

Mini Omni Directional 2.4G Antenna

MODEL: TH-240F



1. GENERAL DESCRIPTION

Model No
TH240F-N(M)

Below is a table summarizing the antenna design specification.

1.1 Electrical Properties


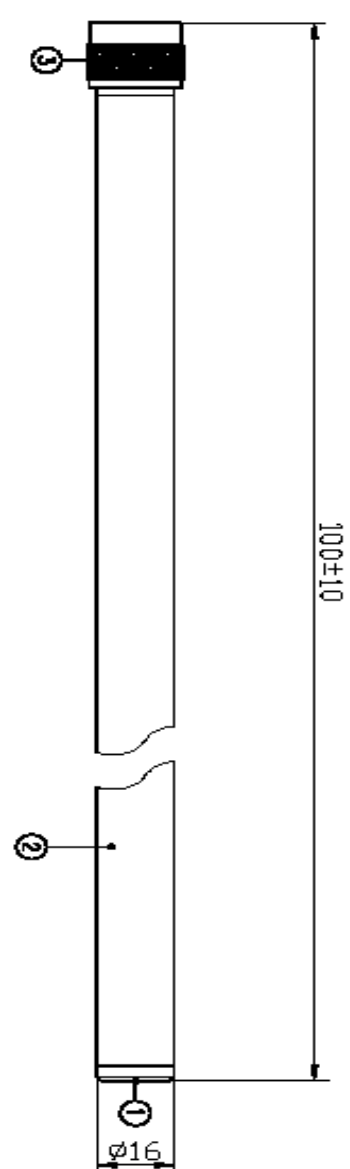
Parameter	Description
Frequency Band	2.4 GHz
Nominal Impedance	50 ohm
Polarization	Vertical
Return Loss	Please See Data-1
V.S.W.R	2.0 : 1
Gain	5~7db
Note: Gain includes the cable loss	

1.2 Mechanical Properties

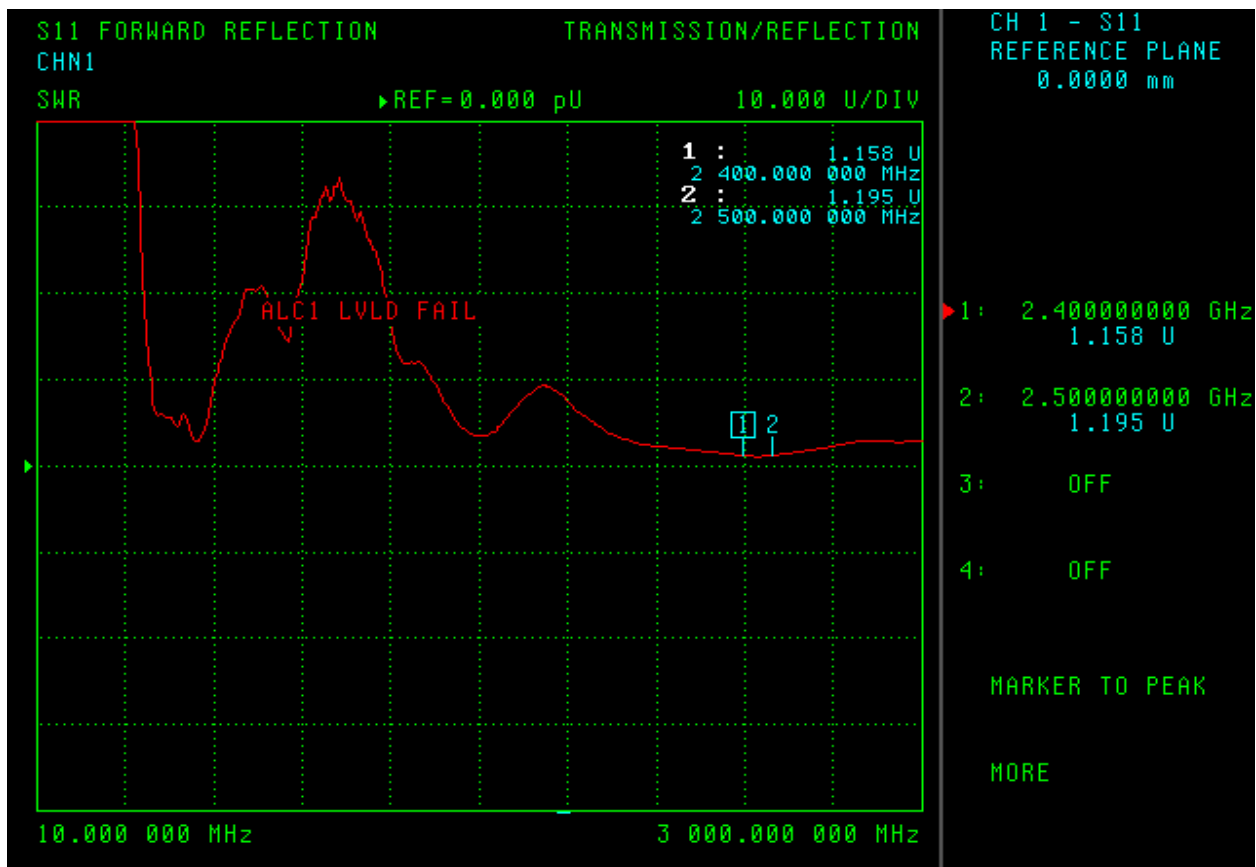
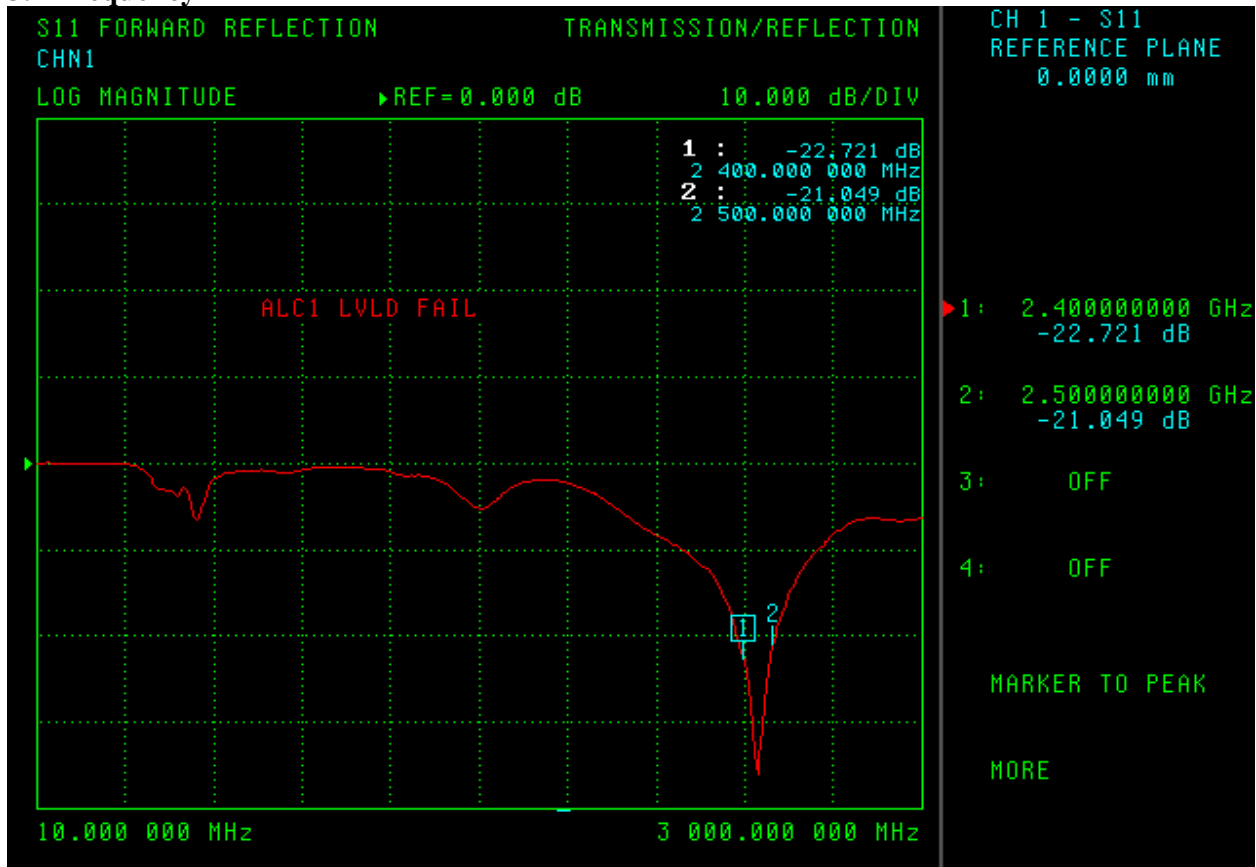
Parameter	Description
Antenna Type	External Antenna
Antenna Material	Tubing plastic
Touch Type	Screw Type

Connector Type	N (Male)
Antenna Dimensions	100mm \pm 2
Antenna Color	Black
Operating Temperature Range	-20°C~+60°C
Storage Temperature Range	-30°C~+70°C

2. Appearance

 Third angle projection		NO.	NAME	FINISH	Q. TY		
		01	Plug cap	Black	01		
		02	Tubing plastic	Black	01		
		03	N 180° (Male)	Nickel plating	01		
CUSTOMER'S	MODEL	PARTS NUMBER	FREQUENCY	UNIT	SCALE	DATE	VERSION
TOLERANCE	1:1X:0.15	NAME	2.4GHz	V/M		20110817	1
SURFACE FINISHNESS	▽	APPEARANCE					

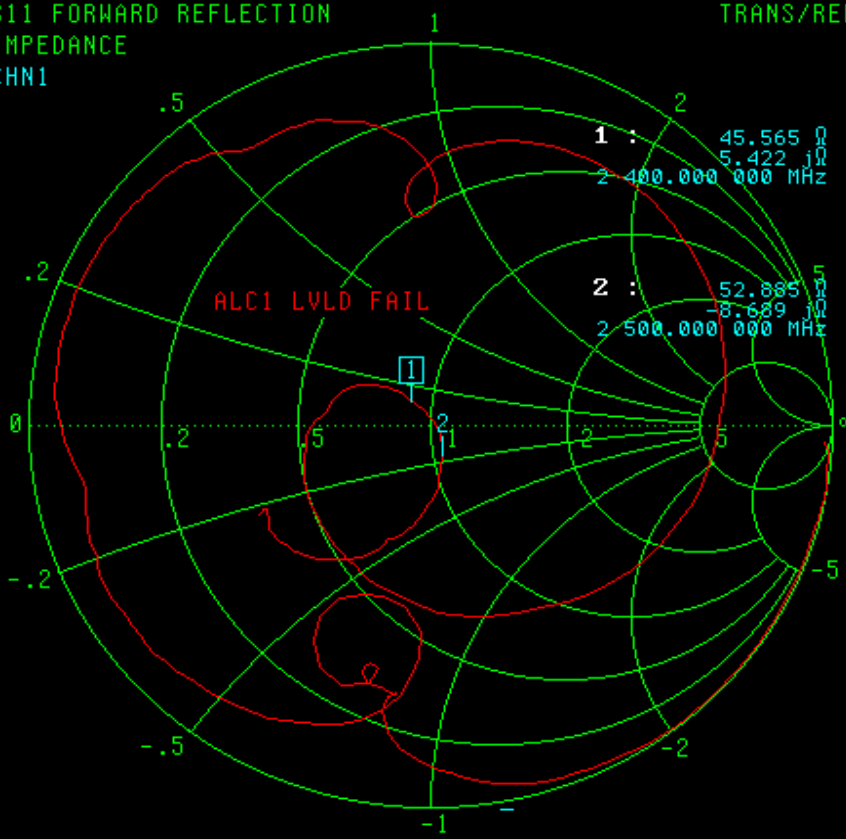
3. Frequency



S11 FORWARD REFLECTION
IMPEDANCE
CHN1

TRANS/REFL

CH 1 - S11
REFERENCE PLANE
0.0000 mm



1 : 45.565 Ω
5.422 jΩ
2 400.000 000 MHz

2 : 52.885 Ω
-8.689 jΩ
2 500.000 000 MHz

1: 2.400000000 GHz
45.565 Ω
5.422 jΩ

2: 2.500000000 GHz
52.885 Ω
-8.689 jΩ

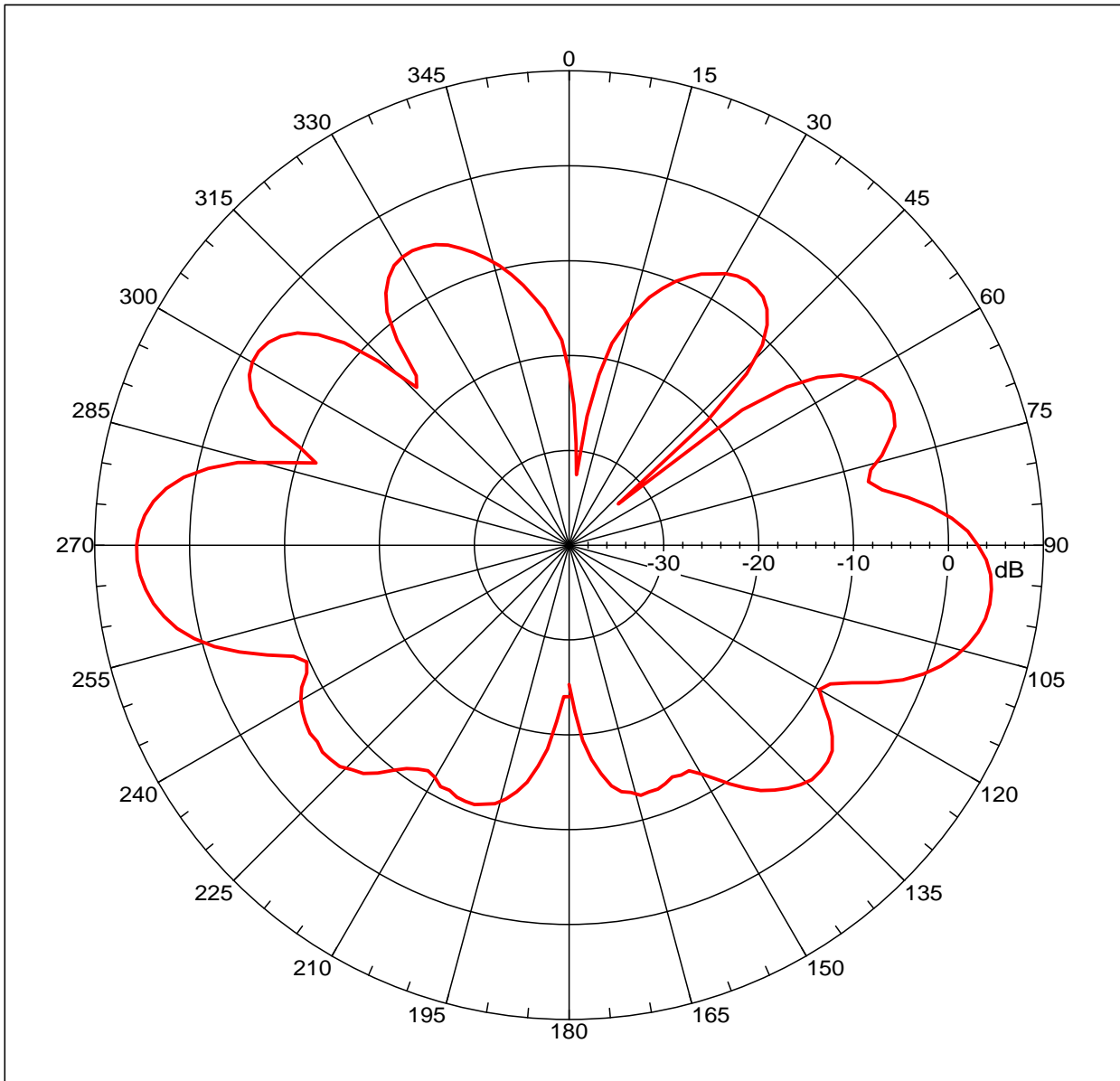
3: OFF

4: OFF

MARKER TO PEAK

MORE

Far-field amplitude of 20110217 TH-240F E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 5.56461 dBi
 Max far-field (global) = -43.44302 dB, Max far-field (plot) = -43.44315 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -90.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

20110217 TH240F E-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\T.Y.HUS\20110217 TH240F E-PLANE.nsi

Measurement date/time: 2/17/2011 4:15:52 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -5.264 dB

-3. dB beam width: 19.87 deg

-6. dB beam width: 26.81 deg

-10. dB beam width: 33.06 deg

Left Sidelobe: -11.82 dB at -125.698 deg

Right Sidelobe: -7.03 dB at -57.318 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

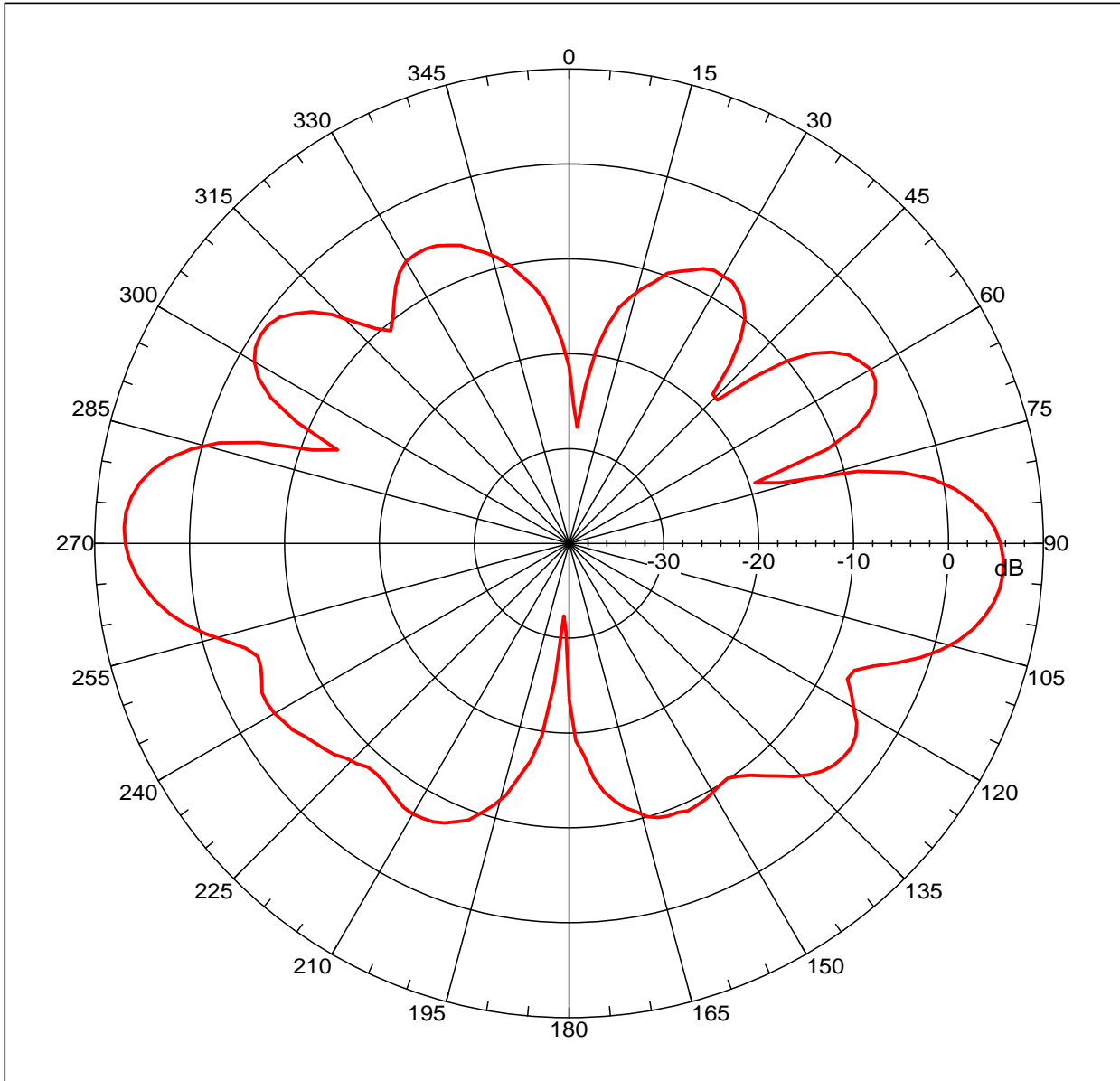
Elevation (deg)

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 20110217 TH-240F E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 6.91786 dBi
 Max far-field (global) = -43.06029 dB, Max far-field (plot) = -43.06035 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -88.00001 deg, Vpeak at: 0.000 deg
 Plot centering: On

20110217 TH240F E-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\T.Y.HUS\20110217 TH240F E-PLANE.nsi

Measurement date/time: 2/17/2011 4:15:52 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -4.346 dB

-3. dB beam width: 19.08 deg

-6. dB beam width: 26.58 deg

-10. dB beam width: 33.60 deg

Left Sidelobe: -10.92 dB at -117.654 deg

Right Sidelobe: -7.69 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

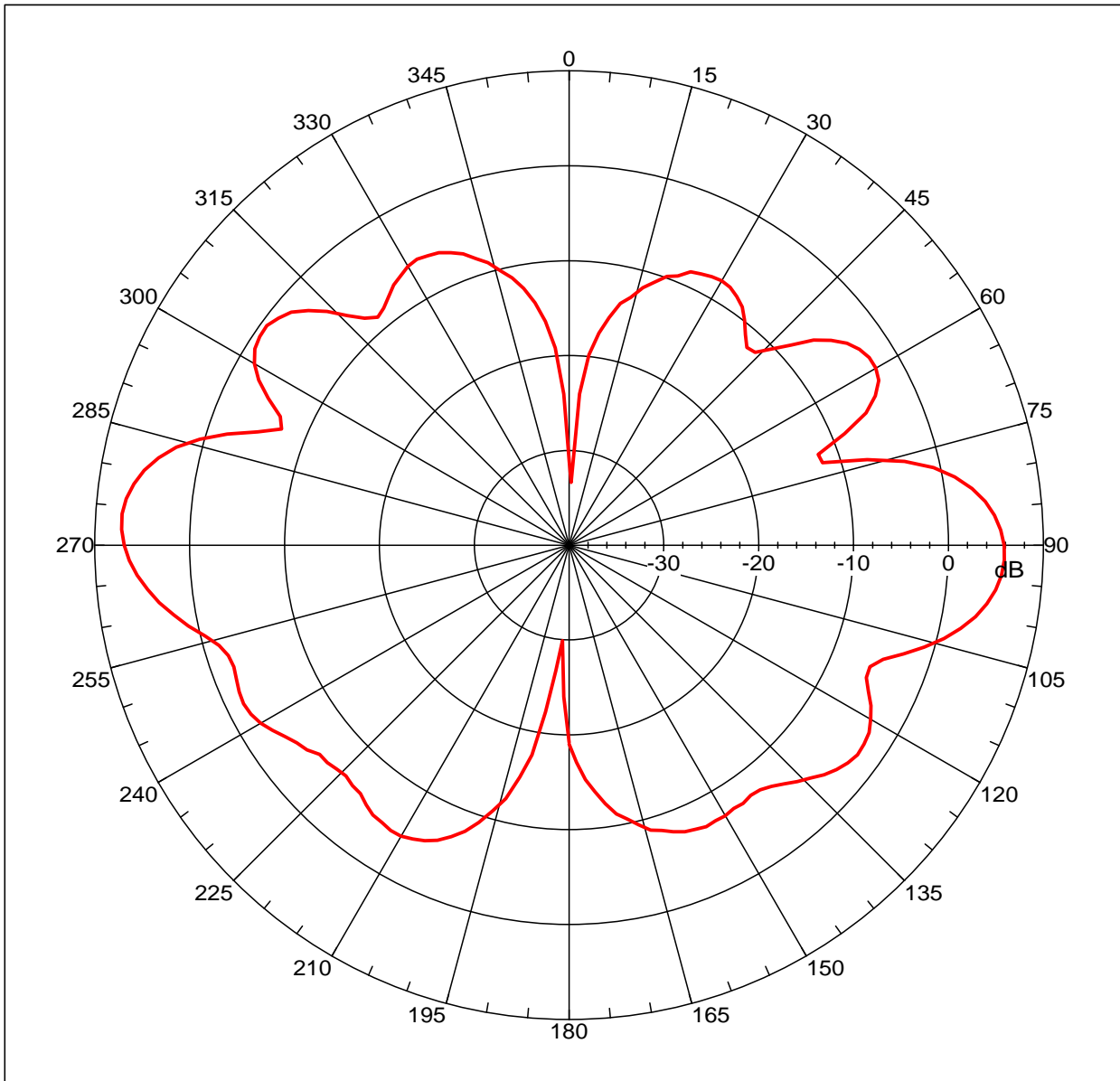
Elevation (deg)

Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 3

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

Far-field amplitude of 20110217 TH-240F E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 7.21162 dBi
 Max far-field (global) = -42.92437 dB, Max far-field (plot) =
 -42.9245 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -86.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

20110217 TH240F E-PLANE

NSI2000 V4.0.124, Filename:C:\nsi2000\T.Y.HUS\20110217 TH240F
 E-PLANE.nsi

Measurement date/time: 2/17/2011 4:15:52 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -3.612 dB

-3. dB beam width: 18.95 deg

-6. dB beam width: 27.18 deg

-10. dB beam width: 49.64 deg

Left Sidelobe: -11.75 dB at -147.821 deg

Right Sidelobe: -7.85 dB at -53.296 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

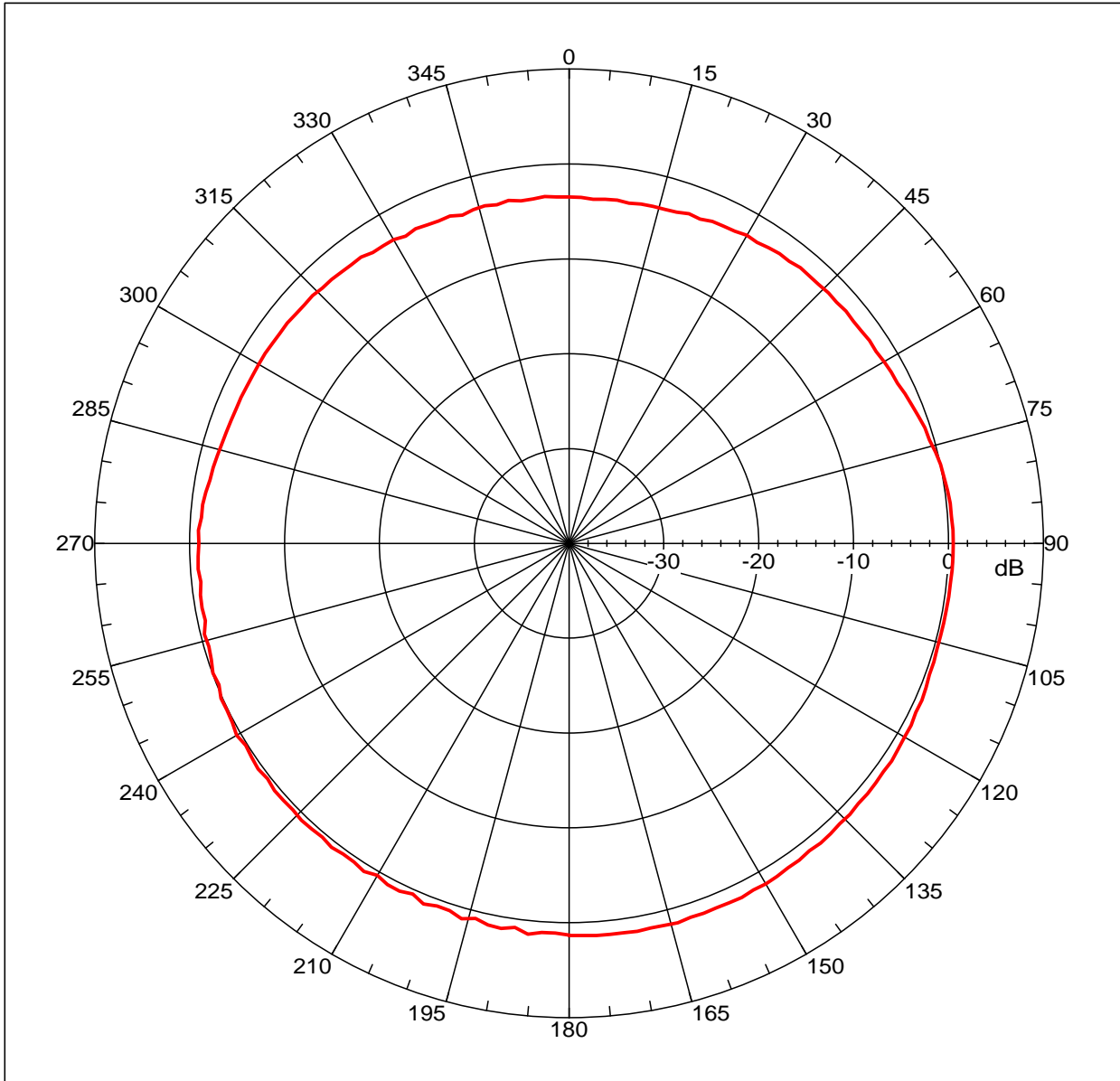
Elevation (deg)

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 20110217 TH-240F H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 1.62142 dBi
 Max far-field (global) = -47.38621 dB, Max far-field (plot) = -47.38636 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 163.99999 deg, Vpeak at: 0.000 deg
 Plot centering: On

20110217 TH240F H-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\T.Y.HUS\20110217 TH240F H-PLANE01.nsi

Measurement date/time: 2/17/2011 4:20:21 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -0.618 dB

-3. dB beam width: Not Found

-6. dB beam width: Not Found

-10. dB beam width: Not Found

Left Sidelobe: -4.20 dB at -41.229 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

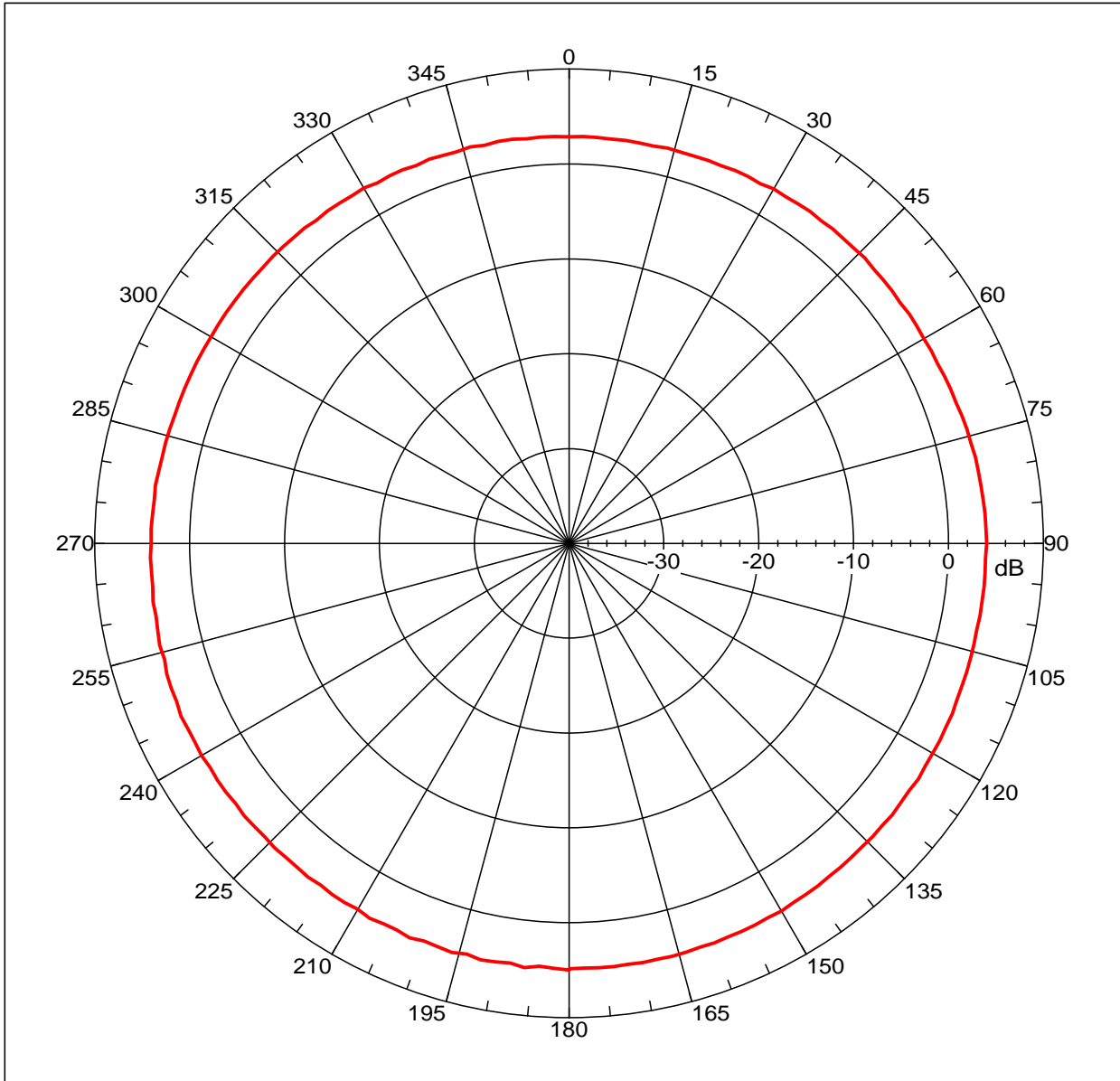
Elevation (deg)

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 20110217 TH-240F H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 4.9769 dBi
 Max far-field (global) = -45.00125 dB, Max far-field (plot) = -45.0014 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -180.00001 deg, Vpeak at: 0.000 deg
 Plot centering: On

20110217 TH240F H-PLANE

NSI2000 V4.0.124, Filename:C:\nsi2000\T.Y.HUS\20110217 TH240F H-PLANE01.nsi

Measurement date/time: 2/17/2011 4:20:21 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: 3.944 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: -0.96 dB at 91.508 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

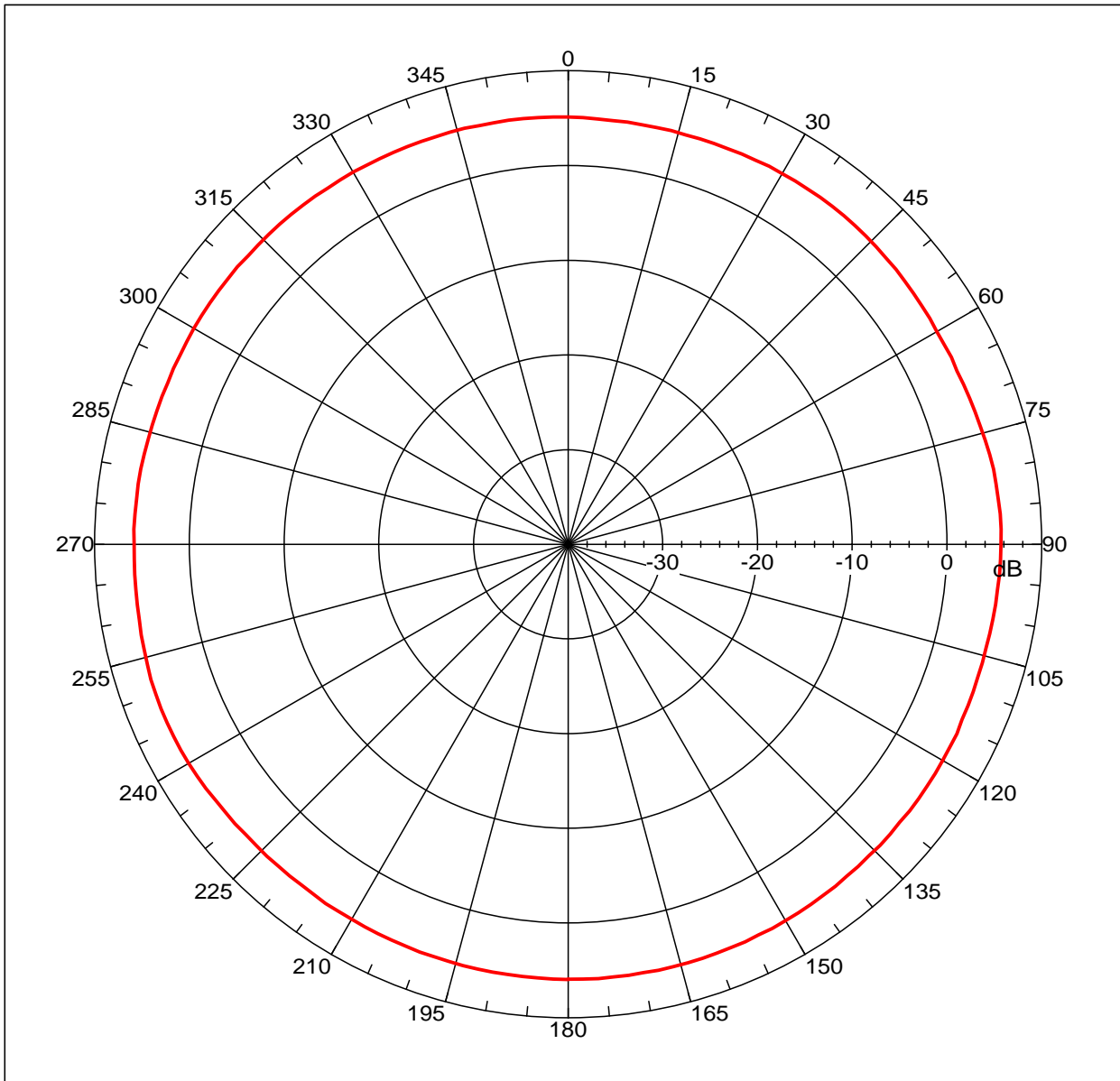
Elevation (deg)

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 20110217 TH-240F H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 6.34542 dBi
 Max far-field (global) = -43.79057 dB, Max far-field (plot) =
 -43.79058 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -114.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

20110217 TH240F H-PLANE

NSI2000 V4.0.124, Filename:C:\nsi2000\T.Y.HUS\20110217 TH240F
 H-PLANE01.nsi

Measurement date/time: 2/17/2011 4:20:21 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: 5.591 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: -0.41 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 3

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