

GSM Antenna

MODEL: TH-88

GSM800/GSM900/DCS1800/PCS1900/3G2170



1.1 Electrical Properties

Parameter	Description
Frequency Band	800/900/1800/1900/2170 MHz
Nominal Impedance	50 ohm
Polarization	Vertical
Electrical Wave	1 / 2 λ Dipole
Return Loss	Please See Data
V.S.W.R	3.5:1
Antenna Average Gain	3~5dBi
Note: Gain includes the cable loss	

1.2 Mechanical Properties

Parameter	Description
Antenna Type	External Antenna
Antenna Cover	ABS
Touch Type	Screw Type
Connector Type	SMA 180°(Male)
Antenna Dimensions	272mm \pm 3
Antenna Color	Black
Operating Temperature Range	-20°C~+60°C
Storage Temperature Range	-30°C~+70°C

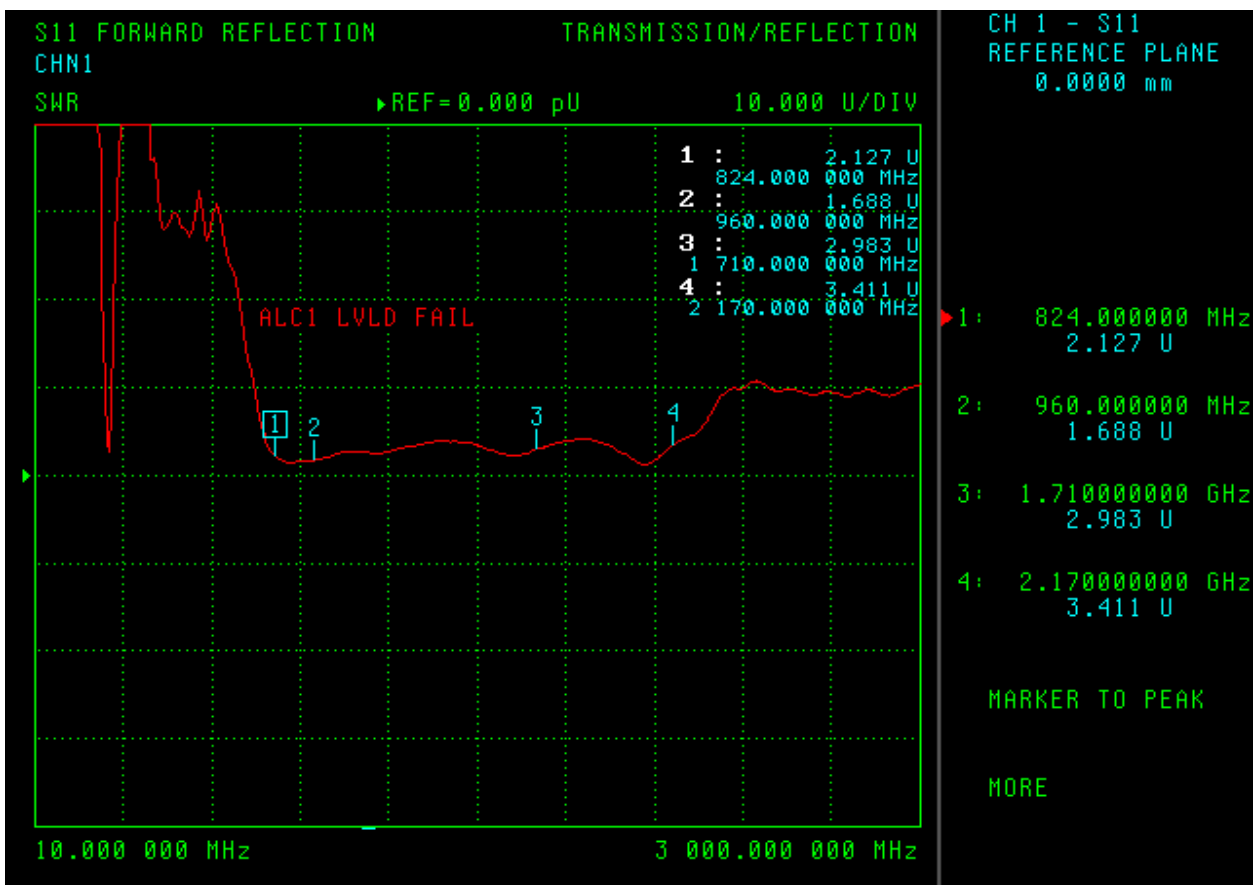
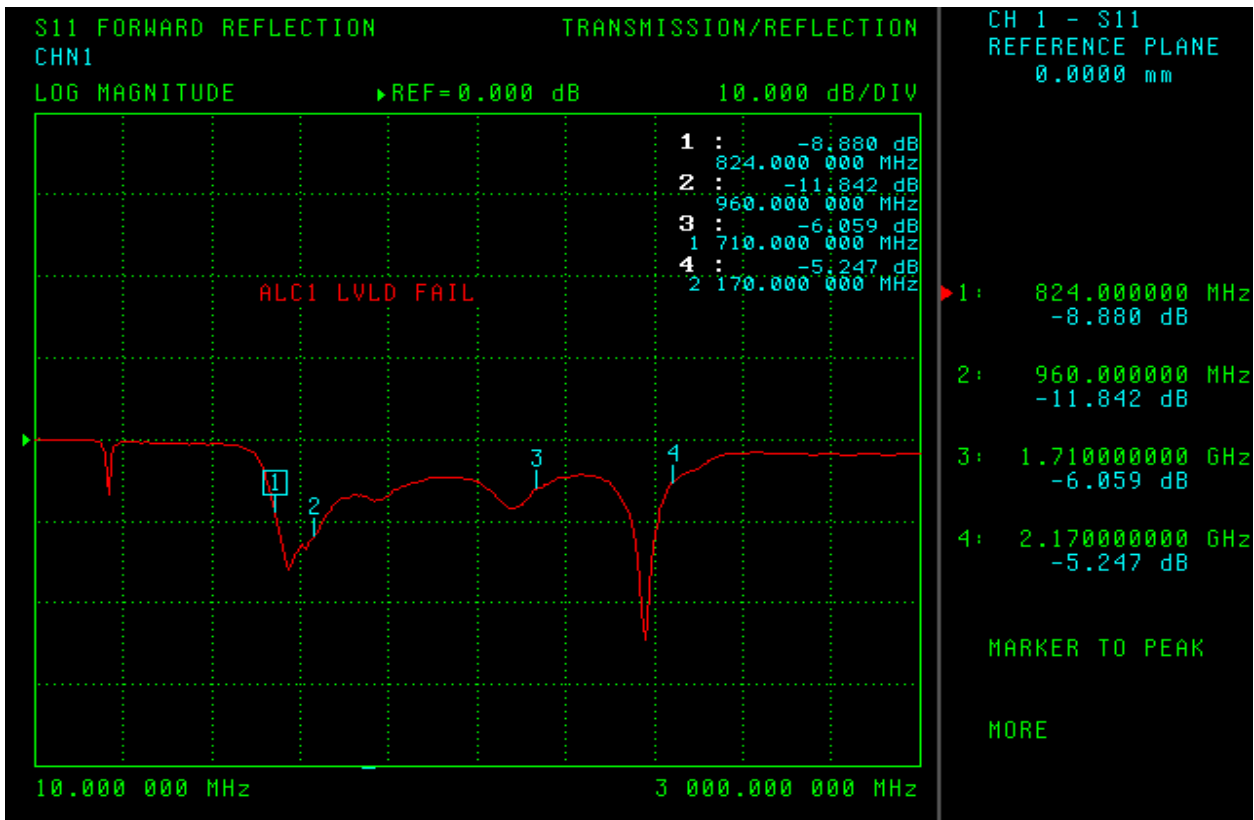
2. APPEARANCE

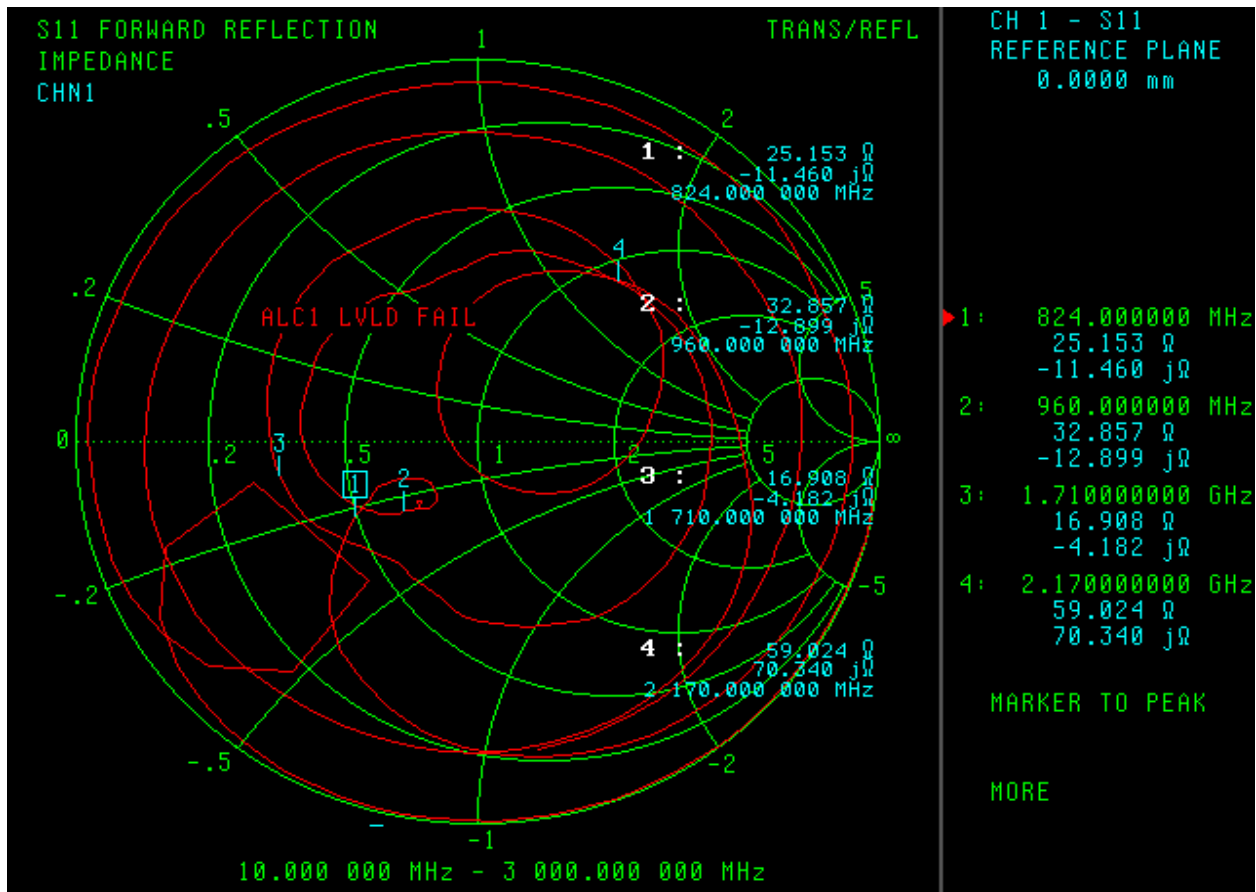
NO.	NAME	FINISH	Q. TY
01	Core tube	Black	01
02	Fixed upper	Black	01
03	Fixed beneath	Black	01
04	RIVET	Chrom plating	02
05	SMA 180' (Male)	Black-nickel plating	01

Technical drawing of a probe assembly. The drawing shows a long cylindrical shaft with a SMA connector at one end. Callouts 1 through 5 identify specific features: 1 is the main shaft, 2 is a hole, 3 is a shoulder, 4 is a rivet, and 5 is the SMA connector. A dimension line indicates a length of 272±3. A 'Third angle projection' symbol is located in the top right corner of the drawing area.

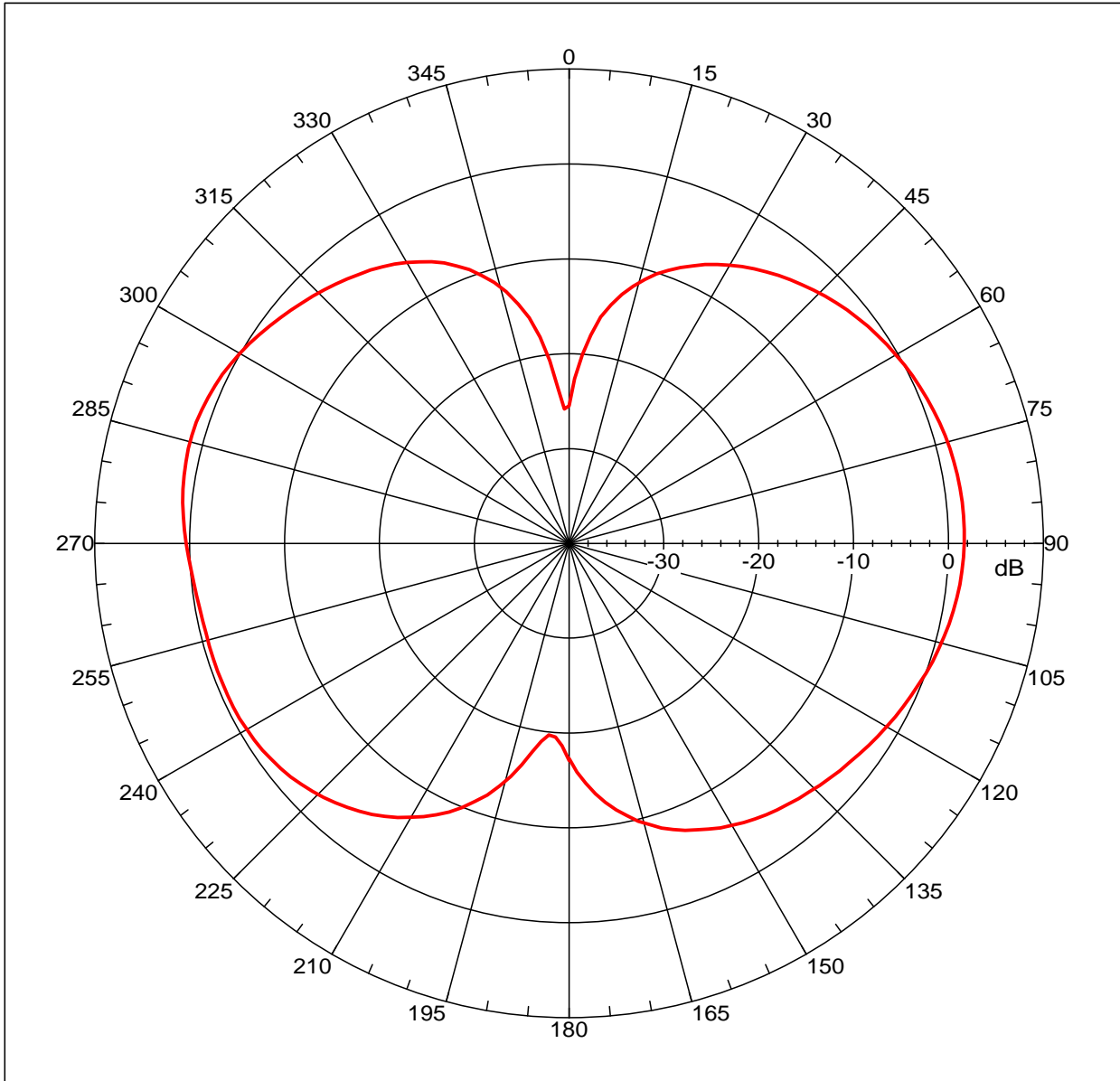
CUSTOMER'S	MODEL	PARTS NUMBER	FREQUENCY	UNIT	SCALE	DATE	VERSION
	X XX±0.15		824-990/716-2170MHz	M/M		20100811	1
SURFACE ROUGHNESS		APPEARANCE	EA-292-1				

3.FREQUENCY





Far-field amplitude of 20100310 TH88 800-2100mhz E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 1.69114 dBi
 Max far-field (global) = -41.3082 dB, Max far-field (plot) = -41.30822 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 87.99999 deg, Vpeak at: 0.000 deg
 Plot centering: On

20100310 TH88 800-2100mhz E-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz E-PLANE.nsi
 Measurement date/time: 3/10/2010 11:28:15 AM, Filetype: NSI-97

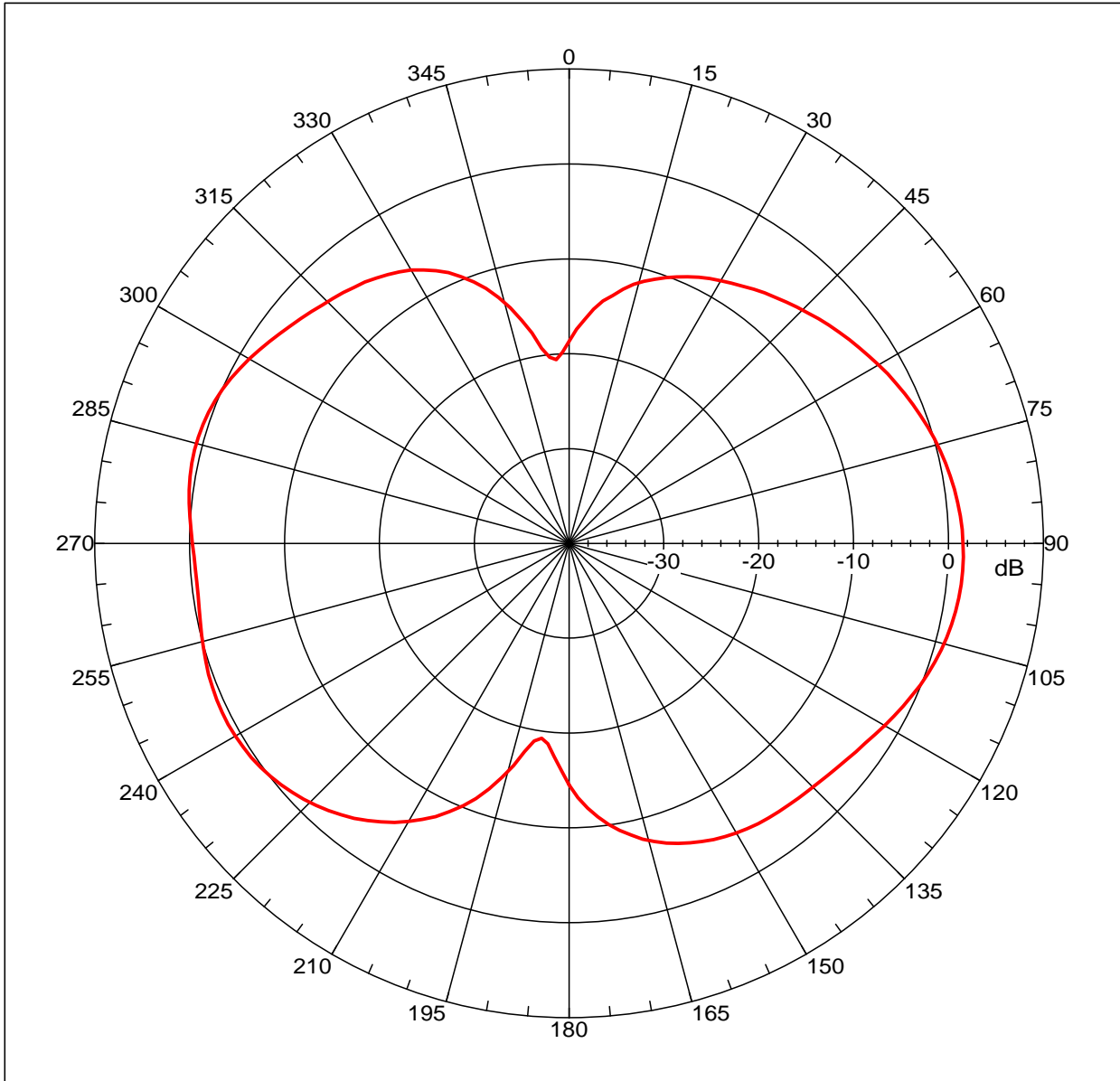
Far-field Cut Analysis:
 Avg value: -3.275 dB
 -3. dB beam width: 67.50 deg
 -6. dB beam width: 104.94 deg
 -10. dB beam width: 139.20 deg
 Left Sidelobe: -0.34 dB at -75.419 deg
 Right Sidelobe: Not Found

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 10

Beam	Frequency	Azimuth	Elevation	Pol
1	0.824 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 1.58786 dBi
 Max far-field (global) = -39.17997 dB, Max far-field (plot) = -39.17999 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 93.99999 deg, Vpeak at: 0.000 deg
 Plot centering: On

20100310 TH88 800-2100mhz E-PLANE

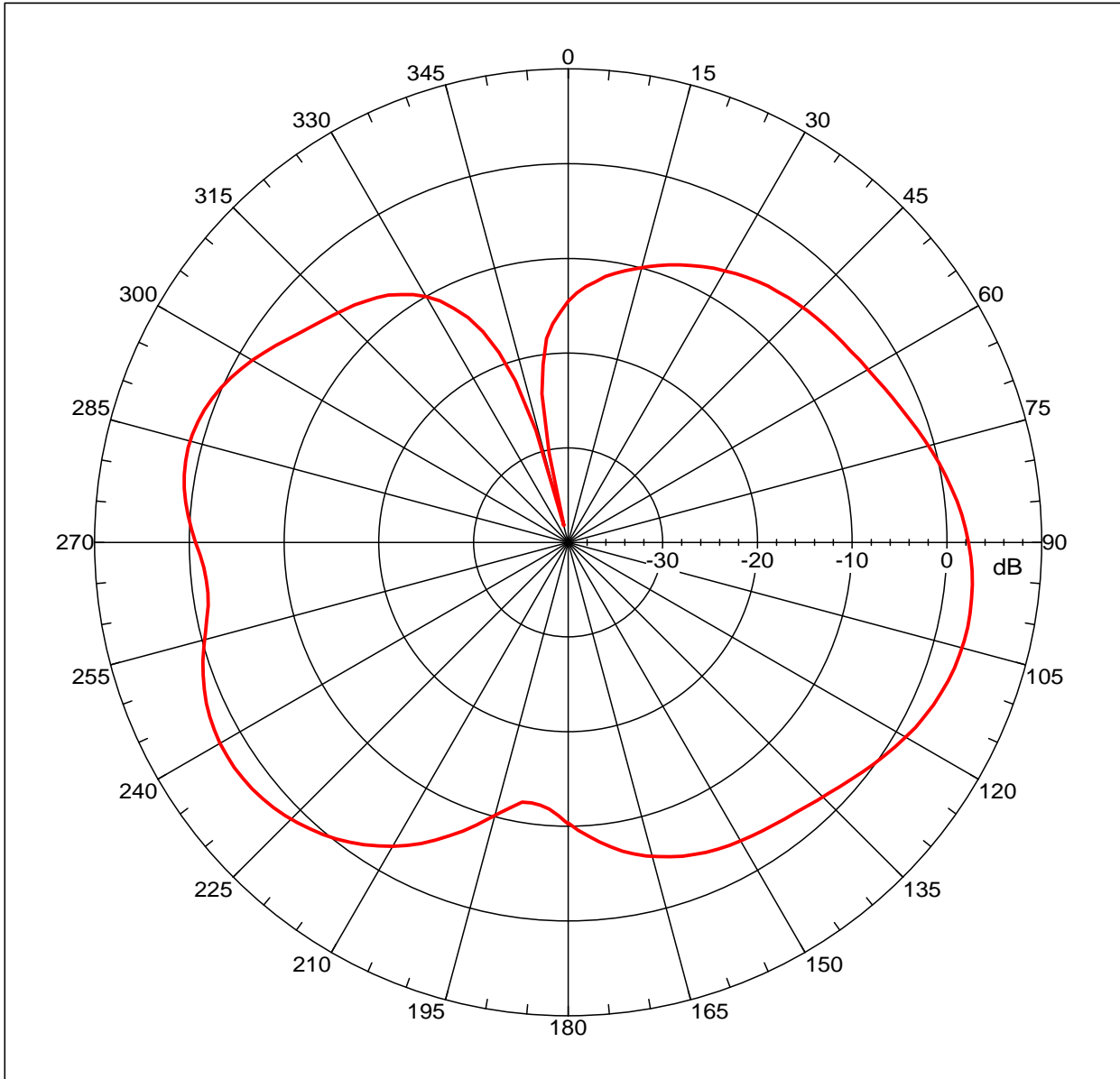
NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz E-PLANE.nsi
 Measurement date/time: 3/10/2010 11:28:15 AM, Filetype: NSI-97

Far-field Cut Analysis:
 Avg value: -3.582 dB
 -3. dB beam width: 54.20 deg
 -6. dB beam width: 98.04 deg
 -10. dB beam width: 140.40 deg
 Left Sidelobe: -0.91 dB at -75.419 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 10

Beam	Frequency	Azimuth	Elevation	Pol
2	0.860 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 3.12838 dBi
Max far-field (global) = -38.4313 dB, Max far-field (plot) = -38.43132 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 102.000 deg, Vpeak at: 0.000 deg
Plot centering: On

20100310 TH88 800-2100mhz E-PLANE

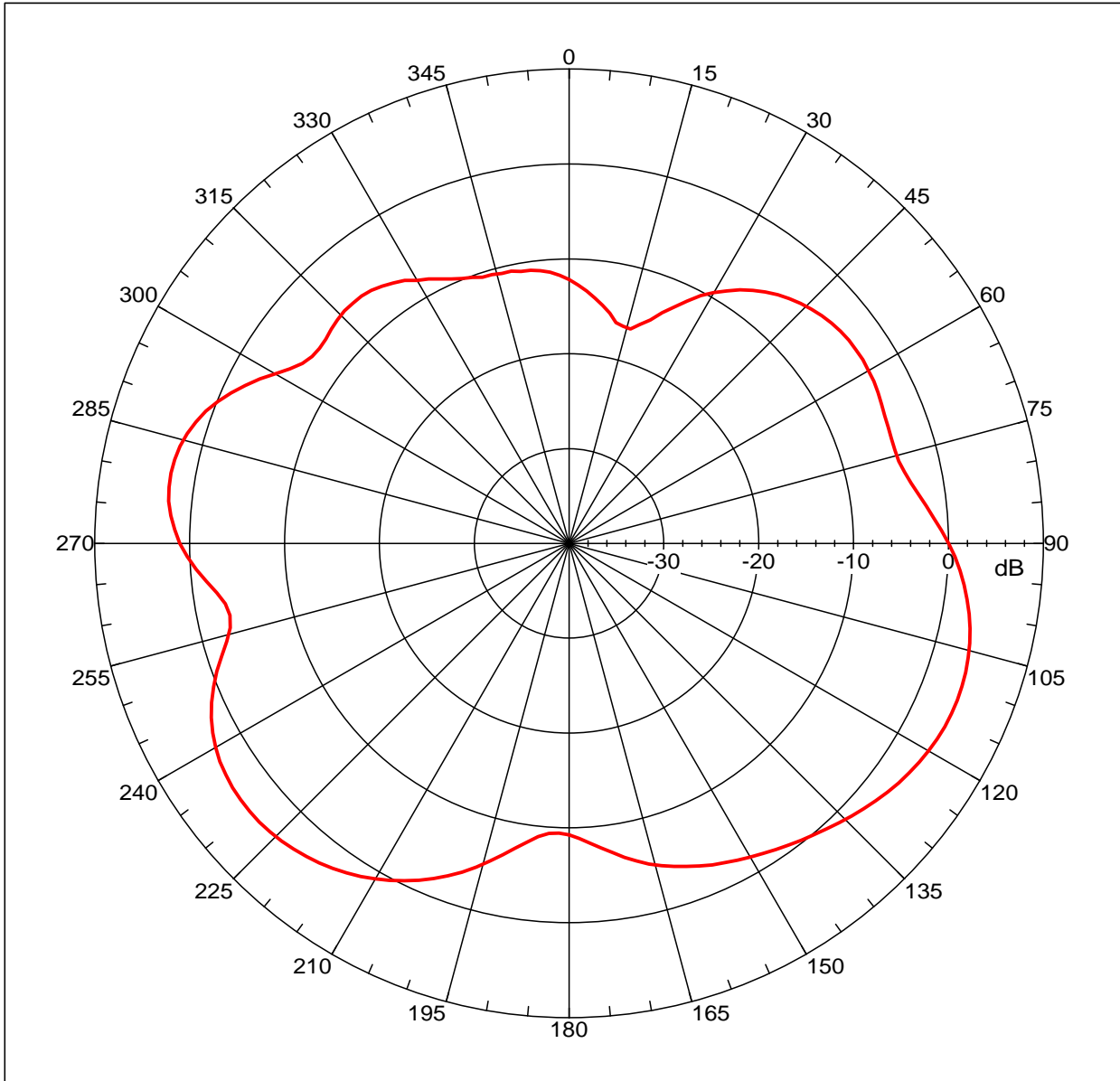
NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz E-PLANE.nsi
Measurement date/time: 3/10/2010 11:28:15 AM, Filetype: NSI-97

Far-field Cut Analysis:
Avg value: -2.719 dB
-3. dB beam width: 46.61 deg
-6. dB beam width: 78.30 deg
-10. dB beam width: 140.46 deg
Left Sidelobe: -1.80 dB at -75.419 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 10

Beam	Frequency	Azimuth	Elevation	Pol
3	0.900 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 4.12803 dBi
Max far-field (global) = -38.50164 dB, Max far-field (plot) = -38.50168 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 111.99999 deg, Vpeak at: 0.000 deg
Plot centering: On

20100310 TH88 800-2100mhz E-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz E-PLANE.nsi
Measurement date/time: 3/10/2010 11:28:15 AM, Filetype: NSI-97

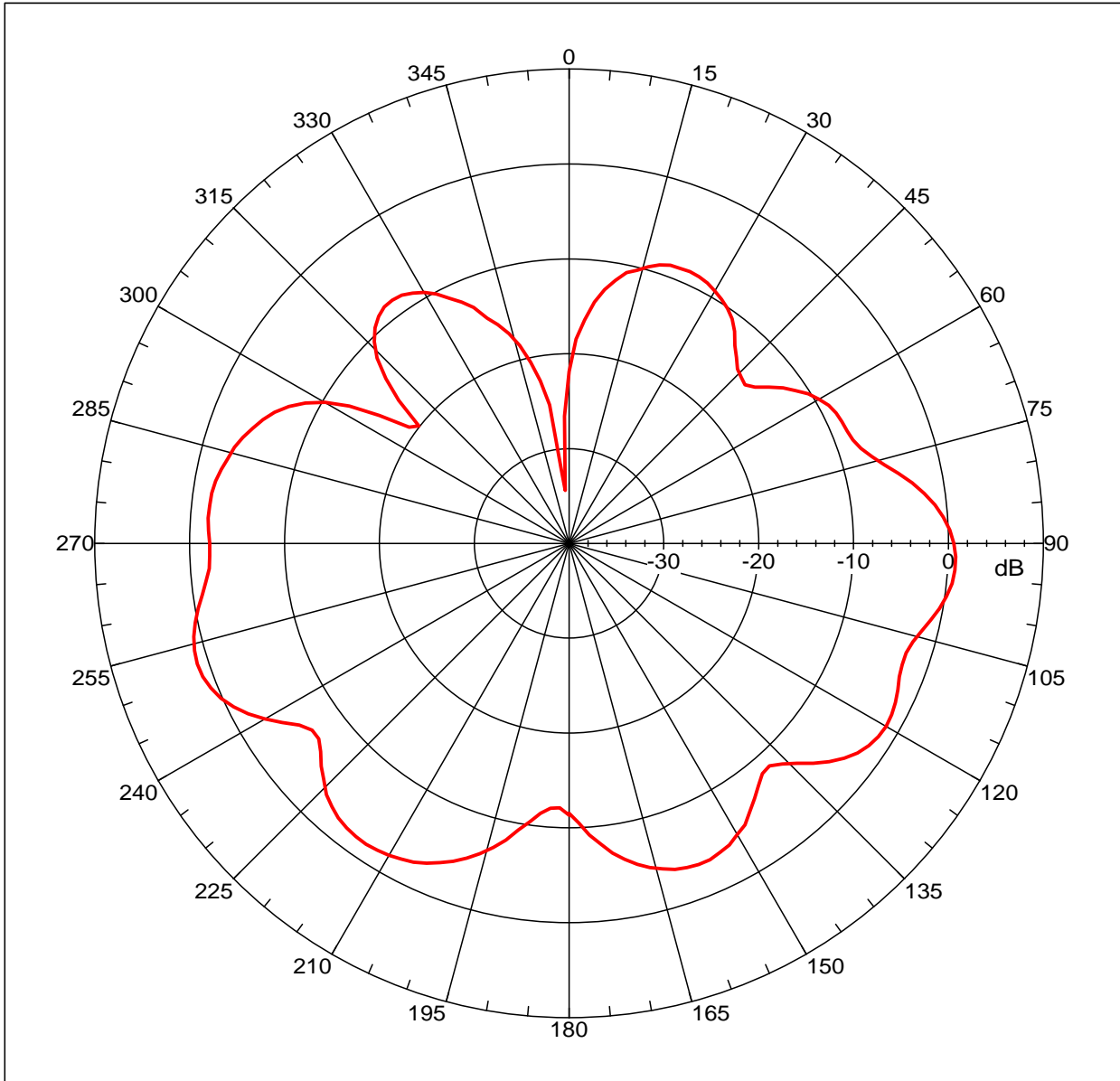
Far-field Cut Analysis:
Avg value: -2.001 dB
-3. dB beam width: 41.99 deg
-6. dB beam width: 65.91 deg
-10. dB beam width: 129.30 deg
Left Sidelobe: -14.81 dB at -11.061 deg
Right Sidelobe: Not Found

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 10

Beam	Frequency	Azimuth	Elevation	Pol
4	0.960 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 1.19579 dBi
 Max far-field (global) = -43.9968 dB, Max far-field (plot) = -43.99691 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -108.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

20100310 TH88 800-2100mhz E-PLANE

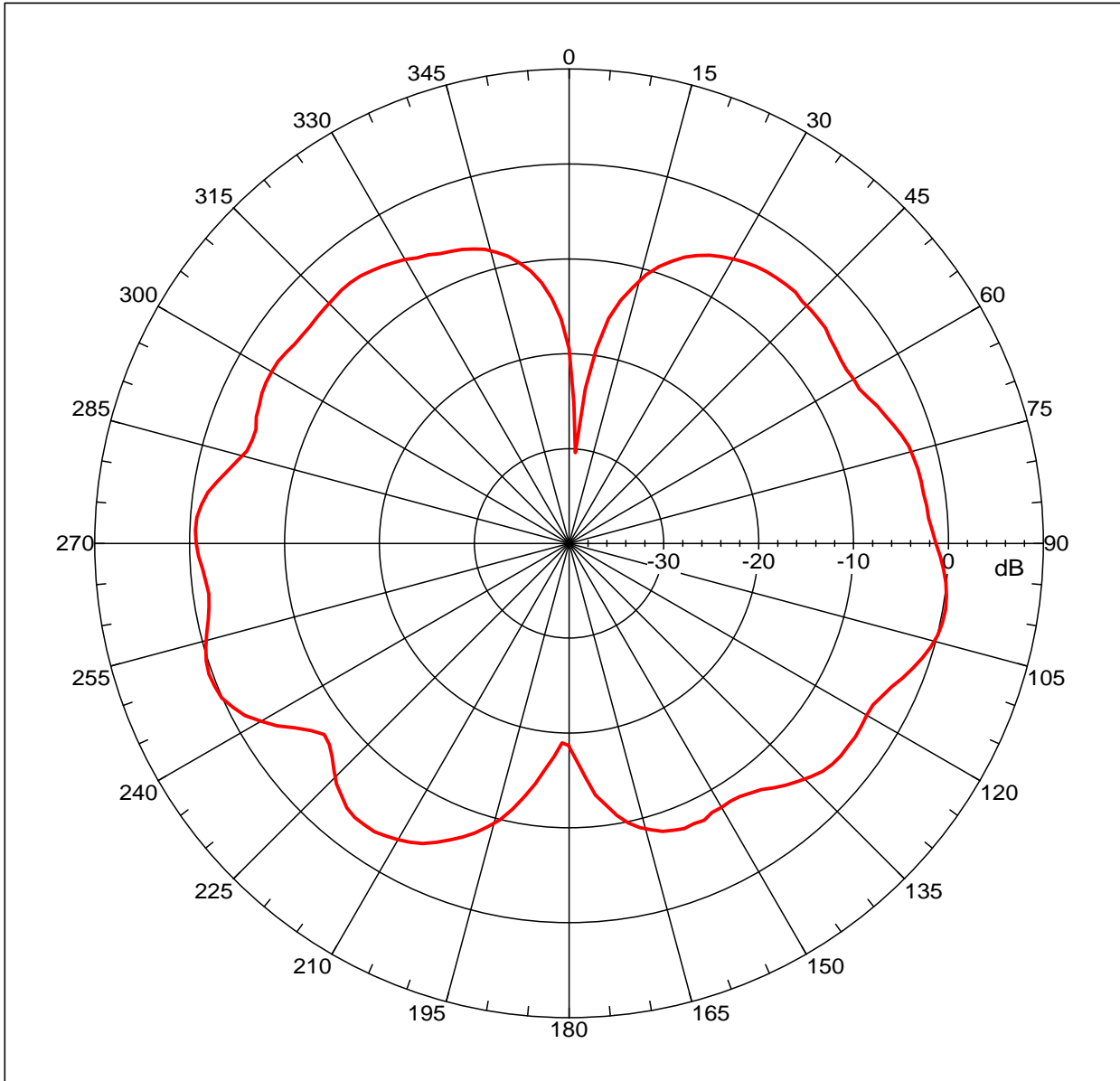
NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz E-PLANE.nsi
 Measurement date/time: 3/10/2010 11:28:15 AM, Filetype: NSI-97

Far-field Cut Analysis:
 Avg value: -5.604 dB
 -3. dB beam width: 23.46 deg
 -6. dB beam width: 53.77 deg
 -10. dB beam width: 108.11 deg
 Left Sidelobe: -2.95 dB at -145.810 deg
 Right Sidelobe: -9.51 dB at -35.196 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 10

Beam	Frequency	Azimuth	Elevation	Pol
5	1.710 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 0.36248 dBi
 Max far-field (global) = -46.45956 dB, Max far-field (plot) = -46.45973 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -110.00001 deg, Vpeak at: 0.000 deg
 Plot centering: On

20100310 TH88 800-2100mhz E-PLANE

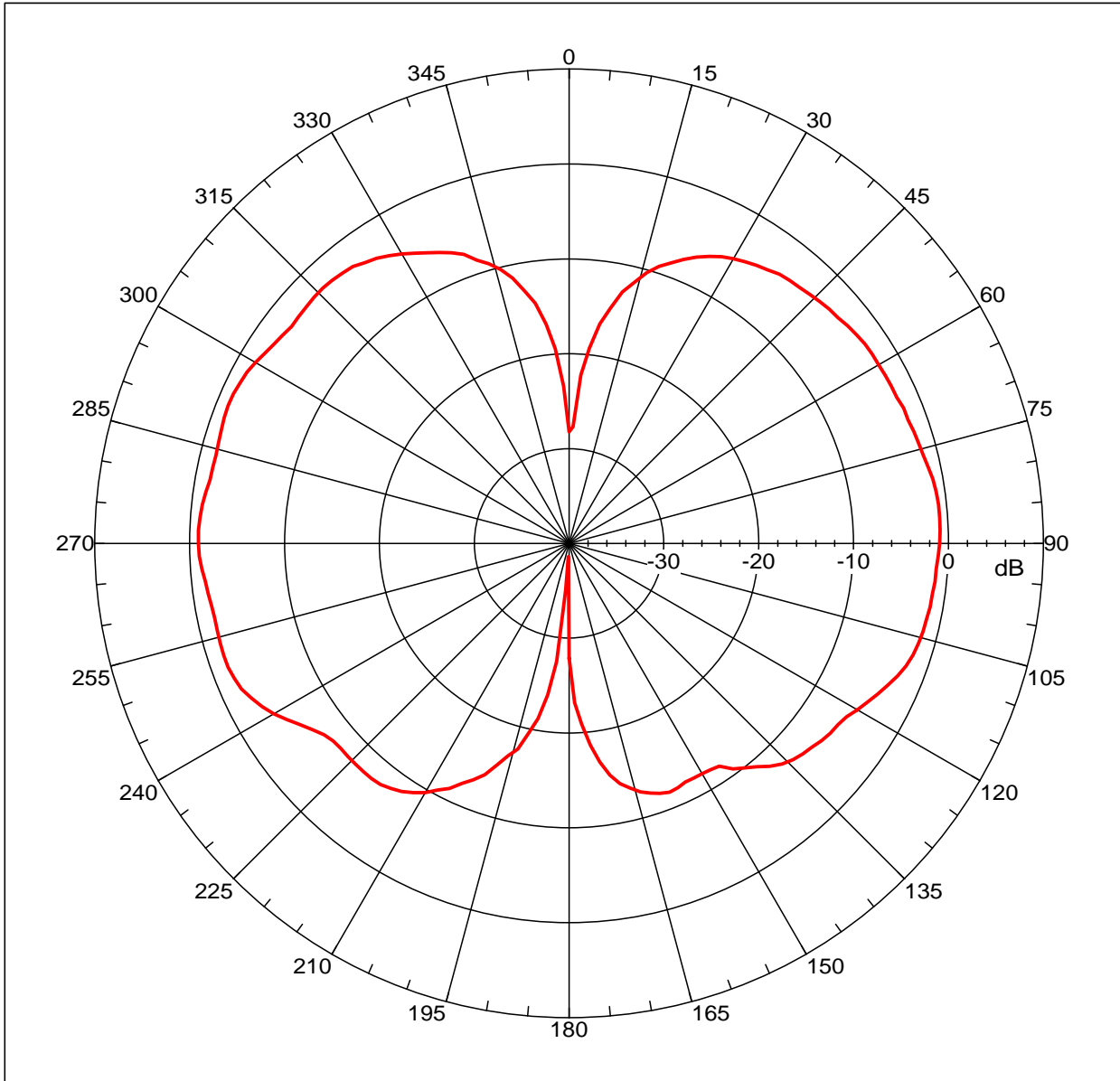
NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz E-PLANE.nsi
 Measurement date/time: 3/10/2010 11:28:15 AM, Filetype: NSI-97

Far-field Cut Analysis:
 Avg value: -4.889 dB
 -3. dB beam width: 41.05 deg
 -6. dB beam width: 96.03 deg
 -10. dB beam width: 155.48 deg
 Left Sidelobe: -3.67 dB at -143.799 deg
 Right Sidelobe: -0.96 dB at -87.486 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 10

Beam	Frequency	Azimuth	Elevation	Pol
6	1.800 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = -0.84259 dBi
 Max far-field (global) = -47.51116 dB, Max far-field (plot) = -47.51133 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 84.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

20100310 TH88 800-2100mhz E-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz E-PLANE.nsi
 Measurement date/time: 3/10/2010 11:28:15 AM, Filetype: NSI-97

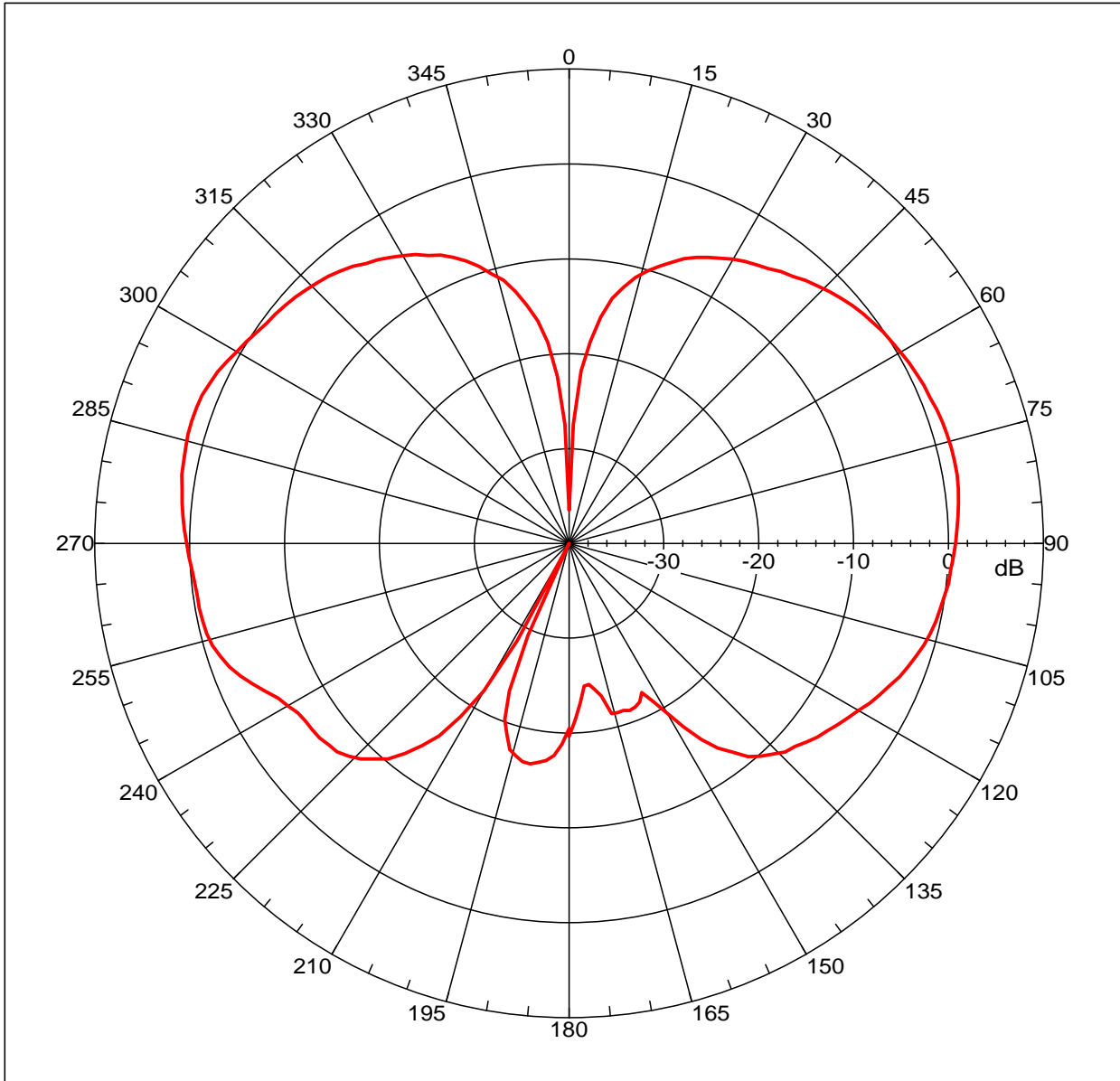
Far-field Cut Analysis:
 Avg value: -5.403 dB
 -3. dB beam width: 76.78 deg
 -6. dB beam width: 108.28 deg
 -10. dB beam width: 129.88 deg
 Left Sidelobe: -1.79 dB at -43.240 deg
 Right Sidelobe: Not Found

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 10

Beam	Frequency	Azimuth	Elevation	Pol
7	1.880 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 1.80724 dBi
 Max far-field (global) = -45.99886 dB, Max far-field (plot) = -45.99897 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -72.00001 deg, Vpeak at: 0.000 deg
 Plot centering: On

20100310 TH88 800-2100mhz E-PLANE

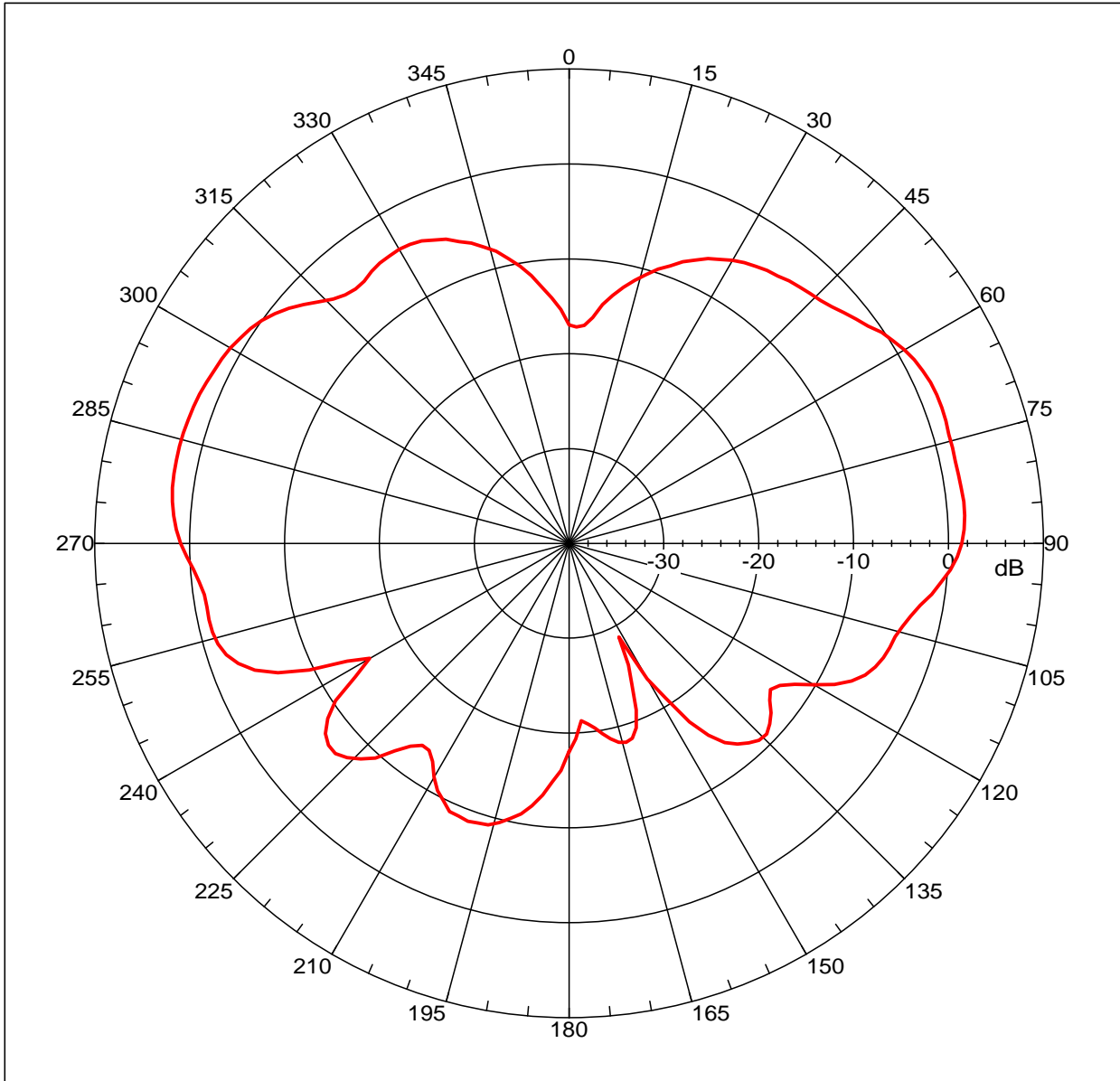
NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz E-PLANE.nsi
 Measurement date/time: 3/10/2010 11:28:15 AM, Filetype: NSI-97

Far-field Cut Analysis:
 Avg value: -4.599 dB
 -3. dB beam width: 59.39 deg
 -6. dB beam width: 82.93 deg
 -10. dB beam width: 115.72 deg
 Left Sidelobe: -18.20 dB at -169.944 deg
 Right Sidelobe: -0.28 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 10

Beam	Frequency	Azimuth	Elevation	Pol
8	1.990 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 2.31376 dBi
 Max far-field (global) = -45.01294 dB, Max far-field (plot) = -45.0131 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -76.00001 deg, Vpeak at: 0.000 deg
 Plot centering: On

20100310 TH88 800-2100mhz E-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz E-PLANE.nsi
 Measurement date/time: 3/10/2010 11:28:15 AM, Filetype: NSI-97

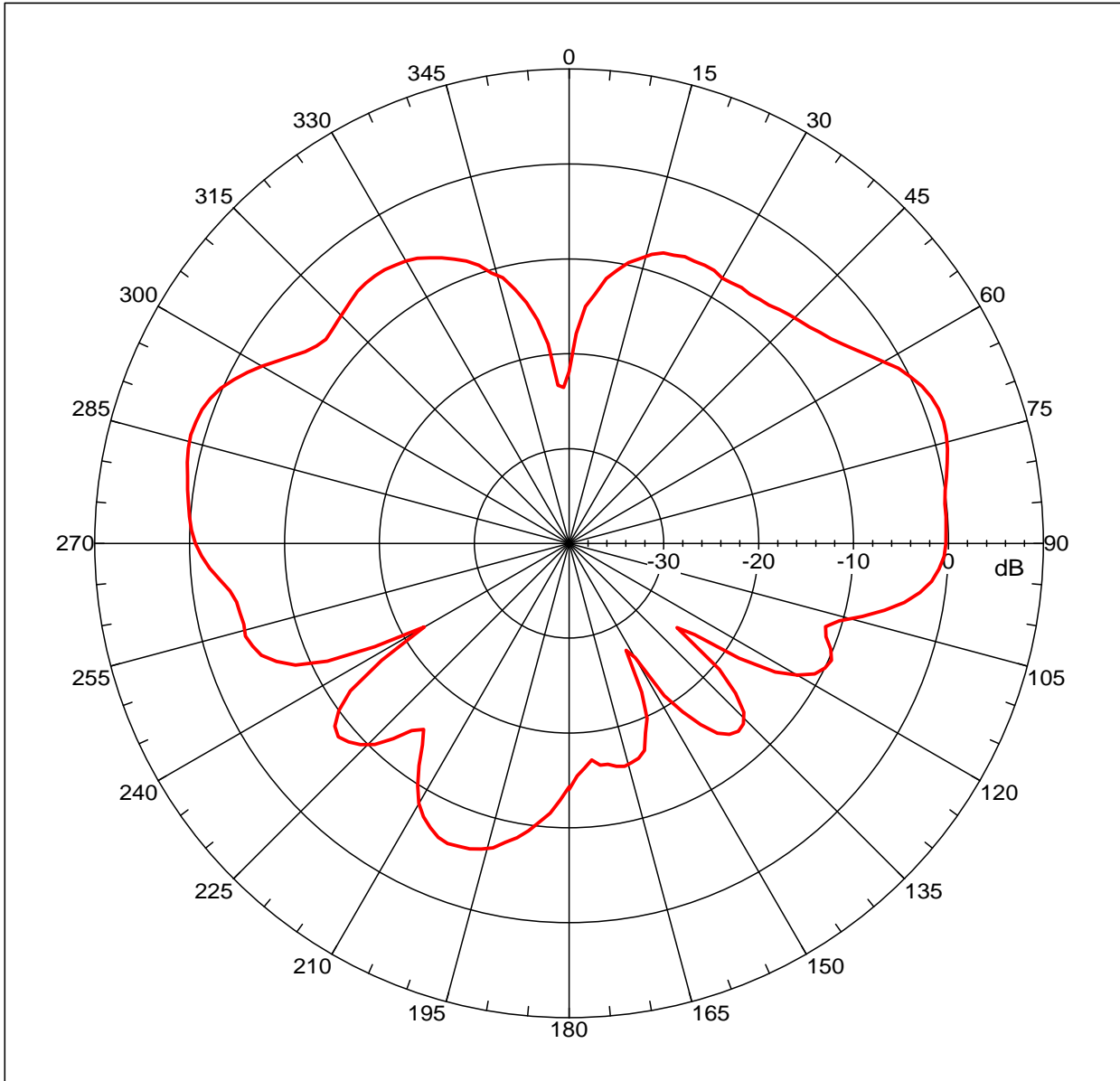
Far-field Cut Analysis:
 Avg value: -4.697 dB
 -3. dB beam width: 43.70 deg
 -6. dB beam width: 66.24 deg
 -10. dB beam width: 99.80 deg
 Left Sidelobe: -9.17 dB at -131.732 deg
 Right Sidelobe: -0.49 dB at 71.397 deg

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 10

Beam	Frequency	Azimuth	Elevation	Pol
9	2.100 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz E-PLANE.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 1.49392 dBi
 Max far-field (global) = -46.03819 dB, Max far-field (plot) = -46.03831 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 72.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

20100310 TH88 800-2100mhz E-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz E-PLANE.nsi
 Measurement date/time: 3/10/2010 11:28:15 AM, Filetype: NSI-97

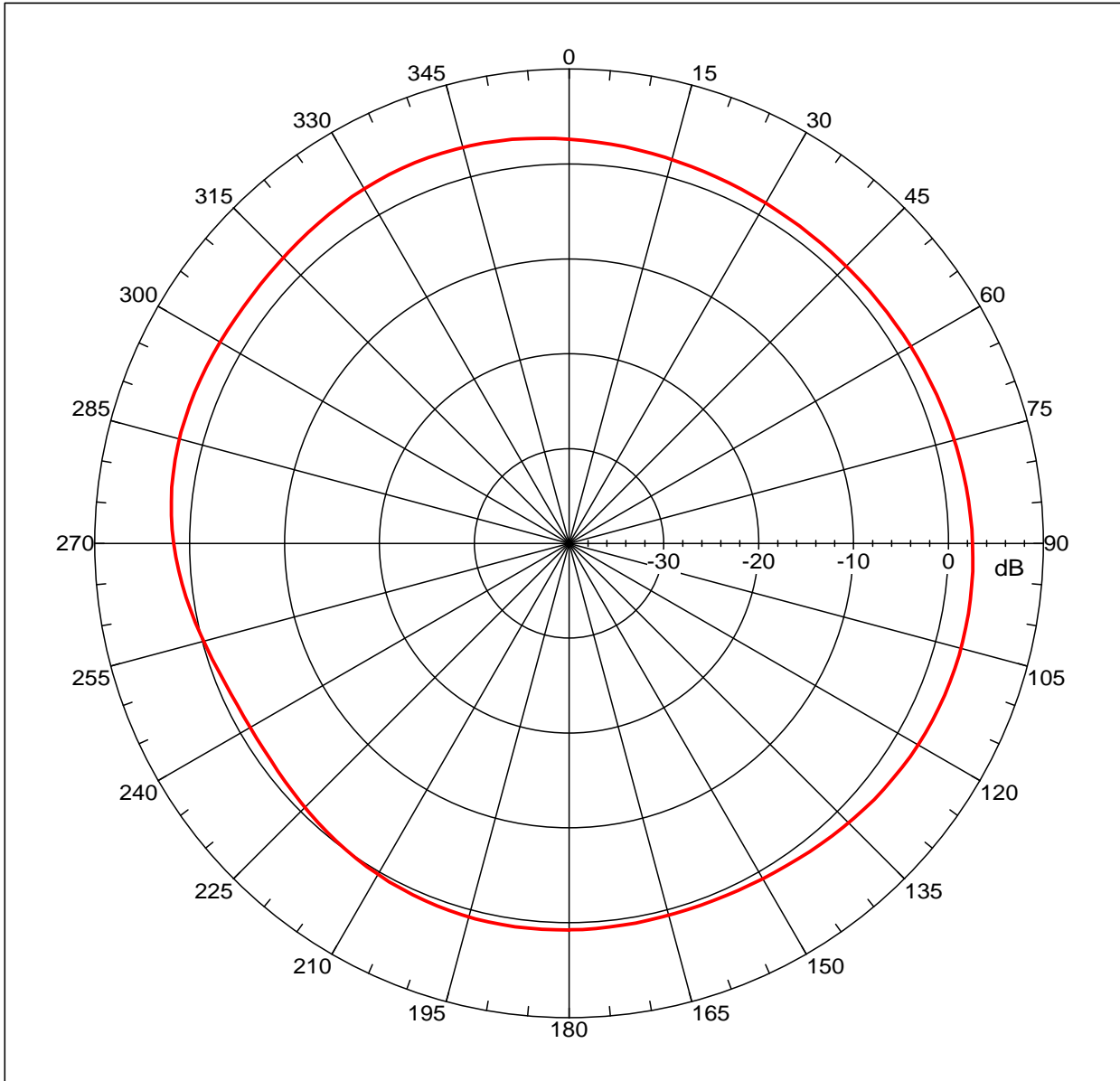
Far-field Cut Analysis:
 Avg value: -6.352 dB
 -3. dB beam width: 35.49 deg
 -6. dB beam width: 47.27 deg
 -10. dB beam width: 89.33 deg
 Left Sidelobe: -6.67 dB at -35.196 deg
 Right Sidelobe: -11.21 dB at 115.643 deg

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 10

Beam	Frequency	Azimuth	Elevation	Pol
10	2.170 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 3.273 dBi
Max far-field (global) = -39.72634 dB, Max far-field (plot) = -39.72634 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -20.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

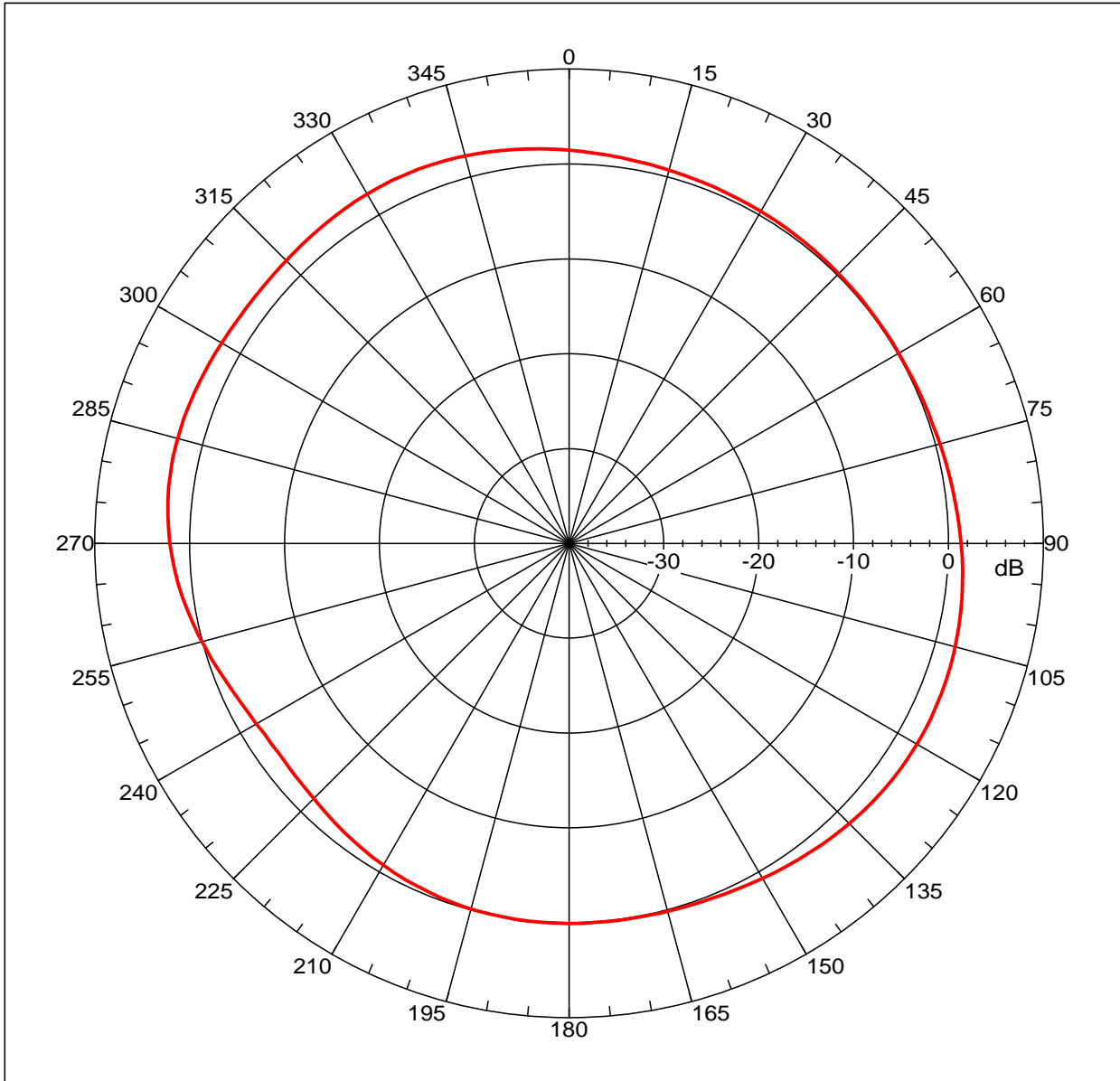
20100310 TH88 800-2100mhz H-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz H-PLANE01.nsi
Measurement date/time: 3/10/2010 11:34:10 AM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: 1.615 dB
-3. dB beam width: Not Found
-6. dB beam width: Not Found
-10. dB beam width: Not Found
Left Sidelobe: -2.48 dB at -167.933 deg
Right Sidelobe: -0.54 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 10

Beam	Frequency	Azimuth	Elevation	Pol
1	0.824 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 2.70159 dBi
Max far-field (global) = -38.06624 dB, Max far-field (plot) = -38.06624 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -78.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

20100310 TH88 800-2100mhz H-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz H-PLANE01.nsi
Measurement date/time: 3/10/2010 11:34:10 AM, Filetype: NSI-97

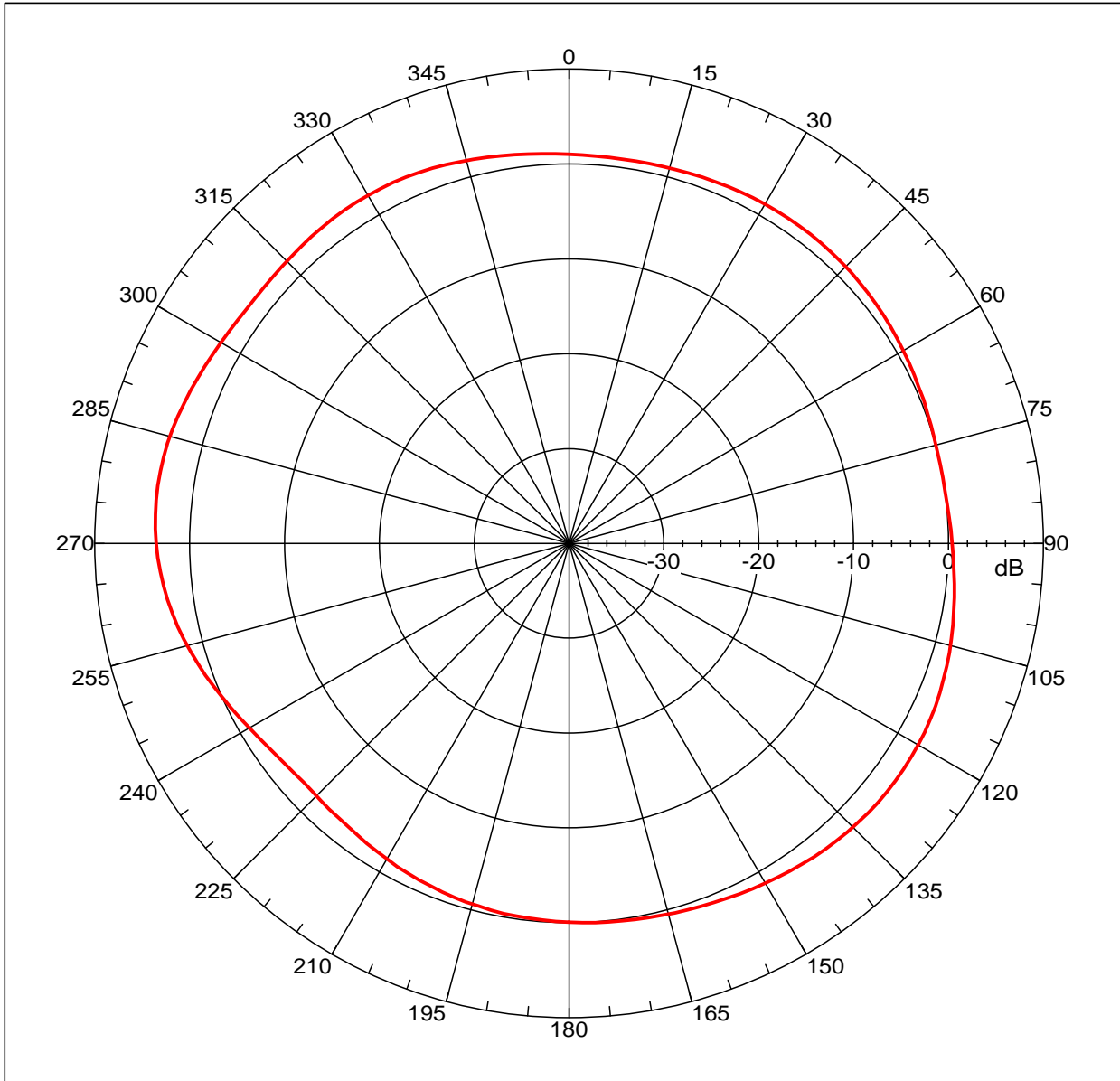
Far-field Cut Analysis:
Avg value: 0.973 dB
-3. dB beam width: Not Found
-6. dB beam width: Not Found
-10. dB beam width: Not Found
Left Sidelobe: Not Found
Right Sidelobe: -0.33 dB at 117.654 deg

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 10

Beam	Frequency	Azimuth	Elevation	Pol
2	0.860 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 3.74655 dBi
 Max far-field (global) = -37.81313 dB, Max far-field (plot) = -37.81314 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -82.00001 deg, Vpeak at: 0.000 deg
 Plot centering: On

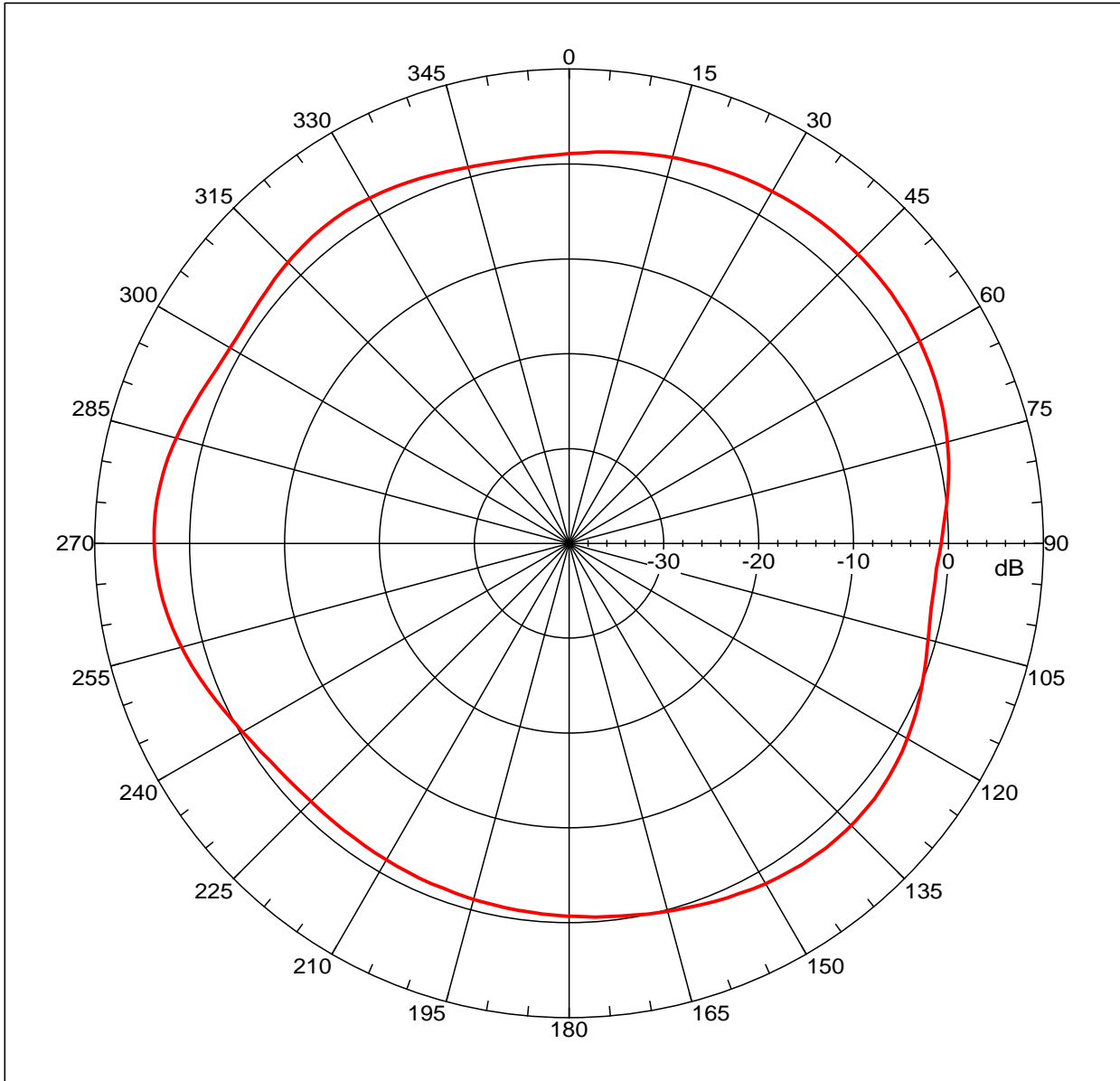
20100310 TH88 800-2100mhz H-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz H-PLANE01.nsi
 Measurement date/time: 3/10/2010 11:34:10 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: 1.171 dB
 -3. dB beam width: 169.35 deg
 -6. dB beam width: Not Found
 -10. dB beam width: Not Found
 Left Sidelobe: Not Found
 Right Sidelobe: -1.20 dB at 125.698 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 10

Beam	Frequency	Azimuth	Elevation	Pol
3	0.900 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 3.73893 dBi
Max far-field (global) = -38.89074 dB, Max far-field (plot) = -38.89074 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -88.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

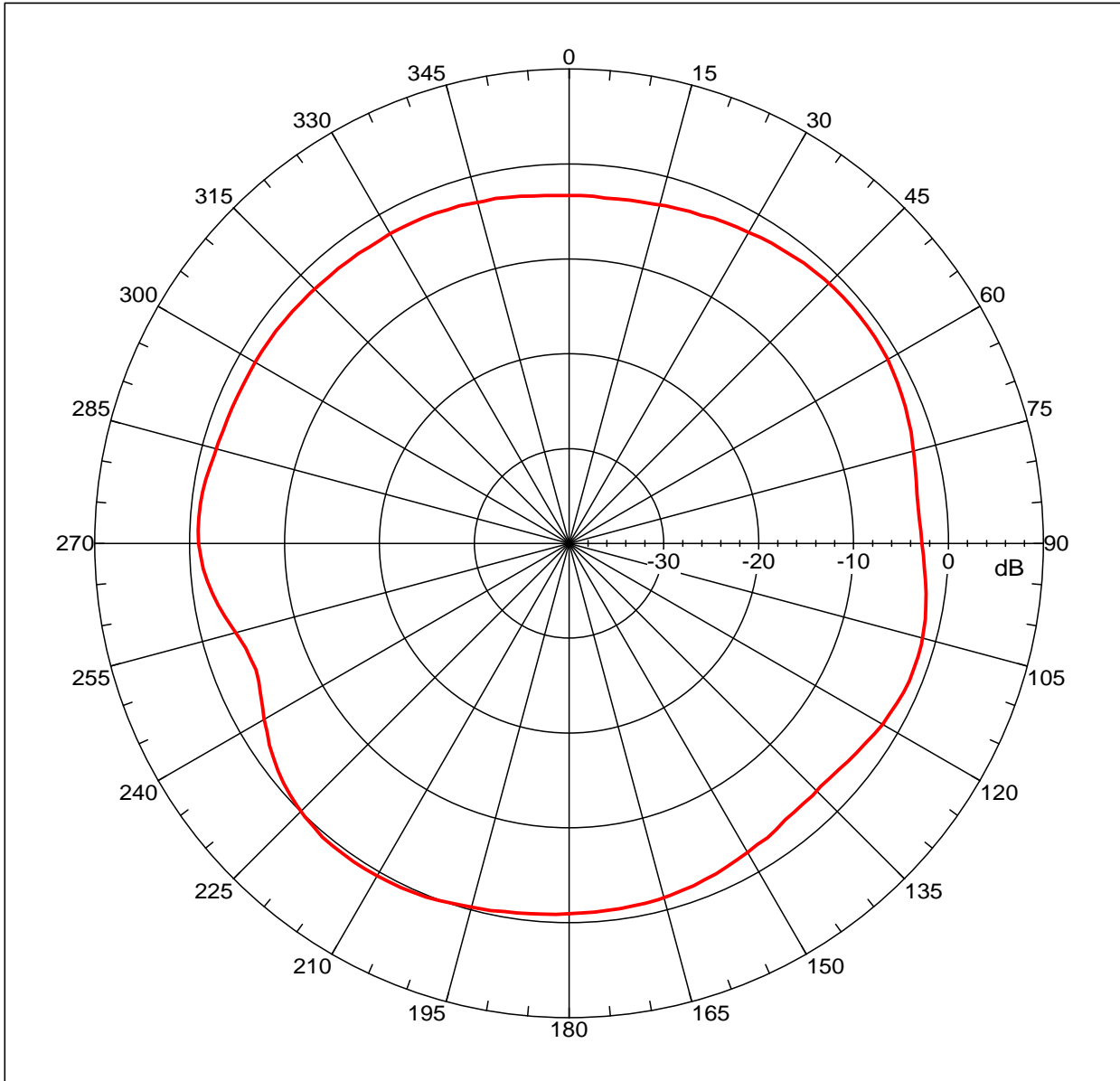
20100310 TH88 800-2100mhz H-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz H-PLANE01.nsi
Measurement date/time: 3/10/2010 11:34:10 AM, Filetype: NSI-97
Far-field Cut Analysis:
Avg value: 1.219 dB
-3. dB beam width: 194.20 deg
-6. dB beam width: Not Found
-10. dB beam width: Not Found
Left Sidelobe: Not Found
Right Sidelobe: -1.54 dB at -35.196 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 10

Beam	Frequency	Azimuth	Elevation	Pol
4	0.960 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 0.5269 dBi
Max far-field (global) = -44.66569 dB, Max far-field (plot) = -44.66573 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -146.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

20100310 TH88 800-2100mhz H-PLANE

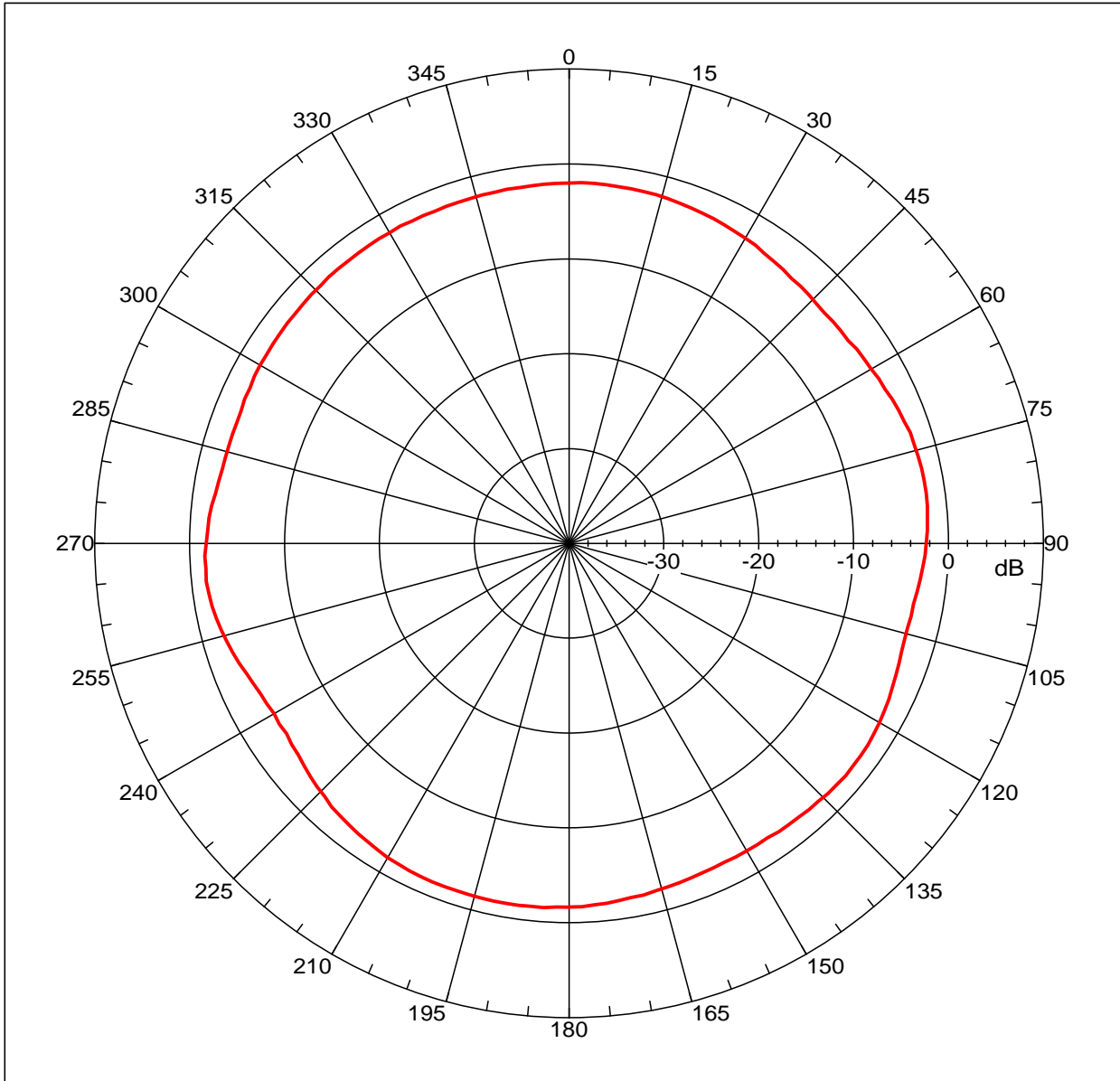
NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz H-PLANE01.nsi
Measurement date/time: 3/10/2010 11:34:10 AM, Filetype: NSI-97

Far-field Cut Analysis:
Avg value: -1.821 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: -1.42 dB at -87.486 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 10

Beam	Frequency	Azimuth	Elevation	Pol
5	1.710 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = -1.45698 dBi
 Max far-field (global) = -48.27902 dB, Max far-field (plot) = -48.27904 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -168.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

20100310 TH88 800-2100mhz H-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz H-PLANE01.nsi
 Measurement date/time: 3/10/2010 11:34:10 AM, Filetype: NSI-97

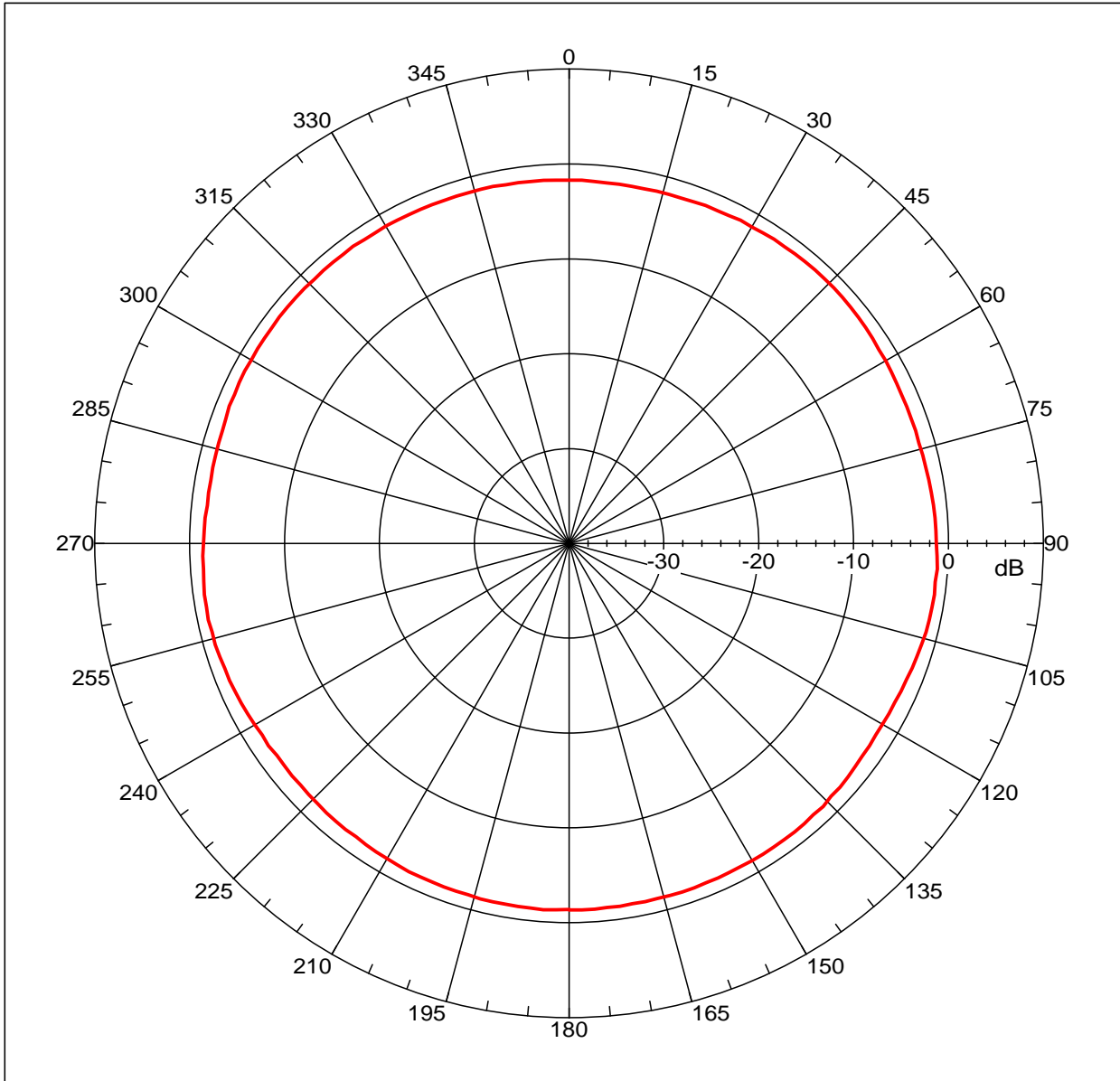
Far-field Cut Analysis:
 Avg value: -2.423 dB
 -3. dB beam width: Not Found
 -6. dB beam width: Not Found
 -10. dB beam width: Not Found
 Left Sidelobe: Not Found
 Right Sidelobe: -0.11 dB at -95.531 deg

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 10

Beam	Frequency	Azimuth	Elevation	Pol
6	1.800 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = -1.08396 dB
 Max far-field (global) = -47.75253 dB, Max far-field (plot) = -47.75259 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 93.99999 deg, Vpeak at: 0.000 deg
 Plot centering: On

20100310 TH88 800-2100mhz H-PLANE

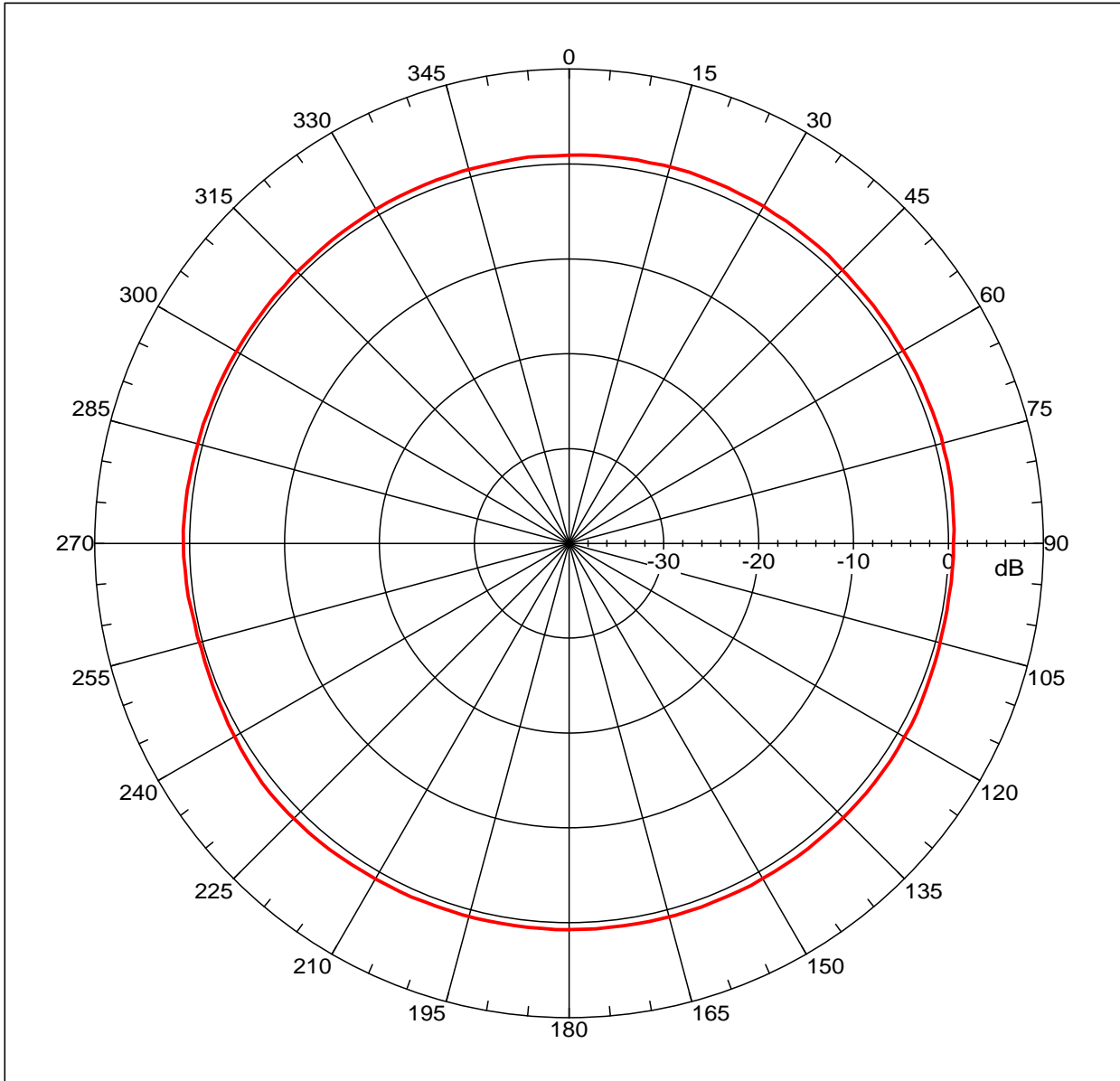
NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz H-PLANE01.nsi
 Measurement date/time: 3/10/2010 11:34:10 AM, Filetype: NSI-97

Far-field Cut Analysis:
 Avg value: -1.490 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: 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 10

Beam	Frequency	Azimuth	Elevation	Pol
7	1.880 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = 1.10392 dBi
Max far-field (global) = -46.70218 dB, Max far-field (plot) = -46.70219 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 17.99999 deg, Vpeak at: 0.000 deg
Plot centering: On

20100310 TH88 800-2100mhz H-PLANE

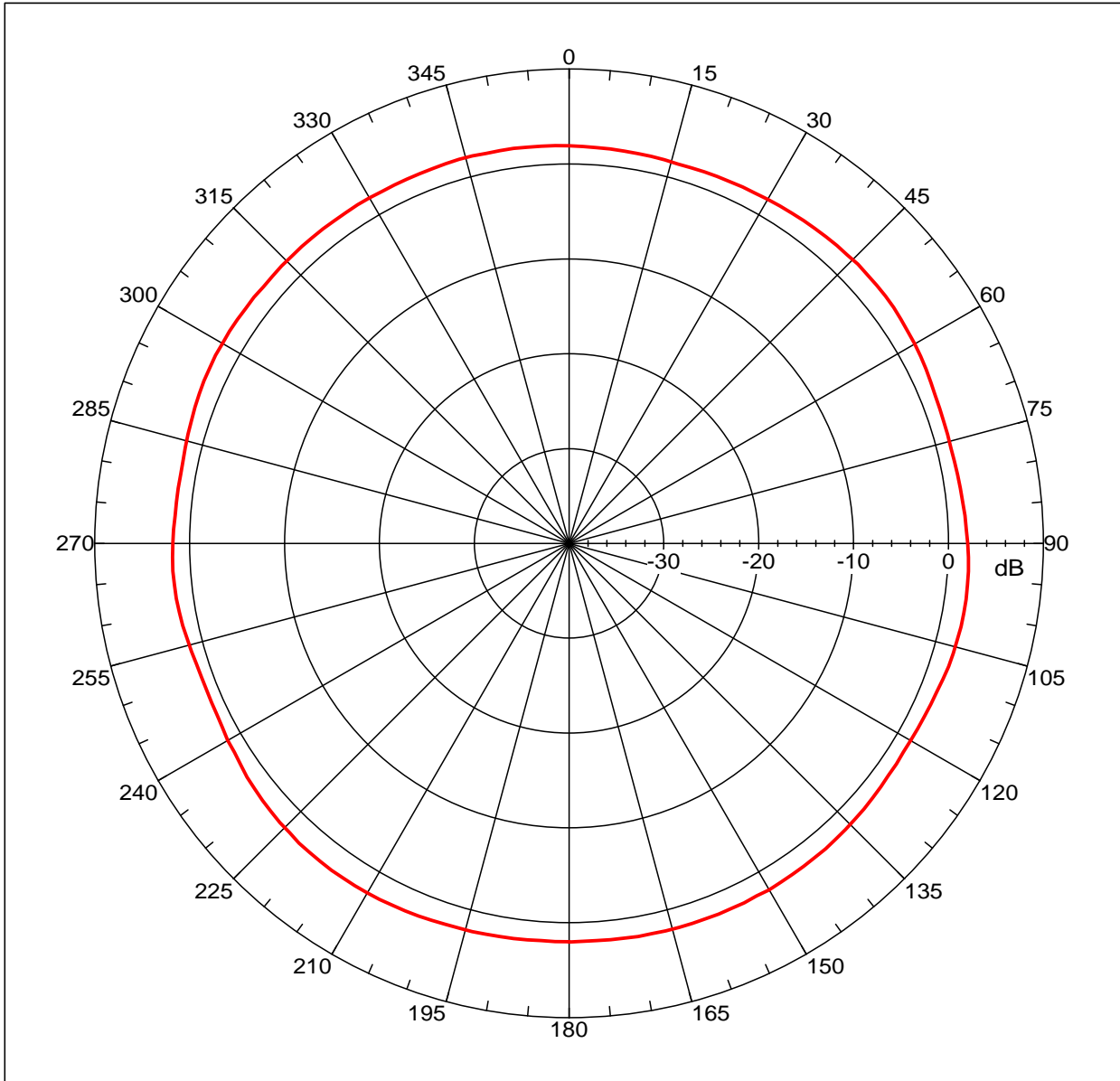
NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz H-PLANE01.nsi
Measurement date/time: 3/10/2010 11:34:10 AM, Filetype: NSI-97

Far-field Cut Analysis:
Avg value: 0.727 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: 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 10

Beam	Frequency	Azimuth	Elevation	Pol
8	1.990 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 2.61057 dBi
 Max far-field (global) = -44.71613 dB, Max far-field (plot) = -44.71618 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -144.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

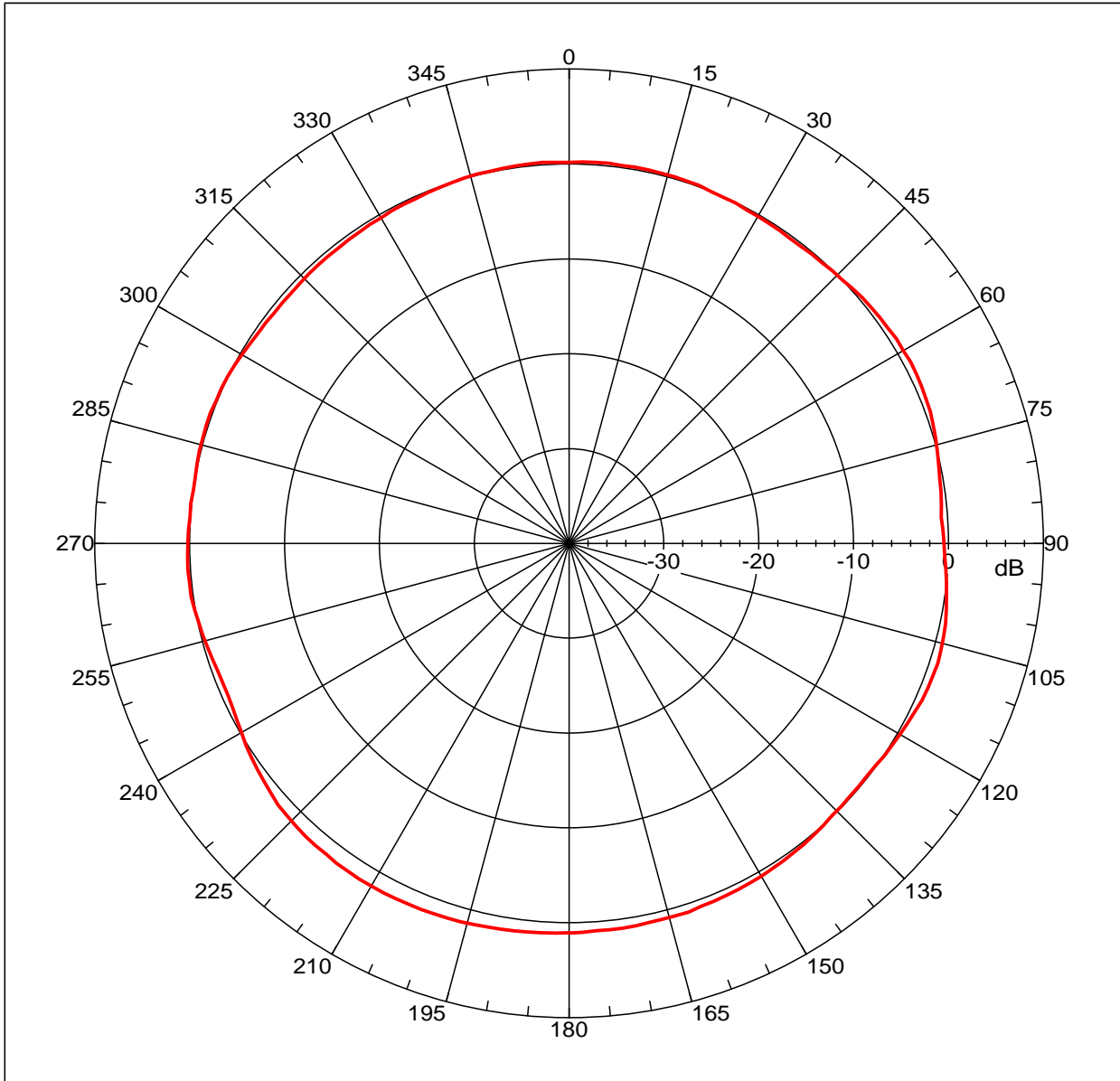
20100310 TH88 800-2100mhz H-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz H-PLANE01.nsi
 Measurement date/time: 3/10/2010 11:34:10 AM, Filetype: NSI-97
 Far-field Cut Analysis:
 Avg value: 1.958 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: -0.28 dB at 47.263 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 10

Beam	Frequency	Azimuth	Elevation	Pol
9	2.100 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude of 20100310 TH88 800-2100mhz H-PLANE01.nsi



Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = 1.71623 dBi
 Max far-field (global) = -45.81588 dB, Max far-field (plot) = -45.81591 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: -148.00001 deg, Vpeak at: 0.000 deg
 Plot centering: On

20100310 TH88 800-2100mhz H-PLANE

NSI2000 V4.0.124, Filename: C:\nsi2000\Data\20100310 TH88 800-2100mhz H-PLANE01.nsi
 Measurement date/time: 3/10/2010 11:34:10 AM, Filetype: NSI-97

Far-field Cut Analysis:
 Avg value: 0.319 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: -1.03 dB at 59.330 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 10

Beam	Frequency	Azimuth	Elevation	Pol
10	2.170 GHz	Azimuth	Elevation	Single-pol