

Getting Started with TDSHT3

You can use this side of the Quick Reference Card to get started with the Sink Jitter Tolerance test procedure. The other side contains a complete menu tree for the TDSHT3 HDMI Compliance Test Software.

NOTE. For additional procedures, refer to the Quick Start User Manual. For complete operating instructions, refer to the Online Help.

TDSHT3 HDMI Compliance Test Software enables unprecedented efficiency by providing a comprehensive range of tests, including Jitter Tolerance.

Sink Jitter Tolerance

This test allows you to confirm that the maximum allowed TMDS clock jitter is supported by the Sink DUT.

You will need one supported oscilloscope, two differential probes, one digital timing generator (DTG), one arbitrary waveform generator (AWG), one DC power supply, 12 SMA cables, two bias-tees, one cable emulator, one GPIB controller, one TPA-R-DI, and one TPA-R-TDR.

Follow these steps:

1. On the menu bar, click **Tests > Select > Sink**.
2. In the differential tests pane, select the **Jitter Tolerance** check box.



3. To change the configuration settings, click **Tests > Configure**. For most tests, you can use the factory default configuration. However, you can change the values by using the virtual keyboard or the general purpose knob on the oscilloscope front panel. Using the File menu, you can also restore the factory defaults or save and recall your own configuration settings.

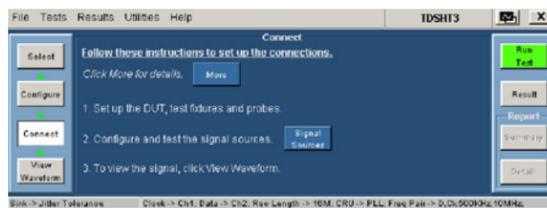


For up-to-date information on Tektronix oscilloscope solutions for HDMI Compliance Test Software, access the www.tektronix.com Web page.

TDSHT3 Ordering Information

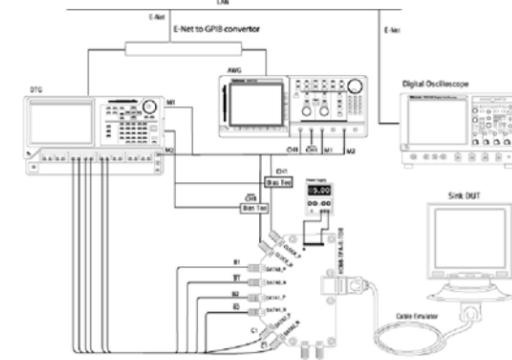
This software supports the TDS7254/B, TDS7404/B, CSA7404/B, and TDS7704B series of oscilloscopes. Refer to the *Optional Applications Software on Windows-Based Oscilloscopes Installation Manual* for a list of specific models. The applications CD includes a PDF file of the online help.

4. The software remotely controls the DTG and AWG, which must be connected by a National Instruments GPIB-USB-B. To connect the DUT, click **Tests > Connect**.

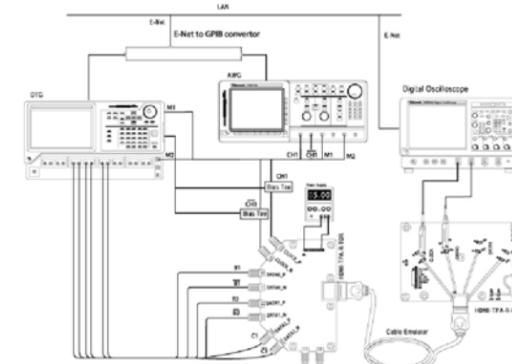


5. Make the connections as follows:

To find the device tolerance limit



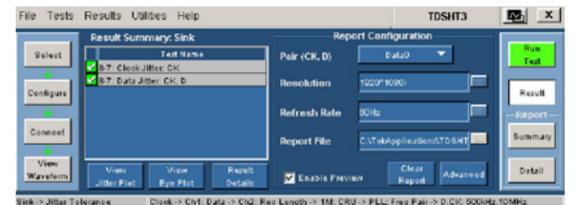
To measure the parameters



6. To configure and test the GPIB connection to the DTG, click **Signal Sources**. The **Signal Sources Setup** dialog box appears.



7. To run the test successfully, ensure that the Bus Timing parameter is set to 2 usec on your GPIB board configuration.
8. Click **Run Test** to perform the test. The TDSHT3 HDMI Compliance Test Software sets up the oscilloscope and conducts the test. Follow the instructions in the dialog box. Depending on your answer, a series of dialog boxes may prompt you for your input.
9. If you successfully run the test, the software calculates the jitter values and displays the results. The software makes **Result** available automatically and displays the result summary, the eye diagram plot, and the clock jitter plot. You can also view the report configuration details in the result pane.



10. In the result summary pane, click **Result Details** to display the results of the tests.

| Test Name | Spec Range | Mean Value | Result | Remarks/Comments |
|------------------------|-------------------------|------------|--------|---|
| 8.7 Clock Jitter: CK C | 0.071ns < Max Clock Jit | 0.0427 ns | Pass | Test = 1.5865ns, VMS = 800.050V, Max Hst = 0.997Tb/s, Record Length = 1.0000M, Max Hst = 0.9999999999999999 |
| 8.7 Data Jitter: CK D | 0.071ns < Max Data Jit | 0.0407 ns | Pass | Test = 1.5865ns, VMS = 800.050V, Max Hst = 0.997Tb/s, Record Length = 1.0000M, Max Hst = 0.9999999999999999 |

To order along with oscilloscope:

- Opt. HT3 - HDMI Compliance Test Software

To order an upgrade for an existing oscilloscope:

- TDS7000/B - Order TDS7UP/7BUP - Opt. HT3
- CSA7000/B - Order TDS7UP/7BUP - Opt. HT3

Recommended Accessories

Oscilloscopes

- 16M Record Length/Ch - Opt. 4M or more (for Eye Diagram and Jitter tests)
- Serial Trigger - Opt. ST (for Inter-pair Skew tests)

HDMI Pattern Sources

- Jitter Generation - AWG710B (for Sink tests)
- Test Pattern Generation - DTG 5274 and DTGM30 for Sink Tests (three required)

TDR Tests

- Oscilloscope - TDS8000B with 80E03 and 80E04 modules

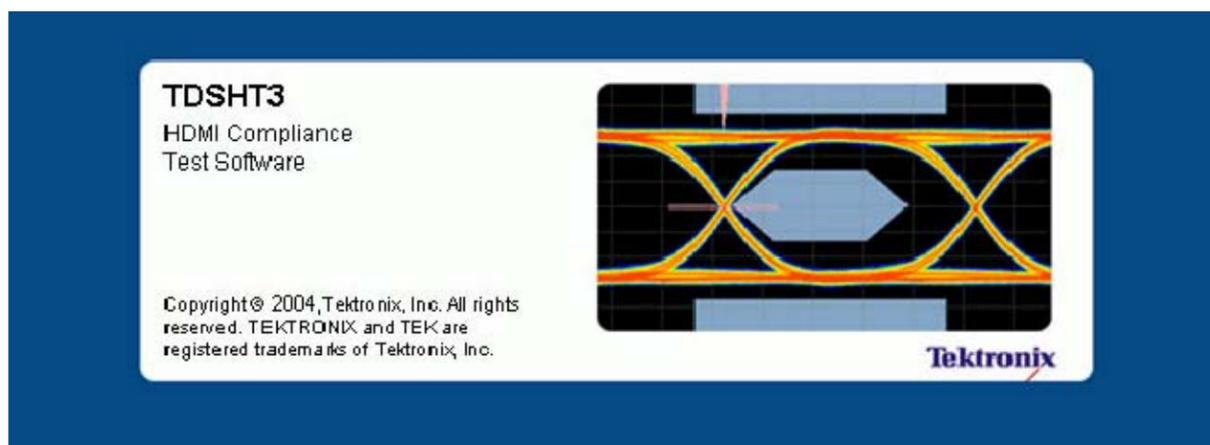
Probes

- Differential Probes - P6330, P7330 and P7350 (two probes required)
- Active Probes - P7240 and above (two probes required)
- Probe Positioner - PPM100 Flexible Arm Probe Positioner

Test Fixtures

- Plug type - HDMI TPA-P adapter set - 013-A013-50
- Receptacle type - HDMI TPA-R adapter set - 013-A012-50

TDSHT3 HDMI Compliance Test Software Reference Sink Test



www.tektronix.com

071-1541-00

TDSHT3 Menu Tree

