Technical Reference

Tektronix

TDS 340A, TDS 360 & TDS 380 Digital Real-Time Oscilloscopes

070-9436-04

This document applies to firmware version 1.05 and above.

Warning
The servicing instructions are for use by qualified personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to all safety summaries prior to performing service.

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WARRANTY

Tektronix warrants that the products that it manufactures and sells will be free from defects in materials and workmanship for a period of three (3) years from the date of purchase from an authorized Tektronix distributor. If any such product proves defective during this warranty period, Tektronix, at its option, either will repair the defective product without charge for parts and labor, or will provide a replacement in exchange for the defective product. Batteries are excluded from this warranty.

In order to obtain service under this warranty, Customer must notify Tektronix of the defect before the expiration of the warranty period and make suitable arrangements for the performance of service. Customer shall be responsible for packaging and shipping the defective product to the service center designated by Tektronix, shipping charges prepaid, and with a copy of customer proof of purchase. Tektronix shall pay for the return of the product to Customer if the shipment is to a location within the country in which the Tektronix service center is located. Customer shall be responsible for paying all shipping charges, duties, taxes, and any other charges for products returned to any other locations.

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General Safety Summary

Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it. To avoid potential hazards, use the product only as specified.

Only qualified personnel should perform service procedures.

While using this product, you may need to access other parts of the system. Read the *General Safety Summary* in other system manuals for warnings and cautions related to operating the system.

Injury Precautions

Use Proper Power Cord. To avoid fire hazard, use only the power cord specified for this product.

Avoid Electric Overload. To avoid electric shock or fire hazard, do not apply a voltage to a terminal that is outside the range specified for that terminal.

Avoid Overvoltage. To avoid electric shock or fire hazard, do not apply potential to any terminal, including the common terminal, that varies from ground by more than the maximum rating for that terminal.

Avoid Electric Shock. To avoid injury or loss of life, do not connect or disconnect probes or test leads while they are connected to a voltage source.

Ground the Product. This product is grounded through the grounding conductor of the power cord. To avoid electric shock, the grounding conductor must be connected to earth ground. Before making connections to the input or output terminals of the product, ensure that the product is properly grounded.

Do Not Operate Without Covers. To avoid electric shock or fire hazard, do not operate this product with covers or panels removed.

Use Proper Fuse. To avoid fire hazard, use only the fuse type and rating specified for this product.

Do Not Operate in Wet/Damp Conditions. To avoid electric shock, do not operate this product in wet or damp conditions.

Do Not Operate in an Explosive Atmosphere. To avoid injury or fire hazard, do not operate this product in an explosive atmosphere.

Avoid Exposed Circuitry. To avoid injury, remove jewelry such as rings, watches, and other metallic objects. Do not touch exposed connections and components when power is present.

Keep Probe Surface Clean and Dry. To avoid electric shock and erroneous readings, keep probe surface clean and dry.

Wear Eye Protection. To avoid eye injury, wear eye protection if there is a possibility of exposure to high-intensity rays.

Product Damage Precautions

Use Proper Power Source. Do not operate this product from a power source that applies more than the voltage specified.

Provide Proper Ventilation. To prevent product overheating, provide proper ventilation.

Do Not Operate With Suspected Failures. If you suspect there is damage to this product, have it inspected by qualified service personnel.

Do Not Immerse in Liquids. Clean the probe using only a damp cloth. Refer to cleaning instructions.

Symbols and Terms

Terms in this Manual. These terms may appear in this manual:

WARNING. *Warning statements identify conditions or practices that could result in injury or loss of life.*

CAUTION. *Caution statements identify conditions or practices that could result in damage to this product or other property.*

Terms on the Product. These terms may appear on the product:

DANGER indicates an injury hazard immediately accessible as you read the marking.

WARNING indicates an injury hazard not immediately accessible as you read the marking.

CAUTION indicates a hazard to property including the product.

Symbols on the Product. The following symbols may appear on the product:

DANGER
High Voltage

Protective Ground
(Earth) Terminal

ATTENTION
Refer to Manual

Double
Insulated

Certifications and Compliances

Refer to the specifications section for a listing of certifications and compliances that apply to this product.

Service Safety Summary

Only qualified personnel should perform service procedures. Read this *Service Safety Summary* and the *General Safety Summary* before performing any service procedures.

Do Not Service Alone. Do not perform internal service or adjustments of this product unless another person capable of rendering first aid and resuscitation is present.

Disconnect Power. To avoid electric shock, disconnect the main power by means of the power cord or, if provided, the power switch.

Use Caution When Servicing the CRT. To avoid electric shock or injury, use extreme caution when handling the CRT. Only qualified personnel familiar with CRT servicing procedures and precautions should remove or install the CRT.

CRTs retain hazardous voltages for long periods of time after power is turned off. Before attempting any servicing, discharge the CRT by shorting the anode to chassis ground. When discharging the CRT, connect the discharge path to ground and then the anode. Rough handling may cause the CRT to implode. Do not nick or scratch the glass or subject it to undue pressure when removing or installing it. When handling the CRT, wear safety goggles and heavy gloves for protection.

Use Care When Servicing With Power On. Dangerous voltages or currents may exist in this product. Disconnect power, remove battery (if applicable), and disconnect test leads before removing protective panels, soldering, or replacing components.

To avoid electric shock, do not touch exposed connections.

X-Radiation. To avoid x-radiation exposure, do not modify or otherwise alter the high-voltage circuitry or the CRT enclosure. X-ray emissions generated within this product have been sufficiently shielded.

Preface

This technical reference manual provides service information for the TDS 340A, TDS 360, and TDS 380 Digitizing Oscilloscopes.

Manual Structure

This manual is divided into Chapters such as *Specifications* and *Theory of Operation*. Further, it is divided into subsections such as *Product Description* and *Removal and Installation Procedures*.

Sections containing procedures also contain introductions to those procedures. Be sure to read these introductions because they provide information needed to do the service correctly and efficiently. The following is a brief description of each manual chapter.

- *Specifications* contains a product description of the digitizing oscilloscope and tables of the characteristics and descriptions that apply to it.
- *Operating Information* includes general information and operating instructions at the level needed to safely power on and service this oscilloscope.
- *Theory of Operation* contains circuit descriptions that support general service and fault isolation down to the module level.
- *Performance Verification* contains a collection of procedures for confirming that this digitizing oscilloscope functions properly and meets warranted limits.
- *Adjustment Procedures* contains a collection of procedures for adjusting this digitizing oscilloscope to meet warranted limits.
- *Maintenance* contains information and procedures for doing preventive and corrective maintenance of the digitizing oscilloscope. Instructions for cleaning, for module removal and installation, and for fault isolation to a module are found here.
- *Options* contains information on the factory-installed options that may be present in your oscilloscope.
- *Electrical Parts List* contains a component-level list grouped by board assembly.

- *Diagrams* contains component location and schematic diagrams.
- *Mechanical Parts List* includes a table of all replaceable modules, their descriptions, and their Tektronix part numbers.

Manual Conventions

This manual uses certain conventions which you should become familiar with before doing service.

Modules

Throughout this manual, any replaceable component, assembly, or part of this digitizing oscilloscope is referred to generically as a module. In general, a module is an assembly, like a circuit board, rather than a component, like a resistor or an integrated circuit. Sometimes a single component is a module; for example, the chassis of the oscilloscope is a module.

Safety

Symbols and terms related to safety appear in the *General Safety Summary* and *Service Safety Summary* found at the beginning of this manual.

Symbols

Besides the symbols related to safety, this manual uses the following symbols:

STOP*. This "stop sign" labels information which you must read in order to correctly do service and to avoid incorrectly using or applying service procedures.*

Related Manuals

These other manuals are available for the TDS 340A, TDS 360, and TDS 380 Digitizing Oscilloscopes.

- The *Reference Manual* gives you a quick overview of how to operate your oscilloscope.
- The *User Manual* provides instructions on how to operate your oscilloscope.
- The *Programmer Manual* provides complete information on programming and remote control of the oscilloscope through the GPIB or RS-232 interface (optional accessory).

Specifications

This appendix contains complete specifications for the TDS 340A, TDS 360, and TDS 380. The specifications are divided into three subsections, one for each of three classes of traits: *Warranted Characteristics*, *Typical Characteristics*, and *Nominal Traits*.

Warranted Characteristics

Warranted characteristics are described in terms of quantifiable performance limits that are warranted. This subsection lists only warranted characteristics.

NOTE. *In these tables, those warranted characteristics that are checked in the* Performance Tests*, starting on page 4–11, appear in* ***boldface type*** *under the column* **Name**.

Performance Conditions

The electrical characteristics found in these tables of warranted characteristics apply when the oscilloscope has been adjusted at an ambient temperature between +20° C and +30° C, has had a warm-up period of at least 20 minutes, and is operating at an ambient temperature between –10° C and +55° C (unless otherwise noted).

Table 1–1: Warranted characteristics — signal acquisition system

Name	Description	
Accuracy, DC Voltage Measurement, Average Acquisition Mode	**Measurement type**	**DC accuracy**
	Average of ≥16 waveforms	±(2.0% × |(reading – Net Offset[1])| + Offset Accuracy + 0.1 div)
	Delta volts between any two averages of ≥16 waveforms acquired under the same setup and ambient conditions	±(2.0% × |reading| + 0.15 div + 0.3 mV)
Accuracy, DC Gain, Sample or Average Acquisition Modes	±2%	
Pulse Response, Peak Detect and Envelope Mode	**Sec/Div setting**	**Minimum pulse width**
	5 s/div – 25 µs/div	10 ns
	TDS 340A: 10 µs/div – 5 ns/div TDS 360: 10 µs/div – 2.5 ns/div TDS 380: 10 µs/div – 1 ns/div	The greater of 10 ns or .02 × sec/div setting

Table 1–1: Warranted characteristics — signal acquisition system (Cont.)

Name	Description	
Accuracy, Offset	**Volts/Div setting**	**Offset accuracy**
	2 mV/div – 99.5 mV/div	±(0.4% × |Net Offset[1]| + 3 mV + 0.1 div × V/div setting)
	100 mV/div – 995 mV/div	±(0.4% × |Net Offset[1]| + 30 mV + 0.1 div × V/div setting)
	1 V/div – 10 V/div	±(0.4% × |Net Offset[1]| + 300 mV + 0.1 div × V/div setting)
Analog Bandwidth, DC Coupled	TDS 340A: DC – ≥100 MHz TDS 360: DC – ≥200 MHz; DC – ≥180 MHz for 2 mV/div TDS 380: DC – ≥400 MHz; DC – ≥250 MHz for 2 mV/div	
Cross Talk (Channel Isolation)	≥100:1 at 50 MHz with equal Volts/Div settings on each channel	
Input Impedance, DC-Coupled	TDS 340A: 1 MΩ ±1% in parallel with 20 pF ±2.0 pF TDS 360: 1 MΩ ±1% in parallel with 20 pF ±2.0 pF TDS 380: 1 MΩ ±1% in parallel with 12 pF ±2.0 pF	
Input Voltage, Maximum	±300 V (DC or AC) CAT II; derate at 20 dB/decade above 100 kHz to 13 V peak AC at 3 MHz and above	
Lower Frequency Limit, AC Coupled[2]	≤10 Hz	

1 **Net Offset = Offset – (Position × Volts/Div). Net offset is the voltage level at the center of the A-D converter dynamic range. Offset Accuracy is the accuracy of this voltage level.**

2 **The AC Coupled Lower Frequency Limits are reduced by a factor of 10 when 10X, passive probes are used.**

Table 1–2: Warranted characteristics — time base system

Name	Description
Accuracy, Long Term Sample Rate and Delay Time	±100 ppm over any ≥1 ms interval
Accuracy, Delta Time Measurements[1, 2]	For single-shot acquisitions using sample acquisition mode and a bandwidth limit setting of FULL: ±(1 WI + 100 ppm × |Reading| + 0.6 ns) For repetitive acquisitions using average acquisition mode with ≥16 averages and a bandwidth limit setting of FULL: ±(1 WI + 100 ppm × |Reading| + 0.4 ns)

1 **For input signals ≥5 divisions in amplitude and a slew rate of ≥2.0 divisions/ns at the delta time measurement points. Signal must be acquired at a volts/division setting ≥5 mV/division.**

2 **The WI (waveform interval) is the time between the samples in the waveform record. Also, see the footnotes for *Sample Rate Range* and *Equivalent Time or Interpolated Waveform Rates* in Table 1–11 on page 1–8.**

Table 1–3: Warranted characteristics — triggering system

Name	Description	
Accuracy, Trigger Level, DC Coupled	**Trigger source**	**Sensitivity**
	CH1 or CH2	±(3% of |Setting – Net Offset[1]| + 0.2 div × volts/div setting + Offset Accuracy)
	External	±(6% of |Setting| + 20 mV)
	External/10	±(6% of |Setting| + 200 mV)
Sensitivity, Edge-Type Trigger, DC Coupled	**Trigger source**	**Sensitivity**
	CH1 or CH2	TDS 340A: 0.35 division from DC to 20 MHz, increasing to 1 div at 100 MHz TDS 360: 0.35 division from DC to 50 MHz, increasing to 1 div at 200 MHz TDS 380: 0.35 division from DC to 50 MHz, increasing to 1 div at 400 MHz
	External	TDS 340A: 50 mV from DC to 20 MHz, increasing to 150 mV at 100 MHz TDS 360: 50 mV from DC to 50 MHz, increasing to 150 mV at 200 MHz TDS 380: 50 mV from DC to 50 MHz, increasing to 500 mV at 400 MHz
	External/10	TDS 340A: 500 mV from DC to 20 MHz, increasing to 1.5 V at 100 MHz TDS 360: 500 mV from DC to 50 MHz, increasing to 1.5 V at 200 MHz TDS 380: 500 mV from DC to 50 MHz, increasing to 5.0 V at 400 MHz
Input Impedance, External Trigger	1 MΩ ±2% in parallel with 20 pF ±2 pF	
Maximum Input Voltage, External Trigger	±300 V (DC or AC) CAT II; derate at 20 dB/decade above 100 kHz to 13 V peak AC at 3 MHz and above	

[1] **Net Offset = Offset – (Position × Volts/Div). Net Offset is the voltage level at the center of the A-D converter dynamic range. Offset Accuracy is the accuracy of this voltage level.**

Table 1–4: Power Requirements

Name	Description
Source Voltage and Frequency	90 to 132 VAC_{RMS}, continuous range, for 47 Hz through 440 Hz 132 to 250 VAC_{RMS}, continuous range, for 47 Hz through 63 Hz
Power Consumption	≤65 Watts (120 VA)

Table 1–5: Warranted characteristics — environmental

Name	Description
Atmospherics (TDS 340A, TDS 360 or TDS 380)	Temperature without diskette in floppy disk drive: +4° C to +50° C, operating; –22° C to +60° C, non-operating Temperature with diskette in floppy disk drive: +10° C to +50° C, operating or non-operating Relative humidity without diskette in floppy disk drive: to 80% at or below +29° C, or to 20% from +30° C to +50° C, operating; to 90% at or below +40° C, or to 5% from +41° C to +50° C, non-operating; Relative humidity with diskette in floppy disk drive: to 80% at or below +29° C, or to 20% from +30° C to +50° C, operating or non-operating Altitude: To 15,000 ft (4570 m), operating; to 40,000 ft (12190 m), non-operating
Dynamics	Random vibration without diskette in floppy disk drive: 0.31 g_{RMS}, from 5 to 500 Hz, 10 minutes each axis, operating; 2.46 g_{RMS}, from 5 to 500 Hz, 10 minutes each axis, non-operating

Typical Characteristics

Typical characteristics are described in terms of typical or average performance. Typical characteristics are not warranted.

Table 1–6: Typical characteristics — signal acquisition system

Name	Description			
Accuracy, DC Gain, Envelope Acquisition Mode	±3% for sec/div settings from 5 Sec/Div to 25 µsec/div; ±2% for sec/div settings from 10 µs/div to 5 ns/div (TDS 340A); ±2% for sec/div settings from 10 µs/div to 2.5 ns/div (TDS 360); ±2% for sec/div settings from 10 µs/div to 1 ns/div (TDS 380)			
Accuracy, DC Voltage Measurement, Sample Acquisition Mode	**Measurement type**		**DC accuracy**	
	Any Sample		±(2.0% × (|reading – Net Offset[1]|) + Offset Accuracy + 0.13 div + 0.6 mV)	
	Delta Volts between any two samples[2] acquired under the same setup and ambient conditions		±(2.0% × |reading| + 0.26 div + 1.2 mV)	
Frequency Limit, Upper, 20 MHz Bandwidth Limited	20 MHz			
Step Response Settling Error	**Volts/Div setting**	**Step amplitude**	**Settling error (%)[3]**	
			100 ns	**20 ms**
	2 mV/div – 99.5 mV/div	≤2 V	≤1.0	≤0.1
	100 mV/div – 995 mV/div	≤20 V	≤1.5	≤0.2
	1 V/div – 10 V/div	≤200 V	≤2.5	≤0.2
Common Mode Rejection Ratio (CMRR)	100:1 at 60 Hz, reducing to 20:1 at 50 MHz, with equal Volts/Div and Coupling settings on each channel.			

1 Net Offset = Offset – (Position × Volts/Div). Net Offset is the voltage level at the center of the A-D converter dynamic range. Offset Accuracy is the accuracy of this voltage level.

2 The samples must be acquired under the same setup and ambient conditions.

3 The values given are the maximum absolute difference between the value at the end of a specified time interval after the mid-level crossing of the step, and the value one second after the mid-level crossing of the step, expressed as a percentage of the step amplitude.

Table 1–7: Typical characteristics — triggering system

Name	Description	
Error, Trigger Position, Edge Triggering	**Acquire mode**	**Trigger-position error[1,2]**
	Sample, Average	±(1 WI + 2 ns)
	Peak Detect, Envelope	±(2 WI + 2 ns)
Sensitivity, Video-Type Trigger	**Source**	**Typical sensitivity**
	CH1 or CH2 External External/10	0.6 division of video sync signal 75 mV of video sync signal 750 mV of video sync signal
Lowest Frequency for Successful Operation of "Set Level to 50%" Function	50 Hz	
Sensitivity, Edge Type Trigger, Not DC Coupled[3]	**Trigger coupling**	**Typical signal level for stable triggering**
	AC	Same as DC-coupled limits[4] for frequencies above 60 Hz. Attenuates signals below 60 Hz.
	Noise Reject	Three and one half times the DC-coupled limits.[4]
	High Frequency Reject	One and one half times times the DC-coupled limits[4] from DC to 30 kHz. Attenuates signals above 30 kHz.
	Low Frequency Reject	One and one half times the DC-coupled limits[4] for frequencies above 80 kHz. Attenuates signals below 80 kHz.

1 The trigger position errors are typically less than the values given here. These values are for triggering signals having a slew rate at the trigger point of ±0.5 division/ns.

2 The waveform interval (WI) is the time between the samples in the waveform record. Also, see the footnote for the characteristics *Sample Rate Range* and *Equivalent Time or Interpolated Waveform Rates* in Table 1–11 on page 1–8.

3 The minimum sensitivity for obtaining a stable trigger. A stable trigger results in a uniform, regular display triggered on the selected slope. The trigger point must not switch between opposite slopes on the waveform, and the display must not "roll" across the screen on successive acquisitions. The TRIG'D LED stays constantly lighted when the SEC/DIV setting is 2 ms or faster but may flash when the SEC/DIV setting is 10 ms or slower.

4 See the characteristic *Sensitivity, Edge-Type Trigger, DC Coupled* in Table 1–3, which begins on page 1–3.

Table 1–8: Typical characteristics — probe compensator output

Name	Description	
Output Voltage and Frequency, Probe Compensator	**Characteristic**	
	Voltage	5.0 V (low-high) into a 1 MΩ load
	Frequency	1 kHz

Table 1–9: Typical characteristics — data handling

Name	Description
Time, Data-Retention, Nonvolatile Memory[1,2]	≥5 Years

1 **The time that reference waveforms, stored setups, and calibration constants are retained when there is no power to the oscilloscope.**

2 **Data is maintained by a lithium poly-carbon monofluoride battery.**

Nominal Traits

Nominal traits are described using simple statements of fact such as "Two, identical" for the trait "Input Channels, Number of," rather than in terms of limits that are performance requirements.

Table 1–10: Nominal traits — signal acquisition system

Name	Description	
Bandwidth Selections	20 MHz and FULL	
Digitizers, Number of	Two, identical, digitized simultaneously	
Digitized Bits, Number of	8 bits[1]	
Input Channels, Number of	Two, identical, called CH 1 and CH 2	
Input Coupling	DC, AC, or GND	
Ranges, Offset, All Channels	**Volts/Div setting**	**Offset range**
	2 mV/div – 99.5 mV/div	±1 V
	100 mV/div – 995 mV/div	±10 V
	1 V/div – 10 V/div	±100 V
Range, Position	±5 divisions	
Range, Sensitivity[2]	2 mV/div to 10 V/div	
Rise Time	TDS 340A: 3.5 ns TDS 360: 1.75 ns TDS 380: 875 ps	
TekProbe Interface	Level one probe coding	

1 **Displayed vertically with 25 digitization levels (DLs) per division and 10.24 divisions dynamic range with zoom off. A DL is the smallest voltage level change that the 8-bit A-D Converter can resolve, with the input scaled to the volts/division setting of the channel used. Expressed as a voltage, a DL is equal to 1/25 of a division times the volts/division setting.**

2 **The sensitivity ranges from 2 mV/div to 10 V/div in a 1–2–5 sequence of coarse settings. Between consecutive coarse settings, the sensitivity can be finely adjusted with a resolution of 1% of the more sensitive setting. For example, between 50 mV/div and 100 mV/div, the volts/division can be set with 0.5 mV resolution.**

Table 1–11: Nominal traits — time base system

Name	Description
Range, Sample-Rate[1,2]	TDS 340A: 10 Samples/s to 500 MSamples/s in a 1–2–5 sequence TDS 360: 10 Samples/s to 1 GSamples/s in a 1–2–5 sequence TDS 380: 10 Samples/s to 2 GSamples/s in a 1–2–5 sequence
Range, Seconds/Division	TDS 340A: 5 ns/div to 5 s/div in a 1–2.5–5 sequence TDS 360: 2.5 ns/div to 5 s/div in a 1–2.5–5 sequence TDS 380: 1 ns/div to 5 s/div in a 1–2.5–5 sequence
Range, Time Base Delay Time	16.5 ns to 50 seconds
Record Length	1,000 samples

1 **The range of real-time rates, expressed in samples/second, at which a digitizer samples signals at its inputs and stores the samples in memory to produce a record of time-sequential samples**

2 **The Waveform Rate (WR) is the equivalent sample rate of a waveform record. For a waveform record acquired by real-time sampling of a single acquisition, the waveform rate is the same as the real-time sample rate; for a waveform created by interpolation of real-time samples from a single acquisition or by equivalent-time sampling of multiple acquisitions, the waveform rate is faster than the real time sample rate. For all three cases, the waveform rate is 1/(Waveform Interval) for the waveform record, where the waveform interval (WI) is the time between the samples in the waveform record.**

Table 1–12: Nominal traits — triggering system

Name	Description	
Range, Hold Off	500 ns minimum to 10 seconds maximum	
Ranges, Trigger Level	**Source**	**Range**
	Any Channel	±12 divisions from center of screen
	External	±1.5 Volts
	External /10	±15 Volts
	Line	±300 Volts
Formats and Field Rates, Video Trigger	Triggers from sync-negative composite video, 525 to 625 lines, 50 Hz to 60 Hz, interlaced or noninterlaced systems with scan rates from 15 kHz to 65 kHz – such as NTSC, PAL, or SECAM	
TekProbe Interface, External Trigger	Level one probe coding	

Table 1–13: Nominal traits — display system

Name	Description
CRT Type	7-inch (17.95 cm) diagonal, magnetic deflection; horizontal raster-scan; P31 green phosphor
Video Display Resolution	640 pixels horizontally by 480 pixels vertically Display area is 5.04 inch (12.92 cm) horizontally by 3.78 inch (9.69 cm) vertically
Waveform Display Graticule	A single graticule 401 × 501 pixels (8 × 10 divisions, with divisions that are approximately 1 cm by 1 cm)
Intensity Levels	Dim and Bright, with adjustable Overall Intensity and Contrast

Table 1–14: Nominal traits — I/O interface option

Name	Description
GPIB	Part of Option 14 I/O interface or TD3F14A I/O interface field upgrade kit; complies with IEEE Std 488–1987
RS-232	Part of Option 14 I/O interface or TD3F14A I/O interface field upgrade kit; a 9-pin male DTE RS-232 interface that complies with EIA/TIA 574–90
Centronics	Part of Option 14 I/O interface or TD3F14A I/O interface field upgrade kit; a 25-pin, IBM PC-type, parallel printer interface that complies electrically with Centronics C332–44, Rev A
Video Signal Output (Option 14 Only)	DB-9 rear panel Video connector; non-interlaced, with levels that comply with ANSI RS343A VGA compatible at a 30.6 kHz sync rate
Power Supply, Printer (Option 14 Only)	Power supply connector to supply power to the Option 3P Printer Pack

Table 1–15: Nominal traits — power distribution system

Name	Description
Fuse Rating	5 mm × 20 mm, 3.15 A (T), 250 V; or 1.25 in × 0.25 in, 3 A (T), 250 V

Table 1–16: Nominal traits — mechanical characteristics

Name	Description
Weight	
Standard TDS 340A, TDS 360 or TDS 380	7.0 kg (15.5 lbs) stand-alone instrument; 8.6 kg (19 lbs) with front cover, accessories, and accessories pouch installed; 12.9 kg (28.5 lbs) when packaged for domestic shipment
Rackmount TDS 340A, TDS 360 or TDS 380	6.6 kg (14.5 lbs), plus weight of rackmount parts, for TDS 360 or TDS 380 (Option 1R); 14.7 kg (32.5 lbs) when the rackmounted TDS 360 or TDS 380 is packaged for domestic shipment
Rackmount conversion kit	4.5 kg (10 lbs); 7.5 kg (17.5 lbs) when kit is packaged for domestic shipment
Overall Dimensions	
Standard Instrument (Figure 1–1)	Height: 191 mm (7.5 in) with feet and accessories pouch installed 165 mm (6.5 in) without the accessories pouch installed Width: 362 mm (14.25 in) with handle Depth: 471 mm (18.55 in) stand-alone instrument 490 mm (19.28 in) with front cover installed 564 mm (22.2 in) with handle extended
Rackmount Instrument	Height: 178 mm (7 in) Width: 483 mm (19 in) Depth: 472 mm (18.6 in) without handles; 517 mm (20.35 in) including handles

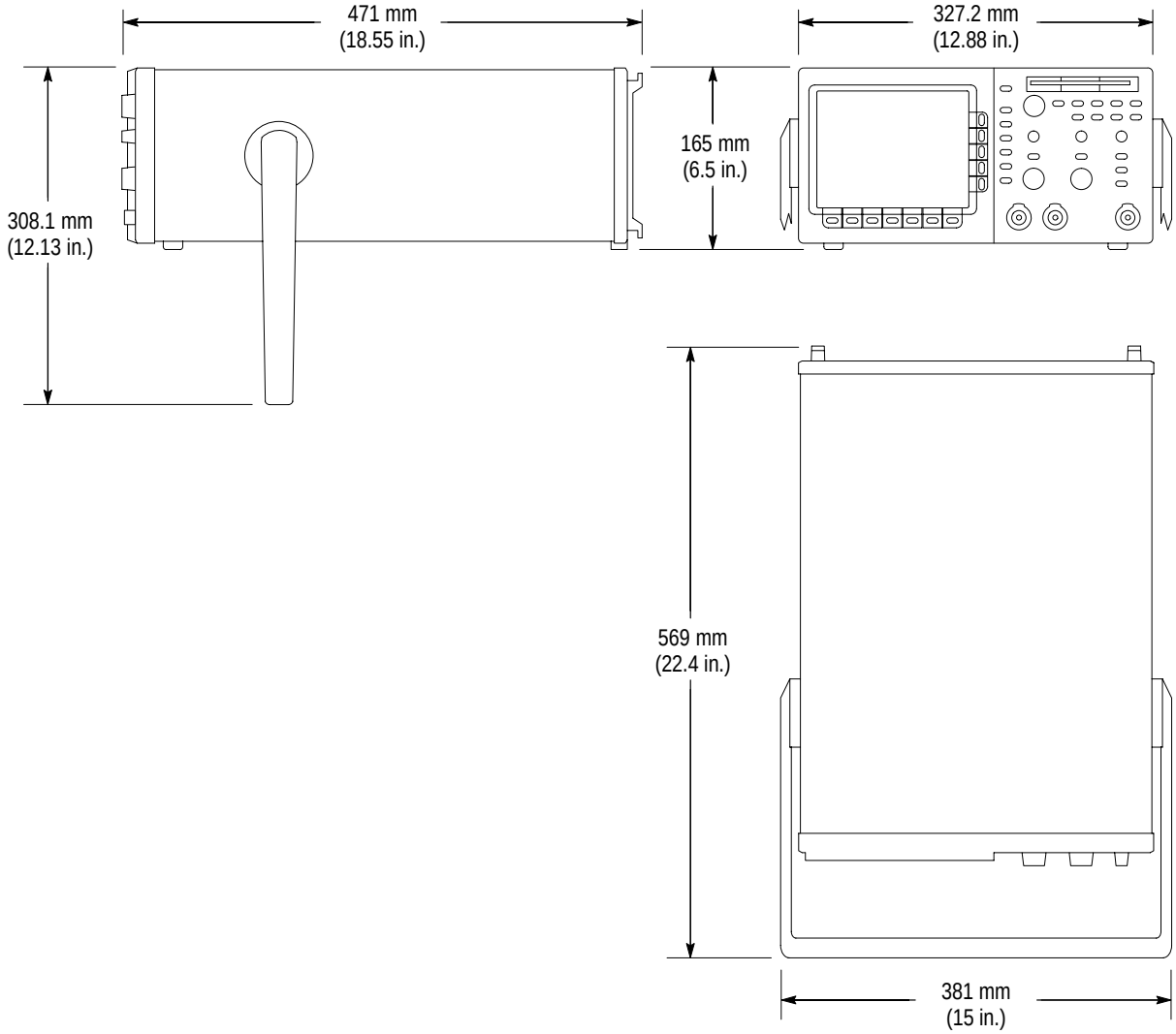


Figure 1–1: Oscilloscope dimensions

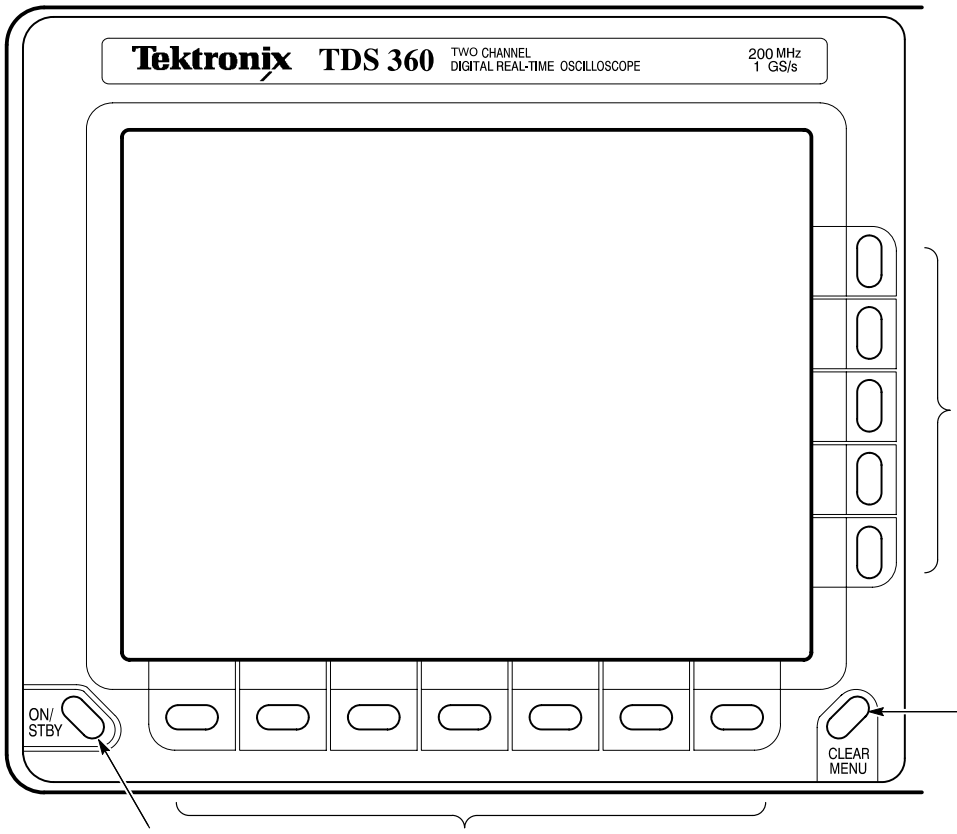
Table 1–17: Certifications and compliances

EC Declaration of Conformity	Meets intent of Directive 89/336/EEC for Electromagnetic Compatibility and Low Voltage Directive 73/23/EEC for Product Safety. Compliance was demonstrated to the following specifications as listed in the Official Journal of the European Communities: EMC Directive 89/336/EEC: EN 55011 Class B Radiated and Conducted Emissions [1] EN 50081-1 Emissions: EN 60555-2 AC Power Line Harmonic Emissions EN 50082-1 Immunity: IEC 801-2 Electrostatic Discharge Immunity IEC 801-3 RF Electromagnetic Field Immunity [2] IEC 801-4 Electrical Fast Transient/Burst Immunity IEC 801-5 Power Line Surge Immunity Low Voltage Directive 73/23/EEC: EN 61010-1 Safety requirements for electrical equipment for measurement, control, and laboratory use 1 To maintain emission requirements when connecting to the I/O interface of this oscilloscope, use only a high-quality, double-shielded (braid and foil) cable. The cable shield must have low-impedance connections to both connector housings. The VGA cable must also have a ferrite core at both ends. Acceptable cables are listed in Table 7–6 on page 7–4. 2 Performance criteria: ≤±0.3 division waveform displacement, or ≤0.6 division increase in p-p noise from 27 MHz to 500 MHz. Test conditions: both channel inputs terminated with grounding caps, both channels set to 10 mV/div, both channels set to DC Coupling, trigger source set to CH 1, acquisition mode set to Sample, and time base set to 250 µs/div.
Certifications	Underwriters Laboratories listing to Standard UL3111–1 for Electrical Measuring and Test Equipment. [3] [4] Canadian Standards Association certified to Standard CAN/CSA-C22.2 No. 1010.1–92. [3] 3 These standards are North American interpretations of IEC 1010. 4 Conditions for certification: operating temperature –10° C to +55° C, maximum operating altitude 2000 m, Safety Class I (IEC 1010-1 Annex H), Overvoltage Catagory II (IEC 1010-1 Annex J), Pollution Degree 2 (IEC 1010-1).
FCC Compliance	Emissions comply with FCC Code of Federal Regulations 47, Part 15, Subpart B, Class A Limits
CSA Certified Power Cords	CSA Certification includes the products and power cords appropriate for use in the North America power network. All other power cords supplied are approved for the country of use.
Overvoltage Category	Category: Examples of Products in this Category: CAT III Distribution-level mains, fixed installation CAT II Local-level mains, appliances, portable equipment CAT I Signal levels in special equipment or parts of equipment, telecommunications, electronics
Pollution Degree 2	Do not operate in environments where conductive pollutants may be present.

Operating Information

This chapter identifies and describes each control and connector on the TDS 300 Series oscilloscope. This chapter also describes how to use the oscilloscope menu system. Refer to the *TDS 340A, TDS 360 & TDS 380 User Manual* for more information on setting up and taking measurements with the oscilloscope.

Display and Power Controls



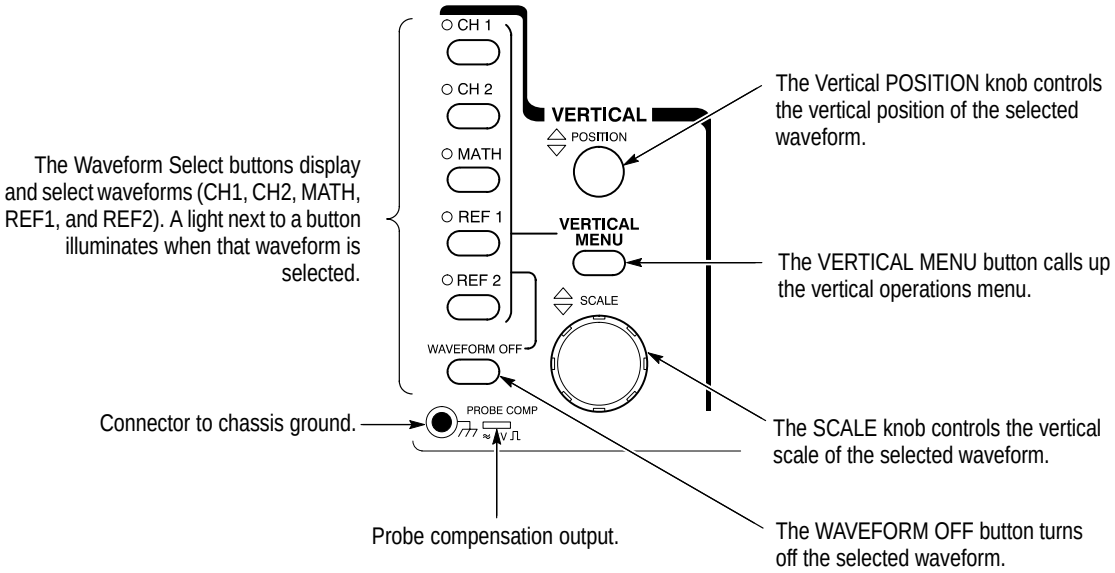
The Side Menu buttons provide access to side menu selections. Refer to page 2–7 for more information about the user interface Side Menu.

The CLEAR MENU button clears all menus from the screen.

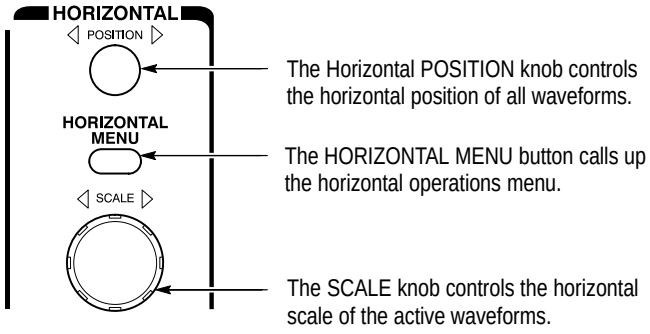
The ON/STBY button toggles instrument power.

The Main Menu buttons provide access to main menu selections. Refer to page 2–7 for more information about the user interface Main Menu.

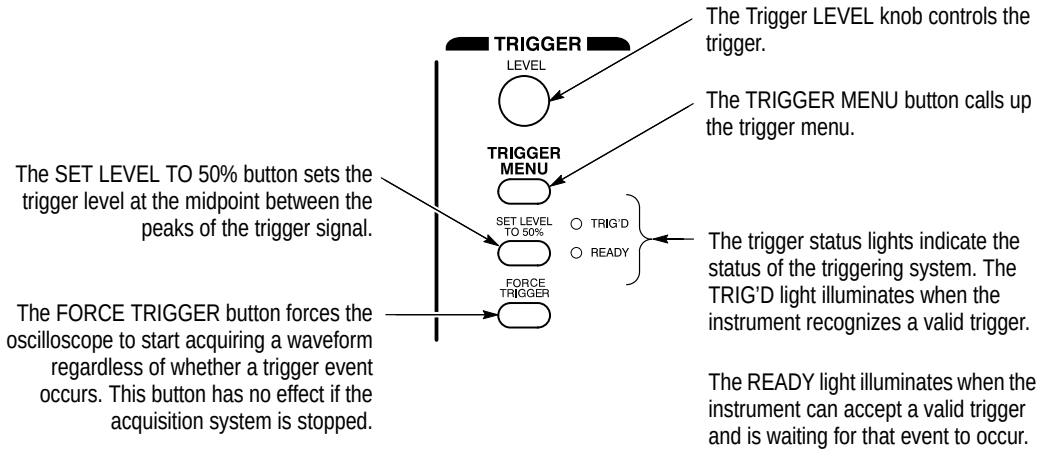
Vertical Controls



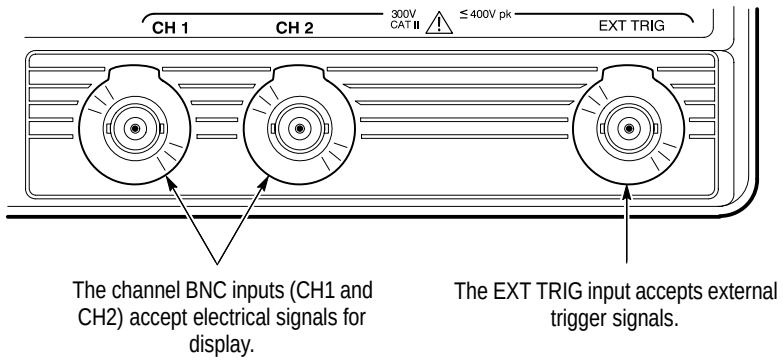
Horizontal Controls



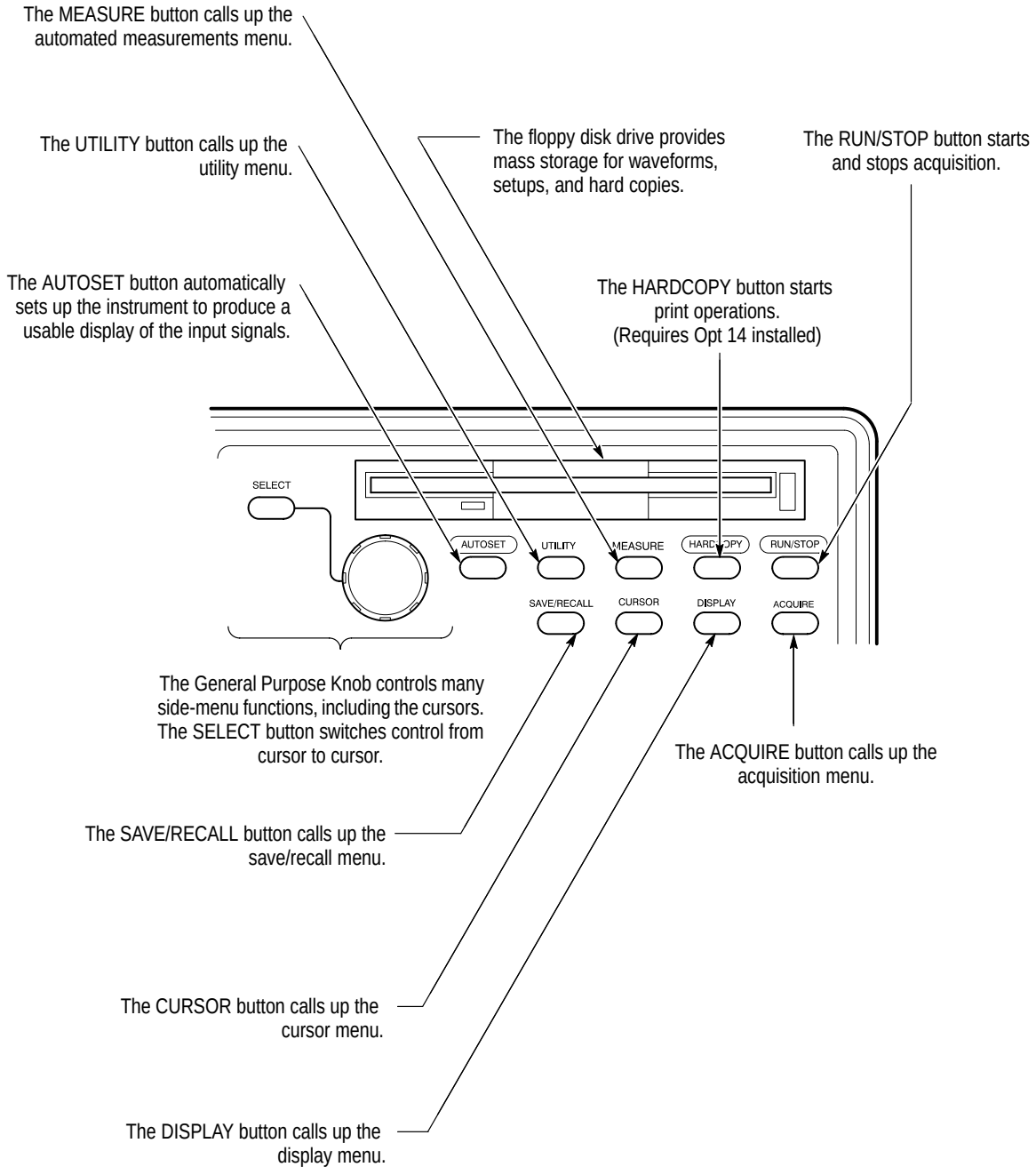
Trigger Controls



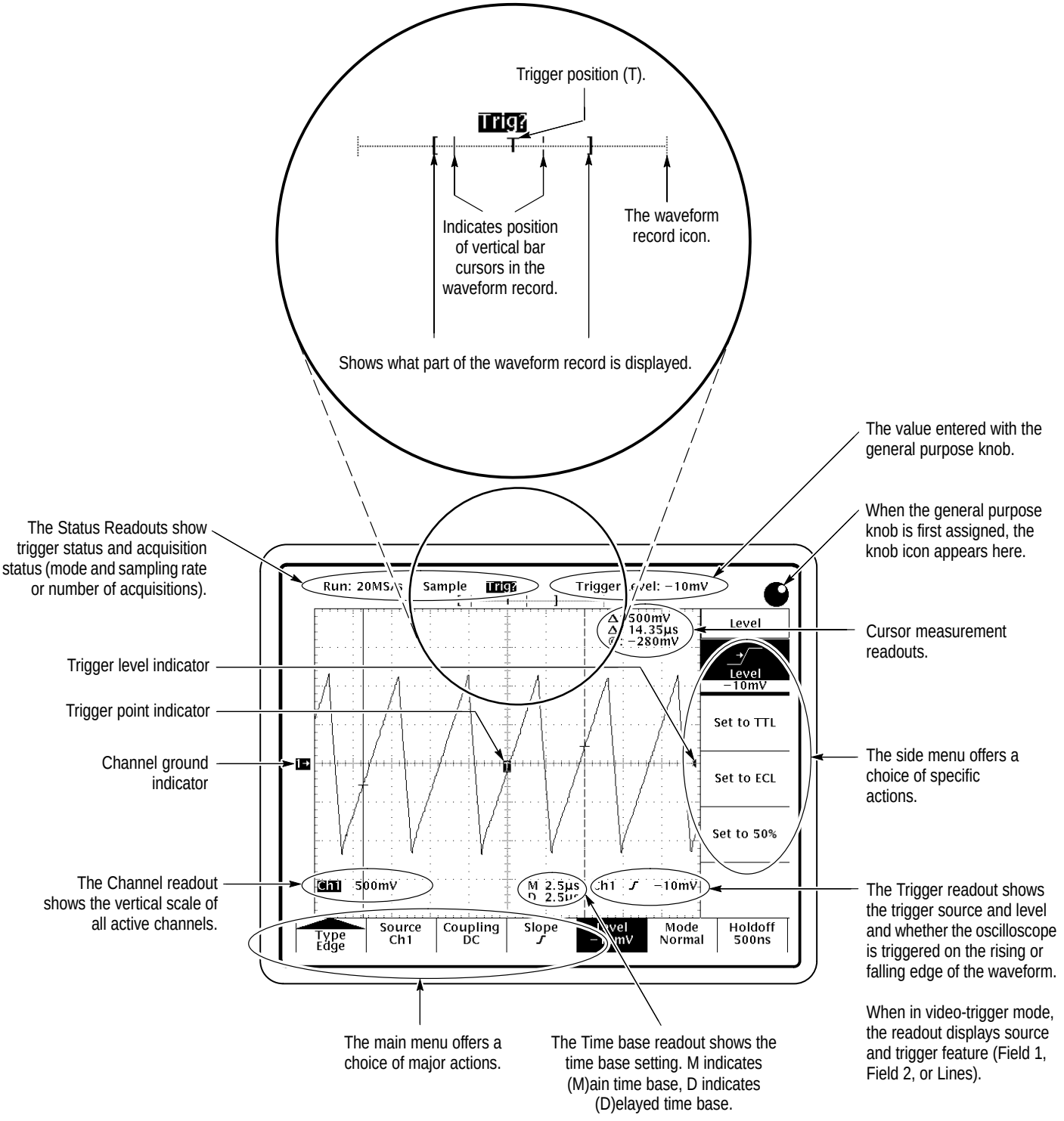
Inputs



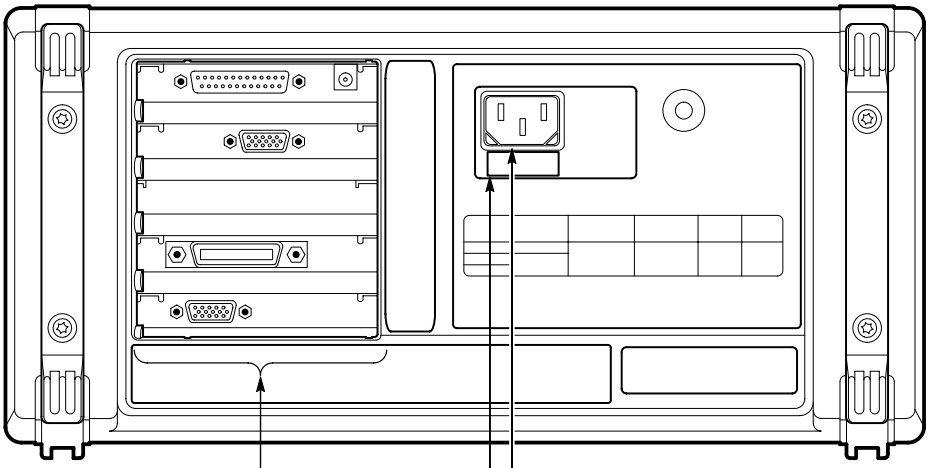
Miscellaneous Controls



Display Map


Trigger position (T).
Trig?
Indicates position of vertical bar cursors in the waveform record.
The waveform record icon.
Shows what part of the waveform record is displayed.
The value entered with the general purpose knob.
When the general purpose knob is first assigned, the knob icon appears here.
The Status Readouts show trigger status and acquisition status (mode and sampling rate or number of acquisitions).
Run: 20MS/s Sample Trig?
Trigger Level: −10mV
Δ 500mV
Δ 14.35µs
@: −280mV
Level
Cursor measurement readouts.
Trigger level indicator
Trigger point indicator
Level
−10mV
Set to TTL
Set to ECL
Set to 50%
Channel ground indicator
The side menu offers a choice of specific actions.
The Channel readout shows the vertical scale of all active channels.
Ch1 500mV
M 2.5µs
D 2.5µs
Ch1 ƒ −10mV
The Trigger readout shows the trigger source and level and whether the oscilloscope is triggered on the rising or falling edge of the waveform.
When in video-trigger mode, the readout displays source and trigger feature (Field 1, Field 2, or Lines).
Type Edge
Source Ch1
Coupling DC
Slope ƒ
Level −10mV
Mode Normal
Holdoff 500ns
The main menu offers a choice of major actions.
The Time base readout shows the time base setting. M indicates (M)ain time base, D indicates (D)elayed time base.

Rear-Panel Connectors



The Option 14 Panel (Option 14 instruments only) allows access to three communications interfaces: a Centronics parallel port, an RS-232 interface, and a GPIB interface. It also includes a VGA video-compatible output port and a power connector for the optional TDS4F5P printer upgrade kit.

You can use the Centronics, RS-232, and GPIB interfaces to transmit hardcopy data.

You can use the GPIB and RS-232 interfaces to operate and program the oscilloscope from a GPIB or RS-232 controller; refer to the *TDS 340A, TDS 360 & TDS 380 Programmer Manual* for more information.

The power connector accepts line voltage to power the instrument. Refer to page 7–2 for a list of power cord and connector options.

The fuse drawer holds the line fuse. Refer to page 6–8 for fuse replacement procedures.

Using the Menu System

TDS 300 Series oscilloscopes use an intuitive user interface. This interface reduces front-panel clutter while allowing easy access to specialized functions through the menu structure.

The following procedure describes how to navigate in the menu structure. If you are unfamiliar with this menu system, you may want to run through the procedure several times to learn how you can access functions and subfunctions. Figure 2–2 provides a graphic overview of using the menu system.

1. Push a front-panel button to call up a menu of functions. This first menu is the *main menu*. Sometimes the main menu will be a side menu (step 3), but most main menus are bottom menus.
2. Push a main menu button to select a function. One of three things happens:
   - If the function has no subfunctions, it becomes active. If it is a variable function, you can now use the General Purpose Knob to adjust it (step 4).
   - If the function has subfunctions, they appear on the side menu (step 3).
   - The leftmost main menu button sometimes activates a pop-up menu (as shown in Figure 2–1). You can cycle through the pop-up menu options by repeatedly pressing the button. Each selection calls up different main and side menus.

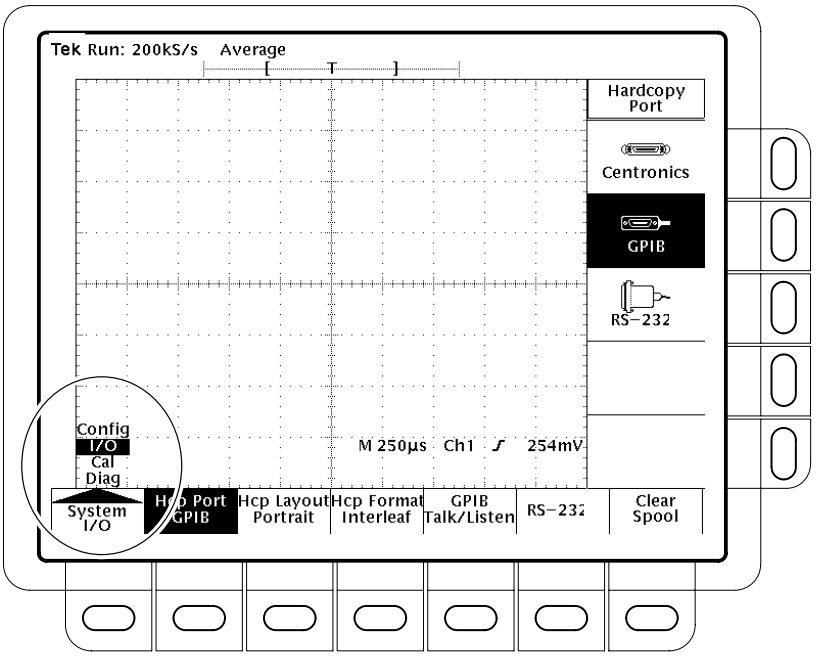
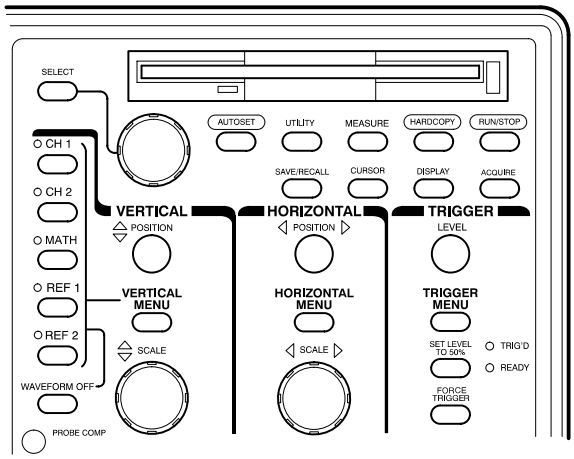
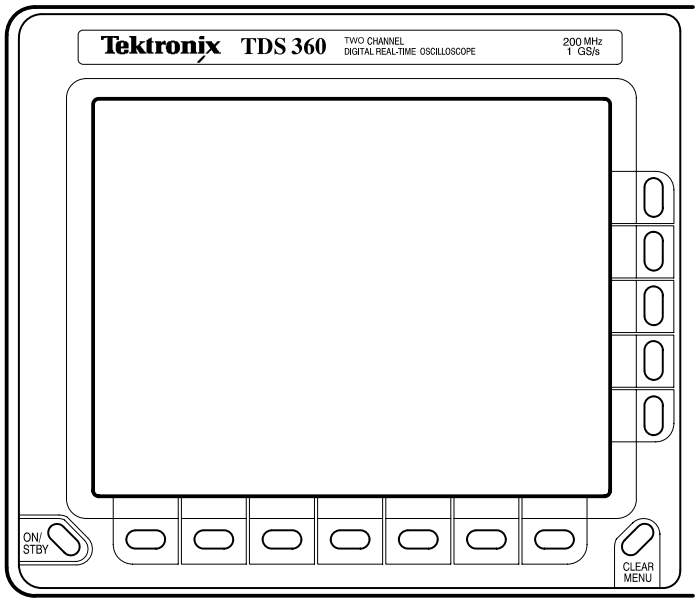


Figure 2–1: A pop-up menu

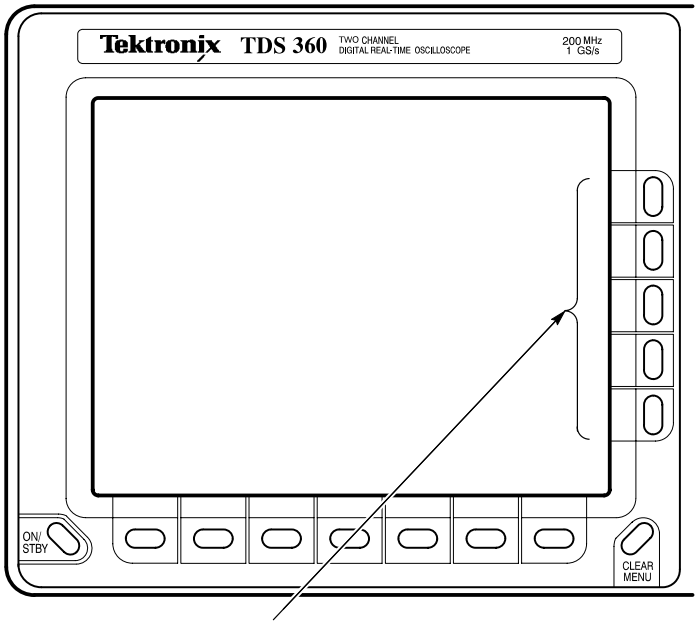
3. Push a side-menu button to select a subfunction.
4. Use the General Purpose knob to change variable-function or subfunction settings.
5. Press the CLEAR MENU button to remove a menu from the screen.

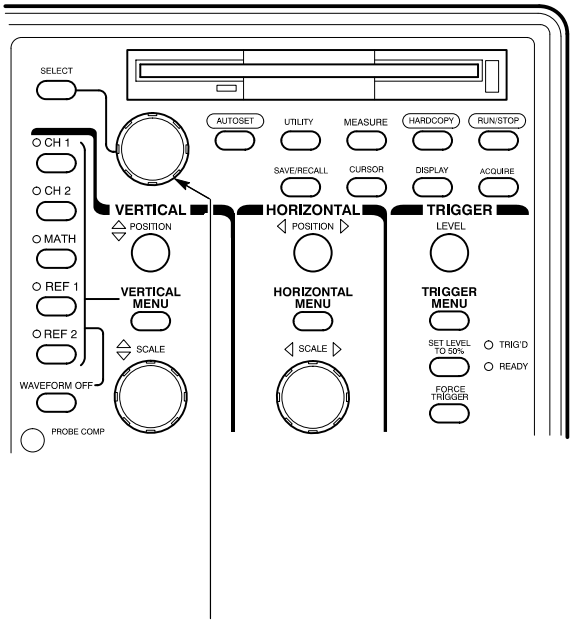




1 Press any of the front-panel menu buttons.

2 Select an item from the main menu or use leftmost button to pop up selections.





3 Select an item from the side menu, if displayed.

4 Adjust menu item values with general purpose knob.

Figure 2–2: Using menus

Theory of Operation

This chapter describes the electrical operation of the TDS 340A, TDS 360, and TDS 380 at the module level.

Logic Conventions

This manual refers to digital logic circuits with standard logic symbols and terms. Unless otherwise stated, all logic functions are described using the positive logic convention: the more positive of the two logic levels is the high (1) state and the more negative level is the low (0) state. Signal states may also be described as “true” meaning their active state or “false” meaning their non-active state. The specific voltages that constitute a high or low state vary among the electronic devices.

Active-low signals are indicated by a tilde (~) prefixed to the signal name (~RESET). Signal names are considered to be either active-high, active-low, or to have both active-high and active-low states.

Module-Level Overview

This overview describes the basic operation of each circuit module as shown in Figures 3–1 through 3–2.

Input Signal Path

A signal enters the oscilloscope through a probe connected to a BNC on the A11 (TDS 340A), A12 (TDS 360), or A13 (TDS 380) Main Board.

Attenuators. Circuitry in the attenuator selects the input coupling and attenuation factor. The processor system controls the attenuators with a serial interface.

Probe Coding Interface. The probe coding interface signals pass through the Main Board to the A6 Front Panel, which senses them.

Acquisition System. The acquisition system amplifies the input signals, samples them, converts them to digital signals, and controls the acquisition process under direction of the processor system. The acquisition system includes the trigger, acquisition timing, and acquisition mode generation and control circuitry.

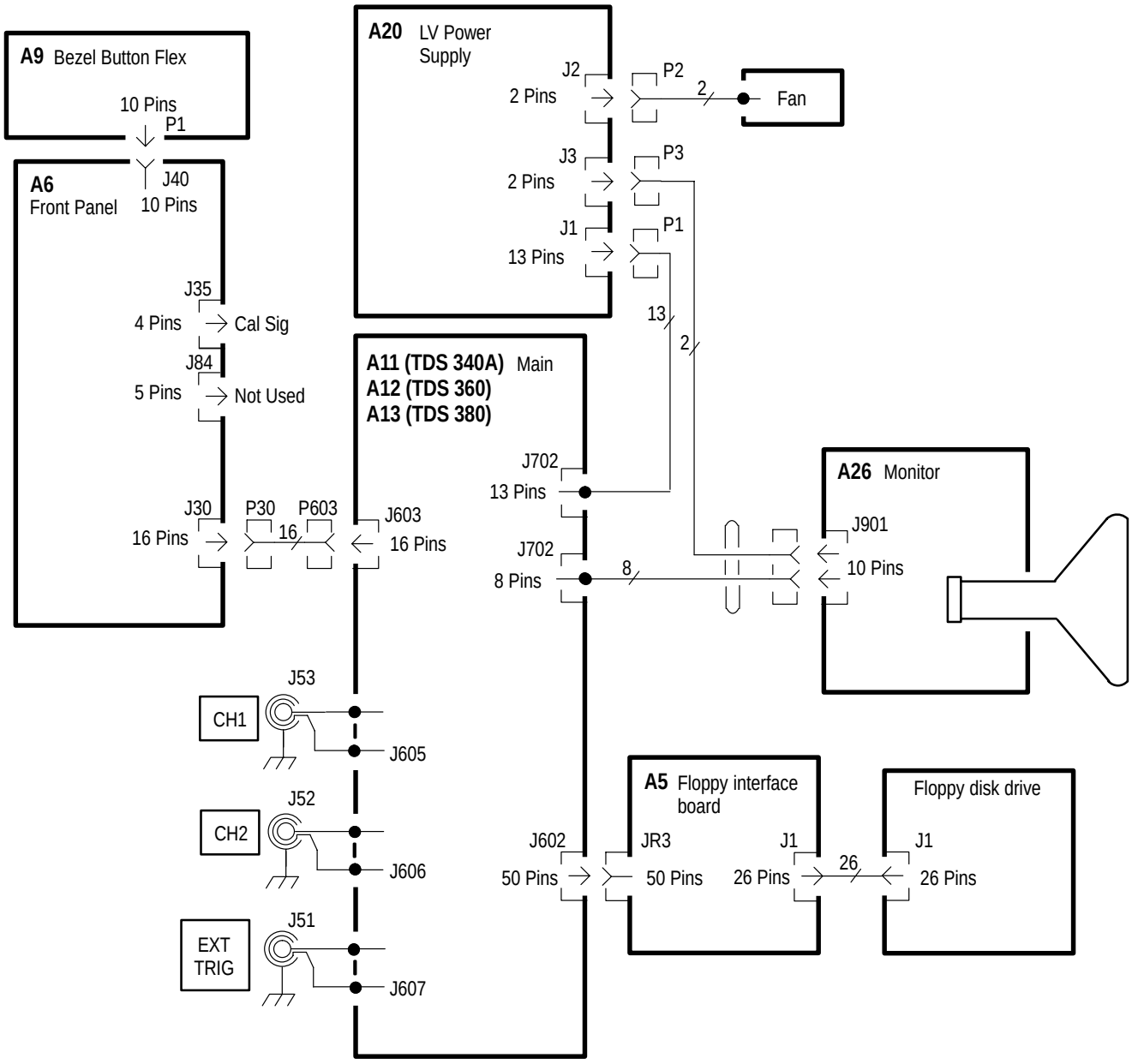


Figure 3–1: Block diagram

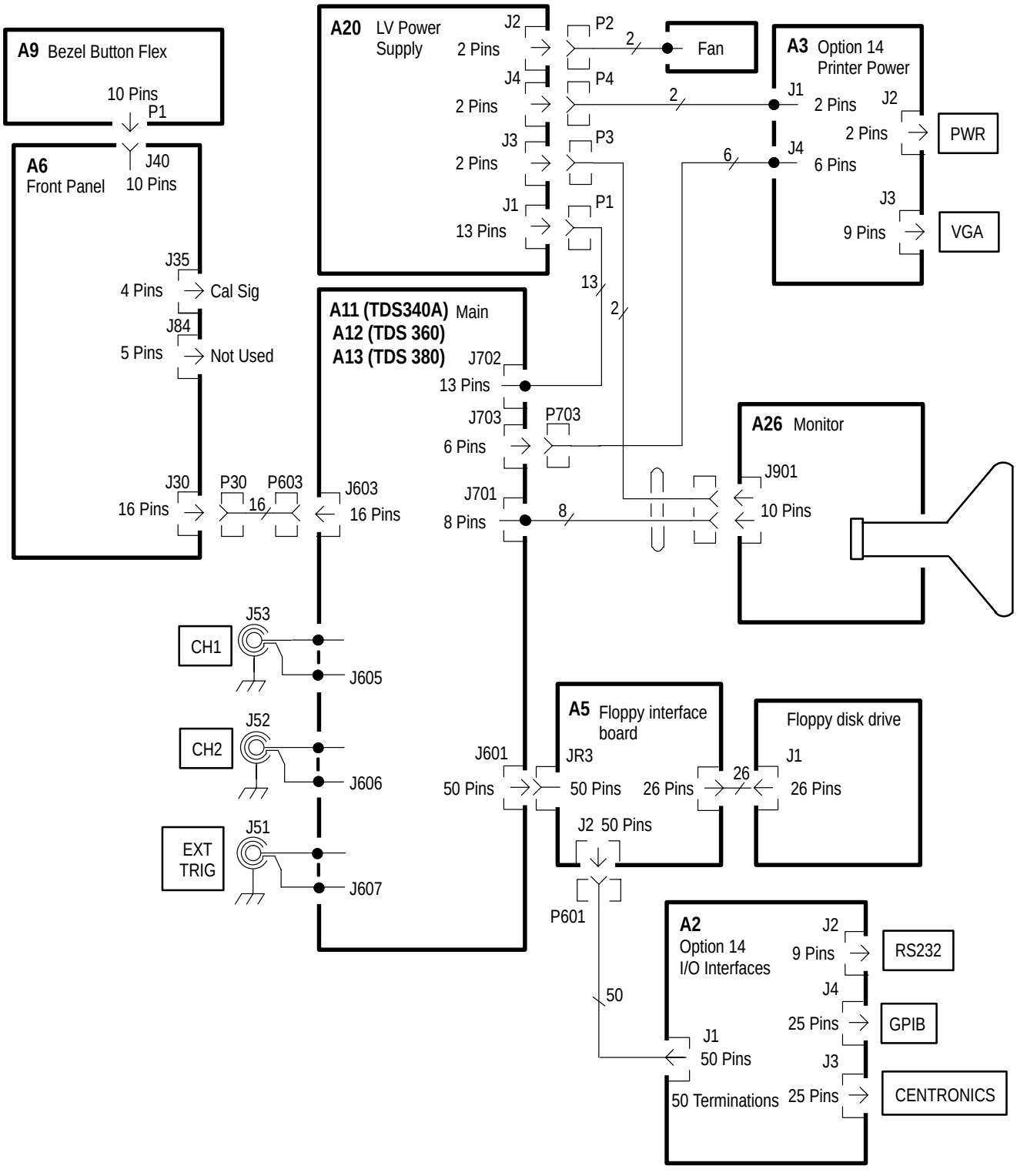


Figure 3–2: Block diagram with Option 14 installed

Processor System. The processor system contains a 68331 microprocessor that controls the entire instrument. The processor passes waveforms and text on to the display system. The Main Board contains both the processor and display systems, in addition to the firmware ROMs.

Display System. A display controller IC processes text and waveforms. The display system sends the text and waveform information to the monitor assembly as a video signal. The display system also generates and sends vertical (VSYNC) and horizontal (HSYNC) sync signals to the monitor assembly.

Monitor

All information (waveforms, text, graticules, and pictographs) is displayed by the A26 Monitor. It generates the high voltages necessary to drive the display tube. It also contains the video amplifier, horizontal oscillator, and the vertical and horizontal yoke driver circuitry.

Front Panel

The processor system sends instructions to and receives information from the Front Panel Processor on the Front Panel Board. The Front Panel Processor reads the front-panel switches and ports, and reports any change in their settings to the processor system. The Front Panel Processor also turns front panel LEDs on and off.

The Front Panel Processor reads the front-panel menu switches and sends any changes in menu selections to the processor system. The **ON/STBY** button is not read by the Front Panel Processor but passes through the Front Panel Board and the Main Board to the A20 Low Voltage Power Supply.

The front panel also generates the probe compensation signal.

Floppy Disk Drive

The floppy disk drive system consists of the A5 floppy interface board that connects to the main board. A 26-pin cable connects the floppy disk drive to the floppy interface board, supplying both power and data to the drive.

The drive is 2 Mbyte double-side, high-density unit that uses 3.5 inch IBM-format disks.

Option 14

The A2 Option 14 board has GPIB, RS-232, and Centronics interfaces for external control and hardcopy operations. Also included is the A3 board with a VGA video output port and a power connector for the Option 3P printer.

Low Voltage Power Supply

The A20 Low Voltage Power Supply is a switching power converter. It supplies power to all the circuitry in the oscilloscope.

The Low Voltage Power Supply does not have a main power switch. The **ON/STBY** switch, located on the front panel, controls all the power to the oscilloscope except the standby circuits in the Low Voltage Power Supply.

Fan

The fan provides forced air cooling for the oscilloscope. It connects to a 12 V connector on the Low Voltage Power Supply.

Component-Level Overview

This section describes the electrical operation of the oscilloscope. Refer to the schematics in the *Diagrams* section as necessary.

A11/A12/A13 Main Board

A signal enters the oscilloscope through a probe connected to a BNC on the A11 (TDS 340A), A12 (TDS 360), or A13 (TDS380) Main Board.

Attenuators. Circuitry in the attenuator selects the input coupling and attenuation factor. The processor system controls the attenuators with a serial interface as well as through voltage changes with the daculator.

The Main Board assembly contains two attenuator hybrids, six relay drivers, and two probe connectors. Each attenuator hybrid contains resistive dividers, an AC coupling capacitor, three relays and a preamplifier. The AC/DC coupling relay couples the output of the BNC to the other relays in the attenuator hybrid. For AC signals, the AC/DC coupling relay inserts a coupling capacitor into the input signal path. The second relay generates a calibration or ground signal. The third relay selects the attenuation factor (X1, X10, or X100).

Probe Code Interface. The probe coding interface signals pass through the Main Board to the A6 Front Panel, which converts the probe code voltage to a digital value.

Acquisition System. The acquisition system amplifies the input signals, samples them, converts them to digital signals, and controls the acquisition process under direction of the processor system. The acquisition system includes the trigger, acquisition timing, and acquisition control circuitry. Figure 3–3 shows a block diagram of the acquisition system.

The sampler driver (U204) amplifies and acquires the analog signal supplied by the attenuators. The acquisition system converts the signal to digital and stores it in acquisition memory. The time base controller controls the acquisition process. The CPU monitors and controls the overall system, and transfers the acquired waveform to the display system.

Daculator. The daculator system provides DC voltage signals that set the offsets and variable gain control voltages for the attenuator hybrids and trigger levels. The CPU controls the daculator serially.

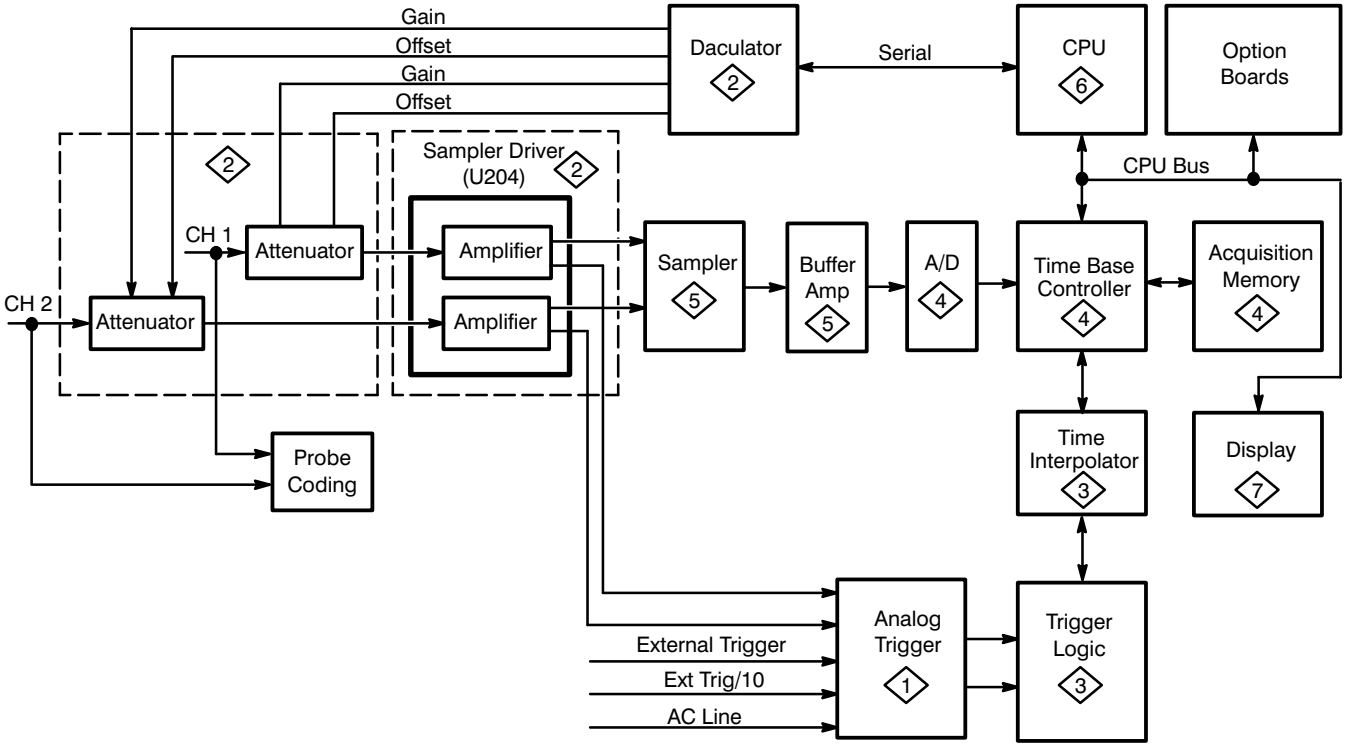


Figure 3–3: Aquisition system block diagram

Sampler Driver. The output of the attenuator drives the sampler driver inputs. The sampler driver provides gain amplification, bandwidth limit filters, and outputs for the sampler and trigger signal paths.

The sampler driver is an integrated circuit containing a differential input. The sampler driver has a differential signal gain of 14X and a single-ended trigger signal gain of 2X. The CPU controls the sampler driver bandwidth limit.

Sampler. The sampler provides two acquisition channels. It contains analog acquisition memory and a heater circuit to provide temperature stabilization.

START/STOP tells the sampler when to start and stop acquiring data. *ACQINIT* tells the sampler to prepare for a new acquisition.

Buffer Amp. The buffer amp converts the differential output signal of the sampler to a single ended signal for use by the A/D converter.

A/D Converter. The A/D converter (U403) converts CH 1 and CH 2 analog samples from the sampler to 8 bit digital values. The A/D reference voltage is 1.0 V.

Time Base Controller (TBC). The time base controller (TBC) provides the horizontal acquisition control for the oscilloscope. It counts pretrigger and posttrigger samples and writes data points into acquisition memory. Programming and control of the sampler is through the TBC. CPU access to acquisition memory is also through the TBC.

The TBC operates in three basic acquisition modes.

- In *Fast* mode the sampler acquires and stores the complete record internally. When stopped, the analog data can be read out, digitized, and moved into acquisition memory. This process is based on the 60.6 MHz oscillator (Y401).
- In *Slow* mode, the sampler acts as a sample and hold device. The data points are transferred point by point to be digitized and stored in acquisition RAM as they are acquired. This process is based on the 40.0 MHz oscillator (Y402).
- In *Peak Detect* mode the sampler holds the minimum and maximum values over a sample interval. The data points are transferred point by point to be digitized and stored in the acquisition RAM as they are acquired.

The processor initiates the acquisition. Once *ACQINIT* is released and the pretrigger count is satisfied, *EPTHO* (end of pretrigger holdoff) is asserted to the trigger logic. Once the trigger logic receives the *EPTHO*, it will accept triggers. A trigger from *SYNTRIG A* will start the posttrigger counter in the TBC. Once the posttrigger count is finished, the sampler will be stopped.

Acquisition Memory. The acquisition memory consists of an 8K-by-8K SRAM. The CPU reads this memory through the time base controller.

The time interpolator counter in the TBC counts for the duration of the slow ramp and terminates the count when it receives *COUNTSTOP* from the time interpolator.

The holdoff counter holds off trigger from being accepted for a programmable period of time. It is asynchronous to the *FAST* system clock. *HOLDOFF* begins on *MAT* (main accepted trigger).

Time Interpolator. The Time Interpolator is a dual-ramp timing circuit that detects and measures the time difference between a trigger event and the sample clock. The CPU uses this time to correctly place the data points obtained on different trigger events. The TBC contains the ramp counters.

The dual ramp consists of a short-duration, positive-going ramp and a long-duration, negative-going ramp. The ramps are the result of charging or discharging integrating capacitors C307 and C305 from constant current sources. The

charging and discharging currents are available at the collectors of Q304 and Q305, respectively. The ratio of these currents is about 2000 to 1.

The trigger event initiates the charging ramp. The next occurrence of the system clock disconnects the charging current, initiating the discharging ramp.

The baseline regulator circuit maintains the voltage at the collector of Q307 at 0 V while waiting for a trigger. When this node is at 0 V, the *COUNTSTOP* signal, at the output of U304A, is low.

When U308B detects a trigger event at its input it sets *~RSTM* to the "true" state, which begins the fast ramp. Q307 is turned off so that the fast ramp charging current will begin to charge the integration capacitors.

The constant current source, Q304 and associated components, determines the fast charging rate. The charging current is nominally 22 mA through R302 and Q304. This current flows through Q301 during the fast ramp charging time and through Q302 during the slow ramp discharge time.

This fast ramp charging, initiated by the trigger event, will end when the next system clock occurs. This causes the trigger logic (U309) to generate the *~RMSW* and *RMSW* signals, to switch from fast-ramp charge to slow-ramp discharge, and tells the TBC (U401) to start counting the ramp discharge time. Q301 is now turned off (and Q302 turned on) to disconnect the 22 mA current source from the integrating capacitors. Now the integrating capacitor discharges through the 11 μA current source formed by Q305 and associated components. When the ramp crosses a –100 mV threshold, the *COUNTSTOP* signal goes high, causing the TBC to stop the counting. This count represents the time from trigger event until the next system clock. The circuitry reads the time base interpolator counter, and then is reset by the next *ACQINIT.*

The signals *~RMST, RMST, ~RMSW,* and *RMSW* are positive referenced ECL levels. The *COUNTSTOP* signal has TTL levels.

Analog Trigger. The analog trigger is a free running analog comparator. It has a variable input threshold determined by the TLM (trigger level).

The input has a channel switch. Control signals SR1, SR2, and SR3 select one of five input signals. The channel switch output is at TP102. Probing this can indicate whether or not the channel switch is working.

Once the source has been selected, filters can be applied to the signal. Filters include high frequency reject, low frequency reject, DC coupled, AC coupled, noise reject and AC noise reject.

Next, the signal is compared to a reference threshold (i.e., trigger level). The polarity of the comparator can be switched to change the trigger slope. A shift register controls filter selection, slope selection, and mode selection. The trigger

control clock (CC) and the control data (SDATA_OUT) control this shift register. Bit 7 is clocked in first, and bit 0 is clocked in last.

The output of the analog trigger is a differential pair of +5 V referenced ECL signals. Output pins 20 and 21 swing full ECL levels, terminated at 75 Ω into the trigger logic.

Trigger Logic. Trigger logic is the digital part of the trigger system. It is composed of discrete positive referenced ECL logic. Trigger logic performs the following functions:

- It selects the trigger event. The CPU serially selects analog trigger (TRIG_GATE), field 1, field 2 (TV_FIELDS), any field (ANY_FIELD), or lines (CSYNC). The different modes are dependent on trigger related front-panel settings.
- It accepts all trigger events and decides which event will finish the acquisition. The analog holdoff qualifies the main trigger event to become the main used trigger.

CPU System

The CPU system contains a 68331 microprocessor that controls the entire instrument. The processor passes waveforms and text on to the display system. The Main Board contains both the CPU and display systems, and the firmware ROMs.

The CPU coordinates all oscilloscope activities. It also directs the activities of the front-panel processor using a serial interface.

CPU Clocks. Processor clocks are derived from 60.6 MHz oscillator Y401. The TBC divides the 60.6 MHz clock by 4 for a PROC_CLK of 15.15 MHz.

Interrupts. The 68331 supports seven levels of auto-vectored interrupts dedicated to different interrupt levels. The TBC, display system, and option board generate interrupts.

Reset. The CPU resets both at power-on and power-off using the reset signal. Reset controller U606 controls system reset. Power-on reset asserts for a minimum of 400 ms after the +5 V supply stabilizes. Power-off reset asserts when the supply falls below a usable threshold.

Memory. The memory subsystem includes 32 K × 8 NVRAM for power-off storage and dynamic RAM for the main system RAM.

The NVRAM (U605) consists of a single nonvolatile memory IC. This RAM provides long-term power-off storage of front-panel settings, waveforms, and calibration constants.

Dynamic RAM U704 is organized as 256 K × 16 for a total of 512 kbytes. It is controlled by the ADG250 display controller (U701).

During a normal 68331 access the ADG250 multiplexes the address (on A2 to A19) onto the A0 to A8 address lines and creates control signals *~RAS*, *~CAS*, *~XWL*, *~XWU*, and *~XOE*.

Display System

A display controller IC processes text and waveforms. The display system sends the text and waveform information to the monitor assembly as a video signal. The display system also generates vertical (VSYNC) and horizontal (HSYNC) sync signals for the monitor assembly.

The display circuit's primary function is writing waveforms into waveform planes. The circuitry provides Vector, Dot, Vector Accumulate, Dot Accumulate, XY, and YT display modes.

The display system provides text, graticule, and waveform bit planes. All information displayed is first written to a plane. Planes are stored in dedicated DRAMS along with the vector lists. The information is sent at regular refresh intervals as an analog video signal.

The waveform display circuit takes a list of sample points, translates them into intensities for the bit map, writes those intensities to the bit map in the proper location, and interrupts the CPU when it is done.

Vector Lists — Four vector lists available from U706 store waveform sample data. Before starting a normal display mode, the CPU writes data to a vector list.

Rasterizers. The display controller (U701) provides two rasterizers. Their primary function is to "draw" vectors between sample points. The display controller also performs the top and bottom clip display functions on waveforms.

Video Timing. Q701–Q704 and associated circuitry convert digital video signals from the display controller into an analog video signal, with two levels controlled by *VIDEO LEVEL* and *INTENS LEVEL* from the daculator. The display controller also creates monitor timing *HSYNC* (31.25 Hz) and *VSYNC* (60 Hz). U703D, U708D, and U709 generate AUX HSYNC, AUX VSYNC and AUX VIDEO for the Option 14 VGA Video output connector.

A2/A3 Option 14 Board

The A2 Option Board has GPIB, RS-232, and Centronics interfaces for external control and hard copy operations. The A3 board has VGA Video output and printer power interfaces.

Refer to schematic A2 <1>. Signals travel from the processor board through the J1 connector to the U2 address decoder. U2 uses lines A15, A16, and A18 to break incoming addresses to either the RS-232, Centronics, GPIB or option ROM.

The GPIB circuitry is composed of GPIB controller U8, with transceivers U9 and U10 buffering signals to and from the GPIB on the option board.

Refer to schematic A2 <2>. The RS-232 portion of the board connects to the rear panel through port J2. Signals travel from the processor board through the J1 connector to the U4 dual asynchronous receiver/transmitter (DUART). The DUART sends data to the U5 driver/receiver. U5 converts signals from logic levels on the DUART side to RS-232 levels at the 9-pin connector. From U5, information goes out port P2.

The Centronics portion of the board connects to the rear panel through the 9-pin connector J3. Data travels from the processor board through the J1 connector to register U6 where it is sent out J3. U4 manages control signals. U12 buffers printer status information to be read through U4.

Refer to schematic A3 <1>. The 9-pin VGA video connector routes auxiliary HSYNC, VSYNC, and VIDEO signals from main board connector J703 to the rear panel.

The printer power converter uses switching regulator U1 to convert +15 V from the power supply to +8 V output at rear panel connector J2. This provides power for the Option 3P thermal printer.

A6 Front Panel

The CPU system sends instructions to and receives information from the Front-Panel Processor on the Front-Panel Board. The Front-Panel Processor reads the front-panel switches and ports, and reports any change in their settings to the processor system. The Front-Panel Processor also turns the LEDs on and off.

The Front-Panel Processor reads the front-panel menu switches and sends any changes in menu selections to the CPU system. The Front Panel Processor does not read the **ON/STBY** button; its signal passes through the Front-Panel Board and the Main Board to the A20 Low Voltage Power Supply.

The front panel also generates the probe compensation signal.

Pots, FPP, and Calibrator. The front-panel processor monitors the front-panel controls. It consists of a single-chip microprocessor (U101) with built-in RAM, ROM, A-to-D converter (for digitizing the potentiometer wiper voltages), a programmable timer (for generating the output of the probe compensator signal), and a serial communications interface (for data transfer to and from the CPU).

The knob scanner, working with the A-to-D converter internal to the front-panel processor, produces digital values for the wiper voltages of the front-panel knobs. Analog multiplexers U420 and U421 select one of 12 possible pot inputs to read. Although there are only six knobs on the front panel, three are continuous-rotation potentiometers made up of two wipers, separated by 180 degrees, which contact a single resistive arc.

Three control lines to multiplexers U420 and U421 select the pot input or wiper voltage to be read. The analog voltage at the wiper of the pot selected is applied to the front-panel processor. This voltage is digitized, and the amount and direction of change from the previously stored value is calculated. The change information is sent to the CPU.

The front-panel processor generates *CALSIG*. The high level is ≈5 V and the low level is at ground.

Switches. The front-panel switches and menu switches are arranged in an array of eight rows and columns. When a switch closes, one row line connects to one column line through an isolation diode. A complete scan of the front-panel switches consists of setting all eight row lines low, in sequence, and performing an eight-column scan to check for a change from the state stored in the front-panel processor. Low bits in the column-line data tell the front-panel processor that a switch is closed.

LEDs and Power Supply. The LEDs are arranged in groups of eight. They are connected between the outputs of 8-bit LED latch (U202). When the CPU needs to turn a particular LED on or off, it sends a command to the front-panel processor indicating what to do to the LED, and which one to change. The front-panel processor converts the LED identification number to the LED address within the latch.

A20 Low Voltage Power Supply

The A20 Low Voltage Power Supply is a switching power converter. It supplies power to all the circuitry in the oscilloscope.

The Low Voltage Power Supply does not have a main power switch. The **ON/STBY** switch, located on the front panel, controls all the power to the oscilloscope except the standby circuits in the Low Voltage Power Supply.

A26 Monitor Assembly

The A26 Monitor Assembly displays all information (waveforms, text, graticules, and pictographs). It generates the high voltages necessary to drive the display tube. It also contains the video amplifier, horizontal oscillator, and the vertical and horizontal yoke driver circuitry.

The 640 by 480 pixel raster scan cathode-ray tube (CRT) display has 60 Hz frame and 31.5 kHz line rates. This CRT display circuitry is similar to a television monitor.

Inputs, Video, and Vertical Deflection. The +12 V regulator is a three-terminal regulator (U130).

The Vertical Yoke Winding Driver provides the scan current (ramp) for the vertical (field) deflection coil. A vertical sync signal, a negative pulse at the deflection rate, causes the ramp to "retrace" to the top of the CRT screen.

A large pulse is generated during vertical retrace. A portion of this signal drives the G1 grid 50 V more negative than normal during the retrace period. This keeps retrace lines blanked even when the background is visible.

The Video Amplifier amplifies the input video signal, and drives the cathode of the CRT.

Horizontal Deflection, CRT, and High Voltage. The Horizontal Oscillator Control generates the "switch" controlling signal and synchronizes the scan to the horizontal sync input signal. IC U370 includes a horizontal oscillator, a phase detector, and an output shaper

The circuit is a phase-locked loop. The differentiated horizontal sync is the reference signal, and the retrace or flyback pulse (U370 pin 4) is the feedback signal to be locked to the horizontal sync (*HORIZONTAL YOKE*) signal.

Horiz Yoke Winding Driver transistor Q160, along with Q260 and T170, provides the deflection coil currents.

Transformer T210 generates the CRT high voltage from the large voltage pulse that occurs during horizontal retrace (flyback pulse). Other secondary voltages are also derived from the flyback pulse.

Performance Verification

The procedures in this chapter verify that the TDS 340A, TDS 360, and TDS 380 oscilloscopes meet warranted specifications. There are three performance tests that you can do.

- To rapidly confirm that this oscilloscope functions, do the *Self Test* procedures that begin on page 4–5.

  Advantages: This procedure is quick to do, requires no external equipment or signal sources, and performs extensive functional and accuracy testing to provide high confidence that the oscilloscope performs properly. You can use it as a quick check before making a series of important measurements.

- To further check functionality, do the *Functional Test* procedures that begin on page 4–7.

  Advantages: These procedures require minimal additional time to perform, require no additional equipment other than a standard-accessory probe, and more completely test the internal hardware of this oscilloscope. You can use them to quickly determine if the oscilloscope is suitable for putting into service, such as when it is first received.

- If you need a more extensive confirmation of performance, do the *Performance Tests* that begin on page 4–11, after doing the functional and self tests.

  Advantages: These procedures check warranted specifications. They require more time and suitable test equipment. (See *Test Equipment* on page 4–3.)

Conventions

Throughout these procedures the following conventions apply:

- Each test procedure uses the following general format:

  Title of test
  Equipment required
  Time required
  Prerequisites
  Procedure steps

- Refer to Figure 4–1: “Main menu” refers to the menu that labels the seven menu buttons under the display. “Side menu” refers to the menu that labels the five buttons to the right of the display. “Pop-up menu” refers to a menu that pops up when a main menu button is pressed.
- Where instructed to use a front-panel button or knob, select from a main or side menu, or verify a readout or status message, the name of the button or knob appears in boldface type.
- Instructions for menu selection follow this format: **FRONT PANEL BUTTON → Pop-Up (if necessary) → Main Menu Button → Side Menu Button**. For example, “Push **TRIGGER MENU → Type: Video → Trigger On → Lines**.”

STOP*. This symbol denotes information you must read to do the procedure properly.*

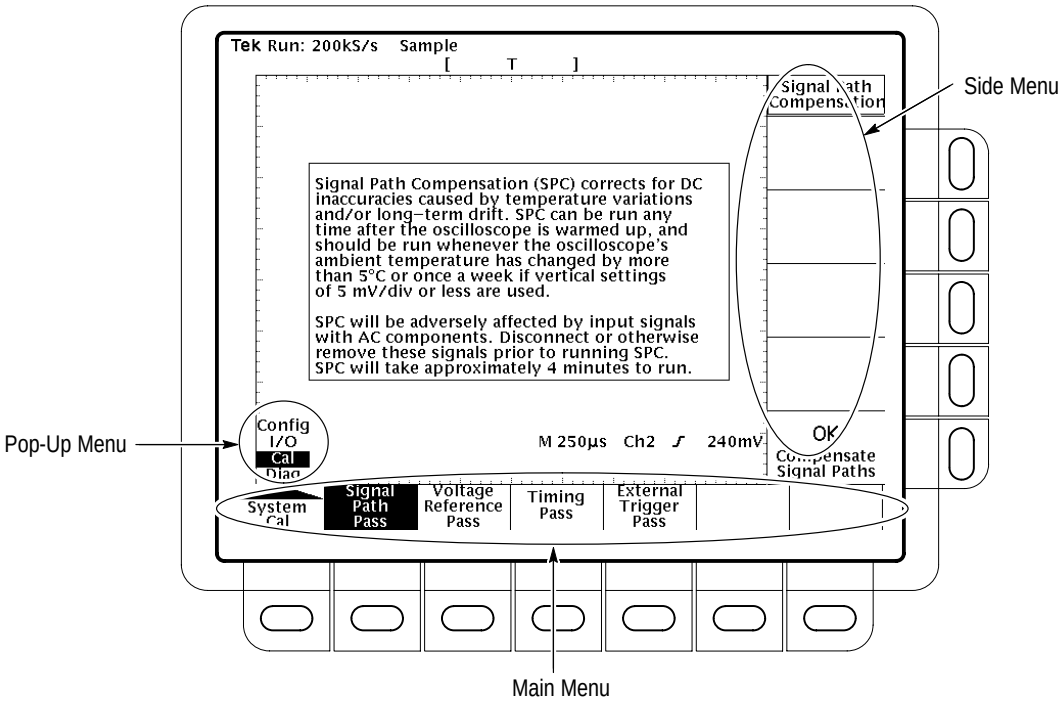


Figure 4–1: Menu locations

Test Equipment

The performance test procedures require external, traceable signal sources to check instrument performance. If your test equipment does not meet the minimum requirements listed in Table 4–1, your test results will be invalid.

Table 4–1: Test equipment

Item number and description	Minimum requirements	Example	Purpose
1. Termination 50 Ω (two required)	Impedance 50 Ω; connectors: female BNC input, male BNC output	Tektronix part number 011-0049-01	Checking delay between channels
2. Cable, Precision Coaxial (two required)	50 Ω, 91 cm (36 in), male to male BNC connectors	Tektronix part number 012-0482-00	Signal interconnection
3. Connector, Dual-Banana	Female-BNC to dual-banana	Tektronix part number 103-0090-00	Several accuracy tests
4. Connector, BNC "T"	Male-BNC to dual-female-BNC	Tektronix part number 103-0030-00	Checking trigger sensitivity
5. Coupler, Dual-Input	Female-BNC to dual-male-BNC	Tektronix part number 067-0525-02	Checking delay between channels
6. Generator, DC Calibration	Variable amplitude to ±110 V; accuracy to 0.1%	Wavetek 9100 Calibration System with Option 250	Checking DC offset, gain, and measurement accuracy
7. Generator, Leveled Sine Wave, Medium-Frequency	200 kHz to 250 MHz; variable amplitude from 5 mV to 4 V_{p-p} into 50 Ω	Wavetek 9100 Calibration System with Option 250	Checking bandwidth and trigger sensitivity
8. Generator, Leveled Sine Wave, High-Frequency[1]	200 kHz to 400 MHz; variable amplitude from 5 mV to 4 V_{p-p} into 50 Ω	Rohde & Schwarz SMY with URV 35 Power Meter and NRV-Z8 Power Sensor	Checking bandwidth and trigger sensitivity
9. Generator, Time Mark	Variable marker frequency from 10 ms to 10 ns; accuracy within 2 ppm	Wavetek 9100 Calibration System with Option 250	Checking sample rate and delay-time accuracy
10. Probe, 10X, included with this instrument	A P6109B (TDS 340A), P6111B (TDS 360), or P6114B (TDS 380) probe	Tektronix number P6109B (TDS 340A), P6111B (TDS 360), or P6114B (TDS 380)	Signal interconnection

[1] **The high frequency leveled sine wave generator is only required to verify the TDS 380, not the TDS 340A or TDS 360. If you use the example equipment, refer to *Sine Wave Generator Leveling Procedure* on page 4–20 for information on obtaining a leveled output from an unleveled sine wave generator. If available, you can use a Tektronix SG504 Leveled Sine Wave Generator in place of the example equipment.**

Test Record

Photocopy this page and use it to record the performance test results for your instrument.

TDS 340A, TDS 360, and TDS 380 test record

Instrument Serial Number: _____ Certificate Number: _____
Temperature: _____ RH %: _____
Date of Calibration: _____ Technician: _____

Performance test		Minimum	Incoming	Outgoing	Maximum
DC Voltage Measurement Accuracy					
CH1 VOLTS/DIV 1 V		+97.1 V	_____	_____	+98.9 V
	200 mV	+8.28 V	_____	_____	+8.52 V
	50 mV[1]	–581 mV	_____	_____	–619 mV
	50 mV[2]	–881 mV	_____	_____	–919 mV
	Δ at 50 mV	+286 mV	_____	_____	+314 mV
	10 mV	+54.6 mV	_____	_____	+65.4 mV
	5 mV	–982 mV	_____	_____	–998 mV
CH2 VOLTS/DIV 1 V		+97.1 V	_____	_____	+98.9 V
	200 mV	+8.28 V	_____	_____	+8.52 V
	50 mV[1]	–581 mV	_____	_____	–619 mV
	50 mV[2]	–881 mV	_____	_____	–919 mV
	Δ at 50 mV	+286 mV	_____	_____	+314 mV
	10 mV	+54.6 mV	_____	_____	+65.4 mV
	5 mV	–982 mV	_____	_____	–998 mV
Analog bandwidth					
CH1		42.5 mV	_____	_____	N/A
CH2		42.5 mV	_____	_____	N/A
Long term sample rate and delay time accuracy					
		–2.0 Div	_____	_____	+2.0 Div
Edge trigger sensitivity, DC coupled					
Main Trigger		stable trigger	_____	_____	N/A
Main Trigger – Falling		stable trigger	_____	_____	N/A

1 **Generator set at –0.6 V.**
2 **Generator set at –0.9 V.**

Self Test

This procedure uses internal routines to verify that the oscilloscope functions and passes its internal self tests and signal-path compensations. It also confirms that the oscilloscope was adjusted properly at the time it was last adjusted. No test equipment or hookups are required.

Equipment Required: None.

Time Required: Approximately 5 minutes.

Prerequisites: Power up the oscilloscope and allow a 20 minute warm up before doing this procedure.

Procedure:

1. Press the front-panel button **UTILITY**.
2. Press the main-menu button **System** to select **Diag**.
3. Press the main-menu button **Execute** and then press the side-menu button **OK Confirm Run Test**. The internal diagnostics verify proper oscilloscope function. This verification takes about 30 seconds. While it progresses, a variety of test patterns flash on screen. When finished, status messages appear on the screen.
4. Check that the screen reports no failures. If it reports a failure, the oscilloscope has failed the self test. Contact your Tektronix representative for assistance.
5. Press **CLEAR MENU**.
6. Press **UTILITY** and then press the main-menu button **System** to select **Cal**.
7. Check that the word **Pass** appears in the main menu under the Voltage Reference, Timing, and Ext Trig menu labels. (See Figure 4–2.) If any of the labels read Fail, the oscilloscope has failed the self test. Contact your Tektronix representative for assistance.

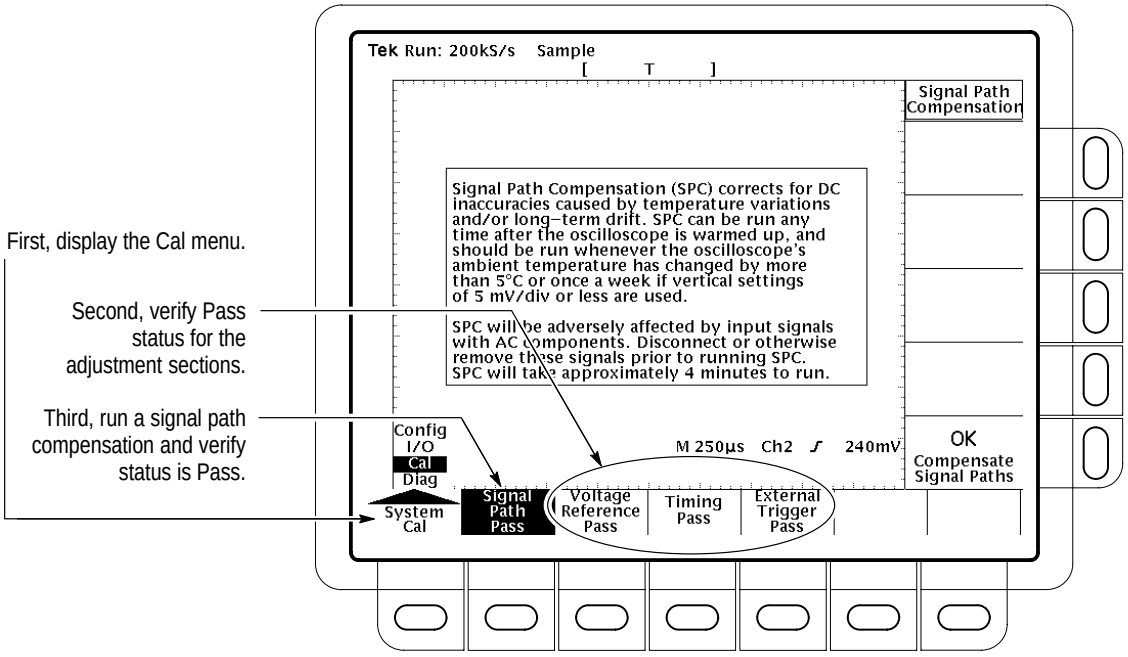


Figure 4–2: Verifying adjustments and signal path compensation

8. Press **Signal Path** and then press the side menu button **OK Compensate Signal Paths**. When compensation completes, the status message updates to Pass or Fail in the main menu

9. Check that the word **Pass** appears under **Signal Path** in the main menu. (See Figure 4–2.) If Pass does not appear, the oscilloscope has failed the performance verification; return it to Tektronix for servicing.

Functional Test

This procedure confirms that the oscilloscope functions properly.

***NOTE**. This procedure verifies functions; that is, it verifies that oscilloscope features operate. It does not verify that they operate within limits. Therefore, when the instructions that follow call for you to verify that a signal appears on-screen "that is about five divisions in amplitude" or "has a period of about six horizontal divisions," do NOT interpret the quantities given as limits. Operation within limits is checked in the performance tests, which begin on page 4–11.*

DO NOT make changes to the front-panel settings that are not called out in the procedure. If you make changes to these settings other than those called out in the procedure, you may obtain invalid results. In this case, just redo the procedure from step 1.

Equipment Required: One P6109B (TDS 340A), P6111B (TDS 360), or P6114B (TDS 380) probe.

Time Required: Approximately 5 minutes.

Prerequisites: None.

Procedure:

1. Install the probe on **CH 1**. Connect the probe tip to **PROBE COMP** on the front panel; leave the probe ground unconnected. (See Figure 4–3.)

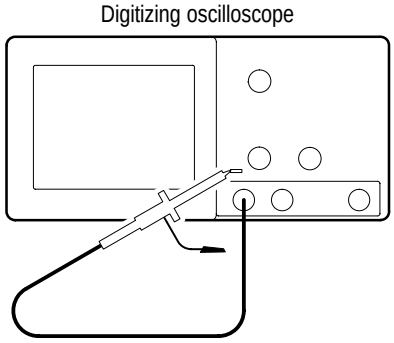


Figure 4–3: Hookup for functional test

2. Press the front-panel button **SAVE/RECALL,** the main-menu button **Recall Factory Setup**, and then the side-menu button **OK Confirm Factory Init.**

3. Press **AUTOSET**.
4. Set the **VOLTS/DIV** to 1 V. Use the vertical **POSITION** knob to center the waveform vertically on screen.
5. Set the **SEC/DIV** to 250 μs. Check that a square wave probe-compensation signal of about five divisions in amplitude is on screen.
6. Check that one period of the square wave probe-compensation signal is about four horizontal divisions on screen.
7. Check that the horizontal **POSITION** knob positions the signal left and right on screen when rotated.
8. Press the front-panel button **TRIGGER MENU**, the main-menu button **Mode**, and then the side-menu button **Normal**.
9. Check that the trigger-level readout for the main trigger system changes with the trigger **LEVEL** knob.
10. Check that the trigger-level knob can trigger and untrigger the square-wave signal as you rotate it. (Leave the signal untriggered.)
11. Check that pressing **SET LEVEL TO 50%** triggers the signal that you just left untriggered.
12. Press the front-panel button **ACQUIRE**, the main-menu button **Mode**, and then the side-menu button **Sample**.
13. Check that the oscilloscope displays an actively acquiring waveform. (Note that there is noise present on the peaks of the square wave.)
14. Press the side-menu button **Peak Detect**. Check that the oscilloscope displays an actively acquiring waveform with the noise "peak detected."
15. Press the side-menu button **Envelope**. Check that the oscilloscope displays an actively acquiring waveform with the noise displayed.
16. Press the side-menu button **Average**. Check that the oscilloscope displays an actively acquiring waveform with the noise reduced.
17. Press **WAVEFORM OFF** to remove Channel 1 from the display.
18. Press CH 2 and move the probe to the CH 2 input.
19. Repeat steps 3 through 16 for Channel 2.
20. Disconnect the probe from the channel input and the PROBE COMP terminal.

File System Functional Test

Equipment Required: One 720K or 1.44Mbyte, 3.5 inch DOS-compatible disk (formatted).

Time Required: Approximately 5 minutes.

Prerequisites: None.

Procedure:

1. Install the probe on **CH 1**. Connect the probe tip to **PROBE COMP** on the front panel; leave the probe ground unconnected. (See Figure 4–4.)

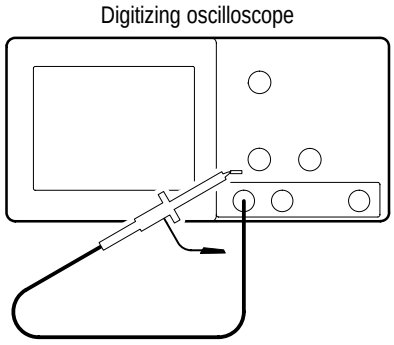


Figure 4–4: Hookup for file system functional test

2. Insert the disk in the disk drive.
3. Push the **SAVE/RECALL** front-panel button.
4. Push the **Recall Factory Setup** main-menu button.
5. Push the **OK Confirm Factory Init** side-menu button.
6. Push the trigger **SET LEVEL TO 50%** front-panel button.
7. Set the horizontal **SCALE** to 250 μs.
8. Push the **Save Current Setup** main-menu button.
9. Push the **To File** side-menu button.
10. Turn the general purpose knob to select the file to which to save the current settings. Select `TEK?????.SET`. This saves the settings to a file starting with `TEK`, then containing five digits, and a .SET extension. For example, if you are using a blank disk, the file name will be `TEK00000.SET`.
11. Push the **Save To Selected File** side-menu button. The oscilloscope writes the current settings out to the file.

12. Push the **SAVE/RECALL** front-panel button.
13. Push the **Recall Factory Setup** main-menu button.
14. Push the **OK Confirm Factory Init** side-menu button. This restores the oscilloscope settings to those before you saved the settings.
15. Push the **Recall Saved Setup** main-menu button.
16. Push the **From File** side-menu button.
17. Turn the general purpose knob to select the file to which you saved the settings (step 10). If you used a blank floppy disk, this file is TEK00000.SET.
18. Push the **Recall From Selected File** side-menu button. The oscilloscope reads the current settings from the selected file and resets its settings. The displayed signal should show a horizontal setting of 250 μs and the trigger at 50%.
19. Disconnect the probe from the channel input and the PROBE COMP terminal. You are done running the file system functional test.

Performance Tests

These procedures confirm that the oscilloscope functions within warranted limits.The procedures are in three groupings: *Signal Acquisition System Check*s, *Time Base System Checks*, and *Trigger System Checks*. They check all the characteristics that appear in **boldface** type under *Warranted Characteristics* on page 1–1.

Prerequisites

The tests in this subsection comprise an extensive, valid confirmation of performance and functionality when the following requirements are met:

- The cabinet must be installed.
- You must have performed and passed the procedures under *Self Test*, on page 4–5, and those under *Functional Test*, on page 4–7.
- The oscilloscope must have been operating for a warm-up period of at least 20 minutes, and must be operating at an ambient temperature between –10° C and +55° C.

Signal Acquisition System Checks

These procedures check signal acquisition system characteristics that are listed as checked under *Warranted Characteristics* in the *Specifications* section.

Check DC Voltage Measurement Accuracy

WARNING. *Performance of this procedure requires input voltages up to 98 VDC. Contact with live circuits could cause injury or death. Be sure to set the DC calibration generator to 0 volts before connecting, disconnecting, or moving the test hookup during the performance of this procedure.*

Equipment Required: One dual-banana connector (Item 3), one DC calibration generator (Item 6), and one precision coaxial cable (Item 2).

Time Required: Approximately 35 minutes.

Prerequisites: The oscilloscope must meet the prerequisites listed on page 4–11.

Procedure:

1. Set the output of a DC calibration generator to 0 volts.
2. Connect the output of a DC calibration generator through a dual-banana connector followed by a 50 Ω precision coaxial cable to **CH 1**, as shown in Figure 4–5.

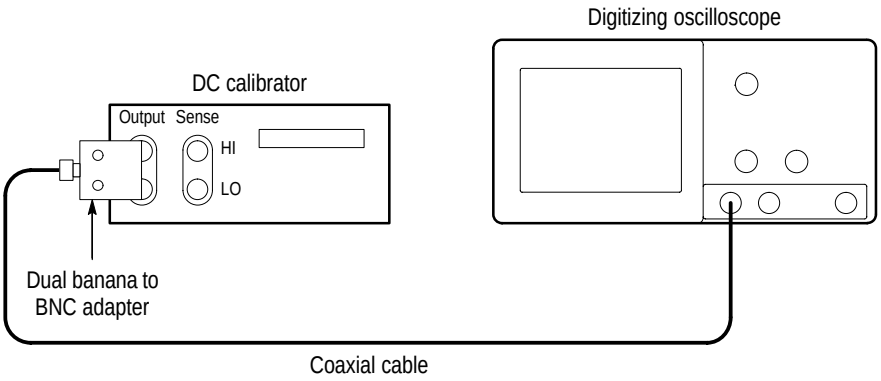


Figure 4–5: Hookup for DC voltage measurement accuracy check

3. Press **SAVE/RECALL SETUP → Recall Factory Setup → OK Confirm Factory Init**.
4. Press **ACQUIRE → Mode → Average 16**.
5. Press **MEASURE → Select Measurement**.
6. Press the side menu button **more** until the menu label **Mean** appears in the side menu. Press the side menu button **Mean**.
7. Set the vertical **SCALE** to one of the settings listed in Table 4–2 that you have not yet checked. (Start with the first setting listed.)
8. Press **VERTICAL MENU → Position**.
9. Turn the **General Purpose Knob** to set the vertical position to the setting listed in Table 4–2. The baseline level moves off screen.
10. Press the main menu button **Offset**.

11. Use the **General Purpose Knob** to set vertical offset to the setting listed in Table 4–2 for the present vertical scale setting. The baseline level remains off screen.

Table 4–2: DC accuracy

Vertical scale setting	Position setting (divs)	Offset setting	Generator setting	Accuracy limits
1 V	+5	+100 V	+98 V	+97.1 V to +98.9 V
200 mV	+5	+10 V	+8.4 V	+8.28 V to +8.52 V
50 mV	–5	–1 V	–0.6 V	–581 mV to –619 mV
50 mV	–5	–1 V	–0.9 V	–881 mV to –919 mV
Δ at 50 mV				+286 mV to +314 mV
10 mV	–5	0 V	+60 mV	+54.6 mV to +65.4 mV
5 mV	0	–1 V	–990 mV	–982 mV to –998 mV

12. Set the generator to the level and polarity indicated in Table 4–2 for the vertical scale, position, and offset settings you have made. The DC test level should appear on screen. (If it does not return, the DC accuracy check has failed for the present vertical scale setting of the current channel.)

13. Check that the readout for the measurement **Mean** readout on screen is within the limits listed for the present vertical scale and position/offset/generator settings.

14. Repeat steps 7 through 13 until you have checked all the vertical scale settings listed in Table 4–2. Record the measurements for each of the 50 mV settings.

15. Subtract the second 50 mV measurement from the first and compare the result to the "Δ at 50 mV" limits in Table 4–2.

16. Press **WAVEFORM OFF**; then, press **CH 2**.

17. Set the generator output to 0 V.

18. Move the test hookup to the **CH 2** input.

19. Repeat steps 5 through 15 for channel 2.

20. Set the generator output to 0 V.

21. Disconnect the cable at the **CH 2** input connector.

DC Gain Accuracy

DC gain accuracy is verified by successful completion of the self tests and the DC voltage measurement accuracy (in the previous procedure).

Offset Accuracy

Offset accuracy is verified by successful completion of the self tests and the DC voltage measurement accuracy (in the previous procedure).

Check Analog Bandwidth

Equipment Required: One leveled sine wave generator (Item 7 or 8), one 50 Ω precision cable (Item 2), and one 50 Ω termination (Item 1).

Time Required: Approximately 20 minutes.

Prerequisites: See page 4–11.

Procedure:

1. Connect, through a 50 Ω precision cable and a 50 Ω termination, the sine wave output of a leveled sine wave generator to **CH 1** (see Figure 4–6). Set the output of the generator to a reference frequency of 50 kHz.

NOTE. *If you are verifying a TDS 380, you need a leveled sine wave generator with a 400 MHz output frequency. Refer to* Sine Wave Generator Leveling Procedure *on page 4–20 for information on obtaining a leveled output from an unleveled sine wave generator.*

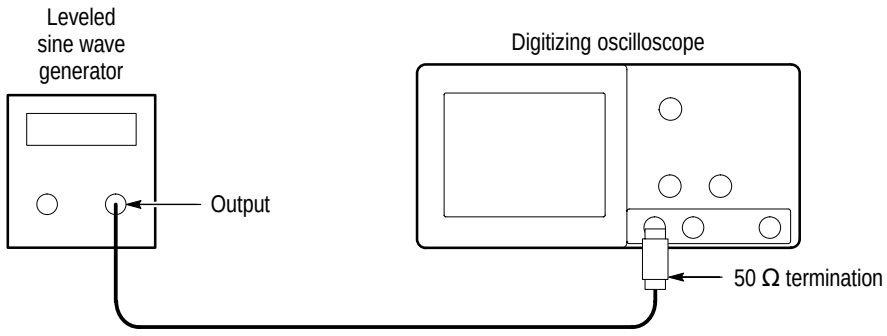


Figure 4–6: Hookup for analog bandwidth check

1. Press **SAVE/RECALL SETUP → Recall Factory Setup → OK Confirm Factory Init**.
2. Set the horizontal **SCALE** to 10 µs/div.
3. Press **TRIGGER MENU → Coupling → Noise Rej**.
4. Press **ACQUIRE → Mode → Average 16**.

5. Press **MEASURE → High-Low Setup → Min-Max**.
6. Press the main menu button **Select Measurement**. Now press the side menu button **more** until the menu label **Pk-Pk** appears in the side menu. Press the side menu button **Pk-Pk**.
7. Set the vertical **SCALE** to 10 mV/div.
8. Set the generator output so the **CHx Pk-Pk** readout equals 60 mV.
9. Press **SET LEVEL TO 50%** as necessary to trigger the display.
10. Increase the frequency of the generator output to 100 MHz (TDS 340), 200 MHz (TDS 360), or 400 MHz (TDS 380).
11. Set the horizontal **SCALE** to 5 ns/div (TDS 340), 2.5 ns/div (TDS 360), or 2.5 ns/div (TDS 380).
12. Press **SET LEVEL TO 50%** as necessary to trigger the display.
13. Check that the **Pk-Pk** readout on screen (as shown in Figure 4–7) is ≥42.5 mV.

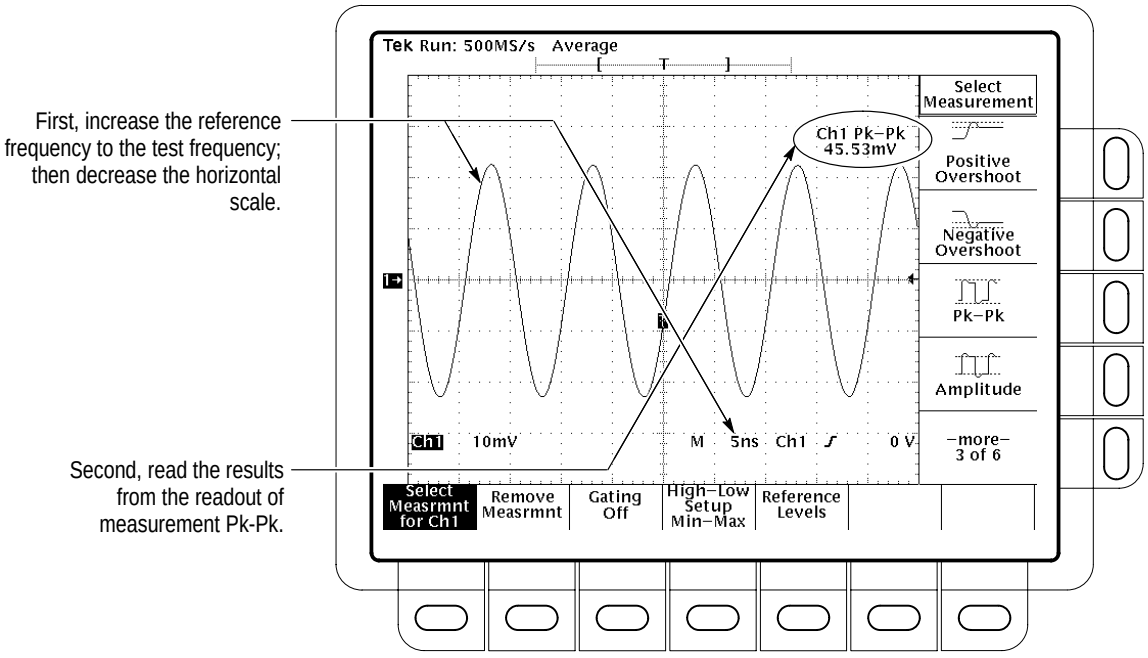


Figure 4–7: Measuring analog bandwidth

14. When finished checking, set the horizontal **SCALE** back to the 10 µs/div setting, and set the generator output frequency back to 50 kHz.
15. Press **WAVEFORM OFF** to remove Channel 1 from the display.
16. Press **CH 2** and move the hookup to the **CH 2** input.
17. Press **TRIGGER MENU → Source → CH 2**.
18. Repeat steps 6 through 13 for **CH 2**.
19. Disconnect the test hook up from the **CH 2** input connector.

Time Base System Checks

This procedure checks those characteristics that relate to the Main and Delayed time base system and are listed as checked under *Warranted Characteristics* in the *Specifications* section.

Check Long-Term Sample Rate and Delay Time Accuracy

Equipment Required: One time-marker generator (Item 9), one precision coaxial cable, (Item 2) and one 50 Ω termination (Item 1).

Time Required: Approximately 5 minutes.

Prerequisites: See page 4–11.

Procedure:

1. Connect, through a 50 Ω precision coaxial cable and a 50 Ω termination, the time-mark output of a time-marker generator to **CH 1**, as shown in Figure 4–8. Set the output of the generator for 10 ms markers.

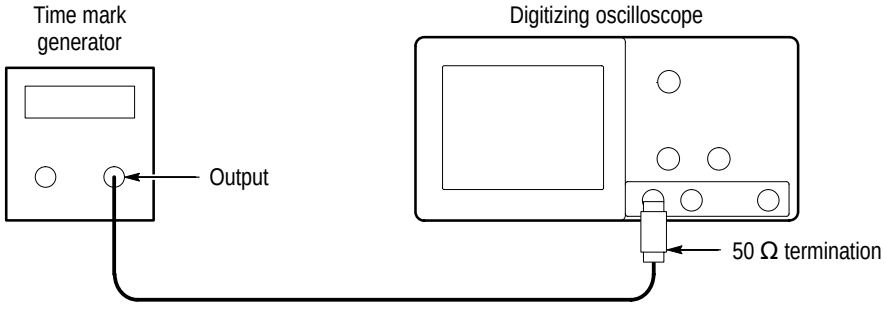


Figure 4–8: Hookup for sample rate check

2. Press **SAVE/RECALL SETUP → Recall Factory Setup → OK Confirm Factory Init**.
3. Set the vertical **SCALE** to 500 mV/div.
4. Press **SET LEVEL TO 50%**; use the vertical **POSITION** knob to center the test signal on screen.
5. Set the horizontal **SCALE** to 1 ms/div.
6. Press **HORIZONTAL MENU → Trigger Position → Set to 10%**.
7. Adjust the horizontal **POSITION** to move the trigger **T** to the right and on to the screen. Continue to position the trigger **T** to align it to the center vertical graticule line.
8. Press the main menu button **Time Base**; then press the side menu button **Delayed Only**.
9. Set the horizontal **SCALE** of the **D** (delayed) time base to 1 ms/div. Then use the **General Purpose** knob to set delay time to 10 ms.
10. Set the horizontal **SCALE** of the **D** (delayed) time base to 500 ns/div.

NOTE. *When you change the **SEC/DIV** in step 10, the delay time readout changes to 10.00001 or 9.99999. This is normal and has no effect on the verification*

11. Check that the rising edge of the marker crosses the center horizontal graticule line at a point within ±2.0 divisions of the graticule center.

NOTE. *One division of displacement from the center graticule corresponds to a 50 ppm time base error.*

12. Disconnect the test hookup.

Delta Time Measurement Accuracy

Delta time measurement accuracy is verified by successful completion of the previous procedure.

Trigger System Checks

These procedures check those characteristics that relate to the trigger system and are listed as checked under *Warranted Characteristics* in the *Specifications* section.

Check Edge Trigger Sensitivity, DC Coupled

Equipment Required: One leveled sine wave generator (Item 7 or 8), two precision 50 Ω coaxial cables (Item 2), one 50 Ω termination (Item 1), and one BNC T connector (Item 4).

Time Required: Approximately 10 minutes.

Prerequisites: See page 4–11.

Procedure:

1. Press **SAVE/RECALL SETUP → Recall Factory Setup → OK Confirm Factory Init**.
2. Set the vertical **SCALE** to 500 mV/div.
3. Set the horizontal **SCALE** to 10 ns/div.
4. Press **TRIGGER MENU → Mode → Normal**.
5. Press **ACQUIRE → Mode → Average 16**.
6. Connect one 50 Ω cable to the output of the sine wave generator. Attach a BNC T connector to the other end of the cable. Connect a second 50 Ω cable to the other side of the BNC T connector.
7. Connect the BNC T connector to **CH 1**; connect the cable to the **EXT TRIG** input through a 50 Ω termination as shown in Figure 4–9.

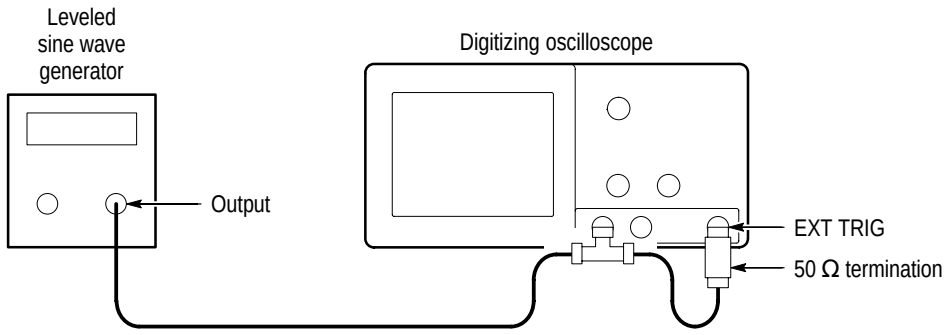


Figure 4–9: Hookup for trigger sensitivity check

8. Set the generator frequency to 100 MHz (TDS 340), 200 MHz (TDS 360), or 400 MHz (TDS 380).
9. Press **MEASURE → High-Low Setup → Min-Max**.
10. Press the main menu button **Select Measurement**.
11. Press the side menu button **-more-** until **Amplitude** appears in the side menu. Press the side menu button **Amplitude**.
12. Press **SET LEVEL TO 50%**.
13. Set the test signal amplitude for about one division on screen. Fine adjust the generator output until the **CH 1 Amplitude** readout indicates the amplitude is 500 mV. (Readout may fluctuate around 500 mV.)
14. Press **TRIGGER MENU → Slope**.
15. Press **SET LEVEL TO 50%**. Check that a stable trigger is obtained for the test waveform on both the positive and negative slopes (see Figure 4–10). (Use the side menu to switch between trigger slopes; use the trigger **LEVEL** knob to stabilize the trigger if required.)

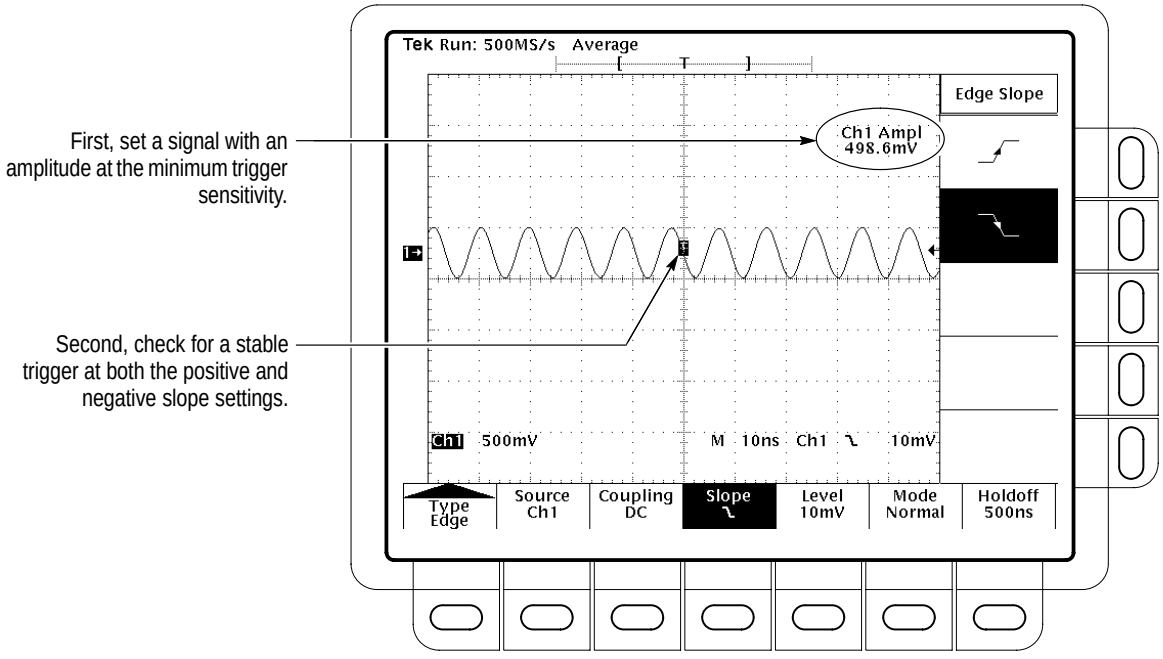


Figure 4–10: Measuring trigger sensitivity

16. Press **WAVEFORM OFF**.
17. Press **CH 2**.
18. Press **TRIGGER MENU → Source → Ch2**.
19. Disconnect the hookup from **CH 1** and connect it to **CH 2**.
20. Set the vertical **SCALE** to 500 mV/div.
21. Repeat steps 14 and 15 for Channel 2.
22. Press **TRIGGER MENU → Source → EXT/10**.
23. Press **MEASURE → Select Measrmnt → Amplitude**.
24. Increase the generator amplitude until the amplitude measurement reads 1.5 V if you are checking a TDS 340 or TDS 360. Increase the generator amplitude until the amplitude measurement reads 4.0 V if you are checking a TDS 380.
25. Repeat steps 14 and 15 for the external trigger.
26. Disconnect the test hookup.

Trigger Level Accuracy, DC Coupled

Trigger level accuracy is verified by the successful completion of the Self Tests and the DC voltage measurement accuracy procedure on page 4–11.

This completes the performance verification procedure.

Sine Wave Generator Leveling Procedure

Some procedures in this manual require a sine wave generator to produce the necessary test signals. If you do not have a leveled sine wave generator, use the following procedure to level the output amplitude of your sine wave generator using a power meter.

Equipment Required: Sine wave generator, level meter and power sensor, power splitter, and one precision coaxial cable.

Time Required: About 5 minutes.

Prerequisites: See page 4–11.

Procedure:

1. Connect the equipment as shown in Figure 4–11.
2. Set the sine wave generator to a reference frequency of 50 kHz.

3. Adjust the sine wave generator amplitude to the required number of divisions as measured by the oscilloscope.
4. Note the reading on the level meter.
5. Change the sine wave generator to the desired new frequency.
6. Input the correction factor for the new frequency into the level meter.
7. Adjust the sine wave generator amplitude until the level meter again reads the value noted in step 4. The signal amplitude is now correctly set for the new frequency.

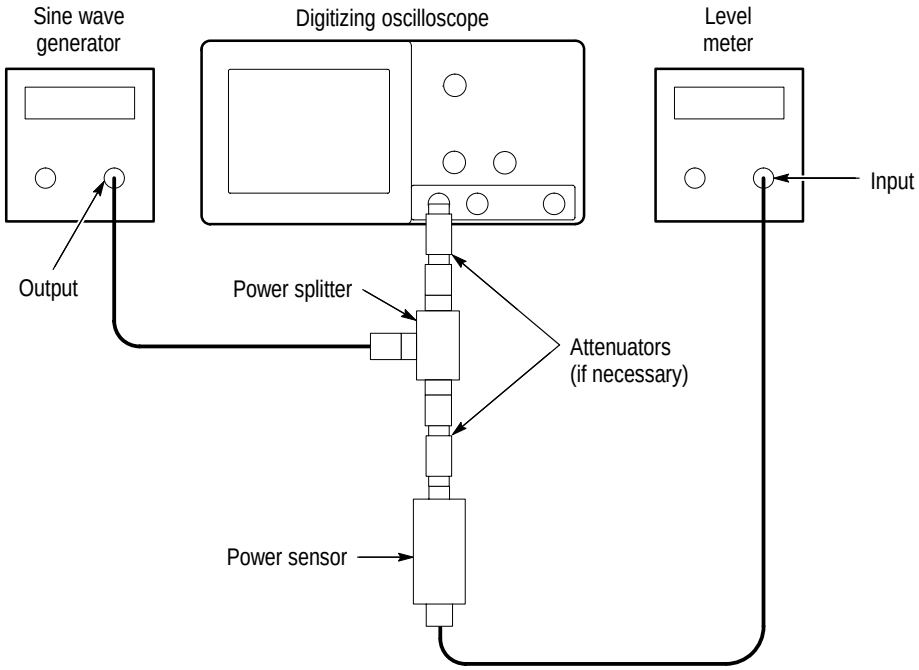


Figure 4–11: Hookup for sine wave generator leveling

Adjustment Procedures

This chapter contains information you need to adjust the TDS 340A, TDS 360, and TDS 380. There are only three types of adjustments you can perform on the oscilloscope: the automated and semiautomated adjustments in the system calibration menu, attenuator adjustments, and monitor adjustments.

You should do the signal path compensation adjustment after servicing your instrument or moving your instrument to a new operating environment (±5° C temperature change). The other adjustment procedures may be necessary if the instrument fails one of the *Performance Tests* in the previous section.

Let the instrument warm up for 20 minutes before performing any adjustments.

Adjustment Interval. These adjustments should be done once a year.

Equipment Required

Table 5–1 lists the equipment you will need to do the adjustment procedures.

Table 5–1: Adjustment equipment

Item number and description	Minimum requirements	Example	Purpose
1. Adjustment Tool	0.075 inch slot screwdriver	Tektronix part number 003-1433-01 (standard probe adjustment tool)	Monitor and attenuator adjustments
2. Termination, 50 Ω	Impedance 50 Ω; connectors: female BNC input, male BNC output	Tektronix part number 011-0049-01	Timing calibration and attenuator adjustment
3. Cable, Precision Coaxial	50 Ω, 36 in, male to male BNC connectors	Tektronix part number 012-0482-00	Attenuator adjustments and system calibration
4. Generator, DC Calibration	Variable amplitude to ±10 V; accuracy to 0.05%	Wavetek 9100 Calibration System with Option 250	Voltage and external trigger calibrations
5. Generator, Fast-rise Step	$t_r \leq 10$ ns; amplitude $\leq 1\ V_{p-p}$	Wavetek 9100 Calibration System with Option 250	Timing calibration and attenuator adjustment

The System Calibration Menu

The oscilloscope has four onboard calibration routines. You can access these routines through the system calibration menu. Use the following procedure.

***NOTE**. The Voltage, Timing, and External Trigger calibration routines are disabled at the factory. To enable the calibration menus, refer to* Enabling Calibration Menus *on page 6–35.*

Equipment Required: One DC calibration generator (Item 4), one precision coaxial cable (Item 3), one fast–rise step generator (Item 5), and one 50 Ω termination (Item 2).

1. Press **UTILITY**.
2. Press the leftmost main menu button until the pop-up menu shows the **Cal** selection. This calls up the system calibration menu, shown in Figure 5–1.

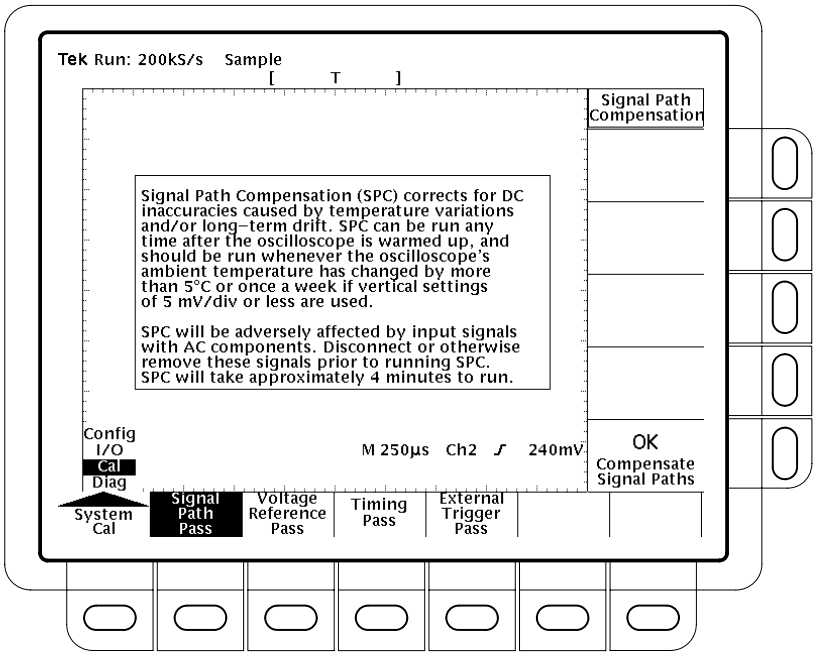


Figure 5–1: The system calibration menu

3. Remove all input signals from the front panel BNC connectors.
4. Press the main menu button **Voltage Reference**. Read the on-screen text before continuing.

5. Press the side menu button **OK Calibrate Voltage Ref**. Connect a DC calibration generator (Item 4) to the **CH 1** input through a 50 Ω coaxial cable (Item 3) and follow the instructions on the screen.
6. Press **UTILITY**.
7. Press the main menu button **Signal Path**. Read the on-screen text before continuing.
8. Press the side menu button **OK Compensate Signal Paths**.
9. Wait. The signal path compensation routine takes about four minutes to run.
10. Move the DC calibration generator (Item 4) from the **CH 1** input to the **EXT TRIG** input.
11. Press **UTILITY**.
12. Press the main menu button **Ext Trig**. Read the on-screen text before continuing.
13. Press the side menu button **OK Calibrate External Trig**. Follow the instructions on the screen.
14. Disconnect the DC calibration generator and connect the –1 V fast rise output of a calibration generator to the **CH 1** input through a 50 Ω coaxial cable and a 50 Ω termination (Item 2).
15. Set the calibration generator to output a 1 ms, fast rise signal; set the pulse amplitude to 50%.
16. Press **SAVE/RECALL SETUP**. Press the main menu button **Recall Factory Setup**; then press the side menu button **OK Confirm Factory Init**.
17. Press **AUTOSET**. Then adjust the vertical **POSITION** control to center the waveform on the screen so that the trigger arrow is at the center graticule, set the **VOLTS/DIV** to 50 mV, and set the **SEC/DIV** to 250 ns. This should result in a waveform similar to the one shown in Figure 5–2.

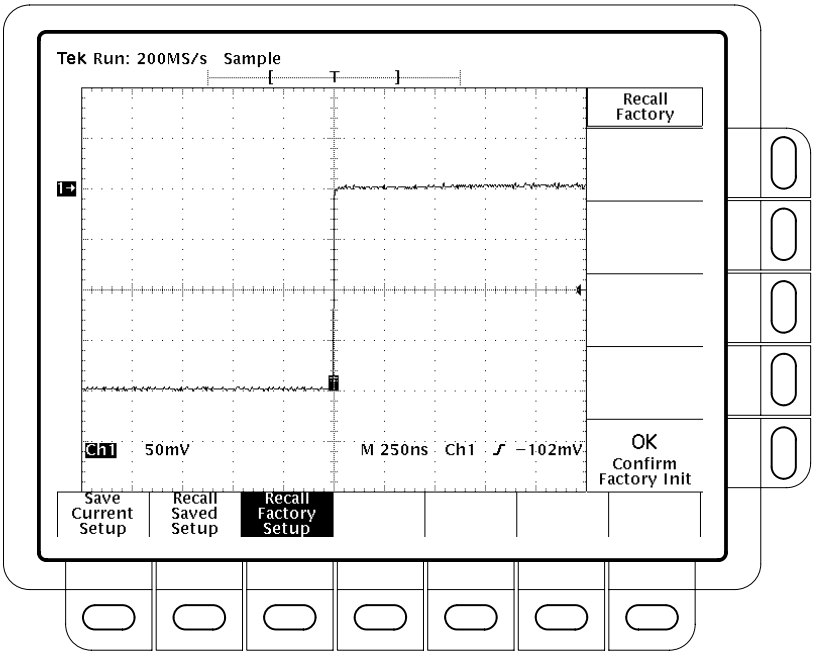


Figure 5–2: Timing compensation waveform

18. Press **UTILITY**.

19. Press the main menu button **Timing**. Read the on-screen text before continuing.

20. Press the side menu button **OK Compensate Timing**. Follow the instructions on the screen.

Attenuator Adjustment

Use this procedure to adjust the low-frequency compensation of the channel 1 and channel 2 attenuators. You should perform this procedure if your oscilloscope demonstrates gross rounding or overshoot of square-wave input signals or if your instrument fails one of the *Performance Tests* in the previous section.

Equipment Required: One adjustment tool (Item 1), one precision coaxial cable (Item 3), one fast–rise step generator (Item 5), and one 50 Ω termination (Item 2).

1. Remove the instrument cabinet as described in the removal procedure on page 6–11.

2. Set the oscilloscope on its left side with its front facing toward you.

3. Power up the oscilloscope and press **SAVE/RECALL SETUP**.

4. Press the main menu button **Recall Factory Setup**; then press the side menu button **OK Confirm Factory Init**.
5. Press **CLEAR MENU**.
6. Connect the high output of a fast–rise step generator (Item 5) to the **CH 1** BNC through a 50 Ω coaxial cable (Item 3) and a 50 Ω termination (Item 2). (See Figure 5–3.)
7. Set the calibration generator to output a high amplitude, 1 kHz signal. Set the pulse amplitude to 25%.
8. Set the oscilloscope **VOLTS/DIV** to 200 mV, the **SEC/DIV** to 10 μs, and adjust the pulse amplitude for a five division display.
9. Press **SET LEVEL TO 50%**.
10. Use the vertical **POSITION** control to place the top of the waveform near center screen.
11. Set the **VOLTS/DIV** to 100 mV.
12. Use an adjustment tool (Item 1) to adjust the CH 1 10X capacitor for the flattest response. (See Figure 5–3.)
13. Remove the 50 Ω termination from the setup.
14. Set the **VOLTS/DIV** to 2 V.

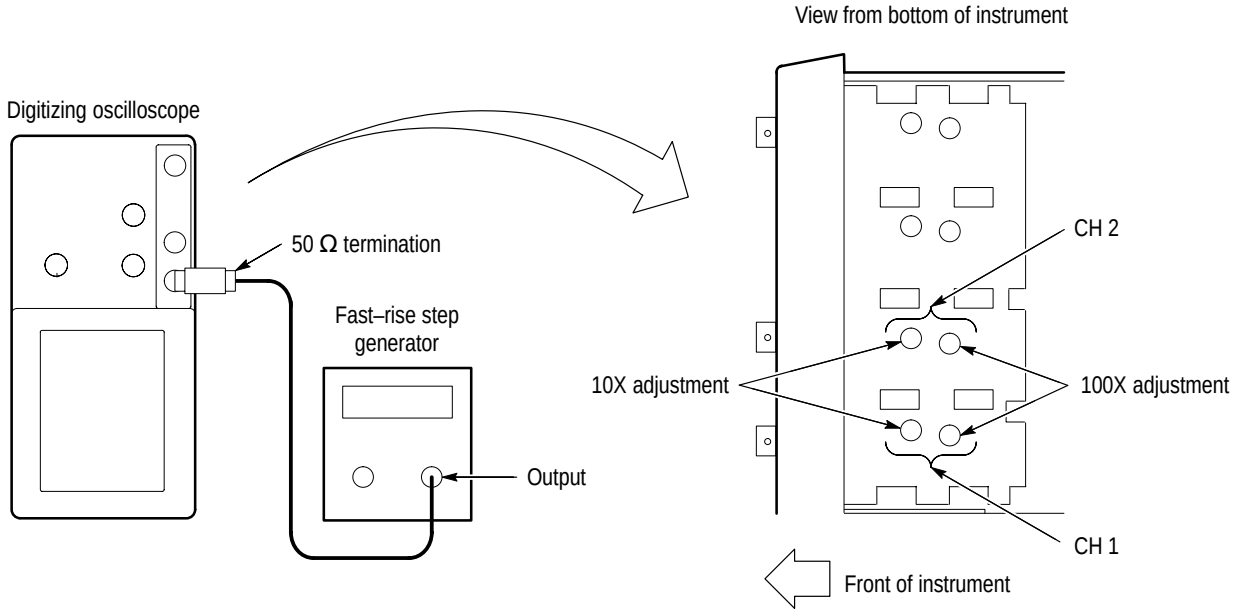


Figure 5–3: Attenuator adjustment setup and locations

15. Press **SET LEVEL TO 50%**.
16. Adjust the pulse amplitude for a five-division display.
17. Set the **VOLTS/DIV** to 1 V.
18. Use an adjustment tool to adjust the CH 1 100X capacitor for the flattest response.
19. Press **WAVEFORM OFF**, **CH 2**, and **TRIGGER MENU**, *in that order.*
20. Press the main menu button **SOURCE**; then press the side menu button **Ch2**.
21. Move the coaxial cable to the **CH 2** BNC input, reinstalling the 50 Ω termination.
22. Repeat steps 7 through 18 for channel 2.
23. Reinstall the instrument cabinet.

Monitor Adjustments

There are no set performance requirements for the monitor. You may use this procedure to change monitor parameters whenever the brightness, contrast, horizontal position, or vertical position of the display is not to your liking.

Equipment Required: One adjustment tool (Item 1).

1. Remove the instrument cabinet as described in the removal procedure on page 6–11.
2. Set the oscilloscope bottom-down with its front facing toward you.
3. Turn on the oscilloscope and allow a 20 minute warm-up period.
4. Press **DISPLAY**.
5. Press the main menu button **Intensity**. Use the side menu to set overall intensity to 100%, **Text/Grat** to bright, and **Waveform** to bright.
6. Locate the brightness potentiometer (see Figure 5–4). Use an adjustment tool (Item 1) to raise the brightness until the background of the screen turns green.

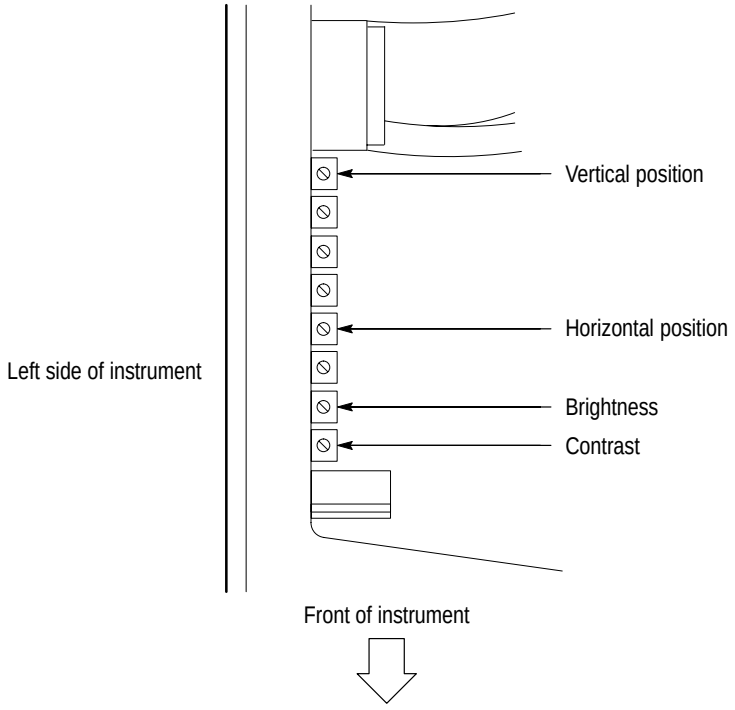


Figure 5–4: Monitor adjustments

7. Now lower the brightness *just beyond the point* where the background fades to black.
8. Locate the contrast potentiometer. Adjust the contrast to your taste.

CAUTION. *The higher the contrast, the higher the likelihood that prolonged use will cause CRT burn-in.*

9. Locate the vertical position potentiometer. Adjust the vertical position until the display is vertically centered on the screen.
10. Locate the horizontal position potentiometer. Adjust the horizontal position until the display is horizontally centered on the screen.

Maintenance

This chapter describes how to inspect, clean, remove, and troubleshoot the oscilloscope at the module level.

Preventive maintenance, when done regularly, may prevent oscilloscope malfunction and enhance its reliability. Preventive maintenance consists of visually inspecting and cleaning the oscilloscope and using general care when operating it. How often to do maintenance depends on the severity of the environment in which you use the oscilloscope. A proper time to perform preventive maintenance is just before oscilloscope adjustment.

Preventing ESD

CAUTION. *Static discharge can damage any semiconductor component in this oscilloscope.*

Precautions

When performing any service which requires internal access to the oscilloscope, adhere to the following precautions to avoid damaging internal modules and their components due to electrostatic discharge (ESD).

1. Minimize handling of static-sensitive modules.
2. Transport and store static-sensitive modules in their static protected containers. Label any package that contains static-sensitive modules.
3. Discharge the static voltage from your body by wearing a grounded antistatic wrist strap while handling these modules. Do service of static-sensitive modules only at a static-free work station.
4. Do not remove the oscilloscope cabinet unless you have met precaution number 3, above. Consider all internal modules static-sensitive.
5. Nothing capable of generating or holding a static charge should be allowed on the work station surface.
6. Handle circuit boards by the edges when possible.
7. Do not slide the modules over any surface.
8. Avoid handling modules in areas that have a floor or work-surface covering capable of generating a static charge.
9. Do not use high-velocity compressed air when cleaning dust from modules.

General Care

The cabinet helps keep dust out of the oscilloscope and it is a major component of its cooling system. It should normally be in place when operating the oscilloscope. The optional oscilloscope front cover protects the front panel and display from dust and damage. Install it when storing or transporting the oscilloscope.

Inspection and Cleaning Procedures

Inspect and clean the oscilloscope as often as operating conditions require. The collection of dirt on components inside can cause them to overheat and breakdown. (Dirt acts as an insulating blanket, preventing efficient heat dissipation.) Dirt also provides an electrical conduction path that could cause an oscilloscope failure, especially under high-humidity conditions.

CAUTION. *Avoid the use of chemical cleaning agents that might damage the plastics used in this oscilloscope. Use only deionized water when cleaning the menu buttons or front-panel buttons. Use a 75% isopropyl alcohol solution as a cleaner and rinse with deionized water. Before using any other type of cleaner, consult your Tektronix Service Center or representative.*

Avoid the use of high pressure compressed air when cleaning dust from the interior of this instrument. (High pressure air can cause ESD.) Instead, use low pressure compressed air (about 9 psi).

Inspection — Exterior

Using Table 6–1 as a guide, inspect the outside of the oscilloscope for damage, wear, and missing parts. You should thoroughly check oscilloscopes that appear to have been dropped or otherwise abused to verify correct operation and performance. Immediately repair defects that could cause personal injury or lead to further damage to the oscilloscope.

Table 6–1: External inspection check list

Item	Inspect for	Repair action
Cabinet, front panel, and cover	Cracks, scratches, deformations, damaged hardware or gaskets	Replace defective module
Front-panel knobs	Missing, damaged, or loose knobs	Repair or replace missing or defective knobs
Connectors	Broken shells, cracked insulation, and deformed contacts. Dirt in connectors	Replace defective modules. Clear or wash out dirt
Carrying handle and cabinet feet	Correct operation	Replace defective module
Accessories	Missing items or parts of items, bent pins, broken or frayed cables, and damaged connectors	Replace damaged or missing items, frayed cables, and defective modules

Cleaning Procedure — Exterior

WARNING. *To avoid injury or death, unplug the power cord from line voltage before cleaning the oscilloscope. To avoid getting moisture inside the oscilloscope during external cleaning, use only enough liquid to dampen the cloth or applicator.*

1. Remove loose dust on the outside of the oscilloscope with a lint free cloth.
2. Remove remaining dirt with a lint free cloth dampened in a general purpose detergent-and-water solution. Do not use abrasive cleaners.
3. Clean the monitor screen with a lint-free cloth dampened with either isopropyl alcohol or, preferably, a gentle, general purpose detergent-and-water solution.

Inspection — Interior

To access the inside of the oscilloscope for inspection and cleaning, refer to the *Removal and Replacement* procedures in this section.

Inspect the internal portions of the oscilloscope for damage and wear, using Table 6–2 as a guide. You should repair defects immediately.

If you replace any electrical module, perform the adjustment procedures, beginning on page 5–1.

CAUTION. *To prevent damage from electrical arcing, ensure that circuit boards and components are dry before applying power to the oscilloscope.*

Table 6–2: Internal inspection check list

Item	Inspect for	Repair action
Circuit boards	Loose, broken, or corroded solder connections. Burned circuit boards. Burned, broken, or cracked circuit-run plating	Remove the failed module and replace it with a new module
Resistors	Burned, cracked, broken, or blistered condition	Remove the module with the faulty resistor and replace it with a new module
Solder connections	Cold solder or rosin joints	Resolder joint and clean with isopropyl alcohol
Capacitors	Damaged or leaking cases. Corroded solder on leads or terminals	Remove the module with the faulty capacitor and replace it with a new module from the factory
Wiring and cables	Loose plugs or connectors. Burned, broken, or frayed wiring	Firmly seat connectors. Repair or replace modules with defective wires or cables
Chassis	Dents and deformations	Straighten, repair, or replace chassis

Cleaning Procedure — Interior

STOP*. If, after doing steps 1 and 2, a module is clean upon inspection, skip the remaining steps.*

1. Blow off dust with dry, low-pressure, deionized air (approximately 9 psi).
2. Remove any remaining dust with a lint free cloth dampened in isopropyl alcohol (75% solution) and rinse with warm deionized water. (A cotton-tipped applicator is useful for cleaning in narrow spaces and on circuit boards.)

NOTE*. If steps 1 and 2 do not remove all the dust or dirt, the oscilloscope may be spray washed using a solution of 75% isopropyl alcohol by doing steps 3 through 7.*

3. Gain access to the parts to be cleaned by removing easily accessible shields and panels (see *Removal and Replacement* procedures).
4. Spray wash dirty parts with the isopropyl alcohol and wait 60 seconds for the majority of the alcohol to evaporate.
5. Use hot (120° F to 140° F or 48.9° C to 60° C) deionized water to thoroughly rinse them.
6. Dry all parts with low-pressure, deionized air.
7. Dry all components and assemblies in an oven or drying compartment using low-temperature (125° F to 150° F or 51.7° C to 65.5° C) circulating air.

Removal and Replacement

This section contains procedures for removal and installation of all mechanical and electrical modules.

Preparation — Please Read

WARNING. *To avoid injury or death, disconnect the power cord from the line voltage source before performing any procedure in this section.*

General Instructions

STOP. READ THESE GENERAL INSTRUCTIONS BEFORE REMOVING A MODULE.

First locate the module you want to remove in the exploded views (Figures 10–1 and 10–2 on pages 10–6 and 10–8). Then read Equipment Required *for a list of the tools needed to remove and install modules in this oscilloscope.*

To remove an internal module, you need only remove the oscilloscope cabinet (page 6–11) and then perform the removal procedure for that module. The internal modules are independently removable.

Procedures will refer to "front," "rear," "top," etc. of the oscilloscope; note from Figure 6–1 which sides are referenced.

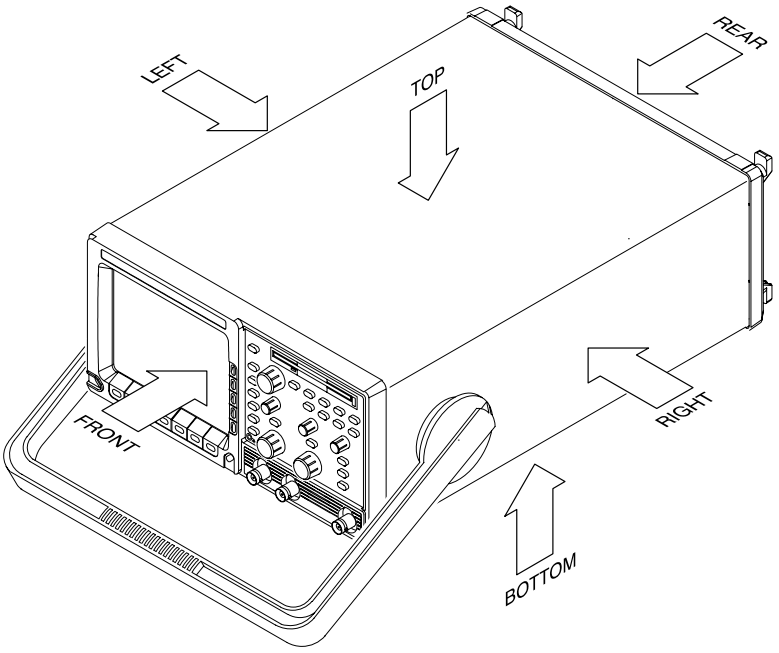


Figure 6–1: Oscilloscope orientation

Equipment Required

The tools listed in Table 6–3 are required to completely disassemble the oscilloscope into its modules. The tools required to remove an individual module are listed before the first step of its procedure.

All the tools are standard tools readily available from tool suppliers.

Table 6–3: Tools required for module removal

Item no.	Name	Description
1	Screwdriver handle	Accepts Torx®-driver bits
2	T-15 Torx tip	Torx®-driver bit for T-15 size screw heads
3	T-20 Torx tip	Torx®-driver bit for T-20 size screw heads. Used only for removal of the cabinet handle
4	Flat-bladed screwdriver	Screwdriver for removing standard-head screws
5	Pozidriv screwdriver	Screwdriver for removing Pozidriv® screws
6	Nut driver, 5/16 inch	Used for removing earth ground cables
7	Nut driver, 3/16 inch	Used for removing GPIB connector shell and EMI gasket
8	Angle-tip tweezers	Used for knob and shaft removal
9	Slip-Jaw Pliers	Used for removing the front feet from the cabinet

Table 6–3: Tools required for module removal (Cont.)

Item no.	Name	Description
10	Wooden Spudger	Used for front EMI gasket removal
11	Front Cover	This optional accessory protects the front of the oscilloscope when positioned face down in the removal procedures
12	Gloves, lint free, cloth	Used for removing the menu elastomer and menu button flex circuit
13	Soldering Iron	15 watt. Used for removal of some cables
14	Solder Wick	
15	BNC Wrench	Removing BNCs from the attenuator assembly. Tektronix 003-1463-00
16	BNC Fixture	Installing BNCs on the attenuator assembly. Tektronix 003-1464-00

Line Fuse and Line Cord

WARNING. *To avoid injury or death, unplug the line cord from the line voltage power source before continuing.*

Required tool: a flat-bladed screwdriver (Item 4).

1. Set the oscilloscope so its bottom is down on the work surface and its rear is facing you.
2. Find the line cord on the rear cover. (See Figure 6–2.) Now, remove the line-cord retaining clamp by first unplugging the line cord from its receptacle.
3. Next, grasp both the line cord and the retaining clamp and rotate them 90 degrees counter-clockwise.

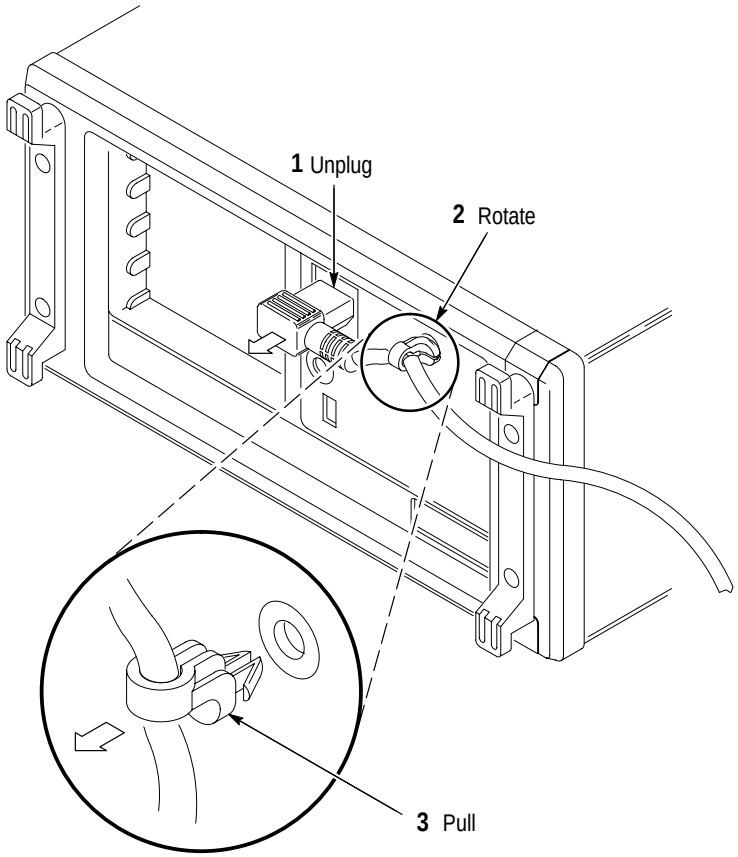


Figure 6–2: Line cord removal

4. Pull the line cord and clamp away to complete the removal.

5. Locate the fuse drawer beneath the line voltage plug on the rear panel. Pry open the drawer with a small flat-bladed screwdriver (Item 4), and remove the line fuse. (See Figure 6–3.)

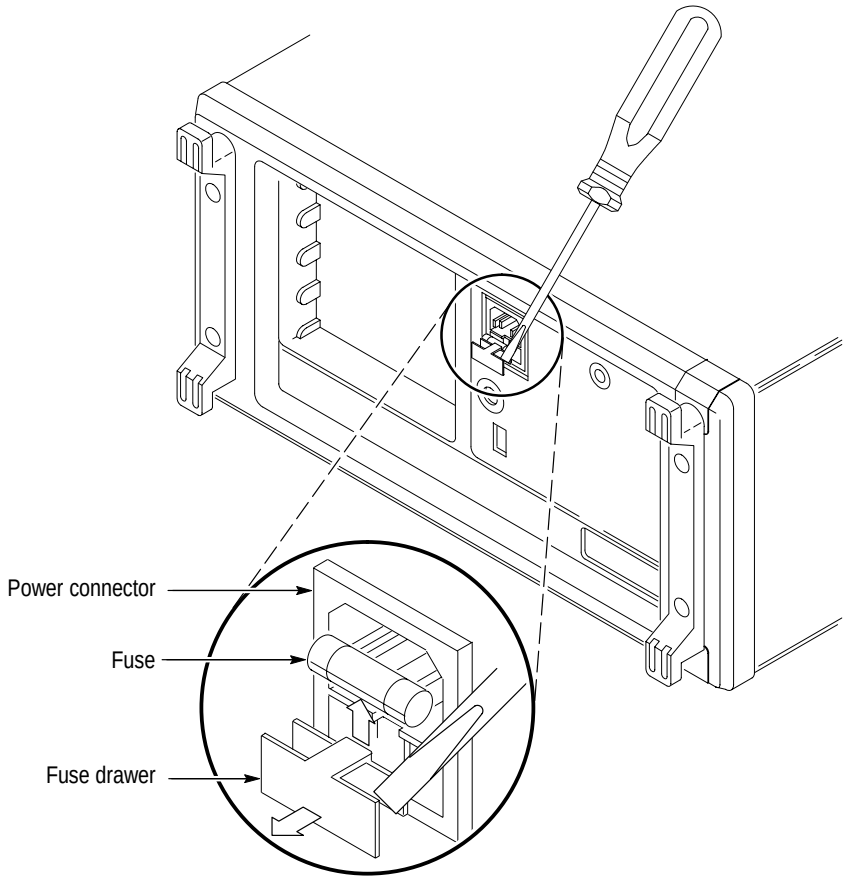


Figure 6–3: Line fuse removal

6. *Reinstallation:* Do in reverse steps 5 through 2 to reinstall the line fuse and then the line cord.

Front Panel Knobs and Shafts

Required tool: a pair of angle-tip tweezers (Item 8).

1. Set the oscilloscope so its bottom is down on the work surface and its front is facing you.
2. Refer to Figure 6–4. Grasp the knob you want to remove and pull it straight out from the front panel slightly to create some clearance between the base of the knob and the front panel.
3. Insert the tweezers between the knob and front panel and use them to remove the knob and its shaft. Pull the shaft out of the knob to remove.
4. *Reinstallation:*
   - **a.** To reinstall, align the inside of the knob to the end of the shaft and push it in until it snaps.
   - **b.** Insert the shaft of the assembled knob into its hole in the front panel assembly until it stops.
   - **c.** Rotate the knob while lightly pushing inwards until the shaft slips into its receptacle. Push all the way in to seat the knob assembly.

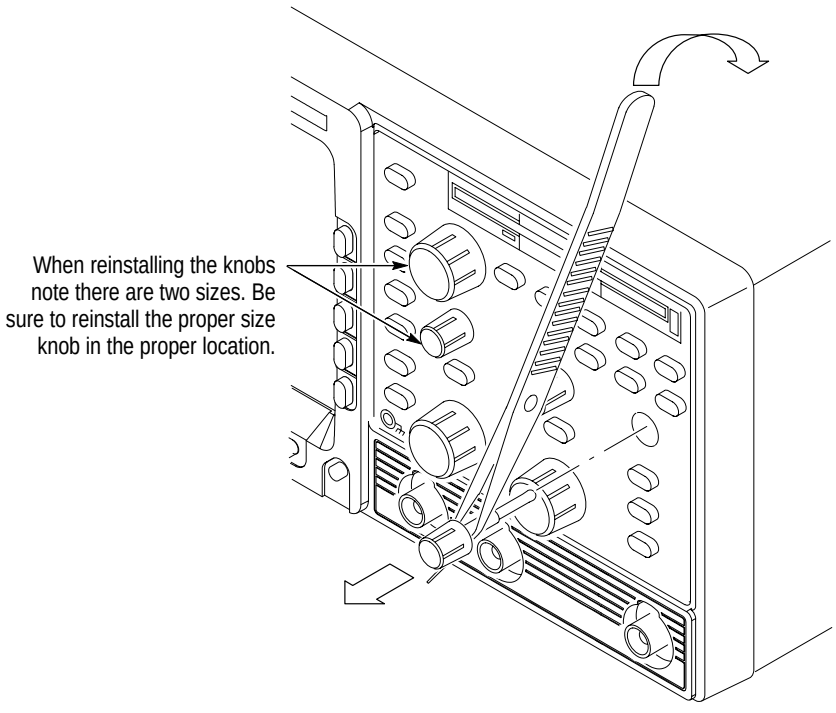


Figure 6–4: Knob and shaft removal

Rear Cover, Cabinet, and Cabinet Handle

Required tool: a screwdriver with a size T-15 Torx® tip (Items 1 and 2).

1. Pull out on both of the hubs on the cabinet handle to unlock it for positioning. While holding the hubs unlocked, rotate the handle towards the bottom of the oscilloscope.
2. Set the oscilloscope so its face is down with its front cover on the work surface and its bottom facing you. Reference Figure 6–5 on page 6–12 as you do the following steps.
3. Remove the four T-15 Torx® screws securing the rear cover to the oscilloscope. Lift off the rear cover. If no other parts are being serviced, skip to the end (step 10) of this procedure.
4. Remove the single T-15 Torx® screw at the left side of the oscilloscope.
5. Lift the cabinet upwards to slide it off the oscilloscope.
6. If no other cabinet parts are being serviced, skip the rest of this procedure.
7. Working from the inside of the cabinet, remove the T-20 Torx® screw securing each handle hub to the cabinet.
8. Working from the outside of the cabinet, grasp the two handle hubs and pull them outward from the cabinet until they are out of the cabinet.
9. While holding the handle hubs pulled out, lift the handle away to remove.
10. *Reinstallation:*
    - **a.** Do, in reverse order, steps 8 and 7 to reinstall the handle assembly.
    - **b.** Do, in reverse order, steps 5 through 3 to reinstall the cabinet, while observing the following precautions:
        - Take care not to bind or snag the cabinet on internal cabling; redress cables as necessary.
        - When sliding the cabinet onto the oscilloscope, be sure that the front and rear ridges of the main chassis slide into the grooves at the rear of the cabinet and on the front trim.
        - Install the four screws at the rear panel before installing the single screw at the left side of the cabinet.

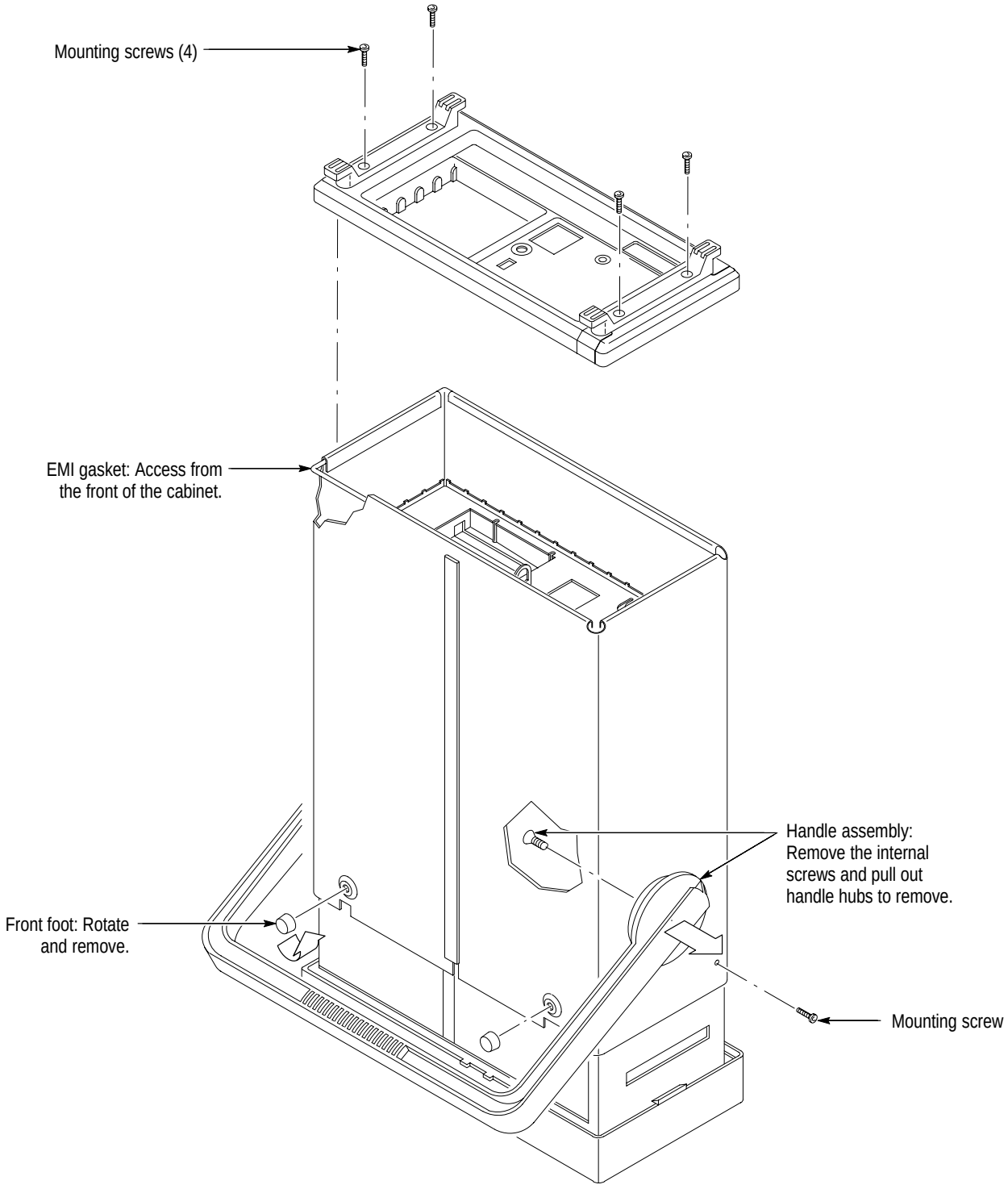


Figure 6–5: Rear cover, cabinet, and cabinet handle and feet removal

Disk Drive

Required tools: a screwdriver with a size T-15 Torx tip (items 1 and 2) and a Pozidriv screwdriver (item 5).

1. Set the oscilloscope so its bottom is down, and its front is facing you.
2. To remove the disk drive, perform the following steps using Figure 6–6 as a guide:
   - **a.** Lift up on the two locking tabs on J1 of the disk drive.
   - **b.** Remove cable J1 from the drive.
   - **c.** If present, remove the T-15 Torx-drive screw that clamps the drive in the chassis. When replacing the drive, do not reinstall this screw.
   - **d.** Remove the one or two screws securing the drive to the chassis. When replacing a drive without a spacer, use one 4.0 mm screw.
   - **e.** Push the drive from the back until it extends one to two inches beyond the front panel. Then grasp the drive by its front edges and pull it out of the front panel to complete its removal.
   - **f.** If present, remove the screw securing the spacer to the drive, and lift the spacer away from the drive to complete the removal.
3. To reinstall the disk drive, perform steps 2a-2f in reverse order.

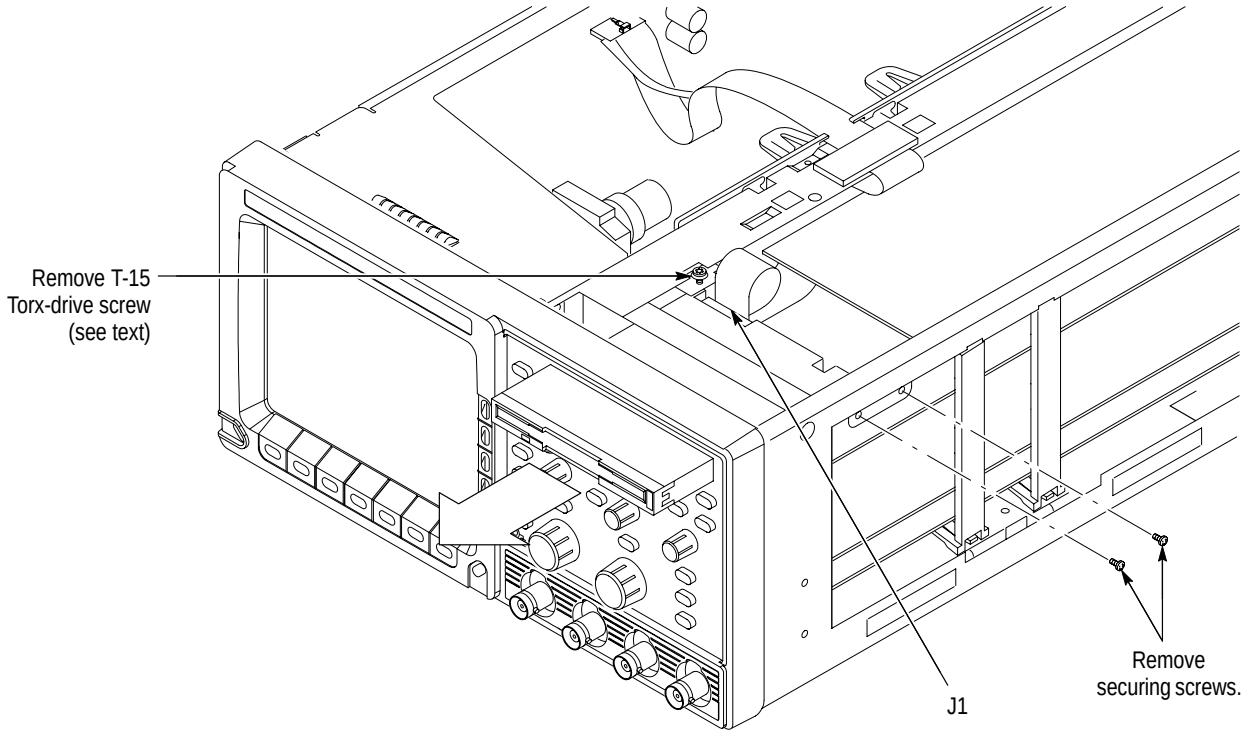


Figure 6–6: Removing the disk drive

Trim Ring, Menu Elastomer, Menu Buttons, and Front EMI Gaskets

Required tool: a wooden spudger (Item 10).

1. Set the oscilloscope so its rear is down on the work surface and its bottom is facing you.

STOP*. DO NOT touch the carbon contact points on the menu elastomer installed in the trim ring. Also, do not touch the contacts on the menu button flex circuit exposed when you remove the trim ring. You should wear clean cloth gloves that are free of lint when handling the menu elastomer or when touching the menu button flex circuit mounted on the front chassis.*

2. Grasp the trim ring by its top edge, pry it up, and lift it forward to snap it off the top front of the main chassis (see Figure 6–7).

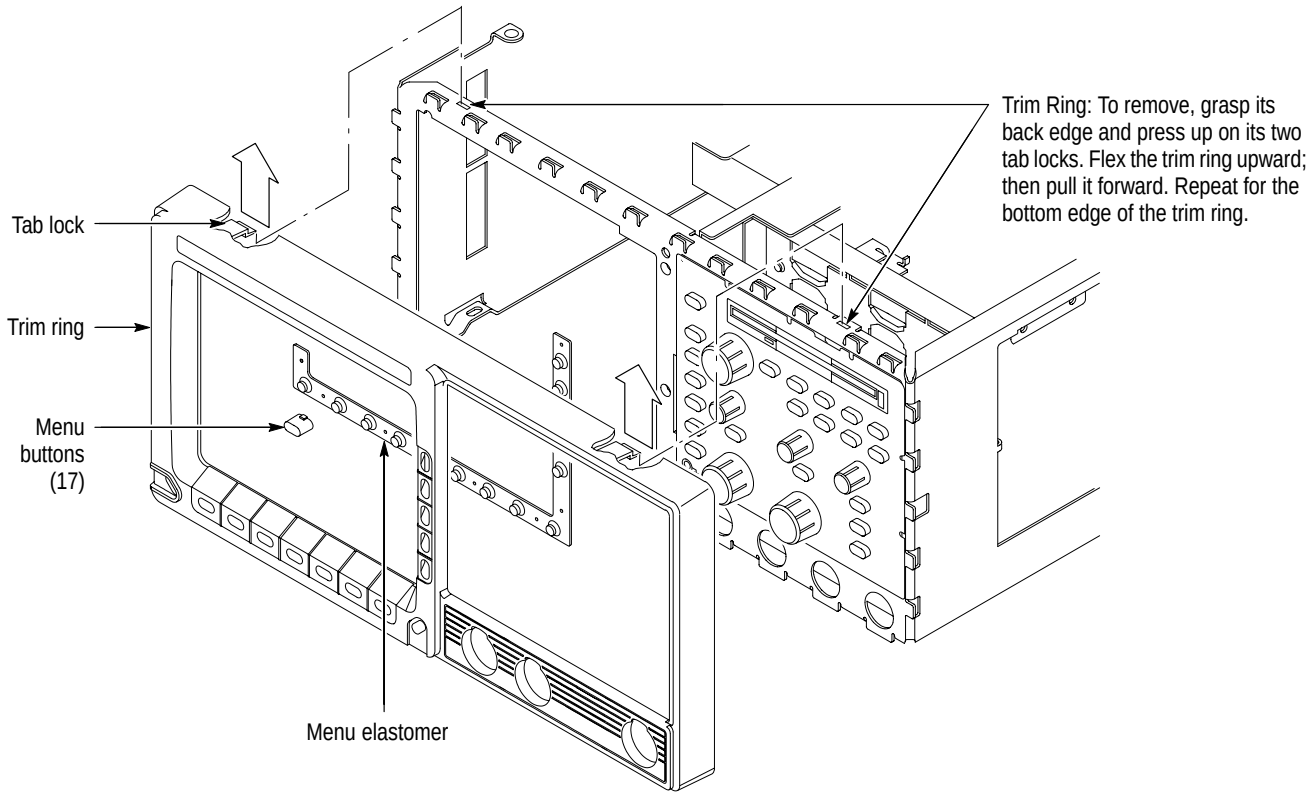


Figure 6–7: Trim ring, menu elastomer, and menu buttons removal

3. Repeat the process, prying on the bottom edge of the trim ring to complete its removal. Lay the trim ring on its face on the work surface.
4. If you are servicing the front EMI gaskets, discard the old ones.
5. If you are servicing the menu elastomer, lift it out of the trim ring.
6. If you are servicing the menu buttons, lift them out of the trim ring.
7. *Reinstallation:*
   a. Insert each button into its hole in the trim ring.
   b. Align the menu elastomer over the menu button holes in the trim ring and press it in to install. Avoid touching the carbon contact points on the elastomer when installing.
   c. Without installing the EMI gaskets, align the trim ring to the front of the chassis and push it on to seat. Be sure that both pairs of flex locks, one pair each at the inside top and bottom of the trim ring, snap over the edge of the chassis.
   d. Lay the oscilloscope so its front cover is on the work surface.
   e. Align an EMI gasket so it lies between any pair of adjacent flex locks along the groove between the cabinet.
   f. Using a wood spudger, push the EMI gasket until it is firmly seated at the bottom of the groove (see Figure 6–8). It should not overlap either flex lock.
   g. Repeat the process just described to install the remaining three gaskets.

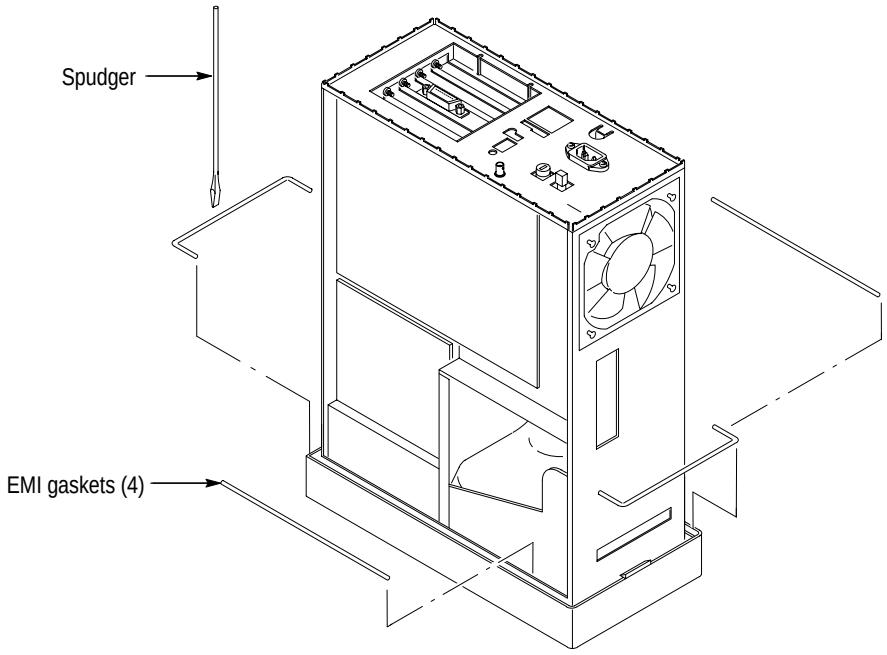


Figure 6–8: EMI gasket removal and installation

Front Panel Assembly and Menu Flex Circuit

Required tool: a flat-bladed screwdriver (Item 4).

1. Perform the previous procedure to remove the trim ring.
2. Set the oscilloscope so its bottom is down on the work surface and its front is facing you.
3. Insert a flat-bladed screwdriver into the slot at the front-right of the chassis (see Figure 6–9). Push inwards to release the snap lock at the right side.
4. Lift the front panel assembly out of the front of the main chassis until you can reach the interconnect cables connecting it to various other modules.
5. Unplug the main board and menu flex-circuit cables from their jacks on the front panel assembly.
6. Finally, lift the front panel assembly out of the front of the main chassis to complete the removal.

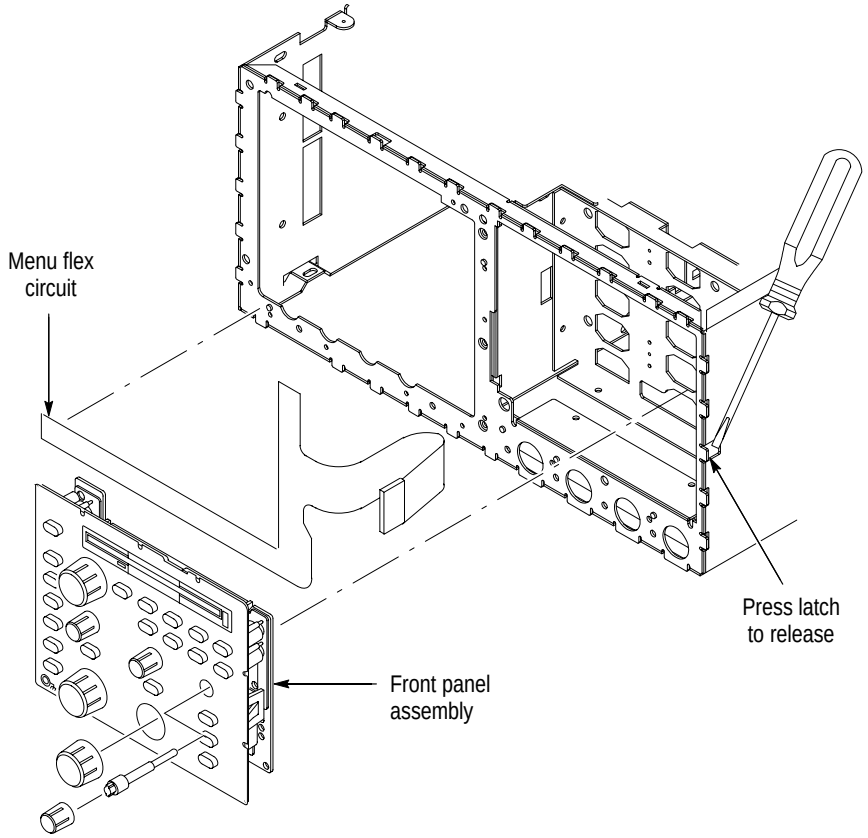


Figure 6–9: Front panel assembly and menu flex circuit removal

7. If you are removing the menu flex circuit, pull the circuit away from the front of the main chassis.
8. If you do not need to perform component-level service on the front-panel assembly, skip to step 15 for reinstallation instructions.
9. Remove the front-panel control knobs from the front-panel assembly using the method described in *Front-Panel Knobs and Shafts* on page 6–10.
10. Release the three snap locks at the edge of the circuit board, then tilt the board away from the assembly until it unplugs from J405. See Figure 6–10.
11. Slide the circuit board out from the retainers found at the edge opposite the snap locks and lift it away from the rest of the assembly.
12. Hand disassemble the front-panel-assembly components using Figure 6–10 as a guide. Reverse the procedure to reassemble.

***STOP**. Perform step 13 only if replacing a damaged ground spring.*

13. Using Figure 6–10 as a guide, grasp (compress) the base of the ground spring (to release the spring) with tweezers (Item 8) and pull the ground spring away from the assembly.

14. *Reassembly of the Front-Panel Assembly:* Do in reverse order substeps 13 through 9, reversing the procedure outlined in each step. Be sure to dress the main-board-to-front-panel cable so that the loop of extra cable length is in the front-panel cavity of the chassis.

15. *Reinstallation:*

a. If you are replacing the menu flex circuit, perform the following subparts:

- Wipe the front of the chassis using isopropyl alcohol and a clean, lint-free cloth. Let it dry.
- Find the score line in the adhesive backing and peel the backing off the menu flex circuit.
- Carefully align the three holes on the menu flex circuit to the locator studs on the front of the main chassis. When the alignment is correct, press the flex circuit against the chassis so it adheres to the chassis.
- Clean the surface of the menu flex circuit using isopropyl alcohol and a clean, lint-free cloth.

b. Reconnect the main board and menu flex-circuit cables to the back of the front panel assembly.

c. Carefully reinsert the front-panel assembly into the main chassis *left side first*.

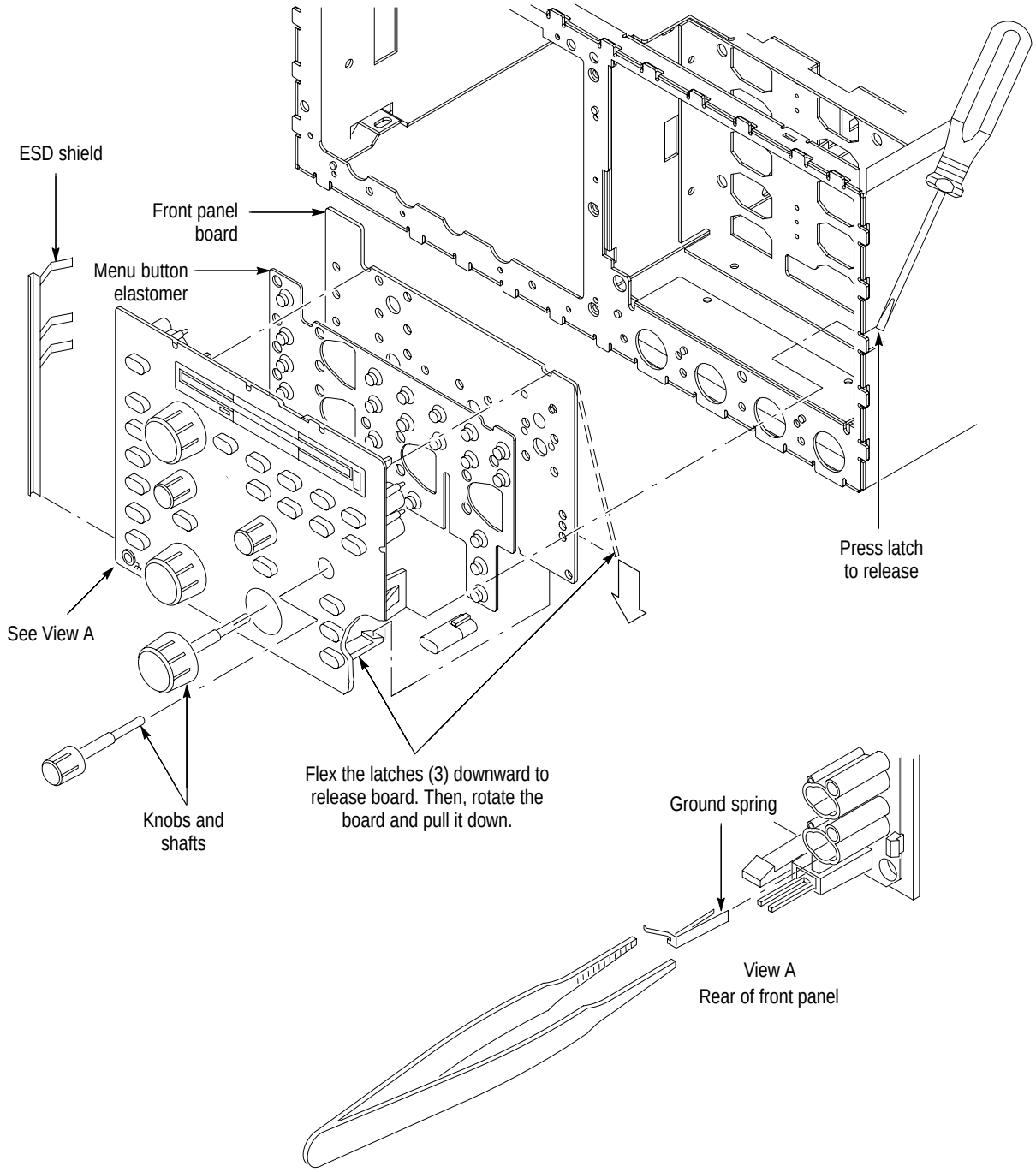


Figure 6–10: Disassembly of front-panel assembly

Main Board Assembly

Required tools: a screwdriver with a size T-15 Torx® tip (Items 1 and 2), BNC wrench (Item 15), BNC fixture (Item 16), and soldering iron (Item 13).

1. Remove the front trim ring as described on page 6–14.
2. Set the oscilloscope so its top side is down on the work surface and its rear is facing you.
3. Remove the floppy interface board, shown in Figure 6–11, by removing the screw, unclipping the standoff post from the board, and gently rocking the board from side to side while lifting. Make sure that you lift and rock from the connector end of the board.

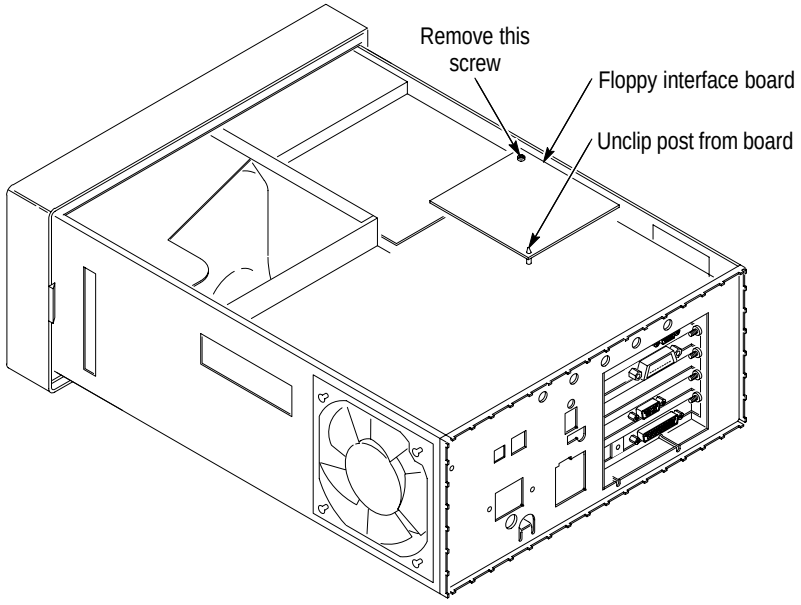


Figure 6–11: Removing the floppy interface board

4. Unplug the power supply cable *at the power supply.*
5. Unplug the monitor cable *at the monitor assembly and power supply*; carefully route the cable out through its access hole.
6. Unplug the front panel cable.
7. Using Figure 6–12 as a guide, remove the T-15 Torx® mounting screws securing the main board assembly to the chassis.
8. Lift the main board assembly away from the oscilloscope to complete its removal.

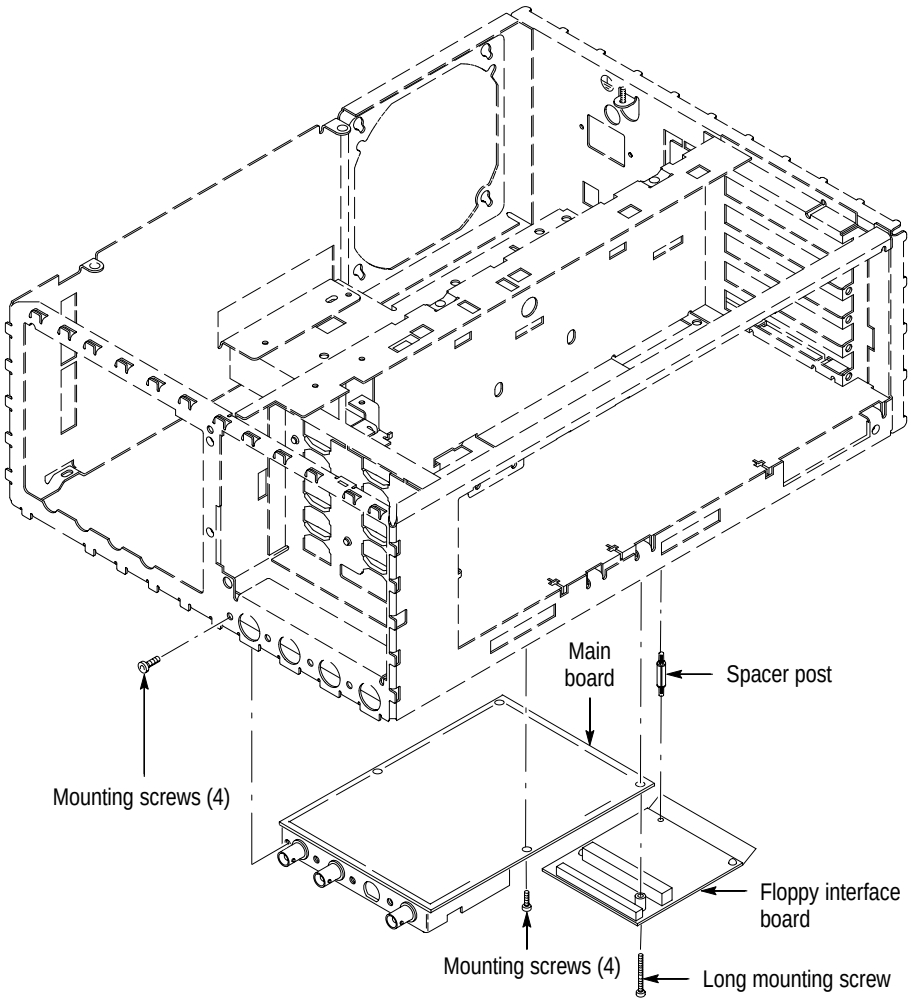


Figure 6–12: Removing the main board

***STOP**. Continue with procedure steps 9 through 13 only if you need to replace a BNC, attenuator hybrid, EMI shield, or attenuator shield (see Figure 6–13). Otherwise, skip to step 14 to reinstall the main board assembly.*

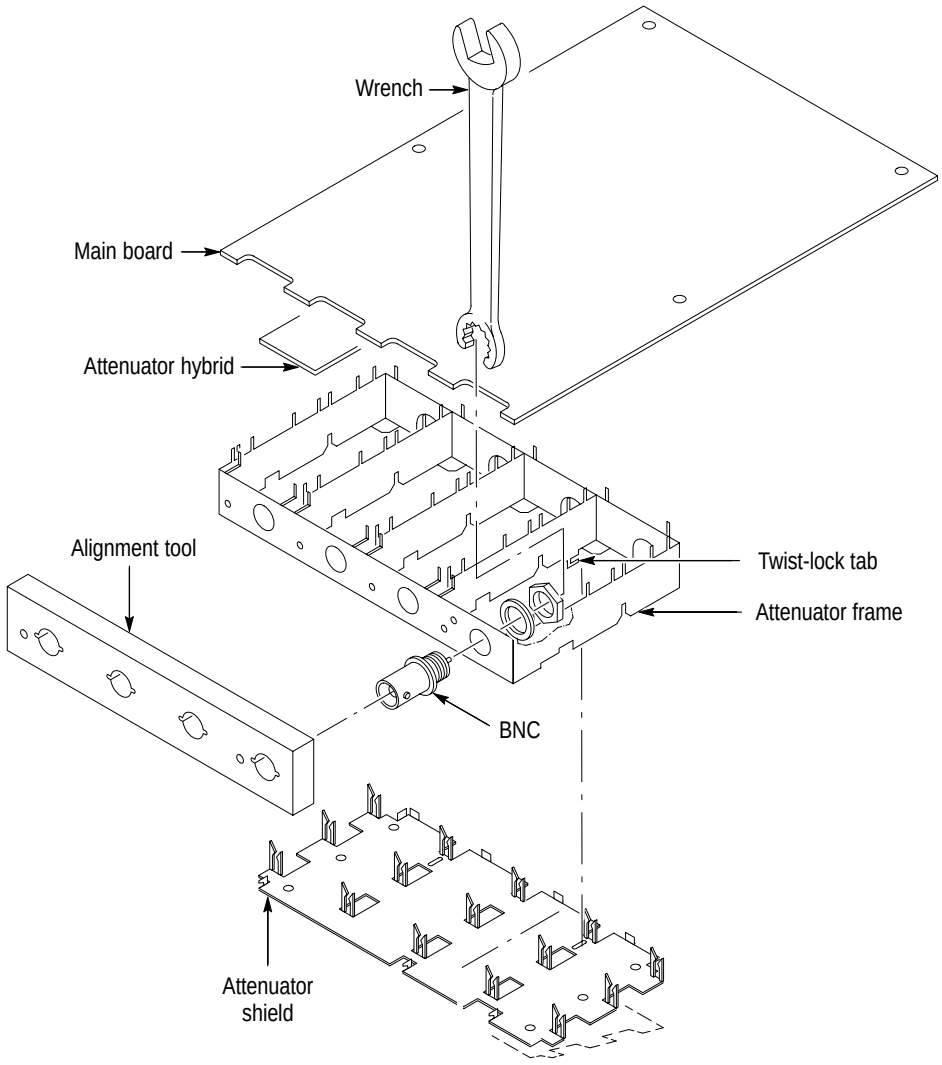


Figure 6–13: BNC and hybrid removal

9. Straighten the two twist-lock tabs that lock the attenuator shield in place.

10. Lift the shield up and toward the back of the main board to complete the removal of the shield.

11. If you need to remove an attenuator hybrid perform the following steps:

a. Grasp the EMI shield with both hands and carefully pull it straight up to remove the shield.

b. Unsolder all 34 leads to the attenuator hybrid.

c. Lift the hybrid away from the main board to complete its removal.

12. If you need to remove a BNC perform the following steps:

a. Unsolder the wire to the center conductor of the BNC.

b. From the back of the board, remove the BNC nut and washer using the BNC wrench (Item 15).

c. Pull the BNC from the front of the main board.

13. *Reassembly:*

a. Perform the following steps if you removed a BNC:

- From the back of the board, loosen the BNC nut of each BNC using the BNC wrench (15).
- Loosely install the new BNC, washer, and nut.
- Place the BNC alignment fixture (16) over all four BNCs.
- Tighten the nuts of all four BNCs using the BNC wrench (15).
- Remove the BNC alignment fixture.
- Resolder the wire to the center conductor of the BNC.

b. Perform in reverse order steps 11 through 9, reversing the removal instructions in each part to reassemble the main board.

14. *Reinstalling the main board:* Perform in reverse order steps 8 through 1, reversing the removal instructions in each substep to reinstall the assembly.

WARNING. *When reinstalling the floppy interface board with Option 14 communications cable, make sure that you pull on the cable while tightening the interface board hold-down screw. Pulling the cable prevents it from getting pinched between the main processor board and the metal standoff post.*

Monitor Assembly

Required tool: a screwdriver with a size T-15 Torx® tip (Items 1 and 2).

1. Set the oscilloscope so its top is down on the work surface, with its front facing you.

WARNING. To avoid injury: *Use care when handling a monitor. If you break its display tube it may implode, scattering glass fragments with high velocity and possibly injuring you. Wear protective clothing, including safety glasses (preferably a full-face shield). Avoid striking the display tube with or against any object.*

To avoid damaging the monitor: *Store the monitor with its display tube face down in a protected location, placing it on a soft, nonabrasive surface to prevent scratching the face plate.*

2. Take the precautions outlined in the ***WARNING*** above. Refer to Figure 6–14 while doing the following steps.
3. Unplug the main board/power supply cable.
4. Remove the three T-15 Torx® screws securing the monitor assembly to the bottom of the main chassis. Rotate the oscilloscope so its bottom is down on the work surface.

WARNING. *To avoid injury or death, do not unplug the anode from the monitor when removing or replacing the monitor module.*

5. Remove the three T-15 Torx® screws securing the monitor assembly to the top of the chassis. (See Figure 6–14 to locate the screws.)
6. Push up on the left top tab lock on the trim ring and pull the left corner of the trim ring forward slightly.
7. Tilt the rear of the monitor assembly upward slightly. Slide the monitor assembly back in the main chassis until it stops (about 2 cm). Now lift it straight up out of the top of the main chassis to complete the removal.
8. While heeding the ***WARNING*** on monitor handling that immediately precedes step 2 of this monitor removal procedure, store the monitor assembly in a protected location. Place it face down on a soft, nonabrasive surface to prevent scratching the face plate.
9. *Reinstallation:* perform steps 3 through 7 in reverse order to reinstall the monitor assembly.

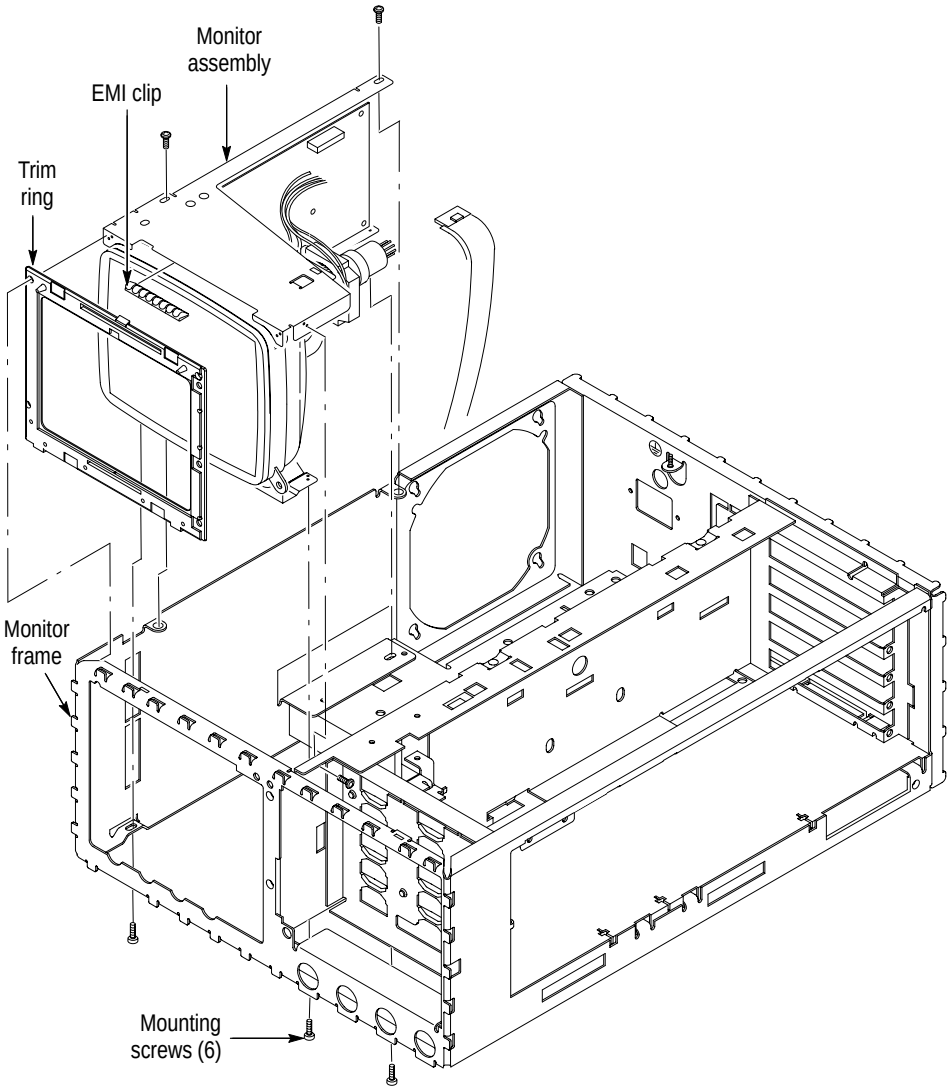


Figure 6–14: Monitor assembly removal

Power Supply Assembly

Required tool: a screwdriver with a size T-15 Torx® tip (Items 1 and 2).

1. Set the oscilloscope so its right side is down on the work surface, with its bottom facing you.
2. Unplug the main board power cable.
3. Set the oscilloscope so its bottom is down on the work surface, with its front facing to the right.
4. If Option 14 is installed and its printer power cable is used on your instrument, unplug the printer power cable.
5. Unplug the monitor and fan power cables.
6. Remove the chassis ground connector by unbolting it from the main chassis.
7. Remove the two screws connecting the power supply assembly to the main chassis (see Figure 6–15).
8. Gently pull the power supply assembly up and out of the main chassis.
9. *Reinstallation:* Perform steps 2 through 8 in reverse order, reversing the removal instructions in each step to reinstall the assembly.

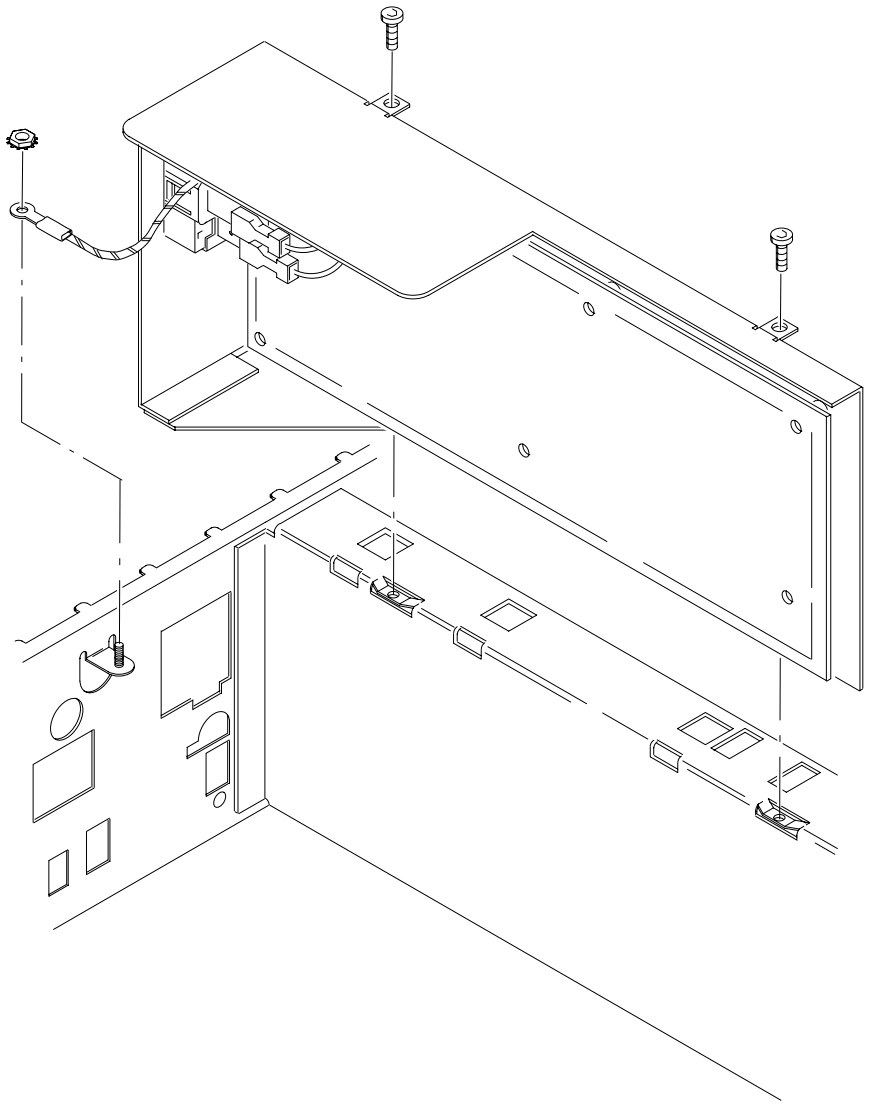


Figure 6–15: Low voltage power supply removal

Option 14 Assembly

Required tools: a screwdriver with a size T-15 Torx® tip (Items 1 and 2) and a 3/16 inch nut driver (Item 7).

1. Set the oscilloscope so its top is down on the work surface, with its front facing towards you.
2. Disconnect the main board communications cable (J601) *at the floppy interface board*. Remove the cable from its cable clamp (see Figure 6–16). Refer to Page 6–20, step 3, for instructions on how to remove the floppy interface board.
3. Disconnect the video cable (J703) *at the main board*.
4. Remove the two screws connecting the assembly to the chassis (see Figure 6–16) using a screwdriver with a size T-15 Torx® tip.
5. Set the oscilloscope so its bottom is down on the work surface, with its rear facing towards you.
6. Disconnect power cable J4 from the power supply.
7. Using a screwdriver with a size T-15 Torx® tip, remove the two screws on the left side of the assembly (see Figure 6–16).
8. Now remove the two screws on the rear panel that fasten the assembly to the chassis.
9. Pull the assembly towards the front of the instrument and up and out of the chassis. Carefully route the cables through their holes in the chassis.

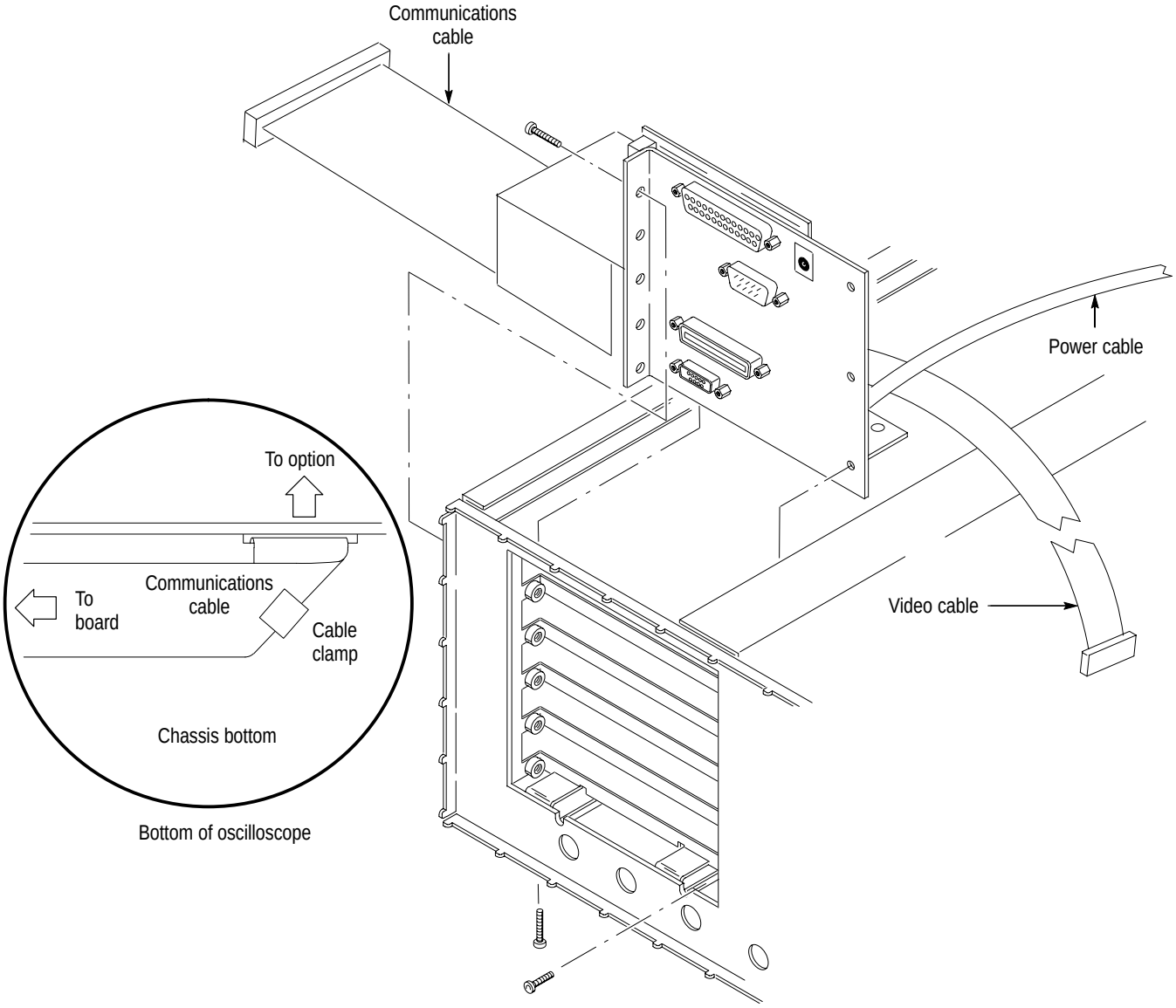


Figure 6–16: Option 14 assembly removal

***STOP**. DO NOT perform step 10 unless you need to replace components on the Option 14 board.*

10. *Disassembly*: Remove the six nuts that fasten the board to its mounting bracket, as shown in Figure 6–17. Gently separate the board and the bracket. Depending on the version of the option you have, remove the six or eight nuts that fasten the board(s) to the mounting bracket, as shown in Figure 6–17. Gently separate the board(s) and the bracket. If part of your option, unplug the printer power cable from J2, and remove the power connector from the bracket by compressing the mounting tabs and pushing the connector through the bracket.

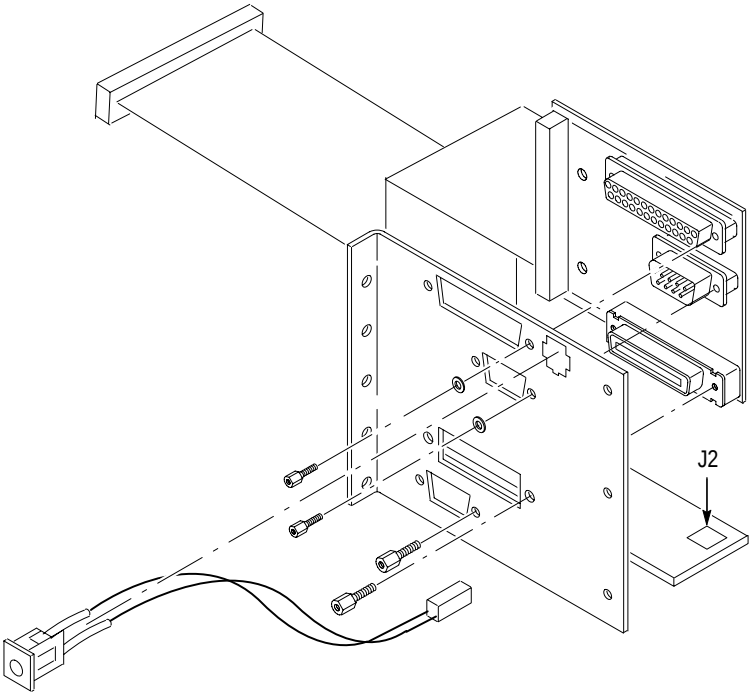


Figure 6–17: Option 14 disassembly

11. *Reinstallation:* Perform steps 10 through 2 in reverse order.

12. *Reinstallation:* Perform steps 9 through 2 in reverse order.

Fan and Fan Mount

1. Set the oscilloscope so its bottom is down, with its rear facing you.
2. Unplug the *fan* power cable from J3 on the *Power Supply.*
3. Release the two flex locks securing the top of the fan to the fan mount, then lift the fan out from the top of the chassis (see Figure 6–18).

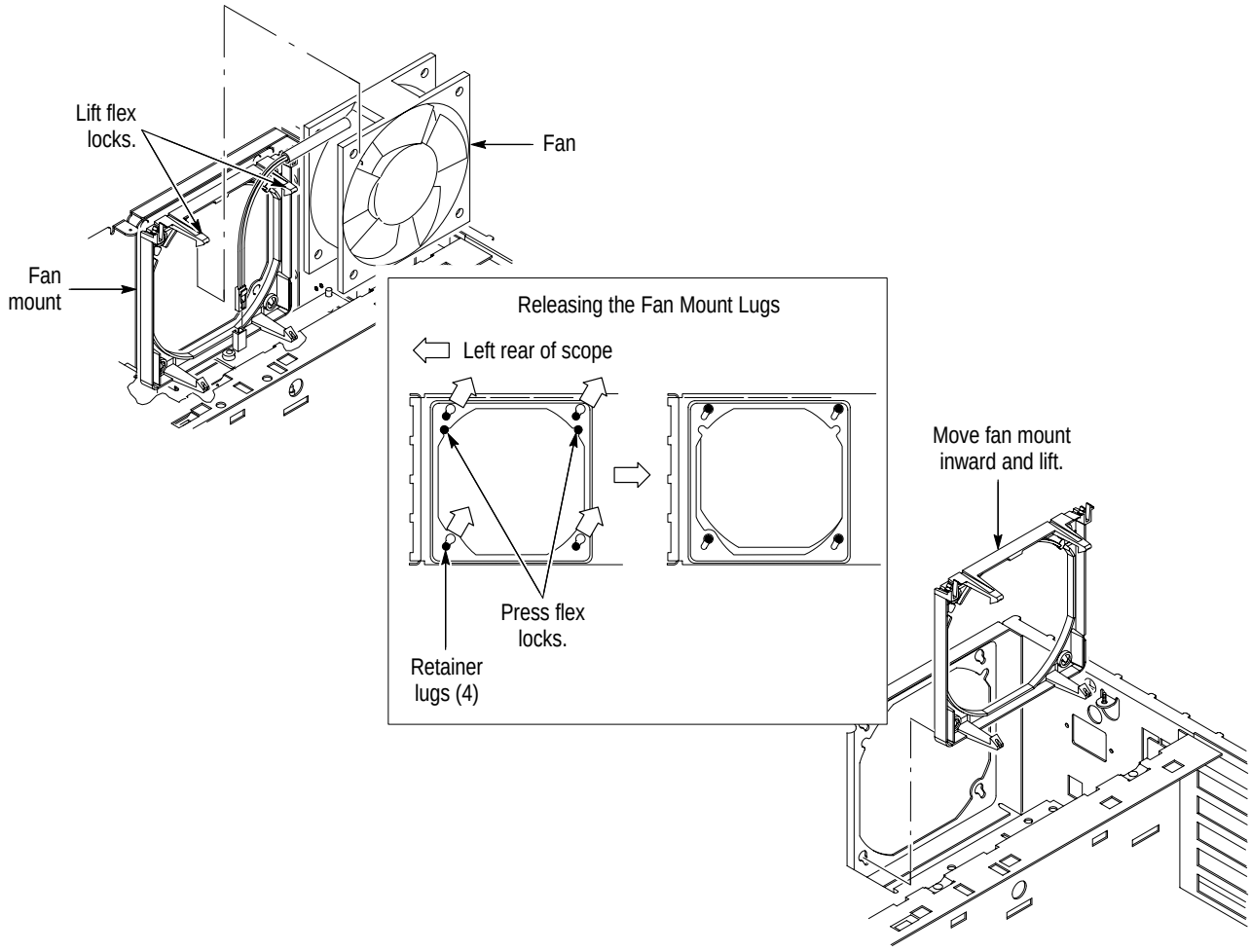


Figure 6–18: Fan and fan mount removal

STOP*. DO NOT proceed unless servicing a broken fan mount or removing that mount for cleaning.*

4. Rotate the oscilloscope so the side that houses the fan *mount* is facing upwards.
5. Depress the two flex locks to release them (see Figure 6–18).
6. While holding the flex locks released, slide the fan mount so its four retainer lugs slide from their small retainer holes in the chassis into their large release holes.
7. Move the fan mount inward so its retainer lugs are out of the large retainer holes and lift it out of the chassis to remove.
8. *Reinstallation:*
   a. Perform in reverse order steps 5 through 7, reversing the removal instructions in each substep to reinstall the fan mount. Be sure to seat the fan mount so its two flex locks snap to secure it on the chassis.
   b. Perform in reverse order steps 2 and 3 to reinstall the fan.

Troubleshooting

This section contains information and procedures designed to help you isolate faulty modules in the oscilloscope. If you need to replace a module, use the *Removal and Replacement* procedures immediately preceding this section.

***NOTE**. These procedures will isolate a fault to the module level. If you wish to isolate a faulty component, use the theory of operation, schematics, board dollies, and grid locator charts provided elsewhere in this manual.*

Onboard Diagnostics

The onboard diagnostics focus on verifying, calibrating, and isolating faulty modules. Use the following procedure to activate the diagnostics.

1. Power up the oscilloscope and allow a 20 minute warm-up period.
2. Press the front panel button **UTILITY**.
3. Repeatedly press the main menu button **System** until **Diag** is highlighted in the pop-up menu. This calls up the diagnostics menu, shown in Figure 6–19.

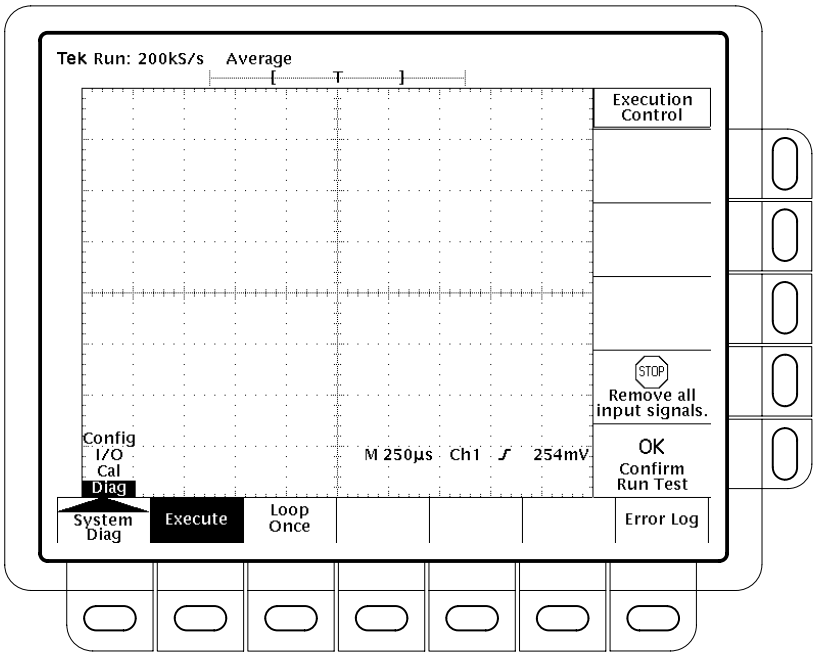


Figure 6–19: The diagnostics menu

4. Press the main menu button **Loop**. Select one of the following options from the side menu.
   - Press **Once** to run the tests once.
   - Press **Always** to run the tests continuously until you cycle the power.
   - Press **Until Fail** to run the tests continuously until the instrument fails a test or until you cycle the power.
5. Press the main menu button **Execute**; press the side menu button **Ok Confirm Run Test**.
6. Wait. The diagnostics will take about two minutes to complete. Then the oscilloscope displays pass/fail results for each system.
7. If the onboard diagnostics indicate a failure, reenter the diagnostics menu and press the main menu button **Error Log**.

NOTE. *The RS232 Line Snapshot and RS232 Errors are reset at each power-on. For more RS-232 information, refer to the* TDS 340A, TDS 360, & TDS 380 Programmer Manual.

8. Press the side menu button **Display Log** to display the diagnostics error log. The error log contains summary data gathered over the life of the oscilloscope and descriptions of the last 200 errors encountered (see Figure 6–20). The last error in the list is the most recent and/or most important; record this information and continue on to the *Troubleshooting Procedure* in the next section to verify the failure and pinpoint the faulty module.

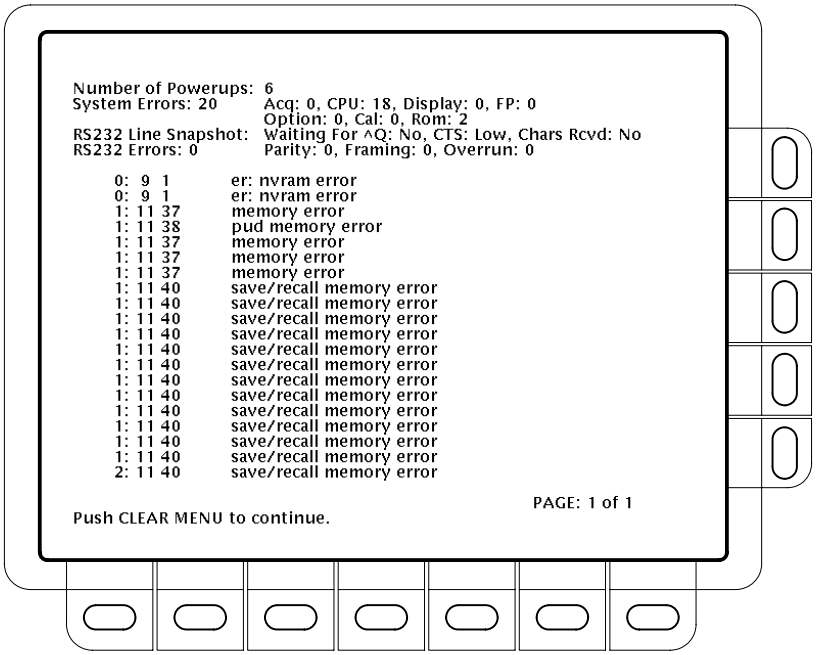


Figure 6–20: The error log

Enabling Calibration Menus

The Voltage, Timing, and External Trigger calibration menus are disabled at the factory. To enable the calibration menus, perform the following steps.

1. Remove the Line Cord as described on page 6–8.
2. Remove the Rear Cover and Cabinet as described on page 6–11.
3. Set the oscilloscope so its top side is down on the work surface and its front is facing you.
4. Remove cal jumper J609 from the main board (see Figure 6–21). Save the jumper. Reinstall the jumper after calibration to protect the calibration settings.

5. *Reinstallation:* Perform in reverse order steps 1 through 4, reversing the removal instructions in each substep.

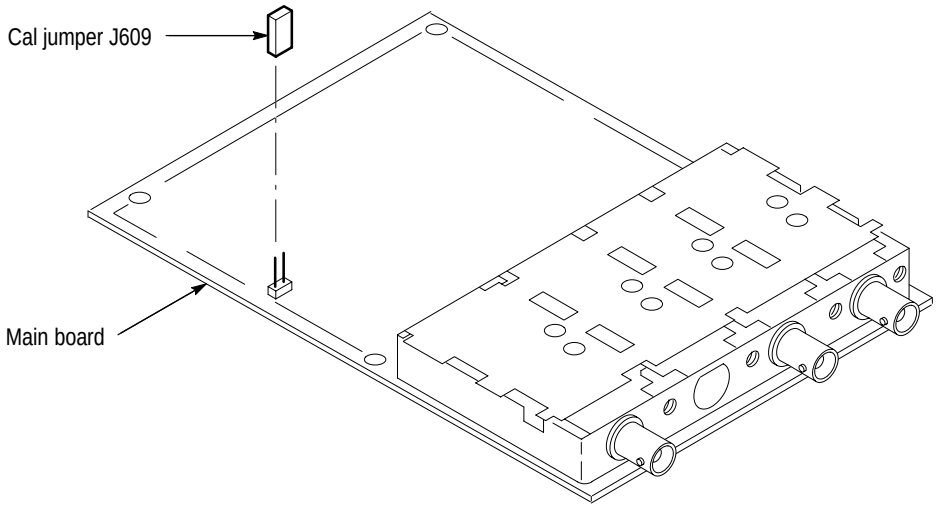


Figure 6–21: Main board cal jumper

Troubleshooting Procedure

Figures 6–22 through 6–25, 6–29, 6–31, and 6–32 are troubleshooting procedure flowcharts. Use them to verify module failures indicated by the onboard diagnostics, or use them to troubleshoot an instrument failure not connected with the diagnostics. Begin with Figure 6–22.

NOTE*. Before performing the troubleshooting procedure, remove the instrument cabinet (see page 6–11).*

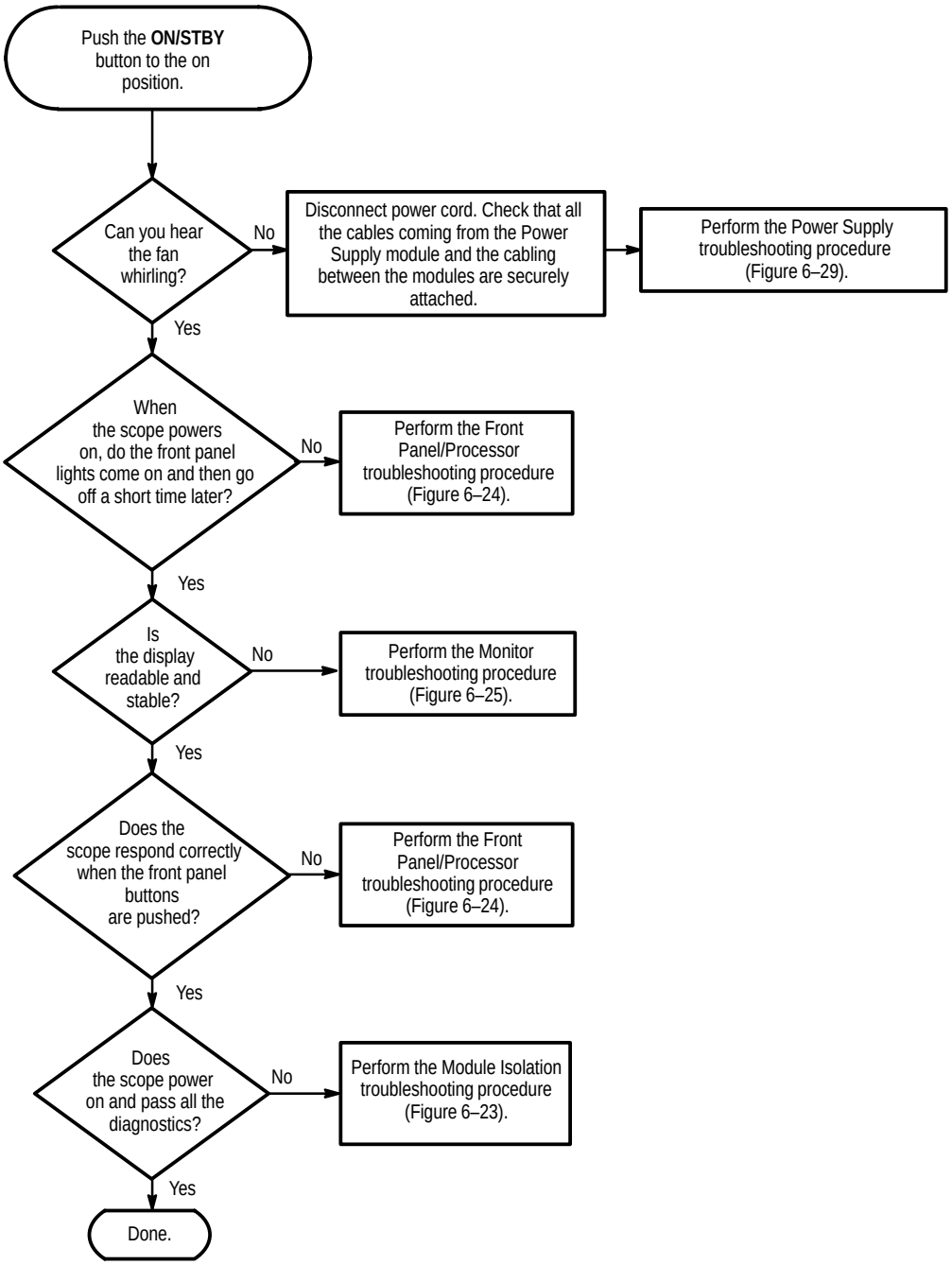


Figure 6–22: Primary troubleshooting procedure

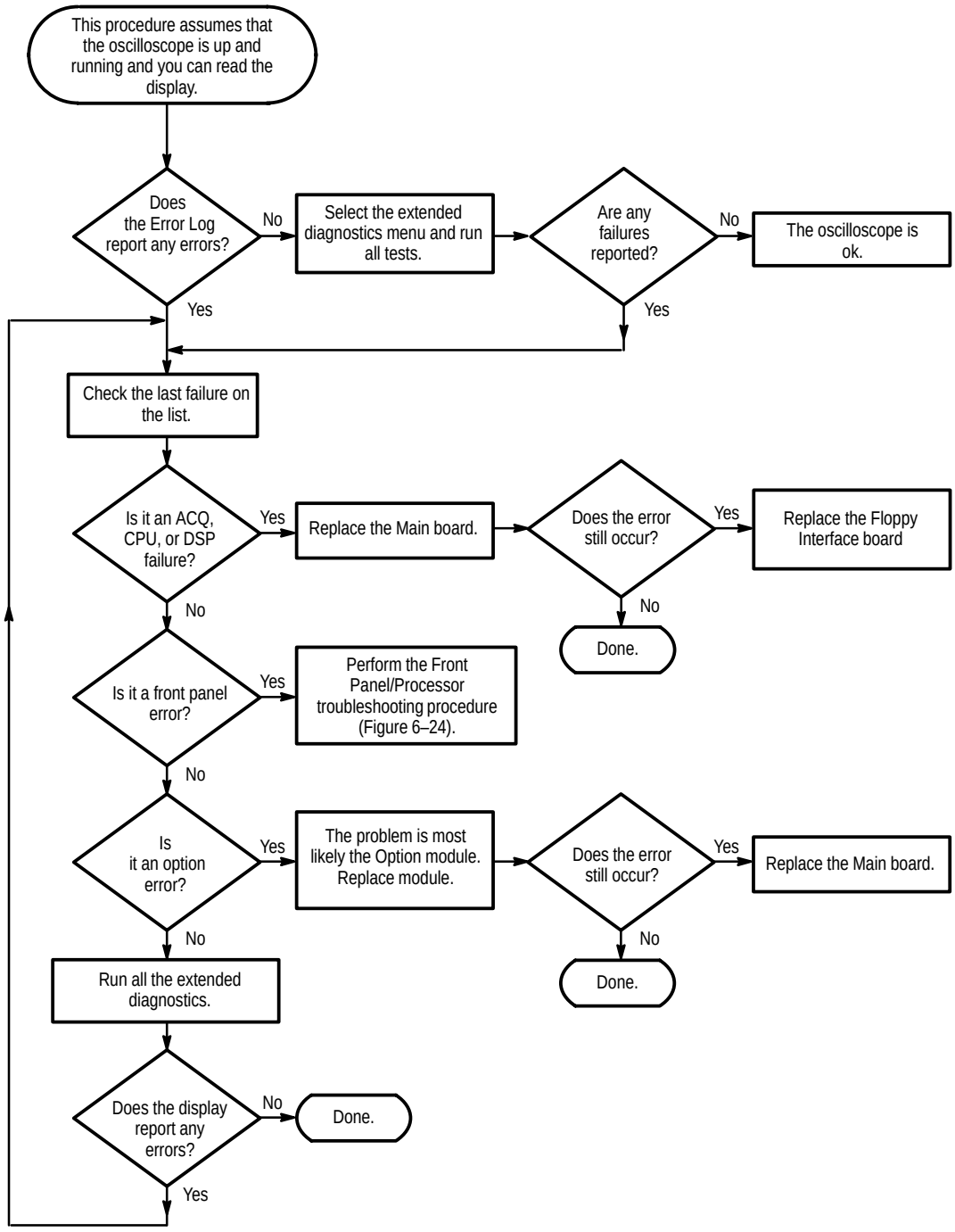


Figure 6–23: Module isolation troubleshooting procedure

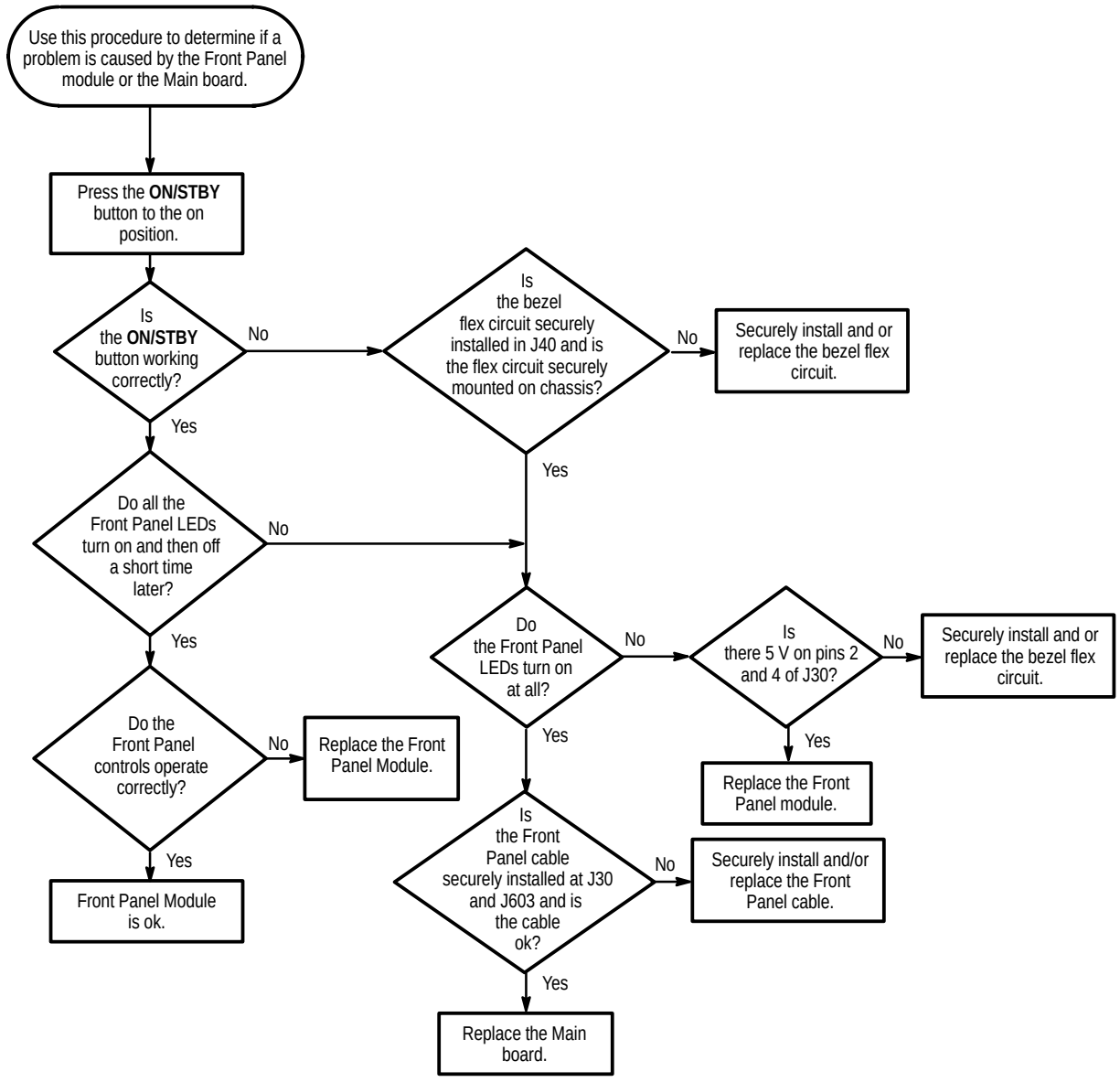


Figure 6–24: Front panel/processor troubleshooting procedure

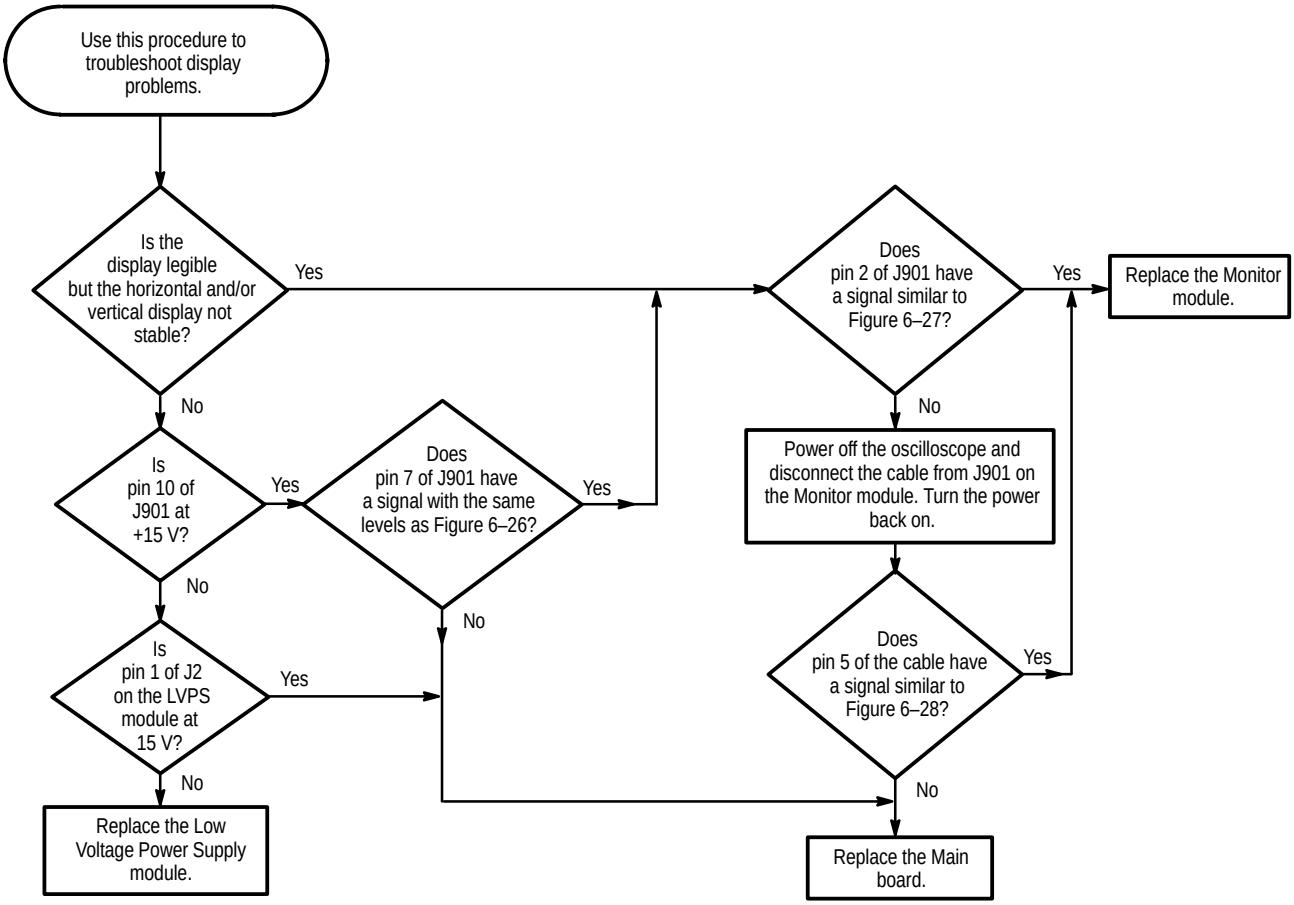


Figure 6–25: Monitor troubleshooting procedure

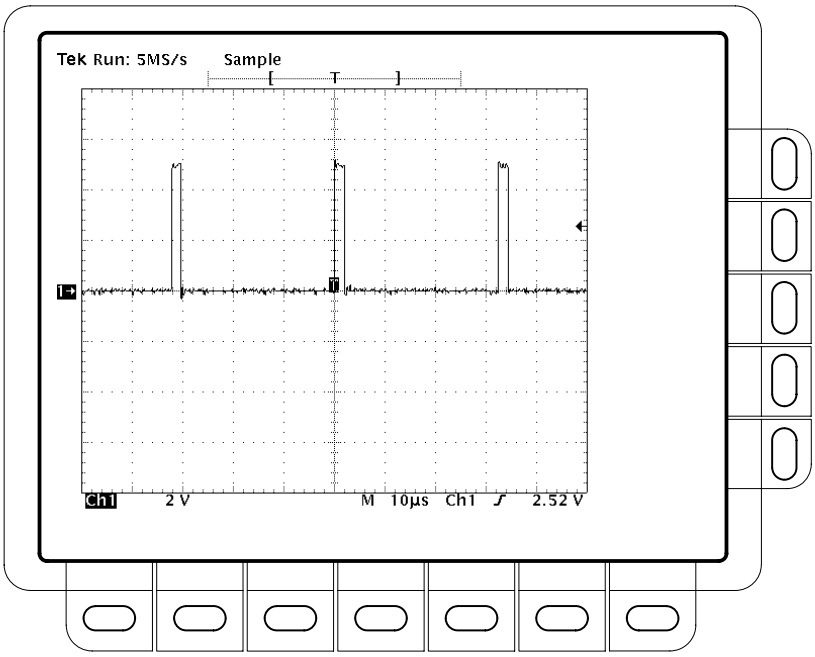


Figure 6–26: J901 pin 7 signal

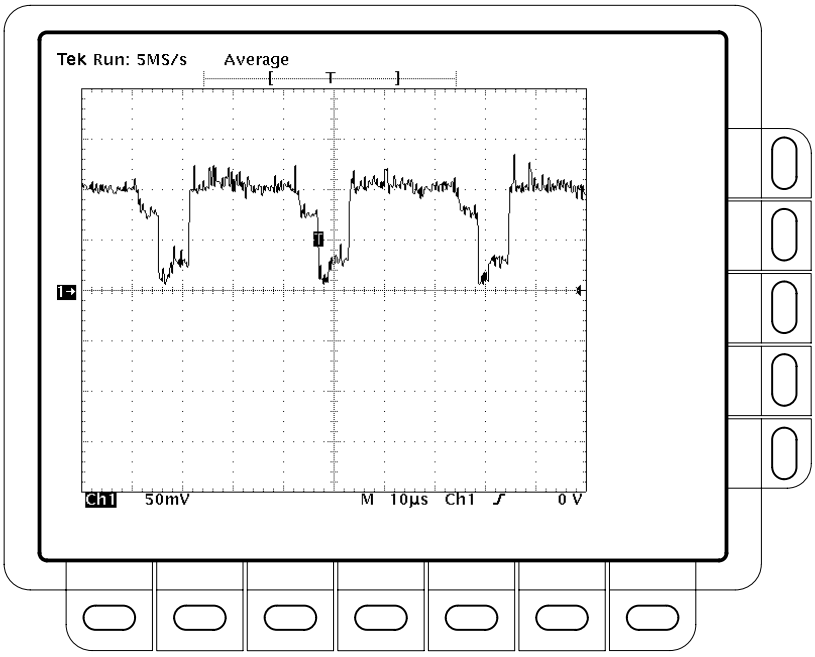


Figure 6–27: J901 pin 2 signal

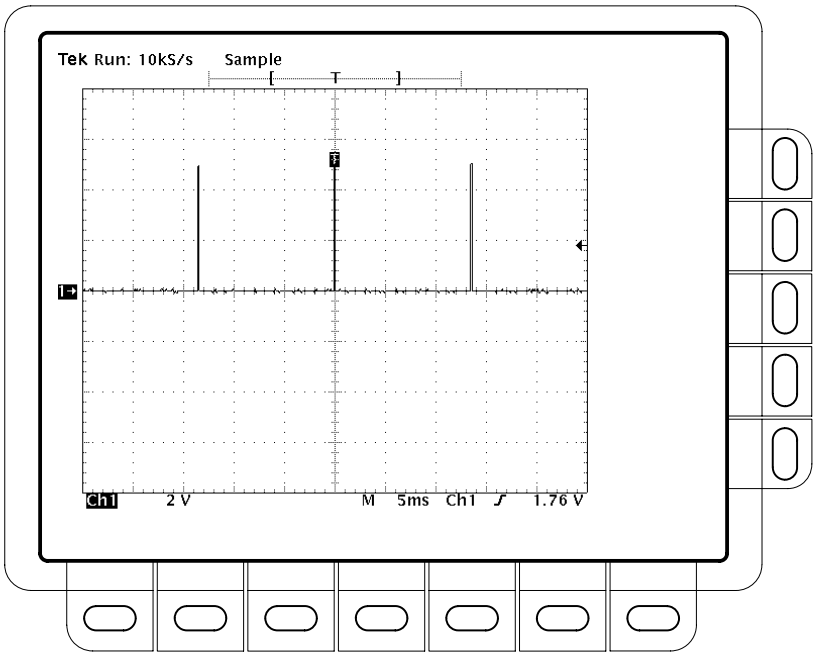


Figure 6–28: J901 pin 5 signal

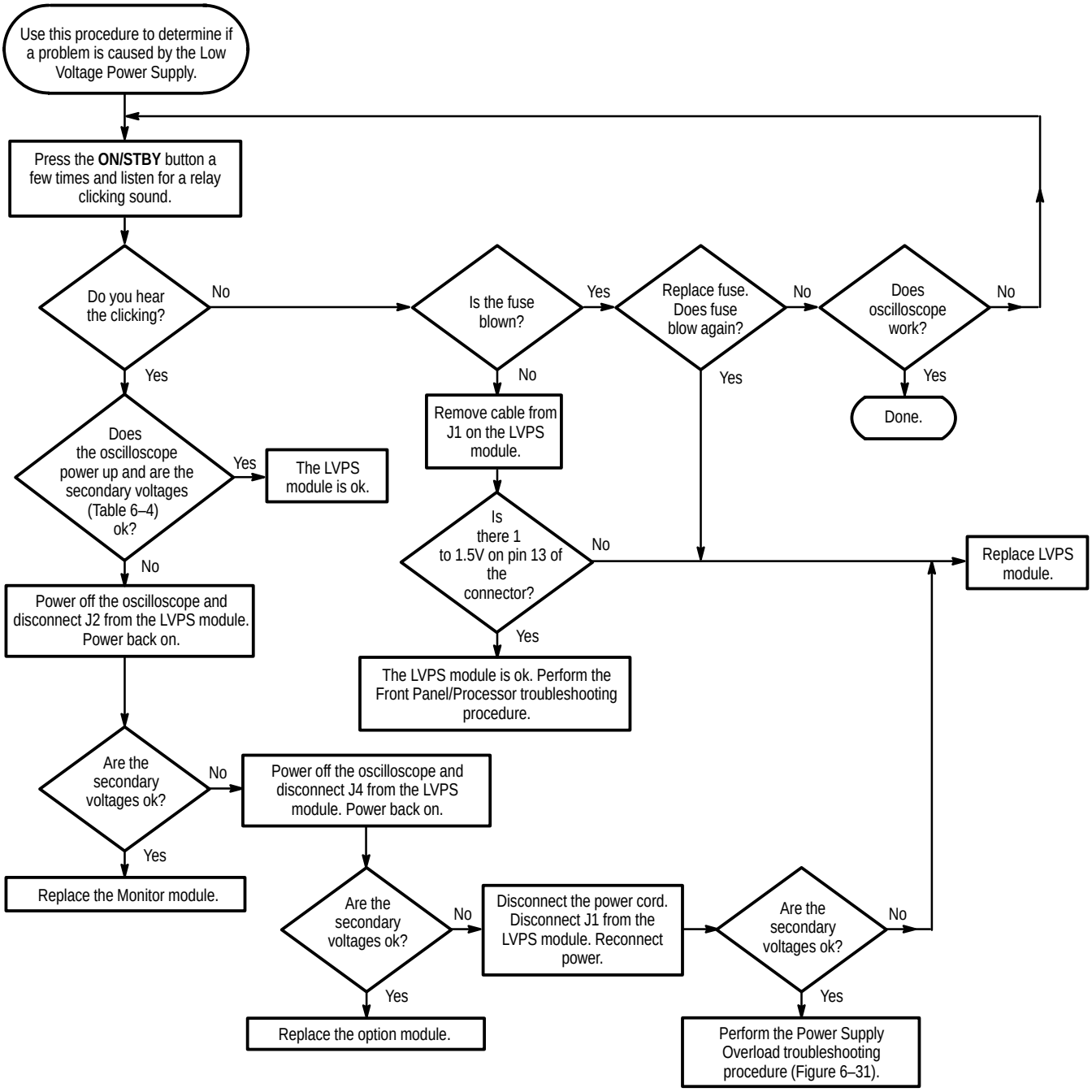


Figure 6–29: Power supply troubleshooting procedure

Table 6–4: Power supply secondary voltages

Location (see Figure 6–30)	Minimum	Maximum
J1 pin 2	+8.38 V	+8.82 V
J1 pins 5 and 6	+4.87 V	+5.13 V
J1 pin 8	+4.87 V	+5.13 V
J1 pin 10	–8.38 V	–8.82 V
J1 pin 11	–4.87 V	–5.13 V
J1 pin 13, ON	+0.991 V	+1.137 V
J1 pin 13, STBY	+1.272 V	+1.406 V
J2 pin 1	+13.80 V	+15.75 V
J3 pin 1, fan connected	+10.20 V	+13.80 V
J3 pin 1, fan disconnected	+13.80 V	+15.75 V
J4 pin 1	+13.80 V	+15.75 V

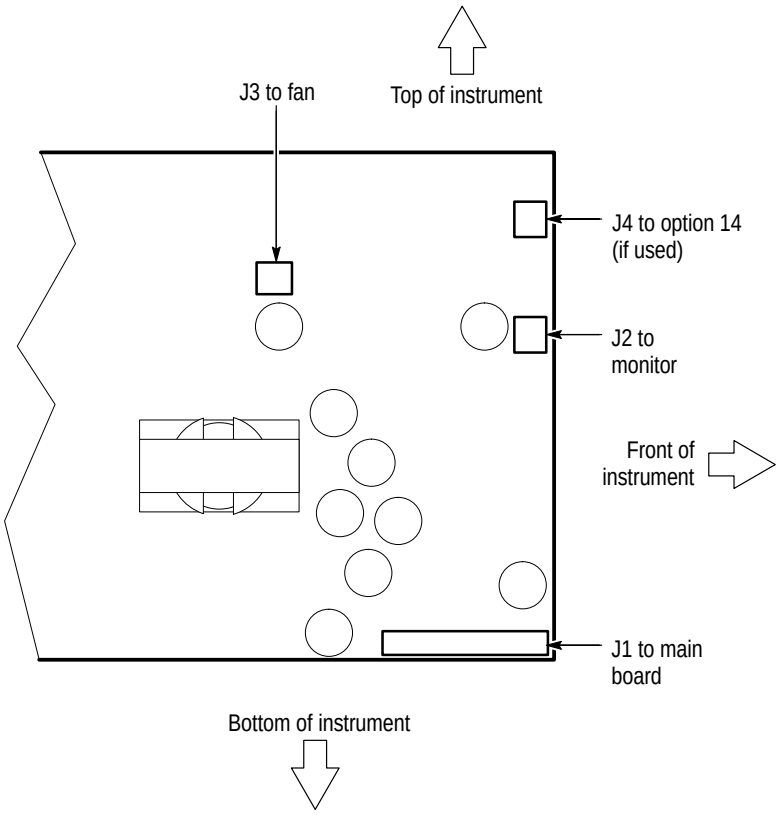


Figure 6–30: Power supply connector locations

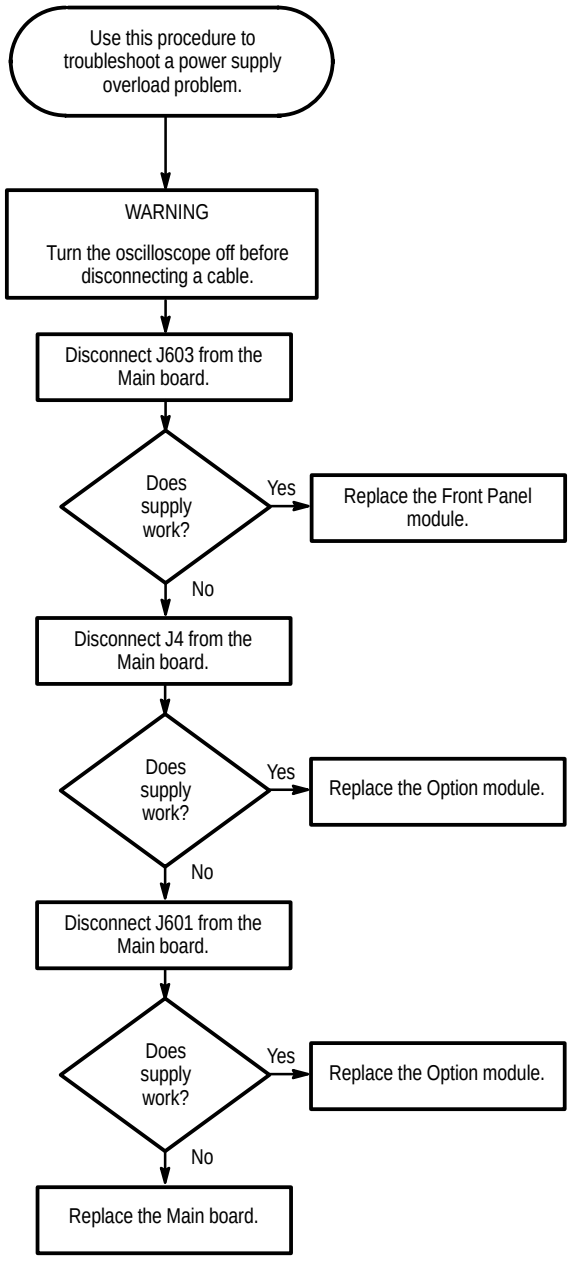


Figure 6–31: Power supply overload troubleshooting procedure

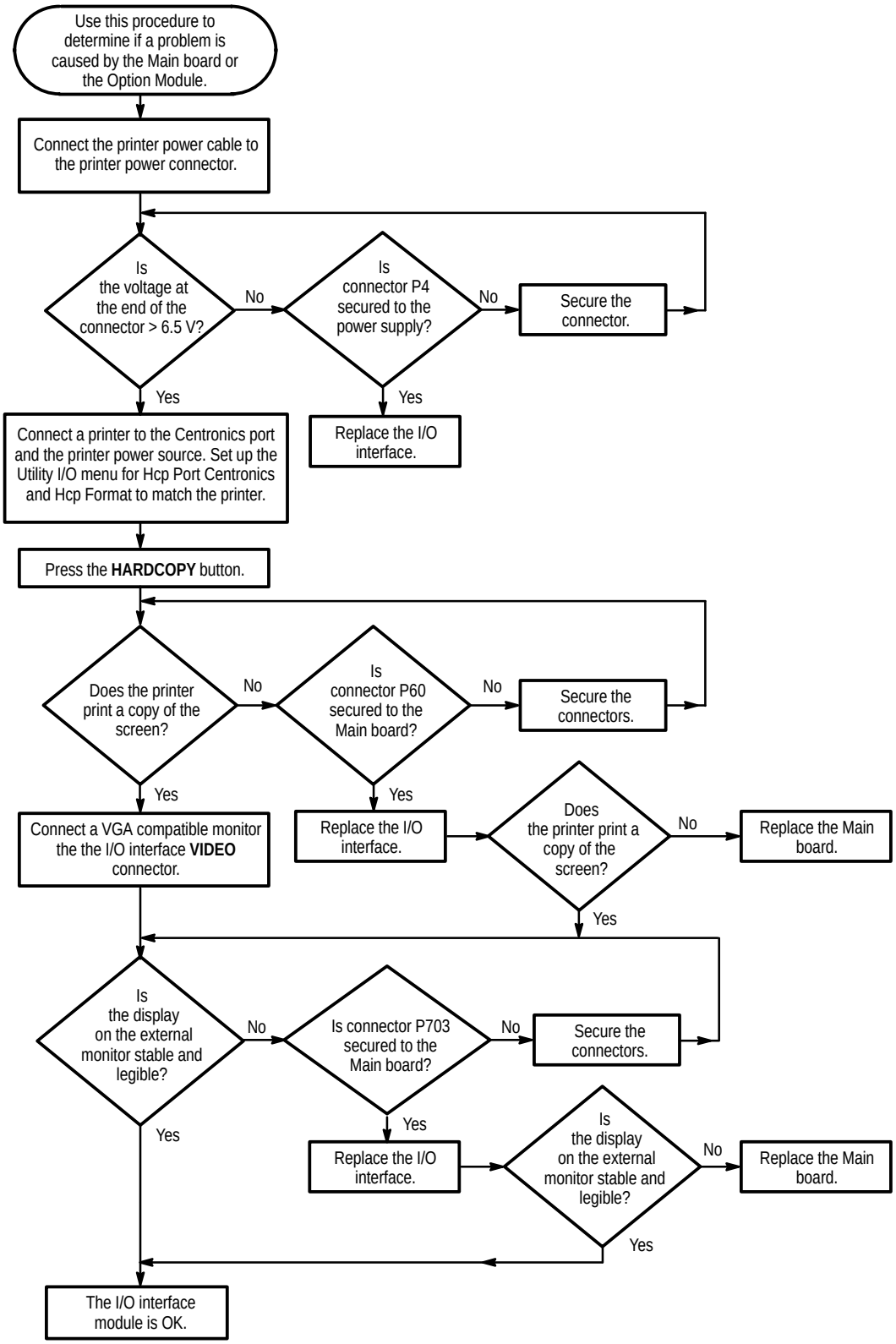


Figure 6–32: Option 14 I/O interfaces troubleshooting procedure

Custom Selected Parts

These instruments may use custom selected parts to optimize performance. This section describes when and how custom components are selected.

TDS 360 A12C230 and A12C231

Capacitors C230 and C231 may be installed with U204 to compensate for bandwidth differences between sampler drivers. Follow these steps when replacing U204.

1. Remove C230 and C231 if they are installed.
2. Replace U204.
3. Check the channel bandwidth and aberrations.
4. If the channel meets bandwidth and aberrations specification, do not install C230 and C231.
5. If the channel has excessive aberrations while meeting bandwidth, install C230 and C231.

TDS 380 A13L212 and A13L213

If U204 is replaced, inductors L212 and L212 may have to be selected to compensate for variation in the frequency/step response between IC's. Follow these steps when replacing U204 or L212 or L213:

1. If U204 is not being replaced, but L212 or L213 are, use the same replacement values as you find installed (see *Electronics Parts List* and your A13 board for values).
2. If replacing U204, do the following steps:
3. Replace U204.
4. Check the channel bandwidth and aberrations; then do one of the following steps:
   - **a.** If the channel meets bandwidth and aberrations specification, do not replace L212 or L213.
   - **b.** If the channel has excessive aberrations while meeting bandwidth, install the larger value inductors for L212 and L213 (see *Electronics Parts List*), recalibrate (see *Adjustment Procedures*, Chapter 5), and recheck bandwidth and aberrations.
   - **c.** If the channel has low bandwidth while meeting aberrations, install the smaller value inductors for L212 and L213 (see *Electronics Parts List*), recalibrate, and recheck bandwidth and aberrations.

Repackaging Instructions

If you ship the oscilloscope, pack it in the original shipping carton and packing material. If the original packing material is not available, package the instrument as follows:

1. Use a corrugated cardboard shipping carton with inside dimensions at least 15 cm (6 in) taller, wider, and deeper than the oscilloscope. The shipping carton must be constructed of cardboard with 170 kg (375 pound) test strength.
2. If you are shipping the oscilloscope to a Tektronix field office for repair, attach a tag to the oscilloscope showing the instrument owner and address, the name of the person to contact about the instrument, the instrument type, and the serial number.
3. Wrap the oscilloscope with polyethylene sheeting or equivalent material to protect the finish.
4. Cushion the oscilloscope in the shipping carton by tightly packing dunnage or urethane foam on all sides between the carton and the oscilloscope. Allow 7.5 cm (3 in) on all sides, top, and bottom.
5. Seal the shipping carton with shipping tape or an industrial stapler.

Options

This chapter describes the various options, as well as the standard and optional accessories, that are available for the TDS 340A, TDS 360, and TDS 380.

Options

The available options are the Option 14 I/O Interfaces, Options A1-A5 (international power cords), manual language options, and warranty service options. The following sections describe each of these options.

Option 14: I/O Interfaces

This option includes GPIB, RS-232, and Centronics interfaces, VGA video output, and power for the DPU 411 printer. It also includes the *TDS 340A, TDS 360 & TDS 380 Programmer Manual*.

You can connect a remote display to the VGA 9-pin D connector on the rear panel. Table 7–6 on page 7–4 gives the part number of a properly shielded cable that is commercially available.

Because display manufacturers use different pin combinations and connectors, you may find the information in Table 7–1 helpful.

Table 7–1: VGA output connector pins

Pin	Signal
2	Video (monochrome analog)
4	Horizontal sync @ 31.5 kHz (VGA rate)
5	Vertical sync
6, 7, 8	Ground

Options A1-A5: International Power Cords

Besides the standard North American, 110 V, 60 Hz power cord, Tektronix ships any of five alternate power cord configurations with the oscilloscope when ordered by the customer (see Table 7–2).

Table 7–2: International power cords

Option	Power Cord
A1	Universal European — 220 V, 50 Hz
A2	UK — 240 V, 50 Hz
A3	Australian — 240 V, 50 Hz
A4	North American — 240 V, 60 Hz
A5	Switzerland — 220 V, 50 Hz

Language Options

Language options provide user documentation in local languages (refer to Table 7–3 for options and manual part numbers):

Table 7–3: Language options

Language option	Language	User manual	Reference
Std	English	070-9459-00	070-9434-00
L1	French	070-9431-00	
L3	German	070-9432-00	
L4	Spanish	070-9433-00	
L5	Japanese	070-9440-00	070-9441-00
L7	Simple Chinese	070-9437-00	
L8	Standard Chinese	070-9438-00	
L9	Korean	070-9439-00	

Warranty-Plus Service Options

The following options add to the services available with the standard warranty. (The standard warranty appears immediately following the title page in this manual.)

- Option M2: Tektronix provides three years of warranty plus two years remedial service.
- Option M3: Tektronix provides three years of warranty plus two years remedial service and four oscilloscope calibrations.
- Option M8: Tektronix provides four calibrations and four performance verifications, one of each in the second through the fifth years of service.

Standard Accessories

The standard accessories listed in Table 7–4 come with the TDS 340A, TDS 360, and TDS 380. (Refer to Table 7–3 for manual part numbers.)

Table 7–4: Standard accessories

Accessory
Reference
User Manual
U.S. Power Cord
Probes (quantity two) P6109B 10X Passive (TDS 340A)
Probes (quantity two) P6111B 10X Passive (TDS 360)
Probes (quantity two) P6114B 10X Passive (TDS 380)

Optional Accessories

You can order the optional accessories listed in Table 7–5.

Table 7–5: Optional accessories

Accessory	Part number
Scope Camera	C-9, Option 4, (includes Adapter Hood 016-1154-01)
Oscilloscope Cart	K212
Rackmount Kit (for field conversion)	016-1166-00
Soft-Sided Carrying Case	016-1158-01
Carrying Case	016-0792-01
Deluxe Transit Case	016-1157-00
Front Cover	200-3232-02
Accessories Pouch	016-1159-00
I/O Interface Field Upgrade Kit	TD3F14A
Docuwave waveform capture utility software for the PC	S60 DWAV
Printer, bubble-jet, 360 dpi, 83 cps, plain paper	HC 220
Printer, portable thermal, 112 mm paper	DPU 411
Paper for DPU 411 printer, package of five rolls	006-7580-00
Programmer Manual	070-9442-00
Service Manual	070-9435-00

Accessory Probes

These are other types of probes you can use with the TDS 340A, TDS 360, and TDS 380. You can order the following probes separately:

- P6101B 1X Passive Probe
- P6129B Switchable 1X-10X Passive Probe (not recommended for the TDS 360 or TDS 380)
- P6408 TTL Logic Probe
- P5100 High Voltage Probe
- P5200 High-Voltage Differential Probe
- AM503S DC/AC Current Probe System
- P6561AS SMD Small-Geometry Probe

Accessory Cables

Table 7–6 lists cables you can use with the TDS 340A, TDS 360, and TDS 380. You can order them separately.

Table 7–6: Accessory cables

Cable type	Part number
GPIB,1 meter (3.3 feet)	012-0991-01
GPIB, 2 meter (6.6 feet)	012-0991-00
RS-232, 9-pin female to 9-pin female connectors, null modem, 76 inch (for AT style computers)	012-1379-00
RS-232, 9-pin female to 25-pin female connectors, null modem, 76 inch (for PC style computers)	012-1380-00
RS-232, 9-pin female to 25-pin male connectors, null modem, 9 feet (for serial interface printers)	012-1298-00
RS-232, 9-pin female to 25-pin male connectors, 15 feet (for modems)	012-1241-00
Centronics, 25-pin male to 36-pin Centronics, 2.4 meter (8 feet) (for parallel printer interfaces)	012-1214-00
NEC® VGA video cable. (Use an appropriate adapter when other than a 9-pin monitor connection is needed.)	73893029

Electrical Parts List

This chapter contains a list of the replaceable parts for the TDS 340A, TDS 360, and TDS 380. Use this list to identify and order replacement parts.

Parts Ordering Information

Replacement parts are available through your local Tektronix field office or representative.

Changes to Tektronix products are sometimes made to accommodate improved components as they become available and to give you the benefit of the latest improvements. Therefore, when ordering parts, it is important to include the following information in your order.

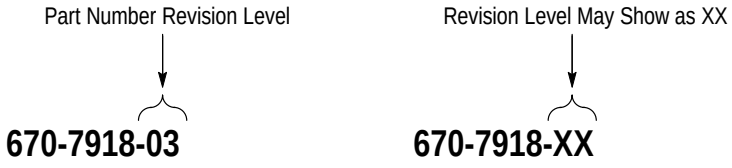
- Part number (see Part Number Revision Level below)
- Instrument type or model number
- Instrument serial number
- Instrument modification number, if applicable

If you order a part that has been replaced with a different or improved part, your local Tektronix field office or representative will contact you concerning any change in part number.

Change information, if any, is located at the rear of this manual.

Part Number Revision Level

Tektronix part numbers contain two digits that show the revision level of the part. For some parts in this manual, you will find the letters XX in place of the revision level number.



When you order parts, Tektronix will provide you with the most current part for your product type, serial number, and modification (if applicable). At the time of your order, Tektronix will determine the part number revision level needed for your product, based on the information you provide.

Module Servicing

Modules can be serviced by selecting one of the following three options. Contact your local Tektronix service center or representative for repair assistance.

Module Exchange. In some cases you may exchange your module for a remanufactured module. These modules cost significantly less than new modules and meet the same factory specifications. For more information about the module exchange program, call 1-800-TEK-WIDE, extension 6630.

Module Repair and Return. You may ship your module to us for repair, after which we will return it to you.

New Modules. You may purchase replacement modules in the same way as other replacement parts.

Using the Replaceable Parts List

This section contains a list of the electrical components that are replaceable for the TDS 340A, TDS 360, and TDS 380. Use this list to identify and order replacement parts. The following table describes each column in the parts list.

Parts List Column Descriptions

Column	Column Name	Description
1	Component Number	Items in this section are referenced by figure and index numbers to the exploded view illustrations that precede the list
2	Tektronix Part Number	Use this part number when ordering replacement parts from Tektronix
3 and 4	Serial Number	Column three indicates the serial number at which the part was first effective. Column four indicates the serial number at which the part was discontinued. No entries indicates the part is good for all serial numbers
5	Qty	This indicates the quantity of parts used
6	Name & Description	An item name is separated from the description by a colon (:). Because of space limitations, an item name may sometimes appear as incomplete. Use the U.S. Federal Catalog handbook H6-1 for further item name identification
7	Mfr. Code	This indicates the code of the actual manufacturer of the part
8	Mfr. Part Number	This indicates the actual manufacturer's or vendor's part number

Abbreviations

Abbreviations conform to American National Standard ANSI Y1.1–1972.

Mfr. Code to Manufacturer Cross Index

The table titled Manufacturers Cross Index shows codes, names, and addresses of manufacturers or vendors of components listed in the parts list.

Manufacturers Cross Index

Mfr. Code	Manufacturer	Address	City, State, Zip Code
00779	AMP INC.	CUSTOMER SERVICE DEPT PO BOX 3608	HARRISBURG, PA 17105–3608
01295	TEXAS INSTRUMENTS INC	SEMICONDUCTOR GROUP 13500 N CENTRAL EXPRESSWAY PO BOX 655303	DALLAS, TX 75272–5303
02113	COILCRAFT, INC.	1102 SILVER LAKE RD.	CARY, IL 60013
04222	AVX/KYOCERA	PO BOX 867	MYRTLE BEACH, SC 29577
04713	MOTOROLA INC	SEMICONDUCTOR PRODUCTS SECTOR 5005 E MCDOWELL ROAD	PHOENIX, AZ 85008–4229
06915	RICHCO	5825 N TRIPP AVE P.O. BOX 804238	CHICAGO, IL 60646
09969	DALE ELECTRONIC COMPONENTS	EAST HWY 50 P.O. BOX 180	YANKTON, SD 57078
0B0A9	DALLAS SEMICONDUCTOR	4350 BELTWOOD PKWY S	DALLAS, TX 75244
0JR04	TOSHIBA AMERICA INC	9775 TOLEDO WAY	IRVINE, CA 92718
0KB01	STAUFFER SUPPLY CO	810 SE SHERMAN	PORTLAND, OR 97214–4657
0LUT2	TOYOCOM USA INC	617 E GOLF ROAD SUITE 172	ARLINGTON HEIGHTS, IL 60005
0N0K0	CALOGIC CORP	237 WHITNEY PLACE	FREMONT, CA 94539
14301	ANDERSON ELECTRONICS INC	PO BOX 89	HOLLIDAYSBURG, PA 16648–0089
1CH66	PHILIPS SEMICONDUCTORS	811 E ARQUES AVE PO BOX 3409	SUNNYVALE, CA 94086–3409
20932	KYOCERA AMERICA INC	8611 BALBOA AVE	SAN DIEGO, CA 92123–1580
22526	BERG ELECTRONICS INC	857 OLD TRAIL ROAD	ETTERS, PA 17319
24355	ANALOG DEVICES	1 TECHNOLOGY DRIVE	NORWOOD, MA 02062
27014	NATIONAL SEMICONDUCTOR CORP	2900 SEMICONDUCTOR DR PO BOX 58090 MS 30–115	SANTA CLARA, CA 95051–0606
27264	MOLEX PRODUCTS COMPANY	2222 WELLINGTON CT.	LISLE, IL 60532
32997	BOURNS INC	TRIMPOT DIVISION 1200 COLUMBIA AVE	RIVERSIDE, CA 92507–2114
34371	HARRIS SEMICONDUCTORS	SEMICONDUCTOR SECTOR MS 58–71 PO BOX 883	MELBOURNE, FL 32902–0883
34649	INTEL CORPORATION	3065 BOWERS PO BOX 58130	SANTA CLARA, CA 95051–8130
46384	PENN ENGINEERING & MFG CORP	OLD EASTON RD PO BOX 1000	DANBORO, PA 18916
50139	ALLEN–BRADLEY COMPANY INC	ELECTRONIC COMPONENTS DIVISION 1414 ALLEN BRADLEY DRIVE	EL PASO, TX 79936
50434	HEWLETT PACKARD	370 W TRIMBLE ROAD	SAN JOSE, CA 95131–1008

Manufacturers Cross Index (Cont.)

Mfr. Code	Manufacturer	Address	City, State, Zip Code
53387	3M COMPANY	ELECTRONICS PRODUCTS DIV 3M AUSTIN CENTER	AUSTIN, TX 78769–2963
55680	NICHICON (AMERICA) CORP	927 E STATE PARKWAY	SCHAUMBURG, IL 60195–4526
56845	DALE ELECTRONIC COMPONENTS	2300 RIVERSIDE BLVD PO BOX 74	NORFOLK, NE 68701
57489	OHMTEK	2160 LIBERTY DR	NIAGRA FALLS, NY 14304
57668	ROHM CORPORATION	15375 BARRANCA PARKWAY SUITE B207	IRVINE, CA 92718
57924	BOURNS INC	INTEGRATED TECHNOLOGY DIV. 1400 NORTH 1000 WEST	LOGAN, UT 84321
59124	KOA SPEER ELECTRONICS INC	BOLIVAR DRIVE PO BOX 547	BRADFORD, PA 16701
61429	FOX ELECTRONICS	DIV OF FOX ENTERPRIXED INC 5842 CORPORATION CIRCLE	FORT MEYERS, FL 33905
62104	CALIFORNIA EASTERN LABS INC	4590 PATRICK HENRY DR	SANTA CLARA, CA 95054–3309
62786	HITACHI AMERICA LTD	HITACHI PLAZA 2000 SIERRA POINT PKWY	BRISBAINE, CA 94005
64762	ELANTEC INC	1996 TAROB COURT	MILPITAS, CA 95035–6824
73743	FISCHER SPECIAL MFG CO	111 INDUSTRIAL RD PO BOX 76500	COLD SPRINGS, KY 41076
80009	TEKTRONIX INC	14150 SW KARL BRAUN DR PO BOX 500	BEAVERTON, OR 97077–0001
85480	BRADY USA	NAMEPLATE DIVISION P O BOX 571 346 ELIZABETH BRADY RD	HILLSBOROUGH, NC 27278
91637	DALE ELECTRONIC COMPONENTS	1122 23RD ST	COLUMBUS, NE 68601
TK1935	ACCRA–FAB INC	11007 NE 37TH CIRCLE	VANCOUVER, WA 98682
TK2058	TDK CORPORATION OF AMERICA	1600 FEEHANVILLE DRIVE	MOUNT PROSPECT, IL 60056
TK2441	INTERNATIONAL MICROELECTRONIC PRODUCTS	2830 NORTH 1ST ST	SAN JOSE, CA 95134
TK2469	UNITREK CORPORATION	3000 LEWIS & CLARK HWY SUITE 2	VANCOUVER, WA 98661
TK2519	ALLIANCE SEMICONDUCTOR CORP	3099 N FIRST ST	SAN JOSE, CA 95134–2006
TK2597	MERIX CORP	1521 POPLAR LANE	FOREST GROVE, OR 97116
TK2598	MAXIM – ASICS	14150 SW KARL BRAUN DRIVE M/S 59–420	BEAVERTON, OR 97077
TK2601	MAXTEK COMPONENTS CORPORATION	13335 SW TERMAN RD PO BOX 1480	BEAVERTON, OR 97075–1480

A2/A3 Option 14 assembly electrical parts list

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A2/A3	672–3140–01			CKT BOARD SUBASSY:OPTION 14 BD	80009	672314001
A2C1	283–5114–00			CAP,FXD,CER DI:0.1UF,10%,50V,X7R	04222	12065C104KAT1A
A2C4	283–5114–00			CAP,FXD,CER DI:0.1UF,10%,50V,X7R	04222	12065C104KAT1A
A2C6	283–5114–00			CAP,FXD,CER DI:0.1UF,10%,50V,X7R	04222	12065C104KAT1A
A2C8	283–5114–00			CAP,FXD,CER DI:0.1UF,10%,50V,X7R	04222	12065C104KAT1A
A2C9	283–5114–00			CAP,FXD,CER DI:0.1UF,10%,50V,X7R	04222	12065C104KAT1A
A2C10	283–5114–00			CAP,FXD,CER DI:0.1UF,10%,50V,X7R	04222	12065C104KAT1A
A2C12	283–5114–00			CAP,FXD,CER DI:0.1UF,10%,50V,X7R	04222	12065C104KAT1A
A2C20	283–5267–00			CAP,FXD,CERAMIC:1.0UF,25V,Y5V,+80–20%,SMD	04222	12063G105ZAT1A
A2C21	283–5267–00			CAP,FXD,CERAMIC:1.0UF,25V,Y5V,+80–20%,SMD	04222	12063G105ZAT1A
A2C22	283–5267–00			CAP,FXD,CERAMIC:1.0UF,25V,Y5V,+80–20%,SMD	04222	12063G105ZAT1A
A2C23	290–5024–00			CAP,FXD,ELCTLT:3.3UF,25V,TANTALUM	04222	TAJC335M025
A2C24	290–5024–00			CAP,FXD,ELCTLT:3.3UF,25V,TANTALUM	04222	TAJC335M025
A2C25	283–5068–00			CAP,FXD,CER DI:2200PF,10%,50V	04222	12065C222KAT1A
A2C26	283–5068–00			CAP,FXD,CER DI:2200PF,10%,50V	04222	12065C222KAT1A
A2C27	283–5068–00			CAP,FXD,CER DI:2200PF,10%,50V	04222	12065C222KAT1A
A2C28	283–5068–00			CAP,FXD,CER DI:2200PF,10%,50V	04222	12065C222KAT1A
A2C29	283–5068–00			CAP,FXD,CER DI:2200PF,10%,50V	04222	12065C222KAT1A
A2C30	283–5068–00			CAP,FXD,CER DI:2200PF,10%,50V	04222	12065C222KAT1A
A2C31	283–5068–00			CAP,FXD,CER DI:2200PF,10%,50V	04222	12065C222KAT1A
A2C32	283–5068–00			CAP,FXD,CER DI:2200PF,10%,50V	04222	12065C222KAT1A
A2C33	283–5195–00			CAP,FXD,CER DI:10PF,5%,100V	04222	12061A100JAT1A
A2C35	283–5267–00			CAP,FXD,CERAMIC:1.0UF,25V,Y5V,+80–20%,SMD	04222	12063G105ZAT1A
A2J1	174–2783–00			CA ASSY,SP,ELEC:50,26 AWG,14.0 L,RIB W/CONN	TK1899	174–2783–00
A2J2	131–5514–00			CONN,DSUB:PCB;MALE,STR,9 POS,0.112 CTR	00779	2–748003–0
A2J3	131–3694–00			CONN,DSUB RCPT:PCB/PNL,;FEMALE,STR,25 POS	00779	2–747708–0
A2J4	131–5515–00			CONN,RIBBON:PCB,;FEMALE,STR,24 POS,0.08CTR	00779	554857–1
A2R21	321–5026–00			RES,FXD:METAL FILM;4.75K OHM,1%,0.125W	91637	CRCW12064751FT
A2R22	321–5026–00			RES,FXD:METAL FILM;4.75K OHM,1%,0.125W	91637	CRCW12064751FT
A2R23	321–5026–00			RES,FXD:METAL FILM;4.75K OHM,1%,0.125W	91637	CRCW12064751FT
A2U1	156–5071–01			IC,DIGITAL:HCTCMOS,TRANSCEIVER;OCTAL	18324	74HCT245DT
A2U2	156–5191–01			IC,DIGITAL:FTTL,DEMUX/DECODER;DUAL 1–OF–4	04713	MC74F139DR2
A2U4	156–6031–00			IC,PROCESSOR:NMOS,PERIPHERAL;DUAL	04713	MC68681FN

A2/A3 Option 14 assembly electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A2U5	156–6423–00			IC,MISC:CMOS,INTERFACE;QUAD RS–232 LINE DR	1ES66	MAX238CWG (C703
A2U6	156–5035–01			IC,DIGITAL:LSTTL,FLIP FLOP;OCTAL D–TYPE	01295	SN74LS374DWR
A2U8	156–6223–01			IC,DIGITAL:NMOS,PERIPHERAL;GPIB CONTROL	01295	TMS9914AFNRLR
A2U9	156–5580–01			IC,DIGITAL:TTL,OCTAL GPIB TRANSCEIVER	01295	SN75160BDWR
A2U10	156–5581–01			IC,DIGITAL:TTL,BUS TRANSCEIVER,OCTAL GPIB	01295	SN75161BDWR
A2U12	156–5041–00			IC,DIGITAL:LSTTL,GATES;HEX INV BUS DRIVER	01295	SN74LS368D
A2U13	156–5075–00			IC,DIGITAL:HCMOS,GATE;QUAD 2–INPUT NAND	0JR04	TC74HC00AFN
A2W1	174–3196–00			CA ASSY,SP:DESCRETE,PWR,2,26AWG,5.0L	80009	174319600
A2Y1	158–5017–00			XTAL UNIT,QTZ:3.6864 MHZ,+/– 0.01%,PARALLEL	61429	FPX–SM 3.6864 M
A3C1	290–1303–00			CAP,FXD,ALUM:1000UF,20%,16WV,0.394X0.787	80009	290130300
A3C4	290–1290–00			CAP,FXD,ALUM:2200UF,20%,25V,16X31.5MM	80009	290129000
A3C5	290–0183–00			CAP,FXD,TANT:DRY,1UF,10%,35V,TANT OXIDE	05397	T3228105K035AS
A3C6	290–0183–00			CAP,FXD,TANT:DRY,1UF,10%,35V,TANT OXIDE	05397	T3228105K035AS
A3C7	290–0183–00			CAP,FXD,TANT:DRY,1UF,10%,35V,TANT OXIDE	05397	T3228105K035AS
A3CR1	152–0141–02			DIODE,SIG:ULTRA FAST,40V,150MA,4NS,2PF	27014	FDH9427
A3CR2	152–0141–02			DIODE,SIG:ULTRA FAST,40V,150MA,4NS,2PF	27014	FDH9427
A3CR3	152–0670–00			DIODE,RECT:SCHTKY,40V,3A	04713	IN5822
A3F1	307–1608–00			RES,THERMAL:CIRCUIT PROTECTOR,1.10AMP	80009	307160800
A3J1	174–3186–00			CA,ASSY,SP:FLAT FLEX,15.0 L	80009	174318600
A3J2	131–4963–00			CONN,HDR:PCB,MALE,STR,1X2,0.1 CTR	80009	131496300
A3J3	131–3925–00			CONN,RIBBON:IDC/PNL,FEMALE,STR,36 POS	TK0AY	JEY–9S–1A3F–14
A3J4	174–3187–00			CA,ASSY,SP:FLAT FLEX,14.0 L	80009	174318700
A3L1	108–0337–00			COIL,RF:INDUCTOR,FXD,25UH,20% FERRITE	OJR03	ORDER BY DESC
A3R2	303–0121–00			RES,FXD,CMPSN:120 OHM,5%,1W	91637	CMF65–42 120OHM
A3R6	313–1100–00			RES,FXD,FILM:100OHM,5%,0.2W	91637	CCF50–2–10R00J
A3R7	313–1472–00			RES,FXD,FILM:47K OHM,5%,0.2W	91637	CCF50–2–47000J
A3R8	313–1102–00			RES,FXD,FILM:1K OHM,5%,0.2W	91637	CCF50–2–10000J
A3R9	313–1472–00			RES,FXD,FILM:47K OHM,5%,0.2W	91637	CCF50–2–47000J
A3U1	156–3213–00			IC,LINEAR:BIPOLAR,SW–REGULATOR,2.5A	64155	LT1071CT

A5 Floppy Interface board replaceable electrical parts list

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A5	671–3777–00			FLOPPY DISC INTERFACE BOARD	TK2597	389–2174–00
A5C2	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A5C3	290–5002–00			CAP,FXD,TANT:DRY,10UF,20%,20V,TANT OXIDE	04222	TAJD106M020 (S OR R)
A5C4	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A5C5	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A5C6	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A5C7	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A5C8	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A5C9	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A5J1	131–5501–00			CONN,BOX:PCB,FFC/ZIF,FEMALE,STR,1 X 26,	27264	52030–2610
A5J2	131–3147–00			CONN,HDR:PCB,MALE,STR,2 X 25,0.1 CTR	22526	66506–032
A5JR3	131–5926–00			CONN,BOX:PCB,FEMALE,STR,2 X 27,0.1 CTR	53387	929852–01–27–30
A5L1	108–5132–00			INDUCTOR,FXD:SIGNAL,68UH,5%,IDC<50 MA	TK2058	NL322522T–680J–3
A5R1	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A5R2	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A5R3	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A5R4	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A5R5	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A5R6	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A5R7	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A5R8	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A5R9	321–5043–00			RES,FXD:THICK FILM,47.5 OHM,1%,0.125W	50139	BCD47R5FT
A5U1	156–6492–00			IC,ASIC:CMOS,CUSTOM,LOGIC REPLACEMENT IC	27014	MM9351–VCE
A5U2	156–5304–01			IC,DIGITAL:QUAD BUFFER, /OE, 3–STATE,74HCT125	01295	SN74HCT125DR
A5U3	156–5051–01			IC,DIGITAL:FTTL,GATE,QUAD 2–INPUT NOR,74F02	01295	SN74F02DR
A5U4	156–5952–00			IC,DIGITAL:DEMUX/DECODER	04713	MC74ACT139D

A5 Floppy Interface board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A5U5	156–5266–01			IC,MEMORY:CMOS,SRAM,32K X 8,100NS	62786	HM62256LFP–10T
A5U6	156–7120–01			IC:CMOS,PERIPHERAL,FLOPPY DISK	27014	PC8477BV–1/FLOW 63
A5Y1	119–1329–00			OSCILLATOR,RF:CRYSTAL CONTROLLED,24MHZ	14301	AE 404

A6 Front Panel replaceable electrical parts list

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A6	672–1454–00			CIRCUIT BOARD:FRONT PANEL BD ASMBLY	TK2597	672145400
A6C101	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C106	283–5211–00			CAP,FXD,CERAMIC:MLC,4700PF,10%,50V,X7R	04222	12065C472KAT2A
A6C131	283–5282–00			CAP,FXD,CERAMIC:MLC,2.2UF,+80–20%,16V	04222	1206YG225ZAT2A
A6C132	283–5282–00			CAP,FXD,CERAMIC:MLC,2.2UF,+80–20%,16V	04222	1206YG225ZAT2A
A6C140	283–5201–00			CAP,FXD,CERAMIC:MLC,33PF,5%,100V,NPO	04222	12061A330JAT1A
A6C141	283–5201–00			CAP,FXD,CERAMIC:MLC,33PF,5%,100V,NPO	04222	12061A330JAT1A
A6C202	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C304	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C305	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C402	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C403	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C404	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C405	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C406	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C407	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C408	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C409	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C420	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C421	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A6C501	283–5203–00			CAP,FXD,CERAMIC:MLC,1000PF,10%,100V,X7R	04222	12061C102KAT1A
A6CR331	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4N	27014	MMBD1203
A6CR332	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS	27014	MMBD1203
A6CR333	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS	27014	MMBD1203
A6CR334	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS	27014	MMBD1203
A6CR335	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS	27014	MMBD1203
A6CR336	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS	27014	MMBD1203
A6CR337	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS	27014	MMBD1203
A6CR338	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS	27014	MMBD1203

A6 Front Panel replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A6CR339	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS	27014	MMBD1203
A6CR500	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A6DS201	150–5008–00			DIODE,OPTO:LED,GRN,569NM,4.2MCD AT 10MA	50434	HLMP–6505–021
A6DS202	150–5008–00			DIODE,OPTO:LED,GRN,569NM,4.2MCD AT 10MA	50434	HLMP–6505–021
A6DS203	150–5008–00			DIODE,OPTO:LED,GRN,569NM,4.2MCD AT 10MA	50434	HLMP–6505–021
A6DS204	150–5008–00			DIODE,OPTO:LED,GRN,569NM,4.2MCD AT 10MA	50434	HLMP–6505–021
A6DS205	150–5008–00			DIODE,OPTO:LED,GRN,569NM,4.2MCD AT 10MA	50434	HLMP–6505–021
A6DS206	150–5008–00			DIODE,OPTO:LED,GRN,569NM,4.2MCD AT 10MA	50434	HLMP–6505–021
A6DS207	150–5008–00			DIODE,OPTO:LED,GRN,569NM,4.2MCD AT 10MA	50434	HLMP–6505–021
A6J30	131–5344–00			CONN,HDR:PCB,MALE,STR,1 X 16,O.1 CTR,LATCHING	00779	1–103670–5
A6J35	131–5167–00			CONN,BOX PWR:PCB,FEMALE,STR,1 X 2,0.156 CTR	27264	09–52–3022
A6J40	131–5158–00			CONN,HDR:PCB,MALE,STR,1 X 10,0.1 CTR,LATCHING	00779	103669–9
A6R101	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A6R102	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A6R103	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A6R104	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A6R106	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A6R107	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A6R108	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A6R109	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A6R140	321–5049–00			RES,FXD:THICK FILM,1M OHM,1%,0.125W	50139	BCA1004FT
A6R201	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R202	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R203	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R204	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R205	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R206	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R207	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R300	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R301	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R302	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R303	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R304	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R305	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT

A6 Front Panel replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A6R306	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R307	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R330	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R331	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R332	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R333	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R334	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R335	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R336	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R337	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A6R411	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A6R412	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A6R413	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A6R414	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A6R450	311–2843–00			RES,VAR:SHAFTLESS,5KOHM,CONTINUOUS ROTA	32997	PSP1D–S00–PS0001
A6R451	311–2843–00			RES,VAR,:SHAFTLESS,5KOHM,CONTINUOUS ROTA	32997	PSP1D–S00–PS0001
A6R452	311–2843–00			RES,VAR,:SHAFTLESS,5KOHM,CONTINUOUS ROTA	32997	PSP1D–S00–PS0001
A6R453	311–2843–00			RES,VAR,:SHAFTLESS,5KOHM,CONTINUOUS ROTA	32997	PSP1D–S00–PS0001
A6R462	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R463	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R464	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R465	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R466	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R467	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R468	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R469	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A6R501	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A6U101	156–6124–00			IC:CMOS,MICROCOMPUTER,8–BIT,16–BIT TIMER	04713	MC68HC705B5–CFN
A6U101	160–7853–07			IC:CMOS,MICROCOMPUTER,8–BIT,A/D,16–BITTIMER	80009	160–7853–07
A6U202	156–5458–01			IC,DIGITAL:HCMOS,LATCH,8–BIT ADDRESSABLE	01295	SN74HC259DR
A6U304	156–6135–01			IC,DIGITAL:HCMOS,DEMUX/DECODER	01295	SN74HC138DR
A6U305	156–6135–01			IC,DIGITAL:HCMOS,DEMUX/DECODER	01295	SN74HC138DR
A6U420	156–5050–01			IC,MISC:HCMOS,ANALOG MUX,8–CHANNEL,74HC4051	04713	MC74HC4051D
A6U421	156–5050–01			IC,MISC:HCMOS,ANALOG MUX,8–CHANNEL,74HC4051	04713	MC74HC4051D
A6Y140	119–4061–00			RESONATOR:2.4576MHZ,50VAC	20932	KBR–2.45MS

A11 (TDS 340A) Main Board replaceable electrical parts list

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A11	671–3736–00			CIRCUIT BOARD:MAIN,TDS340	TK2597	671373600
A11AT205	165–2500–03			MICROCKT,HYBRID:1 MEG OHM ATTEN/PREAMP	TK2601	165250003
A11AT206	165–2500–03			MICROCKT,HYBRID:1 MEG OHM ATTEN/PREAMP	TK2601	165250003
A11C100	283–5342–00			CAP,FXD,CERAMIC:MLC,10PF,5%,500V,NPO	04222	12067A100JAT1A
A11C101	290–5024–00			CAP,FXD,TANT:3.3UF,20%,25V,0.236 X 0.126	04222	TAJC335M025
A11C102	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A11C103	283–5003–00			CAP,FXD,CERAMIC:MLC,0.01UF,10%,50V,X7R	04222	12065C103KAT060R
A11C104	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C105	283–5195–00			CAP,FXD,CERAMIC:MLC,10PF,5%,100V ,NPO	04222	12061A100JAT1A
A11C106	283–5203–00			CAP,FXD,CERAMIC:MLC,1000PF,10%,100V,X7R	04222	12061C102KAT1A
A11C107	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C108	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C109	283–5195–00			CAP,FXD,CERAMIC:MLC,10PF,5%,100V ,NPO	04222	12061A100JAT1A
A11C110	283–5106–00			CAP,FXD,CERAMIC:MLC,470PF,5%,100V,NPO	04222	12061A471JAT1A
A11C112	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C113	283–5196–00			CAP,FXD,CERAMIC:MLC,47PF,5%,100V,NPO	04222	12061A470JAT1A
A11C114	283–5342–00			CAP,FXD,CERAMIC:MLC,10PF,5%,500V,NPO	04222	12067A100JAT1A
A11C115	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C116	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A11C117	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C118	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C119	283–5041–00			CAP,FXD,CERAMIC:MLC,7PF,+/–0.5PF,50V,NPO	04222	12065A7R0DAT1A
A11C120	283–5041–00			CAP,FXD,CERAMIC:MLC,7PF,+/–0.5PF,50V,NPO	04222	12065A7R0DAT1A
A11C121	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C122	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A11C123	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C125	283–5187–00			CAP,FXD,CERAMIC:MLC,15PF,5%,100V,NPO	04222	12061A150JAT1A
A11C130	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C201	283–5202–00			CAP,FXD,CERAMIC:MLC,0.022UF,10%,50V,X7R	04222	12065C223KAT1A
A11C202	283–5202–00			CAP,FXD,CERAMIC:MLC,0.022UF,10%,50V,X7R	04222	12065C223KAT1A
A11C203	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C204	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C205	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)

A11 (TDS 340A) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A11C206	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C207	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C208	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C209	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C210	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C212	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C213	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C214	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C215	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A11C218	290–0963–00			CAP,FXD,ALUM:220UF,+50–20%,25WVDC,RADIAL	55680	UVX1V221MPA
A11C219	290–0963–00			CAP,FXD,ALUM:220UF,+50–20%,25WVDC,RADIAL	55680	UVX1V221MPA
A11C220	290–0963–00			CAP,FXD,ALUM:220UF,+50–20%,25WVDC,RADIAL	55680	UVX1V221MPA
A11C221	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C250	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C305	283–5196–00			CAP,FXD,CERAMIC:MLC,47PF,5%,100V,NPO	04222	12061A470JAT1A
A11C307	283–5196–00			CAP,FXD,CERAMIC:MLC,47PF,5%,100V,NPO	04222	12061A470JAT1A
A11C401	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A11C402	283–5003–00			CAP,FXD,CERAMIC:MLC,0.01UF,10%,50V,X7R	04222	12065C103KAT060R
A11C403	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C404	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C405	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C406	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C407	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C408	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C409	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C410	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C502	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C507	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C508	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C509	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C511	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C512	283–5068–00			CAP,FXD,CERAMIC:MLC,2200PF,10%,50V,X7R	04222	12065C222KAT1A

A11 (TDS 340A) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A11C513	283–5068–00			CAP,FXD,CERAMIC:MLC,2200PF,10%,50V,X7R	04222	12065C222KAT1A
A11C515	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C521	283–5003–00			CAP,FXD,CERAMIC:MLC,0.01UF,10%,50V,X7R	04222	12065C103KAT060R
A11C522	283–5202–00			CAP,FXD,CERAMIC:MLC,0.022UF,10%,50V,X7R	04222	12065C223KAT1A
A11C530	283–5202–00			CAP,FXD,CERAMIC:MLC,0.022UF,10%,50V,X7R	04222	12065C223KAT1A
A11C531	283–5202–00			CAP,FXD,CERAMIC:MLC,0.022UF,10%,50V,X7R	04222	12065C223KAT1A
A11C532	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C533	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C534	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C535	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C562	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C571	283–5003–00			CAP,FXD,CERAMIC:MLC,0.01UF,10%,50V,X7R	04222	12065C103KAT060R
A11C581	283–5003–00			CAP,FXD,CERAMIC:MLC,0.01UF,10%,50V,X7R	04222	12065C103KAT060R
A11C592	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C593	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C594	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C595	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C600	283–5106–00			CAP,FXD,CERAMIC:MLC,470PF,5%,100V,NPO	04222	12061A471JAT1A
A11C602	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C604	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C606	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C607	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT(1A OR 3A)
A11C608	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C609	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C610	283–5106–00			CAP,FXD,CERAMIC:MLC,470PF,5%,100V,NPO	04222	12061A471JAT1A
A11C701	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C702	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C703	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C704	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C705	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A

A11 (TDS 340A) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A11C706	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C707	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C708	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C709	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C710	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A11C711	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C712	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C713	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11C714	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A11CR102	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A11CR103	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A11CR104	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A11CR205	152–5047–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF,	27014	MMBD1204
A11CR206	152–5047–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF,	27014	MMBD1204
A11CR207	152–5047–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF,	27014	MMBD1204
A11CR301	152–5045–00			DIODE,SIG:SCHTKY,20V,1.2PF,24 OHM	50434	HSMS–2810–T31
A11CR302	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A11CR401	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A11CR501	152–5062–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0P	27014	MMBD1205
A11CR520	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A11CR525	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A11CR542	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A11CR543	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A11CR551	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A11CR553	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A11CR554	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A11E1	119–4780–00			BRACKET ASSY:BRACKET W/BNC'S	80009	119–4780–00
A11J601	131–3147–00			CONN,HDR:PCB,MALE,STR,2 X 25,0.1 CTR,30 GOLD	22526	66506–032
A11J603	131–5344–00			CONN,HDR:PCB,MALE,STR,1 X 16,O.1 CTR,LATCHING	00779	1–103670–5
A11J609	131–5203–00			CONN,HDR:PCB,MALE,STR,1 X 2,0.1 CTR,BD RET	00779	104350–1
A11J701	174–2282–00			CA ASSY,SP:FLAT FLEX,FLX,10,26 AWG	TK2469	174–2282–00
A11J702	174–2705–00			CA ASSY,SP:DISCRETE,CPD,12,22 AWG,UL1430,300V	TK2469	174–2705–00
A11J703	131–5472–00			CONN,HDR:PCB,MALE,STR,1 X 6,0.1 CTR,LATCHING	00779	104362–5
A11L203	108–5020–00			INDUCTOR,FXD:270NH,5%	02113	1008CS–271XJB (A OR C)

A11 (TDS 340A) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A11L204	108–5020–00			INDUCTOR,FXD:SIGNAL,270NH,5%	02113	1008CS–271XJB (A OR C)
A11L205	108–5020–00			INDUCTOR,FXD:SIGNAL,270NH,5%	02113	1008CS–271XJB (A OR C)
A11L206	108–5020–00			INDUCTOR,FXD:SIGNAL,270NH,5%	02113	1008CS–271XJB (A OR C)
A11L208	108–5084–00			COIL,RF:FERRITE CHIP BEAD,52 OHM	TK2058	HF70ACB322513T
A11L209	108–5129–00			INDUCTOR,FXD:POWER,10UH,10%	TK2058	NLC453232T–100K
A11L210	108–5074–00			INDUCTOR,FXD:SIGNAL,3.9UH,10%	02113	1008CS–392XKB (A OR C)
A11L211	108–5074–00			INDUCTOR,FXD:SIGNAL,3.9UH,10%	02113	1008CS–392XKB (A OR C)
A11L212	321–5051–00			RES,FXD:THICK FILM,0 OHM,1%,0.125W	09969	CRCW1206 JUMPER
A11L213	108–5094–00			INDUCTOR,FXD:SIGNAL,10NH,10%,IDC	TK2058	NL322522T–010K
A11Q105	151–5001–00			TRANSISTOR:BIPOLAR,NPN,40V,200MA,AMPLIFIER	04713	MMBT3904LT1
A11Q106	151–5001–00			TRANSISTOR:BIPOLAR,NPN,40V,200MA,AMPLIFIER	04713	MMBT3904LT1
A11Q107	151–5018–00			TRANSISTOR:JFET,N–CH,6V,30MA,4.5MS,	0N0K0	SST441–T1
A11Q108	151–5001–00			TRANSISTOR:BIPOLAR,NPN,40V,200MA,AMPLIFIER	04713	MMBT3904LT1
A11Q201	151–5029–00			TRANSISTOR:BIPOLAR,NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A11Q202	151–5029–00			TRANSISTOR:BIPOLAR,NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A11Q203	151–5029–00			TRANSISTOR:BIPOLAR,NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A11Q204	151–5029–00			TRANSISTOR:BIPOLAR,NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A11Q205	151–5029–00			TRANSISTOR:BIPOLAR,NPN,15V,500MA,SWITCHING,	04713	MMBT2369ALT1
A11Q206	151–5029–00			TRANSISTOR:BIPOLAR,NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A11Q301	151–5058–00			TRANSISTOR:BIPOLAR,PNP,12V,80MA,SWITCHING	04713	MMBT3640LT1
A11Q302	151–5058–00			TRANSISTOR:BIPOLAR,PNP,12V,80MA,SWITCHING	04713	MMBT3640LT1
A11Q304	151–5000–00			TRANSISTOR:BIPOLAR,PNP,40V,200MA,AMPLIFIER	04713	MMBT3906LT1
A11Q305	151–5001–00			TRANSISTOR:BIPOLAR,NPN,40V,200MA,AMPLIFIER	04713	MMBT3904LT1
A11Q306	151–5034–00			TRANSISTOR:BIPOLAR,NPN,14V,50MA,1.5GHZ, AMP	62104	NE73433–T1B (2SC2759–T1B)
A11Q307	151–5034–00			TRANSISTOR:BIPOLAR,NPN,14V,50MA,1.5GHZ, AMP	62104	NE73433–T1B (2SC2759–T1B)
A11Q501	156–6140–01			IC,LINEAR:BIPOLAR, ARRAY,QUAD,NPN,MATCHED	24355	MAT04FSR
A11Q505	151–5001–00			TRANSISTOR:BIPOLAR,NPN,40V,200MA,300MHZ, AMP	04713	MMBT3904LT1
A11Q506	151–5001–00			TRANSISTOR:BIPOLAR,NPN,40V,200MA,300MHZ, AMP	04713	MMBT3904LT1
A11Q507	151–5001–00			TRANSISTOR:BIPOLAR,NPN,40V,200MA,300MHZ, AMP	04713	MMBT3904LT1
A11Q508	151–5001–00			TRANSISTOR:BIPOLAR,NPN,40V,200MA,300MHZ, AMP	04713	MMBT3904LT1
A11Q509	151–5058–00			TRANSISTOR:BIPOLAR,PNP,12V,80MA,SWITCHING	04713	MMBT3640LT1
A11Q510	151–5058–00			TRANSISTOR:BIPOLAR,PNP,12V,80MA,SWITCHING	04713	MMBT3640LT1
A11Q701	151–5000–00			TRANSISTOR:BIPOLAR,PNP,40V,200MA,250MHZ, AMP	04713	MMBT3906LT1
A11Q702	151–5000–00			TRANSISTOR:BIPOLAR,PNP,40V,200MA,250MHZ, AMP	04713	MMBT3906LT1

A11 (TDS 340A) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A11Q703	151–5000–00			TRANSISTOR:BIPOLAR,PNP,40V,200MA,250MHZ, AMP	04713	MMBT3906LT1
A11Q704	151–5000–00			TRANSISTOR:BIPOLAR,PNP,40V,200MA,250MHZ, AMP	04713	MMBT3906LT1
A11R50	313–1390–00			RES,FXD,FILM:39 OHM,5%,0.2W TAPED AND REELED	57668	TR20JE 39E
A11R53	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R59	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R101	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R102	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A11R103	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R105	321–5051–00			RES,FXD:THICK FILM,0 OHM,1%,0.125W	09969	CRCW1206 JUMPER
A11R106	321–5032–00			RES,FXD:THICK FILM,15.0K OHM,1%,0.125W	50139	BCK1502FT
A11R107	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A11R108	321–5032–00			RES,FXD:THICK FILM,15.0K OHM,1%,0.125W	50139	BCK1502FT
A11R113	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A11R114	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R115	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R116	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R117	321–5241–00			RES,FXD,FILM:34.0K,0.1%,0.125W	91637	TNPW1206–3402–B–RT2
A11R118	321–5169–00			RES,FXD:THICK FILM,475K OHM,1%,0.125W	59124	RK73H2B4753FT
A11R119	321–5064–00			RES,FXD:THICK FILM,200K OHM,1%,0.125W	91637	CRCW1206–2003FT
A11R120	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R123	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A11R124	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A11R125	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A11R126	321–5169–00			RES,FXD:THICK FILM,475K OHM,1%,0.125W	59124	RK73H2B4753FT
A11R127	321–5048–00			RES,FXD:THICK FILM,332K OHM,1%,0.125W	50139	BCK3323FT
A11R128	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A11R129	321–5064–00			RES,FXD:THICK FILM,200K OHM,1%,0.125W	91637	CRCW1206–2003FT
A11R130	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A11R131	321–5019–00			RES,FXD:THICK FILM,1.21K OHM,1%,0.125W	50139	BCK1211FT
A11R132	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A11R133	321–5048–00			RES,FXD:THICK FILM,332K OHM,1%,0.125W	50139	BCK3323FT
A11R134	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A11R135	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A11R136	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A11R200	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R201	321–5049–00			RES,FXD:THICK FILM,1M OHM,1%,0.125W	50139	BCA1004FT
A11R202	321–5049–00			RES,FXD:THICK FILM,1M OHM,1%,0.125W	50139	BCA1004FT
A11R203	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT

A11 (TDS 340A) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A11R204	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R207	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A11R208	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R209	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A11R210	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A11R211	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A11R212	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A11R215	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R216	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A11R217	321–5032–00			RES,FXD:THICK FILM,15.0K OHM,1%,0.125W	50139	BCK1502FT
A11R218	321–5019–00			RES,FXD:THICK FILM,1.21K OHM,1%,0.125W	50139	BCK1211FT
A11R219	321–5023–00			RES,FXD:THICK FILM,2.74K OHM,1%,0.125W	50139	BCK2741FT
A11R220	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R221	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A11R222	321–5032–00			RES,FXD:THICK FILM,15.0K OHM,1%,0.125W	50139	BCK1502FT
A11R223	321–5019–00			RES,FXD:THICK FILM,1.21K OHM,1%,0.125W	50139	BCK1211FT
A11R224	321–5023–00			RES,FXD:THICK FILM,2.74K OHM,1%,0.125W	50139	BCK2741FT
A11R225	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A11R226	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A11R227	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A11R228	321–5309–00			RES,FXD,FILM:8.25K OHM,+/–0.1%,0.125W	91637	TNPW12068251BT
A11R230	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A11R231	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A11R232	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A11R233	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A11R234	321–5165–00			RES,FXD,FILM:10K OHM,0.1%,0.125W	91637	TNPW1206–1002BT
A11R236	321–5165–00			RES,FXD,FILM:10K OHM,0.1%,0.125W	91637	TNPW1206–1002BT
A11R237	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R238	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R239	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R246	321–5010–00			RES,FXD:THICK FILM,221 OHM,1%,0.125W	50139	BCK221FT
A11R247	321–5010–00			RES,FXD:THICK FILM,221 OHM,1%,0.125W	50139	BCK221FT
A11R248	321–5010–00			RES,FXD:THICK FILM,221 OHM,1%,0.125W	50139	BCK221FT
A11R249	321–5010–00			RES,FXD:THICK FILM,221 OHM,1%,0.125W	50139	BCK221FT
A11R250	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A11R251	321–5241–00			RES,FXD,FILM:34.0K,0.1%,0.125W	91637	TNPW1206–3402–B–RT2
A11R252	321–5241–00			RES,FXD,FILM:34.0K,0.1%,0.125W	91637	TNPW1206–3402–B–RT2

A11 (TDS 340A) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A11R253	321–5165–00			RES,FXD,FILM:10K OHM,0.1%,0.125W	91637	TNPW1206–1002BT
A11R254	321–5309–00			RES,FXD,FILM:8.25K OHM,+/–0.1%,0.125W	91637	TNPW12068251BT
A11R255	321–5242–00			RES,FXD,FILM:68.1K,0.1%,0.125W	91637	TNPW1206–6812–B–R75
A11R256	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A11R260	321–5051–00			RES,FXD:THICK FILM,0 OHM,1%,0.125W	09969	CRCW1206 JUMPER
A11R302	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A11R303	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R304	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A11R305	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R307	321–5042–00			RES,FXD:THICK FILM,39.2 OHM,1%,0.125W	50139	BCD39R2FT
A11R308	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A11R309	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R310	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A11R314	321–5007–00			RES,FXD:THICK FILM,121 OHM,1%,0.125W	50139	BCK1210FT
A11R315	321–5007–00			RES,FXD:THICK FILM,121 OHM,1%,0.125W	50139	BCK1210FT
A11R316	321–5007–00			RES,FXD:THICK FILM,121 OHM,1%,0.125W	50139	BCK1210FT
A11R317	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A11R318	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A11R319	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A11R321	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R324	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A11R325	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A11R327	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R331	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A11R335	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R336	321–5169–00			RES,FXD:THICK FILM,475K OHM,1%,0.125W	59124	RK73H2B4753FT
A11R350	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R351	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A11R352	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R360	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R361	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R365	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R366	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A11R369	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A11R370	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90–FT
A11R372	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A11R373	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT

A11 (TDS 340A) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A11R375	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R376	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R378	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R379	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R380	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R381	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R383	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R384	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R385	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R386	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R387	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R388	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R389	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R390	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A11R392	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R393	321–5007–00			RES,FXD:THICK FILM,121 OHM,1%,0.125W	50139	BCK1210FT
A11R395	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R396	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R398	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R399	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R402	321–5023–00			RES,FXD:THICK FILM,2.74K OHM,1%,0.125W	50139	BCK2741FT
A11R403	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R406	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A11R407	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A11R408	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A11R409	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R410	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A11R411	321–5000–00			RES,FXD:THICK FILM,10 OHM,1%,0.125W	50139	BCD10R0FT
A11R412	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A11R413	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R414	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A11R415	321–5000–00			RES,FXD:THICK FILM,10 OHM,1%,0.125W	50139	BCD10R0FT
A11R416	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A11R417	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R418	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R419	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A11R420	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R421	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT

A11 (TDS 340A) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A11R422	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A11R423	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A11R424	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A11R425	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A11R500	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R502	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A11R503	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A11R504	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A11R507	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R508	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R509	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R510	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R511	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A11R512	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R514	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R516	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R521	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R523	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R525	321–5370–00			RES,FXD,FILM:0.25 OHM,10%,0.33W,TC=300PPM	57489	L1206MR250KBT
A11R526	321–5370–00			RES,FXD,FILM:0.25 OHM,10%,0.33W,TC=300PPM	57489	L1206MR250KBT
A11R527	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A11R528	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R529	321–5023–00			RES,FXD:THICK FILM,2.74K OHM,1%,0.125W	50139	BCK2741FT
A11R530	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R534	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R535	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R538	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R539	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R540	321–5114–00			RES,FXD,FILM:619 OHM,1%,0.125W,TC=100PPM	91637	CRCW1206–6190FT
A11R542	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A11R544	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A11R545	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A11R552	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A11R553	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A11R556	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A11R557	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT

A11 (TDS 340A) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A11R558	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A11R559	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A11R561	321–5025–00			RES,FXD:THICK FILM,3.92K OHM,1%,0.125W ,	50139	BCK3921FT
A11R563	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R565	321–5093–00			RES,FXD,FILM:200 OHM,1%,0.125W	57668	T/R MCR18EZHFX200E
A11R566	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R567	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R572	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R573	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R582	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A11R585	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A11R586	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A11R587	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A11R588	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A11R600	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A11R601	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R602	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A11R613	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R614	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R636	307–5041–01			RES,NTWK FXD:FILM,(15),4.7K OHM,2%,0.08W EACH	57924	4816P–002–472
A11R637	307–5041–01			RES,NTWK FXD:FILM,(15),4.7K OHM,2%,0.08W EACH	57924	4816P–002–472
A11R638	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A11R640	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A11R641	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R642	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R643	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A11R644	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A11R645	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A11R646	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A11R647	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R650	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A11R651	321–5051–00			RES,FXD:THICK FILM,0 OHM,1%,0.125W	09969	CRCW1206 JUMPER
A11R652	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A11R653	321–5051–00			RES,FXD:THICK FILM,0 OHM,1%,0.125W	09969	CRCW1206 JUMPER
A11R700	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A11R701	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT

A11 (TDS 340A) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A11R702	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A11R703	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A11R704	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R705	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A11R706	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A11R707	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A11R708	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A11R709	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A11R710	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R711	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A11R712	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A11R713	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A11R714	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A11U101	155–0325–01			IC,ASIC:BIPOLAR,LINEAR,DETECTOR,FULL CUSTOM	TK2598	155032501
A11U102	156–5198–01			IC,DIGITAL:QUAD 2–INPUT XOR,74HCT86	1CH66	74HCT86DT
A11U103	156–6891–01			IC,MISC:CMOS,VIDEO SUBSYSTEM	64762	EL4581CS(T&R)
A11U104	156–5095–01			IC,LINEAR:OP–AMP,LOW NOISE,HIGH OUTPUT DRIVE	01295	NE5534DR
A11U105	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A11U106	156–5000–01			IC,LINEAR:COMPARATOR,OPEN COLLECTOR,200NS	01295	LM311DR
A11U109	156–5135–01			IC,DIGITAL:REGISTER,8–BIT SIPO SHIFT REGISTER	1CH66	74HCT164DT
A11U201	156–5135–01			IC,DIGITAL:REGISTER,8–BIT SIPO SHIFT REGISTER	1CH66	74HCT164DT
A11U202	156–6224–01			IC,CONVERTER:CMOS,D/A,12–BIT,DACULATOR	TK2441	I10412–04
A11U203	156–5588–01			IC,LINEAR:VOLTAGE REFERENCE,2.5V,1.0%,40PPM	04713	MC1403DR2
A11U204	234–0764–20			IC,ASIC:BIPOLAR,FISO DRIVER,200MHZ	TK2598	234076420
A11U207	156–5073–01			IC,MISC:HCMOS,ANALOG MUX,TRIPLE SPDT	34371	CD74HC4053M96
A11U208	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A11U301	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A11U303	156–5000–01			IC,LINEAR:COMPARATOR,OPEN COLLECTOR,200NS	01295	LM311DR
A11U304	156–5146–01			IC,DIGITAL:HCTCMOS,GATE,QUAD 2–INPUT AND	01295	SN74HCT08DR
A11U307	156–5450–00			IC,DIGITAL:ECL,4–WIDE OR–AND/OR–AND–INVERT	04713	MC10H121FN
A11U308	156–5221–01			IC,DIGITAL:ECL,FLIP FLOP,DUAL D–TYPE	04713	MC10H131FNR2
A11U309	156–5221–01			IC,DIGITAL:ECL,FLIP FLOP,DUAL D–TYPE	04713	MC10H131FNR2
A11U401	156–6428–00			IC,ASIC:CMOS,CUSTOM,TIME BASE LOGIC	27014	MM9350–VF8
A11U402	156–6795–01			IC,MEMORY:CMOS,SRAM,8K X 8,12NS	TK2519	AS7C164–12JCTR
A11U403	156–5589–00			IC,CONVERTER:TTL,A/D,8–BIT,25MSPS,FLASH	04713	MC10319DW

A11 (TDS 340A) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A11U404	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A11U405	156–5297–01			IC,LINEAR:BIPOLAR,VOLTAGE REG,ADJ,SHUNT,100MA	01295	TL431CDR
A11U510	156–5082–01			IC,LINEAR:BIPOLAR,OP–AMP,LOW OFFSET	01295	OP07CDR
A11U520	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A11U550	156–6073–01			IC,LINEAR:OP–AMP,CURRENT FEEDBACK,200MHZ	80009	156–6073–01
A11U560	156–5000–01			IC,LINEAR:COMPARATOR,OPEN COLLECTOR,200NS	01295	LM311DR
A11U570	156–5043–01			IC,CONVERT:D/A,8 BIT,CURRENT OUT, MULTIPLYING	1CH66	DAC08EDT
A11U580	156–5043–01			IC,CONVERT:D/A,8 BIT,CURRENT OUT,MULTIPLYING	1CH66	DAC08EDT
A11U590	156–6427–01			IC,ASIC:CMOS,SAMPLER IC,WITH 1K MEMORY	27014	MM9365–V2
A11U601	156–6298–00			IC,PROCESSOR:CMOS,MICROCONTROLLER,32–BIT	04713	MC68331CFC16B1
A11U602	156–6461–01			IC,MEMORY:CMOS,EPROM,256K X 8,150NS FLASH	34649	N28F020–150
A11U603	156–6461–01			IC,MEMORY:CMOS,EPROM,256K X 8,150NS FLASH	34649	N28F020–150
A11U604	156–5088–01			IC,DIGITAL:HCTCMOS,DEMUX/DECODER,3–TO–8	01295	SN74HCT138DR
A11U605	156–7131–00			IC,MEMORY:CMOS,NVRAM,32K X 8	0B0A9	DS1644–120
A11U606	156–6101–01			IC,MISC:BIPOLAR,PWR SUPPLY SUPERVISOR	04713	MC34164D–5R2
A11U607	156–6461–01			IC,MEMORY:CMOS,EPROM,256K X 8,150NS FLASH	34649	N28F020–150
A11U701	156–6426–00			IC,ASIC:CMOS,CUSTOM,RASTER DISPLAY	27014	MM9337–VF8
A11U702	156–5118–01			IC,DIGITAL:FTTL,GATE,QUAD 2–INPUT NAND	01295	SN74F00DR
A11U703	156–5118–01			IC,DIGITAL:FTTL,GATE,QUAD 2–INPUT NAND	01295	SN74F00DR
A11U704	156–6484–01			IC,MEMORY:CMOS,DRAM,256K X 16	0JR04	TC514260BJL–80(EL)
A11U706	156–6578–01			IC,MEMORY:CMOS,DRAM,512K X 8,70NS	0JR04	TC514800AJLL–70EL
A11U708	156–5198–01			IC,DIGITAL:HCTCMOS,GATE,QUAD 2–INPUT XOR	1CH66	74HCT86DT
A11U709	156–5853–01			IC,LINEAR:BIPOLAR,OP–AMP,35MHZ,UNITY GAIN	27014	LM6361MX
A11VR301	152–5023–00			DIODE,ZENER:5.1V,5%,225MW	04713	MMBZ5231BLT1
A11VR302	152–5023–00			DIODE,ZENER:5.1V,5%,225MW	04713	MMBZ5231BLT1
A11Y401	158–0418–00			OSC,XTAL:MINI DIP,TRISTATE,60.606 MHZ +/–0.01%	61429	F3020 60.606 MHZ
A11Y402	158–5022–01			OSCILLATOR:40MHZ,0.01%,CMOS,OUTPUT ENABLE	0LUT2	TCO–711JTC 40.0MHZ
A11Y701	158–5029–01			OSCILLATOR:50MHZ,0.01%,CMOS	0LUT2	TC0–711JTC 50. MHZ

A12 (TDS 360) Main Board replaceable electrical parts list

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A12	671–3752–00			CIRCUIT BOARD:MAIN,TDS360	TK2597	671375200
A12AT205	165–2500–03			MICROCKT,HYBRID:1 MEG OHM ATTEN/PREAMP	TK2601	165250003
A12AT206	165–2500–03			MICROCKT,HYBRID:1 MEG OHM ATTEN/PREAMP	TK2601	165250003
A12C100	283–5342–00			CAP,FXD,CERAMIC:10PF,5%,500V,NPO	04222	12067A100JAT1A
A12C101	290–5024–00			CAP,FXD,TANT:3.3UF,20%,25V	04222	TAJC335M025
A12C102	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V	04222	12065C104KAT (1A OR 3A)
A12C103	283–5003–00			CAP,FXD,CERAMIC:0.01UF,10%,50V	04222	12065C103KAT060R
A12C104	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V	04222	12065C104KAT (1A OR 3A)
A12C105	283–5195–00			CAP,FXD,CERAMIC:10PF,5%,100V	04222	12061A100JAT1A
A12C106	283–5203–00			CAP,FXD,CERAMIC:1000PF,10%,100V	04222	12061C102KAT1A
A12C107	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V	04222	12065C104KAT (1A OR 3A)
A12C108	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V	04222	12063G105ZAT4A
A12C109	283–5195–00			CAP,FXD,CERAMIC:10PF,5%,100V	04222	12061A100JAT1A
A12C110	283–5106–00			CAP,FXD,CERAMIC:470PF,5%,100V	04222	12061A471JAT1A
A12C112	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V	04222	12063G105ZAT4A
A12C113	283–5196–00			CAP,FXD,CERAMIC:47PF,5%,100V,NPO	04222	12061A470JAT1A
A12C114	283–5342–00			CAP,FXD,CERAMIC:10PF,5%,500V,NPO	04222	12067A100JAT1A
A12C115	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V	04222	12063G105ZAT4A
A12C116	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V	04222	12065C104KAT (1A OR 3A)
A12C117	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V	04222	12065C104KAT (1A OR 3A)
A12C118	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V	04222	12065C104KAT (1A OR 3A)
A12C119	283–5041–00			CAP,FXD,CERAMIC:7PF,+/–0.5PF,50V,NPO	04222	12065A7R0DAT1A
A12C120	283–5041–00			CAP,FXD,CERAMIC:7PF,+/–0.5PF,50V,NPO	04222	12065A7R0DAT1A
A12C121	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V	04222	12065C104KAT (1A OR 3A)
A12C122	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V	04222	12063G105ZAT4A
A12C123	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C130	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V	04222	12063G105ZAT4A
A12C201	283–5202–00			CAP,FXD,CERAMIC:0.022UF,10%,50V	04222	12065C223KAT1A
A12C202	283–5202–00			CAP,FXD,CERAMIC:0.022UF,10%,50V	04222	12065C223KAT1A
A12C203	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V	04222	12065C104KAT (1A OR 3A)
A12C204	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V	04222	12063G105ZAT4A
A12C205	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V	04222	12065C104KAT (1A OR 3A)
A12C206	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A

A12 (TDS 360) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A12C207	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C208	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V (1A OR 3A)	04222	12063G105ZAT4A
A12C209	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V (1A OR 3A)	04222	12063G105ZAT4A
A12C210	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V (1A OR 3A)	04222	12063G105ZAT4A
A12C212	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V (1A OR 3A)	04222	12063G105ZAT4A
A12C213	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V (1A OR 3A)	04222	12063G105ZAT4A
A12C214	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V (1A OR 3A)	04222	12063G105ZAT4A
A12C215	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C218	290–0963–00			CAP,FXD,ALUM:220UF,+50–20%,25WVDC	55680	UVX1V221MPA
A12C219	290–0963–00			CAP,FXD,ALUM:220UF,+50–20%,25WVDC	55680	UVX1V221MPA
A12C220	290–0963–00			CAP,FXD,ALUM:220UF,+50–20%,25WVDC	55680	UVX1V221MPA
A12C221	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C230	283–5017–00			CAP,FXD,CERAMICMLC;1PF,+/–0.25PF,50V	TK2058	C3216C0G1H010C–T
A12C231	283–5017–00			CAP,FXD,CERAMICMLC;1PF,+/–0.25PF,50V	TK2058	C3216C0G1H010C–T
A12C250	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C305	283–5196–00			CAP,FXD,CERAMIC:47PF,5%,100V,NPO (1A OR 3A)	04222	12061A470JAT1A
A12C307	283–5196–00			CAP,FXD,CERAMIC:47PF,5%,100V,NPO (1A OR 3A)	04222	12061A470JAT1A
A12C401	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C402	283–5003–00			CAP,FXD,CERAMIC:0.01UF,10%,50V,X7R (1A OR 3A)	04222	12065C103KAT060R
A12C403	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C404	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C405	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C406	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C407	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C408	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C409	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C410	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C502	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C507	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C508	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C509	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C511	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)

A12 (TDS 360) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A12C512	283–5068–00			CAP,FXD,CERAMIC:2200PF,10%,50V,X7R (1A OR 3A)	04222	12065C222KAT1A
A12C513	283–5068–00			CAP,FXD,CERAMIC:2200PF,10%,50V,X7R (1A OR 3A)	04222	12065C222KAT1A
A12C515	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C521	283–5003–00			CAP,FXD,CERAMIC:0.01UF,10%,50V,X7R (1A OR 3A)	04222	12065C103KAT060R
A12C522	283–5202–00			CAP,FXD,CERAMIC:0.022UF,10%,50V,X7R (1A OR 3A)	04222	12065C223KAT1A
A12C530	283–5202–00			CAP,FXD,CERAMIC:0.022UF,10%,50V,X7R (1A OR 3A)	04222	12065C223KAT1A
A12C531	283–5202–00			CAP,FXD,CERAMIC:0.022UF,10%,50V,X7R (1A OR 3A)	04222	12065C223KAT1A
A12C532	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C533	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C534	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C535	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C562	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C571	283–5003–00			CAP,FXD,CERAMIC:0.01UF,10%,50V,X7R (1A OR 3A)	04222	12065C103KAT060R
A12C581	283–5003–00			CAP,FXD,CERAMIC:0.01UF,10%,50V,X7R (1A OR 3A)	04222	12065C103KAT060R
A12C592	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C593	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C594	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C595	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C600	283–5106–00			CAP,FXD,CERAMIC:470PF,5%,100V,NPO (1A OR 3A)	04222	12061A471JAT1A
A12C602	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C604	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C606	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C607	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C608	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C609	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C610	283–5106–00			CAP,FXD,CERAMIC:470PF,5%,100V,NPO (1A OR 3A)	04222	12061A471JAT1A
A12C701	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C702	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C703	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C704	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A

A12 (TDS 360) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A12C705	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C706	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C707	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C708	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C709	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C710	283–5267–00			CAP,FXD,CERAMIC:1UF,+80%–20%,25V, (1A OR 3A)	04222	12063G105ZAT4A
A12C711	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C712	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C713	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12C714	283–5114–00			CAP,FXD,CERAMIC:0.1UF,10%,50V,X7R (1A OR 3A)	04222	12065C104KAT (1A OR 3A)
A12CR102	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A12CR103	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A12CR104	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A12CR205	152–5047–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1204
A12CR206	152–5047–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1204
A12CR207	152–5047–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1204
A12CR301	152–5045–00			DIODE,SIG:SCHTKY,20V,1.2PF,24 OHM	50434	HSMS–2810–T31
A12CR302	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A12CR401	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A12CR501	152–5062–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1205
A12CR520	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A12CR525	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A12CR542	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A12CR543	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A12CR551	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A12CR553	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A12CR554	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A12E1	119–4780–00			BRACKET ASSY:BRACKET W/BNC'S	80009	119–4780–00
A12J601	131–3147–00			CONN,HDR:PCB,MALE,STR,2 X 25,0.1 CTR	22526	66506–032
A12J603	131–5344–00			CONN,HDR:PCB,MALE,STR,1 X 16,O.1 CTR,LATCHING	00779	1–103670–5
A12J609	131–5203–00			CONN,HDR:PCB,MALE,STR,1 X 2,0.1 CTR,RETENTION	00779	104350–1
A12J701	174–2282–00			CA ASSY,SP:FLAT FLEX,FLX,10,26 AWG,15.8 L,SLDR	TK2469	174–2282–00
A12J702	174–2705–00			CA ASSY,SP:22 AWG,UL1430,300V	TK2469	174–2705–00
A12J703	131–5472–00			CONN,HDR:PCB,MALE,STR,1 X 6,0.1 CTR,LATCHING	00779	104362–5
A12L203	108–5095–00			INDUCTOR,FXD:SIGNAL,27NH,10%	TK2058	NL322522T–27M
A12L204	108–5095–00			INDUCTOR,FXD:SIGNAL,27NH,10%	TK2058	NL322522T–27M

A12 (TDS 360) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A12L205	108–5095–00			INDUCTOR,FXD:SIGNAL,27NH,10%	TK2058	NL322522T–27M
A12L206	108–5095–00			INDUCTOR,FXD:SIGNAL,27NH,10%	TK2058	NL322522T–27M
A12L208	108–5084–00			COIL,RF:FERRITE CHIP BEAD,52 OHM	TK2058	HF70ACB322513T
A12L209	108–5129–00			INDUCTOR,FXD:POWER,10UH,10%	TK2058	NLC453232T–100K
A12L210	108–5074–00			INDUCTOR,FXD:SIGNAL,3.9UH,10%	02113	1008CS–392XKB (A OR C)
A12L211	108–5074–00			INDUCTOR,FXD:SIGNAL,3.9UH,10%	02113	1008CS–392XKB (A OR C)
A12L212	321–5051–00			RES,FXD:THICK FILM,0 OHM,1%,0.125W	09969	CRCW1206 JUMPER
A12L213	108–5094–00			INDUCTOR,FXD:SIGNAL,10NH,10%Z	TK2058	NL322522T–010K
A12Q105	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A12Q106	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A12Q107	151–5018–00			TRANSISTOR,SIG:JFET,N–CH,6V,30MA,4.5MS	0N0K0	SST441–T1
A12Q108	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A12Q201	151–5029–00			TRANSISTOR,SIG:NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A12Q202	151–5029–00			TRANSISTOR,SIG:NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A12Q203	151–5029–00			TRANSISTOR,SIG:NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A12Q204	151–5029–00			TRANSISTOR,SIG:NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A12Q205	151–5029–00			TRANSISTOR,SIG:NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A12Q206	151–5029–00			TRANSISTOR,SIG:NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A12Q301	151–5058–00			TRANSISTOR,SIG:PNP,12V,80MA,SWITCHING	04713	MMBT3640LT1
A12Q302	151–5058–00			TRANSISTOR,SIG:PNP,12V,80MA,SWITCHING	04713	MMBT3640LT1
A12Q304	151–5000–00			TRANSISTOR,SIG:PNP,40V,200MA,250MHZ,AMP	04713	MMBT3906LT1
A12Q305	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A12Q306	151–5034–00			TRANSISTOR,SIG:NPN,14V,50MA,1.5GHZ,AMP	62104	NE73433–T1B (2SC2759–T1B)
A12Q307	151–5034–00			TRANSISTOR,SIG:NPN,14V,50MA,1.5GHZ,AMP	62104	NE73433–T1B (2SC2759–T1B)
A12Q501	156–6140–01			IC,LINEAR:TRANSISTOR ARRAY,QUAD,NPN,MATCHED	24355	MAT04FSR
A12Q505	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A12Q506	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A12Q507	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A12Q508	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A12Q509	151–5058–00			TRANSISTOR,SIG:PNP,12V,80MA,SWITCHING	04713	MMBT3640LT1
A12Q510	151–5058–00			TRANSISTOR,SIG:PNP,12V,80MA,SWITCHING	04713	MMBT3640LT1
A12Q701	151–5000–00			TRANSISTOR,SIG:PNP,40V,200MA,250MHZ,AMP	04713	MMBT3906LT1
A12Q702	151–5000–00			TRANSISTOR,SIG:PNP,40V,200MA,250MHZ,AMP	04713	MMBT3906LT1
A12Q703	151–5000–00			TRANSISTOR,SIG:PNP,40V,200MA,250MHZ,AMP	04713	MMBT3906LT1
A12Q704	151–5000–00			TRANSISTOR,SIG:PNP,40V,200MA,250MHZ,AMP	04713	MMBT3906LT1
A12R50	313–1390–00			RES,FXD,FILM:39 OHM,5%,0.2W	57668	TR20JE 39E

A12 (TDS 360) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A12R101	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R102	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A12R103	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R105	321–5051–00			RES,FXD:THICK FILM,0 OHM,1%,0.125W	09969	CRCW1206 JUMPER
A12R106	321–5032–00			RES,FXD:THICK FILM,15.0K OHM,1%,0.125W	50139	BCK1502FT
A12R107	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A12R108	321–5032–00			RES,FXD:THICK FILM,15.0K OHM,1%,0.125W	50139	BCK1502FT
A12R113	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A12R114	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R115	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R116	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R117	321–5241–00			RES,FXD,FILM:34.0K,0.1%,0.125W	91637	TNPW1206–3402–B–RT2
A12R118	321–5169–00			RES,FXD:THICK FILM,475K OHM,1%,0.125W	59124	RK73H2B4753FT
A12R119	321–5064–00			RES,FXD:THICK FILM,200K OHM,1%,0.125W	91637	CRCW1206–2003FT
A12R120	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R123	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A12R124	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A12R125	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A12R126	321–5169–00			RES,FXD:THICK FILM,475K OHM,1%,0.125W	59124	RK73H2B4753FT
A12R127	321–5048–00			RES,FXD:THICK FILM,332K OHM,1%,0.125W	50139	BCK3323FT
A12R128	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A12R129	321–5064–00			RES,FXD:THICK FILM,200K OHM,1%,0.125W	91637	CRCW1206–2003FT
A12R130	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A12R131	321–5019–00			RES,FXD:THICK FILM,1.21K OHM,1%,0.125W	50139	BCK1211FT
A12R132	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A12R133	321–5048–00			RES,FXD:THICK FILM,332K OHM,1%,0.125W	50139	BCK3323FT
A12R134	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A12R135	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A12R136	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A12R200	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R201	321–5049–00			RES,FXD:THICK FILM,1M OHM,1%,0.125W	50139	BCA1004FT
A12R202	321–5049–00			RES,FXD:THICK FILM,1M OHM,1%,0.125W	50139	BCA1004FT
A12R203	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R204	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R207	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A12R208	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A12R209	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A12R210	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT

A12 (TDS 360) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A12R211	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A12R212	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A12R215	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R216	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A12R217	321–5032–00			RES,FXD:THICK FILM,15.0K OHM,1%,0.125W	50139	BCK1502FT
A12R218	321–5019–00			RES,FXD:THICK FILM,1.21K OHM,1%,0.125W	50139	BCK1211FT
A12R219	321–5023–00			RES,FXD:THICK FILM,2.74K OHM,1%,0.125W	50139	BCK2741FT
A12R220	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R221	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A12R222	321–5032–00			RES,FXD:THICK FILM,15.0K OHM,1%,0.125W	50139	BCK1502FT
A12R223	321–5019–00			RES,FXD:THICK FILM,1.21K OHM,1%,0.125W	50139	BCK1211FT
A12R224	321–5023–00			RES,FXD:THICK FILM,2.74K OHM,1%,0.125W	50139	BCK2741FT
A12R225	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A12R226	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A12R227	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A12R228	321–5309–00			RES,FXD,FILM:8.25K OHM,+/–0.1%,0.125W	91637	TNPW12068251BT
A12R230	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A12R231	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A12R232	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A12R233	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A12R234	321–5165–00			RES,FXD,FILM:10K OHM,0.1%,0.125W,TC=T9	91637	TNPW1206–1002BT
A12R236	321–5165–00			RES,FXD,FILM:10K OHM,0.1%,0.125W,TC=T9	91637	TNPW1206–1002BT
A12R237	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R238	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R239	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R240	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R241	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A12R246	321–5000–00			RES,FXD:THICK FILM,10 OHM,1%,0.125W	50139	BCD10R0FT
A12R247	321–5000–00			RES,FXD:THICK FILM,10 OHM,1%,0.125W	50139	BCD10R0FT
A12R248	321–5000–00			RES,FXD:THICK FILM,10 OHM,1%,0.125W	50139	BCD10R0FT
A12R249	321–5000–00			RES,FXD:THICK FILM,10 OHM,1%,0.125W	50139	BCD10R0FT
A12R250	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A12R251	321–5241–00			RES,FXD,FILM:34.0K,0.1%,0.125W	91637	TNPW1206–3402–B–RT2
A12R252	321–5241–00			RES,FXD,FILM:34.0K,0.1%,0.125W	91637	TNPW1206–3402–B–RT2
A12R253	321–5165–00			RES,FXD,FILM:10K OHM,0.1%,0.125W	91637	TNPW1206–1002BT
A12R254	321–5309–00			RES,FXD,FILM:8.25K OHM,+/–0.1%,0.125W	91637	TNPW12068251BT

A12 (TDS 360) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A12R255	321–5242–00			RES,FXD,FILM:68.1K,0.1%,0.125W	91637	TNPW1206–6812–B–R75
A12R256	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A12R260	321–5051–00			RES,FXD:THICK FILM,0 OHM,1%,0.125W	09969	CRCW1206 JUMPER
A12R302	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A12R303	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R304	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A12R305	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R307	321–5042–00			RES,FXD:THICK FILM,39.2 OHM,1%,0.125W	50139	BCD39R2FT
A12R308	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A12R309	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R310	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A12R314	321–5007–00			RES,FXD:THICK FILM,121 OHM,1%,0.125W	50139	BCK1210FT
A12R315	321–5007–00			RES,FXD:THICK FILM,121 OHM,1%,0.125W	50139	BCK1210FT
A12R316	321–5007–00			RES,FXD:THICK FILM,121 OHM,1%,0.125W	50139	BCK1210FT
A12R317	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A12R318	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A12R319	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A12R321	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R324	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A12R325	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A12R327	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R331	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A12R335	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R336	321–5169–00			RES,FXD:THICK FILM,475K OHM,1%,0.125W	59124	RK73H2B4753FT
A12R350	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R351	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A12R352	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R360	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R361	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R365	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R366	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A12R369	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A12R370	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90–FT
A12R372	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A12R373	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A12R375	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R376	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT

A12 (TDS 360) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A12R378	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R379	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R380	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R381	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R383	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R384	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R385	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R386	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R387	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R388	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R389	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R390	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A12R392	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R393	321–5007–00			RES,FXD:THICK FILM,121 OHM,1%,0.125W	50139	BCK1210FT
A12R395	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R396	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R398	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R399	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R402	321–5023–00			RES,FXD:THICK FILM,2.74K OHM,1%,0.125W	50139	BCK2741FT
A12R403	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R406	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A12R407	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A12R408	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A12R409	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R410	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A12R411	321–5000–00			RES,FXD:THICK FILM,10 OHM,1%,0.125W	50139	BCD10R0FT
A12R412	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A12R413	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R414	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A12R415	321–5000–00			RES,FXD:THICK FILM,10 OHM,1%,0.125W	50139	BCD10R0FT
A12R416	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A12R417	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R418	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R419	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A12R420	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R421	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R422	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A12R423	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT

A12 (TDS 360) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A12R424	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A12R425	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A12R500	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R502	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A12R503	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A12R504	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A12R507	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R508	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R509	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R510	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R511	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A12R512	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R514	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R516	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R521	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R523	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R525	321–5370–00			RES,FXD,FILM:0.25 OHM,10%,0.33W,TC=300PPM	57489	L1206MR250KBT
A12R526	321–5370–00			RES,FXD,FILM:0.25 OHM,10%,0.33W,TC=300PPM	57489	L1206MR250KBT
A12R527	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A12R528	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R529	321–5023–00			RES,FXD:THICK FILM,2.74K OHM,1%,0.125W	50139	BCK2741FT
A12R530	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R534	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R535	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R537	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R538	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R539	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R540	321–5114–00			RES,FXD,FILM:619 OHM,1%,0.125W,TC=100PPM	91637	CRCW1206–6190FT
A12R542	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A12R544	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A12R545	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A12R552	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A12R553	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A12R556	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A12R557	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A12R558	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A12R559	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT

A12 (TDS 360) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A12R561	321–5025–00			RES,FXD:THICK FILM,3.92K OHM,1%,0.125W,	50139	BCK3921FT
A12R563	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R565	321–5093–00			RES,FXD,FILM:200 OHM,1%,0.125W	57668	T/R MCR18EZHFX200E
A12R566	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R567	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R572	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R573	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R582	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A12R585	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A12R586	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A12R587	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A12R588	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A12R590	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R600	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A12R601	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R602	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A12R613	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R614	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R636	307–5041–01			RES,NTWK FXD:FILM,(15),4.7K OHM,2%,0.08W	57924	4816P–002–472
A12R637	307–5041–01			RES,NTWK FXD:FILM,(15),4.7K OHM,2%,0.08W	57924	4816P–002–472
A12R638	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A12R640	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A12R641	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R642	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R643	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A12R644	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A12R645	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A12R646	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A12R647	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R650	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A12R652	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A12R700	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A12R701	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A12R702	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A12R703	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A12R704	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT

A12 (TDS 360) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A12R705	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A12R706	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A12R707	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A12R708	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A12R709	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A12R710	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R711	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A12R712	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A12R713	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A12R714	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A12U101	155–0325–01			IC,ASIC:LINEAR,DETECTOR	TK2598	155032501
A12U102	156–5198–01			IC,DIGITAL:HCTCMOS,GATE,QUAD 2–INPUT XOR	1CH66	74HCT86DT
A12U103	156–6891–01			IC,MISC:CMOS,VIDEO SUBSYSTEM	64762	EL4581CS(T&R)
A12U104	156–5095–01			IC,LINEAR:OP–AMP,LOW NOISE,HIGH OUTPUT	01295	NE5534DR
A12U105	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUA	01295	TL072CDR
A12U106	156–5000–01			IC,LINEAR:COMPARATOR,OPEN COLLECTOR	01295	LM311DR
A12U109	156–5135–01			IC,DIGITAL:REGISTER,8–BIT SIPO SHIFT REGISTER	1CH66	74HCT164DT
A12U201	156–5135–01			IC,DIGITAL:REGISTER,8–BIT SIPO SHIFT REGISTER	1CH66	74HCT164DT
A12U202	156–6224–01			IC,CONVERTER:CMOS,D/A,12–BIT,16 CHANNELS	TK2441	I10412–04
A12U203	156–5588–01			IC,LINEAR:VOLTAGE REFERENCE,POSITIVE,2.5V	04713	MC1403DR2
A12U204	234–0764–20			IC,ASIC:FISO DRIVER,200MHZ	TK2598	234076420
A12U207	156–5073–01			IC,MISC:HCMOS,ANALOG MUX,TRIPLE SPDT	34371	CD74HC4053M96
A12U208	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A12U301	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A12U303	156–5000–01			IC,LINEAR:COMPARATOR,OPEN COLLECTOR	01295	LM311DR
A12U304	156–5146–01			IC,DIGITAL:HCTCMOS,GATE,QUAD 2–INPUT AND	01295	SN74HCT08DR
A12U307	156–5450–00			IC,DIGITAL:ECL,GATE,4 OR–AND/OR–AND–INVERT	04713	MC10H121FN
A12U308	156–5221–01			IC,DIGITAL:ECL,FLIP FLOP,DUAL D–TYPE	04713	MC10H131FNR2
A12U309	156–5221–01			IC,DIGITAL:ECL,FLIP FLOP,DUAL D–TYPE	04713	MC10H131FNR2
A12U401	156–6428–00			IC,ASIC:CMOS,CUSTOM, TIME BASE LOGIC	27014	MM9350–VF8
A12U402	156–6795–01			IC,MEMORY:CMOS,SRAM,8K X 8,12NS	TK2519	AS7C164–12JCTR
A12U403	156–5589–00			IC,CONVERTER:TTL,A/D,8–BIT,25MSPS,FLASH	04713	MC10319DW
A12U404	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A12U405	156–5297–01			IC,LINEAR:VOLTAGE REGULATOR,ADJUSTABLE	01295	TL431CDR
A12U510	156–5082–01			IC,LINEAR:OP–AMP,LOW OFFSET	01295	OP07CDR

A12 (TDS 360) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A12U520	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A12U550	156–6073–01			IC,LINEAR:OP–AMP,CURRENT FEEDBACK,200MHZ	80009	156–6073–01
A12U560	156–5000–01			IC,LINEAR:COMPARATOR,OPEN COLLECTOR	01295	LM311DR
A12U570	156–5043–01			IC,CONVERTER:D/A,8 BIT,CURRENT OUT	1CH66	DAC08EDT
A12U580	156–5043–01			IC,CONVERTER:D/A,8 BIT,CURRENT OUT	1CH66	DAC08EDT
A12U590	156–6427–01			IC,ASIC:CMOS,CUSTOM,SAMPLER IC, 1K MEMORY	27014	MM9365–V2
A12U601	156–6298–00			IC,PROCESSOR:CMOS,MICROCONTROLLER,32–BIT	04713	MC68331CFC16B1
A12U602	156–6461–01			IC,MEMORY:CMOS,EPROM,256K X 8,150NS FLASH	34649	N28F020–150
A12U603	156–6461–01			IC,MEMORY:CMOS,EPROM,256K X 8,150NS FLASH	34649	N28F020–150
A12U604	156–5088–01			IC,DIGITAL:HCTCMOS,DEMUX/DECODER	01295	SN74HCT138DR
A12U605	156–7131–00			IC,MEMORY:CMOS,NVRAM,32K X 8,CLOCK	0B0A9	DS1644–120
A12U606	156–6101–01			IC,MISC:PWR SUPPLY SUPERVISOR,MPU RESET	04713	MC34164D–5R2
A12U607	156–6461–01			IC,MEMORY:CMOS,EPROM,256K X 8,150NS FLASH	34649	N28F020–150
A12U701	156–6426–00			IC,ASIC:CMOS, RASTER DISPLAY	27014	MM9337–VF8
A12U702	156–5118–01			IC,DIGITAL:FTTL,GATE,QUAD 2–INPUT NAND	01295	SN74F00DR
A12U703	156–5118–01			IC,DIGITAL:FTTL,GATE,QUAD 2–INPUT NAND	01295	SN74F00DR
A12U704	156–6484–01			IC,MEMORY:CMOS,DRAM,256K X 16,80NS	0JR04	TC514260BJL–80(EL)
A12U706	156–6578–01			IC,MEMORY:CMOS,DRAM,512K X 8,70NS	0JR04	TC514800AJLL–70EL
A12U708	156–5198–01			IC,DIGITAL:HCTCMOS,GATE,QUAD 2–INPUT XOR	1CH66	74HCT86DT
A12U709	156–5853–01			IC,LINEAR:OP–AMP,35MHZ,UNITY GAIN STABLE	27014	LM6361MX
A12VR301	152–5023–00			DIODE,ZENER:5.1V,5%,225MW	04713	MMBZ5231BLT1
A12VR302	152–5023–00			DIODE,ZENER:5.1V,5%,225MW	04713	MMBZ5231BLT1
A12Y401	158–0418–00			OSC,XTAL CONT:MINI DIP,TRISTATE,60.606 MHZ +/–0.01%	61429	F3020 60.606 MHZ
A12Y402	158–5022–01			OSCILLATOR:40MHZ,0.01%,CMOS, OUTPUT ENABLE	0LUT2	TCO–711JTC 40.0MHZ
A12Y701	158–5029–01			OSCILLATOR:50MHZ,0.01%,CMOS,SMD	0LUT2	TC0–711JTC 50. MHZ

A13 (TDS 380) Main Board replaceable electrical parts list

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13	671–3753–00			CIRCUIT BOARD:MAIN,TDS380	TK2597	671375300
A13AT205	165–2565–00			MICROCKT,HYBRID:1MEG OHM ATTEN/PREAMP	TK2601	165–2565–00
A13AT206	165–2565–00			MICROCKT,HYBRID:1MEG OHM ATTEN/PREAMP	TK2601	165–2565–00
A13C100	283–5342–00			CAP,FXD,CERAMIC:MLC,10PF,5%,500V,NPO	04222	12067A100JAT1A
A13C101	290–5024–00			CAP,FXD,TANT:3.3UF,20%,25V	04222	TAJC335M025
A13C102	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V	04222	12065C104KAT (1A OR 3A)
A13C103	283–5003–00			CAP,FXD,CERAMIC:MLC,0.01UF,10%,50V	04222	12065C103KAT060R
A13C104	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V	04222	12065C104KAT (1A OR 3A)
A13C105	283–5195–00			CAP,FXD,CERAMIC:MLC,10PF,5%,100V	04222	12061A100JAT1A
A13C106	283–5203–00			CAP,FXD,CERAMIC:MLC,1000PF,10%,100V,X7R	04222	12061C102KAT1A
A13C107	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C108	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A13C109	283–5195–00			CAP,FXD,CERAMIC:MLC,10PF,5%,100V	04222	12061A100JAT1A
A13C110	283–5106–00			CAP,FXD,CERAMIC:MLC,470PF,5%,100V,NPO	04222	12061A471JAT1A
A13C112	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V	04222	12063G105ZAT4A
A13C113	283–5196–00			CAP,FXD,CERAMIC:MLC,47PF,5%,100V,NPO	04222	12061A470JAT1A
A13C114	283–5342–00			CAP,FXD,CERAMIC:MLC,10PF,5%,500V,NPO	04222	12067A100JAT1A
A13C115	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C116	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C117	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C118	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C119	283–5041–00			CAP,FXD,CERAMIC:MLC,7PF,+/–0.5PF,50V,NPO	04222	12065A7R0DAT1A
A13C120	283–5041–00			CAP,FXD,CERAMIC:MLC,7PF,+/–0.5PF,50V,NPO	04222	12065A7R0DAT1A
A13C121	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C122	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C123	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C125	283–5041–00			CAP,FXD,CERAMIC:MLC,7PF,+/–0.5PF,50V,NPO	04222	12065A7R0DAT1A
A13C130	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C201	283–5202–00			CAP,FXD,CERAMIC:MLC,0.022UF,10%,50V,X7R	04222	12065C223KAT1A
A13C202	283–5202–00			CAP,FXD,CERAMIC:MLC,0.022UF,10%,50V,X7R	04222	12065C223KAT1A
A13C203	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C204	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C205	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)

A13 (TDS 380) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13C206	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C207	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C208	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C209	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C210	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C212	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C213	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C214	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C215	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C218	290–0963–00			CAP,FXD,ALUM:220UF,+50–20%,25WVDC	55680	UVX1V221MPA
A13C219	290–0963–00			CAP,FXD,ALUM:220UF,+50–20%,25WVDC	55680	UVX1V221MPA
A13C220	290–0963–00			CAP,FXD,ALUM:220UF,+50–20%,25WVDC	55680	UVX1V221MPA
A13C221	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C250	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C305	283–5196–00			CAP,FXD,CERAMIC:MLC,47PF,5%,100V,NPO	04222	12061A470JAT1A
A13C307	283–5196–00			CAP,FXD,CERAMIC:MLC,47PF,5%,100V,NPO	04222	12061A470JAT1A
A13C401	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C402	283–5003–00			CAP,FXD,CERAMIC:MLC,0.01UF,10%,50V,X7R	04222	12065C103KAT060R
A13C403	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C404	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C405	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C406	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C407	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C408	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C409	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C410	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C502	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C507	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C508	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C509	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C511	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C512	283–5068–00			CAP,FXD,CERAMIC:MLC,2200PF,10%,50V,X7R	04222	12065C222KAT1A

A13 (TDS 380) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13C513	283–5068–00			CAP,FXD,CERAMIC:MLC,2200PF,10%,50V,X7R	04222	12065C222KAT1A
A13C515	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C521	283–5003–00			CAP,FXD,CERAMIC:MLC,0.01UF,10%,50V,X7R	04222	12065C103KAT060R
A13C522	283–5202–00			CAP,FXD,CERAMIC:MLC,0.022UF,10%,50V,X7R	04222	12065C223KAT1A
A13C530	283–5353–00			CAP,FXD,CERAMIC:0.1UF,20%,16V,X7R	04222	0603YC104MAT2A
A13C531	283–5353–00			CAP,FXD,CERAMIC:0.1UF,20%,16V,X7R	04222	0603YC104MAT2A
A13C532	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C533	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C534	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C535	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C562	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C571	283–5003–00			CAP,FXD,CERAMIC:MLC,0.01UF,10%,50V,X7R	04222	12065C103KAT060R
A13C581	283–5003–00			CAP,FXD,CERAMIC:MLC,0.01UF,10%,50V,X7R	04222	12065C103KAT060R
A13C592	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C593	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C594	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C595	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C600	283–5106–00			CAP,FXD,CERAMIC:MLC,470PF,5%,100V,NPO	04222	12061A471JAT1A
A13C602	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C604	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C606	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C607	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C608	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C609	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C610	283–5106–00			CAP,FXD,CERAMIC:MLC,470PF,5%,100V,NPO	04222	12061A471JAT1A
A13C701	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C702	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C703	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C704	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C705	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A

A13 (TDS 380) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13C706	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C707	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C708	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C709	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C710	283–5267–00			CAP,FXD,CERAMIC:MLC,1UF,+80%–20%,25V,Y5V	04222	12063G105ZAT4A
A13C711	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C712	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C713	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13C714	283–5114–00			CAP,FXD,CERAMIC:MLC,0.1UF,10%,50V,X7R	04222	12065C104KAT (1A OR 3A)
A13CR102	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A13CR103	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0P	27014	MMBD1203
A13CR104	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A13CR204	152–5047–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1204
A13CR205	152–5047–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1204
A13CR206	152–5047–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1204
A13CR207	152–5047–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1204
A13CR301	152–5045–00			DIODE,SIG:SCHTKY,20V,1.2PF,24 OHM	50434	HSMS–2810–T31
A13CR302	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A13CR401	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A13CR501	152–5062–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1205
A13CR520	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A13CR525	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A13CR542	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A13CR543	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A13CR551	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A13CR553	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A13CR554	152–5018–00			DIODE,SIG:ULTRA FAST,100V,0.74VF,4NS,2.0PF	27014	MMBD1203
A13E1	119–4780–00			BRACKET ASSY:BRACKET W/BNC'S	80009	119–4780–00
A13J601	131–3147–00			CONN,HDR:PCB,MALE,STR,2 X 25,0.1 CTR	22526	66506–032
A13J603	131–5344–00			CONN,HDR:PCB,MALE,STR,1 X 16,O.1 CTR,LATCHING	00779	1–103670–5
A13J609	131–5203–00			CONN,HDR:PCB,MALE,STR,1 X 2,0.1 CTR,BD RET	00779	104350–1
A13J701	174–2282–00			CA ASSY,SP:FLAT FLEX,FLX,10,26 AWG	TK2469	174–2282–00
A13J702	174–2705–00			CA ASSY,SP:DISCRETE,CPD,12,22 AWG	TK2469	174–2705–00
A13J703	131–5472–00			CONN,HDR:PCB,MALE,STR,1 X 6,0.1 CTR,LATCHING	00779	104362–5
A13L208	108–5084–00			COIL,RF:FERRITE BEAD,52 OHM +/–25%@100MHZ	TK2058	HF70ACB322513T
A13L209	108–5129–00			INDUCTOR,FXD:POWER,10UH,10%	TK2058	NLC453232T–100K

A13 (TDS 380) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13L210	108–5074–00			INDUCTOR,FXD:SIGNAL,3.9UH,10%	02113	1008CS–392XKB (A OR C)
A13L211	108–5074–00			INDUCTOR,FXD:SIGNAL,3.9UH,10%	02113	1008CS–392XKB (A OR C)
A13L212	108–5095–00			INDUCTOR,FXD:SIGNAL,27NH,10% or INDUCTOR,FXD:SIGNAL,10NH,10% (selected, see *Custom Selected Parts* on page 6–47)	TK2058	NL322522T–27M
A13L213	108–5083–00			INDUCTOR,FXD:SIGNAL,18NH,10% or RES,FXD: 0 OHM, ONH (selected, see *Custom Selected Parts* on page 6–47)	TK2058	NL322522–018M
A13Q105	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A13Q106	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A13Q107	151–5018–00			TRANSISTOR,SIG:JFET,N–CH,6V,30MA,4.5MS	0N0K0	SST441–T1
A13Q108	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A13Q201	151–5029–00			TRANSISTOR,SIG:NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A13Q202	151–5029–00			TRANSISTOR,SIG:NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A13Q203	151–5029–00			TRANSISTOR,SIG:NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A13Q204	151–5029–00			TRANSISTOR,SIG:NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A13Q205	151–5029–00			TRANSISTOR,SIG:NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A13Q206	151–5029–00			TRANSISTOR,SIG:NPN,15V,500MA,SWITCHING	04713	MMBT2369ALT1
A13Q259	151–5008–00			TRANSISTOR,SIG:NPN,12V,70MA,3.0GHZ,AMPLIFIER	62104	NE02133–T1B (2SC2351–T1B)
A13Q263	151–5008–00			TRANSISTOR,SIG:NPN,12V,70MA,3.0GHZ,AMPLIFIER	62104	NE02133–T1B (2SC2351–T1B)
A13Q264	151–5008–00			TRANSISTOR,SIG:NPN,12V,70MA,3.0GHZ,AMPLIFIER	62104	NE02133–T1B (2SC2351–T1B)
A13Q267	151–5008–00			TRANSISTOR,SIG:NPN,12V,70MA,3.0GHZ,AMPLIFIER	62104	NE02133–T1B (2SC2351–T1B)
A13Q301	151–5058–00			TRANSISTOR,SIG:PNP,12V,80MA,SWITCHING	04713	MMBT3640LT1
A13Q302	151–5058–00			TRANSISTOR,SIG:PNP,12V,80MA,SWITCHING	04713	MMBT3640LT1
A13Q304	151–5000–00			TRANSISTOR,SIG:PNP,40V,200MA,250MHZ,AMP	04713	MMBT3906LT1
A13Q305	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A13Q306	151–5034–00			TRANSISTOR,SIG:NPN,14V,50MA,1.5GHZ,AMP	62104	NE73433–T1B (2SC2759–T1B)
A13Q307	151–5034–00			TRANSISTOR,SIG:NPN,14V,50MA,1.5GHZ,AMPLIFIER	62104	NE73433–T1B (2SC2759–T1B)
A13Q501	156–6140–01			IC,LINEAR:TRANSISTOR ARRAY,NPN,MATCHED	24355	MAT04FSR
A13Q505	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A13Q506	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A13Q507	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A13Q508	151–5001–00			TRANSISTOR,SIG:NPN,40V,200MA,300MHZ,AMP	04713	MMBT3904LT1
A13Q509	151–5058–00			TRANSISTOR,SIG:PNP,12V,80MA,SWITCHING	04713	MMBT3640LT1
A13Q510	151–5058–00			TRANSISTOR,SIG:PNP,12V,80MA,SWITCHING	04713	MMBT3640LT1

A13 (TDS 380) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13Q701	151–5000–00			TRANSISTOR,SIG:PNP,40V,200MA,250MHZ,AMP	04713	MMBT3906LT1
A13Q702	151–5000–00			TRANSISTOR,SIG:PNP,40V,200MA,250MHZ,AMP	04713	MMBT3906LT1
A13Q703	151–5000–00			TRANSISTOR,SIG:PNP,40V,200MA,250MHZ,AMP	04713	MMBT3906LT1
A13Q704	151–5000–00			TRANSISTOR,SIG:PNP,40V,200MA,250MHZ,AMP	04713	MMBT3906LT1
A13R101	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R102	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A13R103	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R105	321–5051–00			RES,FXD:THICK FILM,0 OHM,1%,0.125W	09969	CRCW1206 JUMPER
A13R106	321–5032–00			RES,FXD:THICK FILM,15.0K OHM,1%,0.125W	50139	BCK1502FT
A13R107	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A13R108	321–5032–00			RES,FXD:THICK FILM,15.0K OHM,1%,0.125W	50139	BCK1502FT
A13R113	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A13R114	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R115	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R116	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R117	321–5241–00			RES,FXD,FILM:34.0K,0.1%,0.125W	91637	TNPW1206–3402–B–RT2
A13R118	321–5169–00			RES,FXD:THICK FILM,475K OHM,1%,0.125W	59124	RK73H2B4753FT
A13R119	321–5064–00			RES,FXD:THICK FILM,200K OHM,1%,0.125W	91637	CRCW1206–2003FT
A13R120	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R123	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A13R124	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A13R125	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A13R126	321–5169–00			RES,FXD:THICK FILM,475K OHM,1%,0.125W	59124	RK73H2B4753FT
A13R127	321–5048–00			RES,FXD:THICK FILM,332K OHM,1%,0.125W	50139	BCK3323FT
A13R128	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A13R129	321–5064–00			RES,FXD:THICK FILM,200K OHM,1%,0.125W	91637	CRCW1206–2003FT
A13R130	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A13R131	321–5019–00			RES,FXD:THICK FILM,1.21K OHM,1%,0.125W	50139	BCK1211FT
A13R132	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A13R133	321–5048–00			RES,FXD:THICK FILM,332K OHM,1%,0.125W	50139	BCK3323FT
A13R134	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A13R135	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A13R136	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A13R200	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R201	321–5049–00			RES,FXD:THICK FILM,1M OHM,1%,0.125W	50139	BCA1004FT
A13R202	321–5049–00			RES,FXD:THICK FILM,1M OHM,1%,0.125W	50139	BCA1004FT
A13R203	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R204	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT

A13 (TDS 380) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13R207	321–5416–00			RES,FXD,FILM:10 OHM,1%,100V,62MW	59124	RK73H1J10R0FT
A13R208	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A13R209	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A13R210	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A13R211	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A13R212	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A13R215	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R216	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A13R217	321–5032–00			RES,FXD:THICK FILM,15.0K OHM,1%,0.125W	50139	BCK1502FT
A13R218	321–5019–00			RES,FXD:THICK FILM,1.21K OHM,1%,0.125W	50139	BCK1211FT
A13R219	321–5023–00			RES,FXD:THICK FILM,2.74K OHM,1%,0.125W	50139	BCK2741FT
A13R220	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R221	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A13R222	321–5032–00			RES,FXD:THICK FILM,15.0K OHM,1%,0.125W	50139	BCK1502FT
A13R223	321–5019–00			RES,FXD:THICK FILM,1.21K OHM,1%,0.125W	50139	BCK1211FT
A13R224	321–5023–00			RES,FXD:THICK FILM,2.74K OHM,1%,0.125W	50139	BCK2741FT
A13R225	321–5017–00			RES,FXD:THICK FILM,825 OHM,1%,0.125W	50139	BCK8250FT
A13R226	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A13R227	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A13R228	321–5309–00			RES,FXD,FILM:8.25K OHM,+/–0.1%,0.125W	91637	TNPW12068251BT
A13R230	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A13R231	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A13R232	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A13R233	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A13R234	321–5165–00			RES,FXD,FILM:10K OHM,0.1%,0.125W,TC=T9	91637	TNPW1206–1002BT
A13R236	321–5165–00			RES,FXD,FILM:10K OHM,0.1%,0.125W,TC=T9	91637	TNPW1206–1002BT
A13R237	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R238	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R239	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R240	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R241	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A13R246	321–5416–00			RES,FXD,FILM:10 OHM,1%,100V,62MW	59124	RK73H1J10R0FT
A13R247	321–5416–00			RES,FXD,FILM:10 OHM,1%,100V,62MW	59124	RK73H1J10R0FT
A13R248	321–5416–00			RES,FXD,FILM:10 OHM,1%,100V,62MW	59124	RK73H1J10R0FT
A13R249	321–5416–00			RES,FXD,FILM:10 OHM,1%,100V,62MW	59124	RK73H1J10R0FT
A13R250	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A13R251	321–5241–00			RES,FXD,FILM:34.0K,0.1%,0.125W	91637	TNPW1206–3402–B–RT2

A13 (TDS 380) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13R252	321–5241–00			RES,FXD,FILM:34.0K,0.1%,0.125W	91637	TNPW1206–3402–B–RT2
A13R253	321–5165–00			RES,FXD,FILM:10K OHM,0.1%,0.125W,TC=T9	91637	TNPW1206–1002BT
A13R254	321–5309–00			RES,FXD,FILM:8.25K OHM,+/–0.1%,0.125W	91637	TNPW12068251BT
A13R255	321–5242–00			RES,FXD,FILM:68.1K,0.1%,0.125W	91637	TNPW1206–6812–B–R75
A13R256	321–5305–00			RES,FXD,FILM:2K OHM,0.1%,25PPM,0.125W	91637	TNPW1206–2001BT
A13R259	321–5456–00			RES,FXD,FILM:681 OHM,1%,100V,62.5MW	91637	CRCW06036810 FRT–1
A13R260	321–5051–00			RES,FXD:THICK FILM,0 OHM,1%,0.125W	09969	CRCW1206 JUMPER
A13R261	321–5469–00			RES,FXD,FILM:20.0K OHM,1%,100V,62.5MW	91637	CRCW06032002 FRT–1
A13R262	321–5469–00			RES,FXD,FILM:20.0K OHM,1%,100V,62.5MW	91637	CRCW06032002 FRT–1
A13R263	321–5456–00			RES,FXD,FILM:681 OHM,1%,100V,62.5MW	91637	CRCW06036810 FRT–1
A13R264	321–5456–00			RES,FXD,FILM:681 OHM,1%,100V,62.5MW	91637	CRCW06036810 FRT–1
A13R265	321–5469–00			RES,FXD,FILM:20.0K OHM,1%,100V,62.5MW	91637	CRCW06032002 FRT–1
A13R266	321–5469–00			RES,FXD,FILM:20.0K OHM,1%,100V,62.5MW	91637	CRCW0603200 2FRT–1
A13R267	321–5456–00			RES,FXD,FILM:681 OHM,1%,100V,62.5MW	91637	CRCW06036810 FRT–1
A13R302	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A13R303	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R304	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A13R305	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R307	321–5042–00			RES,FXD:THICK FILM,39.2 OHM,1%,0.125W	50139	BCD39R2FT
A13R308	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A13R309	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R310	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A13R314	321–5007–00			RES,FXD:THICK FILM,121 OHM,1%,0.125W	50139	BCK1210FT
A13R315	321–5007–00			RES,FXD:THICK FILM,121 OHM,1%,0.125W	50139	BCK1210FT
A13R316	321–5007–00			RES,FXD:THICK FILM,121 OHM,1%,0.125W	50139	BCK1210FT
A13R317	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A13R318	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A13R319	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A13R321	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R324	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A13R325	321–5047–00			RES,FXD:THICK FILM,100K OHM,1%,0.125W	50139	BCK1003FT
A13R327	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT

A13 (TDS 380) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13R331	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A13R335	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R336	321–5169–00			RES,FXD:THICK FILM,475K OHM,1%,0.125W	59124	RK73H2B4753FT
A13R350	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R351	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A13R352	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R360	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R361	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R365	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R366	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A13R369	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A13R370	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A13R372	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A13R373	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A13R375	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R376	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R378	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R379	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R380	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R381	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R383	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R384	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R385	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R386	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R387	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R388	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R389	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R390	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A13R392	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R393	321–5007–00			RES,FXD:THICK FILM,121 OHM,1%,0.125W	50139	BCK1210FT
A13R395	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R396	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R398	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R399	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R402	321–5023–00			RES,FXD:THICK FILM,2.74K OHM,1%,0.125W	50139	BCK2741FT
A13R403	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R406	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A13R407	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT

A13 (TDS 380) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13R408	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A13R409	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R410	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A13R411	321–5000–00			RES,FXD:THICK FILM,10 OHM,1%,0.125W	50139	BCD10R0FT
A13R412	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A13R413	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R414	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A13R415	321–5000–00			RES,FXD:THICK FILM,10 OHM,1%,0.125W	50139	BCD10R0FT
A13R416	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A13R417	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R418	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R419	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A13R420	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R421	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R422	321–5009–00			RES,FXD:THICK FILM,182 OHM,1%,0.125W	50139	BCK1820FT
A13R423	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A13R424	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A13R425	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A13R500	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R502	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A13R503	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A13R504	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A13R507	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R508	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R509	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R510	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R511	321–5016–00			RES,FXD:THICK FILM,681 OHM,1%,0.125W	50139	BCK6810FT
A13R512	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R514	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R516	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R521	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R523	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R525	321–5370–00			RES,FXD,FILM:0.25 OHM,10%,0.33W,TC=300PPM	57489	L1206MR250KBT
A13R526	321–5370–00			RES,FXD,FILM:0.25 OHM,10%,0.33W,TC=300PPM	57489	L1206MR250KBT
A13R527	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A13R528	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT

A13 (TDS 380) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13R529	321–5023–00			RES,FXD:THICK FILM,2.74K OHM,1%,0.125W	50139	BCK2741FT
A13R530	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R534	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R535	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R537	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R538	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R539	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R540	321–5114–00			RES,FXD,FILM:619 OHM,1%,0.125W,TC=100PPM	91637	CRCW1206–6190FT
A13R542	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A13R544	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A13R545	321–5038–00			RES,FXD:THICK FILM,47.5K OHM,1%,0.125W	50139	BCK4752FT
A13R552	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A13R553	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A13R556	321–5005–00			RES,FXD:THICK FILM,27.4 OHM,1%,0.125W	50139	BCD27R4JT
A13R557	321–5020–00			RES,FXD:THICK FILM,1.5K OHM,1%,0.125W	50139	BCK1501FT
A13R558	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A13R559	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A13R561	321–5025–00			RES,FXD:THICK FILM,3.92K OHM,1%,0.125W ,	50139	BCK3921FT
A13R563	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R565	321–5093–00			RES,FXD,FILM:200 OHM,1%,0.125W	57668	T/R MCR18EZHFX200E
A13R566	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R567	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R572	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R573	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R582	321–5022–00			RES,FXD:THICK FILM,2.21K OHM,1%,0.125W	50139	BCK2211FT
A13R585	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A13R586	321–5014–00			RES,FXD:THICK FILM,475 OHM,1%,0.125W	50139	BCK4750FT
A13R587	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A13R588	321–5024–00			RES,FXD:THICK FILM,3.32K OHM,1%,0.125W	50139	BCK3321FT
A13R590	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R600	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A13R601	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R602	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A13R613	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R614	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT
A13R636	307–5041–01			RES,NTWK FXD:FILM,(15),4.7K OHM,2%,0.08W	57924	4816P–002–472
A13R637	307–5041–01			RES,NTWK FXD:FILM,(15),4.7K OHM,2%,0.08W	57924	4816P–002–472
A13R638	321–5018–00			RES,FXD:THICK FILM,1.0K OHM,1%,0.125W	50139	BCK1001FT

A13 (TDS 380) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13R640	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A13R641	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R642	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R643	321–5006–00			RES,FXD:THICK FILM,100 OHM,1%,0.125W	50139	BCK1000FT
A13R644	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A13R645	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A13R646	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A13R647	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R650	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A13R651	321–5051–00			RES,FXD:THICK FILM,0 OHM,1%,0.125W	09969	CRCW1206 JUMPER
A13R652	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A13R700	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A13R701	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A13R702	321–5011–00			RES,FXD:THICK FILM,274 OHM,1%,0.125W	50139	BCK2740FT
A13R703	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A13R704	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R705	321–5026–00			RES,FXD:THICK FILM,4.75K OHM,1%,0.125W	50139	BCK4751FT
A13R706	321–5030–00			RES,FXD:THICK FILM,10.0K OHM,1%,0.125W	50139	BCK1002FT
A13R707	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A13R708	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A13R709	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A13R710	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R711	321–5013–00			RES,FXD:THICK FILM,392 OHM,1%,0.125W	50139	BCK3920FT
A13R712	321–5113–00			RES,FXD:THICK FILM,75 OHM,1%,0.125W	56845	CRCW1206–75ROFT
A13R713	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A13R714	321–5194–00			RES,FXD:THICK FILM,49.9 OHM,1%,0.125W	91637	CRCW–1206–49R–90 –FT
A13U101	155–0325–01			IC,ASIC:LINEAR,DETECTOR	TK2598	155032501
A13U102	156–5198–01			IC,DIGITAL:HCTCMOS,GATE,QUAD 2–INPUT XOR	1CH66	74HCT86DT
A13U103	156–6891–01			IC,MISC:CMOS,VIDEO SUBSYSTEM	64762	EL4581CS(T&R)
A13U104	156–5095–01			IC,LINEAR:OP–AMP,LOW NOISE,HIGH OUTPUT	01295	NE5534DR
A13U105	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A13U106	156–5000–01			IC,LINEAR:COMPARATOR,OPEN COLLECTOR	01295	LM311DR
A13U109	156–5135–01			IC,DIGITAL:HCTCMOS,REGISTER,8–BIT SIPO	1CH66	74HCT164DT

A13 (TDS 380) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13U201	156–5135–01			IC,DIGITAL:HCTCMOS,REGISTER,8–BIT SIPO	1CH66	74HCT164DT
A13U202	156–6224–01			IC,CONVERTER:CMOS,D/A,12–BIT,16 CHANNELS	TK2441	I10412–04
A13U203	156–5588–01			IC,LINEAR:VOLTAGE REFERENCE,2.5V,1.0%,40PPM	04713	MC1403DR2
A13U204	234–0764–20			IC,ASIC:FISO DRIVER,200MHZ	TK2598	234076420
A13U207	156–5073–01			IC,MISC:HCMOS,ANALOG MUX,TRIPLE SPDT	34371	CD74HC4053M96
A13U208	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A13U301	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A13U303	156–5000–01			IC,LINEAR:COMPARATOR,OPEN COLLECTOR,200NS	01295	LM311DR
A13U304	156–5146–01			IC,DIGITAL:HCTCMOS,GATE,QUAD 2–INPUT AND	01295	SN74HCT08DR
A13U307	156–5450–00			IC,DIGITAL:ECL,GATE, OR–AND/OR–AND–INVERT	04713	MC10H121FN
A13U308	156–5221–01			IC,DIGITAL:ECL,FLIP FLOP,DUAL D–TYPE	04713	MC10H131FNR2
A13U309	156–5221–01			IC,DIGITAL:ECL,FLIP FLOP,DUAL D–TYPE	04713	MC10H131FNR2
A13U401	156–6428–00			IC,ASIC:CMOS,TIME BASE LOGIC	27014	MM9350–VF8
A13U402	156–6795–01			IC,MEMORY:CMOS,SRAM,8K X 8,12NS	TK2519	AS7C164–12JCTR
A13U403	156–5589–00			IC,CONVERTER:TTL,A/D,8–BIT,25MSPS,FLASH	04713	MC10319DW
A13U404	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A13U405	156–5297–01			IC,LINEAR:VOLTAGE REGULATOR,ADJUSTABLE	01295	TL431CDR
A13U510	156–5082–01			IC,LINEAR:OP–AMP,LOW OFFSET	01295	OP07CDR
A13U520	156–5138–01			IC,LINEAR:BIFET,OP–AMP,DUAL	01295	TL072CDR
A13U550	156–6073–01			IC,LINEAR:OP–AMP,CURRENT FEEDBACK,200MHZ	80009	156–6073–01
A13U560	156–5000–01			IC,LINEAR:COMPARATOR,OPEN COLLECTOR,200NS	01295	LM311DR
A13U570	156–5043–01			IC,CONVERTER:D/A,8 BIT,CURRENT OUT	1CH66	DAC08EDT
A13U580	156–5043–01			IC,CONVERTER:D/A,8 BIT,CURRENT OUT	1CH66	DAC08EDT
A13U590	156–6427–01			IC,ASIC:CMOS,CUSTOM,SAMPLER IC,1K MEMORY	27014	MM9365–V2
A13U601	156–6298–00			IC,PROCESSOR:CMOS,MICROCONTROLLER,32–BIT	04713	MC68331CFC16B1
A13U602	156–6461–01			IC,MEMORY:CMOS,EPROM,256K X 8,150NS,FLASH	34649	N28F020–150
A13U603	156–6461–01			IC,MEMORY:CMOS,EPROM,256K X 8,150NS FLASH	34649	N28F020–150
A13U604	156–5088–01			IC,DIGITAL:3–TO–8 DEMUX/DECODER,	01295	SN74HCT138DR
A13U605	156–7131–00			IC,MEMORY:CMOS,NVRAM,32K X 8	0B0A9	DS1644–120
A13U606	156–6101–01			IC,MISC:PWR SUPPLY SUPERVISOR,5 VOLT SYSTEMS	04713	MC34164D–5R2
A13U607	156–6461–01			IC,MEMORY:CMOS,EPROM,256K X 8,150NS FLASH	34649	N28F020–150
A13U701	156–6426–00			IC,ASIC:CMOS,RASTER DISPLAY	27014	MM9337–VF8
A13U702	156–5118–01			IC,DIGITAL:FTTL,GATE,QUAD 2–INPUT NAND	01295	SN74F00DR
A13U703	156–5118–01			IC,DIGITAL:FTTL,GATE,QUAD 2–INPUT NAND	01295	SN74F00DR
A13U704	156–6484–01			IC,MEMORY:CMOS,DRAM,256K X 16,80NS	0JR04	TC514260BJL–80(EL)
A13U706	156–6578–01			IC,MEMORY:CMOS,DRAM,512K X 8,70NS	0JR04	TC514800AJLL–70EL
A13U708	156–5198–01			IC,DIGITAL:HCTCMOS,GATE,QUAD 2–INPUT XOR	1CH66	74HCT86DT
A13U709	156–5853–01			IC,LINEAR:OP–AMP,35MHZ,UNITY GAIN STABLE	27014	LM6361MX

A13 (TDS 380) Main Board replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A13VR301	152–5023–00			DIODE,ZENER:5.1V,5%,225MW	04713	MMBZ5231BLT1
A13VR302	152–5023–00			DIODE,ZENER:5.1V,5%,225MW	04713	MMBZ5231BLT1
A13Y401	158–0418–00			OSC,XTAL:MINI DIP,TRISTATE,60.606 MHZ +/–0.01%	61429	F3020 60.606 MHZ
A13Y402	158–5022–01			OSCILLATOR:40MHZ,0.01%,CMOS,OUTPUT ENABLE	0LUT2	TCO–711JTC 40.0MHZ
A13Y701	158–5029–01			OSCILLATOR:50MHZ,0.01%,CMOS	0LUT2	TC0–711JTC 50. MHZ

A20 low voltage power supply replaceable electrical parts list

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A20	119–5029–02			POWER SUPPLY:IN90–280VAC,45–440HZ,100W	TK2430	119–5029–02

A26 Monitor assembly replaceable electrical parts list

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A26	671–2159–03			CIRCUIT BD ASSY:MONOCHROME DISPLAY	80009	671215903
A26C120	285–1499–00			CAP,FXD,PLASTIC:METALIZED FILM;,1.5UF,5%	84411	X363 1.5 5% 100
A26C140	290–0963–00			CAP,FXD,ALUM:;220UF,+50–20%,25WVDC	1W344	SME35VB221M10X1
A26C150	285–1497–00			CAP,FXD,PLASTIC:FILM FOIL;0.015UF,5%,400V	49588	715P15354JD3
A26C170	290–0942–00			CAP,FXD,ELCTLT:100UF,+100–10%,25V,,ALUMINUM	0H1N5	CEUFM1E101
A26C171	281–0820–00			CAP,FXD,CERAMIC:MLC;680 PF,10%,50V	04222	SA101C681KAA
A26C180	290–0768–00			CAP,FXD,ELCTLT:10UF,+50–20%,100WVDC	0H1N5	CEBSM2D100M
A26C181	290–0768–00			CAP,FXD,ELCTLT:10UF,+50–20%,100WVDC	0H1N5	CEBSM2D100M
A26C220	290–1303–00			CAP,FXD,ALUM:1000UF,20%,16WV,0.394 X 0.787	0H1N5	CEBSM1C102M
A26C231	290–1235–00			CAP,FXD,ALUM:1000UF,20%,35V	1W344	SME35VB102M12X2
A26C232	290–1235–00			CAP,FXD,ALUM:1000UF,20%,35V	1W344	SME35VB102M12X2
A26C233	290–1235–00			CAP,FXD,ALUM:1000UF,20%,35V	1W344	SME35VB102M12X2
A26C240	281–0812–00			CAP,FXD,CERAMIC:MLC;1000PF,10%,100V	04222	SA101C102KAA
A26C260	290–0920–00			CAP,FXD,ELCTLT:33UF,+50–20%,35WVDC	1W344	SME50VB33RM6X11
A26C270	281–0820–00			CAP,FXD,CERAMIC:MLC;680 PF,10%,50V	04222	SA101C681KAA
A26C280	283–0067–00			CAP,FXD,CER DI:0.001UF,10%,200V	18796	DD09B10 Y5F 102
A26C320	283–0013–00			CAP,FXD,CER DI:0.01UF,–0+100%,1000V,DISC	59660	818–602ZSUO103P
A26C330	290–0950–00			CAP,FXD,ELCTLT:100UF,+50–20%,50WVDC	0H1N5	CEUSM1H101
A26C350	290–0943–00			CAP,FXD,ALUM:;47UF,+50–20%,25V,6 X 11MM	0H1N5	CEUSM1E470–Q
A26C351	281–0765–00			CAP,FXD,CER DI:100PF,5%,100V	04222	SA102A101JAA
A26C360	283–0341–00			CAP,FXD,CER DI:0.047UF,10%,100V	04222	SR211C473KAA
A26C361	290–0766–00			CAP,FXD,ALUM:2.2UF,+50–20%,160V,8 X 11.5MM	1W344	SME250VB2R2M8X1
A26C362	290–0944–00			CAP,FXD,ELCTLT:220UF,+50–20%,10V	0H1N5	CEUSM1A221
A26C363	290–0778–01			CAP,FXD,ELCTLT:1UF,+20%,50V	55680	UVP1H010MAAITD
A26C364	290–0778–01			CAP,FXD,ELCTLT:1UF,+20%,50V	55680	UVP1H010MAAITD
A26C365	281–0812–00			CAP,FXD,CERAMIC:MLC;1000PF,10%,100V	04222	SA101C102KAA
A26C370	283–0626–00			CAP,FXD,MICA DI:1800PF,5%,500V	TK0891	RDM19FD182J03
A26C380	283–0111–00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SR215C104MAA
A26C381	281–0775–01			CAP,FXD,CERAMIC:MCL;0.1UF,20%,50V,Z5U,0.170	04222	SA105E104MAA
A26C390	281–0767–00			CAP,FXD,CERAMIC:MLC;330PF,20%,100V	04222	SA102C331MAA
A26C410	283–0013–00			CAP,FXD,CER DI:0.01UF,–0+100%,1000V,DISC	59660	818–602ZSUO103P
A26C411	283–0013–00			CAP,FXD,CER DI:0.01UF,–0+100%,1000V,DISC	59660	818–602ZSUO103P
A26C420	285–1189–00			CAP,FXD,MTLZD:0.1 UF,5%,100 V	05292	PMT 3R .1J 100

A26 Monitor assembly replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A26C421	285–1188–00			CAP,FXD,MTLZD:0.082 UF,5%,100 V	05292	PMT 3R ADVISE
A26C422	290–0766–00			CAP,FXD,ALUM:2.2UF,+50–20%,160V,8 X 11.5MM	1W344	SME250VB2R2M8X1
A26C430	285–1189–00			CAP,FXD,MTLZD:0.1 UF,5%,100 V	05292	PMT 3R .1J 100
A26C450	281–0791–00			CAP,FXD,CERAMIC:MLC;270PF,10%,100V	04222	SA102C271KAA
A26C451	281–0775–01			CAP,FXD,CERAMIC:MCL;0.1UF,20%,50V,Z5U,0.170	04222	SA105E104MAA
A26C452	281–0772–00			CAP,FXD,CERAMIC:MLC;4700PF,10%,100V,0.100 X	04222	SA101C472KAA
A26C460	281–0812–00			CAP,FXD,CERAMIC:MLC;1000PF,10%,100V	04222	SA101C102KAA
A26C461	281–0813–00			CAP,FXD,CERAMIC:MLC;0.047UF,20%,50V	04222	SA105E473MAA
A26C462	285–1340–00			CAP,FXD,PLASTIC:METALIZED FILM;0.01UF,10%	TK1913	MKS2 .01/63/10
A26C470	281–0772–00			CAP,FXD,CERAMIC:MLC;4700PF,10%,100V	04222	SA101C472KAA
A26C490	290–0806–00			CAP,FXD,ELCTLT:3.3UF,+75–10%,350VDC	0H1N5	CE04W2V3R3B
A26CR140	152–0400–00			DIODE,RECT:,FAST RCVRY;400V,1A,200NS	14552	MB2501
A26CR141	152–0400–00			DIODE,RECT:,FAST RCVRY;400V,1A,200NS	14552	MB2501
A26CR160	152–0906–00			DIODE,RECT:,ULTRA FAST;400V,3A50NS	04713	MUR440
A26CR200	152–0906–00			DIODE,RECT:,ULTRA FAST;400V,3A,50NS	04713	MUR440
A26CR250	152–0400–00			DIODE,RECT:,FAST RCVRY;400V,1A,200NS	14552	MB2501
A26CR260	152–0400–00			DIODE,RECT:,FAST RCVRY;400V,1A,200NS	14552	MB2501
A26CR320	152–0400–00			DIODE,RECT:,FAST RCVRY;400V,1A,200NS	14552	MB2501
A26CR321	152–0897–00			DIODE,RECT:,FAST RCVRY;1000V,1.5A,300NS	25403	BYV96E
A26CR340	152–0400–00			DIODE,RECT:,FAST RCVRY;400V,1A,200NS	14552	MB2501
A26CR460	152–0141–02			DIODE,SIG:,ULTRA FAST;40V,150MA,4NS,2PF	27014	FDH9427
A26CR470	152–0141–02			DIODE,SIG:,ULTRA FAST;40V,150MA,4NS,2PF	27014	FDH9427
A26CR480	152–0242–00			DIODE,SIG:,;225V,200MA	14552	MT5129
A26CR481	152–0242–00			DIODE,SIG:,;225V,200MA	14552	MT5129
A26E150	276–0528–00			SHLD BEAD,ELEK:FERRAMIC	0JR03	276–0528–00
A26E290	119–0181–00			ARSR,ELEC SURGE:230,GAS FILLED,+/–15%	25088	B1–A230T
A26J150	131–4807–00			CONN,HDR PWR:PCB,;MALE,STR,1 X 5,0.156 CTR	00779	640444–5
A26J300	131–2427–00			TERM,QIK DISC.:PCB,;MALE TAB,0.250 X 0.032	00779	62409–1
A26J440	131–5158–00			CONN,HDR:PCB,;MALE,STR,1 X 10,0.1 CTR	00779	103669–9
A26L290	108–0231–00			COIL,RF:,INDUCTOR;FXD,4.5UH,10%,38 AWG	0JR03	108–0231–00
A26L291	108–0509–00			COIL,RF:FIXED,2.45UH +/–10%,AXIAL LEAD,CORE	0JR03	ORDER BY DESC
A26L310	114–0471–00			COIL,RF:VAR 12 – 50 UH,W/LITZ WIRE,DCR 0.1	50783	932–8897–01
A26L400	108–2000–00			COIL,LINEARITY:FXD,NOM 13.O UH,8UH–50UH	50783	933884401

A26 Monitor assembly replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A26Q160	151–0679–00			TRANSISTOR,PWR:BIPOLAR,NPN;400V,12A,SWITC	04713	MJE13009
A26Q260	151–0476–00			TRANSISTOR,PWR:BIPOLAR,NPN;100V,3.0A	04713	TIP31C
A26Q350	151–0347–02			TRANSISTOR,SIG:BIPOLAR,NPN;160V,600MA	04713	2N5551 RLRP (AM
A26Q390	151–0756–00			TRANSISTOR,SIG:BIPOLAR,NPN;100V,100MA	04713	MRF531
A26Q391	151–0411–00			TRANSISTOR,SIG:BIPOLAR,NPN;30V,400MA,1.2GHZ	04713	2N5943
A26Q480	151–0190–00			TRANSISTOR,SIG:BIPOLAR,NPN;40V,200MA	04713	2N3904
A26Q490	151–0712–00			TRANSISTOR,SIG:BIPOLAR,PNP;20V,50MA,600MHZ	04713	MPSH81
A26R150	301–0561–00			RES,FXD,FILM:560 OHM,5%,0.5W	19701	SFR–254 2322–18
A26R160	315–0470–00			RES,FXD,FILM:47 OHM,5%,0.25W	TK1727	SFR25 2322–181–
A26R161	313–1472–00			RES,FXD,FILM:4.7K OHM,5%,0.2W	91637	CCF50–2–47000J
A26R170	307–0108–00			RES,FXD,CMPSN:6.8 OHM,5%,0.25W	50139	CB68G5
A26R180	313–1100–00			RES,FXD,FILM:10 OHM,5%,0.2W	91637	CCF50–2–10R00J
A26R181	307–1602–00			RES,FXD,FILM:1K OHM,5%,3W,FLAME PROOF	24546	FP69–102J
A26R240	308–0459–00			RES,FXD,WW:1.1 OHM,5%,3W	TK2096	KM300 1.1 OHM 5
A26R241	313–1752–00			RES,FXD,FILM:7.5K OHM,5%,0.2W	91637	CCF50–2–75000J
A26R242	301–0823–00			RES,FXD,FILM:82K OHM,5%,0.5W	TK1727	SFR30 2322–182–
A26R243	313–1682–00			RES,FXD,FILM:6.8K OHM,5%,0.2W	91637	CCF50–2–68000J
A26R244	313–1103–00			RES,FXD,FILM:10K OHM,5%,0.2W	91637	CCF50–2–10001J
A26R260	303–0561–00			RES,FXD,CMPSN:560 OHM,5%,1W	24546	FP32 OR FP1 560
A26R261	301–0471–00			RES,FXD,FILM:470 OHM,5%,0.5W	TK1727	SFR30 2322–182–
A26R270	313–1681–00			RES,FXD,FILM:680 OHM,5%,0.2W	91637	CCF50–2–680ROJ
A26R271	313–1331–00			RES,FXD,FILM:330 OHM,5%,0.2W	91637	CCF50–2–330ROJ
A26R272	302–0471–00			RES,FXD,CMPSN:470 OHM,10%,0.5W	24564	FL 1/2 470 OHM
A26R280	315–0271–00			RES,FXD,FILM:270 OHM,5%,0.25W	TK1727	SFR25 2322–181–
A26R281	313–1124–00			RES,FXD,FILM:120K OHM,5%,0.2W	91637	CCF50–2–12002J
A26R290	313–1222–00			RES,FXD,FILM:2.2K OHM,5%,0.2W	91637	CCF50–2–22000J
A26R320	302–0473–00			RES,FXD,CMPSN:47K OHM,10%,0.5W	19701	5053CX47K00K
A26R330	313–1431–00			RES,FXD,FILM:430 OHM,5%,0.2W	91637	CCF50–2–430ROJ
A26R331	313–1051–00			RES,FXD,FILM:5.1 OHM,5%,0.2W	91637	CT3–5R100J
A26R340	322–3427–00			RES,FXD:METAL FILM;274K OHM,1%,0.2W	91637	CCF501G2743FT
A26R350	313–1161–00			RES,FXD,FILM:160 OHM,5%,0.2W	91637	CCF50–2–160R0J
A26R351	313–1272–00			RES,FXD,FILM:2.7K OHM,5%,0.2W	91637	CCF50–2–27000J
A26R352	313–1152–00			RES,FXD,FILM:1.5K OHM,5%,0.2W	91637	CCF50–2–15000J
A26R353	313–1472–00			RES,FXD,FILM:4.7K OHM,5%,0.2W	91637	CCF50–2–47000J

A26 Monitor assembly replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A26R360	313–1162–00			RES,FXD,FILM:1.6K OHM,5%,0.2W	91637	CCF50–2–16000J
A26R370	313–1242–00			RES,FXD,FILM:2.4K OHM,5%,0.2W	91637	CCF50–2–24000J
A26R371	313–1272–00			RES,FXD,FILM:2.7K OHM,5%,0.2W	91637	CCF50–2–27000J
A26R372	313–1203–00			RES,FXD,FILM:20K OHM,5%,0.2W	91637	CCF50–2–20001J
A26R373	313–1394–00			RES,FXD,FILM:390K,5%,0.2W	91637	CCF50–2–39002J
A26R380	313–1102–00			RES,FXD,FILM:1K OHM,5%,0.2W	91637	CCF50–2–10000J
A26R381	313–1222–00			RES,FXD,FILM:2.2K OHM,5%,0.2W	91637	CCF50–2–22000J
A26R382	313–1160–00			RES,FXD,FILM:16 OHM,0.5%,0.2W	91637	CCF50–2–16R00J
A26R390	313–1561–00			RES,FXD,FILM:560 OHM,5%,0.2W	91637	CCF50–2–56OROJ
A26R391	313–1470–00			RES,FXD,FILM:47 OHM,5%,0.2W	91637	CCF50–2–47R00J
A26R392	313–1100–00			RES,FXD,FILM:10 OHM,5%,0.2W	91637	CCF50–2–10R00J
A26R393	313–1332–00			RES,FXD,FILM:3.3K OHM,5%,0.2W	91637	CCF50–2–33000J
A26R410	313–1392–00			RES,FXD,FILM:3.9K OHM,5%,0.2W	91637	CCF50–2–39000J
A26R411	311–2498–00			RES,VAR,TRMR:2.5 MEG OHM,SIDE ADJUST	80009	311249800
A26R412	315–0472–00			RES,FXD,FILM:4.7K OHM,5%,0.25W	TK1727	SFR25 2322–181–
A26R420	313–1100–00			RES,FXD,FILM:10 OHM,5%,0.2W	91637	CCF50–2–10R00J
A26R421	313–1184–00			RES,FXD,FILM:180K OHM,5%,0.2W	91637	CCF50–2–18002J
A26R422	313–1624–00			RES,FXD,FILM:620K OHM,5%,0.2W	91637	CCF5062002J
A26R423	313–1244–00			RES,FXD,FILM:240K OHM,5%,0.2W	91637	CCF50–2–24002J
A26R430	313–1272–00			RES,FXD,FILM:2.7K OHM,5%,0.2W	91637	CCF50–2–27000J
A26R431	313–1151–00			RES,FXD,FILM:150 OHM,5%,0.2W	91637	CCF50–2–150R0J
A26R440	313–1753–00			RES,FXD,FILM:75K OHM,5%,0.2W	91637	CCF50–2–75001J
A26R441	313–1184–00			RES,FXD,FILM:180K OHM,5%,0.2W	91637	CCF50–2–18002J
A26R442	313–1393–00			RES,FXD,FILM:39K OHM,5%,0.2W	91637	CCF50–2–39001J
A26R443	311–2258–00			RES,VAR,TRMR:CERMET;1K OHM,20%,0.5W,0.197	TK2073	GF06VT2 102 M L
A26R450	322–3405–00			RES,FXD,FILM:162K OHM,1%,0.2W	91637	CCF50–2F16202F
A26R451	307–0104–00			RES,FXD,CMPSN:3.3 OHM,5%,0.25W	19701	5043CX3R300J
A26R452	311–2266–00			RES,VAR,NONWW:TRMR,100K OHM,20%,0.5W	TK2073	GF06VT2 104 M L
A26R453	311–2266–00			RES,VAR,NONWW:TRMR,100K OHM,20%,0.5W	TK2073	GF06VT2 104 M L
A26R460	313–1123–00			RES,FXD,FILM:12K OHM,5%,0.2W	91637	CCF50–2–12001J
A26R461	313–1103–00			RES,FXD,FILM:10K OHM,5%,0.2W	91637	CCF50–2–10001J
A26R462	311–2267–00			RES,VAR,NONWW:TRMR,50K OHM,20%,0.5W	TK2073	GF06VT2 503 M L

A26 Monitor assembly replaceable electrical parts list (Cont.)

Component Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Name & Description	Mfr. Code	Mfr. Part Number
A26R463	311–2276–00			RES,VAR,NONWW:TRMR,100 OHM,20%,0.5W	TK2073	GF06VT2 101 M L
A26R470	313–1223–00			RES,FXD,FILM:22K,OHM,5%,0.2W	91637	CCF50–2–22001J
A26R471	313–1472–00			RES,FXD,FILM:4.7K OHM,5%,0.2W	91637	CCF50–2–47000J
A26R472	313–1203–00			RES,FXD,FILM:20K OHM,5%,0.2W	91637	CCF50–2–20001J
A26R473	311–2271–00			RES,VAR,TRMR:CERMET;5K OHM,20%,0.5W,0.197	TK2073	GF06VT2 502 M L
A26R480	313–1682–00			RES,FXD,FILM:6.8K OHM,5%,0.2W	91637	CCF50–2–68000J
A26R481	313–1184–00			RES,FXD,FILM:180K OHM,5%,0.2W	91637	CCF50–2–18002J
A26R482	311–2266–00			RES,VAR,NONWW:TRMR,100K OHM,20%,0.5W	TK2073	GF06VT2 104 M L
A26R483	311–2276–00			RES,VAR,NONWW:TRMR,100 OHM,20%,0.5W	TK2073	GF06VT2 101 M L
A26R490	313–1274–00			RES,FXD,FILM:270K OHM,5%,0.2W	91637	CCF 50–2–2703–J
A26R491	313–1470–00			RES,FXD,FILM:47 OHM,5%,0.2W	91637	CCF50–2–47R00J
A26T170	120–1476–00			XFMR,BASE DRIVE:L1 18MH +/–15% 2.0 OHM MAX	02113	A4369
A26T210	120–1936–00			TRANSFORMER,RF:FLYBACK,12KV	80009	120193600
A26U130	156–4327–00			IC,LINEAR:BIPOLAR,VOLT REG;POSI,12.0V,1.5A,1%	64155	LT1086CT–12
A26U340	156–4618–00			IC,MISC:BIPOLAR,VIDEO SUBSYSTEM;VERT DEF	669588	TDA1175
A26U370	156–1147–00			IC,MISC:BIPOLAR,VIDEO SUBSYSTEM;HORIZPROC	04713	MC1391P
A26VR390	152–0279–00			DIODE,ZENER:5.1V,5%,0.4W	04713	1N751ARL

Diagrams and Circuit Board Illustrations

This section contains the troubleshooting procedures, block diagrams, circuit board illustrations, component locator tables, waveform illustrations, and schematic diagrams.

Symbols

Graphic symbols and class designation letters are based on ANSI Standard Y32.2-1975. Abbreviations are based on ANSI Y1.1-1972.

Logic symbology is based on ANSI/IEEE Standard 91-1984 in terms of positive logic. Logic symbols depict the logic function performed and can differ from the manufacturer's data.

The tilde (~) preceding a signal name indicates that the signal performs its intended function when in the low state.

Other standards used in the preparation of diagrams by Tektronix, Inc., include the following:

- Tektronix Standard 062-2476 Symbols and Practices for Schematic Drafting
- ANSI Y14.159-1971 Interconnection Diagrams
- ANSI Y32.16-1975 Reference Designations for Electronic Equipment
- MIL-HDBK-63038-1A Military Standard Technical Manual Writing Handbook

Component Values

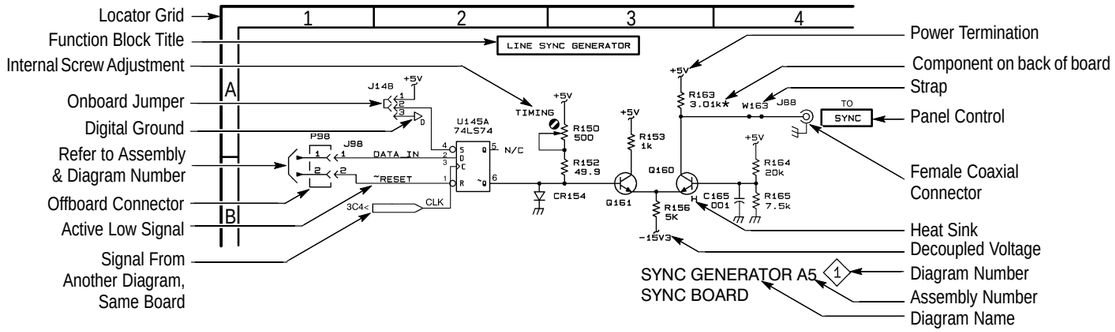
Electrical components shown on the diagrams are in the following units unless noted otherwise:

Capacitors: Values one or greater are in picofarads (pF).
Values less than one are in microfarads (μF).

Resistors: Values are in Ohms (Ω).

Graphic Items and Special Symbols Used in This Manual

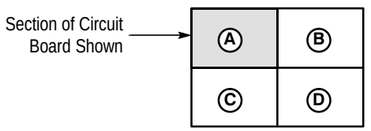
Each assembly in the instrument is assigned an assembly number (for example A5). The assembly number appears in the title on the diagram, in the lookup table for the schematic diagram, and corresponding component locator illustration. The Replaceable Electrical Parts list is arranged by assembly in numerical sequence; the components are listed by component number.

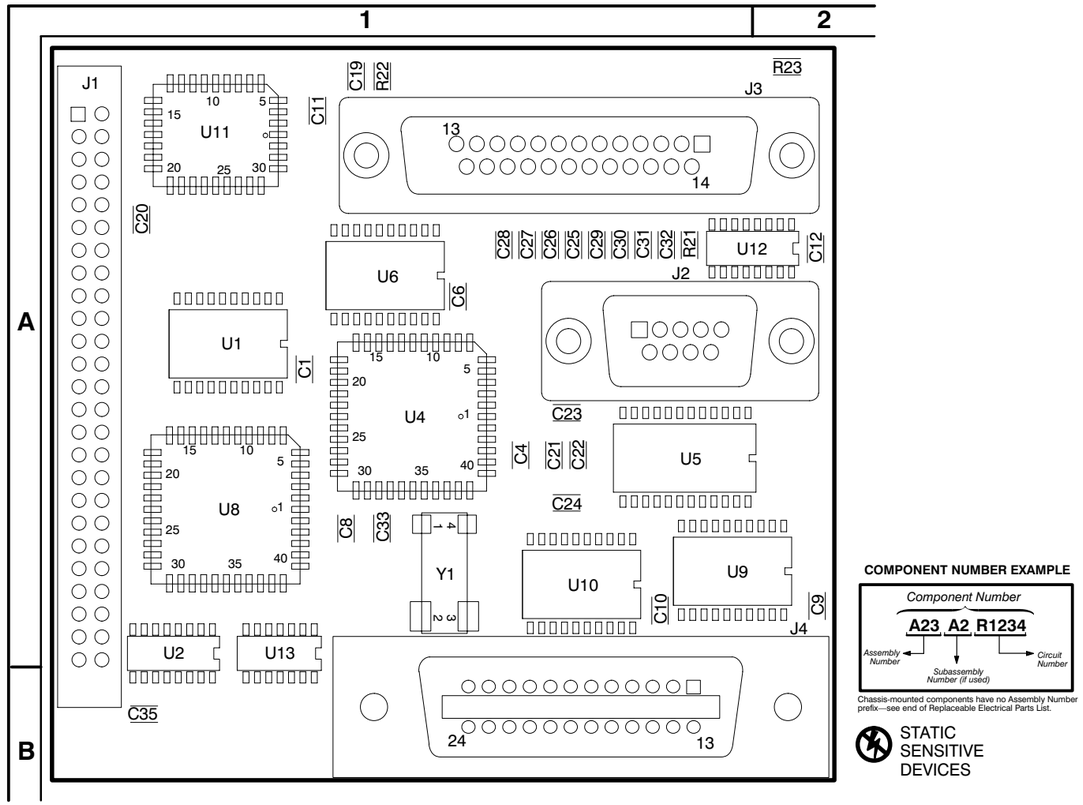


Component Locator Diagrams

The schematic diagram and circuit board component location illustrations have grids marked on them. The component lookup tables refer to these grids to help you locate a component. The circuit board illustration appears only once; its lookup table lists the diagram number of all diagrams on which the circuitry appears.

Some of the circuit board component location illustrations are expanded and divided into several parts to make it easier for you to locate small components. To determine which part of the whole locator diagram you are looking at, refer to the small locator key shown below. The gray block, within the larger circuit board outline, shows where that part fits in the whole locator diagram. Each part in the key is labeled with an identifying letter that appears in the figure titles under component locator diagrams.





COMPONENT NUMBER EXAMPLE

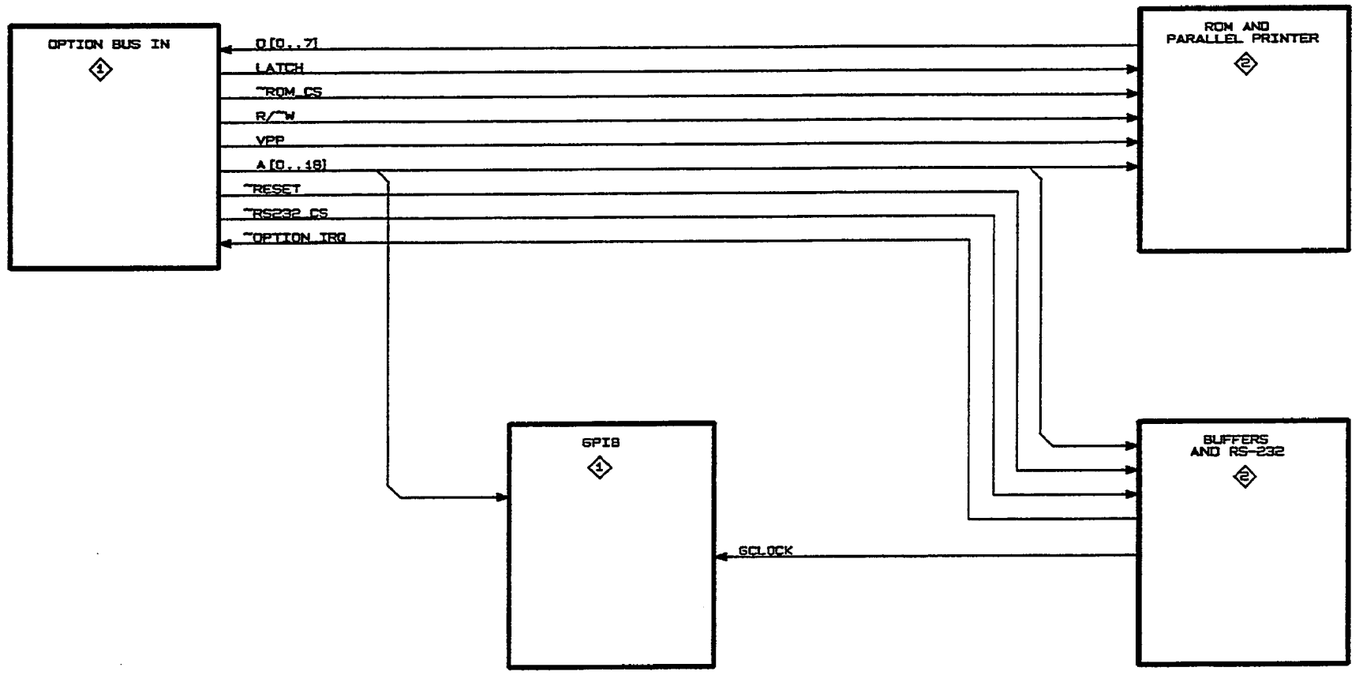
Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

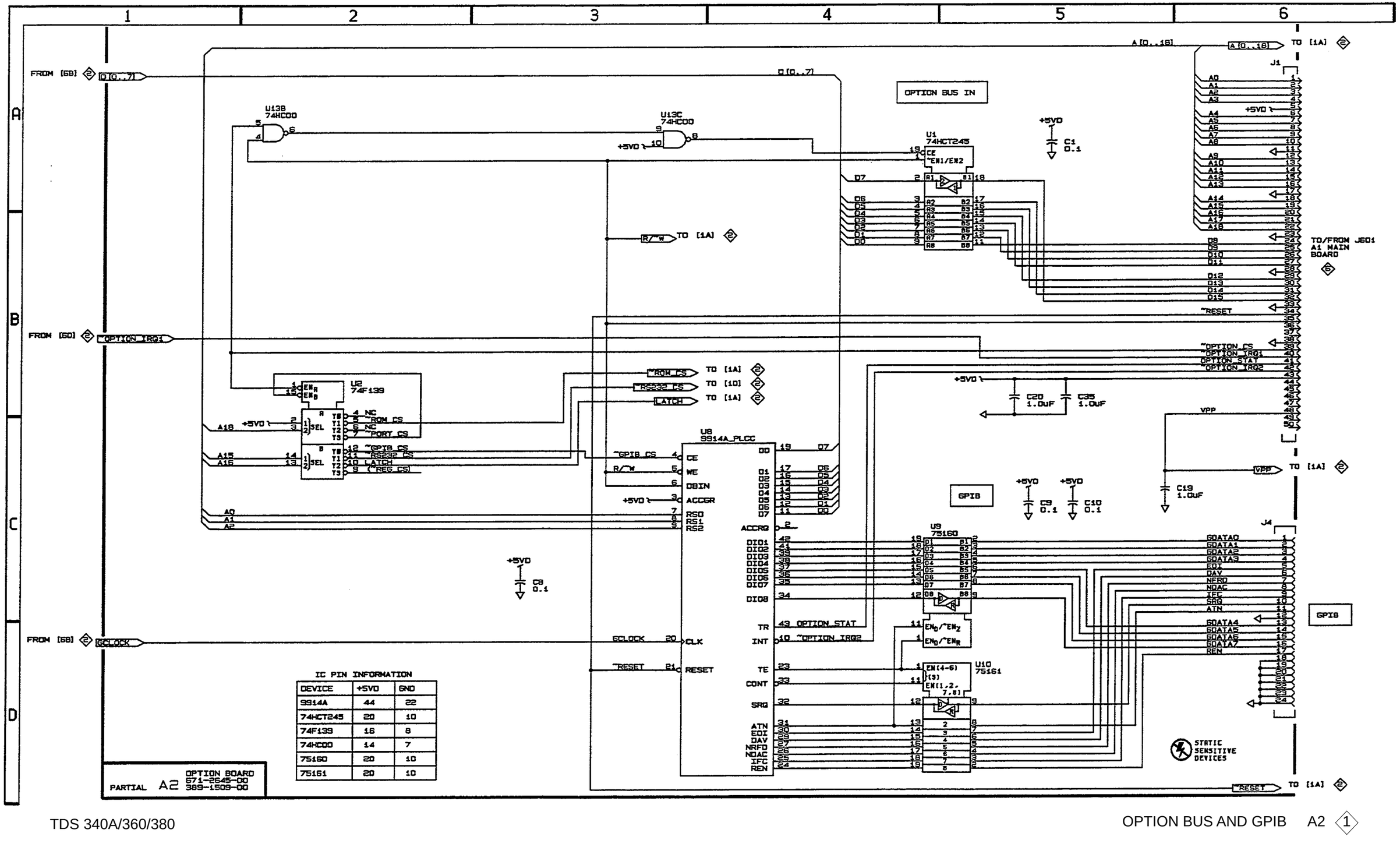
STATIC SENSITIVE DEVICES

A2 Option component locator

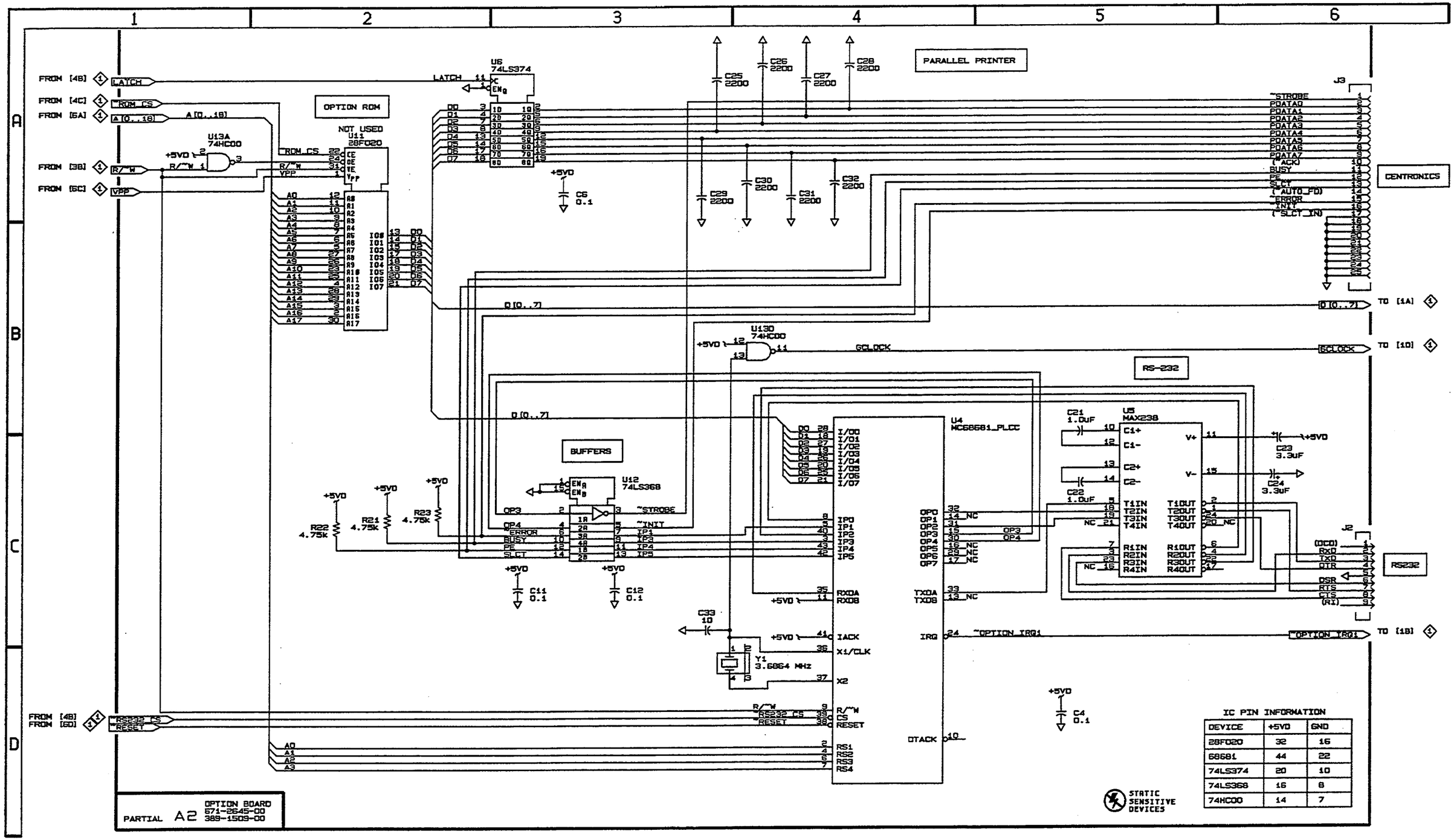
CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION
C1	A2−1	5A	A2	1A	C21	A2−2	5C	A2	1A	C31	A2−2	4A	A2	1A	R21	A2−2	2C	A2	1A	U9	A2−1	4C	A2	2A
C4	A2−2	5D	A2	1A	C22	A2−2	5C	A2	1A	C32	A2−2	4A	A2	1A	R22	A2−2	2C	A2	1A	U10	A2−1	4D	A2	1A
C6	A2−2	3A	A2	1A	C23	A2−2	6C	A2	1A	C33	A2−2	3D	A2	1A	R23	A2−2	2C	A2	2A	U11	A2−2	2A	A2	1A
C8	A2−1	3C	A2	1A	C24	A2−2	6C	A2	1A	C35	A2−1	5B	A2	1B						U12	A2−2	3C	A2	1A
C9	A2−1	5C	A2	2A	C25	A2−2	3A	A2	1A						U1	A2−1	4A	A2	1A	U13B	A2−1	2A	A2	1B
C10	A2−1	5C	A2	1A	C26	A2−2	4A	A2	1A	J1	A2−1	6A	A2	1A	U2	A2−1	2B	A2	1B	U13C	A2−1	3A	A2	1B
C11	A2−2	3C	A2	1A	C27	A2−2	4A	A2	1A	J2	A2−2	6C	A2	1A	U4	A2−2	4C	A2	1A	U13A	A2−2	1A	A2	1B
C12	A2−2	3C	A2	2A	C28	A2−2	4A	A2	1A	J3	A2−2	6A	A2	1A	U5	A2−2	5C	A2	1A	U13D	A2−2	4B	A2	1B
C19	A2−1	5C	A2	1A	C29	A2−2	3A	A2	1A	J4	A2−1	6C	A2	1A	U6	A2−2	3A	A2	1A					
C20	A2−1	5B	A2	1A	C30	A2−2	4A	A2	1A						U8	A2−1	3C	A2	1A	Y1	A2−2	3D	A2	1A

Figure 9–1: A2 Option board


OPTION BUS IN
4
D[0..7]
LATCH
~ROM_CS
R/~W
VPP
A[0..18]
~RESET
~RS232_CS
~OPTION_IRQ
ROM AND
PARALLEL PRINTER
2
GPIB
1
GCLOCK
BUFFERS
AND RS-232
2

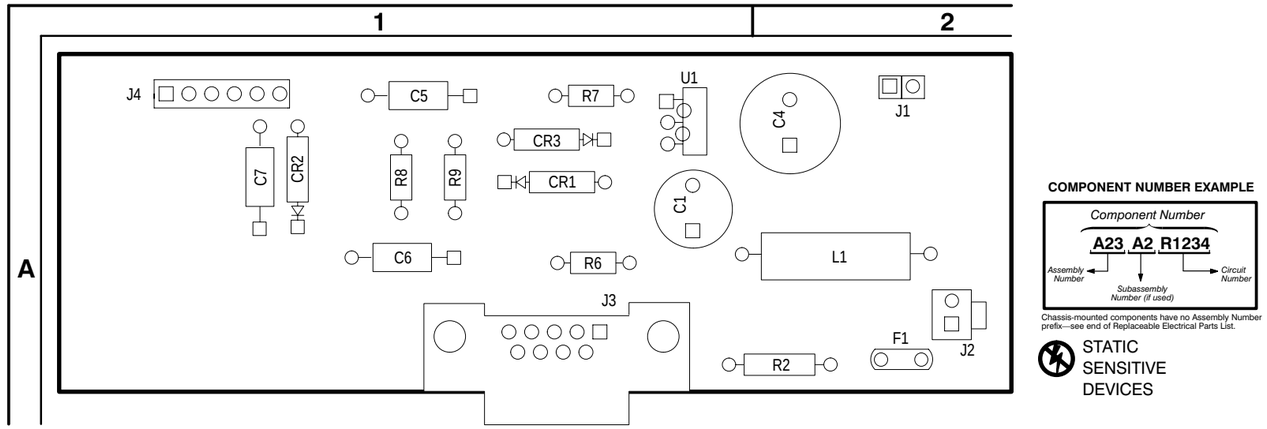


DEVICE	+5VD	GND
9914A	44	22
74HCT245	20	10
74F139	16	8
74HC00	14	7
75160	20	10
75161	20	10



IC PIN INFORMATION

DEVICE	+5VD	GND
28F020	32	16
68681	44	22
74LS374	20	10
74LS368	16	8
74HC00	14	7



COMPONENT NUMBER EXAMPLE

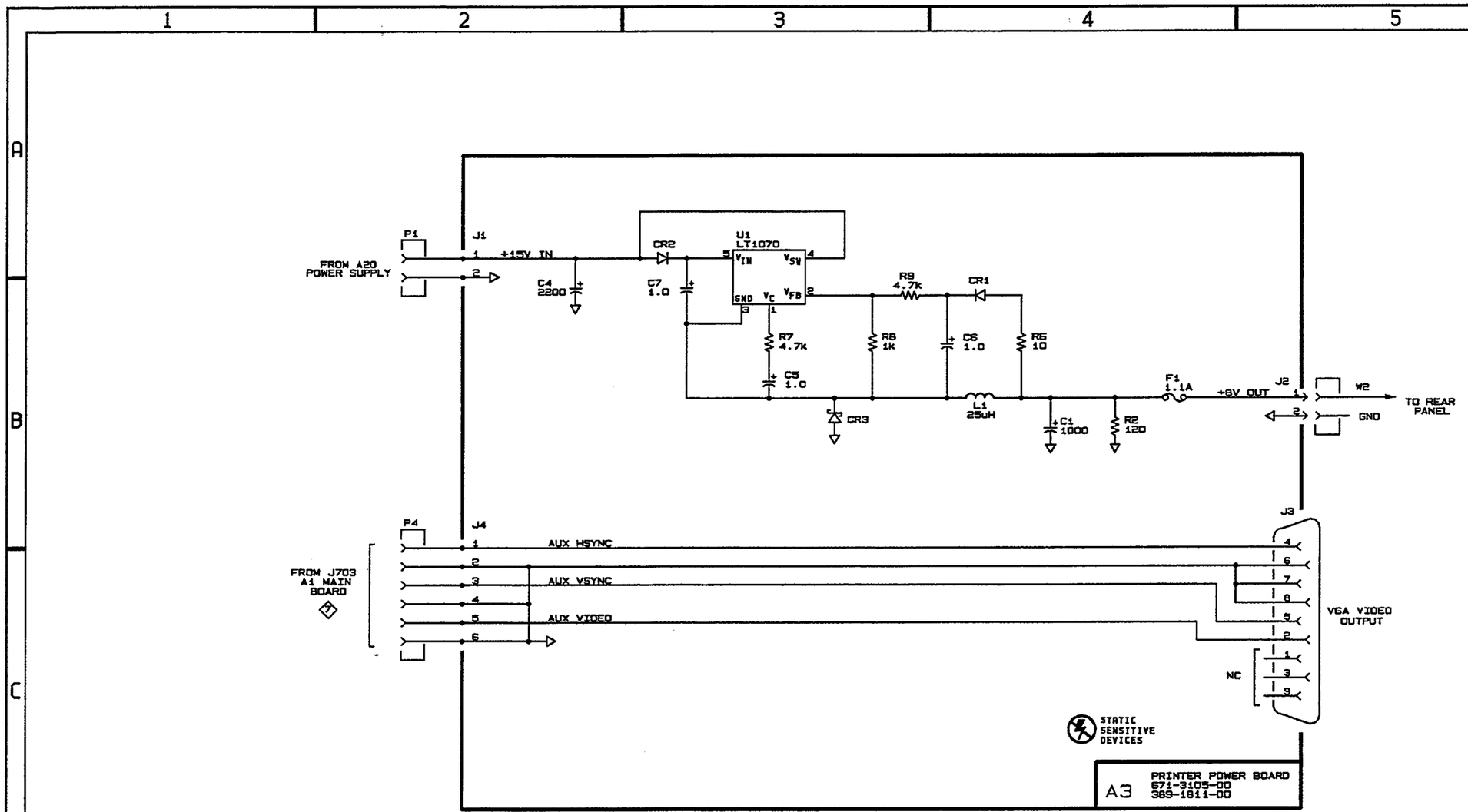
Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

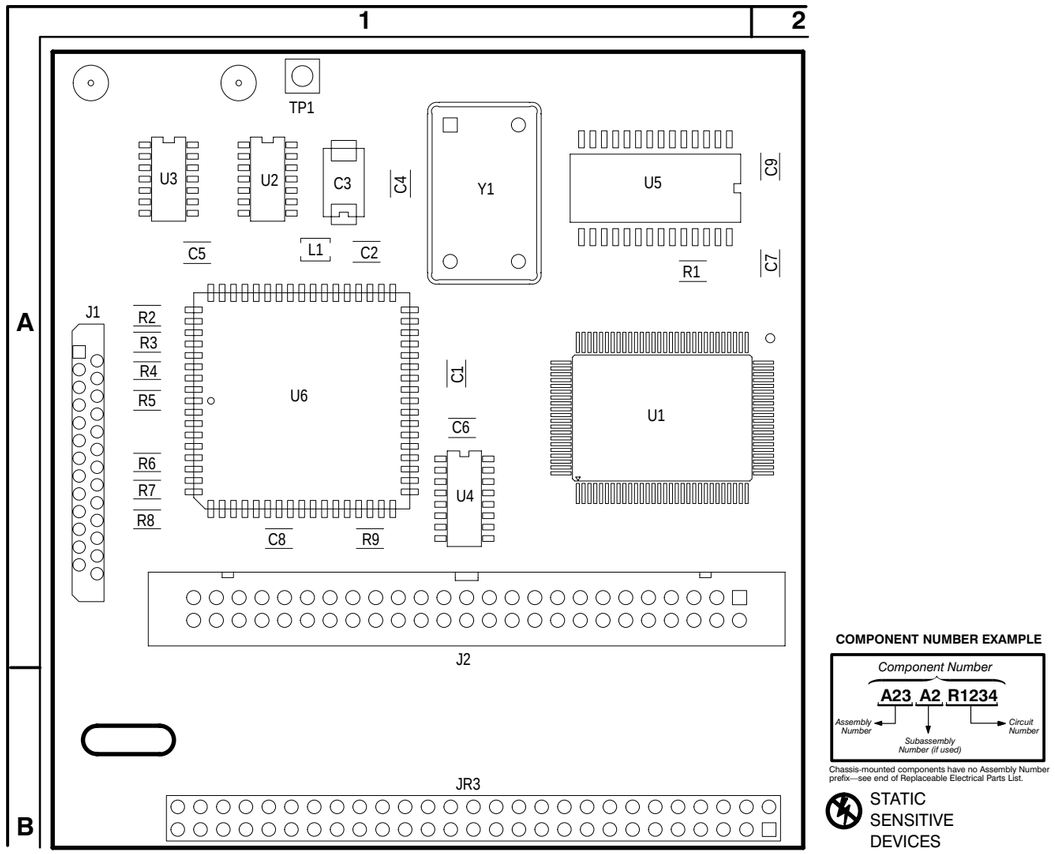
STATIC SENSITIVE DEVICES

A3 Printer Power component locator

CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION
C1	A3–1	4B	A3	1A						F1	A3–1	4B	A3	2A	L1	A3–1	4B	A3	2A	R8	A3–1	3B	A3	1A
C4	A3–1	2B	A3	1A	CR1	A3–1	4B	A3	1A											R9	A3–1	3B	A3	1A
C5	A3–1	3B	A3	1A	CR2	A3–1	3A	A3	1A	J2	A3–1	5B	A3	2A	R2	A3–1	4B	A3	2A					
C6	A3–1	4B	A3	1A	CR3	A3–1	3B	A3	1A	J3	A3–1	5C	A3	1A	R6	A3–1	4B	A3	1A	U1	A3–1	3A	A3	1A
C7	A3–1	3B	A3	1A											R7	A3–1	3B	A3	1A					

Figure 9–2: A3 Printer Power board (option 14)

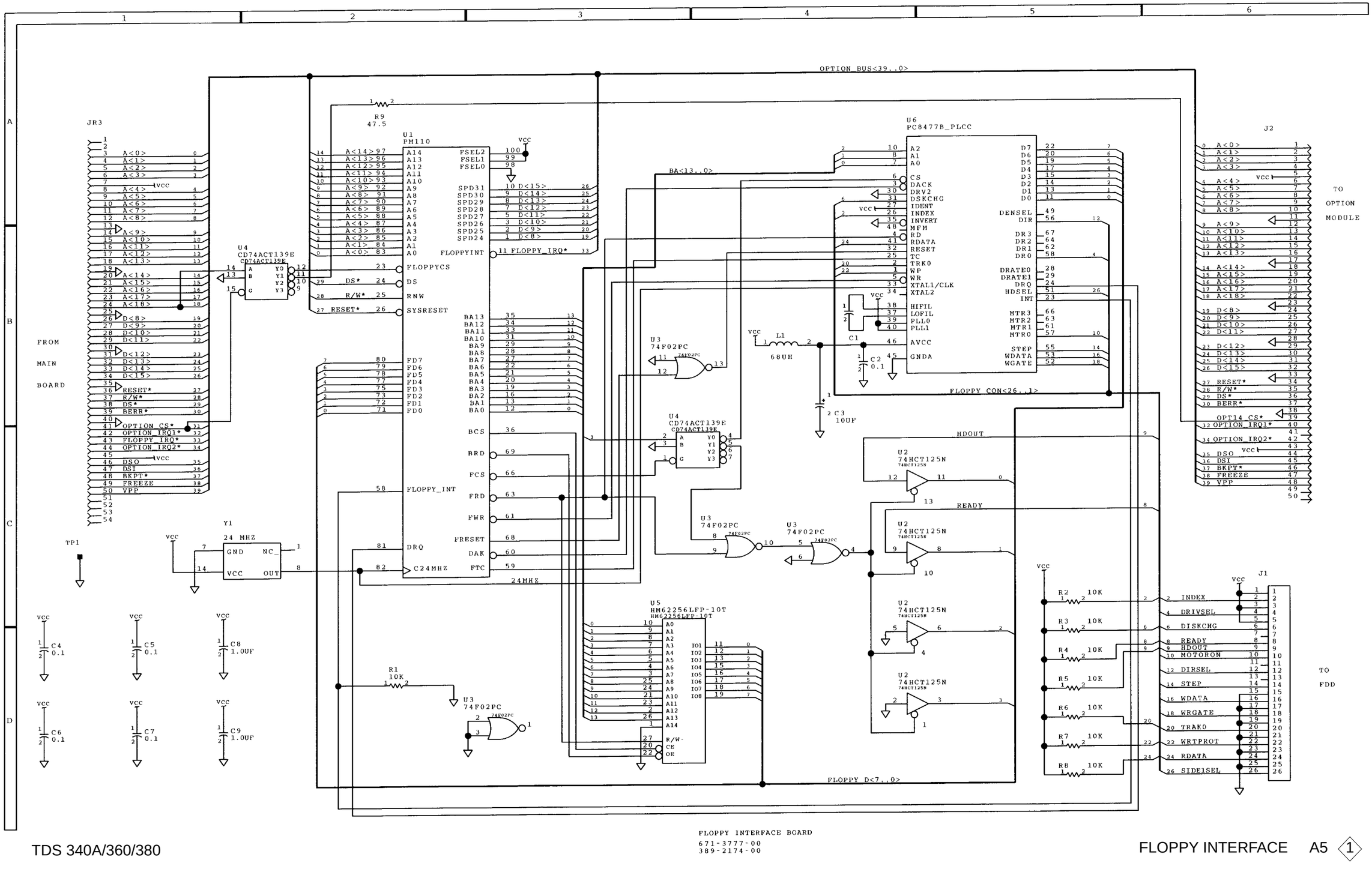

1
2
3
4
5
A
B
C
D
P1
J1
FROM A20
POWER SUPPLY
+15V IN
C4
2200
CR2
C7
1.0
U1
LT1070
VIN
VSW
GND
VC
VFB
R9
4.7k
CR1
R7
4.7k
R8
1k
C5
1.0
R6
10
C3
1.0
CR3
L1
25uH
C1
1000
R2
120
F1
1.1A
+8V OUT
J2
W2
TO REAR
PANEL
GND
P4
J4
FROM J703
A1 MAIN
BOARD
AUX HSYNC
AUX VSYNC
AUX VIDEO
J3
VGA VIDEO
OUTPUT
NC
STATIC
SENSITIVE
DEVICES
A3
PRINTER POWER BOARD
671-3105-00
389-1811-00



A5 Floppy Interface component locator

CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION
C1	A1	1B4	C6	A1	1D1	J2	A1	1A6	R3	A1	1D5	R7	A1	1D5	U1	A1	1A2	U3	A1	1B3	U4	A1	1C3
C2	A1	1B4	C7	A1	1D1	JR3	B1	1A1	R4	A1	1D5	R8	A1	1D5	U2	A1	1C4	U3	A1	1C4	U5	A1	1C3
C3	A1	1B4	C8	A1	1D1	L1	A1	1B4	R5	A1	1D5	R9	A1	1A2	U2	A1	1C4	U3	A1	1D2	U6	A1	1A4
C4	A1	1D1	C9	A1	1D1	R1	A1	1D2	R6	A1	1D5	TP1	A1	1C1	U2	A1	1D4	U4	A1	1B2	Y1	A1	1C1
C5	A1	1D1	J1	A1	1C6	R2	A1	1C5															

Figure 9–3: A5 Floppy Interface board



FLOPPY INTERFACE BOARD
671-3777-00
389-2174-00

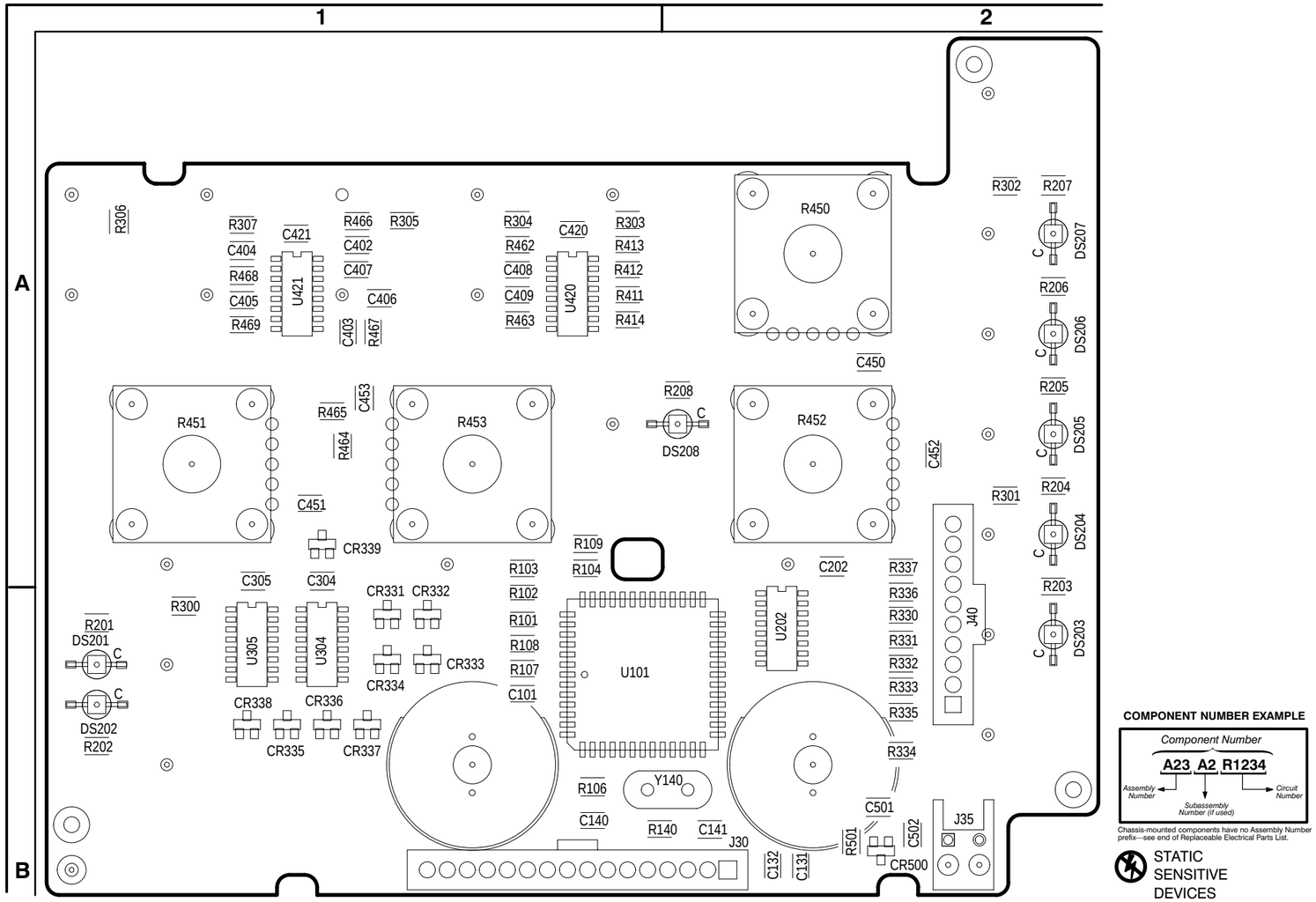
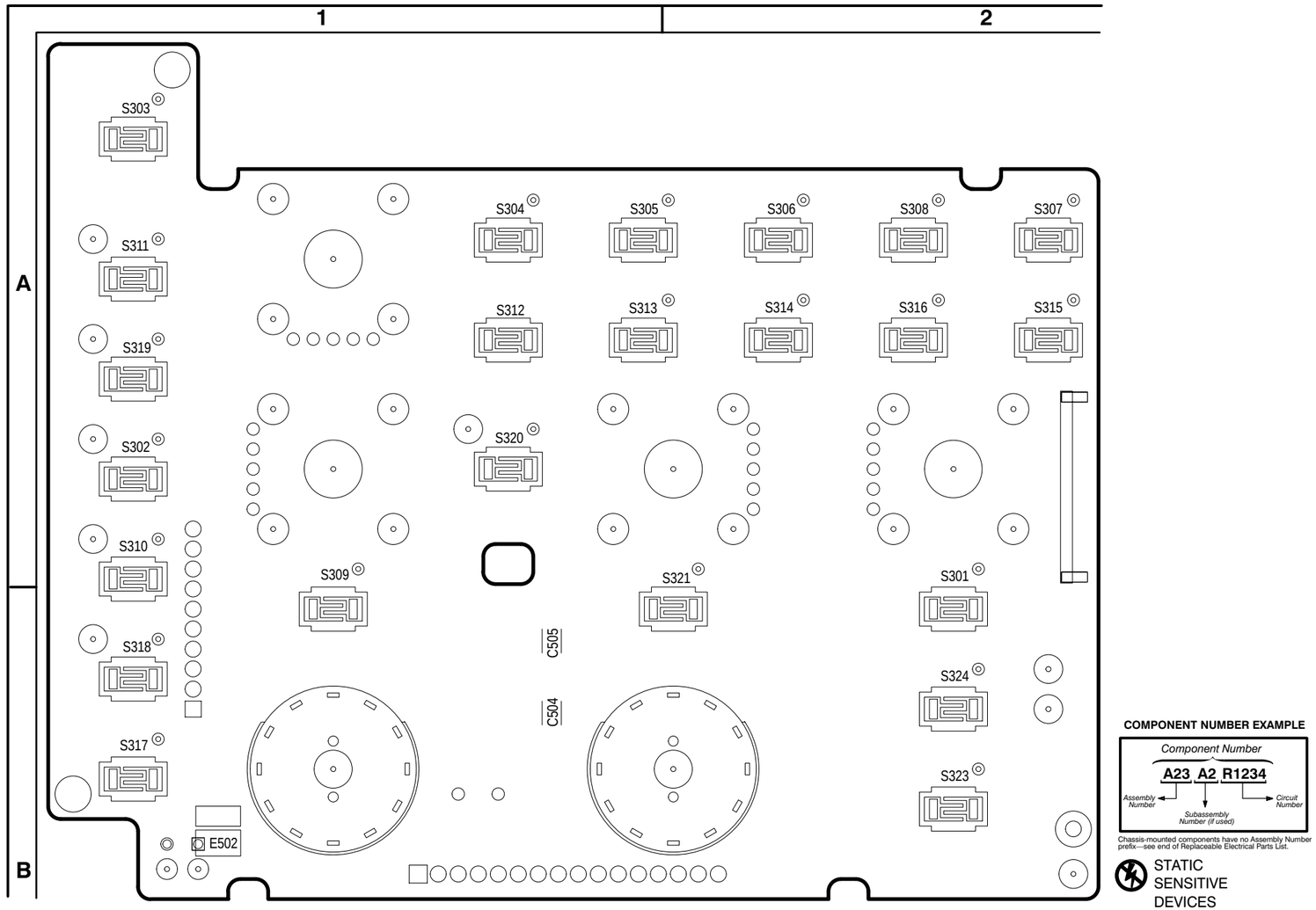


Figure 9–4: A6 Front Panel board (front)



COMPONENT NUMBER EXAMPLE

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

STATIC SENSITIVE DEVICES

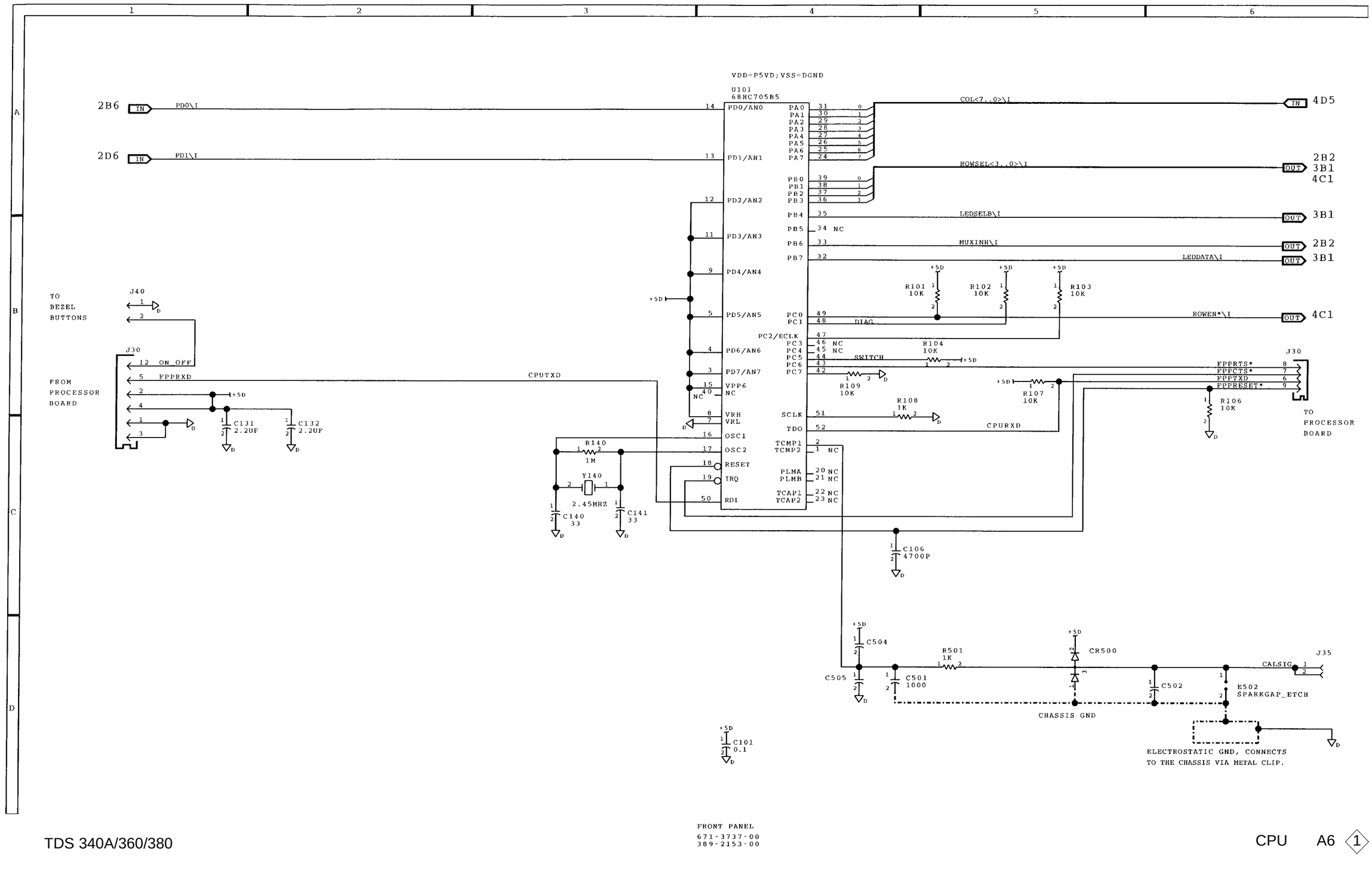
Figure 9–5: A6 Front Panel board (back)

A6 Front Panel component locator

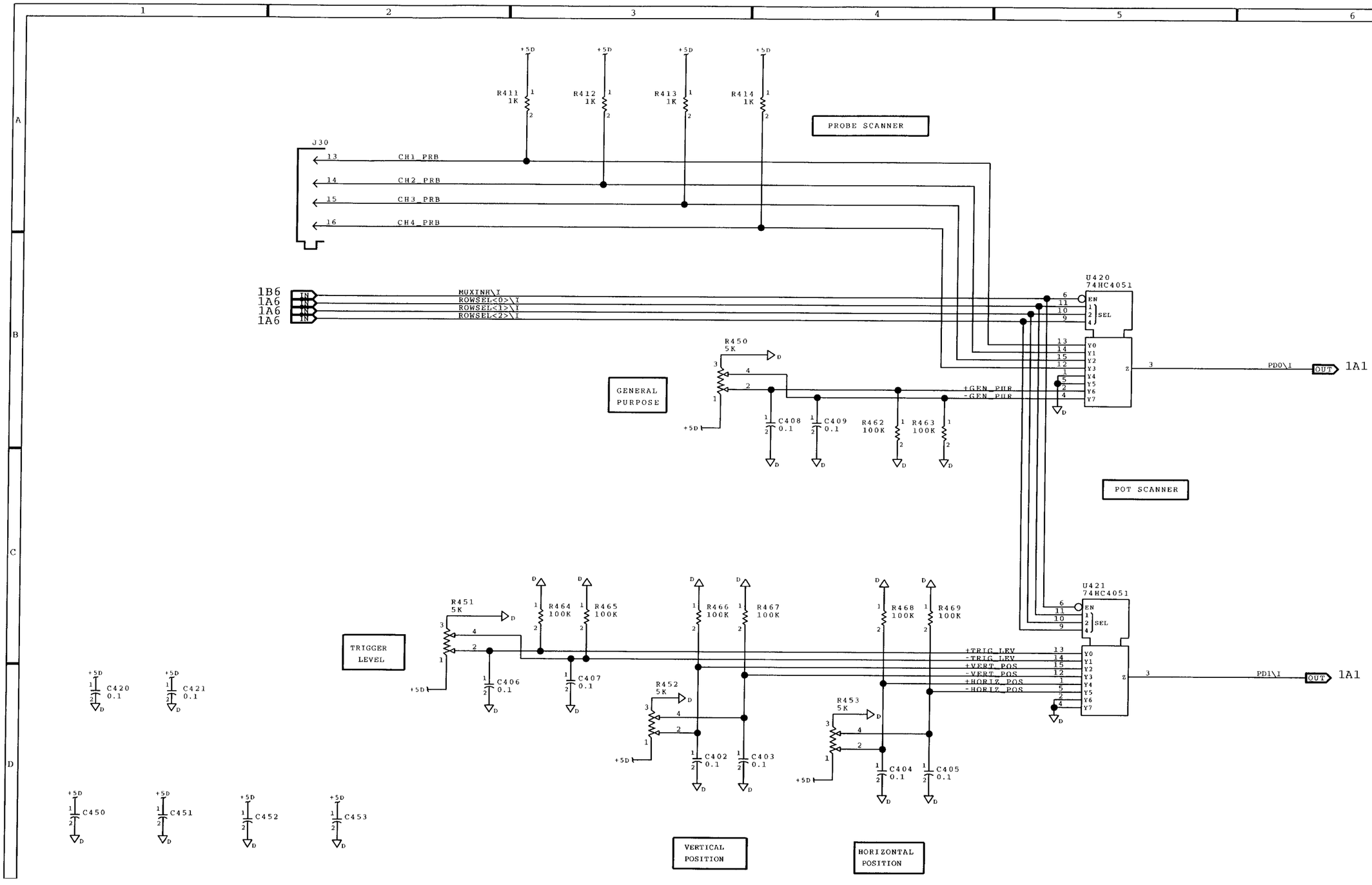
CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION
C101	B1	1D4	C421	A1	2D1	CR339	A1	4D3	J40	B1	4D5	R208	A1	3A6	R411	A1	2A3	S301*	A2	4A5	S317*	B1	4B5
C131	B2	1C1	C450	A2	2D1	CR500	B2	1D5	R101	B1	1B4	R300	A1	4A5	R412	A1	2A3	S302*	A1	4A4	S318*	B1	4B4
C132	B2	1C2	C451	A1	2D1	DS201	B1	3A3	R102	A1	1B5	R301	A2	4A4	R413	A1	2A3	S303*	A1	4A4	S319*	A1	4B4
C140	B1	1C3	C452	A2	2D2	DS202	B1	3A3	R103	A1	1B5	R302	A2	4A4	R414	A1	2A4	S304*	A1	4A3	S320*	A1	4B3
C141	B2	1C3	C453	A1	2D2	DS203	B2	3A4	R104	A1	1B5	R303	A1	4A4	R450	A2	2B3	S305*	A1	4A3	S321*	A1	4B5
C202	A2	4B5	C501	B2	1D4	DS204	A2	3A4	R106	B1	1B6	R304	A1	4A3	R451	A1	2C2	S306*	A2	4A2	S323*	B2	4B4
C304	A1	4B6	C502	B2	1D6	DS205	A2	3A4	R107	B1	1B5	R305	A1	4A3	R452	A2	2D3	S307*	A2	4A2	S324*	B2	4B3
C305	A1	4B6	C504*	B1	1D4	DS206	A2	3A5	R108	B1	1B4	R306	A1	4A2	R453	A1	2D4	S308*	A2	4A2	S340	B1	4C3
C402	A1	2D3	C505*	B1	1D4	DS207	A2	3A5	R109	A1	1B4	R307	A1	4A2	R462	A1	2B4	S309*	A1	4A5	S341	B1	4D3
C403	A1	2D4	CR331	A1	4A1	DS208	A1	3A6	R140	B1	1C3	R330	A2	4C4	R463	A1	2B4	S310*	A1	4A4	U101	B1	1A4
C404	A1	2D4	CR332	A1	4B2	J30	B1	1B1	R201	B1	3A3	R331	B2	4C4	R464	A1	2C3	S311*	A1	4A4	U202	B2	3B2
C405	A1	2D4	CR333	B1	4B2	J30	B1	1B6	R202	B1	3A3	R332	B2	4C4	R465	A1	2C3	S312*	A1	4A3	U304	B1	4B1
C406	A1	2D2	CR334	B1	4C2	J30	B1	1C1	R203	A2	3A4	R333	B2	4C4	R466	A1	2C3	S313*	A1	4B5	U305	B1	4D1
C407	A1	2D3	CR335	B1	4C2	J30	B1	2A2	R204	A2	3A4	R334	B2	4C5	R467	A1	2C4	S314*	A2	4B4	U420	A1	2B5
C408	A1	2B4	CR336	B1	4C3	J35	B2	1D6	R205	A2	3A4	R335	B2	4C5	R468	A1	2C4	S315*	A2	4B4	U421	A1	2C5
C409	A1	2B4	CR337	B1	4D3	J40	B1	1B1	R206	A2	3A5	R336	A2	4C5	R469	A1	2C4	S316*	A2	4B3	Y140	B1	1C3
C420	A1	2D1	CR338	B1	4D3	J40	B1	4C5	R207	A2	3A5	R337	A2	4D5	R501	B2	1D5						

***Asterisks indicate components located on the back of the board.**

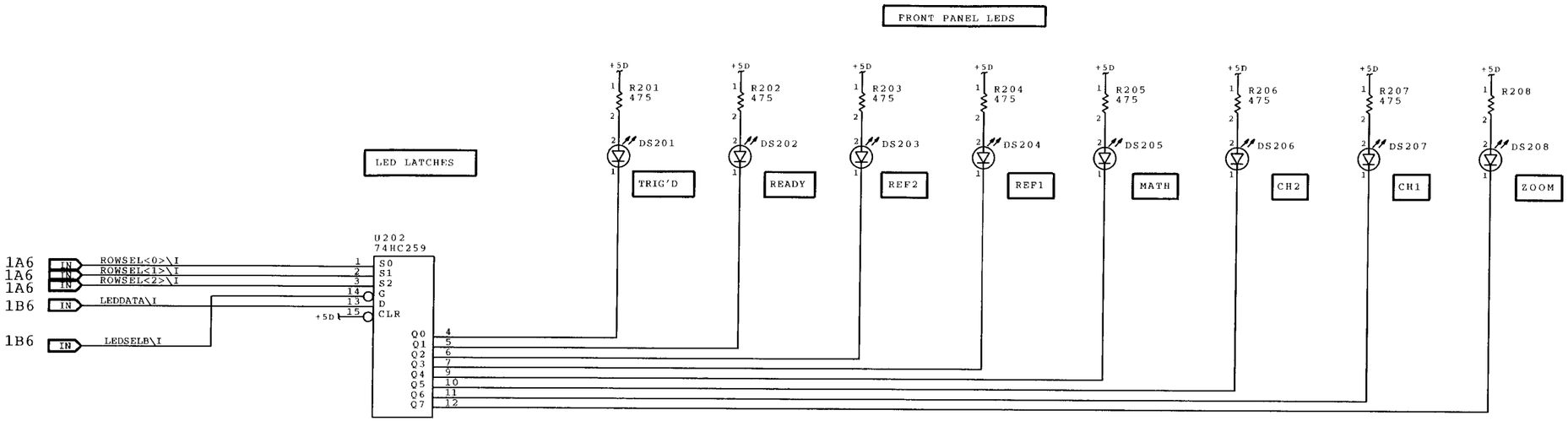
Figure 9–6: A6 Front Panel component locator

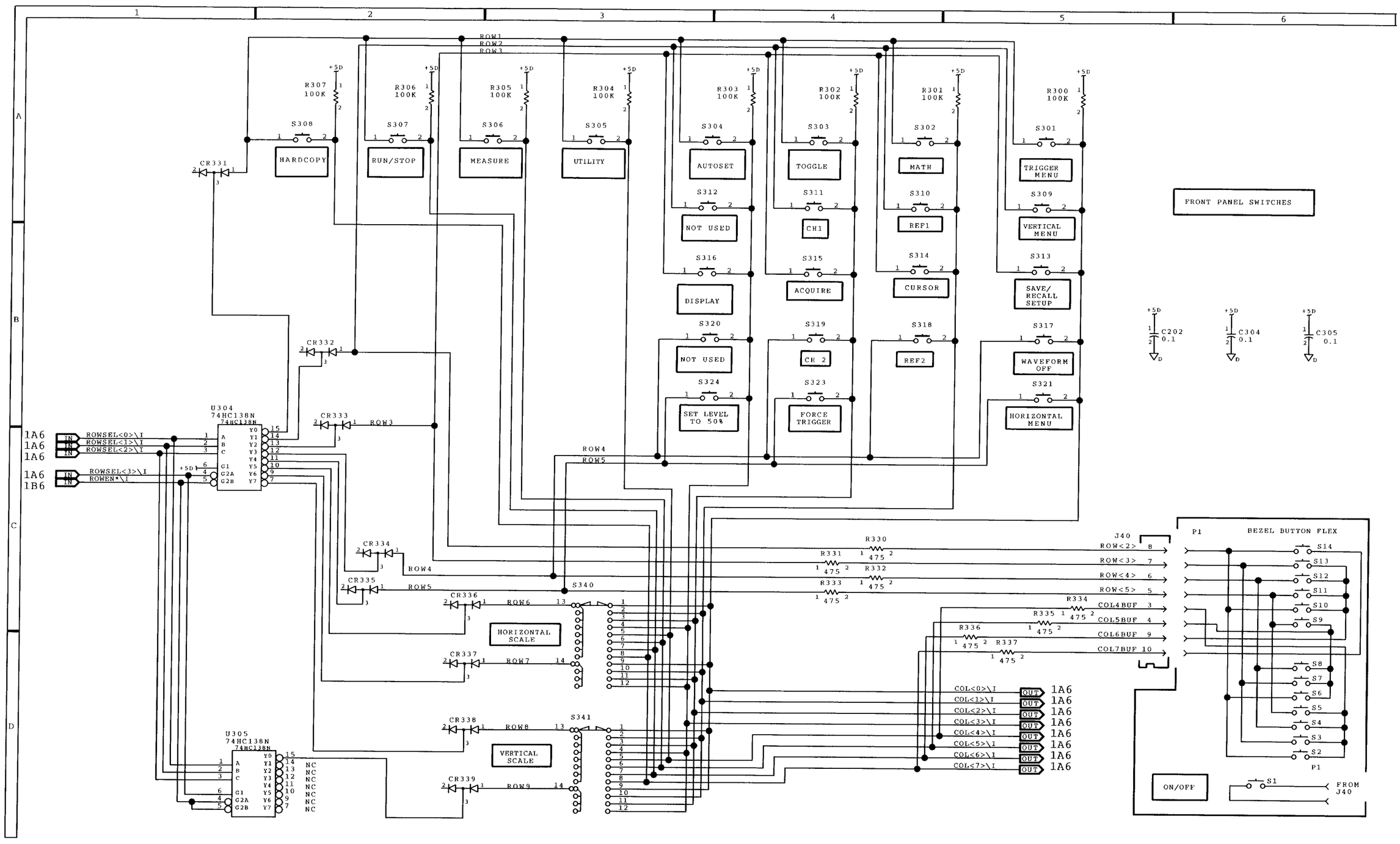


FRONT PANEL
671-3737-00
389-2153-00

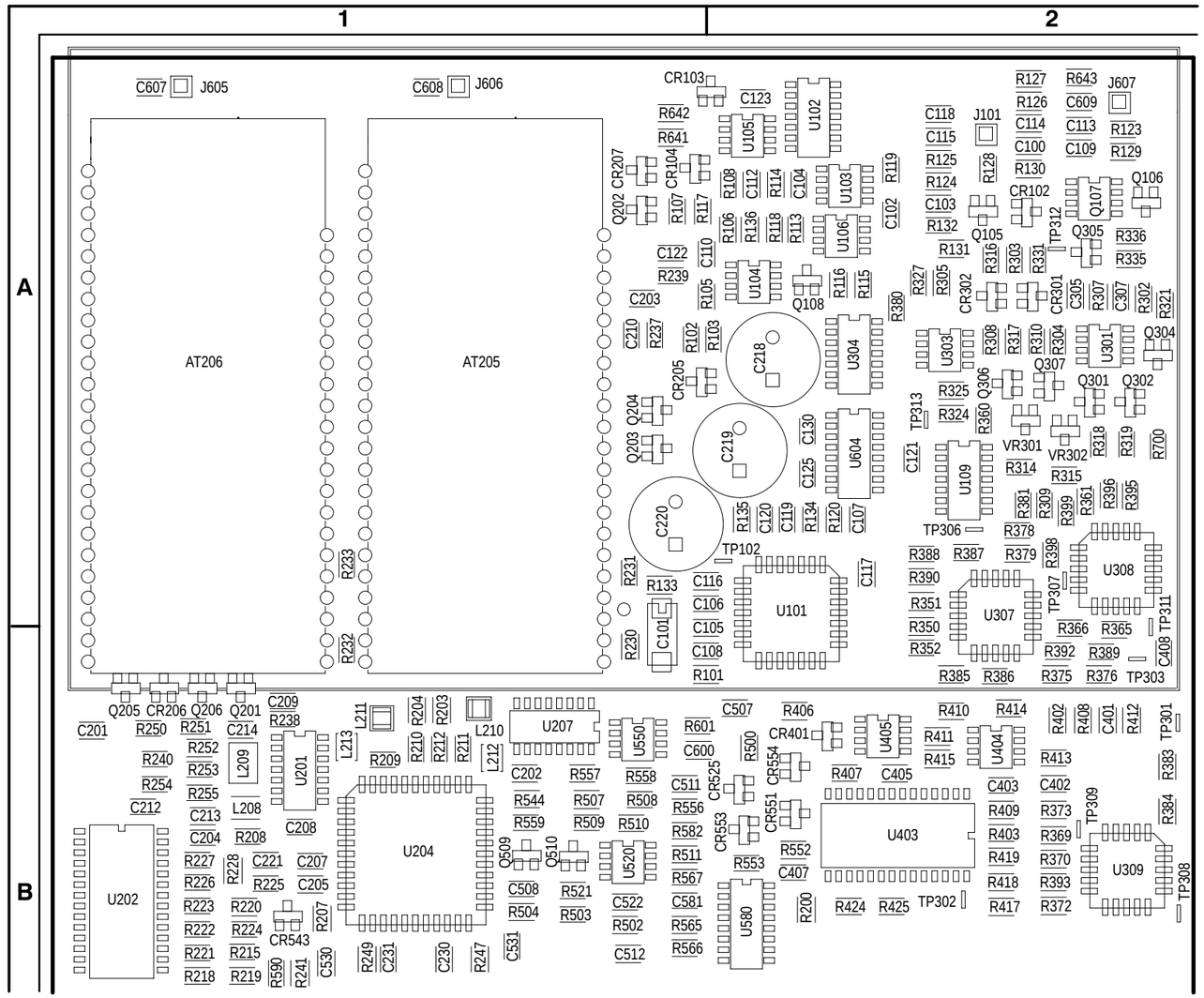


FRONT PANEL BOARD
671-3737-00
389-2153-00

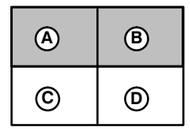

FRONT PANEL LEDS
LED LATCHES
U202
74HC259
1A6 IN ROWSEL<0>\I
1A6 IN ROWSEL<1>\I
1A6 IN ROWSEL<2>\I
1B6 IN LEDDATA\I
1B6 IN LEDSELB\I
+5D
S0
S1
S2
G
D
CLR
Q0
Q1
Q2
Q3
Q4
Q5
Q6
Q7
R201 475
R202 475
R203 475
R204 475
R205 475
R206 475
R207 475
R208
DS201
DS202
DS203
DS204
DS205
DS206
DS207
DS208
TRIG'D
READY
REF2
REF1
MATH
CH2
CH1
ZOOM



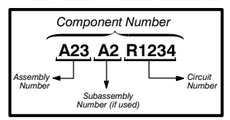
FRONT PANEL BOARD
671-3737-00
389-2153-00



C#	TDS 340A	TDS 360
C125	Installed	Not installed
R240	Not installed	Installed
R241	Not installed	Installed



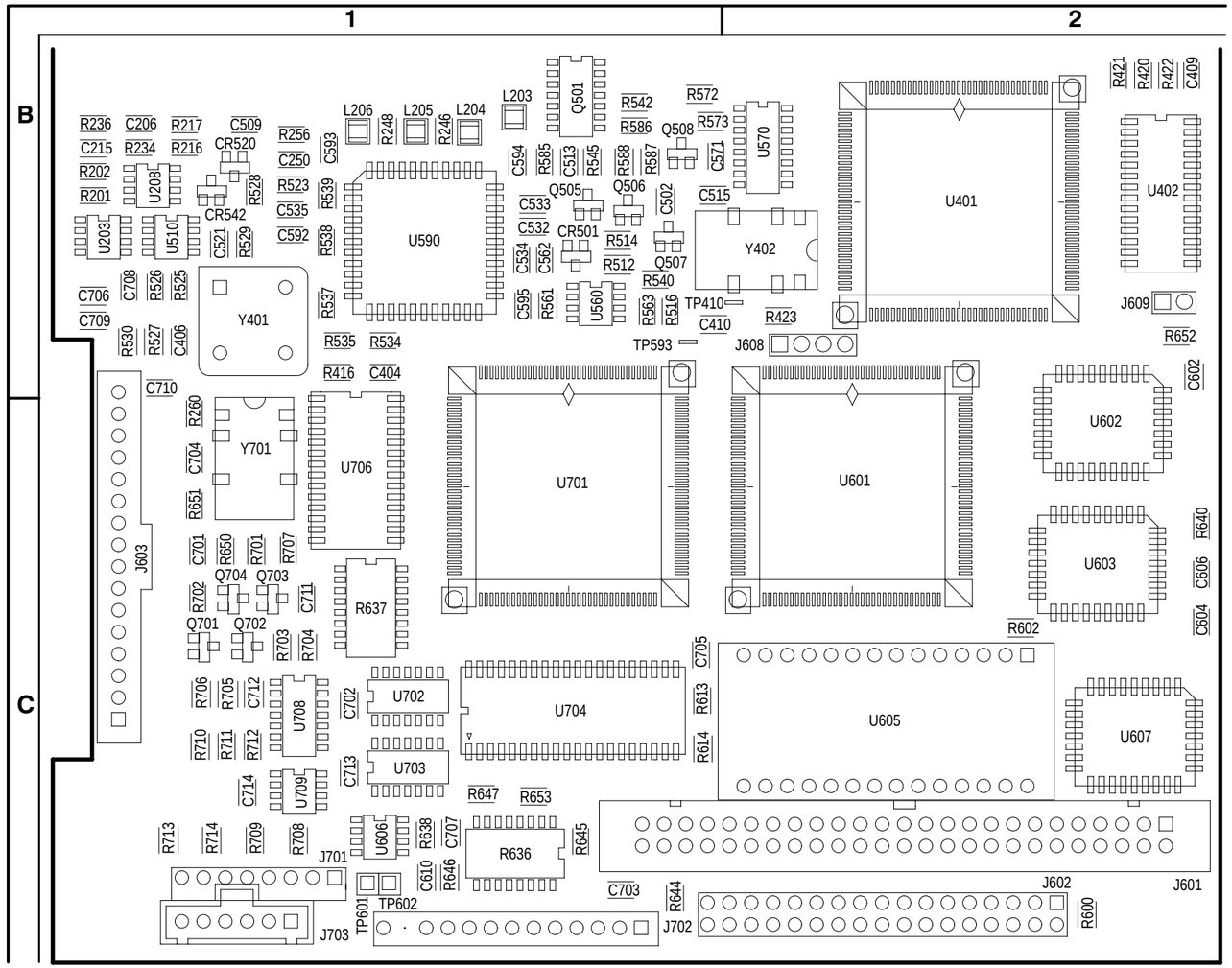
COMPONENT NUMBER EXAMPLE



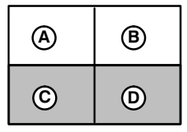
Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

STATIC SENSITIVE DEVICES

Figure 9–7: A11, A12 Main board (TDS 340A, TDS 360) (section A, B)



C#	TDS 340A	TDS 360
R651	Installed	Not installed
R653	Installed	Not installed



COMPONENT NUMBER EXAMPLE

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

STATIC SENSITIVE DEVICES

Figure 9–8: A11, A12 Main board (TDS 340A, TDS 360) (section C, D)

A11, A12 Main component locator (TDS 340A, TDS 360)

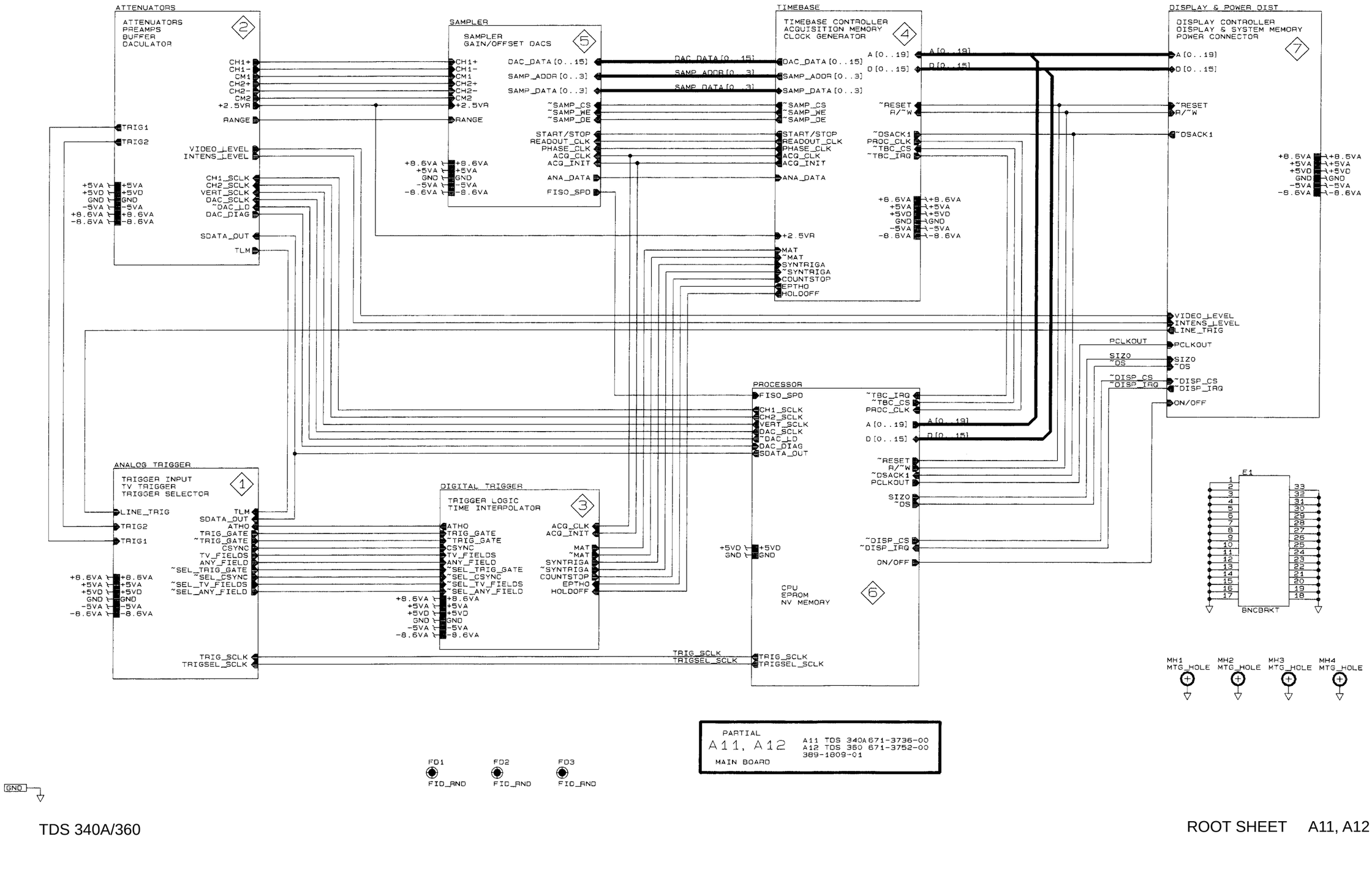
CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION
AT205	A1–2	2A	A1	1A	C512	A1–5	4B	A1	1B	J608	A1–6	2D	A1	2B	R125	A1–1	4D	A1	2A	R309	A1–3	4C	A1	2A
AT206	A1–2	2C	A1	1A	C513	A1–5	5B	A1	1B	J609	A1–6	2D	A1	2B	R126	A1–1	2D	A1	2A	R310	A1–3	5D	A1	2A
					C515	A1–5	6D	A1	1B	J701	A1–7	6C	A1	1C	R127	A1–1	2D	A1	2A	R314	A1–3	4C	A1	2A
C100	A1–1	2D	A1	2A	C521	A1–5	2C	A1	1B	J702	A1–7	6B	A1	1C	R128	A1–1	3D	A1	2A	R315	A1–3	5C	A1	2A
C101	A1–1	2B	A1	1B	C522	A1–5	2D	A1	1B	J703	A1–7	6D	A1	1C	R129	A1–1	2D	A1	2A	R316	A1–3	4C	A1	2A
C102	A1–1	5B	A1	2A	C530	A1–5	1A	A1	1B						R130	A1–1	3D	A1	2A	R317	A1–3	4D	A1	2A
C103	A1–1	4B	A1	2A	C531	A1–5	2A	A1	1B	L203	A1–2	6A	A1	1B	R131	A1–1	3D	A1	2A	R318	A1–3	4B	A1	2A
C104	A1–1	5A	A1	2A	C532	A1–5	2A	A1	1B	L204	A1–2	6A	A1	1B	R132	A1–1	4D	A1	2A	R319	A1–3	5B	A1	2A
C105	A1–1	2C	A1	1B	C533	A1–5	1B	A1	1B	L205	A1–2	6A	A1	1B	R133	A1–1	5B	A1	2A	R321	A1–3	5A	A1	2A
C106	A1–1	2C	A1	1A	C534	A1–5	1A	A1	1B	L206	A1–2	6A	A1	1B	R134	A1–1	1B	A1	1A	R324	A1–3	5B	A1	2A
C107	A1–1	2A	A1	2A	C535	A1–5	3B	A1	1B	L208	A1–2	2D	A1	1B	R135	A1–1	2B	A1	2A	R325	A1–3	5B	A1	2A
C108	A1–1	2C	A1	1B	C562	A1–5	4A	A1	1B	L209	A1–2	2D	A1	1B	R136	A1–1	2B	A1	2A	R327	A1–3	5B	A1	2A
C109	A1–1	2D	A1	2A	C571	A1–5	3D	A1	1B	L210	A1–2	3B	A1	1B	R200	A1–2	3D	A1	2B	R331	A1–3	4B	A1	2A
C110	A1–1	3A	A1	1A	C581	A1–5	4D	A1	1B	L211	A1–2	3C	A1	1B	R201	A1–2	4C	A1	1B	R335	A1–3	5C	A1	2A
C112	A1–1	4A	A1	2A	C592	A1–5	2C	A1	1B	L212	A1–2	5A	A1	1B	R202	A1–2	4C	A1	1B	R336	A1–3	5C	A1	2A
C113	A1–1	2D	A1	2A	C593	A1–5	3B	A1	1B	L213	A1–2	4A	A1	1B	R203	A1–2	3B	A1	1B	R350	A1–3	1B	A1	2B
C114	A1–1	2D	A1	2A	C594	A1–5	3B	A1	1B						R204	A1–2	3D	A1	1B	R351	A1–3	2B	A1	2A
C115	A1–1	3D	A1	2A	C595	A1–5	3B	A1	1B	Q105	A1–1	3D	A1	2A	R207	A1–2	5A	A1	1B	R352	A1–3	1B	A1	2B
C116	A1–1	3B	A1	1A	C600	A1–6	4D	A1	1B	Q106	A1–1	3D	A1	2A	R208	A1–2	5A	A1	1B	R360	A1–3	2C	A1	2A
C117	A1–1	3B	A1	2A	C602	A1–6	5D	A1	2C	Q107A	A1–1	3D	A1	2A	R209	A1–2	4A	A1	1B	R361	A1–3	2C	A1	2A
C118	A1–1	5B	A1	2A	C604	A1–6	5D	A1	2C	Q107B	A1–1	3D	A1	2A	R210	A1–2	4A	A1	1B	R365	A1–3	2C	A1	2B
C119	A1–1	2B	A1	2A	C606	A1–6	4A	A1	2C	Q108	A1–1	5A	A1	2A	R211	A1–2	4A	A1	1B	R366	A1–3	3C	A1	2B
C120	A1–1	2B	A1	2A	C607	A1–6	1D	A1	1A	Q201	A1–2	3D	A1	1B	R212	A1–2	4A	A1	1B	R369	A1–3	2A	A1	2B
C121	A1–1	1A	A1	2A	C608	A1–6	1D	A1	1A	Q202	A1–2	3B	A1	1A	R215	A1–2	6B	A1	1B	R370	A1–3	2A	A1	2B
C122	A1–1	3D	A1	1A	C609	A1–6	1D	A1	2A	Q203	A1–2	3A	A1	1A	R216	A1–2	6B	A1	1B	R372	A1–3	1A	A1	2B
C123	A1–1	4B	A1	2A	C610	A1–6	6C	A1	1C	Q204	A1–2	3A	A1	1A	R217	A1–2	6B	A1	1B	R373	A1–3	4A	A1	2B
C125	A1–1	2B	A1	2A	C701	A1–7	1D	A1	1C	Q205	A1–2	3C	A1	1B	R218	A1–2	6B	A1	1B	R375	A1–3	1C	A1	2B
C130	A1–1	2B	A1	2A	C702	A1–7	1D	A1	1C	Q206	A1–2	3C	A1	1B	R219	A1–2	6B	A1	1B	R376	A1–3	1C	A1	2B
C201	A1–2	1C	A1	1B	C703	A1–7	2D	A1	1C	Q301	A1–3	5B	A1	2A	R220	A1–2	6C	A1	1B	R378	A1–3	1D	A1	2A
C202	A1–2	1B	A1	1B	C704	A1–7	2D	A1	1C	Q302	A1–3	5B	A1	2A	R221	A1–2	6C	A1	1B	R379	A1–3	2D	A1	2A
C203	A1–2	2B	A1	1A	C705	A1–7	1A	A1	1C	Q304	A1–3	5A	A1	2A	R222	A1–2	6C	A1	1B	R380	A1–3	2C	A1	2A
C204	A1–2	4B	A1	1B	C706	A1–7	5C	A1	1B	Q305	A1–3	5C	A1	2A	R223	A1–2	6C	A1	1B	R381	A1–3	2C	A1	2A
C205	A1–2	6B	A1	1B	C707	A1–7	5C	A1	1C	Q306	A1–3	4C	A1	2A	R224	A1–2	6D	A1	1B	R383	A1–3	2A	A1	2B
C206	A1–2	4C	A1	1B	C708	A1–7	5C	A1	1B	Q307	A1–3	5C	A1	2A	R225	A1–2	5A	A1	1B	R384	A1–3	2A	A1	2B
C207	A1–2	6B	A1	1B	C709	A1–7	6C	A1	1B	Q501A	A1–5	4B	A1	1B	R226	A1–2	5C	A1	1B	R385	A1–3	2B	A1	2B
C208	A1–2	3D	A1	1B	C710	A1–7	6C	A1	1C	Q501B	A1–5	4C	A1	1B	R227	A1–2	5C	A1	1B	R386	A1–3	2C	A1	2B
C209	A1–2	1C	A1	1B	C711	A1–7	3D	A1	1C	Q501C	A1–5	5C	A1	1B	R228	A1–2	5C	A1	1B	R387	A1–3	2D	A1	2A
C210	A1–2	1B	A1	1A	C712	A1–7	3D	A1	1C	Q501D	A1–5	5B	A1	1B	R230	A1–2	4A	A1	1B	R388	A1–3	2D	A1	2A
C212	A1–2	1D	A1	1B	C713	A1–7	4D	A1	1C	Q505	A1–5	5A	A1	1B	R231	A1–2	4A	A1	1A	R389	A1–3	2C	A1	2B
C213	A1–2	2D	A1	1B	C714	A1–7	4D	A1	1C	Q506	A1–5	4B	A1	1B	R232	A1–2	4A	A1	1B	R390	A1–3	3D	A1	2A
C214	A1–2	3D	A1	1B						Q507	A1–5	4C	A1	1B	R233	A1–2	4A	A1	1A	R392	A1–3	2C	A1	2B
C215	A1–2	4B	A1	1B	CR102	A1–1	2D	A1	2A	Q508	A1–5	4C	A1	1B	R234	A1–2	3C	A1	1B	R393	A1–3	2A	A1	2B
C218	A1–2	2D	A1	2A	CR103	A1–1	4B	A1	1A	Q509	A1–5	4B	A1	1B	R236	A1–2	4C	A1	1B	R395	A1–3	2B	A1	2A
C219	A1–2	2D	A1	2A	CR104	A1–1	4A	A1	1A	Q510	A1–5	5B	A1	1B	R237	A1–2	1B	A1	1A	R396	A1–3	2B	A1	2A
C220	A1–2	3D	A1	1A	CR205	A1–2	3A	A1	1A	Q701	A1–7	3D	A1	1C	R238	A1–2	1C	A1	1B	R398	A1–3	2D	A1	2A
C221	A1–2	5A	A1	1B	CR206	A1–2	3C	A1	1B	Q702	A1–7	3D	A1	1C	R239	A1–2	2B	A1	1A	R399	A1–3	2D	A1	2A
C230	A1–2	6A	A1	1B	CR207	A1–2	1C	A1	1A	Q703	A1–7	3D	A1	1C	R240	A1–2	2B	A1	1B	R402	A1–4	1B	A1	2B
C231	A1–2	6A	A1	1B	CR301	A1–3	4C	A1	2A	Q704	A1–7	3D	A1	1C	R241	A1–2	2B	A1	1B	R403	A1–4	2C	A1	2B
C250	A1–2	6C	A1	1B	CR302	A1–3	4C	A1	2A						R246	A1–2	6A	A1	1B	R406	A1–4	2B	A1	2B
C305	A1–0	5C	A1	2A	CR401	A1–4	2B	A1	2B	R101	A1–1	2C	A1	1B	R247	A1–2	6A	A1	1B	R407	A1–4	2C	A1	2B
C307	A1–0	5C	A1	2A	CR501	A1–5	4B	A1	1B	R102	A1–1	3B	A1	1A	R248	A1–2	6A	A1	1B	R408	A1–4	1B	A1	2B
C401	A1–4	1B	A1	2B	CR520	A1–5	2C	A1	1B	R103	A1–1	3B	A1	1A	R249	A1–2	6A	A1	1B	R409	A1–4	2B	A1	2B
C402	A1–4	2C	A1	2B	CR525	A1–5	4D	A1	2B	R105	A1–1	3A	A1	1A	R250	A1–2	5C	A1	1B	R410	A1–4	2B	A1	2B
C403	A1–4	1B	A1	2B	CR542	A1–5	3A	A1	1B	R106	A1–1	4B	A1	2A	R251	A1–2	5C	A1	1B	R411	A1–4	2B	A1	2B
C404	A1–4	2A	A1	1C	CR543	A1–5	2C	A1	1B	R107	A1–1	4B	A1	1A	R252	A1–2	5C	A1	1B	R412	A1–4	2C	A1	2B
C405	A1–4	3C	A1	2B	CR551	A1–5	6B	A1	2B	R108	A1–1	4A	A1	2A	R253	A1–2	5C	A1	1B	R413	A1–4	2C	A1	2B
C406	A1–4	2A	A1	1B	CR553	A1–5	6B	A1	2B	R113	A1–1	5A	A1	2A	R254	A1–2	5D	A1	1B	R414	A1–4	2C	A1	2B
C407	A1–4	3C	A1	2B	CR554	A1–5	6B	A1	2B	R114	A1–1	5B	A1	2A	R255	A1–2	5C	A1	1B	R415	A1–4	2C	A1	2B
C408	A1–4	5D	A1	2B						R115	A1–1	4A	A1	2A	R256	A1–2	6C	A1	1B	R416	A1–4	2A	A1	1C
C409	A1–4	5D	A1	2B	J101	A1–1	1D	A1	2A	R116	A1–1	5A	A1	2A	R260	A1–2	1D	A1	1C	R417	A1–4	3D	A1	2B
C410	A1–4	3B	A1	1B	J601	A1–6	6A	A1	2C	R117	A1–1	4B	A1	1A	R302	A1–0	5A	A1	2A	R418	A1–4	3D	A1	2B
C502	A1–5	5D	A1	1B	J602	A1–6	6C	A1	2C	R118	A1–1	4B	A1	2A	R303	A1–0	4B	A1	2A	R419	A1–4	3D	A1	2B
C507	A1–5	5B	A1	1B	J603	A1–6	1C	A1	1C	R119	A1–1	5B	A1	2A	R304	A1–0	5D	A1	2A	R420	A1–4	3D	A1	2B
C508	A1–5	5B	A1	1B	J605	A1–6	1D	A1	1A	R120	A1–1	2A	A1	2A	R305	A1–0	5B	A1	2A	R421	A1–4	3D	A1	2B
C509	A1–5	3C	A1	1B	J606	A1–6	1D	A1	1A	R123	A1–1	2D	A1	2A	R307	A1–0	5C	A1	2A	R422	A1–4	3D	A1	2B
C511	A1–5	5B	A1	1B	J607	A1–6	1D	A1	2A	R124	A1–1	4D	A1	2A	R308	A1–0	4D	A1	2A					

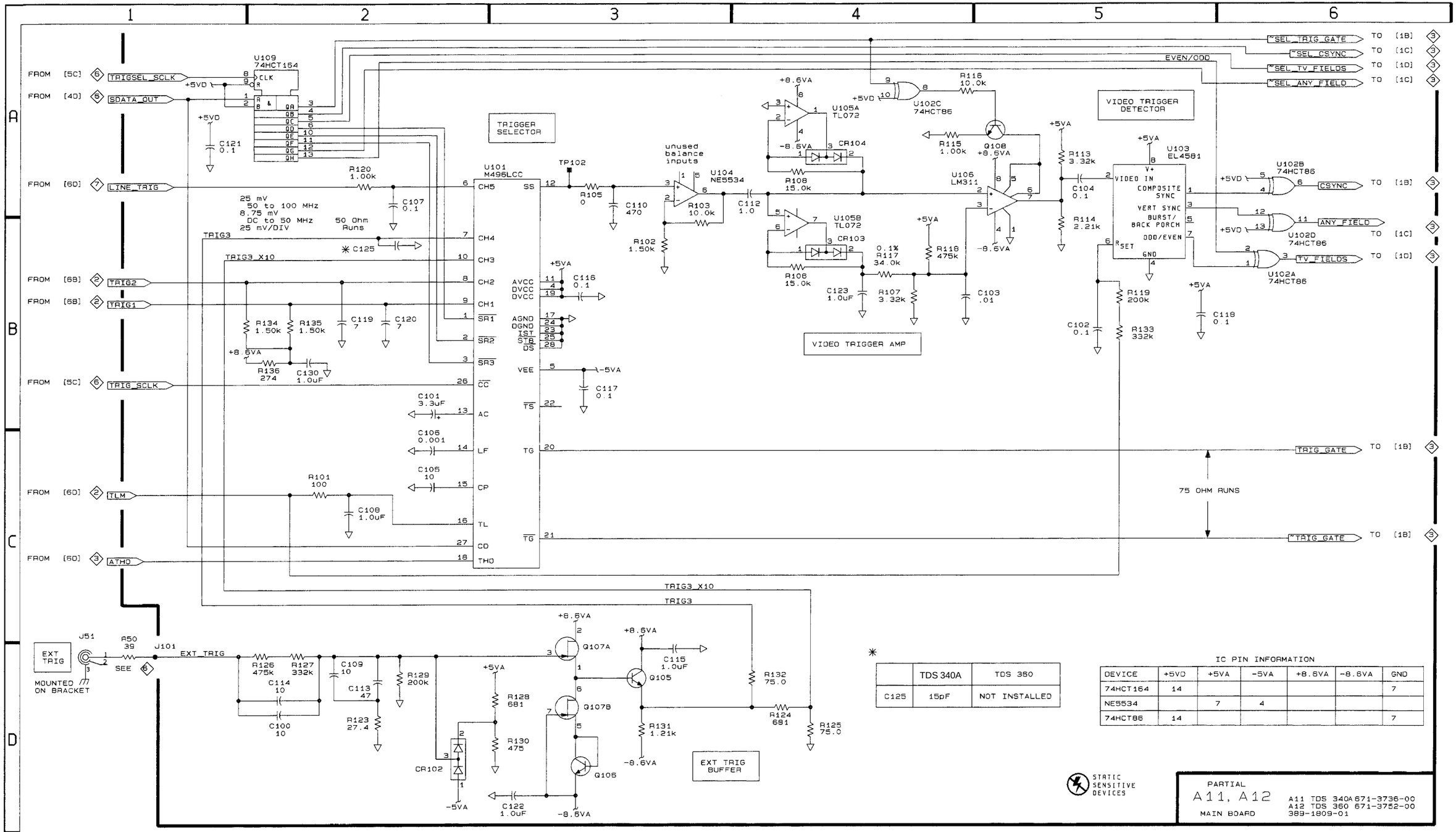
Figure 9–9: A11, A12 component locator (TDS 340A, TDS 360)

A11, A12 Main component locator (TDS 340A, TDS 360) (cont.)

CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION
R423	A1–4	4B	A1	2B	R558	A1–5	5C	A1	1B	R653	A1–6	1B	A1	1C	U102C	A1–1	5C	A1	2A	U550	A1–5	5B	A1	1B
R424	A1–4	5C	A1	2B	R559	A1–5	5B	A1	1B	R700	A1–7	5B	A1	2A	U102D	A1–1	6C	A1	2A	U560	A1–5	4A	A1	1B
R425	A1–4	5C	A1	2B	R561	A1–5	4A	A1	1B	R701	A1–7	3D	A1	1C	U103	A1–1	5A	A1	2A	U570	A1–5	3C	A1	2B
R500	A1–5	4D	A1	2B	R563	A1–5	4A	A1	1B	R702	A1–7	2D	A1	1C	U104	A1–1	3A	A1	2A	U580	A1–5	5D	A1	2B
R502	A1–5	4D	A1	1B	R565	A1–5	5D	A1	1B	R703	A1–7	3D	A1	1C	U105A	A1–1	4A	A1	2A	U590	A1–5	2A	A1	1B
R503	A1–5	5B	A1	1B	R566	A1–5	5D	A1	1B	R704	A1–7	3D	A1	1C	U105B	A1–1	4B	A1	2A	U601	A1–6	2A	A1	2C
R504	A1–5	4B	A1	1B	R567	A1–5	5D	A1	1B	R705	A1–7	2D	A1	1C	U106	A1–1	5A	A1	2A	U602	A1–6	3A	A1	2C
R507	A1–5	3D	A1	1B	R572	A1–5	3D	A1	1B	R706	A1–7	3D	A1	1C	U109	A1–1	2A	A1	2A	U603	A1–6	4A	A1	2C
R508	A1–5	3D	A1	1B	R573	A1–5	3D	A1	1B	R707	A1–7	2A	A1	1C	U201	A1–2	4B	A1	1B	U604	A1–6	4C	A1	2A
R509	A1–5	3D	A1	1B	R582	A1–5	4D	A1	1B	R708	A1–7	5C	A1	1C	U202	A1–2	4C	A1	1B	U605	A1–6	6A	A1	2C
R510	A1–5	3D	A1	1B	R585	A1–5	5B	A1	1B	R709	A1–7	5C	A1	1C	U203	A1–2	3C	A1	1B	U606	A1–6	2D	A1	1C
R511	A1–5	4D	A1	1B	R586	A1–5	4B	A1	1B	R710	A1–7	4D	A1	1C	U204	A1–2	5A	A1	1B	U607	A1–6	5A	A1	2C
R512	A1–5	4B	A1	1B	R587	A1–5	4B	A1	1B	R711	A1–7	4D	A1	1C	U207	A1–2	4A	A1	1B	U701	A1–7	2A	A1	1C
R514	A1–5	4A	A1	1B	R588	A1–5	5B	A1	1B	R712	A1–7	5D	A1	1C	U208A	A1–2	3C	A1	1B	U702A	A1–7	4A	A1	1C
R516	A1–5	6A	A1	1B	R590	A1–5	2C	A1	1B	R713	A1–7	5D	A1	1C	U208B	A1–2	5C	A1	1B	U702B	A1–7	5A	A1	1C
R521	A1–5	2D	A1	1B	R600	A1–6	4A	A1	2C	R714	A1–7	5D	A1	1C	U301A	A1–3	4B	A1	2A	U702C	A1–7	4A	A1	1C
R523	A1–5	3B	A1	1B	R601	A1–6	3D	A1	1B						U301B	A1–3	6C	A1	2A	U702D	A1–7	5A	A1	1C
R525	A1–5	1C	A1	1B	R602	A1–6	2B	A1	2C	TP102	A1–1	3A	A1	1A	U303	A1–3	5C	A1	2A	U703A	A1–7	4A	A1	1C
R526	A1–5	1C	A1	1B	R613	A1–6	5C	A1	1C	TP301	A1–3	1A	A1	2B	U304A	A1–3	6B	A1	2A	U703B	A1–7	4B	A1	1C
R527	A1–5	1C	A1	1B	R614	A1–6	5C	A1	1C	TP302	A1–3	2B	A1	2B	U304B	A1–3	5D	A1	2A	U703C	A1–7	5B	A1	1C
R528	A1–5	1C	A1	1B	R636A	A1–6	1B	A1	1C	TP303	A1–3	1C	A1	2B	U304C	A1–3	6D	A1	2A	U703D	A1–7	4D	A1	1C
R529	A1–5	1C	A1	1B	R636B	A1–6	4C	A1	1C	TP306	A1–3	1C	A1	2A	U304D	A1–3	6D	A1	2A	U704	A1–7	6A	A1	1C
R530	A1–5	2C	A1	1B	R637A	A1–6	1A	A1	1C	TP307	A1–3	1D	A1	2A	U307	A1–3	2C	A1	2A	U706	A1–7	4B	A1	1C
R534	A1–5	2A	A1	1B	R637B	A1–6	1A	A1	1C	TP308	A1–3	4A	A1	2B	U308A	A1–3	3D	A1	2A	U708C	A1–6	2A	A1	1C
R535	A1–5	1A	A1	1B	R638	A1–6	1D	A1	1C	TP309	A1–3	3B	A1	2B	U308B	A1–3	3B	A1	2A	U708A	A1–7	4C	A1	1C
R537	A1–5	1A	A1	1B	R640	A1–6	6C	A1	2C	TP311	A1–3	3C	A1	2B	U309A	A1–3	3A	A1	2B	U708B	A1–7	4C	A1	1C
R538	A1–5	1B	A1	1B	R641	A1–6	1D	A1	1A	TP312	A1–3	5C	A1	2A	U309B	A1–3	4A	A1	2B	U708D	A1–7	4D	A1	1C
R539	A1–5	1B	A1	1B	R642	A1–6	1D	A1	1A	TP313	A1–3	6B	A1	2A	U401	A1–4	4A	A1	2B	U709	A1–7	4D	A1	1C
R540	A1–5	4C	A1	1B	R643	A1–6	1D	A1	2A	TP410	A1–4	3B	A1	1B	U402	A1–4	5C	A1	2B					
R542	A1–5	4B	A1	1B	R644	A1–6	6D	A1	1C	TP593	A1–5	2B	A1	1B	U403	A1–4	3C	A1	2B	VR301	A1–3	4C	A1	2A
R544	A1–5	5C	A1	1B	R645	A1–6	3C	A1	1C	TP601	A1–6	2D	A1	1C	U404A	A1–4	2B	A1	2B	VR302	A1–3	5C	A1	2A
R545	A1–5	5B	A1	1B	R646	A1–6	5C	A1	1C	TP602	A1–6	2D	A1	1C	U404B	A1–4	2C	A1	2B					
R552	A1–5	6B	A1	2B	R647	A1–6	1A	A1	1C						U405	A1–4	2B	A1	2B	Y401	A1–4	2A	A1	1B
R553	A1–5	6B	A1	2B	R650	A1–6	2D	A1	1C	U101	A1–1	2A	A1	2A	U510	A1–5	2C	A1	1B	Y402	A1–4	3B	A1	2B
R556	A1–5	6B	A1	1B	R651	A1–6	2D	A1	1C	U102A	A1–1	6B	A1	2A	U520A	A1–5	2D	A1	1B	Y701	A1–7	2A	A1	1C
R557	A1–5	5C	A1	1B	R652	A1–6	2D	A1	2B	U102B	A1–1	6A	A1	2A	U520B	A1–5	3D	A1	1B					

Figure 9–10: A11, A12 component locator (TDS 340A, TDS 360) (cont.)


ATTENUATORS
ATTENUATORS
PREAMPS
BUFFER
DACULATOR
2
CH1+
CH1-
CM1
CH2+
CH2-
CM2
+2.5VR
RANGE
TRIG1
TRIG2
VIDEO_LEVEL
INTENS_LEVEL
CH1_SCLK
CH2_SCLK
VERT_SCLK
DAC_SCLK
~DAC_LD
DAC_DIAG
SDATA_OUT
TLM
+5VA
+5VD
GND
-5VA
+8.6VA
-8.6VA
SAMPLER
SAMPLER
GAIN/OFFSET DACS
5
DAC_DATA[0..15]
SAMP_ADDR[0..3]
SAMP_DATA[0..3]
~SAMP_CS
~SAMP_WE
~SAMP_OE
START/STOP
READOUT_CLK
PHASE_CLK
ACQ_CLK
ACQ_INIT
ANA_DATA
FISO_SPD
TIMEBASE
TIMEBASE CONTROLLER
ACQUISITION MEMORY
CLOCK GENERATOR
4
A[0..19]
D[0..15]
~RESET
R/~W
~DSACK1
PROC_CLK
~TBC_CS
~TBC_IRQ
MAT
~MAT
SYNTRIGA
~SYNTRIGA
COUNTSTOP
EPTHO
HOLDOFF
DISPLAY & POWER DIST
DISPLAY CONTROLLER
DISPLAY & SYSTEM MEMORY
POWER CONNECTOR
7
PCLKOUT
SIZO
~OS
~DISP_CS
~DISP_IRQ
ON/OFF
PROCESSOR
ANALOG TRIGGER
TRIGGER INPUT
TV TRIGGER
TRIGGER SELECTOR
1
LINE_TRIG
ATHO
TRIG_GATE
~TRIG_GATE
CSYNC
TV_FIELDS
ANY_FIELD
~SEL_TRIG_GATE
~SEL_CSYNC
~SEL_TV_FIELDS
~SEL_ANY_FIELD
TRIG_SCLK
TRIGSEL_SCLK
DIGITAL TRIGGER
TRIGGER LOGIC
TIME INTERPOLATOR
3
CPU
EPROM
NV MEMORY
6
E1
BNCBRKT
MH1
MH2
MH3
MH4
MTG_HOLE
FD1
FD2
FD3
FID_AND
GND
PARTIAL
A11, A12
MAIN BOARD
A11 TDS 340A 671-3736-00
A12 TDS 360 671-3752-00
389-1809-01



*

	TDS 340A	TDS 360
C125	15pF	NOT INSTALLED

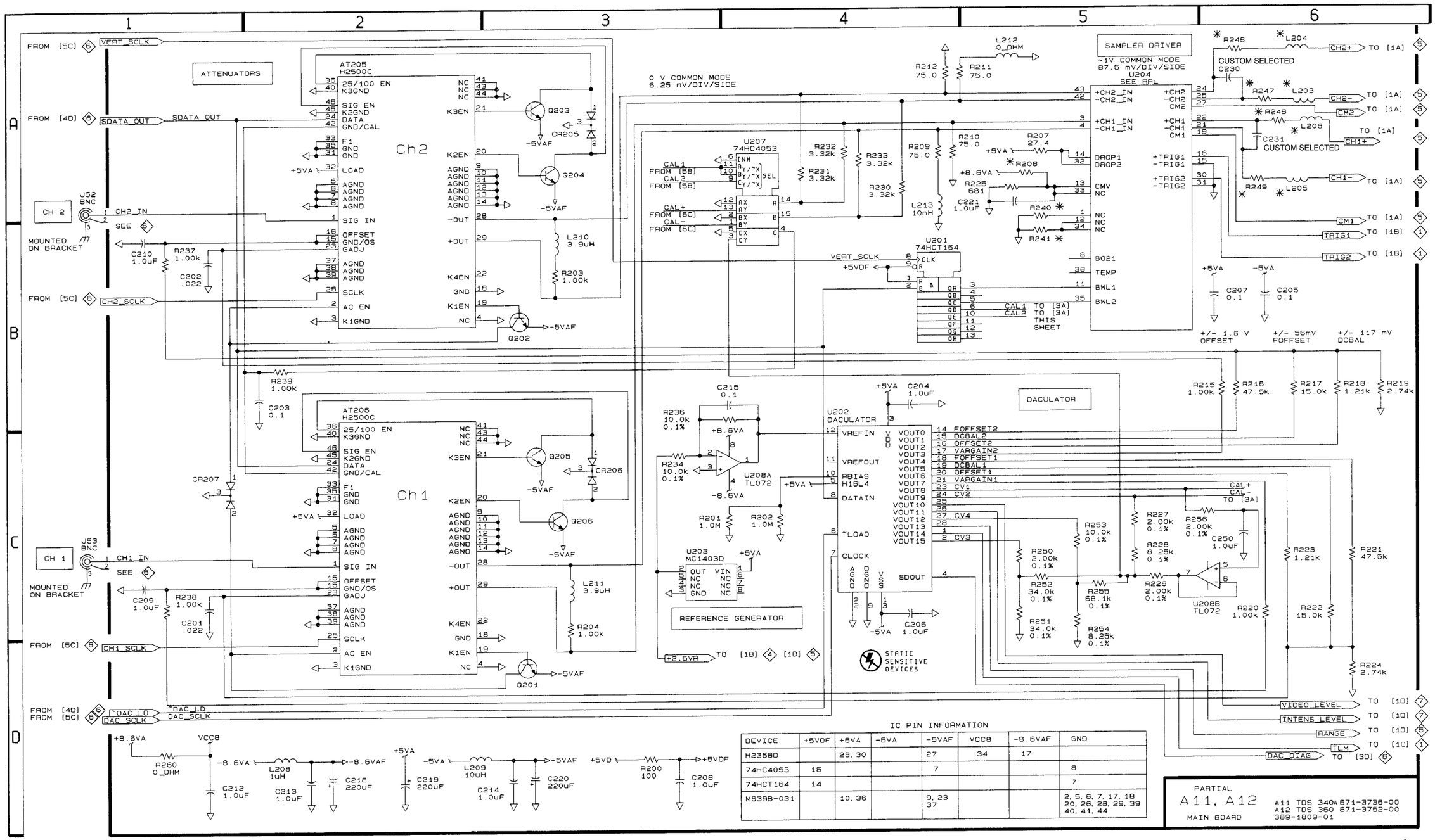
IC PIN INFORMATION

DEVICE	+5VD	+5VA	-5VA	+8.6VA	-8.6VA	GND
74HCT164	14					7
NE5534		7	4			
74HCT86	14					7

STATIC SENSITIVE DEVICES

PARTIAL
A11, A12
MAIN BOARD

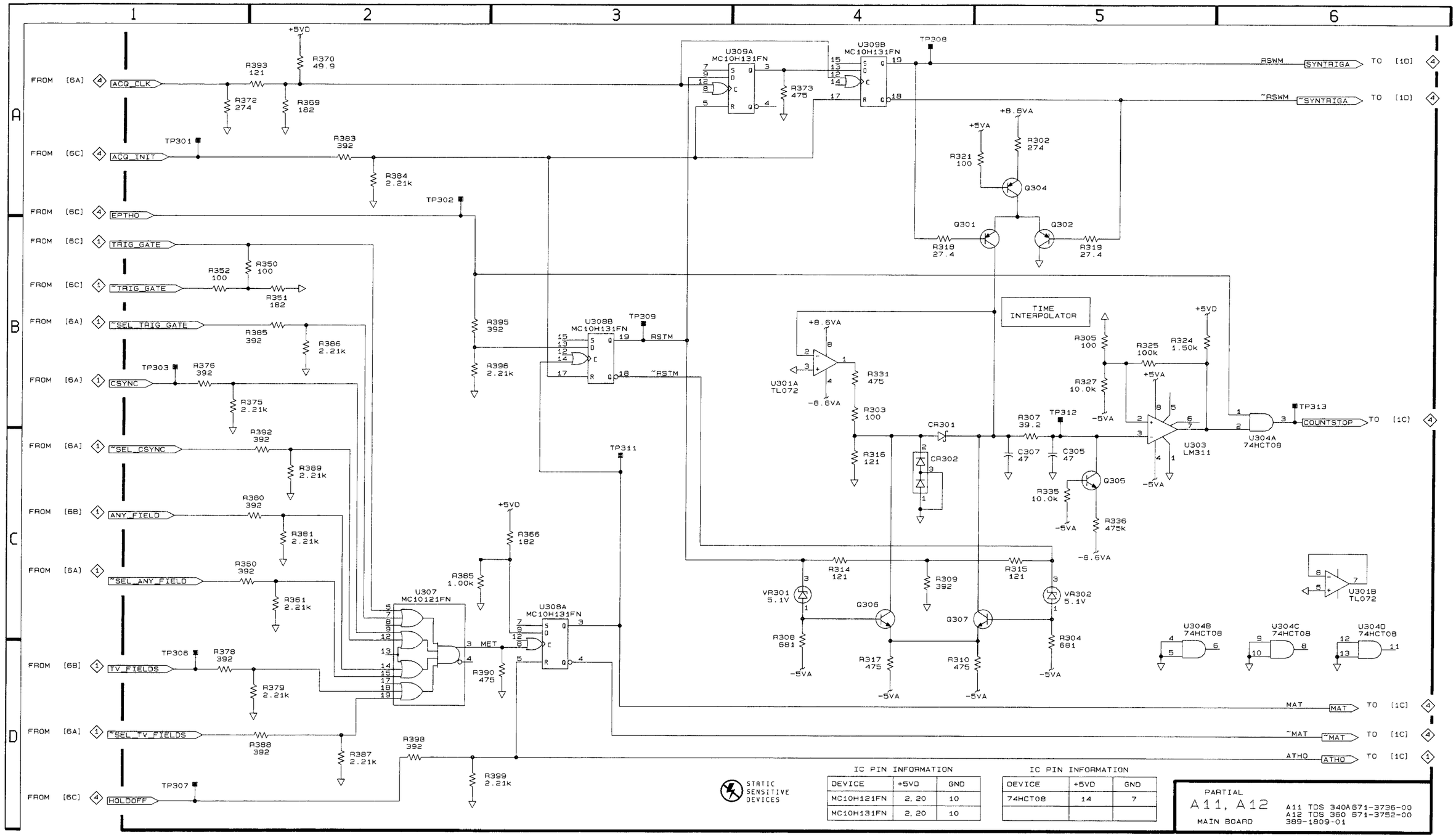
A11 TDS 340A 671-3736-00
A12 TDS 360 671-3752-00
389-1809-01

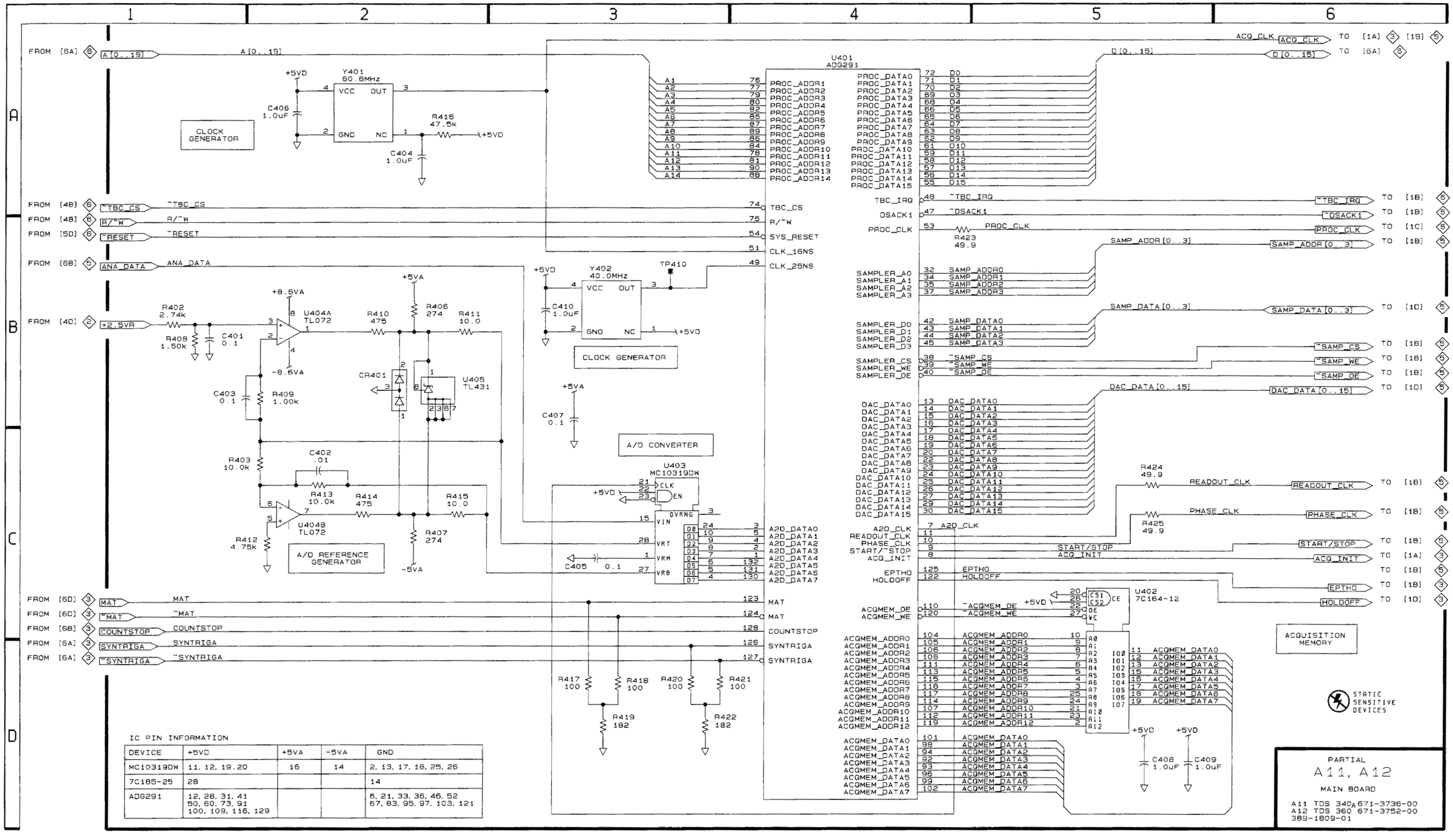


DEVICE	+5VDF	+5VA	-5VA	-5VAF	VCC8	-8.6VAF	GND
H2358D		25, 30		27	34	17	
74HC4053	16			7			8
74HCT164	14						7
M8398-031		10, 36		9, 23 37			2, 5, 6, 7, 17, 18 20, 26, 28, 29, 39 40, 41, 44

	TDS 340A	TDS 360
L203	270nH	27nH
L204	270nH	27nH
L205	270nH	27nH
L206	270nH	27nH
R208	2.21k	2.00k

	TDS 340A	TDS 360
R240	NOT INSTALLED	10.0k
R241	NOT INSTALLED	3.32k
R246	221	10.0
R247	221	10.0
R248	221	10.0
R249	221	10.0


1
2
3
4
5
6
A
B
C
D
+5VD
R370 49.9
R393 121
R372 274
R369 182
FROM [6A] ACQ_CLK
TP301
FROM [6C] ACQ_INIT
R383 392
R384 2.21k
TP302
FROM [6C] EPTHO
FROM [6C] TRIG_GATE
R350 100
R352 100
FROM [6C] ~TRIG_GATE
R351 182
FROM [6A] ~SEL_TRIG_GATE
R385 392
R386 2.21k
TP303
R376 392
FROM [6A] CSYNC
R375 2.21k
R392 392
FROM [6A] ~SEL_CSYNC
R389 2.21k
R380 392
FROM [6B] ANY_FIELD
R381 2.21k
R360 392
FROM [6A] ~SEL_ANY_FIELD
R361 2.21k
TP306
R378 392
FROM [6B] TV_FIELDS
R379 2.21k
FROM [6A] ~SEL_TV_FIELDS
R388 392
R387 2.21k
TP307
FROM [6C] HOLDOFF
U309A MC10H131FN
U309B MC10H131FN
R373 475
TP308
RSWM
SYNTRIGA
TO [1D]
~RSWM
~SYNTRIGA
TO [1D]
+8.6VA
+5VA
R321 100
R302 274
Q304
Q301
Q302
R318 27.4
R319 27.4
R395 392
R396 2.21k
U308B MC10H131FN
TP309
RSTM
~RSTM
TP311
U307 MC10121FN
U308A MC10H131FN
MET
R390 475
+5VD
R366 182
R365 1.00k
TIME INTERPOLATOR
+8.6VA
U301A TL072
R331 475
R303 100
-8.6VA
R305 100
R325 100k
R324 1.50k
R327 10.0k
+5VA
-5VA
TP312
R307 39.2
C307 47
C305 47
CR301
CR302
Q305
R335 10.0k
R336 475k
U303 LM311
U304A 74HCT08
TP313
COUNTSTOP
TO [1C]
R316 121
R314 121
R315 121
R309 392
VR301 5.1V
VR302 5.1V
Q306
Q307
R308 681
R317 475
R310 475
R304 681
U301B TL072
U304B 74HCT08
U304C 74HCT08
U304D 74HCT08
MAT
~MAT
ATHO
TO [1C]
STATIC SENSITIVE DEVICES
IC PIN INFORMATION
DEVICE | +5VD | GND
MC10H121FN | 2, 20 | 10
MC10H131FN | 2, 20 | 10
IC PIN INFORMATION
DEVICE | +5VD | GND
74HCT08 | 14 | 7
PARTIAL
A11, A12
MAIN BOARD
A11 TDS 340A 671-3736-00
A12 TDS 360 671-3752-00
389-1809-01



IC PIN INFORMATION

DEVICE	+5VD	+5VA	-5VA	GND
MC10319DW	11, 12, 19, 20	16	14	2, 13, 17, 18, 25, 26
7C185-25	28			14
ADG291	12, 28, 31, 41 50, 60, 73, 91 100, 109, 116, 129			6, 21, 33, 36, 46, 52 67, 83, 95, 97, 103, 121

SAMPLER

U590
ADG278

FROM [6A] CH2-
FROM [6A] CM2
FROM [6A] CH2+
FROM [6A] CH1-
FROM [6B] CM1
FROM [6A] CH1+
FROM [6A] ACQ_CLK
FROM [6C] PHASE_CLK
FROM [6C] ACQ_INIT
FROM [6C] START/STOP
FROM [6C] READOUT_CLK
FROM [6B] ~SAMP_OE
FROM [6B] ~SAMP_WE
FROM [6B] ~SAMP_CS
FROM [6B] SAMP_ADDR[0..3]

C531 .022
R534 2.21k
C530 .022
R535 392
C532 0.1
R536 1.00k
R537 392
C534 0.1
R539 1.00k
C533 0.1
TP593

AOUTVDD
AINP_CH2
AREF_CH2
AINM_CH2
AINP_CH1
AREF_CH1
AINM_CH1
SPDBIAS1
SPDBIAS2
SPDBIAS3
SAT
P2V
XCK
PHINIT
ACQ_INIT
START/STOP
READCLOCK
OE
WE
CS
ROWVDD
A3
A2
A1
A0
DIODEIN
SPEEDDIAG
AOUTP
AOUTM
VDD
VDD
VDD
VDDL
VSS
VSS
VSS
VSS
D3
D2
D1
D0

SAMP_ADDR3
SAMP_ADDR2
SAMP_ADDR1
SAMP_ADDR0
SAMP_DATA3
SAMP_DATA2
SAMP_DATA1
SAMP_DATA0

C593 0.1
C595 0.1
C594 0.1
C535 0.1
CR542
R523 1.00k
CR543
R590 392
C592 0.1
-5VA
C509 1.0uF

+8.6VA
R551 3.92k
C562 0.1
R563 1.00k
U560 LM311
-5VA
+5VA
+5VD
R516 10.0k
FISO_SPD
TO [1C]

+5VA
Q505
R588 3.32k
-8.6VA
ANA_DATA
TO [1B]
CR501
R514 2.21k
R512 2.21k
+8.5VA
Q506
R504 681
R503 681
Q509
Q510
C508 0.1
R587 3.32k
C512 2200
R586 475
R542 47.5k
Q501A MAT04
Q501D MAT04
C513 2200
R585 475
R545 47.5k
R559 475
C507 0.1
U550 CLC400
R556 27.4
C511 0.1
R558 475
R544 1.50k
R557 1.50k
SAMPLER CORRECTION AMPLIFIER
CR551
R552 4.75k
CR553
R553 4.75k
CR554

+2.5VA
Q507
R540 619
Q501B MAT04
Q501C MAT04

R525 0.25
R526 0.25
R527 27.4
R528 10.0k
R529 2.74k
+8.6VA
U510 OP-07
-8.6VA
R530 10.0k
CR520
C521 .01
HEATER CONTROL

U570
DAC08
DAC_15
DAC_14
DAC_13
DAC_12
DAC_11
DAC_10
DAC_9
DAC_8
B1(MSB)
B2
B3
B4
B5
B6
B7
B8(LSB)
IOUT
GAIN DAC

C571 .01
VLC
COMP
VREF(+)
VREF(-)
R572 1.00k
R573 1.00k
CR525
Q508
R500 2.21k
R509 10.0k
R510 10.0k
R502 4.75k
U520B TL072
R511 681
R507 10.0k
R508 10.0k

FROM [6B] SAMP_DATA[0..3]
FROM [6D] RANGE
R521 1.00k
U520A TL072
C522 .022
FROM [6B] DAC_DATA[0..15]
DAC_[0..15]
FROM [4D] +2.5VA

OFFSET DAC
U580
DAC08
DAC_7
DAC_6
DAC_5
DAC_4
DAC_3
DAC_2
DAC_1
DAC_0
C581 .01
R582 2.21k
R556 100
R567 100
R555 200
C502 1.0uF
C515 1.0uF

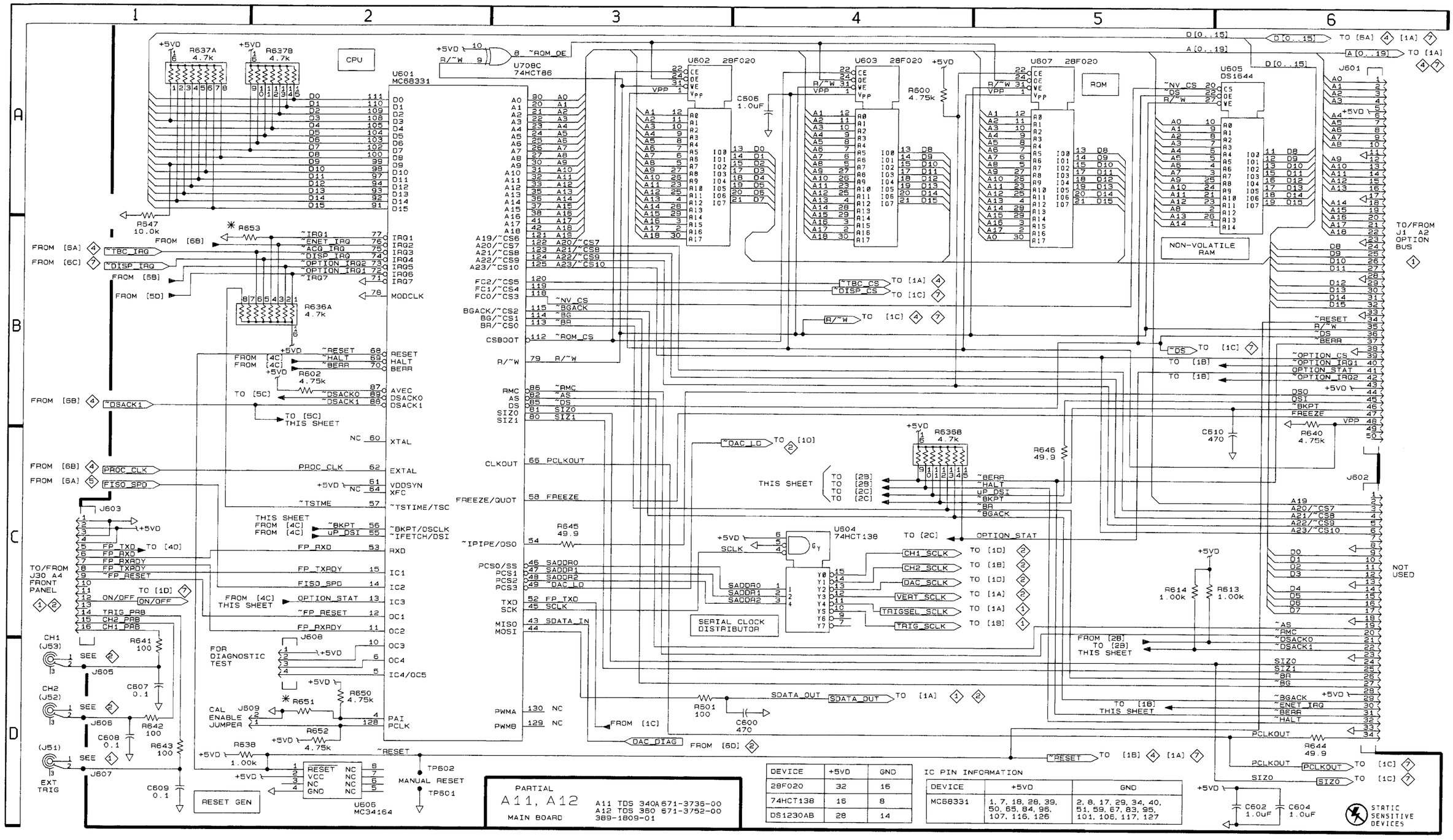
STATIC SENSITIVE DEVICES

IC PIN INFORMATION

DEVICE	+8.6VA	-8.6VA
DAC08	1	7

PARTIAL
A11, A12
MAIN BOARD

A11 TDS 340A 671-3736-00
A12 TDS 360 671-3752-00
389-1809-01



PARTIAL

A11, A12

MAIN BOARD

A11 TDS 340A 671-3735-00
A12 TDS 360 671-3752-00
389-1809-01

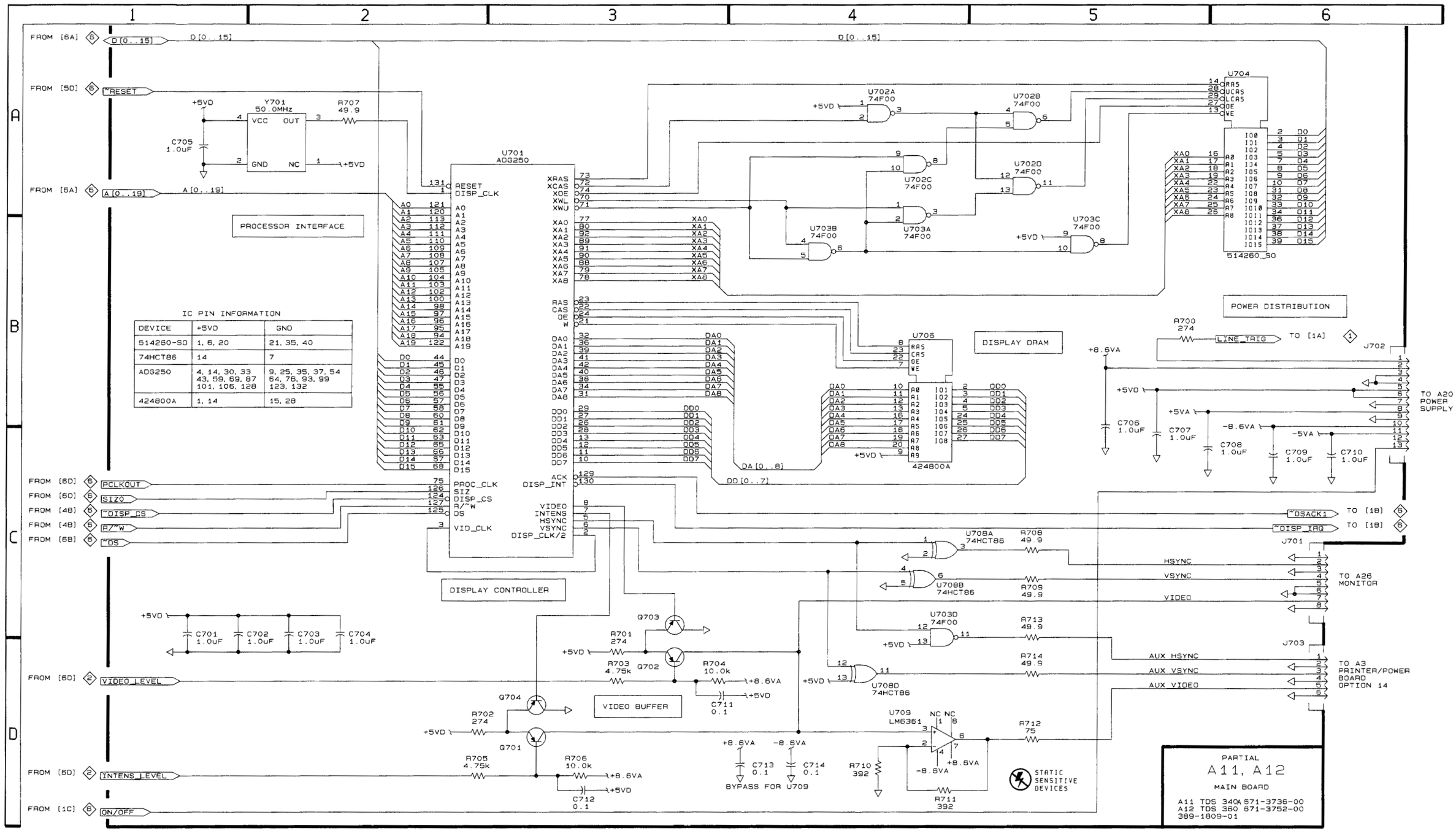
DEVICE	+5VD	GND
28F020	32	16
74HCT138	16	8
DS1230AB	28	14

IC PIN INFORMATION

DEVICE	+5VD	GND
MC68331	1, 7, 18, 28, 39, 50, 65, 84, 96, 107, 116, 126	2, 8, 17, 29, 34, 40, 51, 59, 67, 83, 95, 101, 106, 117, 127

*

	TDS 340A	TDS 360
R651	0 OHM	NOT INSTALLED
R653	0 OHM	NOT INSTALLED


PROCESSOR INTERFACE
DISPLAY CONTROLLER
VIDEO BUFFER
DISPLAY DRAM
POWER DISTRIBUTION
IC PIN INFORMATION
DEVICE | +5VD | GND
514260-SO | 1, 6, 20 | 21, 35, 40
74HCT86 | 14 | 7
ADG250 | 4, 14, 30, 33 43, 59, 69, 87 101, 106, 128 | 9, 25, 35, 37, 54 64, 76, 93, 99 123, 132
424800A | 1, 14 | 15, 28
FROM [6A] D[0..15]
FROM [5D] ~RESET
FROM [6A] A[0..19]
FROM [6D] PCLKOUT
FROM [6D] SIZO
FROM [4B] ~DISP_CS
FROM [4B] R/~W
FROM [6B] ~DS
FROM [6D] VIDEO_LEVEL
FROM [5D] INTENS_LEVEL
FROM [1C] ON/OFF
Y701 50.0MHz
R707 49.9
C705 1.0uF
U701 ADG250
U702A 74F00
U702B 74F00
U702C 74F00
U702D 74F00
U703A 74F00
U703B 74F00
U703C 74F00
U703D 74F00
U704 514260_SO
U705 424800A
U706
U708A 74HCT86
U708B 74HCT86
U708D 74HCT86
U709 LM6361
R700 274
LINE_TAIG
TO [1A]
J702
TO A20 POWER SUPPLY
C706 1.0uF
C707 1.0uF
C708 1.0uF
C709 1.0uF
C710 1.0uF
~DSACK1
~DISP_IRQ
TO [1B]
J701
HSYNC
VSYNC
VIDEO
TO A26 MONITOR
J703
AUX HSYNC
AUX VSYNC
AUX VIDEO
TO A3 PRINTER/POWER BOARD OPTION 14
C701 1.0uF
C702 1.0uF
C703 1.0uF
C704 1.0uF
R701 274
R702 274
R703 4.75k
R704 10.0k
R705 4.75k
R706 10.0k
R708 49.9
R709 49.9
R710 392
R711 392
R712 75
R713 49.9
R714 49.9
Q701
Q702
Q703
Q704
C711 0.1
C712 0.1
C713 0.1
C714 0.1
BYPASS FOR U709
STATIC SENSITIVE DEVICES
PARTIAL
A11, A12
MAIN BOARD
A11 TDS 340A 671-3736-00
A12 TDS 360 671-3752-00
389-1809-01

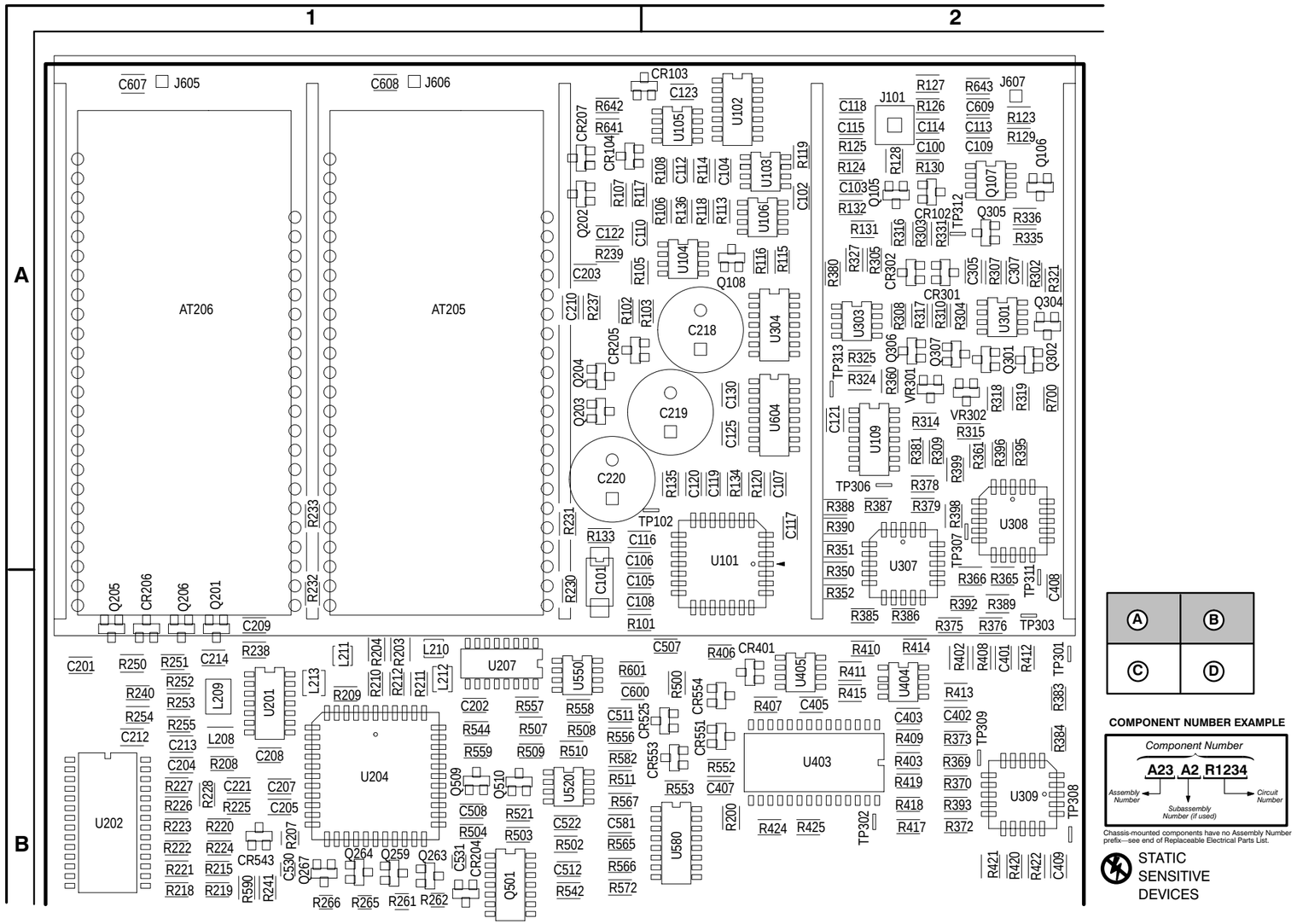


Figure 9–11: A13 Main board (TDS 380) (section A, B)

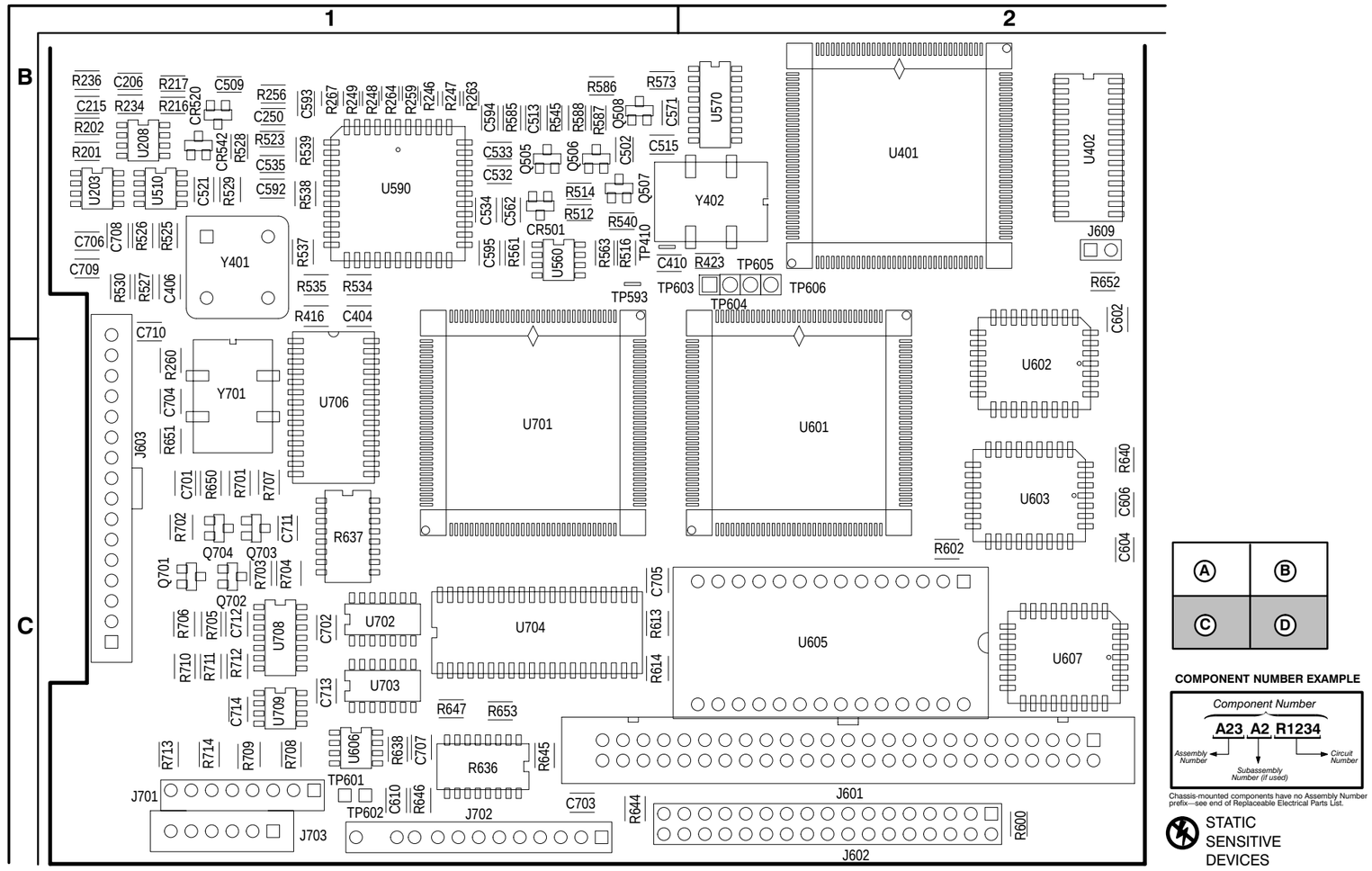


Figure 9–12: A13 Main board (TDS 380) (section C, D)

A13 Main component locator (TDS 380)

CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION	CIRCUIT NUMBER	BOARD LOCATION	SCHEM LOCATION
AT205	A1	2A2	C512	B1	5B4	J605	A1	6B1	R124	A2	1D3	R261	B1	2A6	R407	B2	4C2	R585	B1	5A5	U102	A2	1B6
AT206	A1	2C2	C513	B1	5A5	J606	A1	6B1	R125	A2	1D3	R262	B1	2A6	R408	B2	4B1	R586	B1	5B4	U103	A2	1B5
C100	A2	1D1	C515	B1	5D6	J607	A2	6B1	R126	A2	1D1	R263	B1	2A6	R409	B2	4C1	R587	B1	5B4	U104	A1	1B3
C101	A1	1C2	C521	B1	5C2	J609	B2	6B2	R127	A2	1D1	R264	B1	2A6	R410	B2	4B2	R588	B1	5A5	U105	A1	1B4
C102	A2	1B5	C522	B1	5D2	J701	C1	7C6	R128	A2	1D2	R265	B1	2B6	R411	B2	4B2	R590	B1	5B2	U106	A2	1B5
C103	A2	1C5	C530	B1	5A1	J702	C1	7B6	R129	A2	1D2	R266	B1	2B6	R412	B2	4C1	R600	C2	6A4	U109	A2	1A1
C104	A2	1B5	C531	B1	5A1	J703	C1	7D6	R130	A2	1D2	R267	B1	2B6	R413	B2	4C1	R601	B1	6B1	U201	B1	2B4
C105	A1	1C2	C532	B1	5A2	L208	B1	2D4	R131	A2	1D3	R302	A2	3A5	R414	B2	4C2	R602	C2	6B3	U202	B1	2C4
C106	A1	1C2	C533	B1	5A1	L209	B1	2D4	R132	A2	1D3	R303	A2	3C3	R415	B2	4C2	R613	C1	6C6	U203	B1	2C3
C107	A2	1B2	C534	B1	5A1	L210	B1	2B2	R133	A1	1C5	R304	A2	3D4	R416	B1	4B3	R614	C1	6C6	U204	B1	2A5
C108	A1	1C1	C535	B1	5A3	L211	B1	2D2	R134	A2	1B1	R305	A2	3B4	R417	B2	4D2	R636	C1	6B5	U207	B1	2A3
C109	A2	1D2	C562	B1	5A4	L212	B1	2A5	R135	A1	1B1	R307	A2	3C4	R418	B2	4D2	R637	C1	6B1	U208	B1	2C3
C110	A1	1B3	C571	B1	5C3	L213	B1	2A4	R136	A1	1C1	R308	A2	3D3	R419	B2	4D2	R638	C1	6B4	U208	B1	2D6
C112	A1	1B4	C581	B1	5D4	Q105	A2	1D3	R200	B2	2D5	R309	A2	3C4	R420	B2	4D3	R640	C2	6C6	U301	A2	3B3
C113	A2	1D2	C592	B1	5B2	Q106	A2	1D3	R201	B1	2D3	R310	A2	3D4	R421	B2	4D3	R641	A1	6A1	U301	A2	3C6
C114	A2	1D1	C593	B1	5A3	Q107	A2	1D3	R202	B1	2D3	R314	A2	3C3	R422	B2	4D3	R642	A1	6B1	U303	A2	3B5
C115	A2	1D3	C594	B1	5A3	Q108	A2	1B5	R203	B1	2B2	R315	A2	3C4	R423	B2	4B5	R643	A2	6A1	U304	A2	3C5
C116	A1	1B3	C595	B1	5A3	Q201	B1	2D2	R204	B1	2D2	R316	A2	3C3	R424	B2	4C5	R644	C1	6D6	U304	A2	3D5
C117	A2	1C3	C600	B1	6B1	Q202	A1	2B2	R207	B1	2A5	R317	A2	3D3	R425	B2	4C5	R645	C1	6C3	U304	A2	3D6
C118	A2	1B6	C602	B2	6D1	Q203	A1	2A2	R208	B1	2A4	R318	A2	3B4	R500	B1	5C3	R646	C1	6C5	U307	A2	3C2
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C120	A2	1B1	C606	C2	6A4	Q205	B1	2C2	R210	B1	2A5	R321	A2	3A5	R503	B1	5A4	R650	C1	6A1	U308	A2	3C2
C121	A2	1A1	C607	A1	6B1	Q206	B1	2C2	R211	B1	2A4	R324	A2	3B5	R504	B1	5A4	R651	C1	6A1	U309	B2	3A3
C122	A1	1D2	C608	A1	6B1	Q259	B1	2A6	R212	B1	2A4	R325	A2	3B5	R507	B1	5D3	R652	B2	6A1	U309	B2	3A4
C123	A1	1C4	C609	A2	6B1	Q263	B1	2A6	R215	B1	2C4	R327	A2	3B4	R508	B1	5D3	R653	C1	6C1	U401	B2	4A3
C125	A2	1C2	C610	C1	6C6	Q264	B1	2A6	R216	B1	2C5	R331	A2	3B3	R509	B1	5D3	R700	A2	7B6	U402	B2	4C5
C130	A2	1C1	C701	C1	7D1	Q267	B1	2B6	R217	B1	2C5	R335	A2	3C4	R510	B1	5D3	R701	C1	7C2	U403	B2	4C2
C201	B1	2D1	C702	C1	7D1	Q301	A2	3B5	R218	B1	2C5	R336	A2	3C4	R511	B1	5D4	R702	C1	7D2	U404	B2	4B1
C202	B1	2B1	C703	C1	7D1	Q302	A2	3B5	R219	B1	2C5	R350	A2	3B1	R512	B1	5A4	R703	C1	7C2	U404	B2	4C1
C203	A1	2C2	C704	C1	7D1	Q304	A2	3B5	R220	B1	2D6	R351	A2	3B1	R514	B1	5A4	R704	C1	7C3	U405	B2	4B2
C204	B1	2C4	C705	C1	7A1	Q305	A2	3C5	R221	B1	2D6	R352	A2	3B1	R516	B1	5A6	R705	C1	7C2	U510	B1	5C2
C205	B1	2B6	C706	B1	7C5	Q306	A2	3D4	R222	B1	2D6	R360	A2	3C1	R521	B1	5C1	R706	C1	7D2	U520	B1	5C2
C206	B1	2D3	C707	C1	7C5	Q307	A2	3D4	R223	B1	2C6	R361	A2	3C1	R523	B1	5A3	R707	C1	7A1	U520	B1	5D3
C207	B1	2B6	C708	B1	7C5	Q501	B1	5B4	R224	B1	2D6	R365	A2	3C2	R525	B1	5C1	R708	C1	7C4	U550	B1	5B6
C208	B1	2D5	C709	B1	7C6	Q501	B1	5B4	R225	B1	2A4	R366	A2	3C2	R526	B1	5C1	R709	C1	7C4	U560	B1	5A4
C209	B1	2D1	C710	B1	7C6	Q501	B1	5B5	R226	B1	2D6	R369	B2	3A1	R527	B1	5C1	R710	C1	7D3	U570	B1	5C3
C210	A1	2B1	C711	C1	7C3	Q505	B1	5A5	R227	B1	2C6	R370	B2	3A2	R528	B1	5C1	R711	C1	7D3	U580	B1	5C4
C212	B1	2D3	C712	C1	7D2	Q506	B1	5B4	R228	B1	2D6	R372	B2	3A1	R529	B1	5C1	R712	C1	7D3	U590	B1	5A3
C213	B1	2D4	C713	C1	7D2	Q507	B1	5B4	R230	A1	2A4	R373	B2	3A4	R530	B1	5C2	R713	C1	7C4	U601	C2	6A2
C214	B1	2D4	C714	C1	7D2	Q508	B1	5C4	R231	A1	2A3	R375	A2	3B1	R534	B1	5A2	R714	C1	7D4	U602	B2	6A3
C215	B1	2C3	CR102	A2	1D2	Q509	B1	5B4	R232	A1	2A4	R376	A2	3B1	R535	B1	5A1	TP102	A1	1B3	U603	C2	6A4
C218	A2	2D4	CR103	A1	1C4	Q510	B1	5B4	R233	A1	2A4	R378	A2	3D1	R537	B1	5A1	TP301	B2	3A1	U604	A2	6D2
C219	A1	2D4	CR104	A1	1B4	Q701	C1	7D2	R234	B1	2C3	R379	A2	3D1	R538	B1	5A1	TP302	B2	3A2	U605	C2	6A6
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C221	B1	2A4	CR205	A1	2A2	Q703	C1	7C3	R237	A1	2B1	R381	A2	3C1	R540	B1	5C4	TP306	A2	3C1	U607	C2	6A5
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C305	A2	3C4	CR207	A1	2C1	R101	A1	1C1	R239	A1	2C2	R384	B2	3A2	R544	B1	5C5	TP308	B2	3A4	U702	C1	7A4
C307	A2	3C4	CR301	A2	3C4	R102	A1	1B3	R240	B1	2A5	R385	A2	3B1	R545	B1	5B5	TP309	B2	3B3	U703	C1	7A3
C401	B2	4B1	CR302	A2	3C4	R103	A1	1B3	R241	B1	2B5	R386	A2	3B1	R552	B2	5B6	TP311	A2	3C3	U703	C1	7A4
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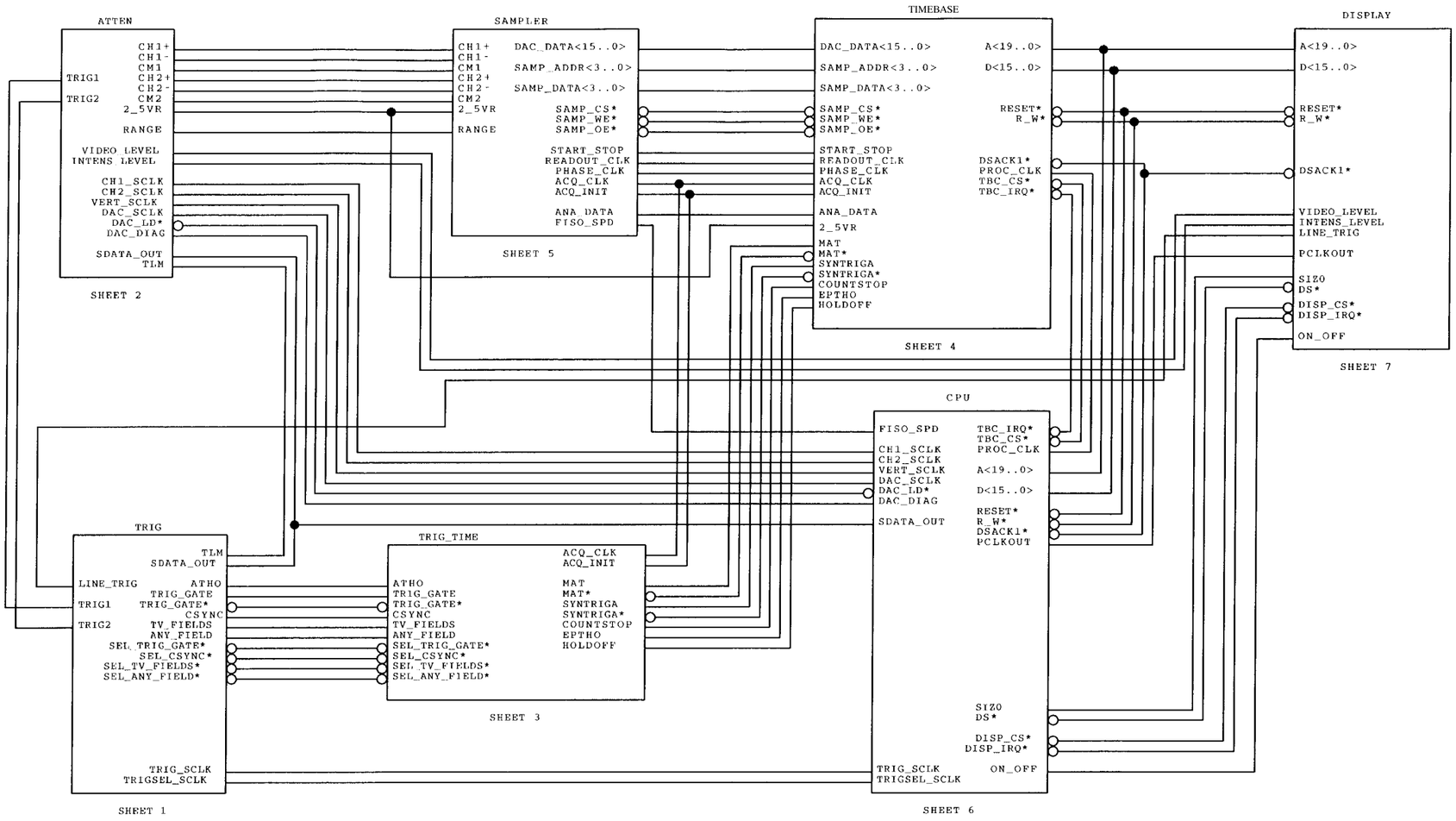
C404	B1	4B2	CR520	B1	5C2	R107	A1	1C4	R248	B1	2A6	R389	A2	3C1	R557	B1	5C5	TP410	B1	4B3	U704	C1	7A5
C405	B2	4C2	CR525	B1	5C3	R108	A1	1B4	R249	B1	2B6	R390	A2	3D2	R558	B1	5B5	TP593	B1	5B1	U706	C1	7B3
C406	B1	4B2	CR542	B1	5A3	R113	A2	1B5	R250	B1	2D5	R392	A2	3C1	R559	B1	5B5	TP601	C1	6C4	U708	C1	6A2
C407	B2	4C3	CR543	B1	5B2	R114	A2	1B5	R251	B1	2D5	R393	B2	3A1	R561	B1	5A4	TP602	C1	6C4	U708	C1	7C3
C408	A2	4D5	CR551	B2	5B6	R115	A2	1B5	R252	B1	2D5	R395	A2	3B2	R563	B1	5A4	TP603	B2	6A1	U708	C1	7D3
C409	B2	4D6	CR553	B1	5B6	R116	A2	1A5	R253	B1	2D5	R396	A2	3B2	R565	B1	5D5	TP604	B2	6A1	U709	C1	7D3
C410	B1	4B2	CR554	B2	5B6	R117	A1	1B4	R254	B1	2D5	R398	A2	3D2	R566	B1	5D5	TP605	B2	6A1	VR301	A2	3C3
C502	B1	5D6	J101	A2	1D1	R118	A2	1B4	R255	B1	2D5	R399	A2	3D2	R567	B1	5D5	TP606	B2	6A1	VR302	A2	3C4
C507	B1	5B5	J601	C2	6A6	R119	A2	1B5	R256	B1	2C6	R402	B2	4B1	R572	B1	5C2	U101	A2	1B2	Y401	B1	4B2
C508	B1	5B4	J602	C2	6C6	R120	A2	1B2	R259	B1	2A6	R403	B2	4C1	R573	B1	5C3	U102	A2	1A5	Y402	B1	4B3
C509	B1	5C2	J603	C1	6A1	R123	A2	1D2	R260	B1	2D3	R406	B2	4B2	R582	B1	5D4	U102	A2	1A6	Y701	C1	7A1
C511	B1	5B5																					

Figure 9–13: A13 Main component locator (TDS 380)



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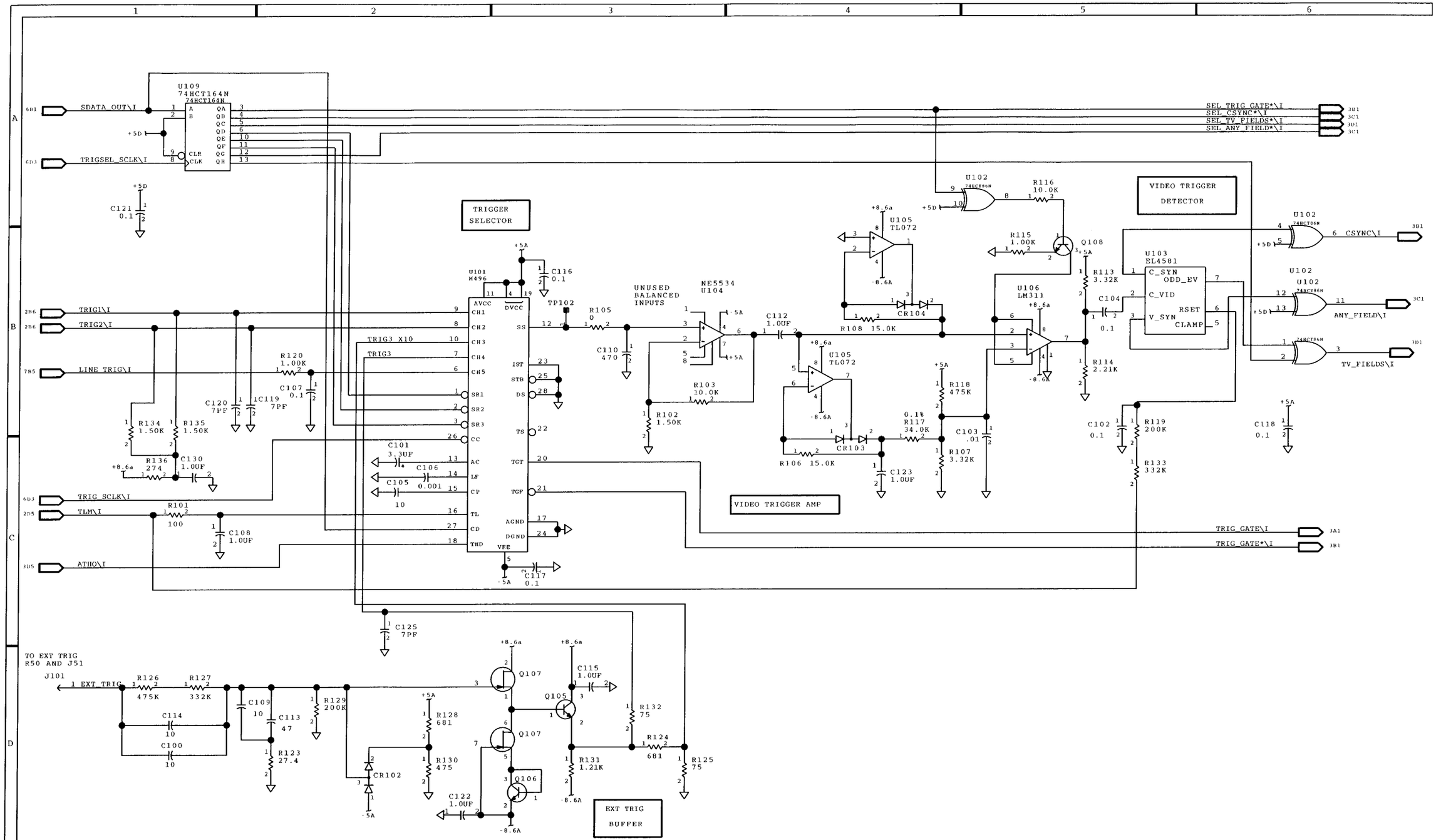
389–2154–00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+5D
C121 0.1
TRIGGER SELECTOR
U101 M496
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DVCC
CH1
CH2
CH3
CH4
CH5
SR1
SR2
SR3
CC
AC
LF
CP
TL
CD
THD
SS
1ST
STB
DS
TS
TGT
TGP
AGND
DGND
VEE
TP102
C116 0.1
C117 0.1
TRIG1\I
TRIG2\I
LINE TRIG\I
TRIG3 X10
TRIG3
R120 1.00K
C107 0.1
C120 7PF
C119 7PF
R134 1.50K
R135 1.50K
R136 274
C130 1.0UF
C101 3.3UF
C106 0.001
C105 10
TRIG_SCLK\I
TLM\I
ATHO\I
R101 100
C108 1.0UF
C125 7PF
R105 0
C110 470
UNUSED BALANCED INPUTS
NE5534 U104
R103 10.0K
R102 1.50K
C112 1.0UF
U105 TL072
R108 15.0K
CR104
U102 74HCT86N
R116 10.0K
R115 1.00K
Q108
U106 LM311
R118 475K
R117 34.0K
R107 3.32K
C103 .01
CR103
R106 15.0K
C123 1.0UF
VIDEO TRIGGER AMP
VIDEO TRIGGER DETECTOR
U103 EL4581
C_SYN
ODD_EV
C_VID
RSET
V_SYN
CLAMP
R113 3.32K
C104 0.1
R114 2.21K
R119 200K
R133 332K
C102 0.1
C118 0.1
SEL TRIG GATE*\I
SEL CSYNC*\I
SEL TV FIELDS*\I
SEL ANY FIELD*\I
CSYNC\I
ANY_FIELD\I
TV_FIELDS\I
TRIG_GATE\I
TRIG_GATE*\I
TO EXT TRIG
R50 AND J51
J101
1 EXT_TRIG
R126 475K
R127 332K
C114 10
C100 10
C109 10
C113 47
R123 27.4
R129 200K
CR102
R128 681
R130 475
C122 1.0UF
Q107
Q105
Q106
C115 1.0UF
R132 75
R124 681
R131 1.21K
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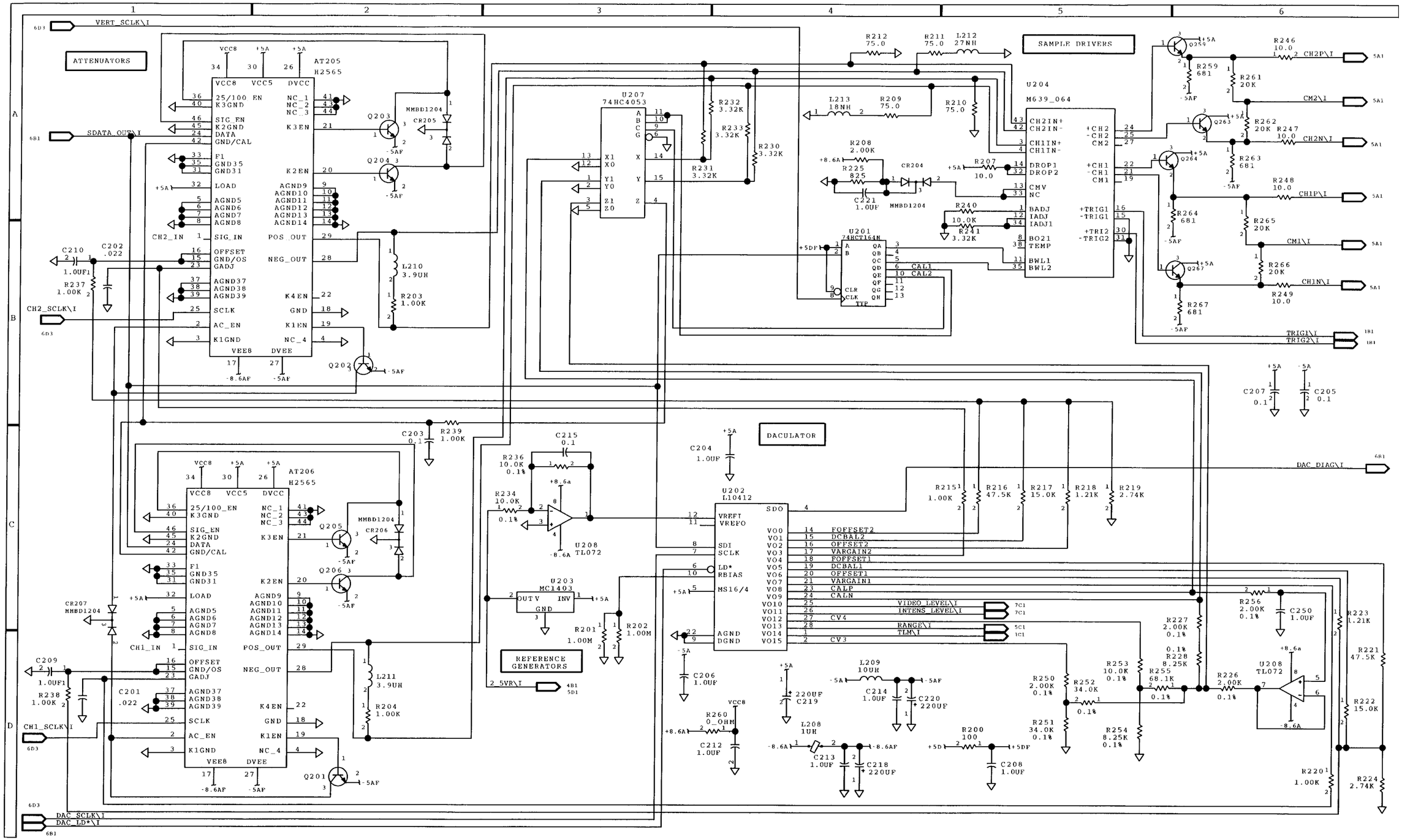
EXT TRIG BUFFER
+5A
-5A
+8.6a
-8.6A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SAMPLE DRIVERS
DACULATOR
REFERENCE GENERATORS
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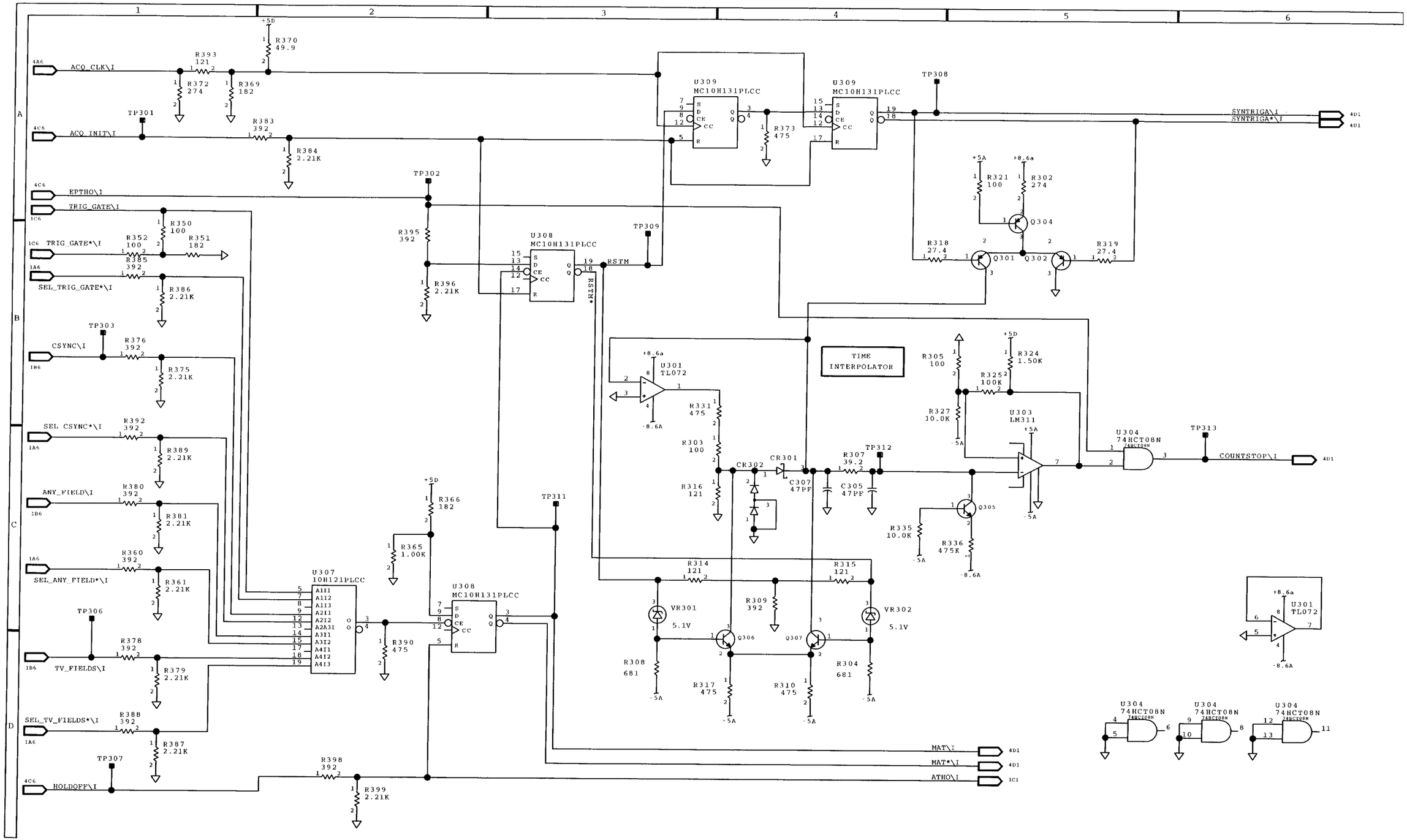
SDATA_OUT\I
CH2_SCLK\I
CH1_SCLK\I
DAC_SCLK\I
DAC_LD*\I
DAC_DIAG\I
CH2P\I
CM2\I
CH2N\I
CH1P\I
CM1\I
CH1N\I
TRIG1\I
TRIG2\I
VIDEO_LEVEL\I
INTENS_LEVEL\I
RANGE\I
TLM\I
5VR\I
AT205 H2565
AT206 H2565
U207 74HC4053
U201 74HCT164N
U204 M639_064
U202 LI0412
U203 MC1403
U208 TL072
MMBD1204
FOFFSET2
DCBAL2
OFFSET2
VARGAIN2
FOFFSET1
DCBAL1
OFFSET1
VARGAIN1
CALP
CALN
CV4
CV3
CAL1
CAL2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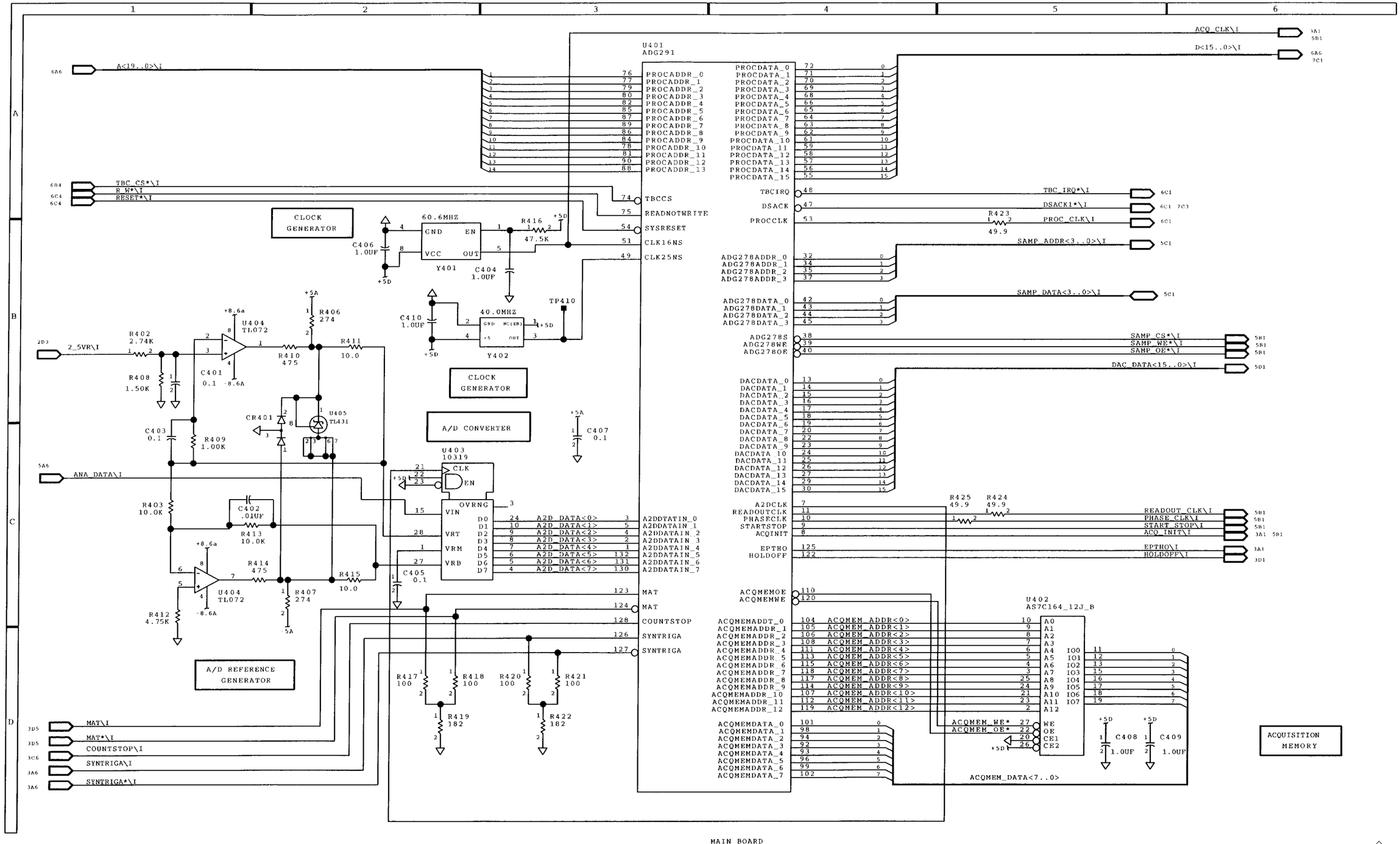
ACQ_INIT\I
EPTHO\I
TRIG_GATE\I
TRIG_GATE*\I
SEL_TRIG_GATE*\I
CSYNC\I
SEL_CSYNC*\I
ANY_FIELD\I
SEL_ANY_FIELD*\I
TV_FIELDS\I
SEL_TV_FIELDS*\I
HOLDOFF\I
TP301
TP302
TP303
TP306
TP307
TP308
TP309
TP311
TP312
TP313
U307 10H121PLCC
U308 MC10H131PLCC
U309 MC10H131PLCC
U301 TL072
U303 LM311
U304 74HCT08N
Q301
Q302
Q304
Q305
Q306
Q307
VR301 5.1V
VR302 5.1V
CR301
CR302
TIME INTERPOLATOR
RSTM
RSTM*
SYNTRIGA\I
SYNTRIGA*\I
COUNTSTOP\I
MAT\I
MAT*\I
ATHO\I
+5D
+5A
+8.6a
-5A
-8.6A



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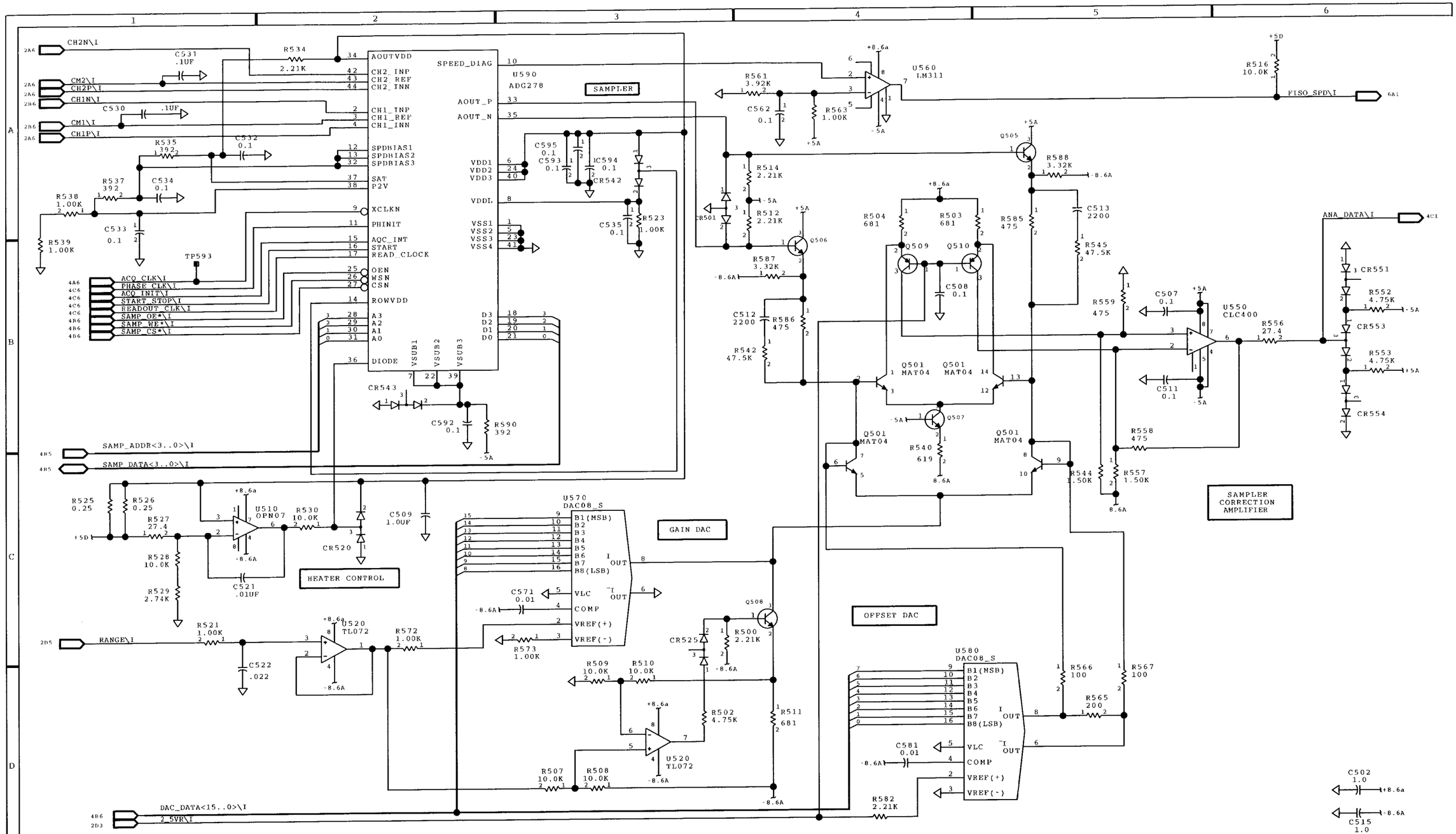
389-2154-00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SAMPLER CORRECTION AMPLIFIER
HEATER CONTROL
GAIN DAC
OFFSET DAC
U590 ADG278
U560 LM311
U550 CLC400
U570 DAC08_S
U580 DAC08_S
U510 OPN07
U520 TL072
U520 TL072
CH2N\I
CM2\I
CH2P\I
CH1N\I
CM1\I
CH1P\I
ACQ_CLK\I
PHASE_CLK\I
ACQ_INIT\I
START_STOP\I
READOUT_CLK\I
SAMP_OE*\I
SAMP_WE*\I
SAMP_CS*\I
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SAMP_DATA<3..0>\I
RANGE\I
DAC_DATA<15..0>\I
2_5VR\I
FISO_SPD\I
ANA_DATA\I
AOUTVDD
CH2_INP
CH2_REF
CH2_INN
CH1_INP
CH1_REF
CH1_INN
SPDBIAS1
SPDBIAS2
SPDBIAS3
SAT
P2V
XCLKN
PHINIT
AQC_INT
START
READ_CLOCK
OEN
WSN
CSN
ROWVDD
A3
A2
A1
A0
DIODE
VSUB1
VSUB2
VSUB3
SPEED_DIAG
AOUT_P
AOUT_N
VDD1
VDD2
VDD3
VDDL
VSS1
VSS2
VSS3
VSS4
D3
D2
D1
D0
+8.6a
-8.6A
+5A
-5A
+5D
TP593
CR543
CR520
CR542
CR501
CR525
CR551
CR553
CR554
Q505
Q506
Q507
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Q510
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Q501 MAT04
Q501 MAT04
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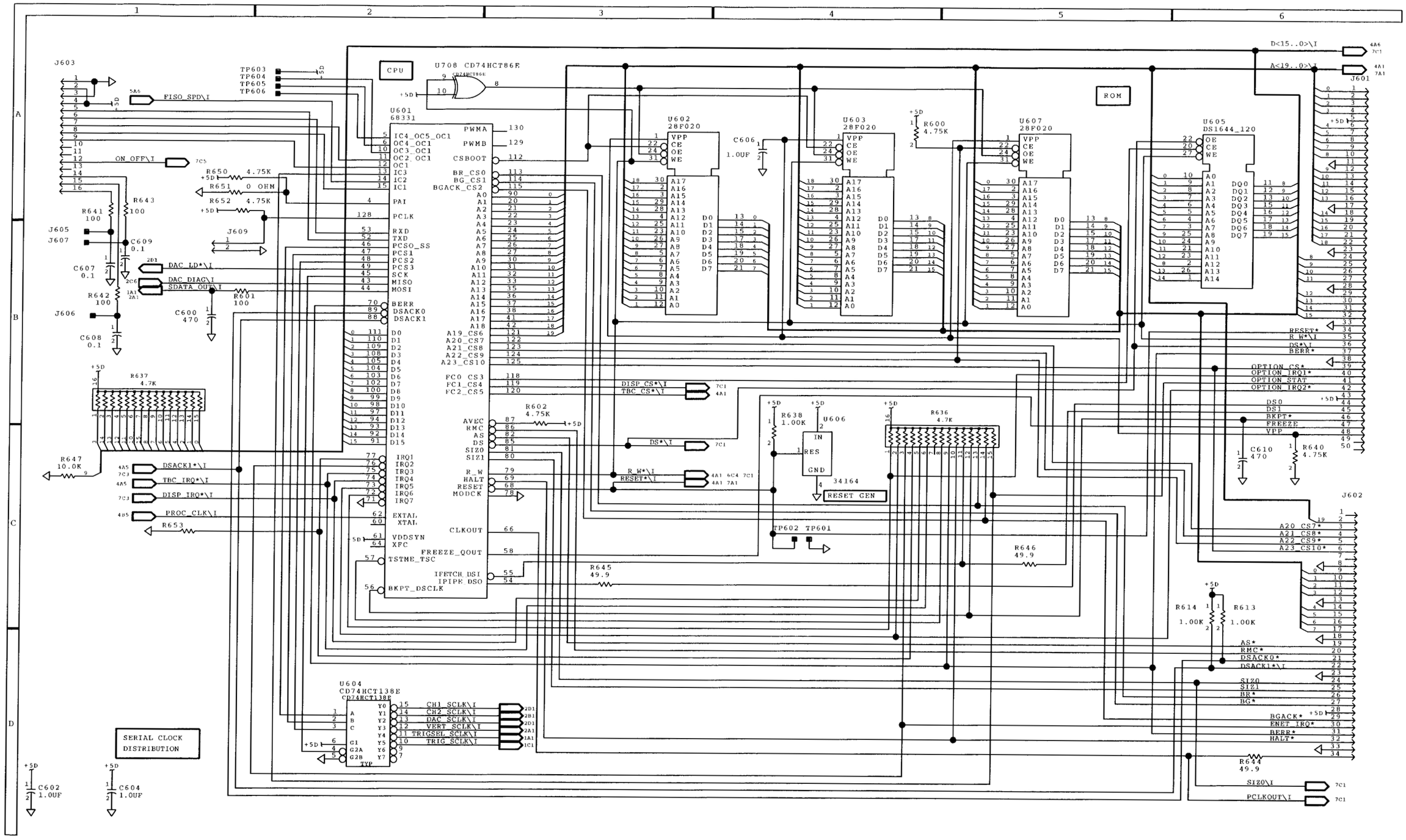
C515 1.0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U602
28F020
U603
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U607
28F020
U605
DS1644_120
ROM
J603
J601
J602
J605
J606
J607
J609
TP603
TP604
TP605
TP606
FISO_SPD\I
ON_OFF\I
DAC_LD*\I
DAC_DIAG\I
SDATA_OUT\I
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R642 100
R643 100
R601 100
C609 0.1
C607 0.1
C608 0.1
C600 470
R650 4.75K
R651 0 OHM
R652 4.75K
R647 10.0K
R637 4.7K
R602 4.75K
R645 49.9
R646 49.9
C606 1.0UF
R600 4.75K
R638 1.00K
U606
34164
RESET GEN
TP602 TP601
R636 4.7K
C610 470
R640 4.75K
R644 49.9
R614 1.00K
R613 1.00K
U604
CD74HCT138E
TYP
SERIAL CLOCK
DISTRIBUTION
C602 1.0UF
C604 1.0UF
DSACK1*\I
TBC_IRQ*\I
DISP_IRQ*\I
PROC_CLK\I
DISP_CS*\I
TBC_CS*\I
DS*\I
R_W*\I
RESET*\I
CH1_SCLK\I
CH2_SCLK\I
DAC_SCLK\I
VERT_SCLK\I
TRIGSEL_SCLK\I
TRIG_SCLK\I
D<15..0>\I
A<19..0>\I
RESET*
R_W*\I
DS*\I
BERR*
OPTION_CS*
OPTION_IRQ1*
OPTION_STAT
OPTION_IRQ2*
DS0
DS1
BKPT*
FREEZE
VPP
A20_CS7*
A21_CS8*
A22_CS9*
A23_CS10*
AS*
RMC*
DSACK0*
DSACK1*\I
SIZ0
SIZ1
BR*
BG*
BGACK*
ENET_IRQ*
BERR*
HALT*
SIZ0\I
PCLKOUT\I

PROCESSOR INTERFACE

DISPLAY CONTROLLER

DISPLAY DRAM

POWER DISTRIBUTION

VIDEO BUFFER

RESET*\I

Y701

R707 49.9

C705 1.0UF

A<19..0>\I

U701 ADG250

RESET
DISP_CLK
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 A16 A17 A18 A19
D0 D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15
PROC_CLK
SIZ
DISP_CS
R_W
DS
VID_CLK
XRAS XCAS XOE WL WU
XA0 XA1 XA2 XA3 XA4 XA5 XA6 XA7 XA8
CAS RAS OE W
DA0 DA1 DA2 DA3 DA4 DA5 DA6 DA7 DA8
DD0 DD1 DD2 DD3 DD4 DD5 DD6 DD7
ACK
DIS_INT
VIDEO INTENS HSYNC VSYNC
DIS_CLK2

D<15..0>\I

PCLKOUT\I
SIZ0\I
DISP_CS*\I
R_W*\I
DS*\I

DSACK1*\I
DISP_IRQ*\I

DD<7..0>

XA<8..0>

U702 SN74F00N
U703 SN74F00N

U704 514260_8

A0 A1 A2 A3 A4 A5 A6 A7 A8 A9
IO0 IO1 IO2 IO3 IO4 IO5 IO6 IO7 IO8 IO9 IO10 IO11 IO12 IO13 IO14 IO15
WE OE RAS UCAS LCAS

U706 UPD42S4800LLE-A70

A0 A1 A2 A3 A4 A5 A6 A7 A8 A9
I/O1 I/O2 I/O3 I/O4 I/O5 I/O6 I/O7 I/O8
RAS CAS WE OE

Q704 Q703 Q702 Q701

VIDEO_LEVEL\I
INTENS_LEVEL\I

R703 4.75K
R704 10.0K
R705 4.75K
R701 274
R702 274
R706 10.0K

C711 0.1
C712 0.1
C713 0.1
C714 0.1

C701 C702 C703 C704 1.0UF

U709 LM6361

R710 392
R711 392
R712 75

U708 CD74HCT86E

R708 49.9
R709 49.9
R713 49.9
R714 49.9

LINE_TRIG\I

R700 274

C706 C707 C708 C709 C710 1.0UF

ON_OFF\I

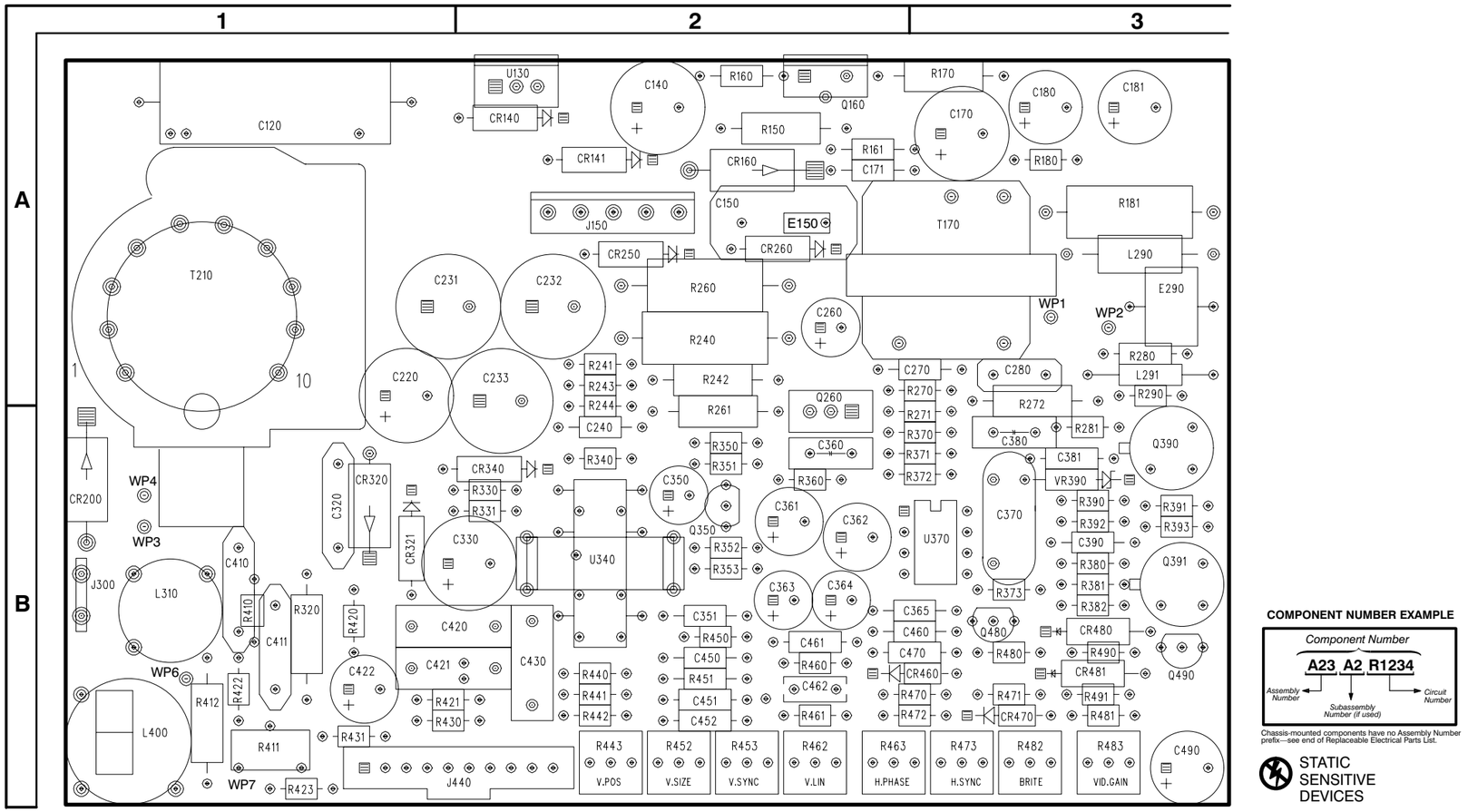
J702

J701
HSYNC
VSYNC
VIDEO

J703
AUX_HSYNC
AUX_VSYNC
AUX_VIDEO

+5D +5A +8.6A -8.6A -5A

MAIN BOARD
671-3753-00
389-2154-00



COMPONENT NUMBER EXAMPLE

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

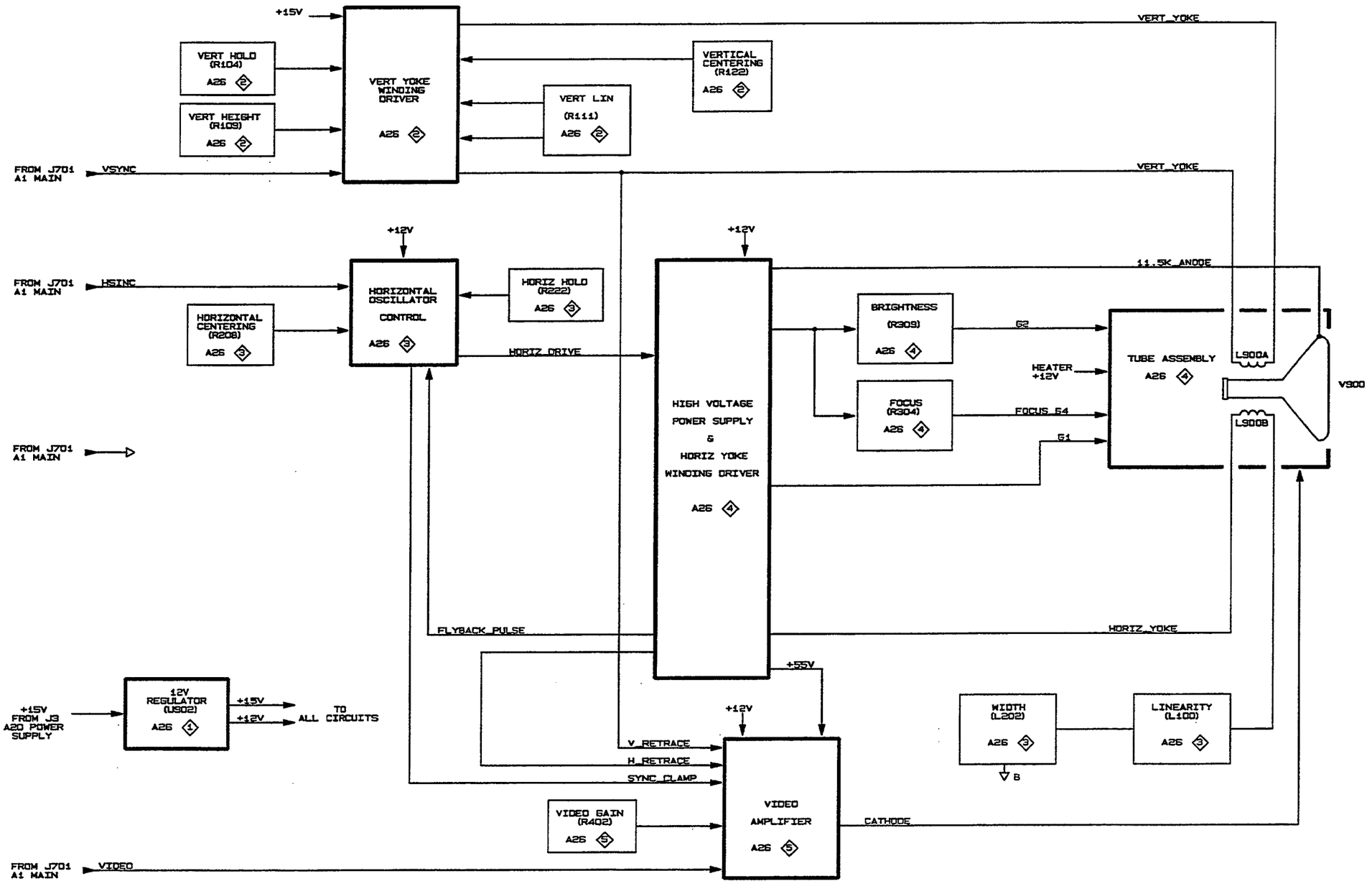
STATIC SENSITIVE DEVICES

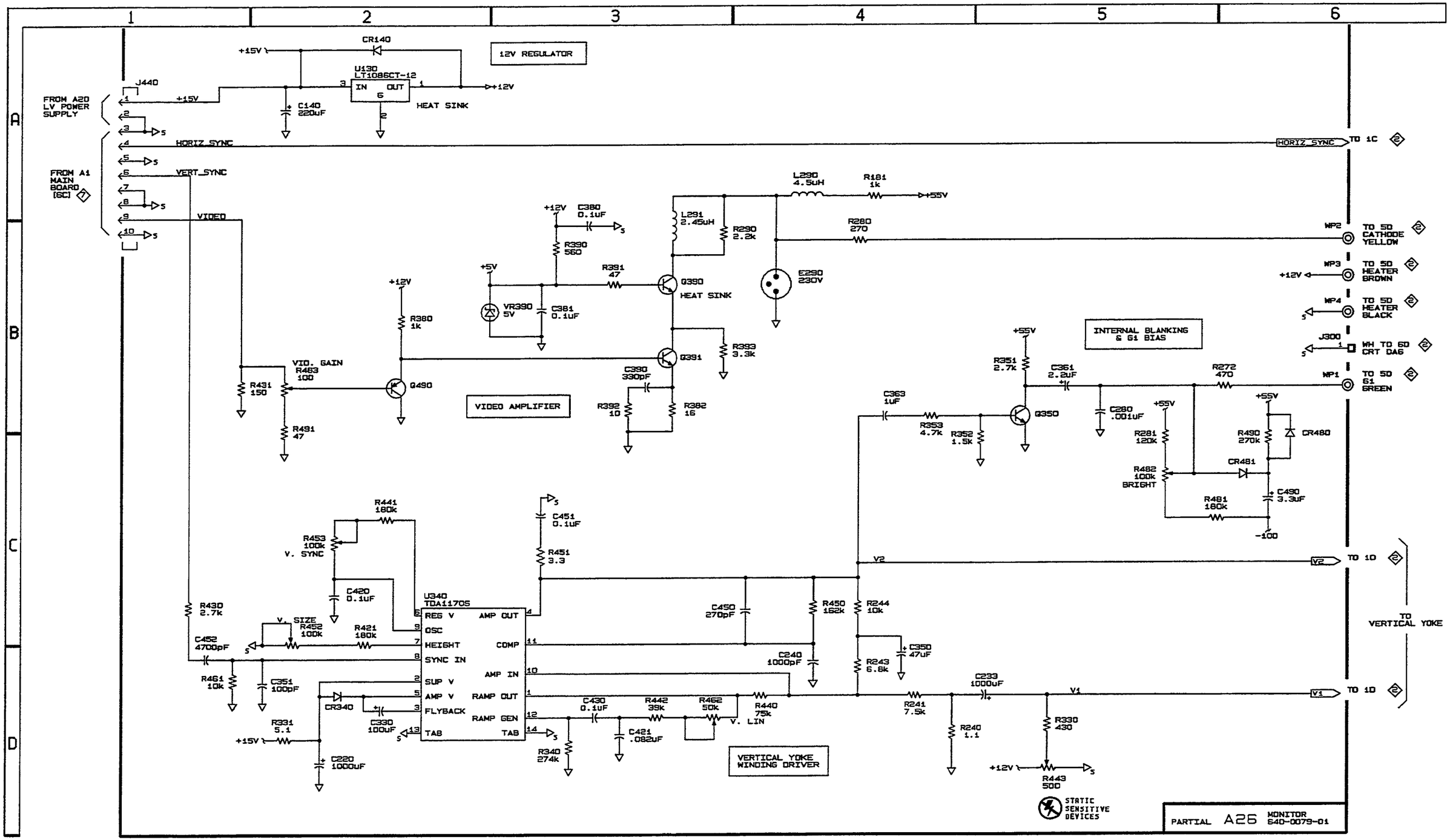
Figure 9–14: A26 Monitor board

A26 Monitor component locator

CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION	CIRCUIT NUMBER	SCHEM NUMBER	SCHEM LOCATION	BOARD NUMBER	BOARD LOCATION
C120	A26−2	3C	A26	1A	C422	A26−2	5A	A26	1B	L291	A26−1	3B	A26	3A	R331	A26−1	2D	A26	2B	R452	A26−1	2D	A26	2B
C140	A26−1	2A	A26	2A	C430	A26−1	3D	A26	2B	L310	A26−2	3C	A26	1B	R340	A26−1	3D	A26	2B	R453	A26−1	2C	A26	2B
C150	A26−2	4B	A26	2A	C450	A26−1	4C	A26	2B	L400	A26−2	4C	A26	1B	R350	A26−2	2B	A26	2B	R460	A26−2	1C	A26	2B
C170	A26−2	3C	A26	3A	C451	A26−1	3C	A26	2B						R351	A26−1	5B	A26	2B	R461	A26−1	1D	A26	2B
C171	A26−2	4C	A26	2A	C452	A26−1	1D	A26	2B	Q160	A26−2	4C	A26	2A	R352	A26−1	5C	A26	2B	R462	A26−1	3D	A26	2B
C180	A26−2	5B	A26	3A	C460	A26−2	2C	A26	3B	Q260	A26−2	3C	A26	2B	R353	A26−1	4B	A26	2B	R463	A26−2	2C	A26	2B
C181	A26−2	5B	A26	3A	C461	A26−2	2C	A26	2B	Q350	A26−1	5B	A26	2B	R360	A26−2	2B	A26	2B	R470	A26−2	1B	A26	3B
C220	A26−1	2D	A26	1A	C462	A26−2	2C	A26	2B	Q390	A26−1	3B	A26	3B	R370	A26−2	1B	A26	3B	R471	A26−2	1C	A26	3B
C231	A26−2	4A	A26	1A	C470	A26−2	1C	A26	3B	Q391	A26−1	3B	A26	3B	R371	A26−2	2B	A26	3B	R472	A26−2	2B	A26	3B
C232	A26−2	4A	A26	2A	C490	A26−1	6C	A26	3B	Q480	A26−2	1C	A26	3B	R372	A26−2	2B	A26	3B	R473	A26−2	2B	A26	3B
C233	A26−1	5D	A26	2A						Q490	A26−1	2B	A26	3B	R373	A26−2	1B	A26	3B	R480	A26−2	1C	A26	3B
C240	A26−1	4D	A26	2B	CR140	A26−1	2A	A26	2A						R380	A26−1	2B	A26	3B	R481	A26−1	5C	A26	3B
C260	A26−2	3A	A26	2A	CR141	A26−2	4C	A26	2A	R150	A26−2	4C	A26	2A	R381	A26−2	1C	A26	3B	R482	A26−1	5C	A26	3B
C270	A26−2	3B	A26	3A	CR160	A26−2	4B	A26	2A	R160	A26−2	4C	A26	2A	R382	A26−1	3B	A26	3B	R483	A26−1	2B	A26	3B
C280	A26−1	5B	A26	3A	CR200	A26−2	4A	A26	1B	R161	A26−2	4C	A26	2A	R390	A26−1	3B	A26	3B	R490	A26−1	6C	A26	3B
C320	A26−2	5B	A26	1B	CR250	A26−2	3A	A26	2A	R170	A26−2	3C	A26	3A	R391	A26−1	3B	A26	3B	R491	A26−1	2C	A26	3B
C330	A26−1	2D	A26	2B	CR260	A26−2	5B	A26	2A	R180	A26−2	5B	A26	3A	R392	A26−1	3B	A26	3B					
C350	A26−1	4D	A26	2B	CR320	A26−2	5A	A26	1B	R181	A26−1	4A	A26	3A	R393	A26−1	3B	A26	3B	T170	A26−2	3C	A26	3A
C351	A26−1	2D	A26	2B	CR321	A26−2	4B	A26	1B	R240	A26−1	4D	A26	2A	R410	A26−2	5B	A26	1B	T210	A26−2	4A	A26	1A
C360	A26−2	3C	A26	2B	CR340	A26−1	2D	A26	2B	R241	A26−1	4D	A26	2A	R411	A26−2	6B	A26	1B					
C361	A26−1	5B	A26	2B	CR460	A26−2	2C	A26	3B	R242	A26−2	2C	A26	2A	R412	A26−2	6C	A26	1B	U130	A26−1	2A	A26	2A
C362	A26−2	2B	A26	2B	CR470	A26−2	1C	A26	3B	R243	A26−1	4D	A26	2A	R420	A26−2	6B	A26	1B	U340	A26−1	2C	A26	2B
C363	A26−1	4B	A26	2B	CR480	A26−1	6C	A26	3B	R244	A26−1	4C	A26	2A	R421	A26−1	2D	A26	1B	U370	A26−2	2B	A26	3B
C364	A26−2	2C	A26	2B	CR481	A26−1	6C	A26	3B	R260	A26−2	3A	A26	2A	R422	A26−2	5B	A26	1B					
C365	A26−2	2C	A26	3B						R261	A26−2	3C	A26	2B	R423	A26−2	6B	A26	1B	VR390	A26−1	2B	A26	3B
C370	A26−2	2B	A26	3B	E150	A26−2	4B	A26	2A	R270	A26−2	3C	A26	3A	R430	A26−1	1C	A26	1B					
C380	A26−1	3B	A26	3B	E290	A26−1	4B	A26	3A	R271	A26−2	3C	A26	3B	R431	A26−1	1B	A26	1B	WP1	A26−1	6B	A26	3A
C381	A26−1	3B	A26	3B						R272	A26−1	5B	A26	3A	R440	A26−1	4D	A26	2B	WP2	A26−1	6B	A26	3A
C390	A26−1	3B	A26	3B	J150	A26−2	5C	A26	2A	R280	A26−1	4B	A26	3A	R441	A26−1	2C	A26	2B	WP3	A26−1	6B	A26	1B
C410	A26−2	5B	A26	1B	J300	A26−1	6B	A26	1B	R281	A26−1	5C	A26	3B	R442	A26−1	3D	A26	2B	WP4	A26−1	6B	A26	1B
C411	A26−2	6B	A26	1B	J440	A26−1	1A	A26	1B	R290	A26−1	3B	A26	3A	R443	A26−1	5D	A26	2B	WP6	A26−2	6C	A26	1B
C420	A26−1	2C	A26	1B						R320	A26−2	6B	A26	1B	R450	A26−1	4C	A26	2B	WP7	A26−2	6B	A26	1B
C421	A26−1	3D	A26	1B	L290	A26−1	4A	A26	3A	R330	A26−1	5D	A26	2B	R451	A26−1	3C	A26	2B					

Figure 9–15: A26 Monitor component locator


+15V
VERT HOLD (R104) A26 2
VERT HEIGHT (R109) A26 2
VERT YOKE WINDING DRIVER A26 2
VERTICAL CENTERING (R122) A26 2
VERT LIN (R111) A26 2
VERT_YOKE
FROM J701 A1 MAIN
VSYNC
VERT_YOKE
+12V
+12V
FROM J701 A1 MAIN
HSINC
HORIZONTAL CENTERING (R208) A26 3
HORIZONTAL OSCILLATOR CONTROL A26 3
HORIZ HOLD (R222) A26 3
HORIZ_DRIVE
11.5K_ANODE
BRIGHTNESS (R309) A26 4
G2
HEATER +12V
TUBE ASSEMBLY A26 4
L900A
V900
L900B
FOCUS (R304) A26 4
FOCUS_54
G1
FROM J701 A1 MAIN
HIGH VOLTAGE POWER SUPPLY & HORIZ YOKE WINDING DRIVER A26 4
FLYBACK_PULSE
HORIZ_YOKE
+55V
+12V
+15V FROM J3 A20 POWER SUPPLY
12V REGULATOR (U902) A26 1
+15V
+12V
TO ALL CIRCUITS
V_RETRACE
H_RETRACE
SYNC_CLAMP
WIDTH (L202) A26 3
LINEARITY (L100) A26 3
B
VIDEO GAIN (R402) A26 5
VIDEO AMPLIFIER A26 5
CATHODE
FROM J701 A1 MAIN
VIDEO


12V REGULATOR
CR140
+15V
U130
LT1086CT-12
IN
OUT
6
+12V
HEAT SINK
J440
FROM A20
LV POWER
SUPPLY
C140
220uF
HORIZ_SYNC
TO 1C
FROM A1
MAIN
BOARD
[SC]
VERT_SYNC
VIDEO
L290
4.5uH
R181
1k
+55V
R280
270
WP2
TO 5D
CATHODE
YELLOW
WP3
TO 5D
HEATER
BROWN
WP4
TO 5D
HEATER
BLACK
J300
WH TO 6D
CRT DA6
WP1
TO 5D
G1
GREEN
+12V
C380
0.1uF
L291
2.45uH
R290
2.2k
R390
560
+5V
R391
47
Q390
HEAT SINK
E290
230V
VR390
5V
C381
0.1uF
R380
1k
R393
3.3k
Q391
C390
330pF
VID. GAIN
R483
100
R431
150
Q490
R491
47
R392
10
R382
16
VIDEO AMPLIFIER
INTERNAL BLANKING
& G1 BIAS
+55V
R351
2.7k
C361
2.2uF
R272
470
C363
1uF
R353
4.7k
R352
1.5k
Q350
C280
.001uF
R281
120k
R490
270k
CR480
CR481
R482
100k
BRIGHT
C490
3.3uF
R481
180k
-100
R441
180k
R453
100k
V. SYNC
C420
0.1uF
C451
0.1uF
R451
3.3
V2
TO 1D
TO
VERTICAL YOKE
U340
TDA1170S
REG V
OSC
HEIGHT
SYNC IN
SUP V
AMP V
FLYBACK
TAB
AMP OUT
COMP
AMP IN
RAMP OUT
RAMP GEN
TAB
R430
2.7k
V. SIZE
R452
100k
R421
180k
C452
4700pF
C450
270pF
R450
152k
R244
10k
C350
47uF
R243
6.8k
C240
1000pF
R461
10k
C351
100pF
CR340
C330
100uF
R331
5.1
+15V
C220
1000uF
C430
0.1uF
R442
39k
R462
50k
V. LIN
R440
75k
C421
.082uF
R340
274k
C233
1000uF
V1
TO 1D
R241
7.5k
R240
1.1
R330
430
+12V
R443
500
VERTICAL YOKE
WINDING DRIVER
STATIC
SENSITIVE
DEVICES
PARTIAL A26 MONITOR
640-0079-01

Mechanical Parts List

This chapter contains a list of the replaceable modules for the TDS 340A, TDS 360, and TDS 380. Use this list to identify and order replacement parts.

Parts Ordering Information

Replacement parts are available through your local Tektronix field office or representative.

Changes to Tektronix products are sometimes made to accommodate improved components as they become available and to give you the benefit of the latest improvements. Therefore, when ordering parts, it is important to include the following information in your order.

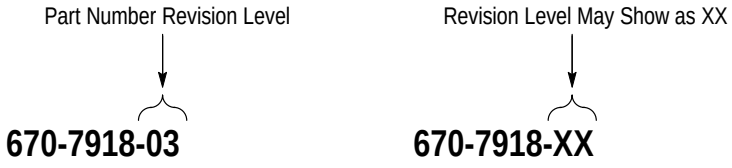
- Part number (see Part Number Revision Level below)
- Instrument type or model number
- Instrument serial number
- Instrument modification number, if applicable

If you order a part that has been replaced with a different or improved part, your local Tektronix field office or representative will contact you concerning any change in part number.

Change information, if any, is located at the rear of this manual.

Part Number Revision Level

Tektronix part numbers contain two digits that show the revision level of the part. For some parts in this manual, you will find the letters XX in place of the revision level number.



When you order parts, Tektronix will provide you with the most current part for your product type, serial number, and modification (if applicable). At the time of your order, Tektronix will determine the part number revision level needed for your product, based on the information you provide.

Module Servicing

Modules can be serviced by selecting one of the following three options. Contact your local Tektronix service center or representative for repair assistance.

Module Exchange. In some cases you may exchange your module for a remanufactured module. These modules cost significantly less than new modules and meet the same factory specifications. For more information about the module exchange program, call 1-800-TEK-WIDE, extension 6630.

Module Repair and Return. You may ship your module to us for repair, after which we will return it to you.

New Modules. You may purchase replacement modules in the same way as other replacement parts.

Using the Replaceable Parts List

This section contains a list of the mechanical and/or electrical components that are replaceable for the TDS 340A, TDS 360, and TDS 380. Use this list to identify and order replacement parts. The following table describes each column in the parts list.

Parts List Column Descriptions

Column	Column Name	Description
1	Figure & Index Number	Items in this section are referenced by figure and index numbers to the exploded view illustrations that precede the list
2	Tektronix Part Number	Use this part number when ordering replacement parts from Tektronix
3 and 4	Serial Number	Column three indicates the serial number at which the part was first effective. Column four indicates the serial number at which the part was discontinued. No entries indicates the part is good for all serial numbers
5	Qty	This indicates the quantity of parts used
6	Name & Description	An item name is separated from the description by a colon (:). Because of space limitations, an item name may sometimes appear as incomplete. Use the U.S. Federal Catalog handbook H6-1 for further item name identification
7	Mfr. Code	This indicates the code of the actual manufacturer of the part
8	Mfr. Part Number	This indicates the actual manufacturer's or vendor's part number

Abbreviations

Abbreviations conform to American National Standard ANSI Y1.1–1972.

Mfr. Code to Manufacturer Cross Index

The table titled Manufacturers Cross Index shows codes, names, and addresses of manufacturers or vendors of components listed in the parts list.

Manufacturers Cross Index

Mfr. Code	Manufacturer	Address	City, State, Zip Code
00779	AMP INC.	CUSTOMER SERVICE DEPT PO BOX 3608	HARRISBURG, PA 17105–3608
06383	PANDUIT CORP	17303 RIDGELAND AVE	TINLEY PARK, IL 60477–3048
06915	RICHCO	5825 N TRIPP AVE P.O. BOX 804238	CHICAGO, IL 60646
0J9P9	GEROME MFG CO INC	PO BOX 737 403 NORTH MAIN	NEWBERG, OR 97132
0KB01	STAUFFER SUPPLY CO	810 SE SHERMAN	PORTLAND, OR 97214–4657
0KBZ5	Q & D PLASTICS INC	1812 – 16TH AVENUE PO BOX 487	FOREST GROVE, OR 97116–0487
1GM54	ZYTEC CORP	7575 MARKET PLACE DR	EDEN PRAIRIE, MN 55344
61058	MATSUSHITA ELECTRIC CORP OF AMERICA	PANASONIC INDUSTRIAL CO DIV TWO PANASONIC WAY	SECAUCUS, NJ 07094
61857	SAN–O INDUSTRIAL CORP	91–3 COLIN DRIVE	HOLBROOK, NY 11741
75915	LITTELFUSE INC	800 E NORTHWEST HWY	DES PLAINES, IL 60016–3049
80009	TEKTRONIX INC	14150 SW KARL BRAUN DR PO BOX 500	BEAVERTON, OR 97077–0001
86928	SEASTROM MFG CO INC	456 SEASTROM STREET	TWIN FALLS, ID 83301
TK1163	POLYCAST INC	9898 SW TIGARD ST	TIGARD, OR 97223
TK1943	NEILSEN MANUFACTURING INC	3501 PORTLAND RD NE	SALEM, OR 97303
TK2469	UNITREK CORPORATION	3000 LEWIS & CLARK HWY SUITE 2	VANCOUVER, WA 98661
07416	NELSON NAME PLATE COMPANY	3191 CASITAS AVENUE	LOS ANGELES, CA 90039–2410
0JR05	TRIQUEST PRECISION PLASTICS	3000 LEWIS & CLARK HWY PO BOX 66008	VANCOUVER, WA 98666–6008
0KB05	NORTH STAR NAMEPLATE INC	5750 NE MOORE COURT	HILLSBORO, OR 97124–6474
18565	CHOMERICS INC	77 DRAGON COURT	WOBURN, MA 01880
2W733	BELDEN WIRE & CABLE COMPANY	2200 US HWY 27 SOUTH PO BOX 1980	RICHMOND, IN 47374
50356	TEAC AMERICA INC	7733 TELEGRAPH RD PO BOX 750	MONTEBELLO, CA 90640–6537
64411	TECH–ETCH INC	100 RIGGENBACH ROAD	FALL RIVER, MA 02720
TK1326	NORTHWEST FOURSLIDE INC	18500 SW TETON AVENUE	TUALATIN, OR 97062
TK1908	PLASTIC MOLDED PRODUCT INC	4336 S ADAMS	TACOMA, WA 98409
TK1918	SHIN–ETSU POLYMER	34135 7TH ST	UNION CITY, CA 94587

Manufacturers Cross Index (Cont.)

Mfr. Code	Manufacturer	Address	City, State, Zip Code
S3109	FELLER U.S. CORPORATION	72 VERONICA AVE UNIT #4	SOMERSET, NJ 08873
TK1373	PATELEC–CEM	10156 TORINO VAICENTALLO 62/456	ITALY,
TK2541	AMERICOR ELECTRONICS LTD	UNIT–H 2682 W COYLE AVE	ELK GROVE VILLAGE, IL 60007
TK2548	XEROX CORPORATION	DIV OF XEROX CORPORATION 14181 SW MILLIKAN WAY	BEAVERTON, OR 97005
1DM20	PARLEX CORP	7 INDUSTRIAL WAY	SALEM, NH 03079
1JJ96	KAM ELECTRIC CO	11866 SLATER AVE NE	KIRKLAND, WA 98034
34416	PARSONS MANUFACTURING CORP	1055 O'BRIEN DRIVE	MENLO PARK, CA 940251476
6D224	HARBOR ELECTRONICS COMPANY	14500 S BROADWAY	GARDENA, CA 90248
TK2193	PHOTO & SOUND COMPANY	824 NW 18TH AVE	PORTLAND, OR 97209–2390
TK2500	SOLECTEK ACCESSORIES CORP	6370 NANCY RIDGE DRIVE UNIT 109	SAN DIEGO, CA 92121

Exploded Views

Figures 10–1 and 10–2 on the following pages show the module-level exploded views of the TDS 340A, TDS 360, and TDS 380 oscilloscope. The adjacent page is the list of components for that exploded view, indexed by the numbers in the figure.

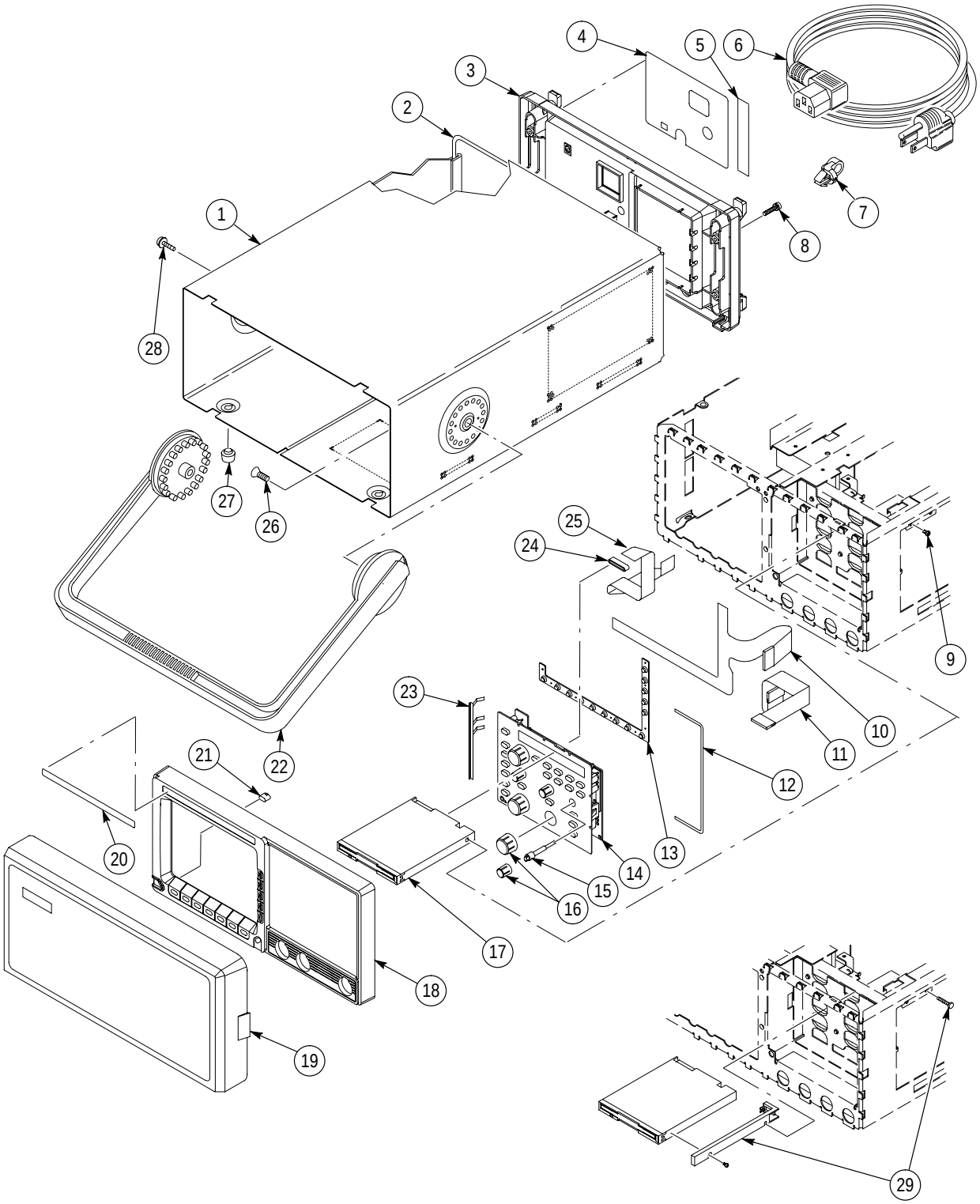


Figure 10–1: Cabinet and front panel assembly

Replaceable Parts List

Fig. & Index Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Qty	Name & Description	Mfr. Code	Mfr. Part Number
10–1–1	390–1109–02			1	CABINET,SCOPE:ALUMINUM,TEK BLUE	80009	390–1109–02
–2	348–0764–04			1	SHLD GSKT,ELEK:0.125 X 0.188,WIRE MESH	18565	ORDER BY DESCR
–3	200–3971–05			1	REAR COVER ASSY,W/LABELS,TDS300	80009	200–3971–05
–4	334–8324–00			1	MARKER,IDENT:MKD REAR,PWR SUPPLY,WARNING	07416	334–8324–00
–5	334–8718–00			1	MARKER,IDENT:OPTION,TDS300	0KB05	334–8718–00
–6	161–0230–01			1	CABLE ASSY,PWR:3,18 AWG,TAN,60 DEG,10A/125V,	2W733	ORDER BY DESCR
–7	343–1213–00			1	CLAMP,PWR CORD:POLYMIDE	TK1163	ORDER BY DESCR
–8	211–0691–00			4	SCR,ASSEM WSHR:6–32 X 0.625,PNH,STL,T–15 TORX	0KB01	ORDER BY DESCR
–9	211–0840–00			2	SCREW,MACHINE:M2.6 X 0.45MM PITCH X 4.0MM L,PHILIPS	0KB01	.26C4MXPHY
–10	259–0086–00			1	FLEX CIRCUIT:BEZEL BUTTON	07416	ORDER BY DESCR
–11	174–2598–00			1	CA ASSY, FRONT PANEL:FLAT FLEX,FLX,16,26 AWG	TK2469	174–2598–00
–12	348–1258–00			4	SHLD,GASKET,ELE:2 LAYER,0.094 X 0.188 X 8.750	64411	348–1258–00
–13	260–2539–00			1	SWITCH,SET:ELASTOMERIC BEZEL,	TK1918	260–2539–00
–14	672–1454–00			1	CIRCUIT BD ASSY:FRONT PANEL ASSEMBLY	80009	672–1454–00
–15	384–1689–00			6	SHAFT,EXTENDER:ACETAL	TK1163	ORDER BY DESCR
–16	020–2036–00			1	KNOB KIT:MINIATURE SIZE	80009	020–2036–00
–17	119–5677–01			1	DISK DRIVE:FLOPPY, 3.5 INCH, 1.44MB HD	50356	FD–04HF–2300
–18	101–0140–00			1	TRIM,DECORATIVE:FRONT	TK1163	ORDER BY DESCR
–19	200–3232–01			1	COVER,FRONT:ABS (OPTIONAL ACCESSORY)	TK1908	ORDER BY DESCR
–20	334–9118–00			1	MARKER,IDENT:LABEL,FRONT PANEL,TDS340A	0KB05	334–9118–00
	334–9119–00			1	MARKER,IDENT:LABEL,FRONT PANEL,TDS360	0KB05	334–9119–00
	334–9120–00				MARKER,IDENT:LABEL,FRONT PANEL,TDS380	0KB05	334–9120–00
–21	366–2164–00			35	PUSH BUTTON:SMOKE TAN	80009	366–2164–00
–22	367–0356–01			1	HANDLE,CARRYING:POLYCARBONATE LEXAN,SMOKE TAN	80009	367–0356–01
–23	131–5965–00			1	CONTACT,ELEC:ESD PROTECT,STAINLESS STEEL ALLOY	TK1326	131–5965–00
–24	276–0849–00			1	CORE,EM:EMI SUPPRESS,RBN CA,RECTANGULAR	1JJ96	33 FR 33.5 X 8 X 6.5
–25	174–3135–00			1	CABLE ASSY,SP:FLAT FLEX,FLX,26,1MM,15.0 L	1DM20	1.00MM–26–15–B
–26	212–0144–00			2	SCREW,TPG,TC:8–16 X 0.562 L,PLASTITE,SPCL HD,TORX	0KB01	ORDER BY DESCR
–27	348–0659–00			2	FOOT,CABINET:BLACK POLYURETHANE	0JR05	ORDER BY DESCR
–28	211–0730–00			1	SCR,ASSEM WSHR:6–32 X 0.375,PNH,STL,CDPL,T–15 TORX	0KB01	ORDER BY DESCR
–29	211–0866–00			1	SCREW PHIL M2.5X10 PHIL PNH BRZN	0KB01	211–0866–00
	105–1081–00			1	ADAPTER:FLOPPY DISK DRIVE BRACKET ADAPTER	TK1163	105–1081–00

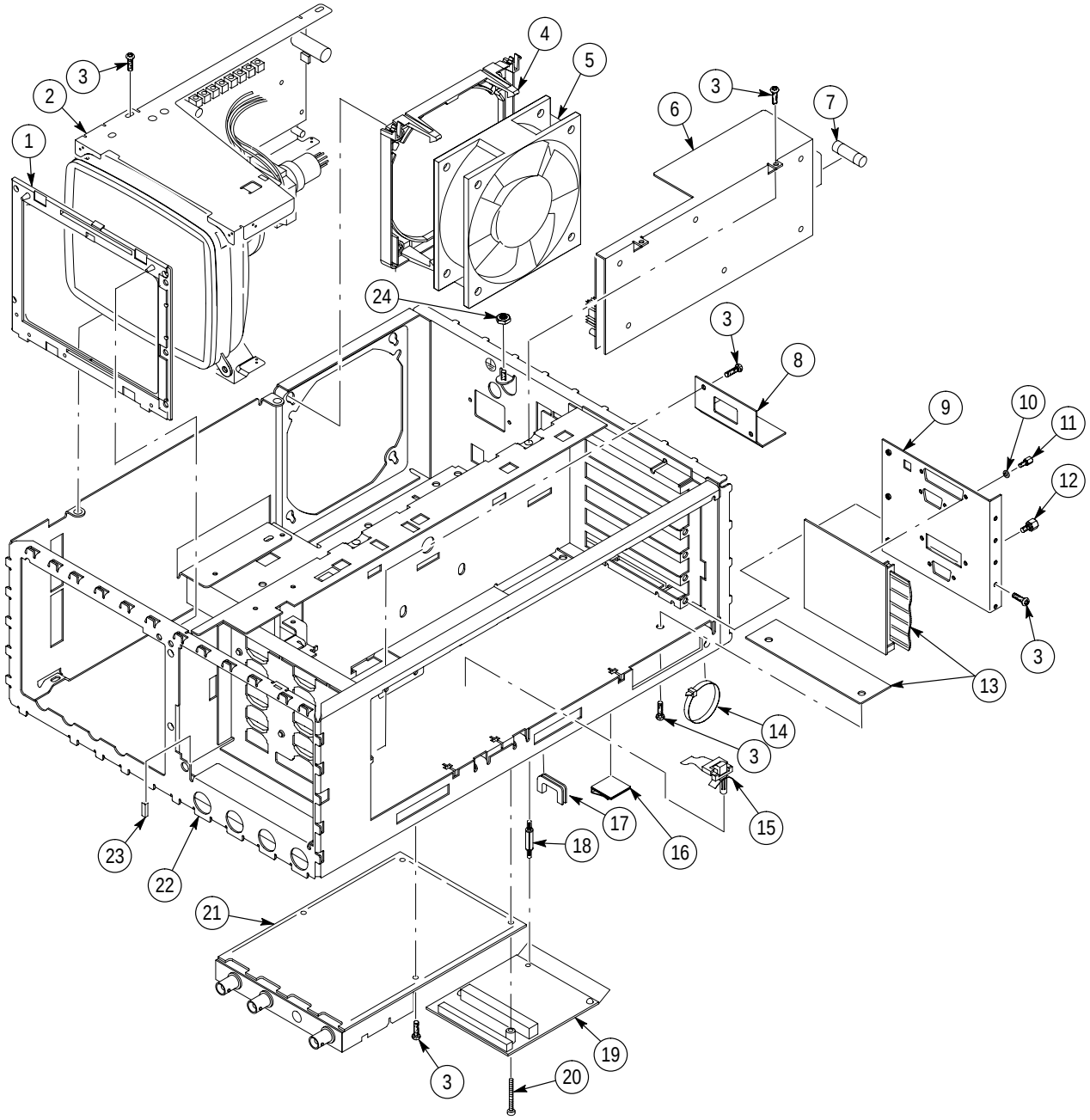


Figure 10–2: CRT, power supply, and circuit boards

Replaceable Parts List

Fig. & Index Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Qty	Name & Description	Mfr. Code	Mfr. Part Number
10–2–1	426–2436–01			1	FRAME,CRT FLTR:POLYCARBONATE,BLACK,CT750	80009	426–2436–01
–2	640–0079–02			1	DISPLAY ASSY:7 INCH,480 X 640 PIXEL,MONOCHROME	80009	640–0079–02
–3	213–0882–00			22	SCREW,TPG,TR:6–32 X 0.437,PNH,STL,CDPL,T–15 TORX	0KB01	ORDER BY DESCR
–4	426–2426–00			1	FRAME,FAN MTG:POLYCARBONATE	TK1163	426–2426–00
–5	119–1770–04			1	FAN,DC:TUBEAXIAL,12V,2.0W,49.5 CFM,40 DBA,7.5" LEAD W/CONNECTOR,120MM X 120MM X 25.4MM,	61058	PANAFLO FBP–12A12L
–6	119–5029–02			1	POWER SUPPLY:44W,90–275VAC,97–440HZ	1GM54	22917399
–7	159–0190–00			1	FUSE,CARTRIDGE:5 X 20MM,3.15A,250V,50MS	61857	EQ–3.15A
	159–0277–00			1	FUSE,CARTRIDGE:5 X 20MM,3A,250V,5 SEC,UL LIST,CSA,	75915	235003
–8	407–4247–00			1	BRACKET:ALUMINUM,CABLE CLAMP,2.375 L	0J9P9	407–4247–00
–9	407–4196–00			1	BRACKET,STD:ALUMINUM (STANDARD)	TK1943	407–4196–00
	407–4293–00			1	BRKT,OPTION 14,0.050 AL ALLOY (OPT 14 ONLY)	TK1943	407–4293–00
–10	210–0056–00			2	WASHER,LOCK:#10 SPLIT,0.047 THK,SI BRZ NP	86928	ORDER BY DESCR
–11	213–1079–00			4	JACKSCREW:4–40 X 0.250EXTTHD,4–40 X 0.120 IN	00779	745563–2
–12	213–1061–00			2	JACKSCREW:6–32 X 0.320	00779	554043–3
–13	672–3140–01			1	CKT BD SUBASSY: OPTION 14 BD TDS300 SERIES	80009	672–3140–01
–14	343–0549–00			1	STRAP,TIEDOWN,E:0.098 W X 4.0 L,ZYTEL	06383	PLT1M
–15	343–1585–00			1	CLAMP:WIRE ROUTING CLAMP, NYLON	06915	HFCC–A–8–01
–16	343–0775–00			1	CLAMP:RIBBON CABLE CLAMP (OPT 14)	52152	80610029243/3484–1000
–17	348–0150–00			1	GROMMET,PLASTIC:DK GRAY,U–SHAPE,0.66 ID	0KBZ5	NA
–18	129–1480–00			1	SPACING SUPPORT POST, 0.710	06915	DLSP–3–18M–01
–19	671–3777–00			1	SUBASSY:FLOPPY DISK INTERFACE	80009	679–3777–00
–20	211–0712–00			1	SCR,ASSEM WSHR:6–32 X 1.250,T–15 TORX	0KB01	ORDER BY DESCR
–21	671–3736–00			1	CIRCUIT BD ASSY:MAIN BD,TDS 340A	80009	671–3736–00
	671–3752–00			1	CIRCUIT BD ASSY:MAIN BD,TDS 360	80009	671–3752–00
	671–3753–00			1	CIRCUIT BD ASSY:MAIN BD,TDS 380	80009	671–3753–00
–22	441–2072–00			1	CHASSIS ASSY	80009	441–2072–00
–23	344–0513–00			1	SHIELD, GASKET:EMI CLIP,0.4L, 0.1W,0.074H,SST	80009	344–0513–00
–24	210–0457–00			1	NUT,PL,ASSEM WA:6–32 X 0.312,STL CD PL	0KB01	ORDER BY DESCR

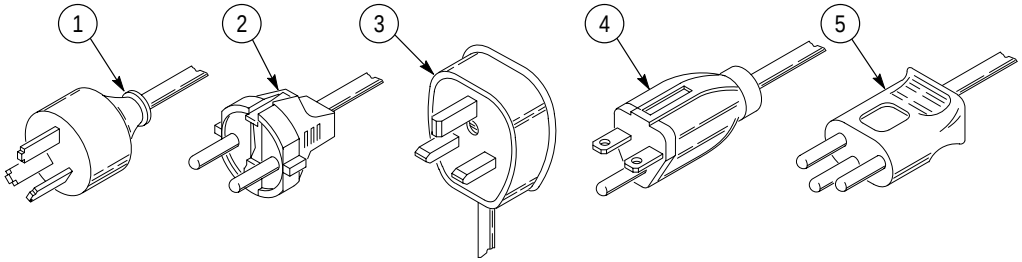


Figure 10–3: Accessories

Replaceable Parts List

Fig. & Index Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Qty	Name & Description	Mfr. Code	Mfr. Part Number
					STANDARD ACCESSORIES		
10–3–1	161–0104–05			1	CABLE ASSY,PWR,:3,18 AWG,240V,98.0 L, (OPTION A3–AUSTRALIAN)	TK1373	161–0104–05
–2	161–0104–06			1	CABLE ASSY,PWR,:3 X 0.75MM SQ,220V,98.0 L (OPTION A1–EUROPEAN)	TK1373	ORDER BY DESC
–3	161–0104–07			1	CABLE ASSY,PWR,:3,1.0MM SQ,240 VOLT,2.5 M (OPTION A2–UNITED KINGDOM)	TK2541	ORDER BY DESC
–4	161–0104–08			1	CABLE ASSY,PWR,:3,18 AWG,98 L,SVT,GREY/BLK (OPTION A4–NORTH AMERICAN)	2W733	ORDER BY DESC
–5	161–0167–00			1	CABLE ASSY,PWR,:3.0 X 0.75,6A,240V,2.5M L (OPTION A5–SWITZERLAND)	S3109	ORDER BY DESC
	————			1	ACCY PKG:(2) P6109B PASSIVE PROBES W/ACCY (TDS340A ONLY)		ORDER BY DESC
	————			1	ACCY PKG:(2) P6111B PASSIVE PROBES W/ACCY (TDS360 ONLY)		ORDER BY DESC
	————			1	ACCY PKG:(2) P6114B PASSIVE PROBES W/ACCY (TDS380 ONLY)		ORDER BY DESC
	070–9459–00			1	MANUAL,TECH:USER ENGLISH	TK2548	070945900
	070–8690–01			1	MANUAL,TECH:USER,XYZ OF OSCILLOSCOPE	TK2548	070869001

Optional Accessories List

Fig. & Index Number	Tektronix Part Number	Serial No. Effective	Serial No. Discont'd	Qty	Name & Description	Mfr. Code	Mfr. Part Number
					OPTIONAL ACCESSORIES		
	012–0991–00			1	CABLE,COMPOSITE:IDC,GPIB:2 METER	00779	553577–3
	012–0991–01			1	CABLE,GPIB:LOW EMI,1 METER	00779	553577–2
	012–1241–00			1	CABLE ASSY, RS232, 9-PIN FEM TO 25-PIN MALE, MODEM	6D224	012–1241–00
	012–1250–00			1	CABLE, CENTRONIC, INTCON:SHLD CMPST,PARA	TK2193	CACC 3049
	012–1298–00			1	CABLE ASSY, RS232, 9-PIN FEM TO 25-PIN MALE, NULL MODEM, 9 FEET	TK2500	C294–9
	012–1379–00			1	CABLE ASSY:RS232, 9-PIN FEM TO 9-PIN FEM, NULL MODEM, 76 INCH	80009	012137900
	012–1380–00			1	CABLE ASSY:RS232, 9-PIN FEM TO 25-PIN FEM, NULL MODEM, 76 INCH	80009	012138000
	016–0792–01			1	CASE,CARRYING:24.5 X 16.5 X 11.5	34416	2416BE11
	016–1154–00			1	HOOD ASSEMBLY:	80009	016115400
	016–1157–00			1	CASE,CARRYING:26 X 22 X 12,HARD TRANSFER	34416	ORDER BY DESC
	016–1158–01			1	CASE,CARRYING:SOFT PADDED,OPTIONS	80009	016115801
	016–1159–00			1	POUCH:POUCH & PLATE,GPS SIZE	80009	016115900
	016–1166–00			1	RACKMOUNT KIT:	80009	016116600
	063–1702–03			1	TDS 300 SERIES I/O INTERFACES UPGRADE KIT (OPT 14)	80009	063170203
	070–9442–00			1	MANUAL,TECH:PROGRAMMER	80009	070944200
	070–9435–00			1	MANUAL,TECH:SERVICE	80009	070943500
	200–3232–00			1	COVER,FRONT:ABS (SEE FIGURE 10–1–19)		ORDER BY DESC