

Ethernet Test Report

Overall Result: FAIL

Test Configuration Details	
Device Description	
ReturnLossTest	Use Vector Network Analyzer
DisturberSource	Use Agilent 81150A
Test Session Details	
Infiniium SW Version	05.60.00901
Infiniium Model Number	DSO91304A
Infiniium Serial Number	MY53450139
Application SW Version	2.43
Debug Mode Used	No
Last Test Date	2019-09-01 17:07:23 UTC +09:00

Summary of Results

Test Statistics	
Failed	3
Passed	17
Total	20

Margin Thresholds	
Warning	< 2 %
Critical	< 0 %

Test Result

Pass	# Failed	# Trials	Test Name	Worst Actual	Worst Margin	Pass Limits
☒	0	6	1000 Base-T, Point A Peak Output Voltage(w/ Disturbing Signal)	700.3 mV	20.2 %	670.0 mV < VALUE < 820.0 mV
☒	0	6	1000 Base-T, Point B Peak Output Voltage(w/ Disturbing Signal)	709.0 mV	26.0 %	670.0 mV < VALUE < 820.0 mV
☒	1	6	1000 Base-T, Difference A,B Peak Output Voltage(w/ Disturbing Signal)	1.23 %	-23.0 %	VALUE < 1.00 %
☒	0	6	1000 Base-T, Point C Peak Output Voltage(w/ Disturbing Signal)	1.65 %	17.5 %	VALUE < 2.00 %
☒	0	6	1000 Base-T, Point D Peak Output Voltage(w/ Disturbing Signal)	1.22 %	39.0 %	VALUE < 2.00 %
☒	0	6	1000 Base-T, Point A Template Test(w/ Disturbing Signal)	0.000	100.0 %	No Mask Failures
☒	0	5	1000 Base-T, Point B Template Test(w/ Disturbing Signal)	0.000	100.0 %	No Mask Failures
☒	0	5	1000 Base-T, Point C Template Test(w/ Disturbing Signal)	0.000	100.0 %	No Mask Failures
☒	0	5	1000 Base-T, Point D Template Test(w/ Disturbing Signal)	0.000	100.0 %	No Mask Failures
☒	3	6	1000 Base-T, Point F Template Test(w/ Disturbing Signal)	12.000	-120E+01 %	No Mask Failures
☒	2	5	1000 Base-T, Point H Template Test(w/ Disturbing Signal)	4.000	-400.0 %	No Mask Failures
☒	0	5	1000 Base-T, Point G Droop Test(w/ Disturbing Signal)	84.54 %	15.6 %	VALUE > 73.10 %
☒	0	4	1000 Base-T, Point J Droop Test(w/ Disturbing Signal)	82.94 %	13.5 %	VALUE > 73.10 %
☒	0	4	1000 Base-T, Transmitter Distortion(w/ Disturbing Signal)	8.94 mV	10.6 %	VALUE <= 10.00 mV
☒	0	4	1000 Base-T, MDI Common Mode Output Voltage	12.0 mV	76.2 %	VALUE < 50.0 mV
☒	0	4	1000 Base-T, Jitter MASTER Filtered (w/o TX_TCLK)	139 ps	53.7 %	VALUE < 300 ps
☒	0	4	1000 Base-T, Jitter MASTER Unfiltered (w/o TX_TCLK)	187 ps	86.6 %	VALUE < 1.400 ns
☒		4	1000 Base-T, Jitter SLAVE Filtered (w/o TX_TCLK)			Information Only
☒		4	1000 Base-T, Jitter SLAVE Unfiltered (w/o TX_TCLK)			Information Only
☒	0	4	1000 Base-T, MDI Return Loss	1.69 dB	16.9 %	VALUE > 0.00 dB (margin calculated using nominal divisor: 10)

Test : 1000 Base-T, Difference A,B Peak Output Voltage(w/ Disturbing Signal)

Test Result : Fail

☒ 1000 Base-T, Difference A,B Peak Output Voltage(w/ Disturbing Signal) Reference: IEEE802.3-2008 Subclause 40.6.1.2.1
 FAIL Test Description: The absolute value of the peak of the waveform at points A and B shall differ by less than 1%
 Pass Limits:< 1.00 %% Difference (Worst of 6 Trials)1.23 % # Trials Run: 6Worst Trial: Trial 6
 Result Details:

Overall Summary + details of 6 worst trials

Pass	Trial	Actual Value	Margin	Peak A Volts (V)	Peak B Volts (V)	#Avgs	Test Pair
	Avg	393.1 m%	60.50 %	723.2 mV	-725.2 mV		
	StdDev	437.9 m%	43.87 %	12.95 mV	9.223 mV		
	Range	1.217 %	122.0 %	33.73 mV	23.56 mV		
	Min	9.419 m%	-23.00 %	700.3 mV	-732.5 mV		
	Max	1.226 %	99.00 %	734.1 mV	-709.0 mV		
	Sum	2.359 %	363.0 %	4.339 V	-4.351 V		
☒	Trial 1	220 m%	78.0%	734.1 mV	-732.5 mV	128	BI_DA
☒	Trial 2	450 m%	55.0%	720.0 mV	-723.2 mV	128	BI_DB
☒	Trial 3	350 m%	65.0%	719.6 mV	-722.1 mV	128	BI_DB
☒	Trial 4	9 m%	99.0%	732.6 mV	-732.5 mV	128	BI_DC
☒	Trial 5	110 m%	89.0%	732.5 mV	-731.7 mV	128	BI_DC
☒	Trial 6 (Worst)	1.23 %	-23.0%	700.3 mV	-709.0 mV	128	BI_DD

Test : 1000 Base-T, Point F Template Test(w/ Disturbing Signal)

Test Result : Fail

✖ 1000 Base-T, Point F Template Test(w/ Disturbing Signal) Reference: IEEE802.3-2008 Subclause 40.6.1.2.3

FAIL Test Description: Fit The Template. The voltage waveforms around points F and H defined in Figure 40-19, (after normalization) shall lie within the time domain template 2 defined in Figure 40-26 and the piecewise linear interpolation between the points in Table 40-11. The waveform around point F is normalized by dividing by the peak value of the waveform at F.

Pass Limits: No Mask Failures Total # Failures (Worst of 6 Trials) 12.000 # Trials Run: 6 Worst Trial: Trial 2

Result Details:

Overall Summary + details of 6 worst trials

Pass	Trial	Actual Value	Margin	Template Point F -- Failure Details	Template Point F	#Avgs	# Waveforms	Test Pair
	Avg	2.833	-233.3 %					
	StdDev	4.665	504.6 %					
	Range	12.00	1.300 k%					
	Min	0.000	-1.200 k%					
	Max	12.00	100.0 %					
	Sum	17.00	-1.400 k%					
✖	Trial 1	0.000	100.0%	No Failure	(no value)	128	50	BI_DA
✖	Trial 2 (Worst)	12.000	-120E+01%	REGION #FAILURES 1 0 2 12	(no value)	128	50	BI_DB
✖	Trial 3	3.000	-300.0%	REGION #FAILURES 1 0 2 3	(no value)	128	50	BI_DB
✖	Trial 4	2.000	-200.0%	REGION #FAILURES 1 1 2 1	(no value)	128	50	BI_DC
✖	Trial 5	0.000	100.0%	No Failure	(no value)	128	50	BI_DD
✖	Trial 6	0.000	100.0%	No Failure	(no value)	128	50	BI_DD

Test : 1000 Base-T, Point H Template Test(w/ Disturbing Signal)

Test Result : Fail

 1000 Base-T, Point H Template Test(w/ Disturbing Signal) Reference: IEEE802.3-2008 Subclause 40.6.1.2.3

FAIL Test Description: Fit The Template. The voltage waveforms around points F and H defined in Figure 40-19, (after normalization) shall lie within the time domain template 2 defined in Figure 40-26 and the piecewise linear interpolation between the points in Table 40-11. The waveform around point H is normalized by dividing by the peak value of the waveform at H.

Pass Limits:No Mask FailuresTotal # Failures (Worst of 5 Trials)4.000 # Trials Run: 5Worst Trial: Trial 3

Result Details:

Overall Summary + details of 5 worst trials

Pass	Trial	Actual Value	Margin	Template Point H -- Failure Details	Template Point H	#Avgs	# Waveforms	Test Pair
	Avg	1.600	-100.0 %					
	StdDev	2.191	273.9 %					
	Range	4.000	500.0 %					
	Min	0.000	-400.0 %					
	Max	4.000	100.0 %					
	Sum	8.000	-500.0 %					
	Trial 1	0.000	100.0%	No Failure	(no value)	128	50	BI_DA
	Trial 2	0.000	100.0%	No Failure	(no value)	128	50	BI_DB
	Trial 3 (Worst)	4.000	-400.0%	REGION #FAILURES 1 0 2 4	(no value)	128	50	BI_DB
	Trial 4	4.000	-400.0%	REGION #FAILURES 1 0 2 4	(no value)	128	50	BI_DC
	Trial 5	0.000	100.0%	No Failure	(no value)	128	50	BI_DD