SPECIFICATION

Spec No : MS.01

Part No. : MS.151001A

Product Name : 2.4GHz 2.0dBi Screw mount Dipole Antenna

Description : RP-SMA Male Straight Connector
Hinged
TPE Housing
Length 108mm
ROHS Compliant

REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
1	2015-10-10	All	New product	CN Product Centre	SHAWN

1.0Introduction

The MS01 2.4 GHz dipole RP-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 1.8dBi gain across all bands ensures constant reception and transmission. The antenna structure is designed for robust handling and the housing is made with TPE giving superior environmental reliability and a quality finish. The antenna can be rotated 90 degrees on the base hinge for ease of placement. Connector mount is fully customized.

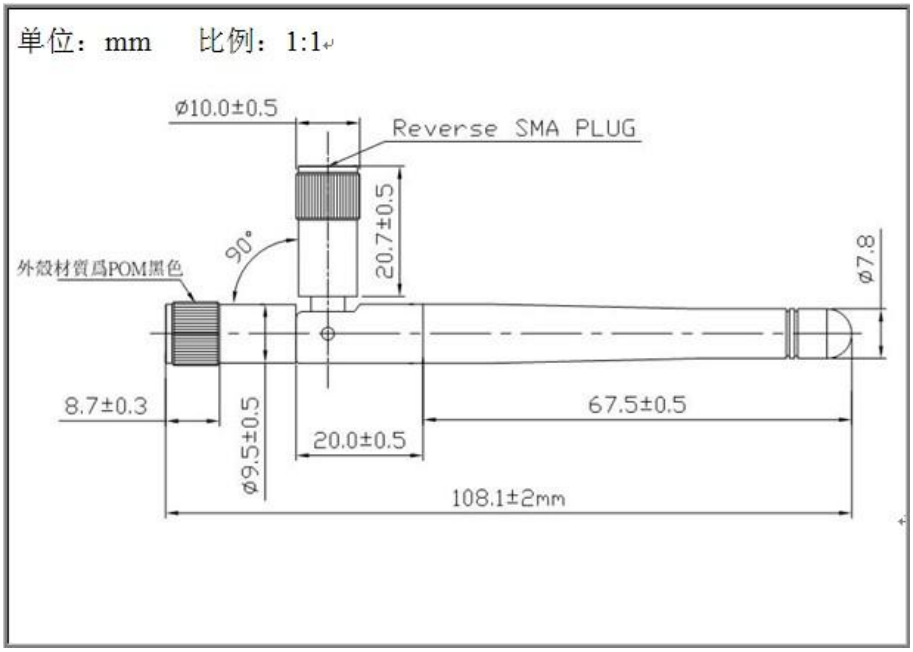
2.0Electrical Properties

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

3.0Mechanical Properties

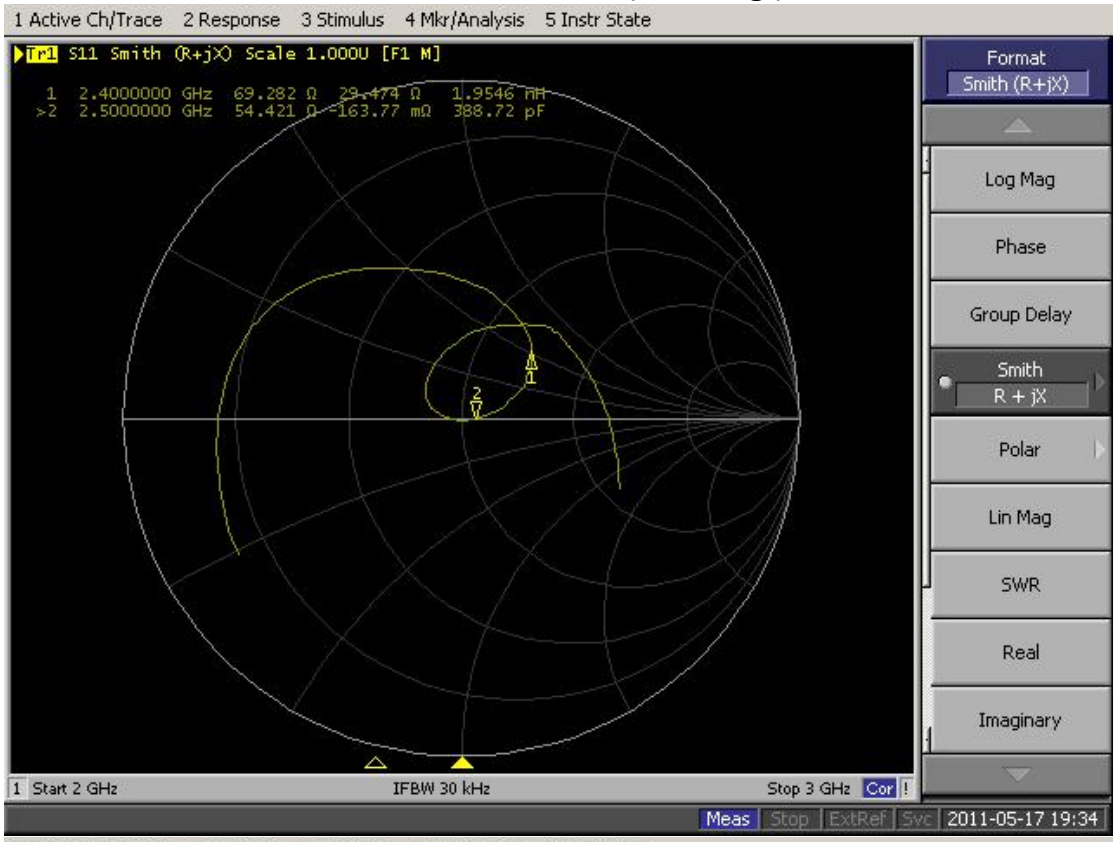
2.1	Cable	RG-178 Coaxial Cable
2.2	Antenna Cover	TPE
2.3	Antenna Base	PC & PBT
2.4	Operating Temperature	-20℃ ~ +65℃
2.5	Storage Temperature	-30℃ ~ +75℃
2.6	Color	Black
2.7	Connector	RP-SMA Plug

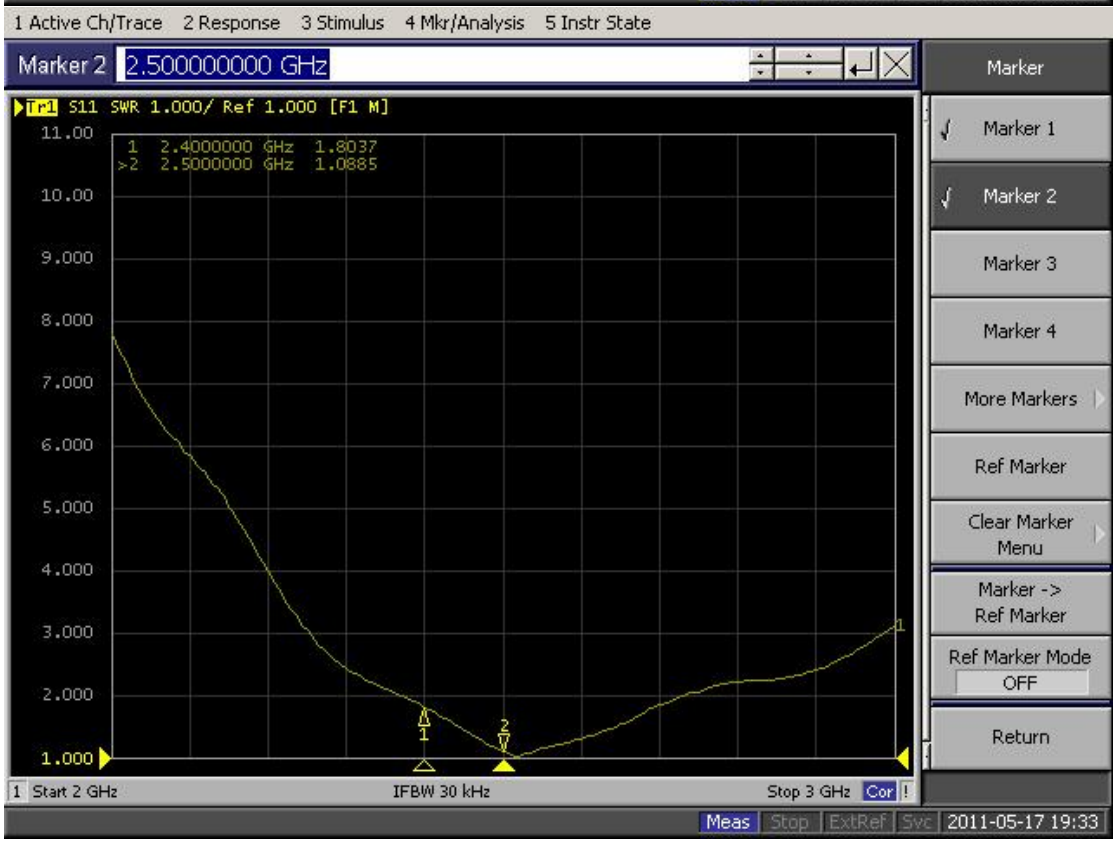
4.0 Outline Drawings and Structure

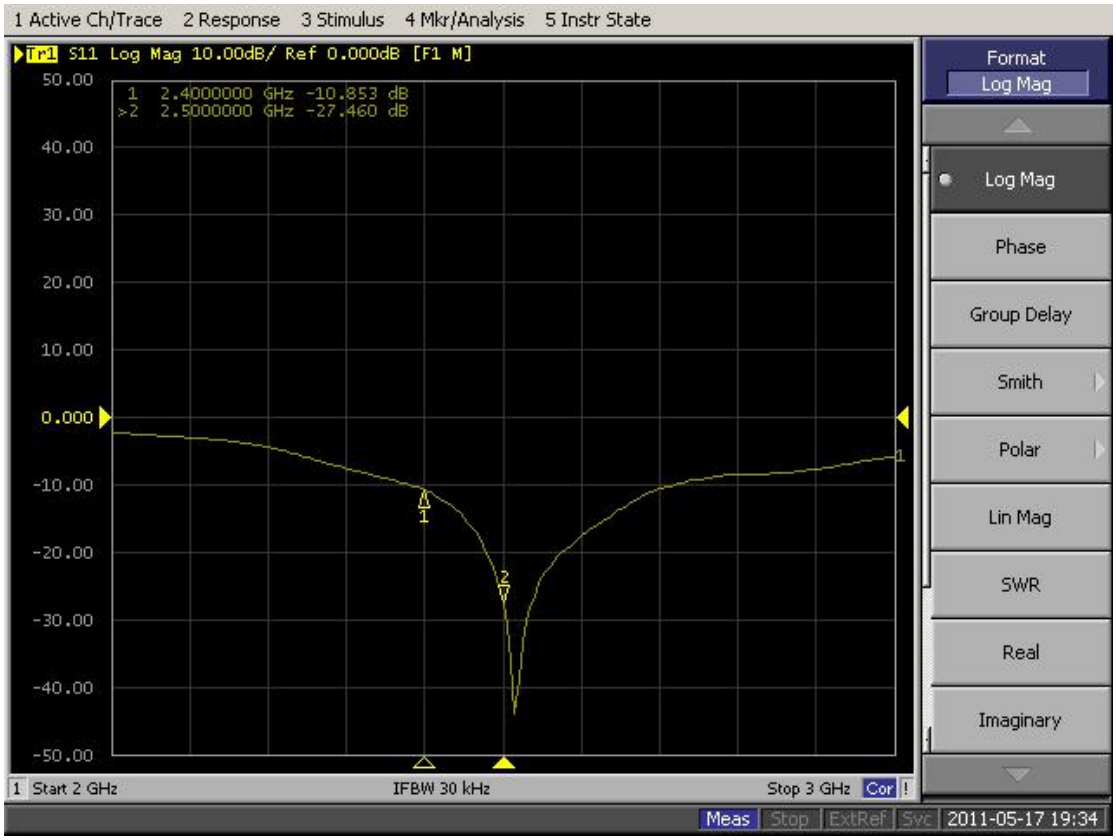


5.0 Measurements

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







5.2 Far-field Amplitude - Horizontal Plane

I. Measurement Setup:

A. Reflection Coefficient Measurement:

- **Instrument:** Network Analyzer (Agilent 8720ES).
- **Setup:**

1. Calibrate the Network Analyzer by one port calibration using O.S.L . calibration kits .
2. Connect the antenna under test(AUT) to the Network Analyzer.
3. Measure the S11(reflection coefficient),Return Loss….

B. Pattern Measurement:

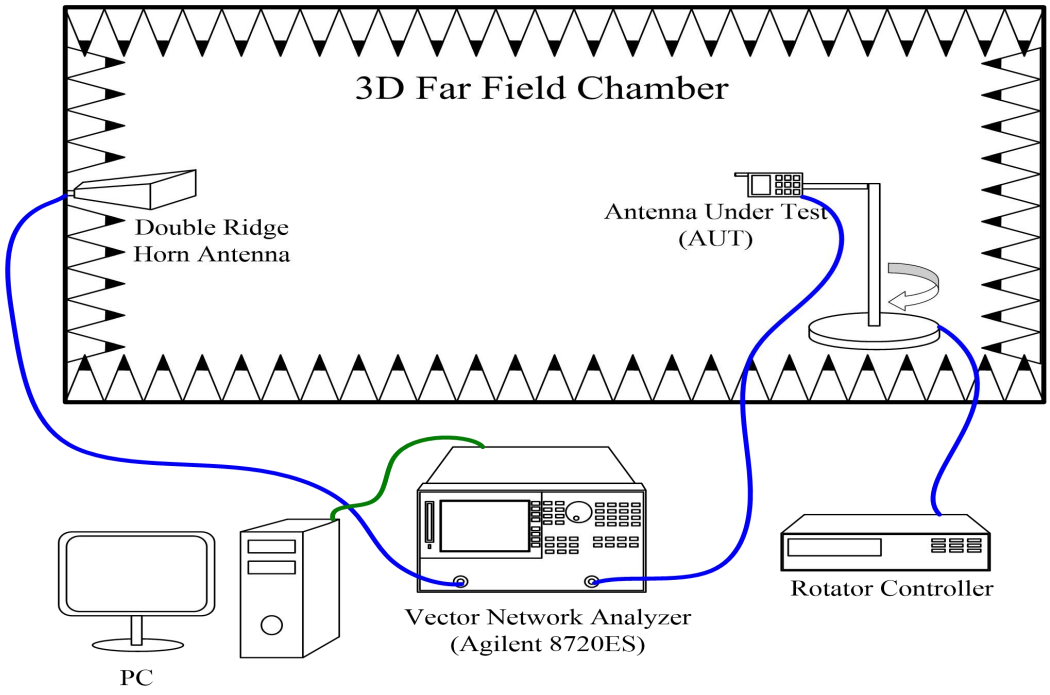
- **Instruments:** Anechoic Chamber, Network Analyzer, Quarter Ridge Horn Antenna.
- **Chamber description:**

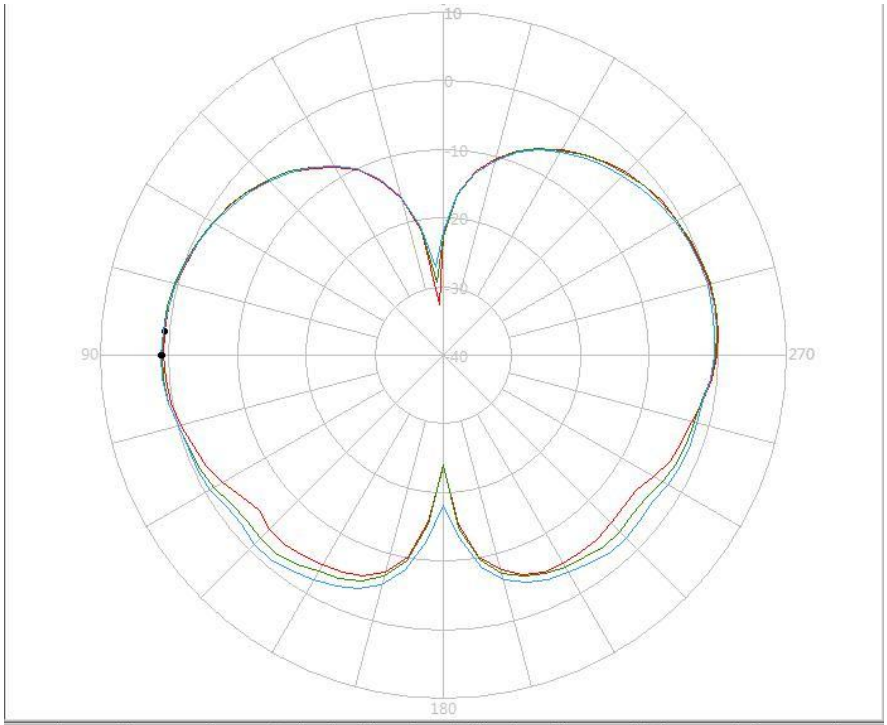
1. The anechoic chamber satisfied a far-field measurement system condition with size of 8m *4m*4m.

2. The Probing antenna is a Quarter Ridge Horn Antenna which is placed in the one

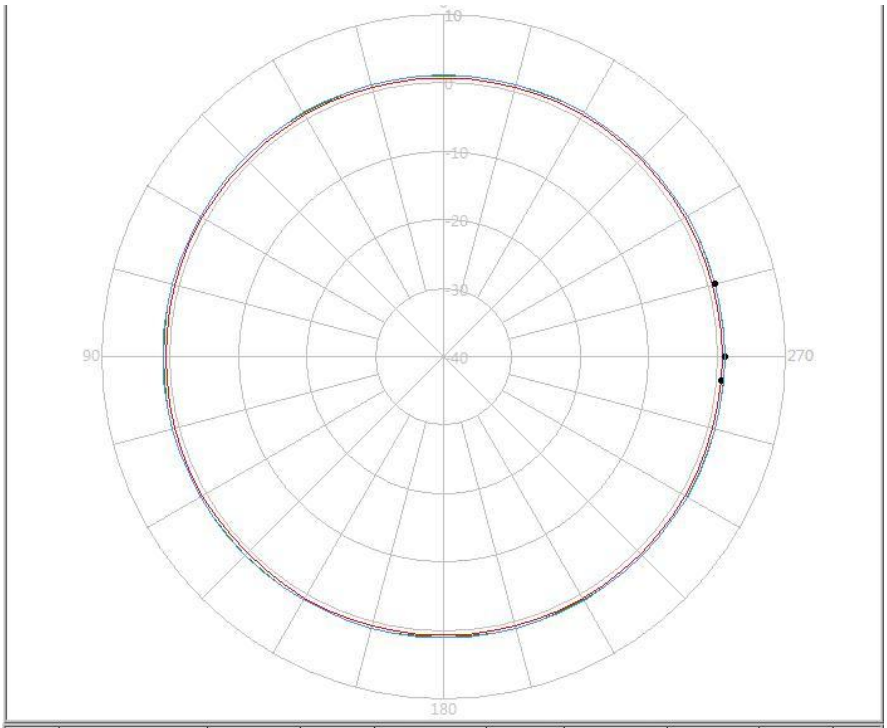
side of chamber And the AUT is placed in the other side of the chamber.

3. The antenna under test is fixed on a step rotator. We can control the rotating angle for accurate or rough measurement.





Pattern		Model Name	Test Mode	Freq(MHz)	Peak Gain(dBi)	Peak angle	Avg. Gain(dBi)	Source Polar.	Date	PAG
1		ante 2.4G 2db	v0_P0	2402.00	0.77	85.00	-3.21	V+H	2011/5/1	-10.08
2		ante 2.4G 2db	v0_P0	2452.00	1.08	90.00	-2.79	V+H	2011/5/1	-9.57
3		ante 2.4G 2db	v0_P0	2492.00	1.12	90.00	-2.60	V+H	2011/5/1	-8.54



Pattern		Model Name	Test Mode	Freq(MHz)	Peak Gain(dBi)	Peak angle	Avg. Gain(dBi)	Source Polar.	Date	PAG
1		ante 2.4G 2db	v0_T90	2402.00	0.78	265.00	0.72	V+H	2011/5/1	0.67
2		ante 2.4G 2db	v0_T90	2452.00	1.11	270.00	1.06	V+H	2011/5/1	1.03
3		ante 2.4G 2db	v0_T90	2492.00	2.00	285.00	1.09	V+H	2011/5/1	1.06