



Specification

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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
Length 108.5mm
ROHS Compliant



REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
01	Nov 25 2009	All	New product	TW Product Centre	Ronan Quinlan



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1.0 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.

2.0 Electrical Properties

1.1	Frequency	2.4 GHz ~ 2.5 GHz
1.2	Gain (peak)	2 dBi
1.3	V.S.W.R	1.8 Max
1.4	Return Loss	- 10 dB Maximum
1.4	Radiation	Omni-directional
1.6	Polarization	Linear Vertical
1.7	Power Handling	1W

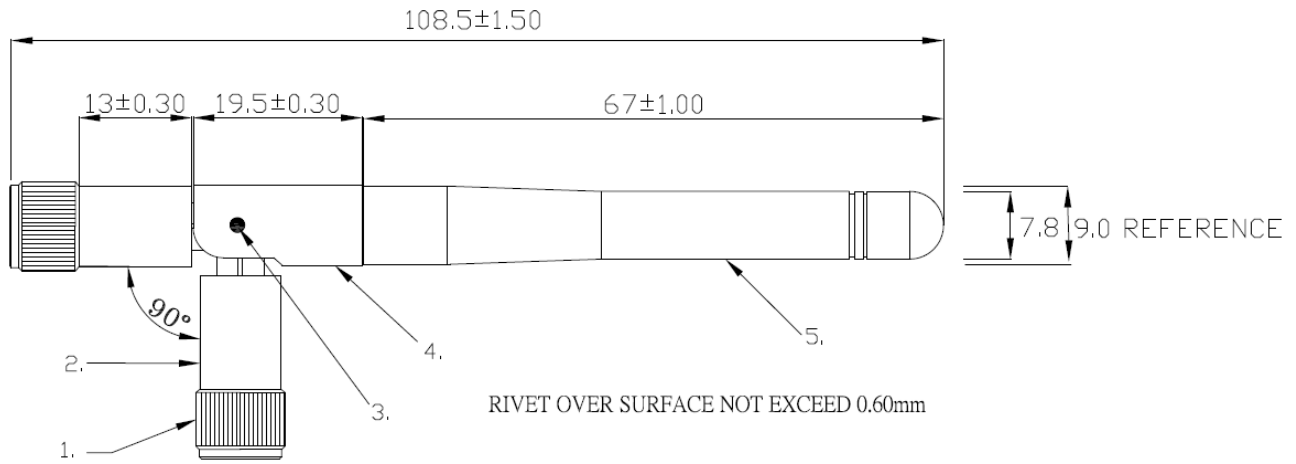
3.0 Mechanical Properties

2.1	Cable	RG-178 Coaxial Cable
2.2	Antenna Cover	TPE
2.3	Antenna Base	PC & PBT
2.4	Operating Temperature	-20°C ~ + 65°C
2.5	Storage Temperature	-30°C ~ + 75°C
2.6	Color	Black
2.7	Connector	SMA Plug Male



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4.0 Outline Drawings and Structure

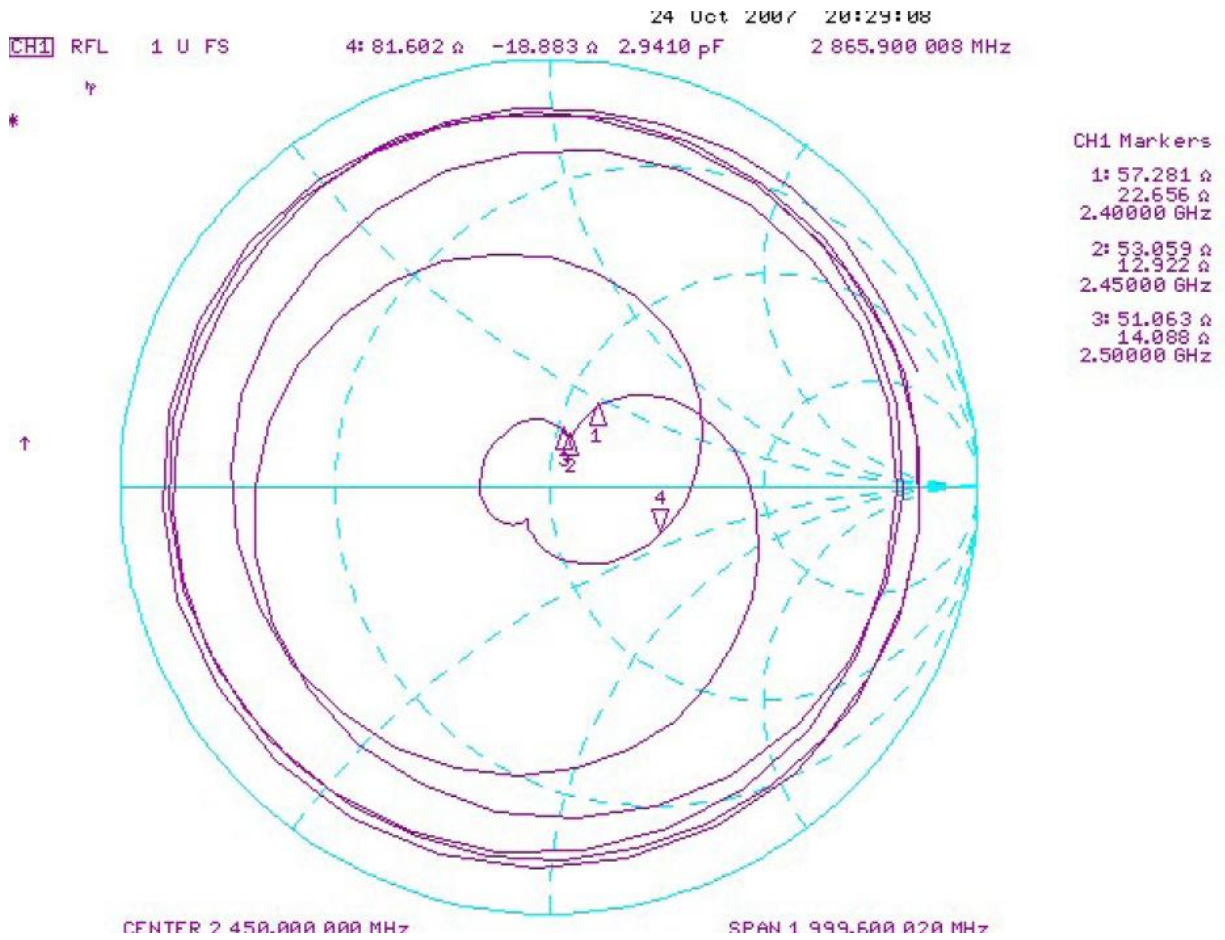


1	Antenna Cover	TPU (Black)
2	Antenna Base I	PC & ABS(Black)
3	Antenna Base II	PC & ABS(Black)
4	Rotary Shaft	Brass, CR (Black)
5	Connector	SMA Straight Plug (Black)



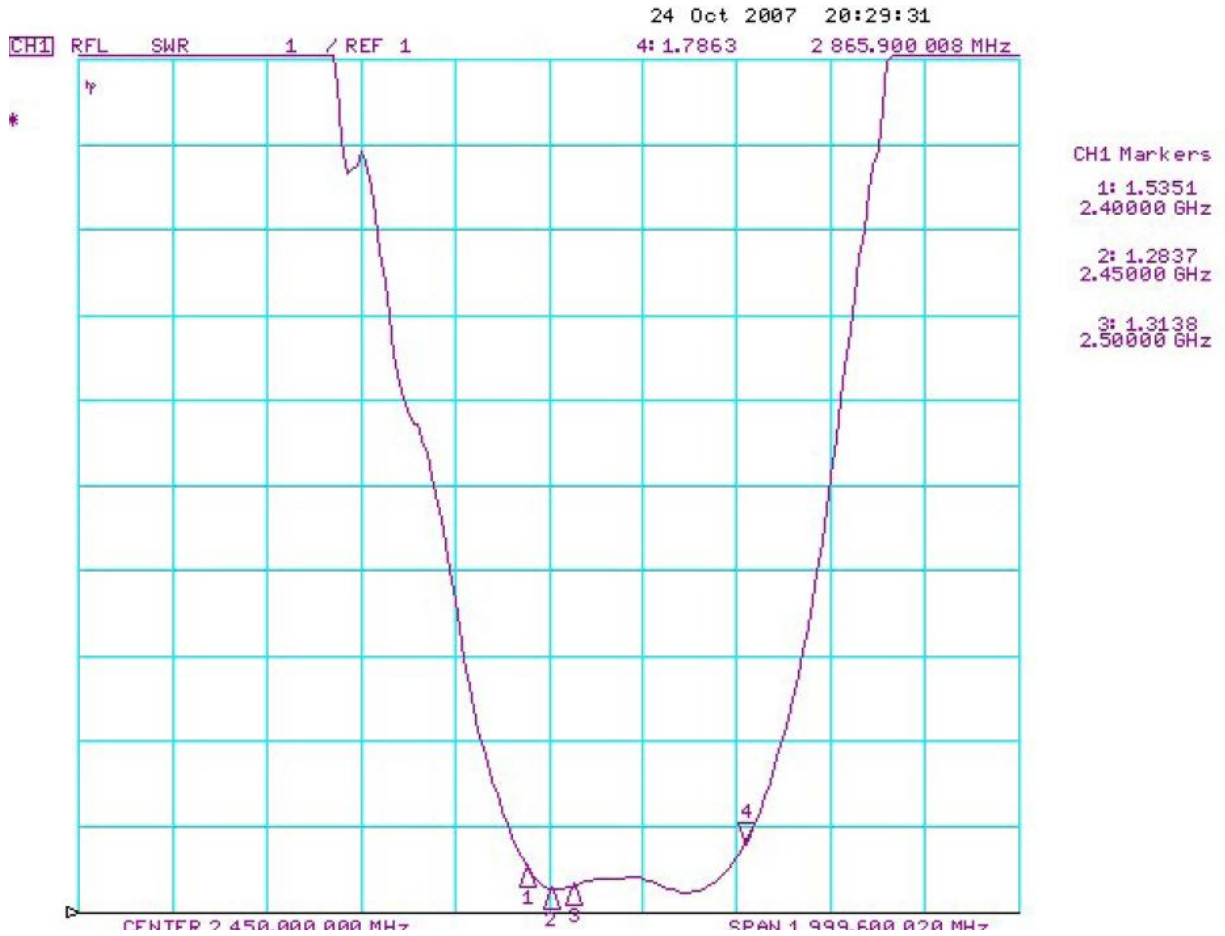
5.0 Measurements

5.1 Smith Chart, VSWR and Return Loss (S11 Mag.)





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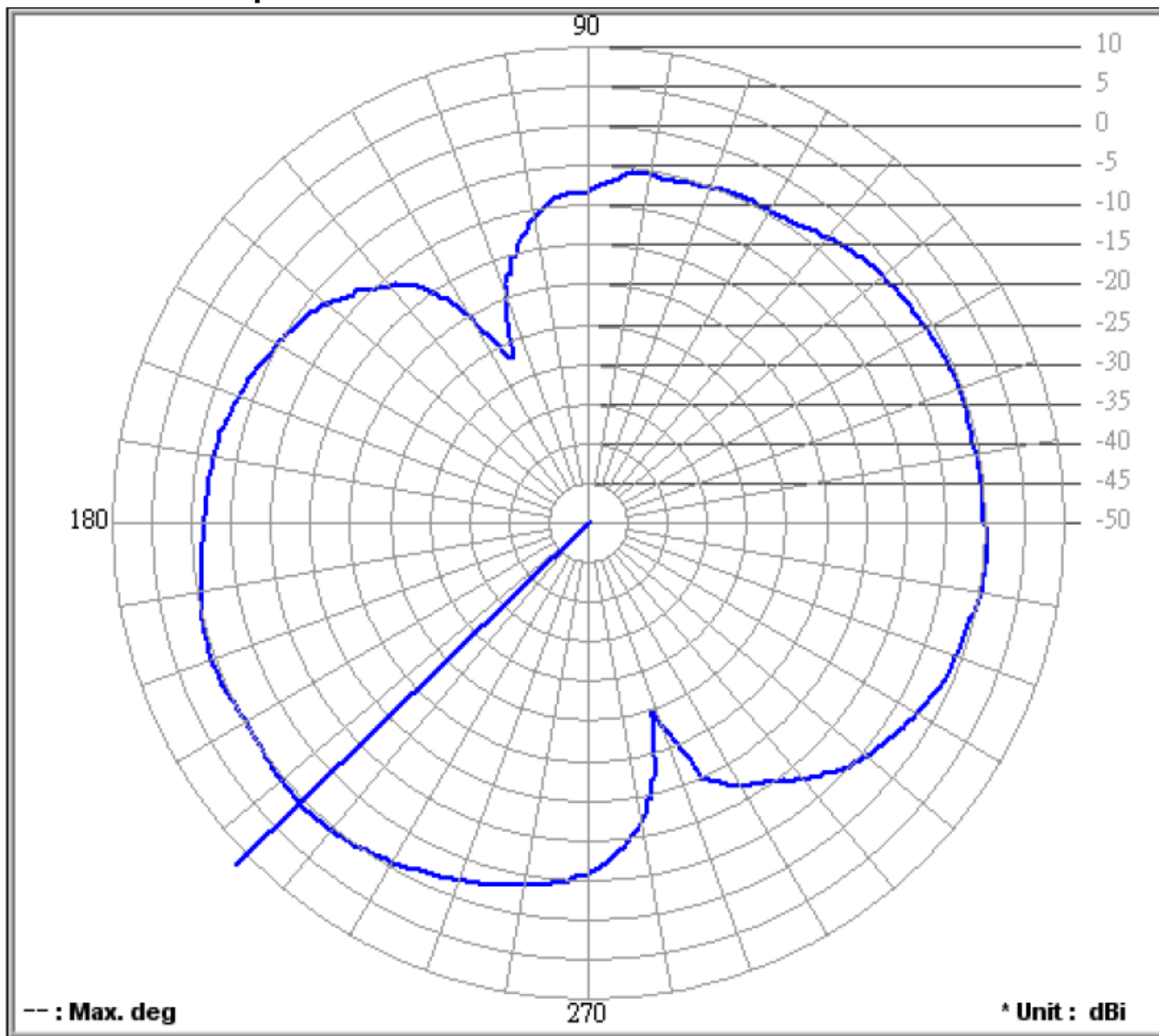
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5.2 Far-field Amplitude - Horizontal Plane 2.4GHz



Frequency (MHz) : **2400.00** Antenna Polarity : **Vertical** Average Value (dB) : **-2.76**

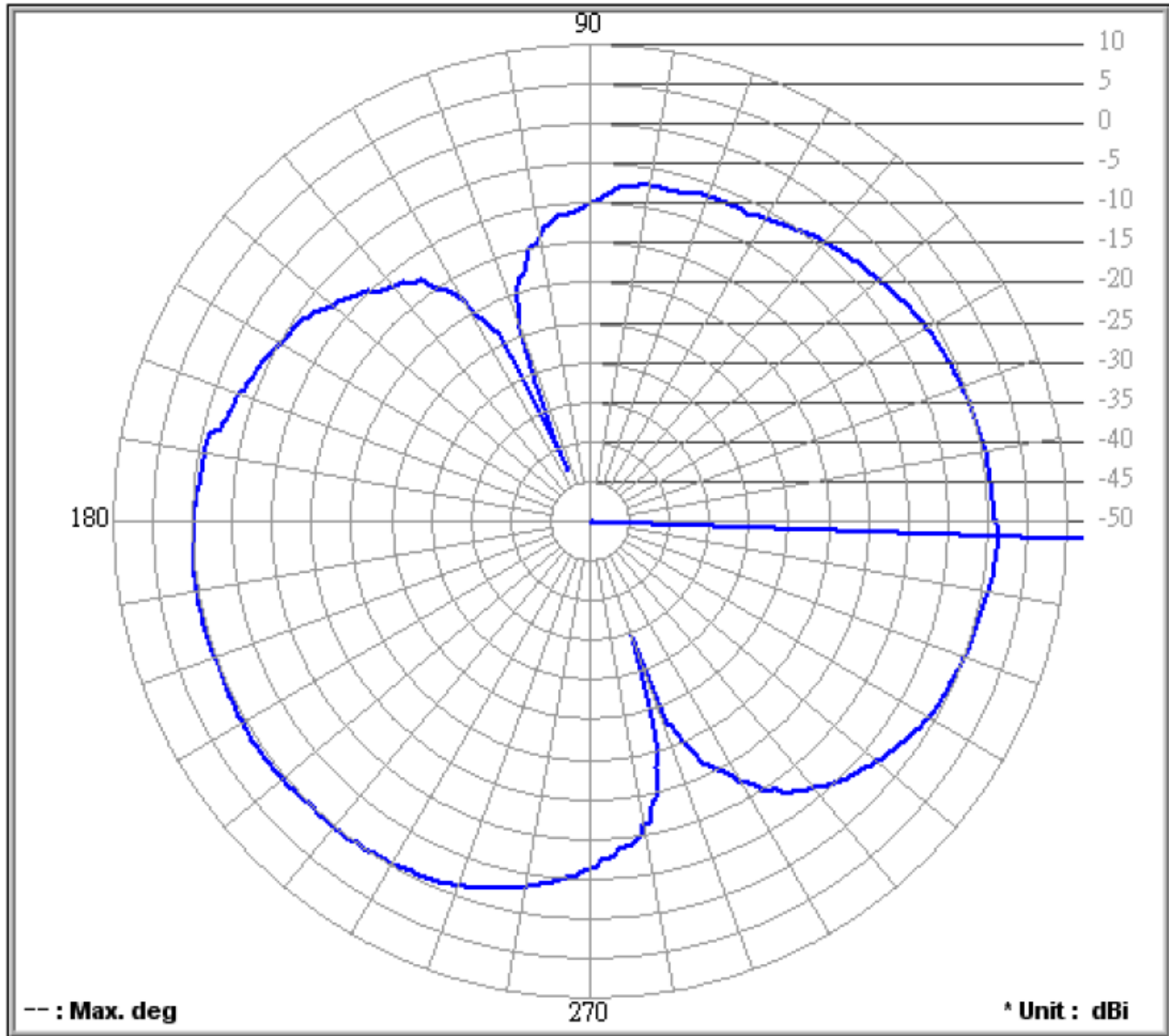
Maximum Value (dB) : **0.66** Maximum Value (degree) : **224**

Minimum Value (dB) : **-27.16** Minimum Value (degree) : **115**



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5.3 Far-field Amplitude - Horizontal Plane 2.45GHz

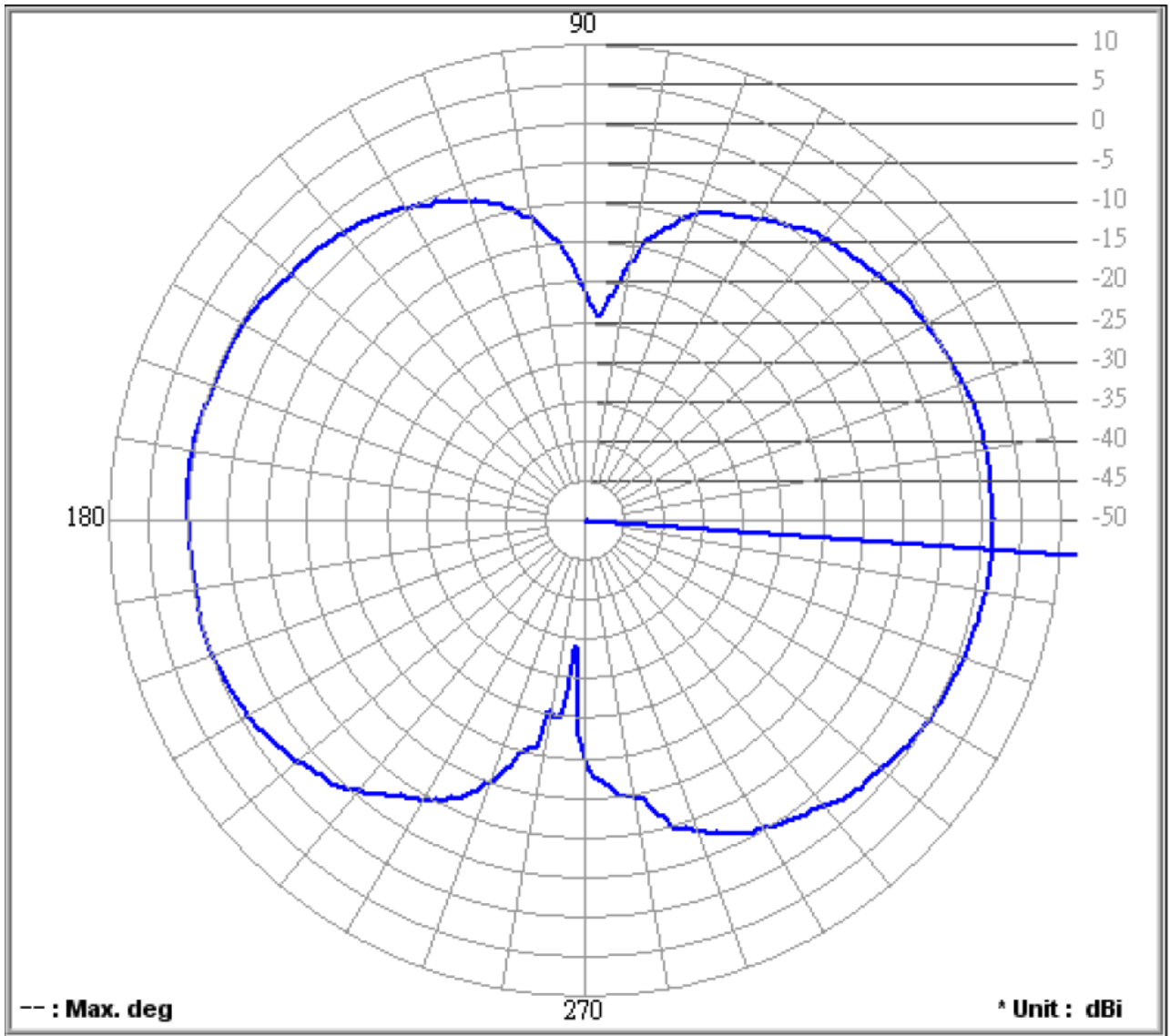


Frequency (MHz) : 2450.00	Antenna Polarity : Vertical	Average Value (dB) : -2.46
Maximum Value (dB) : 1.43	Maximum Value (degree) : 358	
Minimum Value (dB) : -42.89	Minimum Value (degree) : 114	



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5.4 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**

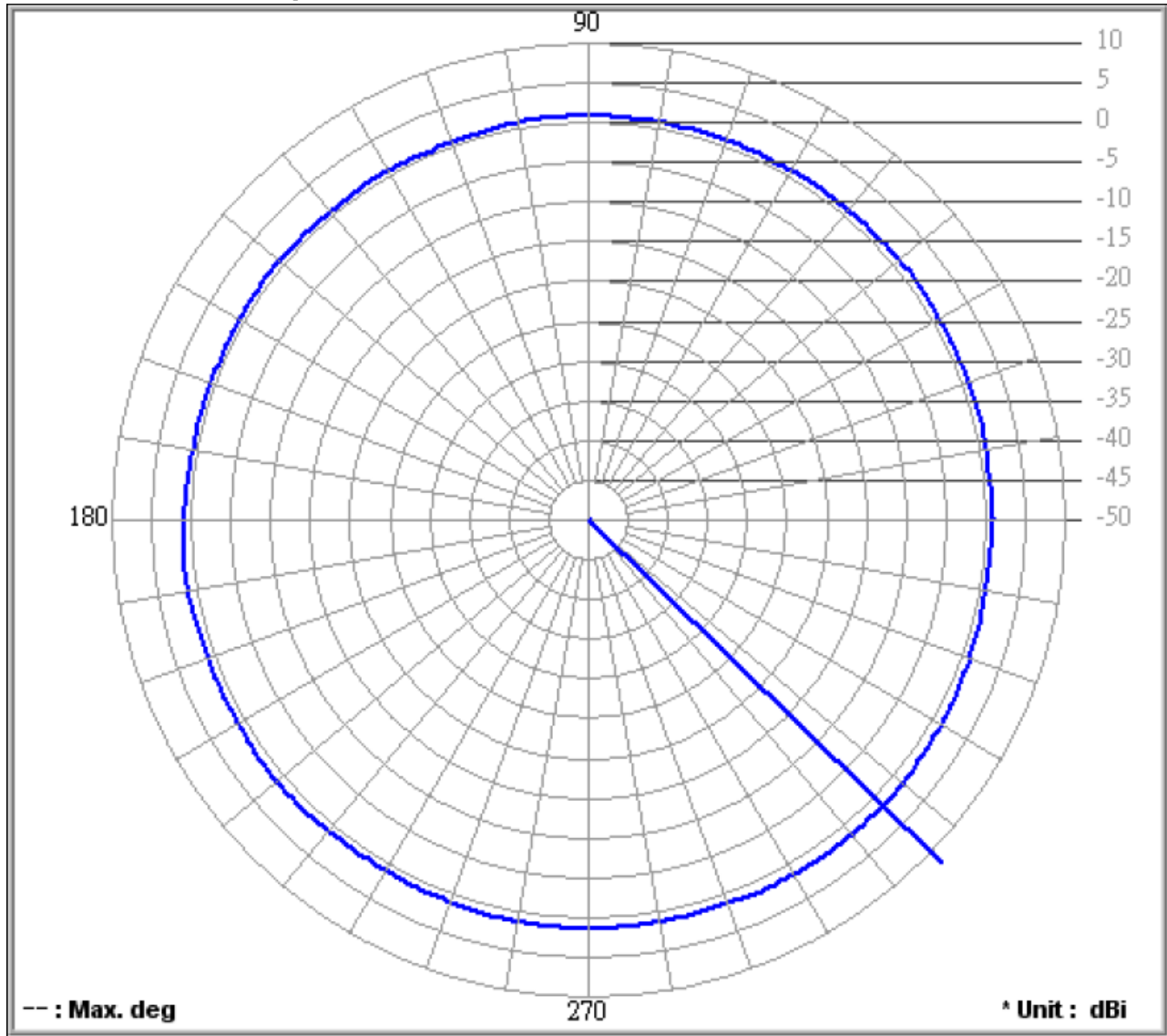
Minimum Value (dB) : **-34.14**

Minimum Value (degree) : **266**



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5.5 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**

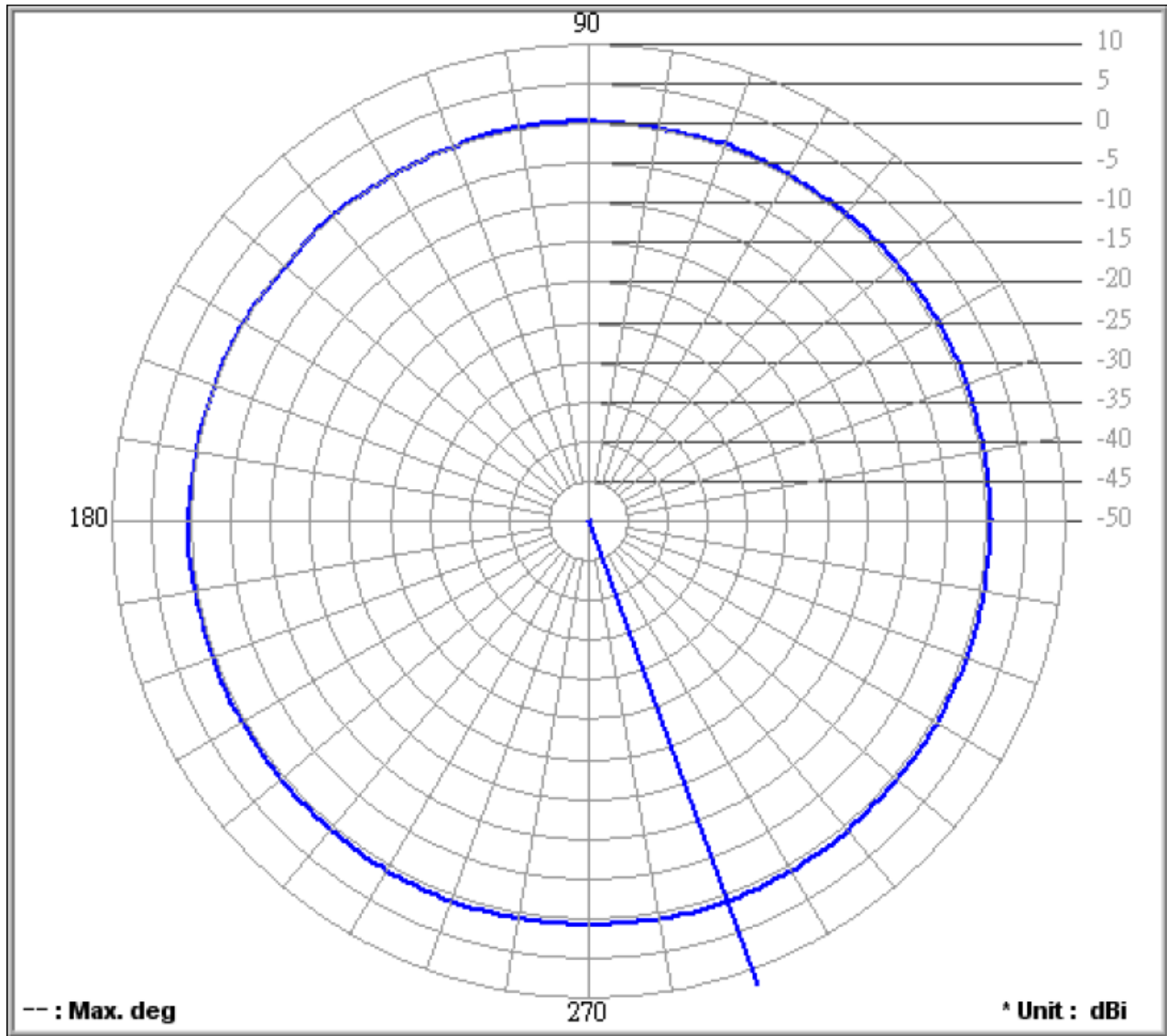
Minimum Value (dB): **0.55**

Minimum Value (degree): **169**



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5.6 Far-field Amplitude - Vertical Plane 2.45GHz



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

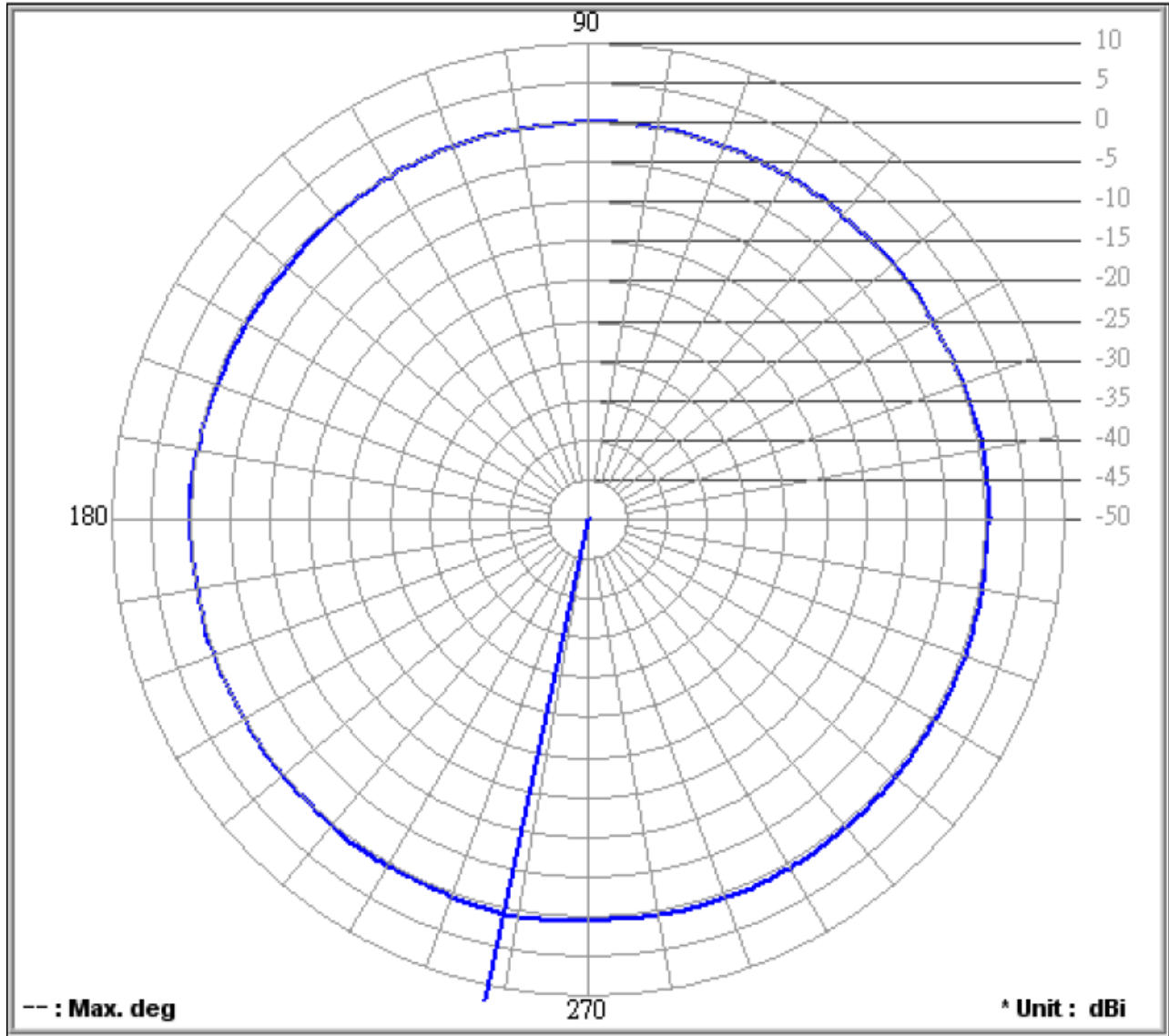
Maximum Value (dB): **0.94** Maximum Value (degree): **290**

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



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5.7 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**