



GSM Rugged 'Puck' Antenna IP67

- GSM 3G Quad Band Antenna
- Low Profile Package
- World-Wide Use
 - 850 - 950MHz
 - 1770 - 2100MHz
- +2dBi Gain
- Rugged IP67 Waterproof
- VSWR <2.0
- 3metres RG174 Cable
- SMA Male Connector
- Operates from -40 to +70°C
- M12 Screw thread Connector



Applications

- Automotive Applications
- Covert Applications
- Machine to Machine
- Secure Rugged Applications

Description

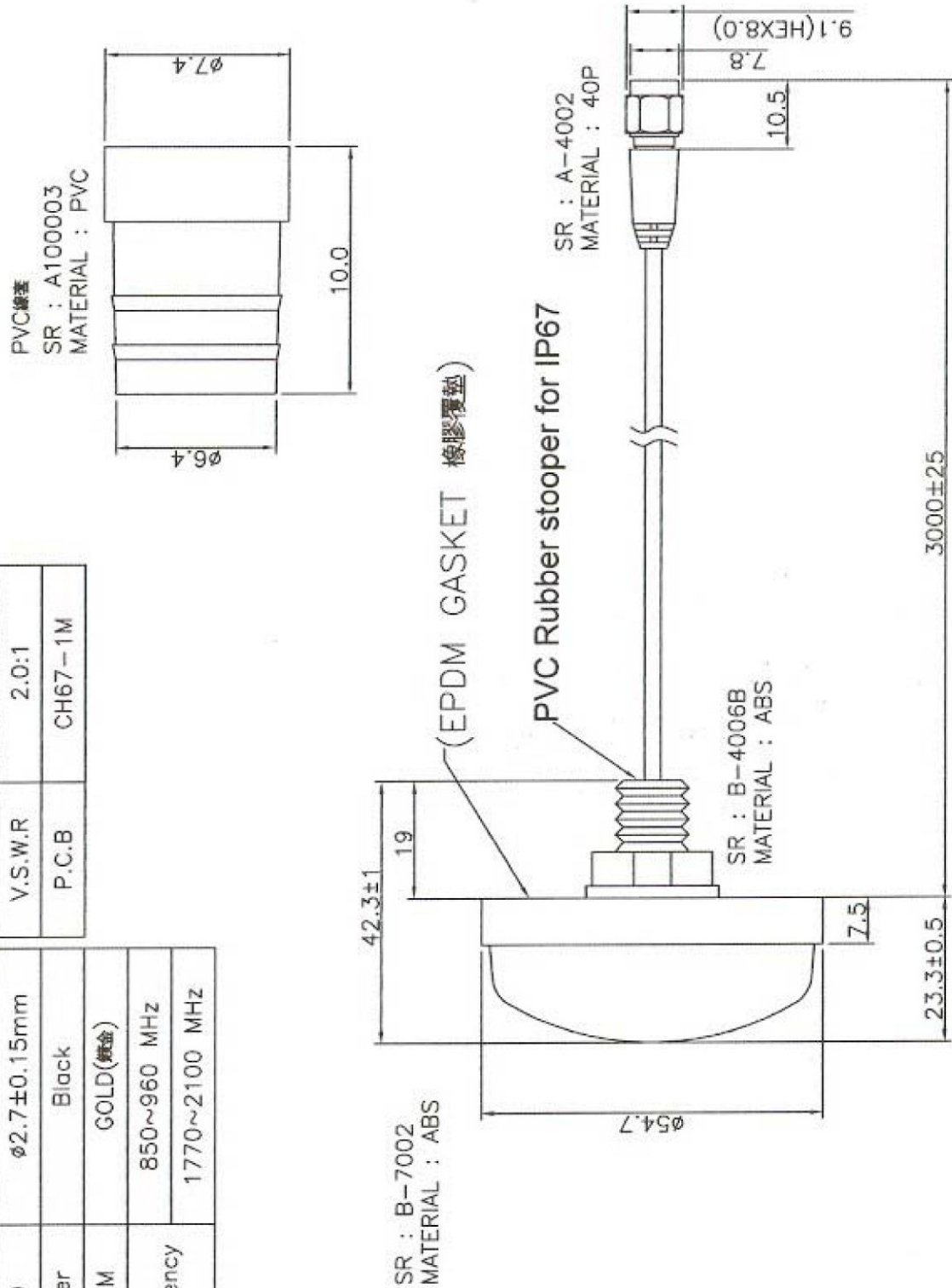
A Rugged antenna with high performance for worldwide use. This antenna provides 3G GSM Antenna with 2dBi gain. Housed in a rugged low profile UV resistant IP67 housing, this antenna is compact and resistant to Vandalism.

	Description	Cable Length	Connector
ANT-GSMPUKS	GSM QuadBand Puck Antenna	3metres	SMA (M)

GSM Rugged 'Puck' Antenna IP67

Mechanical Data

Cable	RG174U	Impedance	50 OHM
OD	$\phi 2.7 \pm 0.15 \text{ mm}$	V.S.W.R	2.0:1
Cover	Black	P.C.B	CH67-1M
SMA M	GOLD(鍍金)		
Frequency	850~960 MHz		
	1770~2100 MHz		

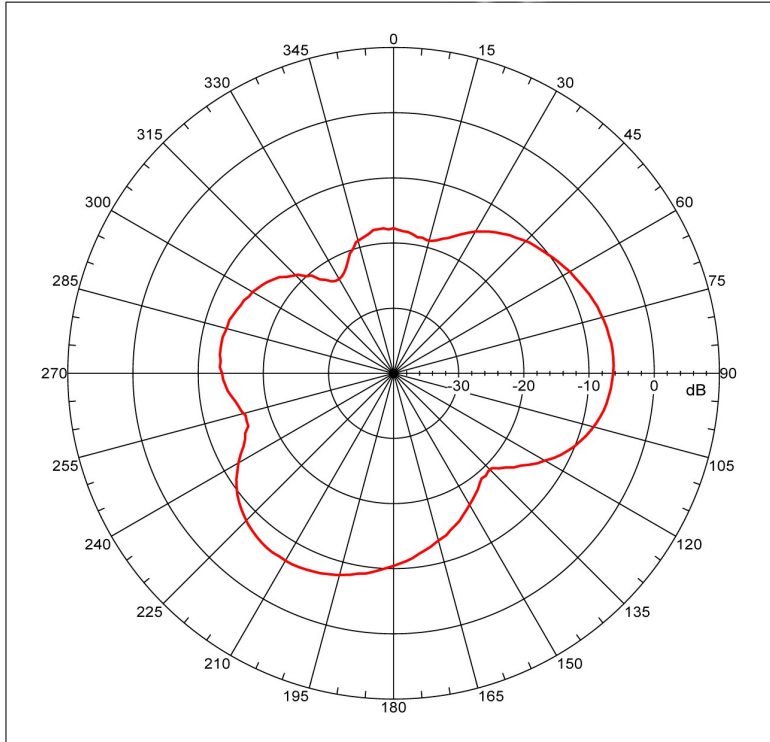




GSM Rugged 'Puck' Antenna IP67

Measured Performance at 824MHz Vertical Plane

Far-field amplitude

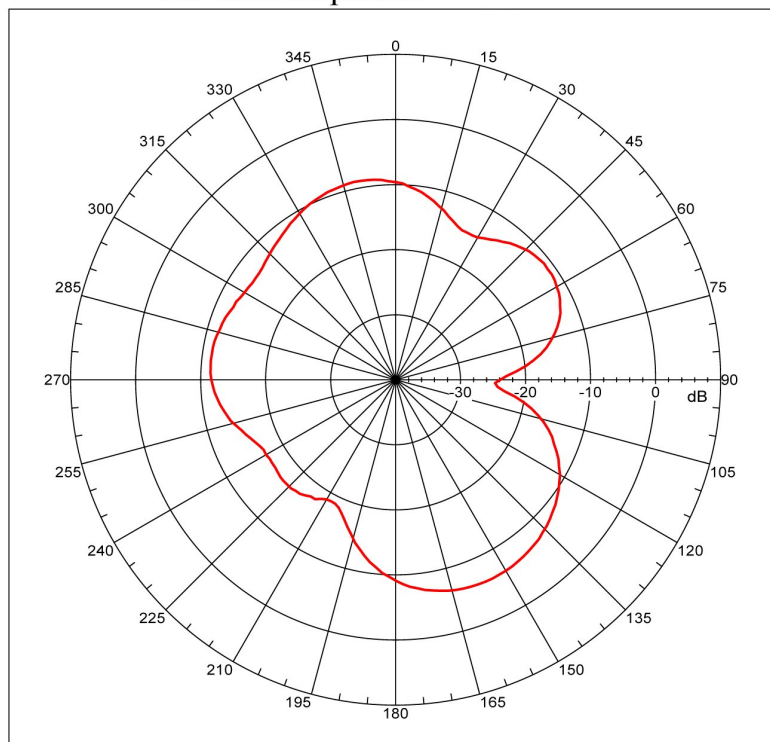


Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -5.20455 dBi
Max far-field (global) = -49.20389 dB, Max far-field (plot) = -49.20395 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 85.99999 deg, Vpeak at: 0.000 deg
Plot centering: On

NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:43:10 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -12.161 dB
-3. dB beam width: 51.34 deg
-6. dB beam width: 77.59 deg
-10. dB beam width: 101.31 deg
Left Sidelobe: -11.54 dB at 1.006 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 8
Beam Frequency Azimuth Elevation Pol
1 0.824 GHz Azimuth Elevation Single-pol

Measured Performance at 850MHz Vertical Plane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -6.0091 dBi
Max far-field (global) = -47.26596 dB, Max far-field (plot) = -47.26603 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 153.99999 deg, Vpeak at: 0.000 deg
Plot centering: On

GSM-04A
NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:36:36 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -11.924 dB
-3. dB beam width: Not Found
-6. dB beam width: Not Found
-10. dB beam width: Not Found
Left Sidelobe: -5.01 dB at 57.318 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 8
Beam Frequency Azimuth Elevation Pol
2 0.850 GHz Azimuth Elevation Single-pol

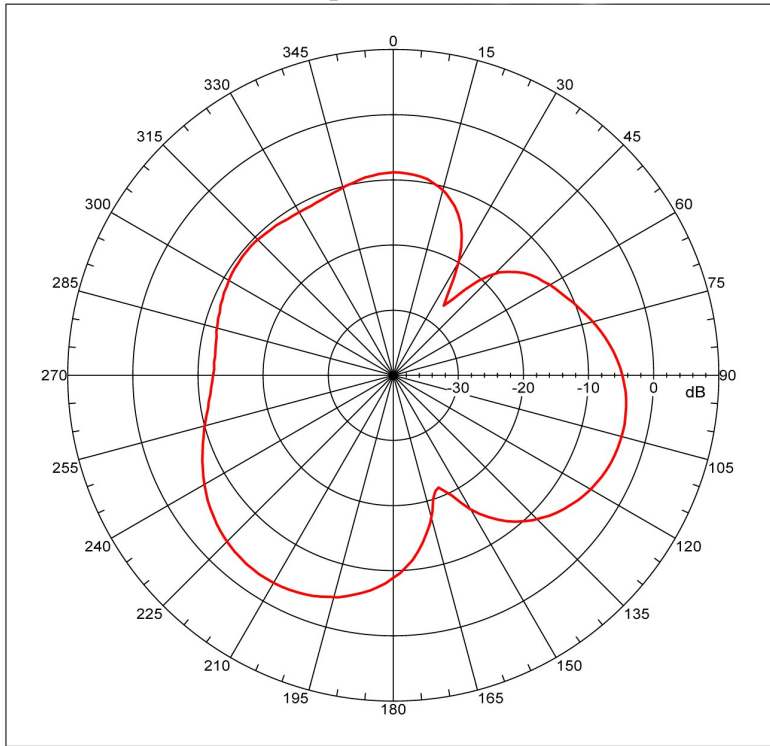




GSM Rugged 'Puck' Antenna IP67

Measured Performance at 900MHz Vertical Plane

Far-field amplitude



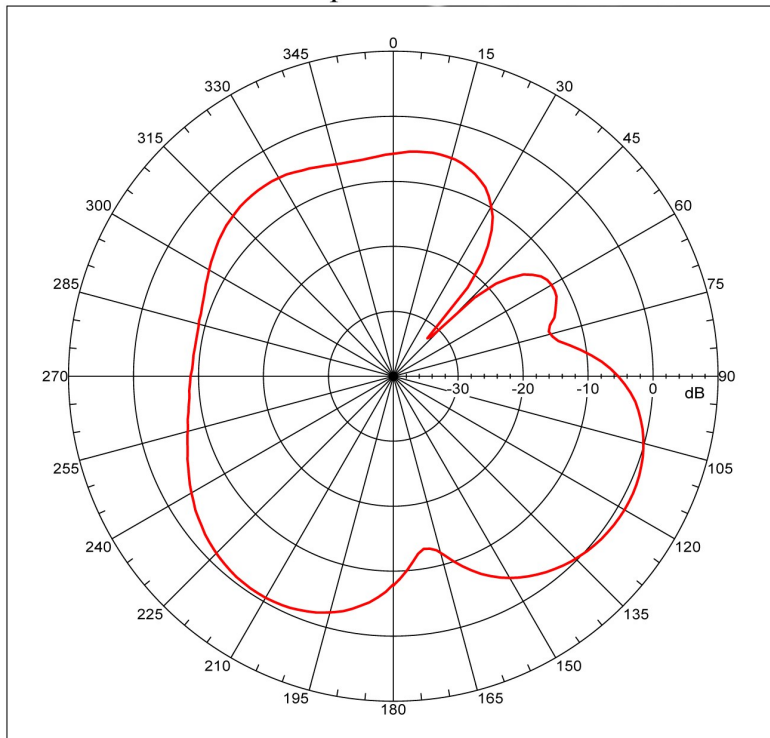
Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -3.17831 dBi
Max far-field (global) = -44.73799 dB, Max far-field (plot) = -44.73805 dB
Normalization: Reference, Network offset = 0.000 dB
Rpeak at: -146.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:43:10 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -8.861 dB
-3. dB beam width: 50.22 deg
-6. dB beam width: Not Found
-10. dB beam width: Not Found
Left Sidelobe: Not Found
Right Sidelobe: -7.47 dB at -55.307 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 8
Beam Frequency Azimuth Elevation Pol
3 0.900 GHz Azimuth Elevation Single-pol

Measured Performance at 960MHz Vertical Plane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 1.10737 dBi
Max far-field (global) = -41.5223 dB, Max far-field (plot) = -41.5223 dB
Normalization: Reference, Network offset = 0.000 dB
Rpeak at: 119.99999 deg, Vpeak at: 0.000 deg
Plot centering: On

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:43:10 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -5.226 dB
-3. dB beam width: 44.75 deg
-6. dB beam width: 61.32 deg
-10. dB beam width: 75.85 deg
Left Sidelobe: -12.98 dB at 63.352 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

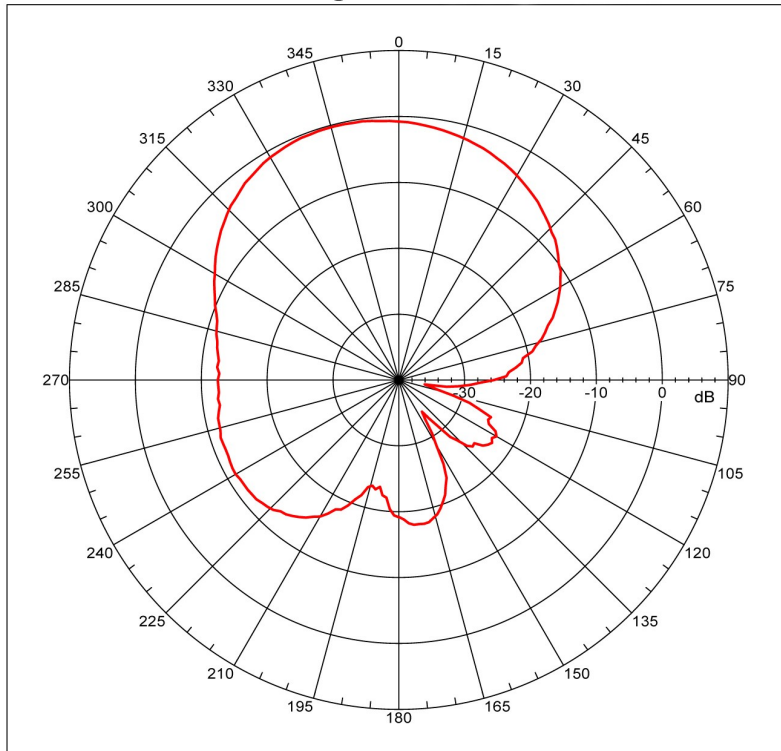
Selected beam(s) 1 of 8
Beam Frequency Azimuth Elevation Pol
4 0.960 GHz Azimuth Elevation Single-pol



GSM Rugged 'Puck' Antenna IP67

Measured Performance at 1.770GHz Vertical Plane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -0.30641 dBi
Max far-field (global) = -46.49443 dB, Max far-field (plot) = -46.49443 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -14.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

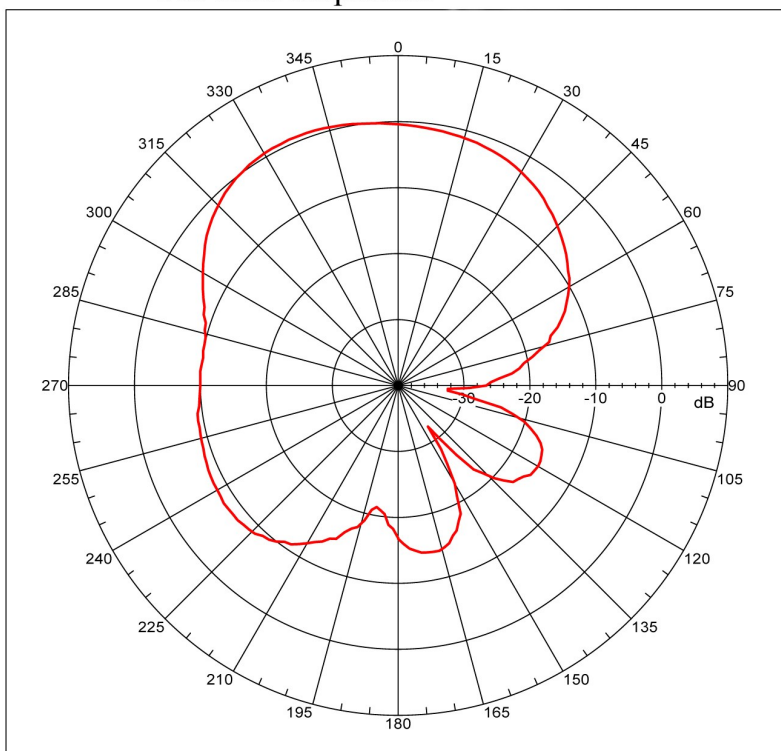
NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:43:10 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -9.534 dB
-3. dB beam width: 69.23 deg
-6. dB beam width: 96.15 deg
-10. dB beam width: 125.61 deg
Left Sidelobe: -11.27 dB at -107.598 deg
Right Sidelobe: -24.62 dB at 113.631 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 8
Beam Frequency Azimuth Elevation Pol

5 1.770 GHz Azimuth Elevation Single-pol

Measured Performance at 1.85GHz Vertical Plane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 0.74919 dBi
Max far-field (global) = -45.67785 dB, Max far-field (plot) = -45.67786 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -24.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:43:10 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -7.679 dB
-3. dB beam width: 76.34 deg
-6. dB beam width: 101.58 deg
-10. dB beam width: 130.00 deg
Left Sidelobe: -8.85 dB at -123.687 deg
Right Sidelobe: -16.26 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 8
Beam Frequency Azimuth Elevation Pol

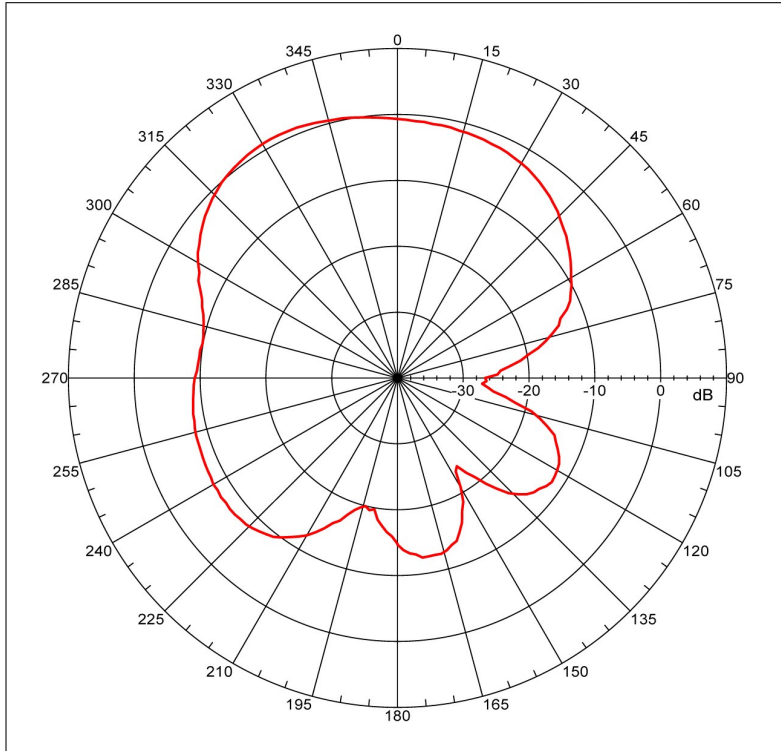
6 1.850 GHz Azimuth Elevation Single-pol



GSM Rugged 'Puck' Antenna IP67

Measured Performance at 1.9GHz Vertical Pane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 1.05238 dBi
Max far-field (global) = -45.98458 dB, Max far-field (plot) = -45.98458 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -28.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

GSM-04A

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20

Measurement date/time: 4/15/2014 1:43:10 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -7.147 dB
-3. dB beam width: 76.62 deg
-6. dB beam width: 104.45 deg
-10. dB beam width: 130.71 deg
Left Sidelobe: -8.76 dB at -119.665 deg
Right Sidelobe: -12.77 dB at 125.698 deg

Far-field display setup

Span = 360.00001 deg, Center = 0.000 deg, #pts = 181

Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000

deg

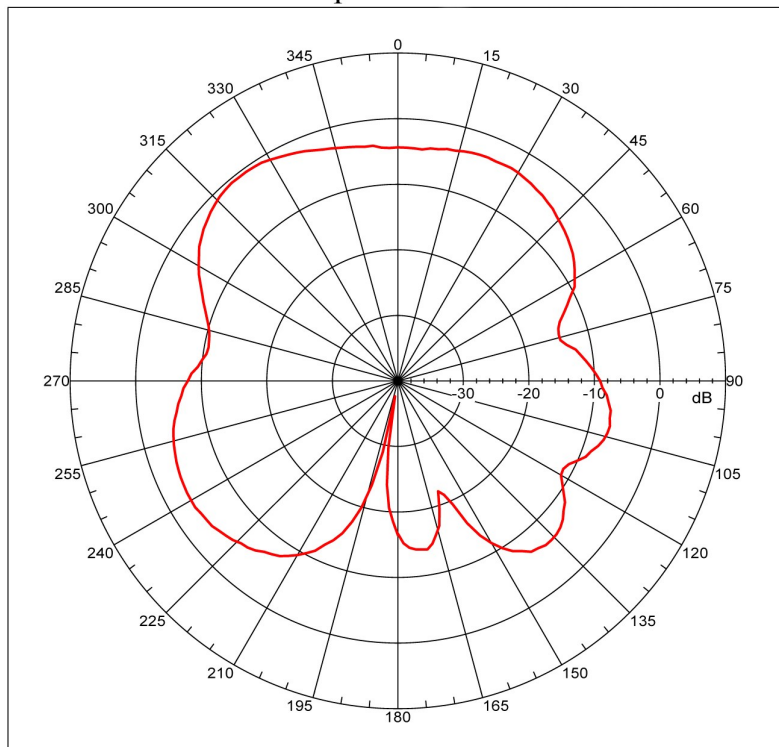
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 8

Beam	Frequency	Azimuth	Elevation	Pol
7	1.900 GHz	Azimuth	Elevation	Single-pol

Measured Performance at 2.17GHz Vertical Plane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -0.59095 dBi
Max far-field (global) = -48.12306 dB, Max far-field (plot) = -48.12307 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -40.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

GSM-04A

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20

Measurement date/time: 4/15/2014 1:43:10 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -6.723 dB
-3. dB beam width: 44.74 deg
-6. dB beam width: 116.88 deg
-10. dB beam width: 143.19 deg
Left Sidelobe: -2.99 dB at -117.654 deg
Right Sidelobe: -2.68 dB at 23.129 deg

Far-field display setup

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 8

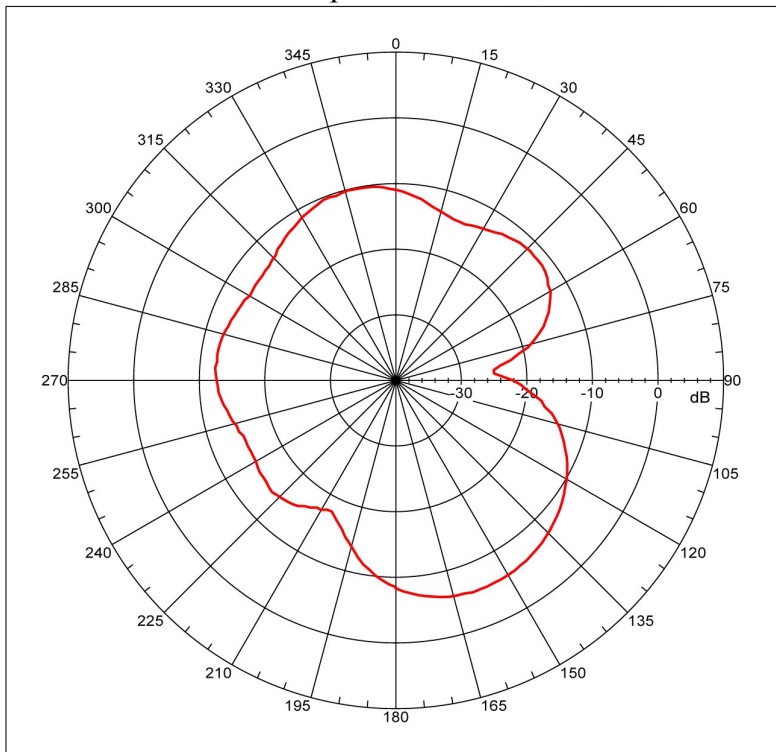
Beam	Frequency	Azimuth	Elevation	Pol
8	2.170 GHz	Azimuth	Elevation	Single-pol



GSM Rugged 'Puck' Antenna IP67

Measured Performance at 824MHz Horizontal Plane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -5.6551 dBi
Max far-field (global) = -48.65444 dB, Max far-field (plot) =
-48.65449 dB
Normalization: Reference, Network offset = 0.000 dB
Rpeak at: 155.99999 deg, Vpeak at: 0.000 deg
Plot centering: On

GSM-04A

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:36:36 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -11.954 dB
-3. dB beam width: Not Found
-6. dB beam width: Not Found
-10. dB beam width: Not Found
Left Sidelobe: -5.98 dB at 51.285 deg
Right Sidelobe: Not Found

Far-field display setup

Span: 360.00001 deg, Center = 0.000 deg, #pts = 181

Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000

deg Elevation (deg)

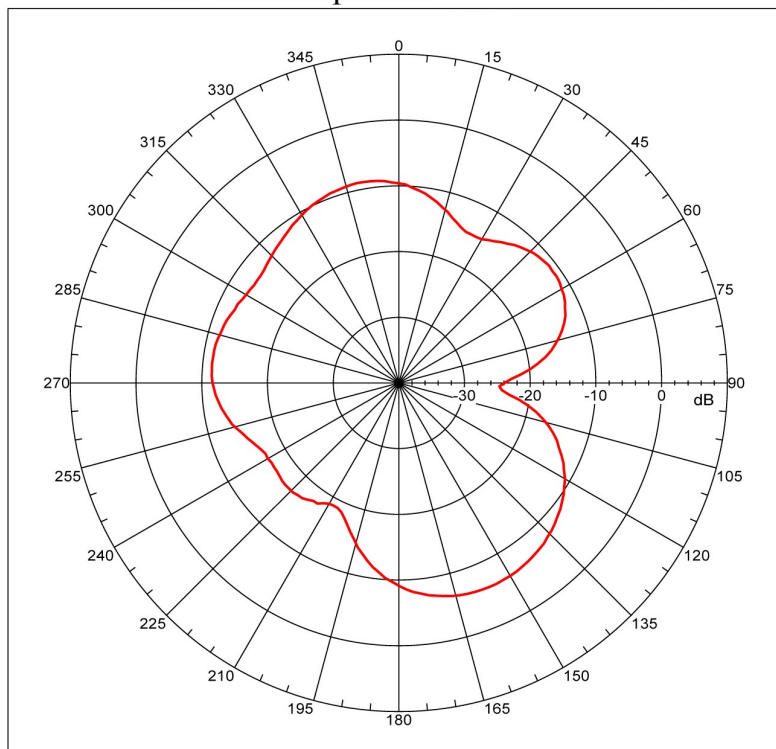
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 8

Beam	Frequency	Azimuth	Elevation	Pol
1	0.824 GHz	Azimuth	Elevation	Single-pol

Measured Performance at 850MHz Horizontal Plane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -6.0091 dBi
Max far-field (global) = -47.26596 dB, Max far-field (plot) =
-47.26603 dB
Normalization: Reference, Network offset = 0.000 dB
Rpeak at: 153.99999 deg, Vpeak at: 0.000 deg
Plot centering: On

GSM-04A

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:36:36 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -11.924 dB
-3. dB beam width: Not Found
-6. dB beam width: Not Found
-10. dB beam width: Not Found
Left Sidelobe: -5.01 dB at 57.318 deg
Right Sidelobe: Not Found

Far-field display setup

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 8

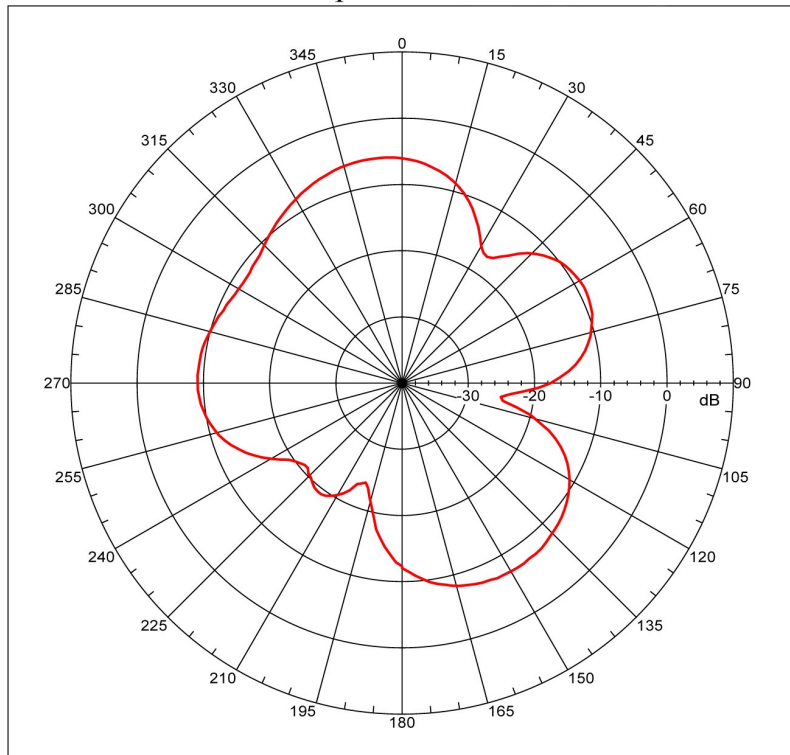
Beam	Frequency	Azimuth	Elevation	Pol
2	0.850 GHz	Azimuth	Elevation	Single-pol



GSM Rugged 'Puck' Antenna IP67

Measured Performance at 900MHz Horizontal Plane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -5.85129 dBi
Max far-field (global) = -47.41097 dB, Max far-field (plot) = -47.41097 dB
Normalization: Reference, Network offset = 0.000 dB
Peak at: -8.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

GSM-04A

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:36:36 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -11.058 dB
-3. dB beam width: 50.84 deg
-6. dB beam width: 131.05 deg
-10. dB beam width: 147.96 deg
Left Sidelobe: -3.26 dB at -87.486 deg
Right Sidelobe: -3.11 dB at 63.352 deg

Far-field display setup

Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000 deg

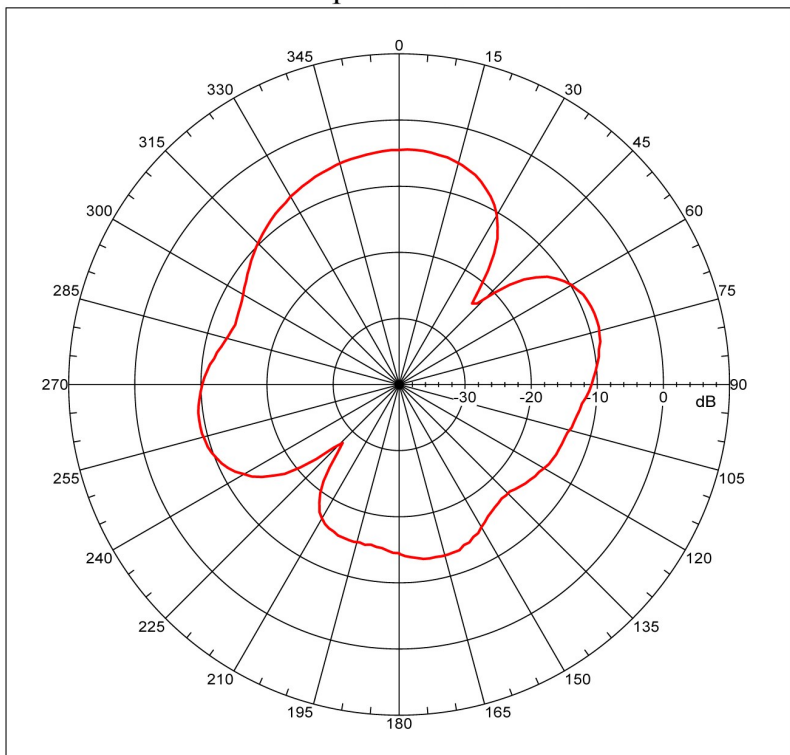
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 8

Beam	Frequency	Azimuth	Elevation	Pol
3	0.900 GHz	Azimuth	Elevation	Single-pol

Measured Performance at 960MHz Horizontal Plane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -4.44603 dBi
Max far-field (global) = -47.0757 dB, Max far-field (plot) = -47.0757 dB
Normalization: Reference, Network offset = 0.000 dB
Peak at: 1.99999 deg, Vpeak at: 0.000 deg
Plot centering: On

GSM-04A

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:36:36 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -11.169 dB
-3. dB beam width: 54.98 deg
-6. dB beam width: 78.59 deg
-10. dB beam width: 159.01 deg
Left Sidelobe: -4.81 dB at -101.564 deg
Right Sidelobe: -4.09 dB at 71.397 deg

Far-field display setup

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 8

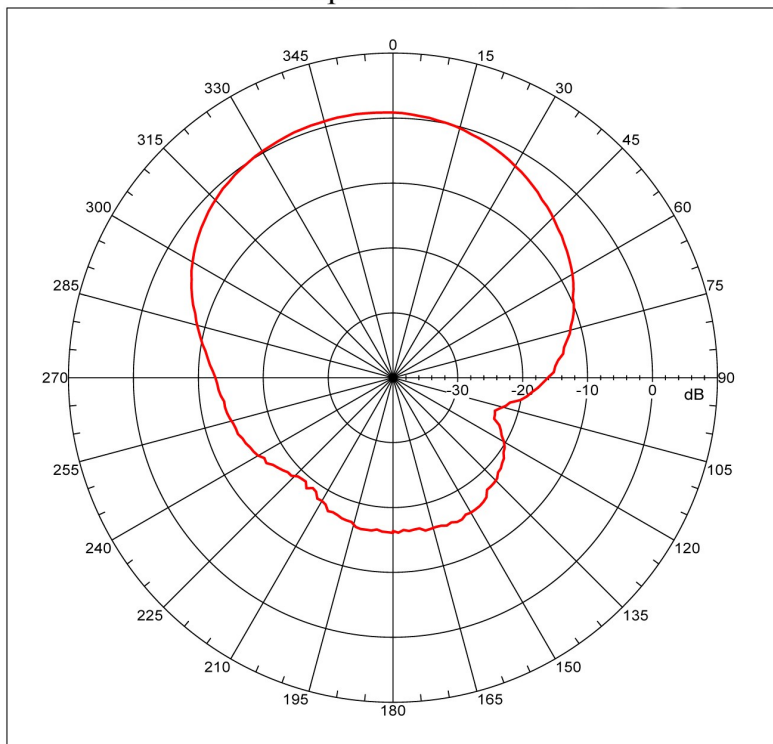
Beam	Frequency	Azimuth	Elevation	Pol
4	0.960 GHz	Azimuth	Elevation	Single-pol



GSM Rugged 'Puck' Antenna IP67

Measured Performance at 1.770GHz Horizontal Plane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 0.97536 dBi
Max far-field (global) = -45.20866 dB, Max far-field (plot) = -45.20867 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -8.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

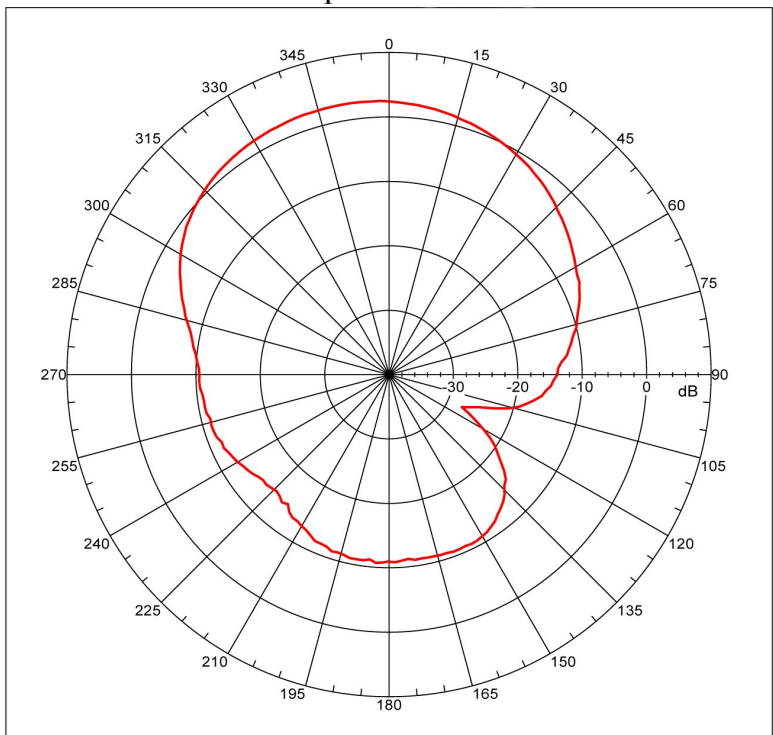
NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:36:36 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -7.677 dB
-3. dB beam width: 77.92 deg
-6. dB beam width: 107.69 deg
-10. dB beam width: 140.44 deg
Left Sidelobe: -19.01 dB at -147.821 deg
Right Sidelobe: -19.43 dB at 139.777 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 8
Beam Frequency Azimuth Elevation Pol

5 1.770 GHz Azimuth Elevation Single-pol

Measured Performance at 1.85GHz Horizontal Plane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 2.52662 dBi
Max far-field (global) = -43.90042 dB, Max far-field (plot) = -43.90041 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -10.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

GSM-04A

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:36:36 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -5.617 dB
-3. dB beam width: 80.58 deg
-6. dB beam width: 109.08 deg
-10. dB beam width: 141.03 deg
Left Sidelobe: -13.70 dB at -161.899 deg
Right Sidelobe: -13.28 dB at 155.866 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 8
Beam Frequency Azimuth Elevation Pol

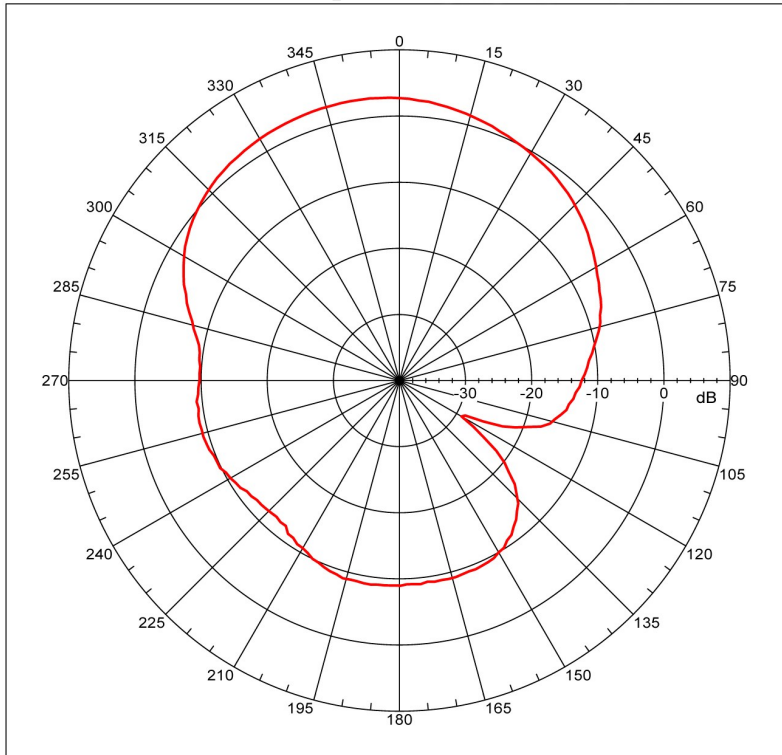
6 1.850 GHz Azimuth Elevation Single-pol



GSM Rugged 'Puck' Antenna IP67

Measured Performance at 1.9GHz Horizontal Plane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 2.89236 dBi
Max far-field (global) = -44.1446 dB, Max far-field (plot) = -44.1446 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -6.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

GSM-04A

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:36:36 PM, Filetype: NSI-97

Far-field Cut Analysis:
Avg value: -4.947 dB
-3. dB beam width: 79.14 deg
-6. dB beam width: 111.04 deg
-10. dB beam width: 141.56 deg
Left Sidelobe: -11.78 dB at -163.911 deg
Right Sidelobe: -12.12 dB at 159.888 deg

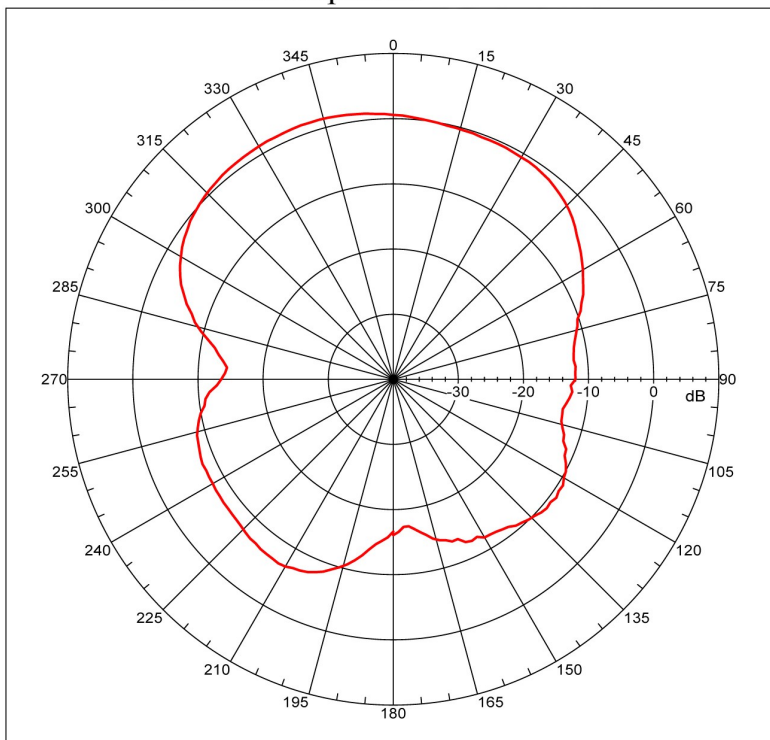
Far-field display setup
Azimuth (deg)
Span = 360.00001 deg, Center = 0.000 deg, #pts = 181
Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 2.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 8
Beam Frequency Azimuth Elevation Pol

7 1.900 GHz Azimuth Elevation Single-pol

Measured Performance at 2.17GHz Horizontal Plane

Far-field amplitude



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 1.44719 dBi
Max far-field (global) = -46.08492 dB, Max far-field (plot) = -46.08492 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -20.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

GSM-04A

NSI2000 V4.0.124, Filename: C:\Documents and Settings\NSI\Desktop\20
Measurement date/time: 4/15/2014 1:36:36 PM, Filetype: NSI-97

Far-field Cut Analysis:
Avg value: -5.442 dB
-3. dB beam width: 98.16 deg
-6. dB beam width: 120.42 deg
-10. dB beam width: 142.39 deg
Left Sidelobe: -9.40 dB at -113.631 deg
Right Sidelobe: -10.71 dB at 123.687 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 8
Beam Frequency Azimuth Elevation Pol

8 2.170 GHz Azimuth Elevation Single-pol



GSM Rugged 'Puck' Antenna IP67

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