Straight

Hinged rotated at 90°

GW.11.A153

Specification

Part No.	**GW.11.A153**
Product Name	2.4GHz 2.3dBi Screw mount Dipole Antenna
Feature	RP-SMA(M) Connector Hinged TPE Housing IP65 Length 84mm ROHS Compliant

1. Introduction

The GW.11 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 84mm in length omni-directional 2.3dBi 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 customizable.

2. Specification Table

Electrical	GSM Band			
Communication System	**Bluetooth**	**WiFi**	**ZigBee**	**2.4GHz ISM**
	2401-2480	2412-2462	2410-2480	2400-2483.5
Peak Gain (dBi)*	2.3			
Average Gain (dBi)*	-0.88			
Efficiency (%)*	80%			
Return Loss (dB)*	-10dB Maximum			
Radiation	Omni-Directional			
Polarization	Linear Vertical			
Power Handling	1W			
Impedance	50Ω			

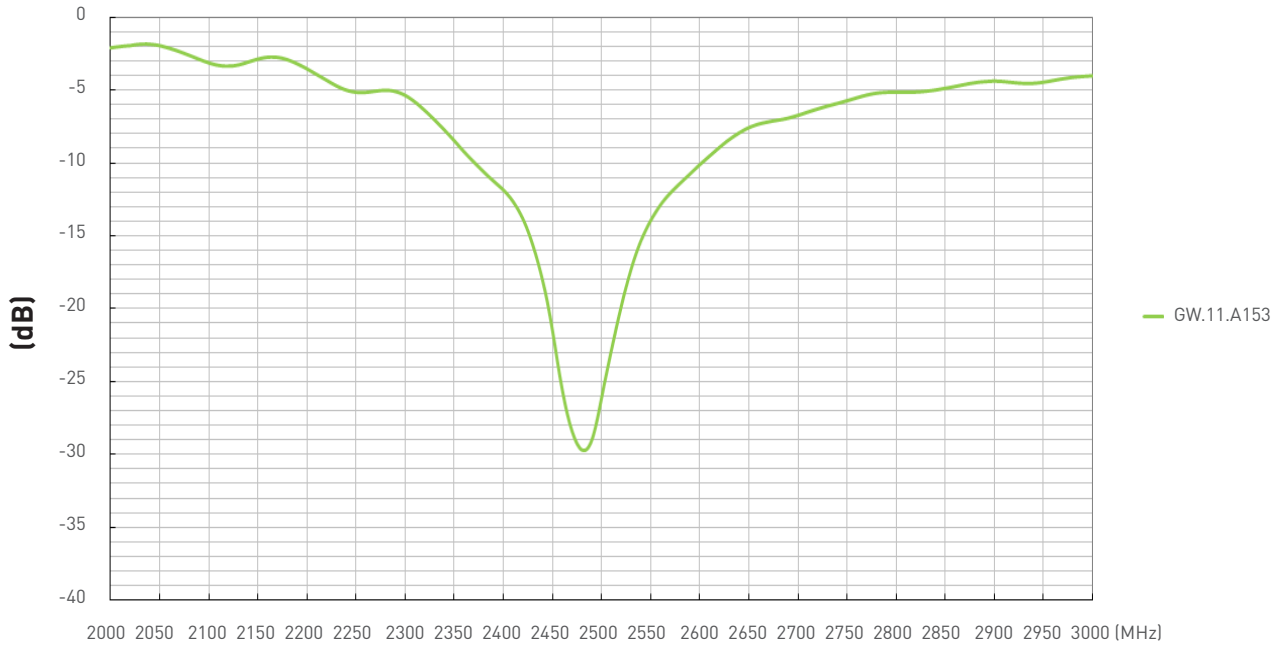
Mechanical	
Cable	RG-178 Coaxial Cable
Antenna Cover	TPE
Antenna Base	PC & PBT
Color	Black
Connector	RP-SMA(M)
IP Rating	IP65-Dust Tight-protected from low pressure water jets

Environmental	
Operation Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C

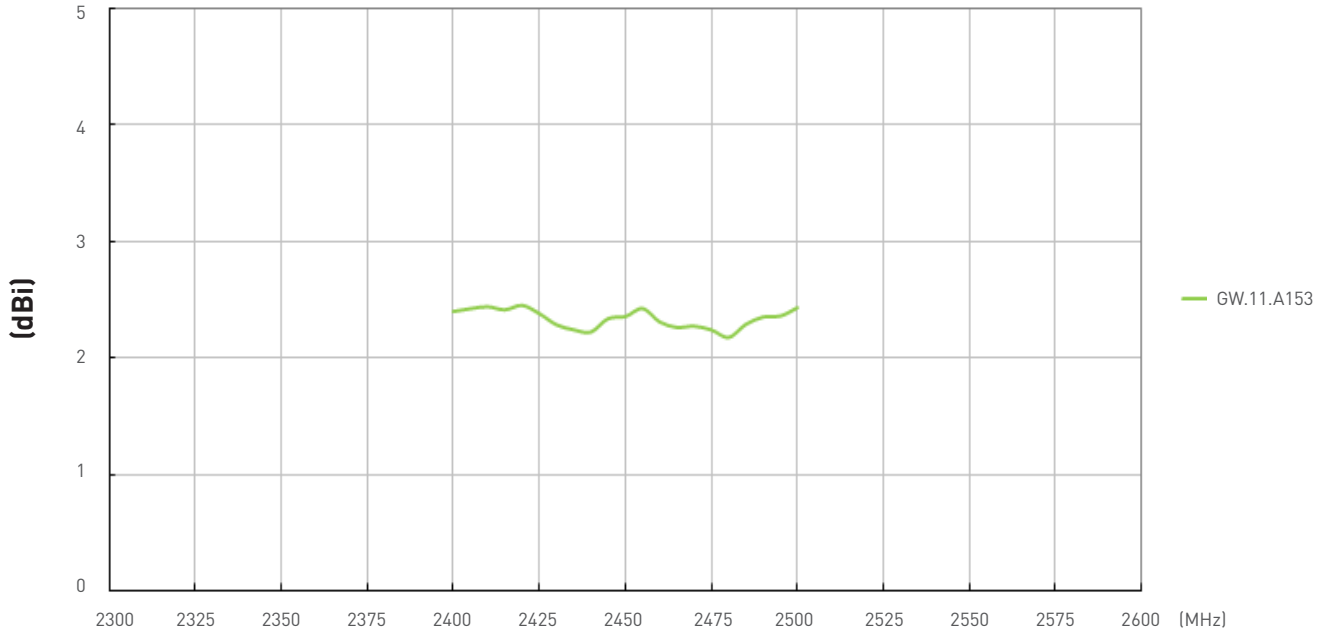
***Note:** The antenna was measured in free space

3. Antenna Characteristics

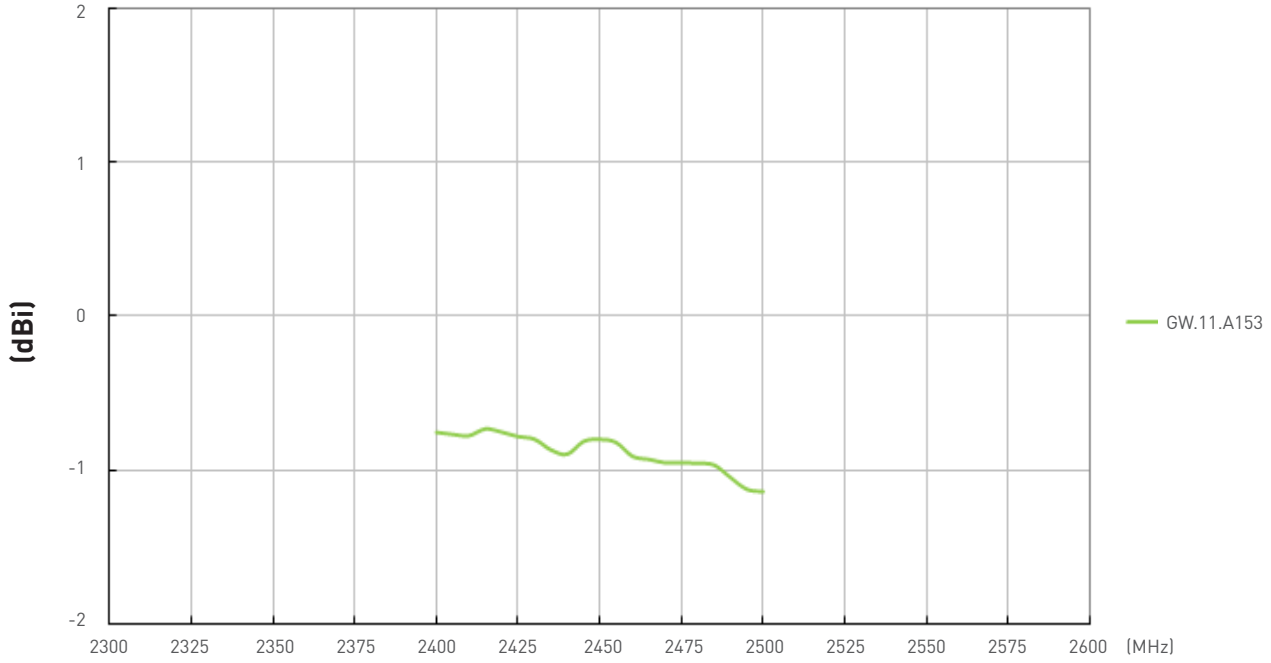
3.1 Return Loss



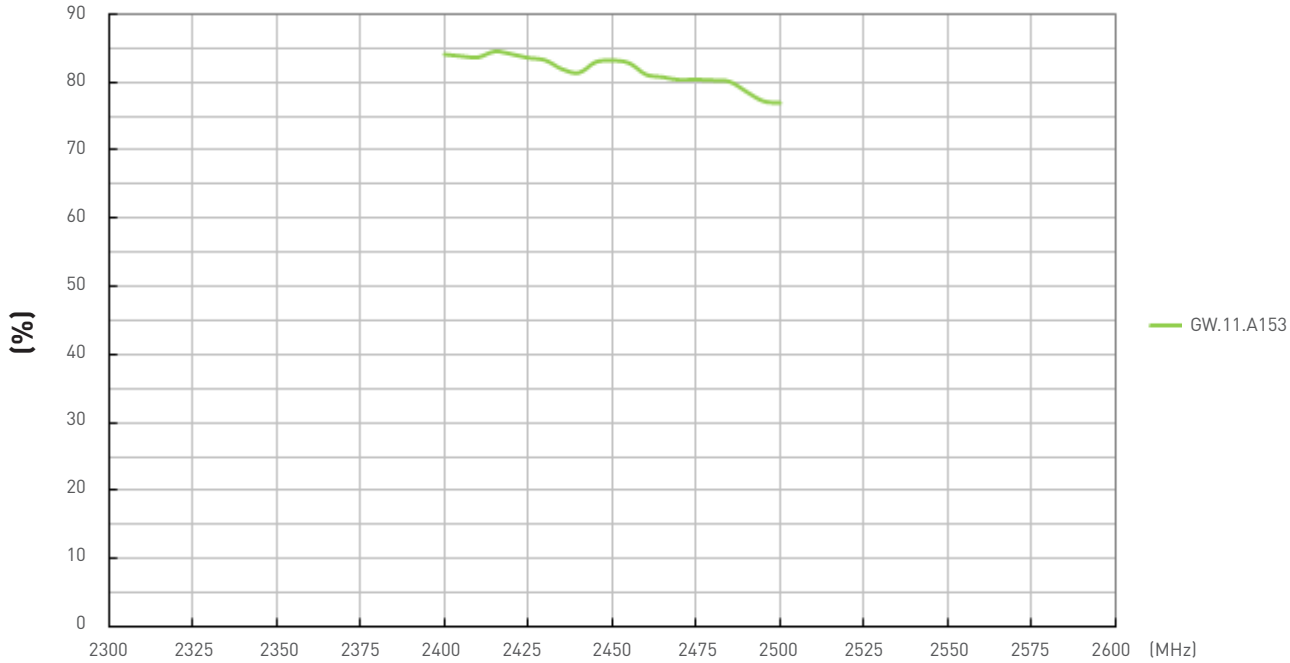
3.2 Peak Gain



3.3 Average Gain

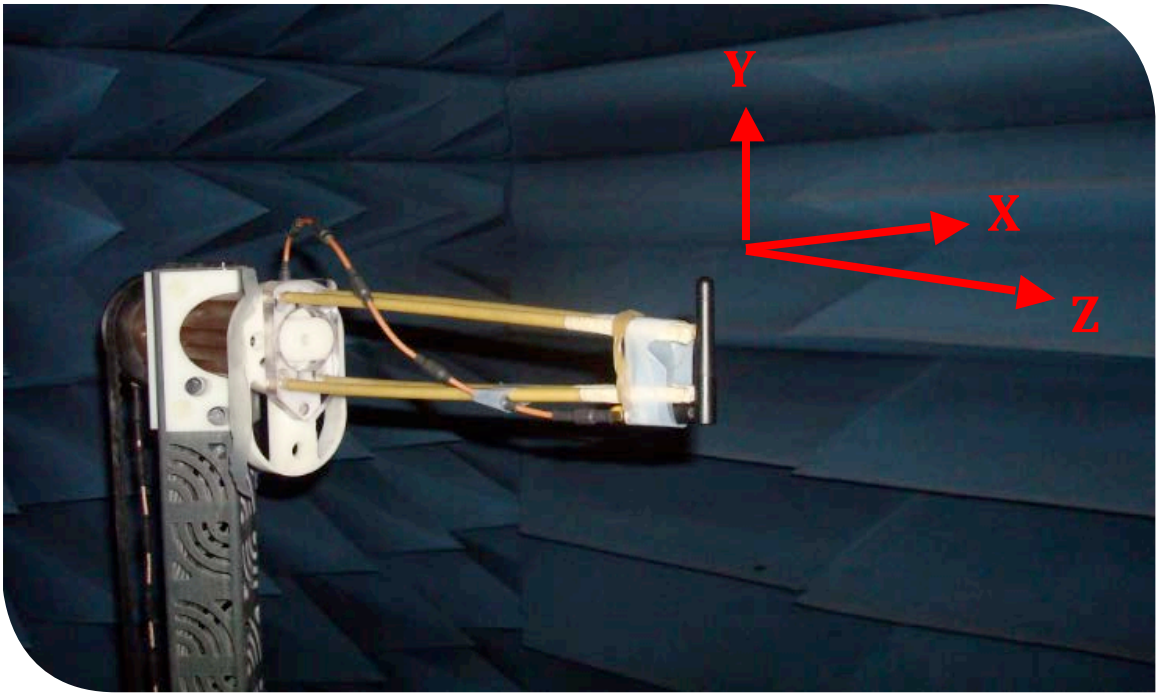


3.4 Efficiency



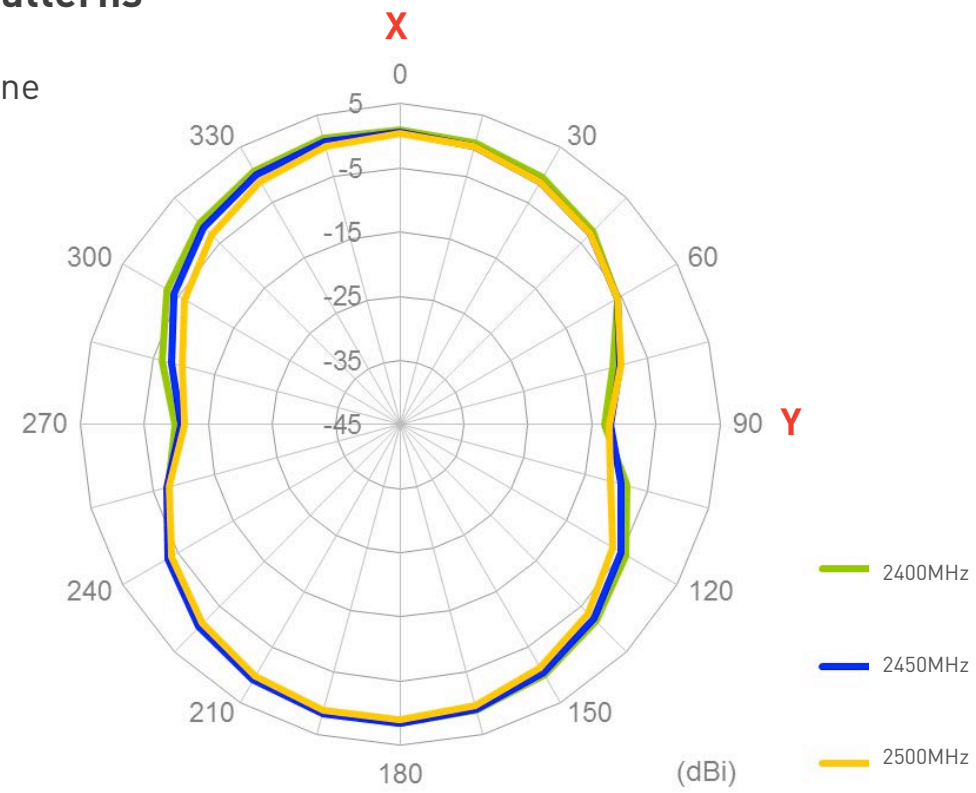
4. Radiation Patterns

The antenna radiation pattern was measured in ETS Anechoic Chamber.
The testing setup is as below.
The antenna was measured in free space.

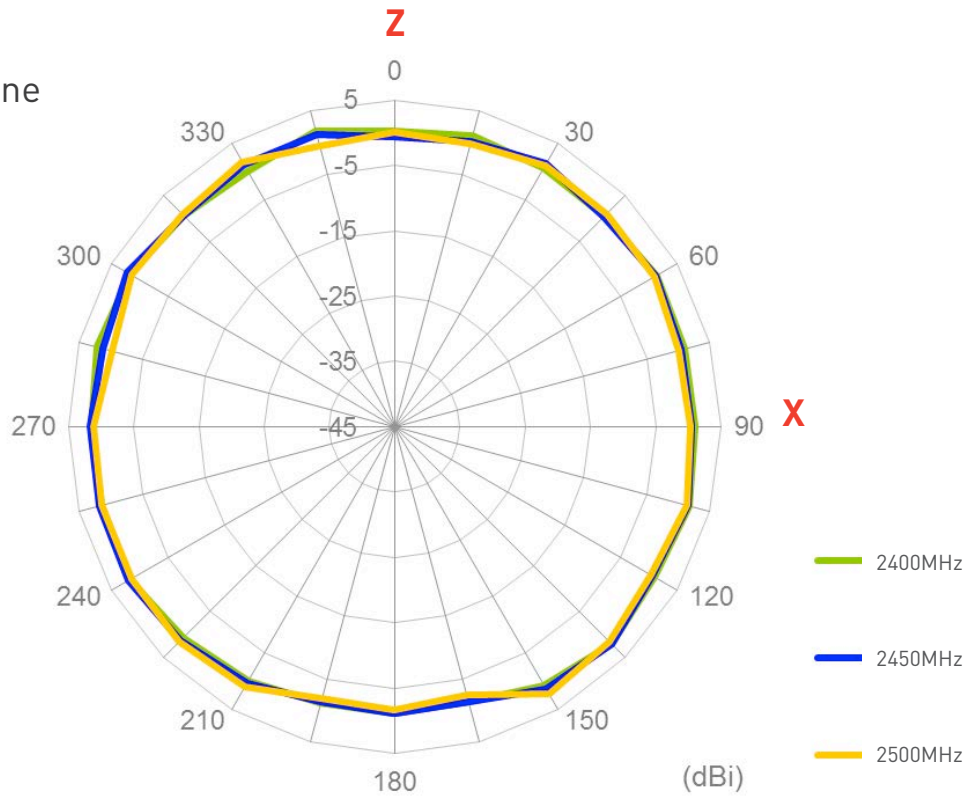


Radiation patterns

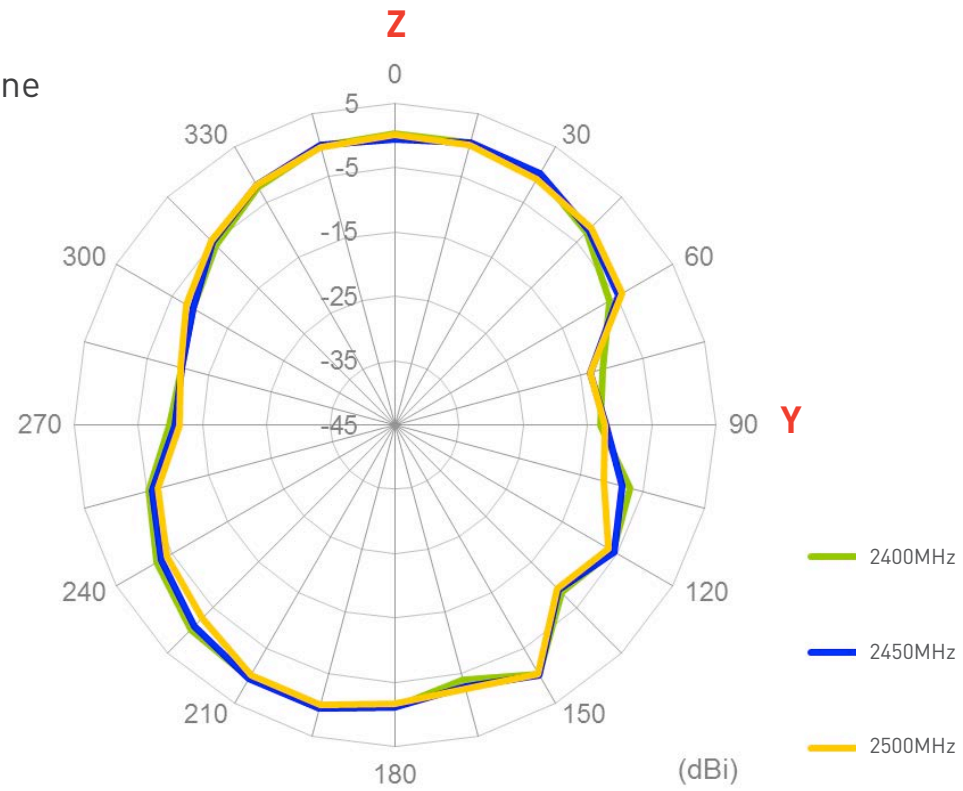
XY Plane



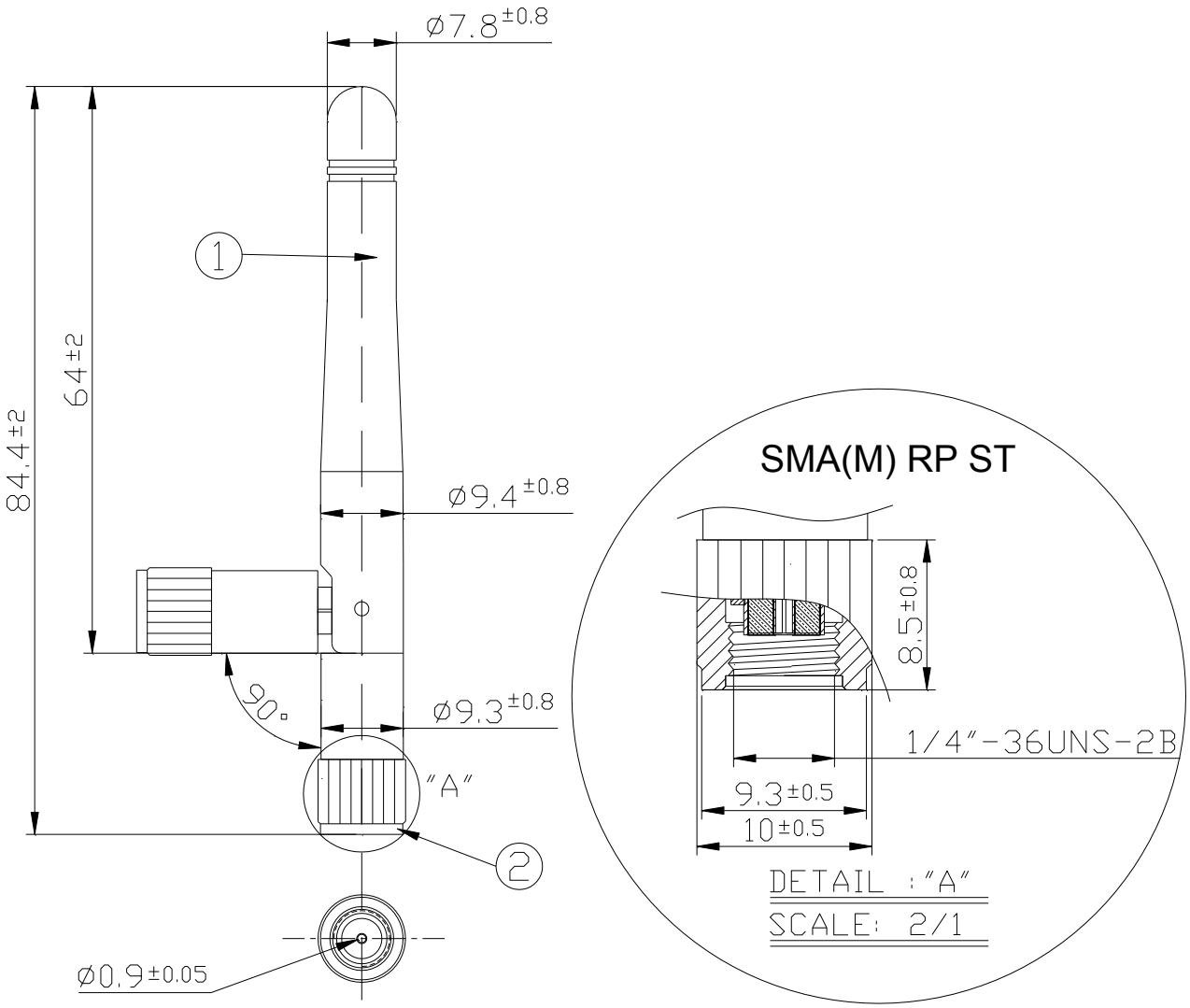
XZ Plane



YZ Plane


Z
0
30
60
90
Y
120
150
180
210
240
270
300
330
5
-5
-15
-25
-35
-45
(dBi)
2400MHz
2450MHz
2500MHz

5. Drawing



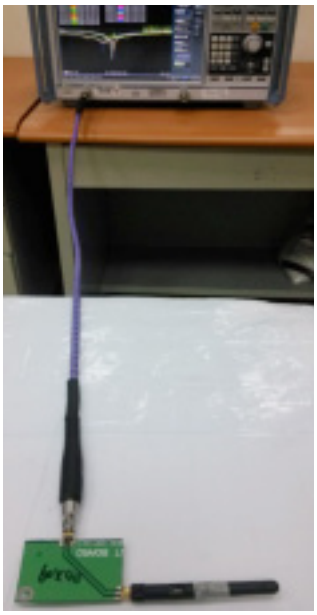
	Name	Material	Finish	QTY
1	Antenna Housing	TPU	Black	1
2	SMA(M) RP	PBT+Brass	Black	1

6. Application Note

6.1 The GW.11 antenna measurement setup

(40mm*60mm PCB board)

On the short side



Antenna straight

Antenna R/A

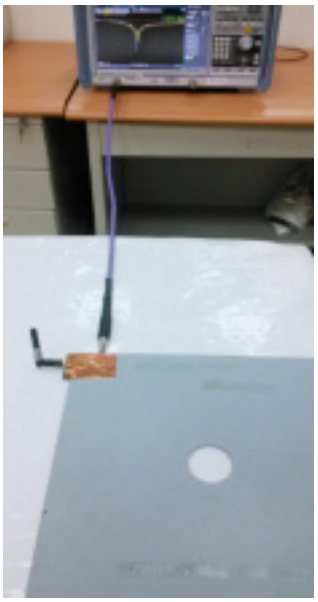
On the long side

Antenna straight

Antenna R/A

On the 30cmx30cm ground plane

Antenna straight



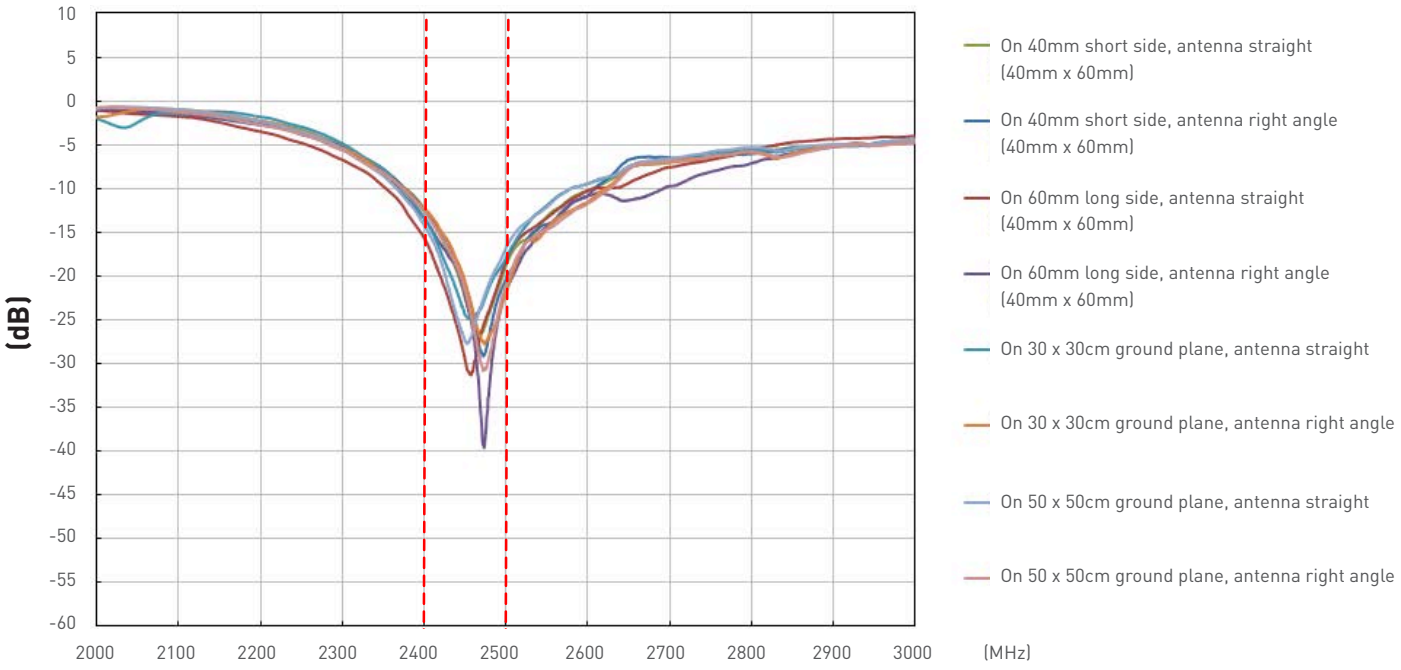
Antenna R/A

On the 50cmx50cm ground

Antenna straight

Antenna R/A

6.2 Return Loss when antenna setup on different conditions



6.3 The GW.11 antenna measurement setup

(40mm*100mm PCB board)

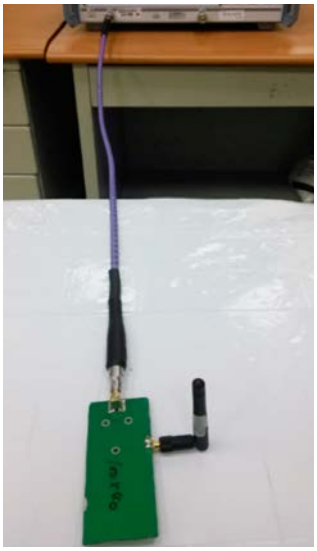
On the short side

Antenna straight

Antenna R/A

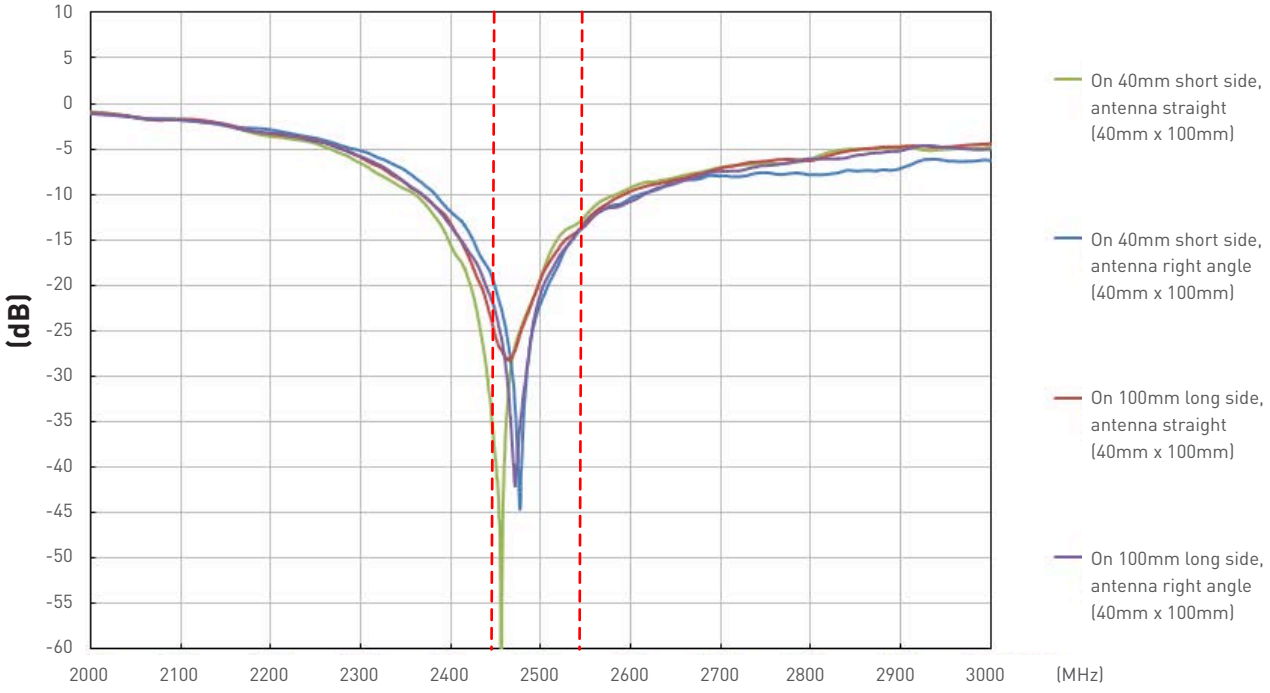
On the long side

Antenna straight



Antenna R/A

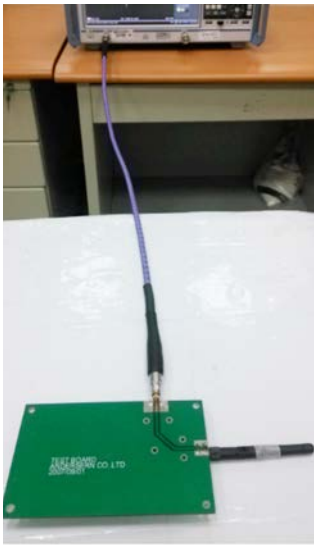
6.4 Return Loss when antenna setup on different conditions



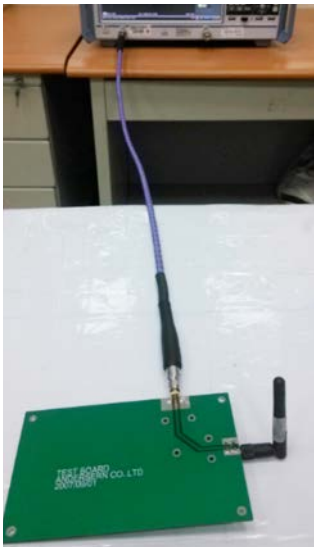
6.5 The GW.11 antenna measurement setup

(90mm*150mm PCB board)

On the short side

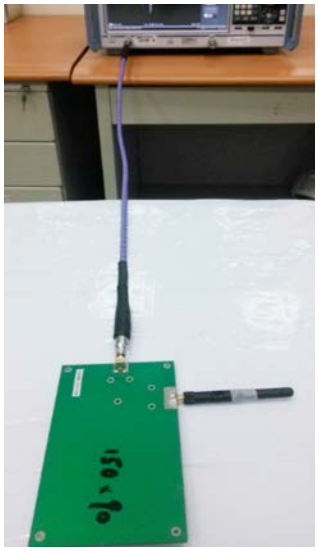


Antenna straight

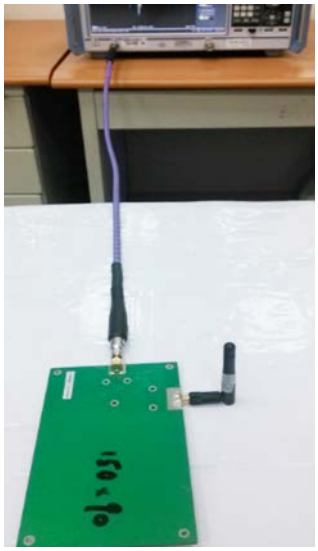


Antenna R/A

On the long side

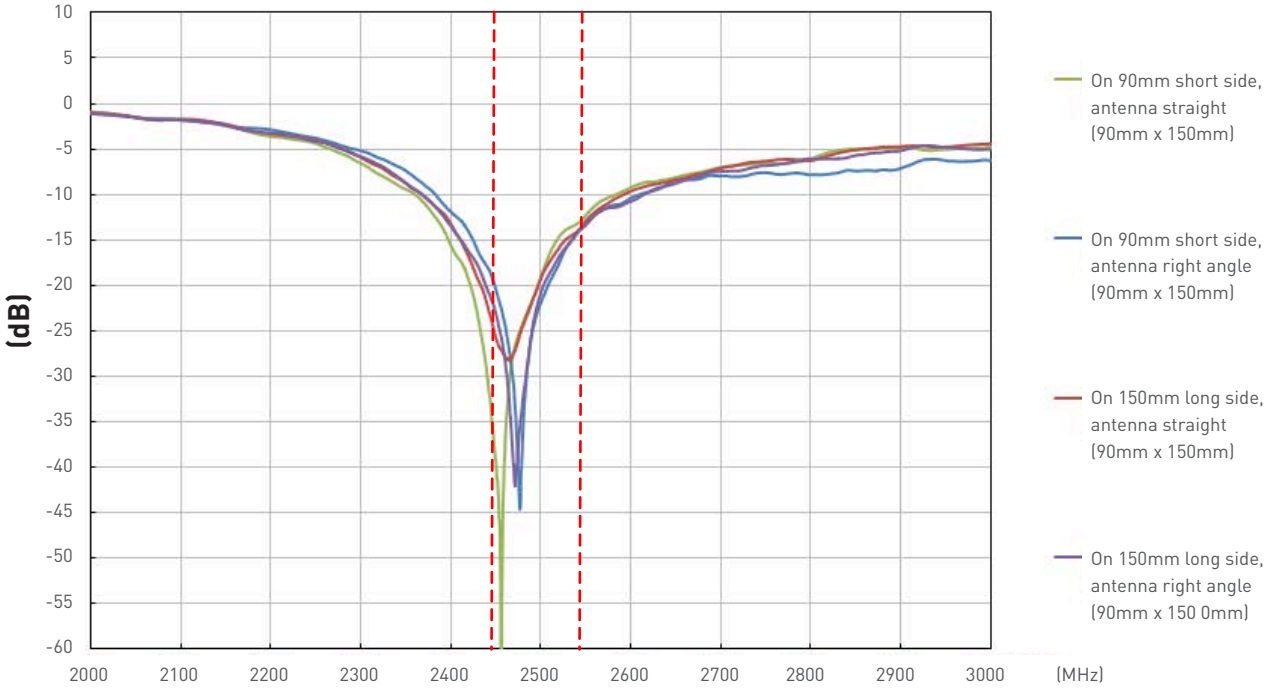


Antenna straight



Antenna R/A

6.6 Return Loss when antenna setup on different conditions.



9. Packaging

10 pcs antennas per small PE bag

100 small PE bags per big PE bag

1000 pcs antennas per big PE bag