

DCM Test Report

Cable Type : 2x2x24 x PE/PVC	Factory Number : PHOENIX	Data File Name : DA009772.D3S
Cable I.D. : U/UTP#24X2P CABLE	Order Number : 4181 GY-265 180600317	Specification File : CAT 5.S3S
Temperature : 25.00 °C	Relative Humidity : 50 %	Test Date/Time : 06/01/2018 11:45:49 AM
Length : 500.00 m	Number of Pairs to Test : 2	Operator : M 180601WE302001/3
Starting Position : 1		Analyzer Type : ENA

Pass - Fail Test Certificate - 2 Pairs

High Frequency

Test Type	Test Result
Input Impedance (Zin)(Ohms)(Terminated)	For Information Only
Characteristic Impedance (Z0)(4th Order)(Ohms)(Terminated)	OK
Structural Return Loss (SRL)(4th Order)(dB)(Terminated)	OK
Insertion Loss (IL)(dB/100.0 m)@20C	OK
Near End Crosstalk Loss (NEXT)(dB)	OK

Low Frequency

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

Signature:	Approved:	Date:
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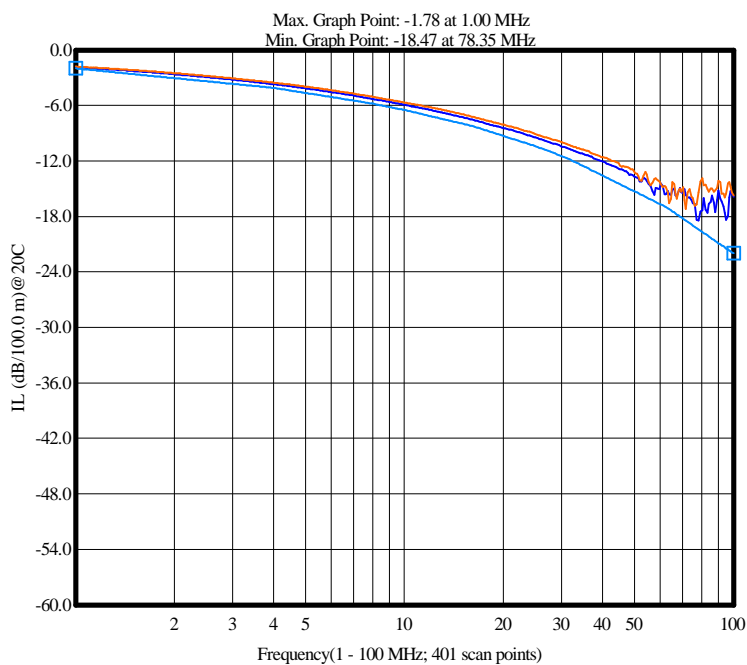
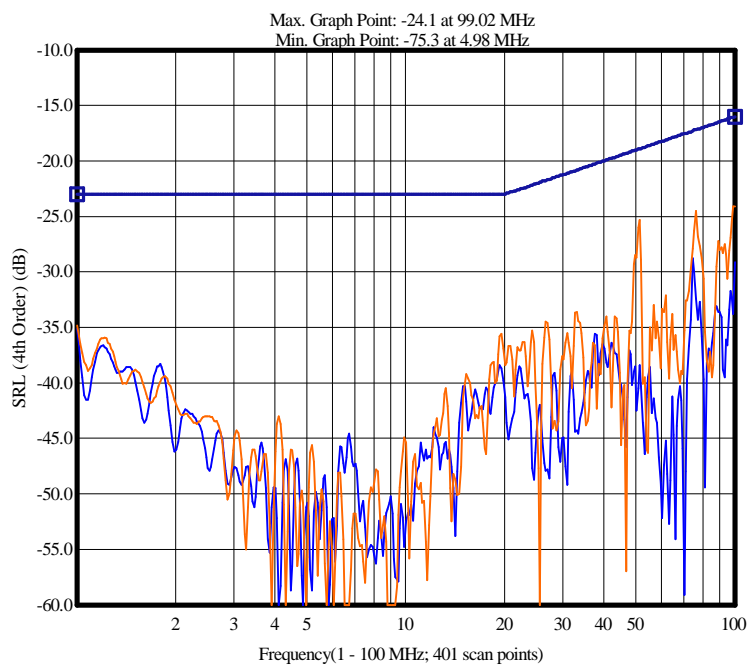
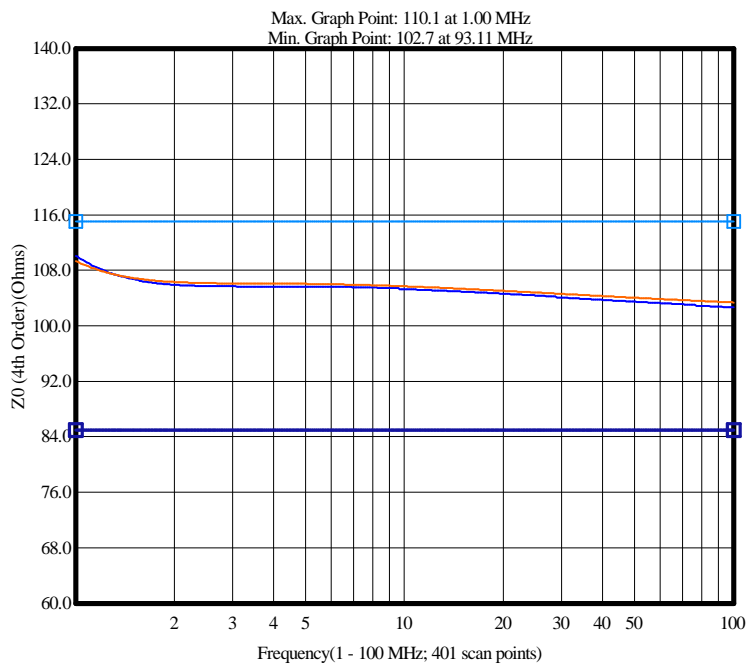
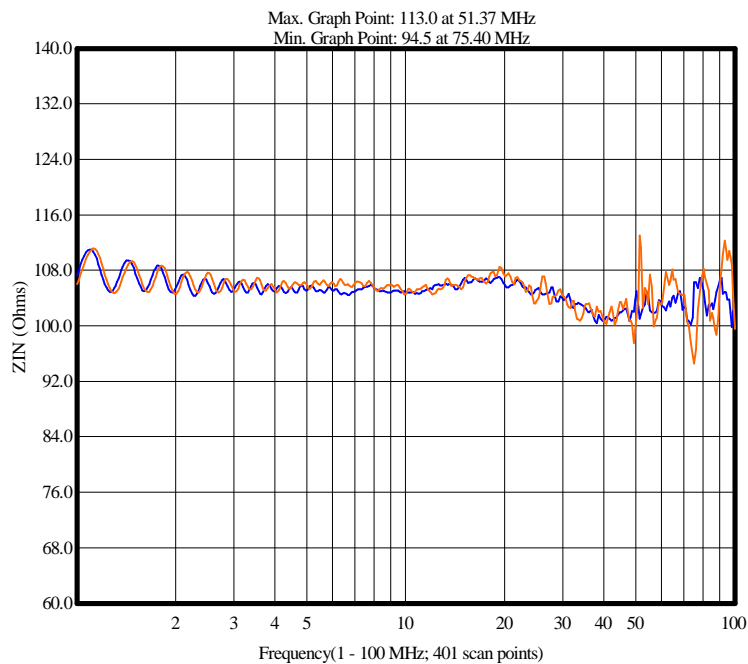
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Starting Position : 1		Analyzer Type : ENA

Worst Case Summary

High Frequency

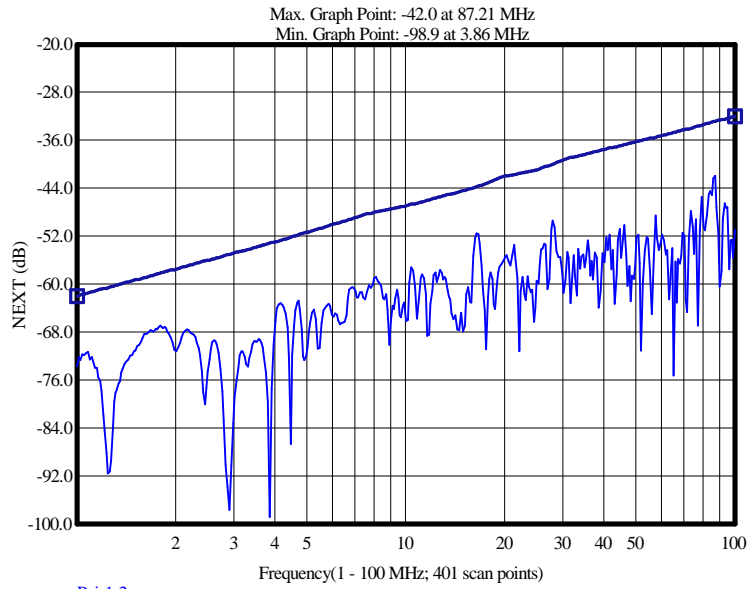
Test Type	Specification	Measured (Pair)	Margin	@ Frequency (MHz)	Test Result
Input Impedance (Zin)(Terminated)	xxx (Min)	N/A	N/A	N/A	N/A
Input Impedance (Zin)(Terminated)	xxx (Max)	N/A	N/A	N/A	N/A
Characteristic Impedance (Z0)(4)(T)	85.0 (Min)	102.7 (Pair 1)	17.7	93.11	Passed
Characteristic Impedance (Z0)(4)(T)	115.0 (Max)	110.1 (Pair 1)	4.9	1.00	Passed
Structural Return Loss (SRL)(4)(T)	18.9 (Min)	25.3 (Pair 2)	6.4	51.37	Passed
Insertion Loss (IL)@20C	2.00 (Max)	1.86 (Pair 1)	0.14	1.00	Passed
Near End Crosstalk Loss (NEXT)	43.8 (Min)	51.6 (Pairs 1-2)	7.8	16.43	Passed



N/A = Not Applicable.
 --- = Disable/Bypassed Pair.

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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	9.30	xxx	9.14	xxx	9.23	xxx	0.064	Passed
Resistance Unbalance(%)	5.00	0.53	xxx	0.17	xxx	0.35	xxx	0.183	Passed
Mutual Capacitance(nF/100.0 m)@1000Hz	5.60	4.64	xxx	4.43	xxx	4.54	xxx	0.106	Passed
Cap. Unbalance to Ground(pF/100.0 m)@1000Hz	330.00	10.20	xxx	5.57	xxx	7.89	xxx	2.317	Passed

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	Test Result
Unit	Ohms/100.0 m	Ohms/100.0 m	%	nF/100.0 m	pF/100.0 m	
Max Spec	9.38	9.38	5.00	5.60	330.00	
Min Spec	xxx	xxx	xxx	xxx	xxx	
Pair 1 [1]	9.30	9.28	0.17	4.64	10.20	Passed
Pair 2 [2]	9.19	9.14	0.53	4.43	-5.57	Passed

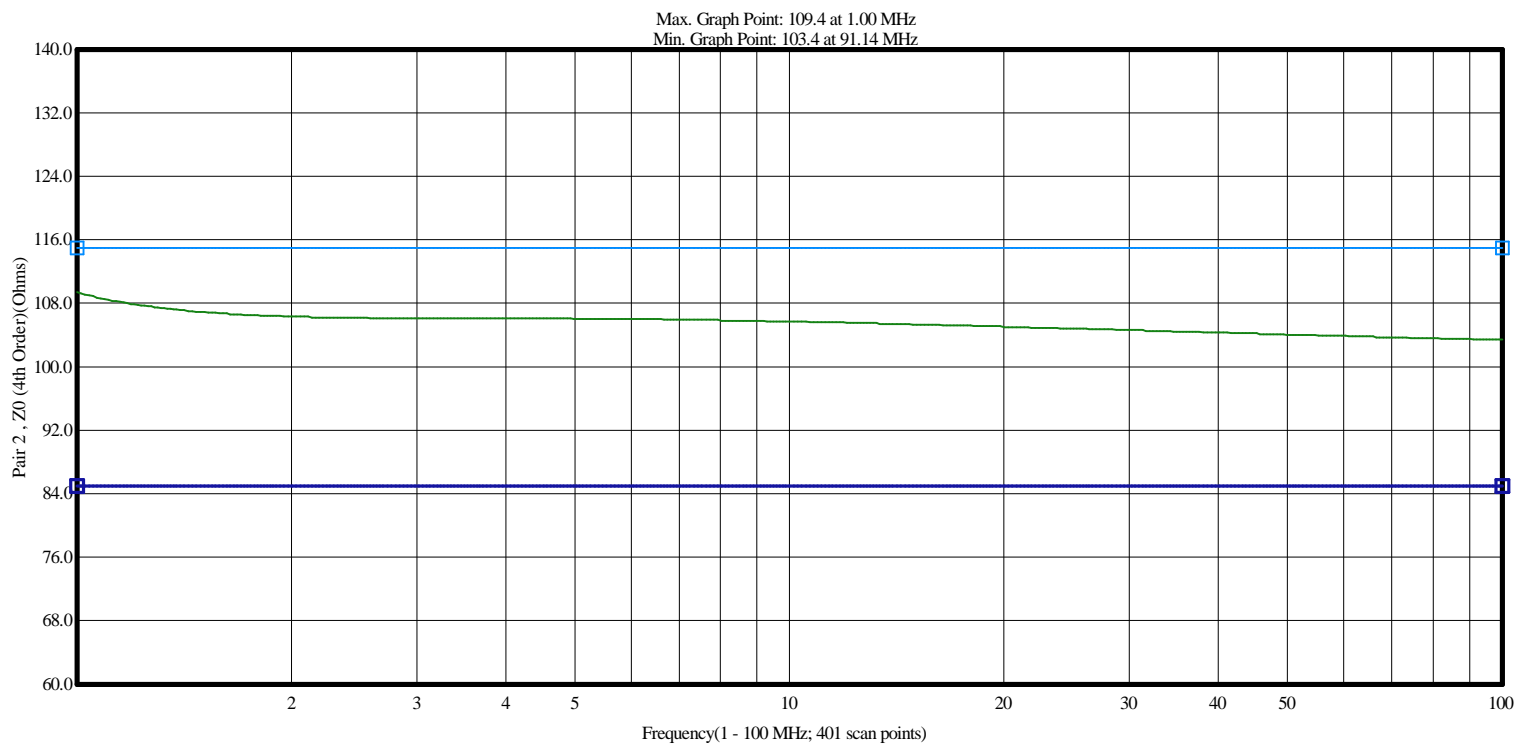
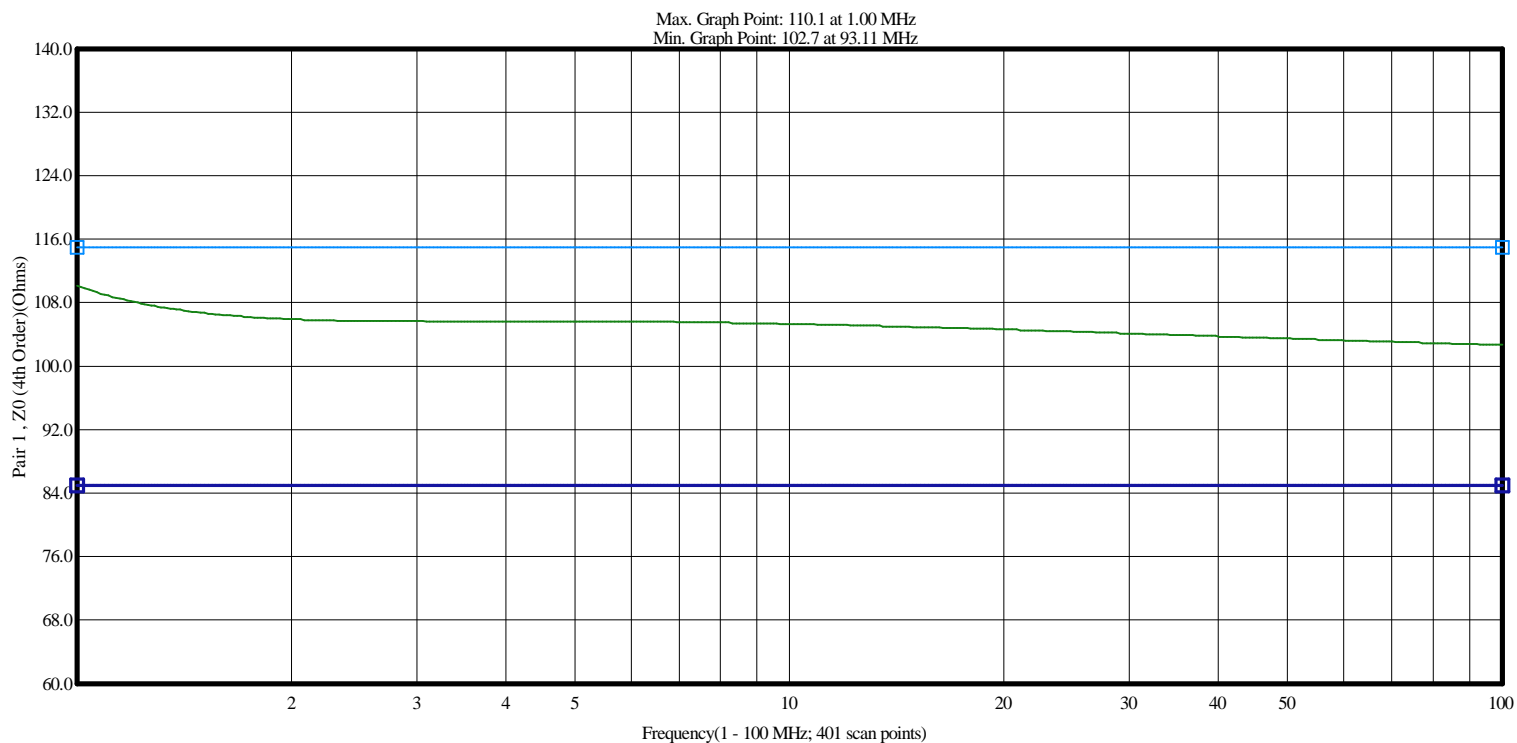
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Summary and Graphic: Characteristic Impedance (Z0)(4th Order)(Terminated)

Pair	Specification		Measured(Ohms)		Margin (Ohms)		@ Frequency (MHz)		Test Result
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	
Pair 1 [1]	85.0	115.0	102.7	110.1	17.7	4.9	93.11	1.00	Passed
Pair 2 [2]	85.0	115.0	103.4	109.4	18.4	5.6	91.14	1.00	Passed



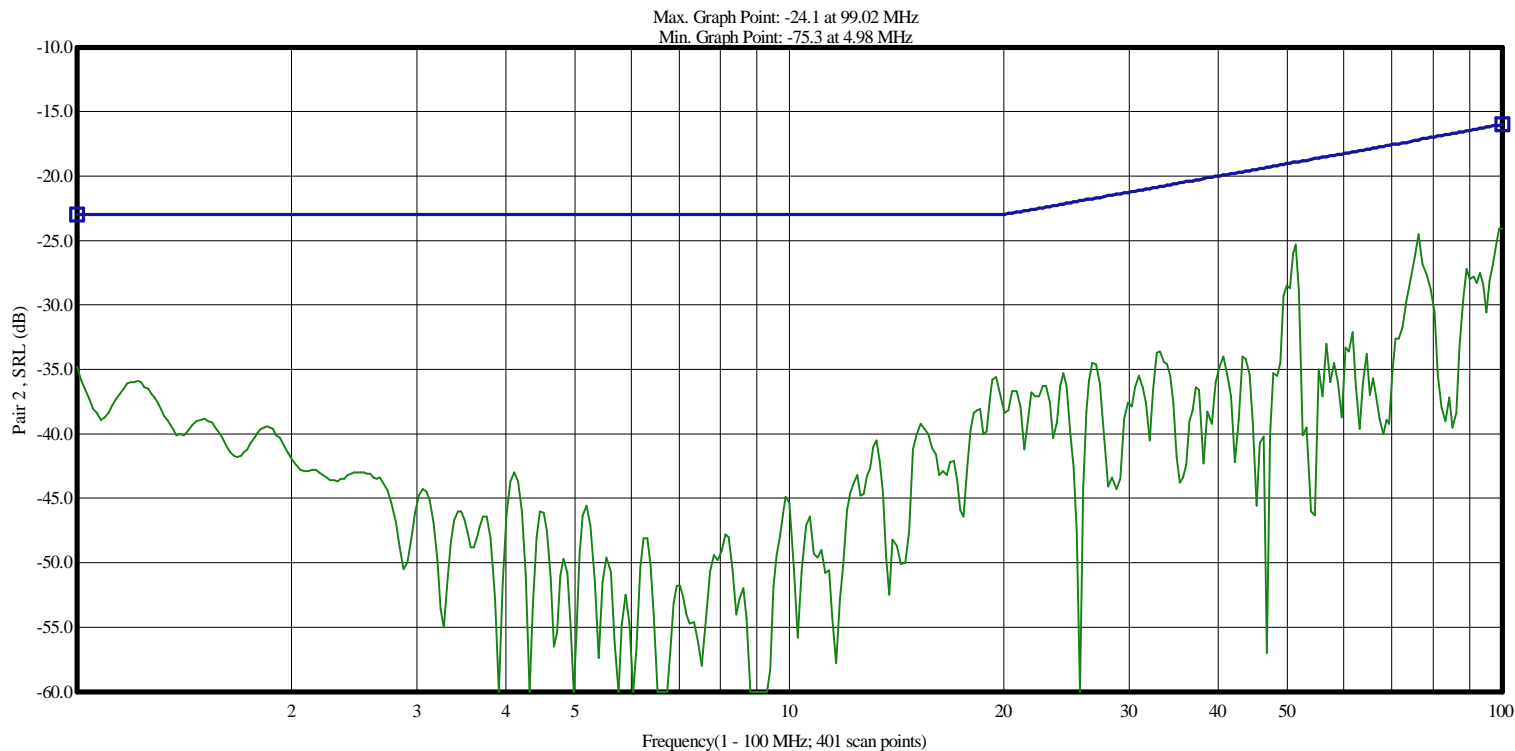
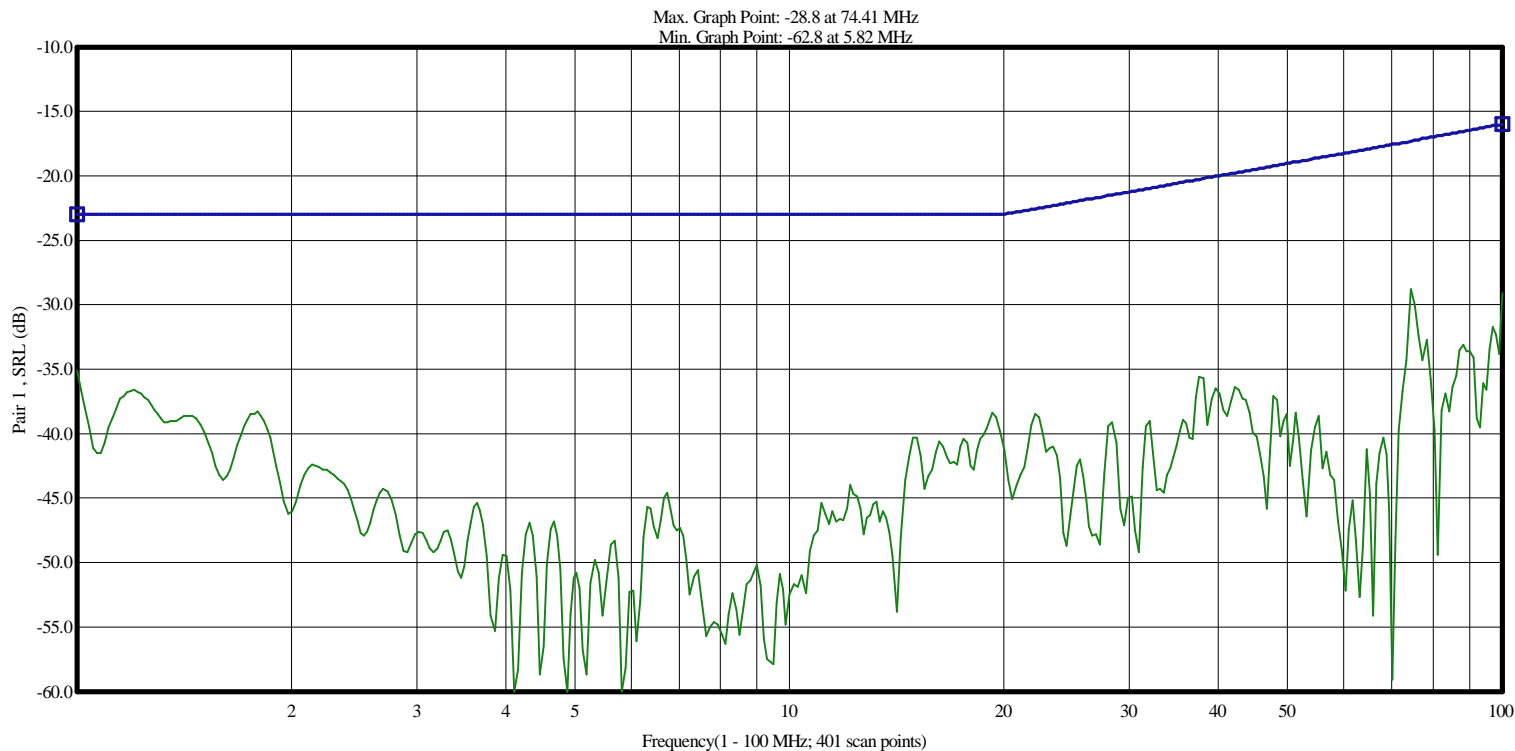
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Summary and Graphic: Structural Return Loss (SRL)(4th Order)(Terminated)

Pair	Spec (Min)(dB)	Measured(dB)	Margin (dB)	@ Frequency (MHz)	Test Result
Pair 1 [1]	17.3	28.8	11.5	74.41	Passed
Pair 2 [2]	18.9	25.3	6.4	51.37	Passed



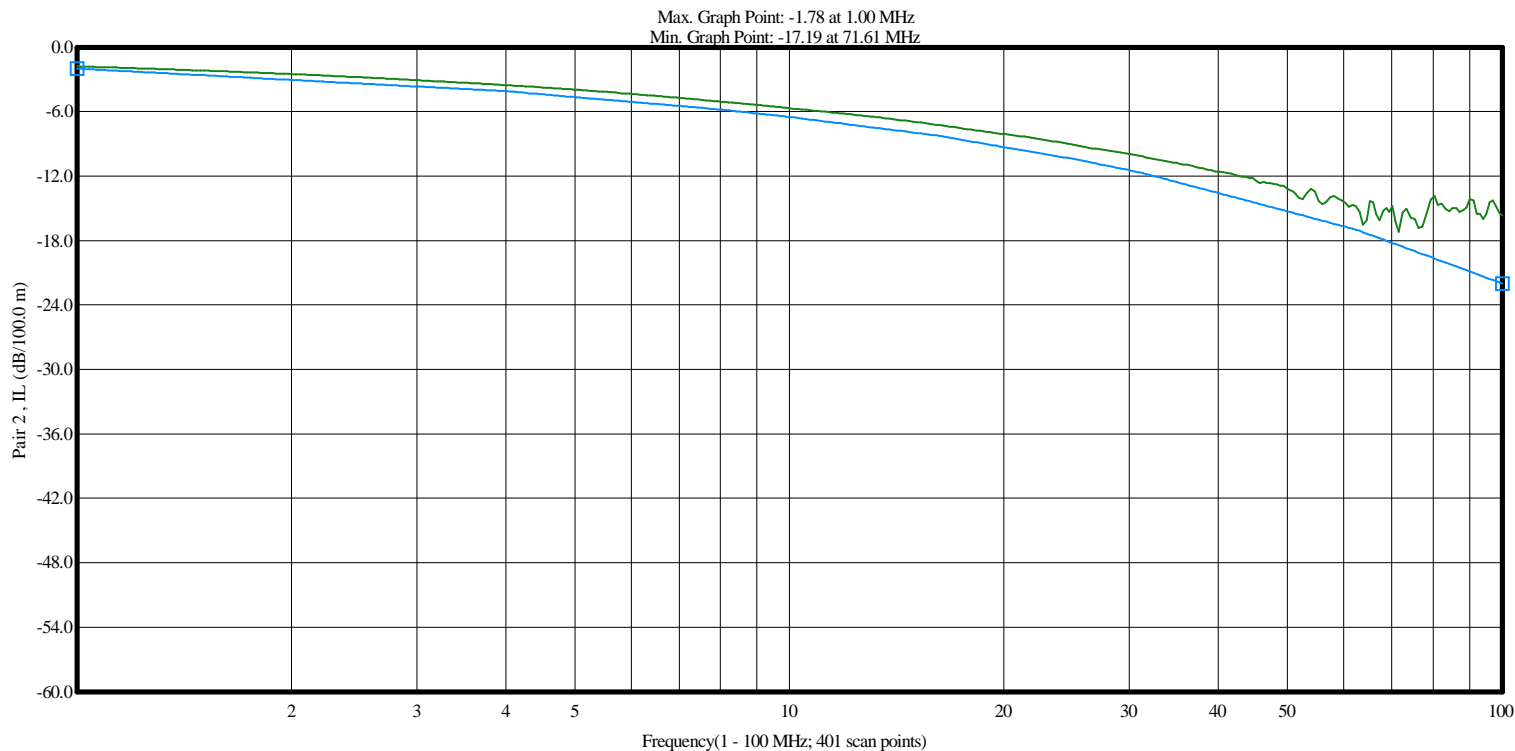
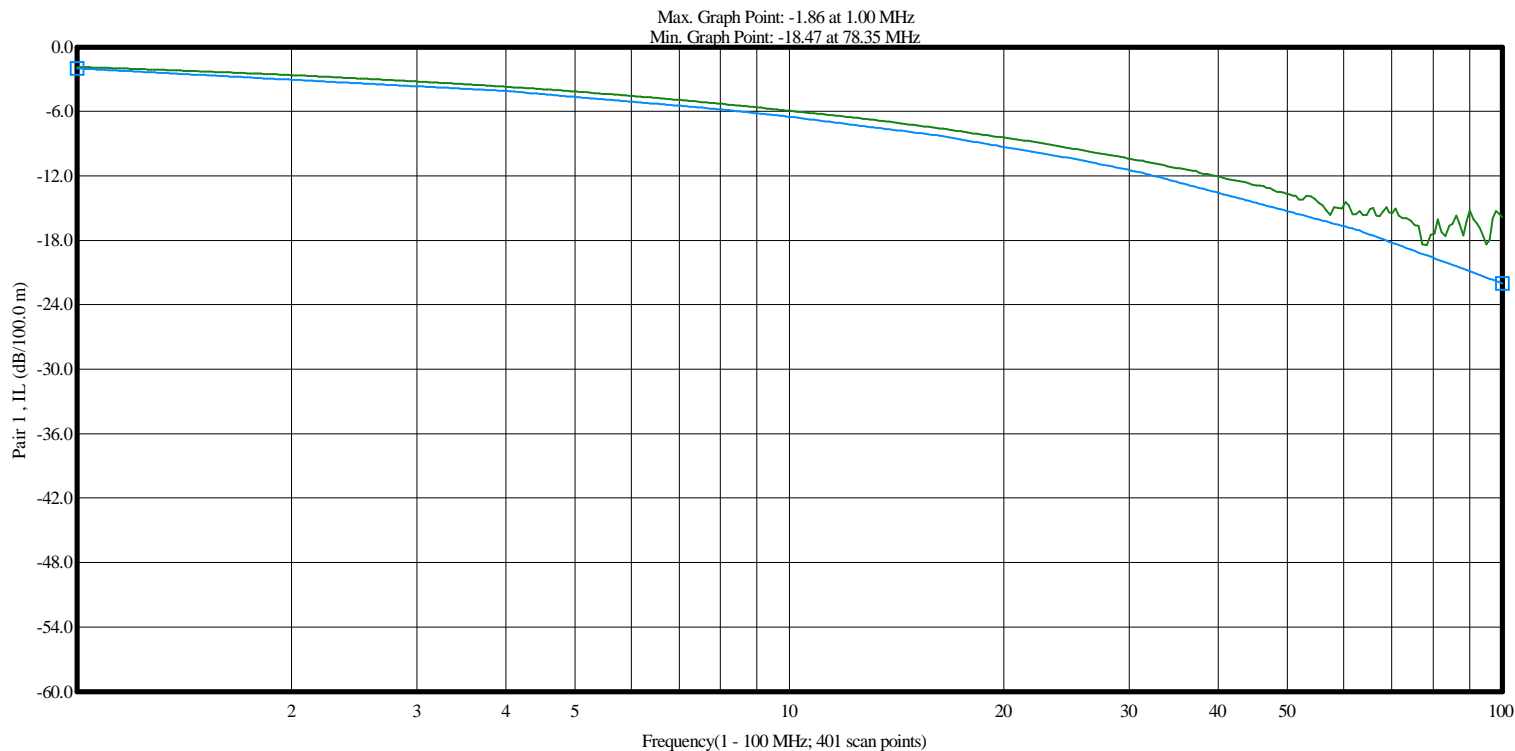
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Summary and Graphic: Insertion Loss (IL)@20C

Pair	Spec (Max)(dB/100.0 m)	Measured(dB/100.0 m)	Margin (dB/100.0 m)	@ Frequency (MHz)	Test Result
Pair 1 [1]	2.00	1.86	0.14	1.00	Passed
Pair 2 [2]	2.00	1.78	0.22	1.00	Passed



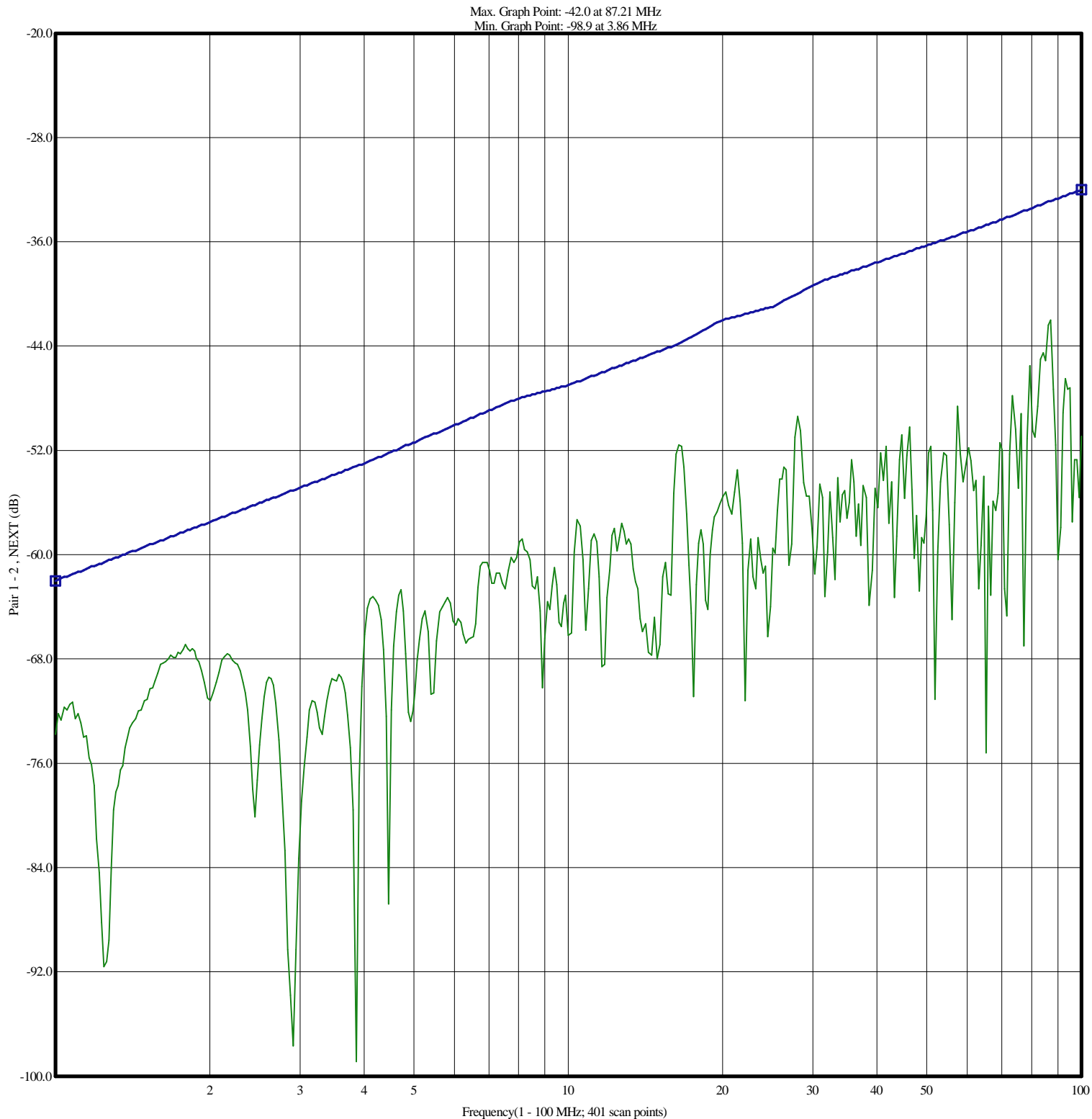
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Summary and Graphic: Near End Crosstalk Loss (NEXT)

Pair	Spec (Min)(dB)	Measured(dB)	Margin (dB)	@ Frequency (MHz)	Test Result
Pair 1 - 2	43.8	51.6	7.8	16.43	Passed



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Detail Discrete Frequencies ---Characteristic Impedance (Z0)(4th Order)(Ohms)(Terminated)

Frequency	1.00	4.00	8.00	10.00	16.00	20.00	25.00	31.25	62.50	100.00
Max Spec	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0
Min Spec	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0
Pair 1 [1]	110.1	105.6	105.5	105.3	104.9	104.6	104.3	104.1	103.2	102.7
Pair 2 [2]	109.4	106.1	105.8	105.7	105.3	105.0	104.8	104.6	103.8	103.4

Detail Discrete Frequencies ---Structural Return Loss (SRL)(dB)(Terminated)

Frequency	1.00	4.00	8.00	10.00	16.00	20.00	25.00	31.25	62.50	100.00
Min Spec	23.0	23.0	23.0	23.0	23.0	23.0	22.0	21.1	18.0	16.0
Pair 1 [1]	35.1	49.5	55.3	52.5	41.8	41.2	44.6	43.6	48.8	29.1
Pair 2 [2]	34.8	47.5	49.3	45.4	41.5	38.3	42.3	36.3	36.8	24.1

Detail Discrete Frequencies ---Insertion Loss (IL)(dB/100.0 m)@20C

Frequency	1.00	4.00	8.00	10.00	16.00	20.00	25.00	31.25	62.50	100.00
Max Spec	2.00	4.10	5.80	6.50	8.20	9.30	10.40	11.70	17.00	22.00
Pair 1 [1]	1.86	3.71	5.29	5.94	7.52	8.44	9.48	10.60	15.55	15.85
Pair 2 [2]	1.78	3.53	5.07	5.68	7.20	8.09	9.09	10.17	14.89	15.71

Detail Discrete Frequencies ---Near End Crosstalk Loss (NEXT)(dB)

Frequency	1.00	4.00	8.00	10.00	16.00	20.00	25.00	31.25	62.50	100.00
Min Spec	62.0	53.0	48.0	47.0	44.0	42.0	41.0	39.0	35.0	32.0
Pair 1 - 2	73.8	67.0	59.3	66.2	57.4	55.6	60.0	55.4	55.4	50.9

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