

CERTIFICATE OF CALIBRATION



Issued by: Pico Technology Ltd.

Certificate Number:

of: James House,
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St. Neots, Cambridgeshire,
PE19 8YP UNITED KINGDOM

SAMPLE

Signature:

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Web: www.picotech.com

Certificate Revision: V 2.00

Signatory: M. Ashcroft

This certificate records compliance with specification at receipt of the instrument

The instrument has been calibrated in accordance with the manufacturer's verification procedure using standards that are traceable to National Standards. The measurements were made in a controlled environment, ambient temperature during the test is recorded below.

The associated Performance Test Record details the calibration results with a further column indicating the instrument performance relative to the stated specification. The column headed 'Performance Results' indicates compliance or otherwise with the stated specification.

The two possible conditions are indicated as follows:

Pass The equipment complies with the stated specification at the measured points.

Fail The equipment does not comply with the stated specification at the measured points.

To the extent defined on the Performance Test Record, this certificate provides traceability of measurement to recognized consensus standards or ratio type measurements through national standards and to the international system of units of measurement (SI), realised and maintained at the National Physical Laboratory or other recognized national standards laboratories.

This certificate may not be reproduced other than in full, except with the prior written approval of Pico Technology Ltd..

Recalibration falls due 1 year following shipment from Pico Technology Ltd., this will not be later than 6 months after the certifying verification.

Unit Under Test Description 6 GHz Vector Network Analyser

Model PicoVNA 106

Serial Number 99999

Measured: 07 Sep 17

Re-calibration due: 08 Sep 18

Ambient temperature during test: 24.0 °C

Result: PASS

Performance Test Record: A0000_99999_42985



PicoVNA 106

6 GHz Vector Network Analyser

Performance Test Record

Instrument Model Number: 106
Description: 6 GHz Vector Network Analyser
Batch Number: A0000
Serial Number: 99999

Date of Calibration: 07 Sep 2017
As Found / As Left / New Unit: SAMPLE ONLY
Test Record Reference: A0000_99999_42985

Ambient Temperature: 24.0 °C

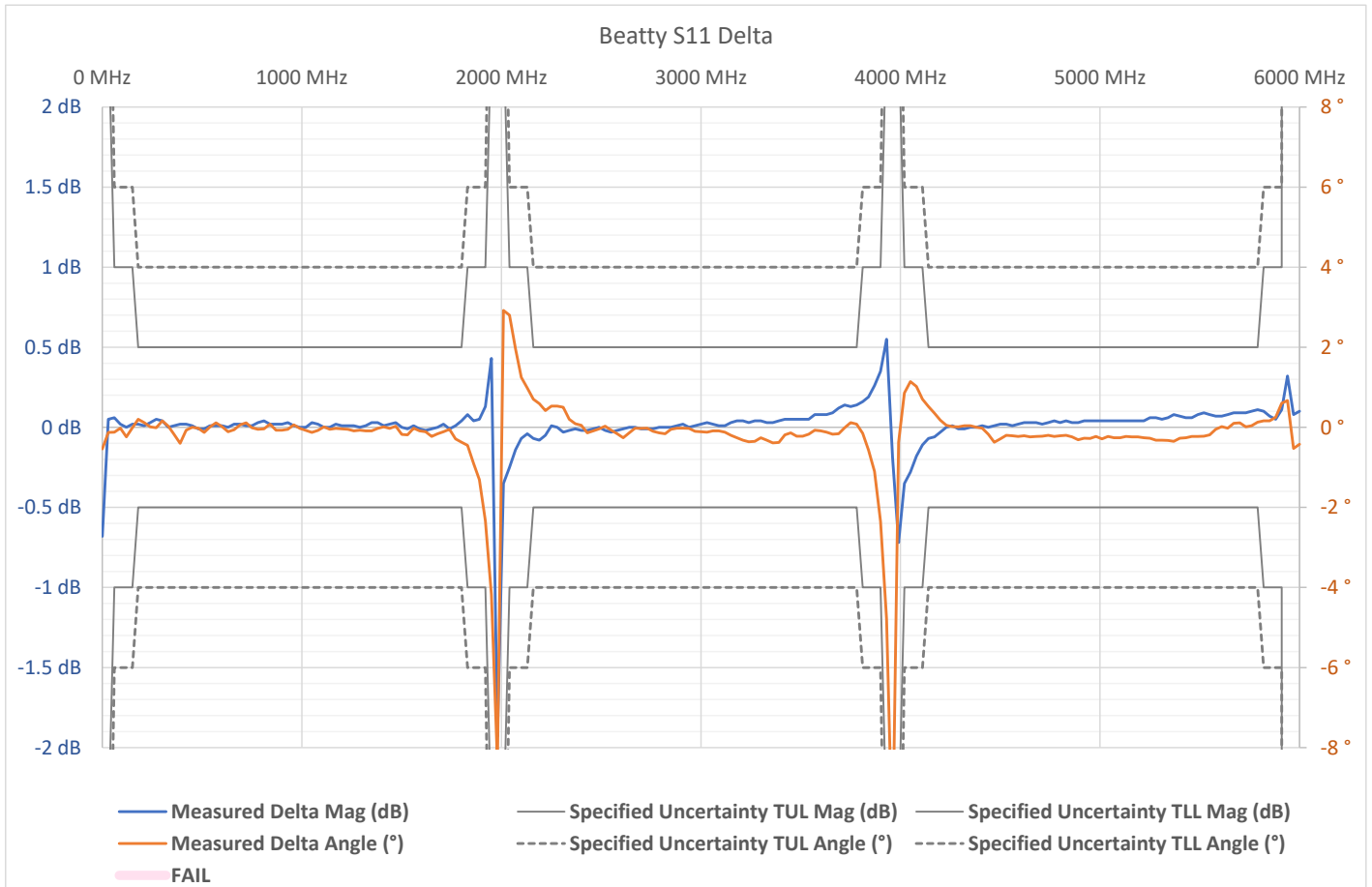
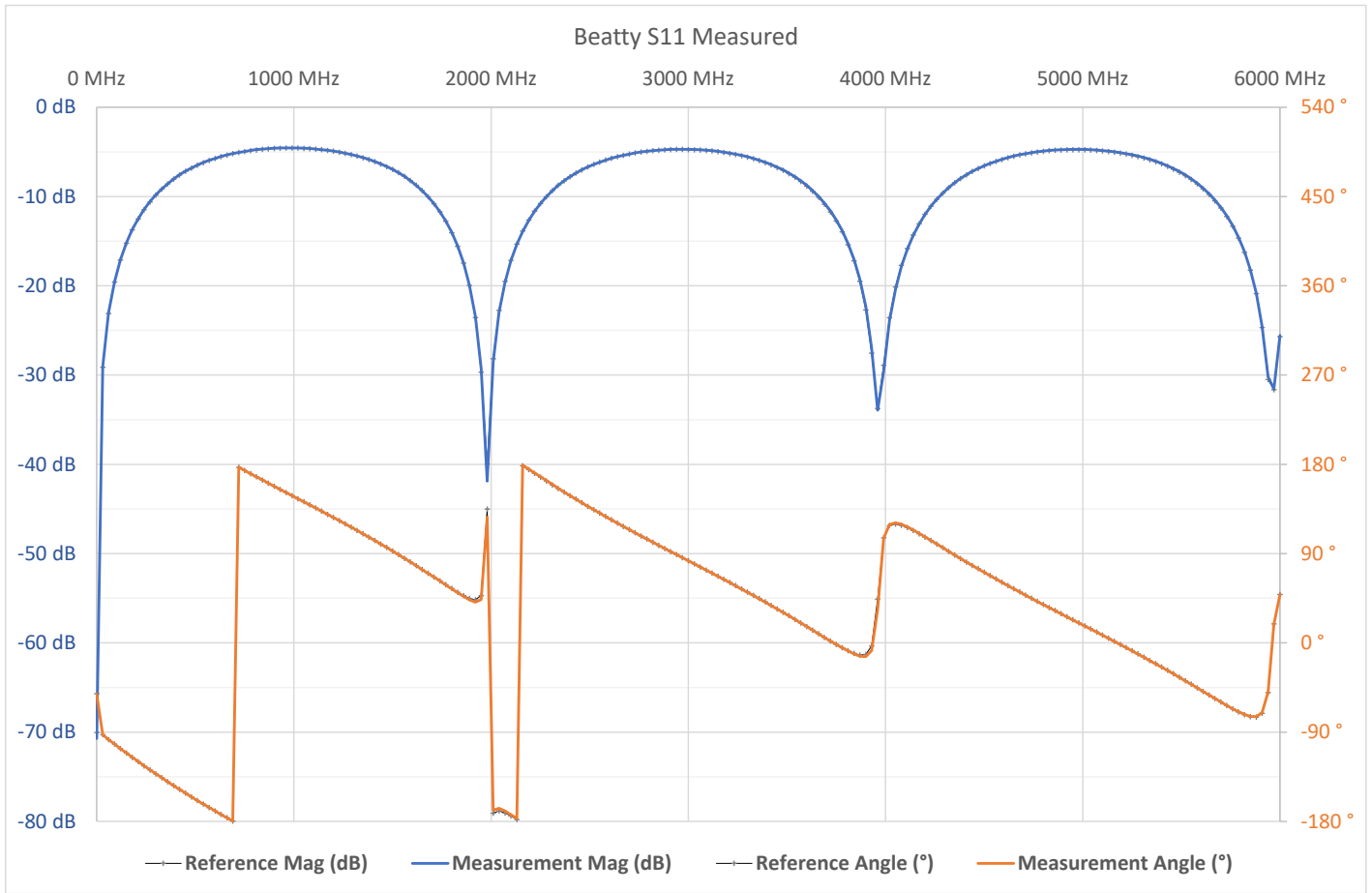
Performed by: MVA

This Test Record supports Certificate No: SAMPLE
Certificate issued for end Customer name: Unknown
Market (re)installation date:

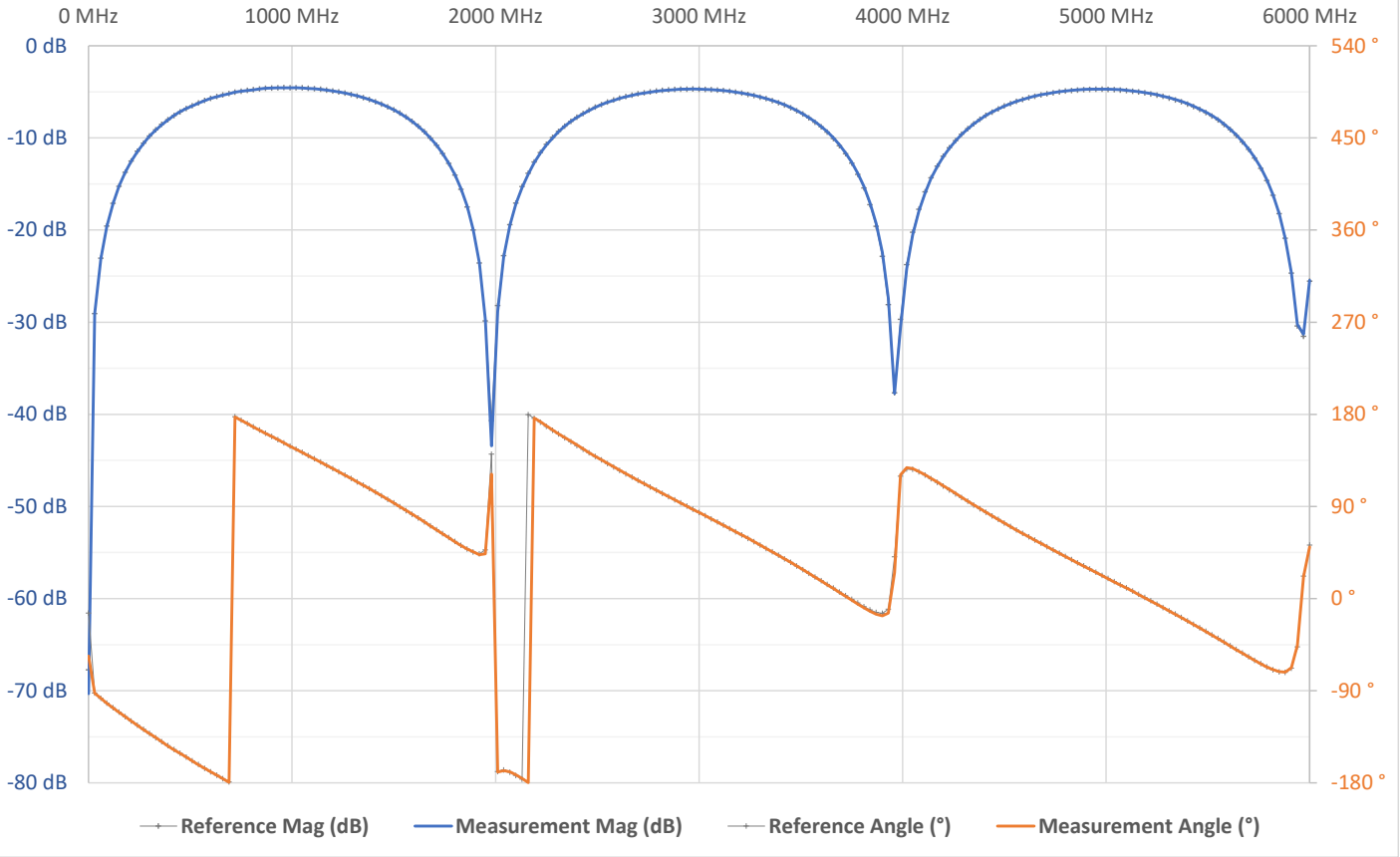
| Calibration Standards | Manufacturer | Model No. | Serial No. | Cal due date |
|-------------------------|---------------|-------------|------------|--------------|
| Vector Network Analyser | Anritsu | 37369C | 10510 | 04 Oct 2017 |
| Calibration Kit | Anritsu | 3652 | 8013 | 04 Oct 2017 |
| USB Power Sensor | Agilent | U8481A | MY53040022 | 17 Nov 2017 |
| Spectrum Analyser | Agilent | HP4407B | US39460772 | 22 Dec 2017 |
| DMM | Agilent | HP34401A | MY47046197 | 14 Mar 2018 |
| Stepped Line | Rosenberger | 02S1A2-K100 | 91804 | 18 Jul 2018 |
| Amplifier | Mini-Circuits | ZFL-100N | D053196 | 01 Aug 2018 |

| Functional Test | Purpose | Minimum | Actual | Maximum | Performance Results |
|-----------------|---------|---------|--------|---------|---------------------|
|-----------------|---------|---------|--------|---------|---------------------|

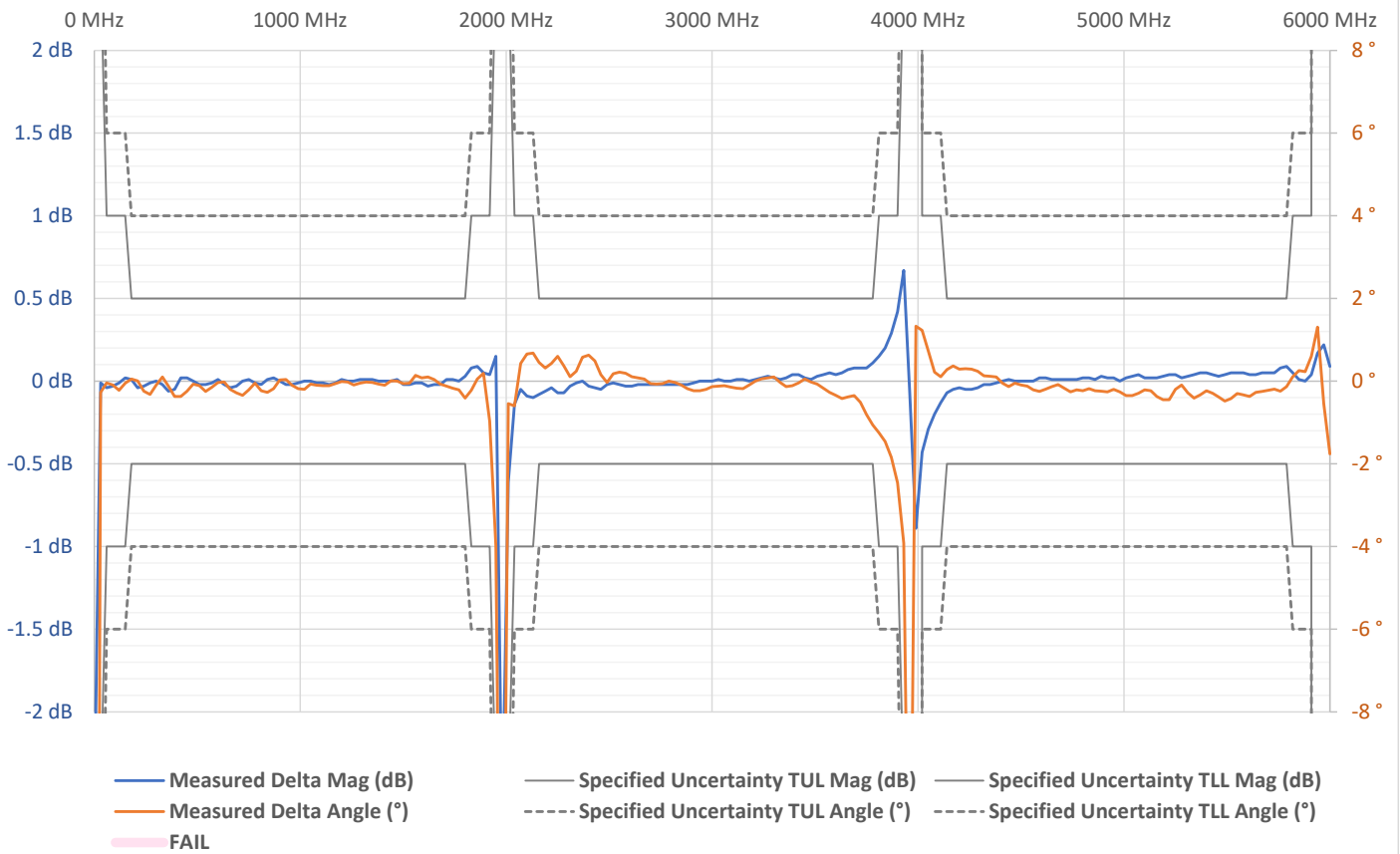
| FUNCTIONAL TESTS | | | | | |
|--|--|------------|------------|------------|------|
| Supply current @ 15 V | Check supply current within limits | 1300 mA | 1531 mA | 1850 mA | PASS |
| Fan Operation | Test fan connected and correct operation | 1 (true) | 1 | 1 (true) | PASS |
| RAM Test | Test RAM functional | - | 0 Errs | 0 Errs | PASS |
| 10 MHz Ref Freq and Lock | Check frequency and lock | -10 Hz | -3 Hz | 10 Hz | PASS |
| 10 MHz Output Level | Check connection and level | -2 dBm | 2.40 dBm | 3 dBm | PASS |
| Trigger In Operation | Check connection is present | 1 (true) | 1 | 1 (true) | PASS |
| Trigger Out Level | Check connection and level | 3 V | 3.578 V | 4 V | PASS |
| Port1 Bias-T connectivity | Check connection is present | 1 (true) | 1 | 1 (true) | PASS |
| Port2 Bias-T connectivity | Check connection is present | 1 (true) | 1 | 1 (true) | PASS |
| VCO adjust file | Store VCO adjust file to EEPROM | 1 (true) | 1 | 1 (true) | PASS |
| Port1 level minimum (> 4 GHz) | Check minimum power above 4 GHz | 3.5 dBm | 5.25 dBm | - | PASS |
| Average RX noise floor @ 1 kHz | Check receiver noise floor | - | -100.41 dB | -98 dB | PASS |
| Adjust RX sensitivity | Store gain adjust file to EEPROM | 1 (true) | 1 | 1 (true) | PASS |
| P1dB performance | Tests P1dB performance against standard | 6.2 dBm | 6.33 dBm | 7.2 dBm | PASS |
| 12 term calibration | Confirm unit meets accuracy and dynamic range spec | 1 (true) | 1 | 1 (true) | PASS |
| Unknown thru calibration | Unknown through Cal and store to EEPROM | 1 (true) | 1 | 1 (true) | PASS |
| Beatty line comparison (see plots and table below) | Compare reference Beatty line s-params with traceable result set (4x 201 pts). | 804 Passes | 804 Passes | 804 Passes | PASS |
| Unit ID | Store Unit information to EEPROM | 1 (true) | 1 | 1 (true) | PASS |
| Stds had valid calibration | Cal standards due dates are all valid at the calibration date. | 1 (true) | 1 | 1 (true) | PASS |
| Market install date valid | Market install date no later than 6 months after calibration date. | 1 (true) | 1 | 1 (true) | PASS |



Beatty S22 Measured

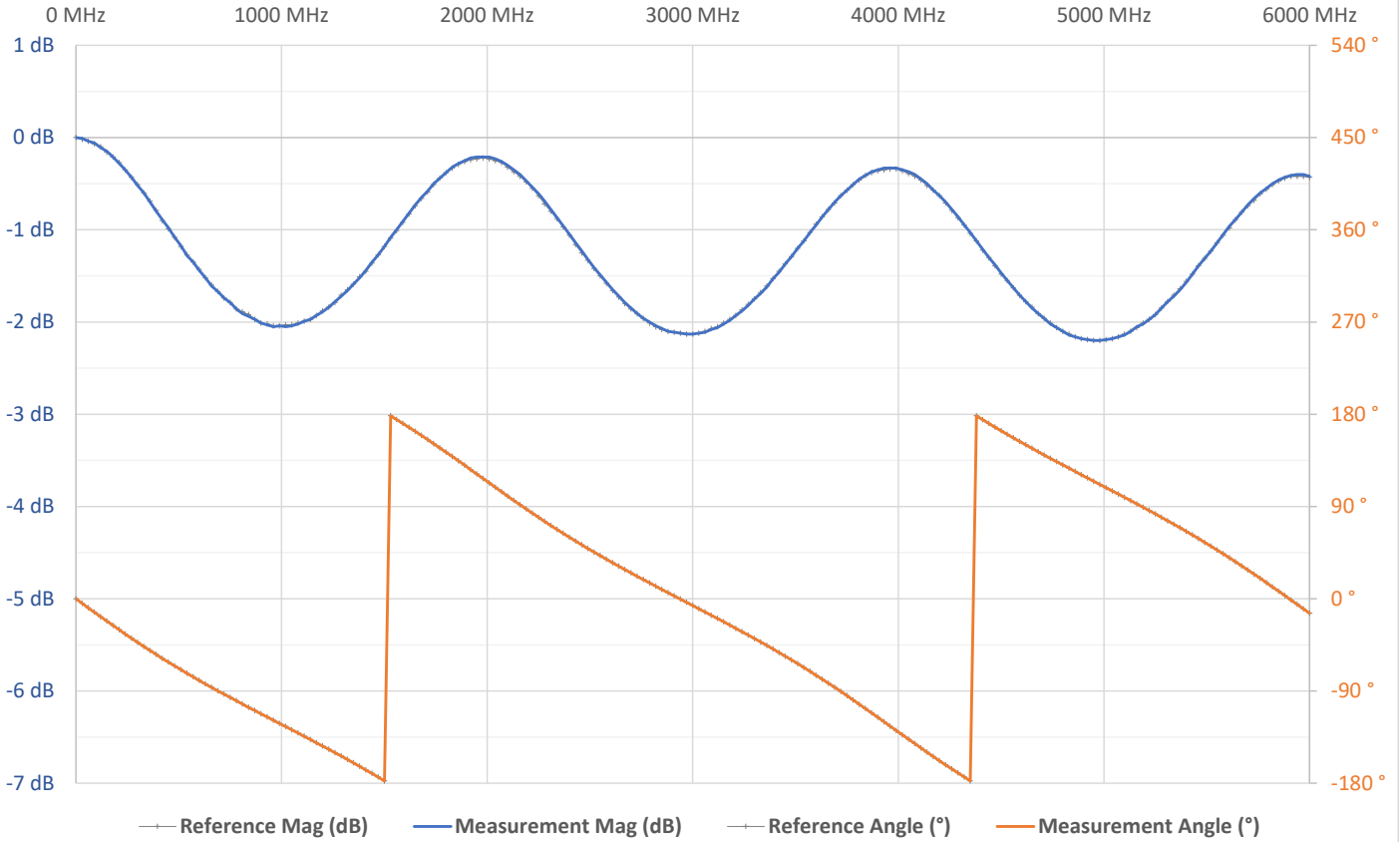


Beatty S22 Delta

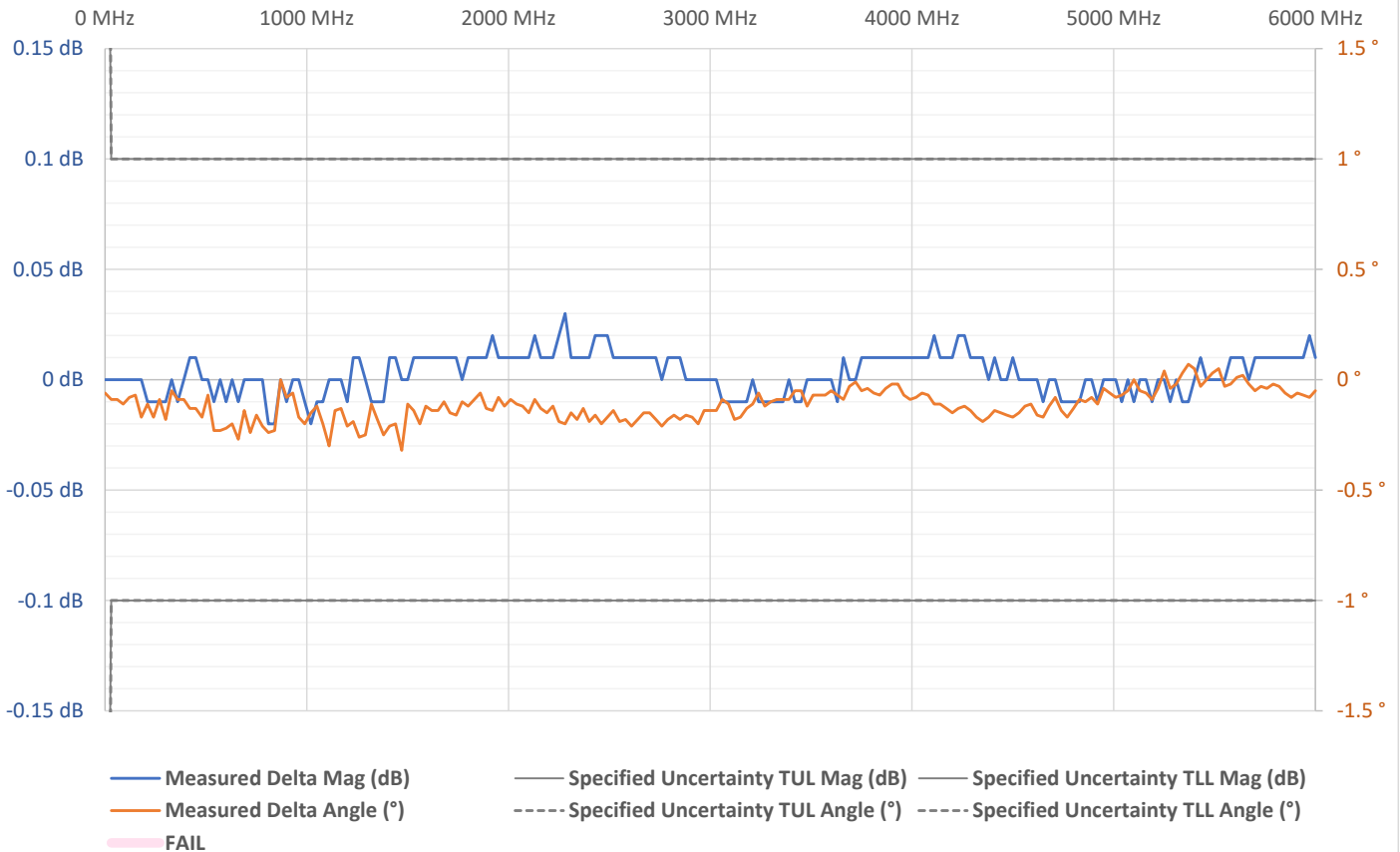


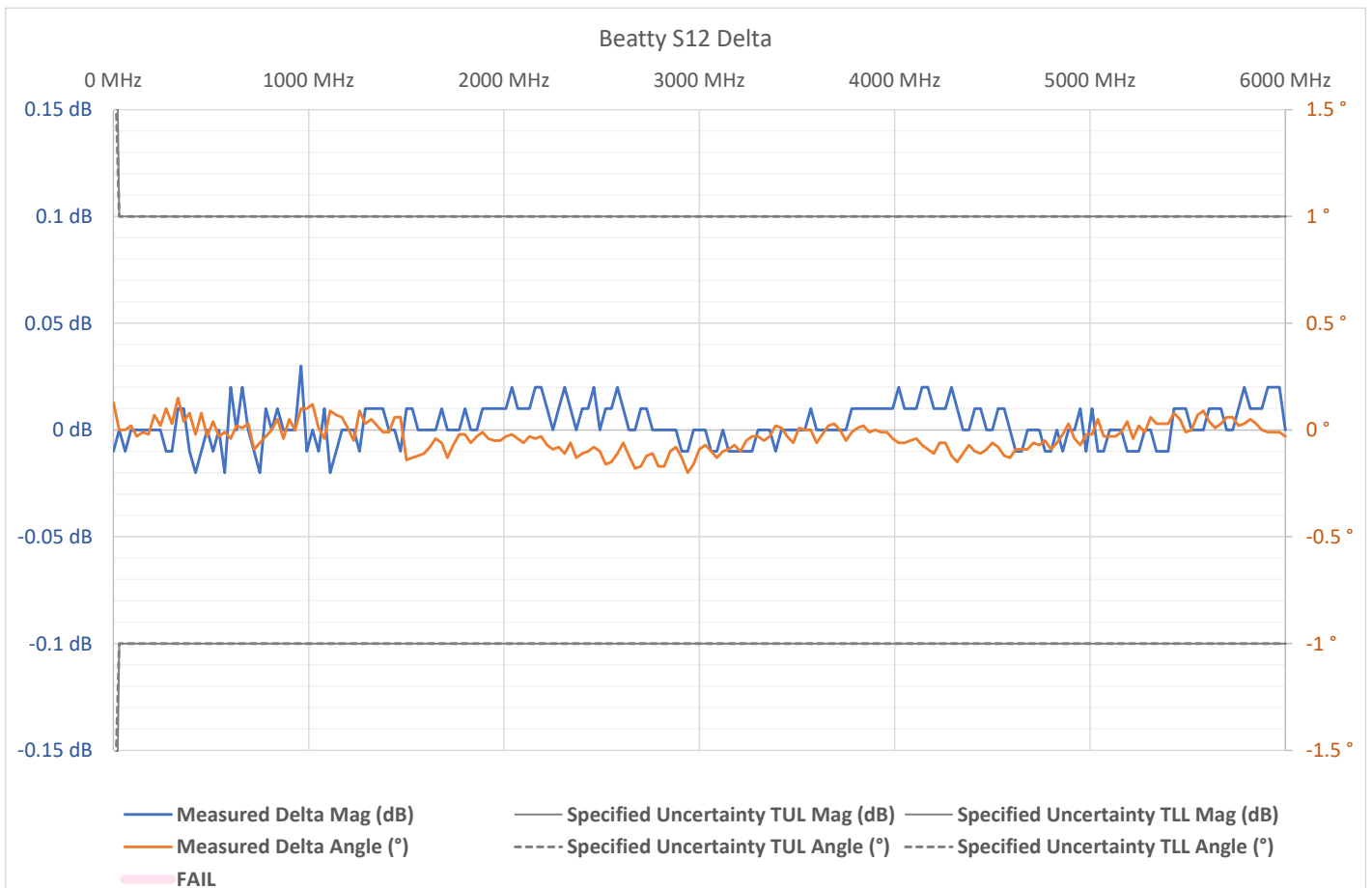
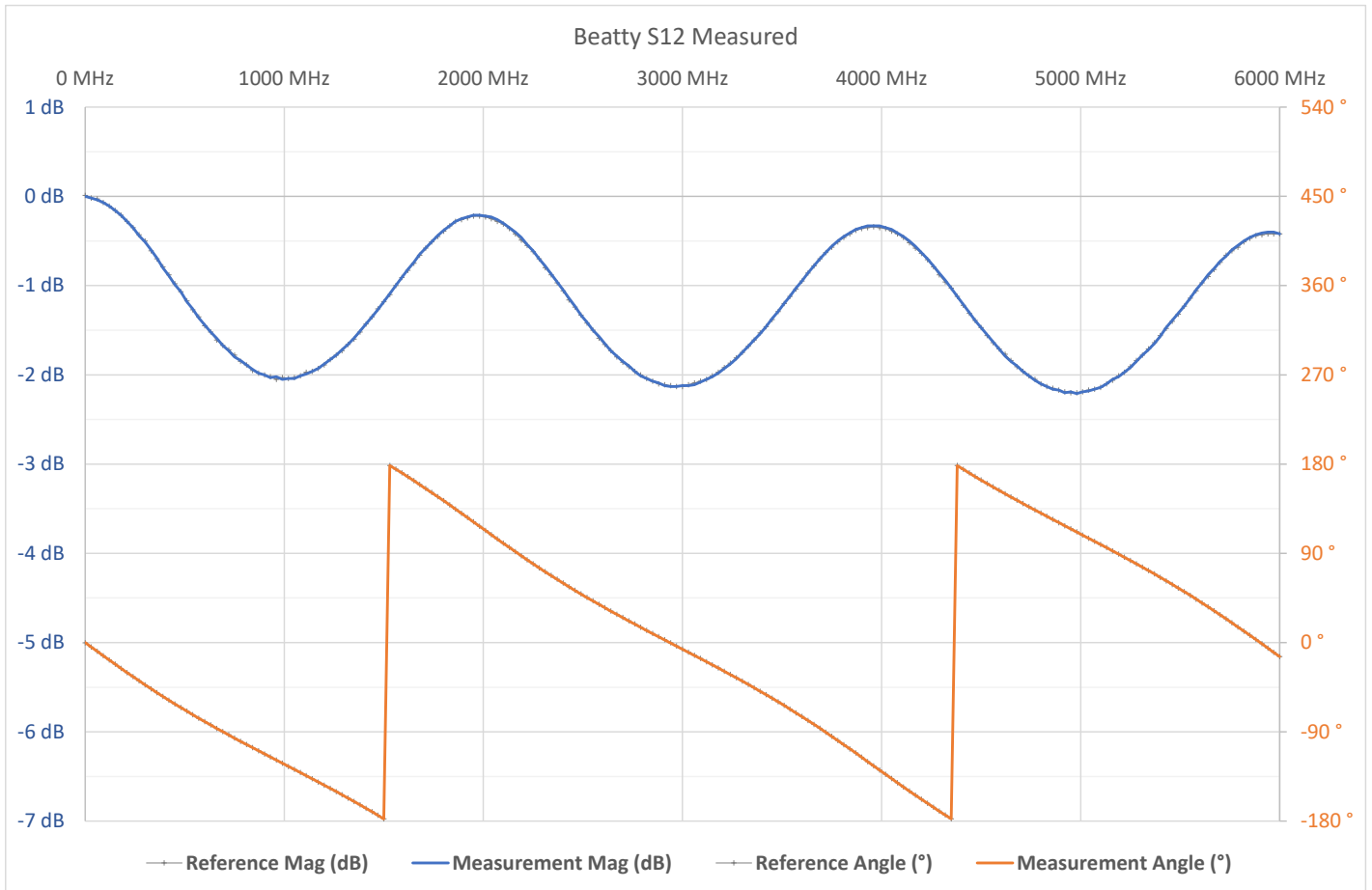


Beatty S21 Measured



Beatty S21 Delta







| Frequency MHz | Measurement | | Reference | | Measured Delta | | Specified Uncertainty TUL | | Test Verdict |
|------------------|-------------|-----------|-----------|-----------|----------------|-----------|---------------------------|-----------|-----------------|
| | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | |
| S11 Tests | | | | | | | | | |
| 0.3 MHz | -70.71 dB | -51.8 ° | -70.03 dB | -51.26 ° | -0.68 dB | -0.54 ° | 200 dB | 360 ° | Pass |
| 30.3 MHz | -29.05 dB | -92.64 ° | -29.11 dB | -92.5 ° | 0.05 dB | -0.13 ° | 2.5 dB | 15 ° | Pass |
| 60.3 MHz | -23.03 dB | -97.54 ° | -23.09 dB | -97.41 ° | 0.06 dB | -0.12 ° | 1 dB | 6 ° | Pass |
| 90.3 MHz | -19.56 dB | -102.09 ° | -19.58 dB | -102.07 ° | 0.02 dB | -0.02 ° | 1 dB | 6 ° | Pass |
| 120.29 MHz | -17.1 dB | -106.71 ° | -17.1 dB | -106.47 ° | 0 dB | -0.24 ° | 1 dB | 6 ° | Pass |
| 150.29 MHz | -15.21 dB | -110.99 ° | -15.23 dB | -110.98 ° | 0.02 dB | -0.01 ° | 1 dB | 6 ° | Pass |
| 180.29 MHz | -13.71 dB | -115.17 ° | -13.73 dB | -115.38 ° | 0.02 dB | 0.2 ° | 0.5 dB | 4 ° | Pass |
| 210.29 MHz | -12.51 dB | -119.57 ° | -12.51 dB | -119.69 ° | 0.01 dB | 0.12 ° | 0.5 dB | 4 ° | Pass |
| 240.29 MHz | -11.46 dB | -123.91 ° | -11.49 dB | -123.92 ° | 0.03 dB | 0.01 ° | 0.5 dB | 4 ° | Pass |
| 270.29 MHz | -10.56 dB | -128 ° | -10.61 dB | -127.99 ° | 0.05 dB | -0.01 ° | 0.5 dB | 4 ° | Pass |
| 300.29 MHz | -9.8 dB | -131.93 ° | -9.83 dB | -132.08 ° | 0.04 dB | 0.16 ° | 0.5 dB | 4 ° | Pass |
| 330.28 MHz | -9.16 dB | -135.99 ° | -9.16 dB | -136.02 ° | 0 dB | 0.03 ° | 0.5 dB | 4 ° | Pass |
| 360.28 MHz | -8.57 dB | -140.07 ° | -8.57 dB | -139.89 ° | 0.01 dB | -0.18 ° | 0.5 dB | 4 ° | Pass |
| 390.28 MHz | -8.02 dB | -144.12 ° | -8.04 dB | -143.73 ° | 0.02 dB | -0.4 ° | 0.5 dB | 4 ° | Pass |
| 420.28 MHz | -7.55 dB | -147.69 ° | -7.57 dB | -147.62 ° | 0.02 dB | -0.07 ° | 0.5 dB | 4 ° | Pass |
| 450.28 MHz | -7.16 dB | -151.46 ° | -7.17 dB | -151.45 ° | 0.01 dB | 0 ° | 0.5 dB | 4 ° | Pass |
| 480.28 MHz | -6.81 dB | -155.19 ° | -6.8 dB | -155.17 ° | -0.01 dB | -0.02 ° | 0.5 dB | 4 ° | Pass |
| 510.27 MHz | -6.49 dB | -158.99 ° | -6.48 dB | -158.85 ° | -0.01 dB | -0.13 ° | 0.5 dB | 4 ° | Pass |
| 540.27 MHz | -6.19 dB | -162.45 ° | -6.2 dB | -162.46 ° | 0.01 dB | 0.01 ° | 0.5 dB | 4 ° | Pass |
| 570.27 MHz | -5.94 dB | -165.87 ° | -5.95 dB | -165.98 ° | 0.01 dB | 0.11 ° | 0.5 dB | 4 ° | Pass |
| 600.27 MHz | -5.73 dB | -169.37 ° | -5.73 dB | -169.39 ° | 0.01 dB | 0.02 ° | 0.5 dB | 4 ° | Pass |
| 630.27 MHz | -5.52 dB | -172.97 ° | -5.53 dB | -172.86 ° | 0 dB | -0.11 ° | 0.5 dB | 4 ° | Pass |
| 660.27 MHz | -5.33 dB | -176.32 ° | -5.35 dB | -176.26 ° | 0.02 dB | -0.06 ° | 0.5 dB | 4 ° | Pass |
| 690.27 MHz | -5.18 dB | -179.54 ° | -5.19 dB | -179.6 ° | 0.02 dB | 0.06 ° | 0.5 dB | 4 ° | Pass |
| 720.26 MHz | -5.06 dB | 177.22 ° | -5.07 dB | 177.11 ° | 0.01 dB | 0.11 ° | 0.5 dB | 4 ° | Pass |
| 750.26 MHz | -4.95 dB | 173.82 ° | -4.96 dB | 173.83 ° | 0.01 dB | -0.01 ° | 0.5 dB | 4 ° | Pass |
| 780.26 MHz | -4.84 dB | 170.57 ° | -4.86 dB | 170.61 ° | 0.03 dB | -0.05 ° | 0.5 dB | 4 ° | Pass |
| 810.26 MHz | -4.74 dB | 167.42 ° | -4.78 dB | 167.46 ° | 0.04 dB | -0.04 ° | 0.5 dB | 4 ° | Pass |
| 840.26 MHz | -4.69 dB | 164.33 ° | -4.71 dB | 164.25 ° | 0.02 dB | 0.08 ° | 0.5 dB | 4 ° | Pass |
| 870.26 MHz | -4.63 dB | 161.02 ° | -4.65 dB | 161.09 ° | 0.02 dB | -0.07 ° | 0.5 dB | 4 ° | Pass |
| 900.26 MHz | -4.59 dB | 157.88 ° | -4.61 dB | 157.95 ° | 0.02 dB | -0.07 ° | 0.5 dB | 4 ° | Pass |
| 930.25 MHz | -4.56 dB | 154.77 ° | -4.59 dB | 154.82 ° | 0.03 dB | -0.05 ° | 0.5 dB | 4 ° | Pass |
| 960.25 MHz | -4.56 dB | 151.72 ° | -4.57 dB | 151.66 ° | 0.01 dB | 0.06 ° | 0.5 dB | 4 ° | Pass |
| 990.25 MHz | -4.56 dB | 148.5 ° | -4.56 dB | 148.52 ° | 0 dB | -0.03 ° | 0.5 dB | 4 ° | Pass |
| 1020.25 MHz | -4.57 dB | 145.34 ° | -4.57 dB | 145.42 ° | 0 dB | -0.08 ° | 0.5 dB | 4 ° | Pass |
| 1050.25 MHz | -4.58 dB | 142.19 ° | -4.6 dB | 142.32 ° | 0.03 dB | -0.13 ° | 0.5 dB | 4 ° | Pass |
| 1080.25 MHz | -4.62 dB | 139.11 ° | -4.64 dB | 139.18 ° | 0.02 dB | -0.08 ° | 0.5 dB | 4 ° | Pass |
| 1110.24 MHz | -4.68 dB | 136.01 ° | -4.68 dB | 136 ° | 0 dB | 0.01 ° | 0.5 dB | 4 ° | Pass |
| 1140.24 MHz | -4.75 dB | 132.79 ° | -4.74 dB | 132.84 ° | 0 dB | -0.05 ° | 0.5 dB | 4 ° | Pass |
| 1170.24 MHz | -4.81 dB | 129.59 ° | -4.83 dB | 129.63 ° | 0.02 dB | -0.03 ° | 0.5 dB | 4 ° | Pass |
| 1200.24 MHz | -4.91 dB | 126.41 ° | -4.92 dB | 126.45 ° | 0.01 dB | -0.04 ° | 0.5 dB | 4 ° | Pass |
| 1230.24 MHz | -5.02 dB | 123.22 ° | -5.03 dB | 123.27 ° | 0.01 dB | -0.05 ° | 0.5 dB | 4 ° | Pass |
| 1260.24 MHz | -5.15 dB | 119.95 ° | -5.15 dB | 120.04 ° | 0.01 dB | -0.09 ° | 0.5 dB | 4 ° | Pass |
| 1290.24 MHz | -5.29 dB | 116.69 ° | -5.3 dB | 116.75 ° | 0 dB | -0.07 ° | 0.5 dB | 4 ° | Pass |
| 1320.23 MHz | -5.45 dB | 113.34 ° | -5.46 dB | 113.43 ° | 0.01 dB | -0.09 ° | 0.5 dB | 4 ° | Pass |
| 1350.23 MHz | -5.63 dB | 110 ° | -5.66 dB | 110.1 ° | 0.03 dB | -0.09 ° | 0.5 dB | 4 ° | Pass |
| 1380.23 MHz | -5.84 dB | 106.63 ° | -5.87 dB | 106.67 ° | 0.03 dB | -0.03 ° | 0.5 dB | 4 ° | Pass |
| 1410.23 MHz | -6.08 dB | 103.22 ° | -6.09 dB | 103.21 ° | 0.01 dB | 0.01 ° | 0.5 dB | 4 ° | Pass |
| 1440.23 MHz | -6.34 dB | 99.73 ° | -6.36 dB | 99.76 ° | 0.02 dB | -0.03 ° | 0.5 dB | 4 ° | Pass |
| 1470.23 MHz | -6.64 dB | 96.23 ° | -6.67 dB | 96.21 ° | 0.03 dB | 0.03 ° | 0.5 dB | 4 ° | Pass |
| 1500.23 MHz | -6.95 dB | 92.51 ° | -6.95 dB | 92.69 ° | 0 dB | -0.18 ° | 0.5 dB | 4 ° | Pass |
| 1530.22 MHz | -7.32 dB | 88.86 ° | -7.31 dB | 89.05 ° | -0.01 dB | -0.19 ° | 0.5 dB | 4 ° | Pass |
| 1560.22 MHz | -7.74 dB | 85.29 ° | -7.74 dB | 85.32 ° | 0.01 dB | -0.02 ° | 0.5 dB | 4 ° | Pass |
| 1590.22 MHz | -8.2 dB | 81.58 ° | -8.2 dB | 81.67 ° | -0.01 dB | -0.09 ° | 0.5 dB | 4 ° | Pass |
| 1620.22 MHz | -8.75 dB | 77.81 ° | -8.73 dB | 77.92 ° | -0.02 dB | -0.11 ° | 0.5 dB | 4 ° | Pass |
| 1650.22 MHz | -9.34 dB | 73.85 ° | -9.34 dB | 74.08 ° | -0.01 dB | -0.23 ° | 0.5 dB | 4 ° | Pass |
| 1680.22 MHz | -10.02 dB | 70.09 ° | -10.02 dB | 70.24 ° | 0 dB | -0.16 ° | 0.5 dB | 4 ° | Pass |
| 1710.21 MHz | -10.79 dB | 66.33 ° | -10.8 dB | 66.44 ° | 0.02 dB | -0.11 ° | 0.5 dB | 4 ° | Pass |
| 1740.21 MHz | -11.71 dB | 62.53 ° | -11.7 dB | 62.58 ° | -0.01 dB | -0.05 ° | 0.5 dB | 4 ° | Pass |
| 1770.21 MHz | -12.74 dB | 58.41 ° | -12.76 dB | 58.7 ° | 0.01 dB | -0.29 ° | 0.5 dB | 4 ° | Pass |
| 1800.21 MHz | -14 dB | 54.54 ° | -14.04 dB | 54.91 ° | 0.04 dB | -0.37 ° | 0.5 dB | 4 ° | Pass |
| 1830.21 MHz | -15.5 dB | 50.76 ° | -15.58 dB | 51.21 ° | 0.08 dB | -0.45 ° | 1 dB | 6 ° | Pass |
| 1860.21 MHz | -17.43 dB | 46.85 ° | -17.46 dB | 47.76 ° | 0.04 dB | -0.9 ° | 1 dB | 6 ° | Pass |
| 1890.21 MHz | -19.91 dB | 43.53 ° | -19.96 dB | 44.84 ° | 0.05 dB | -1.31 ° | 1 dB | 6 ° | Pass |
| 1920.2 MHz | -23.41 dB | 41.04 ° | -23.54 dB | 43.38 ° | 0.13 dB | -2.34 ° | 1 dB | 6 ° | Pass |
| 1950.2 MHz | -29.24 dB | 43.65 ° | -29.67 dB | 47.83 ° | 0.43 dB | -4.18 ° | 2.5 dB | 15 ° | Pass |
| 1980.2 MHz | -41.88 dB | 126.65 ° | -39.95 dB | 135.06 ° | -1.93 dB | -8.41 ° | 200 dB | 360 ° | Pass |
| 2010.2 MHz | -28.51 dB | -168.87 ° | -28.16 dB | -171.79 ° | -0.35 dB | 2.92 ° | 2.5 dB | 15 ° | Pass |
| 2040.2 MHz | -23 dB | -166.67 ° | -22.75 dB | -169.48 ° | -0.25 dB | 2.8 ° | 1 dB | 6 ° | Pass |
| 2070.2 MHz | -19.63 dB | -169.43 ° | -19.49 dB | -171.39 ° | -0.14 dB | 1.96 ° | 1 dB | 6 ° | Pass |
| 2100.2 MHz | -17.21 dB | -173.19 ° | -17.14 dB | -174.45 ° | -0.07 dB | 1.25 ° | 1 dB | 6 ° | Pass |
| 2130.19 MHz | -15.36 dB | -176.92 ° | -15.32 dB | -177.89 ° | -0.04 dB | 0.98 ° | 1 dB | 6 ° | Pass |
| 2160.19 MHz | -13.92 dB | 179.2 ° | -13.85 dB | 178.5 ° | -0.07 dB | 0.7 ° | 0.5 dB | 4 ° | Pass |
| 2190.19 MHz | -12.71 dB | 175.3 ° | -12.63 dB | 174.71 ° | -0.08 dB | 0.59 ° | 0.5 dB | 4 ° | Pass |
| 2220.19 MHz | -11.67 dB | 171.3 ° | -11.62 dB | 170.88 ° | -0.05 dB | 0.42 ° | 0.5 dB | 4 ° | Pass |
| 2250.19 MHz | -10.77 dB | 167.64 ° | -10.78 dB | 167.12 ° | 0.01 dB | 0.53 ° | 0.5 dB | 4 ° | Pass |
| 2280.19 MHz | -10.02 dB | 163.75 ° | -10.02 dB | 163.22 ° | 0 dB | 0.53 ° | 0.5 dB | 4 ° | Pass |
| 2310.18 MHz | -9.35 dB | 159.84 ° | -9.32 dB | 159.34 ° | -0.03 dB | 0.5 ° | 0.5 dB | 4 ° | Pass |
| 2340.18 MHz | -8.76 dB | 155.91 ° | -8.74 dB | 155.71 ° | -0.02 dB | 0.2 ° | 0.5 dB | 4 ° | Pass |
| 2370.18 MHz | -8.24 dB | 152.15 ° | -8.23 dB | 152.07 ° | -0.01 dB | 0.09 ° | 0.5 dB | 4 ° | Pass |
| 2400.18 MHz | -7.79 dB | 148.49 ° | -7.77 dB | 148.44 ° | -0.02 dB | 0.05 ° | 0.5 dB | 4 ° | Pass |
| 2430.18 MHz | -7.38 dB | 144.84 ° | -7.36 dB | 144.99 ° | -0.02 dB | -0.14 ° | 0.5 dB | 4 ° | Pass |
| 2460.18 MHz | -7.02 dB | 141.32 ° | -7.01 dB | 141.42 ° | -0.01 dB | -0.09 ° | 0.5 dB | 4 ° | Pass |
| 2490.18 MHz | -6.69 dB | 137.72 ° | -6.69 dB | 137.76 ° | 0 dB | -0.04 ° | 0.5 dB | 4 ° | Pass |
| 2520.17 MHz | -6.4 dB | 134.33 ° | -6.39 dB | 134.3 ° | -0.02 dB | 0.03 ° | 0.5 dB | 4 ° | Pass |
| 2550.17 MHz | -6.15 dB | 130.84 ° | -6.13 dB | 130.91 ° | -0.03 dB | -0.07 ° | 0.5 dB | 4 ° | Pass |
| 2580.17 MHz | -5.93 dB | 127.36 ° | -5.9 dB | 127.52 ° | -0.02 dB | -0.16 ° | 0.5 dB | 4 ° | Pass |
| 2610.17 MHz | -5.72 dB | 123.94 ° | -5.71 dB | 124.2 ° | -0.01 dB | -0.26 ° | 0.5 dB | 4 ° | Pass |
| 2640.17 MHz | -5.54 dB | 120.73 ° | -5.54 dB | 120.87 ° | 0 dB | -0.14 ° | 0.5 dB | 4 ° | Pass |
| 2670.17 MHz | -5.38 dB | 117.52 ° | -5.38 dB | 117.54 ° | 0 dB | -0.02 ° | 0.5 dB | 4 ° | Pass |
| 2700.17 MHz | -5.25 dB | 114.23 ° | -5.24 dB | 114.26 ° | -0.01 dB | -0.03 ° | 0.5 dB | 4 ° | Pass |
| 2730.16 MHz | -5.12 dB | 111.01 ° | -5.12 dB | 111.03 ° | -0.01 dB | -0.02 ° | 0.5 dB | 4 ° | Pass |
| 2760.16 MHz | -5.02 dB | 107.77 ° | -5.01 dB | 107.86 ° | -0.01 dB | -0.1 ° | 0.5 dB | 4 ° | Pass |
| 2790.16 MHz | -4.93 dB | 104.61 ° | -4.93 dB | 104.75 ° | 0 dB | -0.14 ° | 0.5 dB | 4 ° | Pass |
| 2820.16 MHz | -4.86 dB | 101.42 ° | -4.86 dB | 101.58 ° | 0 dB | -0.16 ° | 0.5 dB | 4 ° | Pass |
| 2850.16 MHz | -4.8 dB | 98.32 ° | -4.81 dB | 98.37 ° | 0 dB | -0.05 ° | 0.5 dB | 4 ° | Pass |
| 2880.16 MHz | -4.76 dB | 95.21 ° | -4.77 dB | 95.23 ° | 0.01 dB | -0.02 ° | 0.5 dB | 4 ° | Pass |
| 2910.15 MHz | -4.72 dB | 92.11 ° | -4.74 dB | 92.13 ° | 0.02 dB | -0.02 ° | 0.5 dB | 4 ° | Pass |
| 2940.15 MHz | -4.71 dB | 89.01 ° | -4.71 dB | 89.04 ° | 0 dB | -0.03 ° | 0.5 dB | 4 ° | Pass |
| 2970.15 MHz | -4.7 dB | 85.86 ° | -4.71 dB | 85.95 ° | 0.01 dB | -0.1 ° | 0.5 dB | 4 ° | Pass |
| 3000.15 MHz | -4.71 dB | 82.74 ° | -4.73 dB | 82.85 ° | 0.02 dB | -0.11 ° | 0.5 dB | 4 ° | Pass |

| Frequency MHz | Measurement | | Reference | | Measured Delta | | Specified Uncertainty TUL | | Test Verdict |
|------------------|-------------|-----------|-----------|-----------|----------------|-----------|---------------------------|-----------|-----------------|
| | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | |
| 3030.15 MHz | -4.73 dB | 79.6 ° | -4.76 dB | 79.72 ° | 0.03 dB | -0.12 ° | 0.5 dB | 4 ° | Pass |
| 3060.15 MHz | -4.77 dB | 76.51 ° | -4.78 dB | 76.6 ° | 0.02 dB | -0.09 ° | 0.5 dB | 4 ° | Pass |
| 3090.15 MHz | -4.82 dB | 73.39 ° | -4.83 dB | 73.48 ° | 0.01 dB | -0.09 ° | 0.5 dB | 4 ° | Pass |
| 3120.14 MHz | -4.87 dB | 70.26 ° | -4.89 dB | 70.38 ° | 0.01 dB | -0.12 ° | 0.5 dB | 4 ° | Pass |
| 3150.14 MHz | -4.94 dB | 67.1 ° | -4.97 dB | 67.31 ° | 0.03 dB | -0.2 ° | 0.5 dB | 4 ° | Pass |
| 3180.14 MHz | -5.03 dB | 63.93 ° | -5.07 dB | 64.19 ° | 0.04 dB | -0.26 ° | 0.5 dB | 4 ° | Pass |
| 3210.14 MHz | -5.14 dB | 60.68 ° | -5.18 dB | 61 ° | 0.04 dB | -0.32 ° | 0.5 dB | 4 ° | Pass |
| 3240.14 MHz | -5.26 dB | 57.42 ° | -5.29 dB | 57.78 ° | 0.03 dB | -0.36 ° | 0.5 dB | 4 ° | Pass |
| 3270.14 MHz | -5.39 dB | 54.18 ° | -5.43 dB | 54.53 ° | 0.04 dB | -0.35 ° | 0.5 dB | 4 ° | Pass |
| 3300.14 MHz | -5.54 dB | 51 ° | -5.59 dB | 51.26 ° | 0.04 dB | -0.26 ° | 0.5 dB | 4 ° | Pass |
| 3330.13 MHz | -5.73 dB | 47.73 ° | -5.76 dB | 48.04 ° | 0.03 dB | -0.32 ° | 0.5 dB | 4 ° | Pass |
| 3360.13 MHz | -5.94 dB | 44.38 ° | -5.97 dB | 44.77 ° | 0.03 dB | -0.39 ° | 0.5 dB | 4 ° | Pass |
| 3390.13 MHz | -6.16 dB | 40.96 ° | -6.2 dB | 41.34 ° | 0.04 dB | -0.38 ° | 0.5 dB | 4 ° | Pass |
| 3420.13 MHz | -6.41 dB | 37.59 ° | -6.46 dB | 37.78 ° | 0.05 dB | -0.19 ° | 0.5 dB | 4 ° | Pass |
| 3450.13 MHz | -6.7 dB | 34.16 ° | -6.75 dB | 34.3 ° | 0.05 dB | -0.14 ° | 0.5 dB | 4 ° | Pass |
| 3480.13 MHz | -7.02 dB | 30.7 ° | -7.07 dB | 30.92 ° | 0.05 dB | -0.22 ° | 0.5 dB | 4 ° | Pass |
| 3510.12 MHz | -7.38 dB | 27.19 ° | -7.42 dB | 27.41 ° | 0.05 dB | -0.22 ° | 0.5 dB | 4 ° | Pass |
| 3540.12 MHz | -7.78 dB | 23.61 ° | -7.84 dB | 23.78 ° | 0.05 dB | -0.17 ° | 0.5 dB | 4 ° | Pass |
| 3570.12 MHz | -8.22 dB | 20.06 ° | -8.31 dB | 20.13 ° | 0.08 dB | -0.07 ° | 0.5 dB | 4 ° | Pass |
| 3600.12 MHz | -8.74 dB | 16.47 ° | -8.82 dB | 16.56 ° | 0.08 dB | -0.09 ° | 0.5 dB | 4 ° | Pass |
| 3630.12 MHz | -9.32 dB | 12.83 ° | -9.4 dB | 12.95 ° | 0.08 dB | -0.12 ° | 0.5 dB | 4 ° | Pass |
| 3660.12 MHz | -9.98 dB | 9.09 ° | -10.07 dB | 9.25 ° | 0.09 dB | -0.17 ° | 0.5 dB | 4 ° | Pass |
| 3690.12 MHz | -10.72 dB | 5.41 ° | -10.85 dB | 5.58 ° | 0.12 dB | -0.16 ° | 0.5 dB | 4 ° | Pass |
| 3720.11 MHz | -11.59 dB | 1.94 ° | -11.73 dB | 1.95 ° | 0.14 dB | -0.01 ° | 0.5 dB | 4 ° | Pass |
| 3750.11 MHz | -12.6 dB | -1.44 ° | -12.73 dB | -1.56 ° | 0.13 dB | 0.12 ° | 0.5 dB | 4 ° | Pass |
| 3780.11 MHz | -13.8 dB | -4.79 ° | -13.94 dB | -4.87 ° | 0.14 dB | 0.08 ° | 0.5 dB | 4 ° | Pass |
| 3810.11 MHz | -15.25 dB | -8.05 ° | -15.41 dB | -7.9 ° | 0.16 dB | -0.15 ° | 1 dB | 6 ° | Pass |
| 3840.11 MHz | -17.02 dB | -11.07 ° | -17.21 dB | -10.5 ° | 0.19 dB | -0.57 ° | 1 dB | 6 ° | Pass |
| 3870.11 MHz | -19.26 dB | -13.34 ° | -19.51 dB | -12.24 ° | 0.26 dB | -1.1 ° | 1 dB | 6 ° | Pass |
| 3900.11 MHz | -22.33 dB | -13.95 ° | -22.69 dB | -11.61 ° | 0.35 dB | -2.35 ° | 1 dB | 6 ° | Pass |
| 3930.1 MHz | -26.98 dB | -7.86 ° | -27.53 dB | -3.08 ° | 0.55 dB | -4.79 ° | 2.5 dB | 15 ° | Pass |
| 3960.1 MHz | -33.93 dB | 33.58 ° | -33.74 dB | 44.23 ° | -0.19 dB | -10.64 ° | 200 dB | 360 ° | Pass |
| 3990.1 MHz | -29.6 dB | 105.56 ° | -28.88 dB | 105.93 ° | -0.72 dB | -0.37 ° | 2.5 dB | 15 ° | Pass |
| 4020.1 MHz | -23.92 dB | 119.19 ° | -23.58 dB | 118.33 ° | -0.35 dB | 0.86 ° | 1 dB | 6 ° | Pass |
| 4050.1 MHz | -20.42 dB | 121 ° | -20.13 dB | 119.86 ° | -0.28 dB | 1.14 ° | 1 dB | 6 ° | Pass |
| 4080.1 MHz | -17.87 dB | 119.59 ° | -17.69 dB | 118.57 ° | -0.18 dB | 1.02 ° | 1 dB | 6 ° | Pass |
| 4110.09 MHz | -15.93 dB | 116.93 ° | -15.82 dB | 116.23 ° | -0.11 dB | 0.7 ° | 1 dB | 6 ° | Pass |
| 4140.09 MHz | -14.38 dB | 113.86 ° | -14.31 dB | 113.33 ° | -0.07 dB | 0.52 ° | 0.5 dB | 4 ° | Pass |
| 4170.09 MHz | -13.11 dB | 110.45 ° | -13.06 dB | 110.1 ° | -0.06 dB | 0.35 ° | 0.5 dB | 4 ° | Pass |
| 4200.09 MHz | -12.03 dB | 106.87 ° | -11.99 dB | 106.68 ° | -0.03 dB | 0.18 ° | 0.5 dB | 4 ° | Pass |
| 4230.09 MHz | -11.09 dB | 103.21 ° | -11.09 dB | 103.16 ° | 0 dB | 0.05 ° | 0.5 dB | 4 ° | Pass |
| 4260.09 MHz | -10.3 dB | 99.63 ° | -10.31 dB | 99.61 ° | 0.01 dB | 0.02 ° | 0.5 dB | 4 ° | Pass |
| 4290.09 MHz | -9.62 dB | 96.02 ° | -9.61 dB | 96.01 ° | -0.01 dB | 0.01 ° | 0.5 dB | 4 ° | Pass |
| 4320.08 MHz | -9.01 dB | 92.36 ° | -9.01 dB | 92.31 ° | -0.01 dB | 0.04 ° | 0.5 dB | 4 ° | Pass |
| 4350.08 MHz | -8.46 dB | 88.72 ° | -8.46 dB | 88.68 ° | 0 dB | 0.04 ° | 0.5 dB | 4 ° | Pass |
| 4380.08 MHz | -7.98 dB | 85.12 ° | -7.99 dB | 85.12 ° | 0 dB | 0 ° | 0.5 dB | 4 ° | Pass |
| 4410.08 MHz | -7.56 dB | 81.53 ° | -7.57 dB | 81.55 ° | 0.01 dB | -0.02 ° | 0.5 dB | 4 ° | Pass |
| 4440.08 MHz | -7.19 dB | 77.99 ° | -7.19 dB | 78.16 ° | 0 dB | -0.17 ° | 0.5 dB | 4 ° | Pass |
| 4470.08 MHz | -6.85 dB | 74.5 ° | -6.86 dB | 74.87 ° | 0.01 dB | -0.37 ° | 0.5 dB | 4 ° | Pass |
| 4500.08 MHz | -6.55 dB | 71.1 ° | -6.57 dB | 71.39 ° | 0.02 dB | -0.29 ° | 0.5 dB | 4 ° | Pass |
| 4530.07 MHz | -6.28 dB | 67.73 ° | -6.3 dB | 67.92 ° | 0.02 dB | -0.2 ° | 0.5 dB | 4 ° | Pass |
| 4560.07 MHz | -6.05 dB | 64.36 ° | -6.06 dB | 64.57 ° | 0.01 dB | -0.21 ° | 0.5 dB | 4 ° | Pass |
| 4590.07 MHz | -5.83 dB | 61.01 ° | -5.85 dB | 61.23 ° | 0.02 dB | -0.23 ° | 0.5 dB | 4 ° | Pass |
| 4620.07 MHz | -5.63 dB | 57.73 ° | -5.66 dB | 57.94 ° | 0.03 dB | -0.21 ° | 0.5 dB | 4 ° | Pass |
| 4650.07 MHz | -5.46 dB | 54.48 ° | -5.49 dB | 54.72 ° | 0.03 dB | -0.24 ° | 0.5 dB | 4 ° | Pass |
| 4680.07 MHz | -5.32 dB | 51.29 ° | -5.34 dB | 51.52 ° | 0.03 dB | -0.23 ° | 0.5 dB | 4 ° | Pass |
| 4710.06 MHz | -5.2 dB | 48.07 ° | -5.22 dB | 48.29 ° | 0.02 dB | -0.22 ° | 0.5 dB | 4 ° | Pass |
| 4740.06 MHz | -5.09 dB | 44.84 ° | -5.12 dB | 45.05 ° | 0.03 dB | -0.2 ° | 0.5 dB | 4 ° | Pass |
| 4770.06 MHz | -4.99 dB | 41.69 ° | -5.02 dB | 41.92 ° | 0.04 dB | -0.23 ° | 0.5 dB | 4 ° | Pass |
| 4800.06 MHz | -4.91 dB | 38.6 ° | -4.94 dB | 38.82 ° | 0.03 dB | -0.21 ° | 0.5 dB | 4 ° | Pass |
| 4830.06 MHz | -4.84 dB | 35.49 ° | -4.87 dB | 35.69 ° | 0.04 dB | -0.2 ° | 0.5 dB | 4 ° | Pass |
| 4860.06 MHz | -4.79 dB | 32.38 ° | -4.82 dB | 32.61 ° | 0.03 dB | -0.24 ° | 0.5 dB | 4 ° | Pass |
| 4890.06 MHz | -4.75 dB | 29.24 ° | -4.79 dB | 29.55 ° | 0.03 dB | -0.31 ° | 0.5 dB | 4 ° | Pass |
| 4920.05 MHz | -4.73 dB | 26.2 ° | -4.77 dB | 26.47 ° | 0.04 dB | -0.27 ° | 0.5 dB | 4 ° | Pass |
| 4950.05 MHz | -4.72 dB | 23.09 ° | -4.75 dB | 23.37 ° | 0.04 dB | -0.28 ° | 0.5 dB | 4 ° | Pass |
| 4980.05 MHz | -4.71 dB | 20.05 ° | -4.75 dB | 20.29 ° | 0.04 dB | -0.23 ° | 0.5 dB | 4 ° | Pass |
| 5010.05 MHz | -4.72 dB | 16.93 ° | -4.77 dB | 17.22 ° | 0.04 dB | -0.29 ° | 0.5 dB | 4 ° | Pass |
| 5040.05 MHz | -4.75 dB | 13.93 ° | -4.79 dB | 14.16 ° | 0.04 dB | -0.23 ° | 0.5 dB | 4 ° | Pass |
| 5070.05 MHz | -4.79 dB | 10.81 ° | -4.83 dB | 11.07 ° | 0.04 dB | -0.26 ° | 0.5 dB | 4 ° | Pass |
| 5100.05 MHz | -4.85 dB | 7.69 ° | -4.89 dB | 7.95 ° | 0.04 dB | -0.26 ° | 0.5 dB | 4 ° | Pass |
| 5130.04 MHz | -4.91 dB | 4.59 ° | -4.96 dB | 4.82 ° | 0.04 dB | -0.23 ° | 0.5 dB | 4 ° | Pass |
| 5160.04 MHz | -4.99 dB | 1.44 ° | -5.03 dB | 1.69 ° | 0.04 dB | -0.24 ° | 0.5 dB | 4 ° | Pass |
| 5190.04 MHz | -5.09 dB | -1.71 ° | -5.13 dB | -1.47 ° | 0.04 dB | -0.24 ° | 0.5 dB | 4 ° | Pass |
| 5220.04 MHz | -5.2 dB | -4.93 ° | -5.24 dB | -4.68 ° | 0.04 dB | -0.26 ° | 0.5 dB | 4 ° | Pass |
| 5250.04 MHz | -5.32 dB | -8.12 ° | -5.38 dB | -7.85 ° | 0.06 dB | -0.27 ° | 0.5 dB | 4 ° | Pass |
| 5280.04 MHz | -5.47 dB | -11.33 ° | -5.53 dB | -11.02 ° | 0.06 dB | -0.32 ° | 0.5 dB | 4 ° | Pass |
| 5310.03 MHz | -5.64 dB | -14.61 ° | -5.69 dB | -14.28 ° | 0.05 dB | -0.32 ° | 0.5 dB | 4 ° | Pass |
| 5340.03 MHz | -5.82 dB | -17.92 ° | -5.88 dB | -17.6 ° | 0.06 dB | -0.33 ° | 0.5 dB | 4 ° | Pass |
| 5370.03 MHz | -6.03 dB | -21.27 ° | -6.1 dB | -20.92 ° | 0.08 dB | -0.35 ° | 0.5 dB | 4 ° | Pass |
| 5400.03 MHz | -6.28 dB | -24.51 ° | -6.34 dB | -24.24 ° | 0.07 dB | -0.27 ° | 0.5 dB | 4 ° | Pass |
| 5430.03 MHz | -6.55 dB | -27.86 ° | -6.62 dB | -27.61 ° | 0.06 dB | -0.26 ° | 0.5 dB | 4 ° | Pass |
| 5460.03 MHz | -6.87 dB | -31.28 ° | -6.93 dB | -31.05 ° | 0.06 dB | -0.23 ° | 0.5 dB | 4 ° | Pass |
| 5490.03 MHz | -7.19 dB | -34.8 ° | -7.28 dB | -34.57 ° | 0.08 dB | -0.23 ° | 0.5 dB | 4 ° | Pass |
| 5520.02 MHz | -7.57 dB | -38.28 ° | -7.66 dB | -38.06 ° | 0.09 dB | -0.22 ° | 0.5 dB | 4 ° | Pass |
| 5550.02 MHz | -8 dB | -41.75 ° | -8.09 dB | -41.56 ° | 0.08 dB | -0.19 ° | 0.5 dB | 4 ° | Pass |
| 5580.02 MHz | -8.5 dB | -45.33 ° | -8.57 dB | -45.27 ° | 0.07 dB | -0.05 ° | 0.5 dB | 4 ° | Pass |
| 5610.02 MHz | -9.05 dB | -48.9 ° | -9.12 dB | -48.92 ° | 0.07 dB | 0.02 ° | 0.5 dB | 4 ° | Pass |
| 5640.02 MHz | -9.67 dB | -52.46 ° | -9.75 dB | -52.43 ° | 0.08 dB | -0.02 ° | 0.5 dB | 4 ° | Pass |
| 5670.02 MHz | -10.38 dB | -55.92 ° | -10.47 dB | -56.03 ° | 0.09 dB | 0.1 ° | 0.5 dB | 4 ° | Pass |
| 5700.02 MHz | -11.2 dB | -59.48 ° | -11.28 dB | -59.59 ° | 0.09 dB | 0.11 ° | 0.5 dB | 4 ° | Pass |
| 5730.01 MHz | -12.13 dB | -63.04 ° | -12.22 dB | -63.05 ° | 0.09 dB | 0.01 ° | 0.5 dB | 4 ° | Pass |
| 5760.01 MHz | -13.22 dB | -66.41 ° | -13.32 dB | -66.45 ° | 0.1 dB | 0.04 ° | 0.5 dB | 4 ° | Pass |
| 5790.01 MHz | -14.54 dB | -69.5 ° | -14.64 dB | -69.62 ° | 0.11 dB | 0.13 ° | 0.5 dB | 4 ° | Pass |
| 5820.01 MHz | -16.15 dB | -72.17 ° | -16.25 dB | -72.33 ° | 0.1 dB | 0.16 ° | 1 dB | 6 ° | Pass |
| 5850.01 MHz | -18.17 dB | -74.14 ° | -18.24 dB | -74.3 ° | 0.07 dB | 0.16 ° | 1 dB | 6 ° | Pass |
| 5880.01 MHz | -20.82 dB | -74.45 ° | -20.86 dB | -74.7 ° | 0.05 dB | 0.25 ° | 1 dB | 6 ° | Pass |
| 5910 MHz | -24.55 dB | -70.34 ° | -24.66 dB | -70.94 ° | 0.11 dB | 0.6 ° | 1 dB | 6 ° | Pass |
| 5940 MHz | -30.18 dB | -49.39 ° | -30.5 dB | -50.06 ° | 0.32 dB | 0.67 ° | 200 dB | 360 ° | Pass |
| 5970 MHz | -31.57 dB | 18.67 ° | -31.65 dB | 19.21 ° | 0.08 dB | -0.53 ° | 200 dB | 360 ° | Pass |
| 6000 MHz | -25.6 dB | 48.4 ° | -25.7 dB | 48.81 ° | 0.1 dB | -0.42 ° | 2.5 dB | 15 ° | Pass |

| Frequency MHz | Measurement | | Reference | | Measured Delta | | Specified Uncertainty TUL | | Test Verdict |
|------------------|-------------|-----------|-----------|-----------|----------------|-----------|---------------------------|-----------|-----------------|
| | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | |
| 3030.15 MHz | -4.73 dB | 80.96 ° | -4.73 dB | 81.08 ° | 0.01 dB | -0.12 ° | 0.5 dB | 4 ° | Pass |
| 3060.15 MHz | -4.76 dB | 77.83 ° | -4.76 dB | 77.94 ° | 0 dB | -0.11 ° | 0.5 dB | 4 ° | Pass |
| 3090.15 MHz | -4.8 dB | 74.68 ° | -4.81 dB | 74.82 ° | 0 dB | -0.14 ° | 0.5 dB | 4 ° | Pass |
| 3120.14 MHz | -4.86 dB | 71.52 ° | -4.87 dB | 71.69 ° | 0.01 dB | -0.17 ° | 0.5 dB | 4 ° | Pass |
| 3150.14 MHz | -4.93 dB | 68.36 ° | -4.94 dB | 68.53 ° | 0.01 dB | -0.18 ° | 0.5 dB | 4 ° | Pass |
| 3180.14 MHz | -5.02 dB | 65.24 ° | -5.03 dB | 65.32 ° | 0 dB | -0.09 ° | 0.5 dB | 4 ° | Pass |
| 3210.14 MHz | -5.12 dB | 62.08 ° | -5.14 dB | 62.08 ° | 0.01 dB | 0 ° | 0.5 dB | 4 ° | Pass |
| 3240.14 MHz | -5.25 dB | 58.92 ° | -5.27 dB | 58.86 ° | 0.02 dB | 0.06 ° | 0.5 dB | 4 ° | Pass |
| 3270.14 MHz | -5.39 dB | 55.66 ° | -5.41 dB | 55.58 ° | 0.03 dB | 0.08 ° | 0.5 dB | 4 ° | Pass |
| 3300.14 MHz | -5.55 dB | 52.35 ° | -5.57 dB | 52.25 ° | 0.02 dB | 0.1 ° | 0.5 dB | 4 ° | Pass |
| 3330.13 MHz | -5.73 dB | 48.94 ° | -5.74 dB | 48.97 ° | 0.01 dB | -0.03 ° | 0.5 dB | 4 ° | Pass |
| 3360.13 MHz | -5.93 dB | 45.56 ° | -5.95 dB | 45.69 ° | 0.02 dB | -0.13 ° | 0.5 dB | 4 ° | Pass |
| 3390.13 MHz | -6.15 dB | 42.22 ° | -6.19 dB | 42.33 ° | 0.04 dB | -0.11 ° | 0.5 dB | 4 ° | Pass |
| 3420.13 MHz | -6.41 dB | 38.85 ° | -6.44 dB | 38.89 ° | 0.04 dB | -0.04 ° | 0.5 dB | 4 ° | Pass |
| 3450.13 MHz | -6.7 dB | 35.44 ° | -6.72 dB | 35.39 ° | 0.02 dB | 0.05 ° | 0.5 dB | 4 ° | Pass |
| 3480.13 MHz | -7.03 dB | 31.85 ° | -7.04 dB | 31.87 ° | 0.01 dB | -0.02 ° | 0.5 dB | 4 ° | Pass |
| 3510.12 MHz | -7.39 dB | 28.25 ° | -7.41 dB | 28.32 ° | 0.03 dB | -0.07 ° | 0.5 dB | 4 ° | Pass |
| 3540.12 MHz | -7.79 dB | 24.61 ° | -7.83 dB | 24.77 ° | 0.04 dB | -0.17 ° | 0.5 dB | 4 ° | Pass |
| 3570.12 MHz | -8.24 dB | 20.93 ° | -8.29 dB | 21.19 ° | 0.05 dB | -0.27 ° | 0.5 dB | 4 ° | Pass |
| 3600.12 MHz | -8.76 dB | 17.21 ° | -8.8 dB | 17.55 ° | 0.04 dB | -0.34 ° | 0.5 dB | 4 ° | Pass |
| 3630.12 MHz | -9.33 dB | 13.48 ° | -9.38 dB | 13.91 ° | 0.05 dB | -0.42 ° | 0.5 dB | 4 ° | Pass |
| 3660.12 MHz | -9.99 dB | 9.85 ° | -10.06 dB | 10.24 ° | 0.07 dB | -0.38 ° | 0.5 dB | 4 ° | Pass |
| 3690.12 MHz | -10.75 dB | 6.13 ° | -10.83 dB | 6.48 ° | 0.08 dB | -0.35 ° | 0.5 dB | 4 ° | Pass |
| 3720.11 MHz | -11.63 dB | 2.29 ° | -11.71 dB | 2.8 ° | 0.08 dB | -0.51 ° | 0.5 dB | 4 ° | Pass |
| 3750.11 MHz | -12.66 dB | -1.56 ° | -12.74 dB | -0.75 ° | 0.08 dB | -0.81 ° | 0.5 dB | 4 ° | Pass |
| 3780.11 MHz | -13.85 dB | -5.39 ° | -13.96 dB | -4.33 ° | 0.11 dB | -1.06 ° | 0.5 dB | 4 ° | Pass |
| 3810.11 MHz | -15.28 dB | -9.07 ° | -15.43 dB | -7.82 ° | 0.15 dB | -1.25 ° | 1 dB | 6 ° | Pass |
| 3840.11 MHz | -17.04 dB | -12.44 ° | -17.24 dB | -10.98 ° | 0.2 dB | -1.46 ° | 1 dB | 6 ° | Pass |
| 3870.11 MHz | -19.3 dB | -15.25 ° | -19.59 dB | -13.41 ° | 0.29 dB | -1.84 ° | 1 dB | 6 ° | Pass |
| 3900.11 MHz | -22.44 dB | -16.86 ° | -22.86 dB | -14.4 ° | 0.42 dB | -2.46 ° | 1 dB | 6 ° | Pass |
| 3930.1 MHz | -27.43 dB | -14.17 ° | -28.09 dB | -10.25 ° | 0.67 dB | -3.92 ° | 2.5 dB | 15 ° | Pass |
| 3960.1 MHz | -37.74 dB | 25.27 ° | -37.66 dB | 40.87 ° | -0.07 dB | -15.6 ° | 200 dB | 360 ° | Pass |
| 3990.1 MHz | -30.58 dB | 120.86 ° | -29.69 dB | 119.54 ° | -0.89 dB | 1.33 ° | 200 dB | 360 ° | Pass |
| 4020.1 MHz | -24.18 dB | 127.87 ° | -23.75 dB | 126.64 ° | -0.43 dB | 1.23 ° | 1 dB | 6 ° | Pass |
| 4050.1 MHz | -20.52 dB | 126.92 ° | -20.23 dB | 126.2 ° | -0.29 dB | 0.73 ° | 1 dB | 6 ° | Pass |
| 4080.1 MHz | -17.95 dB | 124.08 ° | -17.75 dB | 123.86 ° | -0.2 dB | 0.22 ° | 1 dB | 6 ° | Pass |
| 4110.09 MHz | -15.98 dB | 120.83 ° | -15.84 dB | 120.72 ° | -0.13 dB | 0.11 ° | 1 dB | 6 ° | Pass |
| 4140.09 MHz | -14.39 dB | 117.43 ° | -14.32 dB | 117.15 ° | -0.07 dB | 0.28 ° | 0.5 dB | 4 ° | Pass |
| 4170.09 MHz | -13.11 dB | 113.93 ° | -13.06 dB | 113.55 ° | -0.05 dB | 0.37 ° | 0.5 dB | 4 ° | Pass |
| 4200.09 MHz | -12.03 dB | 110.22 ° | -11.99 dB | 109.93 ° | -0.04 dB | 0.29 ° | 0.5 dB | 4 ° | Pass |
| 4230.09 MHz | -11.12 dB | 106.48 ° | -11.07 dB | 106.18 ° | -0.05 dB | 0.3 ° | 0.5 dB | 4 ° | Pass |
| 4260.09 MHz | -10.32 dB | 102.67 ° | -10.28 dB | 102.38 ° | -0.05 dB | 0.29 ° | 0.5 dB | 4 ° | Pass |
| 4290.09 MHz | -9.63 dB | 98.9 ° | -9.59 dB | 98.66 ° | -0.04 dB | 0.24 ° | 0.5 dB | 4 ° | Pass |
| 4320.08 MHz | -9.01 dB | 95.18 ° | -8.99 dB | 95.05 ° | -0.02 dB | 0.13 ° | 0.5 dB | 4 ° | Pass |
| 4350.08 MHz | -8.47 dB | 91.53 ° | -8.46 dB | 91.4 ° | -0.02 dB | 0.12 ° | 0.5 dB | 4 ° | Pass |
| 4380.08 MHz | -7.99 dB | 87.86 ° | -7.98 dB | 87.77 ° | -0.01 dB | 0.1 ° | 0.5 dB | 4 ° | Pass |
| 4410.08 MHz | -7.56 dB | 84.28 ° | -7.56 dB | 84.32 ° | 0 dB | -0.05 ° | 0.5 dB | 4 ° | Pass |
| 4440.08 MHz | -7.18 dB | 80.71 ° | -7.19 dB | 80.84 ° | 0.01 dB | -0.13 ° | 0.5 dB | 4 ° | Pass |
| 4470.08 MHz | -6.84 dB | 77.25 ° | -6.85 dB | 77.3 ° | 0 dB | -0.05 ° | 0.5 dB | 4 ° | Pass |
| 4500.08 MHz | -6.55 dB | 73.76 ° | -6.54 dB | 73.85 ° | 0 dB | -0.09 ° | 0.5 dB | 4 ° | Pass |
| 4530.07 MHz | -6.28 dB | 70.33 ° | -6.28 dB | 70.45 ° | 0 dB | -0.12 ° | 0.5 dB | 4 ° | Pass |
| 4560.07 MHz | -6.04 dB | 66.86 ° | -6.04 dB | 67.07 ° | 0 dB | -0.21 ° | 0.5 dB | 4 ° | Pass |
| 4590.07 MHz | -5.82 dB | 63.51 ° | -5.83 dB | 63.76 ° | 0.02 dB | -0.25 ° | 0.5 dB | 4 ° | Pass |
| 4620.07 MHz | -5.63 dB | 60.26 ° | -5.64 dB | 60.45 ° | 0.02 dB | -0.19 ° | 0.5 dB | 4 ° | Pass |
| 4650.07 MHz | -5.45 dB | 57.05 ° | -5.47 dB | 57.18 ° | 0.01 dB | -0.13 ° | 0.5 dB | 4 ° | Pass |
| 4680.07 MHz | -5.31 dB | 53.88 ° | -5.32 dB | 53.96 ° | 0.01 dB | -0.08 ° | 0.5 dB | 4 ° | Pass |
| 4710.06 MHz | -5.2 dB | 50.59 ° | -5.2 dB | 50.75 ° | 0.01 dB | -0.17 ° | 0.5 dB | 4 ° | Pass |
| 4740.06 MHz | -5.09 dB | 47.28 ° | -5.1 dB | 47.54 ° | 0.01 dB | -0.26 ° | 0.5 dB | 4 ° | Pass |
| 4770.06 MHz | -4.98 dB | 44.16 ° | -5 dB | 44.37 ° | 0.01 dB | -0.21 ° | 0.5 dB | 4 ° | Pass |
| 4800.06 MHz | -4.9 dB | 41.04 ° | -4.91 dB | 41.27 ° | 0.02 dB | -0.23 ° | 0.5 dB | 4 ° | Pass |
| 4830.06 MHz | -4.83 dB | 38.01 ° | -4.85 dB | 38.19 ° | 0.02 dB | -0.18 ° | 0.5 dB | 4 ° | Pass |
| 4860.06 MHz | -4.79 dB | 34.84 ° | -4.8 dB | 35.07 ° | 0.01 dB | -0.23 ° | 0.5 dB | 4 ° | Pass |
| 4890.06 MHz | -4.74 dB | 31.73 ° | -4.77 dB | 31.97 ° | 0.03 dB | -0.24 ° | 0.5 dB | 4 ° | Pass |
| 4920.05 MHz | -4.72 dB | 28.65 ° | -4.74 dB | 28.9 ° | 0.02 dB | -0.26 ° | 0.5 dB | 4 ° | Pass |
| 4950.05 MHz | -4.7 dB | 25.61 ° | -4.72 dB | 25.81 ° | 0.02 dB | -0.2 ° | 0.5 dB | 4 ° | Pass |
| 4980.05 MHz | -4.72 dB | 22.49 ° | -4.72 dB | 22.75 ° | 0 dB | -0.26 ° | 0.5 dB | 4 ° | Pass |
| 5010.05 MHz | -4.72 dB | 19.36 ° | -4.74 dB | 19.71 ° | 0.02 dB | -0.35 ° | 0.5 dB | 4 ° | Pass |
| 5040.05 MHz | -4.74 dB | 16.26 ° | -4.77 dB | 16.61 ° | 0.03 dB | -0.35 ° | 0.5 dB | 4 ° | Pass |
| 5070.05 MHz | -4.77 dB | 13.22 ° | -4.81 dB | 13.51 ° | 0.04 dB | -0.29 ° | 0.5 dB | 4 ° | Pass |
| 5100.05 MHz | -4.83 dB | 10.23 ° | -4.85 dB | 10.44 ° | 0.02 dB | -0.21 ° | 0.5 dB | 4 ° | Pass |
| 5130.04 MHz | -4.91 dB | 7.11 ° | -4.92 dB | 7.34 ° | 0.02 dB | -0.23 ° | 0.5 dB | 4 ° | Pass |
| 5160.04 MHz | -4.99 dB | 3.84 ° | -5.01 dB | 4.21 ° | 0.02 dB | -0.37 ° | 0.5 dB | 4 ° | Pass |
| 5190.04 MHz | -5.08 dB | 0.63 ° | -5.11 dB | 1.08 ° | 0.03 dB | -0.45 ° | 0.5 dB | 4 ° | Pass |
| 5220.04 MHz | -5.18 dB | -2.5 ° | -5.22 dB | -2.05 ° | 0.04 dB | -0.45 ° | 0.5 dB | 4 ° | Pass |
| 5250.04 MHz | -5.31 dB | -5.56 ° | -5.35 dB | -5.36 ° | 0.04 dB | -0.2 ° | 0.5 dB | 4 ° | Pass |
| 5280.04 MHz | -5.47 dB | -8.82 ° | -5.49 dB | -8.72 ° | 0.02 dB | -0.09 ° | 0.5 dB | 4 ° | Pass |
| 5310.03 MHz | -5.64 dB | -12.1 ° | -5.67 dB | -11.82 ° | 0.03 dB | -0.28 ° | 0.5 dB | 4 ° | Pass |
| 5340.03 MHz | -5.82 dB | -15.4 ° | -5.87 dB | -14.98 ° | 0.04 dB | -0.41 ° | 0.5 dB | 4 ° | Pass |
| 5370.03 MHz | -6.03 dB | -18.66 ° | -6.08 dB | -18.33 ° | 0.05 dB | -0.33 ° | 0.5 dB | 4 ° | Pass |
| 5400.03 MHz | -6.27 dB | -21.91 ° | -6.32 dB | -21.68 ° | 0.05 dB | -0.23 ° | 0.5 dB | 4 ° | Pass |
| 5430.03 MHz | -6.56 dB | -25.34 ° | -6.6 dB | -25.05 ° | 0.04 dB | -0.29 ° | 0.5 dB | 4 ° | Pass |
| 5460.03 MHz | -6.87 dB | -28.83 ° | -6.9 dB | -28.46 ° | 0.03 dB | -0.38 ° | 0.5 dB | 4 ° | Pass |
| 5490.03 MHz | -7.2 dB | -32.36 ° | -7.24 dB | -31.88 ° | 0.04 dB | -0.48 ° | 0.5 dB | 4 ° | Pass |
| 5520.02 MHz | -7.58 dB | -35.78 ° | -7.63 dB | -35.36 ° | 0.05 dB | -0.42 ° | 0.5 dB | 4 ° | Pass |
| 5550.02 MHz | -8.01 dB | -39.19 ° | -8.06 dB | -38.89 ° | 0.05 dB | -0.3 ° | 0.5 dB | 4 ° | Pass |
| 5580.02 MHz | -8.5 dB | -42.73 ° | -8.55 dB | -42.39 ° | 0.05 dB | -0.33 ° | 0.5 dB | 4 ° | Pass |
| 5610.02 MHz | -9.06 dB | -46.37 ° | -9.1 dB | -46 ° | 0.04 dB | -0.37 ° | 0.5 dB | 4 ° | Pass |
| 5640.02 MHz | -9.68 dB | -49.95 ° | -9.72 dB | -49.68 ° | 0.04 dB | -0.27 ° | 0.5 dB | 4 ° | Pass |
| 5670.02 MHz | -10.39 dB | -53.48 ° | -10.44 dB | -53.23 ° | 0.05 dB | -0.25 ° | 0.5 dB | 4 ° | Pass |
| 5700.02 MHz | -11.21 dB | -56.99 ° | -11.25 dB | -56.76 ° | 0.05 dB | -0.22 ° | 0.5 dB | 4 ° | Pass |
| 5730.01 MHz | -12.14 dB | -60.46 ° | -12.19 dB | -60.27 ° | 0.05 dB | -0.19 ° | 0.5 dB | 4 ° | Pass |
| 5760.01 MHz | -13.23 dB | -63.78 ° | -13.31 dB | -63.55 ° | 0.08 dB | -0.24 ° | 0.5 dB | 4 ° | Pass |
| 5790.01 MHz | -14.54 dB | -66.77 ° | -14.63 dB | -66.64 ° | 0.09 dB | -0.13 ° | 0.5 dB | 4 ° | Pass |
| 5820.01 MHz | -16.17 dB | -69.35 ° | -16.22 dB | -69.46 ° | 0.05 dB | 0.11 ° | 1 dB | 6 ° | Pass |
| 5850.01 MHz | -18.22 dB | -71.26 ° | -18.23 dB | -71.52 ° | 0.01 dB | 0.26 ° | 1 dB | 6 ° | Pass |
| 5880.01 MHz | -20.89 dB | -71.71 ° | -20.89 dB | -71.95 ° | 0 dB | 0.23 ° | 1 dB | 6 ° | Pass |
| 5910 MHz | -24.63 dB | -67.47 ° | -24.67 dB | -68.07 ° | 0.04 dB | 0.6 ° | 1 dB | 6 ° | Pass |
| 5940 MHz | -30.24 dB | -45.72 ° | -30.4 dB | -47.03 ° | 0.17 dB | 1.31 ° | 200 dB | 360 ° | Pass |
| 5970 MHz | -31.3 dB | 21.48 ° | -31.52 dB | 22.03 ° | 0.22 dB | -0.55 ° | 200 dB | 360 ° | Pass |
| 6000 MHz | -25.46 dB | 50.53 ° | -25.55 dB | 52.29 ° | 0.09 dB | -1.76 ° | 2.5 dB | 15 ° | Pass |

| Frequency MHz | Measurement | | Reference | | Measured Delta | | Specified Uncertainty TUL | | Test Verdict |
|------------------|-------------|-----------|-----------|-----------|----------------|-----------|---------------------------|-----------|-----------------|
| | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | |
| S21 Tests | | | | | | | | | |
| 0.3 MHz | 0 dB | -0.1 ° | 0 dB | -0.04 ° | 0 dB | -0.06 ° | 0.4 dB | 6 ° | Pass |
| 30.3 MHz | -0.01 dB | -4.51 ° | -0.02 dB | -4.42 ° | 0 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 60.3 MHz | -0.04 dB | -8.88 ° | -0.04 dB | -8.79 ° | 0 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 90.3 MHz | -0.06 dB | -13.23 ° | -0.07 dB | -13.13 ° | 0 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 120.29 MHz | -0.11 dB | -17.56 ° | -0.1 dB | -17.48 ° | 0 dB | -0.08 ° | 0.1 dB | 1 ° | Pass |
| 150.29 MHz | -0.15 dB | -21.86 ° | -0.16 dB | -21.79 ° | 0 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 180.29 MHz | -0.21 dB | -26.13 ° | -0.21 dB | -25.96 ° | 0 dB | -0.17 ° | 0.1 dB | 1 ° | Pass |
| 210.29 MHz | -0.28 dB | -30.29 ° | -0.27 dB | -30.18 ° | -0.01 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 240.29 MHz | -0.35 dB | -34.48 ° | -0.35 dB | -34.31 ° | -0.01 dB | -0.17 ° | 0.1 dB | 1 ° | Pass |
| 270.29 MHz | -0.43 dB | -38.57 ° | -0.43 dB | -38.48 ° | -0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 300.29 MHz | -0.52 dB | -42.67 ° | -0.51 dB | -42.49 ° | -0.01 dB | -0.18 ° | 0.1 dB | 1 ° | Pass |
| 330.28 MHz | -0.6 dB | -46.57 ° | -0.6 dB | -46.52 ° | 0 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |
| 360.28 MHz | -0.7 dB | -50.54 ° | -0.69 dB | -50.44 ° | -0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 390.28 MHz | -0.8 dB | -54.37 ° | -0.79 dB | -54.29 ° | 0 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 420.28 MHz | -0.89 dB | -58.24 ° | -0.9 dB | -58.11 ° | 0.01 dB | -0.13 ° | 0.1 dB | 1 ° | Pass |
| 450.28 MHz | -0.98 dB | -61.92 ° | -0.99 dB | -61.79 ° | 0.01 dB | -0.13 ° | 0.1 dB | 1 ° | Pass |
| 480.28 MHz | -1.08 dB | -65.62 ° | -1.08 dB | -65.45 ° | 0 dB | -0.17 ° | 0.1 dB | 1 ° | Pass |
| 510.27 MHz | -1.17 dB | -69.16 ° | -1.18 dB | -69.1 ° | 0 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 540.27 MHz | -1.28 dB | -72.84 ° | -1.27 dB | -72.61 ° | -0.01 dB | -0.23 ° | 0.1 dB | 1 ° | Pass |
| 570.27 MHz | -1.35 dB | -76.3 ° | -1.35 dB | -76.07 ° | 0 dB | -0.23 ° | 0.1 dB | 1 ° | Pass |
| 600.27 MHz | -1.44 dB | -79.77 ° | -1.43 dB | -79.54 ° | -0.01 dB | -0.22 ° | 0.1 dB | 1 ° | Pass |
| 630.27 MHz | -1.52 dB | -83.14 ° | -1.52 dB | -82.94 ° | 0 dB | -0.2 ° | 0.1 dB | 1 ° | Pass |
| 660.27 MHz | -1.61 dB | -86.55 ° | -1.6 dB | -86.28 ° | -0.01 dB | -0.27 ° | 0.1 dB | 1 ° | Pass |
| 690.27 MHz | -1.67 dB | -89.89 ° | -1.67 dB | -89.75 ° | 0 dB | -0.14 ° | 0.1 dB | 1 ° | Pass |
| 720.26 MHz | -1.74 dB | -93.17 ° | -1.74 dB | -92.93 ° | 0 dB | -0.24 ° | 0.1 dB | 1 ° | Pass |
| 750.26 MHz | -1.79 dB | -96.36 ° | -1.79 dB | -96.21 ° | 0 dB | -0.16 ° | 0.1 dB | 1 ° | Pass |
| 780.26 MHz | -1.86 dB | -99.63 ° | -1.86 dB | -99.42 ° | 0 dB | -0.21 ° | 0.1 dB | 1 ° | Pass |
| 810.26 MHz | -1.91 dB | -102.82 ° | -1.89 dB | -102.58 ° | -0.02 dB | -0.24 ° | 0.1 dB | 1 ° | Pass |
| 840.26 MHz | -1.94 dB | -106.04 ° | -1.92 dB | -105.81 ° | -0.02 dB | -0.23 ° | 0.1 dB | 1 ° | Pass |
| 870.26 MHz | -1.97 dB | -109.11 ° | -1.97 dB | -109.11 ° | 0 dB | 0 ° | 0.1 dB | 1 ° | Pass |
| 900.26 MHz | -2.01 dB | -112.3 ° | -2.01 dB | -112.22 ° | -0.01 dB | -0.08 ° | 0.1 dB | 1 ° | Pass |
| 930.25 MHz | -2.03 dB | -115.43 ° | -2.02 dB | -115.38 ° | 0 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 960.25 MHz | -2.05 dB | -118.64 ° | -2.04 dB | -118.47 ° | 0 dB | -0.17 ° | 0.1 dB | 1 ° | Pass |
| 990.25 MHz | -2.04 dB | -121.7 ° | -2.04 dB | -121.5 ° | -0.01 dB | -0.2 ° | 0.1 dB | 1 ° | Pass |
| 1020.25 MHz | -2.05 dB | -124.79 ° | -2.03 dB | -124.63 ° | -0.02 dB | -0.15 ° | 0.1 dB | 1 ° | Pass |
| 1050.25 MHz | -2.04 dB | -127.92 ° | -2.03 dB | -127.8 ° | -0.01 dB | -0.12 ° | 0.1 dB | 1 ° | Pass |
| 1080.25 MHz | -2.02 dB | -131.12 ° | -2.01 dB | -130.92 ° | -0.01 dB | -0.2 ° | 0.1 dB | 1 ° | Pass |
| 1110.24 MHz | -1.99 dB | -134.32 ° | -1.99 dB | -134.02 ° | 0 dB | -0.3 ° | 0.1 dB | 1 ° | Pass |
| 1140.24 MHz | -1.97 dB | -137.39 ° | -1.97 dB | -137.26 ° | 0 dB | -0.14 ° | 0.1 dB | 1 ° | Pass |
| 1170.24 MHz | -1.93 dB | -140.57 ° | -1.93 dB | -140.44 ° | 0 dB | -0.13 ° | 0.1 dB | 1 ° | Pass |
| 1200.24 MHz | -1.89 dB | -143.79 ° | -1.88 dB | -143.58 ° | -0.01 dB | -0.21 ° | 0.1 dB | 1 ° | Pass |
| 1230.24 MHz | -1.84 dB | -147.03 ° | -1.84 dB | -146.84 ° | 0.01 dB | -0.19 ° | 0.1 dB | 1 ° | Pass |
| 1260.24 MHz | -1.78 dB | -150.3 ° | -1.79 dB | -150.04 ° | 0.01 dB | -0.26 ° | 0.1 dB | 1 ° | Pass |
| 1290.24 MHz | -1.72 dB | -153.55 ° | -1.71 dB | -153.29 ° | 0 dB | -0.25 ° | 0.1 dB | 1 ° | Pass |
| 1320.23 MHz | -1.66 dB | -156.86 ° | -1.65 dB | -156.75 ° | -0.01 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 1350.23 MHz | -1.59 dB | -160.25 ° | -1.59 dB | -160.07 ° | -0.01 dB | -0.18 ° | 0.1 dB | 1 ° | Pass |
| 1380.23 MHz | -1.52 dB | -163.66 ° | -1.51 dB | -163.41 ° | -0.01 dB | -0.25 ° | 0.1 dB | 1 ° | Pass |
| 1410.23 MHz | -1.44 dB | -167.11 ° | -1.45 dB | -166.9 ° | 0.01 dB | -0.21 ° | 0.1 dB | 1 ° | Pass |
| 1440.23 MHz | -1.35 dB | -170.59 ° | -1.36 dB | -170.39 ° | 0.01 dB | -0.2 ° | 0.1 dB | 1 ° | Pass |
| 1470.23 MHz | -1.27 dB | -174.16 ° | -1.27 dB | -173.84 ° | 0 dB | -0.32 ° | 0.1 dB | 1 ° | Pass |
| 1500.23 MHz | -1.18 dB | -177.83 ° | -1.18 dB | -177.72 ° | 0 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 1530.22 MHz | -1.08 dB | 178.49 ° | -1.09 dB | 178.63 ° | 0.01 dB | -0.14 ° | 0.1 dB | 1 ° | Pass |
| 1560.22 MHz | -1 dB | 174.8 ° | -1.01 dB | 175.01 ° | 0.01 dB | -0.2 ° | 0.1 dB | 1 ° | Pass |
| 1590.22 MHz | -0.91 dB | 171.04 ° | -0.92 dB | 171.16 ° | 0.01 dB | -0.12 ° | 0.1 dB | 1 ° | Pass |
| 1620.22 MHz | -0.82 dB | 167.19 ° | -0.83 dB | 167.32 ° | 0.01 dB | -0.14 ° | 0.1 dB | 1 ° | Pass |
| 1650.22 MHz | -0.73 dB | 163.28 ° | -0.74 dB | 163.42 ° | 0.01 dB | -0.14 ° | 0.1 dB | 1 ° | Pass |
| 1680.22 MHz | -0.65 dB | 159.34 ° | -0.66 dB | 159.45 ° | 0.01 dB | -0.1 ° | 0.1 dB | 1 ° | Pass |
| 1710.21 MHz | -0.58 dB | 155.34 ° | -0.59 dB | 155.49 ° | 0.01 dB | -0.15 ° | 0.1 dB | 1 ° | Pass |
| 1740.21 MHz | -0.5 dB | 151.26 ° | -0.51 dB | 151.42 ° | 0.01 dB | -0.16 ° | 0.1 dB | 1 ° | Pass |
| 1770.21 MHz | -0.44 dB | 147.15 ° | -0.44 dB | 147.26 ° | 0 dB | -0.1 ° | 0.1 dB | 1 ° | Pass |
| 1800.21 MHz | -0.38 dB | 142.98 ° | -0.38 dB | 143.1 ° | 0.01 dB | -0.12 ° | 0.1 dB | 1 ° | Pass |
| 1830.21 MHz | -0.32 dB | 138.79 ° | -0.33 dB | 138.88 ° | 0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 1860.21 MHz | -0.28 dB | 134.55 ° | -0.29 dB | 134.61 ° | 0.01 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 1890.21 MHz | -0.25 dB | 130.25 ° | -0.26 dB | 130.38 ° | 0.01 dB | -0.13 ° | 0.1 dB | 1 ° | Pass |
| 1920.2 MHz | -0.22 dB | 125.94 ° | -0.24 dB | 126.08 ° | 0.02 dB | -0.14 ° | 0.1 dB | 1 ° | Pass |
| 1950.2 MHz | -0.21 dB | 121.65 ° | -0.23 dB | 121.72 ° | 0.01 dB | -0.08 ° | 0.1 dB | 1 ° | Pass |
| 1980.2 MHz | -0.21 dB | 117.31 ° | -0.22 dB | 117.43 ° | 0.01 dB | -0.12 ° | 0.1 dB | 1 ° | Pass |
| 2010.2 MHz | -0.21 dB | 113.02 ° | -0.23 dB | 113.11 ° | 0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 2040.2 MHz | -0.23 dB | 108.66 ° | -0.25 dB | 108.77 ° | 0.01 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 2070.2 MHz | -0.26 dB | 104.41 ° | -0.27 dB | 104.53 ° | 0.01 dB | -0.12 ° | 0.1 dB | 1 ° | Pass |
| 2100.2 MHz | -0.3 dB | 100.11 ° | -0.32 dB | 100.26 ° | 0.01 dB | -0.15 ° | 0.1 dB | 1 ° | Pass |
| 2130.19 MHz | -0.35 dB | 95.88 ° | -0.37 dB | 95.97 ° | 0.02 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 2160.19 MHz | -0.4 dB | 91.66 ° | -0.42 dB | 91.79 ° | 0.01 dB | -0.13 ° | 0.1 dB | 1 ° | Pass |
| 2190.19 MHz | -0.47 dB | 87.5 ° | -0.48 dB | 87.65 ° | 0.01 dB | -0.15 ° | 0.1 dB | 1 ° | Pass |
| 2220.19 MHz | -0.54 dB | 83.42 ° | -0.55 dB | 83.54 ° | 0.01 dB | -0.12 ° | 0.1 dB | 1 ° | Pass |
| 2250.19 MHz | -0.61 dB | 79.34 ° | -0.63 dB | 79.53 ° | 0.02 dB | -0.19 ° | 0.1 dB | 1 ° | Pass |
| 2280.19 MHz | -0.69 dB | 75.34 ° | -0.72 dB | 75.54 ° | 0.03 dB | -0.2 ° | 0.1 dB | 1 ° | Pass |
| 2310.18 MHz | -0.78 dB | 71.4 ° | -0.8 dB | 71.55 ° | 0.01 dB | -0.15 ° | 0.1 dB | 1 ° | Pass |
| 2340.18 MHz | -0.87 dB | 67.5 ° | -0.88 dB | 67.68 ° | 0.01 dB | -0.18 ° | 0.1 dB | 1 ° | Pass |
| 2370.18 MHz | -0.96 dB | 63.73 ° | -0.97 dB | 63.86 ° | 0.01 dB | -0.13 ° | 0.1 dB | 1 ° | Pass |
| 2400.18 MHz | -1.05 dB | 59.89 ° | -1.06 dB | 60.08 ° | 0.01 dB | -0.19 ° | 0.1 dB | 1 ° | Pass |
| 2430.18 MHz | -1.14 dB | 56.23 ° | -1.16 dB | 56.39 ° | 0.02 dB | -0.16 ° | 0.1 dB | 1 ° | Pass |
| 2460.18 MHz | -1.23 dB | 52.54 ° | -1.25 dB | 52.74 ° | 0.02 dB | -0.2 ° | 0.1 dB | 1 ° | Pass |
| 2490.18 MHz | -1.32 dB | 48.95 ° | -1.33 dB | 49.12 ° | 0.02 dB | -0.17 ° | 0.1 dB | 1 ° | Pass |
| 2520.17 MHz | -1.41 dB | 45.43 ° | -1.42 dB | 45.58 ° | 0.01 dB | -0.14 ° | 0.1 dB | 1 ° | Pass |
| 2550.17 MHz | -1.49 dB | 41.91 ° | -1.5 dB | 42.09 ° | 0.01 dB | -0.19 ° | 0.1 dB | 1 ° | Pass |
| 2580.17 MHz | -1.57 dB | 38.48 ° | -1.58 dB | 38.66 ° | 0.01 dB | -0.18 ° | 0.1 dB | 1 ° | Pass |
| 2610.17 MHz | -1.65 dB | 35.05 ° | -1.66 dB | 35.27 ° | 0.01 dB | -0.21 ° | 0.1 dB | 1 ° | Pass |
| 2640.17 MHz | -1.72 dB | 31.72 ° | -1.73 dB | 31.9 ° | 0.01 dB | -0.18 ° | 0.1 dB | 1 ° | Pass |
| 2670.17 MHz | -1.79 dB | 28.4 ° | -1.8 dB | 28.55 ° | 0.01 dB | -0.15 ° | 0.1 dB | 1 ° | Pass |
| 2700.17 MHz | -1.85 dB | 25.08 ° | -1.86 dB | 25.24 ° | 0.01 dB | -0.15 ° | 0.1 dB | 1 ° | Pass |
| 2730.16 MHz | -1.91 dB | 21.82 ° | -1.91 dB | 22 ° | 0.01 dB | -0.18 ° | 0.1 dB | 1 ° | Pass |
| 2760.16 MHz | -1.96 dB | 18.59 ° | -1.96 dB | 18.8 ° | 0 dB | -0.21 ° | 0.1 dB | 1 ° | Pass |
| 2790.16 MHz | -2 dB | 15.4 ° | -2.01 dB | 15.58 ° | 0.01 dB | -0.18 ° | 0.1 dB | 1 ° | Pass |
| 2820.16 MHz | -2.04 dB | 12.22 ° | -2.05 dB | 12.38 ° | 0.01 dB | -0.16 ° | 0.1 dB | 1 ° | Pass |
| 2850.16 MHz | -2.07 dB | 9.03 ° | -2.08 dB | 9.2 ° | 0.01 dB | -0.18 ° | 0.1 dB | 1 ° | Pass |
| 2880.16 MHz | -2.1 dB | 5.86 ° | -2.1 dB | 6.03 ° | 0 dB | -0.16 ° | 0.1 dB | 1 ° | Pass |
| 2910.15 MHz | -2.11 dB | 2.72 ° | -2.11 dB | 2.89 ° | 0 dB | -0.17 ° | 0.1 dB | 1 ° | Pass |
| 2940.15 MHz | -2.12 dB | -0.42 ° | -2.12 dB | -0.23 ° | 0 dB | -0.2 ° | 0.1 dB | 1 ° | Pass |
| 2970.15 MHz | -2.13 dB | -3.53 ° | -2.13 dB | -3.39 ° | 0 dB | -0.14 ° | 0.1 dB | 1 ° | Pass |
| 3000.15 MHz | -2.13 dB | -6.69 ° | -2.13 dB | -6.54 ° | 0 dB | -0.14 ° | 0.1 dB | 1 ° | Pass |



| Frequency MHz | Measurement | | Reference | | Measured Delta | | Specified Uncertainty TUL | | Test Verdict |
|------------------|-------------|-----------|-----------|-----------|----------------|-----------|---------------------------|-----------|-----------------|
| | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | |
| 3030.15 MHz | -2.12 dB | -9.83 ° | -2.12 dB | -9.69 ° | 0 dB | -0.14 ° | 0.1 dB | 1 ° | Pass |
| 3060.15 MHz | -2.11 dB | -12.99 ° | -2.1 dB | -12.99 ° | -0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 3090.15 MHz | -2.08 dB | -16.16 ° | -2.07 dB | -16.05 ° | -0.01 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 3120.14 MHz | -2.06 dB | -19.34 ° | -2.05 dB | -19.16 ° | -0.01 dB | -0.18 ° | 0.1 dB | 1 ° | Pass |
| 3150.14 MHz | -2.02 dB | -22.54 ° | -2.01 dB | -22.37 ° | -0.01 dB | -0.17 ° | 0.1 dB | 1 ° | Pass |
| 3180.14 MHz | -1.98 dB | -25.75 ° | -1.97 dB | -25.61 ° | -0.01 dB | -0.13 ° | 0.1 dB | 1 ° | Pass |
| 3210.14 MHz | -1.93 dB | -28.98 ° | -1.93 dB | -28.87 ° | 0 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 3240.14 MHz | -1.88 dB | -32.21 ° | -1.87 dB | -32.15 ° | -0.01 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 3270.14 MHz | -1.82 dB | -35.54 ° | -1.81 dB | -35.42 ° | -0.01 dB | -0.12 ° | 0.1 dB | 1 ° | Pass |
| 3300.14 MHz | -1.75 dB | -38.83 ° | -1.75 dB | -38.73 ° | -0.01 dB | -0.1 ° | 0.1 dB | 1 ° | Pass |
| 3330.13 MHz | -1.69 dB | -42.25 ° | -1.68 dB | -42.16 ° | -0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 3360.13 MHz | -1.62 dB | -45.66 ° | -1.61 dB | -45.58 ° | -0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 3390.13 MHz | -1.53 dB | -49.09 ° | -1.53 dB | -48.99 ° | 0 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 3420.13 MHz | -1.46 dB | -52.58 ° | -1.45 dB | -52.53 ° | -0.01 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |
| 3450.13 MHz | -1.37 dB | -56.12 ° | -1.37 dB | -56.07 ° | -0.01 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |
| 3480.13 MHz | -1.29 dB | -59.75 ° | -1.29 dB | -59.63 ° | 0 dB | -0.12 ° | 0.1 dB | 1 ° | Pass |
| 3510.12 MHz | -1.2 dB | -63.38 ° | -1.2 dB | -63.31 ° | 0 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 3540.12 MHz | -1.12 dB | -67.1 ° | -1.12 dB | -67.03 ° | 0 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 3570.12 MHz | -1.03 dB | -70.86 ° | -1.03 dB | -70.78 ° | 0 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 3600.12 MHz | -0.95 dB | -74.68 ° | -0.94 dB | -74.63 ° | 0 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |
| 3630.12 MHz | -0.86 dB | -78.56 ° | -0.86 dB | -78.49 ° | -0.01 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 3660.12 MHz | -0.78 dB | -82.48 ° | -0.78 dB | -82.4 ° | 0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 3690.12 MHz | -0.7 dB | -86.46 ° | -0.71 dB | -86.43 ° | 0 dB | -0.03 ° | 0.1 dB | 1 ° | Pass |
| 3720.11 MHz | -0.63 dB | -90.5 ° | -0.63 dB | -90.5 ° | 0 dB | -0.01 ° | 0.1 dB | 1 ° | Pass |
| 3750.11 MHz | -0.57 dB | -94.62 ° | -0.57 dB | -94.57 ° | 0.01 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |
| 3780.11 MHz | -0.51 dB | -98.76 ° | -0.51 dB | -98.72 ° | 0.01 dB | -0.04 ° | 0.1 dB | 1 ° | Pass |
| 3810.11 MHz | -0.45 dB | -102.95 ° | -0.46 dB | -102.89 ° | 0.01 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 3840.11 MHz | -0.41 dB | -107.17 ° | -0.41 dB | -107.1 ° | 0.01 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 3870.11 MHz | -0.37 dB | -111.41 ° | -0.38 dB | -111.37 ° | 0.01 dB | -0.04 ° | 0.1 dB | 1 ° | Pass |
| 3900.11 MHz | -0.35 dB | -115.69 ° | -0.36 dB | -115.66 ° | 0.01 dB | -0.02 ° | 0.1 dB | 1 ° | Pass |
| 3930.1 MHz | -0.33 dB | -119.95 ° | -0.35 dB | -119.93 ° | 0.01 dB | -0.02 ° | 0.1 dB | 1 ° | Pass |
| 3960.1 MHz | -0.33 dB | -124.28 ° | -0.34 dB | -124.21 ° | 0.01 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 3990.1 MHz | -0.33 dB | -128.58 ° | -0.34 dB | -128.49 ° | 0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 4020.1 MHz | -0.35 dB | -132.86 ° | -0.36 dB | -132.78 ° | 0.01 dB | -0.08 ° | 0.1 dB | 1 ° | Pass |
| 4050.1 MHz | -0.37 dB | -137.12 ° | -0.39 dB | -137.06 ° | 0.01 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 4080.1 MHz | -0.4 dB | -141.38 ° | -0.42 dB | -141.31 ° | 0.01 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 4110.09 MHz | -0.45 dB | -145.62 ° | -0.46 dB | -145.52 ° | 0.02 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 4140.09 MHz | -0.5 dB | -149.81 ° | -0.52 dB | -149.7 ° | 0.01 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 4170.09 MHz | -0.57 dB | -153.97 ° | -0.57 dB | -153.84 ° | 0.01 dB | -0.13 ° | 0.1 dB | 1 ° | Pass |
| 4200.09 MHz | -0.63 dB | -158.08 ° | -0.63 dB | -157.93 ° | 0.01 dB | -0.15 ° | 0.1 dB | 1 ° | Pass |
| 4230.09 MHz | -0.7 dB | -162.11 ° | -0.71 dB | -161.99 ° | 0.02 dB | -0.13 ° | 0.1 dB | 1 ° | Pass |
| 4260.09 MHz | -0.78 dB | -166.11 ° | -0.79 dB | -165.99 ° | 0.02 dB | -0.12 ° | 0.1 dB | 1 ° | Pass |
| 4290.09 MHz | -0.86 dB | -170.07 ° | -0.87 dB | -169.92 ° | 0.01 dB | -0.14 ° | 0.1 dB | 1 ° | Pass |
| 4320.08 MHz | -0.95 dB | -173.97 ° | -0.95 dB | -173.81 ° | 0.01 dB | -0.17 ° | 0.1 dB | 1 ° | Pass |
| 4350.08 MHz | -1.03 dB | -177.83 ° | -1.04 dB | -177.64 ° | 0.01 dB | -0.19 ° | 0.1 dB | 1 ° | Pass |
| 4380.08 MHz | -1.12 dB | 178.41 ° | -1.12 dB | 178.58 ° | 0 dB | -0.17 ° | 0.1 dB | 1 ° | Pass |
| 4410.08 MHz | -1.21 dB | 174.71 ° | -1.22 dB | 174.84 ° | 0.01 dB | -0.14 ° | 0.1 dB | 1 ° | Pass |
| 4440.08 MHz | -1.3 dB | 171.02 ° | -1.3 dB | 171.17 ° | 0 dB | -0.15 ° | 0.1 dB | 1 ° | Pass |
| 4470.08 MHz | -1.38 dB | 167.41 ° | -1.39 dB | 167.57 ° | 0 dB | -0.16 ° | 0.1 dB | 1 ° | Pass |
| 4500.08 MHz | -1.47 dB | 163.84 ° | -1.48 dB | 164.02 ° | 0.01 dB | -0.17 ° | 0.1 dB | 1 ° | Pass |
| 4530.07 MHz | -1.55 dB | 160.34 ° | -1.55 dB | 160.49 ° | 0 dB | -0.15 ° | 0.1 dB | 1 ° | Pass |
| 4560.07 MHz | -1.63 dB | 156.89 ° | -1.63 dB | 157.01 ° | 0 dB | -0.12 ° | 0.1 dB | 1 ° | Pass |
| 4590.07 MHz | -1.71 dB | 153.48 ° | -1.71 dB | 153.59 ° | 0 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 4620.07 MHz | -1.78 dB | 150.06 ° | -1.78 dB | 150.23 ° | 0 dB | -0.16 ° | 0.1 dB | 1 ° | Pass |
| 4650.07 MHz | -1.85 dB | 146.74 ° | -1.84 dB | 146.91 ° | -0.01 dB | -0.17 ° | 0.1 dB | 1 ° | Pass |
| 4680.07 MHz | -1.91 dB | 143.45 ° | -1.91 dB | 143.57 ° | 0 dB | -0.12 ° | 0.1 dB | 1 ° | Pass |
| 4710.06 MHz | -1.96 dB | 140.19 ° | -1.96 dB | 140.27 ° | 0 dB | -0.08 ° | 0.1 dB | 1 ° | Pass |
| 4740.06 MHz | -2.02 dB | 136.91 ° | -2.01 dB | 137.05 ° | -0.01 dB | -0.14 ° | 0.1 dB | 1 ° | Pass |
| 4770.06 MHz | -2.06 dB | 133.66 ° | -2.06 dB | 133.83 ° | -0.01 dB | -0.17 ° | 0.1 dB | 1 ° | Pass |
| 4800.06 MHz | -2.1 dB | 130.48 ° | -2.1 dB | 130.61 ° | -0.01 dB | -0.13 ° | 0.1 dB | 1 ° | Pass |
| 4830.06 MHz | -2.14 dB | 127.32 ° | -2.13 dB | 127.41 ° | -0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 4860.06 MHz | -2.16 dB | 124.13 ° | -2.16 dB | 124.23 ° | 0 dB | -0.1 ° | 0.1 dB | 1 ° | Pass |
| 4890.06 MHz | -2.18 dB | 120.99 ° | -2.18 dB | 121.06 ° | 0 dB | -0.08 ° | 0.1 dB | 1 ° | Pass |
| 4920.05 MHz | -2.19 dB | 117.8 ° | -2.19 dB | 117.91 ° | -0.01 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 4950.05 MHz | -2.2 dB | 114.72 ° | -2.2 dB | 114.75 ° | 0 dB | -0.04 ° | 0.1 dB | 1 ° | Pass |
| 4980.05 MHz | -2.2 dB | 111.54 ° | -2.2 dB | 111.61 ° | 0 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 5010.05 MHz | -2.19 dB | 108.39 ° | -2.19 dB | 108.47 ° | 0 dB | -0.08 ° | 0.1 dB | 1 ° | Pass |
| 5040.05 MHz | -2.18 dB | 105.23 ° | -2.18 dB | 105.31 ° | -0.01 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 5070.05 MHz | -2.16 dB | 102.07 ° | -2.16 dB | 102.12 ° | 0 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |
| 5100.05 MHz | -2.14 dB | 98.95 ° | -2.13 dB | 98.95 ° | -0.01 dB | 0 ° | 0.1 dB | 1 ° | Pass |
| 5130.04 MHz | -2.1 dB | 95.71 ° | -2.1 dB | 95.76 ° | 0 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |
| 5160.04 MHz | -2.05 dB | 92.51 ° | -2.06 dB | 92.56 ° | 0 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 5190.04 MHz | -2.02 dB | 89.26 ° | -2.01 dB | 89.36 ° | -0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 5220.04 MHz | -1.97 dB | 86.03 ° | -1.97 dB | 86.07 ° | 0 dB | -0.04 ° | 0.1 dB | 1 ° | Pass |
| 5250.04 MHz | -1.92 dB | 82.79 ° | -1.92 dB | 82.74 ° | 0 dB | 0.04 ° | 0.1 dB | 1 ° | Pass |
| 5280.04 MHz | -1.85 dB | 79.38 ° | -1.85 dB | 79.42 ° | -0.01 dB | -0.04 ° | 0.1 dB | 1 ° | Pass |
| 5310.03 MHz | -1.78 dB | 76.06 ° | -1.78 dB | 76.08 ° | 0 dB | -0.02 ° | 0.1 dB | 1 ° | Pass |
| 5340.03 MHz | -1.72 dB | 72.73 ° | -1.71 dB | 72.7 ° | -0.01 dB | 0.03 ° | 0.1 dB | 1 ° | Pass |
| 5370.03 MHz | -1.65 dB | 69.32 ° | -1.64 dB | 69.26 ° | -0.01 dB | 0.07 ° | 0.1 dB | 1 ° | Pass |
| 5400.03 MHz | -1.57 dB | 65.82 ° | -1.56 dB | 65.78 ° | 0 dB | 0.05 ° | 0.1 dB | 1 ° | Pass |
| 5430.03 MHz | -1.48 dB | 62.23 ° | -1.48 dB | 62.26 ° | 0.01 dB | -0.03 ° | 0.1 dB | 1 ° | Pass |
| 5460.03 MHz | -1.39 dB | 58.69 ° | -1.39 dB | 58.69 ° | 0 dB | 0 ° | 0.1 dB | 1 ° | Pass |
| 5490.03 MHz | -1.31 dB | 55.07 ° | -1.31 dB | 55.04 ° | 0 dB | 0.03 ° | 0.1 dB | 1 ° | Pass |
| 5520.02 MHz | -1.23 dB | 51.42 ° | -1.23 dB | 51.37 ° | 0 dB | 0.05 ° | 0.1 dB | 1 ° | Pass |
| 5550.02 MHz | -1.14 dB | 47.63 ° | -1.14 dB | 47.67 ° | 0 dB | -0.03 ° | 0.1 dB | 1 ° | Pass |
| 5580.02 MHz | -1.05 dB | 43.85 ° | -1.06 dB | 43.87 ° | 0.01 dB | -0.02 ° | 0.1 dB | 1 ° | Pass |
| 5610.02 MHz | -0.96 dB | 40 ° | -0.98 dB | 40 ° | 0.01 dB | 0.01 ° | 0.1 dB | 1 ° | Pass |
| 5640.02 MHz | -0.89 dB | 36.1 ° | -0.89 dB | 36.08 ° | 0.01 dB | 0.02 ° | 0.1 dB | 1 ° | Pass |
| 5670.02 MHz | -0.81 dB | 32.12 ° | -0.81 dB | 32.14 ° | 0 dB | -0.02 ° | 0.1 dB | 1 ° | Pass |
| 5700.02 MHz | -0.73 dB | 28.08 ° | -0.74 dB | 28.14 ° | 0.01 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |
| 5730.01 MHz | -0.66 dB | 24.03 ° | -0.68 dB | 24.06 ° | 0.01 dB | -0.03 ° | 0.1 dB | 1 ° | Pass |
| 5760.01 MHz | -0.6 dB | 19.9 ° | -0.61 dB | 19.94 ° | 0.01 dB | -0.04 ° | 0.1 dB | 1 ° | Pass |
| 5790.01 MHz | -0.55 dB | 15.75 ° | -0.56 dB | 15.77 ° | 0.01 dB | -0.02 ° | 0.1 dB | 1 ° | Pass |
| 5820.01 MHz | -0.5 dB | 11.53 ° | -0.51 dB | 11.56 ° | 0.01 dB | -0.03 ° | 0.1 dB | 1 ° | Pass |
| 5850.01 MHz | -0.46 dB | 7.3 ° | -0.47 dB | 7.36 ° | 0.01 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 5880.01 MHz | -0.43 dB | 3.03 ° | -0.44 dB | 3.11 ° | 0.01 dB | -0.08 ° | 0.1 dB | 1 ° | Pass |
| 5910 MHz | -0.41 dB | -1.25 ° | -0.42 dB | -1.19 ° | 0.01 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 5940 MHz | -0.4 dB | -5.55 ° | -0.42 dB | -5.47 ° | 0.01 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 5970 MHz | -0.4 dB | -9.85 ° | -0.42 dB | -9.77 ° | 0.02 dB | -0.08 ° | 0.1 dB | 1 ° | Pass |
| 6000 MHz | -0.42 dB | -14.15 ° | -0.43 dB | -14.1 ° | 0.01 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |

| Frequency MHz | Measurement | | Reference | | Measured Delta | | Specified Uncertainty TUL | | Test Verdict |
|------------------|-------------|-----------|-----------|-----------|----------------|-----------|---------------------------|-----------|-----------------|
| | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | Mag (dB) | Angle (°) | |
| 3030.15 MHz | -2.12 dB | -9.8 ° | -2.11 dB | -9.73 ° | 0 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 3060.15 MHz | -2.11 dB | -12.95 ° | -2.09 dB | -12.85 ° | -0.01 dB | -0.1 ° | 0.1 dB | 1 ° | Pass |
| 3090.15 MHz | -2.08 dB | -16.15 ° | -2.07 dB | -16.01 ° | -0.01 dB | -0.13 ° | 0.1 dB | 1 ° | Pass |
| 3120.14 MHz | -2.05 dB | -19.32 ° | -2.05 dB | -19.23 ° | 0 dB | -0.1 ° | 0.1 dB | 1 ° | Pass |
| 3150.14 MHz | -2.02 dB | -22.51 ° | -2.01 dB | -22.42 ° | -0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 3180.14 MHz | -1.98 dB | -25.68 ° | -1.97 dB | -25.61 ° | -0.01 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 3210.14 MHz | -1.93 dB | -28.96 ° | -1.92 dB | -28.86 ° | -0.01 dB | -0.1 ° | 0.1 dB | 1 ° | Pass |
| 3240.14 MHz | -1.88 dB | -32.21 ° | -1.87 dB | -32.16 ° | -0.01 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |
| 3270.14 MHz | -1.82 dB | -35.51 ° | -1.81 dB | -35.48 ° | -0.01 dB | -0.03 ° | 0.1 dB | 1 ° | Pass |
| 3300.14 MHz | -1.75 dB | -38.83 ° | -1.75 dB | -38.8 ° | 0 dB | -0.03 ° | 0.1 dB | 1 ° | Pass |
| 3330.13 MHz | -1.68 dB | -42.2 ° | -1.68 dB | -42.15 ° | 0 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |
| 3360.13 MHz | -1.61 dB | -45.61 ° | -1.61 dB | -45.58 ° | 0 dB | -0.03 ° | 0.1 dB | 1 ° | Pass |
| 3390.13 MHz | -1.54 dB | -49.06 ° | -1.53 dB | -49.08 ° | -0.01 dB | 0.02 ° | 0.1 dB | 1 ° | Pass |
| 3420.13 MHz | -1.46 dB | -52.56 ° | -1.46 dB | -52.57 ° | 0 dB | 0.01 ° | 0.1 dB | 1 ° | Pass |
| 3450.13 MHz | -1.37 dB | -56.1 ° | -1.38 dB | -56.07 ° | 0 dB | -0.03 ° | 0.1 dB | 1 ° | Pass |
| 3480.13 MHz | -1.29 dB | -59.7 ° | -1.29 dB | -59.64 ° | 0 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 3510.12 MHz | -1.2 dB | -63.32 ° | -1.2 dB | -63.34 ° | 0 dB | 0.01 ° | 0.1 dB | 1 ° | Pass |
| 3540.12 MHz | -1.12 dB | -67.06 ° | -1.12 dB | -67.06 ° | 0 dB | 0 ° | 0.1 dB | 1 ° | Pass |
| 3570.12 MHz | -1.03 dB | -70.8 ° | -1.04 dB | -70.8 ° | 0.01 dB | 0 ° | 0.1 dB | 1 ° | Pass |
| 3600.12 MHz | -0.95 dB | -74.66 ° | -0.95 dB | -74.6 ° | 0 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 3630.12 MHz | -0.86 dB | -78.51 ° | -0.86 dB | -78.49 ° | 0 dB | -0.02 ° | 0.1 dB | 1 ° | Pass |
| 3660.12 MHz | -0.78 dB | -82.44 ° | -0.78 dB | -82.46 ° | 0 dB | 0.02 ° | 0.1 dB | 1 ° | Pass |
| 3690.12 MHz | -0.7 dB | -86.44 ° | -0.7 dB | -86.47 ° | 0 dB | 0.03 ° | 0.1 dB | 1 ° | Pass |
| 3720.11 MHz | -0.63 dB | -90.49 ° | -0.63 dB | -90.49 ° | 0 dB | 0 ° | 0.1 dB | 1 ° | Pass |
| 3750.11 MHz | -0.56 dB | -94.6 ° | -0.57 dB | -94.55 ° | 0 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |
| 3780.11 MHz | -0.5 dB | -98.72 ° | -0.51 dB | -98.71 ° | 0.01 dB | -0.01 ° | 0.1 dB | 1 ° | Pass |
| 3810.11 MHz | -0.45 dB | -102.91 ° | -0.46 dB | -102.92 ° | 0.01 dB | 0.01 ° | 0.1 dB | 1 ° | Pass |
| 3840.11 MHz | -0.41 dB | -107.12 ° | -0.42 dB | -107.14 ° | 0.01 dB | 0.02 ° | 0.1 dB | 1 ° | Pass |
| 3870.11 MHz | -0.37 dB | -111.38 ° | -0.38 dB | -111.37 ° | 0.01 dB | -0.01 ° | 0.1 dB | 1 ° | Pass |
| 3900.11 MHz | -0.35 dB | -115.64 ° | -0.36 dB | -115.64 ° | 0.01 dB | 0 ° | 0.1 dB | 1 ° | Pass |
| 3930.1 MHz | -0.33 dB | -119.94 ° | -0.35 dB | -119.93 ° | 0.01 dB | -0.01 ° | 0.1 dB | 1 ° | Pass |
| 3960.1 MHz | -0.33 dB | -124.24 ° | -0.34 dB | -124.22 ° | 0.01 dB | -0.01 ° | 0.1 dB | 1 ° | Pass |
| 3990.1 MHz | -0.33 dB | -128.54 ° | -0.35 dB | -128.5 ° | 0.01 dB | -0.04 ° | 0.1 dB | 1 ° | Pass |
| 4020.1 MHz | -0.35 dB | -132.84 ° | -0.36 dB | -132.78 ° | 0.02 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 4050.1 MHz | -0.37 dB | -137.12 ° | -0.39 dB | -137.06 ° | 0.01 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 4080.1 MHz | -0.41 dB | -141.37 ° | -0.42 dB | -141.32 ° | 0.01 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |
| 4110.09 MHz | -0.45 dB | -145.57 ° | -0.46 dB | -145.54 ° | 0.01 dB | -0.04 ° | 0.1 dB | 1 ° | Pass |
| 4140.09 MHz | -0.5 dB | -149.78 ° | -0.52 dB | -149.71 ° | 0.02 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 4170.09 MHz | -0.56 dB | -153.93 ° | -0.58 dB | -153.85 ° | 0.02 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 4200.09 MHz | -0.63 dB | -158.05 ° | -0.64 dB | -157.95 ° | 0.01 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 4230.09 MHz | -0.7 dB | -162.08 ° | -0.71 dB | -162.03 ° | 0.01 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 4260.09 MHz | -0.78 dB | -166.08 ° | -0.79 dB | -166.02 ° | 0.01 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 4290.09 MHz | -0.86 dB | -170.05 ° | -0.88 dB | -169.93 ° | 0.02 dB | -0.12 ° | 0.1 dB | 1 ° | Pass |
| 4320.08 MHz | -0.94 dB | -173.96 ° | -0.96 dB | -173.81 ° | 0.01 dB | -0.15 ° | 0.1 dB | 1 ° | Pass |
| 4350.08 MHz | -1.03 dB | -177.79 ° | -1.03 dB | -177.68 ° | 0 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 4380.08 MHz | -1.12 dB | 178.45 ° | -1.12 dB | 178.52 ° | 0 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 4410.08 MHz | -1.21 dB | 174.73 ° | -1.22 dB | 174.83 ° | 0.01 dB | -0.1 ° | 0.1 dB | 1 ° | Pass |
| 4440.08 MHz | -1.3 dB | 171.06 ° | -1.31 dB | 171.17 ° | 0.01 dB | -0.11 ° | 0.1 dB | 1 ° | Pass |
| 4470.08 MHz | -1.39 dB | 167.45 ° | -1.39 dB | 167.54 ° | 0 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 4500.08 MHz | -1.47 dB | 163.89 ° | -1.47 dB | 163.96 ° | 0 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 4530.07 MHz | -1.55 dB | 160.39 ° | -1.56 dB | 160.47 ° | 0.01 dB | -0.08 ° | 0.1 dB | 1 ° | Pass |
| 4560.07 MHz | -1.63 dB | 156.92 ° | -1.64 dB | 157.04 ° | 0.01 dB | -0.12 ° | 0.1 dB | 1 ° | Pass |
| 4590.07 MHz | -1.71 dB | 153.47 ° | -1.71 dB | 153.6 ° | 0 dB | -0.13 ° | 0.1 dB | 1 ° | Pass |
| 4620.07 MHz | -1.79 dB | 150.1 ° | -1.77 dB | 150.19 ° | -0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 4650.07 MHz | -1.85 dB | 146.76 ° | -1.84 dB | 146.84 ° | -0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 4680.07 MHz | -1.9 dB | 143.48 ° | -1.91 dB | 143.57 ° | 0 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 4710.06 MHz | -1.96 dB | 140.24 ° | -1.96 dB | 140.3 ° | 0 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 4740.06 MHz | -2.01 dB | 136.94 ° | -2.01 dB | 137.01 ° | 0 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 4770.06 MHz | -2.06 dB | 133.72 ° | -2.05 dB | 133.77 ° | -0.01 dB | -0.05 ° | 0.1 dB | 1 ° | Pass |
| 4800.06 MHz | -2.1 dB | 130.49 ° | -2.1 dB | 130.58 ° | -0.01 dB | -0.09 ° | 0.1 dB | 1 ° | Pass |
| 4830.06 MHz | -2.13 dB | 127.35 ° | -2.13 dB | 127.4 ° | 0 dB | -0.06 ° | 0.1 dB | 1 ° | Pass |
| 4860.06 MHz | -2.16 dB | 124.17 ° | -2.15 dB | 124.19 ° | -0.01 dB | -0.02 ° | 0.1 dB | 1 ° | Pass |
| 4890.06 MHz | -2.17 dB | 121.04 ° | -2.17 dB | 121.01 ° | 0 dB | 0.03 ° | 0.1 dB | 1 ° | Pass |
| 4920.05 MHz | -2.2 dB | 117.85 ° | -2.19 dB | 117.89 ° | 0 dB | -0.04 ° | 0.1 dB | 1 ° | Pass |
| 4950.05 MHz | -2.19 dB | 114.7 ° | -2.2 dB | 114.77 ° | 0.01 dB | -0.07 ° | 0.1 dB | 1 ° | Pass |
| 4980.05 MHz | -2.21 dB | 111.59 ° | -2.21 dB | 111.62 ° | -0.01 dB | -0.02 ° | 0.1 dB | 1 ° | Pass |
| 5010.05 MHz | -2.19 dB | 108.41 ° | -2.19 dB | 108.42 ° | 0.01 dB | -0.02 ° | 0.1 dB | 1 ° | Pass |
| 5040.05 MHz | -2.18 dB | 105.29 ° | -2.17 dB | 105.24 ° | -0.01 dB | 0.05 ° | 0.1 dB | 1 ° | Pass |
| 5070.05 MHz | -2.16 dB | 102.07 ° | -2.16 dB | 102.11 ° | -0.01 dB | -0.03 ° | 0.1 dB | 1 ° | Pass |
| 5100.05 MHz | -2.14 dB | 98.95 ° | -2.14 dB | 98.98 ° | 0 dB | -0.03 ° | 0.1 dB | 1 ° | Pass |
| 5130.04 MHz | -2.1 dB | 95.73 ° | -2.1 dB | 95.77 ° | 0 dB | -0.03 ° | 0.1 dB | 1 ° | Pass |
| 5160.04 MHz | -2.05 dB | 92.51 ° | -2.06 dB | 92.52 ° | 0 dB | -0.01 ° | 0.1 dB | 1 ° | Pass |
| 5190.04 MHz | -2.02 dB | 89.33 ° | -2.01 dB | 89.29 ° | -0.01 dB | 0.04 ° | 0.1 dB | 1 ° | Pass |
| 5220.04 MHz | -1.97 dB | 86.02 ° | -1.97 dB | 86.06 ° | -0.01 dB | -0.04 ° | 0.1 dB | 1 ° | Pass |
| 5250.04 MHz | -1.92 dB | 82.79 ° | -1.91 dB | 82.77 ° | -0.01 dB | 0.02 ° | 0.1 dB | 1 ° | Pass |
| 5280.04 MHz | -1.85 dB | 79.41 ° | -1.84 dB | 79.42 ° | 0 dB | -0.01 ° | 0.1 dB | 1 ° | Pass |
| 5310.03 MHz | -1.78 dB | 76.1 ° | -1.78 dB | 76.04 ° | 0 dB | 0.06 ° | 0.1 dB | 1 ° | Pass |
| 5340.03 MHz | -1.72 dB | 72.69 ° | -1.71 dB | 72.66 ° | -0.01 dB | 0.03 ° | 0.1 dB | 1 ° | Pass |
| 5370.03 MHz | -1.65 dB | 69.28 ° | -1.64 dB | 69.25 ° | -0.01 dB | 0.03 ° | 0.1 dB | 1 ° | Pass |
| 5400.03 MHz | -1.57 dB | 65.79 ° | -1.56 dB | 65.77 ° | -0.01 dB | 0.03 ° | 0.1 dB | 1 ° | Pass |
| 5430.03 MHz | -1.47 dB | 62.31 ° | -1.48 dB | 62.23 ° | 0.01 dB | 0.08 ° | 0.1 dB | 1 ° | Pass |
| 5460.03 MHz | -1.39 dB | 58.71 ° | -1.4 dB | 58.66 ° | 0.01 dB | 0.05 ° | 0.1 dB | 1 ° | Pass |
| 5490.03 MHz | -1.31 dB | 55.05 ° | -1.32 dB | 55.06 ° | 0.01 dB | -0.01 ° | 0.1 dB | 1 ° | Pass |
| 5520.02 MHz | -1.23 dB | 51.38 ° | -1.23 dB | 51.38 ° | 0 dB | 0 ° | 0.1 dB | 1 ° | Pass |
| 5550.02 MHz | -1.14 dB | 47.68 ° | -1.14 dB | 47.61 ° | 0 dB | 0.07 ° | 0.1 dB | 1 ° | Pass |
| 5580.02 MHz | -1.05 dB | 43.89 ° | -1.06 dB | 43.8 ° | 0 dB | 0.09 ° | 0.1 dB | 1 ° | Pass |
| 5610.02 MHz | -0.97 dB | 40.01 ° | -0.97 dB | 39.96 ° | 0.01 dB | 0.04 ° | 0.1 dB | 1 ° | Pass |
| 5640.02 MHz | -0.88 dB | 36.08 ° | -0.9 dB | 36.07 ° | 0.01 dB | 0.01 ° | 0.1 dB | 1 ° | Pass |
| 5670.02 MHz | -0.81 dB | 32.12 ° | -0.82 dB | 32.1 ° | 0.01 dB | 0.03 ° | 0.1 dB | 1 ° | Pass |
| 5700.02 MHz | -0.73 dB | 28.12 ° | -0.74 dB | 28.06 ° | 0 dB | 0.06 ° | 0.1 dB | 1 ° | Pass |
| 5730.01 MHz | -0.67 dB | 24.05 ° | -0.66 dB | 23.99 ° | 0 dB | 0.06 ° | 0.1 dB | 1 ° | Pass |
| 5760.01 MHz | -0.6 dB | 19.93 ° | -0.61 dB | 19.91 ° | 0.01 dB | 0.02 ° | 0.1 dB | 1 ° | Pass |
| 5790.01 MHz | -0.55 dB | 15.77 ° | -0.57 dB | 15.74 ° | 0.02 dB | 0.03 ° | 0.1 dB | 1 ° | Pass |
| 5820.01 MHz | -0.5 dB | 11.57 ° | -0.51 dB | 11.52 ° | 0.01 dB | 0.05 ° | 0.1 dB | 1 ° | Pass |
| 5850.01 MHz | -0.46 dB | 7.32 ° | -0.47 dB | 7.3 ° | 0.01 dB | 0.03 ° | 0.1 dB | 1 ° | Pass |
| 5880.01 MHz | -0.43 dB | 3.06 ° | -0.44 dB | 3.06 ° | 0.01 dB | 0 ° | 0.1 dB | 1 ° | Pass |
| 5910 MHz | -0.41 dB | -1.22 ° | -0.43 dB | -1.21 ° | 0.02 dB | -0.01 ° | 0.1 dB | 1 ° | Pass |
| 5940 MHz | -0.4 dB | -5.52 ° | -0.42 dB | -5.51 ° | 0.02 dB | -0.01 ° | 0.1 dB | 1 ° | Pass |
| 5970 MHz | -0.4 dB | -9.81 ° | -0.42 dB | -9.8 ° | 0.02 dB | -0.01 ° | 0.1 dB | 1 ° | Pass |
| 6000 MHz | -0.42 dB | -14.1 ° | -0.42 dB | -14.07 ° | 0 dB | -0.03 ° | 0.1 dB | 1 ° | Pass |