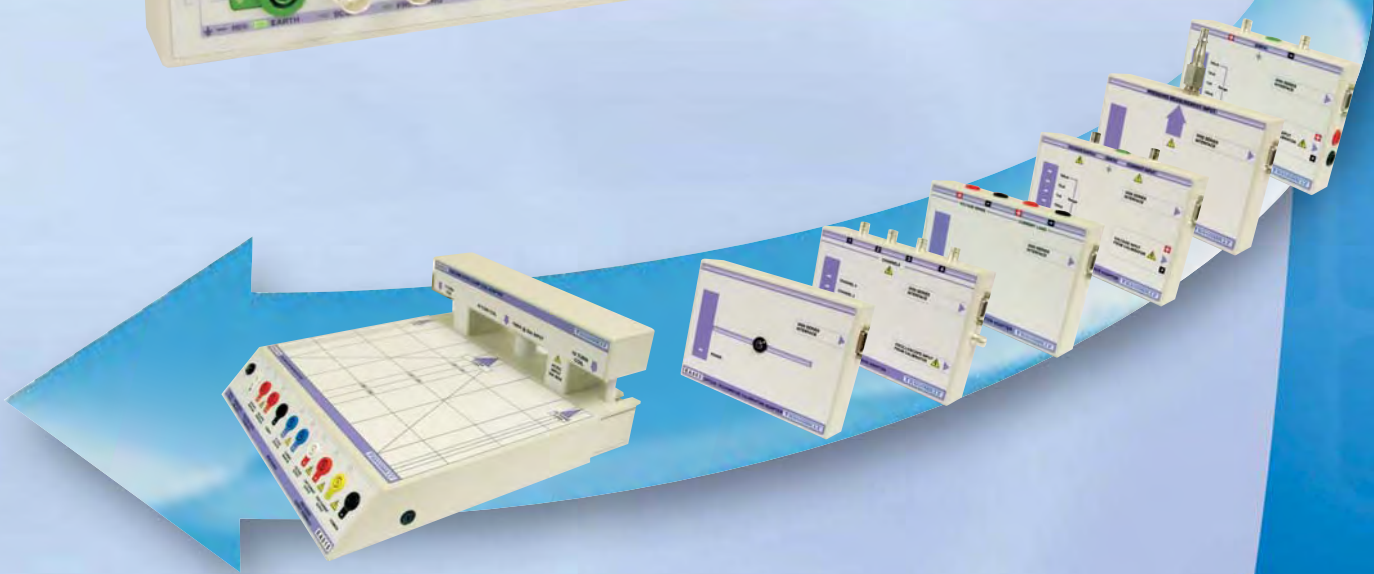


3000/3300

MULTI PRODUCT CALIBRATORS & PRECISION CALIBRATORS



SERVICE MANUAL

3000/3300 Series

**MULTI PRODUCT CALIBRATORS &
PRECISION CALIBRATORS**

Manual Adjustment Using Front Panel Guide

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ADJUSTMENT USING 3000 SERIES FRONT PANEL: OVERVIEW

The 3000 Series calibrator includes the facility to adjust the Zero and +/- Full Scale outputs using the front panel controls. This includes the calibrated 2 + 4 Wire Resistance, Capacitance and Inductance calibration factors stored within the calibrator.



WARNING : RISK OF SHOCK

THIS PROCEDURE SHOULD ONLY BE ATTEMPTED BY QUALIFIED PERSONNEL

Each function e.g. DC voltage, AC Current, Resistance etc. has several ranges.

Each range has one or more calibration factors. See table below.

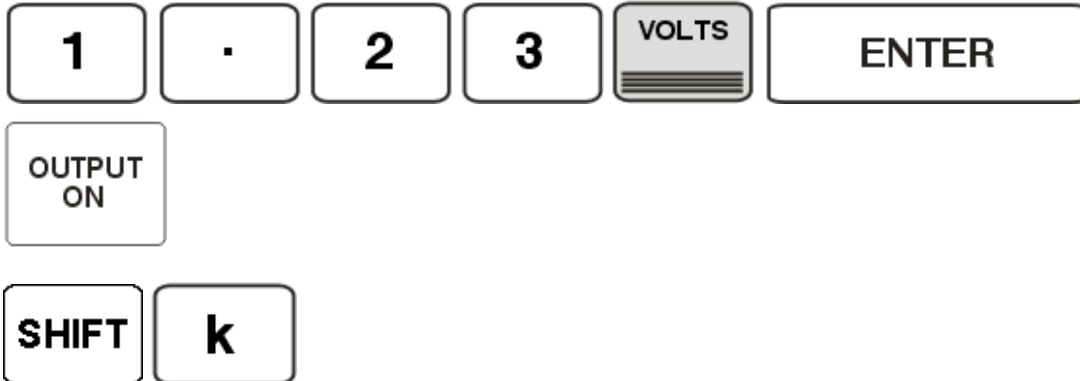
The 3000 Series Front Panel allows any calibration factor to be adjusted independently of any other, therefore it is possible to adjust a single range without needing to adjust any other points. Altering the calibration constants directly changes the calibrator output. Adjusting the calibrator simply involves changing the calibration factor until the output reads correctly.

DC Voltage	: 200mV, 2V, 20V, 200V, 1000V @ Zero, + Full Scale & - Full Scale
AC Voltage	: 200mV, 2V, 20V, 200V, 700V @ 25% of scale & Full Scale
DC Current	: 200uA, 2mA, 20mA, 200mA, 2A, 20A @ + Full Scale & - Full Scale
AC Current	: 200uA, 2mA, 20mA, 200mA, 2A, 20A @ 25% of scale & Full Scale
Resistance	: 2 Wire & 4 Wire value for each resistance
Capacitance	: Value for each Capacitor
Inductance	: Value for each Inductor

Note that AC Voltage/AC Current can only be adjusted at pre-set calibration frequencies. Please refer to the adjustment/verification guide at the end of this manual for a full list of adjustment frequencies.

Setting The Calibrator into Manual Adjustment mode

To activate front panel calibration mode press the following key sequence :

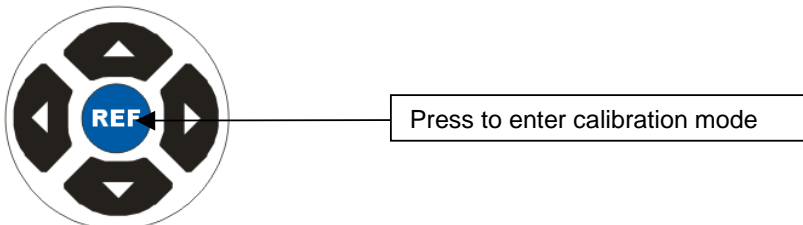


i THE CALIBRATOR WILL SOUND A 2 SECOND BEEP TO INDICATE FRONT PANEL CALIBRATION MODE IS ACTIVATED

i **NOTE : ONCE CALIBRATION MODE IS ACTIVATED THE CALIBRATOR WILL STAY IN THIS MODE UNTIL THE UNTI IS SWITCHED OFF, THEN ON AGAIN.**

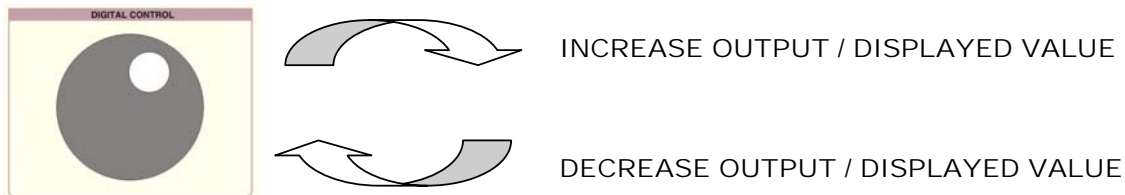
To perform an adjustment using the front panel :

- 1) Select range & output to be adjusted
- 2) With the required function, range and output set, press the **REF** button



SHIFT → **SHIFT** The shift button will illuminate when in calibration mode

- 3) Use the digital control knob to change the output (or the displayed value) as required.



- 4) Press **REF** again and the **SHIFT** button illumination will turn off **SHIFT** to indicate the adjustment has been saved.

i **ONCE ALL ADJUSTMENTS HAVE BEEN COMPLETED, TURN THE CALIBRATOR OFF, THEN ON AGAIN TO RETURN TO NORMAL OPERATION.**

WORKED EXAMPLE : Adjusting the 200mV DC Voltage Range

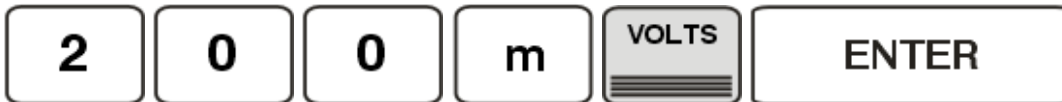
To activate front panel calibration mode press the following key sequence :

i ONLY REQUIRED IF THE CALIBRATOR IS NOT ALREADY IN CALIBRATION MODE

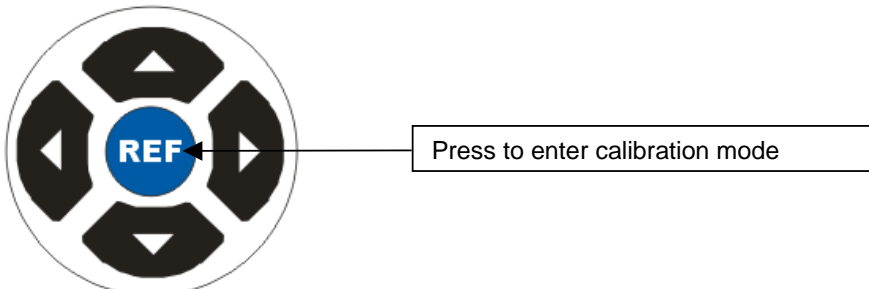


i THE CALIBRATOR WILL PRODUCE A 2 SECOND BEEP TO INDICATE FRONT PANEL CALIBRATION MODE IS ACTIVATED

1) Select 200mV DC output from the calibrator :



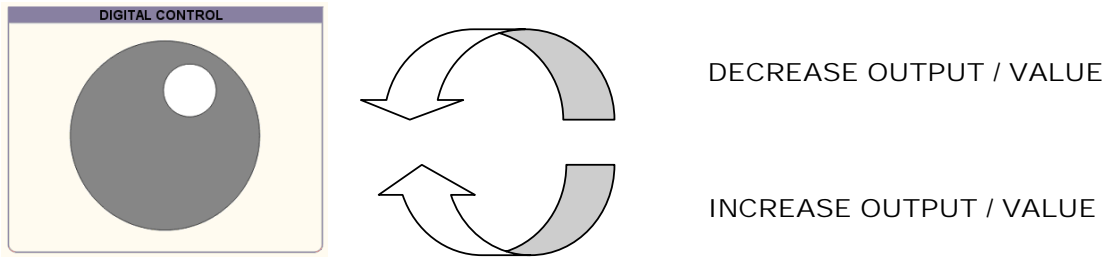
2) Press the REF button to enable adjustment on this range



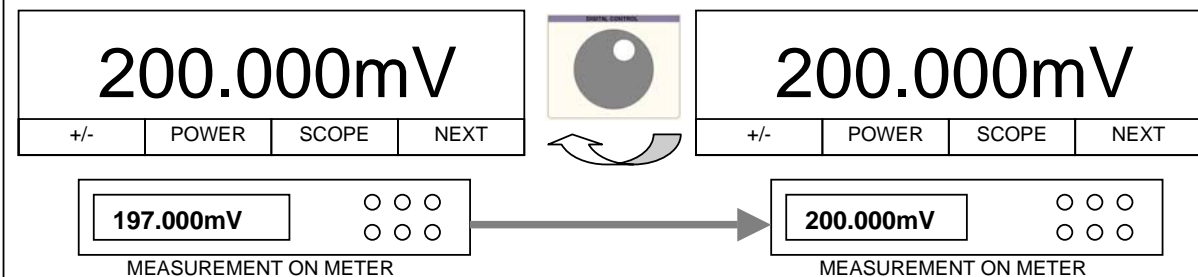
The shift button will illuminate when in calibration mode



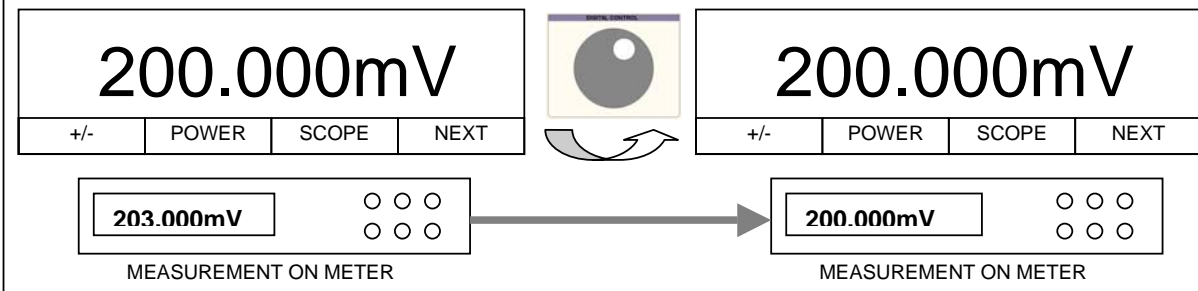
- 3) Use the digital control knob to change the measured output as required.



IF THE MEASURED VALUE IS **LOW**, FOR EXAMPLE **197mV**, ROTATE THE DIAL **CLOCKWISE** UNTIL THE MEASURED VALUE READS **200mV**.



IF THE MEASURED VALUE IS **HIGH**, FOR EXAMPLE **203mV**, ROTATE THE DIAL **ANTI-CLOCKWISE** UNTIL THE MEASURED VALUE READS **200mV**.

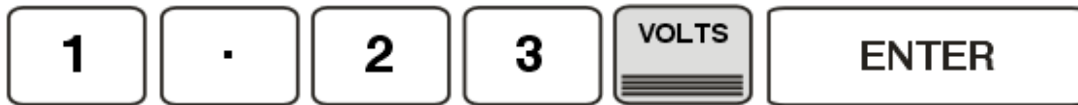


- 4) Press **REF** again and the **SHIFT** button illumination will turn off **SHIFT** to indicate the adjustment has been saved.
- 5) Repeat Steps 1 – 4 for -200mV DC
- 6) To adjust the Zero set the calibrator to 25% of full scale, so in this case 50mV DC. Follow steps 2 – 4 to adjust the calibrator. Please note if the zero is adjusted the full scale values will need to be adjusted also.
- 7) Check Calibrator against reference at zero, + and $-$ full-scale values.

WORKED EXAMPLE : Adjusting the 20V AC Voltage Range

To activate front panel calibration mode press the following key sequence :

i ONLY REQUIRED IF THE CALIBRATOR IS NOT ALREADY IN CALIBRATION MODE



i THE CALIBRATOR WILL PRODUCE A 2 SECOND BEEP TO INDICATE FRONT PANEL CALIBRATION MODE IS ACTIVATED

1) Select 20V AC @ 206Hz output from the calibrator :

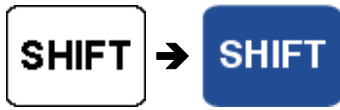


2) Press the REF button to enable adjustment on this range

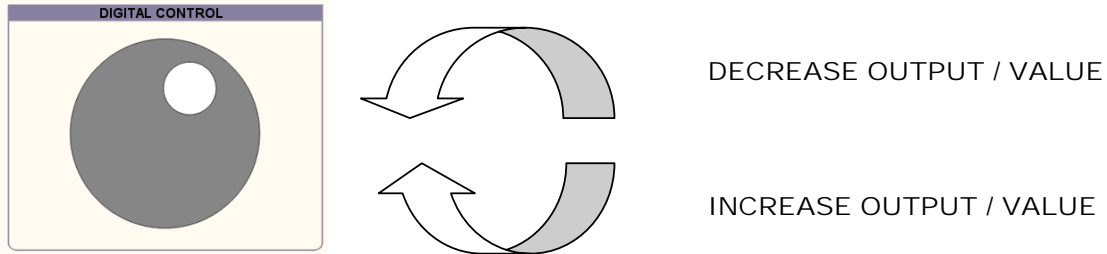


Press to enter calibration mode

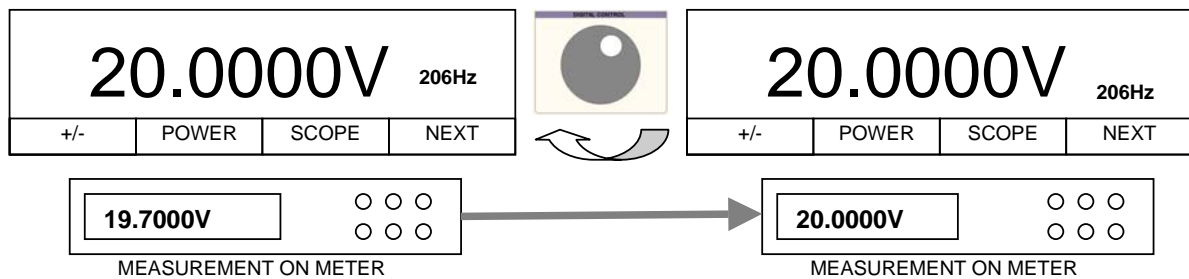
The shift button will illuminate when in calibration mode



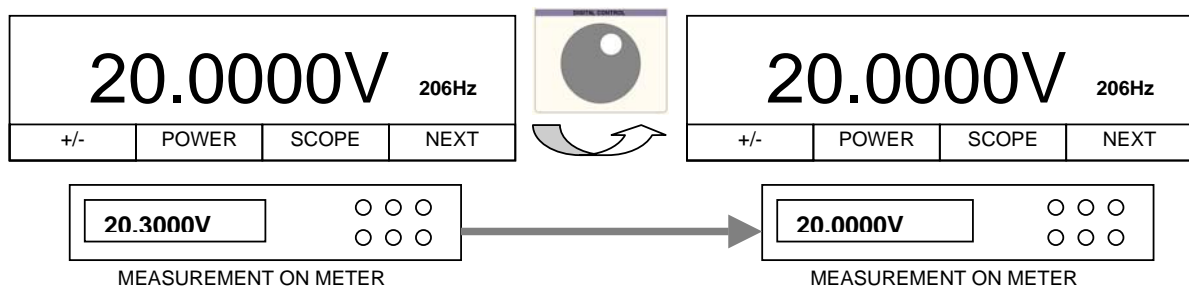
- Use the digital control knob to change the measured output (or the displayed resistance / capacitance value) as required.



IF THE MEASURED VALUE IS LOW, FOR EXAMPLE 19.7V, ROTATE THE DIAL CLOCKWISE UNTIL THE MEASURED VALUE READS 20V.





IF THE MEASURED VALUE IS HIGH, FOR EXAMPLE 20.3V, ROTATE THE DIAL ANTI-CLOCKWISE UNTIL THE MEASURED VALUE READS 20V.



- Press **REF** again and the **SHIFT** button illumination will turn off **SHIFT** to indicate the adjustment has been saved.

- To adjust the zero, repeat steps 1 – 4 but substitute 20V for 5V (25% of scale). Note that adjusting the zero will affect the full scale values, which will need re-adjusting.

6) To adjust the calibrator at different frequencies, type the required frequency into the

calibrator, followed by the  key and then the  key. Note that calibration can only proceed at calibration frequencies (see list of calibration frequencies on verification/adjustment sheet)

WORKED EXAMPLE : Adjusting the 200mA DC Current Range

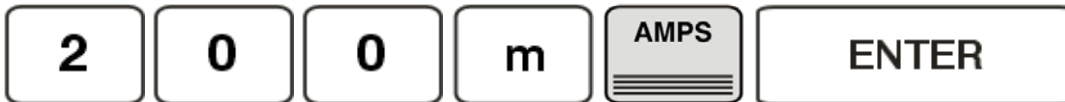
To activate front panel calibration mode press the following key sequence :

i ONLY REQUIRED IF THE CALIBRATOR IS NOT ALREADY IN CALIBRATION MODE

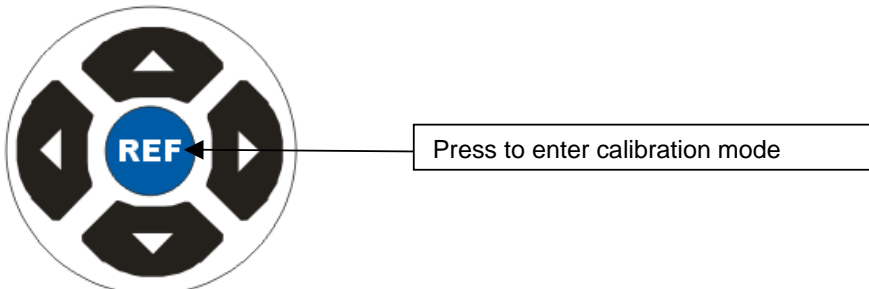


i THE CALIBRATOR WILL PRODUCE A 2 SECOND BEEP TO INDICATE FRONT PANEL CALIBRATION MODE IS ACTIVATED

1) Select 200mA DC output from the calibrator :



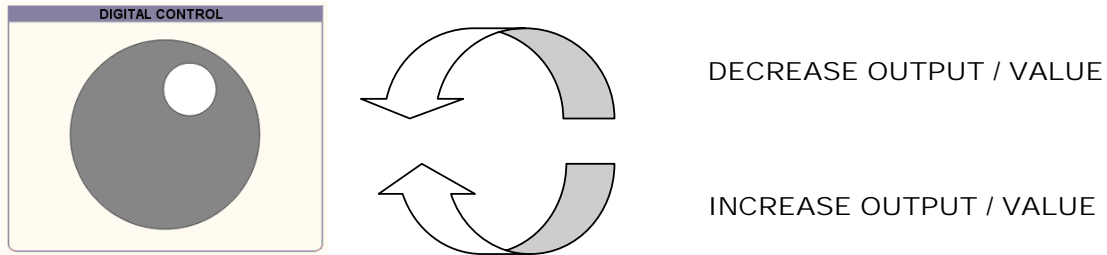
2) Press the REF button to enable adjustment on this range



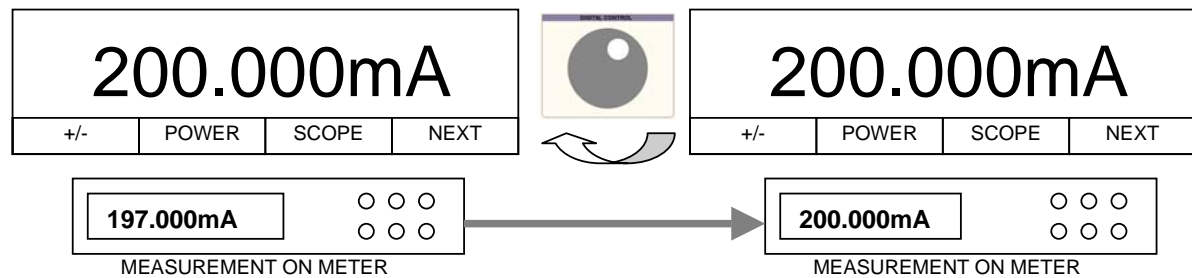
The shift button will illuminate when in calibration mode



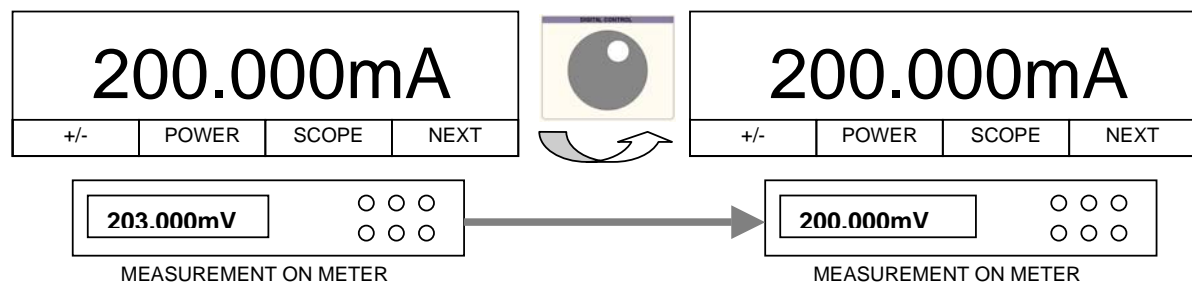
- Use the digital control knob to change the measured output (or the displayed resistance / capacitance value) as required.



IF THE MEASURED VALUE IS LOW, FOR EXAMPLE 197mA, ROTATE THE DIAL CLOCKWISE UNTIL THE MEASURED VALUE READS 200mA.



IF THE MEASURED VALUE IS HIGH, FOR EXAMPLE 203mA, ROTATE THE DIAL ANTI-CLOCKWISE UNTIL THE MEASURED VALUE READS 200mA.



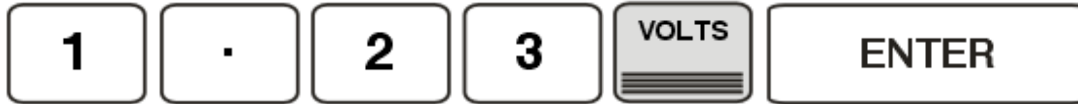
- Press **REF** again and the **SHIFT** button illumination will turn off **SHIFT** to indicate the adjustment has been saved.
- To calibrate -ve full scale, repeat steps 1-4, replacing 200.00mA with -200.00mA
- To adjust Zero, set output of calibrator to 25% of full scale (50mA) and adjust output as shown in steps 2 – 4. Note that adjusting the zero will adjust the full scale values, which will require re-adjustment.

WORKED EXAMPLE : Adjusting the 20mA AC Voltage Range @ 1kHz

To activate front panel calibration mode press the following key sequence :

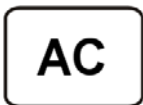


**ONLY REQUIRED IF THE CALIBRATOR IS NOT ALREADY
IN CALIBRATION MODE**



**THE CALIBRATOR WILL PRODUCE A 2 SECOND BEEP TO
INDICATE FRONT PANEL CALIBRATION MODE IS ACTIVATED**

1) Select 20mA AC @ 1kHz output from the calibrator :

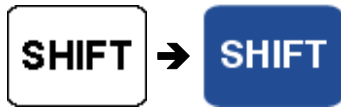


2) Press the REF button to enable adjustment on this range

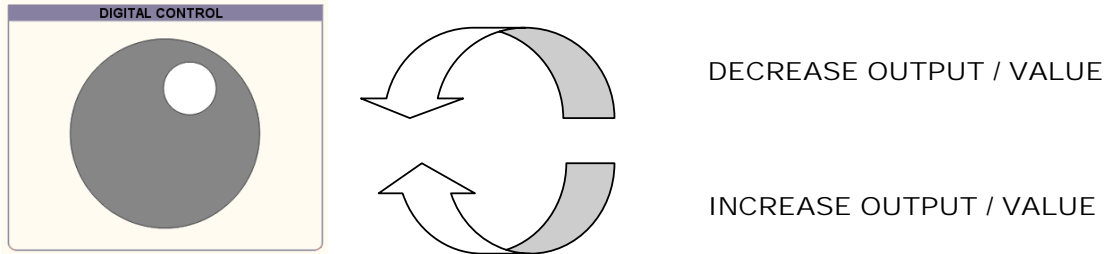


Press to enter calibration mode

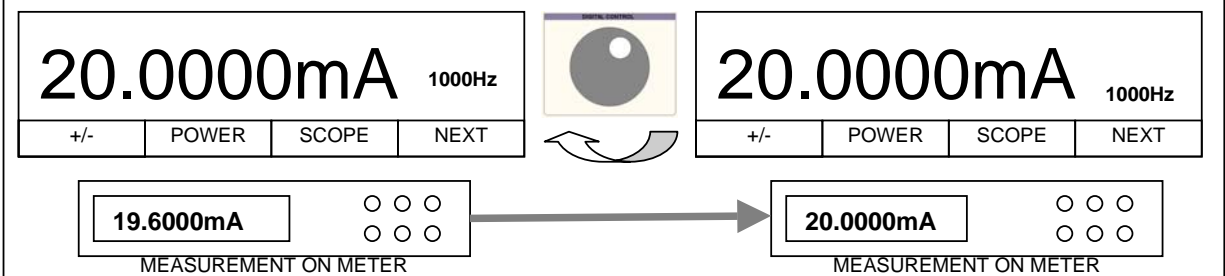
The shift button will illuminate when in calibration mode



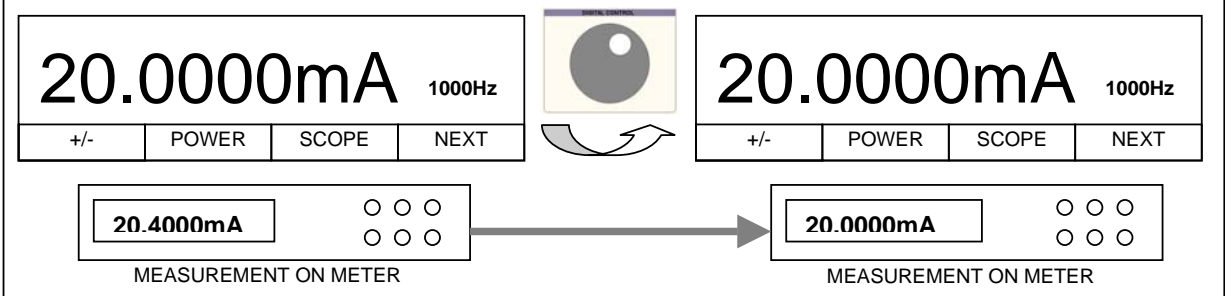
- 3) Use the digital control knob to change the measured output (or the displayed resistance / capacitance value) as required.



IF THE MEASURED VALUE IS LOW, FOR EXAMPLE 19.6mA, ROTATE THE DIAL CLOCKWISE UNTIL THE MEASURED VALUE READS 20mA.



IF THE MEASURED VALUE IS HIGH, FOR EXAMPLE 20.4mA, ROTATE THE DIAL ANTI-CLOCKWISE UNTIL THE MEASURED VALUE READS 20mA.



- 4) Press **REF** again and the **SHIFT** button illumination will turn off **SHIFT** to indicate the adjustment has been saved.

- 5) To adjust the zero, set the calibrator to 25% of scale (5mA), and adjust calibrator. Note that adjusting the zero will affect the full scale output, which will require re-adjustment

-
- 6) To adjust output at other frequencies, substitute 1kHz in step 1 for another calibration frequency (full list available in verification/adjustment sheet).

WORKED EXAMPLE : Adjusting the 100Ohms 2-Wire Resistance Range

To activate front panel calibration mode press the following key sequence :

 **ONLY REQUIRED IF THE CALIBRATOR IS NOT ALREADY IN CALIBRATION MODE**

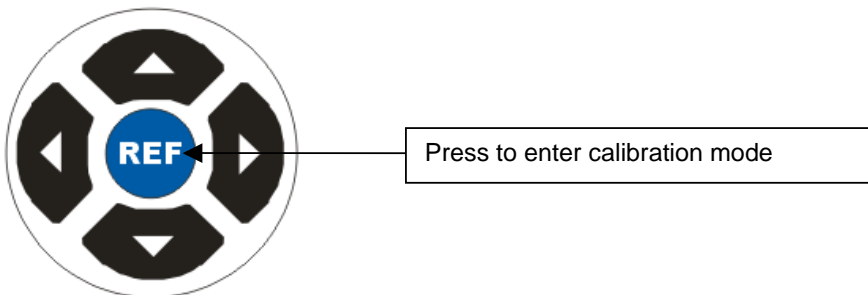


 **THE CALIBRATOR WILL PRODUCE A 2 SECOND BEEP TO INDICATE FRONT PANEL CALIBRATION MODE IS ACTIVATED**

1. Select 100Ω 2-WIRE output from the calibrator :



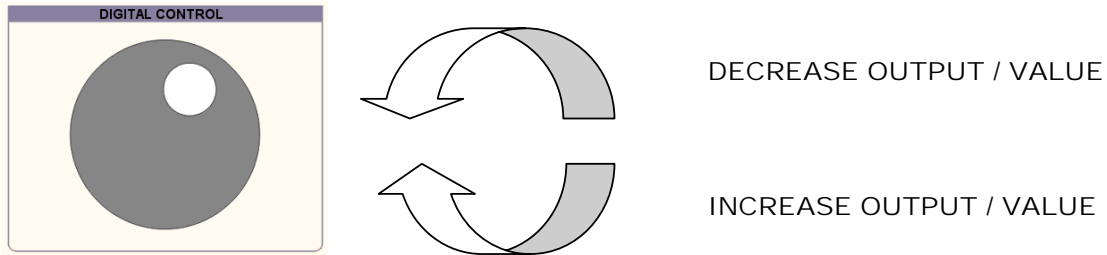
2. Press the REF button to enable adjustment on this range



3. The shift button will illuminate when in calibration mode



- Use the digital control knob to change the measured output (or the displayed resistance / capacitance value) as required.



MEASURE THE RESISTANCE FROM THE CALIBRATOR IN 2-WIRE MODE. IF THE VALUE IS LOW, FOR EXAMPLE 99.99996Ω, ROTATE THE DIAL ANTI-CLOCKWISE UNTIL THE DISPLAY ON THE CALIBRATOR SHOWS 99.99996Ω.

100.000000Ω		99.99996Ω
+/- POWER SCOPE NEXT	+/- POWER SCOPE NEXT	+/- POWER SCOPE NEXT

99.99996Ω	○ ○ ○
	○ ○ ○

MEASUREMENT ON METER

MEASURE THE RESISTANCE FROM THE CALIBRATOR IN 2-WIRE MODE. IF THE VALUE IS HIGH, FOR EXAMPLE 100.00008Ω, ROTATE THE DIAL CLOCKWISE UNTIL THE DISPLAY ON THE CALIBRATOR SHOWS 100.00008Ω.

100.000000Ω		100.00008Ω
+/- POWER SCOPE NEXT	+/- POWER SCOPE NEXT	+/- POWER SCOPE NEXT

100 000080	○ ○ ○
	○ ○ ○

MEASUREMENT ON METER

- Press again and the button illumination will turn off to indicate the adjustment has been saved.

WORKED EXAMPLE : Adjusting the 100nF Capacitance Range

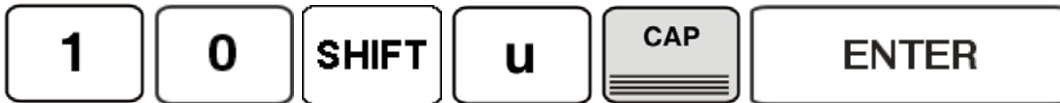
To activate front panel calibration mode press the following key sequence :

i ONLY REQUIRED IF THE CALIBRATOR IS NOT ALREADY IN CALIBRATION MODE

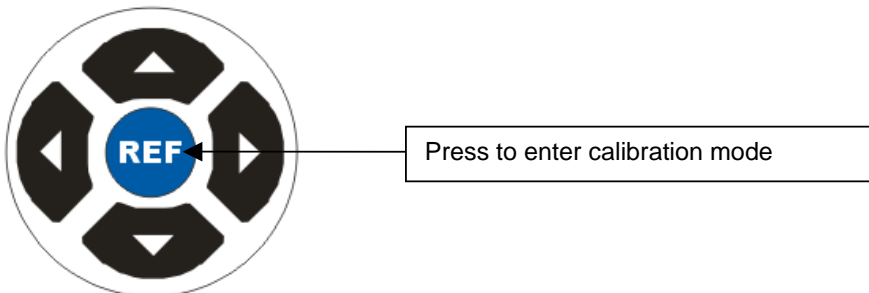


i THE CALIBRATOR WILL PRODUCE A 2 SECOND BEEP TO INDICATE FRONT PANEL CALIBRATION MODE IS ACTIVATED

- 1) Select 100Ω 2-WIRE output from the calibrator :
Note : the SHIFT-u (micro) key presses allow the n (nano) unit to be selected



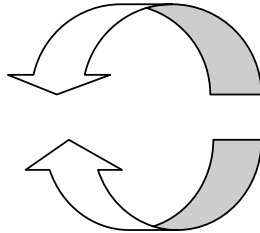
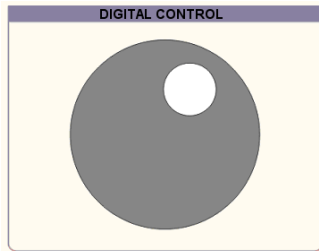
- 2) Press the REF button to enable adjustment on this range



- 3) The shift button will illuminate when in calibration mode



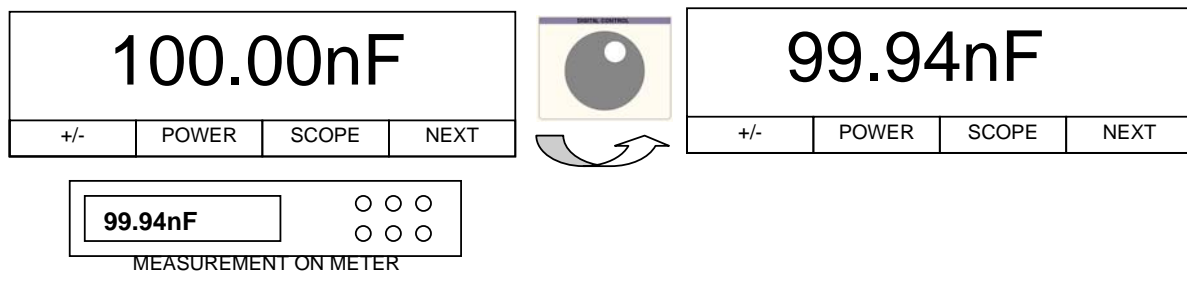
- 4) Use the digital control knob to change the measured output (or the displayed resistance / capacitance value) as required.



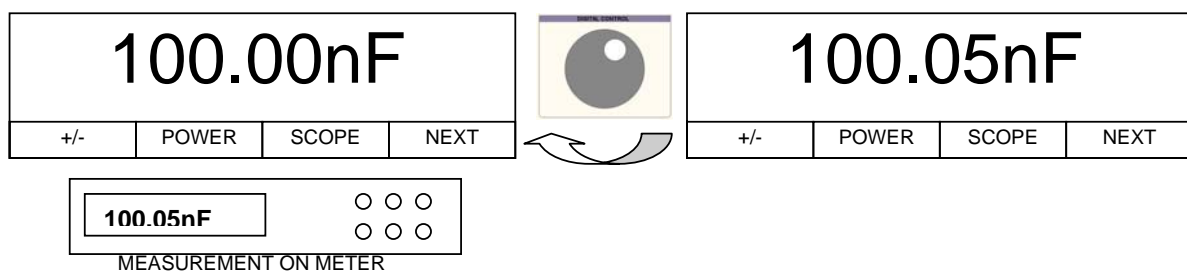
DECREASE OUTPUT / VALUE

INCREASE OUTPUT / VALUE

MEASURE THE CAPACITANCE FROM THE CALIBRATOR USING A BRIDGE. IF THE VALUE IS LOW, FOR EXAMPLE 99.94nF, ROTATE THE DIAL ANTI-CLOCKWISE UNTIL THE DISPLAY ON THE CALIBRATOR SHOWS 99.94nF.



MEASURE THE CAPACITANCE FROM THE CALIBRATOR USING A BRIDGE. IF THE VALUE IS HIGH, FOR EXAMPLE 100.05nF, ROTATE THE DIAL CLOCKWISE UNTIL THE DISPLAY ON THE CALIBRATOR SHOWS 100.05nF.

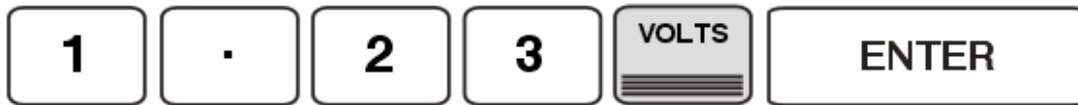


- 5) Press **REF** again and the **SHIFT** button illumination will turn off **SHIFT** to indicate the adjustment has been saved.

WORKED EXAMPLE : Adjusting the 19mH Inductance Range

To activate front panel calibration mode press the following key sequence :

i ONLY REQUIRED IF THE CALIBRATOR IS NOT ALREADY IN CALIBRATION MODE



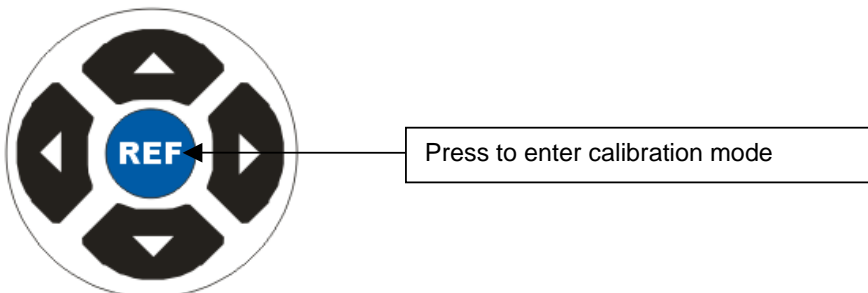
i THE CALIBRATOR WILL PRODUCE A 2 SECOND BEEP TO INDICATE FRONT PANEL CALIBRATION MODE IS ACTIVATED

1) Select 19mH output from the calibrator :

Note : the SHIFT-CAP key presses allow the IND (Inductance) function to be selected



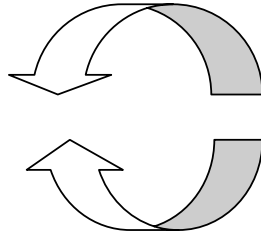
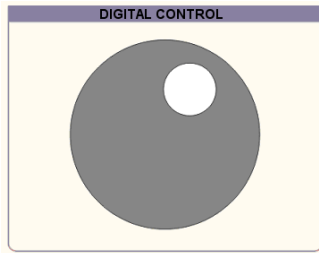
2) Press the REF button to enable adjustment on this range



3) The shift button will illuminate when in calibration mode



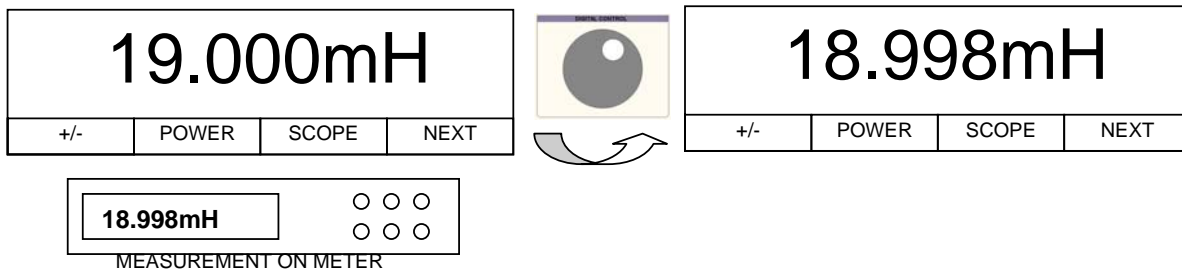
- 4) Use the digital control knob to change the measured output
(or the displayed resistance / capacitance value) as required.



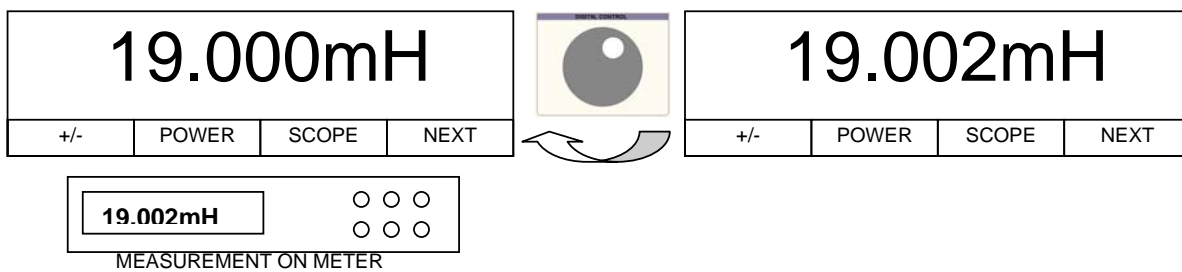
DECREASE OUTPUT / VALUE

INCREASE OUTPUT / VALUE

**MEASURE THE INDUCTANCE FROM THE CALIBRATOR USING A METER.
IF THE VALUE IS LOW, FOR EXAMPLE 18.998mH, ROTATE THE DIAL ANTI-CLOCKWISE UNTIL THE DISPLAY ON THE CALIBRATOR SHOWS 18.998mH.**



**MEASURE THE CAPACITANCE FROM THE CALIBRATOR USING A METER.
IF THE VALUE IS HIGH, FOR EXAMPLE 19.002mH, ROTATE THE DIAL CLOCKWISE UNTIL THE DISPLAY ON THE CALIBRATOR SHOWS 19.002mH.**



- 5) Press **REF** again and the **SHIFT** button illumination will turn off **SHIFT** to indicate the adjustment has been saved.

3000/3300 Series

Multi Product Calibrators & Precision Calibrators

Appendix A

Verification & Adjustment Points



TITLE	TEST VALUE	CONNECTIONS / NOTES
DC Voltage		
200mV Zero ADJ	0mV	Connect Calibrator V terminals to DMM
200mV +FS ADJ	200mV	Connect Calibrator V terminals to DMM
200mV -FS ADJ	-200mV	Connect Calibrator V terminals to DMM
2V Zero ADJ	0V	Connect Calibrator V terminals to DMM
2V +FS ADJ	2V	Connect Calibrator V terminals to DMM
2V -FS ADJ	-2V	Connect Calibrator V terminals to DMM
20V Zero ADJ	0V	Connect Calibrator V terminals to DMM
20V +FS ADJ	20V	Connect Calibrator V terminals to DMM
20V -FS ADJ	-20V	Connect Calibrator V terminals to DMM
200V +FS ADJ	200V	Connect Calibrator V terminals to DMM
200V ZERO ADJ	5V	Connect Calibrator V terminals to DMM
200V -FS ADJ	-200V	Connect Calibrator V terminals to DMM
1kV +FS ADJ	1000V	Connect Calibrator V terminals to DMM
1kV ZERO ADJ	50V	Connect Calibrator V terminals to DMM
1kV -FS ADJ	-1000V	Connect Calibrator V terminals to DMM
AC Voltage Output Frequency Tests		
AC Voltage Measurements		
200mV : 206Hz FS ADJ	200mV	
200mV : 206Hz Z ADJ	22mV	
200mV : 10Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 30Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 56Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 106Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 596Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 1kHz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 2kHz FS ADJ	200mV	
200mV : 3.5kHz ADJ	200mV	



TITLE	TEST VALUE	CONNECTIONS / NOTES
200mV : 5kHz ADJ	200mV	
200mV : 7.5kHz FSADJ	200mV	
200mV : 10kHz FS ADJ	200mV	
200mV : 15kHz FS ADJ	200mV	
200mV : 20kHz FS ADJ	200mV	
200mV : 30kHz FS ADJ	200mV	
200mV : 40kHz FS ADJ	200mV	
200mV : 50kHz FS ADJ	200mV	
200mV : 60kHz FS ADJ	200mV	
200mV : 80kHz FS ADJ	200mV	
200mV :100kHz FS ADJ	200mV	
200mV :200kHz FS ADJ	200mV	
200mV :400kHz FS ADJ	200mV	
200mV :500kHz FS ADJ	200mV	
2V : 206Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 206Hz Z ADJ	0.21V	Connect Calibrator V terminals to DMM
2V : 10Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 30Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 56Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 106Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 596Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 1kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 2kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 3.5kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 5kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 7.5kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 10kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 15kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 20kHz FS ADJ	2V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
2V : 30kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 40kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 50kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 60kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 80kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 100kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 200kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 400kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 500kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
20V : 206Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 206Hz Z ADJ	2.1V	Connect Calibrator V terminals to DMM
20V : 10Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 30Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 56Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 106Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 596Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 1kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 2kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 3.5kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 5kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 7.5kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 10kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 15kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 20kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 30kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 40kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 50kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 60kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 80kHz FS ADJ	20V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
20V : 100kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
200V : 206Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 206Hz Z ADJ	21V	Connect Calibrator V terminals to DMM
200V : 30Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 56Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 106Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 596Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 1kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 2kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 3.5kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 5kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 7.5kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 10kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 15kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 20kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 30kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 40kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
1kV : 206Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 206Hz Z ADJ	210V	Connect Calibrator V terminals to DMM
1kV : 30Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 56Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 106Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 596Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 1kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 2kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 3.5kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 5kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 7.5kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 10kHz FS ADJ	700V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
Linearity - 20V DC Range		
DC CURRENT		
200uA Zero ADJ	0uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA +FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA -FS ADJ	-200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA Zero ADJ	0mA	
2mA +FS ADJ	2mA	
2mA -FS ADJ	-2mA	
20mA Zero ADJ	0mA	
20mA +FS ADJ	20mA	
20mA -FS ADJ	-20mA	
200mA Zero ADJ	0mA	
200mA +FS ADJ	200mA	
200mA -FS ADJ	-200mA	
2A Zero ADJ	0A	>>> Use 1A 10hm Shunt <<<
2A +FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A -FS ADJ	-2A	>>> Use 1A 10hm Shunt <<<
20A Zero ADJ	0A	>>> Use 10A 0.10hm Shunt <<<
20A +FS ADJ	20A	>>> Use 10A 0.10hm Shunt <<<
20A -FS ADJ	-20A	>>> Use 10A 0.10hm Shunt <<<
AC CURRENT		
200uA : 206Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 206Hz Z ADJ	20uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 10Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 30Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 56Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 106Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 596Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS



TITLE	TEST VALUE	CONNECTIONS / NOTES
200uA : 1kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 2kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA :3.5kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA :5kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA :7.5kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA :10kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA : 206Hz FS ADJ	2mA	
2mA : 206Hz Z ADJ	0.21mA	
2mA : 10Hz FS ADJ	2mA	
2mA : 30Hz FS ADJ	2mA	
2mA : 56Hz FS ADJ	2mA	
2mA : 106Hz FS ADJ	2mA	
2mA : 596Hz FS ADJ	2mA	
2mA : 1kHz FS ADJ	2mA	
2mA : 2kHz FS ADJ	2mA	
2mA : 3.5kHz FS ADJ	2mA	
2mA : 5kHz FS ADJ	2mA	
2mA : 7.5kHz FS ADJ	2mA	
2mA : 10kHz FS ADJ	2mA	
20mA : 206Hz FS ADJ	20mA	
20mA : 10Hz FS ADJ	20mA	
20mA : 30Hz FS ADJ	20mA	
20mA : 56Hz FS ADJ	20mA	
20mA : 106Hz FS ADJ	20mA	
20mA : 596Hz FS ADJ	20mA	
20mA : 1kHz FS ADJ	20mA	
20mA : 2kHz FS ADJ	20mA	
20mA : 3.5kHz FS ADJ	20mA	
20mA : 5kHz FS ADJ	20mA	



TITLE	TEST VALUE	CONNECTIONS / NOTES
20mA : 7.5kHz FS ADJ	20mA	
20mA : 10kHz FS ADJ	20mA	
200mA : 206Hz FS ADJ	200mA	
200mA : 206Hz Z ADJ	21mA	
200mA : 10Hz FS ADJ	200mA	
200mA : 30Hz FS ADJ	200mA	
200mA : 56Hz FS ADJ	200mA	
200mA : 106Hz FS ADJ	200mA	
200mA : 596Hz FS ADJ	200mA	
200mA : 1kHz FS ADJ	200mA	
200mA : 2kHz FS ADJ	200mA	
200mA : 3.5kHz FS ADJ	200mA	
200mA : 5kHz FS ADJ	200mA	
200mA : 7.5kHz FS ADJ	200mA	
200mA : 10kHz FS ADJ	200mA	
2A : 206Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 206Hz Z ADJ	0.21A	>>> Use 1A 10hm Shunt <<<
2A : 10Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 30Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 56Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 106Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 596Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 1kHz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 2kHz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 3.5kHz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 5kHz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
20A : 206Hz FS ADJ	25A	>>> Use 10A 0.10hm Shunt <<<
20A : 206Hz Z ADJ	2.1A	>>> Use 10A 0.10hm Shunt <<<
20A : 10Hz FS ADJ	10A	>>> Use 10A 0.10hm Shunt <<<



TITLE	TEST VALUE	CONNECTIONS / NOTES
20A : 30Hz FS ADJ	10A	>>> Use 10A 0.1Ohm Shunt <<<
20A : 56Hz FS ADJ	10A	>>> Use 10A 0.1Ohm Shunt <<<
20A : 106Hz FS ADJ	10A	>>> Use 10A 0.1Ohm Shunt <<<
20A : 596Hz FS ADJ	10A	>>> Use 10A 0.1Ohm Shunt <<<
20A : 1kHz FS ADJ	10A	>>> Use 10A 0.1Ohm Shunt <<<
2 Wire Resistance measured as value at terminals.		
ADJ 0 Ohms 2 Wire	0.0R	
ADJ 0.1 Ohms 2 Wire	0.1R	
ADJ 1 Ohms 2 Wire	1.0R	
ADJ 10 Ohms 2 Wire	10.0R	
ADJ 100 Ohms 2 Wire	100R	
ADJ 1k Ohms 2 Wire	1.0kR	
ADJ 10k Ohms 2 Wire	10.00kR	
ADJ 100 kOhms 2 Wire	100kR	
ADJ 1MOhms 2 Wire	1MR	
ADJ 10MOhms 2 Wire	10.0MR	
ADJ 100MOhms 2 Wire	100MR	
ADJ 1000MOhms 2 Wire	1000MR	
Simulated Ohms		
ADJ 100R Zero 2 WSim	10R	
ADJ 100R FS 2 WSim	100R	
ADJ 100R Zero 2 WSim	10R	
ADJ 100R FS 2 WSim	100R	
ADJ 1kR Zero 2 WSim	100R	
ADJ 1kR FS 2 WSim	1kR	
ADJ 1kR Zero 2 WSim	100R	
ADJ 1kR FS 2 WSim	1kR	
ADJ 10kRZero 2 WSim	1kR	



TITLE	TEST VALUE	CONNECTIONS / NOTES
ADJ 10kR FS 2 WSim	10kR	
ADJ 10kRZero 2 WSim	1kR	
ADJ 10kR FS 2 WSim	10kR	
ADJ 100kRZero 2 WSim	10kR	
ADJ 100kR FS 2 WSim	100kR	
ADJ 100kRZero 2 WSim	10kR	
ADJ 100kR FS 2 WSim	100kR	
ADJ 1MR Zero 2 W Sim	100kR	
ADJ 1MR FS 2 WSim	1MR	
ADJ 1MR Zero 2 W Sim	100kR	
ADJ 1MR FS 2 WSim	1MR	
ADJ 10MR Zero 2 WSim	1MR	
ADJ 10MR FS 2 WSim	10MR	
ADJ 10MR Zero 2 WSim	1MR	
ADJ 10MR FS 2 WSim	10MR	
4 Wire Ohms Measured relative to Zero		
ADJ 100 mOhms 4 Wire	100mR	
ADJ 1 Ohms 4 Wire	1R	
ADJ 10 Ohms 4 Wire	10R	
ADJ 100 Ohms 4 Wire	100R	
ADJ 1 kOhms 4 Wire	1kR	
ADJ 10 kOhms 4 Wire	10kR	
PT100 Resistance Option		
PT100 ADJ	-100.0°C	
PT100 ADJ	0.0°C	
PT100 ADJ	30.0°C	
PT100 ADJ	60.0°C	
PT100 ADJ	100.0°C	



TITLE	TEST VALUE	CONNECTIONS / NOTES
PT100 ADJ	200.0°C	
PT100 ADJ	400.0°C	
PT100 ADJ	800.0°C	
Capacitance @ 1kHz Measured Cp up to 1uF, Cs above		
ADJ 1nF	1nF	Select Parrel cap measurement & OC/CE Trim bridge, conect to V out on Calibrator
ADJ 10nF	10.0nF	
ADJ 20nF	20nF	
ADJ 50nF	50nF	
ADJ 100nF	100nF	
ADJ 1uF	1uF	
ADJ 10uF	10uF	Select Series capacitance measurement
Auto Capacitance @ 1kHz Measured Cp up to 1uF, Cs above		
ADJ 1nF	1nF	Connect L/C Bridge to V-out on Calibrator
ADJ 10nF	10.0nF	
ADJ 20nF	20nF	
ADJ 50nF	50nF	
ADJ 100nF	100nF	
ADJ 1uF	1uF	
ADJ 10uF	10uF	
Simulated Capacitance		
ADJ 100uF	100uF	Select Series capacitance measurement
ADJ 1mF	1mF	Select Series capacitance measurement
ADJ 10mF	10mF	Select Series capacitance measurement
Inductance @ 1kHz. measured Ls up to 1H. Lp above		
ADJ Ind	1mH	Select Ls Measurement Short bridge leads at connector end and perform SC Trim.
ADJ Ind	10mH	
ADJ Ind	19mH	



TITLE	TEST VALUE	CONNECTIONS / NOTES
ADJ Ind	29mH	
ADJ Ind	50mH	
ADJ Ind	100mH	
ADJ Ind	1H	
ADJ Ind	10H	Change Measurement to Lp Measurement
Auto Inductance @ 1kHz. measured Ls up to 1H. Lp above		
ADJ Ind	1mH	Short bridge leads at connector end and perform SC Trim.
ADJ Ind	10mH	
ADJ Ind	19mH	
ADJ Ind	29mH	
ADJ Ind	50mH	
ADJ Ind	100mH	
ADJ Ind	1H	
ADJ Ind	10H	
Reference Frequency Output		
1 ppm Frequency Option		
Amplitude Output		
Timebase Output		
600 MHz Frequency Sweep Output		
600MHz Bandwidth Level output into 50R Pk-Pk		
350MHz Frequency Sweep Output		
350MHz Bandwidth Level output into 50R Pk-Pk		
50kHz Reference level		
Fast Rise output		



TITLE	TEST VALUE	CONNECTIONS / NOTES
Power Option: AC Voltage Measurements (Current out = 3A)		
Power Option: AC Current (Voltage out = 20V)		
DC Current output on Power (DC Voltage out = 20V)		
DC Voltage output on Power (DC Current = 3Amp)		
Phase Angle, Measured at 20V/5A 50Hz AC		
Harmonic Generation Measurements @ 50Hz fundamental, 20V/5A		
Phase Angle Mains Volts		
Phase Angle Full Range		



TITLE	TEST VALUE	CONNECTIONS / NOTES
DC Voltage		
DMM ZERO	0V	
200mV Lead Check	50mV	Connect Calibrator V terminals to DMM
200mV Range	0mV	Connect Calibrator V terminals to DMM
200mV Range	100mV	Connect Calibrator V terminals to DMM
200mV Range	200mV	Connect Calibrator V terminals to DMM
200mV Range	-100mV	Connect Calibrator V terminals to DMM
200mV Range	-200mV	Connect Calibrator V terminals to DMM
DMM ZERO	0V	>>> S/C TEST LEADS <<<
2V Lead Check	-100mV	Connect Calibrator V terminals to DMM
2V Range	0.22V	Connect Calibrator V terminals to DMM
2V Range	1V	Connect Calibrator V terminals to DMM
2V Range	2V	Connect Calibrator V terminals to DMM
2V Range	-0.22V	Connect Calibrator V terminals to DMM
2V Range	-1V	Connect Calibrator V terminals to DMM
2V Range	-2V	Connect Calibrator V terminals to DMM
20V Lead Check	0V	Connect Calibrator V terminals to DMM
20V Range	2.2V	Connect Calibrator V terminals to DMM
20V Range	10V	Connect Calibrator V terminals to DMM
20V Range	20V	Connect Calibrator V terminals to DMM
20V Range	-2.2V	Connect Calibrator V terminals to DMM
20V Range	-10V	Connect Calibrator V terminals to DMM
20V Range	-20V	Connect Calibrator V terminals to DMM
200V Lead Check	5V	Connect Calibrator V terminals to DMM
200V Range	22V	Connect Calibrator V terminals to DMM
200V Range	100V	Connect Calibrator V terminals to DMM
200V Range	200V	Connect Calibrator V terminals to DMM
200V Range	-200V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
200V Range	-100V	Connect Calibrator V terminals to DMM
200V Range	-22V	Connect Calibrator V terminals to DMM
1kV Lead Check	50V	Connect Calibrator V terminals to DMM
1kV Range	220V	Connect Calibrator V terminals to DMM
1kV Range	1000V	Connect Calibrator V terminals to DMM
NEG SWITCH DELAY	-10V	Connect Calibrator V terminals to DMM
1kV Range	-1000V	Connect Calibrator V terminals to DMM
1kV Range	-220V	Connect Calibrator V terminals to DMM
SET ZERO WAIT	0mV	Connect Calibrator V terminals to DMM
AC Voltage Output Frequency Tests		
10kHz at 2V	10kHz	
100kHz at 2V	100kHz	
AC Voltage Measurements		
200mV Lead Check	100mV	USE SCREEN LEADS, SET LEVEL FILTER ON HP+ Guard open
200mV A.C. : 40Hz	20mV	
200mV A.C. : 206Hz	20mV	
200mV A.C. : 500kHz #	20mV	
200mV A.C. : 10Hz#	200mV	
200mV A.C. : 40Hz	200mV	
200mV A.C. : 56Hz	200mV	
200mV A.C. : 206Hz	200mV	
200mV A.C. : 1kHz	200mV	
200mV A.C. : 10kHz	200mV	
200mV A.C. : 20kHz	200mV	
200mV A.C. : 100kHz#	200mV	
200mV A.C. : 500kHz#	200mV	
2V Lead Check	500mV	Connect Calibrator V terminals to DMM
2V Range : 40Hz	0.21V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
2V Range : 206Hz	0.21V	Connect Calibrator V terminals to DMM
2V Range : 500kHz #	0.21V	Connect Calibrator V terminals to DMM
2V Range. : 206Hz	1V	Connect Calibrator V terminals to DMM
2V Range : 206Hz	1.5V	Connect Calibrator V terminals to DMM
2V Range : 10Hz#	2V	Connect Calibrator V terminals to DMM
2V Range : 40Hz	2V	Connect Calibrator V terminals to DMM
2V Range : 56Hz	2V	Connect Calibrator V terminals to DMM
2V Range : 206Hz	2V	Connect Calibrator V terminals to DMM
2V Range: 1kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 5kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 10kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 20kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 50kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 100kHz#	2V	Connect Calibrator V terminals to DMM
2V Range : 500kHz#	2V	Connect Calibrator V terminals to DMM
20V Lead Check	5V	Connect Calibrator V terminals to DMM
20V Range : 40Hz	2.1V	Connect Calibrator V terminals to DMM
20V Range : 206Hz	2.1V	Connect Calibrator V terminals to DMM
20V Range : 100kHz #	2.1V	Connect Calibrator V terminals to DMM
20V Range : 206Hz	10V	Connect Calibrator V terminals to DMM
20V Range : 206Hz	15V	Connect Calibrator V terminals to DMM
20V Range : 10Hz#	20V	Connect Calibrator V terminals to DMM
20V Range : 40Hz	20V	Connect Calibrator V terminals to DMM
20V Range : 56Hz	20V	Connect Calibrator V terminals to DMM
20V Range : 206Hz	20V	Connect Calibrator V terminals to DMM
20V Range : 1kHz	20V	Connect Calibrator V terminals to DMM
20V Range : 5kHz	20V	Connect Calibrator V terminals to DMM
20V Range : 10kHz	20V	Connect Calibrator V terminals to DMM
20V Range : 20kHz	20V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
20V Range : 100kHz #	20V	Connect Calibrator V terminals to DMM
200V Lead Check	50V	Connect Calibrator V terminals to DMM
200V Range : 40Hz	21V	Connect Calibrator V terminals to DMM
200V Range : 206Hz	21V	Connect Calibrator V terminals to DMM
200V Range : 20kHz	21V	Connect Calibrator V terminals to DMM
200V Range : 206Hz	100V	Connect Calibrator V terminals to DMM
200V Range : 30Hz#	200V	Connect Calibrator V terminals to DMM
200V Range : 40Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 56Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 206Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 1000Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 10kHz	200V	Connect Calibrator V terminals to DMM
200V Range : 20kHz	200V	Connect Calibrator V terminals to DMM
1kV Lead Check	50V	Connect Calibrator V terminals to DMM
1kV Range : 40Hz	210V	Connect Calibrator V terminals to DMM
1kV Range : 206Hz	210V	Connect Calibrator V terminals to DMM
1kV Range : 10kHz	210V	Connect Calibrator V terminals to DMM
1kV Range : 30Hz#	700V	Connect Calibrator V terminals to DMM
1kV Range : 40Hz	700V	Connect Calibrator V terminals to DMM
1kV Range : 56Hz	700V	Connect Calibrator V terminals to DMM
1kV Range : 1kHz	700V	Connect Calibrator V terminals to DMM
1kV Range : 5kHz	700V	Connect Calibrator V terminals to DMM
1kV Range : 10kHz	700V	Connect Calibrator V terminals to DMM
Lead check test	250V	USE HV ADAPTOR TO MEASURE 1KV
1kV Range : 56Hz	1000V	Connect Calibrator V terminals to DMM
Linearity - 20V DC Range		
Linearity	19V	Connect Calibrator V terminals to DMM
Linearity	18V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
Linearity	17V	Connect Calibrator V terminals to DMM
Linearity	16V	Connect Calibrator V terminals to DMM
Linearity	15V	Connect Calibrator V terminals to DMM
Linearity	14V	Connect Calibrator V terminals to DMM
Linearity	13V	Connect Calibrator V terminals to DMM
Linearity	12V	Connect Calibrator V terminals to DMM
Linearity	11V	Connect Calibrator V terminals to DMM
Linearity	9V	Connect Calibrator V terminals to DMM
Linearity	8V	Connect Calibrator V terminals to DMM
Linearity	7V	Connect Calibrator V terminals to DMM
Linearity	6V	Connect Calibrator V terminals to DMM
Linearity	5V	Connect Calibrator V terminals to DMM
Linearity	4V	Connect Calibrator V terminals to DMM
Linearity	3V	Connect Calibrator V terminals to DMM
Linearity	2.1V	Connect Calibrator V terminals to DMM
Linearity	-19V	Connect Calibrator V terminals to DMM
Linearity	-18V	Connect Calibrator V terminals to DMM
Linearity	-17V	Connect Calibrator V terminals to DMM
Linearity	-16V	Connect Calibrator V terminals to DMM
Linearity	-15V	Connect Calibrator V terminals to DMM
Linearity	-14V	Connect Calibrator V terminals to DMM
Linearity	-13V	Connect Calibrator V terminals to DMM
Linearity	-12V	Connect Calibrator V terminals to DMM
Linearity	-11V	Connect Calibrator V terminals to DMM
Linearity	-9V	Connect Calibrator V terminals to DMM
Linearity	-8V	Connect Calibrator V terminals to DMM
Linearity	-7V	Connect Calibrator V terminals to DMM
Linearity	-6V	Connect Calibrator V terminals to DMM
Linearity	-5V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
Linearity	-4V	Connect Calibrator V terminals to DMM
Linearity	-3V	Connect Calibrator V terminals to DMM
Linearity	-2.1V	Connect Calibrator V terminals to DMM
DC CURRENT		
200uA Lead Check	50uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	0uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	100uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	-100uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	-200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA Lead Check	500uA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA Range	0.21mA	
2mA Range	1mA	
2mA Range	2mA	
2mA Range	-1mA	
2mA Range	-2mA	
20mA Lead Check	1mA	CONNECT FOR LOW CURRENT MEASUREMENTS
20mA Range	2.1mA	
20mA Range	5mA	
20mA Range	10mA	
20mA Range	15mA	
20mA Range	20mA	
20mA Range	-5mA	
20mA Range	-10mA	
20mA Range	-15mA	
20mA Range	-20mA	
200mA Lead Check	10mA	
200mA Range	21mA	



TITLE	TEST VALUE	CONNECTIONS / NOTES
200mA Range	100mA	
200mA Range	200mA	
200mA Range	-100mA	
200mA Range	-200mA	
2A Lead Check	100mA	>>> Use 1A 10hm Shunt <<<
2A Range	0.21A	>>> Use 1A 10hm Shunt <<<
2A Range	1A	>>> Use 1A 10hm Shunt <<<
2A Range	2A	>>> Use 1A 10hm Shunt <<<
2A Range	-1A	>>> Use 1A 10hm Shunt <<<
2A Range	-2A	>>> Use 1A 10hm Shunt <<<
20A Lead Check	1A	>>> Use 10A 0.1Ohm Shunt <<<
30A Range	2.1A	>>> Use 10A 0.1Ohm Shunt <<<
30A Range	10A	>>> Use 10A 0.1Ohm Shunt <<<
30A Range	20A	>>> Use 10A 0.1Ohm Shunt <<<
30A Range #	30A	>>> Use 50A 0.01Ohm Shunt TL174 <<<
30A Range #	-30A	>>> Use 50A 0.01Ohm Shunt TL174 <<<
30A Range	-20A	>>> Use 10A 0.1Ohm Shunt <<<
30A Range	-10A	>>> Use 10A 0.1Ohm Shunt <<<
AC CURRENT		
200uA Lead Check	100uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Rng: 40Hz	20uA	
200uA Rng: 206Hz	20uA	
200uA Rng: 10kHz#	20uA	
200uA Rng: 10Hz#	200uA	
200uA Rng: 40Hz	200uA	
200uA Rng: 56Hz	200uA	
200uA Rng: 1kHz	200uA	
200uA Rng: 10kHz#	200uA	



TITLE	TEST VALUE	CONNECTIONS / NOTES
2mA Lead Check	0.1mA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA Rng: 40Hz	0.21mA	
2mA Rng: 206Hz	0.21mA	
2mA Rng: 10kHz#	0.21mA	
2mA Rng: 10Hz#	2mA	
2mA Rng: 40Hz	2mA	
2mA Rng: 56Hz	2mA	
2mA Rng: 1kHz	2mA	
2mA Rng: 10kHz#	2mA	
20mA Lead Check	1mA	CONNECT FOR LOW CURRENT MEASUREMENTS
20mA : 206Hz Zero	2.1mA	
20mA Rng: 40Hz	2.1mA	
20mA Rng: 206Hz	2.1mA	
20mA Rng: 10kHz#	2.1mA	
20mA Rng: 56Hz	10mA	
20mA Rng: 10Hz#	20mA	
20mA Rng: 40Hz	20mA	
20mA Rng: 1kHz	20mA	
20mA Rng: 10kHz#	20mA	
200mA Lead Check	50mA	
200mA Rng: 40Hz	21mA	
200mA Rng: 206Hz	21mA	
200mA Rng: 10kHz #	21mA	
200mA Rng: 10Hz#	200mA	
200mA Rng: 40Hz	200mA	
200mA Rng: 56Hz	200mA	
200mA Rng: 1kHz	200mA	
200mA Rng: 10kHz#	200mA	
2A Lead Check	500mA	>>> Use 1A 10hm Shunt <<<



TITLE	TEST VALUE	CONNECTIONS / NOTES
2A Rng: 40Hz	0.21A	
2A Rng: 206Hz	0.21A	
2A Rng: 5kHz#	0.21A	
2A Rng: 10Hz#	2A	
2A Rng: 40Hz	2A	
2A Rng: 56Hz	2A	
2A Rng: 1kHz	2A	
2A Rng: 5kHz #	2A	
20A Lead Check	1A	>>> Use 10A 0.1Ohm Shunt <<<
30A Rng: 40Hz	2.1A	
30A Rng: 206Hz	2.1A	
30A Rng: 10Hz#	20A	
30A Rng: 40Hz	20A	
30A Rng: 56Hz	20A	
30A Rng: 100Hz	20A	
30A Rng: 1kHz #	20A	
30A Rng: 56Hz#	30A	
2 Wire Resistance measured as value at terminals.		
2-Wire Lead Check	0R	>> Connect up 4-Wire leads in 2-Wire Configuration (Connect V and I together) <<
0R 2 Wire	0.0R	
0.1R 2 Wire	0.1R	
1R 2 Wire	1.0R	
10R 2 Wire	10.0R	
100R 2 Wire	100R	
1kR 2 Wire	1.0kR	
10kR 2 Wire	10.00kR	
100kR 2 Wire	100kR	
1MR 2 Wire	1MR	



TITLE	TEST VALUE	CONNECTIONS / NOTES
10MR 2 Wire	10.0MR	
100MR 2 Wire	100MR	
1000MR 2 Wire	1000MR	
Simulated Ohms		
Simulated Ohms		
4 Wire Ohms Measured relative to Zero		
4-Wire Lead Check	0.0R	>>> Connect up 4-Wire leads (Use correct 4-Wire configuration) <<<
Nul Zero Ohms 4 Wire	0.0R	
100mR 4 Wire	100mR	
1R 4 Wire	1R	
10R 4 Wire	10R	
100R 4 Wire	100R	
1kR 4 Wire	1kR	
10kR 4 Wire	10kR	
100kR 4 Wire	100kR	
PT100 Resistance Option		
PT100 Resistance Option		
PT100 PRT Resistance	-100.0°C	
PT100 PRT Resistance	0.0°C	
PT100 PRT Resistance	30.0°C	
PT100 PRT Resistance	60.0°C	
PT100 PRT Resistance	100.0°C	
PT100 PRT Resistance	200.0°C	
PT100 PRT Resistance	400.0°C	
PT100 PRT Resistance	800.0°C	



TITLE	TEST VALUE	CONNECTIONS / NOTES
Capacitance @ 1kHz Measured Cp up to 1uF, Cs above		
1nF	1nF	Select Parrel cap measurement & OC/CE Trim bridge, conect to V out on Calibrator
10nF	10.0nF	
20nF	20nF	
50nF	50nF	
100nF	100nF	
1uF	1uF	
10uF	10uF	Select Series capacitance measurement
Auto Capacitance @ 1kHz Measured Cp up to 1uF, Cs above		
		Auto Capacitance @ 1kHz Measured Cp up to 1uF, Cs above
1nF	1nF	Trim bridge, conect to V out on Calibrator
10nF	10.0nF	
20nF	20nF	
50nF	50nF	
100nF	100nF	
1uF	1uF	
10uF	10uF	Select Series capacitance measurement
Simulated Capacitance		
100uF #	100uF	Select Series capacitance measurement
1mF #	1mF	Select Series capacitance measurement
10mF #	10mF	Select Series capacitance measurement
Inductance @ 1kHz. measured Ls up to 1H. Lp above		
Inductance @ 1kHz	1mH	Select Ls Measurement Short bridge leads at connector end and perform SC Trim.
Inductance @ 1kHz	10mH	
Inductance @ 1kHz#	19mH	
Inductance @ 1kHz#	29mH	



TITLE	TEST VALUE	CONNECTIONS / NOTES
Inductance @ 1kHz#	50mH	
Inductance @ 1kHz	100mH	
Inductance @ 1kHz	1H	
Inductance @ 1kHz #	10H	Change Measurement to Lp Measurement

Auto Inductance @ 1kHz. measured Ls up to 1H. Lp above

Auto Inductance @ 1kHz. measured Ls up to 1H. Lp above

Inductance @ 1kHz	1mH	
Inductance @ 1kHz	10mH	
Inductance @ 1kHz	19mH	
Inductance @ 1kHz	29mH	
Inductance @ 1kHz	50mH	
Inductance @ 1kHz	100mH	
Inductance @ 1kHz	1H	
Inductance @ 1kHz	10H	

Reference Frequency Output

Ref Freq Mult	1.0Hz	Measure 10Mhz REF Frequency
Frequency	10MHz	Measure Calibrators output
Frequency	1MHz	
Frequency	100kHz	
Frequency	50kHz	
Frequency	20kHz	
Frequency	10kHz	
Frequency	1kHz	
Frequency	100Hz	

1 ppm Frequency Option

Ref Freq Mult	1.0Hz	Measure 10Mhz REF Frequency
Frequency	10MHz	Measure Calibrators output



TITLE	TEST VALUE	CONNECTIONS / NOTES
Frequency	1MHz	
Frequency	100kHz	
Frequency	50kHz	
Frequency	20kHz	
Frequency	10kHz	
Frequency	1kHz	
Frequency	100Hz	
Amplitude Output		
10mV/Div Adj	60mV	Connect Calibrator V terminals to DMM
100mV/Div Adj	600mV	Connect Calibrator V terminals to DMM
2mV/Div	12mV	Connect DMM to Scope output.
5mV/Div	30mV	
10mV/Div	60mV	
20mV/Div	120mV	
50mV/Div	300mV	
100mV/Div	600mV	
200mV/Div	1.2V	
500mV/Div	3V	
1V/Div	6V	
2V/Div	12V	
5V/Div	30V	
10V/Div	60V	
20V/Div	120V	
Timebase Output		
20ns/Div	50MHz	
50ns/Div	20MHz	
100ns/Div	10MHz	
200ns/Div	5MHz	



TITLE	TEST VALUE	CONNECTIONS / NOTES
500ns/Div	2MHz	
1us/Div	1MHz	
2us/Div	500kHz	
5us/Div	200kHz	
10us/Div	100kHz	
20us/Div	50kHz	
50us/Div	20kHz	
100us/Div	10kHz	
200us/Div	5kHz	
500us/Div	2kHz	
1ms/Div	1kHz	
2ms/Div	500Hz	
5ms/Div	200Hz	
10ms/Div	100Hz	
20ms/Div	50Hz	
50ms/Div	20Hz	
100ms/Div	10Hz	
200ms/Div	5Hz	200ms/Div
500ms/Div	2Hz	200ms/Div
1s/Div	1Hz	200ms/Div
600 MHz Frequency Sweep Output		
10MHz	10MHz	
300MHz	300MHz	
600MHz	600MHz	
600MHz Bandwidth Level output into 50R Pk-Pk		
Level @ 5MHz#	600mV	
Level @ 250MHz#	600mV	
Level @ 600MHz#	600mV	



TITLE	TEST VALUE	CONNECTIONS / NOTES
350MHz Frequency Sweep Output		
10MHz	10MHz	
100MHz	100MHz	
350MHz	350MHz	
350MHz Bandwidth Level output into 50R Pk-Pk		
Level @ 5MHz#	600mV	
Level @ 100MHz#	600mV	
Level @ 350MHz#	600mV	
50kHz Reference level		
BW ref frequency	50kHz	Connect DMM to Scope output
BW ref level Adj	0.2127V	MEASURE LEVEL WITH DMM USING EXT 50 OHM
BW ref frequency	0.2127V	MEASURE LEVEL WITH DMM USING EXT 50 OHM
Fast Rise output		
Fast Rise output	PASS	Fast Rise output 600mV/10nS
Power Option: AC Voltage Measurements (Current out = 3A)		
20V Range : 56Hz	20V	Connect Calibrator V terminals to DMM, 20A Current shunt
200V Range : 60Hz	50V	Connect Calibrator V terminals to DMM, 20A Current shunt
200V Range : 60Hz	100V	Connect Calibrator V terminals to DMM
200V Range : 45Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 60Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 400Hz	200V	Connect Calibrator V terminals to DMM
1000V Range : 60Hz	500V	Connect Calibrator V terminals to DMM
Power Option: AC Current (Voltage out = 20V)		
3A Zero Adj	0.3A	Connect to 0.1ohm/20 Amp current shunt
3A FS Adj	2A	Connect to 0.1ohm/20 Amp current shunt
12A Zero Adj	3A	Connect to 0.1ohm/20 Amp current shunt



VERIFICATION POINTS

TITLE	TEST VALUE	CONNECTIONS / NOTES
12A FS Adj	12A	Connect to 0.1ohm/20 Amp current shunt
30A Rng: 56Hz	3A	Connect to 0.1ohm/20 Amp current shunt
30A Rng: 56Hz	5A	
30A Rng: 45Hz	10A	
30A Rng: 56Hz	20A	
30A Rng: 400Hz#	10A	
30A Rng: 56Hz	30A	
2A Rng: 56Hz	2A	Use 2A shunt
2A Rng: 56Hz	0.5A	
DC Current output on Power (DC Voltage out = 20V)		
3A DC Zero Adj	0.3A	Connect to 0.1ohm/20 Amp current shunt
3A DC FS Adj	2A	Connect to 0.1ohm/20 Amp current shunt
12A DC Zero Adj	3A	Connect to 0.1ohm/20 Amp current shunt
12A DC FS Adj	12A	Connect to 0.1ohm/20 Amp current shunt
30A DC Rng	20A	Use 20 Amp Shunt
30A DC Rng	3A	
2A DC Rng	2A	Use 2A current shunt
2A DC Rng	0.3A	
DC Voltage output on Power (DC Current = 3Amp)		
20V Range DC	20V	Connect Calibrator V terminals to DMM, 20A Current shunt
200V Range DC	200V	
1000V Range DC	500V	
Phase Angle, Measured at 20V/5A 50Hz AC		
0° Phase Angle#	0°	Connect 3000 Series to phase meter
60° Phase Angle#	60°	
90° Phase Angle#	90°	
Harmonic Generation Measurements @ 50Hz fundamental, 20V/5A		



TITLE	TEST VALUE	CONNECTIONS / NOTES
3rd Harmonic#	5pc	
3rd Harmonic#	10pc	
5th Harmonic#	10pc	
12th Harmonic#	10pc	
21th Harmonic#	10pc	
Phase Angle Mains Volts		
Phase Angle Mains Volts		
0°:220V:10A: 50Hz#	0°	Connect 3000 Series to phase meter
180°:220V:10A: 50Hz#	180°	Connect 3000 Series to phase meter
Phase Angle Full Range		
Phase Angle Full Range		
0°:20V:0.3A: 50Hz#	0°	Connect 3000 Series to phase meter
0°:20V:2A: 50Hz#	0°	Connect 3000 Series to phase meter
0°:220V:2A: 50Hz#	0°	Connect 3000 Series to phase meter
60°:220V:2A: 50Hz#	60°	Connect 3000 Series to phase meter
90°:220V:2A: 50Hz#	90°	Connect 3000 Series to phase meter
0°:220V:2A: 400Hz#	0°	Connect 3000 Series to phase meter
0°:220V:3A: 50Hz#	0°	Connect 3000 Series to phase meter
90°:220V:20A: 50Hz#	90°	Connect 3000 Series to phase meter
0°:220V:5A: 400Hz#	0°	Connect 3000 Series to phase meter



TITLE	TEST VALUE	CONNECTIONS / NOTES
DC Voltage		
200mV Zero ADJ	0mV	Connect Calibrator V terminals to DMM
200mV +FS ADJ	200mV	Connect Calibrator V terminals to DMM
200mV -FS ADJ	-200mV	Connect Calibrator V terminals to DMM
2V Zero ADJ	0V	Connect Calibrator V terminals to DMM
2V +FS ADJ	2V	Connect Calibrator V terminals to DMM
2V -FS ADJ	-2V	Connect Calibrator V terminals to DMM
20V Zero ADJ	0V	Connect Calibrator V terminals to DMM
20V +FS ADJ	20V	Connect Calibrator V terminals to DMM
20V -FS ADJ	-20V	Connect Calibrator V terminals to DMM
200V +FS ADJ	200V	Connect Calibrator V terminals to DMM
200V ZERO ADJ	5V	Connect Calibrator V terminals to DMM
200V -FS ADJ	-200V	Connect Calibrator V terminals to DMM
1kV +FS ADJ	1000V	Connect Calibrator V terminals to DMM
1kV ZERO ADJ	50V	Connect Calibrator V terminals to DMM
1kV -FS ADJ	-1000V	Connect Calibrator V terminals to DMM
AC Voltage Output Frequency Tests		
AC Voltage Measurements		
200mV : 206Hz FS ADJ	200mV	
200mV : 206Hz Z ADJ	22mV	
200mV : 10Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 30Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 56Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 106Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 596Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 1kHz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 2kHz FS ADJ	200mV	
200mV : 3.5kHz ADJ	200mV	



TITLE	TEST VALUE	CONNECTIONS / NOTES
200mV : 5kHz ADJ	200mV	
200mV : 7.5kHz FSADJ	200mV	
200mV : 10kHz FS ADJ	200mV	
200mV : 15kHz FS ADJ	200mV	
200mV : 20kHz FS ADJ	200mV	
200mV : 30kHz FS ADJ	200mV	
200mV : 40kHz FS ADJ	200mV	
200mV : 50kHz FS ADJ	200mV	
200mV : 60kHz FS ADJ	200mV	
200mV : 80kHz FS ADJ	200mV	
200mV :100kHz FS ADJ	200mV	
200mV :200kHz FS ADJ	200mV	
200mV :400kHz FS ADJ	200mV	
200mV :500kHz FS ADJ	200mV	
2V : 206Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 206Hz Z ADJ	0.21V	Connect Calibrator V terminals to DMM
2V : 10Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 30Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 56Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 106Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 596Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 1kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 2kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 3.5kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 5kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 7.5kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 10kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 15kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 20kHz FS ADJ	2V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
2V : 30kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 40kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 50kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 60kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 80kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 100kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 200kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 400kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 500kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
20V : 206Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 206Hz Z ADJ	2.1V	Connect Calibrator V terminals to DMM
20V : 10Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 30Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 56Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 106Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 596Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 1kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 2kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 3.5kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 5kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 7.5kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 10kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 15kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 20kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 30kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 40kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 50kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 60kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 80kHz FS ADJ	20V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
20V : 100kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
200V : 206Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 206Hz Z ADJ	21V	Connect Calibrator V terminals to DMM
200V : 30Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 56Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 106Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 596Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 1kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 2kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 3.5kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 5kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 7.5kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 10kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 15kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 20kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
1kV : 206Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 206Hz Z ADJ	210V	Connect Calibrator V terminals to DMM
1kV : 30Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 56Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 106Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 596Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 1kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 2kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 3.5kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 5kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 7.5kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 10kHz FS ADJ	700V	Connect Calibrator V terminals to DMM

Linearity - 20V DC Range

**ADJUSTMENT POINTS**

TITLE	TEST VALUE	CONNECTIONS / NOTES
DC CURRENT		
200uA Zero ADJ	0uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA +FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA -FS ADJ	-200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA Zero ADJ	0mA	
2mA +FS ADJ	2mA	
2mA -FS ADJ	-2mA	
20mA Zero ADJ	0mA	
20mA +FS ADJ	20mA	
20mA -FS ADJ	-20mA	
200mA Zero ADJ	0mA	
200mA +FS ADJ	200mA	
200mA -FS ADJ	-200mA	
2A Zero ADJ	0A	>>> Use 1A 10hm Shunt <<<
2A +FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A -FS ADJ	-2A	>>> Use 1A 10hm Shunt <<<
20A Zero ADJ	0A	>>> Use 10A 0.10hm Shunt <<<
20A +FS ADJ	20A	>>> Use 10A 0.10hm Shunt <<<
20A -FS ADJ	-20A	>>> Use 10A 0.10hm Shunt <<<
AC CURRENT		
200uA : 206Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 206Hz Z ADJ	20uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 10Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 30Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 56Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 106Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 596Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 1kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS



TITLE	TEST VALUE	CONNECTIONS / NOTES
200uA : 2kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA :3.5kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA :5kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA :7.5kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA :10kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA : 206Hz FS ADJ	2mA	
2mA : 206Hz Z ADJ	0.21mA	
2mA : 10Hz FS ADJ	2mA	
2mA : 30Hz FS ADJ	2mA	
2mA : 56Hz FS ADJ	2mA	
2mA : 106Hz FS ADJ	2mA	
2mA : 596Hz FS ADJ	2mA	
2mA : 1kHz FS ADJ	2mA	
2mA : 2kHz FS ADJ	2mA	
2mA : 3.5kHz FS ADJ	2mA	
2mA : 5kHz FS ADJ	2mA	
2mA : 7.5kHz FS ADJ	2mA	
2mA : 10kHz FS ADJ	2mA	
20mA : 206Hz FS ADJ	20mA	
20mA : 10Hz FS ADJ	20mA	
20mA : 30Hz FS ADJ	20mA	
20mA : 56Hz FS ADJ	20mA	
20mA : 106Hz FS ADJ	20mA	
20mA : 596Hz FS ADJ	20mA	
20mA : 1kHz FS ADJ	20mA	
20mA : 2kHz FS ADJ	20mA	
20mA : 3.5kHz FS ADJ	20mA	
20mA : 5kHz FS ADJ	20mA	
20mA : 7.5kHz FS ADJ	20mA	



TITLE	TEST VALUE	CONNECTIONS / NOTES
20mA : 10kHz FS ADJ	20mA	
200mA : 206Hz FS ADJ	200mA	
200mA : 206Hz Z ADJ	21mA	
200mA : 10Hz FS ADJ	200mA	
200mA : 30Hz FS ADJ	200mA	
200mA : 56Hz FS ADJ	200mA	
200mA : 106Hz FS ADJ	200mA	
200mA : 596Hz FS ADJ	200mA	
200mA : 1kHz FS ADJ	200mA	
200mA : 2kHz FS ADJ	200mA	
200mA :3.5kHz FS ADJ	200mA	
200mA :5kHz FS ADJ	200mA	
200mA :7.5kHz FS ADJ	200mA	
200mA :10kHz FS ADJ	200mA	
2A : 206Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 206Hz Z ADJ	0.21A	>>> Use 1A 10hm Shunt <<<
2A : 10Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 30Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 56Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 106Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 596Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 1kHz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 2kHz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A :3.5kHz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A :5kHz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
20A : 206Hz FS ADJ	25A	>>> Use 10A 0.10hm Shunt <<<
20A : 206Hz Z ADJ	2.1A	>>> Use 10A 0.10hm Shunt <<<
20A : 10Hz FS ADJ	20A	>>> Use 10A 0.10hm Shunt <<<
20A : 30Hz FS ADJ	20A	>>> Use 10A 0.10hm Shunt <<<



TITLE	TEST VALUE	CONNECTIONS / NOTES
20A : 56Hz FS ADJ	20A	>>> Use 10A 0.1Ohm Shunt <<<
20A : 106Hz FS ADJ	20A	>>> Use 10A 0.1Ohm Shunt <<<
20A : 596Hz FS ADJ	20A	>>> Use 10A 0.1Ohm Shunt <<<
20A : 1kHz FS ADJ	20A	>>> Use 10A 0.1Ohm Shunt <<<
2 Wire Resistance measured as value at terminals.		
ADJ 0 Ohms 2 Wire	0.0R	
ADJ 0.1 Ohms 2 Wire	0.1R	
ADJ 1 Ohms 2 Wire	1.0R	
ADJ 10 Ohms 2 Wire	10.0R	
ADJ 100 Ohms 2 Wire	100R	
ADJ 1k Ohms 2 Wire	1.0kR	
ADJ 10k Ohms 2 Wire	10.00kR	
ADJ 100 kOhms 2 Wire	100kR	
ADJ 1MOhms 2 Wire	1MR	
ADJ 10MOhms 2 Wire	10.0MR	
ADJ 100MOhms 2 Wire	100MR	
ADJ 1000MOhms 2 Wire	1000MR	
Simulated Ohms		
ADJ 100R Zero 2 WSim	10R	
ADJ 100R FS 2 WSim	100R	
ADJ 100R Zero 2 WSim	10R	
ADJ 100R FS 2 WSim	100R	
ADJ 1kR Zero 2 WSim	100R	
ADJ 1kR FS 2 WSim	1kR	
ADJ 1kR Zero 2 WSim	100R	
ADJ 1kR FS 2 WSim	1kR	
ADJ 10kRZero 2 WSim	1kR	
ADJ 10kR FS 2 WSim	10kR	



TITLE	TEST VALUE	CONNECTIONS / NOTES
ADJ 10kRZero 2 WSim	1kR	
ADJ 10kR FS 2 WSim	10kR	
ADJ 100kRZero 2 WSim	10kR	
ADJ 100kR FS 2 WSim	100kR	
ADJ 100kRZero 2 WSim	10kR	
ADJ 100kR FS 2 WSim	100kR	
ADJ 1MR Zero 2 W Sim	100kR	
ADJ 1MR FS 2 WSim	1MR	
ADJ 1MR Zero 2 W Sim	100kR	
ADJ 1MR FS 2 WSim	1MR	
ADJ 10MR Zero 2 WSim	1MR	
ADJ 10MR FS 2 WSim	10MR	
ADJ 10MR Zero 2 WSim	1MR	
ADJ 10MR FS 2 WSim	10MR	
4 Wire Ohms Measured relative to Zero		
ADJ 100 mOhms 4 Wire	100mR	
ADJ 1 Ohms 4 Wire	1R	
ADJ 10 Ohms 4 Wire	10R	
ADJ 100 Ohms 4 Wire	100R	
ADJ 1 kOhms 4 Wire	1kR	
ADJ 10 kOhms 4 Wire	10kR	
PT100 Resistance Option		
PT100 ADJ	-100.0°C	
PT100 ADJ	0.0°C	
PT100 ADJ	30.0°C	
PT100 ADJ	60.0°C	
PT100 ADJ	100.0°C	
PT100 ADJ	200.0°C	



TITLE	TEST VALUE	CONNECTIONS / NOTES
PT100 ADJ	400.0°C	
PT100 ADJ	800.0°C	
Capacitance @ 1kHz Measured Cp up to 1uF, Cs above		
ADJ 1nF	1nF	Select Parrel cap measurement & OC/CE Trim bridge, conect to V out on Calibrator
ADJ 10nF	10.0nF	
ADJ 20nF	20nF	
ADJ 50nF	50nF	
ADJ 100nF	100nF	
ADJ 1uF	1uF	
ADJ 10uF	10uF	Select Series capacitance measurement
Auto Capacitance @ 1kHz Measured Cp up to 1uF, Cs above		
ADJ 1nF	1nF	Connect L/C Bridge to V-out on Calibrator
ADJ 10nF	10.0nF	
ADJ 20nF	20nF	
ADJ 50nF	50nF	
ADJ 100nF	100nF	
ADJ 1uF	1uF	
ADJ 10uF	10uF	
Simulated Capacitance		
ADJ 100uF	100uF	Select Series capacitance measurement
ADJ 1mF	1mF	Select Series capacitance measurement
ADJ 10mF	10mF	Select Series capacitance measurement
Manual Inductance @ 1kHz. measured Ls up to 1H. Lp above		
ADJ Ind	1mH	Select Ls Measurement Short bridge leads at connector end and perform SC Trim.
ADJ Ind	10mH	
ADJ Ind	19mH	
ADJ Ind	29mH	



TITLE	TEST VALUE	CONNECTIONS / NOTES
ADJ Ind	50mH	
ADJ Ind	100mH	
ADJ Ind	1H	
ADJ Ind	10H	Change Measurement to Lp Measurement
Auto Inductance @ 1kHz. measured Ls up to 1H. Lp above		
ADJ Ind	1mH	Short bridge leads at connector end and perform SC Trim.
ADJ Ind	10mH	
ADJ Ind	19mH	
ADJ Ind	29mH	
ADJ Ind	50mH	
ADJ Ind	100mH	
ADJ Ind	1H	
ADJ Ind	10H	
Reference Frequency Output		
1 ppm Frequency Option		
Amplitude Output - DC Voltage		
600 MHz Frequency Sweep Output		
350MHz Frequency Sweep Output		
50kHz Reference level		
Fast Rise output 600mV/10nS		
Power Option: AC Voltage Measurements (Current out = 3A)		
Phase Angle Mains Volts		
Phase Angle Full Range		
Harmonic Generation Measurements @ 50Hz fundamental, 20V/5A		



TITLE	TEST VALUE	CONNECTIONS / NOTES
DC Voltage		
DMM ZERO	0V	
200mV Lead Check	50mV	Connect Calibrator V terminals to DMM
200mV Range	0mV	Connect Calibrator V terminals to DMM
200mV Range	100mV	Connect Calibrator V terminals to DMM
200mV Range	200mV	Connect Calibrator V terminals to DMM
200mV Range	-100mV	Connect Calibrator V terminals to DMM
200mV Range	-200mV	Connect Calibrator V terminals to DMM
DMM ZERO	0V	>>> S/C TEST LEADS <<<
2V Lead Check	-100mV	Connect Calibrator V terminals to DMM
2V Range	0.22V	Connect Calibrator V terminals to DMM
2V Range	1V	Connect Calibrator V terminals to DMM
2V Range	2V	Connect Calibrator V terminals to DMM
2V Range	-0.22V	Connect Calibrator V terminals to DMM
2V Range	-1V	Connect Calibrator V terminals to DMM
2V Range	-2V	Connect Calibrator V terminals to DMM
20V Lead Check	0V	Connect Calibrator V terminals to DMM
20V Range	2.2V	Connect Calibrator V terminals to DMM
20V Range	10V	Connect Calibrator V terminals to DMM
20V Range	20V	Connect Calibrator V terminals to DMM
20V Range	-2.2V	Connect Calibrator V terminals to DMM
20V Range	-10V	Connect Calibrator V terminals to DMM
20V Range	-20V	Connect Calibrator V terminals to DMM
200V Lead Check	5V	Connect Calibrator V terminals to DMM
200V Range	22V	Connect Calibrator V terminals to DMM
200V Range	100V	Connect Calibrator V terminals to DMM
200V Range	200V	Connect Calibrator V terminals to DMM
200V Range	-200V	Connect Calibrator V terminals to DMM



VERIFICATION POINTS

TITLE	TEST VALUE	CONNECTIONS / NOTES
200V Range	-100V	Connect Calibrator V terminals to DMM
200V Range	-22V	Connect Calibrator V terminals to DMM
1kV Lead Check	50V	Connect Calibrator V terminals to DMM
1kV Range	220V	Connect Calibrator V terminals to DMM
1kV Range	1000V	Connect Calibrator V terminals to DMM
NEG SWITCH DELAY	-10V	Connect Calibrator V terminals to DMM
1kV Range	-1000V	Connect Calibrator V terminals to DMM
1kV Range	-220V	Connect Calibrator V terminals to DMM
SET ZERO WAIT	0mV	Connect Calibrator V terminals to DMM
AC Voltage Output Frequency Tests		
10kHz at 2V	10kHz	
100kHz at 2V	100kHz	
AC Voltage Measurements		
200mV Lead Check	100mV	USE SCREEN LEADS, SET LEVEL FILTER ON HP+ Guard open
200mV A.C. : 40Hz	20mV	
200mV A.C. : 206Hz	20mV	
200mV A.C. : 500kHz #	20mV	
200mV A.C. : 10Hz#	200mV	
200mV A.C. : 40Hz	200mV	
200mV A.C. : 56Hz	200mV	
200mV A.C. : 206Hz	200mV	
200mV A.C. : 1kHz	200mV	
200mV A.C. : 10kHz	200mV	
200mV A.C. : 20kHz	200mV	
200mV A.C. : 100kHz#	200mV	
200mV A.C. : 500kHz#	200mV	
2V Lead Check	500mV	Connect Calibrator V terminals to DMM
2V Range : 40Hz	0.21V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
2V Range : 206Hz	0.21V	Connect Calibrator V terminals to DMM
2V Range : 500kHz #	0.21V	Connect Calibrator V terminals to DMM
2V Range. : 206Hz	1V	Connect Calibrator V terminals to DMM
2V Range : 206Hz	1.5V	Connect Calibrator V terminals to DMM
2V Range : 10Hz#	2V	Connect Calibrator V terminals to DMM
2V Range : 40Hz	2V	Connect Calibrator V terminals to DMM
2V Range : 56Hz	2V	Connect Calibrator V terminals to DMM
2V Range : 206Hz	2V	Connect Calibrator V terminals to DMM
2V Range: 1kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 5kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 10kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 20kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 50kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 100kHz#	2V	Connect Calibrator V terminals to DMM
2V Range : 500kHz#	2V	Connect Calibrator V terminals to DMM
20V Lead Check	5V	Connect Calibrator V terminals to DMM
20V Range : 40Hz	2.1V	Connect Calibrator V terminals to DMM
20V Range : 206Hz	2.1V	Connect Calibrator V terminals to DMM
20V Range : 100kHz #	2.1V	Connect Calibrator V terminals to DMM
20V Range : 200Hz	10V	Connect Calibrator V terminals to DMM
20V Range : 200Hz	15V	Connect Calibrator V terminals to DMM
20V Range : 10Hz#	20V	Connect Calibrator V terminals to DMM
20V Range : 40Hz	20V	Connect Calibrator V terminals to DMM
20V Range : 56Hz	20V	Connect Calibrator V terminals to DMM
20V Range : 206Hz	20V	Connect Calibrator V terminals to DMM
20V Range : 1kHz	20V	Connect Calibrator V terminals to DMM
20V Range : 5kHz	20V	Connect Calibrator V terminals to DMM
20V Range : 10kHz	20V	Connect Calibrator V terminals to DMM
20V Range : 20kHz	20V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
20V Range : 100kHz #	20V	Connect Calibrator V terminals to DMM
200V Lead Check	50V	Connect Calibrator V terminals to DMM
200V Range : 40Hz	21V	Connect Calibrator V terminals to DMM
200V Range : 206Hz	21V	Connect Calibrator V terminals to DMM
200V Range : 20kHz	21V	Connect Calibrator V terminals to DMM
200V Range : 206Hz	100V	Connect Calibrator V terminals to DMM
200V Range : 30Hz#	200V	Connect Calibrator V terminals to DMM
200V Range : 40Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 56Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 206Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 1000Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 10kHz	200V	Connect Calibrator V terminals to DMM
200V Range : 20kHz	200V	Connect Calibrator V terminals to DMM
1kV Lead Check	50V	Connect Calibrator V terminals to DMM
1kV Range : 40Hz	210V	Connect Calibrator V terminals to DMM
1kV Range : 206Hz	210V	Connect Calibrator V terminals to DMM
1kV Range : 10kHz	210V	Connect Calibrator V terminals to DMM
1kV Range : 30Hz#	700V	Connect Calibrator V terminals to DMM
1kV Range : 40Hz	700V	Connect Calibrator V terminals to DMM
1kV Range : 56Hz	700V	Connect Calibrator V terminals to DMM
1kV Range : 1kHz	700V	Connect Calibrator V terminals to DMM
1kV Range : 5kHz	700V	Connect Calibrator V terminals to DMM
1kV Range : 10kHz	700V	Connect Calibrator V terminals to DMM
Lead check test	250V	USE HV ADAPTOR TO MEASURE 1KV
1kV Range : 56Hz	1000V	Connect Calibrator V terminals to DMM
Linearity - 20V DC Range		
Linearity	19V	Connect Calibrator V terminals to DMM
Linearity	18V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
Linearity	17V	Connect Calibrator V terminals to DMM
Linearity	16V	Connect Calibrator V terminals to DMM
Linearity	15V	Connect Calibrator V terminals to DMM
Linearity	14V	Connect Calibrator V terminals to DMM
Linearity	13V	Connect Calibrator V terminals to DMM
Linearity	12V	Connect Calibrator V terminals to DMM
Linearity	11V	Connect Calibrator V terminals to DMM
Linearity	9V	Connect Calibrator V terminals to DMM
Linearity	8V	Connect Calibrator V terminals to DMM
Linearity	7V	Connect Calibrator V terminals to DMM
Linearity	6V	Connect Calibrator V terminals to DMM
Linearity	5V	Connect Calibrator V terminals to DMM
Linearity	4V	Connect Calibrator V terminals to DMM
Linearity	3V	Connect Calibrator V terminals to DMM
Linearity	2.1V	Connect Calibrator V terminals to DMM
Linearity	-19V	Connect Calibrator V terminals to DMM
Linearity	-18V	Connect Calibrator V terminals to DMM
Linearity	-17V	Connect Calibrator V terminals to DMM
Linearity	-16V	Connect Calibrator V terminals to DMM
Linearity	-15V	Connect Calibrator V terminals to DMM
Linearity	-14V	Connect Calibrator V terminals to DMM
Linearity	-13V	Connect Calibrator V terminals to DMM
Linearity	-12V	Connect Calibrator V terminals to DMM
Linearity	-11V	Connect Calibrator V terminals to DMM
Linearity	-9V	Connect Calibrator V terminals to DMM
Linearity	-8V	Connect Calibrator V terminals to DMM
Linearity	-7V	Connect Calibrator V terminals to DMM
Linearity	-6V	Connect Calibrator V terminals to DMM
Linearity	-5V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
Linearity	-4V	Connect Calibrator V terminals to DMM
Linearity	-3V	Connect Calibrator V terminals to DMM
Linearity	-2.1V	Connect Calibrator V terminals to DMM
DC CURRENT		
200uA Lead Check	50uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	0uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	100uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	-100uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	-200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA Lead Check	500uA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA Range	0.21mA	
2mA Range	1mA	
2mA Range	2mA	
2mA Range	-1mA	
2mA Range	-2mA	
20mA Lead Check	1mA	CONNECT FOR LOW CURRENT MEASUREMENTS
20mA Range	2.1mA	
20mA Range	5mA	
20mA Range	10mA	
20mA Range	15mA	
20mA Range	20mA	
20mA Range	-5mA	
20mA Range	-10mA	
20mA Range	-15mA	
20mA Range	-20mA	
200mA Lead Check	10mA	
200mA Range	21mA	



VERIFICATION POINTS

TITLE	TEST VALUE	CONNECTIONS / NOTES
200mA Range	100mA	
200mA Range	200mA	
200mA Range	-100mA	
200mA Range	-200mA	
2A Lead Check	100mA	>>> Use 1A 10hm Shunt <<<
2A Range	0.21A	>>> Use 1A 10hm Shunt <<<
2A Range	1A	>>> Use 1A 10hm Shunt <<<
2A Range	2A	>>> Use 1A 10hm Shunt <<<
2A Range	-1A	>>> Use 1A 10hm Shunt <<<
2A Range	-2A	>>> Use 1A 10hm Shunt <<<
20A Lead Check	1A	>>> Use 10A 0.1Ohm Shunt <<<
30A Range	2.1A	>>> Use 10A 0.1Ohm Shunt <<<
30A Range	10A	>>> Use 10A 0.1Ohm Shunt <<<
30A Range	20A	>>> Use 10A 0.1Ohm Shunt <<<
30A Range #	30A	>>> Use 50A 0.01Ohm Shunt TL174 <<<
30A Range #	-30A	>>> Use 50A 0.01Ohm Shunt TL174 <<<
30A Range	-20A	>>> Use 10A 0.1Ohm Shunt <<<
30A Range	-10A	>>> Use 10A 0.1Ohm Shunt <<<
AC CURRENT		
200uA Lead Check	100uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Rng: 40Hz	25uA	
200uA Rng: 206Hz	25uA	
200uA Rng: 10kHz#	25uA	
200uA Rng: 10Hz#	200uA	
200uA Rng: 40Hz	200uA	
200uA Rng: 56Hz	200uA	
200uA Rng: 1kHz	200uA	
200uA Rng: 10kHz#	200uA	



TITLE	TEST VALUE	CONNECTIONS / NOTES
2mA Lead Check	0.1mA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA Rng: 40Hz	0.21mA	
2mA Rng: 206Hz	0.21mA	
2mA Rng: 10kHz#	0.21mA	
2mA Rng: 10Hz#	2mA	
2mA Rng: 40Hz	2mA	
2mA Rng: 56Hz	2mA	
2mA Rng: 1kHz	2mA	
2mA Rng: 10kHz#	2mA	
20mA Lead Check	1mA	CONNECT FOR LOW CURRENT MEASUREMENTS
20mA : 206Hz Zero	2.1mA	
20mA Rng: 40Hz	2.1mA	
20mA Rng: 206Hz	2.1mA	
20mA Rng: 10kHz#	2.1mA	
20mA Rng: 56Hz	10mA	
20mA Rng: 10Hz#	20mA	
20mA Rng: 40Hz	20mA	
20mA Rng: 1kHz	20mA	
20mA Rng: 10kHz#	20mA	
200mA Lead Check	50mA	
200mA Rng: 40Hz	21mA	
200mA Rng: 206Hz	21mA	
200mA Rng: 10kHz	21mA	
200mA Rng: 10Hz#	200mA	
200mA Rng: 40Hz	200mA	
200mA Rng: 56Hz	200mA	
200mA Rng: 1kHz	200mA	
200mA Rng: 10kHz#	200mA	
2A Lead Check	500mA	>>> Use 1A 10hm Shunt <<<



TITLE	TEST VALUE	CONNECTIONS / NOTES
2A Rng: 40Hz	0.21A	
2A Rng: 206Hz	0.21A	
2A Rng: 5kHz#	0.21A	
2A Rng: 10Hz#	2A	
2A Rng: 40Hz	2A	
2A Rng: 56Hz	2A	
2A Rng: 1kHz	2A	
2A Rng: 5kHz #	2A	
20A Lead Check	1A	>>> Use 10A 0.1Ohm Shunt <<<
30A Rng: 40Hz	2.1A	
30A Rng: 206Hz	2.1A	
30A Rng: 10Hz#	20A	
30A Rng: 40Hz	20A	
30A Rng: 56Hz	20A	
30A Rng: 100Hz	20A	
30A Rng: 1kHz #	20A	
30A Rng: 56Hz#	30A	
2 Wire Resistance measured as value at terminals.		
2-Wire Lead Check	0R	>> Connect up 4-Wire leads in 2-Wire Configuration (Connect V and I together) <<
0R 2 Wire	0.0R	
0.1R 2 Wire	0.1R	
1R 2 Wire	1.0R	
10R 2 Wire	10.0R	
100R 2 Wire	100R	
1kR 2 Wire	1.0kR	
10kR 2 Wire	10.00kR	
100kR 2 Wire	100kR	
1MR 2 Wire	1MR	



TITLE	TEST VALUE	CONNECTIONS / NOTES
10MR 2 Wire	10.0MR	
100MR 2 Wire	100MR	
1000MR 2 Wire	1000MR	
Simulated Ohms		
100 R Range	30R	
100 R Range	100R	
1kR Range	300R	
1kR Range	1kR	
10kR Range	3kR	
10kR Range	10kR	
100kR Range	30kR	
100kR Range	100kR	
1MR Range	300kR	
1MR Range	1MR	
10MR Range	3MR	
10MR Range	10MR	
4 Wire Ohms Measured relative to Zero		
4-Wire Lead Check	0.0R	>>> Connect up 4-Wire leads (Use correct 4-Wire configuration) <<<
Nul Zero Ohms 4 Wire	0.0R	
100mR 4 Wire	100mR	
1R 4 Wire	1R	
10R 4 Wire	10R	
100R 4 Wire	100R	
1kR 4 Wire	1kR	
10kR 4 Wire	10kR	
100kR 4 Wire	100kR	
PT100 Resistance Option		
PT100 PRT Resistance	-100.0°C	



TITLE	TEST VALUE	CONNECTIONS / NOTES
PT100 PRT Resistance	0.0°C	
PT100 PRT Resistance	30.0°C	
PT100 PRT Resistance	60.0°C	
PT100 PRT Resistance	100.0°C	
PT100 PRT Resistance	200.0°C	
PT100 PRT Resistance	400.0°C	
PT100 PRT Resistance	800.0°C	

Capacitance @ 1kHz Measured Cp up to 1uF, Cs above
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TITLE	TEST VALUE	CONNECTIONS / NOTES
		Capacitance @ 1kHz Measured Cp up to 1uF, Cs above
1nF	1nF	Select Parrel cap measurement & OC/CE Trim bridge, conect to V out on Calibrator
10nF	10.0nF	
20nF	20nF	
50nF	50nF	
100nF	100nF	
1uF	1uF	
10uF	10uF	Select Series capacitance measurement

Auto Capacitance @ 1kHz Measured Cp up to 1uF, Cs above

TITLE	TEST VALUE	CONNECTIONS / NOTES
1nF	1nF	Trim bridge, conect to V out on Calibrator
10nF	10.0nF	
20nF	20nF	
50nF	50nF	
100nF	100nF	
1uF	1uF	
10uF	10uF	Select Series capacitance measurement

Simulated Capacitance

100uF #	100uF	Select Series capacitance measurement
1mF #	1mF	Select Series capacitance measurement



TITLE	TEST VALUE	CONNECTIONS / NOTES
10mF #	10mF	Select Series capacitance measurement
Manual Inductance @ 1kHz. measured Ls up to 1H. Lp above		
		Manual Inductance @ 1kHz. measured Ls up to 1H. Lp above
Inductance @ 1kHz	1mH	Select Ls Measurement Short bridge leads at connector end and perform SC Trim.
Inductance @ 1kHz	10mH	
Inductance @ 1kHz#	19mH	
Inductance @ 1kHz#	29mH	
Inductance @ 1kHz#	50mH	
Inductance @ 1kHz	100mH	
Inductance @ 1kHz	1H	
Inductance @ 1kHz #	10H	Change Measurement to Lp Measurement
Auto Inductance @ 1kHz. measured Ls up to 1H. Lp above		
Inductance @ 1kHz	1mH	
Inductance @ 1kHz	10mH	
Inductance @ 1kHz	19mH	
Inductance @ 1kHz	29mH	
Inductance @ 1kHz	50mH	
Inductance @ 1kHz	100mH	
Inductance @ 1kHz	1H	
Inductance @ 1kHz	10H	
Reference Frequency Output		
Ref Freq Mult	1.0Hz	Measure 10Mhz REF Frequency
Frequency	10MHz	Measure Calibrators output
Frequency	1MHz	
Frequency	100kHz	
Frequency	50kHz	



VERIFICATION POINTS

TITLE	TEST VALUE	CONNECTIONS / NOTES
Frequency	20kHz	
Frequency	10kHz	
Frequency	1kHz	
Frequency	100Hz	
1 ppm Frequency Option		
Ref Freq Mult	1.0Hz	Measure 10Mhz REF Frequency
Frequency	10MHz	Measure Calibrators output
Frequency	1MHz	
Frequency	100kHz	
Frequency	50kHz	
Frequency	20kHz	
Frequency	10kHz	
Frequency	1kHz	
Frequency	100Hz	
Amplitude Output - DC Voltage		
10mV/Div Adj	60mV	Connect Calibrator V terminals to DMM
100mV/Div Adj	600mV	Connect Calibrator V terminals to DMM
2mV/Div	12mV	Connect DMM to Scope output.
5mV/Div	30mV	
10mV/Div	60mV	
20mV/Div	120mV	
50mV/Div	300mV	
100mV/Div	600mV	
200mV/Div	1.2V	
500mV/Div	3V	
1V/Div	6V	
2V/Div	12V	
5V/Div	30V	



TITLE	TEST VALUE	CONNECTIONS / NOTES
10V/Div	60V	
20V/Div	120V	
20ns/Div	50MHz	
50ns/Div	20MHz	
100ns/Div	10MHz	
200ns/Div	5MHz	
500ns/Div	2MHz	
1us/Div	1MHz	
2us/Div	500kHz	
5us/Div	200kHz	
10us/Div	100kHz	
20us/Div	50kHz	
50us/Div	20kHz	
100us/Div	10kHz	
200us/Div	5kHz	
500us/Div	2kHz	
1ms/Div	1kHz	
2ms/Div	500Hz	
5ms/Div	200Hz	
10ms/Div	100Hz	
20ms/Div	50Hz	
50ms/Div	20Hz	
100ms/Div	10Hz	
200ms/Div	5Hz	200ms/Div
500ms/Div	2Hz	200ms/Div
1s/Div	1Hz	200ms/Div
600 MHz Frequency Sweep Output		
10MHz	10MHz	



TITLE	TEST VALUE	CONNECTIONS / NOTES
300MHz	300MHz	
600MHz	600MHz	
Level @ 5MHz#	600mV	
Level @ 250MHz#	600mV	
Level @ 600MHz#	600mV	
350MHz Frequency Sweep Output		
10MHz	10MHz	
100MHz	100MHz	
350MHz	350MHz	
Level @ 5MHz#	600mV	
Level @ 100MHz#	600mV	
Level @ 350MHz#	600mV	
50kHz Reference level		
BW ref frequency	50kHz	Connect DMM to Scope output
BW ref level Adj	0.2127V	MEASURE LEVEL WITH DMM USING EXT 50 OHM
BW ref level #	0.2127V	MEASURE LEVEL WITH DMM USING EXT 50 OHM
Fast Rise output 600mV/10nS		
Fast Rise output	PASS	Fast Rise output 600mV/10nS
Power Option: AC Voltage Measurements (Current out = 3A)		
20V Range : 56Hz	20V	Connect Calibrator V terminals to DMM, 20A Current shunt
200V Range : 60Hz	50V	Connect Calibrator V terminals to DMM, 20A Current shunt
200V Range : 60Hz	100V	Connect Calibrator V terminals to DMM
200V Range : 45Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 60Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 400Hz	200V	Connect Calibrator V terminals to DMM
1000V Range : 60Hz	500V	Connect Calibrator V terminals to DMM
3A Zero Adj	0.3A	Connect to 0.1ohm/20 Amp current shunt



VERIFICATION POINTS

TITLE	TEST VALUE	CONNECTIONS / NOTES
3A FS Adj	2A	Connect to 0.1ohm/20 Amp current shunt
12A Zero Adj	3A	Connect to 0.1ohm/20 Amp current shunt
12A FS Adj	12A	Connect to 0.1ohm/20 Amp current shunt
3A Rng: 56Hz	0.6A	Connect to 0.1ohm/20 Amp current shunt
3A Rng: 56Hz	0.6A	Connect to 0.1ohm/20 Amp current shunt
30A Rng: 56Hz	3A	Connect to 0.1ohm/20 Amp current shunt
30A Rng: 56Hz	5A	
30A Rng: 45Hz	10A	
30A Rng: 56Hz	10A	
30A Rng: 206Hz	10A	
30A Rng: 56Hz	15A	
2A Rng: 56Hz	2A	Use 2A shunt
2A Rng: 56Hz	0.5A	
3A DC Zero Adj	0.3A	Connect to 0.1ohm/20 Amp current shunt
3A DC FS Adj	2A	Connect to 0.1ohm/20 Amp current shunt
12A DC Zero Adj	3A	Connect to 0.1ohm/20 Amp current shunt
12A DC FS Adj	12A	Connect to 0.1ohm/20 Amp current shunt
30A DC Rng	20A	Use 20 Amp Shunt
30A DC Rng	3A	
2A DC Rng	2A	Use 2A current shunt
2A DC Rng	0.3A	
20V Range DC	20V	Connect Calibrator V terminals to DMM, 20A Current shunt
200V Range DC	200V	
1000V Range DC	500V	
Phase Angle Mains Volts		
0°:220V:10A: 50Hz#	0°	Connect 3000 Series to phase meter
180°:220V:10A: 50Hz#	180°	Connect 3000 Series to phase meter
Phase Angle Full Range		



TITLE	TEST VALUE	CONNECTIONS / NOTES
0°:20V:0.3A: 50Hz#	0°	Connect 3000 Series to phase meter
0°:20V:2A: 50Hz#	0°	Connect 3000 Series to phase meter
0°:220V:2A: 50Hz#	0°	Connect 3000 Series to phase meter
60°:220V:2A: 50Hz#	60°	Connect 3000 Series to phase meter
90°:220V:2A: 50Hz#	90°	Connect 3000 Series to phase meter
0°:220V:2A: 400Hz#	0°	Connect 3000 Series to phase meter
0°:220V:3A: 50Hz#	0°	Connect 3000 Series to phase meter
90°:220V:20A: 50Hz#	90°	Connect 3000 Series to phase meter
0°:220V:5A: 400Hz#	0°	Connect 3000 Series to phase meter

Harmonic Generation Measurements @ 50Hz fundamental, 20V/5A

Harmonic Generation Measurements @ 50Hz fundamental, 20V/5A

3rd Harmonic#	5pc
3rd Harmonic#	10pc
5th Harmonic#	10pc
12th Harmonic#	10pc
21th Harmonic#	10pc



TITLE	TEST VALUE	CONNECTIONS / NOTES
DC Voltage		
200mV Zero ADJ	0mV	Connect Calibrator V terminals to DMM
200mV +FS ADJ	200mV	Connect Calibrator V terminals to DMM
200mV -FS ADJ	-200mV	Connect Calibrator V terminals to DMM
2V Zero ADJ	0V	Connect Calibrator V terminals to DMM
2V +FS ADJ	2V	Connect Calibrator V terminals to DMM
2V -FS ADJ	-2V	Connect Calibrator V terminals to DMM
20V Zero ADJ	0V	Connect Calibrator V terminals to DMM
20V +FS ADJ	20V	Connect Calibrator V terminals to DMM
20V -FS ADJ	-20V	Connect Calibrator V terminals to DMM
200V +FS ADJ	200V	Connect Calibrator V terminals to DMM
200V ZERO ADJ	5V	Connect Calibrator V terminals to DMM
200V -FS ADJ	-200V	Connect Calibrator V terminals to DMM
1kV +FS ADJ	1000V	Connect Calibrator V terminals to DMM
1kV ZERO ADJ	50V	Connect Calibrator V terminals to DMM
1kV -FS ADJ	-1000V	Connect Calibrator V terminals to DMM
AC Voltage Output Frequency Tests		
AC Voltage		
200mV : 206Hz FS ADJ	200mV	
200mV : 206Hz Z ADJ	22mV	
200mV : 10Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 40Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 56Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 106Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 596Hz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 1kHz FS ADJ	200mV	Connect Calibrator TO X10 AMP
200mV : 2kHz FS ADJ	200mV	
200mV : 3.5kHz ADJ	200mV	



TITLE	TEST VALUE	CONNECTIONS / NOTES
200mV : 5kHz ADJ	200mV	
200mV : 7.5kHz FSADJ	200mV	
200mV : 10kHz FS ADJ	200mV	
200mV : 15kHz FS ADJ	200mV	
200mV : 20kHz FS ADJ	200mV	
2V : 206Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 206Hz Z ADJ	0.21V	Connect Calibrator V terminals to DMM
2V : 10Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 40Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 56Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 106Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 596Hz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 1kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 2kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 3.5kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 5kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 7.5kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 10kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 15kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 20kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 30kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 40kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 50kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 60kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 80kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
2V : 100kHz FS ADJ	2V	Connect Calibrator V terminals to DMM
20V : 206Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 206Hz Z ADJ	2.1V	Connect Calibrator V terminals to DMM
20V : 10Hz FS ADJ	20V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
20V : 40Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 56Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 106Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 596Hz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 1kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 2kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 3.5kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 5kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 7.5kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 10kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 15kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 20kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 30kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 40kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 50kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 60kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 80kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
20V : 100kHz FS ADJ	20V	Connect Calibrator V terminals to DMM
200V : 206Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 206Hz Z ADJ	21V	Connect Calibrator V terminals to DMM
200V : 40Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 56Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 106Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 596Hz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 1kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 2kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 3.5kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 5kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 7.5kHz FS ADJ	200V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
200V : 10kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 15kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
200V : 20kHz FS ADJ	200V	Connect Calibrator V terminals to DMM
1kV : 206Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 206Hz Z ADJ	210V	Connect Calibrator V terminals to DMM
1kV : 40Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 56Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 106Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 596Hz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 1kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 2kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 3.5kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 5kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 7.5kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
1kV : 10kHz FS ADJ	700V	Connect Calibrator V terminals to DMM
Linearity - 20V DC Range		
DC Current		
200uA Zero ADJ	0uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA +FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA -FS ADJ	-200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA Zero ADJ	0mA	
2mA +FS ADJ	2mA	
2mA -FS ADJ	-2mA	
20mA Zero ADJ	0mA	
20mA +FS ADJ	20mA	
20mA -FS ADJ	-20mA	
200mA Zero ADJ	0mA	
200mA +FS ADJ	200mA	



TITLE	TEST VALUE	CONNECTIONS / NOTES
200mA -FS ADJ	-200mA	
2A Zero ADJ	0A	>>> Use 1A 10hm Shunt <<<
2A +FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A -FS ADJ	-2A	>>> Use 1A 10hm Shunt <<<
20A Zero ADJ	0A	>>> Use 10A 0.10hm Shunt <<<
20A +FS ADJ	20A	>>> Use 10A 0.10hm Shunt <<<
20A -FS ADJ	-20A	>>> Use 10A 0.10hm Shunt <<<
AC Current		
200uA : 206Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 206Hz Z ADJ	20uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 10Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 40Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 56Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 106Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 596Hz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 1kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA : 2kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA :3.5kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA :5kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA :7.5kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA :10kHz FS ADJ	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA : 206Hz FS ADJ	2mA	
2mA : 206Hz Z ADJ	0.21mA	
2mA : 10Hz FS ADJ	2mA	
2mA : 40Hz FS ADJ	2mA	
2mA : 56Hz FS ADJ	2mA	
2mA : 106Hz FS ADJ	2mA	
2mA : 596Hz FS ADJ	2mA	



TITLE	TEST VALUE	CONNECTIONS / NOTES
2mA : 1kHz FS ADJ	2mA	
2mA : 2kHz FS ADJ	2mA	
2mA : 3.5kHz FS ADJ	2mA	
2mA : 5kHz FS ADJ	2mA	
2mA : 7.5kHz FS ADJ	2mA	
2mA : 10kHz FS ADJ	2mA	
20mA : 206Hz FS ADJ	20mA	
20mA : 10Hz FS ADJ	20mA	
20mA : 40Hz FS ADJ	20mA	
20mA : 56Hz FS ADJ	20mA	
20mA : 106Hz FS ADJ	20mA	
20mA : 596Hz FS ADJ	20mA	
20mA : 1kHz FS ADJ	20mA	
20mA : 2kHz FS ADJ	20mA	
20mA : 3.5kHz FS ADJ	20mA	
20mA : 5kHz FS ADJ	20mA	
20mA : 7.5kHz FS ADJ	20mA	
20mA : 10kHz FS ADJ	20mA	
200mA : 206Hz FS ADJ	200mA	
200mA : 206Hz Z ADJ	21mA	
200mA : 10Hz FS ADJ	200mA	
200mA : 40Hz FS ADJ	200mA	
200mA : 56Hz FS ADJ	200mA	
200mA : 106Hz FS ADJ	200mA	
200mA : 596Hz FS ADJ	200mA	
200mA : 1kHz FS ADJ	200mA	
200mA : 2kHz FS ADJ	200mA	
200mA : 3.5kHz FS ADJ	200mA	
200mA : 5kHz FS ADJ	200mA	



TITLE	TEST VALUE	CONNECTIONS / NOTES
200mA :7.5kHz FS ADJ	200mA	
200mA :10kHz FS ADJ	200mA	
2A : 206Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 206Hz Z ADJ	0.21A	>>> Use 1A 10hm Shunt <<<
2A : 10Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 40Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 56Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 106Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 596Hz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 1kHz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
2A : 2kHz FS ADJ	2A	>>> Use 1A 10hm Shunt <<<
20A : 206Hz FS ADJ	20A	>>> Use 10A 0.10hm Shunt <<<
20A : 206Hz Z ADJ	2.1A	>>> Use 10A 0.10hm Shunt <<<
20A : 10Hz FS ADJ	10A	>>> Use 10A 0.10hm Shunt <<<
20A : 40Hz FS ADJ	10A	>>> Use 10A 0.10hm Shunt <<<
20A : 56Hz FS ADJ	10A	>>> Use 10A 0.10hm Shunt <<<
20A : 106Hz FS ADJ	10A	>>> Use 10A 0.10hm Shunt <<<
20A : 596Hz FS ADJ	10A	>>> Use 10A 0.10hm Shunt <<<
20A : 1kHz FS ADJ	10A	>>> Use 10A 0.10hm Shunt <<<
20A : 2kHz FS ADJ	10A	>>> Use 10A 0.10hm Shunt <<<
2 Wire Resistance measured as value at terminals.		
ADJ 0 Ohms 2 Wire	0.0R	
ADJ 10 Ohms 2 Wire	10.0R	
ADJ 100 Ohms 2 Wire	100R	
ADJ 1k Ohms 2 Wire	1.0kR	
ADJ 10k Ohms 2 Wire	10.00kR	
ADJ 100 kOhms 2 Wire	100kR	
ADJ 1MOhms 2 Wire	1MR	



TITLE	TEST VALUE	CONNECTIONS / NOTES
ADJ 10MOhms 2 Wire	10.0MR	
ADJ 100MOhms 2 Wire	100MR	
Simulated Ohms		
ADJ 100R Zero 2 WSim	10R	
ADJ 100R FS 2 WSim	100R	
ADJ 100R Zero 2 WSim	10R	
ADJ 100R FS 2 WSim	100R	
ADJ 1kR Zero 2 WSim	100R	
ADJ 1kR FS 2 WSim	1kR	
ADJ 1kR Zero 2 WSim	100R	
ADJ 1kR FS 2 WSim	1kR	
ADJ 10kRZero 2 WSim	1kR	
ADJ 10kR FS 2 WSim	10kR	
ADJ 10kRZero 2 WSim	1kR	
ADJ 10kR FS 2 WSim	10kR	
ADJ 100kRZero 2 WSim	10kR	
ADJ 100kR FS 2 WSim	100kR	
ADJ 100kRZero 2 WSim	10kR	
ADJ 100kR FS 2 WSim	100kR	
ADJ 1MR Zero 2 W Sim	100kR	
ADJ 1MR FS 2 WSim	1MR	
ADJ 1MR Zero 2 W Sim	100kR	
ADJ 1MR FS 2 WSim	1MR	
ADJ 10MR Zero 2 WSim	1MR	
ADJ 10MR FS 2 WSim	10MR	
ADJ 10MR Zero 2 WSim	1MR	
ADJ 10MR FS 2 WSim	10MR	
4 Wire Ohms Measured relative to Zero		



TITLE	TEST VALUE	CONNECTIONS / NOTES
ADJ 10 Ohms 4 Wire	10R	
ADJ 100 Ohms 4 Wire	100R	
ADJ 1 kOhms 4 Wire	1kR	
ADJ 10 kOhms 4 Wire	10kR	
PT100 Resistance Option		
PT100 ADJ	-100.0°C	
PT100 ADJ	0.0°C	
PT100 ADJ	30.0°C	
PT100 ADJ	60.0°C	
PT100 ADJ	100.0°C	
PT100 ADJ	200.0°C	
PT100 ADJ	400.0°C	
PT100 ADJ	800.0°C	
Capacitance @ 1kHz Measured Cp up to 1uF, Cs above		
ADJ 10nF	10.0nF	
ADJ 20nF	20nF	
ADJ 50nF	50nF	
ADJ 100nF	100nF	
ADJ 1uF	1uF	
Auto Capacitance @ 1kHz Measured Cp up to 1uF, Cs above		
ADJ 1nF	1nF	Connect L/C Bridge to V-out on Calibrator
ADJ 10nF	10.0nF	
ADJ 20nF	20nF	
ADJ 50nF	50nF	
ADJ 100nF	100nF	
ADJ 1uF	1uF	
ADJ 10uF	10uF	



TITLE	TEST VALUE	CONNECTIONS / NOTES
Optional Capacitance Ranges		
Inductance @ 1kHz. measured Ls up to 1H. Lp above		
ADJ Ind	1mH	Select Ls Measurement Short bridge leads at connector end and perform SC Trim.
ADJ Ind	10mH	
ADJ Ind	19mH	
ADJ Ind	29mH	
ADJ Ind	50mH	
ADJ Ind	100mH	
ADJ Ind	1H	
ADJ Ind	10H	Change Measurement to Lp Measurement
Auto Inductance @ 1kHz. measured Ls up to 1H. Lp above		
ADJ Ind	1mH	Short bridge leads at connector end and perform SC Trim.
ADJ Ind	10mH	
ADJ Ind	19mH	
ADJ Ind	29mH	
ADJ Ind	50mH	
ADJ Ind	100mH	
ADJ Ind	1H	
ADJ Ind	10H	
Reference Frequency Output		
1 ppm Frequency Option		
Amplitude Output - DC Voltage		
Timebase Output		
Bandwidth Level Frequency Measurements		
Bandwidth Level output into 50 ohms Pk-Pk		



<i>TITLE</i>	<i>TEST VALUE</i>	<i>CONNECTIONS / NOTES</i>
50kHz Reference level		
Fast Rise output < 1nS		
Power Option: AC Voltage Measurements (Current out = 3A)		
DC Voltage output on Power (DC Current = 3Amp)		
Phase Angle, Measured at 150V/5A 50Hz AC		



TITLE	TEST VALUE	CONNECTIONS / NOTES
DC Voltage		
DMM ZERO	0V	
200mV Lead Check	50mV	Connect Calibrator V terminals to DMM
200mV Range	0mV	Connect Calibrator V terminals to DMM
200mV Range	100mV	Connect Calibrator V terminals to DMM
200mV Range	200mV	Connect Calibrator V terminals to DMM
200mV Range	-100mV	Connect Calibrator V terminals to DMM
200mV Range	-200mV	Connect Calibrator V terminals to DMM
DMM ZERO	0V	>>> S/C TEST LEADS <<<
2V Lead Check	-100mV	Connect Calibrator V terminals to DMM
2V Range	0.22V	Connect Calibrator V terminals to DMM
2V Range	1V	Connect Calibrator V terminals to DMM
2V Range	2V	Connect Calibrator V terminals to DMM
2V Range	-0.22V	Connect Calibrator V terminals to DMM
2V Range	-1V	Connect Calibrator V terminals to DMM
2V Range	-2V	Connect Calibrator V terminals to DMM
20V Lead Check	0V	Connect Calibrator V terminals to DMM
20V Range	2.2V	Connect Calibrator V terminals to DMM
20V Range	10V	Connect Calibrator V terminals to DMM
20V Range	20V	Connect Calibrator V terminals to DMM
20V Range	-2.2V	Connect Calibrator V terminals to DMM
20V Range	-10V	Connect Calibrator V terminals to DMM
20V Range	-20V	Connect Calibrator V terminals to DMM
200V Lead Check	5V	Connect Calibrator V terminals to DMM
200V Range	22V	Connect Calibrator V terminals to DMM
200V Range	100V	Connect Calibrator V terminals to DMM
200V Range	200V	Connect Calibrator V terminals to DMM
200V Range	-200V	Connect Calibrator V terminals to DMM



VERIFICATION POINTS

TITLE	TEST VALUE	CONNECTIONS / NOTES
200V Range	-100V	Connect Calibrator V terminals to DMM
200V Range	-22V	Connect Calibrator V terminals to DMM
1kV Lead Check	50V	Connect Calibrator V terminals to DMM
1kV Range	220V	Connect Calibrator V terminals to DMM
1kV Range	1000V	Connect Calibrator V terminals to DMM
NEG SWITCH DELAY	-10V	Connect Calibrator V terminals to DMM
1kV Range	-1000V	Connect Calibrator V terminals to DMM
1kV Range	-220V	Connect Calibrator V terminals to DMM
SET ZERO WAIT	0mV	Connect Calibrator V terminals to DMM
AC Voltage Output Frequency Tests		
10kHz at 2V	10kHz	
100kHz at 2V	100kHz	
AC Voltage		
200mV Lead Check	100mV	USE SCREEN LEADS, SET LEVEL FILTER ON HP+ Guard open
200mV A.C. : 40Hz	20mV	
200mV A.C. : 206Hz	20mV	
200mV A.C. : 20kHz	20mV	
200mV A.C. : 10Hz #	200mV	
200mV A.C. : 40Hz	200mV	
200mV A.C. : 56Hz	200mV	
200mV A.C. : 206Hz	200mV	
200mV A.C. : 1kHz	200mV	
200mV A.C. : 10kHz	200mV	
200mV A.C. : 20kHz	200mV	
2V Lead Check	500mV	Connect Calibrator V terminals to DMM
2V Range : 40Hz	0.21V	Connect Calibrator V terminals to DMM
2V Range : 206Hz	0.21V	Connect Calibrator V terminals to DMM
2V Range : 100kHz #	0.21V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
2V Range. : 206Hz	1V	Connect Calibrator V terminals to DMM
2V Range : 206Hz	1.5V	Connect Calibrator V terminals to DMM
2V Range : 10Hz #	2V	Connect Calibrator V terminals to DMM
2V Range : 40Hz	2V	Connect Calibrator V terminals to DMM
2V Range : 56Hz	2V	Connect Calibrator V terminals to DMM
2V Range : 200Hz	2V	Connect Calibrator V terminals to DMM
2V Range: 1kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 5kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 10kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 20kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 50kHz	2V	Connect Calibrator V terminals to DMM
2V Range : 100kHz #	2V	Connect Calibrator V terminals to DMM
20V Lead Check	5V	Connect Calibrator V terminals to DMM
20V Range : 40Hz	2.1V	Connect Calibrator V terminals to DMM
20V Range : 200Hz	2.1V	Connect Calibrator V terminals to DMM
20V Range : 100kHz #	2.1V	Connect Calibrator V terminals to DMM
20V Range : 200Hz	10V	Connect Calibrator V terminals to DMM
20V Range : 200Hz	15V	Connect Calibrator V terminals to DMM
20V Range : 10Hz #	20V	Connect Calibrator V terminals to DMM
20V Range : 40Hz	20V	Connect Calibrator V terminals to DMM
20V Range : 56Hz	20V	Connect Calibrator V terminals to DMM
20V Range : 200Hz	20V	Connect Calibrator V terminals to DMM
20V Range : 1kHz	20V	Connect Calibrator V terminals to DMM
20V Range : 5kHz	20V	Connect Calibrator V terminals to DMM
20V Range : 10kHz	20V	Connect Calibrator V terminals to DMM
20V Range : 20kHz	20V	Connect Calibrator V terminals to DMM
20V Range : 100kHz #	20V	Connect Calibrator V terminals to DMM
200V Lead Check	50V	Connect Calibrator V terminals to DMM
200V Range : 40Hz	21V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
200V Range : 200Hz	21V	Connect Calibrator V terminals to DMM
200V Range : 20kHz	21V	Connect Calibrator V terminals to DMM
200V Range : 200Hz	100V	Connect Calibrator V terminals to DMM
200V Range : 40Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 56Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 200Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 1000Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 10kHz	200V	Connect Calibrator V terminals to DMM
200V Range : 20kHz	200V	Connect Calibrator V terminals to DMM
1kV Lead Check	50V	Connect Calibrator V terminals to DMM
1kV Range : 40Hz	210V	Connect Calibrator V terminals to DMM
1kV Range : 200Hz	210V	Connect Calibrator V terminals to DMM
1kV Range : 10kHz	210V	Connect Calibrator V terminals to DMM
1kV Range : 40Hz	700V	Connect Calibrator V terminals to DMM
1kV Range : 56Hz	700V	Connect Calibrator V terminals to DMM
1kV Range : 1kHz	700V	Connect Calibrator V terminals to DMM
1kV Range : 5kHz	700V	Connect Calibrator V terminals to DMM
1kV Range : 10kHz	700V	Connect Calibrator V terminals to DMM
Lead check test	250V	USE HV ADAPTOR TO MEASURE 1KV
1kV Range : 56Hz	1000V	Connect Calibrator V terminals to DMM
Linearity - 20V DC Range		
Linearity	19V	Connect Calibrator V terminals to DMM
Linearity	18V	Connect Calibrator V terminals to DMM
Linearity	17V	Connect Calibrator V terminals to DMM
Linearity	16V	Connect Calibrator V terminals to DMM
Linearity	15V	Connect Calibrator V terminals to DMM
Linearity	14V	Connect Calibrator V terminals to DMM
Linearity	13V	Connect Calibrator V terminals to DMM



TITLE	TEST VALUE	CONNECTIONS / NOTES
Linearity	12V	Connect Calibrator V terminals to DMM
Linearity	11V	Connect Calibrator V terminals to DMM
Linearity	9V	Connect Calibrator V terminals to DMM
Linearity	8V	Connect Calibrator V terminals to DMM
Linearity	7V	Connect Calibrator V terminals to DMM
Linearity	6V	Connect Calibrator V terminals to DMM
Linearity	5V	Connect Calibrator V terminals to DMM
Linearity	4V	Connect Calibrator V terminals to DMM
Linearity	3V	Connect Calibrator V terminals to DMM
Linearity	2.1V	Connect Calibrator V terminals to DMM
Linearity	-19V	Connect Calibrator V terminals to DMM
Linearity	-18V	Connect Calibrator V terminals to DMM
Linearity	-17V	Connect Calibrator V terminals to DMM
Linearity	-16V	Connect Calibrator V terminals to DMM
Linearity	-15V	Connect Calibrator V terminals to DMM
Linearity	-14V	Connect Calibrator V terminals to DMM
Linearity	-13V	Connect Calibrator V terminals to DMM
Linearity	-12V	Connect Calibrator V terminals to DMM
Linearity	-11V	Connect Calibrator V terminals to DMM
Linearity	-9V	Connect Calibrator V terminals to DMM
Linearity	-8V	Connect Calibrator V terminals to DMM
Linearity	-7V	Connect Calibrator V terminals to DMM
Linearity	-6V	Connect Calibrator V terminals to DMM
Linearity	-5V	Connect Calibrator V terminals to DMM
Linearity	-4V	Connect Calibrator V terminals to DMM
Linearity	-3V	Connect Calibrator V terminals to DMM
Linearity	-2.1V	Connect Calibrator V terminals to DMM

DC Current



TITLE	TEST VALUE	CONNECTIONS / NOTES
200uA Lead Check	50uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	0uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	100uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	-100uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Range	-200uA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA Lead Check	500uA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA Range	0.21mA	
2mA Range	1mA	
2mA Range	2mA	
2mA Range	-1mA	
2mA Range	-2mA	
20mA Lead Check	1mA	CONNECT FOR LOW CURRENT MEASUREMENTS
20mA Range	2.1mA	
20mA Range	5mA	
20mA Range	10mA	
20mA Range	15mA	
20mA Range	20mA	
20mA Range	-5mA	
20mA Range	-10mA	
20mA Range	-15mA	
20mA Range	-20mA	
200mA Lead Check	10mA	
200mA Range	21mA	
200mA Range	100mA	
200mA Range	200mA	
200mA Range	-100mA	
200mA Range	-200mA	
2A Lead Check	100mA	>>> Use 1A 10hm Shunt <<<



TITLE	TEST VALUE	CONNECTIONS / NOTES
2A Range	0.21A	>>> Use 1A 10hm Shunt <<<
2A Range	1A	>>> Use 1A 10hm Shunt <<<
2A Range	2A	>>> Use 1A 10hm Shunt <<<
2A Range	-1A	>>> Use 1A 10hm Shunt <<<
2A Range	-2A	>>> Use 1A 10hm Shunt <<<
20A Lead Check	1A	>>> Use 10A 0.10hm Shunt <<<
20A Range	2.1A	>>> Use 10A 0.10hm Shunt <<<
20A Range	10A	>>> Use 10A 0.10hm Shunt <<<
20A Range	20A	>>> Use 10A 0.10hm Shunt <<<
20A Range	-20A	>>> Use 10A 0.10hm Shunt <<<
20A Range	-10A	>>> Use 10A 0.10hm Shunt <<<
AC Current		
200uA Lead Check	100uA	CONNECT FOR LOW CURRENT MEASUREMENTS
200uA Rng: 40Hz	25uA	
200uA Rng: 200Hz	25uA	
200uA Rng: 10kHz #	25uA	
200uA Rng: 10Hz #	200uA	
200uA Rng: 40Hz	200uA	
200uA Rng: 56Hz	200uA	
200uA Rng: 1kHz	200uA	
200uA Rng: 10kHz #	200uA	
2mA Lead Check	0.1mA	CONNECT FOR LOW CURRENT MEASUREMENTS
2mA Rng: 40Hz	0.21mA	
2mA Rng: 200Hz	0.21mA	
2mA Rng: 10kHz #	0.21mA	
2mA Rng: 10Hz #	2mA	
2mA Rng: 40Hz	2mA	
2mA Rng: 56Hz	2mA	



TITLE	TEST VALUE	CONNECTIONS / NOTES
2mA Rng: 1kHz	2mA	
2mA Rng: 10kHz #	2mA	
20mA Lead Check	1mA	CONNECT FOR LOW CURRENT MEASUREMENTS
20mA : 206Hz Zero	2.1mA	
20mA Rng: 40Hz	2.1mA	
20mA Rng: 200Hz	2.1mA	
20mA Rng: 10kHz #	2.1mA	
20mA Rng: 56Hz	10mA	
20mA Rng: 10Hz #	20mA	
20mA Rng: 40Hz	20mA	
20mA Rng: 1kHz	20mA	
20mA Rng: 10kHz #	20mA	
200mA Lead Check	50mA	
200mA Rng: 40Hz	21mA	
200mA Rng: 200Hz	21mA	
200mA Rng: 10kHz #	21mA	
200mA Rng: 10Hz #	200mA	
200mA Rng: 40Hz	200mA	
200mA Rng: 56Hz	200mA	
200mA Rng: 1kHz	200mA	
200mA Rng: 10kHz #	200mA	
2A Lead Check	500mA	>>> Use 1A 10hm Shunt <<<
2A Rng: 40Hz	0.21A	
2A Rng: 200Hz	0.21A	
2A Rng: 2kHz #	0.21A	
2A Rng: 10Hz #	2A	
2A Rng: 40Hz	2A	
2A Rng: 56Hz	2A	
2A Rng: 1kHz	2A	



TITLE	TEST VALUE	CONNECTIONS / NOTES
2A Rng: 2kHz #	2A	
20A Lead Check	1A	>>> Use 10A 0.1Ohm Shunt <<<
20A Rng: 40Hz	2.1A	
20A Rng: 200Hz	2.1A	
20A Rng: 10Hz #	20A	
20A Rng: 40Hz	20A	
20A Rng: 56Hz	20A	
20A Rng: 100Hz	20A	
20A Rng: 1kHz #	20A	
20A Rng: 2kHz #	20A	

2 Wire Resistance measured as value at terminals.

2-Wire Lead Check	0R	>> Connect up 4-Wire leads in 2-Wire Configuration (Connect V and I together) <<
0R 2 Wire	0.0R	
10R 2 Wire	10.0R	
100R 2 Wire	100R	
1kR 2 Wire	1.0kR	
10kR 2 Wire	10.00kR	
100kR 2 Wire	100kR	
1MR 2 Wire	1MR	
10MR 2 Wire	10.0MR	
100MR 2 Wire	100MR	

Simulated Ohms

Simulated Ohms	
100 R Range	30R
100 R Range	100R
1kR Range	300R
1kR Range	1kR



TITLE	TEST VALUE	CONNECTIONS / NOTES
10kR Range	3kR	
10kR Range	10kR	
100kR Range	30kR	
100kR Range	100kR	
1MR Range	300kR	
1MR Range	1MR	
10MR Range	3MR	
10MR Range	10MR	
4 Wire Ohms Measured relative to Zero		
4-Wire Lead Check	0.0R	>>> Connect up 4-Wire leads (Use correct 4-Wire configuration) <<<
Nul Zero Ohms 4 Wire	0.0R	
10R 4 Wire	10R	
100R 4 Wire	100R	
1kR 4 Wire	1kR	
10kR 4 Wire	10kR	
100kR 4 Wire	100kR	
PT100 Resistance Option		
PT100 Resistance Option		
PT100 PRT Resistance	-100.0°C	
PT100 PRT Resistance	0.0°C	
PT100 PRT Resistance	30.0°C	
PT100 PRT Resistance	60.0°C	
PT100 PRT Resistance	100.0°C	
PT100 PRT Resistance	200.0°C	
PT100 PRT Resistance	400.0°C	
PT100 PRT Resistance	800.0°C	



TITLE	TEST VALUE	CONNECTIONS / NOTES
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Capacitance @ 1kHz Measured Cp up to 1uF, Cs above		
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10nF	10.0nF	
20nF	20nF	
50nF	50nF	
100nF	100nF	
1uF	1uF	
10uF	10uF	

Auto Capacitance @ 1kHz Measured Cp up to 1uF, Cs above		
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Auto Capacitance @ 1kHz Measured Cp up to 1uF, Cs above		
1nF	1nF	Trim bridge, conect to V out on Calibrator
10nF	10.0nF	
20nF	20nF	
50nF	50nF	
100nF	100nF	
1uF	1uF	
10uF	10uF	Select Series capacitance measurement

Optional Capacitance Ranges		
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Optional Capacitance Ranges		
Null Meter	0uF	
1nF	1nF	Trim bridge, conect to V out on Calibrator
10uF	10uF	Select Series capacitance measurement
100uF #	100uF	Select Series capacitance measurement
1mF #	1mF	Select Series capacitance measurement
10mF #	10mF	Select Series capacitance measurement



TITLE	TEST VALUE	CONNECTIONS / NOTES
Inductance @ 1kHz. measured Ls up to 1H. Lp above		
Inductance @ 1kHz. measured Ls up to 1H. Lp above		
Inductance @ 1kHz	1mH	Select Ls Measurement Short bridge leads at connector end and perform SC Trim.
Inductance @ 1kHz	10mH	
Inductance @ 1kHz#	19mH	
Inductance @ 1kHz#	29mH	
Inductance @ 1kHz#	50mH	
Inductance @ 1kHz	100mH	
Inductance @ 1kHz	1H	
Inductance @ 1kHz #	10H	Change Measurement to Lp Measurement
Auto Inductance @ 1kHz. measured Ls up to 1H. Lp above		
Auto Inductance @ 1kHz. measured Ls up to 1H. Lp above		
Inductance @ 1kHz	1mH	
Inductance @ 1kHz	10mH	
Inductance @ 1kHz	19mH	
Inductance @ 1kHz	29mH	
Inductance @ 1kHz	50mH	
Inductance @ 1kHz	100mH	
Inductance @ 1kHz	1H	
Inductance @ 1kHz	10H	
Reference Frequency Output		
Ref Freq Mult	1.0Hz	Measure 10Mhz REF Frequency
Frequency	10MHz	Measure Calibrators output
Frequency	1MHz	
Frequency	100kHz	
Frequency	50kHz	
Frequency	20kHz	



TITLE	TEST VALUE	CONNECTIONS / NOTES
Frequency	10kHz	
Frequency	1kHz	
Frequency	100Hz	
1 ppm Frequency Option		
Ref Freq Mult	1.0Hz	Measure 10Mhz REF Frequency
Frequency	10MHz	Measure Calibrators output
Frequency	1MHz	
Frequency	100kHz	
Frequency	50kHz	
Frequency	20kHz	
Frequency	10kHz	
Frequency	1kHz	
Frequency	100Hz	
Amplitude Output - DC Voltage		
		Amplitude Output - DC Voltage
10mV/Div Adj	60mV	Connect Calibrator V terminals to DMM
100mV/Div Adj	600mV	Connect Calibrator V terminals to DMM
2mV/Div	12mV	Connect DMM to Scope output.
5mV/Div	30mV	
10mV/Div	60mV	
20mV/Div	120mV	
50mV/Div	300mV	
100mV/Div	600mV	
200mV/Div	1.2V	
500mV/Div	3V	
1V/Div	6V	
2V/Div	12V	



TITLE	TEST VALUE	CONNECTIONS / NOTES
5V/Div	30V	
10V/Div	60V	
20V/Div	120V	
Timebase Output		
20ns/Div	50MHz	
50ns/Div	20MHz	
100ns/Div	10MHz	
200ns/Div	5MHz	
500ns/Div	2MHz	
1us/Div	1MHz	
2us/Div	500kHz	
5us/Div	200kHz	
10us/Div	100kHz	
20us/Div	50kHz	
50us/Div	20kHz	
100us/Div	10kHz	
200us/Div	5kHz	
500us/Div	2kHz	
1ms/Div	1kHz	
2ms/Div	500Hz	
5ms/Div	200Hz	
10ms/Div	100Hz	
20ms/Div	50Hz	
50ms/Div	20Hz	
100ms/Div	10Hz	
200ms/Div	5Hz	200ms/Div
500ms/Div	2Hz	200ms/Div
1s/Div	1Hz	200ms/Div



TITLE	TEST VALUE	CONNECTIONS / NOTES
Bandwidth Level Frequency Measurements		
10MHz	10MHz	
100MHz	100MHz	
250MHz	250MHz	
Bandwidth Level output into 50 ohms Pk-Pk		
Level @ 5MHz#	600mV	
Level @ 100MHz#	600mV	
Level @ 250MHz#	600mV	
50kHz Reference level		
		50kHz Reference level
BW ref frequency	50kHz	Connect DMM to Scope output
BW ref level Adj	0.2127V	MEASURE LEVEL WITH DMM USING EXT 50 OHM
BW ref level #	0.2127V	MEASURE LEVEL WITH DMM USING EXT 50 OHM
Fast Rise output < 1nS		
Fast Rise output	PASS	Fast Rise output 600mV/10nS
Power Option: AC Voltage Measurements (Current out = 3A)		
20V Range : 56Hz	20V	Connect Calibrator V terminals to DMM, 20A Current shunt
200V Range : 60Hz	50V	Connect Calibrator V terminals to DMM, 20A Current shunt
200V Range : 60Hz	100V	Connect Calibrator V terminals to DMM
200V Range : 45Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 60Hz	200V	Connect Calibrator V terminals to DMM
200V Range : 400Hz	200V	Connect Calibrator V terminals to DMM
1000V Range : 60Hz	500V	Connect Calibrator V terminals to DMM
Power Option: AC Current (Voltage out = 20V)		



TITLE	TEST VALUE	CONNECTIONS / NOTES
3A Zero Adj	0.3A	Connect to 0.1ohm/20 Amp current shunt
3A FS Adj	2A	Connect to 0.1ohm/20 Amp current shunt
12A Zero Adj	3A	Connect to 0.1ohm/20 Amp current shunt
12A FS Adj	12A	Connect to 0.1ohm/20 Amp current shunt
3A Rng: 56Hz	0.6A	Connect to 0.1ohm/20 Amp current shunt
3A Rng: 56Hz	0.6A	Connect to 0.1ohm/20 Amp current shunt
30A Rng: 56Hz	3A	Connect to 0.1ohm/20 Amp current shunt
30A Rng: 56Hz	5A	
30A Rng: 45Hz	10A	
30A Rng: 56Hz	10A	
30A Rng: 206Hz	10A	
30A Rng: 56Hz	15A	
2A Rng: 56Hz	2A	Use 2A shunt
2A Rng: 56Hz	0.5A	
DC Current output on Power (DC Voltage out = 20V)		
3A DC Zero Adj	0.3A	Connect to 0.1ohm/20 Amp current shunt
3A DC FS Adj	2A	Connect to 0.1ohm/20 Amp current shunt
12A DC Zero Adj	3A	Connect to 0.1ohm/20 Amp current shunt
12A DC FS Adj	12A	Connect to 0.1ohm/20 Amp current shunt
30A DC Rng	20A	Use 20 Amp Shunt
30A DC Rng	3A	
2A DC Rng	2A	Use 2A current shunt
2A DC Rng	0.3A	
DC Voltage output on Power (DC Current = 3Amp)		
20V Range DC	20V	Connect Calibrator V terminals to DMM, 20A Current shunt
200V Range DC	200V	
1000V Range DC	500V	



<i>TITLE</i>	<i>TEST VALUE</i>	<i>CONNECTIONS / NOTES</i>
Phase Angle, Measured at 150V/5A 50Hz AC		
0° Phase Angle#	0°	Connect 3000 Series to phase meter
60° Phase Angle#	60°	
90° Phase Angle#	90°	