

DCM Test Report

| | | |
|--------------------------------|--------------------------------------|---|
| Cable Type : 4x2x23 x PE/LSZH | Factory Number : PHOENIX | Data File Name : DA172828.D3S |
| Cable I.D. : U/UTP#23X4P CABLE | Order Number : 10129 GR-67 231047190 | Specification File : SC6E-550-305M.S3S |
| Temperature : 25.00 °C | Relative Humidity : 50 % | Test Date/Time : 10/24/2023 01:03:52 AM |
| Length : 305.00 m | Number of Pairs to Test : 4 | Operator : L 231023WE604002/6 |
| Starting Position : 9 | | 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: |
|------------|-----------|-------|

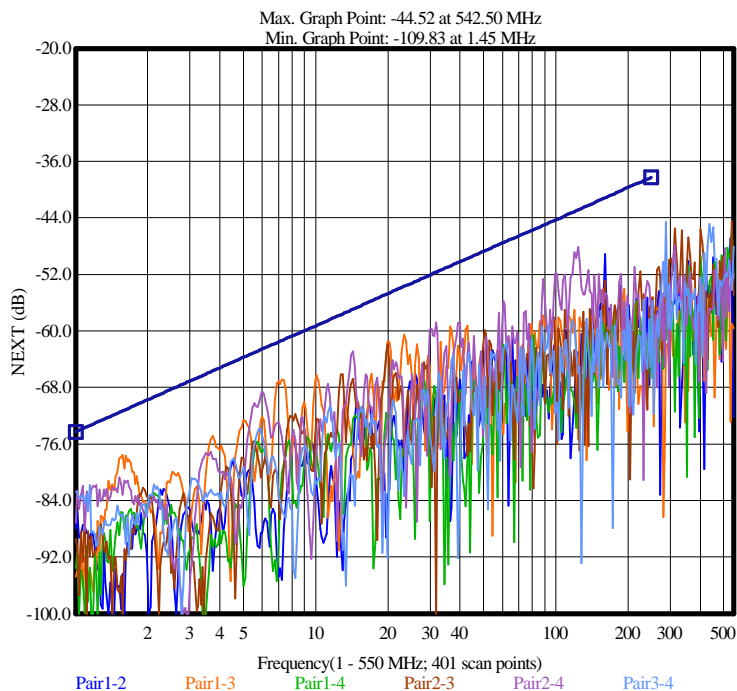
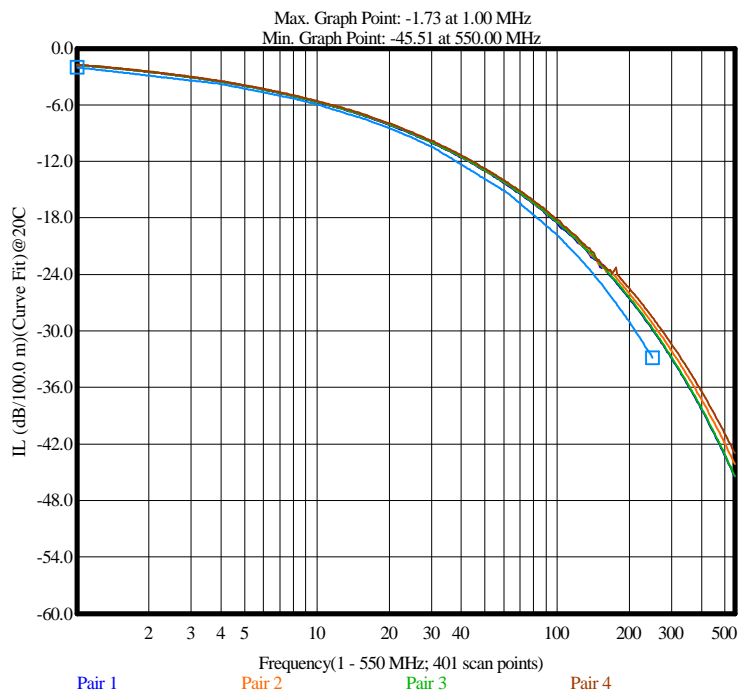
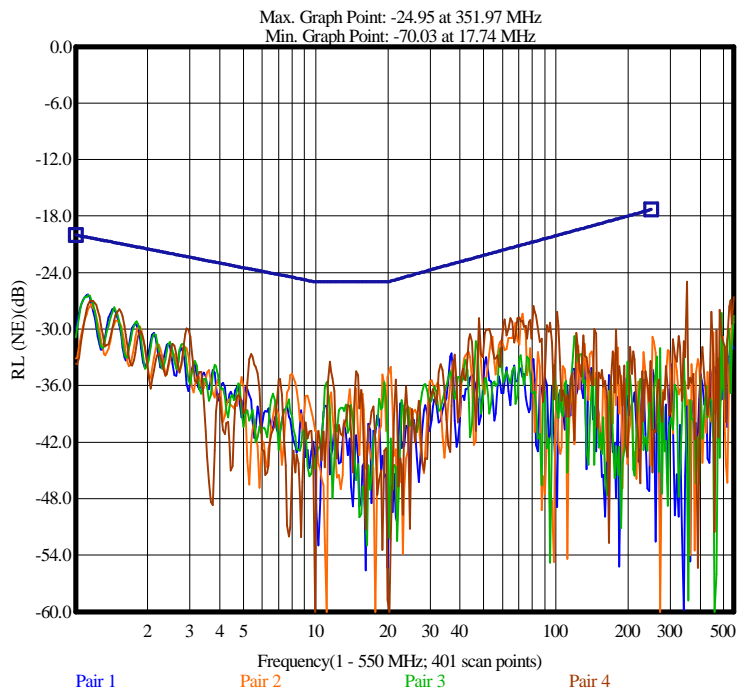
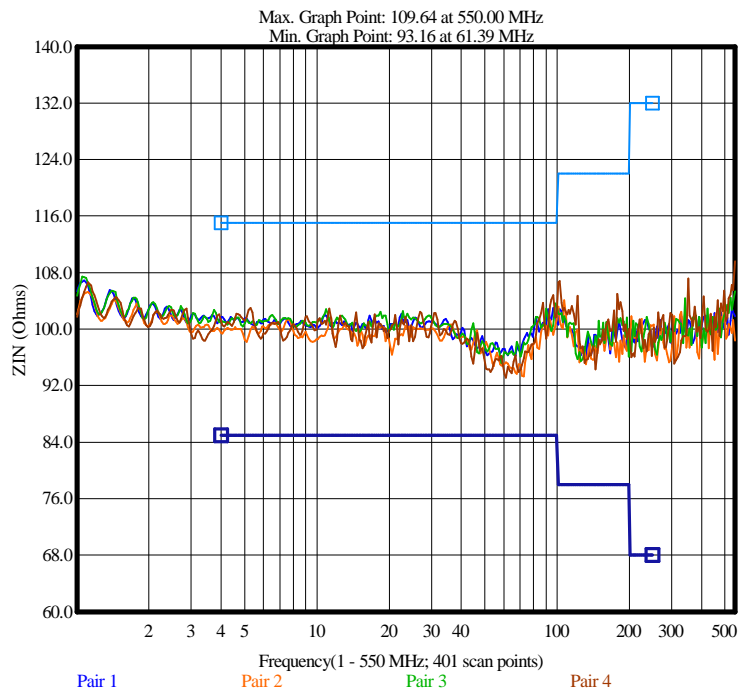
DCM Test Report

| | | |
|--------------------------------|--------------------------------------|---|
| Cable Type : 4x2x23 x PE/LSZH | Factory Number : PHOENIX | Data File Name : DA172828.D3S |
| Cable I.D. : U/UTP#23X4P CABLE | Order Number : 10129 GR-67 231047190 | Specification File : SC6E-550-305M.S3S |
| Temperature : 25.00 °C | Relative Humidity : 50 % | Test Date/Time : 10/24/2023 01:03:52 AM |
| Length : 305.00 m | Number of Pairs to Test : 4 | Operator : L 231023WE604002/6 |
| Starting Position : 9 | | Analyzer Type : ENA |

Worst Case Summary

High Frequency

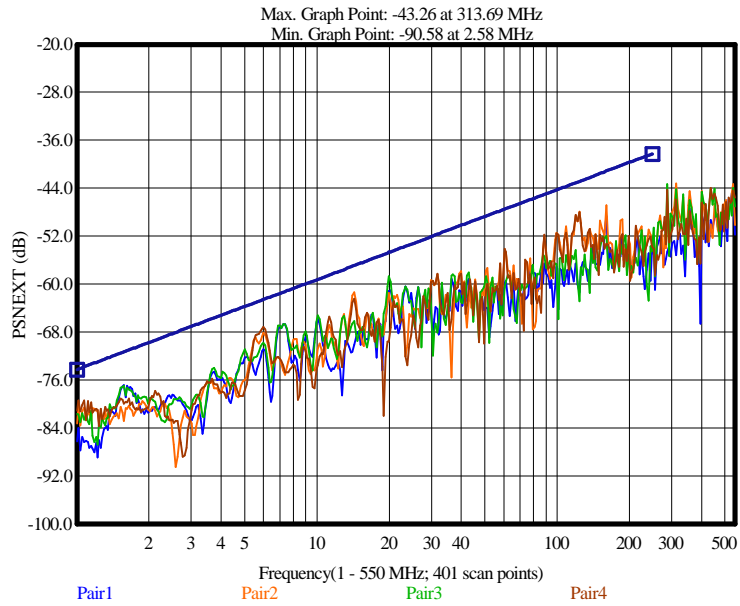
| Test Type | Specification | Measured (Pair) | Margin | @ Frequency (MHz) | Test Result |
|------------------------------------|---------------|-------------------|--------|-------------------|-------------|
| Input Impedance (Zin)(Terminated) | 85.00 (Min) | 93.16 (Pair 4) | 8.16 | 61.39 | Passed |
| Input Impedance (Zin)(Terminated) | 115.00 (Max) | 104.76 (Pair 4) | 10.24 | 96.54 | Passed |
| Return Loss (RL) | 20.26 (Min) | 26.34 (Pair 1) | 6.08 | 1.13 | Passed |
| Insertion Loss (IL)(Curve Fit)@20C | 3.73 (Max) | 3.50 (Pair 1) | 0.23 | 3.86 | Passed |
| Near End Crosstalk Loss (NEXT) | 42.88 (Min) | 48.12 (Pairs 2-4) | 5.24 | 123.87 | Passed |
| Power Sum NEXT(PSNEXT) | 54.71 (Min) | 58.72 (Pair 3) | 4.01 | 19.96 | Passed |



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

* = Measured value out of spec.
 xxx = No entry.

*** = Measured value is invalid.



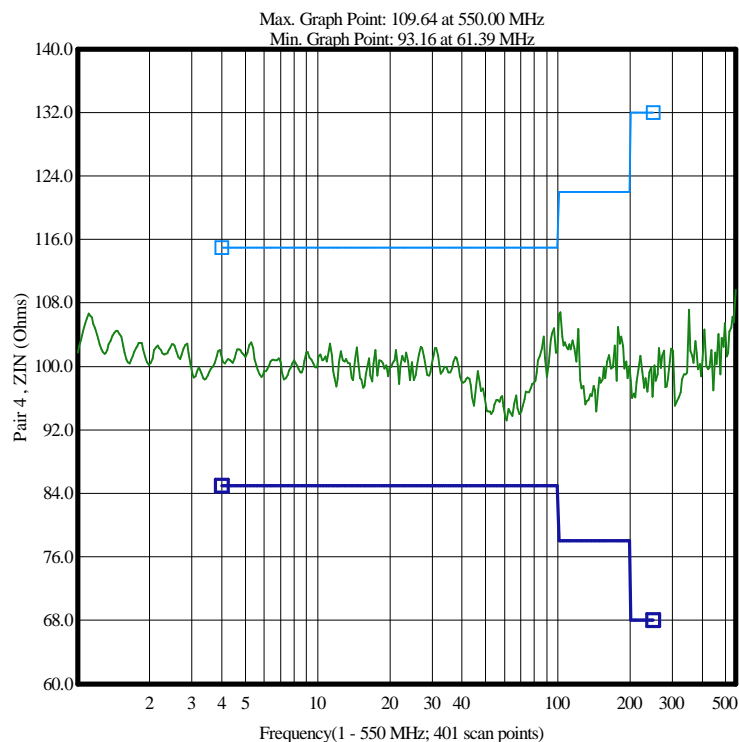
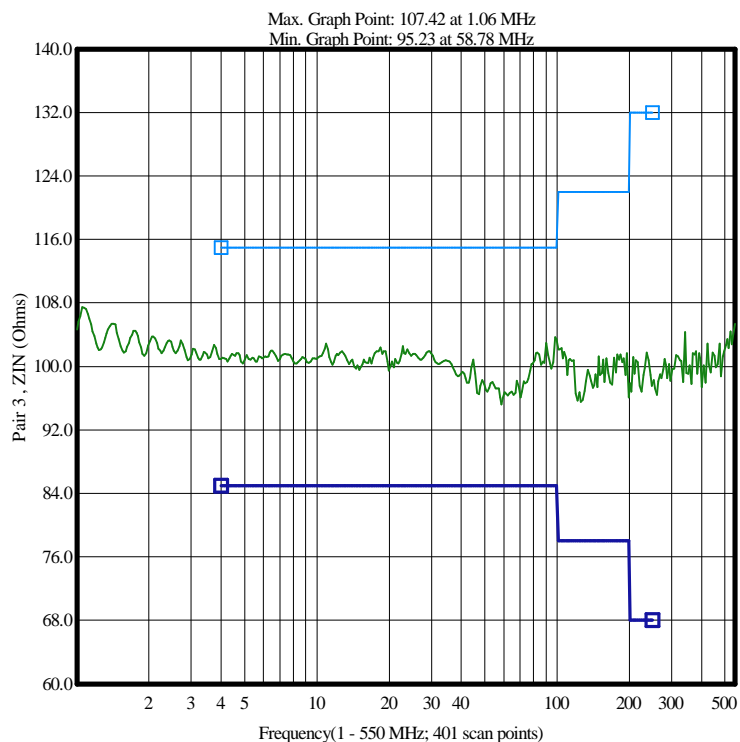
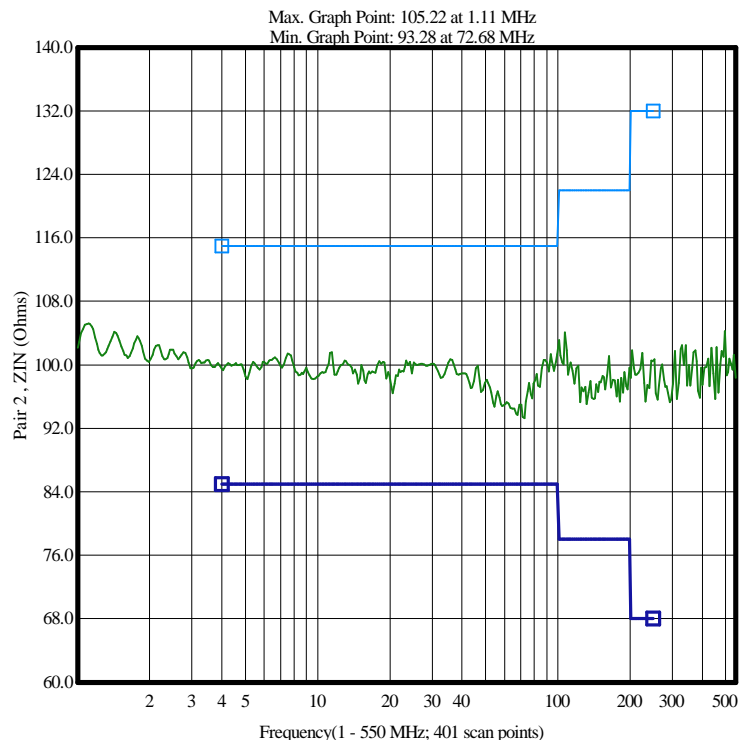
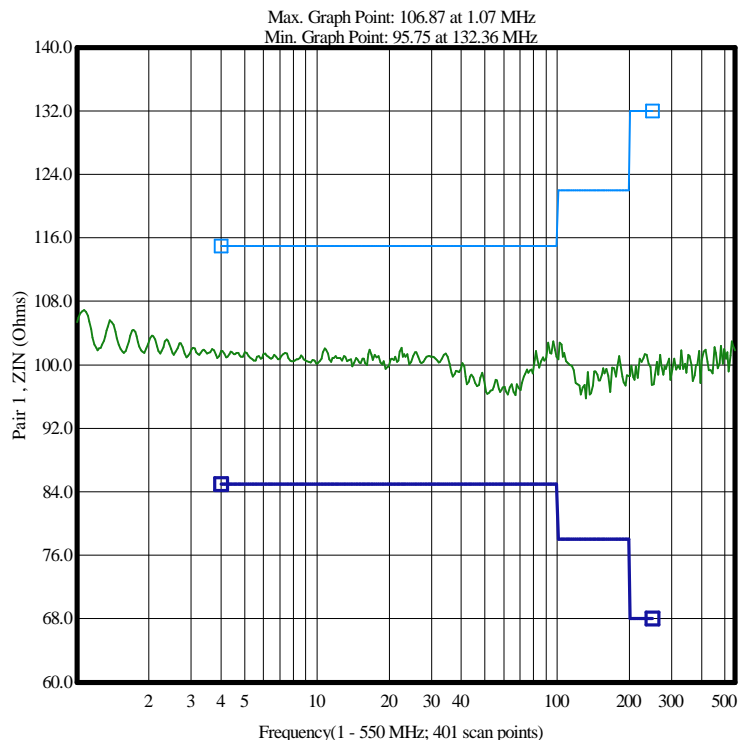
N/A = Not Applicable.
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*** = Measured value is invalid.

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 [9] | 85.00 | 115.00 | 96.20 | 102.98 | 11.20 | 12.02 | 67.03 | 96.54 | Passed |
| Pair 2 [10] | 85.00 | 115.00 | 93.28 | 101.61 | 8.28 | 13.39 | 72.68 | 11.45 | Passed |
| Pair 3 [11] | 85.00 | 115.00 | 95.23 | 103.64 | 10.23 | 11.36 | 58.78 | 98.09 | Passed |
| Pair 4 [12] | 85.00 | 115.00 | 93.16 | 104.76 | 8.16 | 10.24 | 61.39 | 96.54 | Passed |



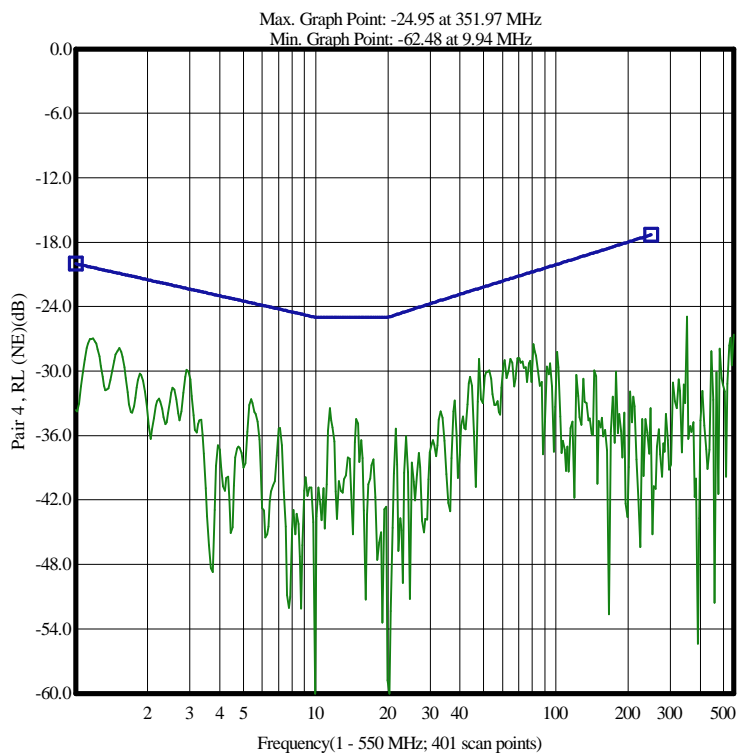
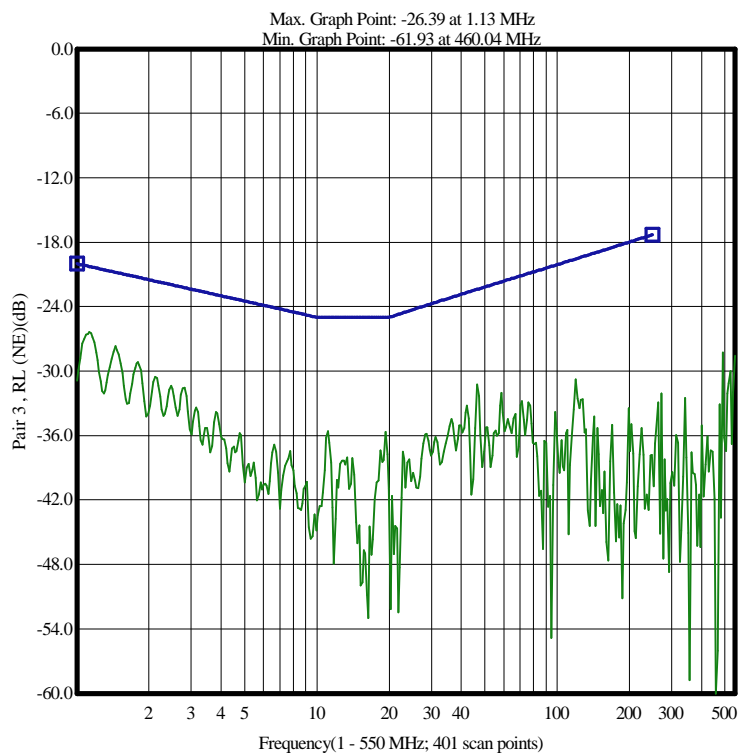
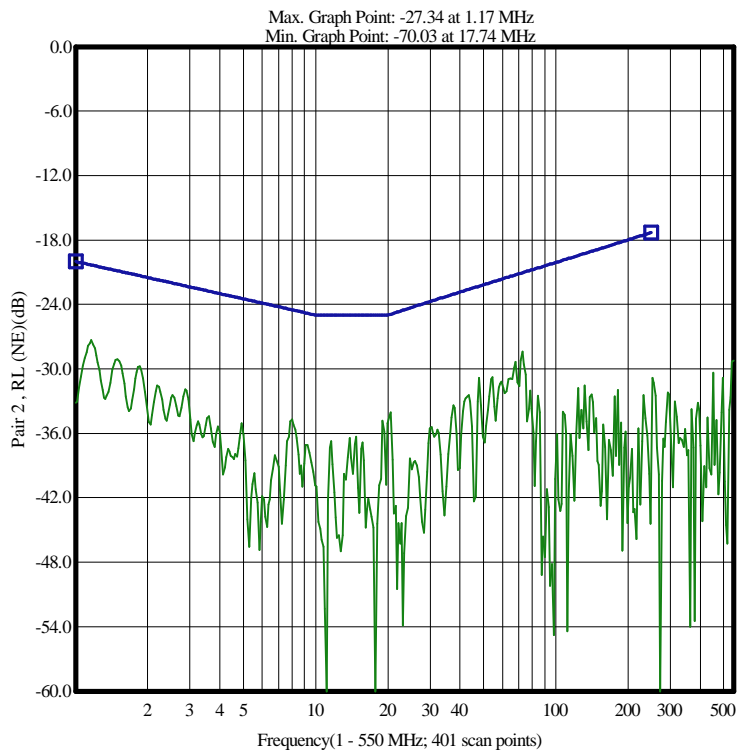
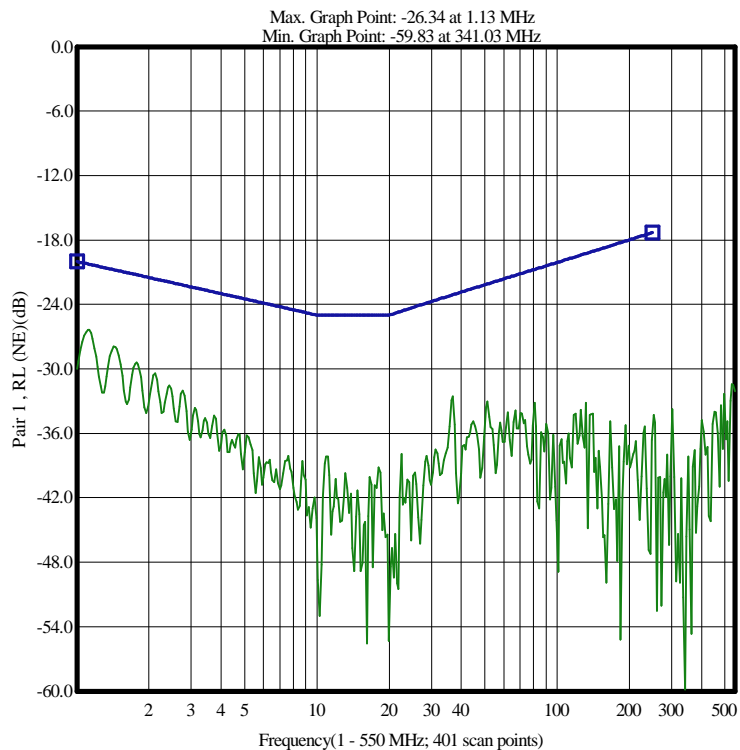
N/A = Not Applicable.
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Summary and Graphic: Return Loss (RL)

| Pair | Spec (Min)(dB) | Measured(dB) | Margin (dB) | @ Frequency (MHz) | Test Result |
|-------------|----------------|--------------|-------------|-------------------|-------------|
| Pair 1 [9] | 20.26 | 26.34 | 6.08 | 1.13 | Passed |
| Pair 2 [10] | 20.33 | 27.34 | 7.01 | 1.17 | Passed |
| Pair 3 [11] | 20.26 | 26.39 | 6.13 | 1.13 | Passed |
| Pair 4 [12] | 22.30 | 28.86 | 6.56 | 48.07 | Passed |



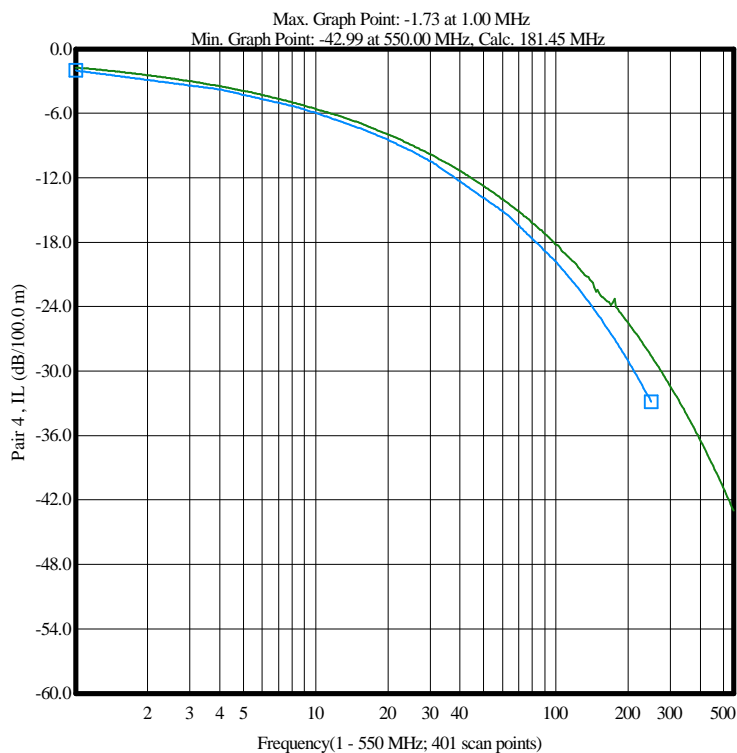
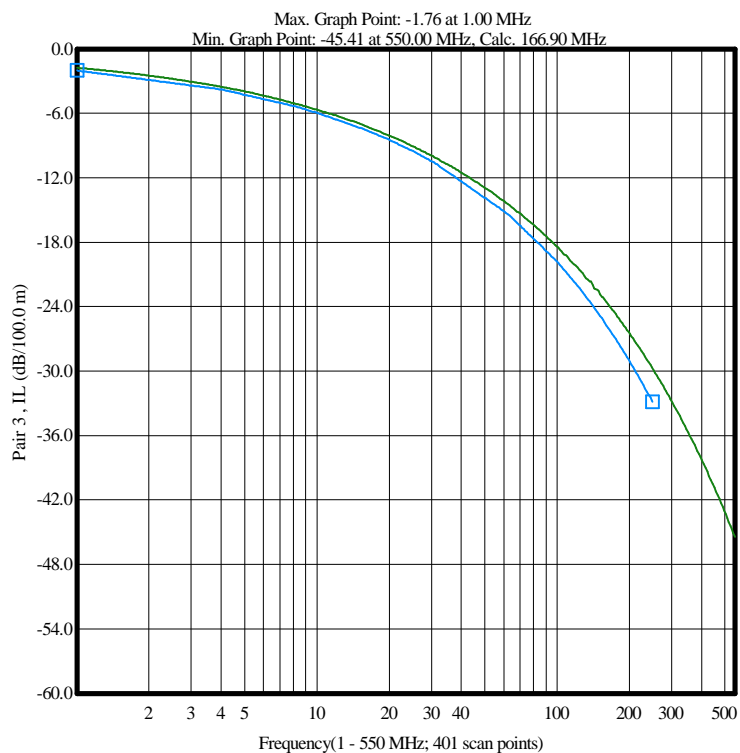
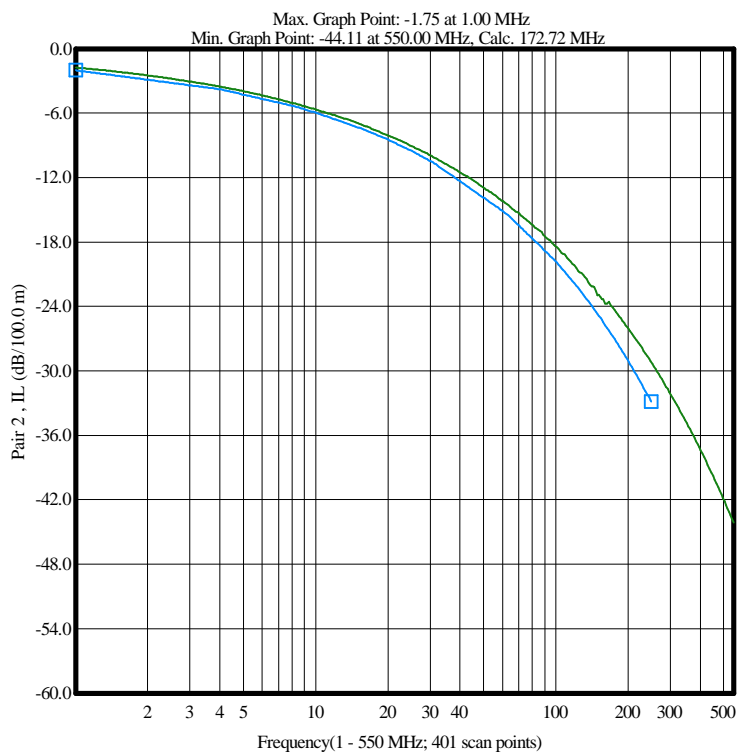
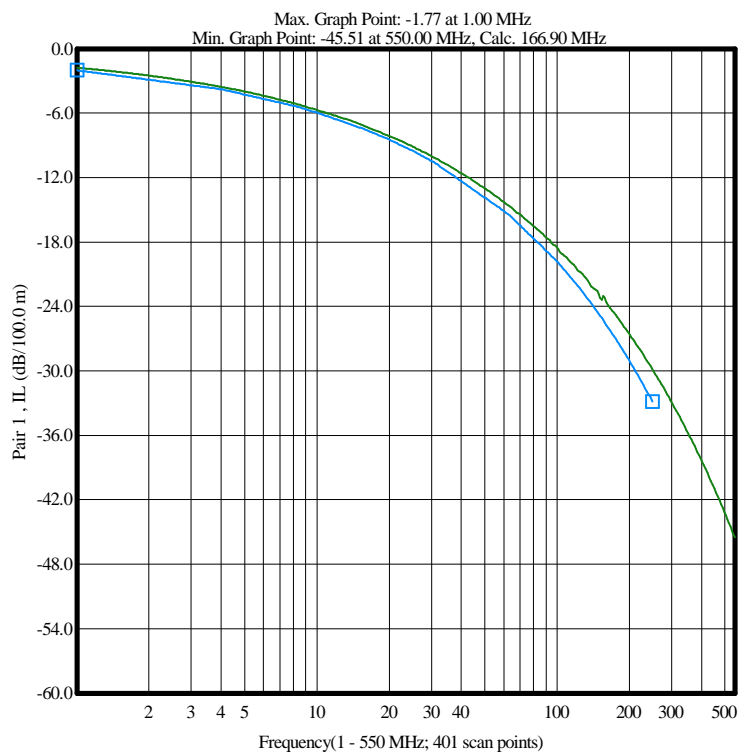
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Summary and Graphic: Insertion Loss (IL)(Curve Fit)@20C

| Pair | Spec (Max)(dB/100.0 m) | Measured(dB/100.0 m) | Margin (dB/100.0 m) | @ Frequency (MHz) | Test Result |
|-------------|------------------------|----------------------|---------------------|-------------------|-------------|
| Pair 1 [9] | 3.73 | 3.50 | 0.23 | 3.86 | Passed |
| Pair 2 [10] | 3.78 | 3.53 | 0.25 | 3.99 | Passed |
| Pair 3 [11] | 3.78 | 3.53 | 0.25 | 3.99 | Passed |
| Pair 4 [12] | 2.04 | 1.76 | 0.28 | 1.02 | Passed |



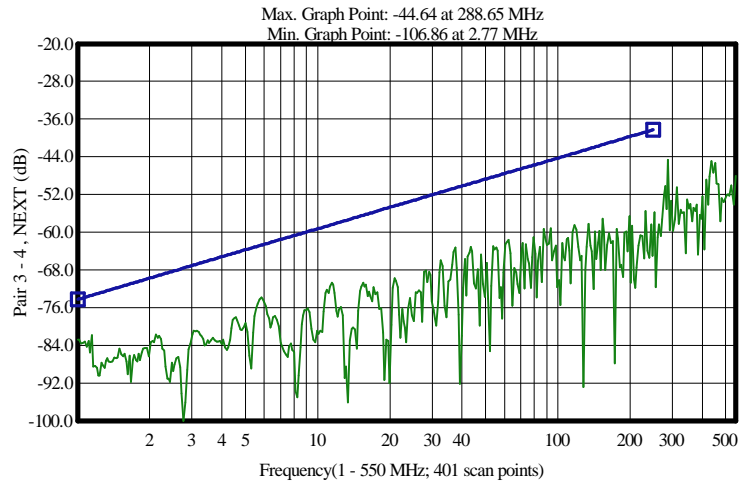
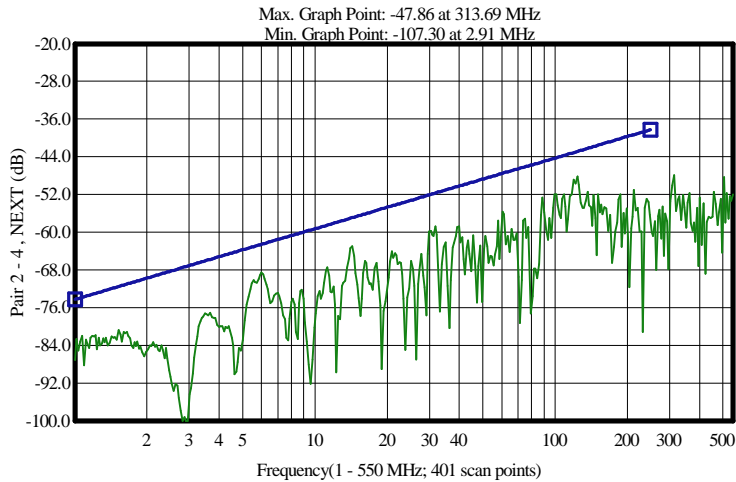
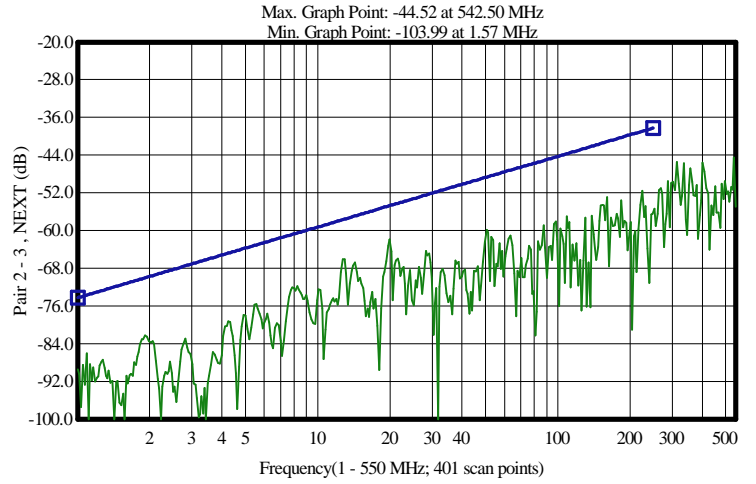
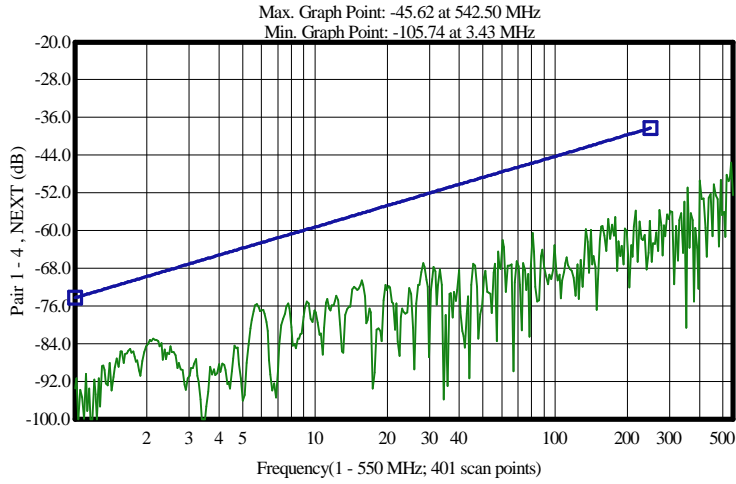
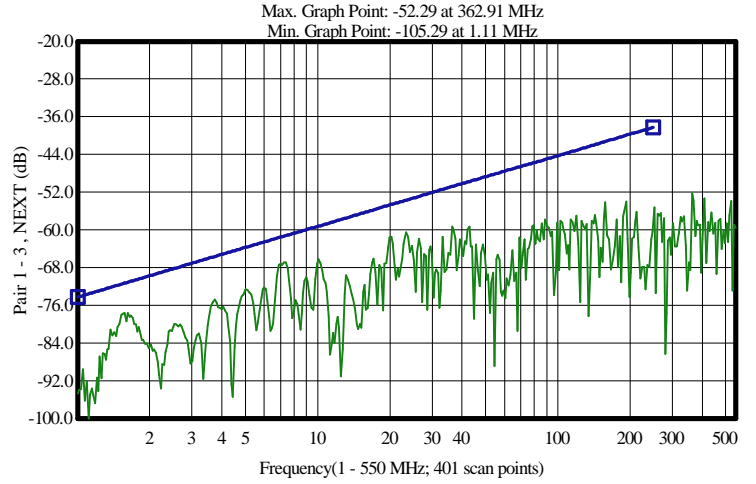
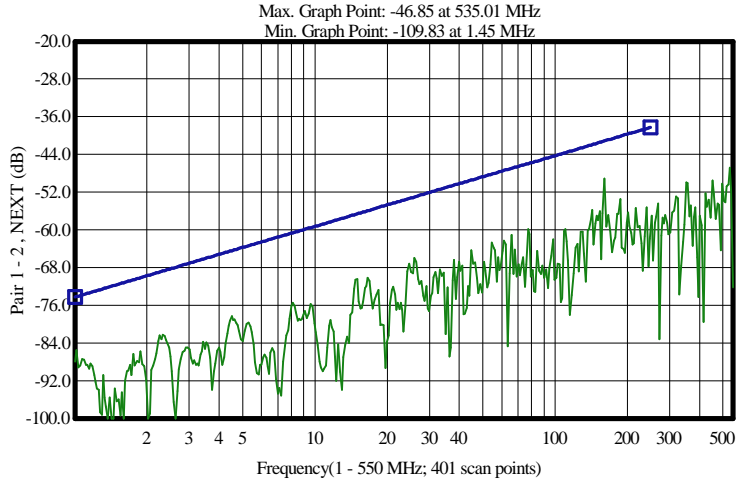
N/A = Not Applicable.
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Summary and Graphic: Near End Crosstalk Loss (NEXT)

| Pair | Spec (Min)(dB) | Measured(dB) | Margin (dB) | @ Frequency (MHz) | Test Result |
|------------|----------------|--------------|-------------|-------------------|-------------|
| Pair 1 - 2 | 41.14 | 49.16 | 8.02 | 161.09 | Passed |
| Pair 1 - 3 | 61.34 | 66.88 | 5.54 | 7.25 | Passed |
| Pair 1 - 4 | 62.86 | 75.67 | 12.81 | 5.73 | Passed |
| Pair 2 - 3 | 54.71 | 61.90 | 7.19 | 19.96 | Passed |
| Pair 2 - 4 | 42.88 | 48.12 | 5.24 | 123.87 | Passed |
| Pair 3 - 4 | 73.40 | 81.84 | 8.44 | 1.15 | Passed |



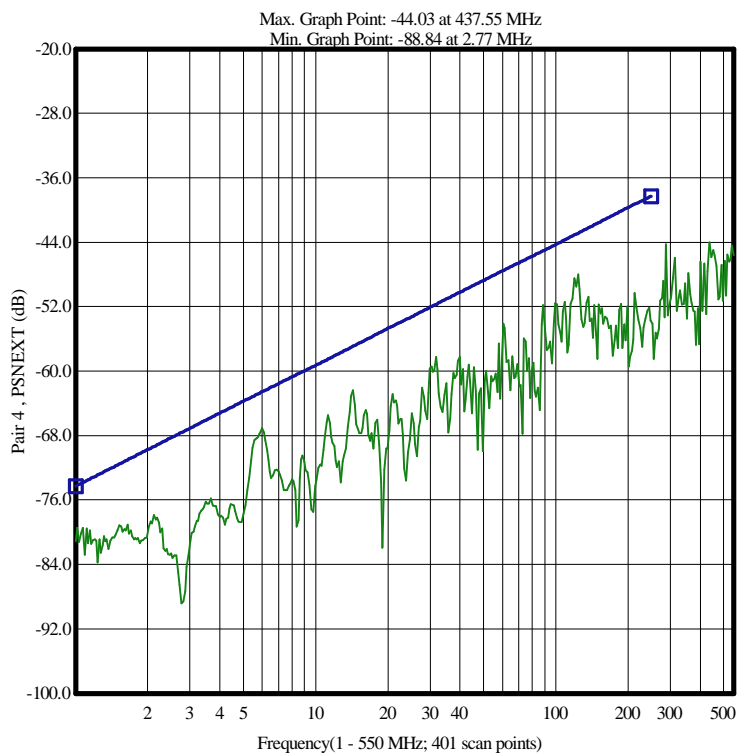
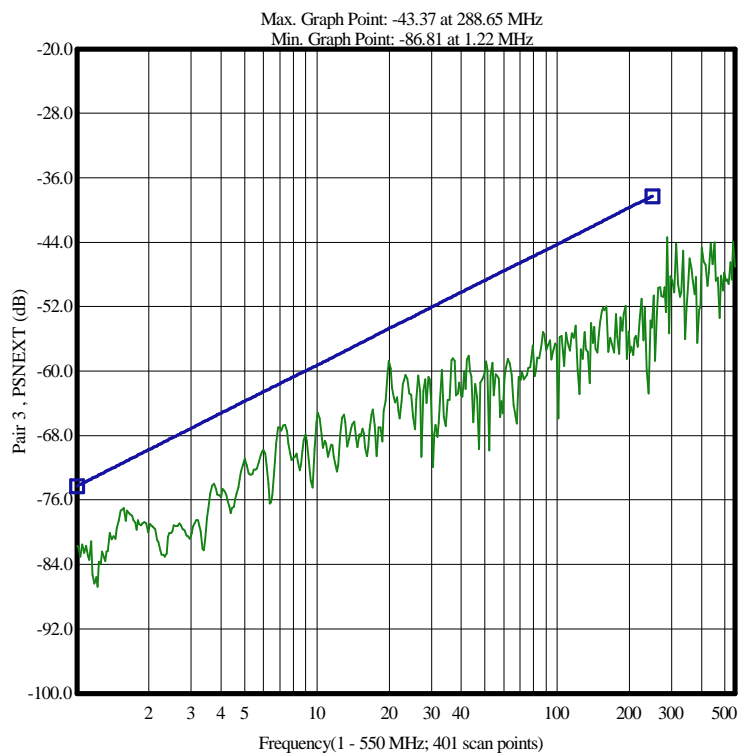
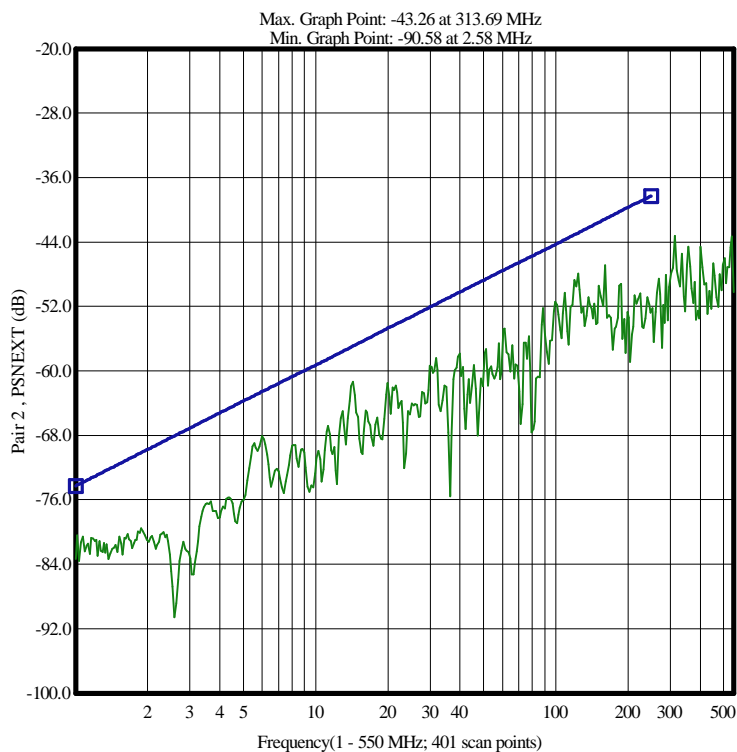
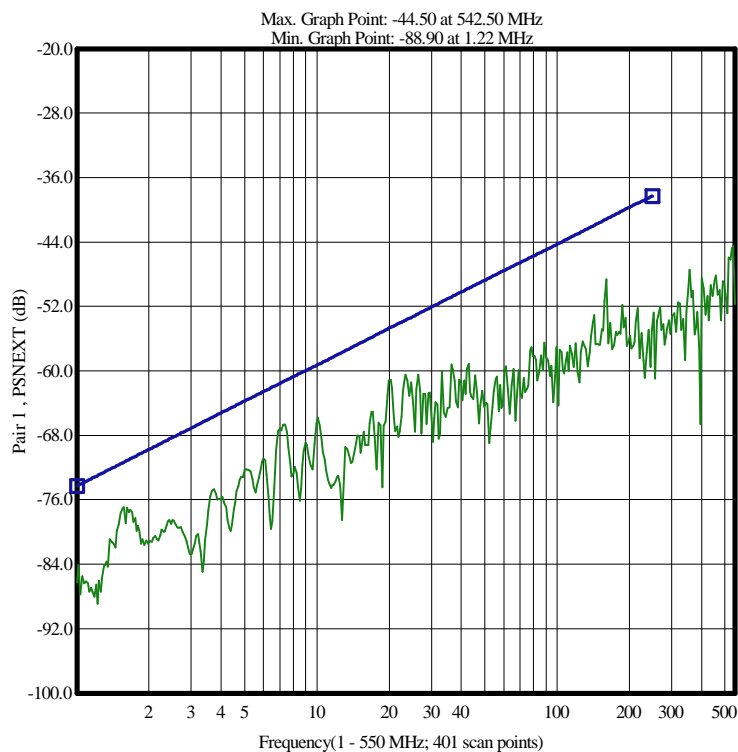
N/A = Not Applicable.
--- = Disable/Bypassed Pair.

* = Measured value out of spec.
xxx = No entry.

*** = Measured value is invalid.

Summary and Graphic: Power Sum NEXT(PSNEXT)

| Pair | Spec (Min)(dB) | Measured(dB) | Margin (dB) | @ Frequency (MHz) | Test Result |
|-------------|----------------|--------------|-------------|-------------------|-------------|
| Pair 1 [9] | 61.34 | 66.68 | 5.34 | 7.25 | Passed |
| Pair 2 [10] | 56.93 | 61.35 | 4.42 | 14.31 | Passed |
| Pair 3 [11] | 54.71 | 58.72 | 4.01 | 19.96 | Passed |
| Pair 4 [12] | 62.57 | 67.11 | 4.54 | 6.00 | Passed |



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Detail Discrete Frequencies ---Input Impedance (Zin)(Ohms)(Terminated)

| | | | | | | | | | | |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency | 4.00 | 8.00 | 10.00 | 16.00 | 20.00 | 25.00 | 31.25 | 62.50 | 99.90 | 100.00 |
| Max Spec | 115.00 | 115.00 | 115.00 | 115.00 | 115.00 | 115.00 | 115.00 | 115.00 | 115.00 | 122.00 |
| Min Spec | 85.00 | 85.00 | 85.00 | 85.00 | 85.00 | 85.00 | 85.00 | 85.00 | 85.00 | 78.00 |
| Pair 1 [9] | 101.75 | 100.45 | 100.17 | 100.14 | 99.93 | 100.87 | 100.74 | 96.28 | 100.97 | 100.95 |
| Pair 2 [10] | 99.44 | 99.61 | 98.53 | 98.13 | 98.43 | 99.84 | 99.67 | 95.15 | 101.67 | 101.78 |
| Pair 3 [11] | 100.94 | 100.55 | 100.98 | 100.48 | 99.58 | 101.51 | 100.55 | 96.34 | 103.19 | 103.11 |
| Pair 4 [12] | 100.99 | 100.69 | 100.38 | 99.41 | 99.83 | 98.98 | 102.26 | 94.60 | 102.57 | 102.89 |

Continue:Input Impedance (Zin)(Ohms)(Terminated)

| | | | | | | | | | | |
|-------------|--------|--------|--------|--------|--------|--|--|--|--|--|
| Frequency | 125.00 | 155.00 | 199.90 | 200.00 | 250.00 | | | | | |
| Max Spec | 122.00 | 122.00 | 122.00 | 132.00 | 132.00 | | | | | |
| Min Spec | 78.00 | 78.00 | 78.00 | 68.00 | 68.00 | | | | | |
| Pair 1 [9] | 96.79 | 99.32 | 98.62 | 98.62 | 97.52 | | | | | |
| Pair 2 [10] | 96.27 | 98.49 | 99.20 | 99.16 | 100.49 | | | | | |
| Pair 3 [11] | 96.08 | 100.31 | 96.69 | 96.75 | 97.78 | | | | | |
| Pair 4 [12] | 97.73 | 99.43 | 99.40 | 99.33 | 97.42 | | | | | |

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

| | | | | | | | | | | |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Frequency | 1.00 | 4.00 | 8.00 | 10.00 | 16.00 | 20.00 | 25.00 | 31.25 | 62.50 | 100.00 |
| Min Spec | 20.00 | 23.00 | 24.50 | 25.00 | 25.00 | 25.00 | 24.30 | 23.60 | 21.50 | 20.10 |
| Pair 1 [9] | 30.02 | 36.84 | 41.20 | 45.99 | 48.18 | 54.51 | 41.86 | 37.52 | 34.09 | 45.24 |
| Pair 2 [10] | 33.15 | 36.16 | 34.79 | 40.88 | 40.71 | 34.99 | 39.05 | 36.28 | 32.08 | 39.29 |
| Pair 3 [11] | 30.90 | 36.15 | 39.45 | 44.30 | 48.32 | 42.29 | 39.75 | 36.17 | 34.50 | 36.11 |
| Pair 4 [12] | 33.66 | 37.62 | 44.47 | 55.56 | 45.84 | 58.94 | 42.56 | 36.81 | 30.63 | 32.16 |

Continue:Return Loss (RL)(dB)

| | | | | | | | | | | |
|-------------|--------|--------|--|--|--|--|--|--|--|--|
| Frequency | 200.00 | 250.00 | | | | | | | | |
| Min Spec | 18.00 | 17.30 | | | | | | | | |
| Pair 1 [9] | 37.92 | 35.88 | | | | | | | | |
| Pair 2 [10] | 43.08 | 40.20 | | | | | | | | |
| Pair 3 [11] | 34.97 | 38.73 | | | | | | | | |
| Pair 4 [12] | 41.86 | 37.10 | | | | | | | | |

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 | 2.02 | 3.78 | 5.32 | 5.95 | 7.55 | 8.47 | 9.50 | 10.67 | 15.38 | 19.79 |
| Pair 1 [9] | 1.77 | 3.56 | 5.09 | 5.71 | 7.24 | 8.14 | 9.11 | 10.22 | 14.55 | 18.52 |
| Pair 2 [10] | 1.75 | 3.54 | 5.05 | 5.67 | 7.18 | 8.07 | 9.06 | 10.15 | 14.46 | 18.41 |
| Pair 3 [11] | 1.76 | 3.54 | 5.05 | 5.67 | 7.18 | 8.08 | 9.05 | 10.13 | 14.44 | 18.41 |
| Pair 4 [12] | 1.73 | 3.48 | 4.98 | 5.59 | 7.08 | 7.95 | 8.93 | 9.99 | 14.26 | 18.20 |

Continue:Insertion Loss (IL)(dB/100.0 m)(Curve Fit)@20C

| | | | | | | | | | | |
|-------------|--------|--------|--------|--------|--|--|--|--|--|--|
| Frequency | 125.00 | 155.00 | 200.00 | 250.00 | | | | | | |
| Max Spec | 22.35 | 25.16 | 28.98 | 32.84 | | | | | | |
| Pair 1 [9] | 20.82 | 23.14 | 26.55 | 29.87 | | | | | | |
| Pair 2 [10] | 20.77 | 23.25 | 26.01 | 29.19 | | | | | | |
| Pair 3 [11] | 20.65 | 23.14 | 26.44 | 29.75 | | | | | | |
| Pair 4 [12] | 20.41 | 23.03 | 25.48 | 28.58 | | | | | | |

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 | 74.30 | 65.20 | 60.70 | 59.30 | 56.20 | 54.70 | 53.30 | 51.80 | 47.30 | 44.30 |
| Pair 1 - 2 | 88.00 | 85.19 | 76.13 | 80.55 | 74.26 | 83.72 | 68.42 | 70.29 | 63.12 | 70.46 |
| Pair 1 - 3 | 94.80 | 76.76 | 76.68 | 66.82 | 76.84 | 61.56 | 65.42 | 68.44 | 71.80 | 60.89 |
| Pair 1 - 4 | 93.58 | 88.72 | 81.04 | 77.12 | 72.43 | 72.56 | 73.06 | 67.90 | 72.90 | 64.47 |
| Pair 2 - 3 | 89.47 | 85.64 | 72.25 | 73.92 | 77.65 | 62.21 | 75.53 | 72.35 | 61.85 | 65.16 |
| Pair 2 - 4 | 87.16 | 80.11 | 74.66 | 79.17 | 67.80 | 72.30 | 68.01 | 60.75 | 62.52 | 51.93 |
| Pair 3 - 4 | 82.76 | 83.54 | 86.65 | 81.21 | 72.03 | 90.61 | 78.50 | 79.73 | 61.65 | 71.35 |

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

| | | | | | | | | | | |
|------------|--------|--------|--------|--|--|--|--|--|--|--|
| Frequency | 155.00 | 200.00 | 250.00 | | | | | | | |
| Min Spec | 41.40 | 39.70 | 38.30 | | | | | | | |
| Pair 1 - 2 | 62.94 | 57.74 | 60.36 | | | | | | | |
| Pair 1 - 3 | 60.62 | 72.30 | 58.80 | | | | | | | |
| Pair 1 - 4 | 60.10 | 62.01 | 60.64 | | | | | | | |
| Pair 2 - 3 | 54.66 | 59.66 | 56.12 | | | | | | | |
| Pair 2 - 4 | 54.71 | 57.39 | 57.43 | | | | | | | |
| Pair 3 - 4 | 59.07 | 61.87 | 62.15 | | | | | | | |

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

| | | | | | | | | | | |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Frequency | 1.00 | 4.00 | 8.00 | 10.00 | 16.00 | 20.00 | 25.00 | 31.25 | 62.50 | 100.00 |
| Min Spec | 74.30 | 65.20 | 60.70 | 59.30 | 56.20 | 54.70 | 53.30 | 51.80 | 47.30 | 44.30 |
| Pair 1 [9] | 86.28 | 75.93 | 72.65 | 66.26 | 69.24 | 61.21 | 63.17 | 63.98 | 62.17 | 58.76 |
| Pair 2 [10] | 83.33 | 78.03 | 69.27 | 72.05 | 66.56 | 61.74 | 64.47 | 60.02 | 57.67 | 51.54 |
| Pair 3 [11] | 81.71 | 75.48 | 70.76 | 65.91 | 69.90 | 58.84 | 64.82 | 66.72 | 58.53 | 58.86 |
| Pair 4 [12] | 81.16 | 78.08 | 73.48 | 74.01 | 65.29 | 69.35 | 66.27 | 59.93 | 58.85 | 51.62 |

Continue:Power Sum NEXT(PSNEXT)(dB)

| | | | | | | | | | | |
|-------------|--------|--------|--------|--|--|--|--|--|--|--|
| Frequency | 155.00 | 200.00 | 250.00 | | | | | | | |
| Min Spec | 41.40 | 39.70 | 38.30 | | | | | | | |
| Pair 1 [9] | 54.92 | 55.97 | 54.31 | | | | | | | |
| Pair 2 [10] | 51.08 | 52.95 | 52.63 | | | | | | | |
| Pair 3 [11] | 52.25 | 56.03 | 53.37 | | | | | | | |
| Pair 4 [12] | 52.41 | 54.81 | 53.82 | | | | | | | |

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

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