Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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
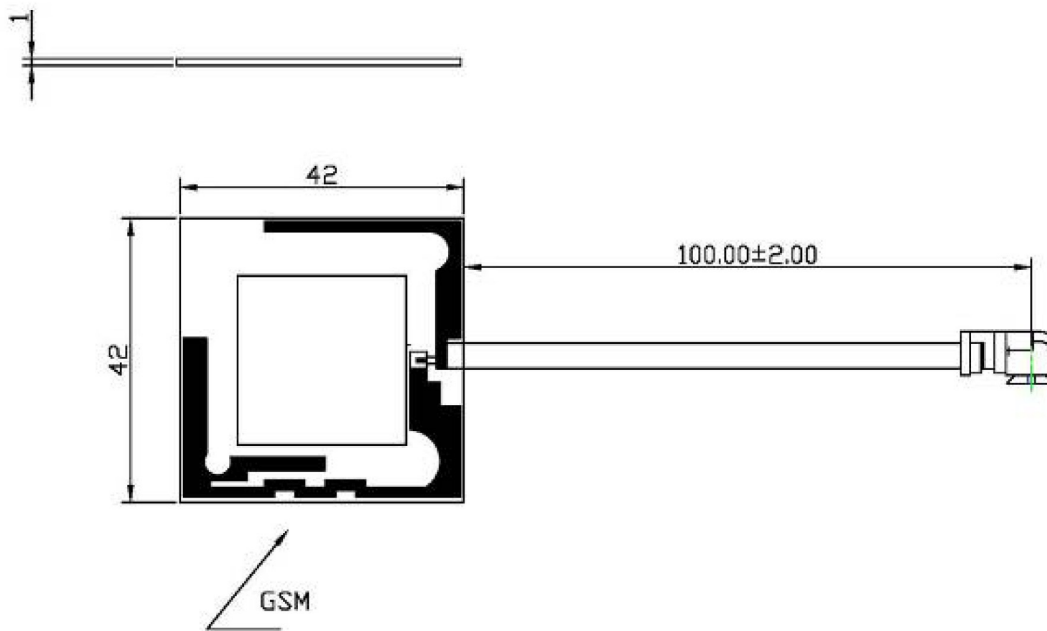
- iPex/UFL Connector

- Operating temp −40 to +70°C
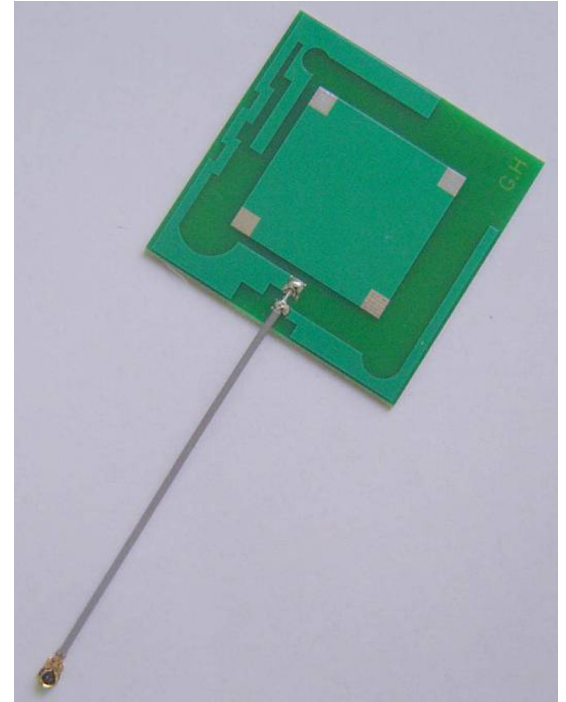
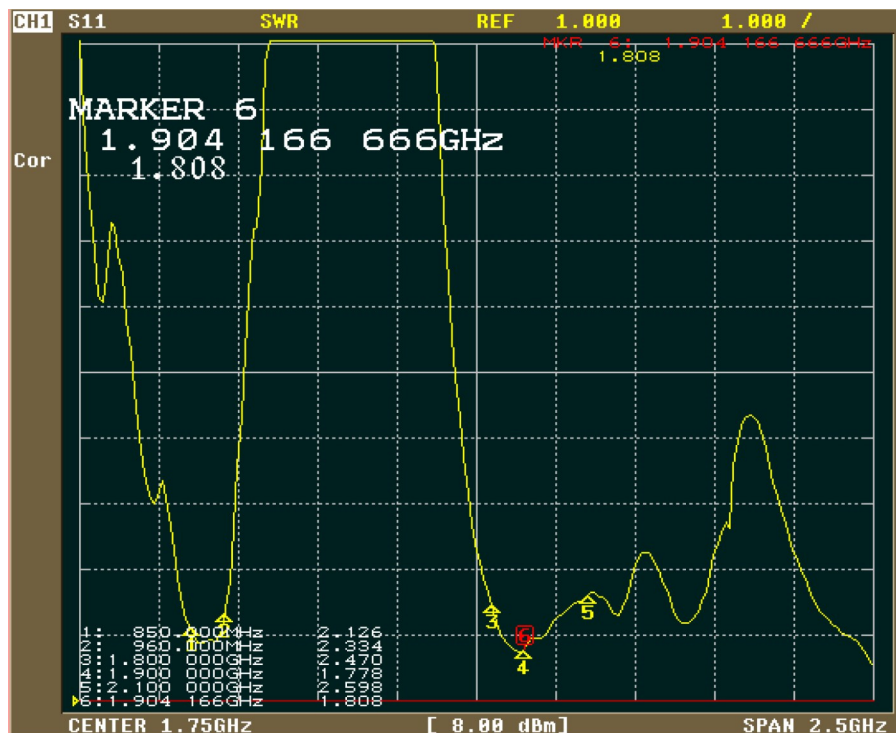## Applications

- Embedded GSM Systems
- For World-wide Use

Ordering Information

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

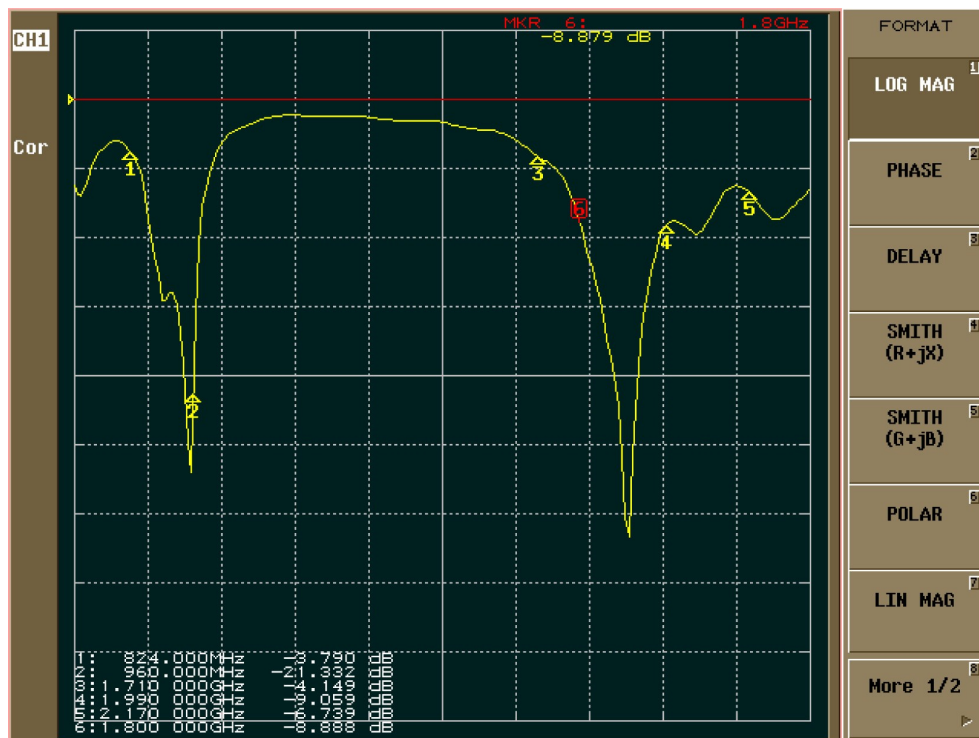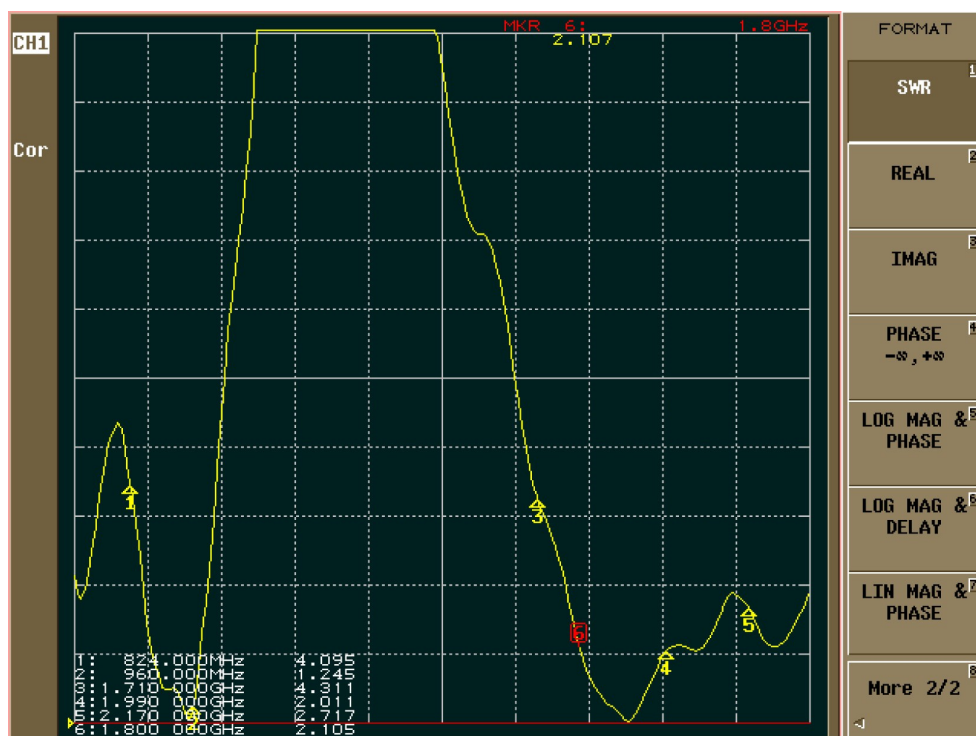FM76316

ANT-PCB4242

Mechanical Detail

Performance Data — TEST VSWR

ANT-PCB4242
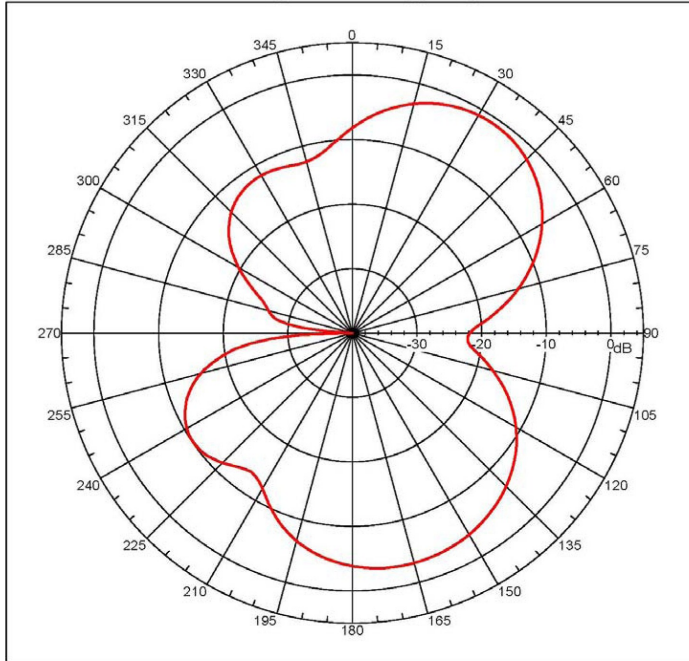
Performance Data — VSWR

Performance Data — RETURN LOSS

Performance Data—Smith Chart @ 880MHz

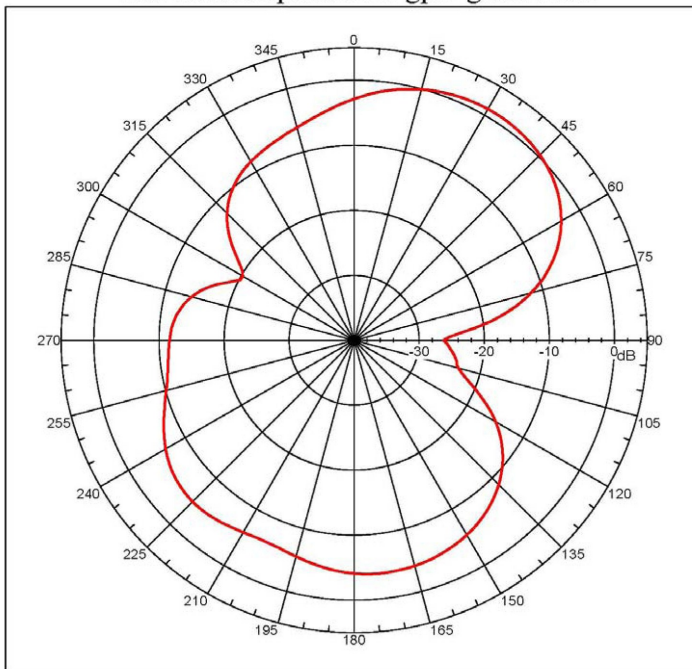### Far-field amplitude of gps+gsm01.nsi


```
Far-field amplitude, Eprincipal: Linear, Tau = 0.000  deg
Gain = -0.93756  dBi
Max far-field (global) = -34.95309  dB, Max far-field (plot) =
-34.95309  dB
Normalization: Reference, Network offset = 0.000  dB
Hpeak at: 214.000  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: -8.754 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 -123.607  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  Azimuth  Elevation  Single-pol
```

Performance Data—Smith Chart @ 920MHz

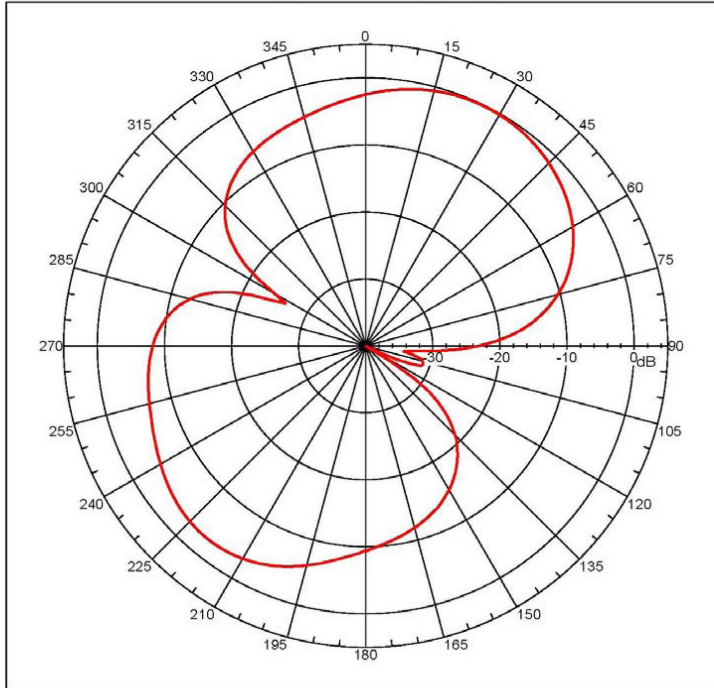### Far-field amplitude of gps+gsm01.nsi


```
Far-field amplitude, Eprincipal: Linear, Tau = 0.000  deg
Gain = 1.08571  dBi
Max far-field (global) = -33.66057  dB, Max far-field (plot) =
-33.66058  dB
Normalization: Reference, Network offset = 0.000  dB
Hpeak at: 212.000  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: -6.512 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  Azimuth  Elevation  Single-pol
```

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Performance Data—Smith Chart @ 960MHz
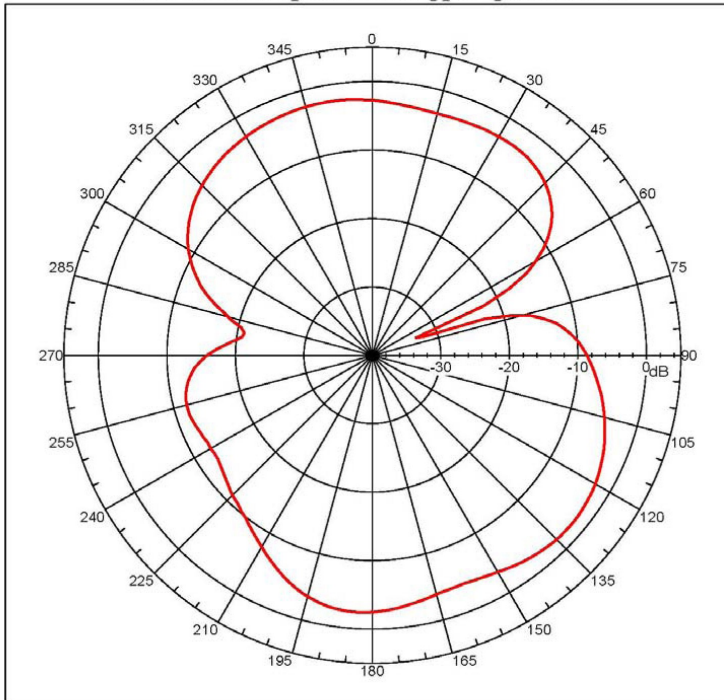
Far-field amplitude of gps+gsm01.nsi

```
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: 119.50 deg
   Left Sidelobe: -2.66 dB at -139.777  deg
   Right Sidelobe: -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 = -1.89386  dBi
Max far-field (global) = -41.61911  dB, Max far-field (plot) =
-41.61913  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: -5.957 dB
   -3. dB beam width: Not Found
   -6. dB beam width: Not Found
   -10. dB beam width: Not Found
   Left Sidelobe: -1.21 dB at 35.196  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
----    ---------  -------  ---------  ---
4       1.710  GHz  Azimuth  Elevation  Single-pol
```
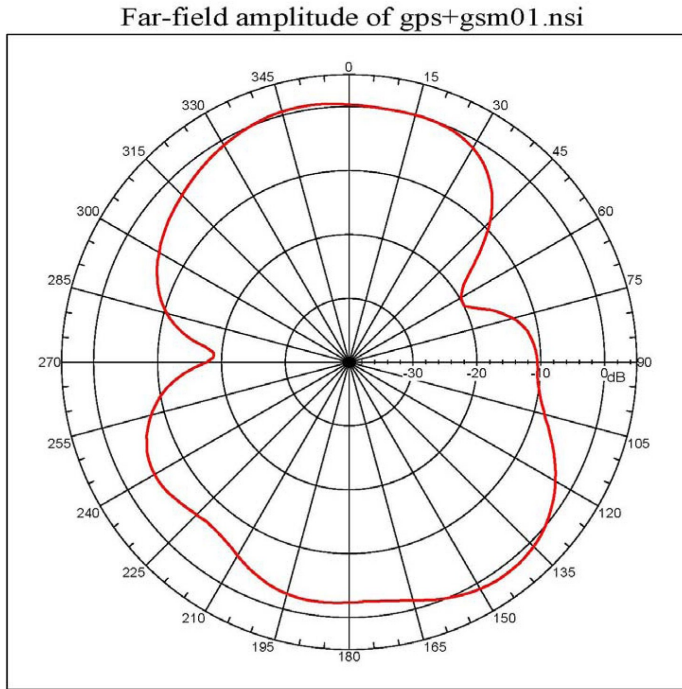
ANT-PCB4242

Performance Data—Smith Chart @ 1785MHz

Far-field amplitude of gps+gsm01.nsi

Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 1.31446 dBi
Max far-field (global) = -40.52198 dB, Max far-field (plot) =
-40.522 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak 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: 43.90 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

Selected beam(s) 1 of 9
Beam   Frequency   Azimuth   Elevation   Pol
----   ---------   -------   ---------   ---
5   1.785 GHz   Azimuth   Elevation   Single-pol

Performance Data—Smith Chart @ 1850MHz
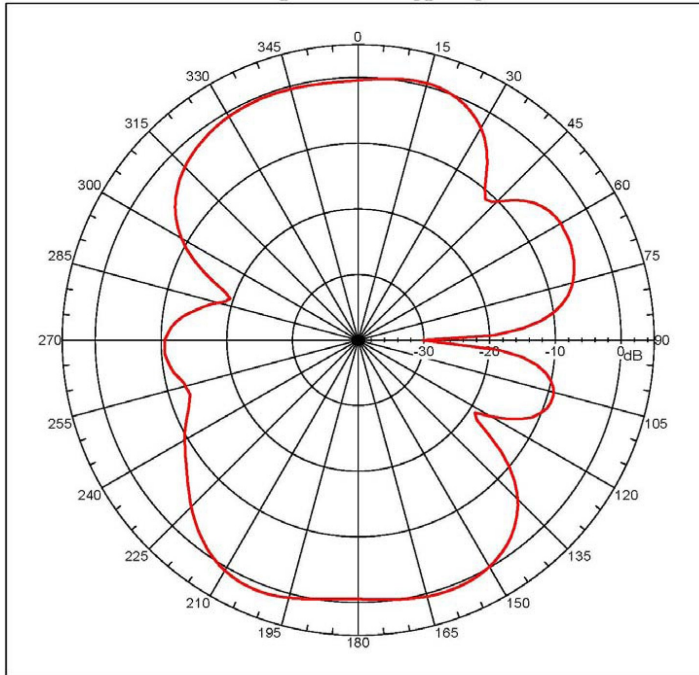

Far-field amplitude of gps+gsm01.nsi
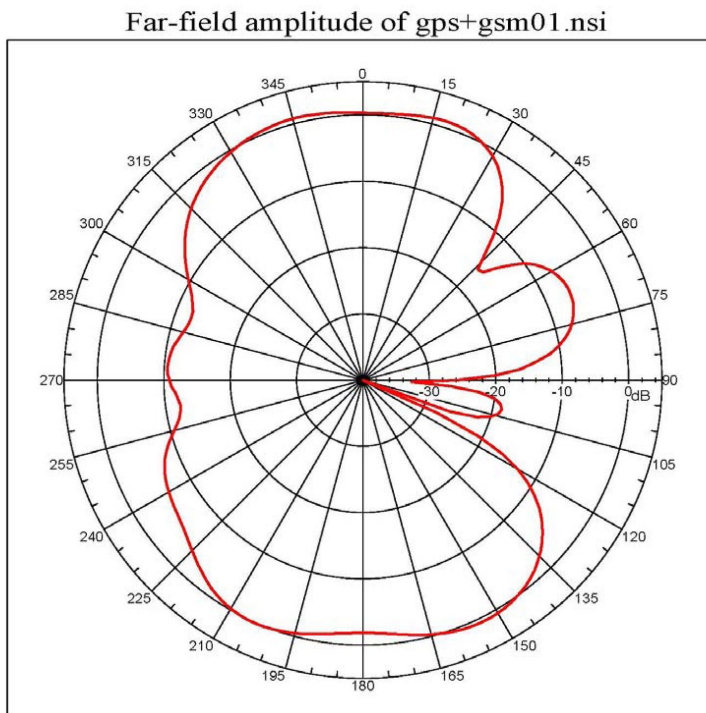
Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 0.97485 dBi
Max far-field (global) = -41.31947 dB, Max far-field (plot) =
-41.31947 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 198.000 deg, Vpeak at: 0.000 deg
Plot centering: On

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: -4.054 dB
    -3. dB beam width: 72.51 deg
    -6. dB beam width: 86.92 deg
    -10. dB beam width: 99.95 deg
    Left Sidelobe: -11.50 dB at -85.475 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

Selected beam(s) 1 of 9
Beam   Frequency   Azimuth   Elevation   Pol
----   ---------   -------   ---------   ---
6   1.850 GHz   Azimuth   Elevation   Single-pol

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Performance Data—Smith Chart @ 1880MHz
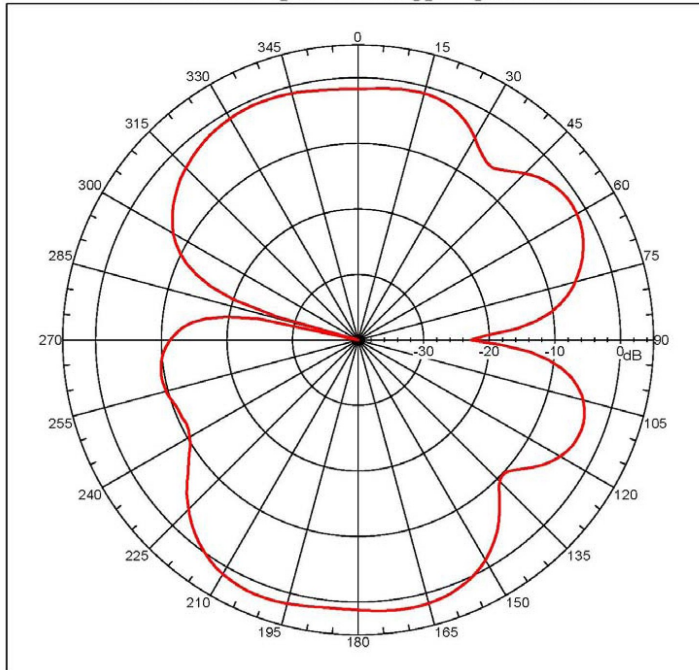

Far-field amplitude of gps+gsm01.nsi

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
-----   ---------   ------- --------- ---
7   1.880 GHz   Azimuth Elevation Single-pol

Performance Data—Smith Chart @ 1920MHz

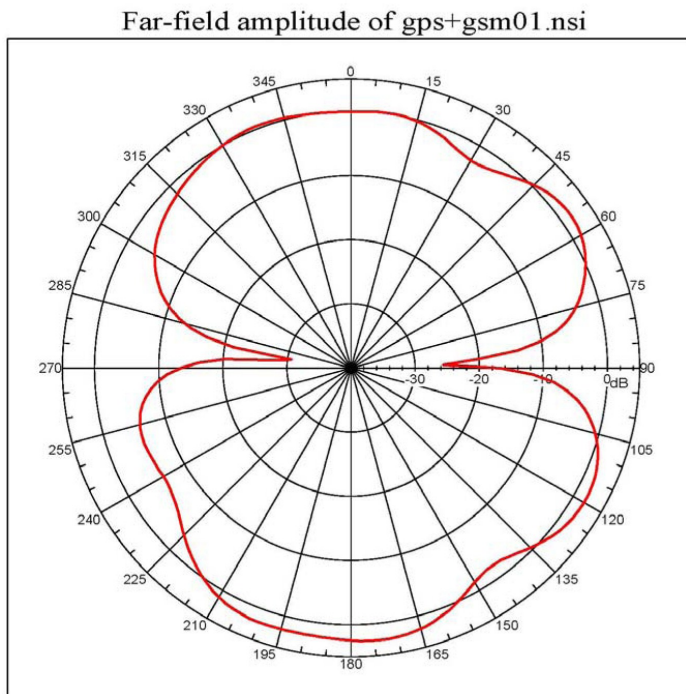Far-field amplitude of gps+gsm01.nsi

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: -3.484 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
-----   ---------   ------- --------- ---
8   1.920 GHz   Azimuth Elevation Single-pol

Performance Data—Smith Chart @ 1990MHz

Far-field amplitude of gps+gsm01.nsi

```
Far-field amplitude, Eprincipal: Linear, Tau = 0.000  deg
Gain = 2.62187  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 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: -1.459 dB
    -3. dB beam width: Not Found
    -6. dB beam width: Not Found
    -10. dB beam width: Not Found
    Left Sidelobe: -0.68 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
```

RF Solutions Ltd. Recycling Notice
Meets the following EC Directives:

DO NOT
Discard with normal waste, please recycle.

ROHS Directive 2002/95/EC
Specifies certain limits for hazardous substances.

WEEE Directive 2002/96/EC
Waste electrical & electronic equipment. This product
must be disposed of through a licensed WEEE collection
point. RF Solutions Ltd., fulfils its WEEE obligations by
membership of an approved compliance scheme.

Waste Batteries and Accumulators

Directive 2006/66/EC
Where batteries are fitted, before recycling the
product, the batteries must be removed and
disposed of at a licensed collection point.

Environment Agency producer registration
number: WEE/JB0104WV.

www.rfsolutions.co.uk

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