



TekExpress USB 3.2 Report

Test Report

Execution and Setup Information							
DUT ID		DUT001		DUT Type		Host	
Date/Time		2026-07-22 11:26:29		Scope Model		DPO73304SX	
Test Point		Compliance (TP4) – Far End		Scope Serial Numer		B322622	
Fixture Type		USB-IF		Scope F/W Version		10.15.1 Build 3	
Connector Type		Standard		SPC Factory:S/W Calibration		PASS;PASS	
Channel Type		Both Long & Short		TekExpress Version		USB:10.4.2.11 Framework:4.18.0.2	
Toggle Tool		AFG31252		DPOJET Version		"10.5.0.2"	
Acquisition Mode		Live		CTS Version		v1.0	
SigTest Version		3.2.11.3(Gen1) & 4.0.23.2(for SSC tests)					
Total Acquisition Time		3 Minutes 12 Seconds					
Total Analysis Time		1 Minute 4 Seconds					
Over All Test Result		Fail					
DUT COMMENT:		General Comment – USB3.2 DUT					

UI-Unit Interval									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
UI-Unit Interval	Lane0	Short	Gen1	SigTest	200.428 ps	Pass	487.820 fs & 632.180 fs	199.94 ps	201.06 ps
UI-Unit Interval	Lane0	Long	Gen1	SigTest	200.436 ps	Pass	495.585 fs & 624.415 fs	199.94 ps	201.06 ps
COMMENTS	USB 3.2 Specification, Rev 1.0, Table 6-17								

Rj-Tx random jitter-Dual Dirac									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
Rj-Tx random jitter-Dual Dirac	Lane0	Short	Gen1	SigTest	1.561 ps	Informative	1.561 ps & 1.709 ps	0 s	3.27 ps
Rj-Tx random jitter-Dual Dirac	Lane0	Long	Gen1	SigTest	1.473 ps	Informative	1.473 ps & 1.797 ps	0 s	3.27 ps
COMMENTS	USB 3.2 Specification, Rev 1.0, Table 6-19								

Mask Hits									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
Mask Hits	Lane0	Short	Gen1	SigTest	0.000	Pass	0.000	N.A	0
Mask Hits	Lane0	Long	Gen1	SigTest	0.000	Pass	0.000	N.A	0
COMMENTS	USB 3.2 Specification, Rev 1.0, Table 6-18								

TSSC-Freq-Dev-Max									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
TSSC-Freq-Dev-Max (Max)	Lane0	Short	Gen1	SigTest	-4.289 kppm (Max)	Pass	1.011 kppm & 588.943 ppm	-5.3 kppm	-3.7 kppm
TSSC-Freq-Dev-Max (Min)	Lane0	Short	Gen1	SigTest	-4.300 kppm (Min)	Pass	999.852 ppm & 600.148 ppm	-5.3 kppm	-3.7 kppm
TSSC-Freq-D	Lane0	Long	Gen1	SigTest	-4.291 kppm	Pass	1.009 kppm & 590.600 ppm	-5.3 kppm	-3.7 kppm

ev-Max (Max)					(Max)		m		
TSSC-Freq-D ev-Max (Min)	Lane0	Long	Gen1	SigTest	-4.302 kppm (Min)	Pass	997.965 ppm & 602.035 pp m	-5.3 kppm	-3.7 kppm
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-16							

TSSC-Freq-Dev-Min									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
TSSC-Freq-D ev-Min (Max)	Lane0	Short	Gen1	SigTest	95.167 ppm (Max)	Pass	395.167 ppm & 204.833 pp m	-300.0 ppm	300.0 ppm
TSSC-Freq-D ev-Min (Min)	Lane0	Short	Gen1	SigTest	79.323 ppm (Min)	Pass	379.323 ppm & 220.677 pp m	-300.0 ppm	300.0 ppm
TSSC-Freq-D ev-Min (Max)	Lane0	Long	Gen1	SigTest	88.684 ppm (Max)	Pass	388.684 ppm & 211.316 pp m	-300.0 ppm	300.0 ppm
TSSC-Freq-D ev-Min (Min)	Lane0	Long	Gen1	SigTest	79.409 ppm (Min)	Pass	379.409 ppm & 220.591 pp m	-300.0 ppm	300.0 ppm
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-16							

TSSC-Mod-Rate - SSC Modulation rate									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
TSSC-Mod-Ra te - SSC Mod ulation rate	Lane0	Short	Gen1	SigTest	31.260 kHz	Pass	1.260 kHz & 1.740 kHz	30.0 kHz	33.0 kHz
TSSC-Mod-Ra te - SSC Mod ulation rate	Lane0	Long	Gen1	SigTest	31.251 kHz	Pass	1.251 kHz & 1.749 kHz	30.0 kHz	33.0 kHz
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-16							

SSC_dfdt									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
SSC_dfdt	Lane0	Short	Gen1	SigTest	329.029 pp m/us	Pass	920.971 pp m/us	N.A	1.25 kppm/us
SSC_dfdt	Lane0	Long	Gen1	SigTest	327.164 pp m/us	Pass	922.836 pp m/us	N.A	1.25 kppm/us
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-17							

DJ-Tx deterministic Jitter-Dual Dirac									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
DJ-Tx determ inistic Jitter-D ual Dirac	Lane0	Short	Gen1	SigTest	61.390 ps	Pass	61.390 ps & 2 4.610 ps	0 s	86.0 ps
DJ-Tx determ inistic Jitter-D ual Dirac	Lane0	Long	Gen1	SigTest	61.264 ps	Pass	61.264 ps & 2 4.736 ps	0 s	86.0 ps
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-19							

TJ-Tx total jitter-Dual Dirac at 1E-12 BER									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
TJ-Tx total jit ter-Dual Dira c at 1E-12 BE R	Lane0	Short	Gen1	SigTest	83.331 ps	Pass	83.331 ps & 4 8.669 ps	0 s	132.0 ps
TJ-Tx total jit ter-Dual Dira	Lane0	Long	Gen1	SigTest	81.976 ps	Pass	81.976 ps & 5	0 s	132.0 ps

c at 1E-12 BER							0.024 ps		
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-19							

Eye Height – Transmitter Eye Mask									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
Eye Height – Transmitter Eye Mask	Lane0	Short	Gen1	SigTest	191.425 mV	Pass	91.425 mV & 1.009 V	100.0 mV	1.2 V
Eye Height – Transmitter Eye Mask	Lane0	Long	Gen1	SigTest	81.372 mV	Fail	-18.628 mV & 1.119 V	100.0 mV	1.2 V
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-19							

Eye Width @ 1E-12 BER									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
Width@BER	Lane0	Short	Gen1	SigTest	116.669 ps	Pass	48.669 ps	68.0 ps	N.A
Width@BER	Lane0	Long	Gen1	SigTest	118.024 ps	Pass	50.024 ps	68.0 ps	N.A
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-18							

LFPS Duty Cycle									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
LFPS Duty Cycle (Max)	Lane0	Short	Gen1	SigTest	49.632 % (Max)	Pass	9.632 % & 10.368 %	40.0 %	60.0 %
LFPS Duty Cycle (Min)	Lane0	Short	Gen1	SigTest	49.480 % (Min)	Pass	9.480 % & 10.520 %	40.0 %	60.0 %
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-28							

LFPS Fall Time									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
LFPS Fall Time	Lane0	Short	Gen1	SigTest	298.237 ps	Pass	3.702 ns	N.A	4.0 ns
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-28							

LFPS Rise Time									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
LFPS Rise Time	Lane0	Short	Gen1	SigTest	295.742 ps	Pass	3.704 ns	N.A	4.0 ns
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-28							

LFPS TPeriod									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
LFPS TPeriod (Max)	Lane0	Short	Gen1	SigTest	34.227 ns (Max)	Pass	14.227 ns & 65.773 ns	20.0 ns	100.0 ns
LFPS TPeriod (Min)	Lane0	Short	Gen1	SigTest	32.522 ns (Min)	Pass	12.522 ns & 67.478 ns	20.0 ns	100.0 ns
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-28							

LFPS Vcm-AC									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
LFPS Vcm-AC	Lane0	Short	Gen1	SigTest	36.000 mV	Pass	64.000 mV	N.A	100.0 mV
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-28							

LFPS Vtx-DIFF-PP									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit

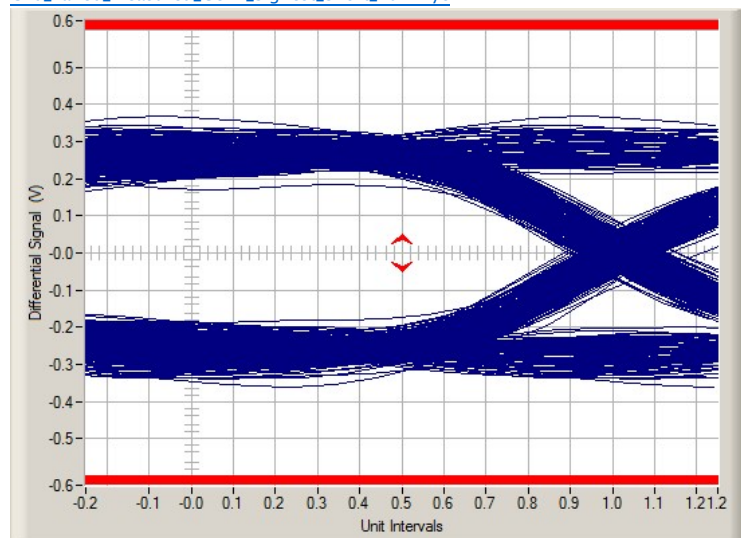
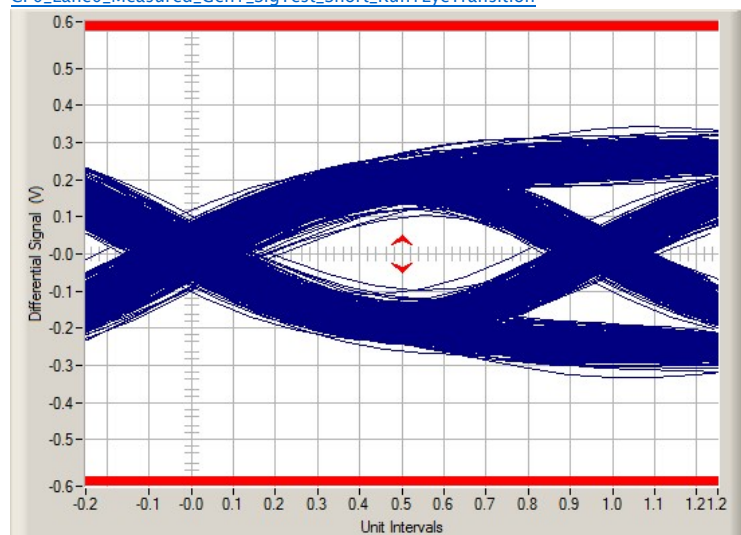
LFPS Vtx-DIFF-PP (Max)	Lane0	Short	Gen1	SigTest	1.004 V (Max)	Pass	204.000 mV & 196.000 mV	800.0 mV	1.2 V
LFPS Vtx-DIFF-PP (Min)	Lane0	Short	Gen1	SigTest	988.000 mV (Min)	Pass	188.000 mV & 212.000 mV	800.0 mV	1.2 V
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-28							

LFPS TBurst									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
LFPS TBurst (Max)	Lane0	Short	Gen1	SigTest	1.054 us (Max)	Pass	454.180 ns & 345.820 ns	600.0 ns	1.4 us
LFPS TBurst (Min)	Lane0	Short	Gen1	SigTest	1.051 us (Min)	Pass	451.220 ns & 348.780 ns	600.0 ns	1.4 us
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-29							

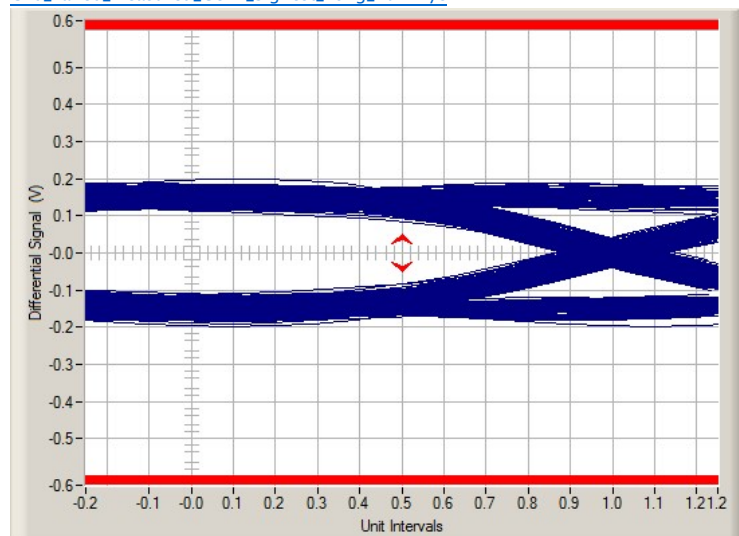
LFPS TRepeat									
Measurement Details	Lane	Channel	Generation	Method	Measured Value	Test Result	Margin	Low Limit	High Limit
LFPS TRepeat (Max)	Lane0	Short	Gen1	SigTest	10.037 us (Max)	Pass	4.037 us & 3.963 us	6.0 us	14.0 us
LFPS TRepeat (Min)	Lane0	Short	Gen1	SigTest	10.010 us (Min)	Pass	4.010 us & 3.990 us	6.0 us	14.0 us
COMMENTS		USB 3.2 Specification, Rev 1.0, Table 6-29							

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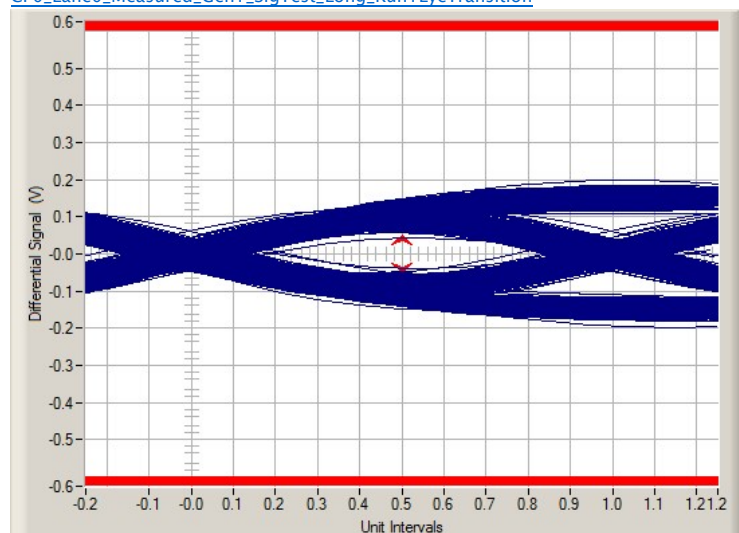
Mask Hits

[CP0_Lane0_Measured_Gen1_SigTest_Short_Run1Eye](#)[CP0_Lane0_Measured_Gen1_SigTest_Short_Run1EyeTransition](#)

CP0_Lane0_Measured_Gen1_SigTest_Long_Run1Eye

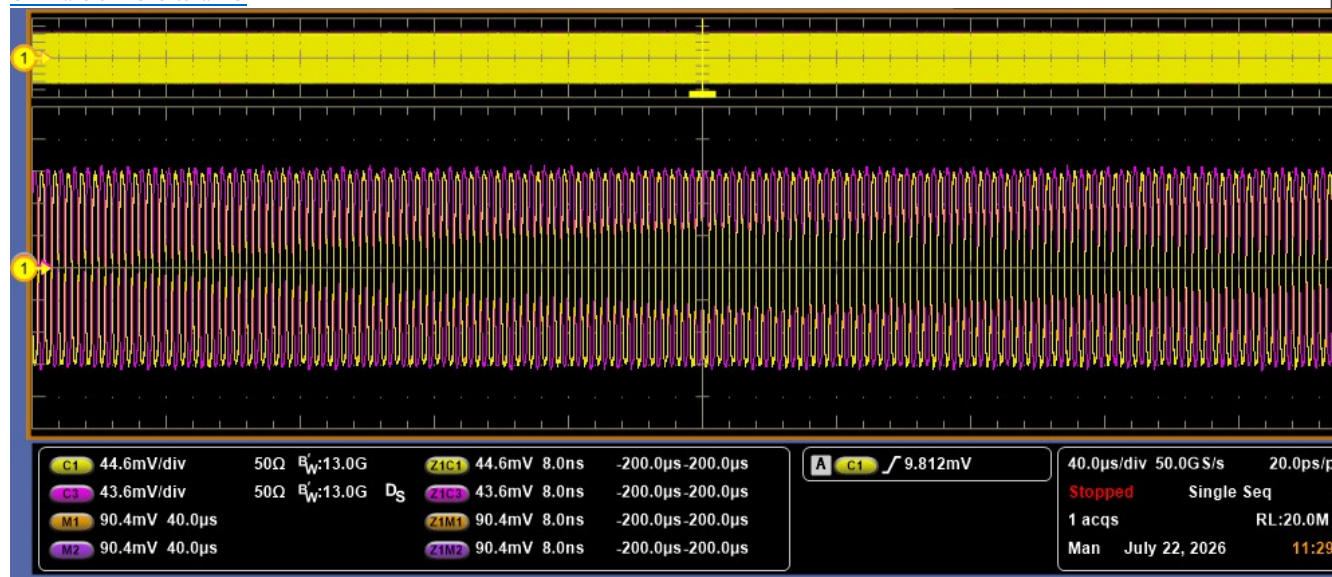


CP0_Lane0_Measured_Gen1_SigTest_Long_Run1EyeTransition

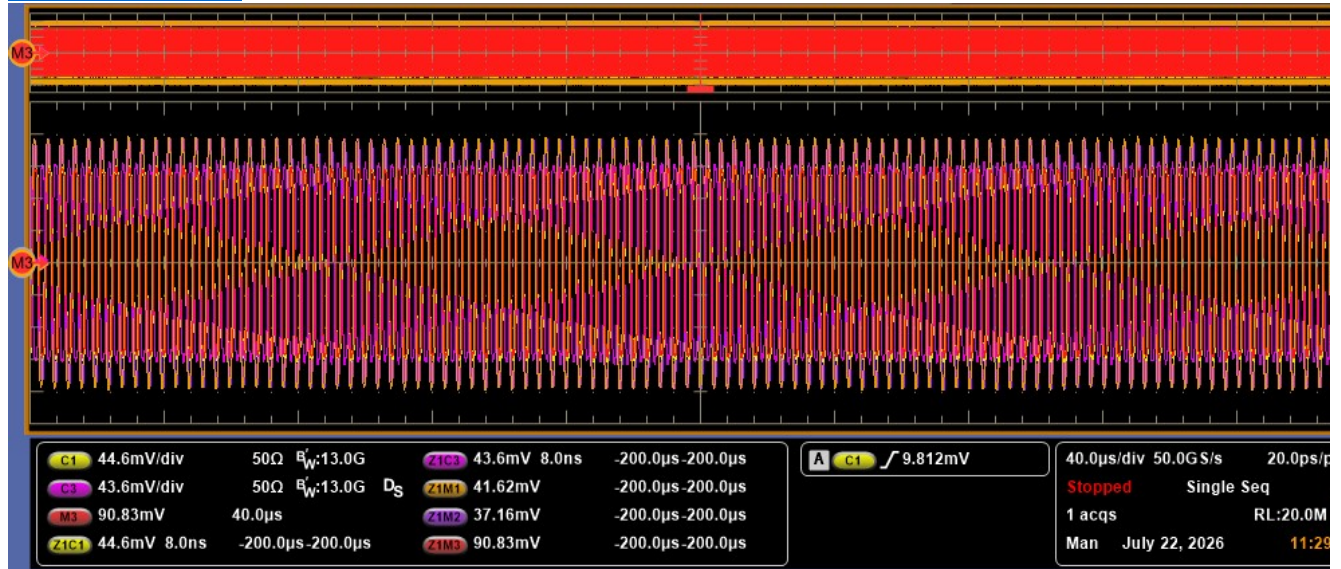


SSC_dfdt

CPI waveform Shortchannel



CPI waveform Longchannel



LFPS Vcm-AC

LFPS waveform Shortchannel

