

## 萬泰科技(股)有限公司 Test Report

Cable Type : TUR2304N4F	Factory Number : 140603132	Data File Name : 000282.rpt
Cable ID : UTP #23 x 4P CM	Order Number : GY-501 (PE/PVC)	Specification File : CAT6-250-100M
Temperature : 29 °C	Operator : PAKORN	Test Date : 06/13/2014
Length : 305 M	Number of Pairs to Test: 4	Test Time : 14:23:00
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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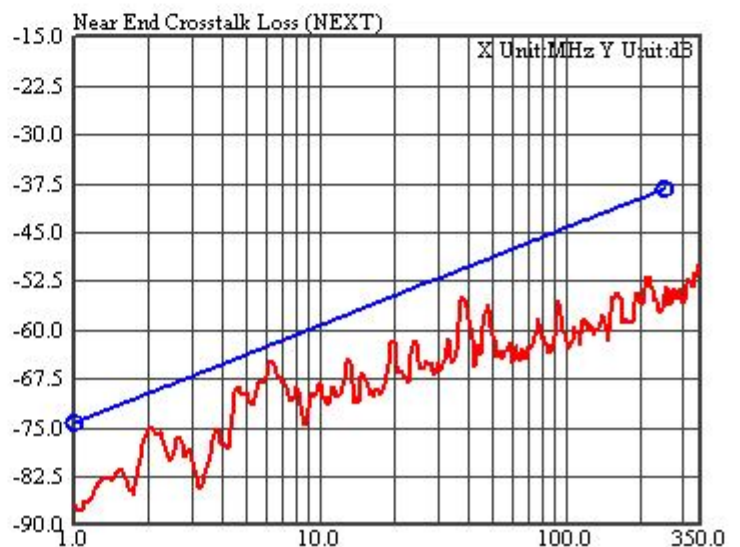
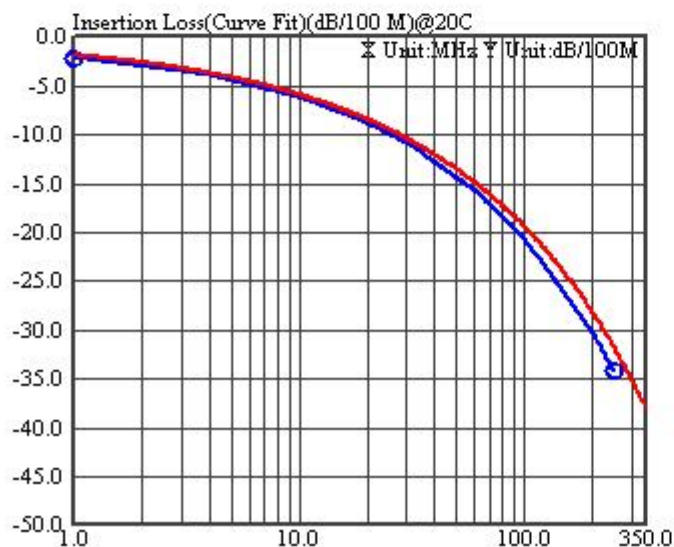
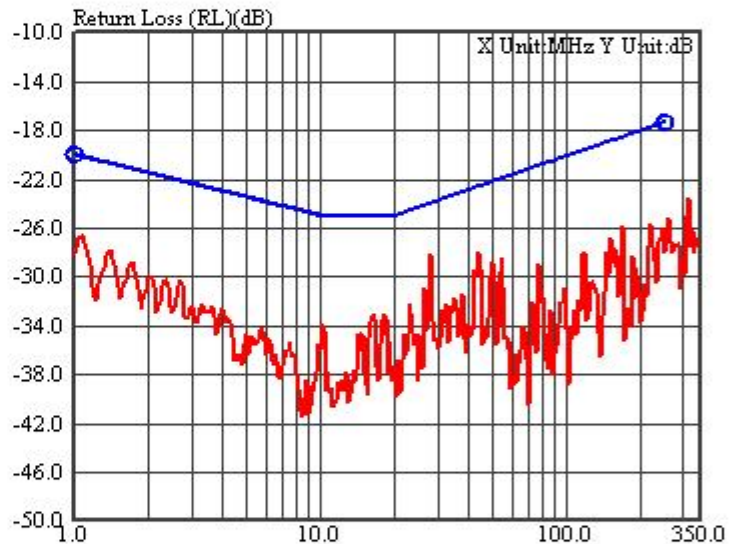
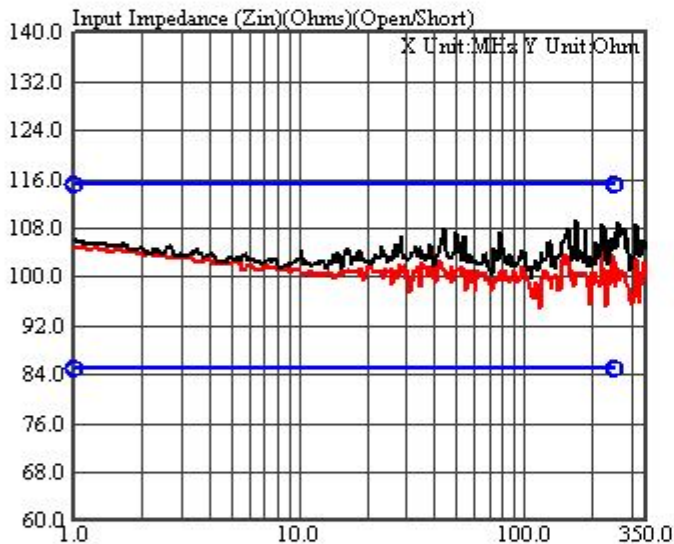
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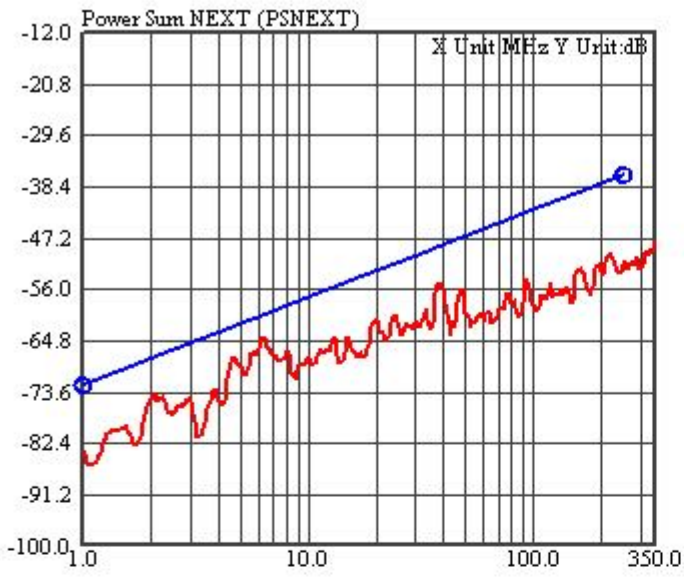
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Cable ID : UTP #23 x 4P CM	Order Number : GY-501 (PE/PVC)	Specification File : CAT6-250-100M
Temperature : 29 °C	Operator : PAKORN	Test Date : 06/13/2014
Length : 305 M	Number of Pairs to Test: 4	Test Time : 14:23:00
Starting Position : xxx		

## Worst Case Summary

## High Frequency

Test Type	Specification	Measured(Pair)	Margin	@Freq.(MHz)	Test Result
Input Impedance (Zin)(Ohms)(Open/Short)	85.000 (Min)	94.926 (Pair 2)	9.926	117.016	OK
Input Impedance (Zin)(Ohms)(Open/Short)	115.000 (Max)	109.237 (Pair 2)	5.763	171.079	OK
Return Loss (RL)(dB)	-23.950 (Max)	-28.175 (Pair 2)	4.225	27.958	OK
Insertion Loss(Curve Fit)(dB/100 M)@20C	-3.900 (Min)	-3.710 (Pair 1)	0.190	4.006	OK
Near End Crosstalk Loss (NEXT)	-62.332 (Max)	-64.856 (Pair 2-4)	2.524	6.301	OK
Power Sum NEXT (PSNEXT)	-60.332 (Max)	-64.199 (Pair 4)	3.867	6.301	OK





## Worst Case Summary

### Low Frequency

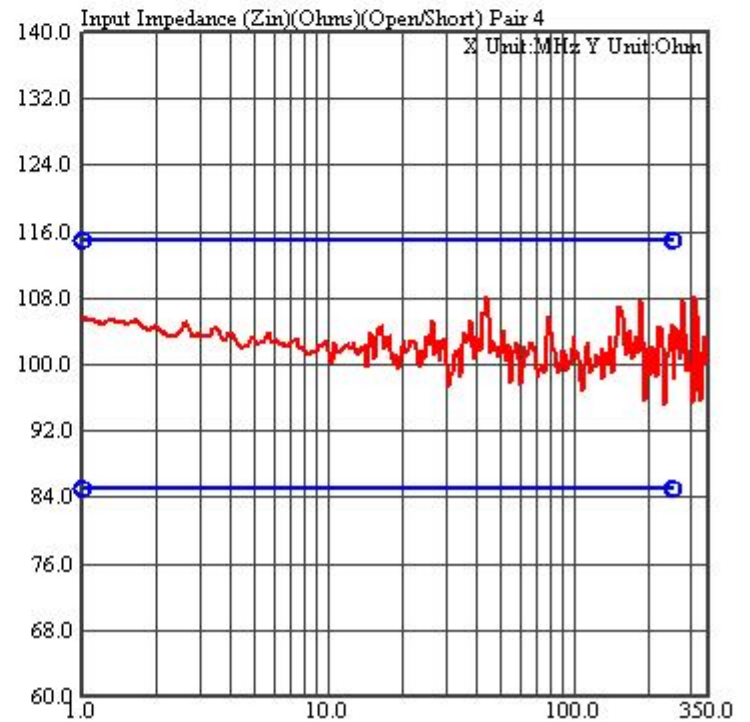
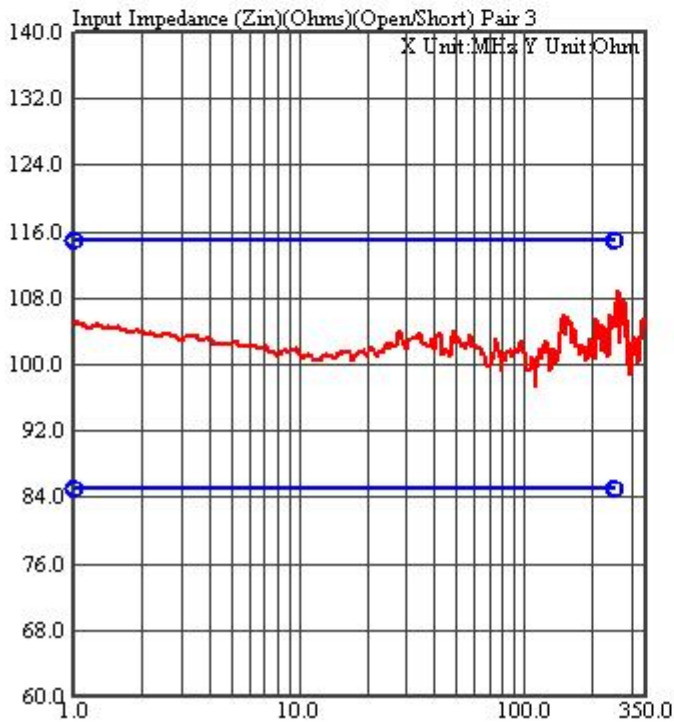
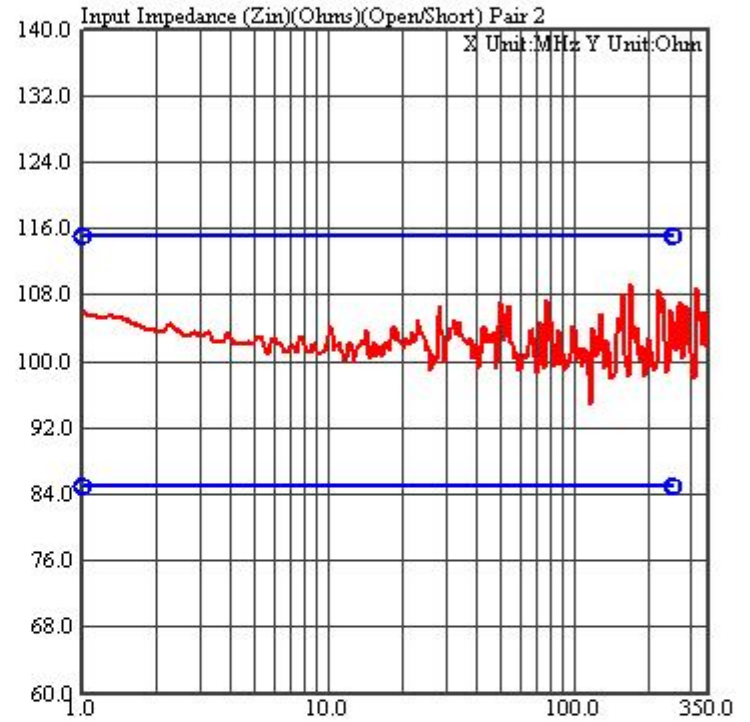
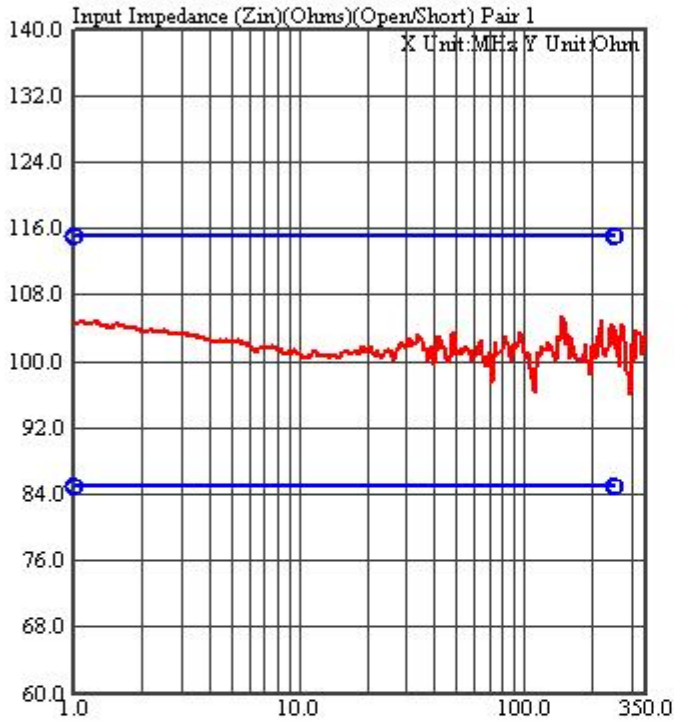
Statistical Parameter	Maximum		Minimum		Average Maximum		Standard Deviation		Result
	Spec Limit	Measured	Spec Limit	Measured	Spec Limit	Measured	Spec Limit	Measured	
Conductor Resistance(Ohms/100.0 m)@20C	9.38	7.16	xxx	6.84	xxx	7.0175	xxx	0.132	OK
Resistance Unbalance( % )@20C	3	1.28	xxx	0	xxx	0.593	xxx	0.539	OK
Mutual Capacitance(nF/100.0 m)@1000Hz	5.6	5.351	xxx	5.05	xxx	5.195	xxx	0.123	OK
Cap. Unbalance to Ground(pF/100.0 m)@1000Hz	330	34.653	xxx	15.578	xxx	25.77	xxx	6.779	OK
Cap. Unbalance to Shield(pF/100.0 m)@1000Hz	330	38.555	xxx	19.413	xxx	27.893	xxx	6.855	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]	7.16	7.16	0	5.351	26.706	26.771	Pass
Pair 2[4]	6.95	6.94	0.139	5.103	26.144	26.833	Pass
Pair 3[5]	7.16	7.09	0.955	5.277	34.653	38.555	Pass
Pair 4[6]	6.8	6.88	1.28	5.05	15.578	19.413	Pass

## Summary and Graphic: Input Impedance ( $Z_{in}$ )(Ohms)(Open/Short)

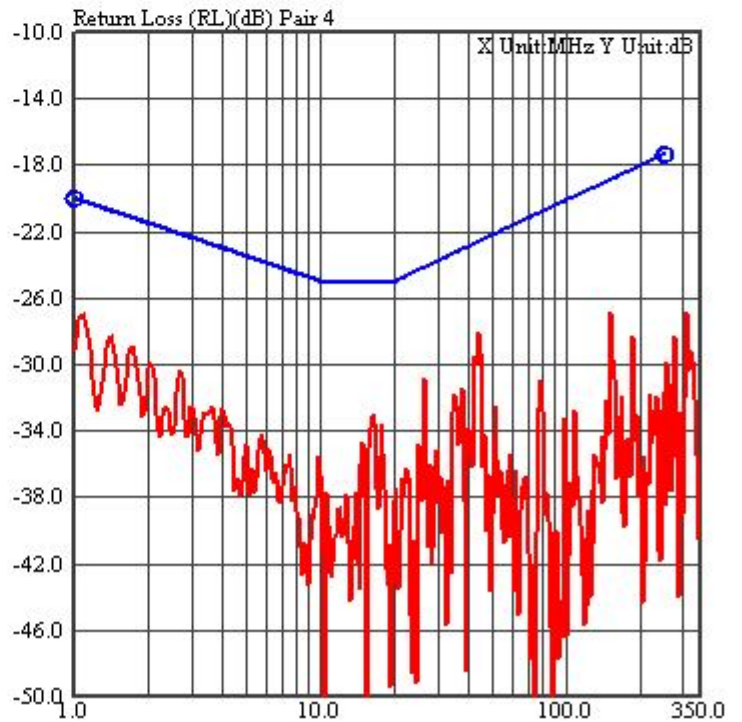
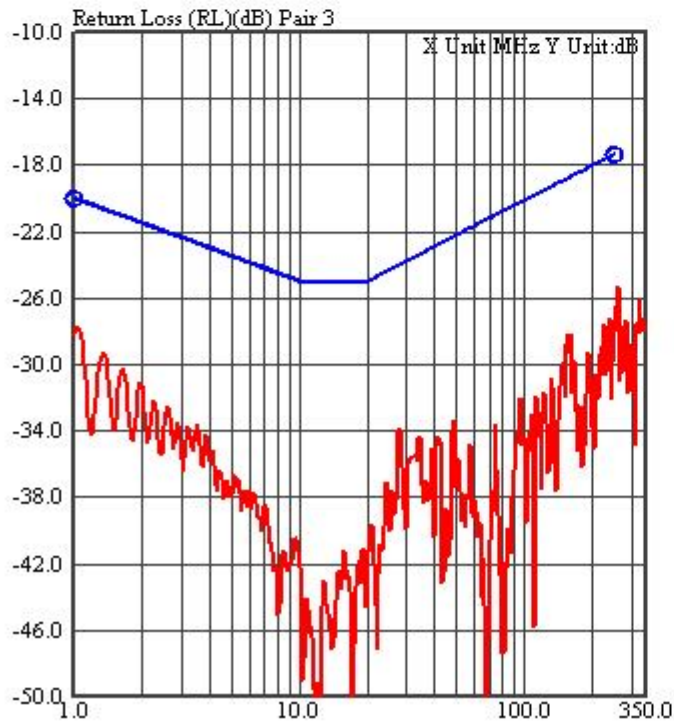
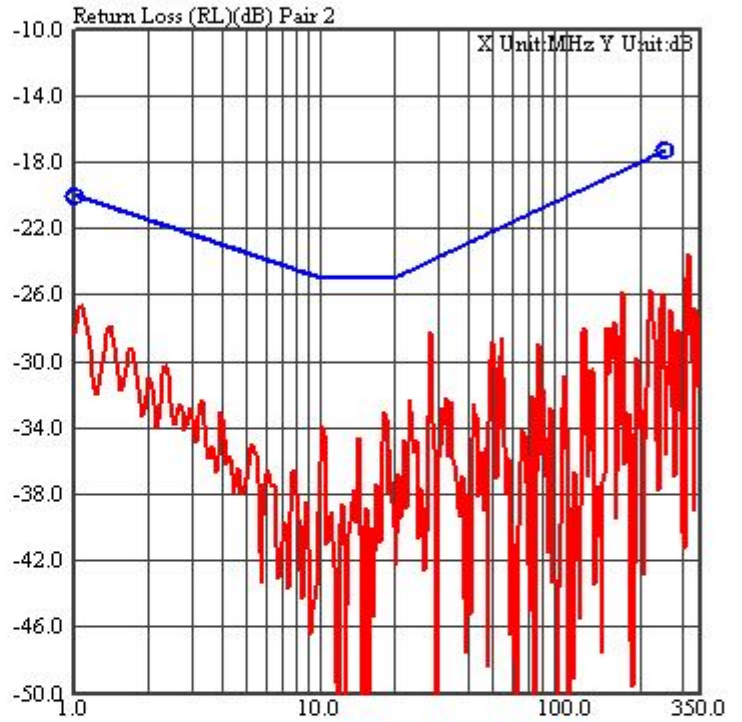
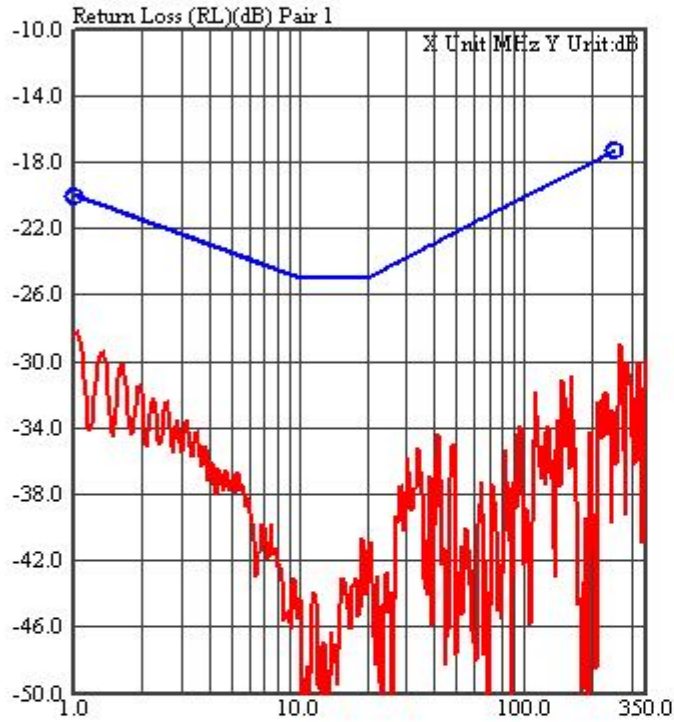
Pair	Specification		Measured(Ohms)		Margin(Ohms)		@Frequency(MHz)		Test Result
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	
Pair 1	85.000	115.000	96.375	105.504	11.375	9.496	111.998	147.827	Pass
Pair 2	85.000	115.000	94.926	109.237	9.926	5.763	117.016	171.079	Pass
Pair 3	85.000	115.000	97.294	106.109	12.294	8.891	111.998	239.396	Pass
Pair 4	85.000	115.000	95.228	108.077	10.228	6.923	232.502	43.972	Pass





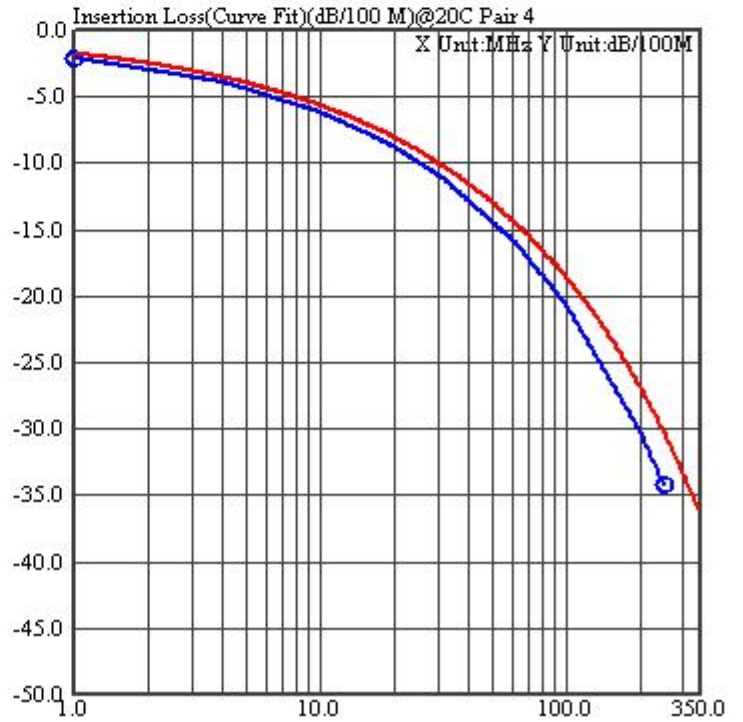
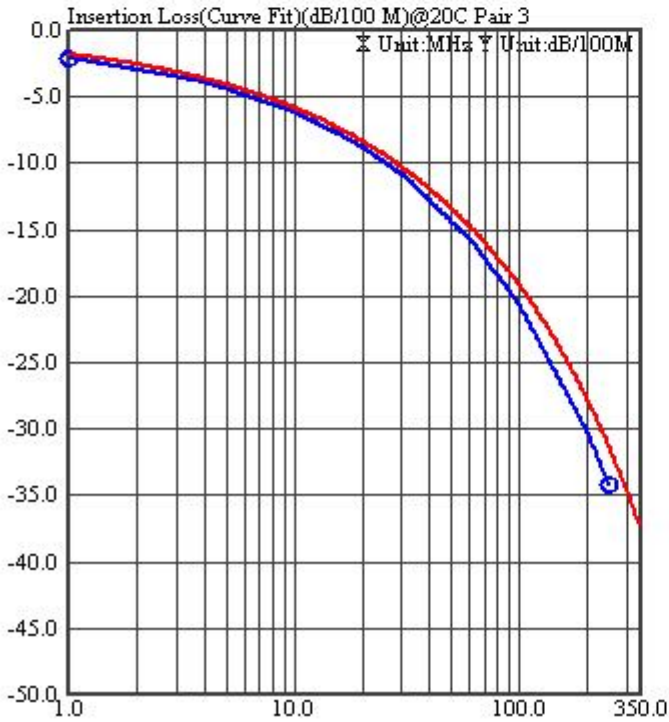
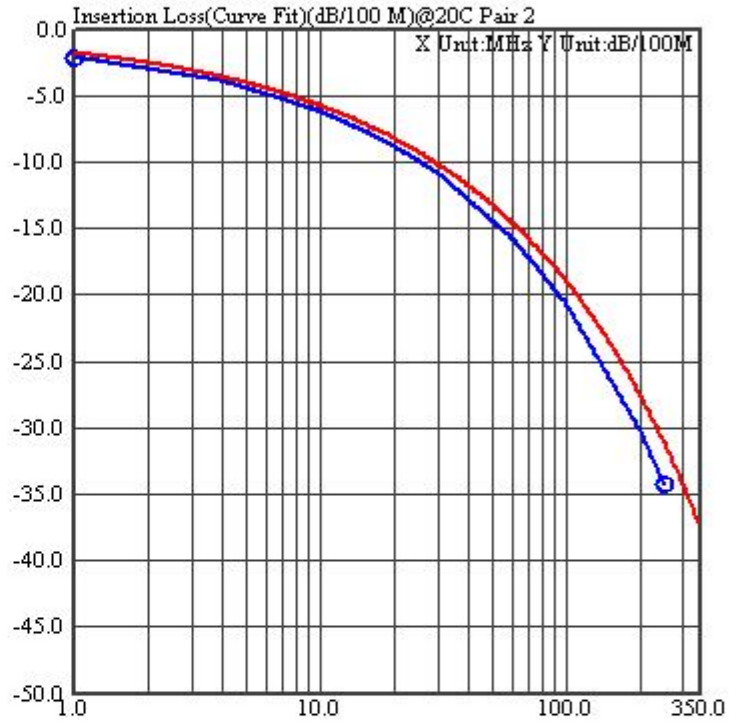
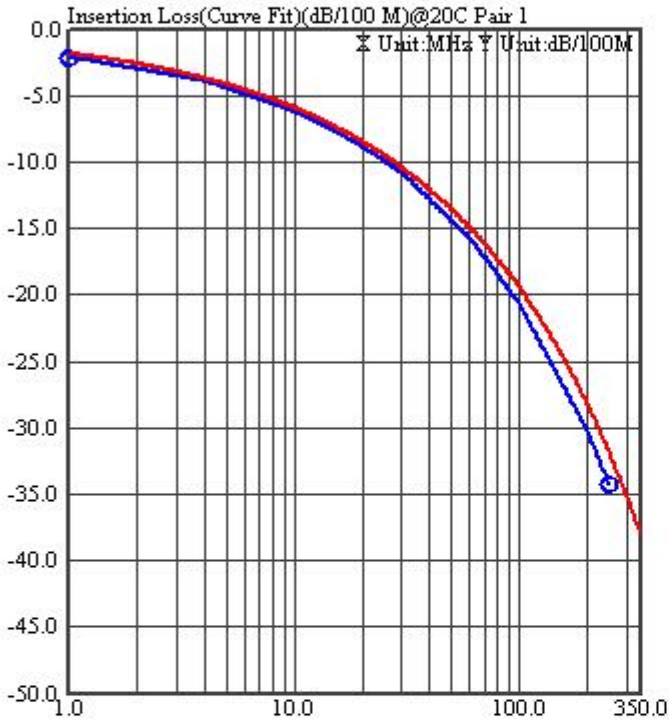
## Summary and Graphic: Return Loss (RL)(dB)

Pair	Spec(Max)(dB)	Measured(dB)	Margin(dB)	@Frequency(MHz)	Test Result
Pair 1	-20.063	-28.196	8.133	1.030	Pass
Pair 2	-23.950	-28.175	4.225	27.958	Pass
Pair 3	-20.063	-27.661	7.597	1.030	Pass
Pair 4	-22.572	-28.035	5.463	43.972	Pass



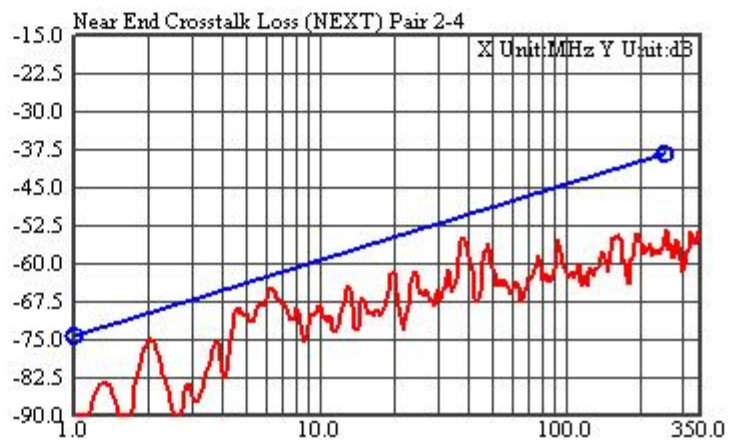
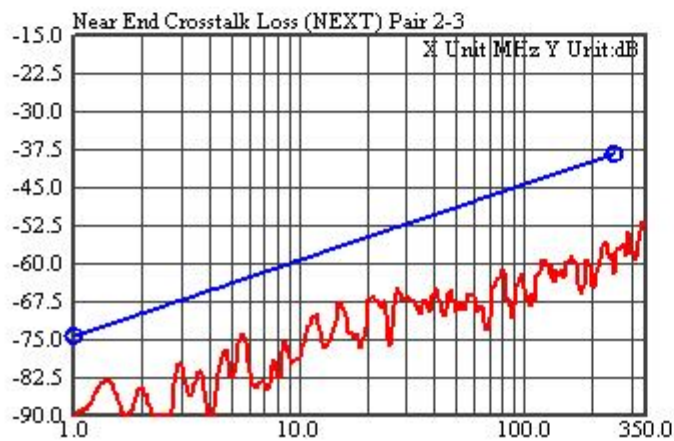
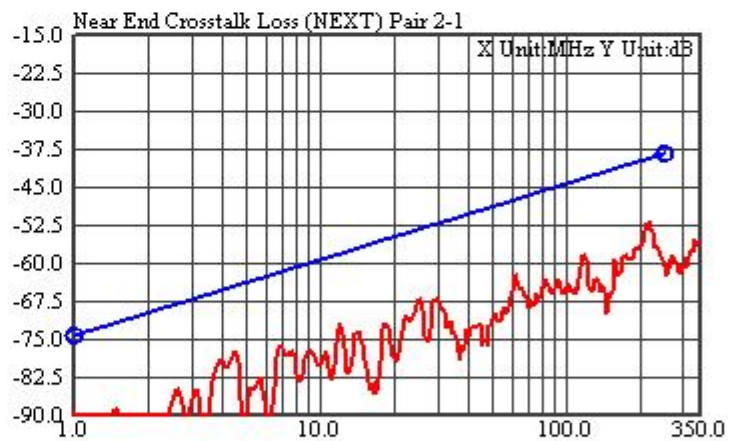
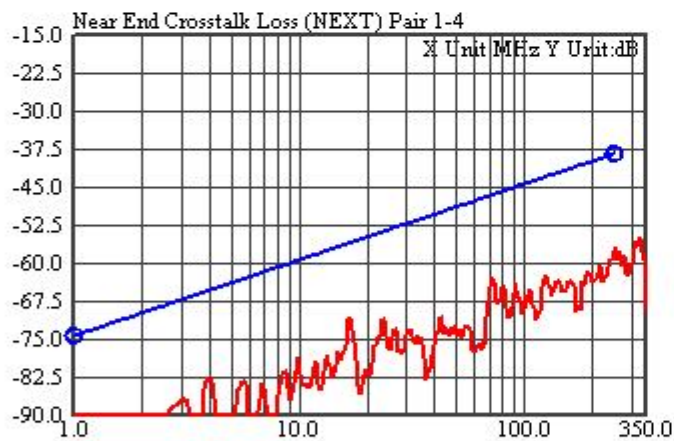
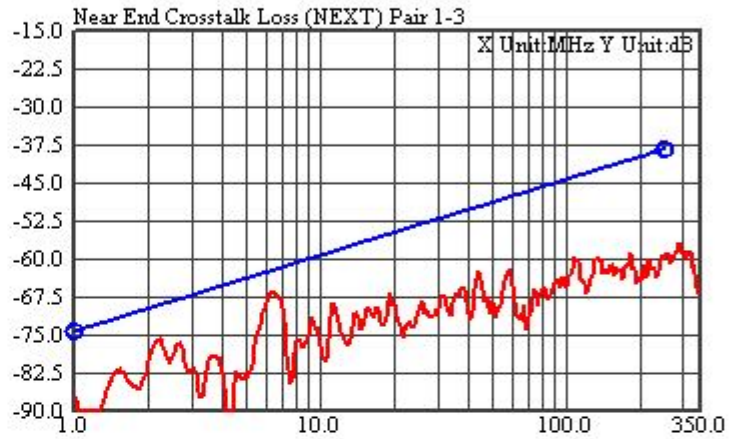
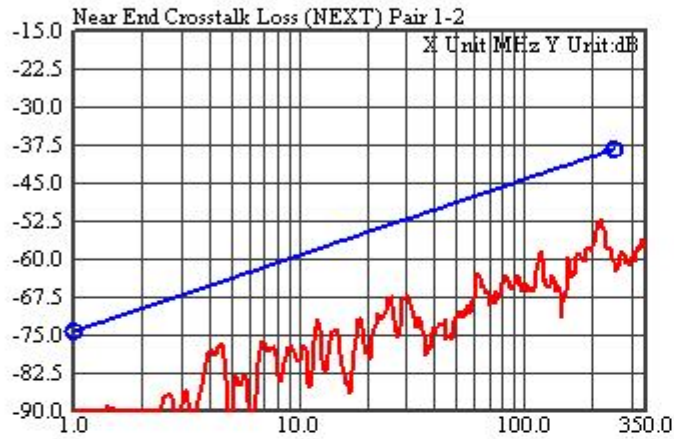
## Summary and Graphic: Insertion Loss(Curve Fit)(dB/100 M)@20C

Pair	Spec(Min)(dB)	Measured(dB)	Margin(dB)	@Frequency(MHz)	Test Result
Pair 1	-3.900	-3.710	0.190	4.006	Pass
Pair 2	-3.900	-3.610	0.290	4.006	Pass
Pair 3	-3.900	-3.670	0.230	4.006	Pass
Pair 4	-2.100	-1.750	0.350	1.000	Pass



## Summary and Graphic: Near End Crosstalk Loss (NEXT)

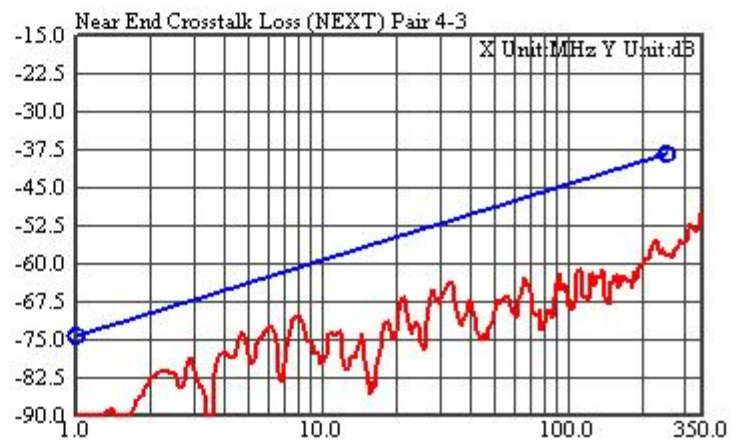
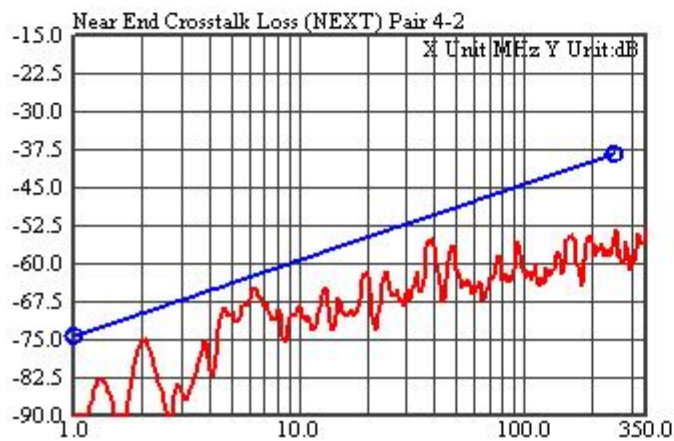
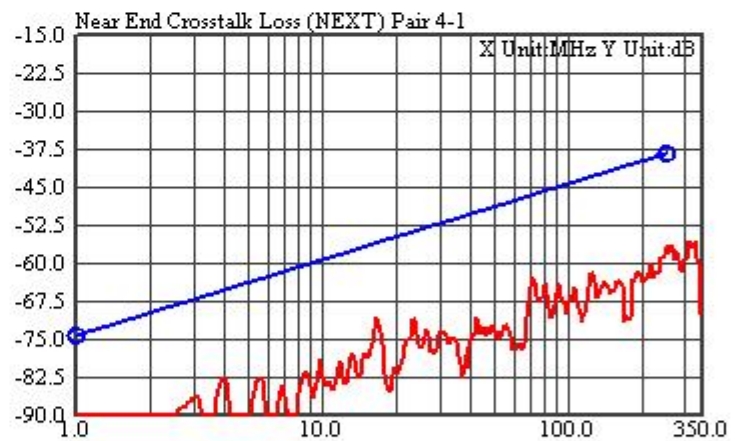
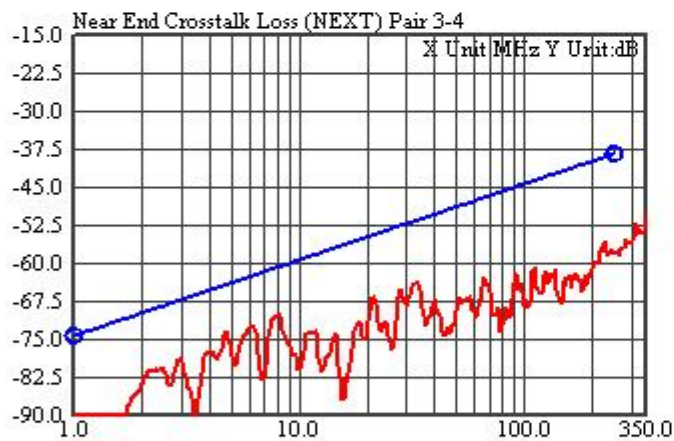
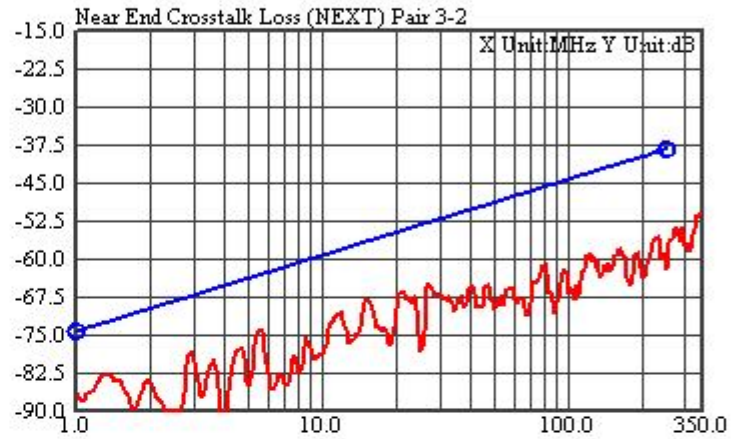
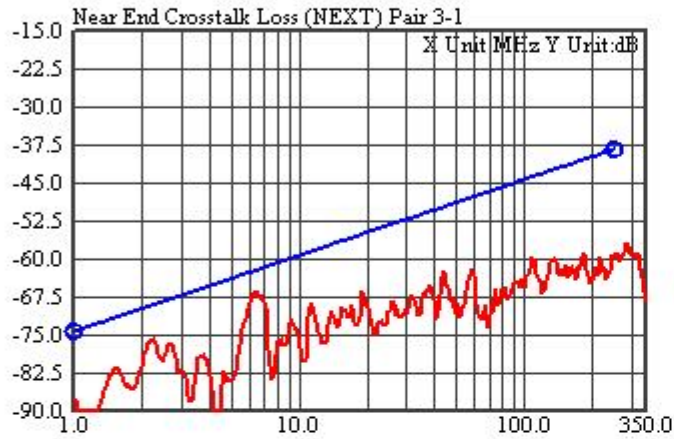
Pair	Spec(Max)(dB)	Measured(dB)	Margin(dB)	@Frequency(MHz)	Test Result
Pair 1-2	-64.534	-76.778	12.244	4.503	Pass
Pair 1-3	-62.236	-66.488	4.252	6.393	Pass
Pair 1-4	-55.920	-70.537	14.617	16.767	Pass
Pair 2-1	-39.400	-51.939	12.539	212.991	Pass
Pair 2-3	-72.121	-82.868	10.747	1.399	Pass
Pair 2-4	-62.332	-64.856	2.524	6.301	Pass





## Summary and Graphic: Near End Crosstalk Loss (NEXT)

Pair	Spec(Max)(dB)	Measured(dB)	Margin(dB)	@Frequency(MHz)	Test Result
Pair 3-1	-62.236	-66.556	4.320	6.393	Pass
Pair 3-2	-72.405	-82.714	10.308	1.339	Pass
Pair 3-4	-64.247	-73.514	9.267	4.704	Pass
Pair 4-1	-55.920	-70.653	14.733	16.767	Pass
Pair 4-2	-62.332	-64.884	2.552	6.301	Pass
Pair 4-3	-64.247	-73.595	9.348	4.704	Pass



## Summary and Graphic: Power Sum NEXT (PSNEXT)

Pair	Spec(Max)(dB)	Measured(dB)	Margin(dB)	@Frequency(MHz)	Test Result
Pair 1	-60.236	-66.439	6.203	6.393	Pass
Pair 2	-60.332	-64.794	4.462	6.301	Pass
Pair 3	-60.332	-65.690	5.358	6.301	Pass
Pair 4	-60.332	-64.199	3.867	6.301	Pass

