

SPECIFICATION

Spec No : MS.11

Part No. : MS.11.A153

Product Name : 2.4GHz Internal Dipole Antenna

Description : IPEX Connector
Hinged
Length 150mm
ROHS Compliant

REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
1	2025-12-29	A11	New product	Product Centre	SHAWN

Manufacturer's Address : No. 202, Lane 1, Guanyin Road, Dakang Community, Yuanshan Street, Longgang District, Shenzhen

1.0 Introduction

The GW.11 2.4 GHz dipole internal antenna is ideal for 2.4 GHz wireless applications such as Bluetooth and Wireless LAN. At only 84mm 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 giving superior environmental reliability and a quality finish.

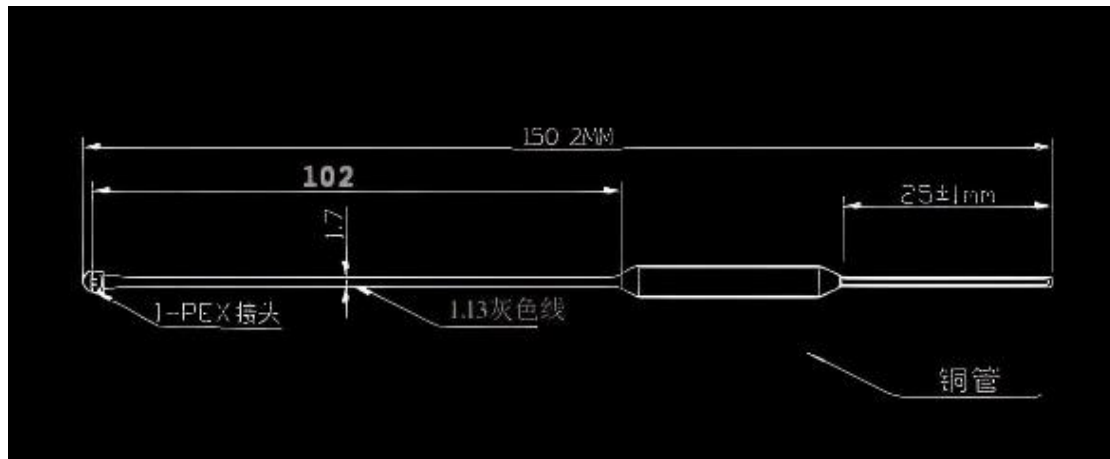
2.0 Electrical Properties

1.1	Frequency	2.4 GHz ~ 2.5 GHz
1.2	Gain (peak)	1.15dBi
1.3	V. S. W. R	2MAX
1.4	Return Loss	-10dB Maximum
1.5	Radiation	Omni-directional
1.6	Polarization	Linear Vertical
1.7	Power Handling	1W

3.0 Mechanical Properties

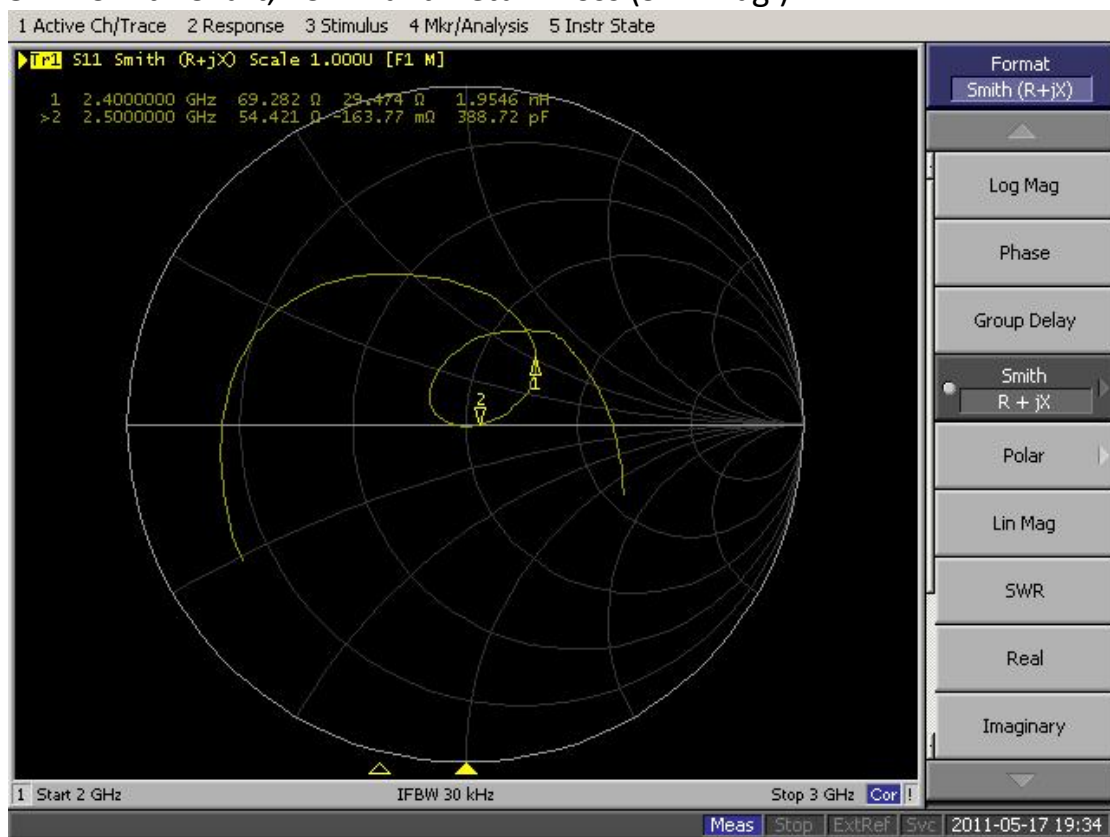
2.1	Cable	RG-1.13 Coaxial Cable
2.2	Antenna Cover	
2.3	Antenna Base	
2.4	Operating Temperature	-20°C ~ +65°C
2.5	Storage Temperature	-30°C ~ +75°C
2.6	Color	Black or Grey
2.7	Connector	IPEX

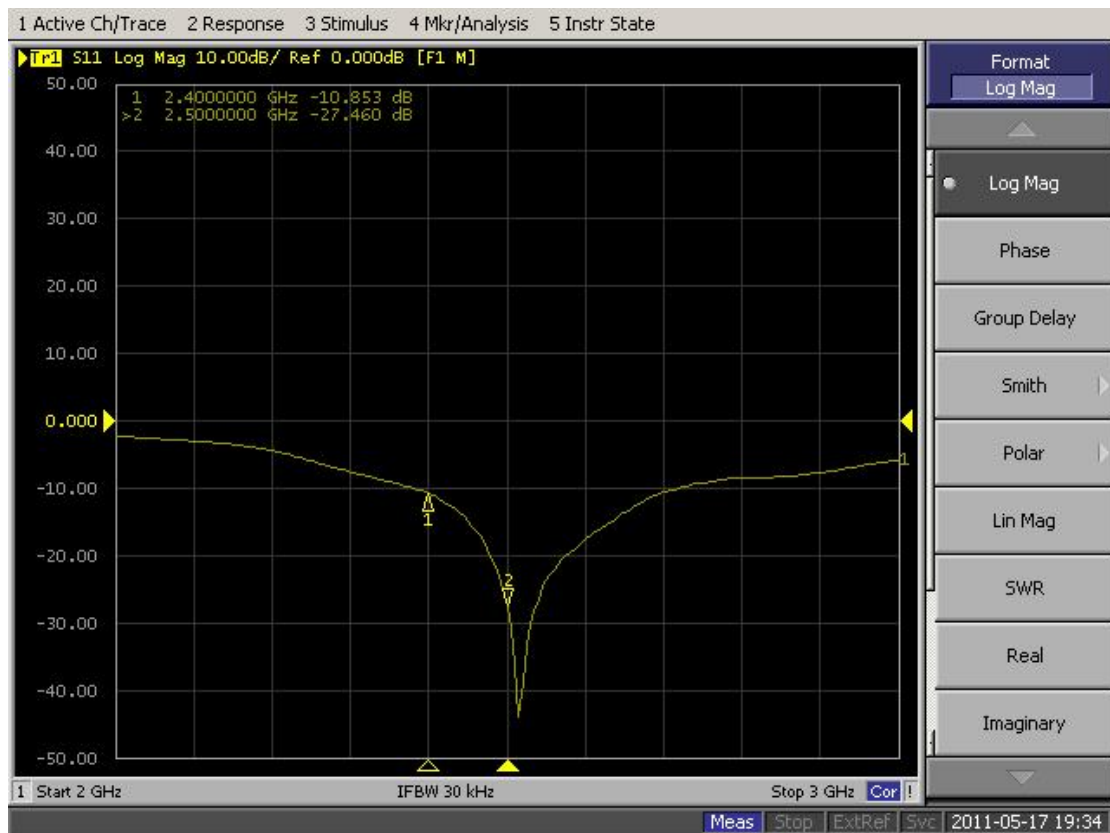
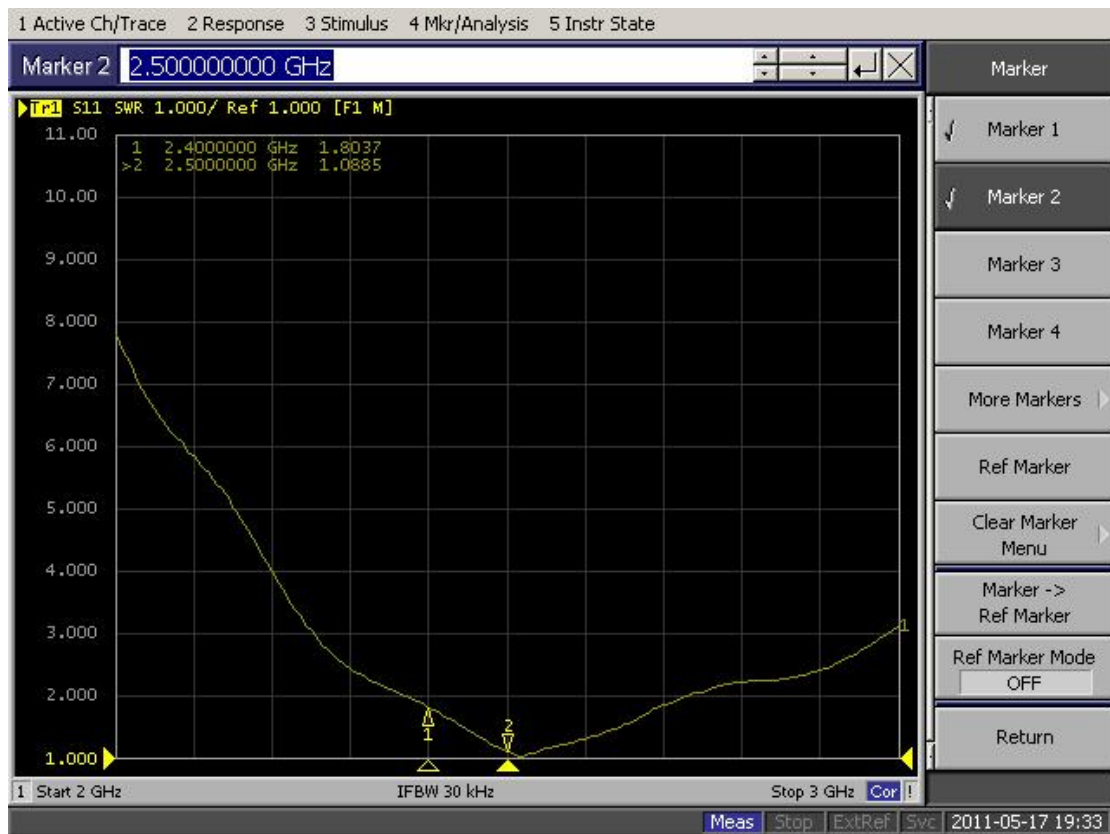
4.0 Outline Drawings and Structure



5.0 Measurements

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





5.2 Far-field Amplitude - Horizontal Plane

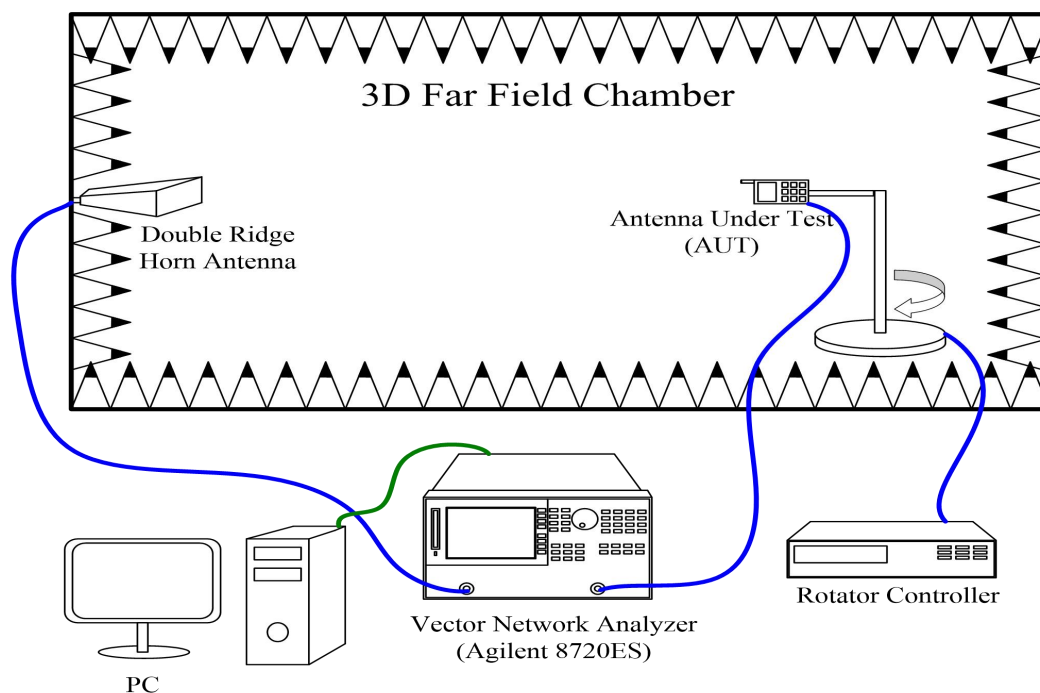
I. Measurement Setup:

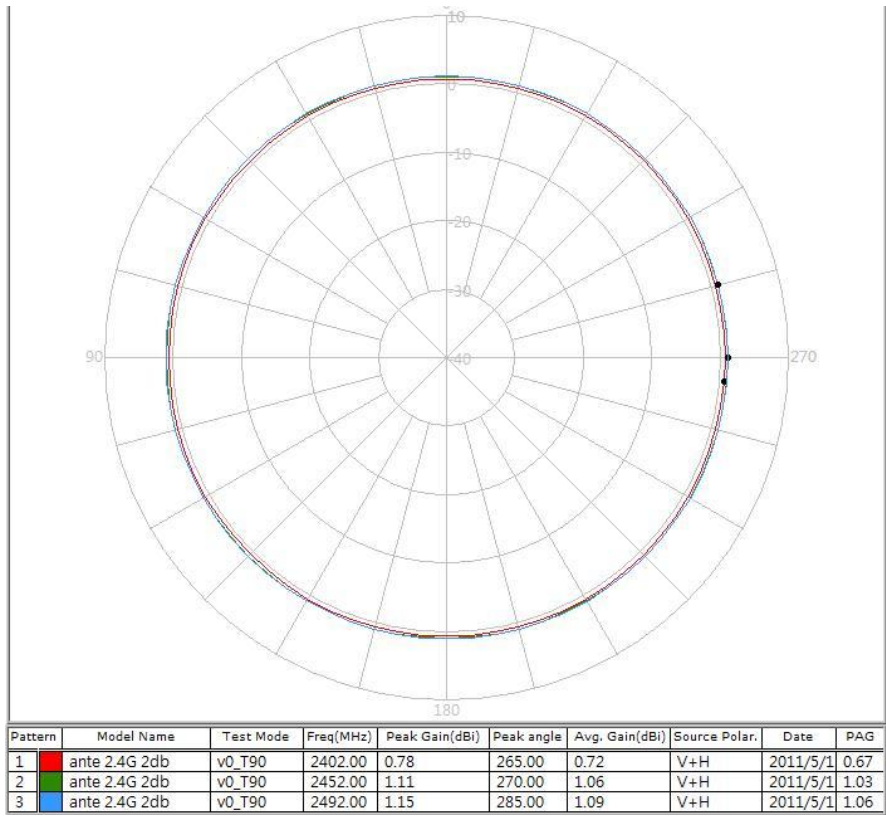
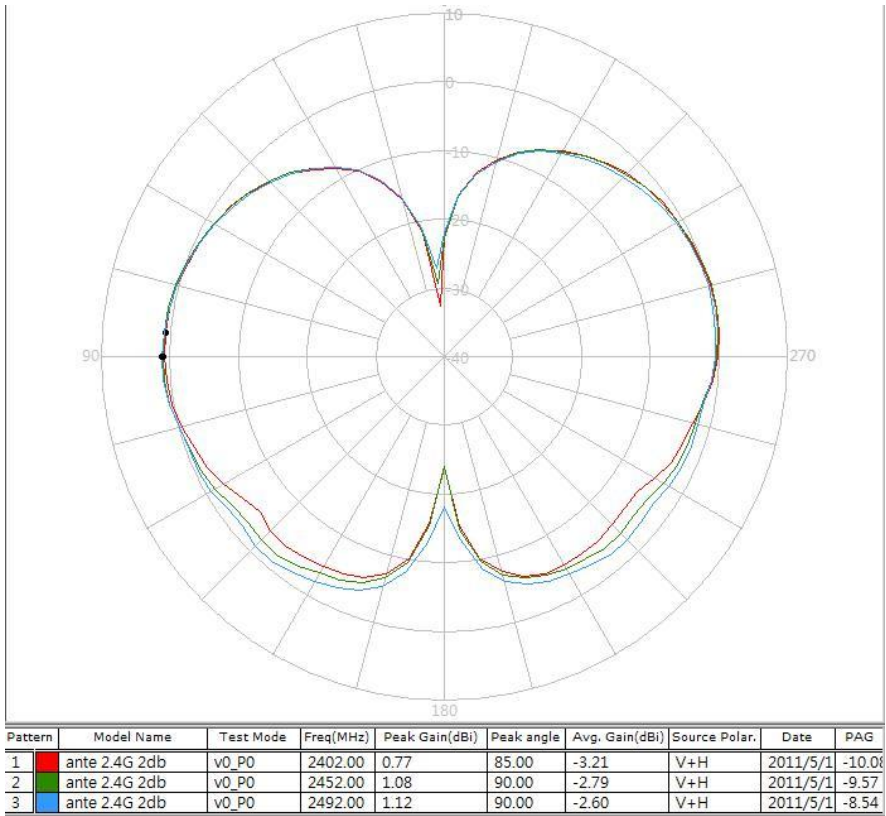
A. Reflection Coefficient Measurement:

- **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.





5.3 Linear 3D Pattern

Model name

ante2.4G

Test mode

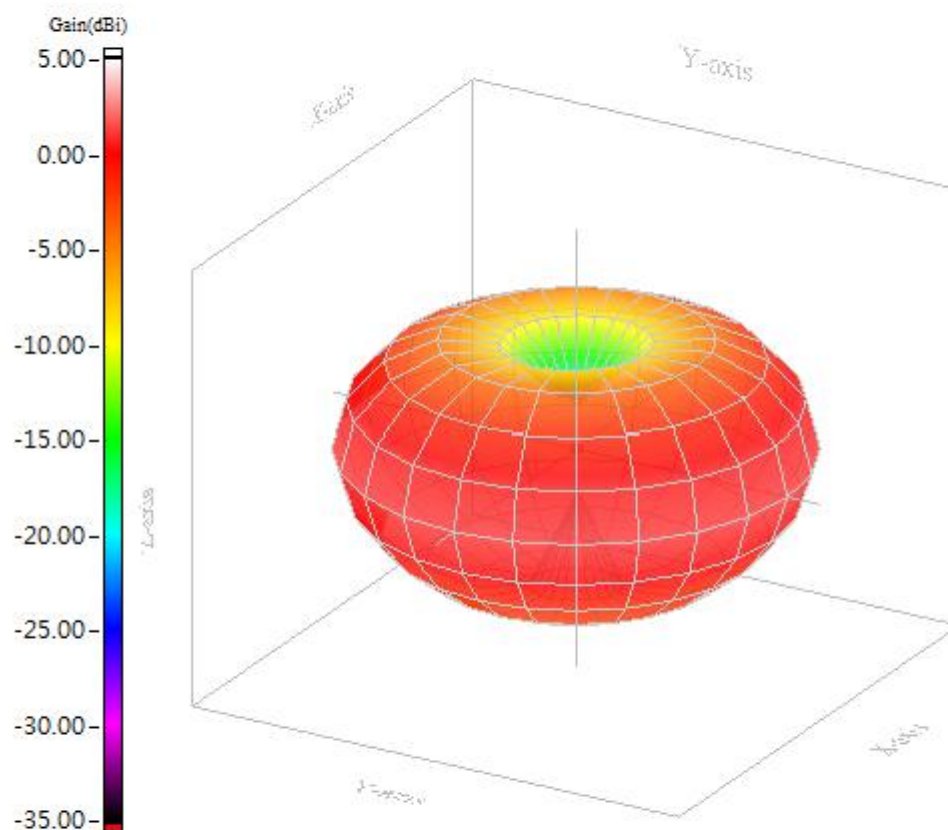
V0

Test frequency / Polarization

2450.00 MHz / Vector sum

Test date

2011/5/17



Max gain= 1.07dBi, at (90, 225)
MEG(mean effective gain)= -2.90dBi
Directivity(dB)= 2.41
Efficiency= -1.34dB, 73.44%