



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.

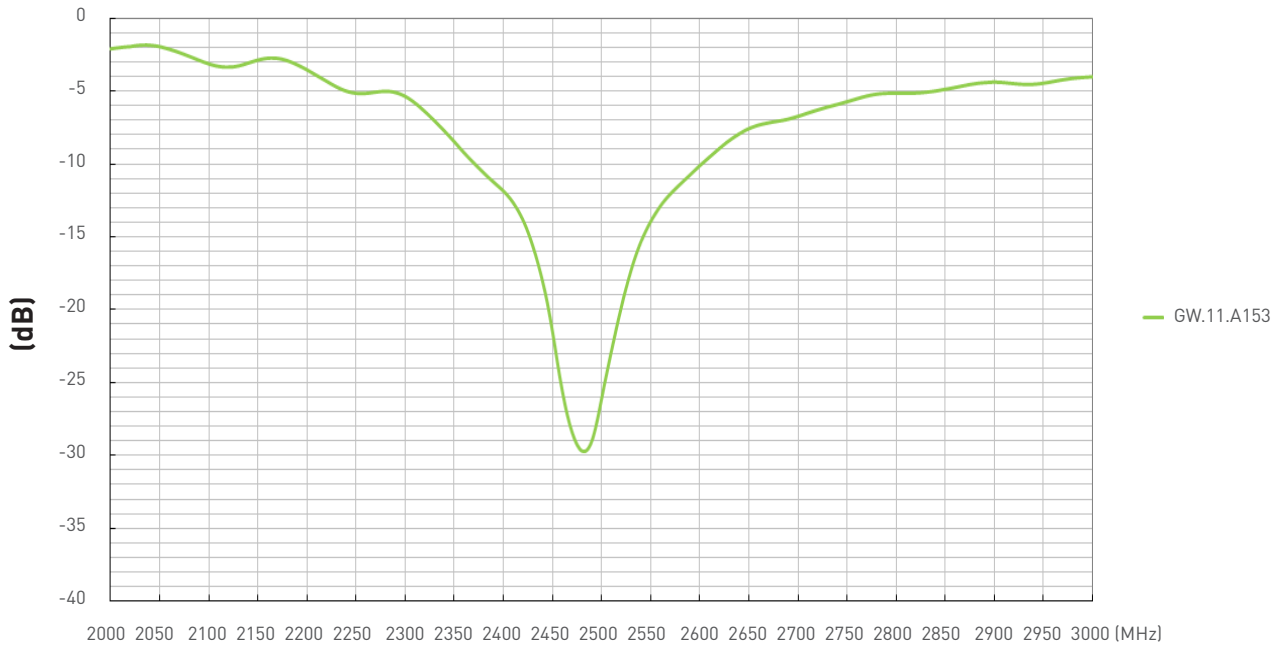
2. Specification Table

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			

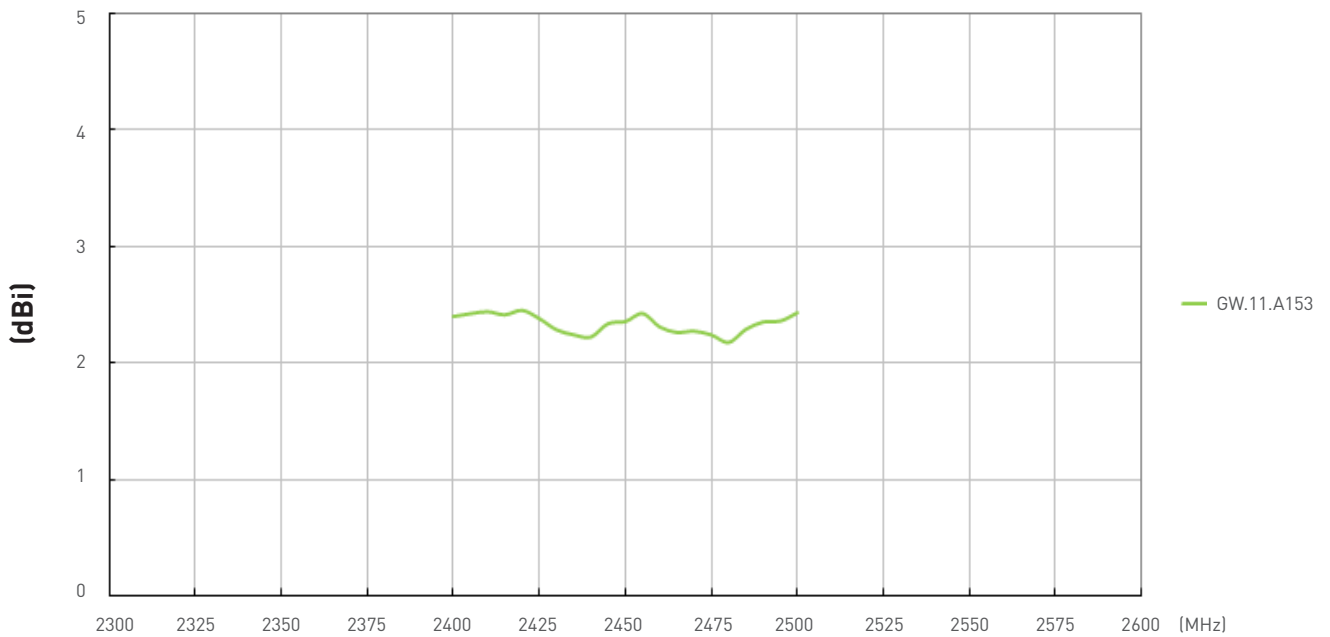
***Note:** The antenna was measured in free space

3. Antenna Characteristics

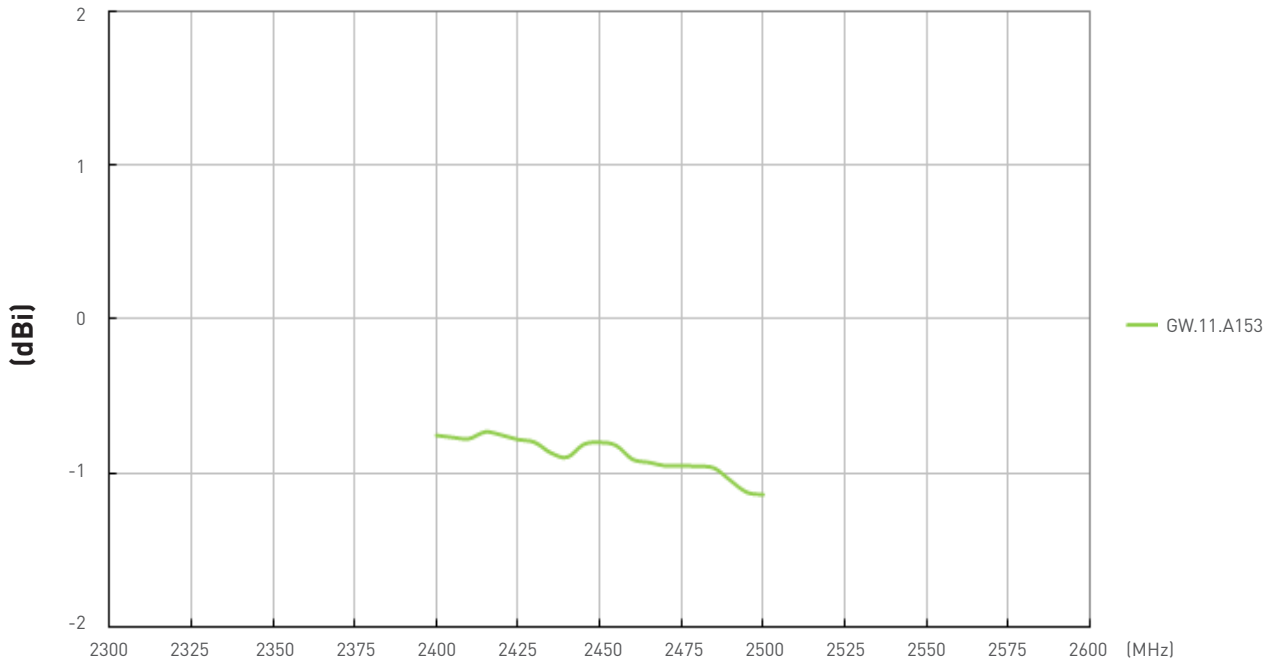
3.1 Return Loss



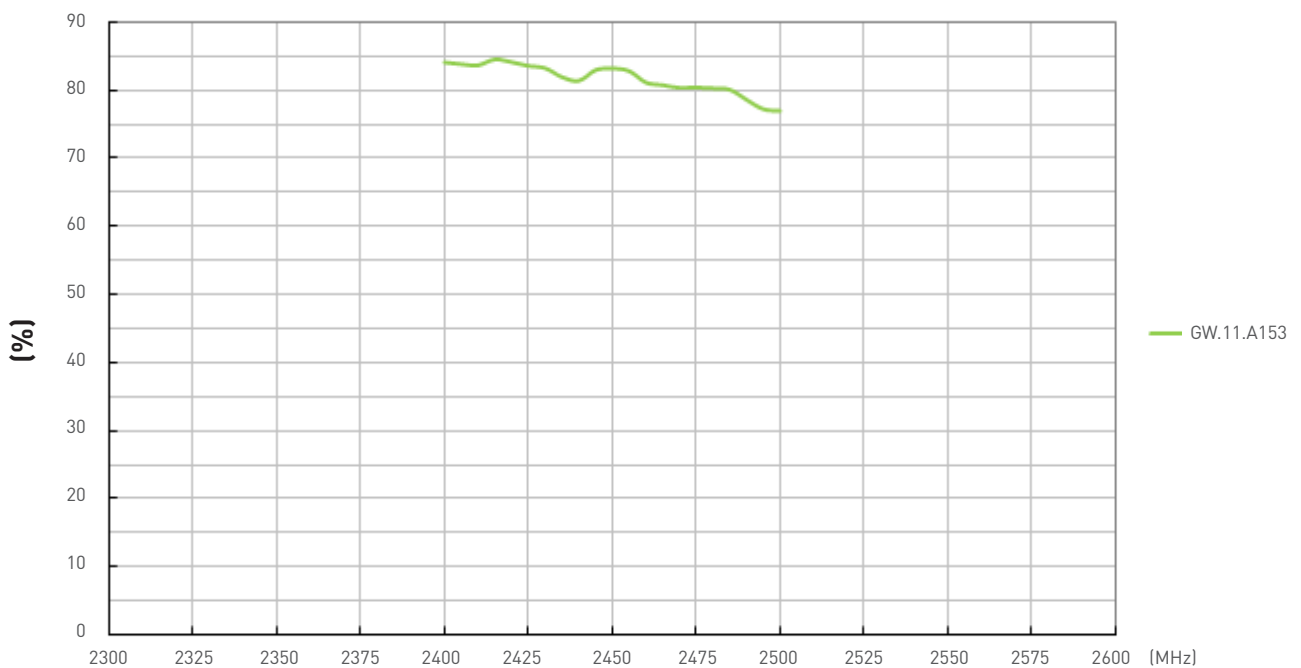
3.2 Peak Gain



3.3 Average Gain



3.4 Efficiency

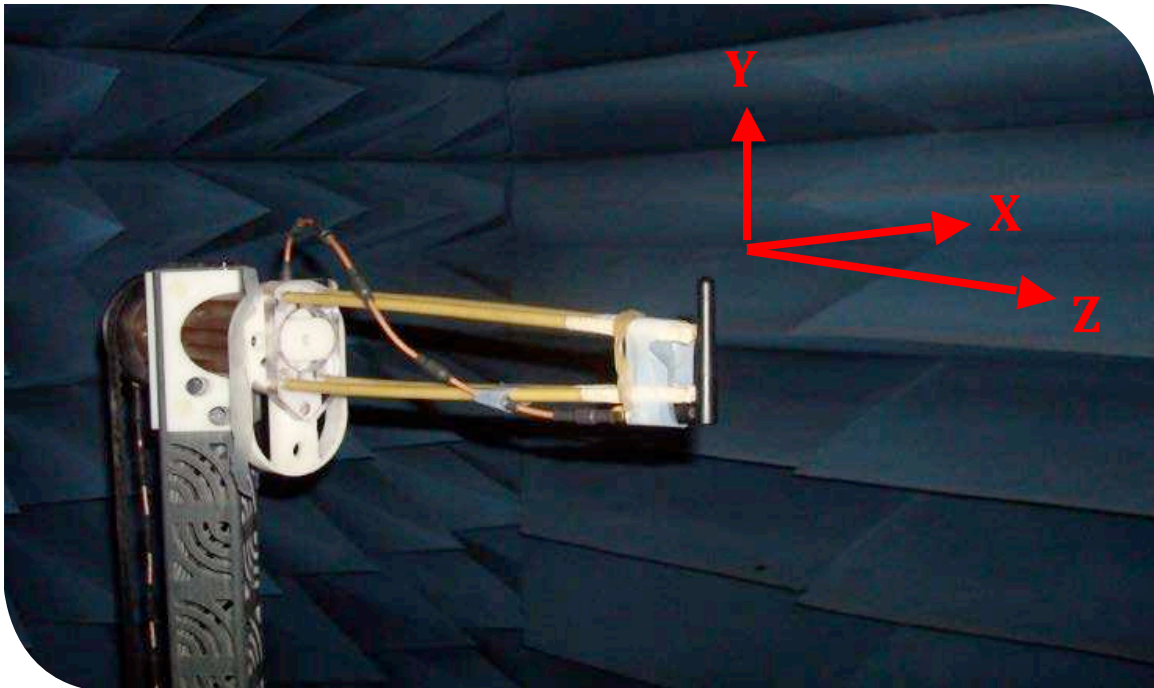


4. Radiation Patterns

The antenna radiation pattern was measured in ETS Anechoic Chamber.

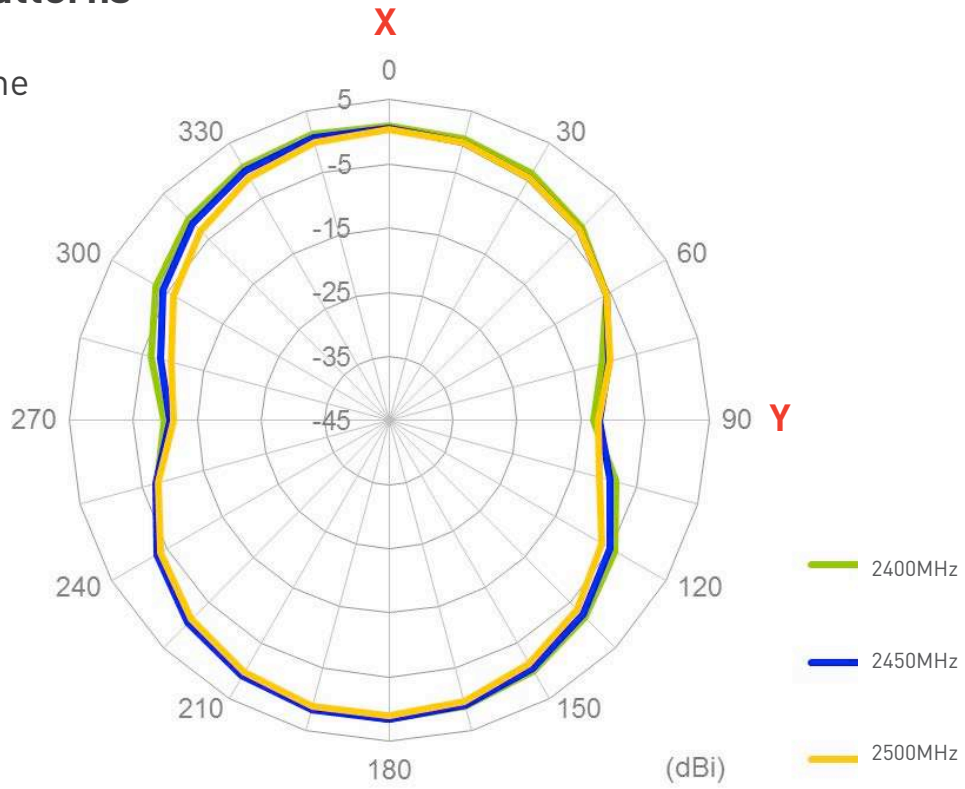
The testing setup is as below.

The antenna was measured in free space.

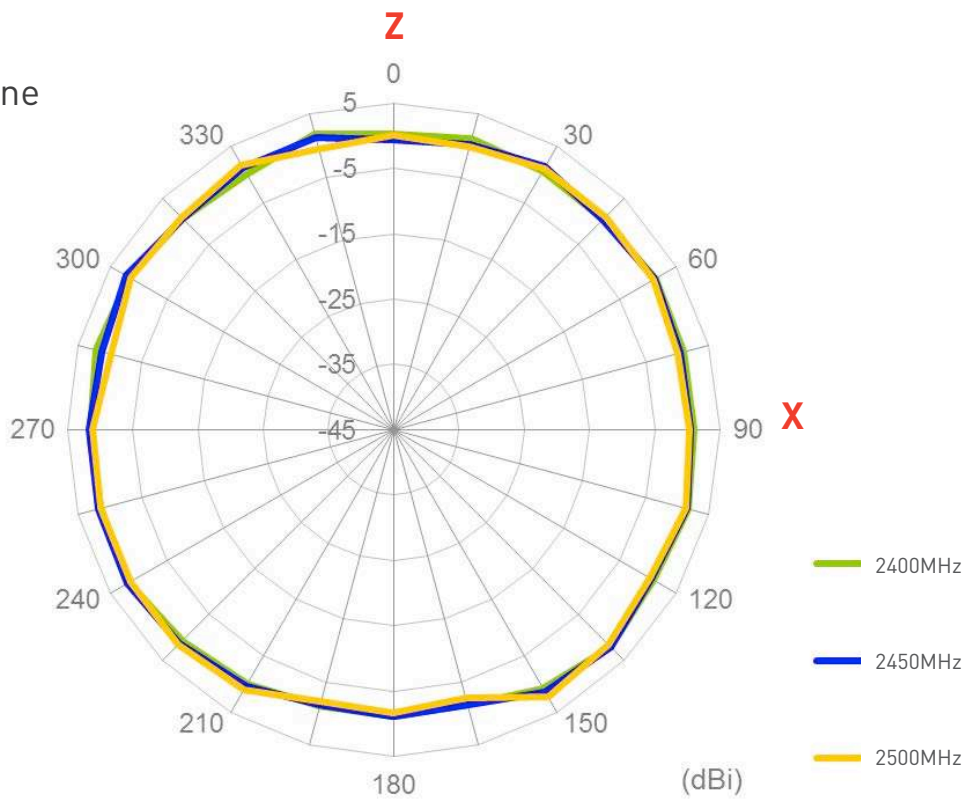


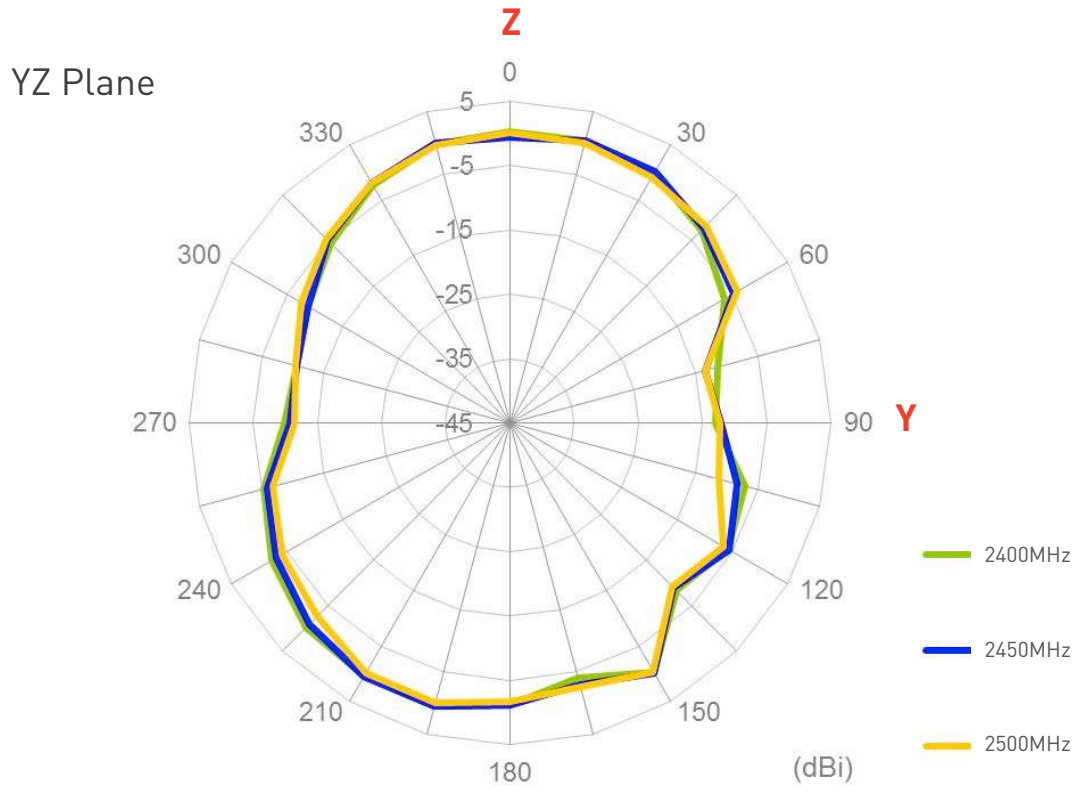
Radiation patterns

XY Plane

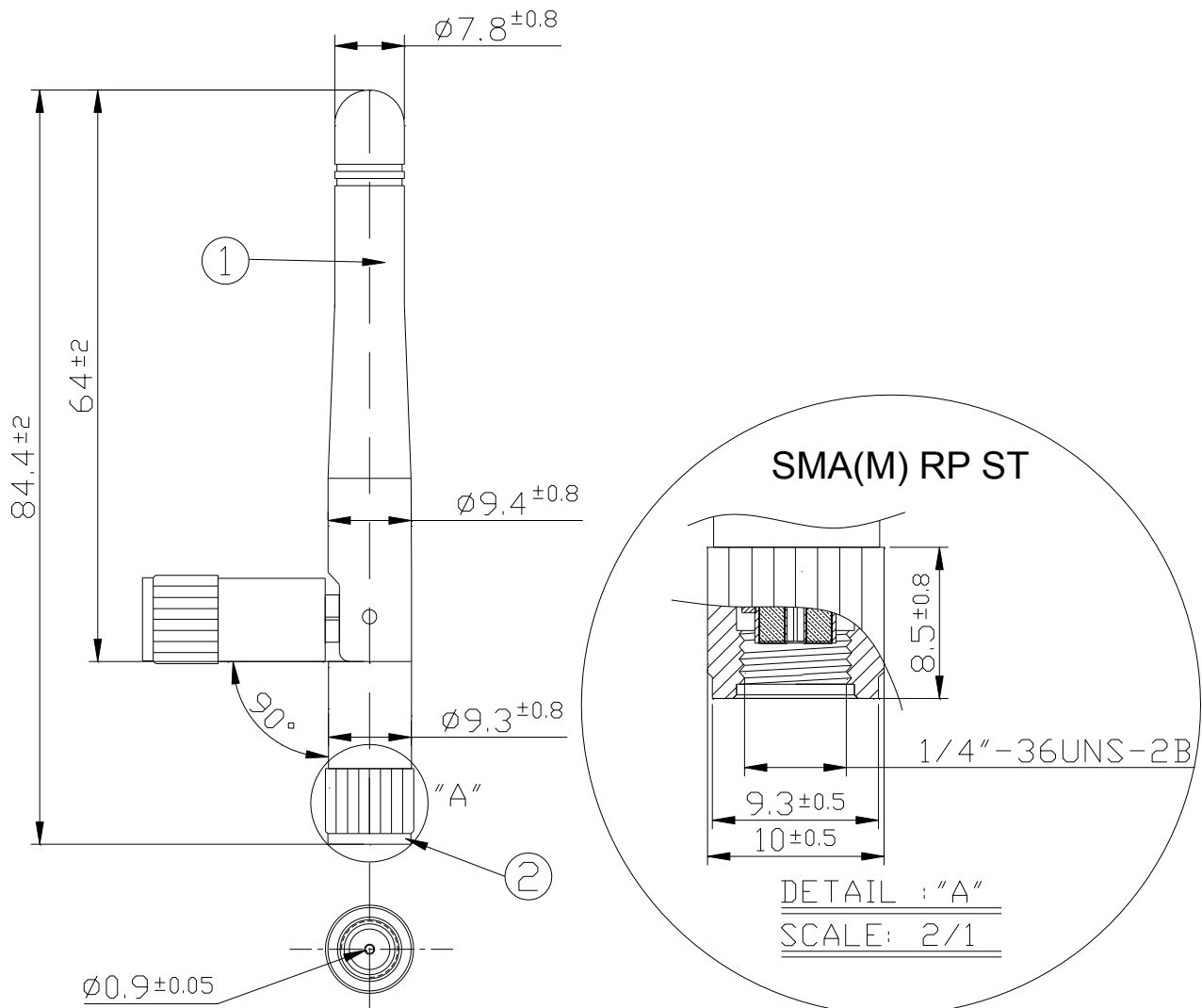


XZ Plane





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

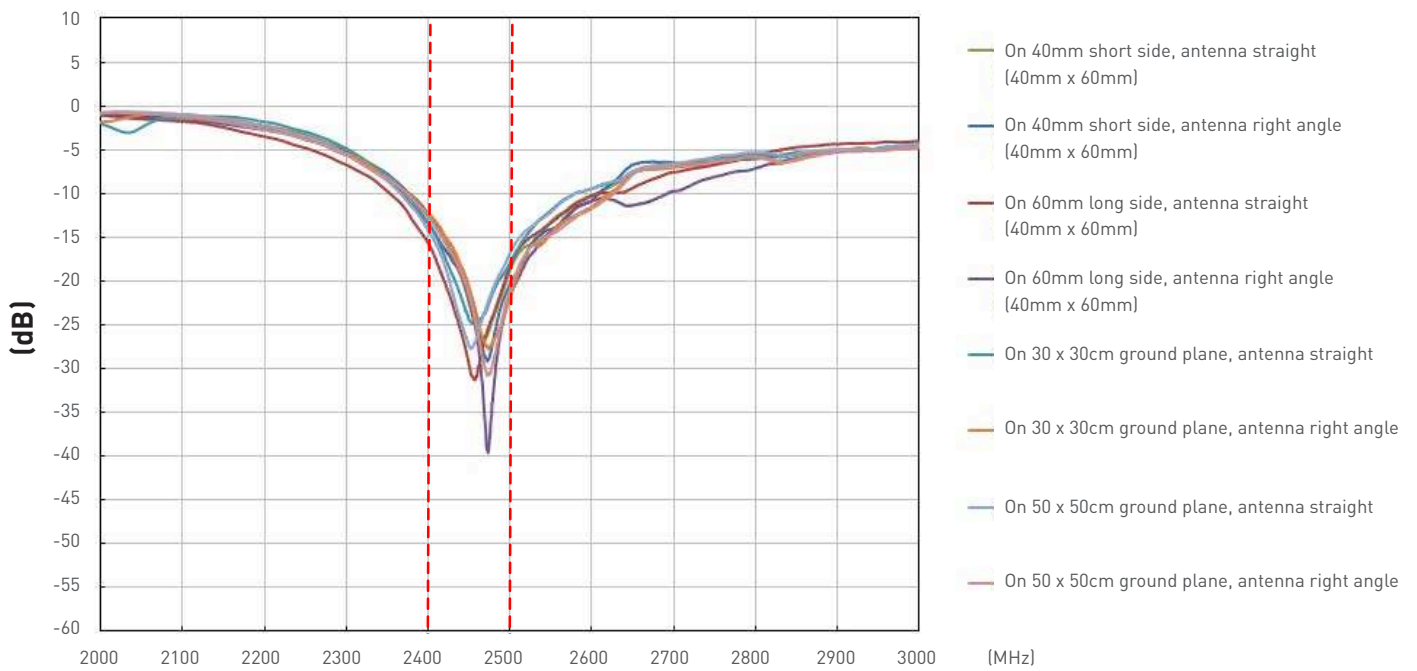
On the 50cmx50cm ground



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

On the long side



Antenna straight



Antenna R/A

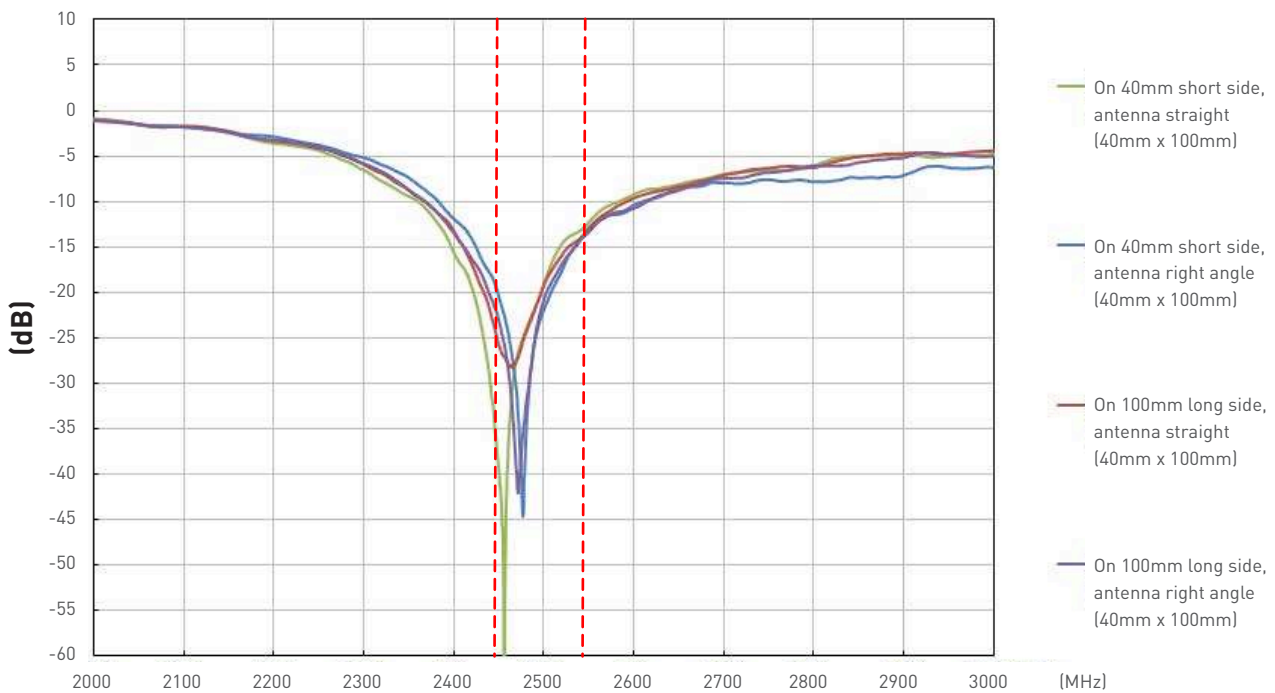


Antenna straight



Antenna R/A

6.4 Return Loss when antenna setup on different conditions

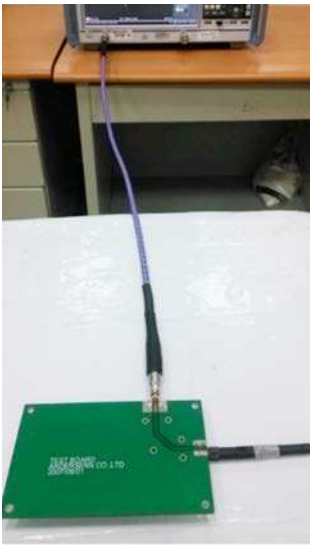


6.5 The GW.11 antenna measurement setup

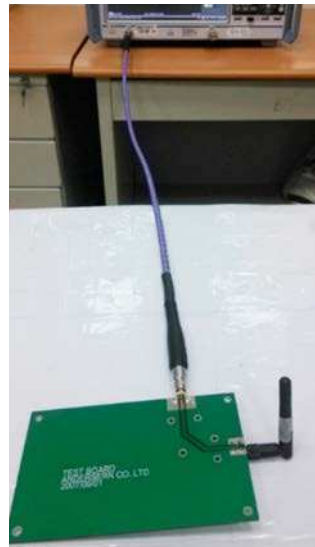
(90mm*150mm PCB board)

On the short side

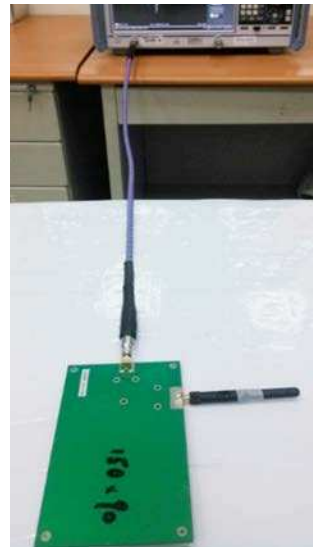
On the long side



Antenna straight



Antenna R/A

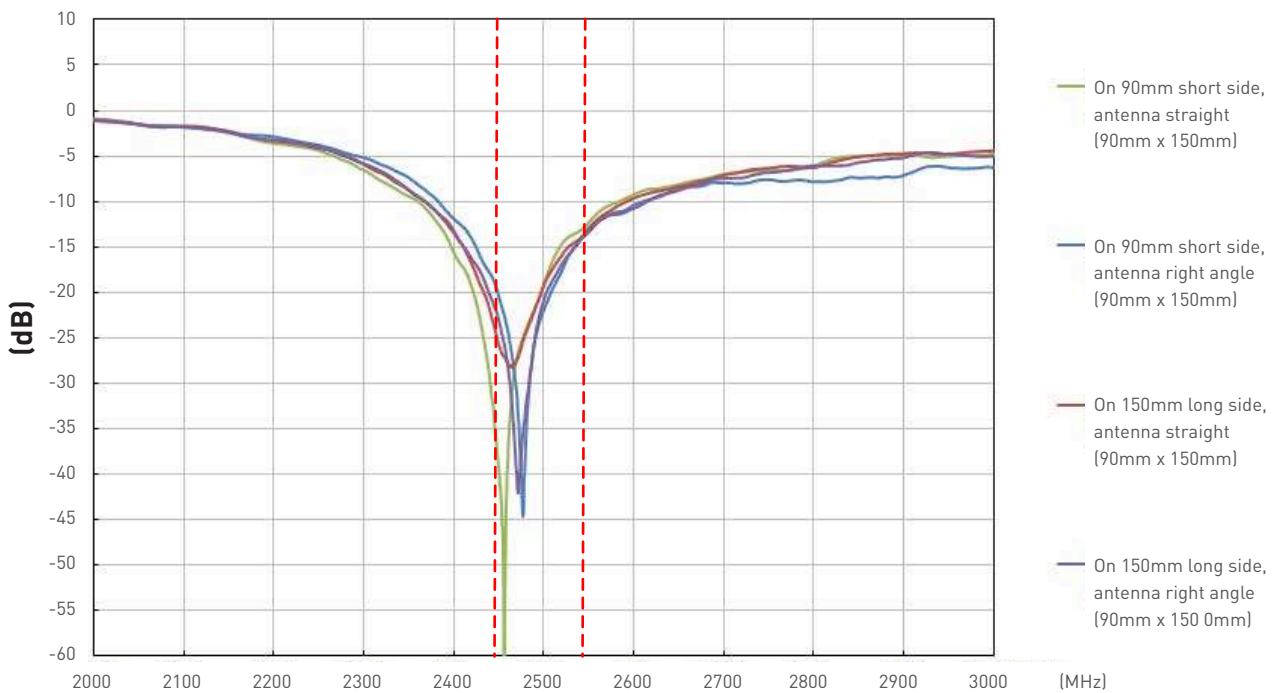


Antenna straight



Antenna R/A

6.6 Return Loss when antenna setup on different conditions.

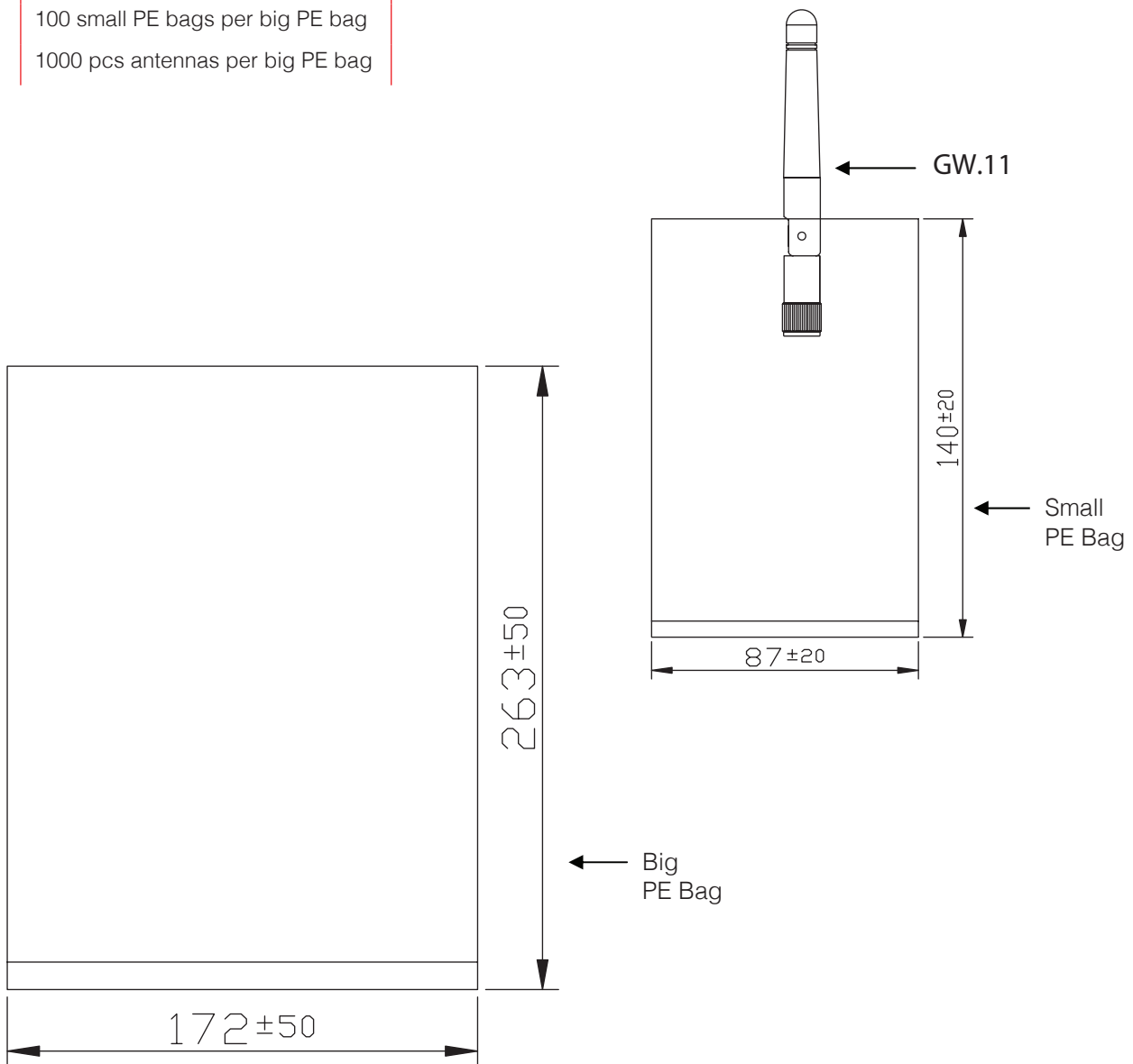


9. Packaging

10 pcs antennas per small PE bag

100 small PE bags per big PE bag

1000 pcs antennas per big PE bag



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