

Heavy Duty Screw Mount 2.4G Antenna

MODEL: TH-240C



1. GENERAL DESCRIPTION

Model No
TH240C-RG174-2M-SMA(M) or FME(J)

Below is a table summarizing the antenna design specification.

1.1 Electrical Properties

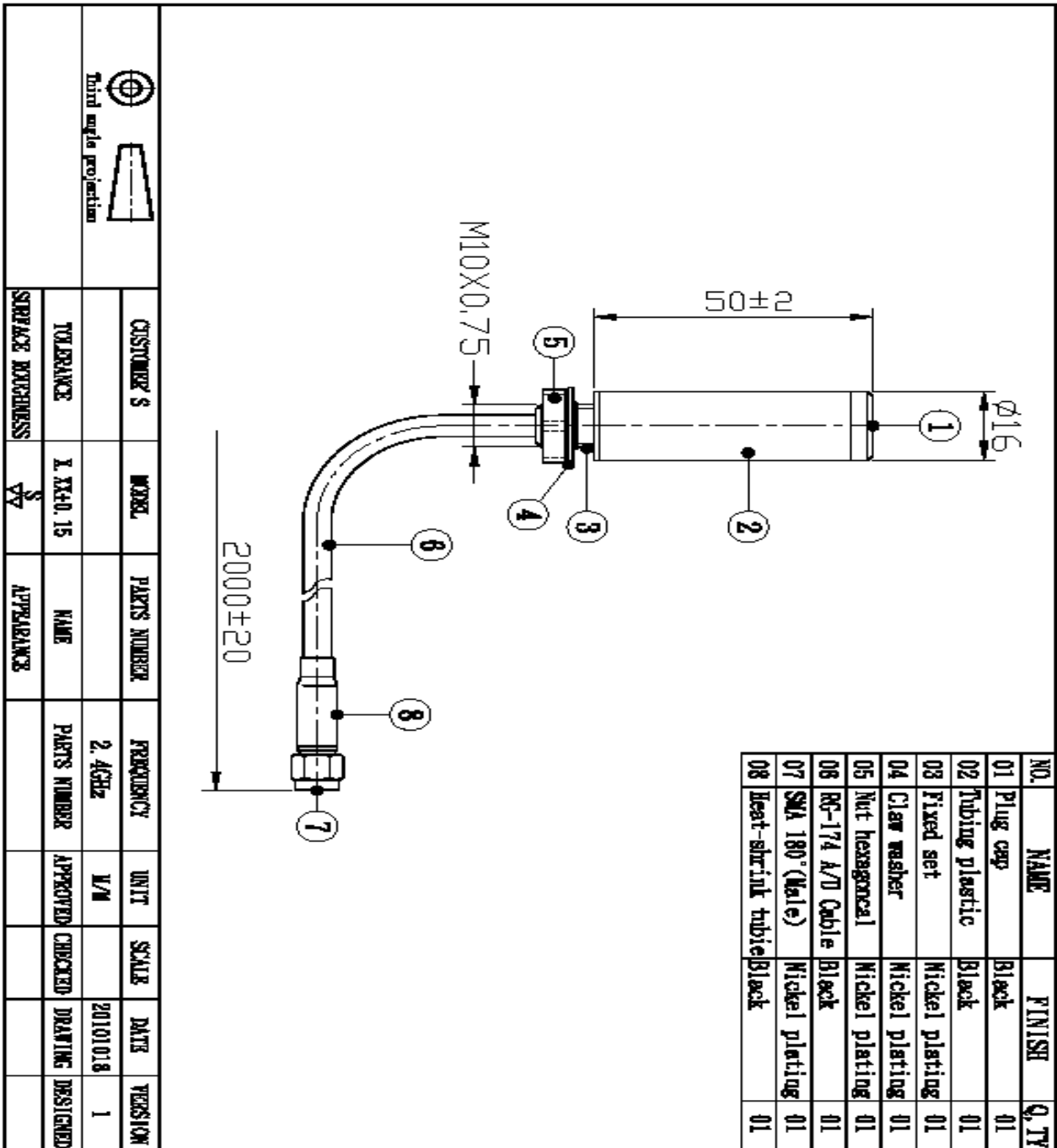
Parameter	Description
Frequency Band	2.4 GHz
Nominal Impedance	50 ohm
Polarization	Vertical
Return Loss	Please See Data-1
V.S.W.R	2.0 : 1
Gain	3~4db
Note: Gain includes the cable loss	

1.2 Mechanical Properties

Parameter	Description
Antenna Type	External Antenna

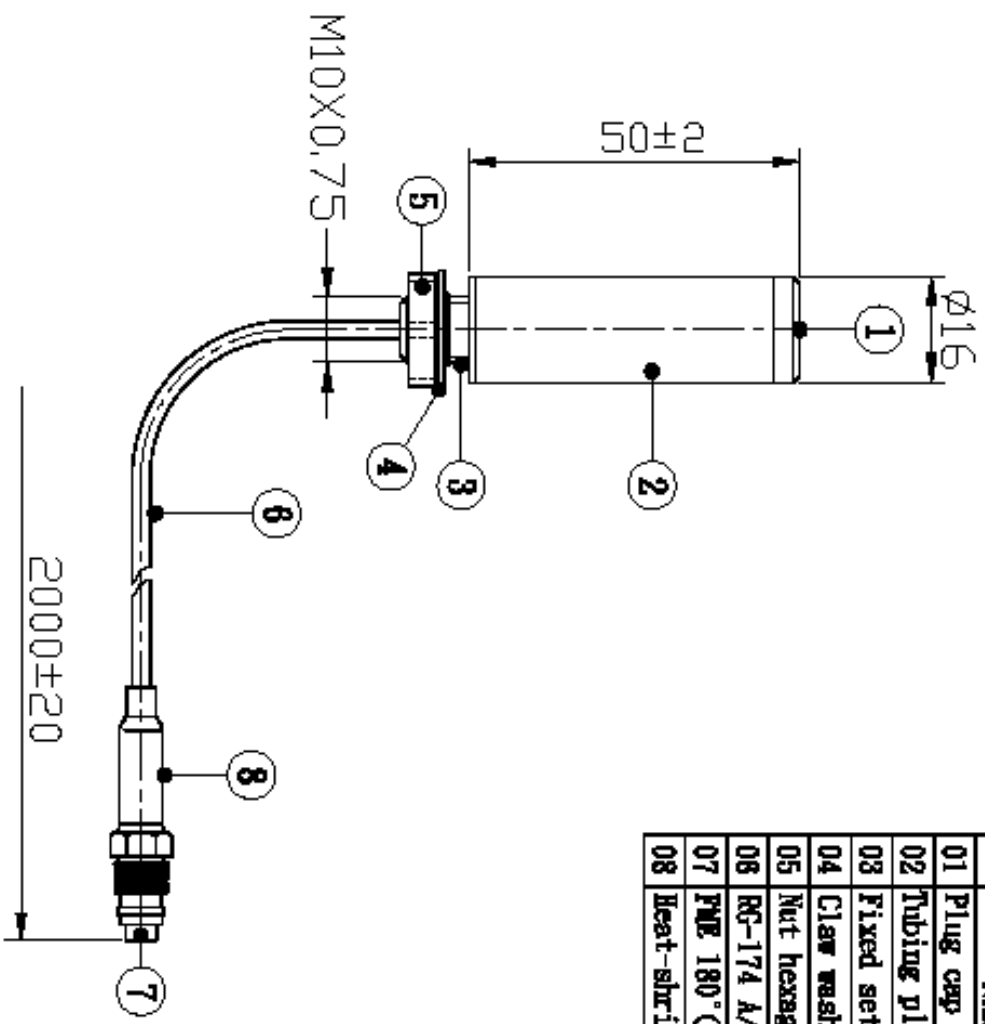
Antenna Material	Tubing plastic
Touch Type	Screw Type M10 x0.75
Connector Type	SMA 180°(Male) or FME(J) or ---
Antenna Dimensions	Φ16x50mm ±2
Antenna Color	Black
Operating Temperature Range	-20°C~+60°C
Storage Temperature Range	-30°C~+70°C

2. Appearance



 Third angle projection	CUSTOMER'S	MODEL	PARTS NUMBER	FREQUENCY	UNIT	SCALE	DATE	VERSION
	TOLERANCE	1:1X10.15	NAME	2.4GHz	V/M	CHECKED	20101018	1
SURFACE FINISHNESS		APPEARANCE						

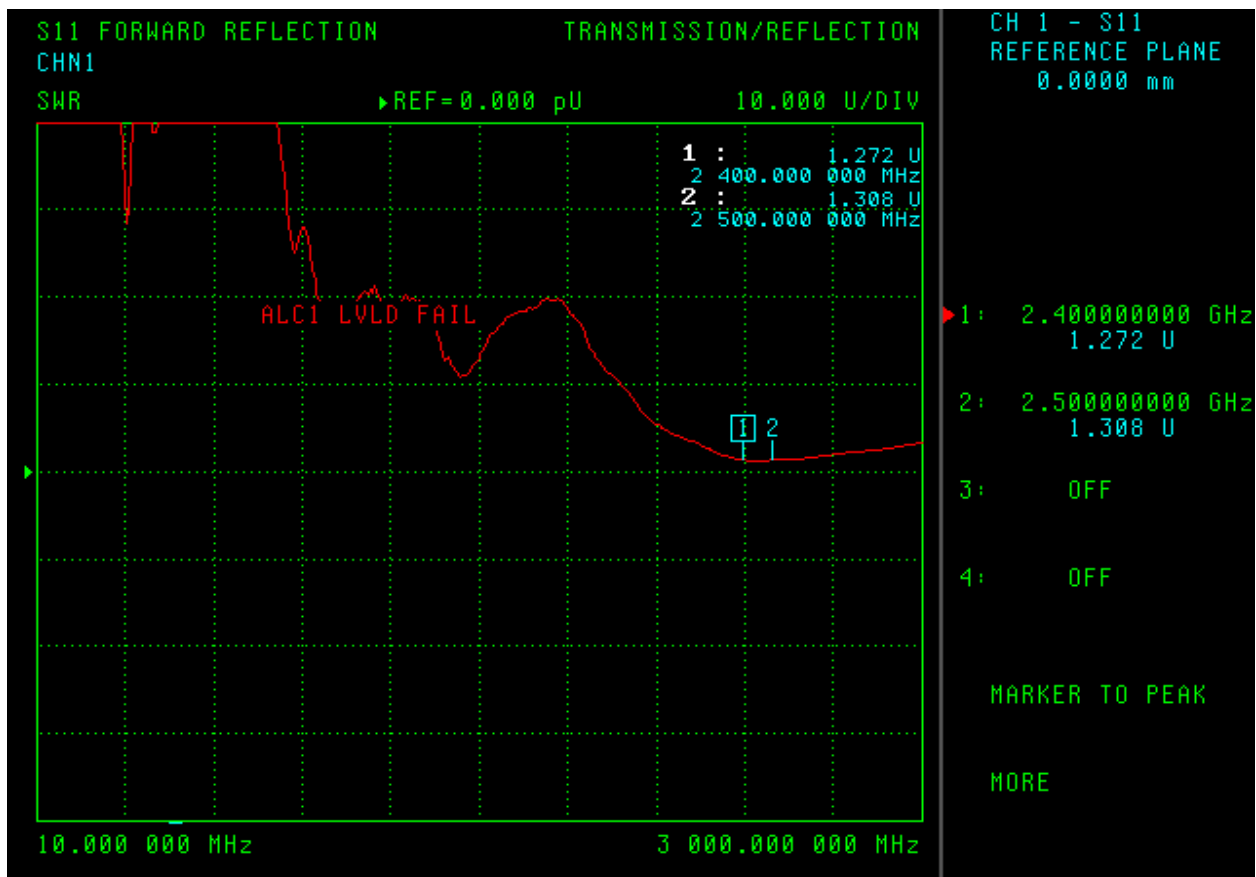
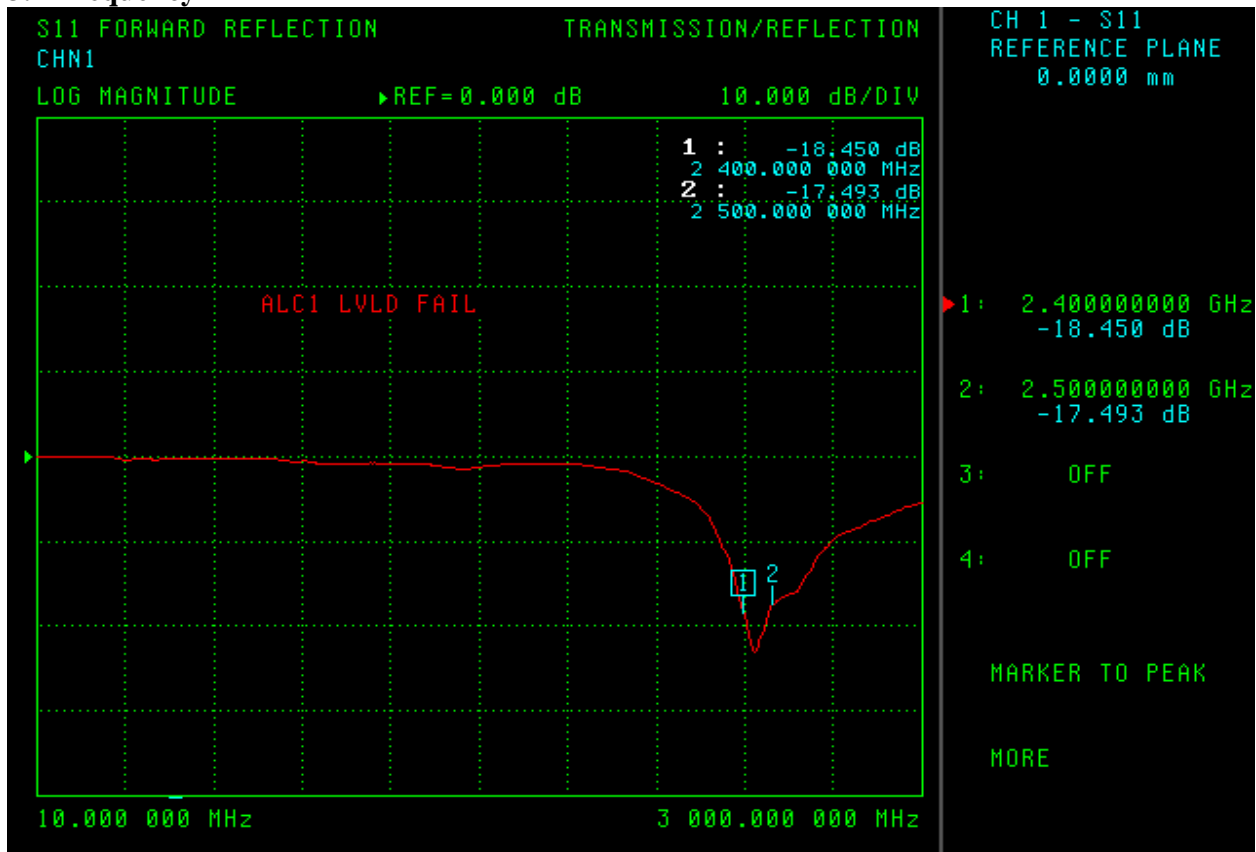
NO.	NAME	FINISH	Q, TY
01	Plug cap	Black	01
02	Tubing plastic	Black	01
03	Fixed set	Nickel plating	01
04	Claw washer	Nickel plating	01
05	Nut hexagonal	Nickel plating	01
06	RG-174 A/D Cable	Black	01
07	PMU 180° (Female)	Nickel plating	01
08	Heat-shrink tubing	Black	01



CUSTOMER'S	MODEL	PARTS NUMBER	FREQUENCY	UNIT	SCALE	DATE	VERSION
S			2.4GHz	N/A		20101019	1
TOLERANCE	X.XX±0.15	NAME	PARTS NUMBER	APPROVED	CHECKED	DRAWING	DESIGNED
SURFACE ROUGHNESS	\sqrt{R}	APPEARANCE					



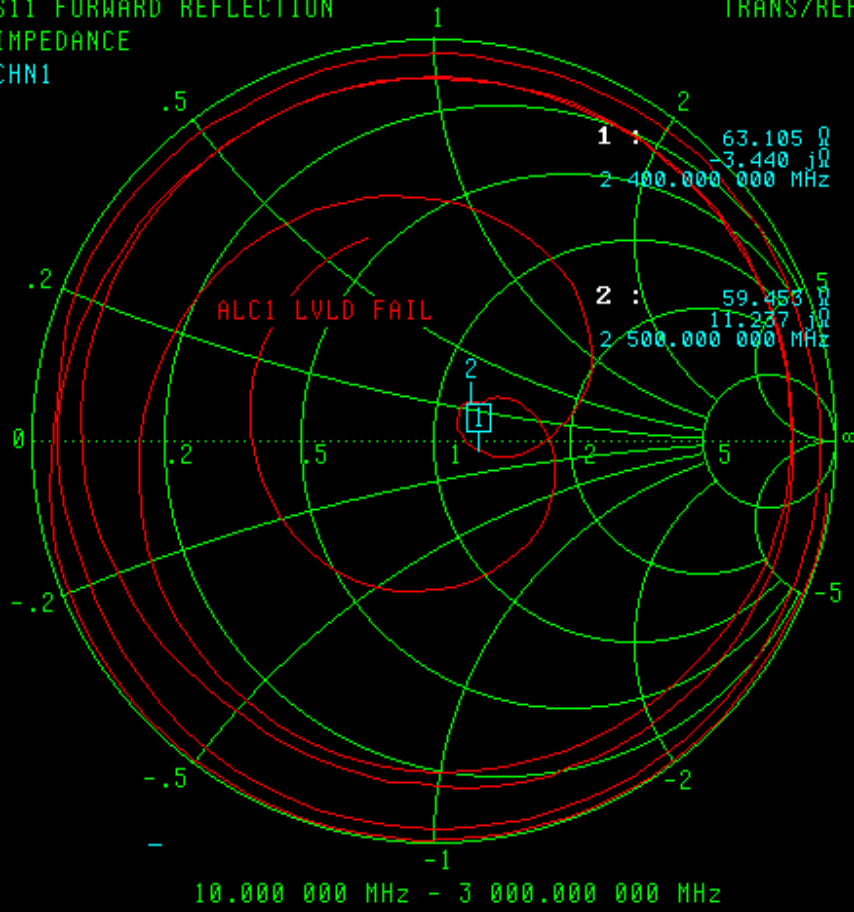
3. Frequency



S11 FORWARD REFLECTION
IMPEDANCE
CHN1

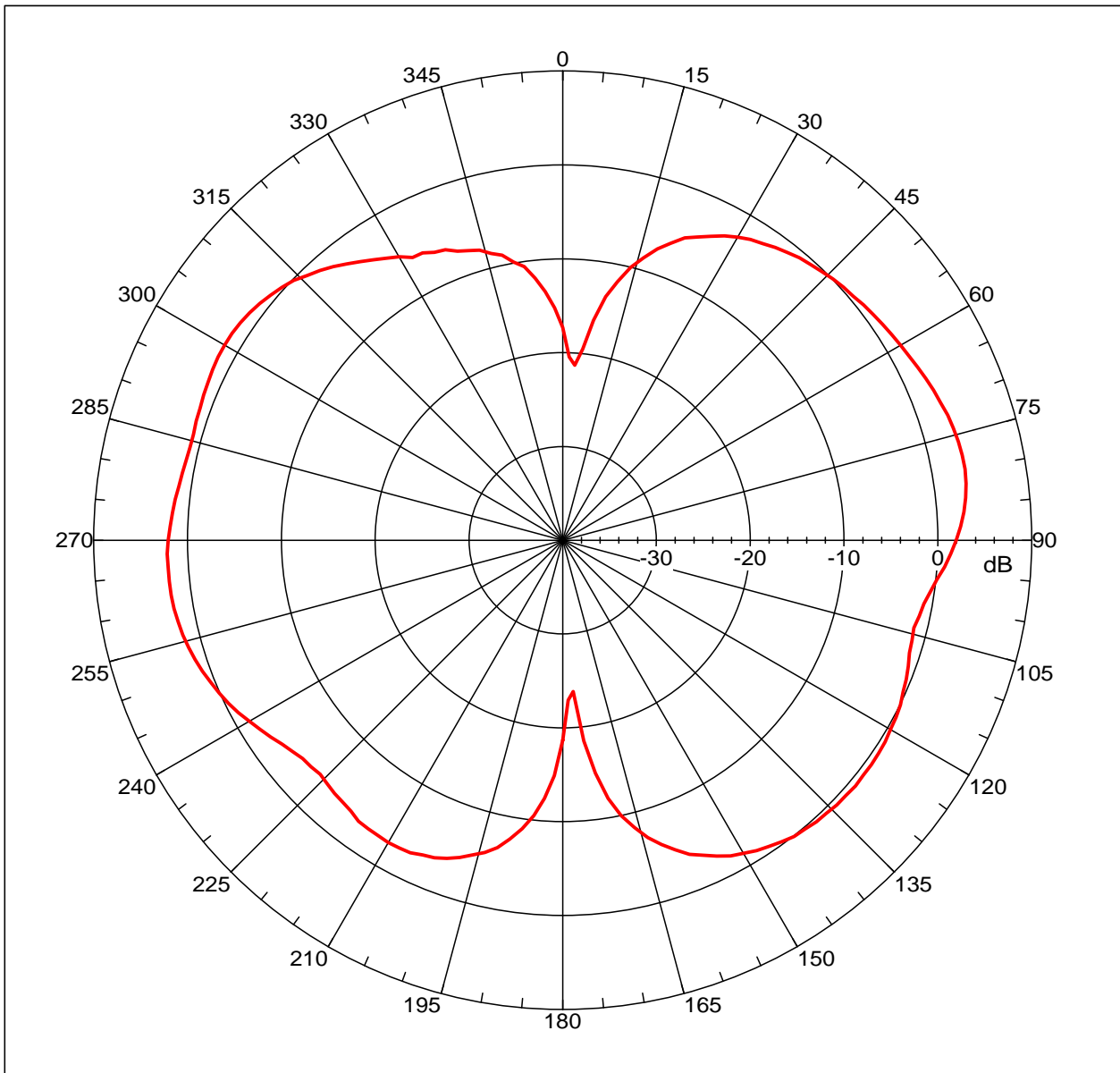
TRANS/REFL

CH 1 - S11
REFERENCE PLANE
0.0000 mm



- 1: 2.400000000 GHz
63.105 Ω
-3.440 $j\Omega$
 - 2: 2.500000000 GHz
59.453 Ω
11.237 $j\Omega$
 - 3: OFF
 - 4: OFF
- MARKER TO PEAK
- MORE

Far-field amplitude of 20101019 TH240C 2.4GHZ E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 3.54578 dBi
 Max far-field (global) = -45.46185 dB, Max far-field (plot) = -45.46186 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 79.99999 deg, Vpeak at: 0.000 deg
 Plot centering: On

TH240C 2.4GHZ E-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Midy\2.4G\20101019 TH240C 2.4GHZ E-PLANE.nsi

Measurement date/time: 10/19/2010 10:06:39 AM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -1.634 dB
 -3. dB beam width: 44.12 deg
 -6. dB beam width: 123.28 deg
 -10. dB beam width: 143.96 deg
 Left Sidelobe: -1.95 dB at -61.341 deg
 Right Sidelobe: -2.87 dB at 127.710 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

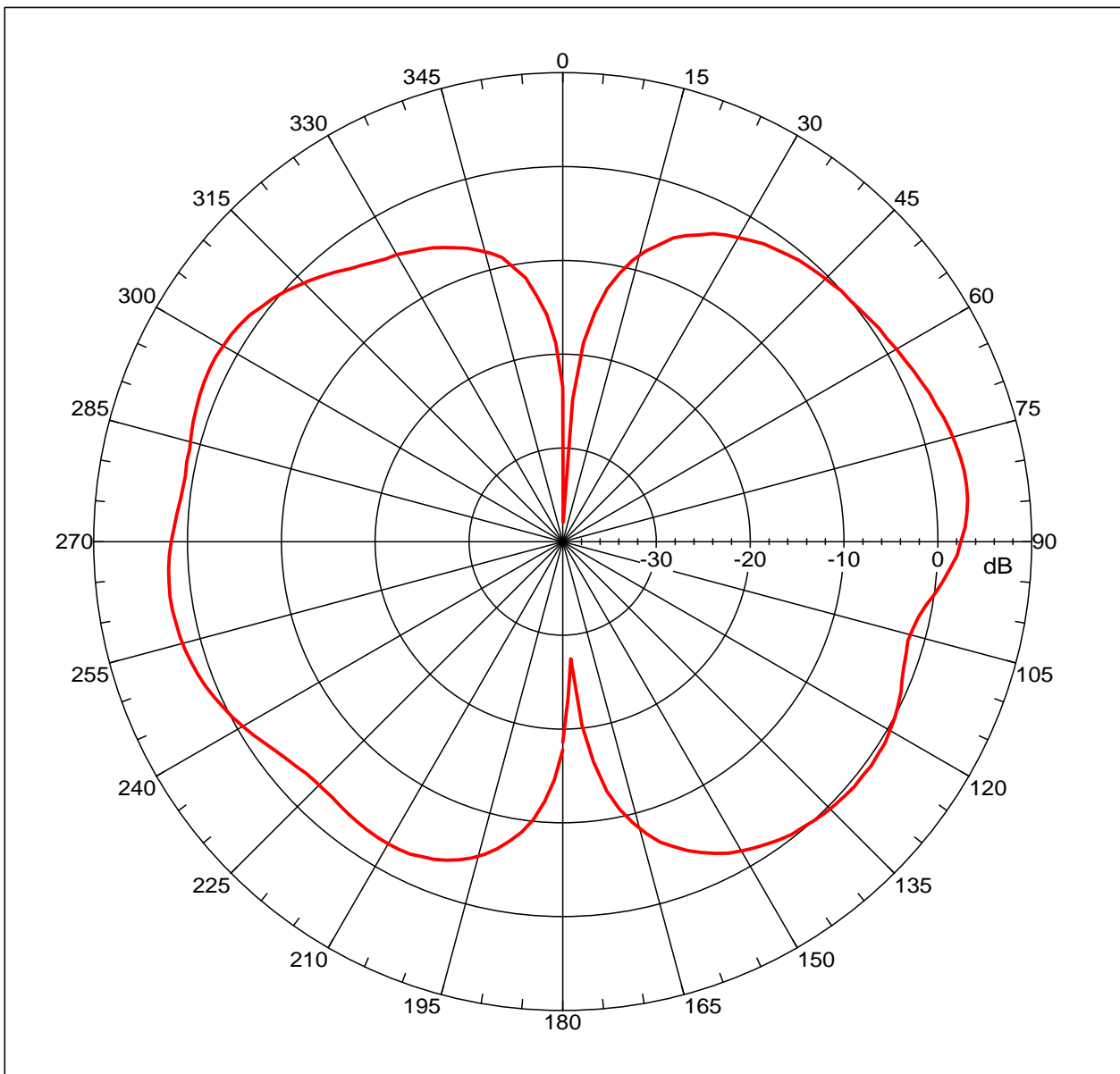
deg

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

Selected beam(s) 1 of 3

Beam	Frequency	Azimuth	Elevation	Pol
1	2.400 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20101019 TH240C 2.4GHZ E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 3.45604 dBi
 Max far-field (global) = -46.52211 dB, Max far-field (plot) = -46.52211 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 81.99999 deg, Vpeak at: 0.000 deg
 Plot centering: On

TH240C 2.4GHZ E-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Midy\2.4G\20101019 TH240C 2.4GHZ E-PLANE.nsi

Measurement date/time: 10/19/2010 10:06:39 AM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -1.650 dB
 -3. dB beam width: 42.79 deg
 -6. dB beam width: 122.99 deg
 -10. dB beam width: 144.88 deg
 Left Sidelobe: -1.56 dB at -61.341 deg
 Right Sidelobe: -2.80 dB at 127.710 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

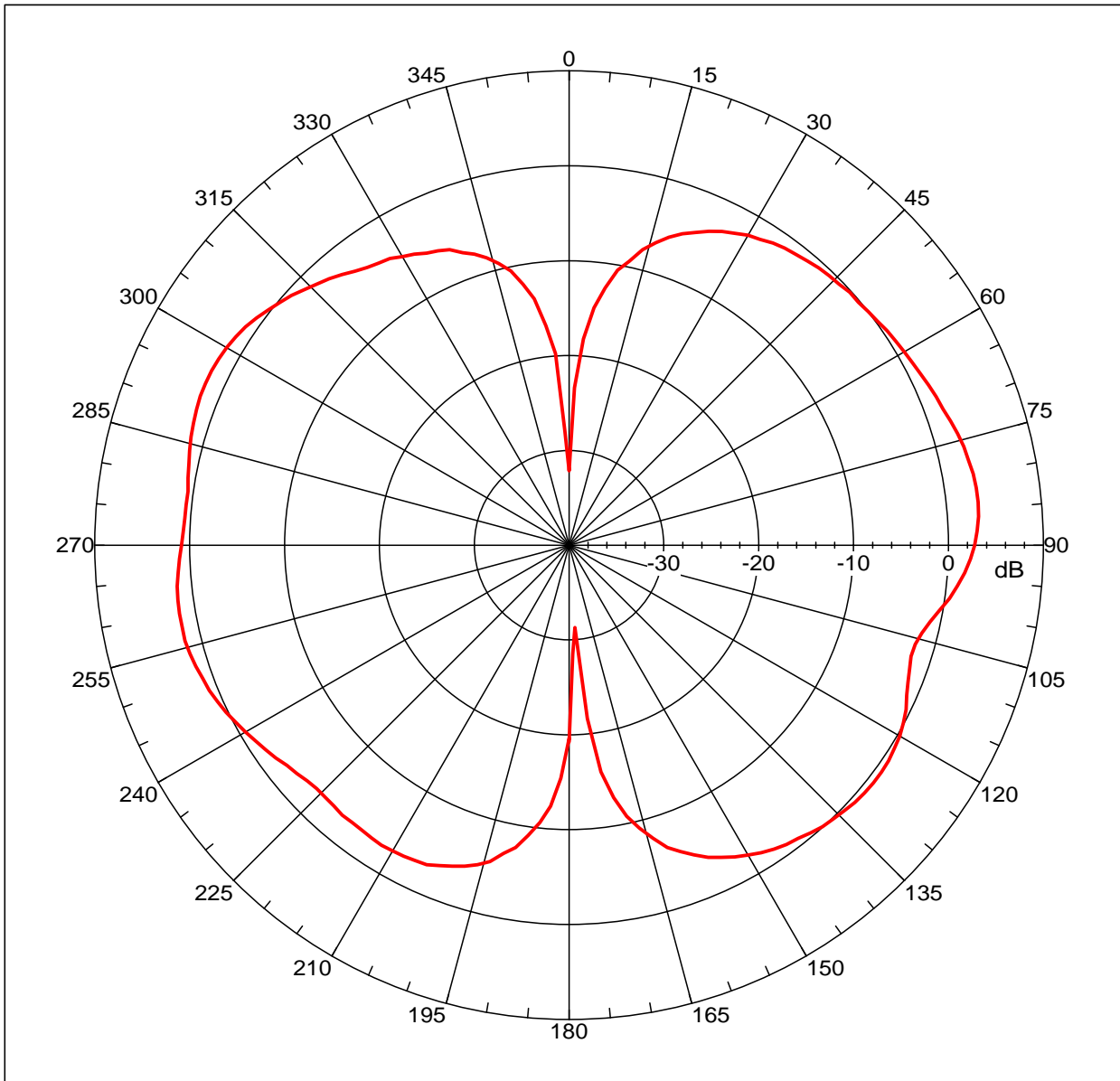
deg

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

Selected beam(s) 1 of 3

Beam	Frequency	Azimuth	Elevation	Pol
2	2.450 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20101019 TH240C 2.4GHZ E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 3.34919 dBi
 Max far-field (global) = -46.7868 dB, Max far-field (plot) =
 -46.78684 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 81.99999 deg, Vpeak at: 0.000 deg
 Plot centering: On

TH240C 2.4GHZ E-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Midy\2.4G\20101019 TH240C
 2.4GHZ E-PLANE.nsi
 Measurement date/time: 10/19/2010 10:06:39 AM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -1.796 dB
 -3. dB beam width: 43.16 deg
 -6. dB beam width: 123.70 deg
 -10. dB beam width: 146.64 deg
 Left Sidelobe: -1.43 dB at -65.363 deg
 Right Sidelobe: -2.64 dB at 129.721 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

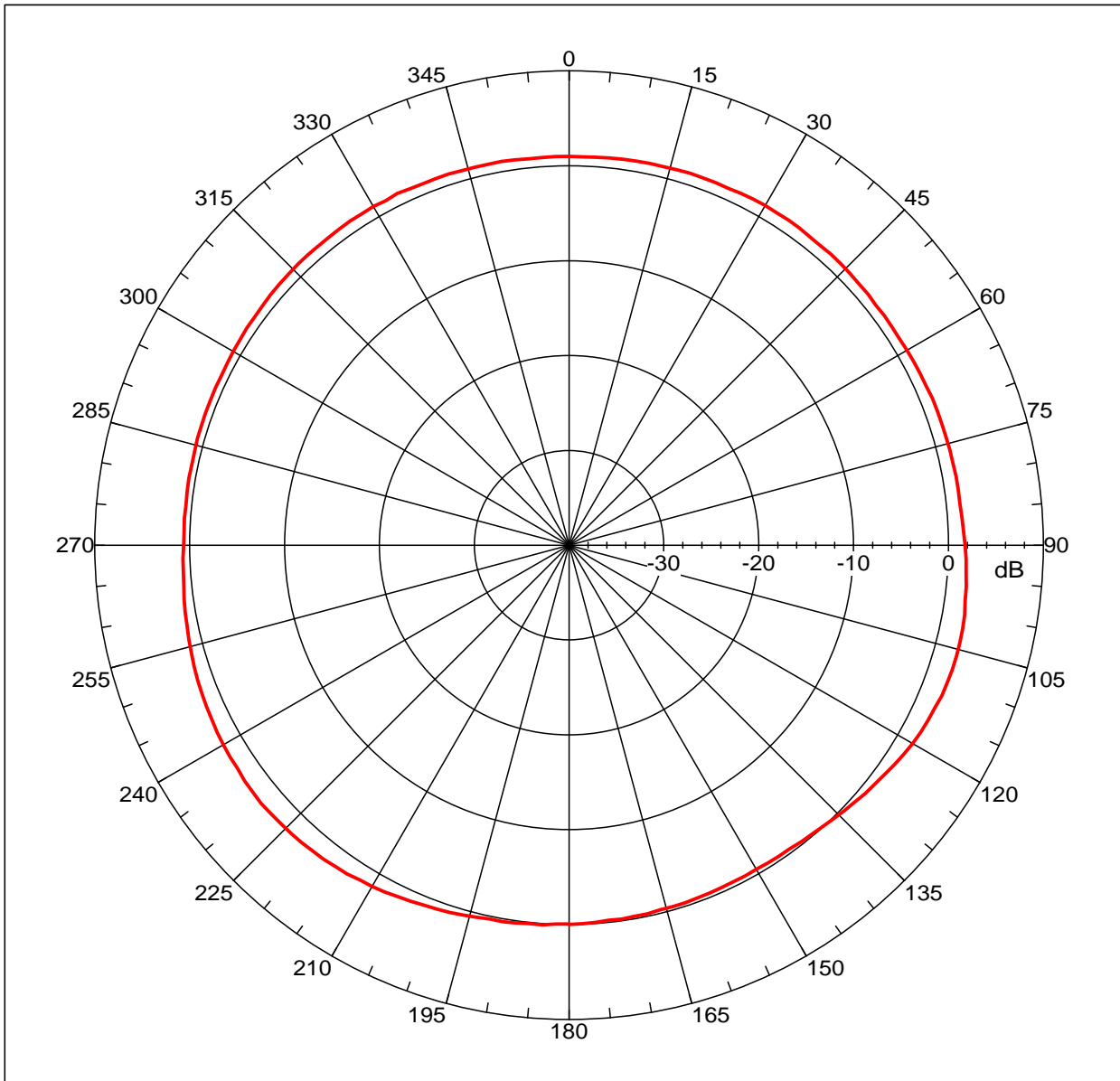
deg

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

Selected beam(s) 1 of 3

Beam	Frequency	Azimuth	Elevation	Pol
3	2.500 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20101019 TH240C 2.4GHZ H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 2.48543 dBi
 Max far-field (global) = -46.5222 dB, Max far-field (plot) = -46.5222 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 105.99999 deg, Vpeak at: 0.000 deg
 Plot centering: On

TH240C 2.4GHZ H-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Midy\2.4G\20101019 TH240C 2.4GHZ H-PLANE01.nsi
 Measurement date/time: 10/19/2010 10:09:30 AM, Filetype: NSI-97

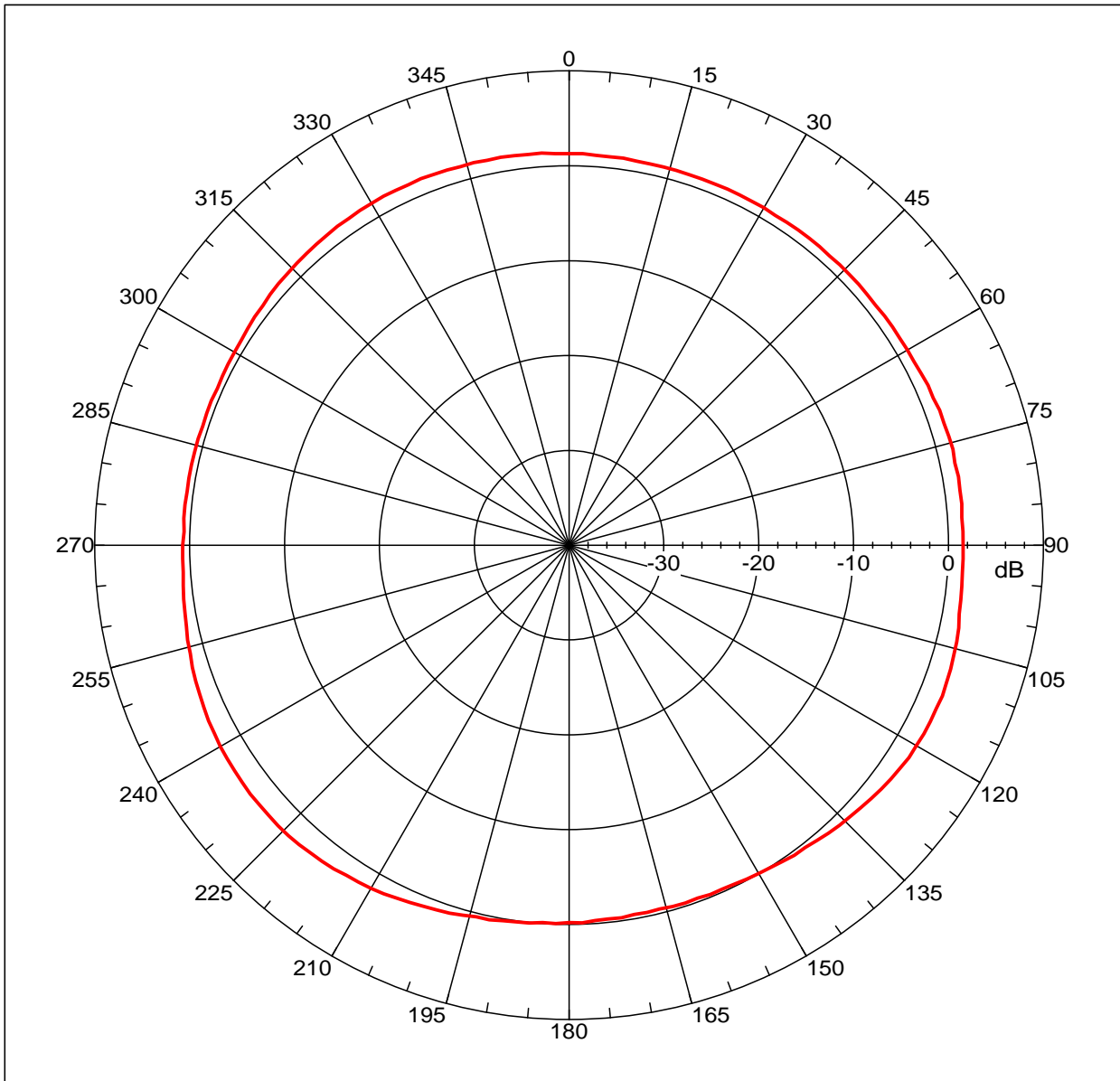
Far-field Cut Analysis:
 Avg value: 1.095 dB
 -3. dB beam width: Not Found
 -6. dB beam width: Not Found
 -10. dB beam width: Not Found
 Left Sidelobe: -0.14 dB at -129.721 deg
 Right Sidelobe: Not Found

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 3

Beam	Frequency	Azimuth	Elevation	Pol
1	2.400 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20101019 TH240C 2.4GHZ H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 2.61743 dBi
 Max far-field (global) = -47.36072 dB, Max far-field (plot) = -47.36075 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -128.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

TH240C 2.4GHZ H-PLANE

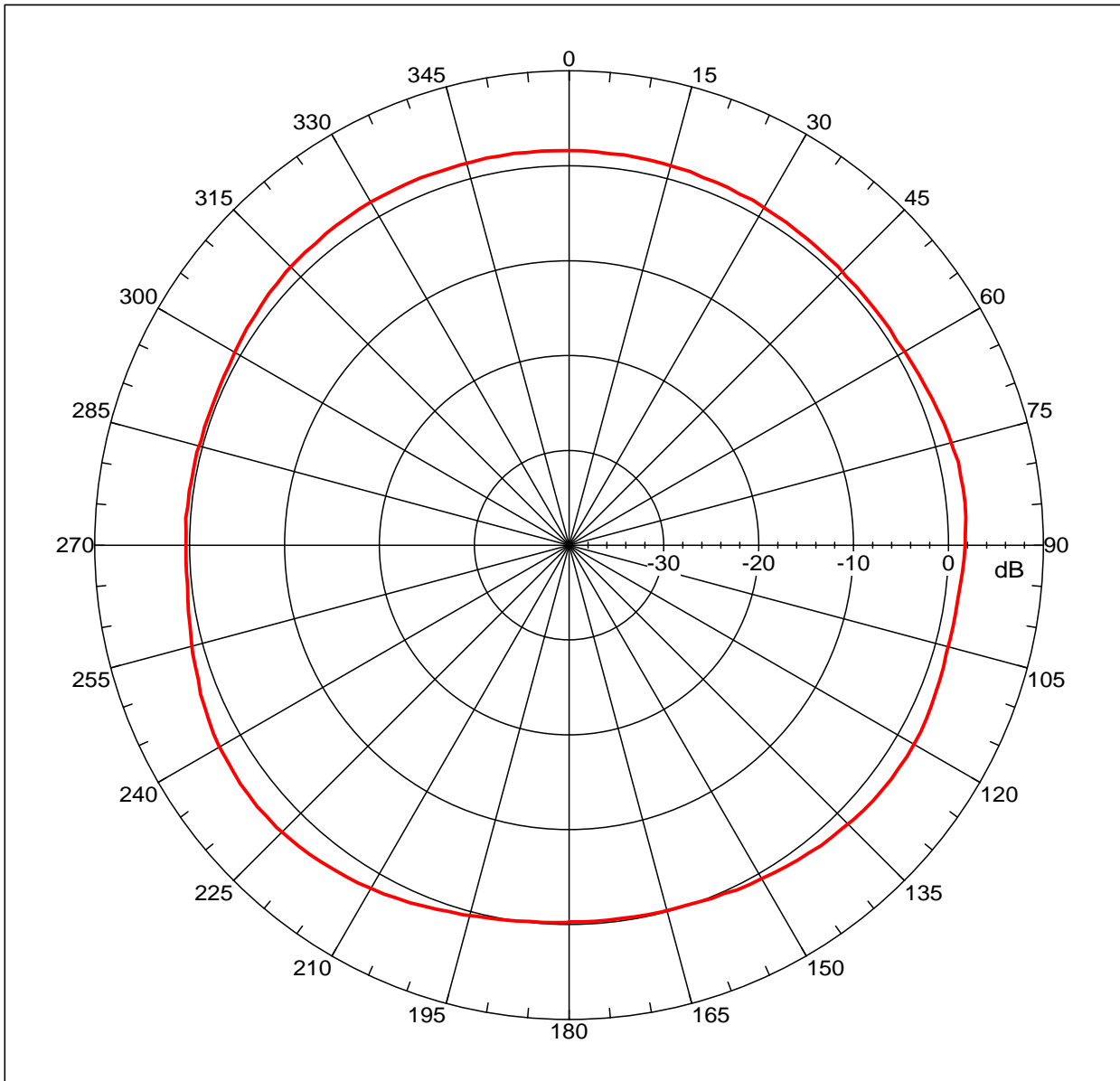
NSI2000 V4.0.124, Filename: C:\nsi2000\Midy\2.4G\20101019 TH240C 2.4GHZ H-PLANE01.nsi
 Measurement date/time: 10/19/2010 10:09:30 AM, Filetype: NSI-97

Far-field Cut Analysis:
 Avg value: 1.231 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: -0.97 dB at -27.151 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 3

Beam	Frequency	Azimuth	Elevation	Pol
2	2.450 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20101019 TH240C 2.4GHZ H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 2.8805 dBi
 Max far-field (global) = -47.25549 dB, Max far-field (plot) = -47.25554 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -130.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

TH240C 2.4GHZ H-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Midy\2.4G\20101019 TH240C 2.4GHZ H-PLANE01.nsi
 Measurement date/time: 10/19/2010 10:09:30 AM, Filetype: NSI-97

Far-field Cut Analysis:
 Avg value: 1.249 dB
 -3. dB beam width: 340.72 deg
 -6. dB beam width: Not Found
 -10. dB beam width: Not Found
 Left Sidelobe: Not Found
 Right Sidelobe: -1.33 dB at -41.229 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 3

Beam	Frequency	Azimuth	Elevation	Pol
3	2.500 GHz	Azimuth	Elevation	Single-pol