

Test Report for 1000BaseT

Time: 08:45:45

Device ID : T99X171T00

Device Description Not Available

Device Pair ID : ch4

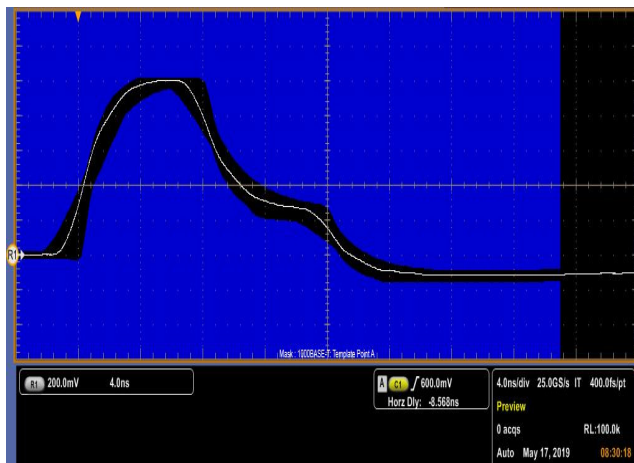
Port ID : Lan

TEST	Spec. Range	Measured Value	Result
Template Test Point A	Fit the template		Pass
Template Test Point B	Fit the template		Pass
Template Test Point C	Fit the template		Pass
Template Test Point D	Fit the template		Pass
Template Test Point F	Fit the template		Pass
Template Test Point H	Fit the template		Pass
Peak Volt Point A	670mV to 820mV	695.3mV	Pass
Peak Volt Point B	670mV to 820mV	689.3mV	Pass
%Diff A and B	<1%	0.43%	Pass
Peak Volt % Diff C	<2%	1.07%	Pass
Peak Volt %Diff D	<2%	0.22%	Pass
Droop Point G	>73.1%	101%	Pass
Droop Point J	>73.1%	98.0%	Pass
Jitter Master Filtered	<0.3ns	Not Available	Not Available
Jitter Master Unfiltered (Histogram Method)	<1.4ns	Not Available	Not Available
Jitter Master Unfiltered (TIE Method)	<1.4ns	Not Available	Not Available
Jitter Slave Filtered	Not Available	Not Available	Not Available
Jitter Slave Unfiltered (Histogram Method)	<1.4ns	Not Available	Not Available
Jitter Slave Unfiltered (TIE Method)	<1.4ns	Not Available	Not Available
Jitter Master Filtered (NO TX_TCLKACCESS)	<0.3ns	Not Available	Not Available
Jitter Master Unfiltered (Histogram Method) (NO TX_TCLKACCESS)	<1.4ns	400.0ps	Pass

Application Version : 3.2.10.35

TEST	Spec. Range	Measured Value	Result
Jitter Master Unfiltered (TIE Method) (NO TX_TCLKACCESS)	<1.4ns	218.13ps	Pass
Jitter Slave Filtered (NO TX_TCLKACCESS)	<0.4ns	Not Available	Not Available
Jitter Slave Unfiltered (Histogram Method) (NO TX_TCLKACCESS)	<1.4ns	Not Available	Not Available
Jitter Slave Unfiltered (TIE Method) (NO TX_TCLKACCESS)	<1.4ns	Not Available	Not Available
Transmitter Distortion	<10mV	-9.432mV	Pass
Common-mode output Voltage	<50mV	Not Available	Not Available
Return Loss			Not Available

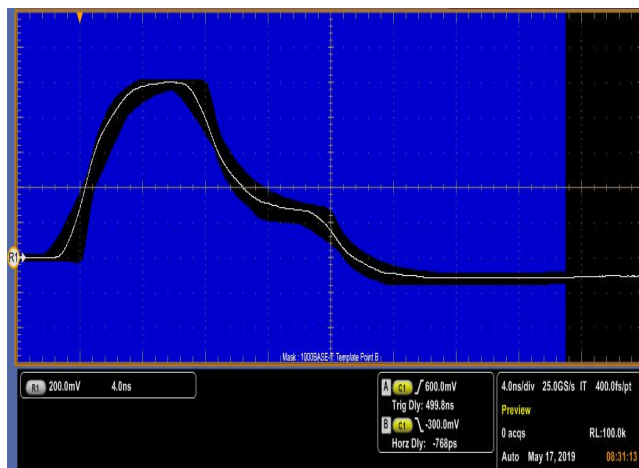
IEEE Std 802.3ab, Sec 40.6.1.2.3: 1000Base-T Differential output template point A



Spec Range: Fit the template

Template Point A Test Result :
Pass

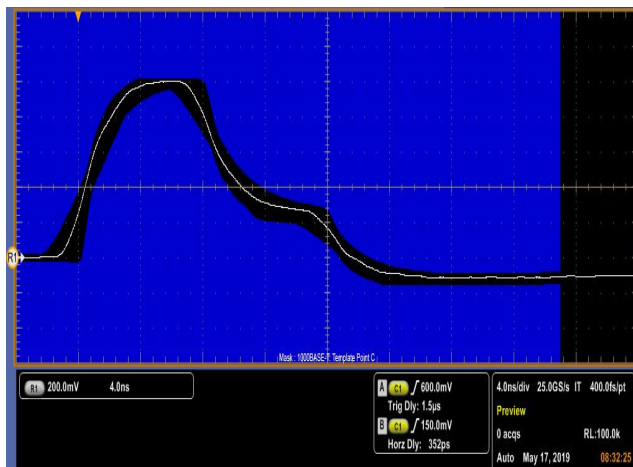
IEEE Std 802.3ab, Sec 40.6.1.2.3: 1000Base-T Differential output template point B



Spec Range: Fit the template

Template Point B Test Result :
Pass

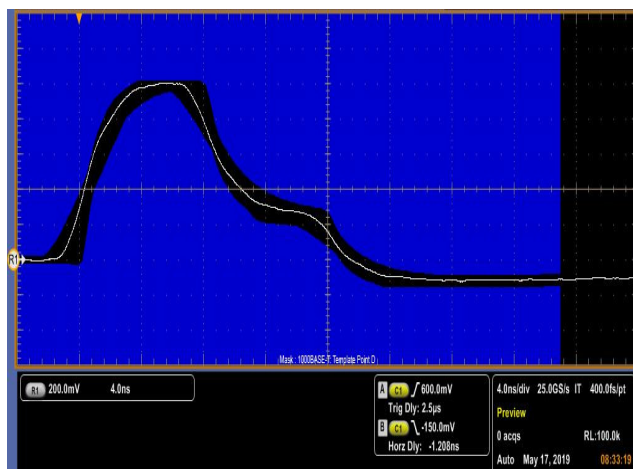
IEEE Std 802.3ab, Sec 40.6.1.2.3: 1000Base-T Differential output template point C



Spec Range: Fit the template

Template Point C Test Result :
Pass

IEEE Std 802.3ab, Sec 40.6.1.2.3: 1000Base-T Differential output template point D



Spec Range: Fit the template

Template Point D Test Result :
Pass

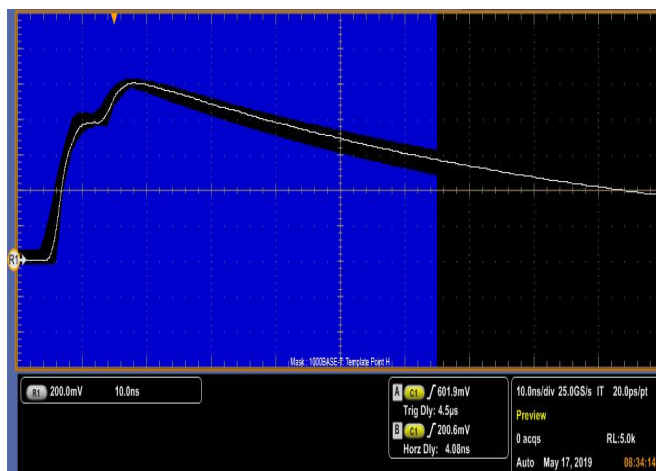
IEEE Std 802.3ab, Sec 40.6.1.2.3: 1000Base-T Differential output template point F



Spec Range: Fit the template

Template Point F Test Result :
Pass

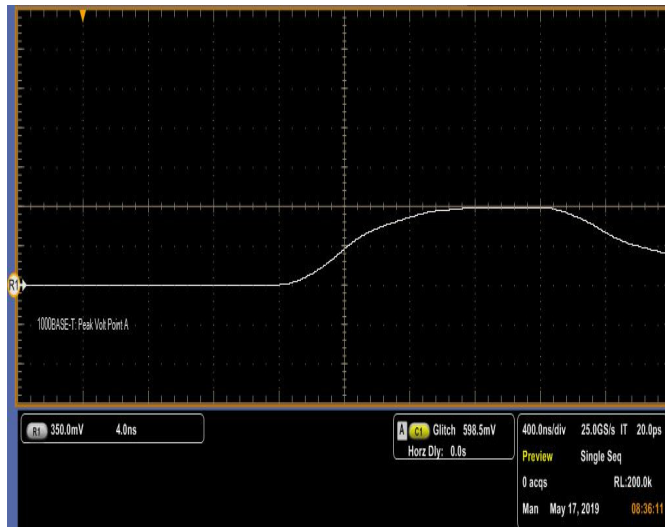
IEEE Std 802.3ab, Sec 40.6.1.2.3: 1000Base-T Differential output template point H



Spec Range: Fit the template

Template Point H Test Result :
Pass

IEEE Std 802.3ab, Sec 40.6.1.2.2: :1000 Base-T Peak differential output voltage point A

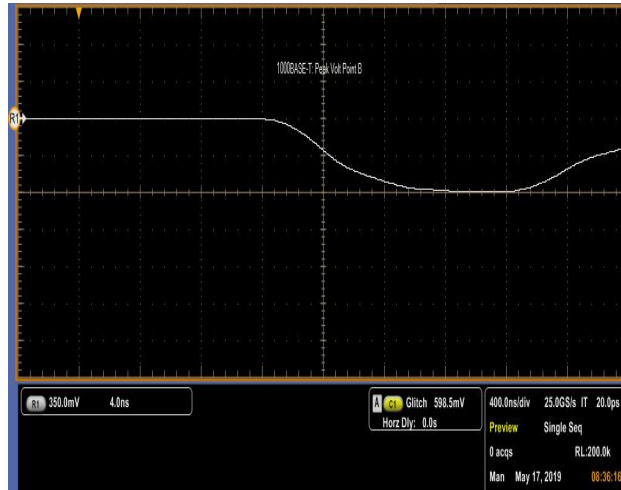


Spec Range: Magnitude of the voltage at point A should lie in the range 670mV to 820mV

Point A Peak Volt :
695.3mV

Point A Peak Volt Test Result :
Pass

IEEE Std 802.3ab, Sec 40.6.1.2.2 :1000 Base-T Peak differential output voltage point B

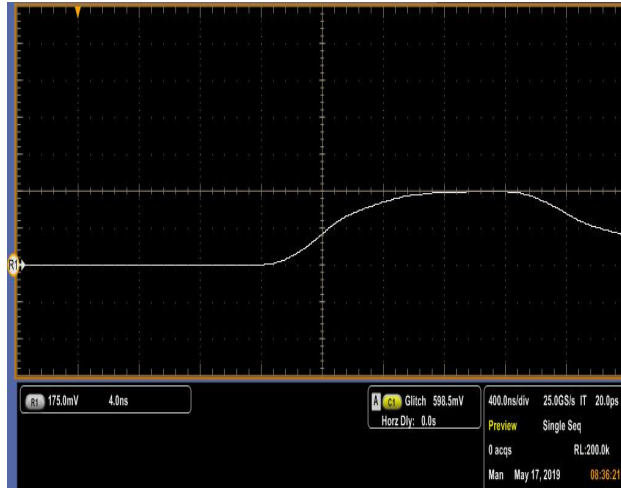


Spec Range: Magnitude of the voltage at point B should lie in the range 670mV to 820mV.

Difference between the magnitudes of the voltages at points A and B < 1%.

Point B Peak Volt : 689.3mV		Point B Peak Volt Test Result : Pass	
%Diff A and B : 0.43%	Point A Peak Volt : 695.3mV		%Diff A and B : Test Result : Pass

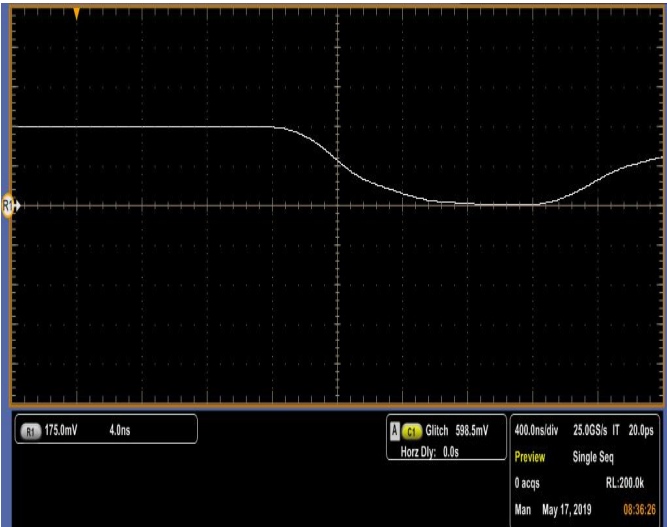
IEEE Std 802.3ab, Sec 40.6.1.2.2 :1000 Base-T Peak differential output voltage point C



Spec Range: Difference between the magnitude of the voltage at point D and 0.5 times the average of the voltage magnitudes at points A and B < 2%

Peak Volt Point A Peak : 695.3mV	Peak Volt Point B Peak : 689.3mV	Peak Volt Point C Peak : 349.9mV
Peak Volt % Diff C : 1.07%		Peak Volt Point C Test Result : Pass

IEEE Std 802.3ab, Sec 40.6.1.2.2 :1000 Base-T Peak differential output voltage point D



Spec Range: Difference between the magnitude of the voltage at point D and 0.5 times the average of the voltage magnitudes at points A and B < 2%

Point A Peak Volt :
695.3mV

Point B Peak Volt :
689.3mV

Point D Peak Volt :
345.4mV

Peak Volt % Diff D :
0.22%

Point D Peak Volt Test Result :
Pass

IEEE Std 802.3ab, Sec 40.6.1.2.2: 1000Base-T Maximum output droop point G



Spec Range: Ratio of the voltage at point G to the voltage at point F > 73.1 %.

Limit: Ratio of the voltage at point G to the voltage at point F.

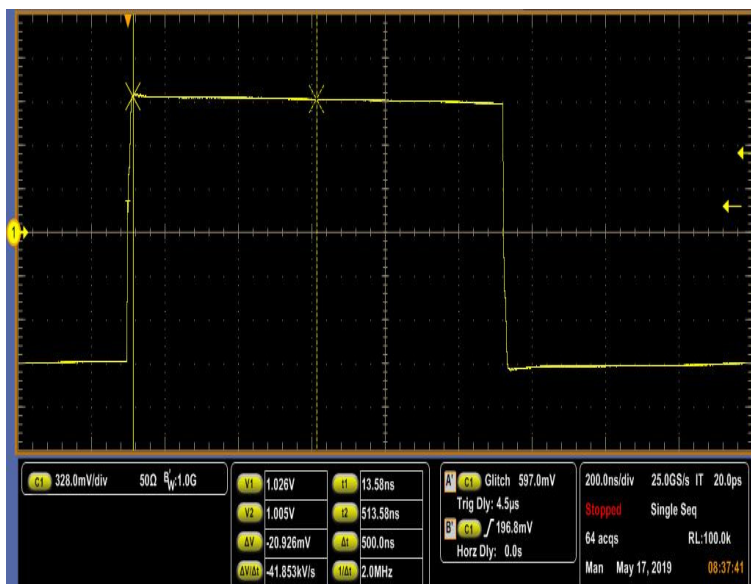
Droop Point G Peak :
-997.9mV

Droop Point F Peak :
-984.6mV

Droop Point G Limit :
101%

Droop Point G Test Result :
Pass

IEEE Std 802.3ab, Sec 40.6.1.2.2: 1000Base-T Maximum output droop point J



Spec Range: Ratio of the voltage at point J to the voltage at point H > 73.1%. Limit: Ratio of the voltage at point J to the voltage at point H.	
Droop Point J Peak : 1.005V	Droop Point H Peak : 1.026V
Droop Point J Limit : 98.0%	Droop Point J Test Result : Pass

IEEE Std 802.3ab, Sec 40.6.1.2.5: 1000Base-T Master Filtered Jitter

Trend Plot: Master Filtered Pk-Pk Jitter

Not Available

Trend Plot: Master Jtx_Out

Not Available

Spec Range: Peak-to-peak value of the MASTER TX_TCLK filtered + JTx of Data <0.3ns	
Master Filtered Pk-Pk Jitter : Not Available	Master Jtx_Out : Not Available
Master Filtered Pk-Pk Jitter + Master Jtx_Out : Not Available	Master Filtered Clk Edges : Not Available
Master Filtered Pk-Pk Jitter Test Result : Not Available	

IEEE Std 802.3ab, Sec 40.6.1.2.5: 1000Base-T Master Unfiltered Jitter[Histogram Method]

Master Unfiltered Pk-Pk Jitter [Histogram]

Not Available

Spec Range: Peak-to-peak value of the Master TX_TCLK jitter relative to unjittered reference <1.4ns	
Master Unfiltered Pk-Pk Jitter : Not Available	Master Unfiltered Median : Not Available
Master Unfiltered Mean : Not Available	Master Unfiltered Pk-Pk Jitter Test Result : Not Available

IEEE Std 802.3ab, Sec 40.6.1.2.5: 1000Base-T Master Unfiltered Jitter [TIE Method]

Trend Plot: Master Unfiltered Pk-Pk Jitter

Not Available

Spec Range: Peak-to-peak value of the Master TX_TCLK jitter relative to unjittered reference <1.4ns	
Master Unfiltered Pk-Pk Jitter : Not Available	Master Unfiltered Clk Edges : Not Available
Master Unfiltered Pk-Pk Jitter Test Result : Not Available	

IEEE Std 802.3ab, Sec 40.6.1.2.5: 1000Base-T Slave Filtered Jitter

Trend Plot: Master Filtered Pk-Pk Jitter

Not Available

Trend Plot: Slave Filtered Pk-Pk Jitter

Not Available

Trend Plot: Slave Jtx_Out

Not Available

Spec Range: Peak-to-peak value of the SLAVE TX_TCLK filtered jitter + JTx of Data < 0.4ns + Pk - Pk Master Filtered jitter	
Master Filtered Pk-Pk Jitter : Not Available	Slave Filtered Pk-Pk Jitter : Not Available
Slave Jtx_Out : Not Available	Slave Filtered Clk Edges : Not Available
Slave Filtered Pk-Pk Jitter + Slave Jtx_Out : Not Available	0.4ns + Master Filtered Pk-Pk Jitter : Not Available
Slave Filtered Pk-Pk Jitter Test Result : Not Available	

IEEE Std 802.3ab, Sec 40.6.1.2.5: 1000Base-T Slave Unfiltered Jitter[Histogram Method]

Slave Unfiltered Pk-Pk Jitter [Histogram]

Not Available

Spec Range: Peak-to-peak value of the SLAVE TX_TCLK jitter relative to MASTER TX_TCLK <1.4ns	
Slave Unfiltered Pk-Pk Jitter : Not Available	Slave Unfiltered Median : Not Available
Slave Unfiltered Mean : Not Available	Slave Unfiltered Pk-Pk Jitter Test Result : Not Available

IEEE Std 802.3ab, Sec 40.6.1.2.5: 1000Base-T Slave Unfiltered Jitter[TIE Method]

Trend Plot: Slave Unfiltered Pk-Pk Jitter

Not Available

Spec Range: Peak-to-peak value of the SLAVE TX_TCLK jitter relative to MASTER TX_TCLK <1.4ns	
Slave Unfiltered Pk-Pk Jitter : Not Available	Slave Unfiltered Clk Edges : Not Available
Slave Unfiltered Pk-Pk Jitter Test Result : Not Available	

1000Base-T Master Filtered Jitter (with out TX_TCLK access)

Note: This is an alternate test method for jitter measurement being proposed, when TX_TCLK is not accessible.

Trend Plot: Data(TM2) Pk-Pk Jitter

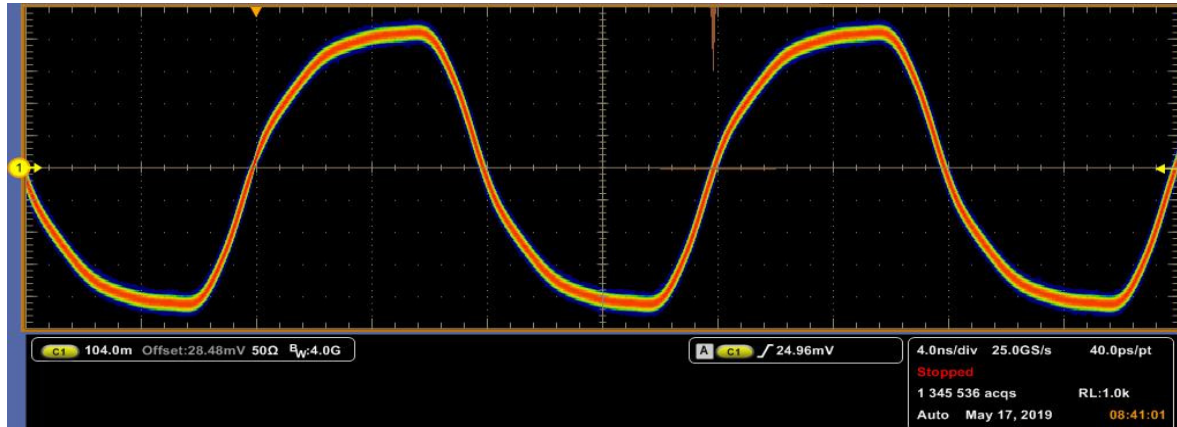
Not Available

Spec Range: Data(TM2) Filtered Jitter < 0.3nS	
Data(TM2) Pk-Pk Jitter : Not Available	Data(TM2) CLK Edges : Not Available
Test Result : Not Available	

1000Base-T Master Unfiltered Jitter (with out TX_TCLK access) - Histogram

Note: This is an alternate test method for jitter measurement being proposed, when TX_TCLK is not accessible.

Trend Plot: Data(TM2) Unfiltered Pk-Pk Jitter [Histogram]



Spec Range: Data(TM2) Unfiltered Jitter < 1.4nS

Data(TM2) Pk-Pk Jitter :
400.0ps

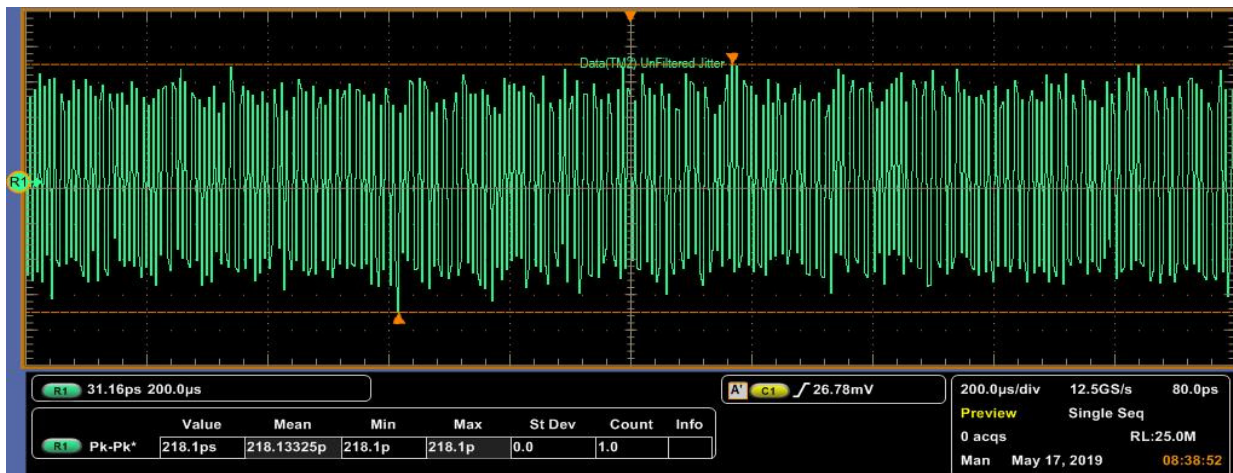
Test Result :
Pass

Remarks :
Median: 15.84ns
Mean: 15.837ns

1000Base-T Master Unfiltered Jitter (with out TX_TCLK access) - TIE

Note: This is an alternate test method for jitter measurement being proposed, when TX_TCLK is not accessible.

Trend Plot: Data(TM2) Unfiltered Pk-Pk Jitter [TIE]



Spec Range: Data(TM2) Unfiltered Jitter < 1.4nS

Data(TM2) Pk-Pk Jitter :
218.13ps

Data(TM2) CLK Edges :
124998

Test Result :
Pass

1000Base-T Slave Filtered Jitter (with out TX_TCLK access)

Note: This is an alternate test method for jitter measurement being proposed, when TX_TCLK is not accessible.

Trend Plot: Data(TM2) Pk-Pk Jitter

Not Available

Trend Plot: Data(TM3) Pk-Pk Jitter

Not Available

Spec Range: Data(TM3) Filtered Jitter - Data(TM2) Filtered Jitter < 0.4nS	
Data(TM2) Pk-Pk Jitter : Not Available	Data(TM3) Pk-Pk Jitter : Not Available
Data(TM3) Pk-Pk Jitter - Data(TM2) Pk-Pk Jitter : Not Available	Data(TM3) Clk Edges : Not Available
Test Result : Not Available	

1000Base-T Slave Unfiltered Jitter (with out TX_TCLK access) - Histogram

Note: This is an alternate test method for jitter measurement being proposed, when TX_TCLK is not accessible.

Trend Plot:Data(TM2) Unfiltered Pk-Pk Jitter [Histogram]

Not Available

Trend Plot:Data(TM3) Unfiltered Pk-Pk Jitter [Histogram]

Not Available

Spec Range: Data(TM3) Unfiltered Jitter - Data(TM2) Unfiltered Jitter < 1.4ns	
Data(TM2) Pk-Pk Jitter : Not Available	Data(TM3) Pk-Pk Jitter : Not Available
Data(TM3) Pk-Pk Jitter - Data(TM2) Pk-Pk Jitter : Not Available	Test Result : Not Available
Remarks : Not Available	

1000Base-T Slave Unfiltered Jitter (with out TX_TCLK access) - TIE

Note: This is an alternate test method for jitter measurement being proposed, when TX_TCLK is not accessible.

Trend Plot:Data(TM2) Unfiltered Pk-Pk Jitter [TIE]

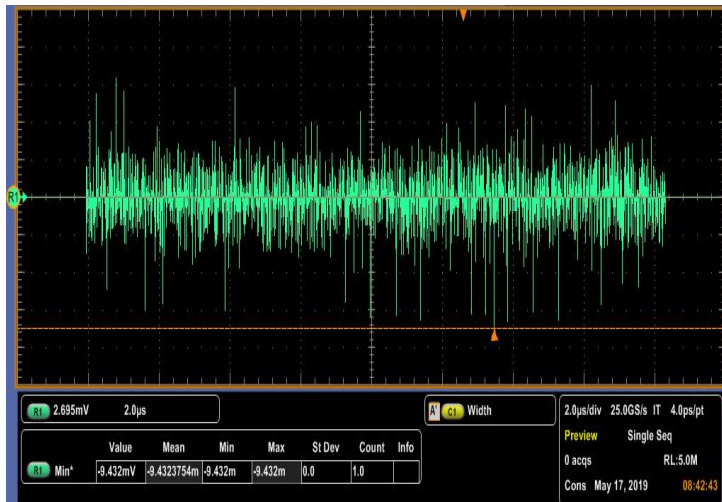
Not Available

Trend Plot:Data(TM3) Unfiltered Pk-Pk Jitter [TIE]

Not Available

Spec Range: Data(TM3) Unfiltered Jitter - Data(TM2) Unfiltered Jitter < 1.4ns	
Data(TM2) Pk-Pk Jitter : Not Available	Data(TM3) Pk-Pk Jitter : Not Available
Data(TM3) Pk-Pk Jitter-Data(TM2) Pk-Pk Jitter : Not Available	Data(TM3) Clk Edges : Not Available
Test Result : Not Available	

IEEE Std 802.3ab, Sec 40.6.1.2.4: 1000Base-T Transmitter Distortion



Spec Range: Peak Distortion < 10mV

Test Result : Pass

Peak Distortion : -9.432mV

RMS : 2.155mV

SNR : 50.32dB

Other Details :

RMS = 2.155mV SNR = 50.32dB

Peak Distortion at symbol 1440 = -9.432mV

Peak Distortion at symbol 1488 = -8.879mV

Peak Distortion at symbol 1180 = -8.852mV

TX_TCLK Freq = 124.9999MHZ

TX_TCLK ppm = -0.000120% [-1.200 ppm]

DC Offset Measured = 29.425mV

Peak Distortion for 37 Phase offsets is below 10mV

Peak Distortion for 3 Phase offsets is above 10mV

IEEE Std 802.3ab, Sec 40.8.3.1: 1000Base-T Return Loss

Not Available

Frequency	Spec. Value	Measured Value Not Available	Result
1 MHz	-16.00dB	Not Available	
10 MHz	-16.00dB	Not Available	
20 MHz	-16.00dB	Not Available	
30 MHz	-16.00dB	Not Available	
40 MHz	-16.00dB	Not Available	
50 MHz	-14.08dB	Not Available	
60 MHz	-12.50dB	Not Available	
70 MHz	-11.16dB	Not Available	
80 MHz	-10.00dB	Not Available	
90 MHz	-8.97dB	Not Available	
100 MHz	-8.07dB	Not Available	

Return Loss Result Not Available

IEEE Std 802.3ab, Sec 40.8.3.3: Common-mode output voltage

Not Available

Spec Range: Less than 50mV peak-to-peak	
Common-mode 1000BaseT output voltage	Not Available
Common-mode for 1000T Result	Not Available