

DCM Test Report

|                                |                                      |                                         |
|--------------------------------|--------------------------------------|-----------------------------------------|
| Cable Type : 4x2x24 x PE/LSZH  | Factory Number : PHOENIX             | Data File Name : DA150243.D3S           |
| Cable I.D. : U/UTP#24X4P CABLE | Order Number : 7332 GY-265 240845439 | Specification File : CAT5e-305M.S3S     |
| Temperature : 25.00 °C         | Relative Humidity : 50 %             | Test Date/Time : 08/20/2024 06:25:47 AM |
| Length : 305.00 m              | Number of Pairs to Test : 4          | Operator : L 240819WE604002/1           |
| 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          |

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: |
|------------|-----------|-------|

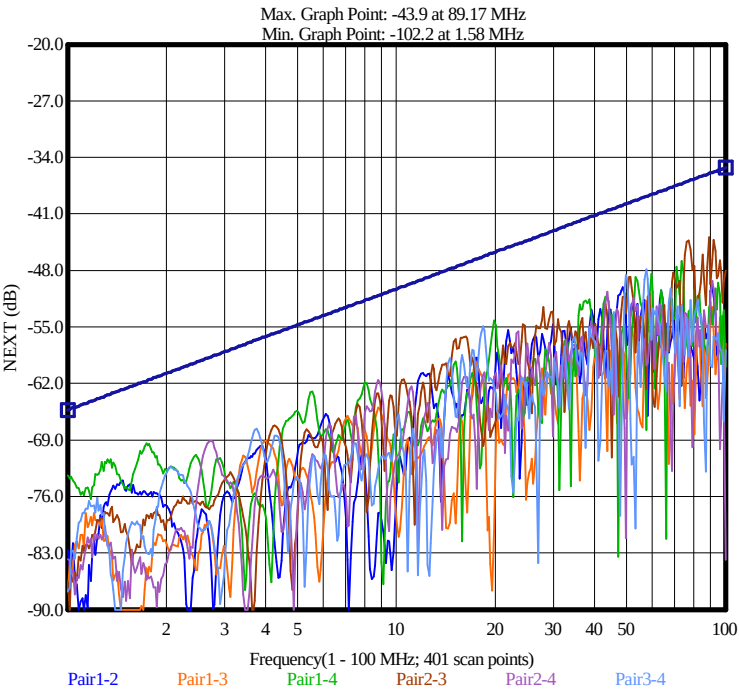
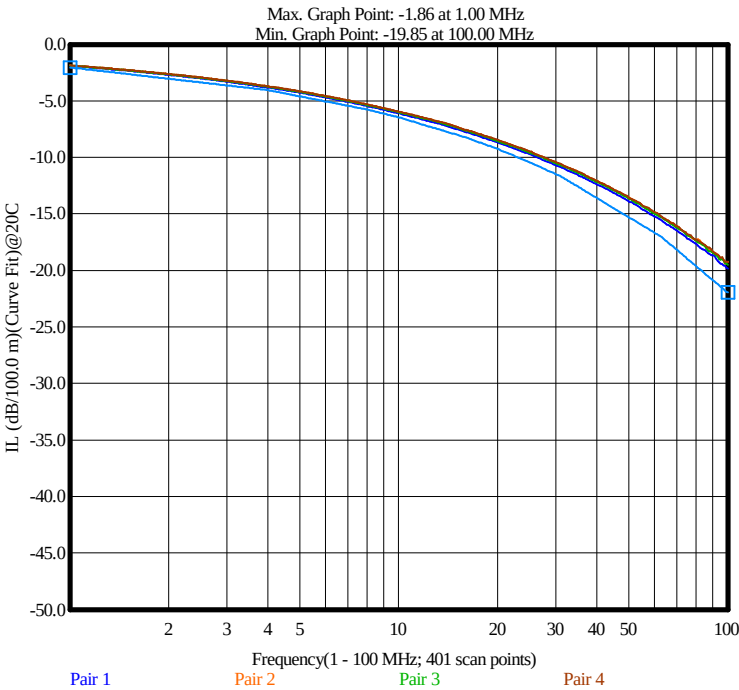
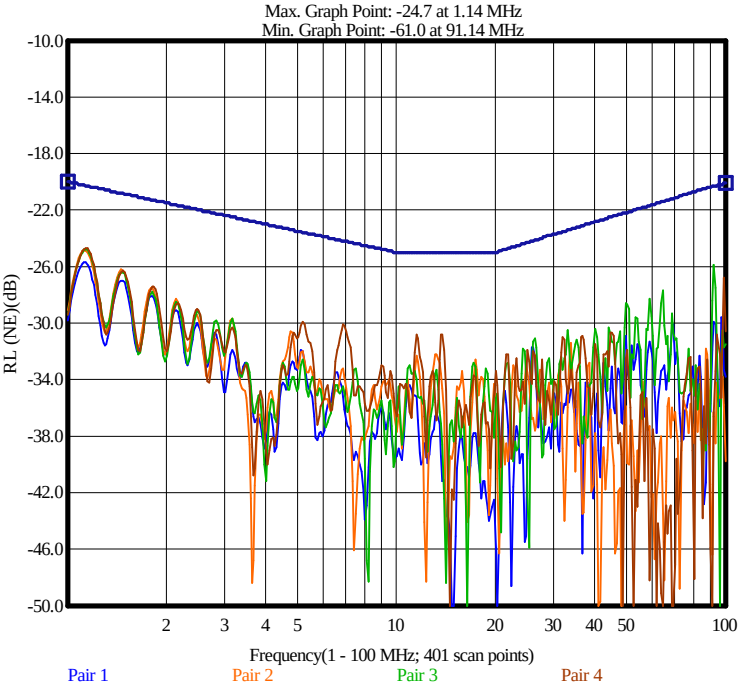
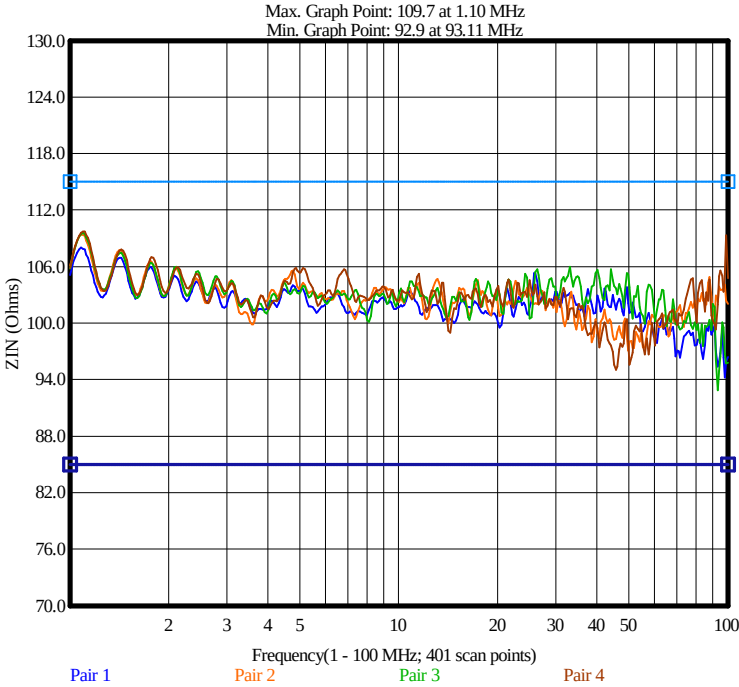
DCM Test Report

|                                |                                      |                                         |
|--------------------------------|--------------------------------------|-----------------------------------------|
| Cable Type : 4x2x24 x PE/LSZH  | Factory Number : PHOENIX             | Data File Name : DA150243.D3S           |
| Cable I.D. : U/UTP#24X4P CABLE | Order Number : 7332 GY-265 240845439 | Specification File : CAT5e-305M.S3S     |
| Temperature : 25.00 °C         | Relative Humidity : 50 %             | Test Date/Time : 08/20/2024 06:25:47 AM |
| Length : 305.00 m              | Number of Pairs to Test : 4          | Operator : L 240819WE604002/1           |
| Starting Position : 1          |                                      | Analyzer Type : ENA                     |

Worst Case Summary

High Frequency

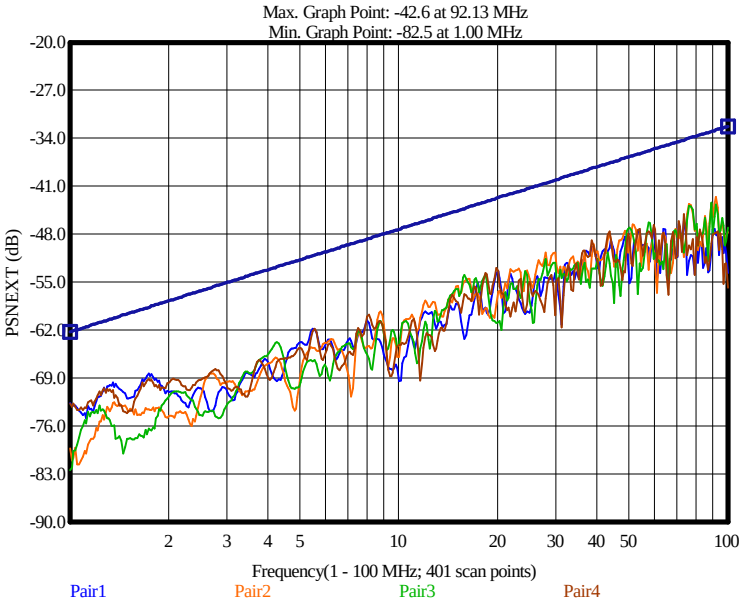
| Test Type                          | Specification | Measured (Pair)  | Margin | @ Frequency (MHz) | Test Result |
|------------------------------------|---------------|------------------|--------|-------------------|-------------|
| Input Impedance (Zin)(Terminated)  | 85.0 (Min)    | 92.9 (Pair 3)    | 7.9    | 93.11             | Passed      |
| Input Impedance (Zin)(Terminated)  | 115.0 (Max)   | 109.7 (Pair 4)   | 5.3    | 1.10              | Passed      |
| Return Loss (RL)                   | 20.3 (Min)    | 24.7 (Pair 4)    | 4.4    | 1.14              | Passed      |
| Insertion Loss (IL)(Curve Fit)@20C | 2.04 (Max)    | 1.91 (Pair 1)    | 0.13   | 1.00              | Passed      |
| Near End Crosstalk Loss (NEXT)     | 36.9 (Min)    | 44.3 (Pairs 2-3) | 7.4    | 77.36             | Passed      |
| Power Sum NEXT(PSNEXT)             | 60.3 (Min)    | 69.7 (Pair 1)    | 9.4    | 1.35              | Passed      |



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

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

\*\*\* = Measured value is invalid.



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

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

\*\*\* = Measured value is invalid.

Worst Case Summary

Low Frequency

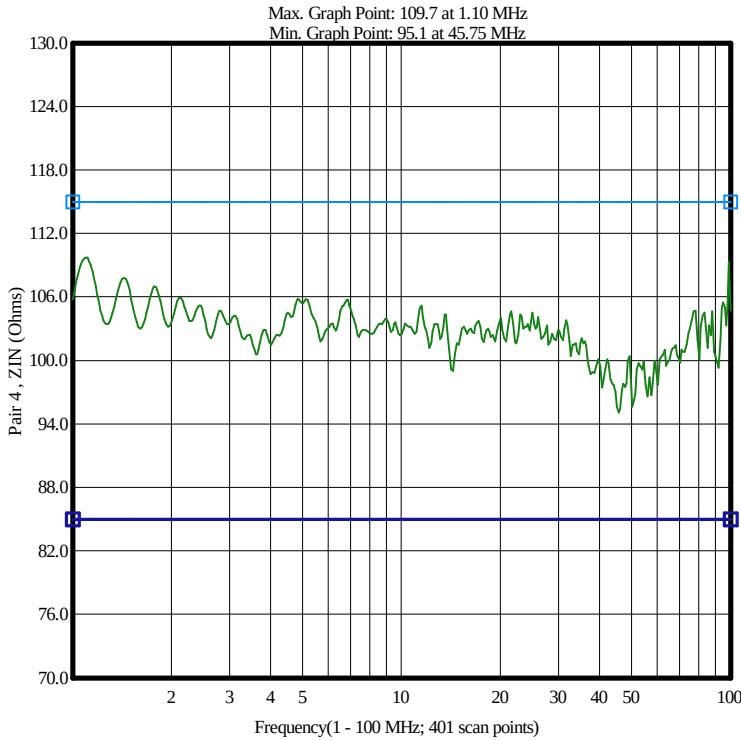
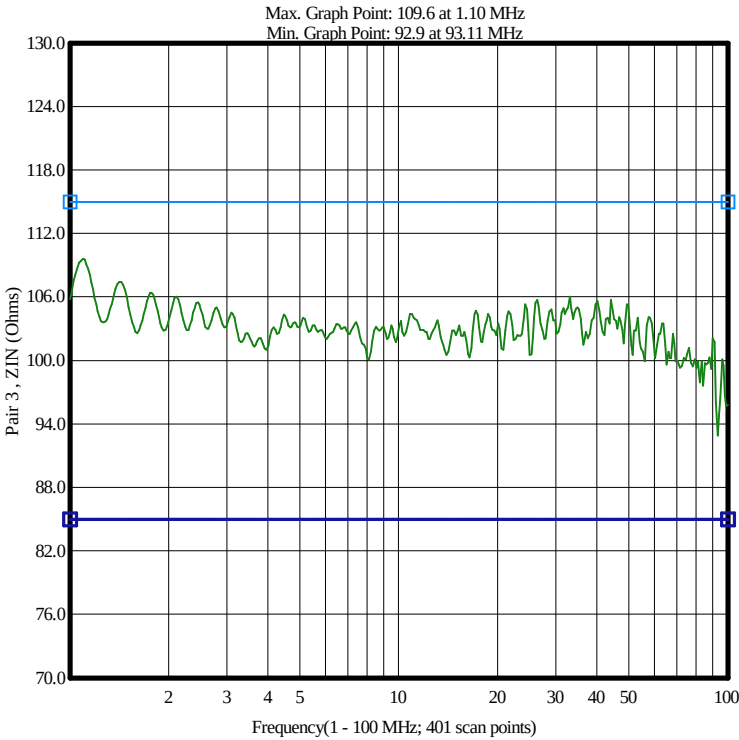
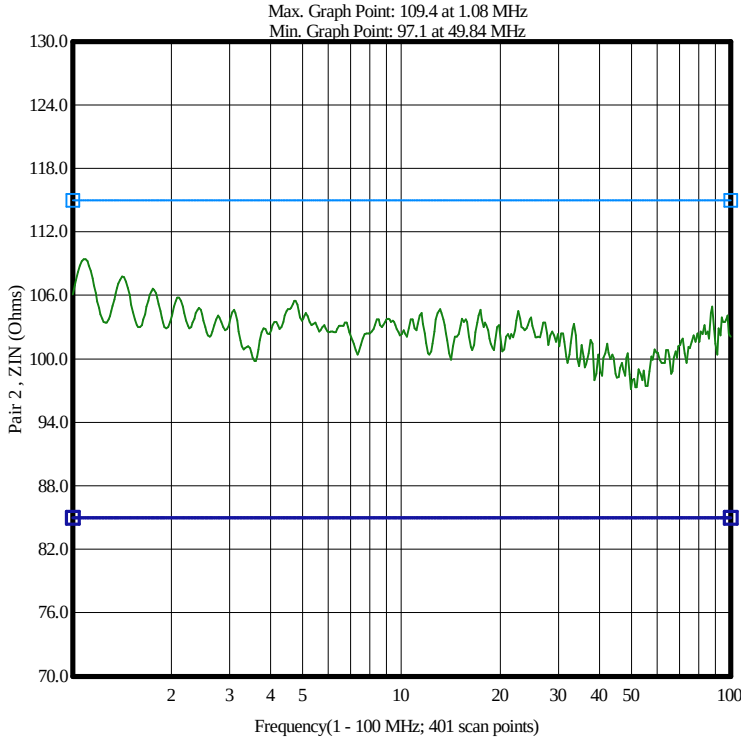
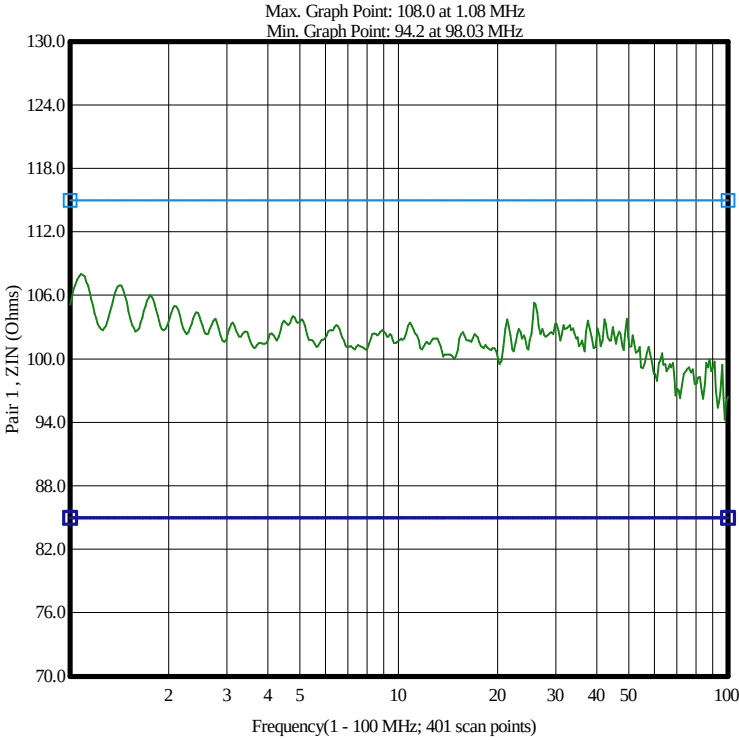
| Statistical Parameter                       | Maximum    |          | Minimum    |          | Average Maximum |          | Standard Deviation |          |        |
|---------------------------------------------|------------|----------|------------|----------|-----------------|----------|--------------------|----------|--------|
| Test Type                                   | Spec Limit | Measured | Spec Limit | Measured | Spec Limit      | Measured | Spec Limit         | Measured | Result |
| Conductor Resistance(Ohms/100.0 m)@20C      | 9.38       | 9.02     | xxx        | 8.87     | xxx             | 8.95     | xxx                | 0.057    | Passed |
| Resistance Unbalance( % )                   | 5.00       | 1.16     | xxx        | 0.05     | xxx             | 0.38     | xxx                | 0.451    | Passed |
| Mutual Capacitance(nF/100.0 m)@1000Hz       | 5.60       | 4.95     | xxx        | 4.77     | xxx             | 4.85     | xxx                | 0.072    | Passed |
| Cap. Unbalance to Ground(pF/100.0 m)@1000Hz | 330.00     | 13.28    | xxx        | 6.87     | xxx             | 9.86     | xxx                | 2.952    | 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] | 9.02                         | 9.00                         | 0.12                 | 4.95                        | -6.87                                    | Passed      |
| Pair 2 [2] | 8.87                         | 8.87                         | 0.05                 | 4.80                        | 6.99                                     | Passed      |
| Pair 3 [3] | 8.97                         | 8.95                         | 0.20                 | 4.89                        | 12.31                                    | Passed      |
| Pair 4 [4] | 8.99                         | 8.89                         | 1.16                 | 4.77                        | -13.28                                   | Passed      |

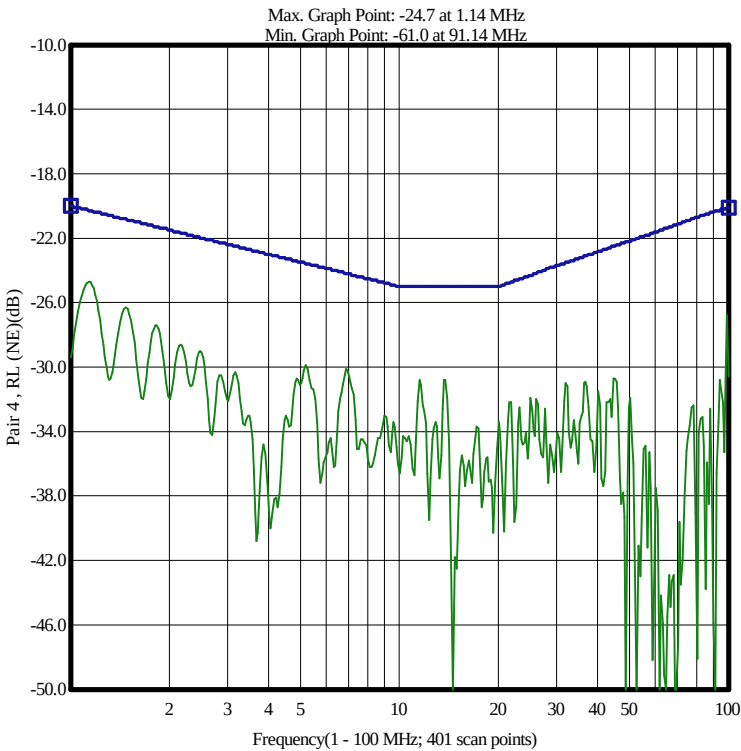
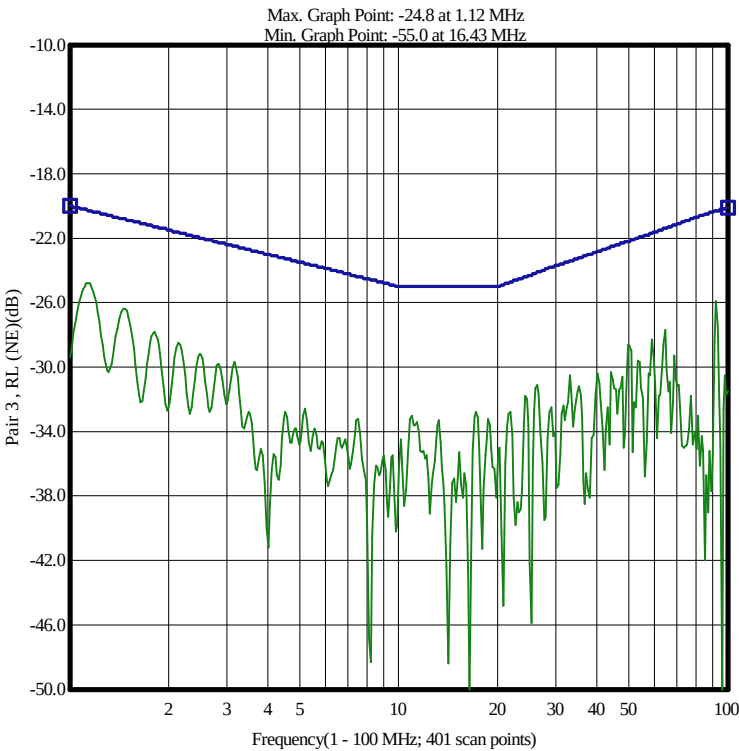
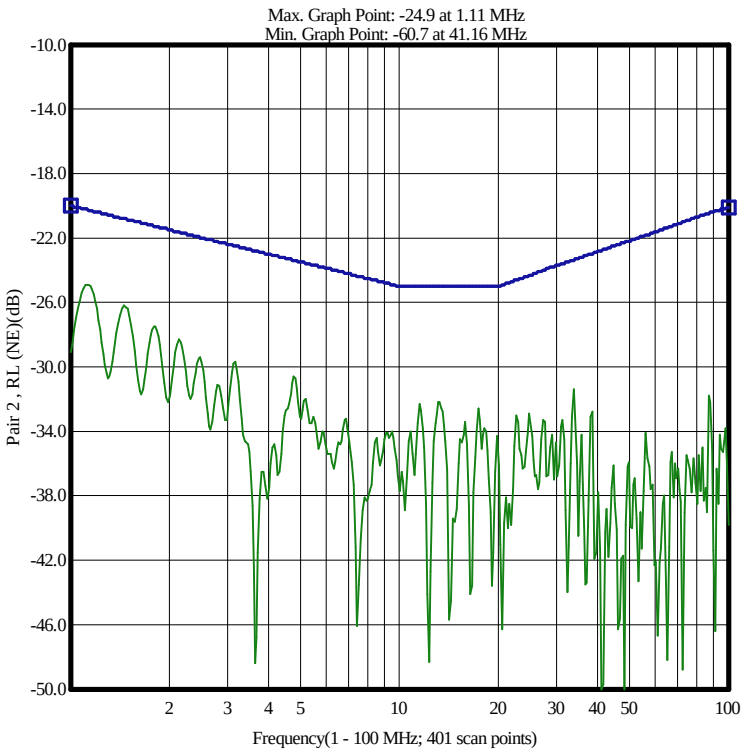
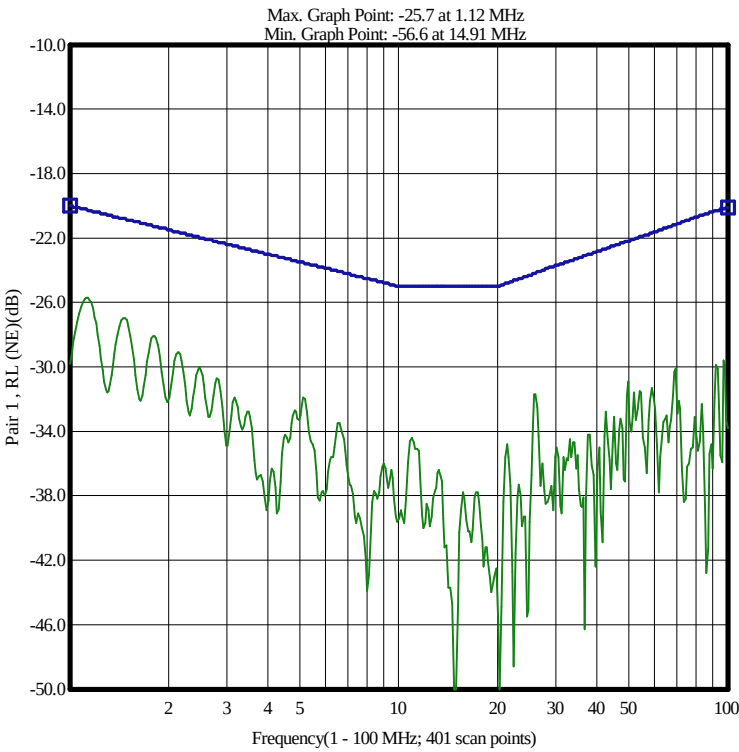
Summary and Graphic: Input Impedance (Zin)(Terminated)

|            | Specification |         | Measured(Ohms) |         | Margin (Ohms) |         | @ Frequency (MHz) |         |             |
|------------|---------------|---------|----------------|---------|---------------|---------|-------------------|---------|-------------|
| Pair       | Minimum       | Maximum | Minimum        | Maximum | Minimum       | Maximum | Minimum           | Maximum | Test Result |
| Pair 1 [1] | 85.0          | 115.0   | 94.2           | 108.0   | 9.2           | 7.0     | 98.03             | 1.08    | Passed      |
| Pair 2 [2] | 85.0          | 115.0   | 97.1           | 109.4   | 12.1          | 5.6     | 49.84             | 1.08    | Passed      |
| Pair 3 [3] | 85.0          | 115.0   | 92.9           | 109.6   | 7.9           | 5.4     | 93.11             | 1.10    | Passed      |
| Pair 4 [4] | 85.0          | 115.0   | 95.1           | 109.7   | 10.1          | 5.3     | 45.75             | 1.10    | Passed      |



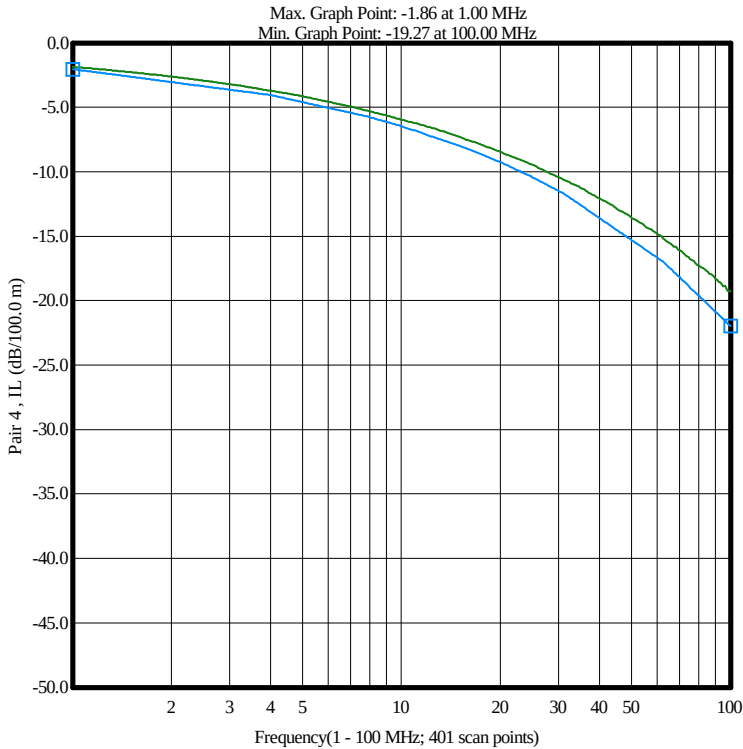
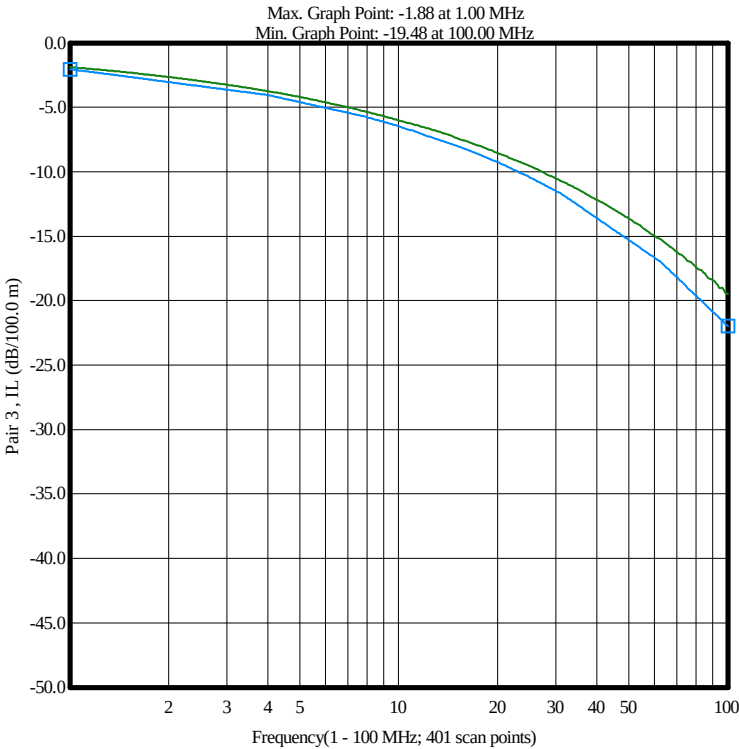
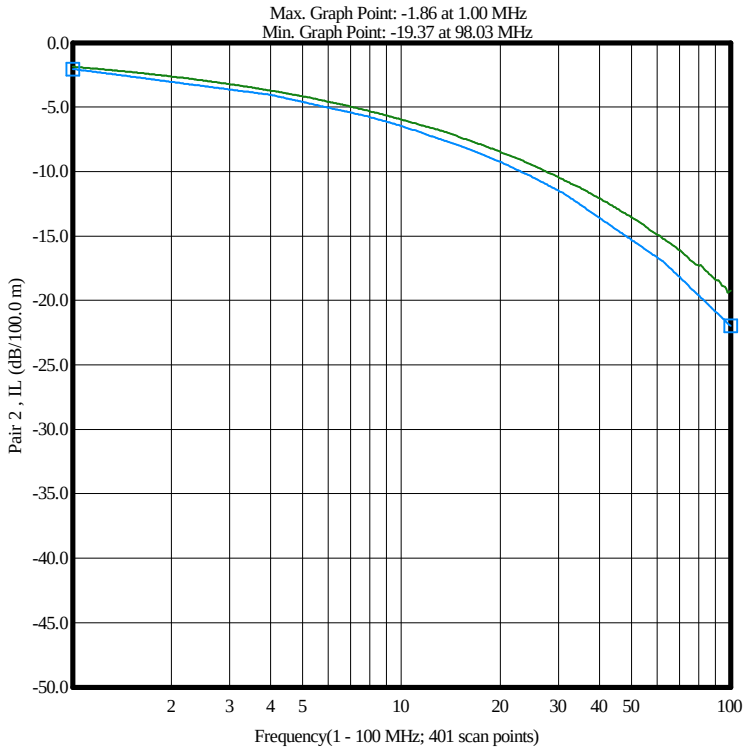
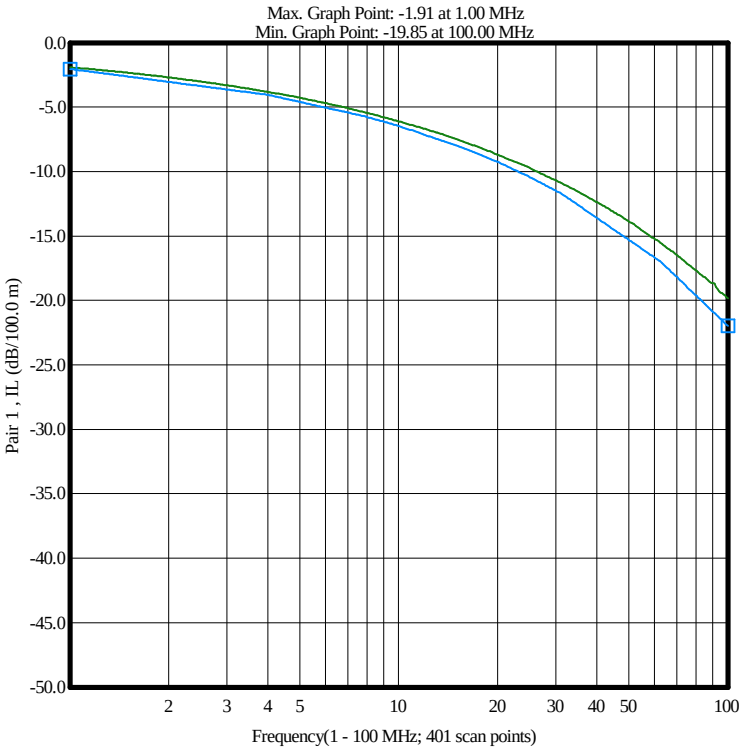
Summary and Graphic: Return Loss (RL)

| Pair       | Spec (Min)(dB) | Measured(dB) | Margin (dB) | @ Frequency (MHz) | Test Result |
|------------|----------------|--------------|-------------|-------------------|-------------|
| Pair 1 [1] | 20.3           | 25.7         | 5.4         | 1.14              | Passed      |
| Pair 2 [2] | 20.3           | 24.9         | 4.6         | 1.14              | Passed      |
| Pair 3 [3] | 20.3           | 24.8         | 4.5         | 1.14              | Passed      |
| Pair 4 [4] | 20.3           | 24.7         | 4.4         | 1.14              | Passed      |



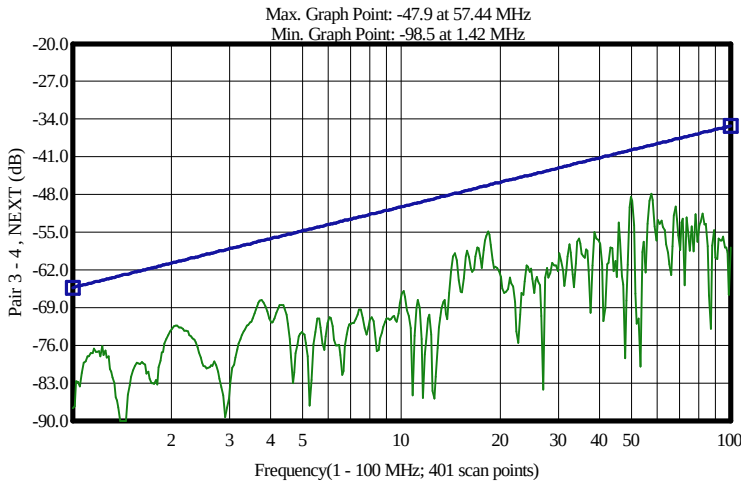
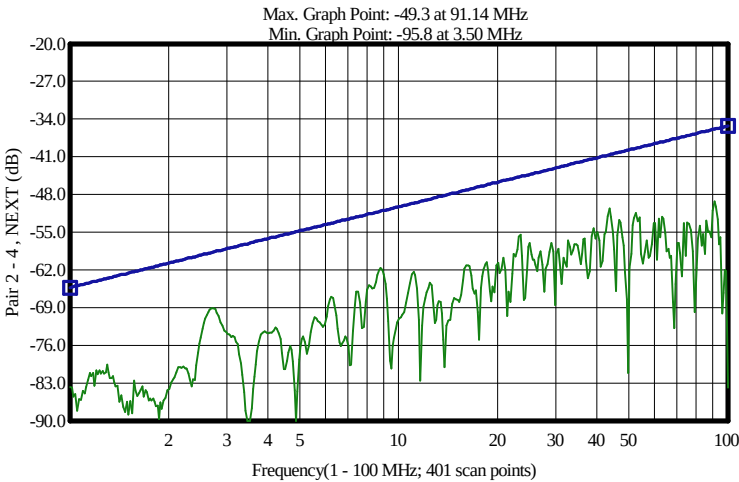
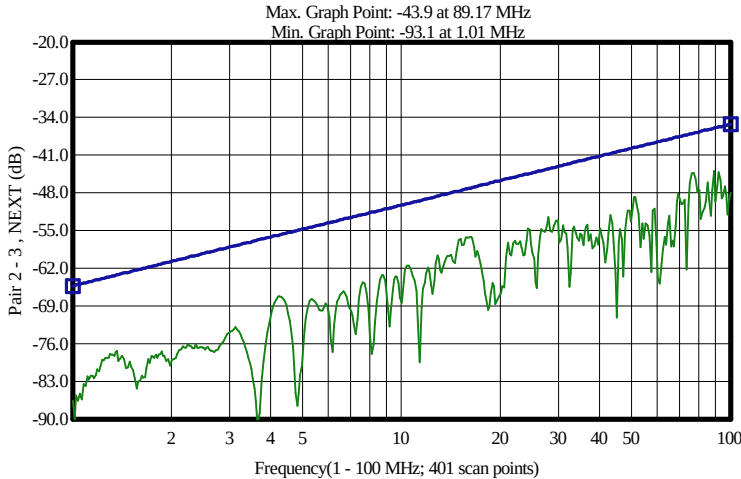
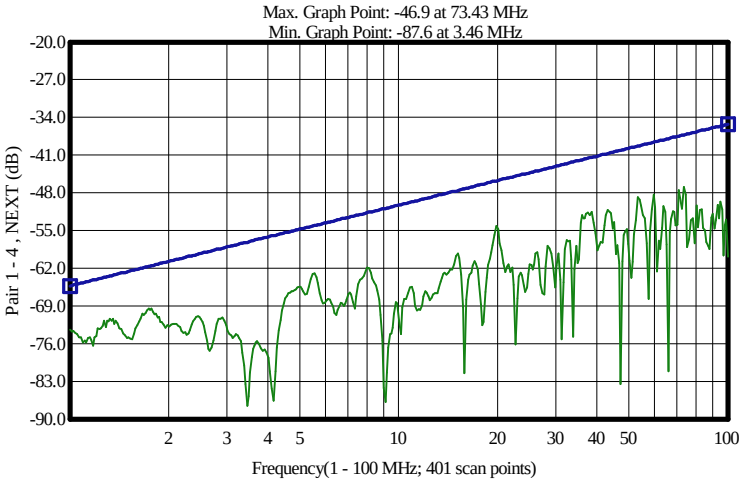
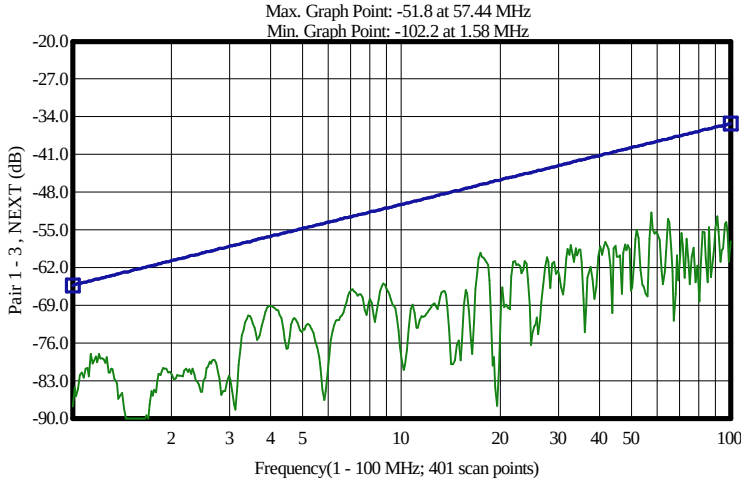
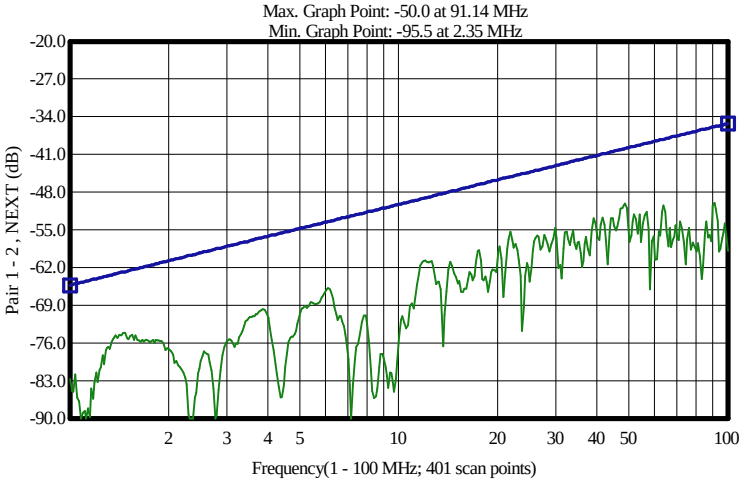
Summary and Graphic: Insertion Loss (IL)(Curve Fit)@20C

| Pair       | Spec (Max)(dB/100.0 m) | Measured(dB/100.0 m) | Margin (dB/100.0 m) | @ Frequency (MHz) | Test Result |
|------------|------------------------|----------------------|---------------------|-------------------|-------------|
| Pair 1 [1] | 2.04                   | 1.91                 | 0.13                | 1.00              | Passed      |
| Pair 2 [2] | 2.04                   | 1.86                 | 0.18                | 1.00              | Passed      |
| Pair 3 [3] | 2.04                   | 1.88                 | 0.16                | 1.00              | Passed      |
| Pair 4 [4] | 2.04                   | 1.86                 | 0.18                | 1.00              | Passed      |



Summary and Graphic: Near End Crosstalk Loss (NEXT)

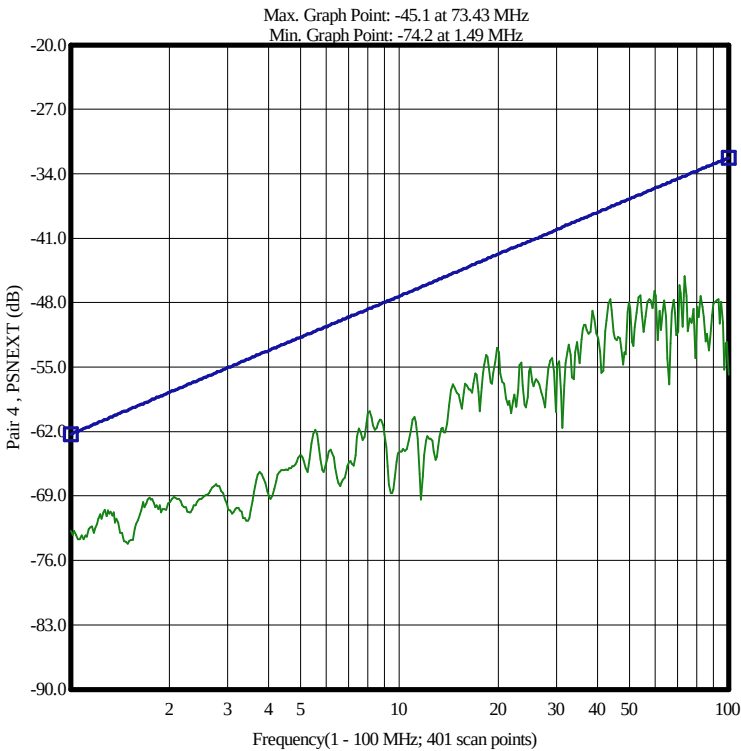
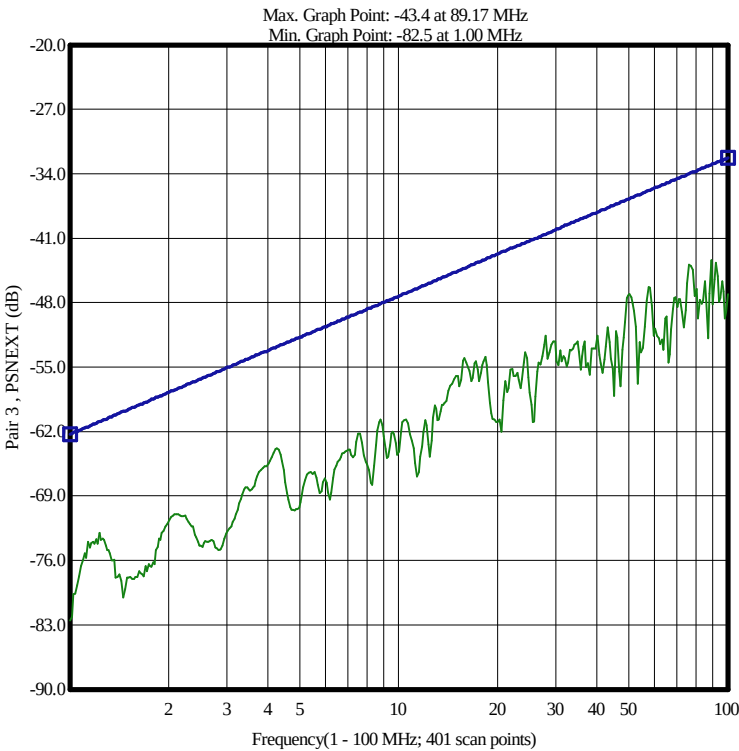
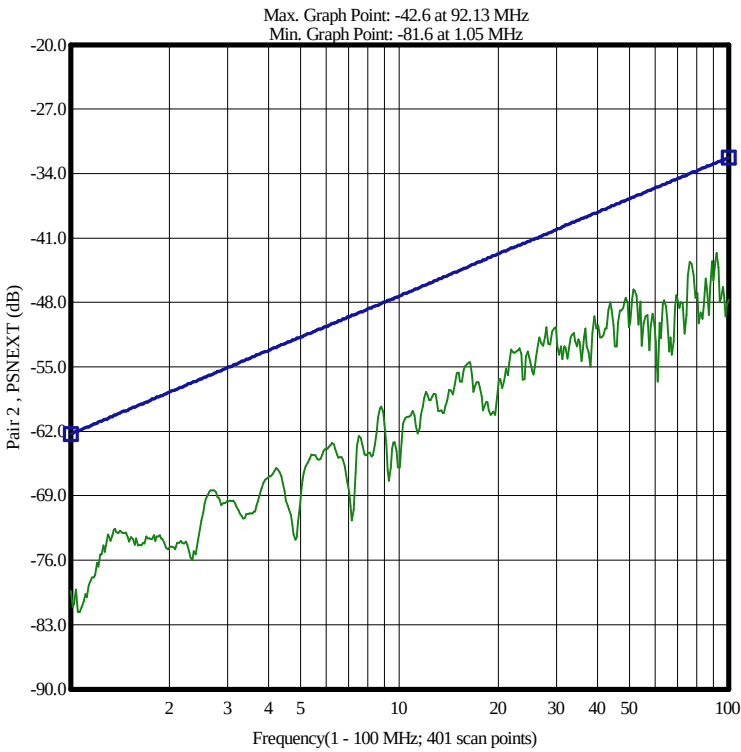
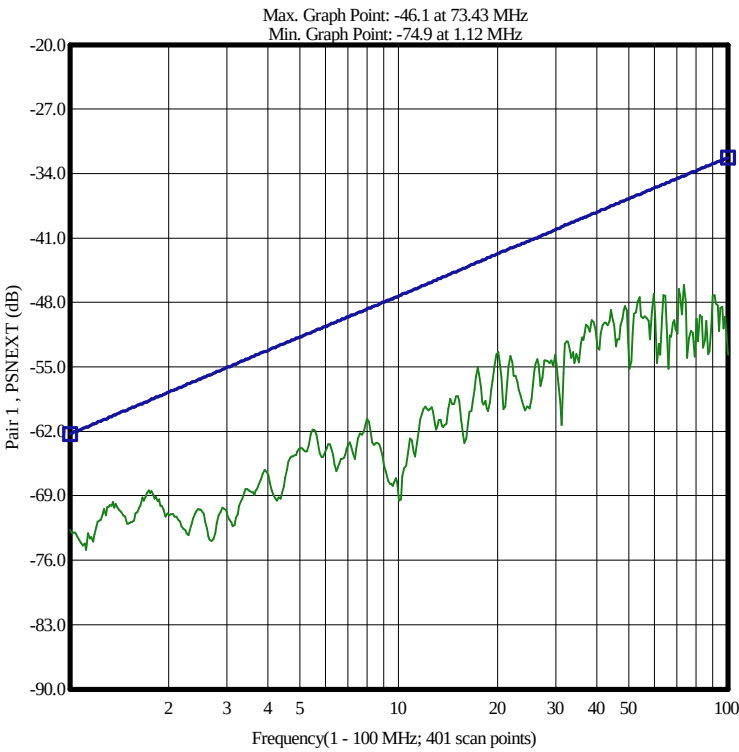
| Pair       | Spec (Min)(dB) | Measured(dB) | Margin (dB) | @ Frequency (MHz) | Test Result |
|------------|----------------|--------------|-------------|-------------------|-------------|
| Pair 1 - 2 | 39.9           | 50.1         | 10.2        | 48.82             | Passed      |
| Pair 1 - 3 | 46.6           | 59.3         | 12.7        | 17.38             | Passed      |
| Pair 1 - 4 | 61.7           | 69.5         | 7.8         | 1.74              | Passed      |
| Pair 2 - 3 | 36.9           | 44.3         | 7.4         | 77.36             | Passed      |
| Pair 2 - 4 | 40.6           | 50.6         | 10.0        | 43.71             | Passed      |
| Pair 3 - 4 | 46.3           | 54.9         | 8.6         | 18.33             | Passed      |





Summary and Graphic: Power Sum NEXT(PSNEXT)

| Pair       | Spec (Min)(dB) | Measured(dB) | Margin (dB) | @ Frequency (MHz) | Test Result |
|------------|----------------|--------------|-------------|-------------------|-------------|
| Pair 1 [1] | 60.3           | 69.7         | 9.4         | 1.35              | Passed      |
| Pair 2 [2] | 34.0           | 43.6         | 9.6         | 76.38             | Passed      |
| Pair 3 [3] | 44.3           | 54.0         | 9.7         | 15.86             | Passed      |
| Pair 4 [4] | 60.7           | 70.5         | 9.8         | 1.27              | Passed      |



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] | 29.8 | 38.4 | 39.4  | 39.2  | 45.6  | 40.2  | 35.3  | 39.0  | 35.4  | 34.0  |
| Pair 2 [2] | 29.1 | 37.7 | 37.7  | 34.4  | 35.9  | 33.4  | 35.6  | 33.4  | 40.9  | 38.1  |
| Pair 3 [3] | 29.4 | 40.9 | 36.1  | 37.2  | 35.6  | 41.3  | 35.5  | 33.3  | 31.5  | 34.7  |
| Pair 4 [4] | 29.4 | 38.7 | 36.6  | 36.7  | 33.6  | 32.2  | 34.7  | 35.1  | 44.4  | 45.2  |

Continue:Return Loss (RL)(dB)

|            |        |  |  |  |  |  |  |  |  |  |
|------------|--------|--|--|--|--|--|--|--|--|--|
| Frequency  | 100.00 |  |  |  |  |  |  |  |  |  |
| Min Spec   | 20.1   |  |  |  |  |  |  |  |  |  |
| Pair 1 [1] | 33.8   |  |  |  |  |  |  |  |  |  |
| Pair 2 [2] | 39.8   |  |  |  |  |  |  |  |  |  |
| Pair 3 [3] | 31.5   |  |  |  |  |  |  |  |  |  |
| Pair 4 [4] | 30.6   |  |  |  |  |  |  |  |  |  |

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] | 1.91 | 3.83 | 5.45 | 6.11  | 7.75  | 8.70  | 9.72  | 10.90 | 15.52 | 19.85  |
| Pair 2 [2] | 1.86 | 3.72 | 5.32 | 5.97  | 7.57  | 8.49  | 9.49  | 10.68 | 15.23 | 19.23  |
| Pair 3 [3] | 1.88 | 3.75 | 5.37 | 6.02  | 7.63  | 8.56  | 9.57  | 10.72 | 15.25 | 19.48  |
| Pair 4 [4] | 1.86 | 3.72 | 5.31 | 5.96  | 7.57  | 8.47  | 9.46  | 10.63 | 15.19 | 19.27  |

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 | 82.7 | 71.2 | 75.0  | 65.9  | 59.5  | 64.4  | 55.5  | 63.6  | 55.4  | 58.8  |
| Pair 1 - 3 | 87.8 | 69.1 | 79.3  | 69.3  | 70.2  | 74.5  | 62.9  | 65.4  | 64.8  | 66.2  |
| Pair 1 - 4 | 73.4 | 78.5 | 71.7  | 71.4  | 54.8  | 61.5  | 63.8  | 73.6  | 57.9  | 52.7  |
| Pair 2 - 3 | 86.6 | 70.9 | 68.4  | 56.3  | 66.6  | 59.1  | 54.9  | 55.0  | 58.3  | 47.6  |
| Pair 2 - 4 | 83.8 | 73.7 | 71.0  | 61.3  | 60.7  | 57.1  | 64.3  | 64.2  | 55.4  | 64.3  |
| Pair 3 - 4 | 87.7 | 71.6 | 66.4  | 59.3  | 63.2  | 63.5  | 60.7  | 64.6  | 54.2  | 54.7  |

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

|            |        |  |  |  |  |  |  |  |  |  |
|------------|--------|--|--|--|--|--|--|--|--|--|
| Frequency  | 100.00 |  |  |  |  |  |  |  |  |  |
| Min Spec   | 35.3   |  |  |  |  |  |  |  |  |  |
| Pair 1 - 2 | 58.9   |  |  |  |  |  |  |  |  |  |
| Pair 1 - 3 | 57.1   |  |  |  |  |  |  |  |  |  |
| Pair 1 - 4 | 59.9   |  |  |  |  |  |  |  |  |  |
| Pair 2 - 3 | 48.0   |  |  |  |  |  |  |  |  |  |
| Pair 2 - 4 | 83.9   |  |  |  |  |  |  |  |  |  |
| Pair 3 - 4 | 57.9   |  |  |  |  |  |  |  |  |  |

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] | 72.7 | 66.7 | 69.5  | 62.9  | 53.4  | 59.5  | 54.1  | 61.0  | 53.1  | 51.1  |
| Pair 2 [2] | 79.3 | 66.9 | 65.9  | 54.8  | 56.6  | 54.4  | 51.6  | 54.0  | 51.4  | 47.2  |
| Pair 3 [3] | 82.5 | 65.6 | 64.2  | 54.4  | 60.9  | 57.6  | 53.2  | 54.2  | 52.4  | 46.8  |
| Pair 4 [4] | 72.8 | 69.0 | 64.2  | 56.9  | 53.4  | 55.1  | 57.7  | 61.0  | 50.7  | 50.3  |

Continue:Power Sum NEXT(PSNEXT)(dB)

|            |        |  |  |  |  |  |  |  |  |  |
|------------|--------|--|--|--|--|--|--|--|--|--|
| Frequency  | 100.00 |  |  |  |  |  |  |  |  |  |
| Min Spec   | 32.3   |  |  |  |  |  |  |  |  |  |
| Pair 1 [1] | 53.7   |  |  |  |  |  |  |  |  |  |
| Pair 2 [2] | 47.7   |  |  |  |  |  |  |  |  |  |
| Pair 3 [3] | 47.1   |  |  |  |  |  |  |  |  |  |
| Pair 4 [4] | 55.8   |  |  |  |  |  |  |  |  |  |