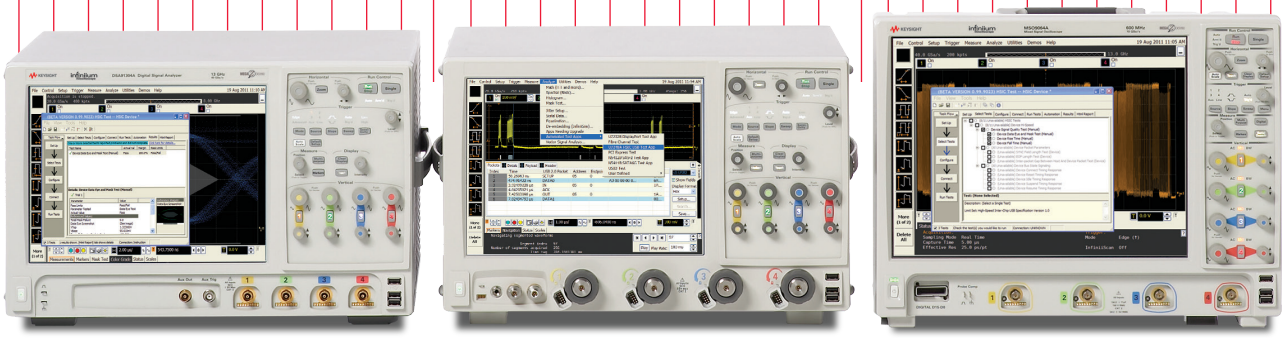
Keysight Technologies

U7248A High Speed Inter-Chip (HSIC) Electrical Test Software Infiniium Oscilloscopes

Data Sheet



KEYSIGHT TECHNOLOGIES

The U7248A HSIC compliance test software is compatible with 90000X, 90000 and 9000 Series Infiniium oscilloscopes.

This application is available in the following license variations

- Order N7248A for user-installed license
- Order N5435A-041 for a server-based license
- Order Option 43 (9000 Series) or Option 46 (90000 Series) for a factory-installed license with a new oscilloscope

USB 2.0 High Speed Inter-Chip Compliance Test Software

The Keysight Technologies, Inc. U7248A HSIC compliance test software provides the first ever automated HSIC compliance test application for a real time oscilloscope. This software provides you with a fast and reliable way to verify HSIC electrical specification compliance for your HSIC devices and hosts.

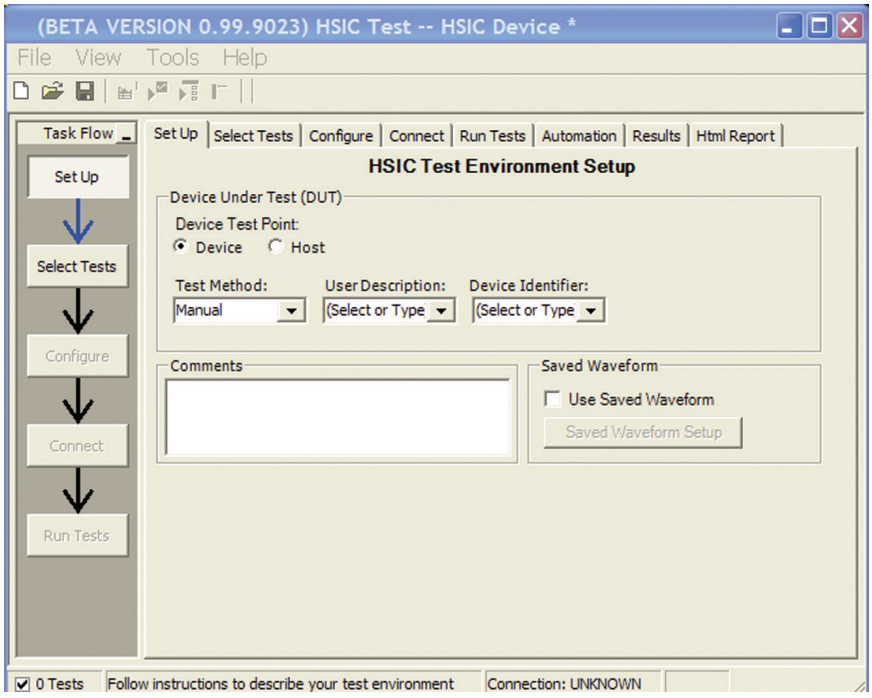


Figure 1: Setup for device or host testing

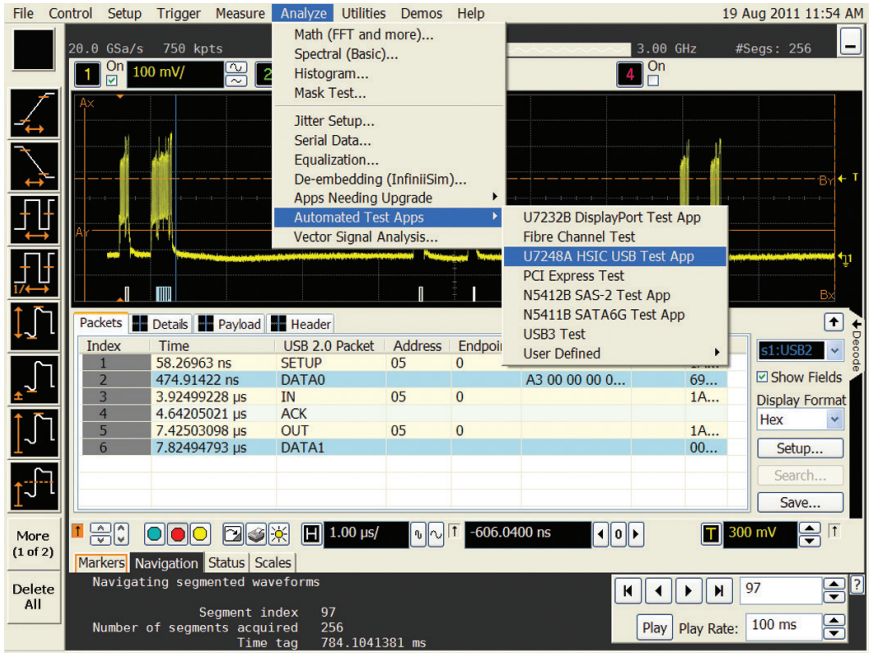


Figure 2: Start application

HSIC compliance testing includes signal quality testing for data and strobe including rise time and fall time measurements. Additional testing of packet parameters and bus state signaling is also included.

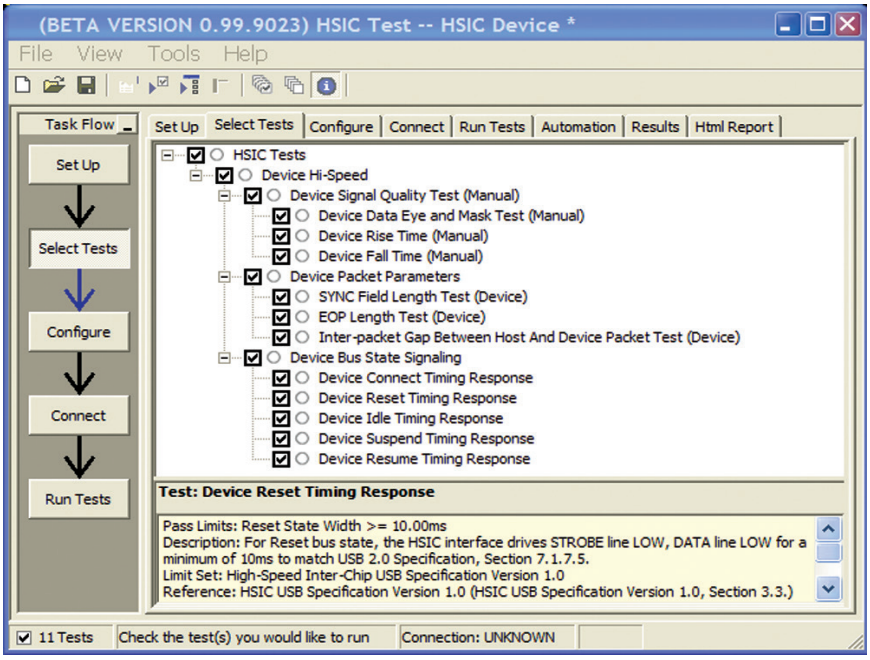


Figure 3: Select tests

Once the test is executed the test results appear on the Infiniium display in an HTML formatted window.

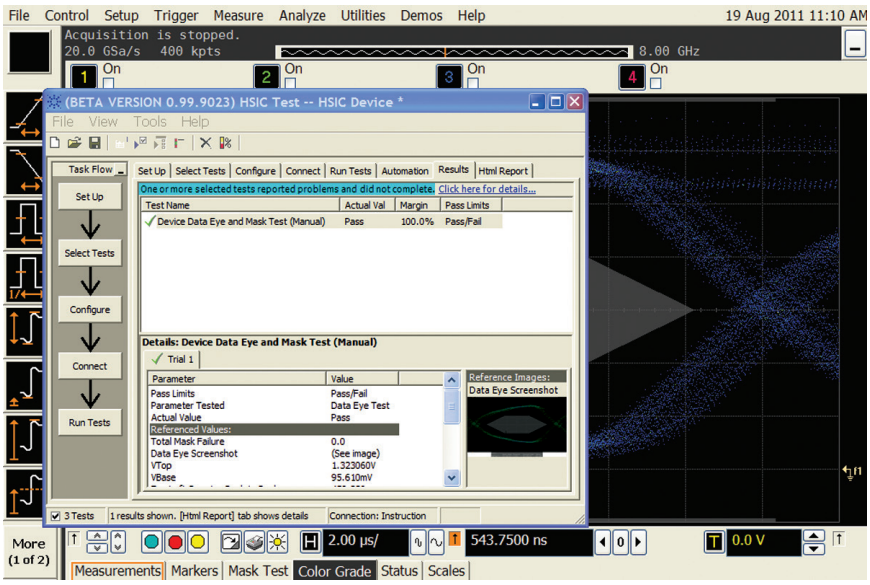


Figure 4: Test results

N2796A Key Features

- High resistance (1MΩ) and low capacitance (1 pF) input for low loading
- Wide input dynamic range (±8V) and offset range (±12V for N2796A, ±8V for N2795A)
- Built-in headlight for better visibility while probing
- Includes various probe tip accessories
- Direct connection to AutoProbe interface (no power supply required)
- Provides full system bandwidth with InfiniiVision and Infiniium oscilloscopes with bandwidths up to 1 GHz

The Keysight Infiniium Series Oscilloscope differential probes 1168A/1169A series and 113x series can be used for testing of the HSIC data line. They cannot be used to test the HSIC strobe signal.

Figure 6: Keysight N2796A Active Probe recommended for HSIC probing

Features

The U7248A HSIC compliance test software offers several features to simplify the validation of your HSIC designs

- Signal quality testing using Data, Strobe or both
- Rise time and fall time measurement
- Device and host packet parameter tests
- Automated bus state signaling measurements
  - Connect timing
  - Reset timing
  - Idle timing
  - Suspend timing
  - Resume timing

Oscilloscope compatibility

The U7248A HSIC compliance test software is compatible with 90000X, 90000 and 9000 Series oscilloscopes with operation software revision 3.10 or higher.

Date Rate	Recommended oscilloscope	Bandwidth
480 Mb/s	DSOX90000 Series	Any
	DSO90254A	2.5 GHz
	DSO9254A	2.5 GHz

Ordering Information

To purchase the U7248A HSIC compliance test software for your new or existing Infiniium oscilloscope, order the following:

Model	Description
U7248A	HSIC electrical compliance software
DSO9000A-043	USB HSIC electrical compliance software- installed
DSO90000A-046	USB HSIC electrical compliance software-installed on Infiniium 90000 Series oscilloscopes
DSOX90000A-046	USB HSIC electrical compliance software-installed on Infiniium 90000 X-Series oscilloscopes
N5435A-042	USB HSIC electrical compliance software server based license

Recommended Probes and Probe heads:

Ensure that the probe amplifier meets the bandwidth requirement for your signal measurements. Refer to the “Probe accessories” section below to configure the probe head to go with your probe amplifier. Minimum recommend bandwidth is 1.5 GHz. Probing HSIC strobe signal requires high resistance single ended probe (ex: N2796A).

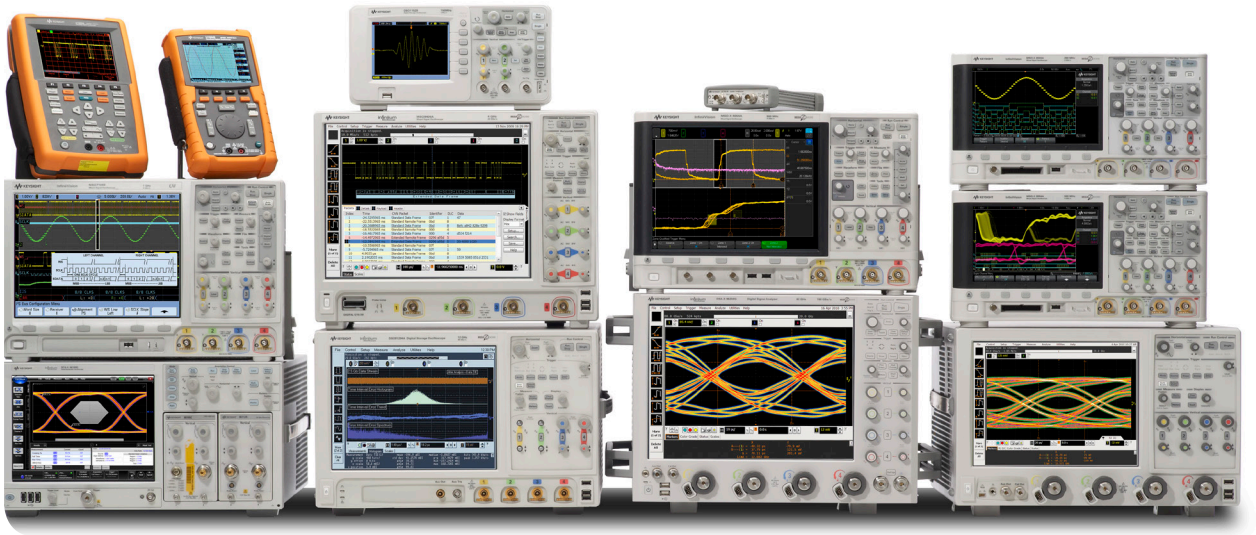
Model number	Description
DSOX90000 DSO90000 DSO9000	Infiniiium 90000X Series scope with software 3.10 or higher
N5464A/B	Optional: N5464A/B Infiniium USB Protocol Triggering and Decode software
U7248A	Infiniium USB 2.0 High Speed Interchip compliance test software

N2796A	Keysight Single-ended active probe
1168A/1169A	InfiniiMax I/II probe amplifier (minimum quantity 1 required) InfiniiMax differential probe heads (solder in and socketed)
N2787A	Keysight 3D probe positioner (recommended quantity 2)

Extensibility

Use the N5467A User Defined Application tool (**www.keysight.com/find/uda**) to: Create and fully integrate custom tests, configuration variables and connection instructions. Insert external application calls into the run sequence, such as MATLAB scripts or your device controller. Configure additional external instruments used in your test suite.

Publication title	Publication type	Publication number
Infiniium Series Oscilloscope Probes, Accessories, and Options	Selection guide	5968-7141EN
Keysight Technologies E2688A, High-Speed Serial Data Analysis and Clock Recovery Software for Infiniium 90000 Series Oscilloscopes	Data sheet	5989-3662EN
U5464A USB Protocol Triggering and Decode for Infiniium series oscilloscopes	Data sheet	5990-4108EN
Infiniium 90000 Series oscilloscopes	Data sheet	5989-7819EN
Infiniium 90000 X-Series oscilloscopes	Data sheet	5990-5271EN
Keysight Technologies Oscilloscope Probes and Accessories	Data sheet	5989-6162EN
Keysight N2796A Single-ended Active Probe	Data sheet	5990-6480EN
Keysight N2780A Series probe positioners	Data sheet	5989-9131EN



Keysight Oscilloscopes

Multiple form factors from 20 MHz to > 90 GHz | Industry leading specs | Powerful applications

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www.keysight.com/find/U7248A

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