TAOGLAS®

Datasheet

Part No:
GW.26.0112

Description

2.4GHz Miniature Terminal Mount Monopole Antenna

Features:

Miniature Terminal Mount Monopole Antenna
Covering: Wi-Fi 2.4GHz
Connector: SMA(M) RA
Dims: Ø28.5 x 17.2mm
ROHS Compliant

1. Introduction

The GW.26 2.4GHz Monopole SMA(M)R/A terminal mount antenna is ideal for 2.4GHz wireless applications such as Bluetooth® and Wireless LAN.

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 put inside a device. So ideally you should go for a slightly higher peak gain antenna than mentioned on the module specification to compensate for this effect, giving you better performance.

Upon testing of any of our antennas with your device and a selection of appropriate layout, integration technique, or cable, Taoglas can make sure any of our antennas' peak gain will be below the peak gain limits. Taoglas can then issue a specification and/or report for the selected antenna in your device that will clearly show it complying with the peak gain limits, so you can be assured you are meeting regulatory requirements for that module.

For example, a module manufacturer may state that the antenna must have less than 2dBi peak gain, but you don't need to select an embedded antenna that has a peak gain of less than 2dBi in free-space. This will give you a less optimized solution. It is better to go for a slightly higher free-space peak gain of 3dBi or more if available. Once that antenna gets integrated into your device, performance will degrade below this 2dBi peak gain due to the effects of GND plane, surrounding components, and device housing. If you want to be absolutely sure, contact Taoglas and we will test. Choosing a Taoglas antenna with a higher peak gain than what is specified by the module manufacturer and enlisting our help will ensure you are getting the best performance possible without exceeding the peak gain limits.

Connector mount is fully customizable. It has a fully IP65 rated waterproof robust housing, ensuring high reliability.

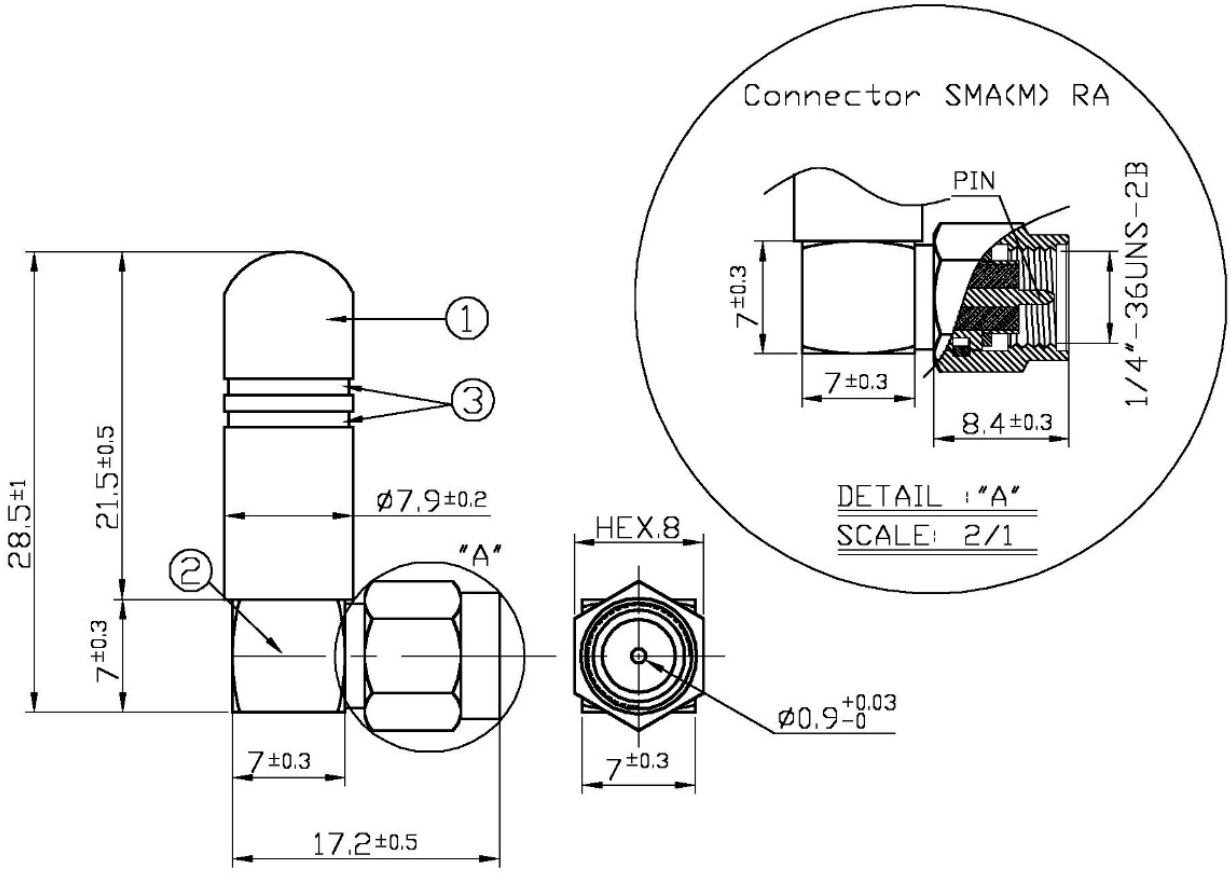
2. Specification

Electrical								
Band	Frequency (MHz)	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
Wi-Fi 2.4GHz	2400-2500	35.6	-4.49	0.99	50 Ω	Vertical	Omni directional	10W

Mechanical	
Dimensions	Ø28.5 x 17.2mm
Weight	4g
Material	TPEE
Connector	SMA(M)R/A

Environmental	
Operating Temperature	-40°C ~ +85°C
Storage Temperature	-40°C ~ +85°C
IP Rating	IP65

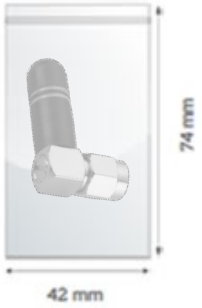
3. Mechanical Drawing



	Name	Material	Finish	QTY
1	Antenna Housing	TPEE	Black	1
2	SMA(M) RA	Brass	Gold	1
3	Colour Stripes	Acrylic Paint	Green	1

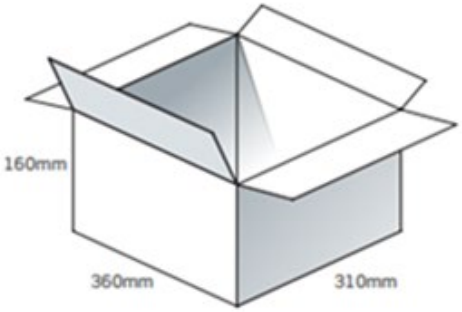
4. Packaging

1 pcs GW.26 per PE Bag
Bag Dimensions - 74 x 42 mm
Weight - 4g

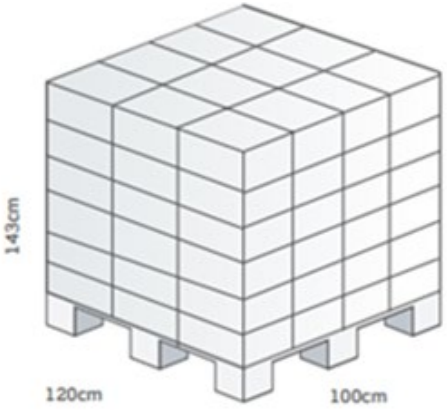


100 pcs GW.26 per PE Large Bag
Bag Dimensions - 280x 180mm
Weight - 400g

1500 pcs GW.26 per carton
Carton - 360x 310 x 160mm
Weight - 6.1Kg

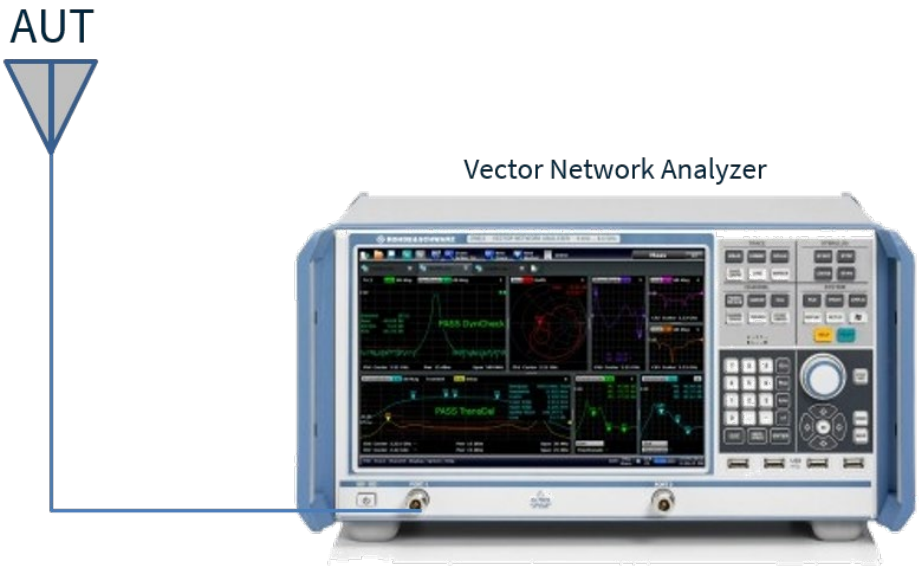


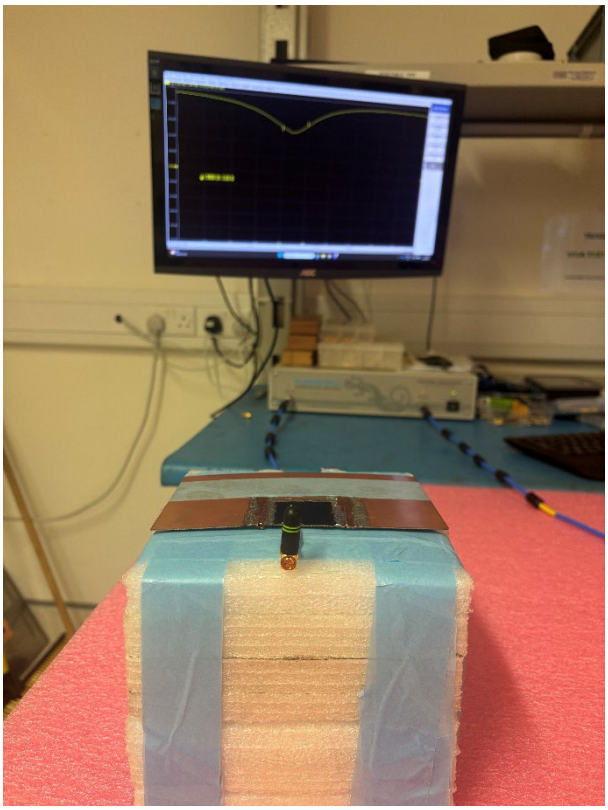
Pallet Dimensions 120x 100 x 143cm
72 Cartons per Pallet
12 Cartons per layer
6 Layers



5. Antenna Characteristics

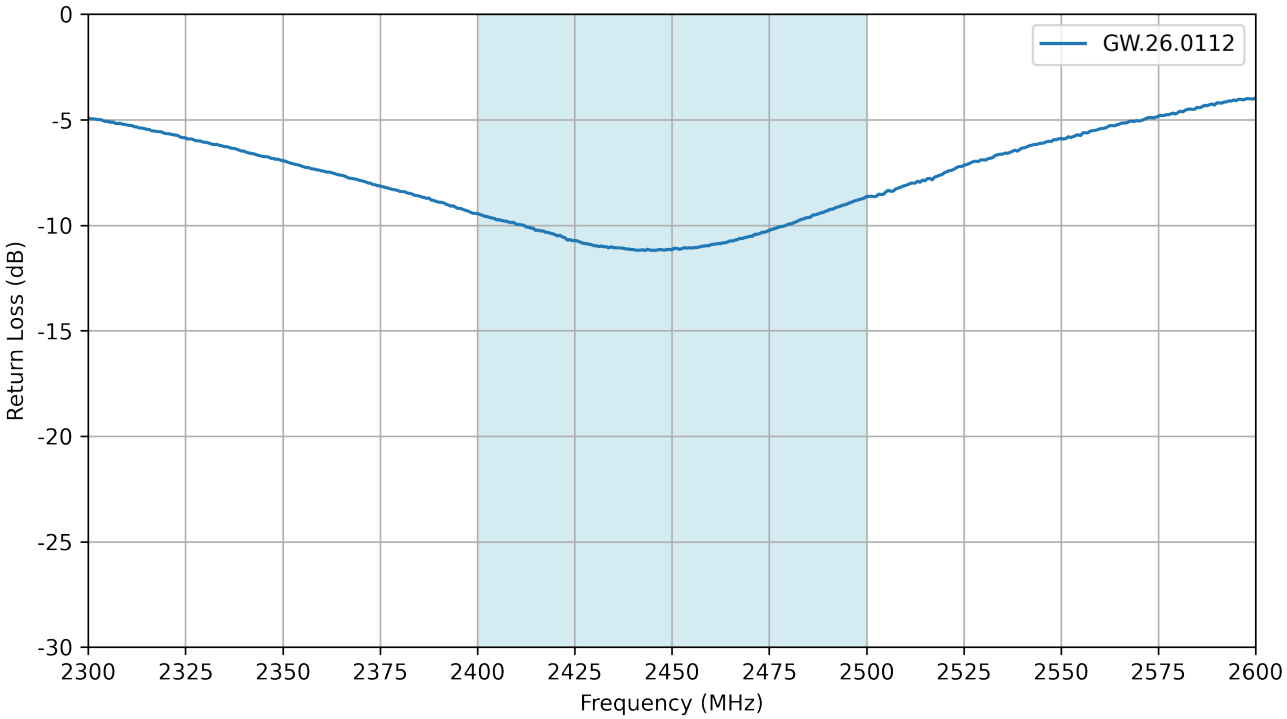
5.1 Test Setup



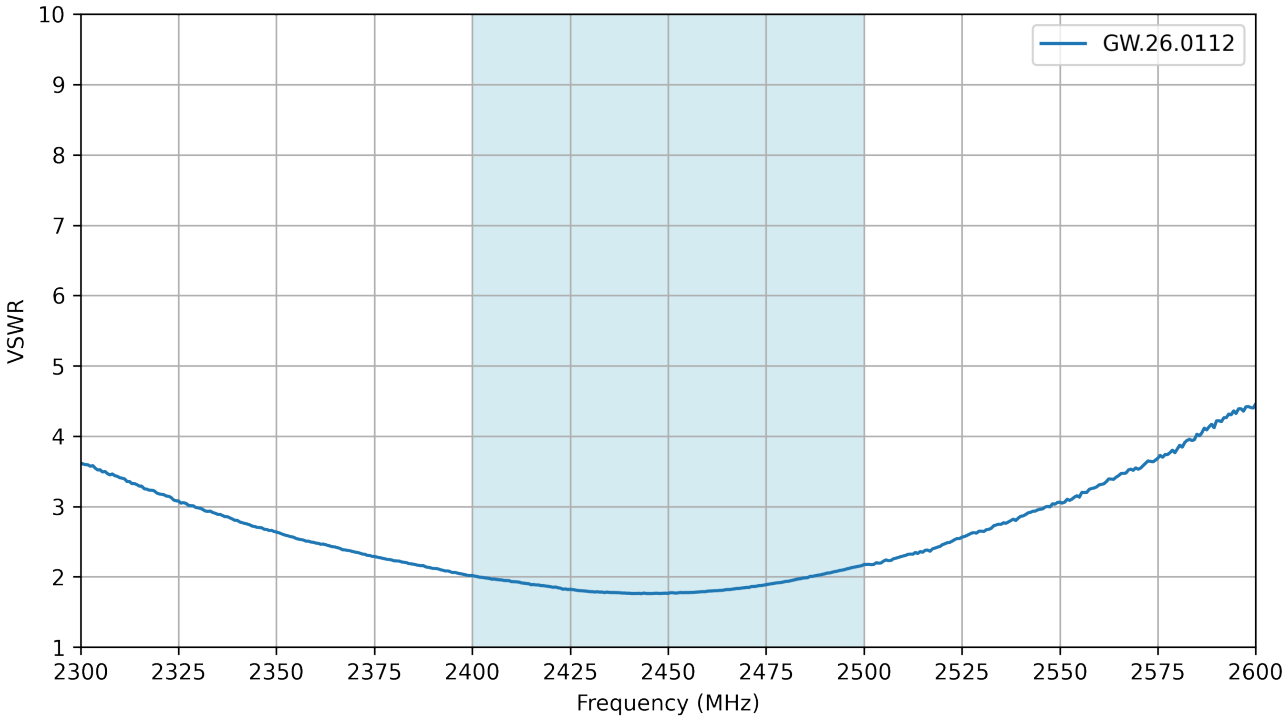


Tested on 150x90mm Ground Plane

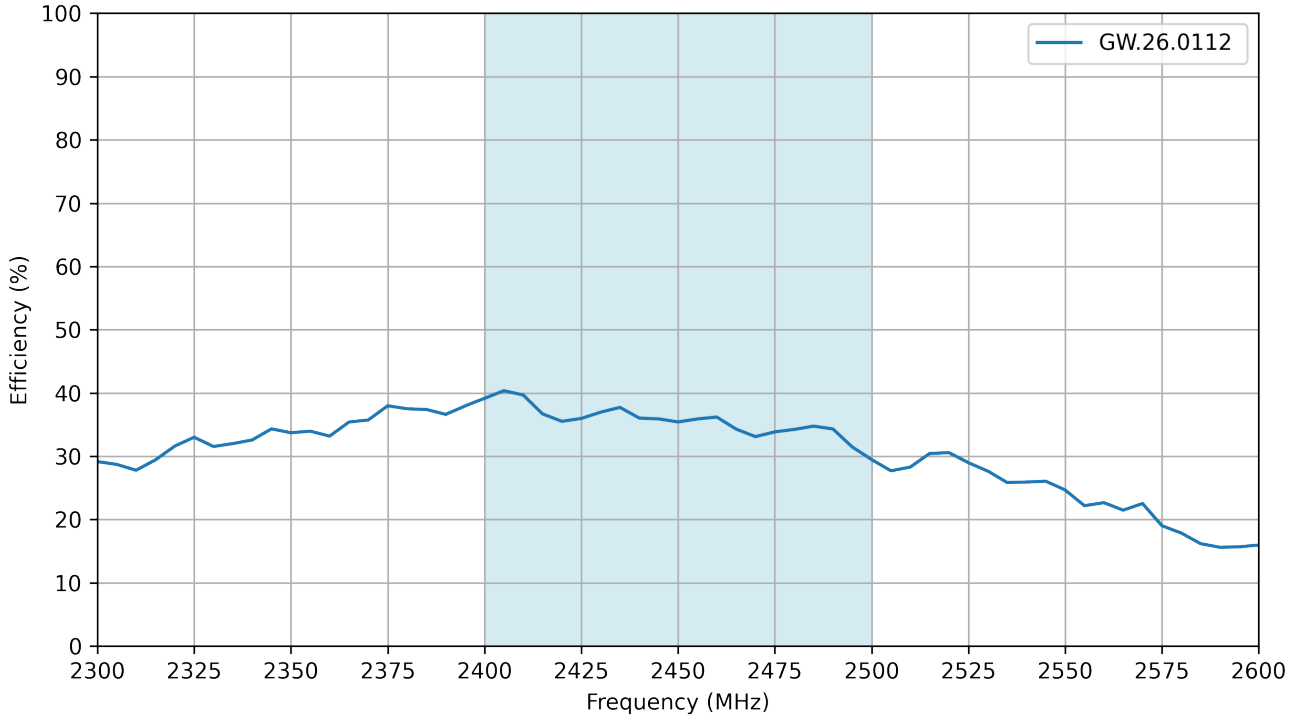
5.2 Return Loss



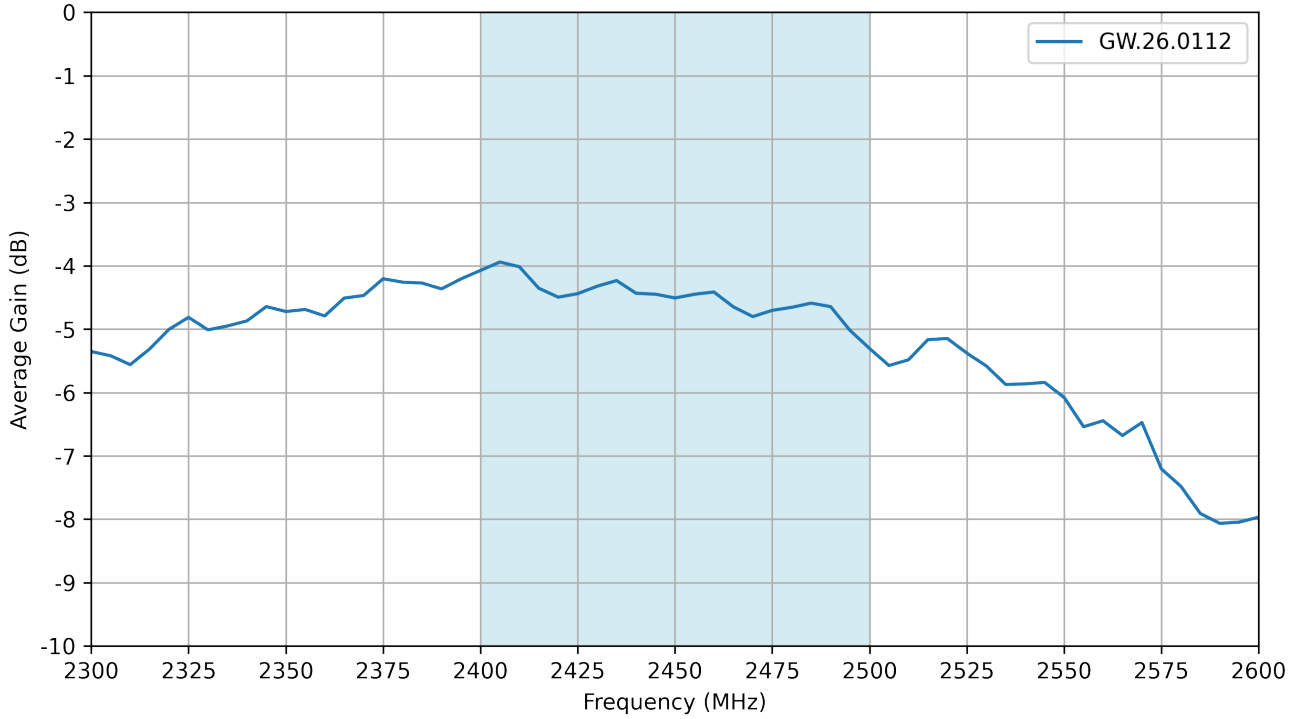
5.3 VSWR



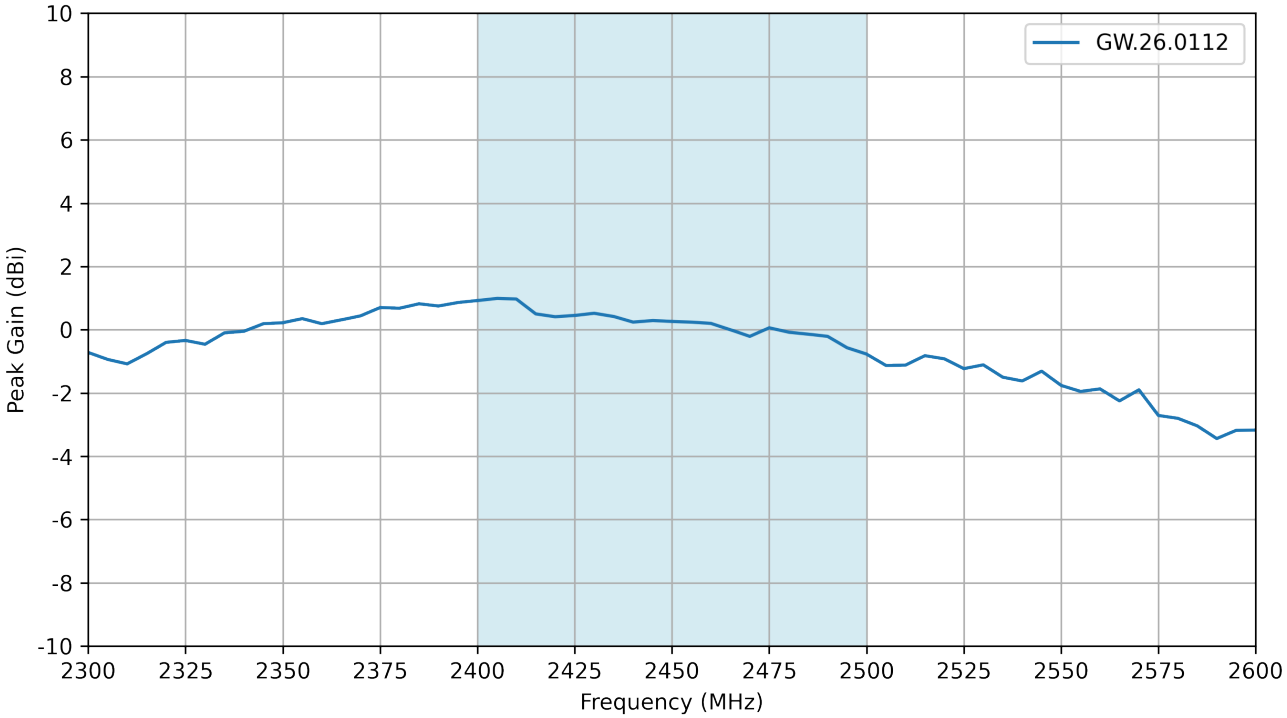
5.4 Efficiency



5.5 Average Gain

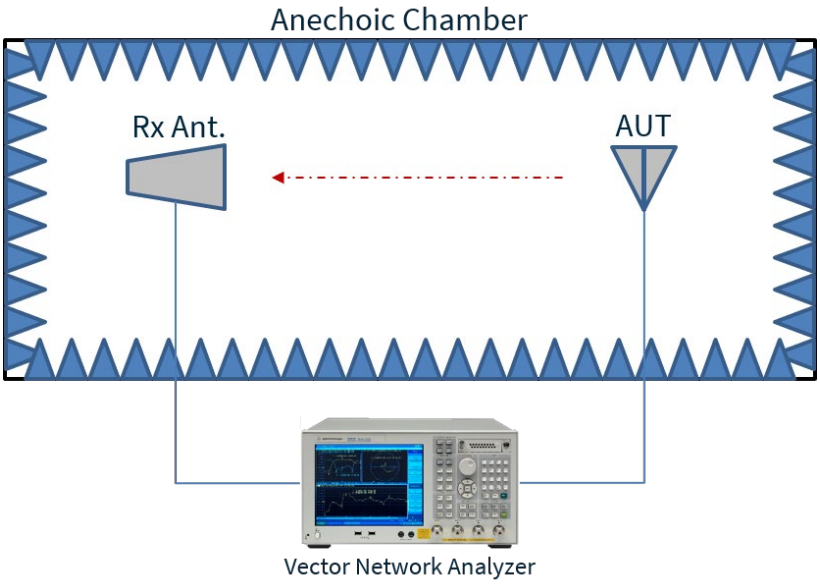


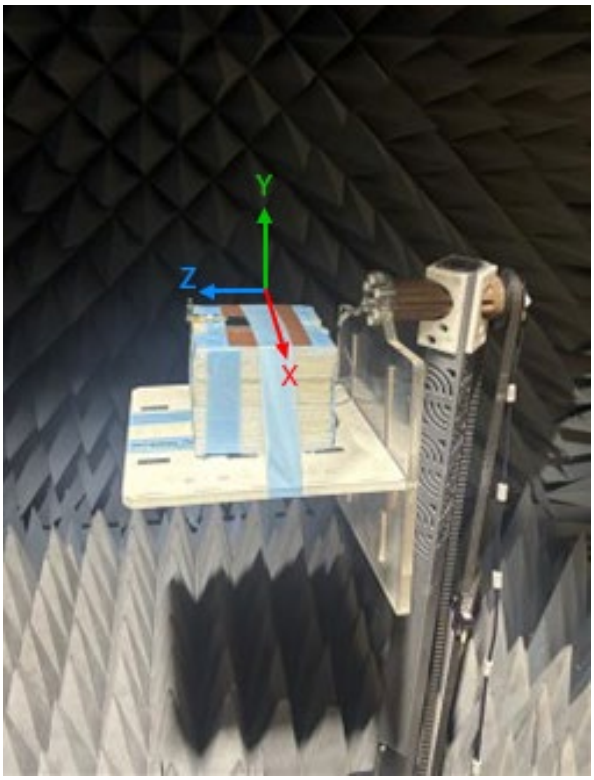
5.6 Peak Gain


GW.26.0112
Peak Gain (dBi)
10
8
6
4
2
0
-2
-4
-6
-8
-10
2300
2325
2350
2375
2400
2425
2450
2475
2500
2525
2550
2575
2600
Frequency (MHz)

6. Radiation Patterns

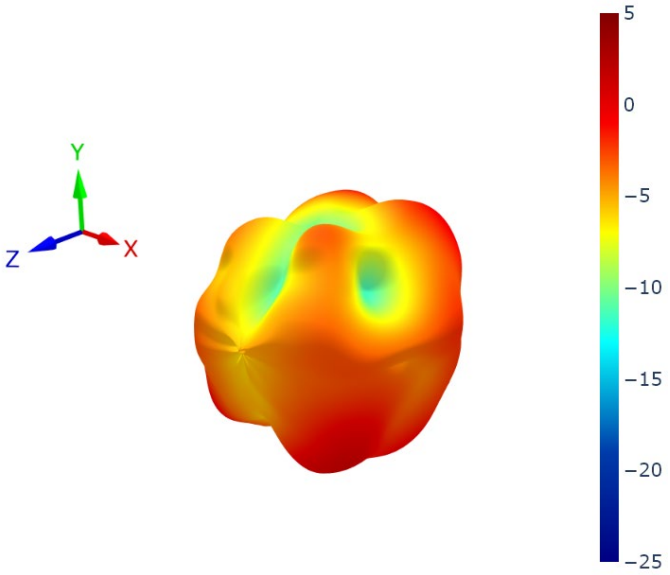
6.1 Test Setup

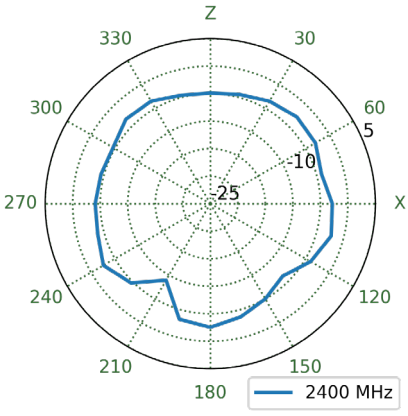
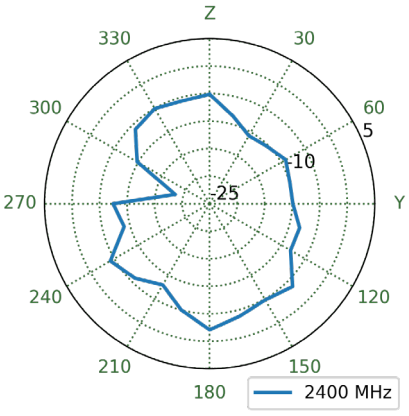
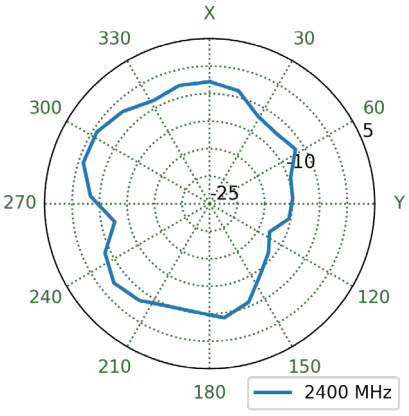




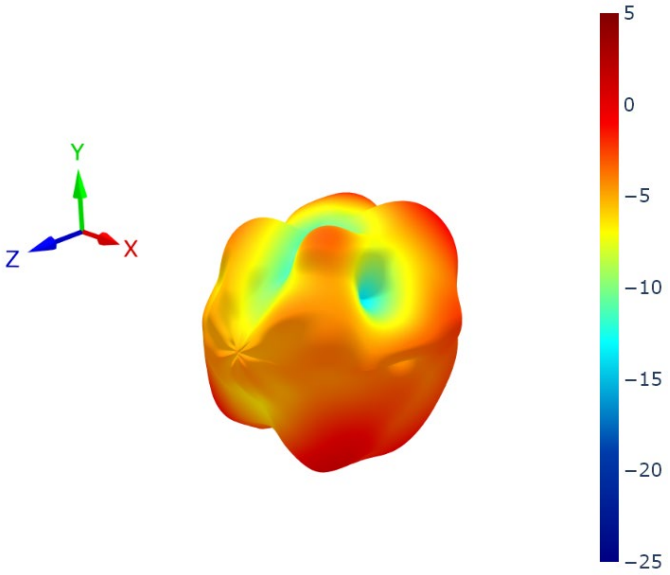
Tested on 150x90mm Ground Plane

6.2 Patterns at 2400 MHz

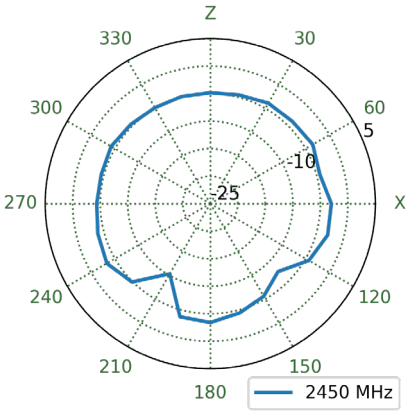


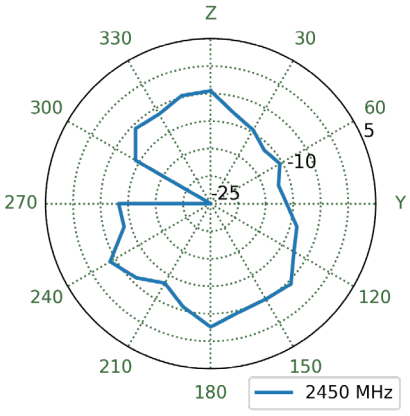
XZ Plane	YZ Plane	XY Plane
		

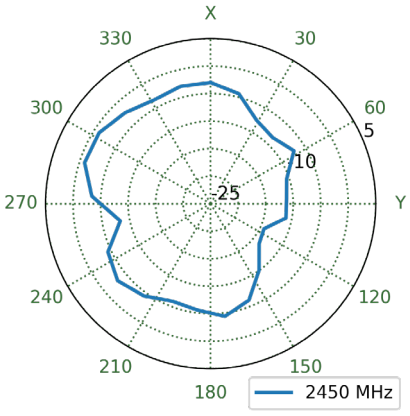
6.3 Patterns at 2450 MHz



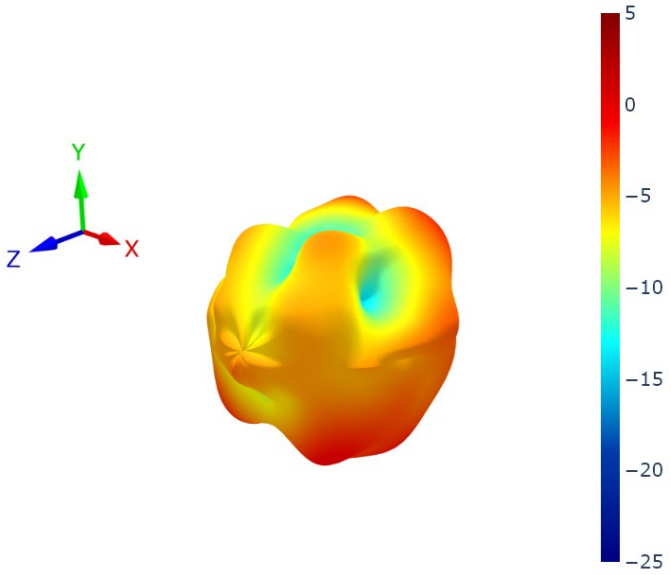
XZ Plane	YZ Plane	XY Plane

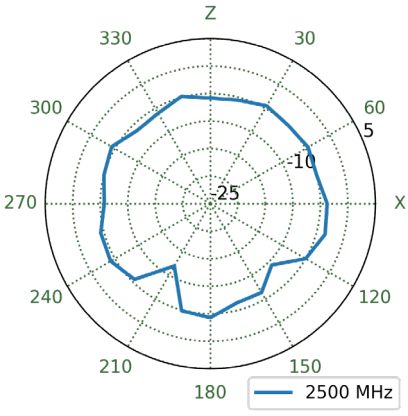
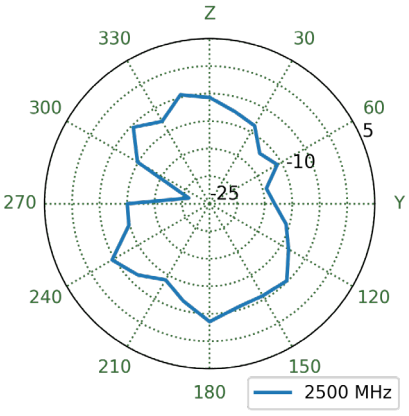
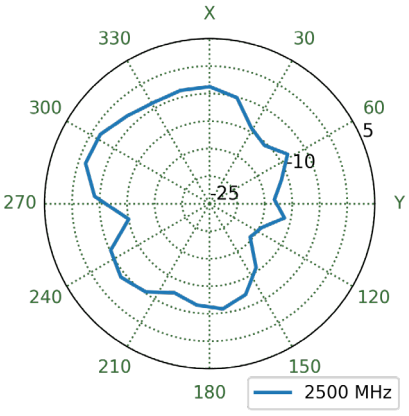






6.4 Patterns at 2500 MHz



XZ Plane	YZ Plane	XY Plane
		

Changelog for the datasheet

SPE-11-8-036 – GW.26.0112

Revision: L (Current Version)	
Date:	2025-12-17
Notes:	Updated test set up photo.
Author:	Conor McGrath

Previous Revisions

Revision: K	
Date:	2025-11-24
Notes:	Full datasheet update
Author:	Gary West

Revision: J	
Date:	2025-03-28
Notes:	Added mention of IP65 to Introduction.
Author:	Conor McGrath

Revision: I	
Date:	2018-11-02
Notes:	Updated dBi
Author:	Jack Conroy

Revision: H	
Date:	2017-01-05
Notes:	Added packaging specs and disclaimer
Author:	Andy Mahoney

Revision: G	
Date:	2016-05-18
Notes:	Amended Peak Gain
Author:	Aine Doyle

Revision: F	
Date:	2014-03-12
Notes:	Amended Bandwidth to 100MHz
Author:	Aine Doyle

Revision: E	
Date:	2013-09-16
Notes:	Amended table heading o Page 2 - general formatting
Author:	Aine Doyle

Revision: D	
Date:	2012-03-26
Notes:	
Author:	Unknown

Revision: C	
Date:	2011-05-08
Notes:	
Author:	Unknown

Revision: B	
Date:	2011-07-20
Notes:	
Author:	Unknown

Previous Revisions

Revision: A (First Release)	
Date:	2011-07-14
Notes:	
Author:	Unknown

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