2.4G Antenna

MODEL: TH-80-2.4G-FAKRA90-L

1. GENERAL DESCRIPTION

Model No
TH80-2.4G-FAKRA90-L

Below is a table summarizing the antenna design specification.

1.1 Electrical Properties

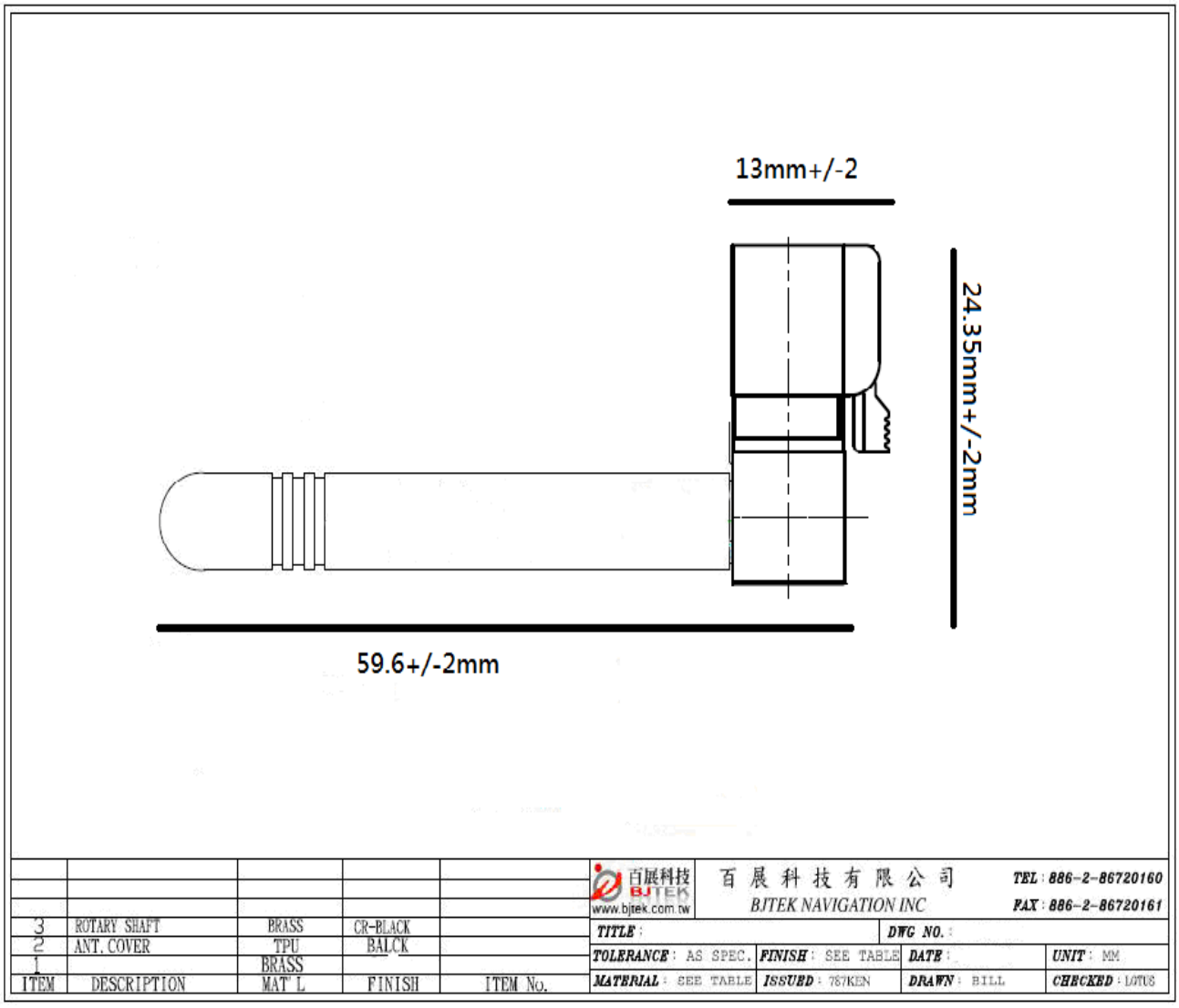
Parameter	Description
Frequency Band	2.4 ~2.5GHz
Nominal Impedance	50 ohm
Polarization	Vertical
Return Loss	Please See Data-1
V.S.W.R	2.0：1
Gain	1db
Note: Gain includes the cable loss	

1.2 Mechanical Properties

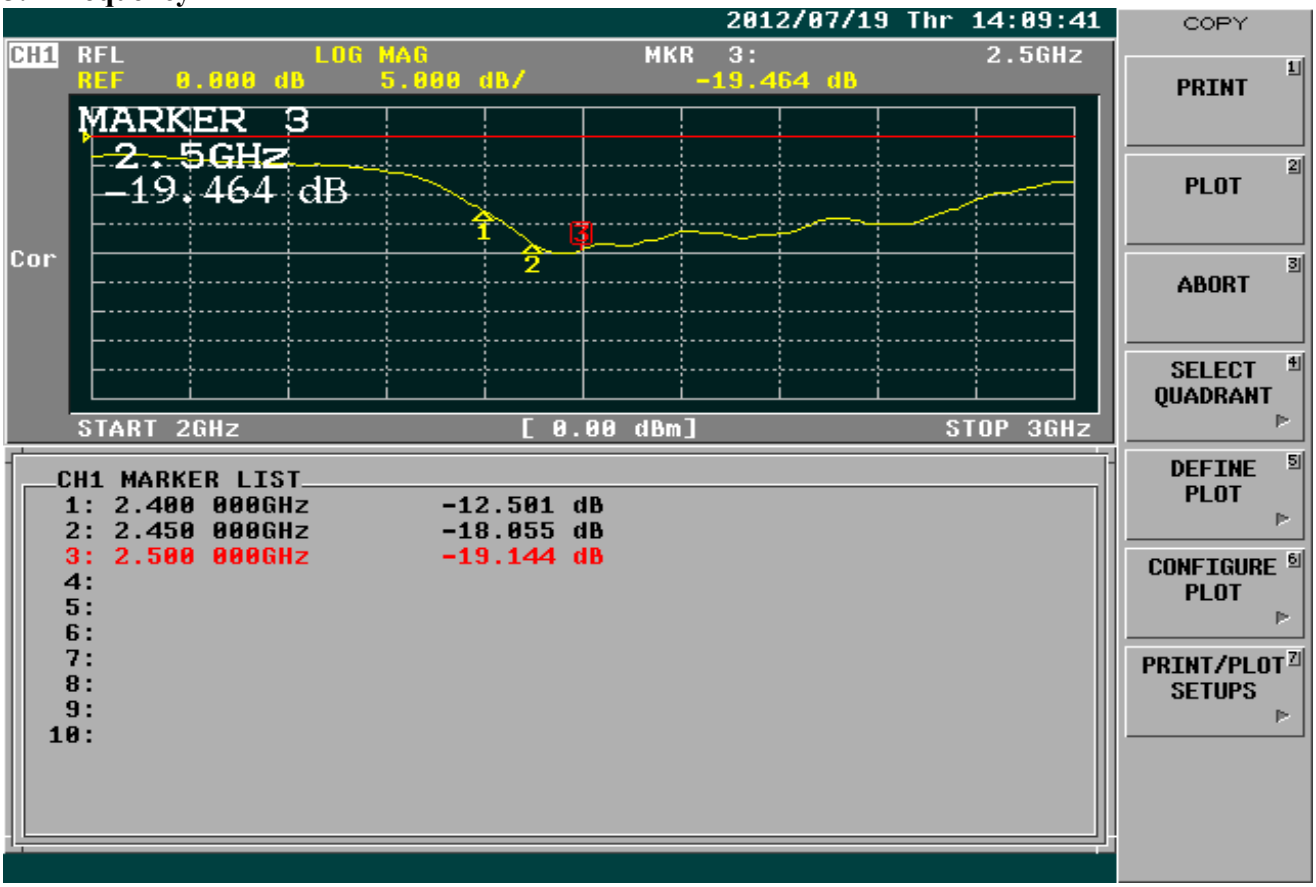
Parameter	Description
Antenna Type	External Antenna

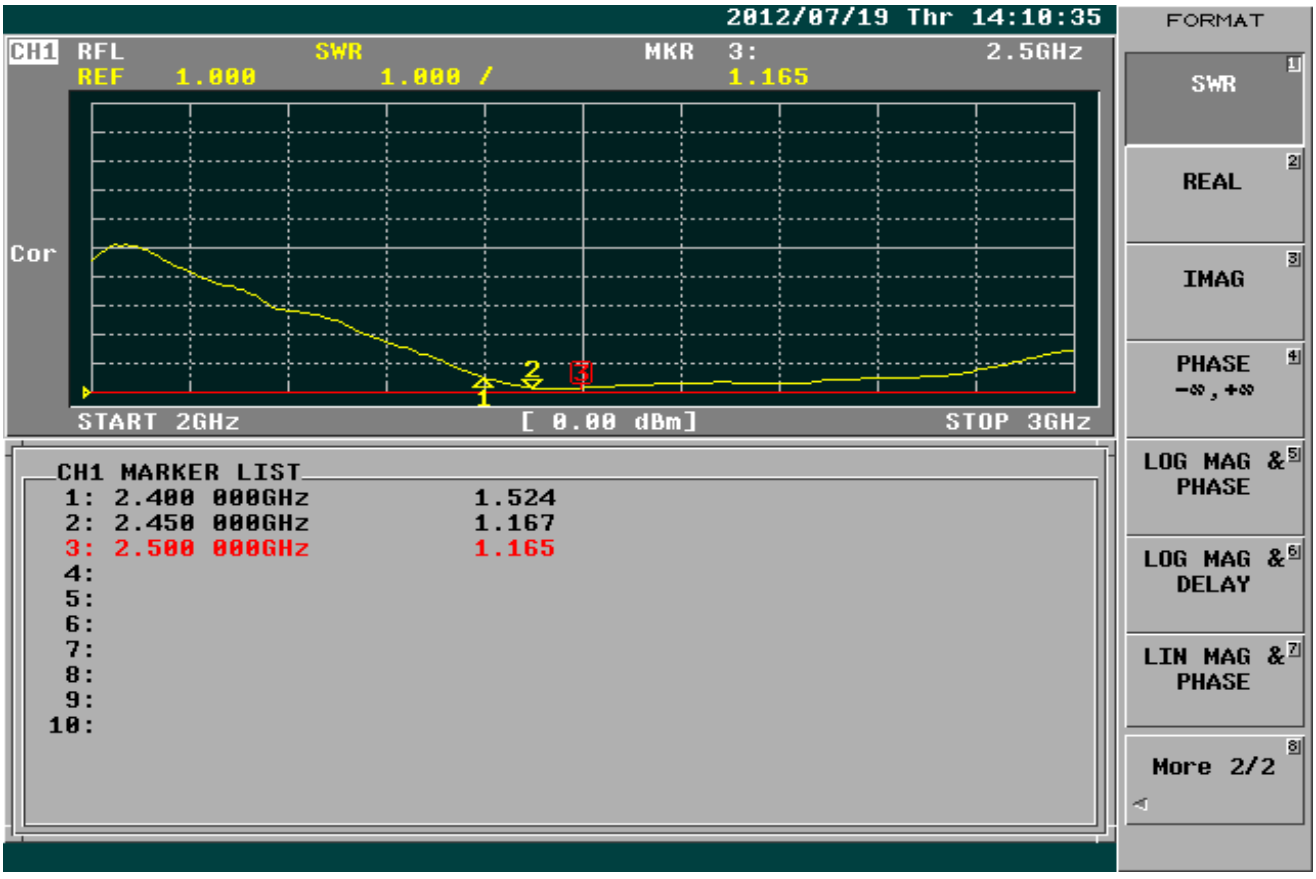
Antenna Material	TPU
Touch Type	Screw Type
Connector Type	SMA 90˚(Male)
Antenna Dimensions	59.6mm ±2
Antenna Color	Black
Operating Temperature Range	-20˚C~+60˚C
Storage Temperature Range	-30˚C~+70˚C

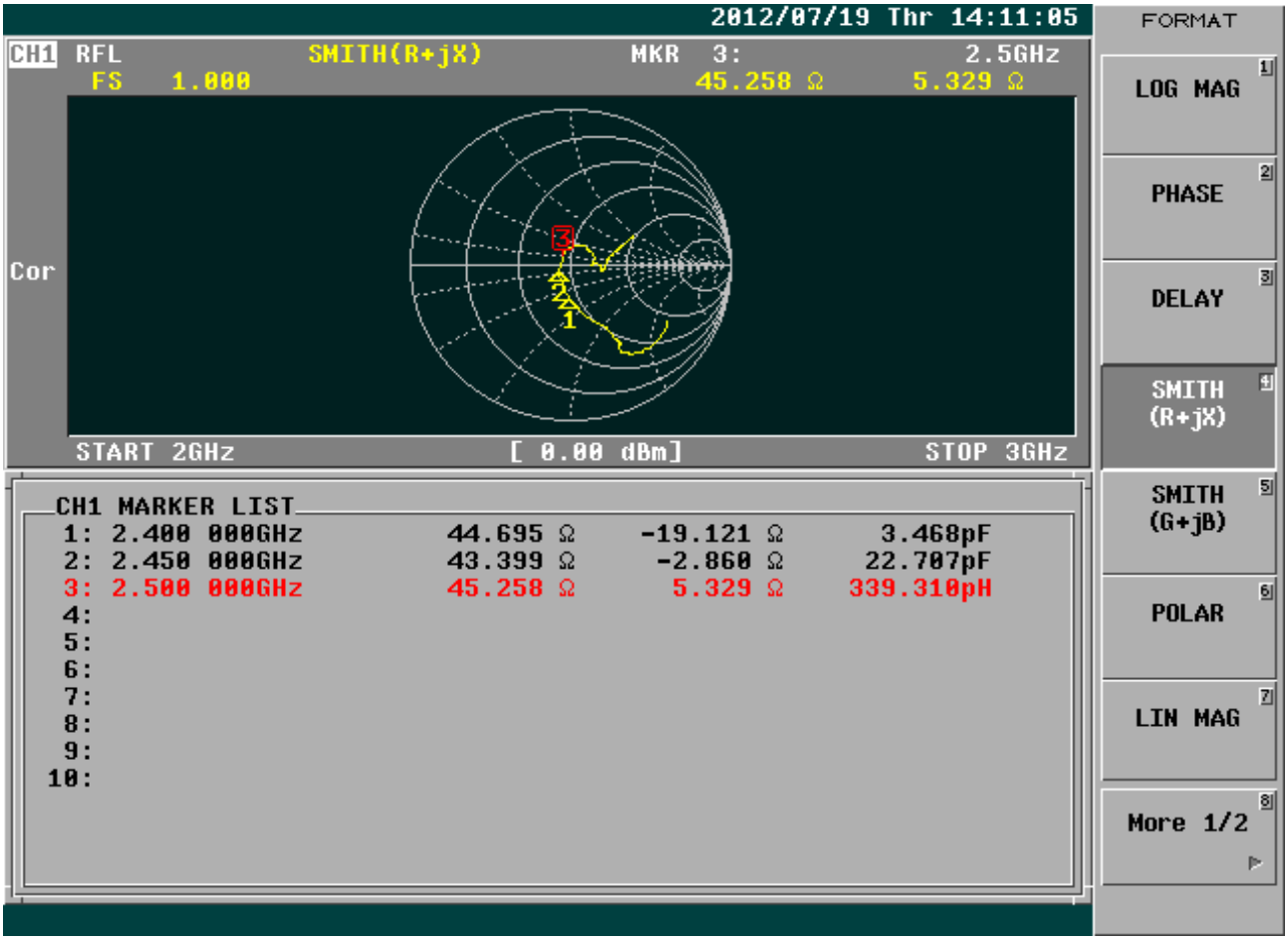
2. Appearance



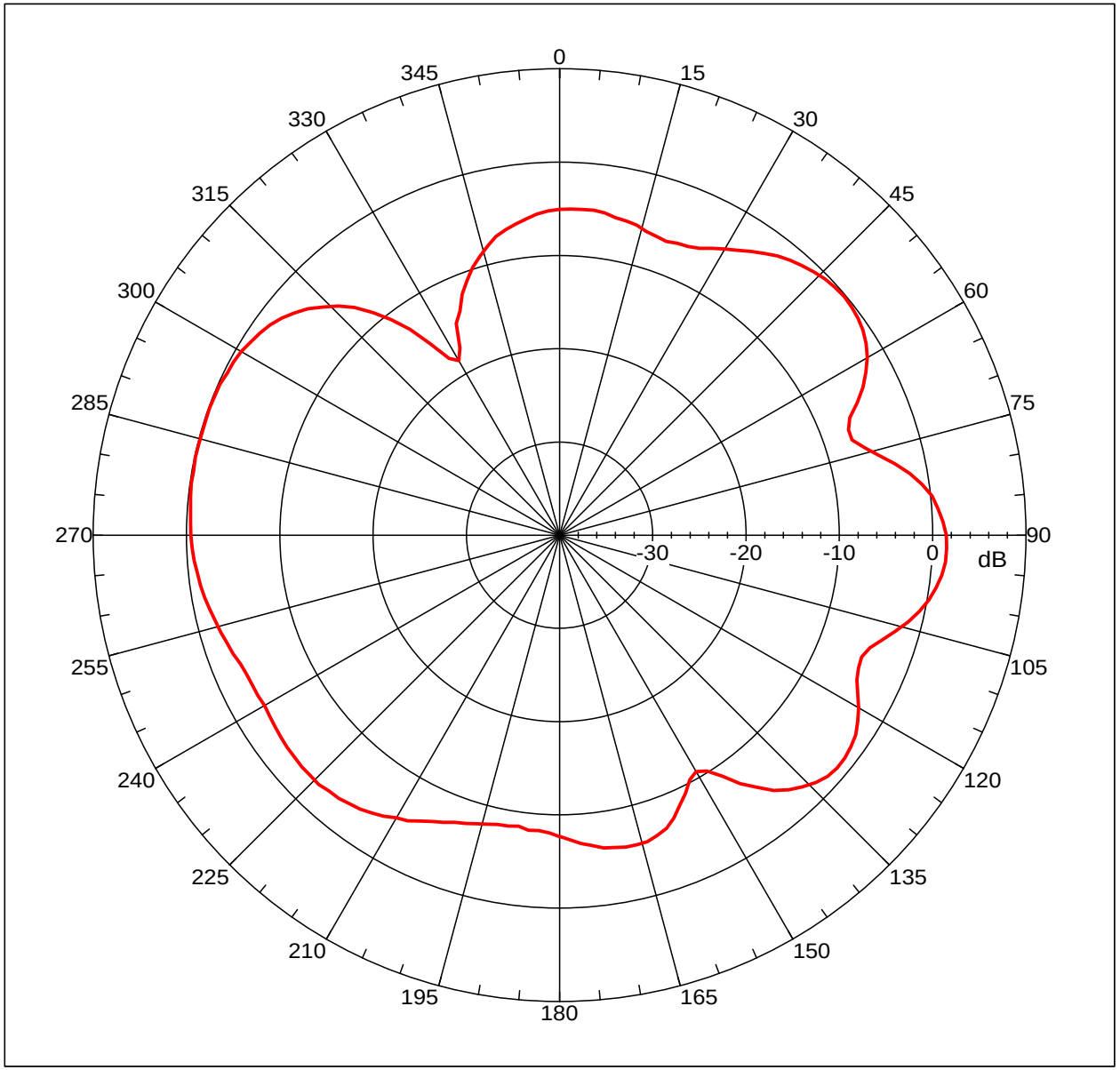
3. Frequency


2012/07/19 Thr 14:09:41
CH1 RFL LOG MAG MKR 3: 2.5GHz
REF 0.000 dB 5.000 dB/ -19.464 dB
MARKER 3
2.5GHz
-19.464 dB
Cor
START 2GHz [0.00 dBm] STOP 3GHz
CH1 MARKER LIST
1: 2.400 000GHz -12.501 dB
2: 2.450 000GHz -18.055 dB
3: 2.500 000GHz -19.144 dB
4:
5:
6:
7:
8:
9:
10:
COPY
PRINT
PLOT
ABORT
SELECT QUADRANT
DEFINE PLOT
CONFIGURE PLOT
PRINT/PLOT SETUPS


2012/07/19 Thr 14:10:35
CH1 RFL SWR MKR 3: 2.5GHz
REF 1.000 1.000 / 1.165
Cor
START 2GHz [0.00 dBm] STOP 3GHz
CH1 MARKER LIST
1: 2.400 000GHz 1.524
2: 2.450 000GHz 1.167
3: 2.500 000GHz 1.165
4:
5:
6:
7:
8:
9:
10:
FORMAT
SWR
REAL
IMAG
PHASE -∞,+∞
LOG MAG & PHASE
LOG MAG & DELAY
LIN MAG & PHASE
More 2/2


2012/07/19 Thr 14:11:05
CH1 RFL
SMITH(R+jX)
MKR 3:
2.5GHz
FS 1.000
45.258 Ω
5.329 Ω
Cor
START 2GHz
[0.00 dBm]
STOP 3GHz
CH1 MARKER LIST
1: 2.400 000GHz 44.695 Ω -19.121 Ω 3.468pF
2: 2.450 000GHz 43.399 Ω -2.860 Ω 22.707pF
3: 2.500 000GHz 45.258 Ω 5.329 Ω 339.310pH
4:
5:
6:
7:
8:
9:
10:
FORMAT
LOG MAG
PHASE
DELAY
SMITH (R+jX)
SMITH (G+jB)
POLAR
LIN MAG
More 1/2

Far-field amplitude of 20120418TH80-2.4-E.nsi



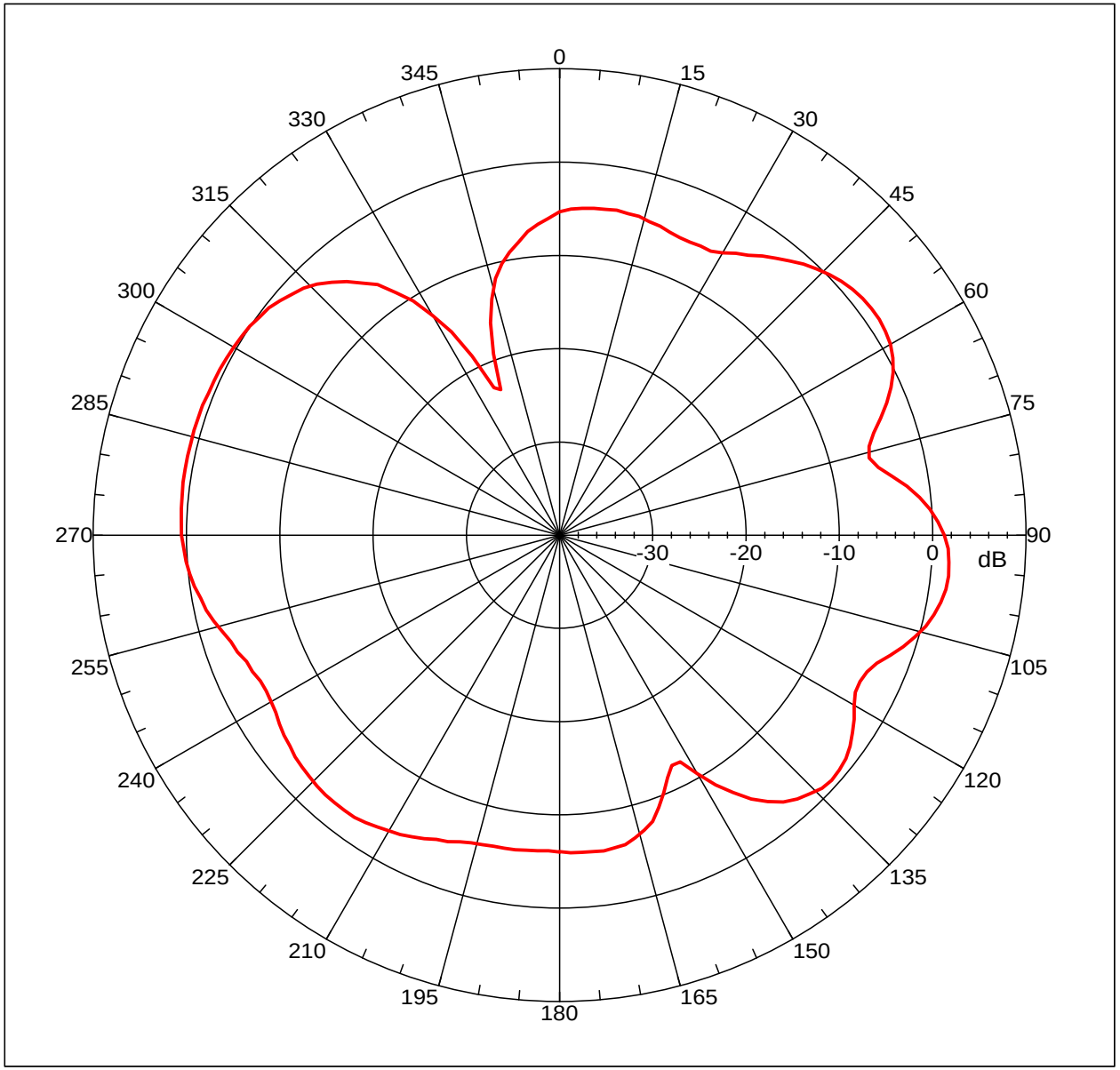

```
Far-field amplitude, Eprincipal: Linear, Tau = 0.000  deg
Gain = 1.50726  dBi
Max far-field (global) = -47.50037  dB, Max far-field (plot) =
-47.50041  dB
Normalization: Reference, Network offset = 0.000  dB
Hpeak at: 91.99999  deg, Vpeak at: 0.000  deg
Plot centering: On

20120418TH80-2.4-E

NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop\Y.
H.T\TH80-2.4G\E\20120418TH80-2.4-E.nsi
Measurement date/time: 4/18/2012 3:51:37 PM, Filetype: NSI-97
Far-field Cut Analysis:
   Avg value: -3.700 dB
   -3. dB beam width: 23.37 deg
   -6. dB beam width: 33.62 deg
   -10. dB beam width: 161.42 deg
   Left Sidelobe: -1.67 dB at 51.285  deg
   Right Sidelobe: -2.68 dB at 131.732  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       2.400  GHz  Azimuth  Elevation  Single-pol
```

Far-field amplitude of 20120418TH80-2.4-E.nsi



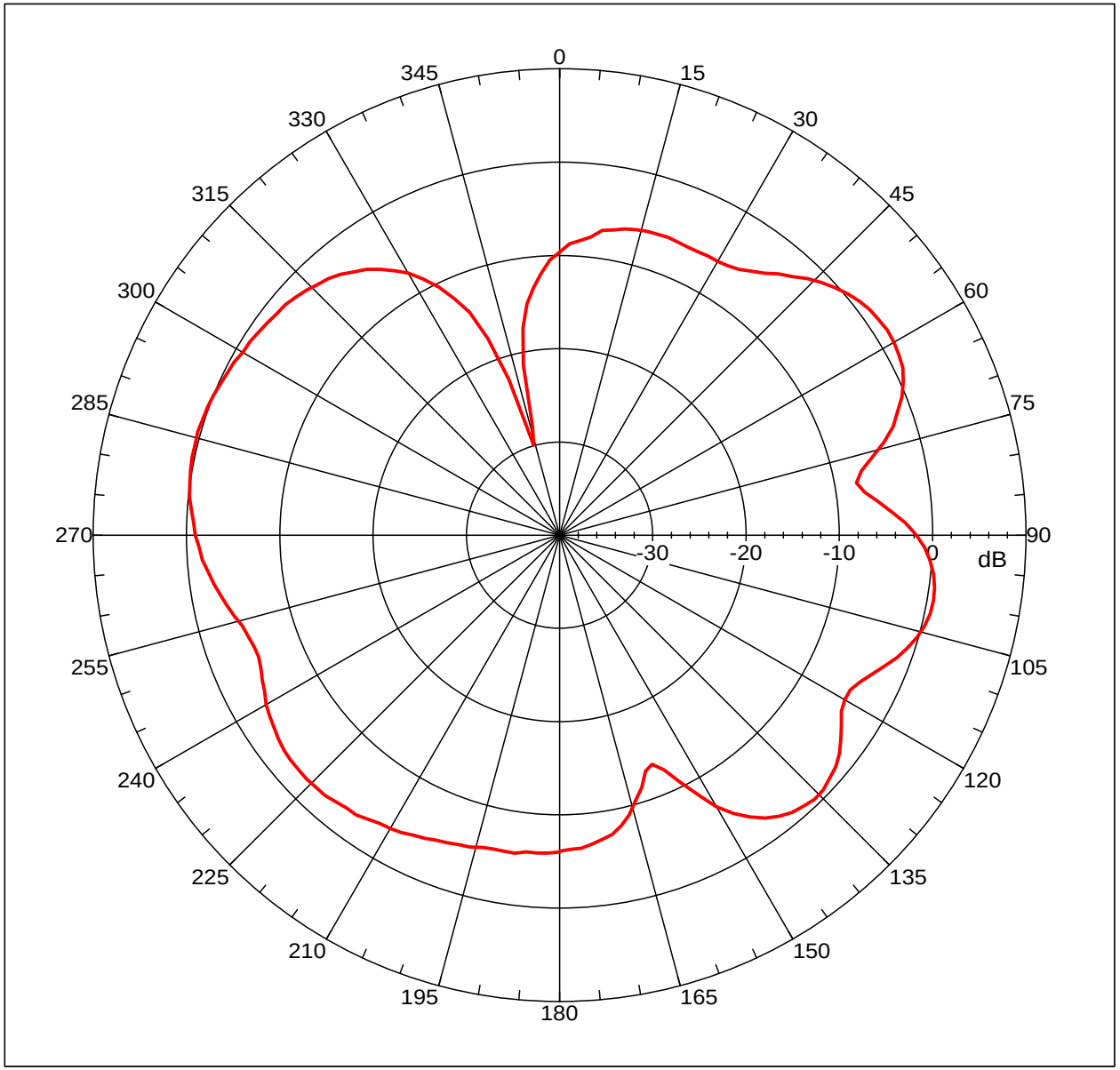

```
Far-field amplitude, Eprincipal: Linear, Tau = 0.000  deg
Gain = 1.9405  dBi
Max far-field (global) = -48.03765  dB, Max far-field (plot) =
-48.03773  dB
Normalization: Reference, Network offset = 0.000  dB
Hpeak at: 96.000  deg, Vpeak at: 0.000  deg
Plot centering: On

20120418TH80-2.4-E

NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop\Y.
H.T\TH80-2.4G\E\20120418TH80-2.4-E.nsi
Measurement date/time: 4/18/2012 3:51:37 PM, Filetype: NSI-97
Far-field Cut Analysis:
   Avg value: -2.995 dB
   -3. dB beam width: 23.40 deg
   -6. dB beam width: 35.74 deg
   -10. dB beam width: 155.96 deg
   Left Sidelobe: -0.59 dB at 57.318  deg
   Right Sidelobe: -2.68 dB at 133.743  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       2.450  GHz  Azimuth  Elevation  Single-pol
```

Far-field amplitude of 20120418TH80-2.4-E.nsi



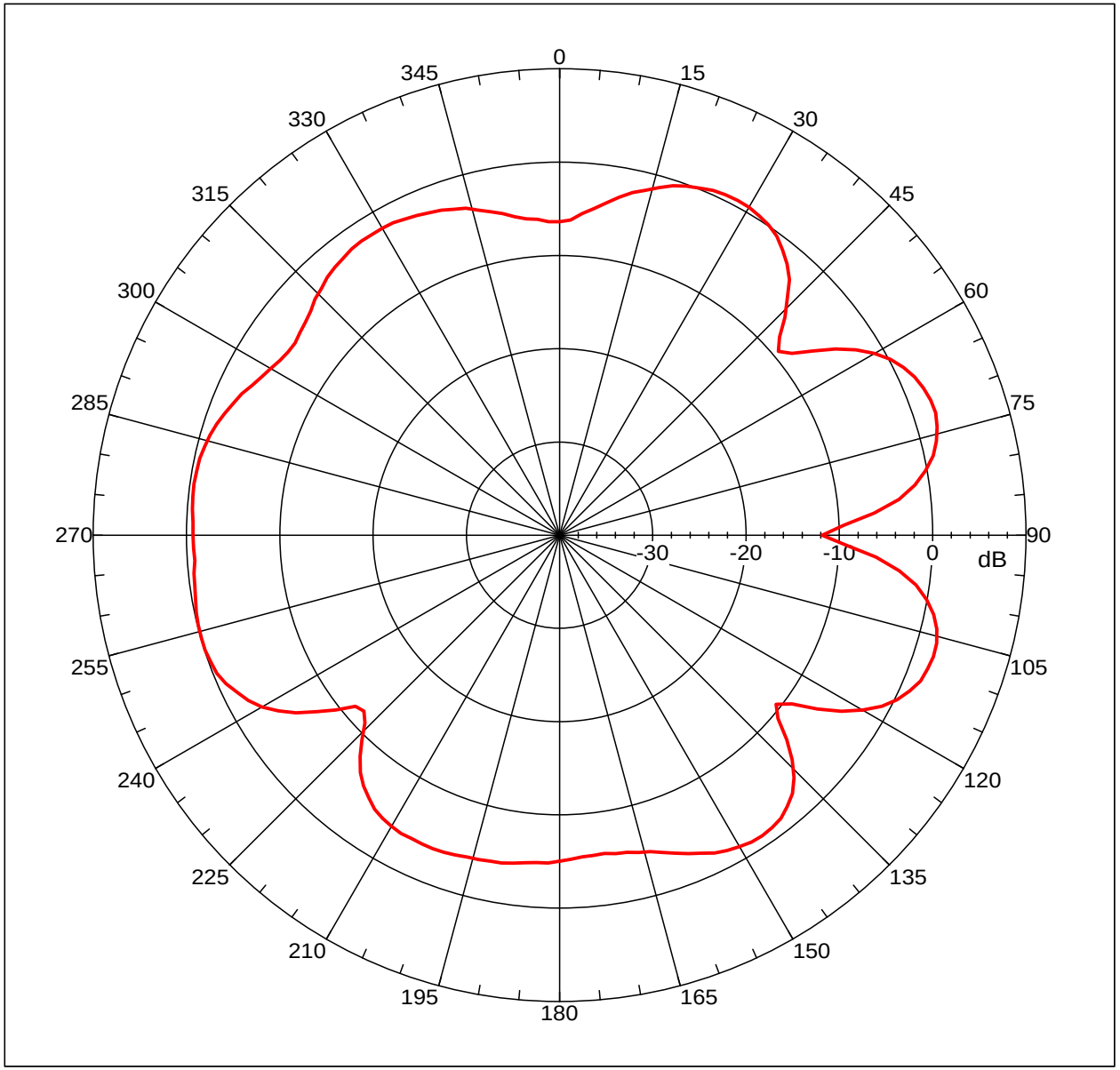

```
Far-field amplitude, Eprincipal: Linear, Tau = 0.000  deg
Gain = 1.44473  dBi
Max far-field (global) = -48.69126  dB, Max far-field (plot) =
-48.69132  dB
Normalization: Reference, Network offset = 0.000  dB
Hpeak at: 57.99999  deg, Vpeak at: 0.000  deg
Plot centering: On

20120418TH80-2.4-E

NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop\Y.
H.T\TH80-2.4G\E\20120418TH80-2.4-E.nsi
Measurement date/time: 4/18/2012 3:51:37 PM, Filetype: NSI-97
Far-field Cut Analysis:
   Avg value: -3.622 dB
   -3. dB beam width: 25.72 deg
   -6. dB beam width: 37.63 deg
   -10. dB beam width: 149.91 deg
   Left Sidelobe: -1.12 dB at -73.408  deg
   Right Sidelobe: -0.76 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
----    ---------   -------  ---------  ---
5       2.500  GHz  Azimuth  Elevation  Single-pol
```

Far-field amplitude of 20120418TH80-2.4-H.nsi



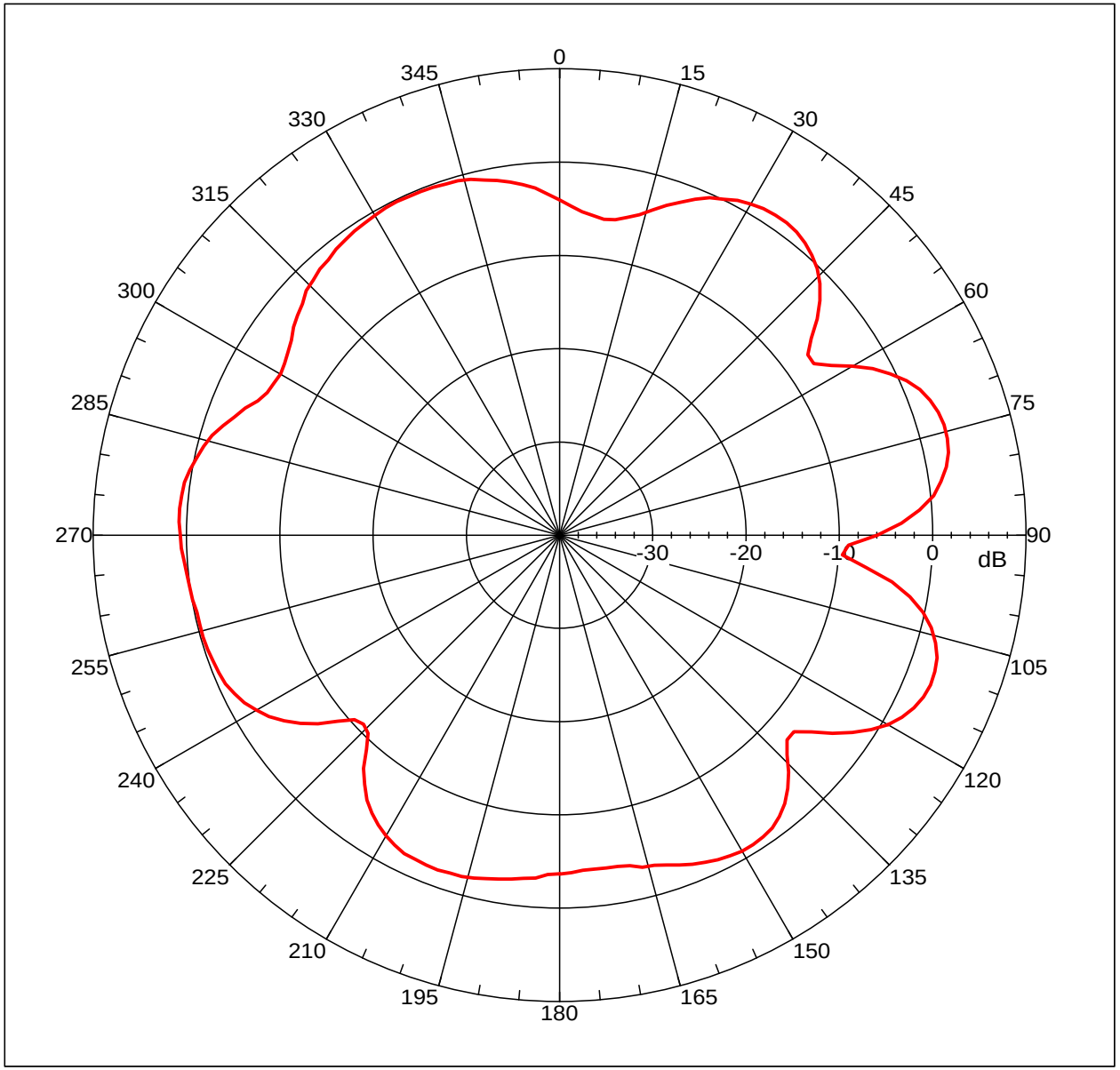

```
Far-field amplitude, Eprincipal: Linear, Tau = 0.000  deg
Gain = 2.40067  dBi
Max far-field (global) = -46.60696  dB, Max far-field (plot) =
-46.60701  dB
Normalization: Reference, Network offset = 0.000  dB
Hpeak at: 72.000  deg, Vpeak at: 0.000  deg
Plot centering: On

20120418TH80-2.4

NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop\Y.
H.T\TH80-2.4G\H\20120418TH80-2.4-H.nsi
Measurement date/time: 4/18/2012 3:44:04 PM, Filetype: NSI-97
Far-field Cut Analysis:
   Avg value: -2.650 dB
   -3. dB beam width: 20.00 deg
   -6. dB beam width: 27.50 deg
   -10. dB beam width: 34.25 deg
   Left Sidelobe: -1.76 dB at 29.162  deg
   Right Sidelobe: -0.25 dB at 109.609  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       2.400  GHz  Azimuth  Elevation  Single-pol
```

Far-field amplitude of 20120418TH80-2.4-H.nsi



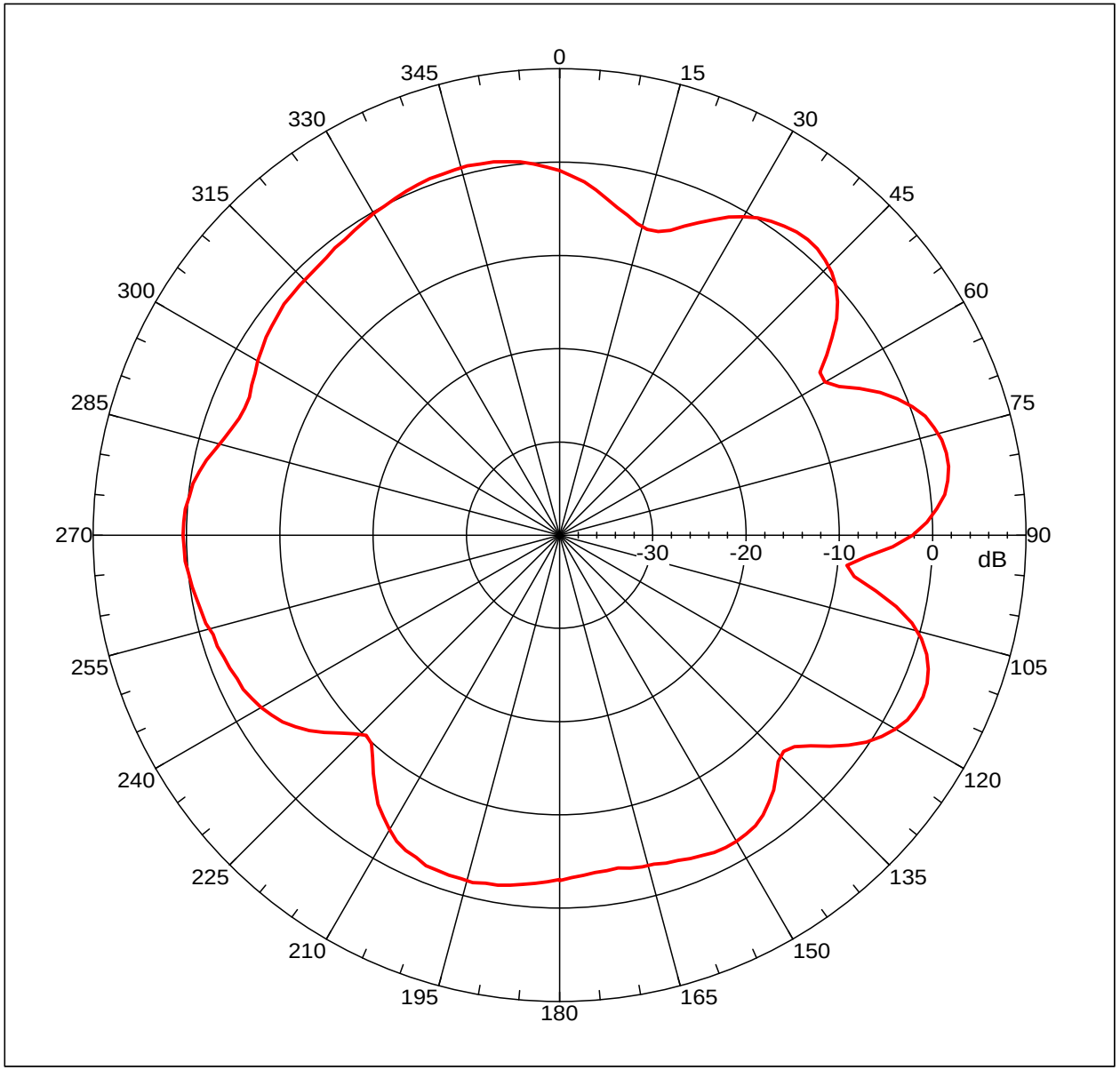

```
Far-field amplitude, Eprincipal: Linear, Tau = 0.000  deg
Gain = 2.88953  dBi
Max far-field (global) = -47.08862  dB, Max far-field (plot) =
-47.08872  dB
Normalization: Reference, Network offset = 0.000  dB
Hpeak at: 73.99999  deg, Vpeak at: 0.000  deg
Plot centering: On

20120418TH80-2.4

NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop\Y.
H.T\TH80-2.4G\H\20120418TH80-2.4-H.nsi
Measurement date/time: 4/18/2012 3:44:04 PM, Filetype: NSI-97
Far-field Cut Analysis:
   Avg value: -1.778 dB
   -3. dB beam width: 19.90 deg
   -6. dB beam width: 27.20 deg
   -10. dB beam width: 34.91 deg
   Left Sidelobe: -1.51 dB at 37.207  deg
   Right Sidelobe: -0.01 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 7
Beam    Frequency   Azimuth  Elevation  Pol
----    ---------   -------  ---------  ---
4       2.450  GHz  Azimuth  Elevation  Single-pol
```

Far-field amplitude of 20120418TH80-2.4-H.nsi




```
Far-field amplitude, Eprincipal: Linear, Tau = 0.000  deg
Gain = 2.64227  dBi
Max far-field (global) = -47.49372  dB, Max far-field (plot) =
-47.49385  dB
Normalization: Reference, Network offset = 0.000  dB
Hpeak at: 113.99999  deg, Vpeak at: 0.000  deg
Plot centering: On

20120418TH80-2.4

NSI2000 V4.0.124, Filename:C:\Documents and Settings\NSI\Desktop\Y.
H.T\TH80-2.4G\H\20120418TH80-2.4-H.nsi
Measurement date/time: 4/18/2012 3:44:04 PM, Filetype: NSI-97
Far-field Cut Analysis:
   Avg value: -1.770 dB
   -3. dB beam width: 19.15 deg
   -6. dB beam width: 26.52 deg
   -10. dB beam width: Not Found
   Left Sidelobe: -0.27 dB at 79.441  deg
   Right Sidelobe: -4.70 dB at 153.855  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       2.500  GHz  Azimuth  Elevation  Single-pol
```