

萬泰科技(股)有限公司 Test Report

Cable Type : TUR2504N4F	Factory Number : 140602762	Data File Name : 000269.rpt
Cable ID : UTP #25 x 4P CM	Order Number : GY-501	Specification File : CAT5E-100
Temperature : 28 °C	Operator : PAKORN	Test Date : 06/06/2014
Length : 305 M	Number of Pairs to Test: 4	Test Time : 15:36:00
Starting Position : xxx		

Pass-Fail Test Certificate - 4 Pairs

High Frequency

Test Type	Test Result
Input Impedance (Zin)(Ohms)(Open/Short)	OK
Return Loss (RL)(dB)	OK
Insertion Loss(Curve Fit)(dB/100 M)@20C	OK
Near End Crosstalk Loss (NEXT)	OK
Power Sum NEXT (PSNEXT)	OK

Low Frequency

Test Type	Test Result
Conductor Resistance(Ohms/100.0 m)@20C	OK
Resistance Unbalance(%)@20C	OK
Mutual Capacitance(nF/100.0 m)@1000Hz	OK
Cap. Unbalance to Ground(pF/100.0 m)@1000Hz	OK
Cap. Unbalance to Shield(pF/100.0 m)@1000Hz	OK

Signature:	Approved:	Date:
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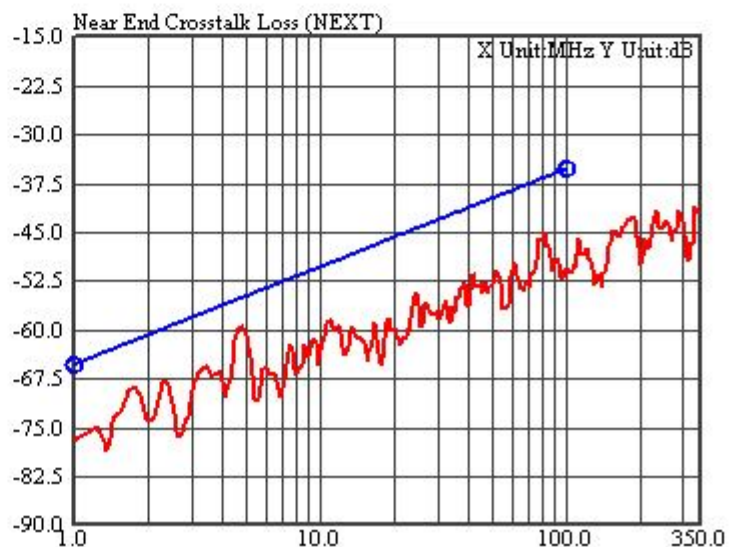
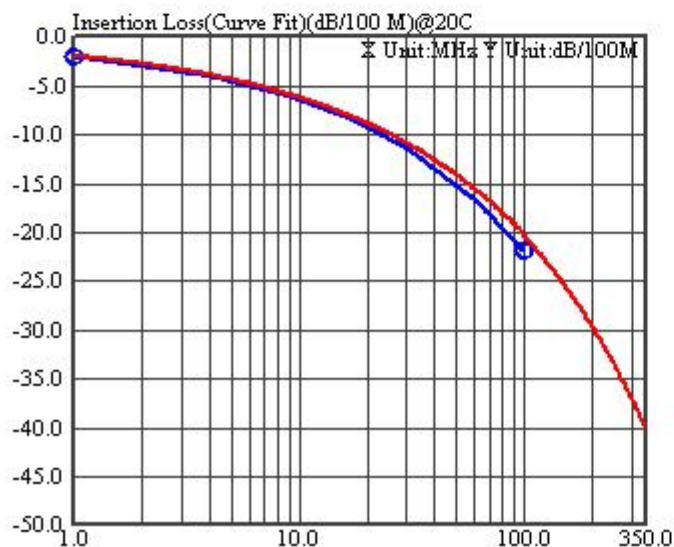
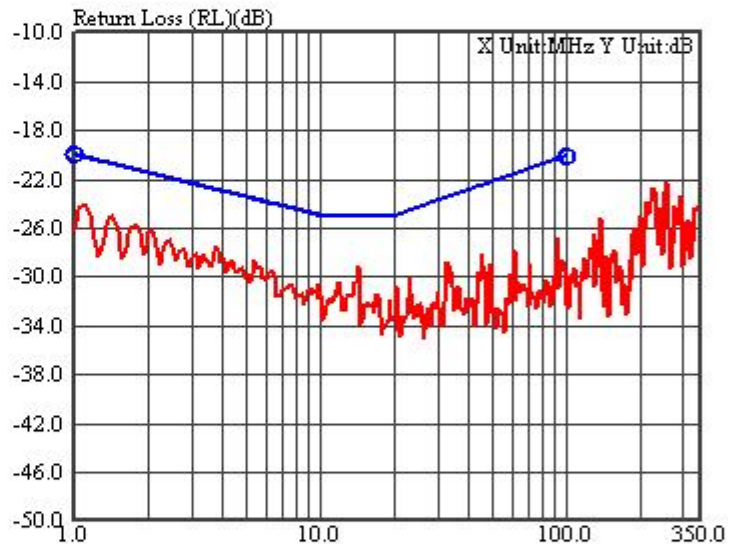
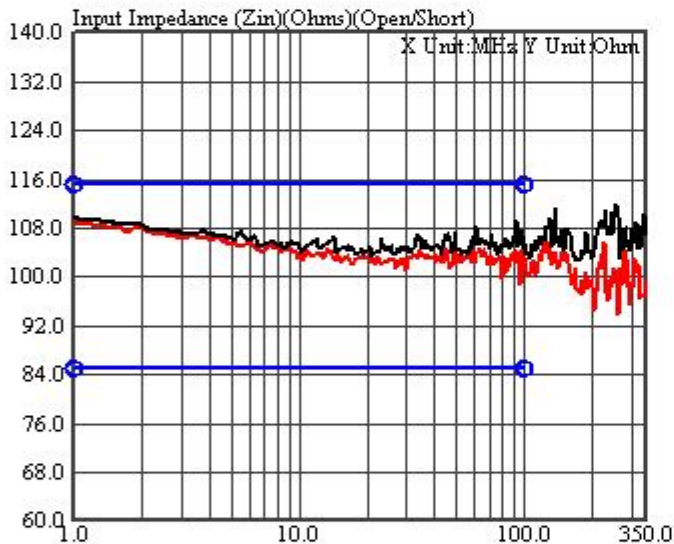
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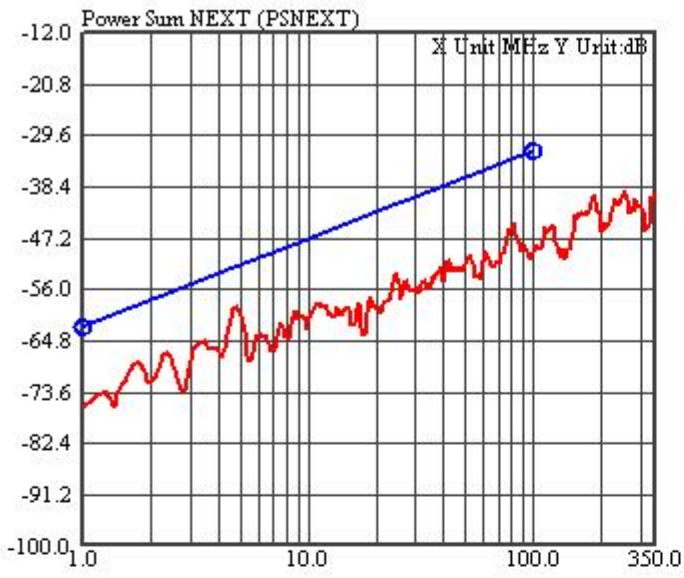
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Cable ID : UTP #25 x 4P CM	Order Number : GY-501	Specification File : CAT5E-100
Temperature : 28 °C	Operator : PAKORN	Test Date : 06/06/2014
Length : 305 M	Number of Pairs to Test: 4	Test Time : 15:36:00
Starting Position : xxx		

Worst Case Summary

High Frequency

Test Type	Specification	Measured(Pair)	Margin	@Freq.(MHz)	Test Result
Input Impedance (Zin)(Ohms)(Open/Short)	85.000 (Min)	98.803 (Pair 4)	13.803	95.373	OK
Input Impedance (Zin)(Ohms)(Open/Short)	115.000 (Max)	109.762 (Pair 4)	5.238	1.000	OK
Return Loss (RL)(dB)	-20.221 (Max)	-24.153 (Pair 4)	3.932	1.108	OK
Insertion Loss(Curve Fit)(dB/100 M)@20C	-2.040 (Min)	-1.940 (Pair 1)	0.100	1.000	OK
Near End Crosstalk Loss (NEXT)	-55.076 (Max)	-59.406 (Pair 3-1)	4.330	4.774	OK
Power Sum NEXT (PSNEXT)	-52.170 (Max)	-59.147 (Pair 3)	6.978	4.704	OK





Worst Case Summary

Low Frequency

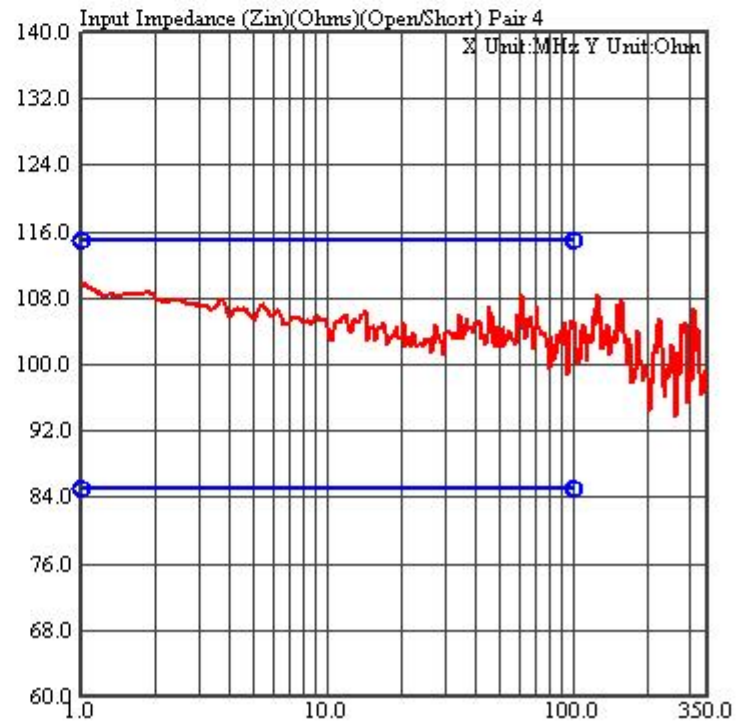
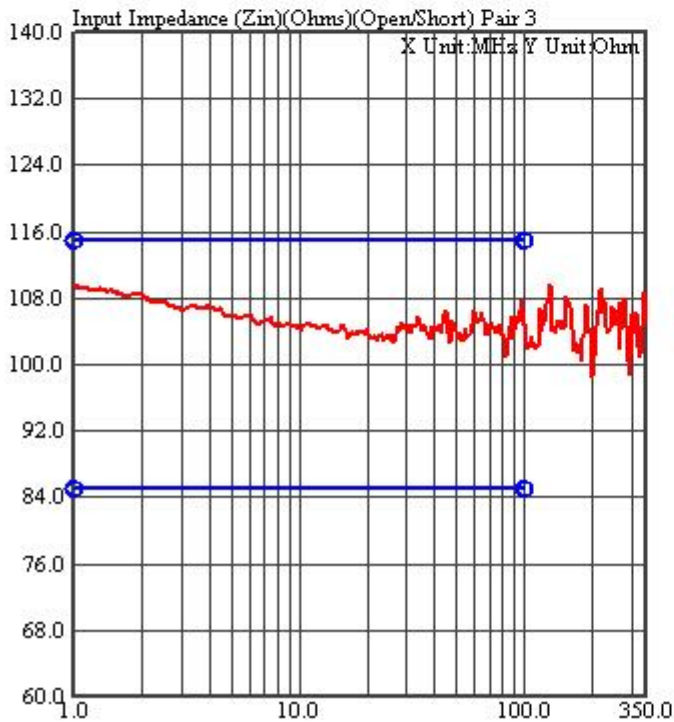
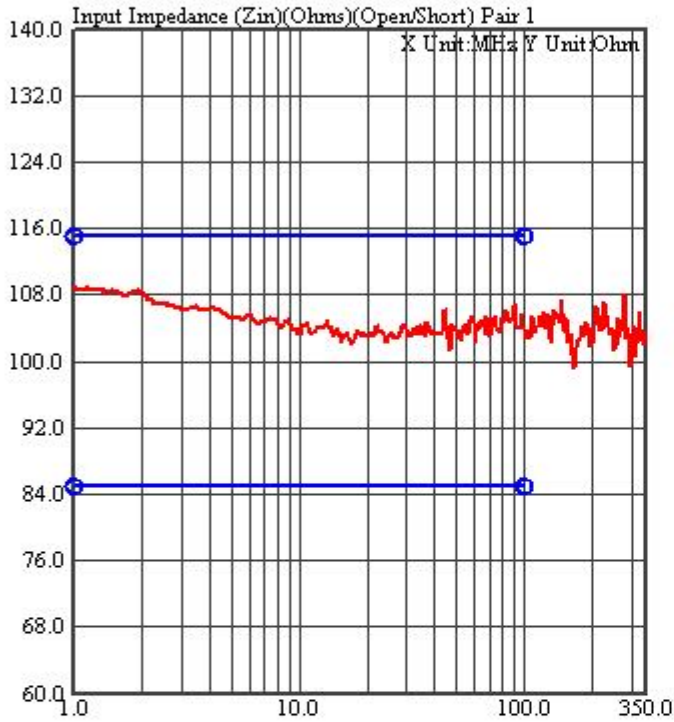
Statistical Parameter	Maximum		Minimum		Average Maximum		Standard Deviation		Result
	Spec Limit	Measured	Spec Limit	Measured	Spec Limit	Measured	Spec Limit	Measured	
Conductor Resistance(Ohms/100.0 m)@20C	9.38	9.11	xxx	8.875	xxx	9.011	xxx	9.299999	OK
Resistance Unbalance(%)@20C	3	0.651	xxx	0	xxx	0.351	xxx	0.299	OK
Mutual Capacitance(nF/100.0 m)@1000Hz	5.6	4.921	xxx	4.778	xxx	4.842	xxx	0.054	OK
Cap. Unbalance to Ground(pF/100.0 m)@1000Hz	330	30.254	xxx	6.076	xxx	19.016	xxx	8.591	OK
Cap. Unbalance to Shield(pF/100.0 m)@1000Hz	330	30.188	xxx	3.912	xxx	19.482	xxx	9.742	OK

Detail: Resistance/Capacitance Measurement - Normalized

Test Types	Conductor Resistance Ra @20C	Conductor Resistance Rb @20C	Resistance Unbalance	Mutual Capacitance @1000 Hz	Capacitance Unbalance to Ground @1000 Hz	Capacitance Unbalance to Shield @1000 Hz	Test Result
Unit	Ohm/100.0m	Ohm/100.0m	%	nF/100.0 m	pF/100.0 m	pF/100.0 m	
Max Spec	9.38	9.38	3	5.6	330	330	
Min Spec	xxx	xxx	xxx	xxx	xxx	xxx	
Pair 1[3]	9.11	9.11	0	4.921	20.039	24.236	Pass
Pair 2[4]	9.01	8.95	0.651	4.808	19.693	19.594	Pass
Pair 3[5]	9.11	9.05	0.643	4.86	30.254	30.188	Pass
Pair 4[6]	8.88	8.87	0.109	4.778	6.076	3.912	Pass

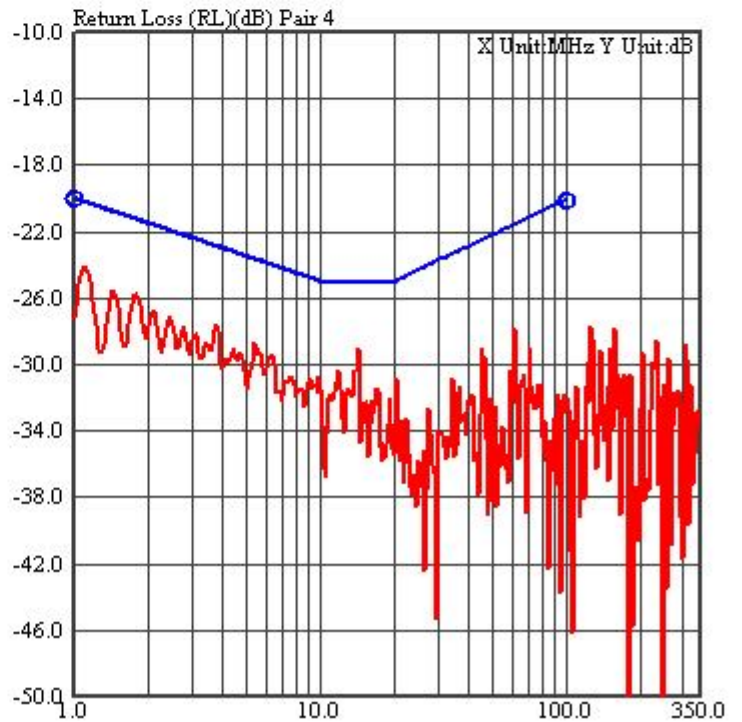
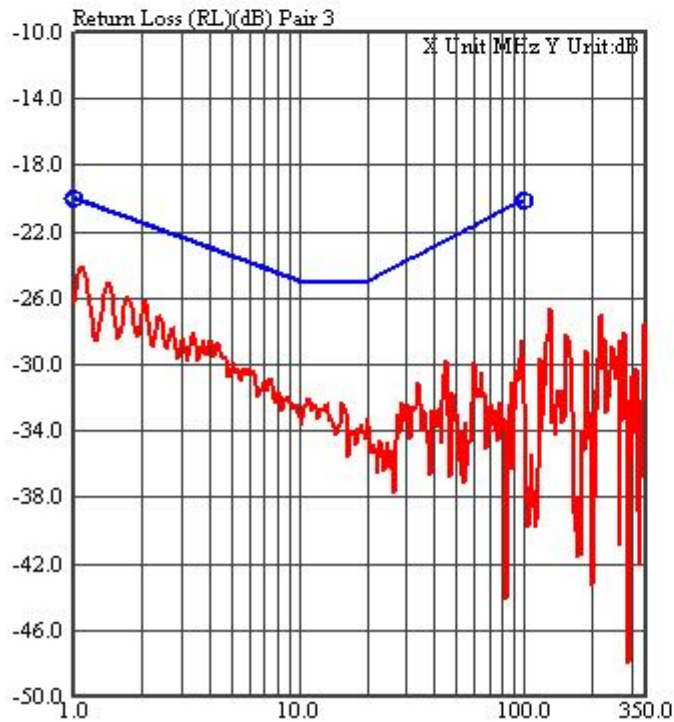
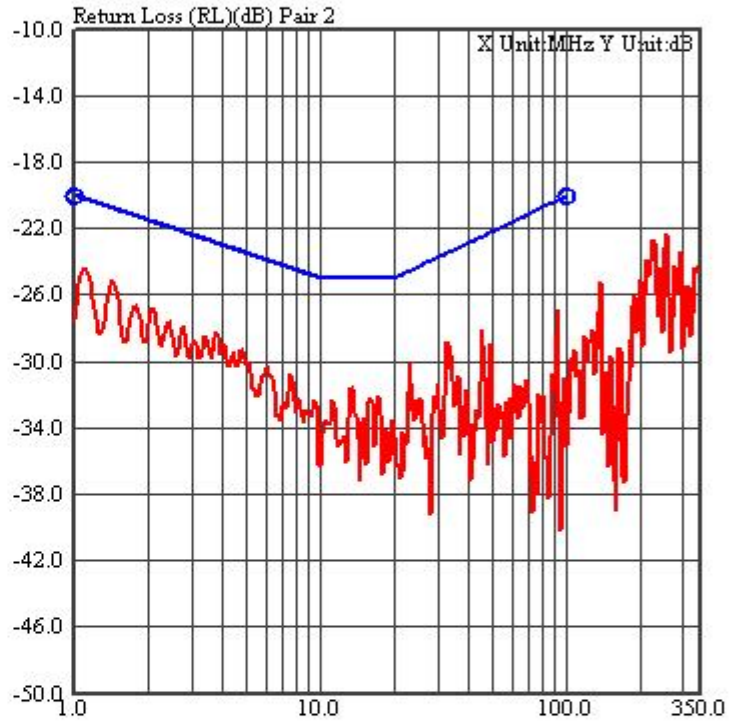
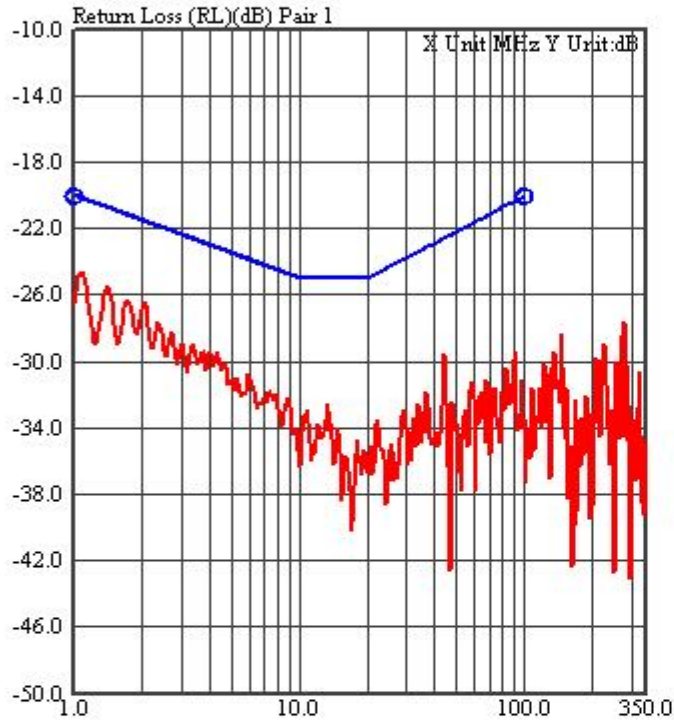
Summary and Graphic: Input Impedance (Zin)(Ohms)(Open/Short)

Pair	Specification		Measured(Ohms)		Margin(Ohms)		@Frequency(MHz)		Test Result
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	
Pair 1	85.000	115.000	101.338	108.990	16.338	6.010	46.618	1.000	Pass
Pair 2	85.000	115.000	99.272	109.374	14.272	5.627	95.373	1.000	Pass
Pair 3	85.000	115.000	101.061	109.580	16.061	5.420	83.623	1.000	Pass
Pair 4	85.000	115.000	98.803	109.762	13.803	5.238	95.373	1.000	Pass



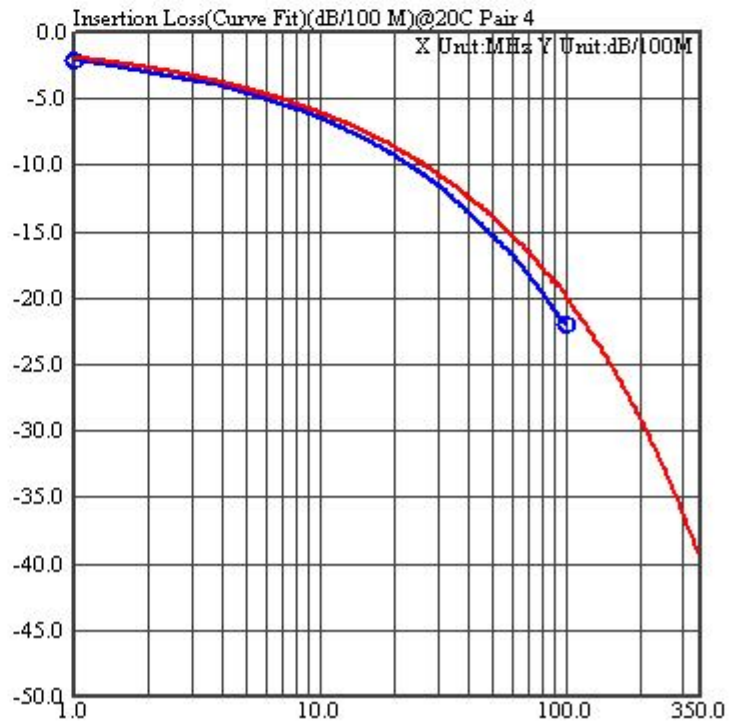
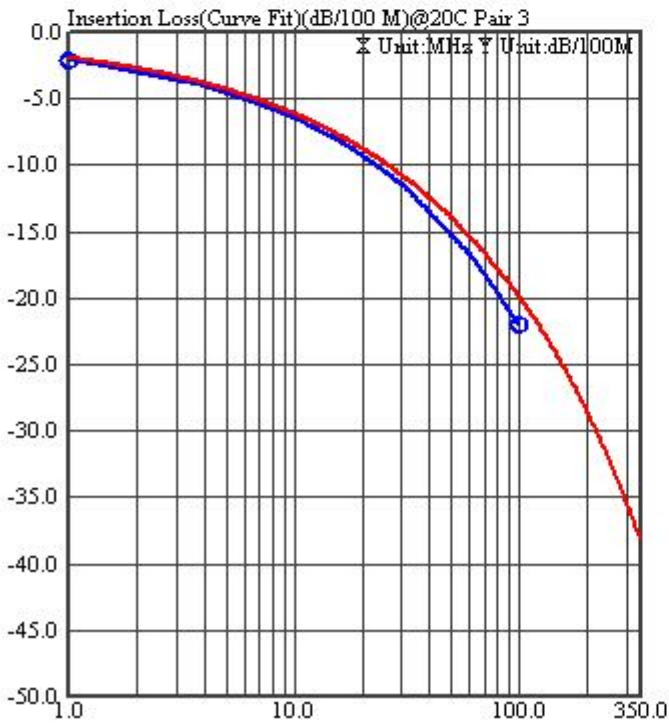
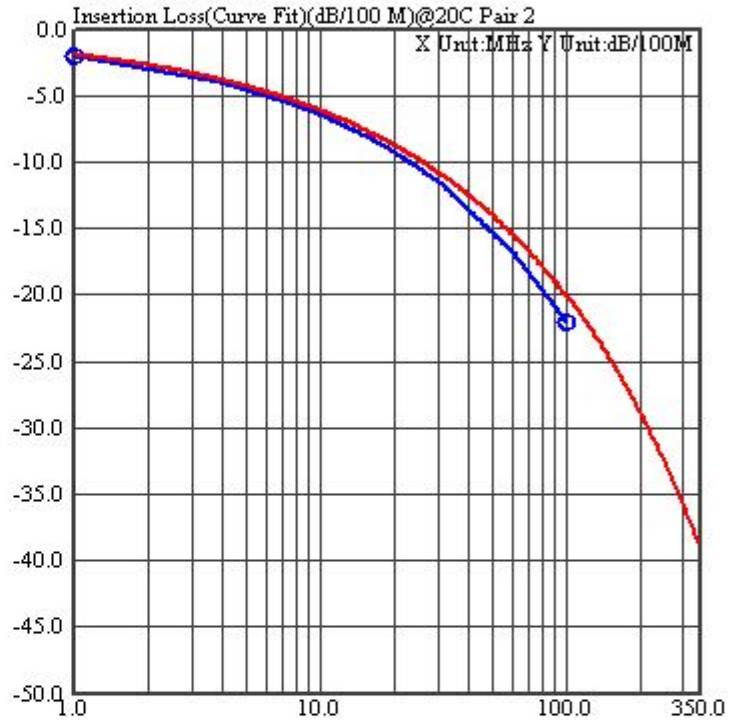
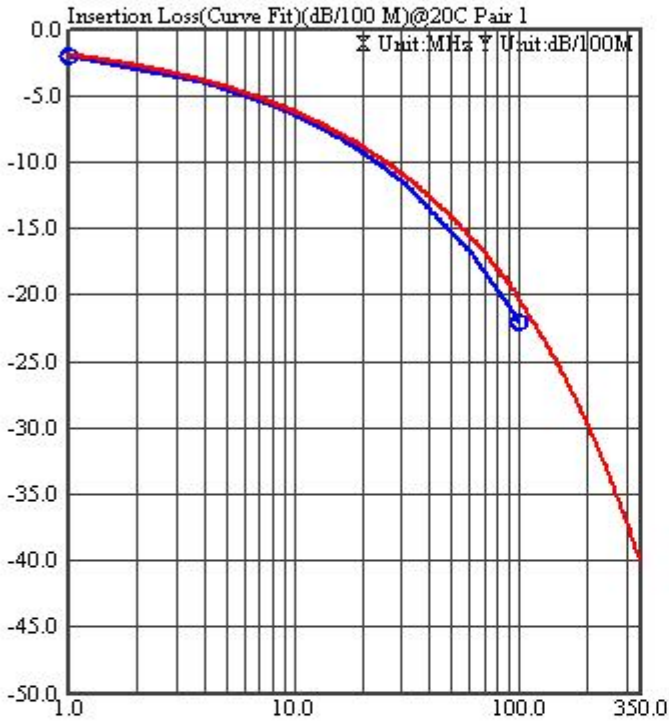
Summary and Graphic: Return Loss (RL)(dB)

Pair	Spec(Max)(dB)	Measured(dB)	Margin(dB)	@Frequency(MHz)	Test Result
Pair 1	-20.158	-24.609	4.451	1.076	Pass
Pair 2	-20.221	-24.360	4.139	1.108	Pass
Pair 3	-20.189	-24.176	3.986	1.092	Pass
Pair 4	-20.221	-24.153	3.932	1.108	Pass



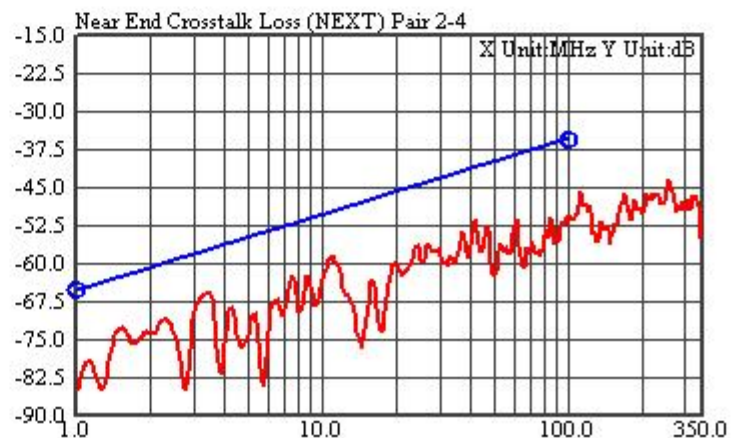
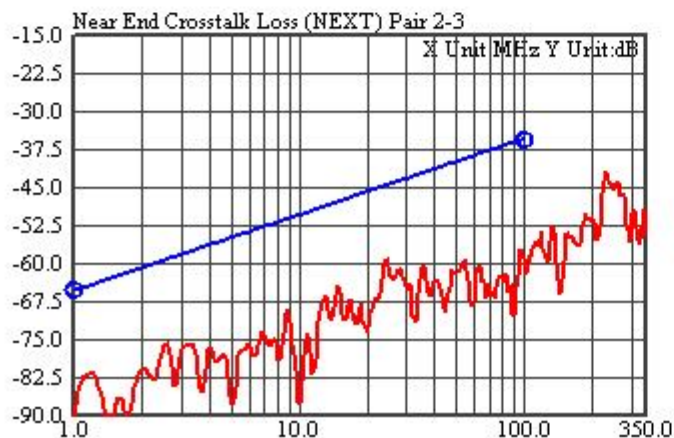
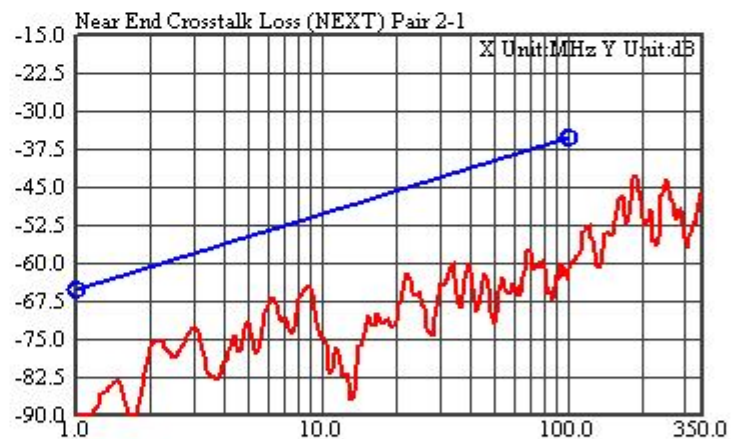
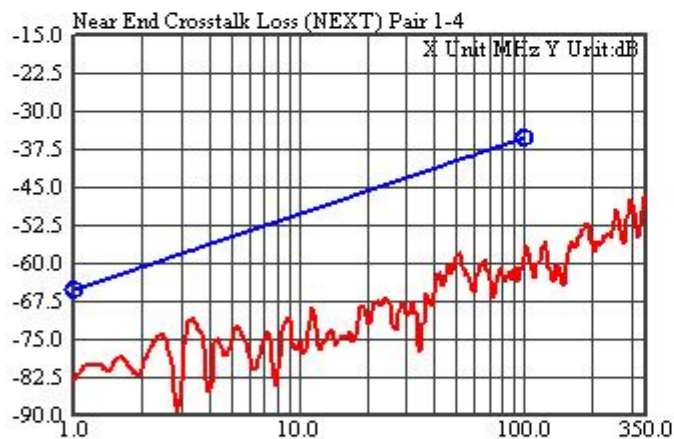
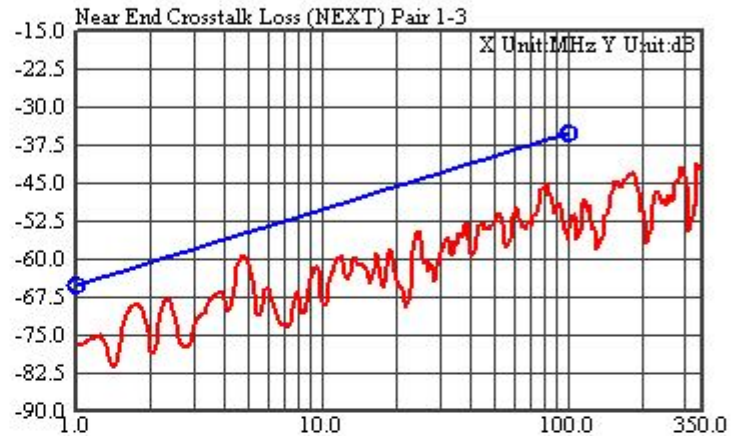
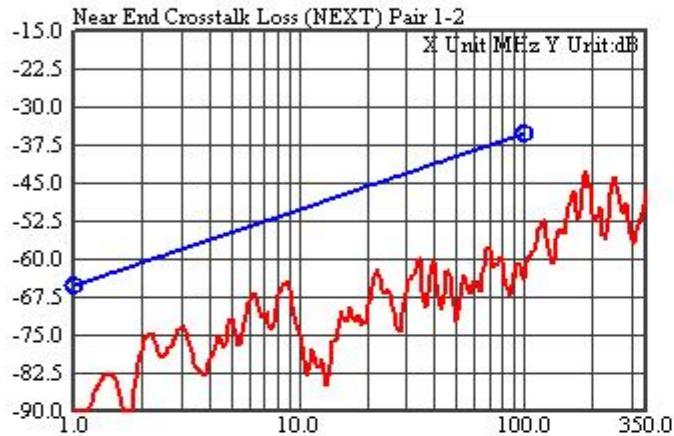
Summary and Graphic: Insertion Loss(Curve Fit)(dB/100 M)@20C

Pair	Spec(Min)(dB)	Measured(dB)	Margin(dB)	@Frequency(MHz)	Test Result
Pair 1	-2.040	-1.940	0.100	1.000	Pass
Pair 2	-2.040	-1.910	0.130	1.000	Pass
Pair 3	-2.040	-1.920	0.120	1.000	Pass
Pair 4	-2.040	-1.890	0.150	1.000	Pass



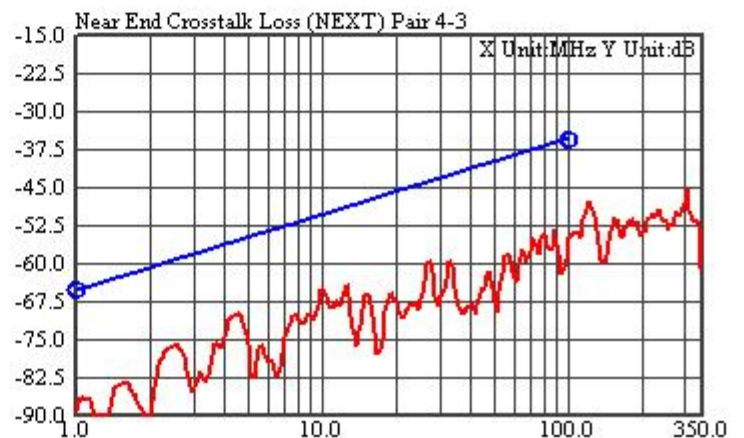
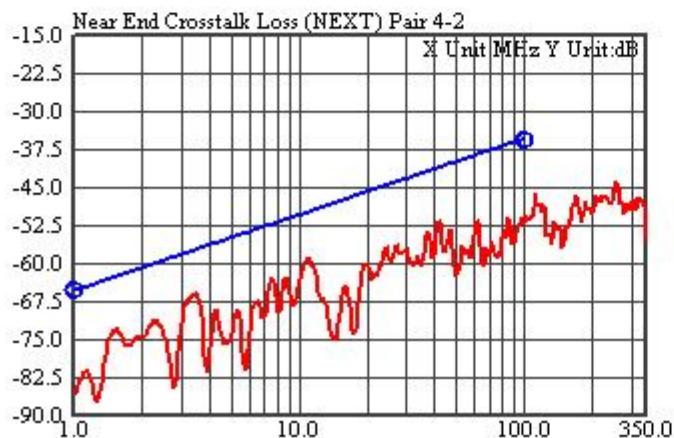
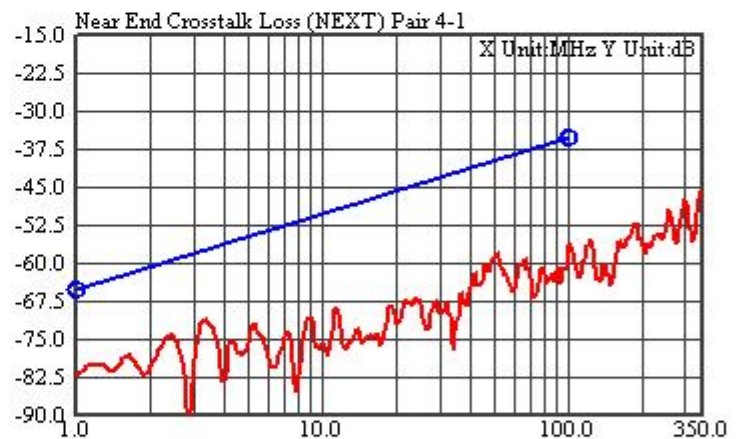
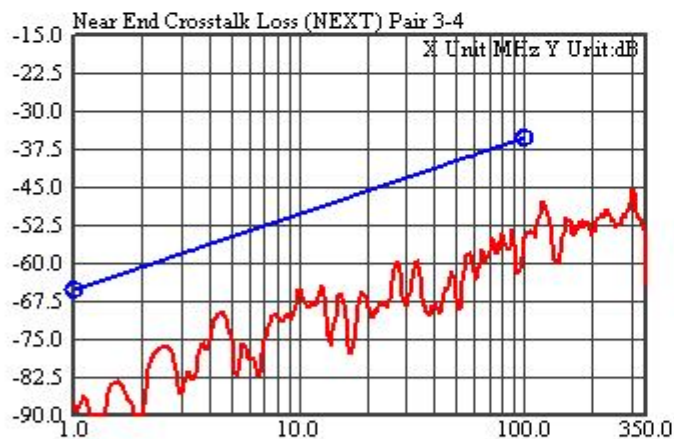
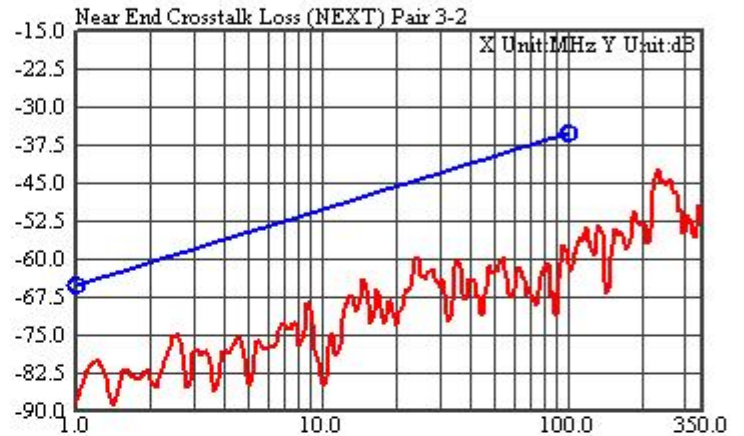
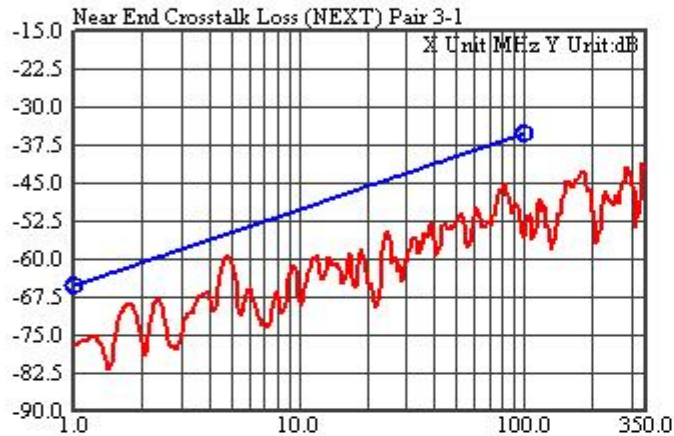
Summary and Graphic: Near End Crosstalk Loss (NEXT)

Pair	Spec(Max)(dB)	Measured(dB)	Margin(dB)	@Frequency(MHz)	Test Result
Pair 1-2	-51.237	-64.695	13.459	8.689	Pass
Pair 1-3	-55.076	-59.424	4.348	4.774	Pass
Pair 1-4	-57.445	-70.889	13.444	3.313	Pass
Pair 2-1	-51.237	-64.568	13.331	8.689	Pass
Pair 2-3	-44.487	-59.081	14.594	24.158	Pass
Pair 2-4	-57.254	-65.767	8.513	3.411	Pass



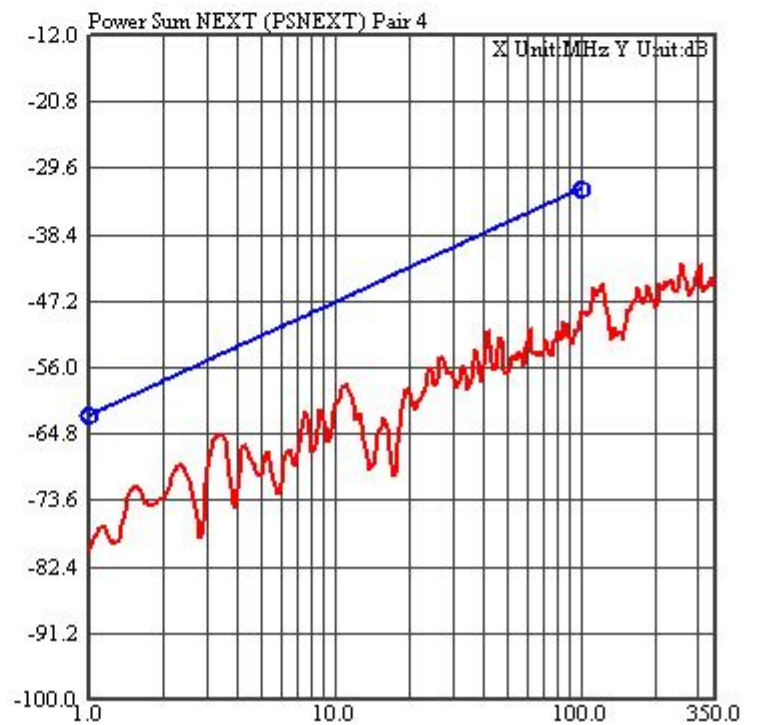
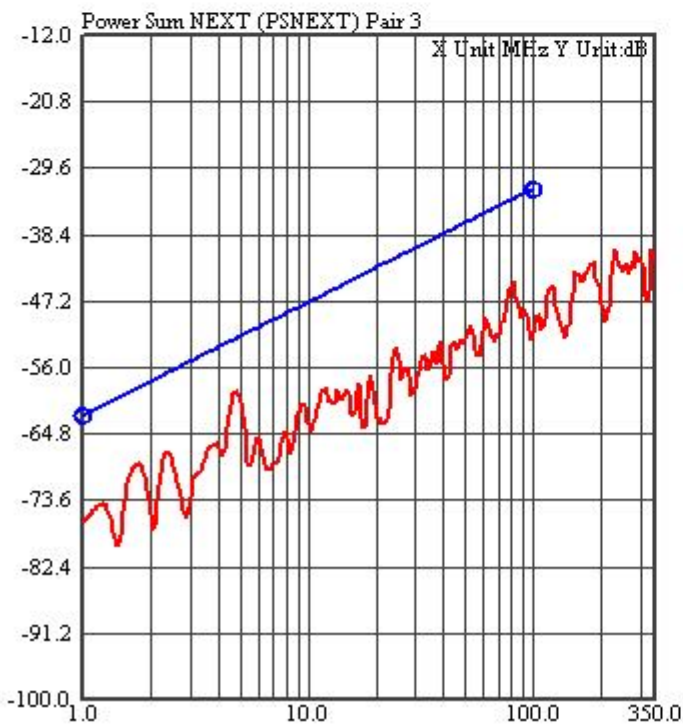
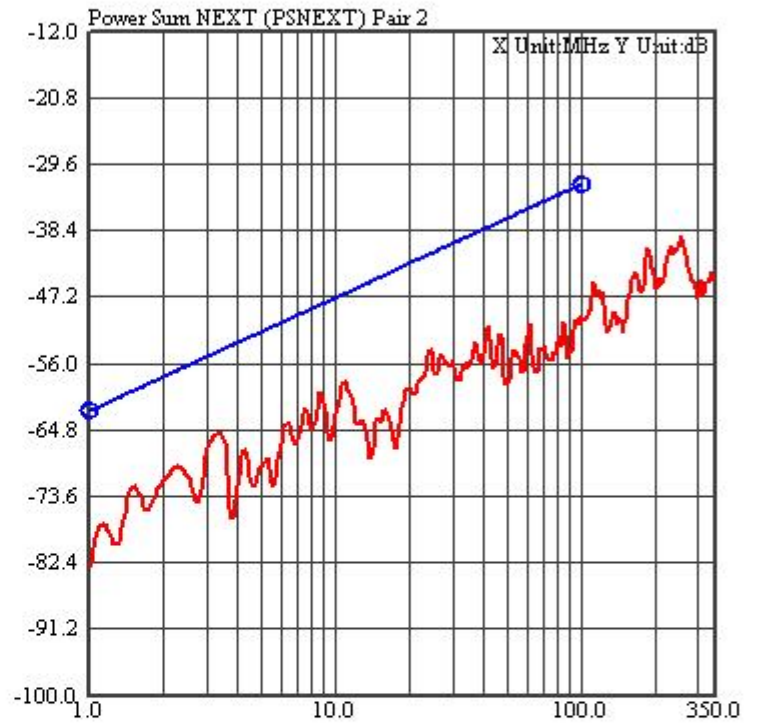
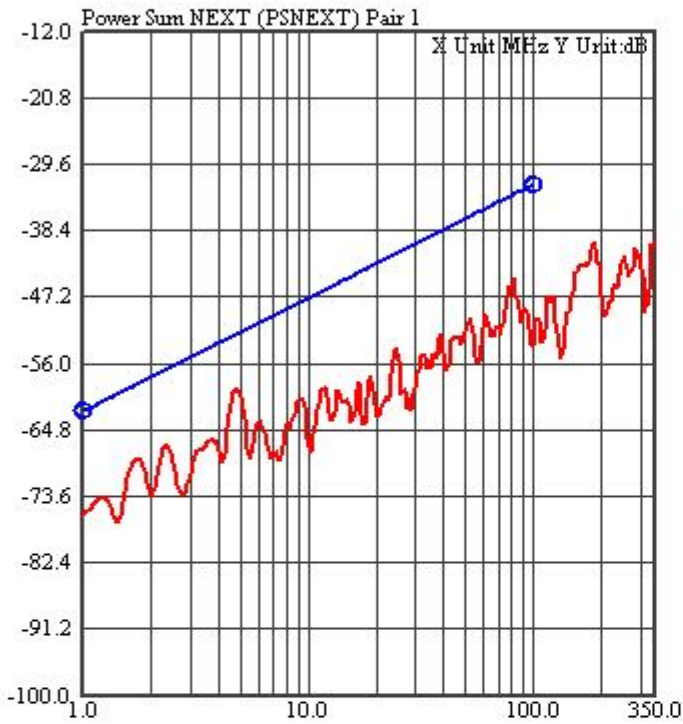
Summary and Graphic: Near End Crosstalk Loss (NEXT)

Pair	Spec(Max)(dB)	Measured(dB)	Margin(dB)	@Frequency(MHz)	Test Result
Pair 3-1	-55.076	-59.406	4.330	4.774	Pass
Pair 3-2	-44.487	-59.575	15.089	24.158	Pass
Pair 3-4	-55.638	-70.048	14.410	4.373	Pass
Pair 4-1	-57.445	-71.029	13.584	3.313	Pass
Pair 4-2	-57.254	-66.057	8.803	3.411	Pass
Pair 4-3	-55.544	-69.904	14.360	4.437	Pass



Summary and Graphic: Power Sum NEXT (PSNEXT)

Pair	Spec(Max)(dB)	Measured(dB)	Margin(dB)	@Frequency(MHz)	Test Result
Pair 1	-52.076	-59.255	7.179	4.774	Pass
Pair 2	-54.445	-65.382	10.936	3.313	Pass
Pair 3	-52.170	-59.147	6.978	4.704	Pass
Pair 4	-54.349	-64.947	10.597	3.362	Pass



Detail Discrete Frequencies-Return Loss (RL)(dB)

Frequency	1	4	10	16	20	25	30	31.25	62.5	80
Max Spec	-20.000	-22.968	-24.968	-25.000	-25.000	-24.300	-23.746	-23.633	-21.500	-20.747
Pair 1	-26.513	-29.586	-35.375	-36.337	-36.694	-37.243	-33.892	-34.829	-33.750	-32.638
Pair 2	-27.486	-29.571	-36.221	-32.496	-34.551	-33.197	-32.557	-33.876	-32.167	-33.672
Pair 3	-26.233	-28.894	-32.947	-32.504	-33.240	-35.118	-33.387	-34.427	-31.903	-32.821
Pair 4	-27.217	-29.952	-30.669	-35.566	-35.423	-37.483	-45.288	-34.235	-32.070	-31.178

Continue: Return Loss (RL)(dB)

100										
-20.100										
-33.441										
-34.983										
-32.252										
-32.723										

Detail Discrete Frequencies-Insertion Loss(Curve Fit)(dB/100 M)@20C

Frequency	1	4	8	10	16	20	25	31.25	62.5	100
Min Spec	-2.040	-4.029	-5.760	-6.416	-8.184	-9.260	-10.420	-11.639	-16.990	-21.970
Pair 1	-1.940	-3.870	-5.540	-6.160	-7.860	-8.840	-9.870	-11.090	-15.880	-20.380
Pair 2	-1.910	-3.810	-5.450	-6.070	-7.750	-8.720	-9.720	-10.940	-15.670	-19.910
Pair 3	-1.920	-3.830	-5.470	-6.090	-7.760	-8.730	-9.740	-10.950	-15.660	-19.810
Pair 4	-1.890	-3.770	-5.400	-6.020	-7.690	-8.630	-9.640	-10.850	-15.610	-19.930

