

DCM Test Report

| | | |
|--------------------------------|--------------------------------------|---|
| Cable Type : 4x2x24 x PE/PE | Factory Number : PHOENIX | Data File Name : DA113608.D3S |
| Cable I.D. : U/UTP#24X4P CABLE | Order Number : 10198 BLACK 221151867 | Specification File : S350-305M.S3S |
| Temperature : 25.00 °C | Relative Humidity : 50 % | Test Date/Time : 12/01/2022 12:42:04 AM |
| Length : 305.00 m | Number of Pairs to Test : 4 | Operator : X 221129SM017001/604/R1 |
| Starting Position : 5 | | 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/328.1 ft)@20C | OK |
| Near End Crosstalk Loss (NEXT)(dB) | OK |
| Power Sum NEXT(PSNEXT)(dB) | OK |

| | | |
|------------|-----------|-------|
| Signature: | Approved: | Date: |
|------------|-----------|-------|

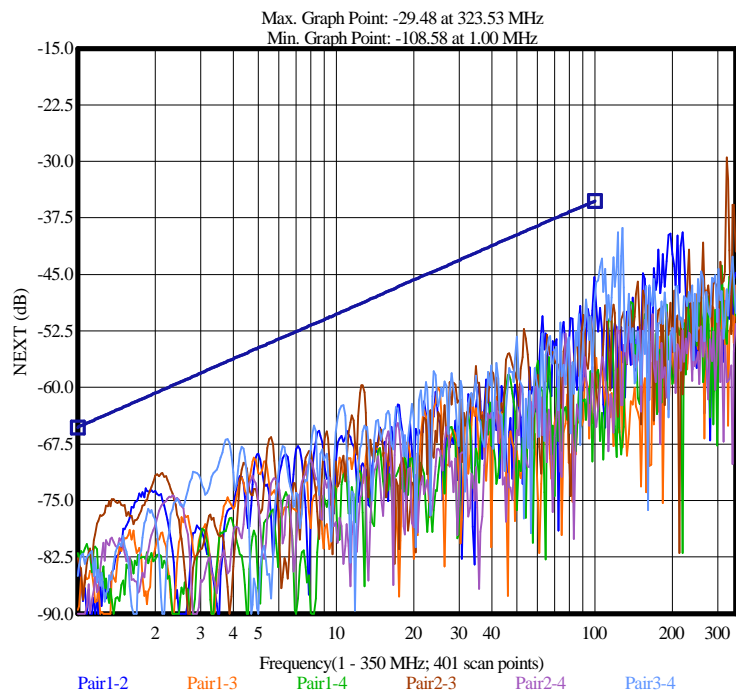
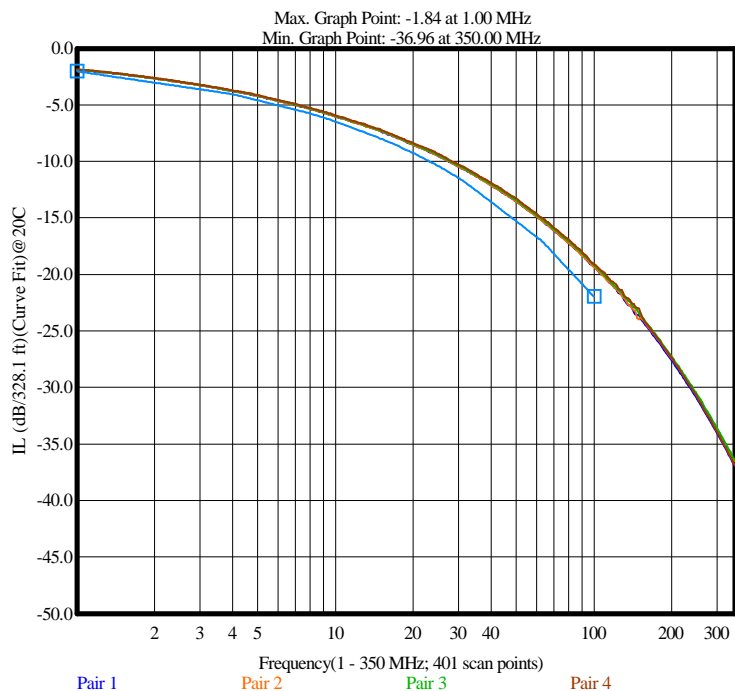
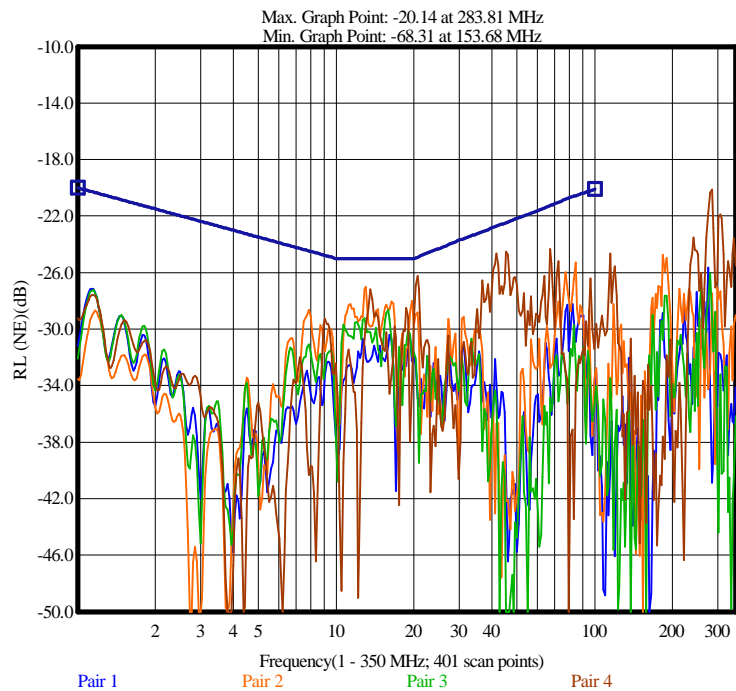
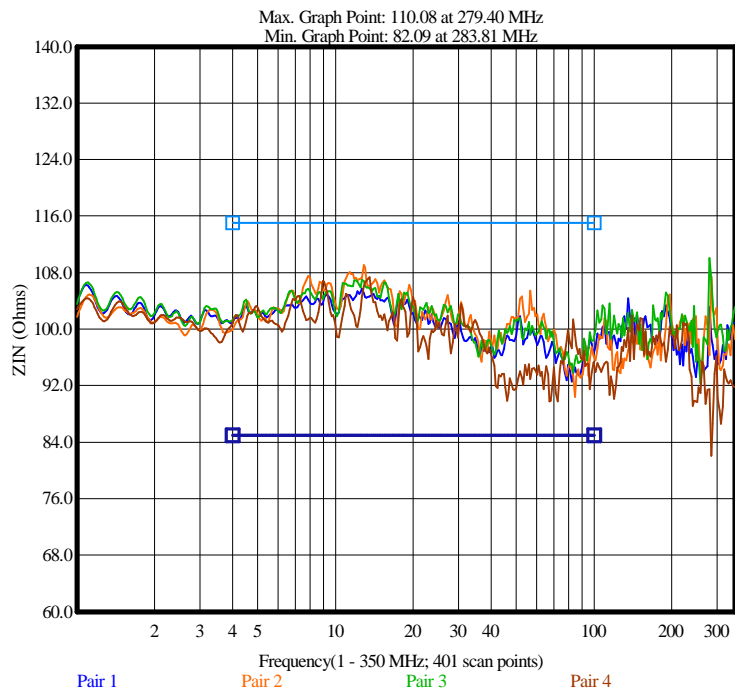
DCM Test Report

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|--------------------------------|--------------------------------------|---|
| Cable Type : 4x2x24 x PE/PE | Factory Number : PHOENIX | Data File Name : DA113608.D3S |
| Cable I.D. : U/UTP#24X4P CABLE | Order Number : 10198 BLACK 221151867 | Specification File : S350-305M.S3S |
| Temperature : 25.00 °C | Relative Humidity : 50 % | Test Date/Time : 12/01/2022 12:42:04 AM |
| Length : 305.00 m | Number of Pairs to Test : 4 | Operator : X 221129SM017001/604/R1 |
| Starting Position : 5 | | Analyzer Type : ENA |

Worst Case Summary

High Frequency

| Test Type | Specification | Measured (Pair) | Margin | @ Frequency (MHz) | Test Result |
|------------------------------------|---------------|-------------------|--------|-------------------|-------------|
| Input Impedance (Zin)(Terminated) | 85.00 (Min) | 89.77 (Pair 4) | 4.77 | 72.29 | Passed |
| Input Impedance (Zin)(Terminated) | 115.00 (Max) | 109.06 (Pair 2) | 5.94 | 12.85 | Passed |
| Return Loss (RL) | 24.91 (Min) | 26.22 (Pair 4) | 1.31 | 20.61 | Passed |
| Insertion Loss (IL)(Curve Fit)@20C | 2.05 (Max) | 1.91 (Pair 1) | 0.14 | 1.02 | Passed |
| Near End Crosstalk Loss (NEXT) | 35.31 (Min) | 45.40 (Pairs 1-2) | 10.09 | 99.77 | Passed |
| Power Sum NEXT(PSNEXT) | 57.43 (Min) | 68.65 (Pair 2) | 11.22 | 2.10 | Passed |

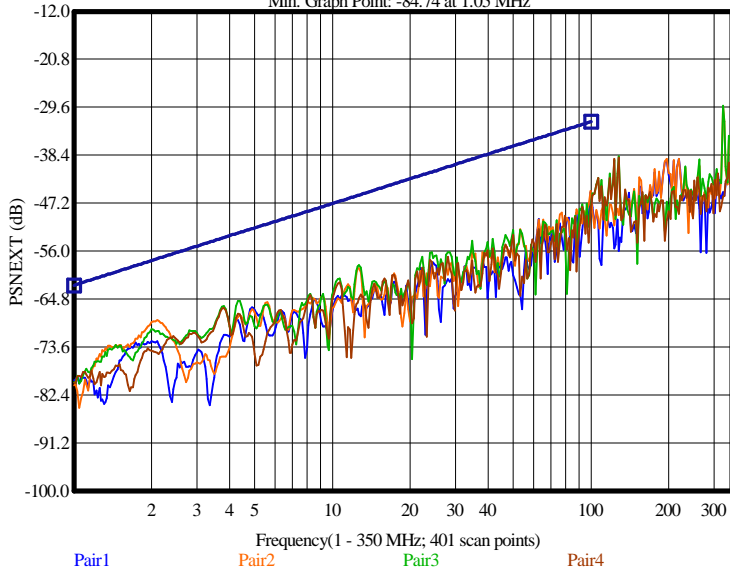


N/A = Not Applicable.
 --- = Disable/Bypassed Pair.

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Max. Graph Point: -29.33 at 323.53 MHz
Min. Graph Point: -84.74 at 1.05 MHz



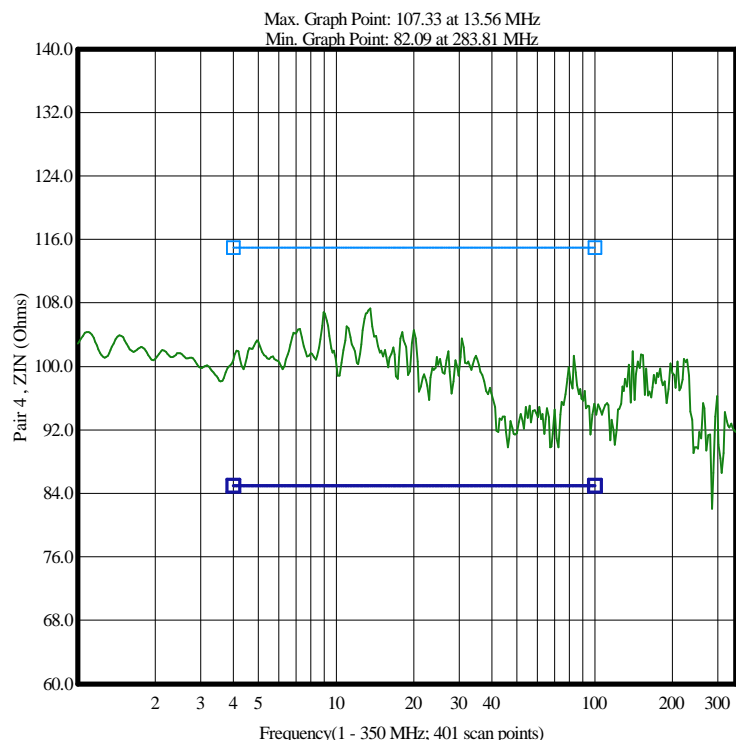
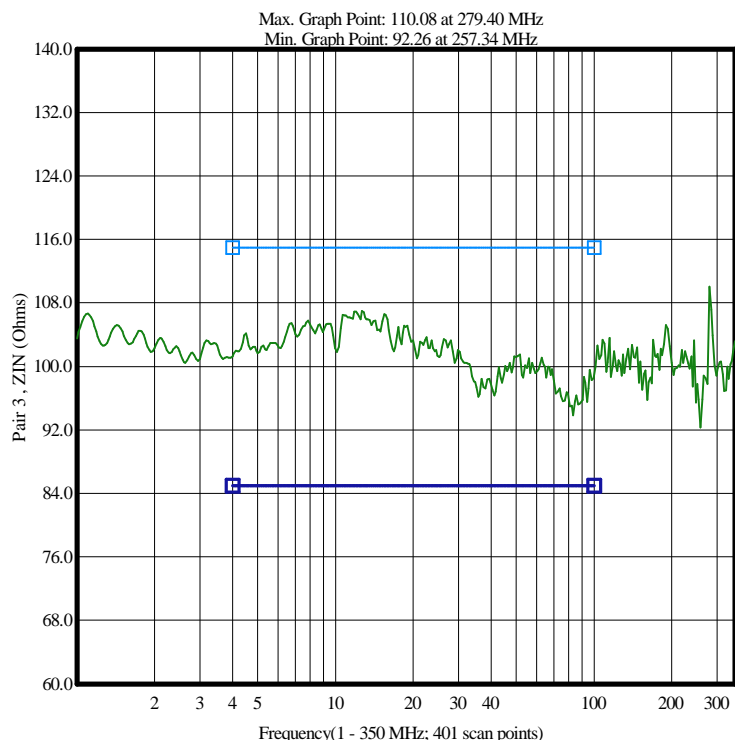
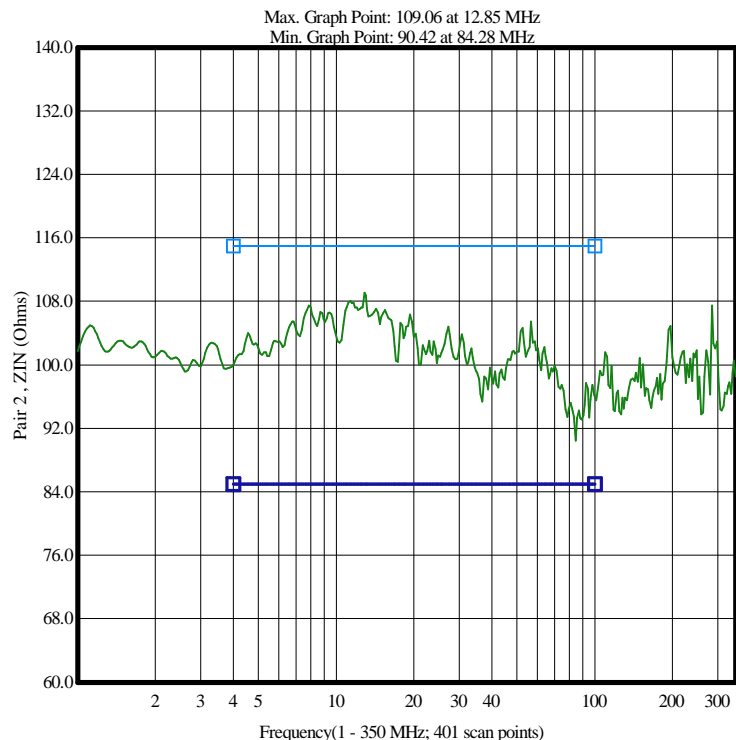
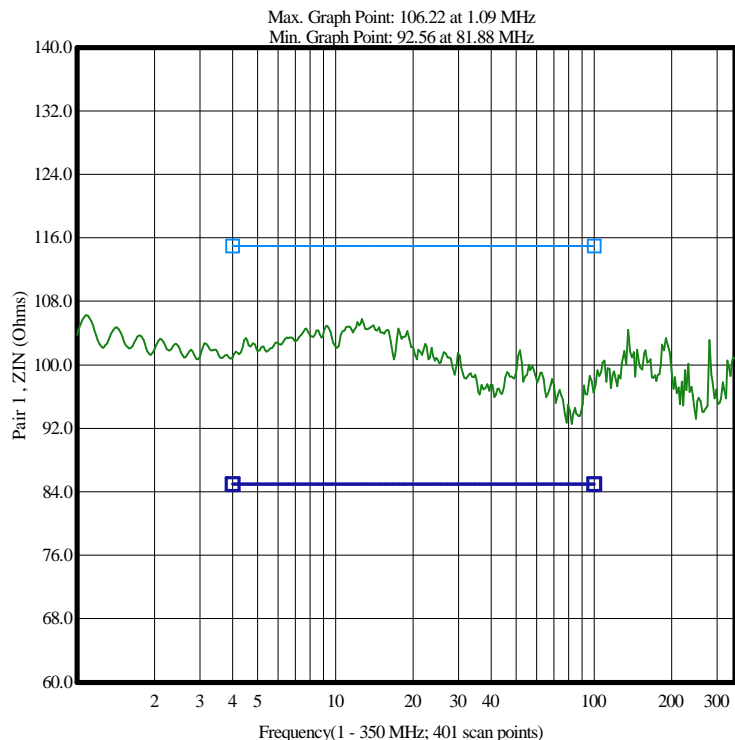
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Summary and Graphic: Input Impedance (Zin)(Terminated)

| Pair | Specification | | Measured(Ohms) | | Margin (Ohms) | | @ Frequency (MHz) | | Test Result |
|------------|---------------|---------|----------------|---------|---------------|---------|-------------------|---------|-------------|
| | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum | Minimum | Maximum | |
| Pair 1 [5] | 85.00 | 115.00 | 92.56 | 105.74 | 7.56 | 9.26 | 81.88 | 12.68 | Passed |
| Pair 2 [6] | 85.00 | 115.00 | 90.42 | 109.06 | 5.42 | 5.94 | 84.28 | 12.85 | Passed |
| Pair 3 [7] | 85.00 | 115.00 | 93.83 | 106.95 | 8.83 | 8.05 | 83.08 | 12.68 | Passed |
| Pair 4 [8] | 85.00 | 115.00 | 89.77 | 107.33 | 4.77 | 7.67 | 72.29 | 13.56 | Passed |



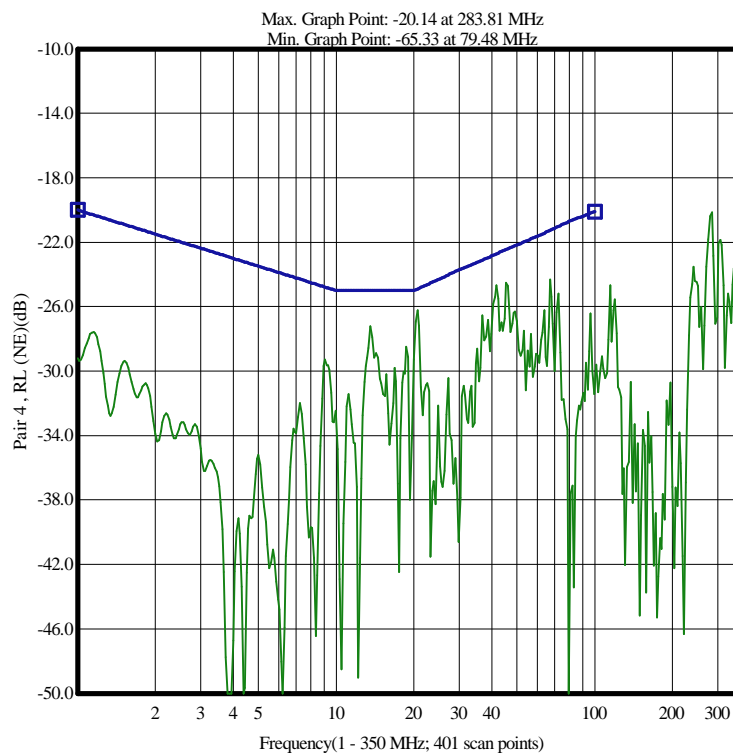
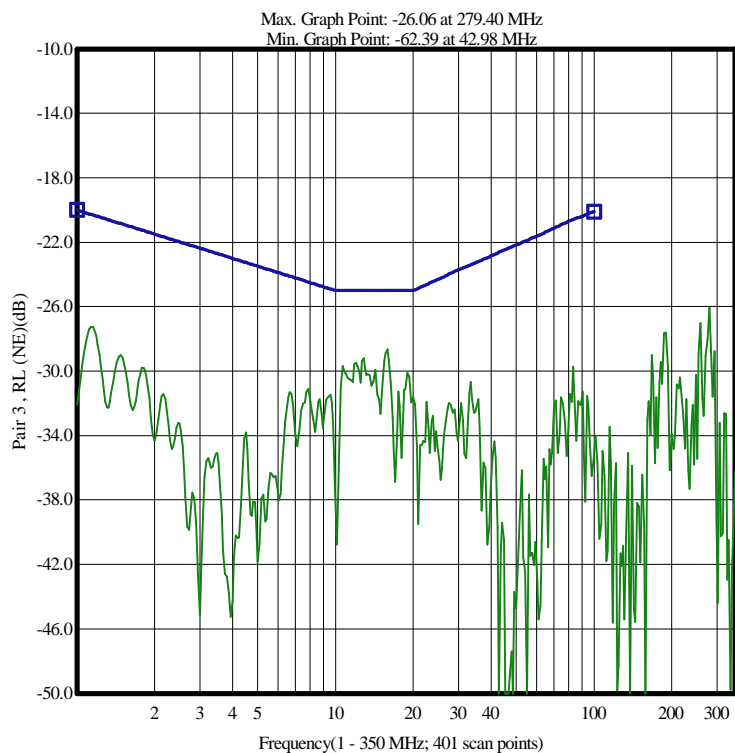
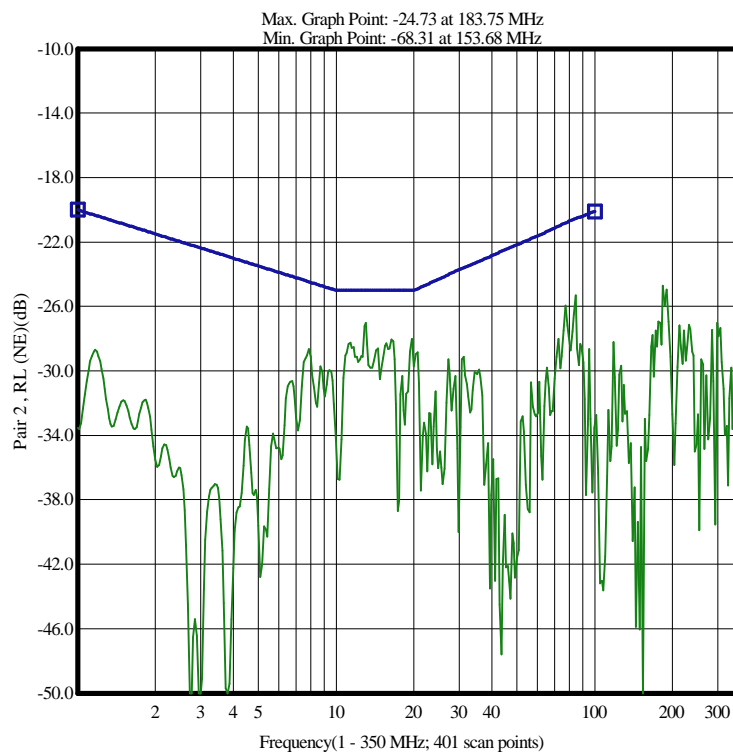
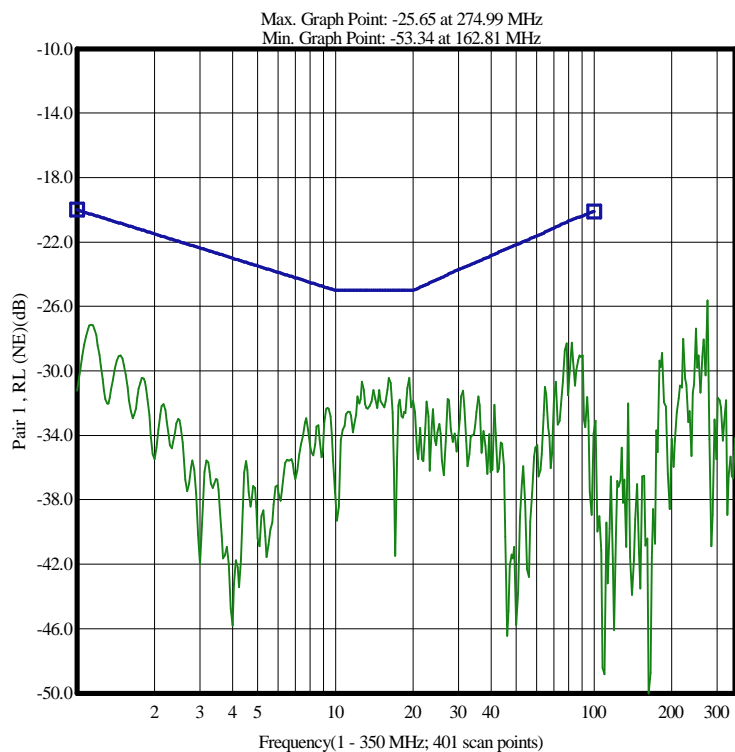
N/A = Not Applicable.
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Summary and Graphic: Return Loss (RL)

| Pair | Spec (Min)(dB) | Measured(dB) | Margin (dB) | @ Frequency (MHz) | Test Result |
|------------|----------------|--------------|-------------|-------------------|-------------|
| Pair 1 [5] | 25.00 | 30.42 | 5.42 | 16.13 | Passed |
| Pair 2 [6] | 25.00 | 27.01 | 2.01 | 13.02 | Passed |
| Pair 3 [7] | 25.00 | 28.66 | 3.66 | 15.90 | Passed |
| Pair 4 [8] | 24.91 | 26.22 | 1.31 | 20.61 | Passed |



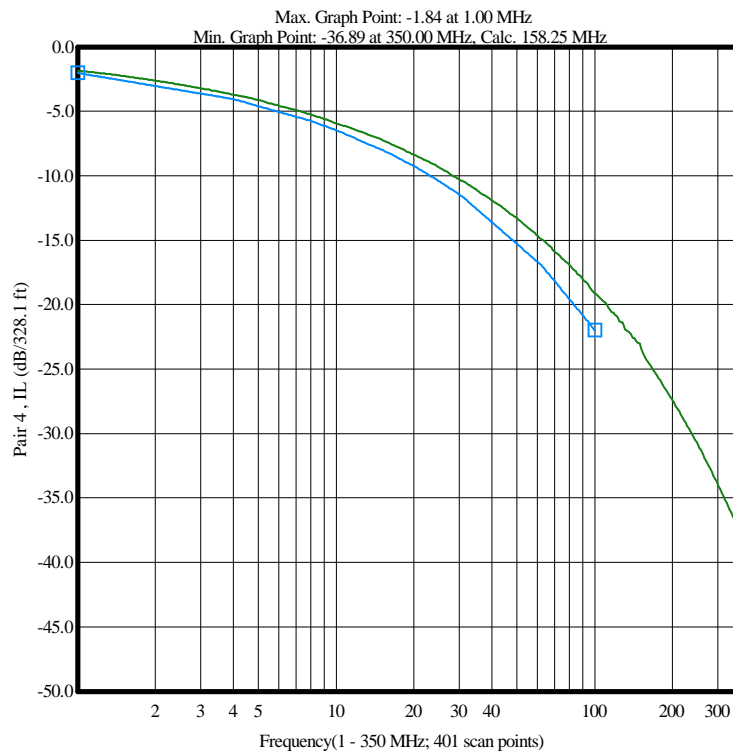
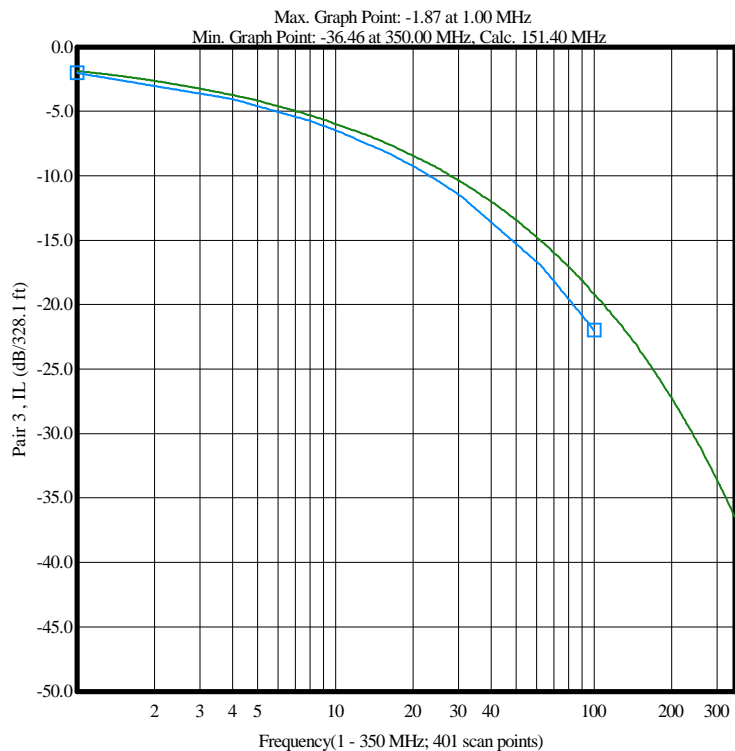
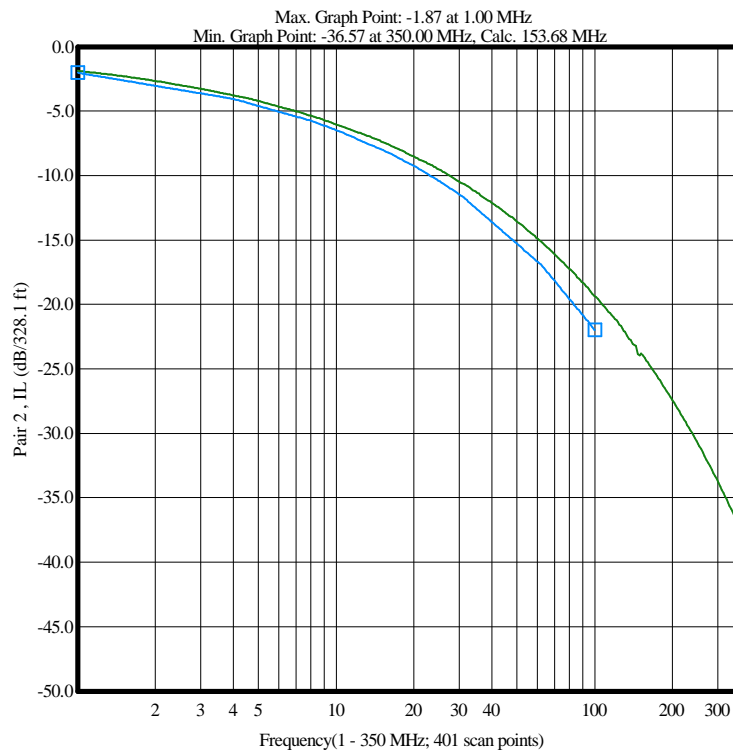
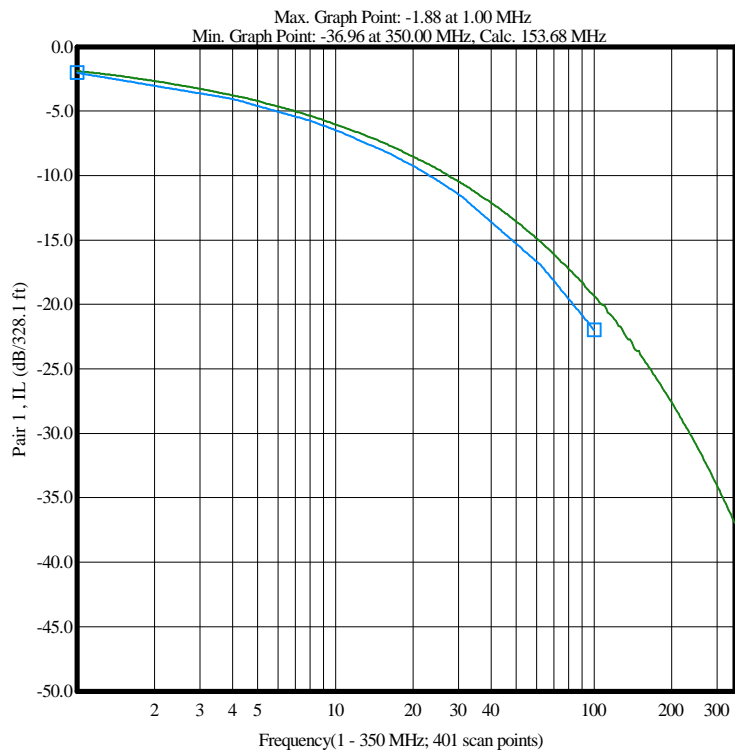
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Summary and Graphic: Insertion Loss (IL)(Curve Fit)@20C

| Pair | Spec (Max)(dB/328.1 ft) | Measured(dB/328.1 ft) | Margin (dB/328.1 ft) | @ Frequency (MHz) | Test Result |
|------------|-------------------------|-----------------------|----------------------|-------------------|-------------|
| Pair 1 [5] | 2.05 | 1.91 | 0.14 | 1.02 | Passed |
| Pair 2 [6] | 2.05 | 1.90 | 0.15 | 1.02 | Passed |
| Pair 3 [7] | 2.03 | 1.87 | 0.16 | 1.00 | Passed |
| Pair 4 [8] | 2.05 | 1.87 | 0.18 | 1.02 | Passed |



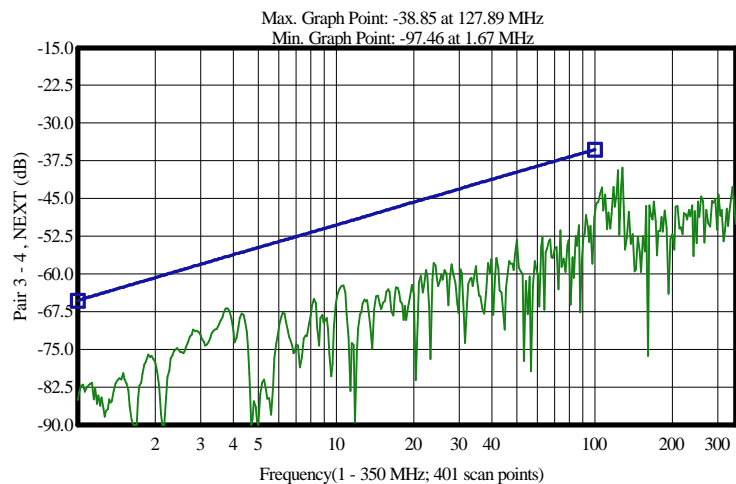
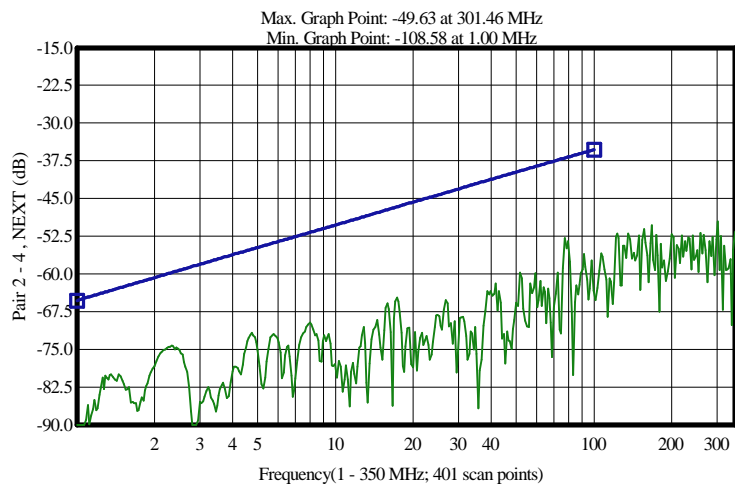
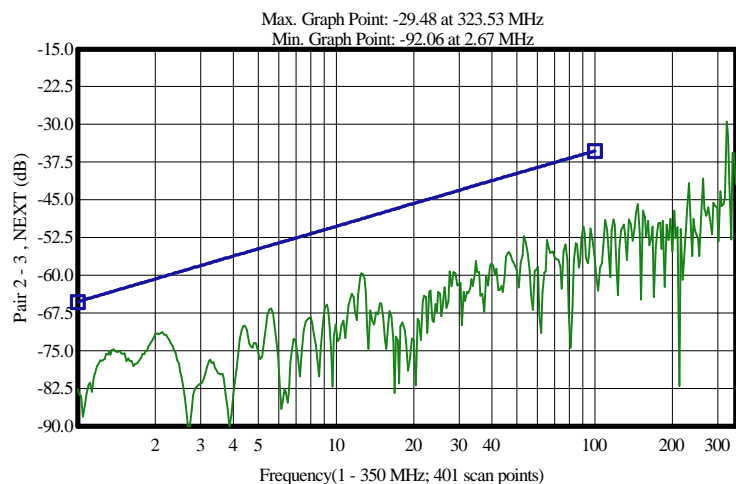
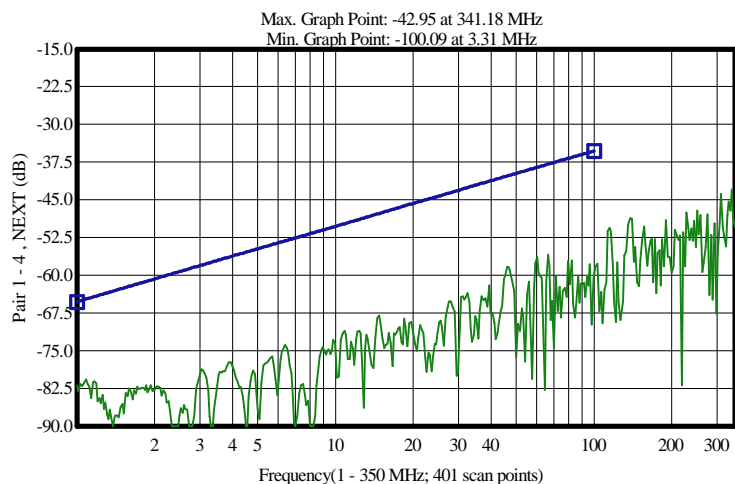
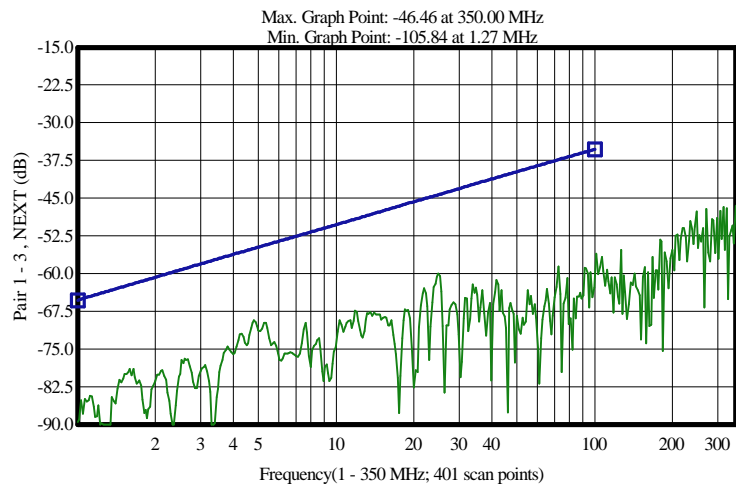
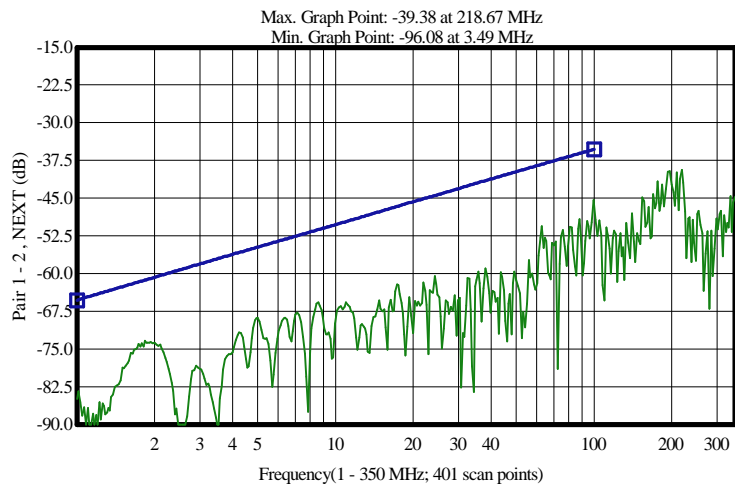
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Summary and Graphic: Near End Crosstalk Loss (NEXT)

| Pair | Spec (Min)(dB) | Measured(dB) | Margin (dB) | @ Frequency (MHz) | Test Result |
|------------|----------------|--------------|-------------|-------------------|-------------|
| Pair 1 - 2 | 35.31 | 45.40 | 10.09 | 99.77 | Passed |
| Pair 1 - 3 | 55.00 | 69.30 | 14.30 | 4.82 | Passed |
| Pair 1 - 4 | 64.76 | 80.79 | 16.03 | 1.09 | Passed |
| Pair 2 - 3 | 48.82 | 59.68 | 10.86 | 12.52 | Passed |
| Pair 2 - 4 | 59.94 | 74.51 | 14.57 | 2.26 | Passed |
| Pair 3 - 4 | 56.63 | 66.92 | 10.29 | 3.74 | Passed |



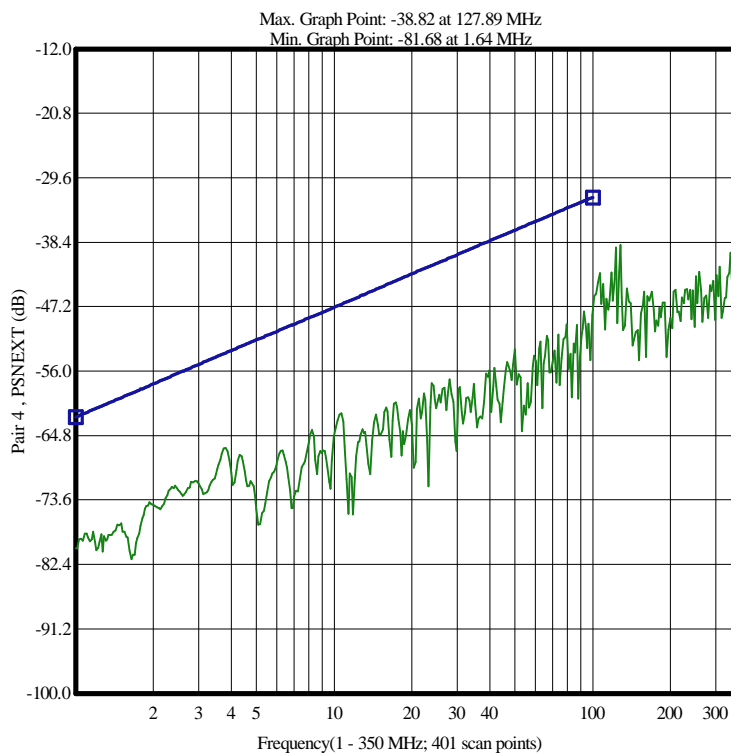
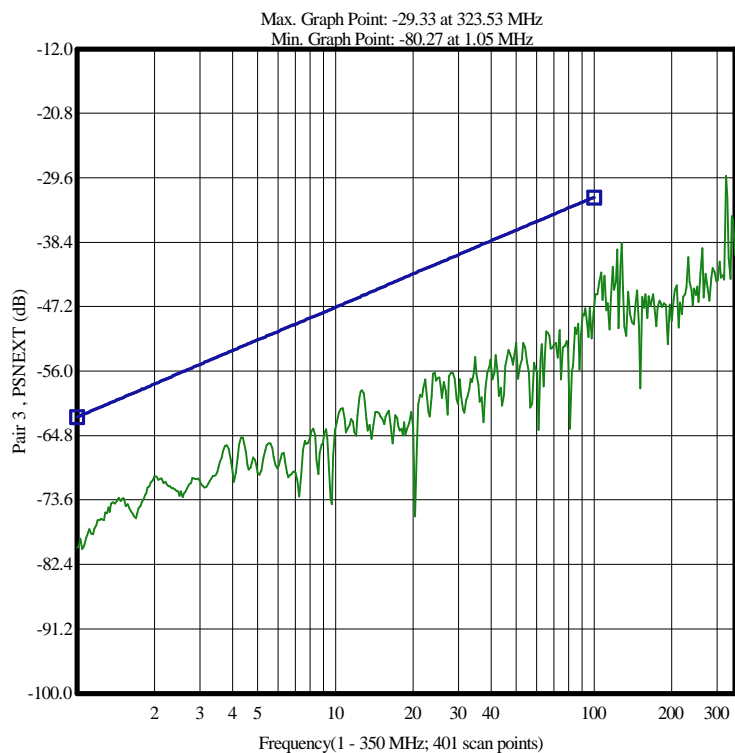
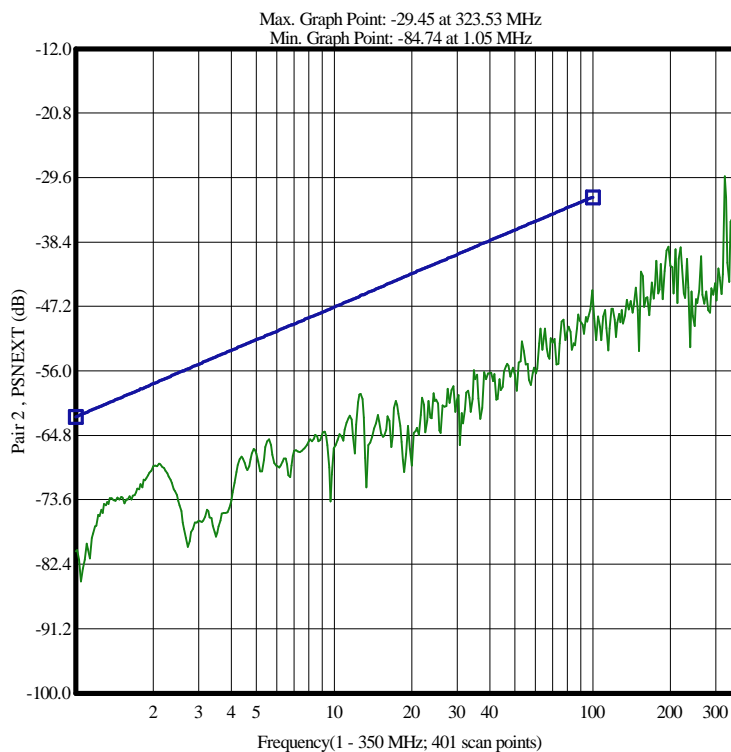
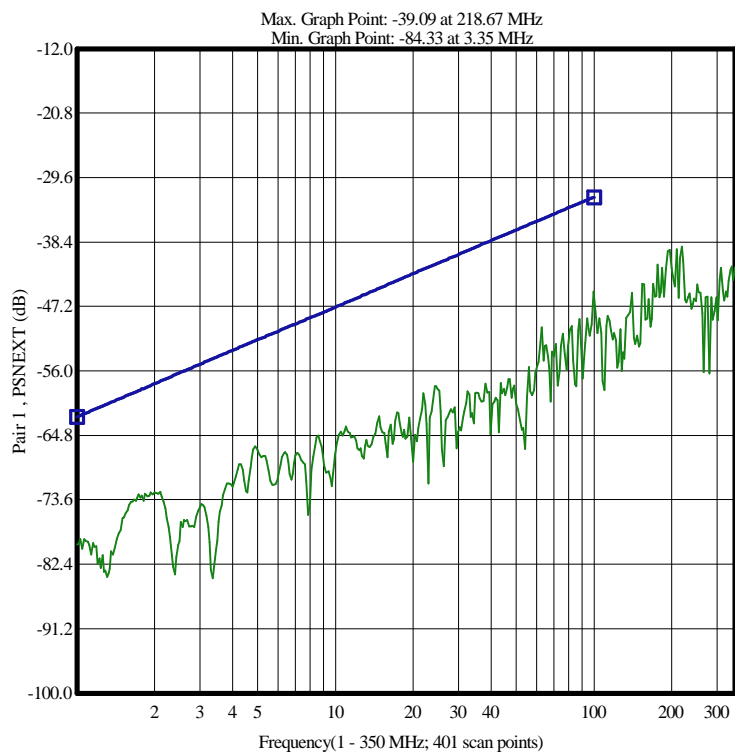
N/A = Not Applicable.
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xxx = No entry.

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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 [5] | 32.31 | 45.20 | 12.89 | 99.77 | Passed |
| Pair 2 [6] | 57.43 | 68.65 | 11.22 | 2.10 | Passed |
| Pair 3 [7] | 52.71 | 65.13 | 12.42 | 4.31 | Passed |
| Pair 4 [8] | 53.63 | 66.56 | 12.93 | 3.74 | 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 | 20.00 | 23.00 | 25.00 | 25.00 | 25.00 | 24.30 | 23.70 | 23.60 | 21.50 | 20.70 |
| Pair 1 [5] | 31.24 | 45.71 | 37.63 | 30.84 | 31.97 | 33.58 | 33.72 | 31.45 | 35.55 | 30.81 |
| Pair 2 [6] | 33.55 | 42.13 | 34.22 | 28.62 | 29.63 | 35.54 | 37.04 | 29.40 | 36.19 | 28.24 |
| Pair 3 [7] | 32.09 | 44.14 | 37.66 | 28.95 | 31.67 | 35.08 | 33.76 | 33.59 | 42.11 | 32.93 |
| Pair 4 [8] | 29.22 | 46.55 | 32.60 | 33.48 | 29.02 | 33.96 | 39.36 | 31.06 | 27.80 | 53.36 |

Continue:Return Loss (RL)(dB)

| | | | | | | | | | | |
|------------|--------|--|--|--|--|--|--|--|--|--|
| Frequency | 100.00 | | | | | | | | | |
| Min Spec | 20.10 | | | | | | | | | |
| Pair 1 [5] | 33.80 | | | | | | | | | |
| Pair 2 [6] | 33.43 | | | | | | | | | |
| Pair 3 [7] | 35.30 | | | | | | | | | |
| Pair 4 [8] | 31.17 | | | | | | | | | |

Detail Discrete Frequencies ---Insertion Loss (IL)(dB/328.1 ft)(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 | 2.03 | 4.05 | 5.76 | 6.46 | 8.24 | 9.26 | 10.41 | 11.72 | 16.99 | 21.97 |
| Pair 1 [5] | 1.88 | 3.78 | 5.37 | 6.03 | 7.62 | 8.55 | 9.53 | 10.68 | 15.18 | 19.31 |
| Pair 2 [6] | 1.87 | 3.78 | 5.37 | 6.02 | 7.61 | 8.55 | 9.53 | 10.67 | 15.20 | 19.36 |
| Pair 3 [7] | 1.87 | 3.75 | 5.32 | 5.97 | 7.53 | 8.46 | 9.43 | 10.57 | 15.07 | 19.14 |
| Pair 4 [8] | 1.84 | 3.72 | 5.26 | 5.91 | 7.46 | 8.38 | 9.35 | 10.47 | 14.97 | 19.09 |

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 | 65.30 | 56.20 | 50.30 | 47.20 | 45.70 | 44.30 | 43.10 | 42.80 | 38.30 | 36.70 |
| Pair 1 - 2 | 84.97 | 75.68 | 69.81 | 71.49 | 71.14 | 64.47 | 65.09 | 72.02 | 51.47 | 52.92 |
| Pair 1 - 3 | 89.54 | 76.09 | 74.48 | 70.33 | 82.29 | 60.26 | 76.00 | 67.95 | 70.59 | 69.55 |
| Pair 1 - 4 | 81.94 | 78.24 | 73.85 | 72.69 | 71.58 | 70.51 | 75.42 | 64.33 | 60.40 | 59.20 |
| Pair 2 - 3 | 82.62 | 83.63 | 70.02 | 68.64 | 74.10 | 63.50 | 61.68 | 63.76 | 66.60 | 70.41 |
| Pair 2 - 4 | 108.58 | 79.30 | 78.09 | 66.35 | 77.72 | 68.28 | 72.61 | 68.79 | 64.37 | 55.27 |
| Pair 3 - 4 | 85.06 | 71.33 | 65.84 | 63.33 | 66.18 | 61.89 | 63.85 | 69.25 | 53.55 | 58.83 |

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

| | | | | | | | | | | |
|------------|--------|--|--|--|--|--|--|--|--|--|
| Frequency | 100.00 | | | | | | | | | |
| Min Spec | 35.30 | | | | | | | | | |
| Pair 1 - 2 | 45.93 | | | | | | | | | |
| Pair 1 - 3 | 61.86 | | | | | | | | | |
| Pair 1 - 4 | 60.23 | | | | | | | | | |
| Pair 2 - 3 | 56.38 | | | | | | | | | |
| Pair 2 - 4 | 63.58 | | | | | | | | | |
| Pair 3 - 4 | 48.49 | | | | | | | | | |

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 | 62.30 | 53.20 | 47.30 | 44.20 | 42.70 | 41.30 | 40.10 | 39.80 | 35.30 | 33.70 |
| Pair 1 [5] | 79.71 | 71.76 | 67.34 | 66.25 | 67.98 | 58.56 | 64.05 | 62.17 | 50.88 | 51.65 |
| Pair 2 [6] | 80.62 | 73.65 | 66.53 | 63.23 | 68.40 | 60.21 | 59.74 | 62.11 | 51.03 | 50.49 |
| Pair 3 [7] | 80.13 | 69.88 | 63.99 | 61.55 | 65.03 | 56.90 | 58.98 | 61.32 | 53.22 | 57.73 |
| Pair 4 [8] | 80.21 | 69.98 | 64.94 | 61.23 | 63.96 | 60.52 | 63.04 | 62.00 | 52.35 | 52.25 |

Continue:Power Sum NEXT(PSNEXT)(dB)

| | | | | | | | | | | |
|------------|--------|--|--|--|--|--|--|--|--|--|
| Frequency | 100.00 | | | | | | | | | |
| Min Spec | 32.30 | | | | | | | | | |
| Pair 1 [5] | 45.58 | | | | | | | | | |
| Pair 2 [6] | 45.49 | | | | | | | | | |
| Pair 3 [7] | 47.59 | | | | | | | | | |
| Pair 4 [8] | 48.07 | | | | | | | | | |

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