

## Antenna Gain Measurement Report

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**Model No.:** LANCOM LX-7200

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**TAF Number:** 2770 (OTA3-HY)

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### Release Control Record

| Issue No.             | Description      | Date Issued |
|-----------------------|------------------|-------------|
| ORBAOZ-WTW-P25060017A | Original release | 2025.12.31  |
|                       |                  |             |
|                       |                  |             |

## 1 EUT Antenna System Description

### 1.1 Antenna Information

| Frequency Range (MHz) | Brand Name | Model Name      | Antenna Type | Connector Type | Antenna Position | Antenna NO. |
|-----------------------|------------|-----------------|--------------|----------------|------------------|-------------|
| 2400-2490             | AOT        | ANT-LX7200-AL03 | PIFA         | ipex(MHF)      | 0                | 1           |
| 2400-2490             | AOT        | ANT-LX7200-AL03 | PIFA         | ipex(MHF)      | 1                | 2           |
| 5150-5850             | AOT        | ANT-LX7200-AL03 | PIFA         | ipex(MHF)      | 0                | 4           |
| 5150-5850             | AOT        | ANT-LX7200-AL03 | PIFA         | ipex(MHF)      | 1                | 5           |

### 1.2 Antenna Location (Configuration and RF Chains)

Please refer to Test Setup and EUT antenna port photo. (Appendix B.)

## 2 Antenna Measurement

### 2.1 Antenna Measurement Chamber

| Chamber Type           | Chamber Size                                      |
|------------------------|---------------------------------------------------|
| Fully Anechoic Chamber | Length: 7.32 m<br>Width: 3.66 m<br>Height: 3.51 m |

| Type of Equipment              | Model Number  | Serial Number  |
|--------------------------------|---------------|----------------|
| ETS Anechoic Chamber (OTA3-HY) | AMS-8500      | CT0000411-1132 |
| Multi-Axis Positioning System  | ETS 2090-OPTI | 00086248       |

Note: The test was performed in CITA OTA distributed-axes system.

### 2.2 Reference Standard

ANSI 63.10-2013 clause 13

IEEE std. 149-2021

KDB 662911 D01

### 2.3 Block diagram of antenna test set-up

In far field chamber, rotation around theta axis corresponds to the elevation angle  $\theta$  and around the phi axis corresponds to the azimuth angle  $\phi$ . When measuring a 3D radiation pattern, the rotation table rotates around the theta from  $0^\circ$  to  $180^\circ$  and the rotation arm revolves around the phi axis between  $0^\circ$  and  $360^\circ$ . The vertical E field actually corresponds to the horizontal polarization and vice versa..

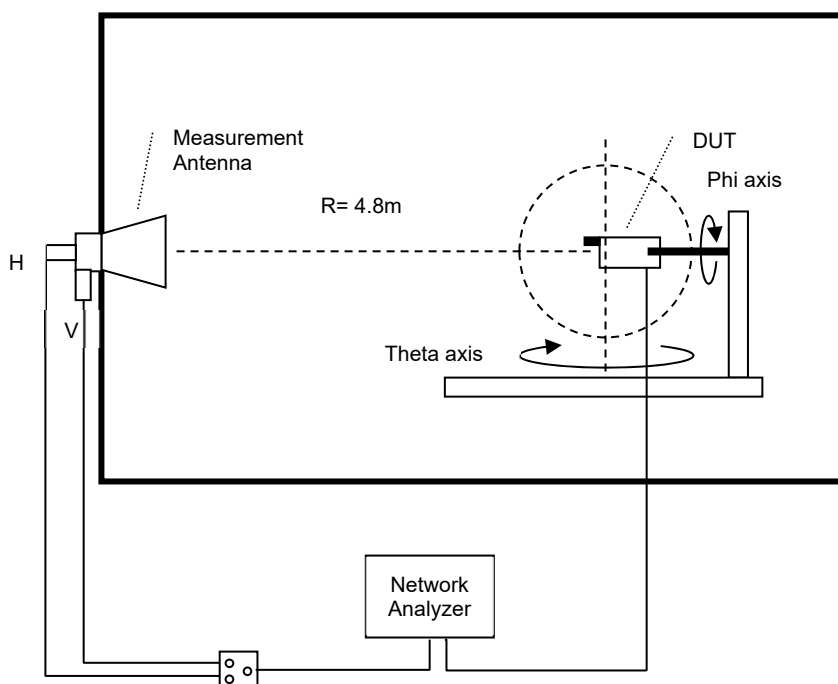


Figure 1. Antenna Pattern Test System.

## 2.4 Block diagram of calibration

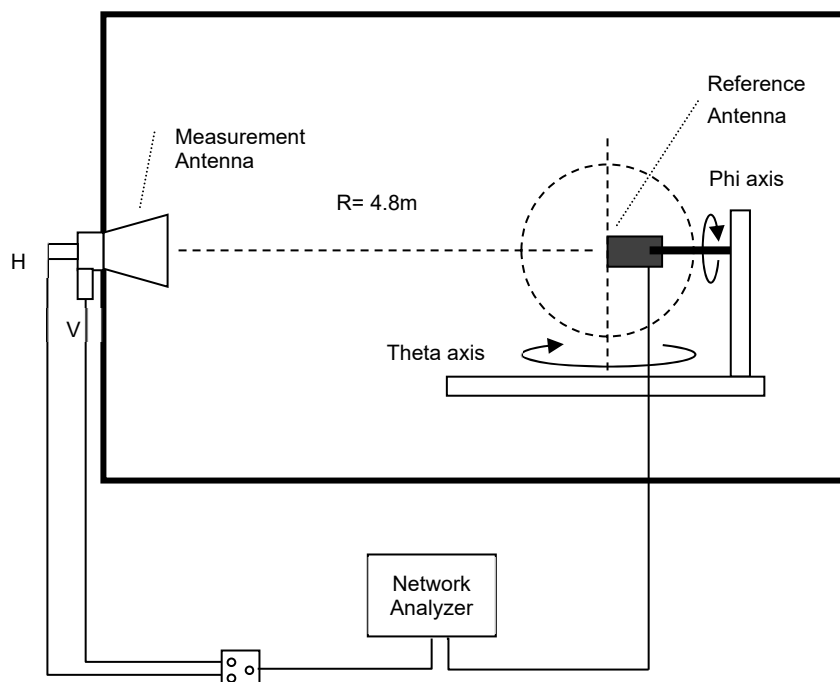
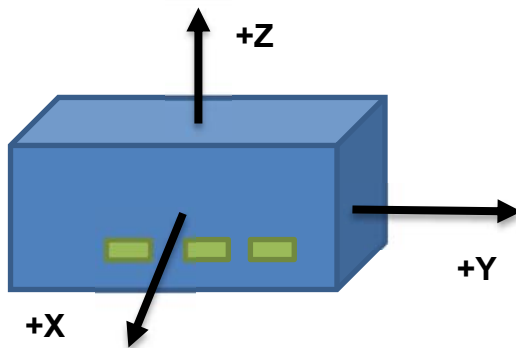


Figure 2. Calibration configuration.

## 2.5 Measurement Setup

| Chamber Placement                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| To minimize the physical volume occupied by the EUT during testing, the center of rotation shall be the three-dimensional geometric center of the EUT and not the antenna                                       |
| Positioning an Integrated Device Relative to the Chamber Coordinate System                                                                                                                                      |
| The reference plane for the EUT is defined as the plane on which the base of the EUT sits. This plane will be normal to the phi axis of the chamber.                                                            |
| Before placing the EUT in the chamber, place the integrated device on a level surface and measure the height, width and depth (H, W, D) of the device to determine the center of each (mark with tape if need). |
| The center of the height, width and depth of the device shall be located at the origin of the chamber coordinate system.                                                                                        |
|                                                                                                                             |

## 2.6 EUT Operation mode

| Band   | Modulation Mode                                                  | CDD mode | Beamforming mode |
|--------|------------------------------------------------------------------|----------|------------------|
| 2.4GHz | 802.11b                                                          | Nss1     | Not Support      |
|        | 802.11g                                                          | Nss1     | Not Support      |
|        | 802.11n(HT20)                                                    | Nss1     | Nss1 / Nss2      |
|        | 802.11n(HT40)                                                    | Nss1     | Nss1 / Nss2      |
|        | 802.11n(VHT20)                                                   | Nss1     | Nss1 / Nss2      |
|        | 802.11n(VHT40)                                                   | Nss1     | Nss1 / Nss2      |
|        | 802.11ax(HE20)                                                   | Nss1     | Nss1 / Nss2      |
|        | 802.11ax(HE40)                                                   | Nss1     | Nss1 / Nss2      |
|        | 802.11be(EHT20)                                                  | Nss1     | Nss1 / Nss2      |
|        | 802.11be(EHT40)                                                  | Nss1     | Nss1 / Nss2      |
| 5GHz   | 802.11a                                                          | Nss1     | Not Support      |
|        | 802.11n(HT20)                                                    | Nss1     | Nss1 / Nss2      |
|        | 802.11n(HT40)                                                    | Nss1     | Nss1 / Nss2      |
|        | 802.11ac(VHT20)                                                  | Nss1     | Nss1 / Nss2      |
|        | 802.11ac(VHT40)                                                  | Nss1     | Nss1 / Nss2      |
|        | 802.11ac(VHT80)                                                  | Nss1     | Nss1 / Nss2      |
|        | 802.11ac(VHT160)                                                 | Nss1     | Nss1 / Nss2      |
|        | 802.11ax(HE20)                                                   | Nss1     | Nss1 / Nss2      |
|        | 802.11ax(HE40)                                                   | Nss1     | Nss1 / Nss2      |
|        | 802.11ax(HE80)                                                   | Nss1     | Nss1 / Nss2      |
|        | 802.11ax(HE160)                                                  | Nss1     | Nss1 / Nss2      |
|        | 802.11be(EHT20)                                                  | Nss1     | Nss1 / Nss2      |
|        | 802.11be(EHT40)                                                  | Nss1     | Nss1 / Nss2      |
|        | 802.11be(EHT80)                                                  | Nss1     | Nss1 / Nss2      |
|        | 802.11be(EHT160)                                                 | Nss1     | Nss1 / Nss2      |
|        | 802.11be(EHT240)                                                 | Nss1     | Nss1 / Nss2      |
|        | 802.11be<br>(MRU 52+26-tone)                                     | Nss1     | Nss1 / Nss2      |
|        | 802.11be<br>(MRU 106+26-tone)                                    | Nss1     | Nss1 / Nss2      |
|        | 802.11be(EHT80<br>MRU 484+242-tone/<br>Punctured 20MHz)          | Nss1     | Nss1 / Nss2      |
|        | 802.11be(EHT160<br>MRU 996+484+242-<br>tone/ Punctured<br>20MHz) | Nss1     | Nss1 / Nss2      |
|        | 802.11be(EHT160<br>MRU 996+484-tone/<br>Punctured 40MHz)         | Nss1     | Nss1 / Nss2      |

Note: The Nss 1 mode for both 2.4GHz, 5GHz bands for final testing.

| Band   | Modulation Mode                                           | Ant1  | Ant2  |
|--------|-----------------------------------------------------------|-------|-------|
| 2.4GHz | 802.11b                                                   | TX/RX | TX/RX |
|        | 802.11g                                                   | TX/RX | TX/RX |
|        | 802.11n(HT20)                                             | TX/RX | TX/RX |
|        | 802.11n(HT40)                                             | TX/RX | TX/RX |
|        | 802.11n(VHT20)                                            | TX/RX | TX/RX |
|        | 802.11n(VHT40)                                            | TX/RX | TX/RX |
|        | 802.11ax(HE20)                                            | TX/RX | TX/RX |
|        | 802.11ax(HE40)                                            | TX/RX | TX/RX |
|        | 802.11be(EHT20)                                           | TX/RX | TX/RX |
|        | 802.11be(EHT40)                                           | TX/RX | TX/RX |
| 5GHz   | 802.11a                                                   | TX/RX | TX/RX |
|        | 802.11n(HT20)                                             | TX/RX | TX/RX |
|        | 802.11n(HT40)                                             | TX/RX | TX/RX |
|        | 802.11ac(VHT20)                                           | TX/RX | TX/RX |
|        | 802.11ac(VHT40)                                           | TX/RX | TX/RX |
|        | 802.11ac(VHT80)                                           | TX/RX | TX/RX |
|        | 802.11ac(VHT160)                                          | TX/RX | TX/RX |
|        | 802.11ax(HE20)                                            | TX/RX | TX/RX |
|        | 802.11ax(HE40)                                            | TX/RX | TX/RX |
|        | 802.11ax(HE80)                                            | TX/RX | TX/RX |
|        | 802.11ax(HE160)                                           | TX/RX | TX/RX |
|        | 802.11be(EHT20)                                           | TX/RX | TX/RX |
|        | 802.11be(EHT 40)                                          | TX/RX | TX/RX |
|        | 802.11be(EHT 80)                                          | TX/RX | TX/RX |
|        | 802.11be(EHT 160)                                         | TX/RX | TX/RX |
|        | 802.11be(EHT240)                                          | TX/RX | TX/RX |
|        | 802.11be<br>(MRU 52+26-tone)                              | TX/RX | TX/RX |
|        | 802.11be<br>(MRU 106+26-tone)                             | TX/RX | TX/RX |
|        | 802.11be(EHT80<br>MRU 484+242-tone/ Punctured 20MHz)      | TX/RX | TX/RX |
|        | 802.11be(EHT160<br>MRU 996+484+242-tone/ Punctured 20MHz) | TX/RX | TX/RX |
|        | 802.11be(EHT160<br>MRU 996+484-tone/ Punctured 40MHz)     | TX/RX | TX/RX |

## 2.7 Test Setup Diagram for EUT

Please refer to another document - Test Setup and EUT antenna port photo. (Appendix B.)

## 2.8 Test Instruments

| TYPE OF EQUIPMENT                 | MODEL NUMBER                              | SERIAL NUMBER  | DATE OF CALIBRATION | DUE DATE OF CALIBRATION | CALIBRATION CYCLE |
|-----------------------------------|-------------------------------------------|----------------|---------------------|-------------------------|-------------------|
| (OTA3-HY)<br>ETS Anechoic Chamber | AMS-8500                                  | CT0000411-1132 | N/A                 | N/A                     | N/A               |
| Multi-Axis Positioning System     | ETS 2090-OPTI                             | 00086248       | N/A                 | N/A                     | N/A               |
| Horn Antenna                      | ETS 3164-08                               | 00157567       | N/A                 | N/A                     | N/A               |
| Switch Control                    | Agilent 3499A                             | MY42005285     | N/A                 | N/A                     | N/A               |
| Network Analyzer                  | E5071C                                    | MY46104190     | 2025/7/11           | 2026/7/10               | 12 months         |
| Test Software                     | ETS-Lindgren<br>EMQuest V1.14 build 31654 | 1281           | N/A                 | N/A                     | N/A               |

Note 1: The test was performed in CITA OTA distributed-axes system.

Note 2: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

## 2.9 Test Procedure

1. The Antenna Gain Test is performed according to The ANSI/IEEE Std 149 12.3.1 Antenna Gain
2. (Small size (< 42cm) Linear Polarization Antennas), using a two-axis support device and one fixed measurement antenna. The EUT is positioned along the required MAPS centerline fixture holder. The EUT is then stepped between 0 and 180 degrees along the theta axis in 15-degree increments. At each theta position, the phi axis is stepped from 0-360 degrees in 15-degree increments. Data is recorded using the Network analyzer for both theta and phi polarizations at each position. Depending on the protocol, an appropriate filter is used in the EMQuest software to process the data. Upon completion of the test, test results (angular dependent EIRP) is calculated at each measurement point and the required value is automatically calculated. This test procedure is repeated for frequency and configuration as required.
3. Repeat step 1 and measures all of antenna gain for each Phi and Theta polarization for all antenna angles.
4. Considering each combination of phi and theta for all angles of each antenna, Directional Gain are calculated according to the FCC KDB662911 D01 d) (i) or e) (ii) formula.
5. Investigate composite antenna gain at all angles by program and determine maximum gain and Phi/Theta position (Direction gain is calculated for each angle then maximum gain is selected.).

## 2.10 Summary Test Result

|           |          |
|-----------|----------|
| Tested By | Leo Chen |
|-----------|----------|

### Individual Antenna Maximum Peak Gain:

| Frequency Band (MHz) | 2400 | 2450 | 2500 | - | - | - | - | - | - |
|----------------------|------|------|------|---|---|---|---|---|---|
| Ant. 1 (dBi)         | 2.49 | 2.07 | 2.49 | - | - | - | - | - | - |
| Polarization         | Phi  | Phi  | Phi  | - | - | - | - | - | - |
| Axis: Theta(°)       | 75   | 75   | 105  | - | - | - | - | - | - |
| Axis: Phi(°)         | 60   | 60   | 60   | - | - | - | - | - | - |
| Ant. 2 (dBi)         | 3.47 | 3.86 | 3.96 | - | - | - | - | - | - |
| Polarization         | Phi  | Phi  | Phi  | - | - | - | - | - | - |
| Axis: Theta(°)       | 60   | 105  | 105  | - | - | - | - | - | - |
| Axis: Phi(°)         | 60   | 60   | 60   | - | - | - | - | - | - |

### Maximum Directional Gain (Maximum Direction Angle and Value):

| Frequency Band (MHz)                                                                                       | 2400 | 2450 | 2500 | - | - | - | - | - | - |
|------------------------------------------------------------------------------------------------------------|------|------|------|---|---|---|---|---|---|
| Ant. 1 (dBi)                                                                                               | 2.49 | 1.5  | 2.49 | - | - | - | - | - | - |
| Ant. 2 (dBi)                                                                                               | 2.72 | 3.86 | 3.96 | - | - | - | - | - | - |
| Polarization                                                                                               | Phi  | Phi  | Phi  | - | - | - | - | - | - |
| Axis: Theta(°)                                                                                             | 75   | 105  | 105  | - | - | - | - | - | - |
| Axis: Phi(°)                                                                                               | 60   | 60   | 60   | - | - | - | - | - | - |
| Correlated Signals DG Calculation<br>$10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$ |      |      |      |   |   |   |   |   |   |
| DG (dBi)<br>[1SS]                                                                                          | 5.62 | 5.77 | 6.27 | - | - | - | - | - | - |

Note:

- ◆ The individual antenna gain and directional gain are by measurement as indicated in above table. For devices transmitter supports MIMO and use same antenna at multiple antenna ports. The direction gain values are follow FCC KDB 662911 D01 into calculation.
- ◆ The applicable limit is subjected to FCC Part 15 regulation and devices transmitter design/specification (i.e., SISO or MIMO etc.). Detail of conformity limit to be described in EUT FCC test reports.

**Individual Antenna Maximum Peak Gain:**

| Frequency Band (MHz) | 5150 | 5200 | 5250 | 5300 | 5350 | 5470 | 5600 | 5725  | 5785  | 5850  |
|----------------------|------|------|------|------|------|------|------|-------|-------|-------|
| Ant. 1 (dBi)         | 3.48 | 4.01 | 4.19 | 4.45 | 4.74 | 4.82 | 5.37 | 5.33  | 5.32  | 5.73  |
| Polarization         | Phi  | Phi  | Phi  | Phi  | Phi  | Phi  | Phi  | Phi   | Phi   | Phi   |
| Axis: Theta(°)       | 90   | 90   | 90   | 135  | 135  | 135  | 90   | 90    | 75    | 75    |
| Axis: Phi(°)         | 60   | 60   | 60   | 60   | 60   | 60   | 60   | 60    | 60    | 60    |
| Ant. 2 (dBi)         | 4.45 | 4.41 | 4.52 | 4.73 | 4.61 | 4.33 | 4    | 4.28  | 4.55  | 4.2   |
| Polarization         | Phi  | Phi  | Phi  | Phi  | Phi  | Phi  | Phi  | Theta | Theta | Theta |
| Axis: Theta(°)       | 60   | 60   | 60   | 105  | 105  | 105  | 105  | 45    | 45    | 45    |
| Axis: Phi(°)         | 300  | 300  | 300  | 60   | 60   | 45   | 45   | 0     | 0     | 0     |

**Maximum Directional Gain (Maximum Direction Angle and Value):**

| Frequency Band (MHz)                                                                                       | 5150 | 5200 | 5250 | 5300 | 5350 | 5470 | 5600 | 5725 | 5785 | 5850 |
|------------------------------------------------------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Ant. 1 (dBi)                                                                                               | 3.48 | 4.01 | 4.19 | 4.04 | 2.58 | 2.98 | 5.37 | 5.33 | 3.11 | 5.73 |
| Ant. 2 (dBi)                                                                                               | 2.59 | 2.96 | 3.37 | 3.35 | 4.61 | 3.76 | 2.52 | 1.91 | 4.23 | 1.65 |
| Polarization                                                                                               | Phi  | Phi  | Phi  | Phi  | Phi  | Phi  | Phi  | Phi  | Phi  | Phi  |
| Axis: Theta(°)                                                                                             | 90   | 90   | 90   | 90   | 105  | 105  | 90   | 90   | 60   | 75   |
| Axis: Phi(°)                                                                                               | 60   | 60   | 60   | 60   | 60   | 60   | 60   | 60   | 60   | 60   |
| Correlated Signals DG Calculation<br>$10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$ |      |      |      |      |      |      |      |      |      |      |
| DG (dBi)<br>[1SS]                                                                                          | 6.06 | 6.51 | 6.80 | 6.71 | 6.66 | 6.39 | 7.07 | 6.80 | 6.70 | 6.94 |

Note:

- ◆ The individual antenna gain and directional gain are by measurement as indicated in above table. For devices transmitter supports MIMO and use same antenna at multiple antenna ports. The direction gain values are follow FCC KDB 662911 D01 into calculation.
- ◆ The applicable limit is subjected to FCC Part 15 regulation and devices transmitter design/specification (i.e., SISO or MIMO etc.). Detail of conformity limit to be described in EUT FCC test reports.

## APPENDIX A – DETAIL TEST DATA INFORMATION

### A.1 RADIATED DIRECTIONAL GAIN

| Ant.           | No.1   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 2400   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) |
| θ (0°)         | -1.34  | -2.11   | -3.63   | -6.24   | -10.96  | -24.50  | -15.49  | -8.31    | -4.82    | -2.79    | -1.65    | -1.19    | -1.34    | -2.11    | -3.63    | -6.24    | -10.96   | -24.50   |
| θ (15°)        | 0.36   | 0.21    | -0.78   | -2.41   | -4.59   | -8.01   | -13.82  | -13.10   | -7.74    | -4.81    | -3.68    | -3.45    | -3.33    | -3.30    | -3.94    | -5.79    | -8.66    | -13.30   |
| θ (30°)        | 1.90   | 1.49    | 0.26    | -2.27   | -6.29   | -12.35  | -13.22  | -8.98    | -6.57    | -4.99    | -4.39    | -4.65    | -5.39    | -6.37    | -7.00    | -9.35    | -13.96   | -21.88   |
| θ (45°)        | 1.13   | 1.24    | 0.47    | -2.10   | -6.97   | -13.79  | -15.04  | -9.87    | -7.09    | -5.63    | -4.34    | -4.94    | -8.26    | -8.44    | -8.06    | -9.72    | -14.03   | -23.88   |
| θ (60°)        | -0.44  | 0.32    | 0.58    | -1.74   | -6.15   | -10.25  | -8.63   | -6.38    | -7.38    | -9.16    | -6.98    | -5.20    | -8.82    | -12.82   | -12.52   | -16.17   | -20.69   | -18.82   |
| θ (75°)        | 0.25   | 0.70    | 0.41    | -2.23   | -8.13   | -15.94  | -15.95  | -11.10   | -10.24   | -13.49   | -6.20    | -5.27    | -7.82    | -14.27   | -15.22   | -11.76   | -11.94   | -13.23   |
| θ (90°)        | -2.72  | -3.29   | -2.01   | -2.37   | -4.45   | -7.08   | -9.76   | -11.67   | -12.09   | -7.84    | -6.54    | -6.61    | -12.38   | -20.24   | -14.58   | -11.75   | -10.73   | -11.70   |
| θ (105°)       | -8.44  | -11.39  | -8.12   | -5.80   | -6.76   | -8.20   | -9.94   | -14.35   | -32.38   | -9.94    | -5.65    | -8.61    | -12.24   | -19.22   | -22.52   | -11.79   | -10.67   | -13.56   |
| θ (120°)       | -3.37  | -5.64   | -10.73  | -11.81  | -11.92  | -11.95  | -9.67   | -6.76    | -5.26    | -6.76    | -10.95   | -10.34   | -12.70   | -12.86   | -12.52   | -11.04   | -9.95    | -9.55    |
| θ (135°)       | -0.20  | -0.63   | -2.45   | -7.47   | -19.05  | -15.71  | -15.04  | -14.46   | -9.83    | -8.63    | -15.18   | -16.52   | -23.28   | -18.92   | -16.08   | -14.70   | -13.05   | -13.42   |
| θ (150°)       | 0.86   | [1.96]  | 1.08    | -1.39   | -4.30   | -7.00   | -8.54   | -9.17    | -9.74    | -11.72   | -16.07   | -21.91   | -19.30   | -17.46   | -17.62   | -17.20   | -12.25   | -8.31    |
| θ (165°)       | -4.89  | -6.55   | -9.85   | -15.75  | -26.06  | -18.17  | -16.98  | -29.81   | -14.40   | -7.39    | -4.34    | -3.36    | -3.56    | -4.83    | -7.11    | -8.69    | -9.36    | -10.14   |
| θ (180°)       | -4.59  | -5.88   | -8.12   | -12.04  | -20.86  | -22.49  | -12.55  | -8.40    | -6.04    | -4.68    | -4.04    | -4.01    | -4.59    | -5.88    | -8.12    | -12.04   | -20.86   | -22.49   |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) |
| θ (0°)         | -15.49 | -8.31   | -4.82   | -2.79   | -1.65   | -1.19   | -1.34   | -2.11    | -3.63    | -6.24    | -10.96   | -24.50   | -15.49   | -8.31    | -4.82    | -2.79    | -1.65    | -1.19    |
| θ (15°)        | -16.04 | -9.64   | -5.78   | -3.70   | -2.42   | -1.71   | -1.56   | -2.27    | -3.35    | -5.22    | -8.30    | -11.48   | -11.69   | -10.02   | -7.76    | -5.32    | -3.84    | -3.30    |
| θ (30°)        | -16.55 | -9.93   | -6.86   | -3.74   | -1.88   | -1.37   | -1.86   | -2.95    | -4.22    | -6.23    | -10.38   | -13.33   | -9.31    | -8.13    | -6.71    | -5.29    | -4.19    | -3.42    |
| θ (45°)        | -18.76 | -10.74  | -5.79   | -2.37   | -1.25   | -1.50   | -2.41   | -4.33    | -7.49    | -10.50   | -12.89   | -13.63   | -12.90   | -11.52   | -8.63    | -5.69    | -3.74    | -3.32    |
| θ (60°)        | -18.03 | -8.72   | -4.66   | -0.66   | 0.43    | -0.20   | -1.97   | -5.42    | -11.11   | -16.30   | -12.08   | -13.07   | -11.18   | -9.24    | -8.10    | -5.66    | -4.31    | -4.03    |
| θ (75°)        | -10.33 | -7.95   | -6.41   | 1.11    | [2.49]  | 1.00    | -1.17   | -5.31    | -10.95   | -10.16   | -11.84   | -7.40    | -11.65   | -9.72    | -13.14   | -7.69    | -3.86    | -4.11    |
| θ (90°)        | -8.47  | -7.74   | -4.45   | 0.61    | 0.98    | -0.60   | -3.90   | -5.31    | -4.22    | -9.92    | -6.72    | -5.20    | -5.25    | -7.07    | -9.08    | -5.98    | -4.55    | -4.48    |
| θ (105°)       | -8.81  | -6.12   | -7.09   | 0.16    | 1.20    | -0.91   | -3.53   | -5.56    | -5.78    | -9.55    | -8.14    | -5.79    | -8.61    | -5.27    | -9.62    | -5.20    | -3.23    | -3.57    |
| θ (120°)       | -8.17  | -4.71   | -8.08   | -0.68   | -0.07   | -3.65   | -7.61   | -5.02    | -5.34    | -12.35   | -7.63    | -6.86    | -10.95   | -5.32    | -7.85    | -8.75    | -5.63    | -5.44    |
| θ (135°)       | -10.20 | -10.13  | -13.44  | -6.13   | -4.21   | -7.26   | -15.37  | -15.84   | -14.18   | -12.10   | -8.36    | -6.99    | -9.17    | -4.38    | -3.87    | -7.73    | -7.66    | -4.65    |
| θ (150°)       | -12.00 | -7.70   | -5.76   | -4.10   | -4.00   | -5.95   | -10.15  | -16.90   | -9.35    | -5.40    | -5.74    | -10.80   | -12.61   | -8.58    | -6.77    | -5.24    | -3.85    | -2.58    |
| θ (165°)       | -16.02 | -11.09  | -8.71   | -8.61   | -10.28  | -13.45  | -11.49  | -6.44    | -4.02    | -3.41    | -4.77    | -8.64    | -15.43   | -11.60   | -9.96    | -10.73   | -10.06   | -6.36    |
| θ (180°)       | -12.55 | -8.40   | -6.04   | -4.68   | -4.04   | -4.01   | -4.59   | -5.88    | -8.12    | -12.04   | -20.86   | -22.49   | -12.55   | -8.40    | -6.04    | -4.68    | -4.04    | -4.01    |

| Ant.            | No.1        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Freq.<br>(MHz)  | 2450        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -0.82       | -1.52        | -2.95        | -5.42        | -9.81        | -21.07       | -16.35       | -8.34         | -4.63         | -2.49         | -1.27         | -0.74         | -0.82         | -1.52         | -2.95         | -5.42         | -9.81         | -21.07        | -16.35        | -8.34         | -4.63         | -2.49         | -1.27         | -0.74         | -0.82         |
| $\theta$ (15°)  | 0.42        | 0.69         | 0.14         | -1.50        | -4.00        | -7.54        | -13.88       | -12.02        | -8.29         | -6.33         | -5.06         | -3.81         | -3.06         | -3.51         | -4.73         | -6.29         | -8.74         | -14.47        | -20.25        | -11.56        | -5.99         | -3.03         | -1.36         | -0.47         | 0.42          |
| $\theta$ (30°)  | 1.57        | 1.76         | 1.03         | -1.45        | -5.91        | -13.75       | -15.71       | -10.09        | -7.19         | -5.33         | -4.40         | -4.32         | -5.67         | -6.83         | -8.13         | -12.07        | -18.37        | -28.04        | -20.68        | -11.13        | -6.46         | -3.47         | -1.15         | 0.46          | 1.57          |
| $\theta$ (45°)  | 1.69        | [1.79]       | 0.67         | -1.47        | -5.58        | -13.57       | -17.71       | -10.13        | -7.49         | -5.96         | -4.90         | -5.82         | -7.38         | -7.68         | -8.97         | -13.14        | -19.07        | -24.83        | -19.32        | -16.04        | -8.61         | -3.91         | -1.32         | 0.44          | 1.69          |
| $\theta$ (60°)  | -1.23       | -0.47        | 0.05         | -1.88        | -7.05        | -11.87       | -8.88        | -6.48         | -7.31         | -8.37         | -6.51         | -5.94         | -9.70         | -11.23        | -11.64        | -18.28        | -20.53        | -17.45        | -19.72        | -29.39        | -10.31        | -4.39         | -2.96         | -2.60         | -1.23         |
| $\theta$ (75°)  | -0.23       | 0.55         | 0.49         | -1.59        | -6.47        | -14.50       | -16.90       | -10.33        | -9.61         | -11.67        | -5.00         | -4.46         | -7.48         | -14.39        | -15.78        | -12.68        | -10.61        | -11.22        | -14.15        | -15.51        | -10.29        | -4.54         | -2.91         | -2.23         | -0.23         |
| $\theta$ (90°)  | -3.53       | -2.15        | -1.44        | -1.73        | -4.35        | -6.65        | -8.35        | -9.84         | -11.96        | -7.45         | -5.83         | -6.76         | -14.30        | -16.99        | -11.77        | -10.99        | -10.39        | -12.63        | -18.83        | -16.46        | -9.89         | -5.99         | -5.57         | -6.02         | -3.53         |
| $\theta$ (105°) | -9.31       | -12.79       | -9.85        | -6.23        | -7.06        | -8.63        | -9.64        | -11.99        | -25.06        | -8.85         | -5.58         | -8.24         | -12.05        | -20.55        | -19.94        | -11.17        | -10.52        | -14.14        | -10.61        | -8.99         | -6.61         | -4.77         | -4.31         | -6.43         | -9.31         |
| $\theta$ (120°) | -3.07       | -4.73        | -9.17        | -10.75       | -11.18       | -11.77       | -9.95        | -6.97         | -5.18         | -6.48         | -11.02        | -9.66         | -10.99        | -12.40        | -9.57         | -9.87         | -9.27         | -9.46         | -9.35         | -6.67         | -4.72         | -4.21         | -3.63         | -3.17         | -3.07         |
| $\theta$ (135°) | 0.71        | 0.23         | -1.69        | -6.36        | -15.68       | -18.67       | -16.98       | -14.82        | -8.44         | -7.23         | -12.93        | -18.08        | -24.30        | -15.31        | -13.70        | -12.75        | -13.18        | -14.08        | -8.38         | -4.93         | -3.25         | -2.57         | -1.10         | 0.06          | 0.71          |
| $\theta$ (150°) | 1.21        | 1.41         | 1.14         | -1.14        | -3.60        | -5.63        | -7.67        | -9.20         | -10.48        | -12.36        | -15.86        | -20.33        | -19.19        | -14.95        | -14.30        | -15.16        | -11.52        | -7.67         | -5.30         | -4.20         | -4.09         | -4.21         | -3.40         | -1.93         | 1.21          |
| $\theta$ (165°) | -4.04       | -5.50        | -8.48        | -14.37       | -25.74       | -16.43       | -15.07       | -20.68        | -15.76        | -8.35         | -4.54         | -2.96         | -3.11         | -5.28         | -6.52         | -7.21         | -7.76         | -10.01        | -15.90        | -16.03        | -11.34        | -7.55         | -5.09         | -4.32         | -4.04         |
| $\theta$ (180°) | -3.97       | -5.38        | -7.81        | -12.13       | -22.92       | -19.22       | -10.97       | -7.19         | -5.01         | -3.77         | -3.23         | -3.29         | -3.97         | -5.38         | -7.81         | -12.13        | -22.92        | -19.22        | -10.97        | -7.19         | -5.01         | -3.77         | -3.23         | -3.29         | -3.97         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -16.35      | -8.34        | -4.63        | -2.49        | -1.27        | -0.74        | -0.82        | -1.52         | -2.95         | -5.42         | -9.81         | -21.07        | -16.35        | -8.34         | -4.63         | -2.49         | -1.27         | -0.74         | -0.82         | -1.52         | -2.95         | -5.42         | -9.81         | -21.07        | -16.35        |
| $\theta$ (15°)  | -18.36      | -10.39       | -5.19        | -2.89        | -1.97        | -1.54        | -1.43        | -1.71         | -2.59         | -3.90         | -6.03         | -8.98         | -11.33        | -10.84        | -7.82         | -5.36         | -3.76         | -2.61         | -2.17         | -1.83         | -2.75         | -4.12         | -6.26         | -9.64         | -18.36        |
| $\theta$ (30°)  | -13.70      | -7.91        | -5.44        | -3.74        | -2.40        | -2.08        | -2.72        | -3.96         | -5.38         | -7.08         | -8.98         | -10.69        | -9.25         | -8.36         | -8.04         | -5.85         | -4.74         | -4.22         | -3.91         | -3.66         | -3.81         | -4.63         | -6.54         | -9.60         | -13.70        |
| $\theta$ (45°)  | -22.89      | -11.62       | -6.30        | -1.56        | 0.44         | 0.07         | -1.53        | -4.19         | -8.68         | -12.89        | -11.80        | -13.89        | -11.17        | -8.03         | -7.42         | -5.69         | -4.14         | -4.29         | -3.36         | -1.96         | -2.21         | -3.57         | -5.51         | -9.57         | -22.89        |
| $\theta$ (60°)  | -29.48      | -9.66        | -4.24        | -1.07        | 0.06         | -0.60        | -2.00        | -5.31         | -11.47        | -14.55        | -9.92         | -12.92        | -8.98         | -8.36         | -6.73         | -5.56         | -4.72         | -4.38         | -3.87         | -2.55         | -1.55         | -1.78         | -2.70         | -7.17         | -29.48        |
| $\theta$ (75°)  | -12.87      | -7.77        | -7.67        | 0.48         | [2.07]       | 1.02         | -1.33        | -5.73         | -13.02        | -9.70         | -13.69        | -8.03         | -12.90        | -9.50         | -11.40        | -5.04         | -4.17         | -4.96         | -4.88         | -3.09         | -0.87         | -0.50         | 0.19          | -3.60         | -12.87        |
| $\theta$ (90°)  | -9.70       | -5.85        | -3.97        | 0.60         | 0.70         | -0.50        | -3.64        | -6.38         | -4.19         | -9.53         | -6.40         | -5.27         | -7.43         | -8.38         | -8.77         | -5.22         | -3.97         | -4.00         | -3.79         | -2.54         | -1.21         | -0.60         | 1.08          | -0.29         | -9.70         |
| $\theta$ (105°) | -8.23       | -4.49        | -5.11        | 0.83         | 1.50         | -1.20        | -4.64        | -5.68         | -5.28         | -9.42         | -7.29         | -4.56         | -7.23         | -5.64         | -10.23        | -4.83         | -3.64         | -3.76         | -4.49         | -2.17         | -1.58         | -2.06         | 0.23          | -0.60         | -8.23         |
| $\theta$ (120°) | -8.58       | -6.40        | -4.49        | -0.54        | 0.19         | -3.41        | -8.42        | -5.29         | -5.61         | -13.74        | -6.87         | -6.78         | -11.01        | -6.28         | -8.78         | -8.30         | -5.37         | -6.01         | -3.80         | -1.30         | -0.68         | -0.11         | 0.37          | -1.83         | -8.58         |
| $\theta$ (135°) | -10.47      | -10.07       | -8.29        | -4.19        | -3.21        | -5.65        | -11.45       | -18.45        | -19.23        | -12.40        | -7.13         | -7.50         | -11.58        | -4.13         | -4.92         | -9.10         | -6.74         | -4.29         | -2.34         | -0.57         | 0.76          | 0.53          | -1.69         | -5.66         | -10.47        |
| $\theta$ (150°) | -10.40      | -6.46        | -3.57        | -2.75        | -2.33        | -3.99        | -8.17        | -20.36        | -11.05        | -5.77         | -5.52         | -10.21        | -13.53        | -9.60         | -7.25         | -5.54         | -3.16         | -1.78         | -1.13         | -0.86         | -1.14         | -2.62         | -6.18         | -10.33        | -10.40        |
| $\theta$ (165°) | -13.55      | -9.50        | -7.22        | -6.99        | -9.14        | -12.17       | -9.89        | -6.33         | -3.74         | -3.05         | -4.28         | -7.49         | -14.12        | -12.97        | -11.45        | -12.37        | -10.80        | -6.51         | -3.72         | -3.13         | -2.62         | -4.35         | -8.31         | -17.80        | -13.55        |
| $\theta$ (180°) | -10.97      | -7.19        | -5.01        | -3.77        | -3.23        | -3.29        | -3.97        | -5.38         | -7.81         | -12.13        | -22.92        | -19.22        | -10.97        | -7.19         | -5.01         | -3.77         | -3.23         | -3.29         | -3.97         | -5.38         | -7.81         | -12.13        | -22.92        | -19.22        | -10.97        |

| Ant.           | No.1   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 2500   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -1.90  | -2.74   | -4.34   | -7.09   | -12.13  | -28.84  | -15.00  | -8.41    | -5.11    | -3.18    | -2.11    | -1.70    | -1.90    | -2.74    | -4.34    | -7.09    | -12.13   | -28.84   | -15.00   | -8.41    | -5.11    | -3.18    | -2.11    | -1.70    | -1.90    |
| θ (15°)        | -0.65  | -0.37   | -0.75   | -1.93   | -3.84   | -6.98   | -12.03  | -20.84   | -13.87   | -9.16    | -6.04    | -4.17    | -3.26    | -3.14    | -4.16    | -5.71    | -7.15    | -10.12   | -13.51   | -10.80   | -8.40    | -5.37    | -2.88    | -1.12    | -0.65    |
| θ (30°)        | 0.04   | 1.27    | 0.70    | -1.64   | -7.30   | -16.65  | -13.85  | -10.80   | -8.55    | -6.53    | -5.14    | -5.99    | -5.76    | -6.37    | -10.73   | -14.09   | -15.59   | -22.83   | -16.87   | -9.61    | -5.96    | -3.93    | -2.18    | -0.52    | 0.04     |
| θ (45°)        | 1.18   | [2.10]  | 1.93    | -0.36   | -6.04   | -19.18  | -15.55  | -9.79    | -8.00    | -7.07    | -5.36    | -4.98    | -6.65    | -9.77    | -13.55   | -13.86   | -17.70   | -19.79   | -19.06   | -18.60   | -7.81    | -3.53    | -1.88    | 0.02     | 1.18     |
| θ (60°)        | -1.61  | -0.04   | 0.05    | -2.82   | -7.76   | -11.20  | -7.48   | -5.51    | -7.01    | -9.24    | -6.95    | -6.16    | -8.83    | -9.90    | -11.20   | -31.46   | -23.13   | -17.12   | -17.69   | -17.82   | -9.28    | -3.87    | -2.83    | -2.48    | -1.61    |
| θ (75°)        | -2.97  | -0.84   | 0.38    | -1.22   | -7.32   | -18.98  | -20.48  | -11.34   | -9.08    | -14.25   | -5.42    | -4.54    | -7.27    | -16.09   | -18.54   | -11.01   | -10.53   | -12.46   | -14.36   | -28.81   | -12.85   | -4.91    | -2.97    | -3.82    | -2.97    |
| θ (90°)        | -3.60  | -2.61   | -0.71   | -1.30   | -3.96   | -5.39   | -5.85   | -7.06    | -9.73    | -6.33    | -5.30    | -9.13    | -12.70   | -15.95   | -10.01   | -10.27   | -10.74   | -14.79   | -20.27   | -12.72   | -8.25    | -5.11    | -4.15    | -5.67    | -3.60    |
| θ (105°)       | -6.03  | -9.53   | -10.39  | -5.87   | -7.50   | -10.13  | -10.59  | -12.99   | -27.68   | -9.57    | -5.36    | -8.00    | -13.18   | -30.00   | -24.99   | -11.02   | -11.65   | -15.06   | -12.90   | -9.86    | -8.65    | -6.58    | -5.32    | -6.54    | -6.03    |
| θ (120°)       | -3.76  | -4.82   | -10.93  | -11.04  | -10.94  | -10.03  | -8.29   | -6.24    | -4.73    | -5.96    | -11.79   | -9.96    | -8.62    | -11.92   | -11.67   | -9.47    | -9.18    | -10.94   | -12.47   | -7.93    | -6.12    | -6.44    | -5.63    | -4.16    | -3.76    |
| θ (135°)       | 0.99   | 1.18    | -0.86   | -6.08   | -22.27  | -12.35  | -10.70  | -18.93   | -11.83   | -7.45    | -11.66   | -19.56   | -18.54   | -11.36   | -10.91   | -13.25   | -16.24   | -15.52   | -9.69    | -5.00    | -4.35    | -3.51    | -1.52    | 0.43     | 0.99     |
| θ (150°)       | -0.96  | 0.49    | 0.71    | -0.47   | -3.86   | -4.80   | -5.06   | -6.81    | -9.34    | -13.33   | -17.47   | -18.46   | -17.06   | -17.39   | -14.98   | -12.05   | -10.76   | -8.03    | -6.74    | -6.38    | -6.60    | -6.04    | -3.95    | -2.01    | -0.96    |
| θ (165°)       | -4.61  | -6.22   | -9.94   | -15.70  | -27.26  | -23.13  | -17.94  | -18.57   | -15.91   | -9.42    | -5.16    | -3.44    | -3.52    | -4.21    | -5.69    | -6.38    | -7.02    | -9.31    | -11.82   | -12.91   | -7.21    | -5.17    | -3.92    | -3.61    | -4.61    |
| θ (180°)       | -5.84  | -7.55   | -10.48  | -15.98  | -42.19  | -16.84  | -10.88  | -7.78    | -5.97    | -4.99    | -4.66    | -4.93    | -5.84    | -7.55    | -10.48   | -15.98   | -42.19   | -16.84   | -10.88   | -7.78    | -5.97    | -4.99    | -4.66    | -4.93    | -5.84    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -15.00 | -8.41   | -5.11   | -3.18   | -2.11   | -1.70   | -1.90   | -2.74    | -4.34    | -7.09    | -12.13   | -28.84   | -15.00   | -8.41    | -5.11    | -3.18    | -2.11    | -1.70    | -1.90    | -2.74    | -4.34    | -7.09    | -12.13   | -28.84   | -15.00   |
| θ (15°)        | -15.16 | -13.59  | -7.12   | -3.92   | -1.84   | -0.81   | -0.54   | -0.85    | -1.36    | -2.71    | -5.19    | -9.41    | -12.73   | -10.74   | -7.59    | -5.12    | -2.44    | -1.23    | -1.10    | -1.17    | -1.58    | -2.94    | -5.09    | -8.63    | -15.16   |
| θ (30°)        | -16.70 | -13.70  | -5.09   | -2.99   | -1.77   | -2.12   | -3.11   | -3.97    | -4.41    | -5.52    | -7.37    | -7.74    | -6.76    | -6.51    | -6.73    | -5.52    | -4.30    | -3.75    | -3.01    | -2.55    | -2.71    | -3.47    | -5.12    | -7.94    | -16.70   |
| θ (45°)        | -14.12 | -18.62  | -7.13   | -1.91   | 0.25    | 0.05    | -1.37   | -3.94    | -6.23    | -7.63    | -7.91    | -10.51   | -8.37    | -6.31    | -6.80    | -5.53    | -5.32    | -4.44    | -3.48    | -1.23    | -0.64    | -2.32    | -5.39    | -7.71    | -14.12   |
| θ (60°)        | -13.26 | -15.98  | -5.97   | -0.88   | 0.09    | -0.65   | -2.24   | -4.40    | -8.39    | -10.66   | -8.14    | -13.19   | -10.91   | -9.15    | -7.14    | -5.86    | -6.30    | -6.21    | -4.92    | -2.13    | -0.62    | -2.30    | -4.69    | -5.79    | -13.26   |
| θ (75°)        | -18.54 | -8.42   | -11.09  | -1.32   | 1.41    | 0.18    | -1.71   | -4.01    | -14.51   | -13.15   | -17.01   | -9.94    | -11.29   | -7.71    | -8.30    | -4.88    | -6.15    | -7.15    | -6.17    | -2.25    | -0.42    | -1.19    | -1.07    | -2.94    | -18.54   |
| θ (90°)        | -17.46 | -11.24  | -4.93   | 1.30    | 0.14    | -1.72   | -3.71   | -8.09    | -5.95    | -11.17   | -6.42    | -4.62    | -6.81    | -7.83    | -10.15   | -5.90    | -5.03    | -6.54    | -6.00    | -3.64    | -1.56    | -0.86    | 0.62     | -0.56    | -17.46   |
| θ (105°)       | -9.65  | -4.76   | -3.52   | 1.82    | [2.49]  | 0.20    | -4.25   | -7.25    | -5.44    | -7.43    | -6.15    | -2.94    | -7.44    | -6.14    | -10.69   | -5.98    | -4.43    | -5.40    | -5.00    | -2.02    | 0.34     | -0.77    | -0.60    | -0.51    | -9.65    |
| θ (120°)       | -11.42 | -4.78   | -4.17   | 0.18    | 1.06    | -1.93   | -10.81  | -5.47    | -4.64    | -10.92   | -7.18    | -10.94   | -11.15   | -7.89    | -11.81   | -8.08    | -6.45    | -5.92    | -2.48    | -0.31    | -0.60    | -1.23    | 0.40     | -0.23    | -11.42   |
| θ (135°)       | -15.73 | -15.40  | -9.21   | -5.06   | -3.70   | -5.99   | -10.79  | -12.69   | -14.46   | -15.25   | -10.14   | -12.86   | -11.68   | -5.34    | -6.78    | -10.80   | -8.51    | -5.92    | -3.77    | -1.25    | -0.41    | -0.48    | -1.85    | -4.08    | -15.73   |
| θ (150°)       | -6.42  | -5.38   | -3.98   | -1.74   | -2.50   | -4.35   | -8.08   | -17.35   | -15.45   | -6.41    | -4.62    | -6.37    | -18.20   | -12.37   | -8.51    | -5.95    | -3.83    | -2.28    | -1.42    | -1.12    | -1.66    | -3.22    | -5.93    | -8.03    | -6.42    |
| θ (165°)       | -9.07  | -5.73   | -4.37   | -4.79   | -6.96   | -11.12  | -13.16  | -8.13    | -4.58    | -3.18    | -3.96    | -7.56    | -13.59   | -16.35   | -14.29   | -20.60   | -11.83   | -6.08    | -3.50    | -2.17    | -3.56    | -5.55    | -10.20   | -24.52   | -9.07    |
| θ (180°)       | -10.88 | -7.78   | -5.97   | -4.99   | -4.66   | -4.93   | -5.84   | -7.55    | -10.48   | -15.98   | -42.19   | -16.84   | -10.88   | -7.78    | -5.97    | -4.99    | -4.66    | -4.93    | -5.84    | -7.55    | -10.48   | -15.98   | -42.19   | -16.84   | -10.88   |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 2400   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -2.89  | -4.23   | -6.54   | -10.62  | -20.14  | -19.62  | -10.45  | -6.45    | -4.17    | -2.86    | -2.26    | -2.27    | -2.89    | -4.23    | -6.54    | -10.62   | -20.14   | -19.62   | -10.45   | -6.45    | -4.17    | -2.86    | -2.26    | -2.27    | -2.89    |
| θ (15°)        | 0.63   | 0.24    | -0.97   | -3.18   | -6.90   | -13.24  | -16.60  | -9.59    | -6.53    | -4.76    | -3.65    | -3.43    | -4.09    | -5.18    | -5.85    | -7.52    | -10.64   | -16.81   | -15.55   | -9.68    | -5.41    | -2.31    | -0.38    | 0.67     | 0.63     |
| θ (30°)        | [3.18] | 2.96    | 1.82    | -0.54   | -4.43   | -10.65  | -23.61  | -22.02   | -18.47   | -14.64   | -10.15   | -7.30    | -5.73    | -5.69    | -7.38    | -11.76   | -23.18   | -16.11   | -10.26   | -6.33    | -2.64    | 0.35     | 2.21     | 3.00     | 3.18     |
| θ (45°)        | 1.97   | 2.71    | 2.61    | 0.96    | -2.89   | -8.32   | -13.79  | -18.36   | -13.65   | -8.27    | -5.65    | -6.38    | -6.58    | -5.62    | -7.78    | -12.98   | -21.93   | -25.93   | -16.19   | -10.20   | -4.52    | -1.20    | 0.89     | 1.66     | 1.97     |
| θ (60°)        | -4.33  | -0.92   | 0.86    | -1.37   | -6.44   | -12.59  | -13.28  | -13.82   | -17.48   | -11.76   | -8.85    | -10.66   | -13.86   | -11.97   | -19.06   | -16.94   | -15.87   | -17.25   | -14.95   | -10.22   | -7.66    | -6.41    | -5.06    | -4.25    | -4.33    |
| θ (75°)        | -1.73  | -1.50   | -2.33   | -3.90   | -6.06   | -10.16  | -21.93  | -22.13   | -15.30   | -12.48   | -10.44   | -8.19    | -7.23    | -9.76    | -17.28   | -24.35   | -18.73   | -18.67   | -23.31   | -27.25   | -14.96   | -11.06   | -5.52    | -2.53    | -1.73    |
| θ (90°)        | -2.90  | -0.19   | -1.66   | -9.05   | -23.15  | -14.14  | -8.36   | -6.92    | -11.09   | -12.09   | -10.14   | -14.79   | -11.30   | -9.83    | -11.61   | -12.36   | -18.52   | -22.80   | -22.62   | -24.83   | -16.75   | -10.70   | -5.34    | -3.77    | -2.90    |
| θ (105°)       | -2.16  | -1.43   | -2.41   | -5.75   | -12.32  | -16.74  | -13.18  | -10.54   | -9.56    | -14.89   | -10.85   | -7.19    | -6.60    | -10.75   | -12.75   | -17.82   | -24.51   | -32.98   | -30.40   | -27.22   | -16.17   | -9.98    | -5.49    | -3.16    | -2.16    |
| θ (120°)       | -1.14  | 1.15    | 0.83    | -3.35   | -12.39  | -15.32  | -9.13   | -8.11    | -9.64    | -16.72   | -8.54    | -10.49   | -8.32    | -5.41    | -6.41    | -9.56    | -16.81   | -24.84   | -21.50   | -12.50   | -7.95    | -5.32    | -3.41    | -2.46    | -1.14    |
| θ (135°)       | -1.19  | -0.34   | 0.14    | -1.20   | -5.07   | -12.29  | -27.85  | -9.60    | -6.69    | -7.78    | -11.04   | -10.46   | -6.64    | -5.05    | -5.98    | -8.36    | -14.70   | -22.12   | -22.50   | -14.03   | -7.10    | -3.92    | -2.61    | -2.21    | -1.19    |
| θ (150°)       | 2.96   | 2.10    | -0.47   | -5.31   | -13.57  | -28.26  | -22.57  | -11.92   | -6.78    | -4.88    | -5.65    | -9.17    | -14.69   | -17.57   | -15.82   | -12.48   | -13.20   | -17.79   | -12.83   | -5.80    | -1.93    | 0.40     | 1.84     | 2.54     | 2.96     |
| θ (165°)       | -5.99  | -8.24   | -11.32  | -11.76  | -11.01  | -11.57  | -10.55  | -6.87    | -3.45    | -1.39    | -0.35    | -0.38    | -1.89    | -4.98    | -10.77   | -22.55   | -17.47   | -13.06   | -11.96   | -10.59   | -8.48    | -6.15    | -4.58    | -5.15    | -5.99    |
| θ (180°)       | -2.38  | -3.79   | -6.24   | -10.58  | -21.55  | -17.46  | -9.30   | -5.55    | -3.39    | -2.16    | -1.62    | -1.69    | -2.38    | -3.79    | -6.24    | -10.58   | -21.55   | -17.46   | -9.30    | -5.55    | -3.39    | -2.16    | -1.62    | -1.69    | -2.38    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -10.45 | -6.45   | -4.17   | -2.86   | -2.26   | -2.27   | -2.89   | -4.23    | -6.54    | -10.62   | -20.14   | -19.62   | -10.45   | -6.45    | -4.17    | -2.86    | -2.26    | -2.27    | -2.89    | -4.23    | -6.54    | -10.62   | -20.14   | -19.62   | -10.45   |
| θ (15°)        | -11.13 | -7.06   | -3.28   | -1.30   | -0.53   | -0.68   | -1.53   | -3.41    | -6.46    | -11.41   | -19.15   | -12.85   | -9.05    | -8.81    | -9.38    | -6.04    | -3.92    | -2.78    | -1.98    | -1.56    | -1.80    | -2.65    | -4.28    | -7.66    | -11.13   |
| θ (30°)        | -13.73 | -6.98   | -2.42   | -0.54   | -0.40   | -1.05   | -2.00   | -3.64    | -6.50    | -10.67   | -13.87   | -10.81   | -9.18    | -12.03   | -7.84    | -3.04    | -1.66    | -1.26    | -0.87    | -0.53    | -0.61    | -1.32    | -2.93    | -5.51    | -13.73   |
| θ (45°)        | -10.19 | -20.11  | -3.29   | 0.95    | 1.72    | 0.19    | -3.26   | -7.40    | -7.02    | -7.99    | -14.03   | -11.68   | -9.11    | -11.83   | -11.35   | -5.43    | -3.62    | -3.24    | -2.07    | 0.36     | 1.61     | 1.05     | -1.49    | -4.68    | -10.19   |
| θ (60°)        | -7.65  | -12.09  | -0.86   | 3.05    | [3.47]  | 1.85    | -2.34   | -8.25    | -5.94    | -8.59    | -16.92   | -9.45    | -16.17   | -12.04   | -8.28    | -8.10    | -7.57    | -6.74    | -4.86    | -2.15    | 0.34     | 1.63     | -0.18    | -5.82    | -7.65    |
| θ (75°)        | -9.67  | -7.51   | -3.86   | 1.86    | 2.72    | 1.89    | -0.70   | -9.95    | -6.26    | -4.82    | -14.14   | -3.58    | -18.03   | -6.51    | -8.86    | -10.50   | -9.62    | -7.59    | -5.02    | -1.55    | -1.08    | -0.35    | 0.46     | -3.88    | -9.67    |
| θ (90°)        | -18.13 | -20.84  | -3.20   | 1.04    | 1.04    | -0.07   | -2.00   | -4.43    | -4.02    | -5.63    | -15.74   | -5.21    | -8.86    | -5.56    | -12.67   | -8.14    | -6.48    | -5.76    | -2.56    | -0.36    | -0.08    | -1.07    | -1.46    | -2.71    | -18.13   |
| θ (105°)       | -11.35 | -15.52  | -6.53   | 1.74    | 2.77    | 0.51    | -3.46   | -5.71    | -7.08    | -12.93   | -32.80   | -6.93    | -10.64   | -8.20    | -7.63    | -7.99    | -7.40    | -6.23    | -4.98    | -2.60    | -2.00    | -2.11    | -3.20    | -6.17    | -11.35   |
| θ (120°)       | -20.84 | -31.20  | -5.53   | 0.35    | 1.52    | 0.28    | -2.84   | -7.42    | -12.49   | -27.52   | -15.01   | -17.99   | -23.93   | -10.68   | -5.85    | -4.69    | -3.89    | -2.67    | -1.75    | -1.15    | -0.60    | -0.57    | -2.21    | -5.80    | -20.84   |
| θ (135°)       | -9.38  | -10.34  | -5.04   | -1.18   | 0.13    | -0.29   | -1.91   | -4.12    | -5.35    | -7.93    | -9.21    | -9.95    | -11.61   | -9.91    | -7.52    | -5.01    | -3.82    | -3.53    | -2.73    | -0.85    | 0.24     | -0.03    | -1.61    | -4.53    | -9.38    |
| θ (150°)       | -9.73  | -7.31   | -3.90   | -3.37   | -5.91   | -9.23   | -5.78   | -3.43    | -3.94    | -7.47    | -12.79   | -16.11   | -15.73   | -11.66   | -8.03    | -4.53    | -1.95    | -0.77    | -0.11    | 0.07     | -0.37    | -1.35    | -3.04    | -5.43    | -9.73    |
| θ (165°)       | -16.35 | -18.94  | -16.31  | -10.83  | -5.70   | -2.00   | 0.14    | 0.68     | 0.23     | -1.38    | -3.69    | -6.96    | -12.18   | -15.23   | -13.95   | -13.07   | -12.17   | -8.61    | -5.35    | -3.96    | -3.72    | -4.90    | -6.67    | -10.40   | -16.35   |
| θ (180°)       | -9.30  | -5.55   | -3.39   | -2.16   | -1.62   | -1.69   | -2.38   | -3.79    | -6.24    | -10.58   | -21.55   | -17.46   | -9.30    | -5.55    | -3.39    | -2.16    | -1.62    | -1.69    | -2.38    | -3.79    | -6.24    | -10.58   | -21.55   | -17.46   | -9.30    |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 2450   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -2.81  | -3.87   | -5.79   | -9.08   | -15.62  | -30.01  | -12.89  | -7.82    | -5.06    | -3.45    | -2.61    | -2.41    | -2.81    | -3.87    | -5.79    | -9.08    | -15.62   | -30.01   | -12.89   | -7.82    | -5.06    | -3.45    | -2.61    | -2.41    | -2.81    |
| θ (15°)        | 0.79   | 0.07    | -1.43   | -4.12   | -9.11   | -20.37  | -18.59  | -9.96    | -7.39    | -6.26    | -5.63    | -5.27    | -5.30    | -5.65    | -7.24    | -8.77    | -12.77   | -18.88   | -12.37   | -7.48    | -4.56    | -1.97    | -0.32    | 0.82     | 0.79     |
| θ (30°)        | [2.76] | 2.52    | 1.48    | -0.49   | -3.63   | -8.07   | -14.05  | -22.65   | -18.41   | -14.04   | -9.81    | -6.48    | -5.67    | -5.18    | -6.15    | -10.72   | -25.39   | -19.30   | -13.29   | -7.88    | -3.52    | -0.44    | 1.52     | 2.38     | 2.76     |
| θ (45°)        | 1.51   | 2.34    | 2.73    | 0.78    | -3.60   | -10.17  | -17.21  | -16.70   | -13.58   | -8.87    | -6.43    | -6.29    | -5.27    | -3.78    | -7.10    | -17.28   | -26.88   | -23.32   | -17.75   | -10.39   | -6.73    | -2.83    | -0.18    | 0.98     | 1.51     |
| θ (60°)        | -3.12  | -1.14   | -0.11   | -2.10   | -6.55   | -11.48  | -11.36  | -11.83   | -18.41   | -15.39   | -10.03   | -8.87    | -12.39   | -10.83   | -13.86   | -17.00   | -16.35   | -16.03   | -11.89   | -7.68    | -5.85    | -6.01    | -5.35    | -4.01    | -3.12    |
| θ (75°)        | -0.85  | -0.73   | -1.80   | -5.53   | -8.09   | -10.72  | -18.38  | -26.03   | -15.24   | -11.54   | -9.66    | -8.24    | -6.88    | -8.89    | -15.54   | -23.44   | -18.61   | -21.55   | -29.41   | -20.27   | -15.66   | -11.72   | -5.86    | -2.34    | -0.85    |
| θ (90°)        | -4.36  | -1.69   | -4.01   | -12.73  | -22.21  | -11.26  | -6.68   | -5.06    | -8.45    | -13.18   | -11.75   | -17.51   | -10.51   | -9.30    | -11.40   | -14.96   | -29.15   | -22.51   | -22.85   | -28.24   | -14.16   | -9.52    | -7.33    | -6.03    | -4.36    |
| θ (105°)       | -1.95  | -1.12   | -1.38   | -5.89   | -14.02  | -17.05  | -12.30  | -10.02   | -8.37    | -11.63   | -8.30    | -5.97    | -7.05    | -12.77   | -14.24   | -17.72   | -25.60   | -27.97   | -23.93   | -17.63   | -13.80   | -9.52    | -5.93    | -2.96    | -1.95    |
| θ (120°)       | 0.46   | 0.94    | -0.12   | -4.11   | -11.72  | -10.80  | -7.27   | -6.67    | -7.33    | -15.51   | -11.58   | -11.57   | -8.29    | -5.43    | -6.79    | -12.55   | -24.17   | -34.08   | -16.79   | -8.94    | -4.80    | -3.17    | -1.77    | -0.50    | 0.46     |
| θ (135°)       | -0.33  | 0.11    | -0.22   | -2.59   | -6.40   | -13.43  | -22.78  | -10.15   | -6.70    | -6.47    | -8.03    | -8.60    | -6.69    | -6.26    | -8.54    | -10.89   | -15.38   | -20.18   | -24.56   | -12.62   | -6.18    | -3.13    | -1.47    | -0.68    | -0.33    |
| θ (150°)       | 2.06   | 1.49    | -0.58   | -5.15   | -13.90  | -27.57  | -20.25  | -12.07   | -6.95    | -4.98    | -5.95    | -11.38   | -27.45   | -11.90   | -8.38    | -13.13   | -14.84   | -19.99   | -11.60   | -5.38    | -2.06    | -0.08    | 1.27     | 2.07     | 2.06     |
| θ (165°)       | -5.26  | -7.37   | -10.70  | -12.37  | -12.03  | -12.18  | -11.31  | -7.56    | -4.29    | -2.23    | -1.15    | -1.25    | -3.23    | -8.70    | -14.28   | -20.26   | -13.81   | -11.62   | -11.57   | -8.63    | -7.57    | -5.28    | -3.55    | -3.71    | -5.26    |
| θ (180°)       | -3.91  | -5.43   | -8.04   | -12.74  | -26.13  | -17.37  | -10.15  | -6.65    | -4.62    | -3.47    | -3.01    | -3.15    | -3.91    | -5.43    | -8.04    | -12.74   | -26.13   | -17.37   | -10.15   | -6.65    | -4.62    | -3.47    | -3.01    | -3.15    | -3.91    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -12.89 | -7.82   | -5.06   | -3.45   | -2.61   | -2.41   | -2.81   | -3.87    | -5.79    | -9.08    | -15.62   | -30.01   | -12.89   | -7.82    | -5.06    | -3.45    | -2.61    | -2.41    | -2.81    | -3.87    | -5.79    | -9.08    | -15.62   | -30.01   | -12.89   |
| θ (15°)        | -10.24 | -5.75   | -2.38   | -0.64   | -0.09   | -0.56   | -1.73   | -4.02    | -7.49    | -14.01   | -35.98   | -15.30   | -12.02   | -14.42   | -11.27   | -8.07    | -5.53    | -3.56    | -2.39    | -1.91    | -2.17    | -3.25    | -4.88    | -8.66    | -10.24   |
| θ (30°)        | -12.26 | -5.31   | -2.05   | -0.83   | -1.32   | -2.57   | -3.87   | -5.62    | -9.00    | -13.21   | -13.12   | -12.59   | -11.29   | -12.67   | -9.49    | -5.16    | -3.56    | -2.60    | -1.85    | -1.19    | -1.22    | -2.72    | -5.18    | -7.85    | -12.26   |
| θ (45°)        | -16.00 | -13.55  | -2.26   | 0.99    | 1.26    | 0.03    | -2.60   | -5.95    | -6.33    | -7.94    | -15.00   | -11.58   | -10.10   | -14.29   | -12.65   | -6.56    | -4.89    | -3.83    | -1.87    | -0.85    | 1.42     | 0.83     | -2.61    | -7.06    | -16.00   |
| θ (60°)        | -9.81  | -8.31   | -1.15   | 2.42    | 3.04    | 1.95    | -2.12   | -8.79    | -5.07    | -7.38    | -15.50   | -9.29    | -19.31   | -13.26   | -11.09   | -9.21    | -8.81    | -8.00    | -4.69    | -2.01    | -0.14    | 1.45     | 0.31     | -5.38    | -9.81    |
| θ (75°)        | -11.33 | -7.26   | -2.31   | 2.68    | 3.19    | 2.21    | -0.28   | -8.62    | -5.67    | -3.83    | -14.96   | -2.82    | -18.07   | -5.83    | -10.45   | -12.29   | -7.69    | -5.98    | -3.06    | -1.55    | -0.38    | -0.82    | 0.33     | -2.71    | -11.33   |
| θ (90°)        | -20.73 | -15.51  | -3.14   | 1.85    | 1.18    | -0.69   | -2.34   | -4.22    | -4.76    | -6.13    | -18.57   | -5.44    | -9.68    | -6.15    | -14.32   | -6.49    | -7.19    | -7.03    | -3.00    | -0.97    | -0.72    | -1.70    | -2.91    | -3.75    | -20.73   |
| θ (105°)       | -15.75 | -16.89  | -6.75   | 1.97    | [3.86]  | 2.11    | -2.22   | -5.71    | -6.56    | -14.94   | -23.26   | -9.57    | -13.25   | -9.89    | -8.11    | -8.02    | -7.72    | -5.66    | -3.71    | -1.80    | -1.10    | -0.76    | -1.95    | -5.57    | -15.75   |
| θ (120°)       | -16.70 | -15.36  | -6.41   | 0.76    | 2.44    | 1.12    | -2.20   | -5.90    | -8.31    | -14.96   | -9.60    | -17.60   | -20.28   | -8.31    | -5.69    | -4.36    | -2.82    | -1.48    | -0.52    | 0.20     | 0.89     | 0.74     | -0.92    | -3.88    | -16.70   |
| θ (135°)       | -7.63  | -9.13   | -5.07   | -1.63   | 0.01    | -0.14   | -1.94   | -4.36    | -5.33    | -7.57    | -8.99    | -9.42    | -11.92   | -10.58   | -8.80    | -6.30    | -4.29    | -3.06    | -1.41    | -0.28    | 0.59     | 0.18     | -1.33    | -3.81    | -7.63    |
| θ (150°)       | -10.15 | -8.02   | -4.18   | -2.88   | -4.70   | -9.15   | -7.90   | -4.44    | -3.95    | -6.52    | -11.16   | -13.22   | -12.75   | -11.66   | -7.54    | -4.84    | -3.05    | -2.03    | -1.66    | -1.67    | -2.08    | -3.19    | -4.95    | -7.01    | -10.15   |
| θ (165°)       | -16.41 | -20.94  | -22.45  | -14.45  | -7.37   | -3.27   | -1.23   | -0.29    | -0.53    | -1.57    | -3.79    | -8.10    | -16.23   | -18.23   | -15.05   | -14.04   | -11.04   | -7.44    | -4.86    | -2.63    | -3.45    | -4.36    | -6.48    | -10.44   | -16.41   |
| θ (180°)       | -10.15 | -6.65   | -4.62   | -3.47   | -3.01   | -3.15   | -3.91   | -5.43    | -8.04    | -12.74   | -26.13   | -17.37   | -10.15   | -6.65    | -4.62    | -3.47    | -3.01    | -3.15    | -3.91    | -5.43    | -8.04    | -12.74   | -26.13   | -17.37   | -10.15   |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 2500   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -2.49  | -3.51   | -5.36   | -8.54   | -14.73  | -34.07  | -13.09  | -7.78    | -4.93    | -3.26    | -2.37    | -2.13    | -2.49    | -3.51    | -5.36    | -8.54    | -14.73   | -34.07   | -13.09   | -7.78    | -4.93    | -3.26    | -2.37    | -2.13    | -2.49    |
| θ (15°)        | 0.60   | 0.16    | -1.12   | -3.52   | -7.43   | -13.19  | -12.65  | -8.55    | -6.59    | -6.31    | -6.99    | -8.01    | -9.12    | -9.30    | -9.69    | -11.11   | -16.28   | -22.00   | -12.29   | -6.51    | -4.01    | -1.86    | -0.48    | 0.44     | 0.60     |
| θ (30°)        | 2.45   | 2.24    | 1.45    | -0.58   | -3.17   | -7.12   | -14.82  | -35.95   | -17.51   | -14.03   | -12.28   | -8.97    | -7.05    | -7.34    | -9.86    | -12.97   | -22.11   | -21.67   | -12.76   | -6.73    | -2.88    | -0.47    | 1.11     | 1.96     | 2.45     |
| θ (45°)        | 1.70   | 2.21    | [2.48]  | 1.02    | -2.64   | -7.96   | -13.68  | -17.35   | -12.66   | -8.50    | -8.32    | -8.33    | -6.59    | -5.60    | -10.45   | -31.52   | -16.79   | -15.78   | -12.75   | -8.27    | -4.76    | -2.17    | -0.25    | 0.80     | 1.70     |
| θ (60°)        | -1.70  | -0.01   | 1.25    | -1.06   | -5.98   | -10.53  | -10.82  | -10.10   | -12.80   | -13.96   | -16.95   | -11.78   | -15.72   | -12.63   | -20.92   | -20.04   | -13.40   | -11.75   | -8.25    | -5.13    | -3.90    | -4.23    | -3.60    | -2.36    | -1.70    |
| θ (75°)        | -0.82  | -1.03   | -2.41   | -6.37   | -9.84   | -11.89  | -16.08  | -34.91   | -16.51   | -12.17   | -10.29   | -7.59    | -5.73    | -7.98    | -19.08   | -17.07   | -16.60   | -25.17   | -24.53   | -16.83   | -14.77   | -12.33   | -6.26    | -2.35    | -0.82    |
| θ (90°)        | -6.95  | -2.58   | -2.72   | -9.55   | -22.08  | -12.18  | -7.12   | -4.49    | -6.28    | -10.29   | -11.52   | -21.44   | -10.41   | -11.14   | -13.51   | -12.91   | -23.03   | -23.97   | -23.58   | -24.84   | -10.01   | -5.84    | -5.20    | -5.20    | -6.95    |
| θ (105°)       | -0.30  | -0.25   | -1.00   | -5.24   | -12.21  | -14.22  | -13.79  | -11.70   | -8.75    | -11.80   | -8.40    | -5.59    | -8.19    | -13.76   | -18.24   | -25.89   | -30.51   | -25.68   | -20.08   | -14.45   | -7.96    | -5.67    | -4.64    | -1.99    | -0.30    |
| θ (120°)       | 1.13   | 0.98    | -0.82   | -6.17   | -16.19  | -9.60   | -6.76   | -6.56    | -6.74    | -10.98   | -17.44   | -14.41   | -7.64    | -6.61    | -7.82    | -10.08   | -16.65   | -22.66   | -15.47   | -8.17    | -4.23    | -2.85    | -1.19    | 0.46     | 1.13     |
| θ (135°)       | -0.16  | -0.87   | -1.97   | -4.30   | -7.87   | -12.35  | -19.88  | -13.67   | -7.35    | -5.25    | -5.70    | -7.80    | -11.76   | -10.91   | -11.60   | -11.11   | -12.85   | -18.09   | -28.00   | -12.69   | -7.47    | -4.23    | -1.26    | 0.48     | -0.16    |
| θ (150°)       | 1.82   | 0.96    | -1.62   | -6.39   | -15.65  | -35.20  | -18.61  | -10.95   | -6.60    | -5.10    | -5.09    | -8.09    | -18.20   | -13.12   | -8.18    | -6.58    | -10.67   | -13.98   | -10.71   | -6.43    | -3.71    | -1.84    | -0.03    | 1.32     | 1.82     |
| θ (165°)       | -3.69  | -5.56   | -8.61   | -10.45  | -10.65  | -10.69  | -10.63  | -8.51    | -5.50    | -3.05    | -1.94    | -2.22    | -3.96    | -6.74    | -17.96   | -16.49   | -10.03   | -8.77    | -9.49    | -10.20   | -7.03    | -5.13    | -3.26    | -2.81    | -3.69    |
| θ (180°)       | -5.73  | -7.51   | -10.54  | -16.31  | -44.47  | -16.11  | -10.44  | -7.45    | -5.70    | -4.76    | -4.47    | -4.78    | -5.73    | -7.51    | -10.54   | -16.31   | -44.47   | -16.11   | -10.44   | -7.45    | -5.70    | -4.76    | -4.47    | -4.78    | -5.73    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -13.09 | -7.78   | -4.93   | -3.26   | -2.37   | -2.13   | -2.49   | -3.51    | -5.36    | -8.54    | -14.73   | -34.07   | -13.09   | -7.78    | -4.93    | -3.26    | -2.37    | -2.13    | -2.49    | -3.51    | -5.36    | -8.54    | -14.73   | -34.07   | -13.09   |
| θ (15°)        | -11.48 | -7.07   | -2.90   | -0.87   | -0.26   | -0.64   | -2.24   | -6.23    | -12.42   | -25.36   | -22.20   | -21.02   | -20.24   | -15.76   | -10.28   | -5.34    | -2.88    | -2.01    | -1.99    | -2.75    | -4.25    | -6.98    | -11.53   | -11.48   |          |
| θ (30°)        | -11.47 | -6.33   | -0.78   | 0.72    | 0.20    | -1.40   | -3.89   | -6.68    | -10.74   | -15.45   | -11.73   | -10.04   | -10.09   | -14.07   | -14.64   | -8.82    | -5.01    | -3.09    | -1.63    | -0.69    | -0.83    | -2.26    | -5.18    | -8.64    | -11.47   |
| θ (45°)        | -12.56 | -24.76  | -4.40   | -0.26   | 0.45    | -0.42   | -2.45   | -4.86    | -5.35    | -6.89    | -15.32   | -11.12   | -13.48   | -21.74   | -13.25   | -6.59    | -5.66    | -4.40    | -1.99    | 0.17     | 0.94     | 1.06     | -1.19    | -7.49    | -12.56   |
| θ (60°)        | -10.47 | -8.67   | -0.64   | 2.79    | 2.49    | 1.39    | -1.65   | -7.58    | -4.86    | -6.03    | -14.39   | -9.43    | -17.96   | -11.56   | -10.71   | -12.81   | -11.55   | -6.01    | -2.29    | -0.89    | -0.59    | 0.66     | 0.59     | -4.22    | -10.47   |
| θ (75°)        | -19.04 | -11.82  | -3.57   | 1.72    | 1.60    | -0.09   | -1.86   | -8.57    | -6.99    | -3.75    | -20.36   | -3.12    | -13.99   | -6.50    | -13.04   | -11.06   | -8.47    | -6.08    | -3.05    | -1.55    | -1.75    | -2.21    | -0.97    | -4.11    | -19.04   |
| θ (90°)        | -10.54 | -18.51  | -4.39   | 0.92    | -0.12   | -2.52   | -3.44   | -5.00    | -5.91    | -7.36    | -29.35   | -8.50    | -12.15   | -8.90    | -13.76   | -9.17    | -11.36   | -9.53    | -5.26    | -3.65    | -3.44    | -2.85    | -2.92    | -5.20    | -10.54   |
| θ (105°)       | -10.61 | -9.31   | -10.40  | 1.47    | [3.96]  | 2.53    | -2.26   | -5.67    | -5.04    | -14.12   | -15.63   | -14.92   | -21.56   | -8.47    | -7.49    | -6.95    | -5.16    | -3.33    | -1.40    | -0.24    | 0.91     | 1.11     | 0.43     | -2.78    | -10.61   |
| θ (120°)       | -14.26 | -14.57  | -5.52   | 0.14    | 1.90    | 0.86    | -2.36   | -7.61    | -8.78    | -14.23   | -9.98    | -14.03   | -19.63   | -8.53    | -6.78    | -4.35    | -2.10    | -0.87    | 0.26     | 1.13     | 1.92     | 1.57     | -0.57    | -3.43    | -14.26   |
| θ (135°)       | -7.31  | -8.80   | -5.02   | -1.88   | -0.92   | -1.46   | -3.42   | -5.74    | -6.82    | -7.75    | -8.58    | -9.72    | -11.72   | -13.63   | -13.79   | -9.38    | -6.23    | -4.38    | -2.35    | -0.53    | 0.06     | -0.80    | -2.95    | -4.74    | -7.31    |
| θ (150°)       | -12.41 | -9.63   | -6.51   | -5.32   | -7.14   | -11.05  | -10.04  | -6.65    | -5.82    | -8.07    | -10.59   | -14.96   | -20.18   | -11.67   | -6.85    | -4.57    | -4.11    | -3.39    | -3.12    | -3.22    | -3.89    | -5.53    | -7.82    | -9.51    | -12.41   |
| θ (165°)       | -25.49 | -18.61  | -17.40  | -16.97  | -11.06  | -6.91   | -4.22   | -2.17    | -1.60    | -2.25    | -4.53    | -8.86    | -17.51   | -20.63   | -13.44   | -11.13   | -8.90    | -5.77    | -3.70    | -2.54    | -2.35    | -3.97    | -6.65    | -12.07   | -25.49   |
| θ (180°)       | -10.44 | -7.45   | -5.70   | -4.76   | -4.47   | -4.78   | -5.73   | -7.51    | -10.54   | -16.31   | -44.47   | -16.11   | -10.44   | -7.45    | -5.70    | -4.76    | -4.47    | -4.78    | -5.73    | -7.51    | -10.54   | -16.31   | -44.47   | -16.11   | -10.44   |

| Ant.           | No.1   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5150   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -3.21  | -4.07   | -5.71   | -8.51   | -13.69  | -32.38  | -15.90  | -9.53    | -6.30    | -4.41    | -3.37    | -2.99    | -3.21    | -4.07    | -5.71    | -8.51    | -13.69   | -32.38   | -15.90   | -9.53    | -6.30    | -4.41    | -3.37    | -2.99    | -3.21    |
| θ (15°)        | 0.49   | -0.04   | -1.65   | -4.71   | -8.73   | -13.94  | -17.95  | -11.98   | -10.11   | -10.80   | -12.59   | -13.27   | -11.55   | -10.44   | -8.84    | -8.61    | -10.20   | -13.57   | -14.10   | -10.11   | -6.25    | -3.03    | -0.45    | 0.71     | 0.49     |
| θ (30°)        | 0.84   | 1.22    | 1.38    | 0.15    | -2.86   | -8.46   | -20.57  | -20.77   | -18.44   | -20.61   | -27.37   | -16.61   | -30.25   | -17.72   | -19.81   | -15.36   | -19.20   | -23.21   | -19.32   | -9.12    | -4.40    | -1.27    | 1.20     | [1.97]   | 0.84     |
| θ (45°)        | -3.71  | -1.23   | 1.07    | 0.47    | -3.36   | -9.14   | -16.08  | -24.58   | -30.83   | -20.13   | -23.07   | -26.53   | -31.82   | -21.95   | -17.68   | -13.84   | -15.06   | -14.09   | -17.52   | -12.44   | -7.68    | -3.35    | 0.27     | -2.16    | -3.71    |
| θ (60°)        | -2.57  | -1.54   | -4.08   | -4.19   | -3.29   | -4.67   | -9.53   | -21.22   | -23.70   | -11.22   | -12.12   | -16.93   | -14.83   | -18.40   | -12.80   | -15.27   | -29.65   | -37.80   | -22.29   | -16.75   | -11.20   | -9.72    | -4.75    | 0.11     | -2.57    |
| θ (75°)        | -4.36  | -5.61   | -9.38   | -6.32   | -10.90  | -17.38  | -17.47  | -18.39   | -16.51   | -13.69   | -8.92    | -13.28   | -27.32   | -10.34   | -12.67   | -28.37   | -27.26   | -24.59   | -18.25   | -10.23   | -10.48   | -12.34   | -8.07    | -3.54    | -4.36    |
| θ (90°)        | -13.08 | -14.00  | -8.17   | -7.72   | -10.02  | -15.37  | -17.73  | -15.06   | -27.86   | -11.49   | -10.73   | -19.22   | -16.32   | -19.20   | -11.07   | -11.96   | -16.35   | -21.15   | -16.35   | -18.63   | -19.04   | -7.04    | -14.67   | -17.91   | -13.08   |
| θ (105°)       | -4.75  | -4.18   | -2.52   | -6.72   | -12.11  | -13.21  | -15.78  | -20.30   | -18.55   | -11.98   | -7.70    | -23.81   | -17.49   | -19.84   | -8.60    | -10.68   | -17.06   | -35.55   | -22.06   | -20.24   | -7.65    | -5.28    | -4.37    | -8.74    | -4.75    |
| θ (120°)       | -4.54  | -3.37   | -2.79   | -4.88   | -10.42  | -16.28  | -14.84  | -16.85   | -12.60   | -14.41   | -15.42   | -18.03   | -12.02   | -17.20   | -15.14   | -9.19    | -11.25   | -13.30   | -12.39   | -13.53   | -8.81    | -4.91    | -1.42    | -0.11    | -4.54    |
| θ (135°)       | -1.31  | -1.22   | -0.41   | -2.53   | -5.69   | -12.67  | -20.01  | -12.17   | -12.36   | -10.15   | -10.98   | -13.41   | -8.12    | -6.71    | -7.74    | -6.59    | -9.48    | -9.48    | -13.28   | -20.14   | -7.52    | -1.85    | 1.34     | 1.63     | -1.31    |
| θ (150°)       | -9.91  | -10.89  | -5.10   | -4.24   | -7.43   | -15.83  | -21.74  | -11.95   | -12.19   | -14.00   | -12.28   | -7.29    | -5.32    | -4.37    | -5.42    | -7.25    | -9.04    | -11.92   | -16.71   | -17.36   | -6.55    | -1.70    | -0.53    | -2.44    | -9.91    |
| θ (165°)       | -4.14  | -5.44   | -7.91   | -11.22  | -18.06  | -25.00  | -25.88  | -42.04   | -21.47   | -15.67   | -11.55   | -6.86    | -4.33    | -4.27    | -5.80    | -8.69    | -14.35   | -19.47   | -31.33   | -14.75   | -8.79    | -5.98    | -4.23    | -3.28    | -4.14    |
| θ (180°)       | -4.08  | -5.72   | -8.53   | -13.71  | -32.45  | -15.91  | -9.54   | -6.31    | -4.42    | -3.38    | -3.00    | -3.22    | -4.08    | -5.72    | -8.53    | -13.71   | -32.45   | -15.91   | -9.54    | -6.31    | -4.42    | -3.38    | -3.00    | -3.22    | -4.08    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -15.90 | -9.53   | -6.30   | -4.41   | -3.37   | -2.99   | -3.21   | -4.07    | -5.71    | -8.51    | -13.69   | -32.38   | -15.90   | -9.53    | -6.30    | -4.41    | -3.37    | -2.99    | -3.21    | -4.07    | -5.71    | -8.51    | -13.69   | -32.38   | -15.90   |
| θ (15°)        | -14.32 | -18.11  | -7.13   | -3.81   | -2.91   | -2.59   | -2.53   | -4.76    | -8.10    | -13.92   | -19.90   | -20.89   | -17.31   | -19.64   | -19.45   | -9.25    | -4.53    | -2.48    | -1.84    | -1.56    | -1.41    | -1.18    | -1.96    | -5.11    | -14.32   |
| θ (30°)        | -28.80 | -7.66   | -0.36   | 2.20    | 2.46    | 1.99    | 0.29    | -2.83    | -7.25    | -9.77    | -14.57   | -23.47   | -15.39   | -16.60   | -10.75   | -10.52   | -7.31    | -3.57    | -0.58    | 0.78     | 1.10     | 0.25     | -3.06    | -7.98    | -28.80   |
| θ (45°)        | -16.68 | -7.95   | -1.37   | 0.98    | 1.64    | 1.15    | -1.64   | -6.04    | -11.25   | -10.20   | -14.93   | -12.24   | -16.19   | -19.86   | -13.63   | -15.64   | -7.74    | -5.33    | -1.64    | 1.11     | 2.49     | 0.62     | -6.10    | -7.24    | -16.68   |
| θ (60°)        | -12.48 | -5.75   | -5.45   | 1.04    | 2.88    | 0.52    | -3.70   | -8.72    | -11.67   | -14.38   | -18.22   | -14.17   | -14.94   | -15.77   | -20.45   | -13.72   | -11.96   | -9.37    | -5.91    | -2.43    | -1.29    | -4.39    | -5.18    | -6.89    | -12.48   |
| θ (75°)        | -9.62  | -8.09   | -3.83   | 1.47    | 2.40    | 0.18    | -5.04   | -10.12   | -7.48    | -23.75   | -16.03   | -13.61   | -13.28   | -17.02   | -13.96   | -20.29   | -14.45   | -7.70    | -3.36    | 0.68     | 2.06     | -0.84    | -3.07    | -5.65    | -9.62    |
| θ (90°)        | -9.38  | -1.99   | -4.63   | 1.08    | [3.48]  | 1.53    | -1.67   | -6.75    | -11.31   | -11.46   | -12.21   | -11.57   | -11.89   | -9.84    | -11.26   | -11.41   | -16.37   | -3.78    | -1.35    | 1.70     | 1.26     | -5.74    | -4.91    | -2.86    | -9.38    |
| θ (105°)       | -6.71  | -4.51   | -2.09   | -0.10   | 1.34    | 1.63    | -2.07   | -6.78    | -21.52   | -12.00   | -14.67   | -22.64   | -14.82   | -18.70   | -12.32   | -12.35   | -12.93   | -7.09    | -3.38    | -0.28    | 1.70     | 0.44     | -4.96    | -5.04    | -6.71    |
| θ (120°)       | -6.43  | -6.43   | -1.96   | 3.16    | 2.89    | 0.80    | -3.24   | -10.88   | -8.70    | -20.46   | -15.99   | -24.84   | -19.88   | -13.52   | -18.21   | -11.30   | -5.47    | -4.20    | -0.44    | 1.61     | 1.28     | -0.98    | -4.36    | -9.57    | -6.43    |
| θ (135°)       | -8.49  | -7.63   | -1.72   | 2.16    | 2.13    | 1.42    | -0.67   | -6.71    | -8.65    | -7.98    | -12.55   | -22.75   | -34.65   | -17.80   | -10.22   | -10.89   | -10.13   | -5.33    | -2.09    | -0.70    | 0.62     | 1.50     | 0.20     | -8.91    | -8.49    |
| θ (150°)       | -30.96 | -16.14  | -5.54   | 0.05    | 2.26    | 1.50    | -1.79   | -5.06    | -7.95    | -21.83   | -24.30   | -21.63   | -17.93   | -13.29   | -9.79    | -10.64   | -12.27   | -7.76    | -3.93    | -1.89    | -1.18    | -1.70    | -4.24    | -10.36   | -30.96   |
| θ (165°)       | -22.86 | -23.43  | -14.26  | -11.31  | -10.17  | -10.13  | -10.50  | -11.63   | -11.55   | -13.39   | -13.74   | -13.60   | -17.55   | -16.51   | -10.36   | -8.45    | -6.66    | -4.41    | -2.62    | -1.87    | -2.09    | -3.03    | -5.13    | -9.38    | -22.86   |
| θ (180°)       | -9.54  | -6.31   | -4.42   | -3.38   | -3.00   | -3.22   | -4.08   | -5.72    | -8.53    | -13.71   | -32.45   | -15.91   | -9.54    | -6.31    | -4.42    | -3.38    | -3.00    | -3.22    | -4.08    | -5.72    | -8.53    | -13.71   | -32.45   | -15.91   | -9.54    |

| Ant.           | No.1   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5200   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -1.51  | -2.25   | -3.74   | -6.29   | -10.87  | -23.37  | -16.19  | -8.70    | -5.12    | -3.05    | -1.88    | -1.39    | -1.51    | -2.25    | -3.74    | -6.29    | -10.87   | -23.37   | -16.19   | -8.70    | -5.12    | -3.05    | -1.88    | -1.39    | -1.51    |
| θ (15°)        | 1.79   | 1.40    | 0.16    | -2.68   | -6.80   | -12.44  | -17.67  | -12.01   | -9.01    | -8.25    | -8.18    | -7.80    | -8.10    | -8.37    | -7.70    | -7.27    | -9.03    | -12.30   | -15.53   | -11.98   | -8.06    | -4.76    | -0.93    | 1.34     | 1.79     |
| θ (30°)        | 1.48   | 2.35    | 1.76    | -0.34   | -3.61   | -9.23   | -19.95  | -23.65   | -16.41   | -14.26   | -13.57   | -11.54   | -16.92   | -16.31   | -15.35   | -17.11   | -22.22   | -20.69   | -18.05   | -8.78    | -4.50    | -1.47    | 0.66     | 1.13     | 1.48     |
| θ (45°)        | -3.49  | -1.92   | 0.82    | 1.01    | -2.45   | -9.32   | -16.56  | -23.52   | -20.97   | -19.32   | -19.85   | -22.53   | -26.22   | -23.52   | -17.69   | -16.53   | -13.84   | -13.26   | -16.36   | -10.97   | -6.53    | -2.10    | 0.78     | -1.11    | -3.49    |
| θ (60°)        | -2.09  | -1.30   | -3.92   | -4.40   | -3.64   | -4.03   | -8.08   | -18.50   | -26.36   | -11.26   | -12.02   | -14.88   | -13.33   | -19.18   | -14.07   | -19.63   | -27.74   | -30.62   | -18.81   | -15.92   | -12.82   | -9.57    | -4.11    | 0.42     | -2.09    |
| θ (75°)        | -3.56  | -4.34   | -7.20   | -6.37   | -8.06   | -10.99  | -14.59  | -18.60   | -17.62   | -15.83   | -9.14    | -11.46   | -17.56   | -10.61   | -12.90   | -22.86   | -37.96   | -31.30   | -18.03   | -9.58    | -10.49   | -13.39   | -7.61    | -2.15    | -3.56    |
| θ (90°)        | -11.43 | -9.58   | -8.56   | -6.81   | -11.51  | -26.59  | -28.06  | -14.73   | -19.79   | -13.35   | -9.63    | -16.38   | -13.94   | -19.85   | -11.04   | -12.37   | -17.18   | -20.55   | -15.84   | -15.29   | -14.86   | -5.90    | -12.17   | -13.66   | -11.43   |
| θ (105°)       | -3.73  | -3.24   | -2.38   | -6.43   | -17.56  | -17.08  | -14.88  | -21.14   | -13.74   | -11.38   | -8.74    | -21.33   | -18.39   | -15.54   | -7.46    | -10.79   | -19.94   | -32.28   | -23.07   | -16.32   | -7.14    | -4.39    | -4.84    | -9.75    | -3.73    |
| θ (120°)       | -3.79  | -4.48   | -2.98   | -3.46   | -10.99  | -17.71  | -13.43  | -12.33   | -9.30    | -14.40   | -18.35   | -18.02   | -12.28   | -17.21   | -13.72   | -8.99    | -11.57   | -12.94   | -12.40   | -11.45   | -6.75    | -3.54    | -0.59    | 0.20     | -3.79    |
| θ (135°)       | -0.67  | -1.04   | 0.15    | -2.04   | -5.98   | -13.10  | -16.93  | -9.44    | -9.37    | -9.33    | -10.75   | -10.99   | -6.20    | -5.58    | -7.12    | -6.90    | -8.78    | -8.42    | -12.65   | -22.62   | -9.57    | -1.87    | 2.27     | [2.57]   | -0.67    |
| θ (150°)       | -7.26  | -9.87   | -7.64   | -6.22   | -9.54   | -19.16  | -19.94  | -11.14   | -11.54   | -14.50   | -11.26   | -6.07    | -3.98    | -3.60    | -5.66    | -7.50    | -8.65    | -11.57   | -16.47   | -17.17   | -6.89    | -1.86    | -0.54    | -2.14    | -7.26    |
| θ (165°)       | -1.94  | -2.77   | -5.11   | -8.55   | -14.84  | -22.85  | -22.55  | -29.62   | -18.62   | -14.06   | -10.57   | -6.28    | -3.80    | -4.08    | -6.02    | -9.73    | -15.84   | -23.12   | -25.98   | -14.43   | -8.80    | -5.63    | -3.61    | -2.40    | -1.94    |
| θ (180°)       | -3.53  | -4.86   | -7.18   | -11.25  | -20.78  | -20.25  | -11.09  | -7.09    | -4.81    | -3.50    | -2.90    | -2.91    | -3.53    | -4.86    | -7.18    | -11.25   | -20.78   | -20.25   | -11.09   | -7.09    | -4.81    | -3.50    | -2.90    | -2.91    | -3.53    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -16.19 | -8.70   | -5.12   | -3.05   | -1.88   | -1.39   | -1.51   | -2.25    | -3.74    | -6.29    | -10.87   | -23.37   | -16.19   | -8.70    | -5.12    | -3.05    | -1.88    | -1.39    | -1.51    | -2.25    | -3.74    | -6.29    | -10.87   | -23.37   | -16.19   |
| θ (15°)        | -15.44 | -12.78  | -6.32   | -3.43   | -2.48   | -2.67   | -2.73   | -4.63    | -7.81    | -14.07   | -17.47   | -16.63   | -13.64   | -16.75   | -20.04   | -9.10    | -4.57    | -3.20    | -2.88    | -2.55    | -2.17    | -1.61    | -2.30    | -5.98    | -15.44   |
| θ (30°)        | -33.08 | -8.10   | -0.16   | 2.50    | 2.31    | 1.74    | 0.38    | -2.37    | -6.65    | -11.52   | -16.52   | -26.33   | -13.87   | -20.49   | -10.87   | -9.09    | -7.02    | -3.39    | -0.39    | 0.67     | 1.07     | 0.47     | -2.38    | -7.92    | -33.08   |
| θ (45°)        | -16.22 | -7.76   | -1.47   | 1.23    | 2.11    | 1.66    | -0.94   | -5.72    | -10.05   | -10.68   | -16.15   | -12.06   | -15.77   | -20.81   | -13.89   | -13.37   | -7.56    | -5.20    | -1.17    | 1.21     | 2.56     | 0.94     | -4.82    | -8.15    | -16.22   |
| θ (60°)        | -12.49 | -6.30   | -5.08   | 1.08    | 2.51    | 0.44    | -3.60   | -9.02    | -13.95   | -13.86   | -18.23   | -12.54   | -15.58   | -14.43   | -18.25   | -12.47   | -11.71   | -8.50    | -4.38    | -1.00    | -0.82    | -4.81    | -4.72    | -5.60    | -12.49   |
| θ (75°)        | -9.12  | -6.86   | -3.73   | 1.38    | 3.15    | 1.31    | -3.67   | -15.33   | -7.33    | -20.21   | -12.91   | -14.38   | -11.63   | -21.19   | -13.05   | -22.74   | -14.58   | -7.35    | -3.72    | 0.48     | 1.66     | -0.80    | -2.50    | -5.26    | -9.12    |
| θ (90°)        | -9.56  | -1.40   | -3.95   | 1.13    | [4.01]  | 2.12    | -1.74   | -5.72    | -11.48   | -9.76    | -12.33   | -10.50   | -13.43   | -10.15   | -11.50   | -11.39   | -12.72   | -3.29    | -1.42    | 1.25     | 0.66     | -6.81    | -4.03    | -2.71    | -9.56    |
| θ (105°)       | -6.20  | -3.11   | -2.02   | 0.45    | 2.02    | 2.58    | -1.09   | -5.18    | -19.13   | -13.83   | -14.79   | -25.42   | -14.76   | -19.32   | -11.06   | -13.46   | -11.74   | -6.77    | -3.04    | -0.05    | 2.14     | 0.91     | -5.10    | -5.96    | -6.20    |
| θ (120°)       | -5.28  | -6.51   | -1.52   | 2.61    | 2.52    | 0.68    | -2.49   | -8.40    | -8.26    | -14.72   | -14.33   | -29.03   | -22.71   | -13.46   | -19.31   | -10.60   | -4.70    | -2.97    | 0.24     | 2.10     | 1.09     | -0.92    | -3.43    | -10.39   | -5.28    |
| θ (135°)       | -7.95  | -7.54   | -1.20   | 2.82    | 3.12    | 2.12    | -0.24   | -5.75    | -8.43    | -7.63    | -13.97   | -20.64   | -28.74   | -15.56   | -9.65    | -12.70   | -12.89   | -5.34    | -2.19    | -0.61    | 0.93     | 1.70     | 0.66     | -6.15    | -7.95    |
| θ (150°)       | -21.28 | -17.50  | -6.65   | -0.95   | 2.06    | 1.75    | -1.54   | -5.67    | -8.61    | -18.39   | -21.28   | -19.99   | -17.90   | -11.21   | -8.97    | -12.72   | -12.51   | -6.95    | -4.41    | -2.97    | -1.77    | -1.52    | -3.47    | -9.73    | -21.28   |
| θ (165°)       | -24.49 | -15.86  | -14.34  | -15.21  | -16.02  | -15.21  | -13.18  | -11.97   | -12.62   | -13.99   | -12.76   | -11.86   | -16.08   | -19.47   | -11.07   | -8.80    | -7.22    | -4.32    | -2.52    | -1.76    | -1.87    | -3.04    | -5.85    | -11.50   | -24.49   |
| θ (180°)       | -11.09 | -7.09   | -4.81   | -3.50   | -2.90   | -2.91   | -3.53   | -4.86    | -7.18    | -11.25   | -20.78   | -20.25   | -11.09   | -7.09    | -4.81    | -3.50    | -2.90    | -2.91    | -3.53    | -4.86    | -7.18    | -11.25   | -20.78   | -20.25   | -11.09   |

| Ant.           | No.1   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5250   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -0.51  | -1.18   | -2.58   | -4.99   | -9.27   | -19.84  | -16.64  | -8.26    | -4.45    | -2.26    | -1.01    | -0.45    | -0.51    | -1.18    | -2.58    | -4.99    | -9.27    | -19.84   | -16.64   | -8.26    | -4.45    | -2.26    | -1.01    | -0.45    | -0.51    |
| θ (15°)        | 2.90   | 2.59    | 1.20    | -1.74   | -5.94   | -11.21  | -16.59  | -11.73   | -8.28    | -6.69    | -6.35    | -5.94    | -6.64    | -7.15    | -6.61    | -6.73    | -8.77    | -12.29   | -18.88   | -15.32   | -10.37   | -5.44    | -0.76    | 1.95     | 2.90     |
| θ (30°)        | 1.95   | 2.37    | 1.62    | -0.70   | -4.25   | -9.88   | -21.20  | -21.19   | -17.84   | -12.31   | -10.08   | -10.05   | -13.55   | -12.87   | -13.12   | -21.03   | -19.29   | -18.17   | -16.51   | -8.31    | -4.43    | -1.58    | 0.48     | 1.03     | 1.95     |
| θ (45°)        | -3.25  | -2.90   | 0.26    | 1.31    | -2.02   | -9.85   | -18.93  | -21.14   | -17.38   | -14.91   | -16.93   | -17.24   | -18.21   | -19.12   | -16.84   | -19.67   | -12.89   | -13.36   | -15.65   | -9.56    | -4.99    | -1.37    | 0.60     | -0.93    | -3.25    |
| θ (60°)        | -2.49  | -1.46   | -3.33   | -4.16   | -4.34   | -4.35   | -7.95   | -16.20   | -28.55   | -11.75   | -11.56   | -14.67   | -13.38   | -15.55   | -14.95   | -27.64   | -27.10   | -27.90   | -17.41   | -15.85   | -14.25   | -7.89    | -3.07    | 0.52     | -2.49    |
| θ (75°)        | -3.17  | -2.36   | -4.59   | -8.11   | -6.47   | -8.12   | -12.35  | -17.37   | -17.52   | -20.05   | -10.86   | -11.89   | -15.96   | -10.87   | -12.19   | -21.67   | -26.18   | -28.75   | -18.50   | -9.51    | -10.76   | -15.60   | -6.57    | -1.78    | -3.17    |
| θ (90°)        | -8.57  | -8.73   | -8.32   | -6.16   | -10.88  | -22.42  | -31.82  | -15.22   | -15.29   | -15.48   | -9.49    | -17.21   | -14.29   | -19.07   | -10.70   | -13.72   | -21.33   | -26.91   | -19.58   | -15.68   | -12.90   | -6.00    | -13.58   | -11.50   | -8.57    |
| θ (105°)       | -3.93  | -3.63   | -2.12   | -5.42   | -17.06  | -18.24  | -13.78  | -18.40   | -12.82   | -10.88   | -10.00   | -21.69   | -17.97   | -14.11   | -7.23    | -11.19   | -22.00   | -22.02   | -21.92   | -15.17   | -6.44    | -4.35    | -5.89    | -8.80    | -3.93    |
| θ (120°)       | -4.13  | -5.43   | -2.78   | -2.70   | -11.32  | -16.73  | -12.85  | -10.85   | -8.07    | -11.82   | -20.04   | -18.59   | -12.02   | -19.70   | -11.05   | -9.01    | -13.34   | -13.28   | -12.39   | -10.24   | -5.79    | -2.76    | -0.04    | -0.30    | -4.13    |
| θ (135°)       | -0.25  | -1.18   | 0.40    | -1.03   | -5.26   | -12.06  | -19.99  | -9.71    | -8.60    | -7.66    | -8.74    | -8.59    | -5.19    | -5.40    | -6.90    | -7.40    | -8.32    | -8.35    | -13.00   | -25.51   | -11.91   | -2.29    | 2.52     | [3.17]   | -0.25    |
| θ (150°)       | -3.49  | -5.61   | -9.39   | -8.95   | -11.53  | -22.24  | -19.17  | -10.88   | -10.34   | -12.87   | -9.73    | -4.75    | -2.70    | -3.47    | -6.06    | -7.88    | -8.61    | -12.05   | -19.18   | -16.13   | -6.82    | -2.75    | -1.74    | -2.31    | -3.49    |
| θ (165°)       | 0.15   | -0.56   | -2.65   | -6.12   | -12.66  | -20.97  | -19.62  | -23.06   | -18.85   | -14.08   | -9.38    | -5.54    | -3.58    | -4.33    | -6.62    | -11.35   | -17.69   | -24.83   | -23.42   | -15.24   | -10.25   | -6.02    | -3.20    | -1.21    | 0.15     |
| θ (180°)       | -2.65  | -3.71   | -5.63   | -8.93   | -15.49  | -29.67  | -12.71  | -7.65    | -4.89    | -3.28    | -2.45    | -2.25    | -2.65    | -3.71    | -5.63    | -8.93    | -15.49   | -29.67   | -12.71   | -7.65    | -4.89    | -3.28    | -2.45    | -2.25    | -2.65    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -16.64 | -8.26   | -4.45   | -2.26   | -1.01   | -0.45   | -0.51   | -1.18    | -2.58    | -4.99    | -9.27    | -19.84   | -16.64   | -8.26    | -4.45    | -2.26    | -1.01    | -0.45    | -0.51    | -1.18    | -2.58    | -4.99    | -9.27    | -19.84   | -16.64   |
| θ (15°)        | -16.64 | -10.35  | -5.33   | -2.99   | -2.17   | -2.34   | -3.04   | -4.56    | -7.47    | -12.29   | -14.50   | -15.04   | -13.75   | -16.20   | -18.02   | -9.11    | -5.84    | -5.01    | -4.38    | -3.60    | -2.59    | -1.99    | -2.63    | -6.15    | -16.64   |
| θ (30°)        | -22.90 | -9.14   | -0.37   | 2.90    | 3.02    | 2.23    | 0.88    | -1.71    | -5.58    | -10.80   | -16.11   | -24.07   | -13.67   | -21.91   | -10.65   | -8.57    | -7.07    | -2.35    | 0.18     | 1.07     | 1.54     | 1.04     | -1.94    | -8.90    | -22.90   |
| θ (45°)        | -16.35 | -8.72   | -1.81   | 1.83    | 2.89    | 1.89    | -0.50   | -5.35    | -9.05    | -9.35    | -23.51   | -12.83   | -15.06   | -24.29   | -13.99   | -12.14   | -8.52    | -4.25    | -0.98    | 1.20     | 2.58     | 0.84     | -4.84    | -9.91    | -16.35   |
| θ (60°)        | -10.46 | -5.34   | -3.69   | 1.68    | 2.31    | 0.51    | -3.31   | -8.63    | -16.78   | -13.66   | -14.90   | -11.28   | -15.97   | -12.17   | -20.67   | -11.55   | -11.45   | -8.73    | -2.97    | -0.21    | -0.58    | -5.05    | -3.73    | -5.17    | -10.46   |
| θ (75°)        | -9.58  | -6.08   | -3.92   | 0.99    | 3.52    | 2.64    | -1.40   | -18.82   | -7.18    | -17.08   | -11.34   | -16.01   | -11.64   | -21.30   | -12.54   | -21.14   | -13.55   | -7.39    | -3.71    | 0.49     | 1.52     | -0.85    | -2.52    | -6.52    | -9.58    |
| θ (90°)        | -10.49 | -1.04   | -2.62   | 1.37    | [4.19]  | 2.39    | -2.30   | -5.98    | -12.07   | -9.21    | -12.71   | -10.07   | -13.44   | -11.72   | -12.07   | -11.74   | -10.28   | -3.35    | -1.78    | 0.99     | 0.97     | -7.50    | -4.38    | -2.36    | -10.49   |
| θ (105°)       | -5.90  | -2.56   | -2.67   | 1.01    | 2.89    | 2.93    | -0.78   | -4.64    | -13.84   | -18.31   | -14.41   | -31.79   | -16.02   | -20.15   | -9.93    | -13.96   | -10.64   | -6.23    | -2.23    | 0.34     | 2.42     | 1.10     | -5.83    | -6.80    | -5.90    |
| θ (120°)       | -5.16  | -7.26   | -1.22   | 2.15    | 2.18    | 0.89    | -1.87   | -6.76    | -8.47    | -12.81   | -13.84   | -26.97   | -23.23   | -13.33   | -24.08   | -9.97    | -4.40    | -3.03    | 0.70     | 2.67     | 1.24     | -0.91    | -2.72    | -9.06    | -5.16    |
| θ (135°)       | -8.96  | -7.42   | -0.52   | 3.53    | 4.04    | 2.66    | -0.05   | -5.21    | -7.83    | -6.76    | -13.86   | -18.15   | -24.32   | -14.18   | -9.32    | -15.65   | -12.23   | -5.13    | -2.15    | -0.29    | 1.17     | 2.00     | 1.19     | -4.58    | -8.96    |
| θ (150°)       | -13.07 | -19.88  | -9.85   | -1.86   | 2.14    | 2.15    | -1.30   | -5.62    | -8.34    | -14.79   | -20.19   | -19.50   | -18.98   | -11.17   | -8.93    | -14.86   | -11.93   | -7.01    | -5.09    | -3.54    | -1.77    | -1.00    | -2.86    | -10.91   | -13.07   |
| θ (165°)       | -22.72 | -13.00  | -11.23  | -12.02  | -14.52  | -22.90  | -16.90  | -12.45   | -12.00   | -10.73   | -10.44   | -10.22   | -16.26   | -21.74   | -12.74   | -9.77    | -7.75    | -4.72    | -2.73    | -1.97    | -1.82    | -2.65    | -5.50    | -12.07   | -22.72   |
| θ (180°)       | -12.71 | -7.65   | -4.89   | -3.28   | -2.45   | -2.25   | -2.65   | -3.71    | -5.63    | -8.93    | -15.49   | -29.67   | -12.71   | -7.65    | -4.89    | -3.28    | -2.45    | -2.25    | -2.65    | -3.71    | -5.63    | -8.93    | -15.49   | -29.67   | -12.71   |

| Ant.            | No.1        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Freq.<br>(MHz)  | 5300        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -0.32       | -0.91        | -2.20        | -4.45        | -8.40        | -17.33       | -18.60       | -8.80         | -4.67         | -2.33         | -0.97         | -0.34         | -0.32         | -0.91         | -2.20         | -4.45         | -8.40         | -17.33        | -18.60        | -8.80         | -4.67         | -2.33         | -0.97         | -0.34         | -0.32         |
| $\theta$ (15°)  | [3.54]      | 3.24         | 1.74         | -0.86        | -5.24        | -10.22       | -15.76       | -12.54        | -8.87         | -6.96         | -6.69         | -6.37         | -7.24         | -7.51         | -6.94         | -7.90         | -9.48         | -13.57        | -20.90        | -15.76        | -10.45        | -4.76         | -0.43         | 2.28          | 3.54          |
| $\theta$ (30°)  | 1.95        | 2.18         | 1.46         | -0.79        | -4.40        | -10.96       | -24.18       | -15.91        | -21.31        | -13.69        | -9.96         | -10.74        | -14.36        | -12.75        | -14.56        | -18.19        | -14.37        | -16.61        | -16.36        | -6.94         | -3.30         | -1.65         | -0.11         | 0.50          | 1.95          |
| $\theta$ (45°)  | -3.47       | -2.85        | 0.86         | 1.67         | -1.96        | -11.09       | -19.87       | -18.80        | -17.17        | -13.53        | -16.89        | -17.75        | -19.06        | -18.05        | -15.63        | -18.56        | -13.48        | -15.06        | -15.55        | -8.90         | -4.33         | -1.55         | 0.30          | -1.12         | -3.47         |
| $\theta$ (60°)  | -2.94       | -0.88        | -2.57        | -2.79        | -4.52        | -4.85        | -7.88        | -14.99        | -24.32        | -13.46        | -10.51        | -16.53        | -14.59        | -13.21        | -13.36        | -61.46        | -22.53        | -22.01        | -16.02        | -16.97        | -14.81        | -7.21         | -2.33         | -0.01         | -2.94         |
| $\theta$ (75°)  | -3.65       | -2.05        | -3.23        | -10.14       | -6.03        | -6.79        | -11.30       | -14.88        | -15.06        | -29.56        | -12.48        | -14.83        | -18.47        | -12.24        | -10.16        | -19.58        | -22.19        | -22.41        | -17.85        | -9.59         | -11.02        | -14.99        | -7.16         | -2.64         | -3.65         |
| $\theta$ (90°)  | -9.06       | -8.92        | -10.51       | -5.88        | -9.10        | -17.75       | -32.47       | -14.77        | -12.39        | -17.17        | -9.04         | -17.76        | -16.26        | -17.36        | -9.47         | -13.99        | -20.52        | -29.09        | -18.91        | -15.15        | -14.12        | -7.31         | -13.28        | -10.03        | -9.06         |
| $\theta$ (105°) | -4.13       | -4.65        | -1.96        | -5.30        | -13.31       | -14.26       | -14.24       | -16.96        | -13.17        | -10.75        | -9.10         | -16.18        | -14.52        | -12.25        | -7.42         | -11.82        | -20.93        | -20.26        | -17.99        | -14.74        | -6.32         | -3.93         | -7.71         | -8.37         | -4.13         |
| $\theta$ (120°) | -5.01       | -5.20        | -2.42        | -3.14        | -14.56       | -14.36       | -10.48       | -9.61         | -7.70         | -10.60        | -17.29        | -20.31        | -12.83        | -20.13        | -9.59         | -8.00         | -13.50        | -12.88        | -13.66        | -8.64         | -4.58         | -3.03         | 0.07          | -0.39         | -5.01         |
| $\theta$ (135°) | 0.04        | -0.94        | 0.08         | -0.54        | -4.87        | -11.11       | -18.90       | -9.48         | -8.94         | -7.14         | -8.01         | -7.75         | -4.61         | -5.17         | -7.24         | -7.68         | -7.48         | -8.54         | -12.91        | -23.15        | -12.09        | -1.98         | 2.13          | 2.60          | 0.04          |
| $\theta$ (150°) | -1.39       | -3.20        | -6.99        | -9.33        | -11.02       | -19.50       | -20.59       | -11.75        | -9.96         | -11.41        | -8.72         | -4.16         | -2.44         | -3.60         | -6.51         | -8.27         | -8.75         | -12.18        | -20.26        | -19.41        | -7.50         | -2.99         | -1.22         | -0.69         | -1.39         |
| $\theta$ (165°) | 1.08        | 0.51         | -1.50        | -5.08        | -11.51       | -21.47       | -21.84       | -25.06        | -18.01        | -12.13        | -7.98         | -4.92         | -3.96         | -5.03         | -7.46         | -12.85        | -21.01        | -26.10        | -18.20        | -13.95        | -9.66         | -5.04         | -1.95         | 0.05          | 1.08          |
| $\theta$ (180°) | -1.96       | -2.99        | -4.86        | -8.08        | -14.37       | -31.93       | -12.39       | -7.16         | -4.34         | -2.68         | -1.82         | -1.59         | -1.96         | -2.99         | -4.86         | -8.08         | -14.37        | -31.93        | -12.39        | -7.16         | -4.34         | -2.68         | -1.82         | -1.59         | -1.96         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -18.60      | -8.80        | -4.67        | -2.33        | -0.97        | -0.34        | -0.32        | -0.91         | -2.20         | -4.45         | -8.40         | -17.33        | -18.60        | -8.80         | -4.67         | -2.33         | -0.97         | -0.34         | -0.32         | -0.91         | -2.20         | -4.45         | -8.40         | -17.33        | -18.60        |
| $\theta$ (15°)  | -17.81      | -9.94        | -5.60        | -3.74        | -3.06        | -2.83        | -3.63        | -5.28         | -8.39         | -12.66        | -15.41        | -16.64        | -17.14        | -18.08        | -15.05        | -9.57         | -7.72         | -6.04         | -4.36         | -3.30         | -2.12         | -1.85         | -2.88         | -6.67         | -17.81        |
| $\theta$ (30°)  | -18.81      | -10.23       | -0.89        | 3.09         | 3.75         | 2.79         | 1.54         | -0.80         | -5.47         | -10.94        | -13.82        | -26.06        | -14.23        | -23.96        | -9.56         | -8.98         | -5.41         | -0.93         | 0.81          | 1.75          | 2.22          | 1.78          | -1.99         | -11.53        | -18.81        |
| $\theta$ (45°)  | -20.94      | -9.67        | -1.48        | 2.46         | 3.10         | 1.77         | -0.37        | -4.56         | -9.79         | -7.50         | -20.48        | -16.03        | -13.39        | -25.47        | -14.32        | -11.64        | -8.89         | -3.95         | -1.50         | 1.06          | 2.66          | 0.70          | -5.75         | -12.46        | -20.94        |
| $\theta$ (60°)  | -8.82       | -4.56        | -3.27        | 2.29         | 2.39         | 0.68         | -3.01        | -8.69         | -14.43        | -14.78        | -13.12        | -11.58        | -14.14        | -12.64        | -21.62        | -13.35        | -11.58        | -8.47         | -2.80         | -0.28         | -0.30         | -4.58         | -3.37         | -4.91         | -8.82         |
| $\theta$ (75°)  | -10.40      | -6.53        | -5.04        | 0.34         | 3.45         | 3.13         | 0.17         | -14.32        | -7.35         | -13.09        | -11.69        | -17.21        | -13.10        | -19.03        | -14.35        | -17.77        | -15.29        | -7.12         | -3.73         | 0.39          | 1.44          | -1.06         | -2.03         | -6.63         | -10.40        |
| $\theta$ (90°)  | -10.94      | -1.24        | -1.95        | 1.96         | 4.04         | 2.25         | -1.96        | -5.09         | -15.42        | -7.85         | -13.82        | -9.65         | -12.04        | -12.82        | -11.79        | -12.90        | -9.35         | -4.37         | -2.60         | 0.94          | 1.46          | -6.87         | -5.21         | -2.38         | -10.94        |
| $\theta$ (105°) | -5.65       | -2.67        | -3.13        | 1.01         | 2.49         | 2.68         | -0.55        | -4.91         | -10.79        | -17.47        | -14.43        | -30.03        | -17.89        | -18.41        | -9.25         | -14.36        | -9.26         | -4.91         | -1.15         | 1.14          | 2.72          | 0.45          | -5.79         | -6.22         | -5.65         |
| $\theta$ (120°) | -5.75       | -6.32        | -1.42        | 1.50         | 1.94         | 0.96         | -1.90        | -6.34         | -8.08         | -10.51        | -12.51        | -18.87        | -25.34        | -13.42        | -29.43        | -9.09         | -4.40         | -2.81         | 1.04          | 2.97          | 1.63          | -0.03         | -3.11         | -9.67         | -5.75         |
| $\theta$ (135°) | -10.59      | -8.67        | -0.31        | 3.90         | [4.45]       | 2.73         | -0.12        | -5.01         | -7.58         | -6.31         | -14.00        | -17.46        | -22.70        | -12.53        | -9.84         | -19.82        | -11.48        | -5.43         | -2.14         | 0.37          | 1.59          | 2.24          | 1.58          | -5.43         | -10.59        |
| $\theta$ (150°) | -11.74      | -22.96       | -14.01       | -2.17        | 2.33         | 2.38         | -1.37        | -6.04         | -8.39         | -15.05        | -18.49        | -19.18        | -20.68        | -12.48        | -10.52        | -23.13        | -10.89        | -7.47         | -5.88         | -4.05         | -2.09         | -1.09         | -3.13         | -11.32        | -11.74        |
| $\theta$ (165°) | -26.88      | -14.34       | -10.42       | -9.29        | -10.56       | -15.79       | -23.92       | -13.62        | -10.47        | -8.91         | -9.35         | -9.91         | -16.35        | -19.64        | -11.64        | -9.66         | -7.34         | -5.22         | -3.38         | -2.26         | -1.78         | -2.30         | -4.31         | -9.06         | -26.88        |
| $\theta$ (180°) | -12.39      | -7.16        | -4.34        | -2.68        | -1.82        | -1.59        | -1.96        | -2.99         | -4.86         | -8.08         | -14.37        | -31.93        | -12.39        | -7.16         | -4.34         | -2.68         | -1.82         | -1.59         | -1.96         | -2.99         | -4.86         | -8.08         | -14.37        | -31.93        | -12.39        |

| Ant.            | No.1        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Freq.<br>(MHz)  | 5350        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -0.49       | -0.92        | -2.01        | -3.98        | -7.36        | -14.18       | -25.84       | -10.64        | -5.73         | -3.04         | -1.47         | -0.67         | -0.49         | -0.92         | -2.01         | -3.98         | -7.36         | -14.18        | -25.84        | -10.64        | -5.73         | -3.04         | -1.47         | -0.67         | -0.49         |
| $\theta$ (15°)  | [3.81]      | 3.63         | 2.08         | -0.54        | -4.58        | -9.90        | -15.83       | -14.24        | -10.29        | -8.55         | -8.73         | -9.13         | -9.85         | -9.96         | -9.83         | -9.70         | -10.61        | -14.61        | -18.50        | -16.66        | -12.24        | -5.59         | -0.65         | 2.00          | 3.81          |
| $\theta$ (30°)  | 2.33        | 2.20         | 1.68         | -0.41        | -3.95        | -10.80       | -37.62       | -14.08        | -16.99        | -17.29        | -11.42        | -12.96        | -18.48        | -16.50        | -15.29        | -12.20        | -12.76        | -18.77        | -14.28        | -6.00         | -2.98         | -1.89         | -0.66         | 0.45          | 2.33          |
| $\theta$ (45°)  | -3.34       | -2.86        | 0.83         | 1.24         | -2.46        | -10.63       | -20.38       | -17.40        | -17.74        | -12.83        | -18.72        | -20.74        | -27.33        | -18.05        | -12.56        | -16.07        | -17.85        | -16.16        | -17.10        | -9.15         | -3.99         | -2.17         | -0.74         | -1.99         | -3.34         |
| $\theta$ (60°)  | -2.33       | -0.05        | -1.85        | -1.92        | -4.05        | -5.20        | -8.20        | -14.75        | -21.27        | -16.87        | -10.29        | -16.48        | -13.52        | -11.87        | -12.38        | -34.91        | -31.70        | -24.00        | -16.04        | -16.93        | -16.82        | -7.42         | -1.83         | 0.07          | -2.33         |
| $\theta$ (75°)  | -4.56       | -3.08        | -2.18        | -9.88        | -5.57        | -6.21        | -12.18       | -14.70        | -14.66        | -25.68        | -12.44        | -15.82        | -20.42        | -10.17        | -9.50         | -19.74        | -23.28        | -24.04        | -18.55        | -10.32        | -10.77        | -16.73        | -8.13         | -2.78         | -4.56         |
| $\theta$ (90°)  | -12.72      | -7.42        | -16.72       | -6.39        | -7.60        | -13.09       | -34.10       | -15.85        | -11.40        | -17.03        | -9.18         | -17.35        | -14.59        | -13.97        | -8.77         | -14.44        | -26.10        | -29.53        | -18.12        | -14.46        | -21.11        | -8.17         | -11.47        | -10.79        | -12.72        |
| $\theta$ (105°) | -3.70       | -4.85        | -2.60        | -5.59        | -8.99        | -11.45       | -15.41       | -16.64        | -13.52        | -10.80        | -8.76         | -14.33        | -13.11        | -11.37        | -8.48         | -12.85        | -25.57        | -17.66        | -16.63        | -13.26        | -7.20         | -3.20         | -8.66         | -11.49        | -3.70         |
| $\theta$ (120°) | -3.94       | -5.68        | -2.88        | -4.70        | -18.47       | -12.47       | -10.10       | -8.54         | -7.48         | -10.83        | -17.33        | -18.58        | -11.61        | -18.56        | -9.80         | -7.47         | -14.31        | -12.64        | -14.96        | -9.16         | -5.29         | -4.45         | -0.73         | -0.51         | -3.94         |
| $\theta$ (135°) | 0.54        | -0.79        | -0.53        | -0.71        | -5.65        | -11.48       | -14.38       | -8.34         | -8.95         | -8.08         | -8.71         | -7.56         | -4.29         | -5.26         | -7.46         | -8.22         | -7.89         | -10.47        | -13.42        | -21.48        | -12.18        | -2.12         | 1.99          | 2.67          | 0.54          |
| $\theta$ (150°) | -1.07       | -2.92        | -5.46        | -8.48        | -11.44       | -18.28       | -37.01       | -14.81        | -10.53        | -10.93        | -8.50         | -4.40         | -3.04         | -4.05         | -6.75         | -8.16         | -8.67         | -12.02        | -18.69        | -22.43        | -9.16         | -3.18         | -1.00         | -0.41         | -1.07         |
| $\theta$ (165°) | 1.39        | 0.87         | -1.18        | -4.52        | -10.31       | -19.78       | -19.87       | -19.89        | -16.93        | -12.35        | -8.48         | -5.65         | -4.79         | -6.14         | -8.78         | -13.94        | -21.30        | -19.72        | -15.87        | -14.27        | -10.55        | -5.12         | -1.52         | 0.29          | 1.39          |
| $\theta$ (180°) | -1.66       | -2.64        | -4.44        | -7.51        | -13.40       | -41.34       | -12.77       | -7.22         | -4.27         | -2.54         | -1.62         | -1.34         | -1.66         | -2.64         | -4.44         | -7.51         | -13.40        | -41.34        | -12.77        | -7.22         | -4.27         | -2.54         | -1.62         | -1.34         | -1.66         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -25.84      | -10.64       | -5.73        | -3.04        | -1.47        | -0.67        | -0.49        | -0.92         | -2.01         | -3.98         | -7.36         | -14.18        | -25.84        | -10.64        | -5.73         | -3.04         | -1.47         | -0.67         | -0.49         | -0.92         | -2.01         | -3.98         | -7.36         | -14.18        | -25.84        |
| $\theta$ (15°)  | -23.24      | -11.51       | -6.38        | -4.66        | -3.86        | -3.73        | -4.17        | -5.84         | -8.86         | -12.44        | -14.01        | -17.53        | -23.49        | -26.41        | -16.68        | -11.92        | -9.27         | -6.07         | -4.43         | -3.26         | -1.99         | -1.69         | -3.42         | -7.67         | -23.24        |
| $\theta$ (30°)  | -18.31      | -10.77       | -0.54        | 3.60         | 4.19         | 3.19         | 1.85         | -0.30         | -5.21         | -12.44        | -14.90        | -31.39        | -14.51        | -18.49        | -9.51         | -9.16         | -3.82         | -0.58         | 0.65          | 1.49          | 2.07          | 1.53          | -3.27         | -16.49        | -18.31        |
| $\theta$ (45°)  | -19.33      | -10.30       | -2.06        | 2.62         | 3.11         | 1.63         | -0.95        | -3.86         | -9.49         | -8.48         | -18.21        | -16.37        | -12.63        | -26.06        | -13.09        | -10.78        | -7.91         | -4.00         | -1.81         | 1.09          | 2.66          | 0.31          | -6.99         | -11.35        | -19.33        |
| $\theta$ (60°)  | -8.06       | -4.59        | -3.05        | 2.26         | 2.09         | 0.34         | -3.37        | -10.15        | -14.33        | -17.18        | -12.55        | -12.39        | -12.22        | -13.08        | -20.32        | -13.34        | -10.83        | -7.17         | -2.30         | 0.31          | -0.28         | -5.72         | -2.69         | -5.09         | -8.06         |
| $\theta$ (75°)  | -12.27      | -6.94        | -5.34        | -0.52        | 3.15         | 3.02         | 0.91         | -8.87         | -8.23         | -10.44        | -14.04        | -14.03        | -16.04        | -17.06        | -20.33        | -17.47        | -19.93        | -7.00         | -4.48         | 0.24          | 1.76          | -1.70         | -3.03         | -5.69         | -12.27        |
| $\theta$ (90°)  | -9.99       | -1.07        | -1.78        | 2.09         | 3.67         | 1.98         | -2.34        | -4.15         | -17.57        | -8.94         | -13.18        | -10.19        | -12.44        | -14.44        | -11.99        | -15.33        | -9.59         | -5.60         | -2.99         | 0.81          | 1.51          | -5.22         | -4.26         | -2.52         | -9.99         |
| $\theta$ (105°) | -5.49       | -2.42        | -3.77        | 1.11         | 2.58         | 2.83         | 0.15         | -4.57         | -8.66         | -14.52        | -15.09        | -22.08        | -20.50        | -15.19        | -9.15         | -13.35        | -8.44         | -3.09         | -0.42         | 1.76          | 2.88          | -0.08         | -5.78         | -6.11         | -5.49         |
| $\theta$ (120°) | -7.24       | -6.43        | -1.69        | 0.95         | 1.58         | 0.85         | -1.48        | -5.54         | -7.37         | -9.04         | -11.56        | -17.35        | -32.25        | -15.11        | -26.94        | -8.28         | -4.35         | -3.02         | 1.53          | 3.51          | 2.19          | -0.26         | -3.49         | -10.24        | -7.24         |
| $\theta$ (135°) | -10.27      | -8.56        | -0.50        | 3.84         | [4.74]       | 3.16         | -0.09        | -5.63         | -8.08         | -6.36         | -14.40        | -17.90        | -22.27        | -12.00        | -10.56        | -33.20        | -10.21        | -6.18         | -1.88         | 0.92          | 1.98          | 2.49          | 1.30          | -5.60         | -10.27        |
| $\theta$ (150°) | -13.16      | -21.40       | -12.20       | -2.77        | 1.56         | 1.66         | -2.23        | -7.87         | -9.61         | -16.89        | -18.16        | -18.65        | -23.37        | -13.26        | -12.09        | -25.01        | -8.86         | -6.91         | -6.29         | -4.33         | -3.36         | -2.51         | -4.41         | -11.10        | -13.16        |
| $\theta$ (165°) | -32.25      | -14.99       | -8.67        | -7.62        | -9.14        | -13.76       | -43.46       | -16.94        | -10.74        | -8.73         | -8.68         | -9.51         | -16.20        | -18.26        | -10.87        | -9.07         | -7.53         | -5.50         | -4.05         | -2.69         | -1.82         | -1.83         | -3.77         | -8.52         | -32.25        |
| $\theta$ (180°) | -12.77      | -7.22        | -4.27        | -2.54        | -1.62        | -1.34        | -1.66        | -2.64         | -4.44         | -7.51         | -13.40        | -41.34        | -12.77        | -7.22         | -4.27         | -2.54         | -1.62         | -1.34         | -1.66         | -2.64         | -4.44         | -7.51         | -13.40        | -41.34        | -12.77        |

| Ant.            | No.1        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Freq.<br>(MHz)  | 5470        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -1.73       | -2.26        | -3.47        | -5.61        | -9.31        | -17.25       | -22.23       | -10.85        | -6.44         | -3.96         | -2.52         | -1.82         | -1.73         | -2.26         | -3.47         | -5.61         | -9.31         | -17.25        | -22.23        | -10.85        | -6.44         | -3.96         | -2.52         | -1.82         | -1.73         |
| $\theta$ (15°)  | 1.74        | 2.09         | 1.33         | -1.38        | -5.56        | -10.68       | -16.22       | -20.88        | -15.87        | -12.87        | -11.34        | -10.22        | -9.38         | -10.12        | -10.47        | -9.81         | -10.00        | -10.83        | -13.80        | -19.98        | -19.01        | -7.30         | -1.42         | 0.98          | 1.74          |
| $\theta$ (30°)  | [3.08]      | 2.71         | 1.64         | -0.41        | -3.70        | -8.89        | -19.88       | -21.68        | -18.21        | -34.96        | -22.20        | -14.55        | -15.83        | -24.07        | -14.09        | -11.34        | -11.92        | -22.57        | -13.10        | -7.06         | -5.08         | -2.64         | -0.56         | 1.00          | 3.08          |
| $\theta$ (45°)  | -2.54       | -3.62        | -0.83        | -0.22        | -3.58        | -9.17        | -16.34       | -15.11        | -24.54        | -12.03        | -18.39        | -21.09        | -13.14        | -11.97        | -9.74         | -17.39        | -17.63        | -16.68        | -19.19        | -8.90         | -3.18         | -2.38         | -2.13         | -1.54         | -2.54         |
| $\theta$ (60°)  | -3.40       | -0.40        | -1.11        | -1.66        | -3.77        | -6.26        | -9.44        | -16.48        | -19.09        | -15.88        | -14.93        | -20.78        | -16.82        | -14.60        | -8.84         | -25.01        | -35.81        | -31.35        | -22.92        | -27.15        | -16.90        | -4.79         | -0.30         | 0.31          | -3.40         |
| $\theta$ (75°)  | -6.28       | -4.15        | -0.81        | -6.38        | -6.05        | -5.94        | -11.69       | -16.79        | -17.12        | -29.56        | -10.99        | -10.50        | -12.60        | -8.29         | -7.84         | -16.66        | -25.65        | -21.63        | -17.36        | -14.45        | -9.93         | -21.80        | -8.98         | -2.97         | -6.28         |
| $\theta$ (90°)  | -23.84      | -4.93        | -10.71       | -8.93        | -7.61        | -10.02       | -22.64       | -28.99        | -11.32        | -18.20        | -7.61         | -11.34        | -8.76         | -9.01         | -8.61         | -14.59        | -20.59        | -19.78        | -22.65        | -16.13        | -20.94        | -12.62        | -10.24        | -8.31         | -23.84        |
| $\theta$ (105°) | -4.23       | -4.40        | -4.24        | -4.94        | -6.16        | -9.78        | -14.18       | -15.89        | -14.42        | -11.17        | -11.35        | -16.58        | -14.39        | -11.42        | -9.52         | -12.62        | -19.00        | -12.63        | -18.44        | -11.69        | -8.24         | -4.45         | -7.96         | -31.17        | -4.23         |
| $\theta$ (120°) | -1.04       | -5.34        | -4.18        | -6.28        | -11.71       | -12.78       | -10.06       | -8.40         | -6.70         | -9.84         | -22.08        | -18.42        | -10.52        | -14.06        | -8.31         | -8.45         | -16.32        | -9.72         | -17.61        | -11.32        | -5.25         | -3.46         | -1.68         | -0.55         | -1.04         |
| $\theta$ (135°) | 1.10        | -0.01        | 0.08         | -0.32        | -7.14        | -15.21       | -10.85       | -6.98         | -9.10         | -8.31         | -9.73         | -8.97         | -5.85         | -6.03         | -7.18         | -9.01         | -12.86        | -14.11        | -13.11        | -18.27        | -8.53         | -1.04         | 2.15          | 2.52          | 1.10          |
| $\theta$ (150°) | -0.44       | -1.60        | -3.43        | -6.54        | -11.99       | -20.57       | -24.31       | -18.43        | -13.01        | -11.18        | -8.91         | -5.61         | -4.07         | -5.44         | -9.19         | -9.20         | -9.54         | -15.46        | -21.97        | -16.10        | -9.33         | -5.03         | -1.99         | -0.51         | -0.44         |
| $\theta$ (165°) | 2.09        | 1.38         | -0.50        | -3.77        | -9.22        | -18.03       | -17.62       | -19.19        | -23.06        | -15.82        | -10.55        | -7.19         | -5.52         | -4.61         | -5.60         | -9.81         | -17.21        | -16.52        | -16.13        | -18.17        | -9.83         | -3.41         | 0.23          | 1.99          | 2.09          |
| $\theta$ (180°) | -1.68       | -2.84        | -4.89        | -8.44        | -15.82       | -23.64       | -10.78       | -6.15         | -3.58         | -2.08         | -1.33         | -1.20         | -1.68         | -2.84         | -4.89         | -8.44         | -15.82        | -23.64        | -10.78        | -6.15         | -3.58         | -2.08         | -1.33         | -1.20         | -1.68         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -22.23      | -10.85       | -6.44        | -3.96        | -2.52        | -1.82        | -1.73        | -2.26         | -3.47         | -5.61         | -9.31         | -17.25        | -22.23        | -10.85        | -6.44         | -3.96         | -2.52         | -1.82         | -1.73         | -2.26         | -3.47         | -5.61         | -9.31         | -17.25        | -22.23        |
| $\theta$ (15°)  | -24.50      | -19.35       | -8.87        | -4.02        | -3.15        | -3.75        | -4.60        | -5.74         | -7.80         | -10.22        | -11.03        | -13.94        | -18.62        | -21.00        | -28.10        | -19.59        | -11.49        | -8.48         | -5.74         | -3.34         | -2.40         | -3.31         | -7.20         | -14.30        | -24.50        |
| $\theta$ (30°)  | -16.66      | -8.16        | 0.34         | 3.76         | 3.38         | 1.97         | 0.93         | -0.36         | -3.89         | -14.54        | -16.43        | -19.54        | -11.23        | -13.24        | -13.92        | -9.40         | -3.72         | -1.27         | -0.51         | 0.63          | 1.59          | 0.26          | -5.57         | -19.28        | -16.66        |
| $\theta$ (45°)  | -15.46      | -9.88        | -2.15        | 2.49         | 2.68         | 1.03         | -1.90        | -5.01         | -8.22         | -11.12        | -16.40        | -19.05        | -13.34        | -28.46        | -15.51        | -10.19        | -9.34         | -5.24         | -2.61         | 1.24          | 2.38          | 0.19          | -5.80         | -12.10        | -15.46        |
| $\theta$ (60°)  | -9.85       | -3.26        | -2.32        | 1.54         | 1.70         | -0.75        | -2.14        | -9.17         | -16.71        | -18.26        | -10.52        | -14.29        | -12.69        | -12.05        | -12.46        | -16.50        | -9.30         | -8.17         | -2.19         | 0.94          | -0.44         | -4.74         | -2.31         | -5.68         | -9.85         |
| $\theta$ (75°)  | -9.15       | -5.64        | -3.09        | -2.42        | 3.45         | 3.35         | 0.25         | -5.55         | -15.81        | -8.40         | -15.16        | -12.41        | -12.21        | -16.64        | -13.55        | -25.60        | -13.66        | -6.68         | -4.67         | 0.62          | 1.98          | -1.85         | -6.43         | -5.39         | -9.15         |
| $\theta$ (90°)  | -7.35       | -1.90        | -1.30        | 2.28         | 3.10         | 2.23         | -2.34        | -4.66         | -8.80         | -12.19        | -11.66        | -13.89        | -12.52        | -12.14        | -14.62        | -16.87        | -10.73        | -7.92         | -2.60         | 0.02          | 0.99          | -2.92         | -4.45         | -3.35         | -7.35         |
| $\theta$ (105°) | -5.65       | -2.57        | -4.10        | 1.38         | 2.98         | 2.73         | 1.52         | -4.47         | -7.26         | -12.16        | -15.85        | -18.67        | -31.28        | -13.06        | -11.35        | -13.76        | -6.92         | -2.27         | -0.75         | 2.71          | 3.20          | -0.86         | -8.03         | -6.87         | -5.65         |
| $\theta$ (120°) | -10.64      | -8.11        | -2.65        | 1.45         | 2.72         | 1.78         | -1.32        | -4.32         | -5.95         | -8.90         | -13.37        | -16.76        | -33.53        | -16.78        | -18.86        | -9.86         | -7.00         | -2.78         | 1.97          | 3.36          | 2.84          | -0.06         | -5.65         | -10.87        | -10.64        |
| $\theta$ (135°) | -11.29      | -7.31        | 0.21         | 3.81         | [4.82]       | 3.47         | 0.76         | -5.13         | -10.41        | -6.09         | -13.41        | -16.38        | -17.26        | -13.90        | -16.50        | -15.54        | -11.05        | -7.06         | -1.34         | 1.12          | 2.76          | 2.56          | 0.74          | -5.03         | -11.29        |
| $\theta$ (150°) | -12.20      | -21.70       | -10.13       | -3.04        | 0.73         | 1.17         | -2.47        | -12.29        | -19.60        | -15.07        | -14.79        | -23.17        | -25.64        | -13.41        | -18.96        | -11.46        | -7.71         | -8.17         | -3.49         | -0.65         | -1.22         | -3.45         | -6.15         | -11.67        | -12.20        |
| $\theta$ (165°) | -30.84      | -11.85       | -7.82        | -5.64        | -5.46        | -7.89        | -15.97       | -21.20        | -12.67        | -9.60         | -9.59         | -10.93        | -16.33        | -18.26        | -12.70        | -9.56         | -7.66         | -5.60         | -3.27         | -1.56         | -0.48         | -0.56         | -2.57         | -7.44         | -30.84        |
| $\theta$ (180°) | -10.78      | -6.15        | -3.58        | -2.08        | -1.33        | -1.20        | -1.68        | -2.84         | -4.89         | -8.44         | -15.82        | -23.64        | -10.78        | -6.15         | -3.58         | -2.08         | -1.33         | -1.20         | -1.68         | -2.84         | -4.89         | -8.44         | -15.82        | -23.64        | -10.78        |

| Ant.           | No.1   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5600   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -1.86  | -2.29   | -3.38   | -5.34   | -8.71   | -15.50  | -27.47  | -12.05   | -7.13    | -4.43    | -2.85    | -2.04    | -1.86    | -2.29    | -3.38    | -5.34    | -8.71    | -15.50   | -27.47   | -12.05   | -7.13    | -4.43    | -2.85    | -2.04    | -1.86    |
| θ (15°)        | 1.94   | 1.67    | 0.55    | -1.76   | -5.95   | -12.34  | -23.70  | -29.25   | -21.06   | -16.72   | -13.36   | -10.80   | -11.01   | -15.09   | -18.36   | -15.86   | -14.17   | -14.42   | -15.27   | -19.40   | -15.93   | -7.36    | -2.09    | 0.62     | 1.94     |
| θ (30°)        | [3.49] | 2.78    | 1.80    | -0.51   | -4.33   | -9.62   | -21.47  | -17.17   | -14.25   | -19.54   | -21.05   | -18.14   | -16.53   | -17.53   | -14.29   | -10.23   | -9.57    | -16.42   | -15.58   | -9.33    | -5.87    | -3.12    | -1.26    | 0.99     | 3.49     |
| θ (45°)        | -1.70  | -2.62   | -0.32   | 0.31    | -3.03   | -8.43   | -17.86  | -19.36   | -18.46   | -15.94   | -21.24   | -33.07   | -16.16   | -15.62   | -10.74   | -12.30   | -14.66   | -36.44   | -33.49   | -10.20   | -3.24    | -1.91    | -1.79    | -1.69    | -1.70    |
| θ (60°)        | -5.79  | -0.07   | -0.42   | -1.50   | -4.66   | -8.14   | -10.55  | -16.97   | -19.70   | -12.72   | -18.86   | -19.05   | -24.08   | -13.89   | -11.77   | -20.25   | -20.02   | -22.01   | -19.73   | -14.80   | -11.55   | -3.28    | 0.16     | -0.36    | -5.79    |
| θ (75°)        | -5.95  | -3.21   | -1.92   | -6.04   | -5.45   | -5.88   | -12.10  | -16.20   | -19.44   | -19.29   | -12.69   | -15.60   | -20.13   | -7.03    | -9.41    | -17.38   | -20.45   | -27.15   | -18.60   | -23.93   | -13.80   | -11.11   | -4.77    | -3.51    | -5.95    |
| θ (90°)        | -10.77 | -6.12   | -10.32  | -10.61  | -8.45   | -9.85   | -24.64  | -17.83   | -13.51   | -13.40   | -10.64   | -17.93   | -10.96   | -8.94    | -8.18    | -15.12   | -19.25   | -21.37   | -30.24   | -22.70   | -18.29   | -22.13   | -17.73   | -9.28    | -10.77   |
| θ (105°)       | -6.11  | -5.77   | -6.39   | -4.84   | -6.24   | -9.63   | -14.85  | -12.21   | -19.34   | -8.92    | -11.37   | -20.03   | -17.57   | -11.63   | -10.86   | -13.32   | -17.87   | -13.52   | -31.06   | -14.42   | -9.58    | -8.62    | -12.58   | -11.72   | -6.11    |
| θ (120°)       | 0.28   | -2.35   | -3.10   | -5.24   | -10.06  | -14.47  | -11.43  | -10.36   | -8.67    | -7.11    | -14.05   | -30.79   | -12.14   | -15.22   | -7.48    | -9.90    | -11.02   | -11.66   | -26.98   | -19.01   | -6.38    | -2.42    | -2.25    | -1.49    | 0.28     |
| θ (135°)       | 1.00   | 0.73    | 0.46    | -0.54   | -7.79   | -18.73  | -10.06  | -8.99    | -10.67   | -9.88    | -9.83    | -10.33   | -7.25    | -6.68    | -7.55    | -9.29    | -14.03   | -11.25   | -11.92   | -16.63   | -6.61    | -0.22    | 2.15     | 1.69     | 1.00     |
| θ (150°)       | 1.68   | 1.48    | -0.42   | -4.71   | -12.85  | -16.54  | -16.09  | -16.10   | -12.22   | -12.16   | -11.37   | -8.47    | -5.37    | -5.54    | -8.64    | -11.33   | -15.90   | -32.48   | -25.24   | -12.84   | -7.10    | -3.70    | -0.49    | 0.59     | 1.68     |
| θ (165°)       | 2.50   | 2.10    | 0.28    | -3.14   | -8.86   | -16.74  | -13.46  | -14.01   | -18.45   | -13.17   | -9.15    | -6.70    | -5.19    | -4.52    | -6.06    | -11.29   | -29.30   | -15.12   | -13.65   | -18.80   | -10.80   | -3.39    | 0.63     | 2.35     | 2.50     |
| θ (180°)       | -2.14  | -3.53   | -5.95   | -10.23  | -20.83  | -17.57  | -9.21   | -5.40    | -3.21    | -1.96    | -1.41    | -1.46    | -2.14    | -3.53    | -5.95    | -10.23   | -20.83   | -17.57   | -9.21    | -5.40    | -3.21    | -1.96    | -1.41    | -1.46    | -2.14    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -27.47 | -12.05  | -7.13   | -4.43   | -2.85   | -2.04   | -1.86   | -2.29    | -3.38    | -5.34    | -8.71    | -15.50   | -27.47   | -12.05   | -7.13    | -4.43    | -2.85    | -2.04    | -1.86    | -2.29    | -3.38    | -5.34    | -8.71    | -15.50   | -27.47   |
| θ (15°)        | -33.69 | -18.46  | -9.83   | -5.58   | -3.51   | -3.91   | -5.57   | -8.76    | -10.32   | -11.72   | -13.58   | -17.81   | -26.49   | -21.03   | -26.81   | -31.03   | -17.35   | -10.01   | -6.58    | -4.35    | -3.69    | -4.97    | -10.45   | -23.04   | -33.69   |
| θ (30°)        | -14.41 | -5.98   | 0.19    | 3.90    | 3.71    | 1.40    | -0.93   | -2.84    | -5.88    | -12.49   | -15.67   | -30.16   | -14.09   | -19.56   | -18.02   | -9.86    | -4.04    | -1.86    | -0.32    | 1.50     | 1.81     | -0.48    | -7.07    | -18.31   | -14.41   |
| θ (45°)        | -19.94 | -7.71   | -1.97   | 2.13    | 2.91    | 1.91    | -1.11   | -6.09    | -6.95    | -13.34   | -30.47   | -14.34   | -14.88   | -36.55   | -18.41   | -9.24    | -6.66    | -7.01    | -3.25    | 1.01     | 3.03     | 1.05     | -6.42    | -10.19   | -19.94   |
| θ (60°)        | -6.86  | -2.66   | -1.73   | 2.01    | 2.75    | -0.10   | -2.81   | -8.40    | -12.41   | -17.29   | -11.81   | -14.05   | -13.69   | -13.11   | -15.33   | -24.52   | -11.85   | -7.30    | -1.44    | 1.14     | 0.36     | -2.94    | -2.28    | -5.15    | -6.86    |
| θ (75°)        | -5.67  | -5.80   | -0.69   | -0.36   | 4.52    | 3.93    | 0.44    | -4.76    | -14.99   | -10.64   | -14.79   | -14.06   | -11.27   | -13.91   | -17.77   | -16.80   | -16.45   | -9.17    | -5.38    | -0.94    | 1.04     | -2.82    | -6.15    | -4.67    | -5.67    |
| θ (90°)        | -6.86  | -1.56   | -2.24   | 1.83    | [5.37]  | 3.95    | -1.14   | -5.02    | -7.89    | -12.83   | -11.79   | -12.29   | -13.17   | -10.09   | -13.97   | -12.26   | -9.64    | -4.90    | -0.62    | 0.71     | 1.92     | -2.20    | -2.72    | -4.00    | -6.86    |
| θ (105°)       | -5.43  | -2.23   | -2.94   | 0.56    | 3.90    | 2.94    | 1.68    | -2.38    | -7.43    | -11.14   | -16.03   | -25.90   | -28.60   | -13.05   | -12.70   | -11.67   | -6.41    | -2.54    | 0.27     | 3.26     | 3.74     | 0.34     | -7.17    | -7.01    | -5.43    |
| θ (120°)       | -7.12  | -7.52   | -1.48   | 2.16    | 3.55    | 3.29    | 0.45    | -4.46    | -7.66    | -11.00   | -19.22   | -19.81   | -41.34   | -17.01   | -17.08   | -8.69    | -6.12    | -2.93    | 0.87     | 2.95     | 3.34     | 0.60     | -5.22    | -8.05    | -7.12    |
| θ (135°)       | -10.74 | -8.77   | 0.76    | 3.65    | 4.10    | 2.84    | 0.54    | -3.68    | -11.73   | -8.36    | -15.91   | -21.29   | -23.18   | -15.39   | -20.12   | -13.47   | -9.04    | -4.15    | -0.48    | 1.60     | 3.10     | 2.92     | 0.16     | -9.05    | -10.74   |
| θ (150°)       | -17.95 | -11.56  | -7.39   | -2.08   | 0.70    | 1.12    | -1.69   | -9.00    | -14.18   | -12.09   | -14.54   | -24.68   | -26.00   | -22.40   | -20.93   | -11.13   | -8.58    | -4.70    | -0.30    | 1.08     | -0.25    | -2.79    | -5.68    | -8.67    | -17.95   |
| θ (165°)       | -23.42 | -9.11   | -4.23   | -3.09   | -3.75   | -7.15   | -16.63  | -17.90   | -10.78   | -10.38   | -13.17   | -18.54   | -24.98   | -15.53   | -10.96   | -9.39    | -8.08    | -5.93    | -3.39    | -1.08    | 0.50     | 0.76     | -1.00    | -5.84    | -23.42   |
| θ (180°)       | -9.21  | -5.40   | -3.21   | -1.96   | -1.41   | -1.46   | -2.14   | -3.53    | -5.95    | -10.23   | -20.83   | -17.57   | -9.21    | -5.40    | -3.21    | -1.96    | -1.41    | -1.46    | -2.14    | -3.53    | -5.95    | -10.23   | -20.83   | -17.57   | -9.21    |

| Ant.            | No.1        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Freq.<br>(MHz)  | 5725        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -2.09       | -2.53        | -3.64        | -5.63        | -9.06        | -16.01       | -26.59       | -12.09        | -7.26         | -4.60         | -3.05         | -2.25         | -2.09         | -2.53         | -3.64         | -5.63         | -9.06         | -16.01        | -26.59        | -12.09        | -7.26         | -4.60         | -3.05         | -2.25         | -2.09         |
| $\theta$ (15°)  | 1.50        | 1.02         | -1.09        | -4.73        | -10.35       | -17.50       | -24.47       | -26.39        | -20.29        | -16.17        | -13.63        | -11.61        | -13.10        | -15.77        | -16.29        | -18.01        | -17.79        | -17.63        | -19.69        | -20.95        | -14.55        | -8.02         | -2.48         | 0.34          | 1.50          |
| $\theta$ (30°)  | 2.57        | 1.39         | 0.46         | -1.32        | -4.79        | -8.63        | -16.04       | -24.60        | -15.35        | -18.61        | -28.01        | -15.49        | -14.57        | -16.55        | -13.11        | -10.97        | -11.41        | -18.89        | -18.32        | -13.77        | -9.25         | -5.35         | -4.37         | -1.54         | 2.57          |
| $\theta$ (45°)  | -1.37       | -1.49        | -1.81        | -0.78        | -1.37        | -4.50        | -11.48       | -15.62        | -14.92        | -13.60        | -19.94        | -29.30        | -16.91        | -16.94        | -10.20        | -9.97         | -13.40        | -27.06        | -25.77        | -8.96         | -3.10         | -2.17         | -3.12         | -2.79         | -1.37         |
| $\theta$ (60°)  | -8.59       | -0.44        | -0.34        | -2.71        | -7.32        | -16.65       | -14.97       | -12.91        | -18.07        | -15.76        | -19.10        | -17.36        | -19.97        | -14.28        | -11.66        | -13.29        | -15.15        | -24.03        | -21.97        | -19.11        | -10.42        | -2.48         | 1.43          | 0.24          | -8.59         |
| $\theta$ (75°)  | -7.49       | -3.02        | -2.28        | -7.27        | -8.24        | -8.73        | -15.98       | -17.01        | -14.79        | -16.61        | -13.81        | -16.99        | -19.99        | -7.94         | -14.07        | -24.76        | -24.72        | -28.74        | -24.99        | -31.18        | -15.65        | -8.60         | -3.14         | -2.07         | -7.49         |
| $\theta$ (90°)  | -6.33       | -4.90        | -8.70        | -11.82       | -11.81       | -14.09       | -21.24       | -21.54        | -16.89        | -10.45        | -12.36        | -19.43        | -11.66        | -10.95        | -8.88         | -21.70        | -23.69        | -30.26        | -30.70        | -23.66        | -11.74        | -14.20        | -20.35        | -11.06        | -6.33         |
| $\theta$ (105°) | -5.03       | -6.25        | -7.19        | -6.47        | -9.42        | -13.12       | -16.25       | -9.74         | -18.55        | -9.58         | -8.16         | -15.44        | -17.34        | -12.09        | -12.52        | -14.09        | -16.73        | -14.63        | -24.72        | -19.34        | -7.93         | -5.88         | -14.07        | -11.75        | -5.03         |
| $\theta$ (120°) | 0.99        | -1.10        | -2.28        | -5.34        | -8.76        | -31.59       | -14.03       | -10.26        | -10.45        | -7.60         | -10.50        | -23.13        | -12.70        | -14.79        | -8.49         | -13.51        | -12.75        | -18.16        | -23.08        | -22.08        | -6.33         | -1.71         | -1.28         | -2.05         | 0.99          |
| $\theta$ (135°) | 1.65        | 1.42         | 1.53         | -0.09        | -6.18        | -21.96       | -13.26       | -9.90         | -12.64        | -11.42        | -10.38        | -13.23        | -7.97         | -7.21         | -10.90        | -13.76        | -12.28        | -10.04        | -12.36        | -17.88        | -6.18         | -0.99         | 2.06          | 2.31          | 1.65          |
| $\theta$ (150°) | [3.04]      | 2.57         | -0.19        | -4.82        | -14.21       | -19.91       | -16.17       | -20.36        | -15.94        | -13.02        | -11.37        | -8.89         | -5.94         | -5.76         | -7.36         | -10.54        | -17.64        | -16.87        | -25.71        | -11.65        | -4.82         | -2.15         | 0.30          | 1.86          | 3.04          |
| $\theta$ (165°) | 2.84        | 2.47         | 1.16         | -2.39        | -9.59        | -22.98       | -13.20       | -13.20        | -18.88        | -15.33        | -9.80         | -7.14         | -5.97         | -5.03         | -8.02         | -15.55        | -17.50        | -12.05        | -13.55        | -26.72        | -9.69         | -2.90         | 0.52          | 2.34          | 2.84          |
| $\theta$ (180°) | -3.73       | -5.04        | -7.33        | -11.32       | -20.48       | -21.03       | -11.49       | -7.42         | -5.10         | -3.76         | -3.14         | -3.13         | -3.73         | -5.04         | -7.33         | -11.32        | -20.48        | -21.03        | -11.49        | -7.42         | -5.10         | -3.76         | -3.14         | -3.13         | -3.73         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -26.59      | -12.09       | -7.26        | -4.60        | -3.05        | -2.25        | -2.09        | -2.53         | -3.64         | -5.63         | -9.06         | -16.01        | -26.59        | -12.09        | -7.26         | -4.60         | -3.05         | -2.25         | -2.09         | -2.53         | -3.64         | -5.63         | -9.06         | -16.01        | -26.59        |
| $\theta$ (15°)  | -36.02      | -16.33       | -11.67       | -8.31        | -8.16        | -10.20       | -11.64       | -10.75        | -12.11        | -14.98        | -14.02        | -17.66        | -29.71        | -20.59        | -17.06        | -15.30        | -13.20        | -10.89        | -8.40         | -6.45         | -5.98         | -7.27         | -8.58         | -11.27        | -36.02        |
| $\theta$ (30°)  | -16.34      | -5.65        | -1.42        | 2.68         | 2.36         | 0.46         | -1.85        | -3.90         | -6.69         | -17.74        | -11.75        | -17.79        | -16.43        | -21.80        | -16.44        | -9.18         | -5.48         | -2.51         | -0.06         | 1.50          | 0.58          | -3.49         | -9.14         | -12.65        | -16.34        |
| $\theta$ (45°)  | -12.31      | -4.90        | -3.55        | 2.22         | 4.64         | 3.83         | 0.72         | -3.82         | -9.11         | -11.15        | -20.33        | -15.25        | -18.25        | -23.19        | -20.94        | -8.07         | -9.46         | -9.29         | -4.12         | 0.49          | 2.96          | 1.48          | -5.80         | -11.46        | -12.31        |
| $\theta$ (60°)  | -7.67       | -1.65        | -1.58        | 0.89         | 3.17         | 0.79         | -4.39        | -8.58         | -13.55        | -13.34        | -12.54        | -13.55        | -15.24        | -15.13        | -13.63        | -19.30        | -10.11        | -5.16         | -1.49         | 1.22          | 0.79          | -2.37         | -1.82         | -4.84         | -7.67         |
| $\theta$ (75°)  | -6.53       | -4.47        | -0.09        | -0.24        | 5.29         | 4.63         | 0.83         | -5.14         | -11.05        | -14.53        | -18.35        | -13.26        | -14.51        | -11.07        | -16.55        | -13.82        | -10.56        | -6.44         | -2.25         | -0.45         | 0.84          | -2.27         | -4.82         | -6.03         | -6.53         |
| $\theta$ (90°)  | -6.19       | -1.63        | -1.00        | 0.59         | [5.33]       | 4.44         | 0.32         | -7.10         | -7.62         | -11.76        | -11.84        | -13.23        | -13.95        | -9.92         | -12.57        | -10.04        | -8.20         | -4.79         | -0.14         | 1.14          | 2.38          | -2.64         | -4.16         | -4.67         | -6.19         |
| $\theta$ (105°) | -5.11       | -2.75        | -3.10        | 0.53         | 3.86         | 3.25         | 1.18         | -2.22         | -10.59        | -8.73         | -22.10        | -20.70        | -25.50        | -15.11        | -15.31        | -11.90        | -6.32         | -3.45         | 0.41          | 2.80          | 4.31          | 1.43          | -5.05         | -7.72         | -5.11         |
| $\theta$ (120°) | -8.11       | -5.49        | -1.84        | 1.55         | 4.54         | 4.66         | 1.38         | -3.65         | -7.97         | -11.42        | -19.18        | -20.29        | -38.00        | -17.67        | -20.80        | -8.28         | -5.89         | -3.14         | 1.11          | 3.11          | 2.86          | 0.34          | -3.64         | -9.25         | -8.11         |
| $\theta$ (135°) | -10.91      | -6.82        | 0.26         | 4.13         | 4.64         | 3.47         | 0.93         | -2.74         | -9.94         | -7.70         | -17.88        | -27.60        | -25.30        | -13.58        | -22.85        | -13.24        | -8.59         | -3.63         | 0.08          | 2.14          | 3.41          | 2.10          | -2.10         | -8.07         | -10.91        |
| $\theta$ (150°) | -18.50      | -10.55       | -6.88        | -2.79        | 0.66         | 1.41         | -1.13        | -7.22         | -16.07        | -11.92        | -13.80        | -34.35        | -23.75        | -20.20        | -15.60        | -8.88         | -6.42         | -2.66         | 1.19          | 2.48          | 1.64          | -0.45         | -3.54         | -8.20         | -18.50        |
| $\theta$ (165°) | -31.08      | -11.41       | -5.72        | -3.08        | -2.70        | -4.55        | -11.35       | -18.53        | -12.55        | -10.57        | -11.88        | -16.97        | -31.40        | -17.71        | -12.62        | -10.74        | -9.67         | -6.67         | -3.34         | -0.98         | 0.26          | 0.09          | -1.87         | -6.93         | -31.08        |
| $\theta$ (180°) | -11.49      | -7.42        | -5.10        | -3.76        | -3.14        | -3.13        | -3.73        | -5.04         | -7.33         | -11.32        | -20.48        | -21.03        | -11.49        | -7.42         | -5.10         | -3.76         | -3.14         | -3.13         | -3.73         | -5.04         | -7.33         | -11.32        | -20.48        | -21.03        | -11.49        |

| Ant.           | No.1   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5785   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -2.29  | -2.77   | -3.94   | -6.01   | -9.57   | -17.03  | -24.42  | -11.80   | -7.20    | -4.64    | -3.15    | -2.41    | -2.29    | -2.77    | -3.94    | -6.01    | -9.57    | -17.03   | -24.42   | -11.80   | -7.20    | -4.64    | -3.15    | -2.41    | -2.29    |
| θ (15°)        | 0.86   | 0.54    | -1.19   | -4.51   | -10.30  | -19.90  | -30.79  | -30.16   | -23.02   | -16.32   | -12.82   | -11.06   | -11.23   | -12.97   | -14.37   | -17.21   | -19.02   | -20.87   | -26.33   | -22.45   | -13.06   | -7.77    | -3.20    | -0.47    | 0.86     |
| θ (30°)        | 1.69   | 1.04    | 0.15    | -2.02   | -6.58   | -10.39  | -14.99  | -36.40   | -17.15   | -19.14   | -42.84   | -13.23   | -15.19   | -17.27   | -13.69   | -12.06   | -11.89   | -17.82   | -20.68   | -20.83   | -11.48   | -6.76    | -5.75    | -2.97    | 1.69     |
| θ (45°)        | -1.35  | -0.35   | -2.07   | -2.01   | -1.30   | -3.54   | -9.02   | -13.30   | -15.20   | -14.29   | -18.54   | -33.10   | -16.89   | -16.05   | -10.47   | -10.51   | -14.39   | -26.46   | -21.39   | -9.03    | -3.80    | -2.64    | -3.55    | -2.63    | -1.35    |
| θ (60°)        | -8.09  | -0.64   | -1.47   | -4.07   | -8.72   | -22.83  | -16.87  | -12.04   | -14.14   | -17.47   | -19.90   | -18.12   | -24.40   | -14.59   | -12.72   | -13.39   | -16.38   | -28.14   | -23.09   | -20.06   | -9.70    | -2.35    | 1.29     | -0.25    | -8.09    |
| θ (75°)        | -9.40  | -3.85   | -2.77   | -10.59  | -9.23   | -9.66   | -16.07  | -16.67   | -13.87   | -12.59   | -18.33   | -21.83   | -20.71   | -9.21    | -16.46   | -22.79   | -29.19   | -29.79   | -24.00   | -31.38   | -16.36   | -8.22    | -3.83    | -2.13    | -9.40    |
| θ (90°)        | -7.15  | -5.18   | -7.78   | -11.32  | -11.31  | -13.49  | -17.69  | -30.35   | -16.28   | -9.53    | -12.67   | -19.63   | -14.19   | -12.29   | -10.60   | -33.06   | -24.78   | -27.86   | -25.64   | -22.26   | -12.77   | -13.86   | -23.73   | -13.41   | -7.15    |
| θ (105°)       | -4.67  | -6.01   | -7.99   | -7.40   | -11.18  | -14.33  | -20.20  | -10.18   | -16.33   | -10.66   | -8.74    | -16.79   | -18.07   | -13.47   | -14.63   | -14.55   | -16.12   | -15.84   | -21.35   | -19.34   | -8.01    | -5.30    | -13.81   | -13.22   | -4.67    |
| θ (120°)       | 0.95   | -0.84   | -2.44   | -6.12   | -9.84   | -21.63  | -13.60  | -10.53   | -10.79   | -8.38    | -11.03   | -27.73   | -14.54   | -15.30   | -9.66    | -13.41   | -11.99   | -19.38   | -22.61   | -20.11   | -5.96    | -1.39    | -1.79    | -3.89    | 0.95     |
| θ (135°)       | 2.02   | 1.86    | 1.42    | -0.82   | -6.28   | -21.18  | -15.09  | -10.23   | -12.60   | -12.34   | -11.14   | -15.64   | -8.91    | -7.63    | -13.13   | -15.10   | -11.42   | -9.09    | -11.74   | -19.01   | -6.50    | -1.61    | 1.28     | 1.91     | 2.02     |
| θ (150°)       | [2.89] | 2.28    | -0.24   | -4.40   | -11.71  | -21.28  | -15.90  | -20.81   | -16.80   | -13.12   | -10.92   | -9.25    | -7.11    | -5.75    | -6.83    | -11.48   | -15.98   | -14.50   | -21.25   | -12.01   | -4.45    | -1.75    | 0.44     | 1.86     | 2.89     |
| θ (165°)       | 1.76   | 1.46    | 0.14    | -3.02   | -9.98   | -35.26  | -13.65  | -13.72   | -19.61   | -16.11   | -10.85   | -8.32    | -5.74    | -5.58    | -8.72    | -15.89   | -16.41   | -11.43   | -13.01   | -26.26   | -8.98    | -2.50    | 0.48     | 1.81     | 1.76     |
| θ (180°)       | -5.11  | -6.55   | -9.02   | -13.41  | -24.70  | -19.91  | -11.93  | -8.21    | -6.07    | -4.86    | -4.33    | -4.41    | -5.11    | -6.55    | -9.02    | -13.41   | -24.70   | -19.91   | -11.93   | -8.21    | -6.07    | -4.86    | -4.33    | -4.41    | -5.11    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -24.42 | -11.80  | -7.20   | -4.64   | -3.15   | -2.41   | -2.29   | -2.77    | -3.94    | -6.01    | -9.57    | -17.03   | -24.42   | -11.80   | -7.20    | -4.64    | -3.15    | -2.41    | -2.29    | -2.77    | -3.94    | -6.01    | -9.57    | -17.03   | -24.42   |
| θ (15°)        | -25.44 | -12.77  | -8.39   | -6.18   | -5.88   | -8.73   | -14.39  | -14.89   | -12.28   | -12.82   | -13.73   | -17.17   | -23.46   | -15.38   | -13.60   | -12.75   | -12.99   | -10.93   | -8.64    | -6.77    | -6.56    | -6.84    | -7.21    | -10.75   | -25.44   |
| θ (30°)        | -17.77 | -5.09   | -2.84   | 1.21    | 1.03    | -0.89   | -2.91   | -4.99    | -7.28    | -17.06   | -13.55   | -18.55   | -13.20   | -22.65   | -19.84   | -9.97    | -6.46    | -3.04    | -0.47    | 1.20     | -0.30    | -6.37    | -12.42   | -12.02   | -17.77   |
| θ (45°)        | -11.86 | -4.51   | -3.60   | 1.90    | 4.52    | 4.10    | 1.37    | -3.31    | -9.44    | -12.30   | -17.46   | -16.99   | -17.56   | -22.00   | -18.82   | -9.42    | -10.68   | -10.43   | -4.37    | -0.15    | 2.49     | 1.00     | -6.48    | -12.52   | -11.86   |
| θ (60°)        | -9.71  | -2.04   | -2.53   | 0.90    | 3.11    | 0.32    | -4.68   | -10.28   | -13.17   | -13.25   | -14.16   | -16.06   | -15.14   | -16.71   | -13.13   | -19.06   | -10.64   | -5.58    | -2.70    | 0.46     | 0.41     | -1.70    | -1.71    | -5.10    | -9.71    |
| θ (75°)        | -7.42  | -3.46   | 0.15    | 0.04    | [5.32]  | 4.74    | 1.10    | -4.55    | -11.58   | -17.26   | -17.41   | -13.24   | -15.62   | -12.02   | -16.24   | -13.38   | -10.14   | -5.45    | -1.59    | -0.42    | 0.37     | -2.57    | -4.55    | -7.77    | -7.42    |
| θ (90°)        | -6.02  | -1.82   | -0.44   | -0.85   | 4.73    | 4.13    | 0.72    | -7.62    | -8.46    | -12.00   | -11.38   | -13.69   | -14.40   | -11.50   | -14.31   | -11.18   | -8.44    | -4.84    | -0.17    | 1.38     | 2.33     | -3.12    | -4.99    | -5.12    | -6.02    |
| θ (105°)       | -5.71  | -2.96   | -3.09   | 0.00    | 3.70    | 3.20    | 0.85    | -2.12    | -12.75   | -8.51    | -18.01   | -18.89   | -26.27   | -14.51   | -15.60   | -13.45   | -6.76    | -3.90    | -0.09    | 2.17     | 4.16     | 1.26     | -5.18    | -7.78    | -5.71    |
| θ (120°)       | -9.03  | -6.15   | -1.96   | 1.25    | 4.59    | 4.68    | 1.28    | -4.56    | -9.81    | -12.51   | -17.55   | -17.22   | -27.47   | -15.16   | -21.86   | -8.65    | -6.15    | -3.66    | 0.65     | 2.91     | 2.92     | 0.72     | -4.16    | -10.32   | -9.03    |
| θ (135°)       | -11.79 | -7.17   | -0.14   | 3.82    | 4.32    | 3.38    | 1.18    | -2.98    | -10.03   | -8.43    | -18.43   | -31.39   | -25.15   | -13.29   | -23.41   | -16.04   | -10.19   | -4.43    | -0.39    | 1.77     | 3.01     | 1.79     | -2.37    | -9.57    | -11.79   |
| θ (150°)       | -16.82 | -10.29  | -5.94   | -2.92   | 0.26    | 0.97    | -1.60   | -7.73    | -15.82   | -12.48   | -13.77   | -27.64   | -28.94   | -20.33   | -15.50   | -9.19    | -6.61    | -2.50    | 1.13     | 2.52     | 1.96     | -0.29    | -4.72    | -11.53   | -16.82   |
| θ (165°)       | -27.76 | -12.90  | -6.74   | -4.05   | -3.25   | -5.00   | -10.76  | -19.85   | -14.12   | -11.19   | -11.57   | -15.75   | -28.81   | -16.39   | -11.02   | -9.62    | -9.23    | -6.21    | -3.04    | -0.79    | 0.24     | -0.10    | -2.47    | -8.15    | -27.76   |
| θ (180°)       | -11.93 | -8.21   | -6.07   | -4.86   | -4.33   | -4.41   | -5.11   | -6.55    | -9.02    | -13.41   | -24.70   | -19.91   | -11.93   | -8.21    | -6.07    | -4.86    | -4.33    | -4.41    | -5.11    | -6.55    | -9.02    | -13.41   | -24.70   | -19.91   | -11.93   |

| Ant.            | No.1        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Freq.<br>(MHz)  | 5850        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -2.34       | -2.82        | -3.97        | -6.03        | -9.57        | -16.93       | -24.86       | -11.94        | -7.30         | -4.72         | -3.22         | -2.47         | -2.34         | -2.82         | -3.97         | -6.03         | -9.57         | -16.93        | -24.86        | -11.94        | -7.30         | -4.72         | -3.22         | -2.47         | -2.34         |
| $\theta$ (15°)  | 0.75        | 0.44         | -0.80        | -3.50        | -7.67        | -14.47       | -27.86       | -30.63        | -39.01        | -23.60        | -13.23        | -10.08        | -9.56         | -11.09        | -12.67        | -13.95        | -15.59        | -18.20        | -23.73        | -21.98        | -12.79        | -7.56         | -3.51         | -0.81         | 0.75          |
| $\theta$ (30°)  | 1.08        | 0.60         | -1.07        | -3.17        | -8.41        | -12.92       | -15.04       | -26.61        | -20.36        | -19.79        | -31.74        | -12.10        | -13.71        | -15.68        | -13.54        | -13.24        | -15.13        | -19.10        | -24.21        | -21.37        | -9.64         | -6.18         | -4.87         | -3.06         | 1.08          |
| $\theta$ (45°)  | -1.00       | 0.18         | -1.31        | -2.04        | -1.31        | -3.00        | -7.97        | -13.01        | -14.10        | -16.32        | -19.44        | -24.44        | -16.12        | -14.54        | -10.98        | -16.14        | -28.99        | -22.51        | -10.78        | -5.41         | -3.43         | -4.34         | -2.46         | -1.00         |               |
| $\theta$ (60°)  | -8.05       | -0.74        | -1.86        | -5.70        | -9.18        | -15.63       | -21.43       | -12.84        | -12.77        | -19.05        | -21.70        | -22.13        | -23.35        | -14.49        | -14.63        | -14.87        | -18.87        | -31.01        | -25.19        | -15.14        | -8.67         | -2.69         | 1.00          | -0.68         | -8.05         |
| $\theta$ (75°)  | -11.14      | -4.49        | -3.21        | -12.69       | -10.95       | -11.50       | -15.70       | -16.87        | -14.13        | -12.16        | -18.74        | -35.45        | -19.12        | -10.35        | -17.71        | -23.32        | -31.05        | -30.41        | -20.32        | -22.59        | -18.54        | -8.74         | -4.39         | -1.98         | -11.14        |
| $\theta$ (90°)  | -4.84       | -5.08        | -8.46        | -12.54       | -11.56       | -12.27       | -15.70       | -23.34        | -17.94        | -8.51         | -11.46        | -16.17        | -18.81        | -14.31        | -12.60        | -25.18        | -25.55        | -25.56        | -20.19        | -30.73        | -14.56        | -12.21        | -24.49        | -13.94        | -4.84         |
| $\theta$ (105°) | -4.32       | -6.16        | -9.82        | -9.18        | -14.03       | -17.19       | -16.76       | -9.66         | -15.67        | -10.93        | -9.74         | -14.69        | -17.28        | -15.44        | -16.06        | -14.12        | -16.83        | -16.75        | -19.66        | -20.47        | -8.27         | -4.67         | -11.83        | -8.59         | -4.32         |
| $\theta$ (120°) | 0.54        | -1.50        | -2.55        | -6.25        | -12.56       | -16.72       | -11.34       | -10.01        | -13.22        | -9.06         | -11.39        | -22.74        | -18.25        | -17.61        | -9.80         | -12.02        | -11.75        | -20.86        | -22.68        | -16.17        | -4.70         | -0.98         | -1.88         | -6.07         | 0.54          |
| $\theta$ (135°) | [2.34]      | 2.21         | 1.63         | -1.30        | -7.47        | -23.07       | -13.88       | -9.77         | -13.92        | -13.58        | -11.95        | -15.70        | -11.01        | -7.68         | -14.82        | -13.38        | -10.55        | -9.54         | -11.84        | -16.86        | -5.66         | -1.30         | 0.68          | 1.71          | 2.34          |
| $\theta$ (150°) | 2.21        | 1.82         | -0.31        | -4.09        | -10.56       | -24.62       | -15.30       | -19.59        | -21.97        | -14.53        | -10.66        | -8.91         | -8.34         | -6.39         | -7.36         | -11.61        | -13.39        | -12.96        | -19.36        | -12.16        | -3.62         | -1.26         | -0.09         | 0.93          | 2.21          |
| $\theta$ (165°) | 0.60        | 0.00         | -1.19        | -3.71        | -9.74        | -37.78       | -14.25       | -14.32        | -19.93        | -18.13        | -12.90        | -9.10         | -5.67         | -5.70         | -8.44         | -16.79        | -15.33        | -10.96        | -12.86        | -27.15        | -8.96         | -2.88         | -0.20         | 0.74          | 0.60          |
| $\theta$ (180°) | -6.62       | -7.84        | -9.98        | -13.69       | -21.66       | -26.51       | -15.19       | -10.79        | -8.32         | -6.88         | -6.18         | -6.10         | -6.62         | -7.84         | -9.98         | -13.69        | -21.66        | -26.51        | -15.19        | -10.79        | -8.32         | -6.88         | -6.18         | -6.10         | -6.62         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -24.86      | -11.94       | -7.30        | -4.72        | -3.22        | -2.47        | -2.34        | -2.82         | -3.97         | -6.03         | -9.57         | -16.93        | -24.86        | -11.94        | -7.30         | -4.72         | -3.22         | -2.47         | -2.34         | -2.82         | -3.97         | -6.03         | -9.57         | -16.93        | -24.86        |
| $\theta$ (15°)  | -21.12      | -11.29       | -7.15        | -5.37        | -4.40        | -5.69        | -9.42        | -19.76        | -20.37        | -14.84        | -14.83        | -17.50        | -19.64        | -14.11        | -14.33        | -14.14        | -12.52        | -9.61         | -7.40         | -6.62         | -7.07         | -7.87         | -9.06         | -10.83        | -21.12        |
| $\theta$ (30°)  | -21.12      | -5.06        | -3.97        | -0.01        | -0.14        | -2.05        | -3.67        | -5.48         | -8.70         | -17.85        | -15.55        | -21.64        | -13.02        | -19.93        | -16.35        | -10.02        | -6.73         | -3.47         | -0.61         | 1.17          | -0.55         | -7.49         | -13.90        | -11.06        | -21.12        |
| $\theta$ (45°)  | -11.56      | -4.36        | -3.74        | 1.88         | 4.78         | 4.02         | 1.24         | -2.83         | -7.84         | -13.98        | -14.89        | -17.26        | -19.35        | -18.12        | -18.17        | -10.85        | -11.80        | -10.97        | -4.40         | -0.94         | 1.77          | 0.38          | -6.91         | -12.55        | -11.56        |
| $\theta$ (60°)  | -10.93      | -2.05        | -3.39        | 0.84         | 2.88         | 0.11         | -6.02        | -11.22        | -15.22        | -15.76        | -13.49        | -17.44        | -17.27        | -17.01        | -17.05        | -19.80        | -12.17        | -6.94         | -4.24         | -0.88         | 0.12          | -0.73         | -2.40         | -5.66         | -10.93        |
| $\theta$ (75°)  | -7.82       | -3.11        | 0.13         | 0.63         | [5.73]       | 4.87         | 1.08         | -3.79         | -11.53        | -16.58        | -18.14        | -11.39        | -14.98        | -13.00        | -17.43        | -14.40        | -9.71         | -4.79         | -1.72         | -0.88         | 0.44          | -2.66         | -4.49         | -8.24         | -7.82         |
| $\theta$ (90°)  | -6.02       | -2.13        | 0.51         | -1.80        | 4.52         | 4.05         | 0.85         | -7.90         | -9.33         | -12.85        | -10.06        | -15.72        | -15.08        | -13.68        | -14.95        | -12.51        | -8.33         | -4.69         | 0.39          | 2.04          | 1.99          | -3.67         | -4.56         | -6.27         | -6.02         |
| $\theta$ (105°) | -6.41       | -3.89        | -2.60        | -0.25        | 3.92         | 3.33         | 0.58         | -1.57         | -13.02        | -9.48         | -15.77        | -18.43        | -21.62        | -13.35        | -17.77        | -13.80        | -7.11         | -4.30         | -0.51         | 1.84          | 4.04          | 0.95          | -4.94         | -8.33         | -6.41         |
| $\theta$ (120°) | -10.32      | -5.47        | -2.21        | 0.68         | 4.79         | 4.42         | 0.80         | -4.95         | -11.70        | -14.90        | -18.58        | -22.40        | -28.47        | -14.48        | -24.41        | -9.38         | -6.63         | -3.99         | 0.73          | 2.95          | 3.26          | 0.82          | -4.99         | -11.10        | -10.32        |
| $\theta$ (135°) | -13.24      | -6.81        | -0.87        | 3.66         | 4.55         | 3.47         | 1.24         | -3.58         | -10.87        | -9.23         | -18.16        | -40.03        | -29.08        | -14.18        | -22.31        | -15.44        | -11.07        | -4.78         | -1.21         | 0.90          | 2.52          | 2.09          | -1.64         | -10.36        | -13.24        |
| $\theta$ (150°) | -27.71      | -13.68       | -6.07        | -2.71        | -0.10        | 0.85         | -1.30        | -7.11         | -15.27        | -11.76        | -12.72        | -30.47        | -31.15        | -18.92        | -14.50        | -10.63        | -7.51         | -2.62         | 1.07          | 2.45          | 2.22          | -0.02         | -5.70         | -14.42        | -27.71        |
| $\theta$ (165°) | -39.57      | -14.65       | -8.91        | -5.66        | -4.75        | -5.97        | -11.00       | -23.21        | -13.36        | -10.48        | -11.56        | -15.45        | -31.03        | -18.36        | -10.90        | -9.74         | -8.97         | -5.64         | -2.50         | -0.43         | 0.51          | -0.32         | -3.31         | -9.34         | -39.57        |
| $\theta$ (180°) | -15.19      | -10.79       | -8.32        | -6.88        | -6.18        | -6.10        | -6.62        | -7.84         | -9.98         | -13.69        | -21.66        | -26.51        | -15.19        | -10.79        | -8.32         | -6.88         | -6.18         | -6.10         | -6.62         | -7.84         | -9.98         | -13.69        | -21.66        | -26.51        | -15.19        |

| Ant.           | No.1   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5865   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -2.54  | -3.02   | -4.18   | -6.25   | -9.81   | -17.24  | -24.76  | -12.07   | -7.46    | -4.90    | -3.41    | -2.66    | -2.54    | -3.02    | -4.18    | -6.25    | -9.81    | -17.24   | -24.76   | -12.07   | -7.46    | -4.90    | -3.41    | -2.66    | -2.54    |
| θ (15°)        | 0.65   | 0.39    | -0.76   | -3.19   | -7.12   | -13.43  | -25.31  | -29.71   | -34.65   | -27.37   | -13.72   | -10.03   | -9.39    | -10.79   | -12.21   | -13.03   | -14.86   | -17.79   | -23.24   | -20.87   | -12.31   | -7.37    | -3.36    | -0.78    | 0.65     |
| θ (30°)        | 0.95   | 0.61    | -1.15   | -3.56   | -8.87   | -13.70  | -15.20  | -24.01   | -21.41   | -19.51   | -28.46   | -11.71   | -13.23   | -14.49   | -13.50   | -14.18   | -16.97   | -19.51   | -25.13   | -20.10   | -9.08    | -5.66    | -4.45    | -2.94    | 0.95     |
| θ (45°)        | -0.91  | 0.04    | -1.37   | -1.76   | -1.27   | -3.06   | -8.19   | -13.58   | -14.22   | -16.66   | -19.94   | -23.28   | -15.88   | -14.46   | -11.85   | -11.23   | -16.58   | -29.32   | -22.74   | -11.36   | -5.75    | -3.44    | -4.38    | -2.40    | -0.91    |
| θ (60°)        | -7.91  | -0.78   | -1.89   | -6.21   | -9.32   | -14.86  | -22.96  | -13.30   | -12.99   | -18.53   | -22.18   | -23.05   | -22.47   | -14.41   | -15.41   | -14.61   | -19.49   | -29.33   | -25.06   | -14.28   | -8.56    | -2.84    | 1.04     | -0.73    | -7.91    |
| θ (75°)        | -10.63 | -4.08   | -3.20   | -14.15  | -11.26  | -11.66  | -16.03  | -16.87   | -14.42   | -12.40   | -18.67   | -35.31   | -18.51   | -10.62   | -18.20   | -24.38   | -29.51   | -29.64   | -19.66   | -21.06   | -18.66   | -8.95    | -4.32    | -2.06    | -10.63   |
| θ (90°)        | -4.33  | -5.03   | -8.71   | -13.02  | -12.35  | -12.58  | -15.34  | -21.95   | -19.16   | -8.85    | -11.27   | -15.51   | -19.69   | -14.82   | -12.80   | -23.21   | -26.03   | -25.18   | -19.45   | -28.11   | -14.62   | -12.21   | -25.18   | -13.71   | -4.33    |
| θ (105°)       | -4.18  | -6.09   | -10.06  | -9.33   | -14.36  | -18.35  | -16.19  | -9.40    | -15.32   | -11.34   | -9.86    | -14.43   | -17.31   | -15.93   | -15.95   | -14.10   | -16.96   | -16.72   | -19.41   | -19.72   | -8.02    | -4.50    | -11.72   | -8.21    | -4.18    |
| θ (120°)       | 0.35   | -1.65   | -2.70   | -6.12   | -13.73  | -16.28  | -11.11  | -9.82    | -13.76   | -9.31    | -11.73   | -21.60   | -19.58   | -18.53   | -9.56    | -11.67   | -11.70   | -21.13   | -22.61   | -15.60   | -4.55    | -1.01    | -1.90    | -6.46    | 0.35     |
| θ (135°)       | [2.37] | 2.23    | 1.74    | -1.19   | -7.84   | -23.67  | -13.54  | -9.46    | -14.06   | -14.65   | -12.48   | -15.63   | -11.62   | -7.80    | -15.23   | -12.91   | -10.53   | -9.64    | -11.94   | -16.14   | -5.46    | -1.13    | 0.82     | 1.85     | 2.37     |
| θ (150°)       | 1.93   | 1.59    | -0.31   | -3.88   | -10.32  | -24.48  | -14.82  | -18.36   | -23.05   | -15.10   | -10.67   | -8.85    | -8.31    | -6.51    | -7.78    | -11.58   | -13.08   | -12.43   | -17.98   | -12.56   | -3.73    | -1.20    | -0.28    | 0.62     | 1.93     |
| θ (165°)       | 0.24   | -0.37   | -1.41   | -3.80   | -9.79   | -34.82  | -14.57  | -14.48   | -19.83   | -18.42   | -13.38   | -9.13    | -5.73    | -5.53    | -8.17    | -16.73   | -15.09   | -10.91   | -13.15   | -27.12   | -9.08    | -3.22    | -0.53    | 0.47     | 0.24     |
| θ (180°)       | -6.97  | -8.18   | -10.31  | -14.00  | -21.92  | -27.01  | -15.58  | -11.16   | -8.68    | -7.24    | -6.53    | -6.44    | -6.97    | -8.18    | -10.31   | -14.00   | -21.92   | -27.01   | -15.58   | -11.16   | -8.68    | -7.24    | -6.53    | -6.44    | -6.97    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -24.76 | -12.07  | -7.46   | -4.90   | -3.41   | -2.66   | -2.54   | -3.02    | -4.18    | -6.25    | -9.81    | -17.24   | -24.76   | -12.07   | -7.46    | -4.90    | -3.41    | -2.66    | -2.54    | -3.02    | -4.18    | -6.25    | -9.81    | -17.24   | -24.76   |
| θ (15°)        | -21.75 | -11.22  | -6.97   | -5.13   | -4.16   | -5.21   | -8.62   | -16.54   | -25.30   | -15.26   | -14.12   | -16.75   | -18.50   | -14.06   | -14.52   | -14.16   | -11.66   | -8.58    | -6.92    | -6.27    | -6.81    | -7.81    | -8.76    | -10.39   | -21.75   |
| θ (30°)        | -20.69 | -5.03   | -4.18   | -0.31   | -0.30   | -2.09   | -3.88   | -8.63    | -18.27   | -15.96   | -21.28   | -13.01   | -19.54   | -15.87   | -10.17   | -6.61    | -3.66    | -0.73    | 1.03     | -0.68    | -7.04    | -12.25   | -10.75   | -20.69   |          |
| θ (45°)        | -11.81 | -4.48   | -3.71   | 1.96    | 4.96    | 4.04    | 1.22    | -2.86    | -7.16    | -14.71   | -14.50   | -16.83   | -19.76   | -17.68   | -17.59   | -11.24   | -12.20   | -10.71   | -4.27    | -1.01    | 1.63     | 0.36     | -6.83    | -12.29   | -11.81   |
| θ (60°)        | -11.13 | -2.05   | -3.56   | 0.83    | 2.92    | 0.24    | -5.98   | -11.64   | -14.78   | -17.10   | -13.42   | -16.56   | -16.34   | -17.53   | -16.80   | -19.57   | -12.18   | -6.93    | -4.22    | -0.92    | 0.32     | -0.58    | -2.46    | -5.44    | -11.13   |
| θ (75°)        | -7.71  | -2.89   | 0.24    | 0.67    | [5.89]  | 4.90    | 1.05    | -3.59    | -11.29   | -16.52   | -17.57   | -11.57   | -14.28   | -13.36   | -16.75   | -14.47   | -9.18    | -4.81    | -1.58    | -0.78    | 0.52     | -2.66    | -4.26    | -8.29    | -7.71    |
| θ (90°)        | -5.95  | -2.13   | 0.60    | -1.66   | 4.65    | 4.12    | 0.89    | -7.59    | -9.44    | -13.07   | -10.01   | -15.56   | -15.71   | -13.76   | -15.59   | -12.80   | -8.32    | -4.59    | 0.57     | 2.28     | 2.09     | -3.59    | -4.17    | -6.31    | -5.95    |
| θ (105°)       | -6.64  | -4.22   | -2.27   | -0.08   | 4.08    | 3.49    | 0.62    | -1.33    | -12.48   | -9.86    | -15.64   | -18.01   | -21.27   | -12.85   | -18.25   | -13.28   | -6.85    | -4.23    | -0.41    | 2.01     | 4.14     | 0.88     | -4.75    | -8.19    | -6.64    |
| θ (120°)       | -10.39 | -5.34   | -1.94   | 0.63    | 4.77    | 4.41    | 0.79    | -4.88    | -11.69   | -14.82   | -17.76   | -23.60   | -29.44   | -14.63   | -25.87   | -9.48    | -6.56    | -3.85    | 0.81     | 2.90     | 3.29     | 0.96     | -4.88    | -10.91   | -10.39   |
| θ (135°)       | -13.07 | -6.29   | -0.92   | 3.58    | 4.53    | 3.45    | 1.25    | -3.70    | -11.58   | -9.56    | -17.40   | -34.10   | -29.20   | -14.86   | -20.68   | -14.32   | -10.81   | -4.87    | -1.32    | 0.84     | 2.65     | 2.36     | -1.35    | -10.45   | -13.07   |
| θ (150°)       | -30.22 | -14.39  | -6.45   | -2.60   | 0.06    | 1.04    | -0.96   | -6.94    | -15.07   | -11.61   | -12.68   | -33.45   | -30.54   | -19.56   | -14.33   | -10.74   | -7.69    | -2.75    | 1.13     | 2.56     | 2.31     | 0.15     | -5.49    | -13.69   | -30.22   |
| θ (165°)       | -35.96 | -14.38  | -9.06   | -5.80   | -4.76   | -5.86   | -10.93  | -22.61   | -12.83   | -10.36   | -11.81   | -15.68   | -32.57   | -18.66   | -10.95   | -9.80    | -8.93    | -5.50    | -2.31    | -0.28    | 0.54     | -0.42    | -3.53    | -9.43    | -35.96   |
| θ (180°)       | -15.58 | -11.16  | -8.68   | -7.24   | -6.53   | -6.44   | -6.97   | -8.18    | -10.31   | -14.00   | -21.92   | -27.01   | -15.58   | -11.16   | -8.68    | -7.24    | -6.53    | -6.44    | -6.97    | -8.18    | -10.31   | -14.00   | -21.92   | -27.01   | -15.58   |

| Ant.           | No.1   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5895   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -3.12  | -3.63   | -4.82   | -6.93   | -10.58  | -18.34  | -24.19  | -12.38   | -7.90    | -5.39    | -3.94    | -3.22    | -3.12    | -3.63    | -4.82    | -6.93    | -10.58   | -18.34   | -24.19   | -12.38   | -7.90    | -5.39    | -3.94    | -3.22    | -3.12    |
| θ (15°)        | 0.49   | 0.20    | -0.91   | -2.83   | -6.22   | -11.90  | -22.33  | -27.24   | -26.63   | -31.38   | -14.99   | -10.11   | -9.23    | -10.56   | -11.12   | -11.92   | -14.36   | -17.47   | -23.69   | -18.28   | -10.90   | -6.78    | -3.11    | -0.63    | 0.49     |
| θ (30°)        | 0.95   | 0.86    | -1.10   | -4.13   | -9.70   | -14.96  | -16.15  | -21.21   | -22.69   | -18.57   | -22.47   | -10.83   | -12.11   | -13.25   | -13.41   | -15.42   | -21.70   | -19.57   | -26.17   | -18.02   | -8.28    | -4.64    | -3.57    | -2.48    | 0.95     |
| θ (45°)        | -0.87  | -0.25   | -1.68   | -1.22   | -1.22   | -3.18   | -8.44   | -14.50   | -14.53   | -16.82   | -20.41   | -23.34   | -15.21   | -14.10   | -12.25   | -11.85   | -17.31   | -28.88   | -22.64   | -12.25   | -6.04    | -3.26    | -4.38    | -2.24    | -0.87    |
| θ (60°)        | -7.51  | -0.81   | -1.89   | -7.07   | -9.21   | -13.44  | -24.10  | -15.33   | -13.53   | -17.39   | -21.29   | -25.72   | -20.41   | -14.54   | -16.31   | -14.37   | -19.68   | -26.96   | -24.21   | -13.16   | -8.67    | -3.08    | 1.13     | -0.73    | -7.51    |
| θ (75°)        | -9.67  | -3.27   | -3.09   | -16.57  | -10.77  | -10.71  | -18.66  | -17.57   | -15.05   | -13.20   | -19.37   | -34.27   | -17.64   | -10.97   | -19.14   | -27.55   | -27.62   | -26.94   | -18.25   | -17.82   | -16.81   | -9.19    | -4.08    | -2.20    | -9.67    |
| θ (90°)        | -3.48  | -4.71   | -8.65   | -13.71  | -14.22  | -14.09  | -14.89  | -19.68   | -21.53   | -9.69    | -11.08   | -14.68   | -20.85   | -15.45   | -13.72   | -20.29   | -26.03   | -25.29   | -18.30   | -22.02   | -14.14   | -12.65   | -23.07   | -13.05   | -3.48    |
| θ (105°)       | -3.50  | -5.20   | -10.45  | -9.19   | -13.84  | -22.26  | -16.35  | -9.45    | -13.47   | -12.71   | -10.54   | -14.68   | -17.33   | -16.66   | -15.89   | -14.16   | -16.63   | -16.98   | -19.95   | -16.35   | -7.53    | -4.34    | -11.39   | -8.09    | -3.50    |
| θ (120°)       | 0.03   | -1.49   | -2.96   | -5.93   | -15.41  | -16.16  | -11.25  | -9.28    | -13.89   | -10.28   | -12.38   | -19.61   | -22.65   | -19.57   | -8.95    | -11.27   | -11.57   | -22.12   | -22.96   | -14.86   | -4.50    | -1.15    | -1.98    | -6.87    | 0.03     |
| θ (135°)       | [2.71] | 2.35    | 1.86    | -0.88   | -7.95   | -24.71  | -13.34  | -9.20    | -13.48   | -16.55   | -13.99   | -15.33   | -12.45   | -8.14    | -15.43   | -12.38   | -10.42   | -9.49    | -12.04   | -14.67   | -5.00    | -0.66    | 1.33     | 2.30     | 2.71     |
| θ (150°)       | 1.42   | 1.20    | -0.27   | -3.47   | -9.92   | -22.46  | -13.69  | -16.11   | -24.07   | -16.05   | -10.57   | -8.76    | -7.97    | -6.67    | -8.30    | -11.53   | -12.41   | -11.40   | -15.82   | -14.08   | -4.18    | -1.19    | -0.59    | 0.00     | 1.42     |
| θ (165°)       | -0.39  | -1.01   | -1.84   | -4.11   | -10.18  | -32.85  | -14.64  | -14.07   | -18.65   | -19.74   | -14.49   | -9.13    | -5.95    | -5.34    | -7.81    | -16.46   | -14.56   | -10.56   | -13.11   | -24.97   | -9.46    | -3.84    | -1.09    | -0.07    | -0.39    |
| θ (180°)       | -7.34  | -8.65   | -10.94  | -14.94  | -24.13  | -24.58  | -15.08  | -11.01   | -8.70    | -7.36    | -6.74    | -6.74    | -7.34    | -8.65    | -10.94   | -14.94   | -24.13   | -24.58   | -15.08   | -11.01   | -8.70    | -7.36    | -6.74    | -6.74    | -7.34    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -24.19 | -12.38  | -7.90   | -5.39   | -3.94   | -3.22   | -3.12   | -3.63    | -4.82    | -6.93    | -10.58   | -18.34   | -24.19   | -12.38   | -7.90    | -5.39    | -3.94    | -3.22    | -3.12    | -3.63    | -4.82    | -6.93    | -10.58   | -18.34   | -24.19   |
| θ (15°)        | -22.71 | -11.35  | -6.77   | -4.92   | -3.77   | -4.46   | -6.98   | -11.97   | -24.23   | -16.42   | -13.74   | -17.39   | -17.77   | -14.76   | -16.08   | -13.61   | -9.58    | -7.51    | -6.17    | -5.80    | -6.36    | -7.44    | -7.76    | -9.59    | -22.71   |
| θ (30°)        | -18.76 | -4.81   | -4.80   | -1.27   | -0.83   | -2.10   | -4.08   | -5.28    | -8.20    | -17.56   | -17.12   | -21.31   | -13.33   | -20.73   | -15.68   | -9.79    | -7.20    | -4.34    | -1.10    | 0.65     | -1.00    | -6.15    | -10.04   | -10.77   | -18.76   |
| θ (45°)        | -12.64 | -4.81   | -3.99   | 1.94    | 5.15    | 3.93    | 1.05    | -3.31    | -6.63    | -15.25   | -14.53   | -16.04   | -19.88   | -16.80   | -17.35   | -11.38   | -12.76   | -10.32   | -3.91    | -1.25    | 1.35     | 0.28     | -6.97    | -12.21   | -12.64   |
| θ (60°)        | -11.89 | -1.97   | -3.79   | 0.75    | 2.77    | 0.54    | -5.52   | -11.67   | -14.53   | -19.64   | -13.39   | -16.61   | -16.12   | -17.94   | -17.92   | -18.73   | -11.77   | -6.63    | -4.05    | -0.85    | 0.52     | -0.53    | -2.55    | -5.07    | -11.89   |
| θ (75°)        | -7.95  | -2.86   | 0.26    | 0.59    | [6.14]  | 4.94    | 0.91    | -3.66    | -11.86   | -15.65   | -17.28   | -12.34   | -13.88   | -13.20   | -16.68   | -14.48   | -8.68    | -4.66    | -1.63    | -0.67    | 0.41     | -2.70    | -4.12    | -8.85    | -7.95    |
| θ (90°)        | -6.04  | -2.20   | 0.58    | -1.71   | 4.77    | 4.05    | 0.70    | -6.98    | -9.73    | -13.14   | -10.92   | -15.05   | -17.16   | -13.95   | -16.64   | -13.61   | -8.22    | -4.30    | 0.72     | 2.53     | 2.13     | -3.43    | -3.63    | -6.77    | -6.04    |
| θ (105°)       | -7.06  | -4.91   | -2.08   | 0.00    | 4.35    | 3.64    | 0.82    | -0.98    | -11.58   | -10.03   | -16.89   | -17.43   | -19.25   | -12.68   | -18.18   | -12.43   | -6.37    | -3.81    | -0.22    | 2.35     | 4.26     | 0.60     | -4.54    | -8.08    | -7.06    |
| θ (120°)       | -10.78 | -5.20   | -1.56   | 0.48    | 4.47    | 4.24    | 0.69    | -4.59    | -11.43   | -13.60   | -15.91   | -25.82   | -30.33   | -14.63   | -25.84   | -9.64    | -6.33    | -3.84    | 0.62     | 2.43     | 3.12     | 0.98     | -4.85    | -11.05   | -10.78   |
| θ (135°)       | -12.32 | -6.03   | -0.89   | 3.32    | 4.37    | 3.44    | 1.14    | -4.33    | -12.96   | -9.82    | -15.79   | -34.93   | -30.81   | -15.17   | -19.59   | -12.99   | -10.00   | -5.04    | -1.85    | 0.52     | 2.70     | 2.78     | -0.70    | -10.09   | -12.32   |
| θ (150°)       | -23.99 | -13.15  | -7.00   | -2.82   | 0.25    | 1.49    | -0.27   | -6.65    | -16.22   | -11.89   | -13.28   | -36.14   | -35.07   | -21.68   | -15.16   | -11.46   | -8.38    | -3.20    | 1.00     | 2.39     | 2.14     | 0.16     | -5.13    | -12.27   | -23.99   |
| θ (165°)       | -38.82 | -14.59  | -9.20   | -6.39   | -5.16   | -6.02   | -11.07  | -21.95   | -12.25   | -10.61   | -12.63   | -16.38   | -31.66   | -18.60   | -11.35   | -10.03   | -9.10    | -5.35    | -2.10    | -0.18    | 0.42     | -0.69    | -3.84    | -9.27    | -38.82   |
| θ (180°)       | -15.08 | -11.01  | -8.70   | -7.36   | -6.74   | -6.74   | -7.34   | -8.65    | -10.94   | -14.94   | -24.13   | -24.58   | -15.08   | -11.01   | -8.70    | -7.36    | -6.74    | -6.74    | -7.34    | -8.65    | -10.94   | -14.94   | -24.13   | -24.58   | -15.08   |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5150   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -1.97  | -2.56   | -3.85   | -6.11   | -10.04  | -18.93  | -20.32  | -10.48   | -6.34    | -3.99    | -2.64    | -2.00    | -1.97    | -2.56    | -3.85    | -6.11    | -10.04   | -18.93   | -20.32   | -10.48   | -6.34    | -3.99    | -2.64    | -2.00    | -1.97    |
| θ (15°)        | 1.24   | 1.61    | 0.76    | -1.54   | -4.05   | -7.86   | -13.01  | -19.29   | -13.76   | -9.35    | -5.71    | -5.06    | -4.63    | -4.02    | -3.73    | -4.33    | -6.35    | -9.97    | -21.70   | -15.96   | -6.48    | -2.09    | -0.51    | -0.20    | 1.24     |
| θ (30°)        | [2.70] | 2.50    | 0.38    | -2.02   | -6.17   | -11.53  | -20.46  | -26.18   | -13.94   | -16.69   | -15.76   | -11.11   | -8.94    | -5.52    | -6.12    | -8.46    | -11.58   | -14.33   | -21.77   | -15.24   | -6.78    | -2.85    | 0.48     | 1.43     | 2.70     |
| θ (45°)        | -0.21  | 1.07    | 1.43    | -2.60   | -8.91   | -21.36  | -23.64  | -19.33   | -24.82   | -14.28   | -17.71   | -20.83   | -13.49   | -7.39    | -11.21   | -16.19   | -12.17   | -9.82    | -11.21   | -20.32   | -8.56    | -5.37    | -0.96    | 1.55     | -0.21    |
| θ (60°)        | -0.19  | -1.55   | -3.62   | -5.76   | -6.91   | -11.02  | -14.51  | -14.33   | -16.06   | -24.49   | -12.69   | -20.69   | -10.18   | -9.96    | -12.22   | -21.75   | -10.61   | -8.08    | -11.50   | -14.89   | -7.37    | -5.97    | -1.01    | -0.95    | -0.19    |
| θ (75°)        | -4.32  | -2.88   | -3.68   | -2.90   | -5.25   | -7.67   | -13.10  | -15.23   | -18.66   | -23.35   | -22.85   | -11.53   | -10.76   | -10.27   | -12.20   | -21.92   | -15.37   | -11.44   | -17.68   | -15.61   | -11.53   | -17.32   | -13.44   | -7.94    | -4.32    |
| θ (90°)        | -4.39  | -6.13   | -2.54   | -5.51   | -8.40   | -10.62  | -15.45  | -15.91   | -20.82   | -20.50   | -21.42   | -10.50   | -15.64   | -11.60   | -14.11   | -26.70   | -15.12   | -15.89   | -13.60   | -10.06   | -19.67   | -12.44   | -18.40   | -8.01    | -4.39    |
| θ (105°)       | -3.45  | -2.87   | -1.16   | -4.75   | -7.81   | -9.81   | -13.23  | -14.22   | -14.74   | -22.61   | -15.63   | -9.13    | -10.97   | -26.65   | -13.90   | -17.08   | -24.27   | -26.22   | -18.35   | -14.01   | -8.06    | -6.01    | -5.07    | -2.79    | -3.45    |
| θ (120°)       | 1.20   | 0.04    | -0.80   | -6.55   | -9.47   | -10.39  | -18.29  | -16.26   | -16.23   | -22.44   | -16.45   | -12.59   | -13.81   | -13.22   | -9.93    | -14.18   | -27.74   | -19.16   | -8.24    | -4.33    | -2.99    | -2.60    | -0.26    | -2.17    | 1.20     |
| θ (135°)       | -2.47  | 0.10    | -1.74   | -3.26   | -4.18   | -5.54   | -8.60   | -12.94   | -35.62   | -21.92   | -15.35   | -12.90   | -10.10   | -12.53   | -28.61   | -20.85   | -12.28   | -13.60   | -22.74   | -11.77   | -3.81    | -2.82    | -4.85    | -3.09    | -2.47    |
| θ (150°)       | 1.95   | 2.25    | -0.23   | -1.54   | -2.43   | -4.67   | -7.75   | -12.64   | -13.19   | -18.45   | -16.38   | -17.36   | -12.77   | -14.76   | -23.98   | -14.95   | -14.24   | -13.14   | -16.67   | -16.87   | -13.59   | -12.41   | -7.47    | -3.21    | 1.95     |
| θ (165°)       | 1.13   | 1.68    | 1.20    | -0.18   | -2.61   | -6.59   | -10.90  | -14.09   | -10.83   | -13.15   | -12.01   | -9.22    | -8.35    | -7.15    | -7.04    | -9.83    | -15.20   | -20.98   | -14.71   | -12.79   | -10.56   | -7.87    | -4.55    | -1.27    | 1.13     |
| θ (180°)       | -2.49  | -3.89   | -6.32   | -10.62  | -21.32  | -17.82  | -9.52   | -5.73    | -3.54    | -2.30    | -1.75    | -1.81    | -2.49    | -3.89    | -6.32    | -10.62   | -21.32   | -17.82   | -9.52    | -5.73    | -3.54    | -2.30    | -1.75    | -1.81    | -2.49    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -20.32 | -10.48  | -6.34   | -3.99   | -2.64   | -2.00   | -1.97   | -2.56    | -3.85    | -6.11    | -10.04   | -18.93   | -20.32   | -10.48   | -6.34    | -3.99    | -2.64    | -2.00    | -1.97    | -2.56    | -3.85    | -6.11    | -10.04   | -18.93   | -20.32   |
| θ (15°)        | -20.02 | -15.98  | -6.57   | -4.24   | -3.41   | -2.54   | -3.19   | -2.90    | -4.30    | -6.37    | -8.21    | -10.18   | -17.44   | -18.12   | -8.83    | -4.40    | -2.25    | -0.67    | -0.03    | 0.63     | 0.62     | -0.51    | -3.79    | -7.84    | -20.02   |
| θ (30°)        | -19.10 | -6.35   | -1.70   | -0.35   | -0.42   | -1.58   | -4.16   | -3.95    | -4.49    | -7.89    | -14.60   | -12.36   | -18.61   | -13.21   | -9.96    | -7.12    | -5.04    | -3.14    | -1.20    | 0.06     | 0.97     | 1.46     | -0.73    | -4.57    | -19.10   |
| θ (45°)        | -11.75 | -2.14   | 1.30    | 2.59    | 1.17    | -0.87   | -2.50   | -3.40    | -4.87    | -5.26    | -7.45    | -10.76   | -14.29   | -10.86   | -12.91   | -14.17   | -13.27   | -6.88    | -1.13    | 2.50     | 3.44     | 2.01     | -0.11    | -6.38    | -11.75   |
| θ (60°)        | -4.30  | -0.46   | 1.50    | 1.44    | 1.14    | -0.40   | -2.26   | -4.22    | -7.34    | -8.44    | -7.05    | -10.09   | -13.16   | -9.71    | -12.25   | -18.36   | -15.89   | -5.18    | 0.42     | 3.81     | [4.45]   | 1.90     | -1.65    | -9.84    | -4.30    |
| θ (75°)        | -2.81  | -0.88   | -0.58   | 0.31    | 1.91    | 1.53    | -0.11   | -4.65    | -5.99    | -10.53   | -9.46    | -7.29    | -10.09   | -9.96    | -14.36   | -12.64   | -17.57   | -9.96    | -9.47    | -3.22    | -3.04    | -4.41    | -1.50    | -2.84    | -2.81    |
| θ (90°)        | -5.91  | -3.95   | 0.79    | 1.92    | 2.59    | 1.51    | -1.31   | -4.41    | -8.18    | -6.63    | -14.00   | -10.40   | -10.40   | -13.52   | -14.75   | -10.46   | -22.08   | -8.25    | -6.50    | 0.17     | -0.83    | -2.58    | -1.61    | -2.57    | -5.91    |
| θ (105°)       | -6.63  | -2.44   | 1.43    | 2.18    | 3.18    | 0.14    | -2.16   | -2.46    | -11.31   | -8.88    | -8.57    | -8.20    | -11.22   | -11.34   | -11.71   | -14.22   | -14.72   | -5.42    | -0.26    | 3.58     | 2.45     | 0.44     | -2.72    | -3.89    | -6.63    |
| θ (120°)       | -9.76  | -1.40   | -0.10   | -0.59   | -0.06   | -2.37   | -3.67   | -4.28    | -8.06    | -13.90   | -9.41    | -7.72    | -10.87   | -12.95   | -13.46   | -11.54   | -10.90   | -5.69    | -3.00    | -0.88    | 0.65     | -1.34    | -2.32    | -5.17    | -9.76    |
| θ (135°)       | -20.76 | -3.92   | -3.91   | -1.64   | -3.51   | -2.88   | -3.17   | -4.49    | -9.69    | -6.97    | -8.55    | -15.69   | -12.91   | -13.81   | -7.31    | -15.43   | -7.51    | -4.01    | 1.56     | 3.52     | 3.52     | 0.15     | -1.22    | -7.50    | -20.76   |
| θ (150°)       | -6.61  | -4.34   | -4.40   | -4.02   | -1.51   | -0.80   | -2.60   | -10.03   | -7.95    | -6.05    | -8.65    | -7.31    | -10.60   | -13.61   | -18.09   | -20.00   | -18.09   | -9.29    | -6.72    | -5.67    | -7.48    | -12.31   | -11.84   | -14.68   | -6.61    |
| θ (165°)       | -8.99  | -6.86   | -4.40   | -2.67   | -1.16   | -0.56   | -0.87   | -2.15    | -4.54    | -8.81    | -14.33   | -13.34   | -12.39   | -16.75   | -13.41   | -9.55    | -8.64    | -10.10   | -10.46   | -9.08    | -7.51    | -7.14    | -8.51    | -10.52   | -8.99    |
| θ (180°)       | -9.52  | -5.73   | -3.54   | -2.30   | -1.75   | -1.81   | -2.49   | -3.89    | -6.32    | -10.62   | -21.32   | -17.82   | -9.52    | -5.73    | -3.54    | -2.30    | -1.75    | -1.81    | -2.49    | -3.89    | -6.32    | -10.62   | -21.32   | -17.82   | -9.52    |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5200   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -1.05  | -1.67   | -3.00   | -5.32   | -9.38   | -18.85  | -18.48  | -9.26    | -5.25    | -2.97    | -1.65    | -1.05    | -1.05    | -1.67    | -3.00    | -5.32    | -9.38    | -18.85   | -18.48   | -9.26    | -5.25    | -2.97    | -1.65    | -1.05    | -1.05    |
| θ (15°)        | 2.55   | 2.68    | 1.32    | -1.24   | -4.20   | -7.63   | -12.83  | -20.49   | -15.60   | -9.39    | -5.99    | -4.19    | -4.24    | -4.06    | -4.19    | -4.44    | -6.58    | -10.30   | -24.56   | -13.15   | -4.76    | -1.02    | 0.33     | 1.25     | 2.55     |
| θ (30°)        | [3.61] | 2.65    | 0.11    | -2.24   | -7.03   | -12.50  | -21.16  | -32.01   | -16.26   | -15.03   | -14.71   | -11.89   | -10.52   | -6.43    | -6.07    | -7.99    | -10.13   | -13.80   | -28.14   | -13.37   | -6.12    | -1.68    | 1.85     | 2.75     | 3.61     |
| θ (45°)        | 1.26   | 2.93    | 2.14    | -3.01   | -9.48   | -16.14  | -20.95  | -21.16   | -26.19   | -14.78   | -15.26   | -18.19   | -17.42   | -7.73    | -9.55    | -12.35   | -10.94   | -9.26    | -11.32   | -22.90   | -7.26    | -3.96    | 0.11     | 2.00     | 1.26     |
| θ (60°)        | -0.28  | -1.01   | -2.81   | -5.22   | -7.45   | -11.39  | -15.60  | -16.43   | -18.25   | -24.05   | -15.86   | -17.74   | -13.38   | -9.94    | -11.21   | -17.98   | -10.39   | -8.71    | -11.80   | -16.45   | -7.96    | -4.49    | -0.79    | -0.51    | -0.28    |
| θ (75°)        | -3.32  | -2.64   | -3.44   | -4.11   | -6.45   | -9.37   | -14.17  | -18.13   | -16.61   | -21.37   | -42.87   | -13.36   | -11.15   | -11.80   | -10.39   | -24.94   | -13.46   | -11.23   | -18.31   | -19.70   | -11.23   | -16.38   | -9.70    | -7.40    | -3.32    |
| θ (90°)        | -4.91  | -6.94   | -3.24   | -7.74   | -10.25  | -12.18  | -16.29  | -18.89   | -18.89   | -21.68   | -22.33   | -12.05   | -14.84   | -12.37   | -12.64   | -27.16   | -13.72   | -17.27   | -17.08   | -11.33   | -17.39   | -15.07   | -24.13   | -8.94    | -4.91    |
| θ (105°)       | -4.64  | -1.74   | -1.57   | -6.31   | -8.91   | -9.52   | -13.27  | -13.98   | -17.41   | -22.56   | -19.76   | -10.17   | -9.62    | -32.24   | -13.97   | -17.76   | -28.14   | -30.30   | -23.09   | -14.41   | -8.88    | -6.45    | -5.13    | -4.53    | -4.64    |
| θ (120°)       | 0.71   | -1.44   | -2.06   | -5.85   | -7.99   | -10.80  | -16.81  | -18.40   | -17.27   | -24.09   | -19.64   | -14.19   | -14.04   | -12.53   | -8.92    | -14.43   | -30.97   | -23.23   | -9.49    | -4.93    | -3.35    | -2.78    | -1.58    | -4.38    | 0.71     |
| θ (135°)       | -2.27  | -0.09   | -2.38   | -2.59   | -3.38   | -4.68   | -7.87   | -13.66   | -23.02   | -21.91   | -20.08   | -13.61   | -9.75    | -10.70   | -23.16   | -19.87   | -11.50   | -12.99   | -20.33   | -12.01   | -4.41    | -4.06    | -4.91    | -4.73    | -2.27    |
| θ (150°)       | 1.63   | 1.40    | -1.15   | -1.48   | -2.12   | -4.33   | -8.04   | -14.35   | -13.70   | -19.47   | -14.53   | -16.54   | -13.19   | -12.54   | -21.09   | -14.75   | -13.28   | -12.25   | -14.42   | -19.10   | -39.88   | -13.58   | -6.85    | -3.62    | 1.63     |
| θ (165°)       | 0.52   | 1.15    | 0.59    | -0.89   | -3.25   | -7.02   | -12.88  | -13.33   | -10.18   | -12.26   | -12.10   | -10.13   | -8.73    | -7.84    | -7.49    | -10.22   | -16.07   | -22.00   | -16.82   | -14.29   | -11.82   | -8.62    | -5.19    | -1.90    | 0.52     |
| θ (180°)       | -3.02  | -4.37   | -6.72   | -10.84  | -20.61  | -19.41  | -10.46  | -6.51    | -4.25    | -2.96    | -2.37    | -2.39    | -3.02    | -4.37    | -6.72    | -10.84   | -20.61   | -19.41   | -10.46   | -6.51    | -4.25    | -2.96    | -2.37    | -2.39    | -3.02    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -18.48 | -9.26   | -5.25   | -2.97   | -1.65   | -1.05   | -1.05   | -1.67    | -3.00    | -5.32    | -9.38    | -18.85   | -18.48   | -9.26    | -5.25    | -2.97    | -1.65    | -1.05    | -1.05    | -1.67    | -3.00    | -5.32    | -9.38    | -18.85   | -18.48   |
| θ (15°)        | -20.25 | -12.71  | -6.82   | -4.22   | -3.79   | -2.83   | -3.05   | -3.35    | -3.55    | -6.11    | -9.05    | -11.78   | -17.94   | -15.10   | -8.08    | -4.25    | -1.92    | -0.86    | 0.37     | 0.77     | 0.64     | -0.16    | -2.88    | -6.96    | -20.25   |
| θ (30°)        | -19.76 | -5.74   | -1.78   | -0.23   | -0.57   | -1.64   | -4.38   | -5.49    | -5.15    | -6.79    | -13.85   | -14.55   | -19.99   | -13.69   | -8.90    | -6.08    | -4.31    | -2.46    | -0.73    | 0.33     | 1.38     | 1.94     | -0.67    | -3.79    | -19.76   |
| θ (45°)        | -10.85 | -1.51   | 1.45    | 2.13    | 0.56    | -1.00   | -2.83   | -4.06    | -5.69    | -5.20    | -7.55    | -9.15    | -16.60   | -11.71   | -11.32   | -11.74   | -10.05   | -5.71    | -0.71    | 3.01     | 3.98     | 2.32     | -0.36    | -7.75    | -10.85   |
| θ (60°)        | -3.41  | 0.27    | 1.49    | 1.29    | 1.15    | 0.04    | -1.71   | -3.29    | -6.99    | -9.59    | -7.16    | -8.45    | -14.86   | -9.71    | -12.54   | -15.51   | -16.88   | -5.03    | 0.23     | 3.65     | [4.41]   | 1.93     | -2.31    | -9.77    | -3.41    |
| θ (75°)        | -2.28  | -0.40   | 0.62    | 1.42    | 1.89    | 0.55    | 0.01    | -3.48    | -7.16    | -8.26    | -12.12   | -6.42    | -9.42    | -11.23   | -13.36   | -12.44   | -15.98   | -10.28   | -11.21   | -3.23    | -1.99    | -2.68    | -1.31    | -3.57    | -2.28    |
| θ (90°)        | -4.45  | -2.14   | 1.83    | 2.04    | 2.96    | 1.46    | -1.35   | -3.78    | -10.40   | -5.90    | -16.02   | -10.86   | -10.57   | -14.71   | -15.07   | -11.51   | -17.21   | -8.79    | -6.37    | -0.33    | -1.62    | -2.48    | -1.82    | -2.99    | -4.45    |
| θ (105°)       | -4.94  | -2.70   | 1.50    | 2.09    | 3.55    | 0.13    | -3.57   | -3.14    | -8.79    | -9.86    | -8.26    | -8.10    | -11.41   | -11.70   | -12.01   | -16.71   | -13.06   | -5.87    | -0.25    | 2.98     | 2.11     | -0.89    | -4.15    | -3.47    | -4.94    |
| θ (120°)       | -6.03  | -2.76   | -2.33   | 0.18    | 0.46    | -2.51   | -4.93   | -4.89    | -7.68    | -12.54   | -11.85   | -9.00    | -11.01   | -14.83   | -14.78   | -12.33   | -12.09   | -5.49    | -2.95    | -0.41    | 1.51     | -2.09    | -2.25    | -4.66    | -6.03    |
| θ (135°)       | -16.95 | -3.54   | -3.44   | -0.43   | -2.08   | -1.99   | -2.25   | -4.13    | -9.07    | -7.15    | -8.11    | -13.98   | -15.03   | -14.53   | -7.17    | -14.14   | -7.41    | -3.20    | 1.96     | 3.37     | 3.43     | 0.25     | -0.89    | -6.59    | -16.95   |
| θ (150°)       | -7.17  | -4.34   | -3.27   | -2.69   | -0.28   | 0.46    | -1.22   | -6.84    | -7.69    | -6.14    | -7.73    | -7.88    | -9.61    | -13.77   | -19.52   | -15.99   | -15.13   | -10.22   | -7.21    | -5.84    | -7.32    | -9.35    | -9.12    | -14.26   | -7.17    |
| θ (165°)       | -10.27 | -8.24   | -6.47   | -3.58   | -1.36   | -0.50   | -0.43   | -1.77    | -3.99    | -8.01    | -15.30   | -15.06   | -12.91   | -17.45   | -12.97   | -9.65    | -9.30    | -9.72    | -9.59    | -7.98    | -7.21    | -7.41    | -9.47    | -11.20   | -10.27   |
| θ (180°)       | -10.46 | -6.51   | -4.25   | -2.96   | -2.37   | -2.39   | -3.02   | -4.37    | -6.72    | -10.84   | -20.61   | -19.41   | -10.46   | -6.51    | -4.25    | -2.96    | -2.37    | -2.39    | -3.02    | -4.37    | -6.72    | -10.84   | -20.61   | -19.41   | -10.46   |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5250   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -0.60  | -1.14   | -2.37   | -4.54   | -8.30   | -16.49  | -20.44  | -9.54    | -5.21    | -2.77    | -1.35    | -0.67    | -0.60    | -1.14    | -2.37    | -4.54    | -8.30    | -16.49   | -20.44   | -9.54    | -5.21    | -2.77    | -1.35    | -0.67    | -0.60    |
| θ (15°)        | 3.03   | 3.04    | 1.57    | -1.11   | -4.65   | -8.80   | -15.88  | -29.60   | -16.35   | -8.88    | -5.77    | -4.08    | -3.89    | -3.87    | -4.01    | -4.30    | -6.60    | -11.86   | -42.59   | -8.94    | -2.68    | 0.46     | 1.60     | 2.15     | 3.03     |
| θ (30°)        | [3.82] | 3.02    | 0.94    | -1.60   | -6.15   | -12.16  | -17.66  | -24.12   | -18.16   | -13.98   | -13.86   | -9.93    | -9.64    | -6.23    | -5.43    | -7.12    | -9.93    | -14.76   | -39.93   | -11.96   | -5.25    | -0.55    | 2.78     | 3.34     | 3.82     |
| θ (45°)        | 1.90   | 3.04    | 1.48    | -4.28   | -10.18  | -14.22  | -20.66  | -23.76   | -21.81   | -20.02   | -14.82   | -17.99   | -15.49   | -8.68    | -9.14    | -11.82   | -10.92   | -9.59    | -11.01   | -33.52   | -7.81    | -4.26    | -0.06    | 1.43     | 1.90     |
| θ (60°)        | -1.45  | -1.34   | -4.35   | -6.44   | -9.79   | -12.45  | -15.82  | -17.76   | -22.47   | -16.40   | -29.53   | -16.33   | -13.99   | -9.98    | -11.42   | -17.19   | -10.86   | -9.26    | -10.92   | -17.60   | -9.77    | -4.48    | -1.60    | -0.07    | -1.45    |
| θ (75°)        | -5.04  | -4.86   | -7.12   | -8.33   | -9.82   | -10.71  | -15.07  | -16.86   | -14.70   | -19.74   | -18.88   | -17.65   | -11.08   | -11.40   | -10.29   | -25.37   | -12.75   | -11.68   | -16.47   | -17.48   | -13.18   | -20.94   | -9.02    | -10.91   | -5.04    |
| θ (90°)        | -9.27  | -10.19  | -7.11   | -16.29  | -16.79  | -17.15  | -18.37  | -20.64   | -16.88   | -22.62   | -18.86   | -15.74   | -14.16   | -14.30   | -12.08   | -27.61   | -12.65   | -14.46   | -19.00   | -16.21   | -17.28   | -24.04   | -12.28   | -19.15   | -9.27    |
| θ (105°)       | -6.11  | -2.88   | -4.59   | -7.76   | -10.58  | -10.51  | -12.66  | -12.61   | -16.68   | -23.42   | -35.81   | -14.75   | -9.86    | -22.07   | -14.24   | -18.78   | -33.98   | -20.24   | -22.63   | -18.16   | -12.86   | -10.06   | -11.65   | -7.60    | -6.11    |
| θ (120°)       | 0.05   | -2.89   | -2.61   | -4.97   | -8.10   | -12.24  | -17.79  | -19.38   | -21.71   | -24.15   | -16.78   | -16.71   | -17.89   | -13.52   | -9.48    | -17.59   | -33.06   | -24.73   | -10.77   | -7.15    | -4.78    | -4.30    | -4.56    | -4.16    | 0.05     |
| θ (135°)       | -1.14  | -0.53   | -2.47   | -1.50   | -3.41   | -4.81   | -8.55   | -14.57   | -20.73   | -21.73   | -28.23   | -16.46   | -10.02   | -10.41   | -21.51   | -23.26   | -13.69   | -15.26   | -19.58   | -9.31    | -3.55    | -3.97    | -4.65    | -5.00    | -1.14    |
| θ (150°)       | 2.04   | 1.21    | -0.77   | -0.76   | -1.78   | -4.40   | -9.00   | -16.85   | -14.83   | -26.51   | -15.88   | -17.24   | -11.78   | -12.61   | -19.81   | -14.97   | -14.98   | -15.54   | -18.37   | -21.30   | -15.98   | -9.75    | -6.23    | -2.77    | 2.04     |
| θ (165°)       | 0.83   | 0.88    | 0.10    | -1.44   | -3.75   | -7.57   | -13.58  | -13.08   | -9.27    | -11.04   | -11.63   | -9.84    | -8.83    | -8.27    | -9.23    | -12.36   | -19.36   | -18.01   | -14.75   | -12.27   | -10.37   | -8.32    | -4.96    | -1.46    | 0.83     |
| θ (180°)       | -3.30  | -4.46   | -6.53   | -10.09  | -17.51  | -25.07  | -12.36  | -7.75    | -5.18    | -3.69    | -2.94    | -2.82    | -3.30    | -4.46    | -6.53    | -10.09   | -17.51   | -25.07   | -12.36   | -7.75    | -5.18    | -3.69    | -2.94    | -2.82    | -3.30    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -20.44 | -9.54   | -5.21   | -2.77   | -1.35   | -0.67   | -0.60   | -1.14    | -2.37    | -4.54    | -8.30    | -16.49   | -20.44   | -9.54    | -5.21    | -2.77    | -1.35    | -0.67    | -0.60    | -1.14    | -2.37    | -4.54    | -8.30    | -16.49   | -20.44   |
| θ (15°)        | -20.75 | -9.80   | -5.20   | -3.11   | -2.40   | -2.07   | -2.04   | -3.34    | -3.34    | -5.08    | -9.05    | -14.35   | -20.07   | -13.59   | -7.61    | -4.33    | -1.66    | -0.35    | 1.04     | 1.56     | 1.21     | -0.04    | -3.03    | -9.17    | -20.75   |
| θ (30°)        | -21.43 | -4.03   | -0.48   | 0.76    | -0.23   | -2.05   | -3.96   | -6.65    | -5.91    | -7.29    | -11.56   | -14.27   | -25.86   | -14.72   | -9.24    | -5.44    | -3.89    | -2.38    | -0.88    | 0.45     | 1.50     | 1.81     | -0.81    | -4.64    | -21.43   |
| θ (45°)        | -8.47  | -0.16   | 1.70    | 2.08    | 0.30    | 0.11    | -1.13   | -3.86    | -4.99    | -6.33    | -7.53    | -9.12    | -15.12   | -14.38   | -12.08   | -11.39   | -10.62   | -6.13    | -0.65    | 3.33     | 3.94     | 1.58     | -1.65    | -9.66    | -8.47    |
| θ (60°)        | -0.75  | 1.44    | 1.46    | 2.23    | 2.14    | 1.42    | -0.43   | -2.09    | -5.58    | -8.60    | -7.14    | -7.34    | -13.79   | -11.25   | -13.27   | -14.41   | -16.63   | -5.17    | 0.13     | 3.60     | [4.52]   | 2.01     | -3.08    | -8.80    | -0.75    |
| θ (75°)        | -0.36  | 0.25    | 1.40    | 1.35    | 1.51    | 0.26    | 0.18    | -2.06    | -7.57    | -7.63    | -11.58   | -6.03    | -8.49    | -11.18   | -11.35   | -13.42   | -15.03   | -8.96    | -10.19   | -2.29    | -1.46    | -2.39    | -3.06    | -2.61    | -0.36    |
| θ (90°)        | -2.36  | -2.68   | 1.37    | 2.31    | 3.37    | 1.23    | -1.97   | -3.62    | -10.73   | -7.05    | -14.36   | -10.17   | -11.11   | -14.58   | -12.79   | -12.59   | -15.92   | -10.23   | -5.85    | -1.18    | -3.40    | -2.57    | -2.29    | -1.51    | -2.36    |
| θ (105°)       | -4.78  | -4.10   | 0.79    | 2.64    | 4.48    | 1.28    | -2.60   | -4.15    | -8.05    | -9.06    | -8.18    | -7.76    | -11.21   | -10.88   | -11.78   | -16.60   | -12.16   | -5.29    | 0.37     | 3.28     | 2.11     | -1.18    | -2.83    | -1.44    | -4.78    |
| θ (120°)       | -5.89  | -5.10   | -2.25   | 1.24    | 0.93    | -2.10   | -5.74   | -6.65    | -9.49    | -10.66   | -13.93   | -9.47    | -10.89   | -15.21   | -13.02   | -12.25   | -12.07   | -4.46    | -1.99    | 0.69     | 2.07     | -1.14    | -1.44    | -1.81    | -5.89    |
| θ (135°)       | -16.57 | -4.93   | -2.74   | -0.27   | -1.30   | -1.21   | -2.22   | -4.01    | -8.84    | -8.47    | -8.56    | -12.48   | -15.75   | -14.98   | -8.05    | -14.93   | -7.53    | -3.33    | 1.62     | 3.06     | 3.36     | 0.48     | -0.31    | -4.49    | -16.57   |
| θ (150°)       | -7.96  | -3.71   | -2.06   | -1.23   | 0.45    | 0.71    | -1.29   | -5.50    | -6.10    | -7.24    | -8.32    | -8.00    | -9.54    | -12.90   | -23.02   | -14.74   | -12.16   | -10.39   | -7.85    | -6.59    | -8.06    | -8.79    | -10.21   | -18.72   | -7.96    |
| θ (165°)       | -9.33  | -7.62   | -5.93   | -3.16   | -1.17   | -0.29   | -0.39   | -1.34    | -3.96    | -8.19    | -14.44   | -15.86   | -14.82   | -18.14   | -12.83   | -9.56    | -9.58    | -9.70    | -9.67    | -8.52    | -8.49    | -9.34    | -11.83   | -12.68   | -9.33    |
| θ (180°)       | -12.36 | -7.75   | -5.18   | -3.69   | -2.94   | -2.82   | -3.30   | -4.46    | -6.53    | -10.09   | -17.51   | -25.07   | -12.36   | -7.75    | -5.18    | -3.69    | -2.94    | -2.82    | -3.30    | -4.46    | -6.53    | -10.09   | -17.51   | -25.07   | -12.36   |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5300   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -0.91  | -1.27   | -2.29   | -4.14   | -7.31   | -13.50  | -33.02  | -11.88   | -6.57    | -3.71    | -2.04    | -1.16    | -0.91    | -1.27    | -2.29    | -4.14    | -7.31    | -13.50   | -33.02   | -11.88   | -6.57    | -3.71    | -2.04    | -1.16    | -0.91    |
| θ (15°)        | 2.83   | 2.49    | 0.75    | -1.71   | -5.14   | -8.89   | -15.50  | -29.02   | -19.20   | -10.62   | -6.24    | -4.76    | -4.33    | -4.88    | -4.63    | -4.86    | -6.53    | -11.46   | -28.54   | -9.25    | -2.97    | 0.21     | 1.19     | 1.78     | 2.83     |
| θ (30°)        | [4.16] | 3.28    | 1.60    | -1.21   | -6.49   | -12.50  | -16.47  | -22.20   | -22.16   | -16.83   | -16.20   | -9.79    | -10.90   | -6.84    | -5.52    | -6.75    | -10.33   | -15.14   | -23.26   | -11.20   | -4.80    | -0.18    | 2.75     | 3.17     | 4.16     |
| θ (45°)        | 2.55   | 2.92    | 1.16    | -3.73   | -8.64   | -12.85  | -20.78  | -31.23   | -18.38   | -33.23   | -14.33   | -22.00   | -13.73   | -10.12   | -9.71    | -12.50   | -11.85   | -10.62   | -11.63   | -28.65   | -8.95    | -5.71    | -0.73    | 0.48     | 2.55     |
| θ (60°)        | -3.09  | -1.26   | -3.52   | -5.09   | -7.83   | -10.79  | -14.38  | -18.17   | -23.15   | -15.78   | -19.78   | -17.49   | -14.18   | -10.55   | -11.47   | -17.43   | -11.04   | -9.69    | -10.96   | -16.05   | -9.34    | -4.63    | -2.81    | -0.25    | -3.09    |
| θ (75°)        | -5.59  | -4.80   | -4.90   | -6.05   | -7.41   | -8.03   | -11.64  | -15.46   | -13.20   | -17.60   | -14.45   | -20.35   | -11.11   | -11.08   | -9.54    | -21.33   | -12.10   | -12.19   | -16.21   | -12.37   | -13.90   | -14.76   | -11.40   | -8.99    | -5.59    |
| θ (90°)        | -4.79  | -4.20   | -4.87   | -9.10   | -12.68  | -14.26  | -13.26  | -17.63   | -14.75   | -24.52   | -16.46   | -17.40   | -13.12   | -13.89   | -11.63   | -21.01   | -12.27   | -13.52   | -14.10   | -11.06   | -25.23   | -16.25   | -8.98    | -11.94   | -4.79    |
| θ (105°)       | -1.73  | -0.99   | -3.27   | -5.32   | -9.15   | -9.63   | -11.46  | -10.76   | -14.88   | -23.06   | -27.37   | -17.75   | -9.26    | -18.91   | -15.84   | -17.85   | -28.97   | -17.64   | -15.42   | -11.26   | -9.42    | -7.08    | -6.75    | -2.69    | -1.73    |
| θ (120°)       | 1.30   | -0.89   | -1.48   | -2.94   | -8.16   | -10.39  | -18.45  | -18.77   | -18.38   | -22.23   | -15.56   | -13.24   | -16.79   | -15.82   | -8.71    | -20.74   | -24.08   | -21.07   | -8.30    | -5.52    | -3.67    | -2.72    | -2.95    | -1.17    | 1.30     |
| θ (135°)       | -0.11  | -0.57   | -1.73   | -0.76   | -2.96   | -4.81   | -8.16   | -14.81   | -23.24   | -23.73   | -29.27   | -19.34   | -9.66    | -8.93    | -16.88   | -20.15   | -13.13   | -15.61   | -25.64   | -9.70    | -3.00    | -2.86    | -2.16    | -2.35    | -0.11    |
| θ (150°)       | 2.82   | 1.87    | 0.38    | -0.11   | -1.96   | -4.67   | -8.92   | -20.30   | -16.22   | -28.15   | -14.86   | -17.64   | -11.52   | -11.98   | -15.38   | -12.57   | -13.19   | -15.25   | -20.42   | -26.45   | -17.39   | -8.75    | -4.89    | -1.97    | 2.82     |
| θ (165°)       | 1.70   | 1.74    | 1.04    | -0.88   | -3.01   | -6.79   | -14.43  | -14.37   | -8.27    | -9.77    | -11.17   | -9.71    | -8.00    | -6.82    | -8.13    | -11.88   | -28.73   | -19.26   | -14.76   | -12.49   | -10.68   | -8.12    | -4.26    | -0.48    | 1.70     |
| θ (180°)       | -2.88  | -3.99   | -5.98   | -9.39   | -16.33  | -27.05  | -12.46  | -7.62    | -4.95    | -3.40    | -2.60    | -2.44    | -2.88    | -3.99    | -5.98    | -9.39    | -16.33   | -27.05   | -12.46   | -7.62    | -4.95    | -3.40    | -2.60    | -2.44    | -2.88    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -33.02 | -11.88  | -6.57   | -3.71   | -2.04   | -1.16   | -0.91   | -1.27    | -2.29    | -4.14    | -7.31    | -13.50   | -33.02   | -11.88   | -6.57    | -3.71    | -2.04    | -1.16    | -0.91    | -1.27    | -2.29    | -4.14    | -7.31    | -13.50   | -33.02   |
| θ (15°)        | -21.26 | -10.97  | -6.29   | -4.33   | -2.96   | -3.12   | -2.68   | -3.78    | -4.26    | -5.12    | -9.54    | -16.47   | -25.30   | -16.55   | -8.96    | -5.26    | -2.47    | -0.36    | 0.88     | 1.60     | 1.46     | -0.37    | -3.38    | -8.37    | -21.26   |
| θ (30°)        | -21.97 | -4.63   | -0.73   | 0.83    | -1.17   | -3.76   | -5.24   | -7.02    | -7.56    | -7.60    | -11.50   | -14.82   | -25.63   | -16.03   | -11.32   | -6.25    | -4.06    | -2.16    | -0.31    | 1.13     | 2.42     | 2.33     | -0.29    | -4.81    | -21.97   |
| θ (45°)        | -9.00  | -0.29   | 1.73    | 2.01    | 0.47    | 0.92    | 0.15    | -2.98    | -4.52    | -5.80    | -9.37    | -8.79    | -15.27   | -16.88   | -15.03   | -12.41   | -10.97   | -6.11    | -0.29    | 3.42     | 3.45     | 1.31     | -1.34    | -8.34    | -9.00    |
| θ (60°)        | -0.48  | 0.74    | 1.60    | 3.10    | 3.39    | 2.10    | 0.47    | -2.07    | -4.79    | -7.60    | -7.58    | -6.93    | -12.62   | -12.22   | -13.51   | -15.59   | -15.54   | -4.54    | -0.11    | 3.41     | 4.28     | 1.67     | -4.24    | -6.30    | -0.48    |
| θ (75°)        | -0.30  | -0.72   | 1.28    | 0.61    | 0.17    | -0.99   | -1.06   | -1.85    | -7.62    | -7.85    | -11.69   | -6.00    | -8.09    | -11.92   | -10.90   | -14.02   | -15.15   | -8.12    | -9.62    | -1.59    | -1.27    | -2.32    | -3.79    | -1.32    | -0.30    |
| θ (90°)        | -4.19  | -3.49   | 1.56    | 2.36    | 3.35    | 0.53    | -3.35   | -4.17    | -11.74   | -8.99    | -14.25   | -11.28   | -11.81   | -15.08   | -12.99   | -12.29   | -17.07   | -12.15   | -4.13    | -0.12    | -1.73    | -0.54    | -0.57    | -0.62    | -4.19    |
| θ (105°)       | -6.88  | -4.85   | 1.09    | 3.90    | [4.73]  | 1.81    | -2.04   | -4.65    | -8.15    | -7.80    | -8.82    | -6.92    | -11.78   | -11.82   | -12.13   | -16.87   | -12.79   | -5.41    | 0.27     | 2.96     | 1.85     | -0.25    | -1.27    | -1.95    | -6.88    |
| θ (120°)       | -7.28  | -5.02   | -1.80   | 0.80    | -0.41   | -2.59   | -6.51   | -9.13    | -9.43    | -11.13   | -17.01   | -9.34    | -10.18   | -15.95   | -13.49   | -15.22   | -11.77   | -4.69    | -2.61    | 0.40     | 2.13     | -1.01    | -1.64    | -2.40    | -7.28    |
| θ (135°)       | -14.71 | -5.61   | -2.32   | -0.44   | -1.15   | -1.11   | -2.53   | -3.89    | -8.96    | -8.94    | -9.37    | -12.05   | -16.84   | -15.01   | -7.41    | -14.22   | -8.18    | -3.57    | 1.43     | 2.81     | 3.14     | 0.90     | 0.10     | -5.13    | -14.71   |
| θ (150°)       | -5.45  | -2.33   | -0.47   | 0.09    | 1.60    | 1.50    | -0.93   | -4.49    | -4.60    | -5.43    | -8.37    | -7.41    | -9.20    | -12.21   | -20.61   | -11.95   | -10.44   | -10.19   | -8.64    | -7.08    | -7.55    | -6.97    | -8.13    | -12.56   | -5.45    |
| θ (165°)       | -9.48  | -6.74   | -4.11   | -1.31   | 0.64    | 1.35    | 1.26    | 0.19     | -2.68    | -7.16    | -13.77   | -16.05   | -14.70   | -17.67   | -13.53   | -9.20    | -9.23    | -9.43    | -8.74    | -7.50    | -7.21    | -8.35    | -12.28   | -16.04   | -9.48    |
| θ (180°)       | -12.46 | -7.62   | -4.95   | -3.40   | -2.60   | -2.44   | -2.88   | -3.99    | -5.98    | -9.39    | -16.33   | -27.05   | -12.46   | -7.62    | -4.95    | -3.40    | -2.60    | -2.44    | -2.88    | -3.99    | -5.98    | -9.39    | -16.33   | -27.05   | -12.46   |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5350   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -1.57  | -1.98   | -3.05   | -4.98   | -8.30   | -14.92  | -28.44  | -11.95   | -6.93    | -4.20    | -2.60    | -1.77    | -1.57    | -1.98    | -3.05    | -4.98    | -8.30    | -14.92   | -28.44   | -11.95   | -6.93    | -4.20    | -2.60    | -1.77    | -1.57    |
| θ (15°)        | 1.79   | 1.07    | -0.77   | -3.03   | -5.72   | -10.27  | -16.44  | -28.97   | -19.64   | -13.64   | -7.48    | -5.64    | -4.85    | -5.67    | -5.29    | -5.90    | -6.89    | -11.53   | -29.17   | -9.93    | -3.54    | -0.31    | 0.57     | 1.27     | 1.79     |
| θ (30°)        | [4.00] | 3.39    | 2.13    | -1.31   | -7.70   | -14.57  | -20.27  | -20.46   | -23.52   | -17.23   | -19.68   | -10.09   | -13.03   | -8.69    | -5.70    | -6.34    | -9.61    | -13.86   | -21.90   | -11.19   | -4.44    | 0.24     | 2.73     | 2.94     | 4.00     |
| θ (45°)        | 3.05   | 2.95    | 1.29    | -3.49   | -8.30   | -11.72  | -22.78  | -37.89   | -20.85   | -23.47   | -16.45   | -24.97   | -14.10   | -11.23   | -10.24   | -12.85   | -12.57   | -9.99    | -10.98   | -28.93   | -9.88    | -6.30    | -0.35    | 0.96     | 3.05     |
| θ (60°)        | -2.47  | -0.87   | -2.08   | -4.31   | -7.16   | -11.54  | -14.31  | -17.21   | -21.92   | -17.35   | -16.72   | -20.53   | -14.25   | -10.81   | -10.59   | -15.87   | -11.89   | -9.77    | -10.41   | -14.87   | -9.17    | -4.85    | -3.15    | 0.30     | -2.47    |
| θ (75°)        | -6.47  | -3.86   | -3.39   | -4.85   | -7.33   | -9.14   | -11.35  | -15.49   | -13.41   | -17.11   | -12.73   | -22.97   | -11.60   | -12.33   | -8.45    | -18.31   | -11.75   | -12.74   | -17.97   | -11.23   | -12.71   | -11.43   | -12.02   | -6.01    | -6.47    |
| θ (90°)        | -3.94  | -2.24   | -4.30   | -7.91   | -13.21  | -15.61  | -12.61  | -16.88   | -15.96   | -32.71   | -15.76   | -20.65   | -12.75   | -15.17   | -10.96   | -18.80   | -12.26   | -13.33   | -13.85   | -9.68    | -27.12   | -14.26   | -8.71    | -11.05   | -3.94    |
| θ (105°)       | -1.01  | -0.91   | -2.71   | -5.16   | -10.76  | -10.18  | -12.05  | -10.67   | -15.62   | -20.82   | -23.53   | -22.52   | -9.24    | -15.72   | -17.90   | -16.50   | -28.88   | -17.30   | -14.95   | -10.79   | -9.31    | -5.33    | -5.13    | -1.30    | -1.01    |
| θ (120°)       | 1.11   | -0.11   | -1.37   | -2.40   | -8.15   | -9.87   | -15.78  | -21.38   | -16.96   | -23.92   | -16.51   | -12.25   | -14.56   | -19.07   | -8.98    | -20.36   | -19.26   | -23.31   | -8.50    | -5.27    | -3.81    | -2.06    | -3.10    | -0.50    | 1.11     |
| θ (135°)       | -0.18  | -2.12   | -1.67   | -1.35   | -3.67   | -5.32   | -8.06   | -14.59   | -20.55   | -21.16   | -23.87   | -21.77   | -10.09   | -8.19    | -14.09   | -17.22   | -12.57   | -14.44   | -33.73   | -10.37   | -2.57    | -2.01    | -1.06    | -2.06    | -0.18    |
| θ (150°)       | 3.10   | 1.63    | 0.29    | -0.14   | -2.65   | -5.86   | -9.50   | -20.41   | -18.01   | -25.63   | -14.72   | -18.90   | -11.92   | -11.10   | -12.64   | -12.21   | -12.03   | -14.78   | -16.16   | -18.03   | -13.68   | -7.29    | -4.94    | -1.97    | 3.10     |
| θ (165°)       | 2.27   | 1.95    | 1.10    | -0.57   | -2.72   | -5.56   | -14.22  | -15.43   | -8.08    | -9.12    | -11.29   | -10.30   | -8.27    | -6.77    | -7.64    | -11.66   | -22.66   | -22.63   | -16.08   | -13.99   | -12.06   | -8.77    | -3.68    | 0.32     | 2.27     |
| θ (180°)       | -2.17  | -3.23   | -5.16   | -8.45   | -15.01  | -29.18  | -12.23  | -7.17    | -4.42    | -2.81    | -1.97    | -1.77    | -2.17    | -3.23    | -5.16    | -8.45    | -15.01   | -29.18   | -12.23   | -7.17    | -4.42    | -2.81    | -1.97    | -1.77    | -2.17    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -28.44 | -11.95  | -6.93   | -4.20   | -2.60   | -1.77   | -1.57   | -1.98    | -3.05    | -4.98    | -8.30    | -14.92   | -28.44   | -11.95   | -6.93    | -4.20    | -2.60    | -1.77    | -1.57    | -1.98    | -3.05    | -4.98    | -8.30    | -14.92   | -28.44   |
| θ (15°)        | -21.41 | -12.56  | -7.51   | -5.41   | -3.74   | -3.39   | -3.99   | -4.26    | -6.03    | -5.74    | -8.86    | -15.16   | -28.04   | -22.35   | -11.41   | -6.11    | -3.30    | -0.79    | 0.56     | 1.30     | 1.39     | -0.36    | -3.52    | -8.59    | -21.41   |
| θ (30°)        | -17.60 | -4.02   | -0.50   | 0.45    | -1.85   | -5.57   | -7.16   | -7.80    | -9.25    | -8.10    | -10.85   | -17.25   | -24.46   | -18.22   | -13.26   | -7.72    | -4.16    | -1.90    | 0.10     | 1.78     | 3.33     | 2.76     | -0.36    | -5.31    | -17.60   |
| θ (45°)        | -8.18  | -0.19   | 2.15    | 1.49    | 1.00    | 1.25    | 0.20    | -2.75    | -4.90    | -5.86    | -8.53    | -10.04   | -16.03   | -16.17   | -19.51   | -15.12   | -11.22   | -5.58    | 0.43     | 3.50     | 3.07     | 1.06     | -0.31    | -8.39    | -8.18    |
| θ (60°)        | -0.95  | 0.72    | 2.19    | 4.10    | 3.55    | 2.28    | 0.57    | -2.21    | -4.29    | -6.92    | -8.24    | -6.82    | -11.56   | -12.93   | -13.29   | -16.42   | -15.39   | -5.03    | -0.82    | 2.92     | 3.99     | 1.14     | -3.39    | -5.32    | -0.95    |
| θ (75°)        | -0.43  | -1.31   | 1.21    | 0.73    | -0.10   | -0.97   | -1.75   | -2.48    | -5.89    | -8.37    | -11.42   | -6.50    | -7.60    | -13.52   | -11.05   | -14.96   | -14.61   | -9.00    | -9.50    | -1.84    | -1.41    | -2.01    | -3.88    | -0.73    | -0.43    |
| θ (90°)        | -4.68  | -2.92   | 1.06    | 2.81    | 2.84    | 0.41    | -4.19   | -5.34    | -10.90   | -9.97    | -13.91   | -12.40   | -11.73   | -14.81   | -14.06   | -12.16   | -18.81   | -12.17   | -3.04    | 0.65     | -0.22    | -0.06    | -0.43    | -0.37    | -4.68    |
| θ (105°)       | -7.30  | -4.61   | 1.09    | 4.06    | [4.61]  | 1.73    | -1.31   | -4.55    | -7.79    | -8.43    | -8.79    | -7.63    | -12.20   | -12.48   | -13.49   | -16.74   | -13.91   | -5.94    | -0.28    | 2.07     | 1.44     | 0.04     | -1.26    | -2.38    | -7.30    |
| θ (120°)       | -6.62  | -4.57   | -1.19   | 0.34    | -1.68   | -2.40   | -5.72   | -8.36    | -8.54    | -11.63   | -15.43   | -9.37    | -10.42   | -16.22   | -15.67   | -16.51   | -11.16   | -5.06    | -2.58    | 0.50     | 2.30     | -0.99    | -2.38    | -2.98    | -6.62    |
| θ (135°)       | -12.55 | -6.03   | -2.50   | -0.78   | -1.18   | -1.22   | -2.19   | -3.41    | -9.49    | -8.65    | -8.75    | -12.09   | -14.93   | -14.51   | -7.06    | -12.91   | -7.56    | -3.56    | 1.32     | 2.80     | 3.47     | 1.68     | 0.10     | -6.06    | -12.55   |
| θ (150°)       | -5.23  | -2.05   | -0.03   | 0.50    | 2.08    | 2.10    | -0.53   | -5.09    | -4.02    | -4.98    | -7.87    | -7.75    | -9.00    | -11.55   | -21.00   | -9.90    | -9.27    | -8.81    | -7.13    | -5.32    | -5.30    | -4.60    | -6.30    | -9.08    | -5.23    |
| θ (165°)       | -11.92 | -8.14   | -3.85   | -0.88   | 1.18    | 1.92    | 2.00    | 1.09     | -2.30    | -6.45    | -13.38   | -17.81   | -15.08   | -18.61   | -14.33   | -9.33    | -8.85    | -9.12    | -8.13    | -7.00    | -6.98    | -8.12    | -11.62   | -20.92   | -11.92   |
| θ (180°)       | -12.23 | -7.17   | -4.42   | -2.81   | -1.97   | -1.77   | -2.17   | -3.23    | -5.16    | -8.45    | -15.01   | -29.18   | -12.23   | -7.17    | -4.42    | -2.81    | -1.97    | -1.77    | -2.17    | -3.23    | -5.16    | -8.45    | -15.01   | -29.18   | -12.23   |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5470   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -0.84  | -1.49   | -2.85   | -5.21   | -9.37   | -19.32  | -17.65  | -8.84    | -4.92    | -2.68    | -1.40    | -0.82    | -0.84    | -1.49    | -2.85    | -5.21    | -9.37    | -19.32   | -17.65   | -8.84    | -4.92    | -2.68    | -1.40    | -0.82    | -0.84    |
| θ (15°)        | 1.37   | 0.38    | -1.11   | -2.73   | -4.81   | -7.15   | -11.35  | -17.09   | -17.69   | -12.70   | -10.20   | -6.92    | -6.13    | -5.30    | -5.91    | -6.17    | -7.87    | -11.86   | -25.14   | -11.83   | -5.08    | -2.58    | -1.34    | 0.89     | 1.37     |
| θ (30°)        | 3.52   | 2.38    | 0.63    | -4.70   | -11.20  | -18.01  | -29.16  | -18.23   | -26.79   | -20.31   | -16.28   | -12.66   | -9.26    | -14.06   | -9.33    | -7.90    | -9.64    | -11.90   | -15.72   | -11.07   | -4.75    | 0.31     | 2.42     | 2.64     | 3.52     |
| θ (45°)        | 3.21   | [3.64]  | 0.98    | -5.81   | -8.30   | -11.40  | -17.63  | -20.02   | -20.80   | -19.20   | -25.16   | -17.25   | -13.16   | -13.90   | -10.77   | -14.25   | -12.34   | -9.07    | -10.51   | -23.26   | -13.82   | -3.06    | 0.39     | 1.97     | 3.21     |
| θ (60°)        | -0.37  | -1.31   | -0.40   | -2.54   | -6.53   | -12.46  | -15.02  | -15.79   | -17.79   | -18.06   | -18.67   | -19.29   | -17.25   | -14.96   | -13.19   | -15.52   | -10.57   | -8.65    | -11.67   | -14.53   | -10.07   | -4.46    | -3.68    | -0.08    | -0.37    |
| θ (75°)        | -4.76  | -1.96   | -1.69   | -4.16   | -10.07  | -15.62  | -17.27  | -25.63   | -17.89   | -17.17   | -14.89   | -15.00   | -14.13   | -17.41   | -10.75   | -18.18   | -11.55   | -11.38   | -15.76   | -12.31   | -16.47   | -9.27    | -19.16   | -2.50    | -4.76    |
| θ (90°)        | -4.56  | -0.66   | -3.36   | -6.35   | -11.78  | -15.07  | -16.13  | -21.55   | -17.54   | -27.56   | -16.24   | -19.40   | -11.98   | -31.52   | -13.49   | -18.00   | -11.77   | -12.92   | -13.51   | -9.29    | -31.61   | -14.64   | -7.60    | -10.57   | -4.56    |
| θ (105°)       | 0.09   | -1.08   | -2.13   | -4.93   | -9.59   | -13.49  | -12.85  | -15.96   | -14.96   | -20.02   | -27.53   | -22.58   | -10.56   | -11.23   | -17.25   | -16.41   | -19.00   | -14.61   | -14.25   | -12.42   | -7.88    | -4.12    | -4.59    | -1.36    | 0.09     |
| θ (120°)       | -0.11  | 0.05    | -2.48   | -3.04   | -5.52   | -8.78   | -13.11  | -36.35   | -19.43   | -23.89   | -15.98   | -13.50   | -13.88   | -19.30   | -10.54   | -14.22   | -18.03   | -20.89   | -8.99    | -5.49    | -3.88    | -1.56    | -3.85    | -0.01    | -0.11    |
| θ (135°)       | -2.13  | -2.50   | -0.28   | -2.13   | -3.36   | -5.91   | -10.12  | -15.68   | -21.07   | -20.43   | -20.70   | -15.43   | -12.80   | -8.45    | -12.26   | -13.80   | -11.02   | -13.52   | -23.35   | -10.78   | -1.93    | -2.62    | -1.04    | -1.86    | -2.13    |
| θ (150°)       | 2.95   | 0.12    | 0.48    | -1.17   | -5.53   | -9.16   | -13.74  | -20.54   | -17.81   | -21.22   | -13.05   | -16.08   | -11.89   | -14.83   | -12.69   | -13.76   | -11.52   | -13.95   | -15.47   | -12.91   | -9.84    | -6.59    | -6.35    | -0.96    | 2.95     |
| θ (165°)       | 2.66   | 1.56    | -0.11   | -0.68   | -2.15   | -4.83   | -12.51  | -16.69   | -8.51    | -8.21    | -10.05   | -9.29    | -8.14    | -7.38    | -8.23    | -11.81   | -19.80   | -28.35   | -23.10   | -24.39   | -16.48   | -7.85    | -2.96    | 1.05     | 2.66     |
| θ (180°)       | -2.92  | -4.06   | -6.10   | -9.62   | -16.88  | -25.37  | -12.14  | -7.46    | -4.86    | -3.35    | -2.58    | -2.45    | -2.92    | -4.06    | -6.10    | -9.62    | -16.88   | -25.37   | -12.14   | -7.46    | -4.86    | -3.35    | -2.58    | -2.45    | -2.92    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -17.65 | -8.84   | -4.92   | -2.68   | -1.40   | -0.82   | -0.84   | -1.49    | -2.85    | -5.21    | -9.37    | -19.32   | -17.65   | -8.84    | -4.92    | -2.68    | -1.40    | -0.82    | -0.84    | -1.49    | -2.85    | -5.21    | -9.37    | -19.32   | -17.65   |
| θ (15°)        | -17.55 | -16.14  | -9.32   | -5.57   | -5.25   | -4.55   | -4.63   | -5.05    | -5.05    | -5.70    | -7.79    | -12.93   | -24.60   | -21.37   | -13.09   | -7.67    | -3.37    | -1.49    | 0.12     | 0.85     | 0.18     | -1.33    | -4.69    | -9.27    | -17.55   |
| θ (30°)        | -19.63 | -6.20   | -1.38   | -4.11   | -7.01   | -4.95   | -5.19   | -8.64    | -11.66   | -10.42   | -8.56    | -15.77   | -19.81   | -20.97   | -15.05   | -9.59    | -4.25    | -1.15    | 1.08     | 2.72     | 3.34     | 2.28     | -0.48    | -4.09    | -19.63   |
| θ (45°)        | -5.44  | -1.27   | 1.63    | -0.48   | 1.96    | 1.77    | -0.26   | -3.47    | -6.80    | -7.77    | -8.55    | -11.54   | -20.56   | -19.65   | -16.26   | -19.82   | -11.79   | -5.02    | -0.09    | 2.21     | 2.04     | 1.34     | -1.10    | -8.59    | -5.44    |
| θ (60°)        | -1.18  | 1.03    | 2.67    | 4.26    | 3.12    | 2.25    | -0.38   | -2.30    | -4.67    | -7.10    | -8.30    | -9.36    | -11.39   | -17.14   | -13.11   | -18.07   | -14.79   | -6.00    | -0.83    | 2.66     | 3.57     | 0.34     | -3.74    | -4.17    | -1.18    |
| θ (75°)        | -1.55  | -1.09   | 0.68    | 2.02    | 1.41    | -0.74   | -2.73   | -5.17    | -6.42    | -7.92    | -10.29   | -9.33    | -7.93    | -14.68   | -12.27   | -17.63   | -18.86   | -13.69   | -9.70    | -2.90    | -1.71    | -1.45    | -2.62    | -0.86    | -1.55    |
| θ (90°)        | -5.71  | -2.71   | 0.70    | 3.73    | 1.01    | 0.51    | -1.69   | -8.14    | -8.92    | -11.92   | -12.12   | -18.77   | -11.03   | -14.21   | -16.20   | -13.29   | -18.28   | -10.67   | -2.23    | 0.58     | 0.89     | -0.20    | -0.13    | -0.21    | -5.71    |
| θ (105°)       | -6.59  | -3.46   | 1.83    | [4.33]  | 3.76    | 2.87    | -0.28   | -3.11    | -5.40    | -11.31   | -7.40    | -9.93    | -12.42   | -17.79   | -12.74   | -19.94   | -13.99   | -6.84    | -2.86    | -0.96    | 0.28     | 0.43     | -1.11    | -3.42    | -6.59    |
| θ (120°)       | -5.62  | -3.19   | -0.76   | -0.11   | -1.07   | -2.20   | -5.66   | -7.53    | -7.78    | -10.52   | -11.11   | -10.79   | -9.95    | -16.45   | -15.54   | -15.33   | -9.99    | -5.30    | -4.16    | 1.04     | 2.83     | -2.14    | -2.13    | -2.67    | -5.62    |
| θ (135°)       | -10.15 | -7.91   | -2.11   | -0.53   | 1.22    | 0.13    | -2.20   | -3.13    | -7.08    | -10.38   | -7.91    | -15.09   | -12.73   | -11.46   | -9.02    | -12.32   | -9.77    | -4.96    | 0.57     | 2.52     | 3.64     | 1.90     | -0.45    | -5.35    | -10.15   |
| θ (150°)       | -7.71  | -1.78   | 0.76    | 0.69    | 1.69    | 2.42    | -0.24   | -5.73    | -4.28    | -4.39    | -8.38    | -8.93    | -8.35    | -11.06   | -22.16   | -13.34   | -8.73    | -7.40    | -5.02    | -3.57    | -3.16    | -2.62    | -4.34    | -7.09    | -7.71    |
| θ (165°)       | -19.37 | -10.89  | -4.37   | -0.31   | 1.83    | 3.05    | 3.06    | 2.09     | -0.59    | -5.08    | -10.52   | -16.74   | -18.68   | -17.00   | -14.00   | -11.70   | -11.68   | -10.38   | -8.99    | -7.02    | -6.79    | -7.90    | -11.48   | -18.26   | -19.37   |
| θ (180°)       | -12.14 | -7.46   | -4.86   | -3.35   | -2.58   | -2.45   | -2.92   | -4.06    | -6.10    | -9.62    | -16.88   | -25.37   | -12.14   | -7.46    | -4.86    | -3.35    | -2.58    | -2.45    | -2.92    | -4.06    | -6.10    | -9.62    | -16.88   | -25.37   | -12.14   |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5600   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -2.14  | -2.58   | -3.68   | -5.67   | -9.07   | -15.98  | -26.96  | -12.19   | -7.34    | -4.67    | -3.11    | -2.31    | -2.14    | -2.58    | -3.68    | -5.67    | -9.07    | -15.98   | -26.96   | -12.19   | -7.34    | -4.67    | -3.11    | -2.31    | -2.14    |
| θ (15°)        | 0.81   | 0.53    | 0.03    | -1.42   | -4.43   | -8.37   | -12.96  | -18.05   | -18.95   | -13.82   | -8.47    | -6.78    | -5.08    | -6.59    | -7.33    | -7.89    | -9.68    | -12.86   | -21.20   | -12.22   | -6.10    | -3.23    | -0.86    | 0.92     | 0.81     |
| θ (30°)        | 3.19   | 1.67    | -1.77   | -7.85   | -10.74  | -13.08  | -25.81  | -19.43   | -15.01   | -19.21   | -13.99   | -10.43   | -10.32   | -10.60   | -11.99   | -11.31   | -11.16   | -12.61   | -13.16   | -10.46   | -4.97    | -0.17    | 1.56     | 2.36     | 3.19     |
| θ (45°)        | 3.46   | [3.49]  | 0.08    | -3.84   | -6.06   | -12.33  | -20.53  | -17.36   | -18.33   | -16.12   | -19.61   | -27.33   | -11.73   | -24.55   | -14.49   | -13.52   | -12.18   | -9.62    | -11.85   | -17.17   | -14.69   | -2.17    | -0.14    | 3.17     | 3.46     |
| θ (60°)        | -0.10  | 0.66    | 0.31    | -2.18   | -7.54   | -11.90  | -15.57  | -16.74   | -20.42   | -17.57   | -16.79   | -17.61   | -12.71   | -20.20   | -13.98   | -16.53   | -10.83   | -9.33    | -14.24   | -19.54   | -11.10   | -4.67    | -3.17    | -0.46    | -0.10    |
| θ (75°)        | -3.95  | -3.46   | -1.68   | -3.60   | -7.34   | -11.09  | -17.96  | -24.88   | -26.77   | -16.33   | -21.88   | -16.02   | -15.15   | -13.78   | -11.11   | -21.55   | -12.31   | -13.51   | -20.67   | -13.23   | -18.05   | -9.41    | -17.04   | -1.79    | -3.95    |
| θ (90°)        | -3.87  | -0.91   | -2.68   | -6.89   | -8.04   | -11.02  | -18.71  | -24.69   | -23.41   | -22.80   | -17.65   | -17.25   | -13.21   | -19.25   | -12.66   | -19.98   | -12.23   | -12.95   | -12.10   | -8.71    | -24.41   | -11.88   | -6.67    | -9.28    | -3.87    |
| θ (105°)       | -1.10  | -1.65   | -2.41   | -5.43   | -6.05   | -13.29  | -16.62  | -17.25   | -16.96   | -26.10   | -28.53   | -24.84   | -10.93   | -11.08   | -16.79   | -22.83   | -20.03   | -15.84   | -16.12   | -14.30   | -8.15    | -3.68    | -3.47    | -0.48    | -1.10    |
| θ (120°)       | 1.00   | -0.08   | -1.66   | -3.33   | -6.01   | -11.45  | -14.83  | -28.83   | -19.39   | -19.88   | -31.02   | -12.80   | -13.47   | -19.81   | -11.59   | -12.79   | -16.36   | -17.83   | -10.43   | -6.46    | -5.21    | -1.77    | -4.49    | 0.29     | 1.00     |
| θ (135°)       | -4.89  | -3.58   | -0.84   | -3.07   | -4.01   | -6.36   | -12.19  | -19.00   | -29.85   | -15.27   | -33.32   | -12.79   | -10.68   | -9.24    | -12.39   | -18.08   | -11.35   | -11.55   | -17.97   | -9.77    | -2.20    | -2.20    | -0.25    | -3.28    | -4.89    |
| θ (150°)       | 1.39   | 0.51    | -0.21   | -3.88   | -5.53   | -9.33   | -13.85  | -18.77   | -15.92   | -15.33   | -13.54   | -17.23   | -10.30   | -15.73   | -12.89   | -11.13   | -10.01   | -14.49   | -16.29   | -12.12   | -7.71    | -6.28    | -7.24    | -0.07    | 1.39     |
| θ (165°)       | 1.48   | 0.59    | 0.32    | 0.11    | -1.28   | -4.40   | -10.86  | -16.42   | -7.95    | -7.02    | -9.12    | -10.40   | -8.15    | -6.35    | -7.51    | -12.82   | -19.99   | -33.73   | -35.86   | -22.33   | -12.09   | -4.57    | -0.34    | 2.10     | 1.48     |
| θ (180°)       | -3.29  | -4.68   | -7.08   | -11.33  | -21.74  | -18.91  | -10.43  | -6.60    | -4.40    | -3.14    | -2.58    | -2.62    | -3.29    | -4.68    | -7.08    | -11.33   | -21.74   | -18.91   | -10.43   | -6.60    | -4.40    | -3.14    | -2.58    | -2.62    | -3.29    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -26.96 | -12.19  | -7.34   | -4.67   | -3.11   | -2.31   | -2.14   | -2.58    | -3.68    | -5.67    | -9.07    | -15.98   | -26.96   | -12.19   | -7.34    | -4.67    | -3.11    | -2.31    | -2.14    | -2.58    | -3.68    | -5.67    | -9.07    | -15.98   | -26.96   |
| θ (15°)        | -20.07 | -14.94  | -6.74   | -3.50   | -2.99   | -4.06   | -5.91   | -6.38    | -6.50    | -6.39    | -6.30    | -9.79    | -17.76   | -20.30   | -14.47   | -9.56    | -6.18    | -2.92    | -1.37    | -0.67    | -0.71    | -2.33    | -4.74    | -9.98    | -20.07   |
| θ (30°)        | -19.87 | -6.03   | -3.74   | -4.61   | -2.17   | -2.16   | -3.48   | -4.96    | -7.81    | -15.77   | -12.24   | -16.50   | -23.99   | -16.66   | -14.00   | -13.56   | -7.14    | -2.73    | 0.15     | 2.06     | 2.73     | 1.65     | -0.33    | -5.45    | -19.87   |
| θ (45°)        | -4.17  | 0.24    | 0.53    | 1.29    | 2.23    | 0.02    | -1.45   | -3.45    | -6.56    | -8.40    | -9.68    | -10.73   | -16.75   | -17.29   | -17.26   | -20.95   | -14.12   | -5.98    | -1.15    | 1.19     | 2.00     | 1.92     | -1.03    | -5.66    | -4.17    |
| θ (60°)        | -1.20  | 1.40    | 3.11    | 3.15    | 2.72    | 1.69    | -0.28   | -2.91    | -6.16    | -7.82    | -7.97    | -7.00    | -13.71   | -15.21   | -15.60   | -27.59   | -16.85   | -6.36    | -0.69    | 1.77     | 2.45     | 0.39     | -4.06    | -3.04    | -1.20    |
| θ (75°)        | -1.61  | -2.50   | 0.90    | 2.80    | 0.63    | -0.52   | -2.67   | -4.44    | -6.24    | -8.61    | -9.31    | -9.35    | -7.94    | -13.62   | -13.20   | -36.68   | -23.10   | -15.56   | -10.42   | -5.08    | -1.10    | -1.49    | -1.29    | -0.57    | -1.61    |
| θ (90°)        | -5.00  | -2.94   | 0.93    | 2.88    | 2.52    | 1.52    | -1.29   | -7.42    | -9.12    | -12.85   | -9.46    | -15.11   | -9.84    | -13.63   | -16.85   | -17.16   | -13.55   | -9.30    | -1.57    | 1.37     | 1.30     | -0.09    | -0.37    | -0.10    | -5.00    |
| θ (105°)       | -6.70  | -4.76   | 2.19    | [4.00]  | 2.77    | 1.98    | 0.25    | -4.45    | -4.66    | -14.34   | -7.27    | -9.59    | -14.68   | -15.69   | -12.78   | -33.05   | -17.65   | -7.96    | -5.32    | -0.47    | 0.54     | 1.26     | -2.34    | -5.12    | -6.70    |
| θ (120°)       | -6.18  | -3.60   | -0.62   | -0.46   | 0.44    | -1.50   | -5.61   | -12.39   | -7.89    | -11.38   | -10.99   | -10.64   | -10.50   | -16.86   | -14.90   | -15.89   | -10.29   | -8.15    | -5.52    | 0.93     | 2.15     | -1.95    | -2.84    | -2.51    | -6.18    |
| θ (135°)       | -11.58 | -10.34  | -3.24   | -0.43   | 1.20    | -0.36   | -2.90   | -6.64    | -6.57    | -14.69   | -7.19    | -15.40   | -12.40   | -13.08   | -11.34   | -13.70   | -14.50   | -5.72    | -0.39    | 2.21     | 3.21     | 2.12     | -0.90    | -6.99    | -11.58   |
| θ (150°)       | -12.00 | -2.05   | -0.38   | 0.95    | 1.80    | 2.55    | 0.97    | -6.03    | -3.97    | -3.30    | -9.20    | -9.01    | -9.17    | -10.75   | -21.50   | -11.57   | -7.68    | -6.17    | -3.98    | -2.11    | -1.09    | -1.45    | -4.00    | -7.59    | -12.00   |
| θ (165°)       | -21.05 | -10.93  | -2.84   | -0.33   | 1.10    | 2.06    | 2.60    | 2.44     | 0.20     | -4.40    | -10.05   | -13.01   | -20.06   | -16.88   | -10.91   | -9.90    | -10.31   | -10.71   | -8.21    | -6.77    | -6.20    | -5.22    | -6.50    | -11.46   | -21.05   |
| θ (180°)       | -10.43 | -6.60   | -4.40   | -3.14   | -2.58   | -2.62   | -3.29   | -4.68    | -7.08    | -11.33   | -21.74   | -18.91   | -10.43   | -6.60    | -4.40    | -3.14    | -2.58    | -2.62    | -3.29    | -4.68    | -7.08    | -11.33   | -21.74   | -18.91   | -10.43   |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5725   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -1.38  | -2.05   | -3.45   | -5.86   | -10.13  | -20.65  | -17.56  | -9.15    | -5.33    | -3.14    | -1.89    | -1.33    | -1.38    | -2.05    | -3.45    | -5.86    | -10.13   | -20.65   | -17.56   | -9.15    | -5.33    | -3.14    | -1.89    | -1.33    | -1.38    |
| θ (15°)        | 1.03   | 1.10    | -0.07   | -1.98   | -3.96   | -6.85   | -11.03  | -17.49   | -26.43   | -16.20   | -11.39   | -7.38    | -6.39    | -4.91    | -5.45    | -7.14    | -8.32    | -12.55   | -23.09   | -12.79   | -7.44    | -4.51    | -0.71    | 0.53     | 1.03     |
| θ (30°)        | 1.92   | 1.87    | -1.09   | -6.03   | -8.29   | -13.76  | -16.22  | -32.84   | -17.11   | -14.89   | -15.49   | -11.44   | -7.70    | -9.94    | -10.61   | -11.25   | -11.46   | -10.60   | -13.09   | -13.55   | -6.31    | -0.27    | 0.69     | 1.93     | 1.92     |
| θ (45°)        | [4.28] | 3.78    | -0.86   | -1.42   | -5.96   | -10.48  | -12.62  | -15.85   | -14.32   | -19.85   | -19.88   | -20.92   | -18.77   | -16.93   | -15.17   | -13.52   | -9.89    | -8.20    | -9.04    | -15.97   | -9.21    | -1.24    | 1.15     | 3.84     | 4.28     |
| θ (60°)        | -0.09  | 2.31    | -0.02   | -2.38   | -6.89   | -9.23   | -18.69  | -14.43   | -17.65   | -18.55   | -17.36   | -22.79   | -11.42   | -19.32   | -15.56   | -21.46   | -9.68    | -7.18    | -10.65   | -19.96   | -8.92    | -4.84    | -2.35    | -0.24    | -0.09    |
| θ (75°)        | -2.58  | -4.91   | -1.08   | -3.36   | -8.78   | -15.98  | -20.77  | -22.03   | -24.54   | -12.13   | -22.13   | -20.19   | -13.68   | -16.86   | -10.13   | -19.85   | -13.39   | -12.34   | -16.12   | -16.53   | -20.93   | -10.30   | -14.57   | -1.78    | -2.58    |
| θ (90°)        | -2.55  | -2.02   | -3.03   | -8.38   | -12.93  | -16.98  | -20.37  | -19.98   | -33.46   | -17.81   | -33.20   | -17.10   | -11.55   | -16.74   | -13.18   | -25.04   | -13.23   | -12.97   | -14.24   | -10.26   | -17.85   | -10.69   | -8.13    | -5.68    | -2.55    |
| θ (105°)       | -1.52  | -0.20   | -1.36   | -3.68   | -4.78   | -10.51  | -15.09  | -18.26   | -17.01   | -16.75   | -19.09   | -25.43   | -10.31   | -9.27    | -17.49   | -29.56   | -19.16   | -14.68   | -18.13   | -16.07   | -7.22    | -2.43    | -2.54    | -2.37    | -1.52    |
| θ (120°)       | 1.28   | -2.61   | -1.17   | -4.08   | -6.50   | -12.71  | -15.68  | -16.85   | -15.17   | -15.03   | -23.05   | -13.81   | -12.31   | -15.10   | -13.46   | -13.40   | -15.41   | -14.10   | -11.52   | -6.86    | -4.79    | -2.33    | -3.73    | -0.59    | 1.28     |
| θ (135°)       | -7.05  | -1.95   | -2.45   | -4.11   | -5.32   | -8.43   | -17.48  | -18.24   | -21.31   | -15.89   | -18.30   | -14.31   | -12.10   | -9.02    | -11.11   | -22.83   | -12.79   | -12.62   | -16.46   | -8.80    | -2.63    | -1.25    | -0.68    | -7.36    | -7.05    |
| θ (150°)       | 1.15   | 1.26    | -1.39   | -5.05   | -4.54   | -8.15   | -15.47  | -17.12   | -17.36   | -12.84   | -14.53   | -18.00   | -10.47   | -13.16   | -14.82   | -11.39   | -8.91    | -12.49   | -14.58   | -9.77    | -7.02    | -7.17    | -5.28    | 0.51     | 1.15     |
| θ (165°)       | 1.08   | 0.97    | 0.54    | -0.02   | -1.23   | -4.78   | -9.36   | -24.32   | -9.85    | -6.04    | -7.25    | -11.32   | -9.94    | -5.57    | -7.24    | -13.32   | -24.47   | -26.85   | -50.03   | -18.36   | -8.46    | -2.87    | 0.40     | 1.62     | 1.08     |
| θ (180°)       | -5.05  | -6.73   | -9.60   | -14.96  | -37.06  | -16.39  | -10.26  | -7.11    | -5.27    | -4.26    | -3.91    | -4.16    | -5.05    | -6.73    | -9.60    | -14.96   | -37.06   | -16.39   | -10.26   | -7.11    | -5.27    | -4.26    | -3.91    | -4.16    | -5.05    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -17.56 | -9.15   | -5.33   | -3.14   | -1.89   | -1.33   | -1.38   | -2.05    | -3.45    | -5.86    | -10.13   | -20.65   | -17.56   | -9.15    | -5.33    | -3.14    | -1.89    | -1.33    | -1.38    | -2.05    | -3.45    | -5.86    | -10.13   | -20.65   | -17.56   |
| θ (15°)        | -15.26 | -17.36  | -7.84   | -6.80   | -6.75   | -5.60   | -5.12   | -5.46    | -7.39    | -9.49    | -8.81    | -10.79   | -18.97   | -26.65   | -12.54   | -7.49    | -4.62    | -2.53    | -1.09    | -0.44    | -1.19    | -1.98    | -3.28    | -5.53    | -15.26   |
| θ (30°)        | -26.22 | -4.48   | -2.75   | -1.87   | -0.93   | -2.32   | -5.36   | -7.91    | -7.42    | -9.08    | -13.96   | -15.21   | -23.95   | -18.42   | -11.63   | -10.39   | -9.11    | -4.05    | -0.42    | 1.38     | 2.37     | 1.75     | -0.07    | -7.39    | -26.22   |
| θ (45°)        | -3.32  | -0.36   | -0.83   | 2.97    | 0.94    | -0.01   | -0.92   | -4.04    | -6.40    | -11.00   | -12.08   | -12.56   | -17.95   | -16.14   | -14.61   | -21.01   | -15.68   | -5.78    | -0.36    | 2.32     | 3.13     | 2.30     | -0.34    | -6.01    | -3.32    |
| θ (60°)        | 0.45   | 1.55    | 3.15    | 3.16    | 3.62    | 3.48    | 1.37    | -0.92    | -4.84    | -6.12    | -9.27    | -6.24    | -11.32   | -16.93   | -19.03   | -28.07   | -20.83   | -8.47    | -1.78    | 0.50     | 3.11     | 1.09     | -2.45    | -2.15    | 0.45     |
| θ (75°)        | -0.65  | -2.27   | 1.85    | 2.59    | 1.68    | 1.38    | -2.12   | -4.84    | -6.18    | -9.66    | -8.53    | -9.50    | -7.55    | -10.83   | -10.91   | -21.78   | -22.86   | -13.04   | -10.64   | -4.62    | -1.46    | -0.75    | -0.41    | 0.35     | -0.65    |
| θ (90°)        | -2.75  | -2.83   | 1.36    | 2.49    | 1.91    | 0.27    | -2.61   | -6.71    | -11.92   | -16.87   | -7.99    | -19.09   | -8.99    | -14.39   | -19.80   | -19.41   | -12.32   | -9.02    | -1.85    | 1.23     | 0.04     | 1.80     | 1.62     | -0.26    | -2.75    |
| θ (105°)       | -5.88  | -3.83   | 2.60    | [3.63]  | 2.05    | 1.63    | 1.48    | -3.52    | -4.67    | -9.65    | -10.02   | -11.71   | -17.48   | -19.07   | -10.53   | -20.54   | -12.81   | -9.22    | -3.54    | 0.25     | 1.37     | 1.32     | -1.98    | -6.05    | -5.88    |
| θ (120°)       | -4.83  | -4.13   | -1.24   | 0.41    | -0.59   | -3.22   | -4.46   | -14.87   | -8.77    | -7.50    | -10.19   | -11.56   | -11.25   | -15.16   | -12.93   | -17.73   | -12.70   | -8.70    | -3.72    | 1.93     | 2.95     | -1.79    | -1.44    | -3.82    | -4.83    |
| θ (135°)       | -11.02 | -7.68   | -2.39   | 1.61    | 2.05    | -0.20   | -2.33   | -5.71    | -8.63    | -17.50   | -7.05    | -12.54   | -10.93   | -14.12   | -12.28   | -12.09   | -22.82   | -6.81    | -1.35    | 1.88     | 2.86     | 2.36     | -0.02    | -7.52    | -11.02   |
| θ (150°)       | -12.80 | -1.58   | -1.36   | 0.55    | 1.45    | 2.64    | 2.12    | -4.08    | -6.28    | -2.16    | -8.94    | -10.19   | -10.47   | -12.39   | -17.47   | -11.24   | -6.60    | -4.60    | -1.89    | -0.11    | 0.27     | -0.93    | -3.71    | -5.48    | -12.80   |
| θ (165°)       | -15.01 | -8.05   | -3.05   | -0.52   | 0.14    | 0.54    | 1.22    | 1.57     | -0.02    | -4.43    | -9.65    | -11.03   | -13.32   | -25.20   | -10.37   | -8.98    | -10.24   | -8.98    | -6.20    | -4.05    | -2.30    | -2.03    | -4.42    | -8.41    | -15.01   |
| θ (180°)       | -10.26 | -7.11   | -5.27   | -4.26   | -3.91   | -4.16   | -5.05   | -6.73    | -9.60    | -14.96   | -37.06   | -16.39   | -10.26   | -7.11    | -5.27    | -4.26    | -3.91    | -4.16    | -5.05    | -6.73    | -9.60    | -14.96   | -37.06   | -16.39   | -10.26   |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5785   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -0.72  | -1.27   | -2.51   | -4.68   | -8.45   | -16.67  | -20.48  | -9.64    | -5.32    | -2.88    | -1.47    | -0.79    | -0.72    | -1.27    | -2.51    | -4.68    | -8.45    | -16.67   | -20.48   | -9.64    | -5.32    | -2.88    | -1.47    | -0.79    | -0.72    |
| θ (15°)        | 1.68   | 1.83    | 1.12    | -1.77   | -5.13   | -8.09   | -11.08  | -17.00   | -27.15   | -19.39   | -10.66   | -7.87    | -6.26    | -5.70    | -5.50    | -6.29    | -9.49    | -14.10   | -21.94   | -12.34   | -7.15    | -3.03    | 0.19     | 0.71     | 1.68     |
| θ (30°)        | 2.22   | 2.48    | -3.27   | -7.20   | -9.41   | -16.30  | -16.42  | -20.01   | -22.71   | -14.98   | -26.56   | -12.17   | -11.07   | -9.76    | -10.90   | -12.39   | -14.05   | -13.60   | -16.49   | -12.70   | -4.42    | -0.33    | 0.33     | 2.24     | 2.22     |
| θ (45°)        | [4.55] | 3.89    | -0.43   | -2.70   | -7.73   | -10.72  | -12.59  | -14.59   | -16.17   | -13.98   | -24.94   | -22.83   | -19.92   | -19.87   | -13.02   | -13.39   | -9.30    | -7.66    | -9.35    | -17.10   | -9.61    | -1.92    | 2.31     | 3.53     | 4.55     |
| θ (60°)        | 0.56   | 1.53    | -0.40   | -2.50   | -7.52   | -12.49  | -16.86  | -20.93   | -15.26   | -19.23   | -19.23   | -19.65   | -14.48   | -16.75   | -13.34   | -20.17   | -9.36    | -6.46    | -8.64    | -21.55   | -8.28    | -4.92    | -1.84    | 0.06     | 0.56     |
| θ (75°)        | -2.49  | -5.82   | -0.20   | -4.48   | -11.09  | -20.10  | -22.70  | -22.31   | -19.41   | -14.93   | -16.76   | -28.66   | -13.36   | -17.53   | -10.42   | -16.35   | -12.30   | -11.49   | -14.71   | -13.99   | -21.88   | -11.54   | -11.77   | -2.46    | -2.49    |
| θ (90°)        | -1.93  | -1.54   | -2.74   | -8.88   | -16.06  | -17.92  | -17.85  | -19.47   | -24.24   | -18.21   | -25.02   | -21.11   | -9.94    | -14.94   | -12.49   | -20.29   | -11.86   | -12.10   | -14.27   | -11.30   | -16.30   | -10.65   | -7.22    | -5.54    | -1.93    |
| θ (105°)       | -1.89  | -0.29   | -0.41   | -4.15   | -4.82   | -9.50   | -15.64  | -16.79   | -18.18   | -17.88   | -16.63   | -41.19   | -9.91    | -8.43    | -18.21   | -30.58   | -17.04   | -14.84   | -17.97   | -19.10   | -7.26    | -1.66    | -3.55    | -1.70    | -1.89    |
| θ (120°)       | 0.36   | -1.81   | -1.55   | -4.46   | -7.10   | -14.28  | -16.81  | -16.14   | -13.34   | -15.32   | -18.79   | -14.82   | -10.64   | -13.69   | -14.44   | -12.47   | -12.66   | -13.09   | -12.81   | -6.91    | -5.42    | -4.08    | -3.64    | -0.94    | 0.36     |
| θ (135°)       | -7.88  | -4.04   | -3.35   | -5.16   | -6.15   | -8.81   | -26.40  | -22.37   | -21.62   | -16.09   | -15.01   | -16.55   | -13.39   | -8.46    | -10.15   | -25.62   | -14.25   | -12.68   | -17.74   | -9.14    | -2.40    | -0.42    | -1.29    | -9.64    | -7.88    |
| θ (150°)       | 1.34   | 1.83    | -0.61   | -3.94   | -4.19   | -8.04   | -18.49  | -19.64   | -20.28   | -13.79   | -14.54   | -16.72   | -10.77   | -11.71   | -16.29   | -11.45   | -9.20    | -13.13   | -13.79   | -9.41    | -5.90    | -6.04    | -3.94    | 0.69     | 1.34     |
| θ (165°)       | 0.80   | 1.29    | 1.31    | -0.14   | -1.46   | -4.95   | -9.21   | -23.38   | -10.44   | -6.43    | -6.96    | -10.47   | -10.98   | -5.97    | -7.01    | -13.43   | -19.78   | -19.45   | -28.54   | -16.59   | -7.57    | -2.54    | 0.54     | 1.56     | 0.80     |
| θ (180°)       | -5.25  | -6.90   | -9.72   | -14.95  | -34.38  | -16.95  | -10.65  | -7.43    | -5.56    | -4.52    | -4.15    | -4.38    | -5.25    | -6.90    | -9.72    | -14.95   | -34.38   | -16.95   | -10.65   | -7.43    | -5.56    | -4.52    | -4.15    | -4.38    | -5.25    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -20.48 | -9.64   | -5.32   | -2.88   | -1.47   | -0.79   | -0.72   | -1.27    | -2.51    | -4.68    | -8.45    | -16.67   | -20.48   | -9.64    | -5.32    | -2.88    | -1.47    | -0.79    | -0.72    | -1.27    | -2.51    | -4.68    | -8.45    | -16.67   | -20.48   |
| θ (15°)        | -17.39 | -16.16  | -8.93   | -7.58   | -7.97   | -8.28   | -6.65   | -6.13    | -6.14    | -7.25    | -8.66    | -10.54   | -15.96   | -20.52   | -11.81   | -6.61    | -4.04    | -1.97    | -0.85    | -0.80    | -0.37    | -0.48    | -1.76    | -4.56    | -17.39   |
| θ (30°)        | -25.81 | -5.34   | -4.78   | -2.52   | -1.85   | -3.45   | -5.95   | -8.04    | -9.60    | -8.18    | -13.32   | -13.83   | -37.12   | -19.72   | -11.21   | -10.61   | -8.55    | -4.47    | -1.06    | 1.27     | 2.60     | 1.99     | -0.61    | -6.46    | -25.81   |
| θ (45°)        | -4.20  | -0.31   | -0.87   | 2.16    | -0.34   | 0.01    | 0.30    | -2.45    | -6.29    | -12.83   | -11.93   | -12.61   | -13.71   | -14.42   | -16.15   | -14.24   | -18.90   | -5.96    | -0.60    | 1.35     | 2.38     | 2.27     | 0.22     | -7.32    | -4.20    |
| θ (60°)        | 0.95   | 1.67    | 3.45    | 3.82    | [4.23]  | 3.34    | 1.33    | -1.61    | -3.17    | -9.16    | -8.27    | -8.03    | -11.09   | -24.09   | -24.49   | -22.29   | -20.46   | -9.87    | -3.42    | -0.14    | 2.98     | 1.06     | -2.08    | -2.30    | 0.95     |
| θ (75°)        | -0.93  | -2.30   | 2.24    | 1.58    | 1.59    | 0.61    | -2.04   | -6.04    | -7.92    | -10.68   | -8.85    | -9.39    | -8.40    | -11.35   | -10.39   | -21.14   | -22.33   | -10.10   | -10.33   | -4.95    | -0.50    | -1.30    | -0.28    | 0.82     | -0.93    |
| θ (90°)        | -2.69  | -2.33   | 1.52    | 3.10    | 2.11    | 0.70    | -1.54   | -5.44    | -11.52   | -13.49   | -8.99    | -14.92   | -8.02    | -13.77   | -17.95   | -21.70   | -12.57   | -10.72   | -1.94    | 1.55     | -0.14    | 1.70     | 1.81     | -0.08    | -2.69    |
| θ (105°)       | -5.43  | -2.75   | 2.48    | 4.07    | 2.17    | 1.58    | 1.56    | -3.18    | -5.67    | -7.44    | -11.62   | -13.52   | -17.81   | -20.90   | -10.78   | -21.09   | -13.84   | -10.60   | -2.41    | 0.49     | 1.59     | 1.91     | -2.66    | -6.31    | -5.43    |
| θ (120°)       | -4.69  | -3.55   | -0.96   | 0.41    | -1.11   | -3.44   | -4.08   | -10.99   | -8.99    | -7.79    | -8.98    | -12.24   | -10.38   | -16.63   | -13.28   | -23.04   | -12.15   | -8.38    | -3.11    | 2.59     | 3.31     | -1.79    | -1.25    | -4.36    | -4.69    |
| θ (135°)       | -9.91  | -9.21   | -2.75   | 1.62    | 1.86    | -0.32   | -2.52   | -4.67    | -8.03    | -14.65   | -8.37    | -10.29   | -11.29   | -15.10   | -13.11   | -11.14   | -22.24   | -6.15    | -1.65    | 2.05     | 2.80     | 3.25     | -0.21    | -7.62    | -9.91    |
| θ (150°)       | -12.17 | -2.40   | -1.20   | 0.95    | 0.89    | 2.43    | 2.29    | -2.60    | -7.76    | -1.81    | -8.20    | -10.13   | -10.33   | -12.09   | -17.69   | -10.27   | -6.53    | -4.49    | -1.74    | 0.05     | 0.83     | -0.44    | -2.65    | -5.40    | -12.17   |
| θ (165°)       | -15.17 | -8.75   | -2.47   | -0.62   | -0.55   | -0.18   | 0.40    | 1.14     | 0.01     | -3.88    | -10.62   | -12.58   | -13.69   | -23.14   | -11.75   | -9.13    | -9.75    | -8.37    | -4.53    | -2.68    | -1.67    | -1.57    | -3.92    | -9.46    | -15.17   |
| θ (180°)       | -10.65 | -7.43   | -5.56   | -4.52   | -4.15   | -4.38   | -5.25   | -6.90    | -9.72    | -14.95   | -34.38   | -16.95   | -10.65   | -7.43    | -5.56    | -4.52    | -4.15    | -4.38    | -5.25    | -6.90    | -9.72    | -14.95   | -34.38   | -16.95   | -10.65   |

| Ant.            | No.2        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Freq.<br>(MHz)  | 5850        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -0.34       | -0.95        | -2.28        | -4.58        | -8.61        | -17.96       | -17.94       | -8.61         | -4.57         | -2.27         | -0.95         | -0.34         | -0.34         | -0.95         | -2.28         | -4.58         | -8.61         | -17.96        | -17.94        | -8.61         | -4.57         | -2.27         | -0.95         | -0.34         | -0.34         |
| $\theta$ (15°)  | 2.23        | 2.15         | 1.00         | -1.76        | -5.89        | -8.99        | -13.40       | -18.97        | -33.40        | -26.25        | -12.59        | -9.07         | -6.36         | -6.21         | -6.15         | -6.17         | -9.55         | -14.27        | -16.44        | -10.73        | -6.11         | -1.95         | 0.14          | 0.85          | 2.23          |
| $\theta$ (30°)  | 3.18        | 2.04         | -4.46        | -4.34        | -8.03        | -18.50       | -19.53       | -15.34        | -32.10        | -21.10        | -24.35        | -14.45        | -14.66        | -10.82        | -9.93         | -14.95        | -18.31        | -18.11        | -15.31        | -10.21        | -4.54         | -1.71         | 0.62          | 2.31          | 3.18          |
| $\theta$ (45°)  | [4.20]      | 3.37         | -0.91        | -3.67        | -8.55        | -13.63       | -16.37       | -18.12        | -19.37        | -13.84        | -27.77        | -25.76        | -19.58        | -18.04        | -16.10        | -16.30        | -12.85        | -9.33         | -9.87         | -16.62        | -9.39         | -1.93         | 2.64          | 3.25          | 4.20          |
| $\theta$ (60°)  | 0.99        | 1.44         | 0.60         | -2.95        | -8.23        | -13.64       | -13.10       | -23.37        | -16.07        | -20.27        | -18.69        | -16.31        | -20.06        | -16.99        | -14.17        | -20.10        | -10.46        | -7.38         | -9.74         | -22.83        | -8.44         | -5.17         | -1.43         | -0.24         | 0.99          |
| $\theta$ (75°)  | -2.30       | -6.13        | 0.38         | -4.95        | -12.70       | -17.04       | -26.49       | -20.41        | -19.50        | -19.44        | -15.41        | -26.30        | -14.27        | -17.22        | -12.15        | -17.06        | -14.27        | -12.55        | -16.61        | -13.66        | -28.44        | -10.90        | -12.90        | -2.45         | -2.30         |
| $\theta$ (90°)  | -1.66       | -1.43        | -3.79        | -8.83        | -14.12       | -18.26       | -17.67       | -18.84        | -22.74        | -16.87        | -30.71        | -22.39        | -10.67        | -11.87        | -15.71        | -20.11        | -12.74        | -12.44        | -14.12        | -12.37        | -15.52        | -10.75        | -6.69         | -7.57         | -1.66         |
| $\theta$ (105°) | -2.25       | -1.45        | -1.04        | -4.52        | -5.61        | -10.44       | -23.73       | -15.92        | -16.55        | -19.11        | -14.68        | -31.16        | -10.73        | -8.19         | -17.51        | -22.40        | -16.08        | -16.70        | -20.77        | -21.15        | -6.68         | -1.33         | -4.15         | -1.30         | -2.25         |
| $\theta$ (120°) | -0.63       | -1.48        | -2.55        | -5.96        | -8.91        | -14.85       | -21.26       | -14.69        | -14.33        | -13.52        | -18.58        | -14.80        | -10.24        | -11.94        | -18.10        | -12.01        | -12.58        | -14.54        | -12.83        | -7.28         | -6.45         | -3.88         | -2.70         | -0.61         | -0.63         |
| $\theta$ (135°) | -7.58       | -3.64        | -4.04        | -6.46        | -8.73        | -12.28       | -17.04       | -27.08        | -23.76        | -14.85        | -13.71        | -17.29        | -14.36        | -8.30         | -9.78         | -19.84        | -14.93        | -12.88        | -16.75        | -8.37         | -2.06         | 0.05          | -2.72         | -9.53         | -7.58         |
| $\theta$ (150°) | 1.93        | 1.25         | -0.97        | -3.85        | -5.22        | -7.67        | -19.03       | -22.96        | -22.38        | -14.50        | -15.05        | -19.05        | -11.90        | -11.38        | -14.98        | -11.10        | -9.24         | -15.00        | -13.24        | -8.73         | -5.12         | -6.37         | -2.42         | 1.55          | 1.93          |
| $\theta$ (165°) | 1.00        | 1.50         | 1.65         | -0.06        | -1.68        | -4.68        | -8.47        | -20.84        | -12.53        | -6.84         | -6.50         | -9.57         | -13.16        | -6.87         | -6.84         | -13.06        | -20.47        | -19.01        | -24.43        | -12.61        | -5.97         | -1.44         | 0.84          | 1.49          | 1.00          |
| $\theta$ (180°) | -6.58       | -8.69        | -12.35       | -20.13       | -25.84       | -14.11       | -9.64        | -7.13         | -5.68         | -4.96         | -4.87         | -5.38         | -6.58         | -8.69         | -12.35        | -20.13        | -25.84        | -14.11        | -9.64         | -7.13         | -5.68         | -4.96         | -4.87         | -5.38         | -6.58         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -17.94      | -8.61        | -4.57        | -2.27        | -0.95        | -0.34        | -0.34        | -0.95         | -2.28         | -4.58         | -8.61         | -17.96        | -17.94        | -8.61         | -4.57         | -2.27         | -0.95         | -0.34         | -0.34         | -0.95         | -2.28         | -4.58         | -8.61         | -17.96        | -17.94        |
| $\theta$ (15°)  | -21.17      | -16.27       | -9.63        | -5.84        | -4.12        | -5.19        | -6.86        | -7.54         | -6.93         | -6.65         | -7.73         | -9.66         | -14.05        | -20.36        | -11.38        | -6.90         | -3.53         | -1.81         | -0.83         | -0.54         | -0.03         | -0.25         | -2.29         | -5.97         | -21.17        |
| $\theta$ (30°)  | -16.71      | -6.55        | -4.50        | -2.64        | -3.32        | -4.22        | -5.94        | -8.66         | -14.65        | -8.97         | -12.18        | -11.97        | -19.09        | -21.52        | -11.94        | -10.83        | -10.94        | -6.14         | -2.70         | 0.22          | 1.97          | 1.26          | -1.48         | -6.48         | -16.71        |
| $\theta$ (45°)  | -4.54       | 0.40         | -0.03        | 1.39         | 0.72         | 0.79         | 0.26         | -1.71         | -5.74         | -10.26        | -11.59        | -11.77        | -12.42        | -16.79        | -14.55        | -12.06        | -15.20        | -7.84         | -2.33         | 0.52          | 2.68          | 3.04          | 0.50          | -9.10         | -4.54         |
| $\theta$ (60°)  | 0.61        | 1.82         | [3.83]       | 3.48         | 3.72         | 2.01         | 0.97         | -2.98         | -3.61         | -12.27        | -8.08         | -9.31         | -11.86        | -23.31        | -17.29        | -24.99        | -19.18        | -10.49        | -4.85         | -0.18         | 3.47          | 0.86          | -2.23         | -1.45         | 0.61          |
| $\theta$ (75°)  | -1.35       | -1.91        | 2.05         | 1.81         | 1.65         | 0.39         | -1.59        | -5.47         | -9.13         | -10.00        | -8.70         | -10.42        | -8.37         | -12.55        | -11.38        | -20.37        | -21.75        | -8.47         | -10.51        | -4.08         | -0.02         | -3.43         | -0.46         | 0.65          | -1.35         |
| $\theta$ (90°)  | -3.15       | -2.40        | 1.95         | 3.31         | 3.02         | 0.61         | -1.44        | -4.89         | -9.85         | -12.59        | -11.15        | -12.43        | -8.40         | -12.22        | -13.34        | -17.21        | -12.23        | -10.41        | -1.29         | 2.16          | -1.36         | 2.13          | 1.58          | -0.62         | -3.15         |
| $\theta$ (105°) | -4.57       | -1.92        | 2.16         | 3.76         | 2.35         | 1.45         | 0.21         | -3.30         | -7.41         | -6.46         | -13.97        | -13.30        | -20.81        | -28.22        | -12.99        | -21.98        | -16.95        | -10.16        | -1.86         | 0.76          | 1.66          | 1.82          | -3.25         | -6.03         | -4.57         |
| $\theta$ (120°) | -5.11       | -3.91        | -1.25        | 0.26         | -1.10        | -3.71        | -3.23        | -7.75         | -11.14        | -7.42         | -9.26         | -11.34        | -10.79        | -13.12        | -12.40        | -18.39        | -11.31        | -9.28         | -2.86         | 2.37          | 2.60          | -1.03         | -1.44         | -3.35         | -5.11         |
| $\theta$ (135°) | -10.45      | -9.99        | -3.25        | 1.00         | 1.66         | -0.34        | -2.79        | -3.99         | -9.06         | -11.71        | -9.53         | -9.06         | -12.79        | -14.40        | -12.55        | -10.45        | -15.19        | -4.59         | -1.50         | 2.32          | 3.44          | 3.76          | -0.79         | -7.82         | -10.45        |
| $\theta$ (150°) | -14.39      | -3.43        | -2.36        | -0.39        | 0.27         | 1.52         | 2.25         | -2.51         | -9.29         | -2.12         | -7.52         | -10.88        | -11.73        | -11.49        | -18.66        | -8.90         | -6.19         | -4.50         | -2.02         | -0.31         | 0.35          | -0.80         | -2.93         | -5.12         | -14.39        |
| $\theta$ (165°) | -13.11      | -8.13        | -2.52        | -0.55        | -0.74        | -1.00        | -0.29        | 0.45          | -0.73         | -3.85         | -10.54        | -13.67        | -13.49        | -21.18        | -10.79        | -9.18         | -9.27         | -6.96         | -3.60         | -1.76         | -1.43         | -1.85         | -4.16         | -9.53         | -13.11        |
| $\theta$ (180°) | -9.64       | -7.13        | -5.68        | -4.96        | -4.87        | -5.38        | -6.58        | -8.69         | -12.35        | -20.13        | -25.84        | -14.11        | -9.64         | -7.13         | -5.68         | -4.96         | -4.87         | -5.38         | -6.58         | -8.69         | -12.35        | -20.13        | -25.84        | -14.11        | -9.64         |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5865   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -0.51  | -1.18   | -2.58   | -4.99   | -9.26   | -19.82  | -16.65  | -8.27    | -4.45    | -2.26    | -1.01    | -0.45    | -0.51    | -1.18    | -2.58    | -4.99    | -9.26    | -19.82   | -16.65   | -8.27    | -4.45    | -2.26    | -1.01    | -0.45    | -0.51    |
| θ (15°)        | 2.34   | 2.18    | 0.85    | -1.70   | -5.58   | -8.70   | -13.27  | -18.59   | -34.57   | -21.85   | -13.46   | -9.60    | -6.75    | -6.42    | -6.28    | -6.41    | -9.27    | -13.77   | -15.64   | -10.39   | -5.93    | -1.88    | 0.07     | 0.92     | 2.34     |
| θ (30°)        | 3.30   | 1.90    | -4.08   | -4.19   | -8.11   | -19.40  | -20.19  | -14.53   | -25.95   | -24.17   | -22.26   | -14.91   | -14.84   | -11.49   | -9.99    | -15.42   | -19.31   | -18.19   | -14.27   | -9.98    | -4.95    | -2.13    | 0.76     | 2.23     | 3.30     |
| θ (45°)        | [4.00] | 3.25    | -1.01   | -3.52   | -8.51   | -13.65  | -17.88  | -18.71   | -19.34   | -13.98   | -26.29   | -24.93   | -19.51   | -17.53   | -17.64   | -16.86   | -13.94   | -9.68    | -9.57    | -15.96   | -9.13    | -1.65    | 2.66     | 3.24     | 4.00     |
| θ (60°)        | 1.08   | 1.56    | 0.72    | -3.11   | -8.06   | -13.61  | -13.30  | -20.74   | -17.15   | -20.13   | -18.24   | -15.79   | -21.48   | -17.38   | -14.66   | -20.41   | -10.60   | -7.63    | -10.30   | -24.21   | -8.70    | -5.34    | -1.32    | -0.44    | 1.08     |
| θ (75°)        | -2.20  | -6.29   | 0.37    | -5.21   | -13.11  | -16.42  | -25.16  | -20.24   | -19.34   | -19.61   | -15.33   | -25.05   | -14.58   | -17.04   | -12.51   | -16.84   | -14.83   | -12.95   | -17.42   | -13.86   | -30.69   | -10.82   | -13.14   | -2.42    | -2.20    |
| θ (90°)        | -1.74  | -1.66   | -4.29   | -8.98   | -13.47  | -18.16  | -17.40  | -19.53   | -22.49   | -16.64   | -33.51   | -21.12   | -10.83   | -11.68   | -15.98   | -20.54   | -12.79   | -12.48   | -14.24   | -12.60   | -15.33   | -10.64   | -6.64    | -8.17    | -1.74    |
| θ (105°)       | -2.41  | -1.71   | -1.33   | -4.66   | -5.96   | -10.74  | -27.61  | -16.15   | -15.84   | -19.32   | -14.66   | -28.33   | -11.07   | -8.17    | -17.11   | -22.05   | -16.09   | -17.13   | -21.23   | -22.00   | -6.46    | -1.19    | -4.19    | -1.33    | -2.41    |
| θ (120°)       | -1.01  | -1.59   | -2.85   | -6.28   | -9.42   | -14.57  | -21.73  | -14.69   | -14.33   | -13.76   | -18.76   | -15.11   | -10.13   | -12.11   | -19.53   | -12.26   | -12.87   | -14.99   | -12.81   | -7.48    | -6.70    | -3.73    | -2.63    | -0.59    | -1.01    |
| θ (135°)       | -7.53  | -3.18   | -3.97   | -6.45   | -9.42   | -13.27  | -16.22  | -28.25   | -23.09   | -15.00   | -13.41   | -17.32   | -14.53   | -8.38    | -9.86    | -19.21   | -15.22   | -13.03   | -16.32   | -8.11    | -2.00    | -0.01    | -3.30    | -9.35    | -7.53    |
| θ (150°)       | 1.96   | 1.01    | -1.17   | -3.96   | -5.30   | -7.62   | -18.81  | -22.80   | -22.74   | -14.40   | -14.81   | -19.74   | -12.24   | -11.32   | -14.84   | -11.02   | -9.17    | -15.07   | -13.06   | -8.66    | -5.17    | -6.66    | -2.00    | 1.76     | 1.96     |
| θ (165°)       | 1.11   | 1.53    | 1.56    | 0.00    | -1.75   | -4.62   | -8.31   | -20.20   | -13.48   | -7.01    | -6.42    | -9.27    | -13.59   | -7.05    | -7.04    | -12.90   | -20.59   | -19.36   | -24.12   | -11.93   | -5.72    | -1.31    | 0.90     | 1.45     | 1.11     |
| θ (180°)       | -7.12  | -9.43   | -13.48  | -22.90  | -22.68  | -13.41  | -9.40   | -7.10    | -5.78    | -5.18    | -5.80    | -7.12    | -9.43    | -13.48   | -22.90   | -22.68   | -13.41   | -9.40    | -7.10    | -5.78    | -5.18    | -5.18    | -5.18    | -5.80    | -7.12    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -16.65 | -8.27   | -4.45   | -2.26   | -1.01   | -0.45   | -0.51   | -1.18    | -2.58    | -4.99    | -9.26    | -19.82   | -16.65   | -8.27    | -4.45    | -2.26    | -1.01    | -0.45    | -0.51    | -1.18    | -2.58    | -4.99    | -9.26    | -19.82   | -16.65   |
| θ (15°)        | -21.39 | -15.79  | -9.11   | -5.74   | -3.58   | -4.30   | -6.49   | -7.35    | -7.05    | -6.92    | -7.32    | -9.39    | -13.96   | -20.79   | -11.67   | -7.06    | -3.43    | -1.69    | -0.76    | -0.30    | 0.07     | -0.25    | -2.50    | -6.16    | -21.39   |
| θ (30°)        | -15.96 | -6.61   | -4.24   | -2.52   | -3.60   | -4.13   | -5.90   | -8.09    | -15.01   | -9.70    | -12.17   | -11.93   | -18.16   | -21.48   | -12.04   | -10.48   | -11.47   | -6.57    | -3.00    | 0.02     | 1.78     | 1.16     | -1.55    | -6.42    | -15.96   |
| θ (45°)        | -4.46  | 0.52    | 0.25    | 1.43    | 1.06    | 0.96    | 0.10    | -1.59    | -5.40    | -9.71    | -11.23   | -11.93   | -12.67   | -17.43   | -14.01   | -11.89   | -14.14   | -8.14    | -2.51    | 0.73     | 3.06     | 3.29     | 0.73     | -9.24    | -4.46    |
| θ (60°)        | 0.55   | 1.93    | [3.92]  | 3.39    | 3.65    | 1.70    | 0.91    | -3.10    | -3.69    | -11.74   | -7.93    | -9.19    | -11.77   | -22.24   | -15.97   | -24.28   | -18.51   | -10.34   | -4.70    | 0.12     | 3.67     | 0.88     | -2.21    | -1.15    | 0.55     |
| θ (75°)        | -1.19  | -1.68   | 2.07    | 1.79    | 1.90    | 0.49    | -1.30   | -5.39    | -8.76    | -9.35    | -8.67    | -10.74   | -8.29    | -12.32   | -11.69   | -20.62   | -20.79   | -8.04    | -9.94    | -3.55    | 0.24     | -3.78    | -0.14    | 0.67     | -1.19    |
| θ (90°)        | -3.00  | -2.43   | 2.27    | 3.54    | 3.26    | 0.72    | -1.24   | -4.67    | -9.44    | -12.68   | -11.37   | -11.85   | -8.35    | -12.40   | -12.72   | -16.31   | -12.05   | -10.18   | -1.04    | 2.36     | -1.64    | 2.41     | 1.68     | -0.51    | -3.00    |
| θ (105°)       | -4.48  | -1.81   | 2.11    | 3.71    | 2.55    | 1.47    | -0.01   | -3.16    | -7.77    | -6.40    | -15.21   | -12.44   | -21.59   | -27.69   | -12.99   | -22.49   | -17.13   | -9.77    | -1.66    | 0.86     | 1.67     | 1.85     | -3.27    | -5.86    | -4.48    |
| θ (120°)       | -5.12  | -4.05   | -1.20   | 0.26    | -0.94   | -3.50   | -2.72   | -6.78    | -11.27   | -7.62    | -9.12    | -11.54   | -10.50   | -12.47   | -12.24   | -17.63   | -11.16   | -9.30    | -2.73    | 2.34     | 2.47     | -0.93    | -1.57    | -3.18    | -5.12    |
| θ (135°)       | -10.09 | -9.90   | -2.97   | 1.03    | 1.72    | -0.10   | -2.55   | -4.01    | -9.13    | -10.84   | -10.10   | -8.70    | -13.69   | -13.77   | -12.76   | -10.39   | -14.99   | -4.22    | -1.26    | 2.42     | 3.57     | 3.85     | -0.84    | -7.88    | -10.09   |
| θ (150°)       | -14.62 | -3.59   | -2.57   | -0.62   | 0.30    | 1.42    | 2.29    | -2.62    | -9.10    | -2.21    | -7.28    | -10.91   | -11.77   | -11.35   | -18.47   | -8.72    | -5.97    | -4.29    | -1.89    | -0.21    | 0.19     | -0.97    | -2.97    | -4.68    | -14.62   |
| θ (165°)       | -12.98 | -7.94   | -2.44   | -0.59   | -0.56   | -0.91   | -0.27   | 0.39     | -0.82    | -3.91    | -10.58   | -13.60   | -13.29   | -21.06   | -10.58   | -9.19    | -9.31    | -6.46    | -3.30    | -1.47    | -1.26    | -1.85    | -4.12    | -9.13    | -12.98   |
| θ (180°)       | -9.40  | -7.10   | -5.78   | -5.18   | -5.18   | -5.80   | -7.12   | -9.43    | -13.48   | -22.90   | -22.68   | -13.41   | -9.40    | -7.10    | -5.78    | -5.18    | -5.18    | -5.80    | -7.12    | -9.43    | -13.48   | -22.90   | -22.68   | -13.41   | -9.40    |

| Ant.           | No.2   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 5895   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -0.76  | -1.53   | -3.06   | -5.68   | -10.42  | -24.12  | -14.83  | -7.69    | -4.22    | -2.20    | -1.07    | -0.61    | -0.76    | -1.53    | -3.06    | -5.68    | -10.42   | -24.12   | -14.83   | -7.69    | -4.22    | -2.20    | -1.07    | -0.61    | -0.76    |
| θ (15°)        | 2.45   | 2.19    | 0.37    | -1.88   | -4.93   | -8.13   | -12.43  | -17.67   | -39.26   | -17.51   | -15.21   | -10.02   | -7.68    | -6.79    | -6.75    | -7.18    | -8.71    | -12.97   | -14.52   | -9.96    | -5.68    | -1.93    | -0.03    | 1.02     | 2.45     |
| θ (30°)        | 3.48   | 1.53    | -3.42   | -3.93   | -8.33   | -19.73  | -23.32  | -14.24   | -19.23   | -30.86   | -20.02   | -15.81   | -13.59   | -13.21   | -10.15   | -15.43   | -20.34   | -16.75   | -12.27   | -9.99    | -5.92    | -2.62    | 1.07     | 2.04     | 3.48     |
| θ (45°)        | [3.50] | 2.92    | -1.23   | -2.99   | -8.29   | -13.32  | -20.82  | -19.30   | -18.87   | -14.74   | -20.47   | -24.19   | -20.27   | -16.92   | -21.56   | -17.76   | -15.03   | -10.15   | -9.38    | -15.53   | -8.72    | -1.10    | 2.61     | 3.16     | 3.50     |
| θ (60°)        | 1.05   | 1.80    | 0.79    | -3.42   | -7.65   | -13.15  | -14.15  | -18.02   | -19.90   | -19.53   | -17.27   | -15.05   | -28.00   | -18.64   | -15.92   | -20.73   | -11.35   | -8.62    | -11.73   | -27.65   | -9.51    | -5.35    | -1.30    | -0.76    | 1.05     |
| θ (75°)        | -2.05  | -6.45   | 0.05    | -5.99   | -14.21  | -15.98  | -22.42  | -19.41   | -18.91   | -20.32   | -15.20   | -22.15   | -14.91   | -16.80   | -12.98   | -16.25   | -15.72   | -13.45   | -18.93   | -13.85   | -30.18   | -11.04   | -13.68   | -2.50    | -2.05    |
| θ (90°)        | -1.88  | -2.39   | -5.15   | -9.26   | -12.25  | -18.17  | -17.39  | -20.64   | -21.19   | -16.48   | -33.39   | -19.54   | -11.28   | -11.03   | -17.28   | -21.07   | -13.18   | -12.84   | -14.83   | -13.49   | -14.32   | -10.09   | -6.61    | -9.48    | -1.88    |
| θ (105°)       | -2.88  | -1.79   | -2.09   | -4.96   | -6.83   | -12.15  | -36.88  | -16.55   | -14.04   | -20.13   | -14.59   | -25.12   | -11.40   | -7.92    | -16.91   | -21.36   | -16.05   | -17.22   | -21.91   | -25.23   | -6.07    | -1.03    | -4.23    | -1.49    | -2.88    |
| θ (120°)       | -1.85  | -1.95   | -3.46   | -6.82   | -10.16  | -13.93  | -23.41  | -15.15   | -13.91   | -14.11   | -19.39   | -15.60   | -9.80    | -11.97   | -23.62   | -12.53   | -13.37   | -15.51   | -12.45   | -7.90    | -7.00    | -3.51    | -2.50    | -0.68    | -1.85    |
| θ (135°)       | -7.46  | -2.43   | -4.17   | -6.69   | -10.61  | -15.38  | -15.67  | -31.20   | -20.80   | -15.98   | -12.76   | -16.98   | -15.85   | -8.52    | -9.85    | -18.89   | -15.15   | -13.18   | -15.94   | -7.78    | -2.09    | -0.31    | -4.59    | -9.10    | -7.46    |
| θ (150°)       | 1.85   | 0.57    | -1.56   | -4.18   | -5.75   | -7.54   | -17.17  | -22.69   | -22.19   | -14.60   | -14.71   | -19.70   | -12.74   | -11.58   | -14.55   | -11.32   | -9.22    | -14.97   | -12.89   | -8.61    | -5.39    | -7.06    | -1.28    | 2.03     | 1.85     |
| θ (165°)       | 1.38   | 1.71    | 1.43    | 0.03    | -1.91   | -4.60   | -8.20   | -18.94   | -15.22   | -7.65    | -6.23    | -8.70    | -14.51   | -7.38    | -7.42    | -12.90   | -19.53   | -20.34   | -22.25   | -10.96   | -5.05    | -1.14    | 0.82     | 1.25     | 1.38     |
| θ (180°)       | -8.24  | -10.81  | -15.44  | -28.28  | -20.48  | -13.10  | -9.55   | -7.50    | -6.34    | -5.86    | -5.99    | -6.74    | -8.24    | -10.81   | -15.44   | -28.28   | -20.48   | -13.10   | -9.55    | -7.50    | -6.34    | -5.86    | -5.99    | -6.74    | -8.24    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -14.83 | -7.69   | -4.22   | -2.20   | -1.07   | -0.61   | -0.76   | -1.53    | -3.06    | -5.68    | -10.42   | -24.12   | -14.83   | -7.69    | -4.22    | -2.20    | -1.07    | -0.61    | -0.76    | -1.53    | -3.06    | -5.68    | -10.42   | -24.12   | -14.83   |
| θ (15°)        | -20.93 | -15.78  | -8.58   | -6.07   | -3.62   | -3.49   | -5.65   | -7.48    | -7.60    | -7.70    | -7.51    | -9.53    | -14.93   | -21.24   | -12.66   | -7.45    | -3.53    | -1.76    | -0.93    | -0.11    | 0.09     | -0.40    | -2.83    | -6.51    | -20.93   |
| θ (30°)        | -14.77 | -6.47   | -3.88   | -2.51   | -3.54   | -4.57   | -5.56   | -7.48    | -14.33   | -11.65   | -12.59   | -12.39   | -16.42   | -22.01   | -12.26   | -10.16   | -12.53   | -7.90    | -4.01    | -0.50    | 1.24     | 0.91     | -1.75    | -6.91    | -14.77   |
| θ (45°)        | -4.21  | 0.38    | 0.39    | 1.51    | 1.46    | 0.82    | -0.67   | -1.64    | -5.08    | -9.66    | -11.06   | -13.55   | -13.77   | -20.30   | -13.72   | -11.96   | -12.99   | -8.33    | -3.03    | 0.95     | 3.60     | 3.48     | 0.74     | -9.54    | -4.21    |
| θ (60°)        | 0.28   | 1.91    | 3.77    | 2.98    | 3.26    | 0.98    | 0.39    | -3.00    | -4.20    | -10.01   | -8.18    | -9.32    | -12.18   | -21.60   | -14.40   | -23.24   | -17.50   | -10.25   | -4.59    | 0.45     | [3.82]   | 0.67     | -2.58    | -0.93    | 0.28     |
| θ (75°)        | -1.15  | -1.33   | 1.79    | 1.82    | 2.44    | 0.56    | -1.07   | -5.20    | -8.07    | -8.93    | -9.61    | -10.61   | -8.51    | -11.51   | -13.54   | -22.07   | -19.77   | -7.89    | -9.07    | -2.84    | 0.34     | -4.32    | 0.14     | 0.59     | -1.15    |
| θ (90°)        | -3.04  | -2.65   | 2.49    | 3.71    | 3.29    | 0.80    | -1.12   | -4.35    | -8.94    | -14.30   | -12.31   | -10.96   | -9.31    | -12.65   | -12.44   | -15.43   | -12.05   | -9.76    | -0.83    | 2.39     | -2.70    | 2.67     | 1.69     | -0.69    | -3.04    |
| θ (105°)       | -4.51  | -2.13   | 1.76    | 3.30    | 2.69    | 1.36    | -0.88   | -3.18    | -8.60    | -6.80    | -18.22   | -11.45   | -19.76   | -30.15   | -13.17   | -22.12   | -17.57   | -9.20    | -1.66    | 0.76     | 1.59     | 1.53     | -3.26    | -5.99    | -4.51    |
| θ (120°)       | -5.38  | -4.23   | -1.07   | 0.28    | -0.54   | -3.43   | -2.24   | -5.40    | -12.33   | -8.25    | -8.65    | -12.18   | -10.50   | -11.15   | -12.52   | -16.63   | -11.41   | -9.53    | -2.60    | 1.96     | 2.05     | -0.88    | -1.94    | -2.96    | -5.38    |
| θ (135°)       | -9.54  | -9.26   | -2.73   | 1.11    | 1.36    | -0.12   | -2.40   | -4.12    | -8.94    | -10.14   | -11.01   | -8.83    | -13.95   | -13.13   | -12.74   | -9.79    | -13.78   | -3.87    | -1.05    | 2.57     | 3.66     | 3.49     | -1.17    | -7.52    | -9.54    |
| θ (150°)       | -15.26 | -4.45   | -3.37   | -1.49   | -0.06   | 1.09    | 1.92    | -2.93    | -9.02    | -2.30    | -7.51    | -11.21   | -11.44   | -12.11   | -19.02   | -8.59    | -6.10    | -4.59    | -2.07    | -0.19    | -0.20    | -1.70    | -3.58    | -4.25    | -15.26   |
| θ (165°)       | -12.74 | -7.93   | -2.82   | -0.82   | -0.61   | -1.05   | -0.56   | -0.04    | -1.14    | -4.20    | -10.51   | -13.44   | -12.80   | -20.73   | -10.41   | -9.16    | -9.23    | -5.68    | -2.99    | -1.21    | -0.89    | -1.90    | -4.35    | -8.14    | -12.74   |
| θ (180°)       | -9.55  | -7.50   | -6.34   | -5.86   | -5.99   | -6.74   | -8.24   | -10.81   | -15.44   | -28.28   | -20.48   | -13.10   | -9.55    | -7.50    | -6.34    | -5.86    | -5.99    | -6.74    | -8.24    | -10.81   | -15.44   | -28.28   | -20.48   | -13.10   | -9.55    |

## A.2 DIRECTIONAL GAIN@1SS:

| 1SS            |        |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Freq.<br>(MHz) | 2400   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | 0.93   | -0.10   | -1.95   | -5.15   | -11.38  | -18.71  | -9.60   | -4.32    | -1.48    | 0.19     | 1.06     | 1.30     | 0.93     | -0.10    | -1.95    | -5.15    | -11.38   | -18.71   | -9.60    | -4.32    | -1.48    | 0.19     | 1.06     | 1.30     | 0.93     |
| θ (15°)        | 3.51   | 3.24    | 2.14    | 0.22    | -2.66   | -7.23   | -12.09  | -8.16    | -4.10    | -1.77    | -0.65    | -0.43    | -0.69    | -1.18    | -1.83    | -3.60    | -6.58    | -11.87   | -14.64   | -8.30    | -3.27    | -0.09    | 1.83     | 3.06     | 3.51     |
| θ (30°)        | [5.57] | 5.27    | 4.09    | 1.65    | -2.30   | -8.45   | -13.94  | -10.24   | -7.61    | -5.53    | -3.79    | -2.86    | -2.55    | -3.01    | -4.18    | -7.46    | -14.39   | -15.51   | -12.01   | -6.32    | -1.95    | 1.36     | 3.72     | 4.94     | 5.57     |
| θ (45°)        | 4.57   | 5.02    | 4.62    | 2.57    | -1.68   | -7.62   | -11.38  | -10.11   | -6.75    | -3.84    | -1.96    | -2.62    | -4.37    | -3.91    | -4.91    | -8.19    | -14.10   | -21.83   | -14.19   | -9.05    | -3.50    | 0.10     | 2.41     | 3.74     | 4.57     |
| θ (60°)        | 0.84   | 2.73    | 3.73    | 1.46    | -3.28   | -8.33   | -7.64   | -6.32    | -8.03    | -7.35    | -4.85    | -4.50    | -7.97    | -9.37    | -12.18   | -13.54   | -14.94   | -14.99   | -13.46   | -10.40   | -5.49    | -2.68    | -1.34    | -0.37    | 0.84     |
| θ (75°)        | 2.33   | 2.68    | 2.16    | -0.01   | -4.02   | -9.57   | -15.42  | -11.96   | -9.40    | -9.96    | -5.05    | -3.60    | -4.51    | -8.72    | -13.18   | -12.94   | -11.68   | -12.52   | -15.54   | -14.76   | -8.41    | -4.17    | -0.93    | 1.05     | 2.33     |
| θ (90°)        | 0.20   | 1.41    | 1.18    | -2.07   | -6.51   | -6.90   | -6.02   | -5.96    | -8.57    | -6.70    | -5.14    | -6.76    | -8.81    | -10.55   | -9.96    | -9.04    | -10.77   | -12.58   | -15.00   | -17.26   | -10.63   | -5.47    | -2.15    | -1.04    | 0.20     |
| θ (105°)       | -1.73  | -2.04   | -1.79   | -2.76   | -6.09   | -8.45   | -8.40   | -9.23    | -11.96   | -9.06    | -4.86    | -4.86    | -5.96    | -10.98   | -13.32   | -11.28   | -12.07   | -15.69   | -13.76   | -9.44    | -5.93    | -3.42    | -1.51    | -1.04    | -1.73    |
| θ (120°)       | 0.83   | 1.41    | -0.14   | -3.58   | -9.14   | -10.46  | -6.39   | -4.40    | -4.17    | -7.37    | -6.65    | -7.40    | -7.23    | -5.35    | -5.93    | -7.26    | -9.71    | -11.18   | -9.50    | -5.38    | -2.80    | -1.36    | 0.01     | 0.75     | 0.83     |
| θ (135°)       | 2.33   | 2.53    | 1.95    | -0.77   | -6.50   | -10.82  | -16.26  | -8.68    | -5.11    | -5.18    | -9.86    | -9.96    | -8.46    | -6.46    | -6.63    | -7.95    | -10.83   | -13.71   | -9.61    | -5.49    | -2.11    | -0.20    | 1.14     | 1.85     | 2.33     |
| θ (150°)       | 4.98   | 5.04    | 3.35    | -0.12   | -4.74   | -9.29   | -9.98   | -7.43    | -5.12    | -4.63    | -6.37    | -10.38   | -13.68   | -14.50   | -13.66   | -11.51   | -9.70    | -8.81    | -5.52    | -1.94    | 0.34     | 1.83     | 3.07     | 3.98     | 4.98     |
| θ (165°)       | -2.41  | -4.34   | -7.54   | -10.52  | -12.61  | -11.25  | -10.17  | -9.28    | -4.29    | -0.87    | 0.89     | 1.27     | 0.33     | -1.89    | -5.74    | -10.10   | -9.49    | -8.47    | -11.62   | -11.33   | -6.90    | -3.84    | -1.81    | -1.77    | -2.41    |
| θ (180°)       | -0.40  | -1.76   | -4.12   | -8.27   | -18.19  | -16.61  | -7.76   | -3.85    | -1.60    | -0.32    | 0.26     | 0.24     | -0.40    | -1.76    | -4.12    | -8.27    | -18.19   | -16.61   | -7.76    | -3.85    | -1.60    | -0.32    | 0.26     | 0.24     | -0.40    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -9.60  | -4.32   | -1.48   | 0.19    | 1.06    | 1.30    | 0.93    | -0.10    | -1.95    | -5.15    | -11.38   | -18.71   | -9.60    | -4.32    | -1.48    | 0.19     | 1.06     | 1.30     | 0.93     | -0.10    | -1.95    | -5.15    | -11.38   | -18.71   | -9.60    |
| θ (15°)        | -10.23 | -5.24   | -1.43   | 0.59    | 1.59    | 1.83    | 1.47    | 0.19     | -1.76    | -4.76    | -9.12    | -9.13    | -7.26    | -6.38    | -5.52    | -2.66    | -0.87    | -0.03    | 0.66     | 0.85     | 0.44     | -0.47    | -2.31    | -6.28    | -10.23   |
| θ (30°)        | -12.02 | -5.32   | -1.35   | 1.02    | 1.90    | 1.80    | 1.08    | -0.28    | -2.28    | -5.16    | -8.94    | -8.97    | -6.23    | -6.85    | -4.25    | -1.08    | 0.18     | 0.74     | 1.19     | 1.51     | 1.47     | 0.68     | -1.49    | -5.16    | -12.02   |
| θ (45°)        | -10.45 | -11.21  | -1.44   | 2.46    | 3.37    | 2.40    | 0.19    | -2.72    | -4.24    | -6.14    | -10.43   | -9.59    | -7.79    | -8.66    | -6.87    | -2.55    | -0.67    | -0.27    | 0.29     | 1.66     | 2.62     | 2.26     | -0.01    | -4.41    | -10.45   |
| θ (60°)        | -8.36  | -7.23   | 0.46    | 4.40    | 5.09    | 3.90    | 0.86    | -3.71    | -5.14    | -8.61    | -11.16   | -8.06    | -10.31   | -7.52    | -5.18    | -3.78    | -2.78    | -2.27    | -1.02    | 0.91     | 2.66     | 3.35     | 1.62     | -3.78    | -8.36    |
| θ (75°)        | -6.98  | -4.72   | -2.03   | 4.50    | [5.62]  | 4.47    | 2.08    | -4.31    | -5.28    | -4.08    | -9.90    | -2.27    | -11.26   | -4.96    | -7.73    | -5.97    | -3.26    | -2.67    | -1.66    | 0.90     | 2.05     | 2.83     | 3.42     | -0.85    | -6.98    |
| θ (90°)        | -9.01  | -9.01   | -0.79   | 3.84    | 4.02    | 2.68    | 0.11    | -1.85    | -1.11    | -4.50    | -7.10    | -2.19    | -3.86    | -3.27    | -7.68    | -3.98    | -2.45    | -2.09    | -0.29    | 1.58     | 2.30     | 2.39     | 2.89     | 1.02     | -9.01    |
| θ (105°)       | -6.98  | -6.60   | -3.80   | 4.00    | 5.03    | 2.84    | -0.48   | -2.62    | -3.40    | -8.07    | -10.66   | -3.33    | -6.56    | -3.60    | -5.56    | -3.47    | -2.06    | -1.79    | -1.14    | 0.03     | 0.95     | 1.48     | 2.03     | -0.51    | -6.98    |
| θ (120°)       | -9.36  | -7.32   | -3.70   | 2.86    | 3.77    | 1.55    | -1.89   | -3.13    | -5.19    | -13.96   | -7.55    | -7.74    | -12.20   | -4.58    | -3.78    | -3.47    | -1.71    | -0.93    | 0.26     | 1.72     | 2.62     | 3.07     | 2.17     | -1.13    | -9.36    |
| θ (135°)       | -6.77  | -7.22   | -5.25   | -0.30   | 1.24    | -0.08   | -3.25   | -5.13    | -5.68    | -6.76    | -5.76    | -5.33    | -7.29    | -3.70    | -2.49    | -3.25    | -2.52    | -1.06    | 0.61     | 2.62     | 3.70     | 3.32     | 1.35     | -2.15    | -6.77    |
| θ (150°)       | -7.78  | -4.49   | -1.77   | -0.72   | -1.89   | -4.43   | -4.68   | -4.77    | -3.22    | -3.36    | -5.56    | -10.05   | -11.02   | -6.97    | -4.37    | -1.87    | 0.16     | 1.38     | 2.22     | 2.57     | 2.21     | 0.90     | -1.68    | -4.83    | -7.78    |
| θ (165°)       | -13.17 | -11.15  | -8.69   | -6.64   | -4.68   | -2.95   | -0.85   | 0.84     | 1.37     | 0.67     | -1.20    | -4.75    | -10.64   | -10.22   | -8.72    | -8.81    | -8.04    | -4.40    | -1.61    | -0.47    | -0.59    | -2.13    | -4.71    | -10.10   | -13.17   |
| θ (180°)       | -7.76  | -3.85   | -1.60   | -0.32   | 0.26    | 0.24    | -0.40   | -1.76    | -4.12    | -8.27    | -18.19   | -16.61   | -7.76    | -3.85    | -1.60    | -0.32    | 0.26     | 0.24     | -0.40    | -1.76    | -4.12    | -8.27    | -18.19   | -16.61   | -7.76    |

|                 |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 1SS             |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Freq.<br>(MHz)  | 2450        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | 1.25        | 0.39         | -1.24        | -4.05        | -9.23        | -21.43       | -11.44       | -5.07         | -1.83         | 0.05          | 1.10          | 1.48          | 1.25          | 0.39          | -1.24         | -4.05         | -9.23         | -21.43        | -11.44        | -5.07         | -1.83         | 0.05          | 1.10          | 1.48          | 1.25          |
| $\theta$ (15°)  | 3.62        | 3.40         | 2.40         | 0.30         | -3.17        | -8.76        | -12.91       | -7.92         | -4.82         | -3.28         | -2.33         | -1.50         | -1.10         | -1.50         | -2.88         | -4.43         | -7.51         | -13.39        | -12.44        | -6.27         | -2.24         | 0.53          | 2.19          | 3.21          | 3.62          |
| $\theta$ (30°)  | [5.20]      | 5.16         | 4.27         | 2.05         | -1.69        | -7.44        | -11.83       | -11.26        | -8.09         | -5.63         | -3.68         | -2.32         | -2.66         | -2.96         | -4.07         | -8.36         | -18.18        | -19.60        | -13.21        | -6.34         | -1.86         | 1.19          | 3.30          | 4.48          | 5.20          |
| $\theta$ (45°)  | 4.61        | 5.08         | 4.77         | 2.74         | -1.52        | -8.69        | -14.45       | -9.80         | -7.00         | -4.28         | -2.62         | -3.04         | -3.25         | -2.50         | -4.97         | -11.96        | -19.11        | -21.03        | -15.49        | -9.75         | -4.61         | -0.34         | 2.28          | 3.72          | 4.61          |
| $\theta$ (60°)  | 0.89        | 2.21         | 2.98         | 1.02         | -3.79        | -8.66        | -7.02        | -5.74         | -8.19         | -8.18         | -5.08         | -4.27         | -7.93         | -8.02         | -9.67         | -14.61        | -15.18        | -13.70        | -11.94        | -10.00        | -4.79         | -2.15         | -1.06         | -0.27         | 0.89          |
| $\theta$ (75°)  | 2.48        | 2.94         | 2.43         | -0.33        | -4.23        | -9.40        | -14.60       | -12.02        | -8.97         | -8.59         | -4.01         | -3.14         | -4.16         | -8.20         | -12.65        | -13.48        | -10.71        | -11.92        | -15.78        | -14.56        | -9.56         | -4.40         | -1.25         | 0.73          | 2.48          |
| $\theta$ (90°)  | -0.92       | 1.09         | 0.38         | -2.58        | -6.31        | -5.64        | -4.46        | -4.11         | -7.02         | -6.84         | -5.28         | -7.56         | -9.19         | -9.31         | -8.57         | -9.74         | -12.45        | -13.22        | -17.60        | -17.48        | -8.75         | -4.57         | -3.40         | -3.01         | -0.92         |
| $\theta$ (105°) | -1.86       | -2.12        | -1.61        | -3.05        | -6.85        | -8.85        | -7.86        | -7.94         | -10.19        | -7.12         | -3.82         | -4.02         | -6.18         | -12.81        | -13.62        | -10.83        | -12.12        | -15.54        | -11.92        | -9.27         | -6.47         | -3.81         | -2.07         | -1.51         | -1.86         |
| $\theta$ (120°) | 1.88        | 1.57         | -0.51        | -3.80        | -8.44        | -8.26        | -5.50        | -3.81         | -3.18         | -6.86         | -8.29         | -7.55         | -6.53         | -5.22         | -5.06         | -8.10         | -10.84        | -11.97        | -9.29         | -4.72         | -1.75         | -0.66         | 0.36          | 1.28          | 1.88          |
| $\theta$ (135°) | 3.22        | 3.18         | 2.09         | -1.26        | -6.85        | -12.65       | -16.39       | -9.16         | -4.52         | -3.83         | -7.13         | -9.10         | -8.63         | -6.65         | -7.73         | -8.76         | -11.20        | -13.59        | -10.14        | -4.94         | -1.58         | 0.16          | 1.73          | 2.71          | 3.22          |
| $\theta$ (150°) | 4.66        | 4.46         | 3.33         | 0.09         | -4.29        | -7.97        | -8.85        | -7.51         | -5.53         | -4.90         | -6.55         | -11.74        | -19.36        | -10.28        | -7.83         | -11.08        | -10.01        | -8.80         | -4.88         | -1.76         | -0.01         | 1.11          | 2.26          | 3.31          | 4.66          |
| $\theta$ (165°) | -1.62       | -3.37        | -6.51        | -10.30       | -13.41       | -11.04       | -9.98        | -8.84         | -5.24         | -1.75         | 0.33          | 0.95          | -0.16         | -3.81         | -6.55         | -8.47         | -7.26         | -7.77         | -10.46        | -8.55         | -6.24         | -3.33         | -1.28         | -1.00         | -1.62         |
| $\theta$ (180°) | -0.93       | -2.39        | -4.91        | -9.42        | -21.37       | -15.24       | -7.54        | -3.91         | -1.80         | -0.61         | -0.11         | -0.21         | -0.93         | -2.39         | -4.91         | -9.42         | -21.37        | -15.24        | -7.54         | -3.91         | -1.80         | -0.61         | -0.11         | -0.21         | -0.93         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -11.44      | -5.07        | -1.83        | 0.05         | 1.10         | 1.48         | 1.25         | 0.39          | -1.24         | -4.05         | -9.23         | -21.43        | -11.44        | -5.07         | -1.83         | 0.05          | 1.10          | 1.48          | 1.25          | 0.39          | -1.24         | -4.05         | -9.23         | -21.43        | -11.44        |
| $\theta$ (15°)  | -10.37      | -4.75        | -0.66        | 1.32         | 2.03         | 1.97         | 1.43         | 0.22          | -1.69         | -4.55         | -8.77         | -8.57         | -8.66         | -9.44         | -6.36         | -3.60         | -1.59         | -0.06         | 0.73          | 1.14          | 0.56          | -0.66         | -2.53         | -6.13         | -10.37        |
| $\theta$ (30°)  | -9.94       | -3.50        | -0.57        | 0.85         | 1.17         | 0.69         | -0.27        | -1.74         | -3.99         | -6.60         | -7.80         | -8.58         | -7.20         | -7.24         | -5.72         | -2.49         | -1.12         | -0.36         | 0.19          | 0.67          | 0.59          | -0.61         | -2.82         | -5.67         | -9.94         |
| $\theta$ (45°)  | -15.77      | -9.52        | -1.04        | 2.82         | 3.87         | 3.06         | 0.96         | -2.02         | -4.42         | -7.06         | -10.24        | -9.65         | -7.61         | -7.60         | -6.64         | -3.10         | -1.50         | -1.05         | 0.43          | 1.62          | 2.80          | 1.92          | -0.93         | -5.21         | -15.77        |
| $\theta$ (60°)  | -11.96      | -5.95        | 0.45         | 3.86         | 4.69         | 3.78         | 0.95         | -3.87         | -4.68         | -7.23         | -9.26         | -7.91         | -9.68         | -7.46         | -5.63         | -4.18         | -3.52         | -2.99         | -1.26         | 0.73          | 2.19          | 2.99          | 1.95          | -3.22         | -11.96        |
| $\theta$ (75°)  | -9.06       | -4.50        | -1.57        | 4.66         | 5.66         | 4.65         | 2.22         | -4.05         | -5.58         | -3.27         | -11.29        | -2.03         | -12.10        | -4.46         | -7.90         | -4.92         | -2.74         | -2.44         | -0.91         | 0.72          | 2.39          | 2.35          | 3.27          | -0.13         | -9.06         |
| $\theta$ (90°)  | -10.56      | -6.39        | -0.53        | 4.26         | 3.95         | 2.42         | 0.04         | -2.22         | -1.46         | -4.65         | -7.50         | -2.34         | -5.47         | -4.18         | -8.10         | -2.82         | -2.42         | -2.37         | -0.38         | 1.29          | 2.05          | 1.88          | 2.32          | 1.16          | -10.56        |
| $\theta$ (105°) | -8.19       | -5.63        | -2.88        | 4.43         | [5.77]       | 3.62         | -0.34        | -2.68         | -2.89         | -8.74         | -9.02         | -3.70         | -6.72         | -4.50         | -6.10         | -3.27         | -2.43         | -1.65         | -1.08         | 1.03          | 1.67          | 1.62          | 2.22          | 0.28          | -8.19         |
| $\theta$ (120°) | -8.71       | -6.76        | -2.39        | 3.14         | 4.40         | 2.16         | -1.75        | -2.58         | -3.85         | -11.32        | -5.12         | -7.59         | -11.45        | -4.23         | -4.09         | -3.10         | -0.99         | -0.44         | 1.00          | 2.49          | 3.15          | 3.34          | 2.76          | 0.22          | -8.71         |
| $\theta$ (135°) | -5.92       | -6.58        | -3.52        | 0.19         | 1.56         | 0.55         | -2.44        | -5.81         | -6.74         | -6.64         | -5.00         | -5.40         | -8.74         | -3.76         | -3.63         | -4.58         | -2.42         | -0.64         | 1.15          | 2.59          | 3.69          | 3.37          | 1.50          | -1.68         | -5.92         |
| $\theta$ (150°) | -7.26       | -4.19        | -0.86        | 0.20         | -0.42        | -3.18        | -5.02        | -6.16         | -3.78         | -3.13         | -4.88         | -8.57         | -10.12        | -7.56         | -4.38         | -2.17         | -0.09         | 1.11          | 1.62          | 1.75          | 1.41          | 0.11          | -2.53         | -5.50         | -7.26         |
| $\theta$ (165°) | -11.85      | -10.45       | -8.84        | -6.93        | -5.20        | -3.62        | -1.51        | 0.22          | 1.02          | 0.73          | -1.02         | -4.78         | -12.10        | -12.20        | -10.05        | -10.15        | -7.91         | -3.95         | -1.26         | 0.13          | -0.01         | -1.34         | -4.34         | -10.35        | -11.85        |
| $\theta$ (180°) | -7.54       | -3.91        | -1.80        | -0.61        | -0.11        | -0.21        | -0.93        | -2.39         | -4.91         | -9.42         | -21.37        | -15.24        | -7.54         | -3.91         | -1.80         | -0.61         | -0.11         | -0.21         | -0.93         | -2.39         | -4.91         | -9.42         | -21.37        | -15.24        | -7.54         |

|                 |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 1SS             |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Freq.<br>(MHz)  | 2500        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | 0.82        | -0.11        | -1.82        | -4.77        | -10.32       | -28.06       | -10.98       | -5.08         | -2.01         | -0.21         | 0.77          | 1.10          | 0.82          | -0.11         | -1.82         | -4.77         | -10.32        | -28.06        | -10.98        | -5.08         | -2.01         | -0.21         | 0.77          | 1.10          | 0.82          |
| $\theta$ (15°)  | 3.01        | 2.91         | 2.08         | 0.32         | -2.44        | -6.53        | -9.32        | -9.67         | -6.48         | -4.61         | -3.49         | -2.87         | -2.69         | -2.67         | -3.48         | -4.99         | -7.56         | -11.16        | -9.87         | -5.38         | -2.92         | -0.43         | 1.41          | 2.71          | 3.01          |
| $\theta$ (30°)  | 4.34        | 4.78         | 4.09         | 1.92         | -1.98        | -7.63        | -11.31       | -13.34        | -8.91         | -6.48         | -4.99         | -4.34         | -3.37         | -3.83         | -7.27         | -10.50        | -15.24        | -19.22        | -11.56        | -5.04         | -1.27         | 0.98          | 2.63          | 3.82          | 4.34          |
| $\theta$ (45°)  | 4.45        | 5.17         | [5.22]       | 3.37         | -1.16        | -8.86        | -11.55       | -9.76         | -7.01         | -4.75         | -3.70         | -3.48         | -3.61         | -4.43         | -8.85         | -15.80        | -14.22        | -14.55        | -12.33        | -8.97         | -3.14         | 0.19          | 1.98          | 3.43          | 4.45          |
| $\theta$ (60°)  | 1.36        | 2.99         | 3.68         | 1.11         | -3.81        | -7.85        | -5.98        | -4.49         | -6.42         | -8.27         | -7.57         | -5.51         | -8.60         | -8.15         | -11.76        | -20.98        | -13.96        | -11.02        | -8.74         | -6.33         | -3.17         | -1.04         | -0.20         | 0.59          | 1.36          |
| $\theta$ (75°)  | 1.18        | 2.08         | 2.11         | -0.41        | -5.48        | -11.72       | -14.99       | -13.79        | -9.01         | -10.14        | -4.51         | -2.92         | -3.46         | -8.11         | -15.80        | -10.51        | -10.03        | -13.66        | -15.02        | -17.89        | -10.75        | -4.84         | -1.45         | -0.04         | 1.18          |
| $\theta$ (90°)  | -2.10       | 0.42         | 1.35         | -1.47        | -5.95        | -5.13        | -3.45        | -2.67         | -4.82         | -5.08         | -4.85         | -10.26        | -8.47         | -10.21        | -8.57         | -8.48         | -11.86        | -15.21        | -18.76        | -13.81        | -6.08         | -2.46         | -1.65         | -2.42         | -2.10         |
| $\theta$ (105°) | 0.31        | -0.70        | -1.47        | -2.54        | -6.53        | -8.93        | -9.03        | -9.31         | -10.83        | -7.60         | -3.74         | -3.70         | -7.32         | -15.52        | -17.96        | -12.59        | -13.72        | -15.83        | -12.76        | -8.84         | -5.29         | -3.10         | -1.96         | -0.96         | 0.31          |
| $\theta$ (120°) | 2.03        | 1.57         | -1.47        | -5.26        | -10.16       | -6.80        | -4.48        | -3.39         | -2.67         | -5.10         | -11.15        | -8.89         | -5.11         | -5.86         | -6.52         | -6.76         | -9.13         | -11.95        | -10.83        | -5.04         | -2.11         | -1.45         | -0.12         | 1.46          | 2.03          |
| $\theta$ (135°) | 3.44        | 3.23         | 1.61         | -2.13        | -9.37        | -9.34        | -11.12       | -12.90        | -6.29         | -3.27         | -5.17         | -8.82         | -11.49        | -8.12         | -8.24         | -9.10         | -11.37        | -13.70        | -11.70        | -5.01         | -2.76         | -0.85         | 1.62          | 3.47          | 3.44          |
| $\theta$ (150°) | 3.55        | 3.74         | 2.63         | 0.08         | -4.88        | -7.55        | -6.41        | -5.63         | -4.85         | -5.26         | -6.23         | -8.80         | -14.60        | -11.98        | -7.92         | -5.88         | -7.70         | -7.49         | -5.49         | -3.39         | -2.03         | -0.68         | 1.24          | 2.82          | 3.55          |
| $\theta$ (165°) | -1.13       | -2.87        | -6.24        | -9.67        | -12.46       | -11.84       | -10.53       | -9.15         | -6.22         | -2.65         | -0.39         | 0.20          | -0.73         | -2.37         | -6.81         | -7.03         | -5.38         | -6.03         | -7.57         | -8.44         | -4.11         | -2.14         | -0.57         | -0.19         | -1.13         |
| $\theta$ (180°) | -2.77       | -4.52        | -7.50        | -13.13       | -40.25       | -13.46       | -7.65        | -4.60         | -2.82         | -1.86         | -1.55         | -1.84         | -2.77         | -4.52         | -7.50         | -13.13        | -40.25        | -13.46        | -7.65         | -4.60         | -2.82         | -1.86         | -1.55         | -1.84         | -2.77         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -10.98      | -5.08        | -2.01        | -0.21        | 0.77         | 1.10         | 0.82         | -0.11         | -1.82         | -4.77         | -10.32        | -28.06        | -10.98        | -5.08         | -2.01         | -0.21         | 0.77          | 1.10          | 0.82          | -0.11         | -1.82         | -4.77         | -10.32        | -28.06        | -10.98        |
| $\theta$ (15°)  | -10.12      | -6.72        | -1.75        | 0.75         | 2.00         | 2.29         | 1.66         | -0.12         | -2.23         | -5.10         | -7.05         | -10.39        | -12.69        | -9.88         | -7.74         | -4.31         | -0.76         | 0.99          | 1.47          | 1.44          | 0.86          | -0.56         | -2.97         | -6.95         | -10.12        |
| $\theta$ (30°)  | -10.69      | -6.25        | 0.34         | 2.07         | 2.28         | 1.26         | -0.48        | -2.21         | -4.00         | -6.13         | -6.27         | -5.80         | -5.26         | -6.48         | -6.80         | -4.00         | -1.64         | -0.40         | 0.72          | 1.44          | 1.29          | 0.17          | -2.14         | -5.27         | -10.69        |
| $\theta$ (45°)  | -10.29      | -18.15       | -2.65        | 1.96         | 3.36         | 2.83         | 1.12         | -1.38         | -2.77         | -4.24         | -7.84         | -7.80         | -7.54         | -7.96         | -6.43         | -3.03         | -2.48         | -1.41         | 0.31          | 2.51          | 3.20          | 2.54          | -0.03         | -4.59         | -10.29        |
| $\theta$ (60°)  | -8.74       | -8.57        | 0.11         | 4.16         | 4.38         | 3.44         | 1.07         | -2.83         | -3.44         | -5.03         | -7.70         | -8.10         | -10.73        | -7.26         | -5.73         | -5.65         | -5.52         | -3.10         | -0.50         | 1.52          | 2.41          | 2.32          | 1.36          | -1.96         | -8.74         |
| $\theta$ (75°)  | -15.78      | -6.94        | -3.53        | 3.34         | 4.52         | 3.06         | 1.23         | -2.98         | -6.95         | -4.23         | -15.51        | -2.87         | -9.53         | -4.07         | -7.34         | -4.42         | -4.22         | -3.59         | -1.46         | 1.12          | 1.95          | 1.33          | 1.99          | -0.50         | -15.78        |
| $\theta$ (90°)  | -10.32      | -11.13       | -1.65        | 4.12         | 3.02         | 0.90         | -0.56        | -3.40         | -2.92         | -6.05         | -8.83         | -3.33         | -6.07         | -5.34         | -8.76         | -4.37         | -4.62         | -4.90         | -2.61         | -0.63         | 0.56          | 1.21          | 2.04          | 0.44          | -10.32        |
| $\theta$ (105°) | -7.11       | -3.73        | -3.29        | 4.66         | [6.27]       | 4.45         | -0.19        | -3.41         | -2.23         | -7.14         | -6.65         | -4.00         | -8.89         | -4.22         | -5.93         | -3.44         | -1.78         | -1.29         | -0.00         | 1.93          | 3.64          | 3.23          | 2.94          | 1.44          | -7.11         |
| $\theta$ (120°) | -9.71       | -5.35        | -1.81        | 3.17         | 4.50         | 2.59         | -2.59        | -3.46         | -3.46         | -9.41         | -5.46         | -9.34         | -11.38        | -5.19         | -5.93         | -3.01         | -1.00         | -0.02         | 2.01          | 3.45          | 3.76          | 3.29          | 2.94          | 1.33          | -9.71         |
| $\theta$ (135°) | -7.53       | -8.48        | -3.85        | -0.31        | 0.81         | -0.42        | -3.34        | -5.53         | -6.82         | -7.70         | -6.31         | -8.14         | -8.69         | -5.52         | -6.59         | -7.05         | -4.29         | -2.11         | -0.02         | 2.13          | 2.84          | 2.37          | 0.63          | -1.39         | -7.53         |
| $\theta$ (150°) | -5.90       | -4.24        | -2.14        | -0.34        | -1.50        | -4.06        | -5.99        | -7.44         | -6.35         | -4.19         | -4.09         | -6.63         | -16.12        | -9.00         | -4.63         | -2.22         | -0.96         | 0.19          | 0.78          | 0.90          | 0.31          | -1.29         | -3.81         | -5.73         | -5.90         |
| $\theta$ (165°) | -10.86      | -6.96        | -5.63        | -5.89        | -5.76        | -5.75        | -4.58        | -1.64         | 0.05          | 0.31          | -1.23         | -5.18         | -12.32        | -15.22        | -10.84        | -11.62        | -7.23         | -2.91         | -0.59         | 0.66          | 0.08          | -1.71         | -5.23         | -13.22        | -10.86        |
| $\theta$ (180°) | -7.65       | -4.60        | -2.82        | -1.86        | -1.55        | -1.84        | -2.77        | -4.52         | -7.50         | -13.13        | -40.25        | -13.46        | -7.65         | -4.60         | -2.82         | -1.86         | -1.55         | -1.84         | -2.77         | -4.52         | -7.50         | -13.13        | -40.25        | -13.46        | -7.65         |

|                 |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 1SS             |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Freq. (MHz)     | 5150        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | 0.44        | -0.27        | -1.72        | -4.22        | -8.66        | -20.27       | -14.82       | -6.98         | -3.31         | -1.19         | 0.01          | 0.53          | 0.44          | -0.27         | -1.72         | -4.22         | -8.66         | -20.27        | -14.82        | -6.98         | -3.31         | -1.19         | 0.01          | 0.53          | 0.44          |
| $\theta$ (15°)  | 3.88        | 3.83         | 2.65         | 0.03         | -3.07        | -7.37        | -12.12       | -11.88        | -8.73         | -7.03         | -5.48         | -5.22         | -4.41         | -3.64         | -2.90         | -3.20         | -5.05         | -8.57         | -14.08        | -9.54         | -3.35         | 0.46          | 2.53          | 3.28          | 3.88          |
| $\theta$ (30°)  | 4.83        | [4.89]       | 3.90         | 2.14         | -1.35        | -6.85        | -17.50       | -20.05        | -12.89        | -15.42        | -16.74        | -10.42        | -11.23        | -6.62         | -7.50         | -8.23         | -11.57        | -14.67        | -17.45        | -8.64         | -2.50         | 0.99          | 3.86          | 4.71          | 4.83          |
| $\theta$ (45°)  | 1.23        | 3.01         | 4.26         | 2.08         | -2.69        | -10.25       | -16.05       | -18.55        | -24.30        | -13.71        | -16.97        | -20.21        | -15.51        | -8.91         | -10.85        | -11.93        | -10.49        | -8.68         | -10.79        | -12.51        | -5.10         | -1.29         | 2.69          | 2.90          | 1.23          |
| $\theta$ (60°)  | 1.71        | 1.47         | -0.84        | -1.93        | -1.90        | -4.27        | -8.66        | -14.10        | -16.06        | -12.52        | -9.39         | -15.60        | -9.19         | -10.18        | -9.49         | -14.91        | -12.70        | -10.81        | -12.31        | -12.76        | -6.07         | -4.63         | 0.33          | 2.61          | 1.71          |
| $\theta$ (75°)  | -1.33       | -1.13        | -3.06        | -1.43        | -4.61        | -8.22        | -12.00       | -13.66        | -14.51        | -14.23        | -10.34        | -9.35         | -12.57        | -7.29         | -9.42         | -21.55        | -16.41        | -12.72        | -14.95        | -9.50         | -7.98         | -11.47        | -7.34         | -2.45         | -1.33         |
| $\theta$ (90°)  | -4.68       | -6.19        | -1.90        | -3.53        | -6.16        | -9.66        | -13.51       | -12.46        | -20.64        | -11.87        | -11.51        | -10.80        | -12.96        | -11.58        | -9.45         | -13.51        | -12.70        | -15.12        | -11.86        | -10.32        | -16.34        | -6.32         | -13.33        | -8.61         | -4.68         |
| $\theta$ (105°) | -1.07       | -0.49        | 1.20         | -2.67        | -6.69        | -8.33        | -11.40       | -13.73        | -13.43        | -12.75        | -7.78         | -10.67        | -10.62        | -19.58        | -7.84         | -10.29        | -16.93        | -26.68        | -17.00        | -13.57        | -4.84         | -2.63         | -1.70         | -2.25         | -1.07         |
| $\theta$ (120°) | 1.81        | 1.51         | 1.27         | -2.66        | -6.92        | -9.83        | -13.38       | -13.54        | -11.22        | -14.52        | -12.91        | -11.88        | -9.86         | -11.97        | -9.14         | -8.32         | -13.05        | -12.73        | -7.06         | -4.75         | -2.41         | -0.67         | 2.19          | 1.93          | 1.81          |
| $\theta$ (135°) | 1.14        | 2.48         | 1.96         | 0.12         | -1.89        | -5.38        | -9.54        | -9.54         | -14.79        | -11.17        | -9.88         | -10.14        | -6.04         | -6.13         | -10.00        | -8.06         | -7.76         | -8.29         | -13.77        | -11.97        | -2.46         | 0.69          | 1.80          | 2.60          | 1.14          |
| $\theta$ (150°) | 0.91        | 0.97         | 0.68         | 0.22         | -1.56        | -5.56        | -9.18        | -9.28         | -9.67         | -12.93        | -11.08        | -7.93         | -5.26         | -5.09         | -7.46         | -7.26         | -8.25         | -9.50         | -13.68        | -14.10        | -6.37         | -2.49         | -0.31         | 0.19          | 0.91          |
| $\theta$ (165°) | 1.90        | 1.84         | 0.80         | -1.04        | -4.27        | -8.62        | -12.49       | -16.76        | -11.60        | -11.31        | -8.77         | -4.95         | -3.10         | -2.58         | -3.39         | -6.23         | -11.75        | -17.18        | -16.52        | -10.70        | -6.62         | -3.86         | -1.38         | 0.79          | 1.90          |
| $\theta$ (180°) | -0.24       | -1.75        | -4.34        | -9.02        | -22.20       | -13.80       | -6.52        | -3.00         | -0.96         | 0.19          | 0.66          | 0.52          | -0.24         | -1.75         | -4.34         | -9.02         | -22.20        | -13.80        | -6.52         | -3.00         | -0.96         | 0.19          | 0.66          | 0.52          | -0.24         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -14.82      | -6.98        | -3.31        | -1.19        | 0.01         | 0.53         | 0.44         | -0.27         | -1.72         | -4.22         | -8.66         | -20.27        | -14.82        | -6.98         | -3.31         | -1.19         | 0.01          | 0.53          | 0.44          | -0.27         | -1.72         | -4.22         | -8.66         | -20.27        | -14.82        |
| $\theta$ (15°)  | -13.70      | -13.97       | -3.84        | -1.01        | -0.15        | 0.45         | 0.16         | -0.77         | -2.98         | -6.34         | -9.21         | -10.97        | -14.36        | -15.84        | -9.60         | -3.48         | -0.31         | 1.48          | 2.12          | 2.61          | 2.67          | 2.17          | 0.18          | -3.36         | -13.70        |
| $\theta$ (30°)  | -19.65      | -3.97        | 2.01         | 4.03         | 4.15         | 3.40         | 1.36         | -0.36         | -2.75         | -5.77         | -11.57        | -13.24        | -13.84        | -11.73        | -7.34         | -5.64         | -3.09         | -0.34         | 2.13          | 3.44          | 4.05          | 3.89          | 1.19          | -3.10         | -19.65        |
| $\theta$ (45°)  | -10.86      | -1.56        | 3.08         | 4.83         | 4.42         | 3.21         | 0.95         | -1.61         | -4.48         | -4.37         | -7.40         | -8.46         | -12.18        | -11.23        | -10.25        | -11.86        | -7.06         | -3.06         | 1.63          | 4.84          | 5.99          | 4.35          | 0.41          | -3.79         | -10.86        |
| $\theta$ (60°)  | -4.45       | 0.30         | 1.71         | 4.25         | 5.06         | 3.08         | 0.06         | -3.17         | -6.23         | -7.90         | -7.94         | -8.88         | -10.99        | -9.21         | -12.41        | -12.72        | -10.69        | -4.01         | 0.83          | 4.25          | 5.06          | 2.32          | -0.23         | -5.23         | -4.45         |
| $\theta$ (75°)  | -2.55       | -0.75        | 0.96         | 3.92         | 5.17         | 3.89         | 0.78         | -3.95         | -3.69         | -11.83        | -9.13         | -6.88         | -8.53         | -9.78         | -11.15        | -12.64        | -12.86        | -5.75         | -2.88         | 1.96          | 2.89          | 0.57          | 0.76          | -1.12         | -2.55         |
| $\theta$ (90°)  | -4.46       | 0.10         | 1.51         | 4.52         | [6.06]       | 4.53         | 1.52         | -2.49         | -6.59         | -5.70         | -10.05        | -7.96         | -8.10         | -8.48         | -9.82         | -7.91         | -15.75        | -2.72         | -0.54         | 3.98          | 3.29          | -1.01         | -0.09         | 0.30          | -4.46         |
| $\theta$ (105°) | -3.66       | -0.40        | 2.86         | 4.12         | 5.32         | 3.93         | 0.90         | -1.34         | -11.98        | -7.29         | -8.08         | -9.70         | -9.82         | -11.25        | -9.00         | -10.22        | -10.77        | -3.20         | 1.33          | 4.87          | 5.09          | 3.45          | -0.76         | -1.44         | -3.66         |
| $\theta$ (120°) | -4.93       | -0.55        | 2.03         | 4.50         | 4.55         | 2.37         | -0.44        | -3.96         | -5.36         | -13.56        | -9.08         | -9.60         | -11.25        | -10.22        | -12.50        | -8.41         | -4.76         | -1.90         | 1.38          | 3.46          | 3.98          | 1.85          | -0.27         | -4.08         | -4.93         |
| $\theta$ (135°) | -9.61       | -2.57        | 0.26         | 3.48         | 2.77         | 2.54         | 1.18         | -2.52         | -6.14         | -4.45         | -7.31         | -15.51        | -15.24        | -12.57        | -5.63         | -9.86         | -5.71         | -1.63         | 2.94          | 4.67          | 5.20          | 3.86          | 2.53          | -5.17         | -9.61         |
| $\theta$ (150°) | -9.11       | -5.36        | -1.94        | 1.26         | 3.59         | 3.44         | 0.82         | -4.18         | -4.94         | -7.75         | -10.33        | -8.79         | -10.50        | -10.44        | -9.97         | -11.11        | -11.69        | -5.48         | -2.20         | -0.57         | -0.76         | -2.47         | -4.22         | -9.24         | -9.11         |
| $\theta$ (165°) | -10.40      | -8.67        | -4.99        | -2.95        | -1.54        | -1.08        | -1.40        | -2.65         | -4.35         | -7.79         | -11.02        | -10.46        | -11.58        | -13.62        | -8.74         | -5.97         | -4.58         | -3.79         | -2.67         | -1.74         | -1.37         | -1.83         | -3.65         | -6.92         | -10.40        |
| $\theta$ (180°) | -6.52       | -3.00        | -0.96        | 0.19         | 0.66         | 0.52         | -0.24        | -1.75         | -4.34         | -9.02         | -22.20        | -13.80        | -6.52         | -3.00         | -0.96         | 0.19          | 0.66          | 0.52          | -0.24         | -1.75         | -4.34         | -9.02         | -22.20        | -13.80        | -6.52         |

|                 |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 1SS             |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Freq. (MHz)     | 5200        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | 1.73        | 1.06         | -0.35        | -2.78        | -7.08        | -17.81       | -14.25       | -5.97         | -2.17         | 0.00          | 1.25          | 1.79          | 1.73          | 1.06          | -0.35         | -2.78         | -7.08         | -17.81        | -14.25        | -5.97         | -2.17         | 0.00          | 1.25          | 1.79          | 1.73          |
| $\theta$ (15°)  | 5.19        | 5.07         | 3.77         | 1.08         | -2.39        | -6.70        | -11.91       | -12.24        | -8.68         | -5.79         | -4.01         | -2.80         | -2.95         | -2.94         | -2.76         | -2.73         | -4.71         | -8.23         | -15.91        | -9.54         | -3.24         | 0.32          | 2.73          | 4.31          | 5.19          |
| $\theta$ (30°)  | [5.62]      | 5.51         | 3.98         | 1.77         | -2.14        | -7.70        | -17.52       | -23.85        | -13.32        | -11.63        | -11.11        | -8.70         | -10.13        | -7.02         | -6.52         | -8.39         | -11.21        | -13.57        | -18.70        | -7.76         | -2.26         | 1.44          | 4.29          | 4.99          | 5.62          |
| $\theta$ (45°)  | 2.22        | 3.85         | 4.52         | 2.24         | -2.26        | -9.07        | -15.47       | -19.25        | -20.18        | -13.75        | -14.24        | -17.08        | -17.74        | -9.43         | -9.69         | -11.18        | -9.26         | -8.02         | -10.47        | -12.02        | -3.88         | 0.03          | 3.46          | 3.59          | 2.22          |
| $\theta$ (60°)  | 1.87        | 1.86         | -0.34        | -1.79        | -2.33        | -3.94        | -8.04        | -14.39        | -18.38        | -12.48        | -10.72        | -13.18        | -10.34        | -10.37        | -9.51         | -15.76        | -12.30        | -11.05        | -11.61        | -13.17        | -7.04         | -3.65         | 0.72          | 2.98          | 1.87          |
| $\theta$ (75°)  | -0.43       | -0.44        | -2.11        | -2.16        | -4.21        | -7.13        | -11.37       | -15.35        | -14.09        | -15.16        | -11.97        | -9.35         | -10.77        | -8.17         | -8.54         | -20.83        | -15.97        | -13.42        | -15.16        | -10.23        | -7.84         | -11.75        | -5.58         | -1.37         | -0.43         |
| $\theta$ (90°)  | -4.56       | -5.15        | -2.49        | -4.25        | -7.85        | -13.68       | -17.31       | -13.55        | -16.32        | -13.54        | -10.83        | -10.94        | -11.37        | -12.32        | -8.79         | -13.93        | -12.27        | -15.75        | -13.43        | -10.08        | -13.02        | -6.32         | -13.23        | -7.97         | -4.56         |
| $\theta$ (105°) | -1.16       | 0.55         | 1.04         | -3.36        | -9.19        | -9.49        | -11.03       | -13.83        | -12.37        | -12.27        | -9.60         | -11.06        | -9.93         | -17.36        | -7.11         | -10.58        | -20.10        | -28.22        | -20.07        | -12.30        | -4.96         | -2.35         | -1.97         | -3.74         | -1.16         |
| $\theta$ (120°) | 1.76        | 0.18         | 0.50         | -1.56        | -6.35        | -10.57       | -11.95       | -11.83        | -9.39         | -14.95        | -15.96        | -12.89        | -10.11        | -11.55        | -7.98         | -8.28         | -13.70        | -13.63        | -7.81         | -4.58         | -1.87         | -0.14         | 1.94          | 1.22          | 1.76          |
| $\theta$ (135°) | 1.58        | 2.46         | 1.99         | 0.70         | -1.57        | -4.90        | -8.26        | -8.29         | -10.74        | -10.51        | -11.21        | -9.19         | -4.78         | -4.76         | -8.86         | -8.15         | -7.02         | -7.40         | -12.66        | -12.78        | -3.60         | 0.11          | 2.41          | 2.68          | 1.58          |
| $\theta$ (150°) | 1.29        | 0.49         | -0.79        | -0.52        | -2.05        | -5.89        | -9.08        | -9.59         | -9.54         | -13.62        | -9.73         | -6.80         | -4.41         | -3.96         | -7.31         | -7.38         | -7.65         | -8.89         | -12.37        | -15.07        | -9.71         | -2.87         | -0.12         | 0.16          | 1.29          |
| $\theta$ (165°) | 2.39        | 2.42         | 1.21         | -0.89        | -4.23        | -8.73        | -13.42       | -15.10        | -10.40        | -10.10        | -8.29         | -4.98         | -2.91         | -2.75         | -3.71         | -6.96         | -12.94        | -19.53        | -17.23        | -11.35        | -7.17         | -3.99         | -1.35         | 0.86          | 2.39          |
| $\theta$ (180°) | -0.26       | -1.60        | -3.94        | -8.03        | -17.68       | -16.81       | -7.76        | -3.78         | -1.52         | -0.22         | 0.38          | 0.36          | -0.26         | -1.60         | -3.94         | -8.03         | -17.68        | -16.81        | -7.76         | -3.78         | -1.52         | -0.22         | 0.38          | 0.36          | -0.26         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -14.25      | -5.97        | -2.17        | 0.00         | 1.25         | 1.79         | 1.73         | 1.06          | -0.35         | -2.78         | -7.08         | -17.81        | -14.25        | -5.97         | -2.17         | 0.00          | 1.25          | 1.79          | 1.73          | 1.06          | -0.35         | -2.78         | -7.08         | -17.81        | -14.25        |
| $\theta$ (15°)  | -14.51      | -9.73        | -3.56        | -0.81        | -0.10        | 0.26         | 0.12         | -0.96         | -2.41         | -6.20         | -9.27         | -10.86        | -12.52        | -12.88        | -9.14         | -3.33         | -0.13         | 1.06          | 1.91          | 2.28          | 2.36          | 2.16          | 0.43          | -3.45         | -14.51        |
| $\theta$ (30°)  | -21.07      | -3.83        | 2.08         | 4.25         | 4.00         | 3.22         | 1.33         | -0.78         | -2.86         | -5.83         | -12.07        | -15.57        | -13.39        | -13.43        | -6.82         | -4.44         | -2.55         | 0.10          | 2.45          | 3.51          | 4.24          | 4.25          | 1.53          | -2.60         | -21.07        |
| $\theta$ (45°)  | -10.12      | -1.07        | 3.12         | 4.70         | 4.38         | 3.44         | 1.18         | -1.84         | -4.59         | -4.50         | -7.82         | -7.47         | -13.16        | -12.11        | -9.50         | -9.51         | -5.71         | -2.44         | 2.07          | 5.17          | 6.31          | 4.67          | 0.70          | -4.94         | -10.12        |
| $\theta$ (60°)  | -3.80       | 0.60         | 1.82         | 4.20         | 4.87         | 3.25         | 0.41         | -2.68         | -6.78         | -8.45         | -8.03         | -7.25         | -12.20        | -8.74         | -11.92        | -10.85        | -10.91        | -3.58         | 1.24          | 4.64          | 5.19          | 2.21          | -0.42         | -4.43         | -3.80         |
| $\theta$ (75°)  | -2.03       | -0.03        | 1.72         | 4.41         | 5.55         | 3.95         | 1.37         | -4.51         | -4.23         | -9.31         | -9.50         | -6.51         | -7.44         | -11.84        | -10.19        | -13.13        | -12.24        | -5.68         | -3.67         | 1.83          | 3.04          | 1.32          | 1.13          | -1.36         | -2.03         |
| $\theta$ (90°)  | -3.62       | 1.25         | 2.42         | 4.61         | [6.51]       | 4.81         | 1.47         | -1.69         | -7.91         | -4.61         | -10.97        | -7.67         | -8.87         | -9.12         | -10.09        | -8.44         | -11.67        | -2.60         | -0.54         | 3.51          | 2.60          | -1.37         | 0.16          | 0.16          | -3.62         |
| $\theta$ (105°) | -2.54       | 0.11         | 2.93         | 4.32         | 5.83         | 4.45         | 0.77         | -1.09         | -9.49         | -8.61         | -7.91         | -10.00        | -9.91         | -11.69        | -8.51         | -11.92        | -9.36         | -3.30         | 1.48          | 4.61          | 5.14          | 3.07          | -1.60         | -1.62         | -2.54         |
| $\theta$ (120°) | -2.64       | -1.42        | 1.09         | 4.49         | 4.56         | 2.24         | -0.61        | -3.46         | -4.95         | -10.55        | -9.99         | -11.19        | -12.01        | -11.11        | -13.74        | -8.41         | -4.62         | -1.13         | 1.80          | 3.95          | 4.31          | 1.52          | 0.19          | -4.05         | -2.64         |
| $\theta$ (135°) | -8.32       | -2.30        | 0.76         | 4.36         | 3.91         | 3.32         | 1.82         | -1.89         | -5.73         | -4.38         | -7.54         | -13.68        | -16.41        | -12.02        | -5.31         | -10.38        | -6.71         | -1.19         | 3.14          | 4.62          | 5.28          | 4.02          | 2.93          | -3.36         | -8.32         |
| $\theta$ (150°) | -8.62       | -5.62        | -1.79        | 1.23         | 3.98         | 4.14         | 1.63         | -3.23         | -5.13         | -7.25         | -9.08         | -8.97         | -9.79         | -9.39         | -9.72         | -11.19        | -10.71        | -5.42         | -2.69         | -1.28         | -1.10         | -1.57         | -2.83         | -8.69         | -8.62         |
| $\theta$ (165°) | -11.74      | -8.23        | -6.53        | -4.57        | -2.90        | -2.04        | -1.64        | -2.44         | -4.26         | -7.48         | -10.93        | -10.30        | -11.34        | -15.39        | -8.96         | -6.20         | -5.19         | -3.60         | -2.34         | -1.31         | -1.13         | -1.94         | -4.46         | -8.34         | -11.74        |
| $\theta$ (180°) | -7.76       | -3.78        | -1.52        | -0.22        | 0.38         | 0.36         | -0.26        | -1.60         | -3.94         | -8.03         | -17.68        | -16.81        | -7.76         | -3.78         | -1.52         | -0.22         | 0.38          | 0.36          | -0.26         | -1.60         | -3.94         | -8.03         | -17.68        | -16.81        | -7.76         |

|                |        |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1SS            |        |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Freq.<br>(MHz) | 5250   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | 2.46   | 1.85    | 0.54    | -1.75   | -5.76   | -14.99  | -15.32  | -5.87    | -1.81    | 0.50     | 1.83     | 2.45     | 2.46     | 1.85     | 0.54     | -1.75    | -5.76    | -14.99   | -15.32   | -5.87    | -1.81    | 0.50     | 1.83     | 2.45     | 2.46     |
| θ (15°)        | [5.98] | 5.83    | 4.40    | 1.59    | -2.26   | -6.91   | -13.22  | -13.70   | -8.40    | -4.71    | -3.04    | -1.95    | -2.15    | -2.35    | -2.20    | -2.42    | -4.61    | -9.06    | -21.34   | -8.55    | -2.69    | 1.01     | 3.51     | 5.06     | 5.98     |
| θ (30°)        | 5.95   | 5.71    | 4.30    | 1.87    | -2.14   | -7.94   | -16.24  | -19.52   | -14.99   | -10.09   | -8.76    | -6.98    | -8.37    | -5.92    | -5.44    | -8.54    | -10.40   | -13.29   | -18.95   | -6.93    | -1.82    | 1.96     | 4.72     | 5.27     | 5.95     |
| θ (45°)        | 2.71   | 3.58    | 3.90    | 1.97    | -2.16   | -8.75   | -16.74  | -19.34   | -16.31   | -14.08   | -12.80   | -14.60   | -13.73   | -9.41    | -9.15    | -11.88   | -8.84    | -8.26    | -10.01   | -12.04   | -3.28    | 0.31     | 3.29     | 3.34     | 2.71     |
| θ (60°)        | 1.06   | 1.61    | -0.81   | -2.22   | -3.63   | -4.48   | -8.01   | -13.93   | -21.98   | -10.76   | -13.54   | -12.45   | -10.67   | -9.32    | -10.00   | -17.92   | -12.62   | -11.31   | -10.56   | -13.67   | -8.71    | -3.01    | 0.71     | 3.24     | 1.06     |
| θ (75°)        | -1.04  | -0.51   | -2.75   | -5.21   | -4.97   | -6.31   | -10.59  | -14.10   | -12.99   | -16.88   | -10.97   | -11.29   | -10.17   | -8.12    | -8.18    | -20.31   | -14.08   | -13.55   | -14.42   | -9.60    | -8.88    | -14.86   | -4.70    | -2.19    | -1.04    |
| θ (90°)        | -5.90  | -6.42   | -4.68   | -6.81   | -10.33  | -16.38  | -19.71  | -14.50   | -13.04   | -15.33   | -9.96    | -13.43   | -11.21   | -13.35   | -8.35    | -15.13   | -12.94   | -15.61   | -16.27   | -12.93   | -11.81   | -7.98    | -9.90    | -11.50   | -5.90    |
| θ (105°)       | -1.94  | -0.24   | -0.26   | -3.50   | -10.22  | -10.53  | -10.19  | -12.02   | -11.53   | -12.05   | -12.58   | -14.53   | -9.99    | -14.20   | -7.04    | -11.17   | -23.06   | -18.07   | -19.26   | -13.53   | -6.06    | -3.73    | -5.29    | -5.17    | -1.94    |
| θ (120°)       | 1.22   | -1.06   | 0.32    | -0.75   | -6.55   | -11.19  | -11.96  | -11.10   | -9.44    | -12.95   | -15.25   | -14.59   | -11.46   | -13.06   | -7.22    | -9.27    | -15.50   | -14.23   | -8.53    | -5.55    | -2.26    | -0.49    | 1.00     | 0.99     | 1.22     |
| θ (135°)       | 2.33   | 2.16    | 2.09    | 1.75    | -1.28   | -4.69   | -9.50   | -8.79    | -9.69    | -9.10    | -10.87   | -8.65    | -4.26    | -4.54    | -8.43    | -9.11    | -7.59    | -8.12    | -12.67   | -11.07   | -3.75    | -0.08    | 2.67     | 3.02     | 2.33     |
| θ (150°)       | 2.72   | 1.46    | -1.04   | -0.91   | -2.34   | -6.36   | -9.66   | -10.35   | -9.29    | -14.24   | -9.26    | -5.91    | -3.09    | -3.88    | -7.45    | -7.71    | -8.21    | -10.61   | -15.76   | -15.33   | -7.23    | -2.55    | -0.69    | 0.47     | 2.72     |
| θ (165°)       | 3.51   | 3.20    | 1.84    | -0.46   | -4.10   | -8.90   | -13.07  | -13.70   | -9.79    | -9.42    | -7.42    | -4.42    | -2.80    | -3.07    | -4.82    | -8.83    | -15.47   | -17.76   | -15.04   | -10.62   | -7.30    | -4.08    | -1.03    | 1.68     | 3.51     |
| θ (180°)       | 0.04   | -1.07   | -3.06   | -6.48   | -13.43  | -24.06  | -9.52   | -4.69    | -2.02    | -0.47    | 0.32     | 0.48     | 0.04     | -1.07    | -3.06    | -6.48    | -13.43   | -24.06   | -9.52    | -4.69    | -2.02    | -0.47    | 0.32     | 0.48     | 0.04     |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -15.32 | -5.87   | -1.81   | 0.50    | 1.83    | 2.45    | 2.46    | 1.85     | 0.54     | -1.75    | -5.76    | -14.99   | -15.32   | -5.87    | -1.81    | 0.50     | 1.83     | 2.45     | 2.46     | 1.85     | 0.54     | -1.75    | -5.76    | -14.99   | -15.32   |
| θ (15°)        | -15.44 | -7.06   | -2.25   | -0.04   | 0.73    | 0.81    | 0.48    | -0.92    | -2.15    | -4.95    | -8.34    | -11.68   | -13.34   | -11.79   | -8.33    | -3.38    | -0.49    | 0.64     | 1.76     | 2.37     | 2.53     | 2.05     | 0.18     | -4.52    | -15.44   |
| θ (30°)        | -19.12 | -3.20   | 2.59    | 4.91    | 4.56    | 3.36    | 1.80    | -0.82    | -2.73    | -5.86    | -10.53   | -14.85   | -14.77   | -14.58   | -6.91    | -3.85    | -2.32    | 0.65     | 2.68     | 3.78     | 4.53     | 4.44     | 1.65     | -3.50    | -19.12   |
| θ (45°)        | -8.54  | -0.42   | 3.13    | 4.97    | 4.70    | 4.06    | 2.20    | -1.56    | -3.77    | -4.70    | -9.26    | -7.77    | -12.08   | -14.98   | -9.97    | -8.75    | -6.50    | -2.13    | 2.20     | 5.34     | 6.30     | 4.23     | -0.09    | -6.77    | -8.54    |
| θ (60°)        | -1.30  | 1.71    | 2.27    | 4.97    | 5.24    | 3.99    | 1.26    | -1.75    | -6.48    | -7.76    | -7.17    | -6.08    | -11.80   | -8.69    | -13.19   | -9.85    | -10.65   | -3.76    | 1.73     | 4.91     | 5.35     | 2.19     | -0.39    | -3.79    | -1.30    |
| θ (75°)        | -0.79  | 0.66    | 2.15    | 4.18    | 5.58    | 4.54    | 2.44    | -3.89    | -4.36    | -8.12    | -8.45    | -6.65    | -6.91    | -11.83   | -8.91    | -13.44   | -11.25   | -5.13    | -3.35    | 2.22     | 3.17     | 1.42     | 0.22     | -1.34    | -0.79    |
| θ (90°)        | -2.50  | 1.19    | 2.61    | 4.86    | [6.80]  | 4.84    | 0.88    | -1.71    | -8.36    | -5.05    | -10.49   | -7.11    | -9.19    | -10.02   | -9.41    | -9.14    | -9.64    | -3.12    | -0.57    | 2.98     | 2.07     | -1.68    | -0.26    | 1.09     | -2.50    |
| θ (105°)       | -2.31  | -0.29   | 2.24    | 4.87    | 6.73    | 5.15    | 1.37    | -1.38    | -7.46    | -9.50    | -7.74    | -10.24   | -10.28   | -11.32   | -7.80    | -12.17   | -8.36    | -2.74    | 2.18     | 4.94     | 5.28     | 3.04     | -1.19    | -0.70    | -2.31    |
| θ (120°)       | -2.51  | -3.10   | 1.29    | 4.72    | 4.59    | 2.53    | -0.58   | -3.69    | -5.95    | -8.66    | -10.87   | -11.39   | -12.02   | -11.21   | -13.89   | -8.03    | -4.40    | -0.71    | 2.47     | 4.75     | 4.68     | 1.99     | 0.95     | -1.69    | -2.51    |
| θ (135°)       | -8.95  | -3.08   | 1.45    | 4.85    | 4.78    | 3.95    | 1.94    | -1.58    | -5.31    | -4.56    | -7.80    | -11.85   | -16.01   | -11.56   | -5.65    | -12.27   | -6.56    | -1.17    | 2.95     | 4.56     | 5.34     | 4.28     | 3.48     | -1.52    | -8.95    |
| θ (150°)       | -7.13  | -5.47   | -2.10   | 1.47    | 4.35    | 4.47    | 1.72    | -2.55    | -4.14    | -7.21    | -9.36    | -8.96    | -10.03   | -8.98    | -10.38   | -11.79   | -9.03    | -5.53    | -3.35    | -1.92    | -1.35    | -1.04    | -2.77    | -10.95   | -7.13    |
| θ (165°)       | -10.66 | -6.89   | -5.17   | -3.50   | -2.49   | -2.68   | -2.19   | -2.22    | -4.07    | -6.36    | -9.20    | -9.58    | -12.50   | -16.74   | -9.77    | -6.65    | -5.61    | -3.85    | -2.51    | -1.63    | -1.52    | -2.36    | -5.09    | -9.36    | -10.66   |
| θ (180°)       | -9.52  | -4.69   | -2.02   | -0.47   | 0.32    | 0.48    | 0.04    | -1.07    | -3.06    | -6.48    | -13.43   | -24.06   | -9.52    | -4.69    | -2.02    | -0.47    | 0.32     | 0.48     | 0.04     | -1.07    | -3.06    | -6.48    | -13.43   | -24.06   | -9.52    |

|                 |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 1SS             |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Freq.<br>(MHz)  | 5300        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | 2.40        | 1.92         | 0.77         | -1.28        | -4.83        | -12.20       | -20.10       | -7.19         | -2.56         | 0.02          | 1.52          | 2.27          | 2.40          | 1.92          | 0.77          | -1.28         | -4.83         | -12.20        | -20.10        | -7.19         | -2.56         | 0.02          | 1.52          | 2.27          | 2.40          |
| $\theta$ (15°)  | [6.20]      | 5.88         | 4.27         | 1.74         | -2.18        | -6.52        | -12.62       | -14.34        | -9.57         | -5.59         | -3.45         | -2.52         | -2.65         | -3.09         | -2.70         | -3.24         | -4.87         | -9.44         | -20.90        | -8.90         | -2.92         | 1.09          | 3.43          | 5.04          | 6.20          |
| $\theta$ (30°)  | 6.14        | 5.76         | 4.54         | 2.01         | -2.37        | -8.69        | -16.49       | -15.49        | -18.71        | -12.11        | -9.52         | -7.24         | -9.45         | -6.29         | -5.90         | -7.70         | -9.11         | -12.83        | -16.13        | -5.80         | -1.01         | 2.13          | 4.45          | 4.95          | 6.14          |
| $\theta$ (45°)  | 3.06        | 3.52         | 4.02         | 2.39         | -1.66        | -8.92        | -17.30       | -19.95        | -14.74        | -15.68        | -12.51        | -16.61        | -12.98        | -10.20        | -9.16         | -12.00        | -9.62         | -9.55         | -10.36        | -11.06        | -3.33         | -0.37         | 2.81          | 2.73          | 3.06          |
| $\theta$ (60°)  | -0.00       | 1.94         | -0.02        | -0.85        | -3.01        | -4.31        | -7.53        | -13.42        | -20.71        | -11.53        | -10.95        | -13.99        | -11.37        | -8.77         | -9.35         | -20.39        | -12.00        | -10.82        | -10.12        | -13.49        | -8.64         | -2.81         | 0.44          | 2.88          | -0.00         |
| $\theta$ (75°)  | -1.56       | -0.31        | -1.01        | -4.85        | -3.68        | -4.38        | -8.46        | -12.15        | -11.07        | -18.66        | -10.40        | -14.15        | -11.02        | -8.63         | -6.83         | -17.40        | -12.75        | -12.87        | -13.98        | -7.86         | -9.33         | -11.86        | -6.01         | -2.24         | -1.56         |
| $\theta$ (90°)  | -3.65       | -3.23        | -4.23        | -4.33        | -7.70        | -12.82       | -15.37       | -13.07        | -10.48        | -17.08        | -8.97         | -14.57        | -11.54        | -12.44        | -7.47         | -13.80        | -12.44        | -15.19        | -13.17        | -9.86         | -15.00        | -7.67         | -7.86         | -7.92         | -3.65         |
| $\theta$ (105°) | 0.16        | 0.38         | 0.42         | -2.30        | -7.97        | -8.63        | -9.73        | -10.31        | -10.97        | -11.88        | -11.11        | -13.92        | -8.49         | -11.95        | -7.64         | -11.31        | -21.04        | -15.84        | -13.60        | -9.82         | -4.72         | -2.35         | -4.21         | -2.06         | 0.16          |
| $\theta$ (120°) | 1.72        | 0.23         | 1.07         | -0.03        | -7.77        | -9.14        | -10.57       | -10.02        | -8.48         | -11.59        | -13.37        | -13.06        | -11.58        | -14.70        | -6.13         | -9.21         | -14.26        | -13.03        | -7.56         | -3.93         | -1.10         | 0.14          | 1.70          | 2.24          | 1.72          |
| $\theta$ (135°) | 2.98        | 2.26         | 2.23         | 2.36         | -0.85        | -4.39        | -8.96        | -8.73         | -10.42        | -8.95         | -10.30        | -8.73         | -3.76         | -3.84         | -7.78         | -8.84         | -6.84         | -8.36         | -14.12        | -11.04        | -3.40         | 0.60          | 3.26          | 3.48          | 2.98          |
| $\theta$ (150°) | 3.98        | 2.71         | 0.46         | -0.54        | -2.35        | -6.23        | -9.92        | -12.00        | -9.53         | -13.24        | -8.25         | -5.50         | -2.83         | -3.81         | -6.85         | -7.15         | -7.68         | -10.57        | -17.33        | -19.23        | -8.10         | -2.39         | 0.15          | 1.70          | 3.98          |
| $\theta$ (165°) | 4.41        | 4.16         | 2.87         | 0.28         | -3.25        | -8.33        | -14.36       | -15.15        | -8.83         | -7.86         | -6.42         | -3.98         | -2.74         | -2.87         | -4.78         | -9.34         | -21.03        | -19.01        | -13.30        | -10.18        | -7.14         | -3.43         | -0.02         | 2.80          | 4.41          |
| $\theta$ (180°) | 0.60        | -0.47        | -2.39        | -5.70        | -12.28       | -26.14       | -9.41        | -4.38         | -1.63         | -0.02         | 0.81          | 1.01          | 0.60          | -0.47         | -2.39         | -5.70         | -12.28        | -26.14        | -9.41         | -4.38         | -1.63         | -0.02         | 0.81          | 1.01          | 0.60          |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -20.10      | -7.19        | -2.56        | 0.02         | 1.52         | 2.27         | 2.40         | 1.92          | 0.77          | -1.28         | -4.83         | -12.20        | -20.10        | -7.19         | -2.56         | 0.02          | 1.52          | 2.27          | 2.40          | 1.92          | 0.77          | -1.28         | -4.83         | -12.20        | -20.10        |
| $\theta$ (15°)  | -16.35      | -7.43        | -2.93        | -1.02        | 0.00         | 0.04         | -0.13        | -1.49         | -3.07         | -5.09         | -8.98         | -13.54        | -17.28        | -14.27        | -8.47         | -4.14         | -1.69         | 0.27          | 1.66          | 2.50          | 2.86          | 1.93          | -0.12         | -4.47         | -16.35        |
| $\theta$ (30°)  | -17.24      | -3.98        | 2.20         | 5.04         | 4.64         | 3.13         | 1.81         | -0.35         | -3.44         | -6.10         | -9.57         | -15.73        | -15.17        | -16.11        | -7.39         | -4.50         | -1.70         | 1.49          | 3.28          | 4.46          | 5.33          | 5.07          | 1.91          | -4.53         | -17.24        |
| $\theta$ (45°)  | -10.05      | -0.76        | 3.28         | 5.25         | 4.89         | 4.37         | 2.90         | -0.72         | -3.75         | -3.60         | -10.25        | -8.67         | -11.27        | -17.14        | -11.66        | -9.01         | -6.86         | -1.95         | 2.14          | 5.33          | 6.07          | 4.02          | -0.26         | -7.15         | -10.05        |
| $\theta$ (60°)  | -0.67       | 1.50         | 2.51         | 5.71         | 5.91         | 4.43         | 1.91         | -1.75         | -5.33         | -7.46         | -6.91         | -5.94         | -10.34        | -9.42         | -13.64        | -11.39        | -10.33        | -3.27         | 1.66          | 4.77          | 5.30          | 2.11          | -0.78         | -2.57         | -0.67         |
| $\theta$ (75°)  | -0.95       | -0.14        | 1.69         | 3.49         | 4.97         | 4.32         | 2.59         | -3.01         | -4.47         | -7.07         | -8.68         | -6.90         | -7.23         | -11.76        | -9.44         | -12.68        | -12.21        | -4.60         | -3.17         | 2.47          | 3.20          | 1.34          | 0.14          | -0.57         | -0.95         |
| $\theta$ (90°)  | -3.91       | 0.72         | 2.99         | 5.17         | [6.71]       | 4.44         | 0.38         | -1.61         | -10.38        | -5.39         | -11.02        | -7.42         | -8.91         | -10.87        | -9.36         | -9.58         | -9.37         | -4.41         | -0.32         | 3.44          | 3.02          | -0.13         | 0.43          | 1.55          | -3.91         |
| $\theta$ (105°) | -3.23       | -0.68        | 2.24         | 5.58         | 6.69         | 5.27         | 1.75         | -1.77         | -6.36         | -8.34         | -8.17         | -9.34         | -11.30        | -11.49        | -7.56         | -12.51        | -7.84         | -2.15         | 2.60          | 5.11          | 5.31          | 3.12          | -0.23         | -0.81         | -3.23         |
| $\theta$ (120°) | -3.47       | -2.64        | 1.40         | 4.17         | 3.85         | 2.38         | -0.89        | -4.61         | -5.72         | -7.80         | -11.46        | -9.85         | -11.79        | -11.58        | -15.21        | -8.61         | -4.32         | -0.69         | 2.42          | 4.79          | 4.89          | 2.50          | 0.67          | -2.29         | -3.47         |
| $\theta$ (135°) | -9.40       | -4.00        | 1.75         | 5.01         | 5.10         | 4.03         | 1.77         | -1.42         | -5.23         | -4.52         | -8.37         | -11.33        | -16.27        | -10.67        | -5.53         | -13.57        | -6.66         | -1.44         | 2.84          | 4.69          | 5.41          | 4.61          | 3.88          | -2.27         | -9.40         |
| $\theta$ (150°) | -5.03       | -4.57        | -1.82        | 2.04         | 4.98         | 4.96         | 1.86         | -2.22         | -3.28         | -5.96         | -9.02         | -8.43         | -10.16        | -9.33         | -11.17        | -12.84        | -7.65         | -5.71         | -4.14         | -2.42         | -1.39         | -0.53         | -2.26         | -8.91         | -5.03         |
| $\theta$ (165°) | -11.39      | -6.72        | -3.69        | -1.40        | -0.26        | -0.53        | -1.28        | -1.21         | -2.72         | -4.98         | -8.27         | -9.44         | -12.48        | -15.59        | -9.52         | -6.42         | -5.22         | -4.06         | -2.64         | -1.48         | -1.07         | -1.80         | -4.40         | -8.86         | -11.39        |
| $\theta$ (180°) | -9.41       | -4.38        | -1.63        | -0.02        | 0.81         | 1.01         | 0.60         | -0.47         | -2.39         | -5.70         | -12.28        | -26.14        | -9.41         | -4.38         | -1.63         | -0.02         | 0.81          | 1.01          | 0.60          | -0.47         | -2.39         | -5.70         | -12.28        | -26.14        | -9.41         |

|                 |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 1SS             |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Freq.<br>(MHz)  | 5350        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | 2.00        | 1.58         | 0.50         | -1.46        | -4.81        | -11.53       | -24.03       | -8.26         | -3.30         | -0.59         | 0.99          | 1.81          | 2.00          | 1.58          | 0.50          | -1.46         | -4.81         | -11.53        | -24.03        | -8.26         | -3.30         | -0.59         | 0.99          | 1.81          | 2.00          |
| $\theta$ (15°)  | 5.87        | 5.45         | 3.78         | 1.31         | -2.12        | -7.07        | -13.12       | -15.79        | -10.75        | -7.72         | -5.07         | -4.20         | -3.98         | -4.54         | -4.26         | -4.58         | -5.54         | -9.92         | -19.28        | -9.65         | -3.83         | 0.46          | 2.99          | 4.65          | 5.87          |
| $\theta$ (30°)  | [6.22]      | 5.83         | 4.92         | 2.16         | -2.61        | -9.47        | -22.18       | -13.69        | -16.64        | -14.25        | -11.59        | -8.40         | -12.32        | -8.73         | -6.22         | -5.77         | -8.03         | -12.96        | -14.27        | -5.20         | -0.67         | 2.25          | 4.21          | 4.79          | 6.22          |
| $\theta$ (45°)  | 3.44        | 3.53         | 4.07         | 2.20         | -1.89        | -8.15        | -18.49       | -19.63        | -16.15        | -13.60        | -14.50        | -19.59        | -15.40        | -10.98        | -8.31         | -11.30        | -11.80        | -9.53         | -10.50        | -11.31        | -3.43         | -0.98         | 2.47          | 2.62          | 3.44          |
| $\theta$ (60°)  | 0.61        | 2.56         | 1.05         | -0.02        | -2.46        | -4.79        | -7.72        | -12.88        | -18.58        | -14.10        | -9.91         | -15.26        | -10.87        | -8.31         | -8.43         | -17.96        | -14.06        | -11.24        | -9.77         | -12.83        | -9.17         | -3.03         | 0.55          | 3.20          | 0.61          |
| $\theta$ (75°)  | -2.45       | -0.45        | 0.25         | -4.00        | -3.40        | -4.54        | -8.74        | -12.08        | -11.00        | -17.37        | -9.57         | -15.67        | -11.93        | -8.17         | -5.95         | -15.99        | -12.72        | -13.66        | -15.24        | -7.75         | -8.68         | -10.67        | -6.85         | -1.24         | -2.45         |
| $\theta$ (90°)  | -4.25       | -1.44        | -5.45        | -4.11        | -6.95        | -11.25       | -14.92       | -13.34        | -10.37        | -18.72        | -8.85         | -15.83        | -10.61        | -11.54        | -6.79         | -13.34        | -13.66        | -15.09        | -12.71        | -8.73         | -20.59        | -7.68         | -6.97         | -7.91         | -4.25         |
| $\theta$ (105°) | 0.76        | 0.35         | 0.36         | -2.36        | -6.82        | -7.78        | -10.56       | -10.14        | -11.50        | -11.43        | -10.31        | -14.48        | -7.95         | -10.27        | -8.96         | -11.47        | -24.06        | -14.47        | -12.74        | -8.93         | -5.18         | -1.19         | -3.71         | -1.97         | 0.76          |
| $\theta$ (120°) | 1.96        | 0.55         | 0.92         | -0.46        | -8.85        | -8.06        | -9.47        | -9.77         | -7.98         | -12.10        | -13.90        | -11.84        | -9.95         | -15.80        | -6.37         | -8.71         | -13.43        | -13.42        | -8.13         | -3.99         | -1.51         | -0.16         | 1.18          | 2.51          | 1.96          |
| $\theta$ (135°) | 3.20        | 1.58         | 1.93         | 1.99         | -1.59        | -4.85        | -7.65        | -7.90         | -9.93         | -9.35         | -10.32        | -9.02         | -3.70         | -3.59         | -7.15         | -8.59         | -6.91         | -9.22         | -15.63        | -11.25        | -3.10         | 0.95          | 3.61          | 3.63          | 3.20          |
| $\theta$ (150°) | 4.27        | 2.66         | 0.89         | -0.33        | -2.97        | -7.01        | -12.15       | -14.16        | -10.48        | -12.47        | -8.05         | -5.91         | -3.38         | -3.87         | -6.19         | -6.94         | -7.18         | -10.28        | -14.32        | -16.94        | -8.12         | -1.98         | 0.26          | 1.86          | 4.27          |
| $\theta$ (165°) | 4.85        | 4.44         | 3.04         | 0.69         | -2.70        | -7.03        | -13.58       | -14.37        | -8.41         | -7.58         | -6.76         | -4.66         | -3.35         | -3.44         | -5.18         | -9.72         | -18.94        | -18.04        | -12.96        | -11.12        | -8.26         | -3.74         | 0.48          | 3.32          | 4.85          |
| $\theta$ (180°) | 1.10        | 0.08         | -1.78        | -4.96        | -11.16       | -30.28       | -9.49        | -4.18         | -1.33         | 0.34          | 1.22          | 1.46          | 1.10          | 0.08          | -1.78         | -4.96         | -11.16        | -30.28        | -9.49         | -4.18         | -1.33         | 0.34          | 1.22          | 1.46          | 1.10          |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -24.03      | -8.26        | -3.30        | -0.59        | 0.99         | 1.81         | 2.00         | 1.58          | 0.50          | -1.46         | -4.81         | -11.53        | -24.03        | -8.26         | -3.30         | -0.59         | 0.99          | 1.81          | 2.00          | 1.58          | 0.50          | -1.46         | -4.81         | -11.53        | -24.03        |
| $\theta$ (15°)  | -19.27      | -9.01        | -3.92        | -2.02        | -0.79        | -0.55        | -1.07        | -2.00         | -4.32         | -5.45         | -8.05         | -13.25        | -22.46        | -21.13        | -10.64        | -5.53         | -2.77         | -0.02         | 1.43          | 2.33          | 2.87          | 2.01          | -0.46         | -5.11         | -19.27        |
| $\theta$ (30°)  | -14.94      | -3.74        | 2.49         | 5.18         | 4.70         | 2.88         | 1.47         | -0.25         | -3.99         | -6.99         | -9.63         | -18.70        | -15.12        | -15.34        | -8.17         | -5.40         | -0.98         | 1.80          | 3.39          | 4.65          | 5.73          | 5.18          | 1.32          | -6.20         | -14.94        |
| $\theta$ (45°)  | -9.07       | -0.84        | 3.31         | 5.08         | 5.13         | 4.45         | 2.65         | -0.28         | -3.88         | -4.06         | -9.08         | -9.63         | -11.15        | -16.77        | -12.71        | -9.67         | -6.40         | -1.74         | 2.39          | 5.39          | 5.88          | 3.70          | -0.01         | -6.73         | -9.07         |
| $\theta$ (60°)  | -0.79       | 1.47         | 2.97         | 6.24         | 5.86         | 4.37         | 1.83         | -2.29         | -4.92         | -7.61         | -7.12         | -6.16         | -8.87         | -9.99         | -13.10        | -11.73        | -9.80         | -3.02         | 1.48          | 4.72          | 5.13          | 1.38          | -0.02         | -2.19         | -0.79         |
| $\theta$ (75°)  | -1.46       | -0.67        | 1.55         | 3.14         | 4.69         | 4.26         | 2.69         | -2.09         | -3.97         | -6.33         | -9.62         | -6.46         | -7.82         | -12.10        | -11.50        | -13.11        | -13.86        | -4.93         | -3.62         | 2.27          | 3.33          | 1.16          | -0.43         | 0.15          | -1.46         |
| $\theta$ (90°)  | -3.93       | 1.06         | 2.77         | 5.47         | 6.28         | 4.24         | -0.21        | -1.71         | -10.60        | -6.43         | -10.53        | -8.21         | -9.07         | -11.61        | -9.95         | -10.59        | -10.02        | -5.27         | -0.00         | 3.74          | 3.70          | 0.75          | 0.87          | 1.63          | -3.93         |
| $\theta$ (105°) | -3.34       | -0.44        | 2.01         | 5.72         | [6.66]       | 5.31         | 2.46         | -1.55         | -5.20         | -7.94         | -8.37         | -9.13         | -12.38        | -10.72        | -8.04         | -11.87        | -7.74         | -1.39         | 2.66          | 4.93          | 5.20          | 2.99          | -0.22         | -1.04         | -3.34         |
| $\theta$ (120°) | -3.91       | -2.44        | 1.57         | 3.66         | 3.11         | 2.39         | -0.33        | -3.83         | -4.93         | -7.23         | -10.27        | -9.46         | -12.75        | -12.64        | -16.58        | -8.44         | -4.09         | -0.97         | 2.73          | 5.15          | 5.26          | 2.39          | 0.09          | -2.86         | -3.91         |
| $\theta$ (135°) | -8.33       | -4.19        | 1.57         | 4.84         | 5.29         | 4.25         | 1.93         | -1.44         | -5.75         | -4.42         | -8.11         | -11.51        | -14.84        | -10.15        | -5.62         | -15.12        | -5.77         | -1.76         | 2.88          | 4.92          | 5.77          | 5.10          | 3.73          | -2.82         | -8.33         |
| $\theta$ (150°) | -5.31       | -4.17        | -1.13        | 2.03         | 4.83         | 4.89         | 1.67         | -3.36         | -3.36         | -6.03         | -8.56         | -8.58         | -10.49        | -9.35         | -12.44        | -11.51        | -6.05         | -4.80         | -3.69         | -1.80         | -1.27         | -0.48         | -2.29         | -7.02         | -5.31         |
| $\theta$ (165°) | -14.13      | -7.90        | -2.92        | -0.60        | 0.48         | 0.23         | -0.96        | -0.89         | -2.52         | -4.51         | -7.71         | -9.69         | -12.61        | -15.42        | -9.42         | -6.19         | -5.15         | -4.11         | -2.84         | -1.57         | -1.01         | -1.41         | -3.83         | -9.66         | -14.13        |
| $\theta$ (180°) | -9.49       | -4.18        | -1.33        | 0.34         | 1.22         | 1.46         | 1.10         | 0.08          | -1.78         | -4.96         | -11.16        | -30.28        | -9.49         | -4.18         | -1.33         | 0.34          | 1.22          | 1.46          | 1.10          | 0.08          | -1.78         | -4.96         | -11.16        | -30.28        | -9.49         |

|                |        |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1SS            |        |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Freq.<br>(MHz) | 5470   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | 1.74   | 1.14    | -0.14   | -2.40   | -6.33   | -15.21  | -16.63  | -6.78    | -2.64    | -0.29    | 1.07     | 1.70     | 1.74     | 1.14     | -0.14    | -2.40    | -6.33    | -15.21   | -16.63   | -6.78    | -2.64    | -0.29    | 1.07     | 1.70     | 1.74     |
| θ (15°)        | 4.57   | 4.29    | 3.21    | 0.98    | -2.17   | -5.73   | -10.44  | -15.77   | -13.72   | -9.77    | -7.74    | -5.40    | -4.59    | -4.37    | -4.88    | -4.79    | -5.86    | -8.32    | -14.73   | -11.97   | -6.50    | -1.61    | 1.63     | 3.95     | 4.57     |
| θ (30°)        | [6.31] | 5.56    | 4.16    | 0.72    | -3.65   | -9.29   | -20.33  | -16.77   | -18.47   | -21.84   | -15.73   | -10.54   | -8.93    | -14.69   | -8.38    | -6.44    | -7.70    | -12.68   | -11.30   | -5.83    | -1.90    | 1.97     | 4.07     | 4.87     | 6.31     |
| θ (45°)        | 3.81   | 3.76    | 3.13    | 0.44    | -2.61   | -7.20   | -13.95  | -14.21   | -19.46   | -11.88   | -18.12   | -15.95   | -10.14   | -9.87    | -7.23    | -12.67   | -11.58   | -9.06    | -10.80   | -10.39   | -3.95    | 0.30     | 2.23     | 3.40     | 3.81     |
| θ (60°)        | 1.26   | 2.17    | 2.26    | 0.92    | -2.03   | -5.81   | -8.78   | -13.12   | -15.41   | -13.89   | -13.59   | -16.99   | -14.02   | -11.77   | -7.74    | -16.02   | -13.12   | -11.05   | -12.58   | -15.71   | -9.82    | -1.61    | 1.18     | 3.13     | 1.26     |
| θ (75°)        | -2.48  | 0.02    | 1.77    | -2.19   | -4.82   | -6.49   | -11.03  | -17.12   | -14.49   | -18.31   | -9.71    | -9.45    | -10.32   | -8.69    | -6.16    | -14.38   | -13.00   | -12.06   | -13.51   | -10.30   | -9.59    | -10.44   | -9.65    | 0.28     | -2.48    |
| θ (90°)        | -6.67  | 0.48    | -3.27   | -4.53   | -6.44   | -9.17   | -15.78  | -21.49   | -10.87   | -18.67   | -7.88    | -11.46   | -7.21    | -11.39   | -7.70    | -13.12   | -12.10   | -12.68   | -13.92   | -9.04    | -21.72   | -10.56   | -5.81    | -6.36    | -6.67    |
| θ (105°)       | 1.21   | 0.43    | -0.11   | -1.92   | -4.70   | -8.43   | -10.48  | -12.91   | -11.68   | -11.50   | -13.11   | -16.06   | -9.26    | -8.31    | -9.54    | -11.30   | -15.99   | -10.55   | -13.08   | -9.04    | -5.05    | -1.27    | -3.10    | -4.09    | 1.21     |
| θ (120°)       | 2.45   | 0.78    | -0.28   | -1.50   | -5.06   | -7.54   | -8.44   | -11.07   | -7.91    | -11.28   | -15.49   | -12.61   | -9.03    | -13.28   | -6.34    | -7.85    | -14.12   | -10.61   | -9.26    | -4.91    | -1.53    | 0.55     | 0.31     | 2.73     | 2.45     |
| θ (135°)       | 2.64   | 1.84    | 2.91    | 1.83    | -2.04   | -6.36   | -7.47   | -7.27    | -10.16   | -9.40    | -10.58   | -8.60    | -5.64    | -4.15    | -6.34    | -8.07    | -8.88    | -10.80   | -13.79   | -10.73   | -1.61    | 1.22     | 3.71     | 3.61     | 2.64     |
| θ (150°)       | 4.43   | 2.31    | 1.75    | -0.44   | -5.16   | -10.10  | -14.50  | -16.41   | -12.07   | -11.81   | -7.73    | -6.34    | -4.12    | -5.91    | -7.75    | -8.17    | -7.46    | -11.66   | -15.12   | -11.35   | -6.57    | -2.76    | -0.89    | 2.28     | 4.43     |
| θ (165°)       | 5.39   | 4.48    | 2.71    | 0.92    | -1.97   | -6.12   | -11.68  | -14.84   | -10.03   | -8.20    | -7.29    | -5.17    | -3.72    | -2.87    | -3.81    | -7.74    | -15.40   | -17.55   | -15.92   | -17.72   | -9.52    | -2.34    | 1.79     | 4.54     | 5.39     |
| θ (180°)       | 0.73   | -0.42   | -2.46   | -6.00   | -13.32  | -21.45  | -8.42   | -3.77    | -1.19    | 0.32     | 1.08     | 1.21     | 0.73     | -0.42    | -2.46    | -6.00    | -13.32   | -21.45   | -8.42    | -3.77    | -1.19    | 0.32     | 1.08     | 1.21     | 0.73     |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -16.63 | -6.78   | -2.64   | -0.29   | 1.07    | 1.70    | 1.74    | 1.14     | -0.14    | -2.40    | -6.33    | -15.21   | -16.63   | -6.78    | -2.64    | -0.29    | 1.07     | 1.70     | 1.74     | 1.14     | -0.14    | -2.40    | -6.33    | -15.21   | -16.63   |
| θ (15°)        | -17.34 | -14.59  | -6.08   | -1.75   | -1.13   | -1.13   | -1.60   | -2.38    | -3.31    | -4.66    | -6.25    | -10.41   | -18.09   | -18.17   | -14.68   | -8.72    | -3.50    | -1.29    | 0.69     | 2.02     | 2.00     | 0.75     | -2.84    | -8.42    | -17.34   |
| θ (30°)        | -15.01 | -4.11   | 2.53    | 3.70    | 2.66    | 2.19    | 1.41    | -0.54    | -3.92    | -9.23    | -8.62    | -14.44   | -11.49   | -13.26   | -11.46   | -6.48    | -0.97    | 1.80     | 3.33     | 4.75     | 5.52     | 4.34     | 0.35     | -5.71    | -15.01   |
| θ (45°)        | -6.07  | -1.54   | 2.95    | 4.14    | 5.34    | 4.42    | 1.97    | -1.20    | -4.47    | -6.27    | -8.61    | -11.50   | -13.21   | -19.97   | -12.87   | -10.72   | -7.47    | -2.12    | 1.75     | 4.75     | 5.22     | 3.79     | -0.13    | -7.16    | -6.07    |
| θ (60°)        | -1.47  | 2.16    | 3.54    | 6.02    | 5.45    | 3.89    | 1.79    | -2.06    | -5.74    | -7.99    | -6.33    | -8.47    | -9.01    | -11.22   | -9.77    | -14.24   | -8.61    | -4.01    | 1.53     | 4.85     | 4.80     | 1.18     | 0.01     | -1.88    | -1.47    |
| θ (75°)        | -1.53  | -0.06   | 2.01    | 3.09    | 5.50    | 4.55    | 1.90    | -2.35    | -6.89    | -5.15    | -9.38    | -7.72    | -6.80    | -12.59   | -9.88    | -17.72   | -12.87   | -6.49    | -3.82    | 2.05     | 3.34     | 1.36     | -1.31    | 0.18     | -1.53    |
| θ (90°)        | -3.48  | 0.71    | 2.77    | 6.05    | 5.13    | 4.42    | 1.00    | -3.22    | -5.85    | -9.04    | -8.88    | -12.98   | -8.73    | -10.10   | -12.36   | -11.89   | -10.70   | -6.18    | 0.60     | 3.31     | 3.95     | 1.56     | 0.99     | 1.37     | -3.48    |
| θ (105°)       | -3.10  | 0.01    | 2.37    | 5.99    | [6.39]  | 5.81    | 3.68    | -0.75    | -3.27    | -8.71    | -7.63    | -10.23   | -14.49   | -12.10   | -9.01    | -13.30   | -6.74    | -1.25    | 1.27     | 4.08     | 4.87     | 2.82     | -0.89    | -1.96    | -3.10    |
| θ (120°)       | -4.76  | -2.30   | 1.36    | 3.72    | 4.04    | 3.03    | -0.21   | -2.77    | -3.81    | -6.66    | -9.16    | -10.26   | -12.40   | -13.60   | -14.03   | -9.16    | -5.36    | -0.94    | 2.45     | 5.29     | 5.85     | 1.97     | -0.70    | -2.83    | -4.76    |
| θ (135°)       | -7.69  | -4.59   | 2.14    | 4.92    | 6.22    | 4.97    | 2.42    | -1.06    | -5.58    | -4.96    | -7.22    | -12.70   | -11.69   | -9.58    | -8.97    | -10.77   | -7.38    | -2.94    | 2.68     | 4.86     | 6.22     | 5.25     | 3.18     | -2.18    | -7.69    |
| θ (150°)       | -6.66  | -3.96   | -0.07   | 2.03    | 4.23    | 4.83    | 1.73    | -5.39    | -5.92    | -5.17    | -8.00    | -10.40   | -10.25   | -9.15    | -17.40   | -9.34    | -5.19    | -4.77    | -1.21    | 1.02     | 0.87     | -0.01    | -2.19    | -6.07    | -6.66    |
| θ (165°)       | -20.32 | -8.35   | -2.91   | 0.44    | 1.94    | 2.21    | 0.97    | -0.35    | -1.67    | -4.04    | -7.03    | -10.35   | -14.42   | -14.60   | -10.32   | -7.55    | -6.43    | -4.65    | -2.66    | -0.86    | -0.06    | -0.47    | -2.92    | -8.25    | -20.32   |
| θ (180°)       | -8.42  | -3.77   | -1.19   | 0.32    | 1.08    | 1.21    | 0.73    | -0.42    | -2.46    | -6.00    | -13.32   | -21.45   | -8.42    | -3.77    | -1.19    | 0.32     | 1.08     | 1.21     | 0.73     | -0.42    | -2.46    | -6.00    | -13.32   | -21.45   | -8.42    |

|                 |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 1SS             |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Freq.<br>(MHz)  | 5600        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | 1.01        | 0.58         | -0.52        | -2.49        | -5.88        | -12.73       | -24.20       | -9.11         | -4.22         | -1.54         | 0.03          | 0.84          | 1.01          | 0.58          | -0.52         | -2.49         | -5.88         | -12.73        | -24.20        | -9.11         | -4.22         | -1.54         | 0.03          | 0.84          | 1.01          |
| $\theta$ (15°)  | 4.40        | 4.13         | 3.30         | 1.42         | -2.15        | -7.12        | -13.76       | -18.95        | -16.93        | -12.14        | -7.57         | -5.55         | -4.54         | -6.83         | -8.19         | -7.98         | -8.63         | -10.59        | -14.73        | -12.08        | -6.68         | -2.04         | 1.56          | 3.78          | 4.40          |
| $\theta$ (30°)  | [6.35]      | 5.25         | 3.21         | -0.42        | -3.95        | -8.17        | -20.36       | -15.22        | -11.61        | -16.36        | -13.81        | -10.45        | -9.87         | -10.38        | -10.05        | -7.74         | -7.32         | -11.30        | -11.28        | -6.87         | -2.40         | 1.49          | 3.27          | 4.71          | 6.35          |
| $\theta$ (45°)  | 4.27        | 3.97         | 2.89         | 1.49         | -1.40        | -7.15        | -16.08       | -15.29        | -15.38        | -13.02        | -17.38        | -26.72        | -10.66        | -15.97        | -9.40         | -9.88         | -10.32        | -12.24        | -14.17        | -9.99         | -4.19         | 0.97          | 2.08          | 4.09          | 4.27          |
| $\theta$ (60°)  | 0.52        | 3.31         | 2.96         | 1.18         | -2.97        | -6.81        | -9.69        | -13.84        | -17.04        | -11.80        | -14.75        | -15.29        | -13.64        | -13.47        | -9.79         | -15.18        | -11.25        | -10.53        | -13.55        | -13.84        | -8.31         | -0.94         | 1.66          | 2.60          | 0.52          |
| $\theta$ (75°)  | -1.88       | -0.32        | 1.21         | -1.72        | -3.33        | -5.09        | -11.53       | -16.49        | -19.34        | -14.67        | -13.11        | -12.80        | -14.28        | -6.75         | -7.21         | -16.21        | -12.45        | -14.88        | -16.56        | -14.02        | -12.66        | -7.21         | -5.89         | 0.40          | -1.88         |
| $\theta$ (90°)  | -3.64       | -0.12        | -2.68        | -5.54        | -5.23        | -7.41        | -18.17       | -17.59        | -14.11        | -13.88        | -10.45        | -14.57        | -9.00         | -9.64         | -7.12         | -14.20        | -12.04        | -13.17        | -14.10        | -10.14        | -17.81        | -12.56        | -7.54         | -6.27         | -3.64         |
| $\theta$ (105°) | -0.24       | -0.46        | -1.16        | -2.12        | -3.13        | -8.26        | -12.68       | -11.36        | -15.06        | -10.80        | -13.25        | -19.10        | -10.62        | -8.34         | -10.32        | -13.82        | -15.87        | -11.59        | -17.70        | -11.35        | -5.83         | -2.79         | -3.87         | -1.39         | -0.24         |
| $\theta$ (120°) | 3.66        | 1.87         | 0.66         | -1.22        | -4.79        | -9.82        | -9.95        | -12.39        | -9.46         | -8.32         | -15.91        | -14.78        | -9.77         | -14.20        | -6.28         | -8.22         | -10.28        | -11.20        | -12.24        | -7.63         | -2.77         | 0.92          | -0.29         | 2.46          | 3.66          |
| $\theta$ (135°) | 1.56        | 1.85         | 2.84         | 1.30         | -2.69        | -7.50        | -8.05        | -9.62         | -12.77        | -9.15         | -12.28        | -8.46         | -5.79         | -4.86         | -6.63         | -9.61         | -9.58         | -8.39         | -11.42        | -9.53         | -1.12         | 1.86          | 4.04          | 2.57          | 1.56          |
| $\theta$ (150°) | 4.55        | 4.02         | 2.70         | -1.27        | -5.43        | -9.20        | -11.89       | -14.32        | -10.86        | -10.59        | -9.38         | -8.78         | -4.48         | -6.21         | -7.50         | -8.22         | -9.45         | -16.47        | -16.65        | -9.46         | -4.39         | -1.88         | -0.21         | 3.28          | 4.55          |
| $\theta$ (165°) | 5.02        | 4.39         | 3.31         | 1.65         | -1.26        | -5.53        | -9.05        | -12.12        | -8.69         | -6.55         | -6.12         | -5.34         | -3.53         | -2.38         | -3.74         | -9.01         | -20.44        | -17.17        | -16.01        | -17.38        | -8.41         | -0.95         | 3.17          | 5.24          | 5.02          |
| $\theta$ (180°) | 0.31        | -1.08        | -3.49        | -7.75        | -18.26       | -15.20       | -6.79        | -2.97         | -0.77         | 0.48          | 1.03          | 0.99          | 0.31          | -1.08         | -3.49         | -7.75         | -18.26        | -15.20        | -6.79         | -2.97         | -0.77         | 0.48          | 1.03          | 0.99          | 0.31          |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -24.20      | -9.11        | -4.22        | -1.54        | 0.03         | 0.84         | 1.01         | 0.58          | -0.52         | -2.49         | -5.88         | -12.73        | -24.20        | -9.11         | -4.22         | -1.54         | 0.03          | 0.84          | 1.01          | 0.58          | -0.52         | -2.49         | -5.88         | -12.73        | -24.20        |
| $\theta$ (15°)  | -21.44      | -13.51       | -5.14        | -1.47        | -0.24        | -0.97        | -2.73        | -4.48         | -5.19         | -5.64         | -6.19         | -9.90         | -18.06        | -17.65        | -15.60        | -11.87        | -7.07         | -2.75         | -0.58         | 0.69          | 0.94          | -0.54         | -4.12         | -11.25        | -21.44        |
| $\theta$ (30°)  | -13.71      | -2.99        | 1.46         | 3.66         | 4.27         | 2.81         | 0.90         | -0.83         | -3.78         | -10.97        | -10.78        | -17.87        | -14.69        | -14.98        | -12.77        | -8.50         | -2.44         | 0.73          | 2.93          | 4.79          | 5.29          | 3.66          | -0.05         | -6.68         | -13.71        |
| $\theta$ (45°)  | -5.87       | 0.15         | 2.38         | 4.73         | 5.59         | 4.03         | 1.73         | -1.66         | -3.74         | -7.51         | -11.93        | -9.34         | -12.75        | -19.40        | -14.81        | -10.24        | -6.60         | -3.47         | 0.87          | 4.11          | 5.54          | 4.51          | -0.30         | -4.62         | -5.87         |
| $\theta$ (60°)  | -0.57       | 2.62         | 4.03         | 5.61         | 5.75         | 3.85         | 1.56         | -2.22         | -5.72         | -8.31         | -6.67         | -6.82         | -10.69        | -11.09        | -12.45        | -22.91        | -10.98        | -3.81         | 1.95          | 4.47          | 4.48          | 1.89          | -0.11         | -1.02         | -0.57         |
| $\theta$ (75°)  | -0.39       | -0.98        | 3.15         | 4.37         | 5.80         | 5.00         | 2.03         | -1.59         | -6.55         | -6.56         | -8.61         | -8.38         | -6.44         | -10.75        | -12.18        | -18.97        | -16.14        | -8.78         | -4.53         | 0.24          | 3.05          | 0.88          | -0.37         | 0.63          | -0.39         |
| $\theta$ (90°)  | -2.87       | 0.79         | 2.50         | 5.38         | [7.07]       | 5.83         | 1.80         | -3.13         | -5.47         | -9.83         | -7.54         | -10.58        | -8.34         | -8.67         | -12.28        | -11.36        | -8.37         | -3.81         | 1.93          | 4.06          | 4.63          | 1.93          | 1.54          | 1.18          | -2.87         |
| $\theta$ (105°) | -3.03       | -0.39        | 3.01         | 5.46         | 6.36         | 5.48         | 4.00         | -0.34         | -2.92         | -9.58         | -7.58         | -11.36        | -16.10        | -11.26        | -9.73         | -13.97        | -7.32         | -1.82         | 0.93          | 4.60          | 5.30          | 3.82          | -1.41         | -3.00         | -3.03         |
| $\theta$ (120°) | -3.63       | -2.33        | 1.97         | 3.96         | 5.14         | 4.23         | 0.95         | -4.54         | -4.76         | -8.18         | -11.15        | -11.06        | -13.26        | -13.92        | -12.91        | -8.55         | -4.95         | -2.14         | 1.26          | 5.01          | 5.78          | 2.43          | -0.94         | -1.84         | -3.63         |
| $\theta$ (135°) | -8.14       | -6.51        | 2.00         | 4.86         | 5.78         | 4.40         | 2.00         | -2.02         | -5.76         | -7.95         | -7.49         | -14.84        | -13.20        | -11.15        | -11.65        | -10.57        | -8.34         | -1.89         | 2.58          | 4.92          | 6.17          | 5.54          | 2.66          | -4.95         | -8.14         |
| $\theta$ (150°) | -11.46      | -2.55        | -0.19        | 2.58         | 4.28         | 4.87         | 2.75         | -4.38         | -4.64         | -3.62         | -8.46         | -10.70        | -11.01        | -11.74        | -18.20        | -8.34         | -5.11         | -2.39         | 1.06          | 2.64          | 2.35          | 0.92          | -1.79         | -5.10         | -11.46        |
| $\theta$ (165°) | -19.14      | -6.96        | -0.50        | 1.41         | 2.02         | 1.63         | 0.49         | 0.23          | -0.65         | -3.87         | -8.46         | -12.33        | -19.17        | -13.17        | -7.92         | -6.63         | -6.11         | -4.98         | -2.46         | -0.46         | 0.79          | 1.29          | -0.31         | -5.19         | -19.14        |
| $\theta$ (180°) | -6.79       | -2.97        | -0.77        | 0.48         | 1.03         | 0.99         | 0.31         | -1.08         | -3.49         | -7.75         | -18.26        | -15.20        | -6.79         | -2.97         | -0.77         | 0.48          | 1.03          | 0.99          | 0.31          | -1.08         | -3.49         | -7.75         | -18.26        | -15.20        | -6.79         |

|                 |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 1SS             |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Freq. (MHz)     | 5725        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | 1.28        | 0.72         | -0.53        | -2.73        | -6.57        | -15.01       | -17.94       | -7.49         | -3.23         | -0.83         | 0.56          | 1.23          | 1.28          | 0.72          | -0.53         | -2.73         | -6.57         | -15.01        | -17.94        | -7.49         | -3.23         | -0.83         | 0.56          | 1.23          | 1.28          |
| $\theta$ (15°)  | 4.28        | 4.07         | 2.45         | -0.24        | -3.57        | -7.63        | -12.36       | -17.84        | -19.82        | -13.17        | -9.43         | -6.23         | -6.10         | -5.73         | -6.27         | -7.96         | -8.81         | -11.71        | -18.21        | -12.93        | -7.28         | -3.08         | 1.46          | 3.45          | 4.28          |
| $\theta$ (30°)  | [5.26]      | 4.64         | 2.73         | -0.35        | -3.35        | -7.81        | -13.12       | -24.77        | -13.18        | -13.54        | -16.66        | -10.22        | -7.46         | -9.62         | -8.76         | -8.10         | -8.42         | -10.78        | -12.31        | -10.65        | -4.65         | 0.57          | 1.53          | 3.38          | 5.26          |
| $\theta$ (45°)  | 4.92        | 4.55         | 1.69         | 1.92         | -0.35        | -3.97        | -9.02        | -12.72        | -11.60        | -13.16        | -16.90        | -21.13        | -14.78        | -13.92        | -9.32         | -8.55         | -8.46         | -10.27        | -10.87        | -8.77         | -2.62         | 1.32          | 2.29          | 4.15          | 4.92          |
| $\theta$ (60°)  | -0.33       | 4.05         | 2.83         | 0.47         | -4.09        | -9.16        | -13.62       | -10.63        | -14.85        | -14.03        | -15.18        | -16.65        | -11.67        | -13.43        | -10.38        | -13.44        | -8.98         | -9.02         | -11.57        | -16.51        | -6.63         | -0.57         | 2.75          | 3.01          | -0.33         |
| $\theta$ (75°)  | -1.68       | -0.90        | 1.35         | -2.09        | -5.50        | -8.61        | -15.04       | -16.15        | -15.35        | -11.07        | -14.00        | -15.43        | -13.26        | -8.29         | -8.87         | -18.95        | -14.32        | -14.13        | -16.46        | -18.06        | -14.88        | -6.40         | -4.09         | 1.09          | -1.68         |
| $\theta$ (90°)  | -1.23       | -0.33        | -2.40        | -6.92        | -9.34        | -12.41       | -17.78       | -17.71        | -18.70        | -10.36        | -14.62        | -15.18        | -8.59         | -10.36        | -7.76         | -20.20        | -13.96        | -14.87        | -16.03        | -11.59        | -11.26        | -9.26         | -9.24         | -4.95         | -1.23         |
| $\theta$ (105°) | -0.09       | 0.30         | -0.78        | -1.95        | -3.78        | -8.71        | -12.64       | -9.98         | -14.74        | -9.43         | -9.00         | -16.06        | -10.12        | -7.56         | -11.64        | -15.75        | -14.85        | -11.64        | -17.80        | -14.54        | -4.56         | -0.97         | -3.51         | -2.84         | -0.09         |
| $\theta$ (120°) | 4.15        | 1.19         | 1.30         | -1.68        | -4.55        | -14.78       | -11.81       | -9.93         | -9.48         | -7.53         | -11.67        | -14.27        | -9.49         | -11.93        | -7.61         | -10.44        | -10.97        | -12.88        | -12.49        | -8.48         | -2.52         | 1.00          | 0.59          | 1.72          | 4.15          |
| $\theta$ (135°) | 1.36        | 2.91         | 2.78         | 1.14         | -2.73        | -9.78        | -12.11       | -10.09        | -12.93        | -10.36        | -10.46        | -10.74        | -6.78         | -5.06         | -7.99         | -14.15        | -9.52         | -8.22         | -11.16        | -9.19         | -1.21         | 1.89          | 3.81          | 1.77          | 1.36          |
| $\theta$ (150°) | 5.16        | 4.95         | 2.24         | -1.92        | -5.08        | -9.17        | -12.80       | -15.58        | -13.61        | -9.92         | -9.80         | -9.29         | -4.90         | -5.68         | -7.30         | -7.94         | -9.21         | -11.40        | -15.46        | -7.65         | -2.84         | -1.29         | 0.96          | 4.22          | 5.16          |
| $\theta$ (165°) | 5.01        | 4.76         | 3.87         | 1.89         | -1.43        | -6.78        | -8.06        | -14.08        | -10.23        | -6.49         | -5.42         | -5.97         | -4.72         | -2.29         | -4.61         | -11.35        | -17.29        | -13.61        | -16.43        | -18.56        | -6.04         | 0.13          | 3.47          | 5.00          | 5.01          |
| $\theta$ (180°) | -1.35       | -2.83        | -5.38        | -9.94        | -22.29       | -15.39       | -7.84        | -4.25         | -2.17         | -1.00         | -0.51         | -0.62         | -1.35         | -2.83         | -5.38         | -9.94         | -22.29        | -15.39        | -7.84         | -4.25         | -2.17         | -1.00         | -0.51         | -0.62         | -1.35         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -17.94      | -7.49        | -3.23        | -0.83        | 0.56         | 1.23         | 1.28         | 0.72          | -0.53         | -2.73         | -6.57         | -15.01        | -17.94        | -7.49         | -3.23         | -0.83         | 0.56          | 1.23          | 1.28          | 0.72          | -0.53         | -2.73         | -6.57         | -15.01        | -17.94        |
| $\theta$ (15°)  | -17.51      | -13.82       | -6.54        | -4.51        | -4.42        | -4.59        | -4.77        | -4.70         | -6.42         | -8.80         | -8.02         | -10.55        | -19.77        | -20.09        | -11.50        | -7.53         | -4.88         | -2.73         | -0.99         | 0.08          | -0.25         | -1.22         | -2.52         | -4.92         | -17.51        |
| $\theta$ (30°)  | -16.93      | -2.04        | 0.95         | 3.71         | 3.88         | 2.19         | -0.42        | -2.67         | -4.04         | -9.36         | -9.77         | -13.39        | -16.39        | -16.94        | -10.70        | -6.75         | -4.10         | -0.24         | 2.77          | 4.45          | 4.53          | 2.53          | -0.46         | -6.62         | -16.93        |
| $\theta$ (45°)  | -3.69       | 0.67         | 0.93         | 5.61         | 6.00         | 5.13         | 2.95         | -0.92         | -4.64         | -8.06         | -12.25        | -10.79        | -15.09        | -15.96        | -14.20        | -9.31         | -9.01         | -4.35         | 0.97          | 4.46          | 6.06          | 4.91          | 0.36          | -5.30         | -3.69         |
| $\theta$ (60°)  | 0.32        | 3.11         | 4.11         | 5.11         | 6.41         | 5.25         | 1.97         | -0.92         | -5.14         | -5.99         | -7.74         | -6.14         | -10.05        | -12.97        | -12.91        | -19.61        | -10.90        | -3.65         | 1.38          | 3.88          | 5.04          | 2.54          | 0.88          | -0.38         | 0.32          |
| $\theta$ (75°)  | -0.09       | -0.29        | 3.94         | 4.30         | 6.68         | 6.17         | 2.49         | -1.98         | -5.27         | -8.75         | -9.11         | -8.17         | -7.34         | -7.94         | -10.27        | -13.91        | -11.68        | -6.12         | -2.46         | 0.72          | 2.78          | 1.53          | 0.67          | 0.74          | -0.09         |
| $\theta$ (90°)  | -1.29       | 0.80         | 3.27         | 4.60         | [6.80]       | 5.61         | 1.99         | -3.89         | -6.50         | -10.93        | -6.69         | -12.66        | -8.11         | -8.86         | -12.44        | -10.51        | -7.01         | -3.64         | 2.06          | 4.20          | 4.30          | 2.87          | 2.21          | 0.82          | -1.29         |
| $\theta$ (105°) | -2.48       | -0.26        | 3.22         | 5.23         | 6.01         | 5.49         | 4.34         | 0.16          | -4.12         | -6.17         | -11.10        | -12.08        | -17.59        | -13.86        | -9.58         | -12.18        | -5.96         | -2.85         | 1.67          | 4.63          | 5.97          | 4.39          | -0.37         | -3.83         | -2.48         |
| $\theta$ (120°) | -3.31       | -1.77        | 1.48         | 4.01         | 5.36         | 4.59         | 1.95         | -4.55         | -5.35         | -6.23         | -10.56        | -11.86        | -13.87        | -13.31        | -12.99        | -8.77         | -5.63         | -2.47         | 2.04          | 5.55          | 5.92          | 2.35          | 0.54          | -3.11         | -3.31         |
| $\theta$ (135°) | -7.95       | -4.23        | 2.05         | 5.97         | 6.45         | 4.84         | 2.46         | -1.09         | -6.25         | -8.28         | -7.87         | -14.14        | -12.42        | -10.84        | -13.04        | -9.64         | -10.06        | -2.06         | 2.40          | 5.02          | 6.15          | 5.24          | 2.01          | -4.78         | -7.95         |
| $\theta$ (150°) | -12.18      | -1.94        | -0.68        | 2.05         | 4.07         | 5.06         | 3.66         | -2.50         | -6.85         | -2.73         | -8.02         | -12.68        | -11.78        | -12.43        | -13.47        | -6.97         | -3.50         | -0.57         | 2.80          | 4.29          | 3.99          | 2.32          | -0.61         | -3.72         | -12.18        |
| $\theta$ (165°) | -16.75      | -6.56        | -1.27        | 1.30         | 1.85         | 1.37         | 0.04         | -0.62         | -1.19         | -3.96         | -7.68         | -10.49        | -15.31        | -17.66        | -8.41         | -6.81         | -6.94         | -4.74         | -1.64         | 0.63          | 2.08          | 2.10          | -0.04         | -4.63         | -16.75        |
| $\theta$ (180°) | -7.84       | -4.25        | -2.17        | -1.00        | -0.51        | -0.62        | -1.35        | -2.83         | -5.38         | -9.94         | -22.29        | -15.39        | -7.84         | -4.25         | -2.17         | -1.00         | -0.51         | -0.62         | -1.35         | -2.83         | -5.38         | -9.94         | -22.29        | -15.39        | -7.84         |

|                 |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 1SS             |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Freq. (MHz)     | 5785        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | 1.54        | 1.02         | -0.19        | -2.31        | -5.98        | -13.84       | -19.22       | -7.64         | -3.20         | -0.71         | 0.74          | 1.45          | 1.54          | 1.02          | -0.19         | -2.31         | -5.98         | -13.84        | -19.22        | -7.64         | -3.20         | -0.71         | 0.74          | 1.45          | 1.54          |
| $\theta$ (15°)  | 4.29        | 4.22         | 3.05         | -0.02        | -4.33        | -9.12        | -13.24       | -18.28        | -21.83        | -14.71        | -8.66         | -6.31         | -5.38         | -5.59         | -5.84         | -7.13         | -10.00        | -13.83        | -20.85        | -12.99        | -6.60         | -2.07         | 1.67          | 3.15          | 4.29          |
| $\theta$ (30°)  | 4.97        | 4.80         | 1.62         | -1.22        | -4.87        | -9.84        | -12.67       | -21.79        | -16.48        | -13.80        | -28.33        | -9.67         | -9.88         | -9.72         | -9.17         | -9.21         | -9.89         | -12.45        | -15.32        | -12.84        | -4.24         | 0.05          | 0.82          | 3.03          | 4.97          |
| $\theta$ (45°)  | 5.10        | 5.04         | 1.80         | 0.66         | -0.92        | -3.40        | -7.61        | -10.91        | -12.66        | -11.12        | -18.15        | -23.52        | -15.26        | -14.74        | -8.64         | -8.82         | -8.47         | -9.73         | -10.42        | -9.15         | -3.22         | 0.74          | 2.88          | 4.00          | 5.10          |
| $\theta$ (60°)  | 0.28        | 3.52         | 2.09         | -0.24        | -5.09        | -13.19       | -13.85       | -12.38        | -11.67        | -15.30        | -16.55        | -15.84        | -15.08        | -12.59        | -10.01        | -13.12        | -9.17         | -8.78         | -10.14        | -17.76        | -5.95         | -0.53         | 2.88          | 2.92          | 0.28          |
| $\theta$ (75°)  | -2.26       | -1.77        | 1.62         | -4.00        | -7.10        | -10.39       | -15.76       | -16.03        | -13.20        | -10.67        | -14.50        | -21.58        | -13.27        | -9.40         | -9.91         | -15.98        | -14.15        | -13.50        | -15.16        | -15.90        | -15.68        | -6.71         | -3.91         | 0.72          | -2.26         |
| $\theta$ (90°)  | -1.14       | -0.16        | -1.89        | -7.00        | -10.35       | -12.42       | -14.76       | -20.30        | -16.37        | -9.82         | -13.80        | -17.33        | -8.80         | -10.50        | -8.48         | -21.50        | -13.10        | -13.80        | -15.20        | -12.14        | -11.35        | -9.10         | -9.02         | -5.60         | -1.14         |
| $\theta$ (105°) | -0.16       | 0.32         | -0.39        | -2.61        | -4.42        | -8.57        | -14.61       | -9.86         | -14.20        | -10.53        | -8.81         | -19.29        | -10.05        | -7.58         | -13.23        | -16.29        | -13.56        | -12.32        | -16.49        | -16.21        | -4.62         | -0.28         | -4.24         | -2.67         | -0.16         |
| $\theta$ (120°) | 3.67        | 1.70         | 1.03         | -2.24        | -5.35        | -14.19       | -12.05       | -9.88         | -8.96         | -8.16         | -11.06        | -16.06        | -9.36         | -11.45        | -8.71         | -9.92         | -9.31         | -12.67        | -13.39        | -8.20         | -2.68         | 0.38          | 0.34          | 0.72          | 3.67          |
| $\theta$ (135°) | 1.42        | 2.41         | 2.37         | 0.29         | -3.20        | -9.95        | -16.01       | -11.32        | -12.98        | -11.00        | -9.85         | -13.07        | -7.85         | -5.02         | -8.50         | -15.85        | -9.71         | -7.69         | -11.22        | -9.73         | -1.20         | 2.02          | 3.10          | 0.94          | 1.42          |
| $\theta$ (150°) | [5.16]      | 5.07         | 2.59         | -1.16        | -4.15        | -9.34        | -14.09       | -17.20        | -15.36        | -10.44        | -9.53         | -9.20         | -5.74         | -5.22         | -7.32         | -8.45         | -8.93         | -10.78        | -13.73        | -7.60         | -2.13         | -0.62         | 1.53          | 4.30          | 5.16          |
| $\theta$ (165°) | 4.30        | 4.39         | 3.75         | 1.55         | -1.70        | -7.70        | -8.14        | -14.26        | -10.86        | -6.98         | -5.68         | -6.32         | -4.96         | -2.76         | -4.81         | -11.56        | -14.92        | -11.54        | -14.68        | -17.13        | -5.24         | 0.49          | 3.52          | 4.70          | 4.30          |
| $\theta$ (180°) | -2.17       | -3.71        | -6.35        | -11.14       | -25.25       | -15.29       | -8.26        | -4.80         | -2.80         | -1.68         | -1.23         | -1.38         | -2.17         | -3.71         | -6.35         | -11.14        | -25.25        | -15.29        | -8.26         | -4.80         | -2.80         | -1.68         | -1.23         | -1.38         | -2.17         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -19.22      | -7.64        | -3.20        | -0.71        | 0.74         | 1.45         | 1.54         | 1.02          | -0.19         | -2.31         | -5.98         | -13.84        | -19.22        | -7.64         | -3.20         | -0.71         | 0.74          | 1.45          | 1.54          | 1.02          | -0.19         | -2.31         | -5.98         | -13.84        | -19.22        |
| $\theta$ (15°)  | -17.50      | -11.29       | -5.65        | -3.84        | -3.85        | -5.49        | -6.67        | -6.44         | -5.67         | -6.59         | -7.82         | -10.23        | -15.91        | -14.56        | -9.65         | -6.14         | -4.40         | -2.33         | -0.89         | -0.27         | 0.09          | -0.08         | -1.05         | -4.10         | -17.50        |
| $\theta$ (30°)  | -17.88      | -2.20        | -0.75        | 2.55         | 2.72         | 0.93         | -1.29        | -3.37         | -5.35         | -8.52         | -10.42        | -12.86        | -15.67        | -18.05        | -11.48        | -7.27         | -4.43         | -0.72         | 2.25          | 4.25          | 4.28          | 1.79          | -1.64         | -5.79         | -17.88        |
| $\theta$ (45°)  | -4.20       | 0.85         | 0.88         | 5.04         | 5.44         | 5.30         | 3.86         | 0.14          | -4.71         | -9.55         | -11.25        | -11.52        | -12.41        | -14.40        | -14.37        | -8.49         | -10.84        | -4.90         | 0.73          | 3.64          | 5.45          | 4.67          | 0.51          | -6.53         | -4.20         |
| $\theta$ (60°)  | 0.17        | 3.02         | 3.98         | 5.49         | [6.70]       | 4.97         | 1.85         | -1.90         | -3.79         | -7.96         | -7.71         | -8.14         | -9.87         | -16.63        | -14.06        | -17.52        | -11.22        | -4.45         | -0.04         | 3.18          | 4.80          | 2.80          | 1.12          | -0.58         | 0.17          |
| $\theta$ (75°)  | -0.57       | 0.15         | 4.27         | 3.85         | 6.66         | 5.93         | 2.68         | -2.25         | -6.55         | -10.35        | -9.11         | -8.09         | -8.27         | -8.67         | -9.82         | -13.41        | -11.24        | -4.46         | -1.89         | 0.62          | 2.96          | 1.10          | 0.86          | 0.56          | -0.57         |
| $\theta$ (90°)  | -1.19       | 0.94         | 3.61         | 4.36         | 6.53         | 5.59         | 2.67         | -3.45         | -6.85         | -9.70         | -7.09         | -11.27        | -7.63         | -9.55         | -12.93        | -11.93        | -7.25         | -4.28         | 2.00          | 4.48          | 4.19          | 2.63          | 2.07          | 0.77          | -1.19         |
| $\theta$ (105°) | -2.56       | 0.16         | 3.14         | 5.28         | 5.98         | 5.44         | 4.22         | 0.38          | -5.50         | -4.95         | -11.23        | -12.79        | -18.04        | -14.12        | -9.85         | -13.45        | -6.59         | -3.61         | 1.84          | 4.38          | 5.98          | 4.60          | -0.82         | -4.00         | -2.56         |
| $\theta$ (120°) | -3.58       | -1.74        | 1.56         | 3.85         | 5.21         | 4.55         | 2.02         | -4.18         | -6.38         | -6.82         | -9.24         | -11.37        | -12.25        | -12.85        | -13.54        | -10.14        | -5.63         | -2.69         | 1.98          | 5.76          | 6.13          | 2.57          | 0.43          | -3.83         | -3.58         |
| $\theta$ (135°) | -7.79       | -5.12        | 1.66         | 5.80         | 6.19         | 4.74         | 2.54         | -0.77         | -5.96         | -7.98         | -9.01         | -12.57        | -12.70        | -11.14        | -13.80        | -10.24        | -11.26        | -2.24         | 2.01          | 4.92          | 5.92          | 5.56          | 1.79          | -5.53         | -7.79         |
| $\theta$ (150°) | -11.18      | -2.47        | -0.24        | 2.24         | 3.59         | 4.74         | 3.57         | -1.78         | -7.88         | -2.59         | -7.54         | -12.05        | -12.38        | -12.26        | -13.52        | -6.70         | -3.56         | -0.43         | 2.82          | 4.38          | 4.42          | 2.65          | -0.61         | -4.92         | -11.18        |
| $\theta$ (165°) | -16.35      | -7.57        | -1.33        | 0.84         | 1.21         | 0.75         | -0.49        | -1.13         | -1.44         | -3.78         | -8.07         | -11.01        | -15.30        | -16.11        | -8.37         | -6.36         | -6.48         | -4.21         | -0.74         | 1.33          | 2.35          | 2.21          | -0.15         | -5.77         | -16.35        |
| $\theta$ (180°) | -8.26       | -4.80        | -2.80        | -1.68        | -1.23        | -1.38        | -2.17        | -3.71         | -6.35         | -11.14        | -25.25        | -15.29        | -8.26         | -4.80         | -2.80         | -1.68         | -1.23         | -1.38         | -2.17         | -3.71         | -6.35         | -11.14        | -25.25        | -15.29        | -8.26         |

|                |        |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------|--------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1SS            |        |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Freq.<br>(MHz) | 5850   |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Polarity       | Theta  |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | 1.73   | 1.18    | -0.07   | -2.26   | -6.07   | -14.42  | -17.72  | -7.11    | -2.82    | -0.40    | 1.00     | 1.67     | 1.73     | 1.18     | -0.07    | -2.26    | -6.07    | -14.42   | -17.72   | -7.11    | -2.82    | -0.40    | 1.00     | 1.67     | 1.73     |
| θ (15°)        | 4.53   | 4.35    | 3.16    | 0.42    | -3.72   | -8.29   | -14.90  | -19.96   | -32.75   | -21.81   | -9.89    | -6.55    | -4.80    | -5.30    | -5.80    | -6.21    | -9.04    | -13.00   | -16.33   | -11.64   | -5.81    | -1.30    | 1.52     | 3.07     | 4.53     |
| θ (30°)        | [5.20] | 4.36    | 0.41    | -0.73   | -5.21   | -12.26  | -13.99  | -16.25   | -21.37   | -17.41   | -24.27   | -10.19   | -11.16   | -9.90    | -8.54    | -11.04   | -13.56   | -15.58   | -15.66   | -11.10   | -3.71    | -0.65    | 1.31     | 3.04     | 5.20     |
| θ (45°)        | 4.99   | 4.93    | 1.90    | 0.19    | -1.19   | -3.77   | -8.18   | -12.18   | -13.33   | -11.98   | -19.63   | -22.06   | -14.67   | -13.10   | -10.51   | -10.23   | -11.33   | -11.48   | -11.06   | -10.21   | -4.16    | 0.36     | 2.84     | 3.87     | 4.99     |
| θ (60°)        | 0.61   | 3.43    | 2.47    | -1.21   | -5.68   | -11.57  | -13.29  | -13.59   | -11.25   | -16.63   | -17.05   | -15.73   | -18.54   | -12.64   | -11.39   | -14.09   | -10.67   | -9.84    | -11.40   | -15.15   | -5.54    | -0.83    | 2.88     | 2.55     | 0.61     |
| θ (75°)        | -2.63  | -2.26   | 1.78    | -4.97   | -8.77   | -10.83  | -16.51  | -15.45   | -13.40   | -12.05   | -13.91   | -26.71   | -13.35   | -10.11   | -11.48   | -16.63   | -16.11   | -14.51   | -15.26   | -14.01   | -19.14   | -6.74    | -4.63    | 0.80     | -2.63    |
| θ (90°)        | -0.09  | -0.05   | -2.80   | -7.48   | -9.74   | -11.75  | -13.62  | -17.79   | -17.00   | -8.71    | -13.57   | -15.72   | -10.81   | -9.99    | -11.01   | -19.27   | -13.96   | -13.72   | -13.62   | -14.39   | -12.02   | -8.44    | -8.65    | -7.17    | -0.09    |
| θ (105°)       | -0.21  | -0.48   | -1.35   | -3.53   | -5.83   | -10.16  | -16.55  | -9.23    | -13.09   | -11.08   | -8.85    | -16.49   | -10.39   | -8.07    | -13.74   | -14.30   | -13.44   | -13.71   | -17.19   | -17.79   | -4.43    | 0.17     | -4.16    | -1.19    | -0.21    |
| θ (120°)       | 2.98   | 1.52    | 0.46    | -3.09   | -7.53   | -12.72  | -11.94  | -9.03    | -10.75   | -8.00    | -11.25   | -14.88   | -10.34   | -11.31   | -9.98    | -9.00    | -9.14    | -14.13   | -13.42   | -7.62    | -2.52    | 0.70     | 0.73     | 0.09     | 2.98     |
| θ (135°)       | 1.74   | 2.78    | 2.26    | -0.49   | -5.07   | -13.09  | -12.31  | -11.67   | -14.50   | -11.18   | -9.78    | -13.45   | -9.51    | -4.97    | -8.93    | -13.01   | -9.46    | -8.04    | -10.94   | -8.61    | -0.66    | 2.41     | 2.16     | 0.80     | 1.74     |
| θ (150°)       | 5.08   | 4.55    | 2.38    | -0.96   | -4.48   | -9.53   | -13.96  | -18.10   | -19.16   | -11.50   | -9.57    | -9.57    | -6.93    | -5.52    | -7.35    | -8.34    | -8.06    | -10.91   | -12.76   | -7.27    | -1.33    | -0.43    | 1.83     | 4.26     | 5.08     |
| θ (165°)       | 3.81   | 3.79    | 3.36    | 1.32    | -1.80   | -7.50   | -7.88   | -13.97   | -12.45   | -7.76    | -6.11    | -6.32    | -5.62    | -3.26    | -4.59    | -11.72   | -14.51   | -11.07   | -13.84   | -14.13   | -4.33    | 0.88     | 3.35     | 4.13     | 3.81     |
| θ (180°)       | -3.59  | -5.24   | -8.07   | -13.32  | -20.49  | -15.25  | -8.97   | -5.76    | -3.89    | -2.86    | -2.49    | -2.72    | -3.59    | -5.24    | -8.07    | -13.32   | -20.49   | -15.25   | -8.97    | -5.76    | -3.89    | -2.86    | -2.49    | -2.72    | -3.59    |
| Polarity       | Phi    |         |         |         |         |         |         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| dB             | φ (0°) | φ (15°) | φ (30°) | φ (45°) | φ (60°) | φ (75°) | φ (90°) | φ (105°) | φ (120°) | φ (135°) | φ (150°) | φ (165°) | φ (180°) | φ (195°) | φ (210°) | φ (225°) | φ (240°) | φ (255°) | φ (270°) | φ (285°) | φ (300°) | φ (315°) | φ (330°) | φ (345°) | φ (360°) |
| θ (0°)         | -17.72 | -7.11   | -2.82   | -0.40   | 1.00    | 1.67    | 1.73    | 1.18     | -0.07    | -2.26    | -6.07    | -14.42   | -17.72   | -7.11    | -2.82    | -0.40    | 1.00     | 1.67     | 1.73     | 1.18     | -0.07    | -2.26    | -6.07    | -14.42   | -17.72   |
| θ (15°)        | -18.13 | -10.42  | -5.29   | -2.59   | -1.25   | -2.43   | -5.04   | -8.65    | -8.26    | -6.80    | -7.56    | -9.71    | -13.39   | -13.67   | -9.72    | -6.78    | -3.90    | -1.85    | -0.50    | -0.05    | 0.15     | -0.24    | -2.02    | -5.05    | -18.13   |
| θ (30°)        | -15.63 | -2.76   | -1.22   | 1.78    | 1.43    | -0.06   | -1.72   | -3.91    | -8.16    | -9.31    | -10.69   | -12.51   | -12.52   | -17.68   | -10.86   | -7.41    | -5.57    | -1.69    | 1.42     | 3.72     | 3.81     | 0.95     | -2.63    | -5.46    | -15.63   |
| θ (45°)        | -4.35  | 1.35    | 1.32    | 4.65    | 6.00    | 5.56    | 3.77    | 0.76     | -3.72    | -8.91    | -10.07   | -11.08   | -12.20   | -14.42   | -13.16   | -8.42    | -10.32   | -6.25    | -0.29    | 2.83     | 5.25     | 4.82     | 0.57     | -7.64    | -4.35    |
| θ (60°)        | -0.36  | 3.11    | 3.96    | 5.27    | 6.32    | 4.12    | 1.17    | -3.15    | -4.59    | -10.83   | -7.36    | -9.45    | -11.14   | -16.59   | -14.16   | -19.00   | -11.98   | -5.52    | -1.53    | 2.49     | 4.97     | 3.11     | 0.70     | -0.29    | -0.36    |
| θ (75°)        | -0.99  | 0.52    | 4.15    | 4.25    | [6.94]  | 5.93    | 2.86    | -1.58    | -7.24    | -9.67    | -9.19    | -7.88    | -8.05    | -9.76    | -10.88   | -13.87   | -10.78   | -3.43    | -2.04    | 0.68     | 3.22     | -0.03    | 0.77     | 0.31     | -0.99    |
| θ (90°)        | -1.46  | 0.75    | 4.27    | 4.14    | 6.81    | 5.51    | 2.79    | -3.25    | -6.58    | -9.71    | -7.58    | -10.91   | -8.10    | -9.91    | -11.10   | -11.54   | -7.05    | -4.08    | 2.60     | 5.11     | 3.49     | 2.72     | 2.05     | 0.02     | -1.46    |
| θ (105°)       | -2.43  | 0.16    | 3.11    | 4.99    | 6.18    | 5.45    | 3.41    | 0.62     | -6.76    | -4.83    | -11.81   | -12.48   | -18.20   | -14.92   | -12.04   | -13.95   | -7.69    | -3.73    | 1.85     | 4.33     | 5.94     | 4.41     | -1.04    | -4.09    | -2.43    |
| θ (120°)       | -4.32  | -1.64   | 1.29    | 3.48    | 5.35    | 4.28    | 2.03    | -3.23    | -8.41    | -7.37    | -9.72    | -12.21   | -12.73   | -10.76   | -13.47   | -9.76    | -5.65    | -3.23    | 2.13     | 5.68     | 5.95     | 2.95     | -0.02    | -3.38    | -4.32    |
| θ (135°)       | -8.72  | -5.24   | 1.03    | 5.44    | 6.23    | 4.78    | 2.47    | -0.77    | -6.91    | -7.37    | -9.80    | -11.83   | -14.56   | -11.28   | -13.12   | -9.58    | -9.88    | -1.67    | 1.66     | 4.65     | 6.00     | 5.98     | 1.81     | -5.99    | -8.72    |
| θ (150°)       | -15.70 | -4.11   | -1.01   | 1.54    | 3.10    | 4.20    | 3.67    | -1.50    | -8.76    | -2.66    | -6.73    | -13.02   | -13.86   | -11.42   | -13.32   | -6.71    | -3.81    | -0.50    | 2.67     | 4.19     | 4.35     | 2.61     | -1.19    | -5.57    | -15.70   |
| θ (165°)       | -15.72 | -7.78   | -2.13   | 0.28    | 0.49    | -0.12   | -1.08   | -2.01    | -1.92    | -3.54    | -8.02    | -11.50   | -15.42   | -16.65   | -7.83    | -6.45    | -6.11    | -3.26    | -0.02    | 1.94     | 2.60     | 1.96     | -0.71    | -6.42    | -15.72   |
| θ (180°)       | -8.97  | -5.76   | -3.89   | -2.86   | -2.49   | -2.72   | -3.59   | -5.24    | -8.07    | -13.32   | -20.49   | -15.25   | -8.97    | -5.76    | -3.89    | -2.86    | -2.49    | -2.72    | -3.59    | -5.24    | -8.07    | -13.32   | -20.49   | -15.25   | -8.97    |

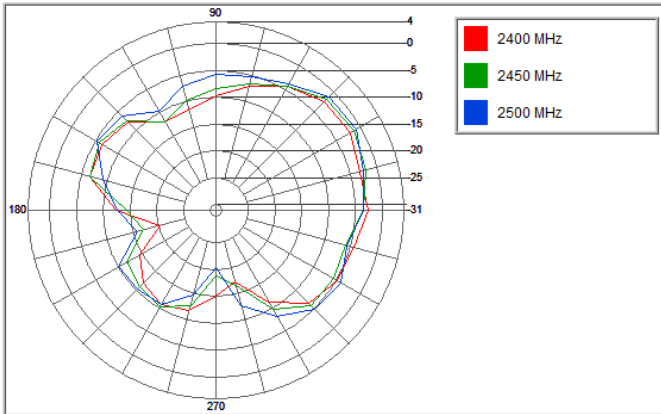
|                 |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 1SS             |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Freq.<br>(MHz)  | 5865        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\Phi$ (0°) | $\Phi$ (15°) | $\Phi$ (30°) | $\Phi$ (45°) | $\Phi$ (60°) | $\Phi$ (75°) | $\Phi$ (90°) | $\Phi$ (105°) | $\Phi$ (120°) | $\Phi$ (135°) | $\Phi$ (150°) | $\Phi$ (165°) | $\Phi$ (180°) | $\Phi$ (195°) | $\Phi$ (210°) | $\Phi$ (225°) | $\Phi$ (240°) | $\Phi$ (255°) | $\Phi$ (270°) | $\Phi$ (285°) | $\Phi$ (300°) | $\Phi$ (315°) | $\Phi$ (330°) | $\Phi$ (345°) | $\Phi$ (360°) |
| $\theta$ (0°)   | 1.54        | 0.96         | -0.33        | -2.59        | -6.52        | -15.42       | -16.78       | -6.95         | -2.81         | -0.47         | 0.88          | 1.53          | 1.54          | 0.96          | -0.33         | -2.59         | -6.52         | -15.42        | -16.78        | -6.95         | -2.81         | -0.47         | 0.88          | 1.53          | 1.54          |
| $\theta$ (15°)  | 4.55        | 4.34         | 3.09         | 0.60         | -3.31        | -7.74        | -14.34       | -19.47        | -31.60        | -21.17        | -10.58        | -6.80         | -4.96         | -5.32         | -5.74         | -6.09         | -8.61         | -12.54        | -15.62        | -11.13        | -5.54         | -1.19         | 1.53          | 3.12          | 4.55          |
| $\theta$ (30°)  | [5.21]      | 4.29         | 0.52         | -0.86        | -5.47        | -13.08       | -14.33       | -15.03        | -20.38        | -18.52        | -21.81        | -10.15        | -10.99        | -9.85         | -8.56         | -11.77        | -15.05        | -15.81        | -15.09        | -10.63        | -3.76         | -0.71         | 1.55          | 3.03          | 5.21          |
| $\theta$ (45°)  | 4.90        | 4.80         | 1.82         | 0.41         | -1.15        | -3.82        | -8.74        | -12.76        | -13.40        | -12.21        | -19.54        | -21.06        | -14.50        | -12.85        | -11.26        | -10.59        | -12.15        | -11.83        | -10.86        | -10.35        | -4.27         | 0.51          | 2.84          | 3.88          | 4.90          |
| $\theta$ (60°)  | 0.71        | 3.48         | 2.52         | -1.51        | -5.66        | -11.20       | -13.84       | -13.24        | -11.81        | -16.28        | -16.98        | -15.67        | -18.95        | -12.76        | -12.02        | -14.02        | -10.94        | -9.95         | -11.85        | -14.89        | -5.62         | -0.99         | 2.95          | 2.43          | 0.71          |
| $\theta$ (75°)  | -2.42       | -2.10        | 1.78         | -5.57        | -9.13        | -10.71       | -16.44       | -15.38        | -13.53        | -12.27        | -13.83        | -25.74        | -13.31        | -10.24        | -11.89        | -16.81        | -16.37        | -14.77        | -15.46        | -13.72        | -19.73        | -6.82         | -4.65         | 0.77          | -2.42         |
| $\theta$ (90°)  | 0.07        | -0.17        | -3.21        | -7.76        | -9.88        | -11.92       | -13.30       | -17.65        | -17.66        | -8.89         | -13.63        | -14.86        | -11.17        | -10.10        | -11.23        | -18.76        | -14.09        | -13.68        | -13.45        | -14.26        | -11.96        | -8.38         | -8.68         | -7.50         | 0.07          |
| $\theta$ (105°) | -0.24       | -0.62        | -1.63        | -3.67        | -6.17        | -10.73       | -17.13       | -9.12         | -12.57        | -11.43        | -8.92         | -15.84        | -10.63        | -8.20         | -13.50        | -14.19        | -13.50        | -13.91        | -17.26        | -17.78        | -4.19         | 0.32          | -4.15         | -1.10         | -0.24         |
| $\theta$ (120°) | 2.71        | 1.39         | 0.24         | -3.19        | -8.30        | -12.37       | -11.88       | -8.91         | -11.03        | -8.24         | -11.54        | -14.75        | -10.62        | -11.73        | -10.18        | -8.95         | -9.26         | -14.52        | -13.39        | -7.61         | -2.55         | 0.75          | 0.75          | -0.03         | 2.71          |
| $\theta$ (135°) | 1.77        | 2.95         | 2.36         | -0.42        | -5.58        | -13.99       | -11.77       | -11.53        | -14.44        | -11.81        | -9.92         | -13.42        | -9.94         | -5.07         | -9.13         | -12.49        | -9.55         | -8.16         | -10.85        | -8.22         | -0.55         | 2.46          | 2.01          | 0.95          | 1.77          |
| $\theta$ (150°) | 4.96        | 4.32         | 2.28         | -0.91        | -4.44        | -9.47        | -13.58       | -17.29        | -19.88        | -11.73        | -9.49         | -9.68         | -7.04         | -5.58         | -7.60         | -8.29         | -7.90         | -10.64        | -12.17        | -7.38         | -1.41         | -0.50         | 1.91          | 4.22          | 4.96          |
| $\theta$ (165°) | 3.70        | 3.64         | 3.21         | 1.32         | -1.86        | -7.37        | -7.88        | -13.87        | -13.08        | -7.95         | -6.21         | -6.19         | -5.79         | -3.25         | -4.58         | -11.60        | -14.40        | -11.14        | -14.00        | -13.55        | -4.23         | 0.80          | 3.22          | 3.98          | 3.70          |
| $\theta$ (180°) | -4.03       | -5.77        | -8.74        | -14.35       | -19.28       | -14.77       | -8.94        | -5.88         | -4.10         | -3.14         | -2.82         | -3.10         | -4.03         | -5.77         | -8.74         | -14.35        | -19.28        | -14.77        | -8.94         | -5.88         | -4.10         | -3.14         | -2.82         | -3.10         | -4.03         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\Phi$ (0°) | $\Phi$ (15°) | $\Phi$ (30°) | $\Phi$ (45°) | $\Phi$ (60°) | $\Phi$ (75°) | $\Phi$ (90°) | $\Phi$ (105°) | $\Phi$ (120°) | $\Phi$ (135°) | $\Phi$ (150°) | $\Phi$ (165°) | $\Phi$ (180°) | $\Phi$ (195°) | $\Phi$ (210°) | $\Phi$ (225°) | $\Phi$ (240°) | $\Phi$ (255°) | $\Phi$ (270°) | $\Phi$ (285°) | $\Phi$ (300°) | $\Phi$ (315°) | $\Phi$ (330°) | $\Phi$ (345°) | $\Phi$ (360°) |
| $\theta$ (0°)   | -16.78      | -6.95        | -2.81        | -0.47        | 0.88         | 1.53         | 1.54         | 0.96          | -0.33         | -2.59         | -6.52         | -15.42        | -16.78        | -6.95         | -2.81         | -0.47         | 0.88          | 1.53          | 1.54          | 0.96          | -0.33         | -2.59         | -6.52         | -15.42        | -16.78        |
| $\theta$ (15°)  | -18.56      | -10.20       | -4.96        | -2.42        | -0.85        | -1.73        | -4.48        | -7.77         | -9.06         | -7.11         | -7.06         | -9.30         | -12.93        | -13.78        | -9.97         | -6.89         | -3.59         | -1.46         | -0.29         | 0.23          | 0.30          | -0.22         | -2.07         | -5.01         | -18.56        |
| $\theta$ (30°)  | -15.00      | -2.77        | -1.20        | 1.67         | 1.22         | -0.04        | -1.82        | -3.62         | -8.24         | -9.96         | -10.85        | -12.39        | -12.20        | -17.45        | -10.74        | -7.31         | -5.69         | -1.98         | 1.22          | 3.55          | 3.65          | 1.00          | -2.34         | -5.31         | -15.00        |
| $\theta$ (45°)  | -4.37       | 1.39         | 1.50         | 4.71         | 6.24         | 5.65         | 3.69         | 0.81          | -3.23         | -8.84         | -9.70         | -11.03        | -12.50        | -14.54        | -12.61        | -8.55         | -10.11        | -6.32         | -0.34         | 2.91          | 5.38          | 4.96          | 0.76          | -7.62         | -4.37         |
| $\theta$ (60°)  | -0.45       | 3.18         | 3.97         | 5.21         | 6.30         | 4.01         | 1.14         | -3.35         | -4.56         | -11.00        | -7.24         | -9.11         | -10.75        | -16.56        | -13.36        | -18.60        | -11.77        | -5.46         | -1.45         | 2.63          | 5.17          | 3.19          | 0.68          | -0.02         | -0.45         |
| $\theta$ (75°)  | -0.84       | 0.75         | 4.21         | 4.26         | [7.13]       | 5.98         | 2.96         | -1.43         | -6.92         | -9.20         | -9.02         | -8.13         | -7.77         | -9.81         | -10.85        | -14.00        | -10.16        | -3.27         | -1.78         | 0.96          | 3.39          | -0.19         | 1.05          | 0.31          | -0.84         |
| $\theta$ (90°)  | -1.34       | 0.73         | 4.49         | 4.33         | 6.99         | 5.60         | 2.90         | -3.00         | -6.43         | -9.86         | -7.65         | -10.50        | -8.26         | -10.04        | -11.03        | -11.37        | -6.98         | -3.93         | 2.81          | 5.33          | 3.43          | 2.93          | 2.25          | 0.08          | -1.34         |
| $\theta$ (105°) | -2.48       | 0.08         | 3.20         | 5.03         | 6.36         | 5.55         | 3.32         | 0.81          | -6.80         | -4.95         | -12.41        | -11.78        | -18.42        | -14.41        | -12.22        | -13.71        | -7.54         | -3.56         | 2.00          | 4.46          | 6.00          | 4.39          | -0.97         | -3.94         | -2.48         |
| $\theta$ (120°) | -4.35       | -1.66        | 1.45         | 3.46         | 5.39         | 4.34         | 2.22         | -2.77         | -8.47         | -7.48         | -9.40         | -12.62        | -12.58        | -10.47        | -13.61        | -9.62         | -5.55         | -3.14         | 2.23          | 5.63          | 5.90          | 3.08          | -0.06         | -3.20         | -4.35         |
| $\theta$ (135°) | -8.44       | -4.90        | 1.13         | 5.41         | 6.25         | 4.87         | 2.57         | -0.84         | -7.26         | -7.17         | -9.99         | -11.26        | -15.35        | -11.29        | -12.84        | -9.12         | -9.64         | -1.53         | 1.72          | 4.68          | 6.13          | 6.15          | 1.92          | -6.06         | -8.44         |
| $\theta$ (150°) | -16.30      | -4.40        | -1.28        | 1.46         | 3.19         | 4.24         | 3.83         | -1.50         | -8.57         | -2.69         | -6.56         | -13.30        | -13.83        | -11.51        | -13.15        | -6.66         | -3.78         | -0.48         | 2.76          | 4.30          | 4.32          | 2.62          | -1.13         | -5.06         | -16.30        |
| $\theta$ (165°) | -15.39      | -7.57        | -2.12        | 0.20         | 0.60         | -0.03        | -1.05        | -2.03         | -1.89         | -3.54         | -8.16         | -11.57        | -15.40        | -16.77        | -7.75         | -6.48         | -6.11         | -2.96         | 0.22          | 2.16          | 2.70          | 1.90          | -0.81         | -6.27         | -15.39        |
| $\theta$ (180°) | -8.94       | -5.88        | -4.10        | -3.14        | -2.82        | -3.10        | -4.03        | -5.77         | -8.74         | -14.35        | -19.28        | -14.77        | -8.94         | -5.88         | -4.10         | -3.14         | -2.82         | -3.10         | -4.03         | -5.77         | -8.74         | -14.35        | -19.28        | -14.77        | -8.94         |

|                 |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 1SS             |             |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Freq.<br>(MHz)  | 5895        |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Polarity        | Theta       |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | 1.15        | 0.49         | -0.89        | -3.27        | -7.49        | -17.75       | -15.30       | -6.71         | -2.86         | -0.64         | 0.62          | 1.19          | 1.15          | 0.49          | -0.89         | -3.27         | -7.49         | -17.75        | -15.30        | -6.71         | -2.86         | -0.64         | 0.62          | 1.19          | 1.15          |
| $\theta$ (15°)  | 4.54        | 4.26         | 2.76         | 0.67         | -2.54        | -6.80        | -13.03       | -18.19        | -27.82        | -18.92        | -12.09        | -7.05         | -5.41         | -5.46         | -5.65         | -6.22         | -8.07         | -11.92        | -14.94        | -10.15        | -4.89         | -1.01         | 1.58          | 3.24          | 4.54          |
| $\theta$ (30°)  | [5.32]      | 4.21         | 0.83         | -1.02        | -5.98        | -14.01       | -16.00       | -14.03        | -17.78        | -19.69        | -18.15        | -9.96         | -9.81         | -10.22        | -8.62         | -12.41        | -17.98        | -15.04        | -13.68        | -10.10        | -4.01         | -0.56         | 2.07          | 3.08          | 5.32          |
| $\theta$ (45°)  | 4.60        | 4.49         | 1.56         | 0.95         | -1.04        | -3.84        | -9.58        | -13.56        | -13.42        | -12.71        | -17.43        | -20.74        | -14.37        | -12.39        | -12.70        | -11.30        | -13.09        | -12.21        | -10.68        | -10.73        | -4.27         | 0.90          | 2.81          | 3.88          | 4.60          |
| $\theta$ (60°)  | 0.79        | 3.60         | 2.56         | -2.04        | -5.38        | -10.28       | -14.76       | -13.56        | -13.13        | -15.38        | -16.04        | -15.83        | -20.39        | -13.34        | -13.10        | -13.97        | -11.54        | -10.64        | -12.89        | -14.67        | -6.07         | -1.13         | 3.01          | 2.27          | 0.79          |
| $\theta$ (75°)  | -2.04       | -1.70        | 1.63         | -6.75        | -9.31        | -9.94        | -17.33       | -15.43        | -13.76        | -13.04        | -14.03        | -23.24        | -13.16        | -10.39        | -12.51        | -17.17        | -16.76        | -14.79        | -15.57        | -12.60        | -18.13        | -7.06         | -4.61         | 0.66          | -2.04         |
| $\theta$ (90°)  | 0.37        | -0.46        | -3.71        | -8.19        | -10.17       | -12.88       | -13.04       | -17.14        | -18.35        | -9.43         | -13.45        | -13.76        | -11.80        | -9.95         | -12.31        | -17.66        | -14.41        | -13.99        | -13.38        | -13.74        | -11.22        | -8.27         | -8.40         | -8.07         | 0.37          |
| $\theta$ (105°) | -0.17       | -0.32        | -2.29        | -3.81        | -6.64        | -12.80       | -18.58       | -9.28         | -10.74        | -12.64        | -9.32         | -15.41        | -10.86        | -8.22         | -13.37        | -14.02        | -13.32        | -14.09        | -17.86        | -16.69        | -3.76         | 0.48          | -4.08         | -1.17         | -0.17         |
| $\theta$ (120°) | 2.15        | 1.29         | -0.20        | -3.35        | -9.38        | -11.96       | -12.35       | -8.72         | -10.89        | -8.98         | -12.19        | -14.37        | -11.03        | -11.95        | -10.49        | -8.87         | -9.41         | -15.19        | -13.19        | -7.69         | -2.65         | 0.76          | 0.77          | -0.22         | 2.15          |
| $\theta$ (135°) | 2.05        | 3.30         | 2.37         | -0.30        | -6.17        | -15.84       | -11.42       | -11.55        | -13.38        | -13.25        | -10.34        | -13.11        | -10.97        | -5.32         | -9.19         | -12.03        | -9.46         | -8.13         | -10.76        | -7.55         | -0.41         | 2.53          | 1.88          | 1.36          | 2.05          |
| $\theta$ (150°) | 4.65        | 3.90         | 2.12         | -0.81        | -4.58        | -9.12        | -12.25       | -15.78        | -20.07        | -12.28        | -9.39         | -9.60         | -7.02         | -5.77         | -7.86         | -8.41         | -7.66         | -9.99         | -11.22        | -7.91         | -1.75         | -0.63         | 2.08          | 4.08          | 4.65          |
| $\theta$ (165°) | 3.55        | 3.47         | 2.96         | 1.21         | -2.09        | -7.28        | -7.83        | -13.16        | -13.76        | -8.73         | -6.40         | -5.90         | -6.21         | -3.29         | -4.60         | -11.49        | -13.68        | -11.13        | -13.52        | -12.39        | -3.97         | 0.62          | 2.93          | 3.63          | 3.55          |
| $\theta$ (180°) | -4.77       | -6.65        | -9.89        | -16.26       | -19.10       | -14.06       | -8.87        | -6.07         | -4.43         | -3.57         | -3.35         | -3.73         | -4.77         | -6.65         | -9.89         | -16.26        | -19.10        | -14.06        | -8.87         | -6.07         | -4.43         | -3.57         | -3.35         | -3.73         | -4.77         |
| Polarity        | Phi         |              |              |              |              |              |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| dB              | $\phi$ (0°) | $\phi$ (15°) | $\phi$ (30°) | $\phi$ (45°) | $\phi$ (60°) | $\phi$ (75°) | $\phi$ (90°) | $\phi$ (105°) | $\phi$ (120°) | $\phi$ (135°) | $\phi$ (150°) | $\phi$ (165°) | $\phi$ (180°) | $\phi$ (195°) | $\phi$ (210°) | $\phi$ (225°) | $\phi$ (240°) | $\phi$ (255°) | $\phi$ (270°) | $\phi$ (285°) | $\phi$ (300°) | $\phi$ (315°) | $\phi$ (330°) | $\phi$ (345°) | $\phi$ (360°) |
| $\theta$ (0°)   | -15.30      | -6.71        | -2.86        | -0.64        | 0.62         | 1.19         | 1.15         | 0.49          | -0.89         | -3.27         | -7.49         | -17.75        | -15.30        | -6.71         | -2.86         | -0.64         | 0.62          | 1.19          | 1.15          | 0.49          | -0.89         | -3.27         | -7.49         | -17.75        | -15.30        |
| $\theta$ (15°)  | -18.76      | -10.28       | -4.62        | -2.47        | -0.68        | -0.95        | -3.28        | -6.43         | -9.42         | -8.00         | -7.07         | -9.59         | -13.22        | -14.40        | -11.19        | -6.98         | -3.03         | -1.16         | -0.15         | 0.51          | 0.46          | -0.22         | -1.94         | -4.90         | -18.76        |
| $\theta$ (30°)  | -13.53      | -2.59        | -1.32        | 1.14         | 0.93         | -0.24        | -1.78        | -3.30         | -7.72         | -11.10        | -11.55        | -12.74        | -11.73        | -18.34        | -10.79        | -6.96         | -6.45         | -2.93         | 0.58          | 3.10          | 3.20          | 1.09          | -1.93         | -5.62         | -13.53        |
| $\theta$ (45°)  | -4.43       | 1.18         | 1.48         | 4.74         | 6.51         | 5.52         | 3.24         | 0.58          | -2.81         | -9.00         | -9.61         | -11.70        | -13.29        | -15.36        | -12.34        | -8.65         | -9.86         | -6.26         | -0.45         | 2.93          | 5.56          | 5.04          | 0.72          | -7.76         | -4.43         |
| $\theta$ (60°)  | -0.82       | 3.20         | 3.80         | 4.95         | 6.03         | 3.77         | 0.94         | -3.29         | -4.90         | -10.54        | -7.39         | -9.21         | -10.92        | -16.57        | -12.97        | -17.69        | -11.16        | -5.24         | -1.31         | 2.83          | 5.34          | 3.10          | 0.45          | 0.25          | -0.82         |
| $\theta$ (75°)  | -0.89       | 0.95         | 4.07         | 4.24         | [7.50]       | 6.03         | 2.99         | -1.39         | -6.75         | -8.65         | -9.61         | -8.42         | -7.78         | -9.30         | -11.96        | -14.46        | -9.55         | -3.12         | -1.57         | 1.32          | 3.39          | -0.46         | 1.28          | 0.10          | -0.89         |
| $\theta$ (90°)  | -1.40       | 0.59         | 4.60         | 4.43         | 7.07         | 5.59         | 2.85         | -2.56         | -6.32         | -10.69        | -8.58         | -9.76         | -9.37         | -10.27        | -11.28        | -11.46        | -6.92         | -3.60         | 2.99          | 5.47          | 3.06          | 3.16          | 2.44          | -0.20         | -1.40         |
| $\theta$ (105°) | -2.68       | -0.40        | 3.06         | 4.82         | 6.57         | 5.58         | 3.02         | 1.00          | -6.95         | -5.26         | -14.52        | -10.92        | -16.49        | -14.60        | -12.31        | -12.98        | -7.27         | -3.08         | 2.10          | 4.60          | 6.04          | 4.09          | -0.87         | -3.96         | -2.68         |
| $\theta$ (120°) | -4.66       | -1.69        | 1.70         | 3.39         | 5.33         | 4.24         | 2.36         | -1.98         | -8.86         | -7.51         | -8.53         | -13.55        | -12.67        | -9.71         | -13.83        | -9.44         | -5.49         | -3.22         | 2.17          | 5.21          | 5.61          | 3.11          | -0.26         | -3.09         | -4.66         |
| $\theta$ (135°) | -7.81       | -4.49        | 1.25         | 5.30         | 6.01         | 4.85         | 2.56         | -1.21         | -7.71         | -6.97         | -10.06        | -11.42        | -15.80        | -11.08        | -12.50        | -8.23         | -8.68         | -1.43         | 1.57          | 4.62          | 6.20          | 6.15          | 2.08          | -5.70         | -7.81         |
| $\theta$ (150°) | -15.56      | -4.74        | -1.99        | 0.88         | 3.11         | 4.30         | 3.90         | -1.58         | -8.88         | -2.82         | -6.91         | -13.74        | -13.90        | -12.63        | -13.87        | -6.90         | -4.16         | -0.86         | 2.61          | 4.21          | 4.06          | 2.29          | -1.31         | -4.36         | -15.56        |
| $\theta$ (165°) | -15.33      | -7.63        | -2.43        | -0.16        | 0.42         | -0.17        | -1.30        | -2.38         | -2.02         | -3.82         | -8.50         | -11.78        | -14.87        | -16.59        | -7.86         | -6.57         | -6.15         | -2.50         | 0.48          | 2.33          | 2.80          | 1.74          | -1.08         | -5.68         | -15.33        |
| $\theta$ (180°) | -8.87       | -6.07        | -4.43        | -3.57        | -3.35        | -3.73        | -4.77        | -6.65         | -9.89         | -16.26        | -19.10        | -14.06        | -8.87         | -6.07         | -4.43         | -3.57         | -3.35         | -3.73         | -4.77         | -6.65         | -9.89         | -16.26        | -19.10        | -14.06        | -8.87         |

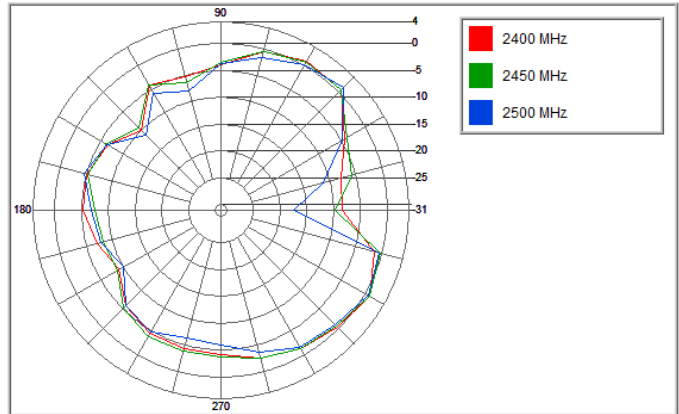
### A.3 ANTENNA PATTERN TEST PLOTS

#### X-Y Plan (Ant 1)

Ant 1, Theta, XY-Plan

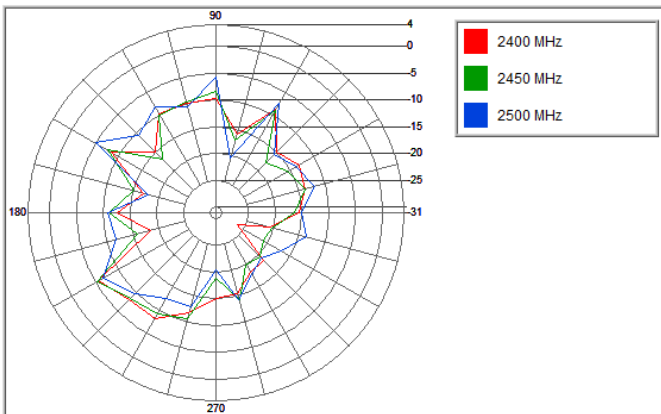


Ant 1, Phi, XY-Plan

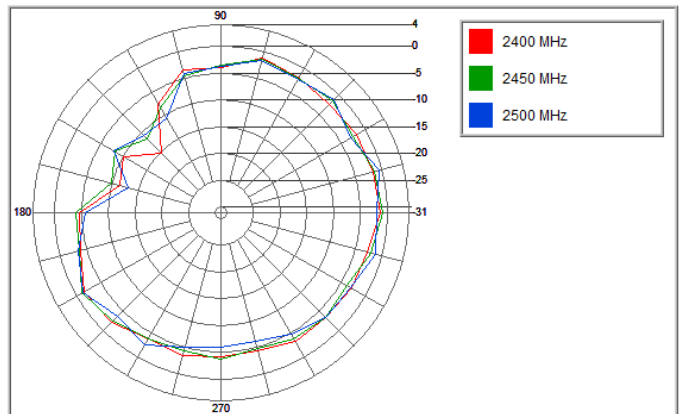


#### Y-Z Plan (Ant 1)

Ant 1, Theta, YZ-Plan

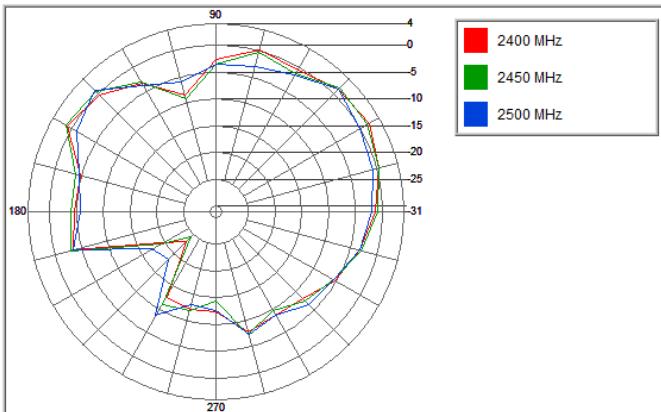


Ant 1, Phi, YZ-Plan

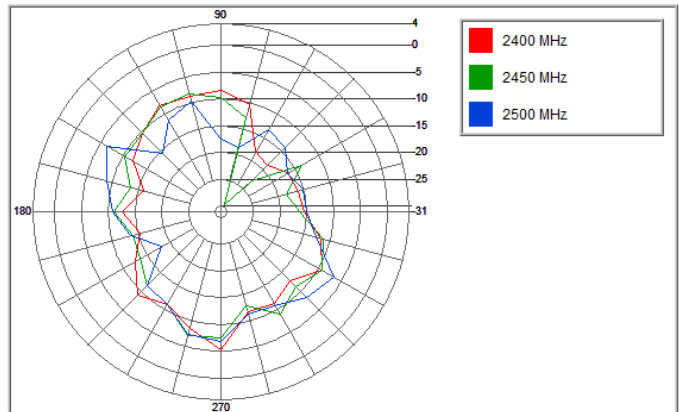


#### Z-X Plan (Ant 1)

Ant 1, Theta, ZX-Plan

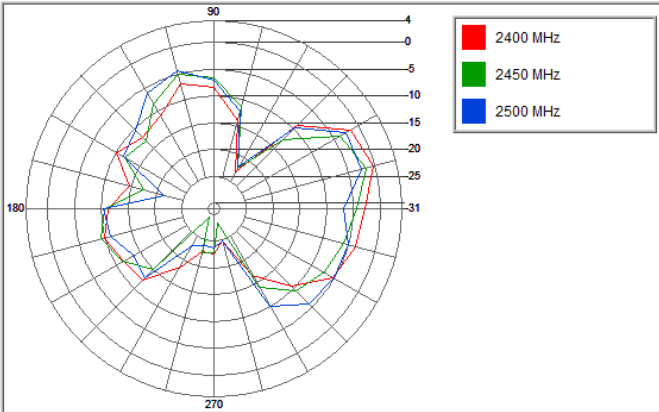


Ant 1, Phi, ZX-Plan

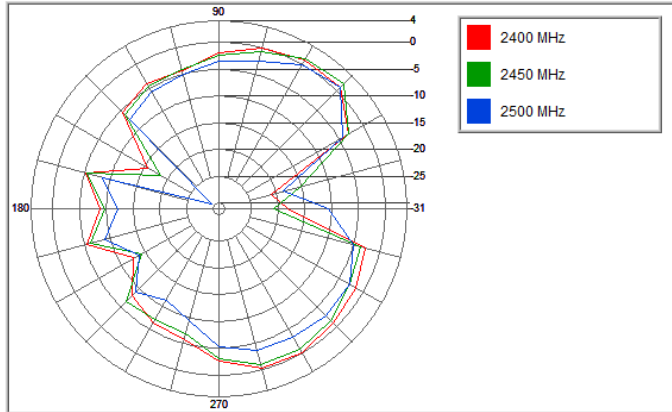


### X-Y Plan (Ant 2)

Ant 2, Theta, XY-Plan

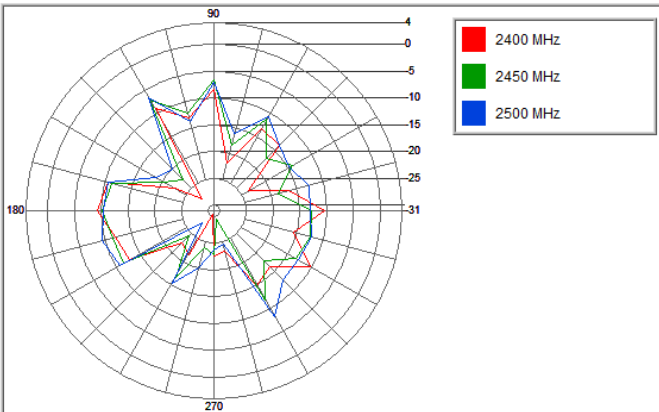


Ant 2, Phi, XY-Plan

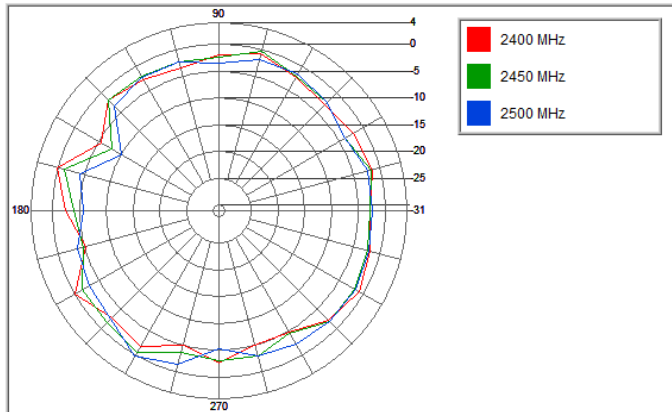


### Y-Z Plan (Ant 2)

Ant 2, Theta, YZ-Plan

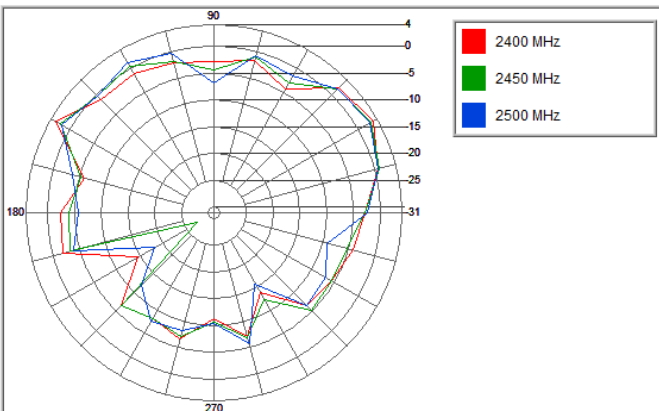


Ant 2, Phi, YZ-Plan

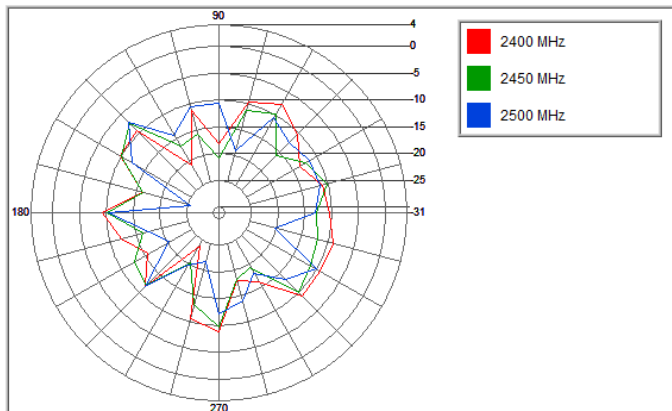


### Z-X Plan (Ant 2)

Ant 2, Theta, XZ-Plan

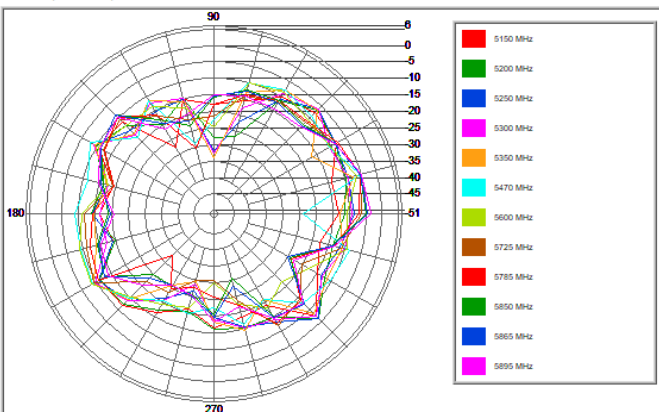


Ant 2, Phi, XZ-Plan

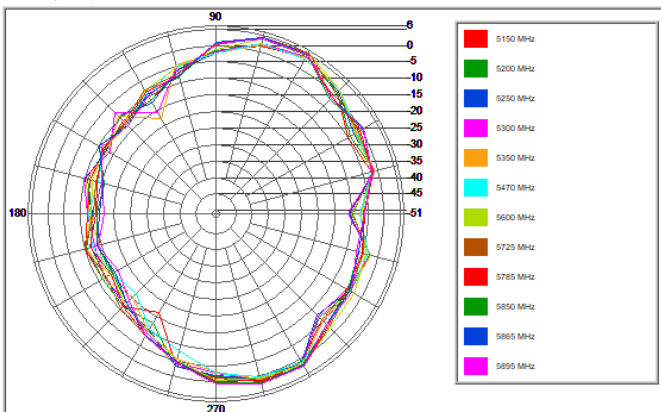


### X-Y Plan (Ant 1)

Ant 1, Theta, XY-Plan

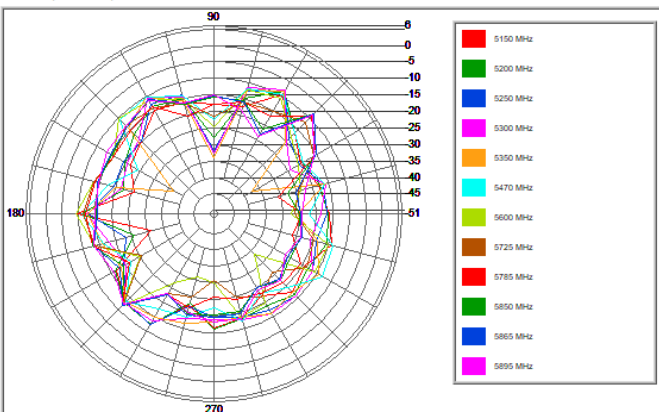


Ant 1, Phi, XY-Plan

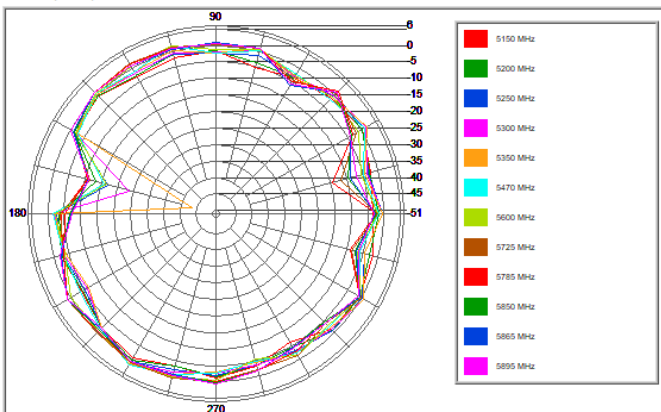


### Y-Z Plan (Ant 1)

Ant 1, Theta, YZ-Plan

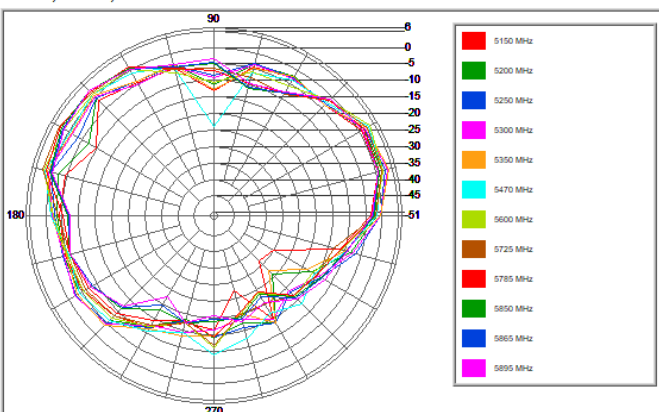


Ant 1, Phi, YZ-Plan

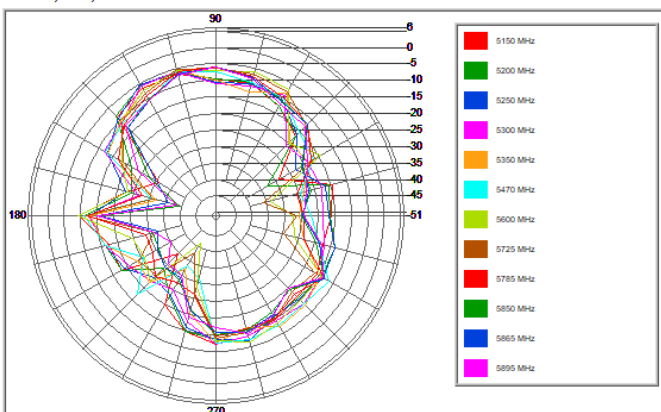


### Z-X Plan (Ant 1)

Ant 1, Theta, XZ-Plan

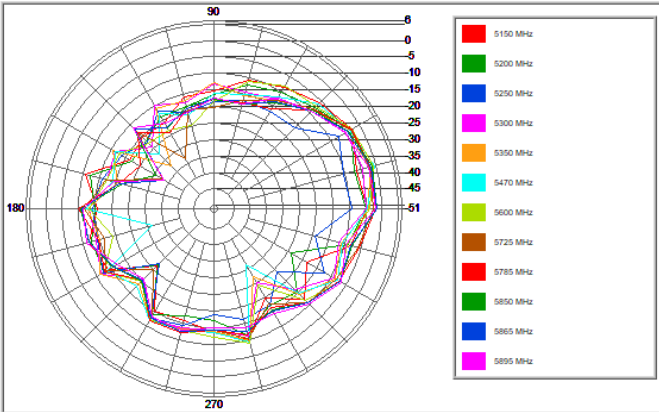


Ant 1, Phi, XZ-Plan

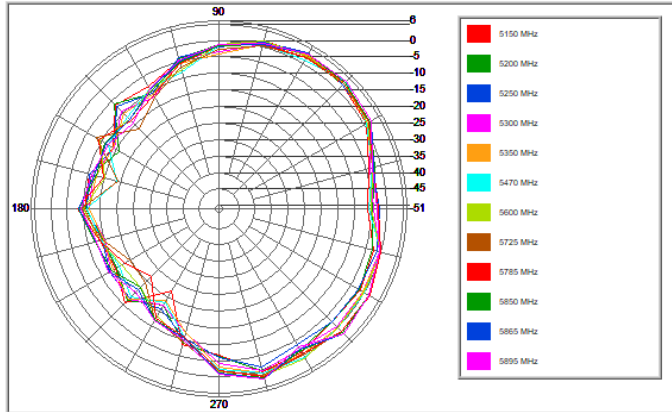


### X-Y Plan (Ant 2)

Ant 2, Theta, XY-Plan

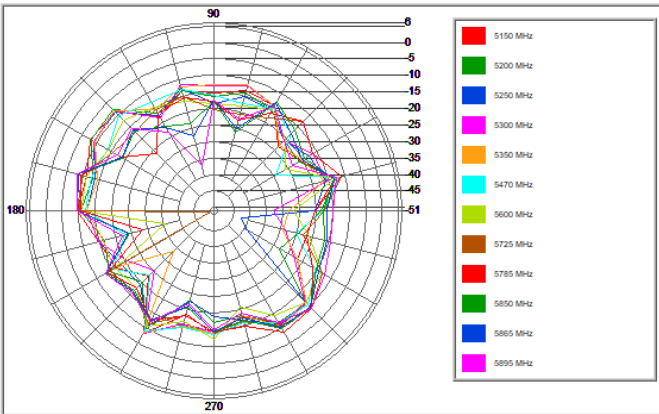


Ant 2, Phi, XY-Plan

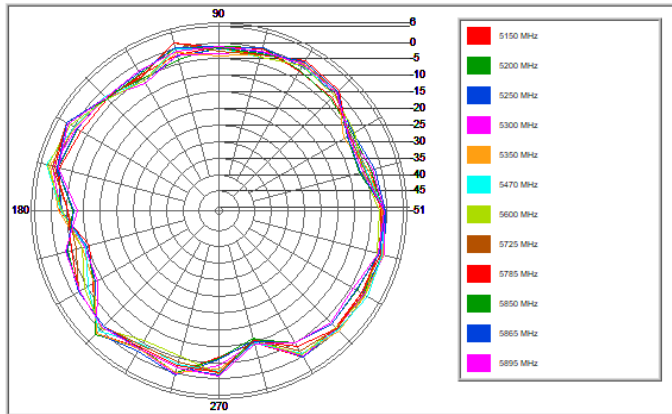


### Y-Z Plan (Ant 2)

Ant 2, Theta, YZ-Plan

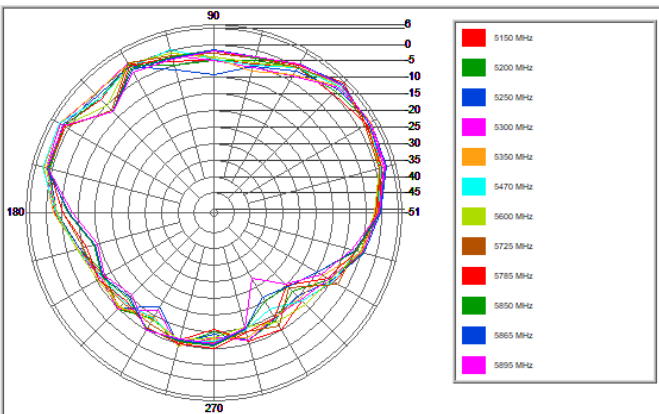


Ant 2, Phi, YZ-Plan

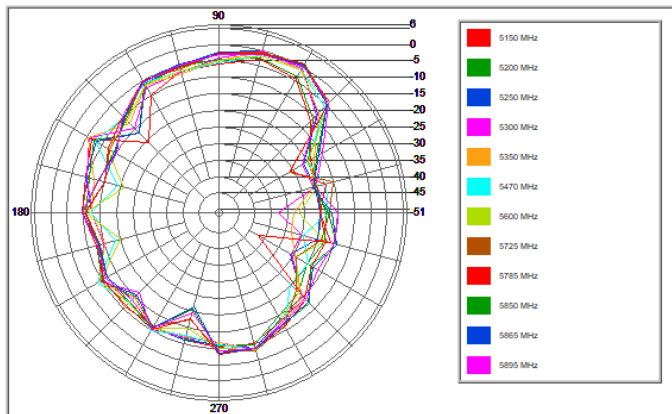


### Z-X Plan (Ant 2)

Ant 2, Theta, XZ-Plan



Ant 2, Phi, XZ-Plan



## **APPENDIX B –Test Setup and EUT antenna port photo**

### **B.1 Antenna Location (Configuration and RF Chains)**

Please refer to the documents “ORBAOZ-WTW-P25060017A\_LANCOM\_LANCOM LX-7200\_Antenna measurement Report\_APPENDIX”

### **B.2 Test Setup Diagram for EUT**

Please refer to the documents “ORBAOZ-WTW-P25060017A\_LANCOM\_LANCOM LX-7200\_Antenna measurement Report\_APPENDIX”

## APPENDIX C - Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

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The address and road map of all our labs can be found in our web site also.

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