Getting Started with TDSDVI

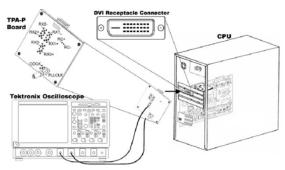
Side one of this Quick Reference Guide is designed to get you started making measurements with the DVI Compliance Test Solution (TDSDVI). Side two contains a complete menu tree for the TDSDVI software.

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 Test, Peak-to-Peak Jitter, Inter-Pair Skew, Intra-Pair Skew, and Rise and Fall Time testing.

Performing Transmitter Eye-diagram Test

- **1.** From the TDS Windows menu, select File > Run Application > DVI Compliance Test Solution.
- 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 measurement, 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 displays in the Value field.

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Menu: Measurements > Select	Hint: Define Thit then select a measurement to configur	•	Status : Ready

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

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Define Tbit Tbit Ta Clock Discussion Chi w Value Tbit Value 4000es	Sclect Measurement Transmitter Cable Readver Bye Rise and Pa Pk Diagram Fail Time Jitler Inta-Pair Steer Steer	Configure	Define Toit value before taking any measurements Run Stop
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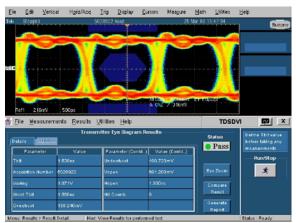
9. Press the configure button to configure the application.

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	Transmitter Eye Diagra	m Configuration		Define Thit value
Select Source	Select Pair	Number of Eyes Value 🍨		before taking any measurements
Data	Pair	2		Run/Stop
CM1 🔻	R/X0 🔻	Calculate Vswing		*
Trigger		Pattern — Pseudo Random 💌		
Ch2 🔻		Value 9		
		User - 400mV	Select	
Menu: Measurements > 0	Configure Hint: Configure	the selected measurement here		Status : Ready

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



The detailed results and the eye diagram display 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, and TDS6804B, TDS6124C, TDS6154C oscilloscopes.

Order Option DVI (along with an oscilloscope).

Order TDS6/7 UP, TDS7B UP, CSA7B UP, or CSA7 UP, Option DVI (if ordered as an upgrade to an existing oscilloscope).

Recommended Accessories P7350, P7330, P6330 - Differential Probes

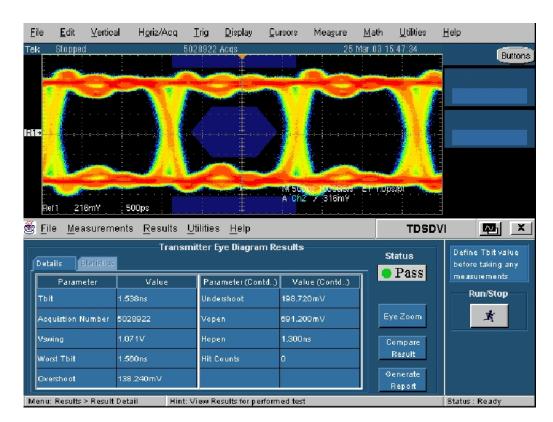
P7240 - Single ended probes

AWG510, AWG520, AWG610, AWG710 - Arbitrary Waveform Generator

DG2020A - Data Generator

TDS8000/ 80E04 - Time Domain Reflectometer

TDSJIT3 - Jitter analysis package



TDSDVI Compliance Test Solution Reference

www.tektronix.com



TDSDVI Menu Tree

	Recall Default —	Yes No			
		File browser			
	Save	Save Cancel			
	Decell	File browser			
	Recall ———	Open Cancel			
	Recently Saved —	List of Files			
F ile	Recently Recalled -	List of Files	Use cursors for Eve. BT& ET tes	ting Prompt for signal connection	
File ———		General —	Ref Wfm deletion prompt for Eye		
			Use zoomed eye mask in report Number of acquisitions		
	Preferences —	-	Prompt for result reset		
			Prompt for Tbit validity	Test at TP2	
		Advanced	Cable Eye Diagram Test Point -	- Test at TP3	
	Minimize	_	Number of acquisitions	Test at TP2 & TP3	
	Evà	Yes	- Restore Scope Settings		
	Exit —	- No Cancel		_	
		Define Tbit	Calculated — Tx Clock —	Ch1, Ch2, Ch3, Ch4	
			User ———Value		
	Select	_	Transmitter	Eye Diagram Rise and Fall Time Pk-Pk Jitter	
				Intra-Pair Skew Inter-Pair Skew	
		Select Measurement	 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	
Measurements —		Transmitter Eye Diagram		Data Trigger Pair Number of Eyes Calculate Vswing	
modouromonio		Transmitter Rise & Fall T	ime	Data Trigger Pair Hysteresis Calculate Vswing	
		Transmitter Pk - Pk Jitter		Tx Clock Trigger	
		Transmitter Intra-Pair Ske		Source1 Source2 Pair Hysteresis	
				Source1 Source2 Differential Probe	
		Transmitter Inter-Pair Ske	ew	Pair1 Pair2 Hysteresis Polarity	
	Configure —	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	
			Source1 Source2 Differential Probe		
	Cable Inter-Pair Skew			Pair1 Pair2 Hysteresis Polarity	
			Select Source Select Pair Number of Eyes		
Receiver Low-Amp Eye Diagram		Diagram	Select Source Select Pair Number of Eyes		
	_	Details			
Results —	Result Details				
			Device Detail	U Description Prefix	
		Report Setup	Mode	Manual Automatic	
	Report Generator —	_	Clock Frequency	Defined Resolution Refresh Rate	
Utilities	4	Report Name	Directory File Name		
		Select Type	Current Vs File File Vs File		
	Compare Results —	Select File(s) to Compare	L'		
	_	Select Destination File			
11.1.	Topics About TDSDVI				
Help ———	Contact Tektronix				

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