



USB 3.1 TX Test Report

Overall result: Pass

DUT:	Intel Host TUSB1064
Comment:	
Time of session start:	04/03/2017 11:36:39
Operator:	
Temperature	25° C
Standard in use:	USB 3.1 TX

Session ID: 29, Continuation #: 1:

Time of run:	2017/04/03 11:37:01
Configuration in use:	Host - Scope Only GEN II
Limits in use:	ComplianceLimits
Oscilloscope Name:	LCRY0430N54635 Model: SDA825ZI-A
Oscilloscope Serial #:	LCRY0430N54635
Computer:	LCRY0430N54635
Oscilloscope firmware version:	8.1.0.1 (Build 225434)
QualiPHY core version:	8.1.0.0 (Build 221173)

QualiPHY script version:	8.1.0.0
Stylesheet version:	1.2.0.7

Summary Table

[\[Hide Table\]](#)

Pass #	Test	Measurement	Current Value	Test Criteria
	1 2.1 Gen2 Jitter Sigtest	Tj CP10 SigTest	15.5681 ps	$x \leq 71.40 \text{ ps}$
	1 2.1 Gen2 Jitter Sigtest	Rj (rms) CP10 SigTest	0.7089 ps	$x \leq 1.308 \text{ ps}$
	1 Gen2 CTLE Settings (Long Channel)	DC Gain	-5.00 dB	Informational Only
	1 Gen2 CTLE Settings (Long Channel)	Zero Frequency	597.000 MHz	Informational Only
	1 2.1 Gen2 SigTest	SigTest Pass / Fail Result	pass	match "Pass"
	1 2.1 Gen2 SigTest	Tj CP9 SigTest	39.6702 ps	$x \leq 71.40 \text{ ps}$
	1 2.1 Gen2 SigTest	Dj DD CP9 SigTest	34.9077 ps	$x \leq 53.00 \text{ ps}$
	1 2.1 Gen2 SigTest	Min Time Between Crossovers (after channel) SigTest	55.799 ps	Informational Only
	1 2.1 Gen2 SigTest	Avg UI SigTest	100.2181 ps	$99.9700 \text{ ps} < x < 100.5301 \text{ ps}$
	1 2.1 Gen2 SigTest	Max PP Jitter SigTest	48.516 ps	Informational Only
	1 Gen 2	Non Transition Eye Violations	0 hits	$x = 0 \text{ hits}$
	1 Gen 2	Transition Eye Violations	0 hits	$x = 0 \text{ hits}$
	1 Gen 2	Total Eye Violations	0 hits	$x = 0 \text{ hits}$
	1 2.1 Gen2 SigTest	Eye Height SigTest	78.6 mV	Informational Only
	1 2.1 Gen2 SigTest	Max Non Trans Voltage SigTest	183.4 mV	Informational Only
	1 2.1 Gen2 SigTest	Min Non Trans Voltage SigTest	-181.6 mV	Informational Only
	1 2.1 Gen2 SigTest	Max Trans Voltage SigTest	178.1 mV	Informational Only
	1 2.1 Gen2 SigTest	Max Trans Voltage SigTest	-179.0 mV	Informational Only
	1 2.1 Gen2 SigTest	Min Non Trans Upper Margin	18.1 mV	Informational Only
	1 2.1 Gen2 SigTest	Max Non Trans Lower Margin	-18.3 mV	Informational Only
	1 2.1 Gen2 SigTest	Max Trans Upper Margin	11.1 mV	Informational Only
	1 2.1 Gen2 SigTest	Max Trans Lower Margin	-9.1 mV	Informational Only
	1 2.1 Gen2 SigTest	Min Eye Width SigTest	60.330 ps	Informational Only
	1 2.2 Gen2 Short Channel Jitter SigTest	Tj CP10 SigTest	7.3520 ps	$x \leq 71.40 \text{ ps}$
	1 2.2 Gen2 Short Channel Jitter SigTest	Rj (rms) CP10 SigTest	0.5019 ps	$x \leq 1.308 \text{ ps}$

Pass #	Test	Measurement	Current Value	Test Criteria
	1 Gen2 CTLE Settings (Short Channel)	DC Gain	0.00 dB	Informational Only
	1 Gen2 CTLE Settings (Short Channel)	Zero Frequency	1.060 GHz	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel SigTest Pass / Fail Result	pass	match "Pass"
	1 2.2 Gen2 Short Channel SigTest	Short Channel Tj CP9 SigTest	43.6512 ps	$x \leq 71.40$ ps
	1 2.2 Gen2 Short Channel SigTest	Short Channel Ri (rms) CP9 SigTest	0.5019 ps	$x \leq 1.308$ ps
	1 2.2 Gen2 Short Channel SigTest	Short Channel Dj DD CP9 SigTest	38.8802 ps	$x \leq 53.00$ ps
	1 2.2 Gen2 Short Channel SigTest	Short Channel Min Time Between Crossovers (after channel) SigTest	80.439 ps	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Avg UI SigTest	100.2181 ps	99.9700 ps $< x < 100.5301$ ps
	1 2.2 Gen2 Short Channel SigTest	Short Channel Max PP Jitter SigTest	48.421 ps	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Transition Eye Violations	0	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Non Transition Eye Violations	0	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Total Eye Violations	0	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Eye Height SigTest	216.8 mV	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Max Non Trans Voltage SigTest	382.3 mV	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Min Non Trans Voltage SigTest	-390.2 mV	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Max Trans Voltage SigTest	376.2 mV	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Min Trans Voltage SigTest	-385.7 mV	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Min Non Trans Upper Margin	99.7 mV	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Max Non Trans Lower Margin	-102.6 mV	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Max Trans Upper Margin	89.1 mV	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Max Trans Lower Margin	-86.7 mV	Informational Only
	1 2.2 Gen2 Short Channel SigTest	Short Channel Min Eye Width SigTest	56.349 ps	Informational Only
	1 2.3 Gen2	SSC Deviation Max (max)	-88.5 PPM	-300.0 PPM $\leq x \leq 300.0$ PPM or -2.3000 kPPM $\leq x \leq -1.7000$ kPPM
	1 2.3 Gen2	SSC Deviation Max (min)	-105.1 PPM	-300.0 PPM $\leq x \leq 300.0$ PPM or -2.3000 kPPM $\leq x \leq -1.7000$ kPPM

Pass	#	Test	Measurement	Current Value	Test Criteria
✓	1	2.3 Gen2	SSC Frequency Modulation Rate	31.011 kHz	30.000 kHz <= x <= 33.000 kHz
✓	1	2.3 Gen2	SSC Deviation Min (max)	-4.5410 kPPM	-5.3000 kPPM <= x <= -3.7000 kPPM
✓	1	2.3 Gen2	SSC Deviation Min (min)	-4.5524 kPPM	-5.3000 kPPM <= x <= -3.7000 kPPM
✓	1	2.3 Gen2	SSC DF / DT	445.03558	x <= 1.2500000e+3

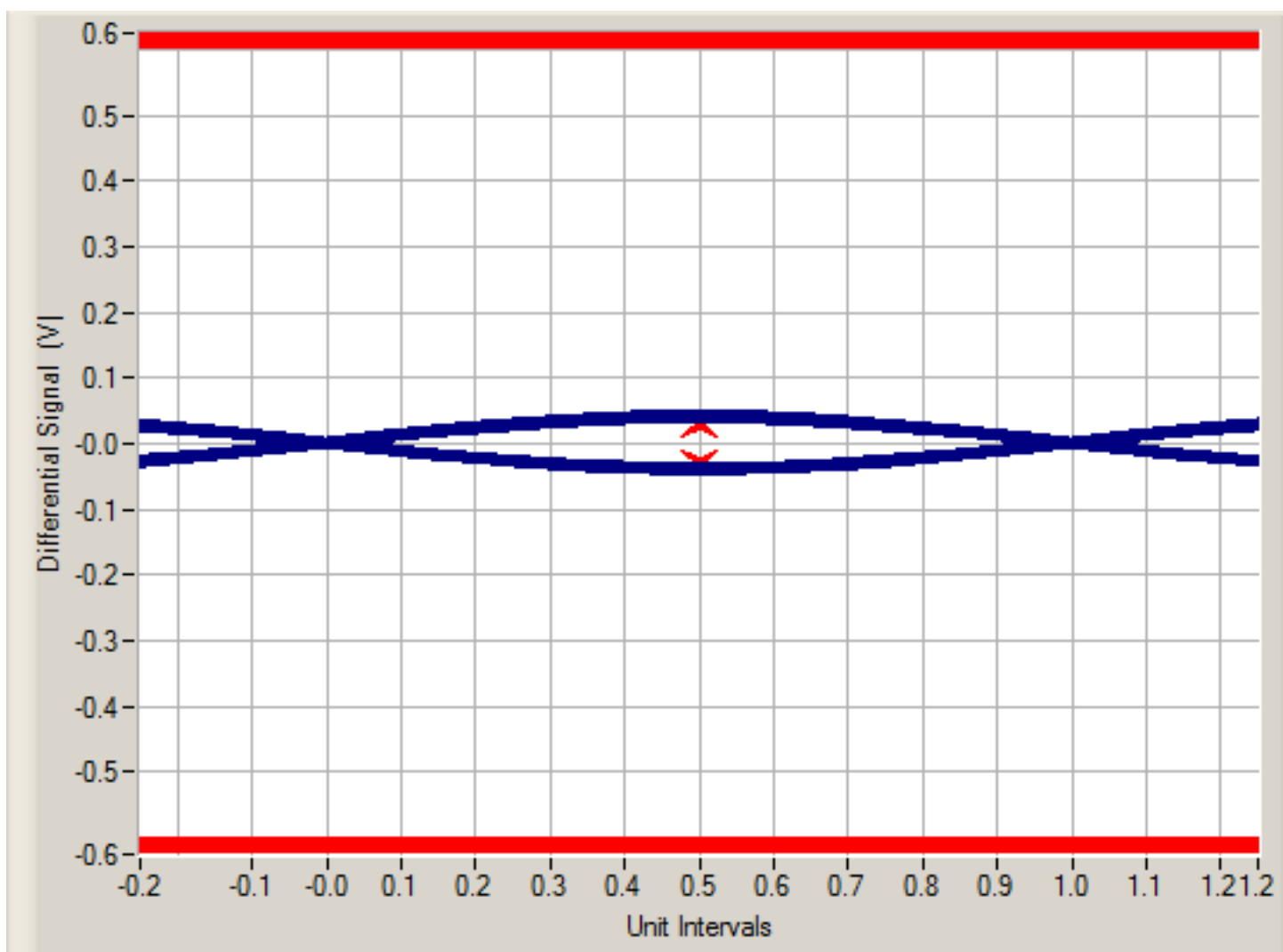
Details

[\[Up\]](#)

 Pass	Measurement: <i>Tj CP10 SigTest</i>		
	Current Value:	15.5681 ps	Test Criteria: $x \leq 71.40$ ps
	Timestamp:	04/03/2017 11:45:12	Limit Name: Gen2_Tj

[\[Up\]](#)

 Pass	Measurement: <i>Rj (rms) CP10 SigTest</i>		
	Current Value:	0.7089 ps	Test Criteria: $x \leq 1.308$ ps
	Timestamp:	04/03/2017 11:45:12	Limit Name: Gen2_Rj



SigTest CP10 Eye Diagram

Timestamp: 04/03/2017 11:45:12

[\[Up \]](#)

	Measurement: DC Gain		
	Current Value:	-5.00 dB	Test Criteria: Informational Only
	Timestamp:	04/03/2017 11:45:43	Limit Name: InfoOnlyS

[\[Up \]](#)

	Measurement: Zero Frequency		
	Current Value:	597.000 MHz	Test Criteria: Informational Only
	Timestamp:	04/03/2017 11:45:43	Limit Name: InfoOnlyS

[\[Up \]](#)

 Pass	Measurement: SigTest Pass / Fail Result		
	Current Value:	pass	Test Criteria: match "Pass"
	Timestamp:	04/03/2017 11:51:38	Limit Name: OverallPassFail

[\[Up \]](#)

 Pass	Measurement: Tj CP9 SigTest		
	Current Value:	39.6702 ps	Test Criteria: $x \leq 71.40$ ps
	Timestamp:	04/03/2017 11:51:38	Limit Name: Gen2_Tj

[\[Up \]](#)

 Pass	Measurement: Dj DD CP9 SigTest		
	Current Value:	34.9077 ps	Test Criteria: $x \leq 53.00$ ps
	Timestamp:	04/03/2017 11:51:38	Limit Name: Gen2_Dj

[\[Up \]](#)

	Measurement: Min Time Between Crossovers (after channel) SigTest		
	Current Value:	55.799 ps	Test Criteria: Informational Only
	Timestamp:	04/03/2017 11:51:38	Limit Name: InfoOnlyS

[\[Up \]](#)

 Pass	Measurement: Avg UI SigTest		
	Current Value:	100.2181 ps	Test Criteria: $99.9700 \text{ ps} < x < 100.5301 \text{ ps}$
	Timestamp:	04/03/2017 11:51:38	Limit Name: Gen2_UISSC

[\[Up\]](#)

	Measurement: Max PP Jitter SigTest		
	Current Value:	48.516 ps	Test Criteria: Informational Only
	Timestamp:	04/03/2017 11:51:38	Limit Name: InfoOnlyS

[\[Up\]](#)

 Pass	Measurement: Non Transition Eye Violations		
	Current Value:	0 hits	Test Criteria: x = 0 hits
	Timestamp:	04/03/2017 11:51:38	Limit Name: MaskHits

[\[Up\]](#)

 Pass	Measurement: Transition Eye Violations		
	Current Value:	0 hits	Test Criteria: x = 0 hits
	Timestamp:	04/03/2017 11:51:38	Limit Name: MaskHits

[\[Up\]](#)

 Pass	Measurement: Total Eye Violations		
	Current Value:	0 hits	Test Criteria: x = 0 hits
	Timestamp:	04/03/2017 11:51:38	Limit Name: MaskHits

[\[Up\]](#)

	Measurement: Eye Height SigTest		
	Current Value:	78.6 mV	Test Criteria: Informational Only
	Timestamp:	04/03/2017 11:51:38	Limit Name: InfoOnlyV

[\[Up\]](#)

	Measurement: Max Non Trans Voltage SigTest		
	Current Value:	183.4 mV	Test Criteria: Informational Only
	Timestamp:	04/03/2017 11:51:38	Limit Name: InfoOnlyV

[\[Up\]](#)

	Measurement: Min Non Trans Voltage SigTest		
	Current Value:	-181.6 mV	Test Criteria: Informational Only
	Timestamp:	04/03/2017 11:51:38	Limit Name: InfoOnlyV

[\[Up\]](#)

	Measurement: Max Trans Voltage SigTest		
	Current Value:	178.1 mV	Test Criteria: Informational Only

	Timestamp: 04/03/2017 11:51:38	Limit Name: InfoOnlyV
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[\[Up \]](#)

	Measurement: Max Trans Voltage SigTest	
	Current Value: -179.0 mV	Test Criteria: Informational Only
	Timestamp: 04/03/2017 11:51:38	Limit Name: InfoOnlyV

[\[Up \]](#)

	Measurement: Min Non Trans Upper Margin	
	Current Value: 18.1 mV	Test Criteria: Informational Only
	Timestamp: 04/03/2017 11:51:38	Limit Name: InfoOnlyV

[\[Up \]](#)

	Measurement: Max Non Trans Lower Margin	
	Current Value: -18.3 mV	Test Criteria: Informational Only
	Timestamp: 04/03/2017 11:51:38	Limit Name: InfoOnlyV

[\[Up \]](#)

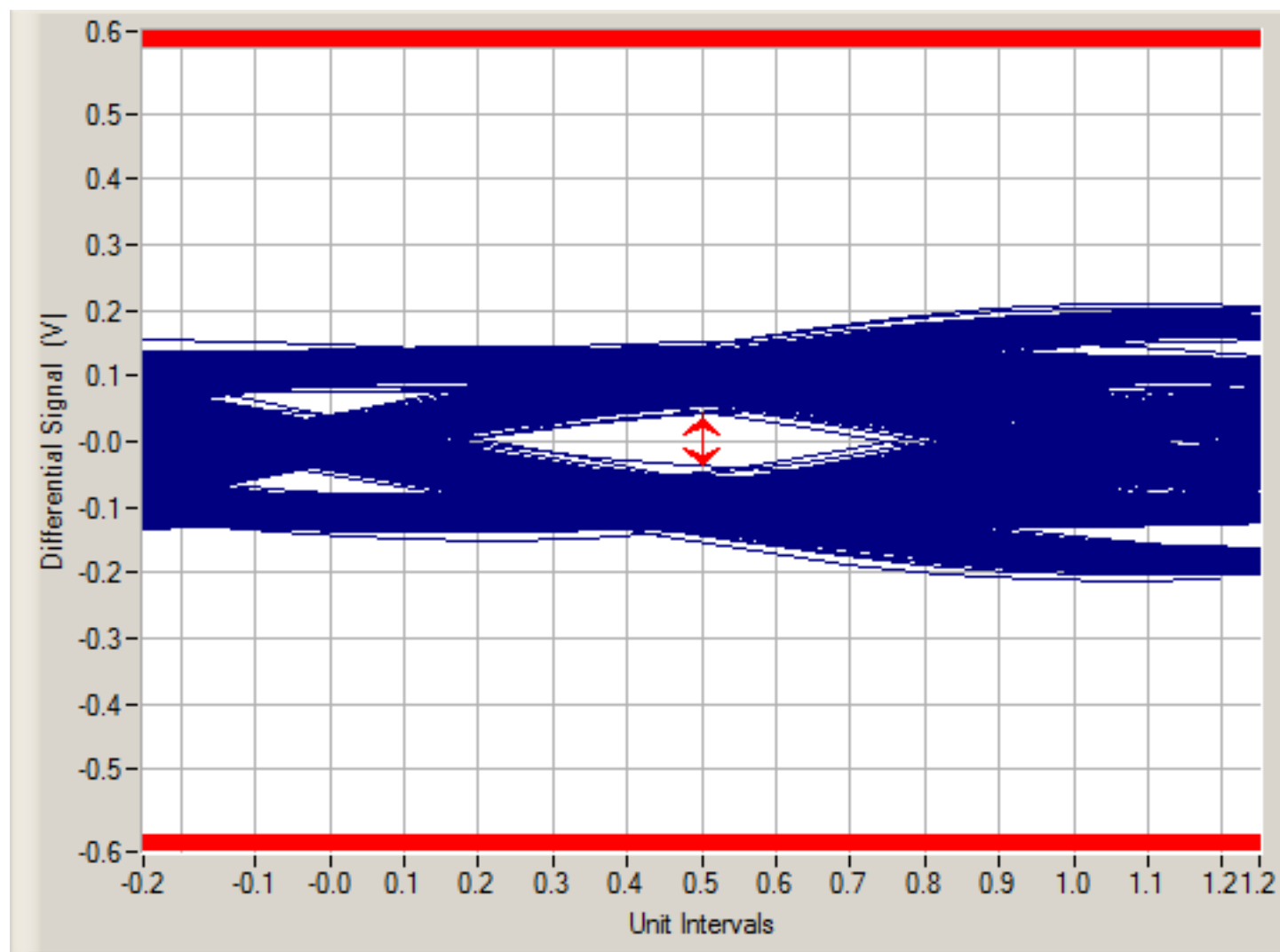
	Measurement: Max Trans Upper Margin	
	Current Value: 11.1 mV	Test Criteria: Informational Only
	Timestamp: 04/03/2017 11:51:38	Limit Name: InfoOnlyV

[\[Up \]](#)

	Measurement: Max Trans Lower Margin	
	Current Value: -9.1 mV	Test Criteria: Informational Only
	Timestamp: 04/03/2017 11:51:38	Limit Name: InfoOnlyV

[\[Up \]](#)

	Measurement: Min Eye Width SigTest	
	Current Value: 60.330 ps	Test Criteria: Informational Only
	Timestamp: 04/03/2017 11:51:38	Limit Name: InfoOnlyS



SigTest CP9 Non Transition Eye Diagram

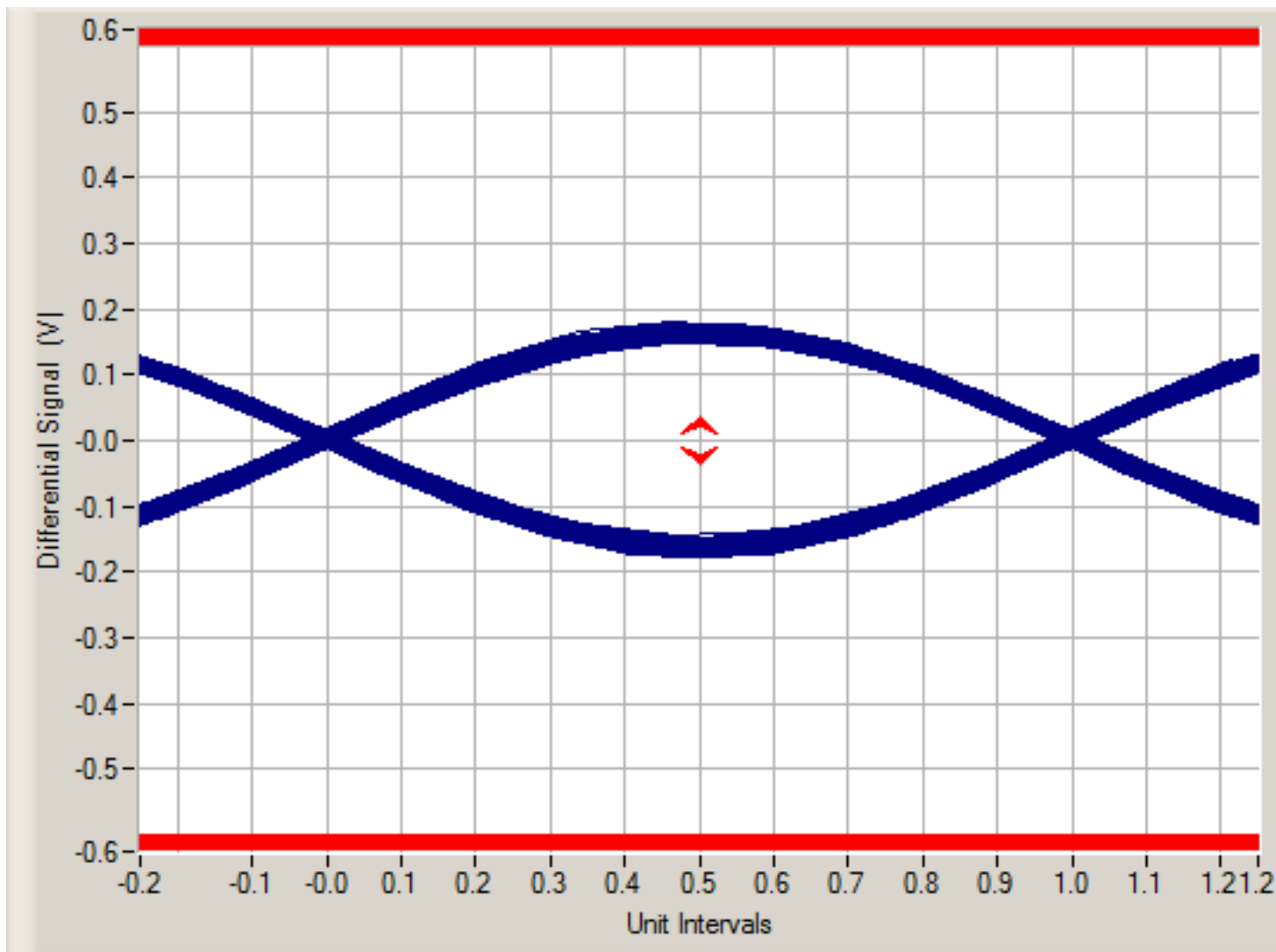
Timestamp: 04/03/2017 11:51:38

[\[Up\]](#)

 Pass	Measurement: <i>Tj CP10 SigTest</i>	
	Current Value: 7.3520 ps	Test Criteria: $x \leq 71.40$ ps
	Timestamp: 04/03/2017 11:57:38	Limit Name: Gen2_Tj

[\[Up\]](#)

 Pass	Measurement: <i>Rj (rms) CP10 SigTest</i>	
	Current Value: 0.5019 ps	Test Criteria: $x \leq 1.308$ ps
	Timestamp: 04/03/2017 11:57:38	Limit Name: Gen2_Rj



Gen2 Short Channel SigTest CP10 Eye Diagram

Timestamp: 04/03/2017 11:57:38

[\[Up \]](#)

	Measurement: DC Gain		
	Current Value:	0.00 dB	Test Criteria: Informational Only
	Timestamp:	04/03/2017 11:57:39	Limit Name: InfoOnlyS

[\[Up \]](#)

	Measurement: Zero Frequency		
	Current Value:	1.060 GHz	Test Criteria: Informational Only
	Timestamp:	04/03/2017 11:57:39	Limit Name: InfoOnlyS

[\[Up \]](#)

 Pass	Measurement: Short Channel SigTest Pass / Fail Result		
	Current Value:	pass	Test Criteria: match "Pass"
	Timestamp:	04/03/2017 12:02:53	Limit Name: OverallPassFail

[\[Up \]](#)

 Pass	Measurement: Short Channel Tj CP9 SigTest		
	Current Value:	43.6512 ps	Test Criteria: $x \leq 71.40$ ps
	Timestamp:	04/03/2017 12:02:53	Limit Name: Gen2_Tj

[\[Up \]](#)

 Pass	Measurement: Short Channel Rj (rms) CP9 SigTest		
	Current Value:	0.5019 ps	Test Criteria: $x \leq 1.308$ ps
	Timestamp:	04/03/2017 12:02:53	Limit Name: Gen2_Rj

[\[Up \]](#)

 Pass	Measurement: Short Channel Dj DD CP9 SigTest		
	Current Value:	38.8802 ps	Test Criteria: $x \leq 53.00$ ps
	Timestamp:	04/03/2017 12:02:53	Limit Name: Gen2_Dj

[\[Up \]](#)

	Measurement: Short Channel Min Time Between Crossovers (after channel) SigTest		
	Current Value:	80.439 ps	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: InfoOnlyS

[\[Up\]](#)

 Pass	Measurement: Short Channel Avg UI SigTest		
	Current Value:	100.2181 ps	Test Criteria: 99.9700 ps < x < 100.5301 ps
	Timestamp:	04/03/2017 12:02:53	Limit Name: Gen2_UISSC

[\[Up\]](#)

	Measurement: Short Channel Max PP Jitter SigTest		
	Current Value:	48.421 ps	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: InfoOnlyS

[\[Up\]](#)

	Measurement: Short Channel Transition Eye Violations		
	Current Value:	0	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: MaskHits

[\[Up\]](#)

	Measurement: Short Channel Non Transition Eye Violations		
	Current Value:	0	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: MaskHits

[\[Up\]](#)

	Measurement: Short Channel Total Eye Violations		
	Current Value:	0	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: MaskHits

[\[Up\]](#)

	Measurement: Short Channel Eye Height SigTest		
	Current Value:	216.8 mV	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: InfoOnlyV

[\[Up\]](#)

	Measurement: Short Channel Max Non Trans Voltage SigTest		
	Current Value:	382.3 mV	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: InfoOnlyV

[\[Up\]](#)

	Measurement: Short Channel Min Non Trans Voltage SigTest		
	Current Value:	-390.2 mV	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: InfoOnlyV

[\[Up\]](#)

	Measurement: Short Channel Max Trans Voltage SigTest		
	Current Value:	376.2 mV	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: InfoOnlyV

[\[Up\]](#)

	Measurement: Short Channel Min Trans Voltage SigTest		
	Current Value:	-385.7 mV	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: InfoOnlyV

[\[Up\]](#)

	Measurement: Short Channel Min Non Trans Upper Margin		
	Current Value:	99.7 mV	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: InfoOnlyV

[\[Up\]](#)

	Measurement: Short Channel Max Non Trans Lower Margin		
	Current Value:	-102.6 mV	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: InfoOnlyV

[\[Up\]](#)

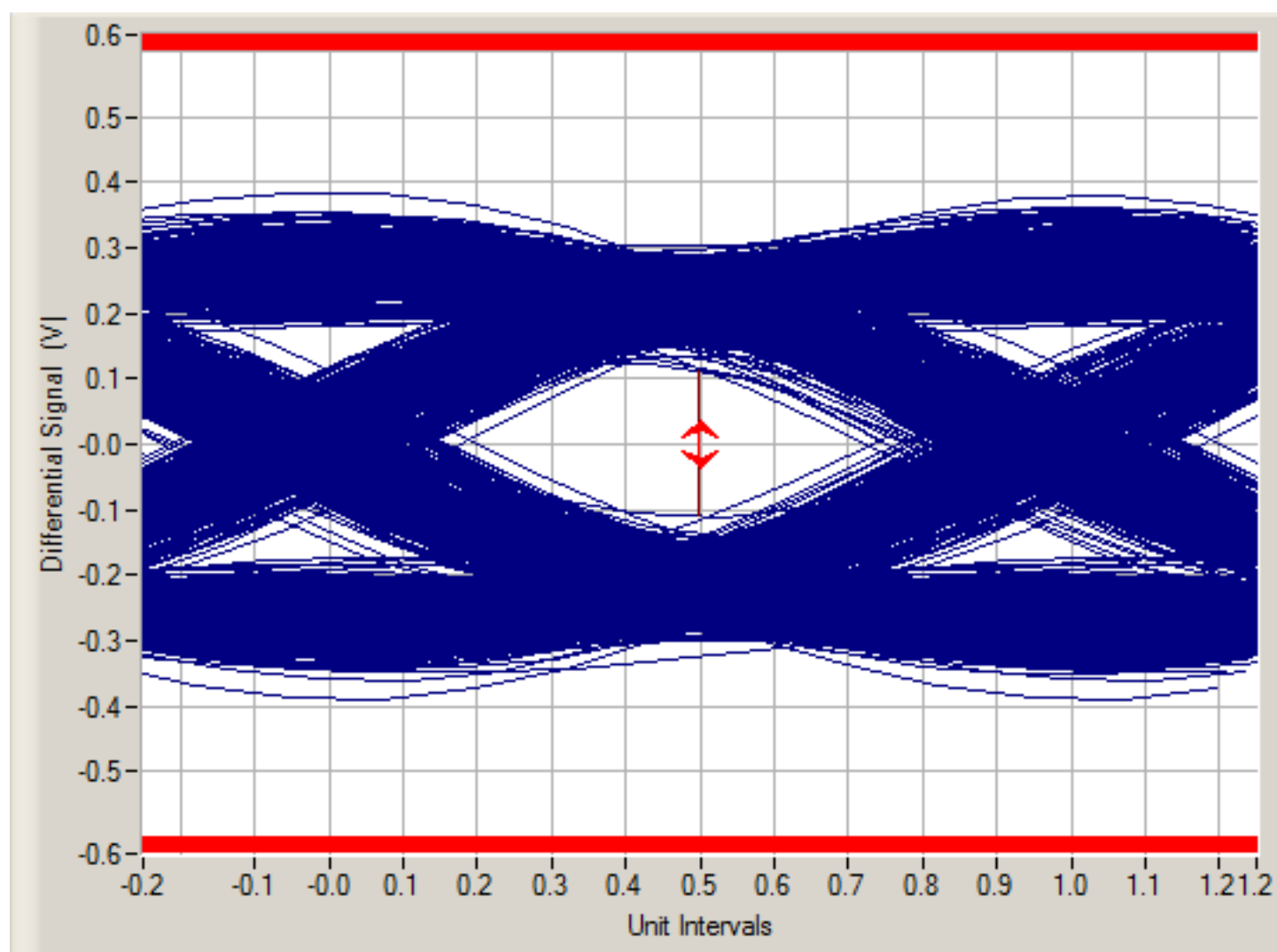
	Measurement: Short Channel Max Trans Upper Margin		
	Current Value:	89.1 mV	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: InfoOnlyV

[\[Up\]](#)

	Measurement: Short Channel Max Trans Lower Margin		
	Current Value:	-86.7 mV	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: InfoOnlyV

[\[Up\]](#)

	Measurement: Short Channel Min Eye Width SigTest		
	Current Value:	56.349 ps	Test Criteria: Informational Only
	Timestamp:	04/03/2017 12:02:53	Limit Name: InfoOnlyS



Short Channel SigTest CP9 Non Transition Eye Diagram

Timestamp: 04/03/2017 12:02:53

[\[Up\]](#)

 Pass	Measurement: <i>SSC Deviation Max (max)</i>		
	Current Value: -88.5 PPM	Test Criteria:	-300.0 PPM <= x <= 300.0 PPM or -2.3000 kPPM <= x <= -1.7000 kPPM
	Timestamp: 04/03/2017 12:03:04	Limit Name:	SSCDeviationMax or SSCRadioFriendlyMax

[\[Up\]](#)

 Pass	Measurement: <i>SSC Deviation Max (min)</i>		
	Current Value: -105.1 PPM	Test Criteria:	-300.0 PPM <= x <= 300.0 PPM or -2.3000 kPPM <= x <= -1.7000 kPPM
	Timestamp: 04/03/2017 12:03:04	Limit Name:	SSCDeviationMax or SSCRadioFriendlyMax

[\[Up\]](#)

 Pass	Measurement: <i>SSC Frequency Modulation Rate</i>		
	Current Value: 31.011 kHz	Test Criteria:	30.000 kHz <= x <= 33.000 kHz
	Timestamp: 04/03/2017 12:03:04	Limit Name:	SSCFreq

[\[Up\]](#)

 Pass	Measurement: <i>SSC Deviation Min (max)</i>		
	Current Value: -4.5410 kPPM	Test Criteria:	-5.3000 kPPM <= x <= -3.7000 kPPM
	Timestamp: 04/03/2017 12:03:04	Limit Name:	SSCDeviationMin

[\[Up\]](#)

 Pass	Measurement: <i>SSC Deviation Min (min)</i>		
	Current Value: -4.5524 kPPM	Test Criteria:	-5.3000 kPPM <= x <= -3.7000 kPPM
	Timestamp: 04/03/2017 12:03:04	Limit Name:	SSCDeviationMin

[\[Up\]](#)

 Pass	Measurement: <i>SSC DF / DT</i>		
	Current Value: 445.03558	Test Criteria:	x <= 1.2500000e+3
	Timestamp: 04/03/2017 12:03:04	Limit Name:	SSC_DFDT

--- End of report ---