



TAOGLAS®



Datasheet

Taoglas IP67 Wi-Fi® 2.4GHz Terminal Antenna

Part No:
GW.29.A153

Description

IP67 Wi-Fi® 2.4GHz Dipole Antenna RP-SMA(M) Hinged

Features:

- 2.4GHz Band Operation
- Waterproof Outdoor Use - IP67 Rating
- 5dBi Gain
- High Efficiency
- Hinged RP-SMA (M) Connector
- Height: 123.7mm
- Diameter: 13mm
- RoHS & Reach Compliant

1.	Introduction	2
2.	Specification	3
3.	Antenna Characteristics	4
4.	Radiation Patterns	6
5.	Mechanical Drawing	10
6.	Packaging	11
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	Changelog	12

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1. Introduction



The Taoglas GW.29 is a IP67, 2.4GHz Wi-Fi® terminal mount dipole antenna. At just 127.3mm in height and 13mm in diameter, the robust IP67 PC+PBT enclosure can be mounted indoor or outdoor straight or at right angle to the device with its hinged RP-SMA(M) connector. It is ideal for applications such as Bluetooth®, BLE, and Wireless LAN. The GW.29, designed for superior performance and reliability, has an omnidirectional radiation pattern and extremely high efficiency and gain on all Wi-Fi® bands.

Typical applications include:

- Smart Home
- Gateways/Routers
- Connected Agriculture

The GW.29 has optimized Peak Gain making it a cost-effective, high-performing choice for any indoor or outdoor application. Many module manufacturers specify peak gain limits for any antennas that are to be connected to that module. Those peak gain limits are based on free-space conditions. In practice, the peak gain of an antenna tested in free-space can degrade by at least 1 or 2dBi when installed. So ideally you should go for a slightly higher peak gain antenna than mentioned on the module specification to compensate for this effect.

This great product has an RP-SMA (M) connector as standard and is an ideal solution for any device requiring reliable performance in a slim form factor. The innovative hinge design not only provides flexibility when mounting the antenna, but its weatherproof, IP67 rating, means it be used in outdoor locations where potential water ingress would prevent other terminal mount antennas from being used.

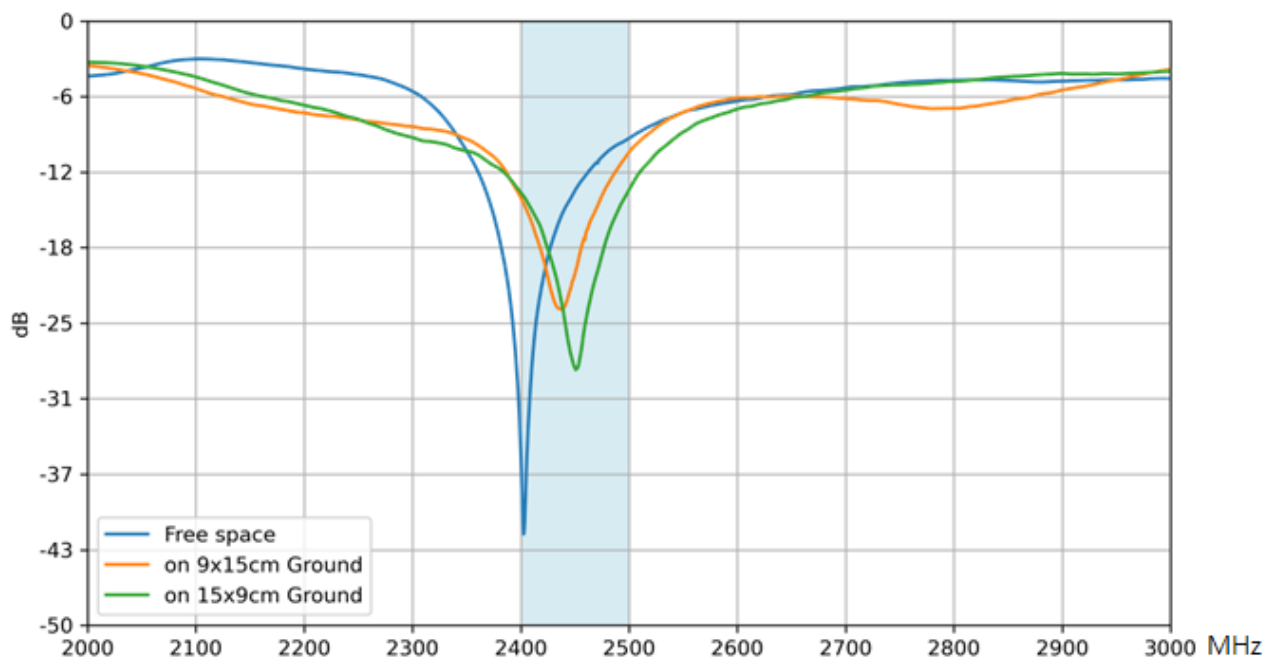
For further information, or support to test and integrate this product please contact your regional Taoglas customer support team.

2. Specification

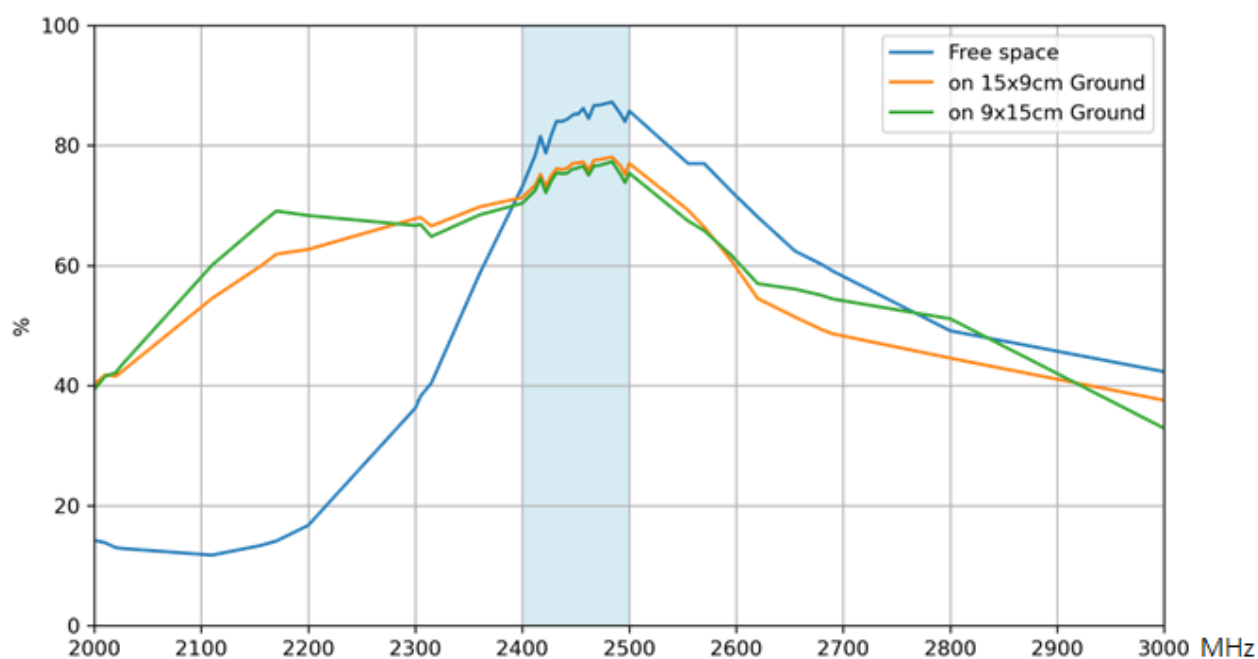
Electrical	
Frequency (MHz)	2400~2500
Efficiency (%)	
Free space	83.5
15X9cm Ground plane	75.9
9X15cm Ground plane	75.0
Average Gain (dB)	
Free space	-0.78
15X9cm Ground plane	-1.20
9X15cm Ground plane	-1.25
Peak Gain (dBi)	
Free space	2.32
15X9cm Ground plane	2.92
9X15cm Ground plane	5.03
Impedance	50Ω
Polarization	Linear
Radiation Pattern	Omni
Mechanical	
Height	123.7 ±2mm
Planner Dimension	Ø13 x 123.7mm
Casing	PC+PBT
Connector	RP-SMA(M)
Environmental	
Temperature Range	-40°C to 85°C
Waterproof Rating	IP67
Humidity	Non-condensing 65°C 95% RH

3. Antenna Characteristics

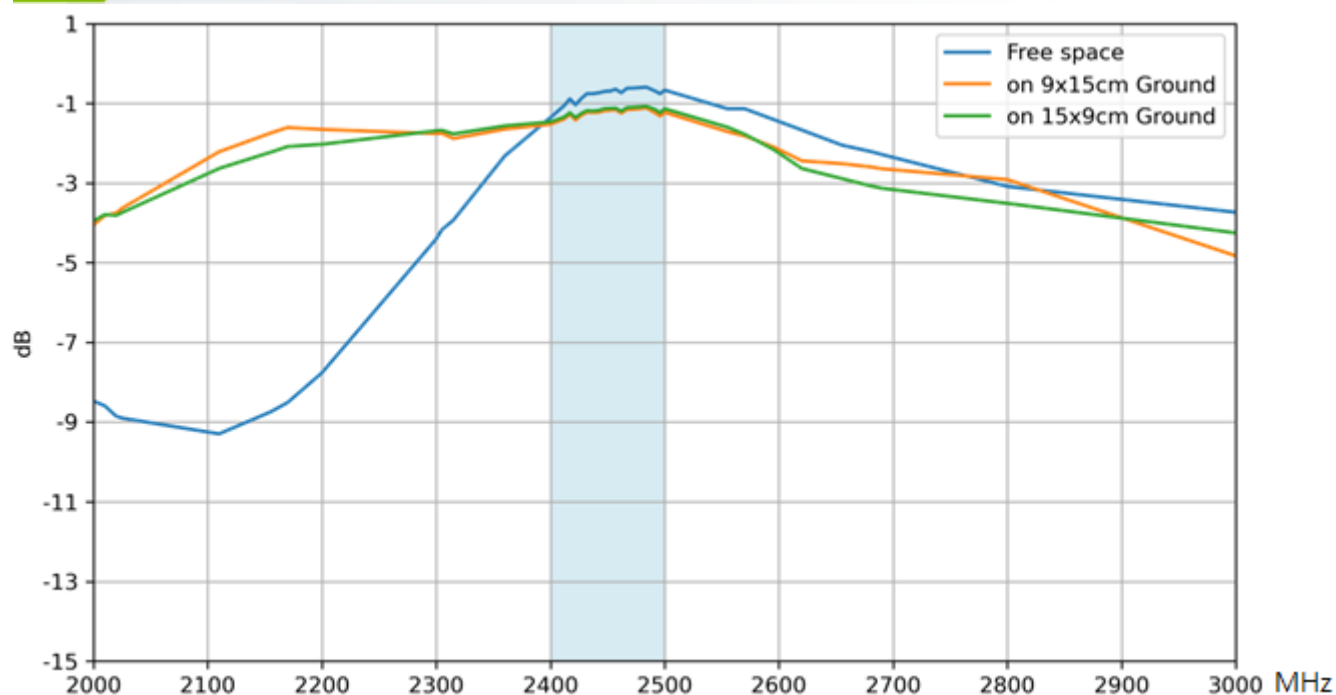
3.1 Return Loss



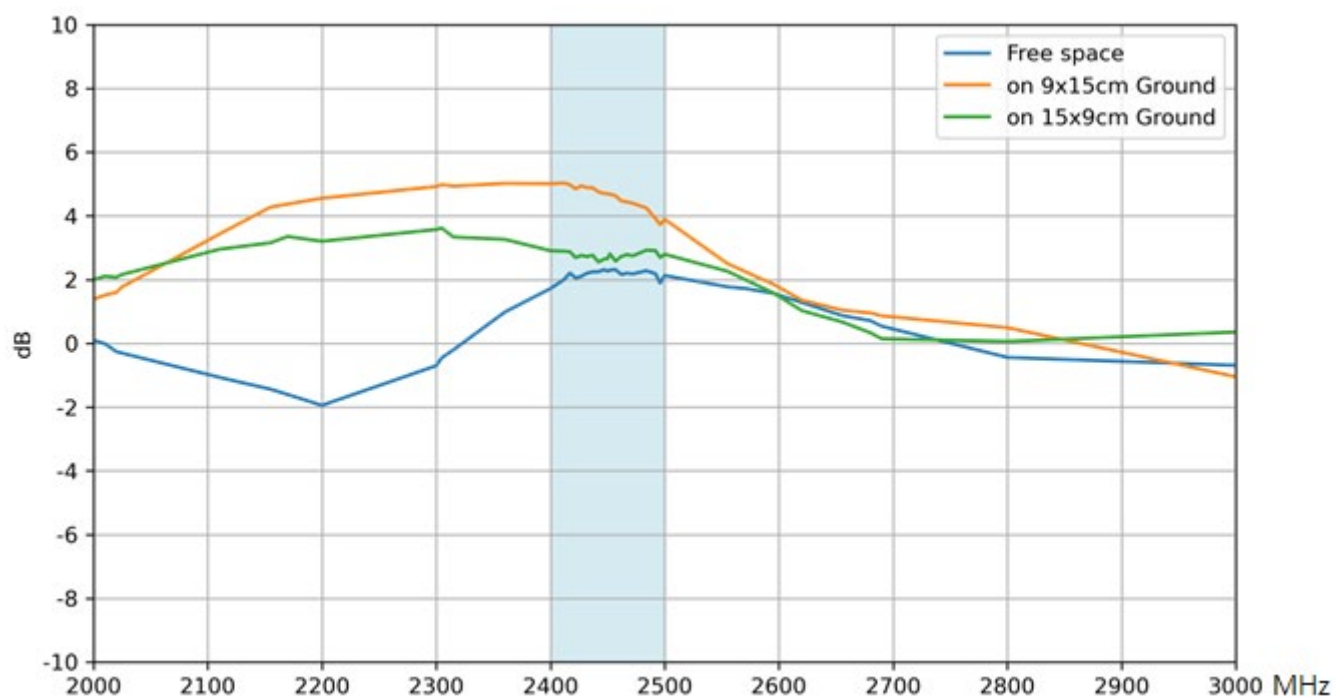
3.2 Efficiency



3.3 Average Gain

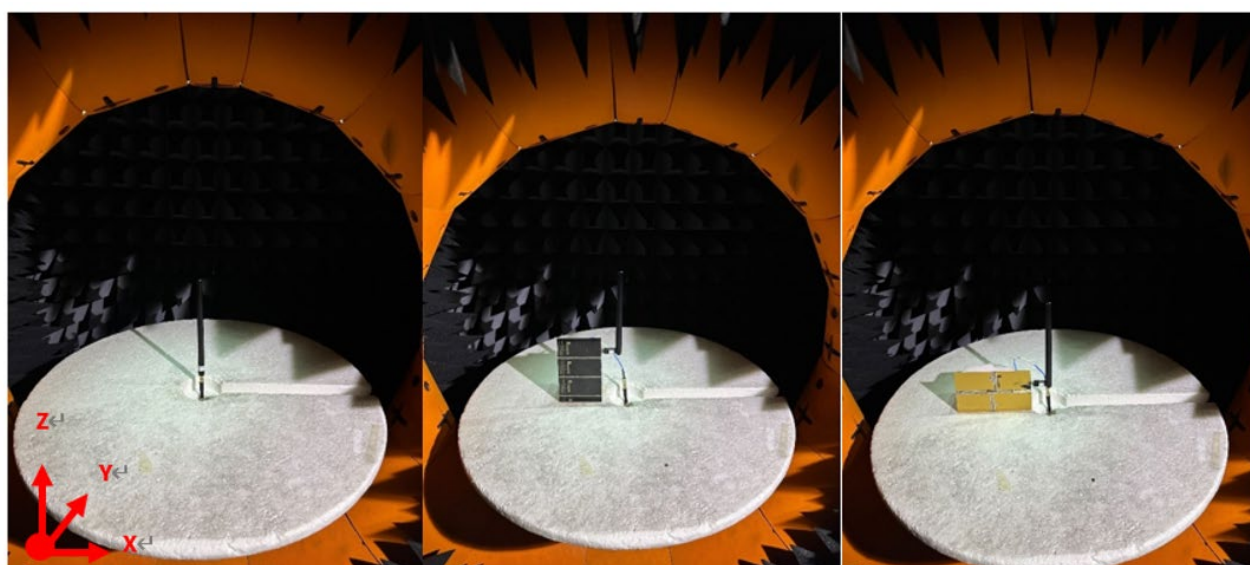
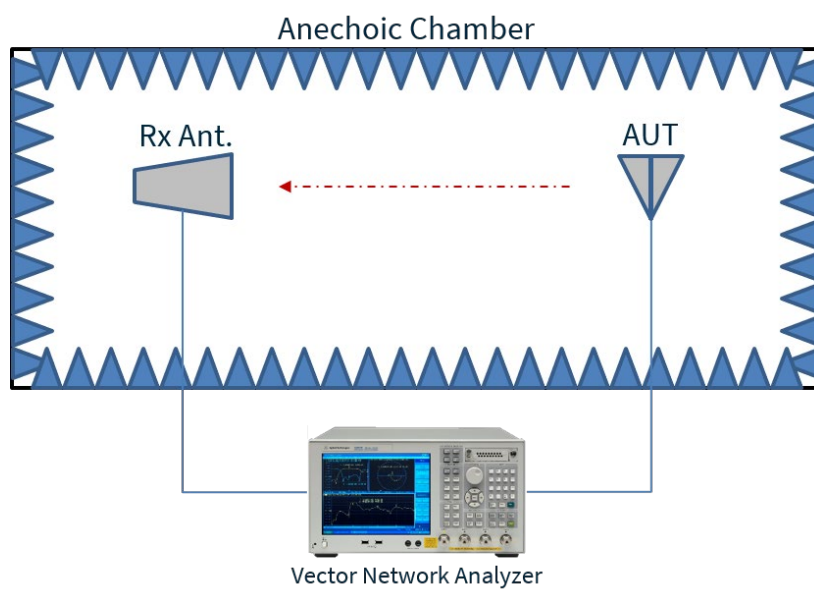


3.4 Peak Gain



4. Radiation Patterns

4.1 Test Setup

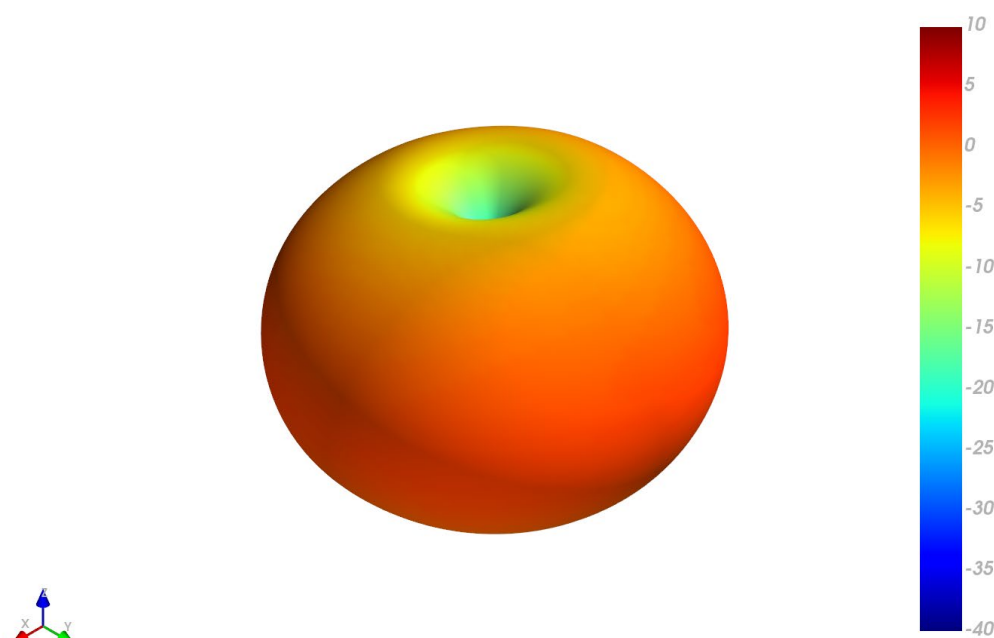


Free Space

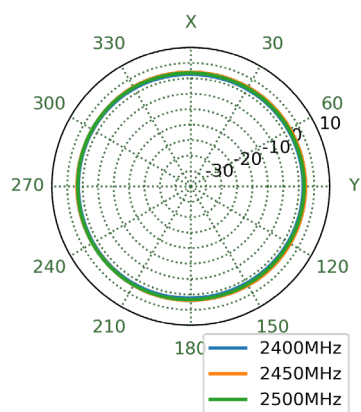
On 15x9cm Ground

On 9x15cm Ground

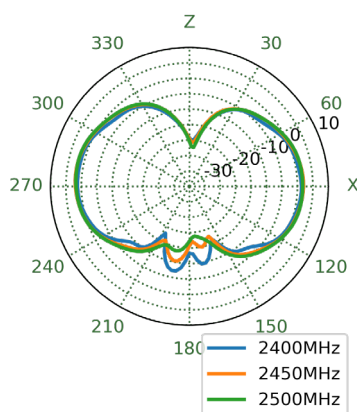
4.2 Free space 3D and 2D Radiation Patterns at 2450 MHz



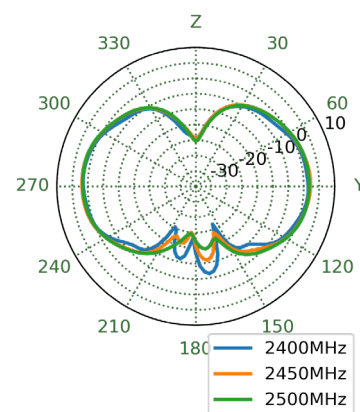
XY Plane



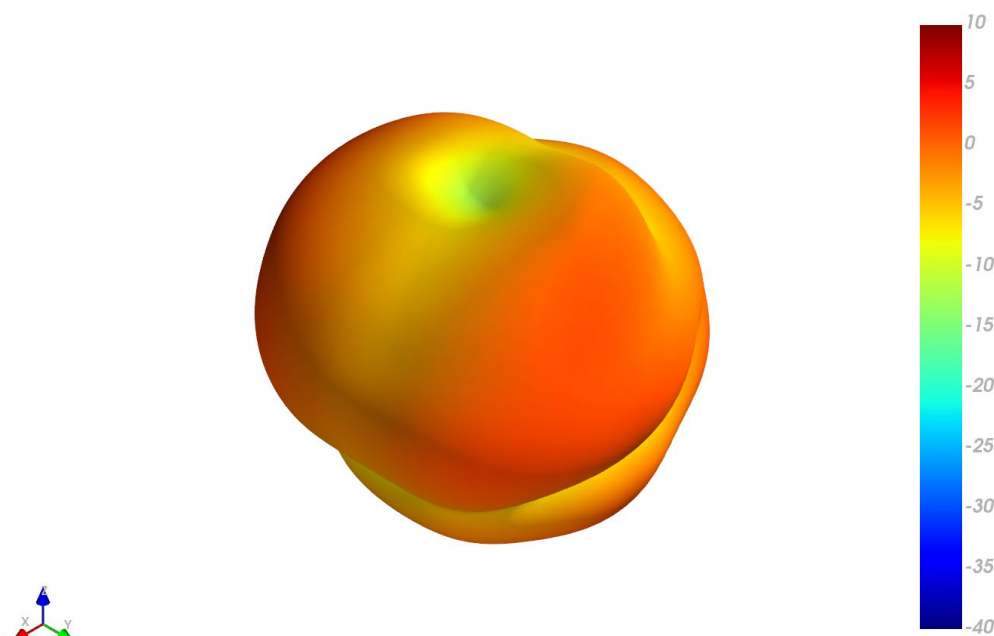
XZ Plane



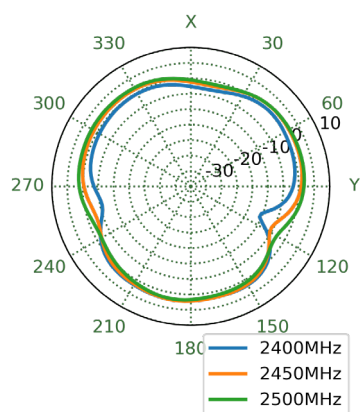
YZ Plane



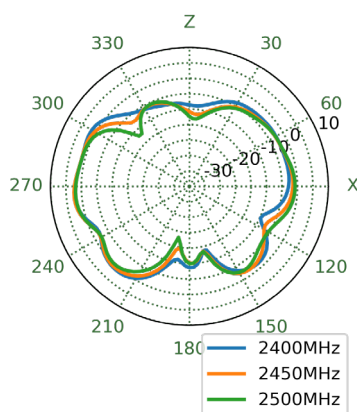
4.3 15x9cm Ground 3D and 2D Radiation Patterns at 2450 MHz



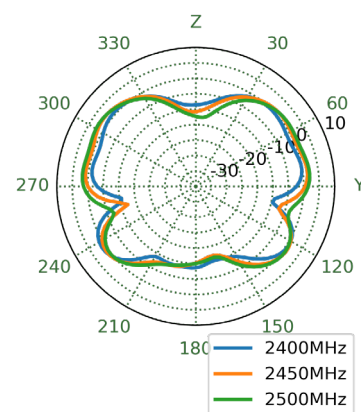
XY Plane



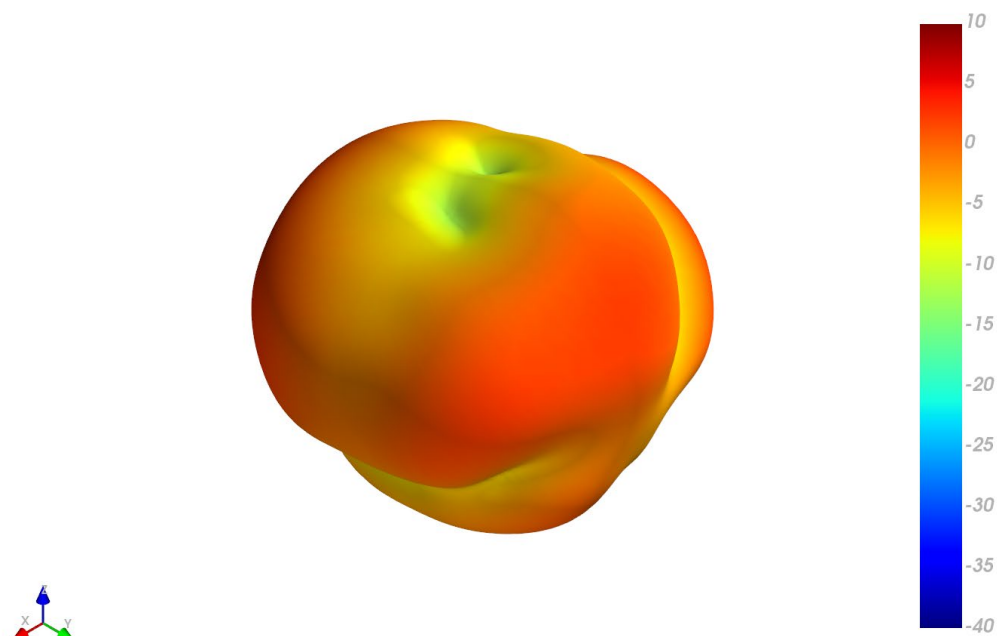
XZ Plane



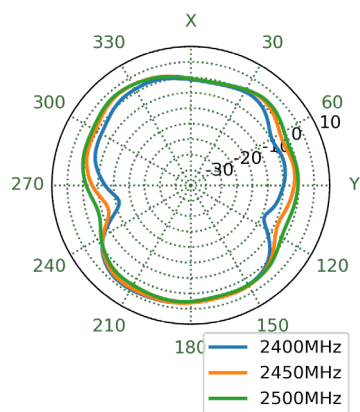
YZ Plane



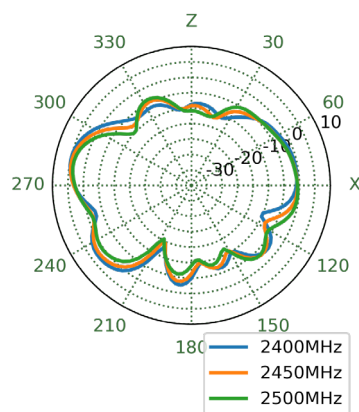
4.4 9x15cm Ground 3D and 2D Radiation Patterns at 2450 MHz



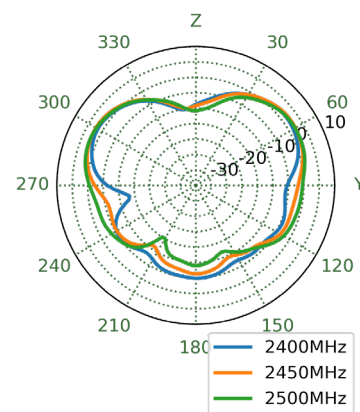
XY Plane



XZ Plane



YZ Plane

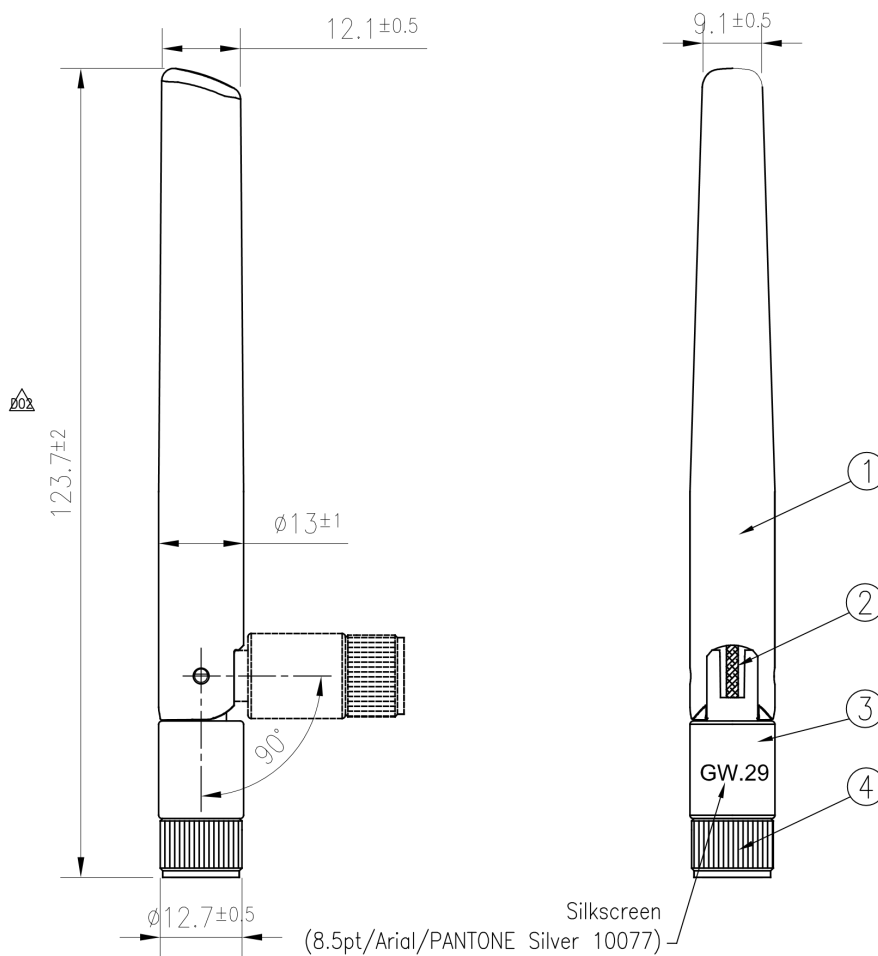


5. Mechanical Drawing

ISO NO.: EDW-23-8-0892

STATE: RELEASE

NOTES: 1. All material must be RoHS compliant.



	Name	Material	Finish	QTY
1	Radome	PC+PBT	Black	1
2	RG178 coaxial cable	FEP	Brown	1
3	Lower Holder	PC+PBT	Black	1
4	RP-SMA(M)	PC+PBT	Black	1

6. Packaging

TBD

Changelog for the datasheet

SPE-23-8-275 – GW.29.A153

Revision: A (Original First Release)	
Date:	2023-09-27
Notes:	Initial Release
Author:	Cesar Sousa

Previous Revisions



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