

### DCM Test Report

Cable Type : 4x2x24 x PE/PE	Factory Number : PHOENIX	Data File Name : DA114468.D3S
Cable I.D. : U/UTP#24X4P CABLE+Y	Order Number : 12107 BLACK 221200701	Specification File : CAT5e-305M.S3S
Temperature : 25.00 °C	Relative Humidity : 50 %	Test Date/Time : 12/16/2022 03:38:25 PM
Length : 305.00 m	Number of Pairs to Test : 4	Operator : X 221205SM013001/101/R1
Starting Position : 1		Analyzer Type : ENA

### Pass - Fail Test Certificate - 4 Pairs

#### High Frequency

Test Type	Test Result
Input Impedance (Zin)(Ohms)(Terminated)	OK
Return Loss (RL)(dB)	OK
Insertion Loss (IL)(Curve Fit)(dB/100.0 m)@20C	OK
Near End Crosstalk Loss (NEXT)(dB)	OK
Power Sum NEXT(PSNEXT)(dB)	OK

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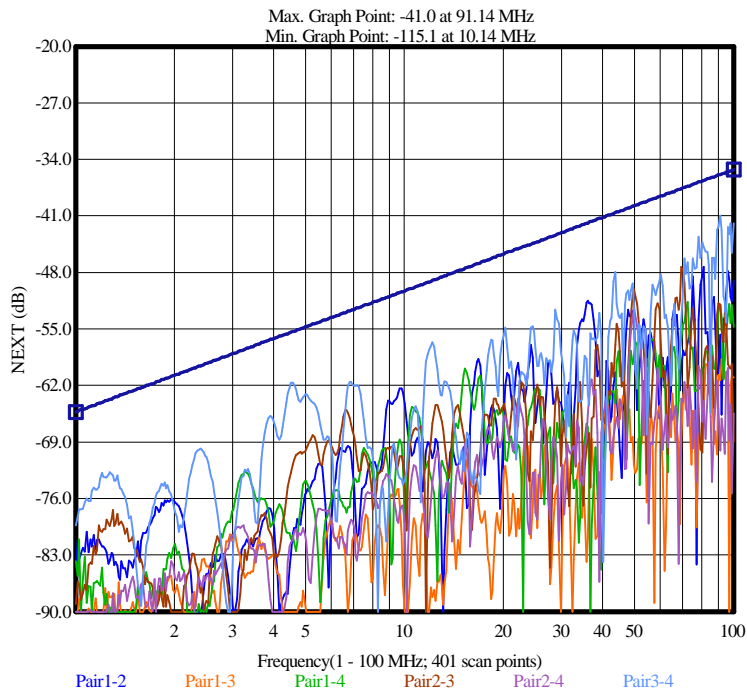
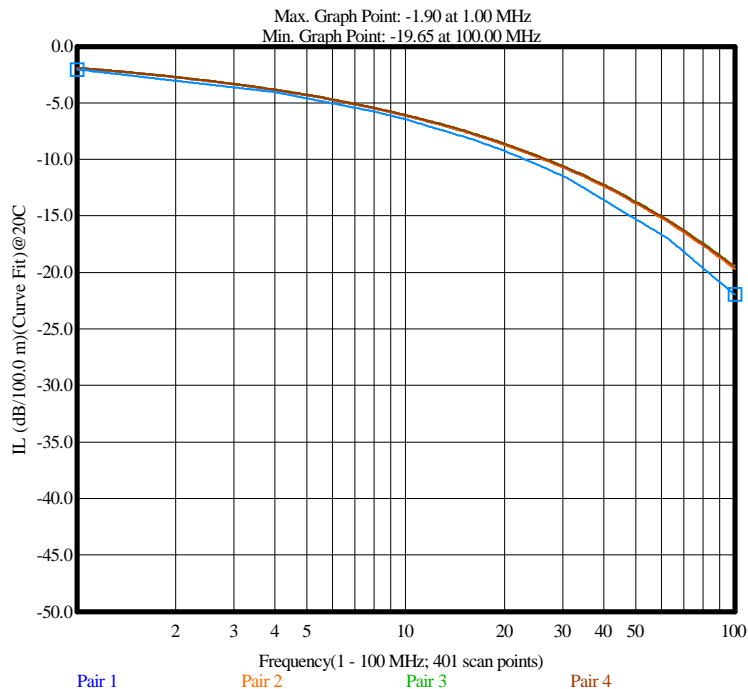
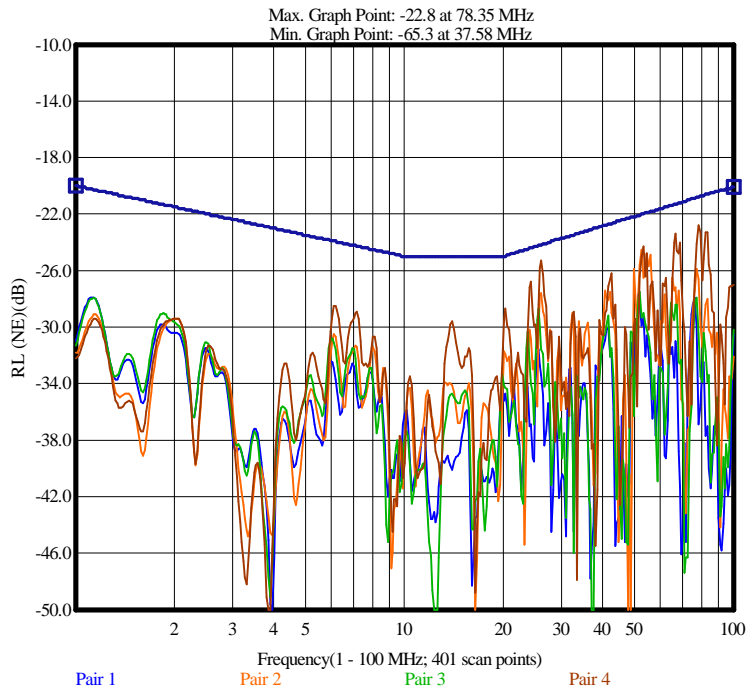
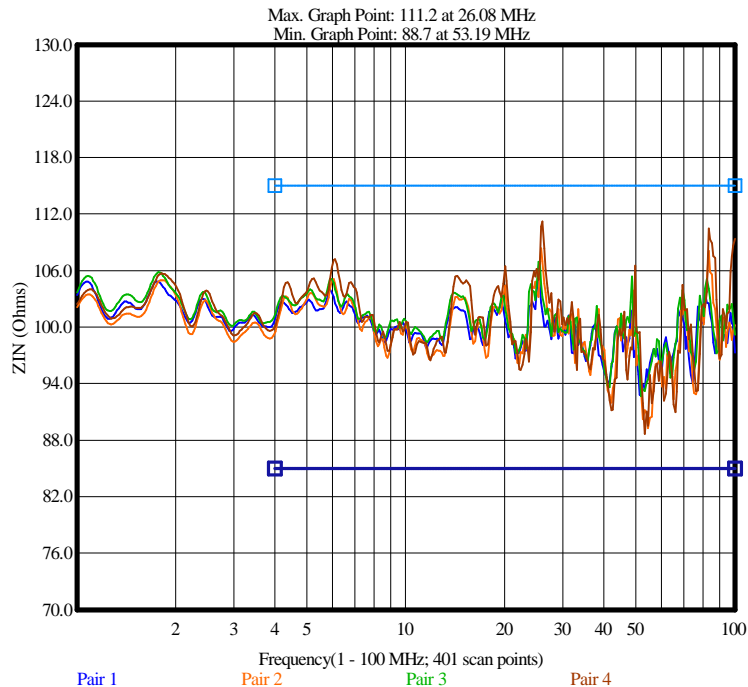
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Starting Position : 1		Analyzer Type : ENA

### Worst Case Summary

#### High Frequency

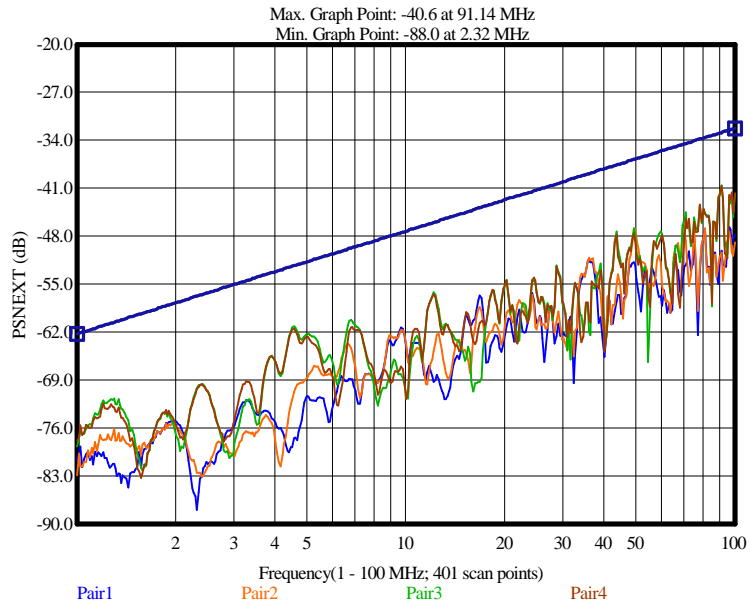
Test Type	Specification	Measured (Pair)	Margin	@ Frequency (MHz)	Test Result
Input Impedance (Zin)(Terminated)	85.0 (Min)	88.7 (Pair 4)	3.7	53.19	Passed
Input Impedance (Zin)(Terminated)	115.0 (Max)	111.2 (Pair 4)	3.8	26.08	Passed
Return Loss (RL)	24.2 (Min)	25.3 (Pair 4)	1.1	26.08	Passed
Insertion Loss (IL)(Curve Fit)@20C	2.06 (Max)	1.95 (Pair 1)	0.11	1.01	Passed
Near End Crosstalk Loss (NEXT)	35.9 (Min)	41.0 (Pairs 3-4)	5.1	91.14	Passed
Power Sum NEXT(PSNEXT)	32.9 (Min)	40.6 (Pair 3)	7.7	91.14	Passed



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

\* = Measured value out of spec.  
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\*\*\* = Measured value is invalid.



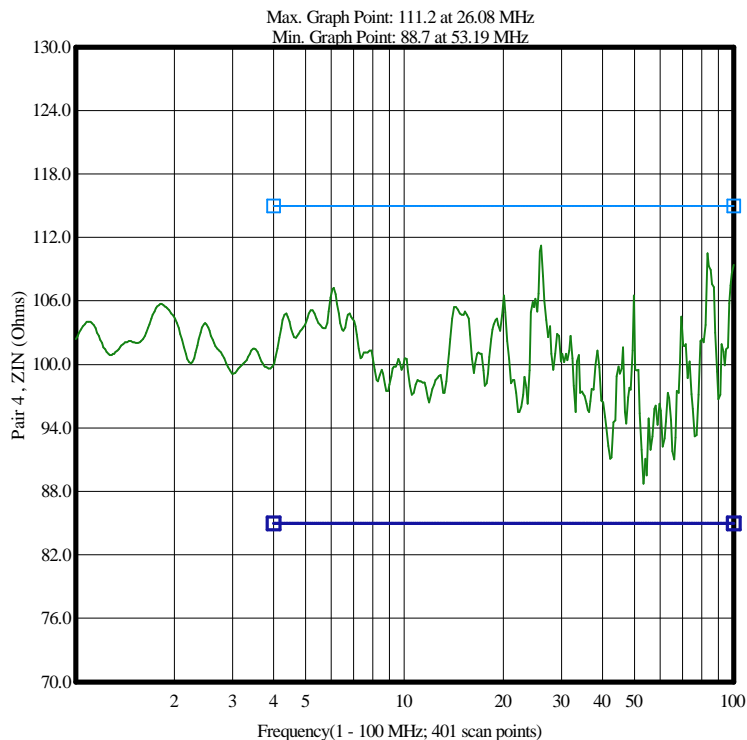
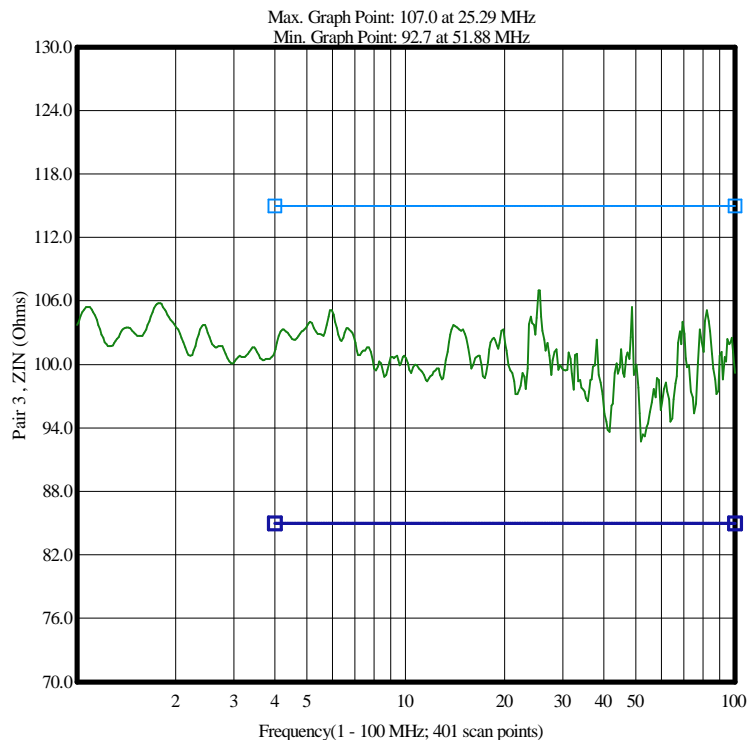
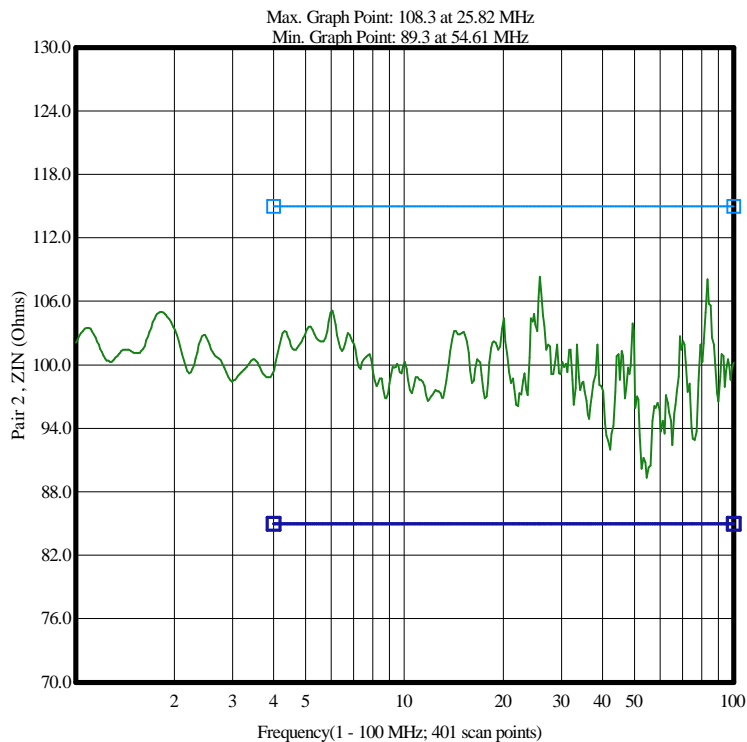
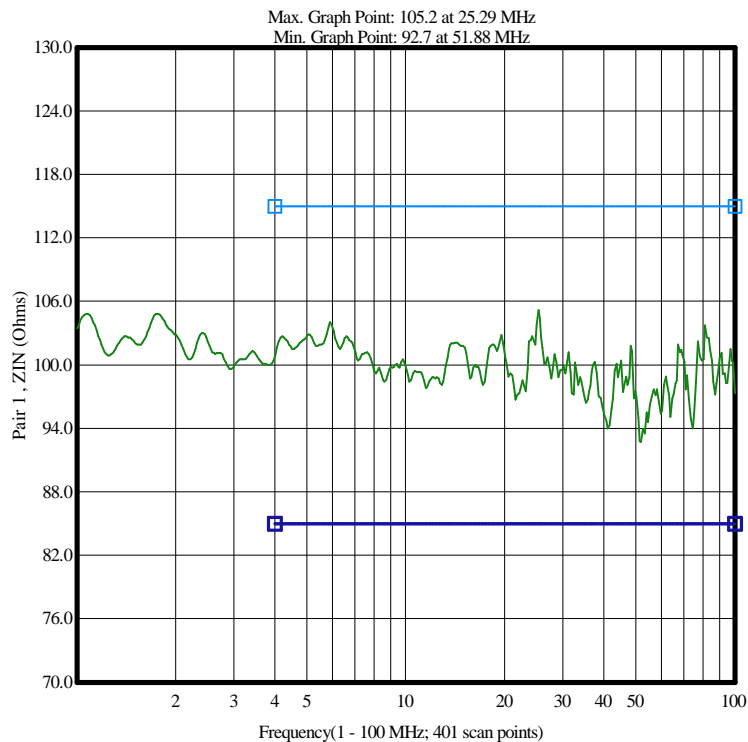
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### Summary and Graphic: Input Impedance (Zin)(Terminated)

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	92.7	105.2	7.7	9.8	51.88	25.29	Passed
Pair 2 [2]	85.0	115.0	89.3	108.3	4.3	6.7	54.61	25.82	Passed
Pair 3 [3]	85.0	115.0	92.7	107.0	7.7	8.0	51.88	25.29	Passed
Pair 4 [4]	85.0	115.0	88.7	111.2	3.7	3.8	53.19	26.08	Passed



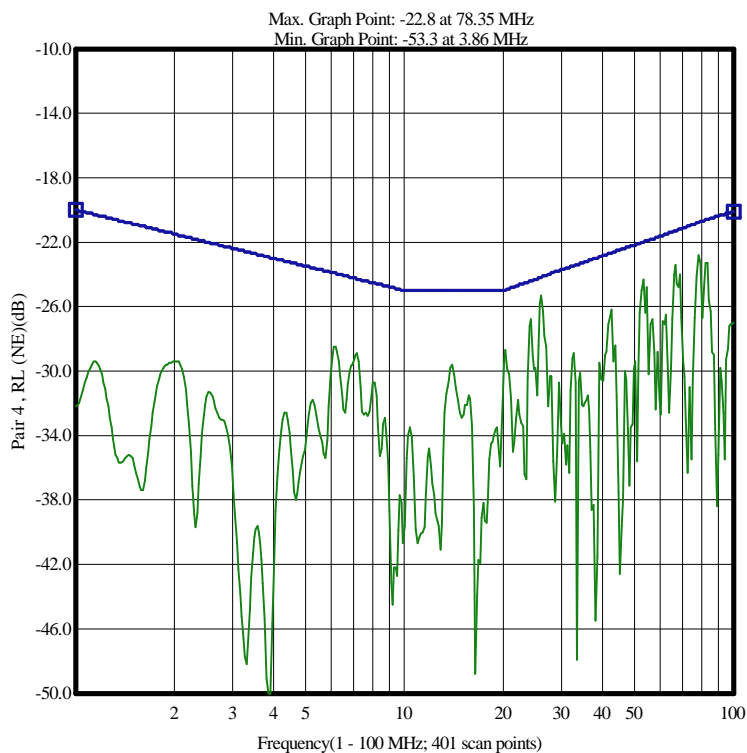
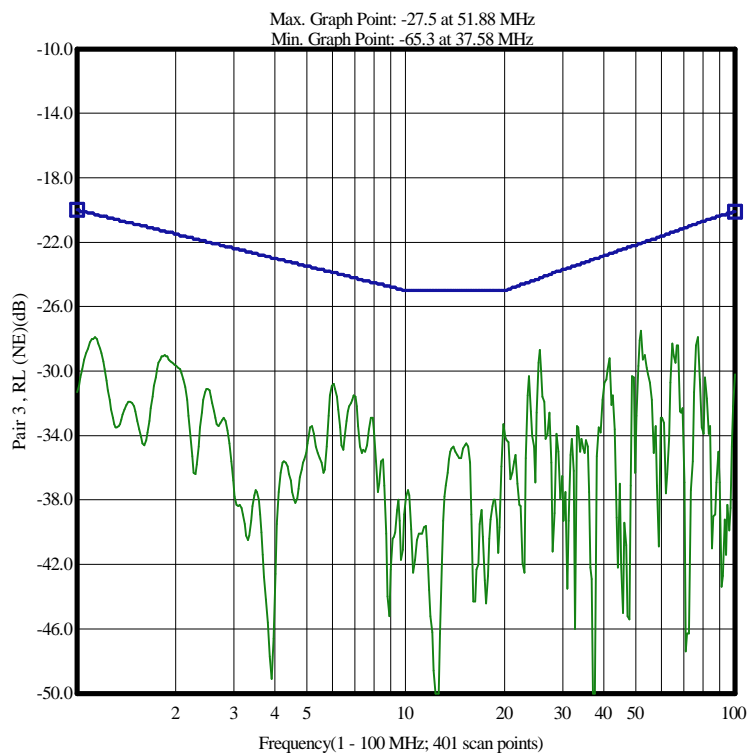
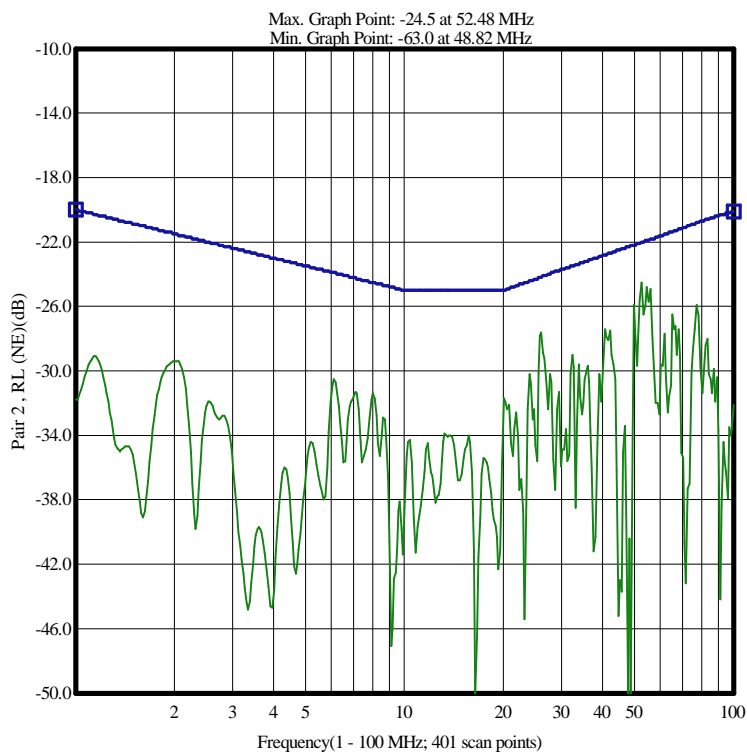
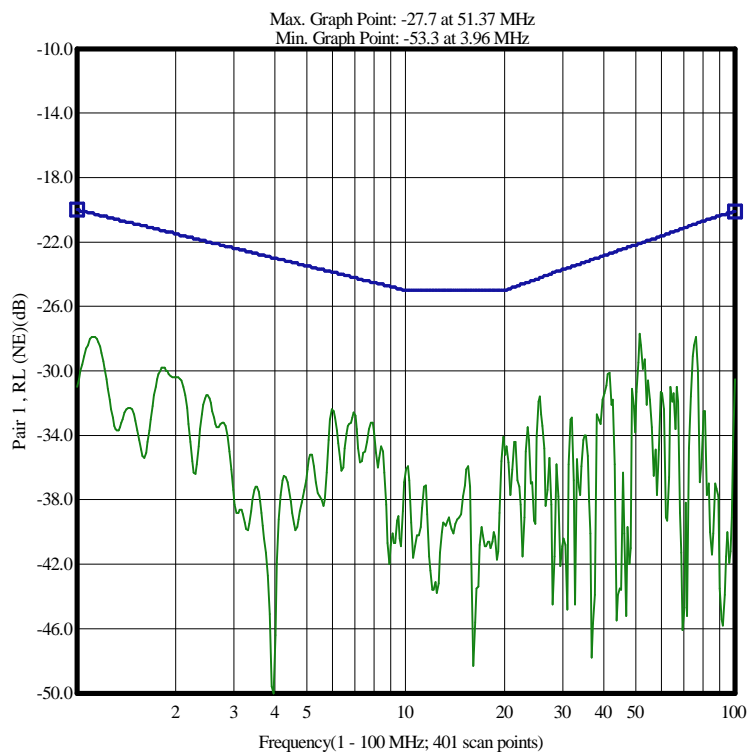
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### Summary and Graphic: Return Loss (RL)

Pair	Spec (Min)(dB)	Measured(dB)	Margin (dB)	@ Frequency (MHz)	Test Result
Pair 1 [1]	22.1	27.7	5.6	51.37	Passed
Pair 2 [2]	22.0	24.5	2.5	52.48	Passed
Pair 3 [3]	24.2	28.7	4.5	25.55	Passed
Pair 4 [4]	24.2	25.3	1.1	26.08	Passed



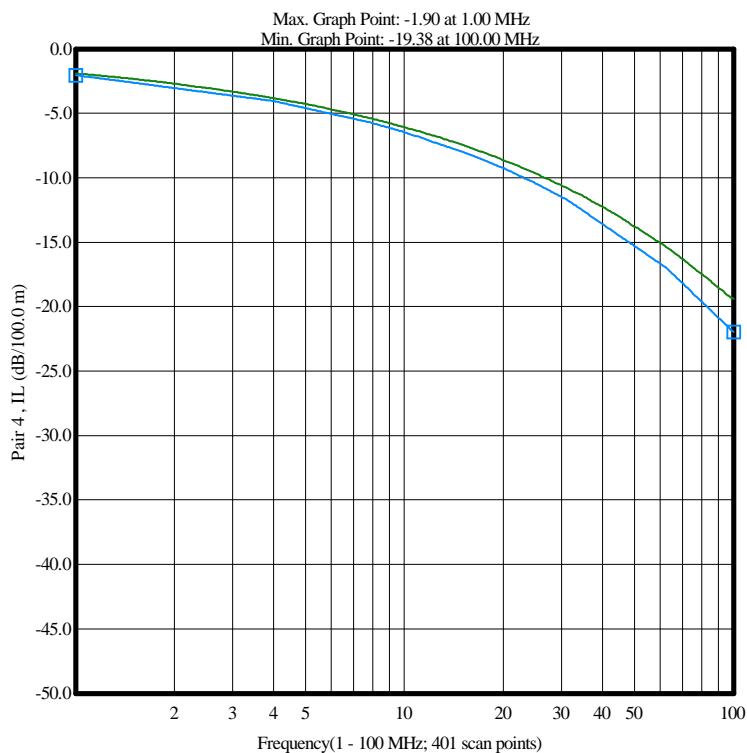
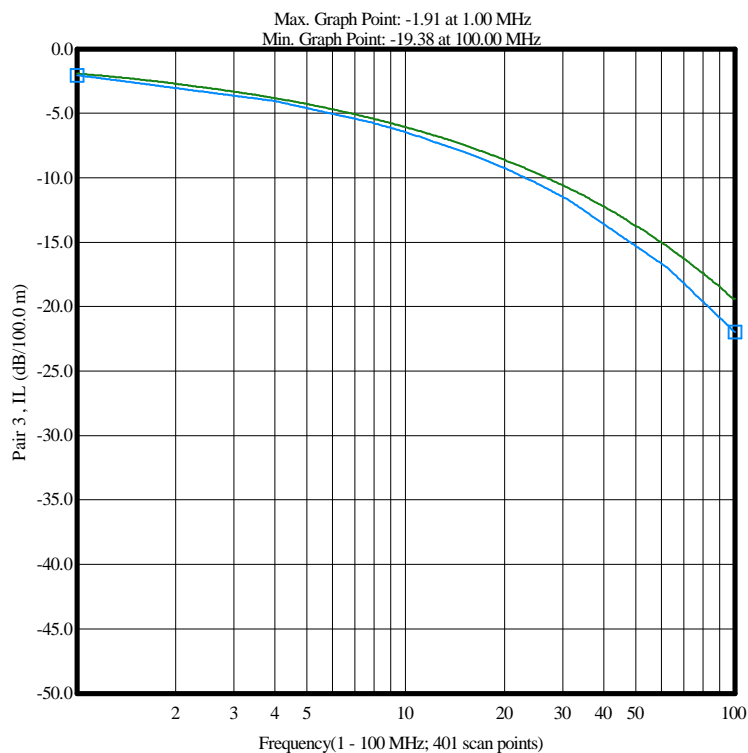
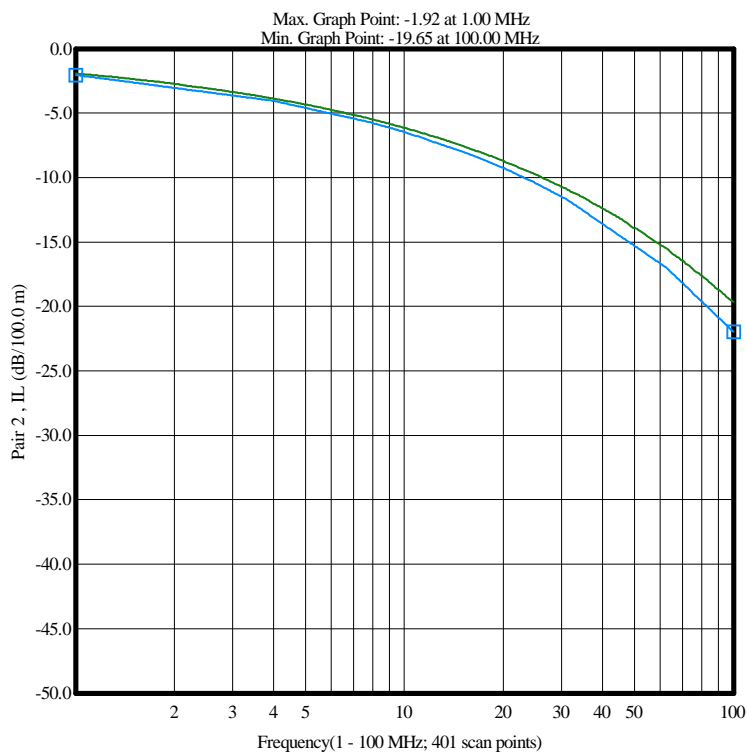
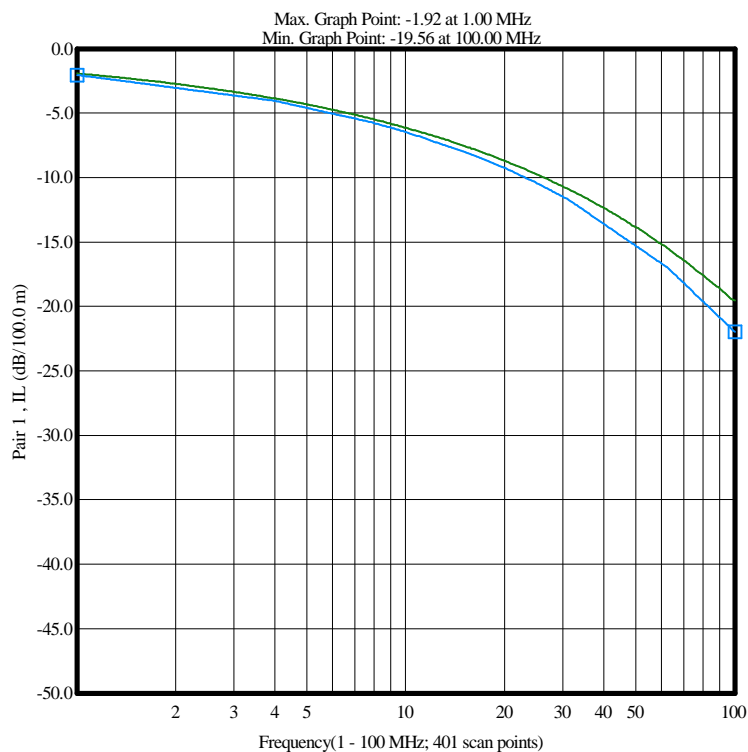
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### Summary and Graphic: Insertion Loss (IL)(Curve Fit)@20C

Pair	Spec (Max)(dB/100.0 m)	Measured(dB/100.0 m)	Margin (dB/100.0 m)	@ Frequency (MHz)	Test Result
Pair 1 [1]	2.06	1.95	0.11	1.01	Passed
Pair 2 [2]	2.06	1.94	0.12	1.01	Passed
Pair 3 [3]	2.04	1.91	0.13	1.00	Passed
Pair 4 [4]	2.08	1.94	0.14	1.03	Passed



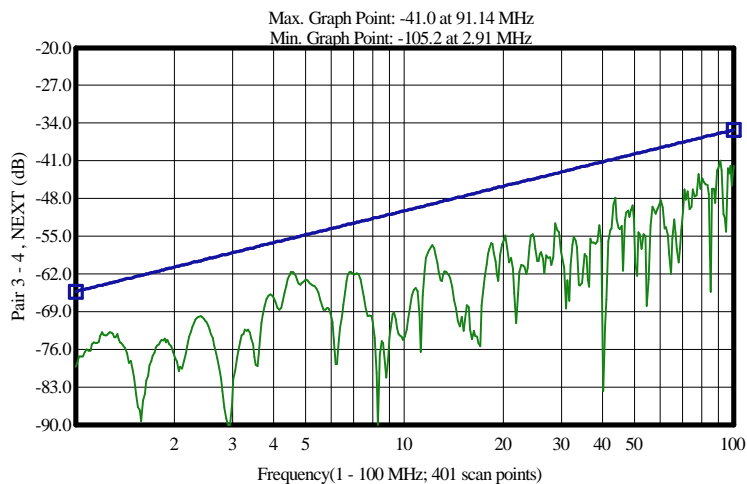
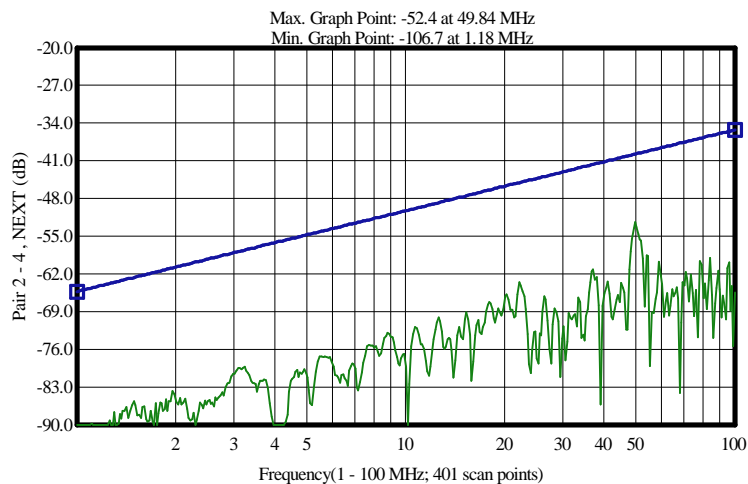
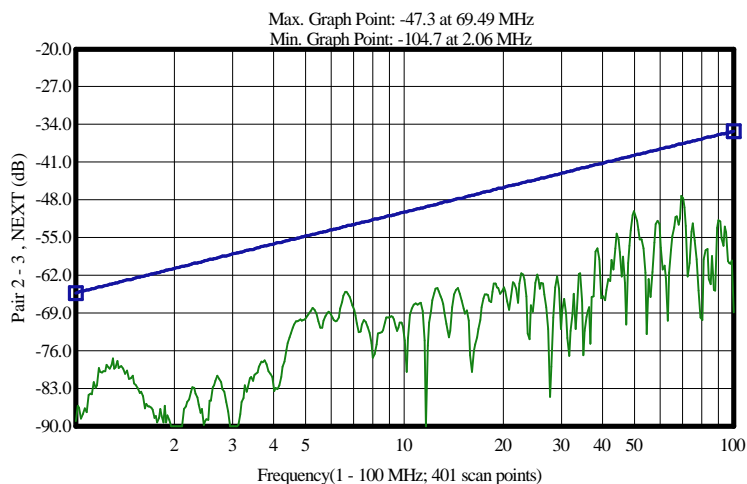
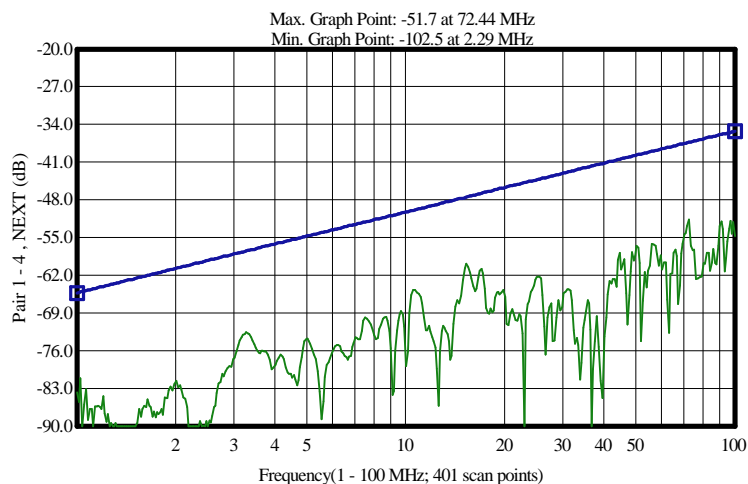
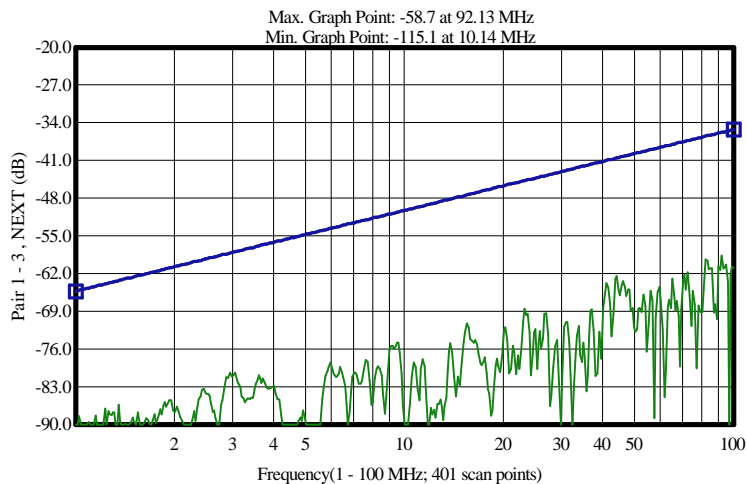
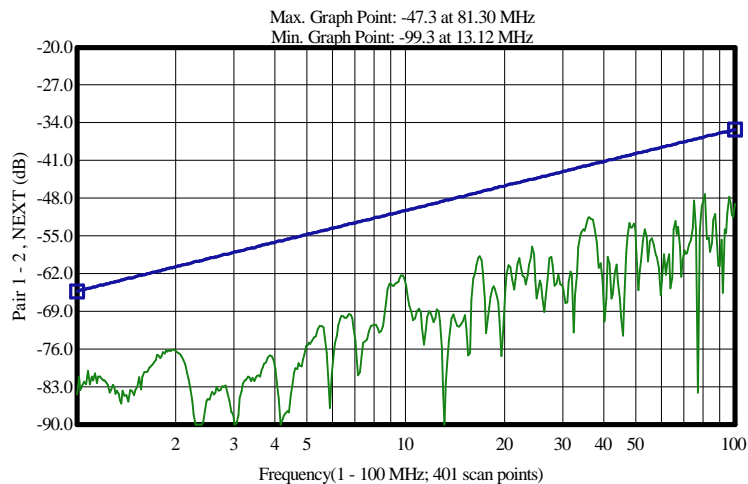
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### Summary and Graphic: Near End Crosstalk Loss (NEXT)

Pair	Spec (Min)(dB)	Measured(dB)	Margin (dB)	@ Frequency (MHz)	Test Result
Pair 1 - 2	41.9	51.5	9.6	36.06	Passed
Pair 1 - 3	40.5	62.5	22.0	44.22	Passed
Pair 1 - 4	47.5	59.9	12.4	15.29	Passed
Pair 2 - 3	37.6	47.3	9.7	69.49	Passed
Pair 2 - 4	39.8	52.4	12.6	49.84	Passed
Pair 3 - 4	35.9	41.0	5.1	91.14	Passed



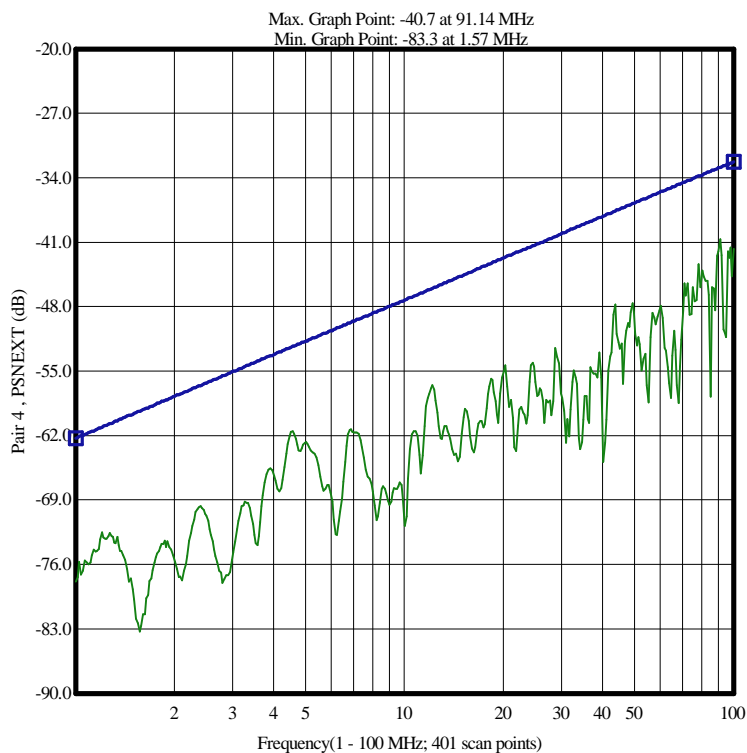
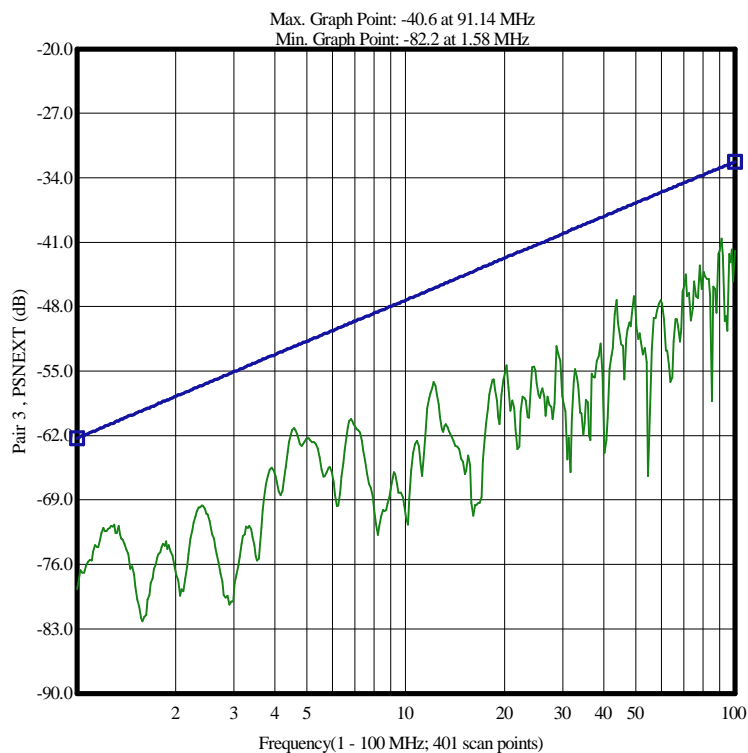
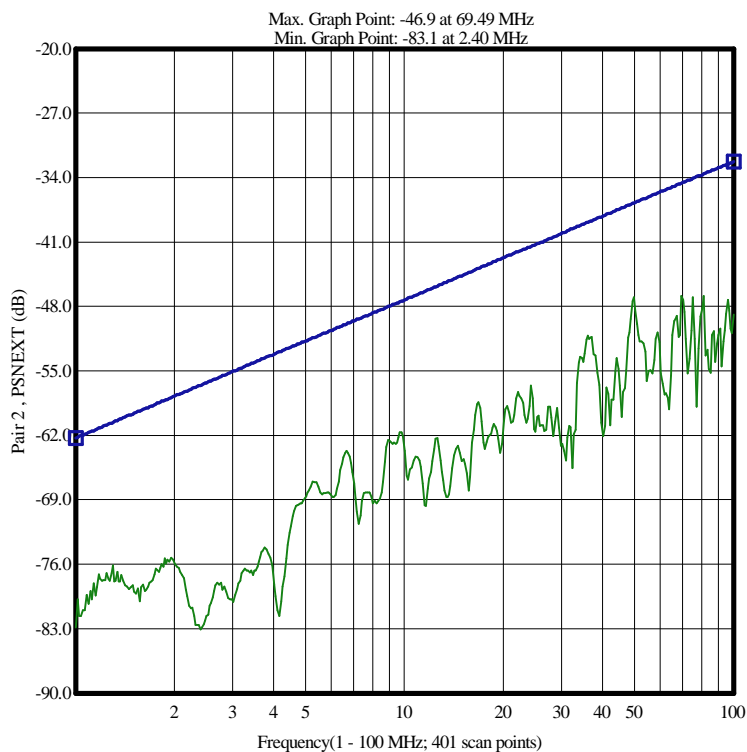
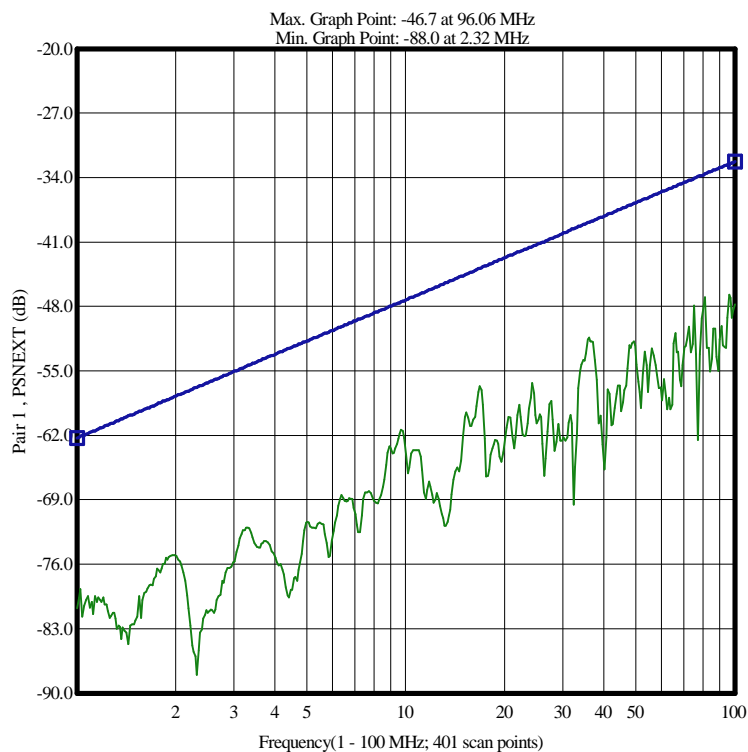
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### Summary and Graphic: Power Sum NEXT(PSNEXT)

Pair	Spec (Min)(dB)	Measured(dB)	Margin (dB)	@ Frequency (MHz)	Test Result
Pair 1 [1]	38.9	51.4	12.5	36.06	Passed
Pair 2 [2]	36.8	47.0	10.2	49.84	Passed
Pair 3 [3]	32.9	40.6	7.7	91.14	Passed
Pair 4 [4]	32.9	40.7	7.8	91.14	Passed



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

Frequency	1.00	4.00	10.00	16.00	20.00	25.00	30.00	31.25	62.50	80.00
Min Spec	20.0	23.0	25.0	25.0	25.0	24.3	23.7	23.6	21.5	20.7
Pair 1 [1]	31.0	48.0	36.1	46.6	35.1	34.7	40.7	37.1	38.9	33.5
Pair 2 [2]	31.8	43.9	38.1	35.8	32.1	34.4	35.5	35.3	30.7	30.9
Pair 3 [3]	31.3	43.6	37.8	42.9	34.0	33.0	37.7	39.9	36.1	33.8
Pair 4 [4]	32.2	42.7	39.6	32.9	29.9	29.8	33.8	34.8	27.0	25.6

**Continue:Return Loss (RL)(dB)**

Frequency	100.00									
Min Spec	20.1									
Pair 1 [1]	30.5									
Pair 2 [2]	32.1									
Pair 3 [3]	30.2									
Pair 4 [4]	27.0									

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

Frequency	1.00	4.00	8.00	10.00	16.00	20.00	25.00	31.25	62.50	100.00
Max Spec	2.04	4.05	5.76	6.46	8.24	9.26	10.42	11.72	16.99	21.97
Pair 1 [1]	1.92	3.87	5.49	6.15	7.78	8.71	9.74	10.91	15.48	19.56
Pair 2 [2]	1.92	3.88	5.49	6.15	7.78	8.73	9.75	10.93	15.50	19.65
Pair 3 [3]	1.91	3.83	5.43	6.08	7.70	8.63	9.64	10.81	15.34	19.38
Pair 4 [4]	1.90	3.83	5.43	6.09	7.70	8.63	9.65	10.81	15.38	19.38

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

Frequency	1.00	4.00	10.00	16.00	20.00	25.00	30.00	31.25	62.50	80.00
Min Spec	65.3	56.2	50.3	47.2	45.7	44.3	43.1	42.8	38.3	36.7
Pair 1 - 2	84.5	79.3	64.2	64.1	65.8	66.3	64.6	64.1	59.9	48.7
Pair 1 - 3	92.2	82.9	95.4	74.4	73.1	72.5	88.5	71.0	78.2	69.2
Pair 1 - 4	83.8	78.8	78.9	63.6	65.9	62.5	66.8	64.6	67.3	60.6
Pair 2 - 3	89.1	82.9	74.1	79.1	64.3	63.7	70.5	72.9	63.7	70.2
Pair 2 - 4	94.0	96.6	79.3	79.3	66.4	77.2	73.1	70.0	66.2	64.5
Pair 3 - 4	79.3	66.5	73.7	73.6	55.8	57.2	58.4	63.9	53.5	44.9

**Continue:Near End Crosstalk Loss (NEXT)(dB)**

Frequency	100.00									
Min Spec	35.3									
Pair 1 - 2	49.0									
Pair 1 - 3	61.0									
Pair 1 - 4	54.8									
Pair 2 - 3	68.9									
Pair 2 - 4	65.4									
Pair 3 - 4	41.9									

**Detail Discrete Frequencies ---Power Sum NEXT(PSNEXT)(dB)**

Frequency	1.00	4.00	10.00	16.00	20.00	25.00	30.00	31.25	62.50	80.00
Min Spec	62.3	53.2	47.3	44.2	42.7	41.3	40.1	39.8	35.3	33.7
Pair 1 [1]	80.8	75.2	64.1	60.5	62.4	60.6	62.4	60.8	59.0	48.4
Pair 2 [2]	82.9	77.7	63.7	63.8	60.6	61.6	63.0	62.6	57.5	48.5
Pair 3 [3]	78.7	66.3	70.9	70.3	55.2	56.2	58.0	62.5	53.0	44.8
Pair 4 [4]	77.9	66.3	71.8	63.1	55.1	56.0	57.6	60.6	53.0	44.7

**Continue:Power Sum NEXT(PSNEXT)(dB)**

Frequency	100.00									
Min Spec	32.3									
Pair 1 [1]	47.8									
Pair 2 [2]	48.9									
Pair 3 [3]	41.9									
Pair 4 [4]	41.7									

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