SPECIFICATION

Specification No	:	**GW.15**
Part No.	:	**GW.15.2113**
Product Name	:	2.4GHz 2dBi Screw mount Dipole Antenna
Description	:	SMA Male Straight Connector Hinged TPU Housing IP65 Length 108.5mm ROHS Compliant

1. Introduction

The GW.15 2.4 GHz dipole SMA plug mount antenna is ideal for 2.4 GHz wireless applications such as Bluetooth and Wireless LAN. At only 108mm in length omni-directional 2dBi gain across all bands ensures constant reception and transmission. The antenna structure is designed for robust handling and the housing is made with TPU giving superior environmental reliability and a quality finish. The antenna can be rotated 90 degrees on the base hinge for ease of placement.

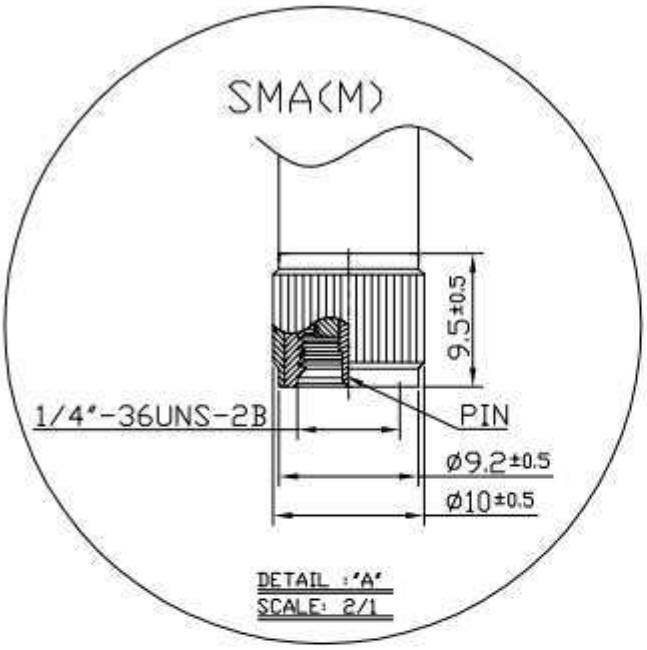
2. Electrical Properties

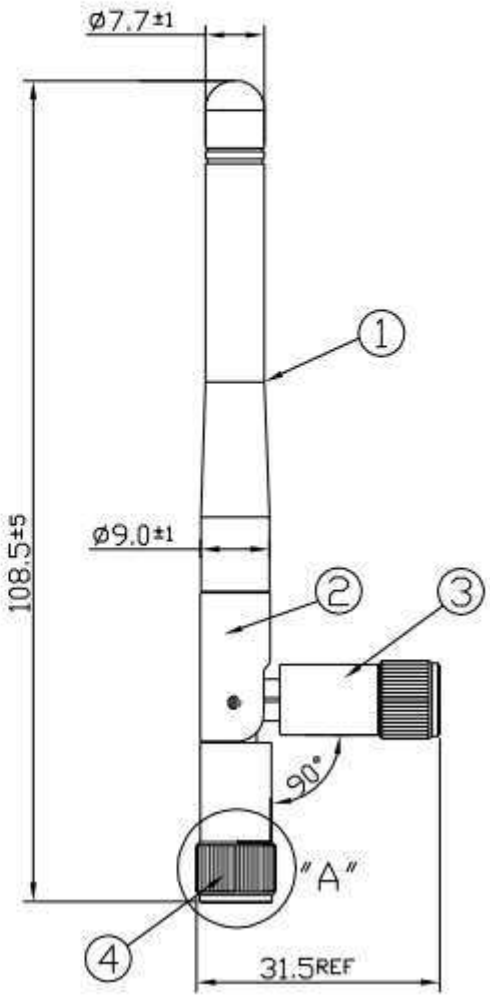
2.1	Frequency	2.4 GHz ~ 2.5 GHz
2.2	Gain (peak)	2 dBi
2.3	V.S.W.R	1.8 Max
2.4	Return Loss	- 10 dB Maximum
2.5	Radiation	Omni-directional
2.6	Polarization	Linear Vertical
2.7	Power Handling	1W

3. Mechanical Properties

3.1	Cable	RG-178 Coaxial Cable
3.2	Antenna Cover	TPE
3.3	Antenna Base	Nylon
3.4	Operating Temperature	-40°C ~ + 85°C
3.5	Storage Temperature	-30°C ~ + 90°C
3.6	Color	Black
3.7	Connector	SMA Plug Male
3.8	IP rating	IP65

4. Outline Drawings and Structure

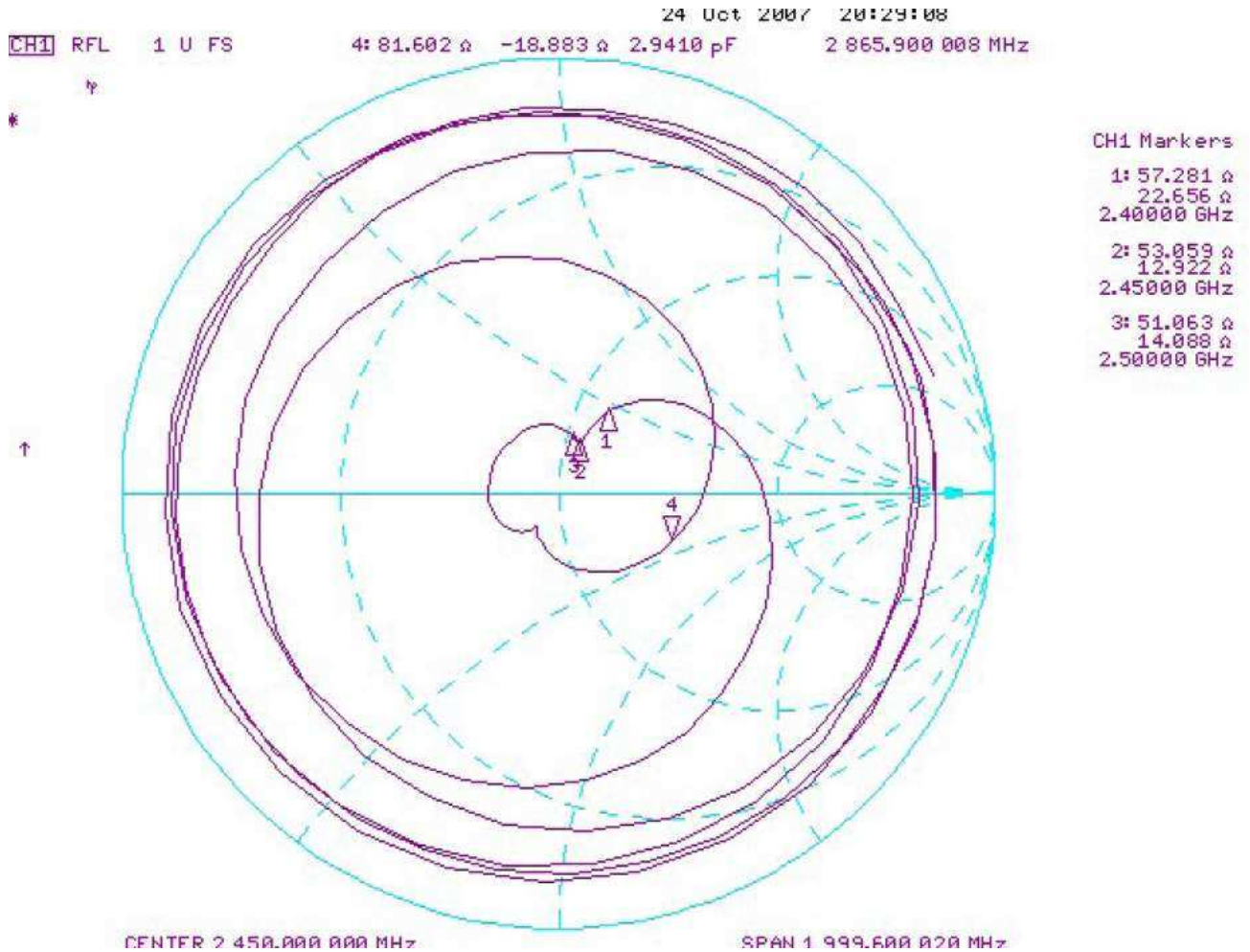




1	GW.15 Housing	TPU (Black)
2	GW.15 Base I	Nylon(Black)
3	GW.15 Base II	Nylon(Black)
4	Connector	SMA Straight Plug

5. Measurements

5.1 Smith Chart

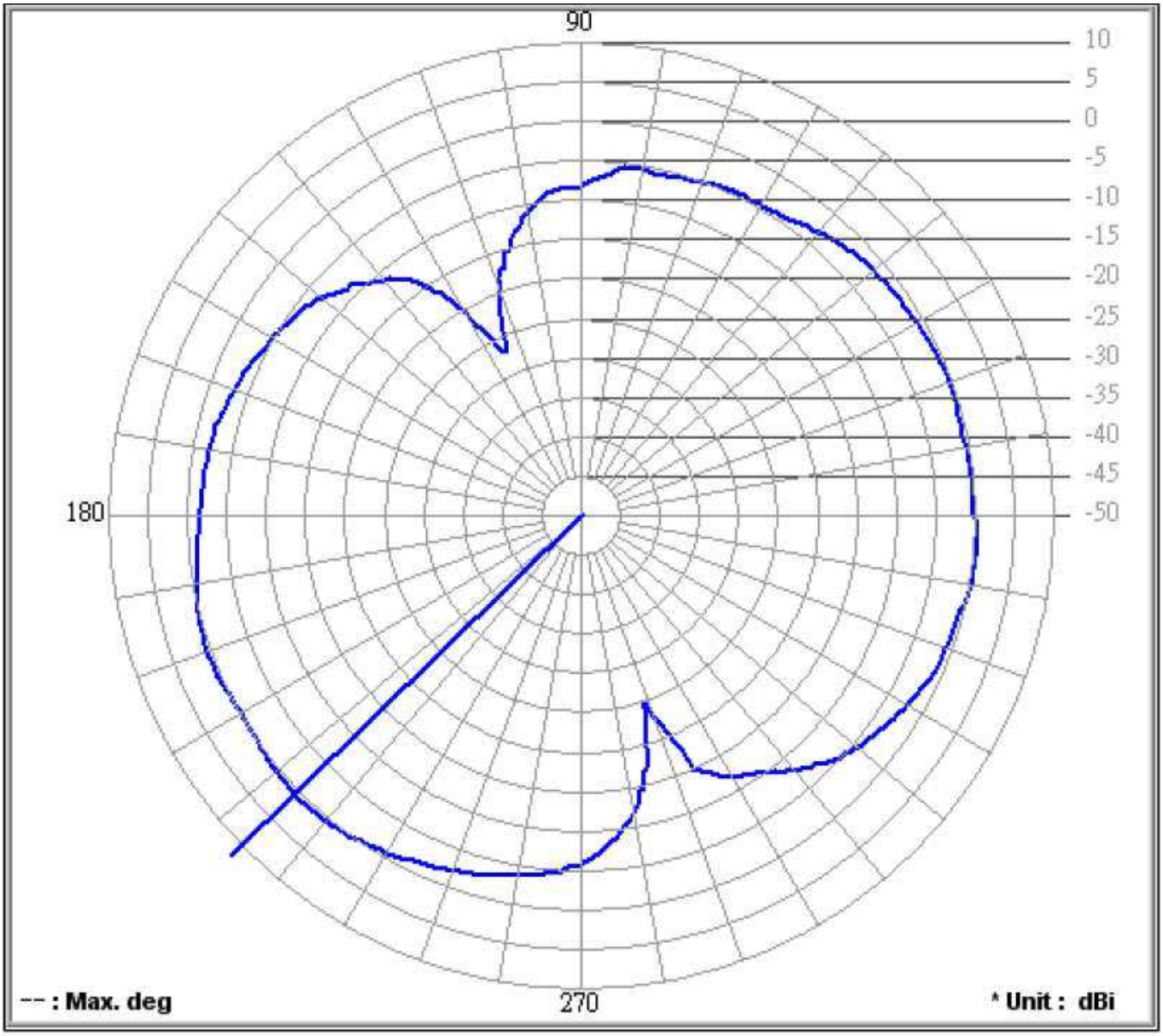


5.2 VSWR


24 Oct 2007 20:29:31
CH1 RFL SWR 1 / REF 1
4: 1.7863
2 865.900 008 MHz
CH1 Markers
1: 1.5351
2.40000 GHz
2: 1.2837
2.45000 GHz
3: 1.3138
2.50000 GHz
CENTER 2 450.000 000 MHz
SPAN 1 999.600 020 MHz

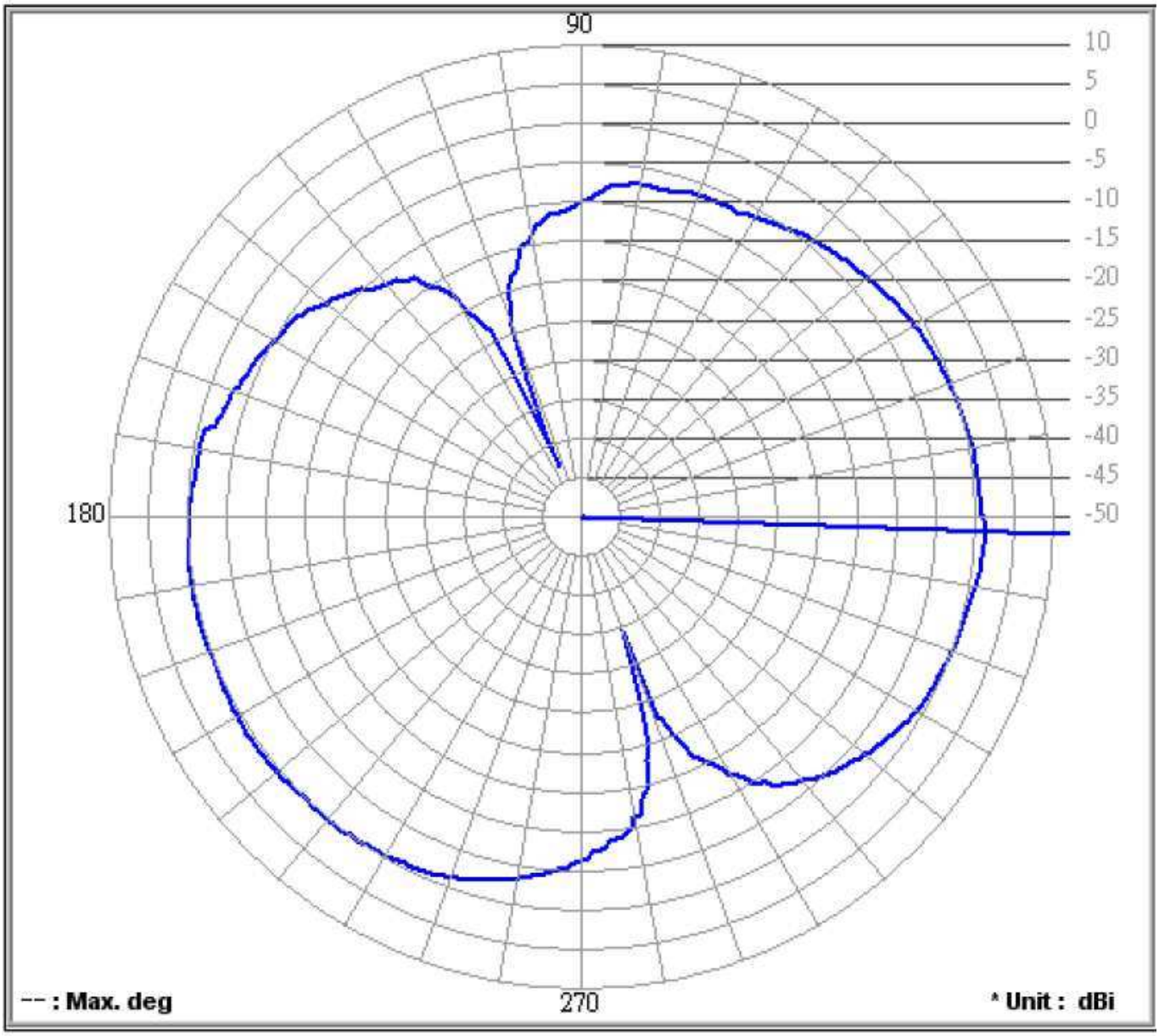
5.3 Return Loss

5.4 Far-field Amplitude - Horizontal Plane 2.4GHz



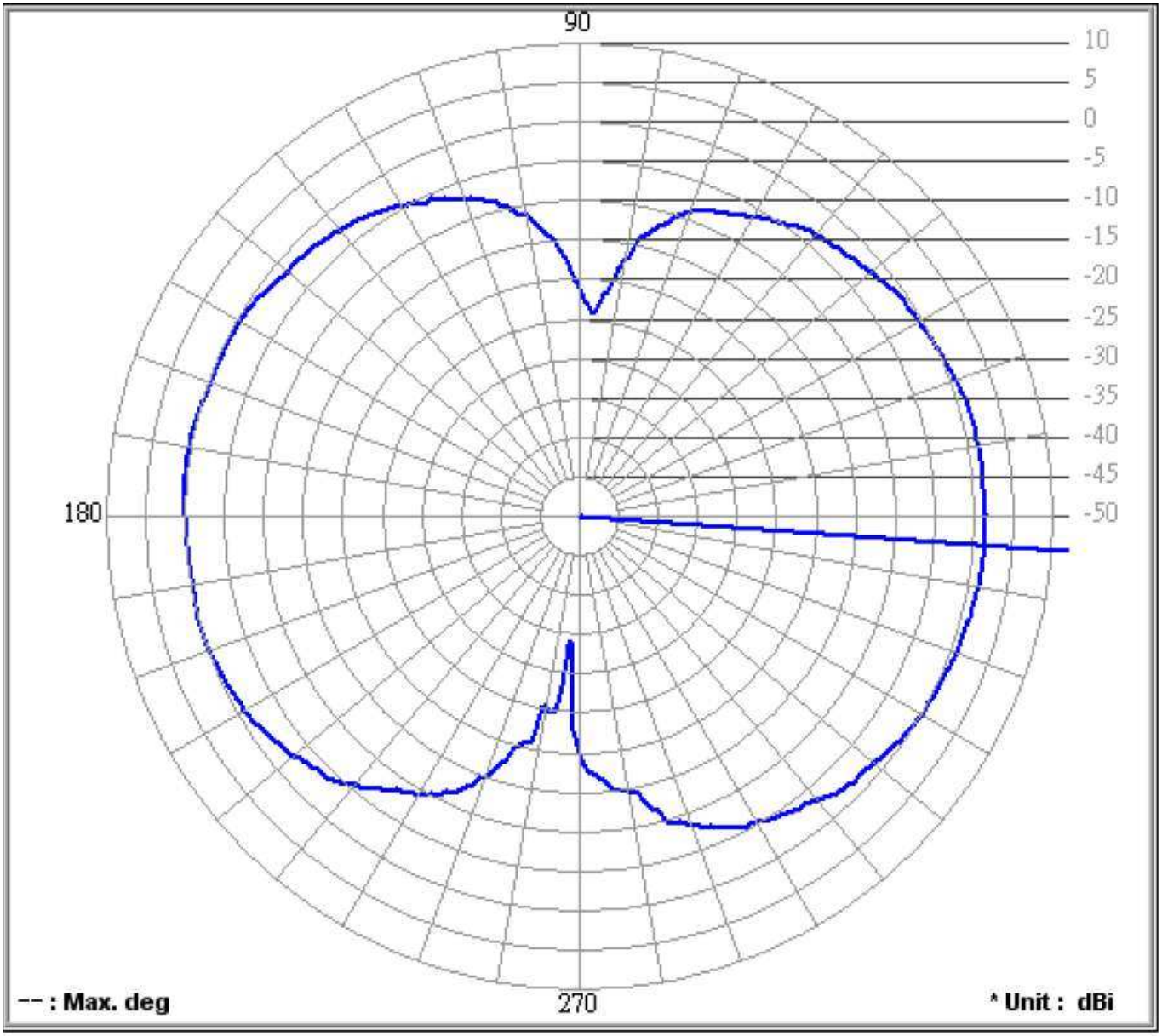
Frequency (MHz) :	**2400.00**	Antenna Polarity :	**Vertical**	Average Value (dB) :	**-2.76**
Maximum Value (dB) :	**0.66**	Maximum Value (degree) :	**224**		
Minimum Value (dB) :	**-27.16**	Minimum Value (degree) :	**115**		

5.5 Far-field Amplitude - Horizontal Plane 2.45GHz



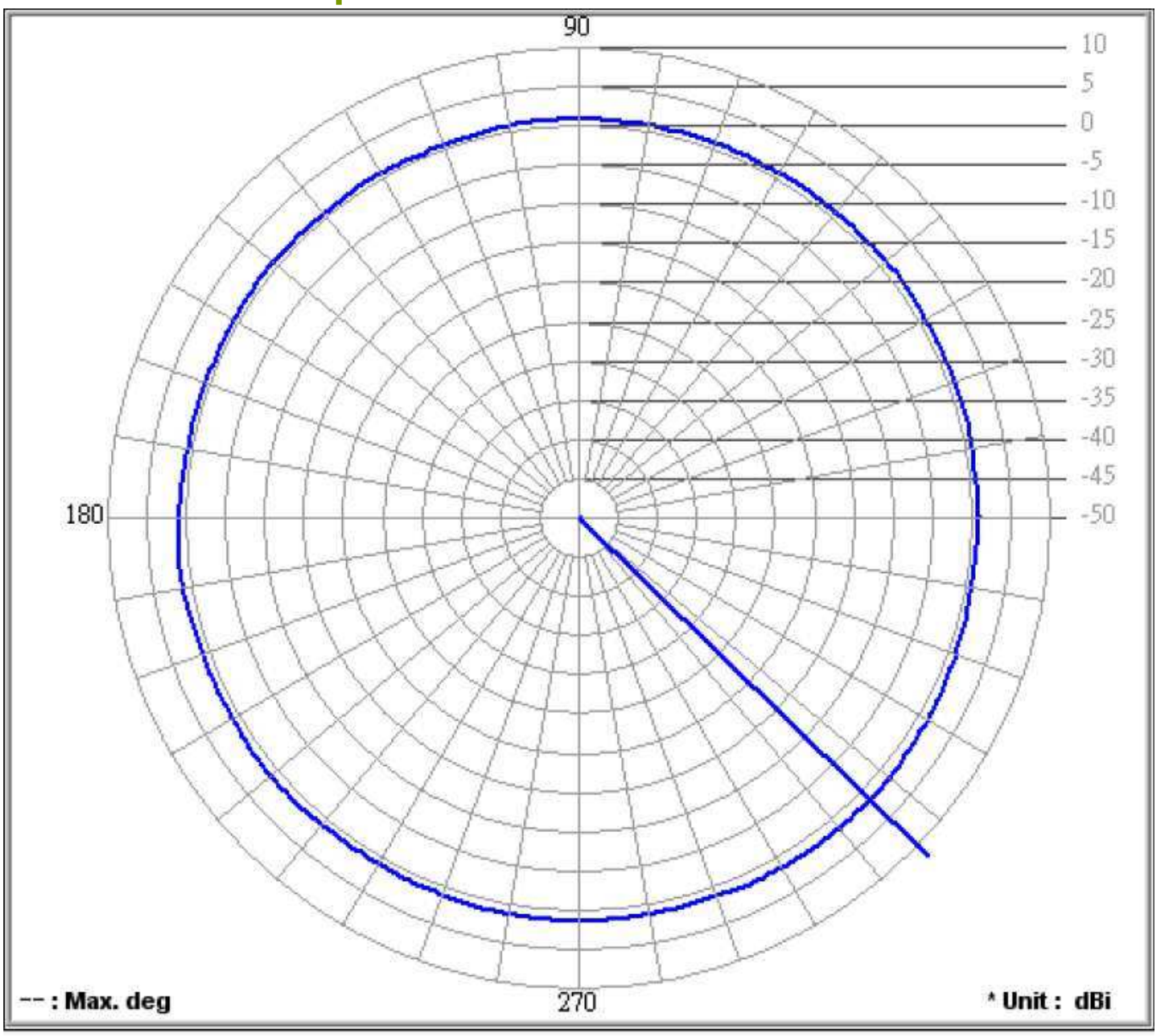
Frequency (MHz) :	**2450.00**	Antenna Polarity :	**Vertical**	Average Value (dB) :	**-2.46**
Maximum Value (dB) :	**1.43**	Maximum Value (degree) :	**358**		
Minimum Value (dB) :	**-42.89**	Minimum Value (degree) :	**114**		

5.6 Far-field Amplitude - Horizontal Plane 2.5GHz



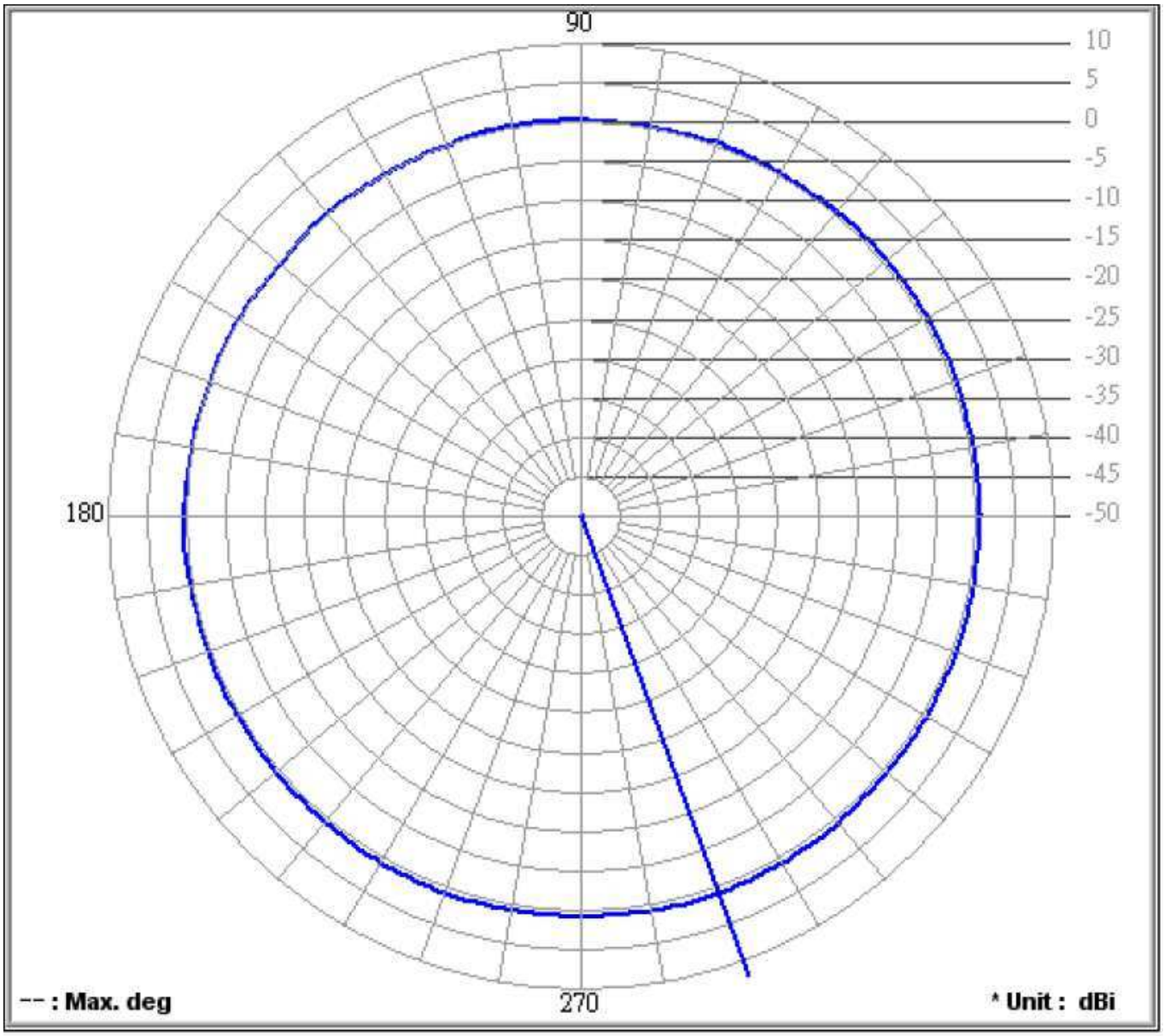
Frequency (MHz) : **2500.00**	Antenna Polarity : **Vertical**	Average Value (dB) : **-2.29**
Maximum Value (dB) : **1.57**	Maximum Value (degree) : **356**	
Minimum Value (dB) : **-34.14**	Minimum Value (degree) : **266**	

5.7 Far-field Amplitude - Vertical Plane 2.4GHz



Frequency (MHz) :	**2400.00**	Antenna Polarity :	**Vertical**	Average Value (dB) :	**1.00**
Maximum Value (dB) :	**1.62**	Maximum Value (degree) :	**316**		
Minimum Value (dB) :	**0.55**	Minimum Value (degree) :	**169**		

5.8 Far-field Amplitude - Vertical Plane 2.45GHz

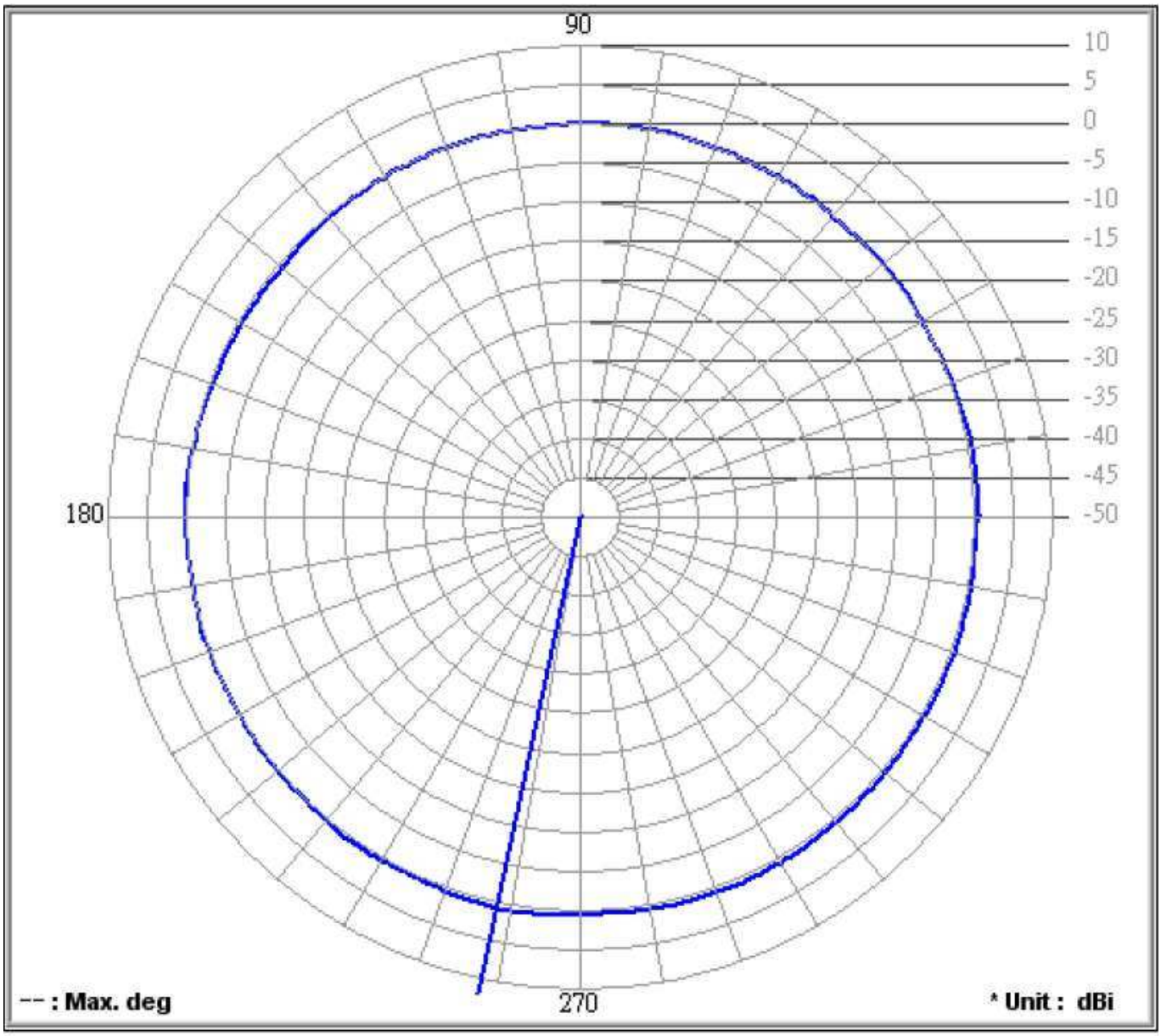


Frequency (MHz) : **2450.00** Antenna Polarity : **Vertical** Average Value (dB) : **0.48**

Maximum Value (dB) : **0.94** Maximum Value (degree) : **290**

Minimum Value (dB) : **-0.09** Minimum Value (degree) : **141**

5.9 Far-field Amplitude - Vertical Plane 2.5GHz



Frequency (MHz) :	**2500.00**	Antenna Polarity :	**Vertical**	Average Value (dB) :	**0.23**
Maximum Value (dB) :	**0.85**	Maximum Value (degree) :	**258**		
Minimum Value (dB) :	**-0.59**	Minimum Value (degree) :	**143**		