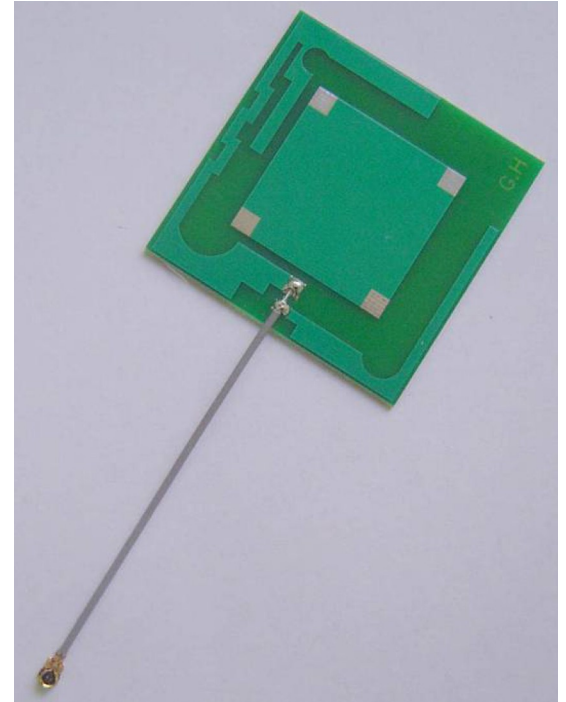


ANT-PCB4242

Features

- 800/900/1800/1900/2100MHz
- Omni Directional 1/2 Wave
- Miniature 42 x 42 x 1mm
- VSWR <3.0
- RG178 Coax 50Ω Impedance
- 2-3dBi Gain (nominal)
- Vertical Polarization
- Admitted Radiation Power 1W
- iPex/UFL Connector
- Operating temp -40 to +70°C



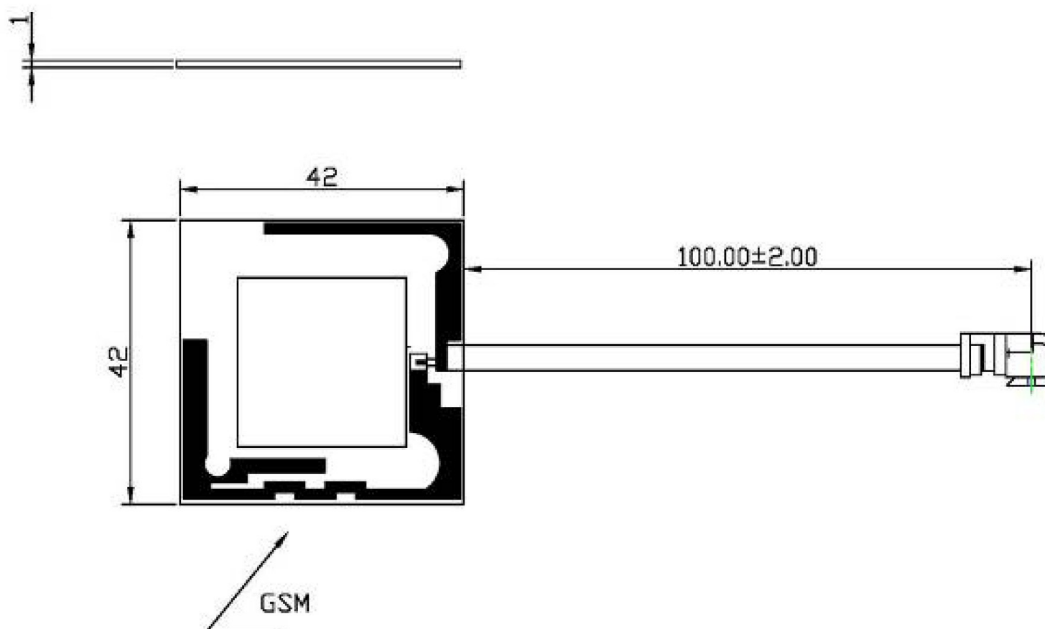
Applications

- Embedded GSM Systems
- For World-wide Use

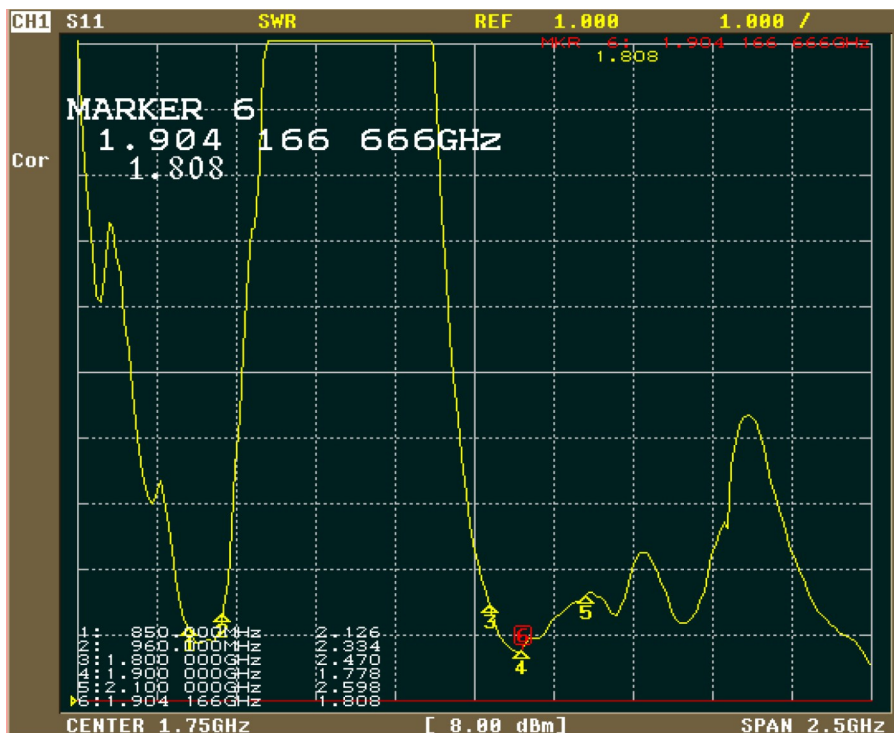
Ordering Information

Part Number	Description
ANT-PCB4242-FL	Miniature PCB Penta Band Antenna

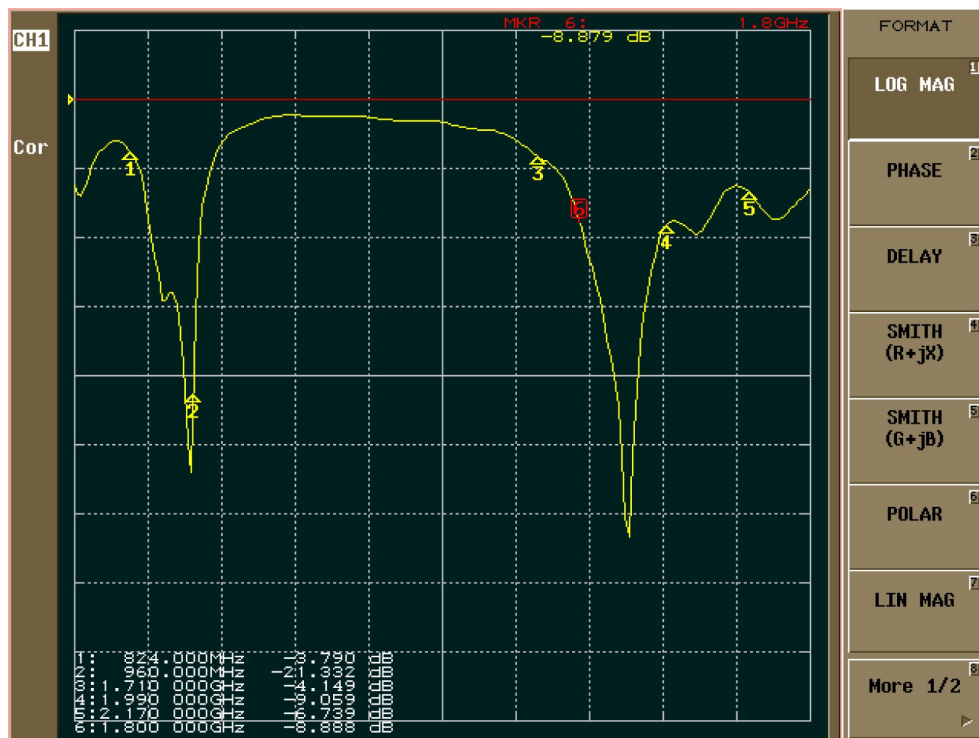
Mechanical Detail



Performance Data – TEST VSWR



Performance Data – VSWR

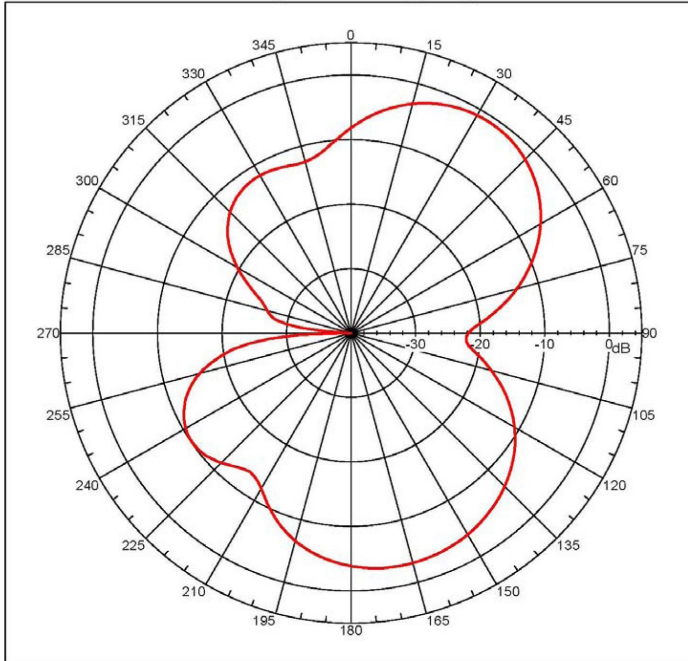


Performance Data – RETURN LOSS



Performance Data—Smith Chart @ 880MHz

Far-field amplitude of gps+gsm01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -8.33756 dBi
Max far-field (global) = -34.95309 dB, Max far-field (plot) =
-34.95309 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 234.000 deg, Vpeak at: 0.000 deg
Plot centering: on

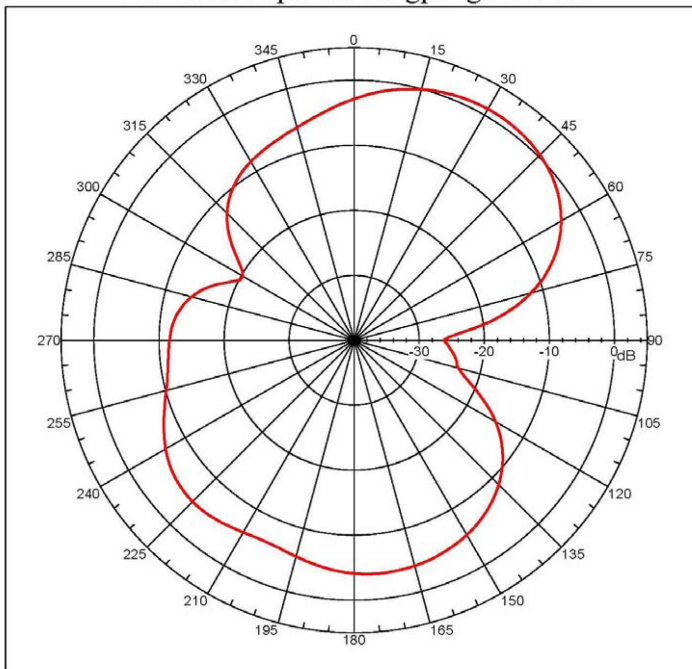
NSI2000 V4.0.116, filename:c:\Documents and Settings\Administrator\
Desktop\bill\gps+gsm01.nsi
Measurement date/time: 11/26/2009 8:04:08 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -9.754 dB
-3. dB beam width: 41.64 deg
-6. dB beam width: 59.14 deg
-10. dB beam width: 78.02 deg
Left sidelobe: -9.20 dB at -121.607 deg
Right sidelobe: -2.13 dB at 167.933 deg
Far-field display setup
Azimuth (deg)
Span = 360.00001 deg, Center = 180.00001 deg, #pts = 181
Start = 0.000 deg, Stop = 360.00001 deg, Delta = 2.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 9

Beam	Frequency	Azimuth	Elevation	Pol
1	0.880 GHz			Single-pol

Performance Data—Smith Chart @ 920MHz

Far-field amplitude of gps+gsm01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 1.08571 dBi
Max far-field (global) = -33.66057 dB, Max far-field (plot) =
-33.66056 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 232.000 deg, Vpeak at: 0.000 deg
Plot centering: on

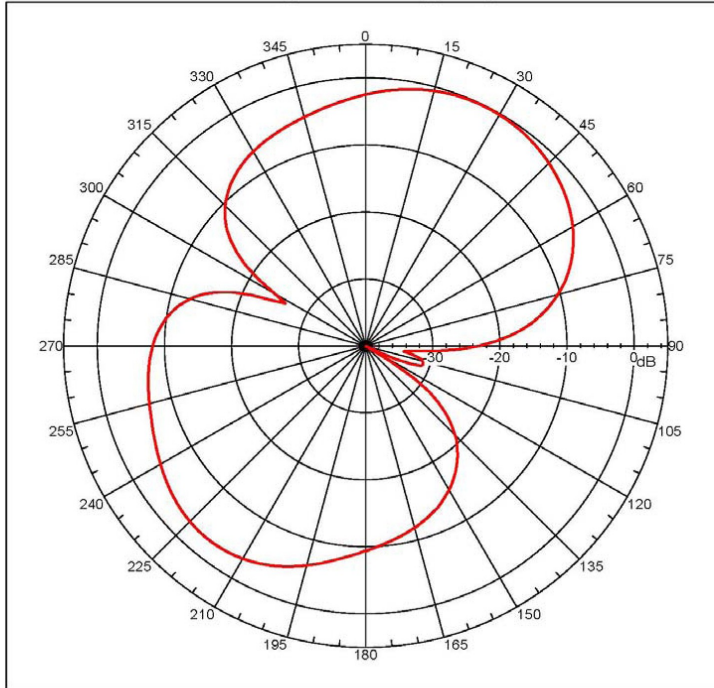
NSI2000 V4.0.116, filename:c:\Documents and Settings\Administrator\
Desktop\bill\gps+gsm01.nsi
Measurement date/time: 11/26/2009 8:04:08 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -6.232 dB
-3. dB beam width: 51.85 deg
-6. dB beam width: 73.16 deg
-10. dB beam width: 105.26 deg
Left sidelobe: -5.98 dB at -135.754 deg
Right sidelobe: -4.99 dB at 173.967 deg
Far-field display setup
Azimuth (deg)
Span = 360.00001 deg, Center = 180.00001 deg, #pts = 181
Start = 0.000 deg, Stop = 360.00001 deg, Delta = 2.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 9

Beam	Frequency	Azimuth	Elevation	Pol
2	0.920 GHz			Single-pol

Performance Data—Smith Chart @ 960MHz

Far-field amplitude of gps+gsm01.nsi

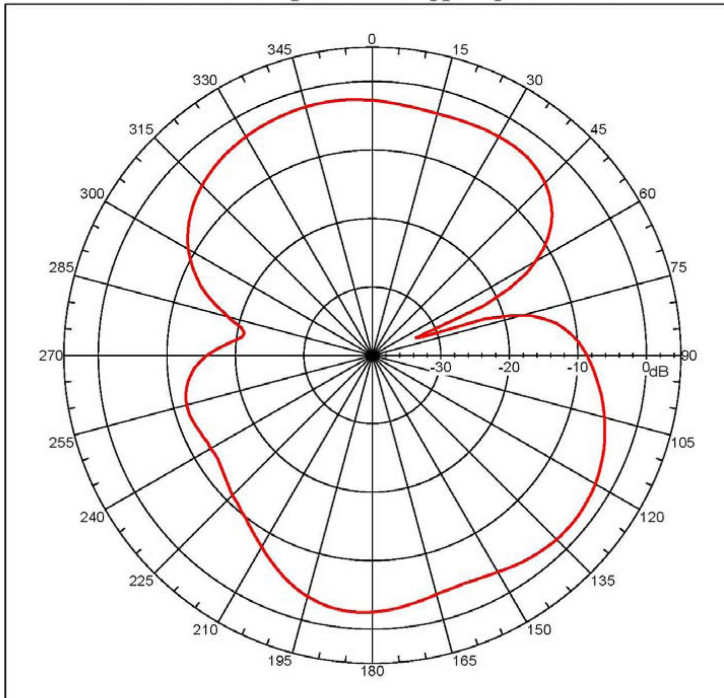


```
Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -0.12529 dBi
Max far-field (global) = -35.22531 dB, Max far-field (plot) =
-35.22531 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 208.000 deg, Vpeak at: 0.000 deg
Plot centering: on

-----
NSI2000 V4.0.116, Filename:C:\Documents and Settings\Administrator\
Desktop\bill\gps+gsm01.nsi
Measurement date/time: 11/26/2009 8:04:08 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -7.296 dB
-3. dB beam width: 59.19 deg
-6. dB beam width: 93.33 deg
-10. dB beam width: 119.58 deg
Left Side-lobe: -2.66 dB at -139.777 deg
Right Side-lobe: -30.90 dB at 109.609 deg
Far-field display setup
Azimuth (deg)
Span = 360.00001 deg, Center = 180.00001 deg, #pts = 181
Start= 0.000 deg, Stop = 360.00001 deg, Delta = 2.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1
Selected beam(s) 1 of 9
Beam Frequency Azimuth Elevation Pol
----
3 0.960 GHz Azimuth Elevation Single-pol
```

Performance Data—Smith Chart @ 1710MHz

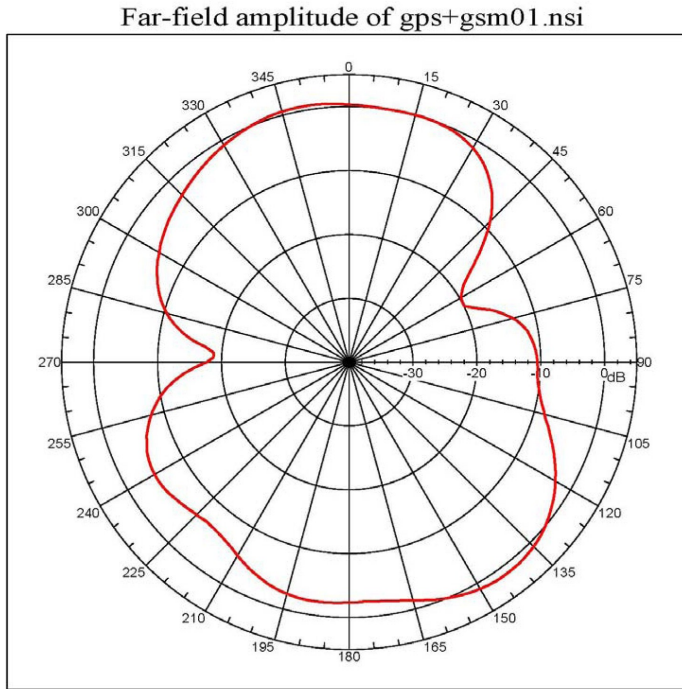
Far-field amplitude of gps+gsm01.nsi



```
Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -41.61911 dBi
Max far-field (global) = -41.61911 dB, Max far-field (plot) =
-41.61911 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 309.99999 deg, Vpeak at: 0.000 deg
Plot centering: on

-----
NSI2000 V4.0.116, Filename:C:\Documents and Settings\Administrator\
Desktop\bill\gps+gsm01.nsi
Measurement date/time: 11/26/2009 8:04:08 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -3.357 dB
-3. dB beam width: Not Found
-6. dB beam width: Not Found
-10. dB beam width: Not Found
Left Side-lobe: -1.21 dB at 33.196 deg
Right Side-lobe: Not Found
Far-field display setup
Azimuth (deg)
Span = 360.00001 deg, Center = 180.00001 deg, #pts = 181
Start= 0.000 deg, Stop = 360.00001 deg, Delta = 2.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1
Selected beam(s) 1 of 9
Beam Frequency Azimuth Elevation Pol
----
4 1.710 GHz Azimuth Elevation Single-pol
```

Performance Data—Smith Chart @ 1785MHz

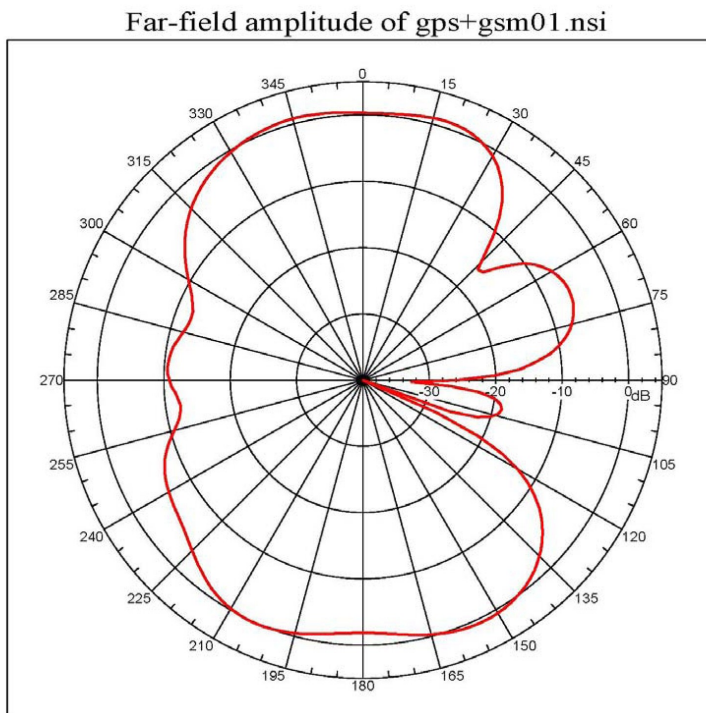


Far-field amplitude, Spherical: Linear, Tau = 0.000 deg
 Gain = 1.31446 dBi
 Max far-field (global) = -40.52198 dB, Max far-field (plot) = -41.522 dB
 Normalization: Reference, Network offset = 0.000 dB
 Mpeak at: 324.000 deg, Vpeak at: 0.000 deg
 Plot centering: on

NSI2000 V4.0.116, Filename:C:\Documents and Settings\Administrator\Desktop\bill\gps+gsm01.nsi
 Measurement date/time: 11/26/2009 8:04:08 PM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -3.945 dB
 -3. dB beam width: 43.99 deg
 -6. dB beam width: Not Found
 -10. dB beam width: Not Found
 Left Sidelobe: -1.26 dB at 17.095 deg
 Right Sidelobe: Not Found
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 180.00001 deg, #pts = 181
 Start = 0.000 deg, Stop = 360.00001 deg, Delta = 2.000 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1

Beam	Frequency	Azimuth	Elevation	Pol
5	1.785 GHz	Azimuth	Elevation	Single-pol

Performance Data—Smith Chart @ 1850MHz



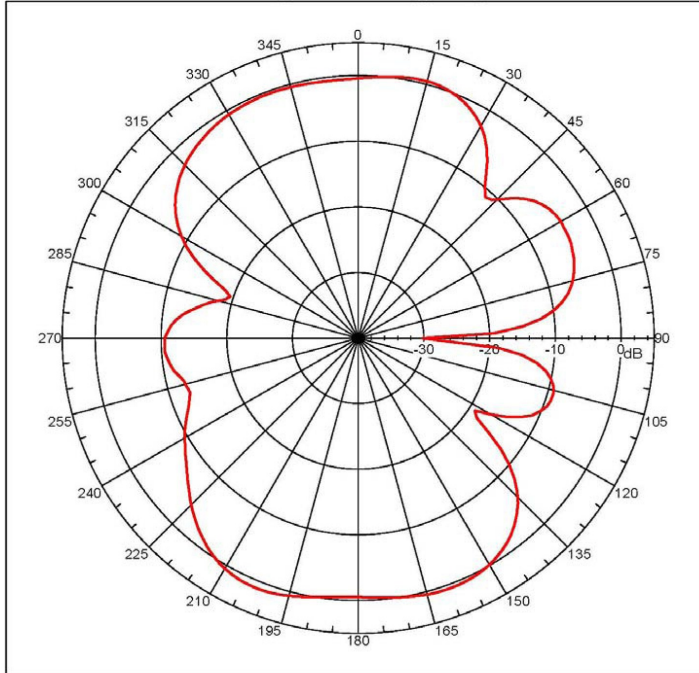
Far-field amplitude, Spherical: Linear, Tau = 0.000 deg
 Gain = 0.97485 dBi
 Max far-field (global) = -41.31947 dB, Max far-field (plot) = -41.31947 dB
 Normalization: Reference, Network offset = 0.000 dB
 Mpeak at: 198.000 deg, Vpeak at: 0.000 deg
 Plot centering: on

NSI2000 V4.0.116, Filename:C:\Documents and Settings\Administrator\Desktop\bill\gps+gsm01.nsi
 Measurement date/time: 11/26/2009 8:04:08 PM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -41.319 dB
 -3. dB beam width: 72.51 deg
 -6. dB beam width: 86.92 deg
 -10. dB beam width: 97.85 deg
 Left Sidelobe: -11.50 dB at -65.475 deg
 Right Sidelobe: -7.14 dB at 67.374 deg
 Far-field display setup
 Azimuth (deg)
 Span = 360.00001 deg, Center = 180.00001 deg, #pts = 181
 Start = 0.000 deg, Stop = 360.00001 deg, Delta = 2.000 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1

Beam	Frequency	Azimuth	Elevation	Pol
6	1.850 GHz	Azimuth	Elevation	Single-pol

Performance Data—Smith Chart @ 1880MHz

Far-field amplitude of gps+gsm01.nsi



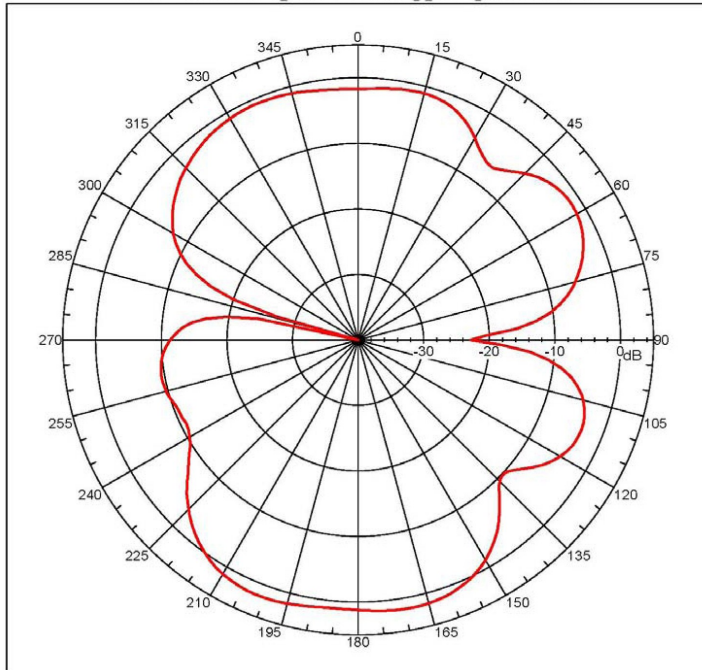
Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 1.13285 dBi
Max far-field (global) = -41.25224 dB, Max far-field (plot) =
-41.25229 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 22.000 deg, Vpeak at: 0.000 deg
Plot centering: on

NSI2000 v4.0.116, Filename:C:\Documents and Settings\Administrator\
Desktop\bill\gps+gsm01.nsi
Measurement date/time: 11/26/2009 8:04:08 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -4.118 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: -11.63 dB at -93.520 deg
Far-field display setup
Azimuth (deg)
Span = 360.00001 deg, Center = 180.00001 deg, #pts = 181
Start = 0.000 deg, Stop = 360.00001 deg, Delta = 2.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1
Selected beam(s) 1 of 9
Beam Frequency Azimuth Elevation Pol

1 1.880 GHz Azimuth Elevation Single-pol

Performance Data—Smith Chart @ 1920MHz

Far-field amplitude of gps+gsm01.nsi

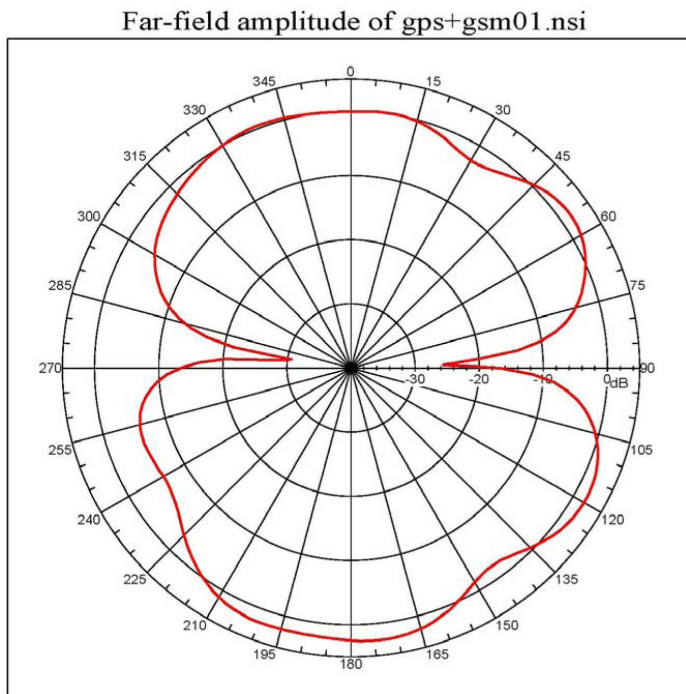


Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 1.87032 dBi
Max far-field (global) = -42.12482 dB, Max far-field (plot) =
-42.12489 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 22.000 deg, Vpeak at: 0.000 deg
Plot centering: on

NSI2000 v4.0.116, Filename:C:\Documents and Settings\Administrator\
Desktop\bill\gps+gsm01.nsi
Measurement date/time: 11/26/2009 8:04:08 PM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: -3.494 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: -11.39 dB at -99.553 deg
Far-field display setup
Azimuth (deg)
Span = 360.00001 deg, Center = 180.00001 deg, #pts = 181
Start = 0.000 deg, Stop = 360.00001 deg, Delta = 2.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1
Selected beam(s) 1 of 9
Beam Frequency Azimuth Elevation Pol

0 1.920 GHz Azimuth Elevation Single-pol

Performance Data—Smith Chart @ 1990MHz



Far-field amplitude, Spherical: Linear, Tau = 0.000 deg
Gain = 2.02187 dBi
Max far-field (global) = -42.62542 dB, Max far-field (plot) =
-42.6255 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 352.000 deg, Vpeak at: 0.000 deg
Plot centerings: On

NSI2000 V4.0.116, Filename: C:\Documents and Settings\Administrator\
Desktop\bill\gps+gsm01.nsi
Measurement date/time: 11/26/2009 8:04:08 PM, Filetype: NSI-97

Far-field Cut Analysis:
Avg value: -1.459 dB
-3. dB beam width: Not Found
-6. dB beam width: Not Found
-10. dB beam width: Not Found
Left sidelobe: -8.68 dB at 121.676 deg
Right sidelobe: Not Found

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

Selected beam(s) 1 of 9
Beam Frequency Azimuth Elevation Pol
9 1.990 GHz Azimuth Elevation Single-pol

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