



**Typical Characteristics
On
PS-500M2G-8B-SFF
(Extended Data - 85MHz to 6GHz)**



**Designed by: Ashok Gorwara, Dave Durbin
Tested by: Kevin Mansfield
Reported by: Kevin Mansfield**

February 4, 2013



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DESCRIPTION

PMI MODEL NUMBER PS-500M2G-8B-SFF IS A 0.5 TO 2GHZ DIGITALLY CONTROLLED ANALOG PHASE SHIFTER WITH CAPABILITY FOR PHASE SHIFTING FROM 0° TO 360°. THE UNIT CONSISTS OF AN ANALOG PHASE SHIFTER AND A DIGITAL-TO-ANALOG CONVERTER. EIGHT LOGIC INPUT LINES ALLOW 256 DISCRETE VALUES OF PHASE.

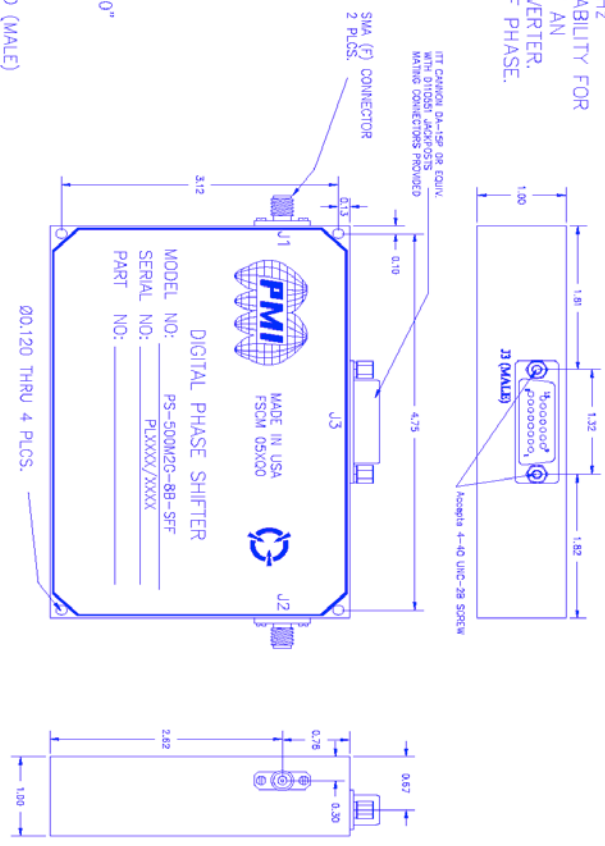
SPECIFICATIONS

- FREQUENCY RANGE: 0.5 TO 2 GHz
- CONTROL: 8 BIT TTL
- INSERTION LOSS: 1.3dB MAX
- PHASE SHIFT: 360° TYP
- AMPLITUDE ERROR: ±1.0 DB MAX.
- PHASE SHIFT ERROR: ±10° MAX.
- SWITCHING SPEED: 500 nSEC MAX.
- POWER SUPPLY:
 - +V: +15V
 - V: -15V
- SIZE: 4.95" X 3.38" X 1.00"
- WEIGHT: TBD
- CONNECTORS(RF): SMA FEMALE
- CONNECTOR (CONTROL): 15 PIN SUBMINIATURE D (MALE)
- TEMPERATURE: 0°C TO +50° C
- FINISH: PAINTED GREY

ENVIRONMENTAL RATINGS

- TEMPERATURE: 0°C TO +50°C (OPERATING)
-65°C TO +125°C (STORAGE)
 - HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
 - SHOCK: MIL-STD-202F, METHOD 213B COND. B
 - VIBRATION: MIL-STD-202F, METHOD 204D COND. B
 - ALTITUDE: MIL-STD-202F, METHOD 109C COND. B
 - TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A
- NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE RANGE. THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION.

| REVISIONS | | DATE | APPROVED |
|-----------|-----|------------------|----------|
| ZONE | REV | DESCRIPTION | |
| A | | ORIGINAL RELEASE | 2/9/11 |



| PII LETTER | FUNCTION |
|------------|--------------------|
| 1 | LOGIC INPUTS (LSB) |
| 2 | LOGIC INPUTS |
| 3 | LOGIC INPUTS |
| 4 | LOGIC INPUTS |
| 5 | LOGIC INPUTS |
| 6 | LOGIC INPUTS |
| 7 | LOGIC INPUTS |
| 8 | LOGIC INPUTS (MSB) |
| 9 | NC |
| 10 | NC |
| 11 | NC |
| 12 | NC |
| 13 | +15 VDC |
| 14 | -15 VDC |
| 15 | GROUND |

ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
X.XX ±0.020
X.XXX ±0.010

CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: 301-662-5019 FAX: 301-662-1731
WEBSITE: WWW.PMI-RF.COM
E-MAIL: SALES@PMI-RF.COM
ISO 9001:2000 CERTIFIED

APPROVALS: _____ DATE: _____

DESIGN: **gjs** DATE: **2/9/11**

MODIFIED: **gjk** DATE: **3/18/11**

ISSUED: _____

PRODUCT FEATURE

PS-500M2G-8B-SFF

0.5-2.0GHz, 0-360° PHASE SHIFTER

SIZE FROM NO. 05X00

DWG NO. 27014064

SCALE: N/A

SHEET 1 OF 1



Data Taken at 25° C

Data Taken at -30 dBm Input Power

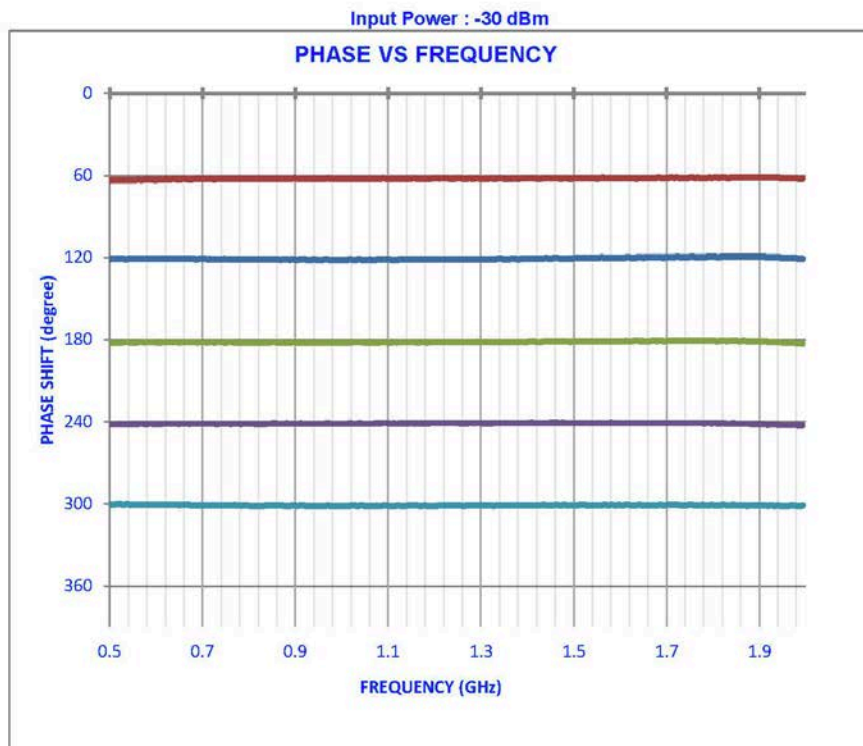
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|------------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 9.77 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.61 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.61 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 0.48 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|--------------------------|-------------|----------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.42 | -0.02 | 0.15 |
| 2.81 | 2.91 | -0.09 | 0.19 |
| 5.63 | 5.83 | -0.21 | 0.16 |
| 11.25 | 11.58 | -0.33 | 0.17 |
| 22.50 | 21.68 | 0.82 | 0.18 |
| 45.00 | 44.82 | 0.18 | 0.17 |
| 90.00 | 90.07 | -0.07 | 0.19 |
| 180.00 | 180.36 | -0.36 | 0.20 |
| 358.59 | 358.52 | 0.07 | 0.26 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|--------------------------|-------------|----------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 33.95 | -0.20 | 0.38 |
| 67.50 | 67.90 | -0.40 | 0.42 |
| 101.25 | 100.57 | 0.68 | 0.36 |
| 135.00 | 134.95 | 0.05 | 0.43 |
| 168.75 | 168.92 | -0.17 | 0.41 |
| 202.50 | 203.12 | -0.62 | 0.43 |
| 236.25 | 236.03 | 0.22 | 0.43 |
| 270.00 | 269.47 | 0.53 | 0.44 |
| 303.75 | 303.69 | 0.06 | 0.44 |
| 337.50 | 337.26 | 0.24 | 0.48 |
| | | | |
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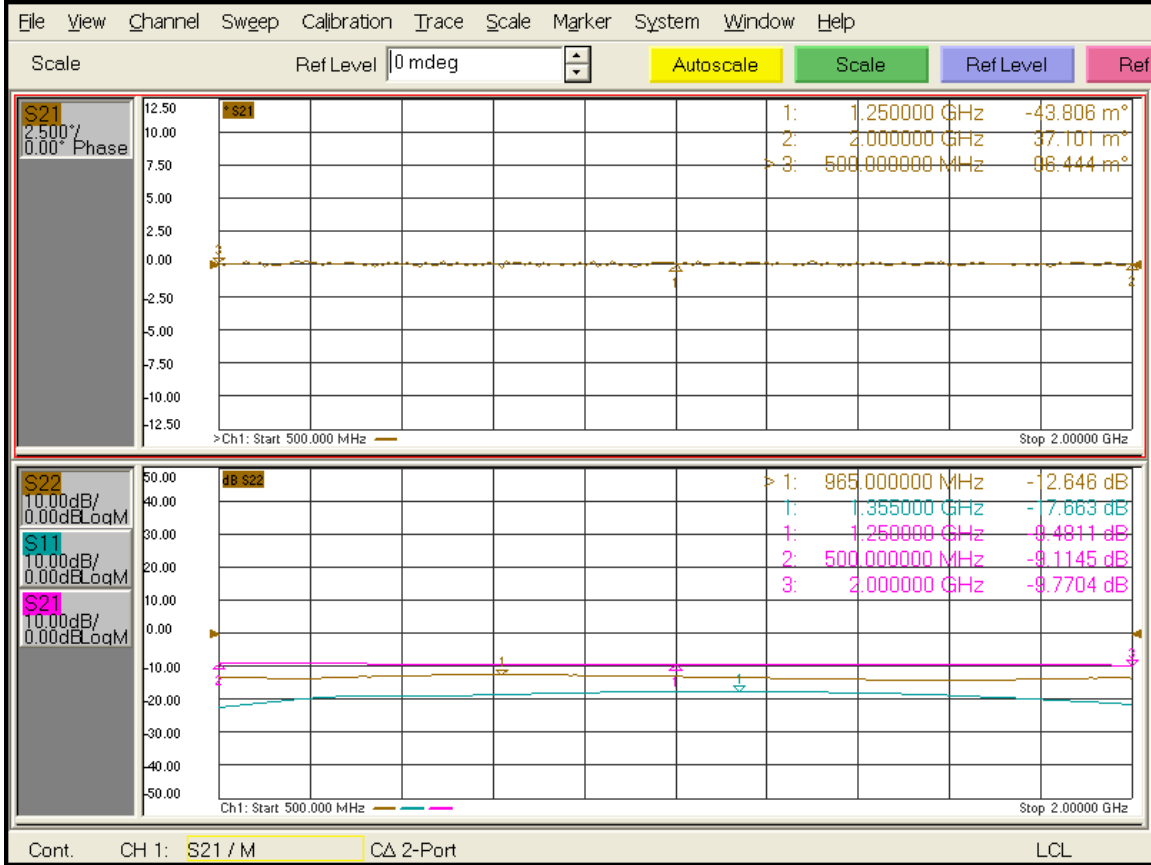


Phase Plot at 25° C



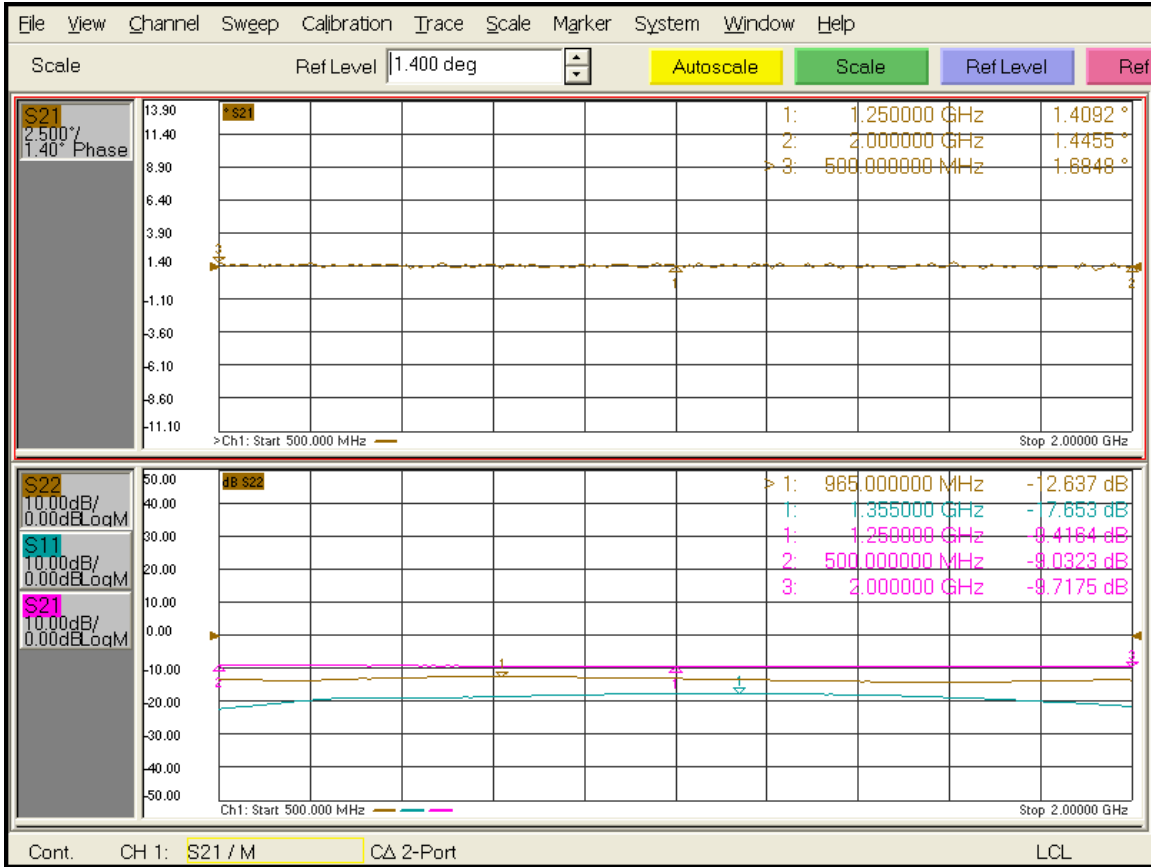


0° Phase, -30 dBm Input Power @ 25° C



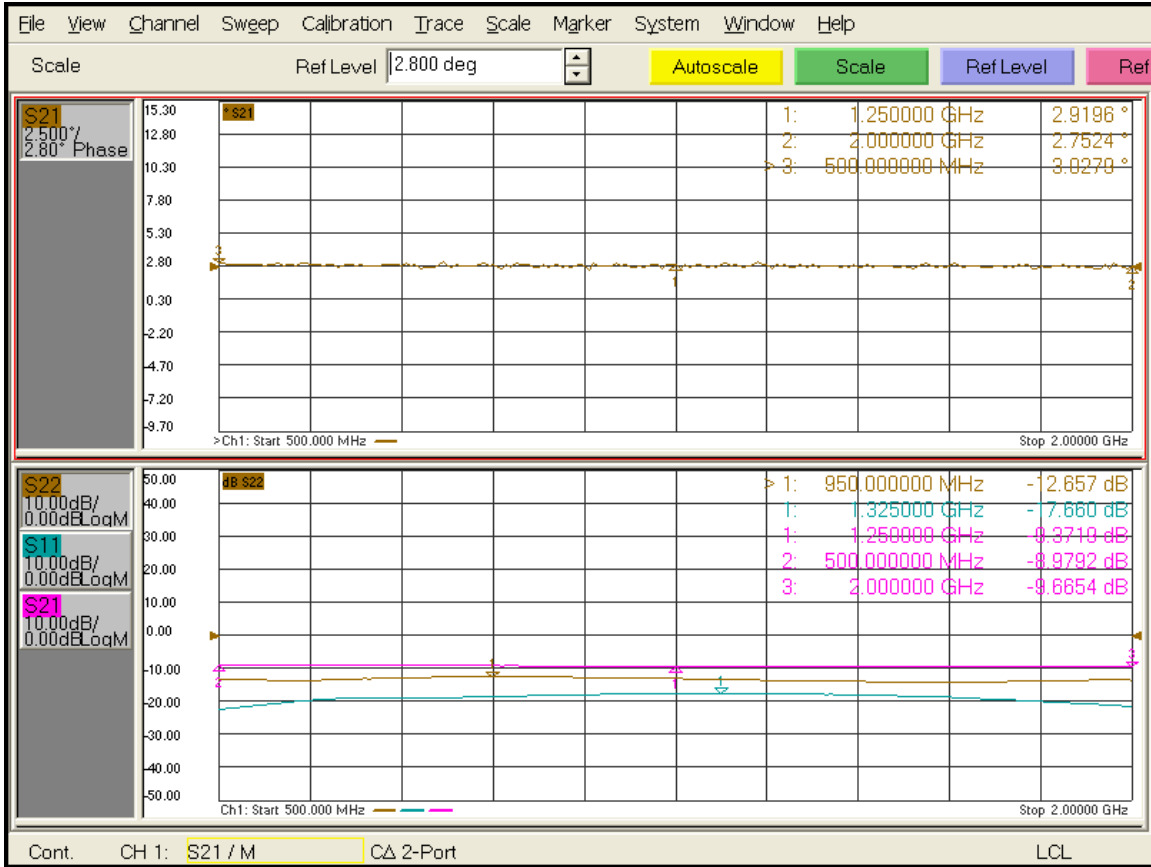


1.4° Phase, -30 dBm Input Power @ 25° C



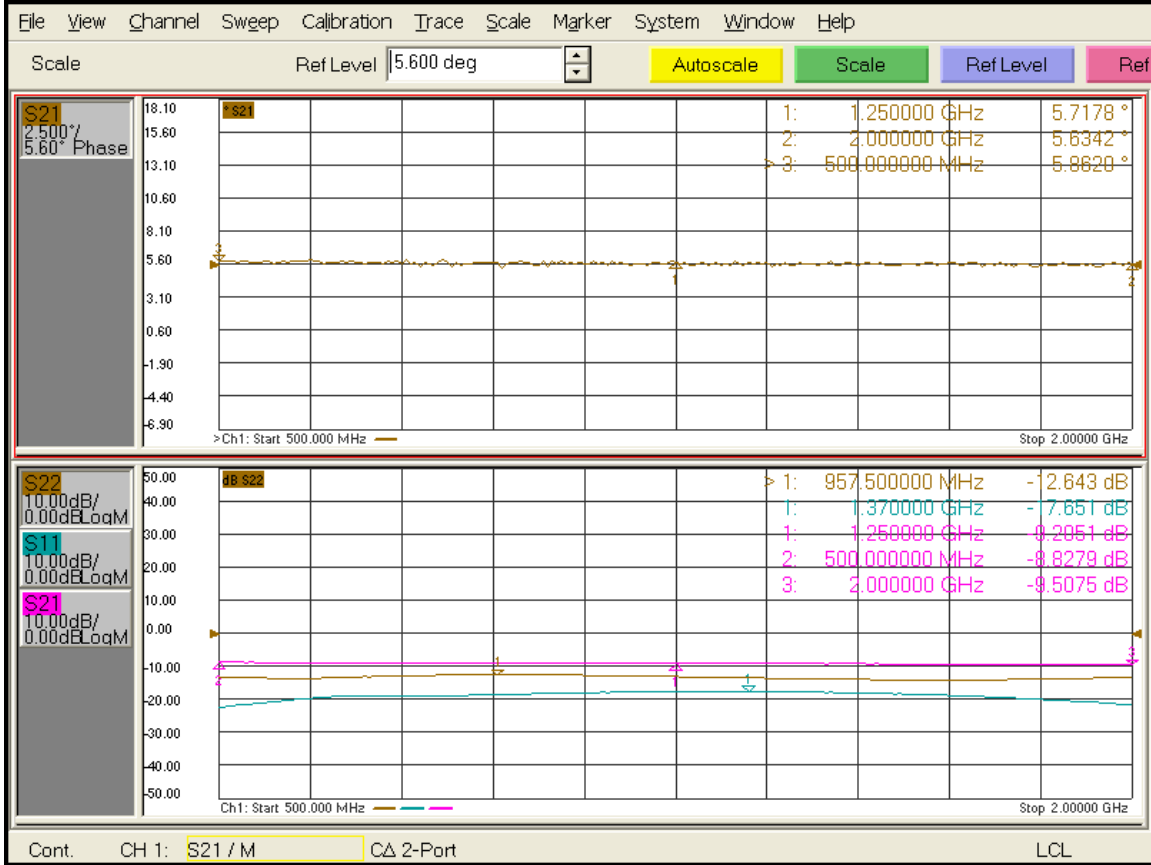


2.8° Phase, -30 dBm Input Power @ 25° C



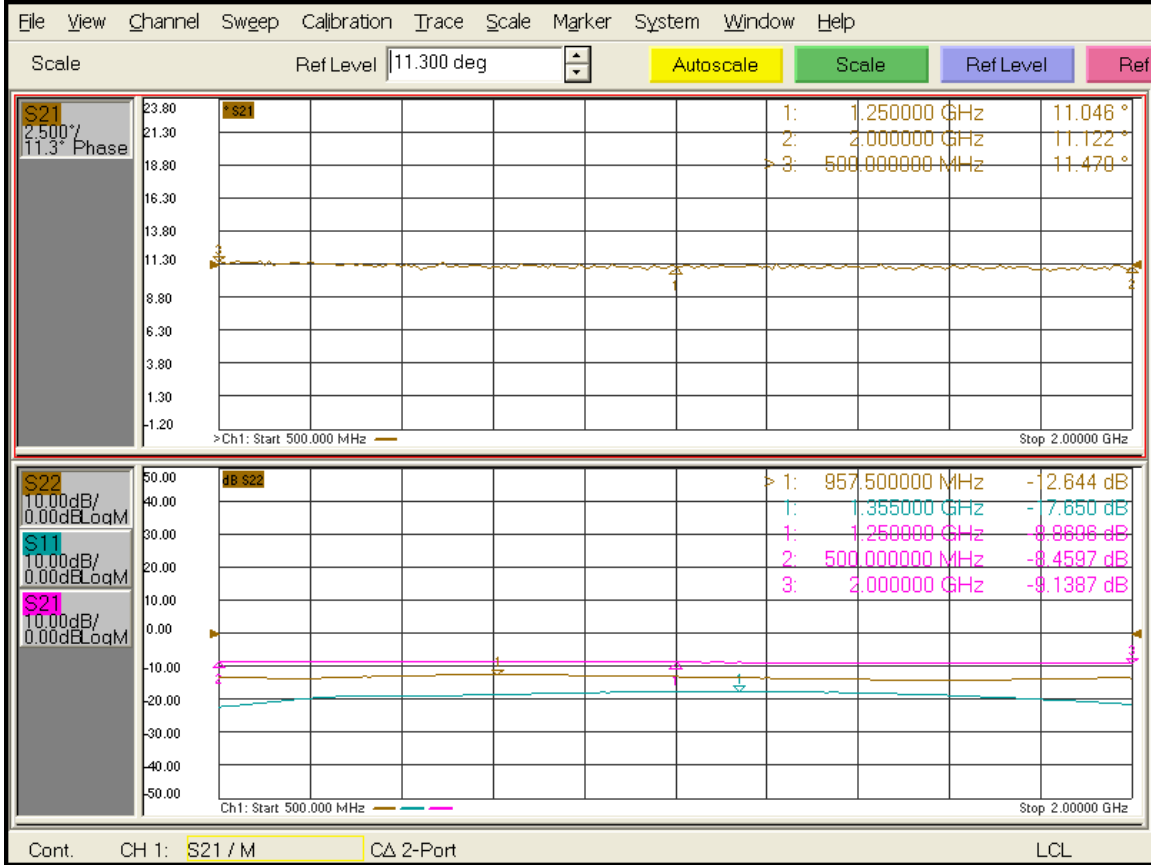


5.6° Phase, -30 dBm Input Power @ 25° C



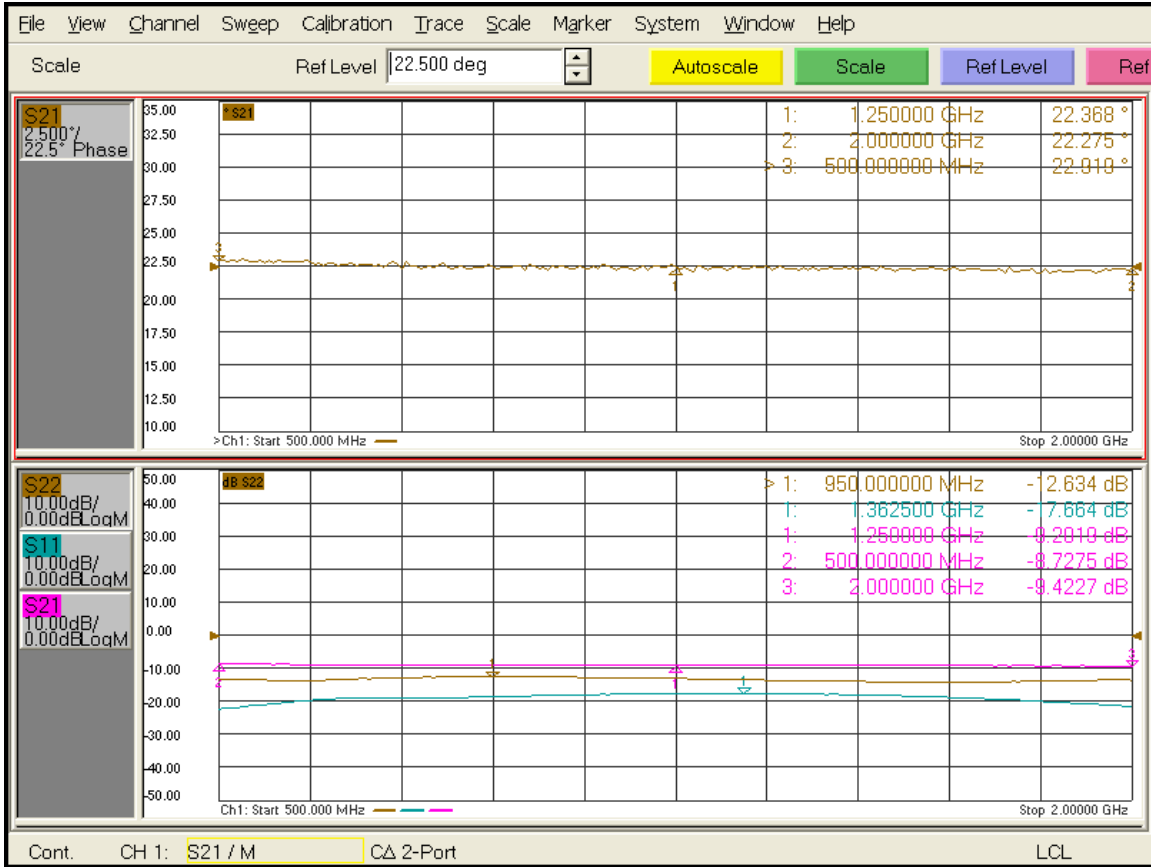


11.25° Phase, -30 dBm Input Power @ 25° C



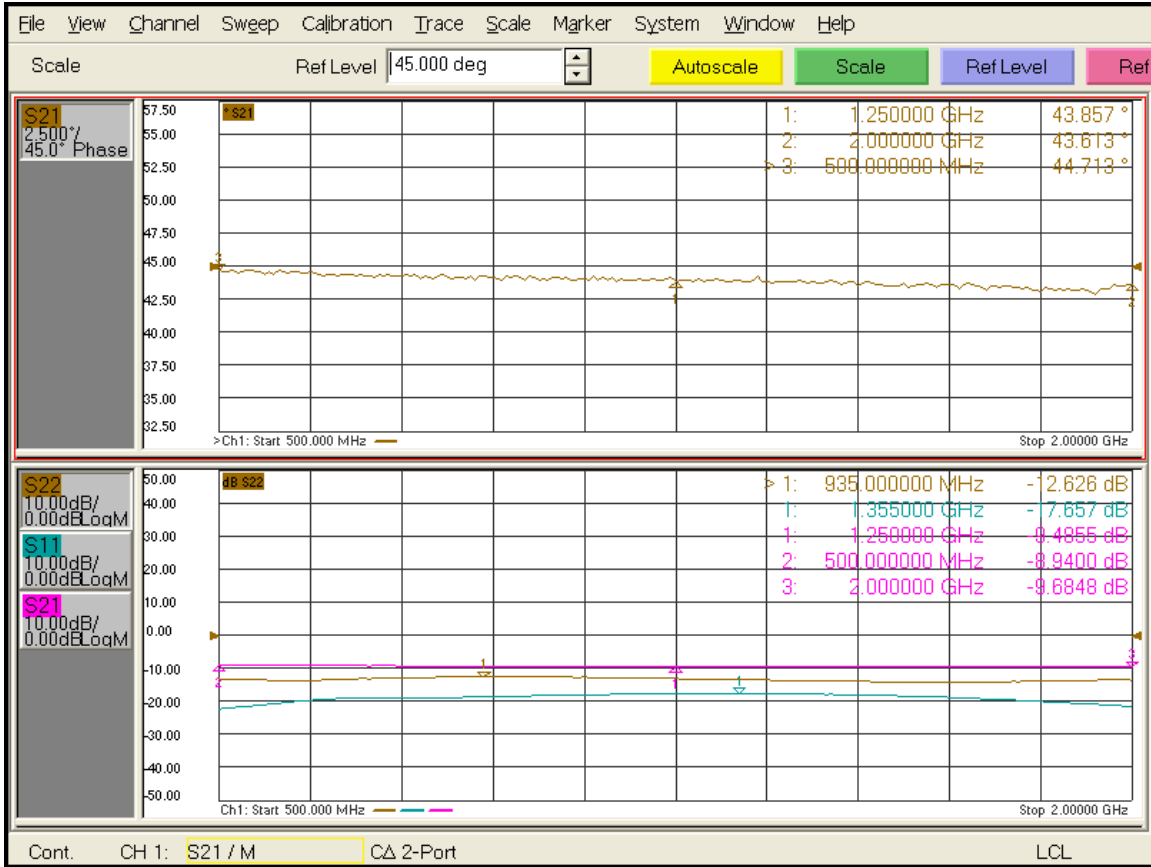


22.5° Phase, -30 dBm Input Power @ 25° C



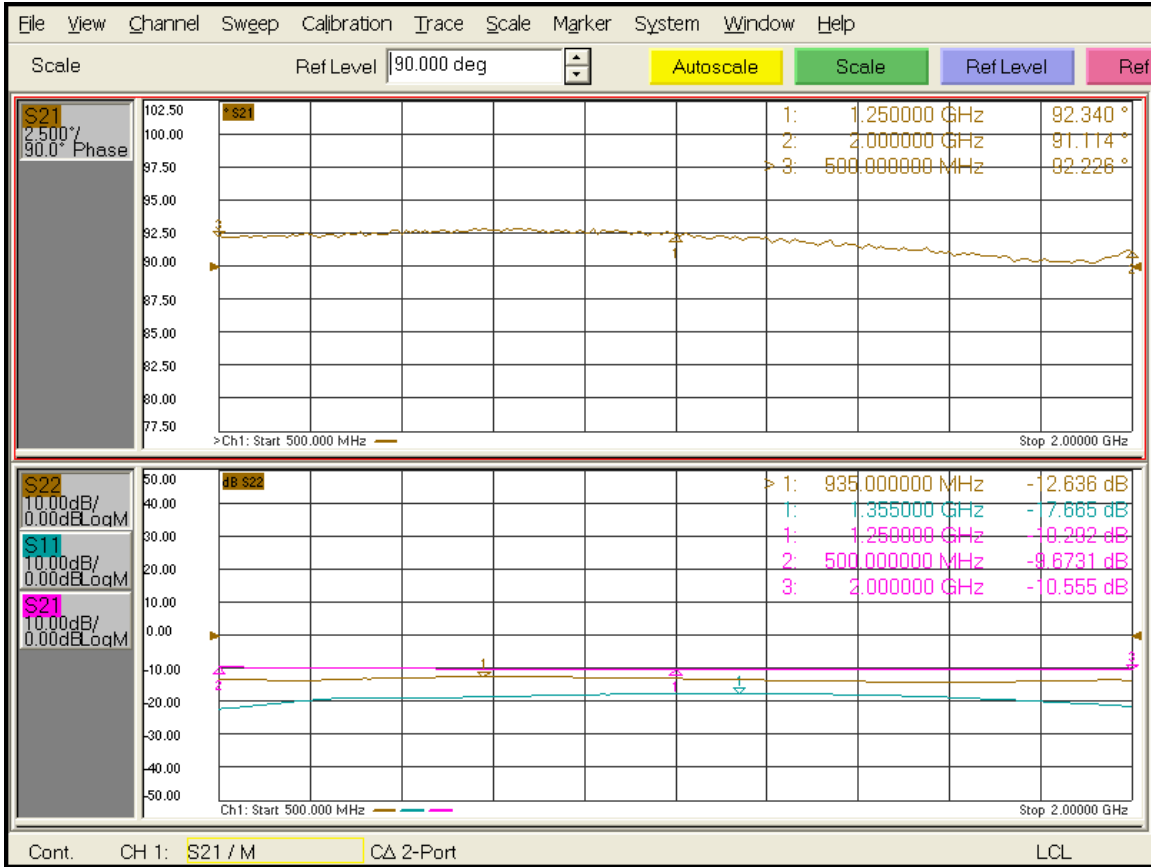


45° Phase, -30 dBm Input Power @ 25° C



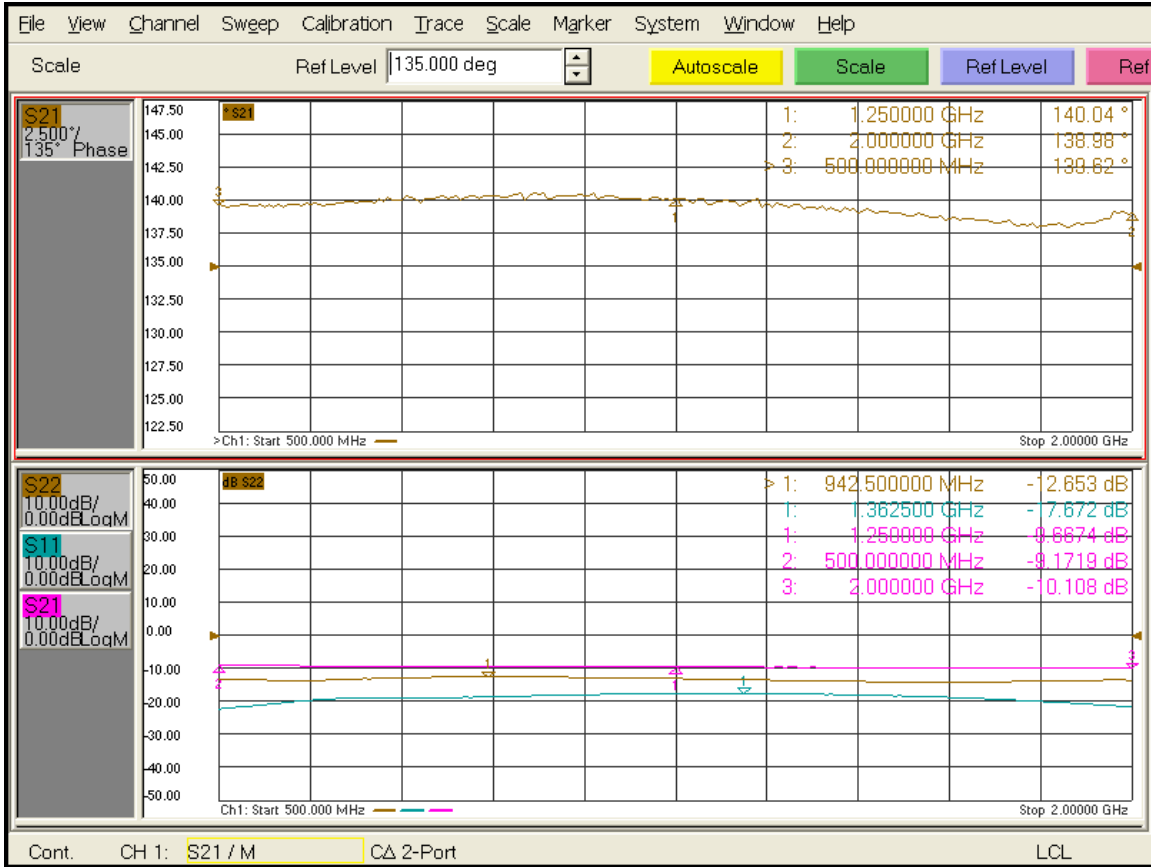


90° Phase, -30 dBm Input Power @ 25° C



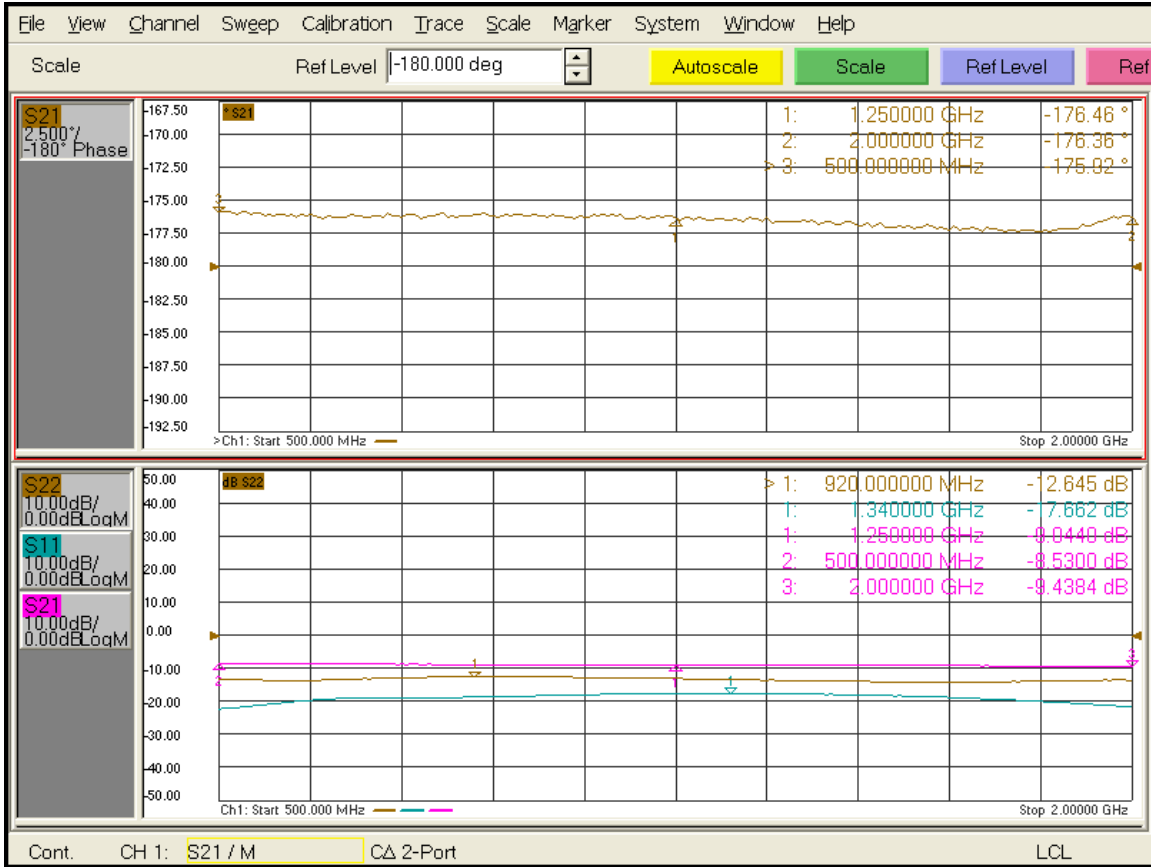


135° Phase, -30 dBm Input Power @ 25° C



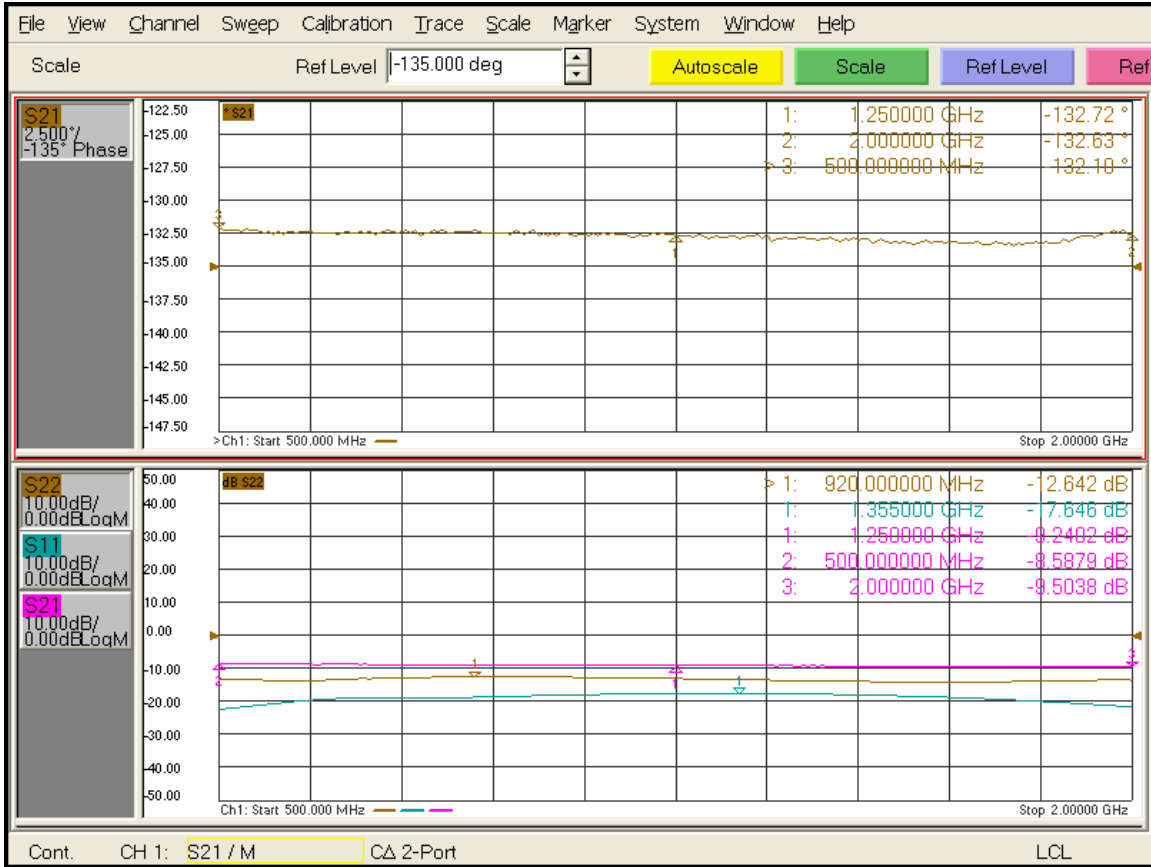


180° Phase, -30 dBm Input Power @ 25° C



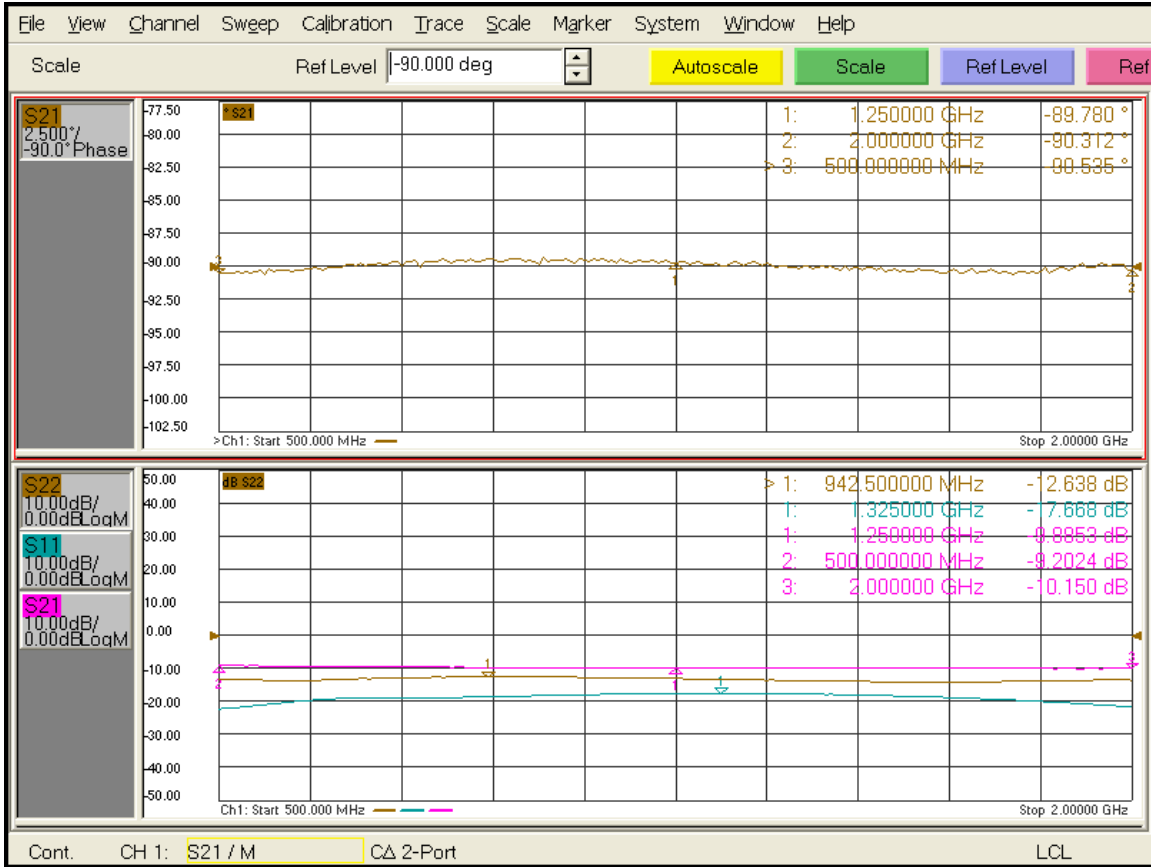


225° Phase, -30 dBm Input Power @ 25° C



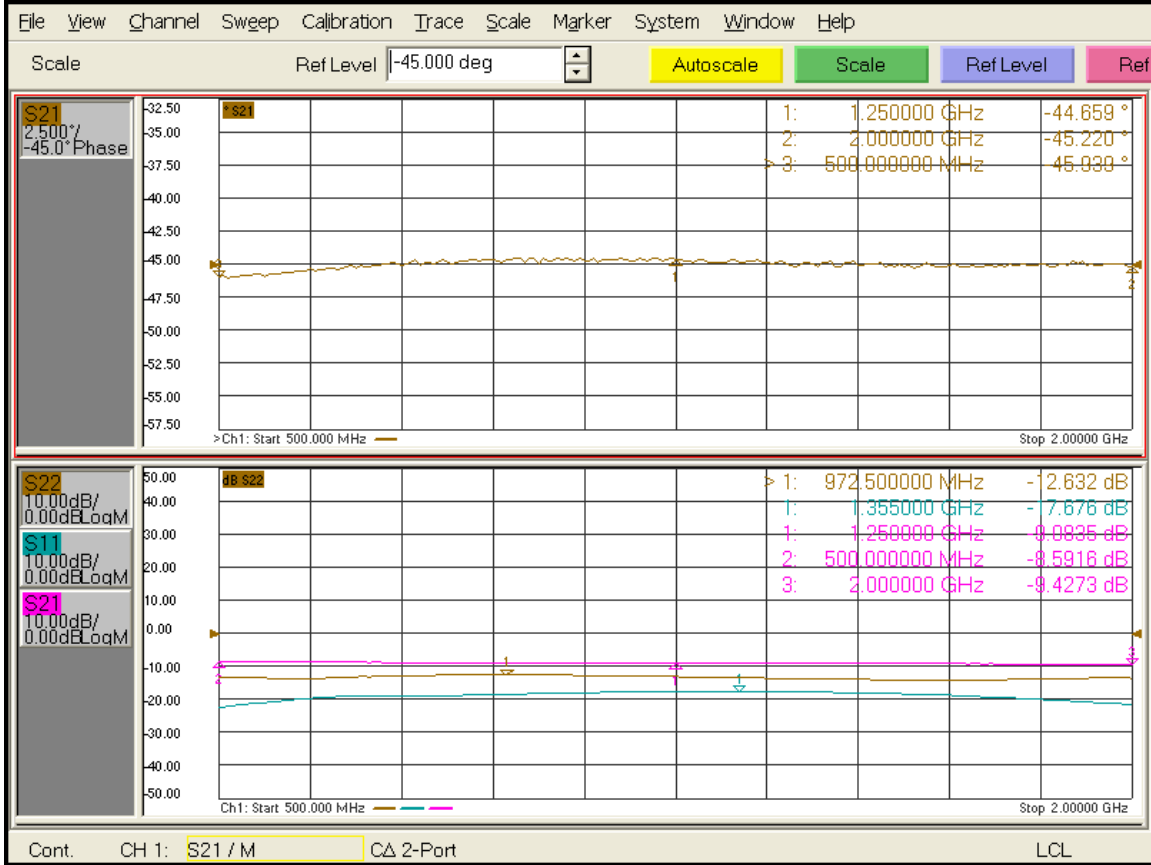


270° Phase, -30 dBm Input Power @ 25° C



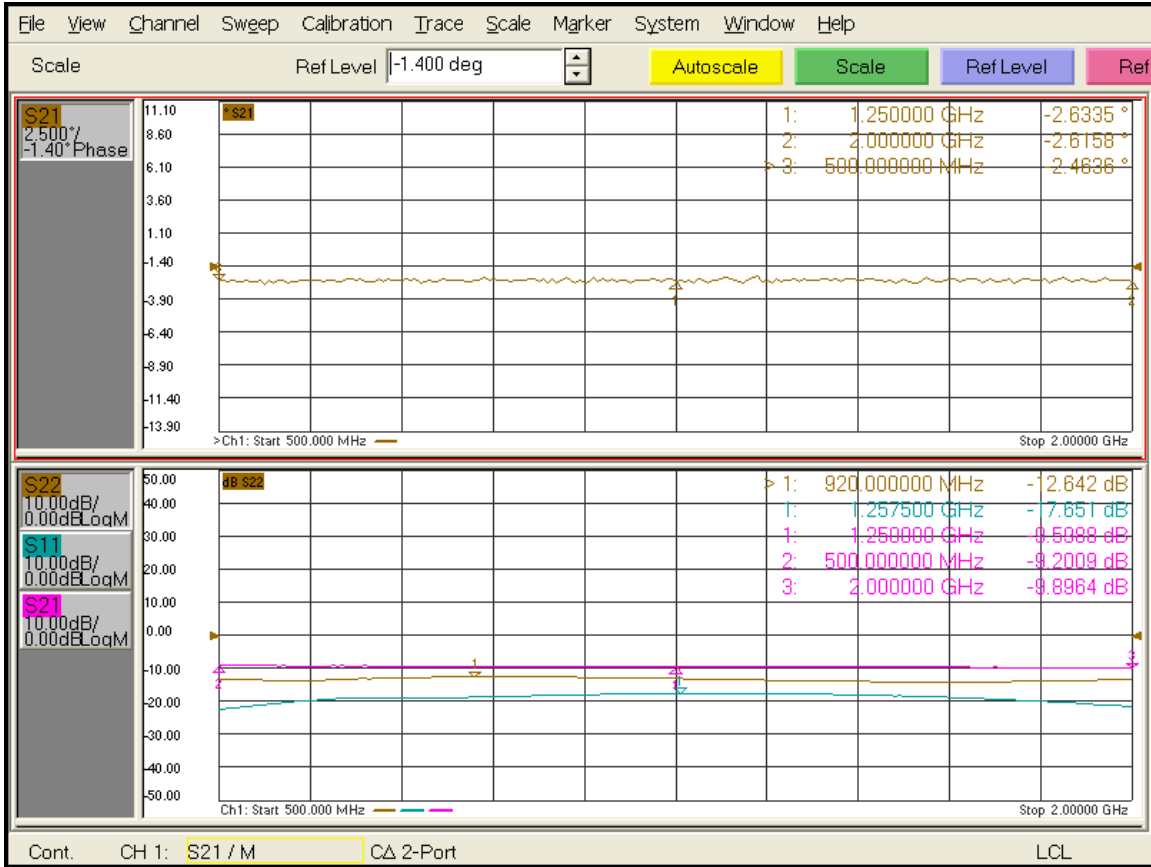


315° Phase, -30 dBm Input Power @ 25° C





358.6° Phase, -30 dBm Input Power @ 25° C





Data Taken at 25° C

Data Taken at -20 dBm Input Power

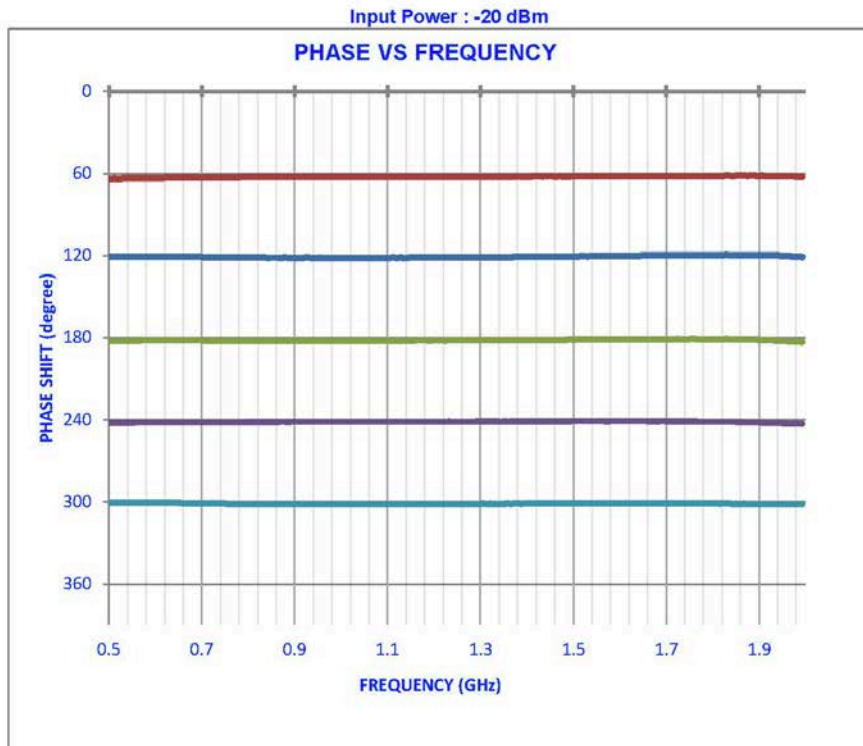
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|------------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 9.58 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.61 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.62 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 0.40 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|--------------------------|-------------|----------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.43 | -0.02 | 0.06 |
| 2.81 | 2.89 | -0.08 | 0.06 |
| 5.63 | 5.82 | -0.19 | 0.08 |
| 11.25 | 11.58 | -0.33 | 0.10 |
| 22.50 | 21.72 | 0.78 | 0.10 |
| 45.00 | 45.02 | -0.02 | 0.13 |
| 90.00 | 90.33 | -0.33 | 0.13 |
| 180.00 | 180.52 | -0.52 | 0.15 |
| 358.59 | 358.69 | -0.10 | 0.17 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|--------------------------|-------------|----------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 34.03 | -0.28 | 0.36 |
| 67.50 | 68.22 | -0.72 | 0.37 |
| 101.25 | 100.63 | 0.62 | 0.38 |
| 135.00 | 135.09 | -0.09 | 0.39 |
| 168.75 | 169.11 | -0.36 | 0.40 |
| 202.50 | 203.15 | -0.65 | 0.44 |
| 236.25 | 236.24 | 0.01 | 0.42 |
| 270.00 | 269.74 | 0.26 | 0.42 |
| 303.75 | 303.82 | -0.07 | 0.44 |
| 337.50 | 337.36 | 0.14 | 0.47 |
| | | | |
| | | | |
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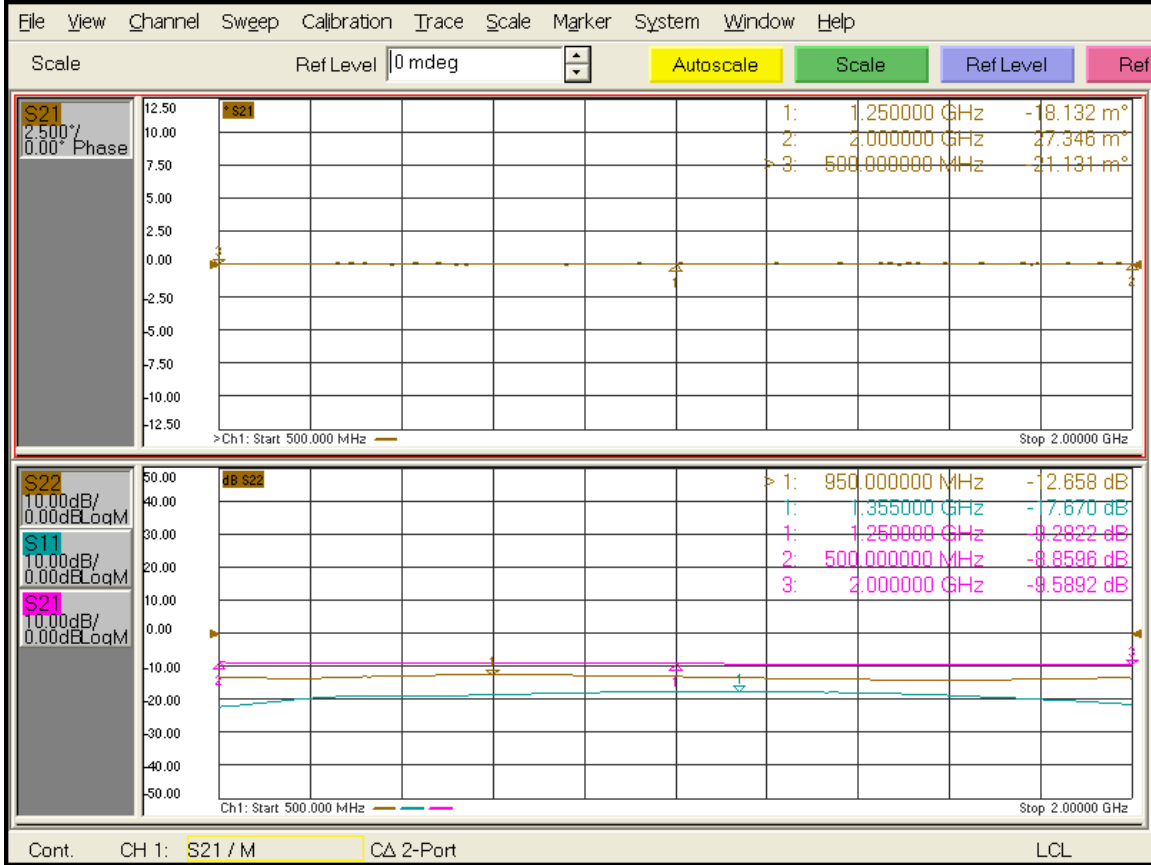


Phase Plot at 25° C



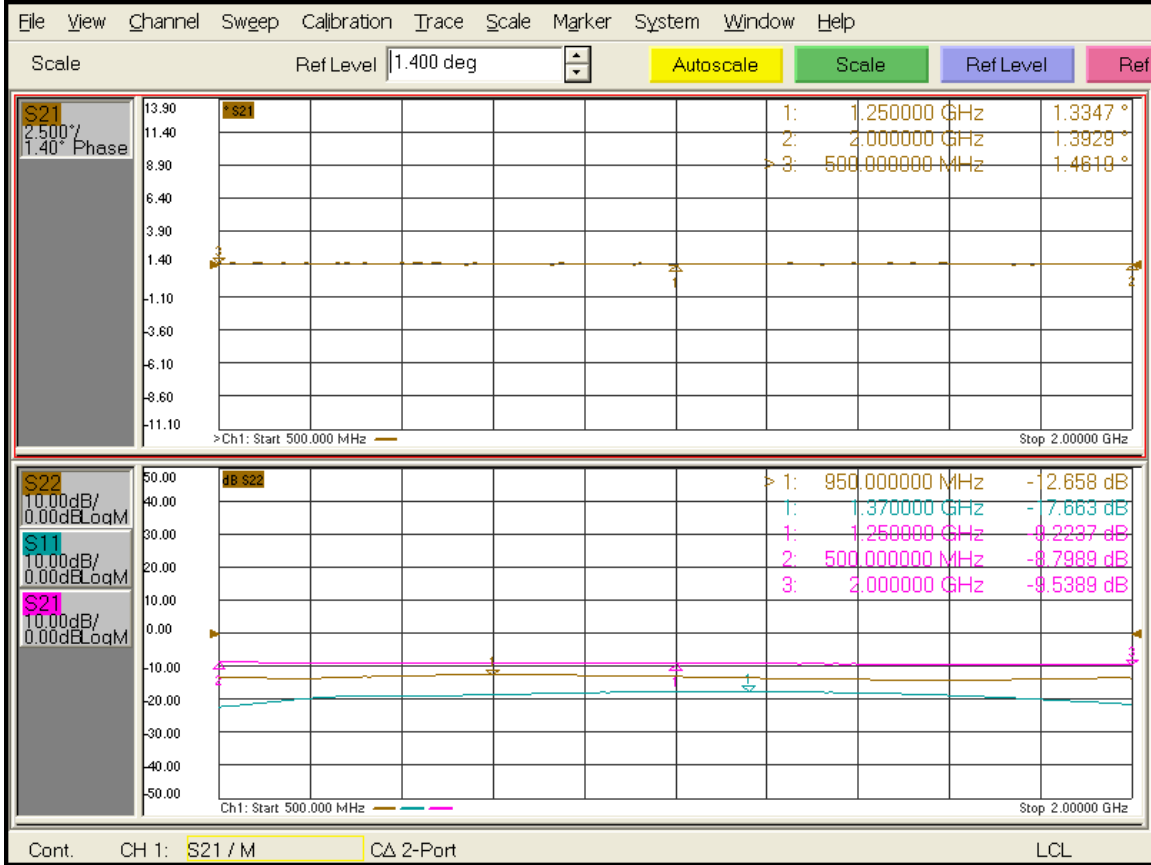


0° Phase, -20 dBm Input Power @ 25° C



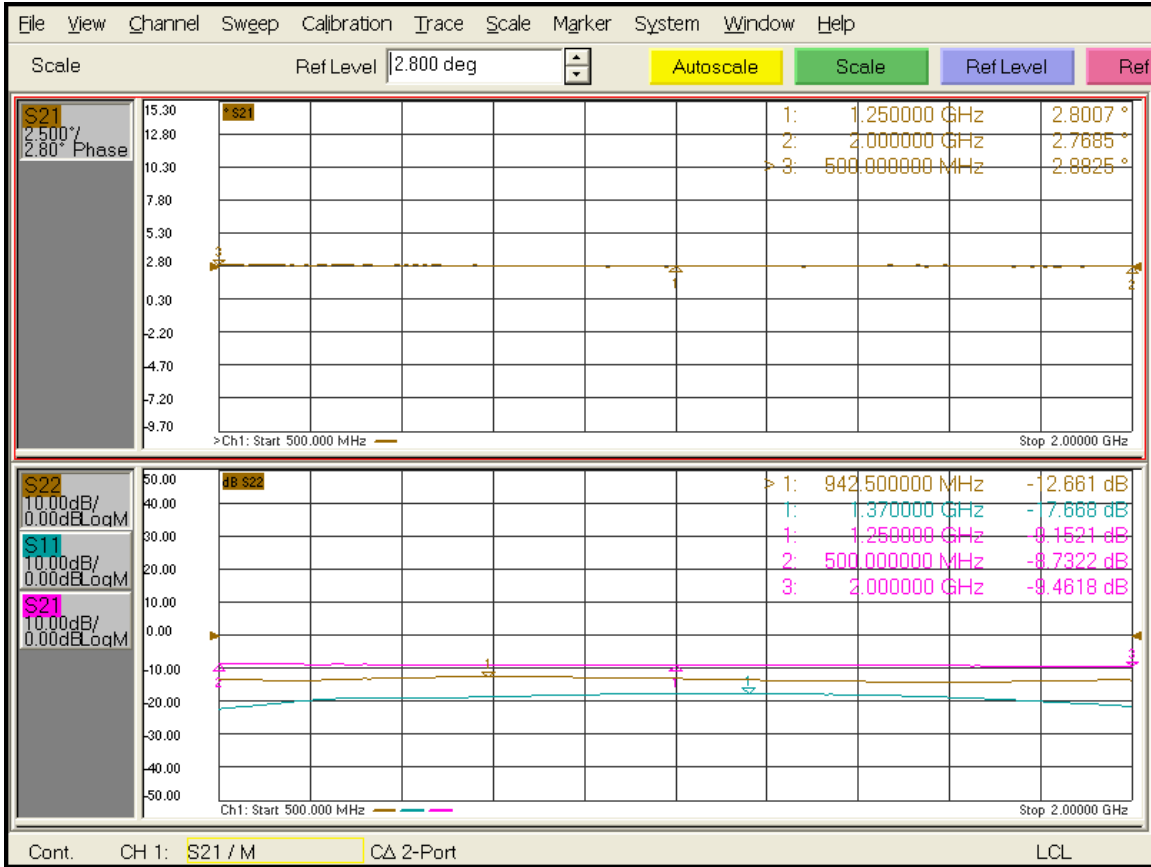


1.4° Phase, -20 dBm Input Power @ 25° C



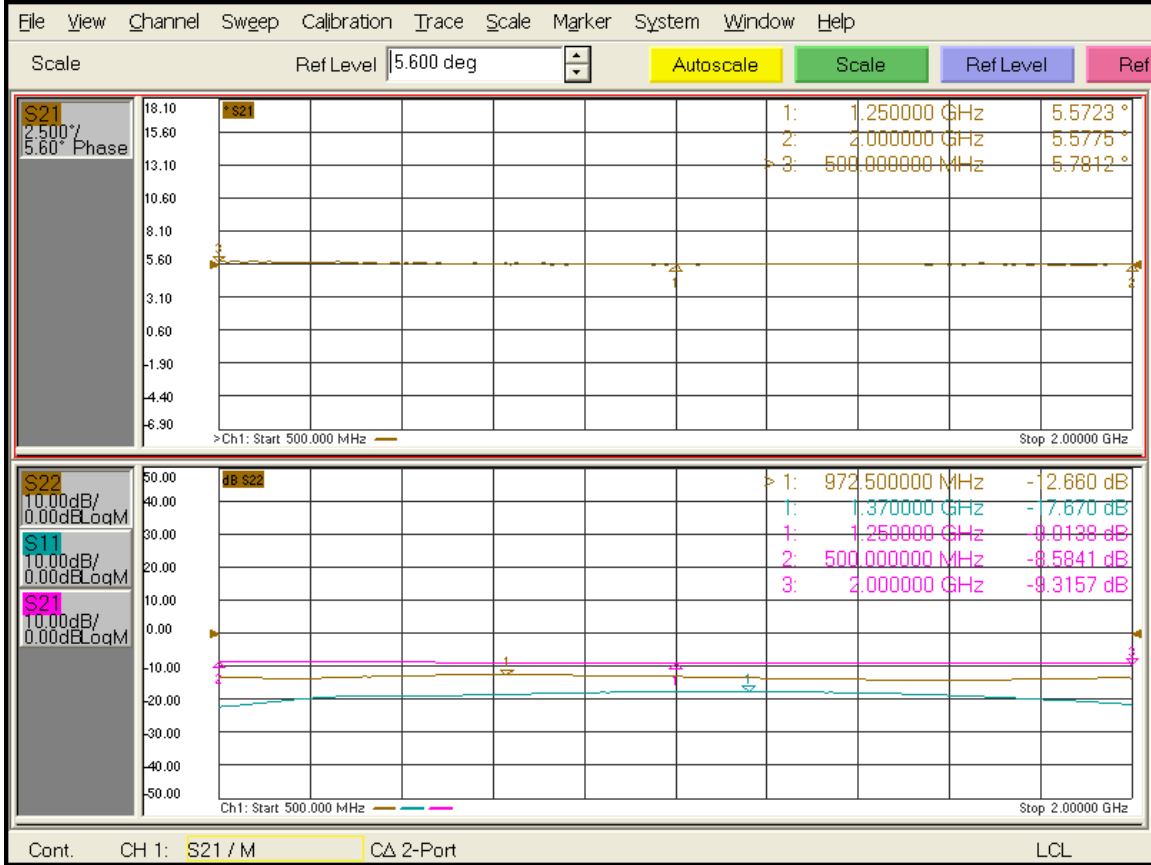


2.8° Phase, -20 dBm Input Power @ 25° C



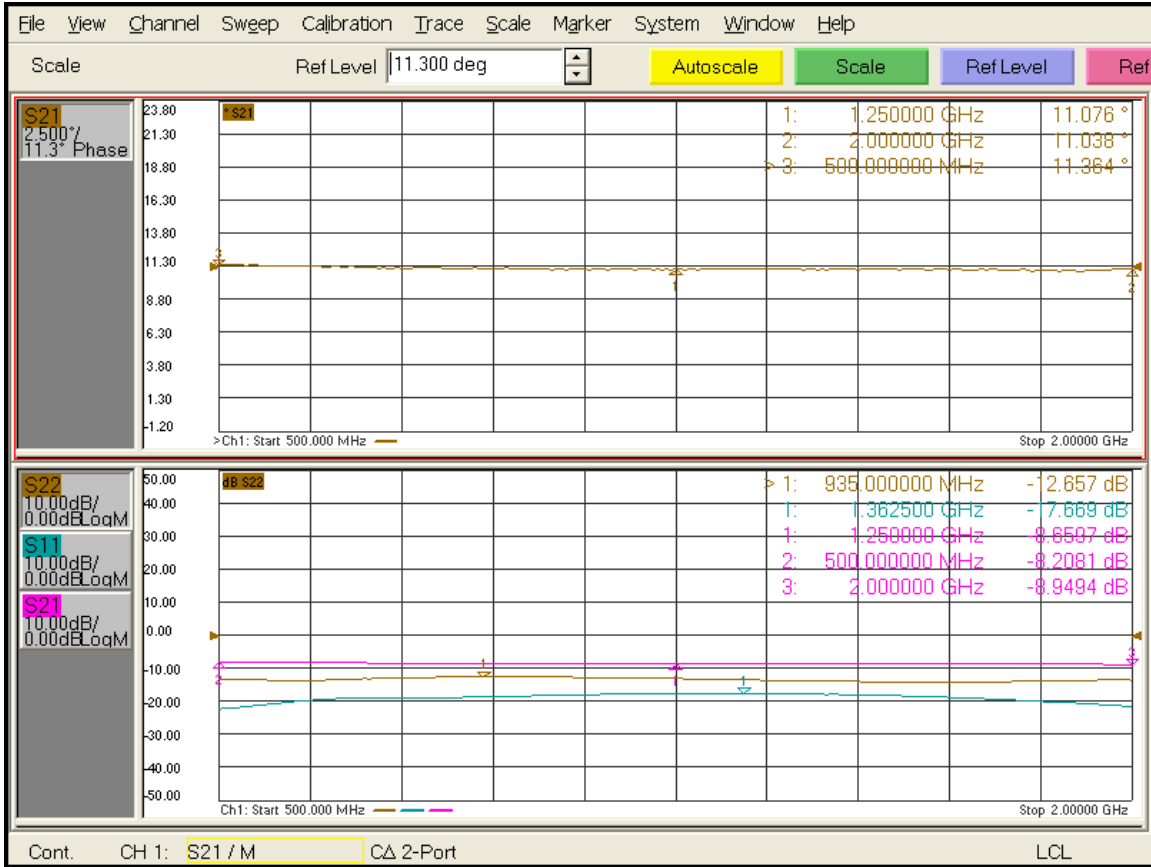


5.6° Phase, -20 dBm Input Power @ 25° C



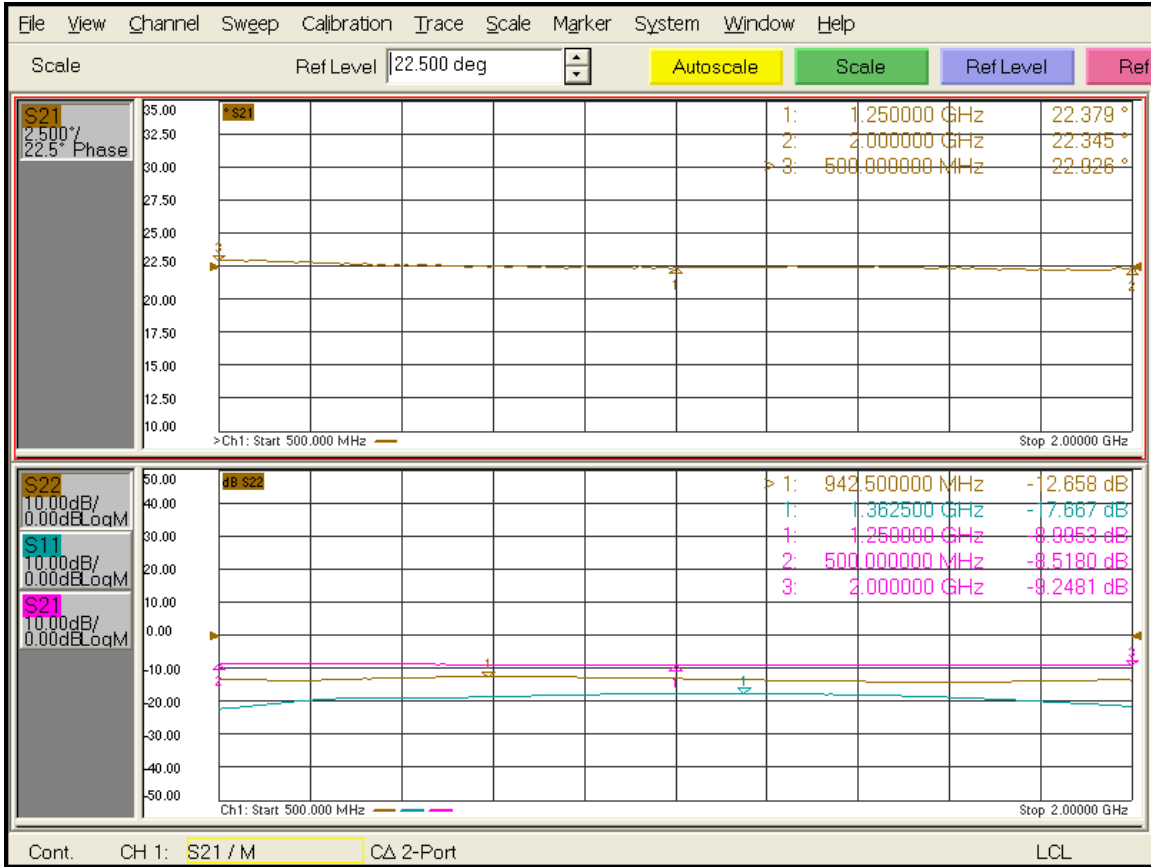


11.25° Phase, -20 dBm Input Power @ 25° C



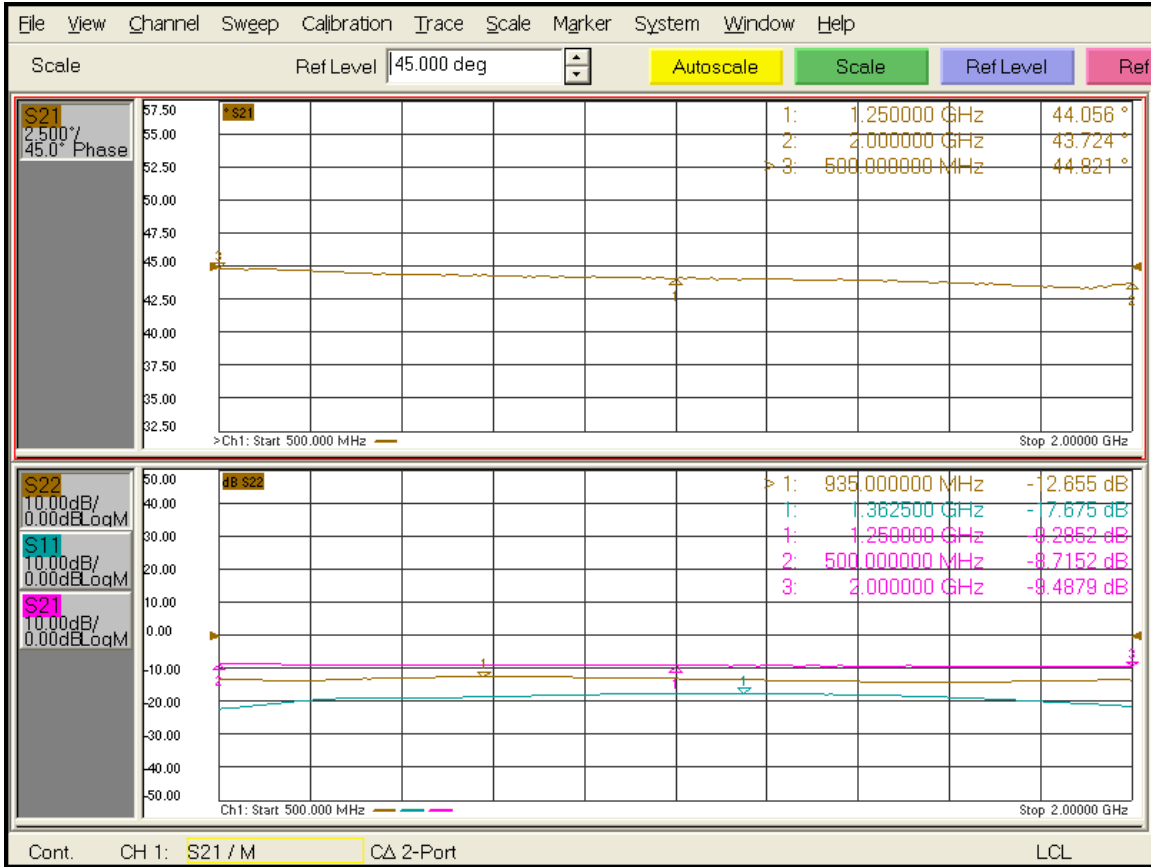


22.5° Phase, -20 dBm Input Power @ 25° C



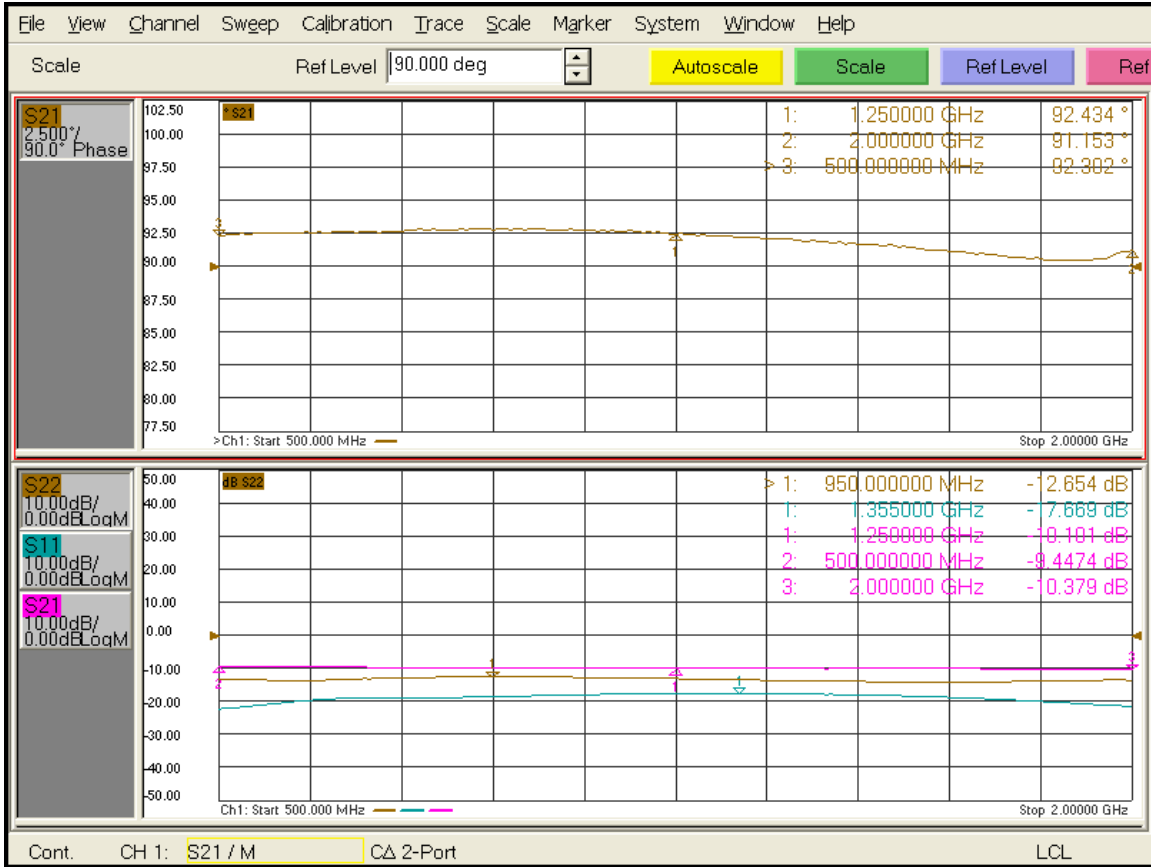


45° Phase, -20 dBm Input Power @ 25° C



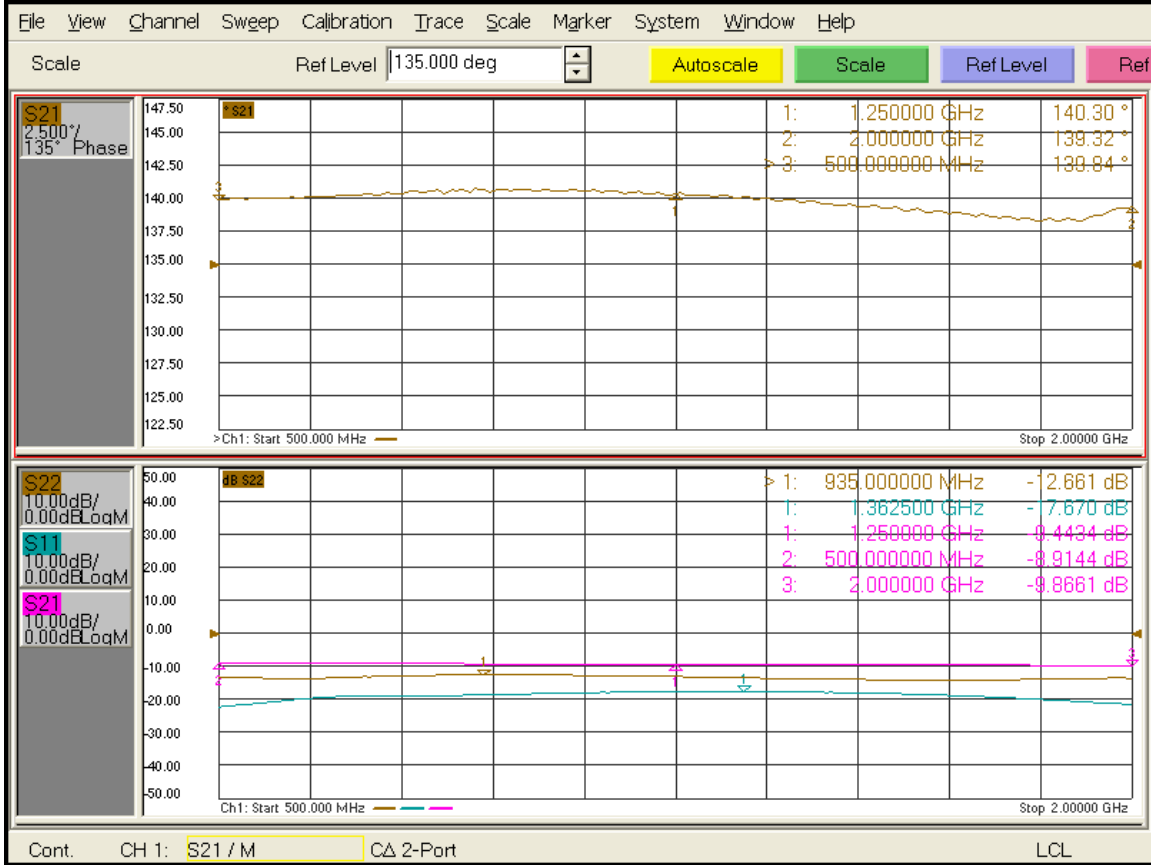


90° Phase, -20 dBm Input Power @ 25° C



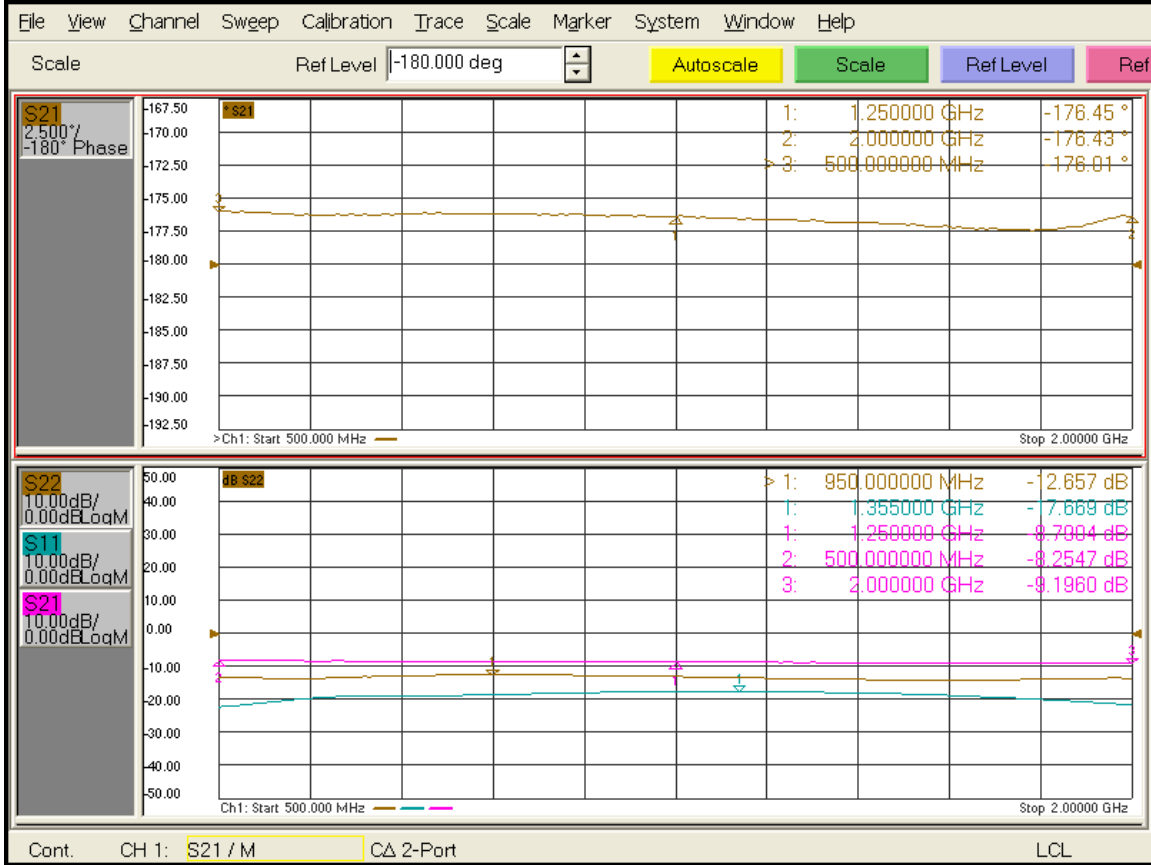


135° Phase, -20 dBm Input Power @ 25° C



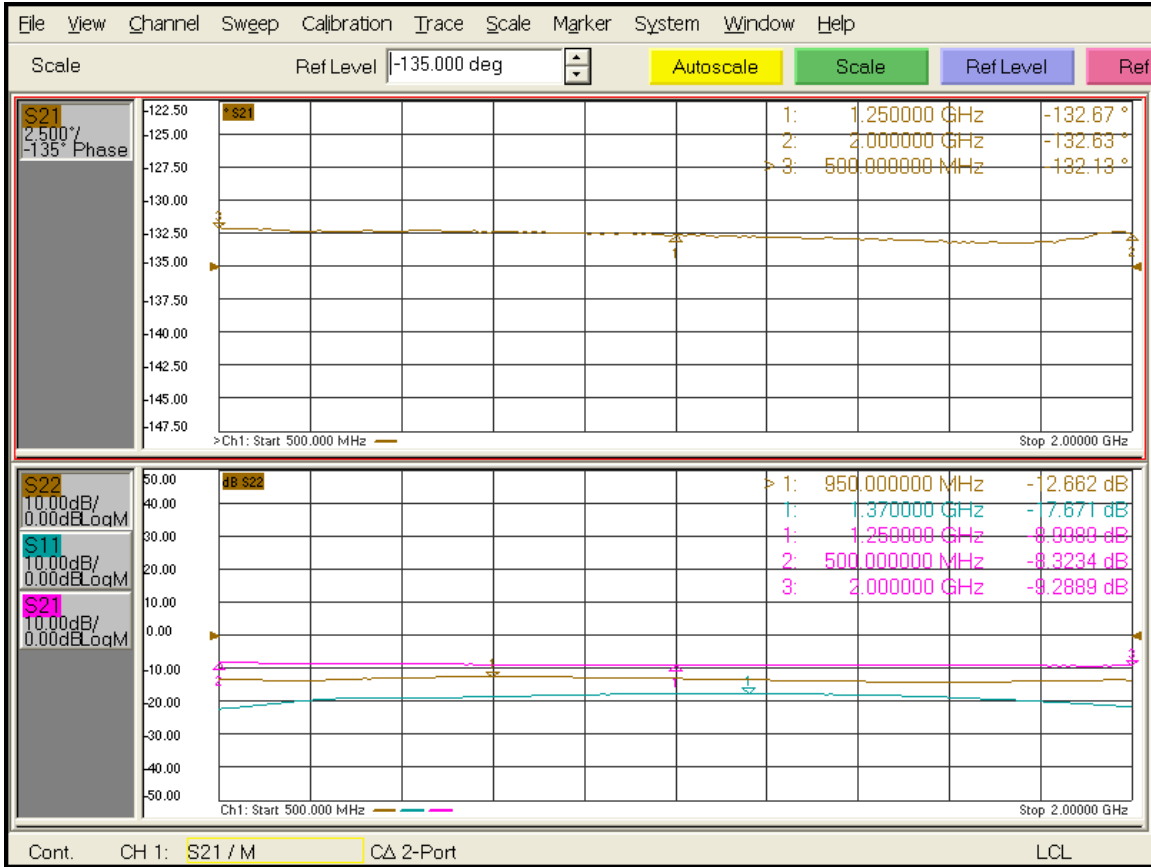


180° Phase, -20 dBm Input Power @ 25° C



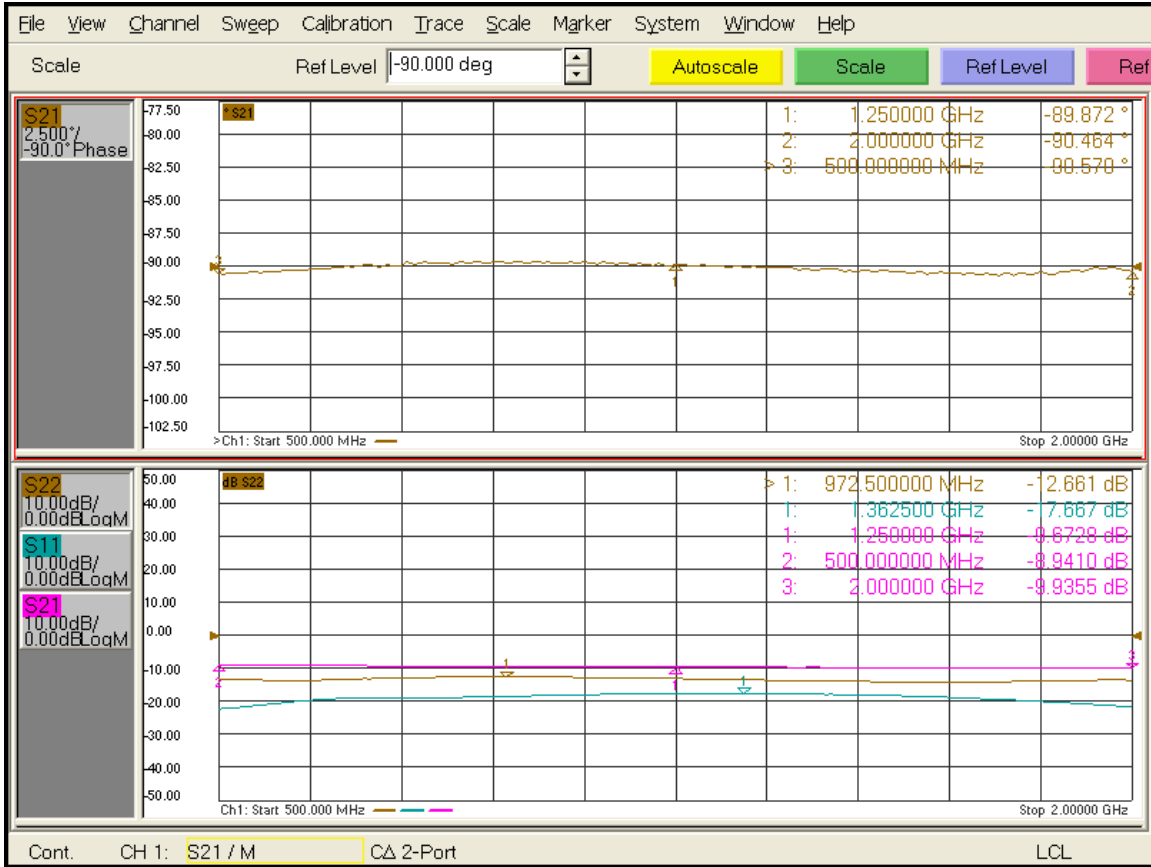


225° Phase, -20 dBm Input Power @ 25° C



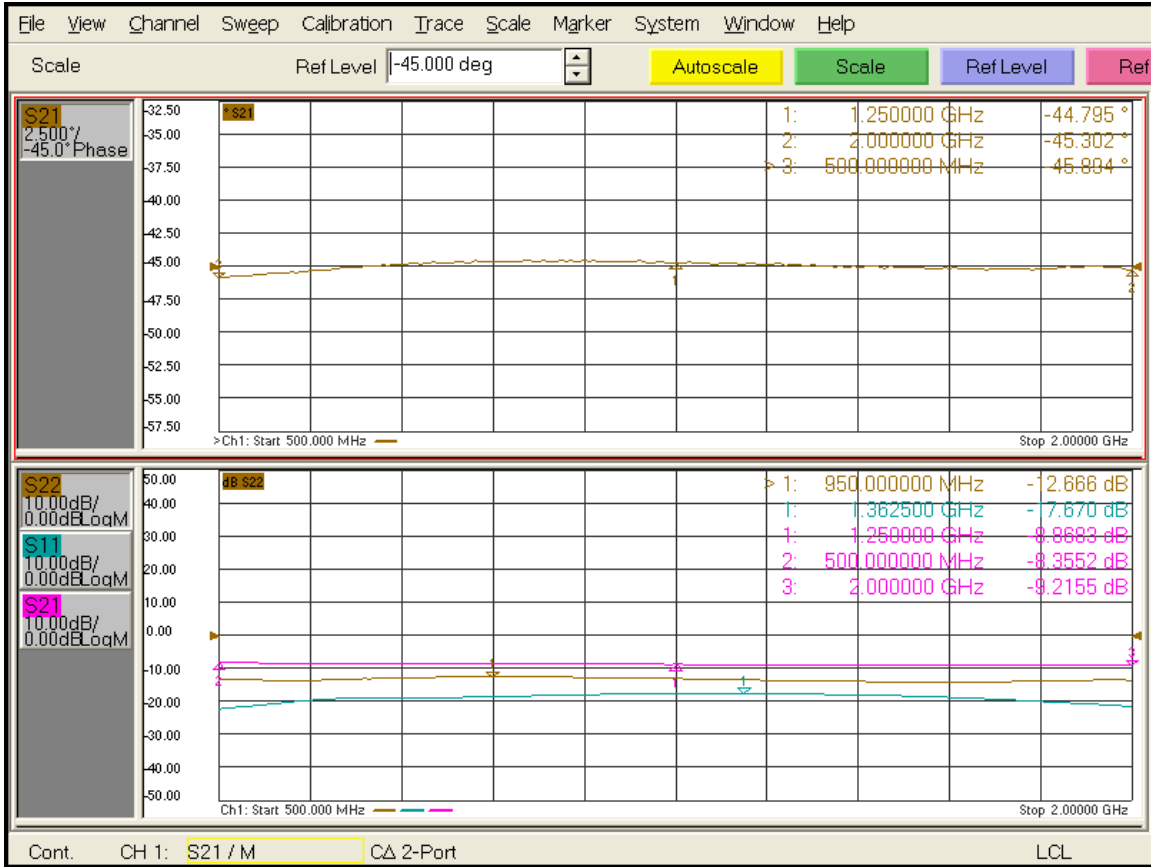


270° Phase, -20 dBm Input Power @ 25° C



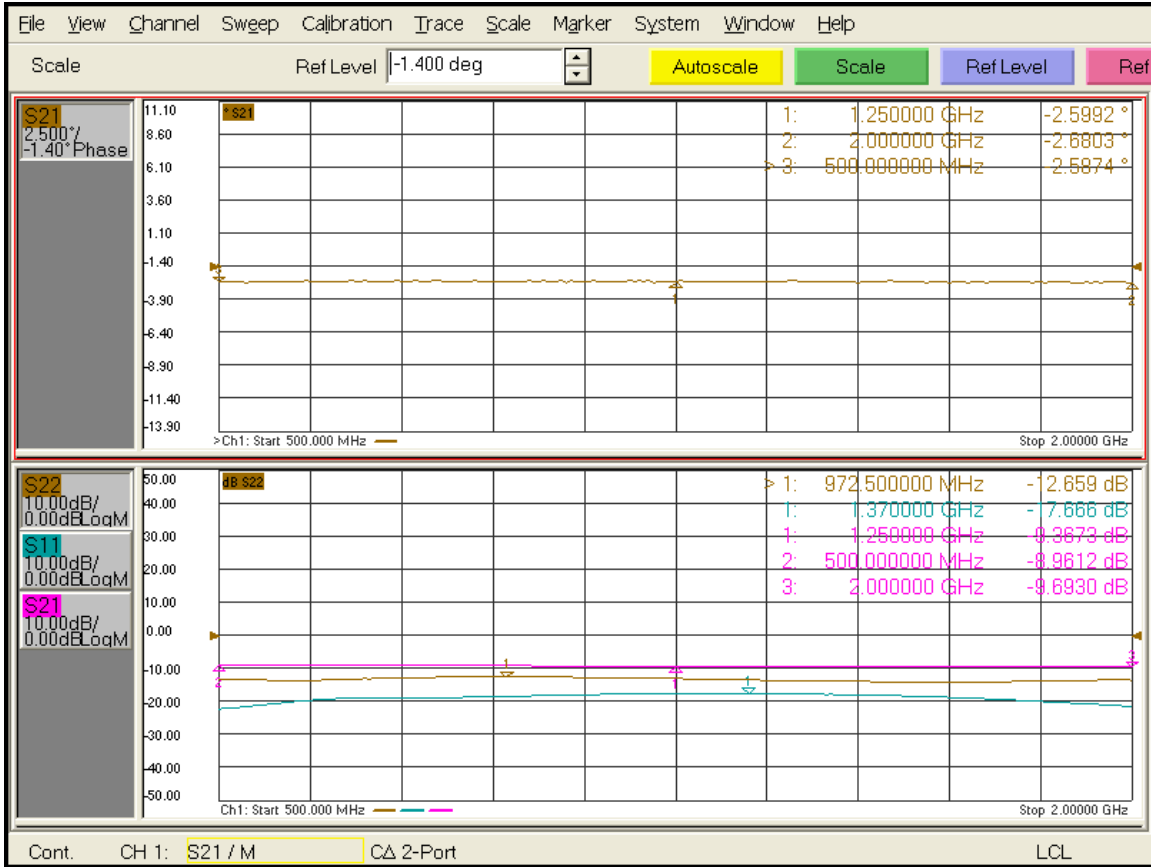


315° Phase, -20 dBm Input Power @ 25° C





358.6° Phase, -20 dBm Input Power @ 25° C





Data Taken at 25° C

Data Taken at -15 dBm Input Power

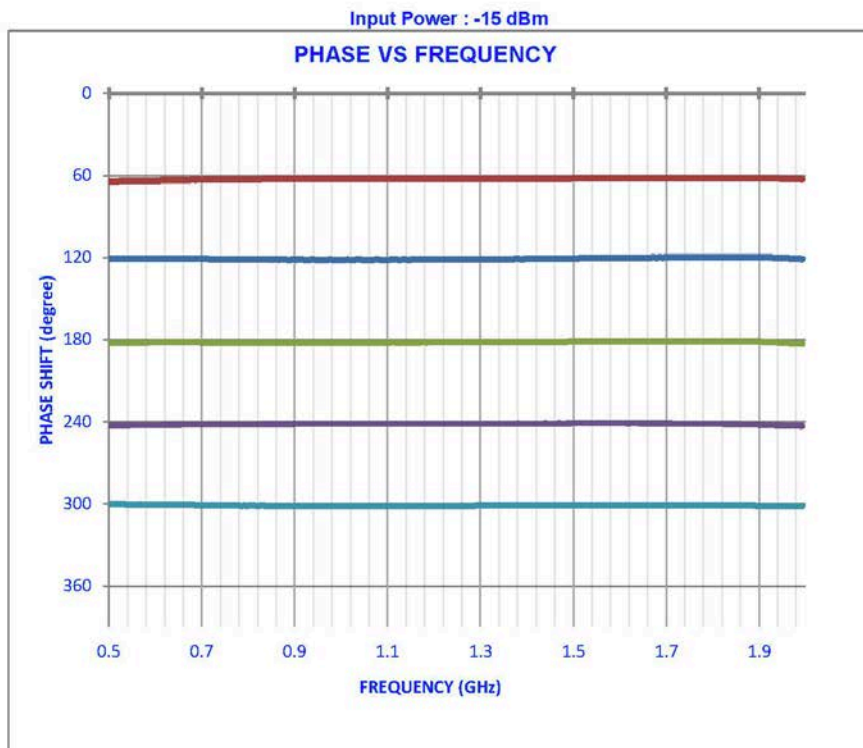
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 9.58 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.61 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.62 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 0.58 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.44 | -0.03 | 0.03 |
| 2.81 | 2.86 | -0.05 | 0.06 |
| 5.63 | 5.76 | -0.13 | 0.07 |
| 11.25 | 11.49 | -0.24 | 0.09 |
| 22.50 | 21.63 | 0.87 | 0.11 |
| 45.00 | 45.20 | -0.20 | 0.13 |
| 90.00 | 90.56 | -0.56 | 0.15 |
| 180.00 | 180.51 | -0.51 | 0.16 |
| 358.59 | 358.57 | 0.03 | 0.18 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 34.04 | -0.29 | 0.43 |
| 67.50 | 68.64 | -1.14 | 0.42 |
| 101.25 | 100.72 | 0.53 | 0.43 |
| 135.00 | 135.28 | -0.28 | 0.46 |
| 168.75 | 169.29 | -0.54 | 0.45 |
| 202.50 | 202.98 | -0.48 | 0.47 |
| 236.25 | 236.28 | -0.03 | 0.48 |
| 270.00 | 269.71 | 0.29 | 0.49 |
| 303.75 | 303.65 | 0.10 | 0.50 |
| 337.50 | 337.46 | 0.04 | 0.51 |
| | | | |
| | | | |
| | | | |

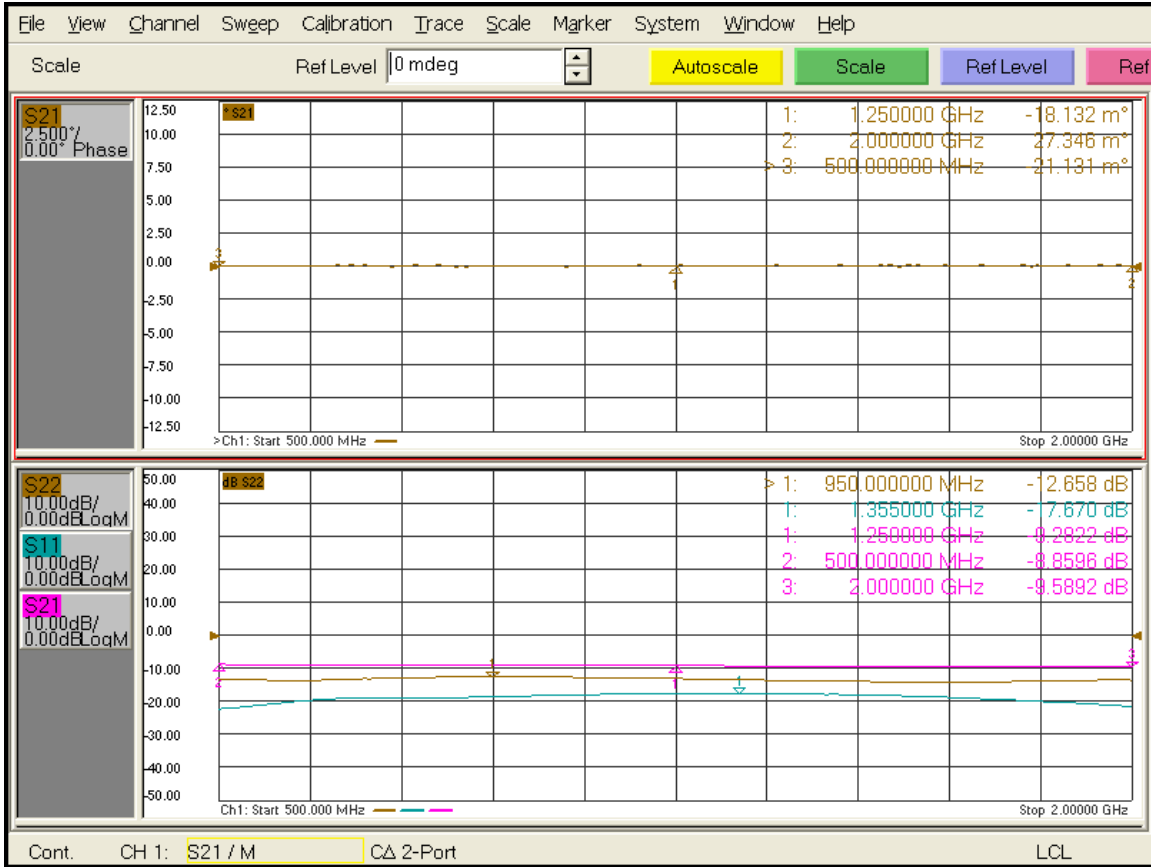


Phase Plot at 25° C



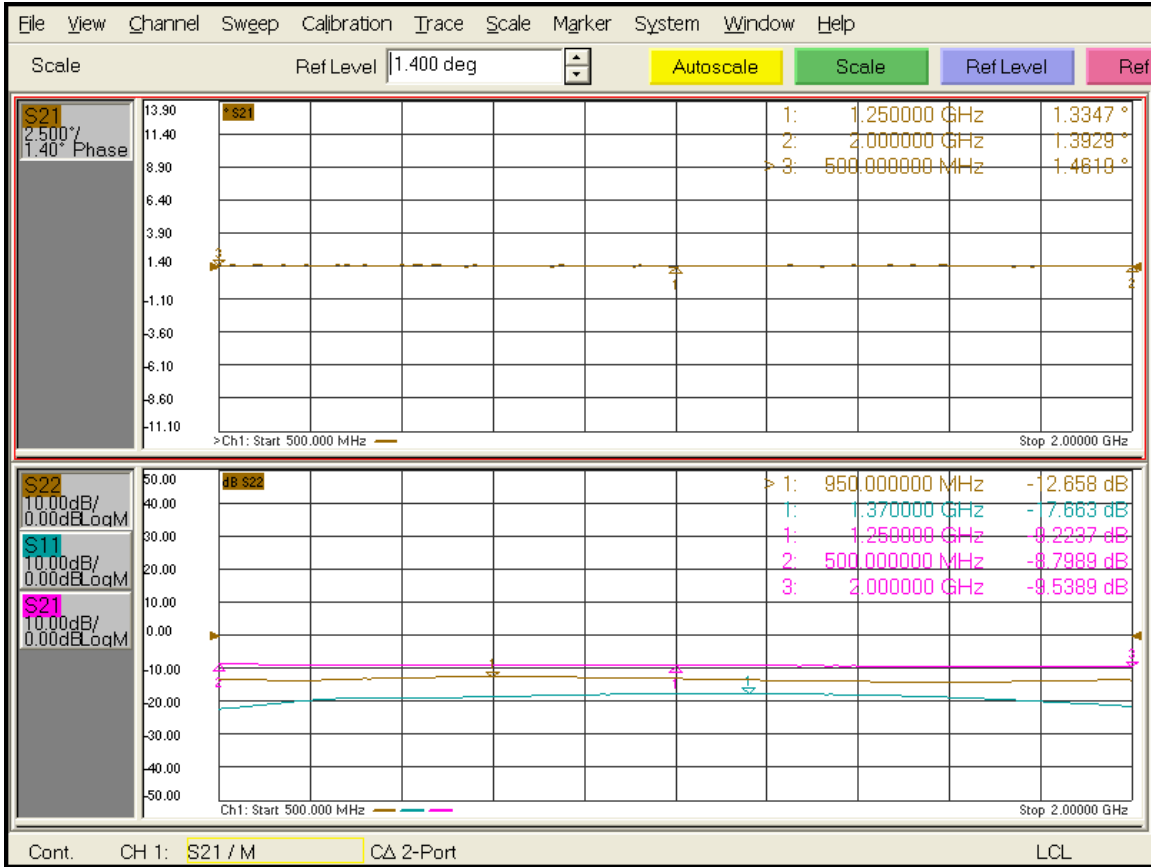


0° Phase, -15 dBm Input Power @ 25° C



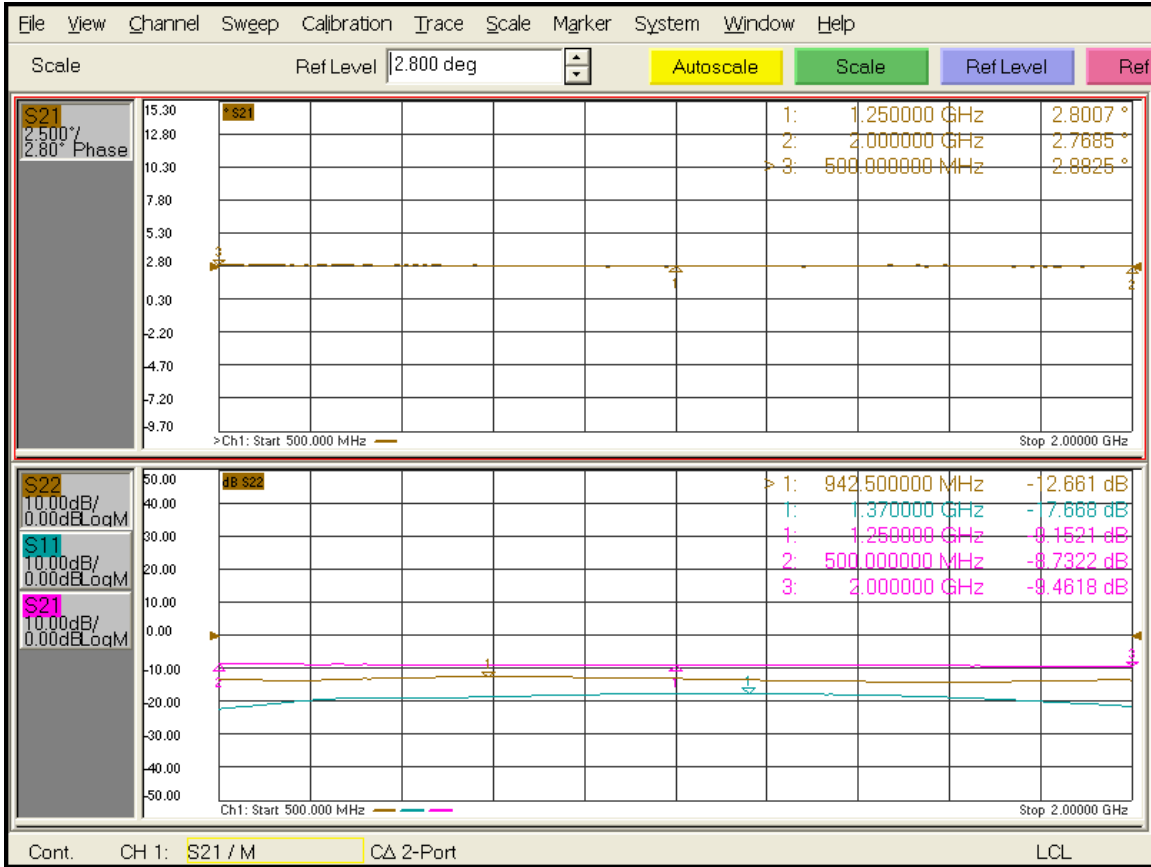


1.4° Phase, -15 dBm Input Power @ 25° C



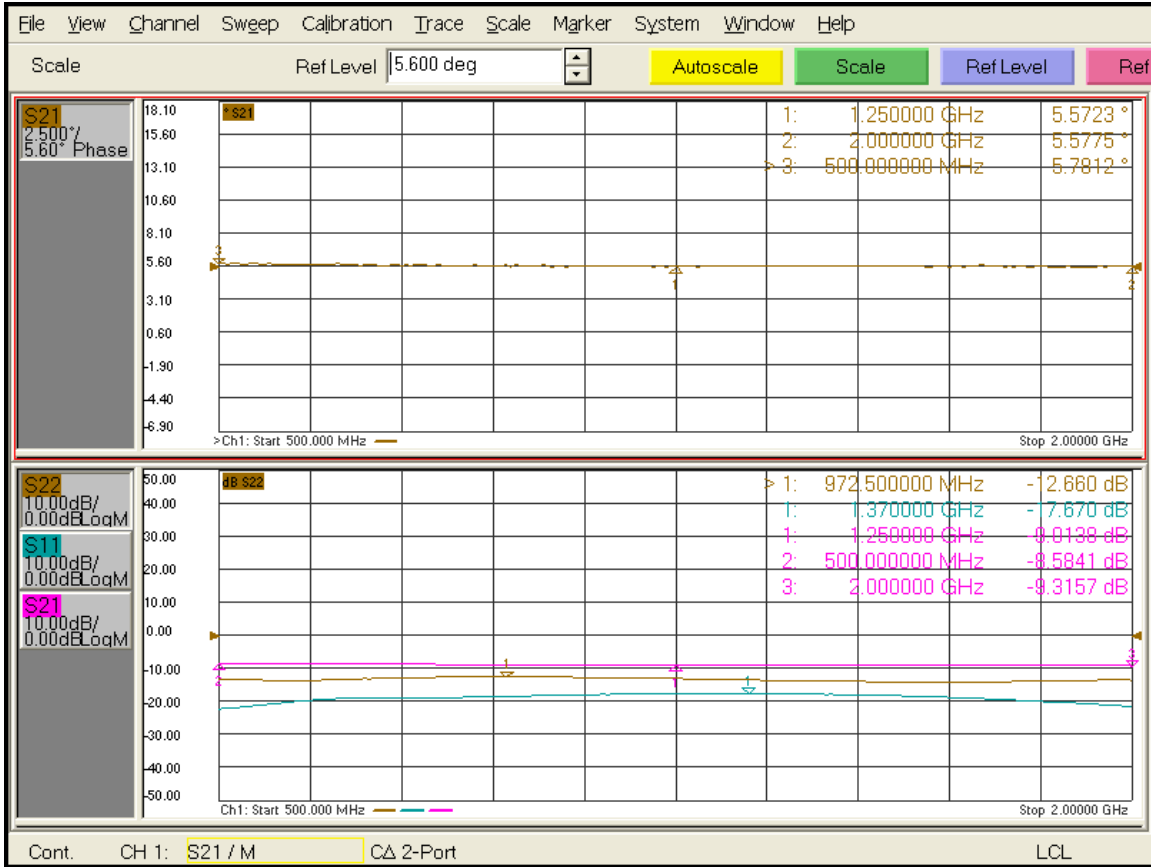


2.8° Phase, -15 dBm Input Power @ 25° C



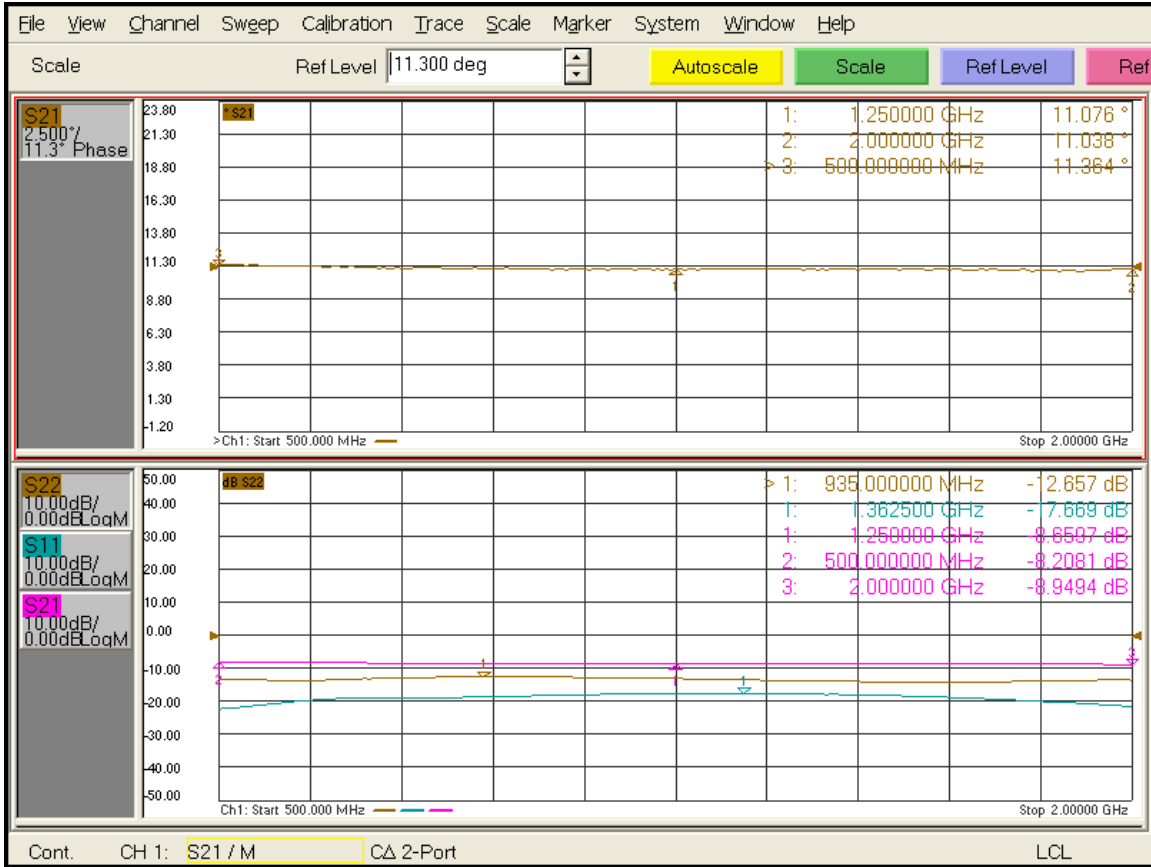


5.6° Phase, -15 dBm Input Power @ 25° C



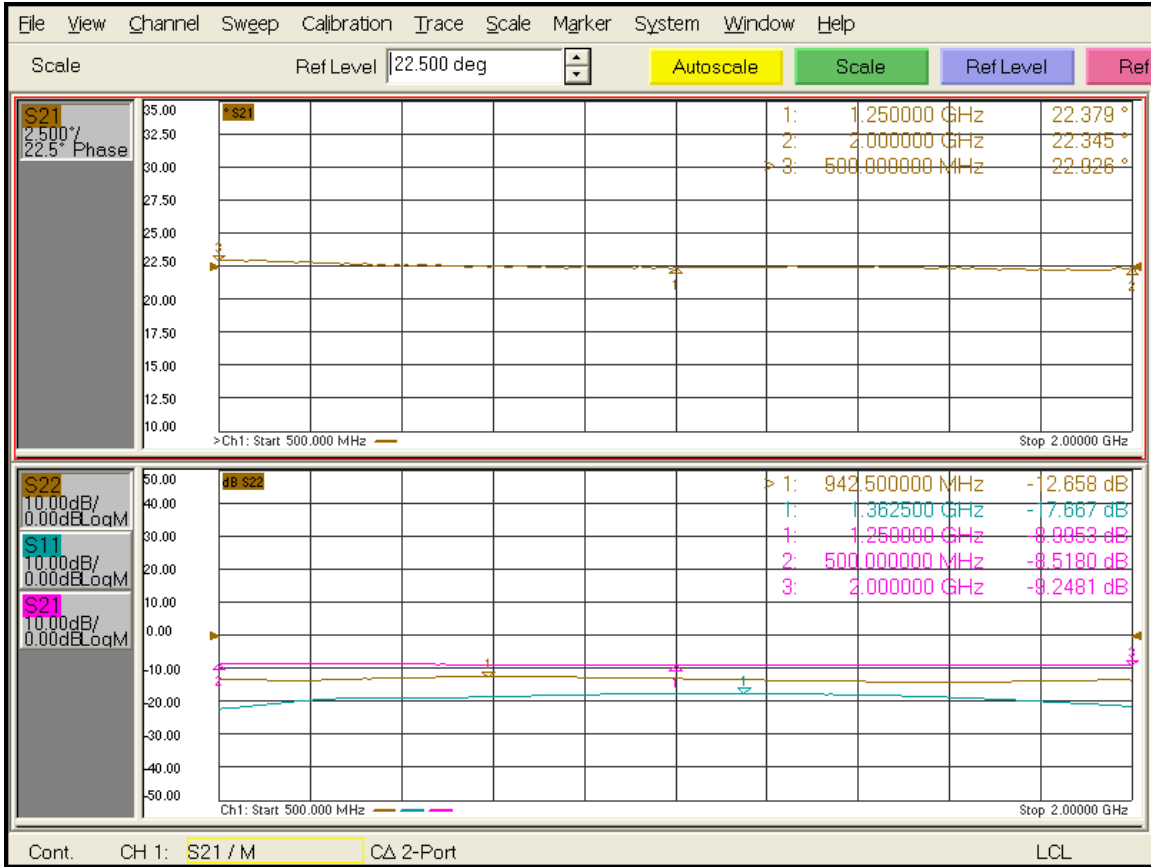


11.25° Phase, -15 dBm Input Power @ 25° C



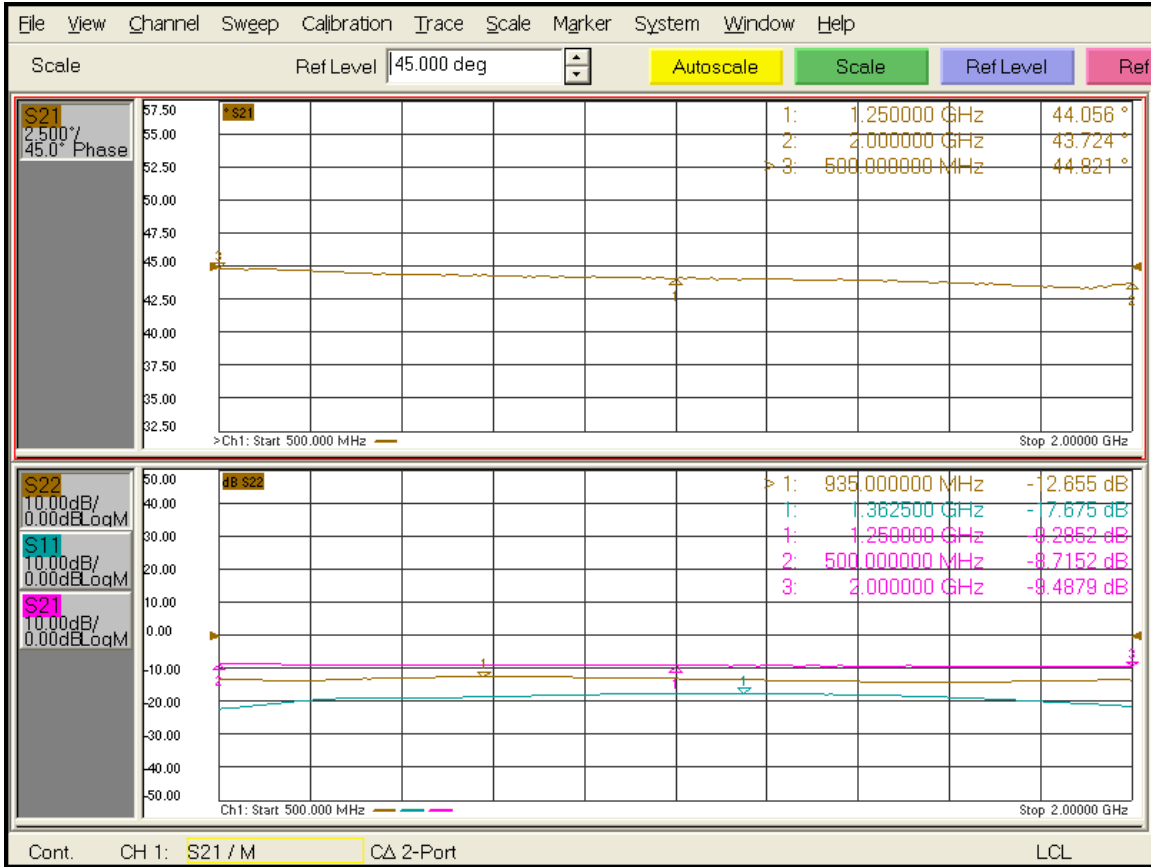


22.5° Phase, -15 dBm Input Power @ 25° C



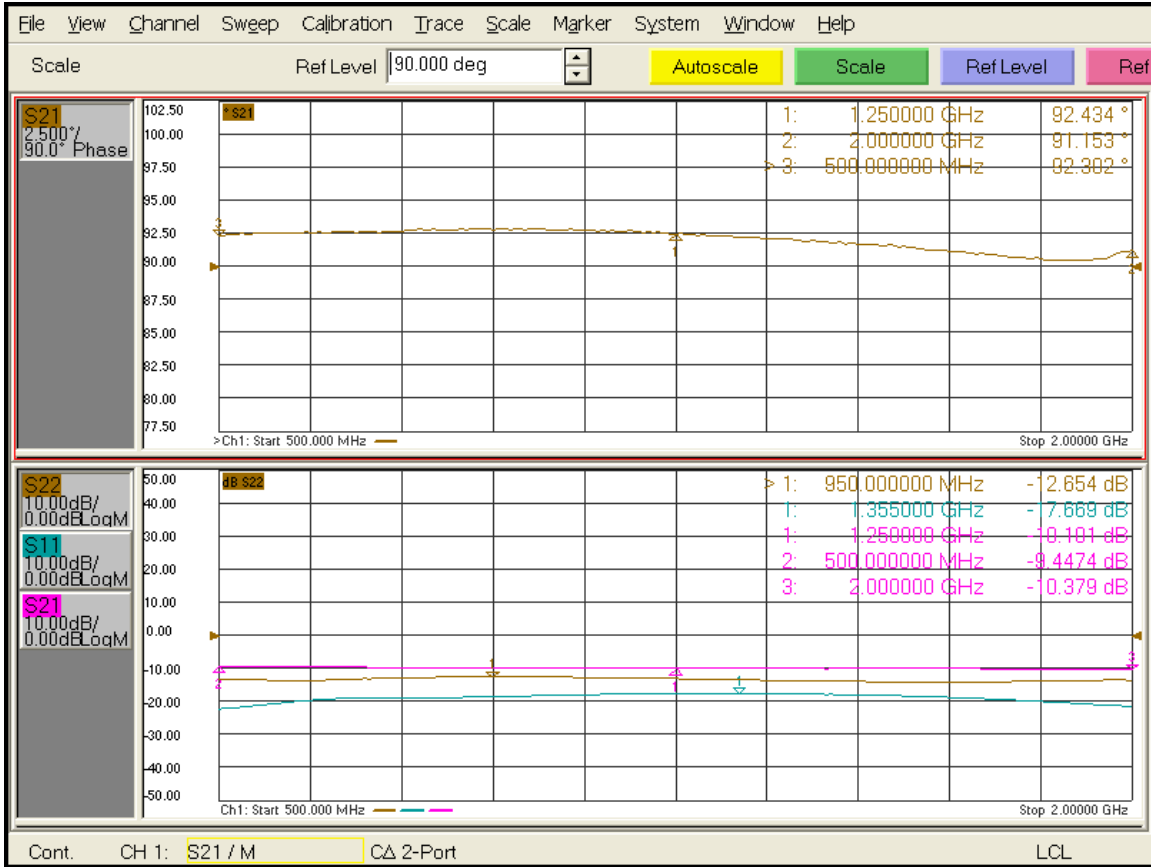


45° Phase, -15 dBm Input Power @ 25° C



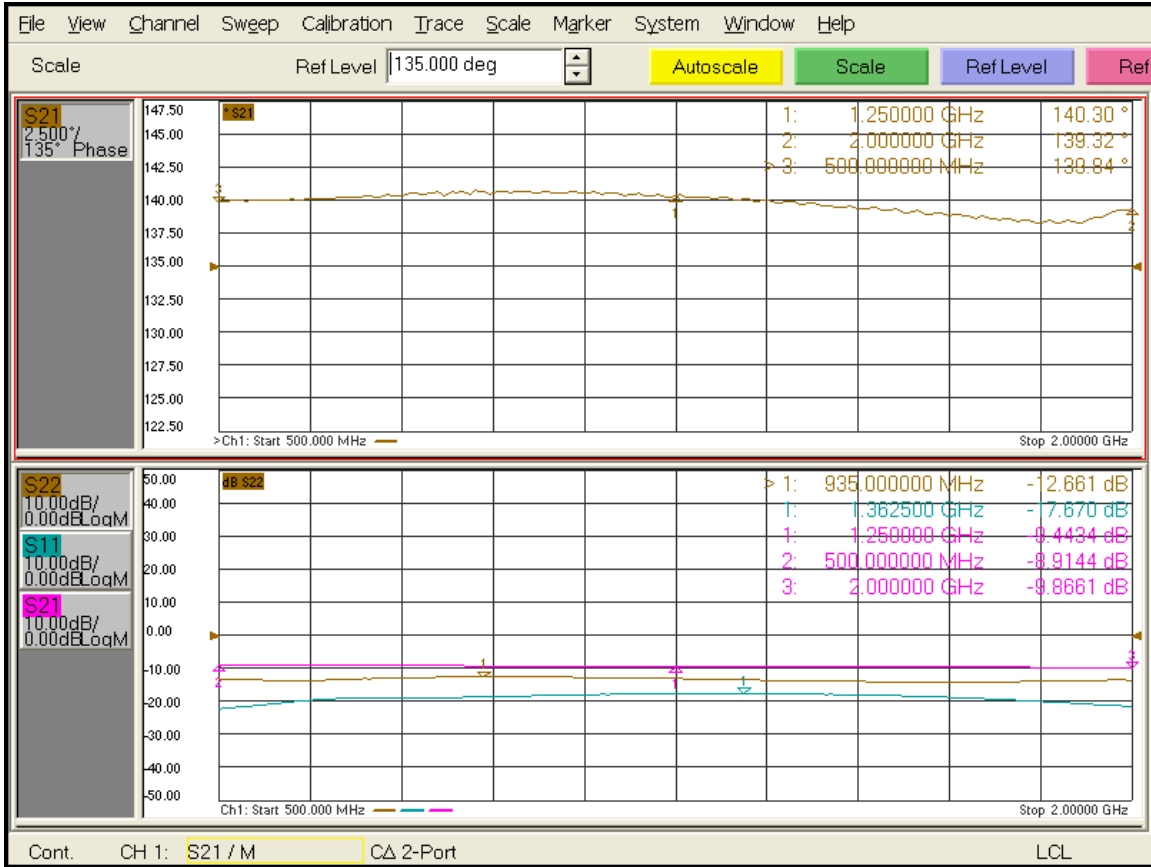


90° Phase, -15 dBm Input Power @ 25° C



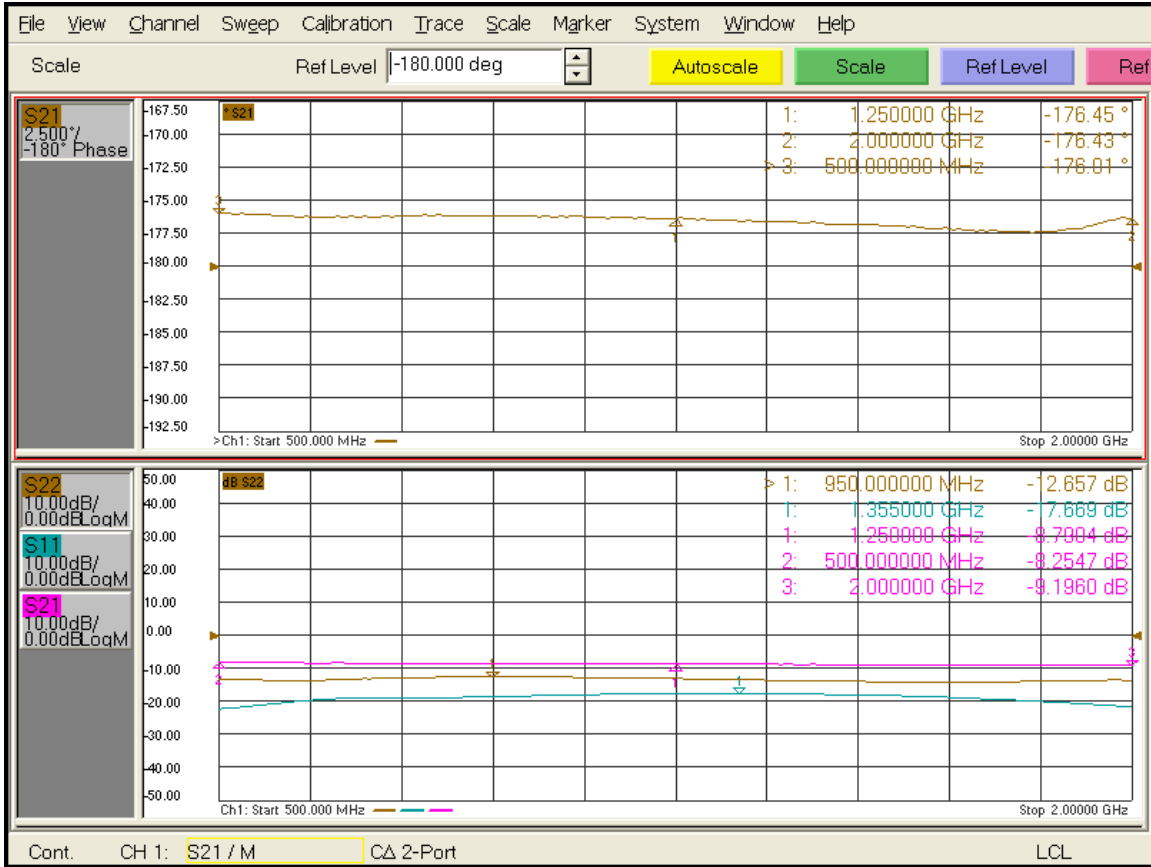


135° Phase, -15 dBm Input Power @ 25° C



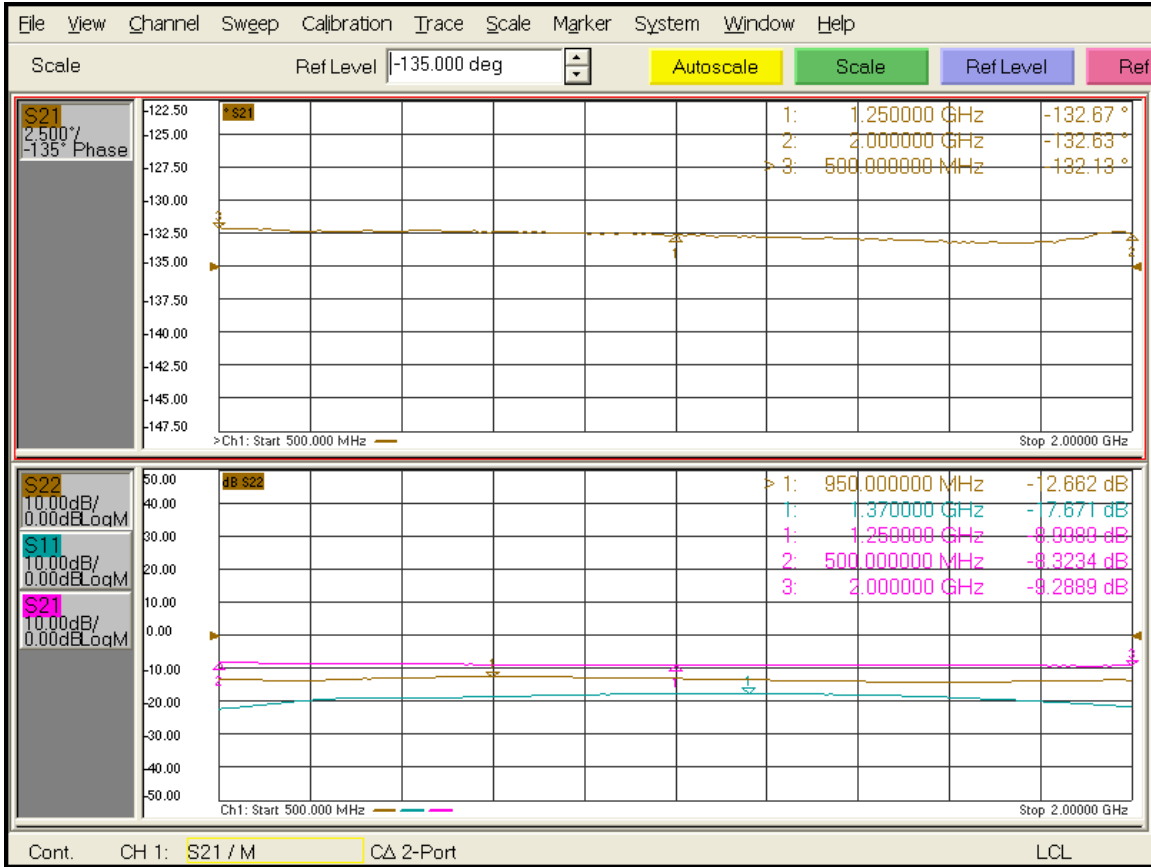


180° Phase, -15 dBm Input Power @ 25° C



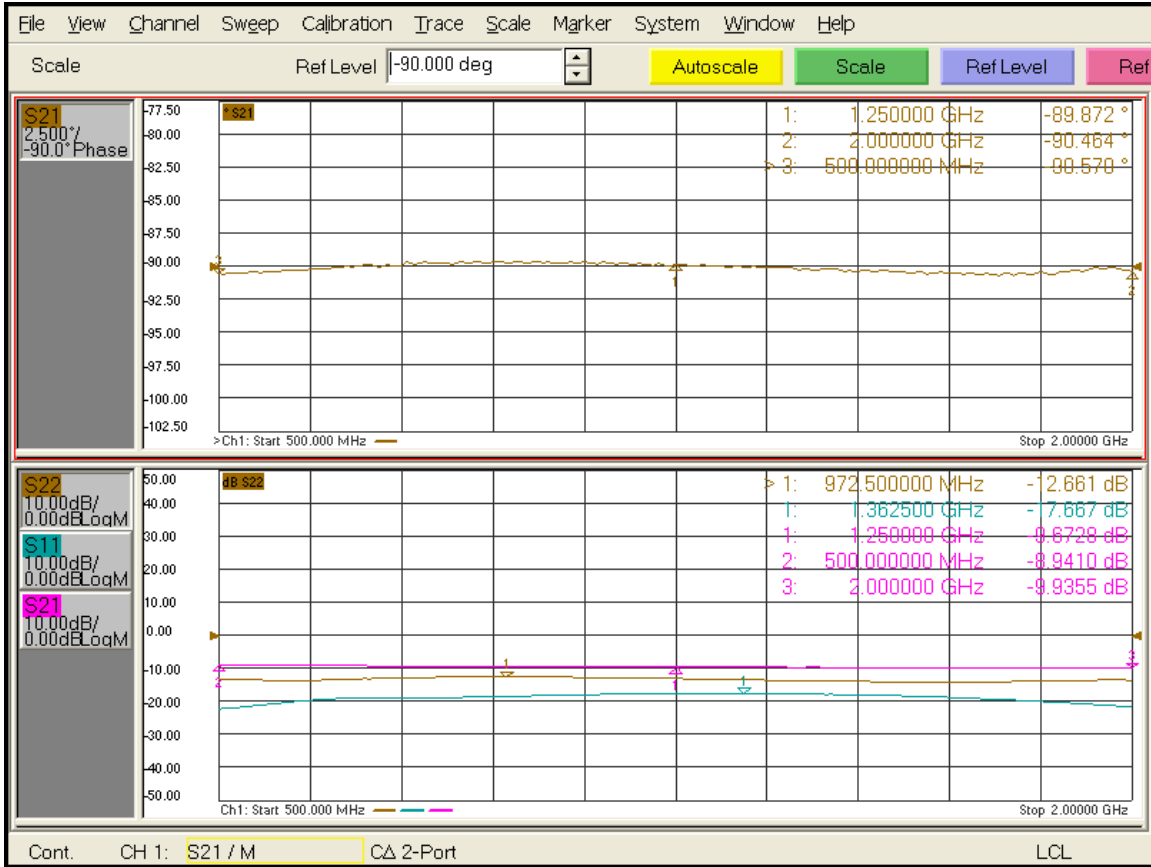


225° Phase, -15 dBm Input Power @ 25° C



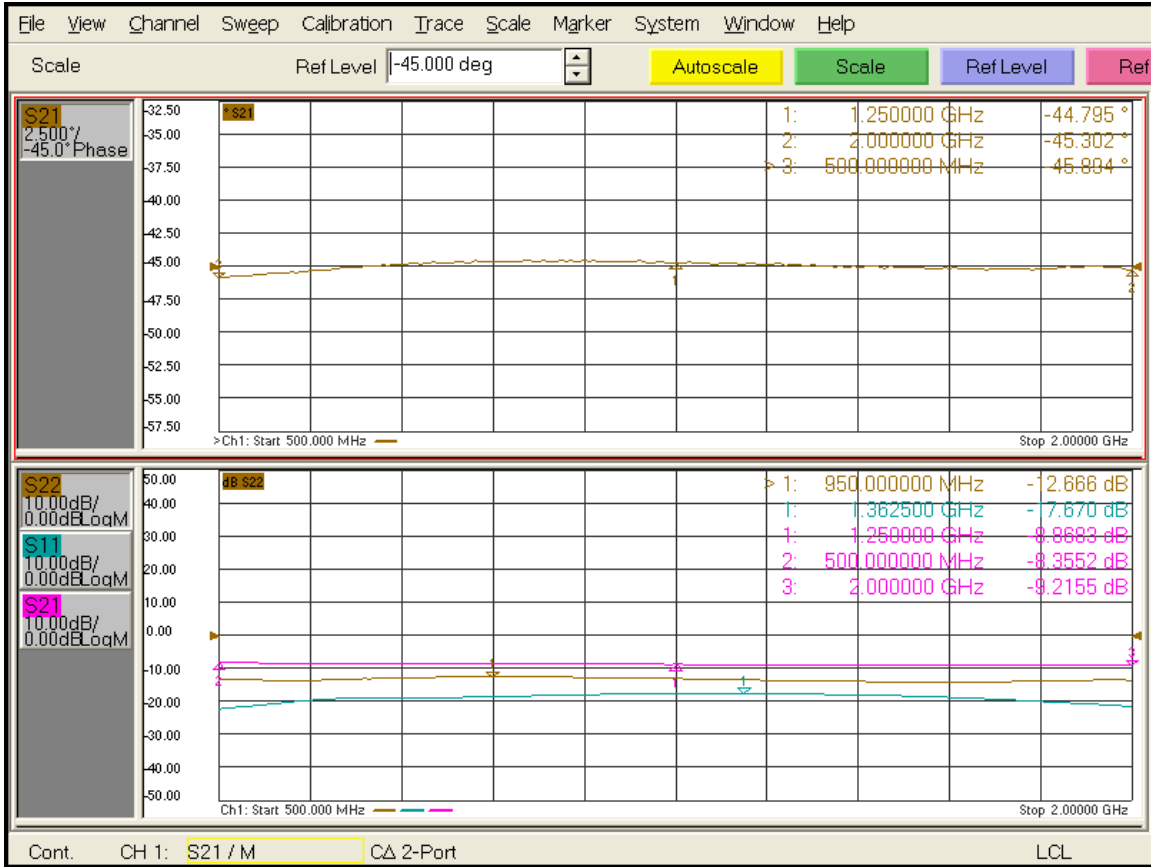


270° Phase, -15 dBm Input Power @ 25° C



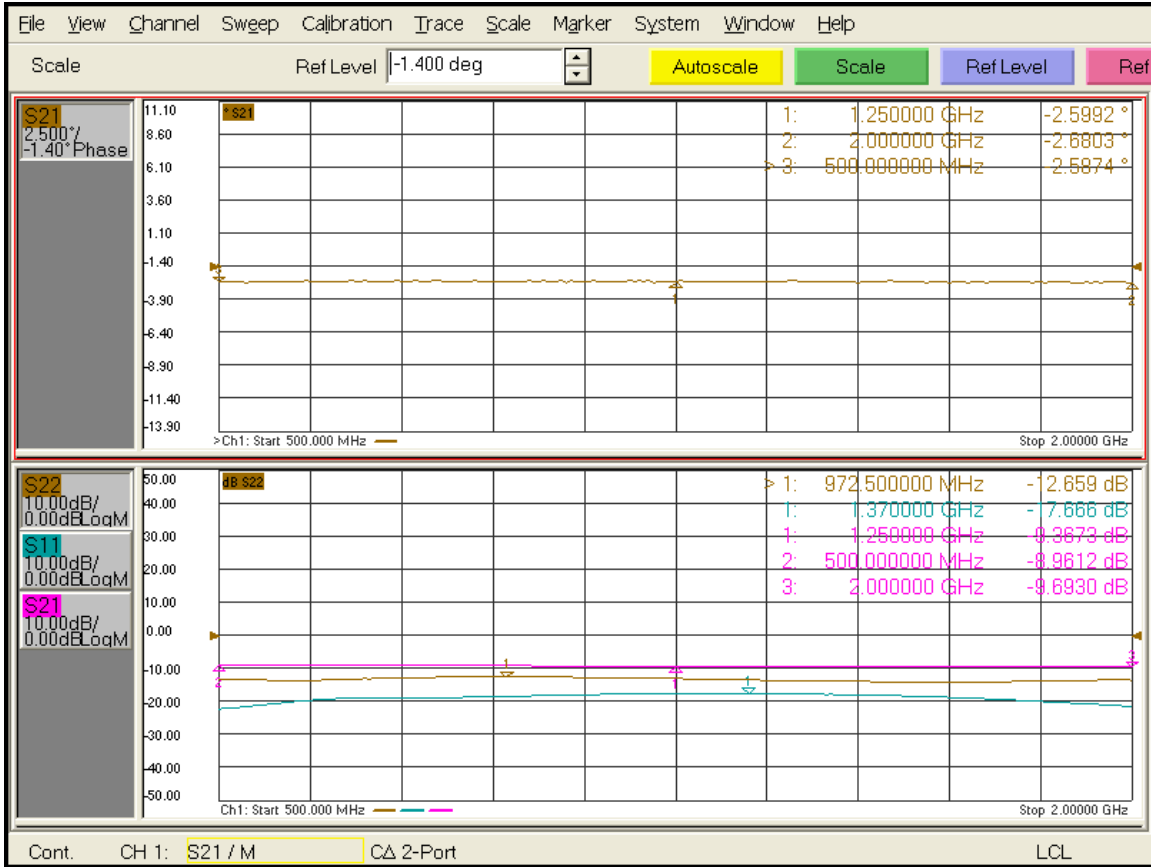


315° Phase, -15 dBm Input Power @ 25° C





358.6° Phase, -15 dBm Input Power @ 25° C





Data Taken at 25° C

Data Taken at -10 dBm Input Power

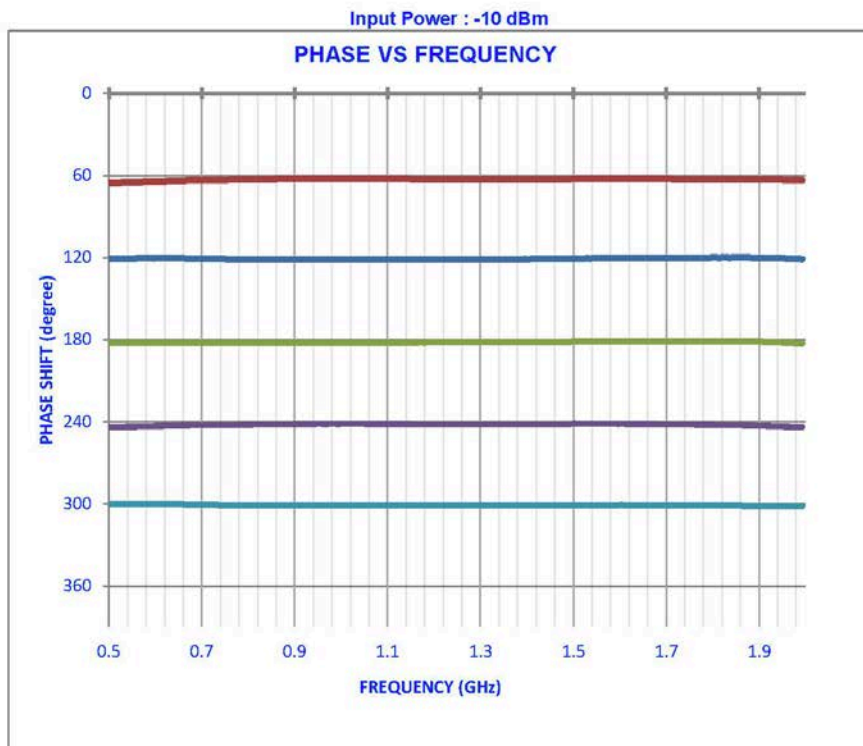
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 7.63 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.61 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.64 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 0.95 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.41 | -0.01 | 0.04 |
| 2.81 | 2.85 | -0.04 | 0.06 |
| 5.63 | 5.72 | -0.09 | 0.09 |
| 11.25 | 11.41 | -0.16 | 0.11 |
| 22.50 | 21.55 | 0.95 | 0.14 |
| 45.00 | 45.56 | -0.56 | 0.16 |
| 90.00 | 91.09 | -1.09 | 0.19 |
| 180.00 | 180.50 | -0.50 | 0.22 |
| 358.59 | 358.61 | -0.02 | 0.24 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 34.16 | -0.41 | 0.58 |
| 67.50 | 69.40 | -1.90 | 0.60 |
| 101.25 | 100.99 | 0.26 | 0.62 |
| 135.00 | 135.53 | -0.53 | 0.64 |
| 168.75 | 169.43 | -0.68 | 0.66 |
| 202.50 | 202.86 | -0.36 | 0.66 |
| 236.25 | 236.85 | -0.60 | 0.68 |
| 270.00 | 270.02 | -0.02 | 0.69 |
| 303.75 | 303.55 | 0.20 | 0.71 |
| 337.50 | 337.53 | -0.03 | 0.71 |
| | | | |
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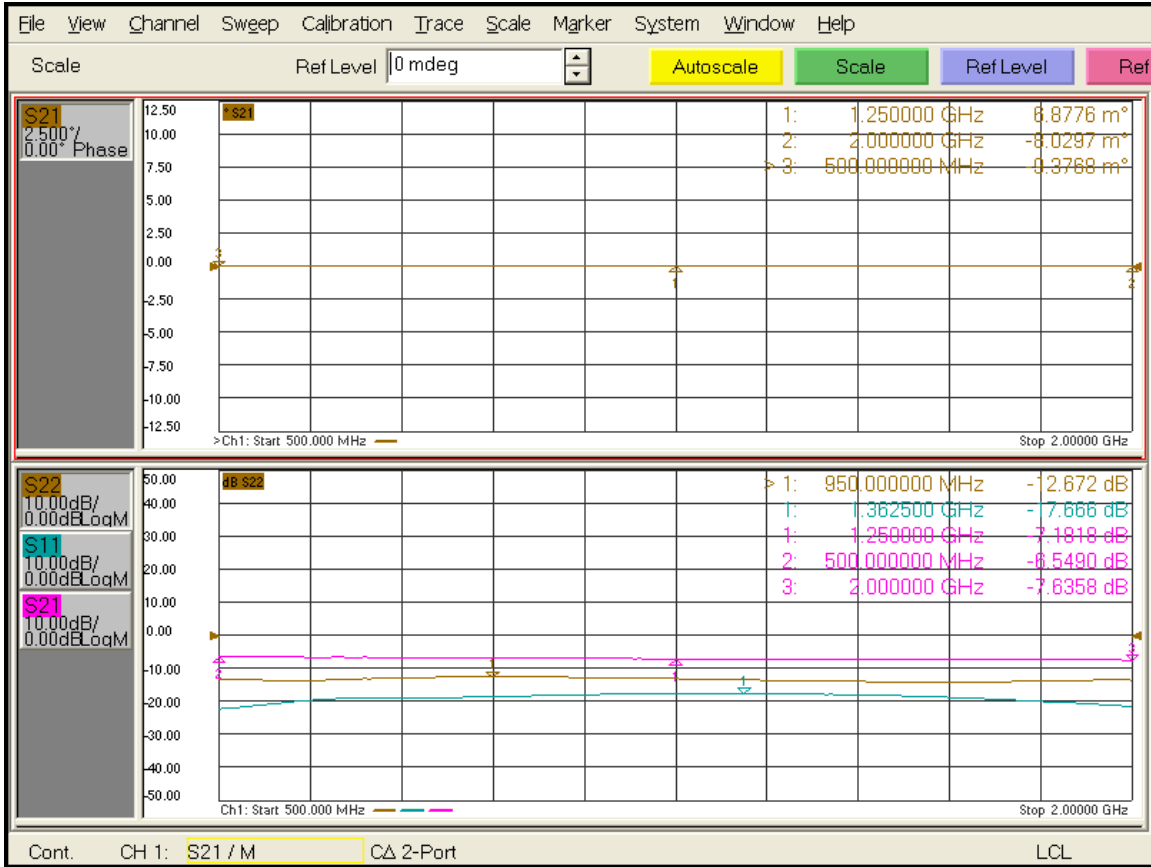


Phase Plot at 25° C



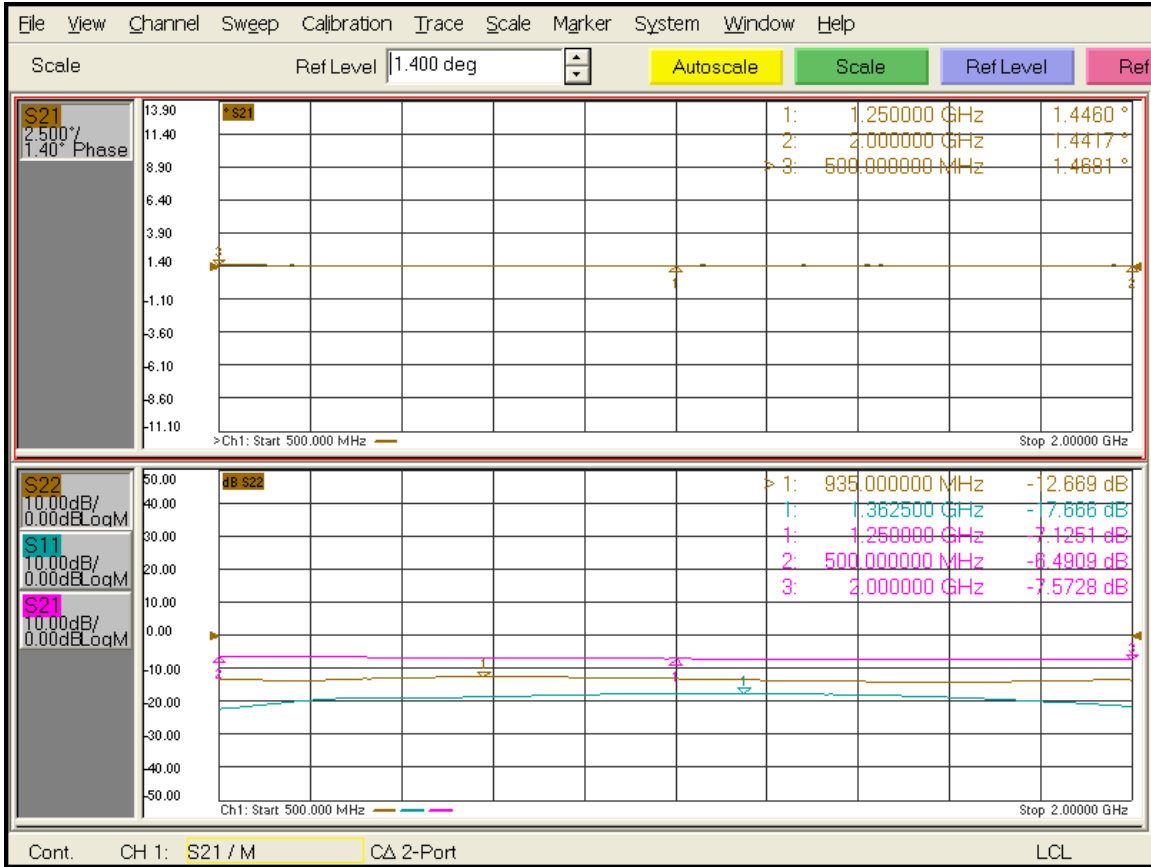


0° Phase, -10 dBm Input Power @ 25° C



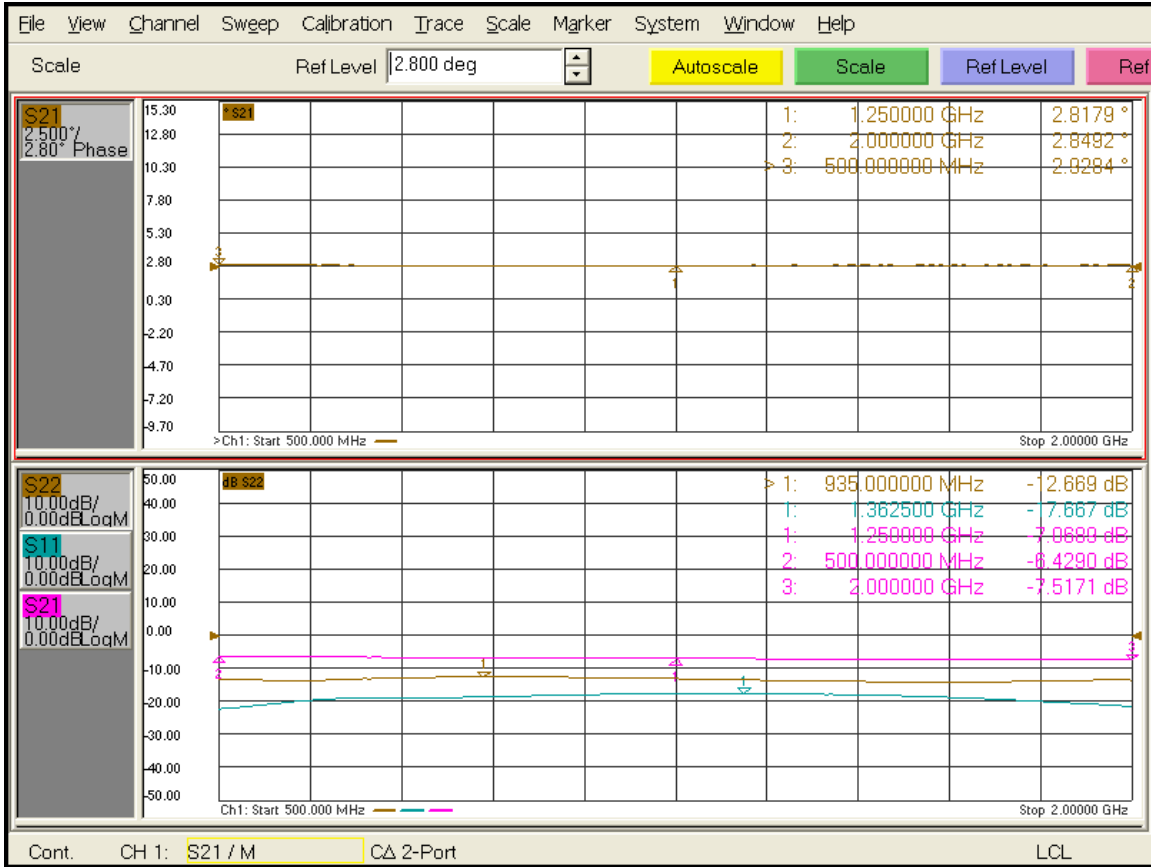


1.4° Phase, -10 dBm Input Power @ 25° C



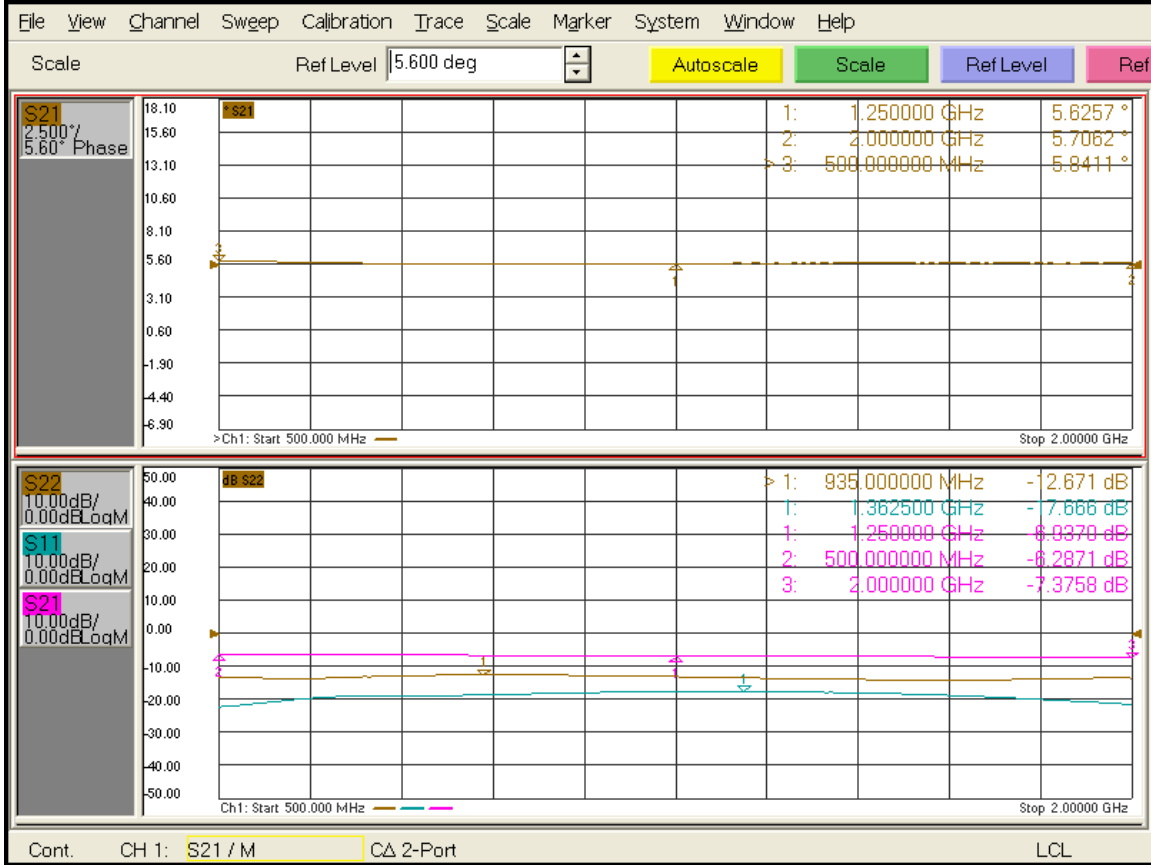


2.8° Phase, -10 dBm Input Power @ 25° C



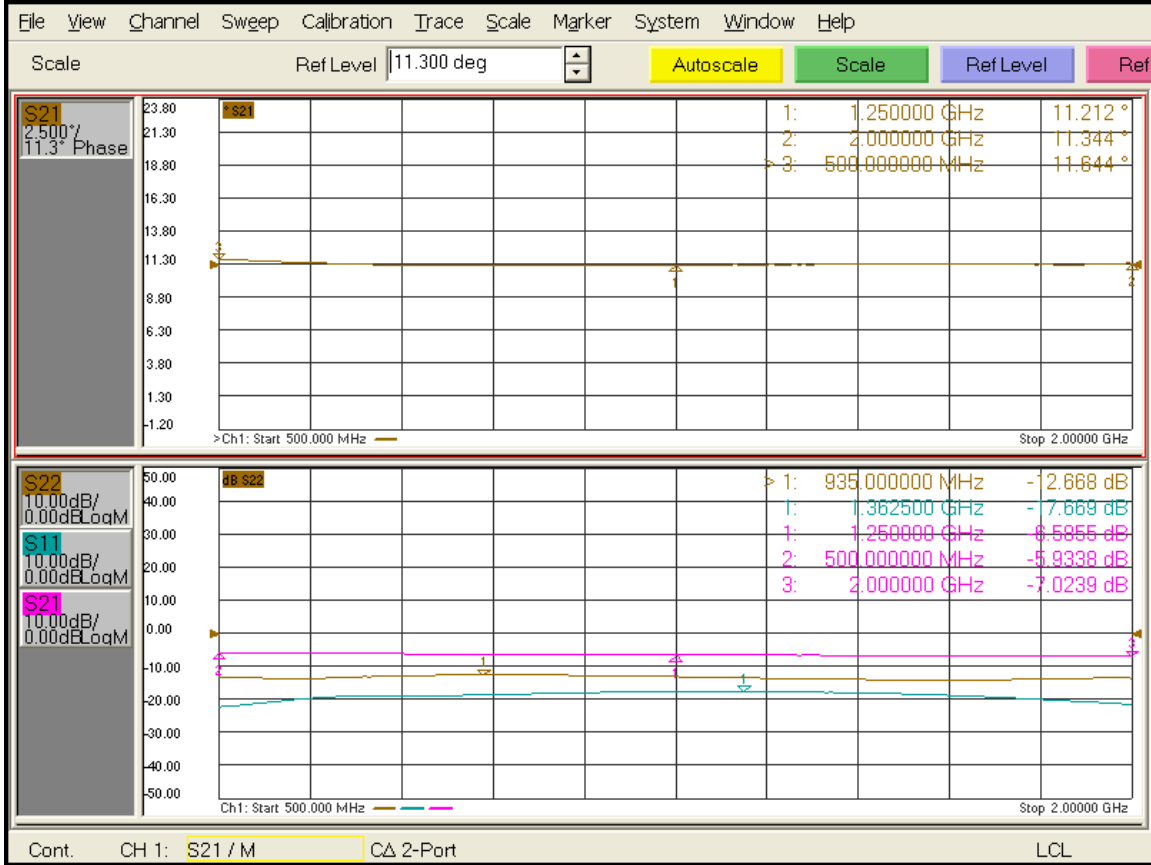


5.6° Phase, -10 dBm Input Power @ 25° C



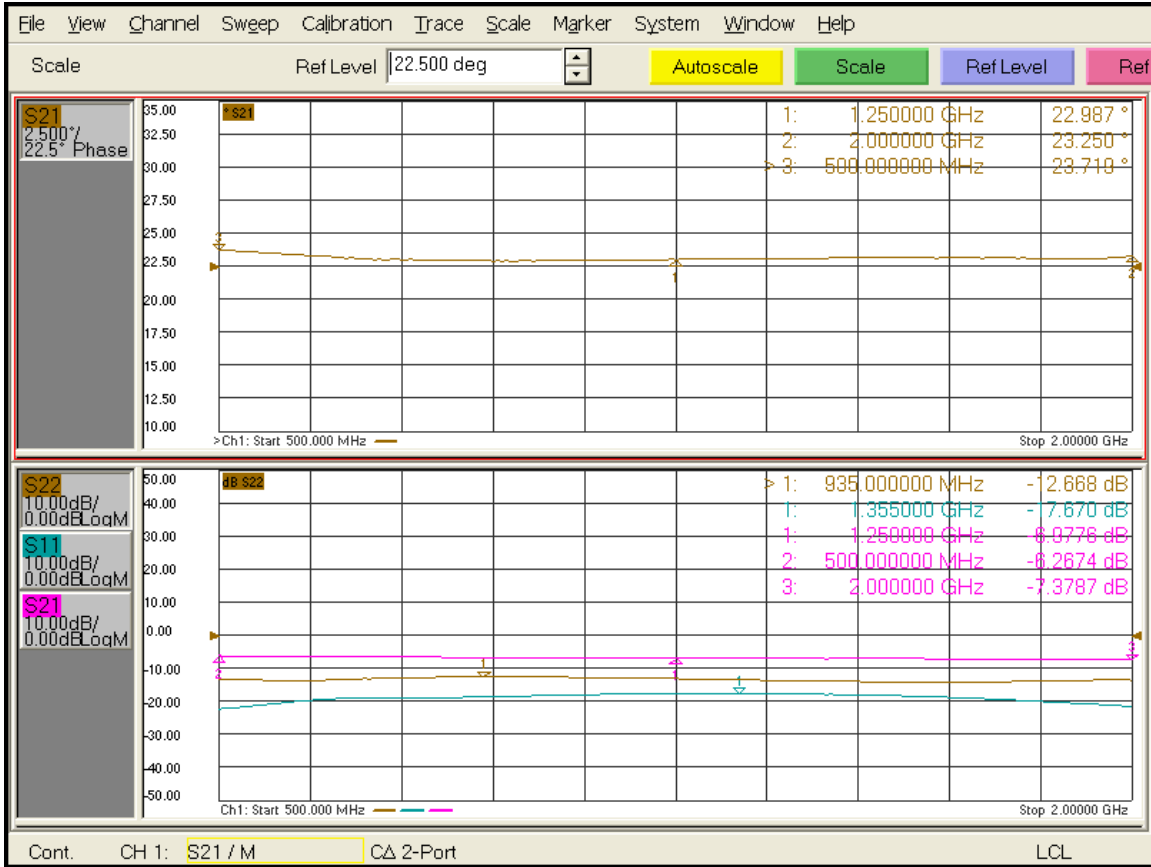


11.25° Phase, -10 dBm Input Power @ 25° C



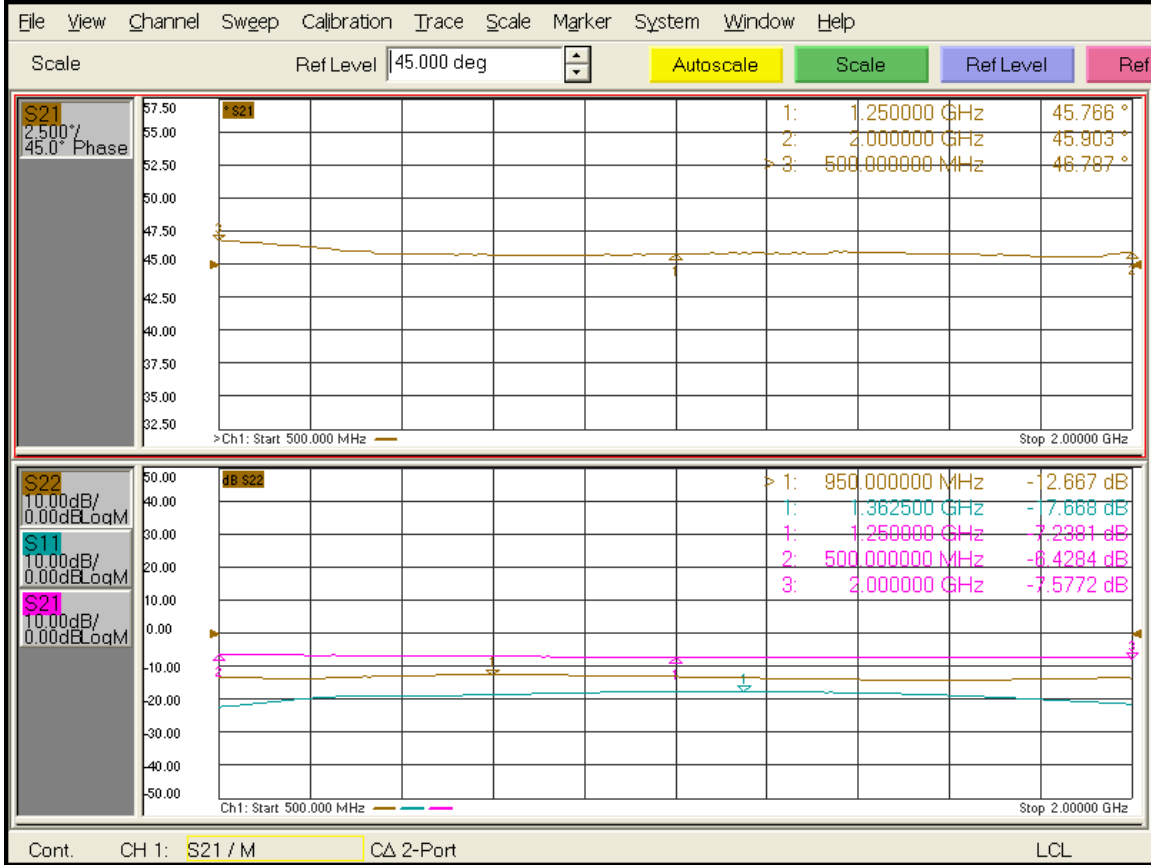


22.5° Phase, -10 dBm Input Power @ 25° C



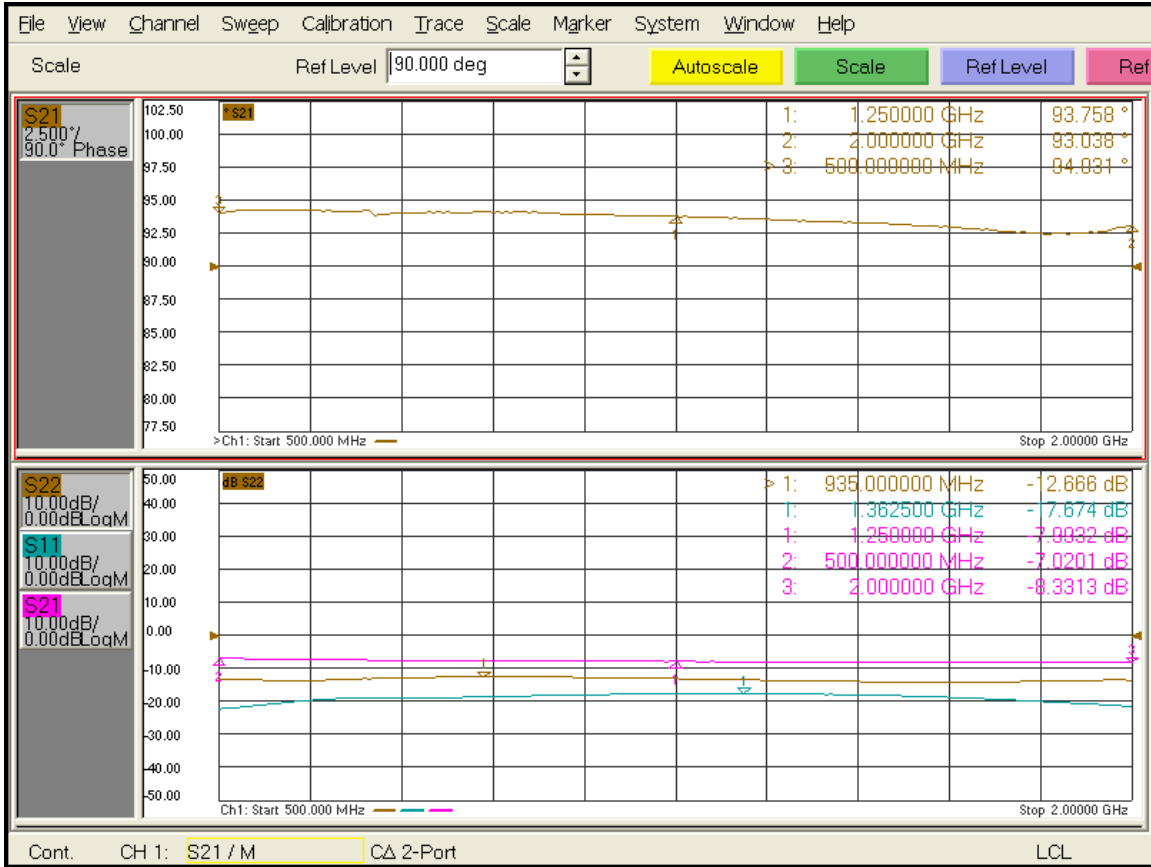


45° Phase, -10 dBm Input Power @ 25° C



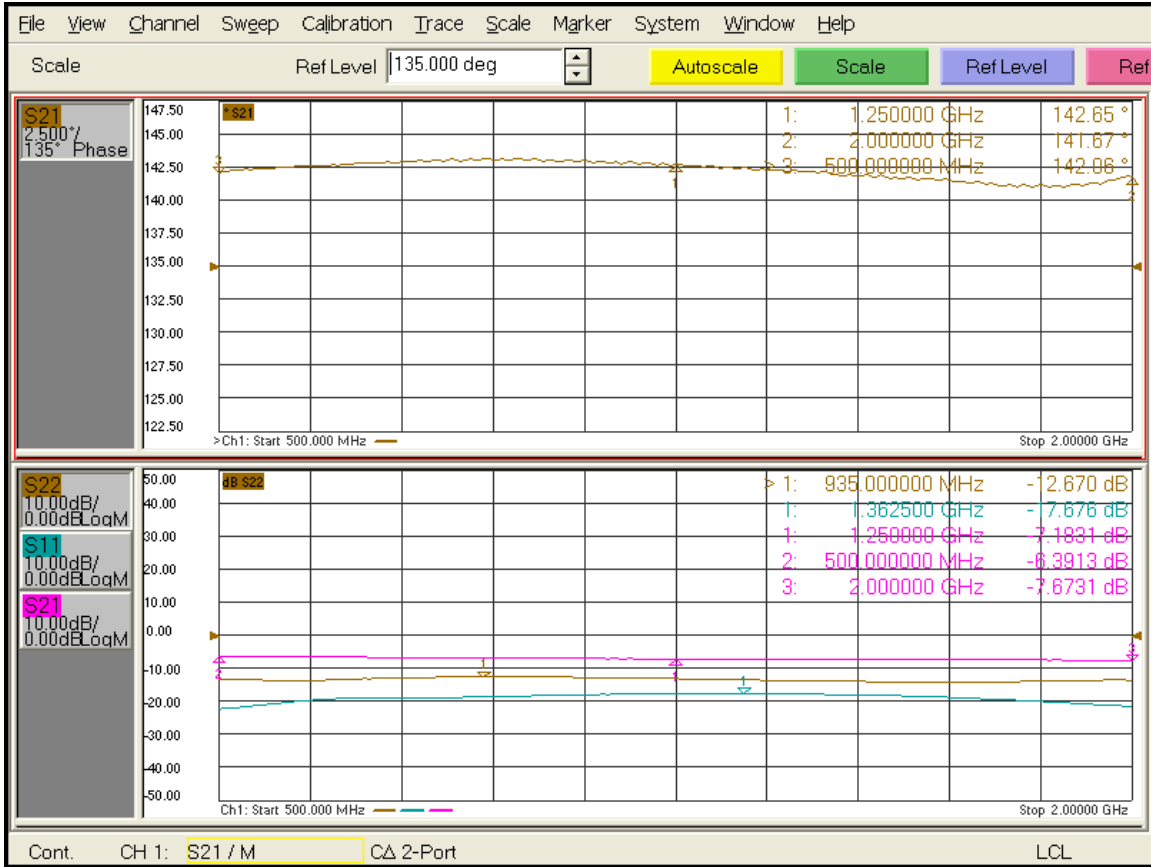


90° Phase, -10 dBm Input Power @ 25° C



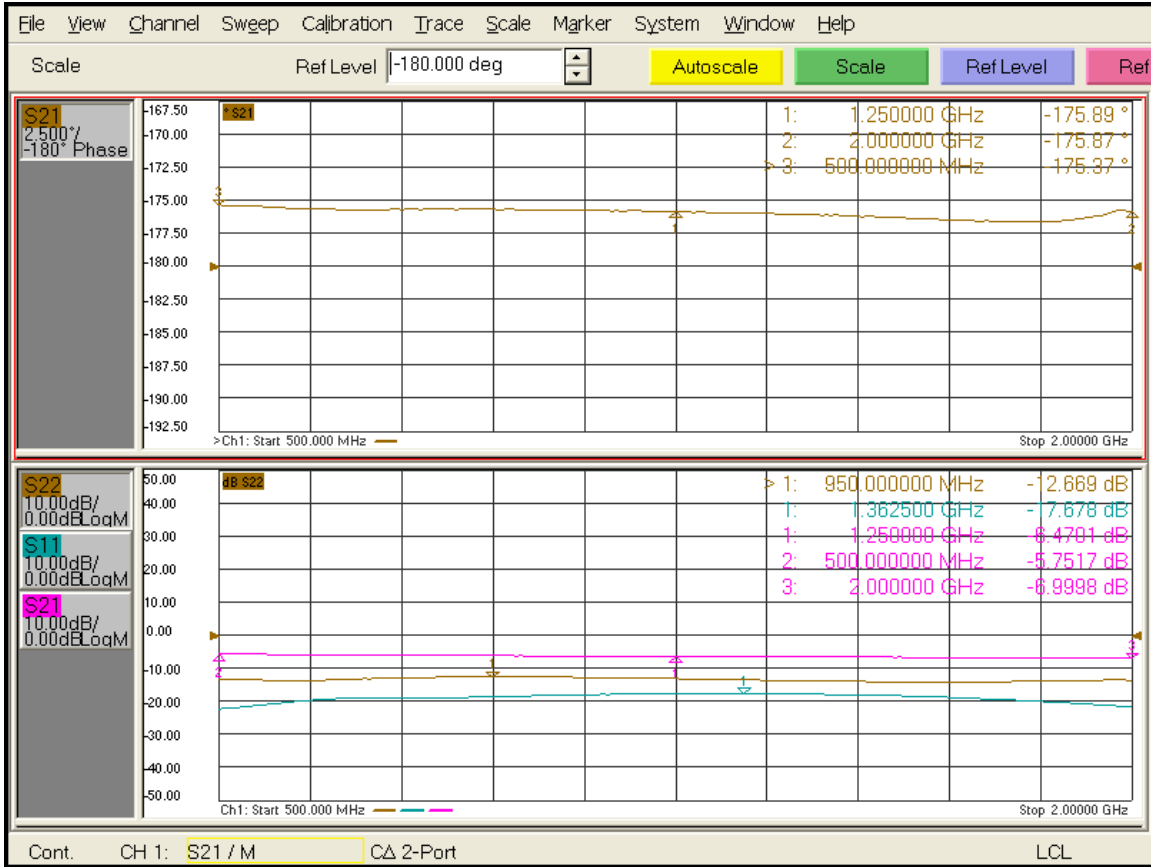


135° Phase, -10 dBm Input Power @ 25° C



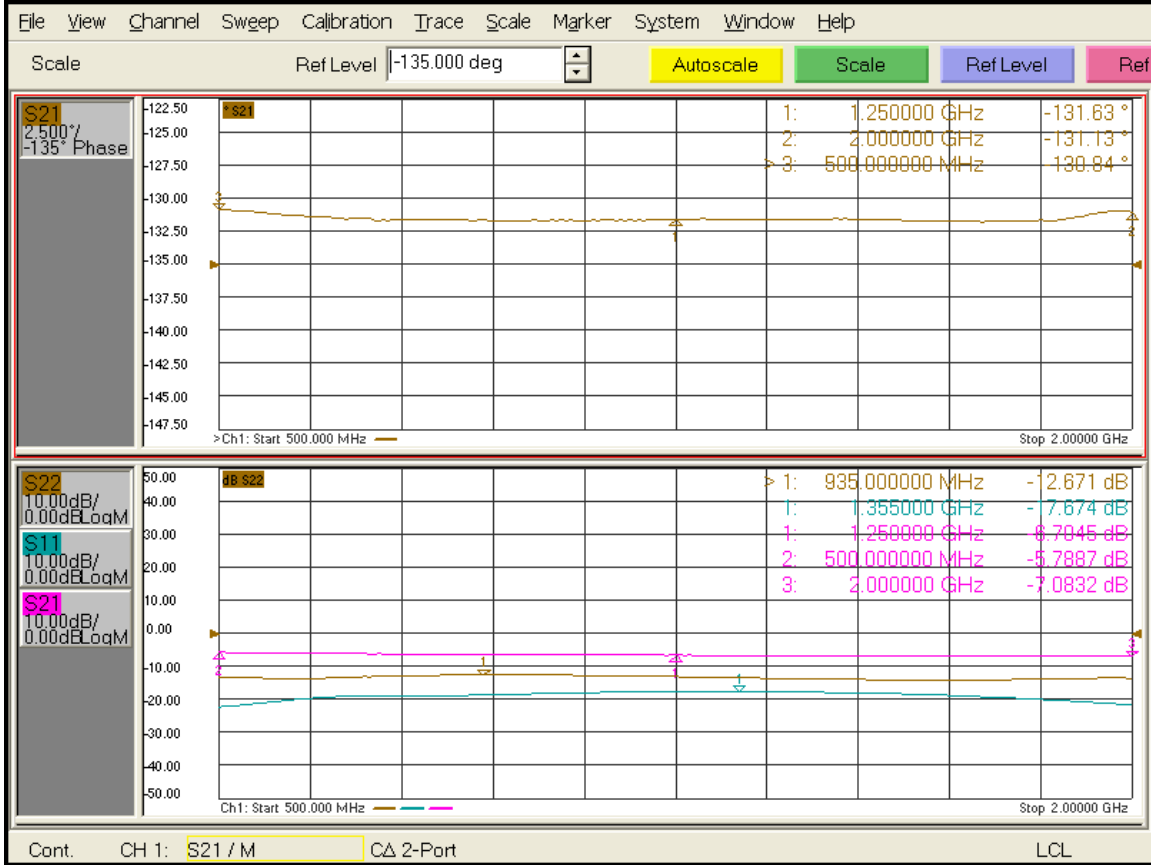


180° Phase, -10 dBm Input Power @ 25° C



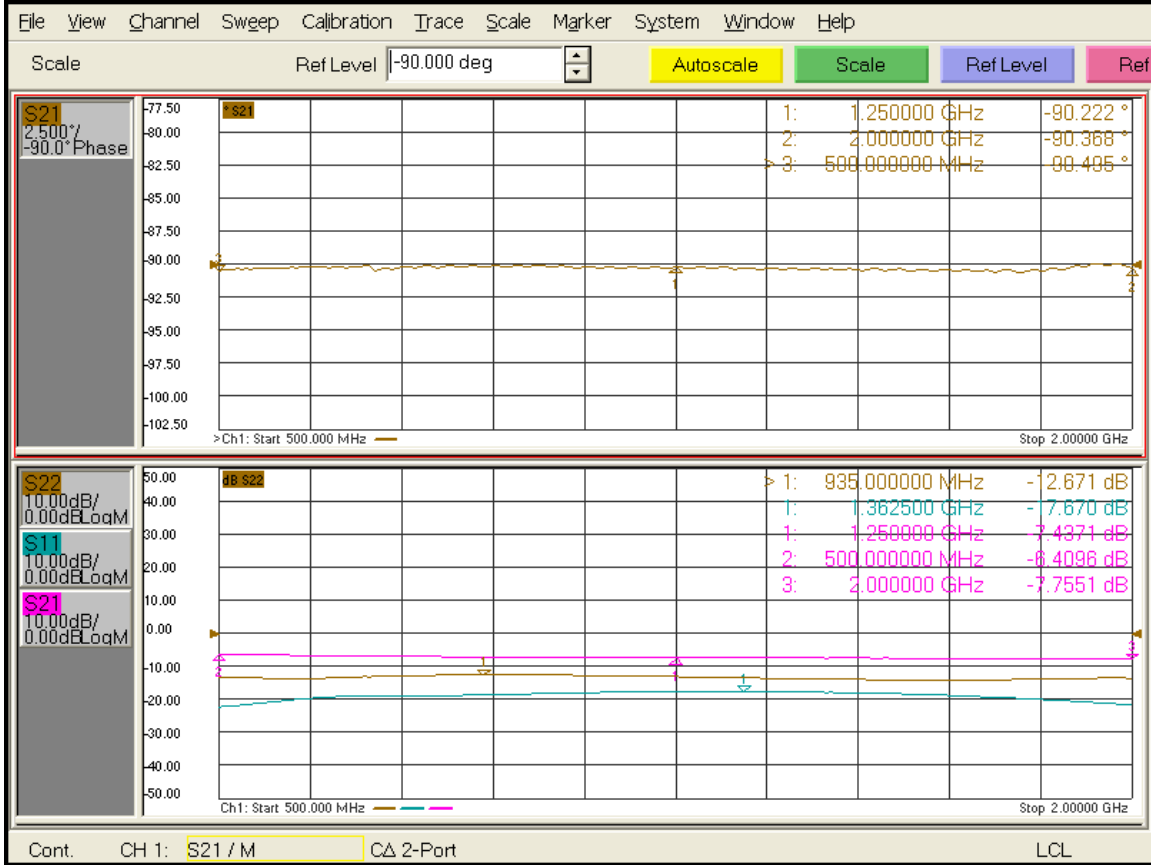


225° Phase, -10 dBm Input Power @ 25° C



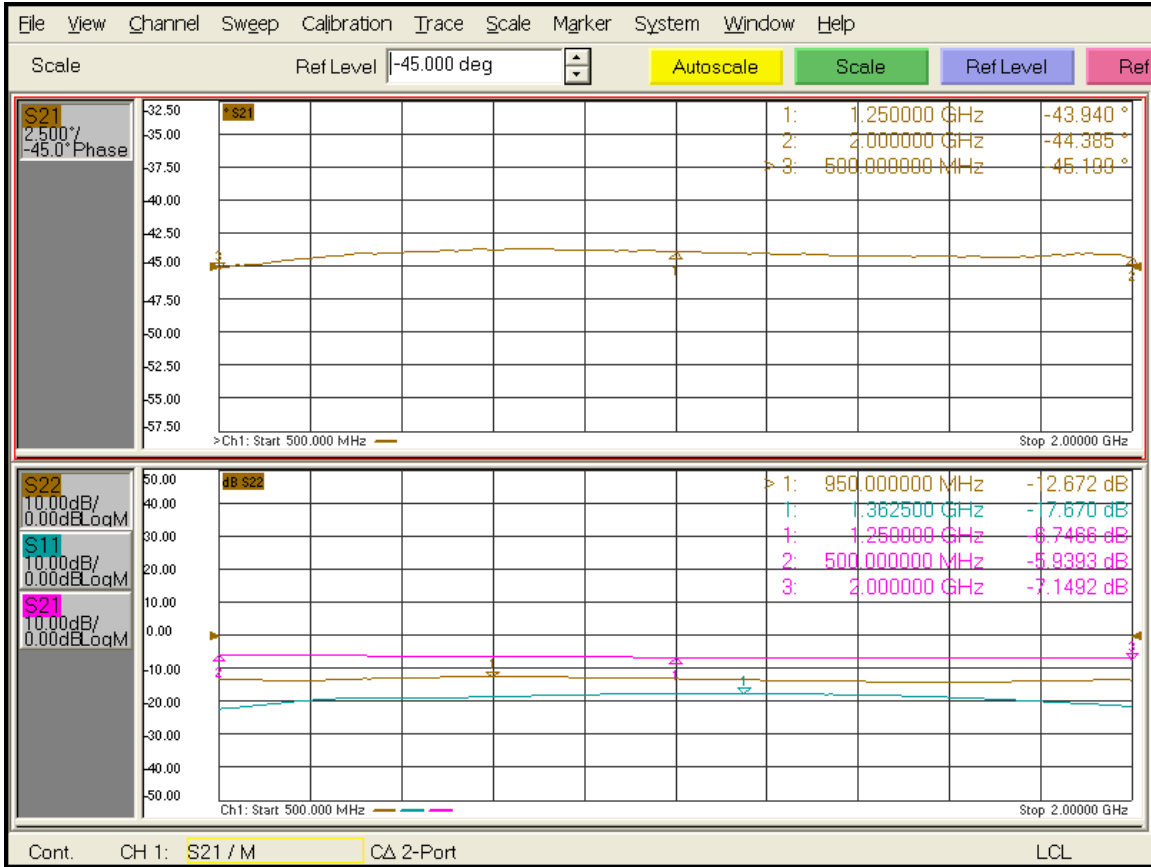


270° Phase, -10 dBm Input Power @ 25° C



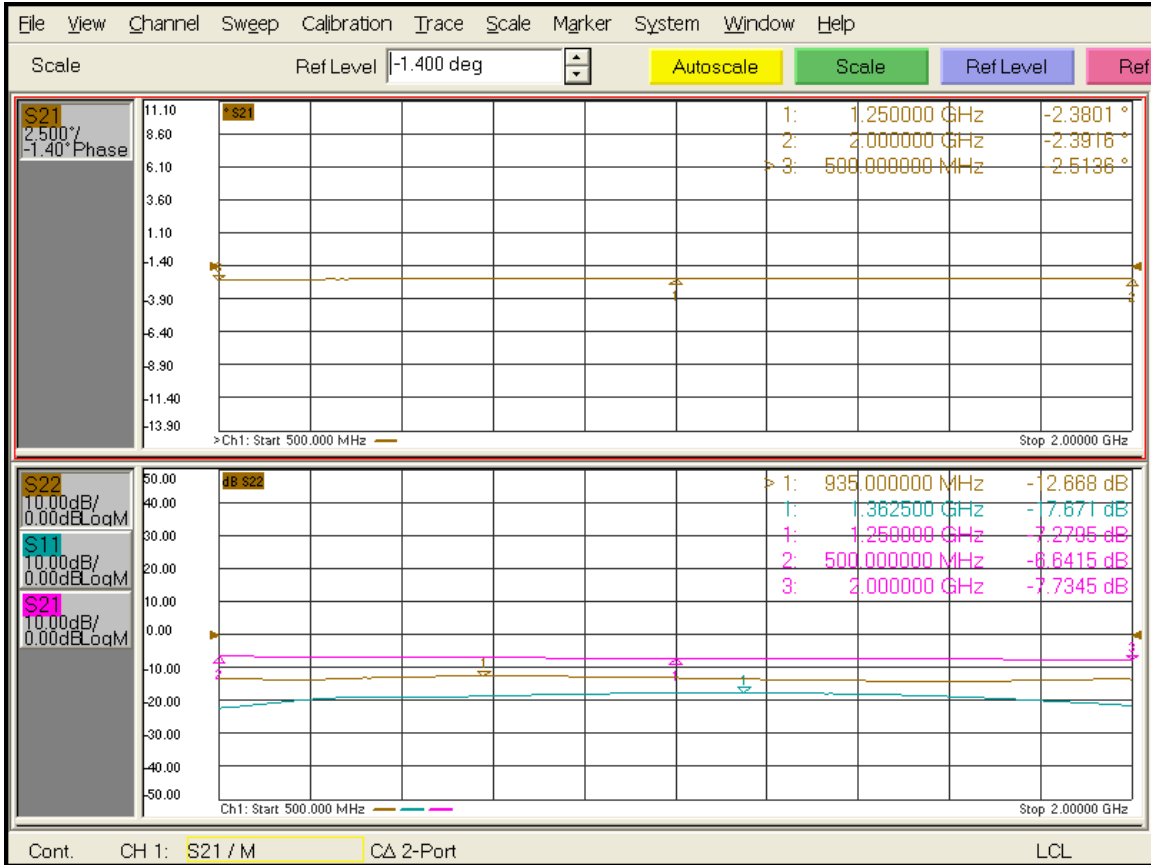


315° Phase, -10 dBm Input Power @ 25° C





358.6° Phase, -10 dBm Input Power @ 25° C





Data Taken at 25° C

Data Taken at -5 dBm Input Power

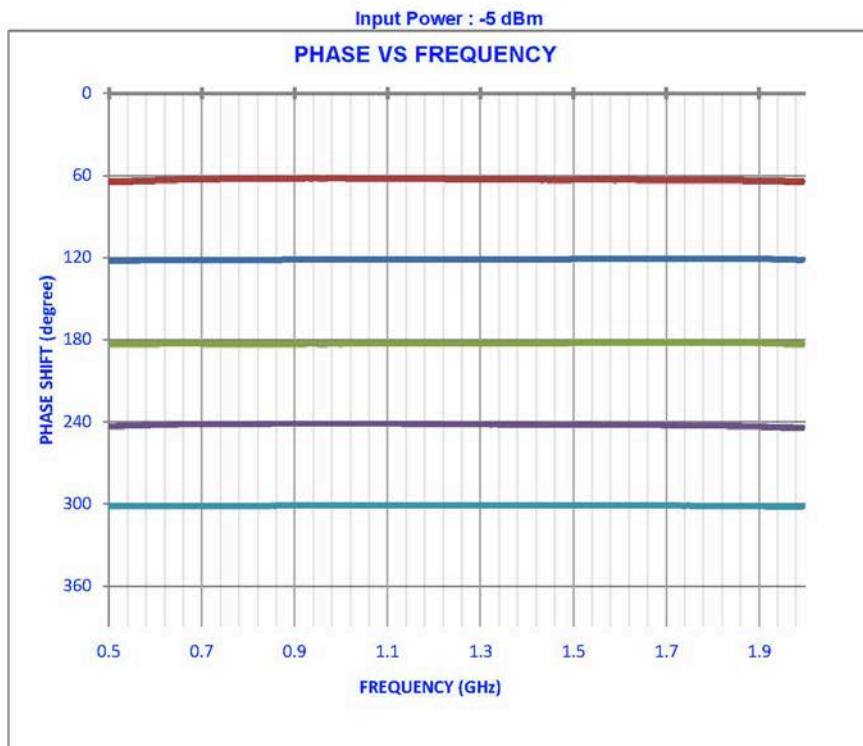
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|--|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 9.58 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.61 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.62 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 2.32 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.77 | -0.37 | 0.04 |
| 2.81 | 3.52 | -0.71 | 0.07 |
| 5.63 | 7.06 | -1.44 | 0.10 |
| 11.25 | 13.95 | -2.70 | 0.13 |
| 22.50 | 25.28 | -2.78 | 0.16 |
| 45.00 | 47.56 | -2.56 | 0.19 |
| 90.00 | 91.57 | -1.57 | 0.22 |
| 180.00 | 181.05 | -1.05 | 0.25 |
| 358.59 | 358.38 | 0.21 | 0.27 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 37.60 | -3.85 | 0.54 |
| 67.50 | 68.62 | -1.12 | 0.55 |
| 101.25 | 102.55 | -1.30 | 0.55 |
| 135.00 | 133.93 | 1.07 | 0.57 |
| 168.75 | 167.67 | 1.08 | 0.57 |
| 202.50 | 207.14 | -4.64 | 0.58 |
| 236.25 | 237.61 | -1.36 | 0.58 |
| 270.00 | 270.33 | -0.33 | 0.59 |
| 303.75 | 304.00 | -0.25 | 0.59 |
| 337.50 | 334.29 | 3.21 | 0.59 |
| | | | |
| | | | |
| | | | |

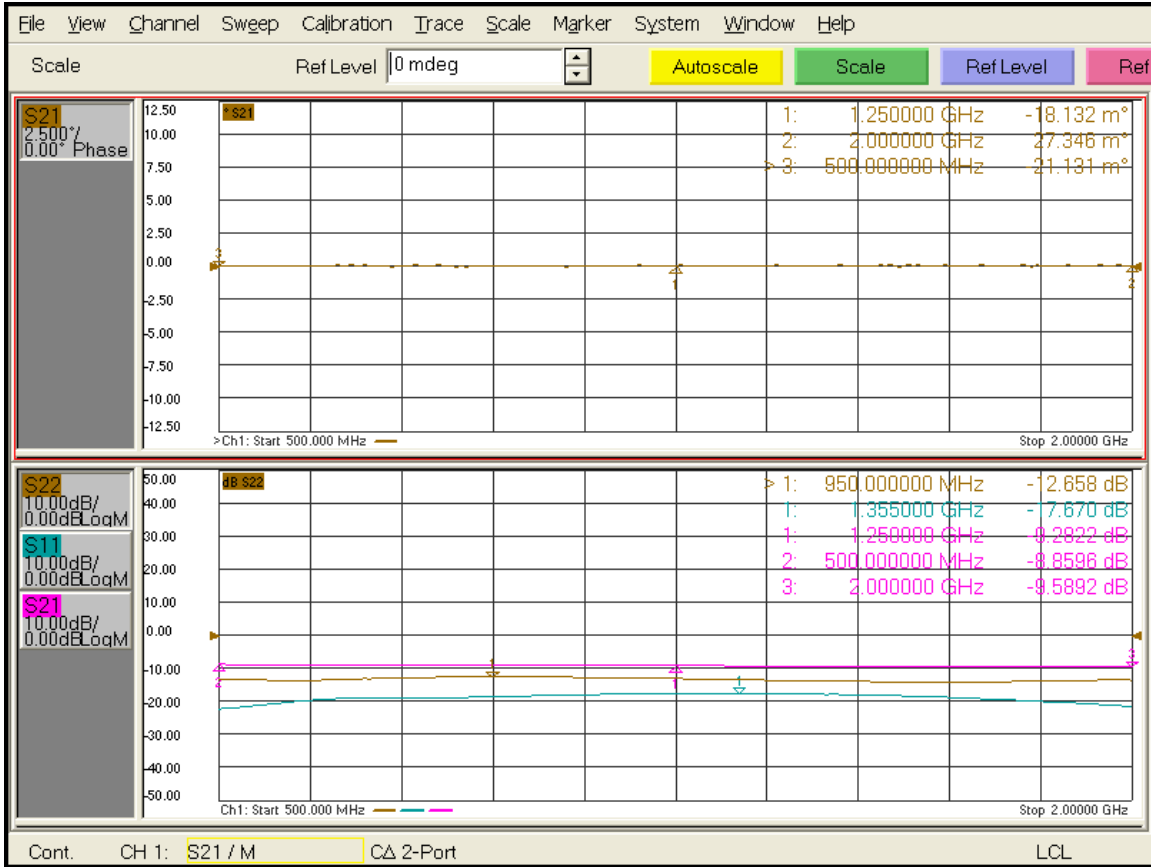


Phase Plot at 25° C



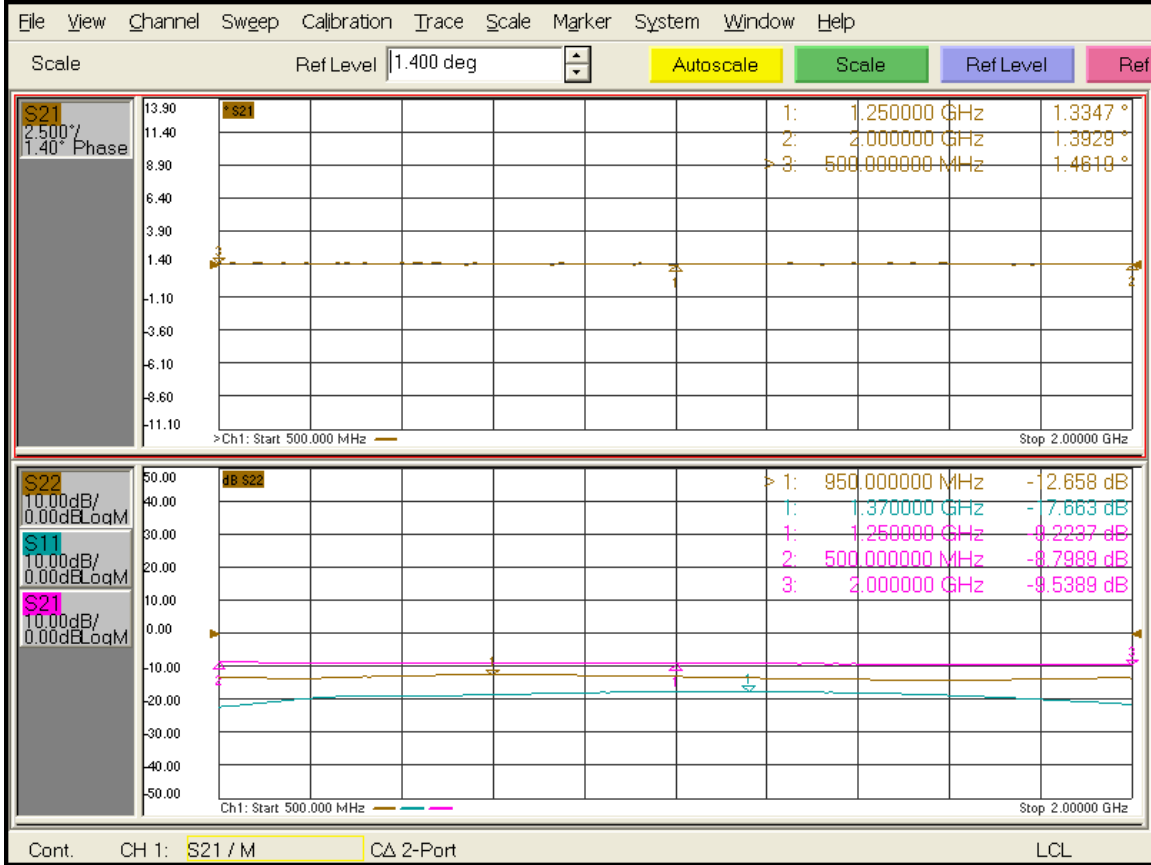


0° Phase, -5 dBm Input Power @ 25° C



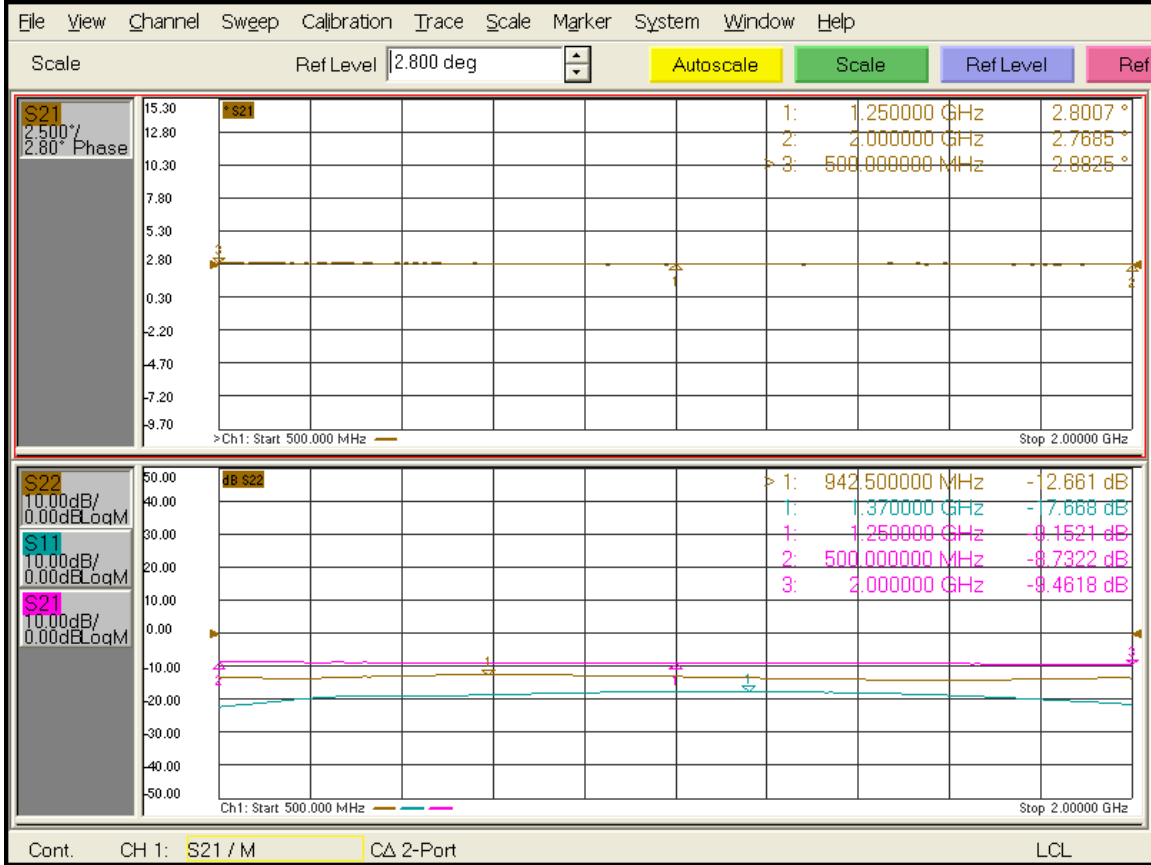


1.4° Phase, -5 dBm Input Power @ 25° C



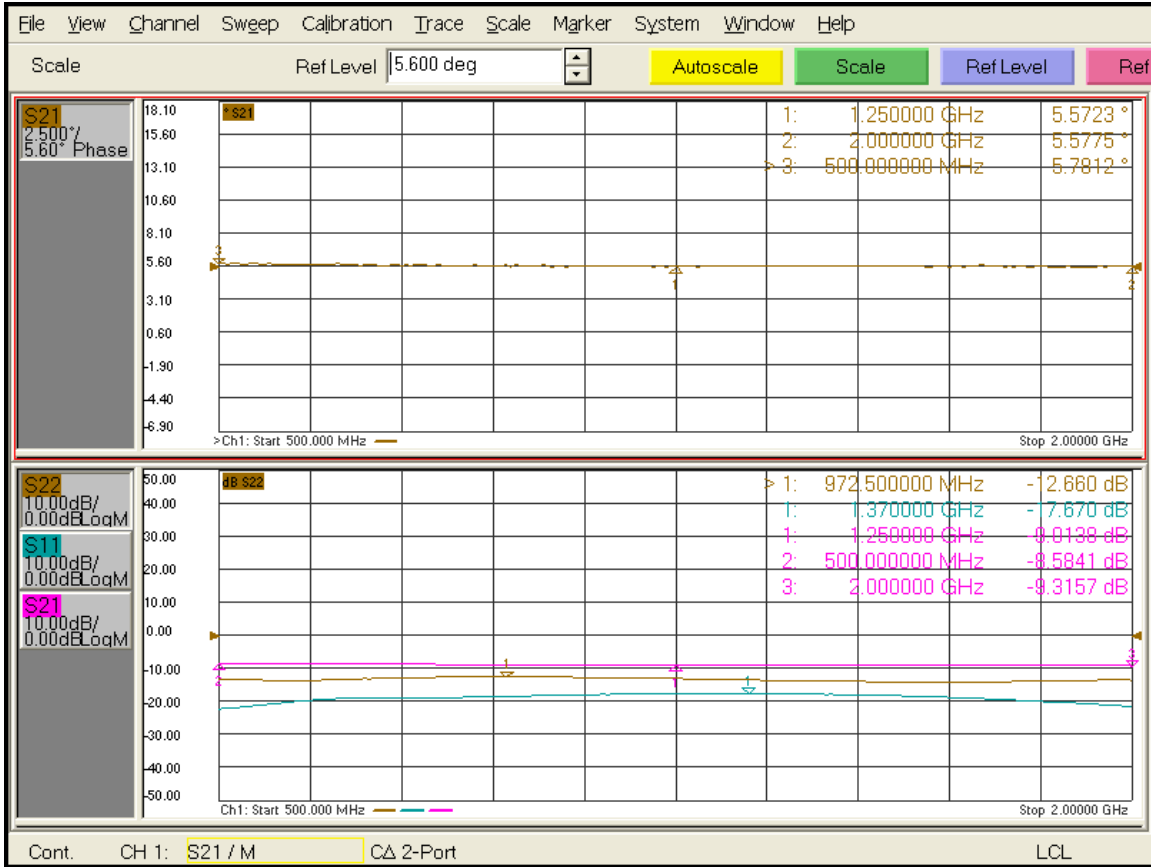


2.8° Phase, -5 dBm Input Power @ 25° C



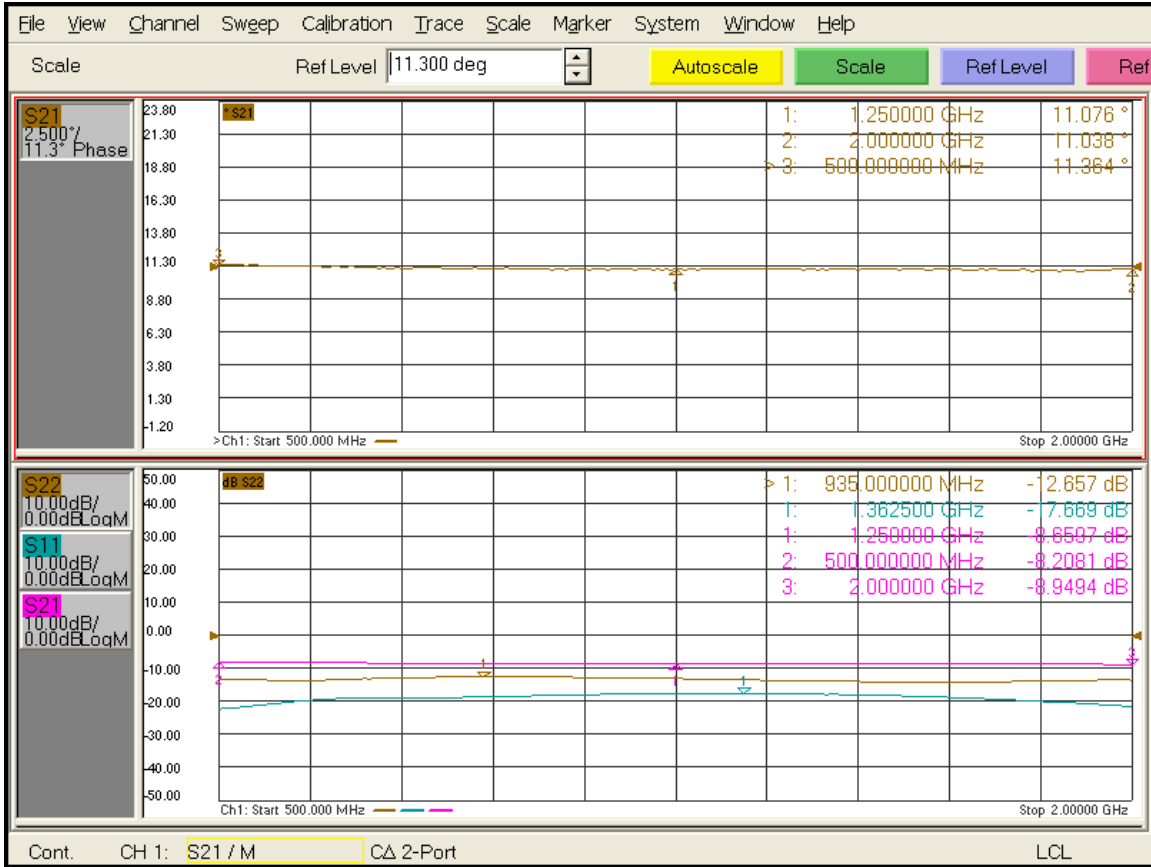


5.6° Phase, -5 dBm Input Power @ 25° C



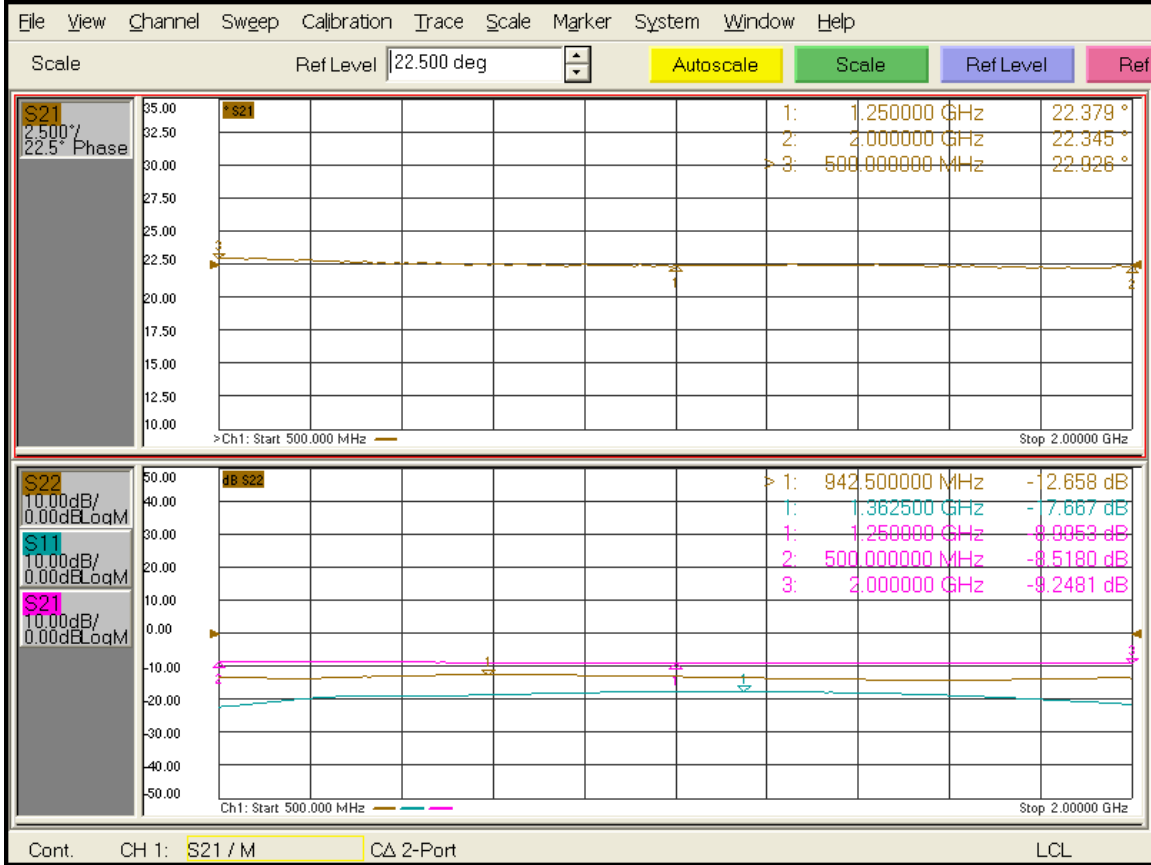


11.25° Phase, -5 dBm Input Power @ 25° C



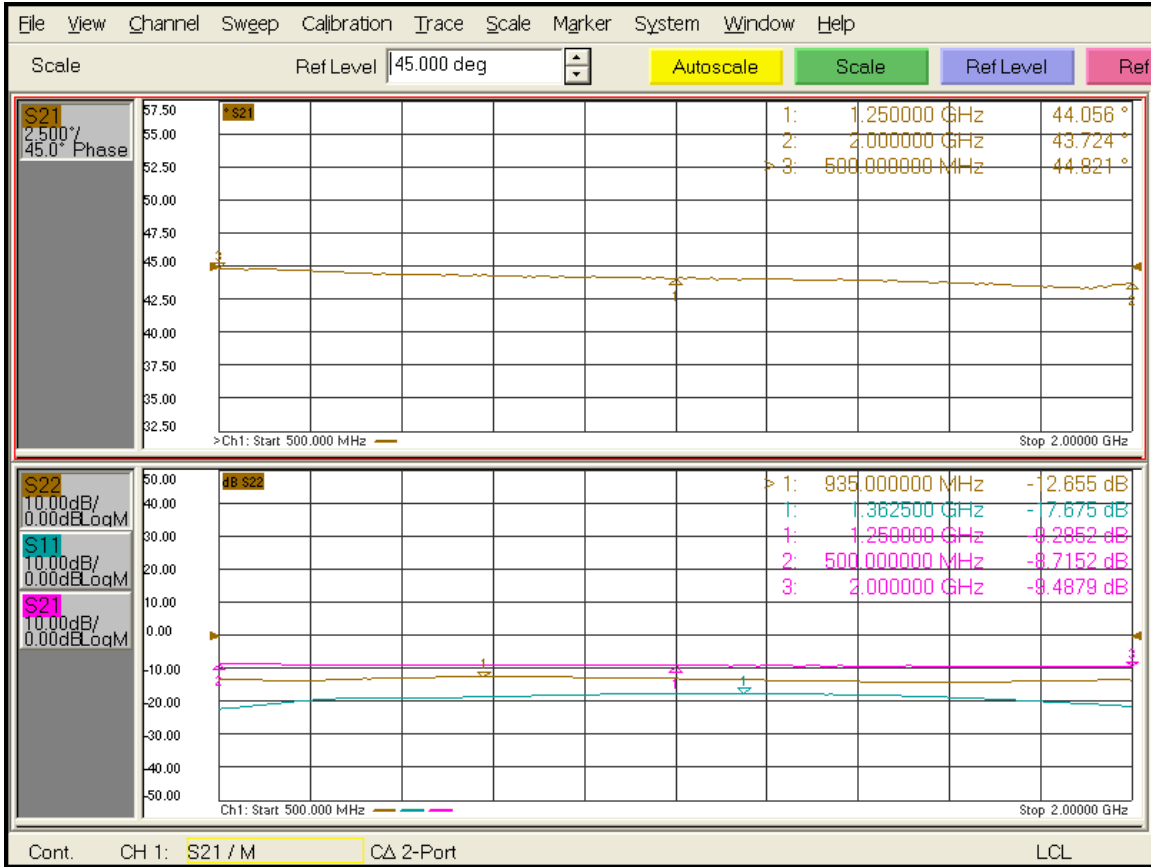


22.5° Phase, -5 dBm Input Power @ 25° C



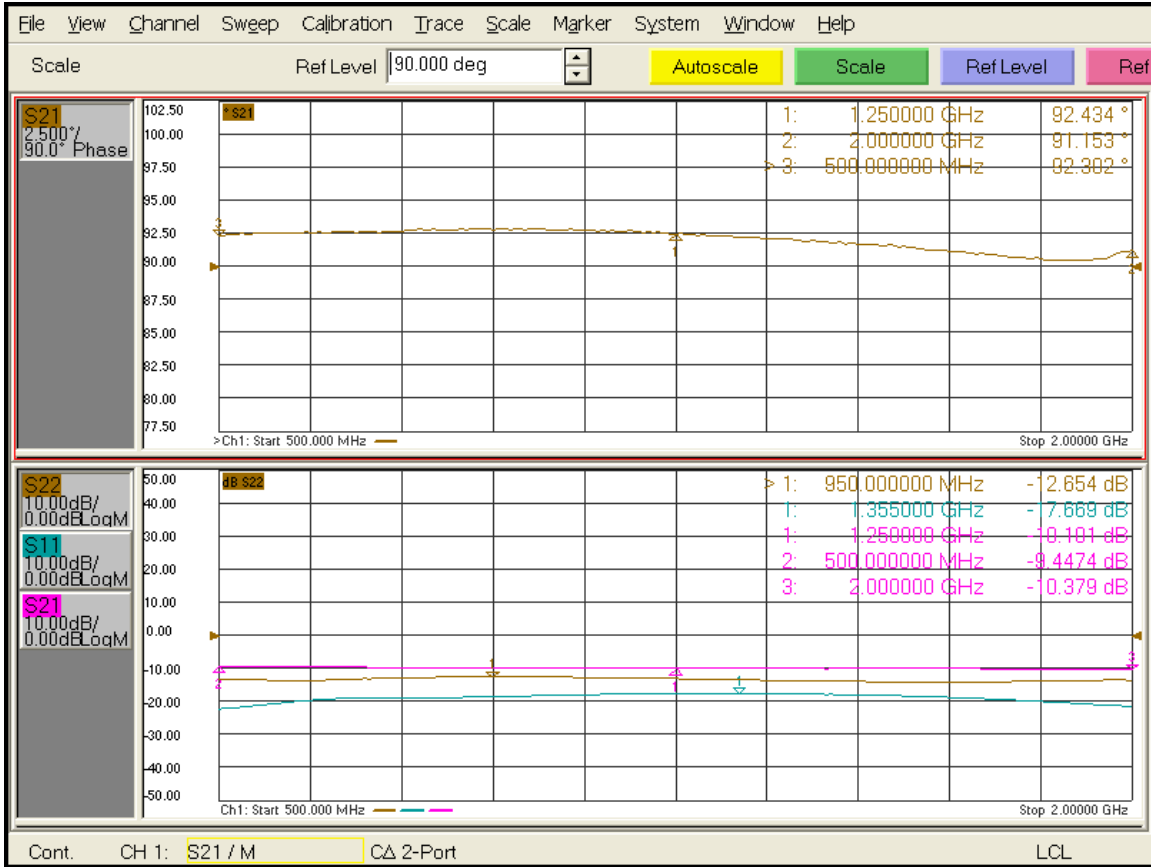


45° Phase, -5 dBm Input Power @ 25° C



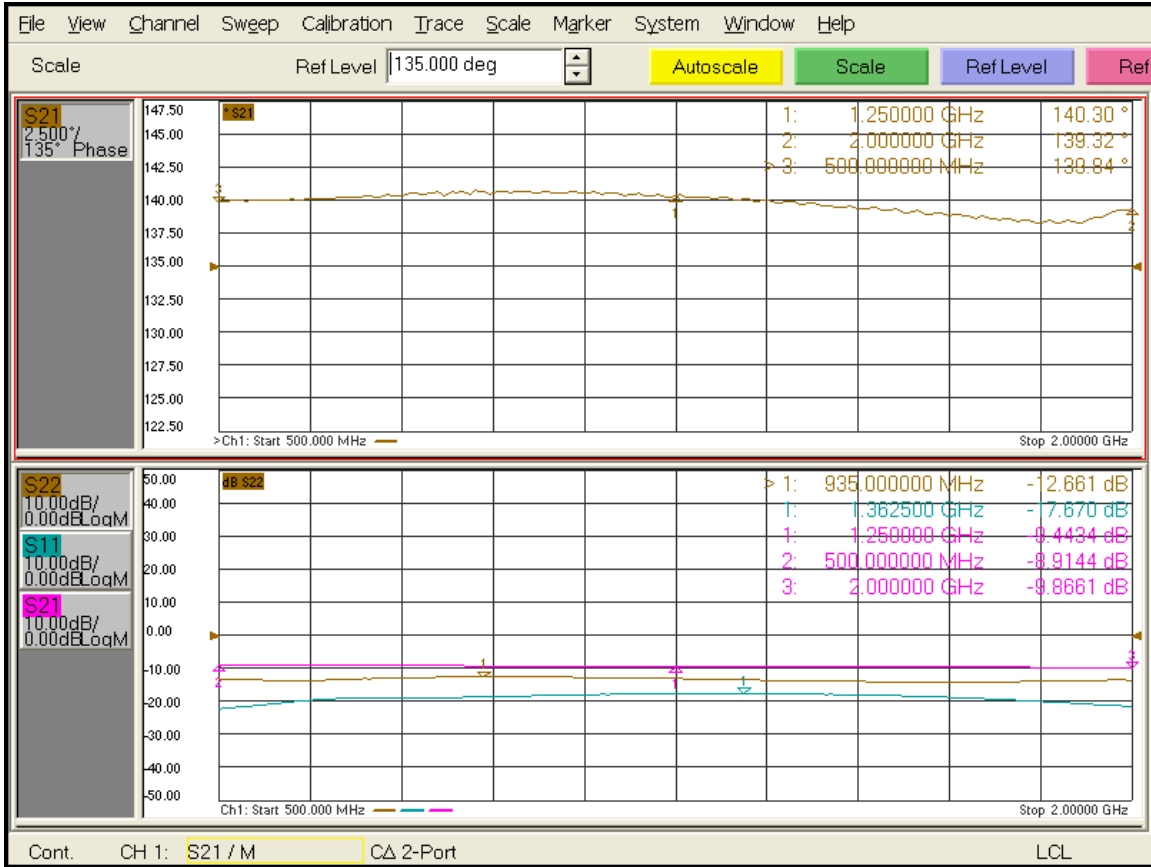


90° Phase, -5 dBm Input Power @ 25° C



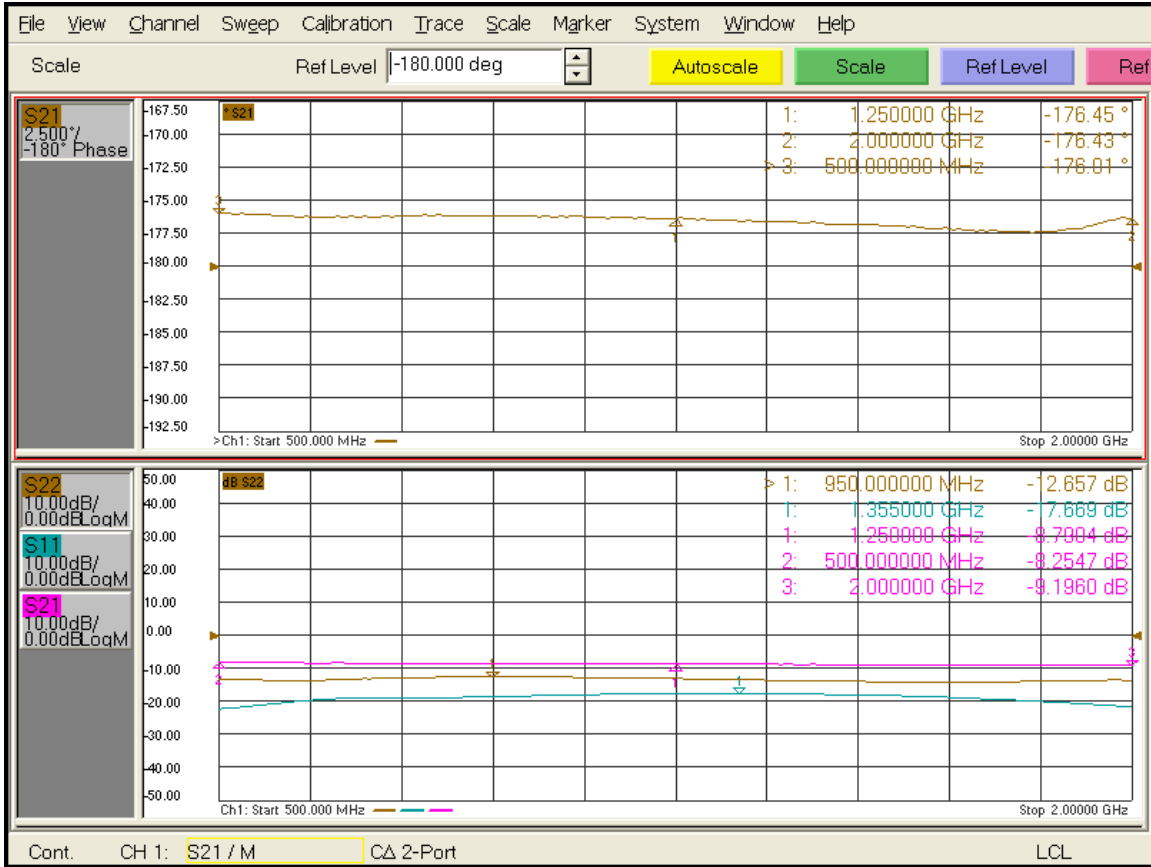


135° Phase, -5 dBm Input Power @ 25° C



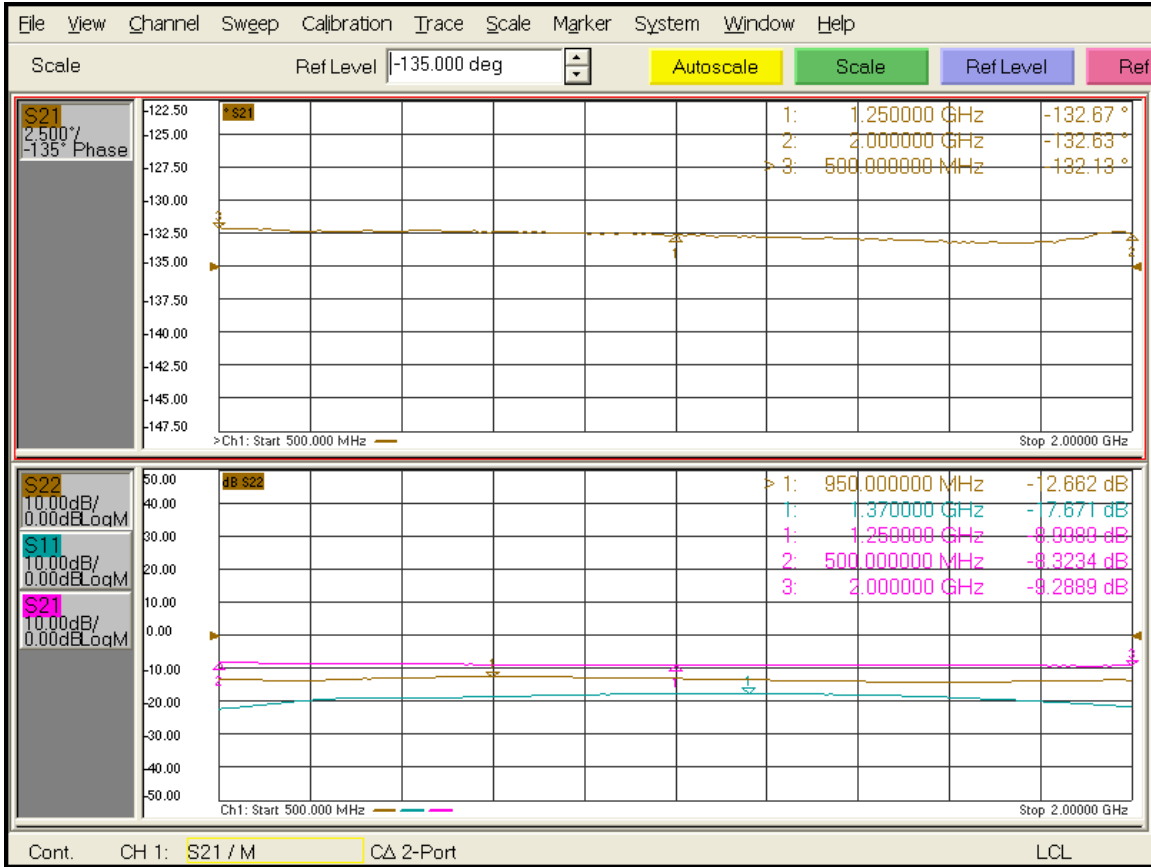


180° Phase, -5 dBm Input Power @ 25° C



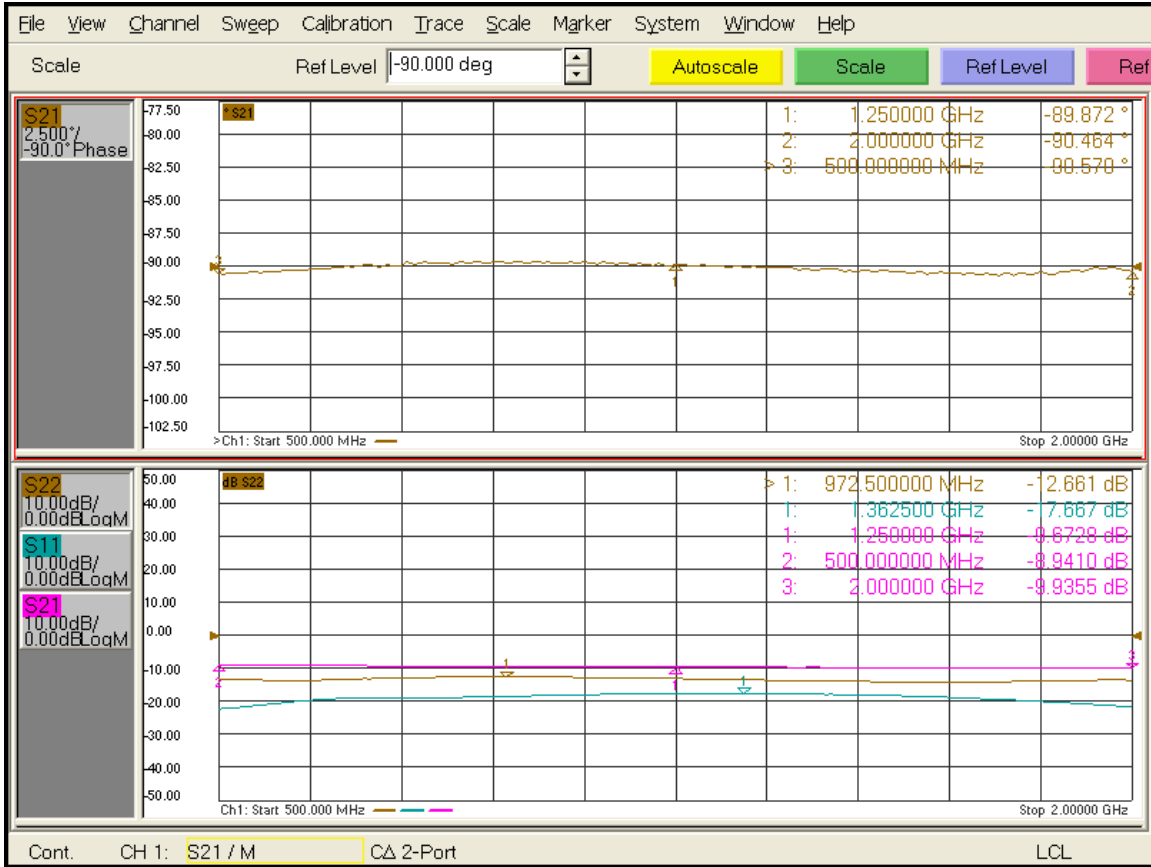


225° Phase, -5 dBm Input Power @ 25° C



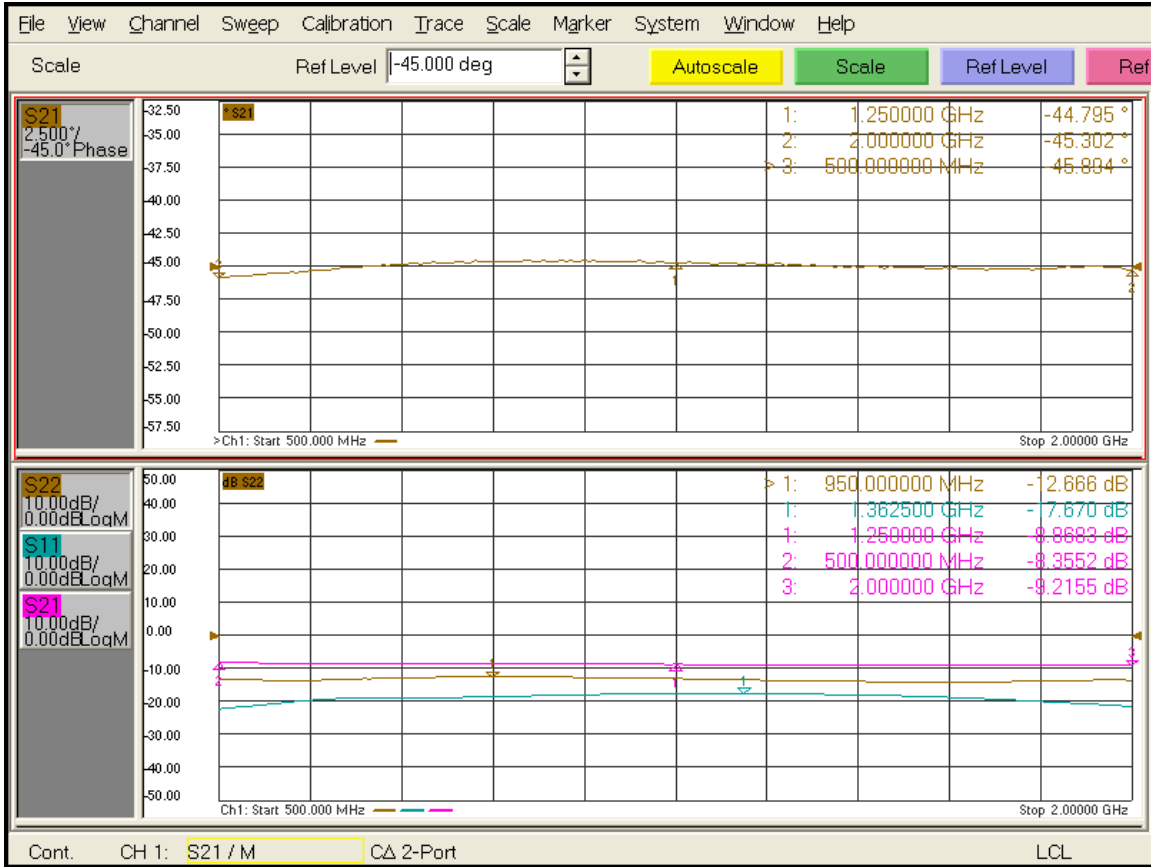


270° Phase, -5 dBm Input Power @ 25° C



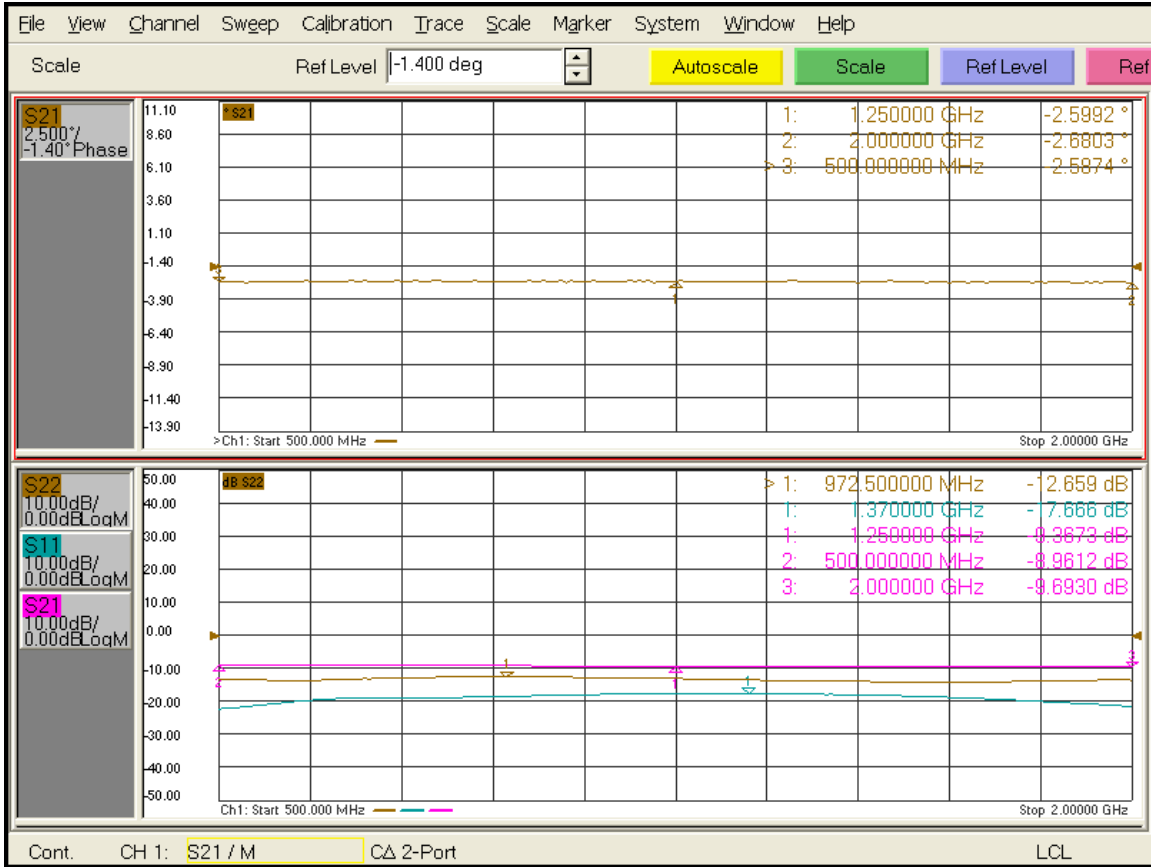


315° Phase, -5 dBm Input Power @ 25° C





358.6° Phase, -5 dBm Input Power @ 25° C





Data Taken at 25° C

Data Taken at 0 dBm Input Power

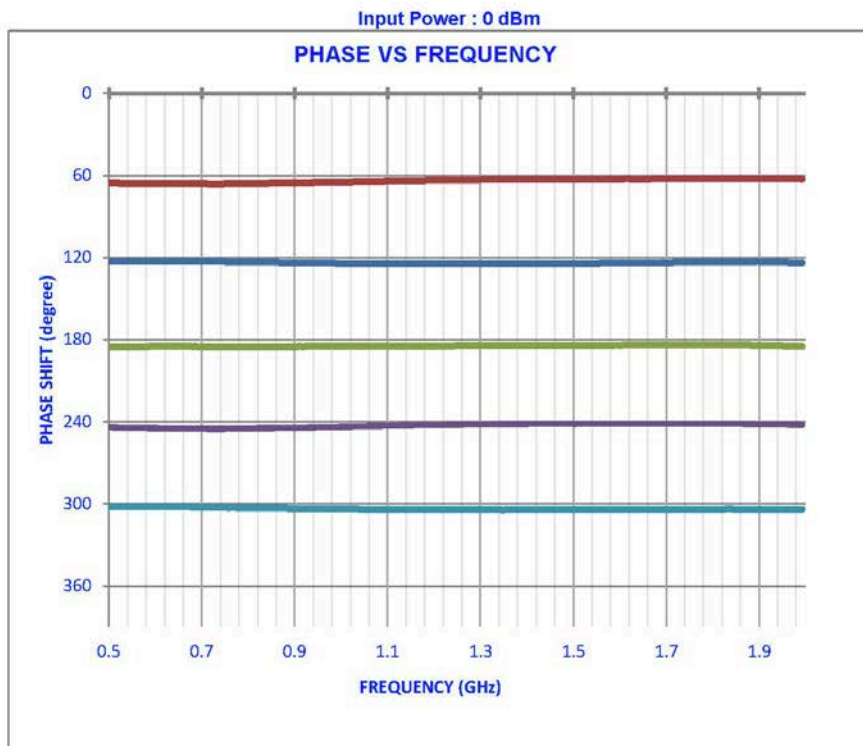
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|--|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 4.71 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.60 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.75 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 3.19 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 3.60 | -2.20 | 0.09 |
| 2.81 | 5.43 | -2.62 | 0.14 |
| 5.63 | 9.00 | -3.37 | 0.19 |
| 11.25 | 16.01 | -4.76 | 0.23 |
| 22.50 | 27.33 | -4.83 | 0.28 |
| 45.00 | 48.99 | -3.99 | 0.33 |
| 90.00 | 92.50 | -2.50 | 0.37 |
| 180.00 | 182.61 | -2.61 | 0.41 |
| 358.59 | 359.92 | -1.33 | 0.44 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 39.42 | -5.67 | 0.86 |
| 67.50 | 69.45 | -1.95 | 0.88 |
| 101.25 | 103.99 | -2.74 | 0.90 |
| 135.00 | 135.88 | -0.88 | 0.91 |
| 168.75 | 169.13 | -0.38 | 0.92 |
| 202.50 | 208.87 | -6.37 | 0.93 |
| 236.25 | 238.17 | -1.92 | 0.95 |
| 270.00 | 271.22 | -1.22 | 0.95 |
| 303.75 | 305.59 | -1.84 | 0.97 |
| 337.50 | 335.45 | 2.05 | 0.97 |
| | | | |
| | | | |
| | | | |

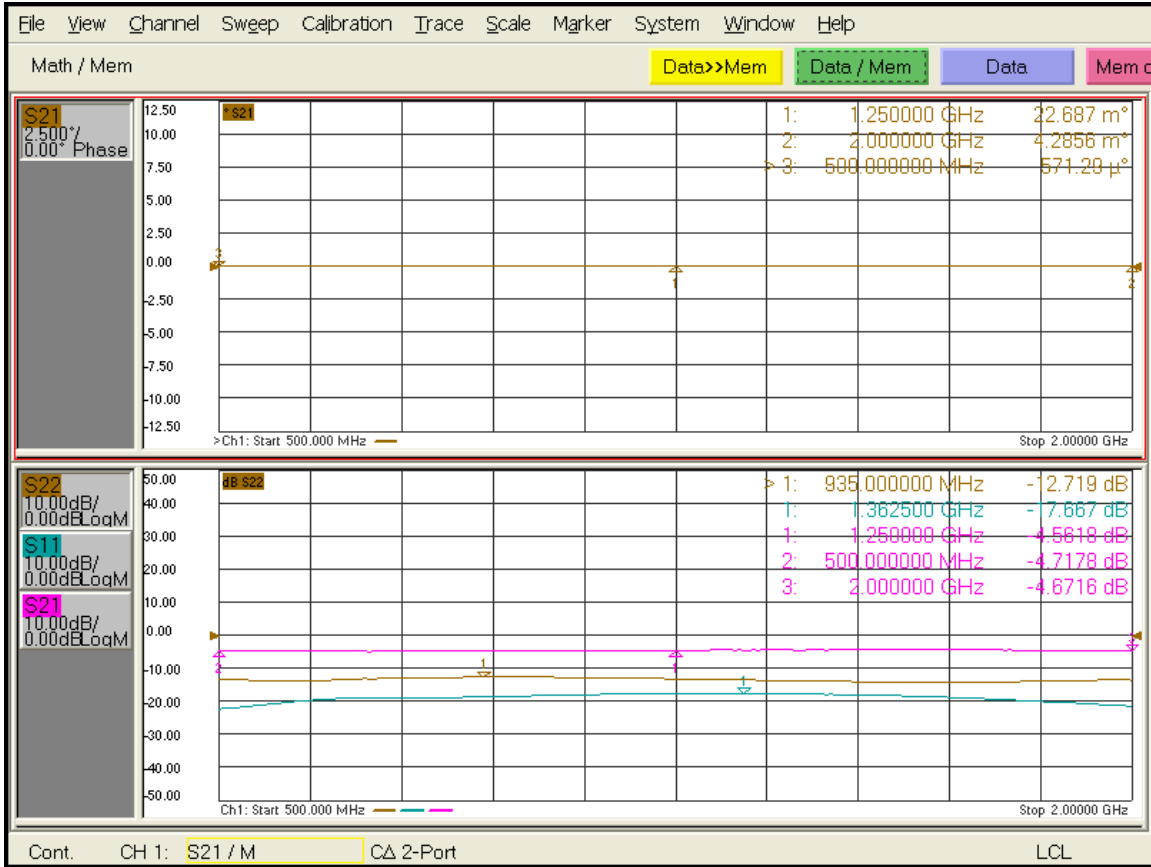


Phase Plot at 25° C



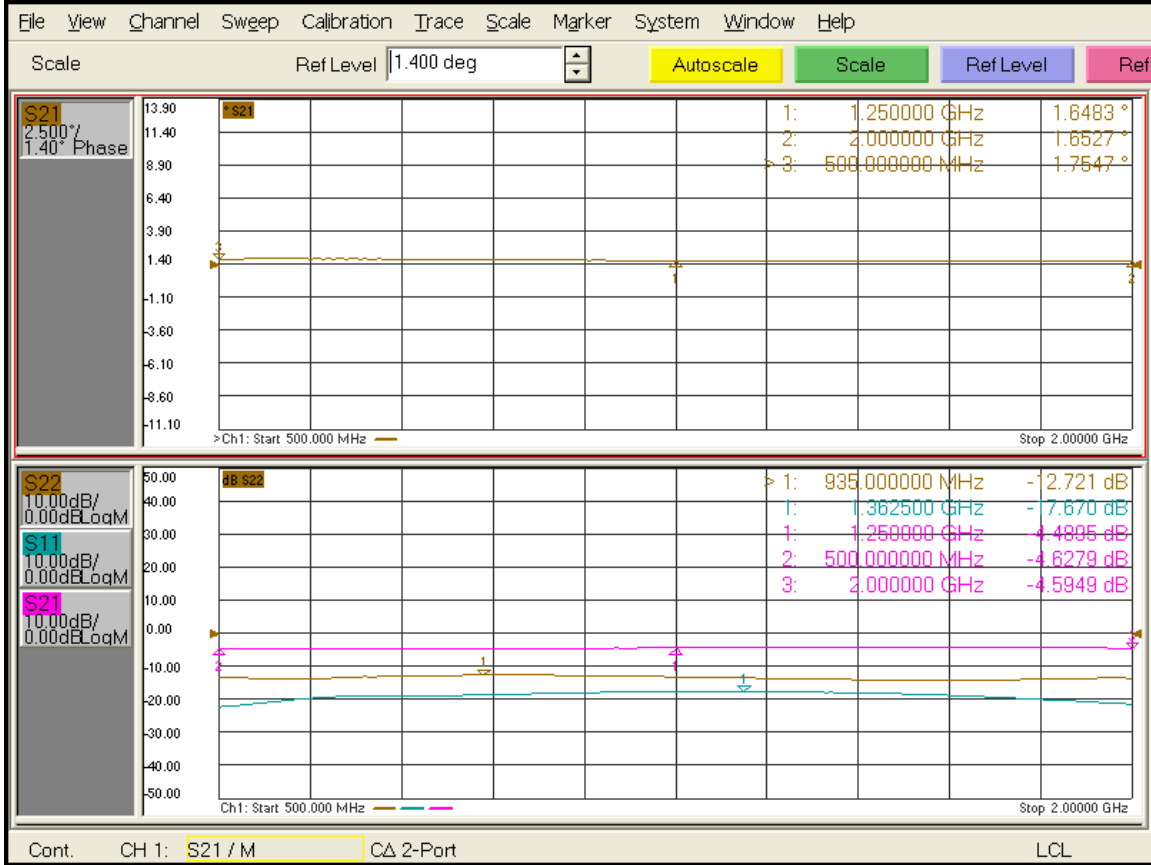


0° Phase, 0 dBm Input Power @ 25° C



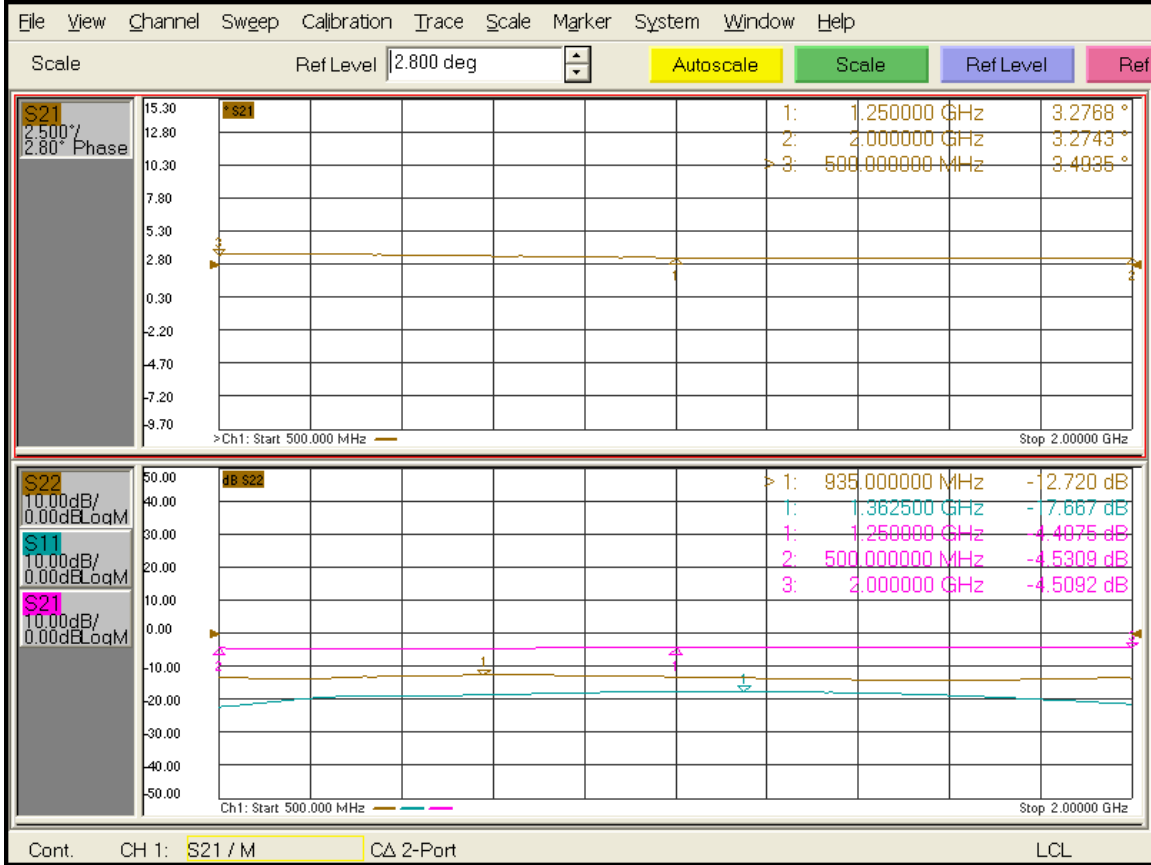


1.4° Phase, 0 dBm Input Power @ 25° C



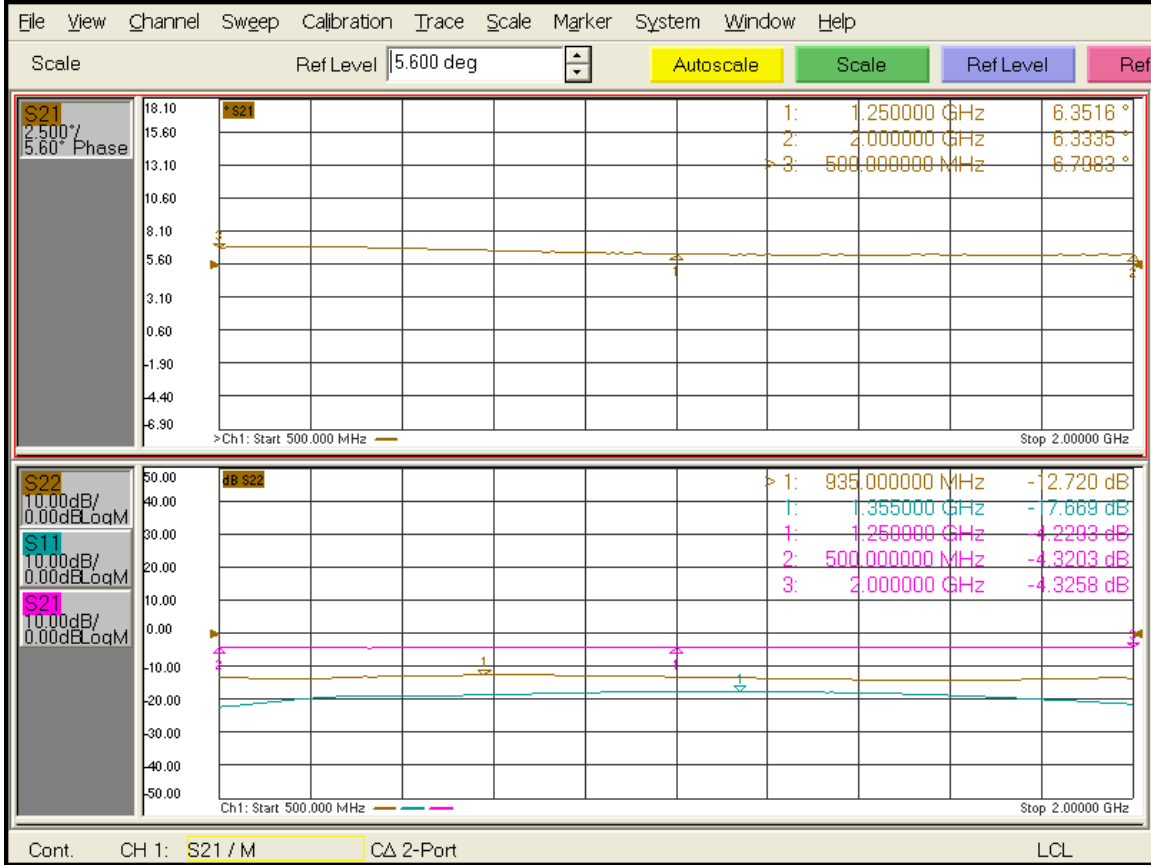


2.8° Phase, 0 dBm Input Power @ 25° C



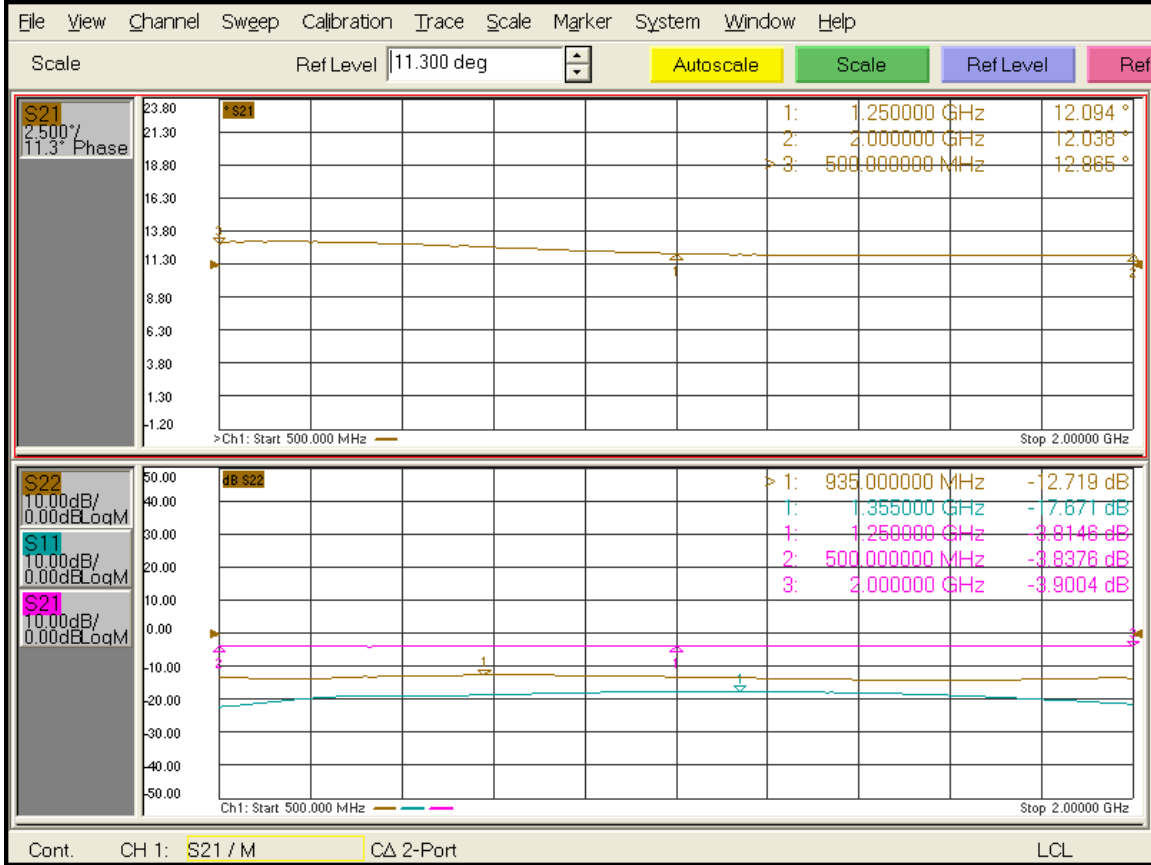


5.625° Phase, 0 dBm Input Power @ 25° C



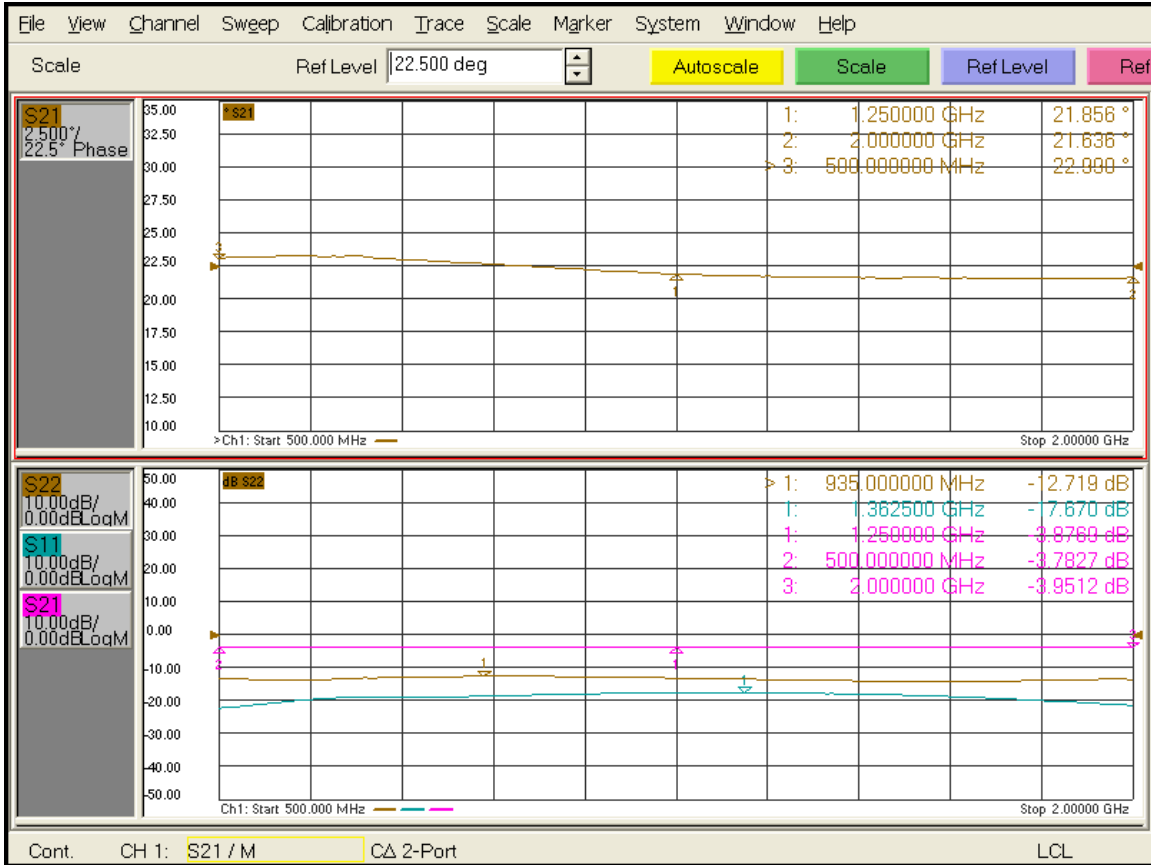


11.25° Phase, 0 dBm Input Power @ 25° C



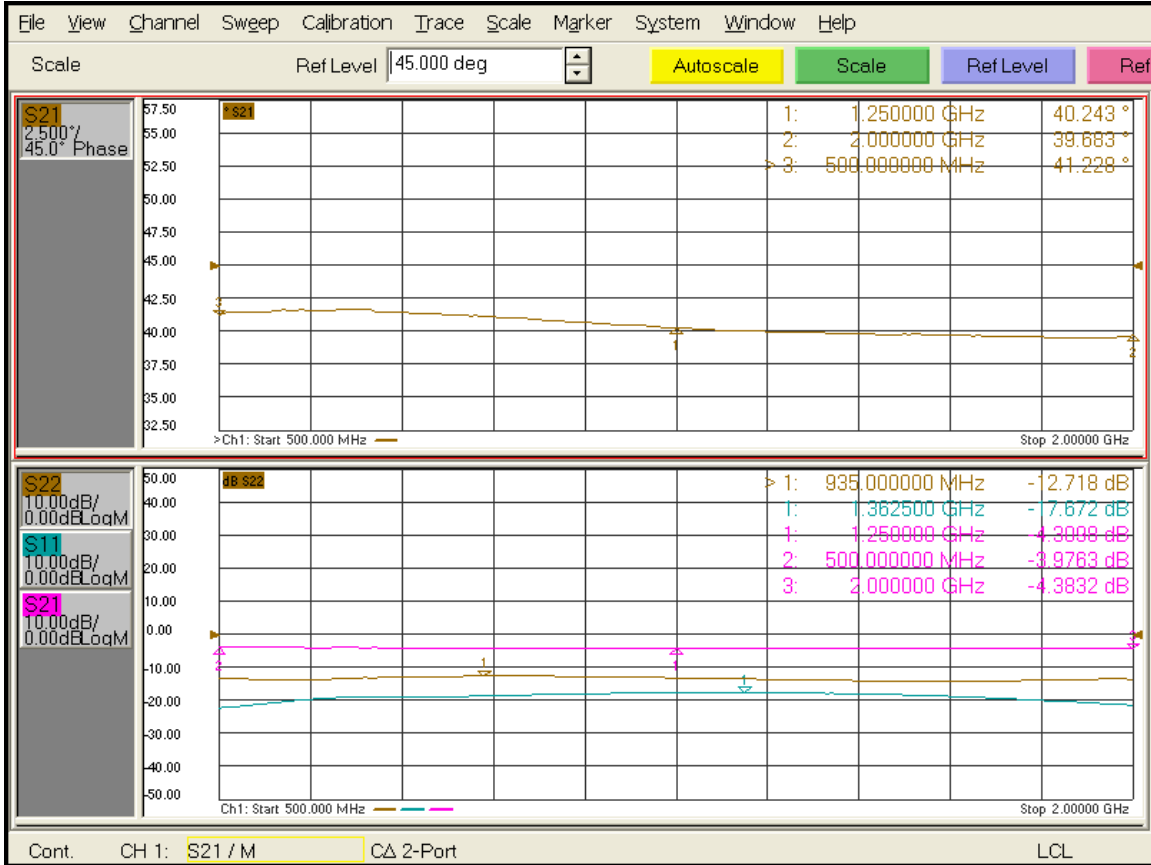


22.5° Phase, 0 dBm Input Power @ 25° C



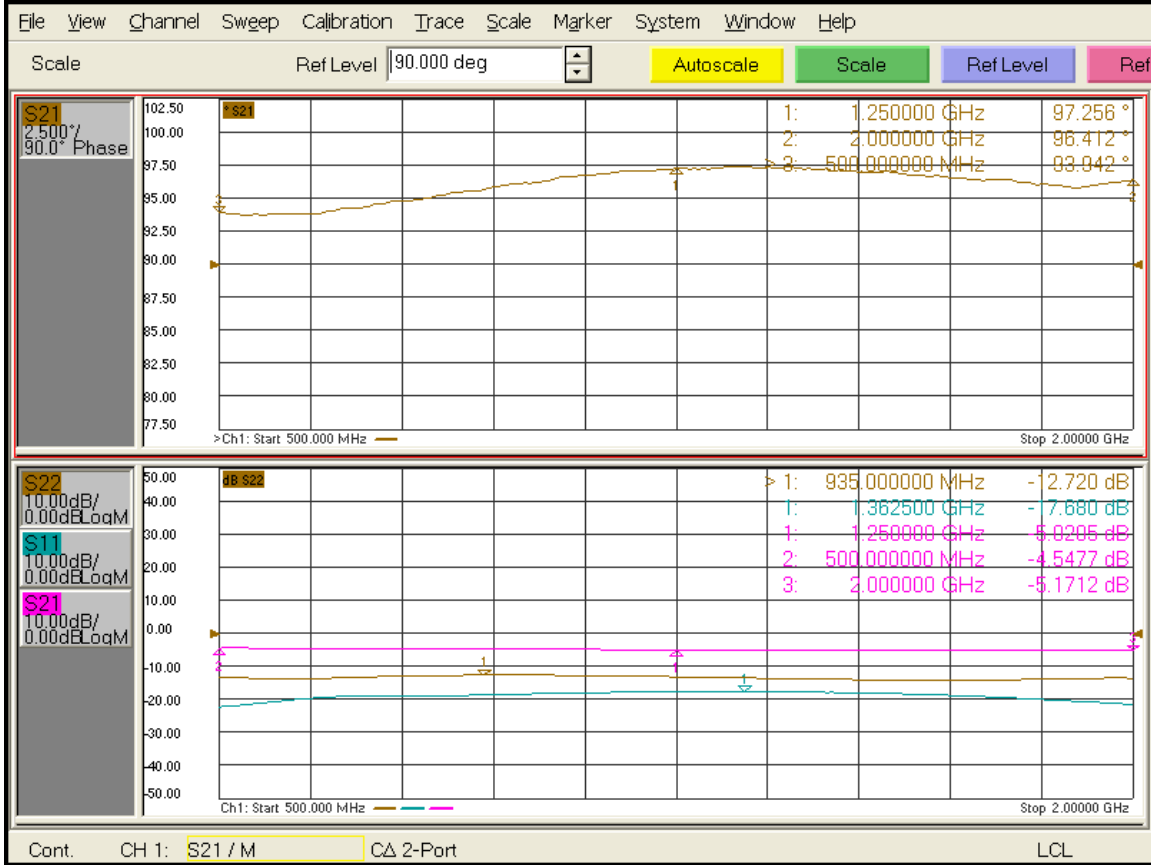


45° Phase, 0 dBm Input Power @ 25° C



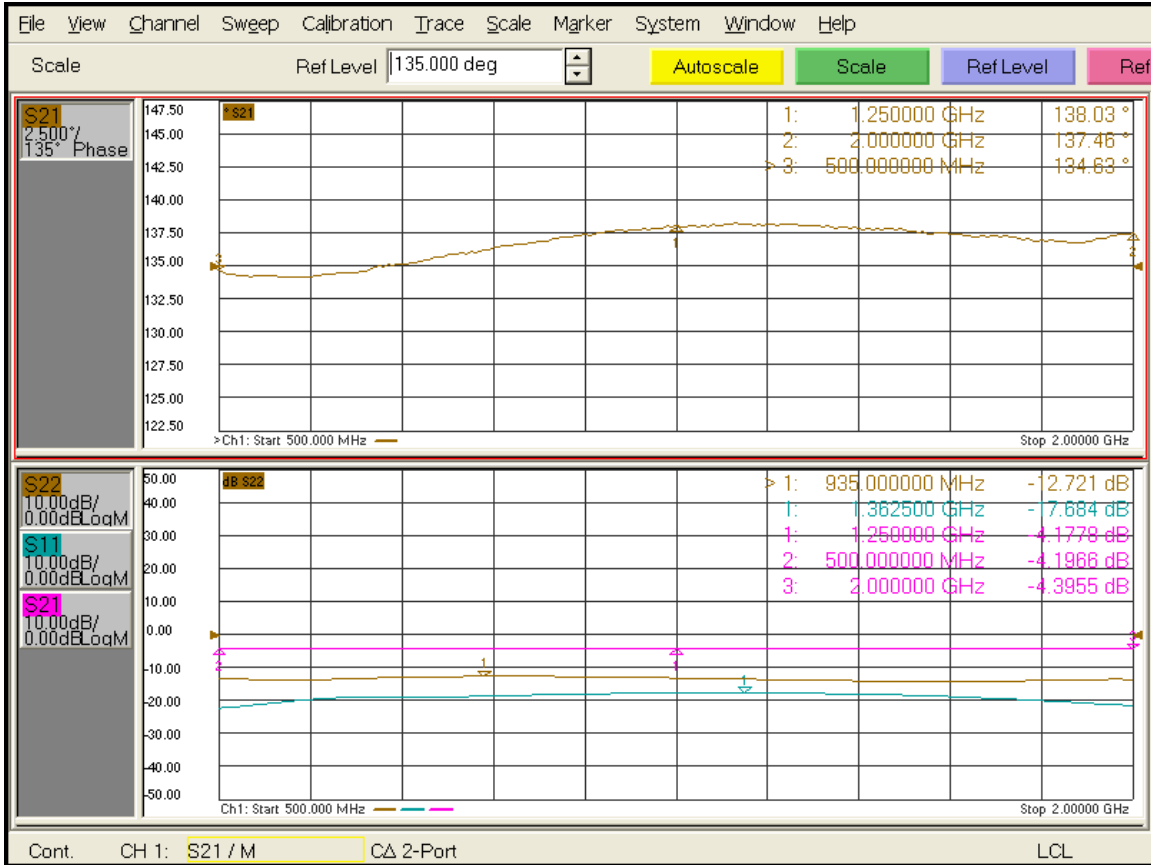


90° Phase, 0 dBm Input Power @ 25° C



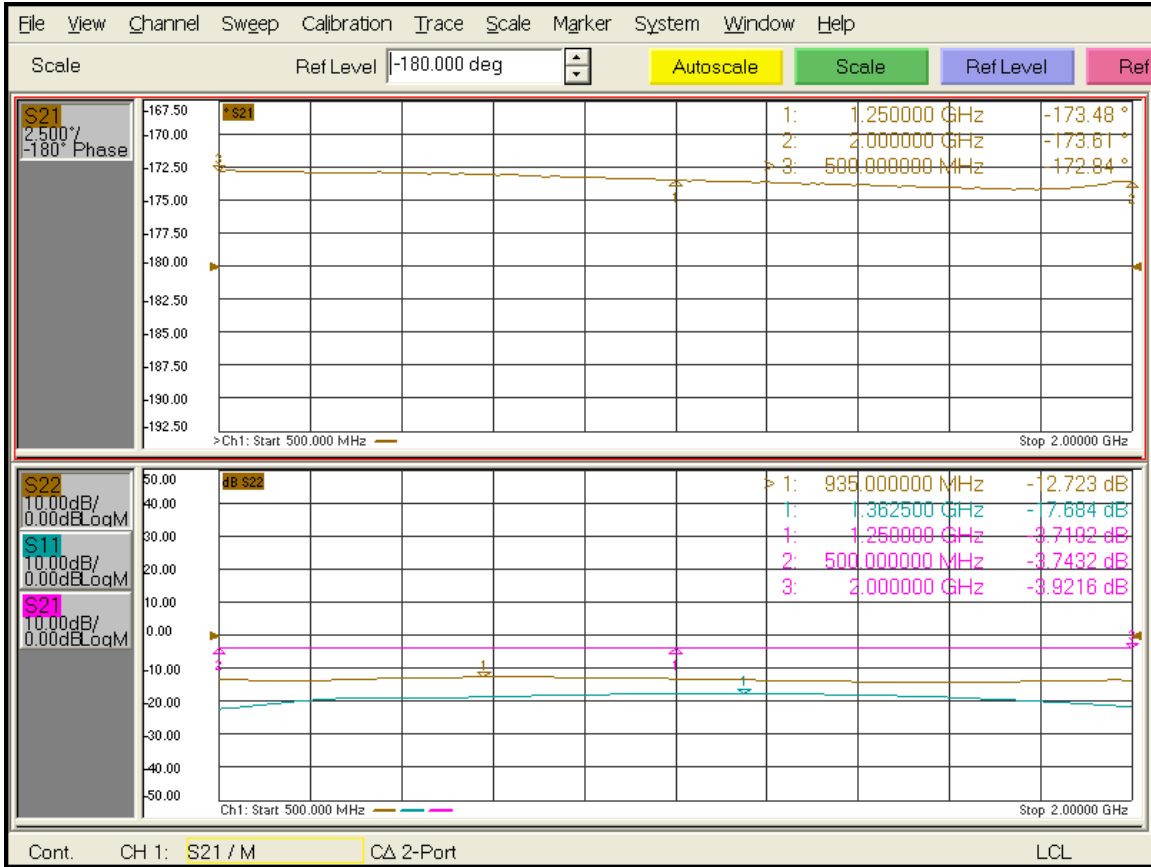


135° Phase, 0 dBm Input Power @ 25° C



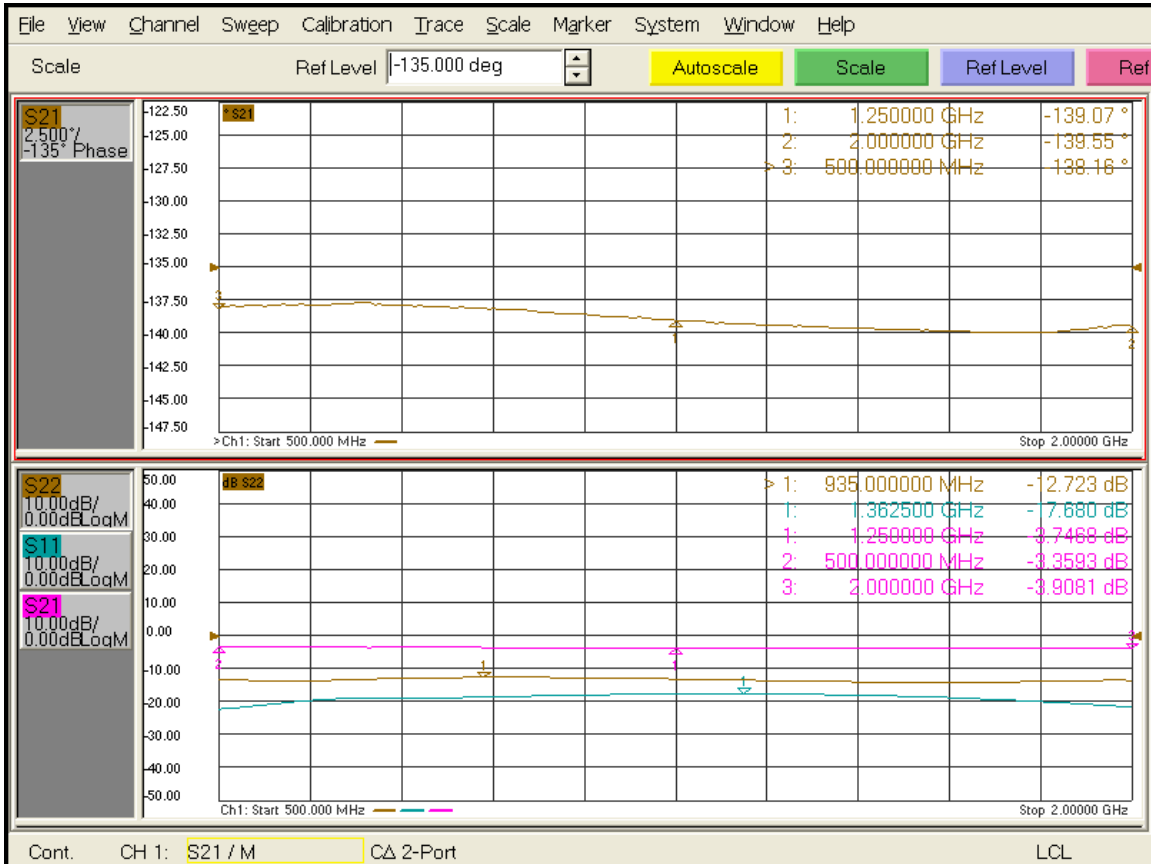


180° Phase, 0 dBm Input Power @ 25° C



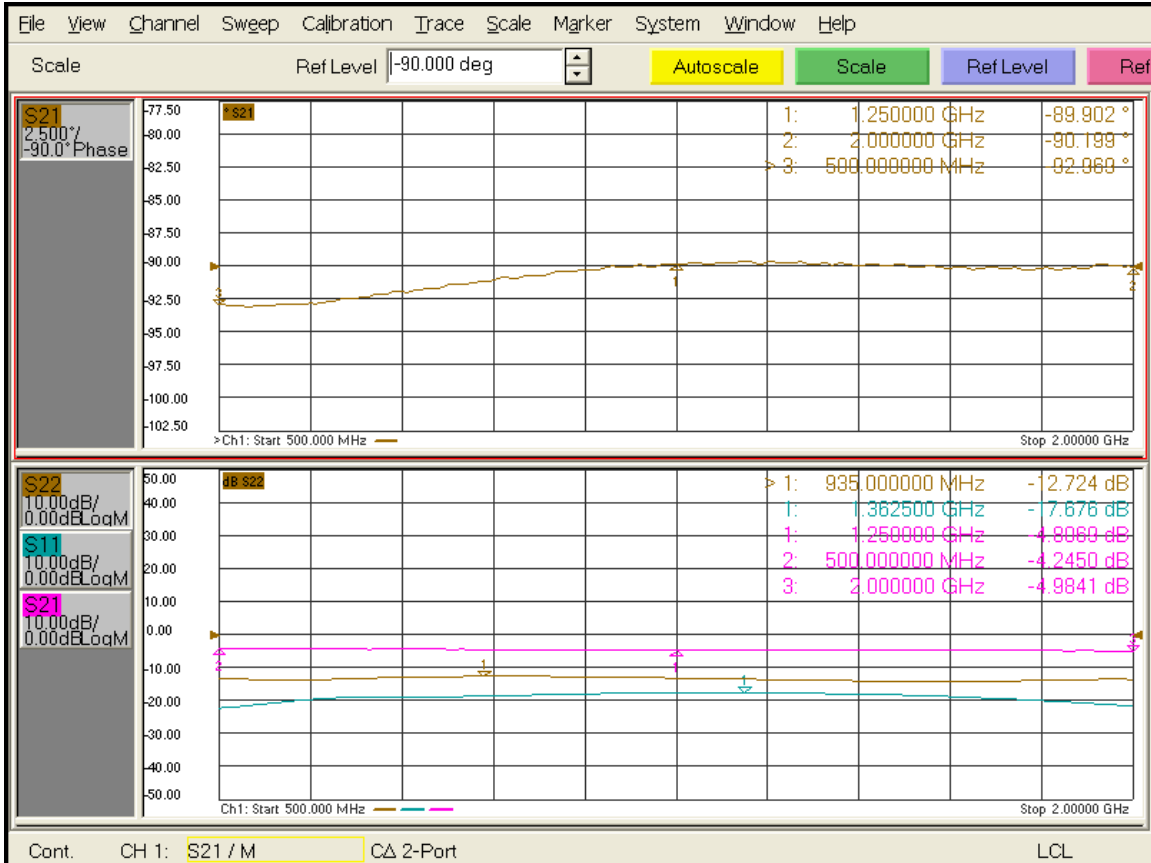


225° Phase, 0 dBm Input Power @ 25° C



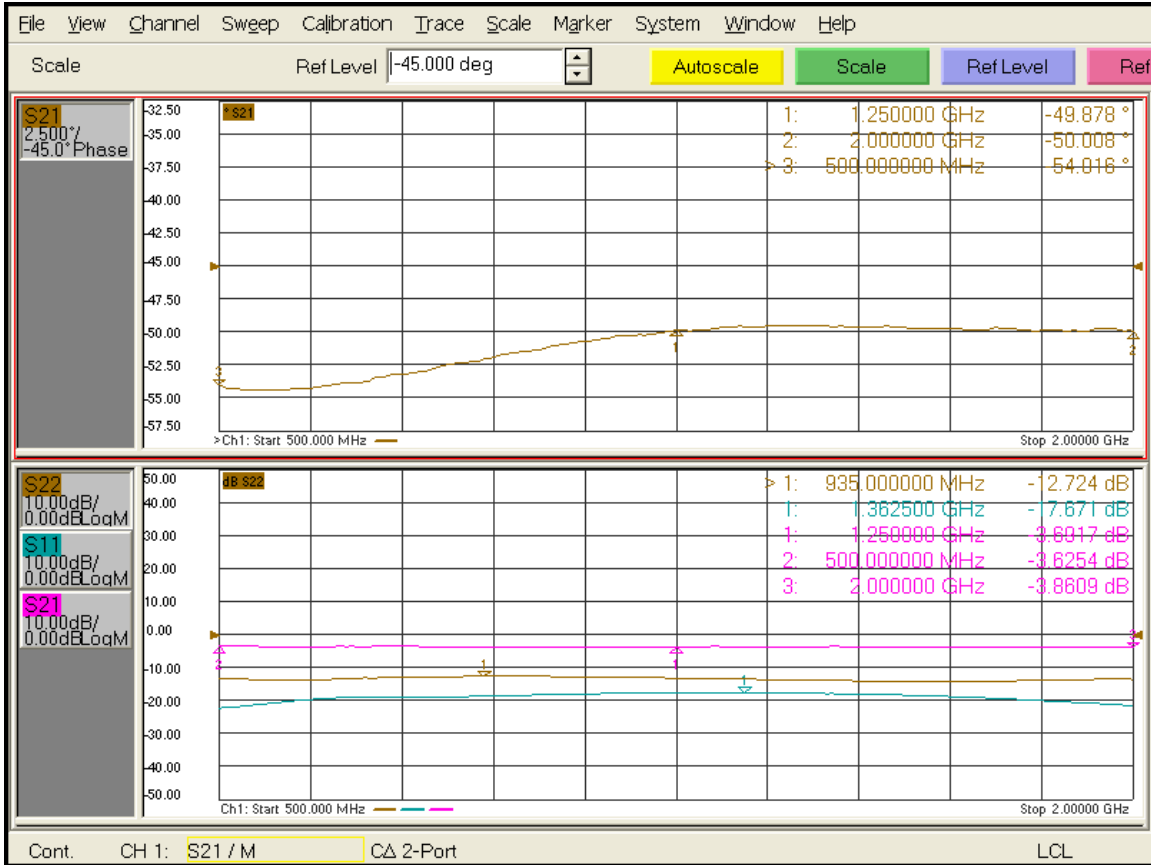


270° Phase, 0 dBm Input Power @ 25° C



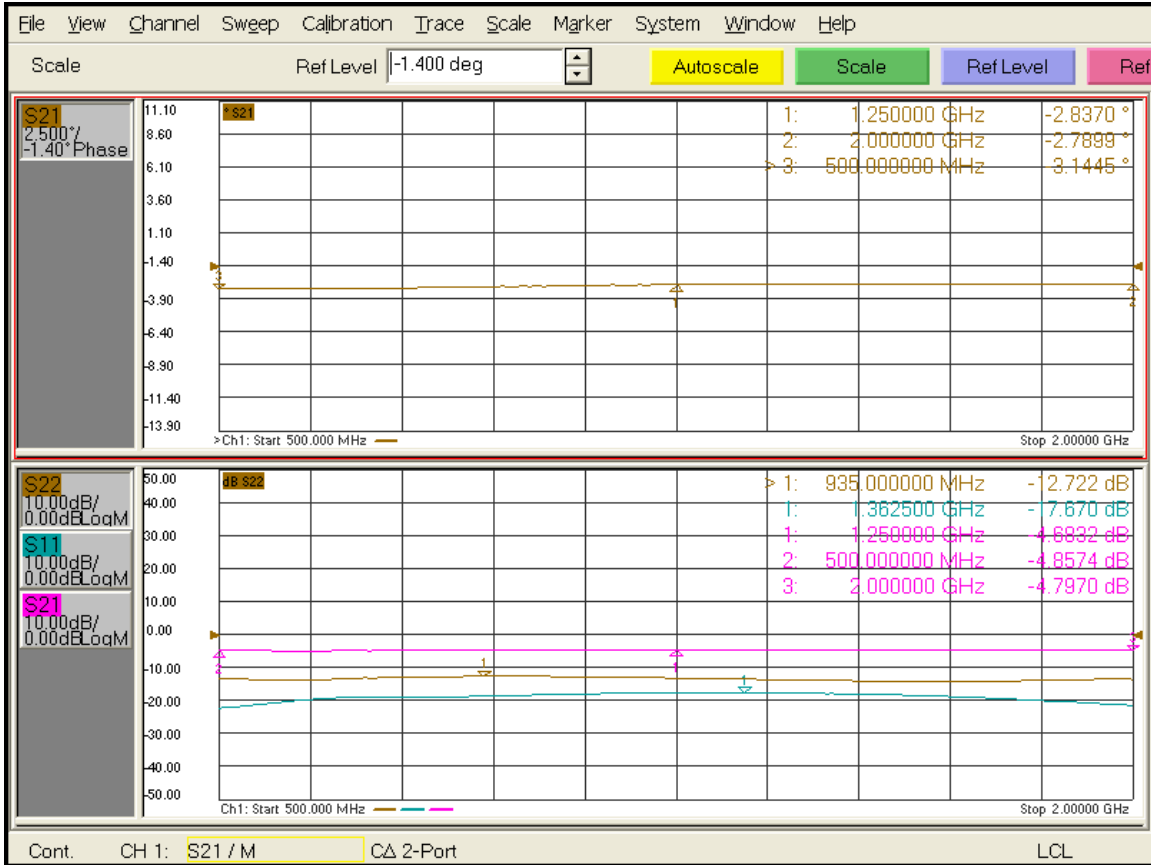


315° Phase, 0 dBm Input Power @ 25° C





358.6° Phase, 0 dBm Input Power @ 25° C





Data Taken at 25° C

Data Taken at 5 dBm Input Power

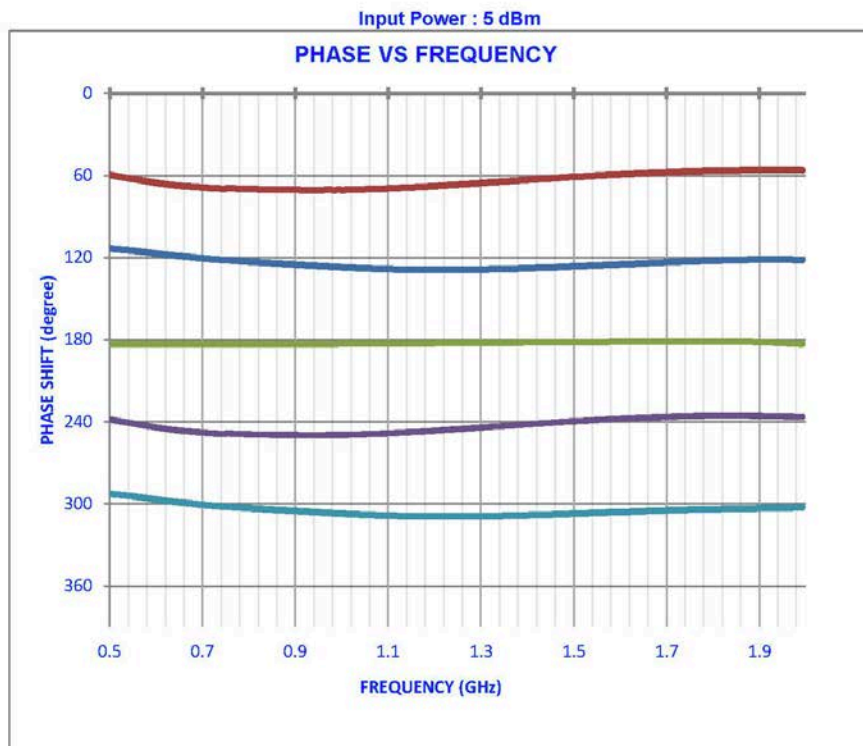
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 9.96 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.59 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 1.00 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 2.19 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.78 | -0.38 | 0.15 |
| 2.81 | 3.60 | -0.79 | 0.29 |
| 5.63 | 7.19 | -1.56 | 0.44 |
| 11.25 | 14.14 | -2.89 | 0.58 |
| 22.50 | 25.45 | -2.95 | 0.72 |
| 45.00 | 47.47 | -2.47 | 0.86 |
| 90.00 | 92.06 | -2.06 | 1.00 |
| 180.00 | 180.53 | -0.53 | 1.14 |
| 358.59 | 358.28 | 0.31 | 1.25 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 37.74 | -3.99 | 2.80 |
| 67.50 | 68.75 | -1.25 | 2.86 |
| 101.25 | 102.73 | -1.48 | 2.93 |
| 135.00 | 133.36 | 1.64 | 2.99 |
| 168.75 | 167.17 | 1.58 | 3.05 |
| 202.50 | 206.89 | -4.39 | 3.10 |
| 236.25 | 237.32 | -1.07 | 3.15 |
| 270.00 | 270.48 | -0.48 | 3.19 |
| 303.75 | 303.31 | 0.44 | 3.24 |
| 337.50 | 333.53 | 3.97 | 3.29 |
| | | | |
| | | | |
| | | | |

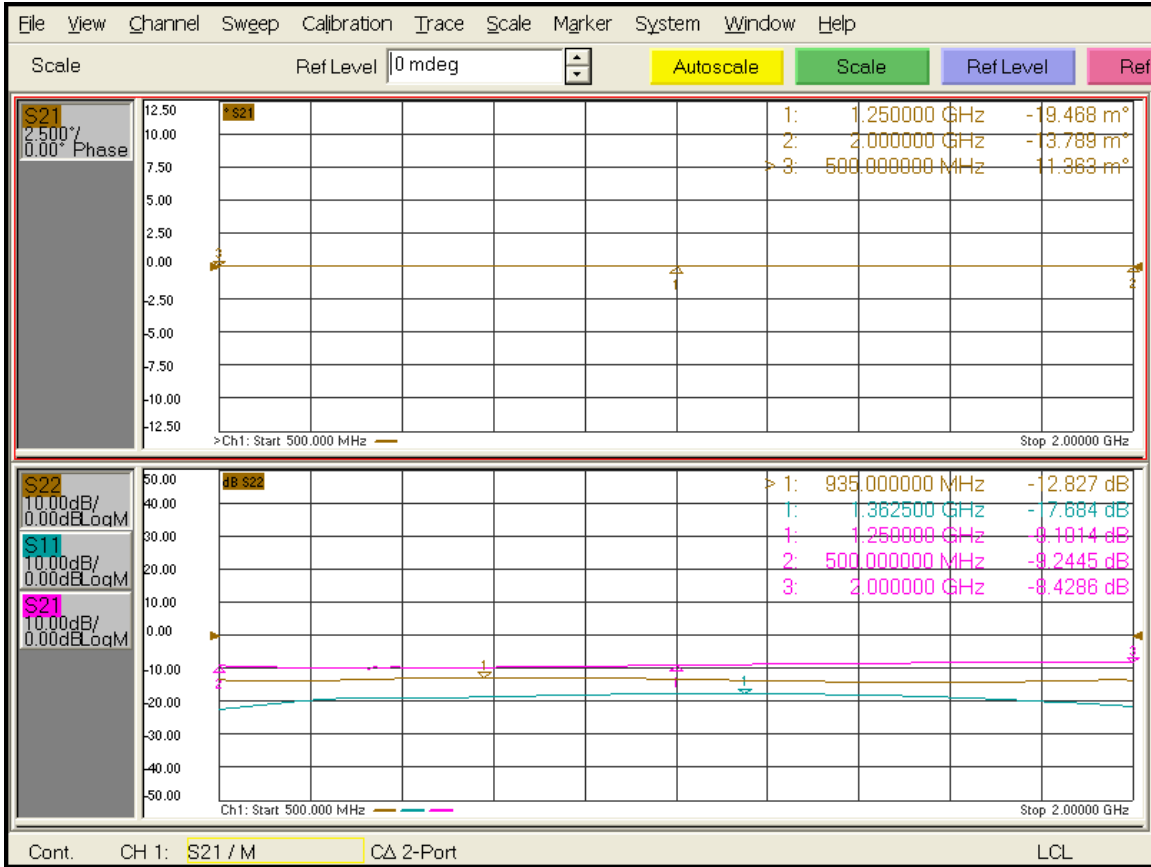


Phase Plot at 25° C



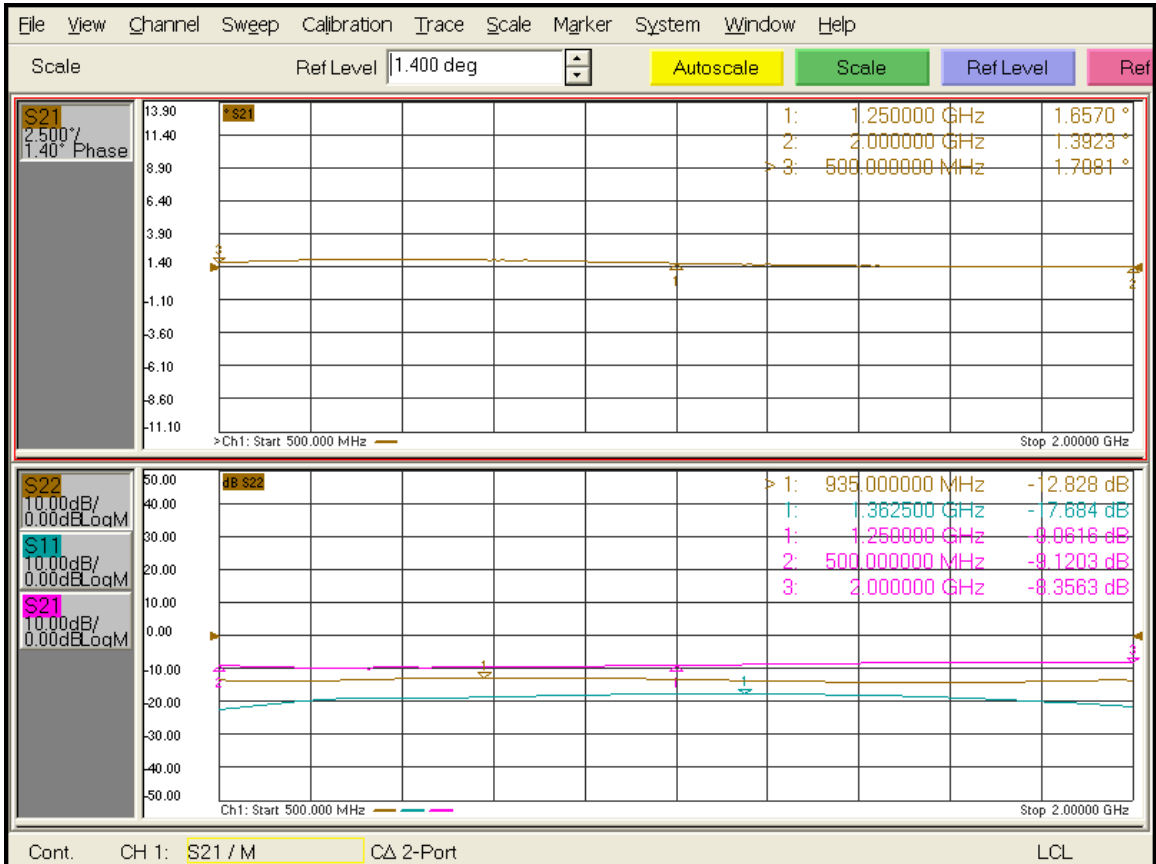


0° Phase, 5 dBm Input Power @ 25° C



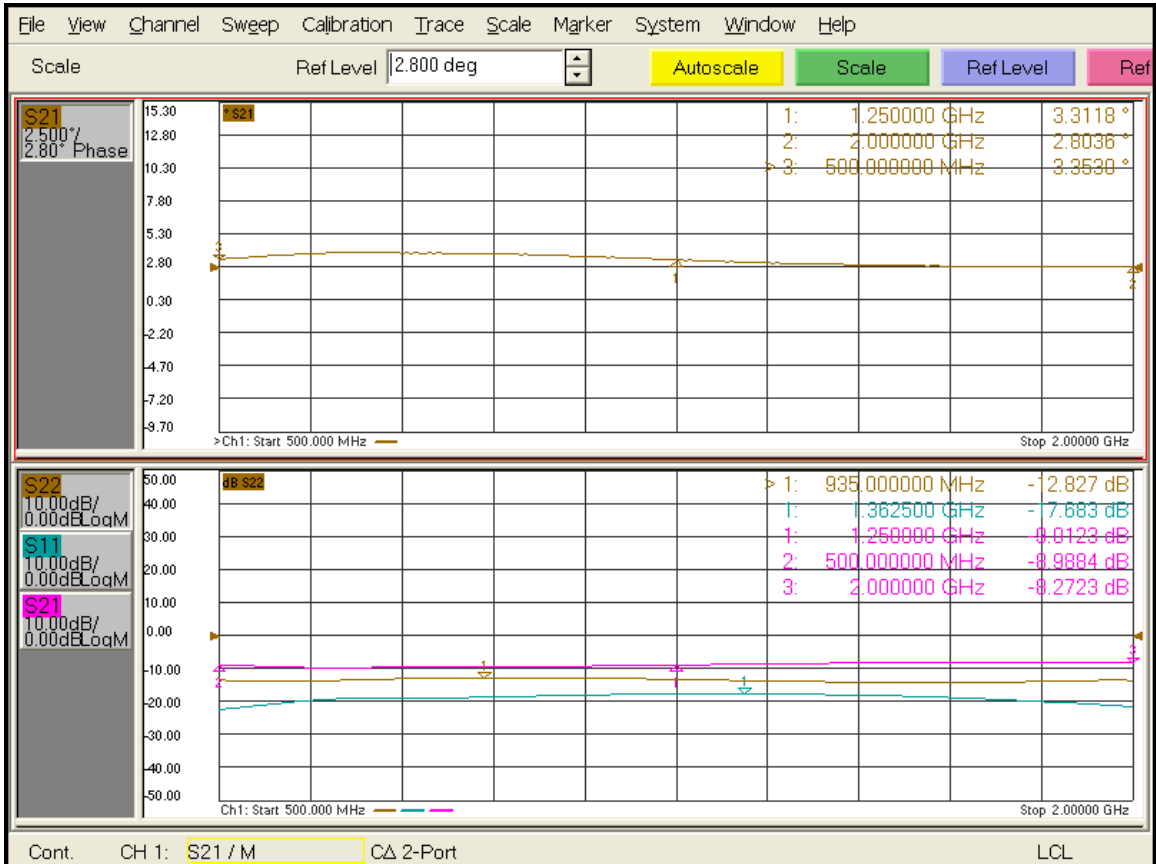


1.4° Phase, 5 dBm Input Power @ 25° C



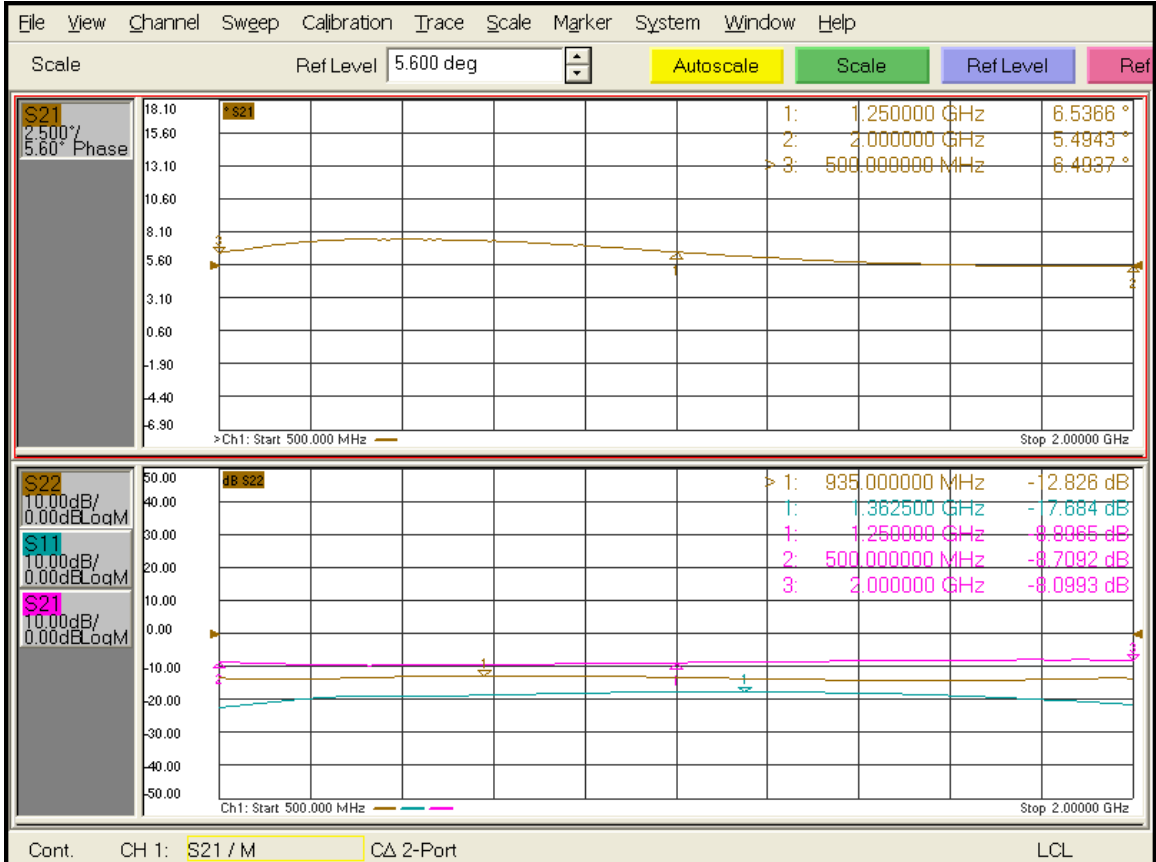


2.8° Phase, 5 dBm Input Power @ 25° C



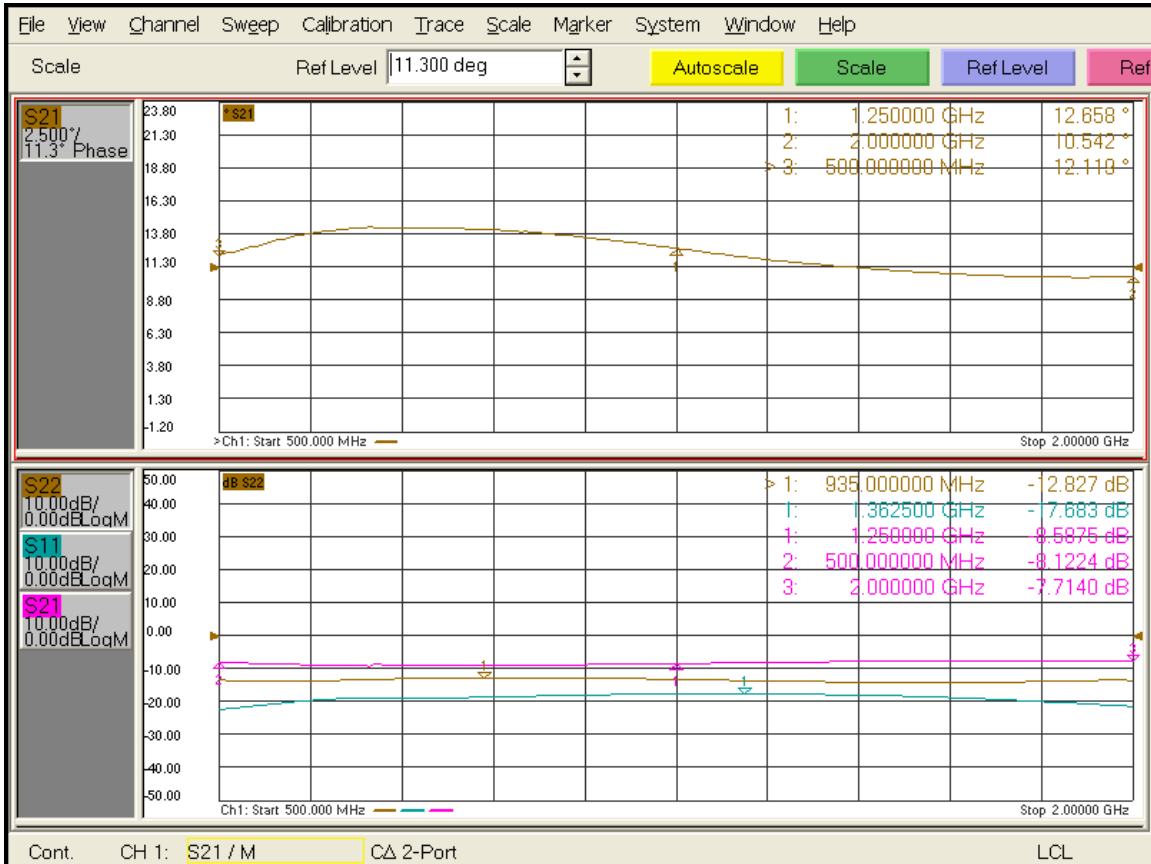


5.625° Phase, 5 dBm Input Power @ 25° C



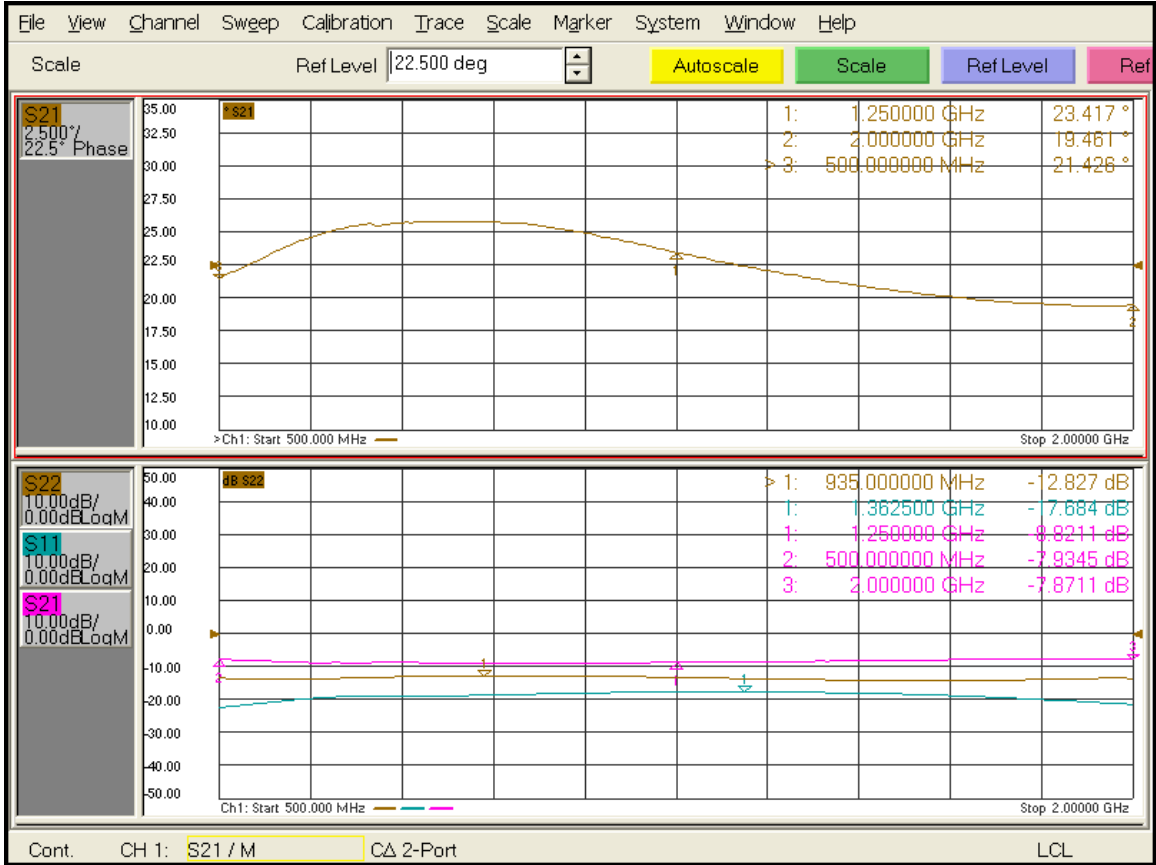


11.25° Phase, 5 dBm Input Power @ 25° C



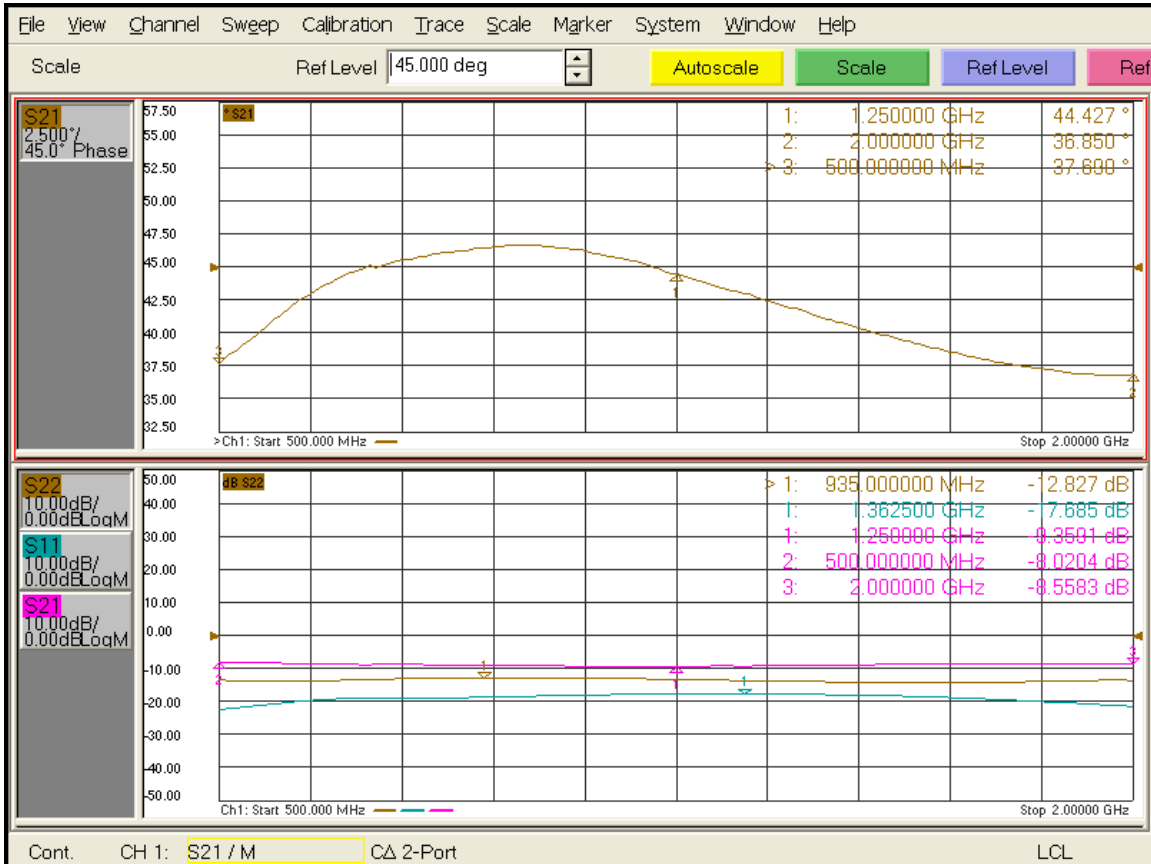


22.5° Phase, 5 dBm Input Power @ 25° C



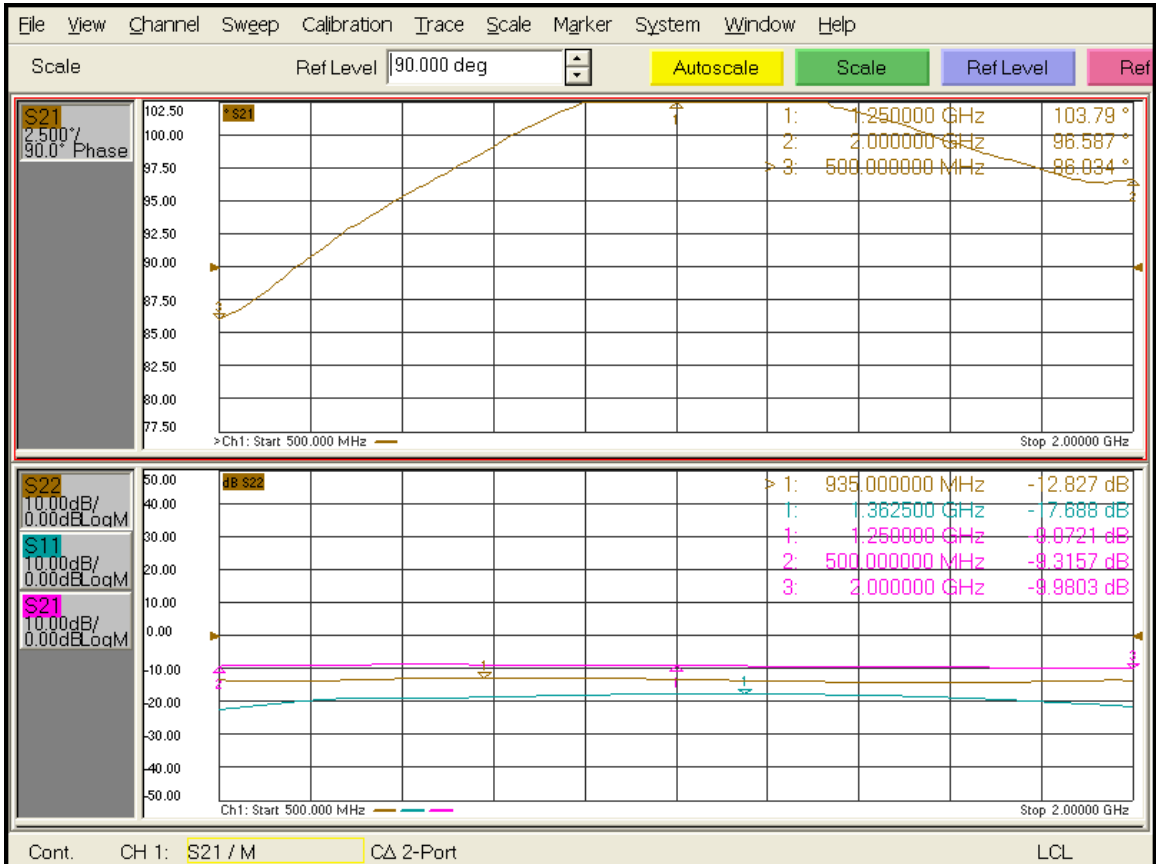


45° Phase, 5 dBm Input Power @ 25° C



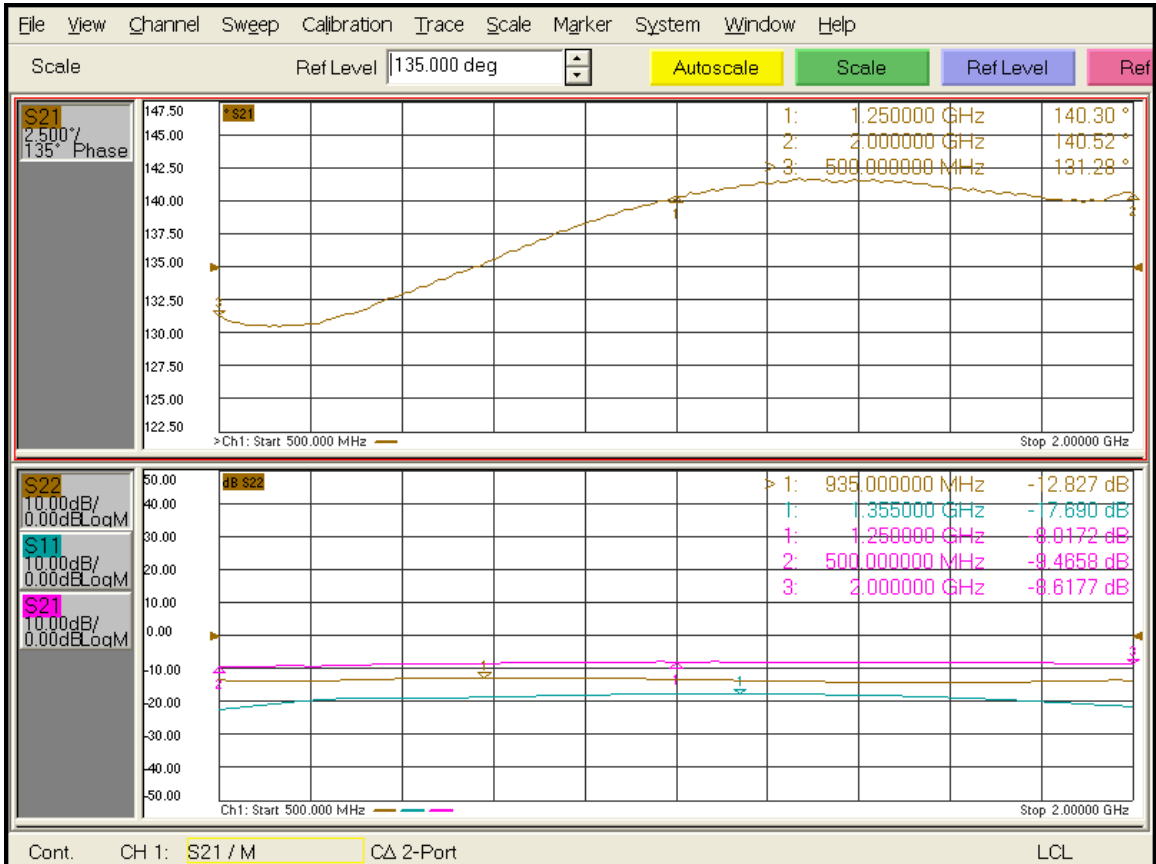


90° Phase, 5 dBm Input Power @ 25° C



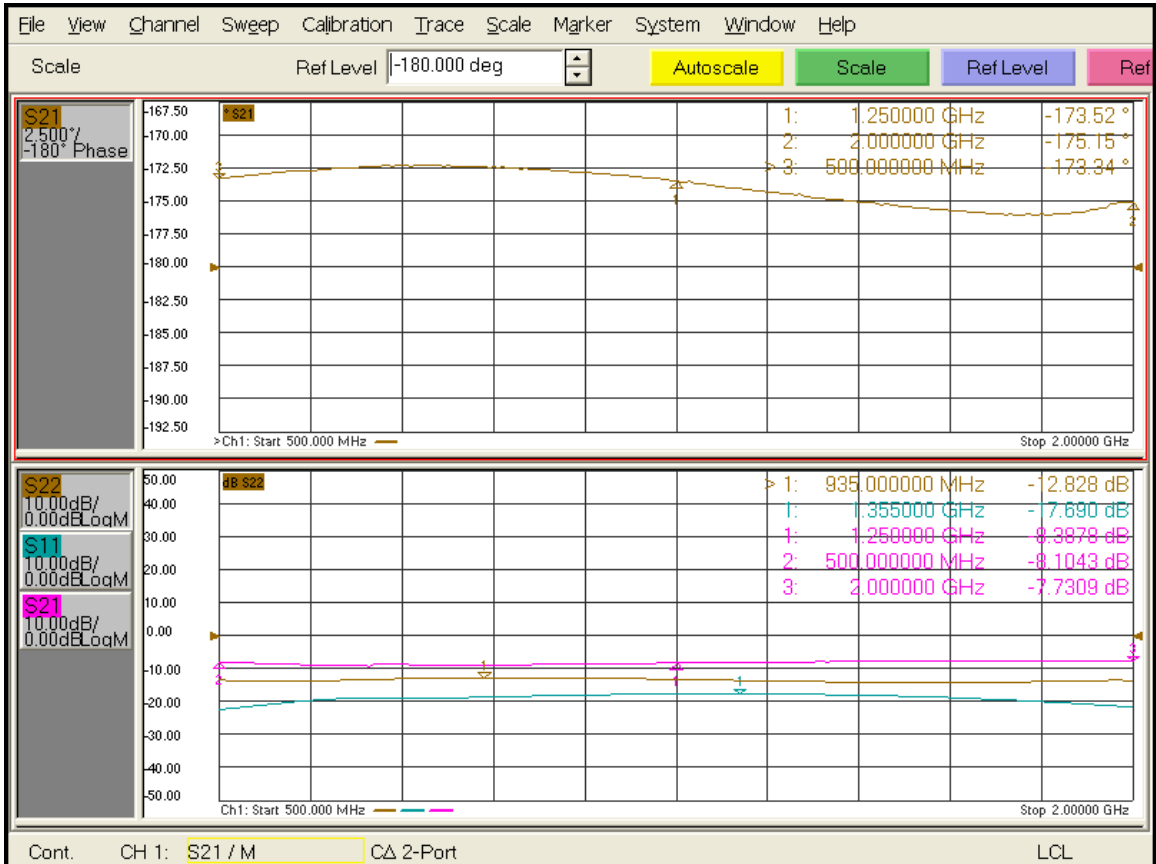


135° Phase, 5 dBm Input Power @ 25° C



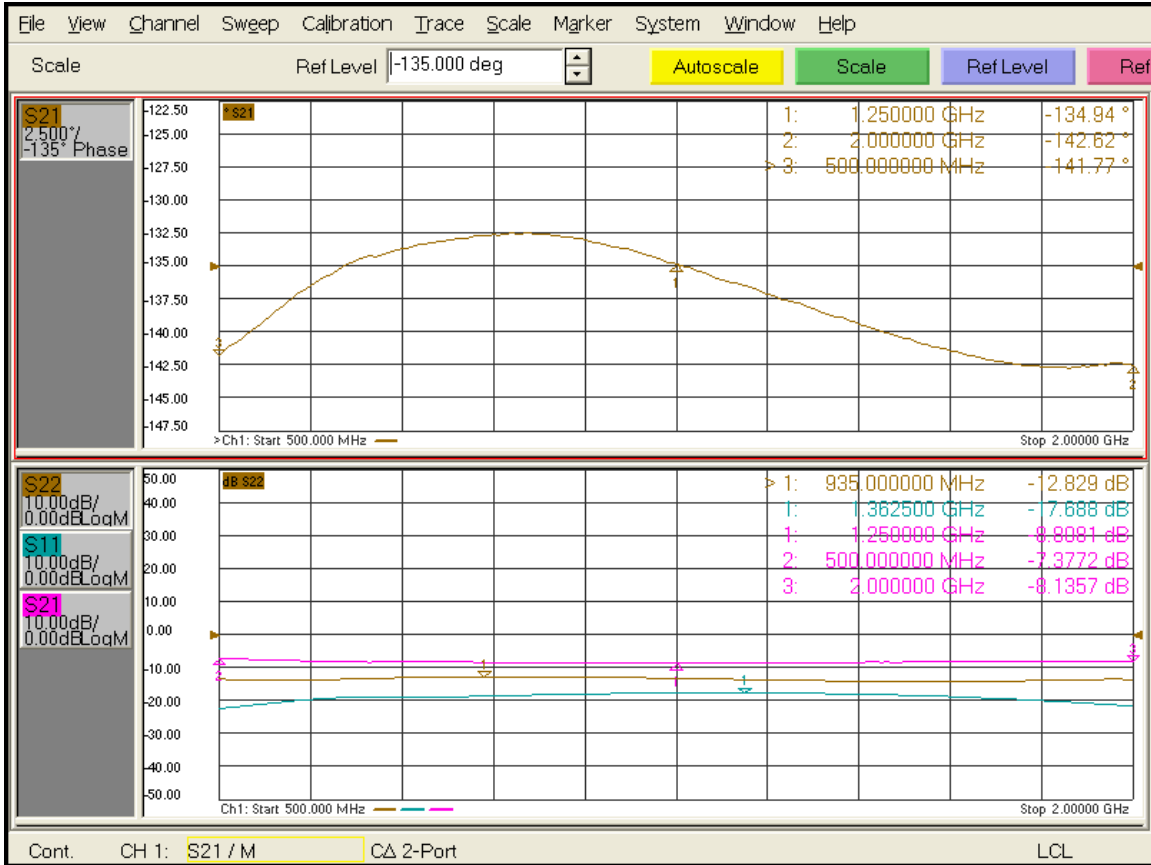


180° Phase, 5 dBm Input Power @ 25° C



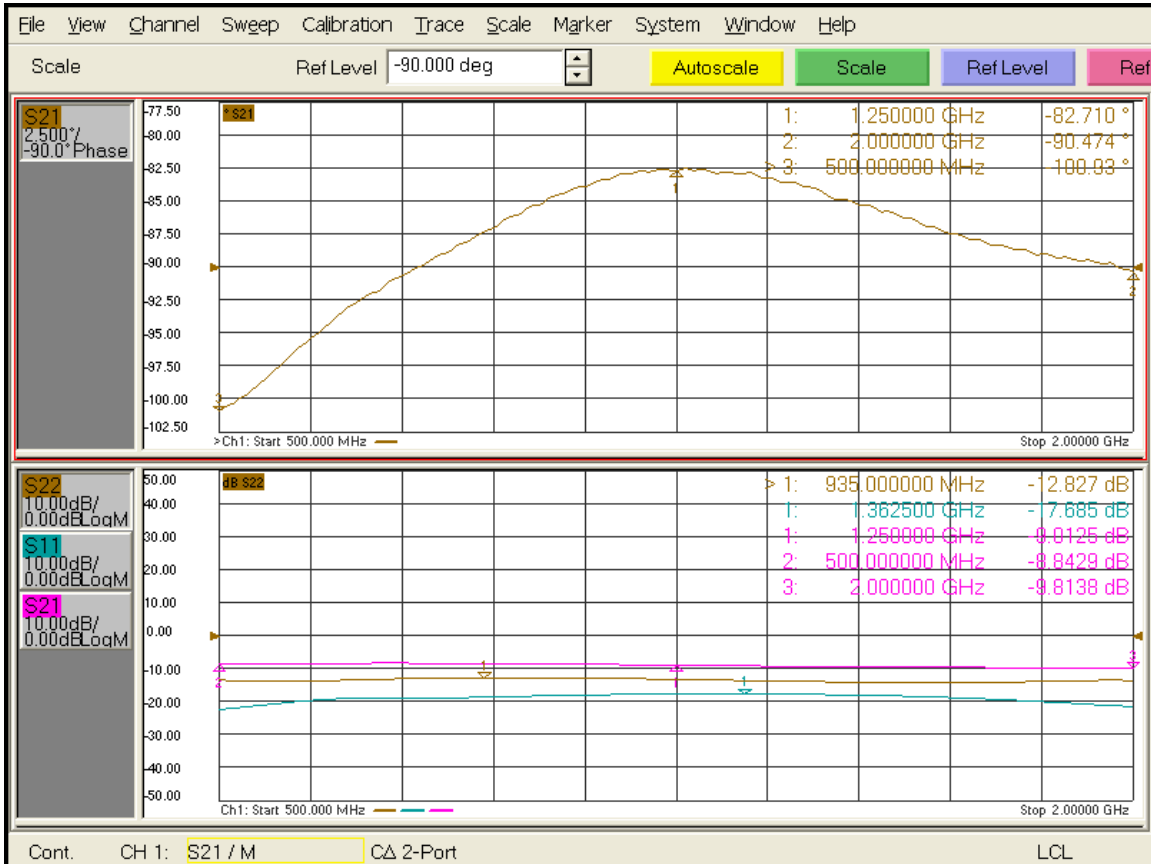


225° Phase, 5 dBm Input Power @ 25° C



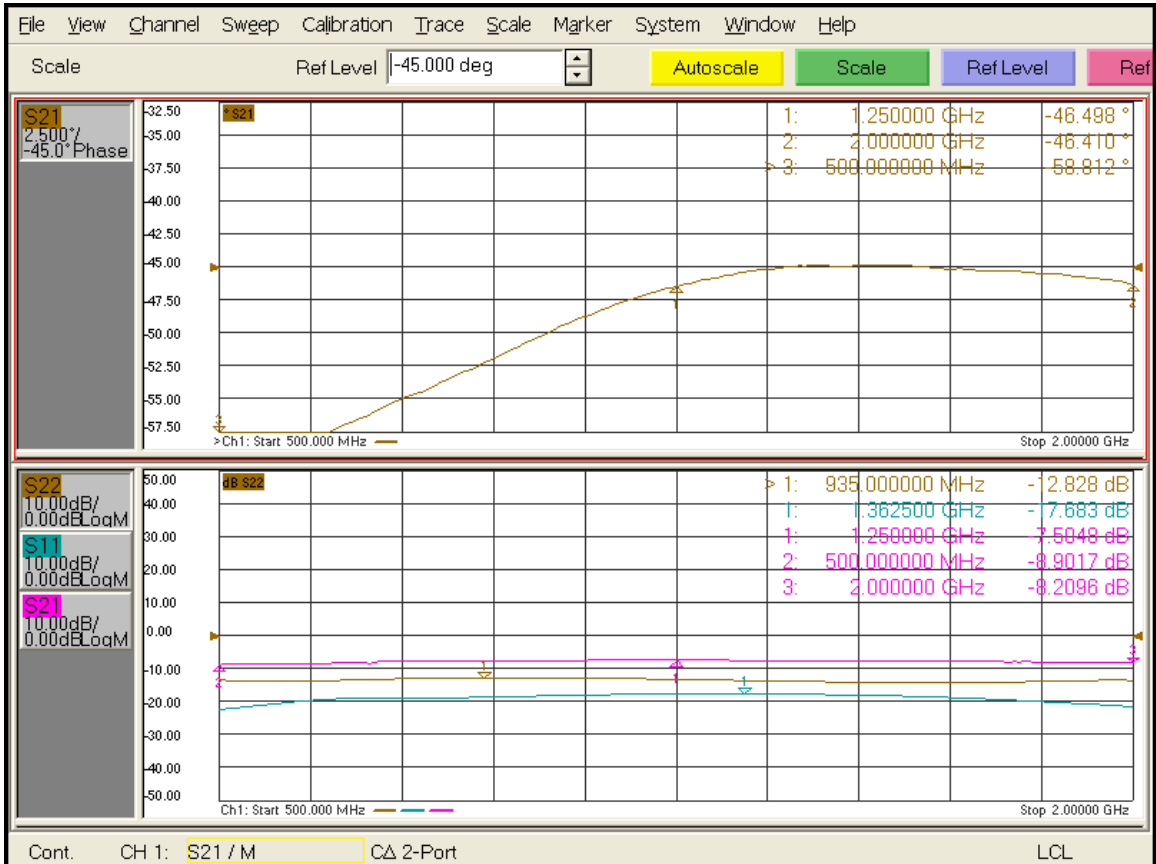


270° Phase, 5 dBm Input Power @ 25° C



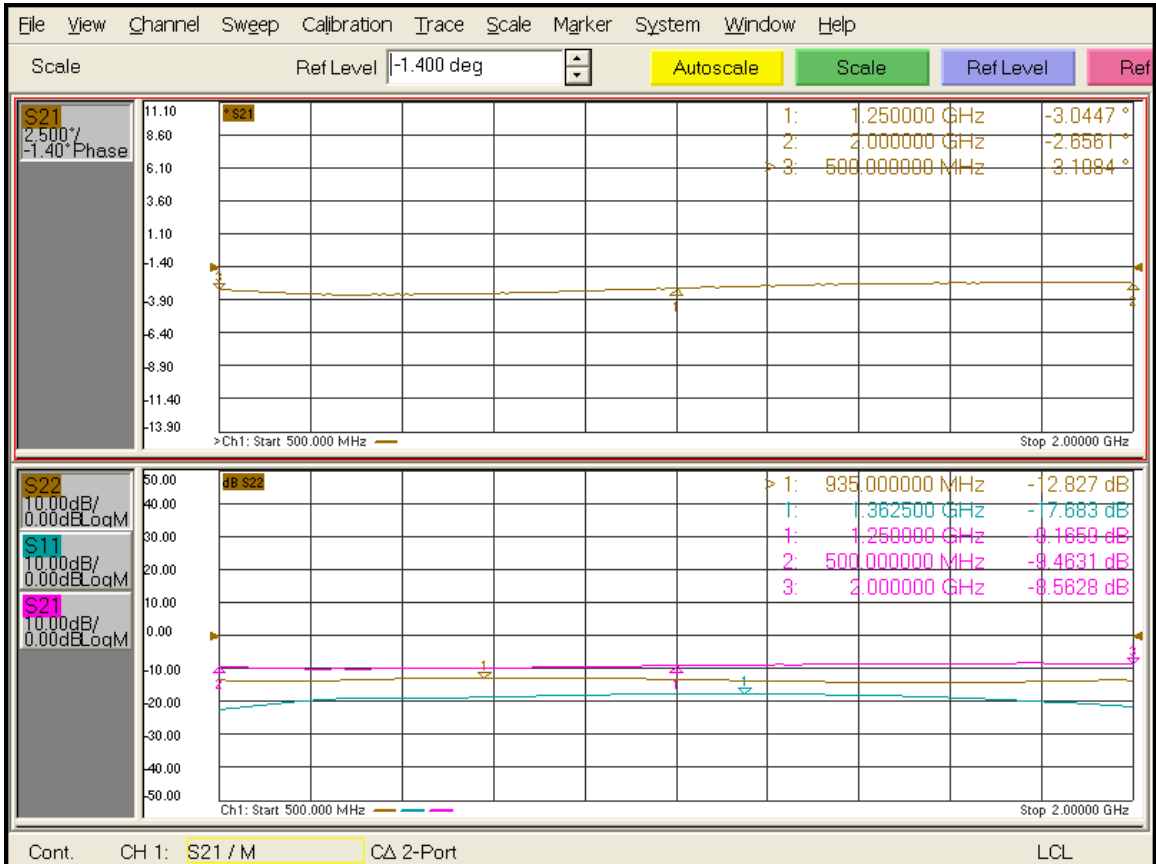


315° Phase, 5 dBm Input Power @ 25° C



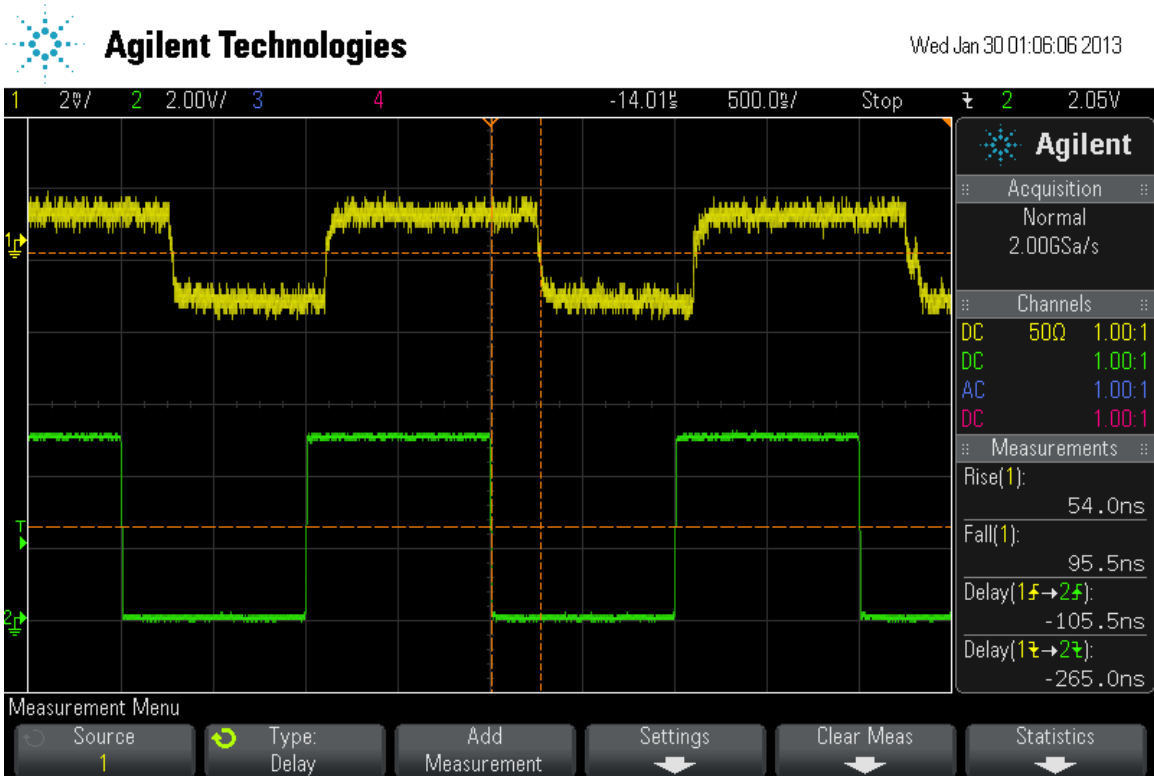


358.6° Phase, 5 dBm Input Power @ 25° C





Switching Speed



Channel 1 (Yellow Trace): RF output signal

Channel 2 (Green Trace): TTL trigger signal



Data Taken at 0° C

Data Taken at -30 dBm Input Power

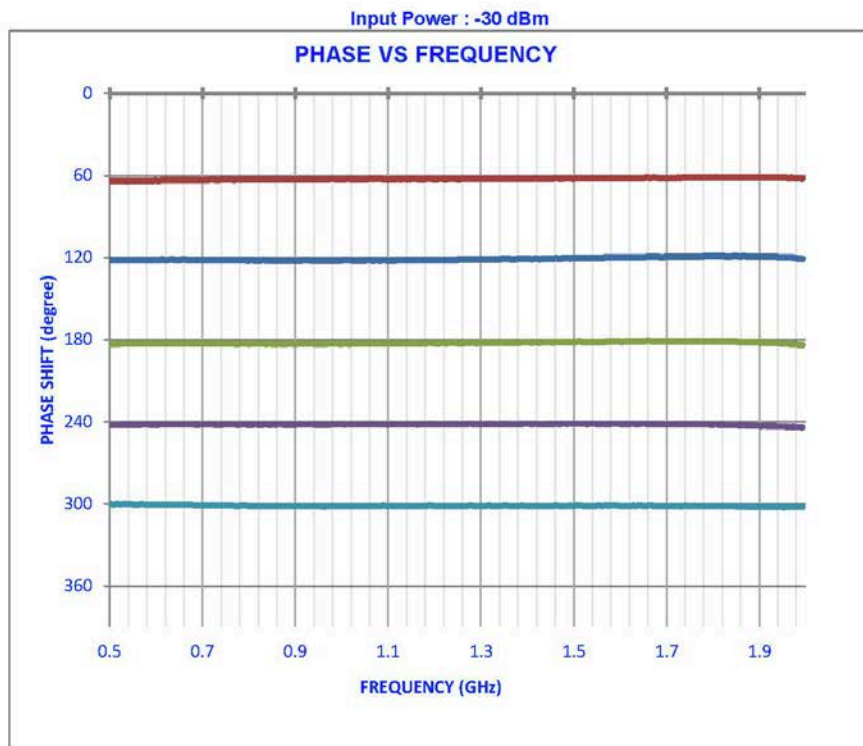
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 11.94 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.80 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.46 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 0.56 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.46 | -0.05 | 0.15 |
| 2.81 | 2.94 | -0.12 | 0.19 |
| 5.63 | 5.77 | -0.14 | 0.16 |
| 11.25 | 11.49 | -0.24 | 0.17 |
| 22.50 | 21.53 | 0.97 | 0.21 |
| 45.00 | 44.85 | 0.15 | 0.19 |
| 90.00 | 90.30 | -0.30 | 0.22 |
| 180.00 | 180.92 | -0.92 | 0.25 |
| 358.59 | 358.72 | -0.13 | 0.24 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 33.77 | -0.02 | 0.46 |
| 67.50 | 68.22 | -0.72 | 0.50 |
| 101.25 | 100.56 | 0.69 | 0.51 |
| 135.00 | 135.35 | -0.35 | 0.54 |
| 168.75 | 169.54 | -0.79 | 0.52 |
| 202.50 | 203.46 | -0.96 | 0.58 |
| 236.25 | 236.98 | -0.73 | 0.59 |
| 270.00 | 270.41 | -0.41 | 0.59 |
| 303.75 | 303.94 | -0.19 | 0.64 |
| 337.50 | 337.64 | -0.14 | 0.63 |
| | | | |
| | | | |
| | | | |

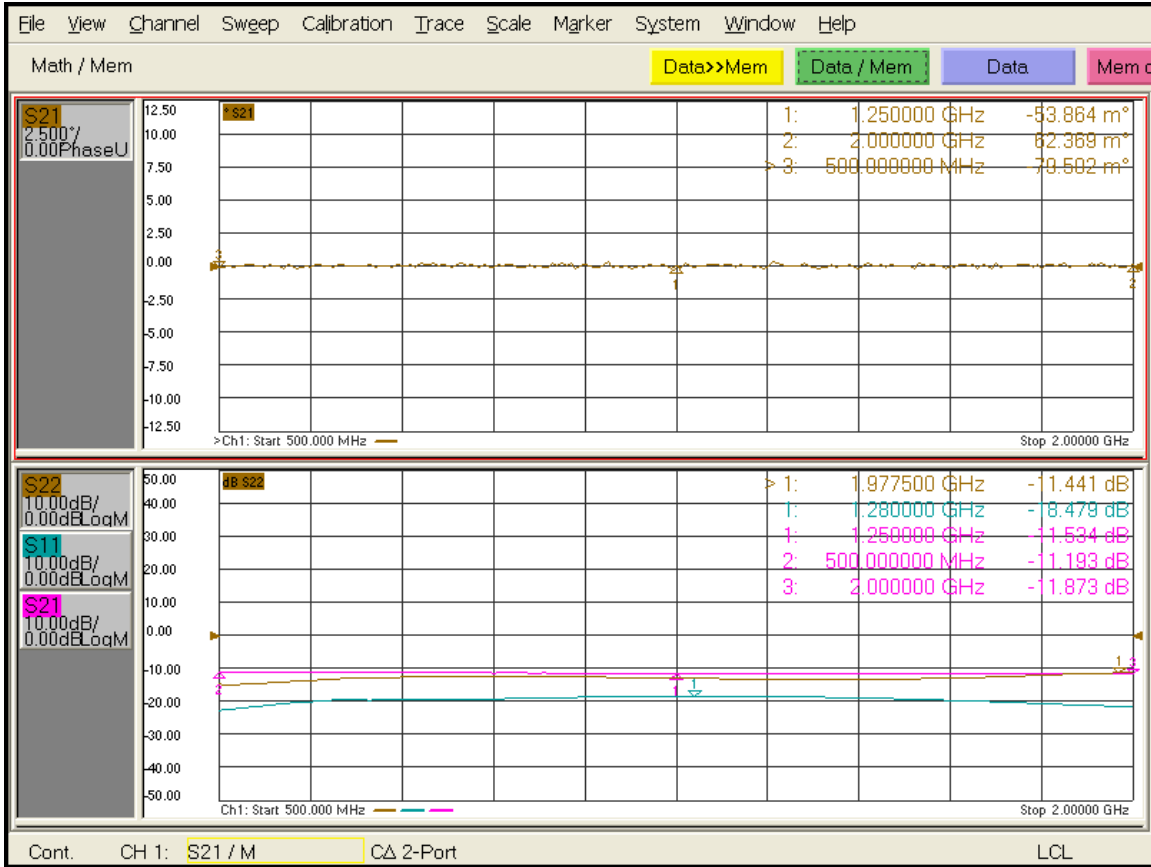


Phase Plot at 0° C



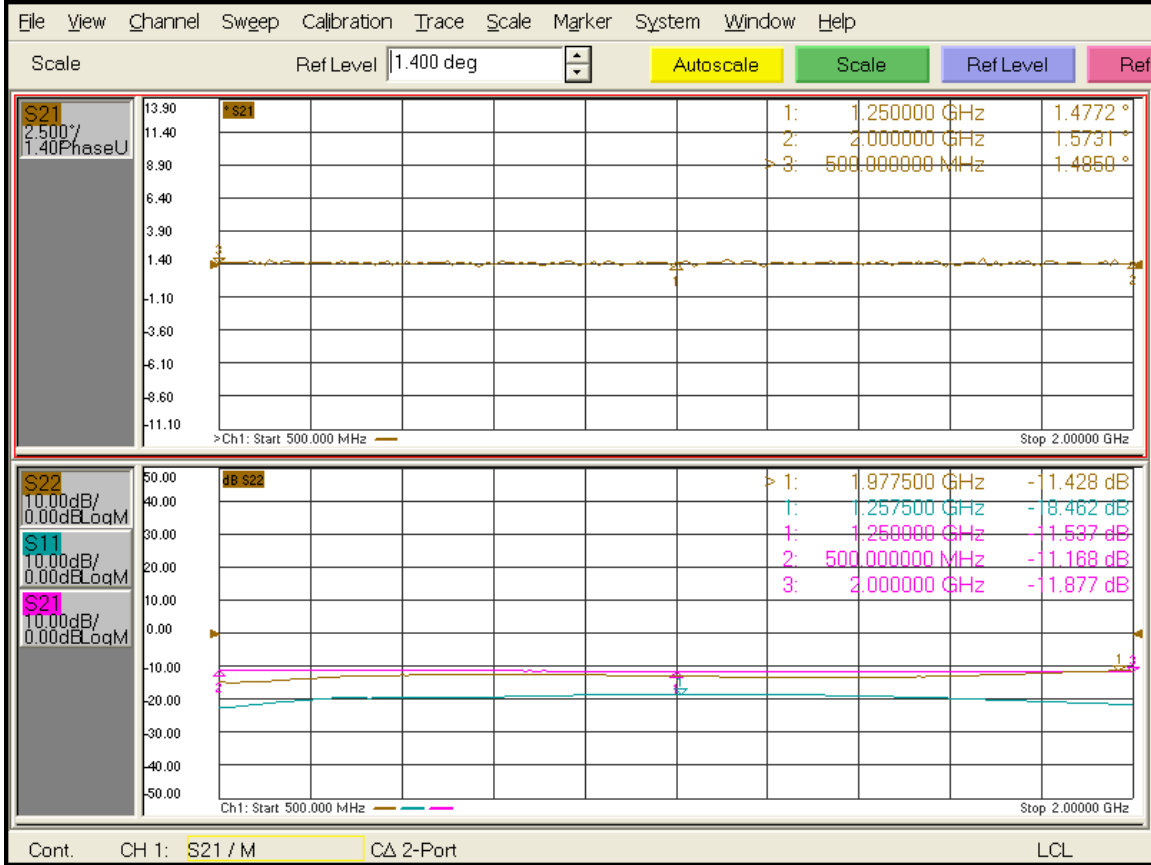


0° Phase, -30 dBm Input Power @ 0° C



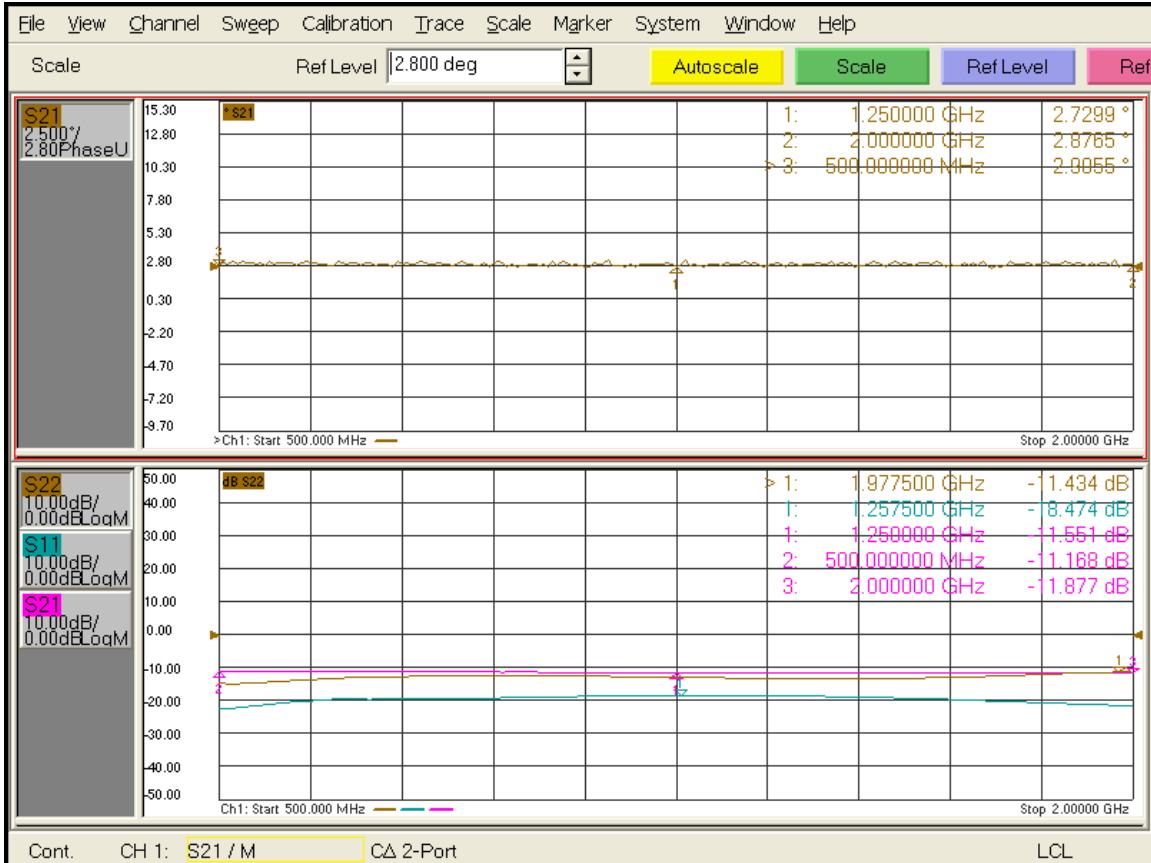


1.4° Phase, -30 dBm Input Power @ 0° C



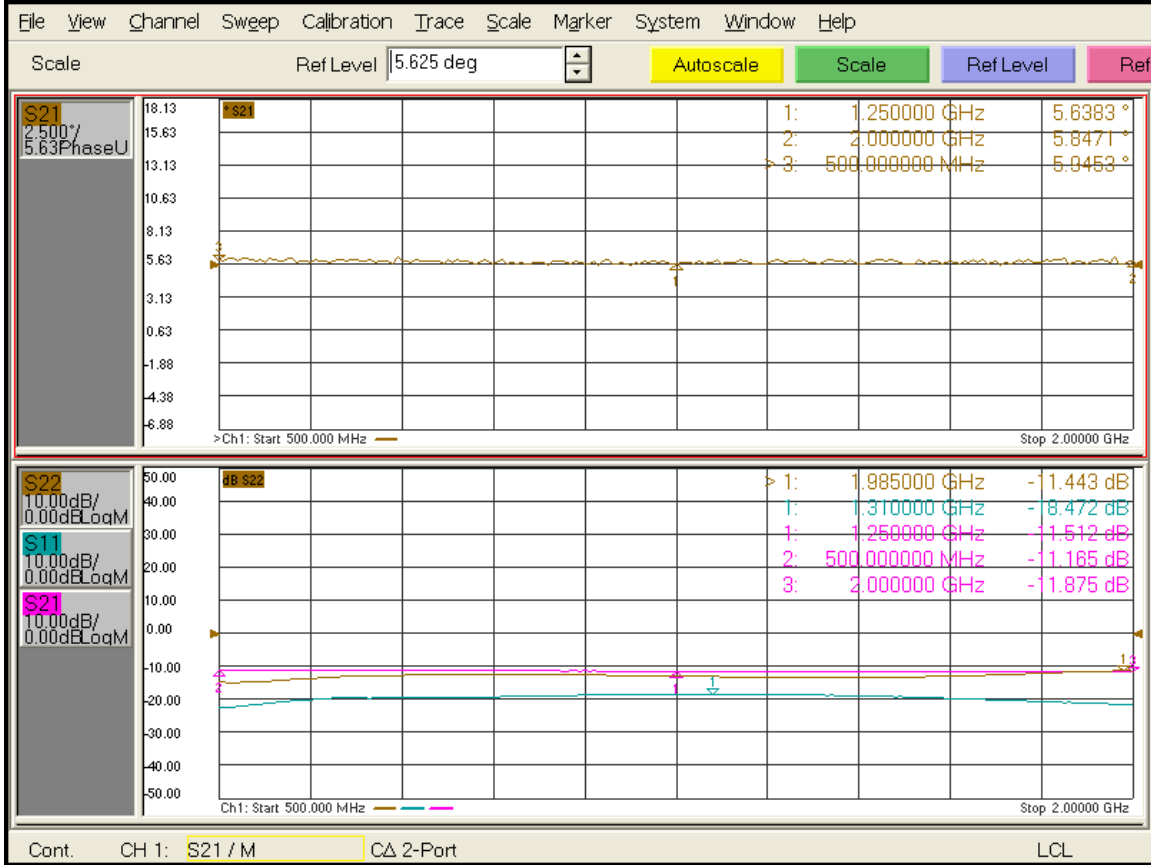


2.8° Phase, -30 dBm Input Power @ 0° C



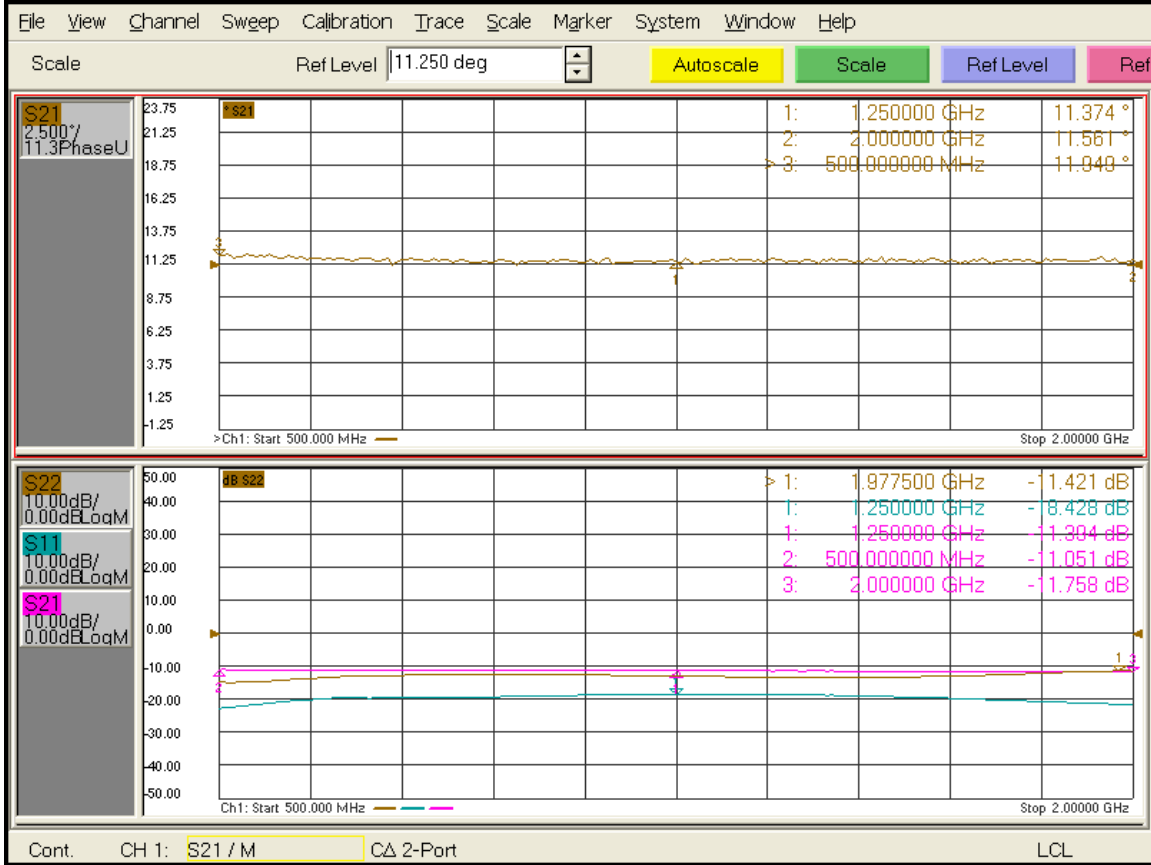


5.625° Phase, -30 dBm Input Power @ 0° C



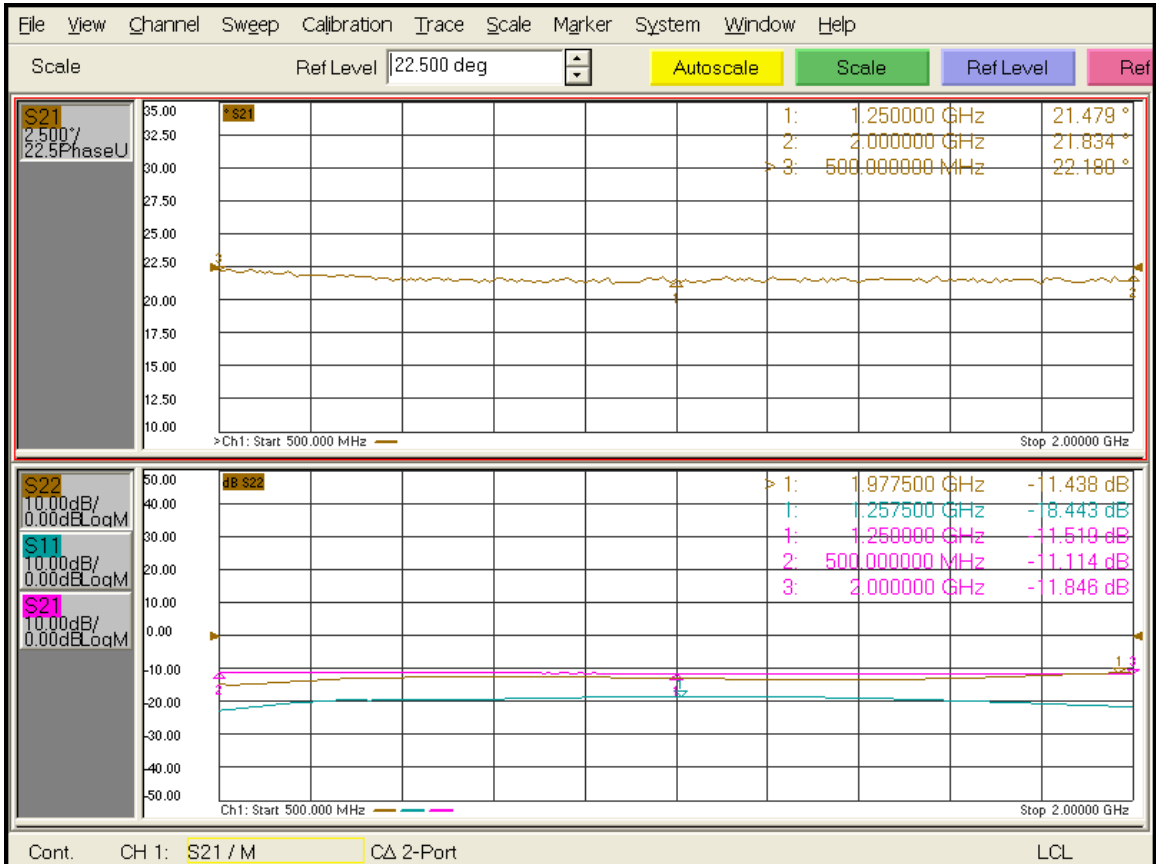


11.25° Phase, -30 dBm Input Power @ 0° C



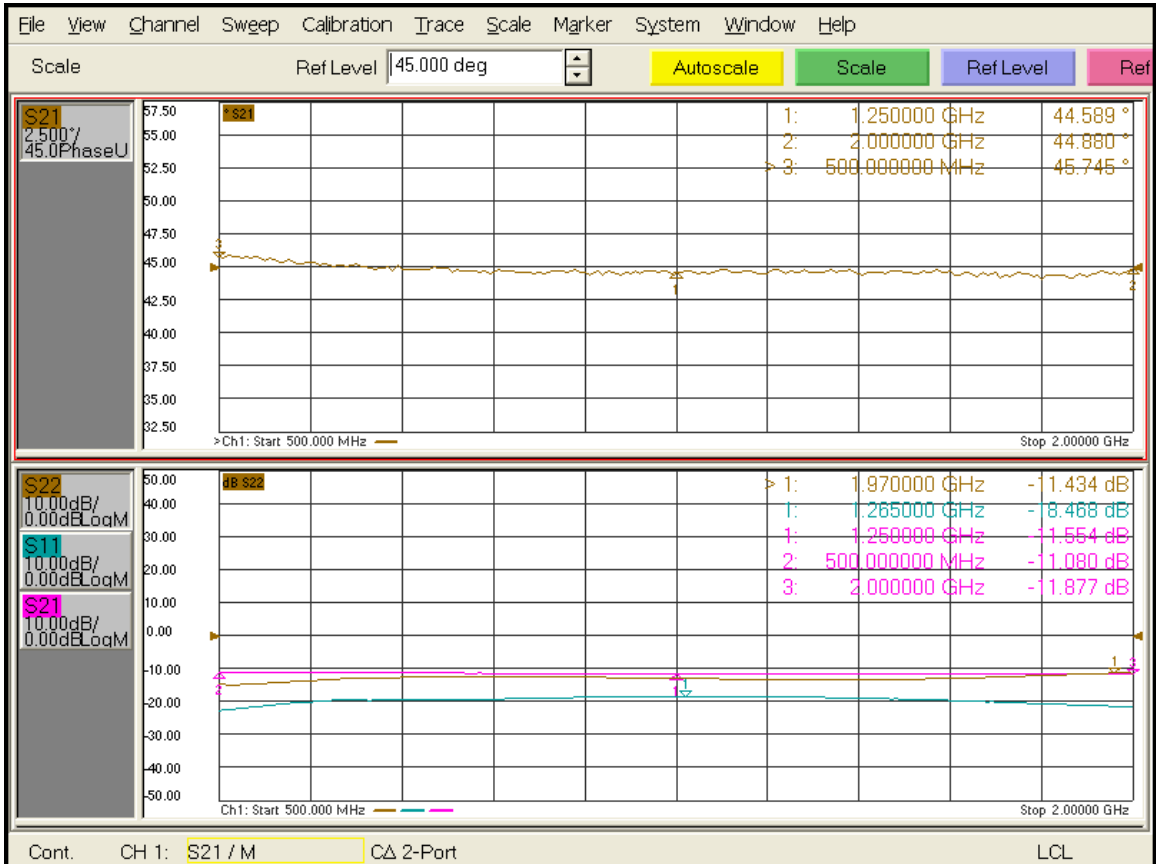


22.5° Phase, -30 dBm Input Power @ 0° C



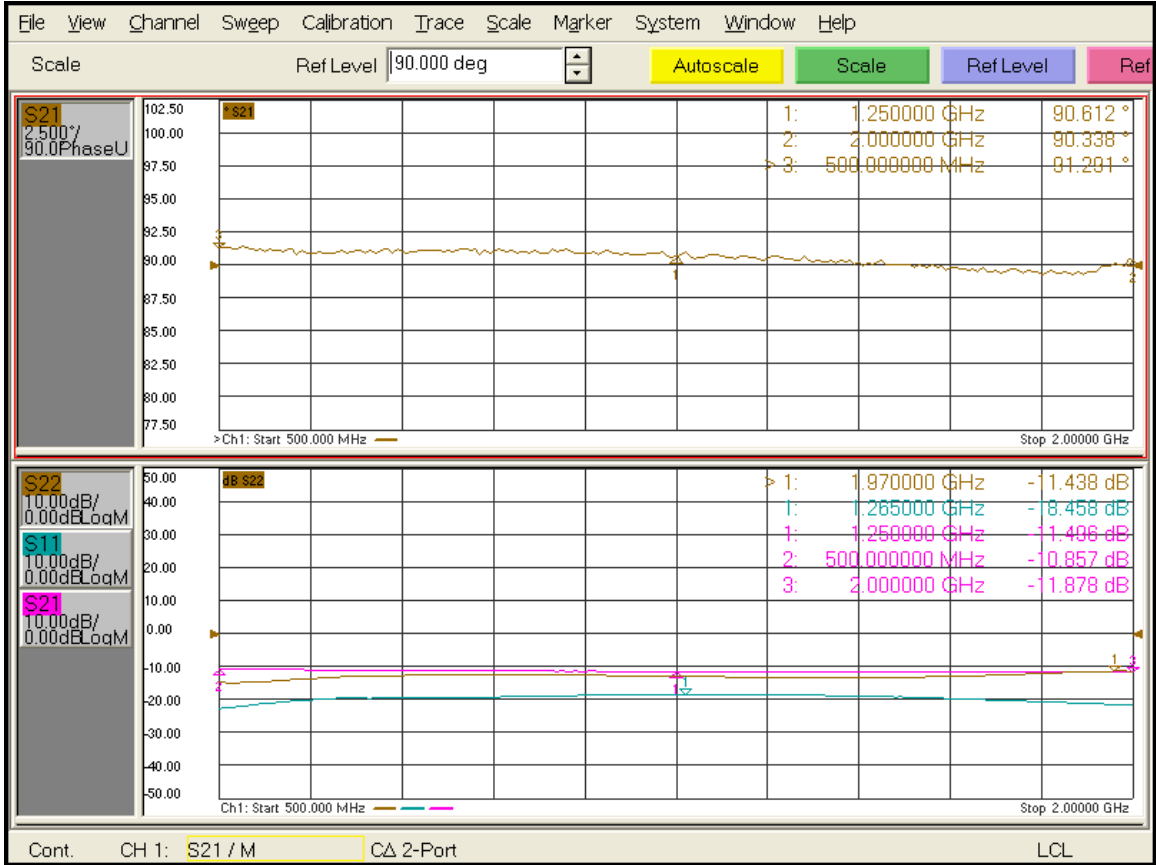


45° Phase, -30 dBm Input Power @ 0° C



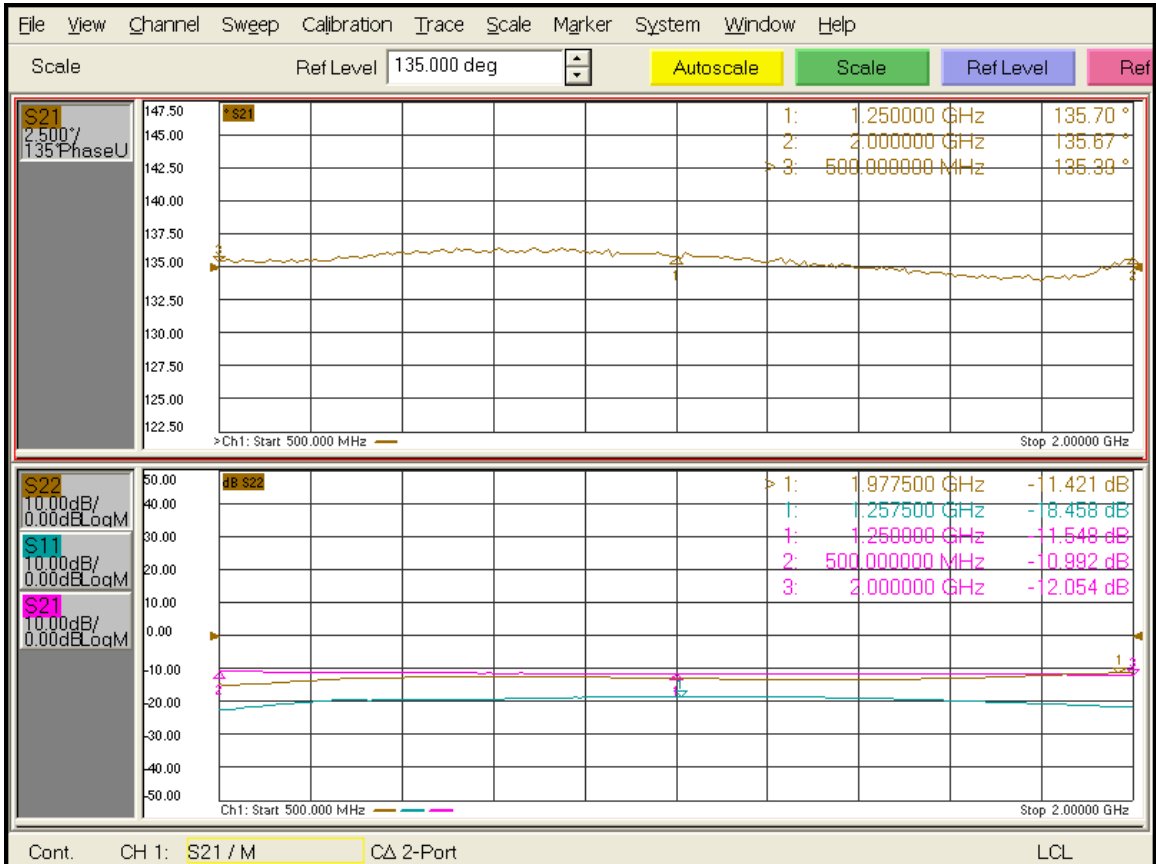


90° Phase, -30 dBm Input Power @ 0° C



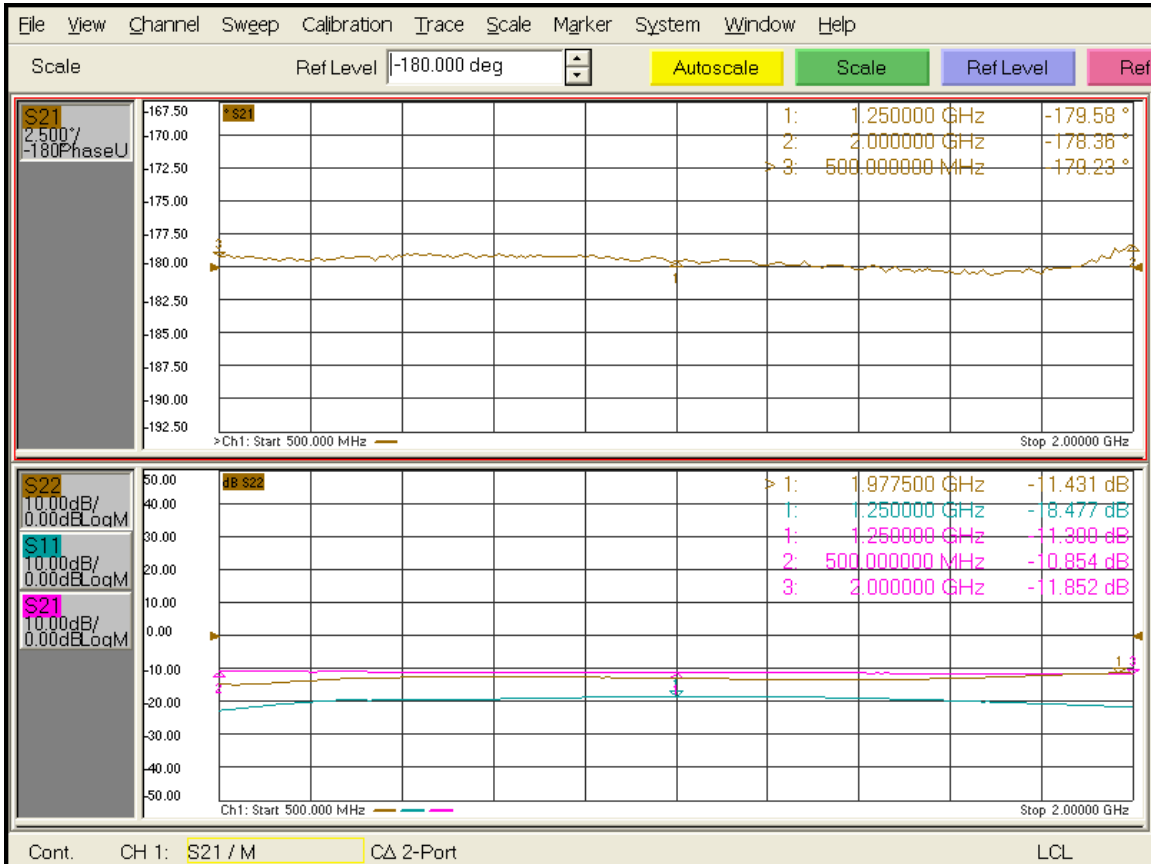


135° Phase, -30 dBm Input Power @ 0° C



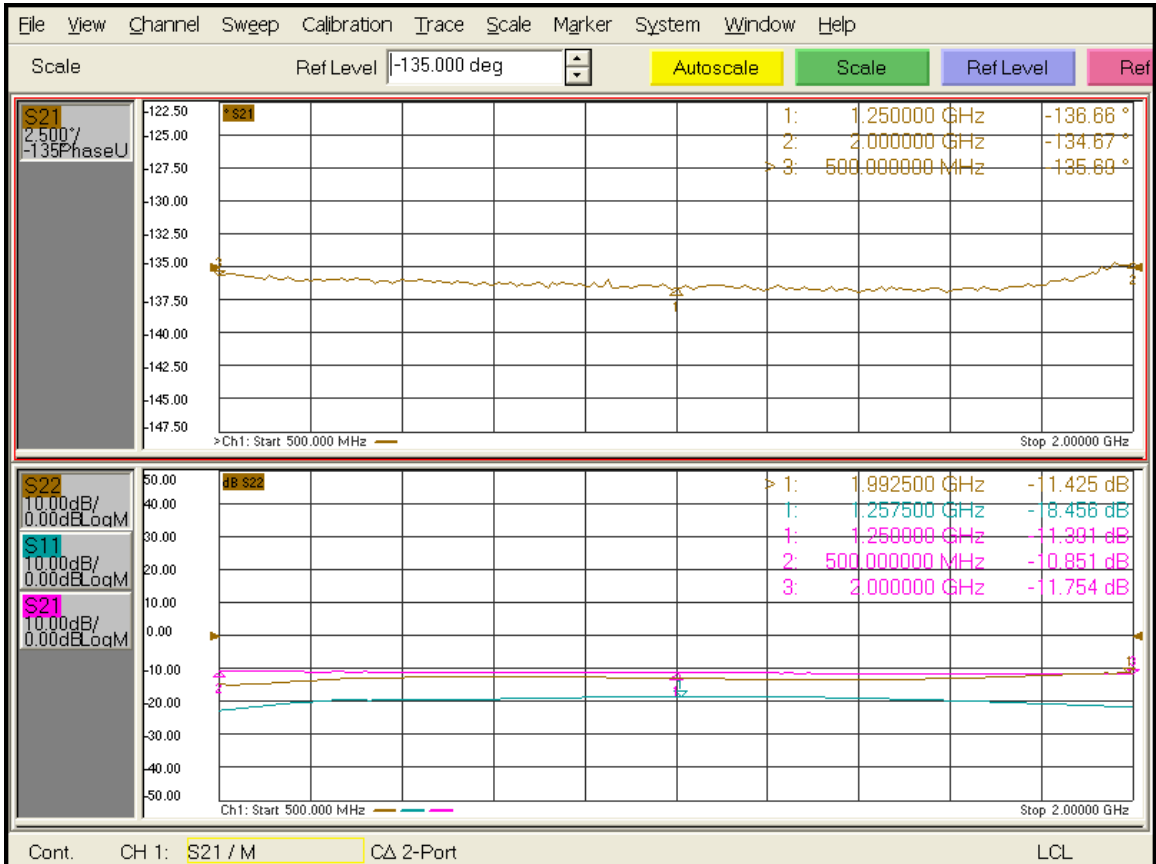


180° Phase, -30 dBm Input Power @ 0° C



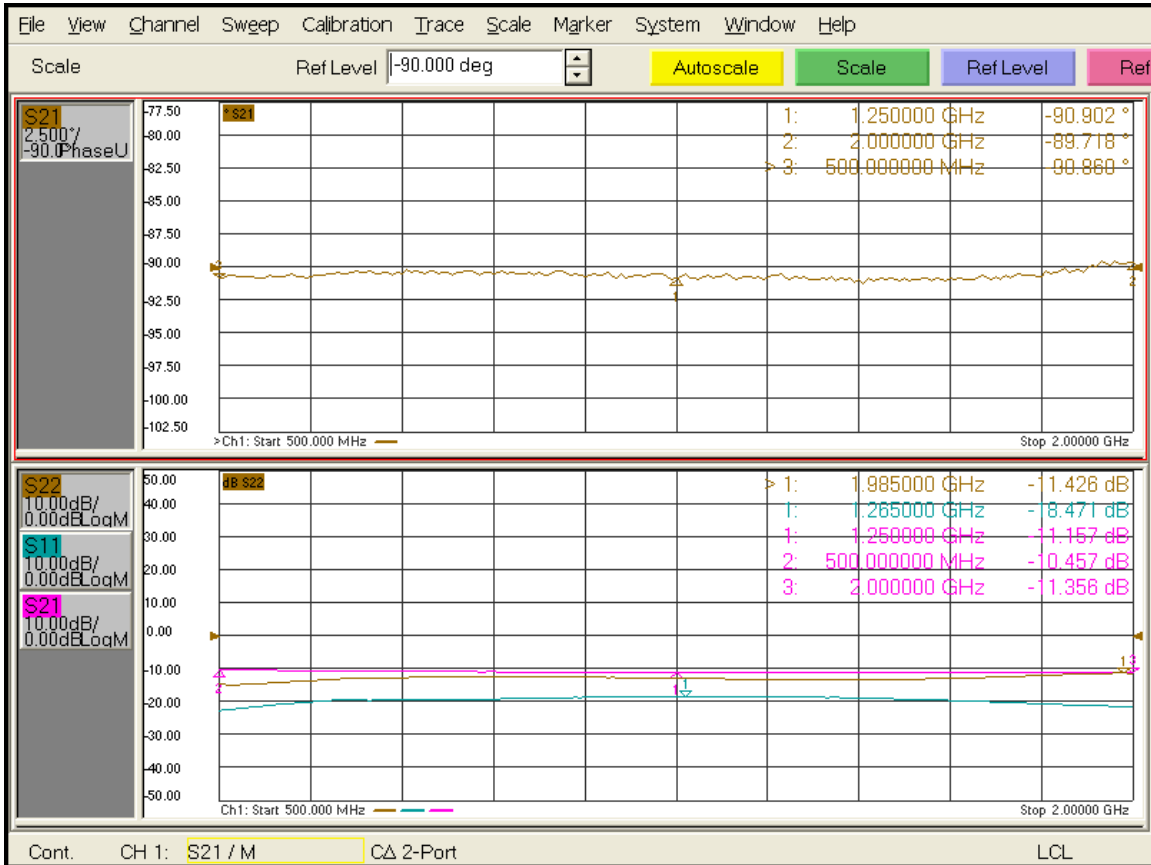


225° Phase, -30 dBm Input Power @ 0° C



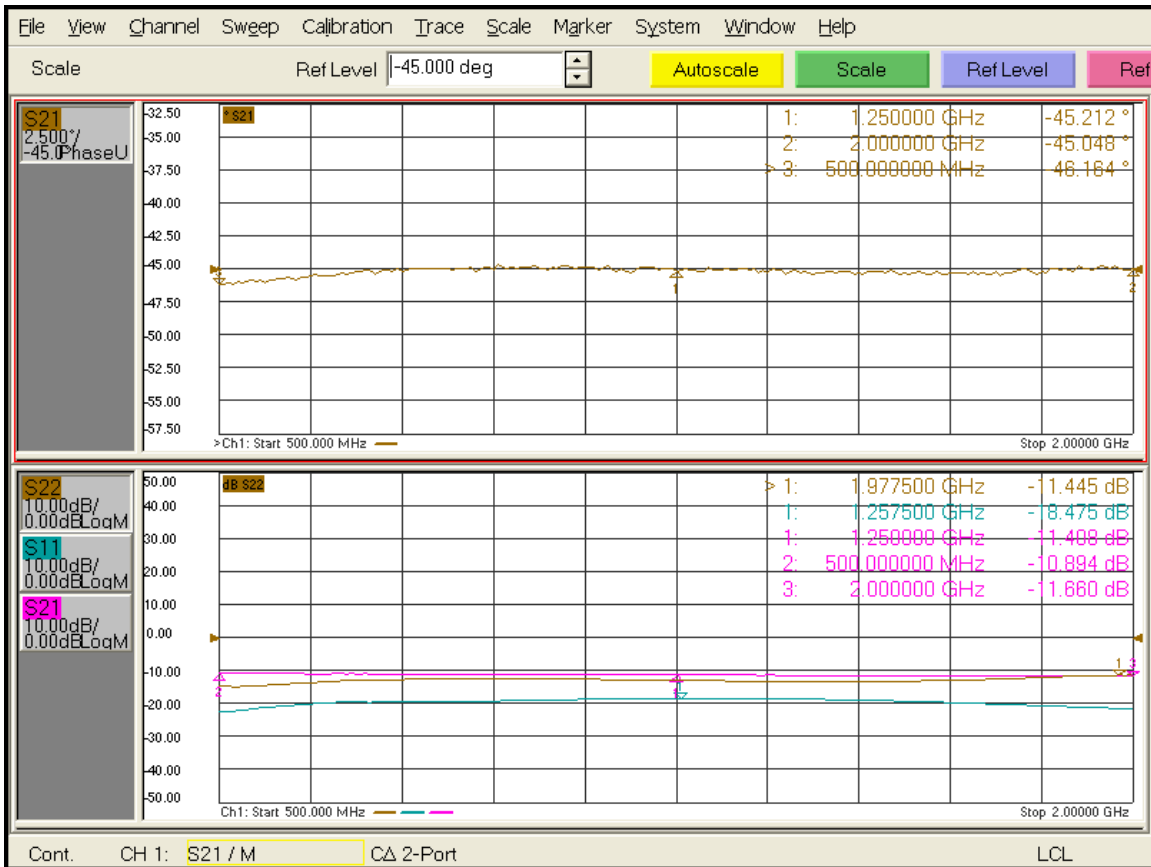


270° Phase, -30 dBm Input Power @ 0° C



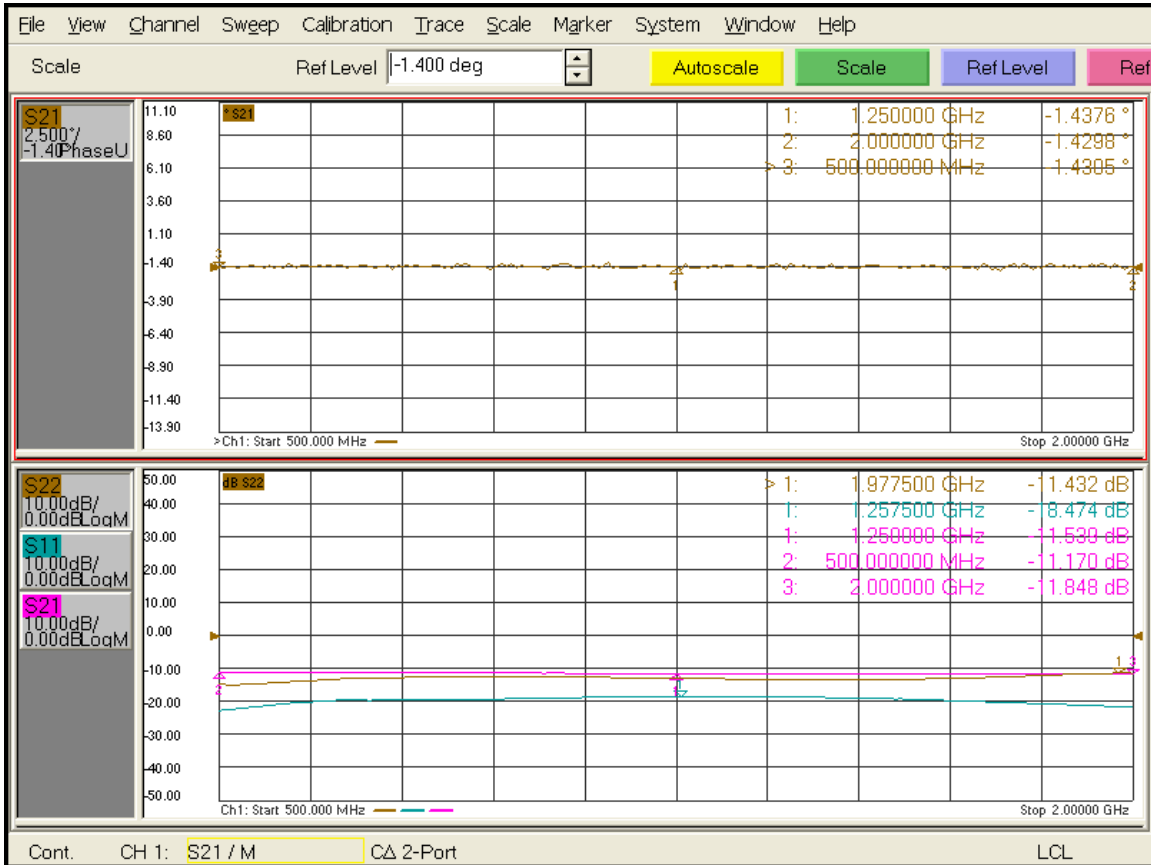


315° Phase, -30 dBm Input Power @ 0° C





358.6° Phase, -30 dBm Input Power @ 0° C





Data Taken at 0° C

Data Taken at -20 dBm Input Power

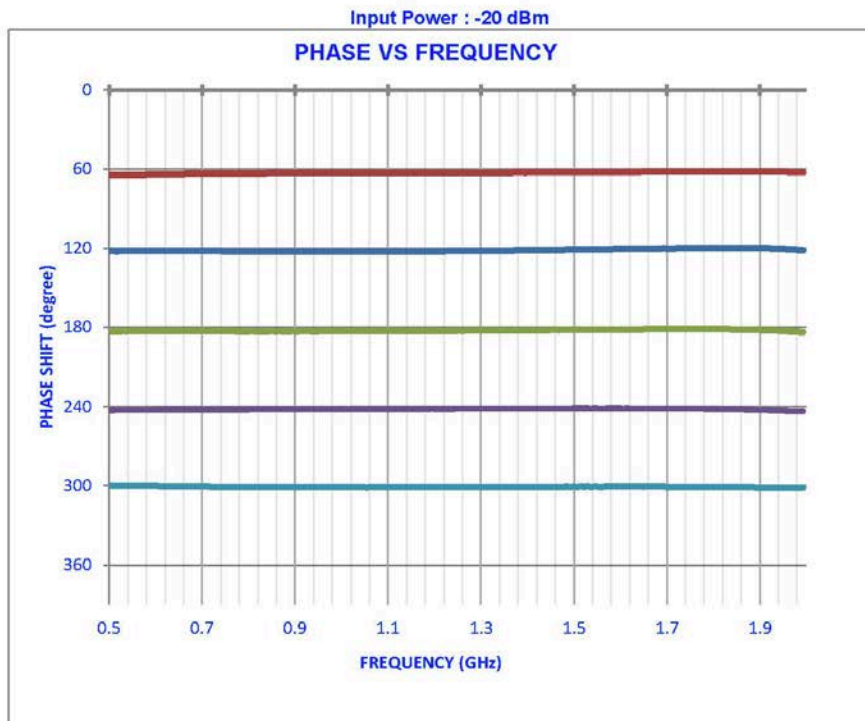
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|------------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 11.9 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.77 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.59 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 0.69 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|--------------------------|-------------|----------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.42 | -0.01 | 0.06 |
| 2.81 | 2.90 | -0.08 | 0.07 |
| 5.63 | 5.77 | -0.14 | 0.09 |
| 11.25 | 11.55 | -0.30 | 0.10 |
| 22.50 | 21.71 | 0.79 | 0.13 |
| 45.00 | 45.25 | -0.25 | 0.13 |
| 90.00 | 90.83 | -0.83 | 0.14 |
| 180.00 | 181.00 | -1.00 | 0.18 |
| 358.59 | 358.49 | 0.10 | 0.20 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|--------------------------|-------------|----------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 34.09 | -0.34 | 0.45 |
| 67.50 | 68.76 | -1.26 | 0.47 |
| 101.25 | 101.07 | 0.18 | 0.49 |
| 135.00 | 135.83 | -0.83 | 0.50 |
| 168.75 | 169.83 | -1.08 | 0.53 |
| 202.50 | 203.36 | -0.86 | 0.53 |
| 236.25 | 236.57 | -0.32 | 0.53 |
| 270.00 | 269.87 | 0.13 | 0.54 |
| 303.75 | 303.60 | 0.15 | 0.57 |
| 337.50 | 337.36 | 0.14 | 0.57 |
| | | | |
| | | | |
| | | | |

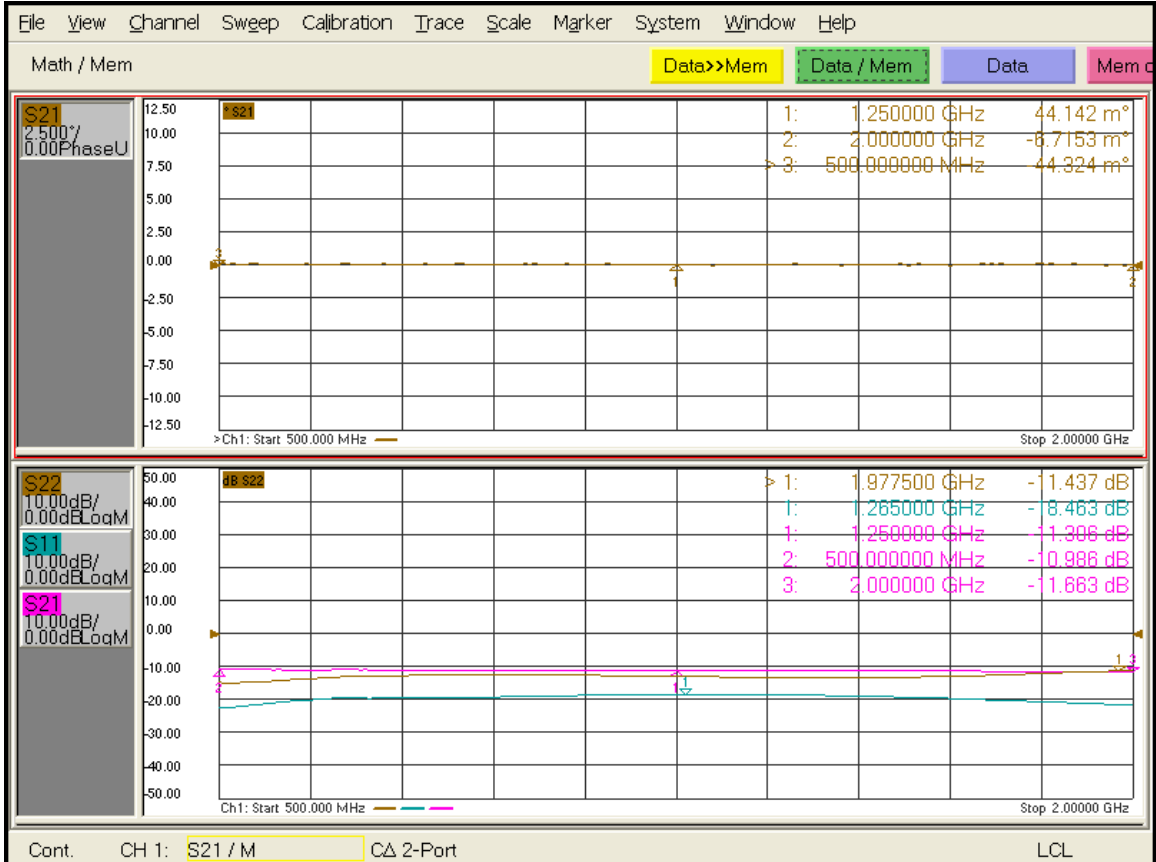


Phase Plot at 0° C



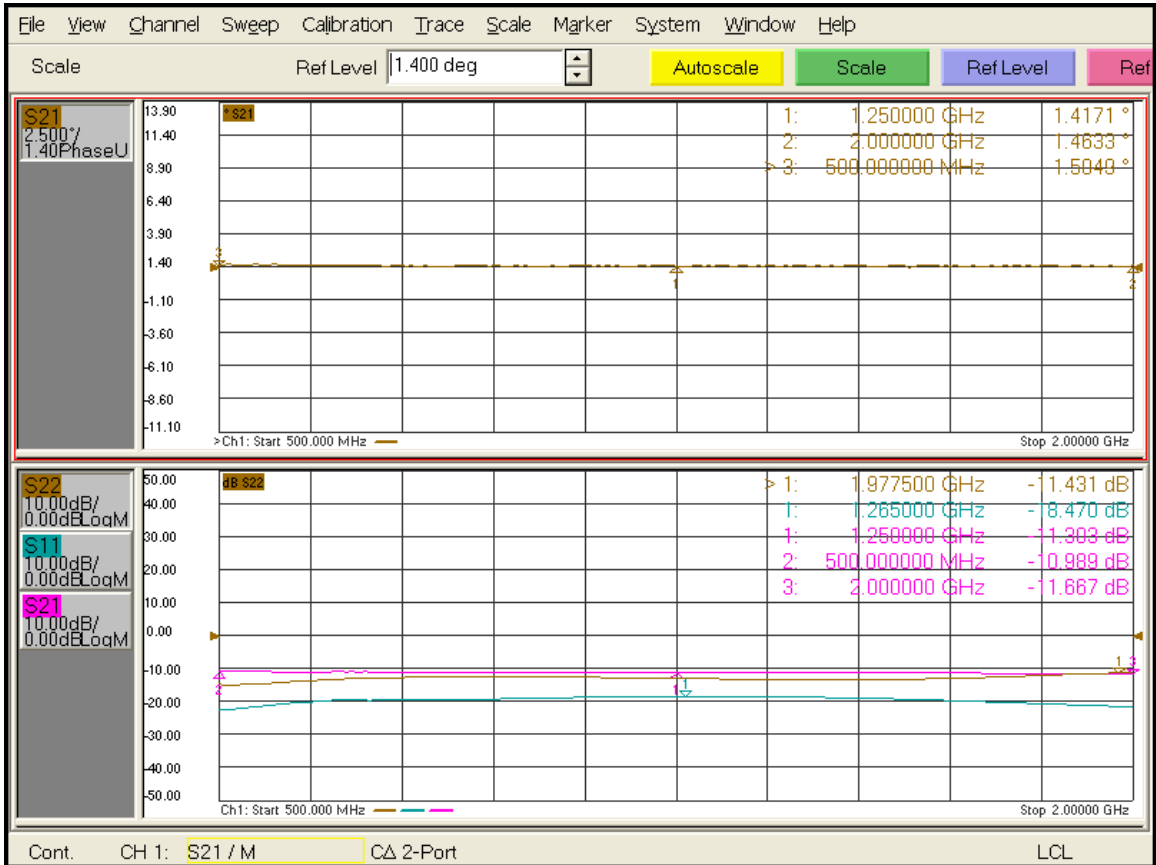


0° Phase, -20 dBm Input Power @ 0° C



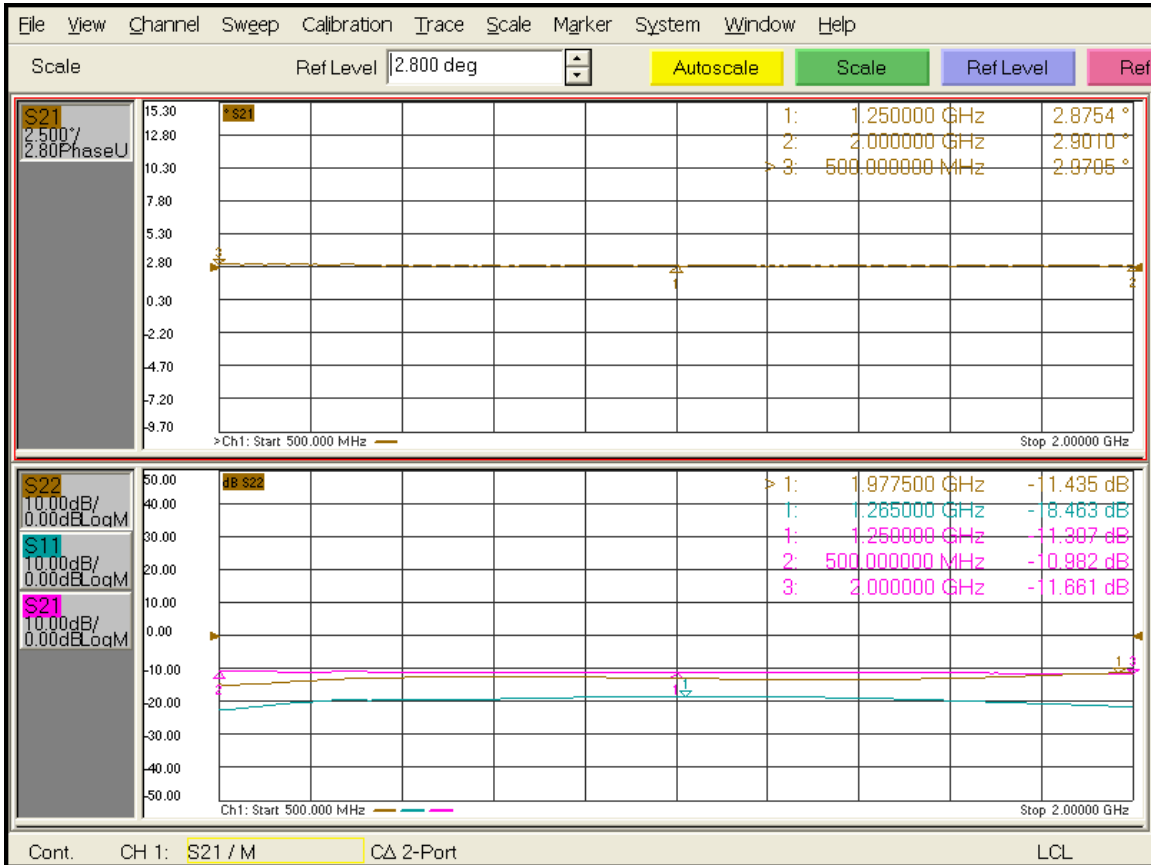


1.4° Phase, -20 dBm Input Power @ 0° C



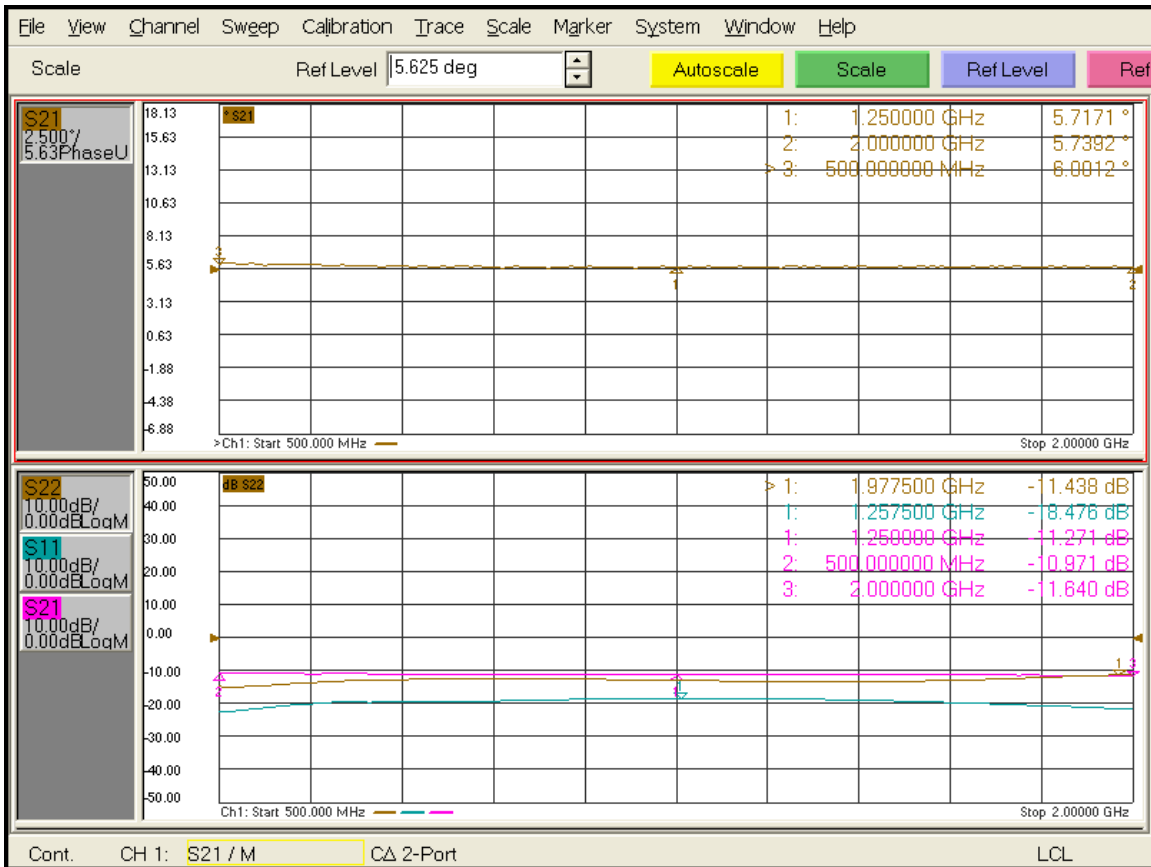


2.8° Phase, -20 dBm Input Power @ 0° C



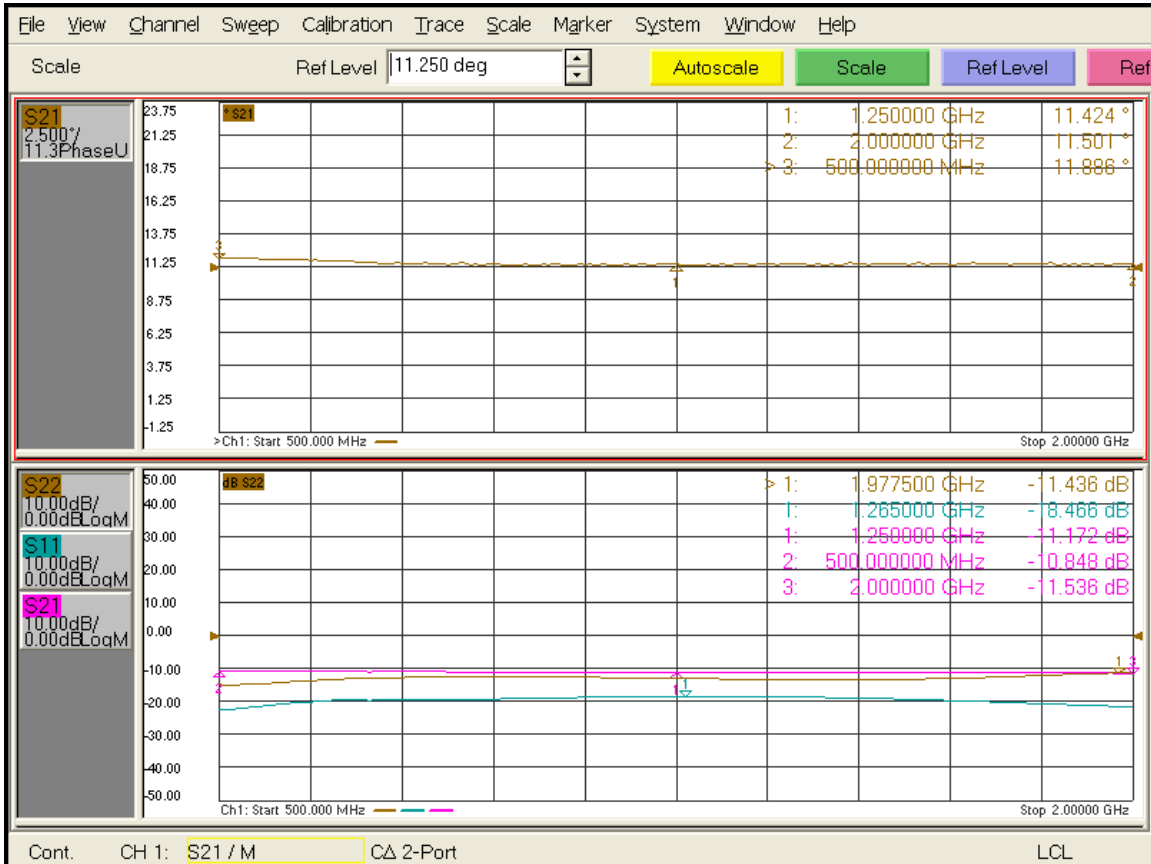


5.625° Phase, -20 dBm Input Power @ 0° C



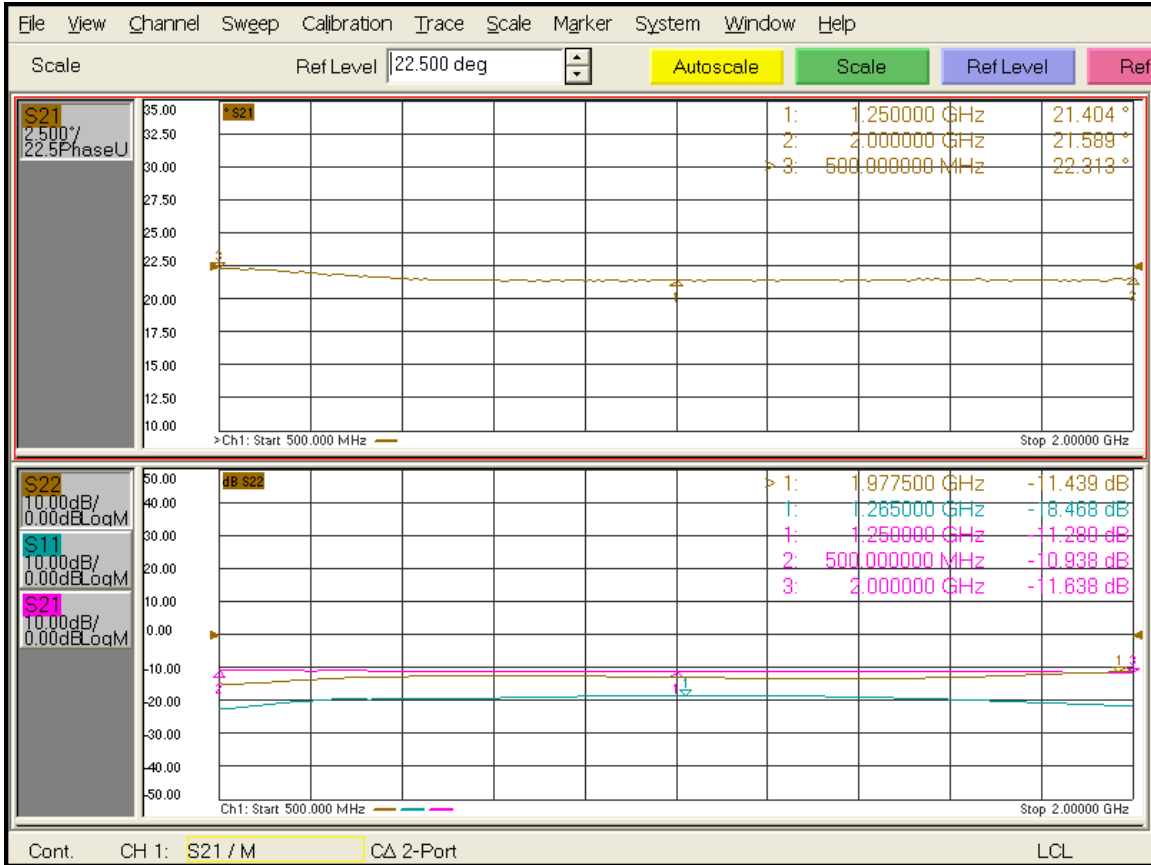


11.25° Phase, -20 dBm Input Power @ 0° C



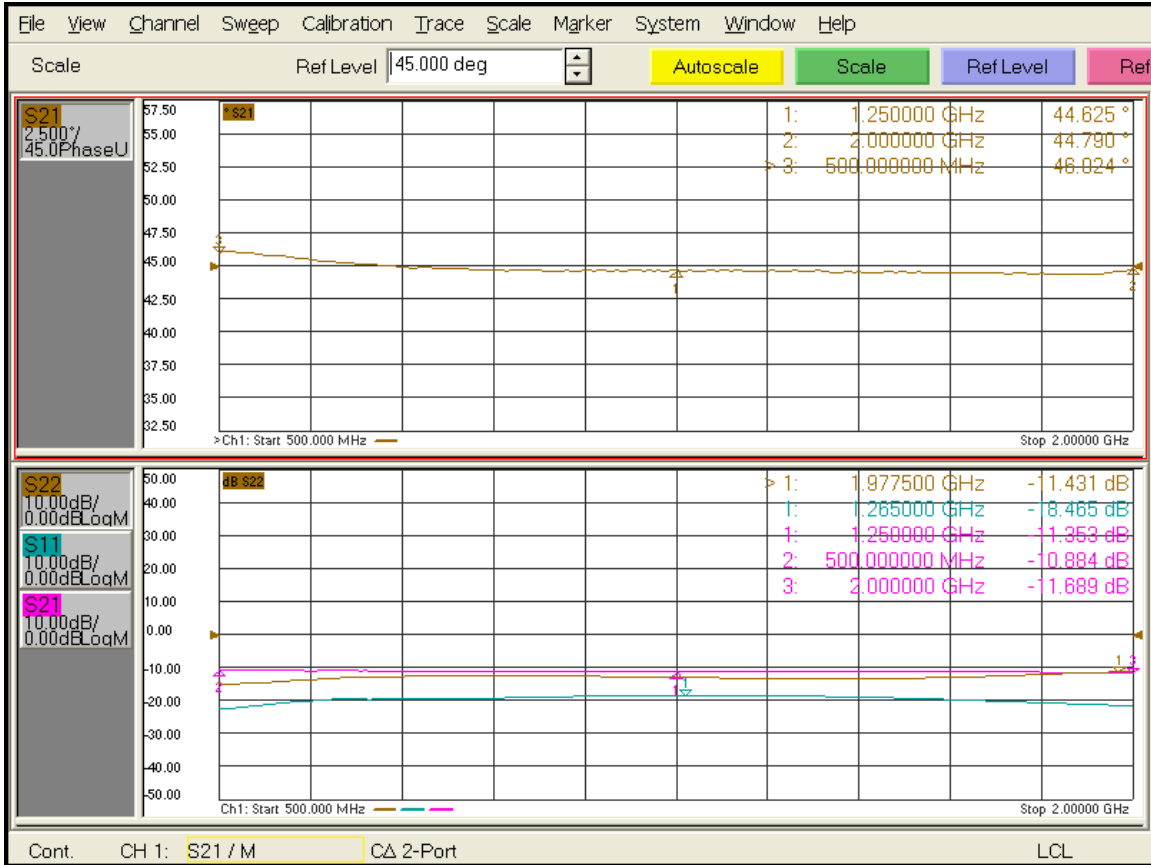


22.5° Phase, -20 dBm Input Power @ 0° C



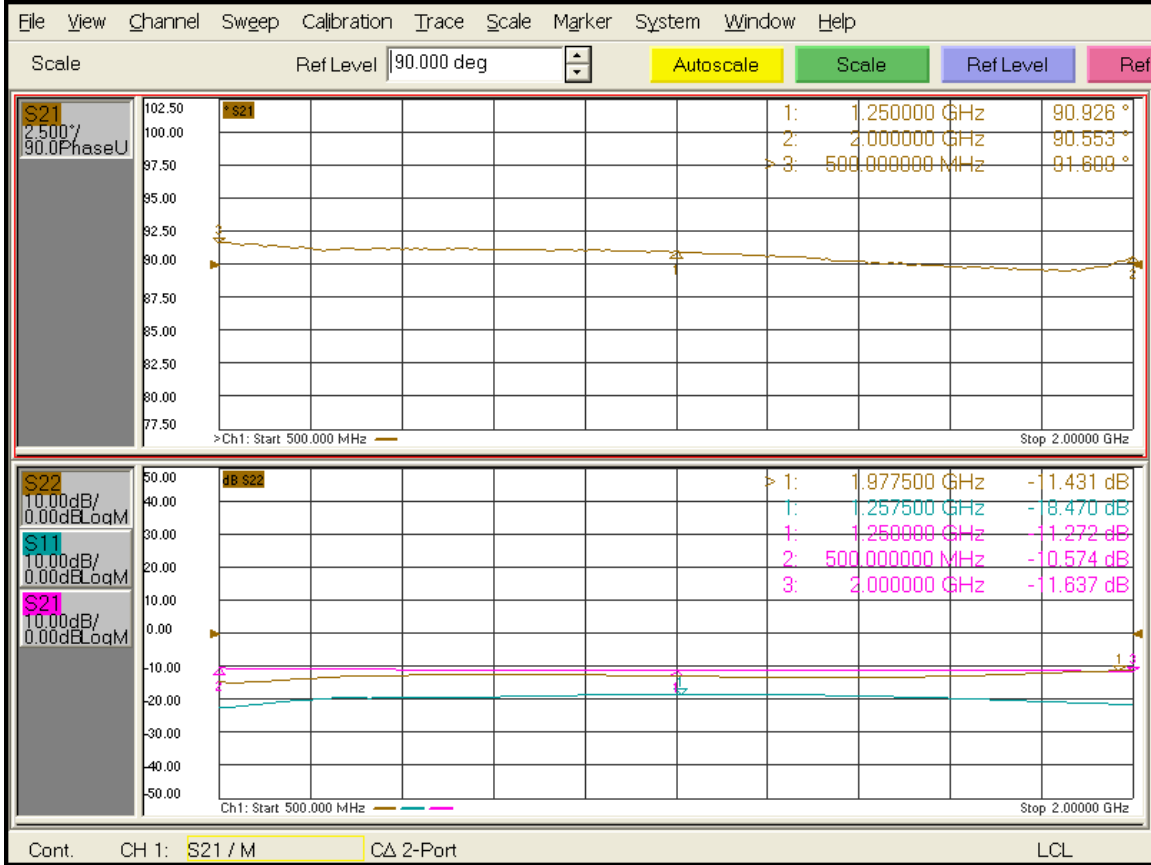


45° Phase, -20 dBm Input Power @ 0° C



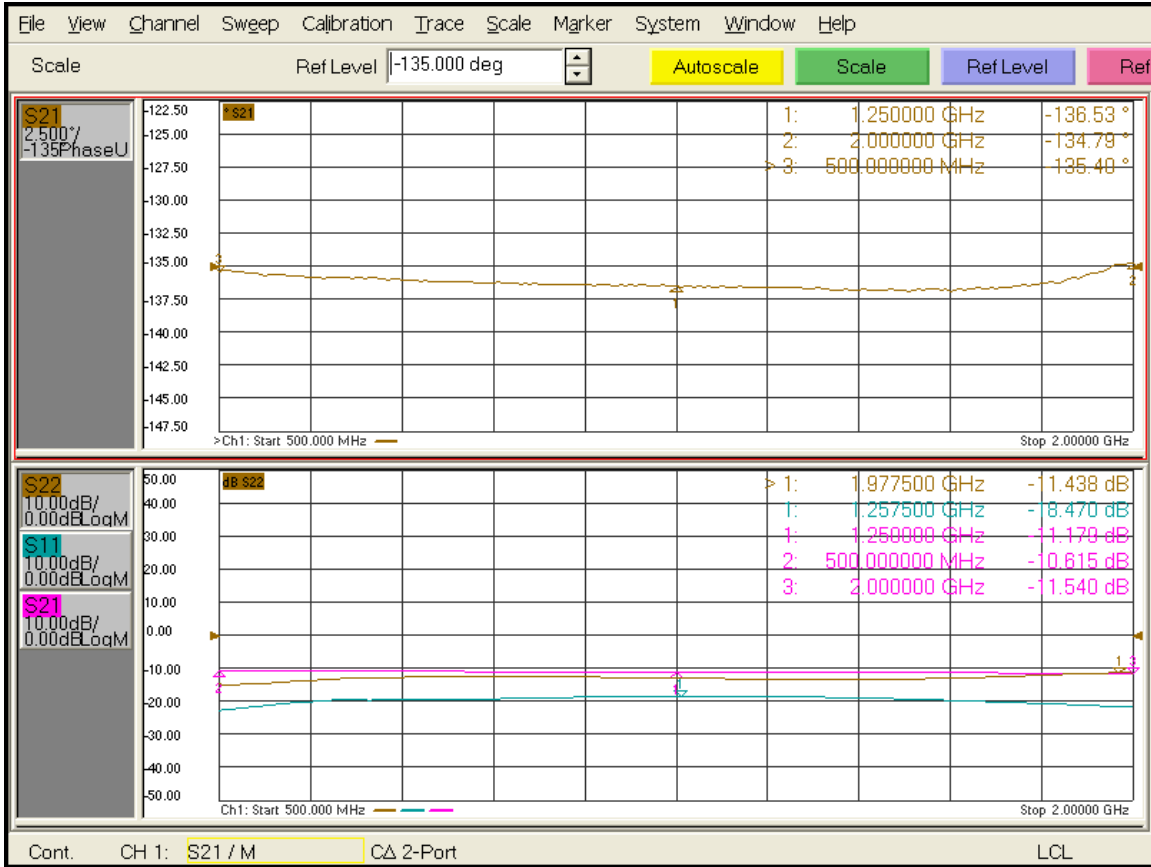


90° Phase, -20 dBm Input Power @ 0° C



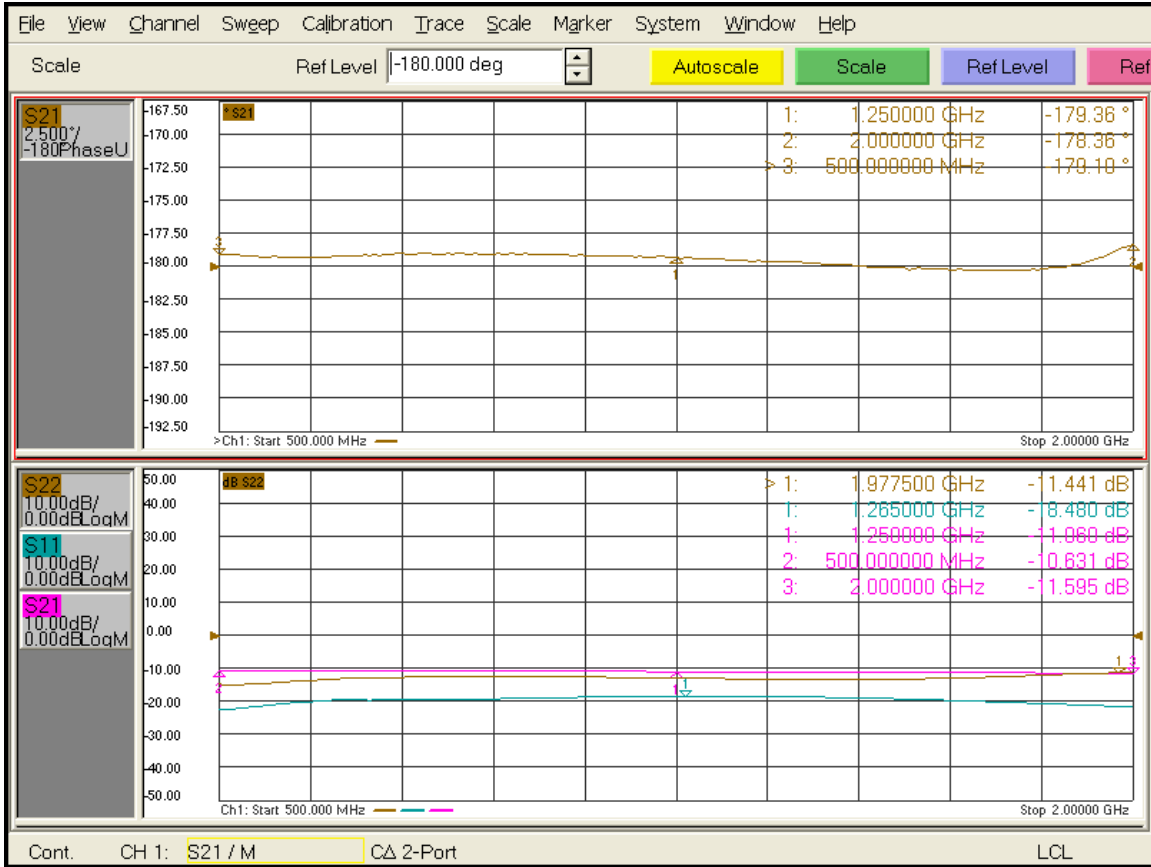


135° Phase, -20 dBm Input Power @ 0° C



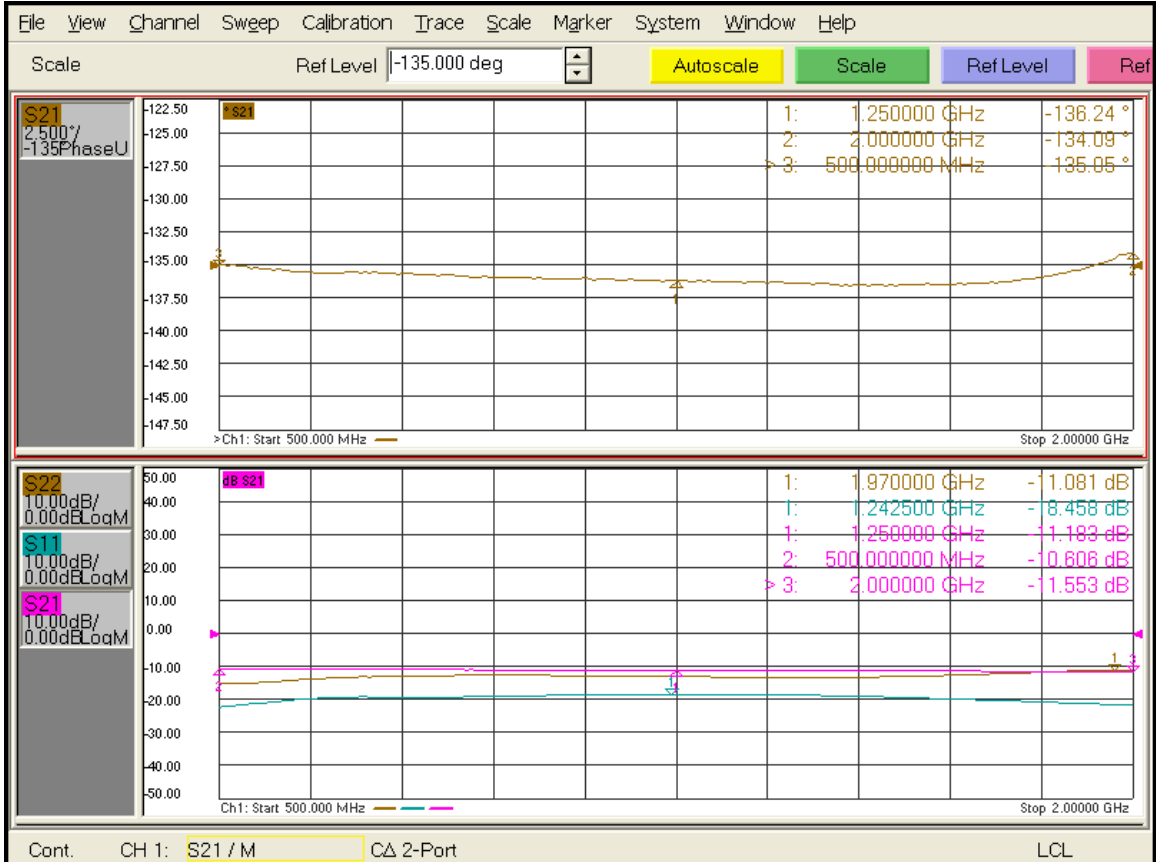


180° Phase, -20 dBm Input Power @ 0° C



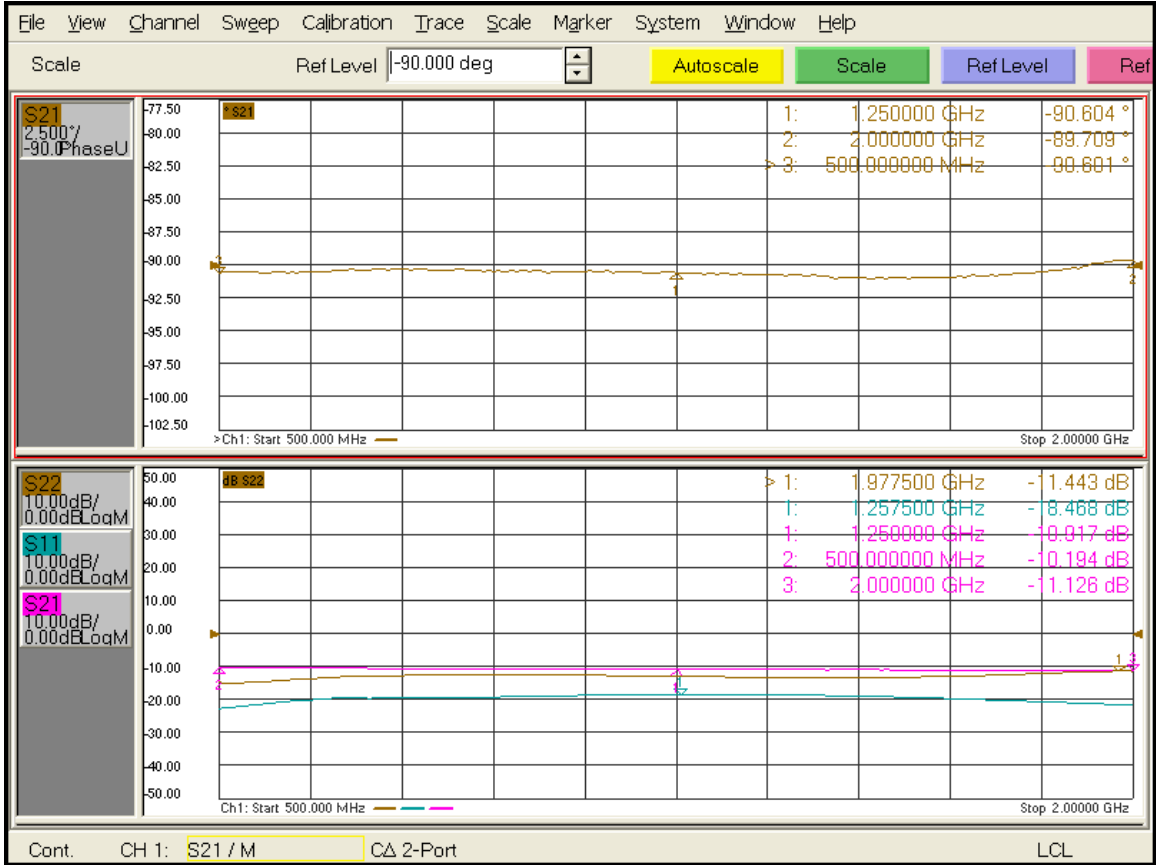


225° Phase, -20 dBm Input Power @ 0° C



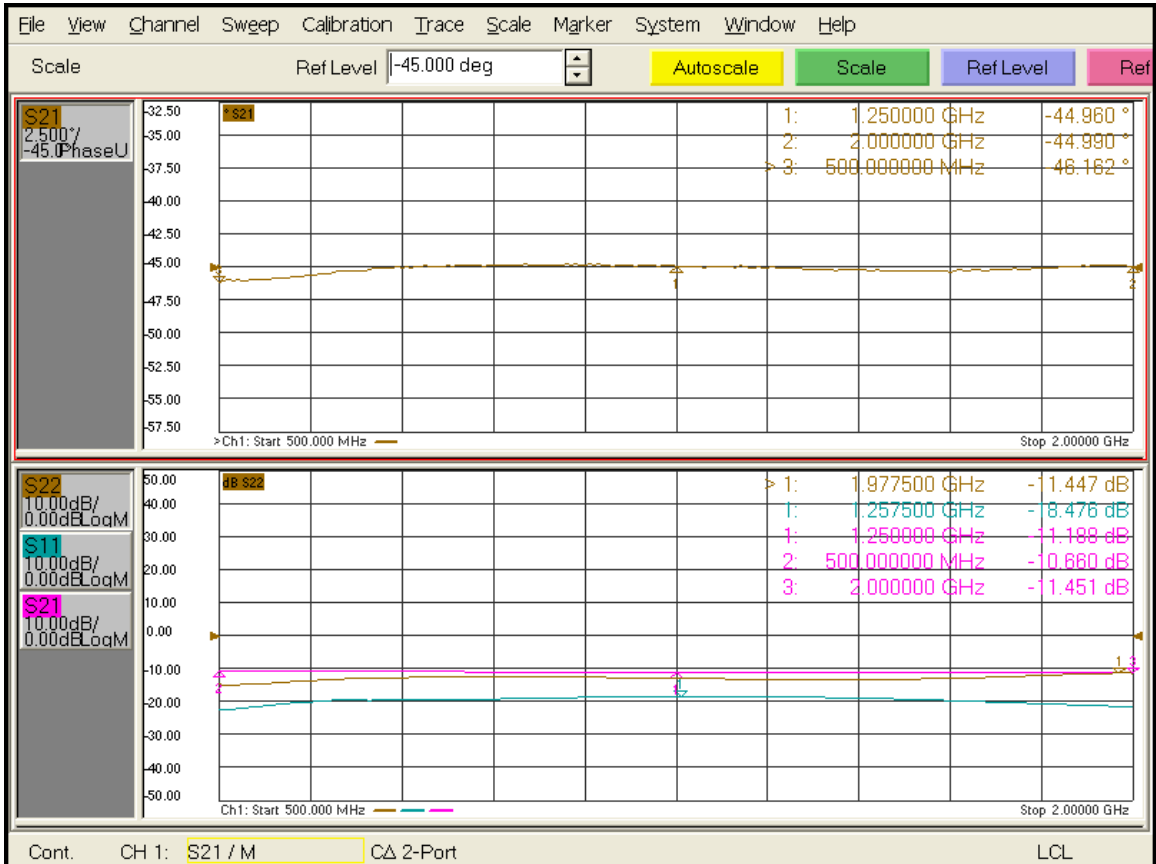


270° Phase, -20 dBm Input Power @ 0° C



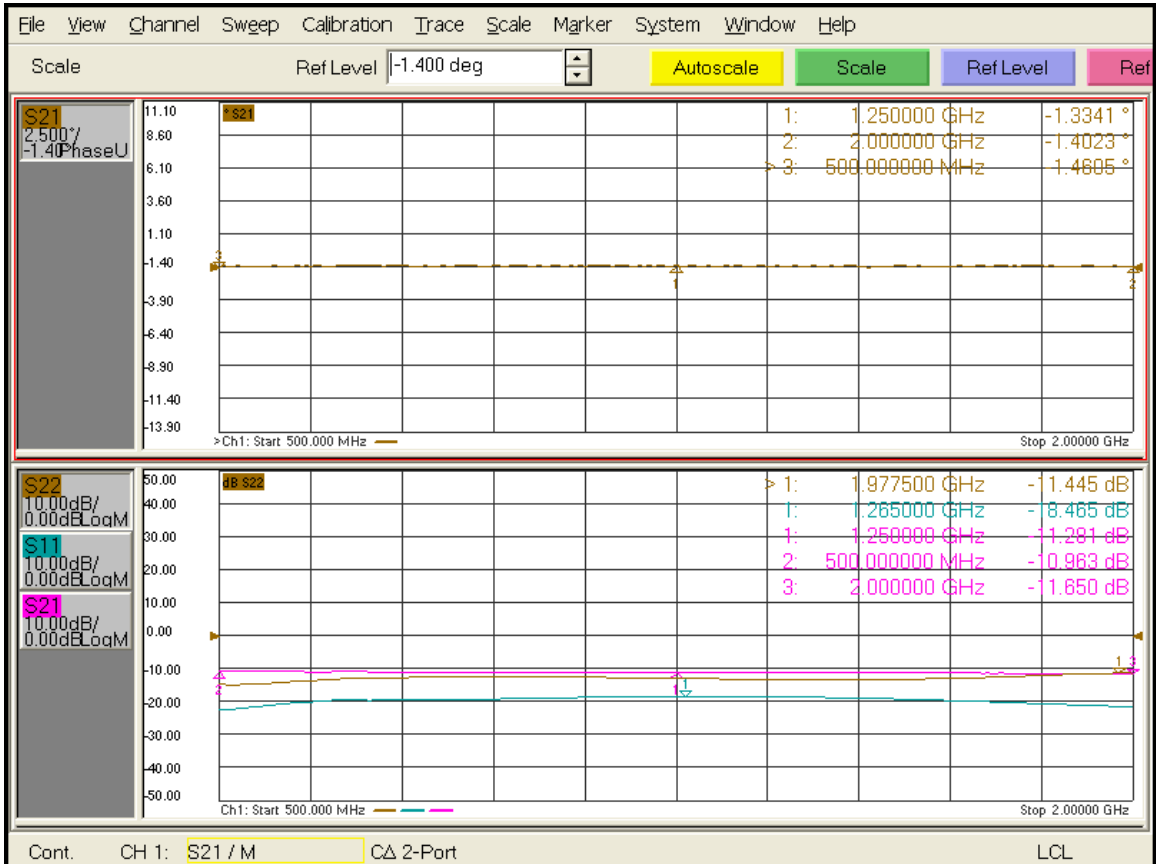


315° Phase, -20 dBm Input Power @ 0° C





358.6° Phase, -20 dBm Input Power @ 0° C





Data Taken at 0° C

Data Taken at -15 dBm Input Power

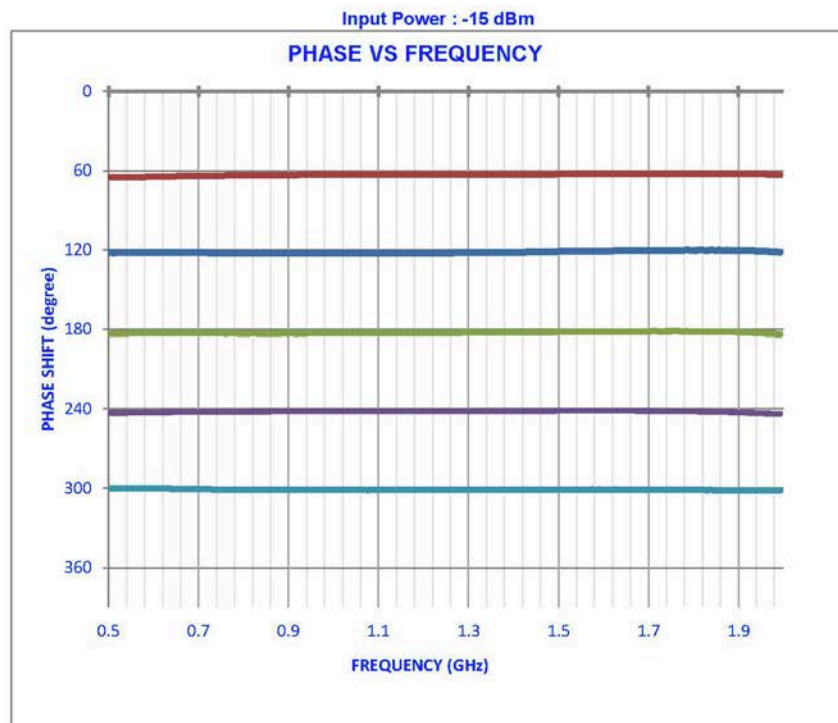
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 11.3 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.77 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.63 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 0.92 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.45 | -0.05 | 0.03 |
| 2.81 | 2.89 | -0.07 | 0.05 |
| 5.63 | 5.75 | -0.13 | 0.07 |
| 11.25 | 11.44 | -0.19 | 0.08 |
| 22.50 | 21.57 | 0.93 | 0.11 |
| 45.00 | 45.49 | -0.49 | 0.13 |
| 90.00 | 91.17 | -1.17 | 0.15 |
| 180.00 | 181.13 | -1.13 | 0.17 |
| 358.59 | 358.64 | -0.04 | 0.19 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 34.10 | -0.35 | 0.47 |
| 67.50 | 69.28 | -1.78 | 0.49 |
| 101.25 | 101.29 | -0.04 | 0.51 |
| 135.00 | 136.14 | -1.14 | 0.52 |
| 168.75 | 170.12 | -1.37 | 0.54 |
| 202.50 | 203.26 | -0.76 | 0.55 |
| 236.25 | 236.77 | -0.52 | 0.56 |
| 270.00 | 270.02 | -0.02 | 0.58 |
| 303.75 | 303.61 | 0.14 | 0.61 |
| 337.50 | 337.64 | -0.14 | 0.60 |
| | | | |
| | | | |
| | | | |

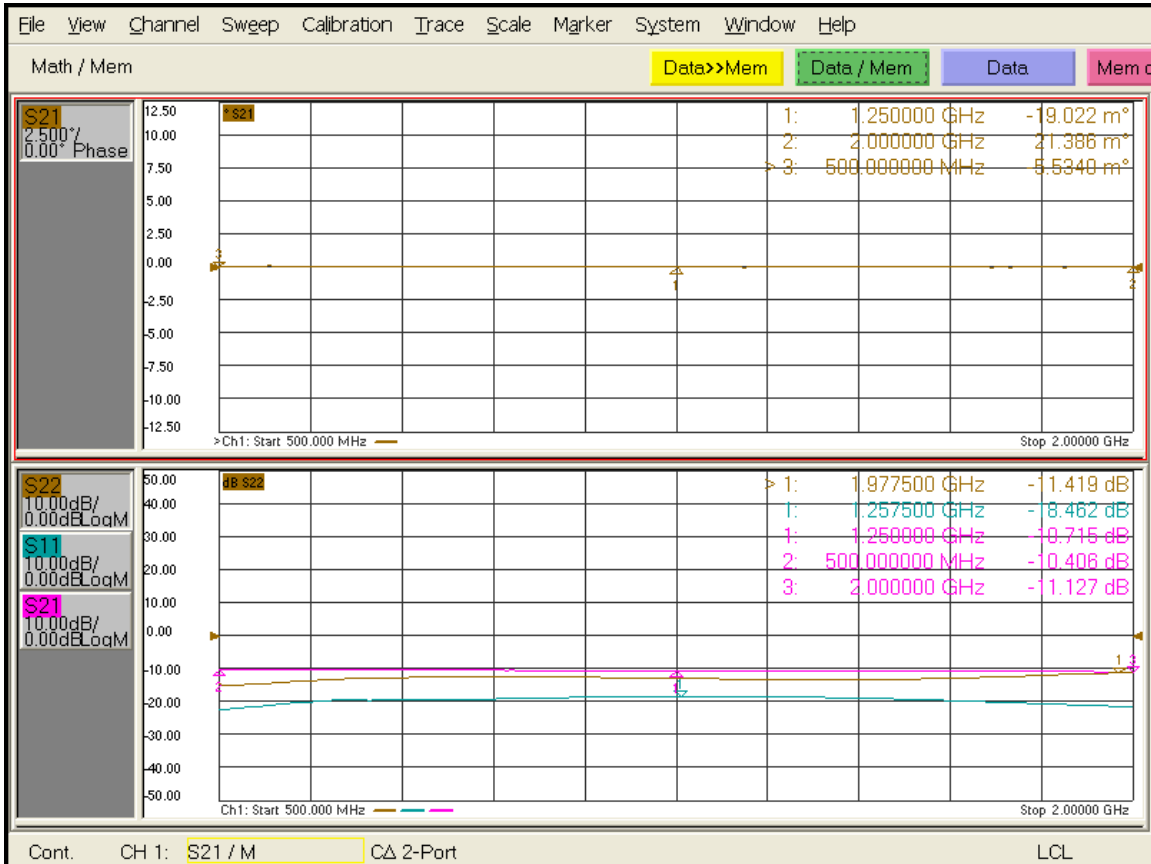


Phase Plot Taken at 0° C



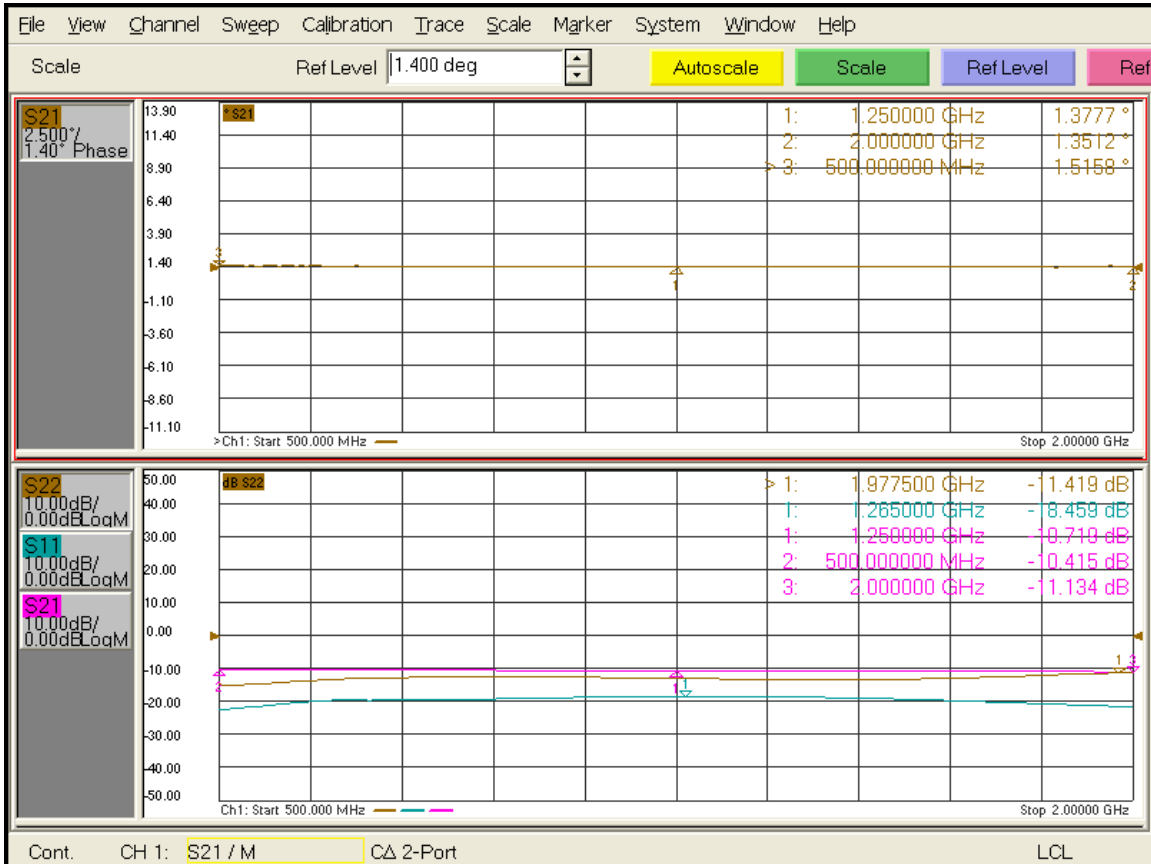


0° Phase, -15 dBm Input Power @ 0° C



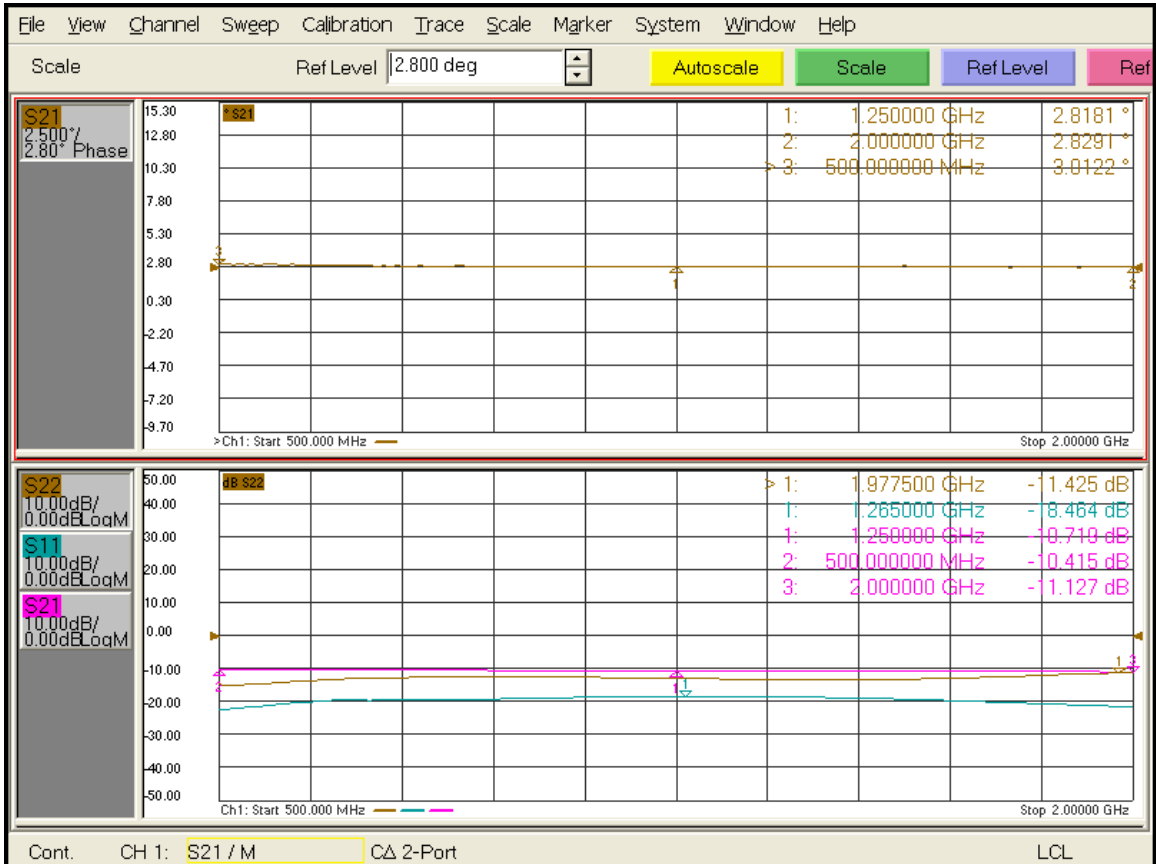


1.4° Phase, -15 dBm Input Power @ 0° C



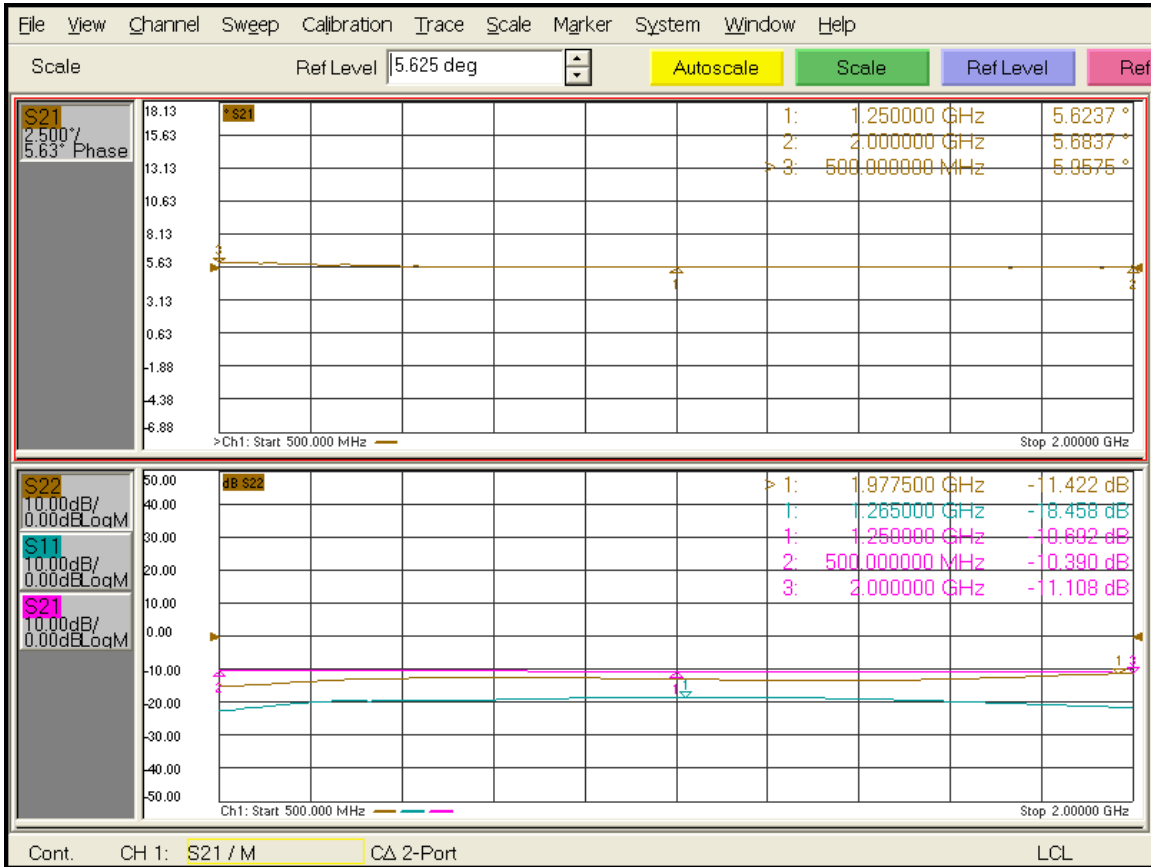


2.8° Phase, -15 dBm Input Power @ 0° C



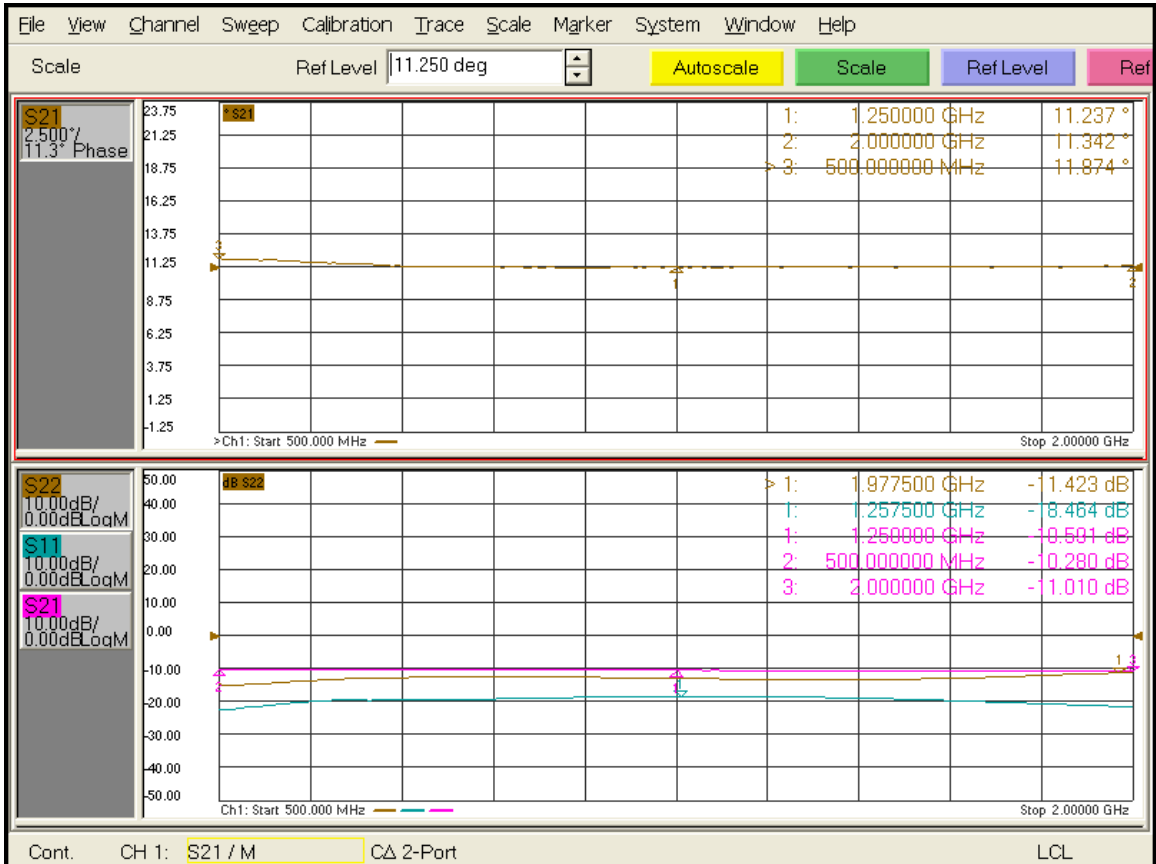


5.625° Phase, -15 dBm Input Power @ 0° C



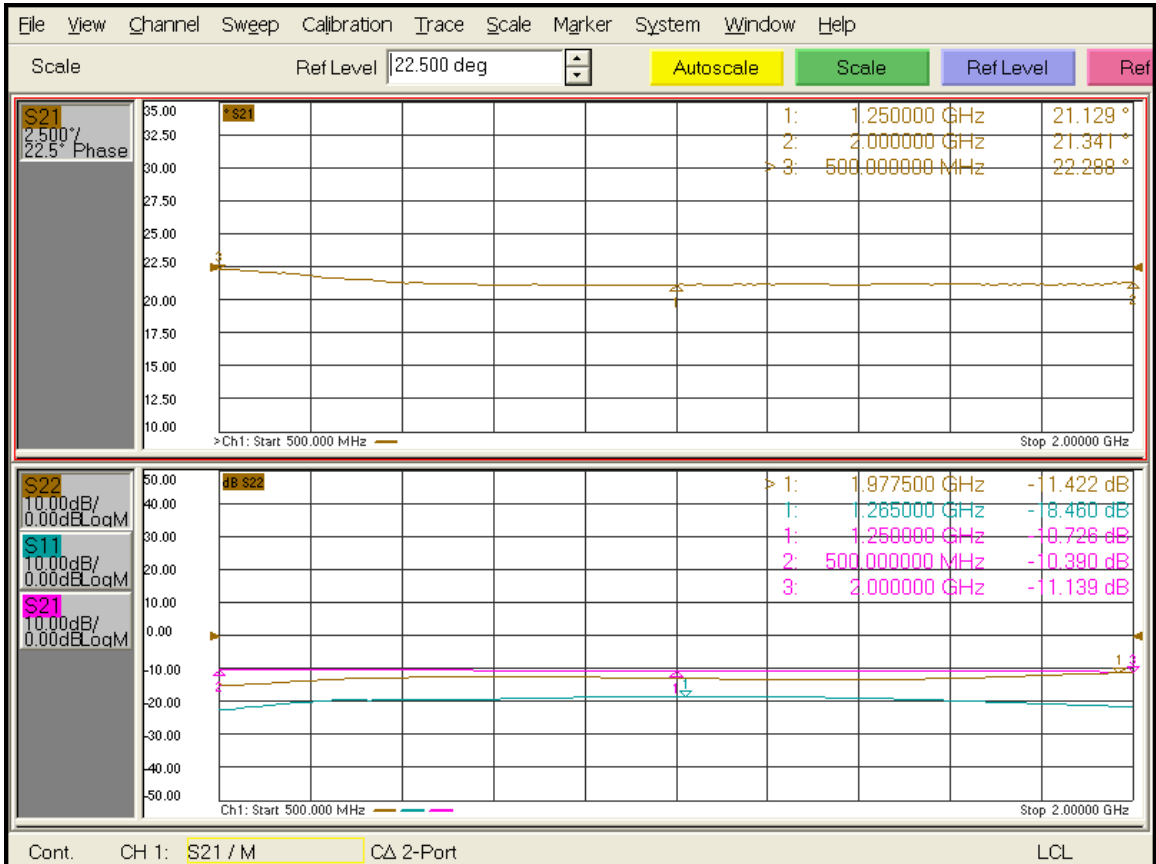


11.25° Phase, -15 dBm Input Power @ 0° C



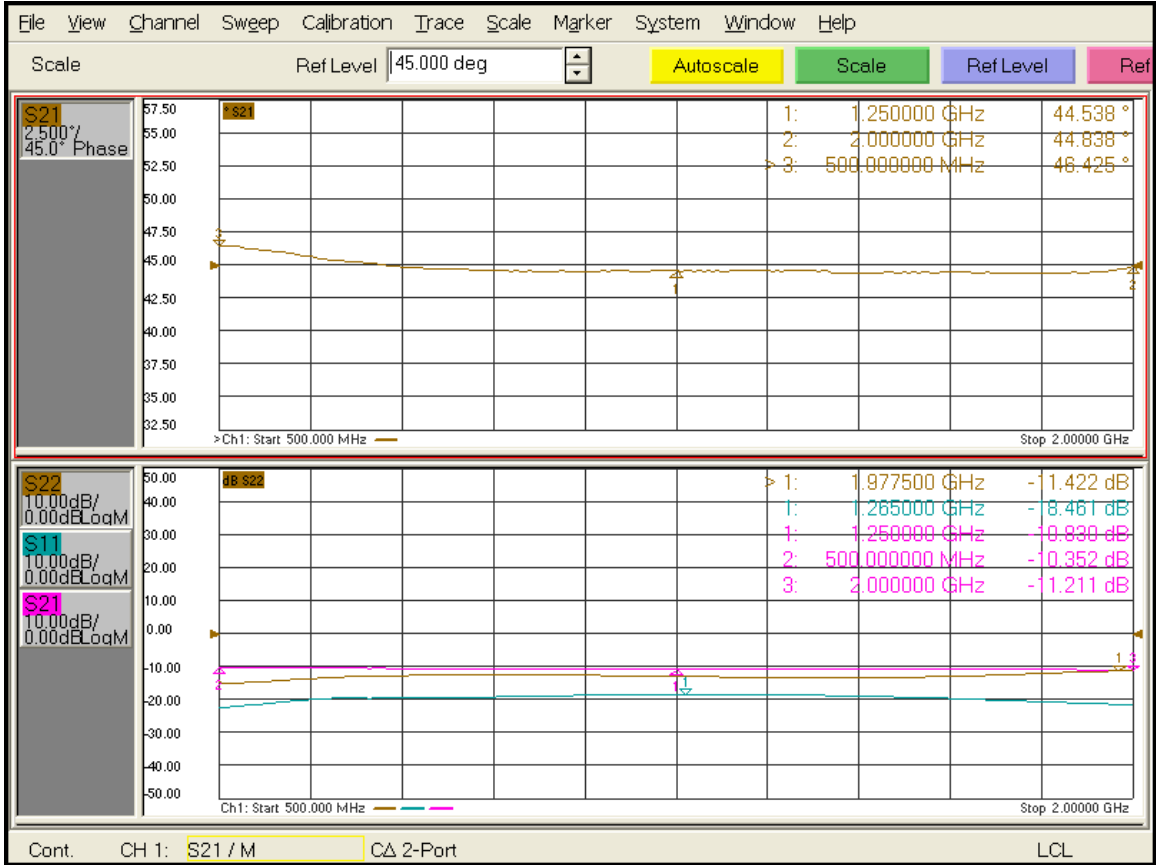


22.5° Phase, -15 dBm Input Power @ 0° C



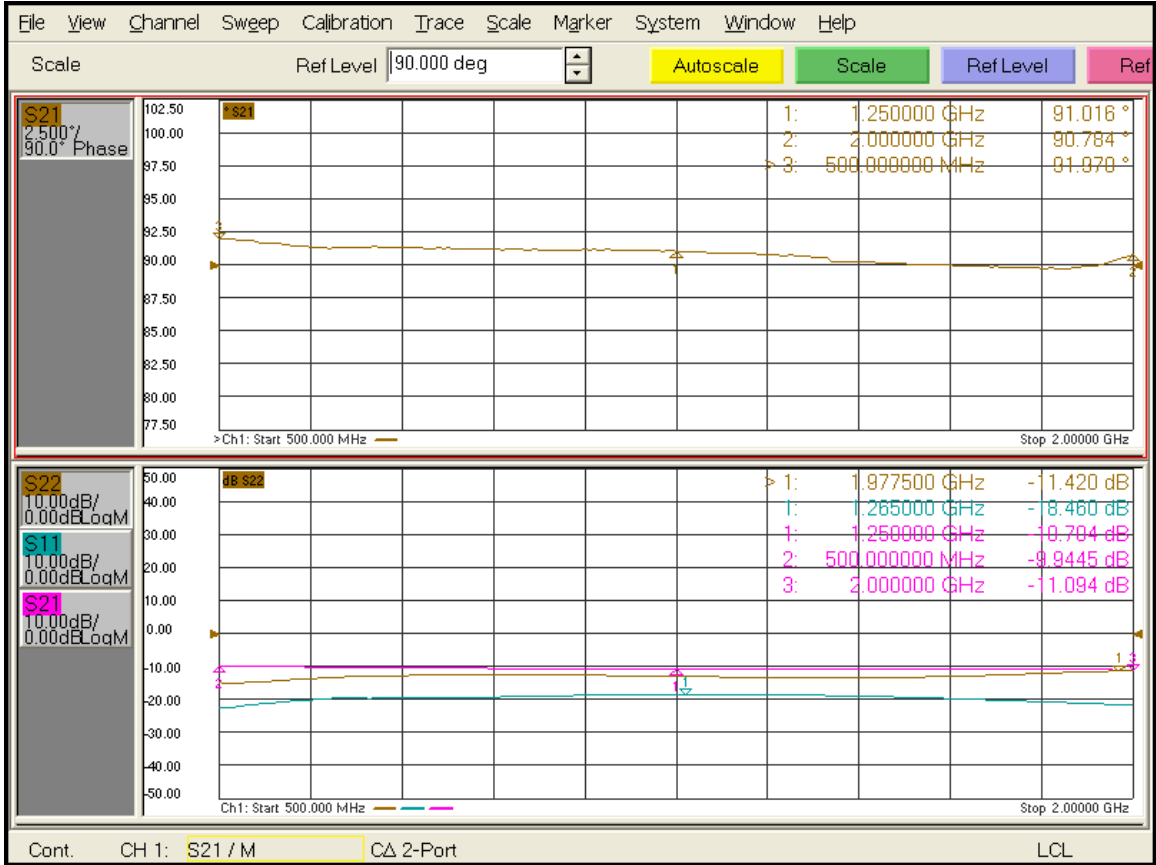


45° Phase, -15 dBm Input Power @ 0° C



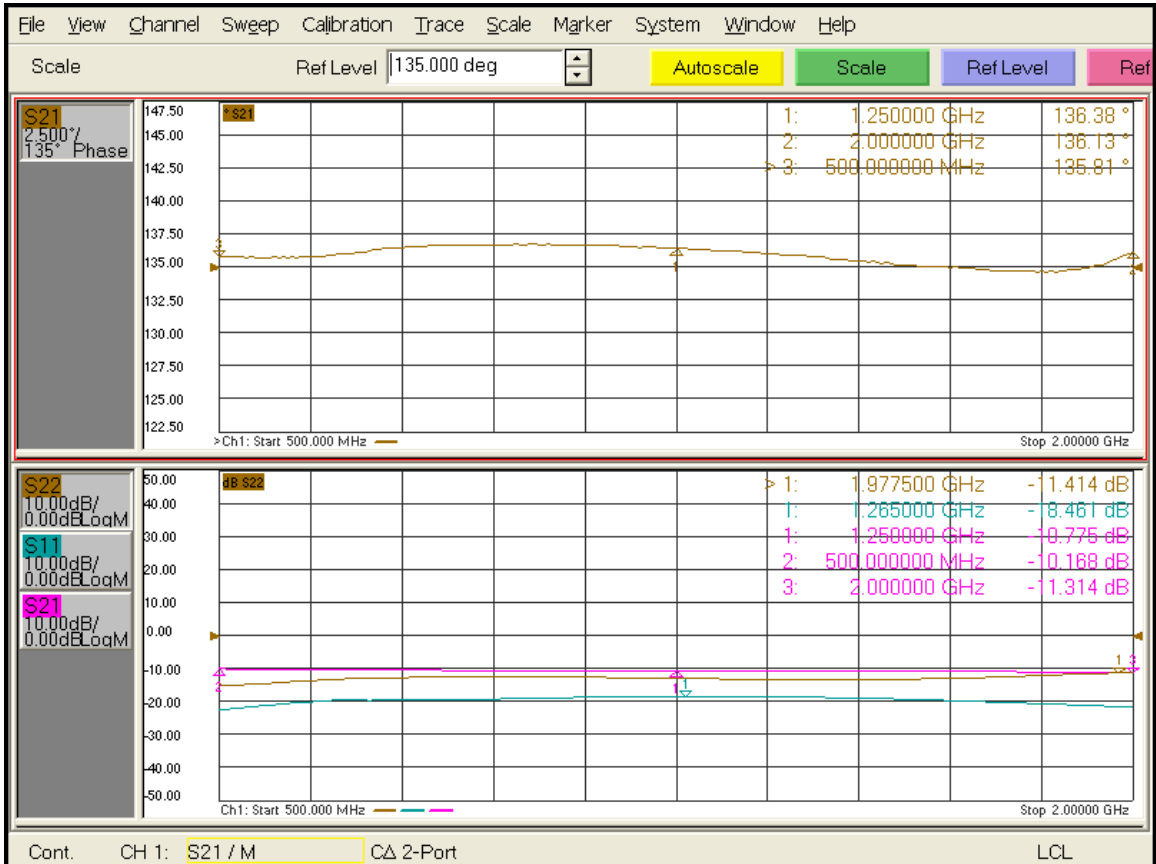


90° Phase, -15 dBm Input Power @ 0° C



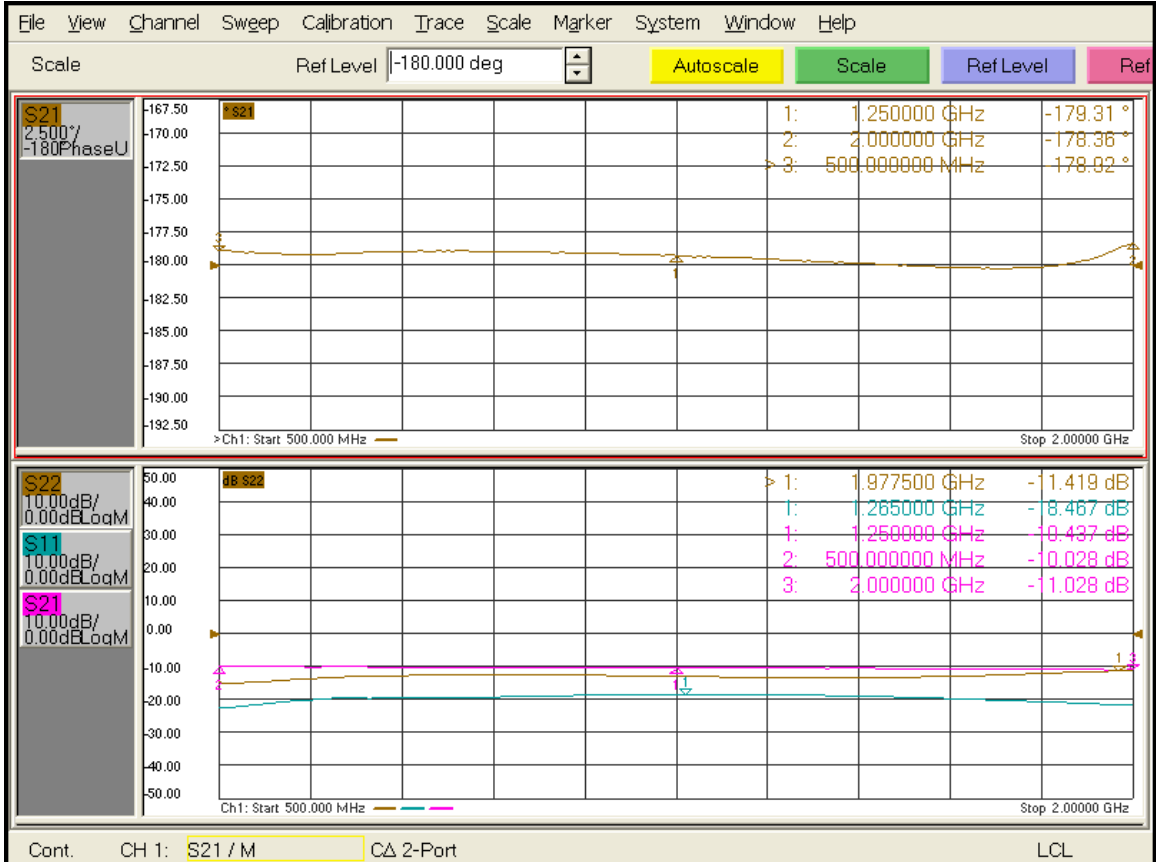


135° Phase, -15 dBm Input Power @ 0° C



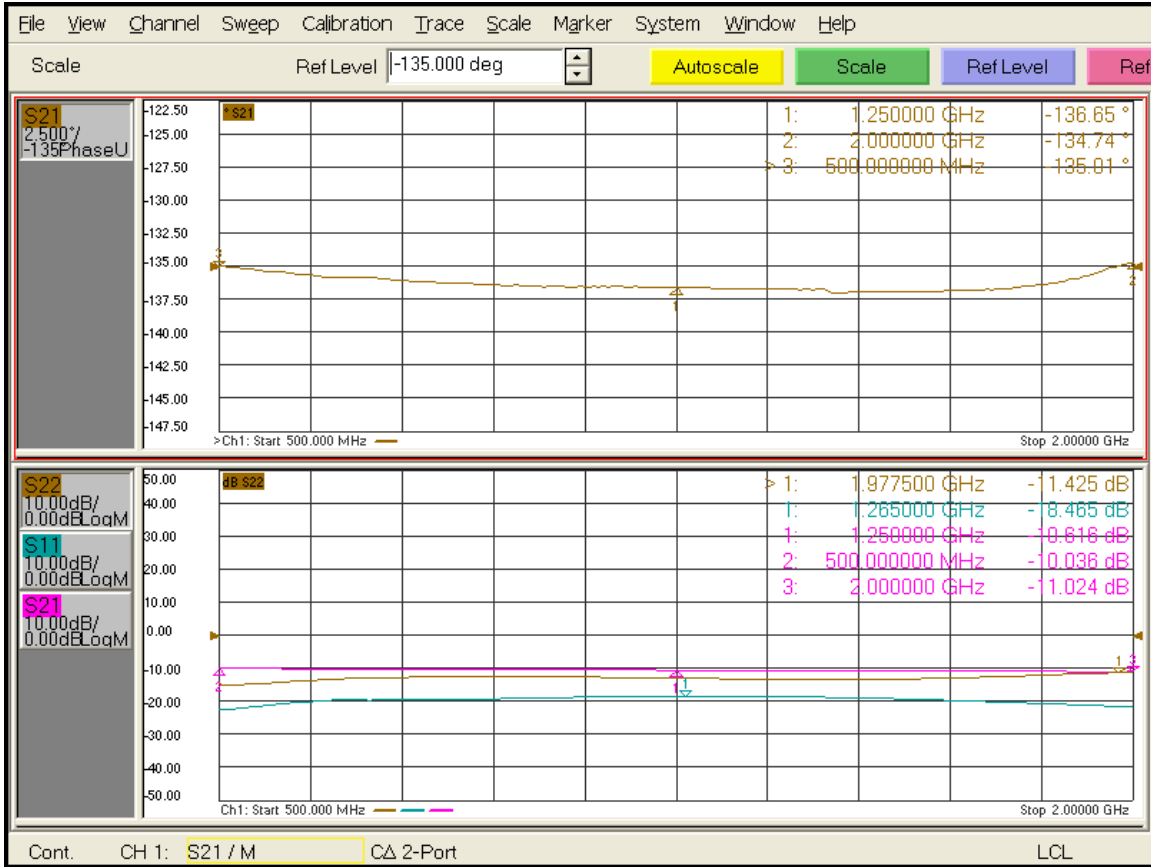


180° Phase, -15 dBm Input Power @ 0° C



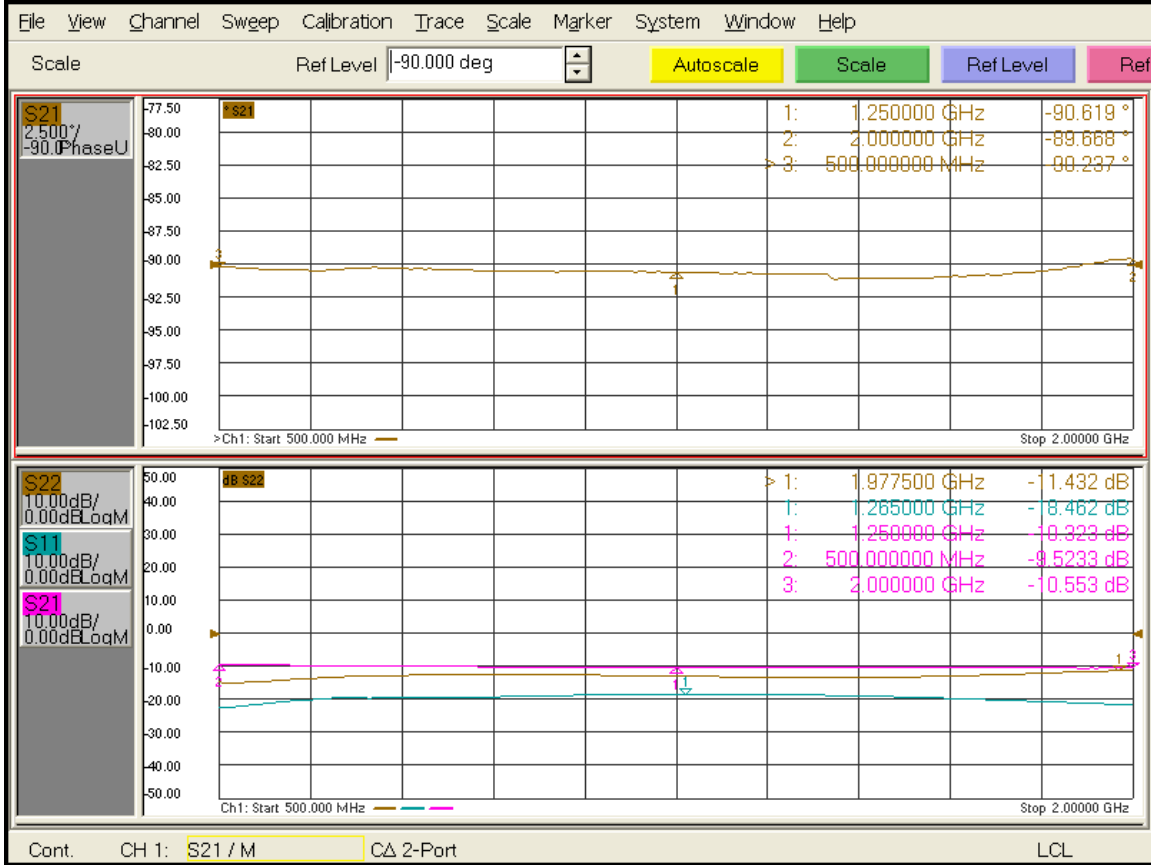


225° Phase, -15 dBm Input Power @ 0° C



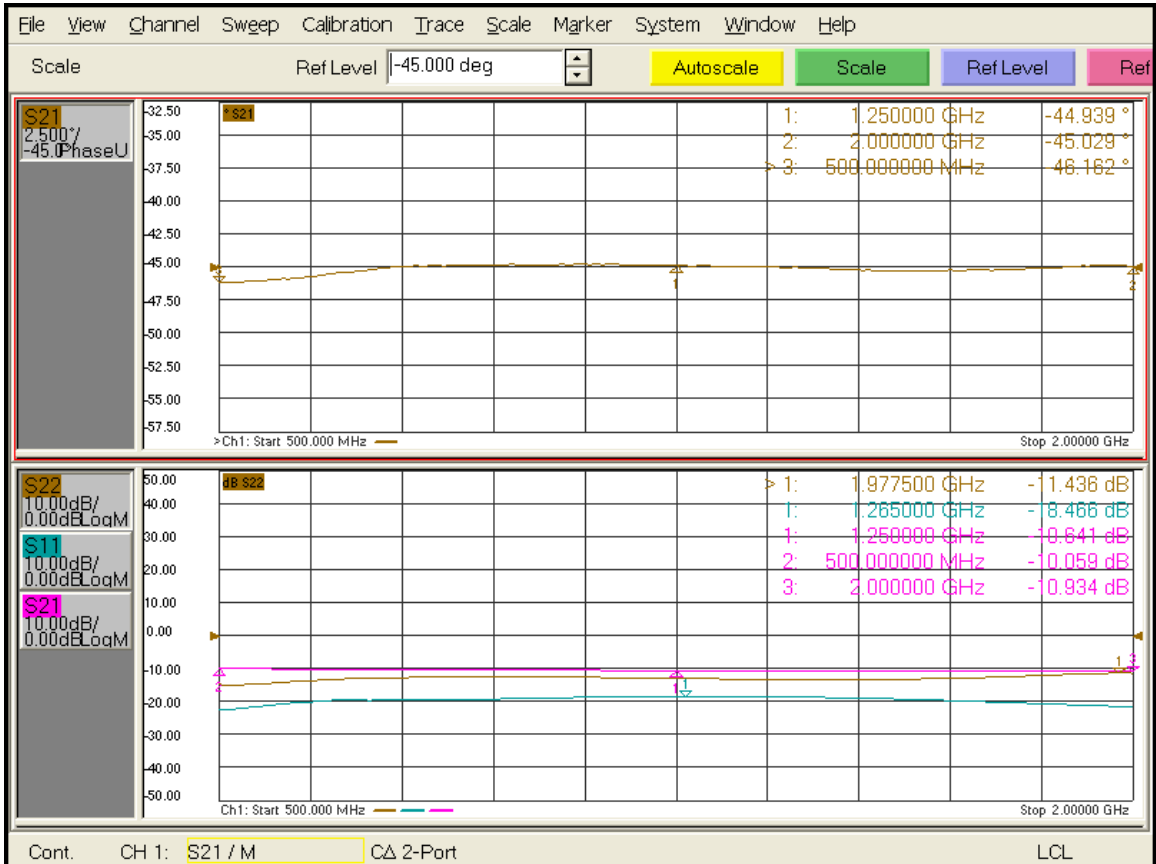


270° Phase, -15 dBm Input Power @ 0° C



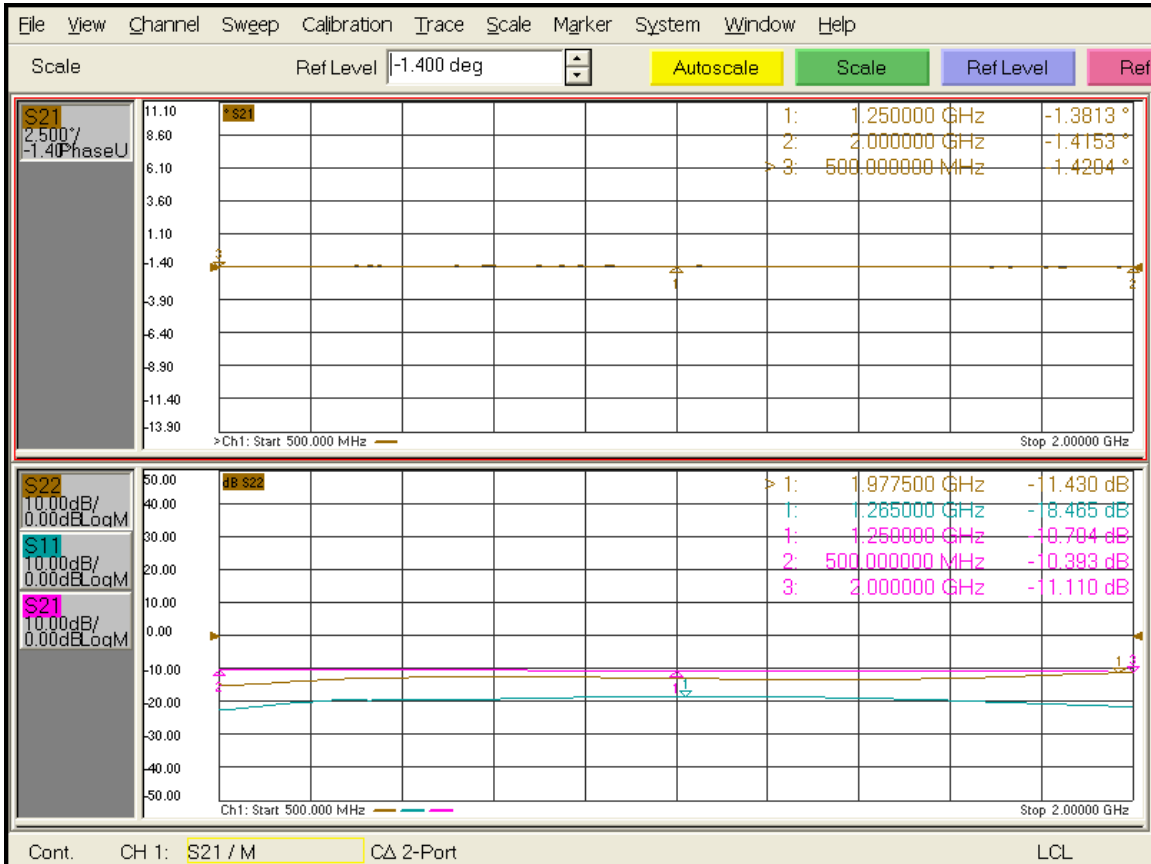


315° Phase, -15 dBm Input Power @ 0° C





358.6° Phase, -15 dBm Input Power @ 0° C





Data Taken at 0° C

Data Taken at -10 dBm Input Power

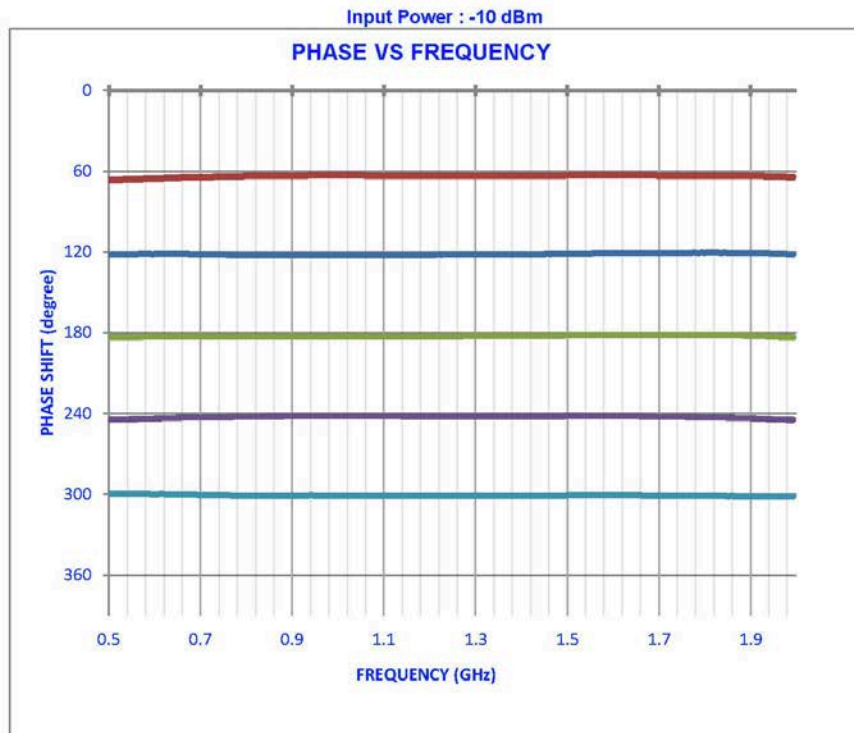
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 9.41 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.78 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.71 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 1.39 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.45 | -0.04 | 0.03 |
| 2.81 | 2.85 | -0.03 | 0.05 |
| 5.63 | 5.69 | -0.07 | 0.09 |
| 11.25 | 11.35 | -0.10 | 0.11 |
| 22.50 | 21.46 | 1.04 | 0.14 |
| 45.00 | 45.93 | -0.93 | 0.17 |
| 90.00 | 91.86 | -1.86 | 0.19 |
| 180.00 | 181.10 | -1.10 | 0.22 |
| 358.59 | 358.68 | -0.09 | 0.25 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 34.25 | -0.50 | 0.65 |
| 67.50 | 70.29 | -2.79 | 0.67 |
| 101.25 | 101.67 | -0.42 | 0.70 |
| 135.00 | 136.52 | -1.52 | 0.71 |
| 168.75 | 170.31 | -1.56 | 0.73 |
| 202.50 | 203.05 | -0.55 | 0.76 |
| 236.25 | 237.27 | -1.02 | 0.77 |
| 270.00 | 270.27 | -0.27 | 0.79 |
| 303.75 | 303.44 | 0.31 | 0.81 |
| 337.50 | 337.74 | -0.24 | 0.83 |
| | | | |
| | | | |
| | | | |

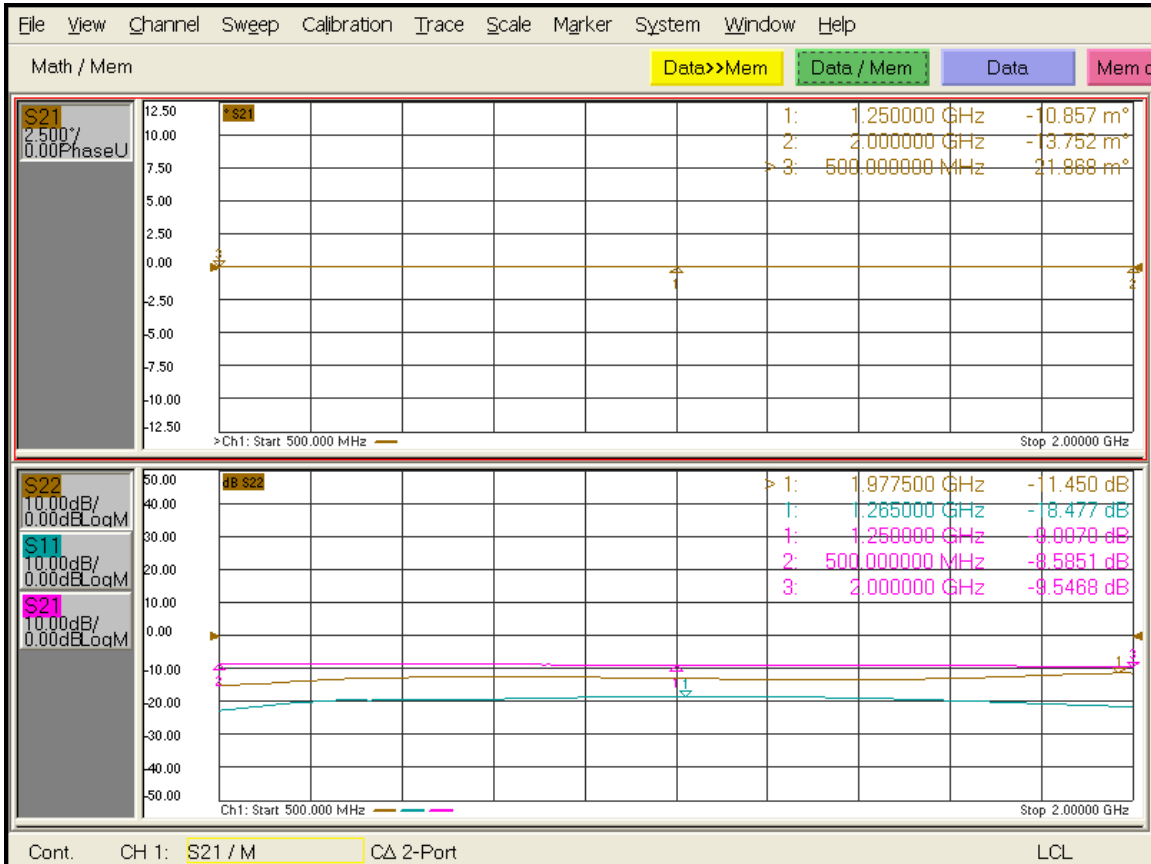


Phase Plot Taken at 0° C



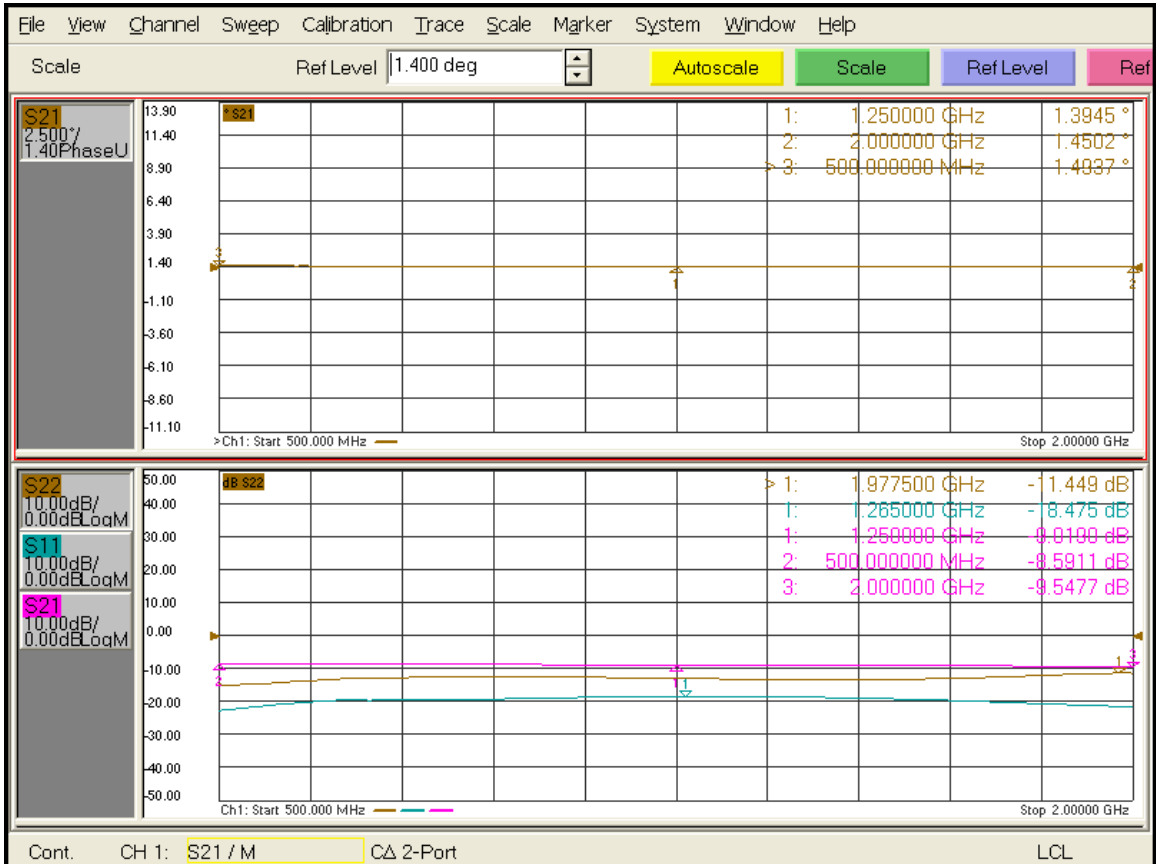


0° Phase, -10 dBm Input Power @ 0° C



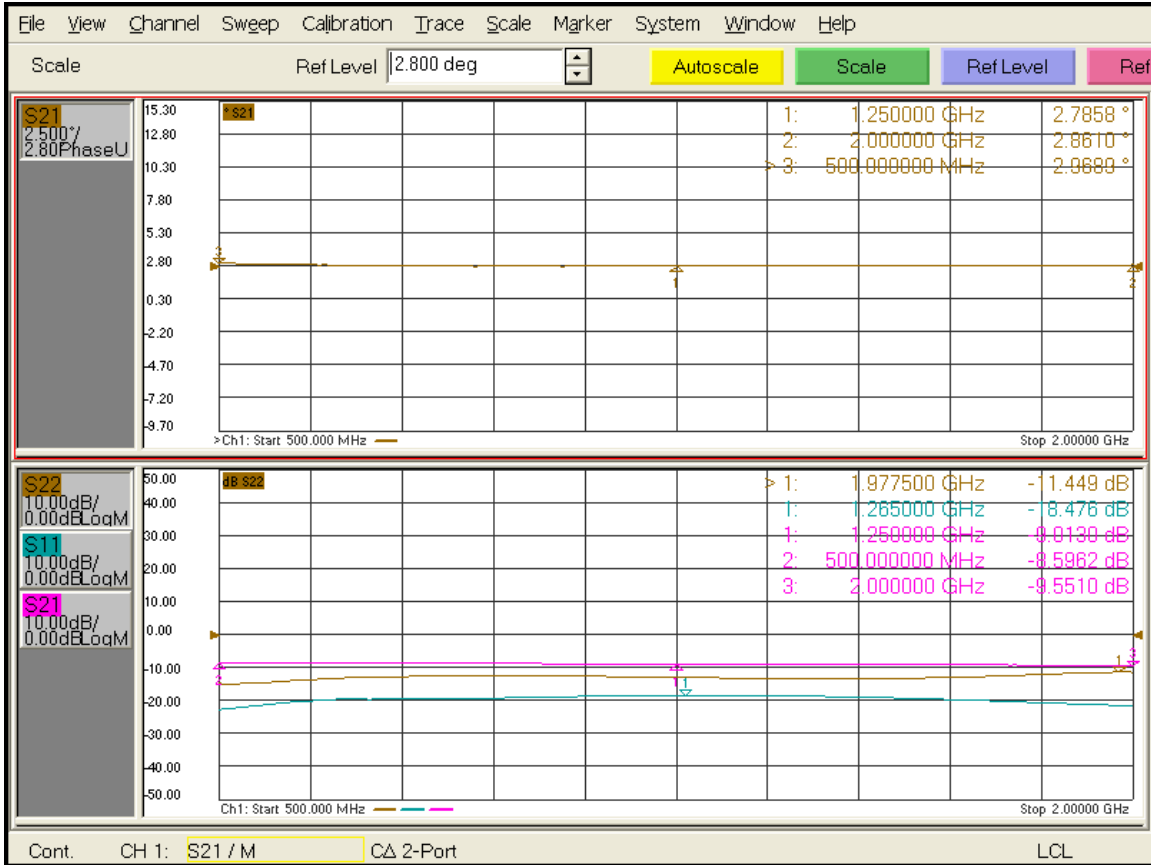


1.4° Phase, -10 dBm Input Power @ 0° C



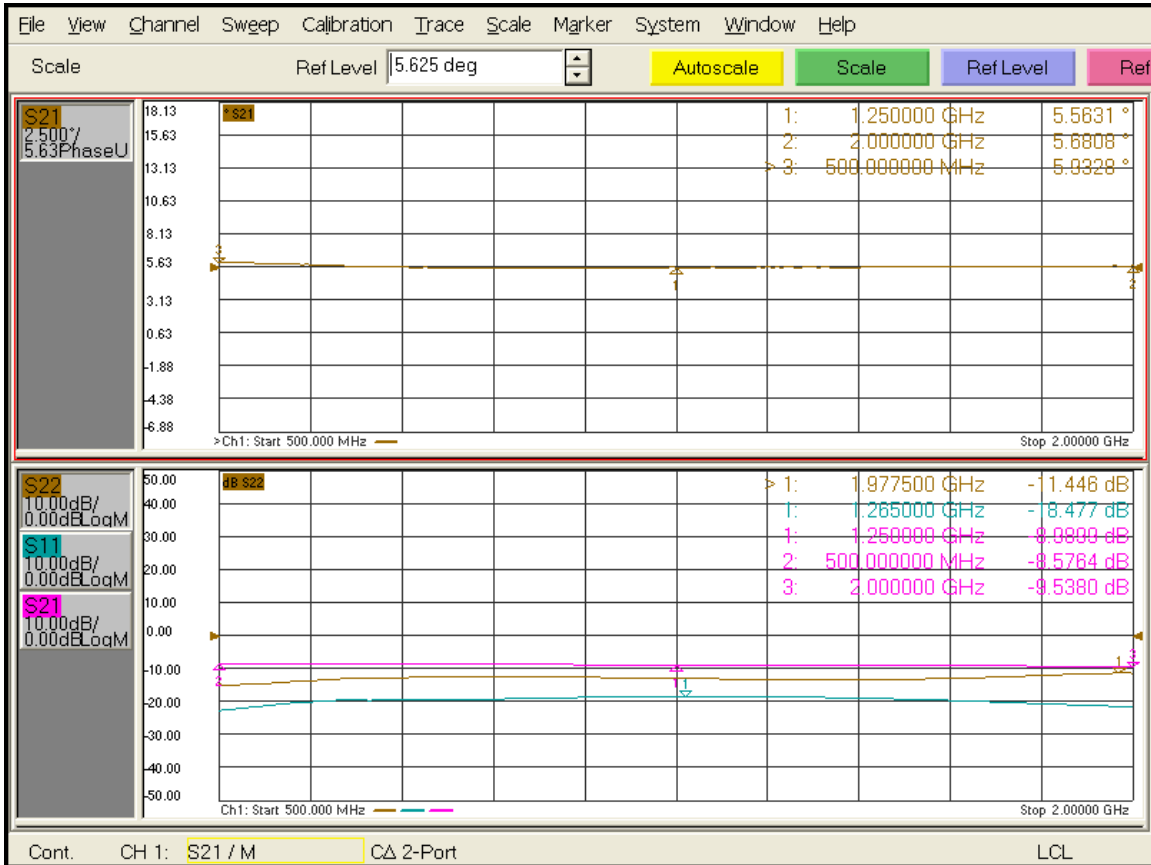


2.8° Phase, -10 dBm Input Power @ 0° C



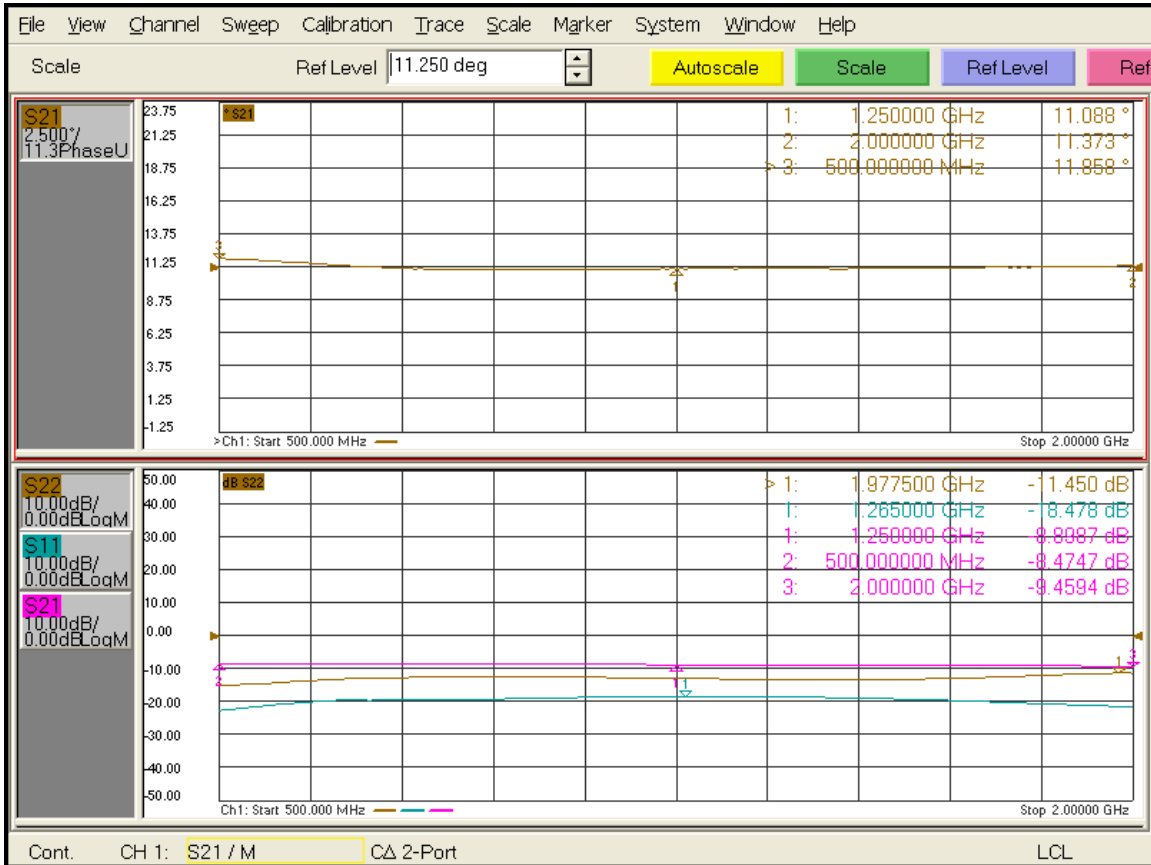


5.625° Phase, -10 dBm Input Power @ 0° C



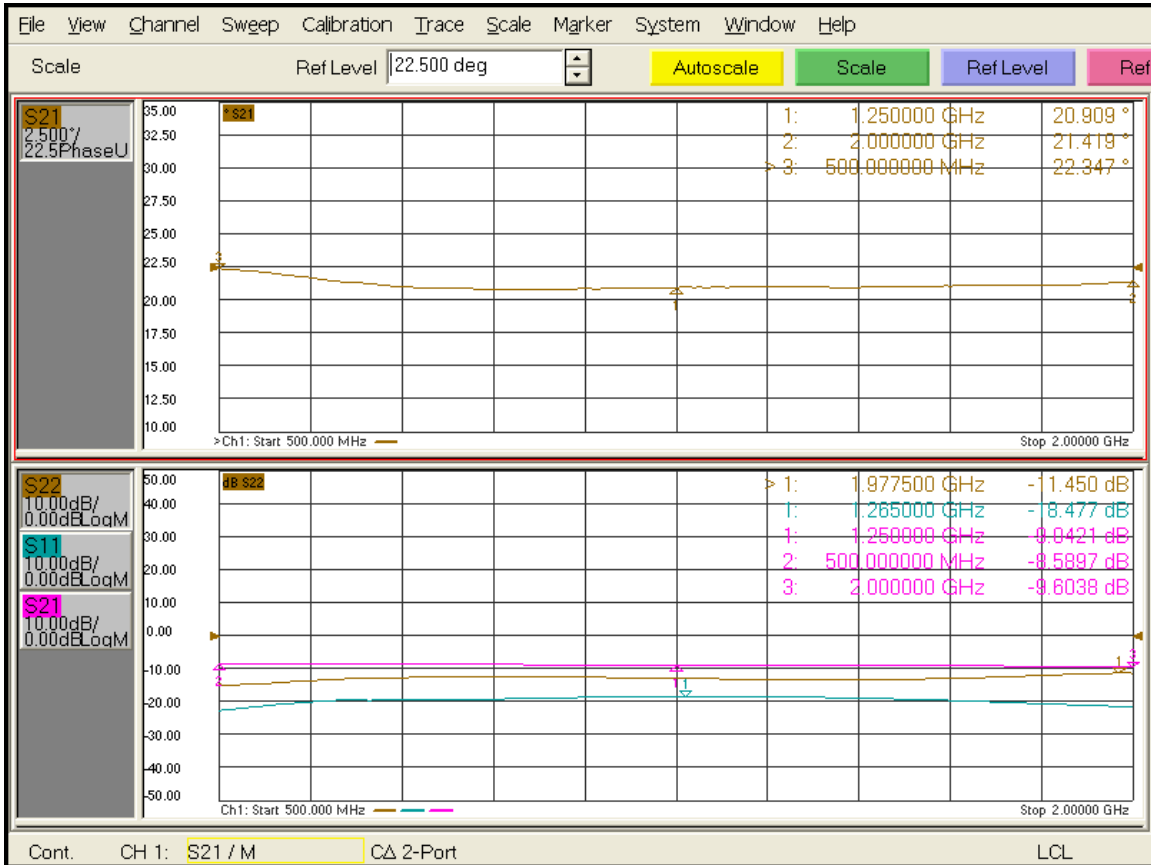


11.25° Phase, -10 dBm Input Power @ 0° C



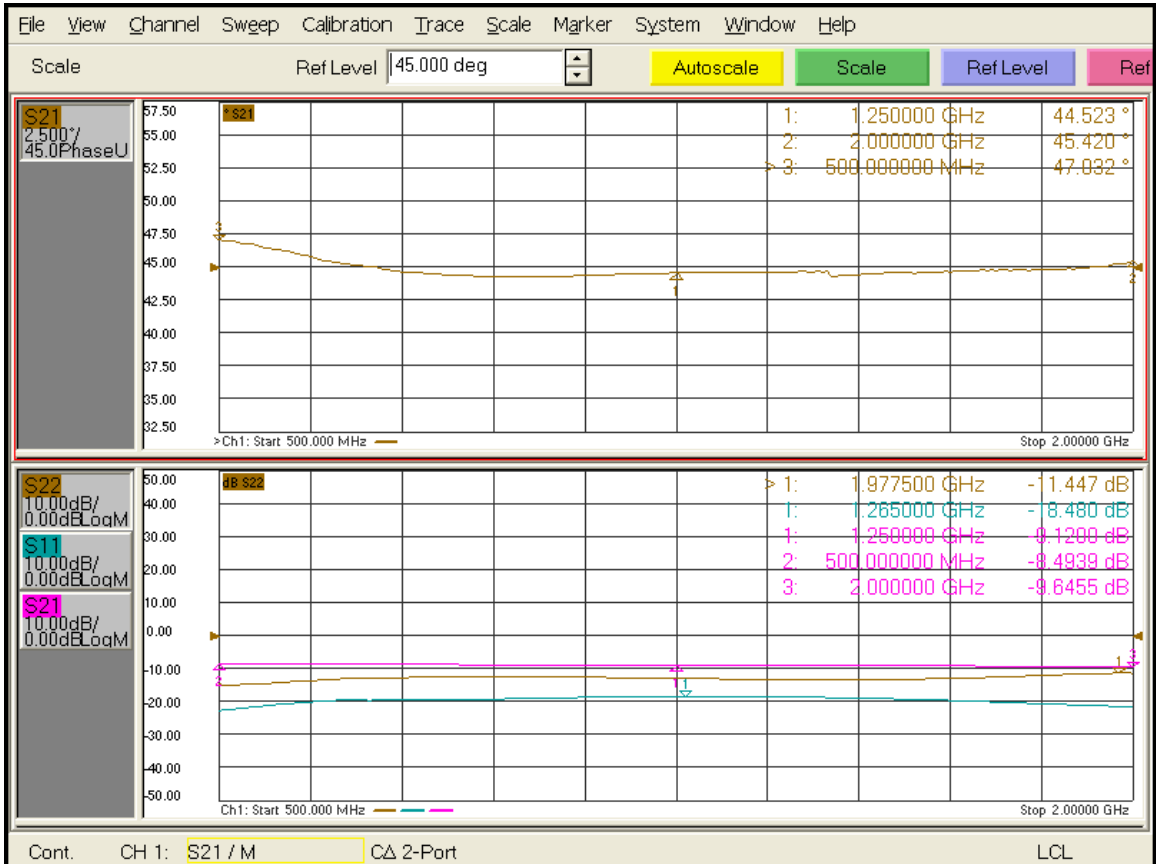


22.5° Phase, -10 dBm Input Power @ 0° C



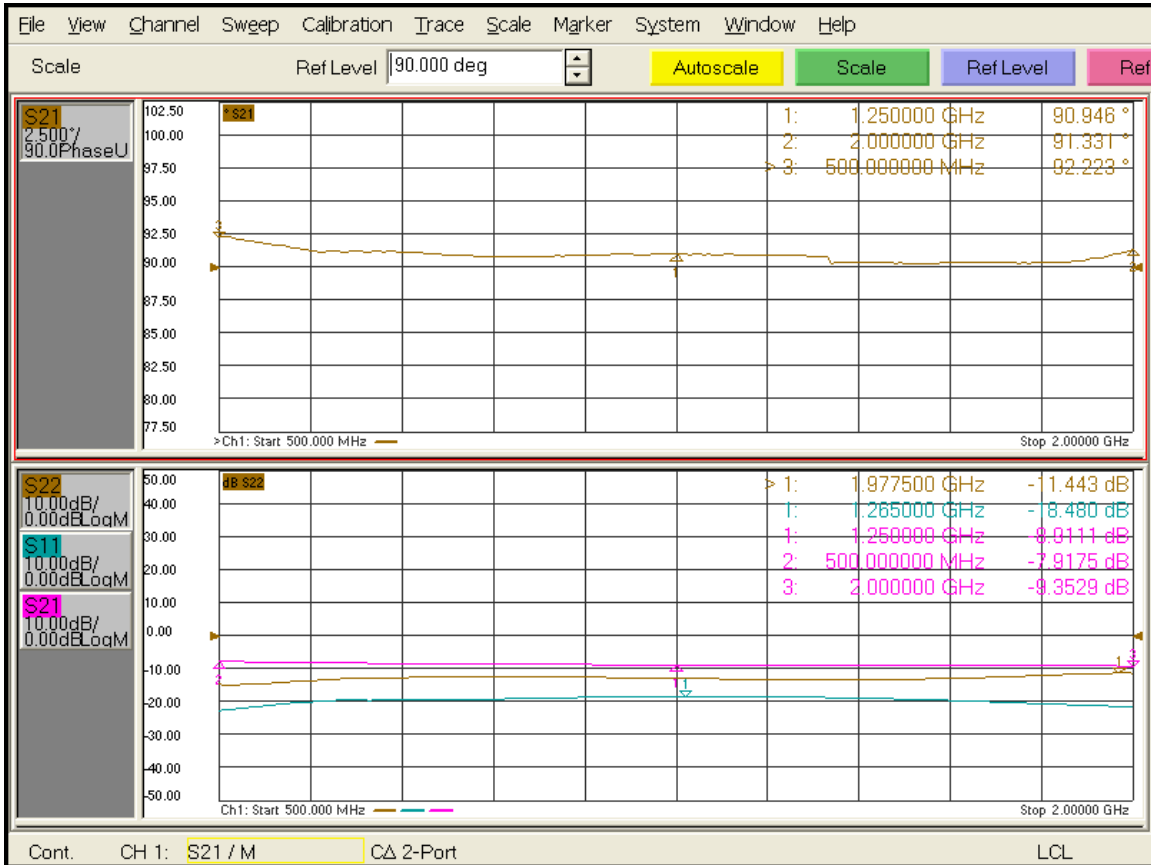


45° Phase, -10 dBm Input Power @ 0° C



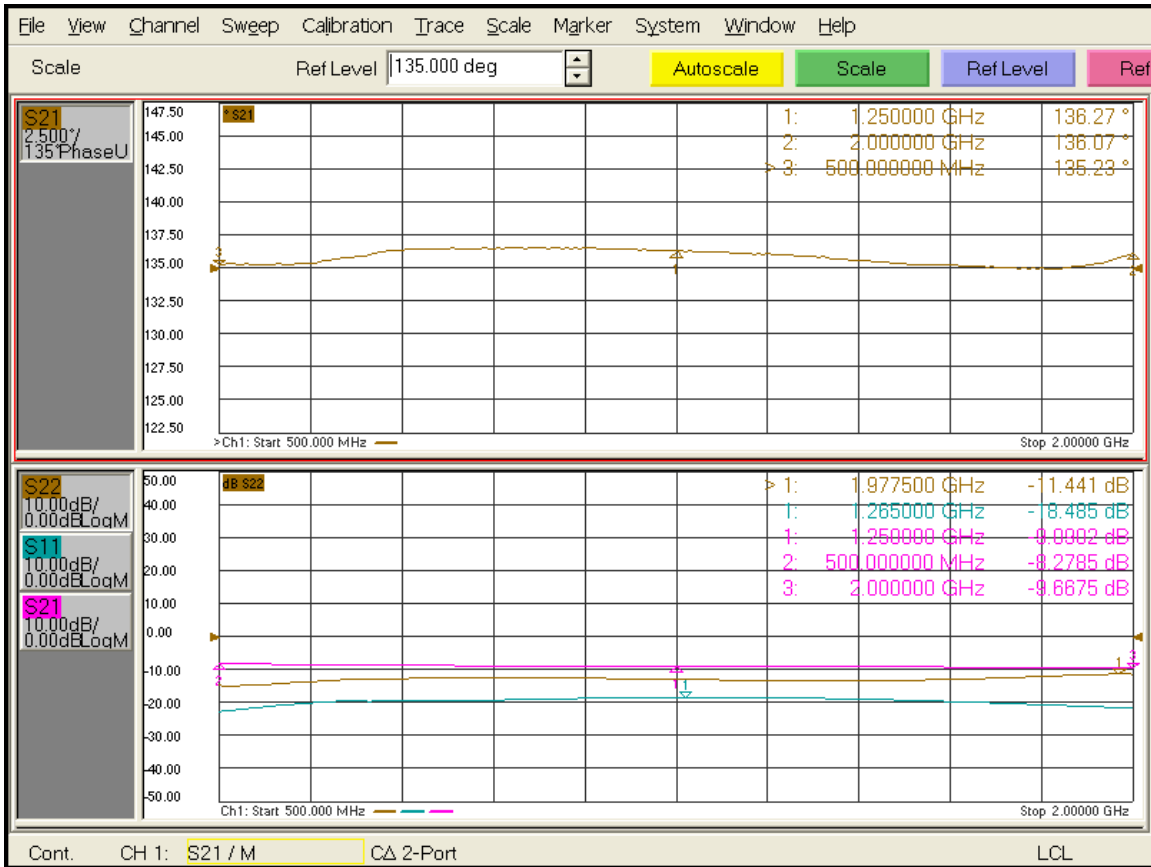


90° Phase, -10 dBm Input Power @ 0° C



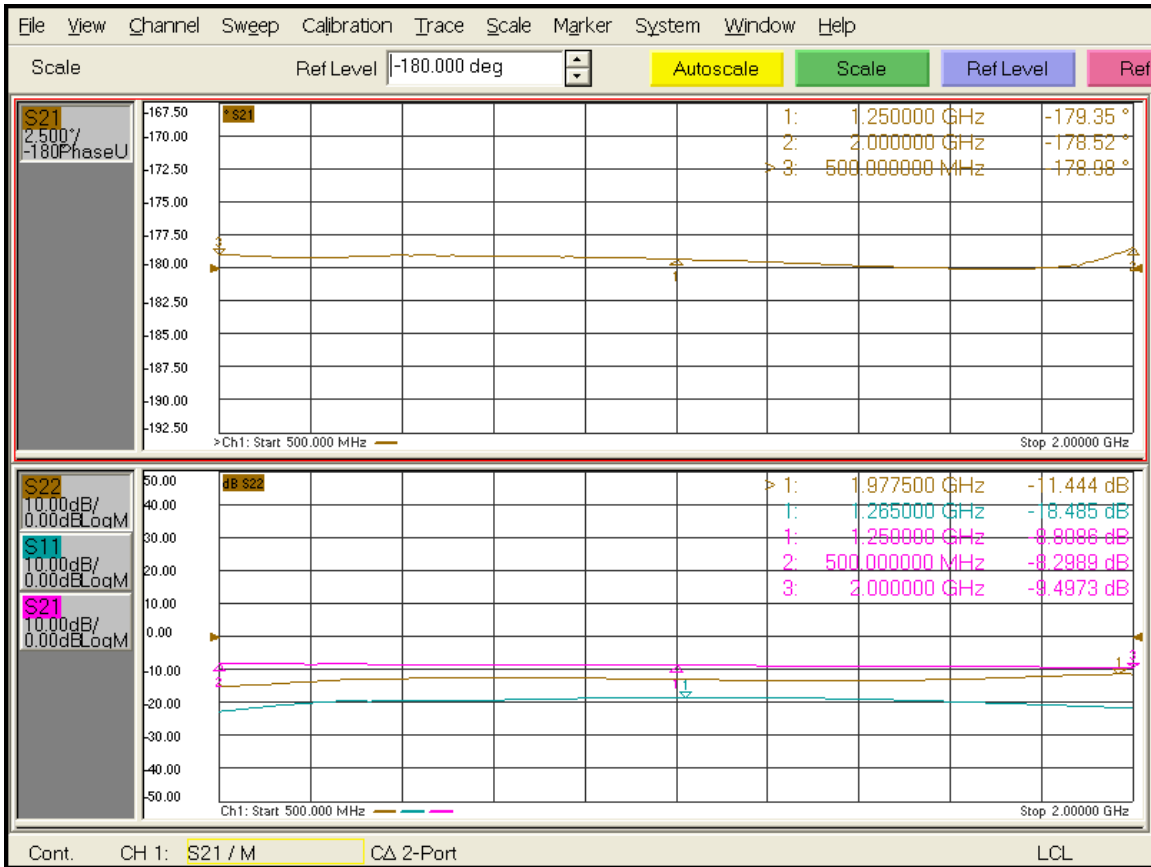


135° Phase, -10 dBm Input Power @ 0° C



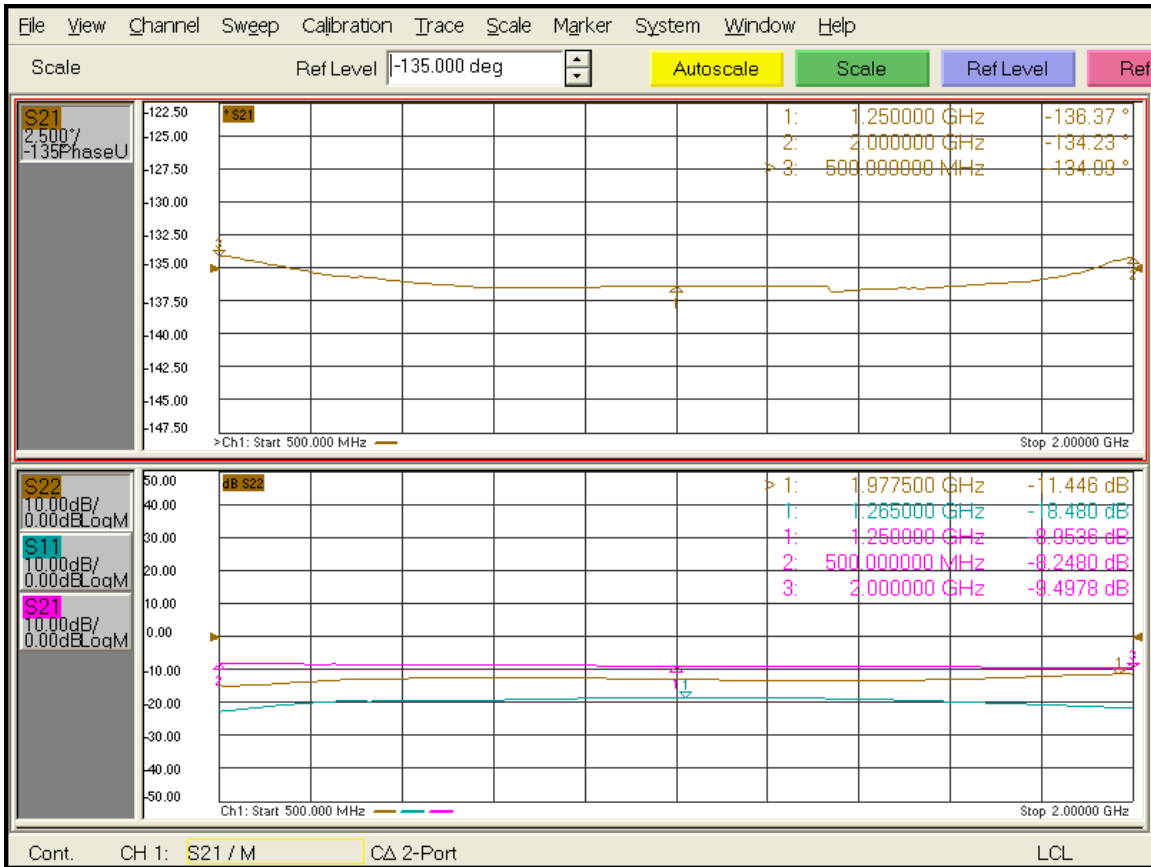


180° Phase, -10 dBm Input Power @ 0° C



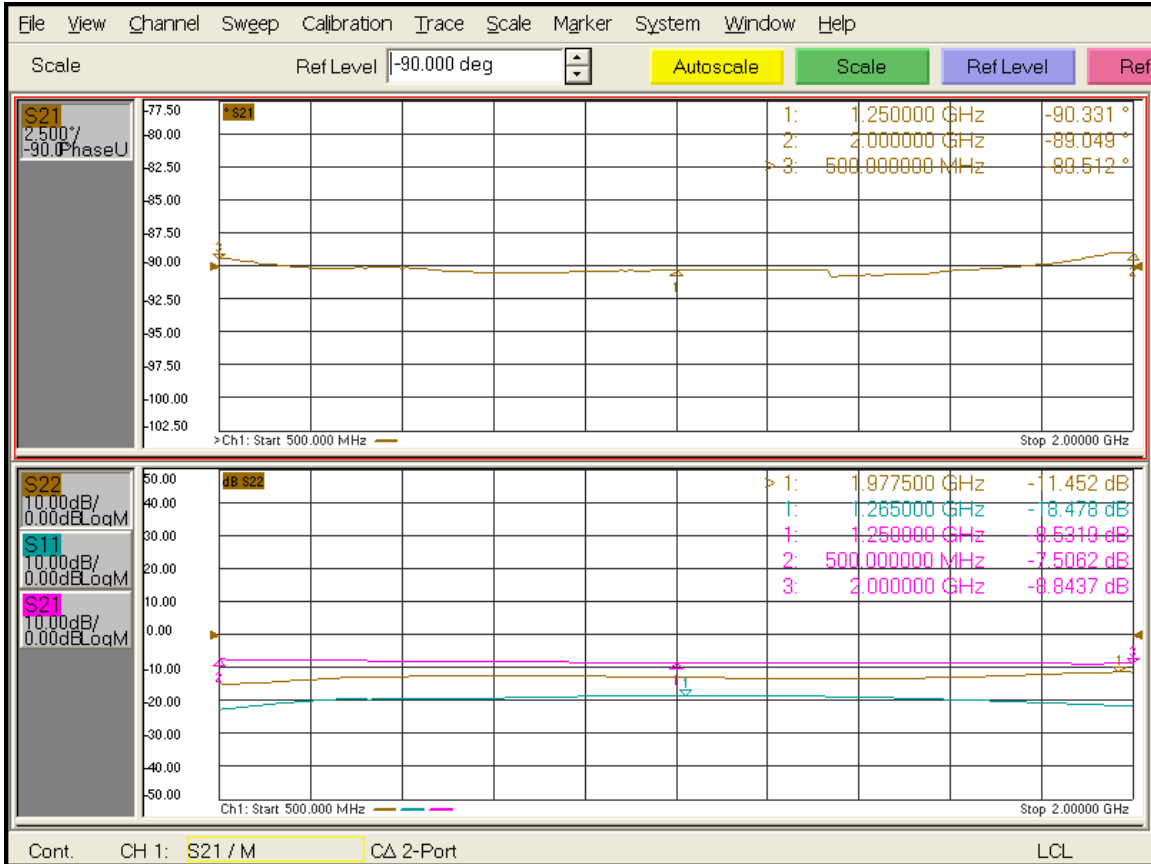


225° Phase, -10 dBm Input Power @ 0° C



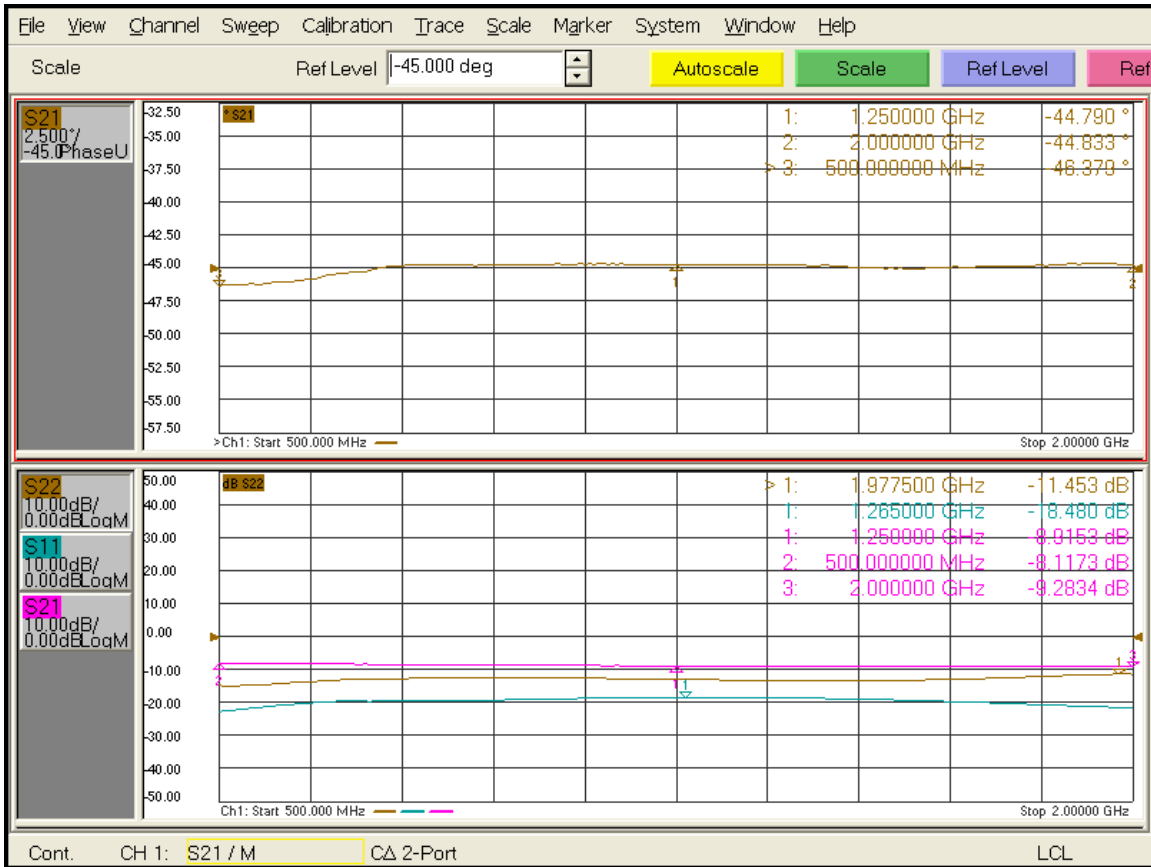


270° Phase, -10 dBm Input Power @ 0° C



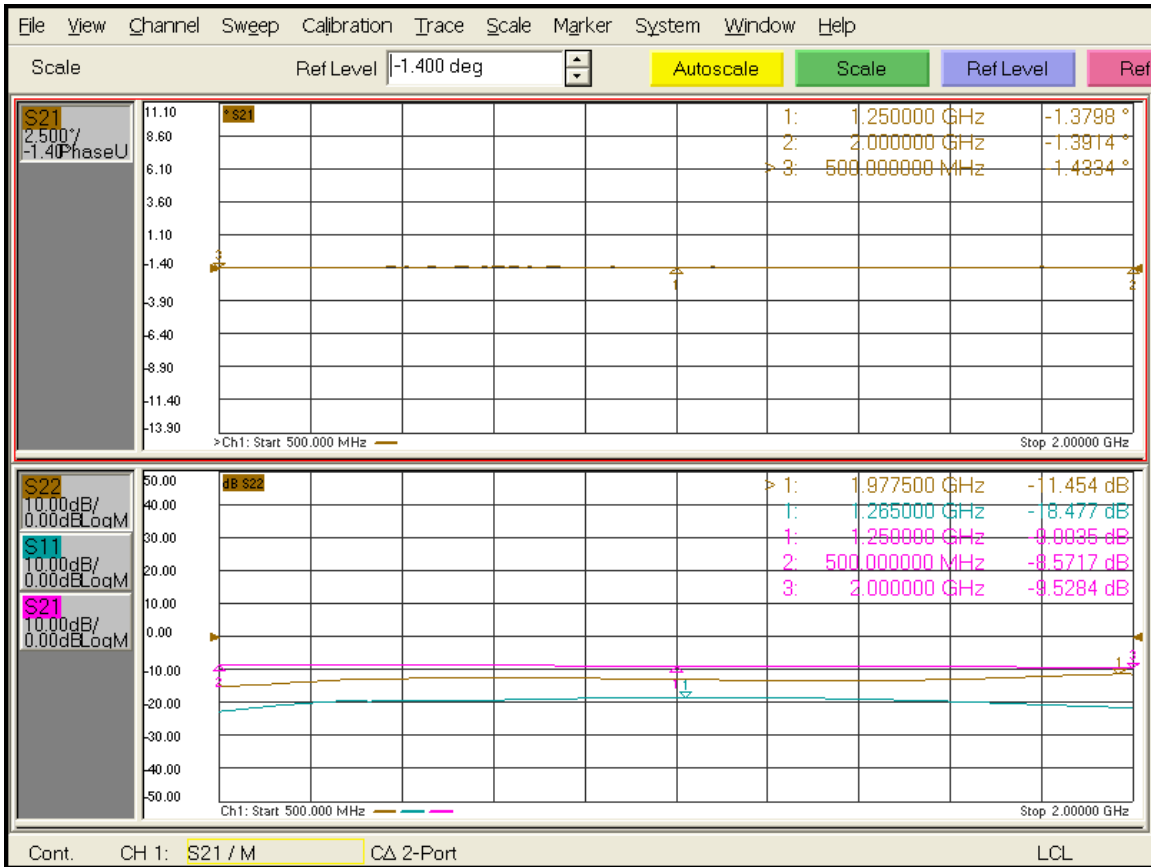


315° Phase, -10 dBm Input Power @ 0° C





358.6° Phase, -10 dBm Input Power @ 0° C





Data Taken at 0° C

Data Taken at -5 dBm Input Power

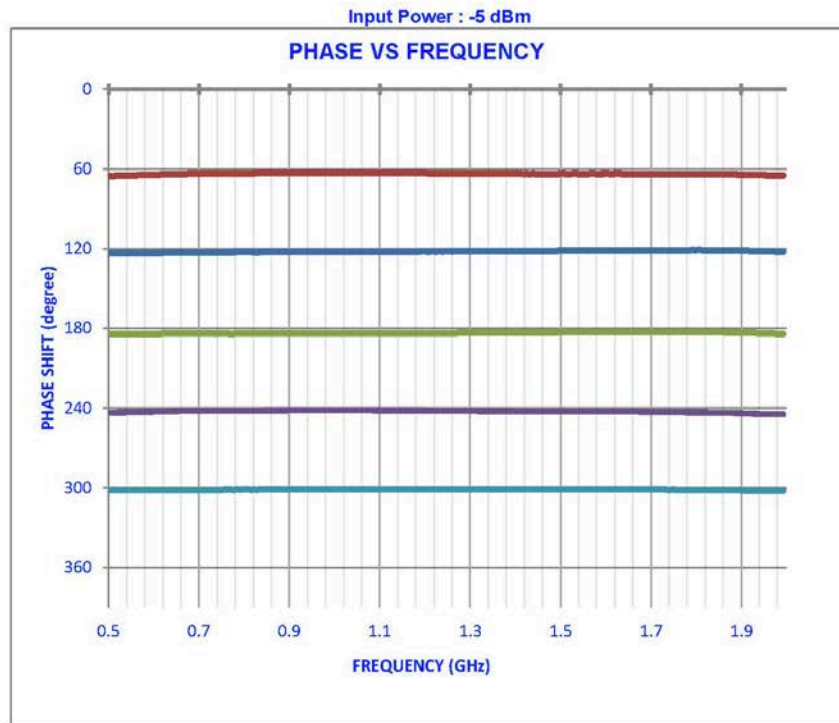
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 6.82 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.78 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.71 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 2.76 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.84 | -0.44 | 0.03 |
| 2.81 | 3.68 | -0.86 | 0.06 |
| 5.63 | 7.31 | -1.69 | 0.09 |
| 11.25 | 14.43 | -3.18 | 0.11 |
| 22.50 | 25.96 | -3.46 | 0.14 |
| 45.00 | 48.28 | -3.28 | 0.18 |
| 90.00 | 92.53 | -2.53 | 0.21 |
| 180.00 | 181.70 | -1.70 | 0.24 |
| 358.59 | 358.33 | 0.26 | 0.26 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 38.38 | -4.63 | 0.54 |
| 67.50 | 69.29 | -1.79 | 0.55 |
| 101.25 | 103.48 | -2.23 | 0.56 |
| 135.00 | 134.57 | 0.43 | 0.56 |
| 168.75 | 167.93 | 0.82 | 0.58 |
| 202.50 | 208.03 | -5.53 | 0.57 |
| 236.25 | 237.92 | -1.67 | 0.58 |
| 270.00 | 270.33 | -0.33 | 0.59 |
| 303.75 | 303.97 | -0.22 | 0.59 |
| 337.50 | 333.93 | 3.57 | 0.59 |
| | | | |
| | | | |
| | | | |

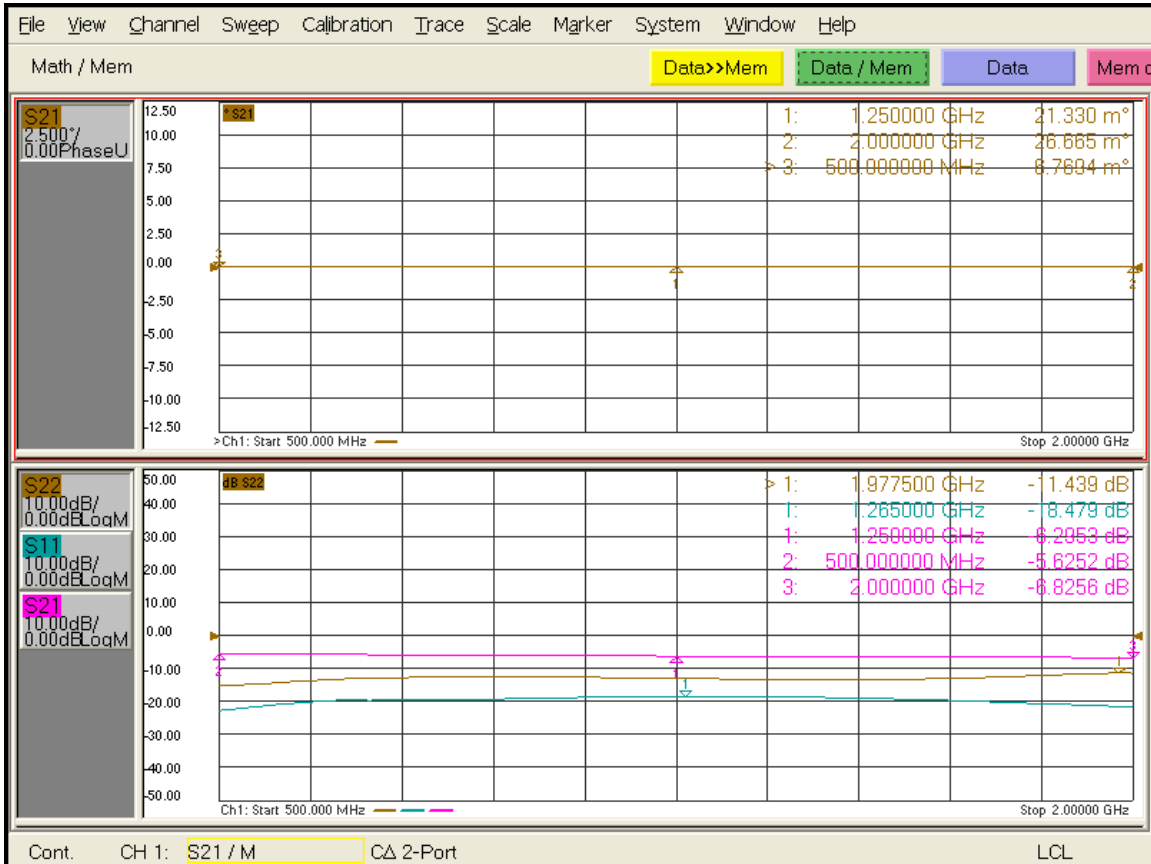


Phase Plot Taken at 0° C



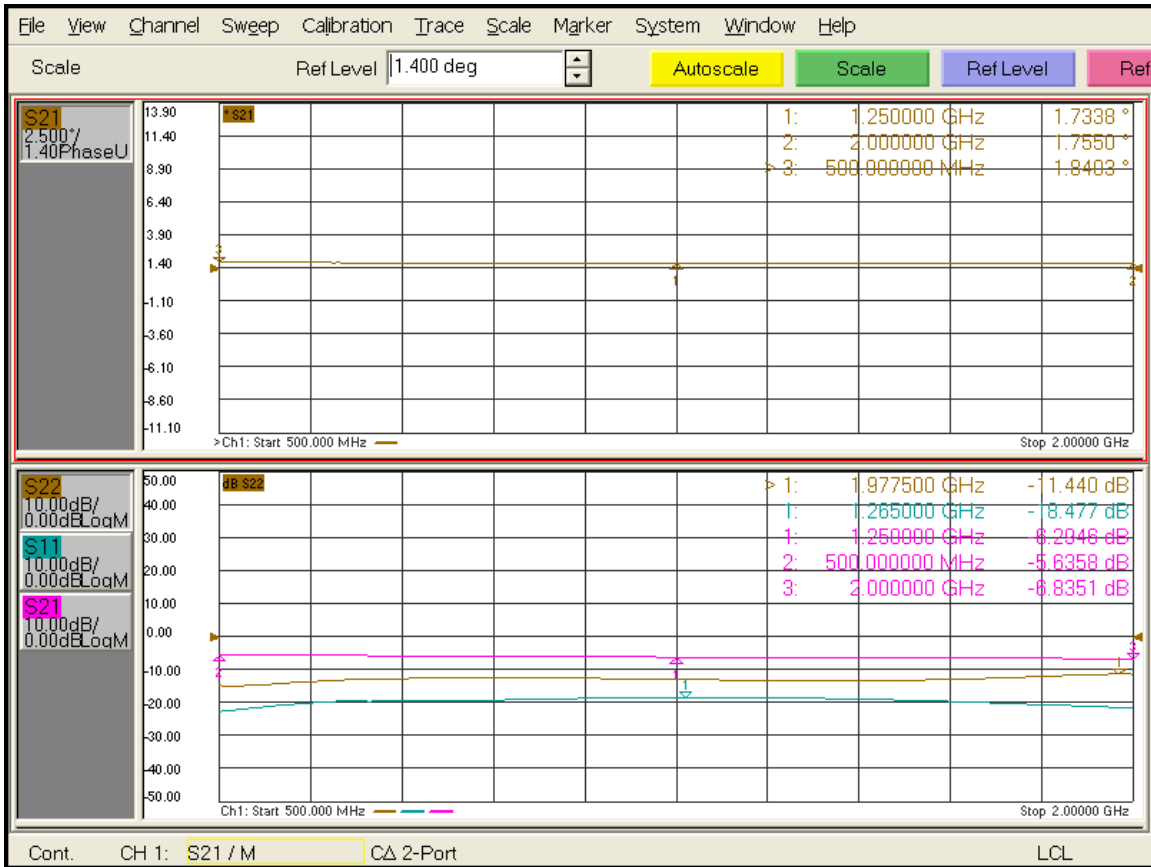


0° Phase, -5 dBm Input Power @ 0° C



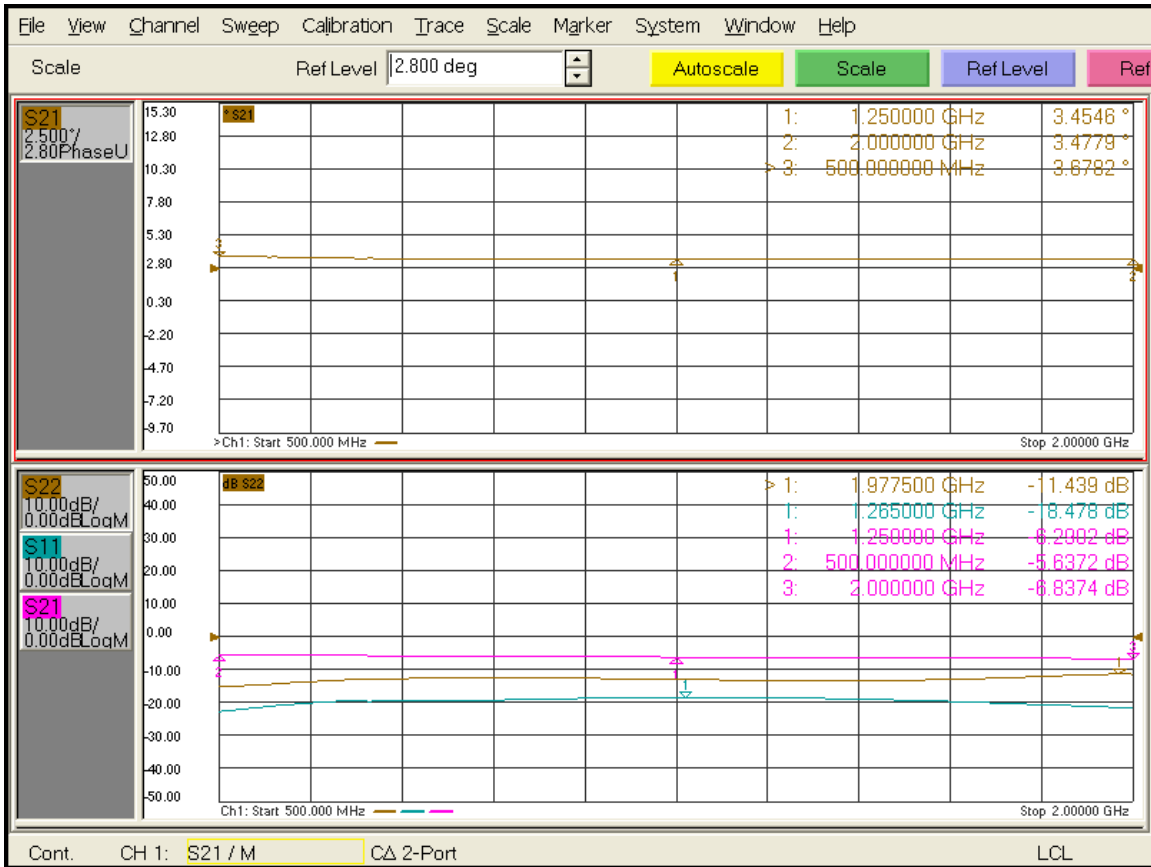


1.4° Phase, -5 dBm Input Power @ 0° C



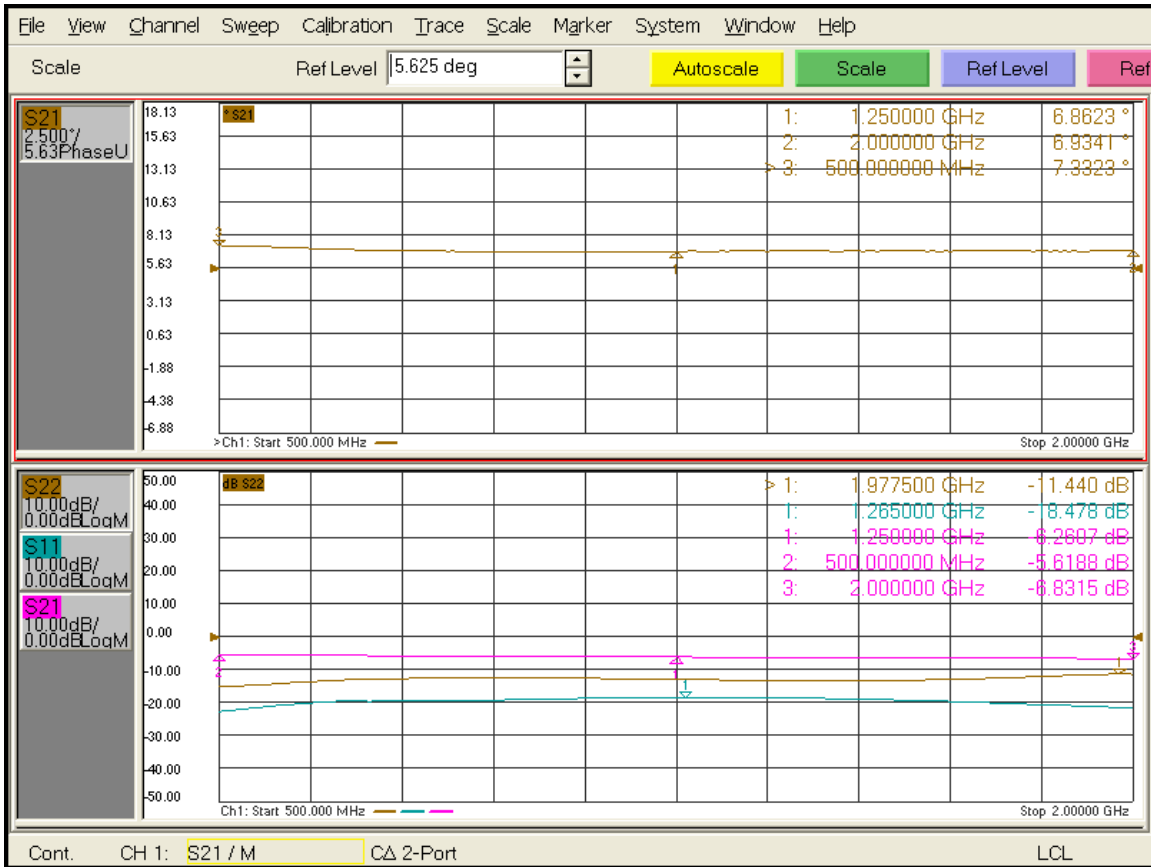


2.8° Phase, -5 dBm Input Power @ 0° C



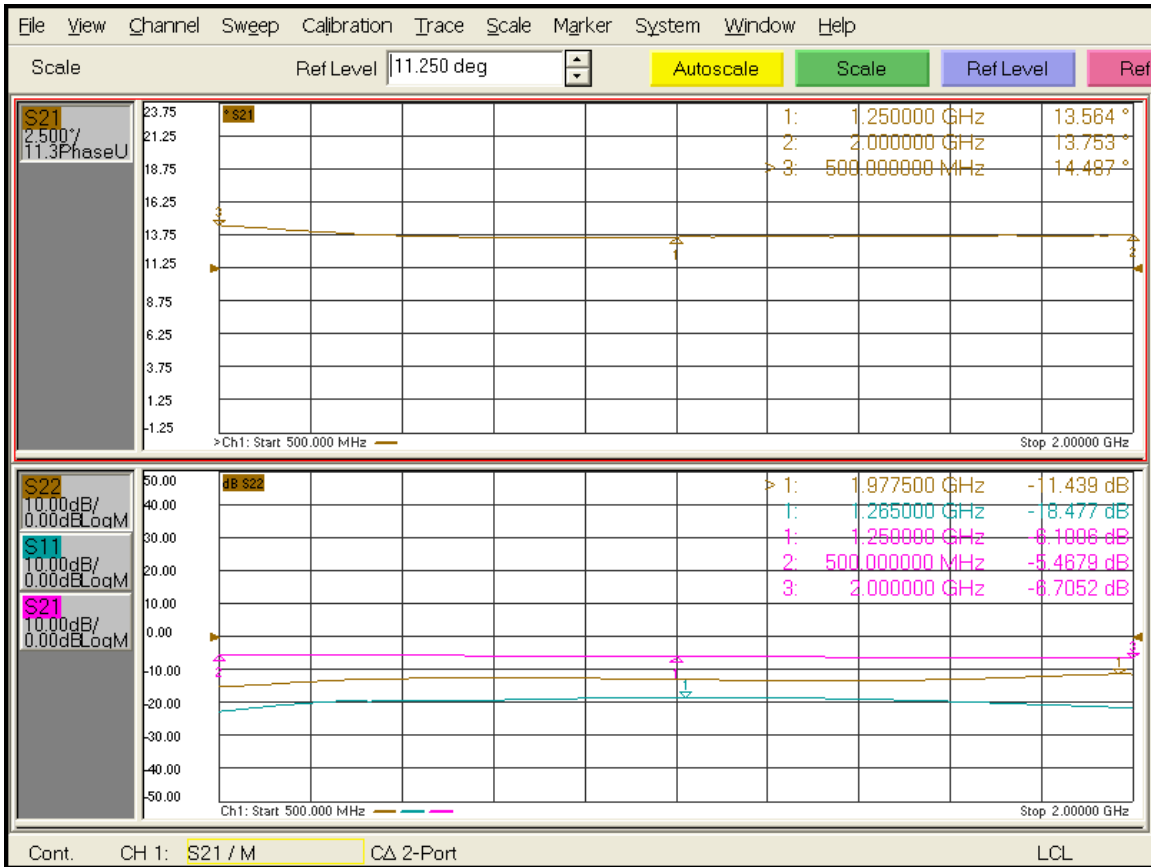


5.625° Phase, -5 dBm Input Power @ 0° C



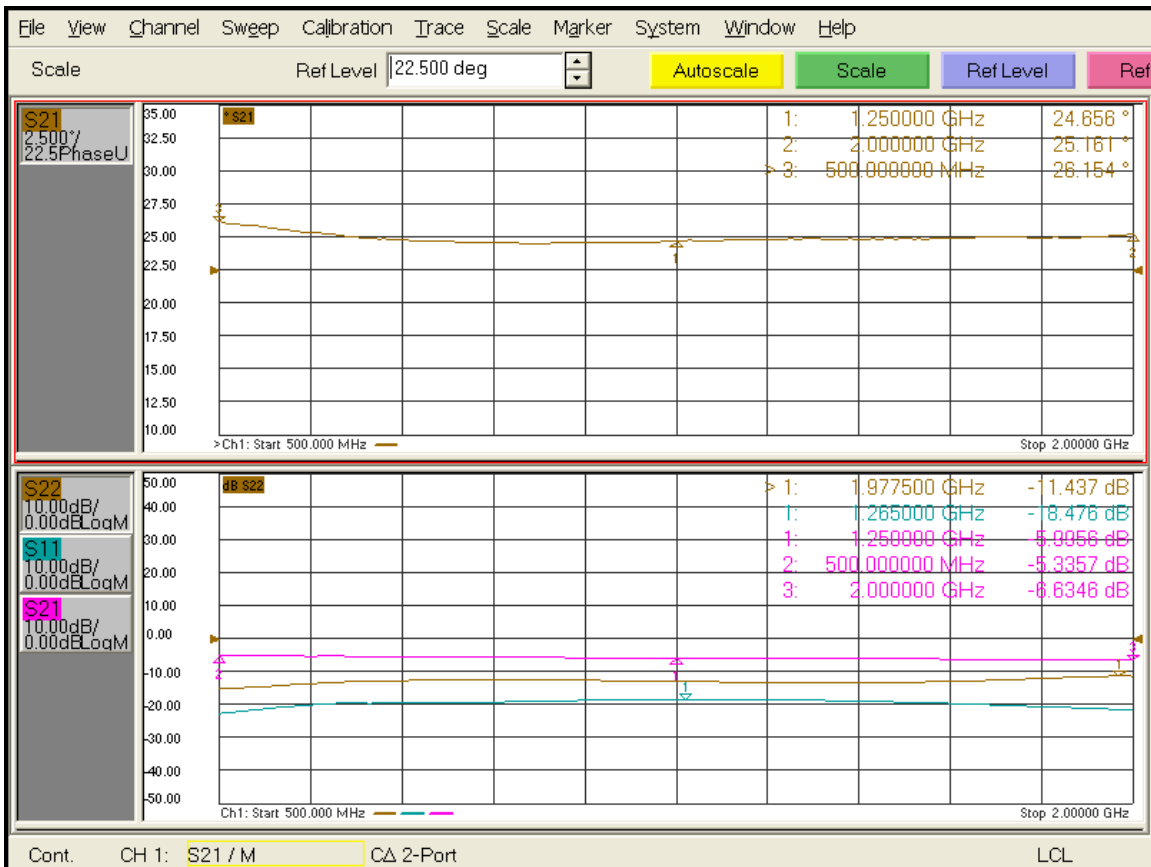


11.25° Phase, -5 dBm Input Power @ 0° C



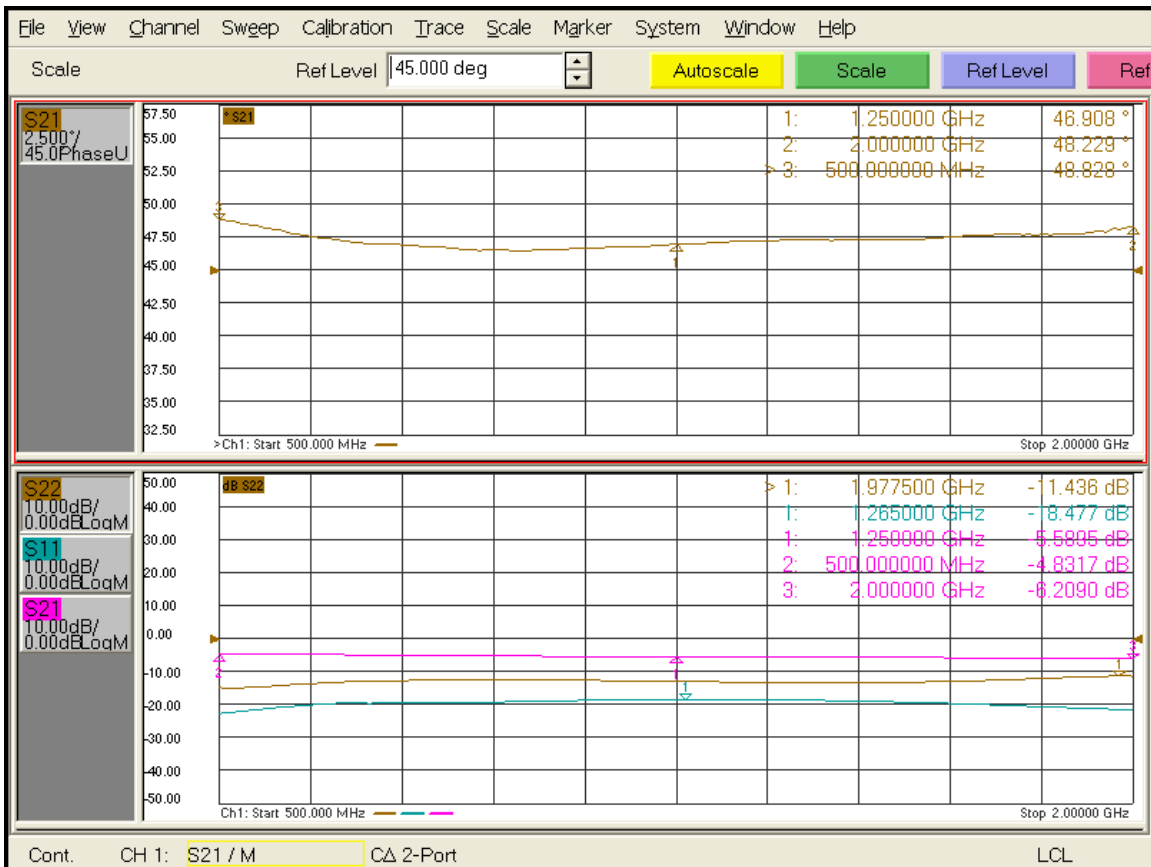


22.5° Phase, -5 dBm Input Power @ 0° C



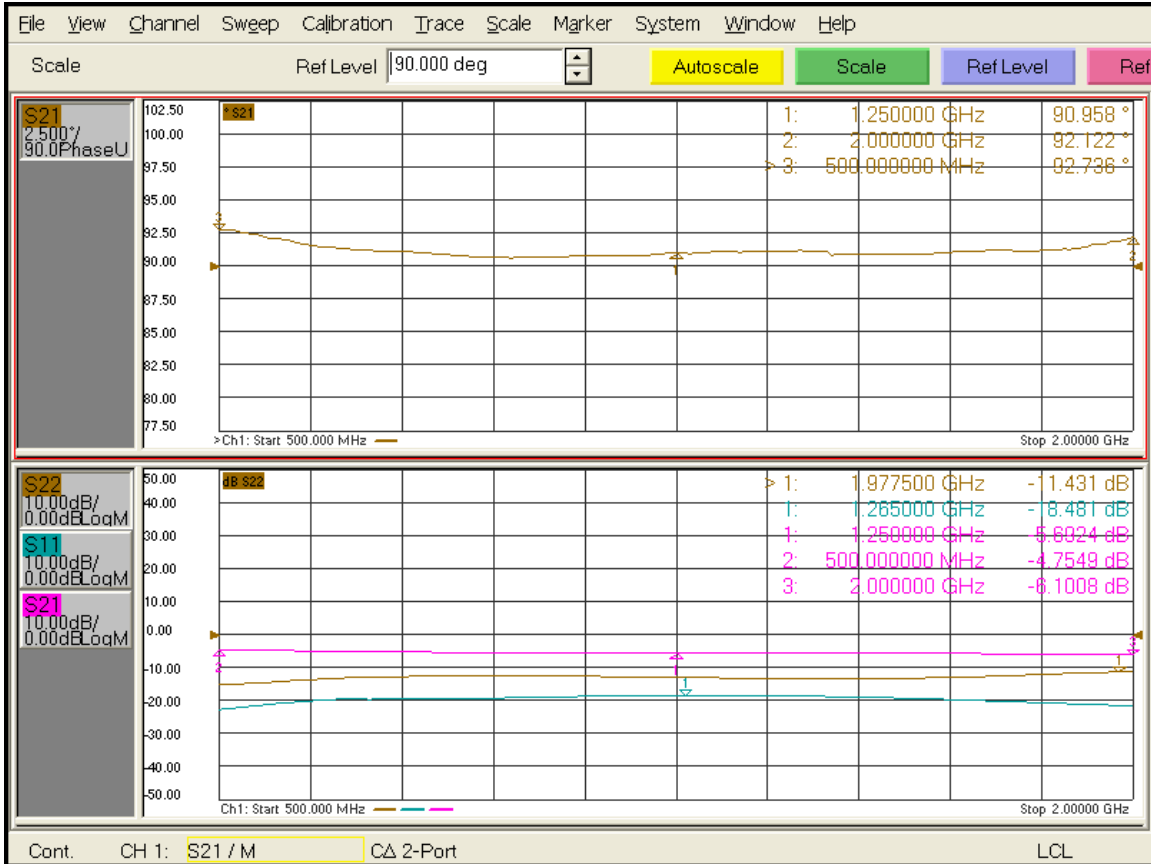


45° Phase, -5 dBm Input Power @ 0° C



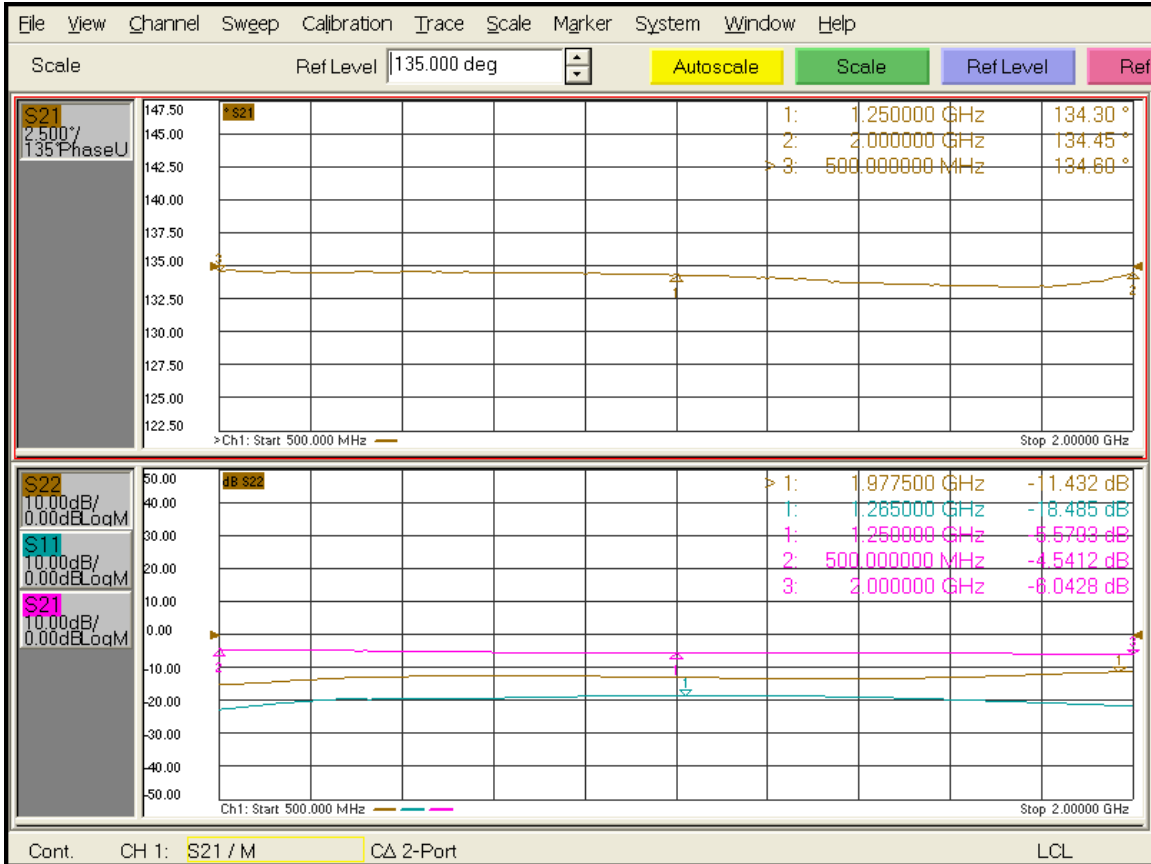


90° Phase, -5 dBm Input Power @ 0° C



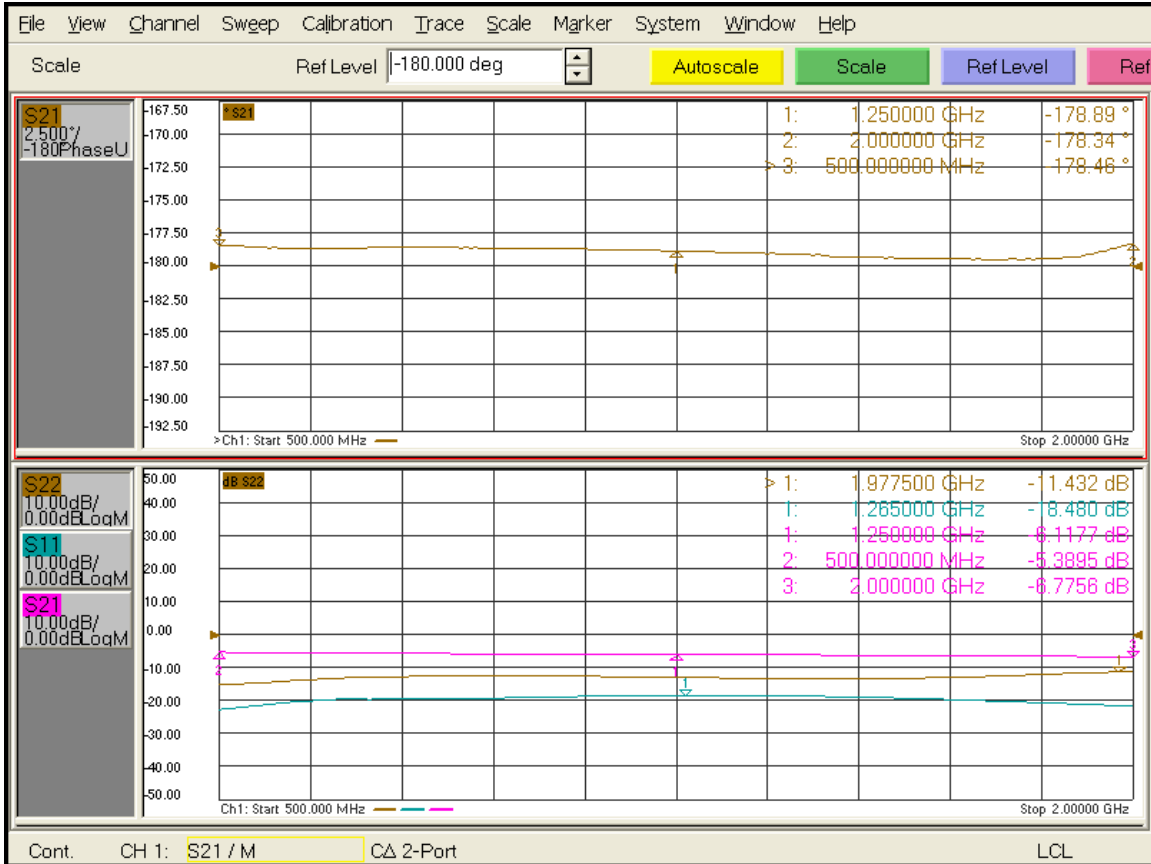


135° Phase, -5 dBm Input Power @ 0° C



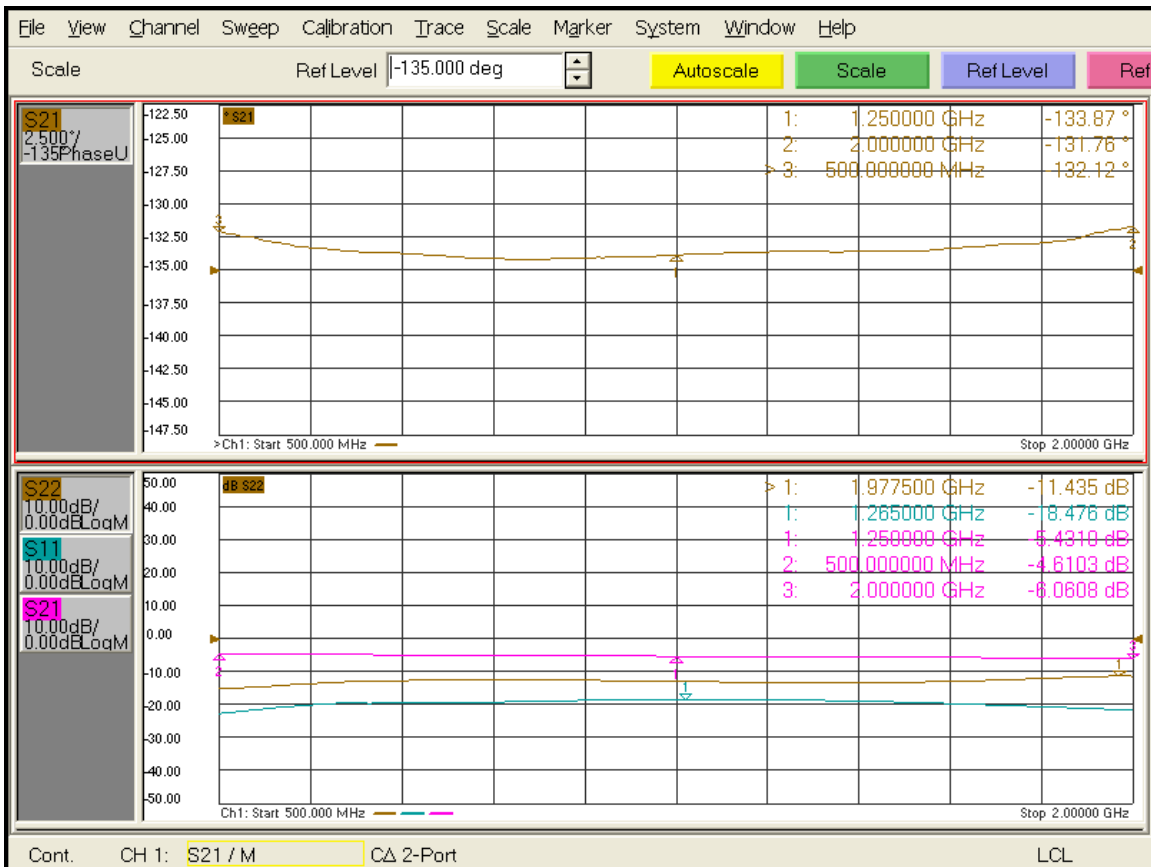


180° Phase, -5 dBm Input Power @ 0° C



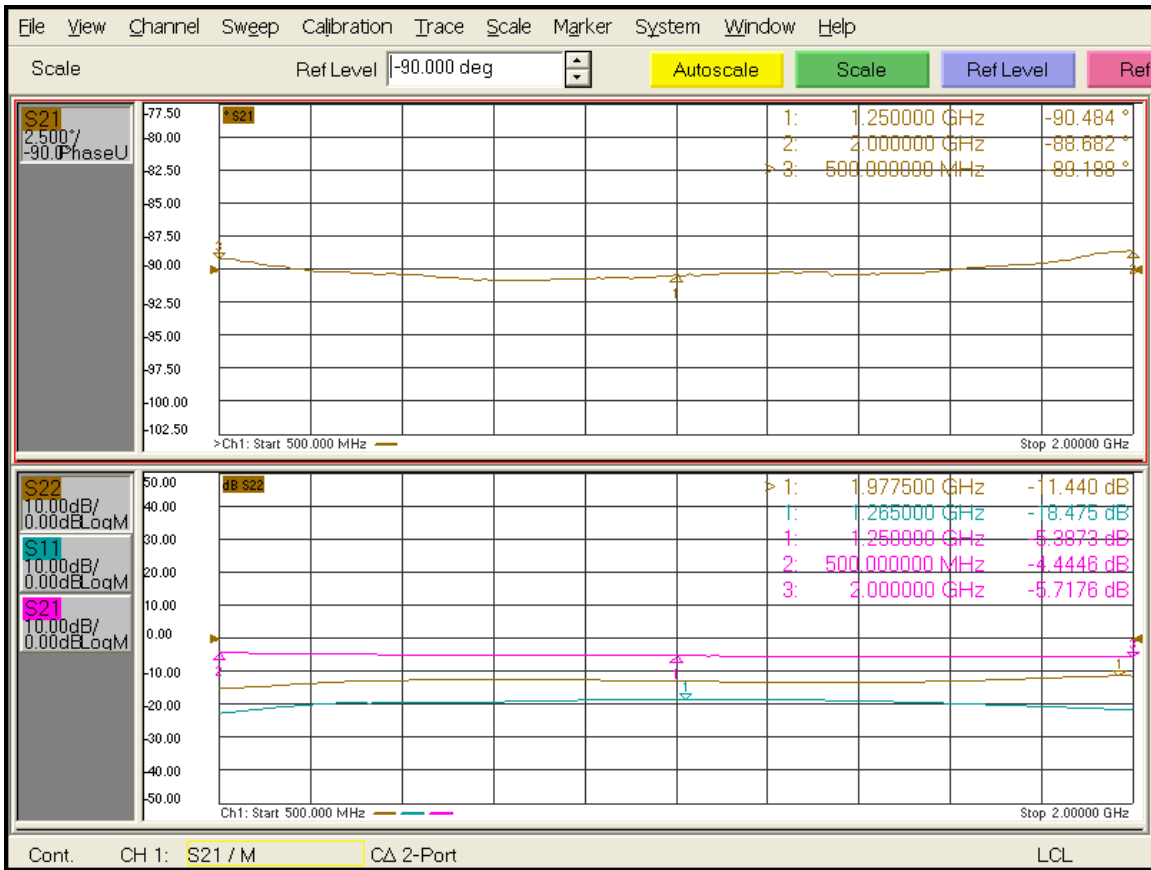


225° Phase, -5 dBm Input Power @ 0° C



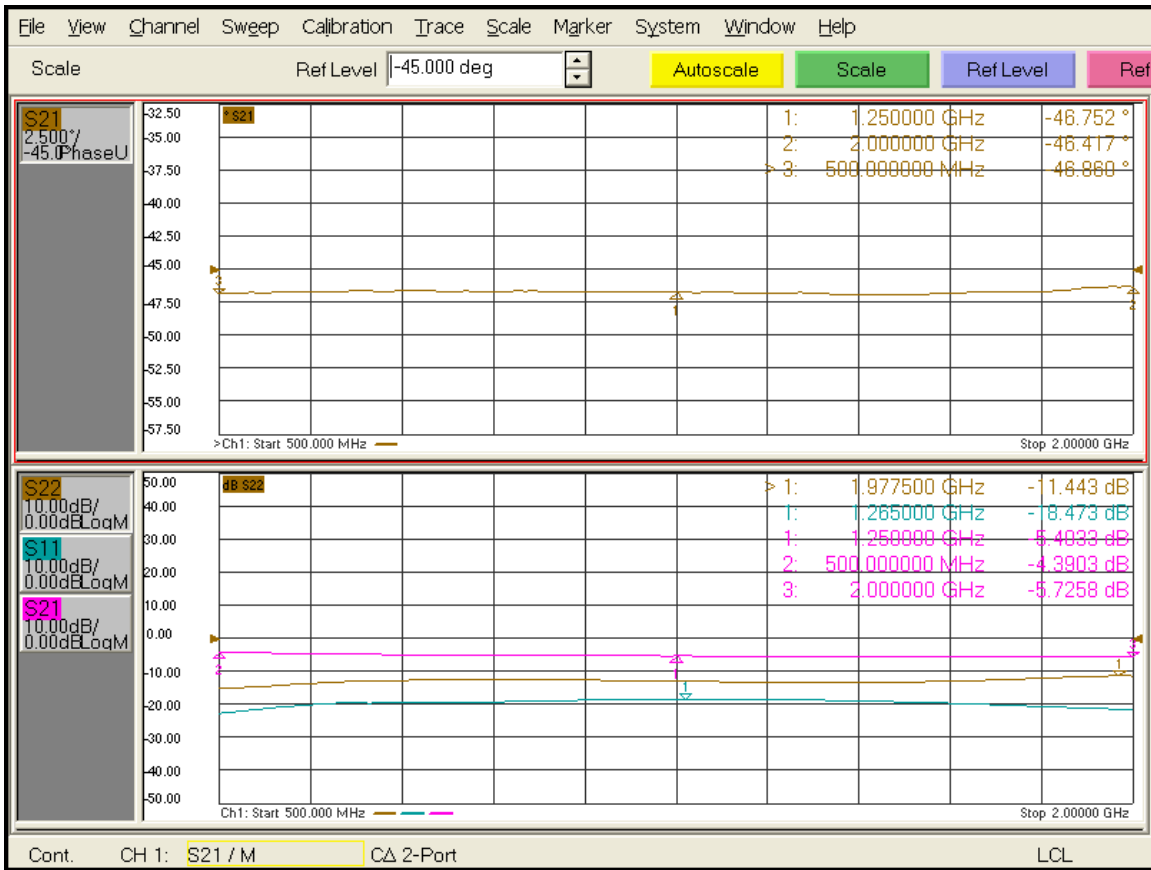


270° Phase, -5 dBm Input Power @ 0° C



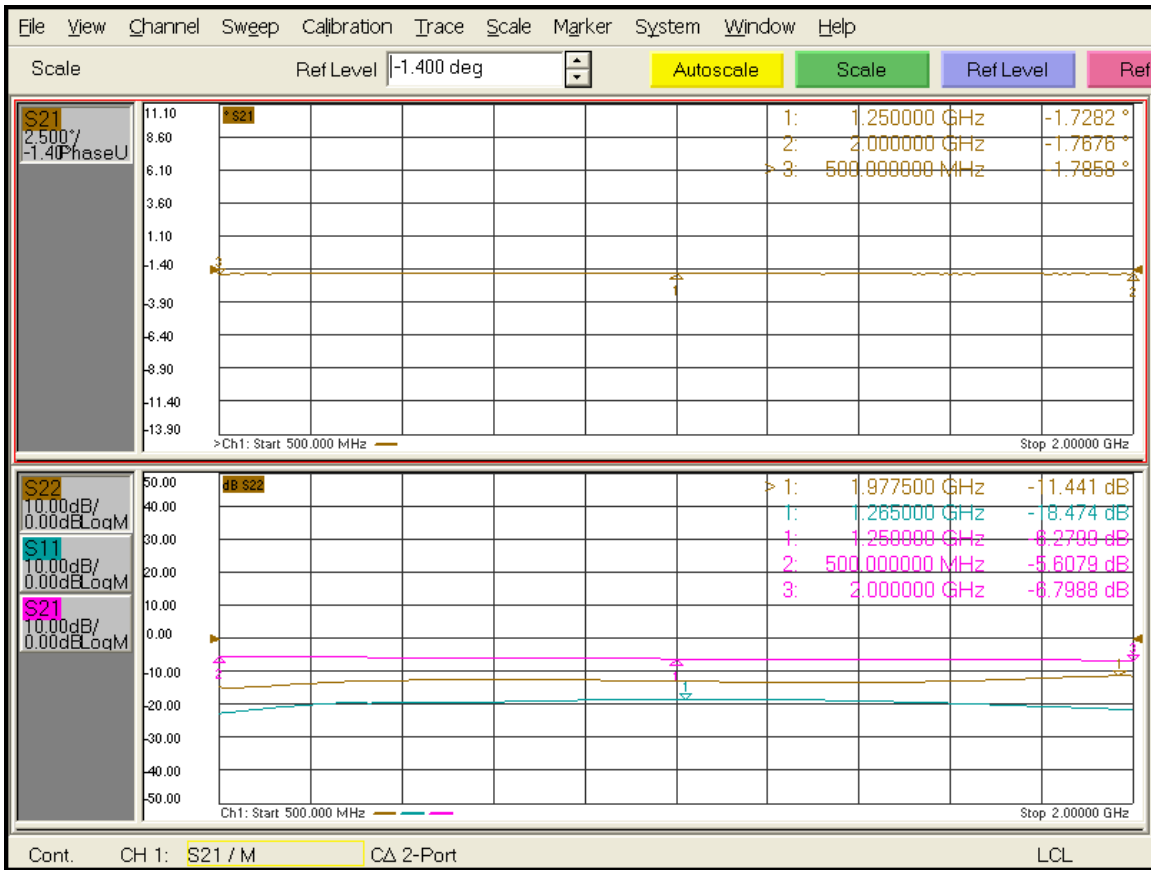


315° Phase, -5 dBm Input Power @ 0° C





358.6° Phase, -5 dBm Input Power @ 0° C





Data Taken at 0° C

Data Taken at 0 dBm Input Power

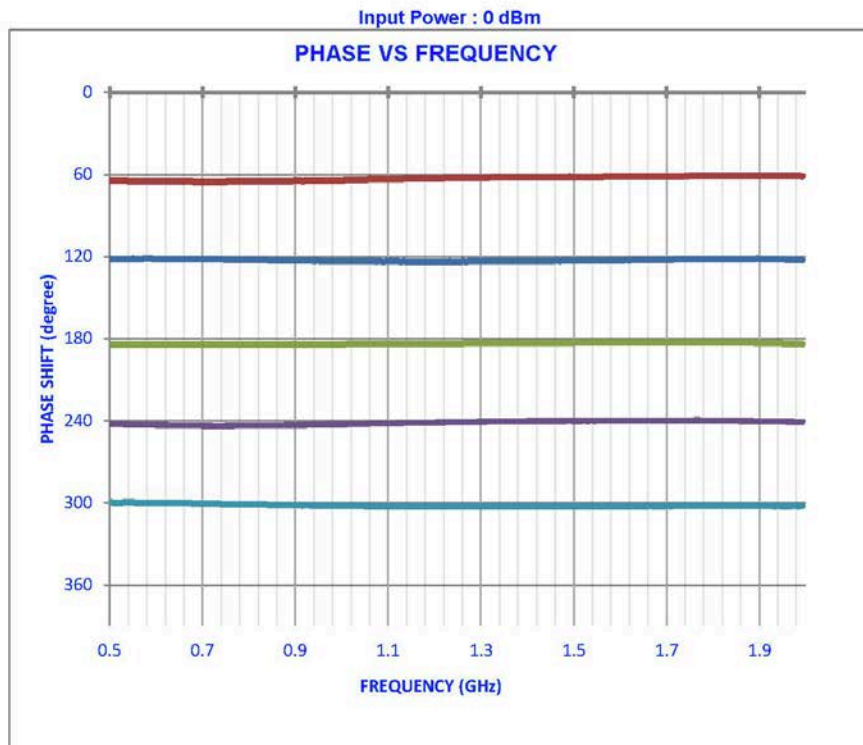
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 6.57 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.80 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.83 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 2.55 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.82 | -0.41 | 0.06 |
| 2.81 | 3.63 | -0.82 | 0.11 |
| 5.63 | 7.26 | -1.63 | 0.16 |
| 11.25 | 14.30 | -3.05 | 0.21 |
| 22.50 | 25.72 | -3.22 | 0.26 |
| 45.00 | 47.69 | -2.69 | 0.31 |
| 90.00 | 91.46 | -1.46 | 0.36 |
| 180.00 | 181.58 | -1.58 | 0.41 |
| 358.59 | 358.30 | 0.29 | 0.45 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 37.96 | -4.21 | 0.94 |
| 67.50 | 68.31 | -0.81 | 0.96 |
| 101.25 | 102.90 | -1.65 | 0.97 |
| 135.00 | 134.94 | 0.06 | 0.99 |
| 168.75 | 168.13 | 0.62 | 1.01 |
| 202.50 | 207.60 | -5.10 | 1.03 |
| 236.25 | 236.75 | -0.50 | 1.04 |
| 270.00 | 269.62 | 0.38 | 1.06 |
| 303.75 | 303.75 | 0.00 | 1.07 |
| 337.50 | 333.74 | 3.76 | 1.08 |
| | | | |
| | | | |
| | | | |

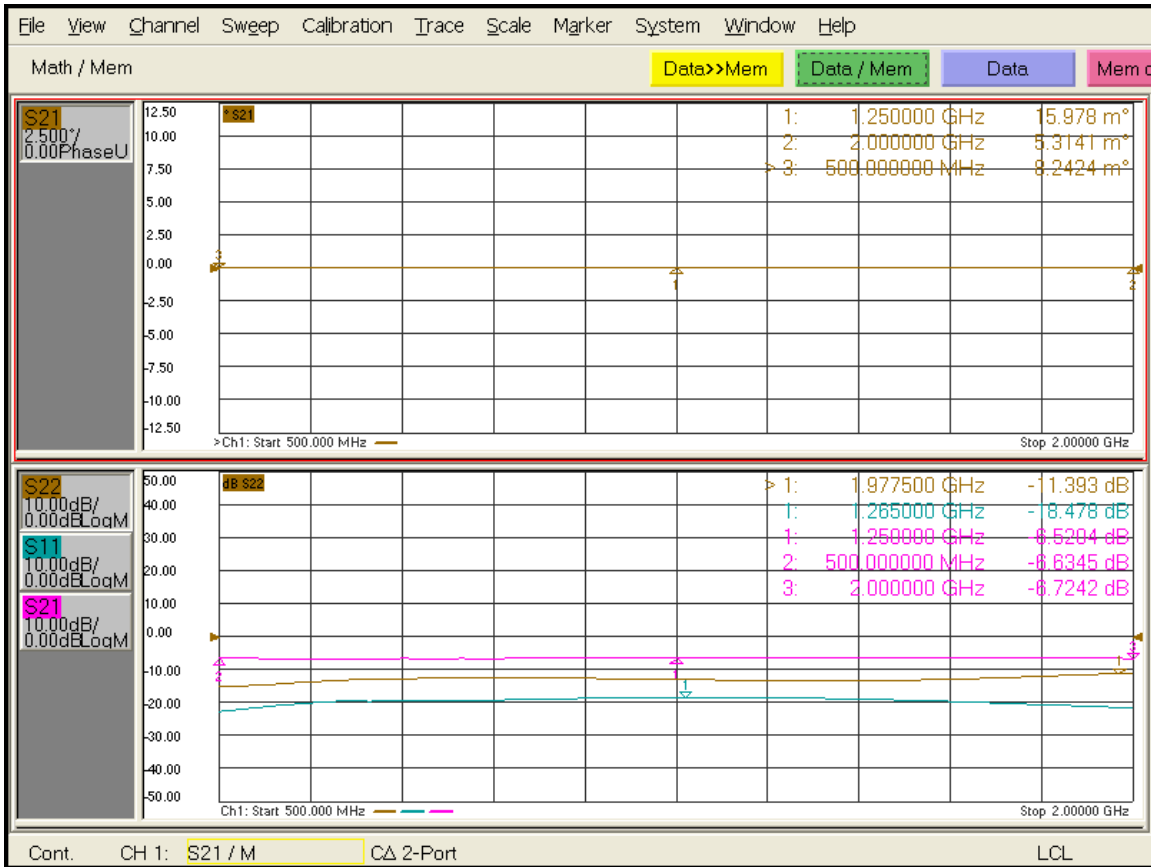


Phase Plot Taken at 0° C



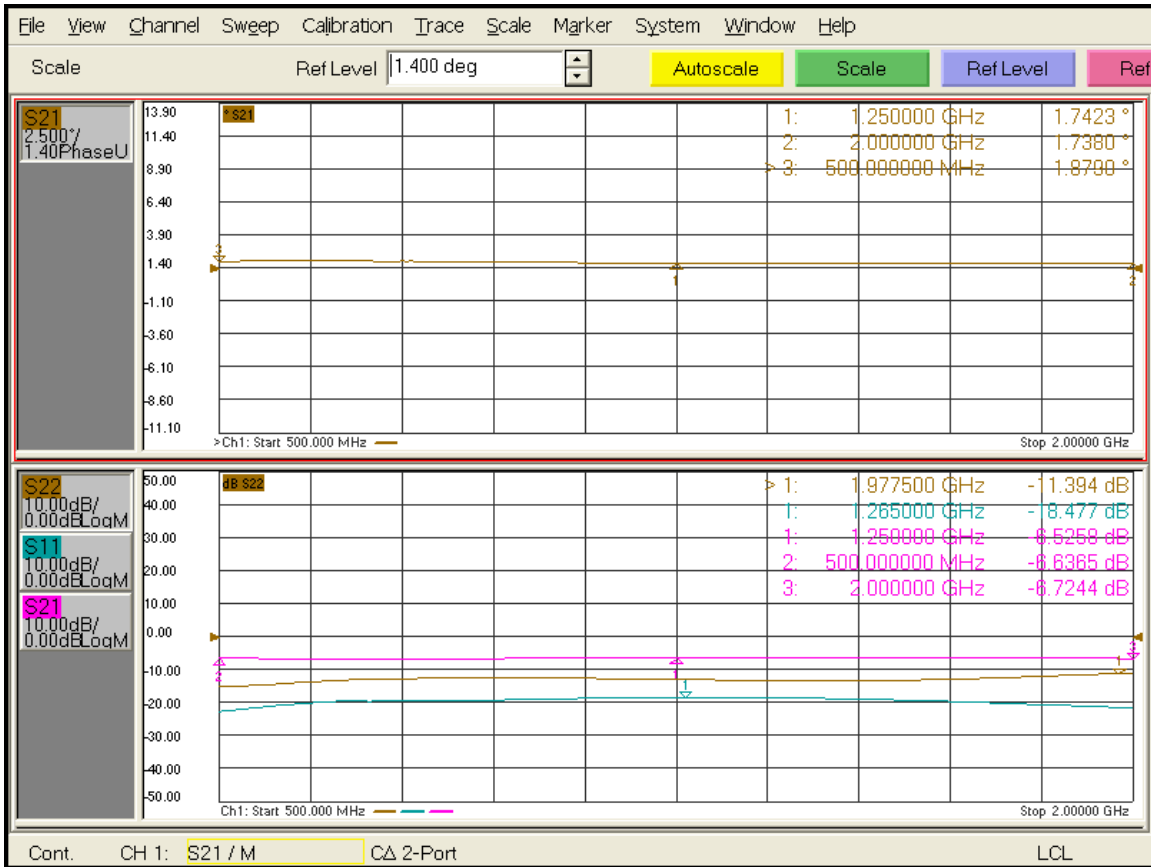


0° Phase, 0 dBm Input Power @ 0° C



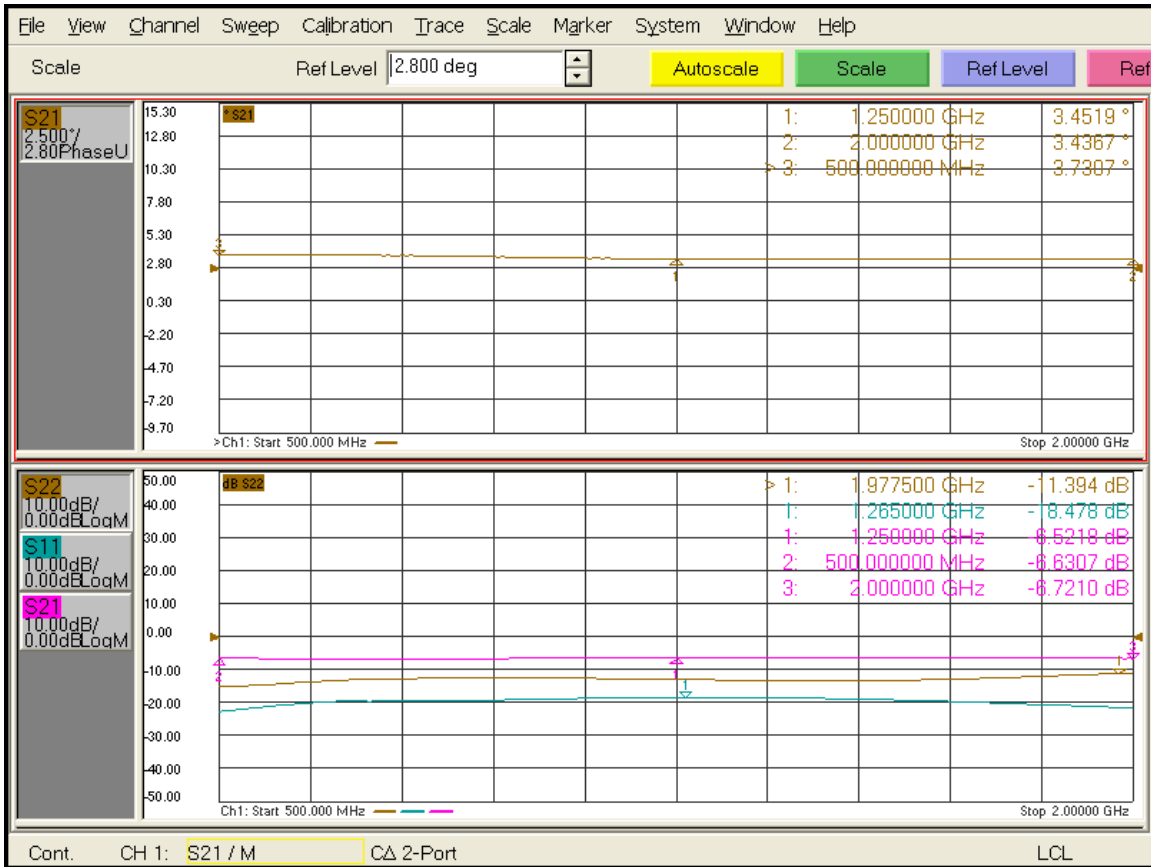


1.4° Phase, 0 dBm Input Power @ 0° C



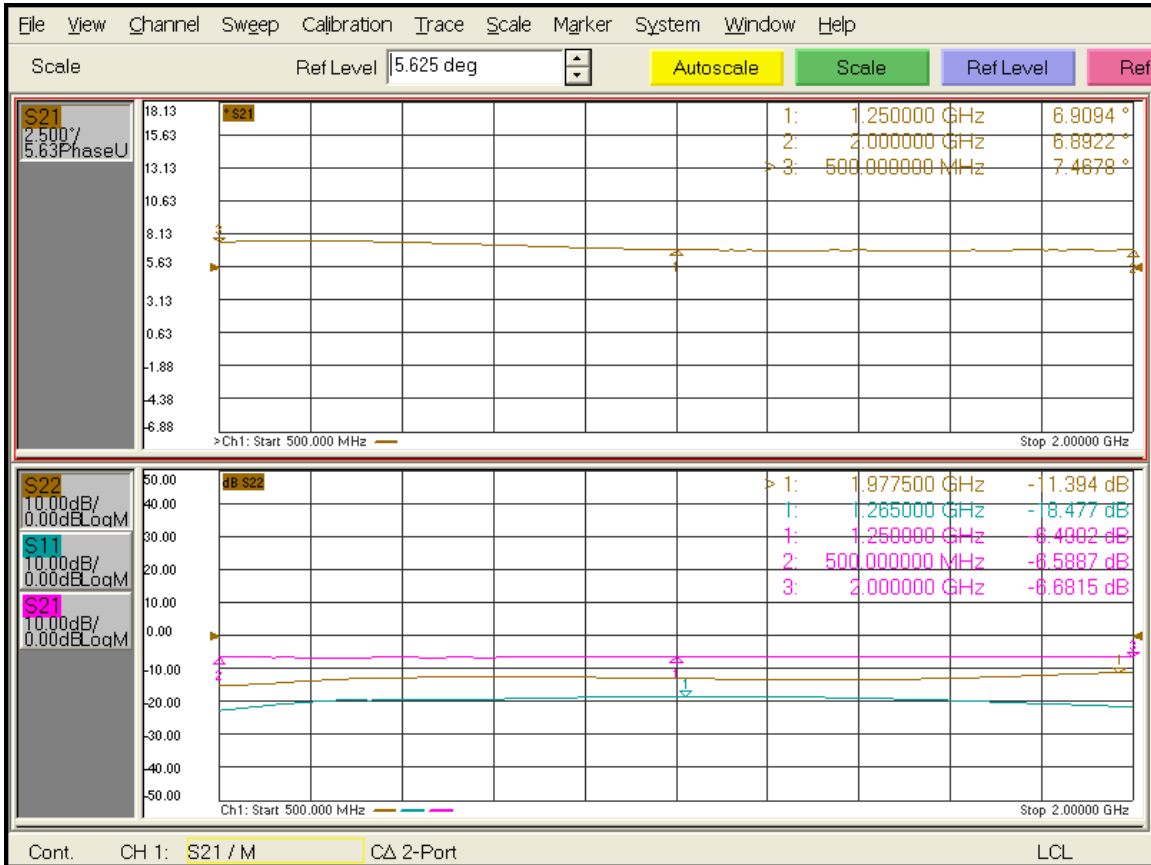


2.8° Phase, 0 dBm Input Power @ 0° C



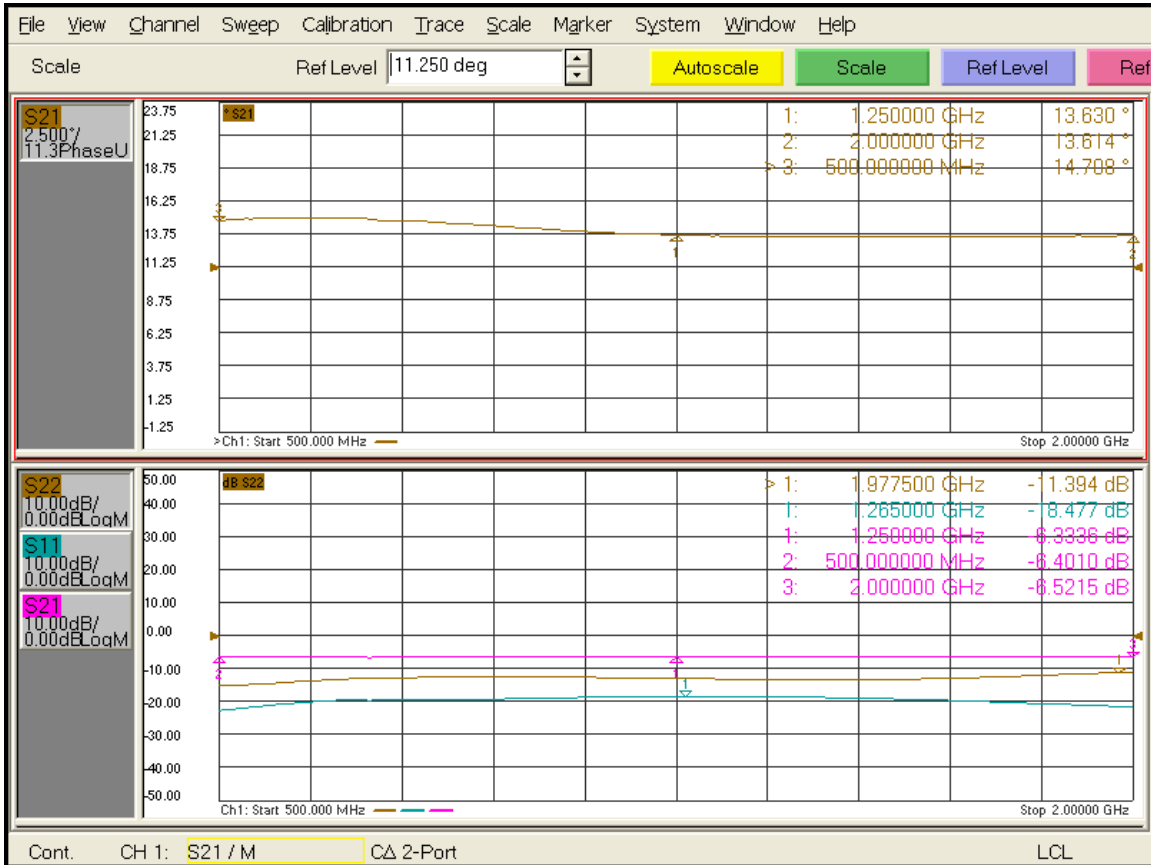


5.625° Phase, 0 dBm Input Power @ 0° C



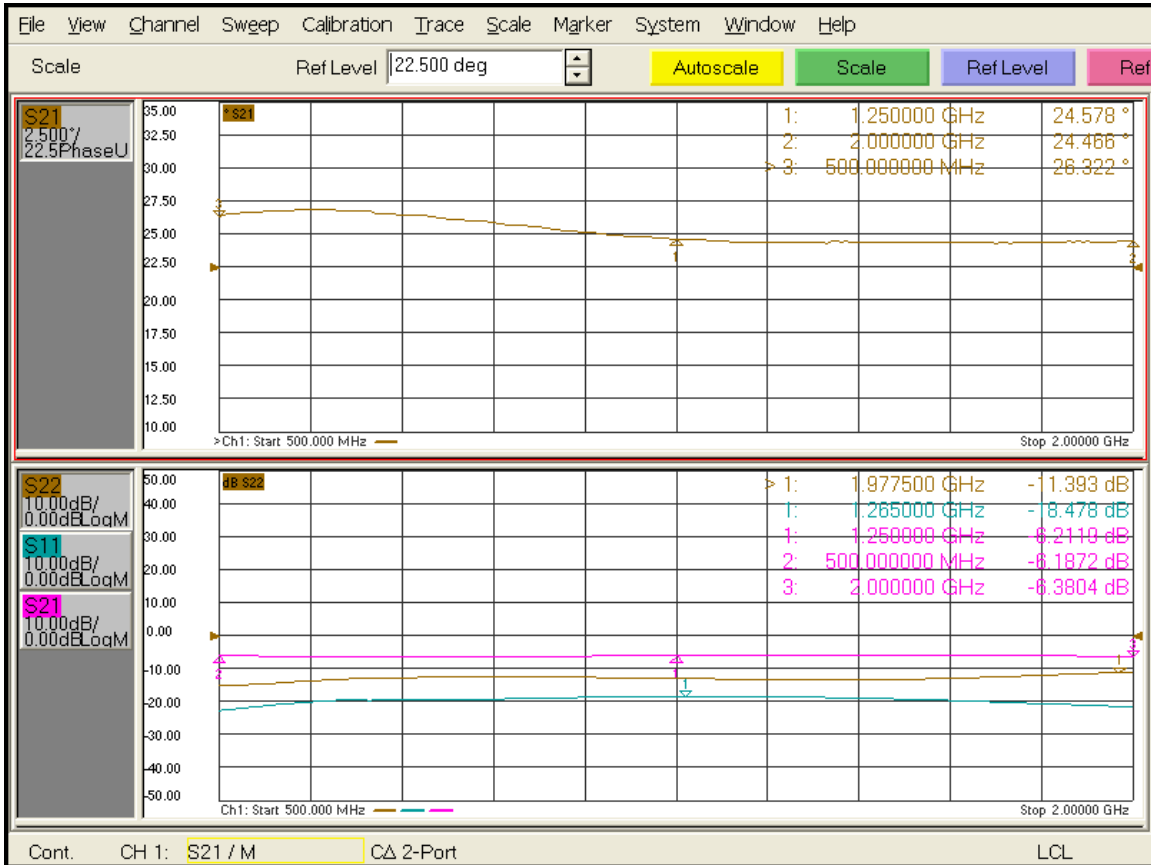


11.25° Phase, 0 dBm Input Power @ 0° C



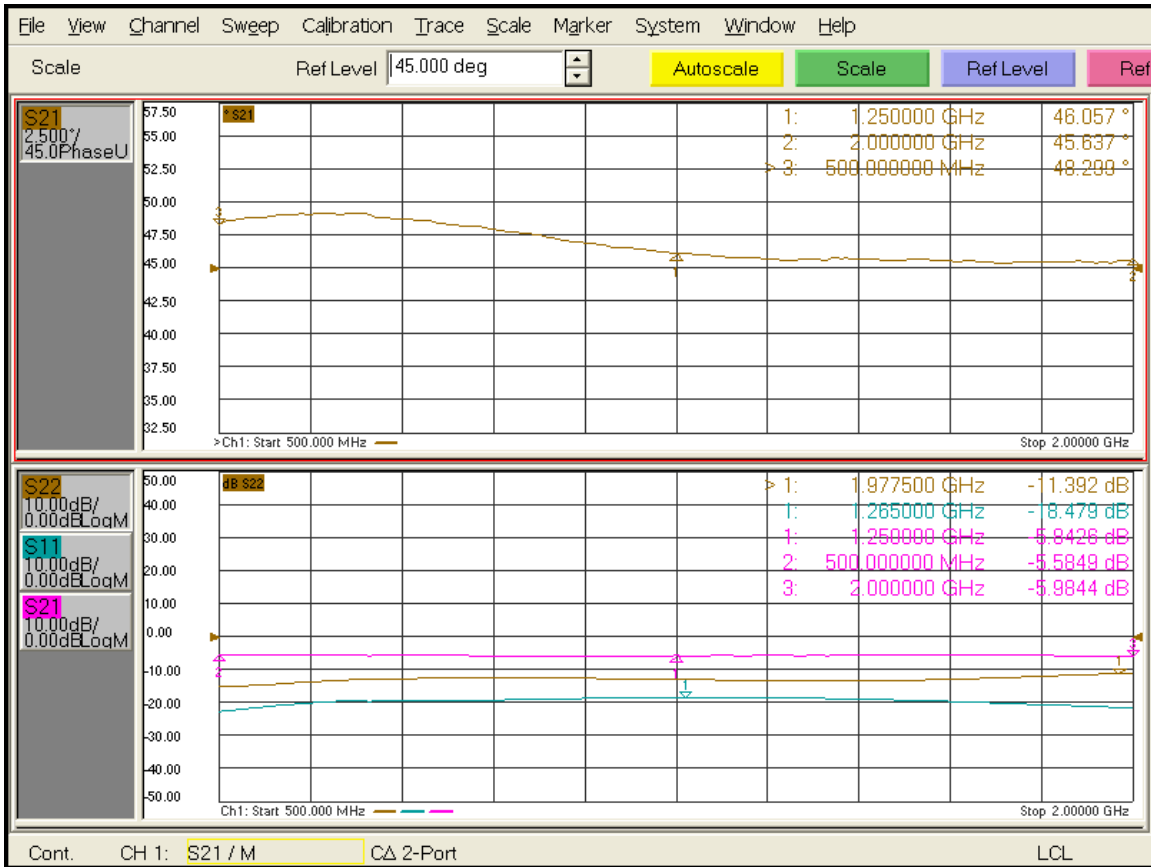


22.5° Phase, 0 dBm Input Power @ 0° C



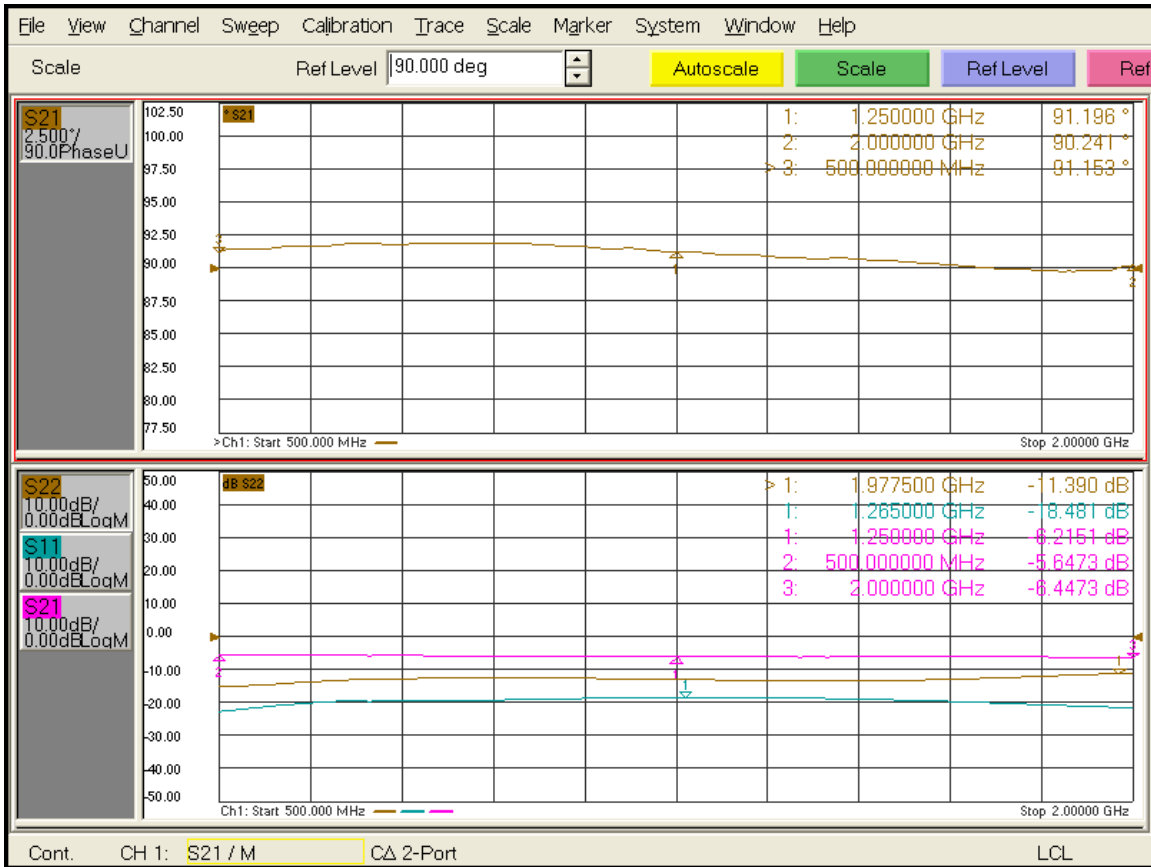


45° Phase, 0 dBm Input Power @ 0° C



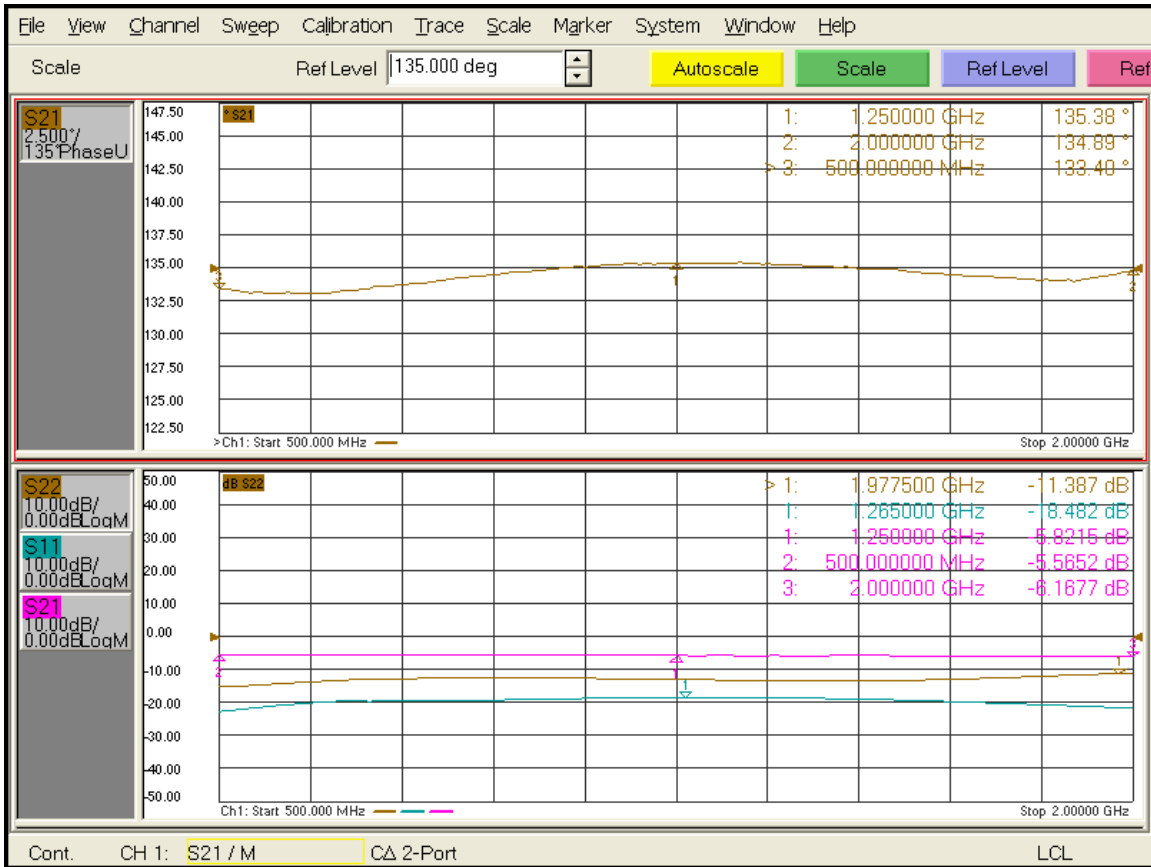


90° Phase, 0 dBm Input Power @ 0° C



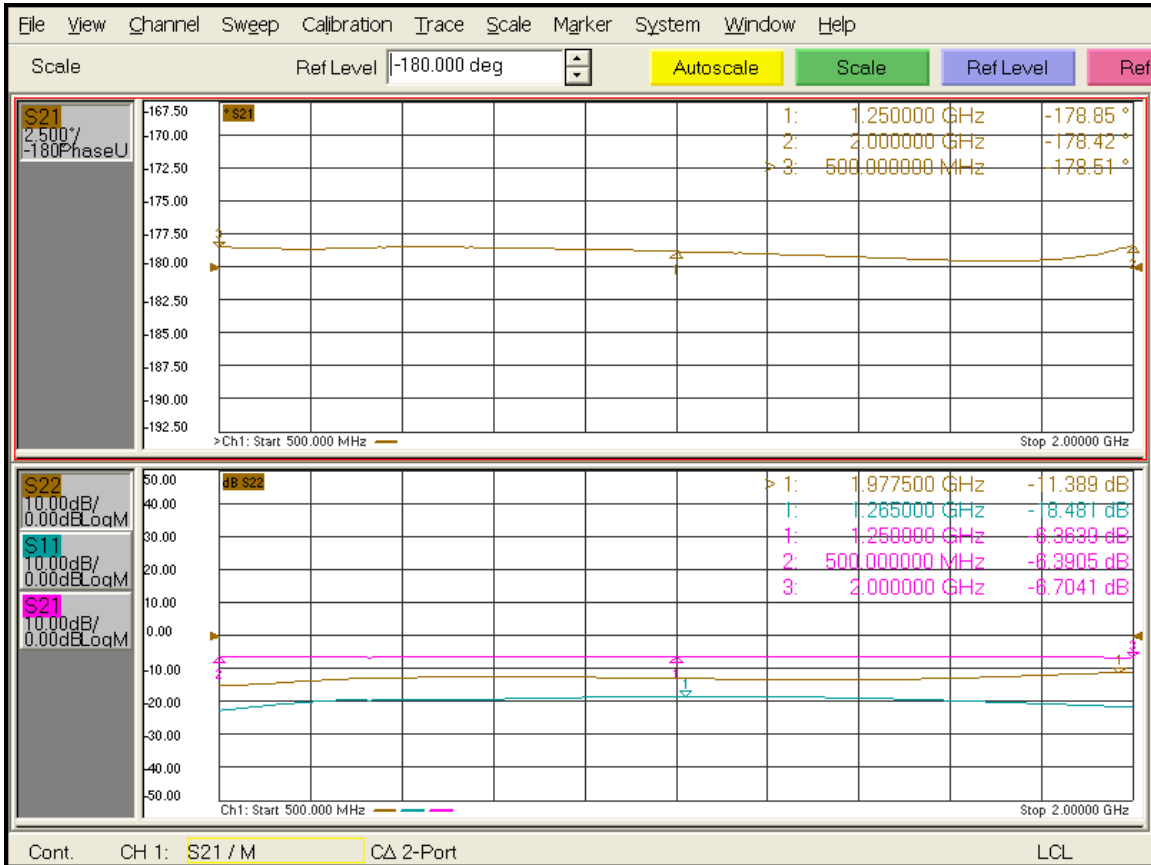


135° Phase, 0 dBm Input Power @ 0° C



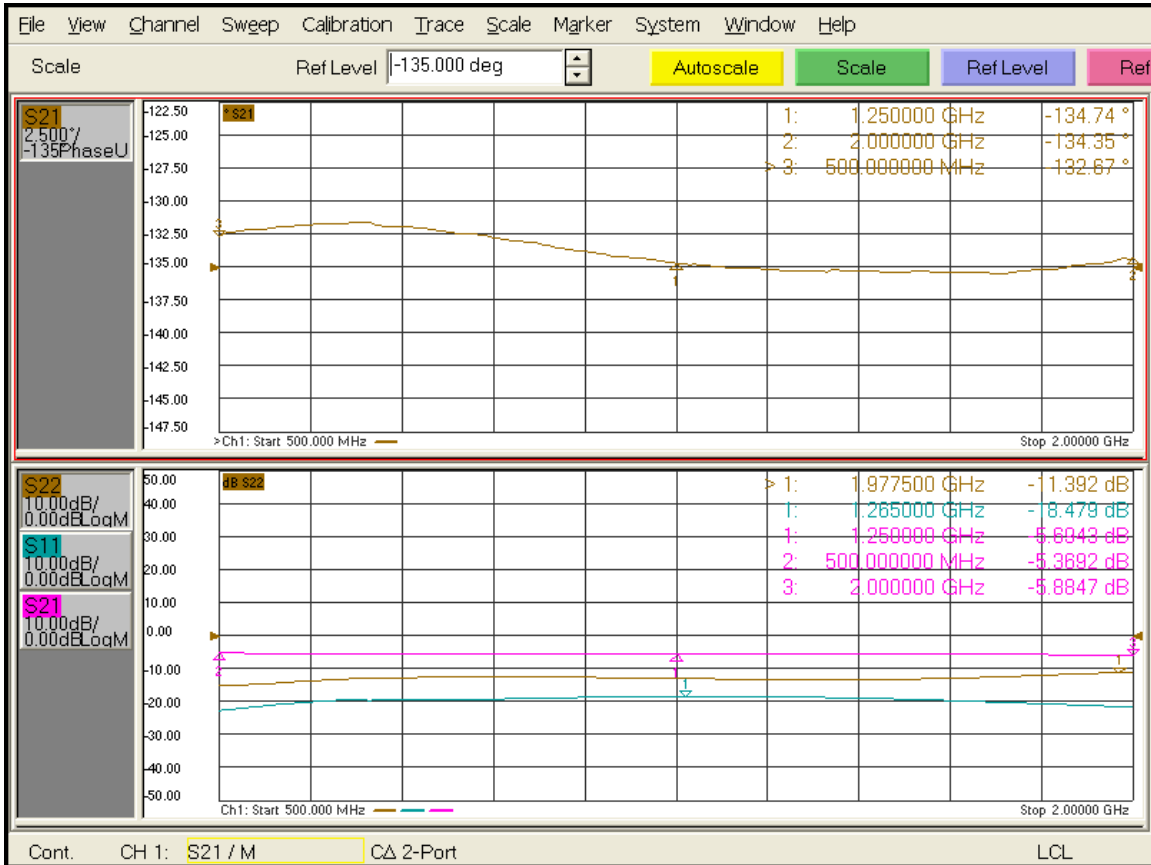


180° Phase, 0 dBm Input Power @ 0° C



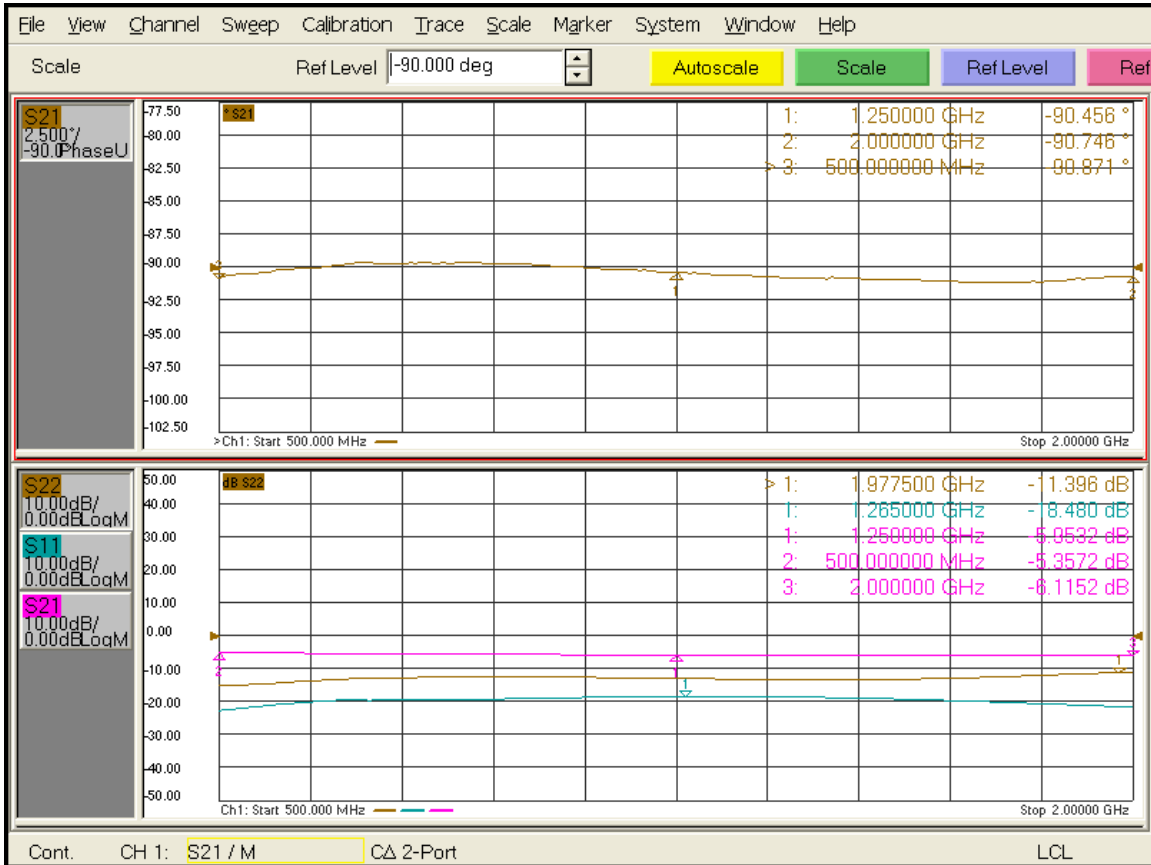


225° Phase, 0 dBm Input Power @ 0° C



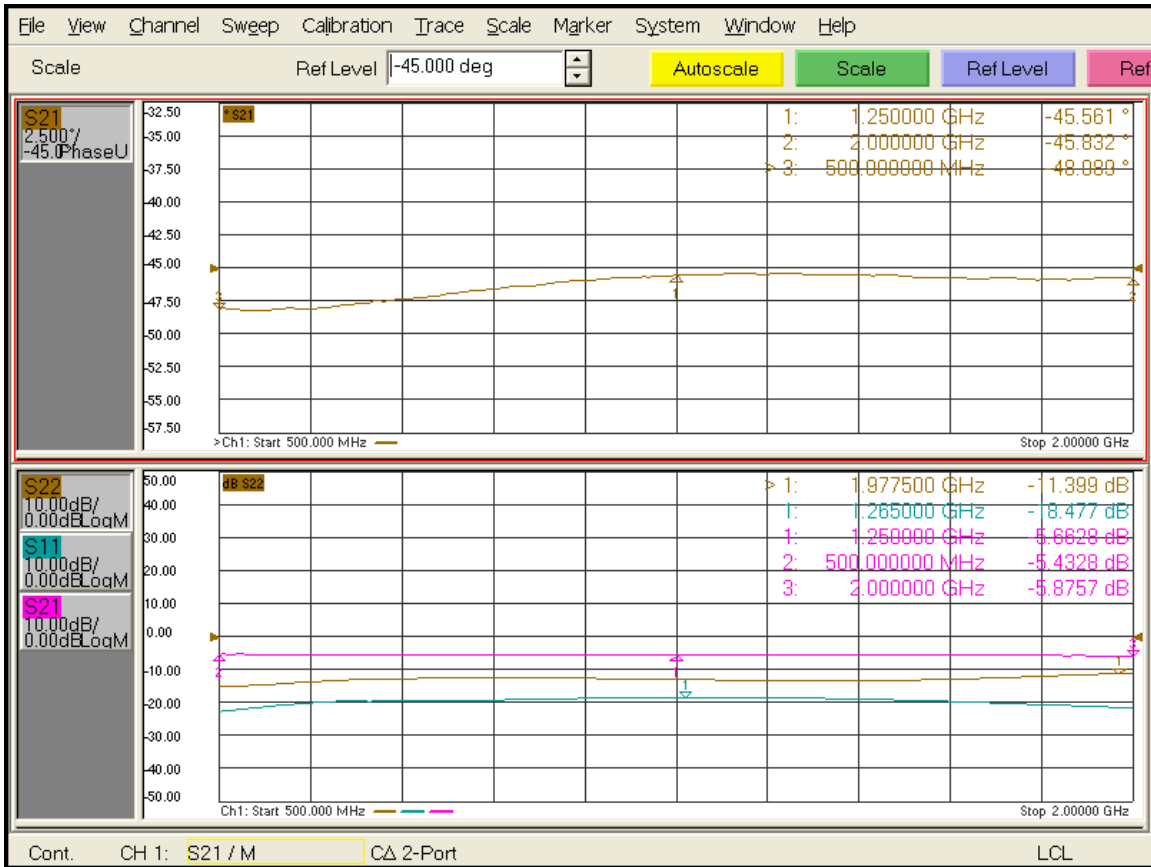


270° Phase, 0 dBm Input Power @ 0° C



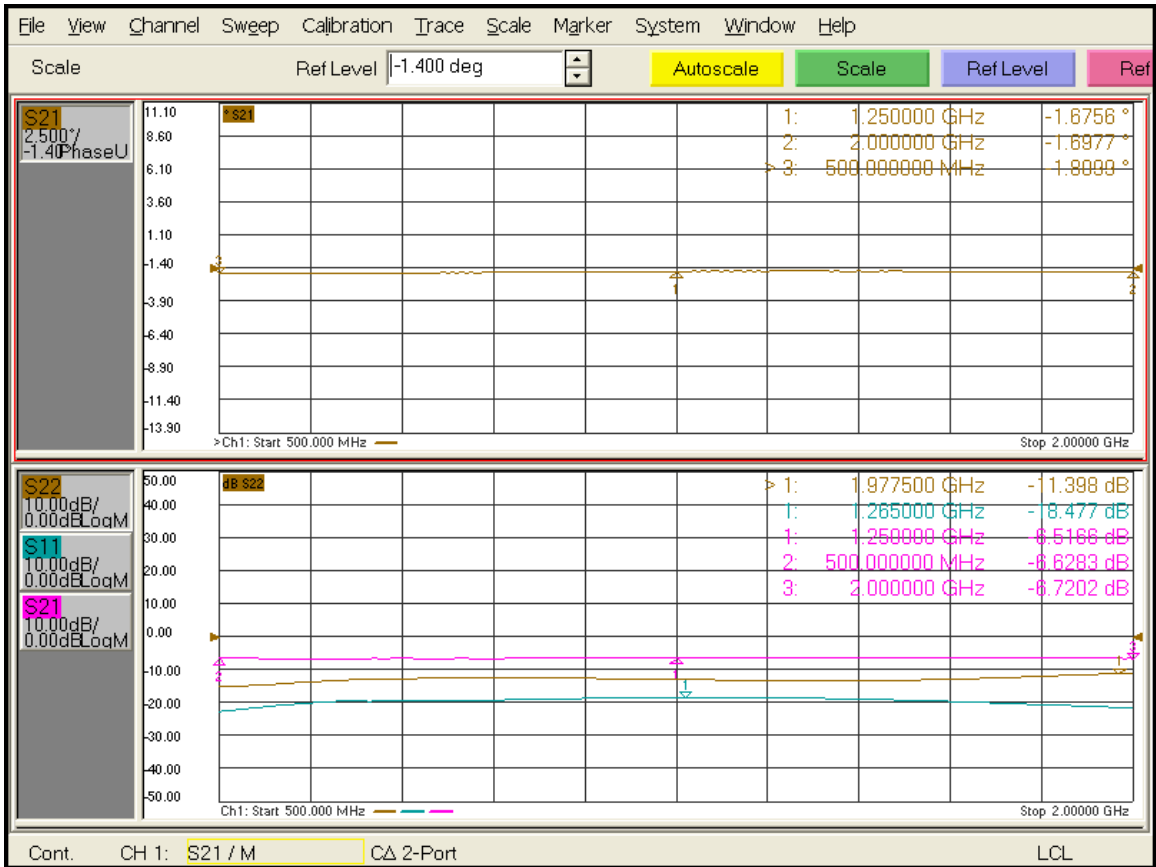


315° Phase, 0 dBm Input Power @ 0° C





358.6° Phase, 0 dBm Input Power @ 0° C





Data Taken at 0° C

Data Taken at 5 dBm Input Power

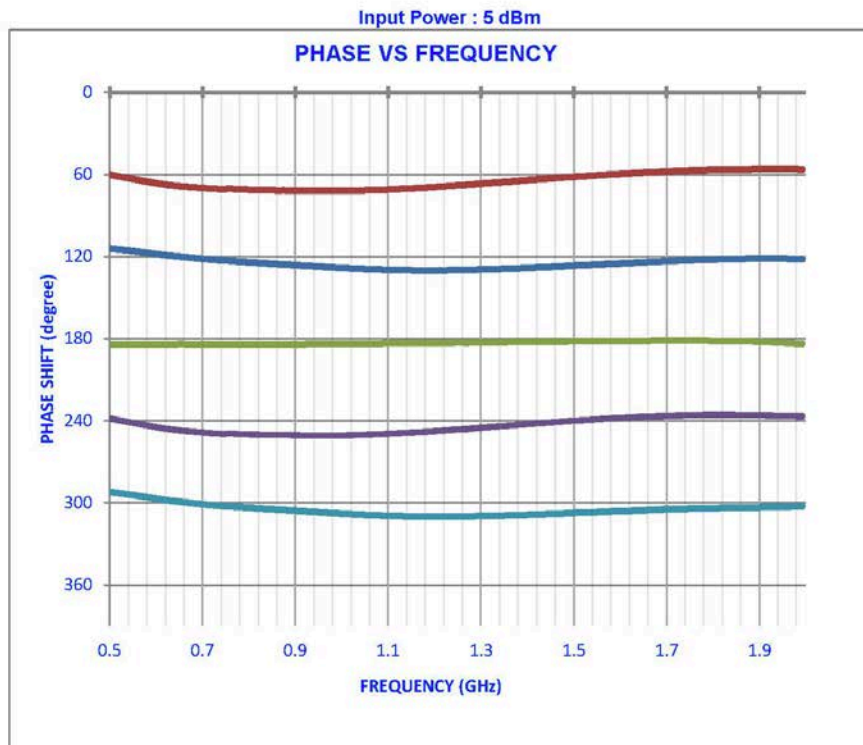
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|--|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 11.72 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.76 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 1.00 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 2.46 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.80 | -0.39 | 0.17 |
| 2.81 | 3.59 | -0.78 | 0.31 |
| 5.63 | 7.20 | -1.58 | 0.46 |
| 11.25 | 14.25 | -3.00 | 0.61 |
| 22.50 | 25.66 | -3.16 | 0.75 |
| 45.00 | 47.98 | -2.98 | 0.90 |
| 90.00 | 93.17 | -3.17 | 1.04 |
| 180.00 | 181.08 | -1.08 | 1.19 |
| 358.59 | 358.23 | 0.37 | 1.31 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 38.13 | -4.38 | 2.94 |
| 67.50 | 69.60 | -2.10 | 3.02 |
| 101.25 | 103.77 | -2.52 | 3.08 |
| 135.00 | 134.20 | 0.80 | 3.15 |
| 168.75 | 167.98 | 0.77 | 3.21 |
| 202.50 | 207.42 | -4.92 | 3.27 |
| 236.25 | 237.89 | -1.64 | 3.32 |
| 270.00 | 270.88 | -0.88 | 3.37 |
| 303.75 | 303.39 | 0.36 | 3.43 |
| 337.50 | 333.40 | 4.10 | 3.49 |
| | | | |
| | | | |
| | | | |

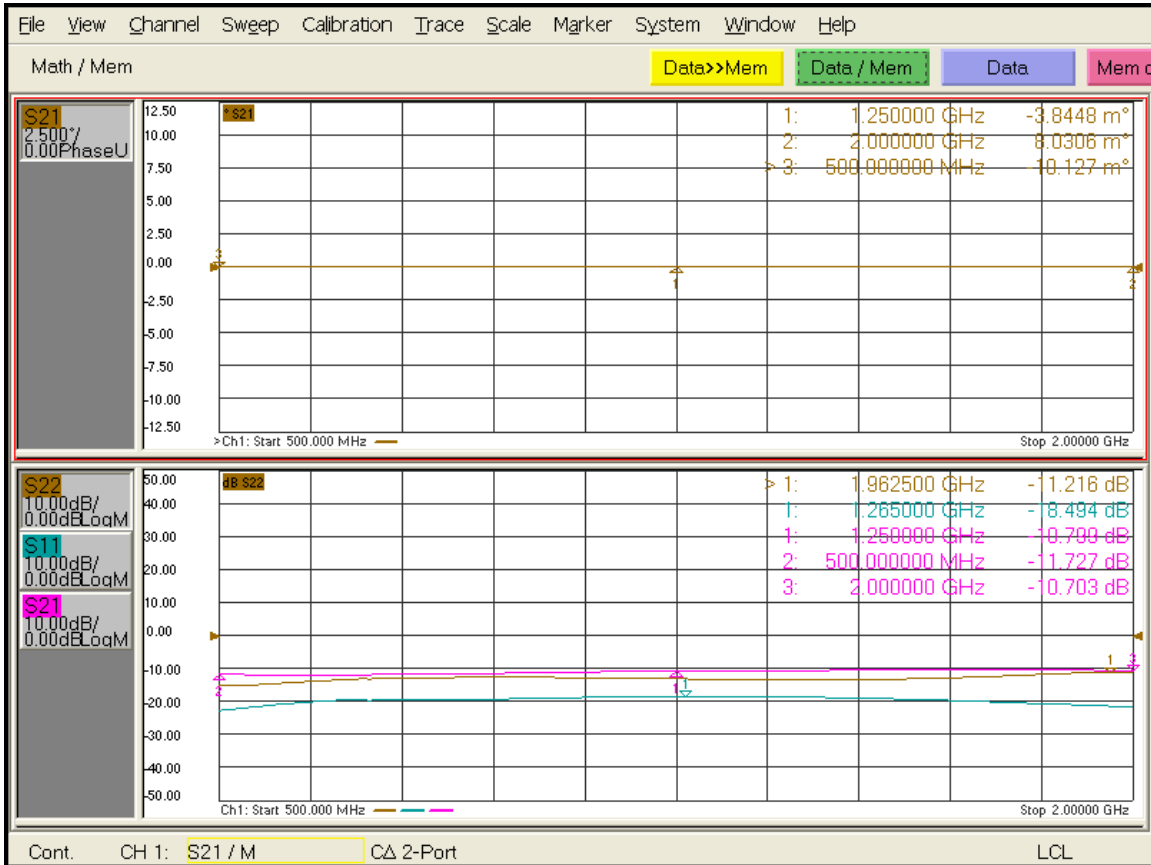


Phase Plot Taken at 0° C



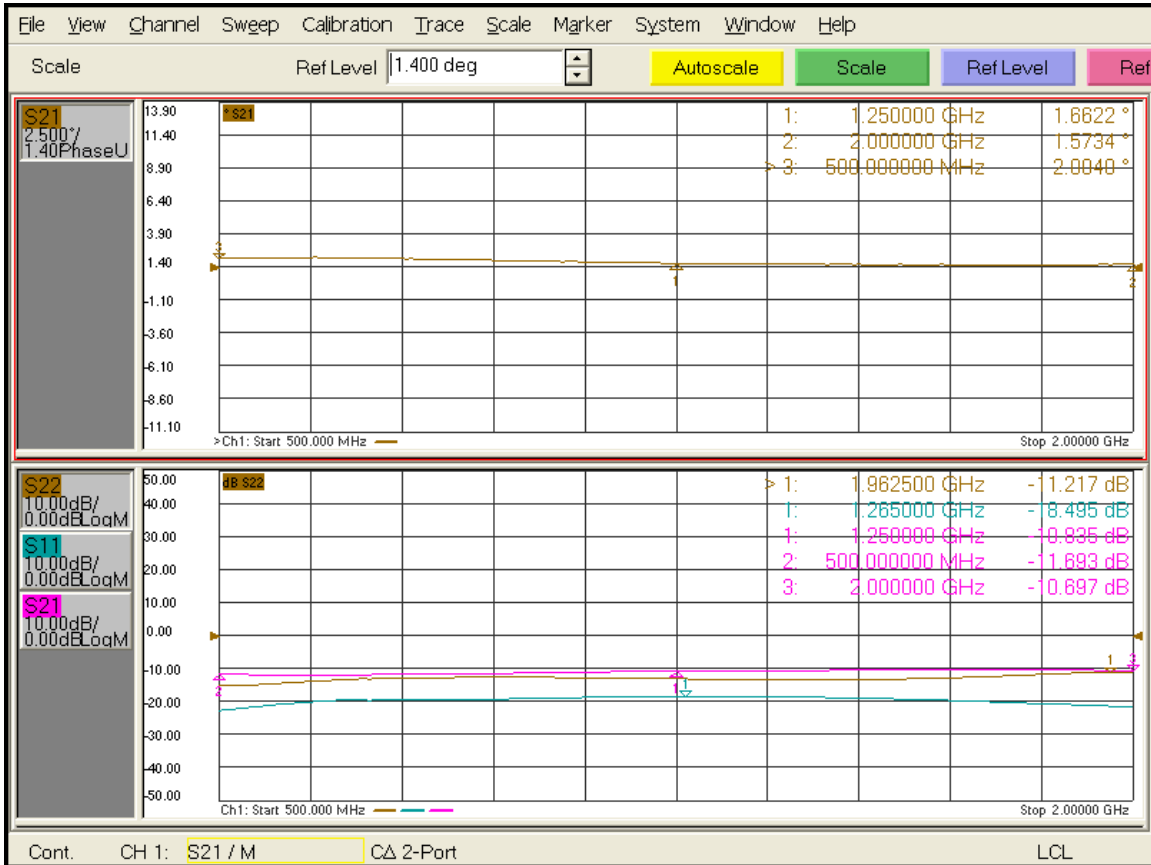


0° Phase, 5 dBm Input Power @ 0° C



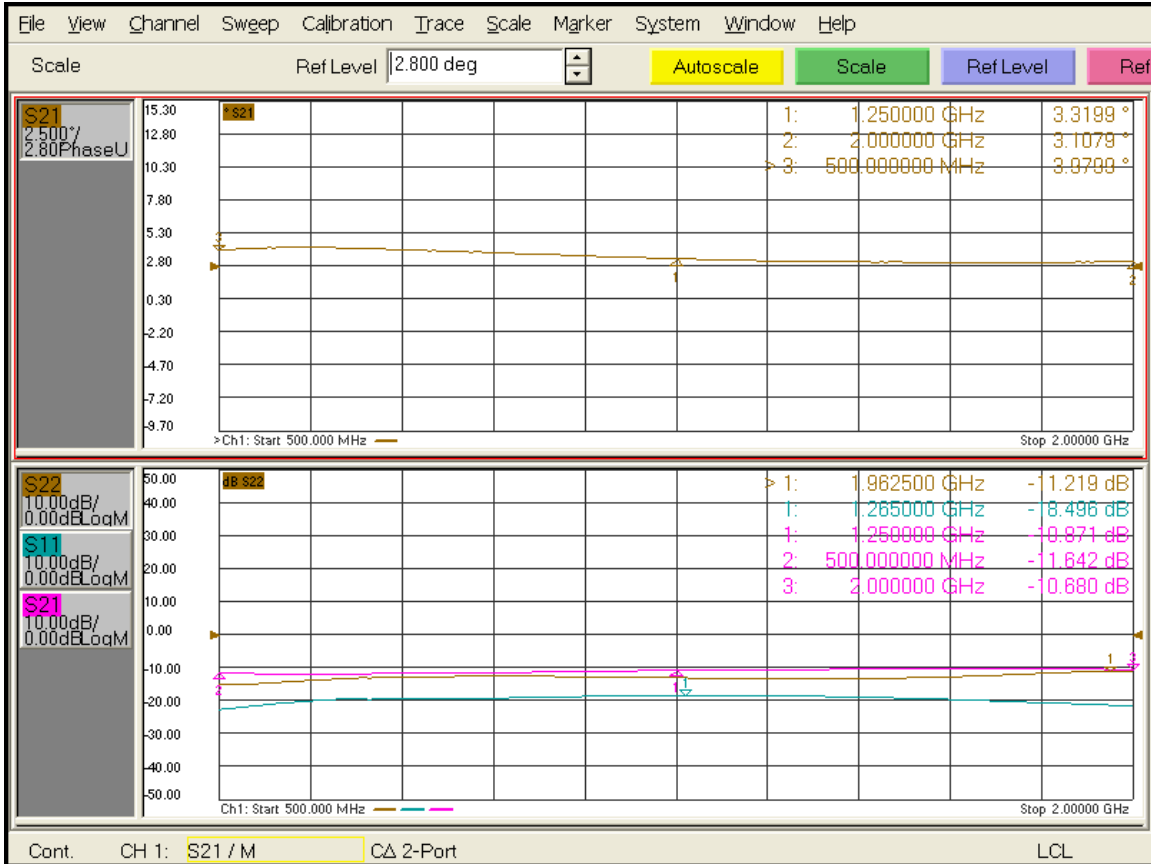


1.4° Phase, 5 dBm Input Power @ 0° C



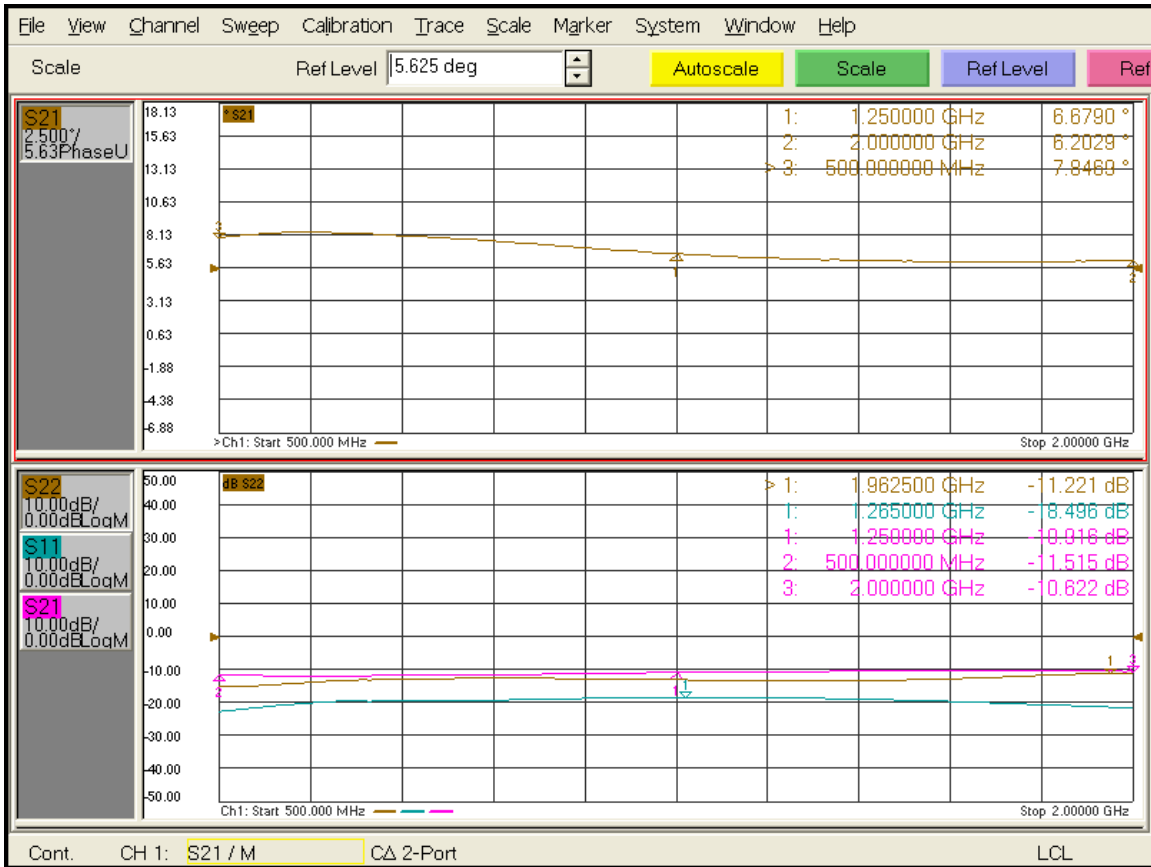


2.8° Phase, 5 dBm Input Power @ 0° C



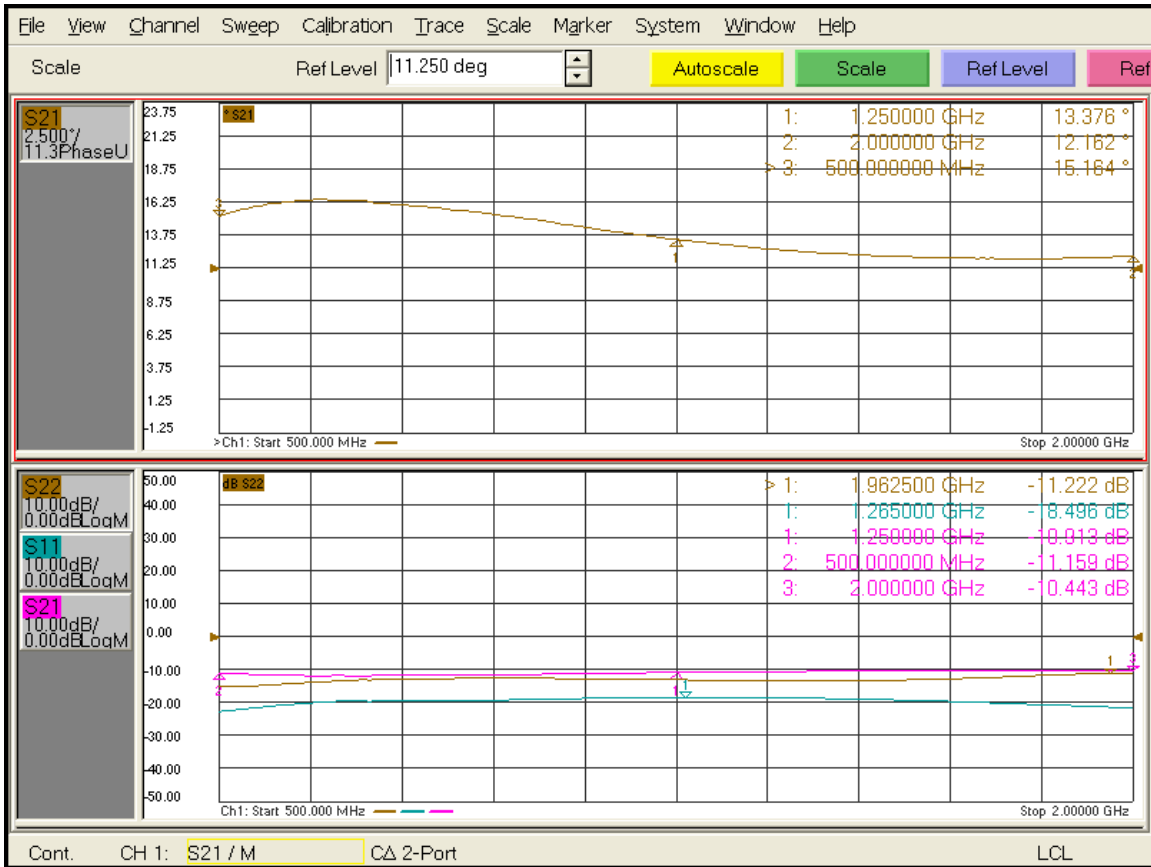


5.625° Phase, 5 dBm Input Power @ 0° C



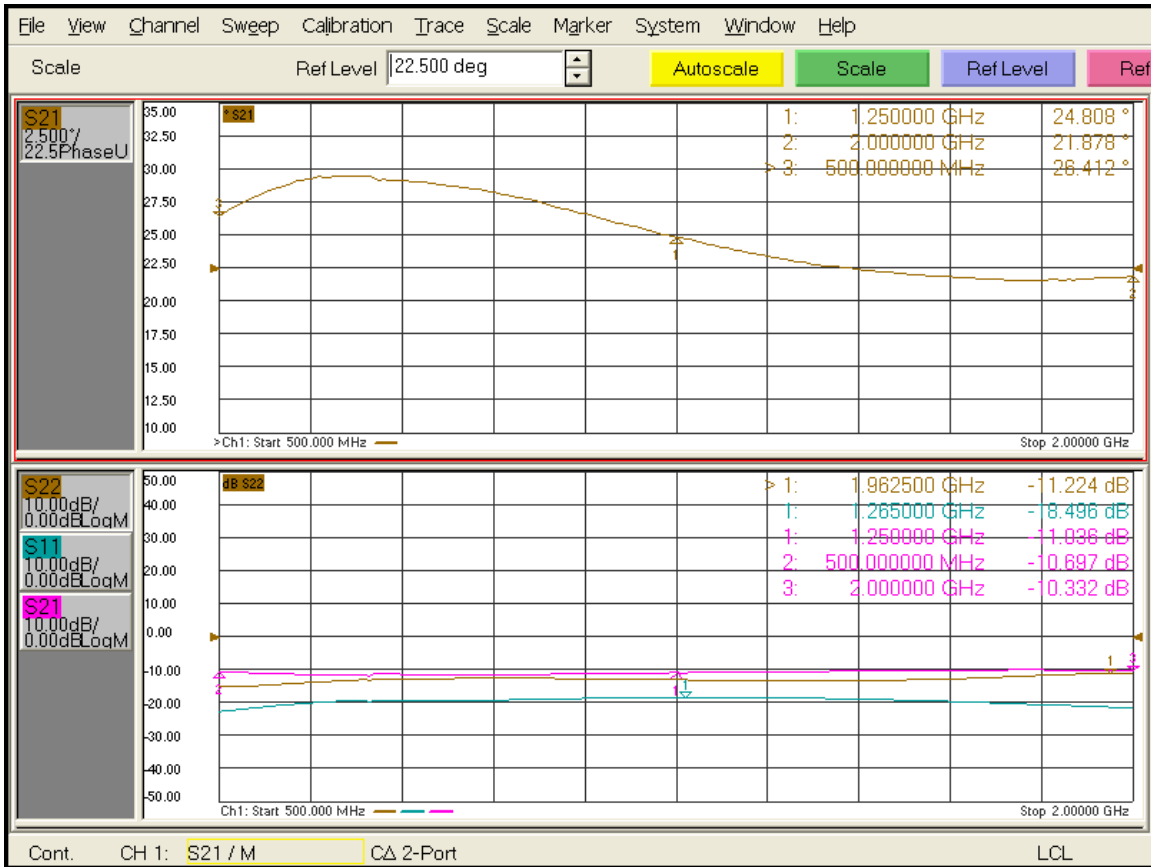


11.25° Phase, 5 dBm Input Power @ 0° C



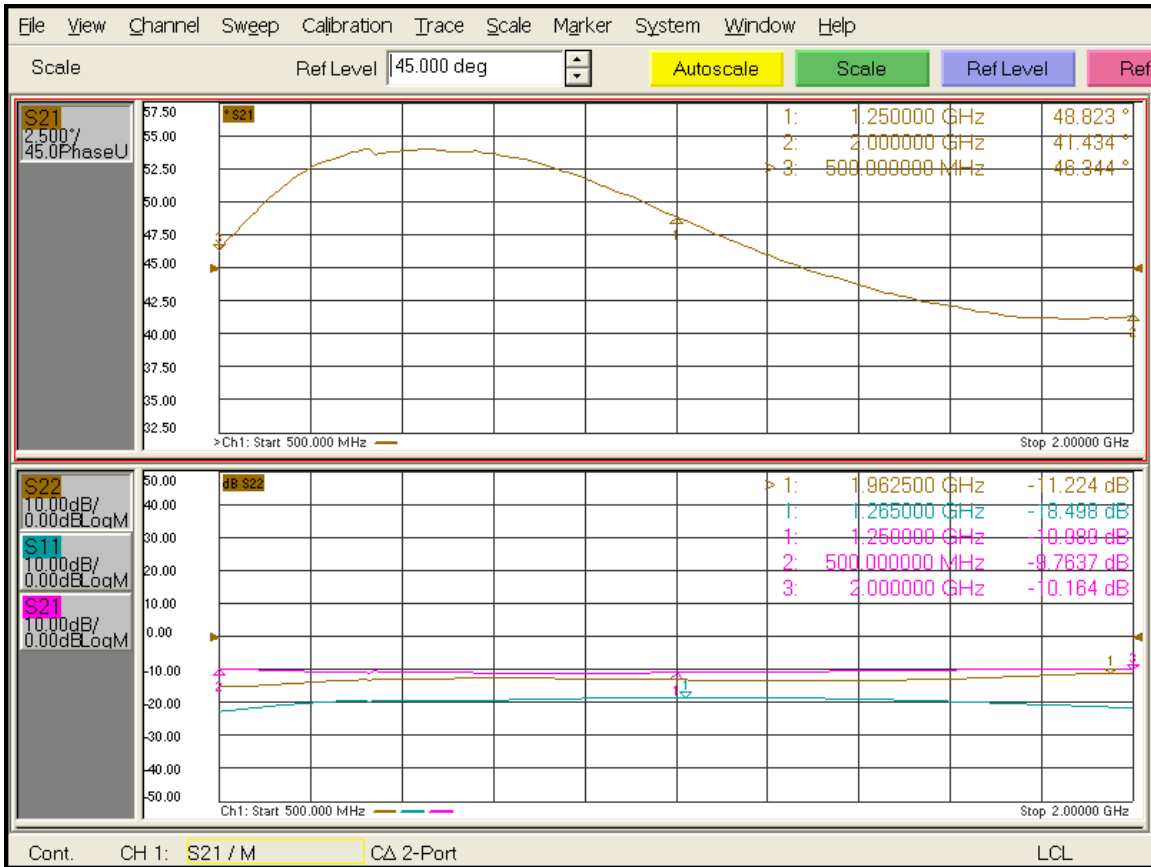


22.5° Phase, 5 dBm Input Power @ 0° C



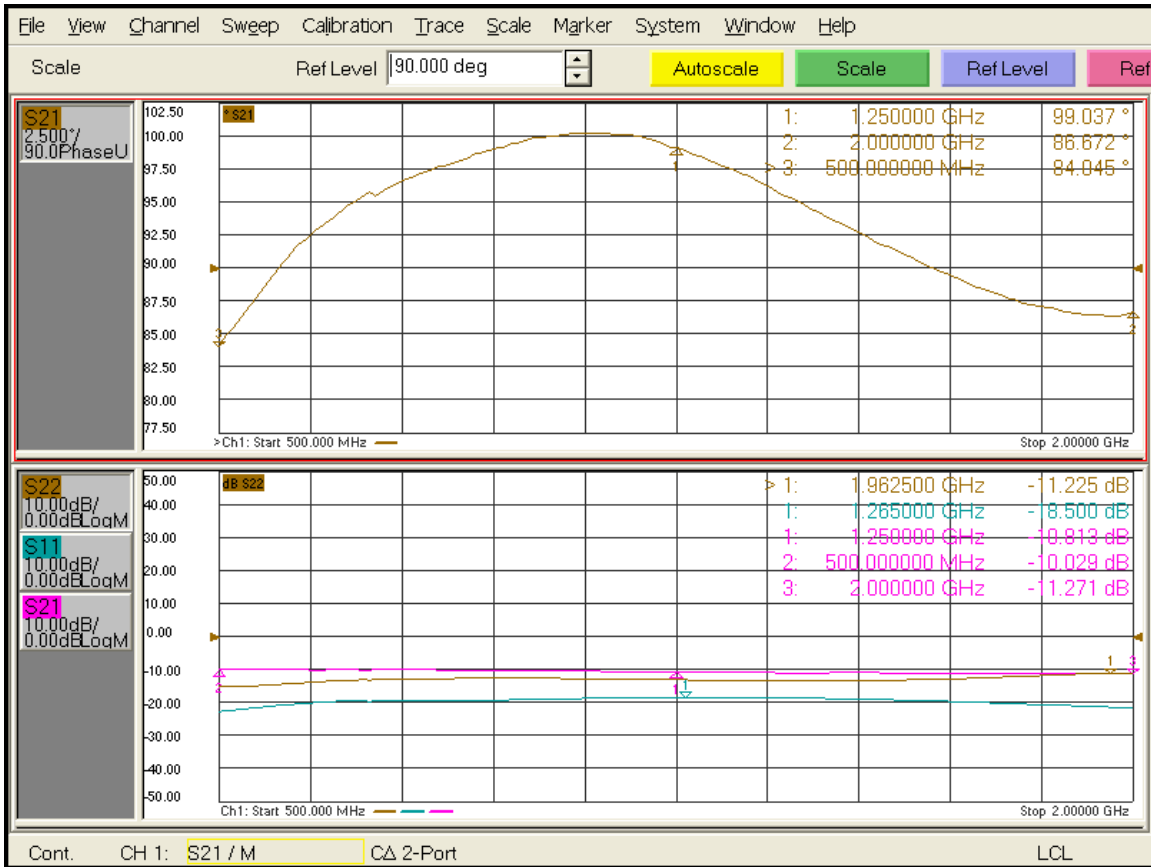


45° Phase, 5 dBm Input Power @ 0° C



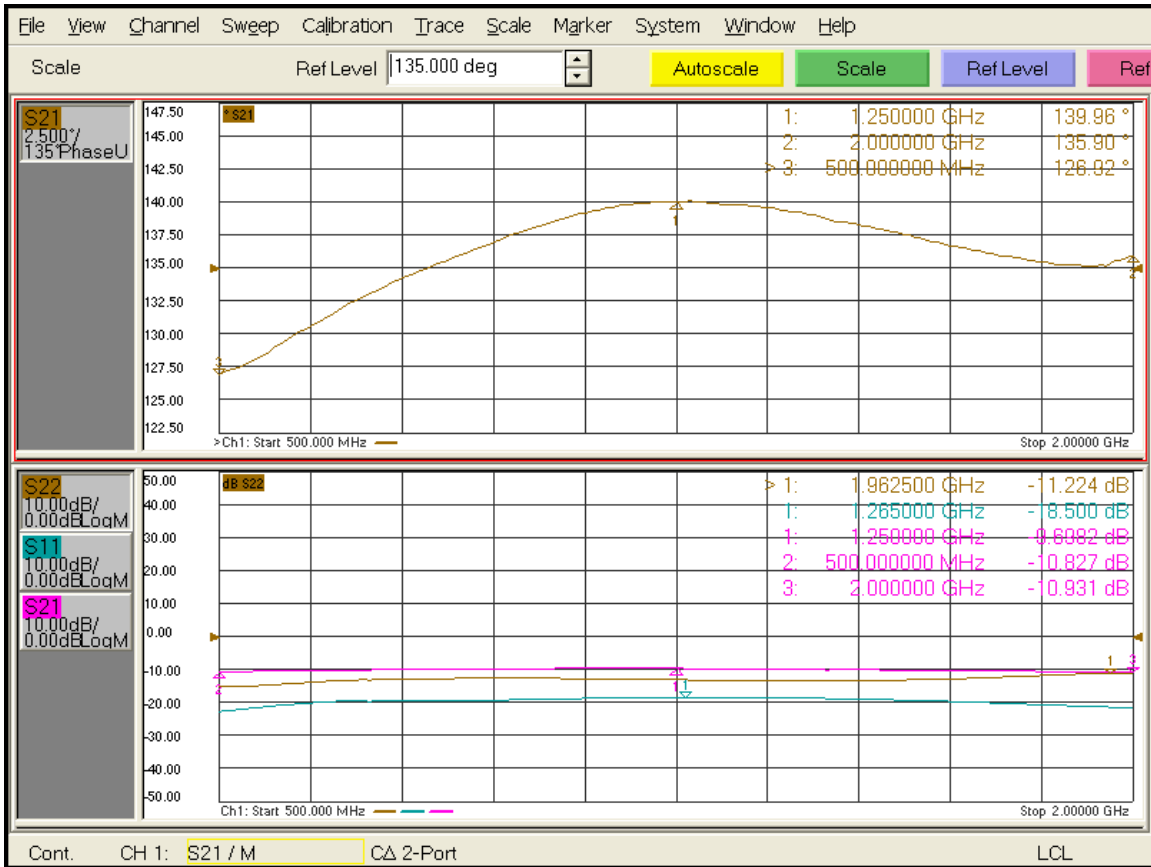


90° Phase, 5 dBm Input Power @ 0° C



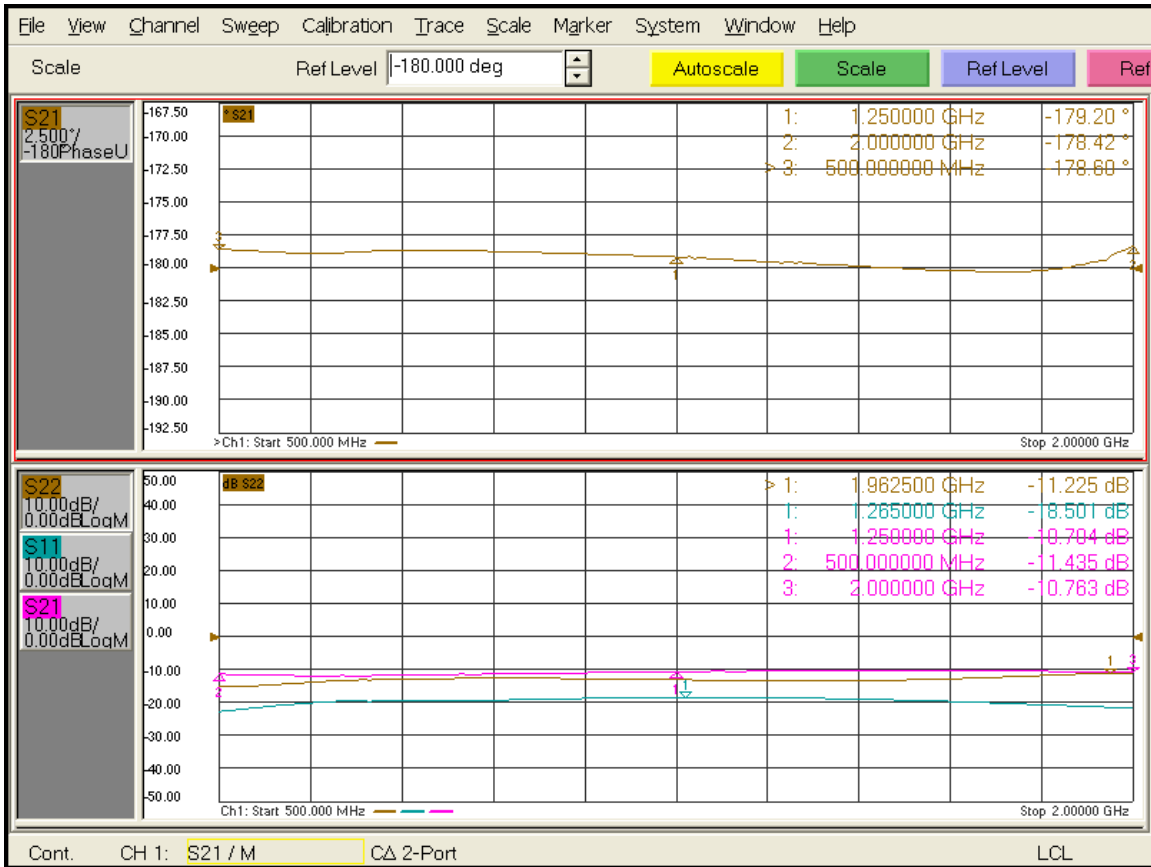


135° Phase, 5 dBm Input Power @ 0° C



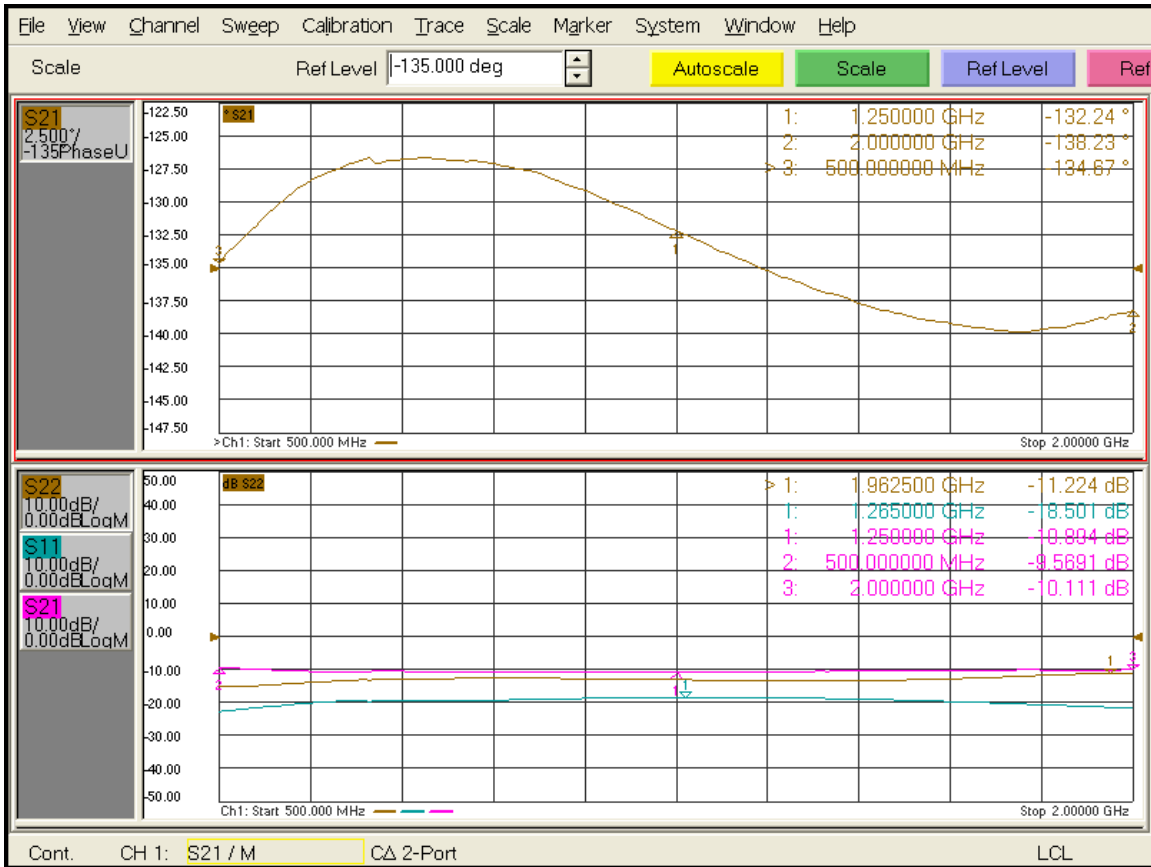


180° Phase, 5 dBm Input Power @ 0° C



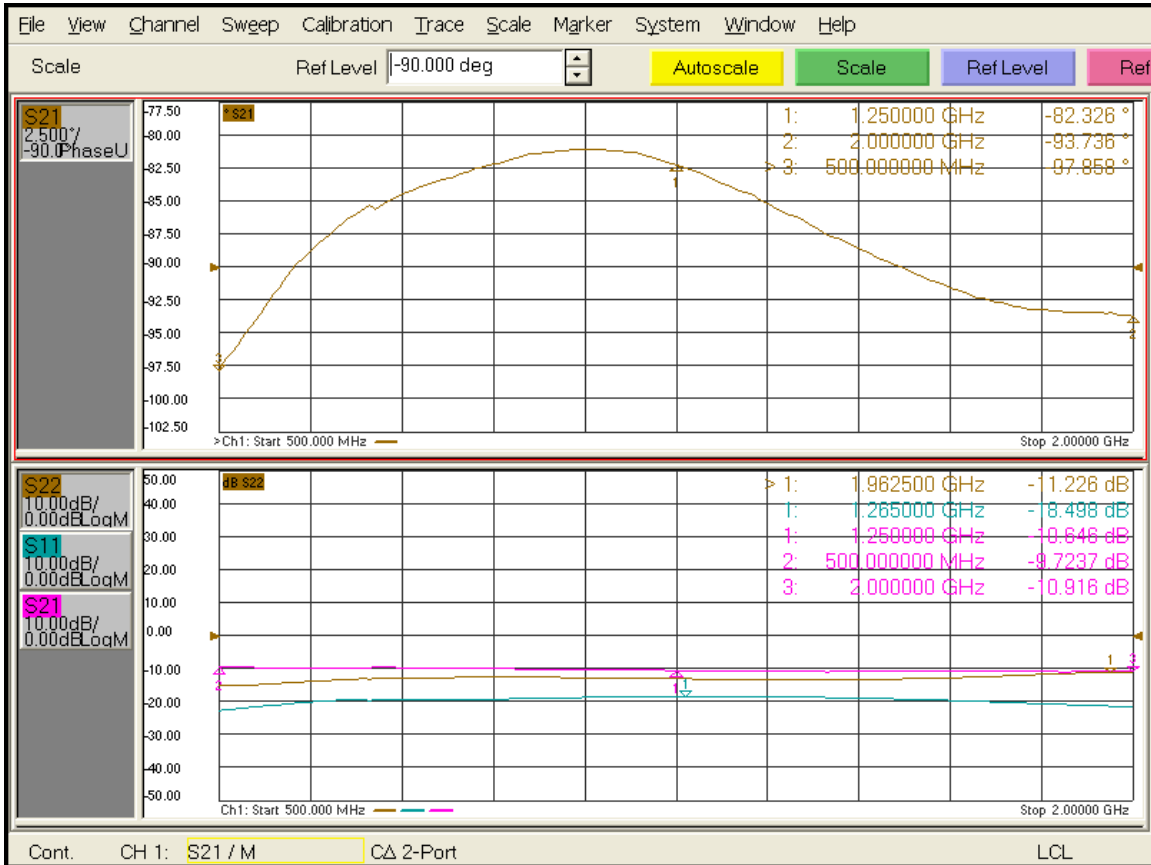


225° Phase, 5 dBm Input Power @ 0° C



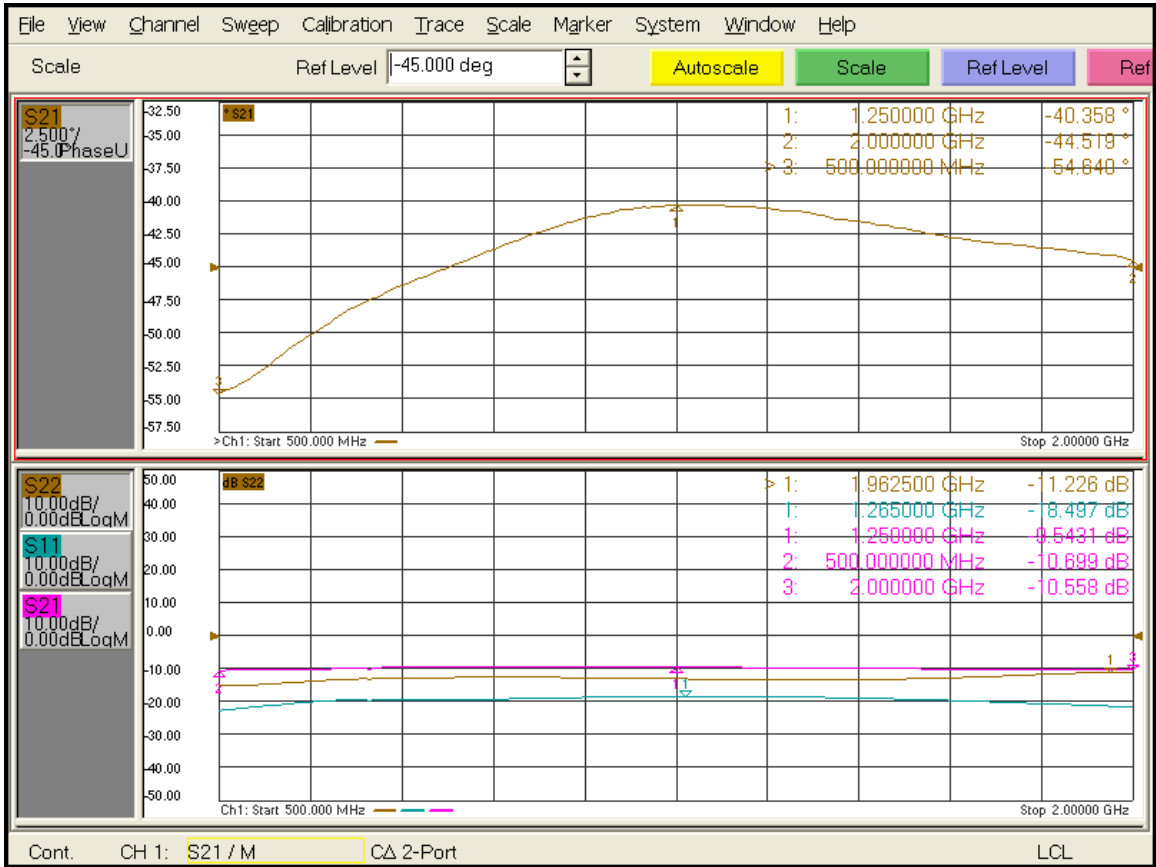


270° Phase, 5 dBm Input Power @ 0° C



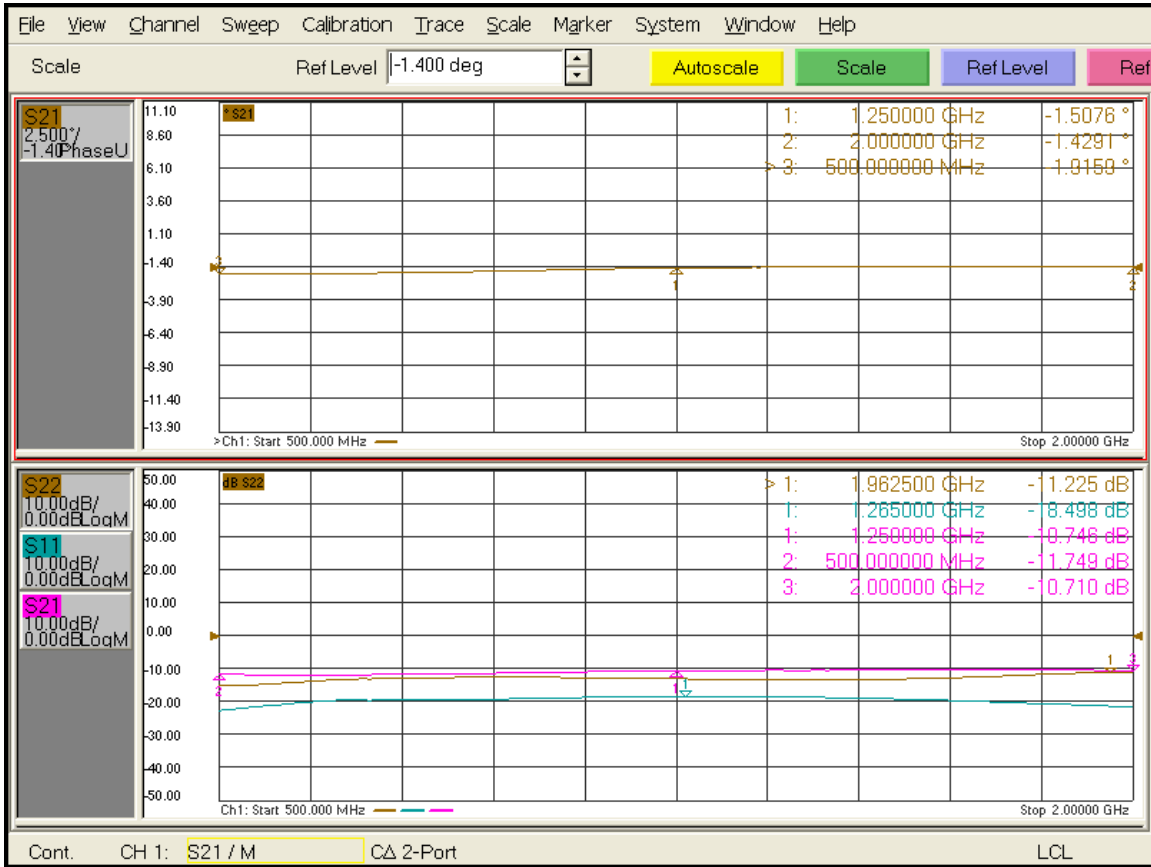


315° Phase, 5 dBm Input Power @ 0° C





358.6° Phase, 5 dBm Input Power @ 0° C





Data Taken at 50° C

Data Taken at -30 dBm Input Power

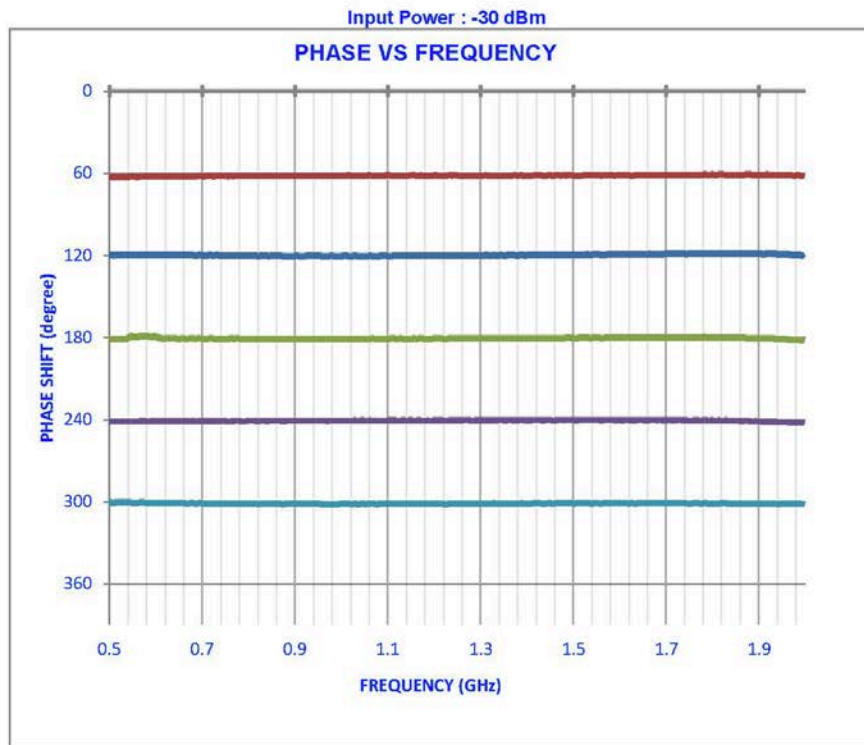
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|--|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 12.06 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.71 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.34 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 0.79 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.45 | -0.04 | 0.15 |
| 2.81 | 2.88 | -0.07 | 0.14 |
| 5.63 | 5.74 | -0.11 | 0.16 |
| 11.25 | 11.55 | -0.30 | 0.18 |
| 22.50 | 21.63 | 0.87 | 0.17 |
| 45.00 | 44.52 | 0.48 | 0.17 |
| 90.00 | 89.35 | 0.65 | 0.18 |
| 180.00 | 179.32 | 0.68 | 0.17 |
| 358.59 | 358.48 | 0.11 | 0.18 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 33.74 | 0.01 | 0.35 |
| 67.50 | 67.30 | 0.20 | 0.35 |
| 101.25 | 99.74 | 1.51 | 0.34 |
| 135.00 | 133.81 | 1.19 | 0.35 |
| 168.75 | 167.85 | 0.90 | 0.38 |
| 202.50 | 202.40 | 0.10 | 0.36 |
| 236.25 | 235.45 | 0.80 | 0.37 |
| 270.00 | 269.26 | 0.74 | 0.38 |
| 303.75 | 303.92 | -0.17 | 0.38 |
| 337.50 | 337.32 | 0.18 | 0.39 |
| | | | |
| | | | |
| | | | |

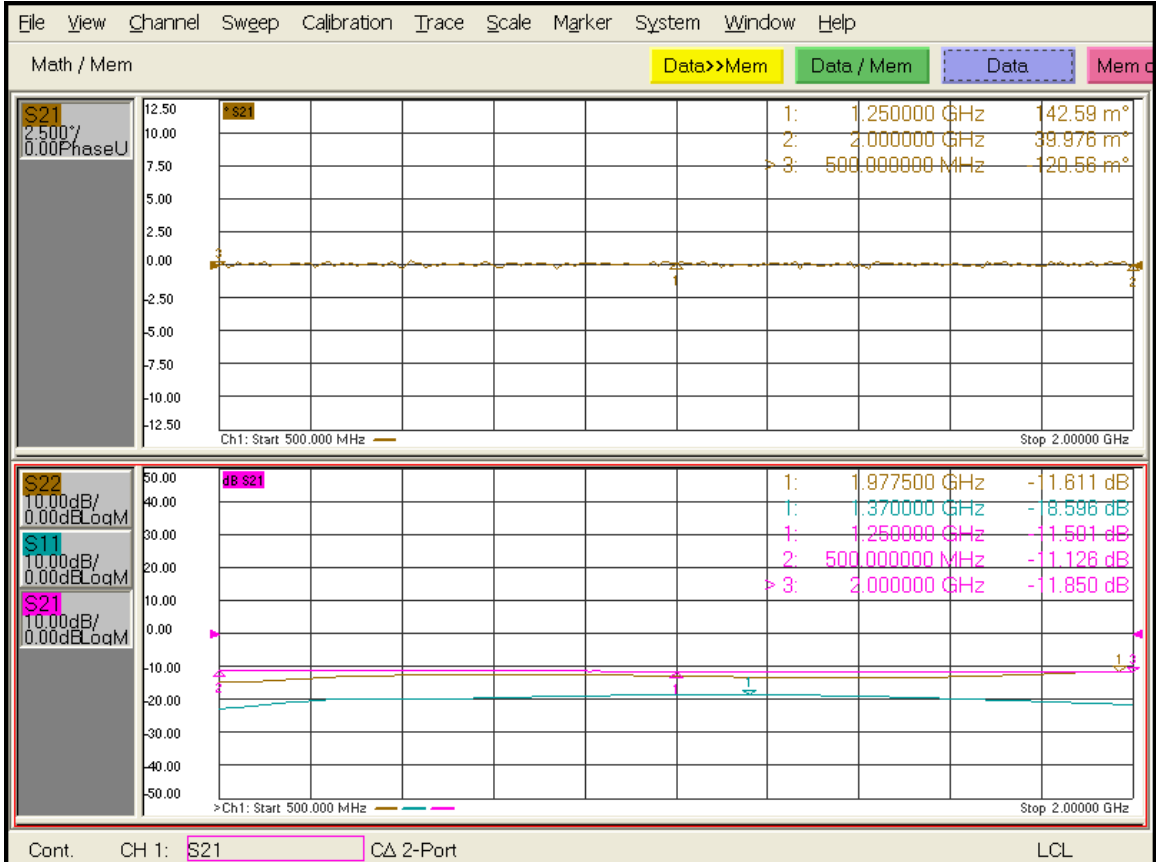


Phase Plot Taken at 50° C



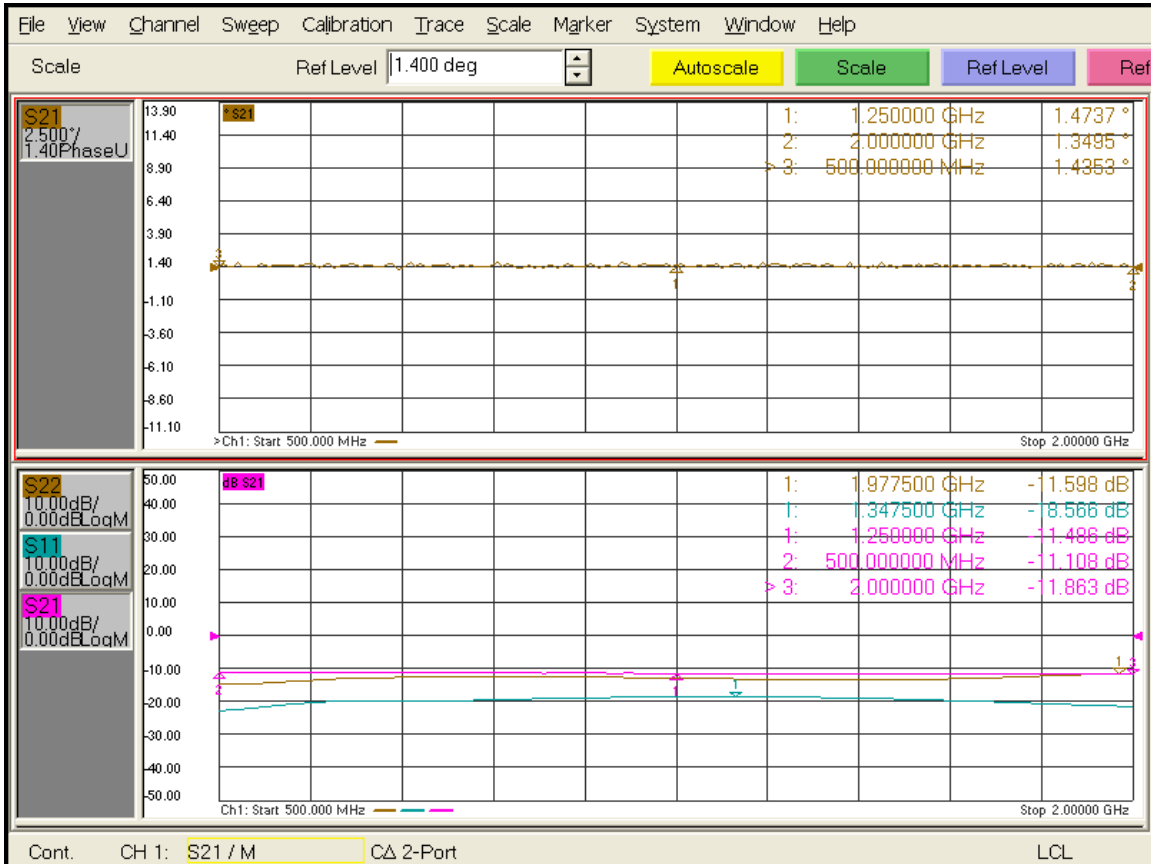


0° Phase, -30 dBm Input Power @ 50° C



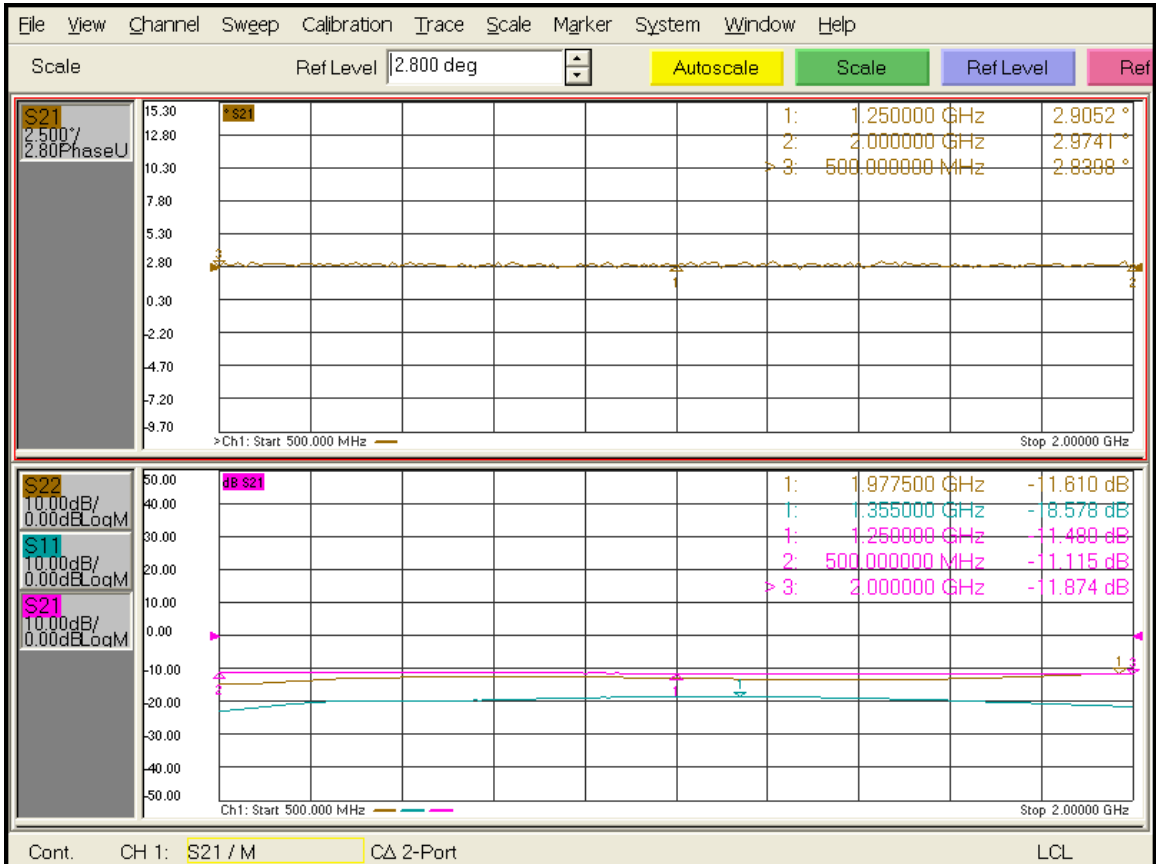


1.4° Phase, -30 dBm Input Power @ 50° C



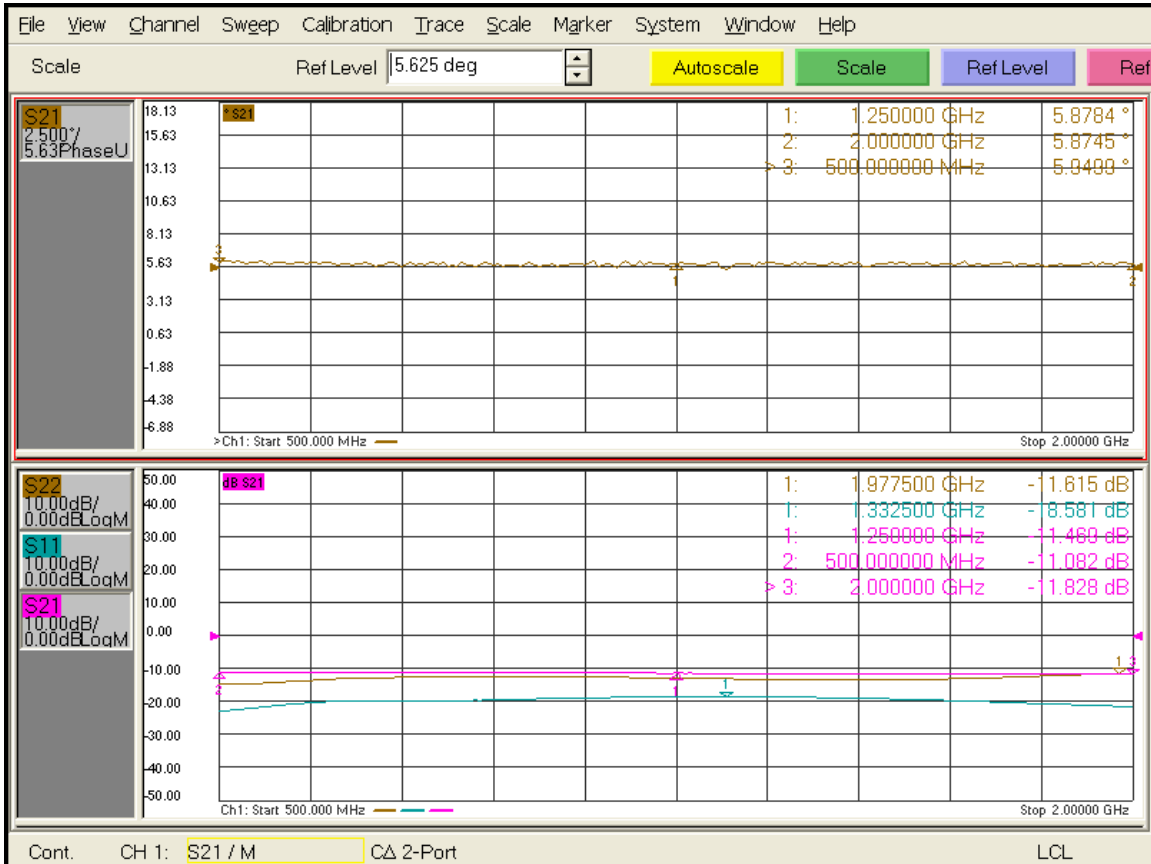


2.8° Phase, -30 dBm Input Power @ 50° C



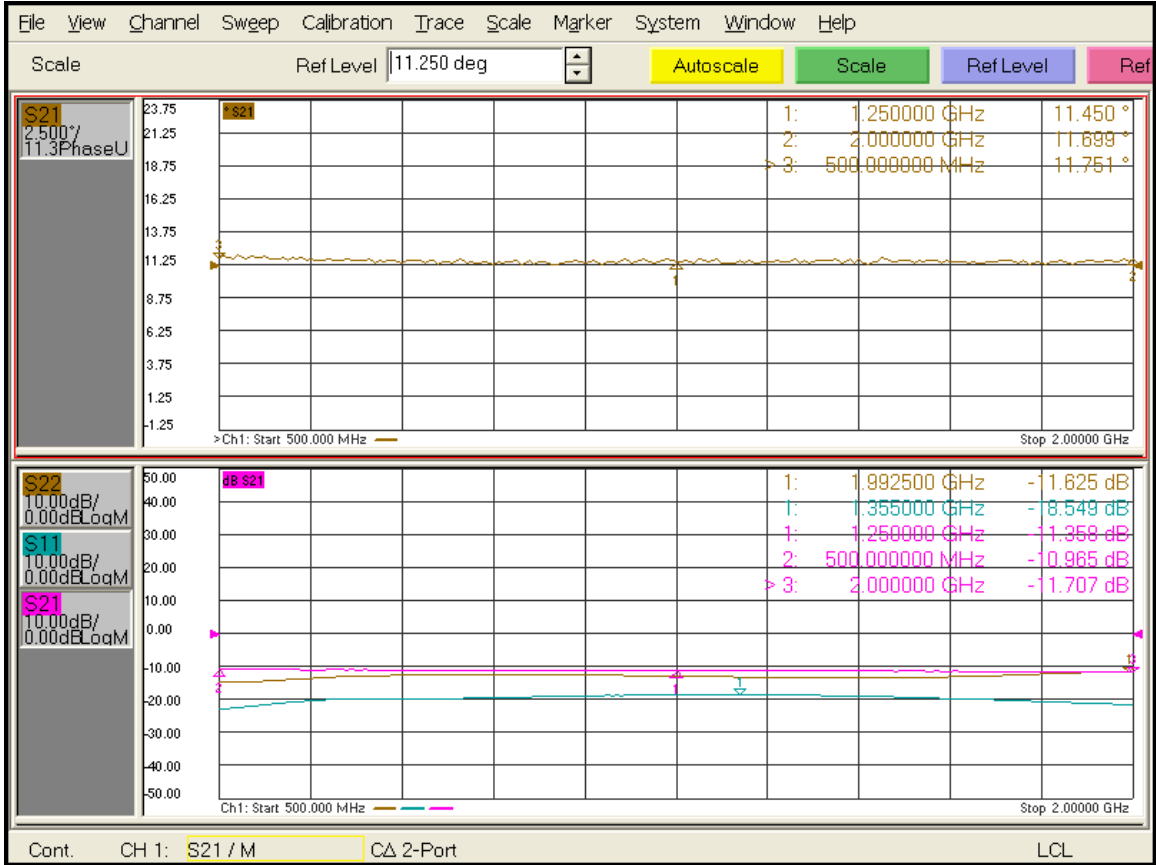


5.625° Phase, -30 dBm Input Power @ 50° C



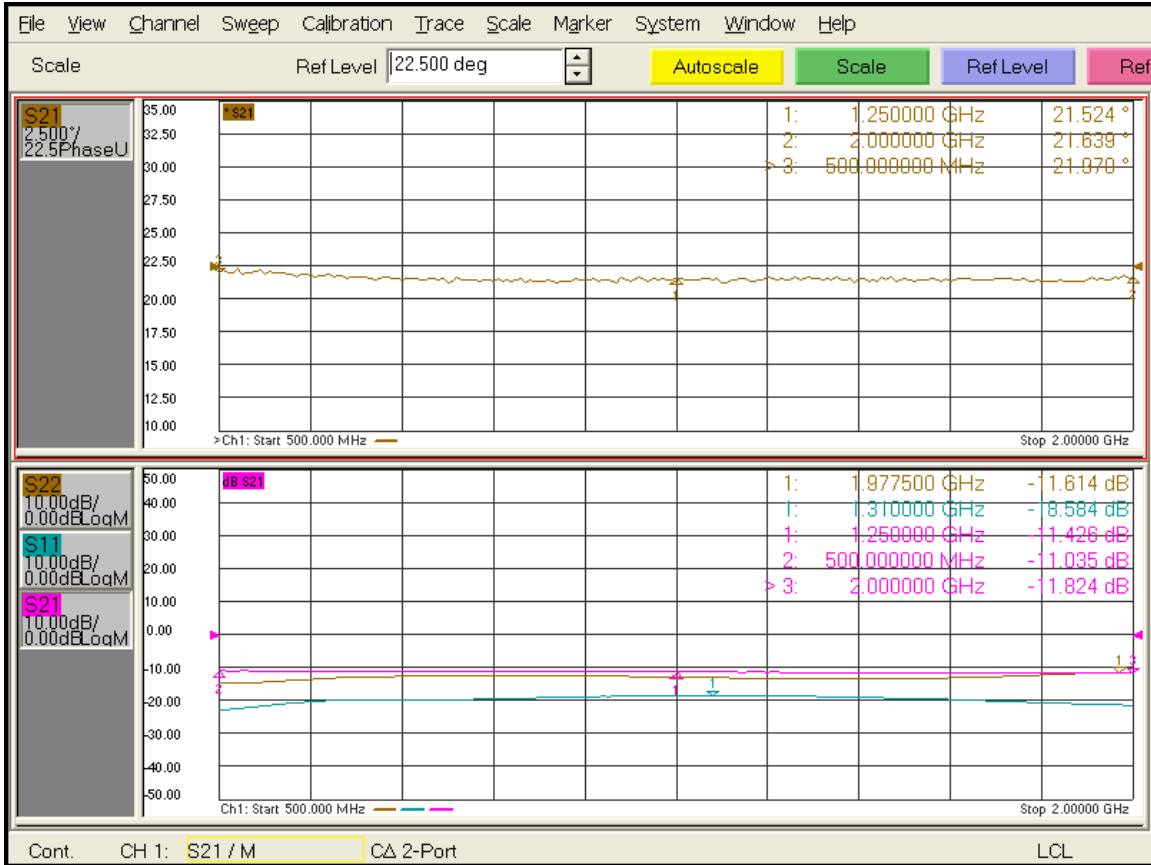


11.25° Phase, -30 dBm Input Power @ 50° C



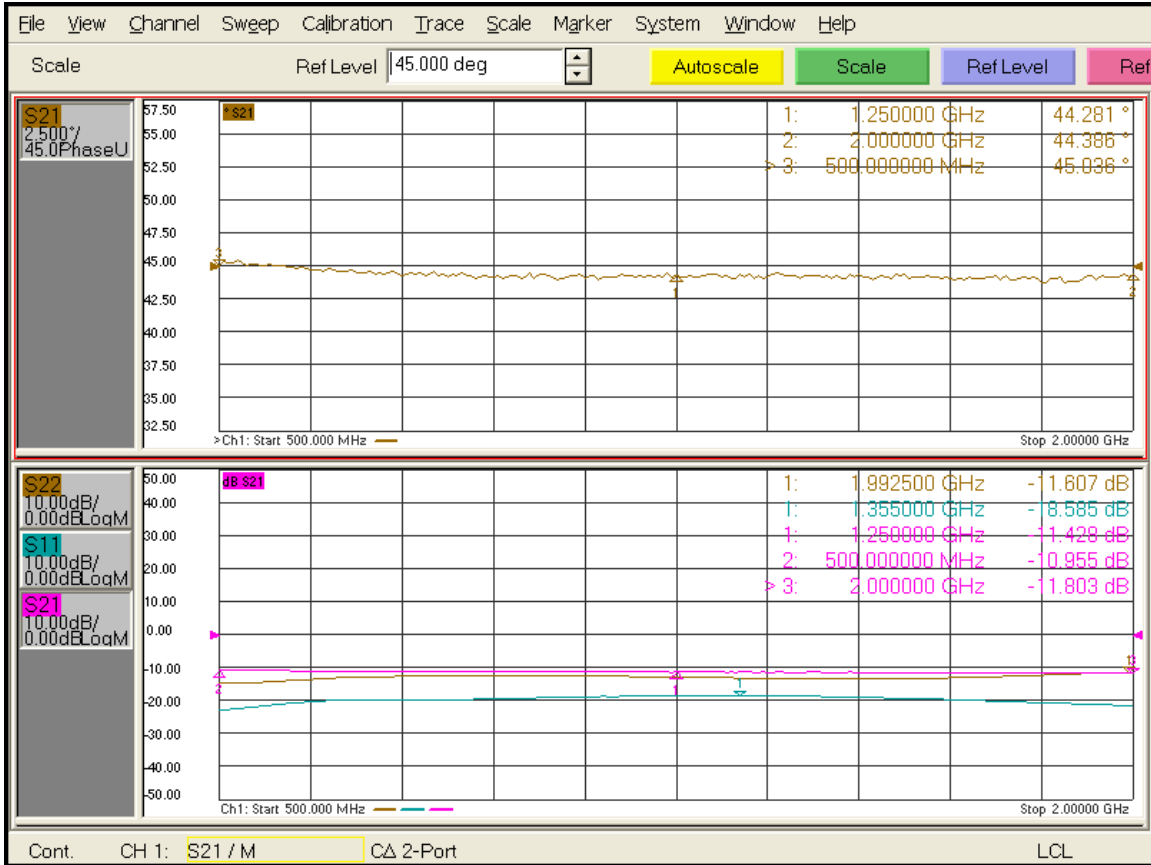


22.5° Phase, -30 dBm Input Power @ 50° C



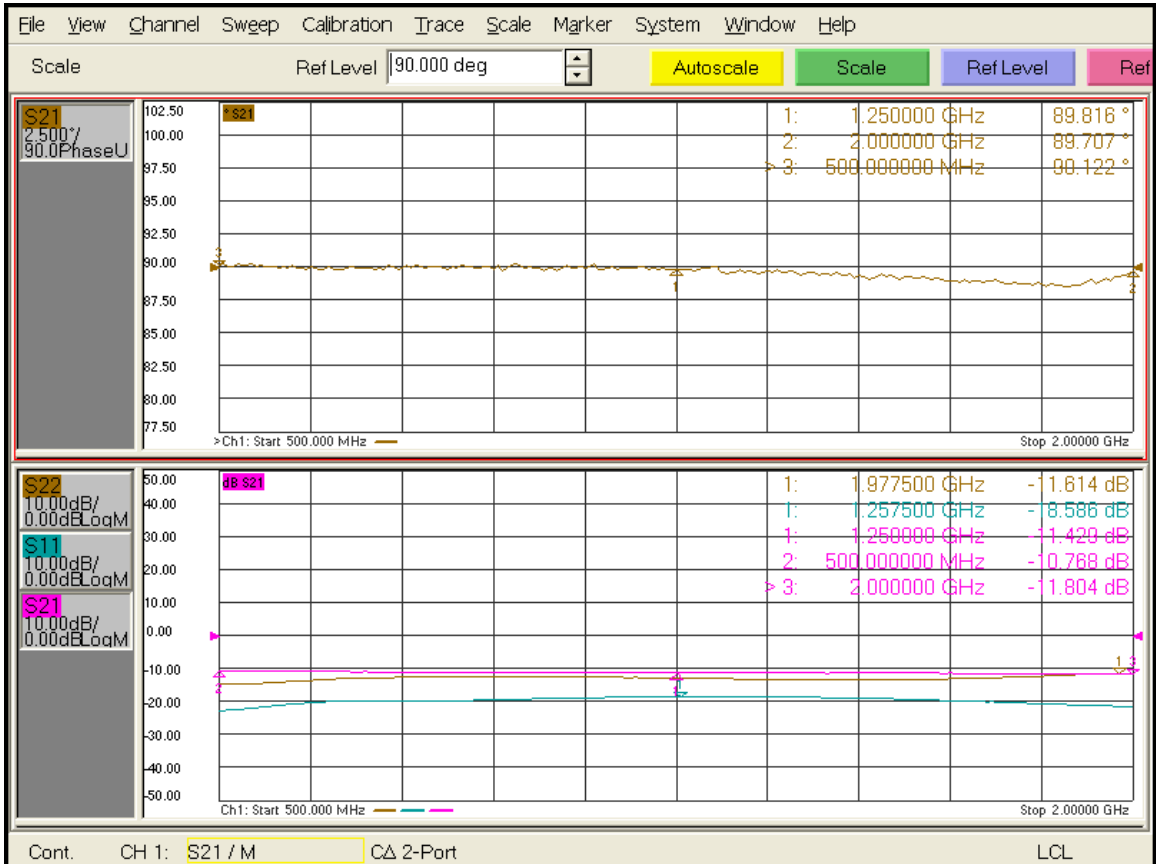


45° Phase, -30 dBm Input Power @ 50° C



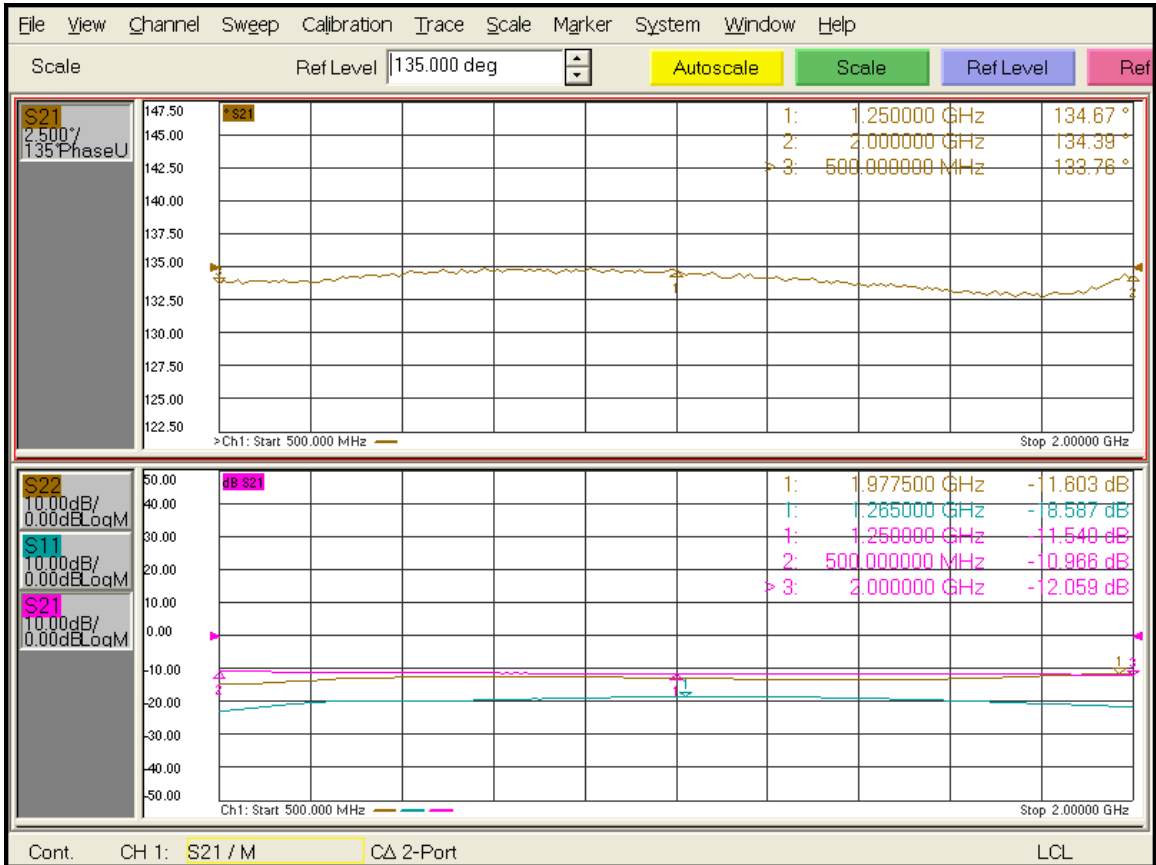


90° Phase, -30 dBm Input Power @ 50° C



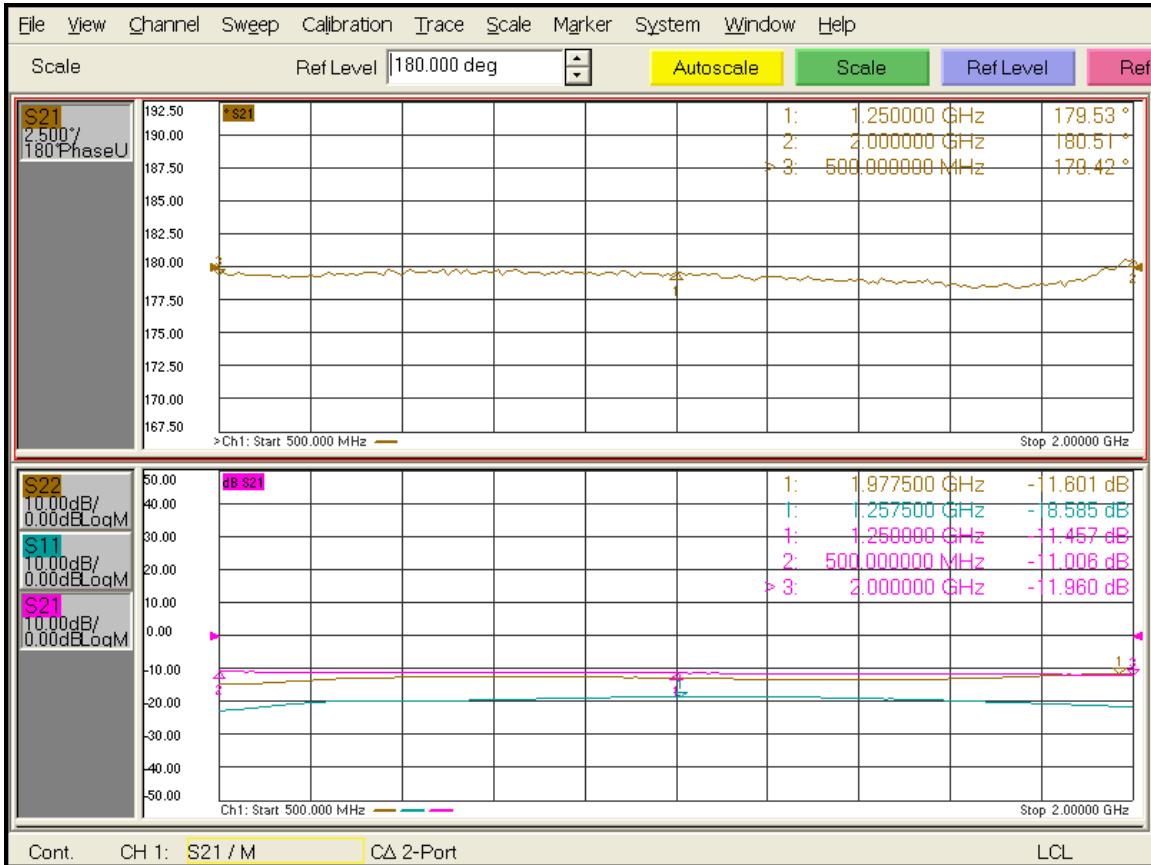


135° Phase, -30 dBm Input Power @ 50° C



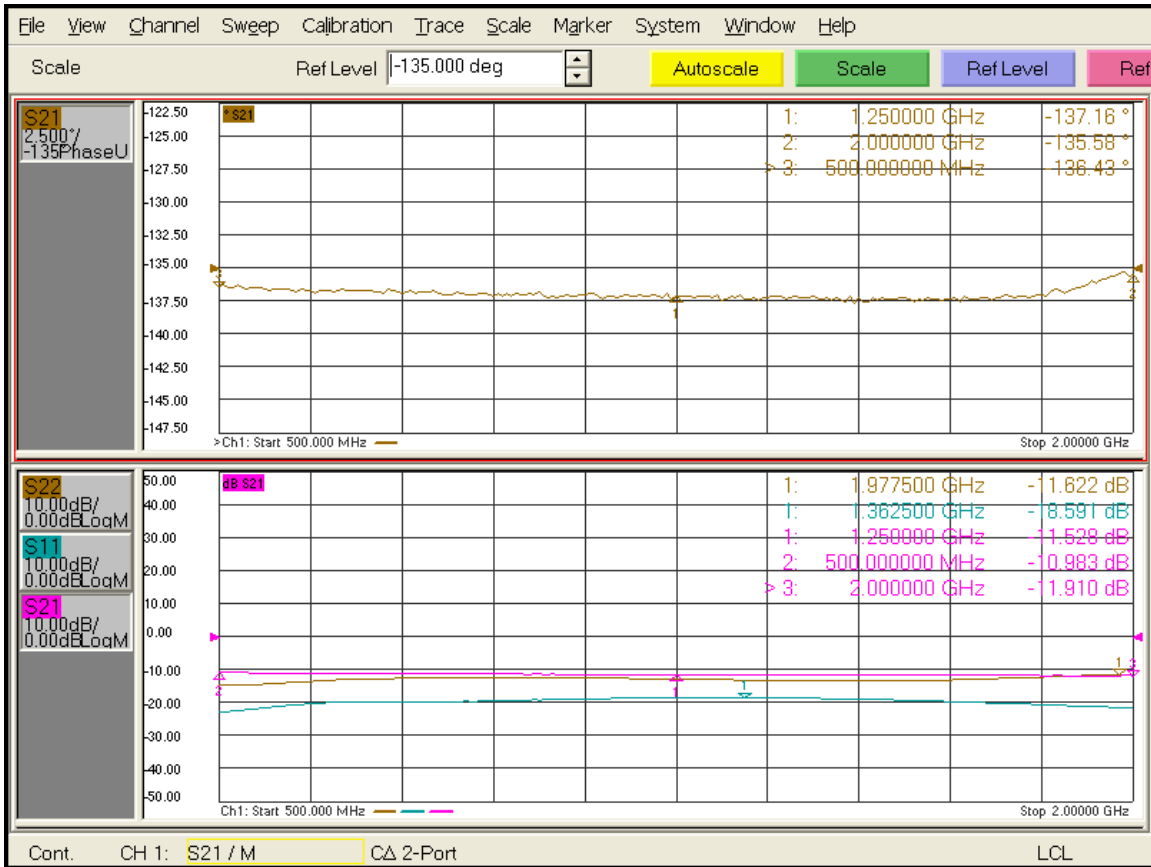


180° Phase, -30 dBm Input Power @ 50° C



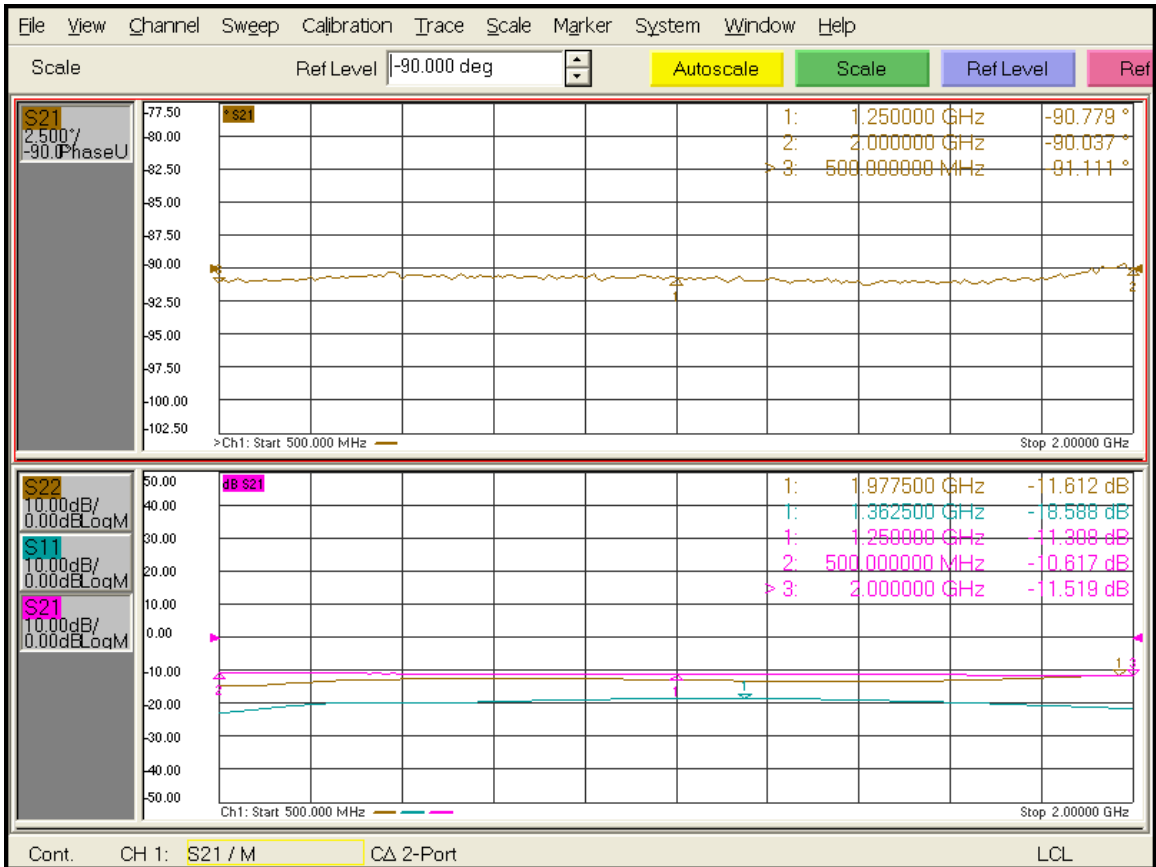


225° Phase, -30 dBm Input Power @ 50° C



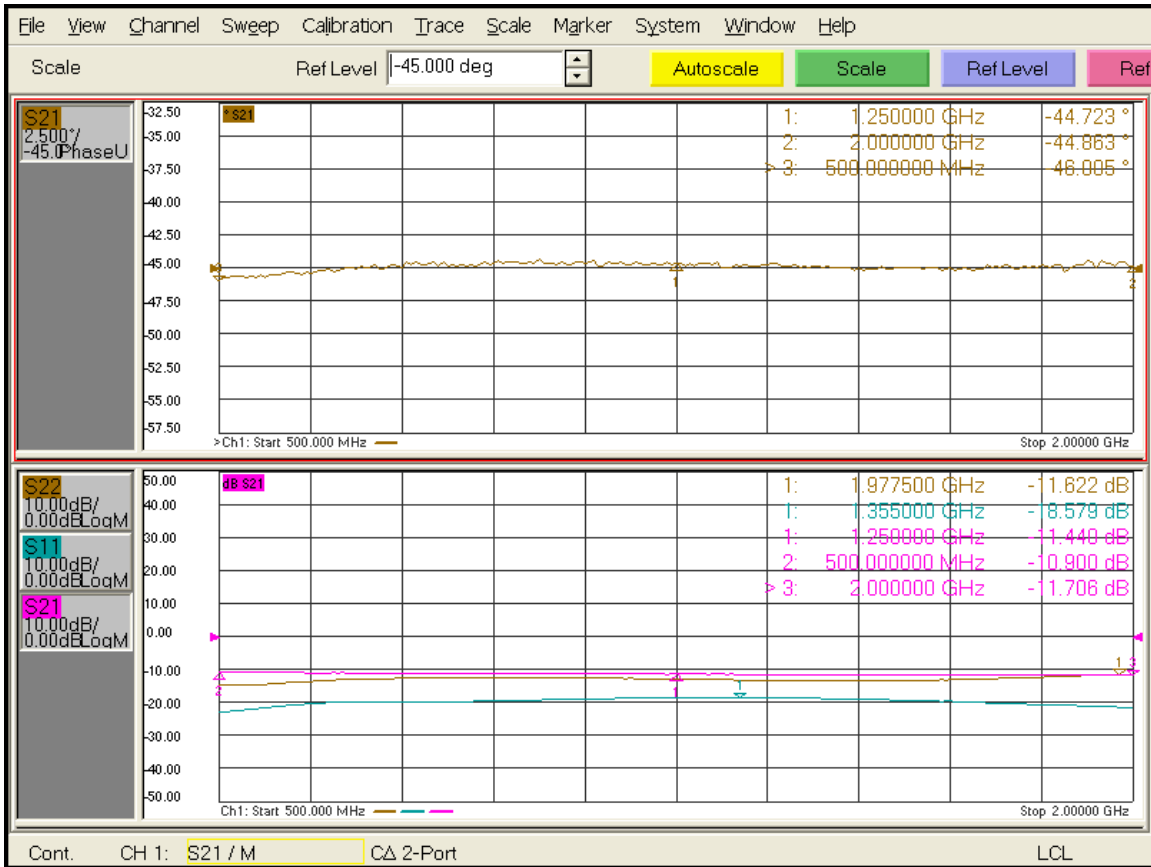


270° Phase, -30 dBm Input Power @ 50° C



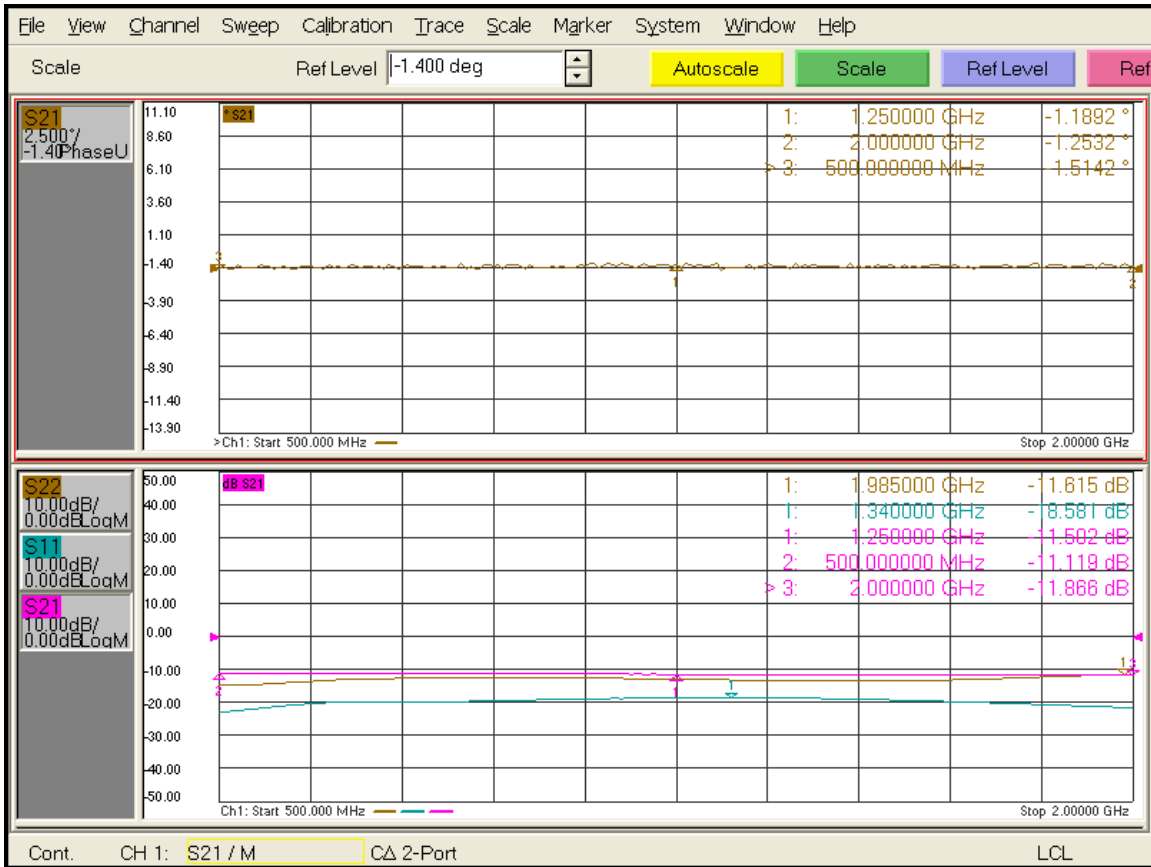


315° Phase, -30 dBm Input Power @ 50° C





358.6° Phase, -30 dBm Input Power @ 50° C





Data Taken at 50° C

Data Taken at -20 dBm Input Power

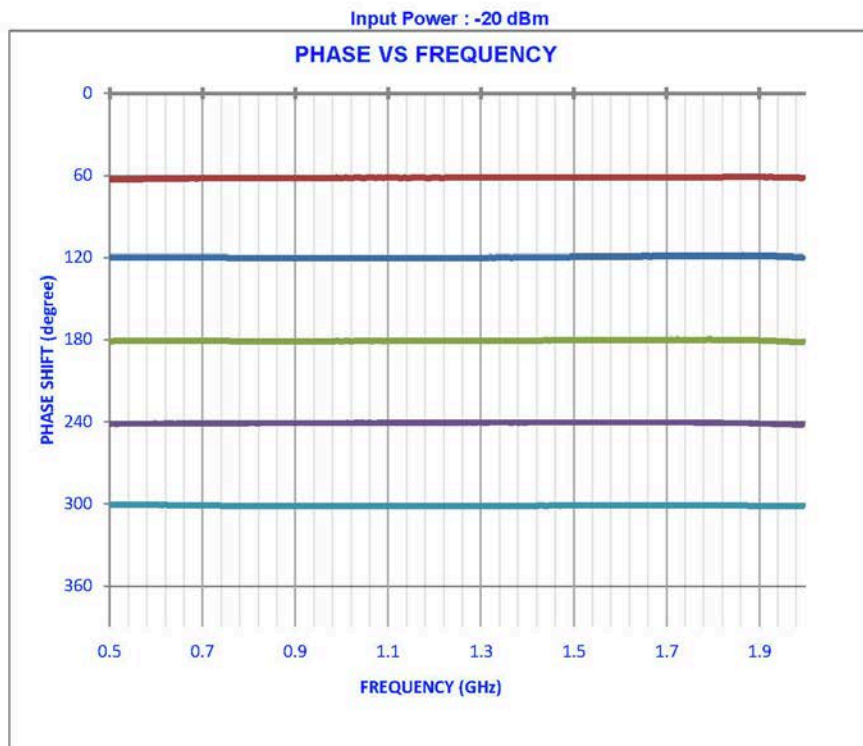
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 11.87 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.71 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.38 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 0.77 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.45 | -0.04 | 0.05 |
| 2.81 | 2.89 | -0.08 | 0.06 |
| 5.63 | 5.83 | -0.20 | 0.09 |
| 11.25 | 11.57 | -0.32 | 0.10 |
| 22.50 | 21.65 | 0.85 | 0.12 |
| 45.00 | 44.69 | 0.31 | 0.13 |
| 90.00 | 89.43 | 0.57 | 0.14 |
| 180.00 | 179.49 | 0.51 | 0.14 |
| 358.59 | 358.55 | 0.04 | 0.16 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 33.84 | -0.09 | 0.34 |
| 67.50 | 67.52 | -0.02 | 0.33 |
| 101.25 | 99.72 | 1.53 | 0.36 |
| 135.00 | 133.84 | 1.16 | 0.35 |
| 168.75 | 167.94 | 0.81 | 0.36 |
| 202.50 | 202.35 | 0.15 | 0.37 |
| 236.25 | 235.53 | 0.72 | 0.37 |
| 270.00 | 269.36 | 0.64 | 0.39 |
| 303.75 | 303.88 | -0.13 | 0.41 |
| 337.50 | 337.33 | 0.17 | 0.42 |
| | | | |
| | | | |
| | | | |

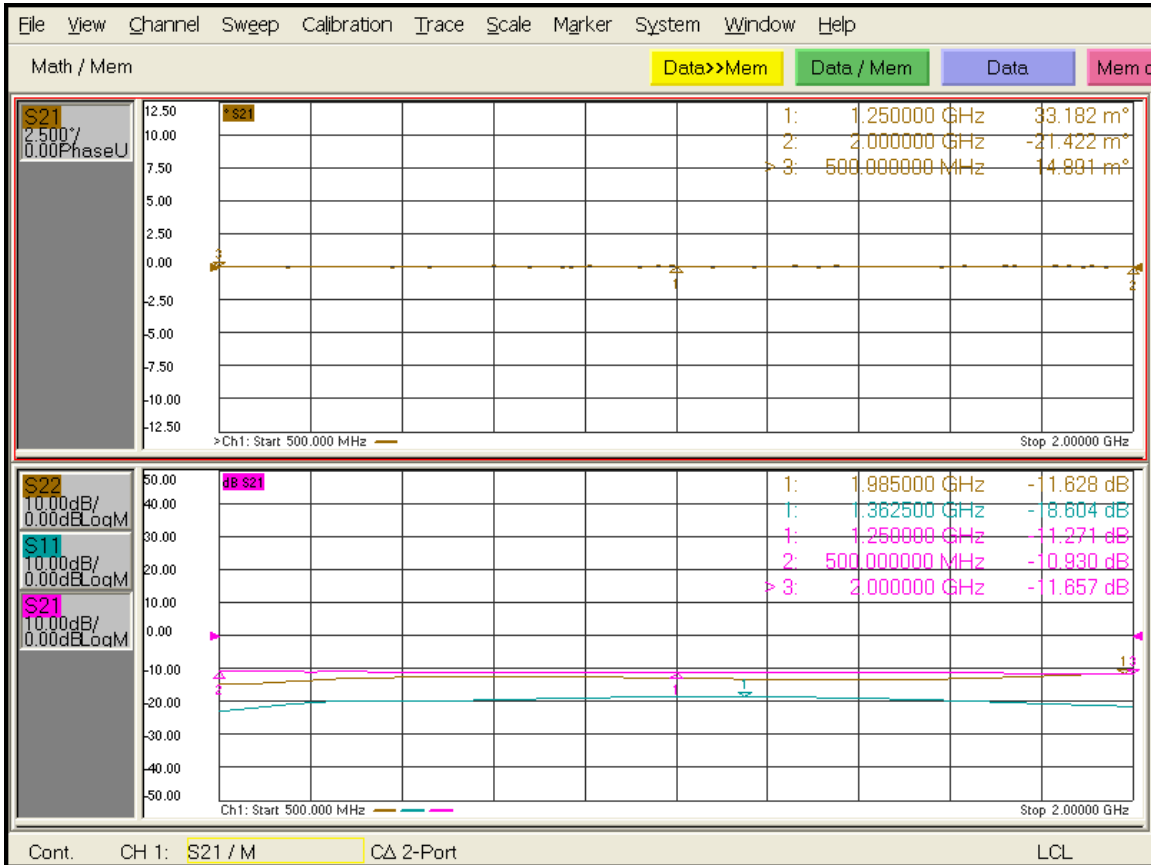


Phase Plot Taken at 50° C



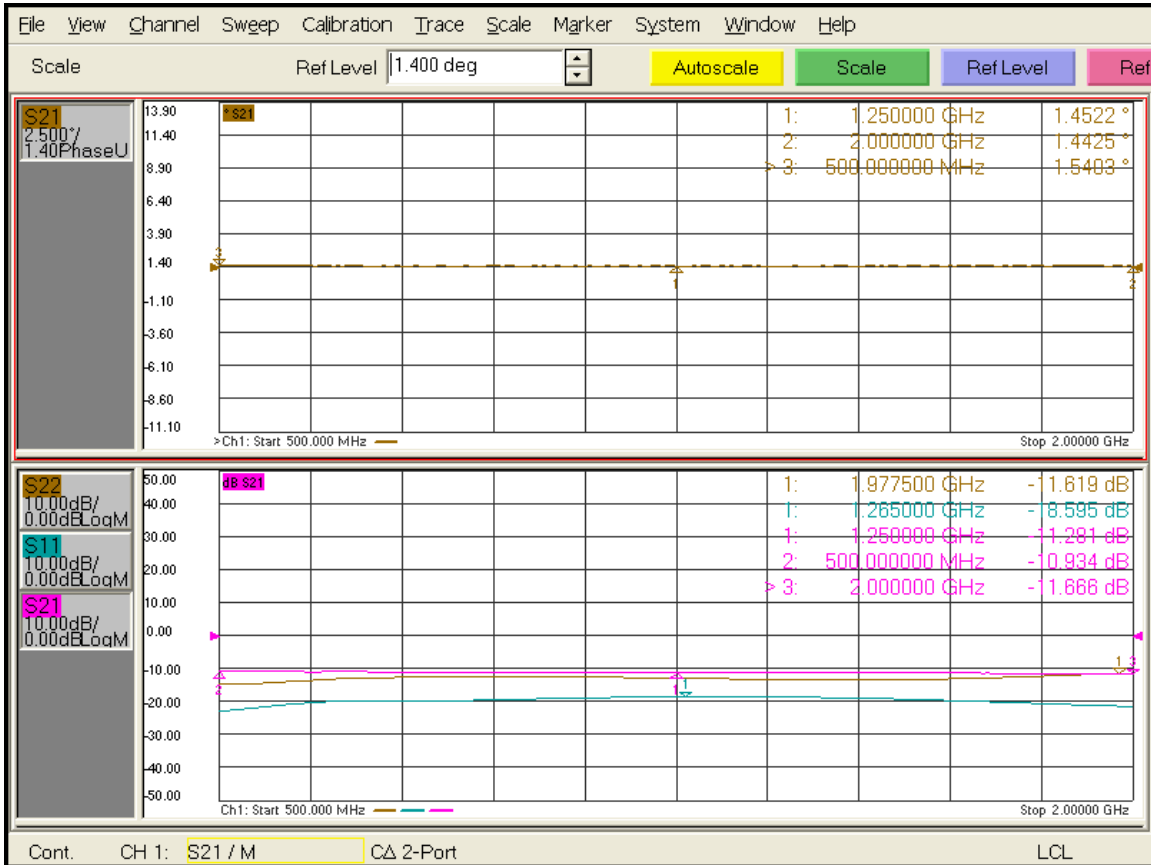


0° Phase, -20 dBm Input Power @ 50° C



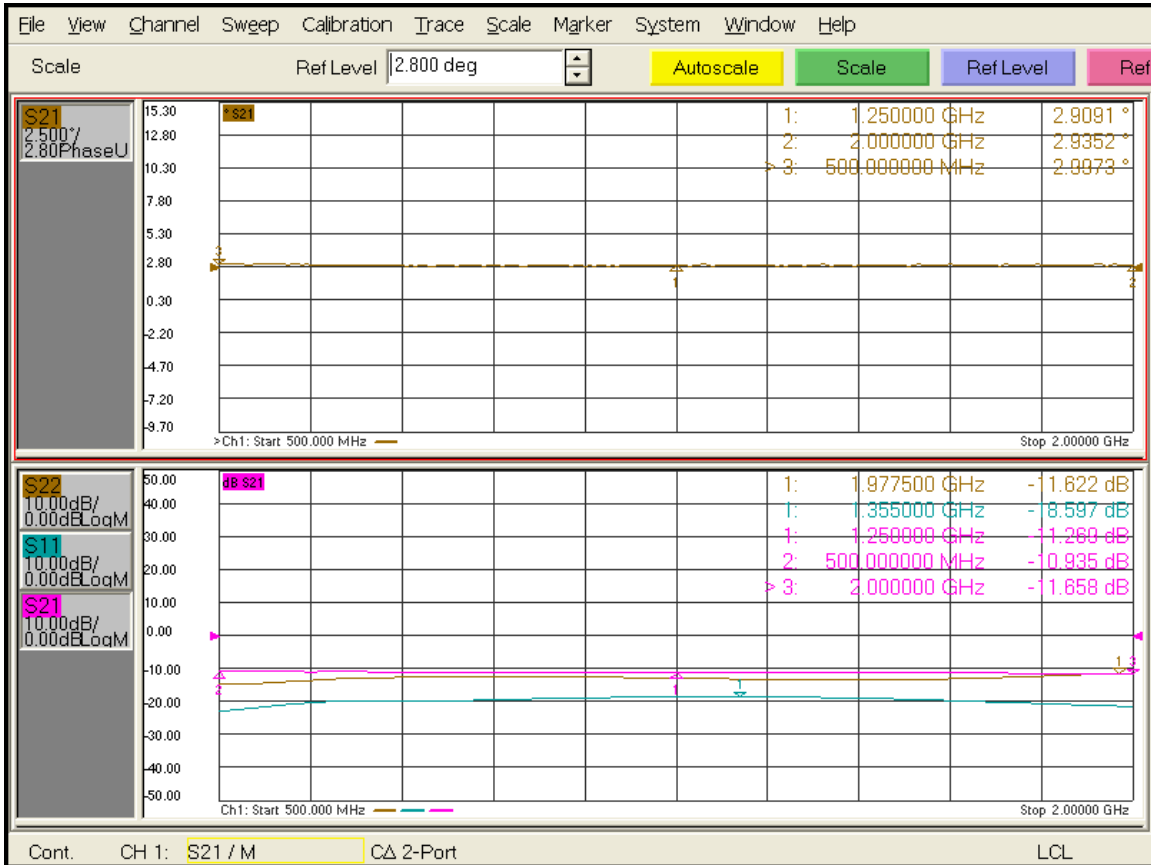


1.4° Phase, -20 dBm Input Power @ 50° C



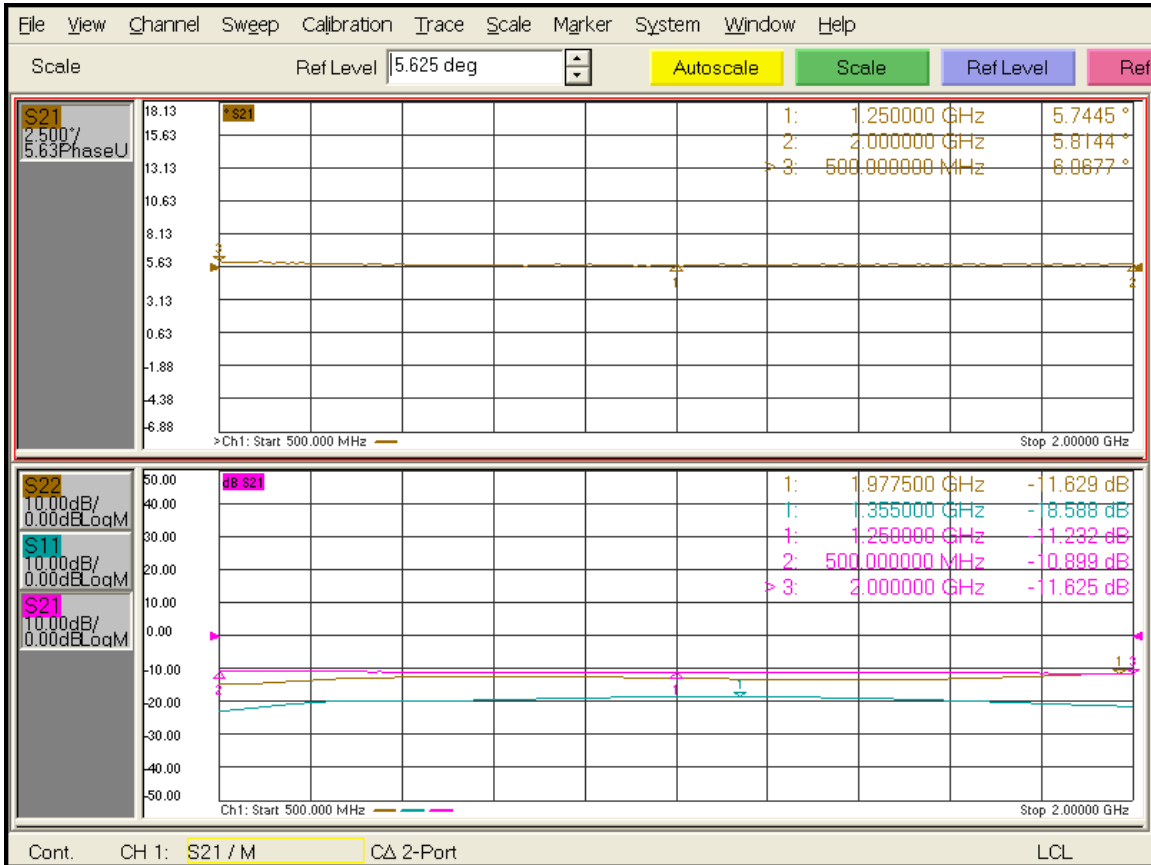


2.8° Phase, -20 dBm Input Power @ 50° C



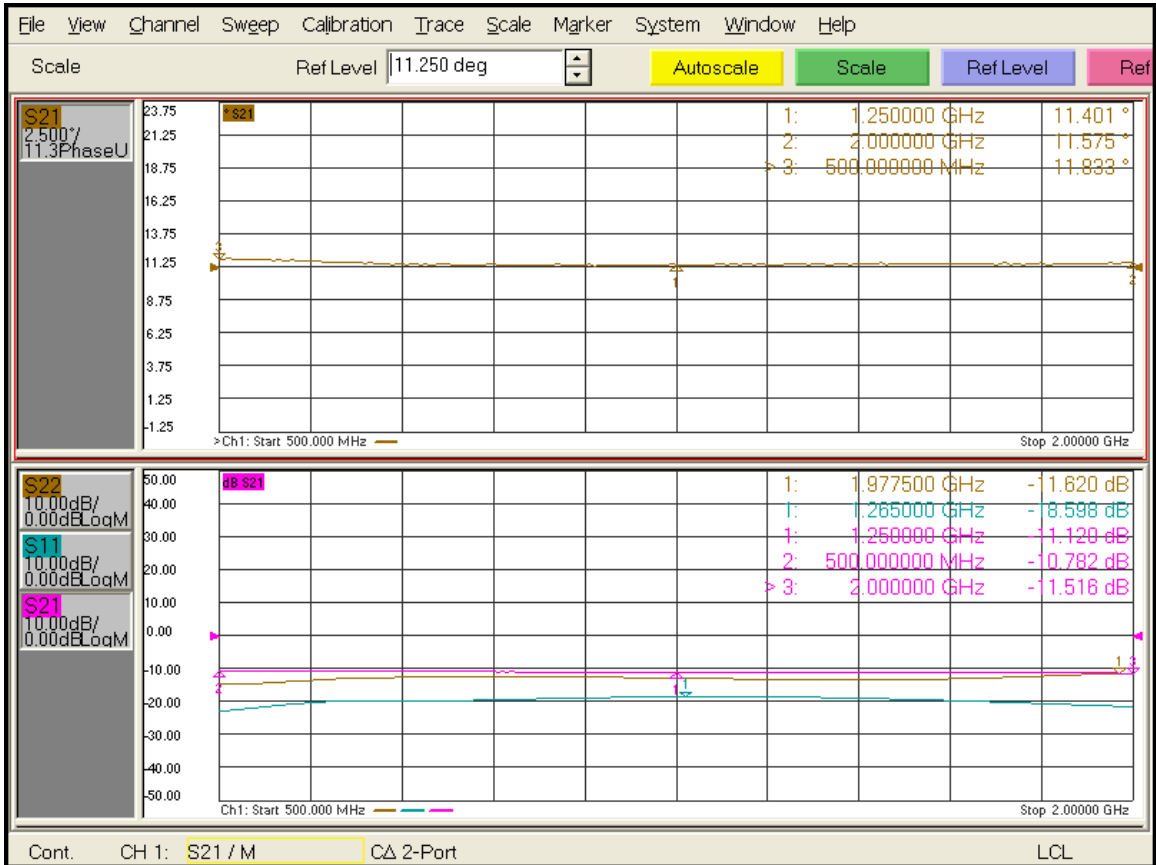


5.625° Phase, -20 dBm Input Power @ 50° C



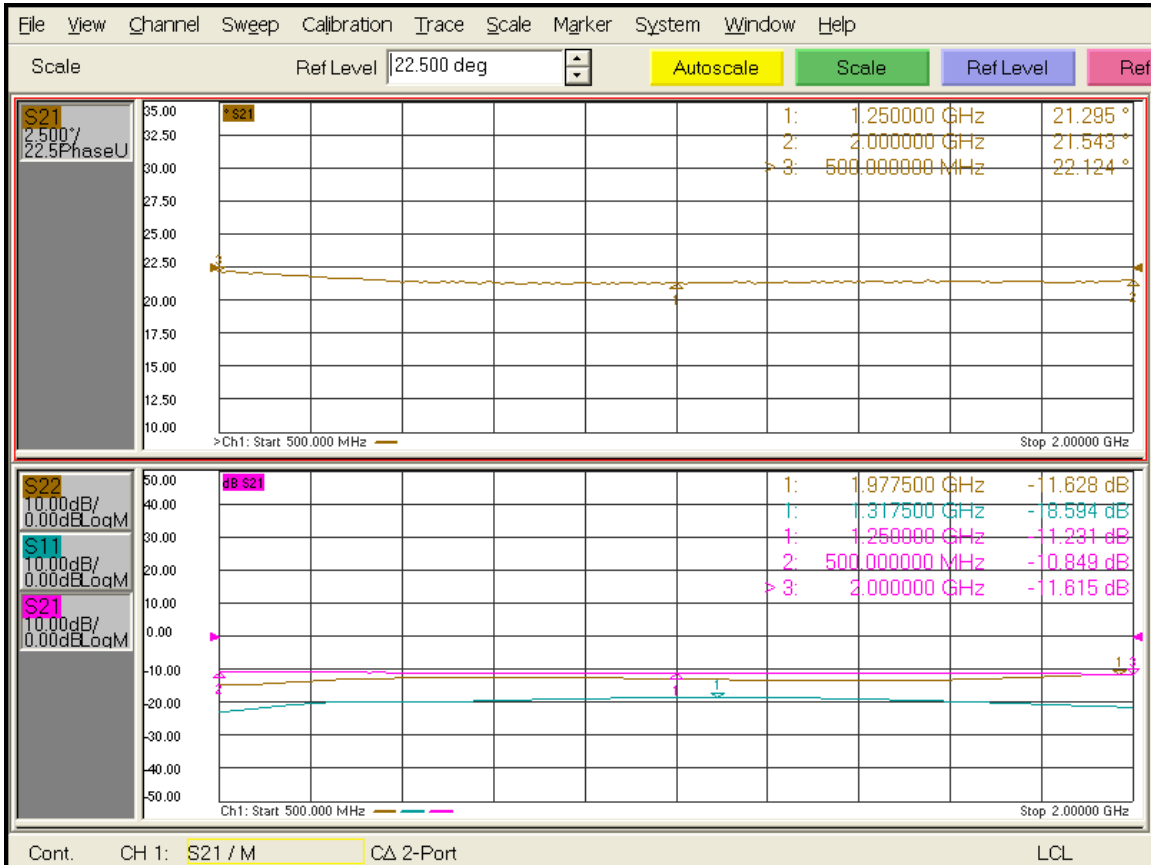


11.25° Phase, -20 dBm Input Power @ 50° C



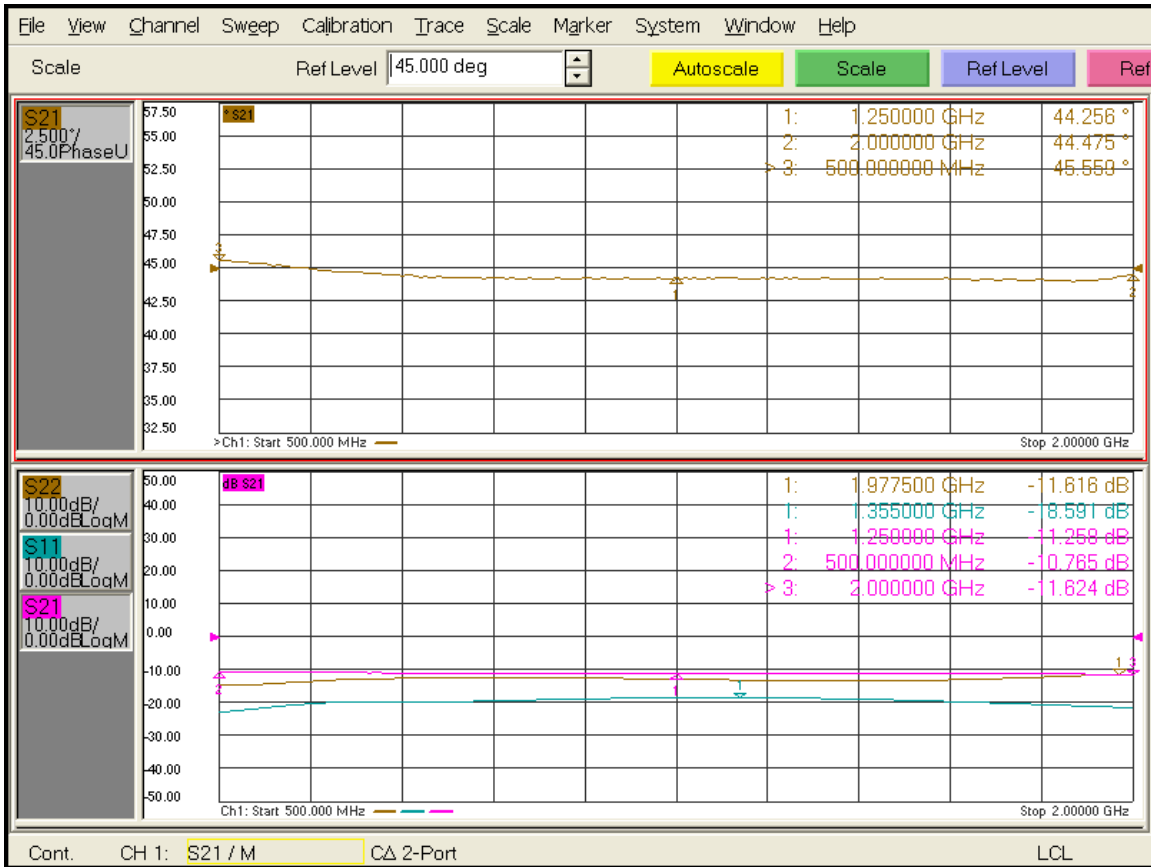


22.5° Phase, -20 dBm Input Power @ 50° C



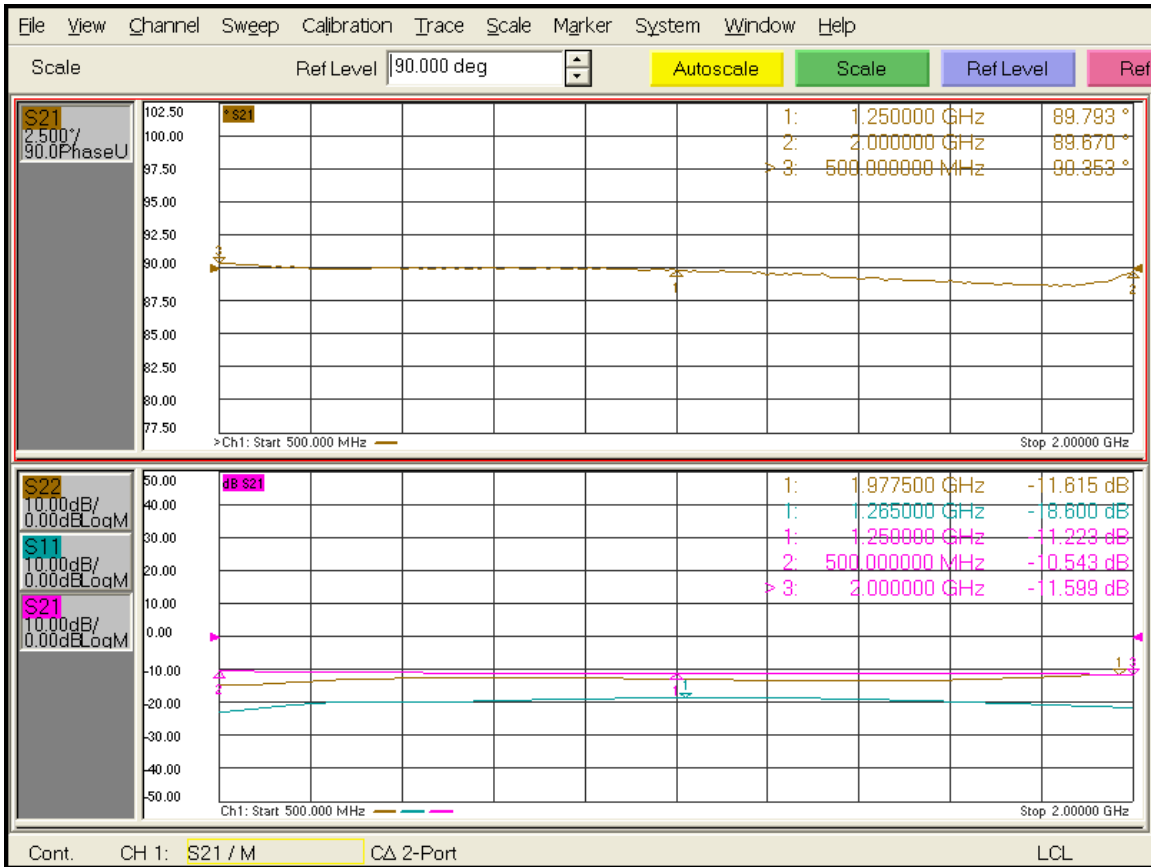


45° Phase, -20 dBm Input Power @ 50° C



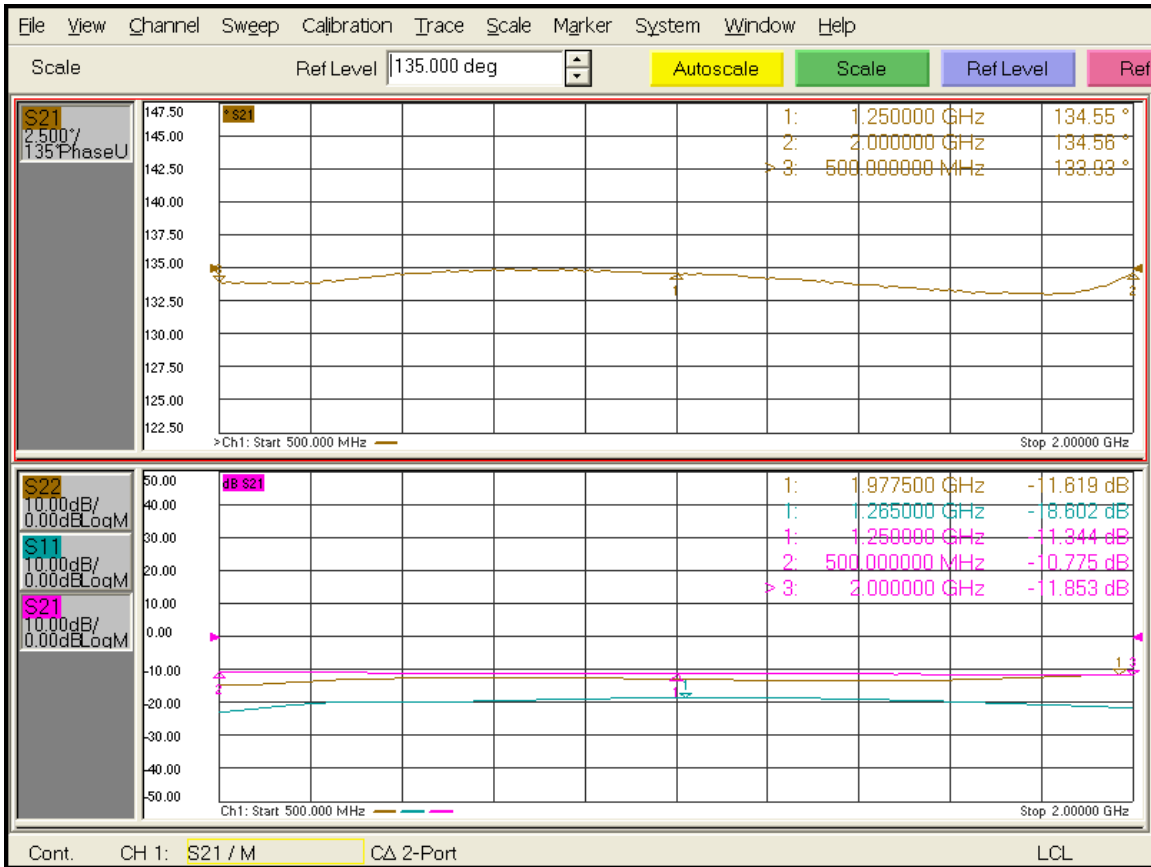


90° Phase, -20 dBm Input Power @ 50° C



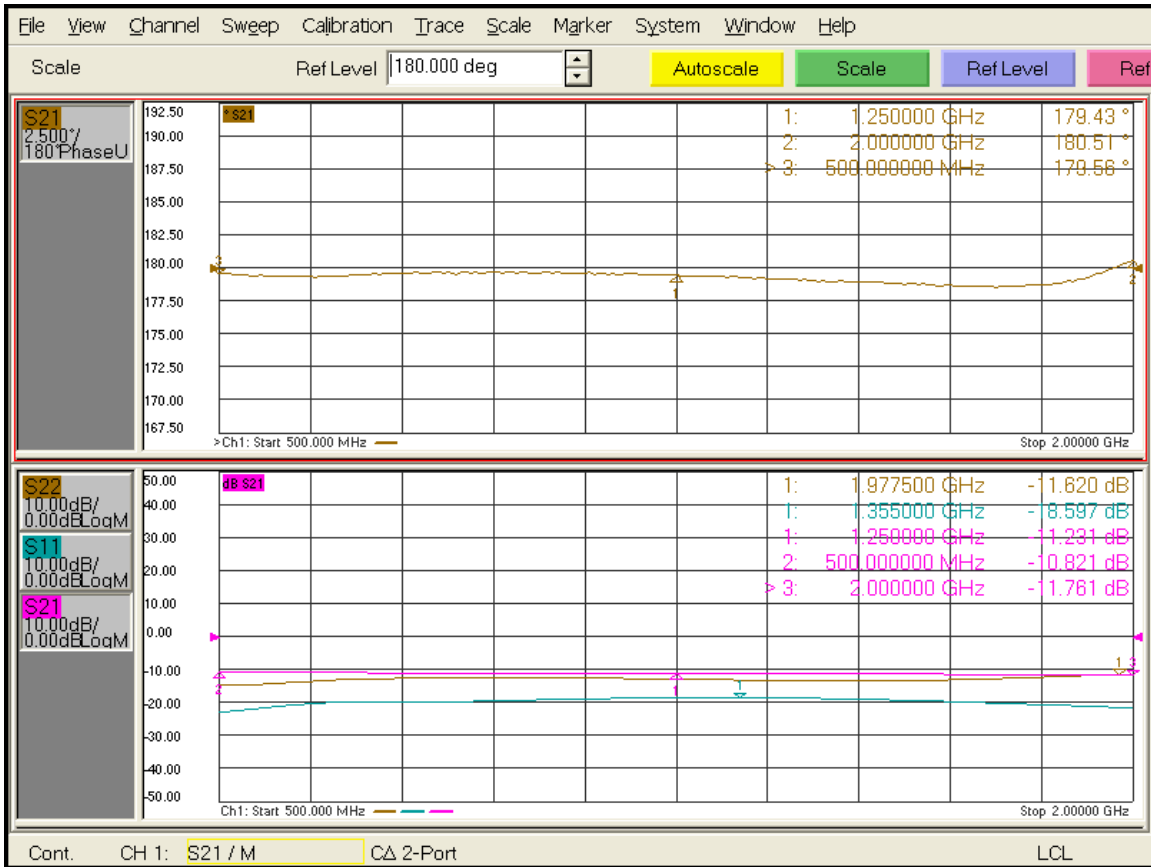


135° Phase, -20 dBm Input Power @ 50° C



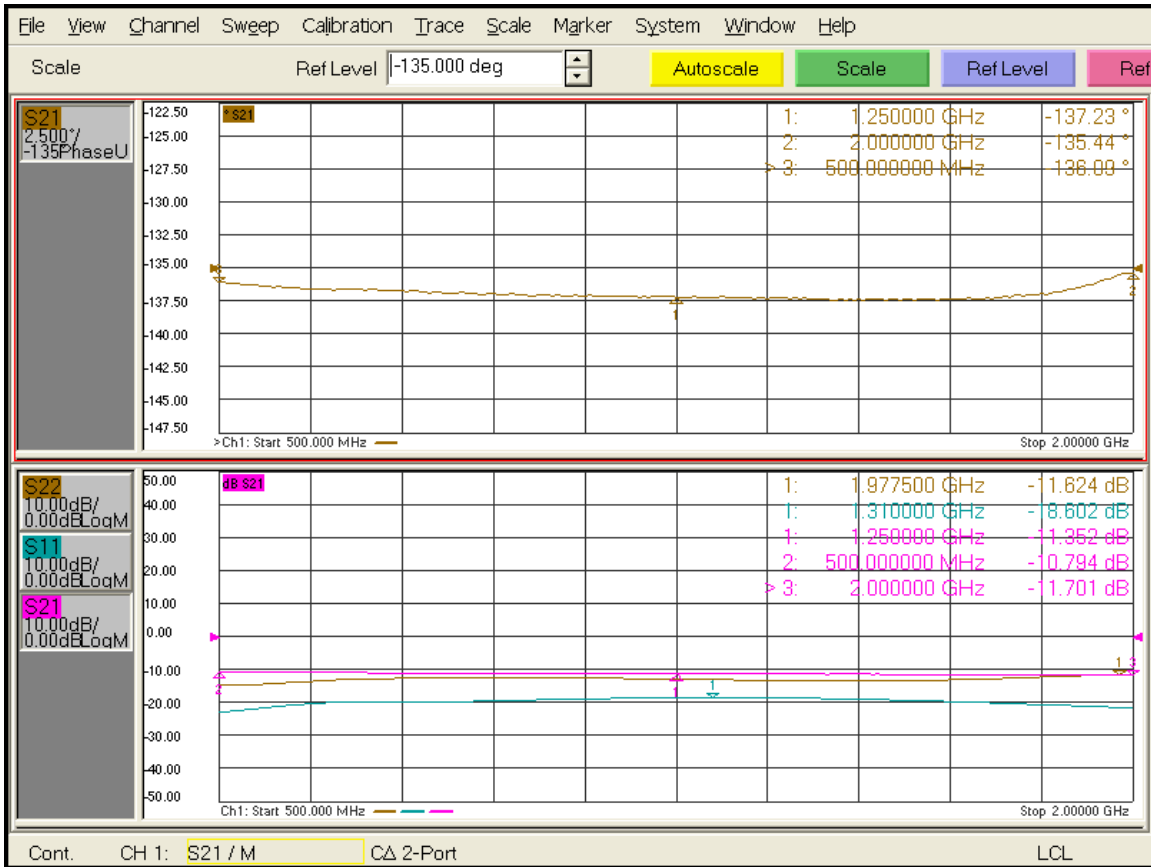


180° Phase, -20 dBm Input Power @ 50° C



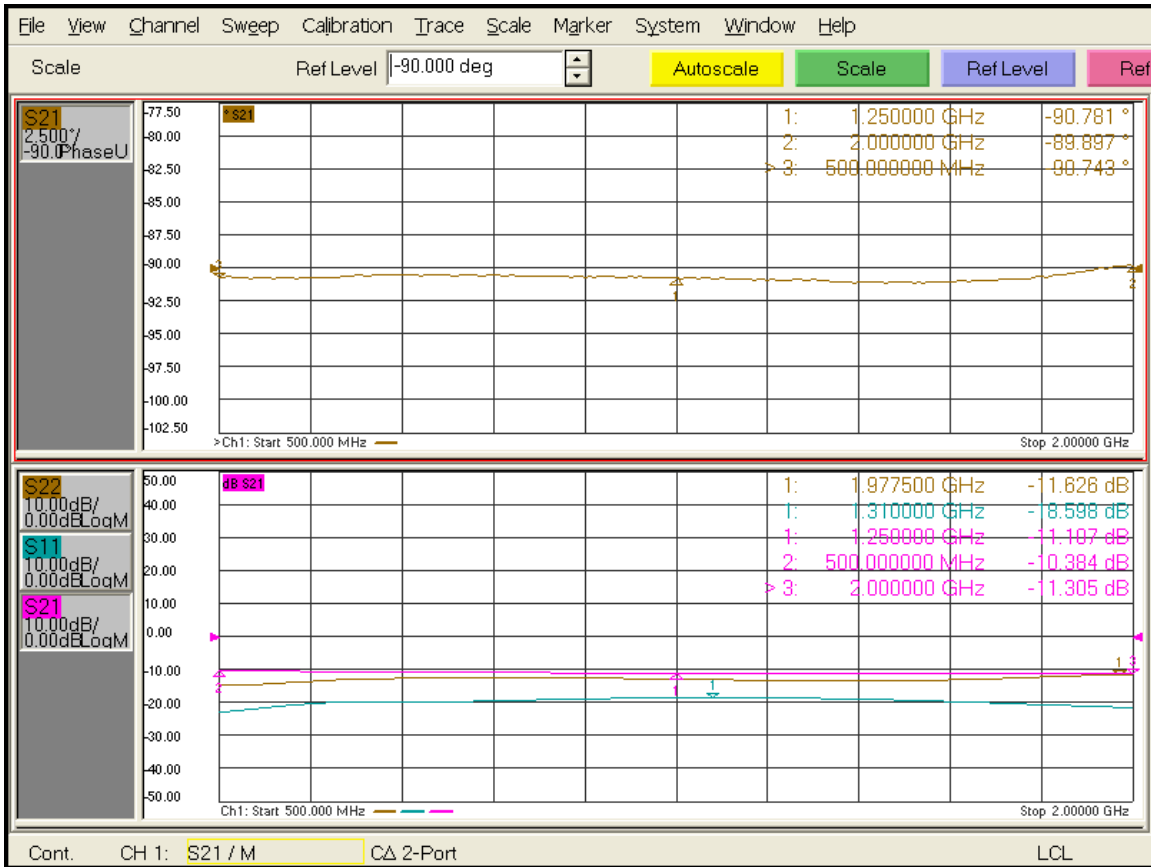


225° Phase, -20 dBm Input Power @ 50° C



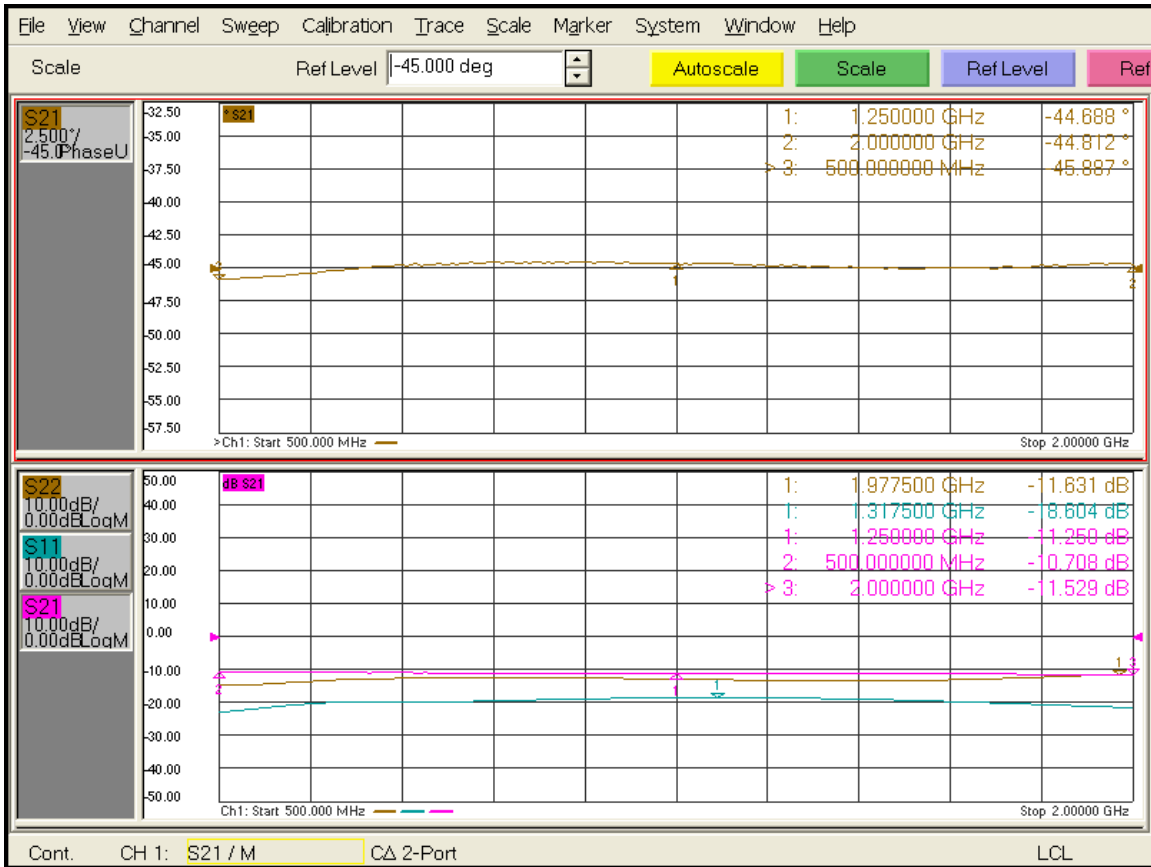


270° Phase, -20 dBm Input Power @ 50° C



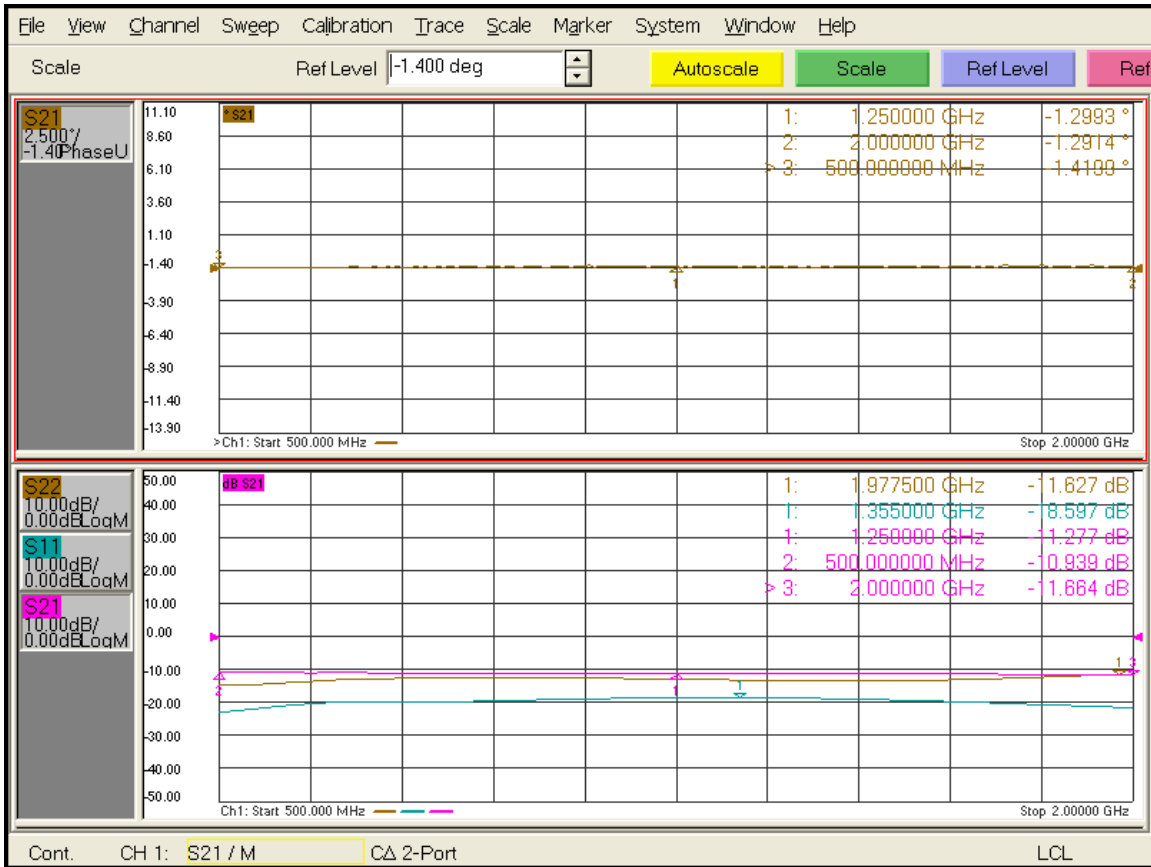


315° Phase, -20 dBm Input Power @ 50° C





358.6° Phase, -20 dBm Input Power @ 50° C





Data Taken at 50° C

Data Taken at -15 dBm Input Power

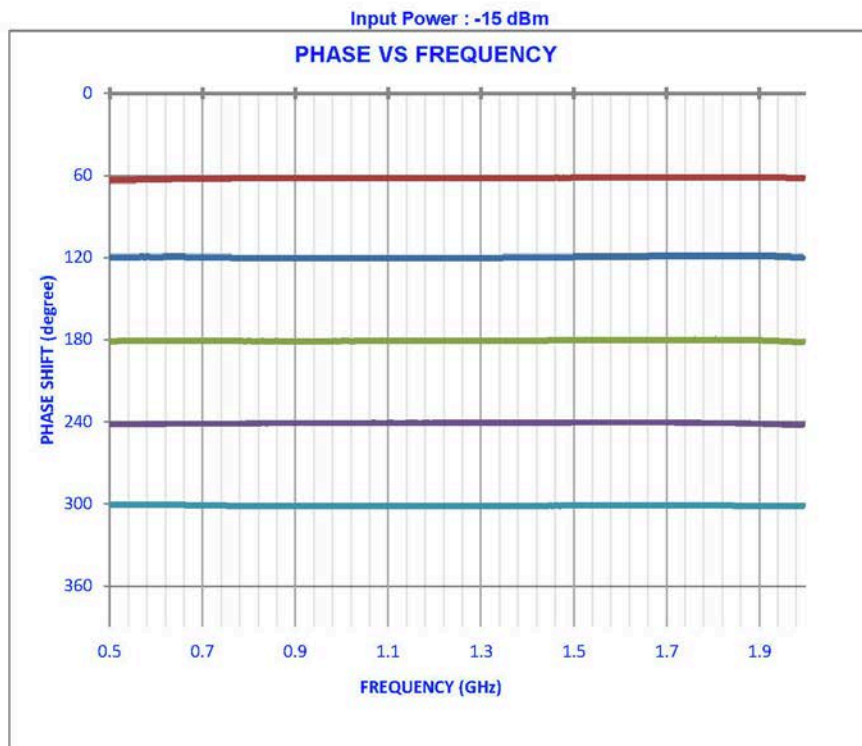
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|------------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 11.38 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.71 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.40 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 0.80 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|--------------------------|-------------|----------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.41 | 0.00 | 0.04 |
| 2.81 | 2.87 | -0.05 | 0.05 |
| 5.63 | 5.75 | -0.13 | 0.07 |
| 11.25 | 11.46 | -0.21 | 0.08 |
| 22.50 | 21.52 | 0.98 | 0.10 |
| 45.00 | 44.76 | 0.24 | 0.13 |
| 90.00 | 89.63 | 0.37 | 0.15 |
| 180.00 | 179.43 | 0.57 | 0.16 |
| 358.59 | 358.51 | 0.09 | 0.17 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|--------------------------|-------------|----------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 33.79 | -0.04 | 0.39 |
| 67.50 | 67.84 | -0.34 | 0.40 |
| 101.25 | 99.77 | 1.48 | 0.42 |
| 135.00 | 133.96 | 1.04 | 0.42 |
| 168.75 | 168.05 | 0.70 | 0.43 |
| 202.50 | 202.20 | 0.30 | 0.44 |
| 236.25 | 235.58 | 0.67 | 0.45 |
| 270.00 | 269.39 | 0.61 | 0.46 |
| 303.75 | 303.81 | -0.06 | 0.46 |
| 337.50 | 337.40 | 0.10 | 0.46 |
| | | | |
| | | | |
| | | | |

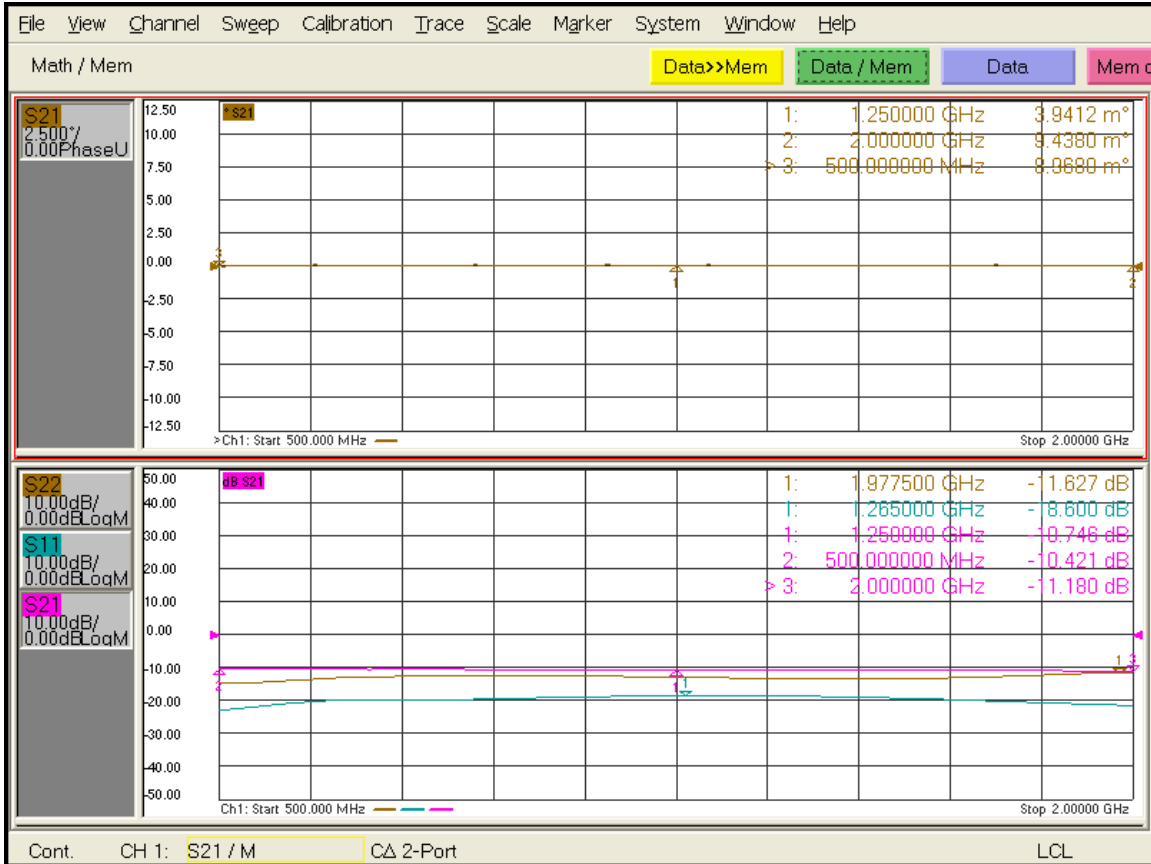


Phase Plot Taken at 50° C



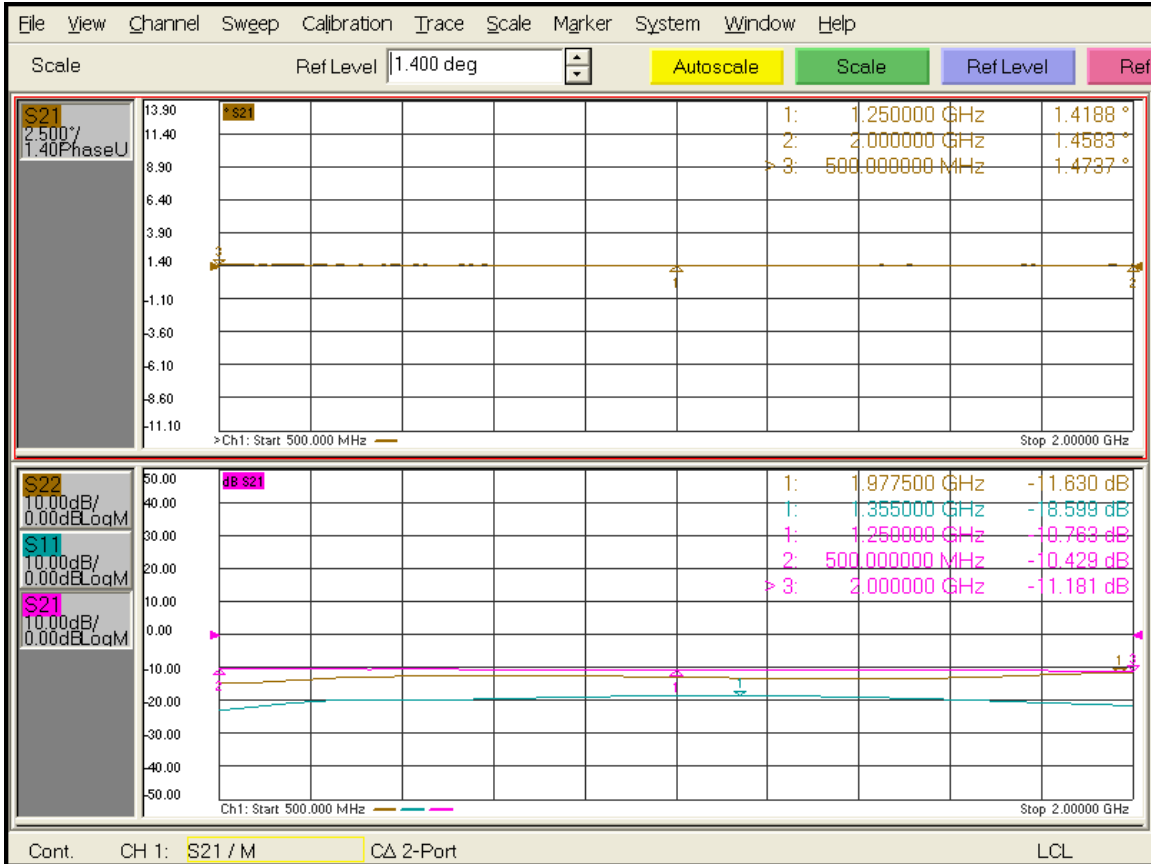


0° Phase, -15 dBm Input Power @ 50° C



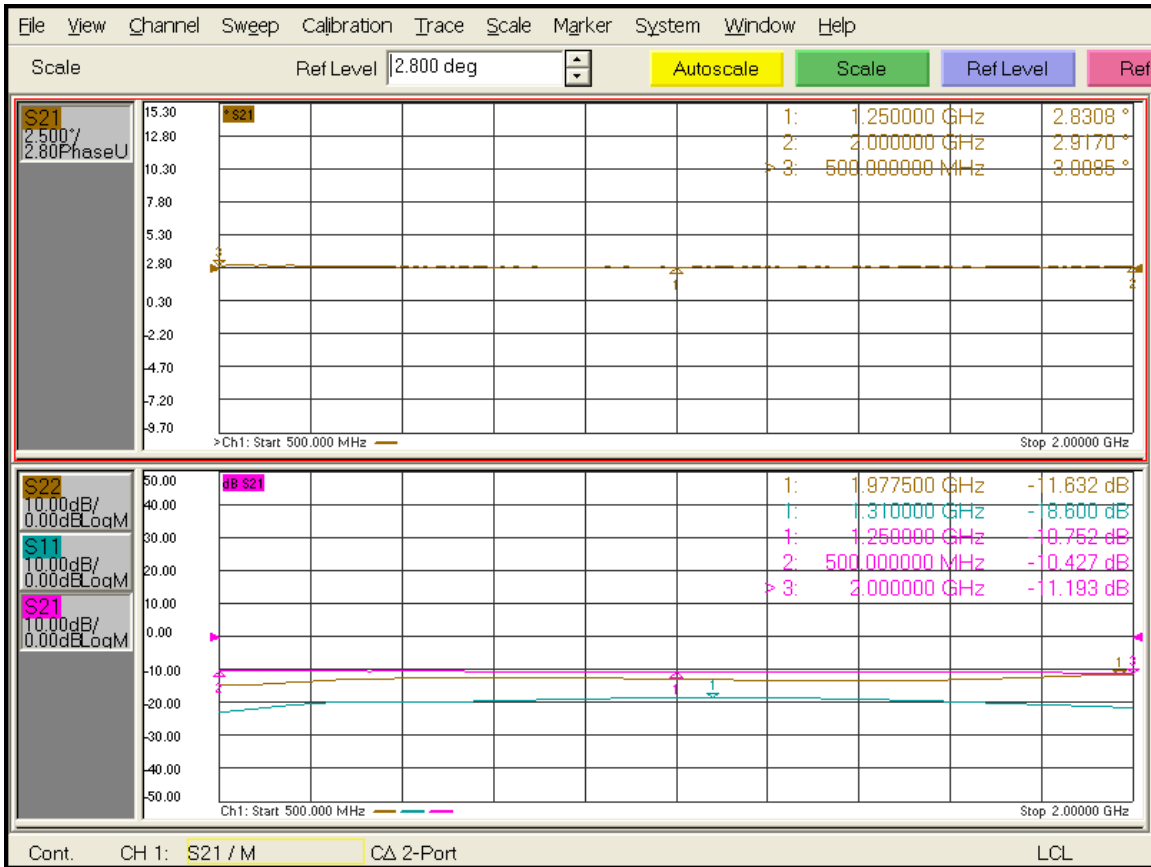


1.4° Phase, -15 dBm Input Power @ 50° C



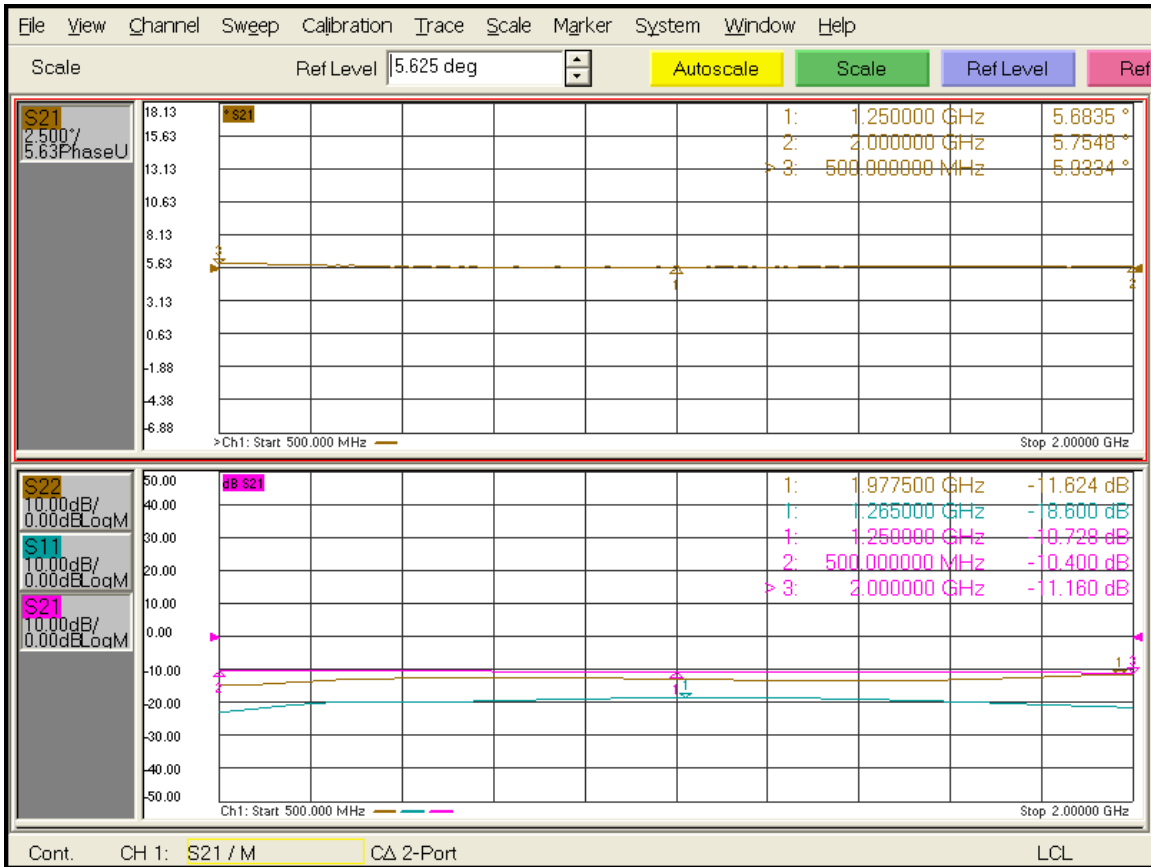


2.8° Phase, -15 dBm Input Power @ 50° C



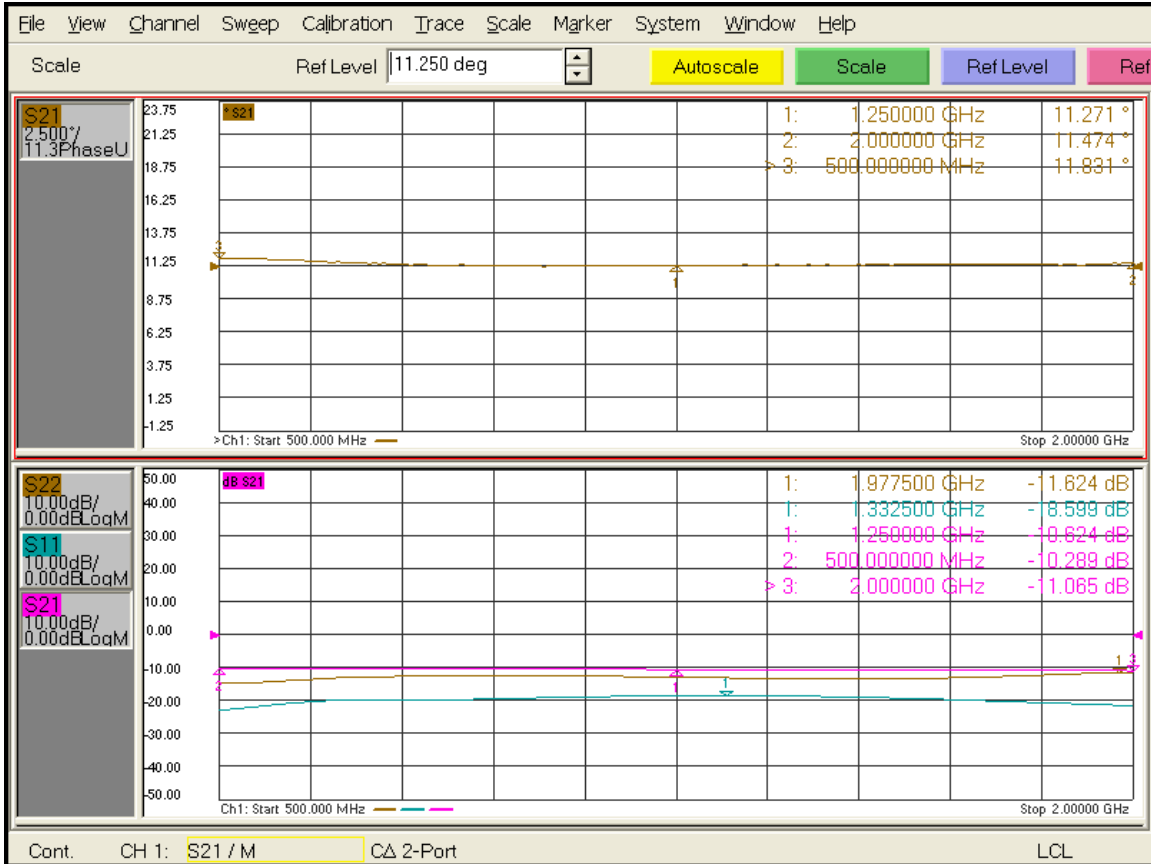


5.625° Phase, -15 dBm Input Power @ 50° C



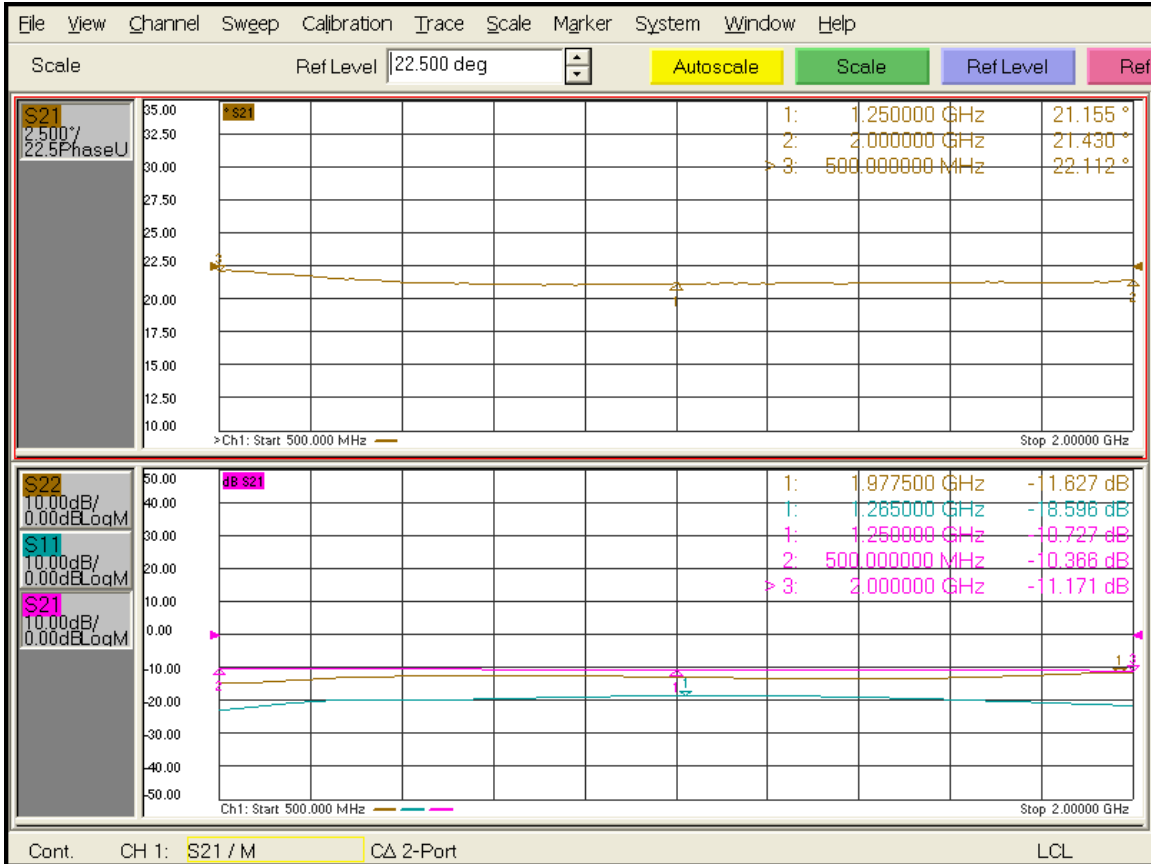


11.25° Phase, -15 dBm Input Power @ 50° C



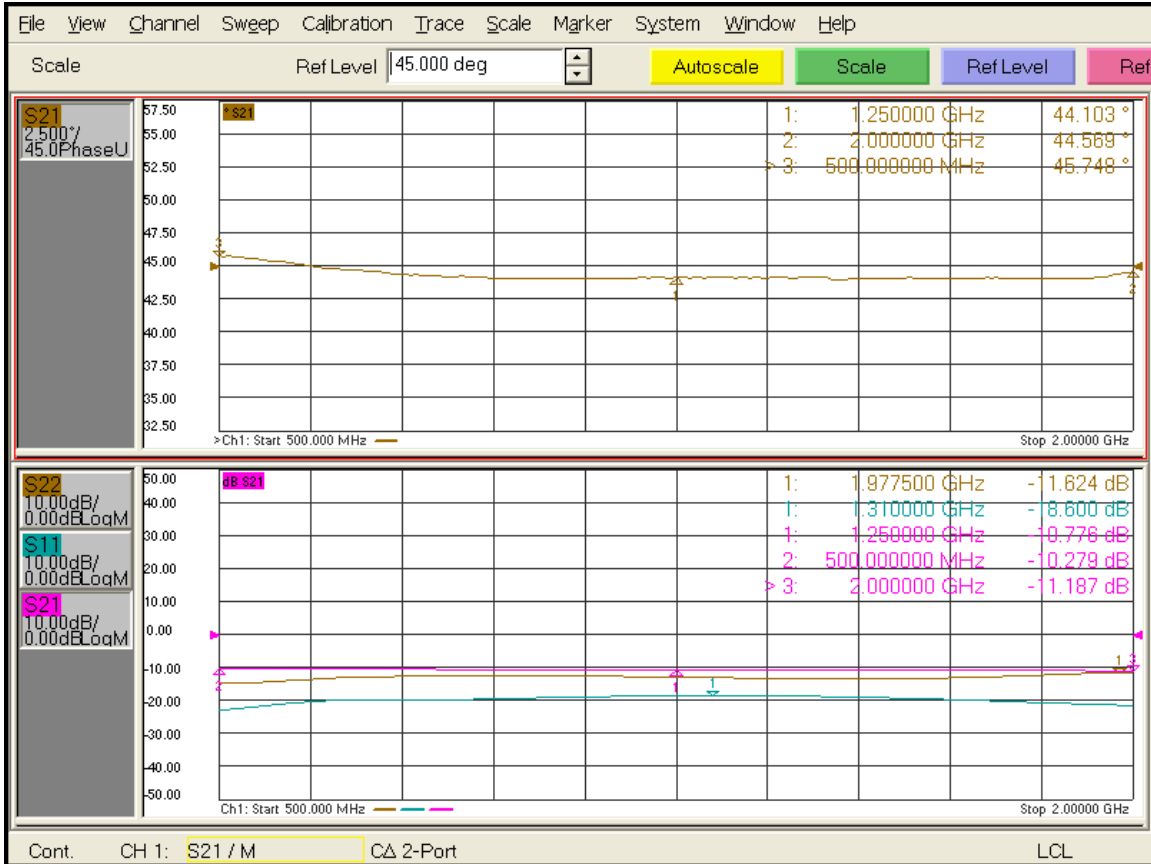


22.5° Phase, -15 dBm Input Power @ 50° C



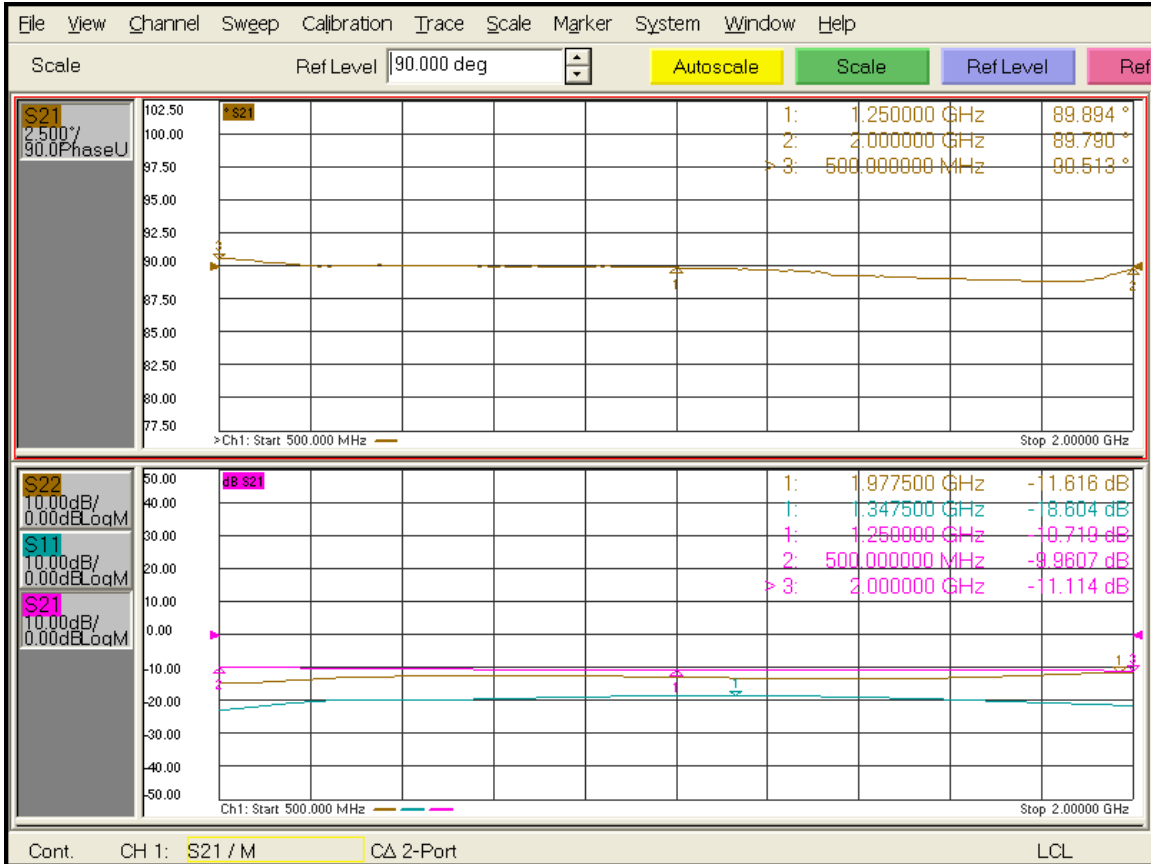


45° Phase, -15 dBm Input Power @ 50° C



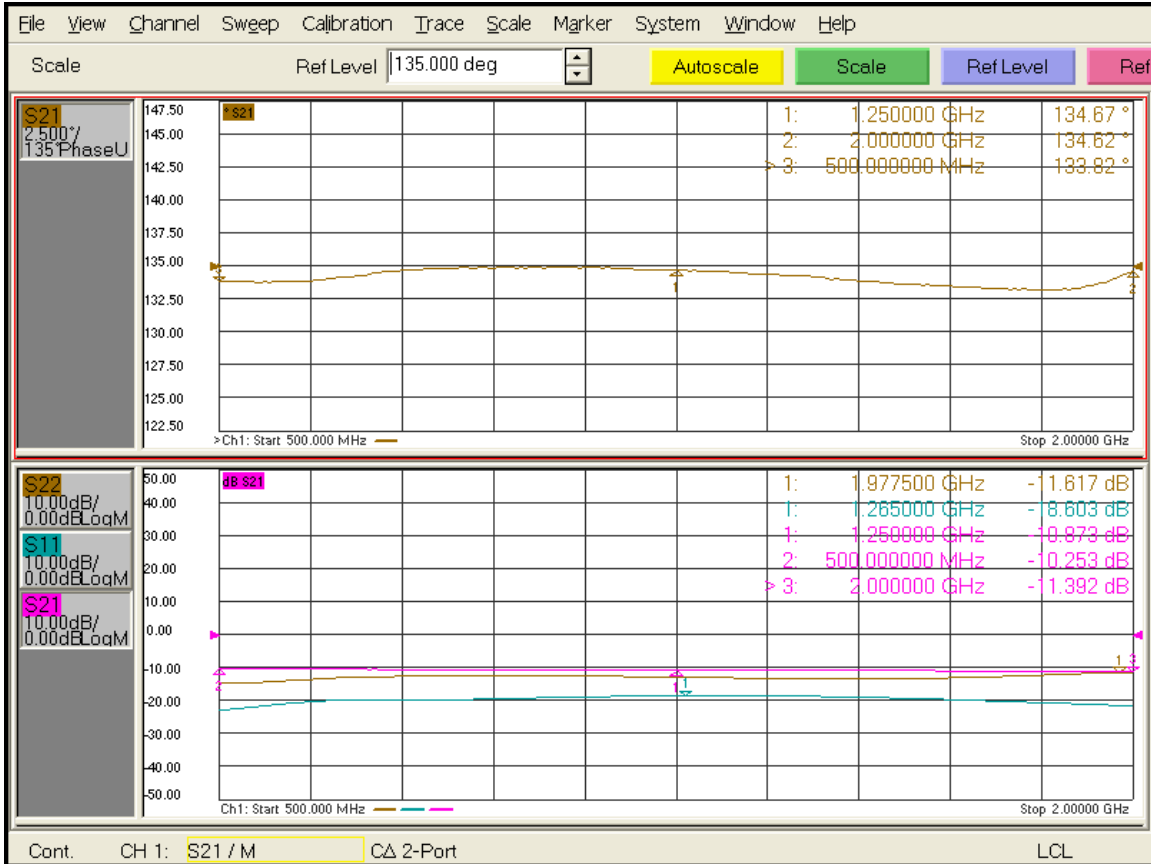


90° Phase, -15 dBm Input Power @ 50° C



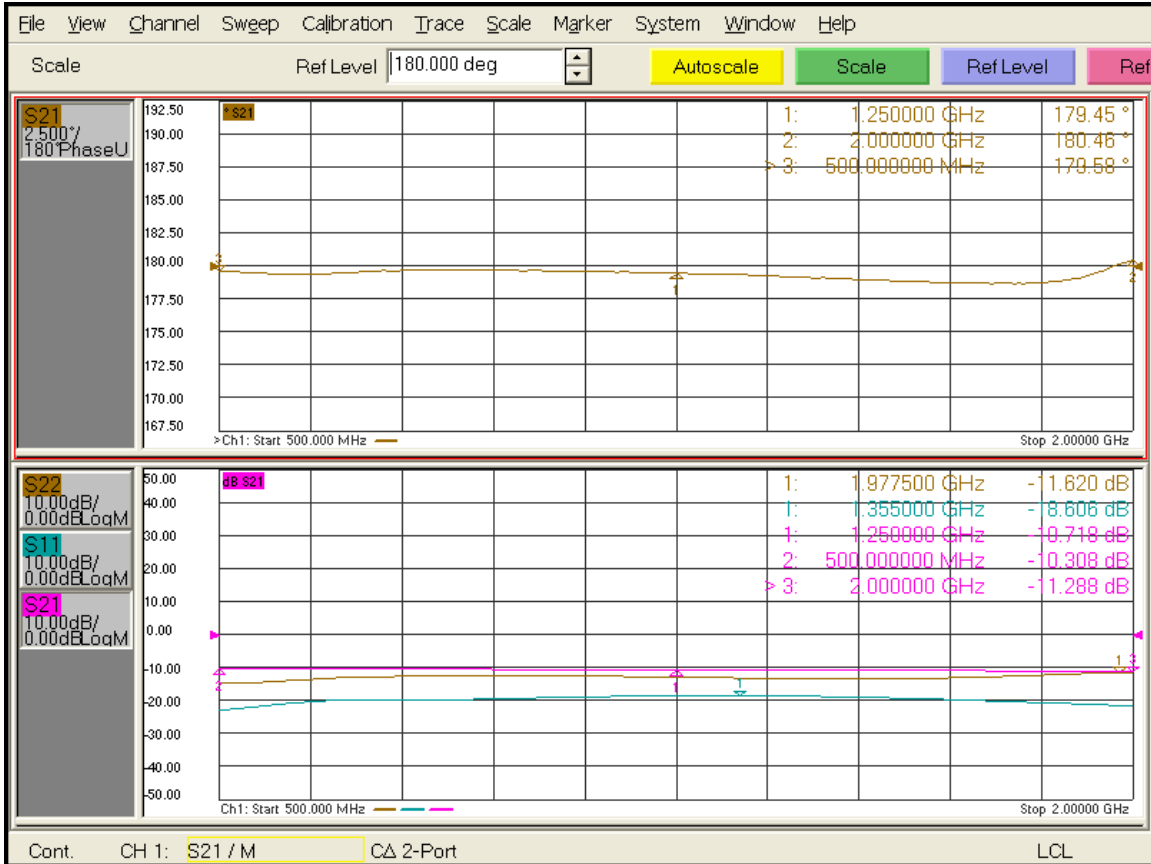


135° Phase, -15 dBm Input Power @ 50° C



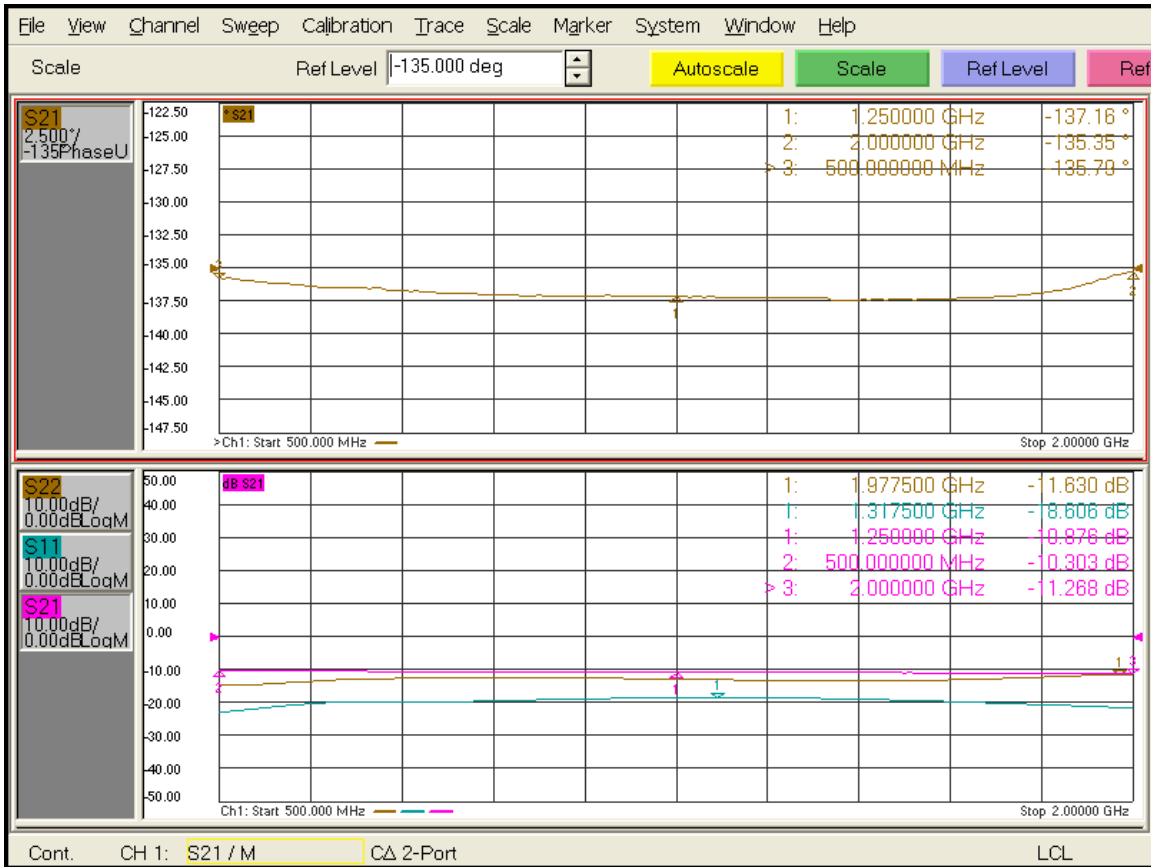


180° Phase, -15 dBm Input Power @ 50° C



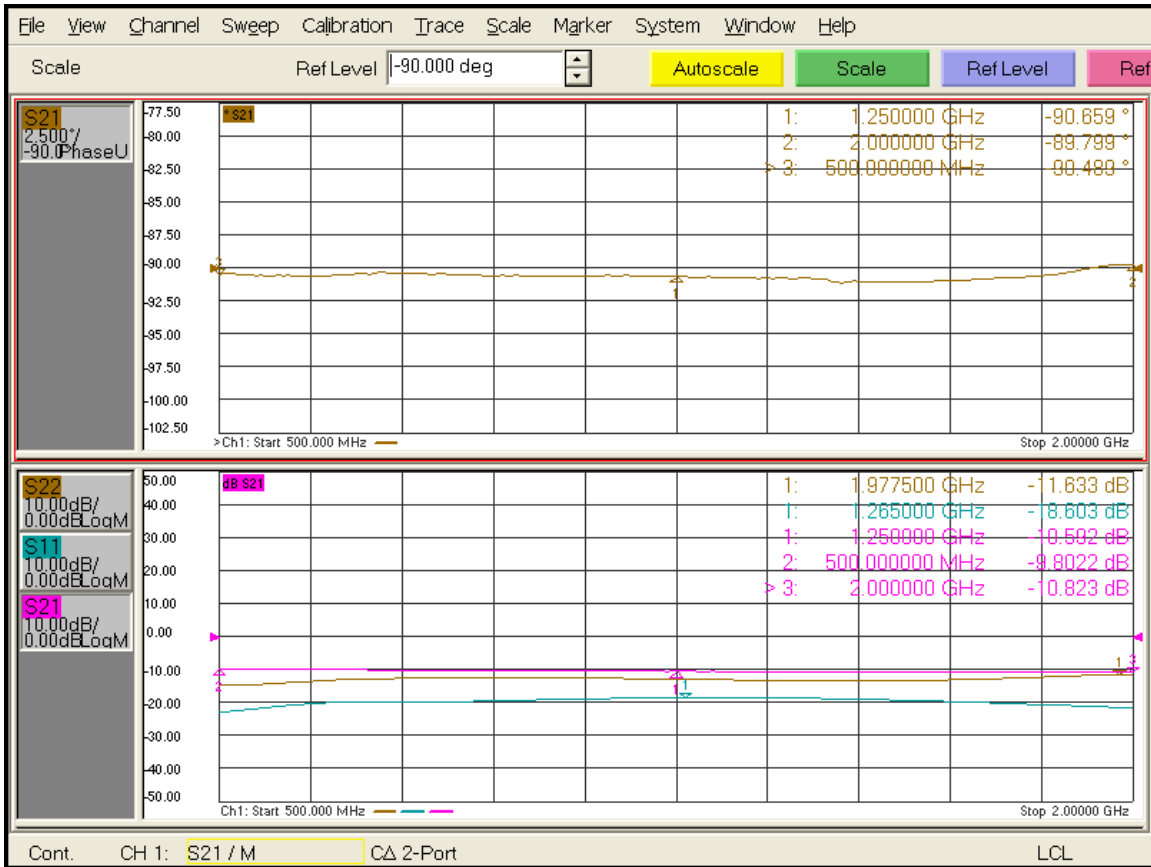


225° Phase, -15 dBm Input Power @ 50° C



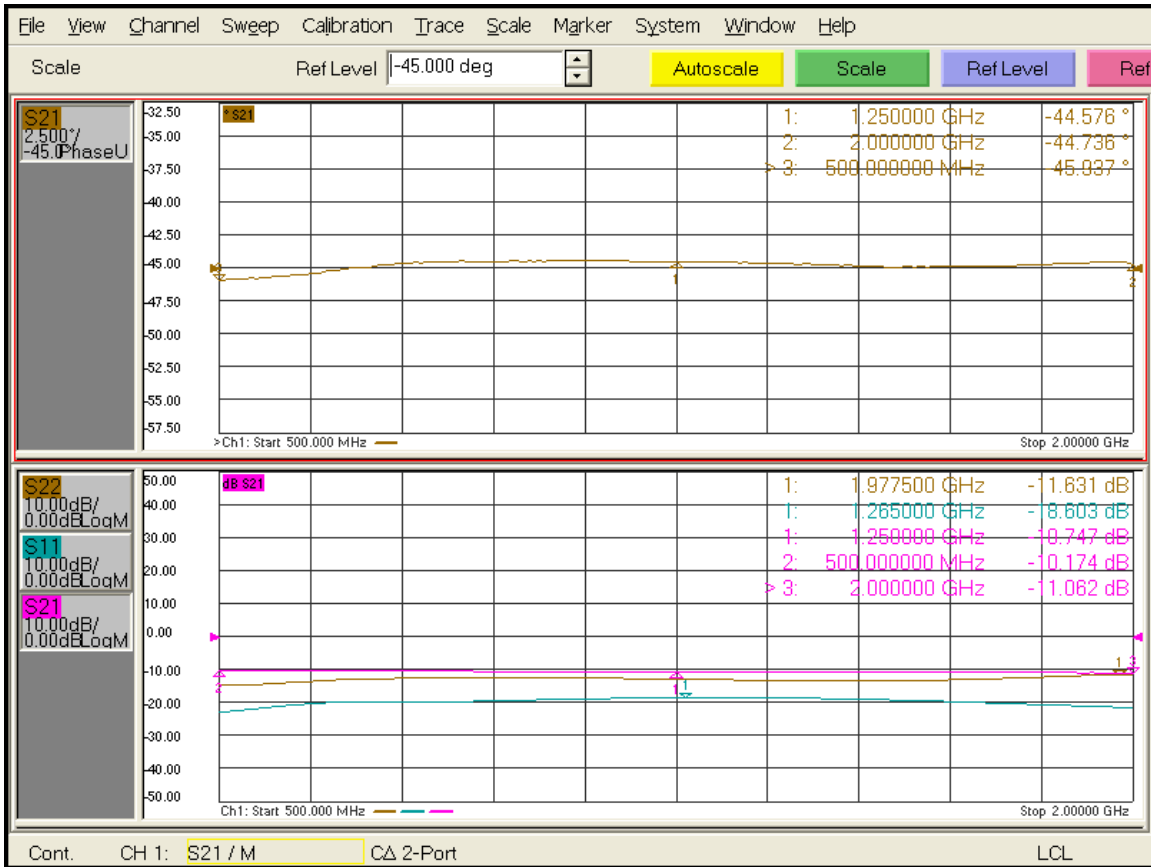


270° Phase, -15 dBm Input Power @ 50° C



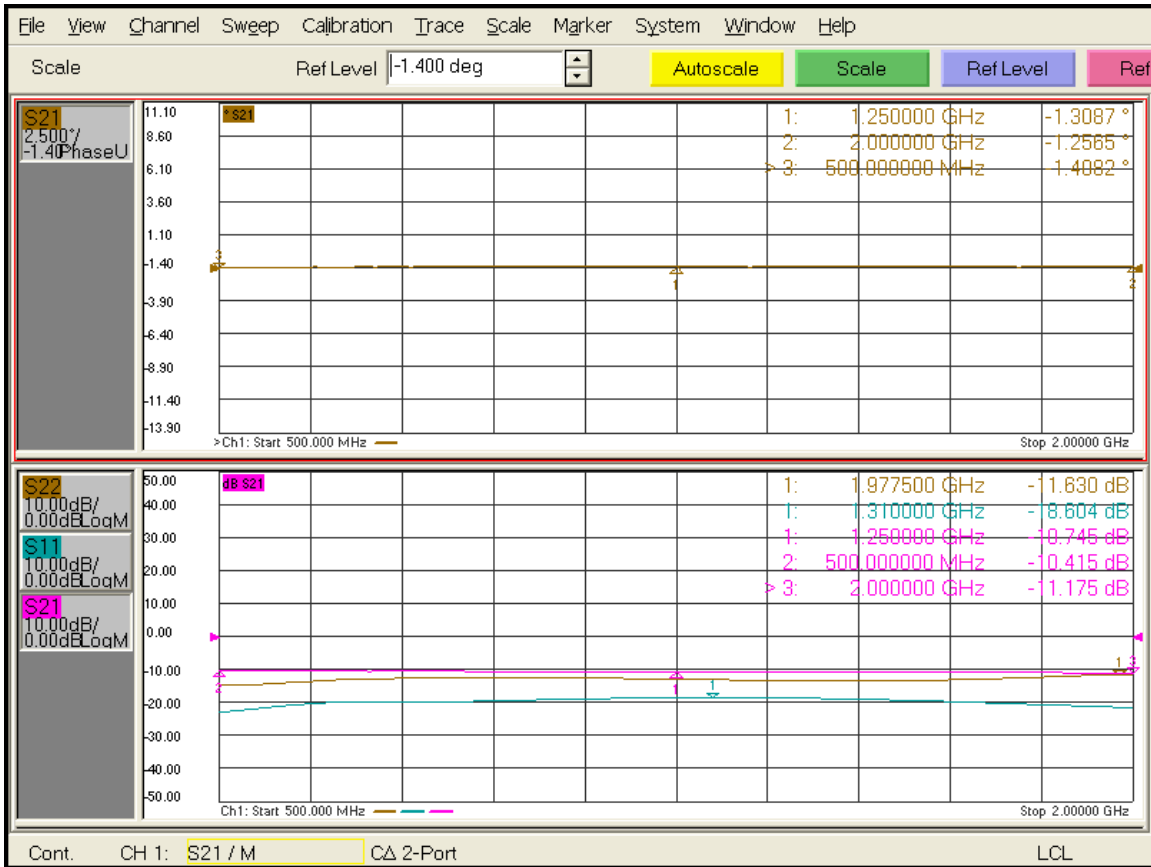


315° Phase, -15 dBm Input Power @ 50° C





358.6° Phase, -15 dBm Input Power @ 50° C





Data Taken at 50° C

Data Taken at -10 dBm Input Power

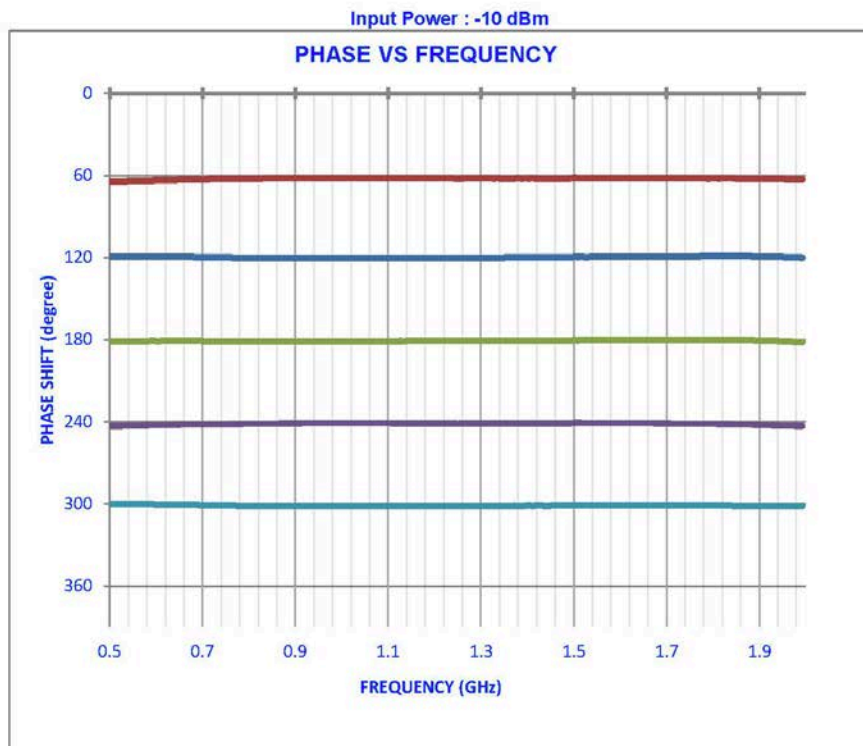
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 9.88 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.71 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.48 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 1.02 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.43 | -0.02 | 0.04 |
| 2.81 | 2.87 | -0.06 | 0.06 |
| 5.63 | 5.75 | -0.12 | 0.08 |
| 11.25 | 11.46 | -0.21 | 0.10 |
| 22.50 | 21.55 | 0.95 | 0.13 |
| 45.00 | 45.21 | -0.21 | 0.16 |
| 90.00 | 90.18 | -0.18 | 0.18 |
| 180.00 | 179.50 | 0.50 | 0.21 |
| 358.59 | 358.52 | 0.07 | 0.23 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 34.00 | -0.25 | 0.55 |
| 67.50 | 68.61 | -1.11 | 0.56 |
| 101.25 | 100.10 | 1.15 | 0.58 |
| 135.00 | 134.24 | 0.76 | 0.59 |
| 168.75 | 168.23 | 0.52 | 0.61 |
| 202.50 | 202.19 | 0.31 | 0.62 |
| 236.25 | 236.15 | 0.10 | 0.63 |
| 270.00 | 269.64 | 0.36 | 0.64 |
| 303.75 | 303.63 | 0.12 | 0.65 |
| 337.50 | 337.46 | 0.04 | 0.66 |
| | | | |
| | | | |
| | | | |

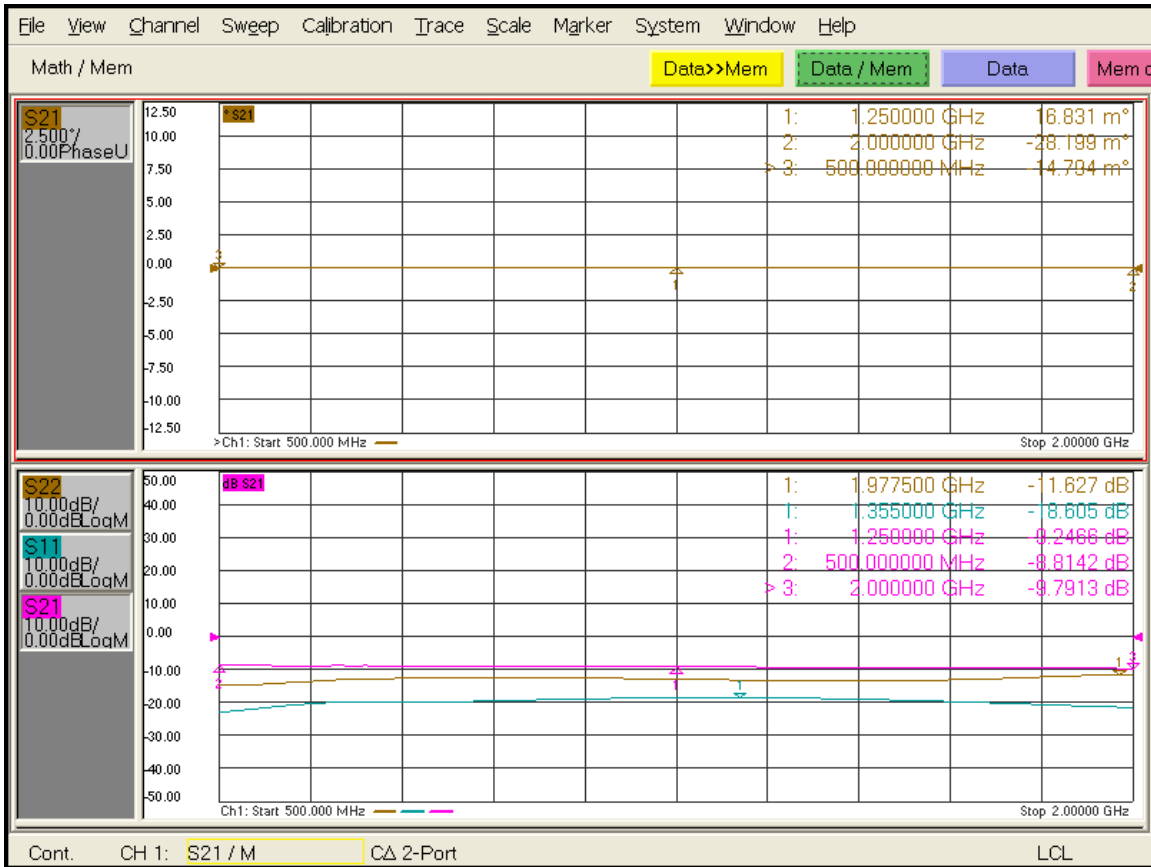


Phase Plot Taken at 50° C



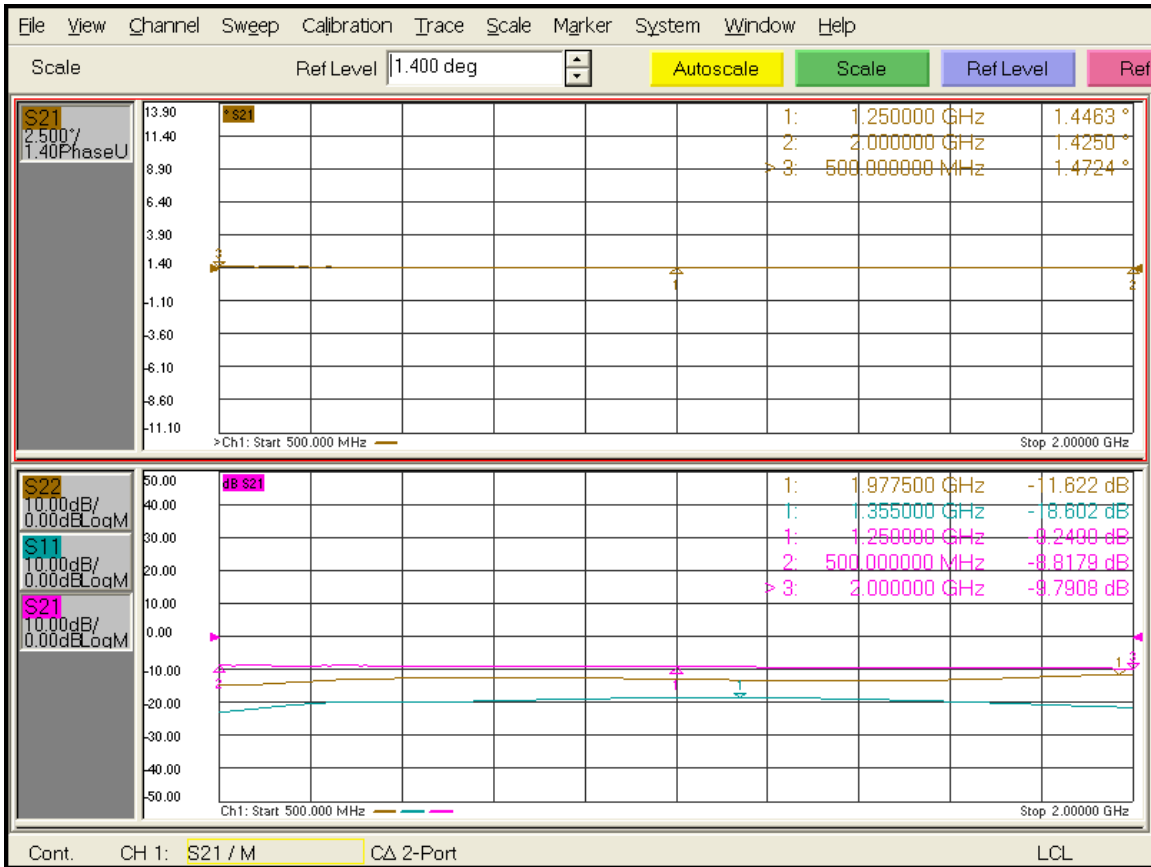


0° Phase, -10 dBm Input Power @ 50° C



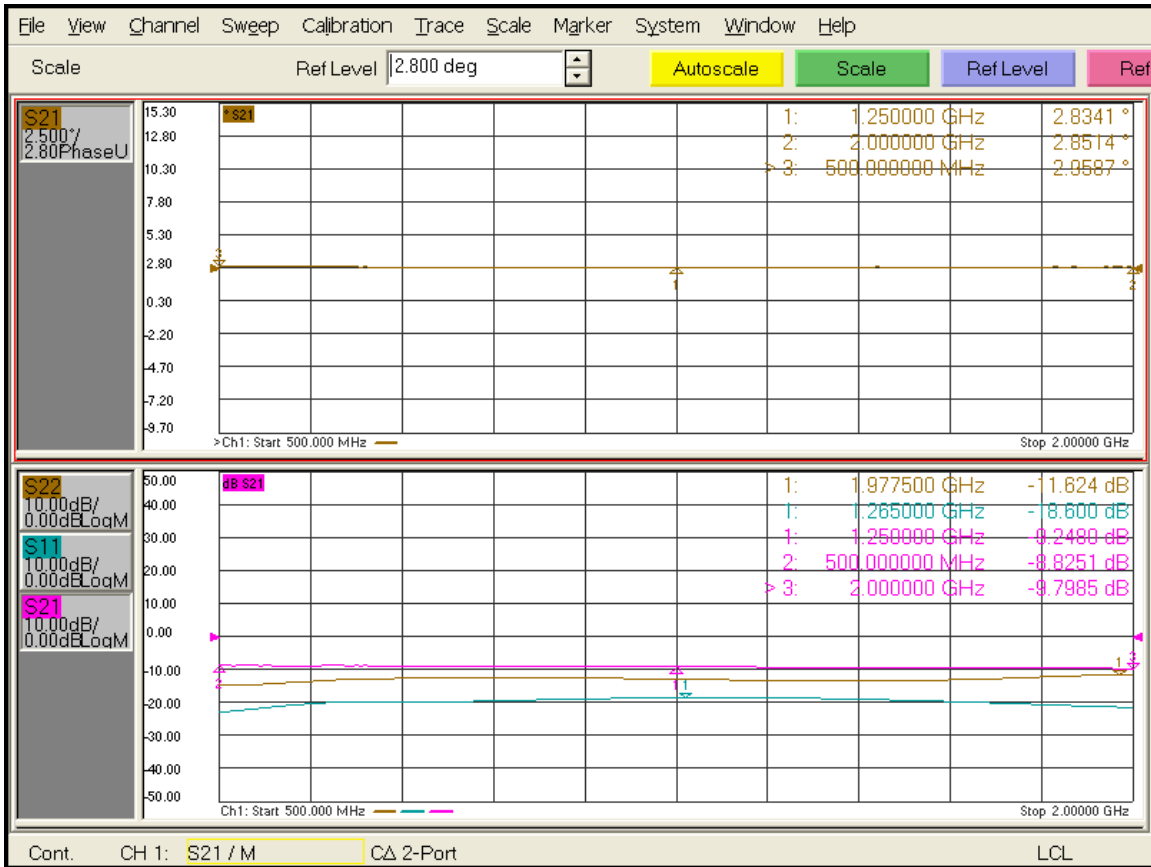


1.4° Phase, -10 dBm Input Power @ 50° C



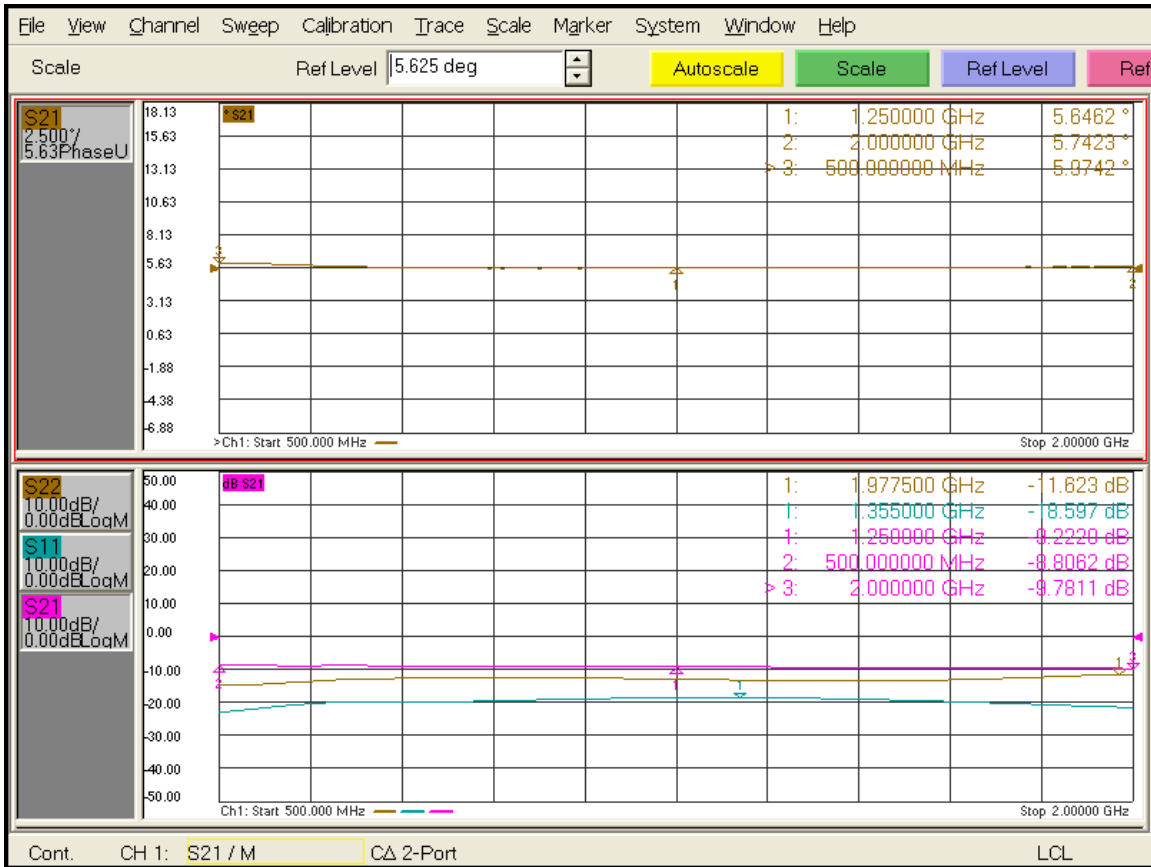


2.8° Phase, -10 dBm Input Power @ 50° C



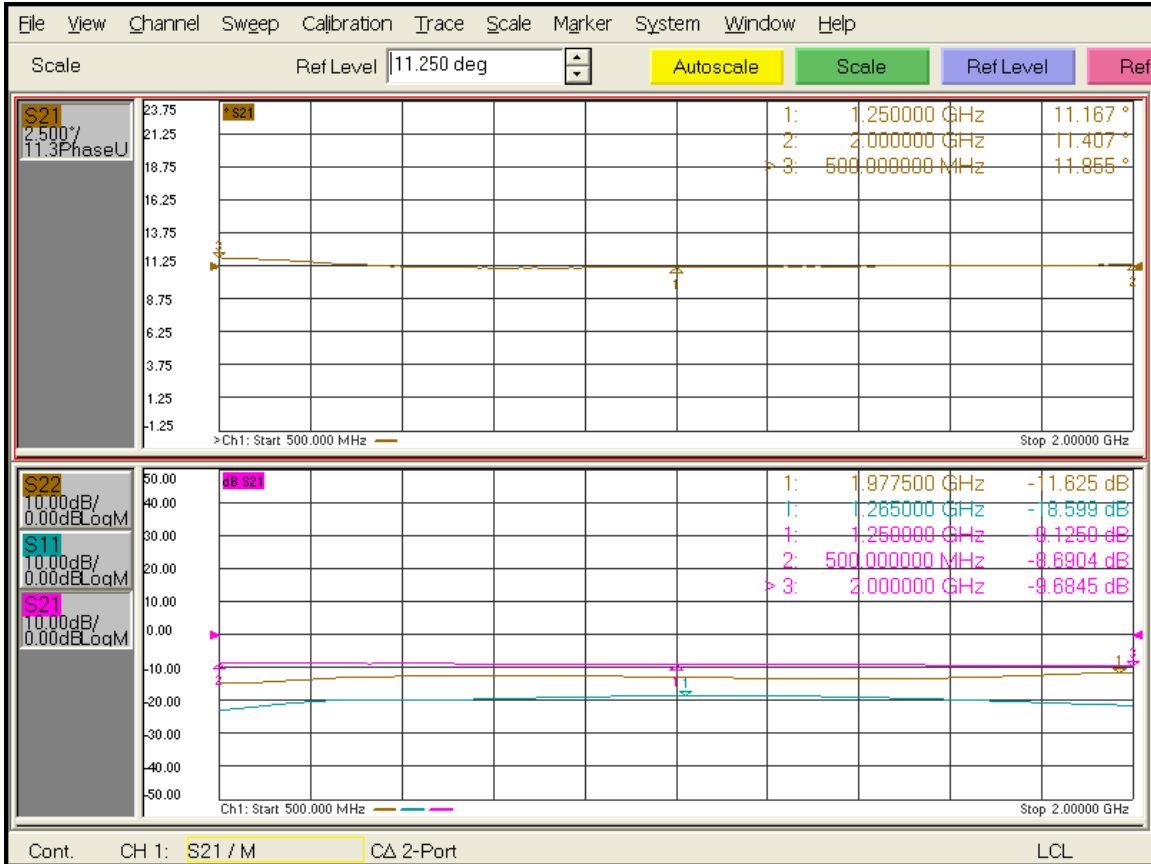


5.625° Phase, -10 dBm Input Power @ 50° C



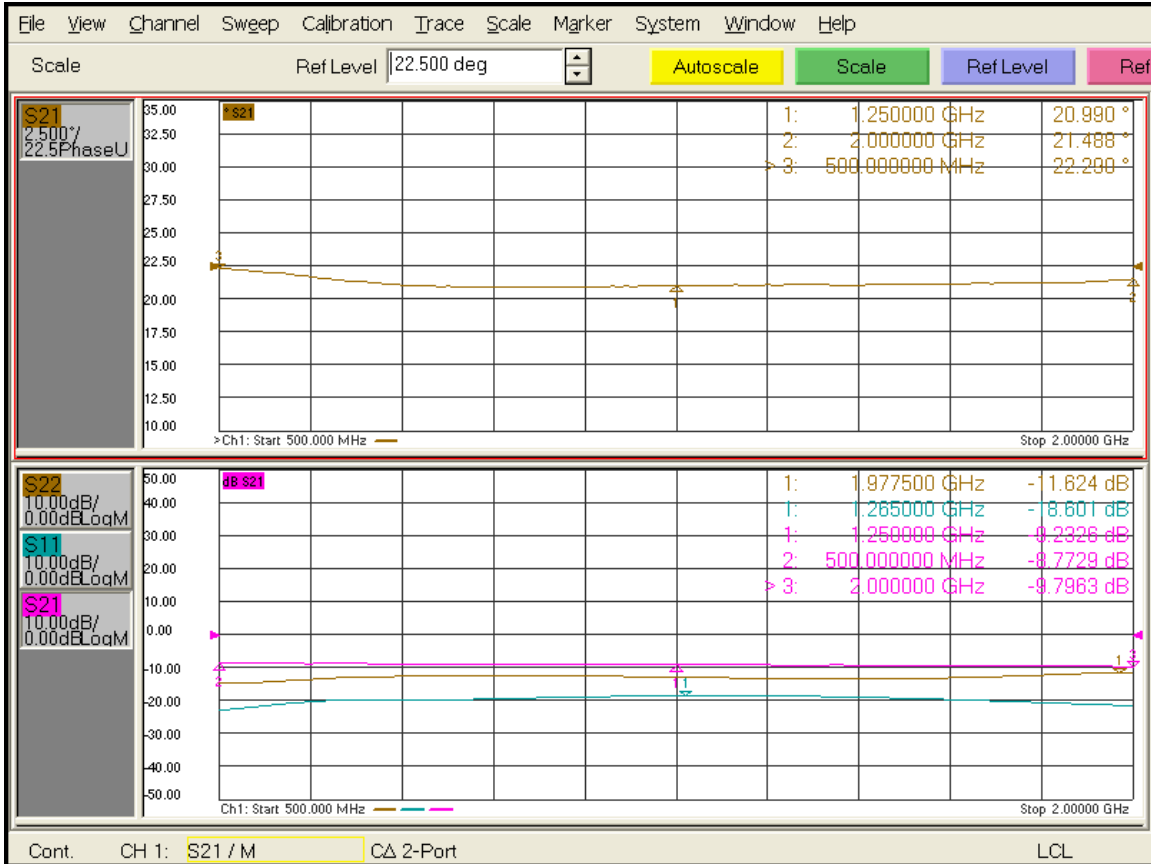


11.25° Phase, -10 dBm Input Power @ 50° C



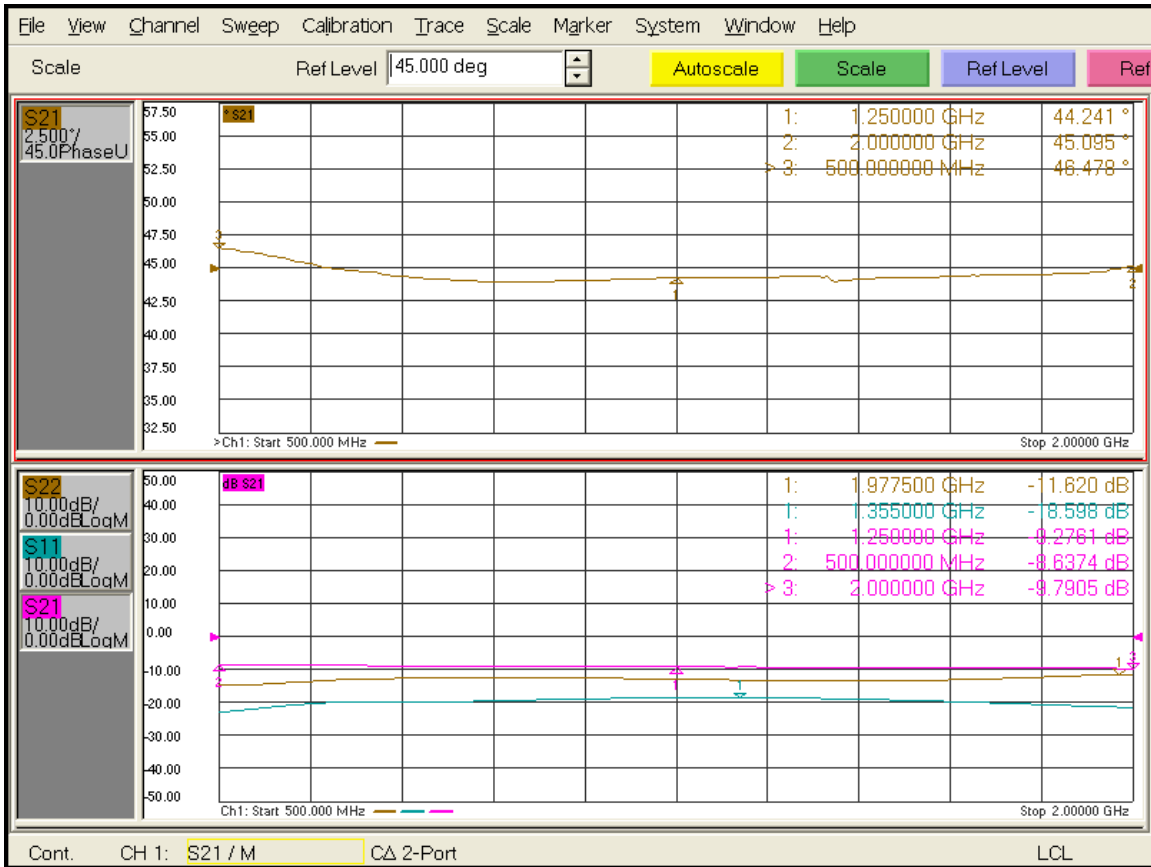


22.5° Phase, -10 dBm Input Power @ 50° C



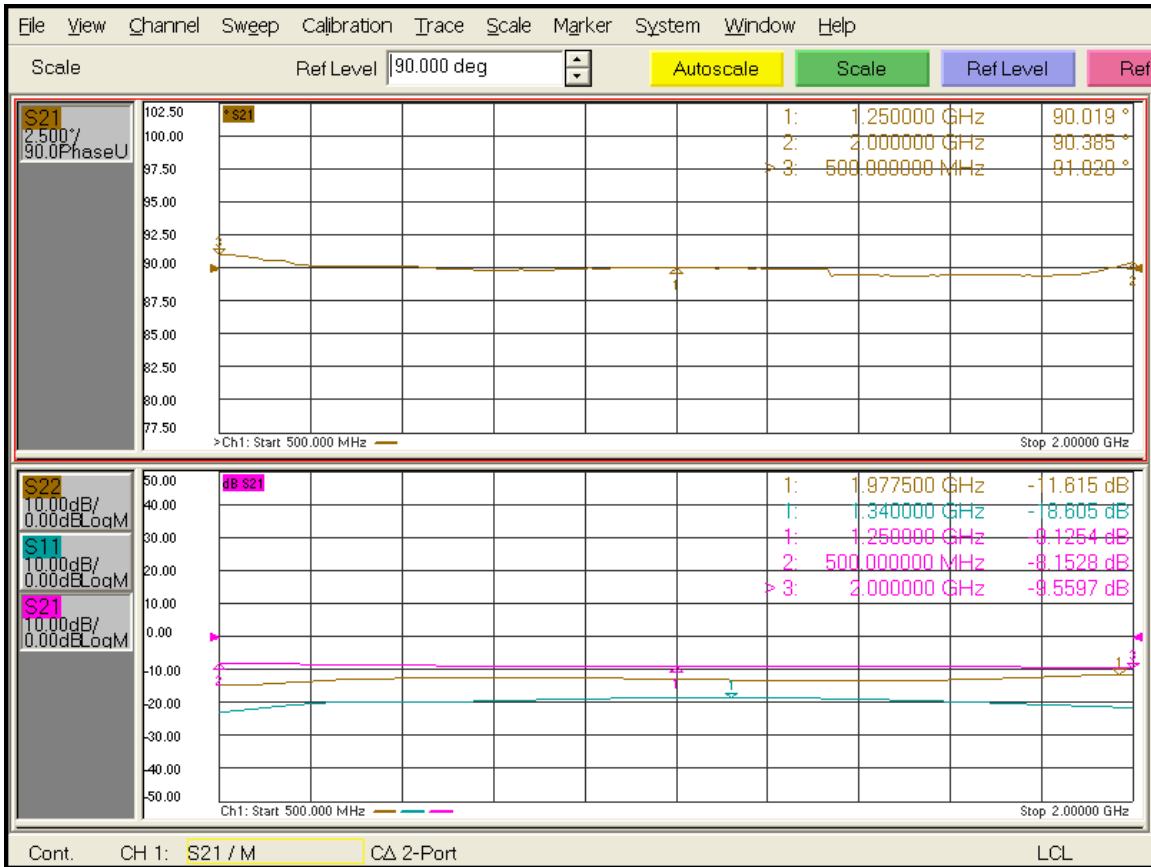


45° Phase, -10 dBm Input Power @ 50° C



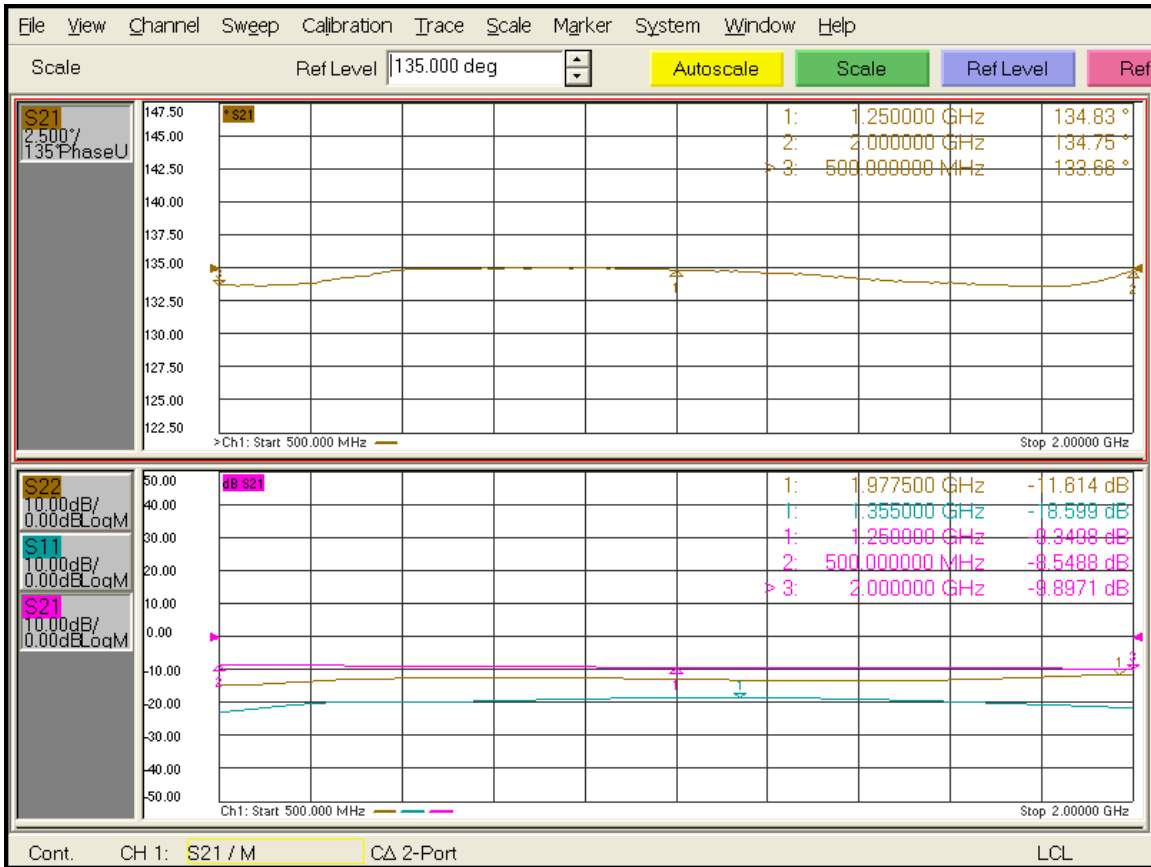


90° Phase, -10 dBm Input Power @ 50° C



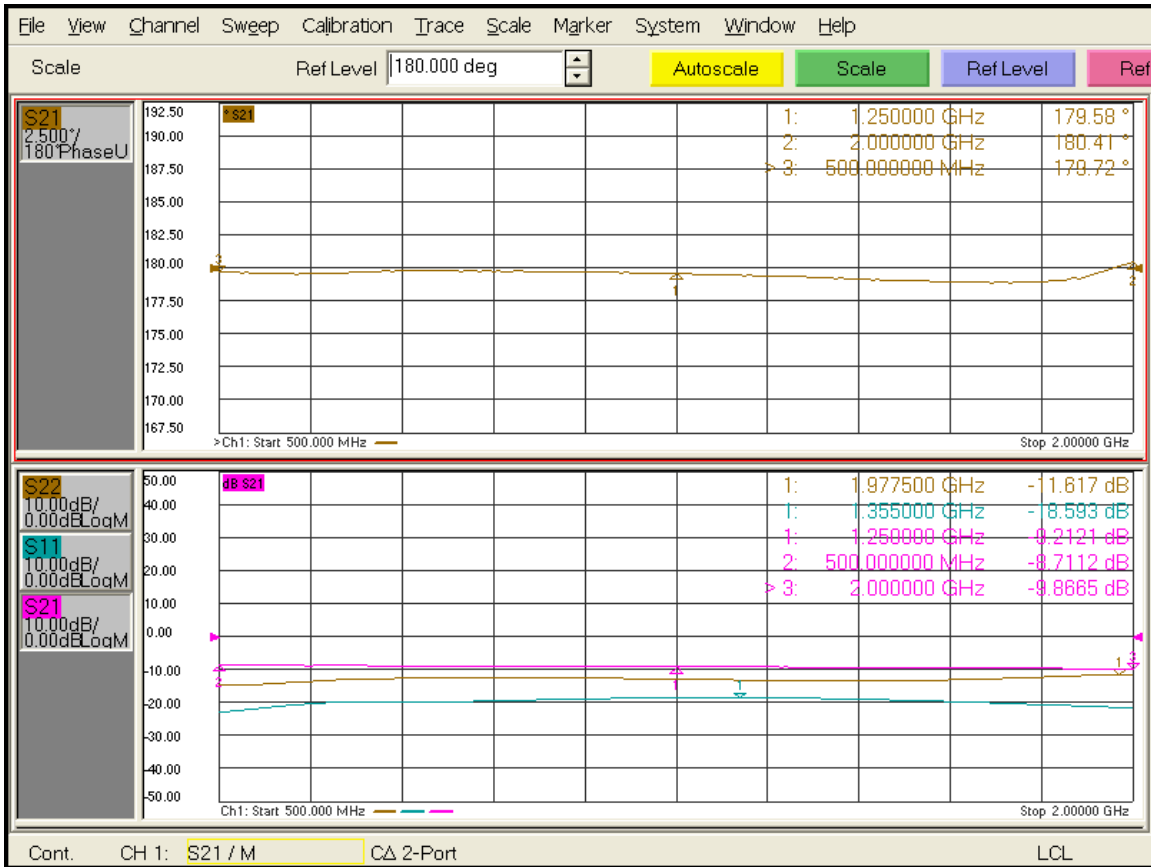


135° Phase, -10 dBm Input Power @ 50° C



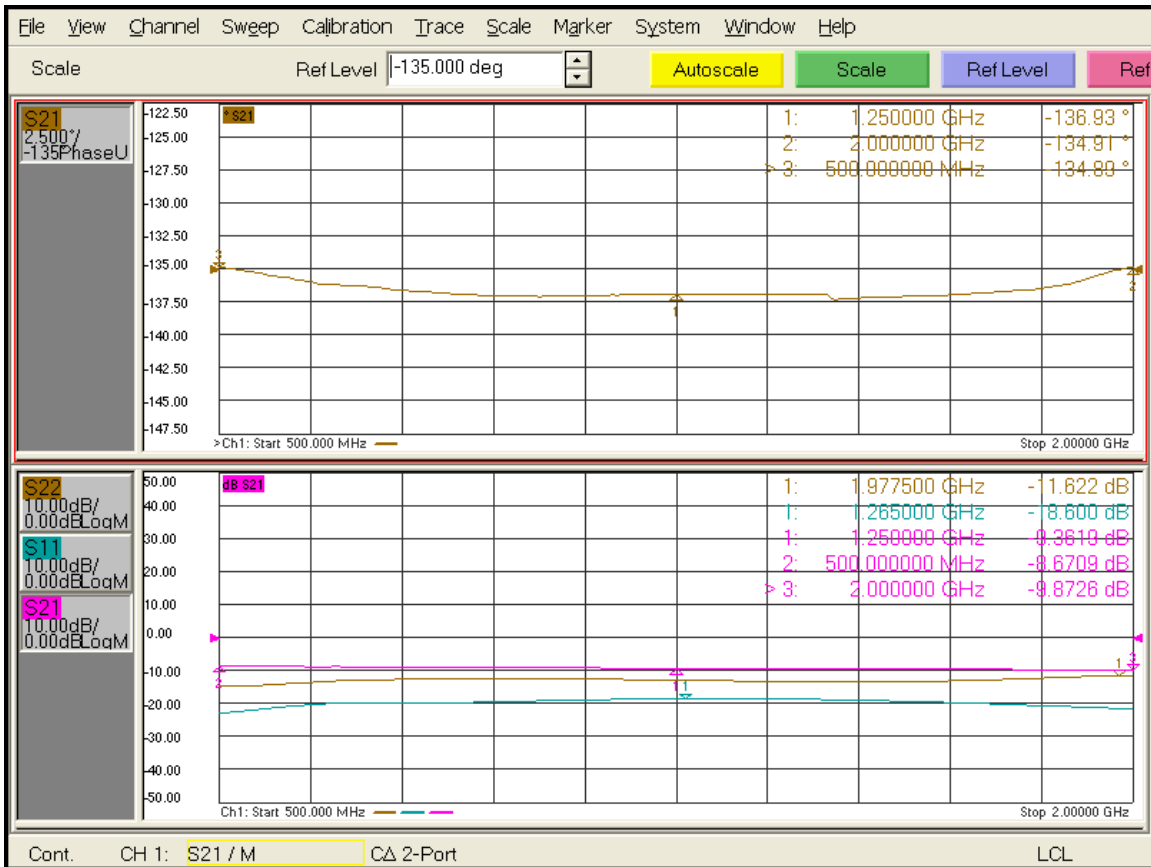


180° Phase, -10 dBm Input Power @ 50° C



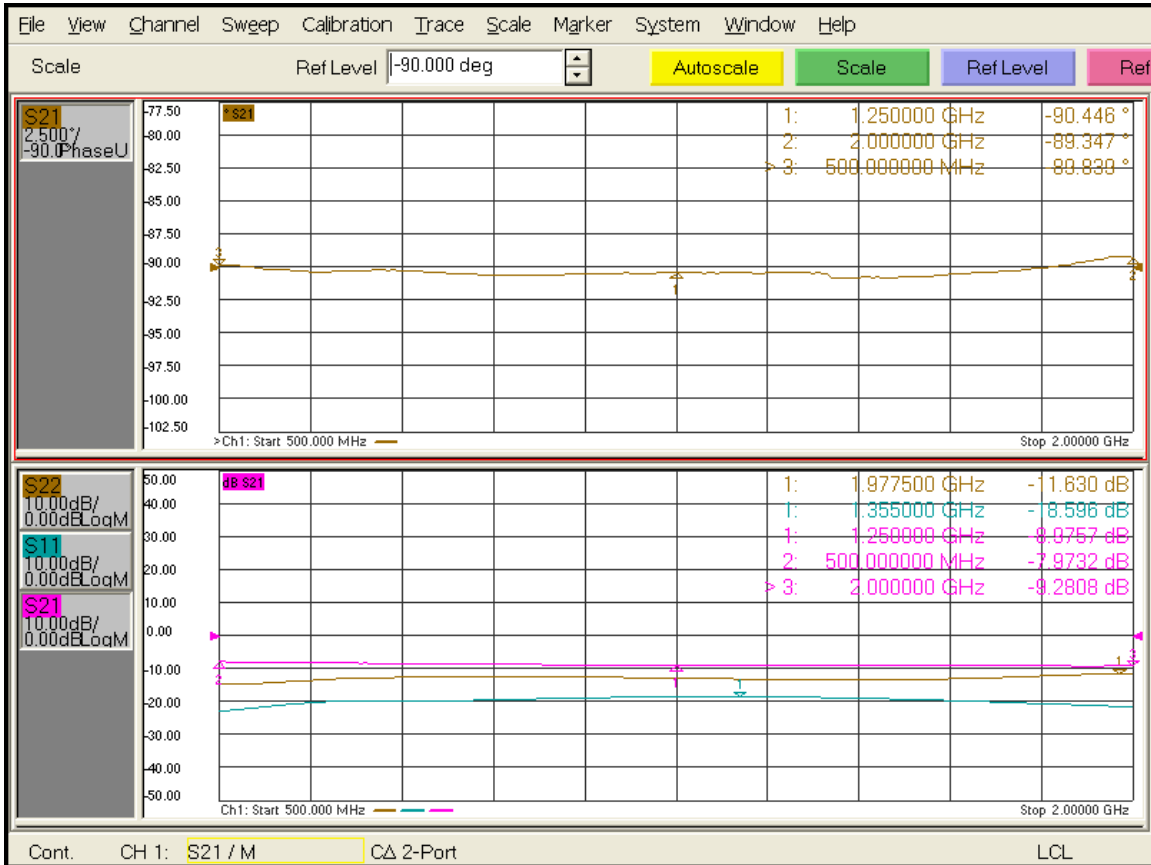


225° Phase, -10 dBm Input Power @ 50° C



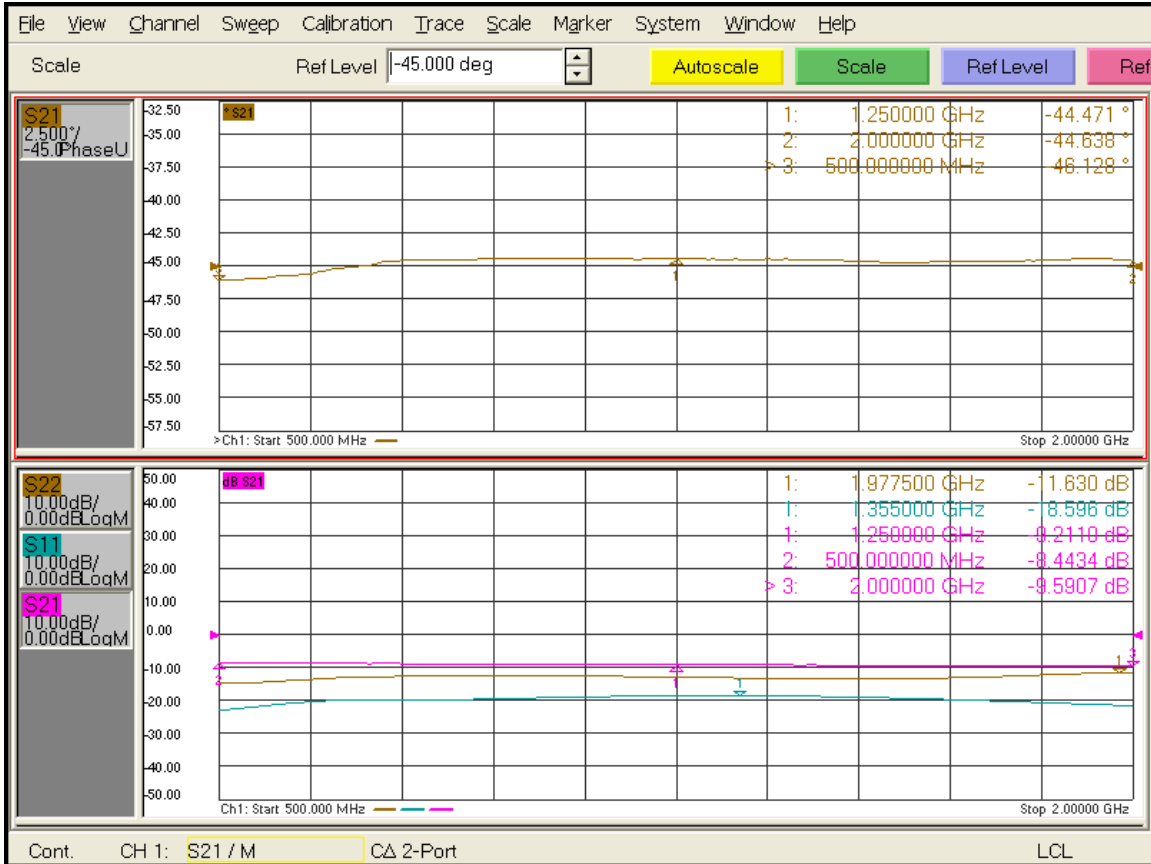


270° Phase, -10 dBm Input Power @ 50° C



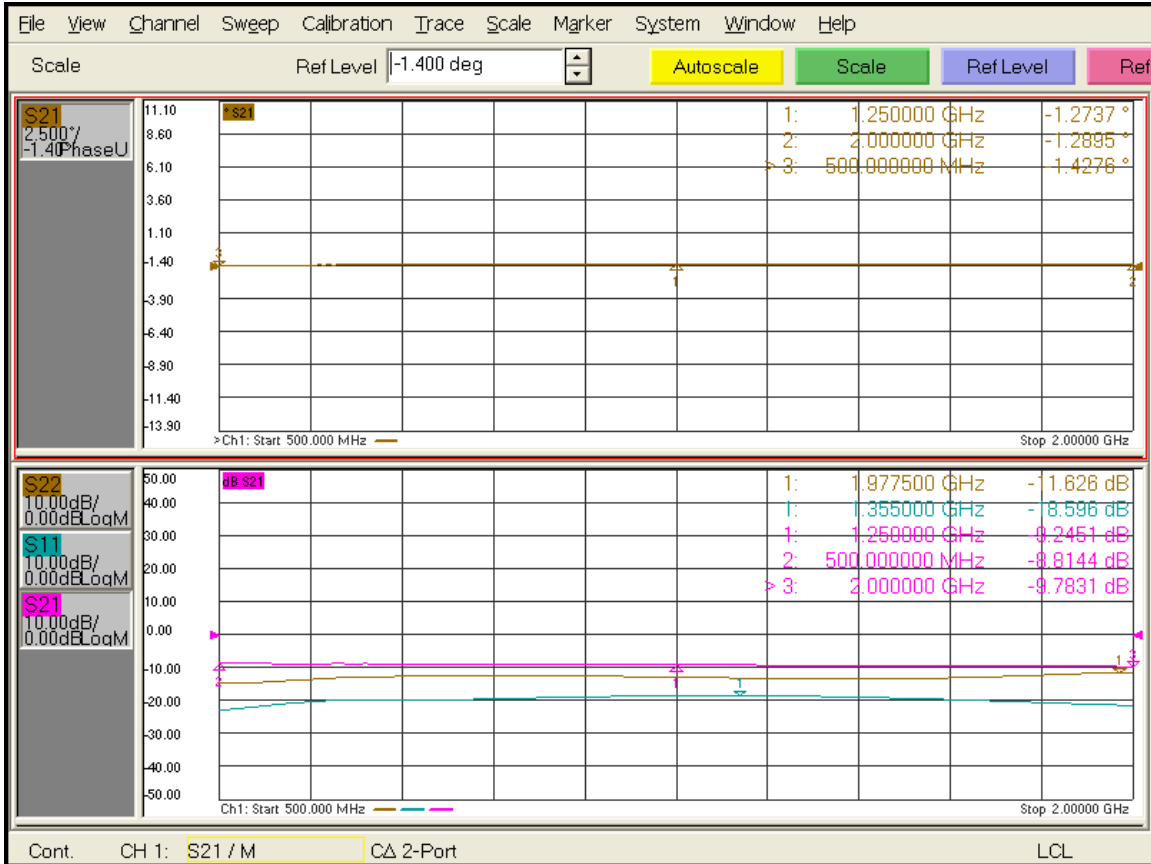


315° Phase, -10 dBm Input Power @ 50° C





358.6° Phase, -10 dBm Input Power @ 50° C





Data Taken at 50° C

Data Taken at -5 dBm Input Power

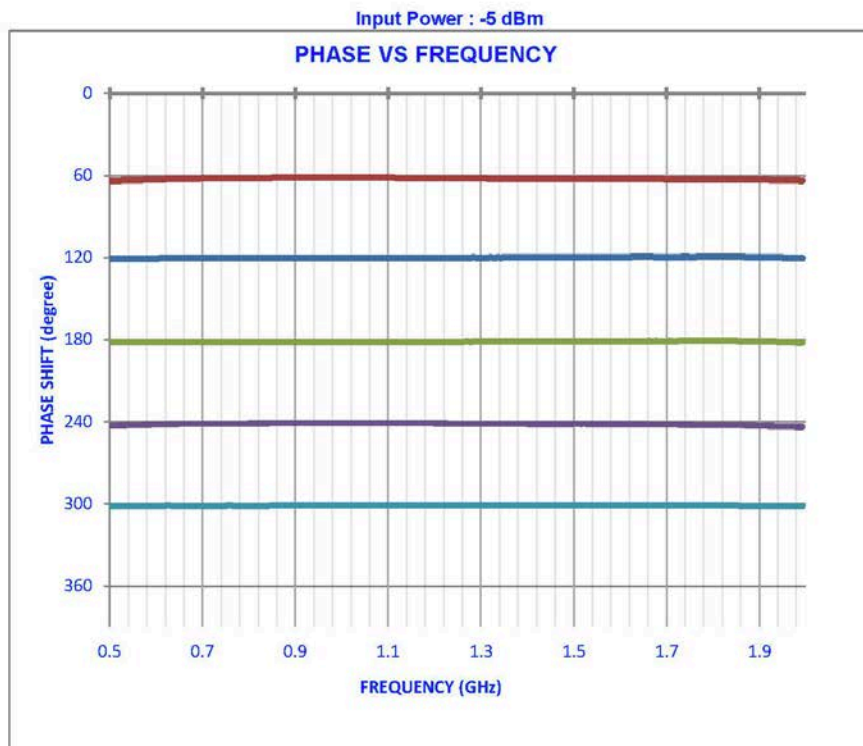
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 7.23 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.71 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.61 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 1.67 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.72 | -0.31 | 0.03 |
| 2.81 | 3.46 | -0.65 | 0.07 |
| 5.63 | 6.89 | -1.27 | 0.09 |
| 11.25 | 13.63 | -2.38 | 0.12 |
| 22.50 | 24.72 | -2.22 | 0.16 |
| 45.00 | 46.86 | -1.86 | 0.19 |
| 90.00 | 90.51 | -0.51 | 0.22 |
| 180.00 | 179.79 | 0.21 | 0.25 |
| 358.59 | 358.26 | 0.34 | 0.27 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 36.93 | -3.18 | 0.55 |
| 67.50 | 67.84 | -0.34 | 0.55 |
| 101.25 | 101.36 | -0.11 | 0.55 |
| 135.00 | 132.82 | 2.18 | 0.56 |
| 168.75 | 166.57 | 2.18 | 0.57 |
| 202.50 | 205.85 | -3.35 | 0.57 |
| 236.25 | 236.88 | -0.63 | 0.58 |
| 270.00 | 270.00 | 0.00 | 0.58 |
| 303.75 | 303.81 | -0.06 | 0.59 |
| 337.50 | 334.42 | 3.08 | 0.59 |
| | | | |
| | | | |
| | | | |

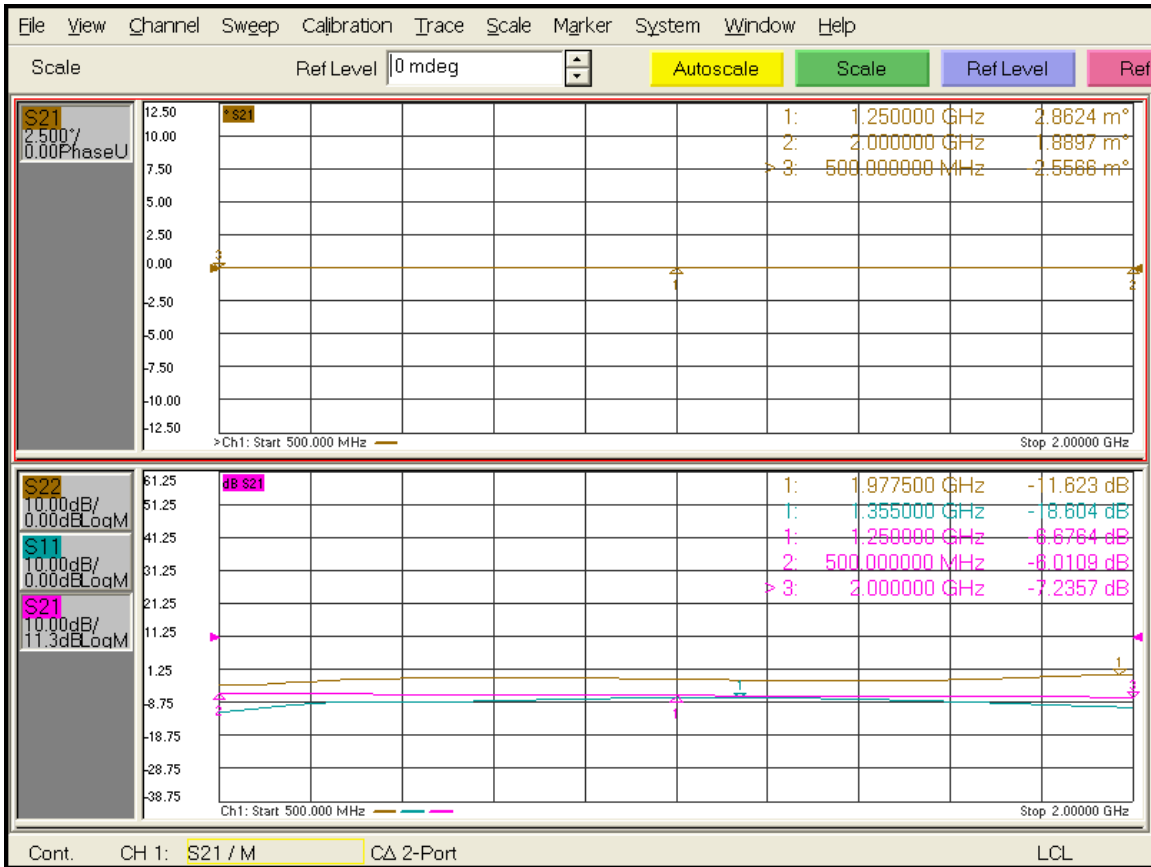


Phase Plot Taken at 50° C



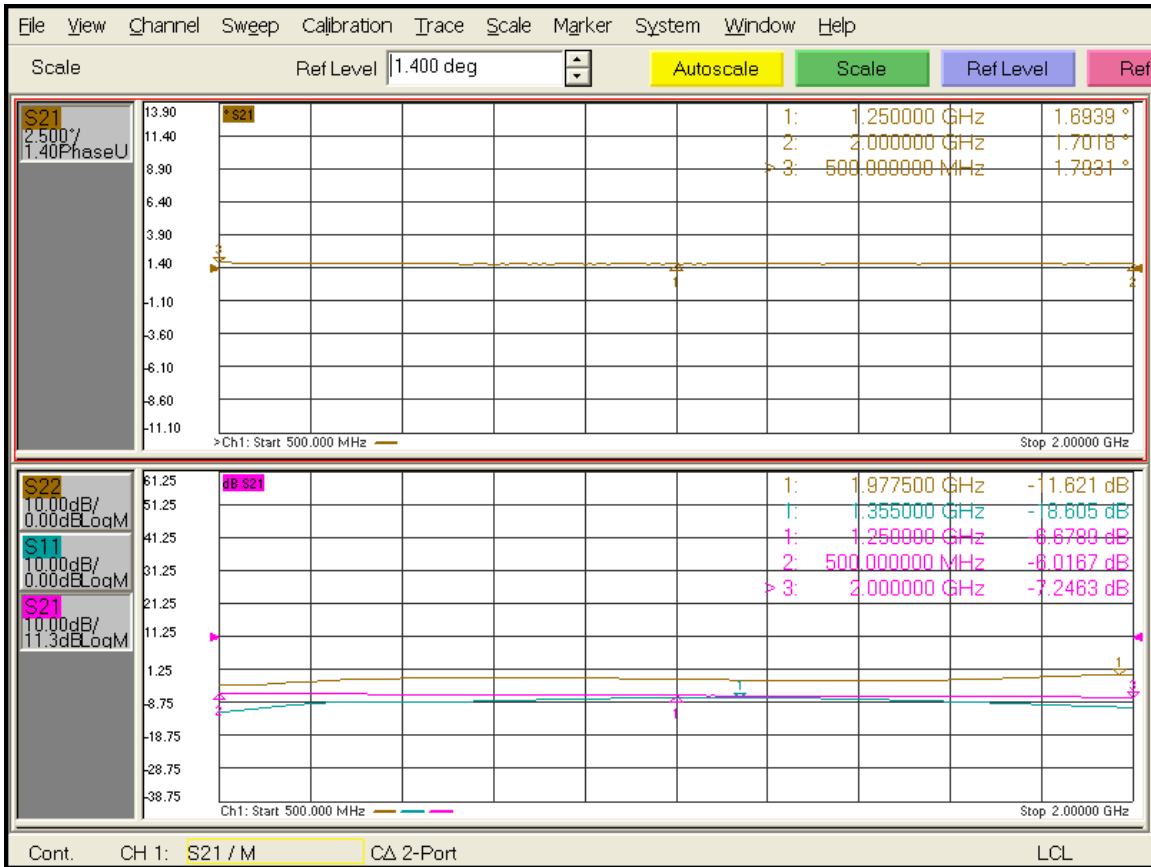


0° Phase, -5 dBm Input Power @ 50° C



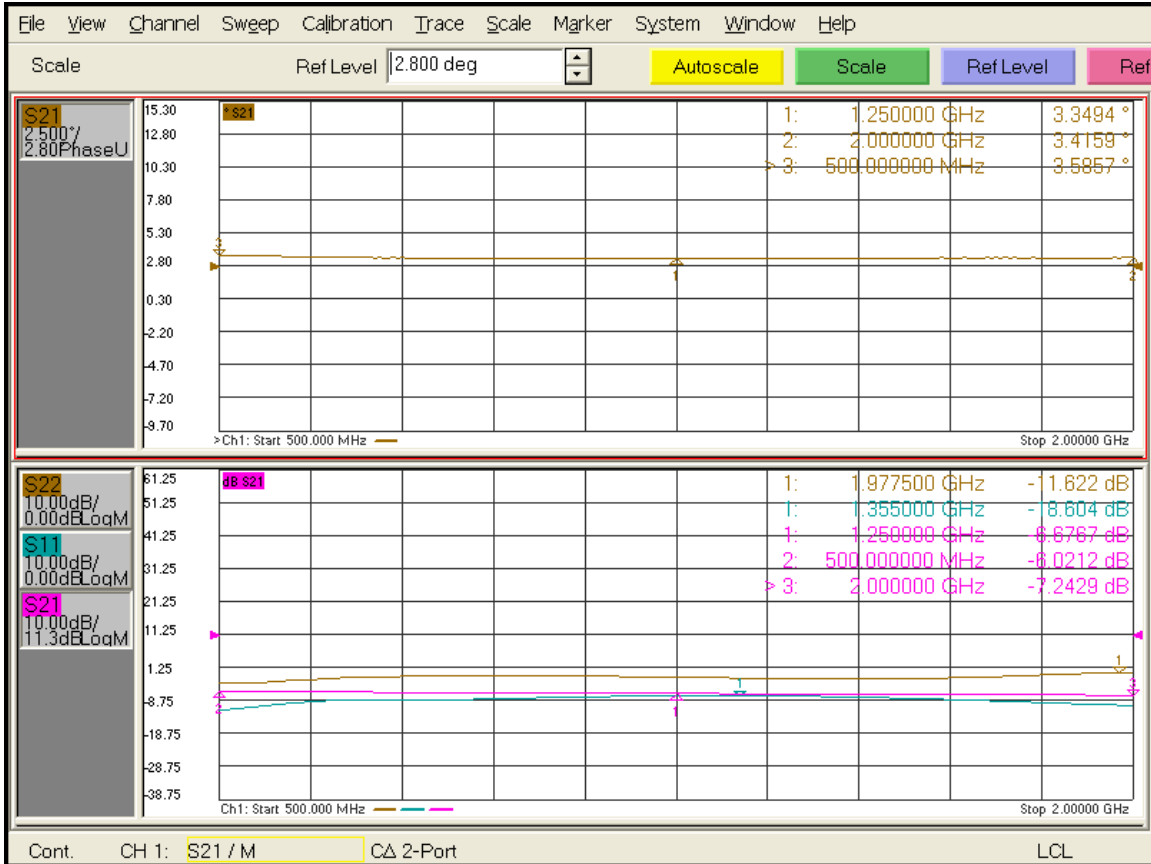


1.4° Phase, -5 dBm Input Power @ 50° C



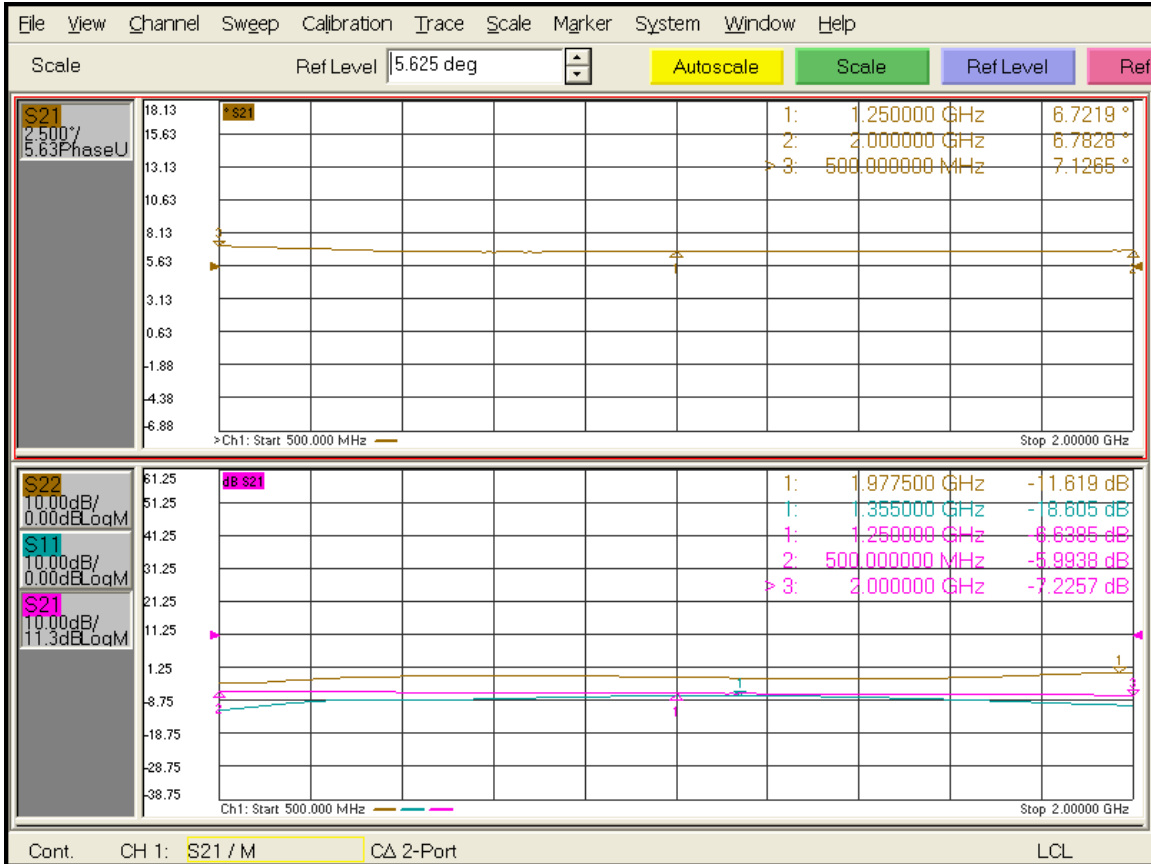


2.8° Phase, -5 dBm Input Power @ 50° C



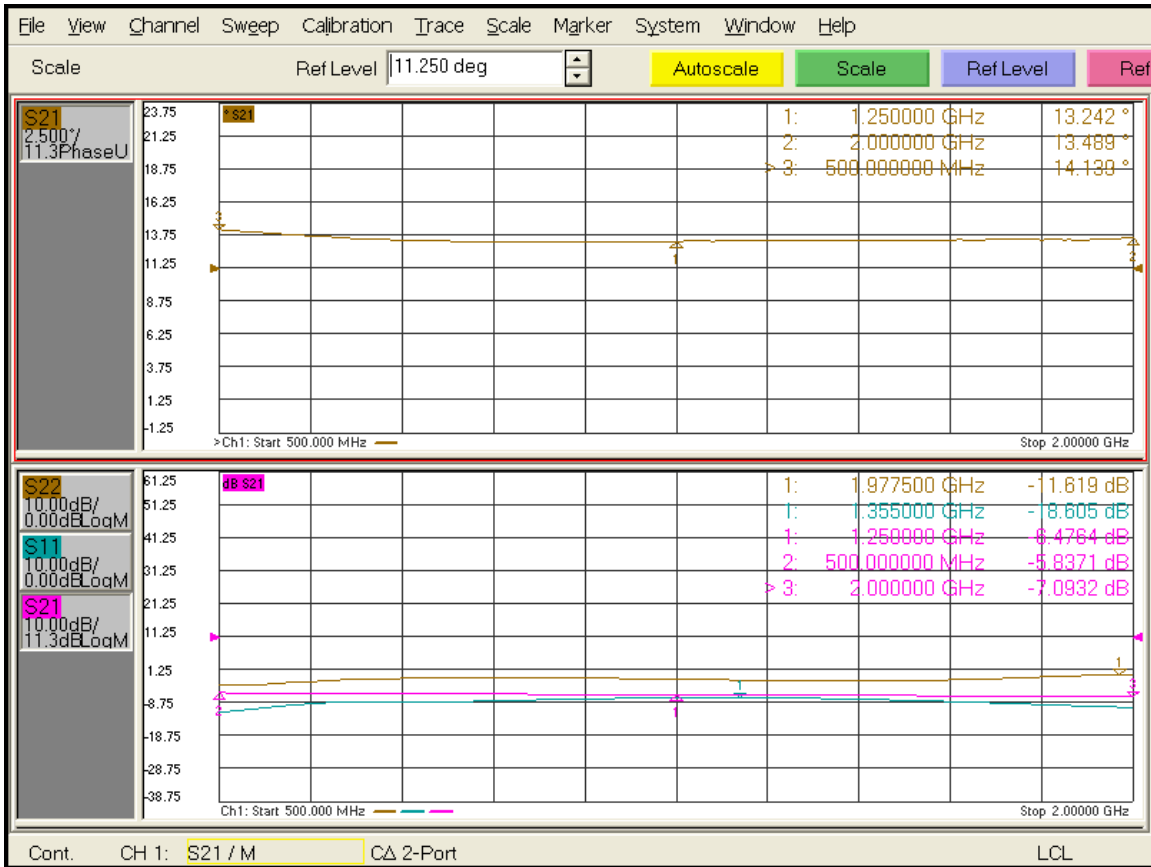


5.625° Phase, -5 dBm Input Power @ 50° C



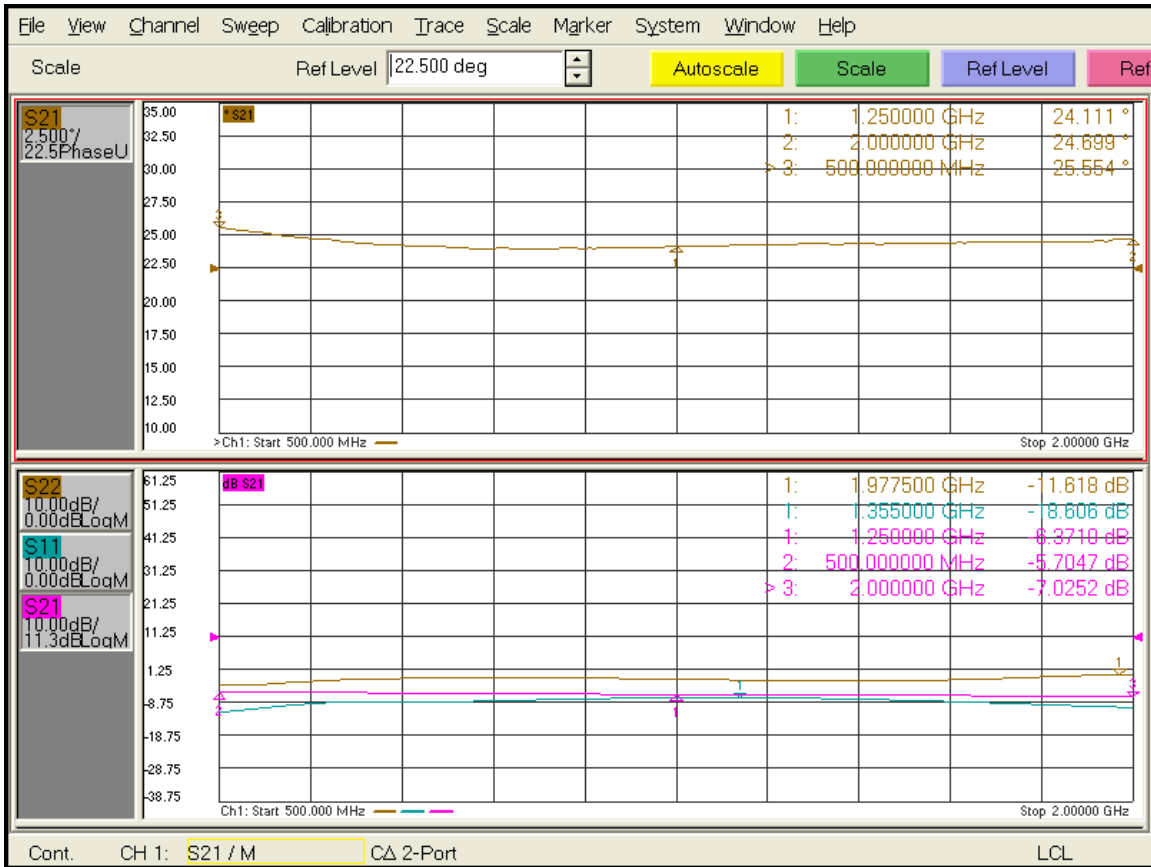


11.25° Phase, -5 dBm Input Power @ 50° C



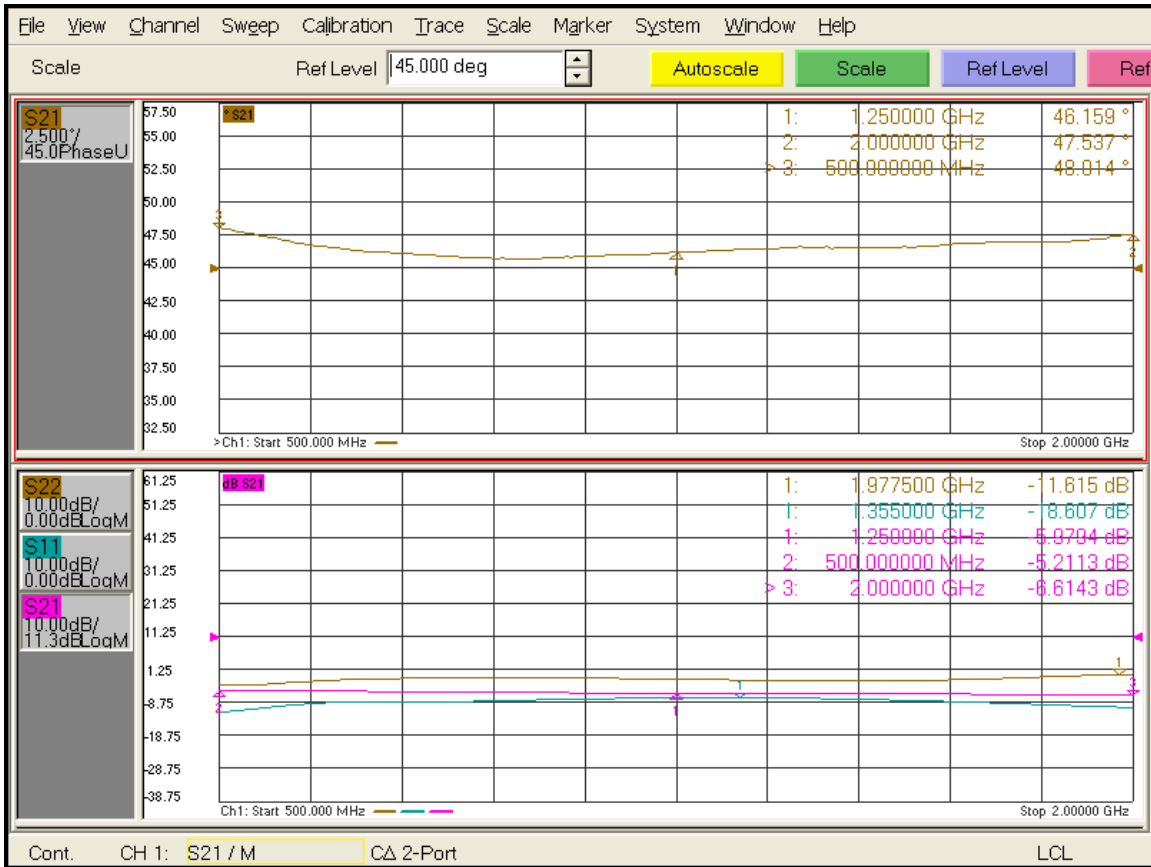


22.5° Phase, -5 dBm Input Power @ 50° C



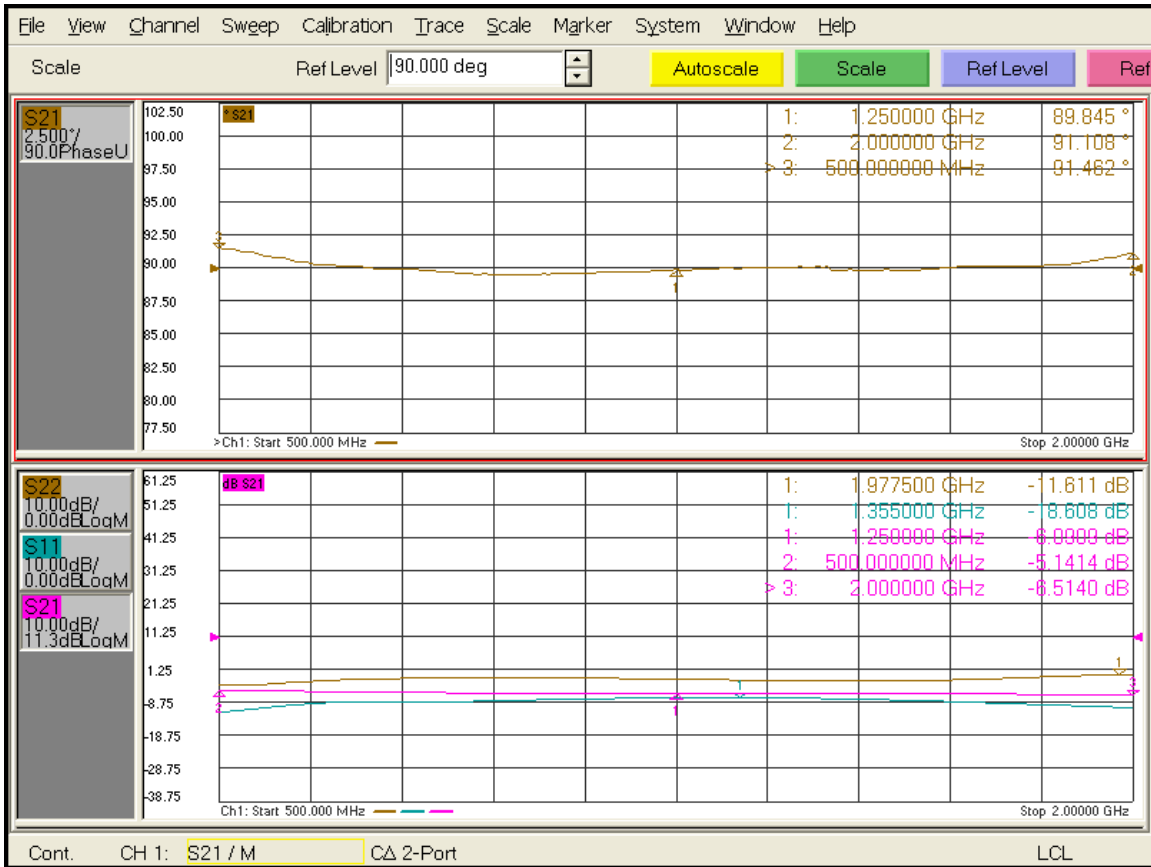


45° Phase, -5 dBm Input Power @ 50° C



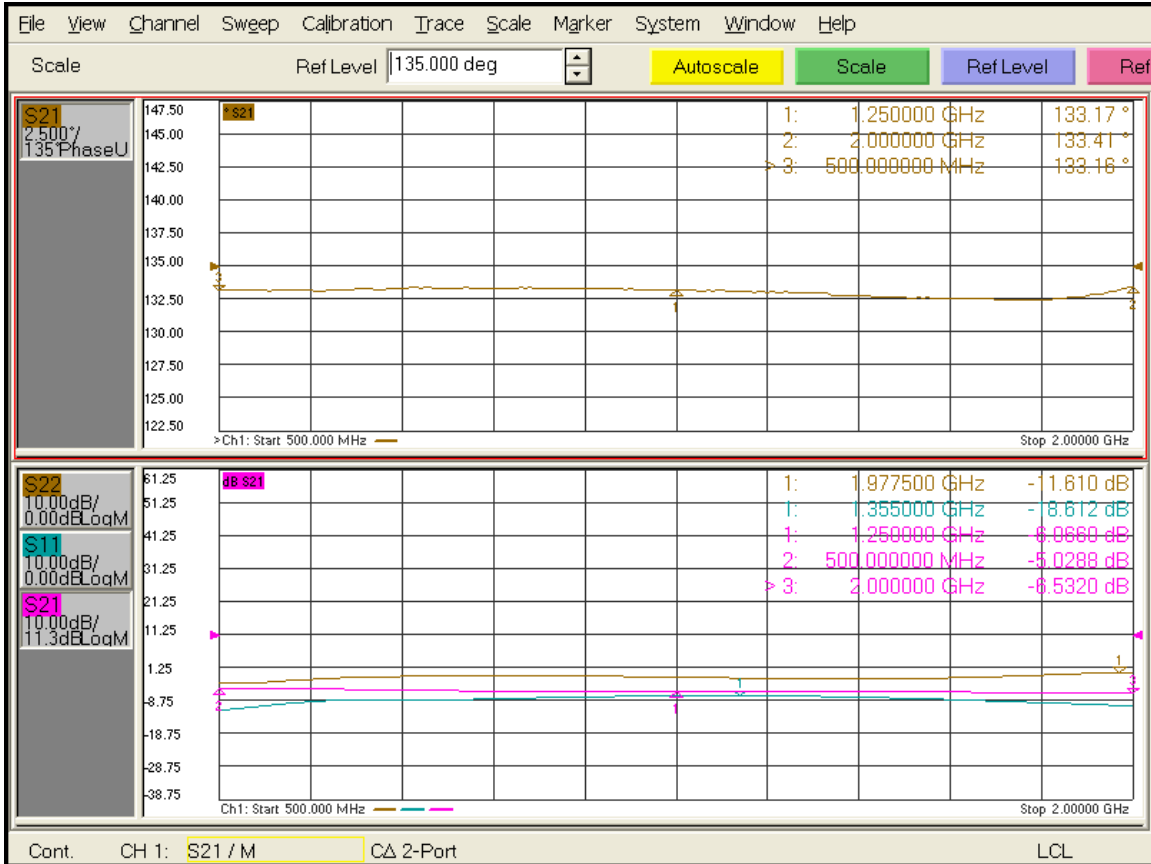


90° Phase, -5 dBm Input Power @ 50° C



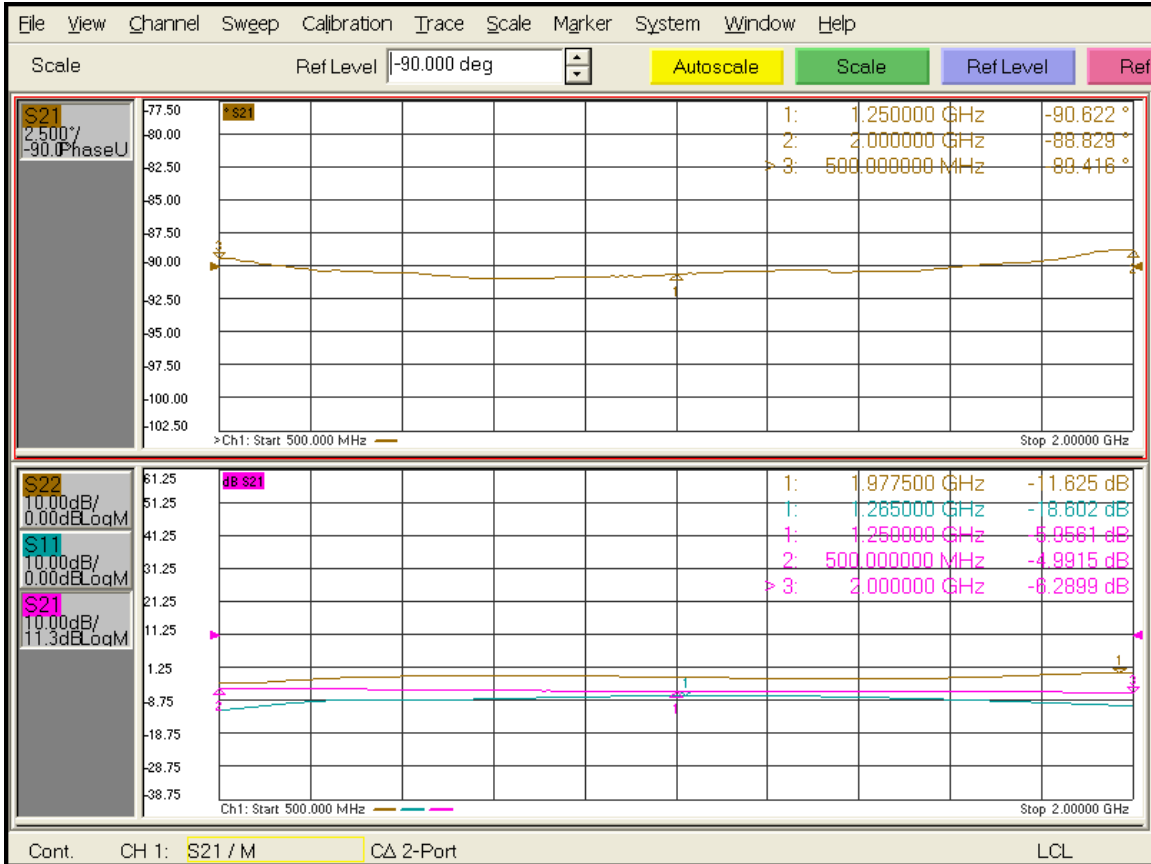


135° Phase, -5 dBm Input Power @ 50° C



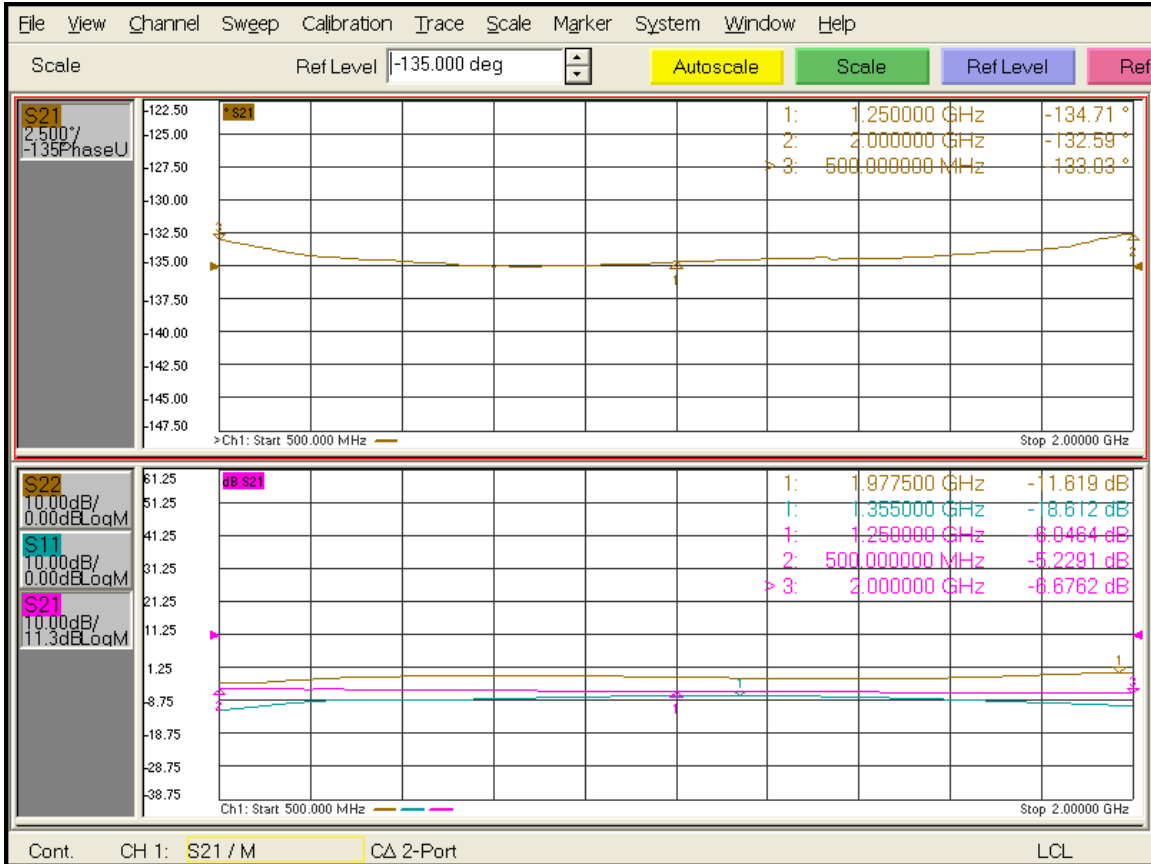


180° Phase, -5 dBm Input Power @ 50° C



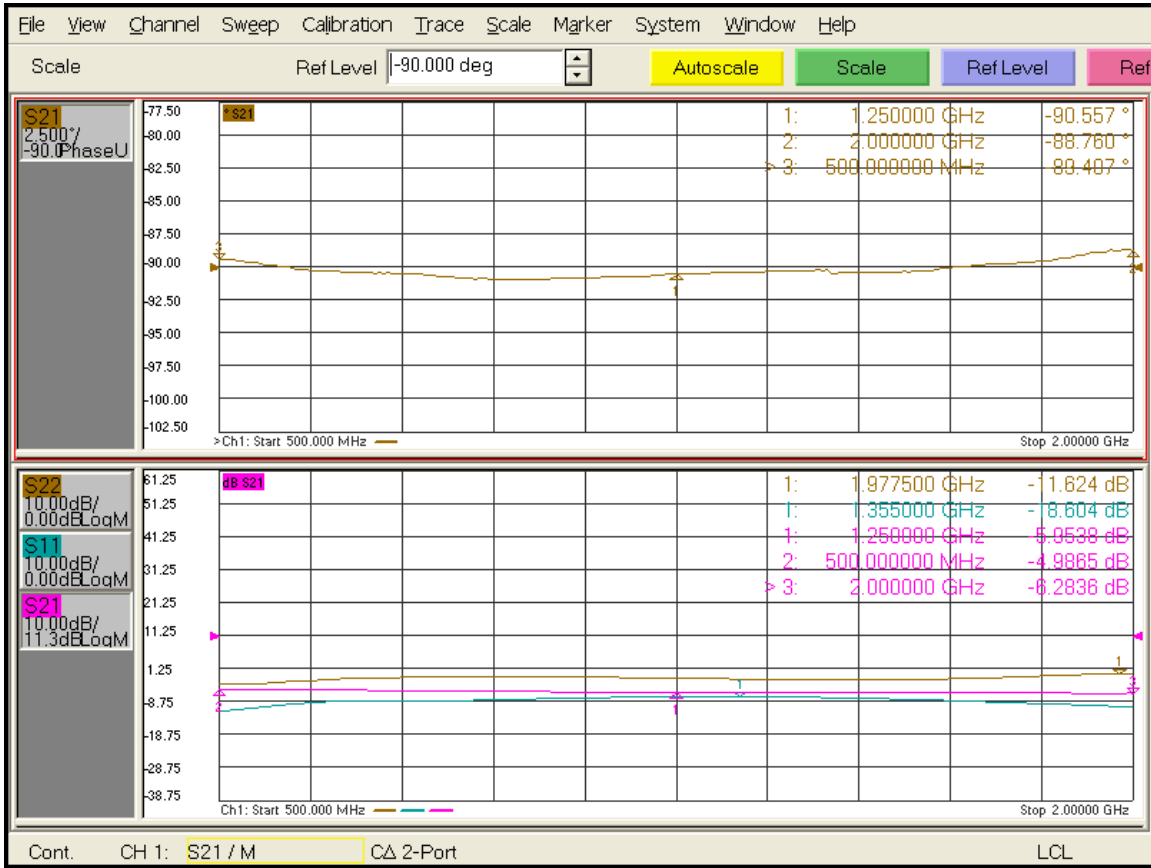


225° Phase, -5 dBm Input Power @ 50° C



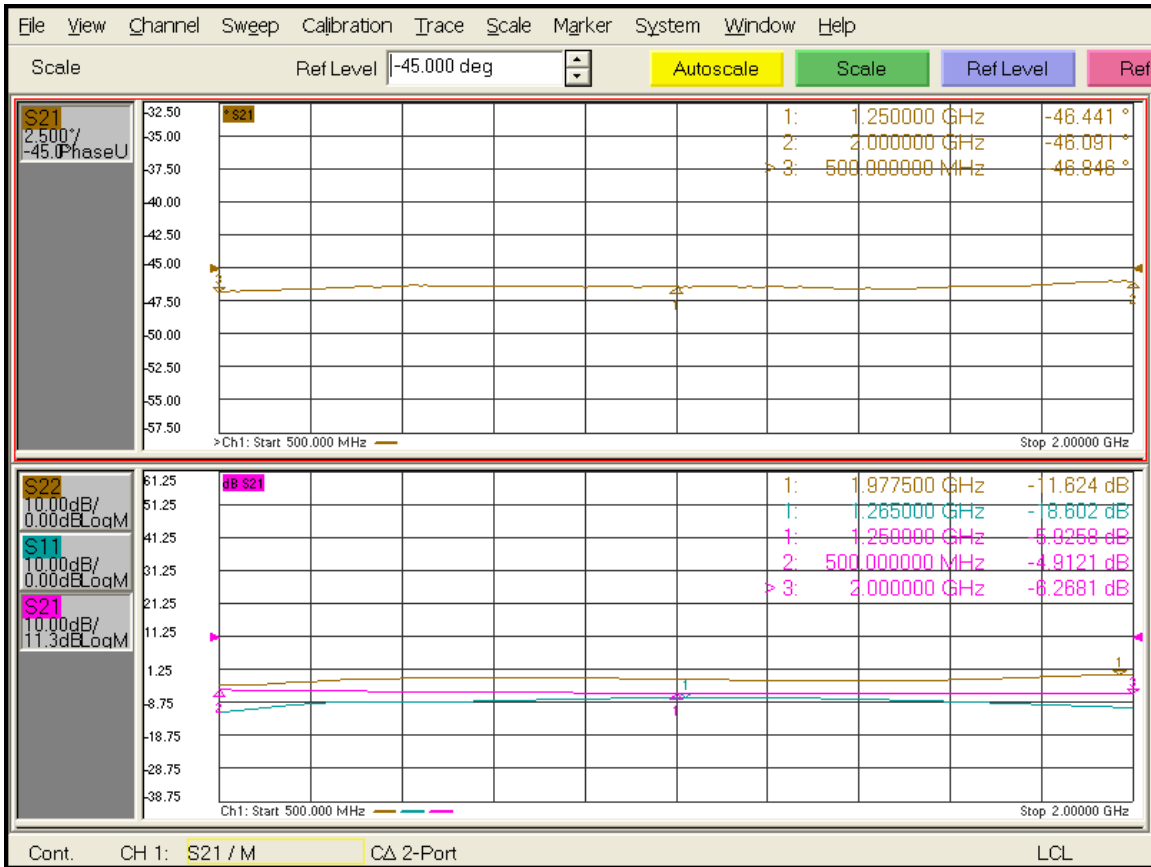


270° Phase, -5 dBm Input Power @ 50° C



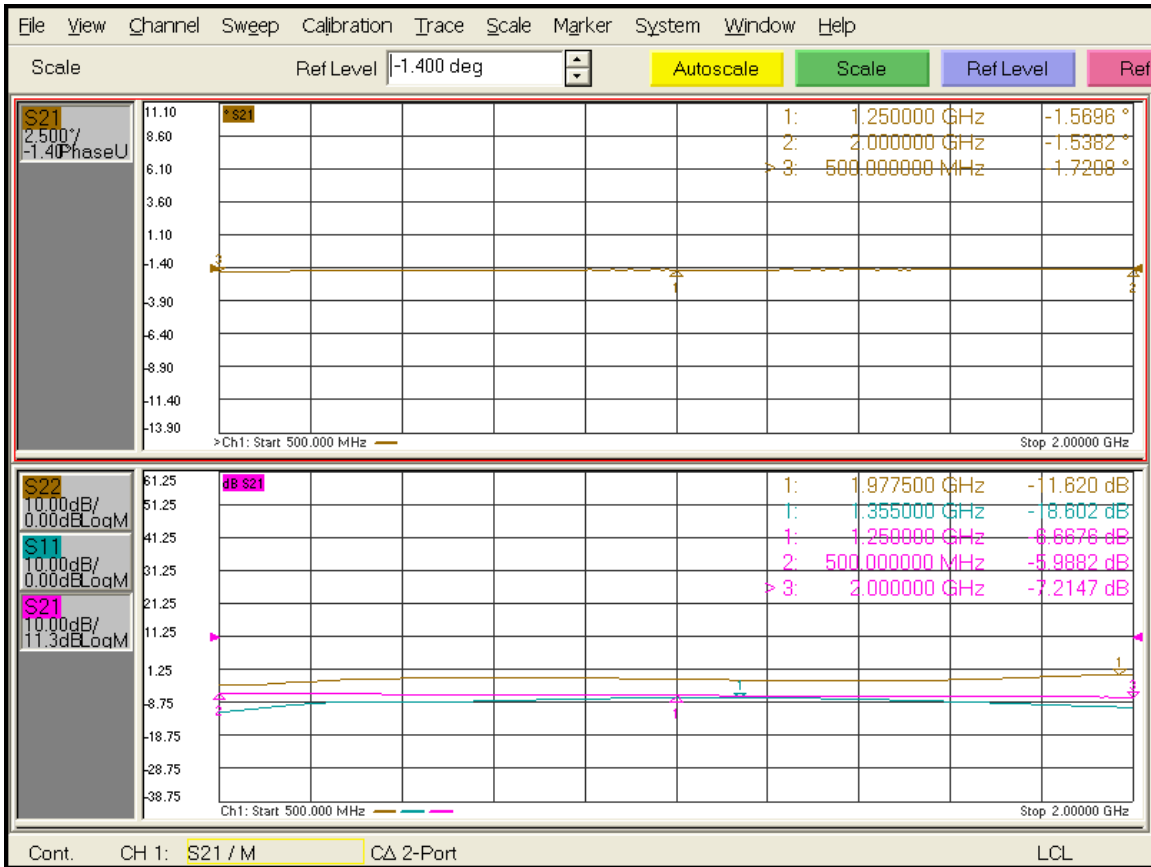


315° Phase, -5 dBm Input Power @ 50° C





358.6° Phase, -5 dBm Input Power @ 50° C





Data Taken at 50° C

Data Taken at 0 dBm Input Power

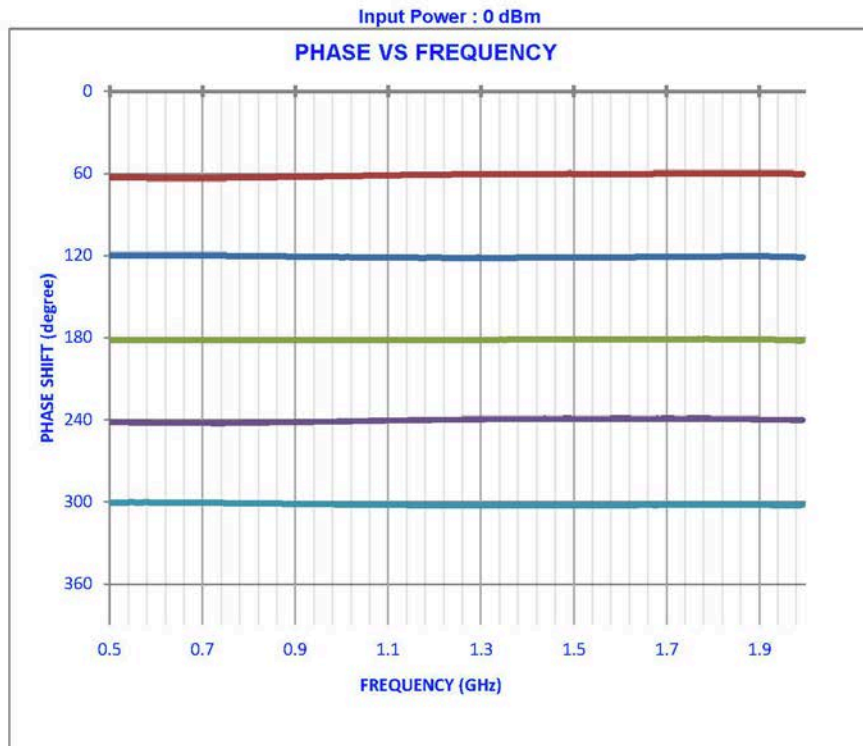
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|---|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 6.98 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.71 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 0.65 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 2.04 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.78 | -0.37 | 0.05 |
| 2.81 | 3.58 | -0.77 | 0.09 |
| 5.63 | 7.13 | -1.50 | 0.14 |
| 11.25 | 14.05 | -2.80 | 0.19 |
| 22.50 | 25.25 | -2.75 | 0.23 |
| 45.00 | 46.64 | -1.64 | 0.27 |
| 90.00 | 89.70 | 0.30 | 0.31 |
| 180.00 | 179.79 | 0.21 | 0.36 |
| 358.59 | 358.15 | 0.45 | 0.39 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 37.16 | -3.41 | 0.78 |
| 67.50 | 66.76 | 0.74 | 0.79 |
| 101.25 | 101.20 | 0.05 | 0.81 |
| 135.00 | 132.93 | 2.07 | 0.81 |
| 168.75 | 166.08 | 2.67 | 0.82 |
| 202.50 | 206.17 | -3.67 | 0.83 |
| 236.25 | 235.82 | 0.43 | 0.84 |
| 270.00 | 269.30 | 0.70 | 0.84 |
| 303.75 | 303.91 | -0.16 | 0.85 |
| 337.50 | 333.69 | 3.81 | 0.86 |
| | | | |
| | | | |
| | | | |

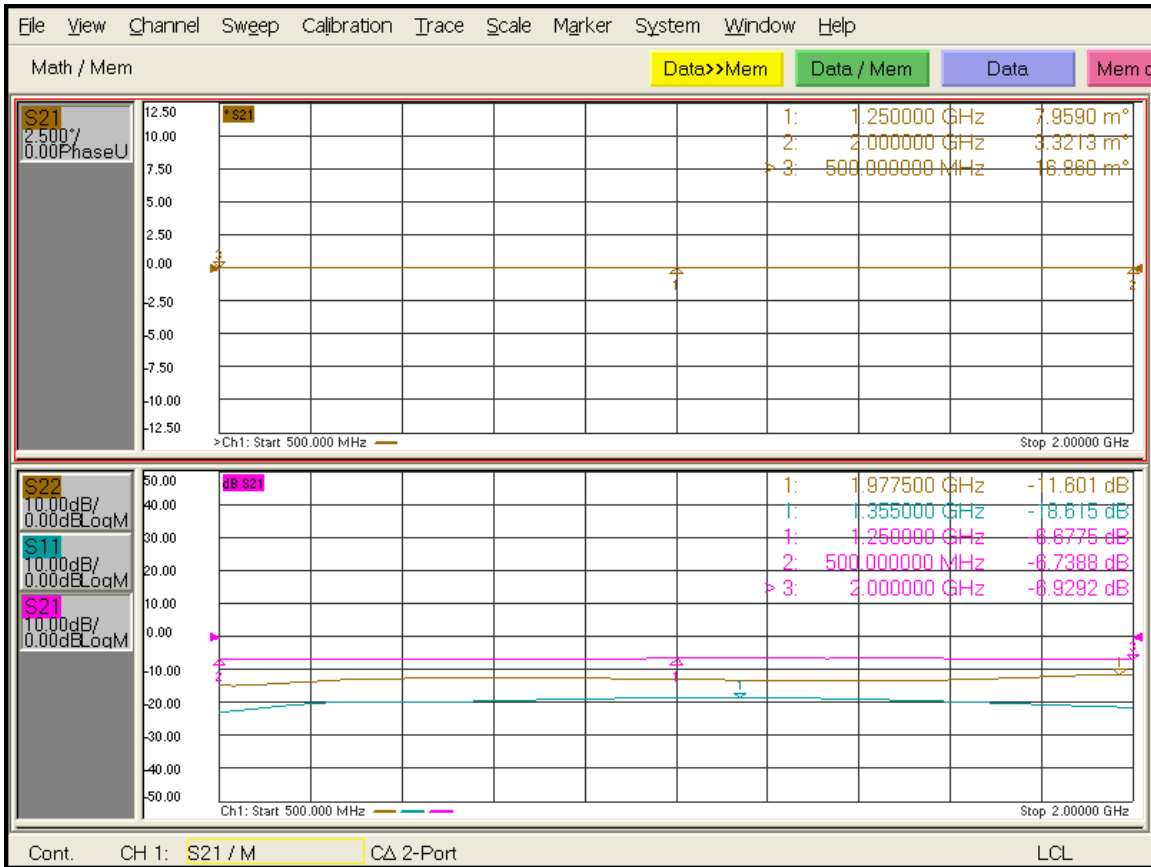


Phase Plot Taken at 50° C



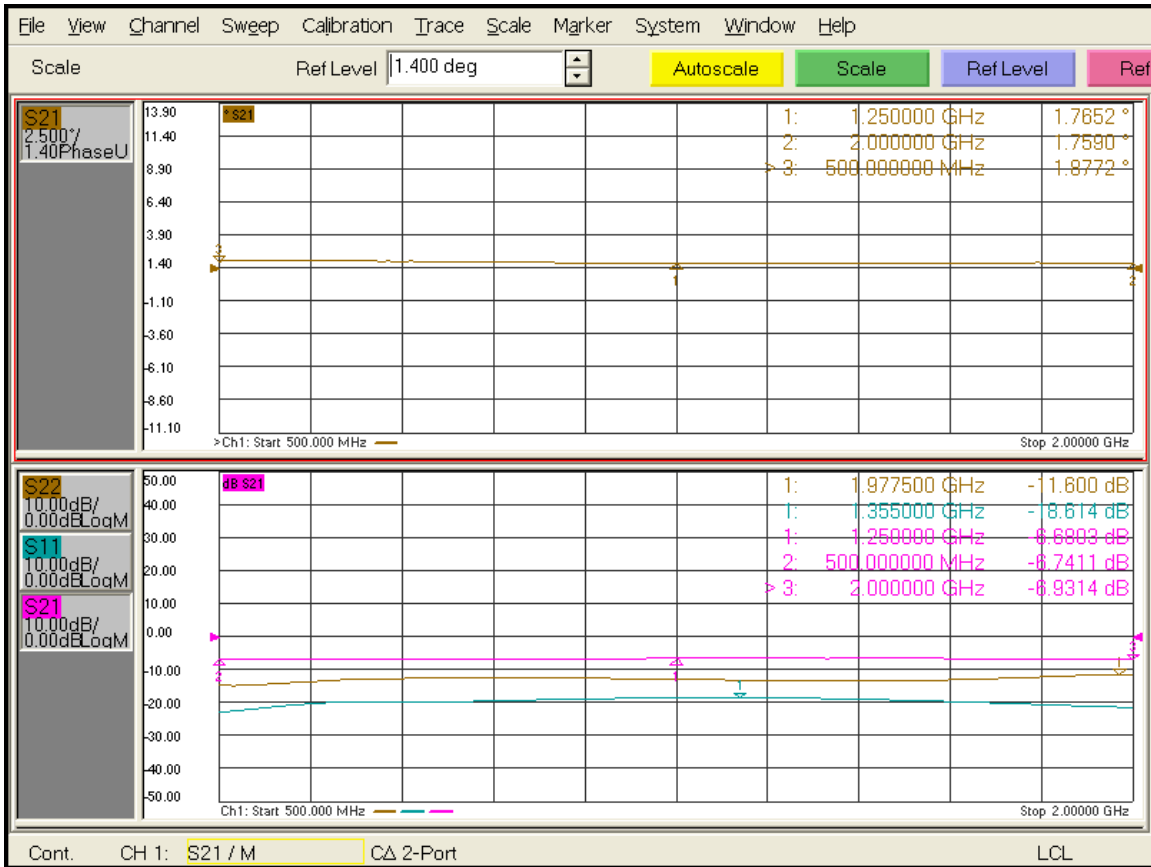


0° Phase, 0 dBm Input Power @ 50° C



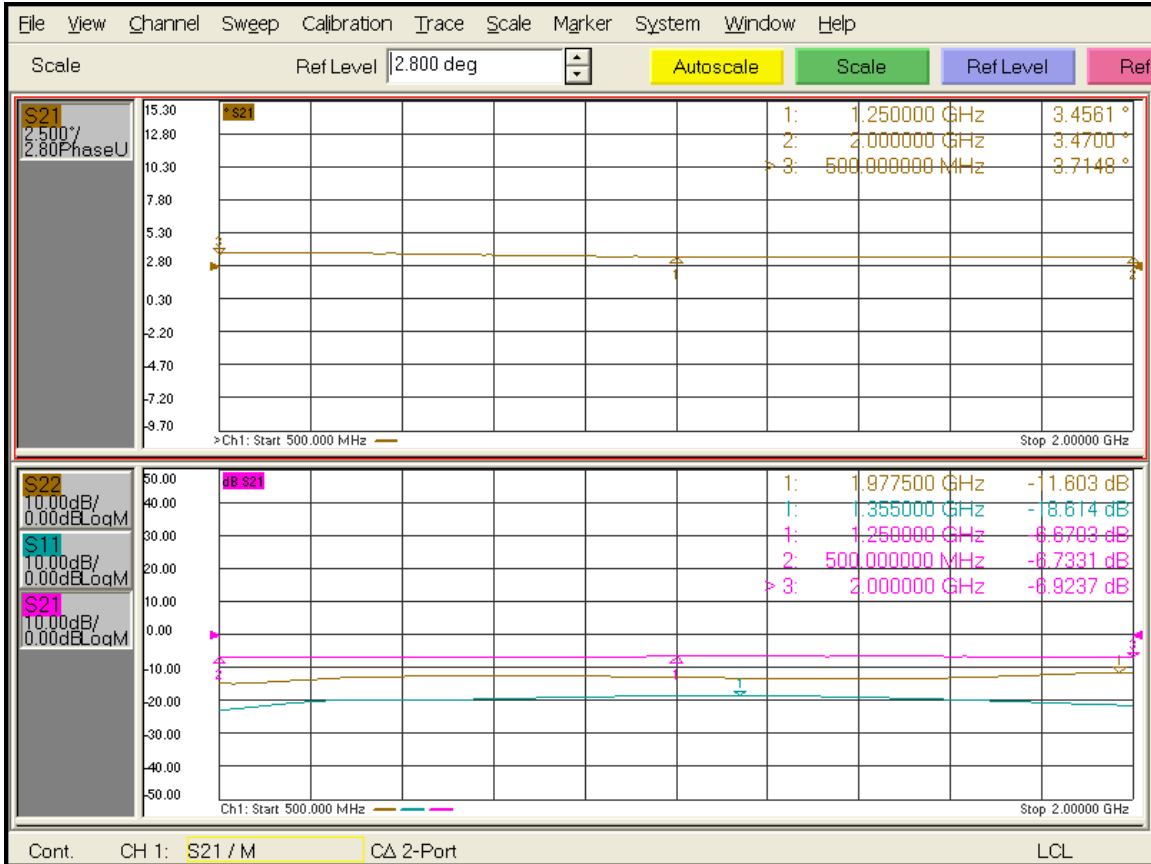


1.4° Phase, 0 dBm Input Power @ 50° C



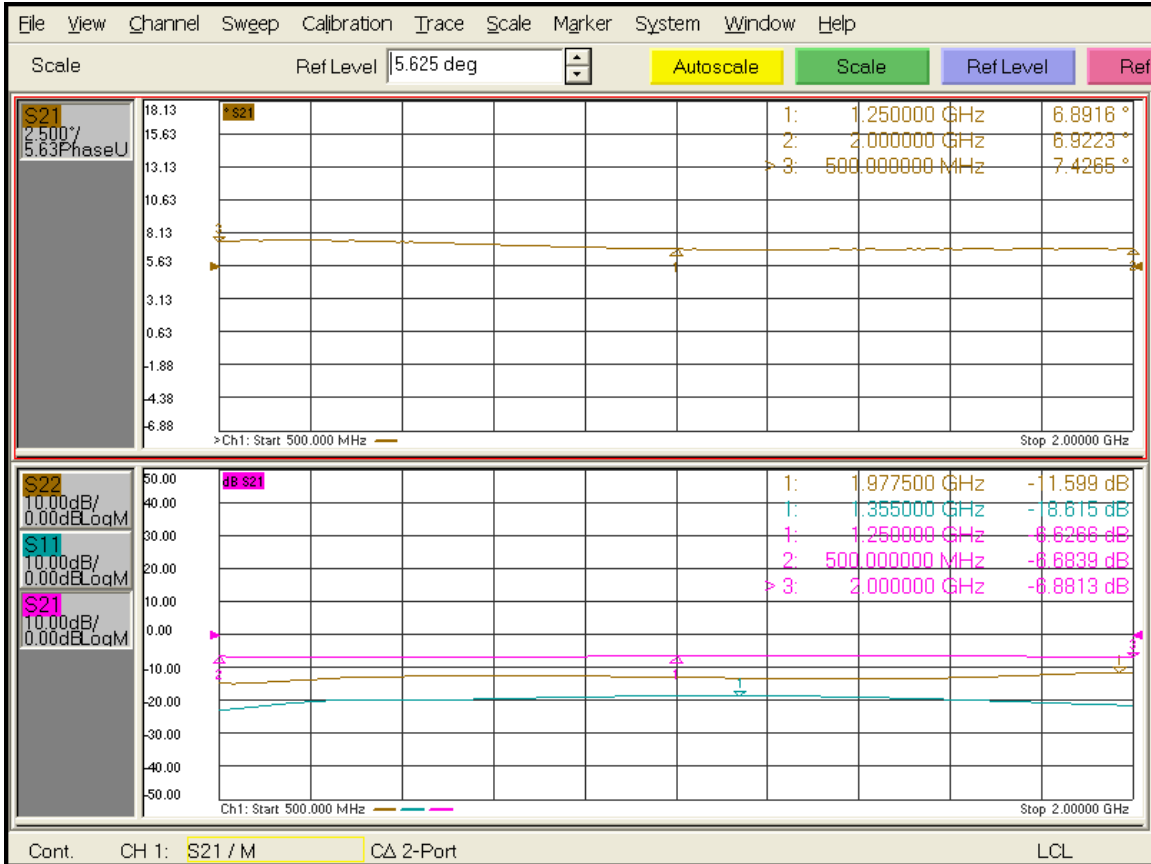


2.8° Phase, 0 dBm Input Power @ 50° C



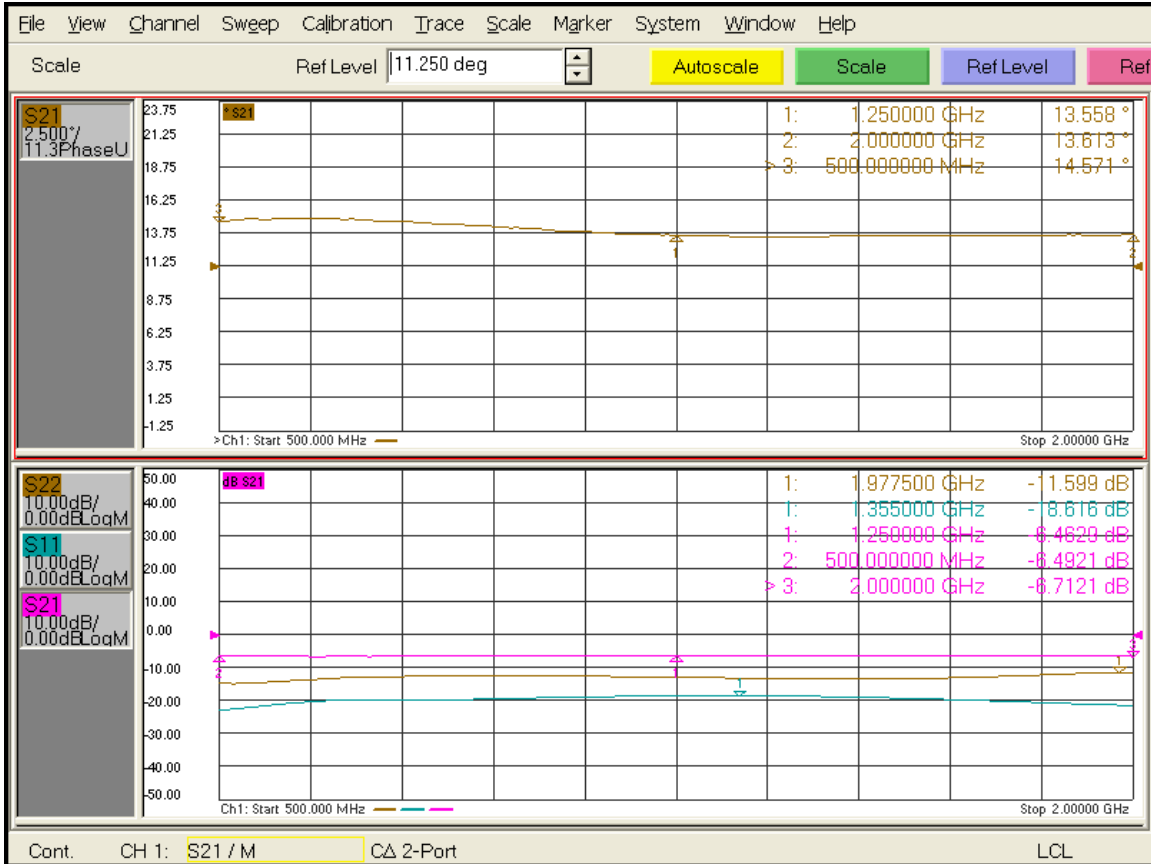


5.625° Phase, 0 dBm Input Power @ 50° C



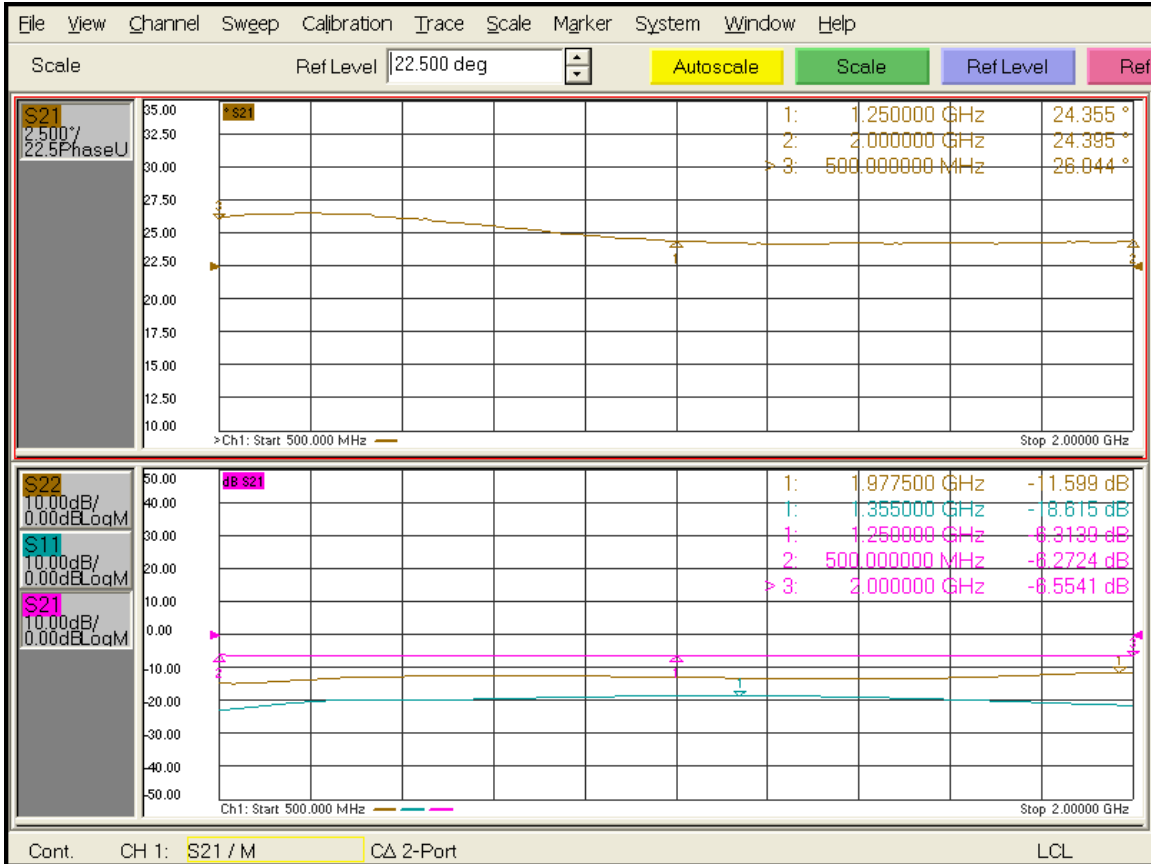


11.25° Phase, 0 dBm Input Power @ 50° C



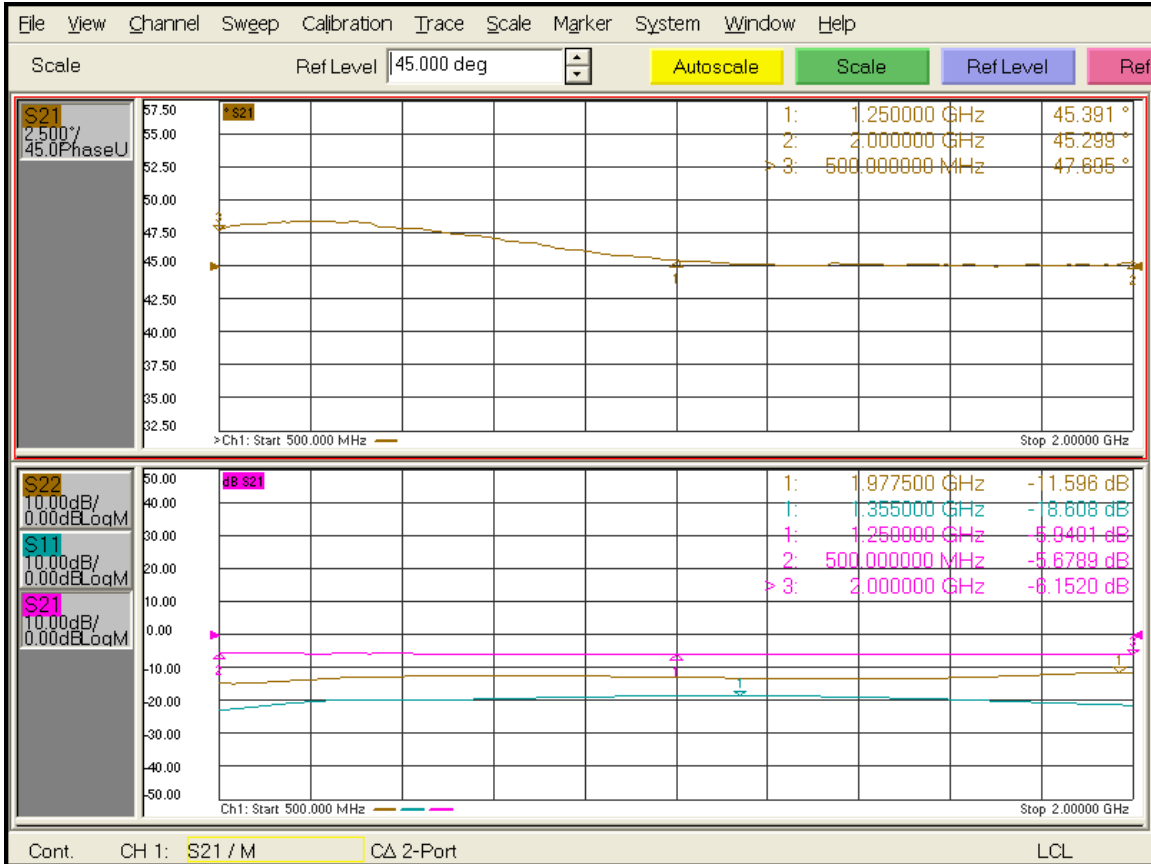


22.5° Phase, 0 dBm Input Power @ 50° C



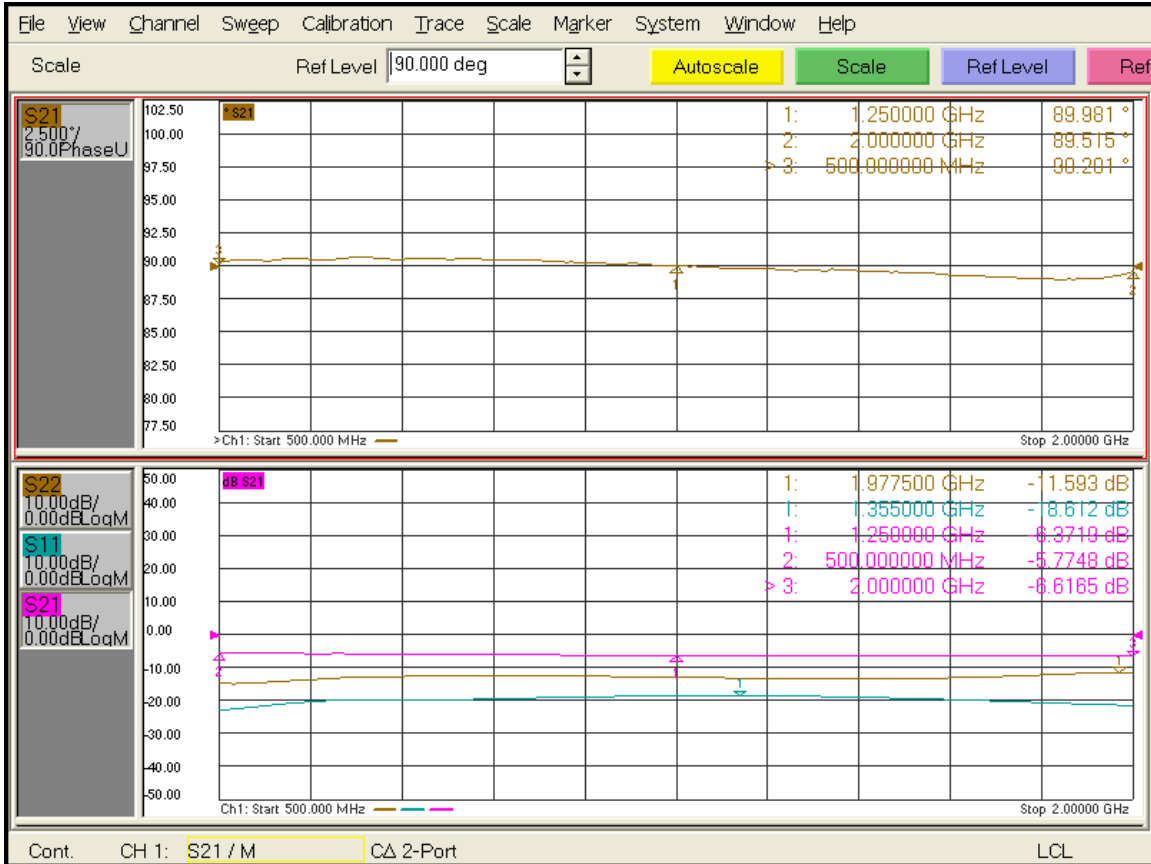


45° Phase, 0 dBm Input Power @ 50° C



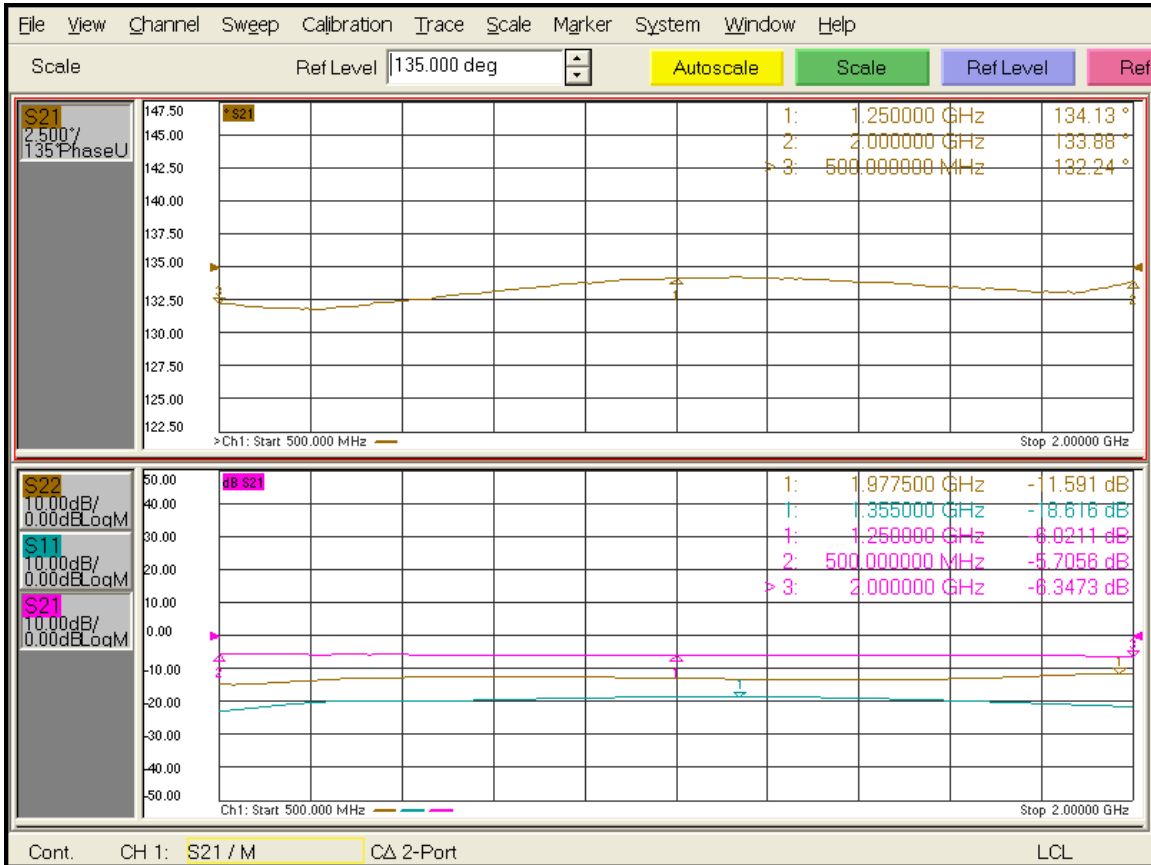


90° Phase, 0 dBm Input Power @ 50° C



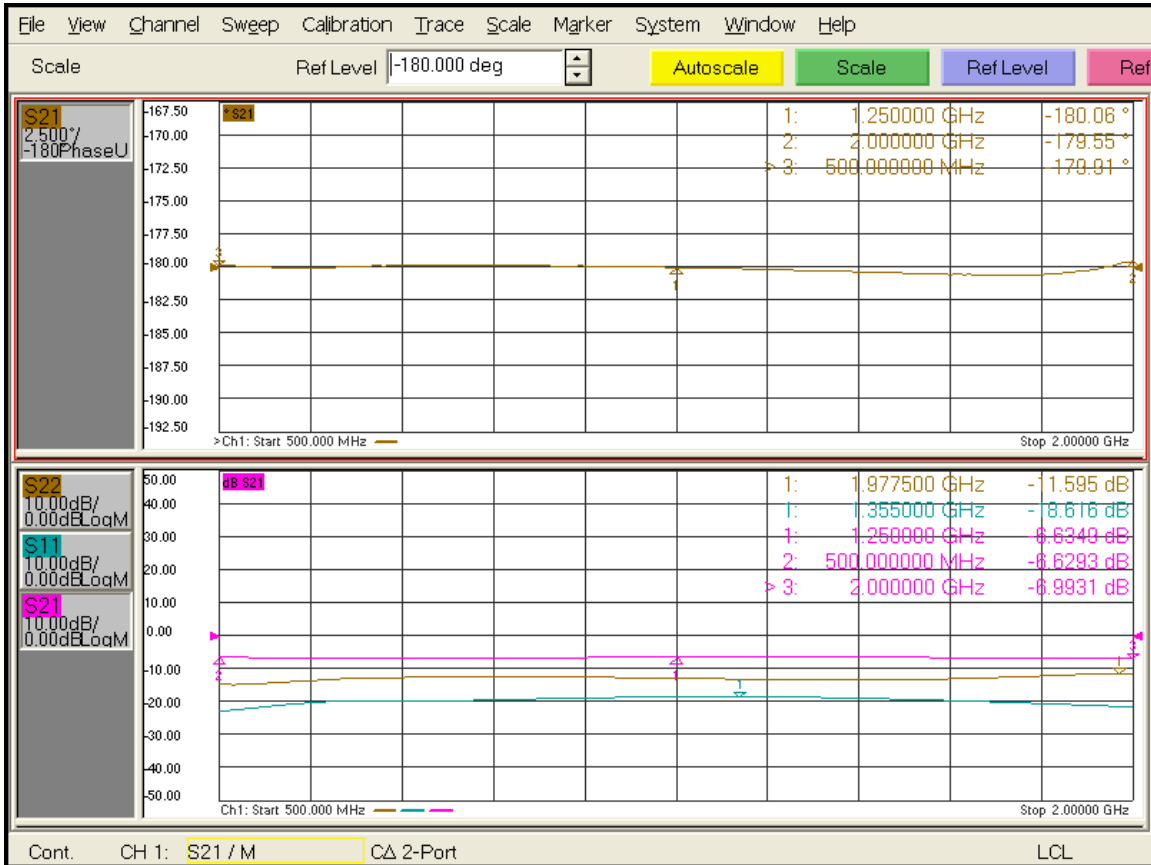


135° Phase, 0 dBm Input Power @ 50° C



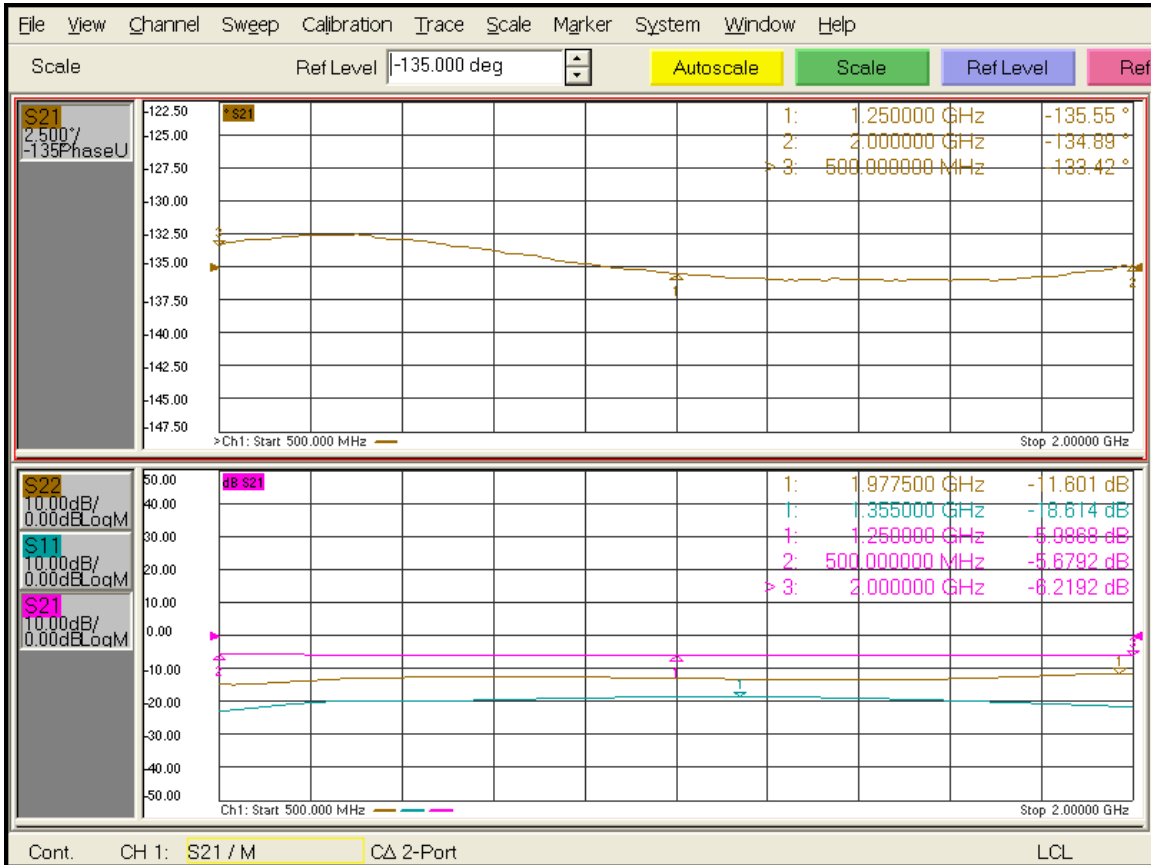


180° Phase, 0 dBm Input Power @ 50° C



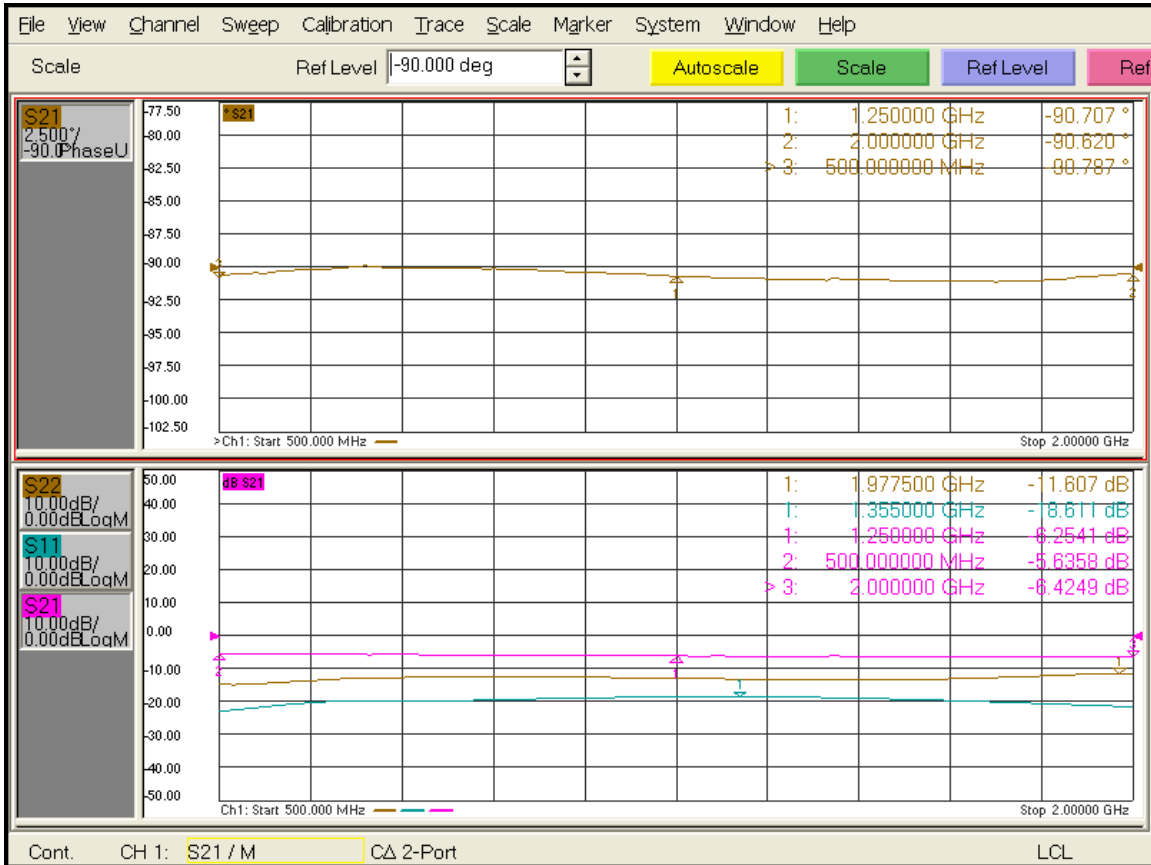


225° Phase, 0 dBm Input Power @ 50° C



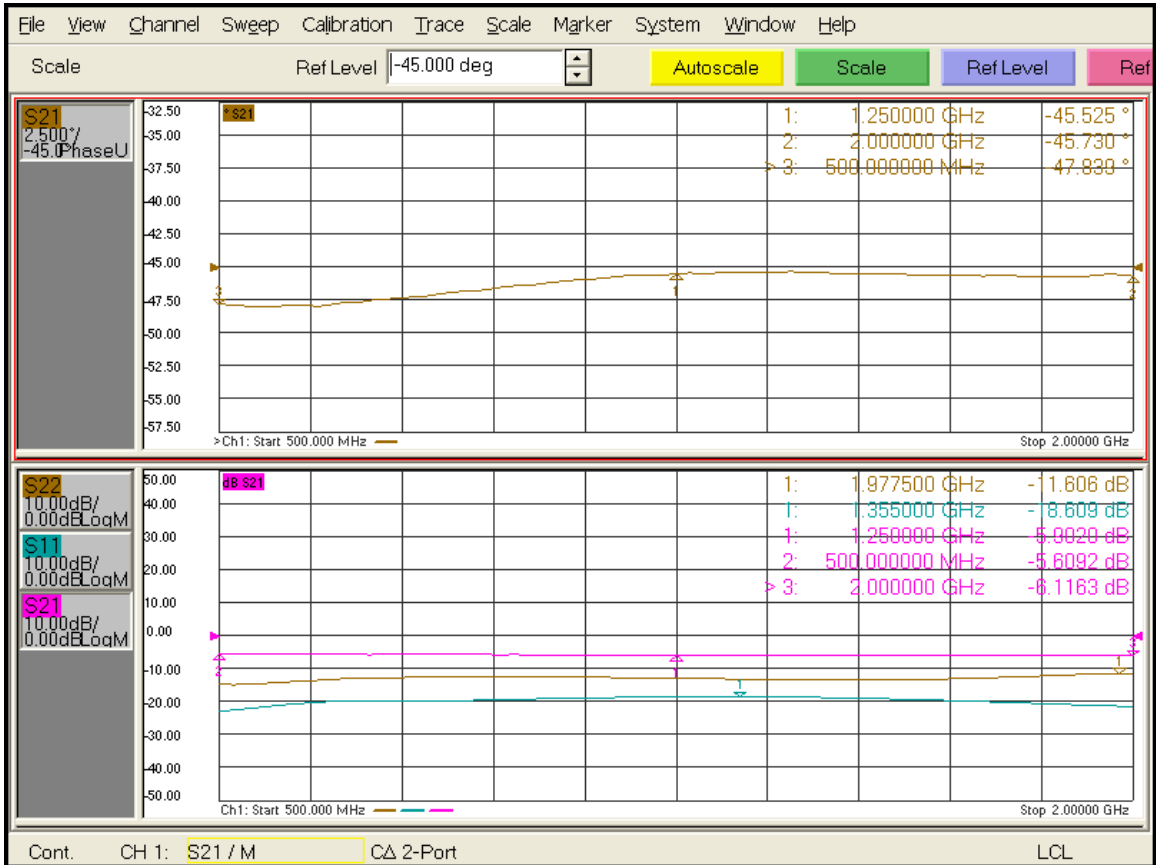


270° Phase, 0 dBm Input Power @ 50° C



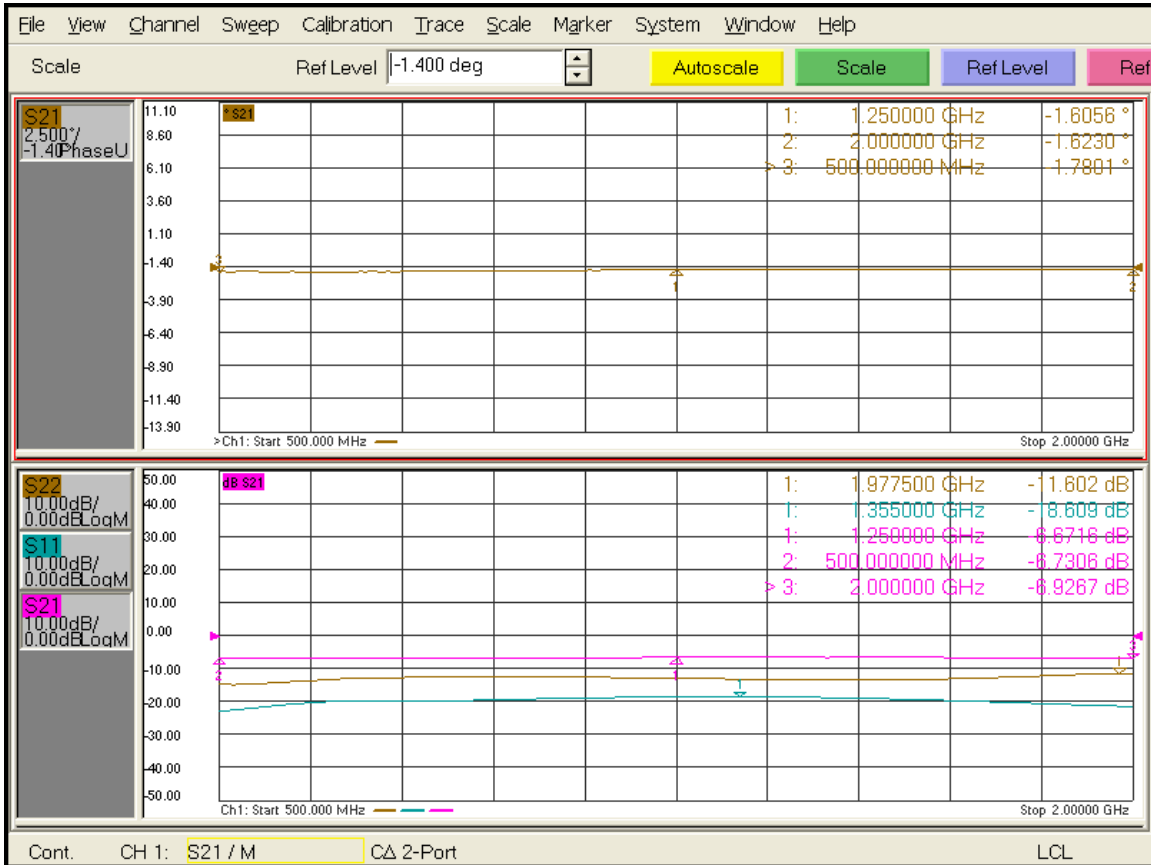


315° Phase, 0 dBm Input Power @ 50° C





358.6° Phase, 0 dBm Input Power @ 50° C





Data Taken at 50° C

Data Taken at 5 dBm Input Power

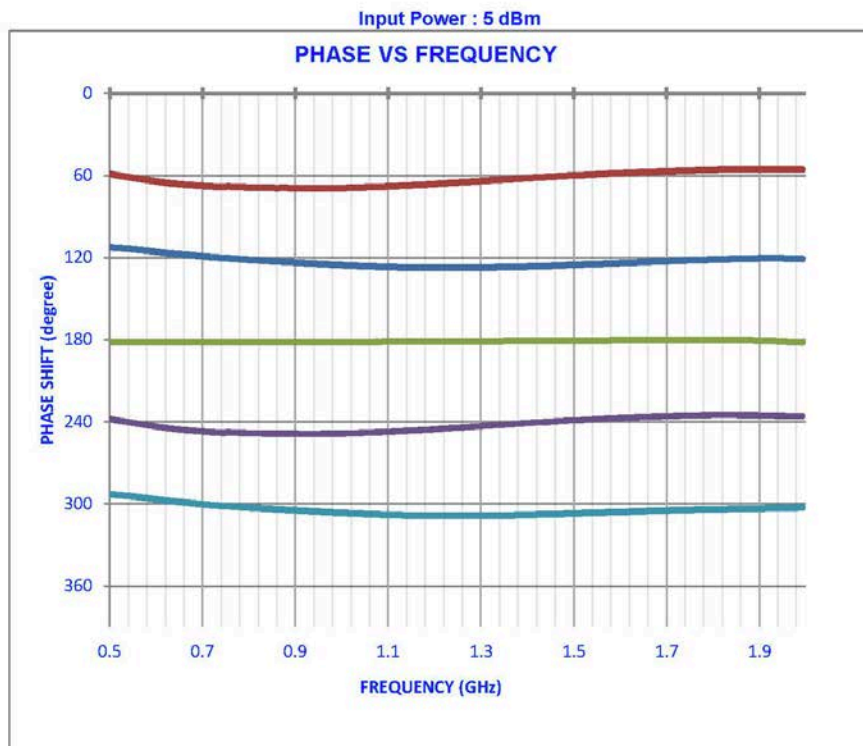
| TEST. ITEM NO | PARAMETERS | SPECIFIED VALUE | PASS/FAIL | QA |
|---------------|--------------------|--|-----------------------------------|----|
| | | | | QC |
| 1 | Frequency Range: | 500 MHz – 2 GHz | 500 MHz – 2 GHz | |
| 2 | Insertion Loss: | 13 dB Max | 12.3 dB | |
| 3 | Control: | 8 Bit TTL | Pass | |
| 4 | VSWR: | Additional Parameter Added Not Specified by FLIC | 1.73 :1 | |
| 5 | Phase Shift: | 360° Typ | 358.6° | |
| 6 | Amplitude Error: | ±1 dB Max | 1.00 dB (±) | |
| 7 | Phase Shift Error: | ±10° Max | 2.28 DEG (±) | |
| 8 | Switching Speed: | 500 ns MAX | 265 ns | |
| 9 | DC Supply: | +15VDC -15VDC | +15 VDC @ 249mA -15 VDC @ 18mA | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 1.41 | 1.79 | -0.39 | 0.15 |
| 2.81 | 3.56 | -0.75 | 0.29 |
| 5.63 | 7.10 | -1.48 | 0.43 |
| 11.25 | 13.99 | -2.74 | 0.57 |
| 22.50 | 25.15 | -2.65 | 0.71 |
| 45.00 | 46.82 | -1.82 | 0.85 |
| 90.00 | 90.77 | -0.77 | 0.99 |
| 180.00 | 179.51 | 0.49 | 1.12 |
| 358.59 | 358.25 | 0.35 | 1.23 |
| | | | |
| | | | |
| | | | |

| Programed Phase Shift | Phase Shift | Accuracy of Phase Shift | Flatness |
|-----------------------|-------------|-------------------------|----------|
| DEG | DEG | DEG | ±DEG |
| 33.75 | 37.23 | -3.48 | 2.71 |
| 67.50 | 67.63 | -0.13 | 2.77 |
| 101.25 | 101.46 | -0.21 | 2.83 |
| 135.00 | 132.12 | 2.88 | 2.89 |
| 168.75 | 165.85 | 2.90 | 2.95 |
| 202.50 | 206.90 | -3.40 | 2.99 |
| 236.25 | 236.55 | -0.30 | 3.04 |
| 270.00 | 270.06 | -0.06 | 3.08 |
| 303.75 | 303.23 | 0.52 | 3.12 |
| 337.50 | 333.55 | 3.95 | 3.16 |
| | | | |
| | | | |
| | | | |

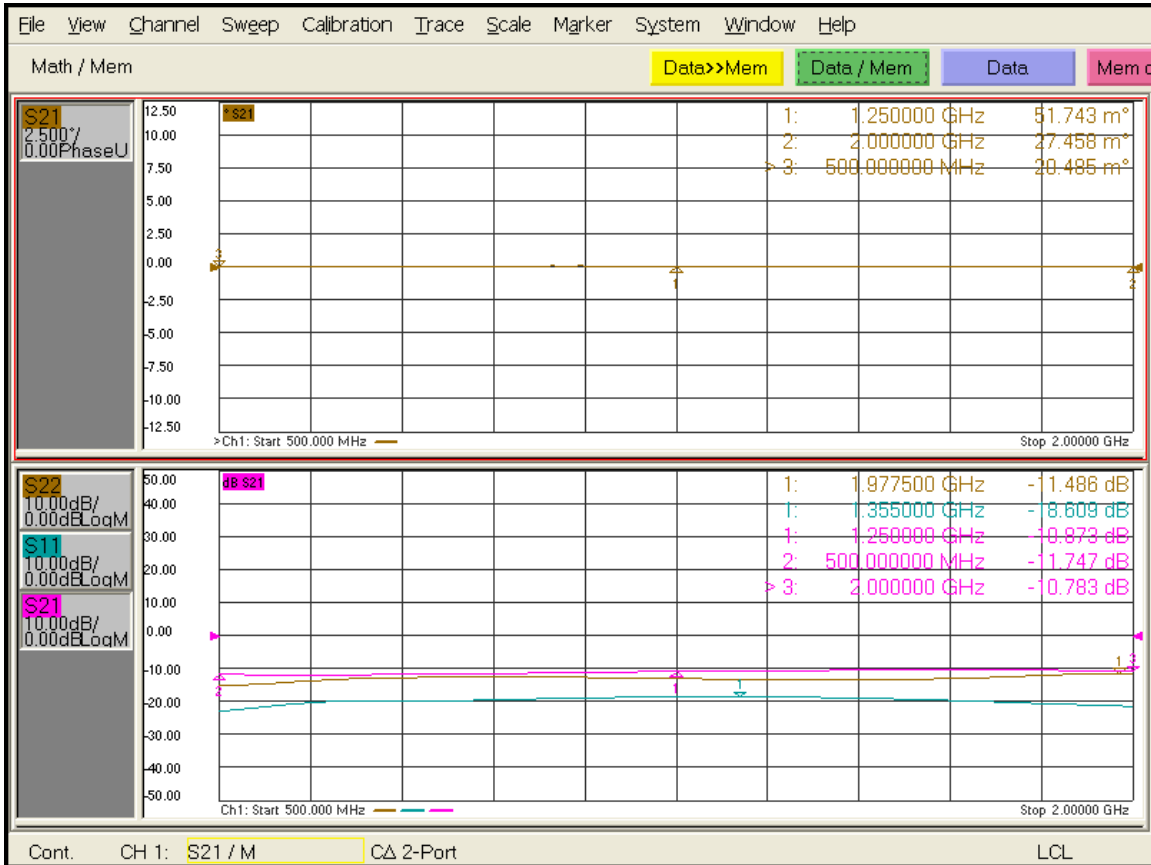


Phase Plot Taken at 50° C



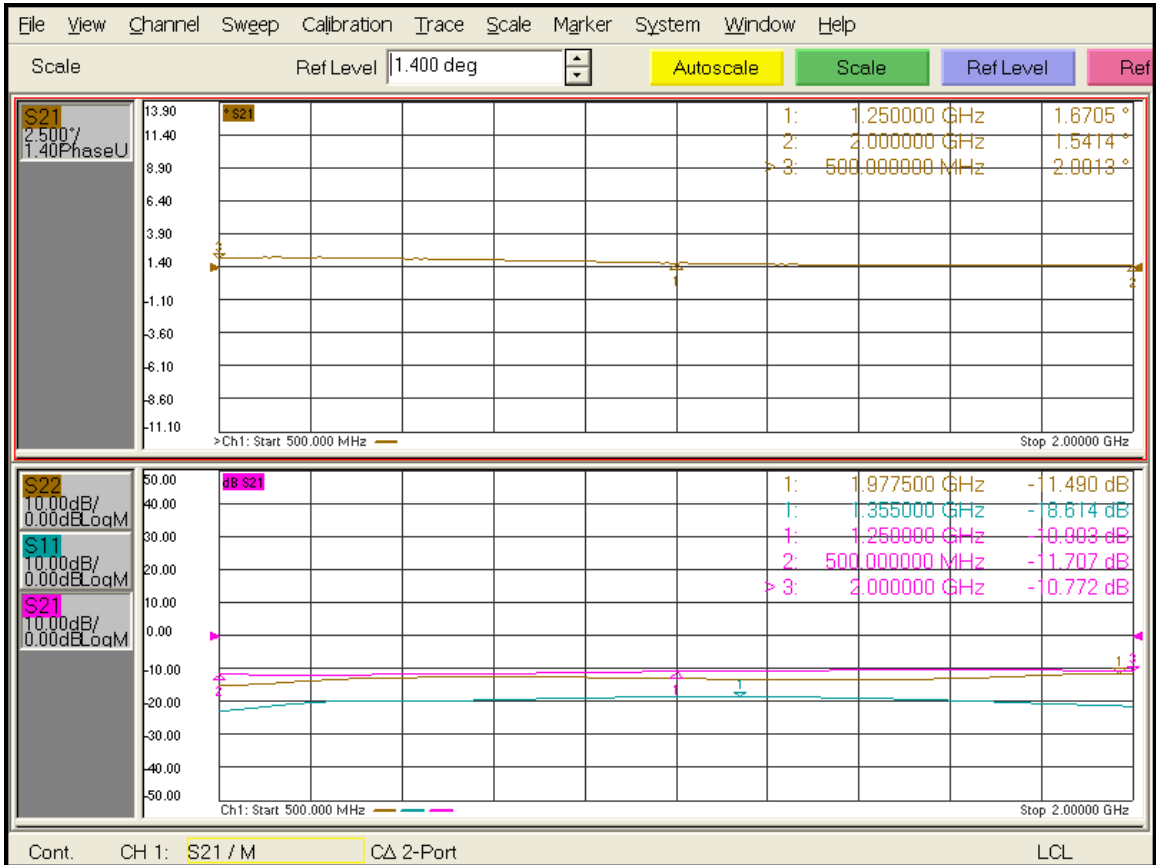


0° Phase, 5 dBm Input Power @ 50° C



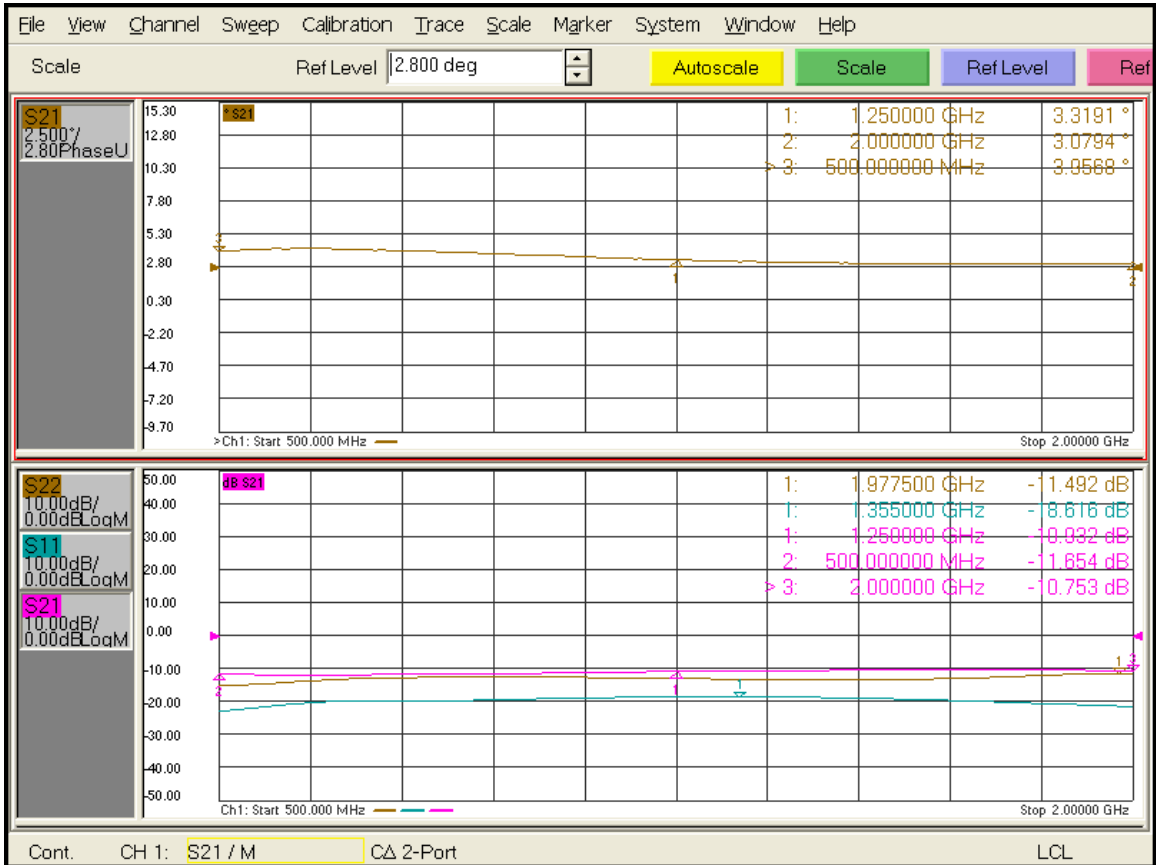


1.4° Phase, 5 dBm Input Power @ 50° C



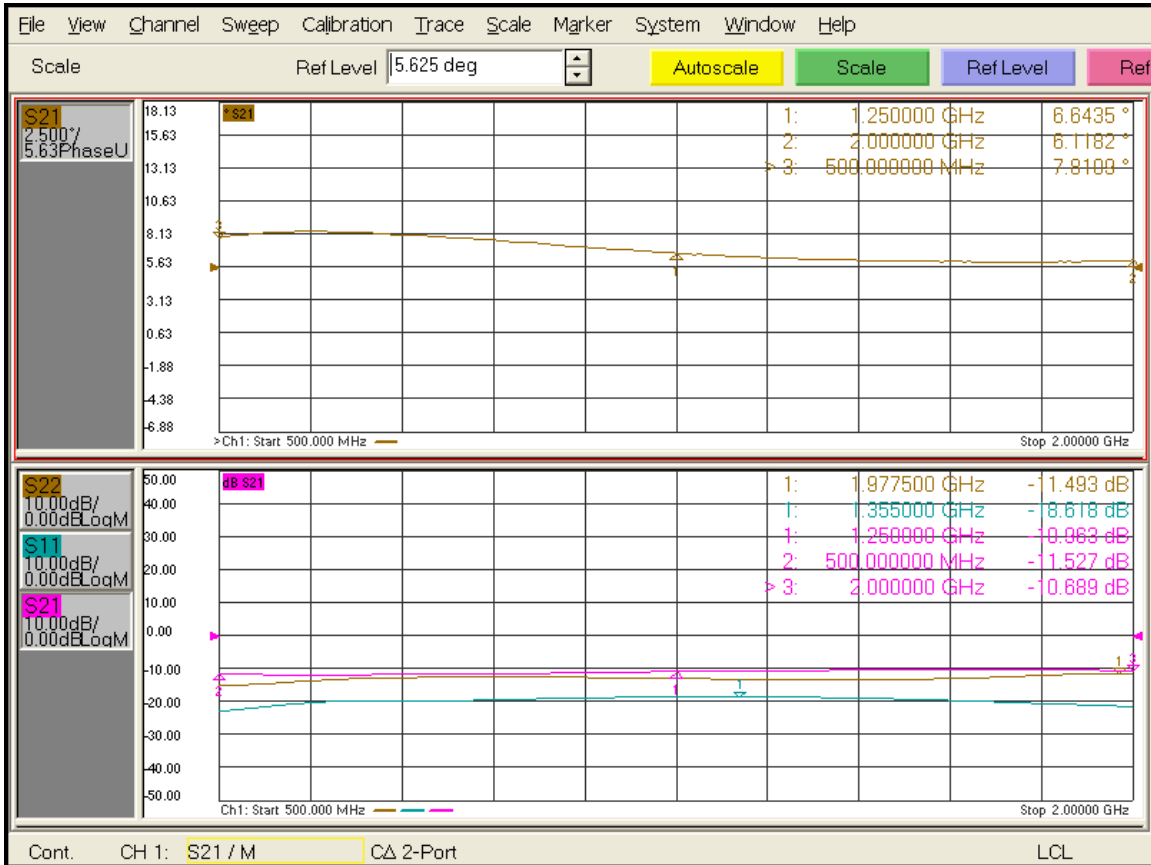


2.8° Phase, 5 dBm Input Power @ 50° C



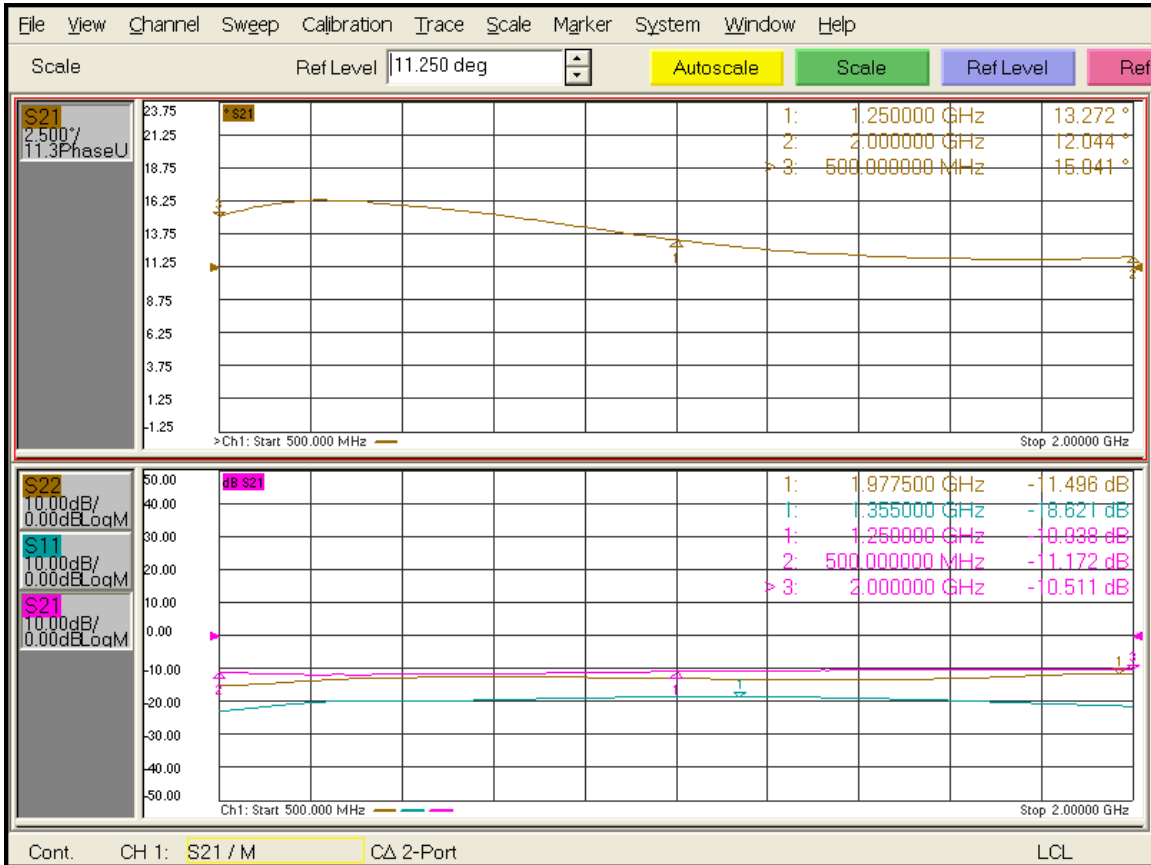


5.625° Phase, 5 dBm Input Power @ 50° C



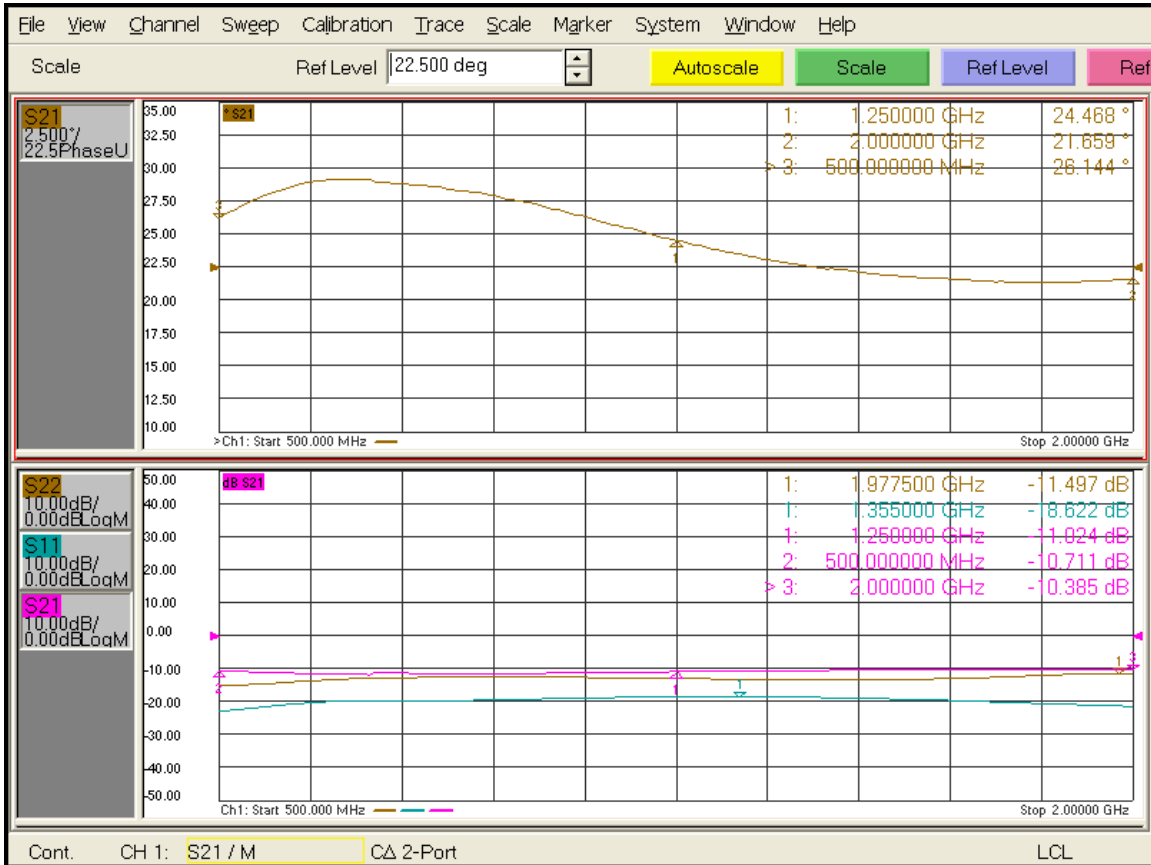


11.25° Phase, 5 dBm Input Power @ 50° C



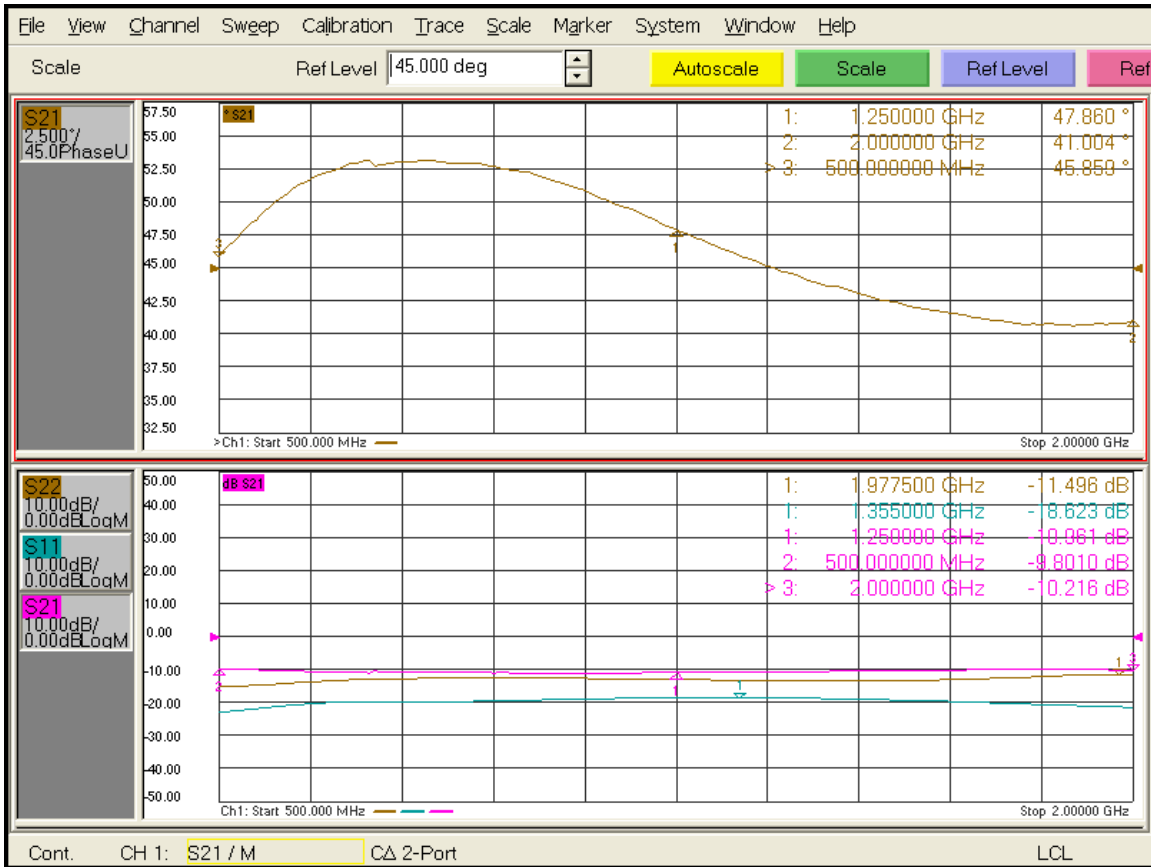


22.5° Phase, 5 dBm Input Power @ 50° C



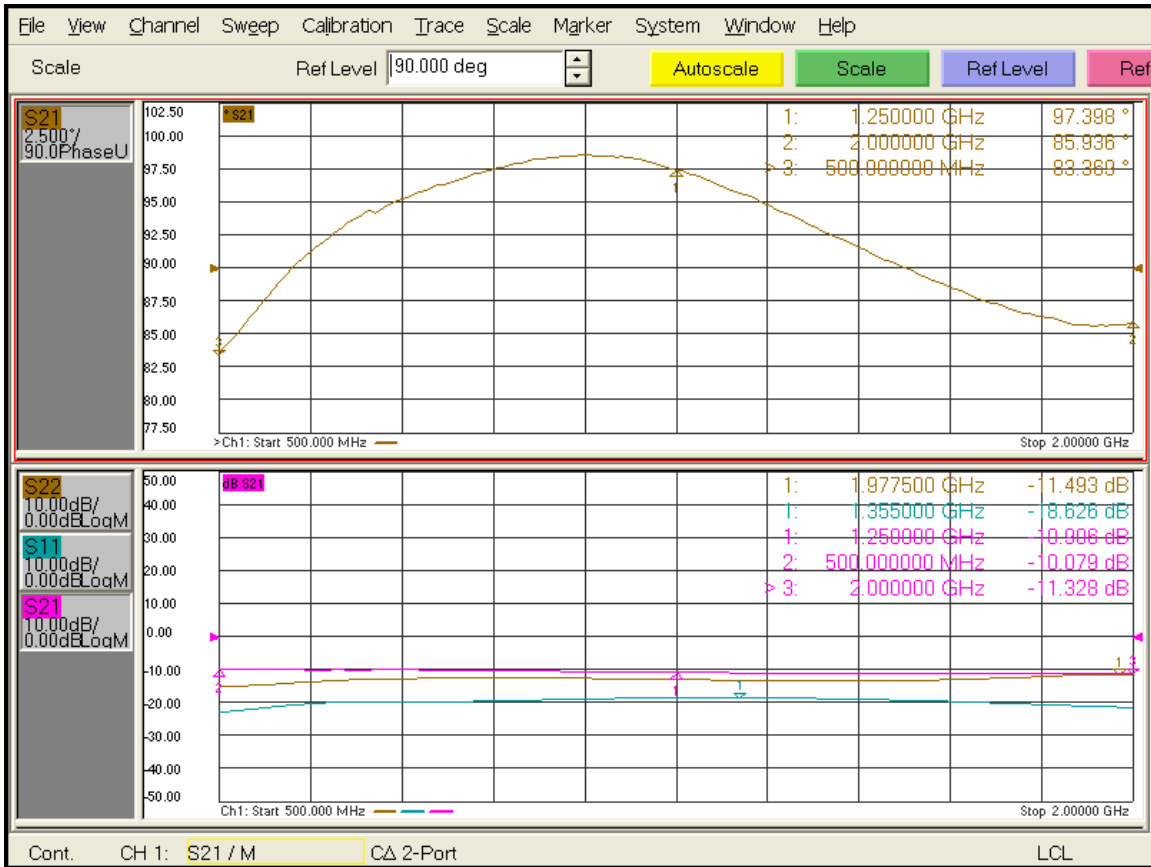


45° Phase, 5 dBm Input Power @ 50° C



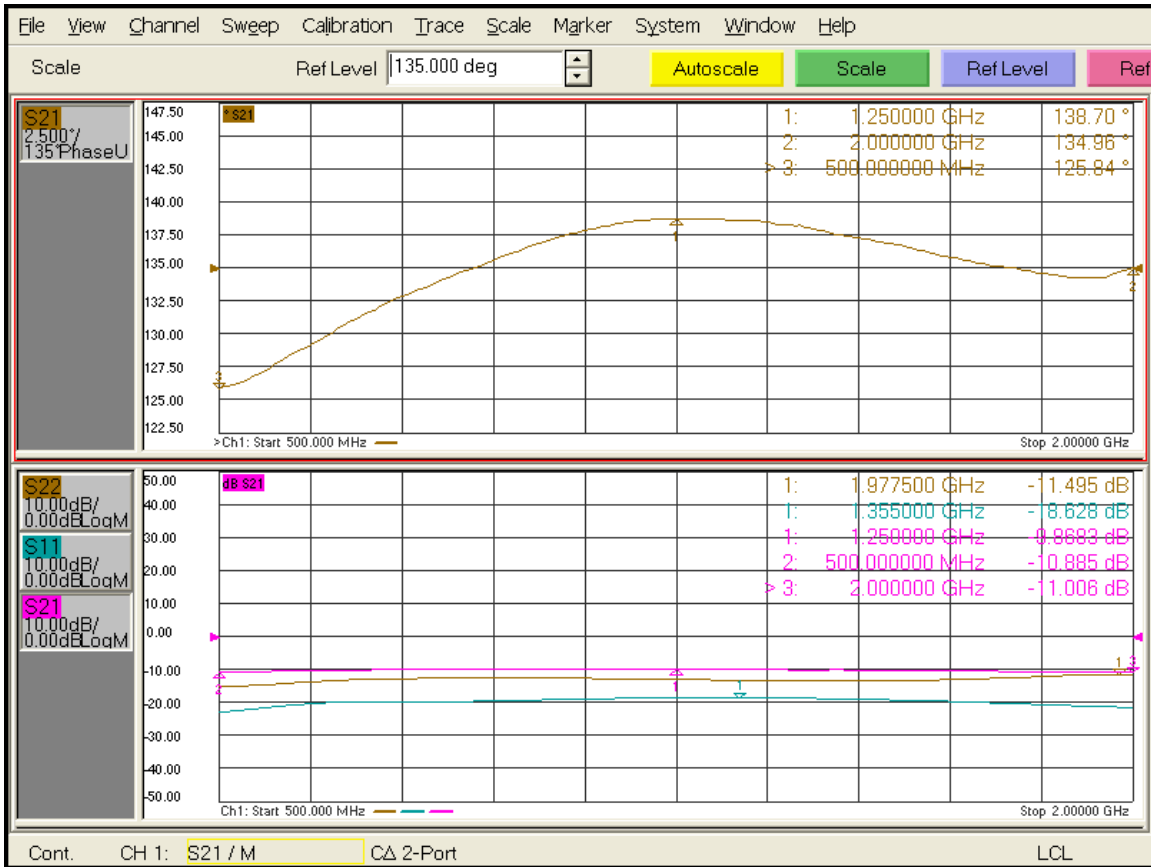


90° Phase, 5 dBm Input Power @ 50° C



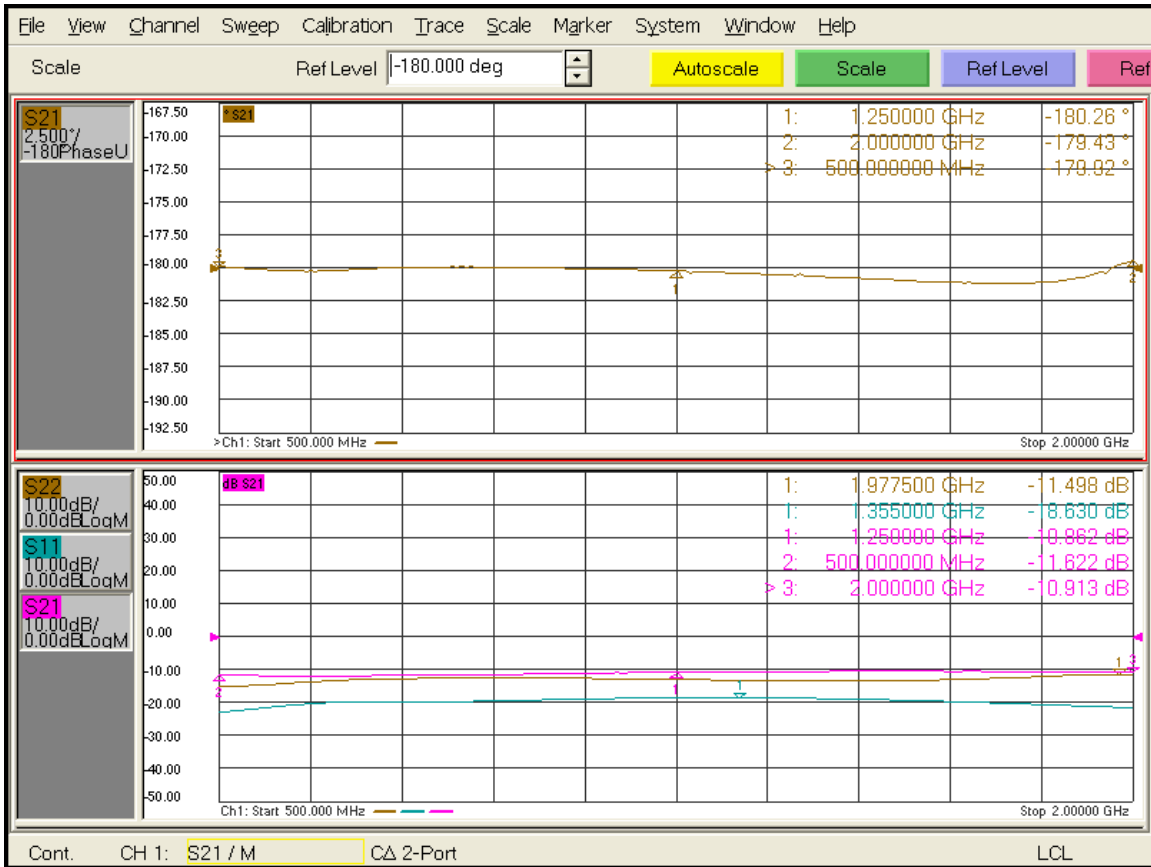


135° Phase, 5 dBm Input Power @ 50° C



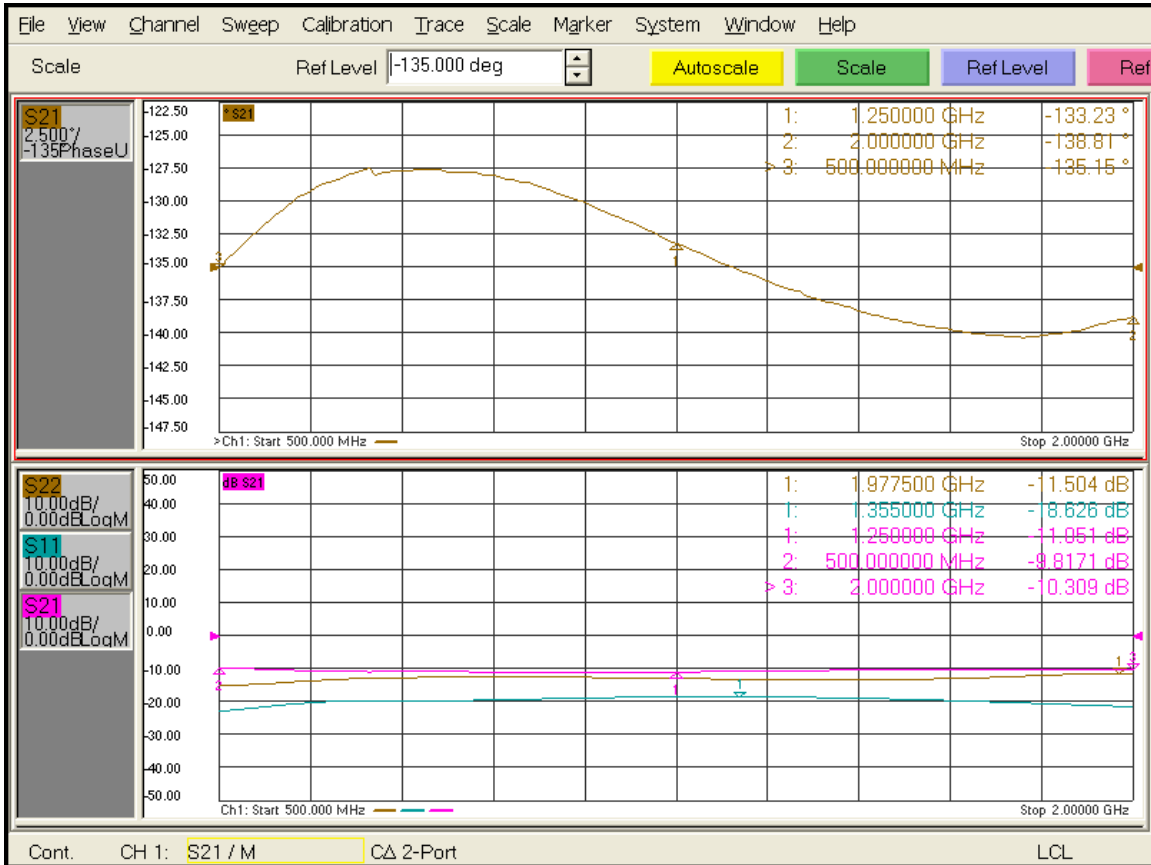


180° Phase, 5 dBm Input Power @ 50° C



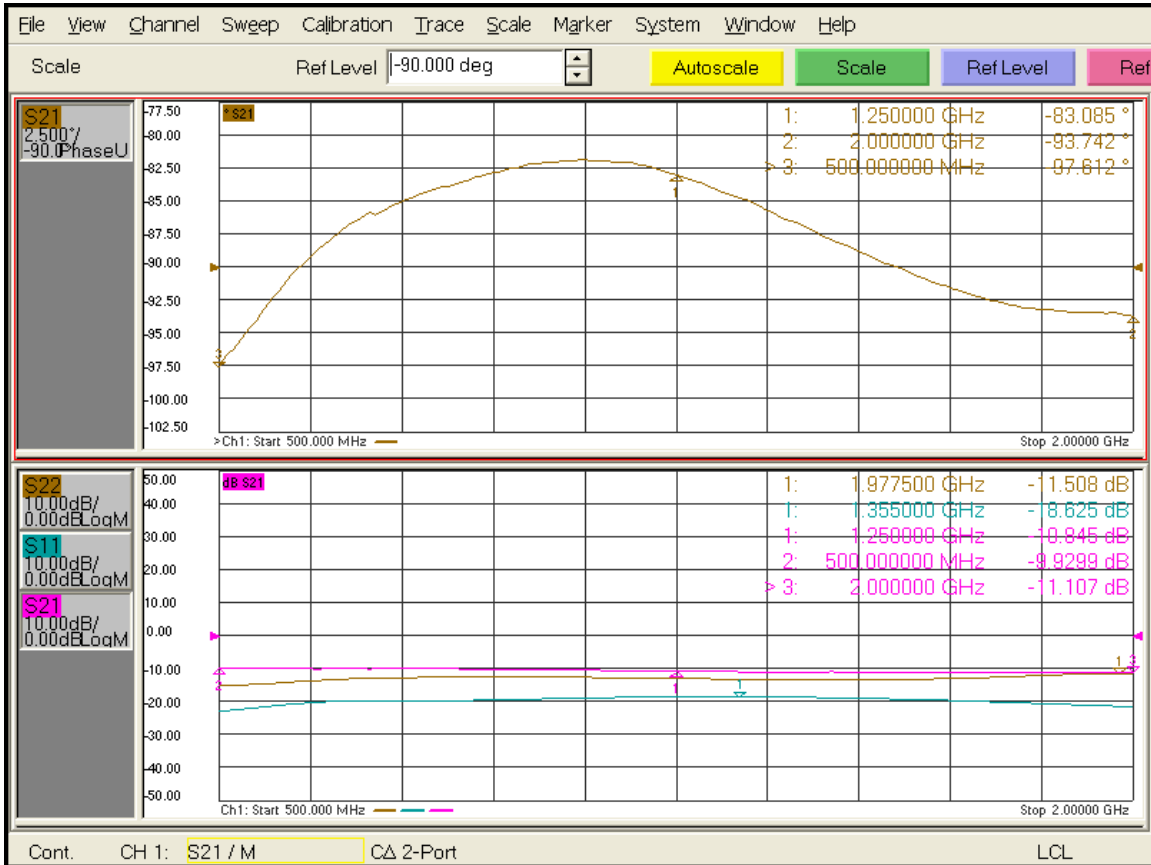


225° Phase, 5 dBm Input Power @ 50° C



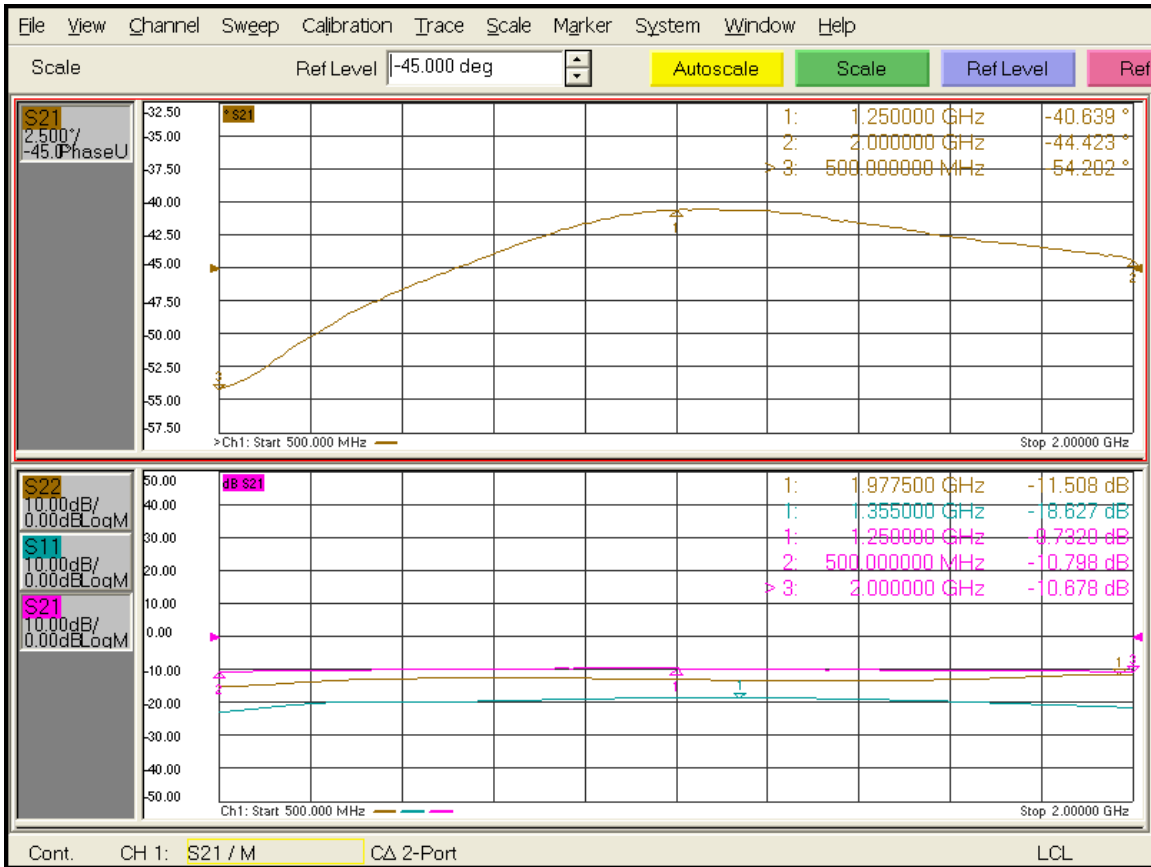


270° Phase, 5 dBm Input Power @ 50° C



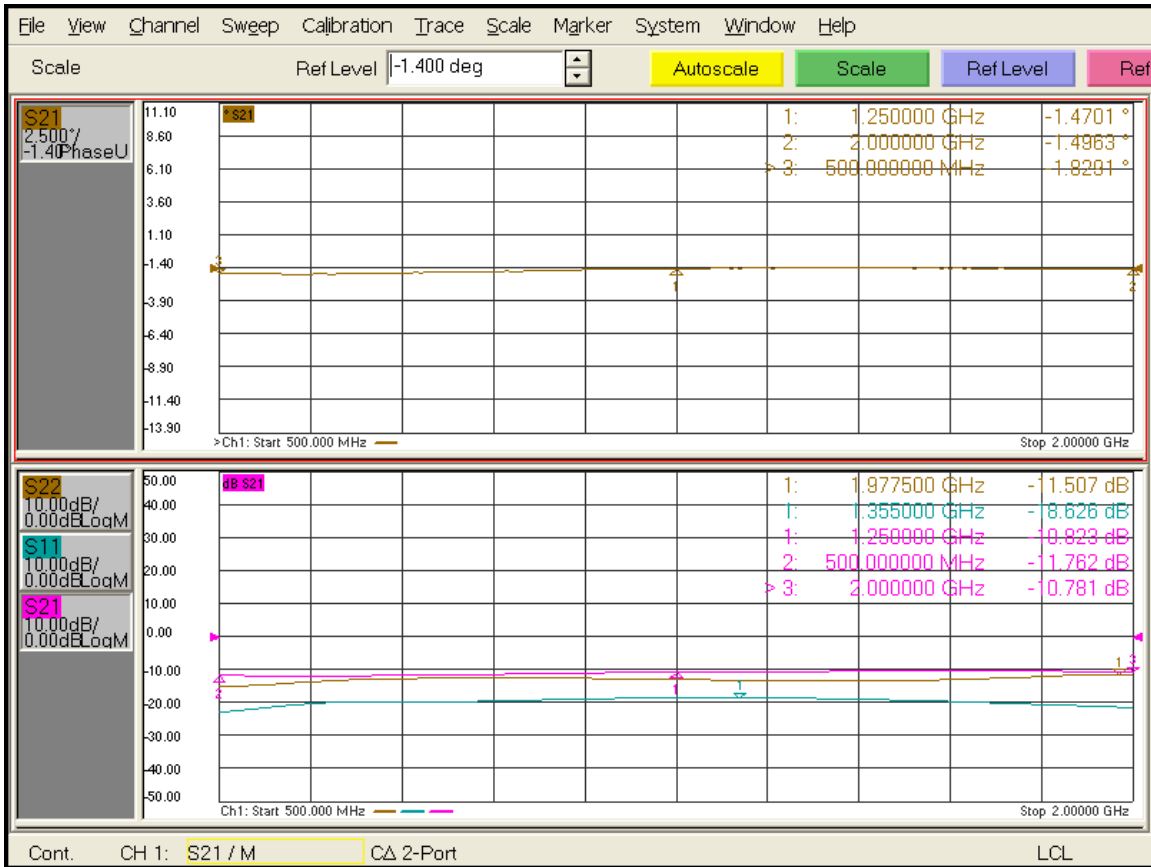


315° Phase, 5 dBm Input Power @ 50° C





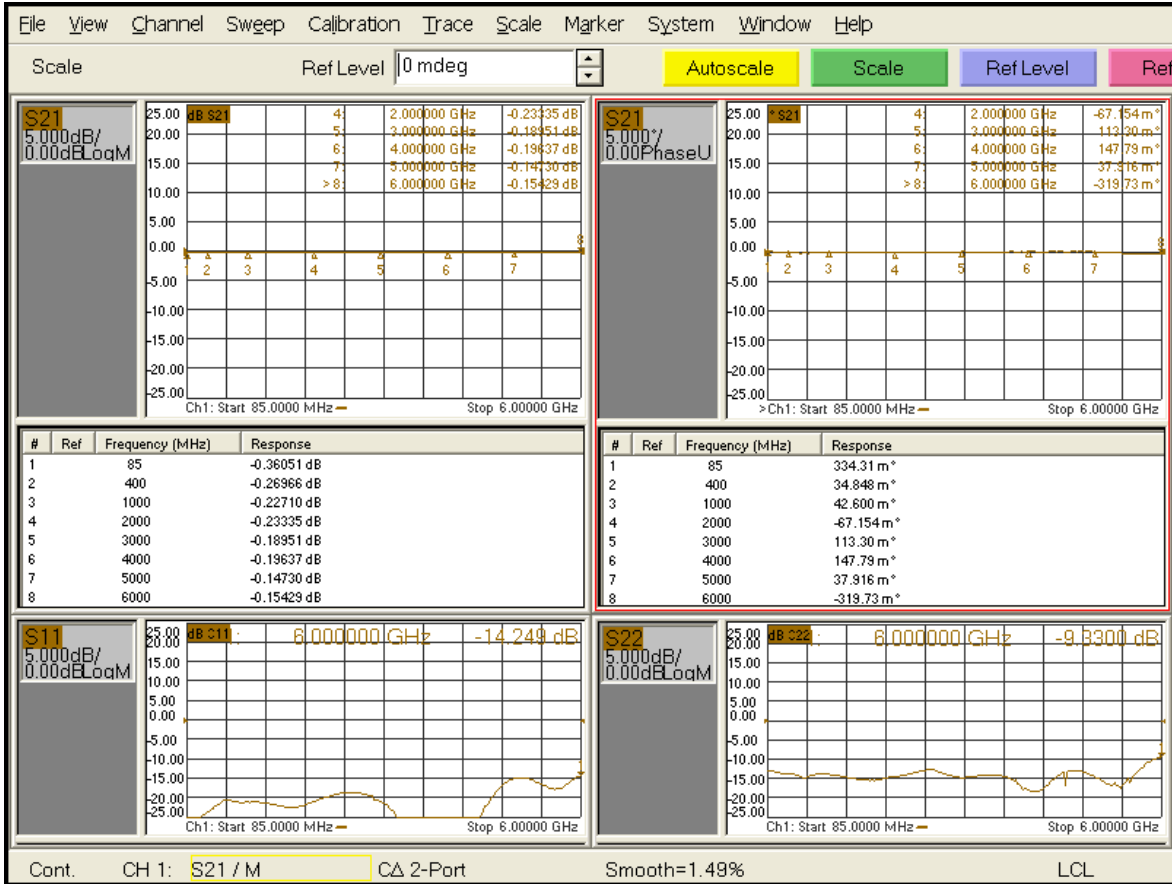
358.6° Phase, 5 dBm Input Power @ 50° C





EXTENDED DATA – 85MHz TO 6GHz AT 25° C

0° Phase, -30 dBm Input Power



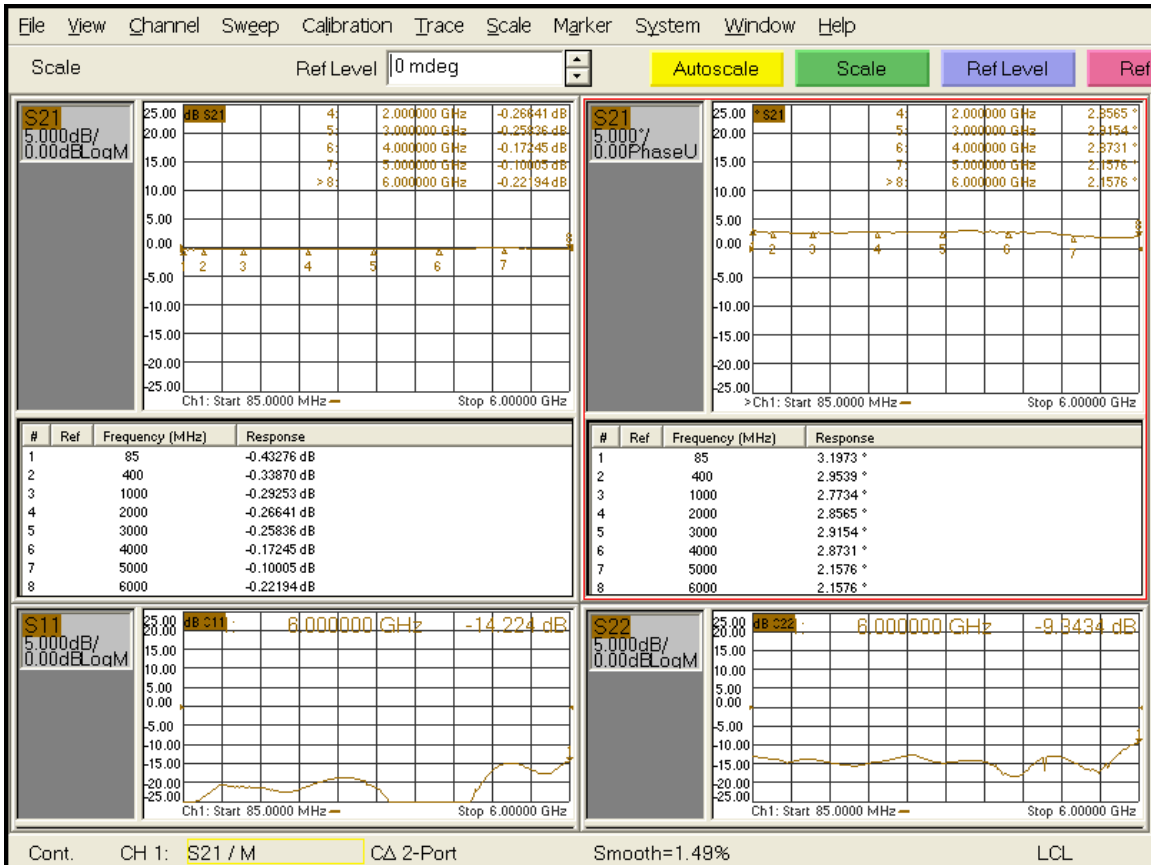


1.4° Phase, -30 dBm Input Power



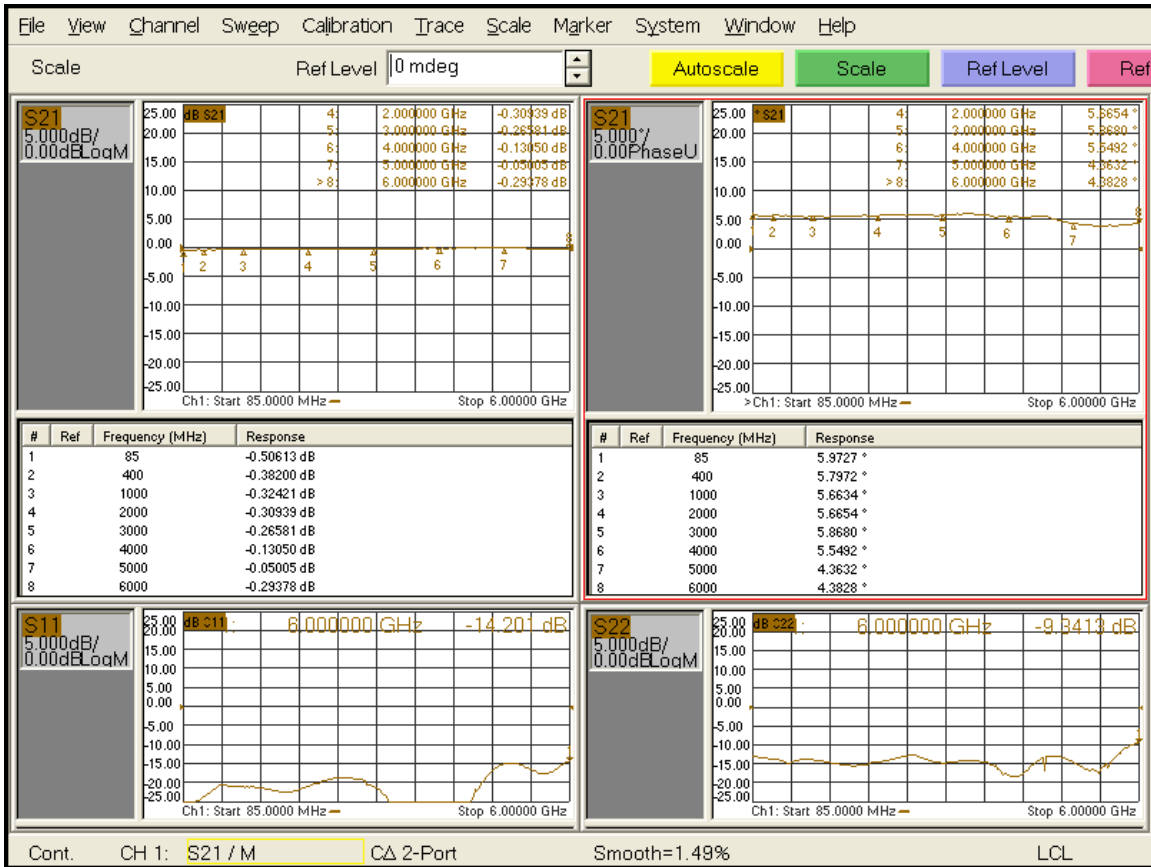


2.8° Phase, -30 dBm Input Power



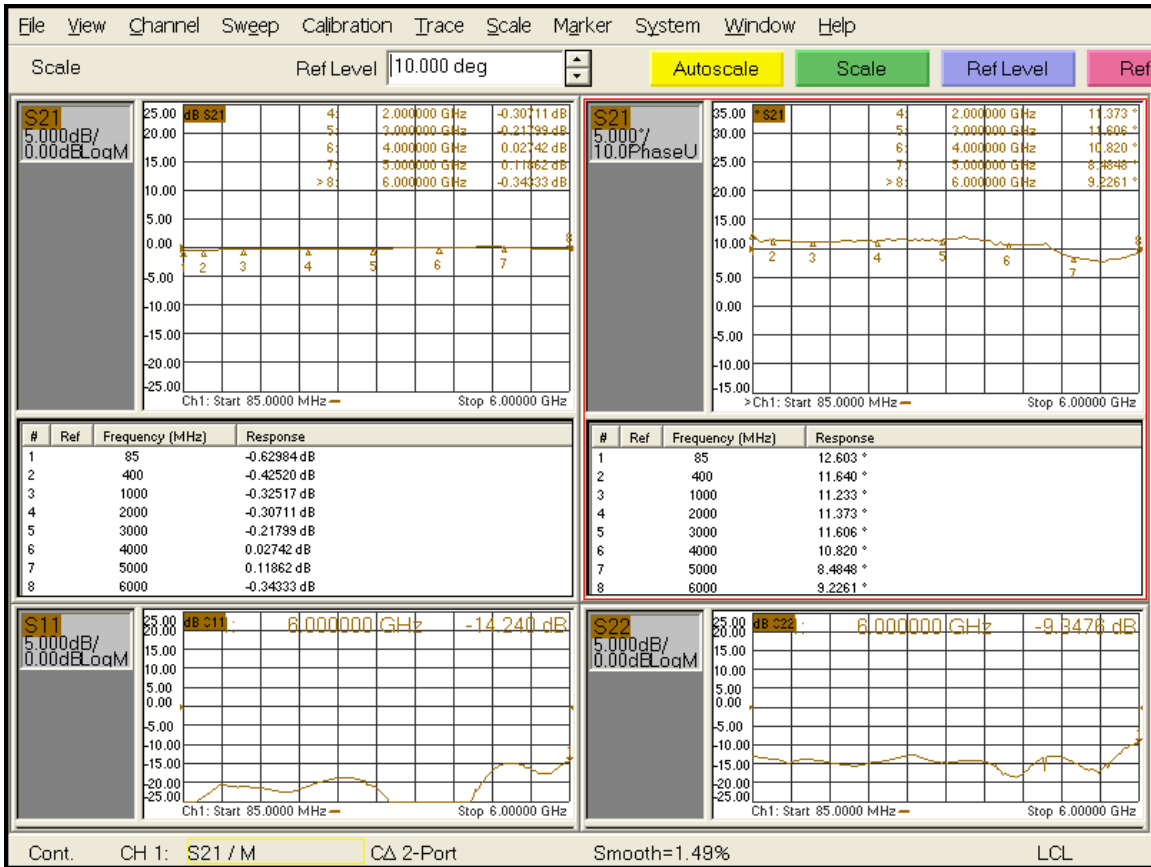


5.6° Phase, -30 dBm Input Power



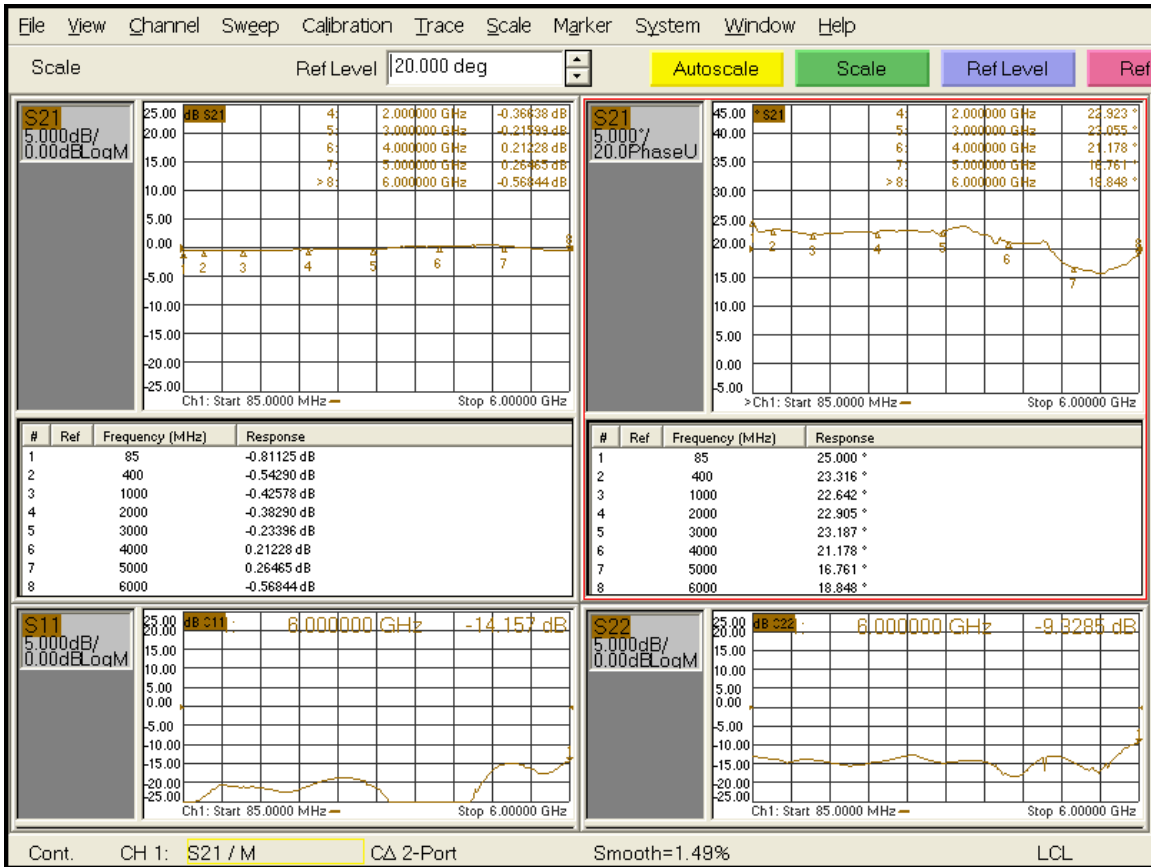


11.25° Phase, -30 dBm Input Power



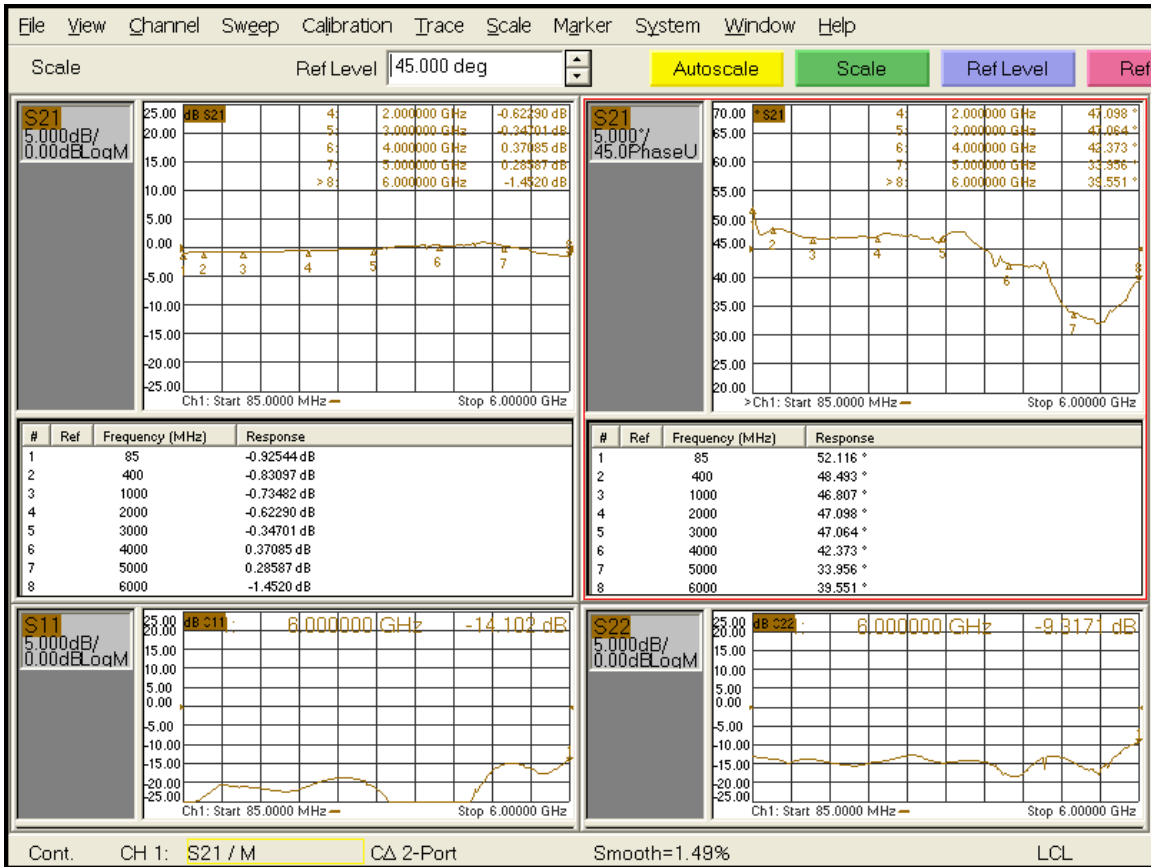


22.5° Phase, -30 dBm Input Power



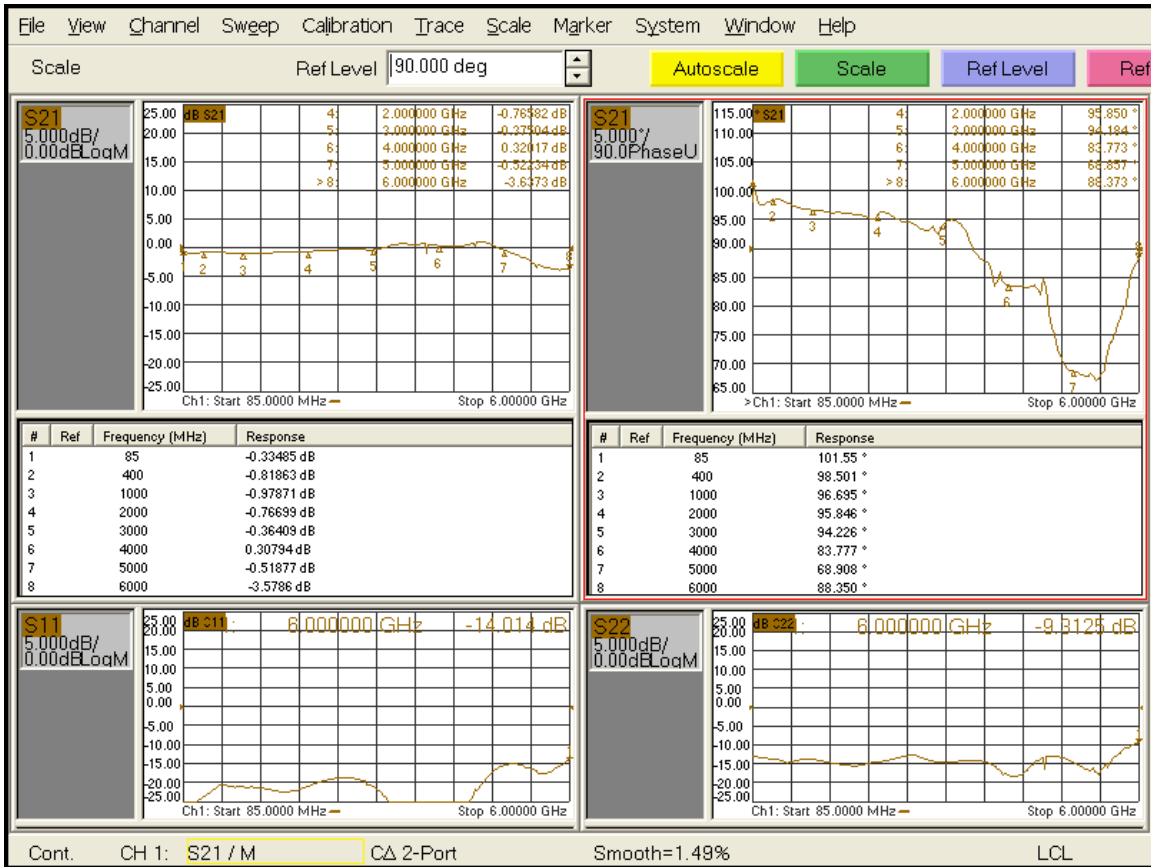


45° Phase, -30 dBm Input Power



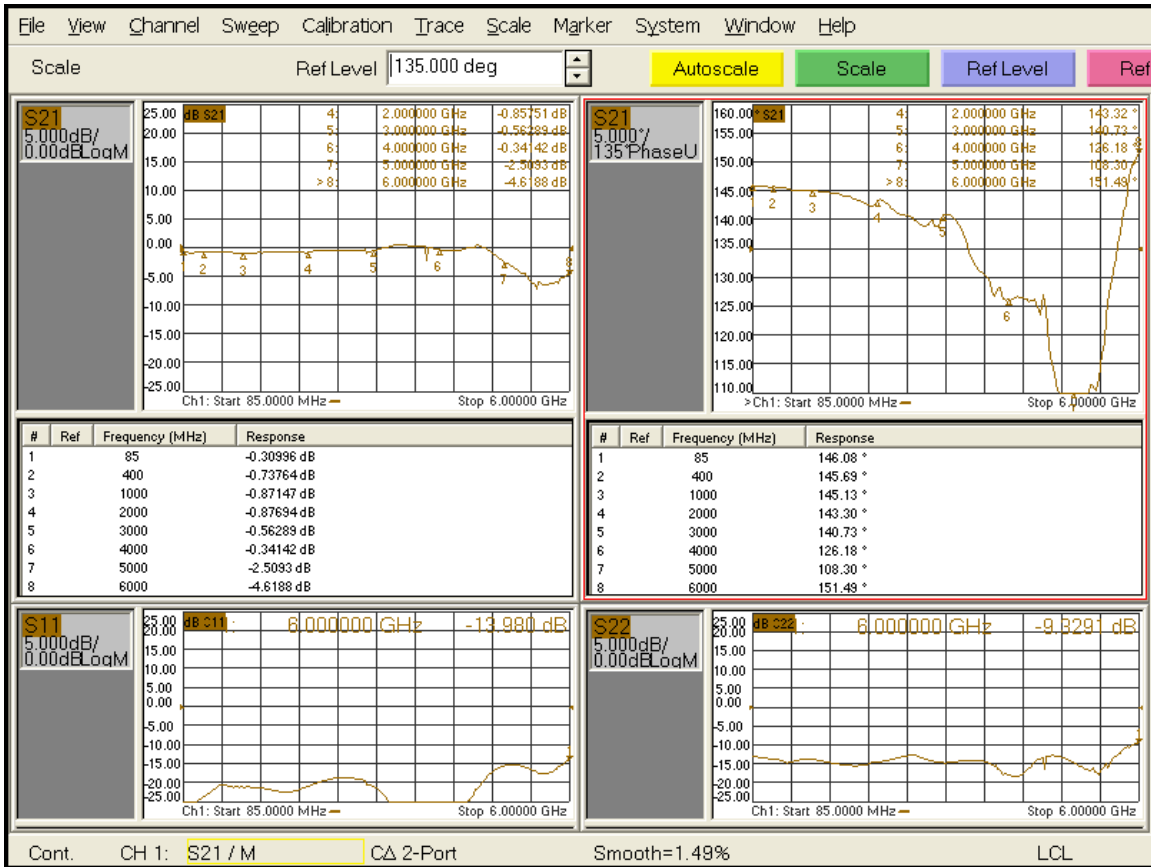


90° Phase, -30 dBm Input Power



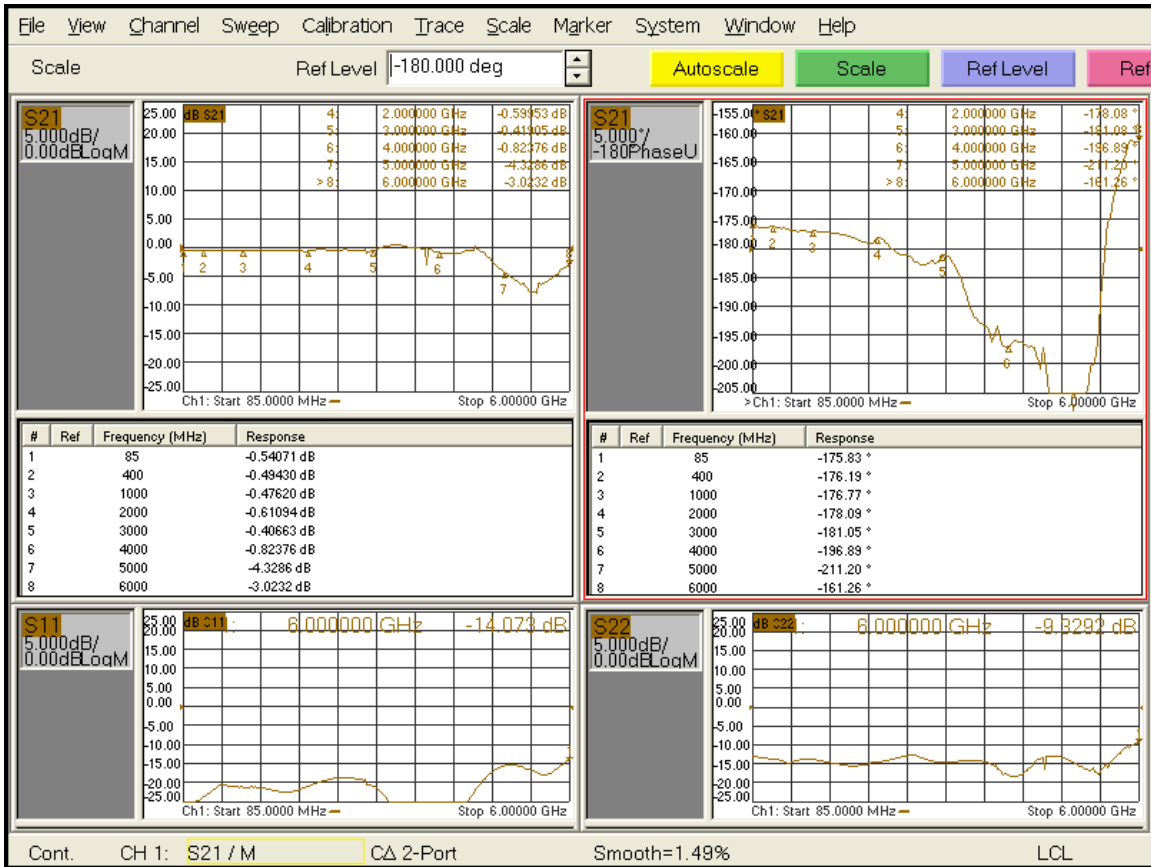


135° Phase, -30 dBm Input Power



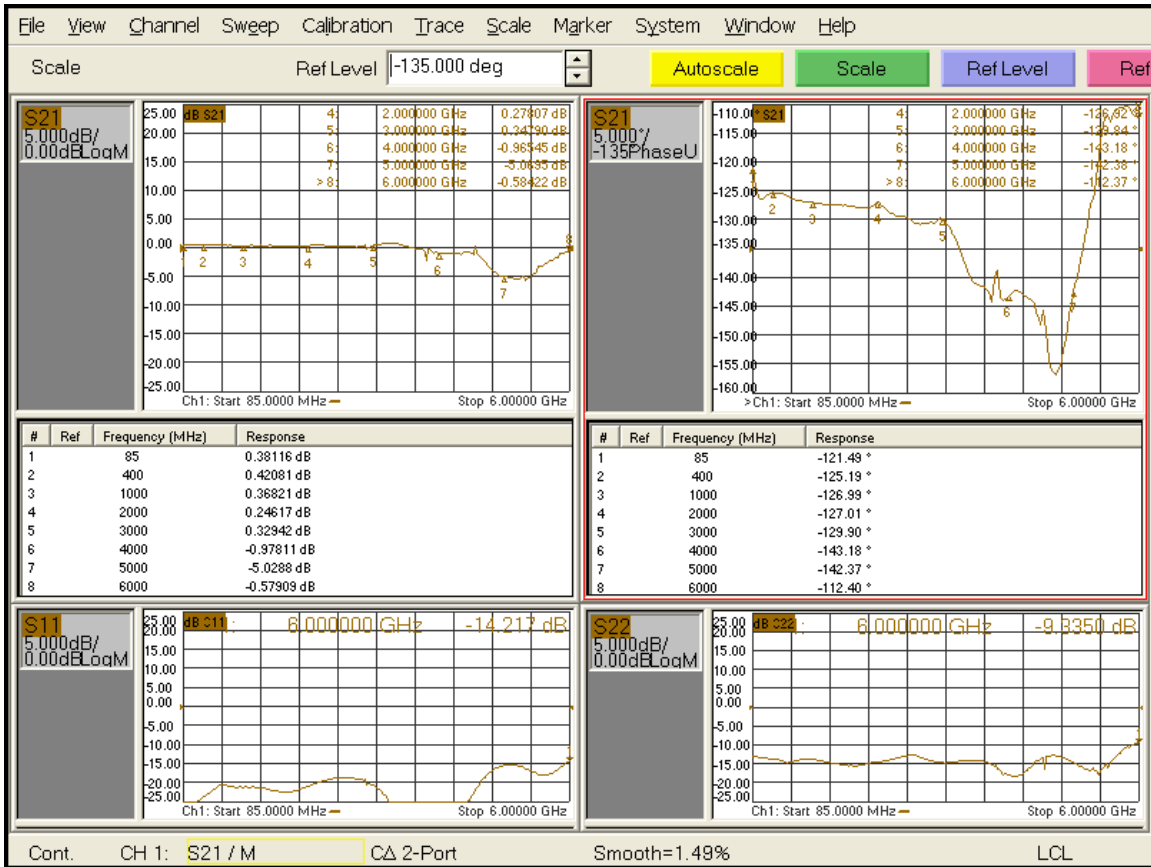


180° Phase, -30 dBm Input Power



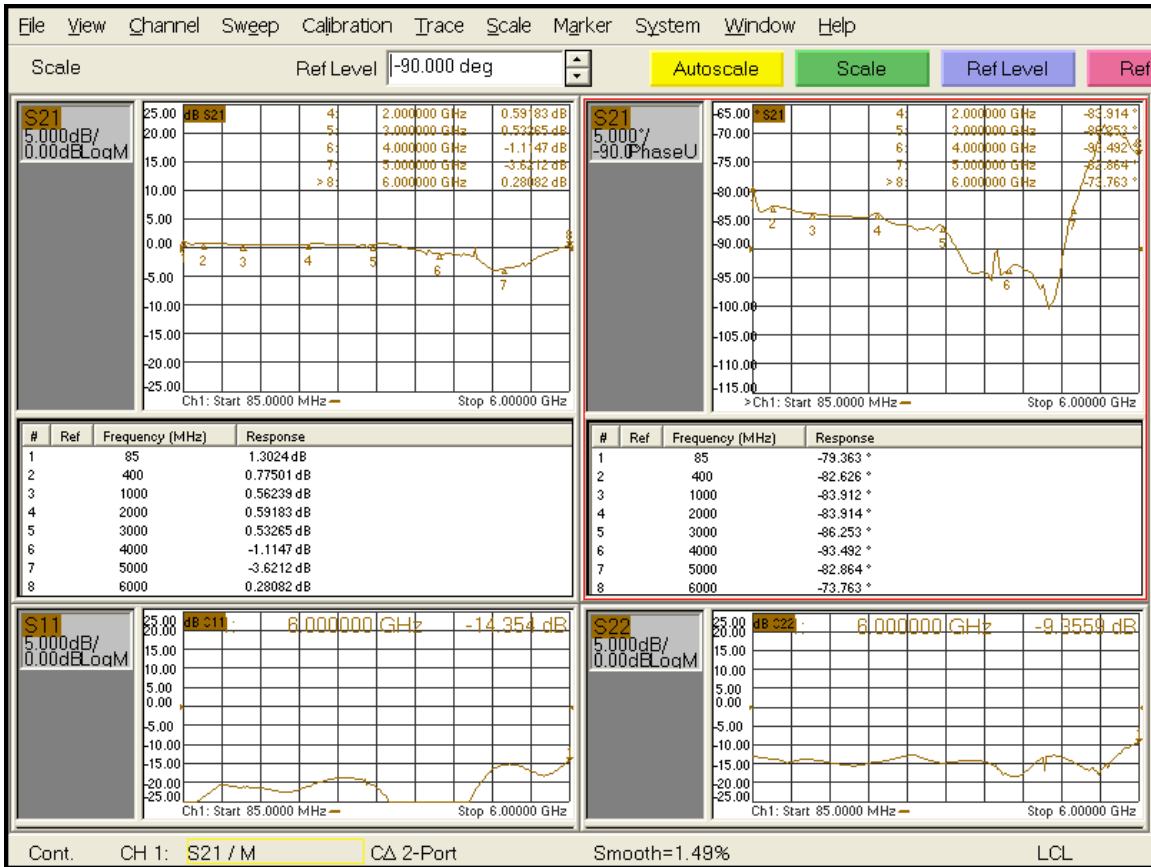


225° Phase, -30 dBm Input Power



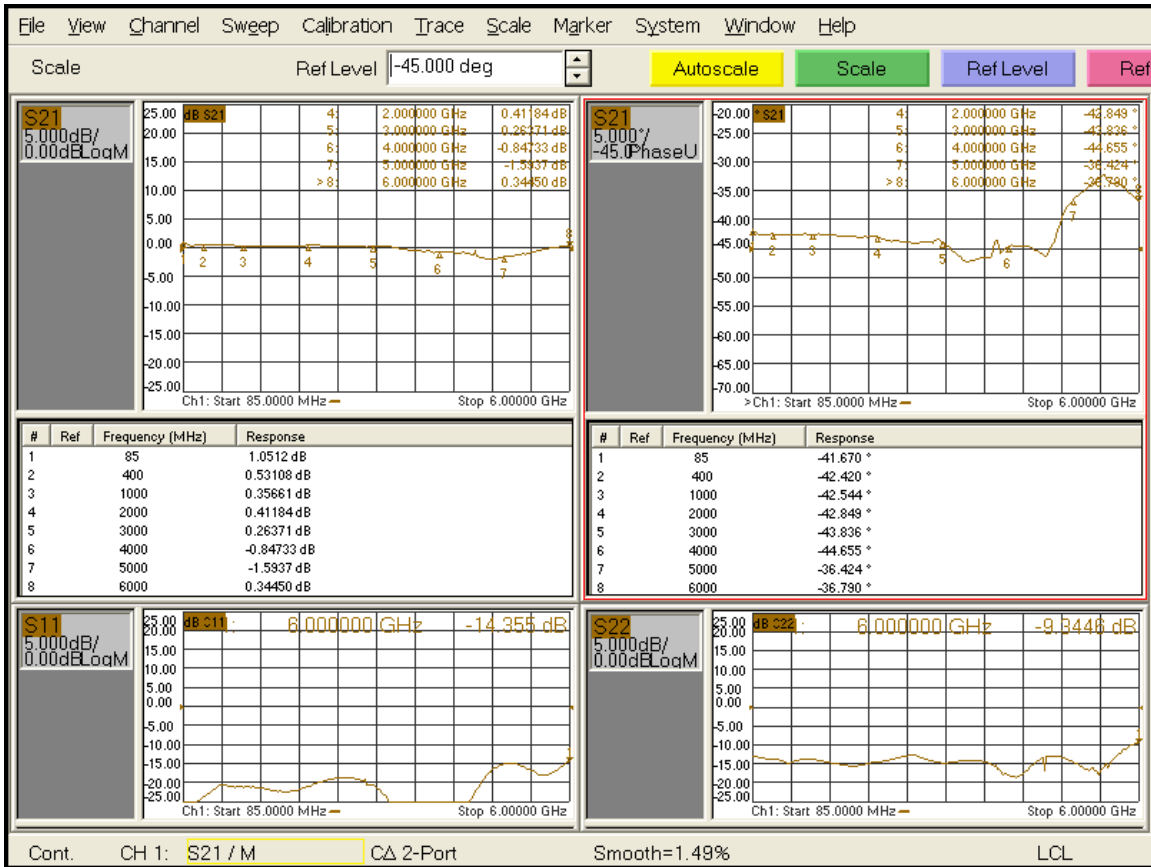


270° Phase, -30 dBm Input Power



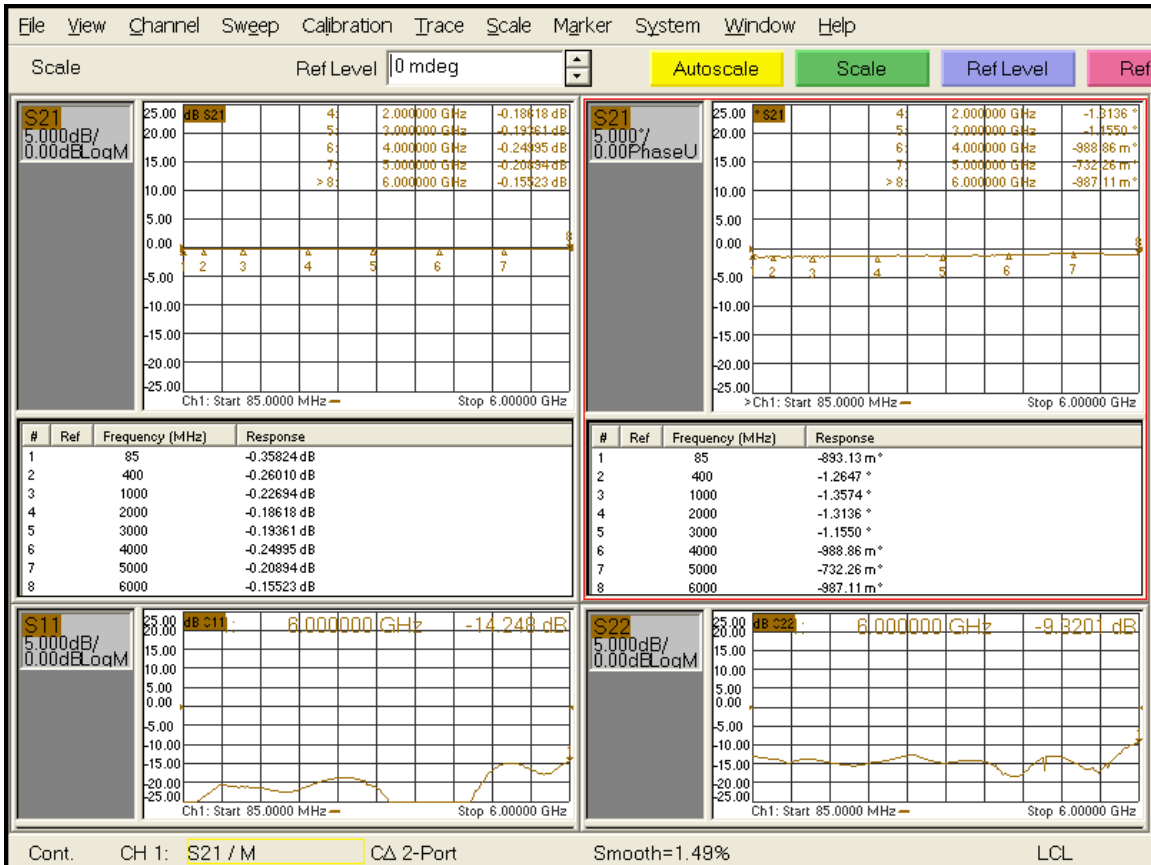


315° Phase, -30 dBm Input Power



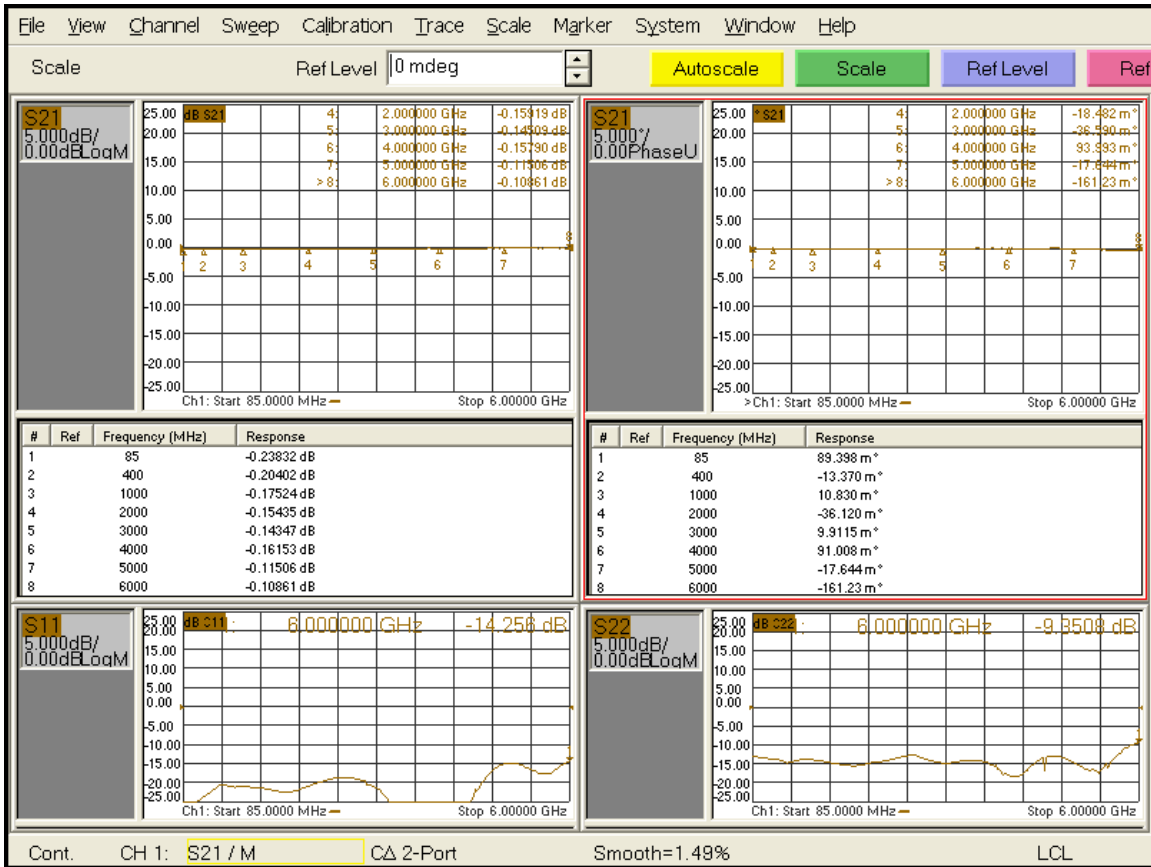


358.6° Phase, -30 dBm Input Power



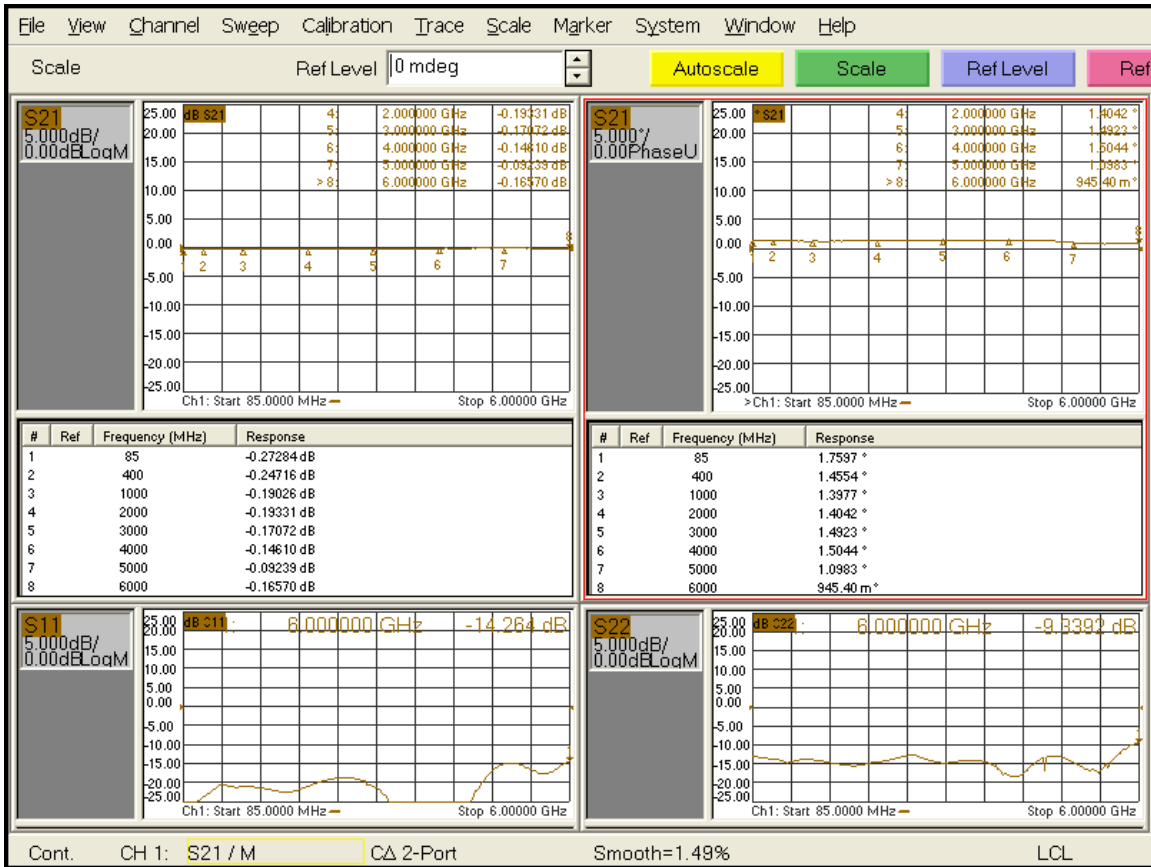


0° Phase, -25 dBm Input Power



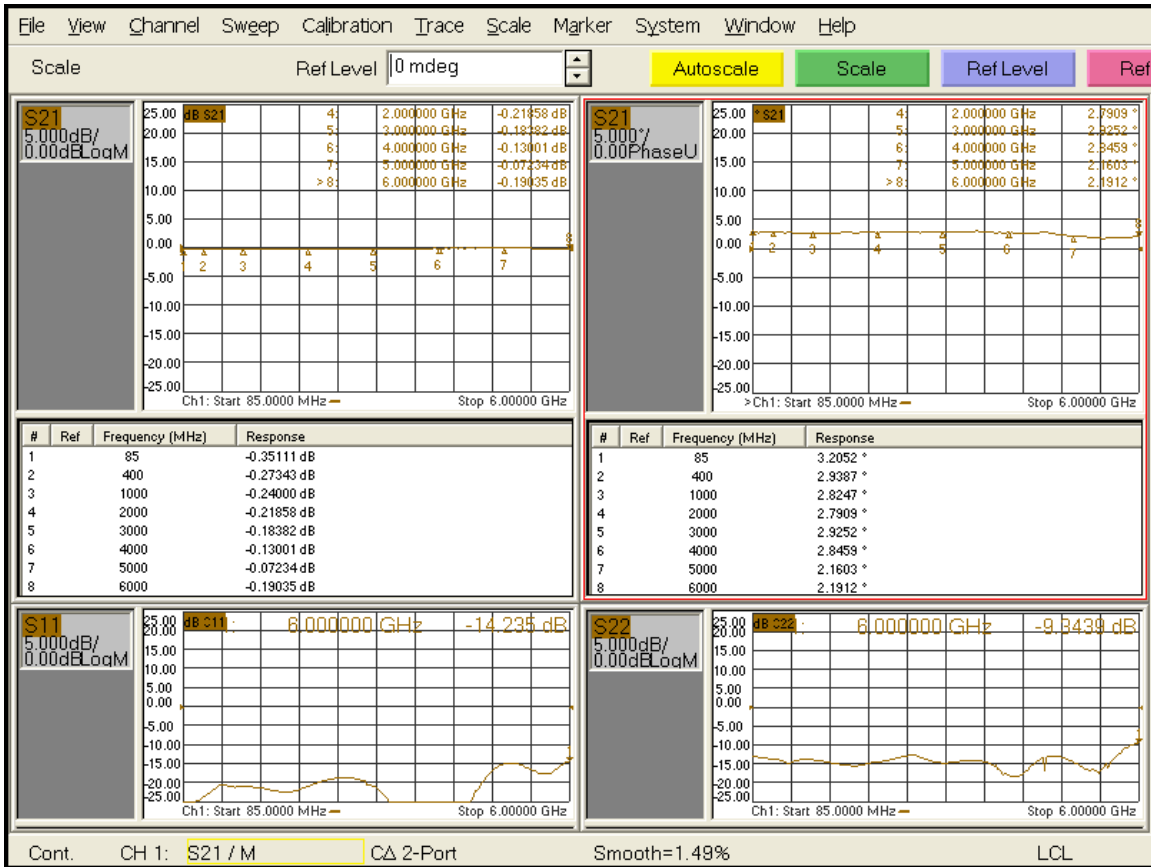


1.4° Phase, -25 dBm Input Power



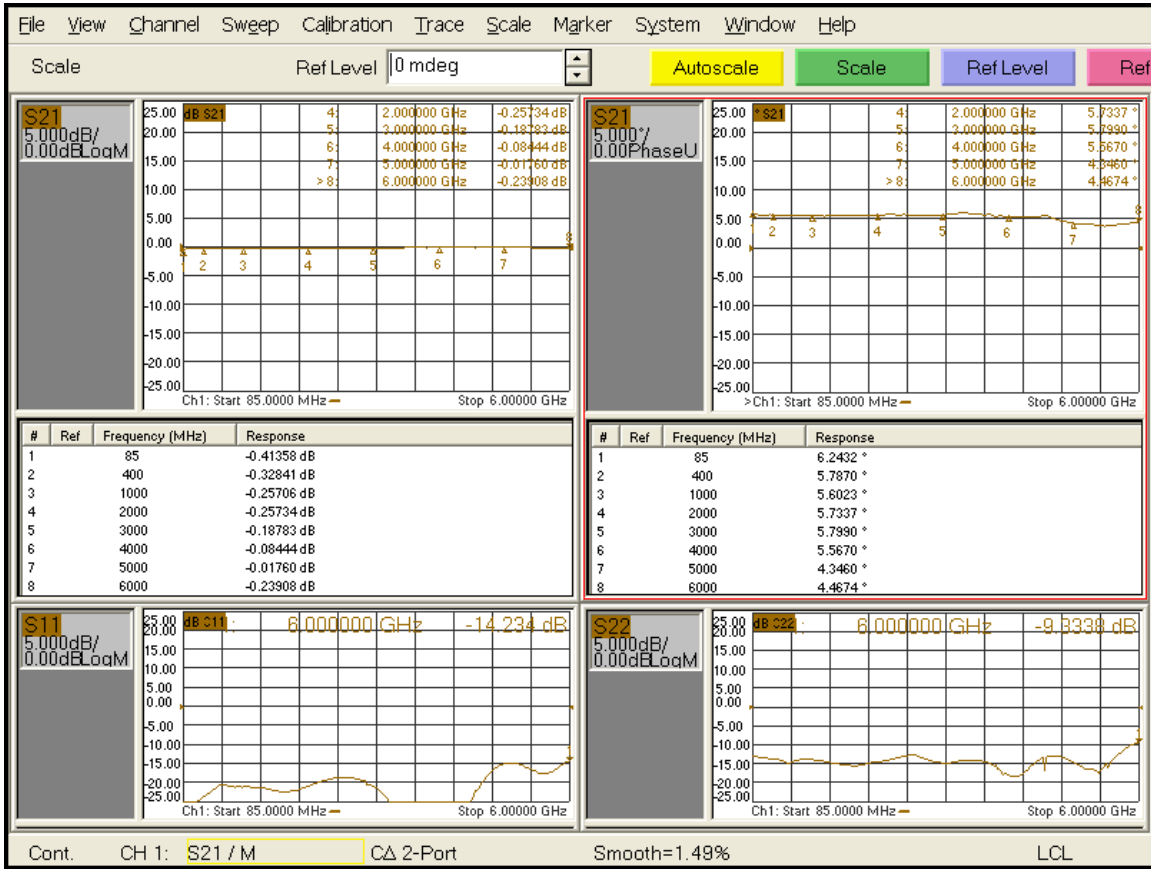


2.8° Phase, -25 dBm Input Power



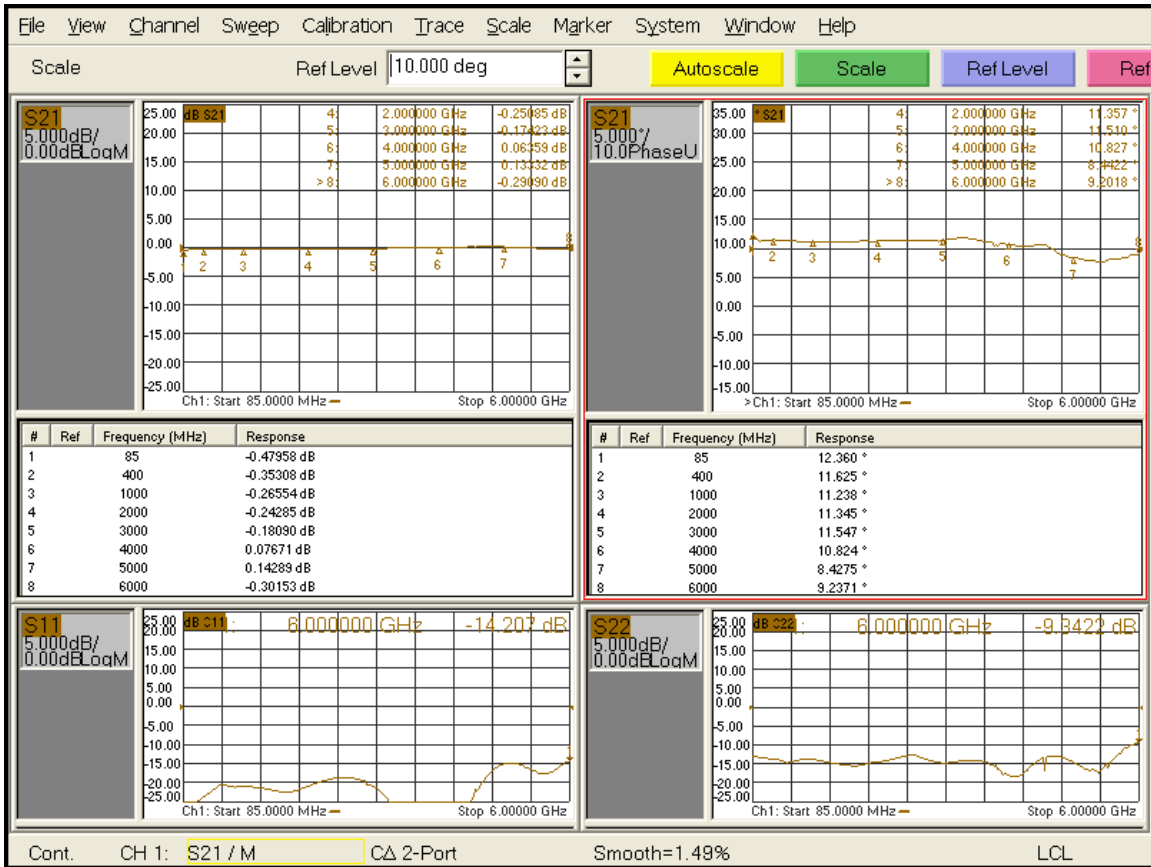


5.6° Phase, -25 dBm Input Power



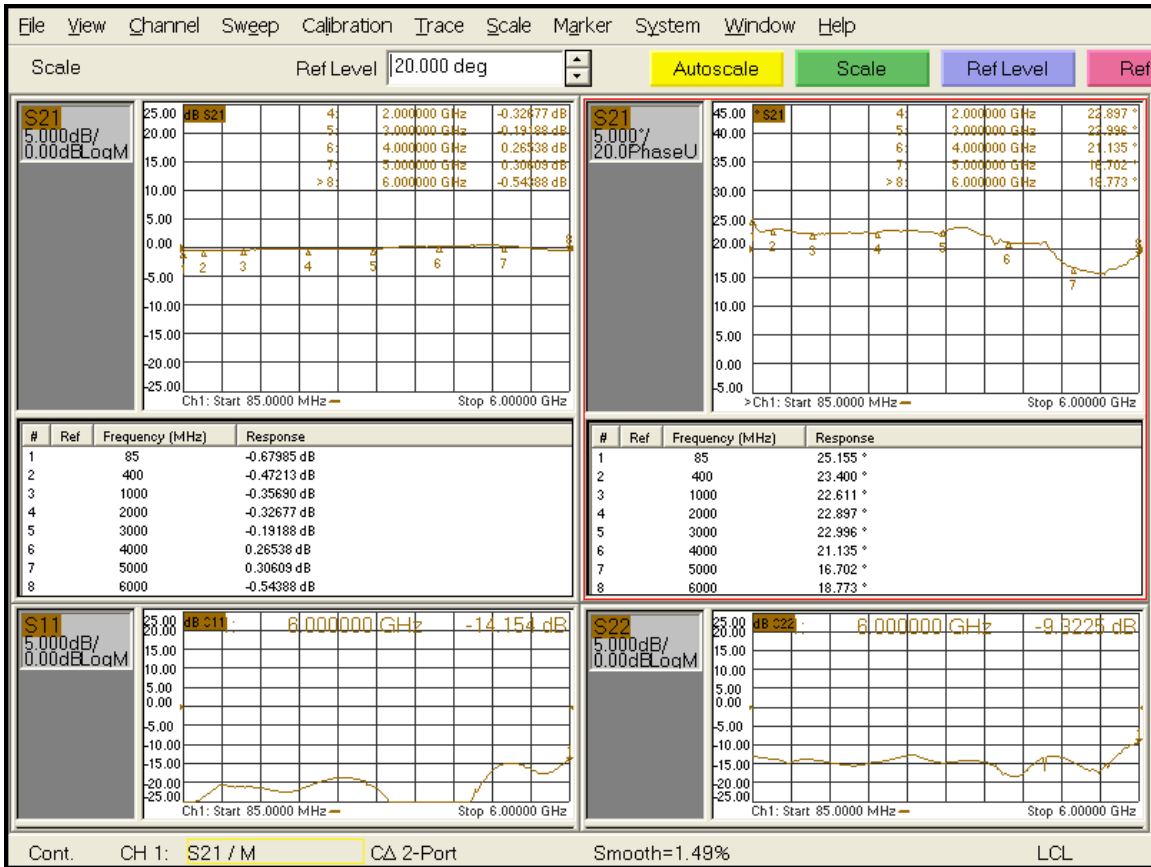


11.25° Phase, -25 dBm Input Power



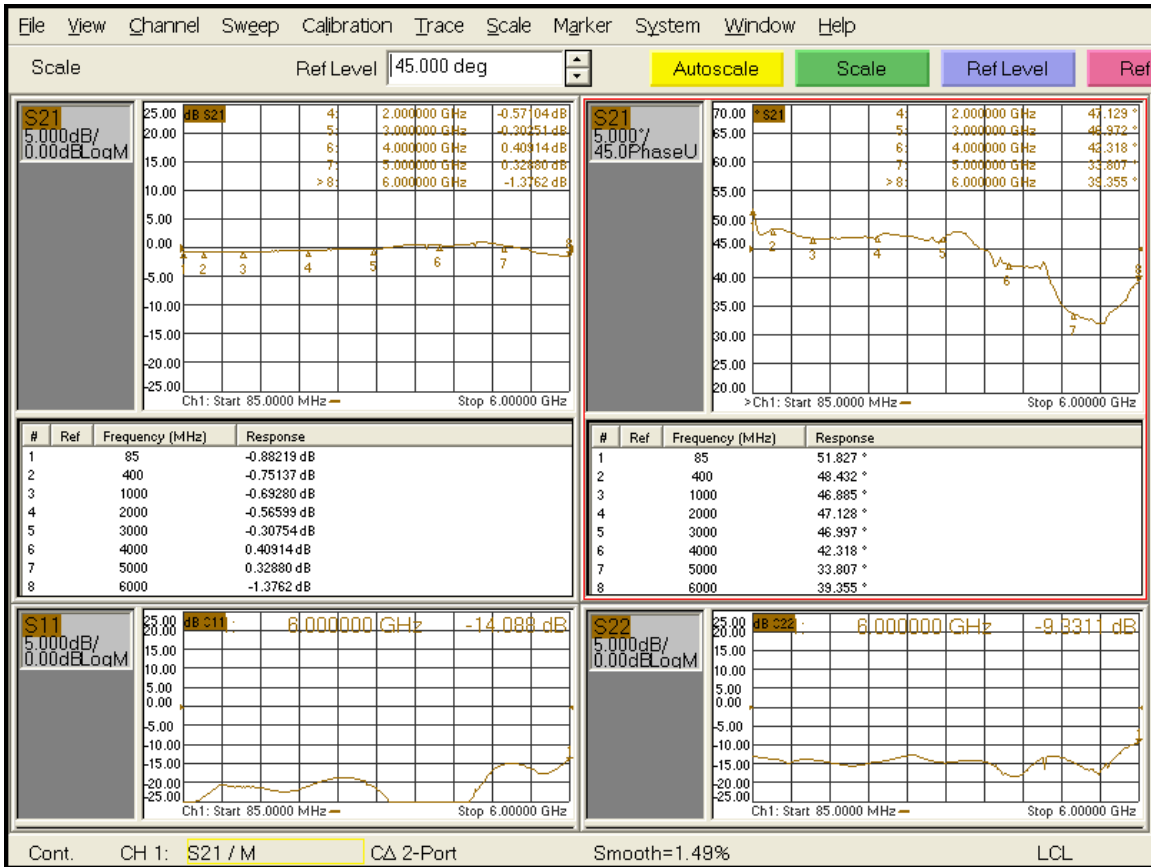


22.5° Phase, -25 dBm Input Power



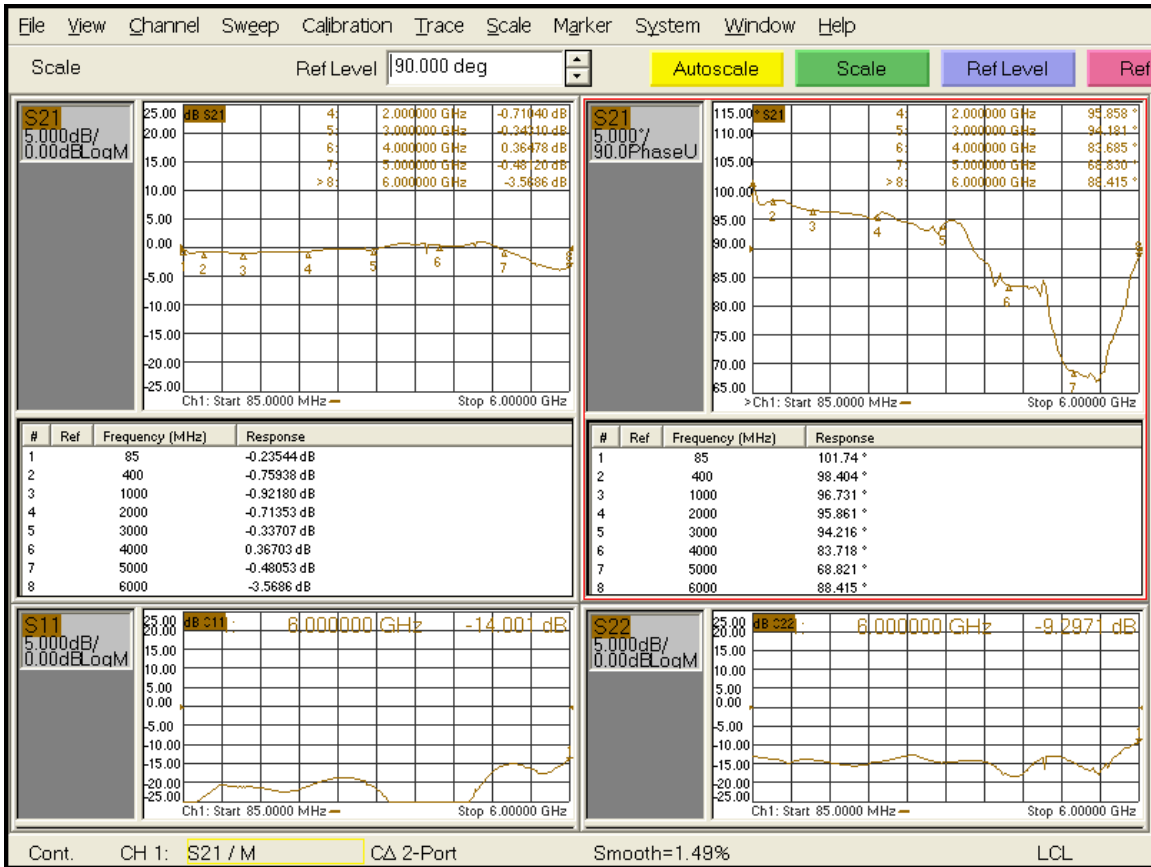


45° Phase, -25 dBm Input Power



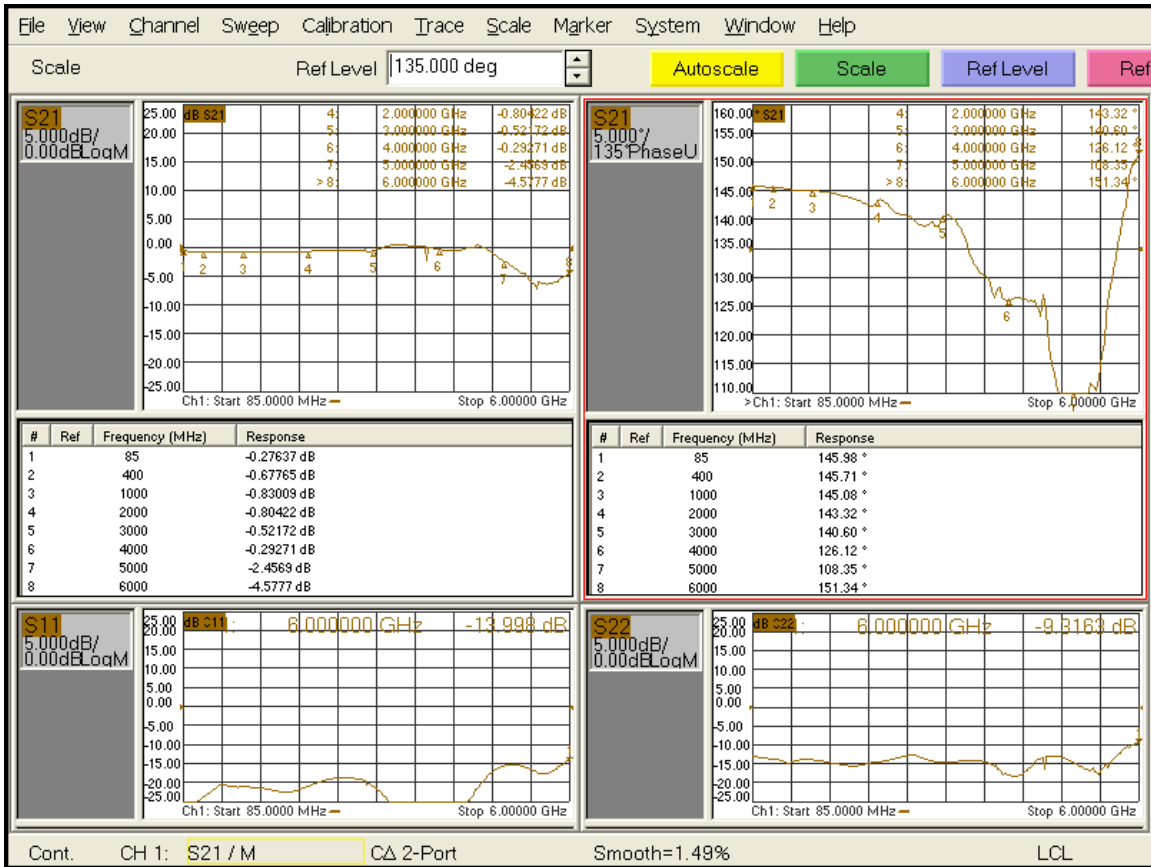


90° Phase, -25 dBm Input Power



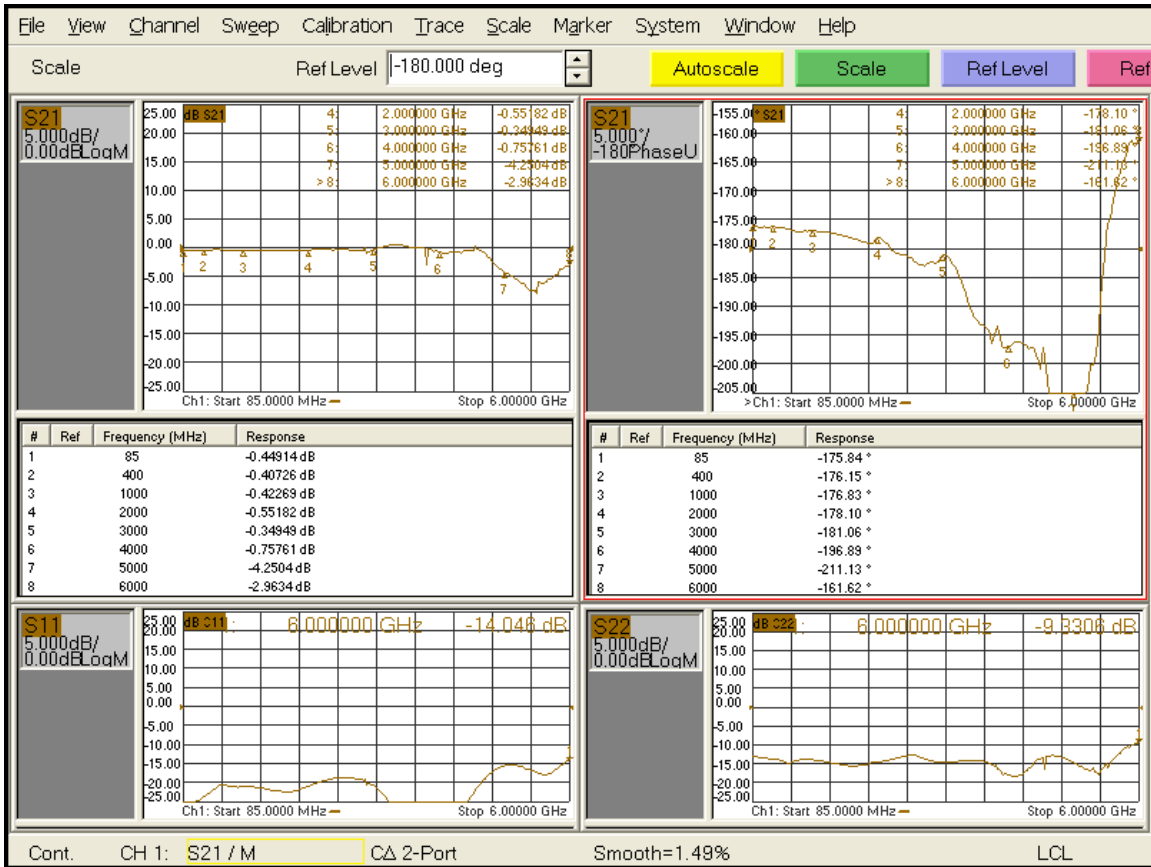


135° Phase, -25 dBm Input Power



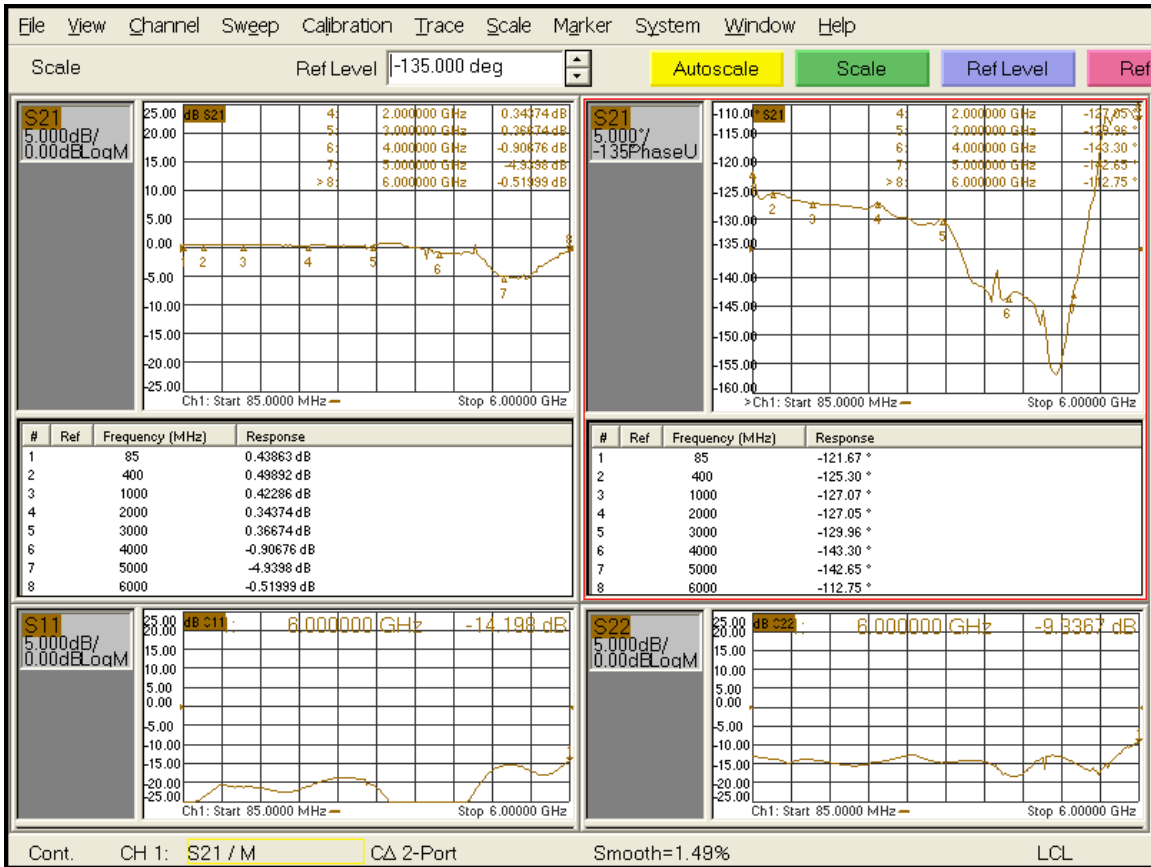


180° Phase, -25 dBm Input Power



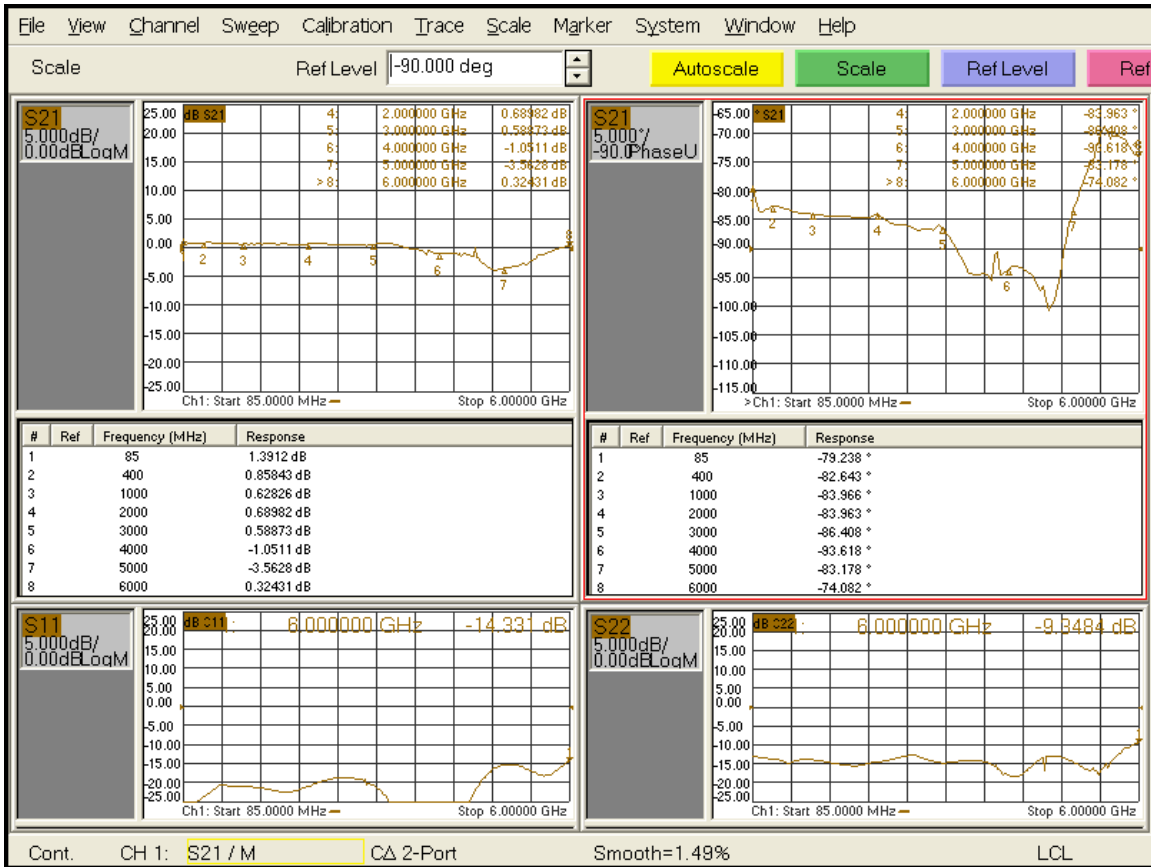


225° Phase, -25 dBm Input Power



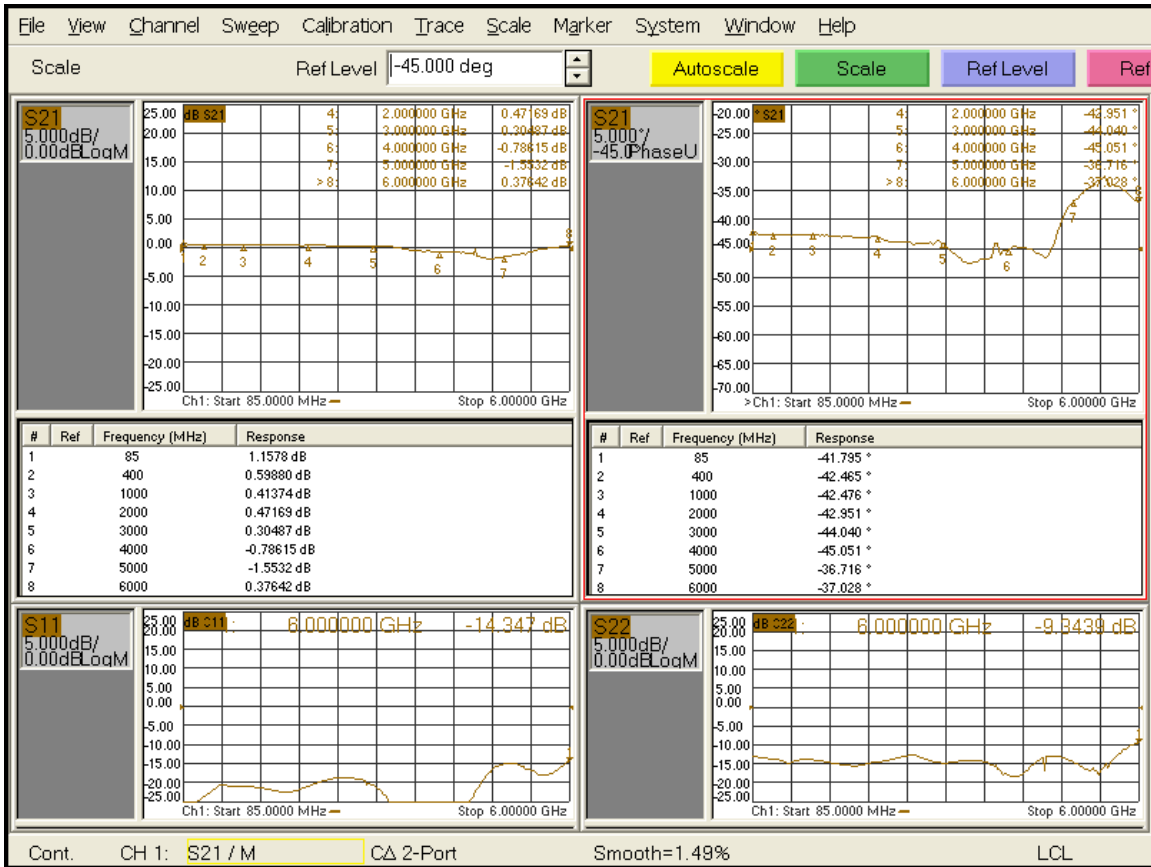


270° Phase, -25 dBm Input Power



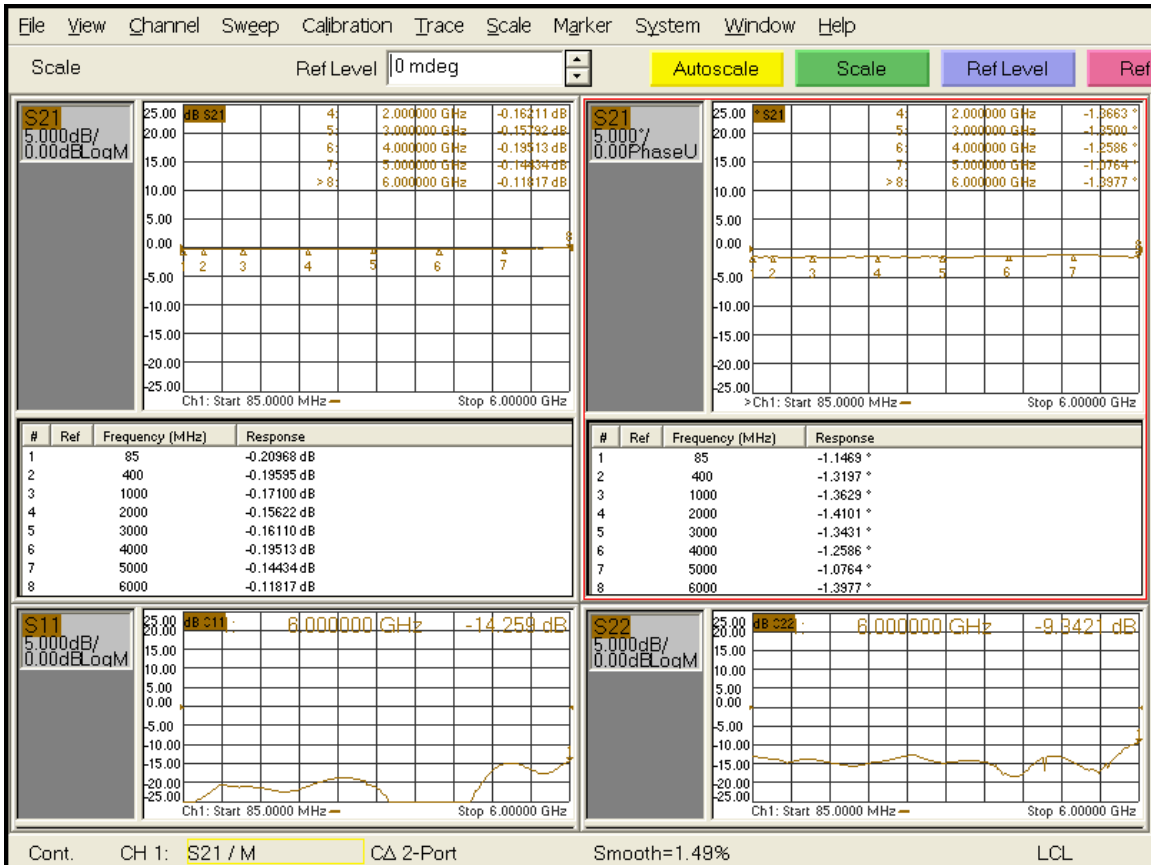


315° Phase, -25 dBm Input Power



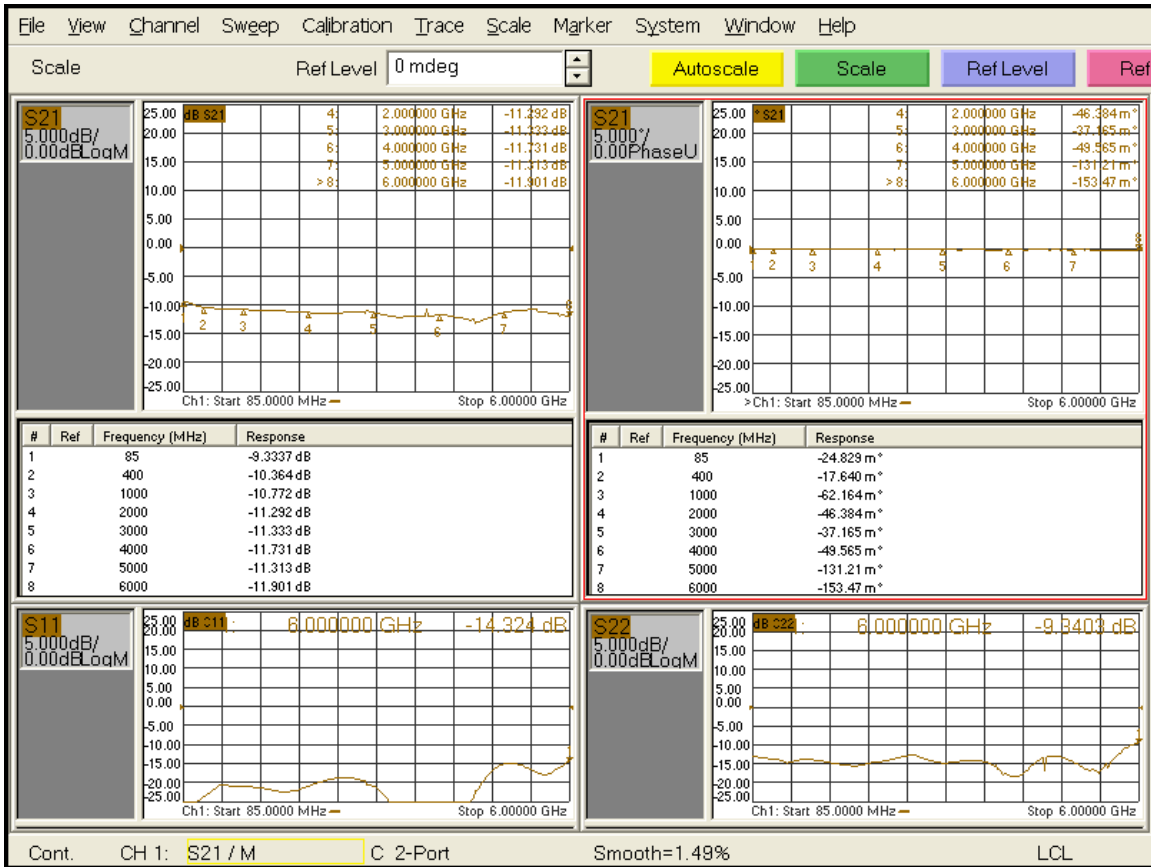


358.6° Phase, -25 dBm Input Power



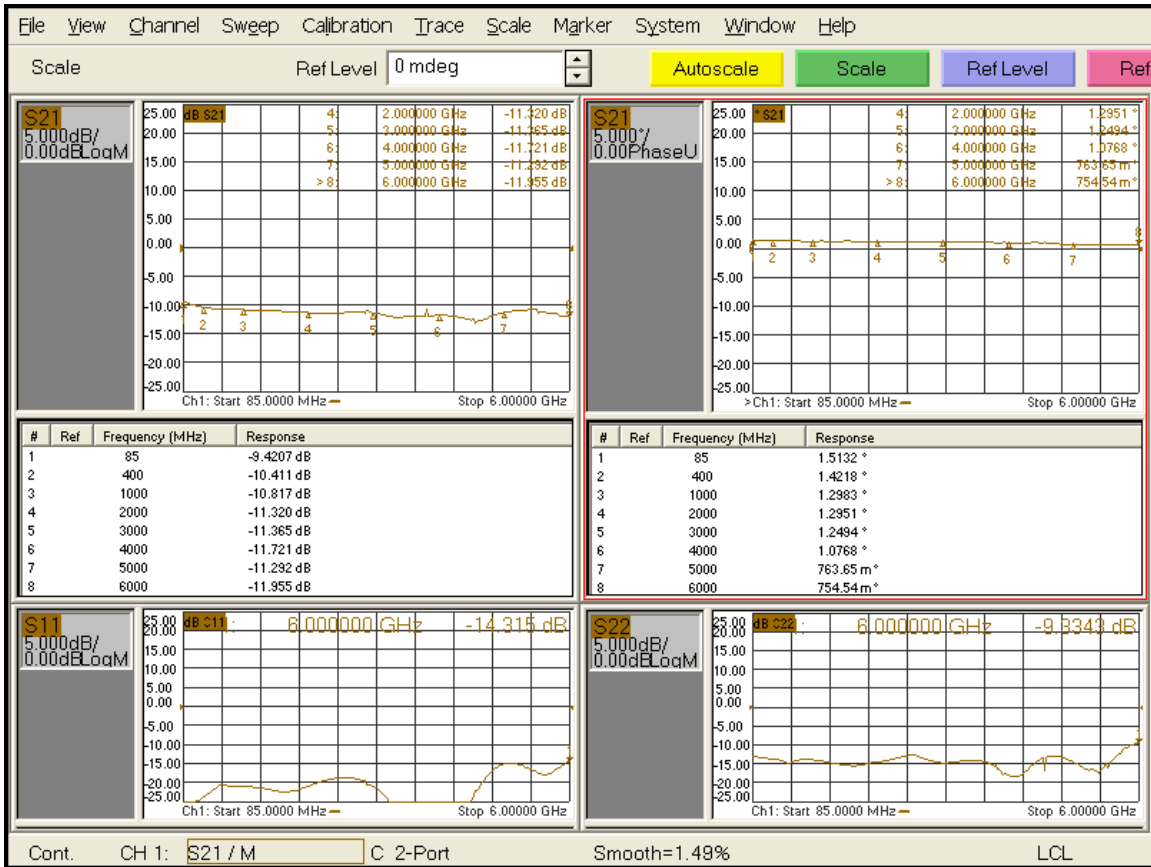


0° Phase, -20 dBm Input Power



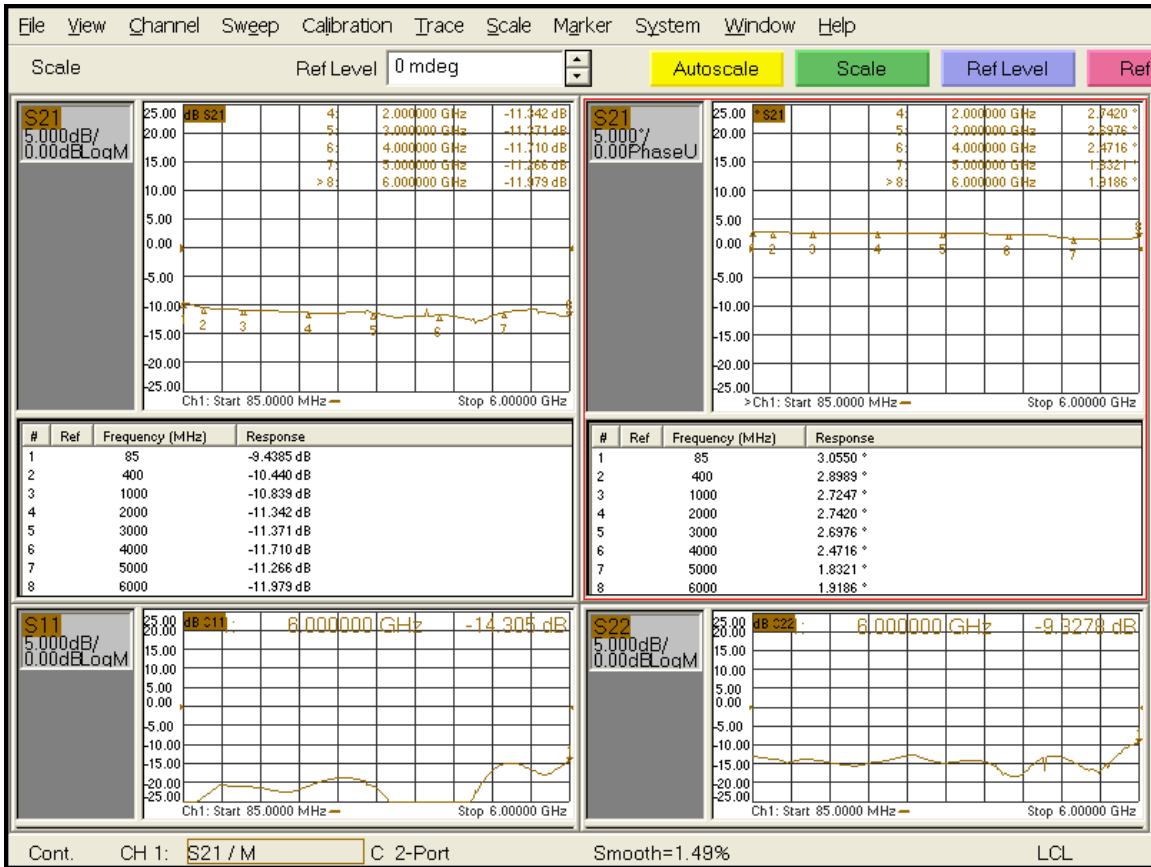


1.4° Phase, -20 dBm Input Power



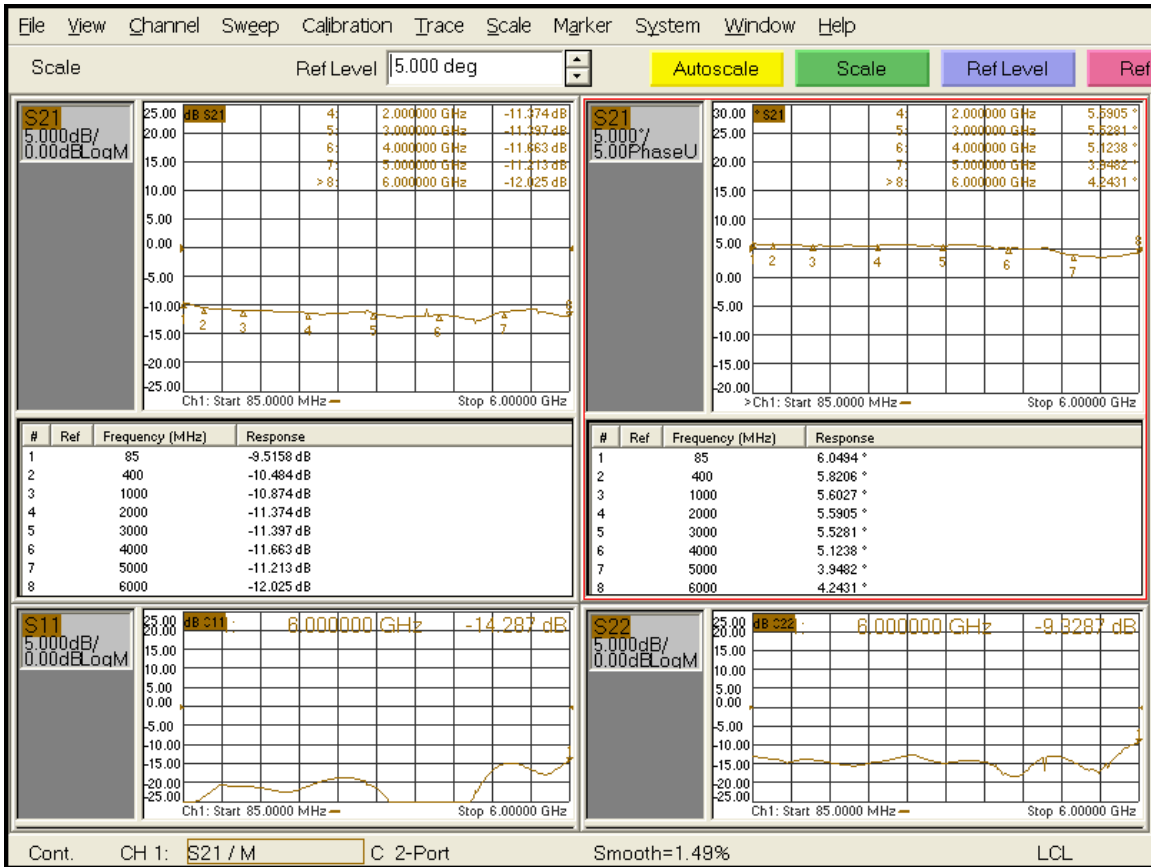


2.8° Phase, -20 dBm Input Power



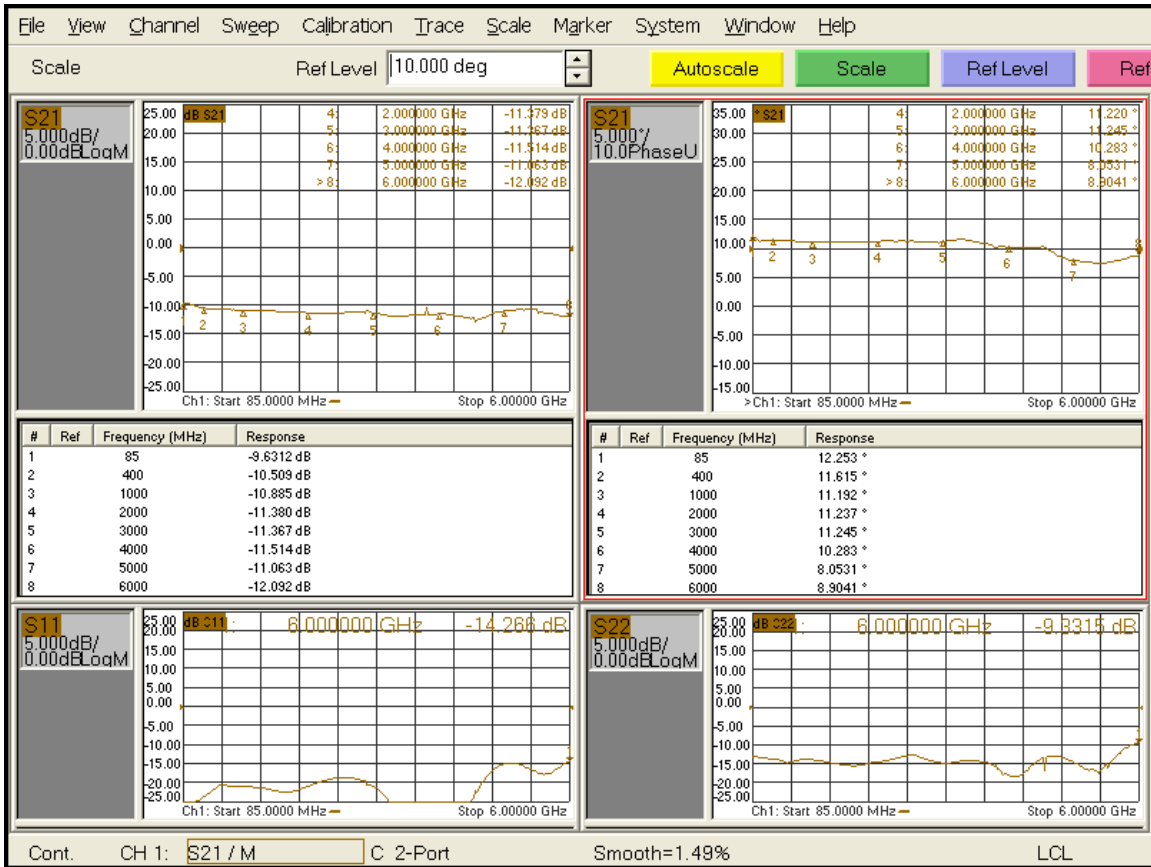


5.6° Phase, -20 dBm Input Power



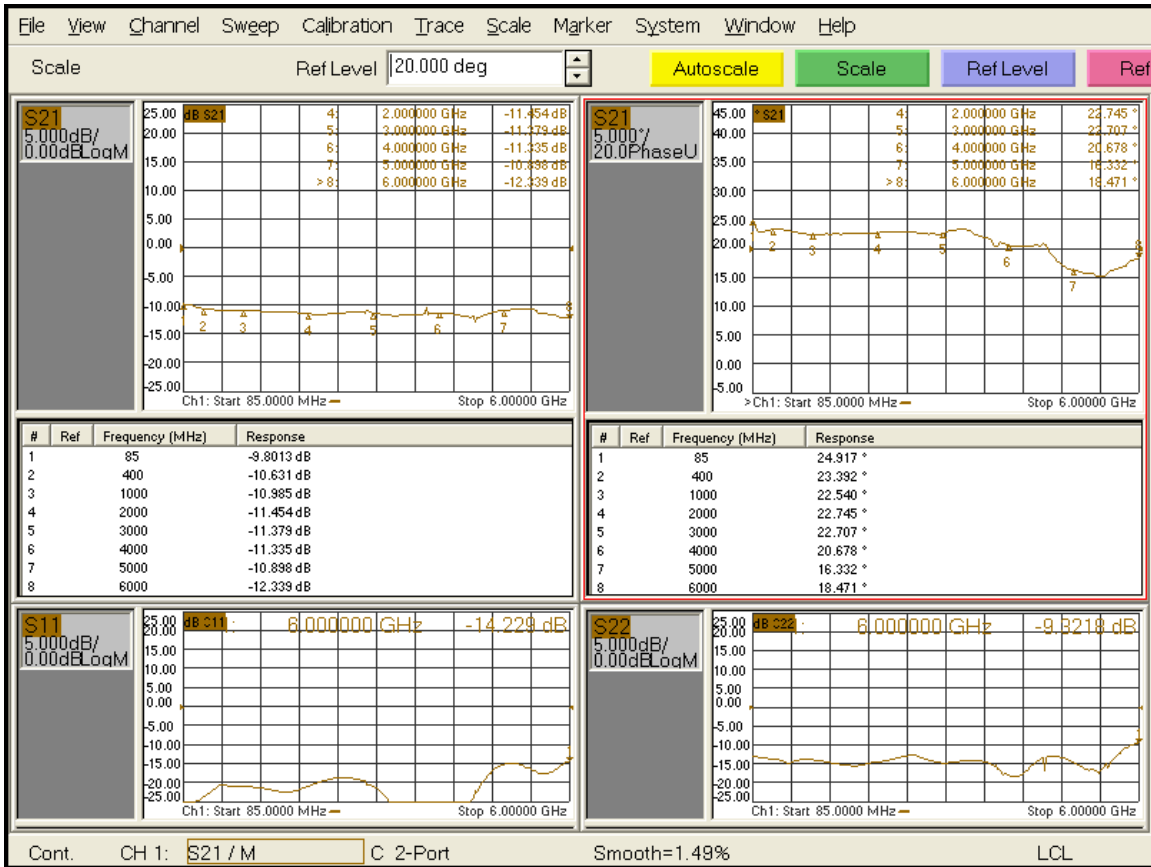


11.25° Phase, -20 dBm Input Power



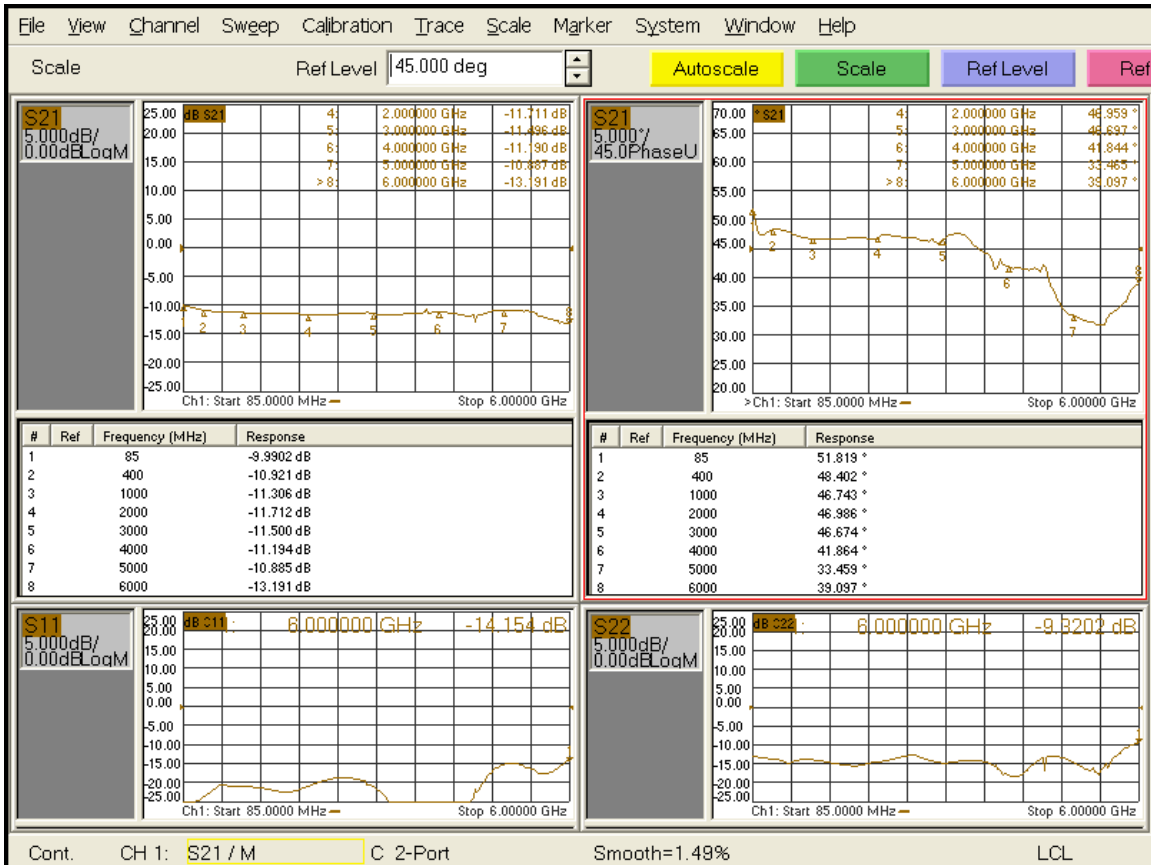


22.5° Phase, -20 dBm Input Power



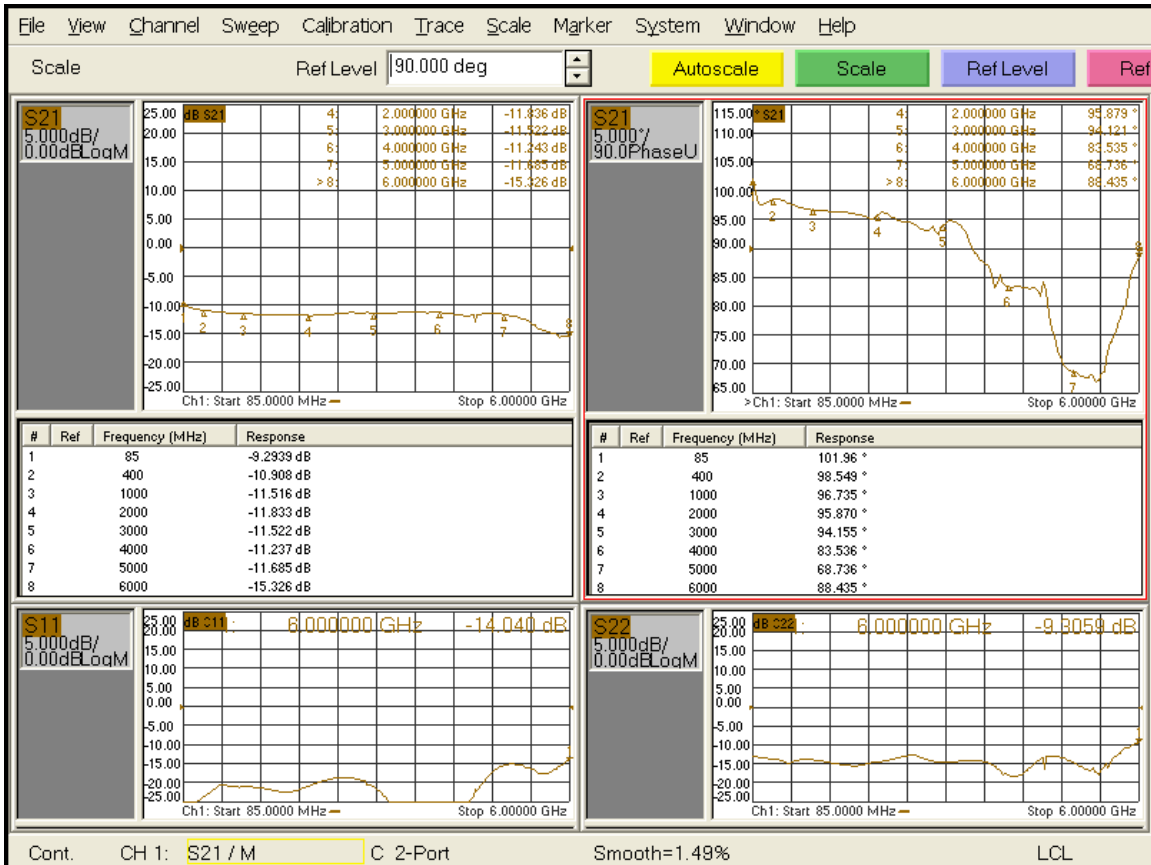


45° Phase, -20 dBm Input Power



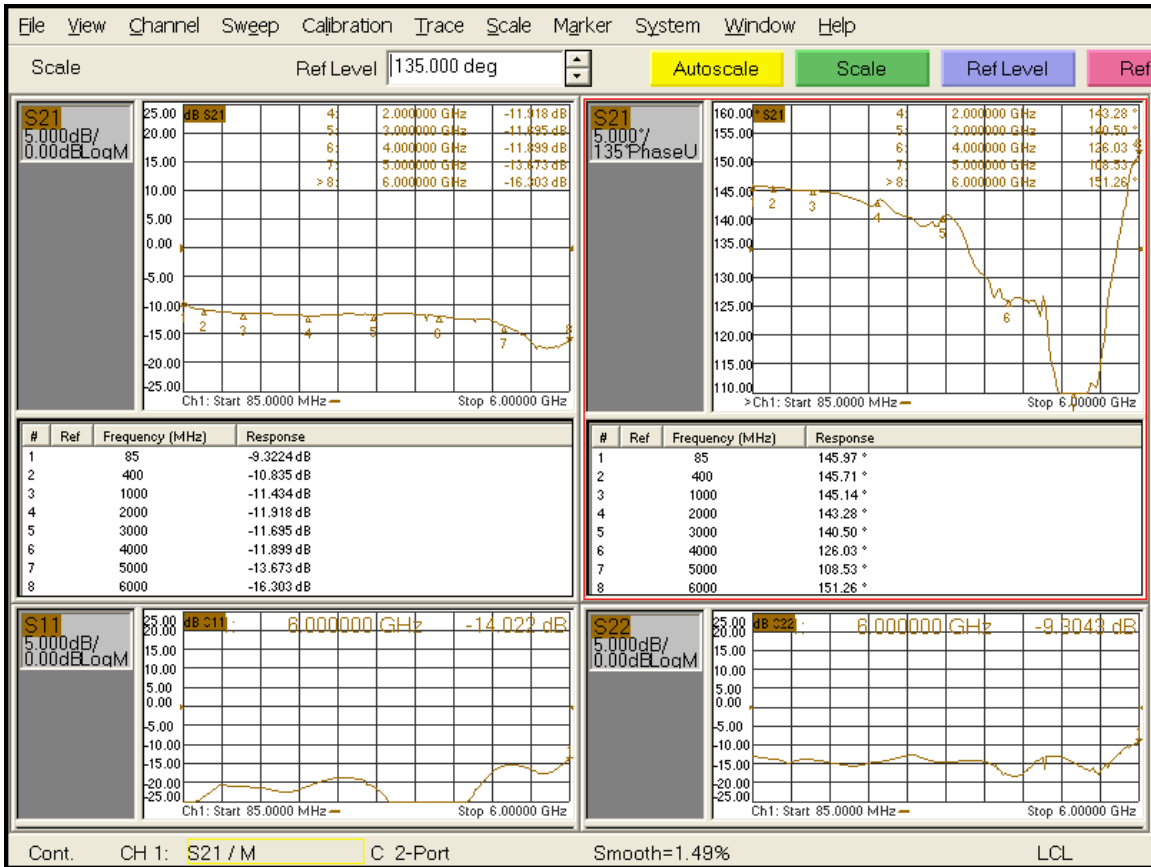


90° Phase, -20 dBm Input Power



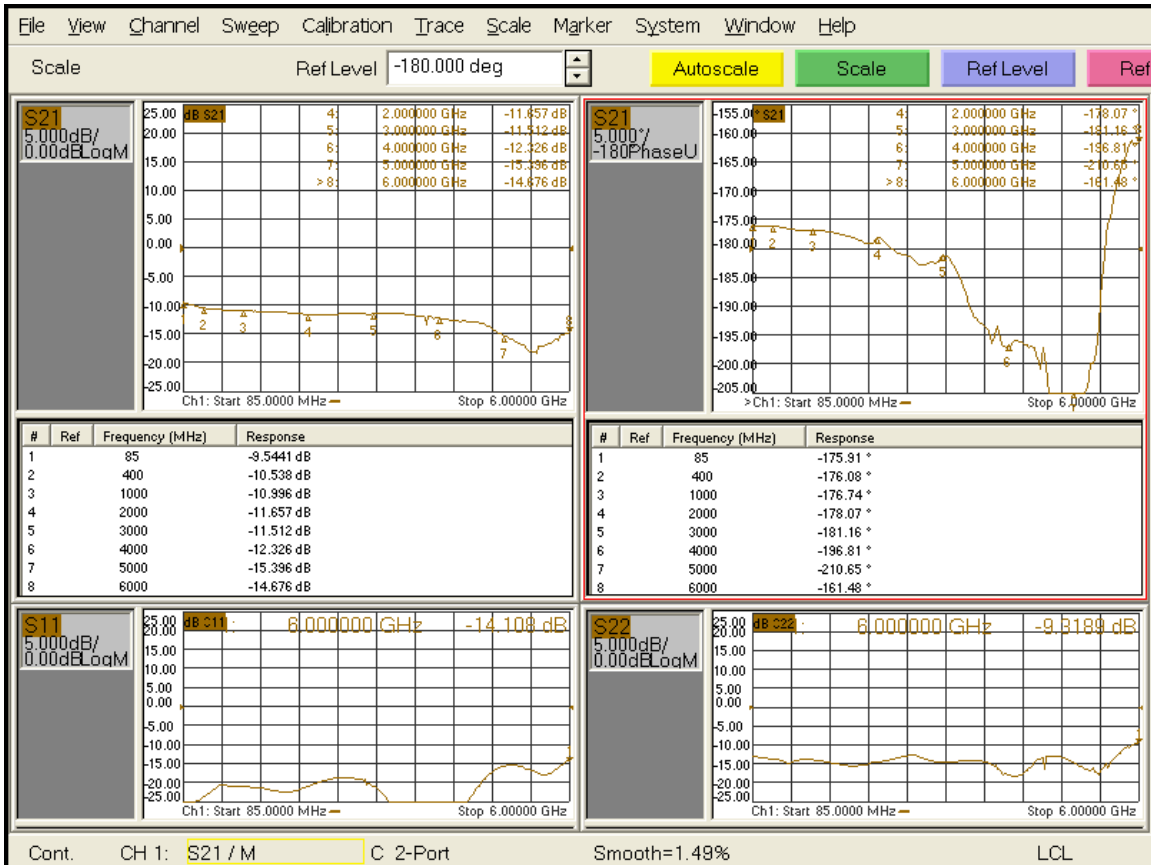


135° Phase, -20 dBm Input Power



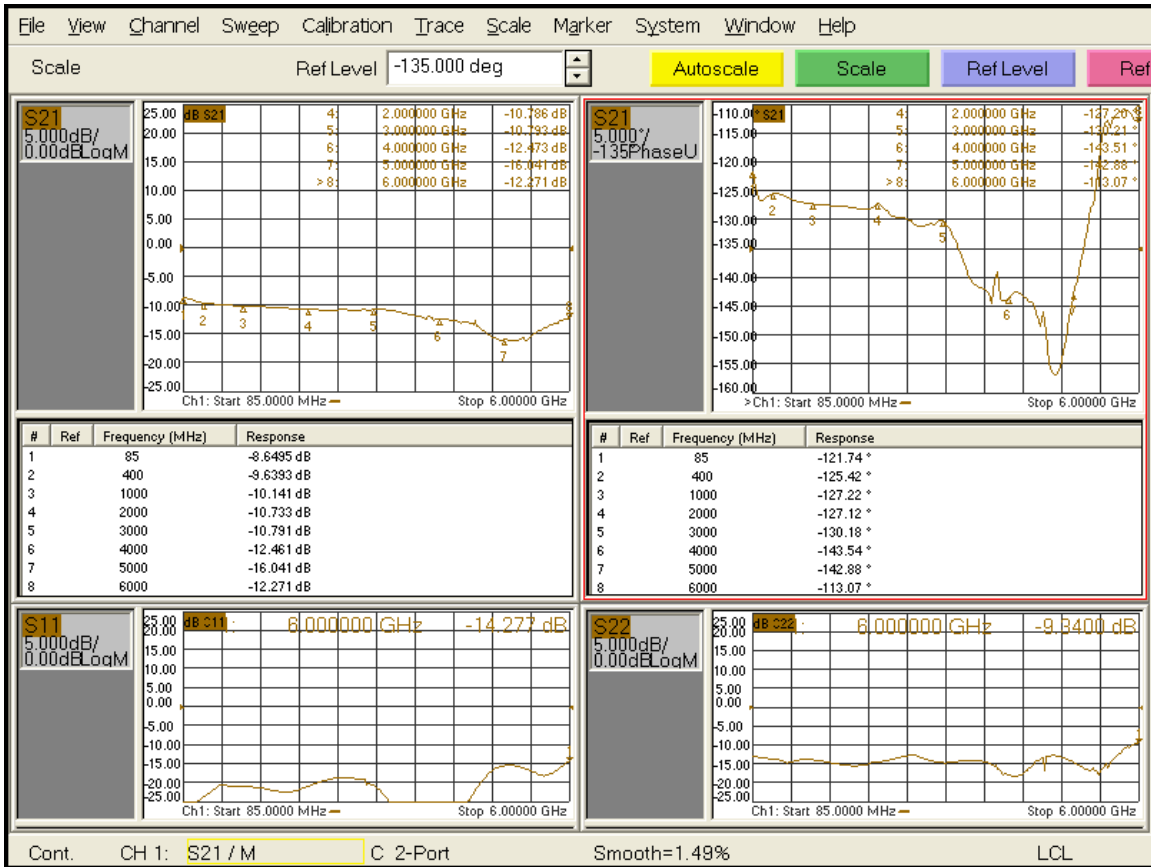


180° Phase, -20 dBm Input Power



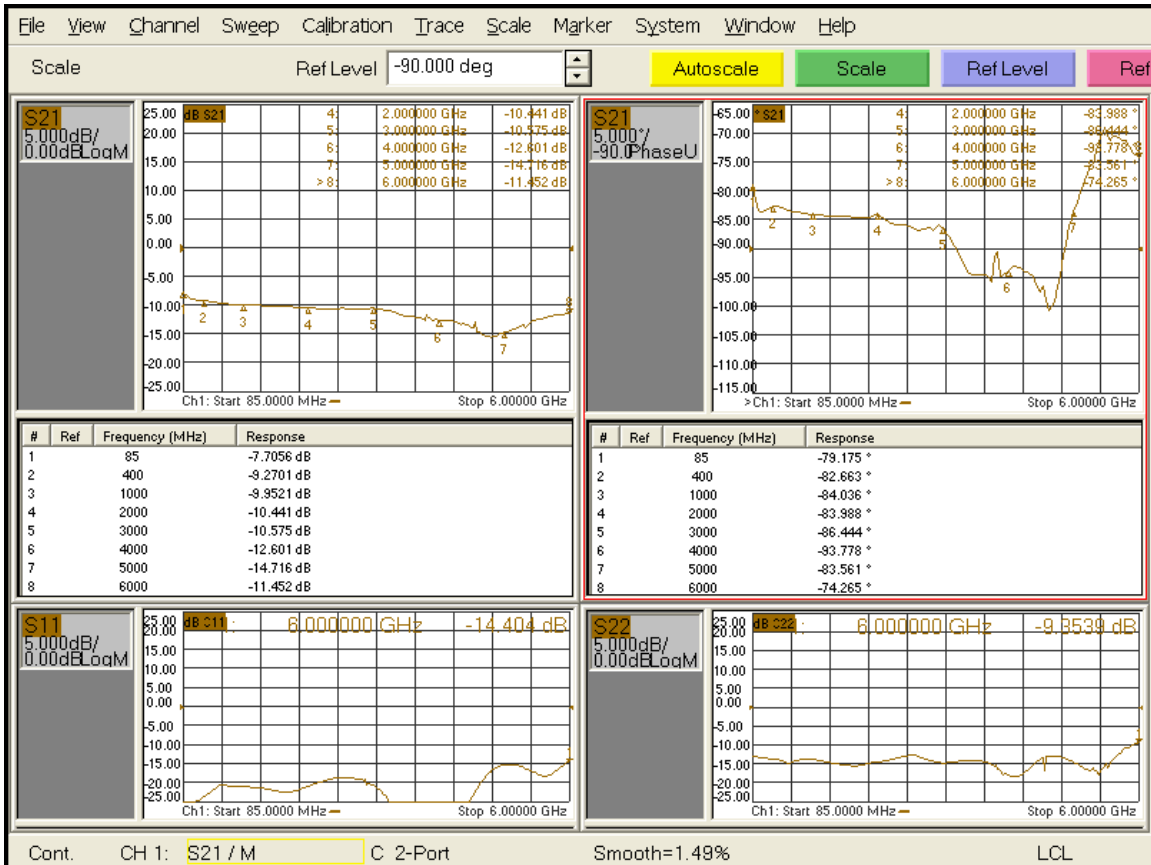


225° Phase, -20 dBm Input Power



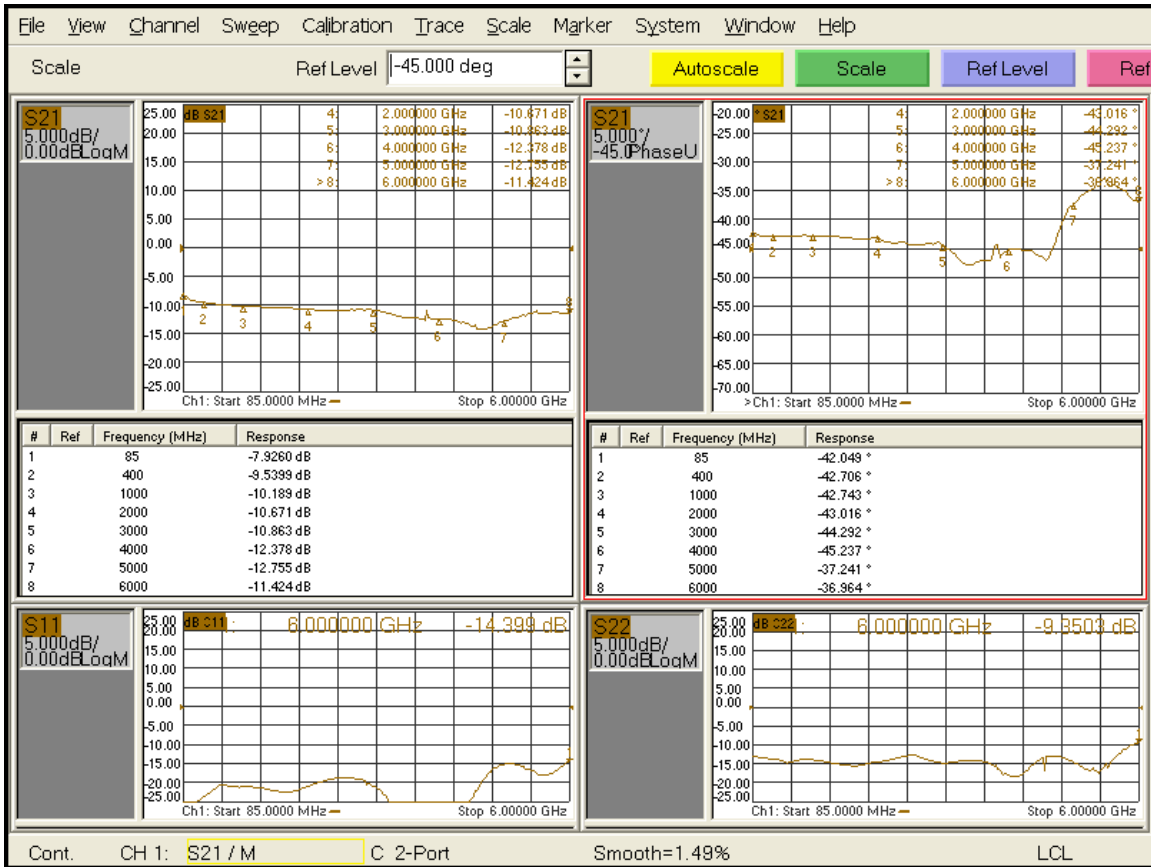


270° Phase, -20 dBm Input Power



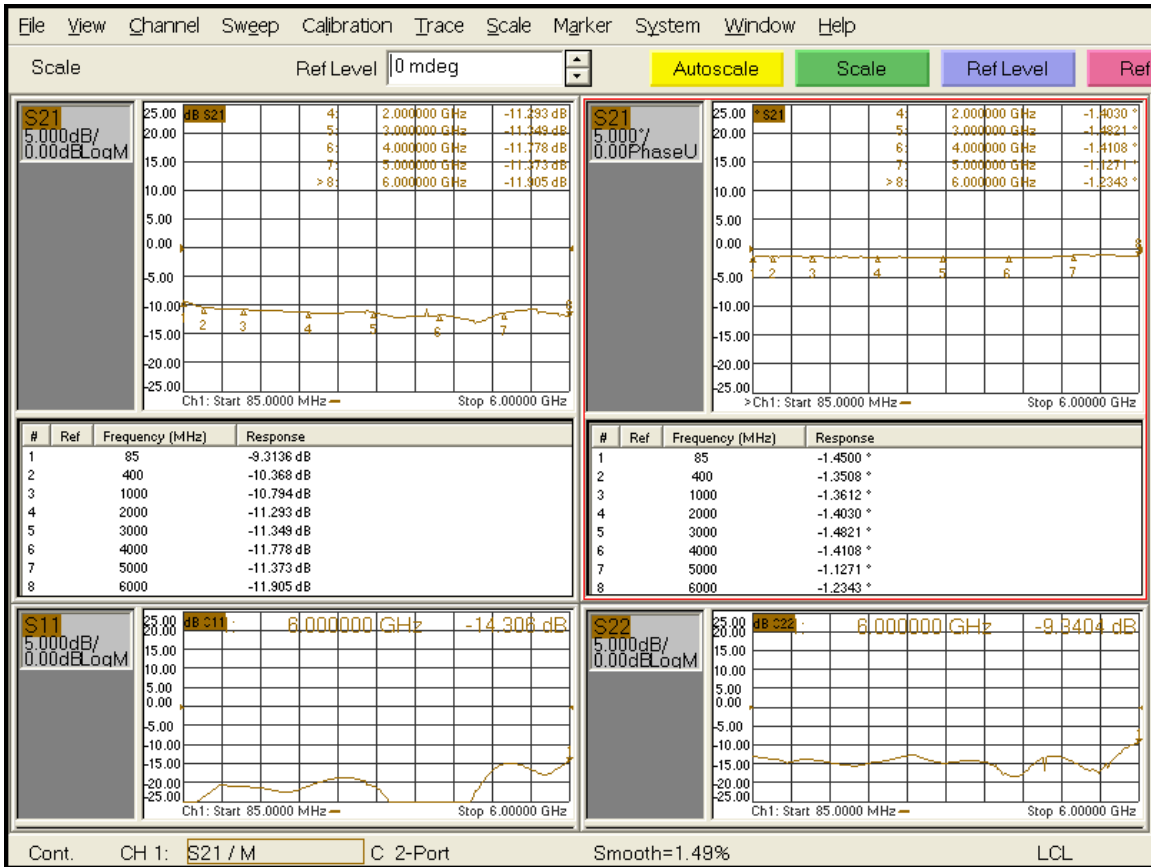


315° Phase, -20 dBm Input Power



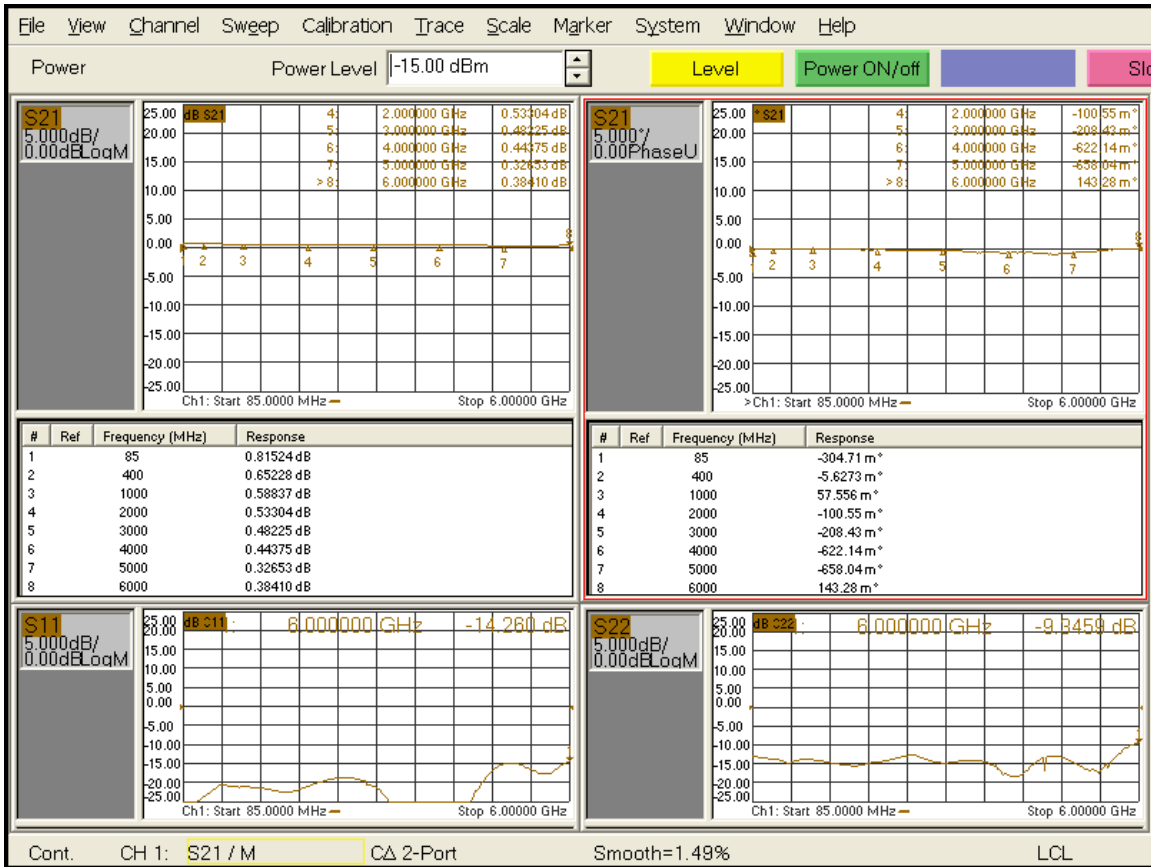


358.6° Phase, -20 dBm Input Power



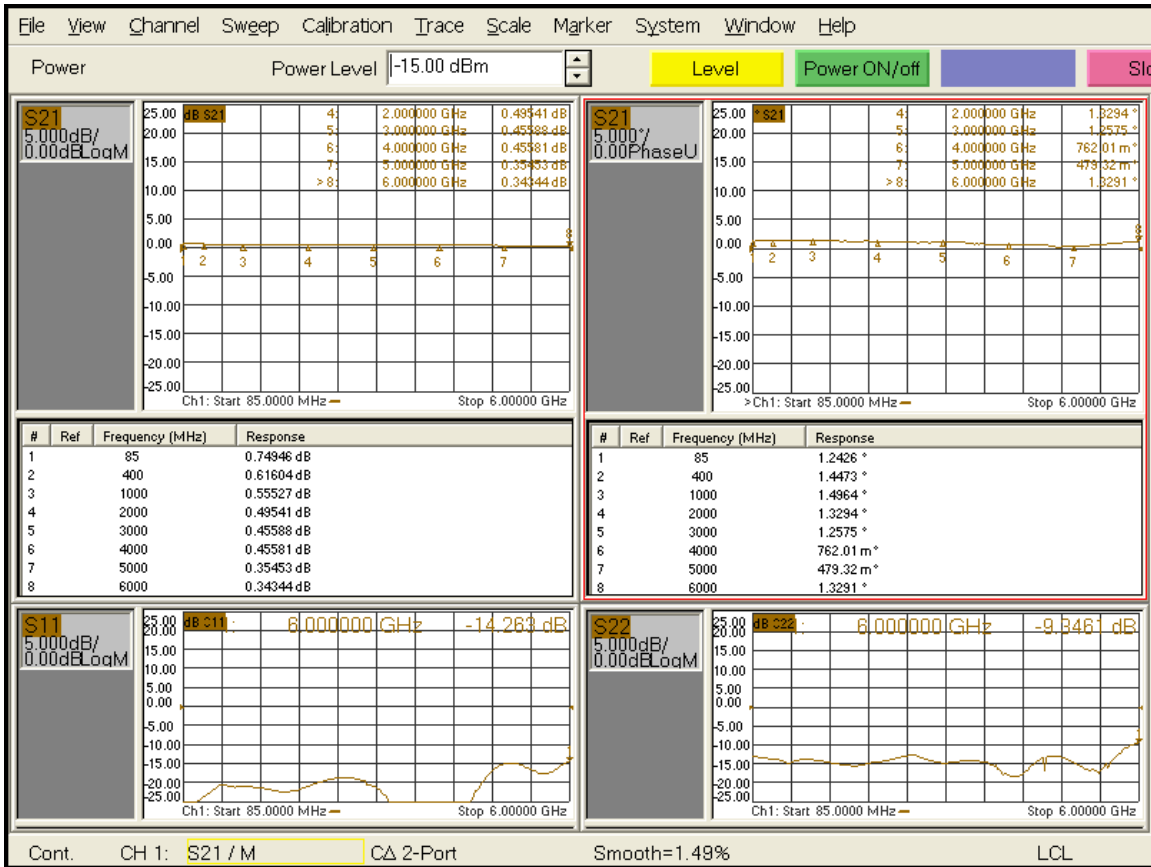


0° Phase, -15 dBm Input Power



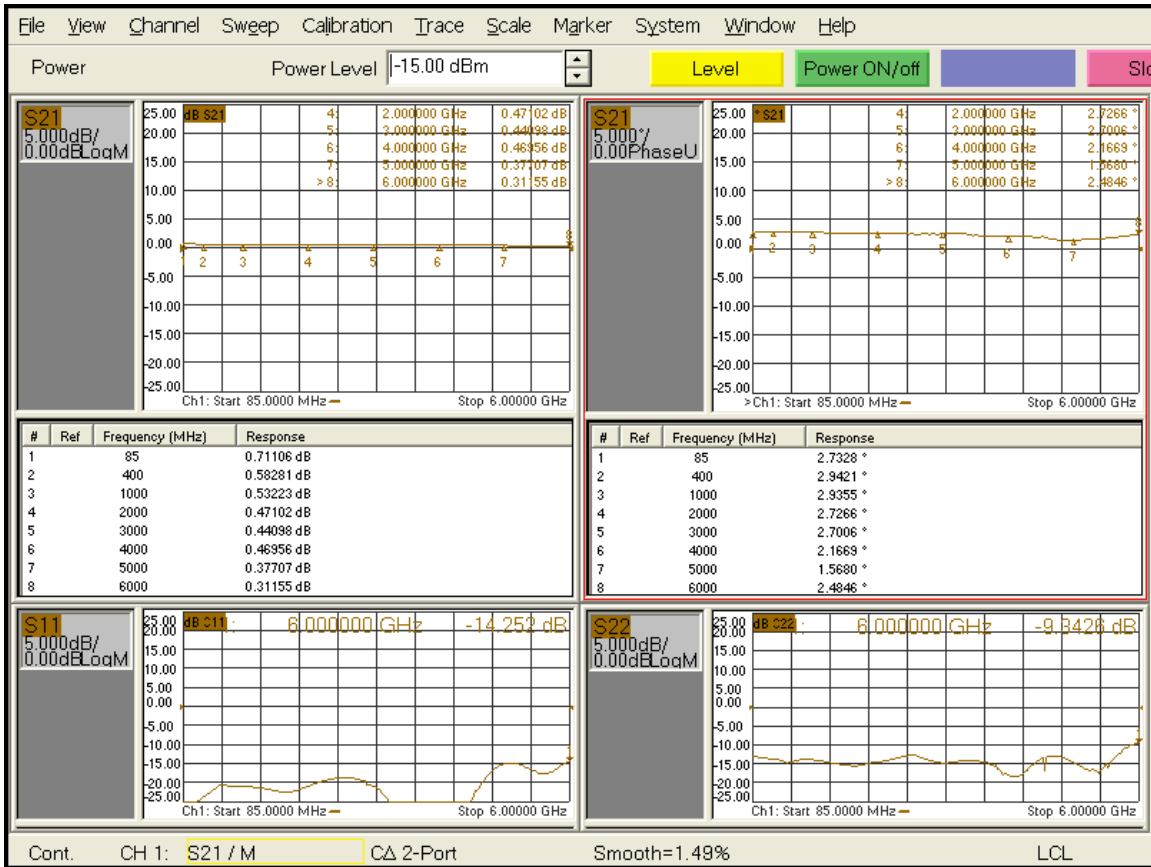


1.4° Phase, -15 dBm Input Power



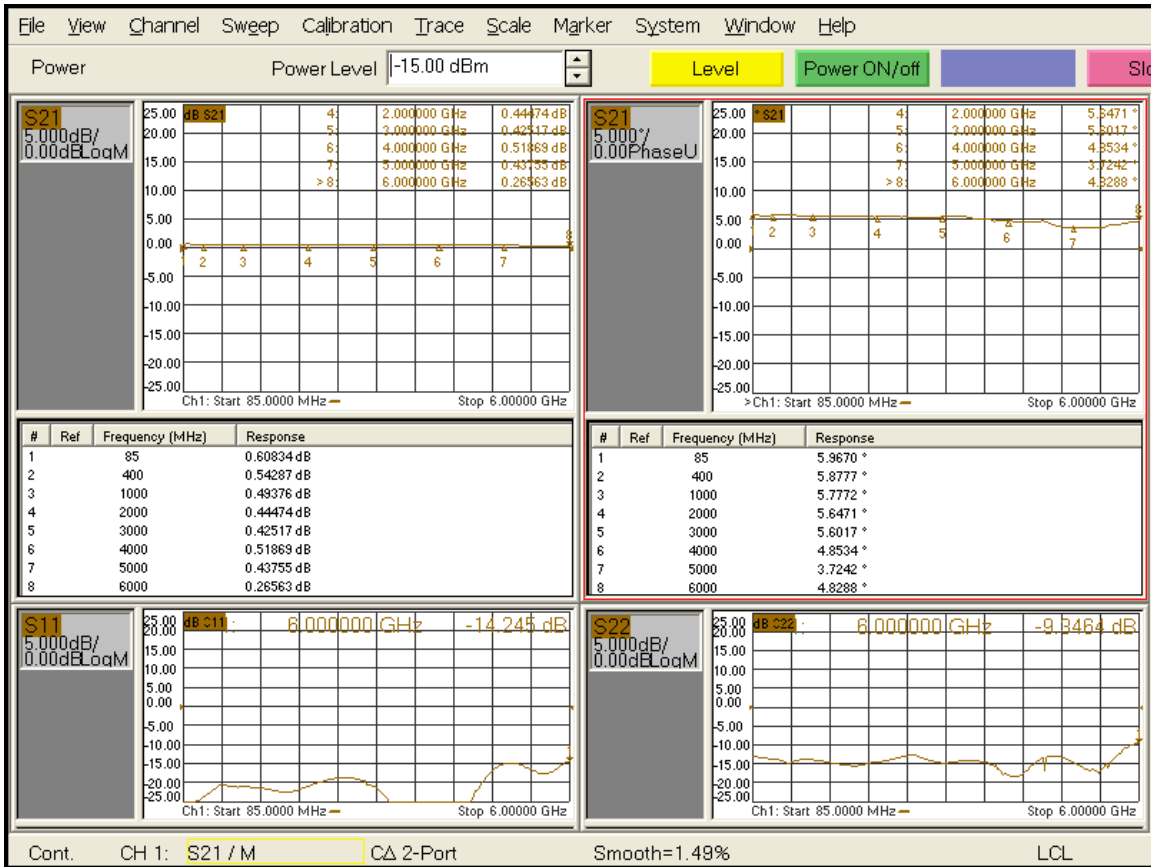


2.8° Phase, -15 dBm Input Power



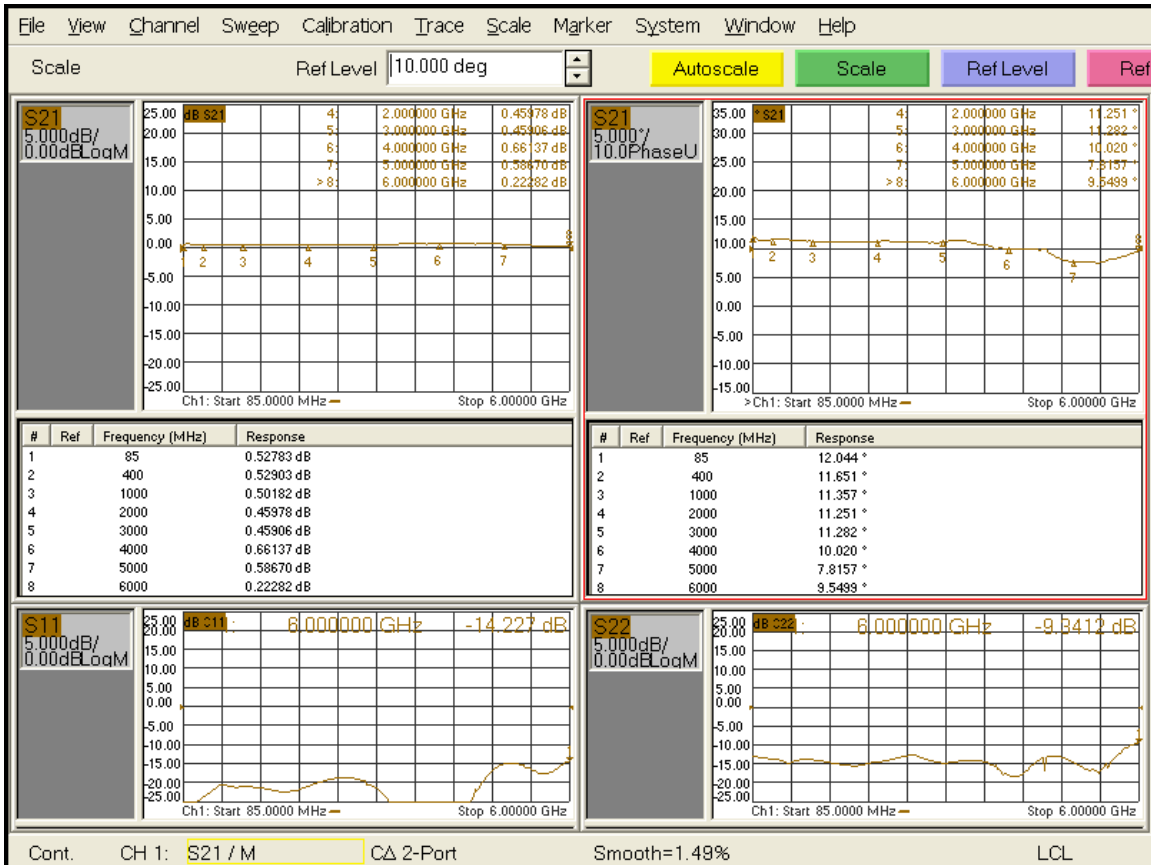


5.6° Phase, -15 dBm Input Power





11.25° Phase, -15 dBm Input Power



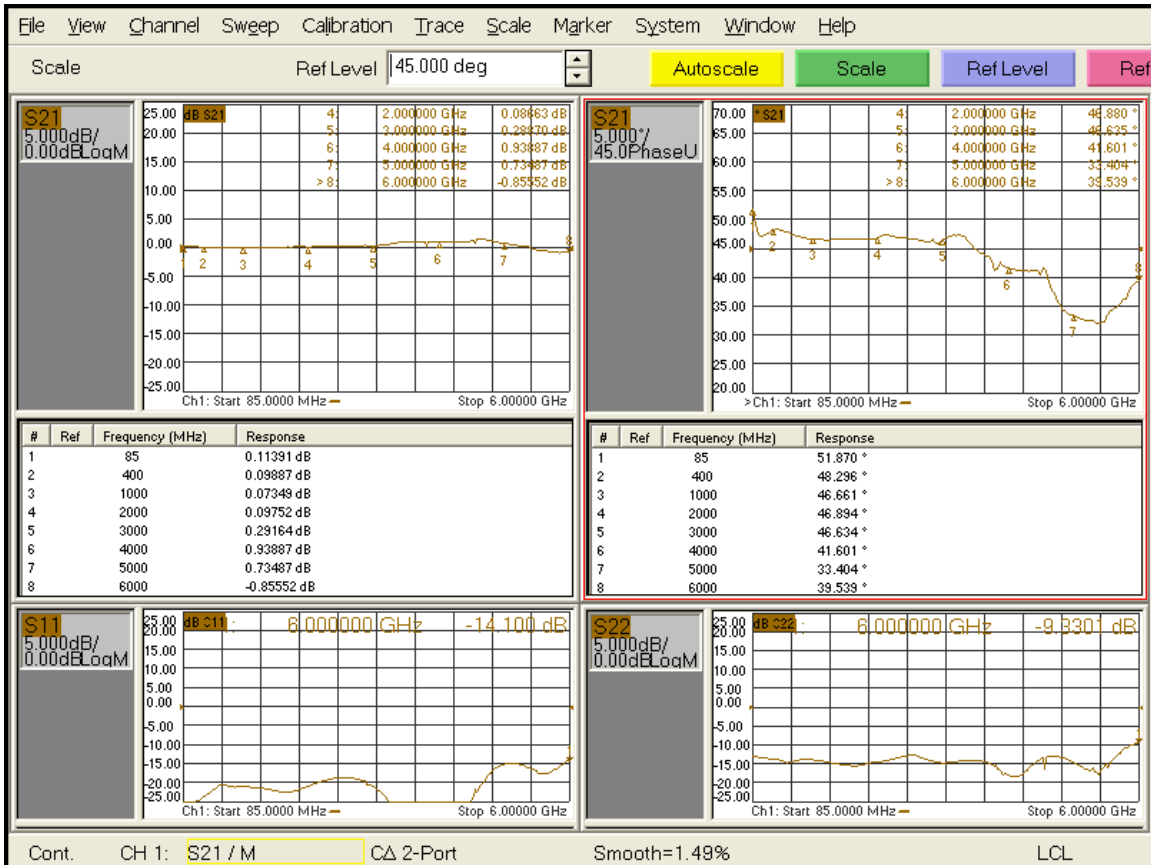


22.5° Phase, -15 dBm Input Power



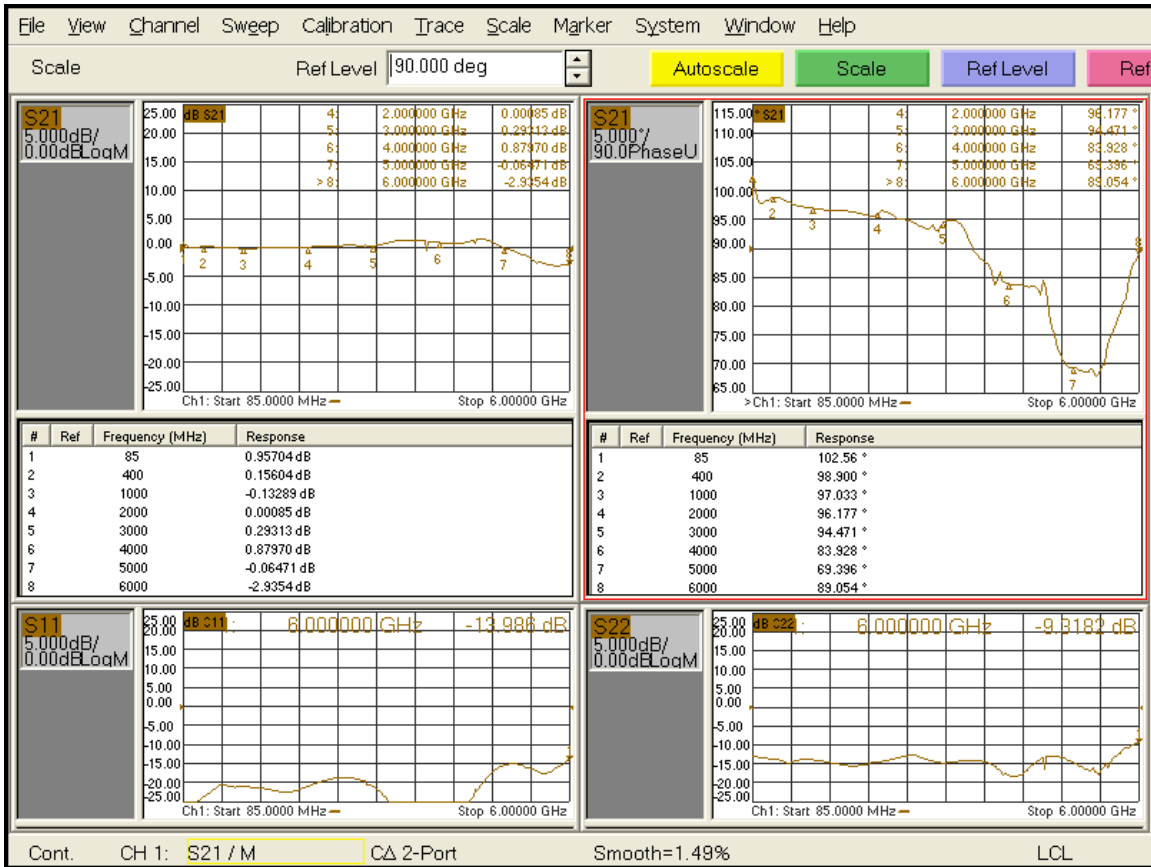


45° Phase, -15 dBm Input Power



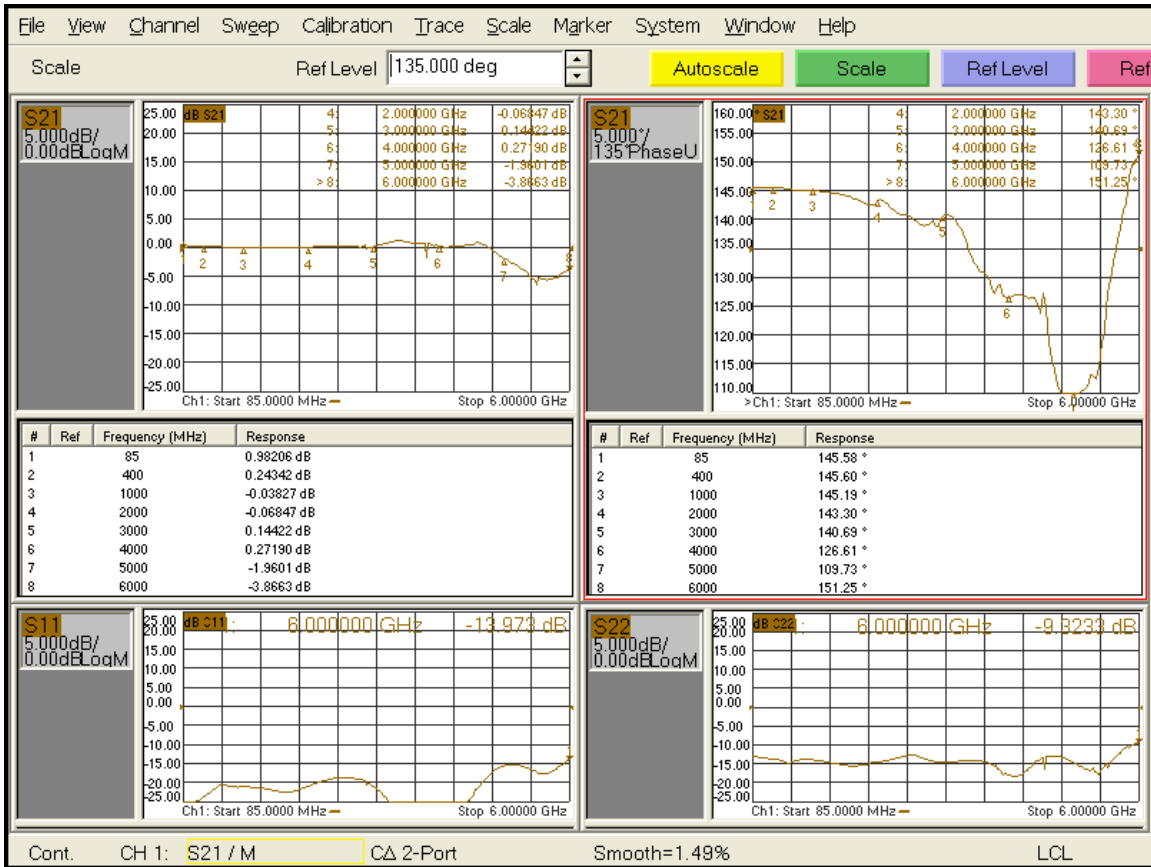


90° Phase, -15 dBm Input Power



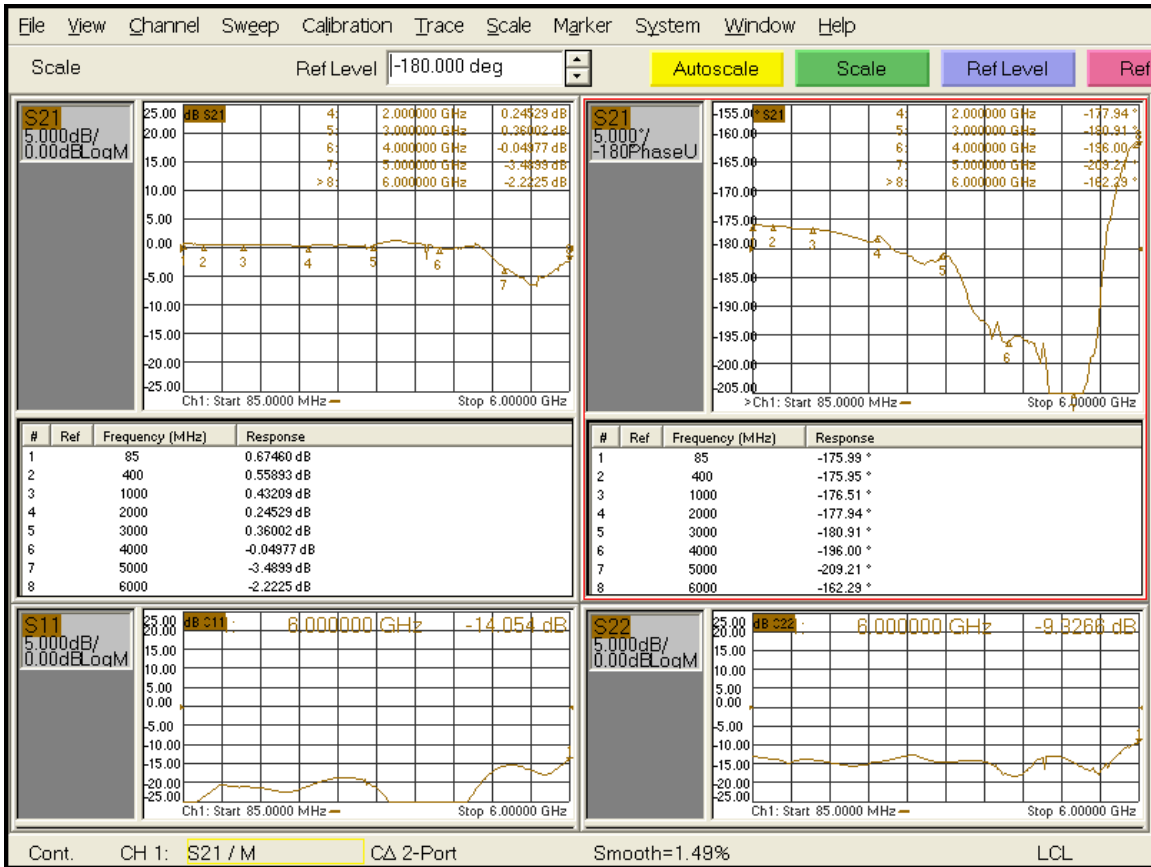


135° Phase, -15 dBm Input Power



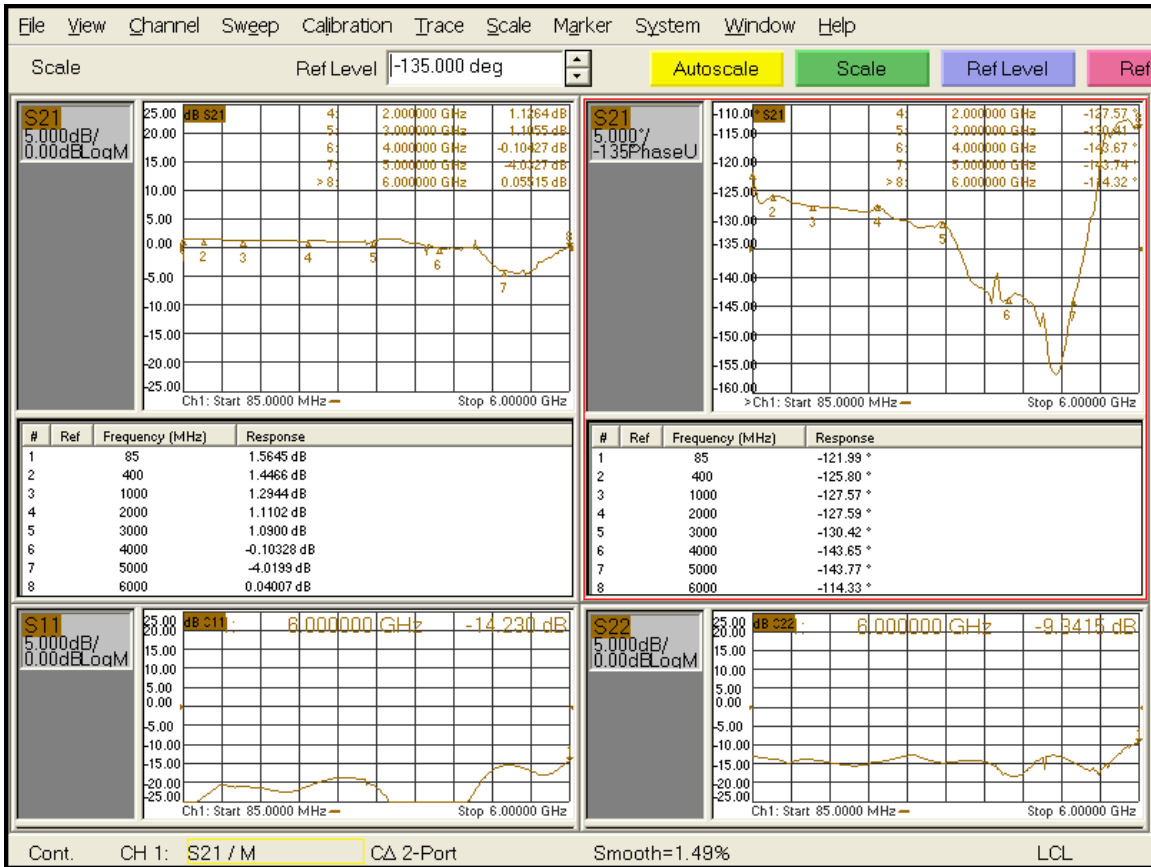


180° Phase, -15 dBm Input Power



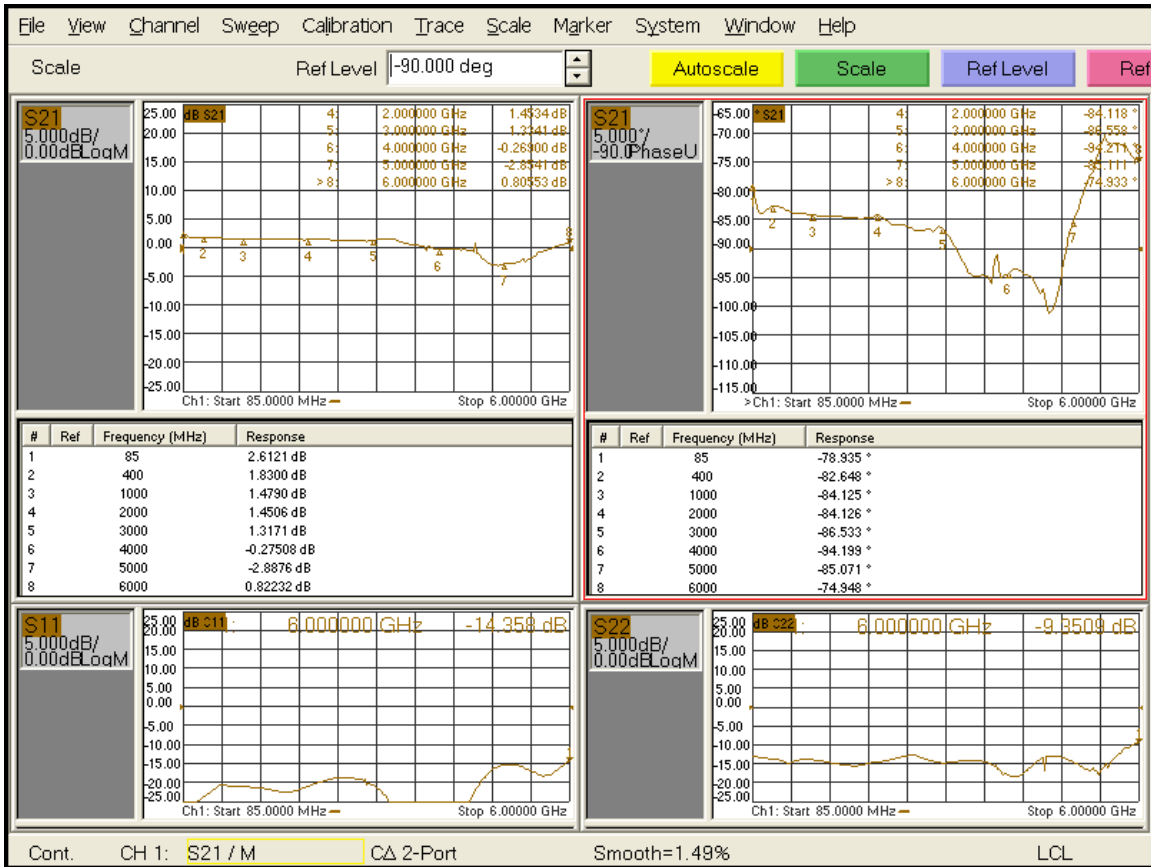


225° Phase, -15 dBm Input Power



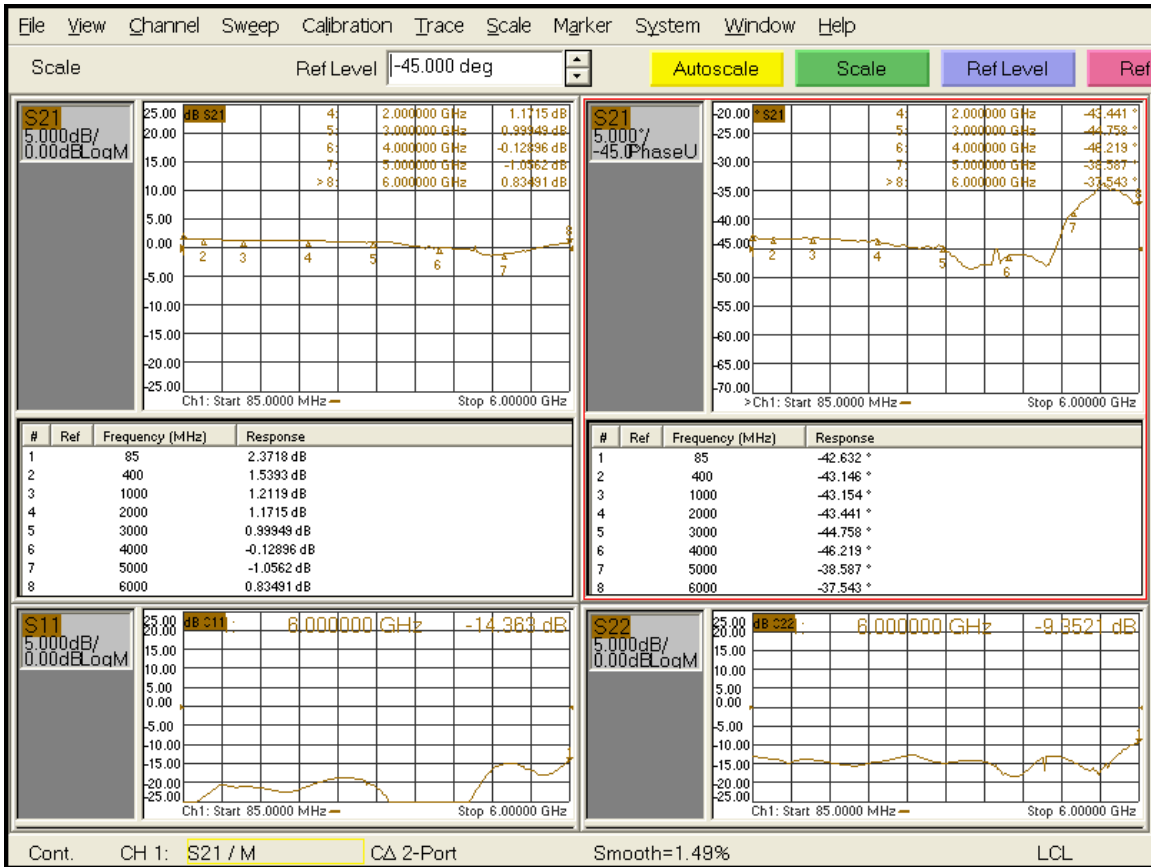


270° Phase, -15 dBm Input Power



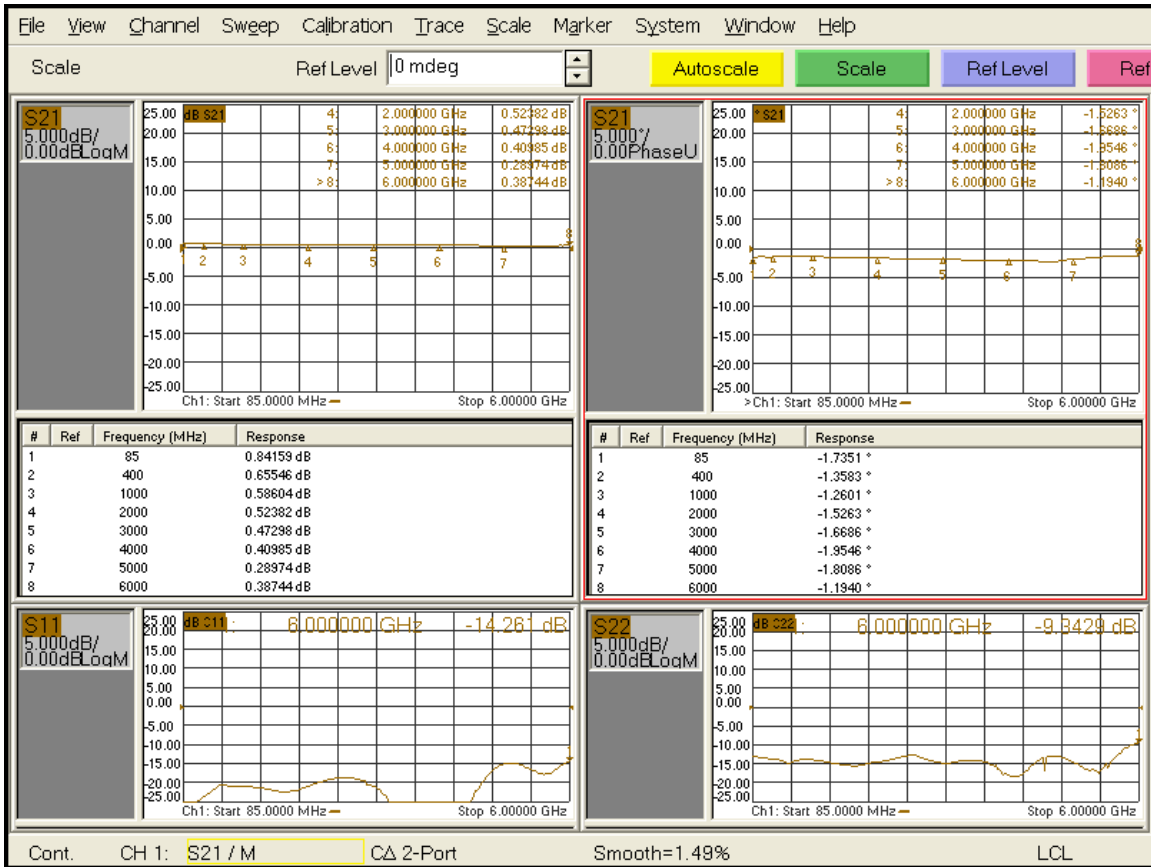


315° Phase, -15 dBm Input Power



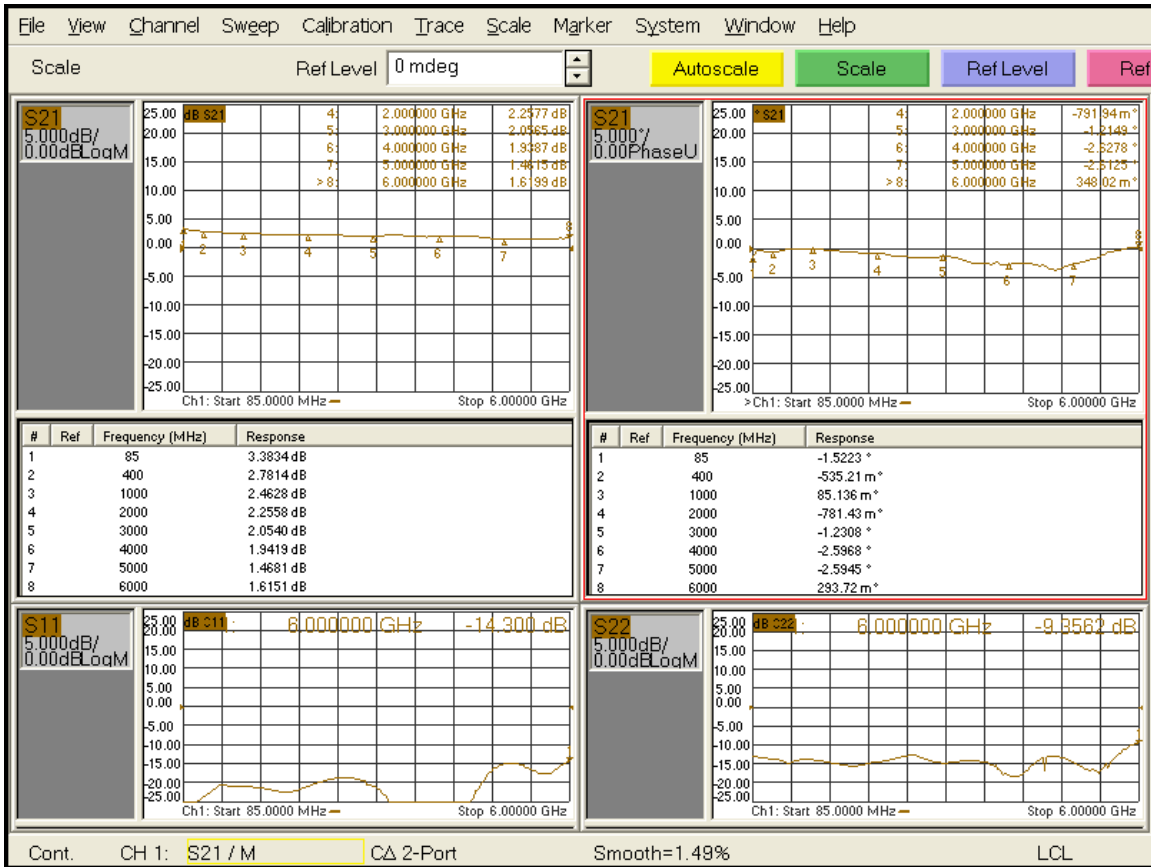


358.6° Phase, -15 dBm Input Power



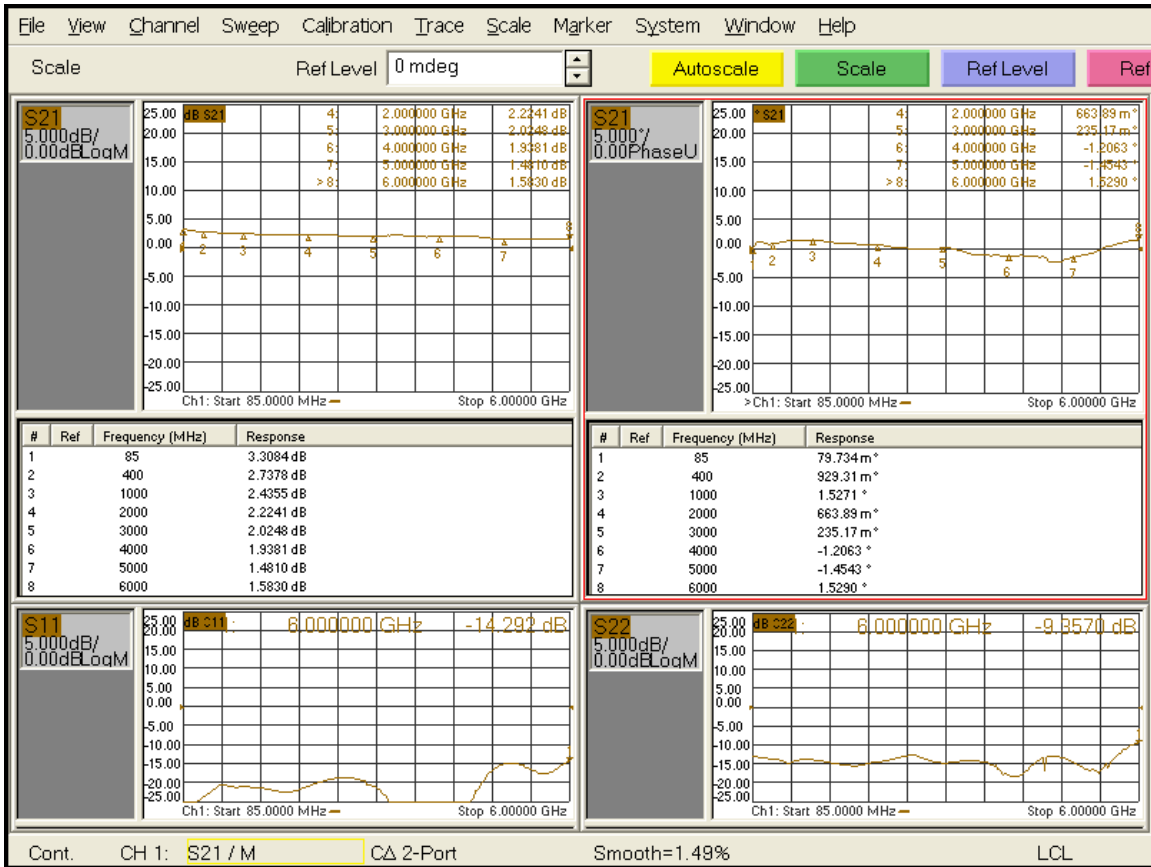


0° Phase, -10 dBm Input Power



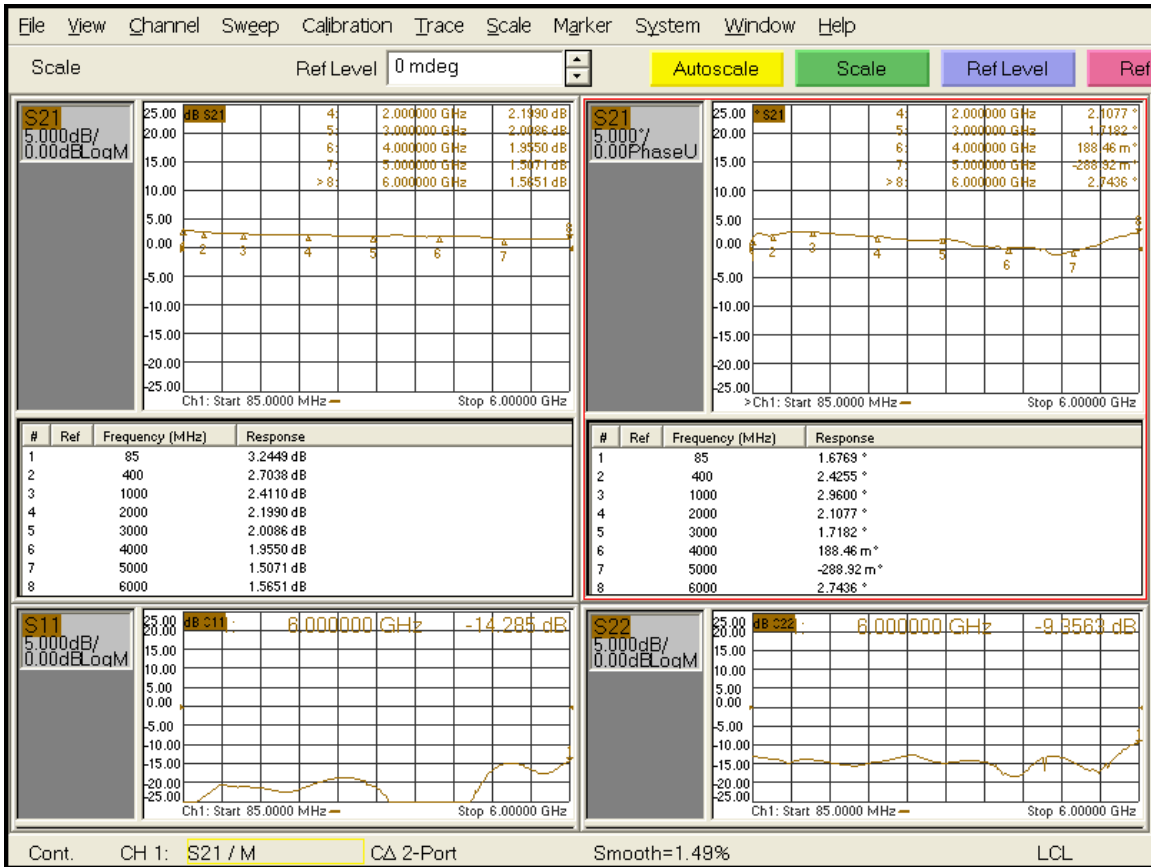


1.4° Phase, -10 dBm Input Power



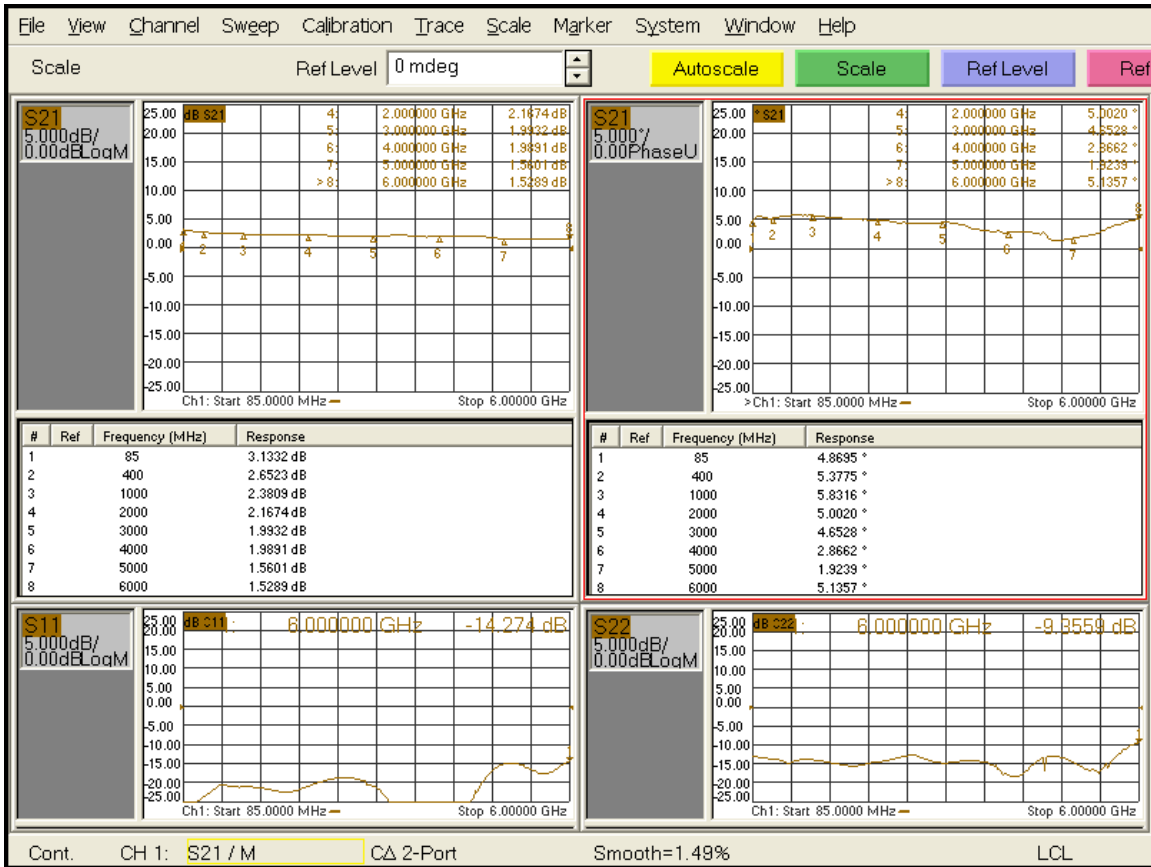


2.8° Phase, -10 dBm Input Power



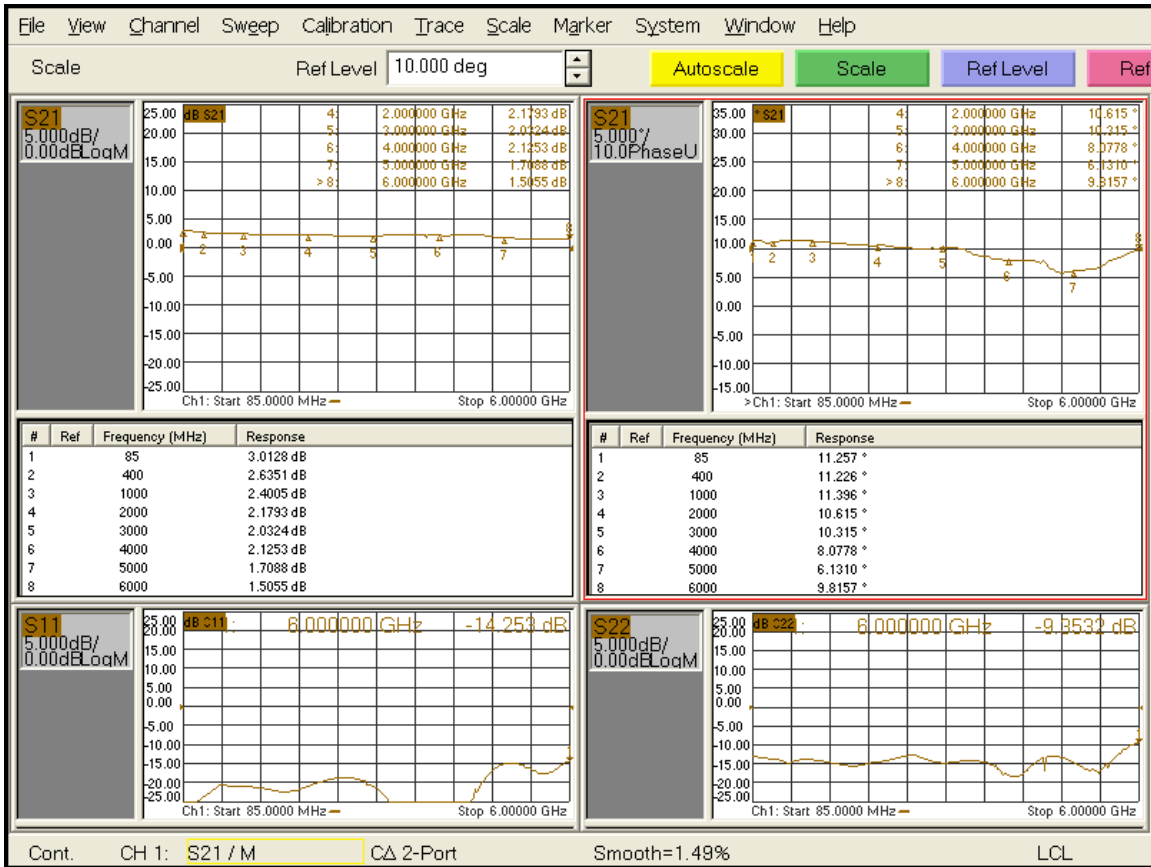


5.6° Phase, -10 dBm Input Power



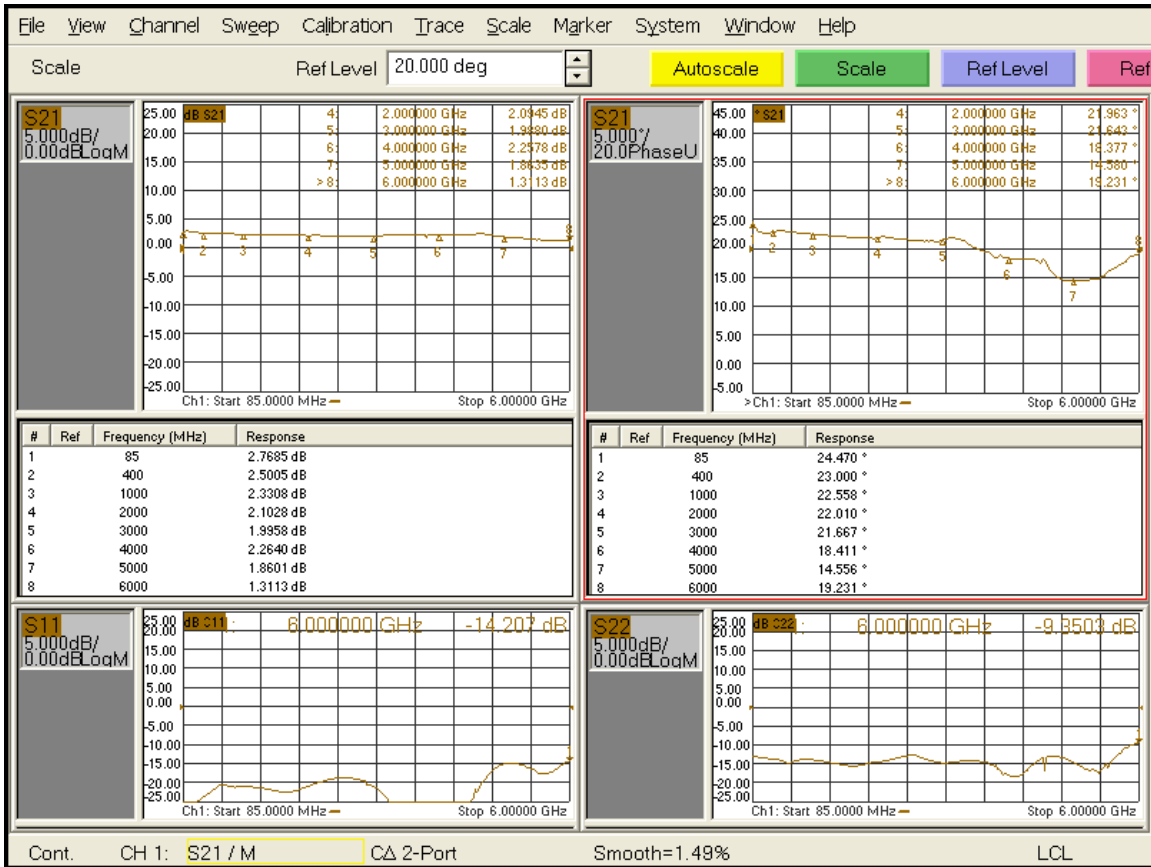


11.25° Phase, -10 dBm Input Power





22.5° Phase, -10 dBm Input Power



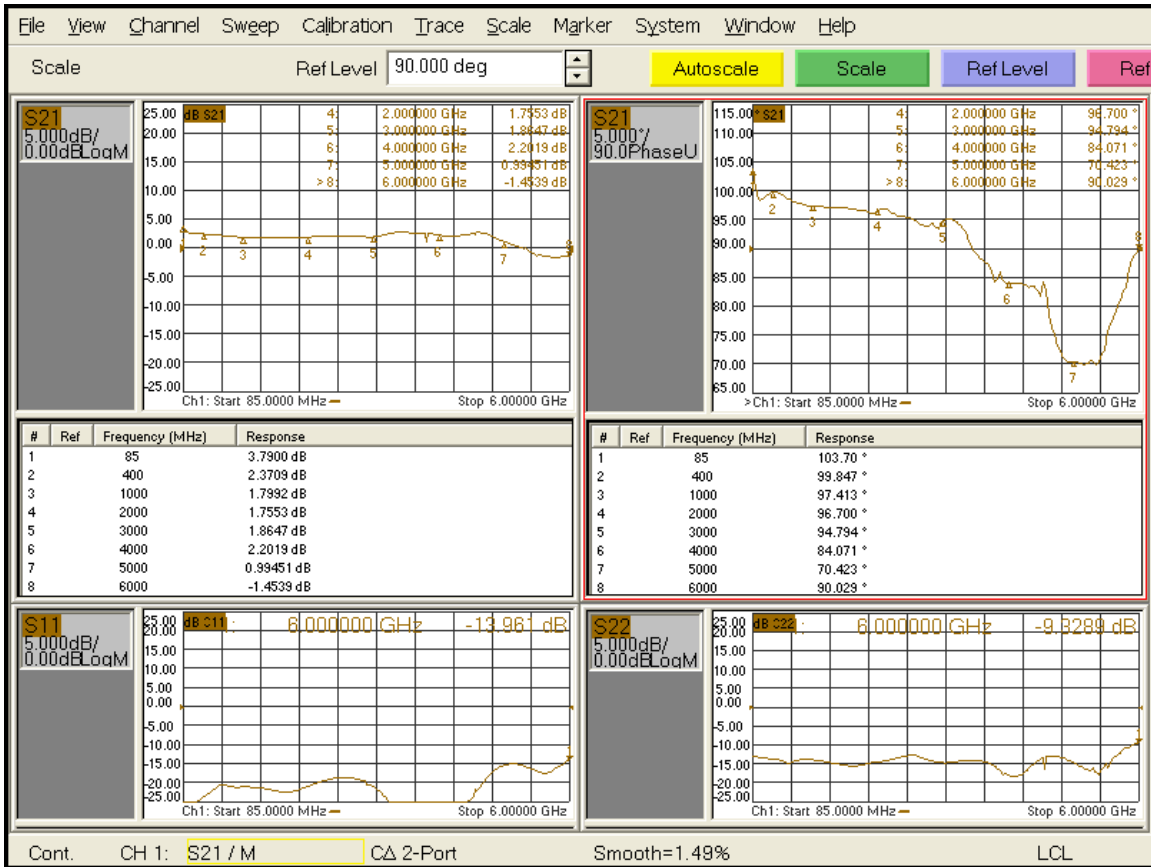


45° Phase, -10 dBm Input Power



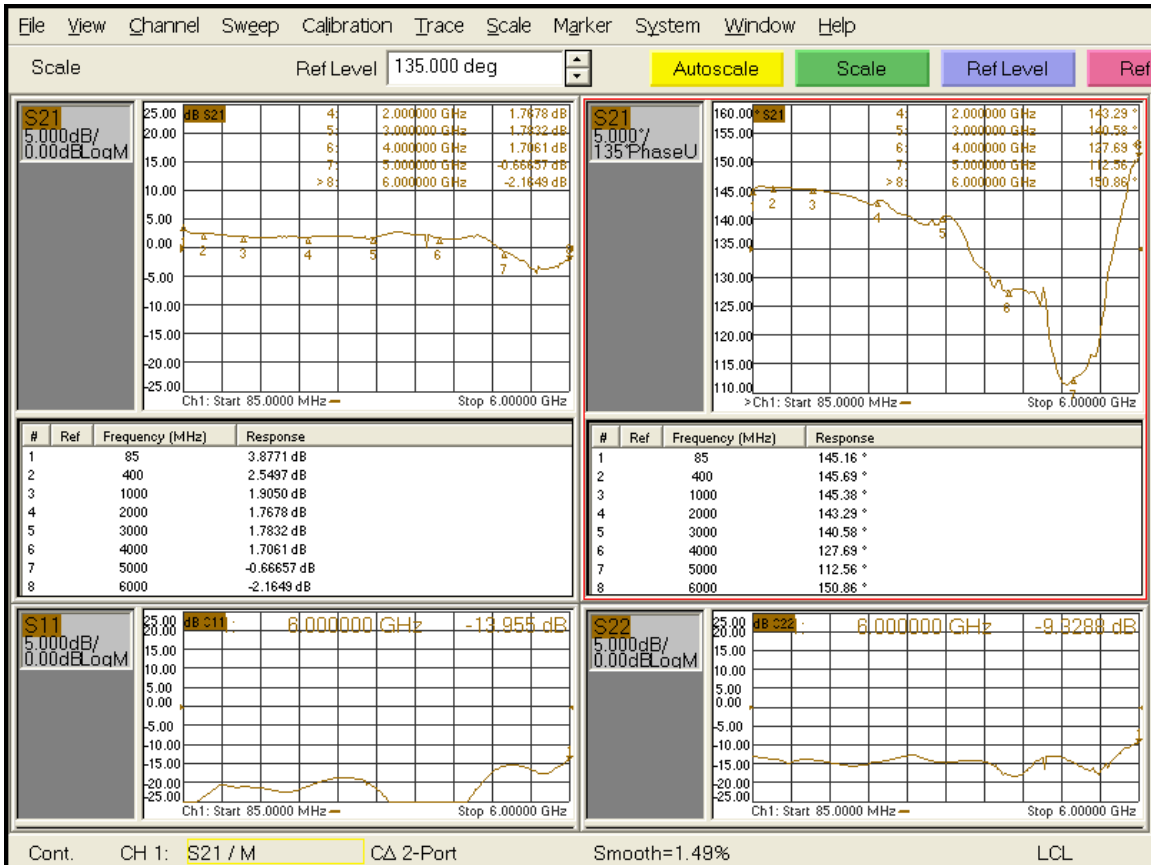


90° Phase, -10 dBm Input Power



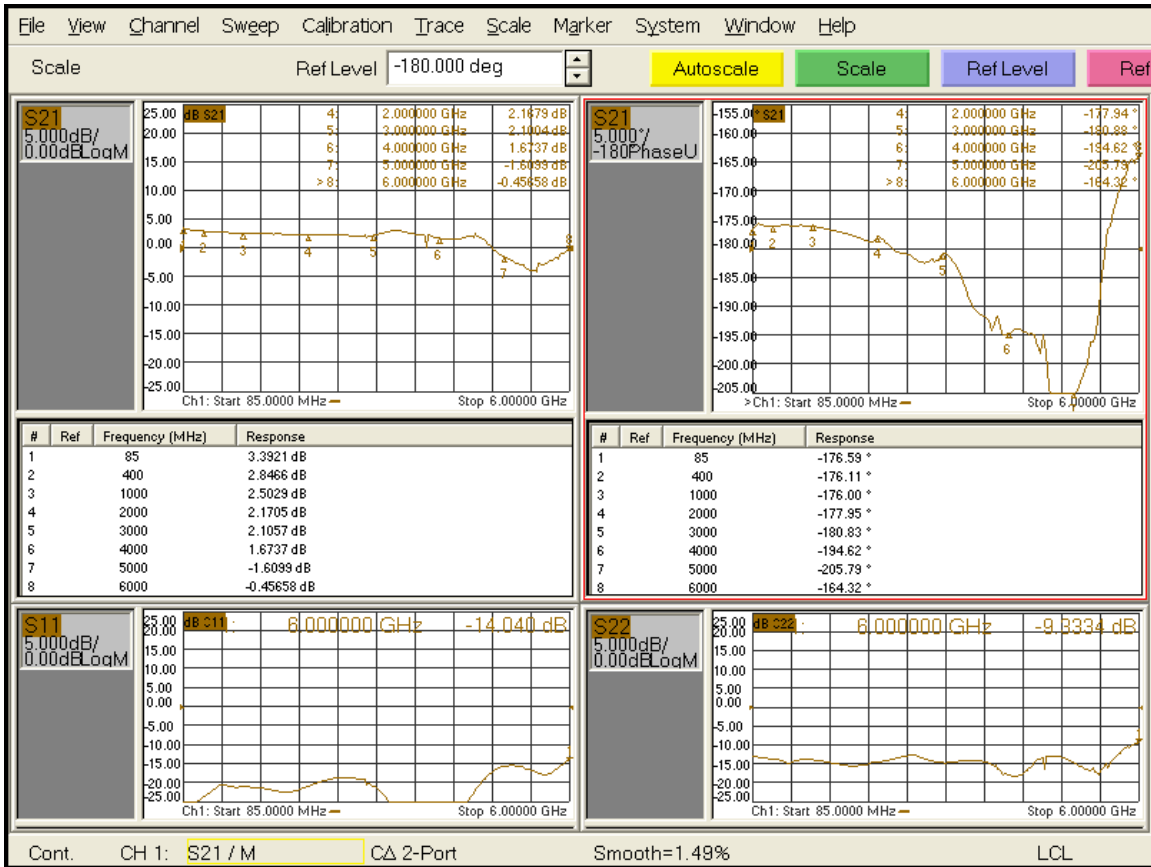


135° Phase, -10 dBm Input Power



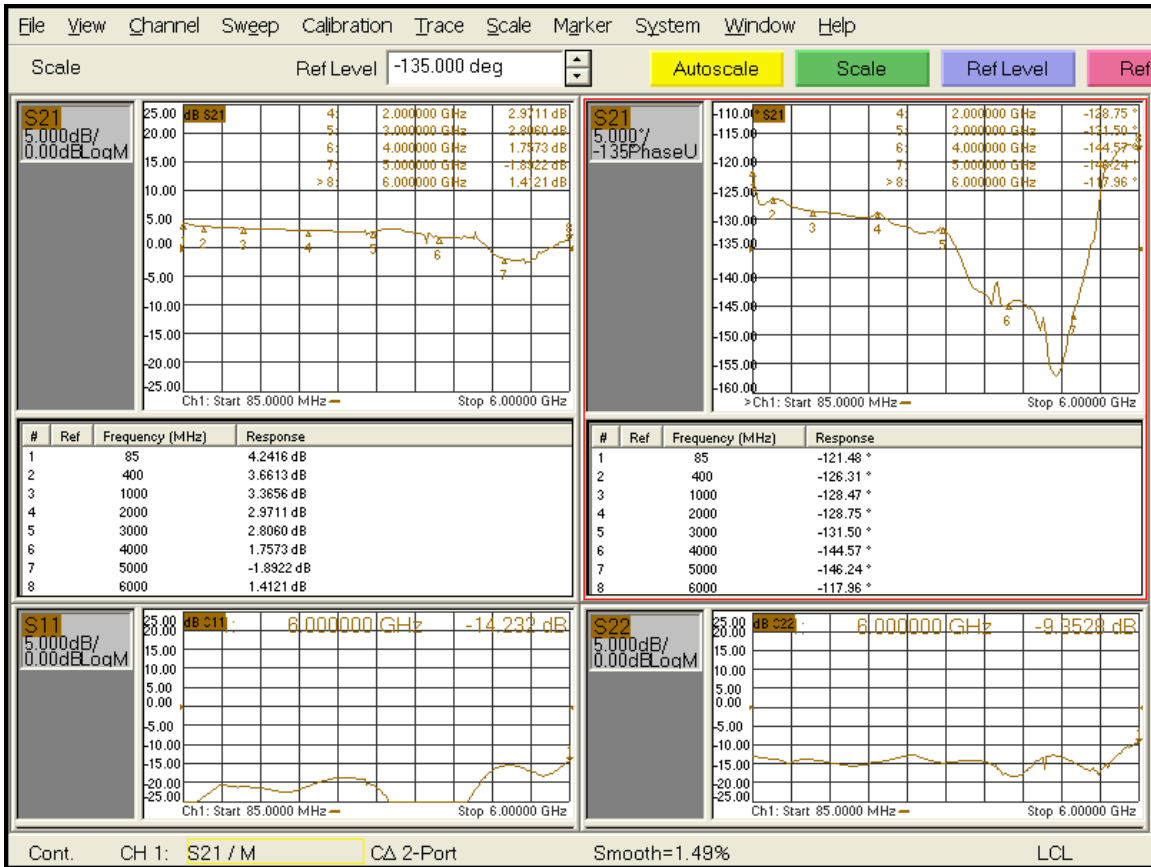


180° Phase, -10 dBm Input Power



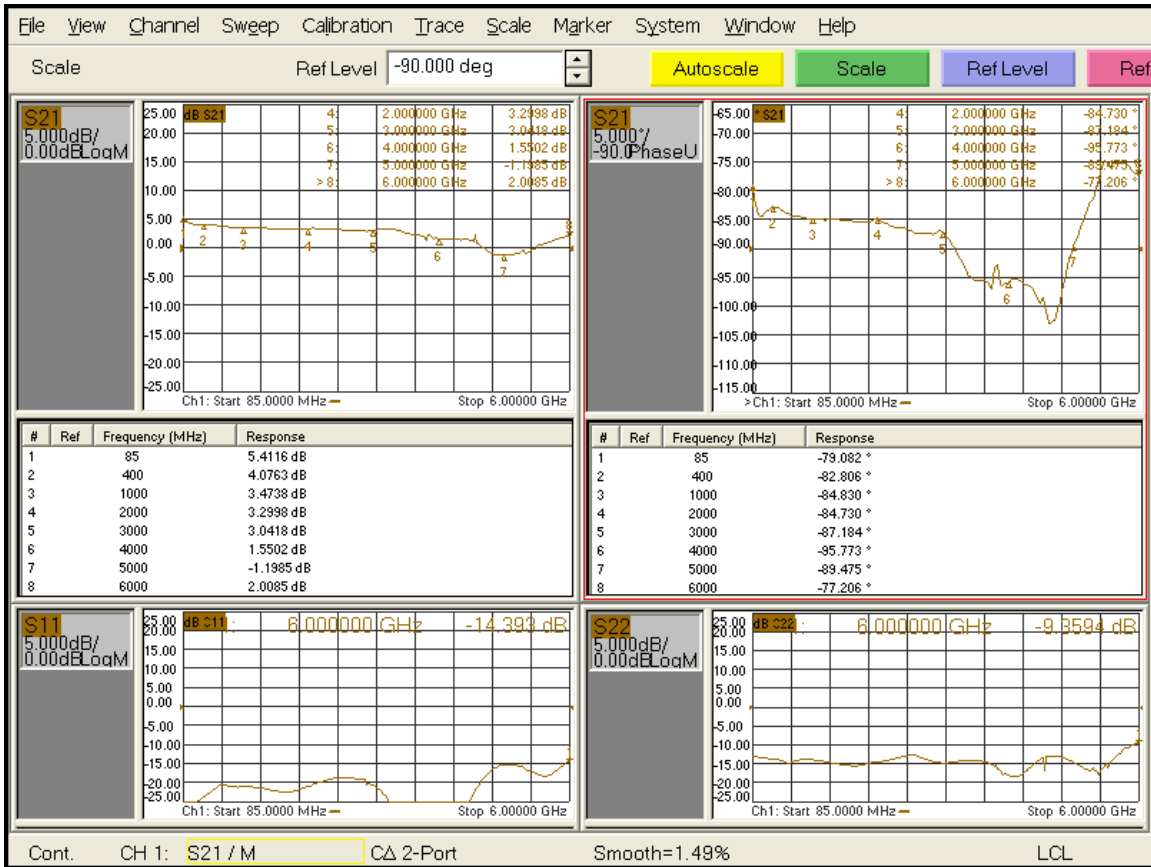


225° Phase, -10 dBm Input Power



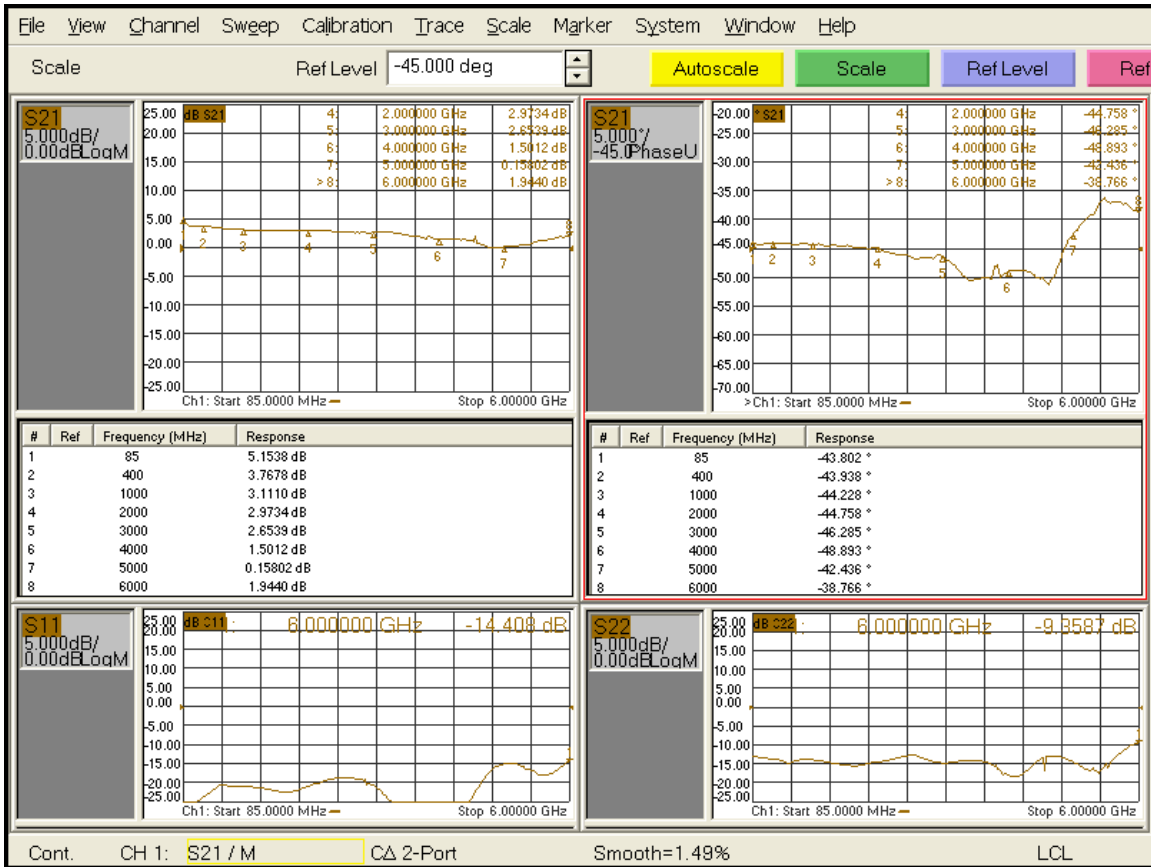


270° Phase, -10 dBm Input Power



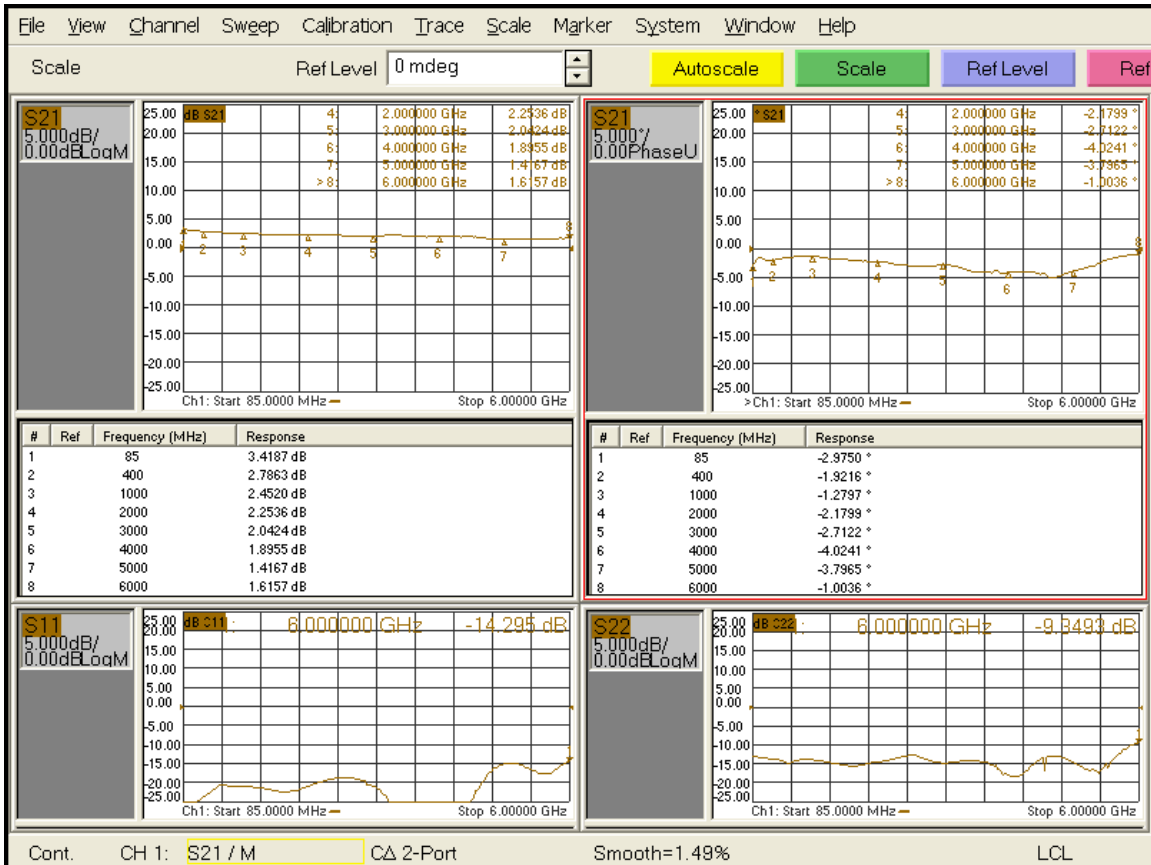


315° Phase, -10 dBm Input Power



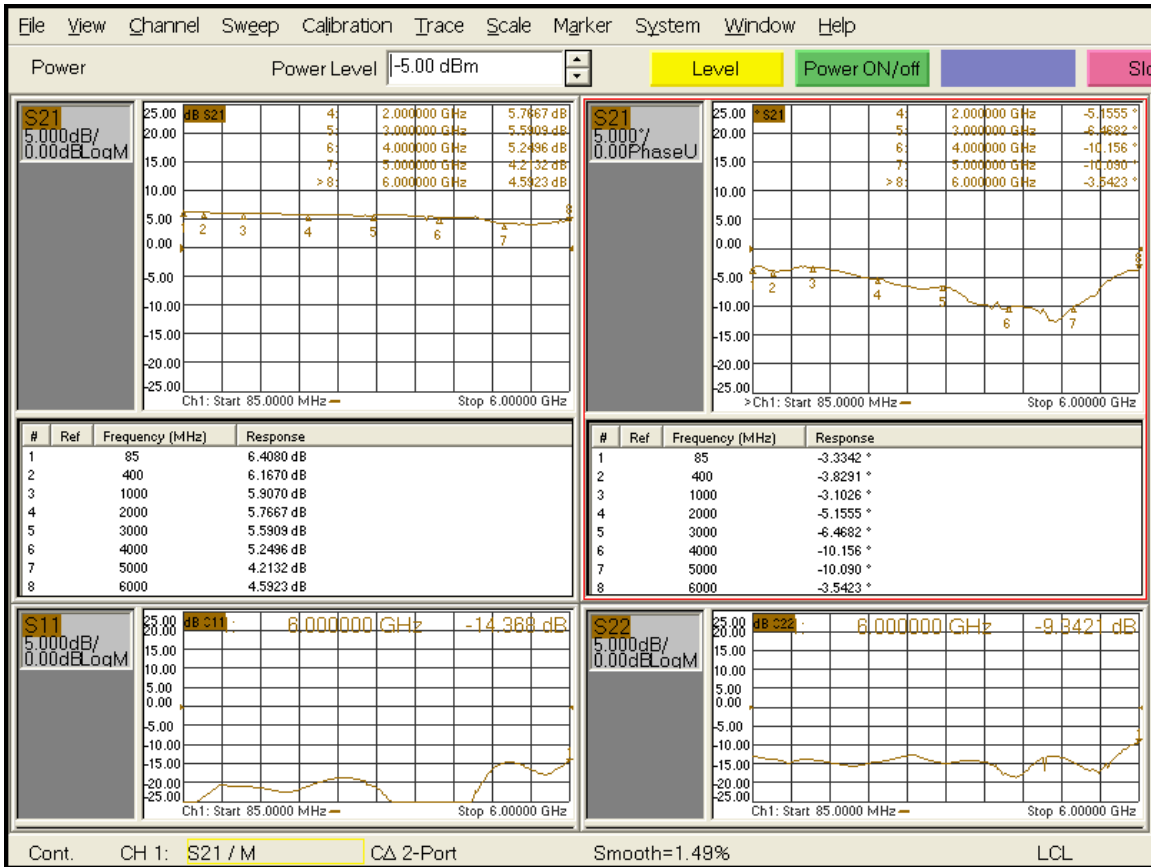


358.6° Phase, -10 dBm Input Power



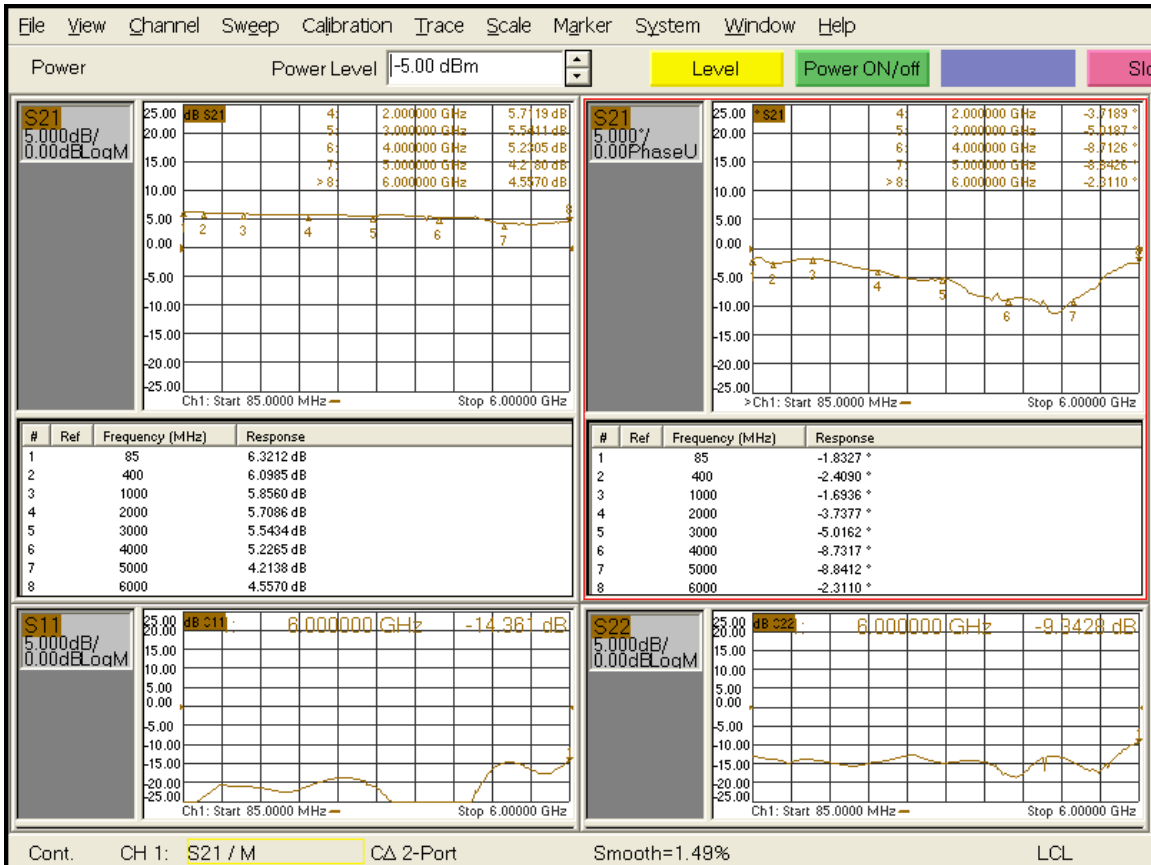


0° Phase, -5 dBm Input Power



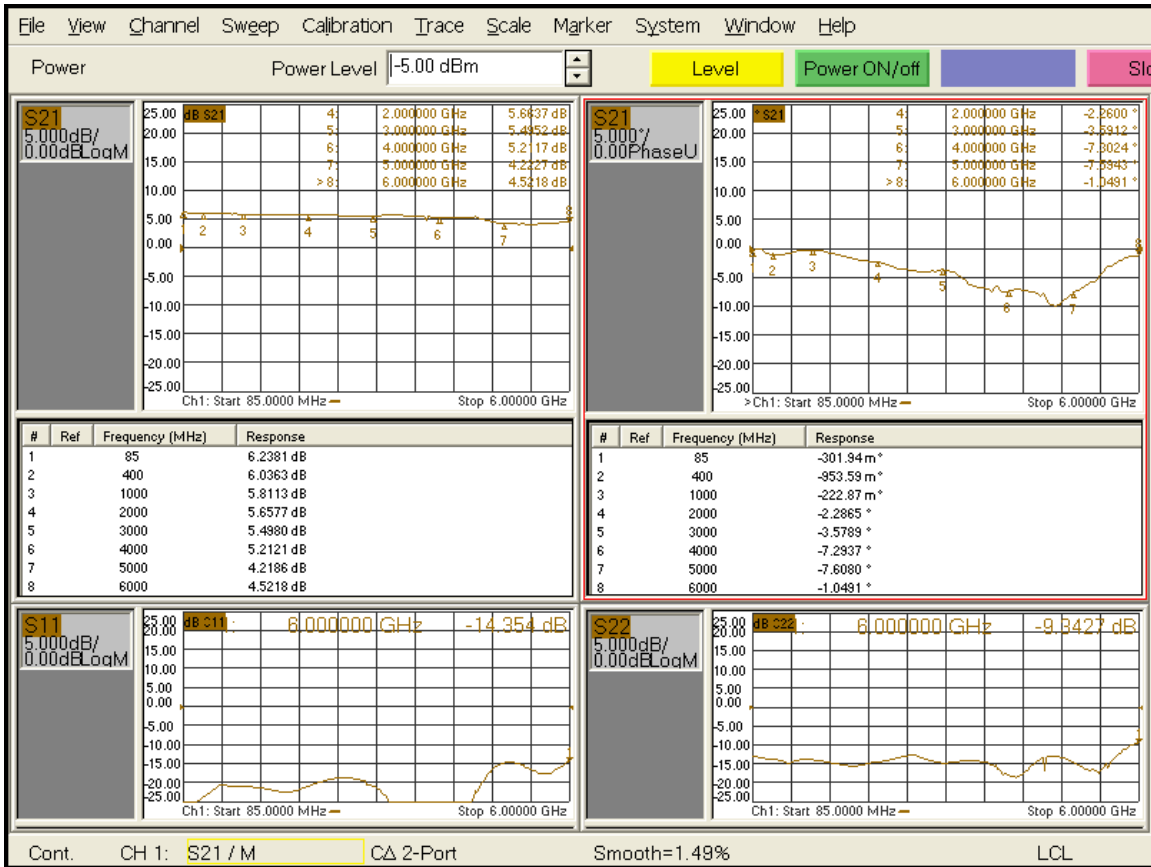


1.4° Phase, -5 dBm Input Power



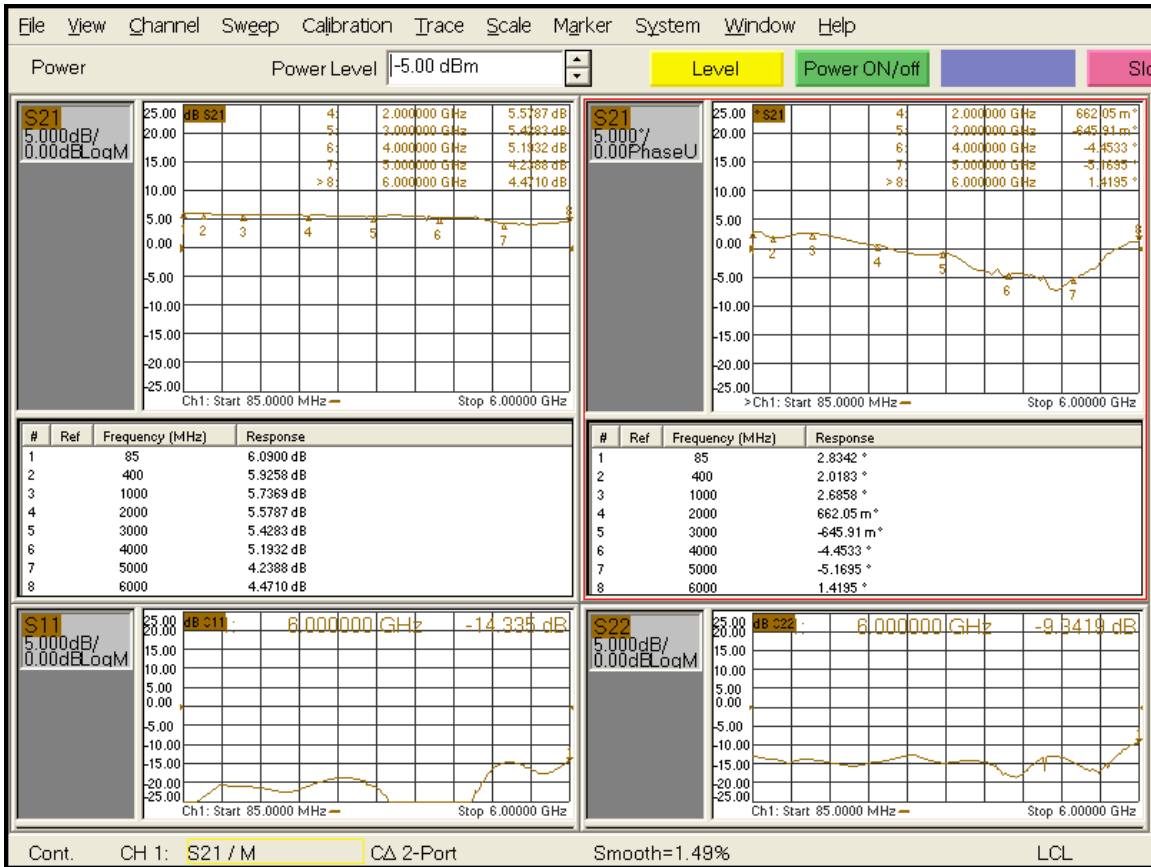


2.8° Phase, -5 dBm Input Power



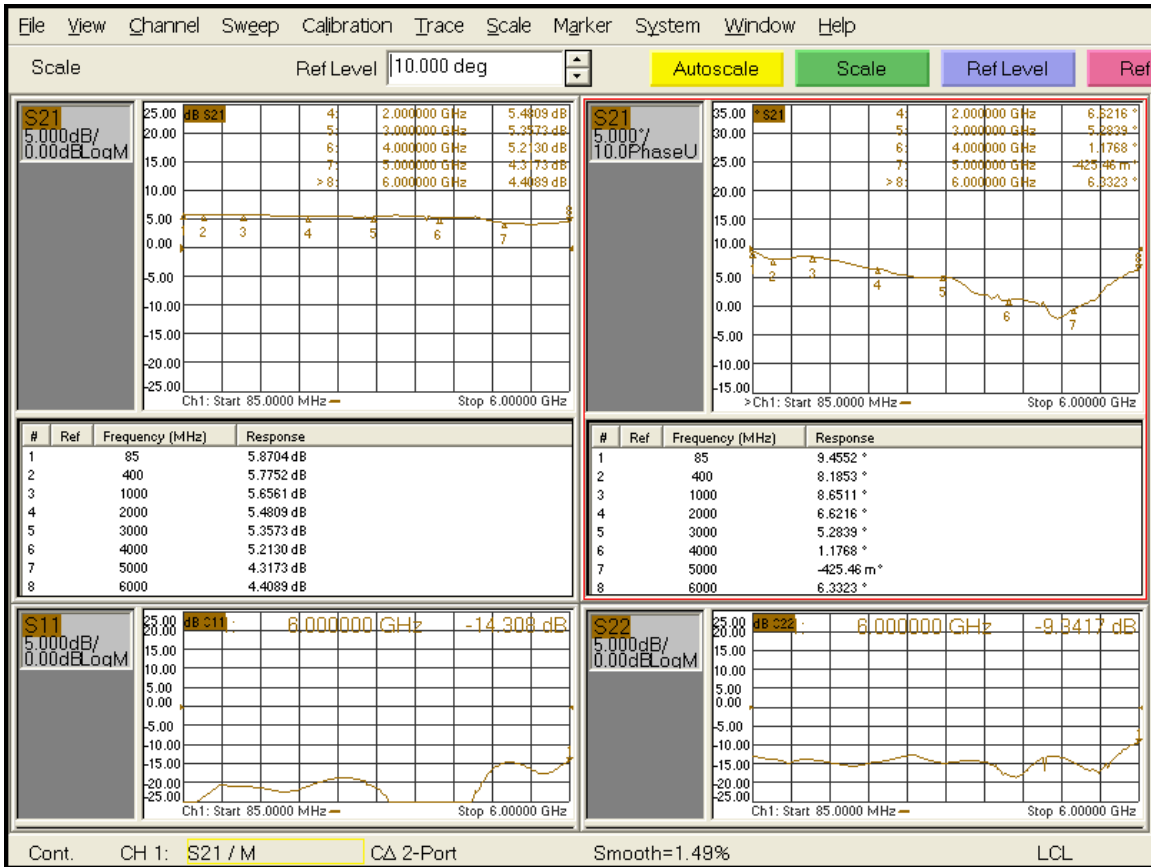


5.6° Phase, -5 dBm Input Power



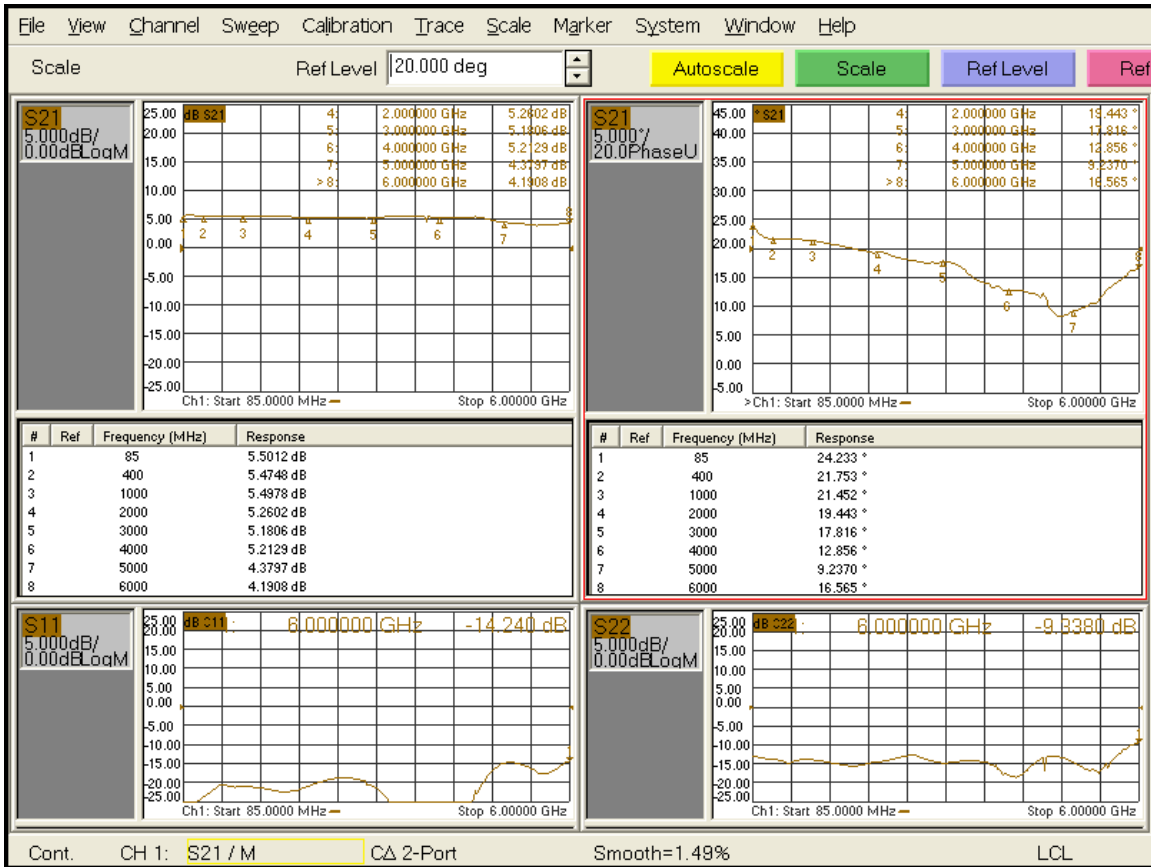


11.25° Phase, -5 dBm Input Power



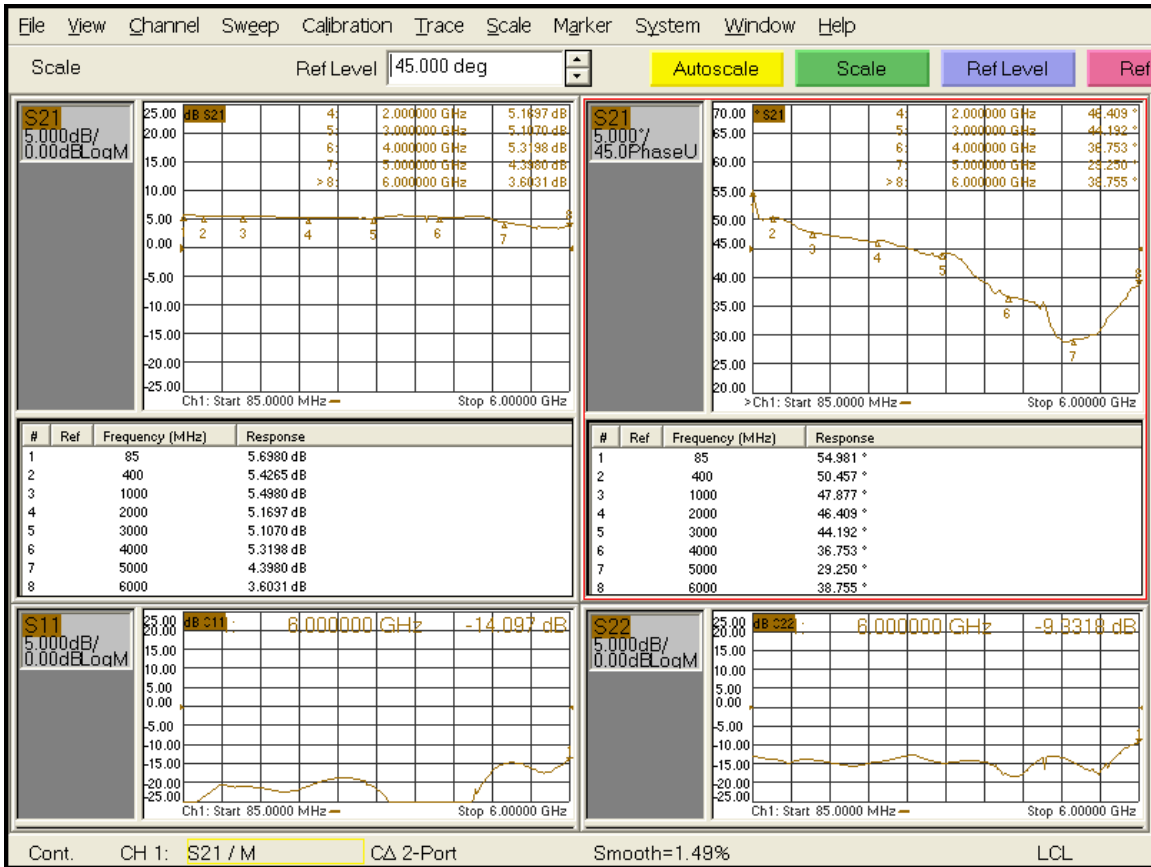


22.5° Phase, -5 dBm Input Power



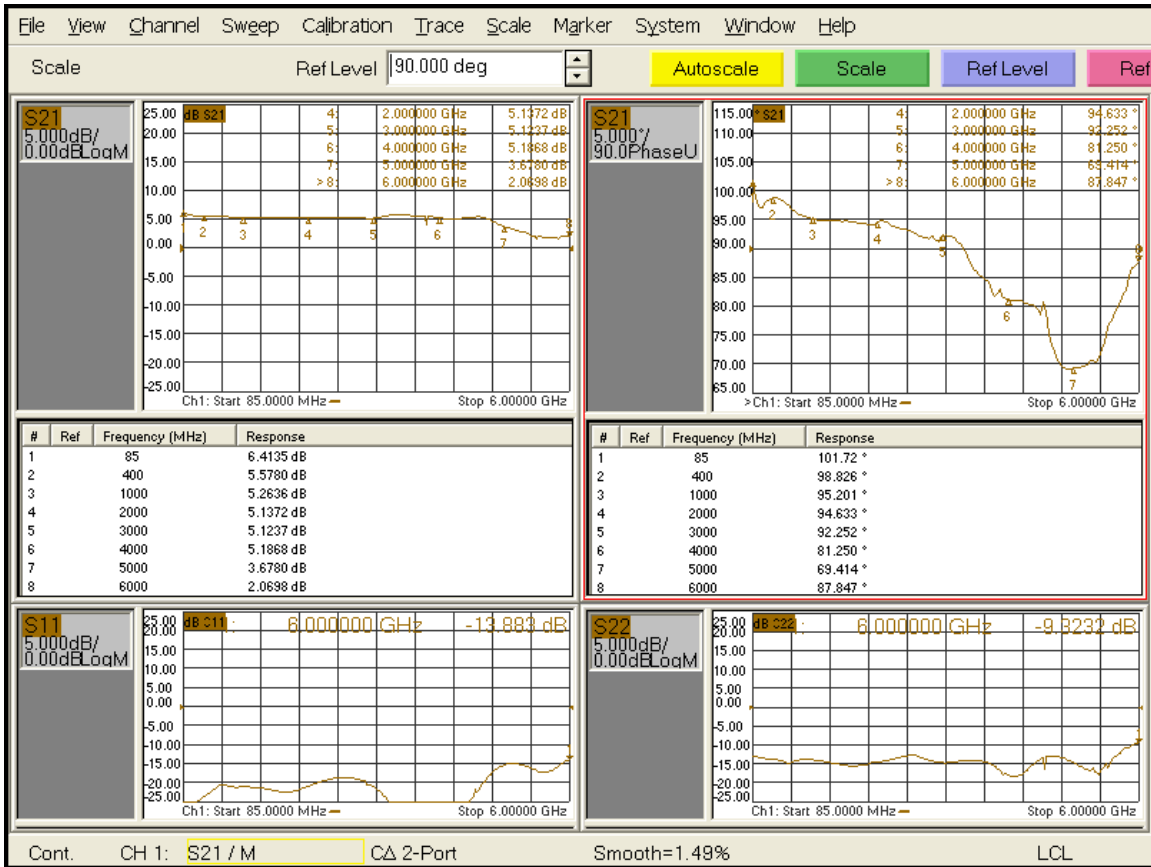


45° Phase, -5 dBm Input Power



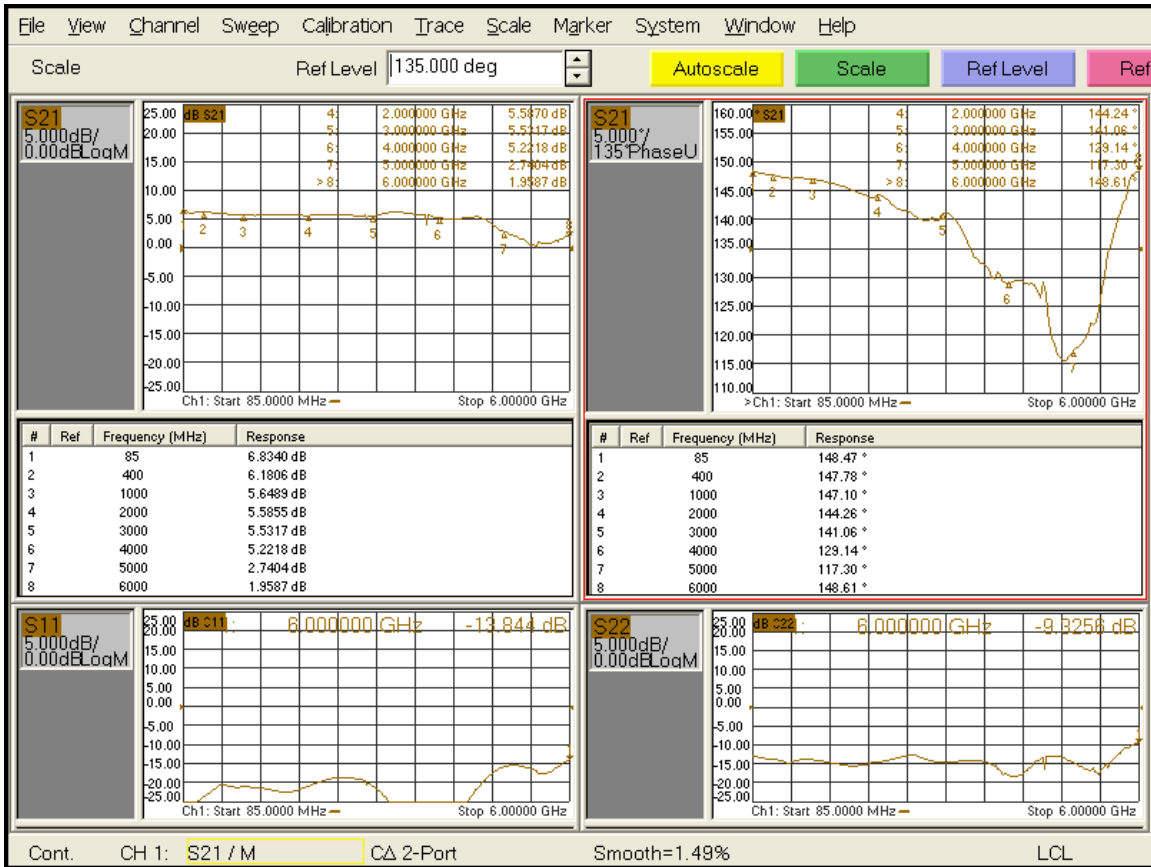


90° Phase, -5 dBm Input Power



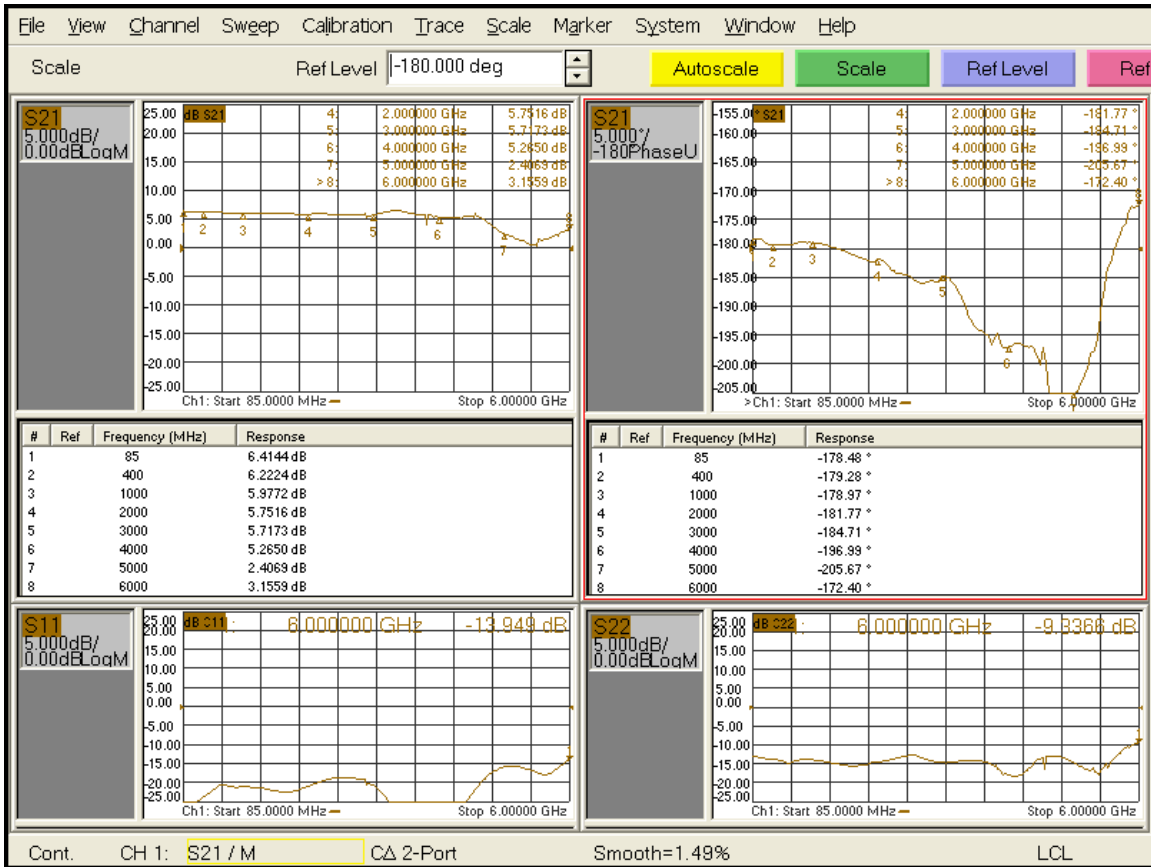


135° Phase, -5 dBm Input Power



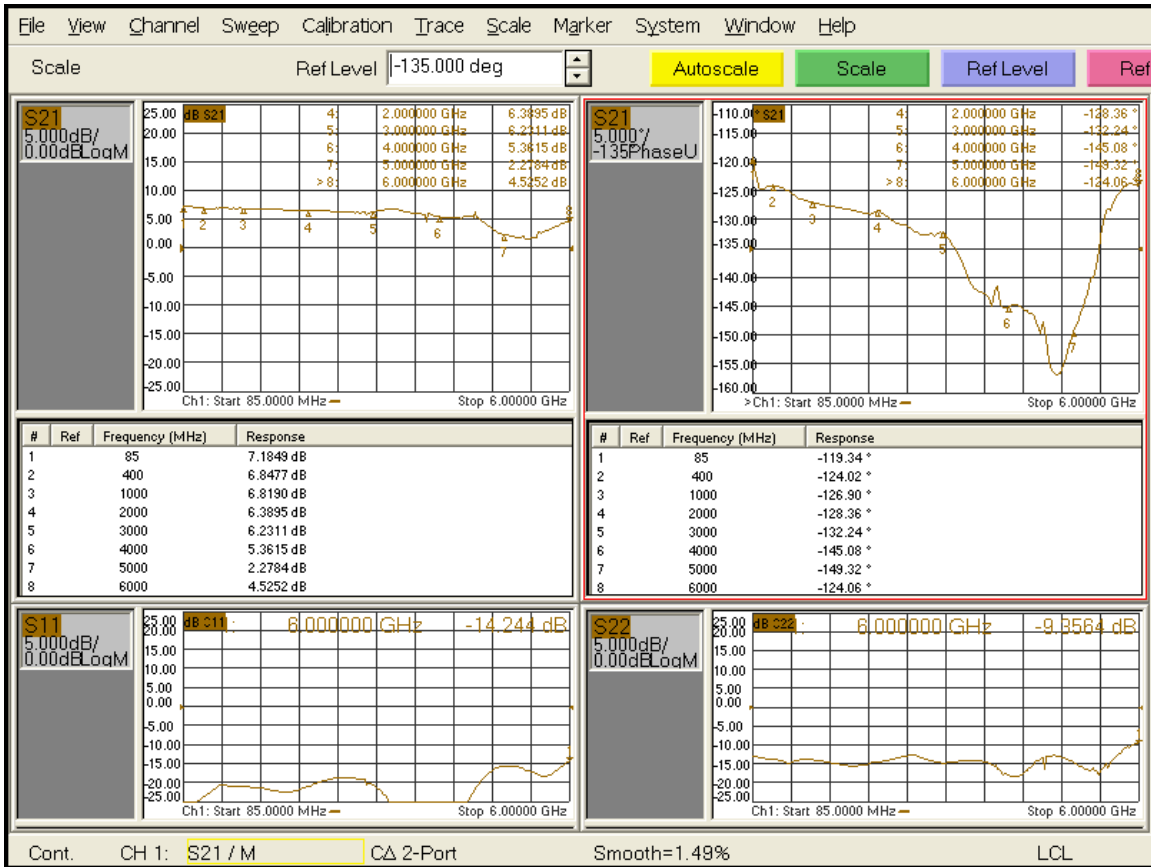


180° Phase, -5 dBm Input Power



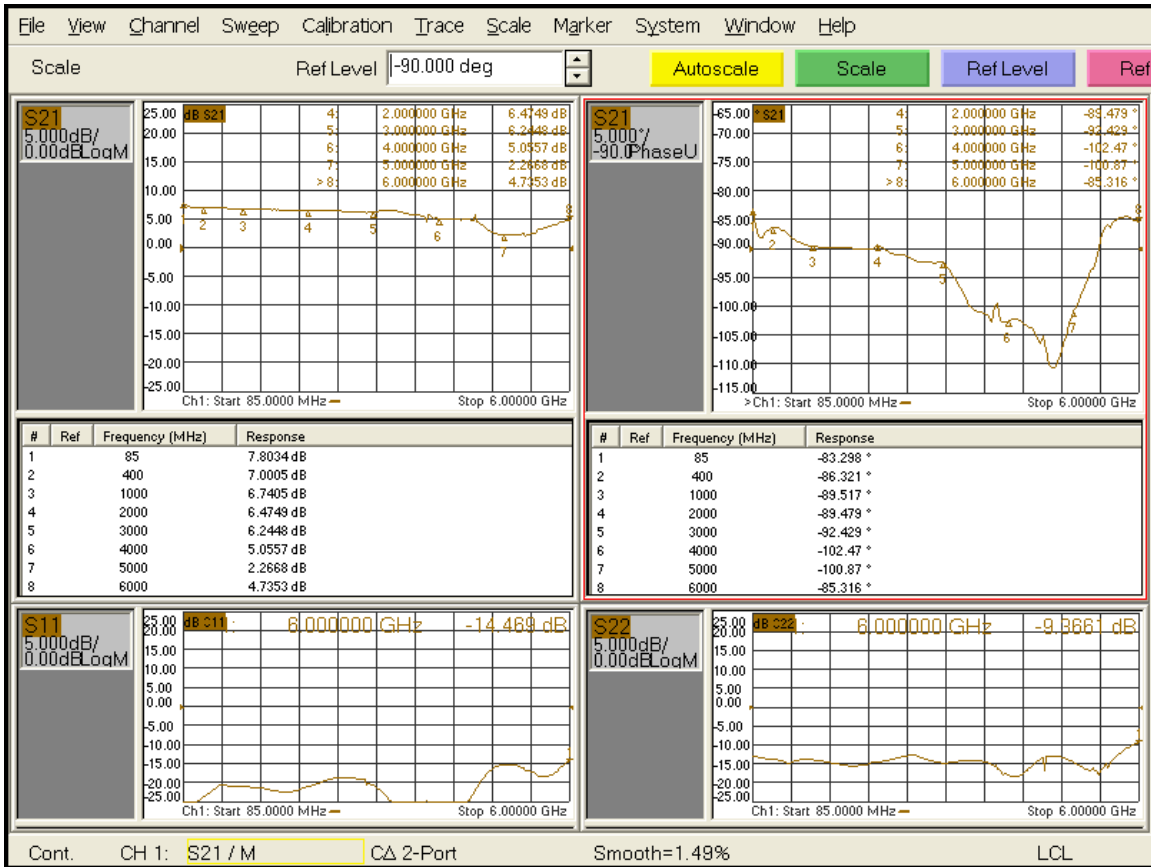


225° Phase, -5 dBm Input Power



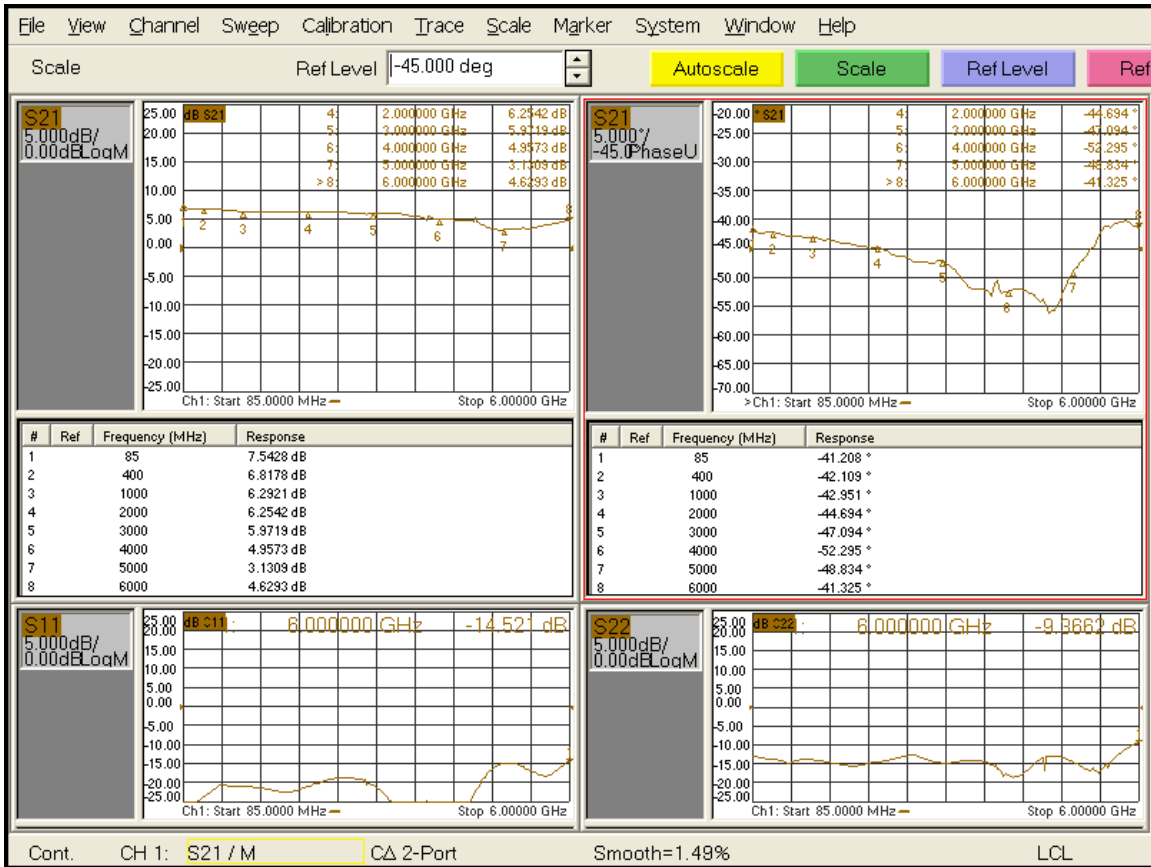


270° Phase, -5 dBm Input Power



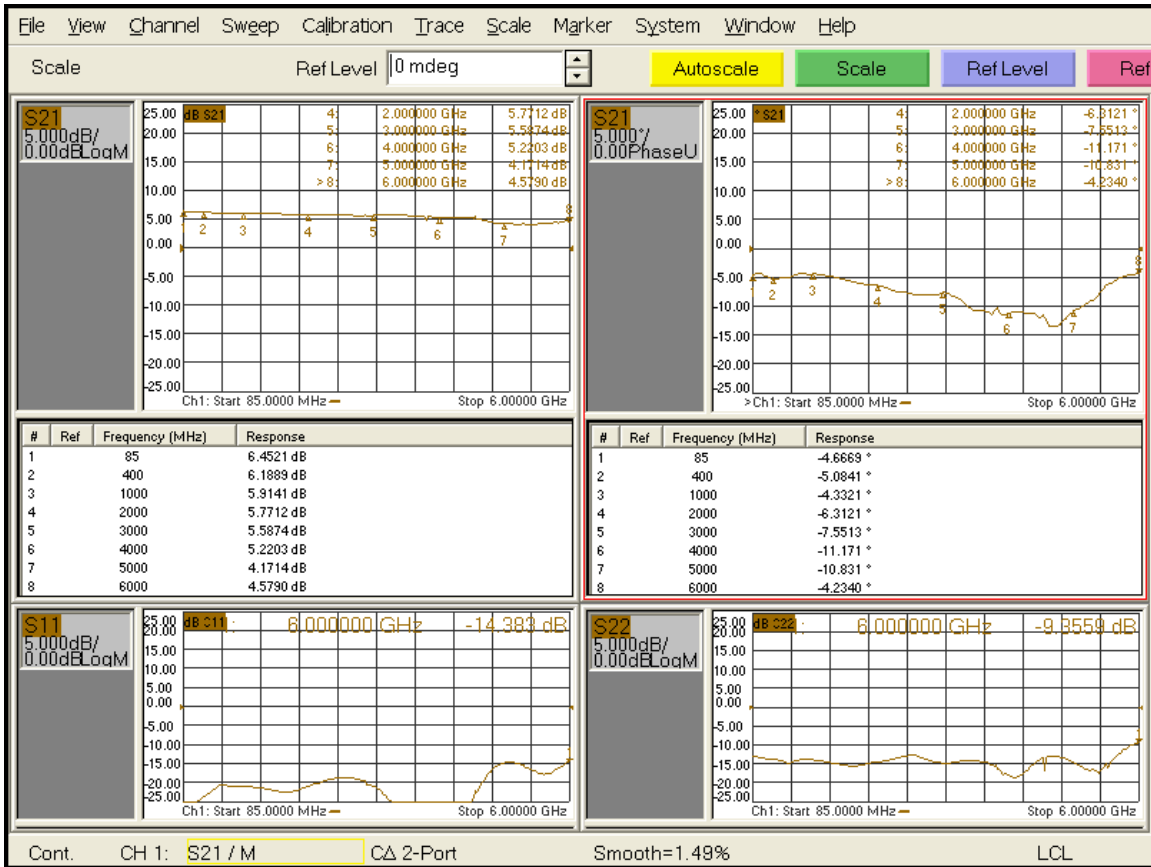


315° Phase, -5 dBm Input Power



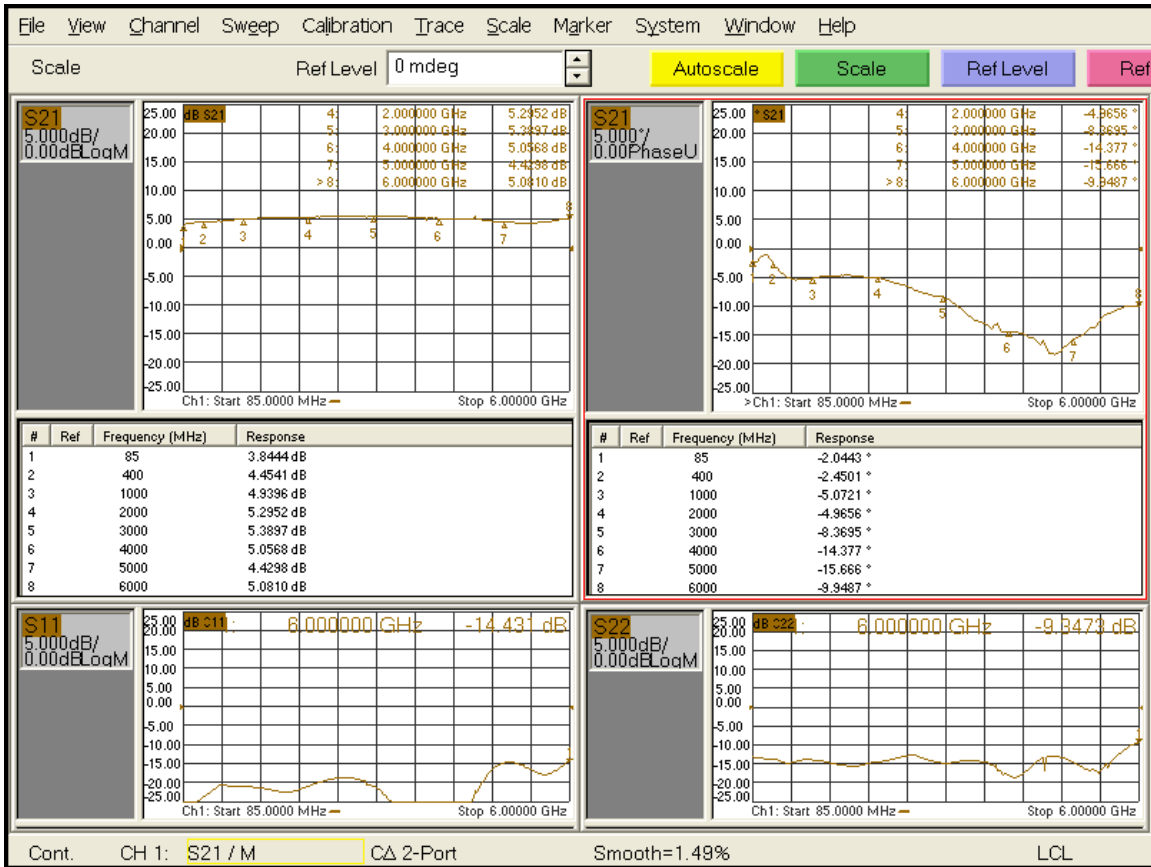


358.6° Phase, -5 dBm Input Power



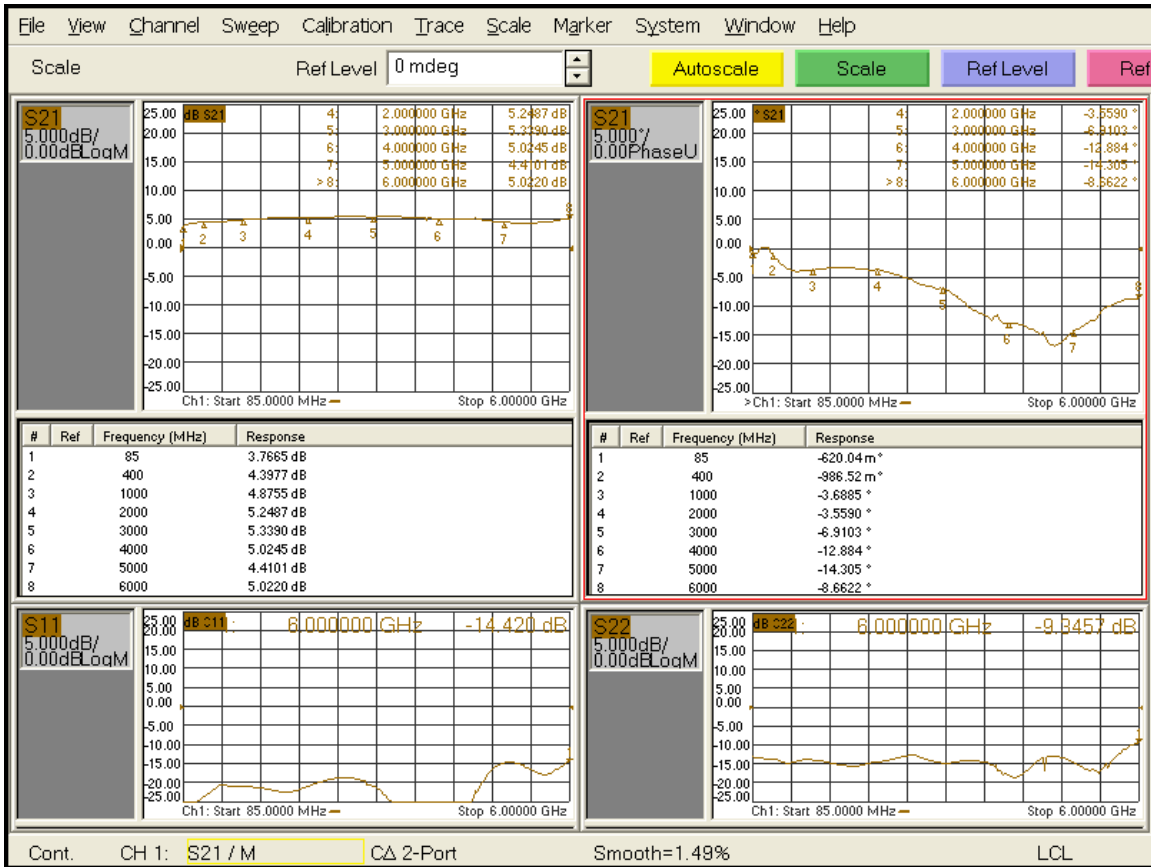


0° Phase, 0 dBm Input Power



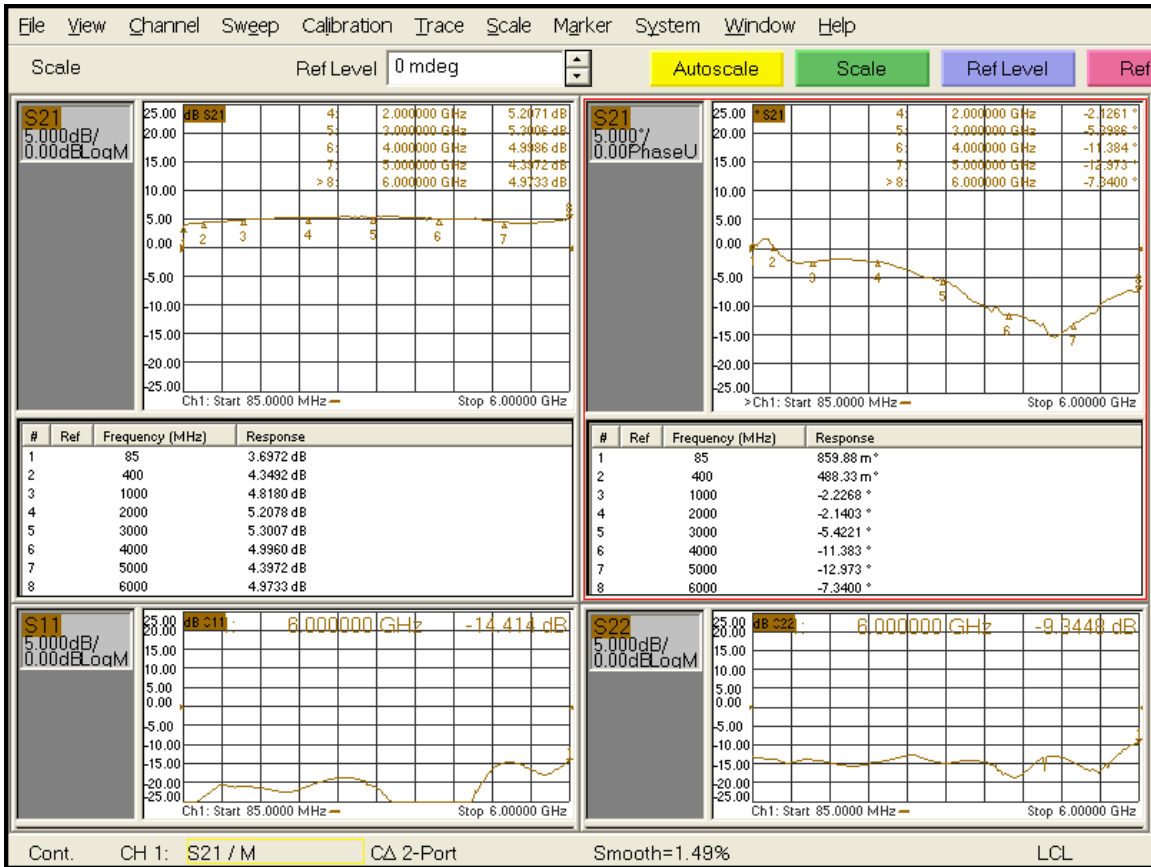


1.4° Phase, 0 dBm Input Power



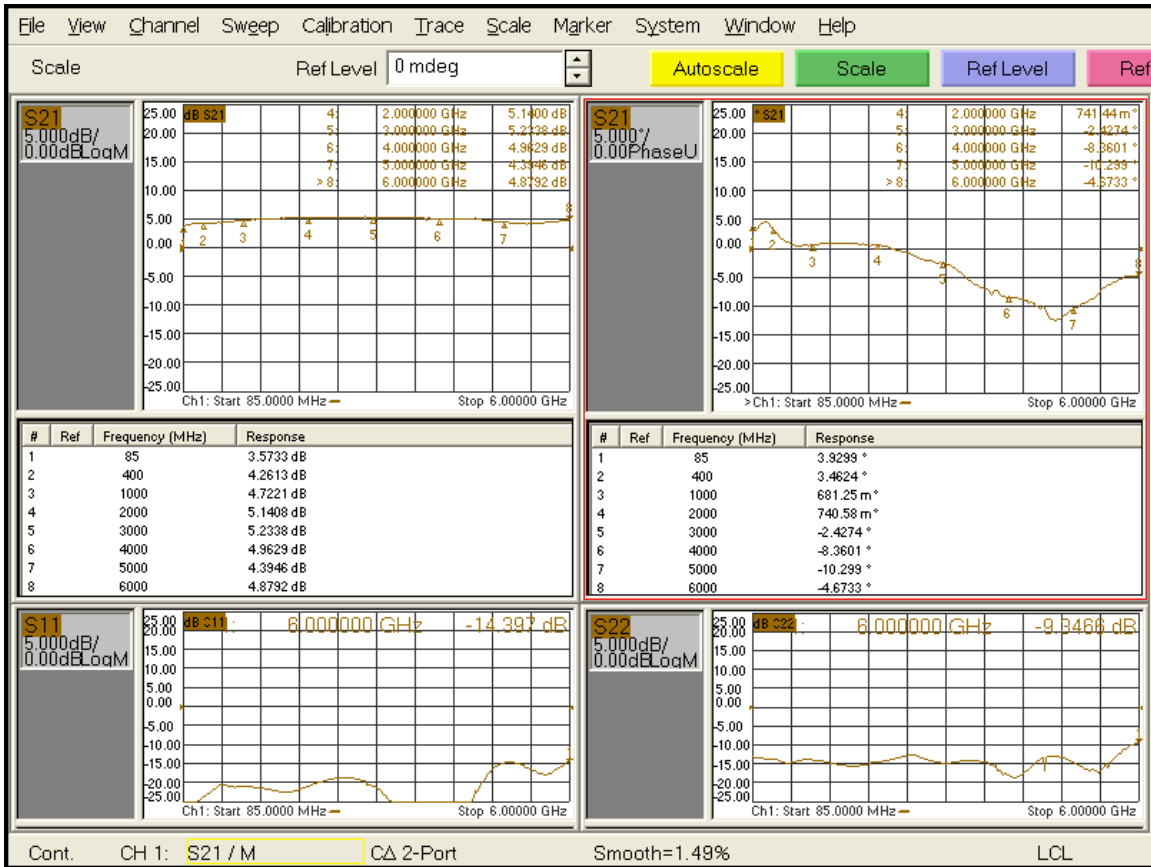


2.8° Phase, 0 dBm Input Power



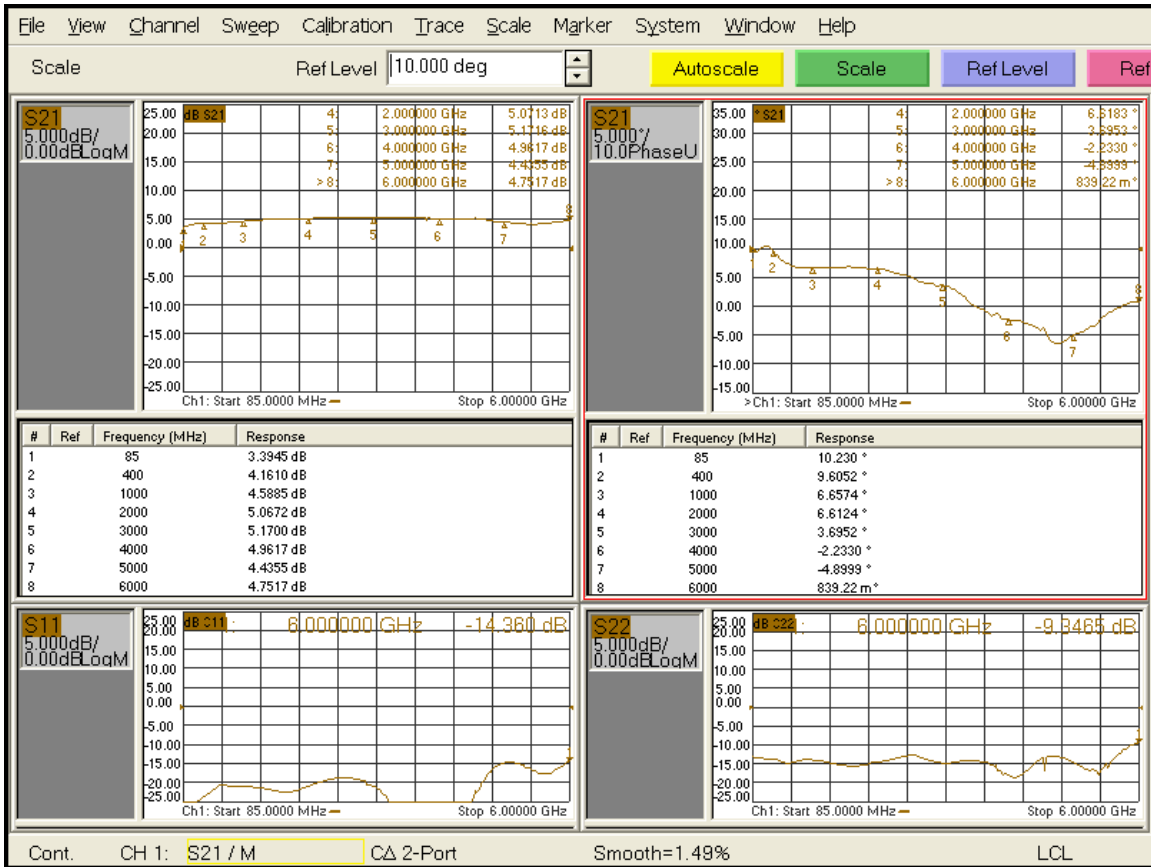


5.6° Phase, 0 dBm Input Power



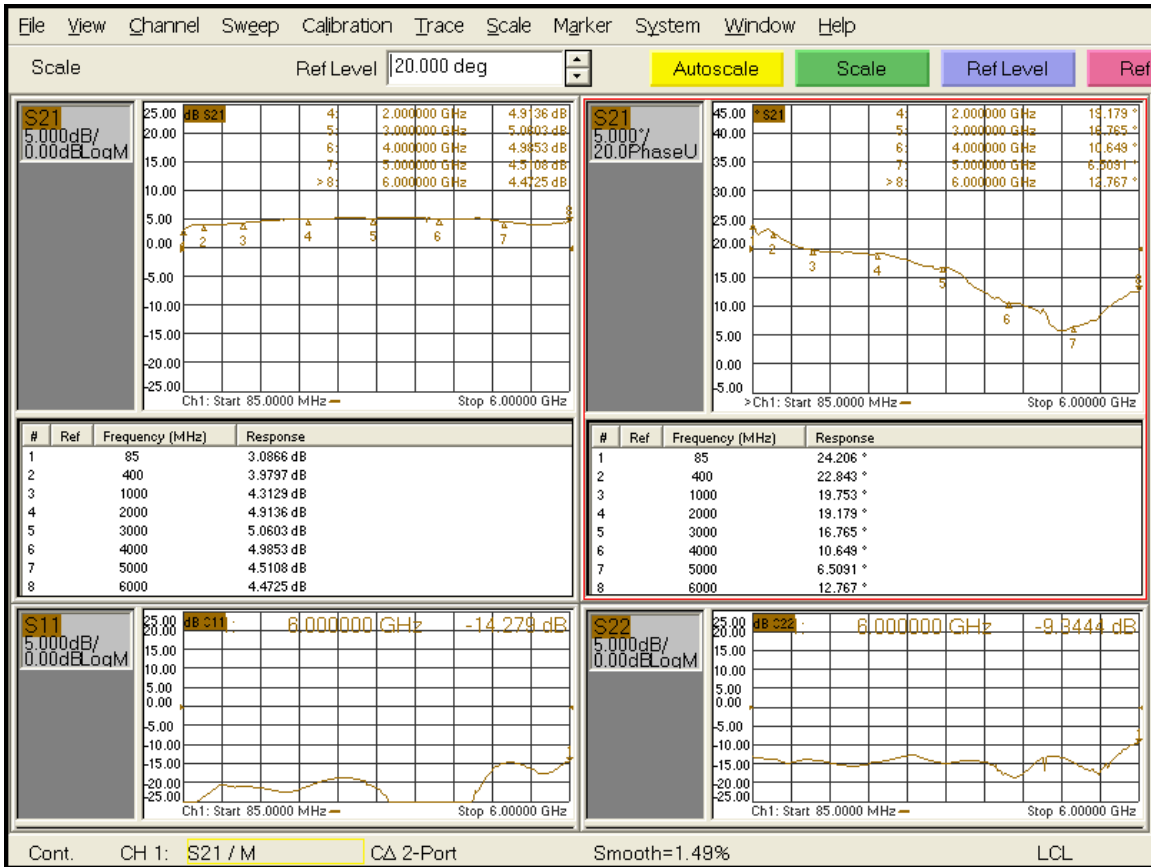


11.25° Phase, 0 dBm Input Power



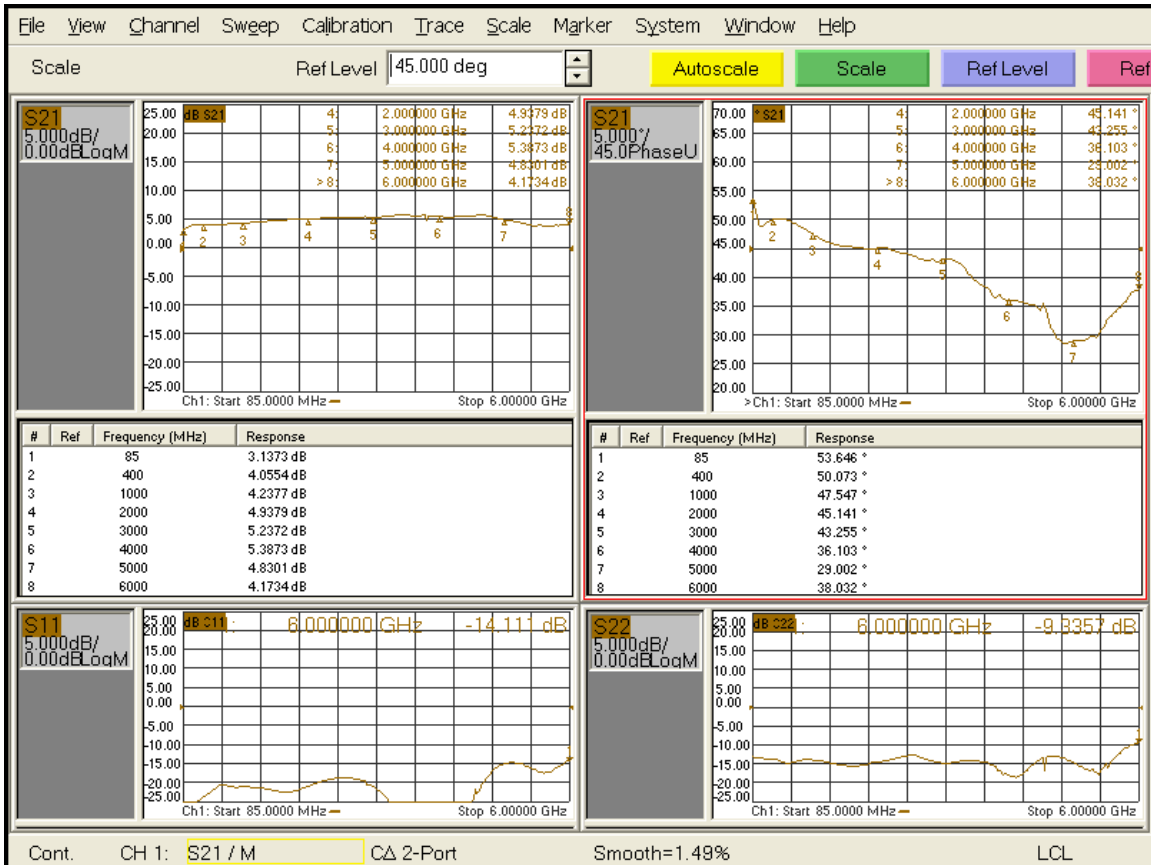


22.5° Phase, 0 dBm Input Power



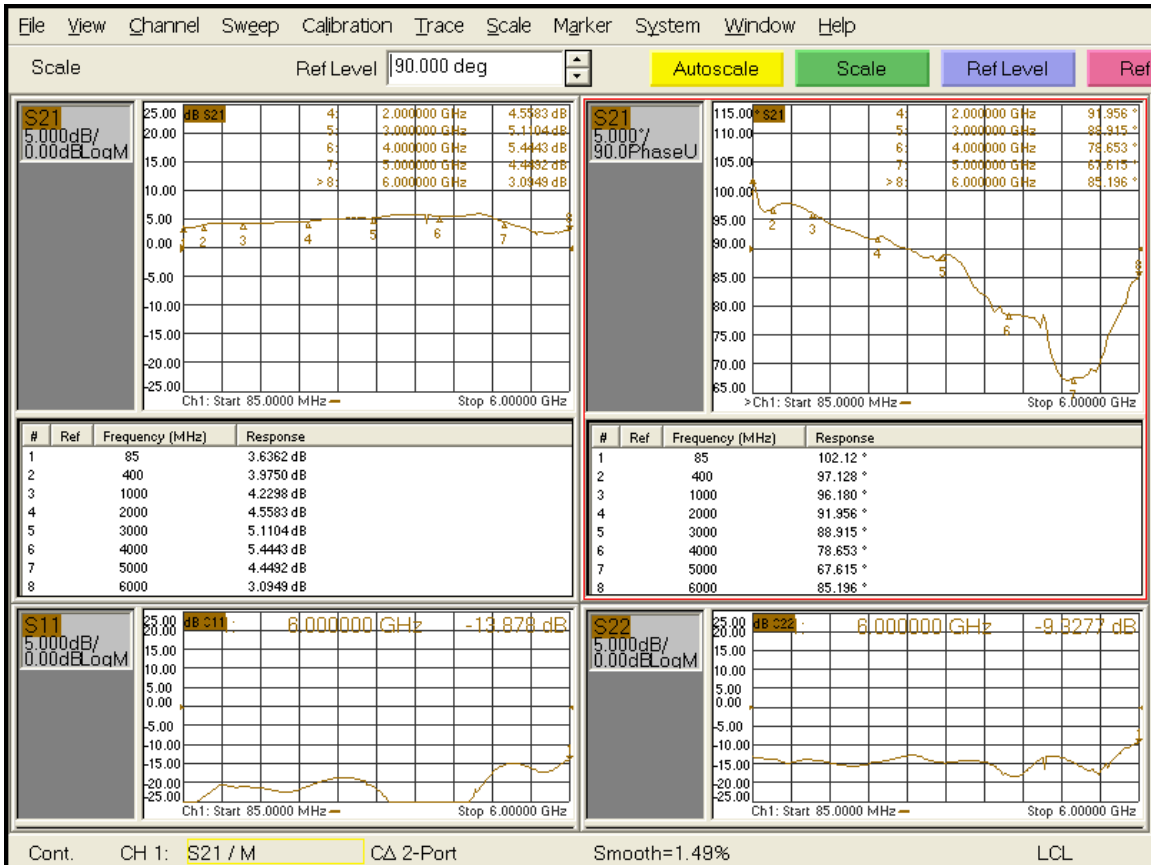


45° Phase, 0 dBm Input Power



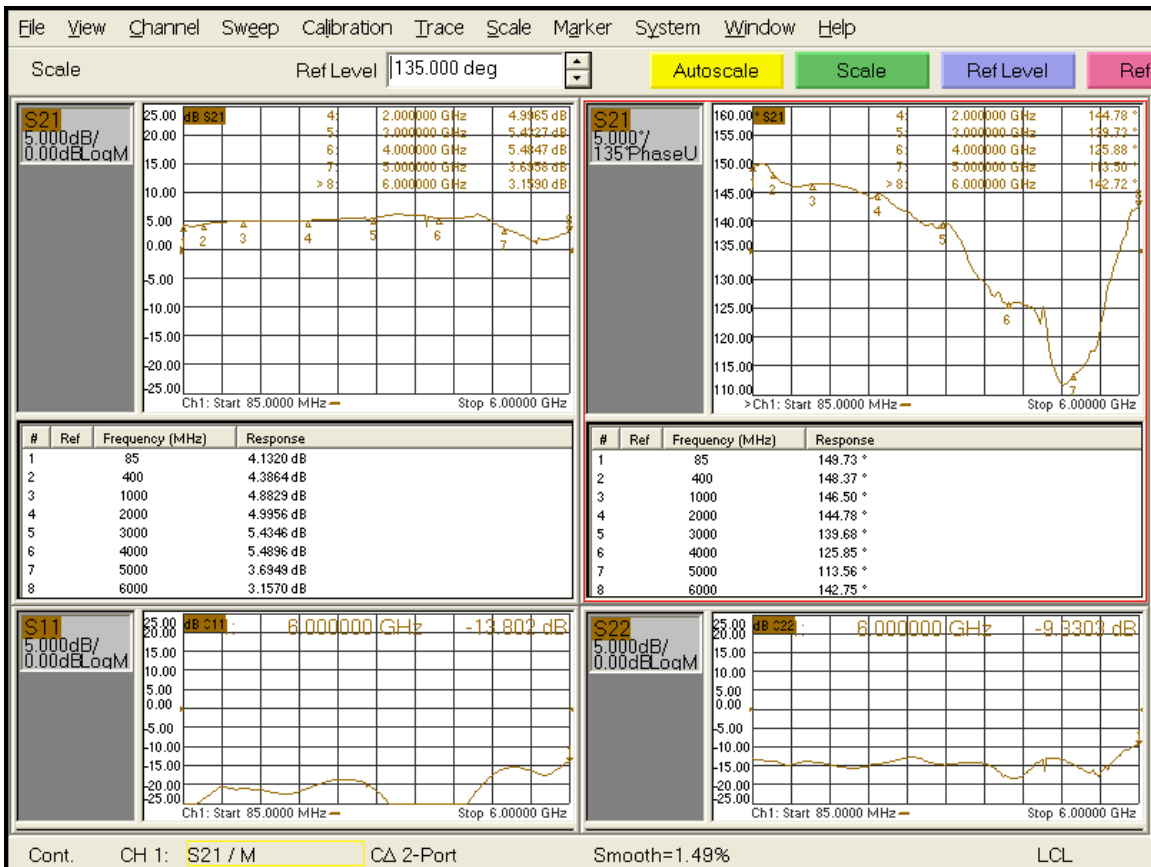


90° Phase, 0 dBm Input Power



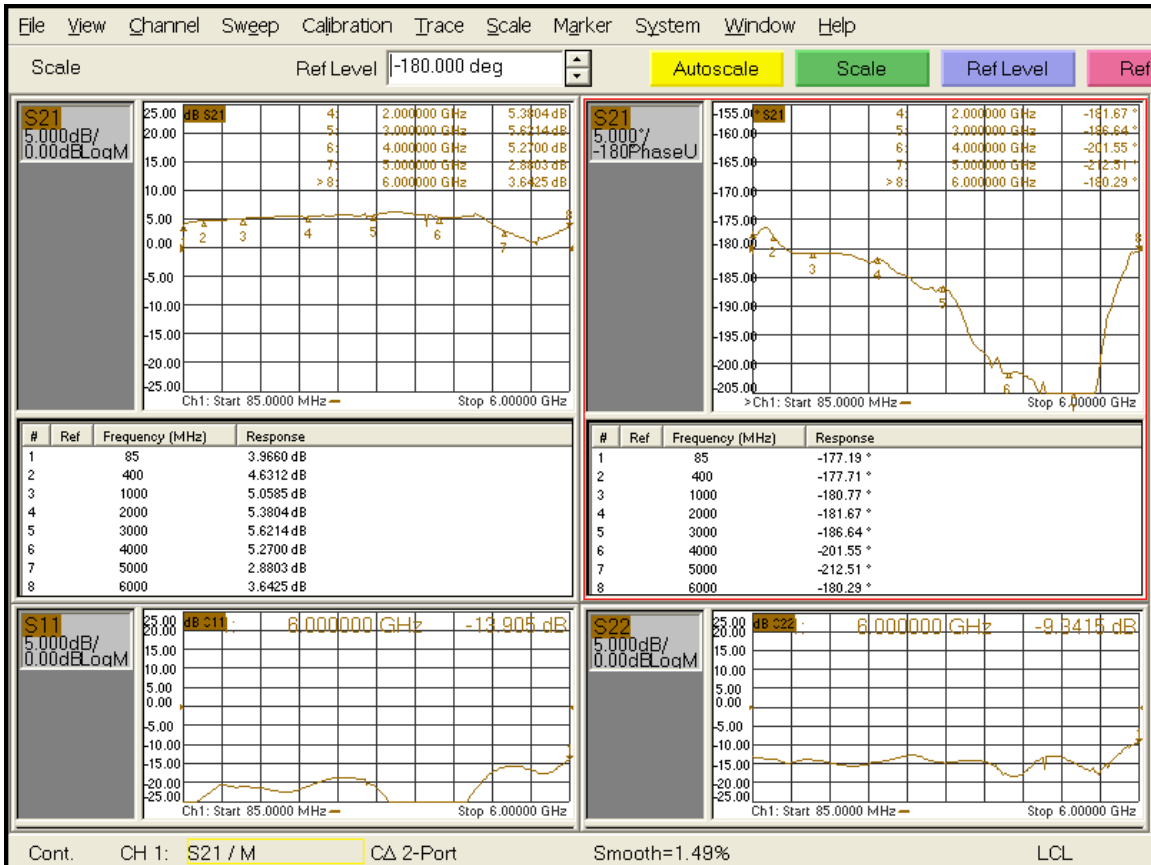


135° Phase, 0 dBm Input Power



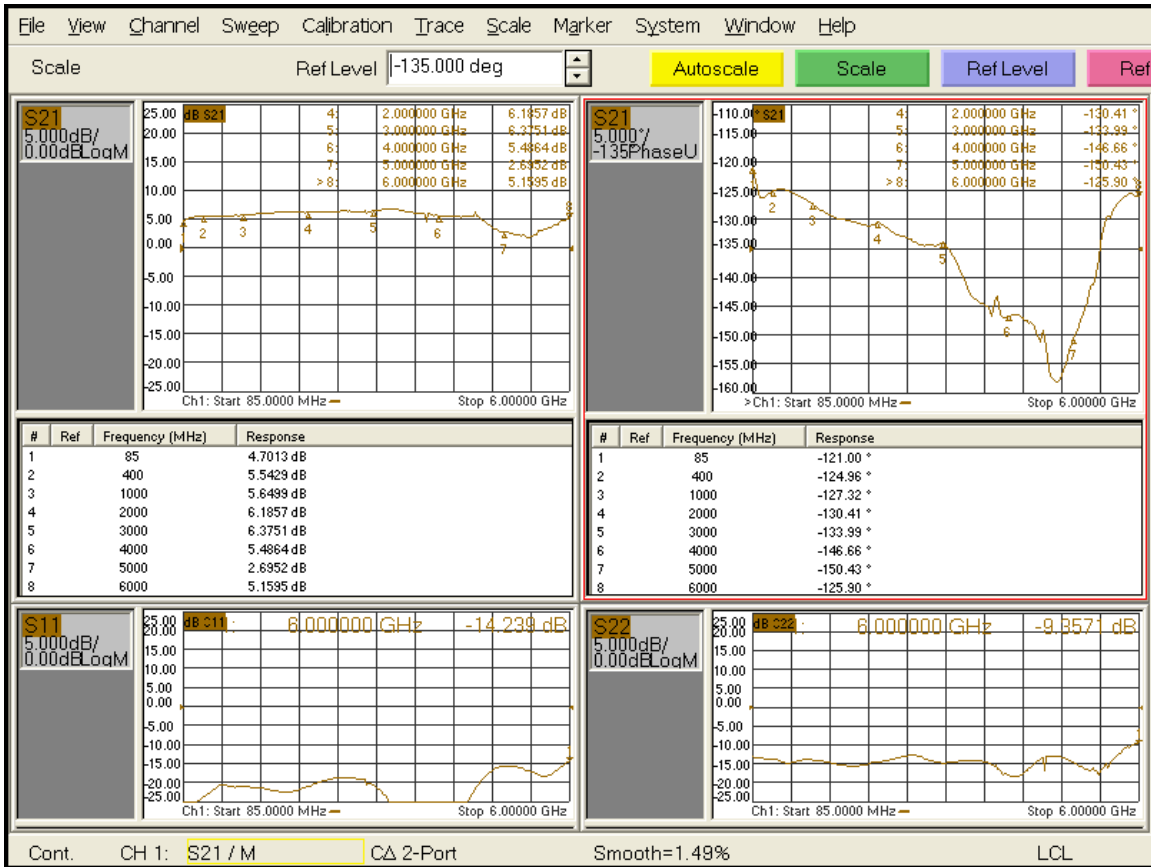


180° Phase, 0 dBm Input Power



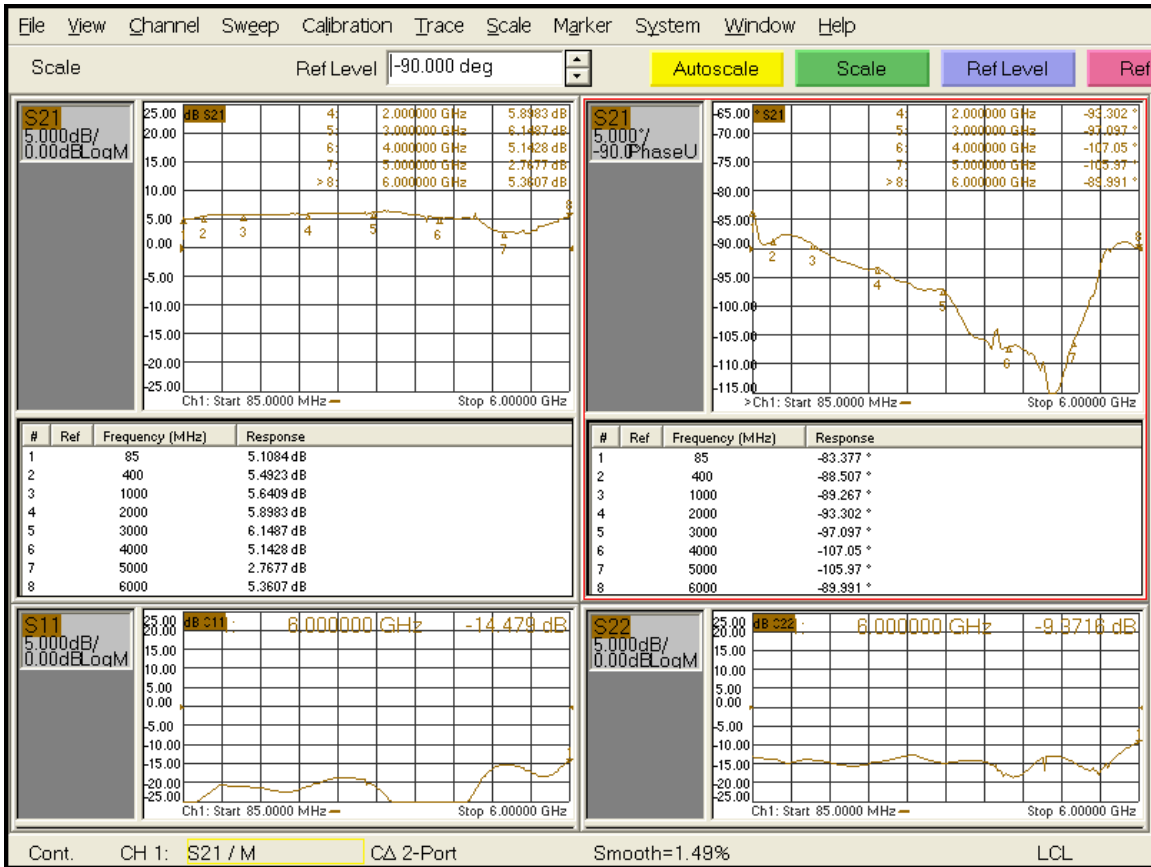


225° Phase, 0 dBm Input Power



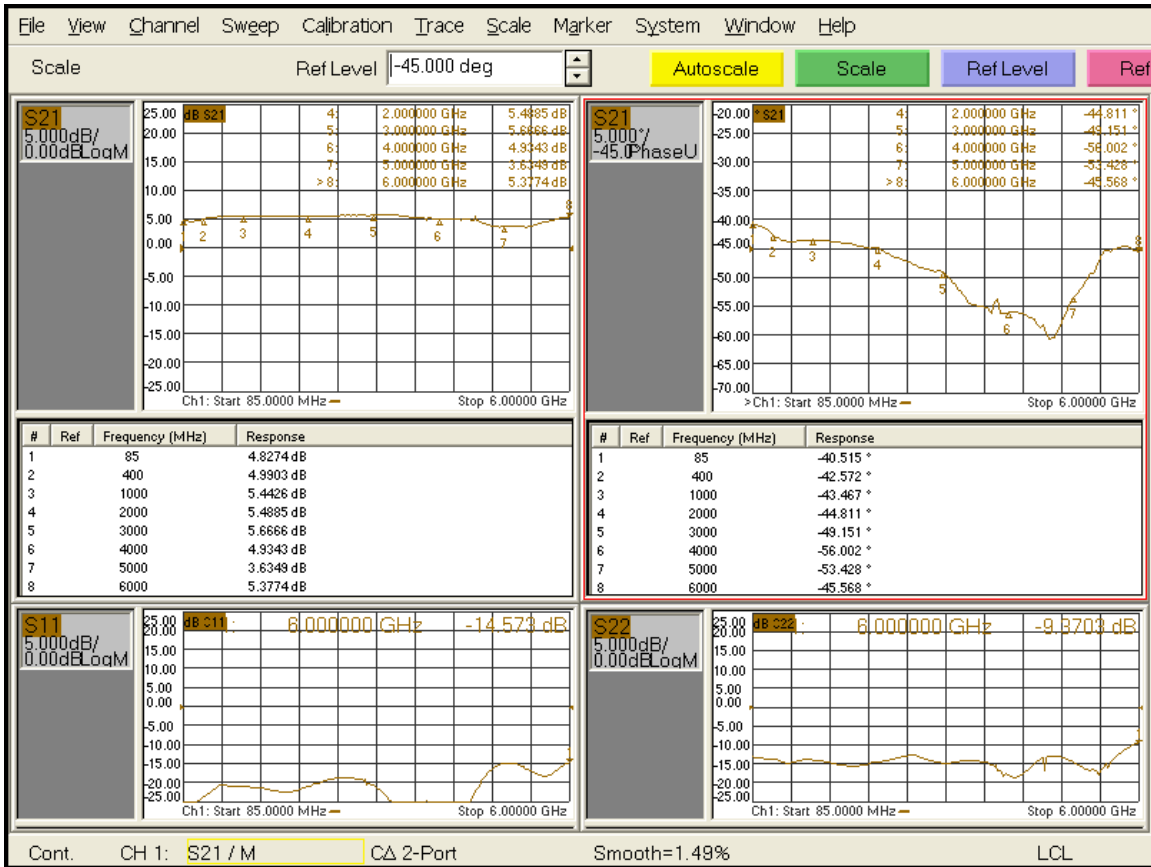


270° Phase, 0 dBm Input Power



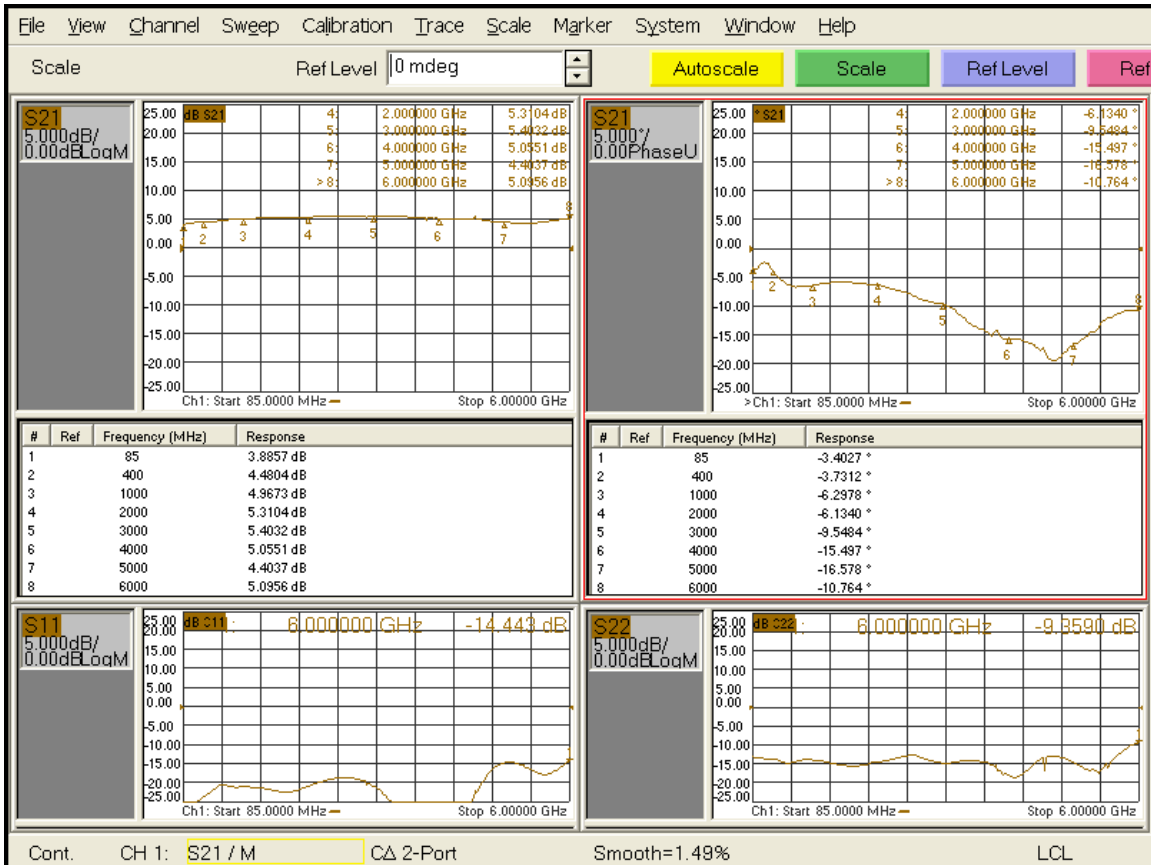


315° Phase, 0 dBm Input Power



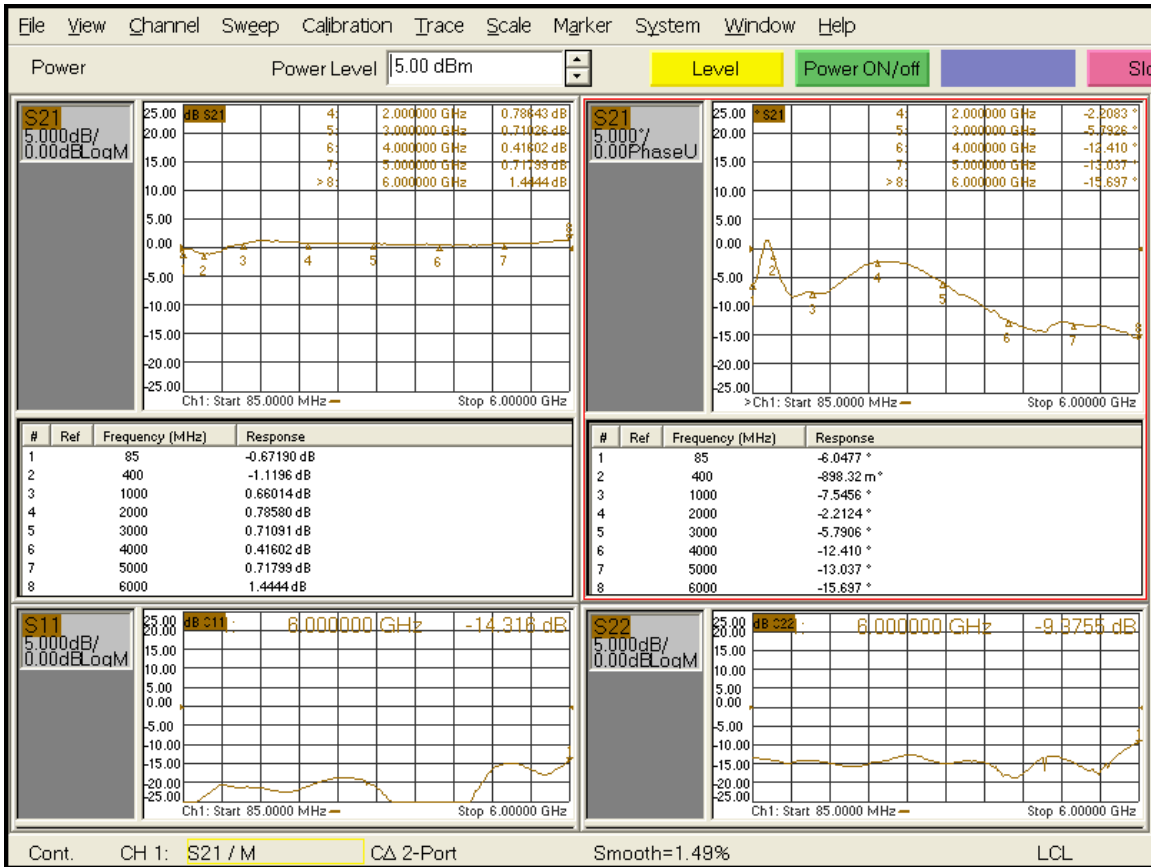


358.6° Phase, 0 dBm Input Power





0° Phase, 5 dBm Input Power



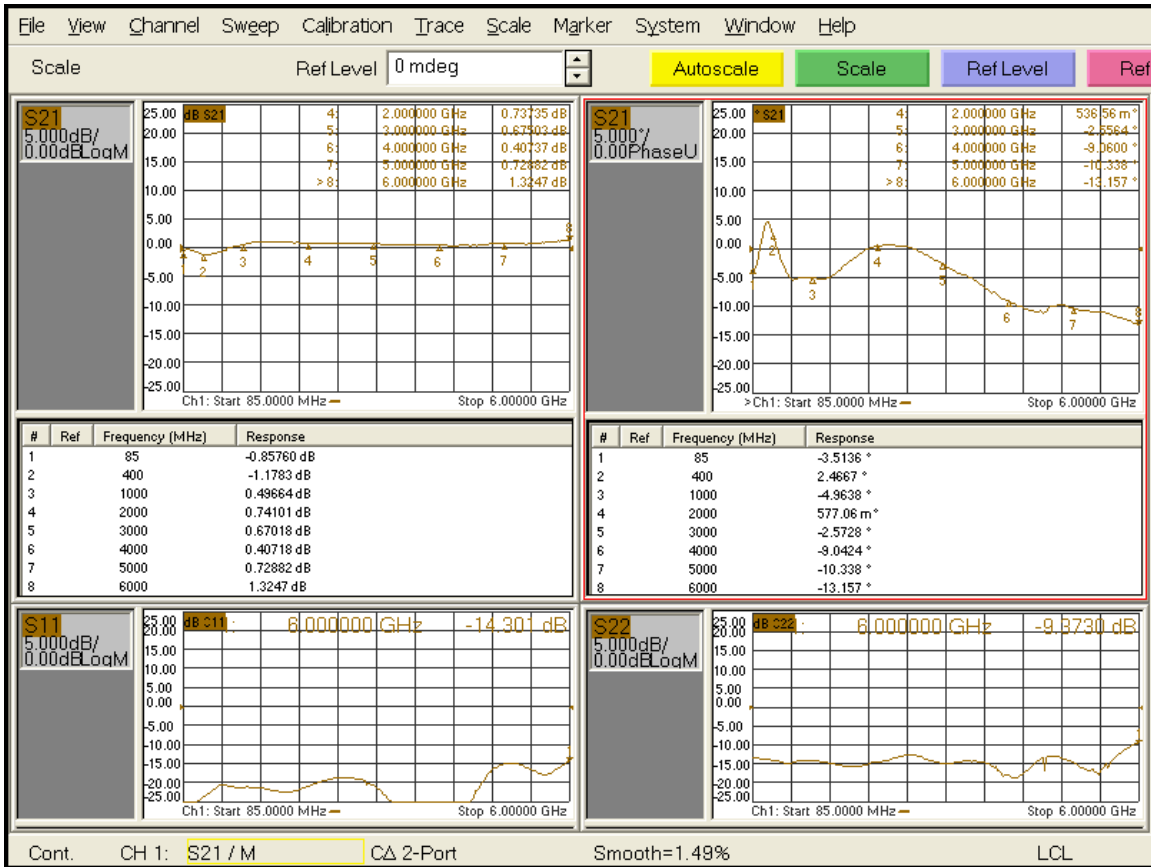


1.4° Phase, 5 dBm Input Power



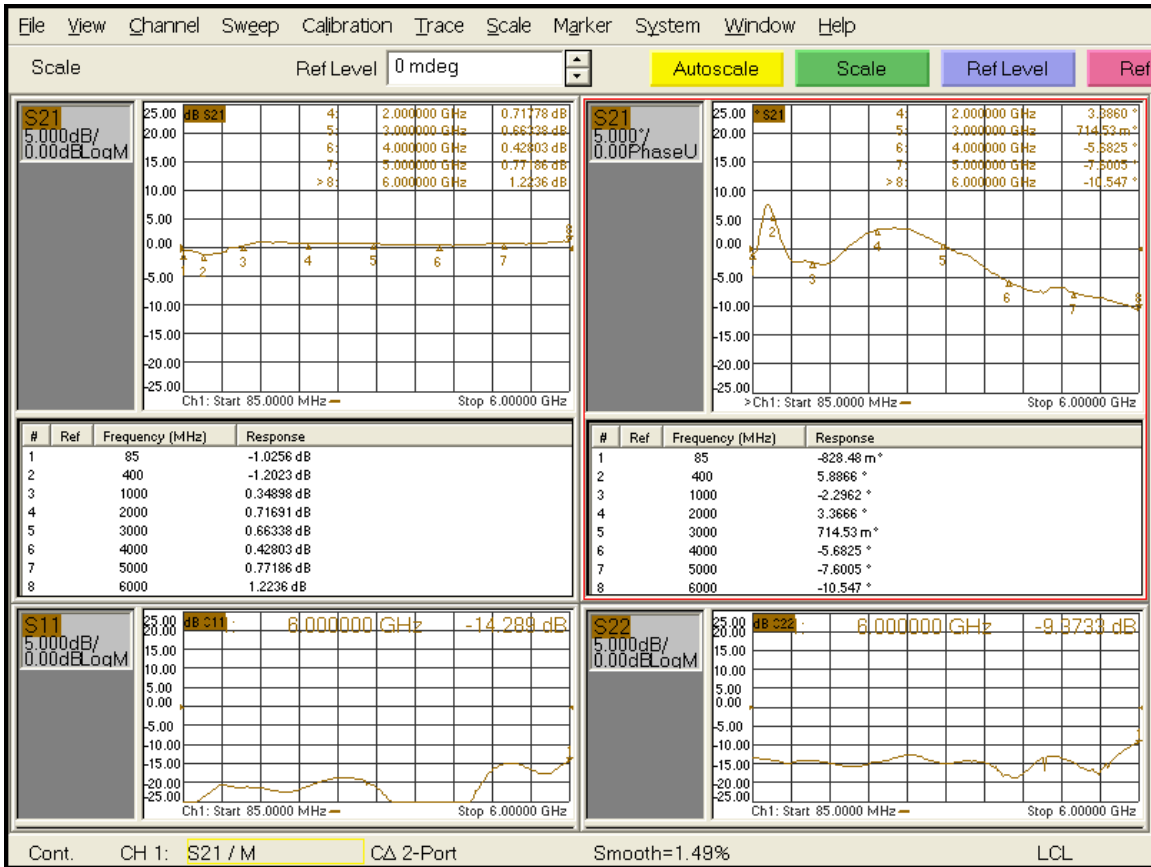


2.8° Phase, 5 dBm Input Power



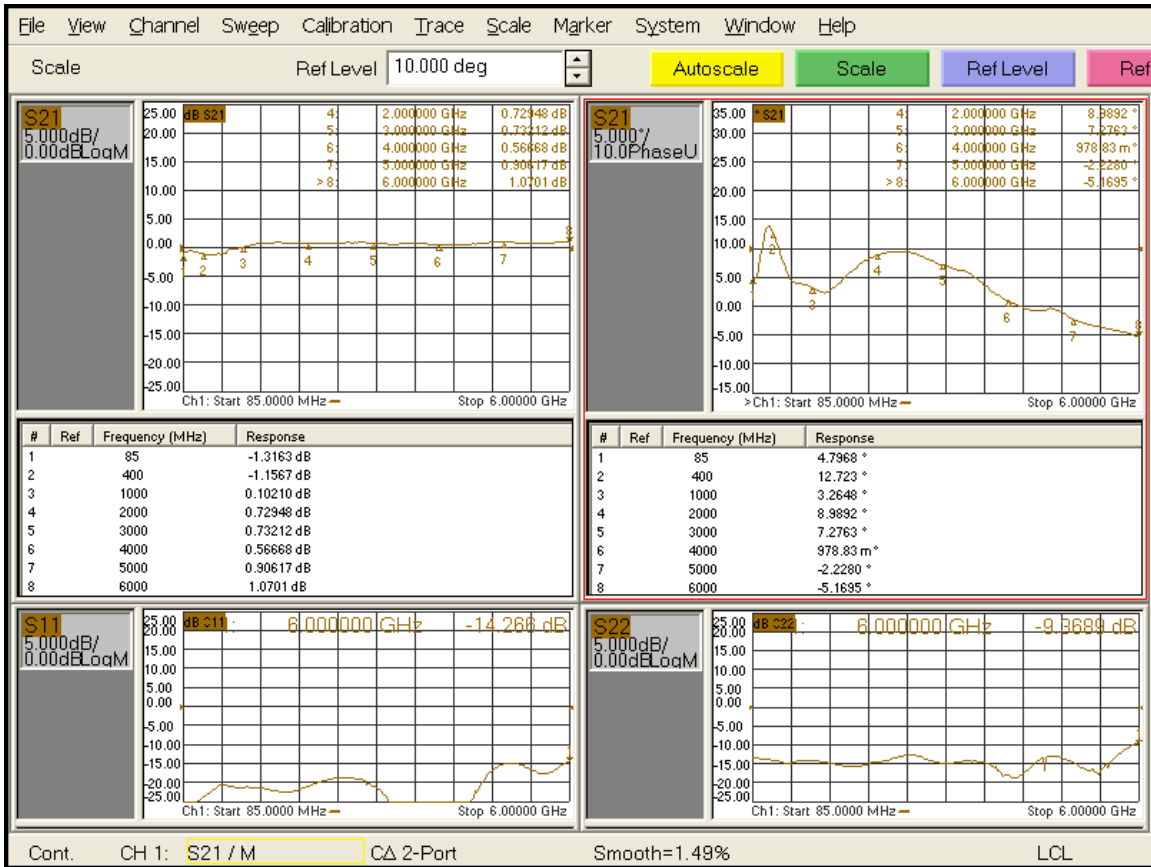


5.6° Phase, 5 dBm Input Power



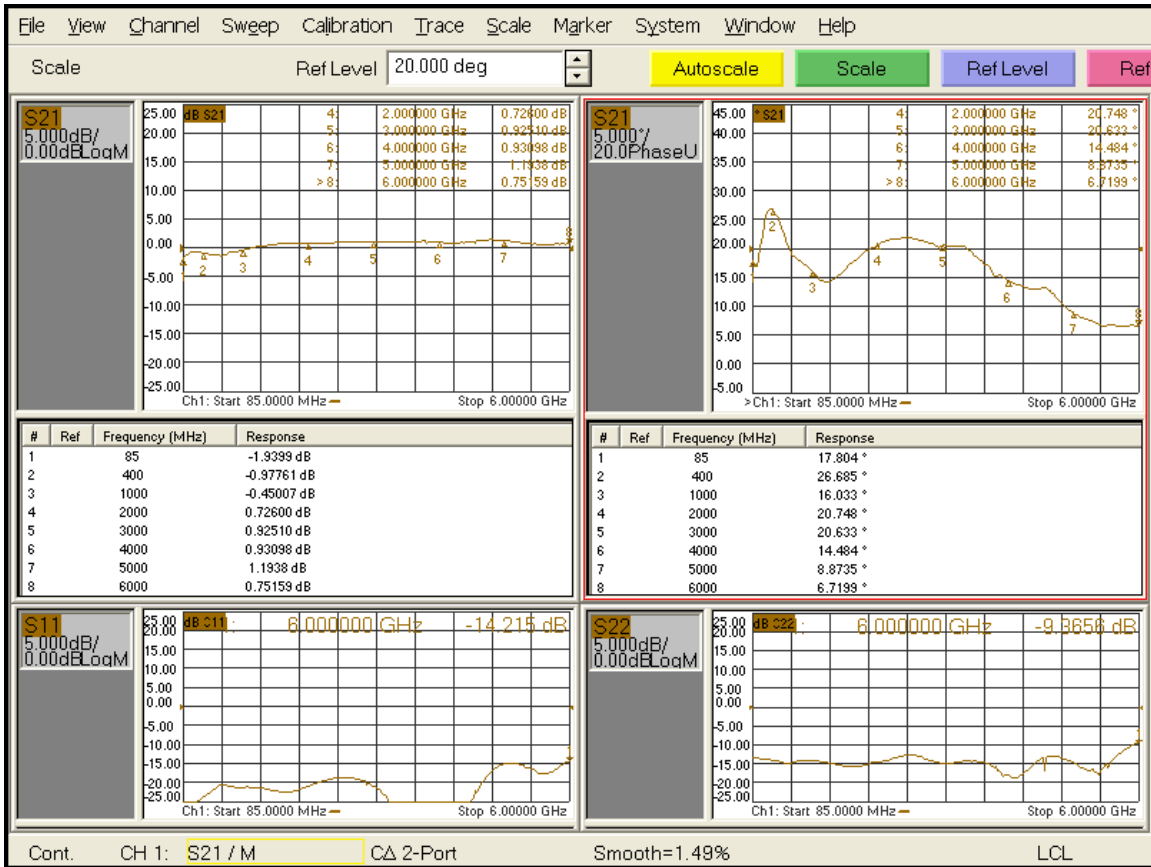


11.25° Phase, 5 dBm Input Power



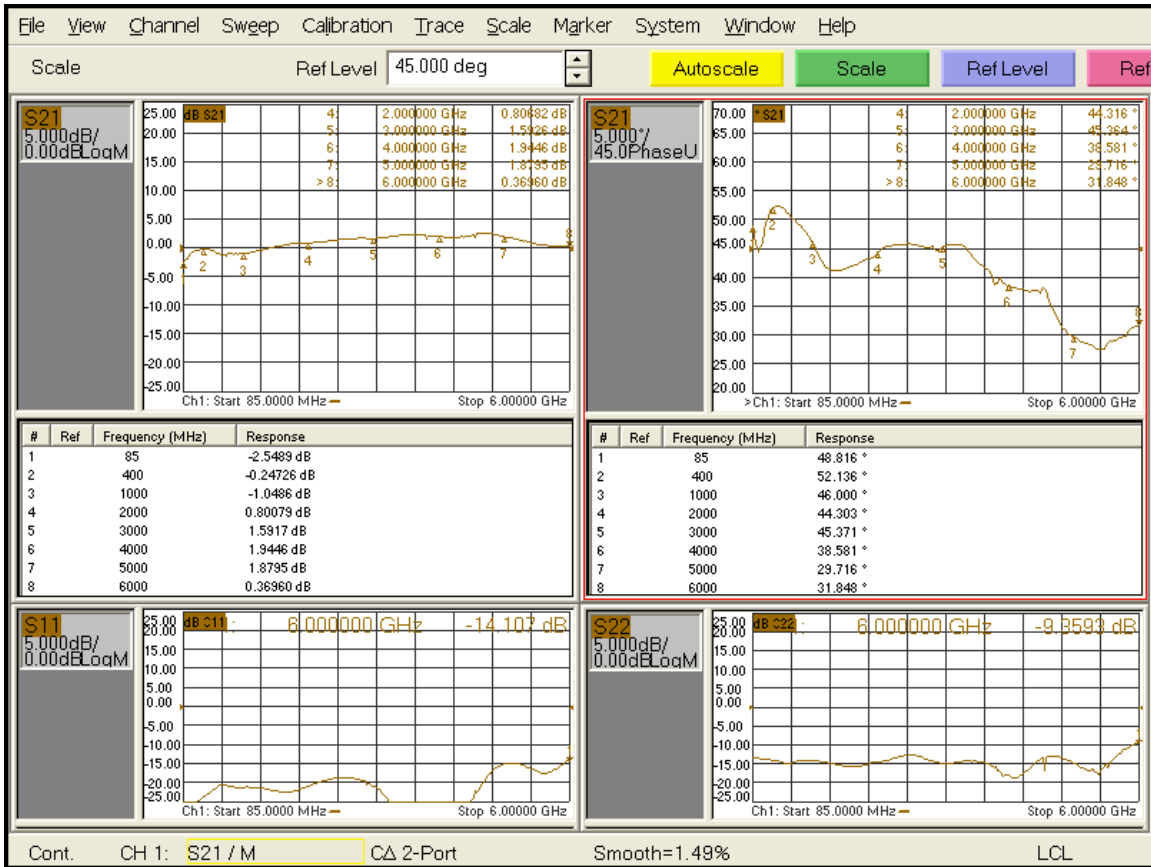


22.5° Phase, 5 dBm Input Power





45° Phase, 5 dBm Input Power





90° Phase, 5 dBm Input Power



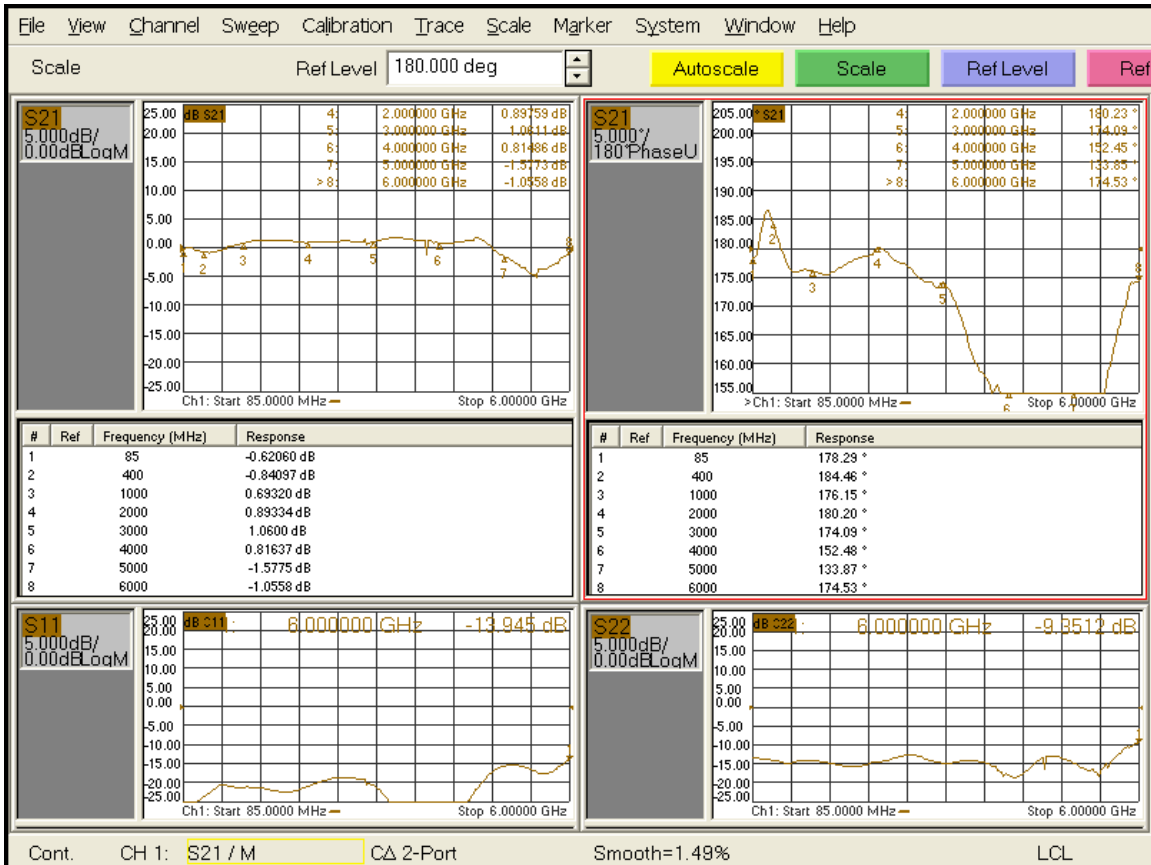


135° Phase, 5 dBm Input Power



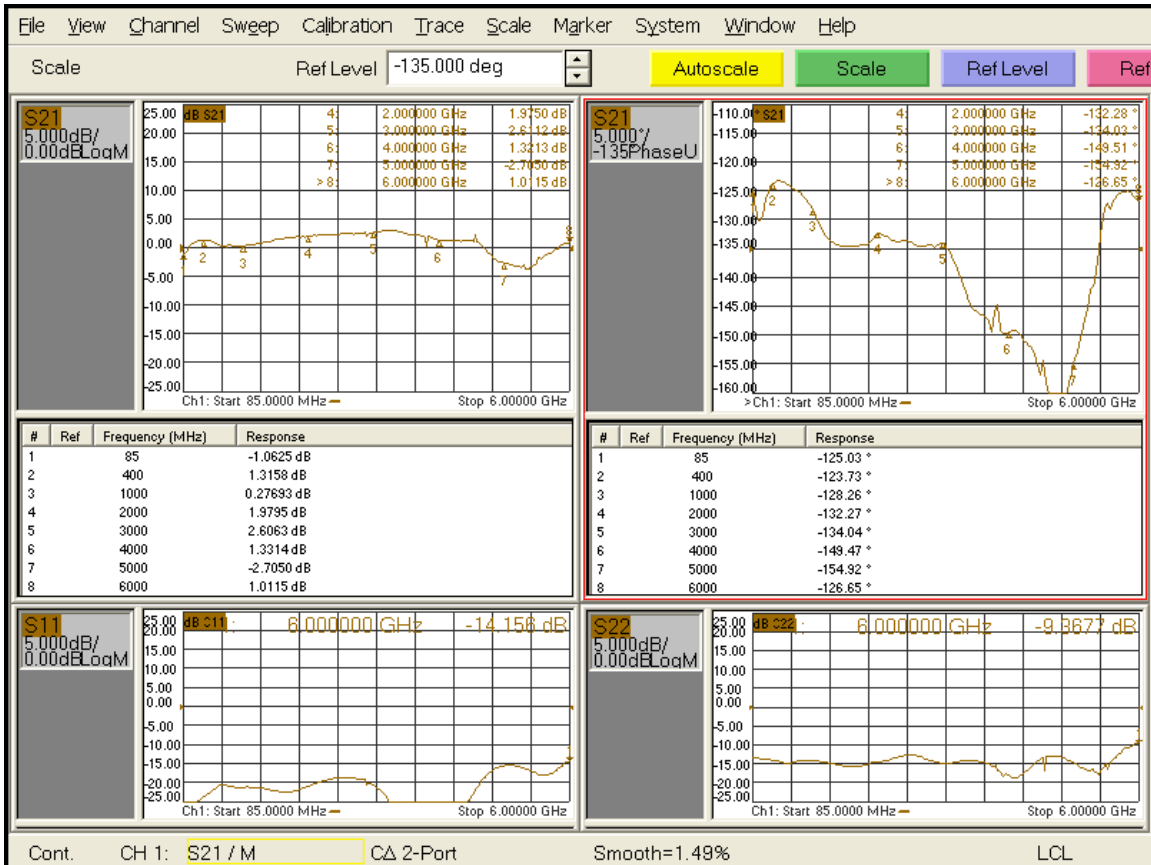


180° Phase, 5 dBm Input Power





225° Phase, 5 dBm Input Power



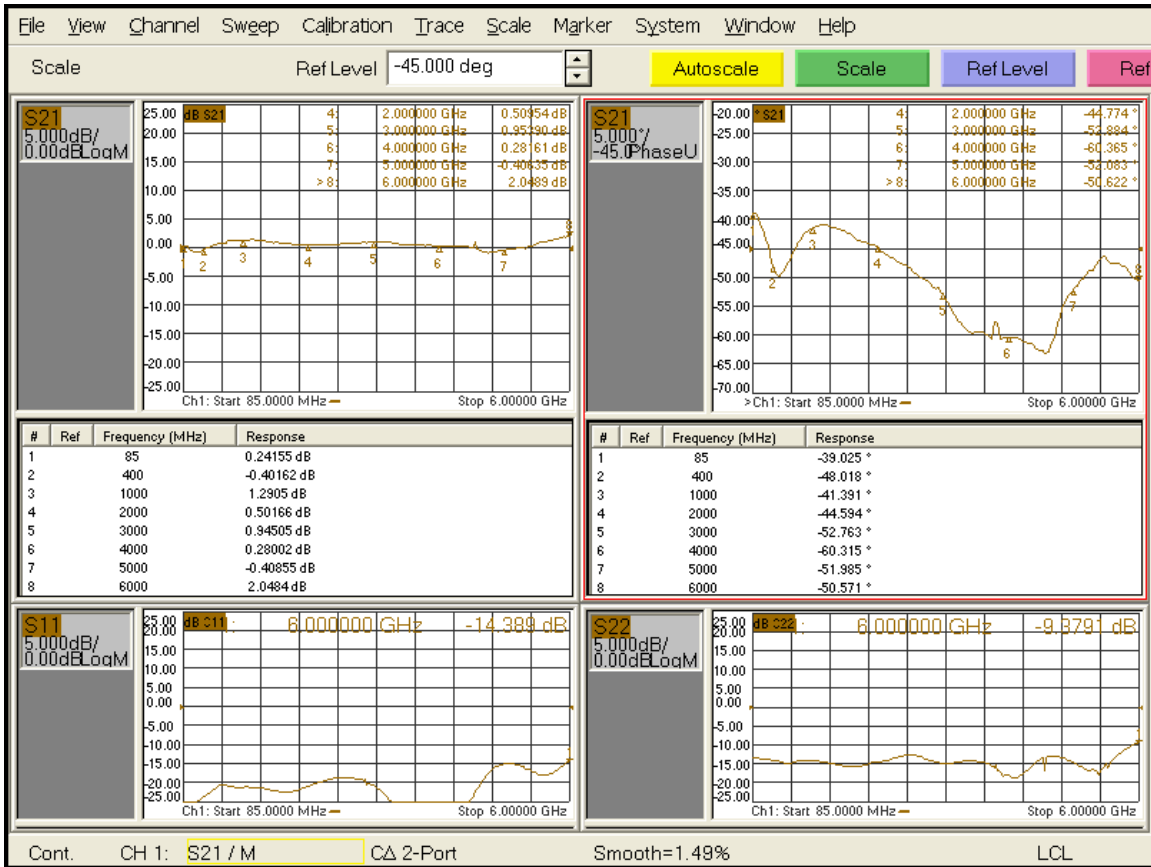


270° Phase, 5 dBm Input Power





315° Phase, 5 dBm Input Power





358.6° Phase, 5 dBm Input Power

