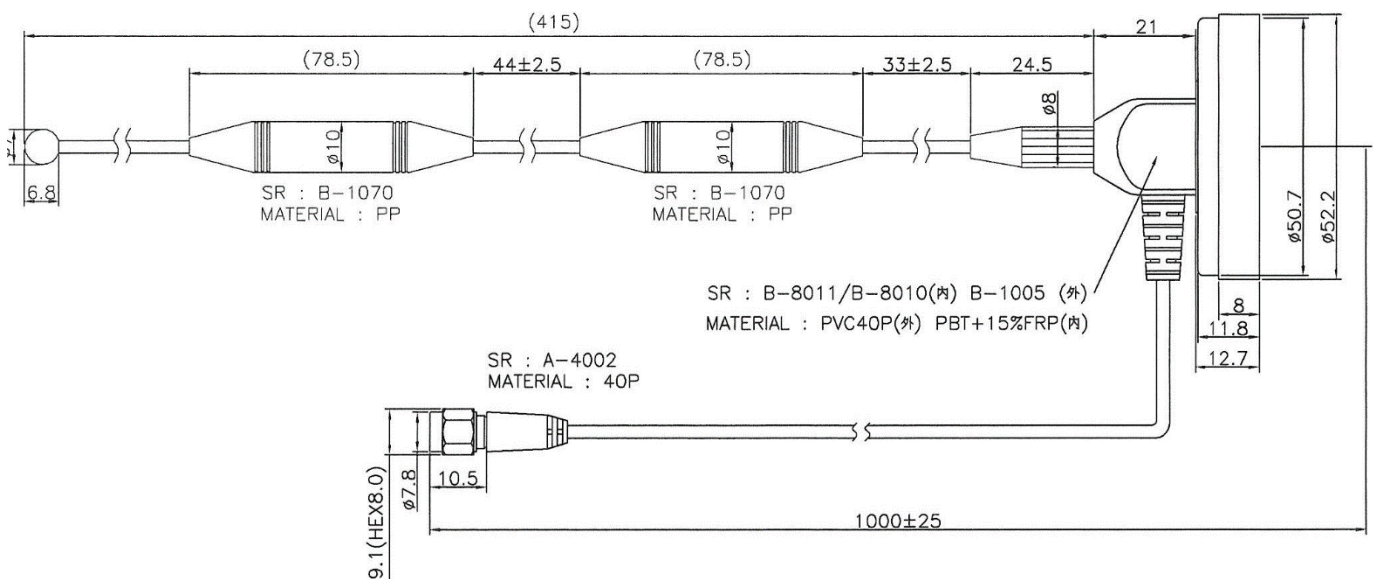
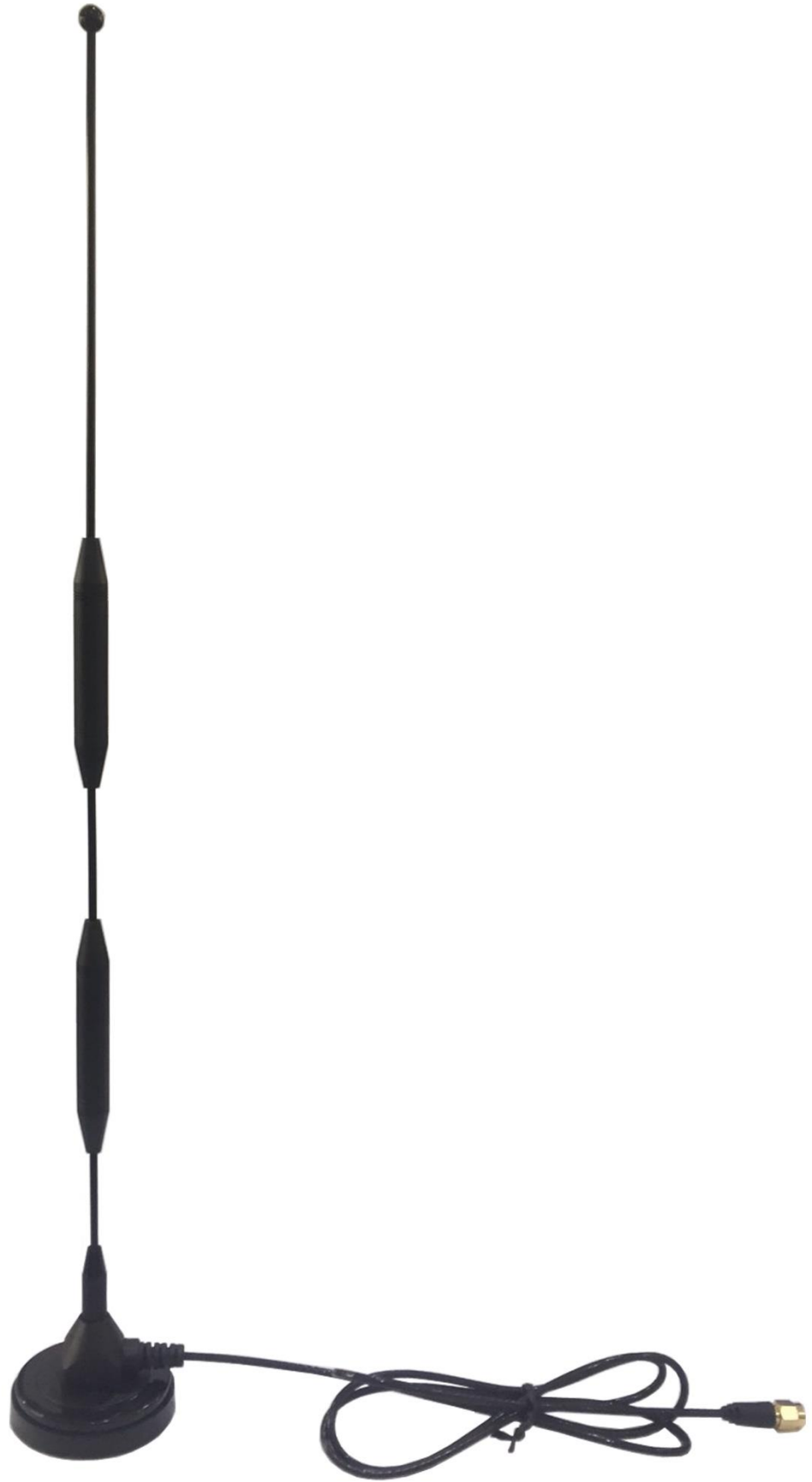


Art.no: 202-910

Specification

1. *Product: C13D+M87-3+316U+SMA M*
 2. *Frequency:698~960/1710~2170/2300~2700 MHz*
 3. *VSWR: 3.6:1*
 4. *Gain:3dB*
 5. *Impedance:50 Ω*
 6. *Cable: RG316U*
 7. *Connector: SMA M*
- ✳RoHS Compliant*



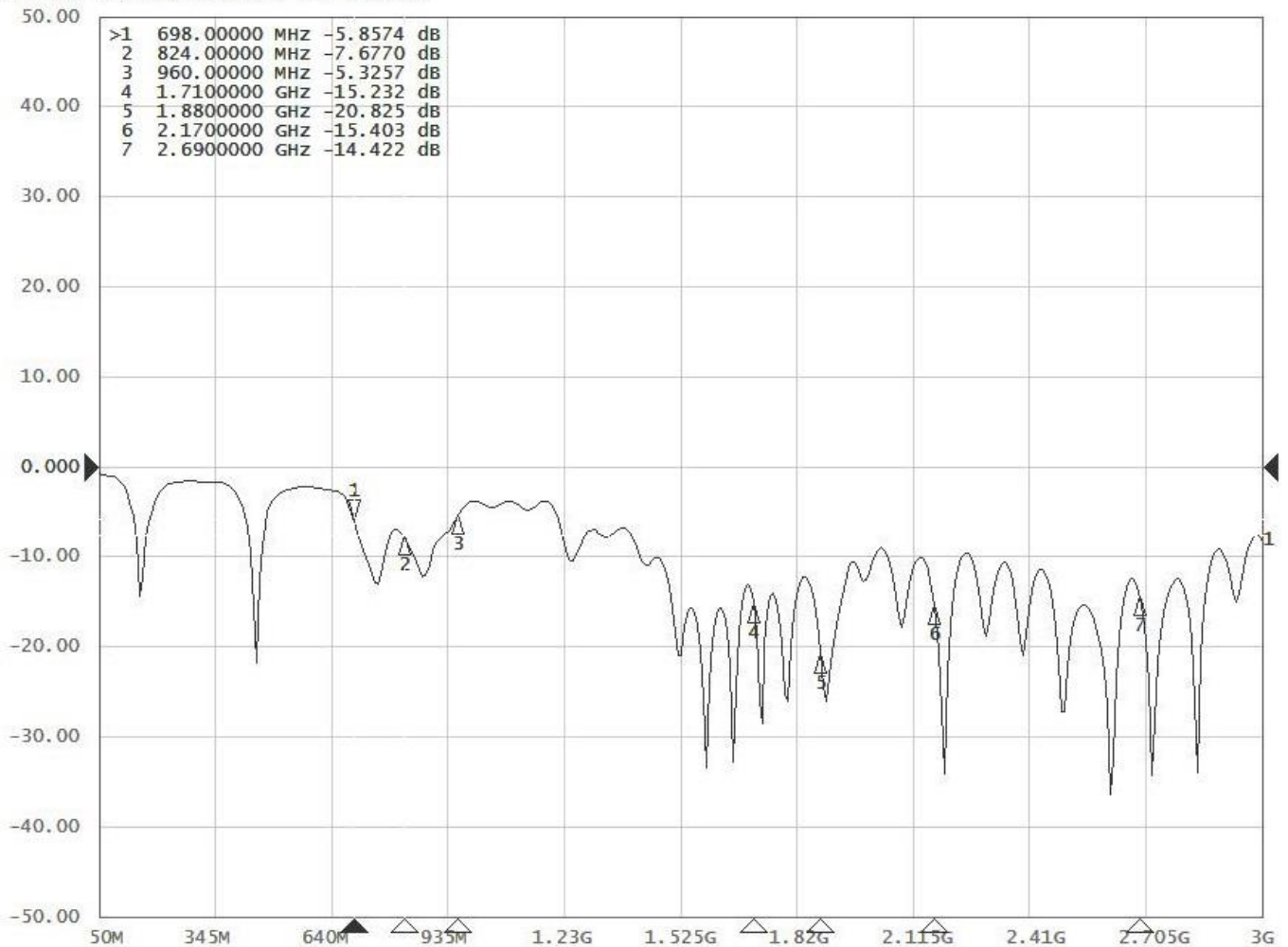


ELECTRICAL

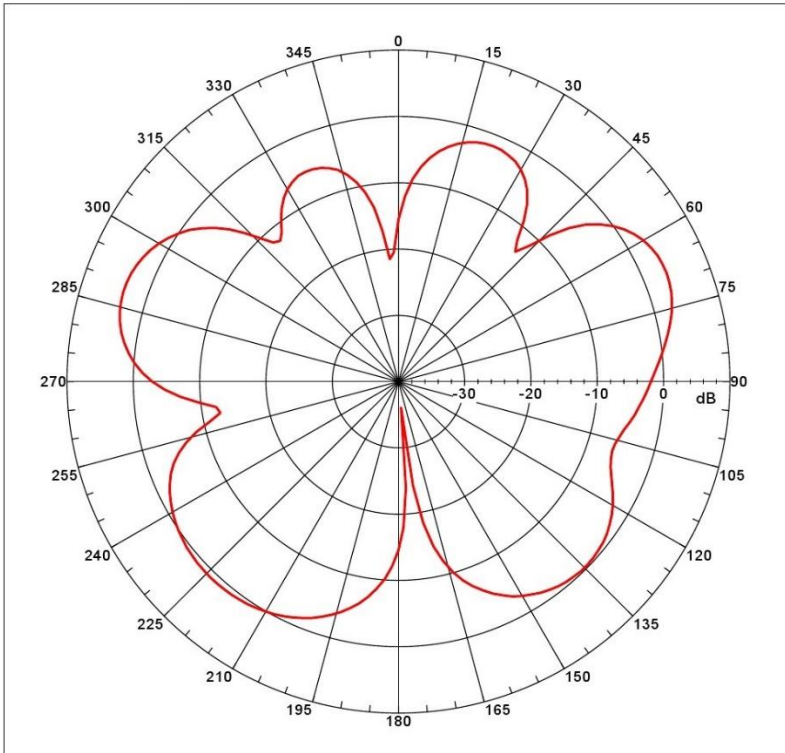
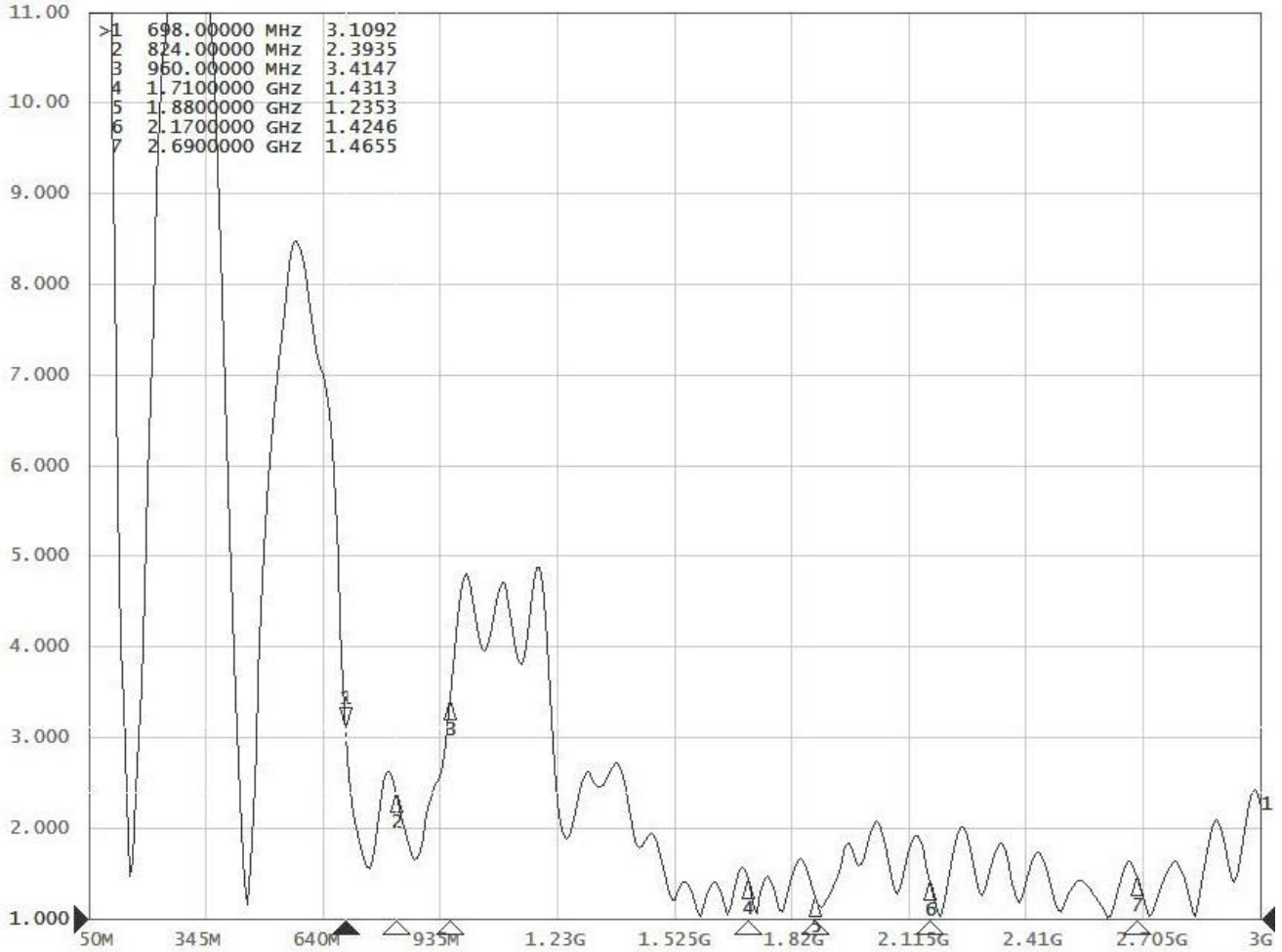
Frequency (MHz)	Return Loss (dB)	VSWR (dB)	H-plane (dB)	E-plane (dB)
698	-5.85	3.10	-----	-----
824	-7.67	2.39	0.65	3.63
960	-5.32	3.41	-8.82	0.40
1710	-15.23	1.43	-1.59	2.70
1880	-20.82	1.23	-6.17	2.51
2170	-15.40	1.42	-5.66	4.74
2600	-----	-----	-6.07	5.02
2690	-14.42	1.46	-----	-----

Test Data

Tr1 511 Log Mag 10.00dB/ Ref 0.000dB

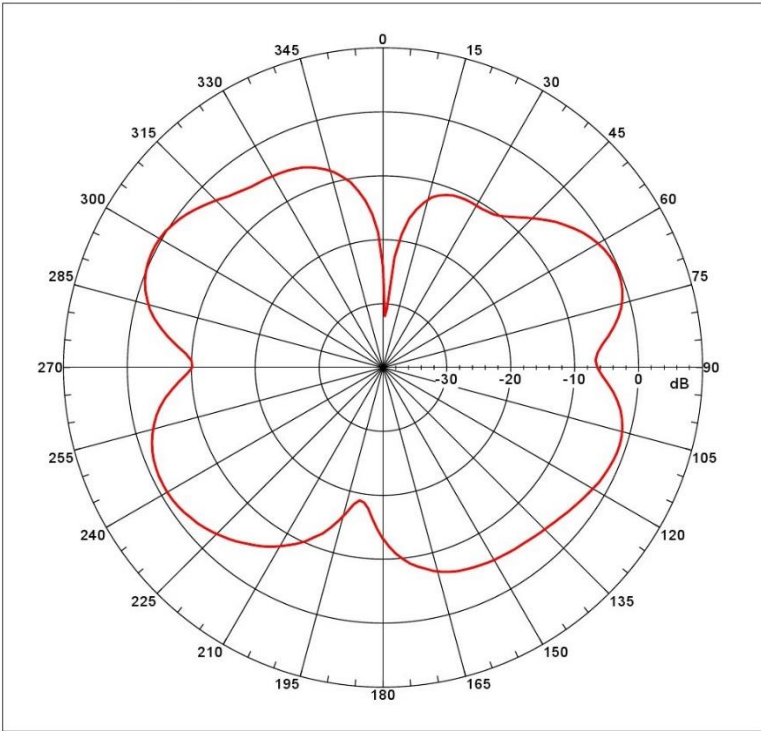


SWR 1.000/ Ref 1.000



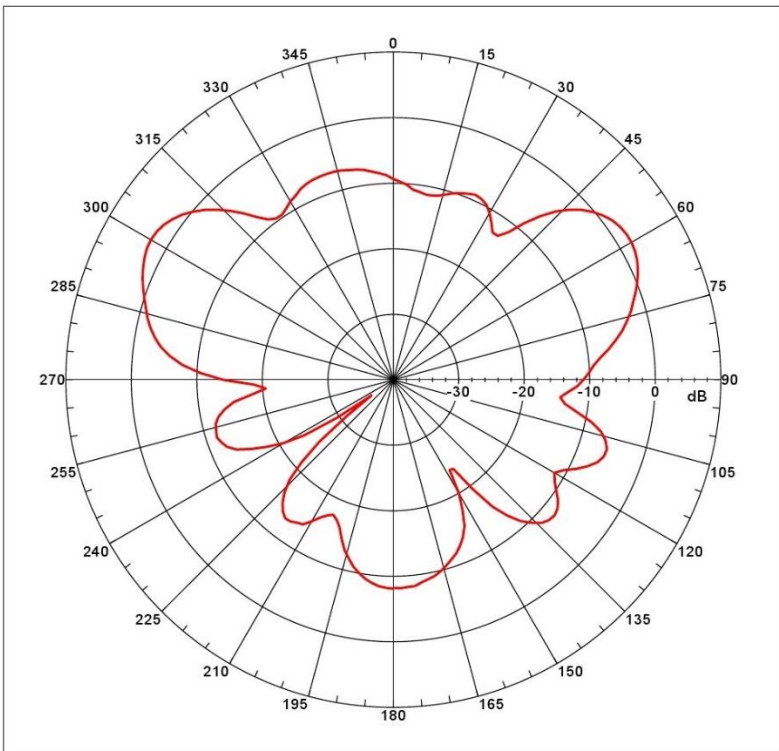
Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 3.63531 dBi
 Max far-field (global) = -39.36103 dB, Max far-field (plot) = -39.36107 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -72.00001 deg, Vpeak at: 0.000 deg
 Plot centering: On

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop
 Measurement date/time: 6/30/2017 11:56:38 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -2.703 dB
 -3. dB beam width: 27.22 deg
 -6. dB beam width: 37.38 deg
 -10. dB beam width: 46.30 deg
 Left Sidelobe: -2.69 dB at -135.754 deg
 Right Sidelobe: -5.05 dB at -23.128 deg
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
 Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1
 Selected beam(s) 1 of 7
 Beam Frequency Azimuth Elevation Pol
 1 0.824 GHz Azimuth Elevation Single-pol



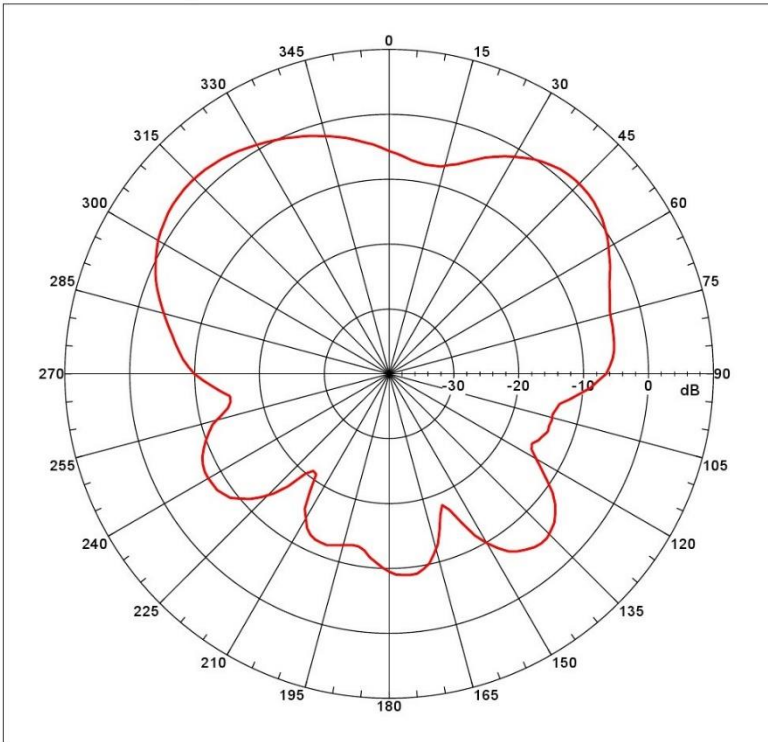
Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 0.40817 dBi
 Max far-field (global) = -42.2215 dB, Max far-field (plot) = -42.2215 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -62.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop
 Measurement date/time: 6/30/2017 11:56:38 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg Value: -3.064 dB
 -3. dB beam width: 29.53 deg
 -6. dB beam width: 33.33 deg
 -10. dB beam width: 75.64 deg
 Left SideLobe: -11.43 dB at -17.654 deg
 Right SideLobe: -17.654 dB at 17.654 deg
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
 Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1
 Selected beam(s) 1 of 7
 Beam Frequency Azimuth Elevation Pol
 2 0.960 GHz Azimuth Elevation Single-pol



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 2.70444 dBi
 Max far-field (global) = -42.40815 dB, Max far-field (plot) = -42.4082 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -60.00001 deg, Vpeak at: 0.000 deg
 Plot centering: On

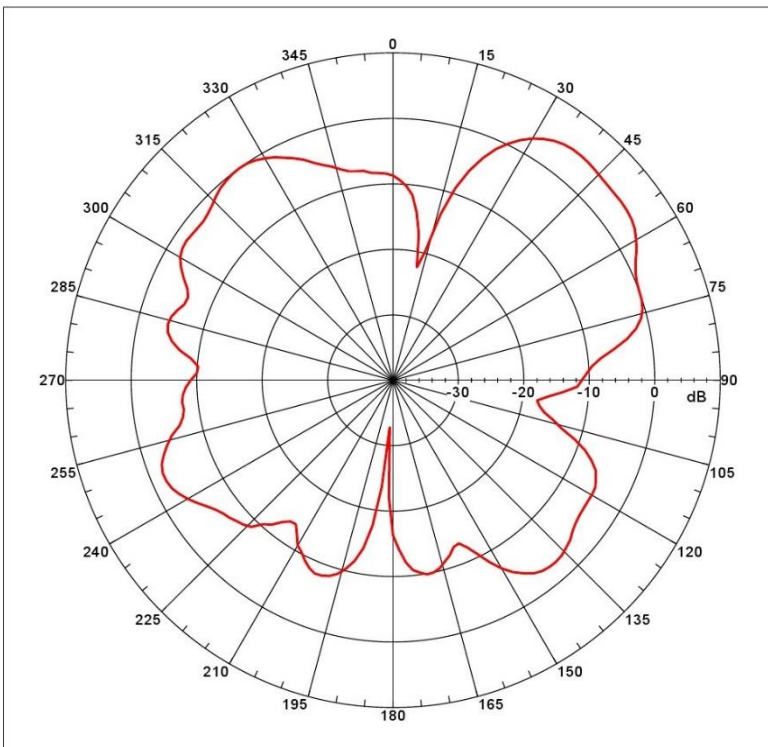
NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop
 Measurement date/time: 6/30/2017 11:56:38 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg Value: -7.122 dB
 -3. dB beam width: 23.14 deg
 -6. dB beam width: 35.50 deg
 -10. dB beam width: 45.45 deg
 Left SideLobe: -14.36 dB at -107.598 deg
 Right SideLobe: -15.084 dB at 15.084 deg
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
 Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1
 Selected beam(s) 1 of 7
 Beam Frequency Azimuth Elevation Pol
 3 1.710 GHz Azimuth Elevation Single-pol



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 2.51007 dBi
 Max far-field (global) = -44.1585 dB, Max far-field (plot) = -44.1585 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -48.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop
 Measurement date/time: 6/30/2017 11:56:38 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -5.355 dB
 -3. dB beam width: 42.93 deg
 -6. dB beam width: 65.35 deg
 -10. dB beam width: 176.55 deg
 Left Side-lobe: -10.33 dB at -119.665 deg
 Right Side-lobe: -1.08 dB at 45.251 deg
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
 Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1
 Selected beam(s) 1 of 7
 Beam Frequency Azimuth Elevation Pol

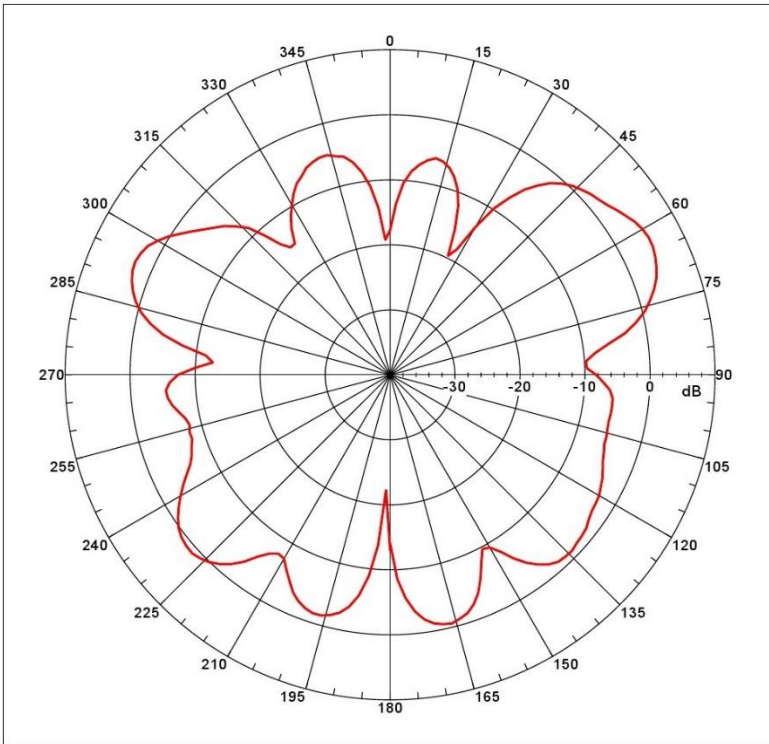
 4 1.880 GHz Azimuth Elevation Single-pol



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 4.74011 dBi
 Max far-field (global) = -42.792 dB, Max far-field (plot) = -42.792 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 35.99999 deg, Vpeak at: 0.000 deg
 Plot centering: On

NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop
 Measurement date/time: 6/30/2017 11:56:38 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -4.359 dB
 -3. dB beam width: 34.68 deg
 -6. dB beam width: 52.74 deg
 -10. dB beam width: 61.21 deg
 Left Side-lobe: -4.77 dB at -35.196 deg
 Right Side-lobe: -9.67 dB at 121.676 deg
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
 Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1
 Selected beam(s) 1 of 7
 Beam Frequency Azimuth Elevation Pol

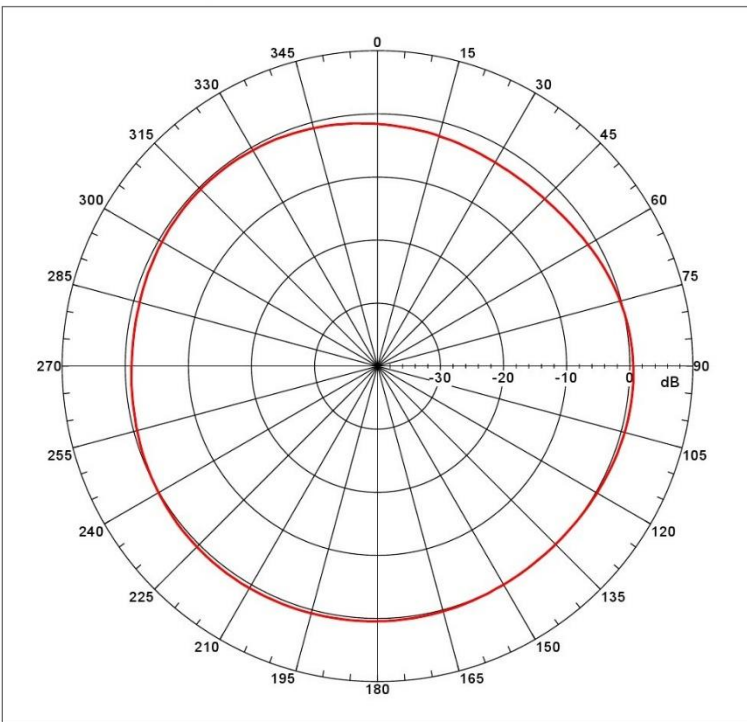
 5 2.170 GHz Azimuth Elevation Single-pol



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 5.02498 dB
 Max far-field (global) = -45.29181 dB, Max far-field (plot) =
 -45.29188 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 61.99999 deg, Vpeak at: 0.000 deg
 Plot centering: On

NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop
 Measurement date/time: 6/30/2017 11:56:38 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -3.451 dB
 -3. dB beam width: 22.89 deg
 -6. dB beam width: 36.77 deg
 -10. dB beam width: 45.60 deg
 Left Sidelobe: -10.59 dB at 13.073 deg
 Right Sidelobe: -10.55 dB at 101.564 deg
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
 Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000
 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1
 Selected beam(s) 1 of 7
 Beam Frequency Azimuth Elevation Pol

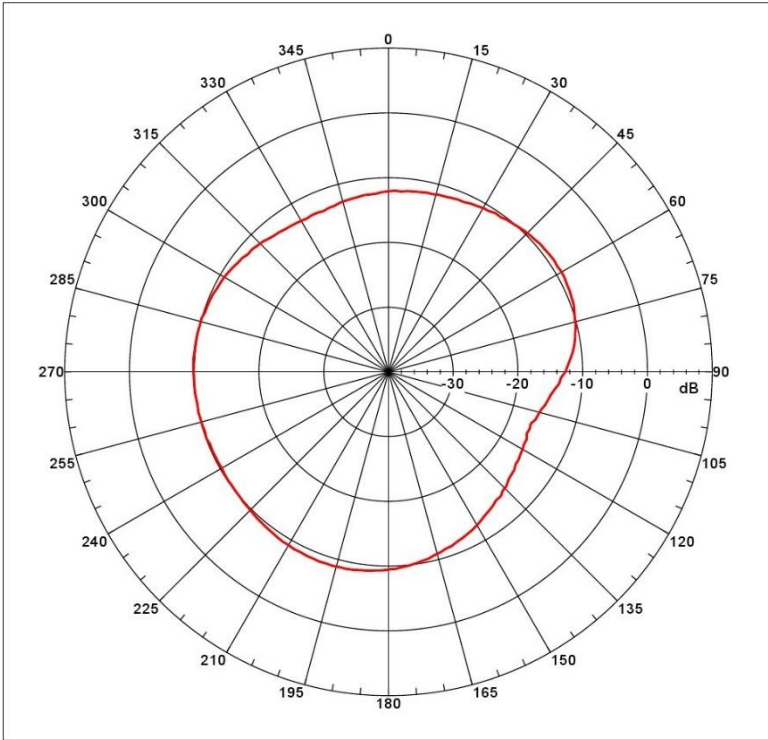
 7 2.600 GHz Azimuth Elevation Single-pol



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 0.62095 dB
 Max far-field (global) = -42.34839 dB, Max far-field (plot) =
 -42.34842 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -148.00001 deg, Vpeak at: 0.000 deg
 Plot centering: On

NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop
 Measurement date/time: 6/30/2017 10:41:17 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -0.440 dB
 -3. dB beam width: Not Found
 -6. dB beam width: Not Found
 -10. dB beam width: Not Found
 Left Sidelobe: Not Found
 Right Sidelobe: 0.00 dB at 95.531 deg
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
 Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000
 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1
 Selected beam(s) 1 of 7
 Beam Frequency Azimuth Elevation Pol

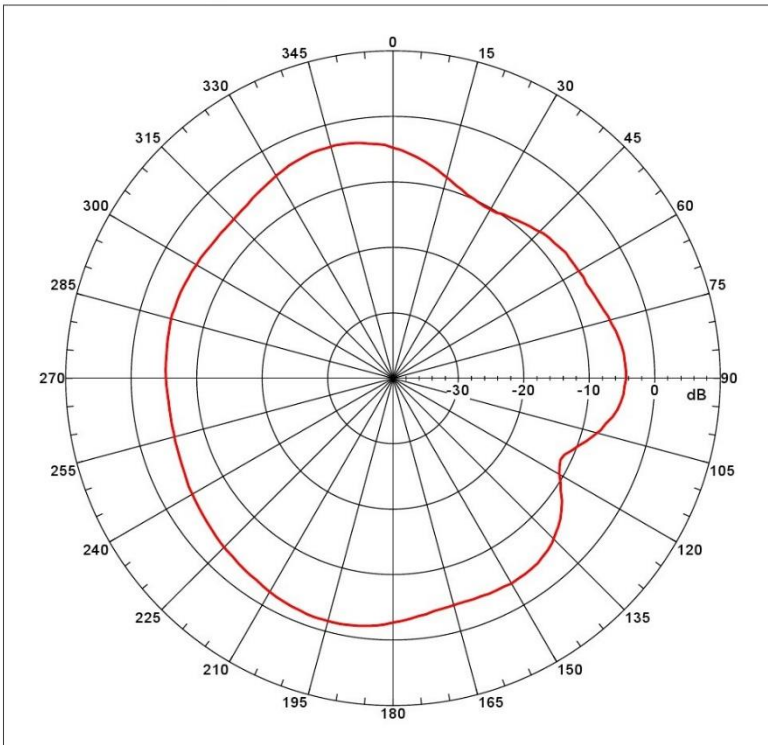
 1 0.024 GHz Azimuth Elevation Single-pol



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = -0.82666 dB
 Max far-field (global) = -51.45633 dB, Max far-field (plot) = -51.45635 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -124.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop
 Measurement date/time: 6/30/2017 10:41:17 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -11.151 dB
 -3. dB beam width: Not Found
 -6. dB beam width: Not Found
 -10. dB beam width: Not Found
 Left Side-lobe: Not Found
 Right Side-lobe: -3.18 dB at 3.017 deg
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
 Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1
 Selected beam(s) 1 of 7
 Beam Frequency Azimuth Elevation Pol

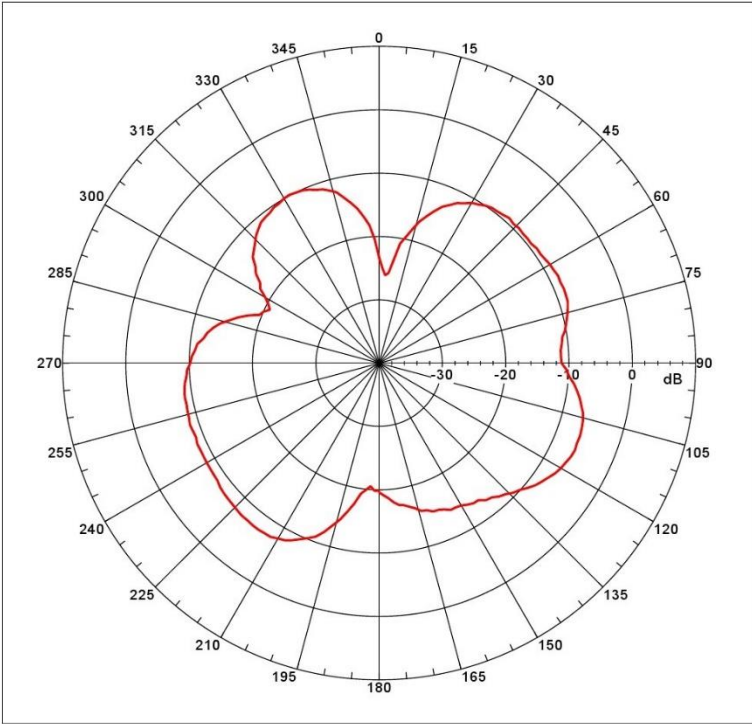
 2 0.960 GHz Azimuth Elevation Single-pol



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = -1.59468 dB
 Max far-field (global) = -46.78727 dB, Max far-field (plot) = -46.78729 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -166.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop
 Measurement date/time: 6/30/2017 10:41:17 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -5.123 dB
 -3. dB beam width: Not Found
 -6. dB beam width: Not Found
 -10. dB beam width: Not Found
 Left Side-lobe: Not Found
 Right Side-lobe: -1.75 dB at -17.095 deg
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
 Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1
 Selected beam(s) 1 of 7
 Beam Frequency Azimuth Elevation Pol

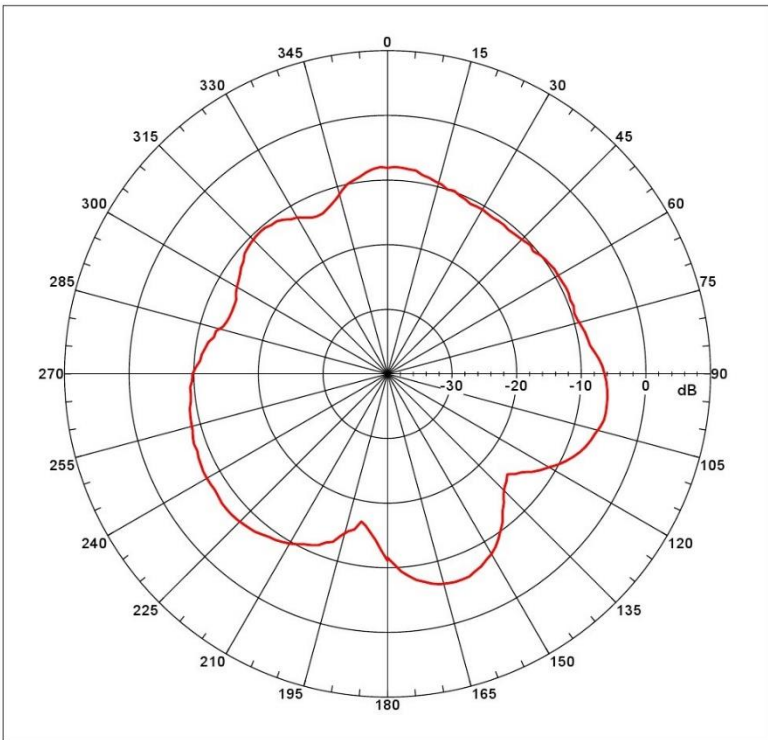
 3 1.710 GHz Azimuth Elevation Single-pol



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = -4.17086 dBi
 Max far-field (global) = -52.83943 dB, Max far-field (plot) =
 -52.83943 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 113.95959 deg, Vpeak at: 0.000 deg
 Plot centering: On

NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop
 Measurement date/time: 6/30/2017 10:41:17 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -11.162 dB
 -3. dB beam width: 33.88 deg
 -6. dB beam width: 114.87 deg
 -10. dB beam width: 149.21 deg
 Left Sidelobe: -2.16 dB at 65.385 deg
 Right Sidelobe: Not Found
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
 Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000
 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1
 Selected beam(s) 1 of 7

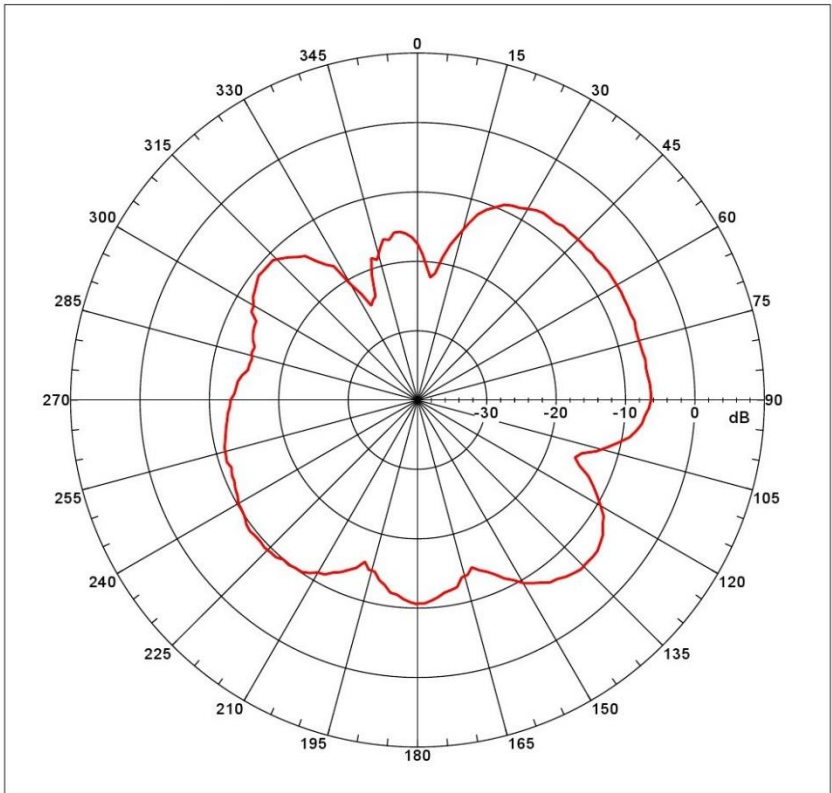
Beam	Frequency	Azimuth	Elevation	Pol
4	1.880 GHz	Azimuth	Elevation	Single-pol



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = -5.66964 dBi
 Max far-field (global) = -53.20178 dB, Max far-field (plot) =
 -53.20178 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 69.95959 deg, Vpeak at: 0.000 deg
 Plot centering: On

NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop
 Measurement date/time: 6/30/2017 10:41:17 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -5.658 dB
 -3. dB beam width: 35.74 deg
 -6. dB beam width: 138.03 deg
 -10. dB beam width: 259.74 deg
 Left Sidelobe: -4.18 dB at 21.117 deg
 Right Sidelobe: -0.47 dB at 163.911 deg
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
 Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000
 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1
 Selected beam(s) 1 of 7

Beam	Frequency	Azimuth	Elevation	Pol
5	2.170 GHz	Azimuth	Elevation	Single-pol



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = -8.07685 dBi
 Max far-field (global) = -56.39364 dB, Max far-field (plot) =
 -56.39372 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 135.99999 deg, Vpeak at: 0.000 deg
 Plot centering: On

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop
 Measurement date/time: 6/30/2017 10:41:17 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -10.829 dB
 -3. dB beam width: 27.59 deg
 -2. dB beam width: 39.87 deg
 -10. dB beam width: Not Found
 Left Sidelobe: -0.25 dB at 91.508 deg
 Right Sidelobe: Not Found
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
 Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000
 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1
 Selected beam(s) 1 of 7

Beam	Frequency	Azimuth	Elevation	Pol
7	2.600 GHz	Azimuth	Elevation	Single-pol