Datasheet

915/868MHz Terminal Antenna

Part No:
TI.08.C.0112

Description

915MHz/868MHz ISM Band Terminal Antenna Fixed Right-Angle SMA(M) Connector

Features:

Omni-Directional Dipole Antenna
TPU Housing
Dimensions: 53x17mm
SMA Male Right Angle Connector
RoHS & Reach Compliant

1. Introduction

The Taoglas TI.08.C.0112 is a high performance antenna covering both 915MHz and 868MHz, small form factor, dipole omni-direction terminal mount antenna. This antenna features an SMA(M) right angle connector as standard.

Some typical applications include:

- Smart Lighting
- Remote Monitoring
- IoT (Internet of Things)
- Smart Metering

This antenna is fabricated using TPU, which is a lightweight robust material used on several other Taoglas products. The TI.08.0112 can function impressively with a small ground plane while maintaining high efficiencies, on the band 863~870 it can reach at least 68% on a 15x9cm ground plane. The antenna connector type can be customizable, please contact your regional Taoglas sales facility for support.

2. Specification

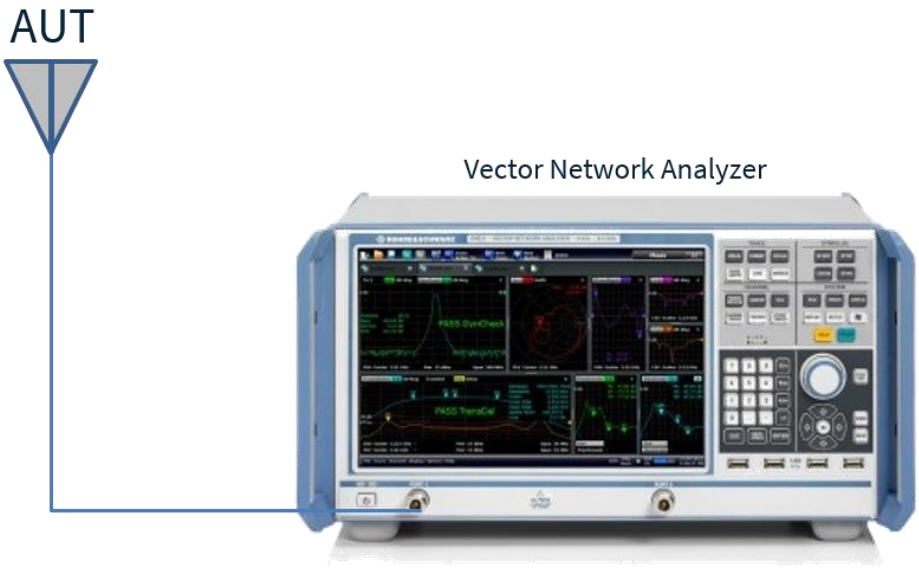
LTE Electrical								
Band	Frequency (MHz)	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern	Max. input power
868MHz	862-874	84.8	-0.72	2.48	50 Ω	Linear	Omni	10W
915MHz	910-920	68.3	-1.65	1.70				

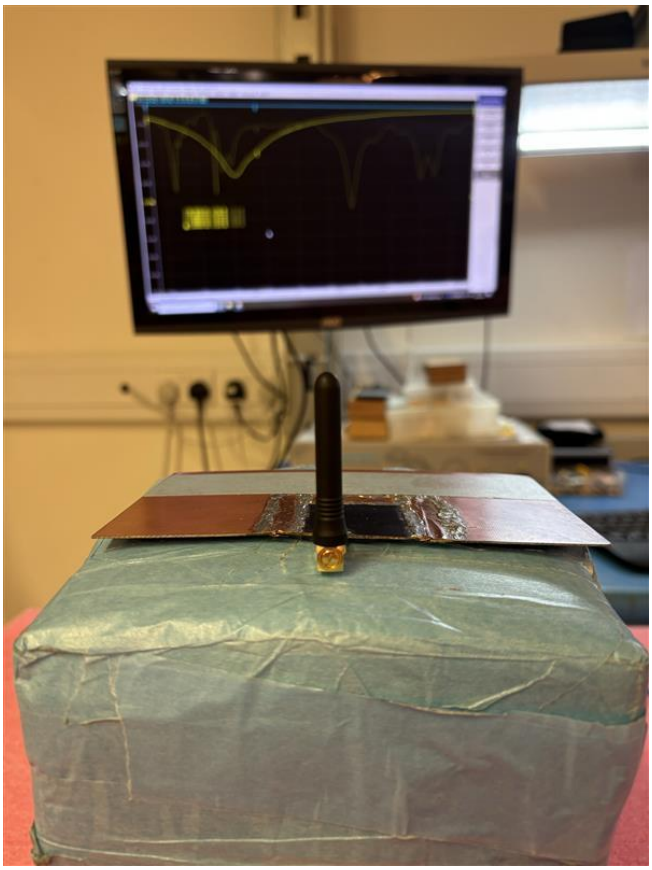
Mechanical	
Height	53 ± 2 mm
Diameter	Ø7 ± 0.2 mm
Width	17 ± 0.8 mm
Casing	TPU
Connector	SMA(M) RA

Environmental	
Operation Temperature	-40°C to 70°C
Storage Temperature	-40°C to 70°C

3. Antenna Characteristics

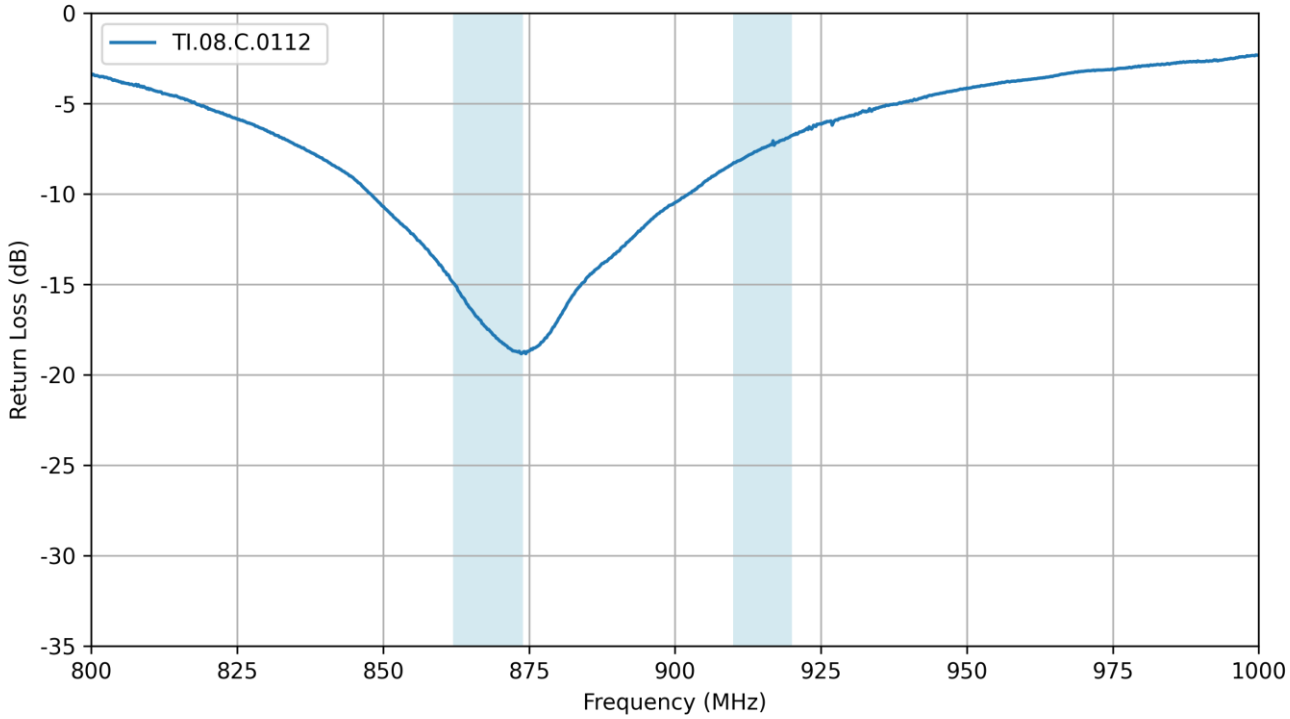
3.1 Test Setup



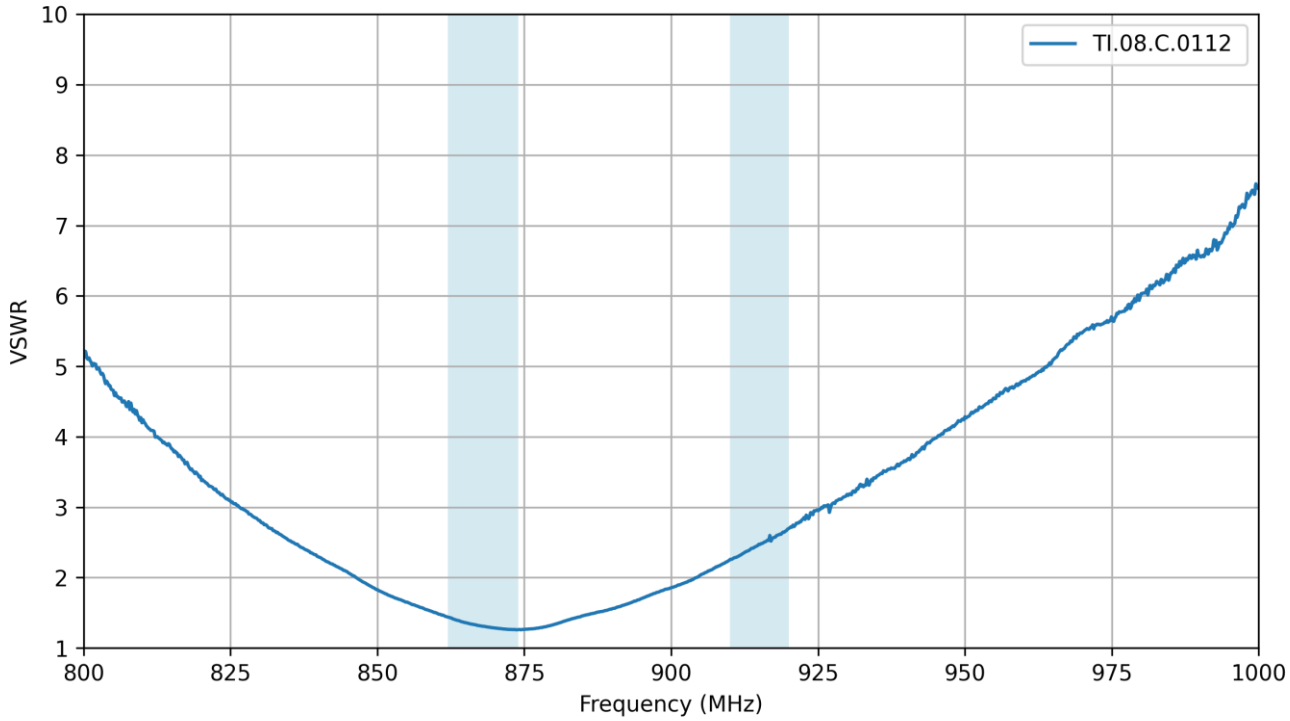


VNA Test Set-up on 15x9cm Ground Plane

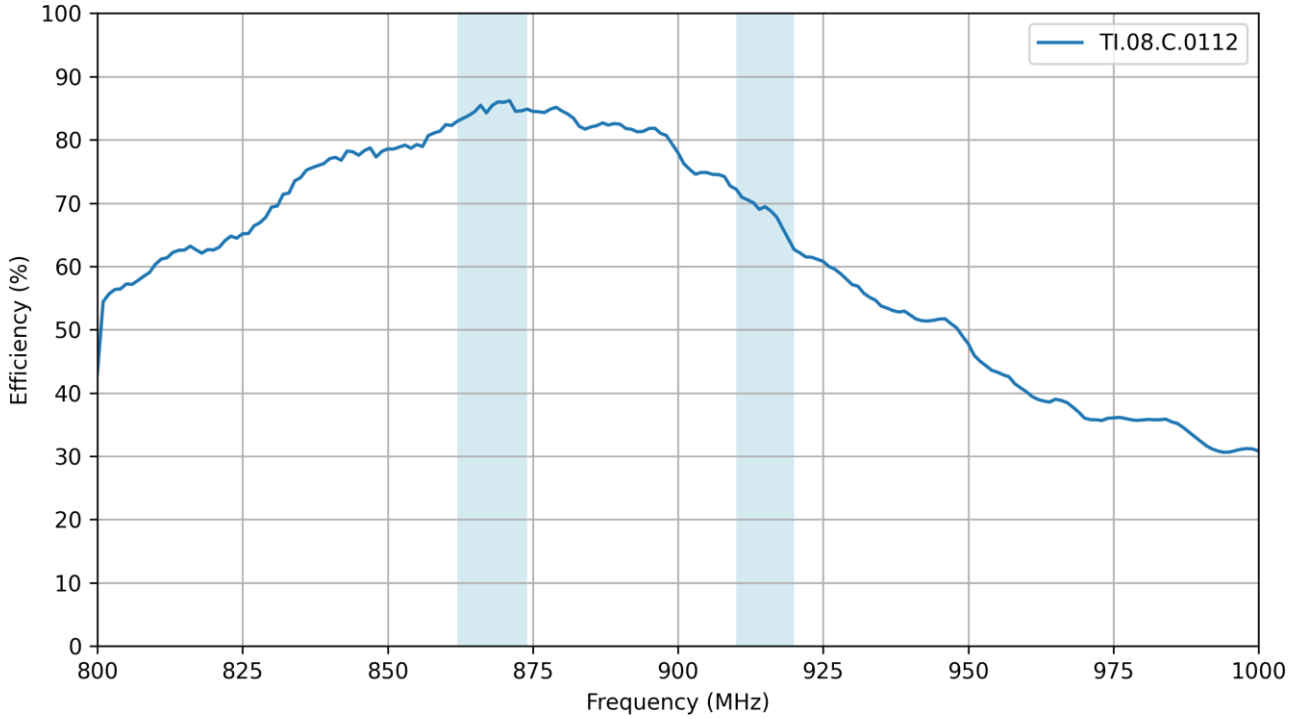
3.2 Return Loss



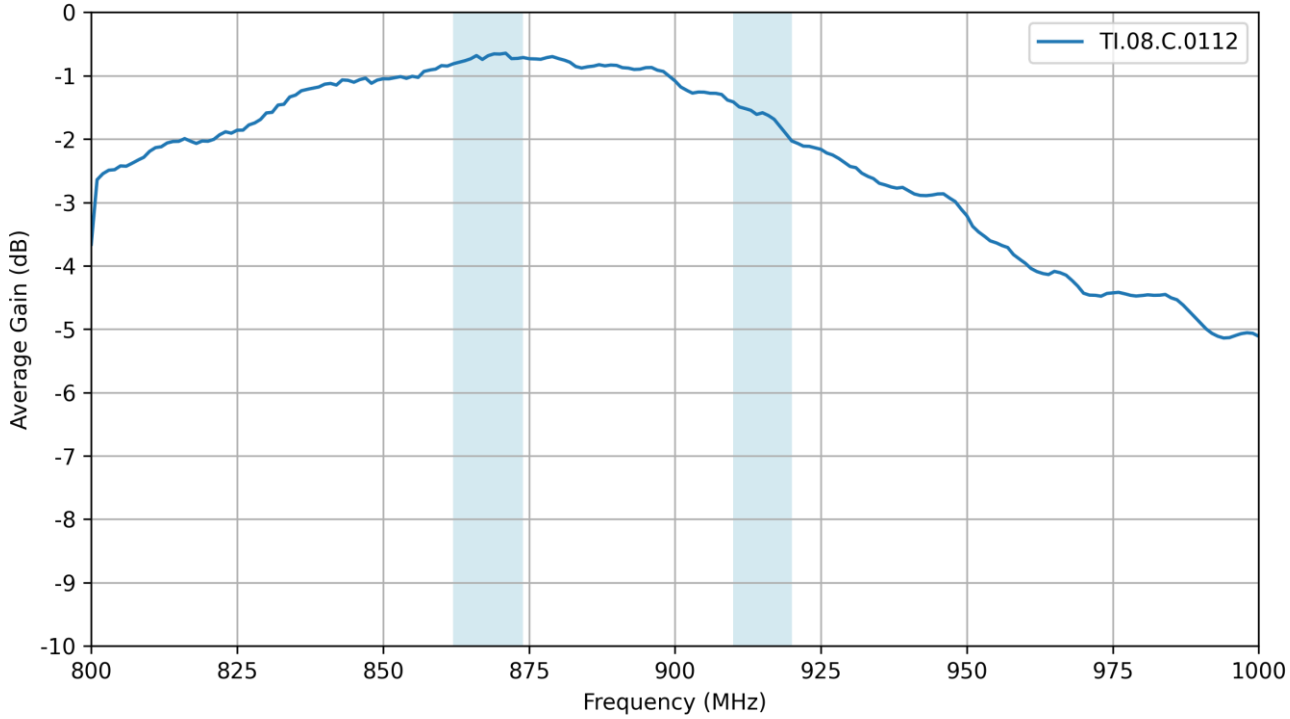
3.3 VSWR



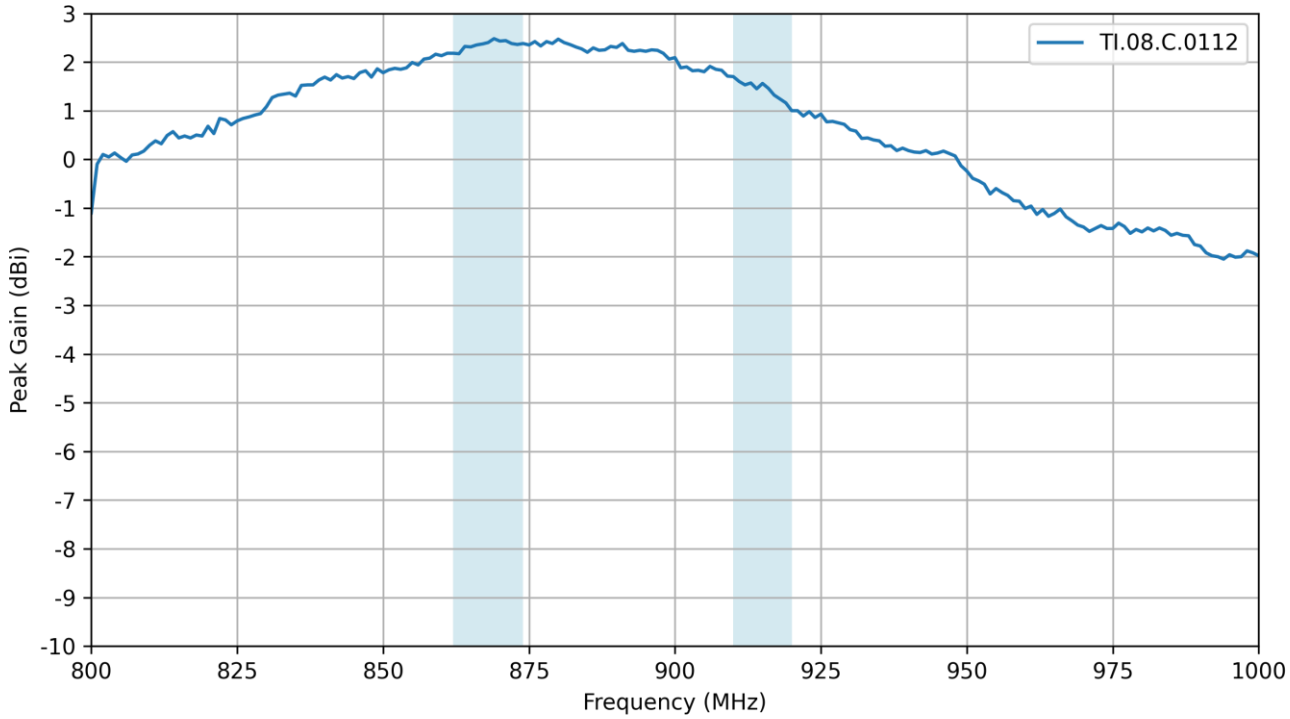
3.4 Efficiency



3.5 Average Gain

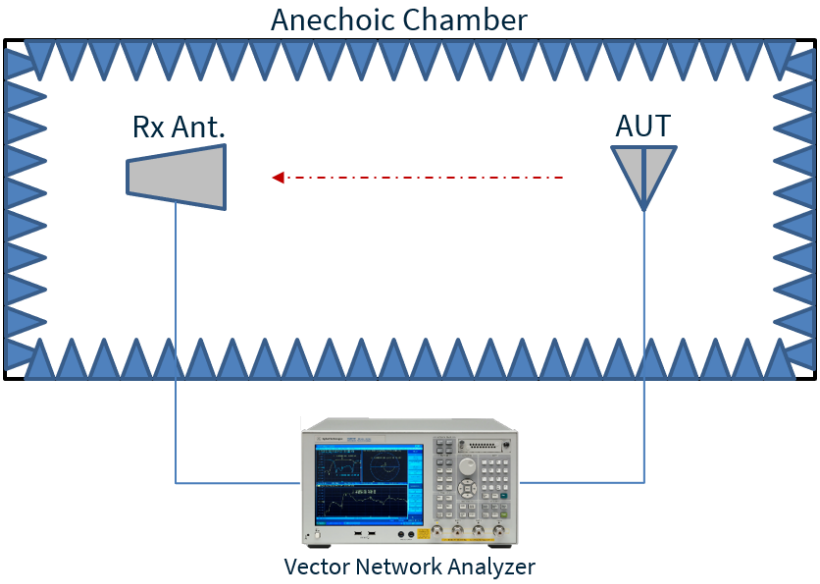


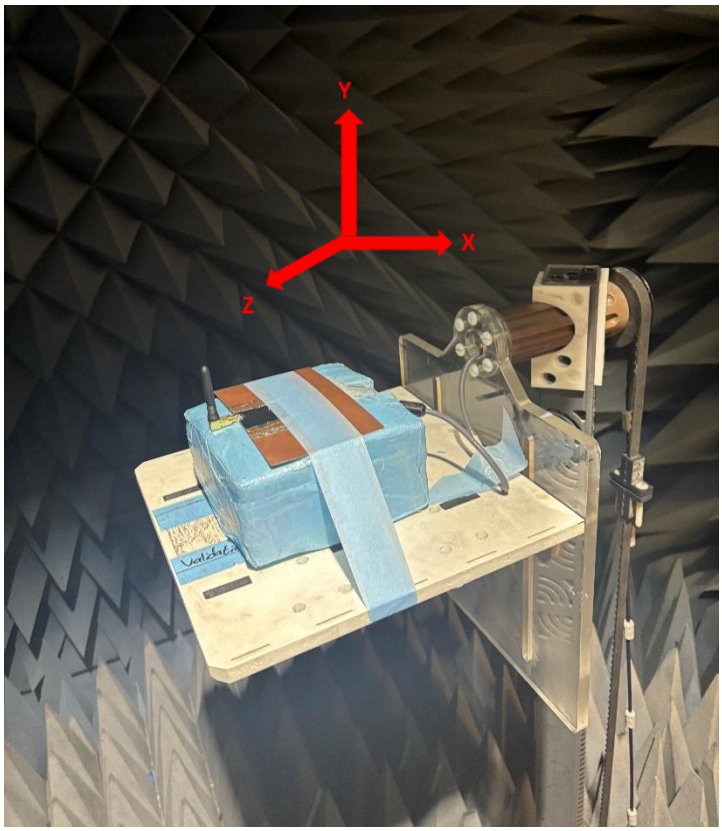
3.6 Peak Gain


TI.08.C.0112
Peak Gain (dBi)
Frequency (MHz)
3
2
1
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
800
825
850
875
900
925
950
975
1000

4. Radiation Patterns

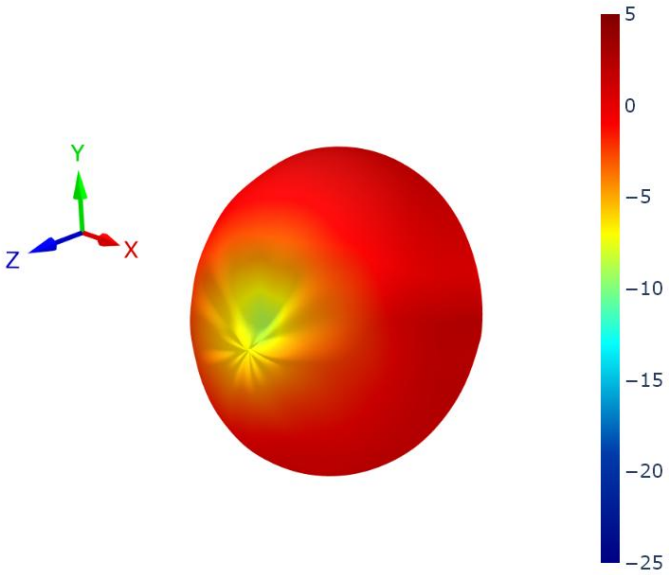
4.1 Test Setup



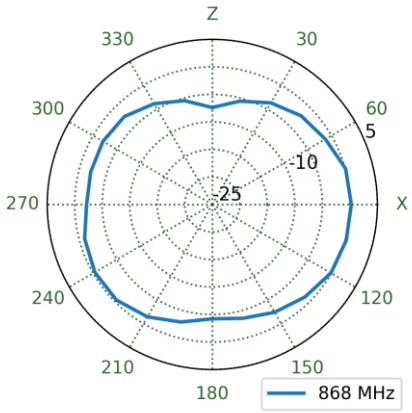


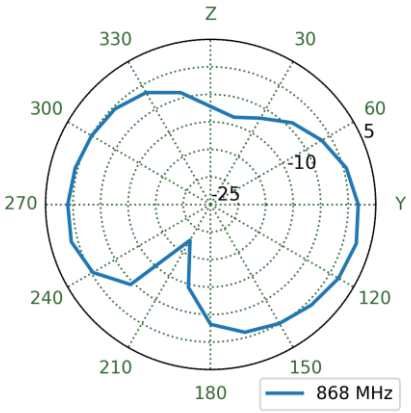
Chamber Test Set-up on 15x9cm Ground Plane

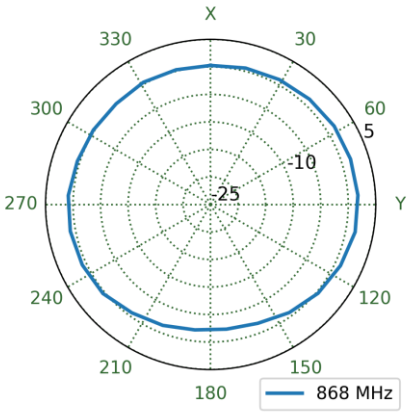
4.2 Patterns at 868 MHz



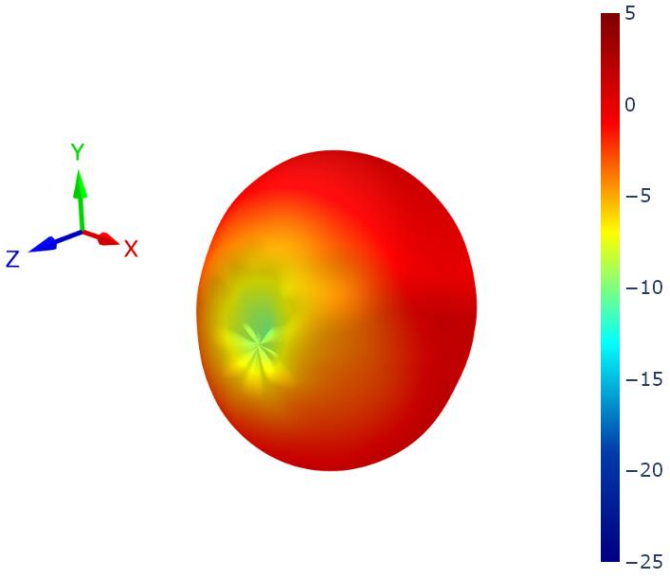
XZ Plane	YZ Plane	XY Plane

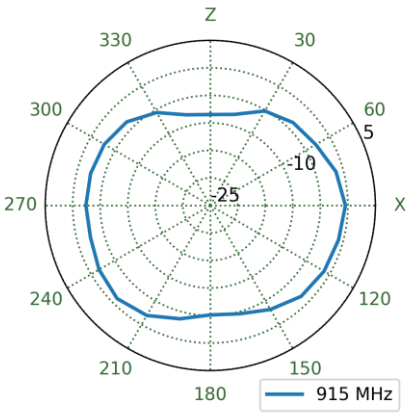
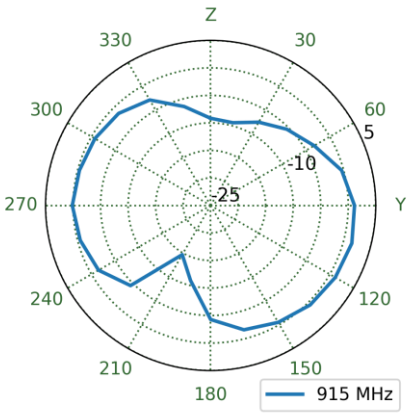
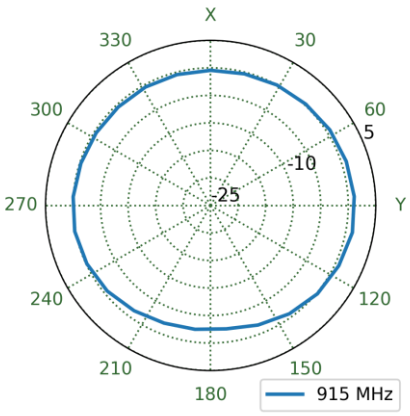




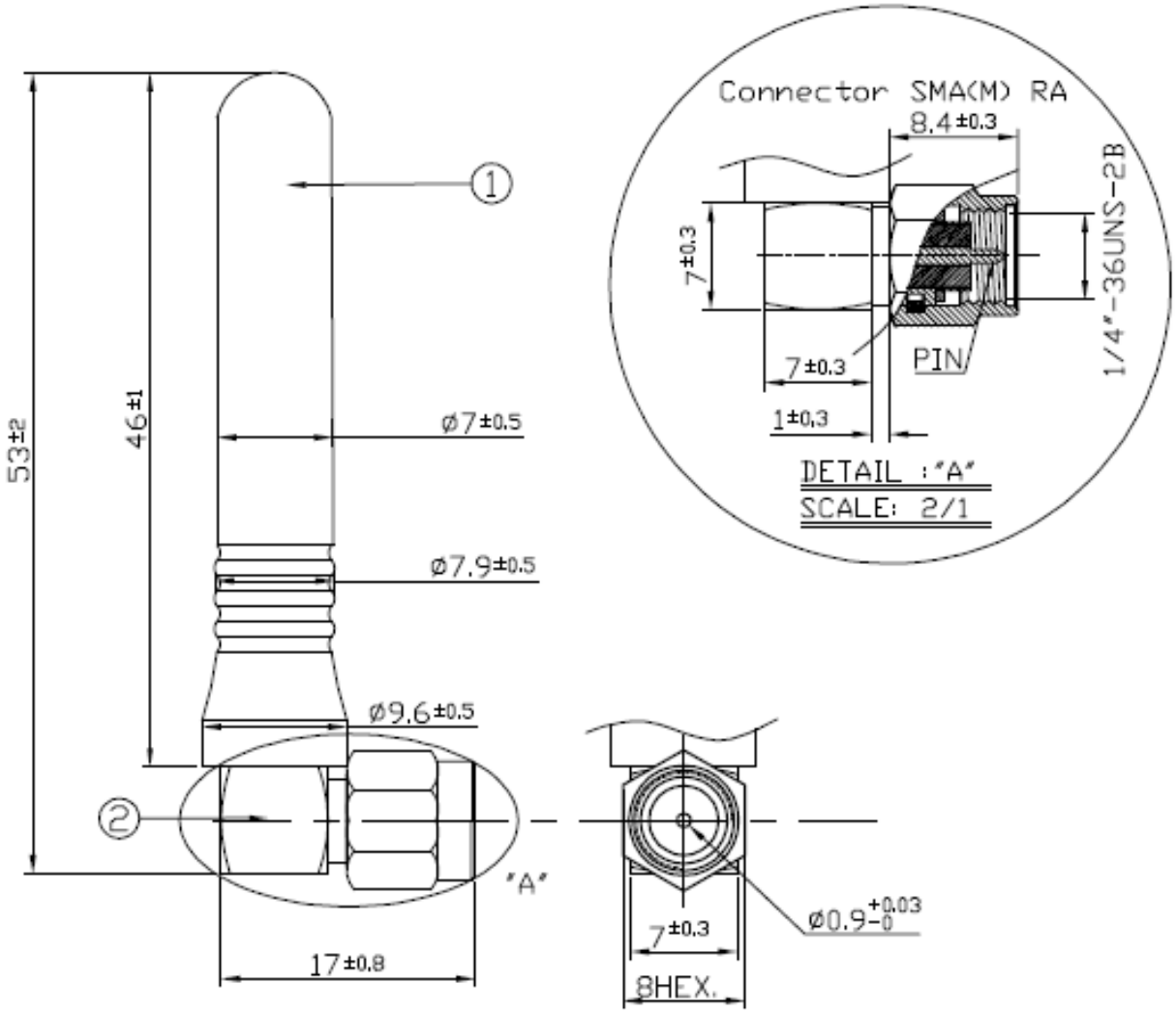


4.3 Patterns at 915 MHz



XZ Plane	YZ Plane	XY Plane
		

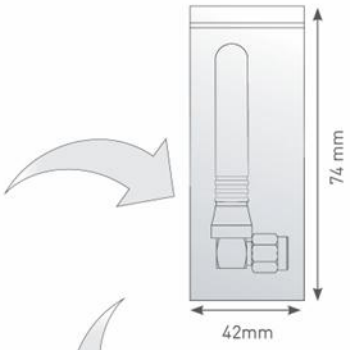
5. Mechanical Drawing



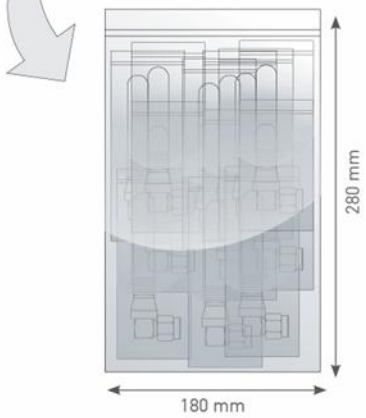
	Name	P/N	Material	Finish	QTY
①	Antenna Cover	000111G000002A	TPU	Black	1
②	SMA(M) RA	210211G010002A	Brass	Gold	1

6. Packaging

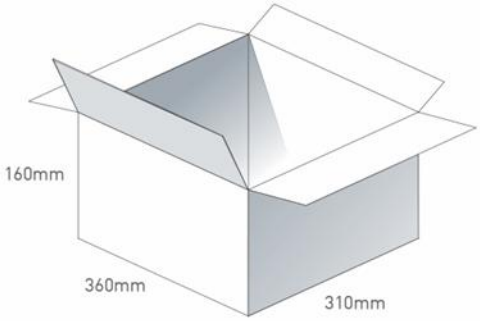
1 pcs TI.08.C.0112 per PE Bag
PE Bag Dimensions - 42*74mm
Weight - 7.5g



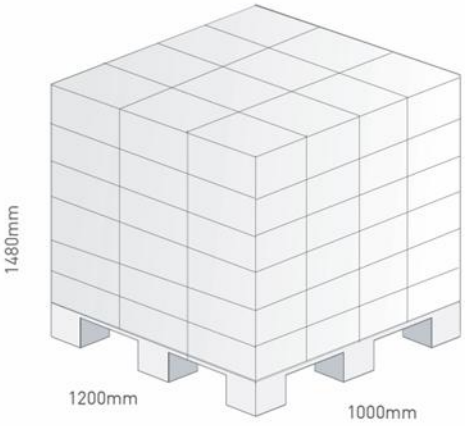
100 PE Bags per Large PE Bag
100 pcs TI.08.C.0112 per Large PE Bag
Large PE Dimensions - 180*280mm
Weight - 0.761kg



15 Large PE bags per carton
1500 pcs TI.08.C.0112 per carton
Carton Dimensions - 360*310*160mm
Weight - 12kg



Pallet Dimensions 1200mm*1000mm*1480mm
72 Cartons per Pallet
9 Cartons per layer
8 Layers



Changelog for the datasheet

SPE-11-8-039 – TI.08.C.0112

Revision: E (Current Version)	
Date:	2022-12-09
Changes:	Retest antenna and updated datasheet
Changes Made by:	Gary West

Previous Revisions

Revision: D	
Date:	2022-12-09
Changes:	Full datasheet update
Changes Made by:	Gary West

Revision: C	
Date:	2019-04-02
Changes:	Added new introduction and data
Changes Made by:	Jack Conroy

Revision: B	
Date:	2011-11-15
Changes:	Packaging amended
Changes Made by:	Aine Doyle

Revision: A (Original First Release)	
Date:	2011-07-16
Notes:	
Author:	Aine Doyle

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