

2.4G Antenna

MODEL: TH-240A



1. GENERAL DESCRIPTION

Model No
TH240A-SMA(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	2db
Note: Gain includes the cable loss	

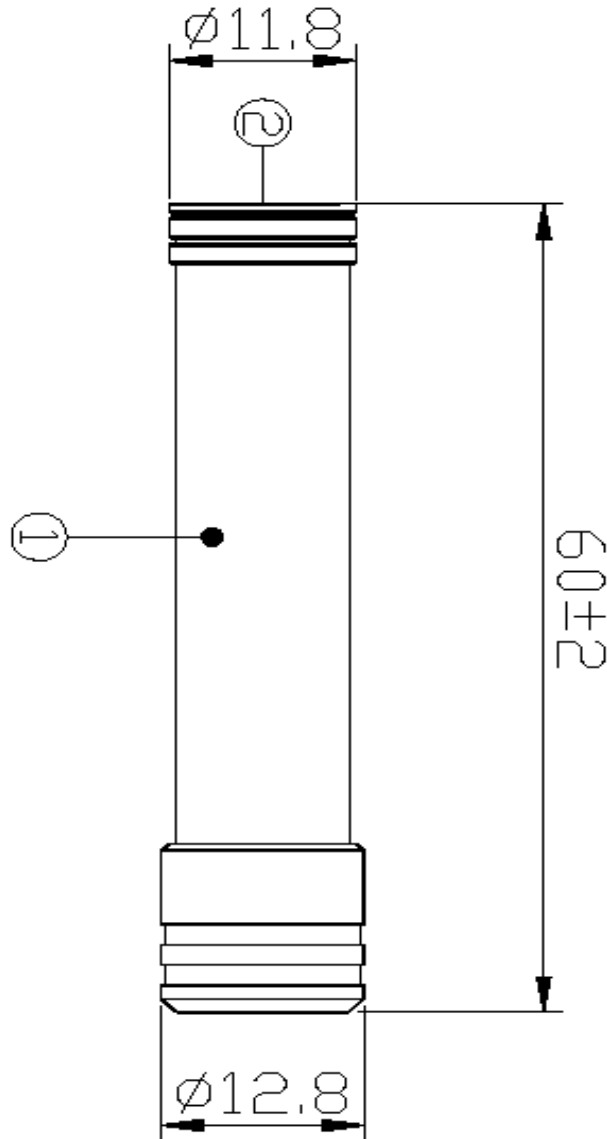
1.2 Mechanical Properties

Parameter	Description
Antenna Type	External Antenna
Antenna Material	PU
Touch Type	Screw Type
Connector Type	SMA 180°(Male)

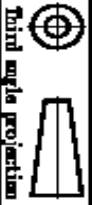
Antenna Dimensions	60mm ±2
Antenna Color	Black
Operating Temperature Range	-20°C~+60°C
Storage Temperature Range	-30°C~+70°C

2. Appearance

NO.	NAME	FINISH	Q, TV
01	Core tube	Black	01
02	SMA male	Golden plating	01

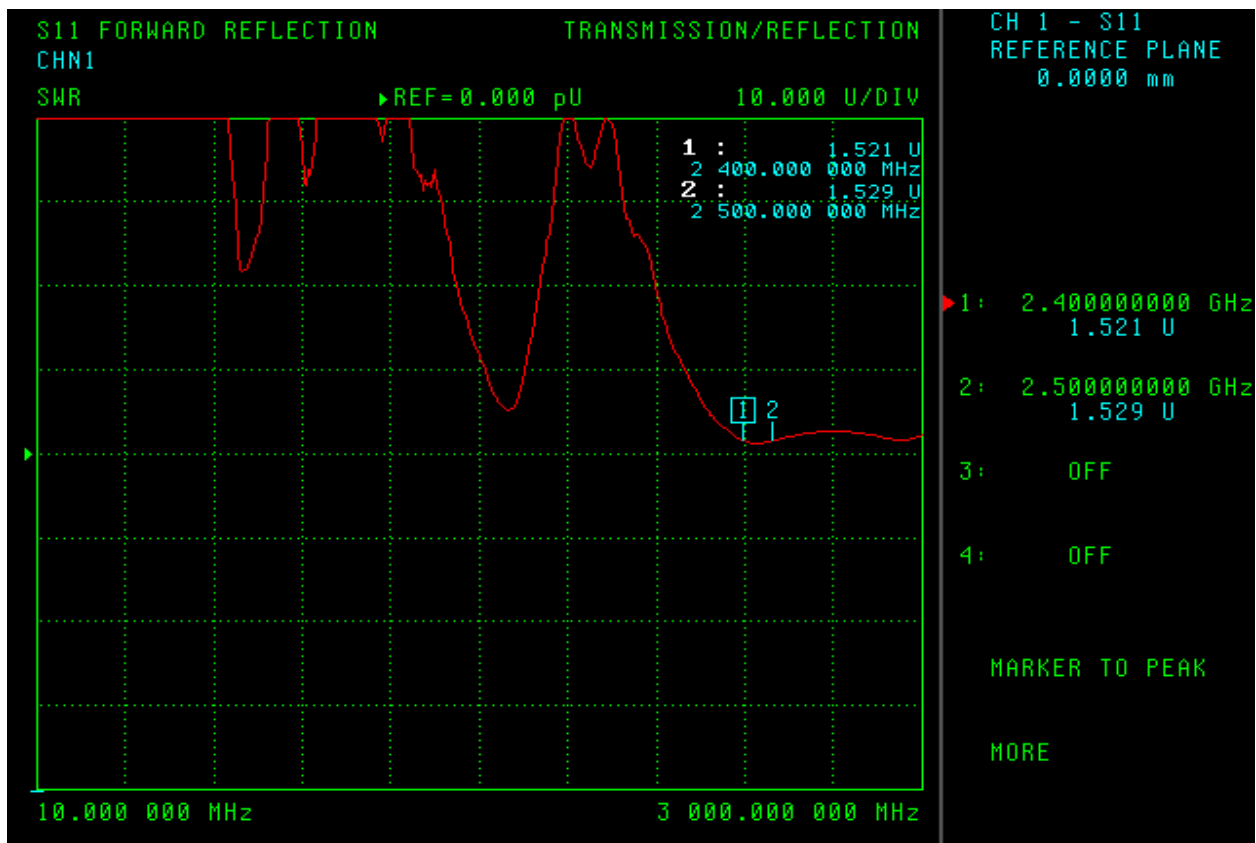
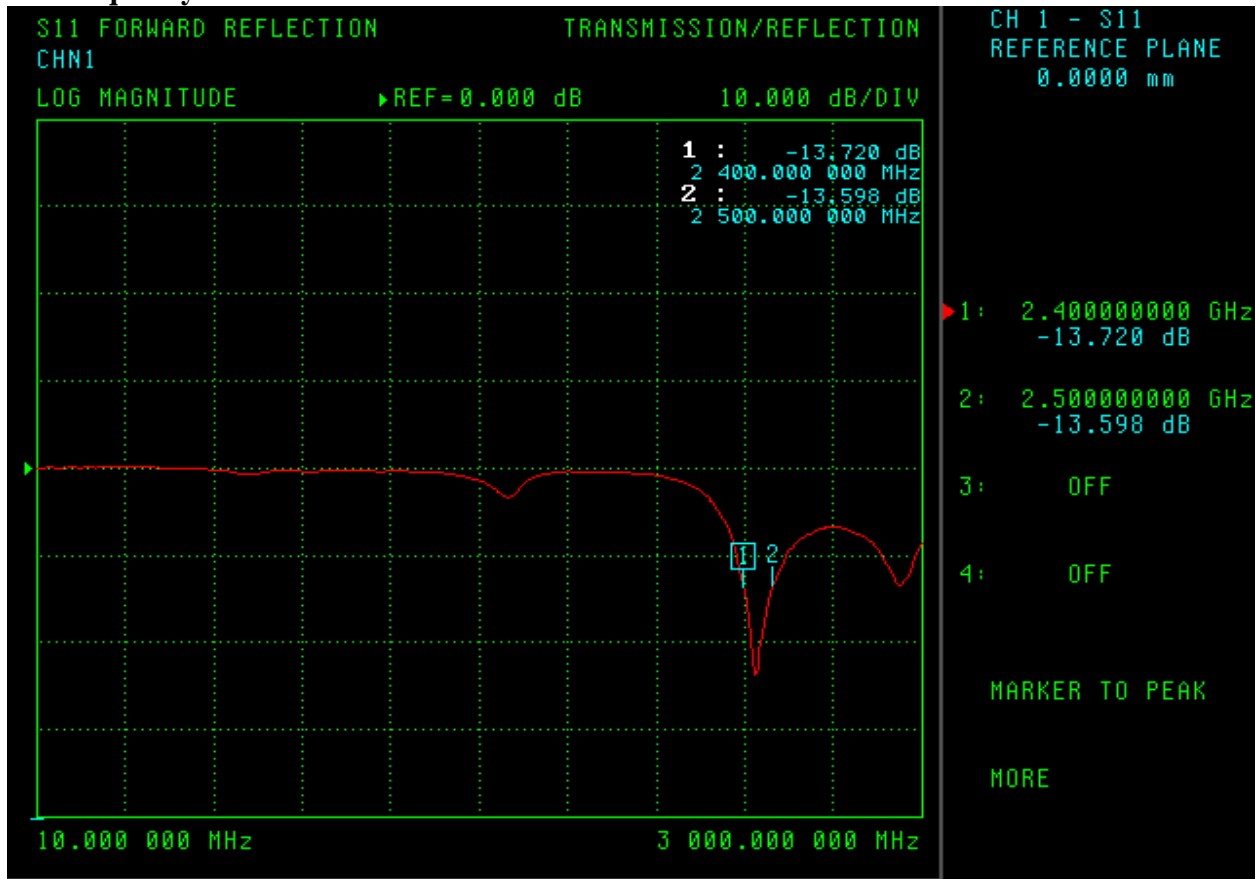


CUSTOMER'S		MODEL	PARTS NUMBER	FREQUENCY	UNIT	SCALE	DATE	VERSION
TOLERANCE		1 XX±0.15	NAME	2.4GHz	W/M		20100914	1
SURFACE ROUGHNESS		RV	APPEARANCE					



Third angle projection

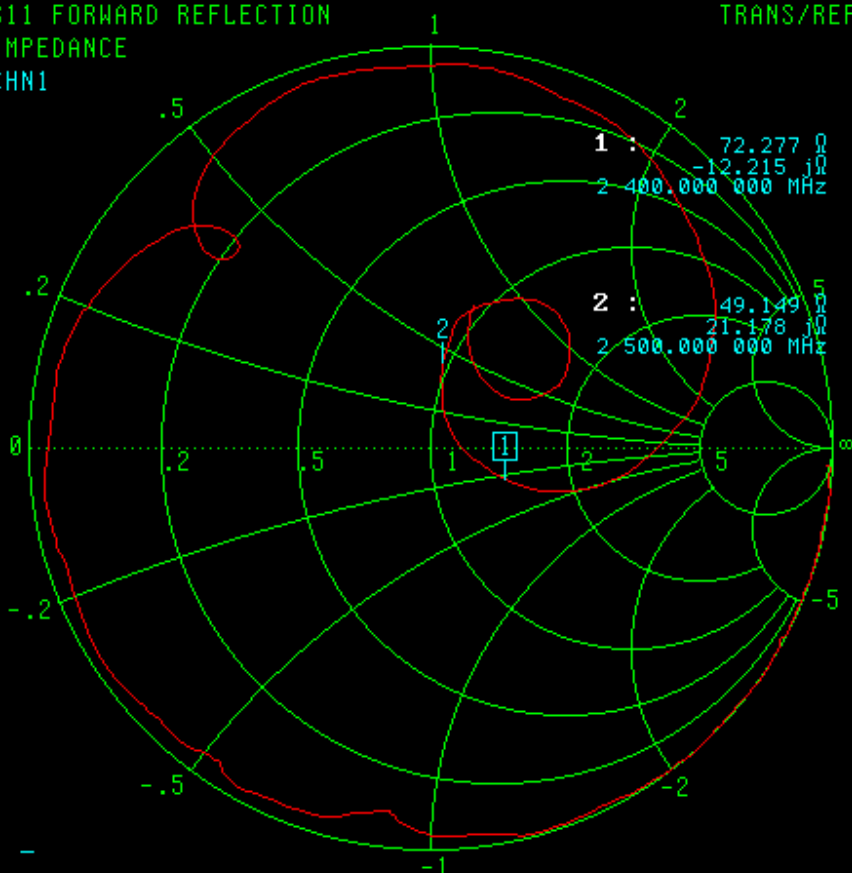
3. Frequency



S11 FORWARD REFLECTION
IMPEDANCE
CHN1

TRANS/REFL

CH 1 - S11
REFERENCE PLANE
0.0000 mm

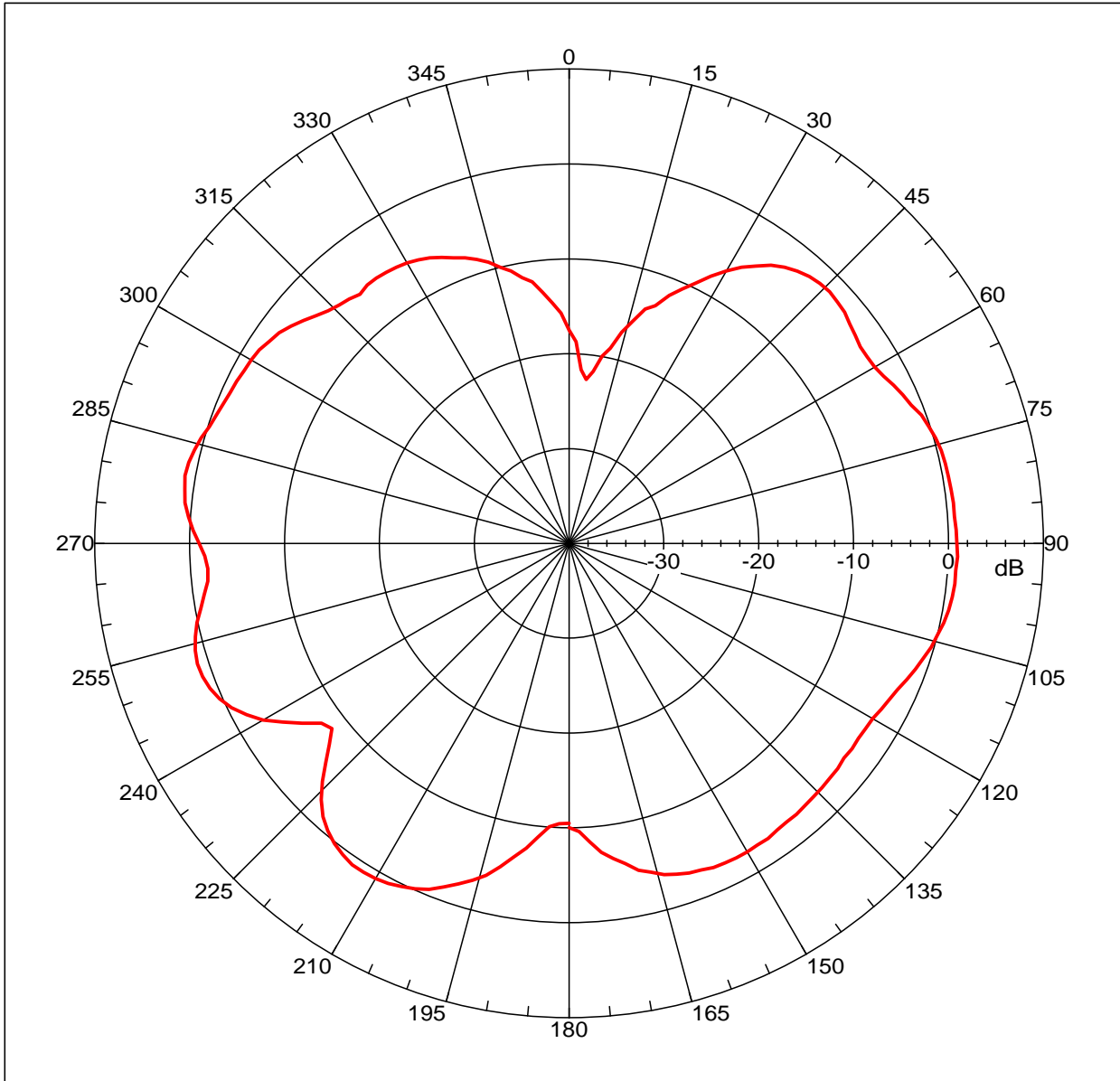


- 1: 2.400000000 GHz
72.277 Ω
-12.215 $j\Omega$
- 2: 2.500000000 GHz
49.149 Ω
21.178 $j\Omega$
- 3: OFF
- 4: OFF

MARKER TO PEAK

MORE

Far-field amplitude of TH240A 2.4GHZ E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 1.15646 dBi
 Max far-field (global) = -47.85117 dB, Max far-field (plot) = -47.85128 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -108.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

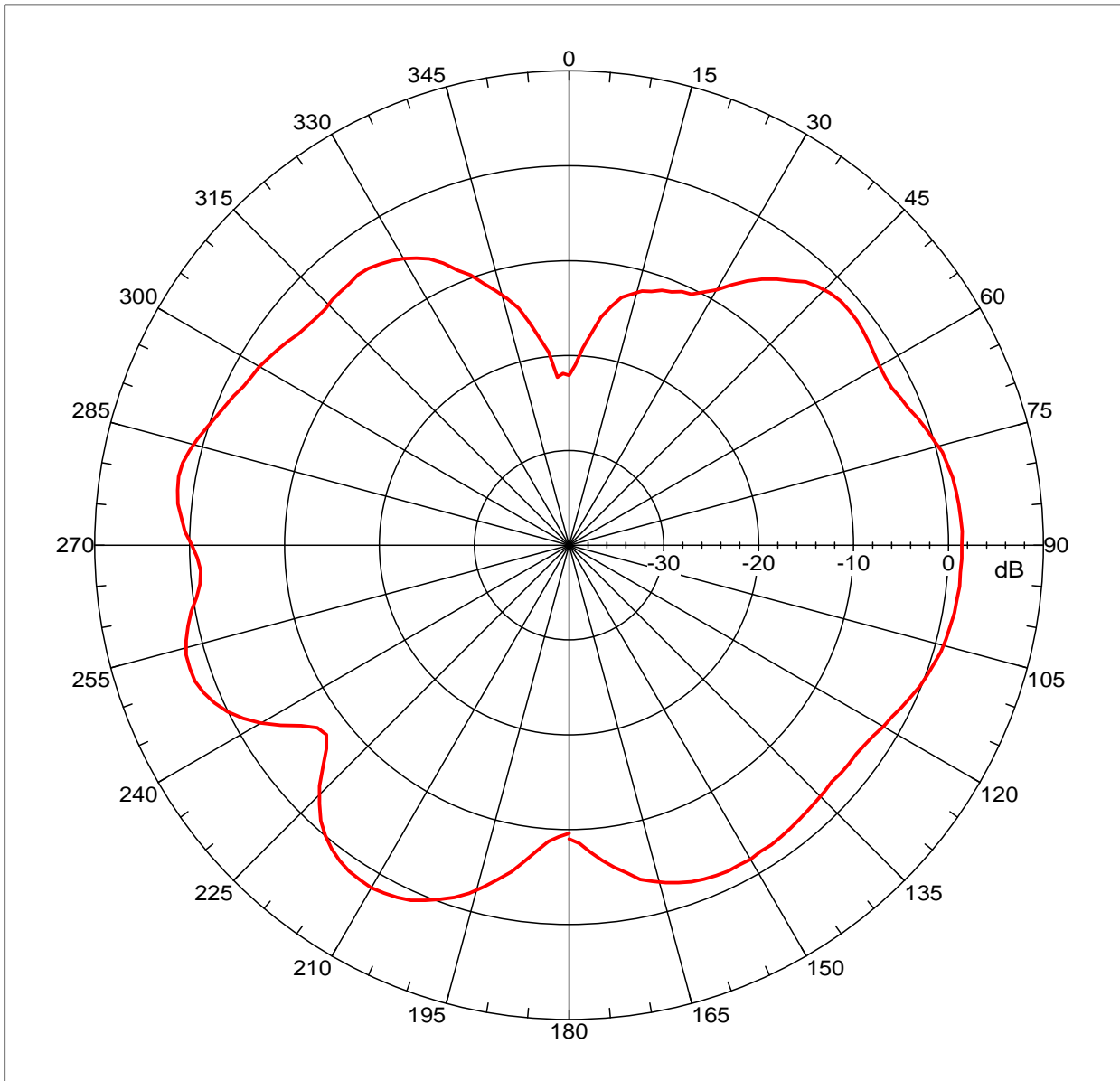
TH240A 2.4GHZ E-PLANE

NSI2000 V4.0.124, Filename:C:\nsi2000\Data\TH240A 2.4GHZ E-PLANE.nsi
 Measurement date/time: 9/14/2010 2:09:27 PM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -3.010 dB
 -3. dB beam width: 62.48 deg
 -6. dB beam width: 77.60 deg
 -10. dB beam width: 157.78 deg
 Left Sidelobe: -0.28 dB at -147.821 deg
 Right Sidelobe: -0.06 dB at -79.441 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 TH240A 2.4GHZ E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 2.02162 dBi
 Max far-field (global) = -47.95653 dB, Max far-field (plot) = -47.95657 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -108.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

TH240A 2.4GHZ E-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\TH240A 2.4GHZ E-PLANE.nsi

Measurement date/time: 9/14/2010 2:09:27 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -2.556 dB

-3. dB beam width: 22.71 deg

-6. dB beam width: 71.73 deg

-10. dB beam width: 152.30 deg

Left Sidelobe: -0.33 dB at -149.832 deg

Right Sidelobe: -0.25 dB at -79.441 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

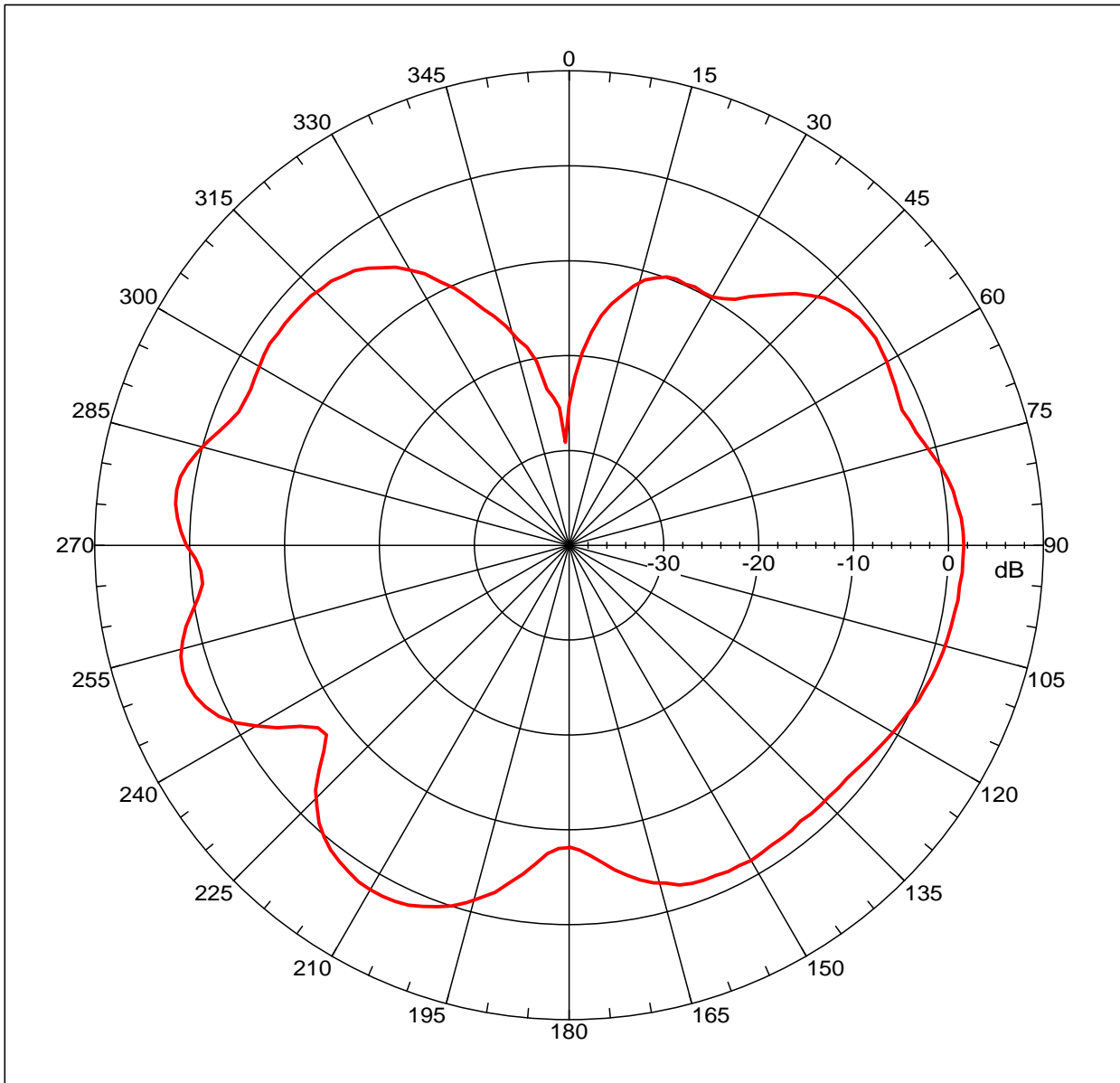
Elevation (deg)

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 TH240A 2.4GHZ E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 2.81088 dBi
 Max far-field (global) = -47.32511 dB, Max far-field (plot) =
 -47.32526 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -108.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

TH240A 2.4GHZ E-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\TH240A 2.4GHZ
 E-PLANE.nsi

Measurement date/time: 9/14/2010 2:09:27 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -2.402 dB

-3. dB beam width: 19.24 deg

-6. dB beam width: 83.27 deg

-10. dB beam width: 97.68 deg

Left Sidelobe: -0.90 dB at -149.832 deg

Right Sidelobe: -1.06 dB at -81.453 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

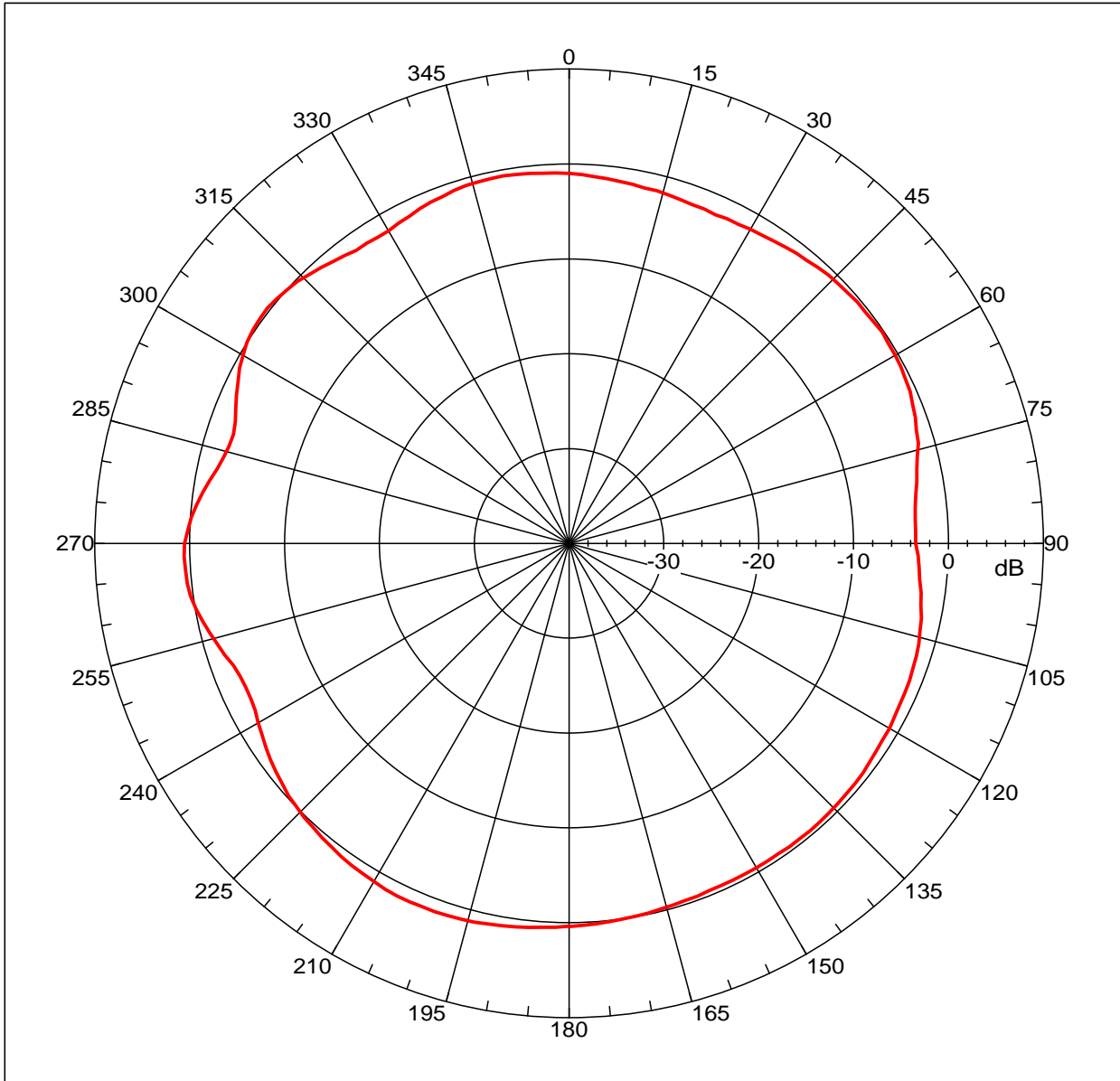
Elevation (deg)

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 TH240A 2.4GHZ H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 1.35417 dBi
 Max far-field (global) = -47.65346 dB, Max far-field (plot) = -47.65347 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -156.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

TH240A 2.4GHZ H-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\TH240A 2.4GHZ H-PLANE01.nsi

Measurement date/time: 9/14/2010 2:11:51 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -0.819 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: -0.77 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

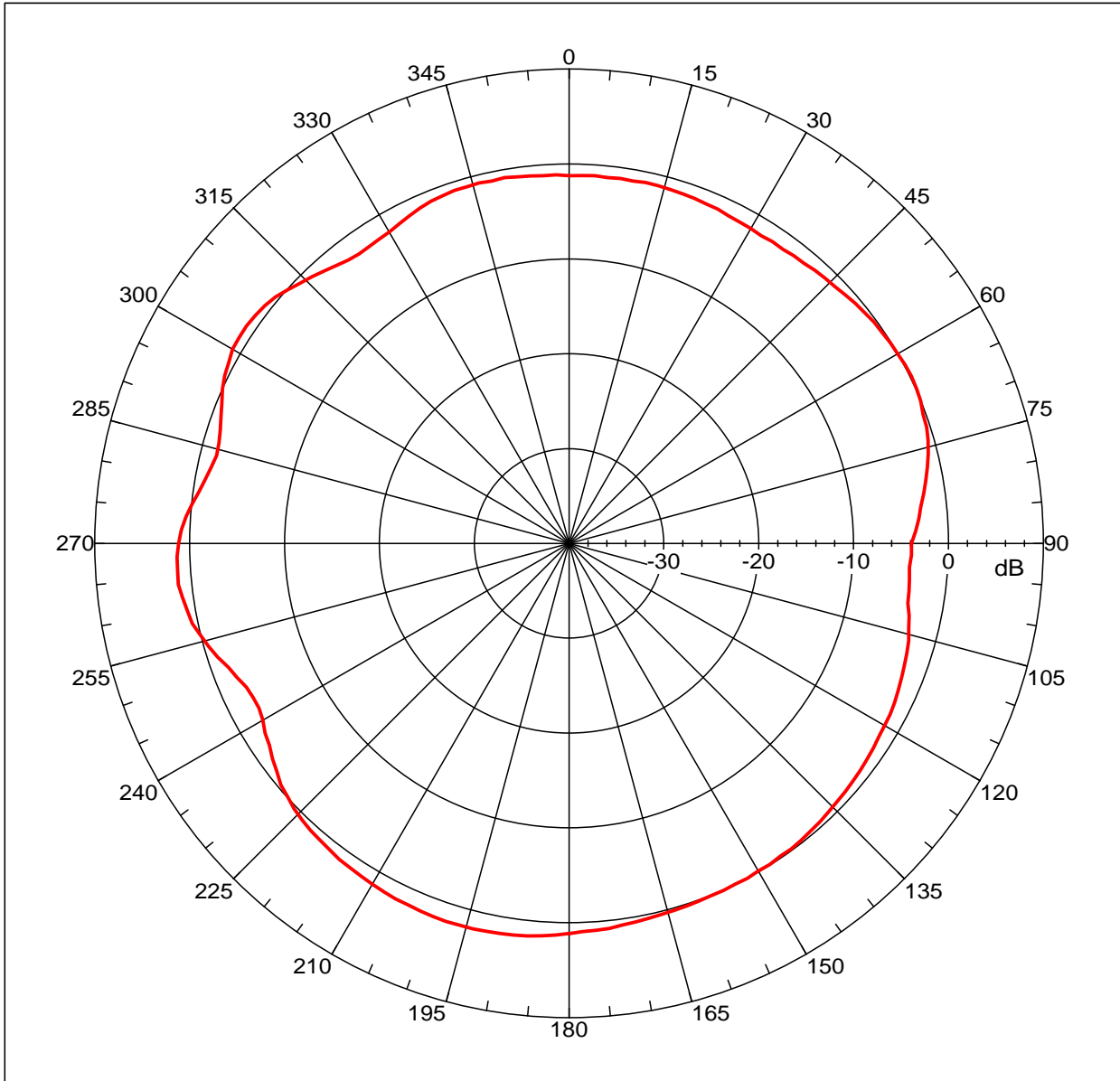
Elevation (deg)

Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 3

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

Far-field amplitude of TH240A 2.4GHZ H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 1.91709 dBi
 Max far-field (global) = -48.06106 dB, Max far-field (plot) =
 -48.06109 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -162.00001 deg, Vpeak at: 0.000 deg
 Plot centering: On

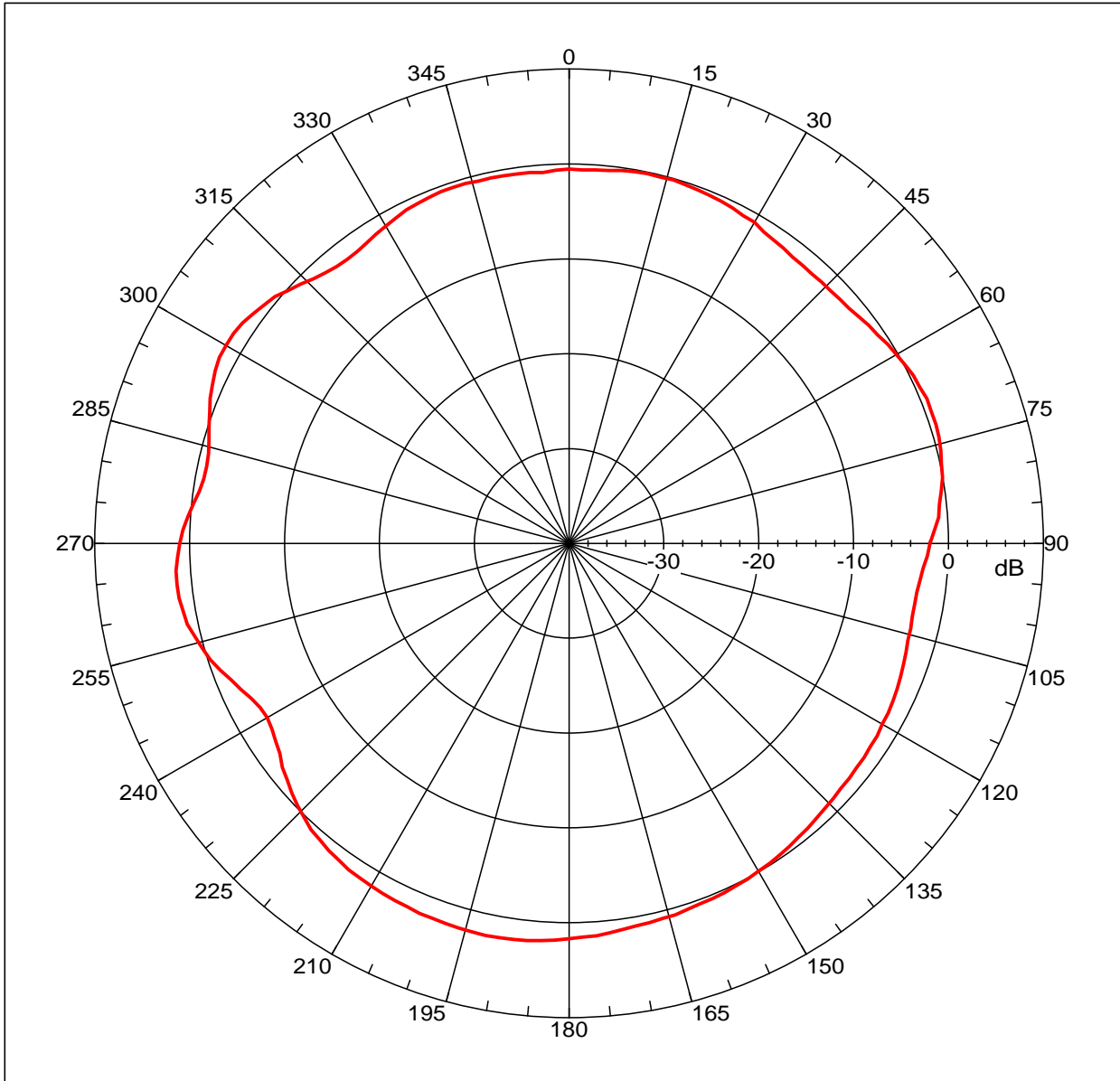
TH240A 2.4GHZ H-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\TH240A 2.4GHZ
 H-PLANE01.nsi
 Measurement date/time: 9/14/2010 2:11:51 PM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -0.557 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: -0.51 dB at -95.531 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 TH240A 2.4GHZ H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 2.26566 dBi
 Max far-field (global) = -47.87033 dB, Max far-field (plot) = -47.87038 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -168.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

TH240A 2.4GHZ H-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\TH240A 2.4GHZ H-PLANE01.nsi
 Measurement date/time: 9/14/2010 2:11:51 PM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: -0.236 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: -0.73 dB at -95.531 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