## Getting Started with TDSDVI

Side one of this Quick Reference Guide is designed to get you started making measurements with the DVI Compliance Test Solution (TDSDVI). Side two contains a complete menu tree for the TDSDVI software.

NOTE. For complete operating instructions and General Safety information, refer to the Online Help for the application.

The TDSDVI software application tests for compliance with DVI specifications. TDSDVI software is designed to meet the compliance test requirements of the DVI industry for physical layer measurements. Supported tests include Eye Diagram, Peak-to-Peak Jitter, Inter-Pair Skew, Intra-Pair Skew, and Rise and Fall Time. RGPIB commands are available for automating the application to perform compliance testing.

Performing Transmitter Eye-diagram Test

1. Depending on the type of oscilloscope, select either File > Run Application > DVI Compliance Test Solution or select Analyze > DVI Compliance Test Solution from the oscilloscope menu bar.

2. Attach the TPA-P test fixture to the device under test. To calculate Tbit, connect the differential probe to Rxc+ and Rxc– (transmitter clock). For Eye measurements, connect another differential probe to Rx0+ and Rx0– (data pair).

3. Connect an SMA cable to the recovered clock (PLL Clock) output on the fixture.
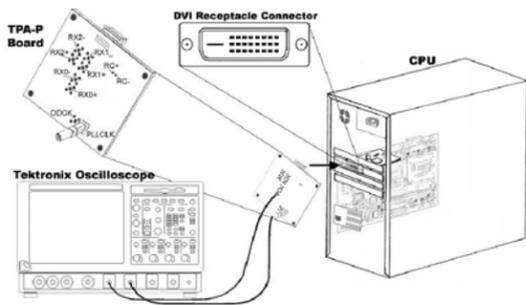
4. Connect the differential probes and the SMA cable from the test fixture to your TDS oscilloscope.

5. To calculate Tbit, select the Tbit button on the Define Tbit pane of the application.

6. Select the appropriate channel.

7. Press the "Running Man" icon to run the application.

The Tbit value appears in the Value field.

8. Select Measurement > Select >Transmitter> Eye Diagram. (Alternatively, in the Transmitter tab, select the Eye Diagram measurement.)
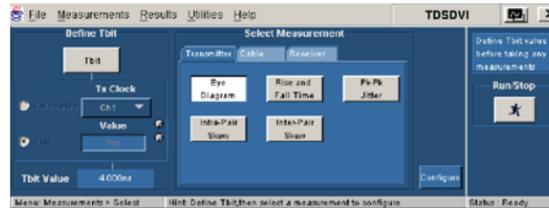

9. Press the configure button to configure the application.
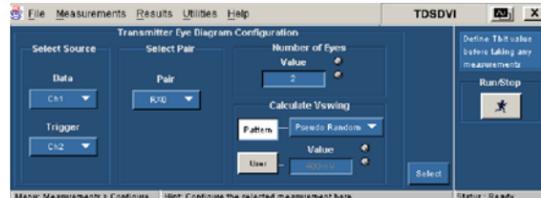
10. Press the "Running Man" icon to run the application.
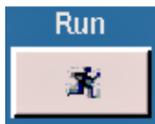
The detailed results and the eye diagram appear as shown below.
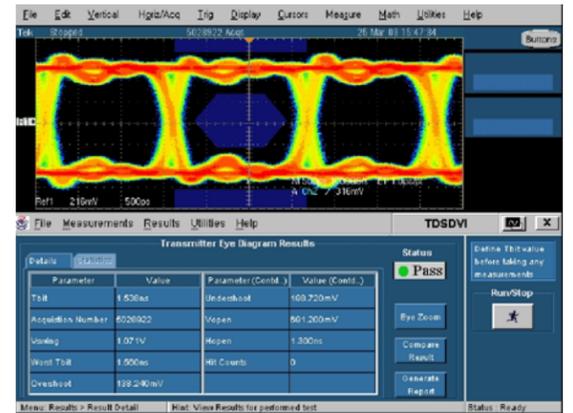
11. Select Utilities > Report Generator from the TDSDVI menu to generate a compliance test report.

For up-to-date information on Tektronix oscilloscope solutions for DVI testing, go to www.tektronix.com/dvi.

TDSDVI Ordering Information

This application supports TDS7704B, CSA7404B, TDS7404B, TDS7254B, CSA7404, TDS7404, TDS7254, TDS6604, TDS6404, TDS6604B, TDS6804B, TDS6124C, TDS6154C, DPO7354, and DPO/DSA70000 series oscilloscopes.

Order Option DVI (along with an oscilloscope).

Order TDS6/7UP, TDS7BUP, CSA7BUP, or CSA7UP, Option DVI (if ordered as an upgrade to an existing oscilloscope).

Recommended Accessories

P7350, P7330, P6330 – Differential probes

**P7240, P6249** – Single-ended probes

AWG510, AWG520, AWG610, AWG710, AWG5000/AWG7000 series – Arbitrary waveform generator

DG2020A – Data generator

TDS8000/ 80E04 – Time domain reflectometer

DPOJET/TDSJIT3 – Jitter analysis package

**TDSDVI
DVI Compliance Test Solution
Reference**

TDSDVI Menu Tree

File
- Recall Default — Yes | No
- Save . . . — *File browser* / Save | Cancel
- Recall . . . — *File browser* / Open | Cancel
- Recently Saved — *List of Files*
- Recently Recalled — *List of Files*
- Preferences . . .
  - General — Use cursors for Eye, RT& FT testing | Prompt for signal connection | Ref Wfm deletion prompt for Eye | Show report after generation | Use zoomed eye mask in report / Number of acquisitions
  - Advanced — Prompt for result reset / Prompt for Tbit validity / Cable Eye Diagram Test Point — Test at TP2 / Test at TP3 / Test at TP2 & TP3 / Number of acquisitions
- Minimize
- Exit — Yes — *Restore Scope Settings* / No / Cancel

Measurements
- Select
  - Define Tbit — Calculated — Tx Clock — Ch1, Ch2, Ch3, Ch4 / User — Value
  - Select Measurement
    - Transmitter — Eye Diagram | Rise and Fall Time | Pk-Pk Jitter | Intra-Pair Skew | Inter-Pair Skew
    - Cable — High-Amp Eye Diagram | Low-Amp Eye Diagram | Pk-Pk Jitter | Intra-Pair Skew | Inter-Pair Skew
    - Receiver — High-Amp Eye Diagram | Low-Amp Eye Diagram
- Configure
  - Transmitter Eye Diagram — Data | Trigger | Pair | Number of Eyes | Calculate Vswing
  - Transmitter Rise & Fall Time — Data | Trigger | Pair | Hysteresis | Calculate Vswing
  - Transmitter Pk - Pk Jitter — Tx Clock | Trigger
  - Transmitter Intra-Pair Skew — Source1 | Source2 | Pair | Hysteresis
  - Transmitter Inter-Pair Skew — Source1 | Source2 | Differential Probe | Pair1 | Pair2 | Hysteresis | Polarity
  - Cable High-Amplitude Eye Diagram — Data | Trigger | Pair | Number of Eyes
  - Cable Low-Amplitude Eye Diagram — Data | Trigger | Pair | Number of Eyes
  - Cable Pk-Pk Jitter — Tx Clock | Trigger
  - Cable Intra-Pair Skew — Source1 | Source2 | Pair | Hysteresis
  - Cable Inter-Pair Skew — Source1 | Source2 | Differential Probe | Pair1 | Pair2 | Hysteresis | Polarity
  - Receiver High-Amp Eye Diagram — Select Source | Select Pair | Number of Eyes
  - Receiver Low-Amp Eye Diagram — Select Source | Select Pair | Number of Eyes

Results
- Result Details — Details / Statistics

Utilities
- Report Generator
  - Report Setup
    - Device Detail — ID | Description | Prefix
    - Mode — Manual | Automatic
    - Clock Frequency — Defined | Resolution | Refresh Rate
  - Report Name — Directory | File Name
- Compare Results
  - Select Type — Current Vs File | File Vs File
  - Select File(s) to Compare
  - Select Destination File

Help
- Topics . . .
- About TDSDVI . . .
- Contact Tektronix

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