TAOGLAS

Datasheet

Part No:
TI.09.A.0111

Description:

915MHz ISM/LoRA Terminal Mount Antenna

Features:

0dBi Peak Gain Antenna
High Efficiency
SMA Male Straight Connector
Dimensions: 168*Ø12mm
RoHS & REACH Compliant

1. Introduction

The Taoglas TI.09.A.0111 is a Dipole antenna designed to operate on the LoRA/ISM/Helium network at 915MHz. It is 168mm tall and can be mounted directly to a device via the SMA male connector integrated into the bottom side of the antenna. This antenna performs very well in free space with over 45 percent efficiency, making it an ideal solution in areas where there may be no ground plane.

Typical Applications include:

- Smart Metering
- Remote Monitoring
- Industrial IoT
- Connected Enterprise

The TI.09.A.0111 is manufactured using robust TPU Material making it suiable for mounting in outdoor areas if required. This antenna's connector can be customised subject to MOQ, please contact your regional Taoglas customer support team for installation guidelines or additional support to integrate and test this antenna's performance in your device.

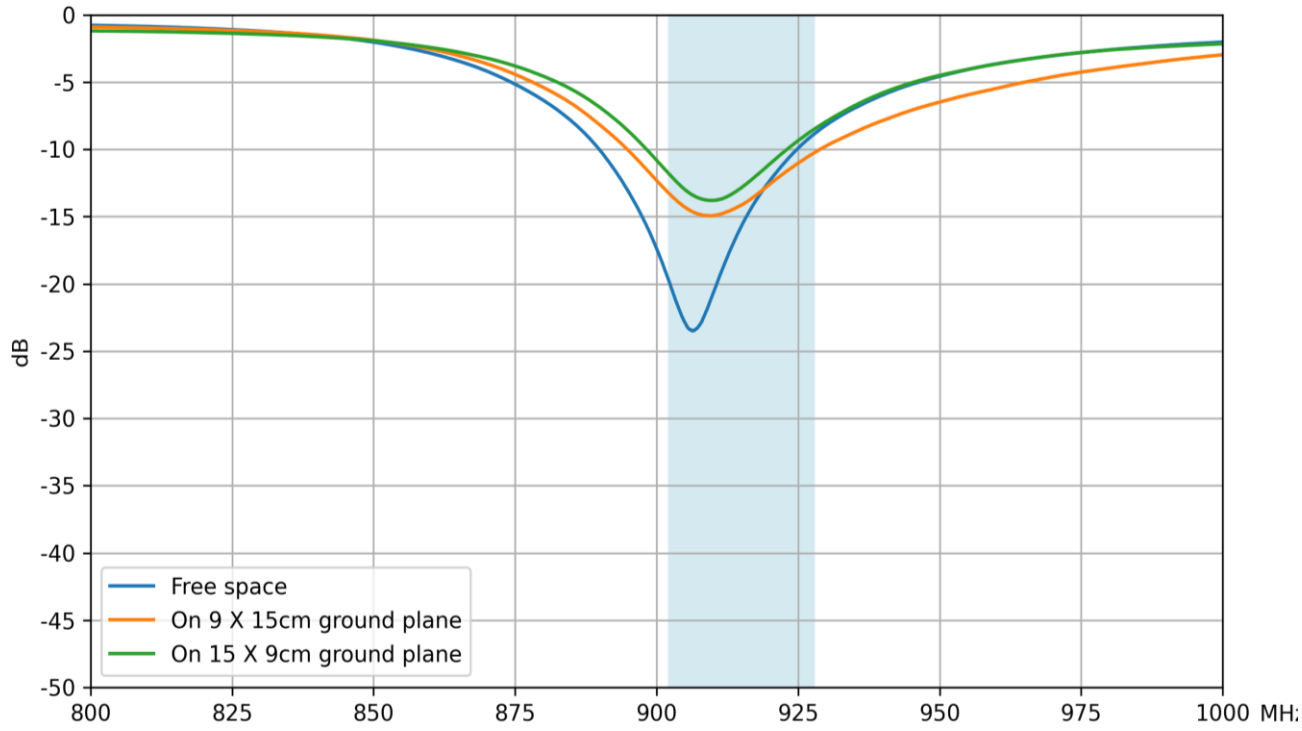
2. Specifications

Electrical		
Frequency (MHz)		915ISM
		902-928
Efficiency (%)		
Free space		47.8
On 9 X 15cm ground plane		57.0
On 15 X 9cm ground plane		48.0
Average Gain (dB)		
Free space		-3.21
On 9 X 15cm ground plane		-2.44
On 15 X 9cm ground plane		-3.19
Peak Gain (dBi)		
Free space		-0.89
On 9 X 15cm ground plane		2.17
On 15 X 9cm ground plane		0.41
Impedance	50 Ω	
Polarization	Vertical	
Radiation Pattern	Omni	

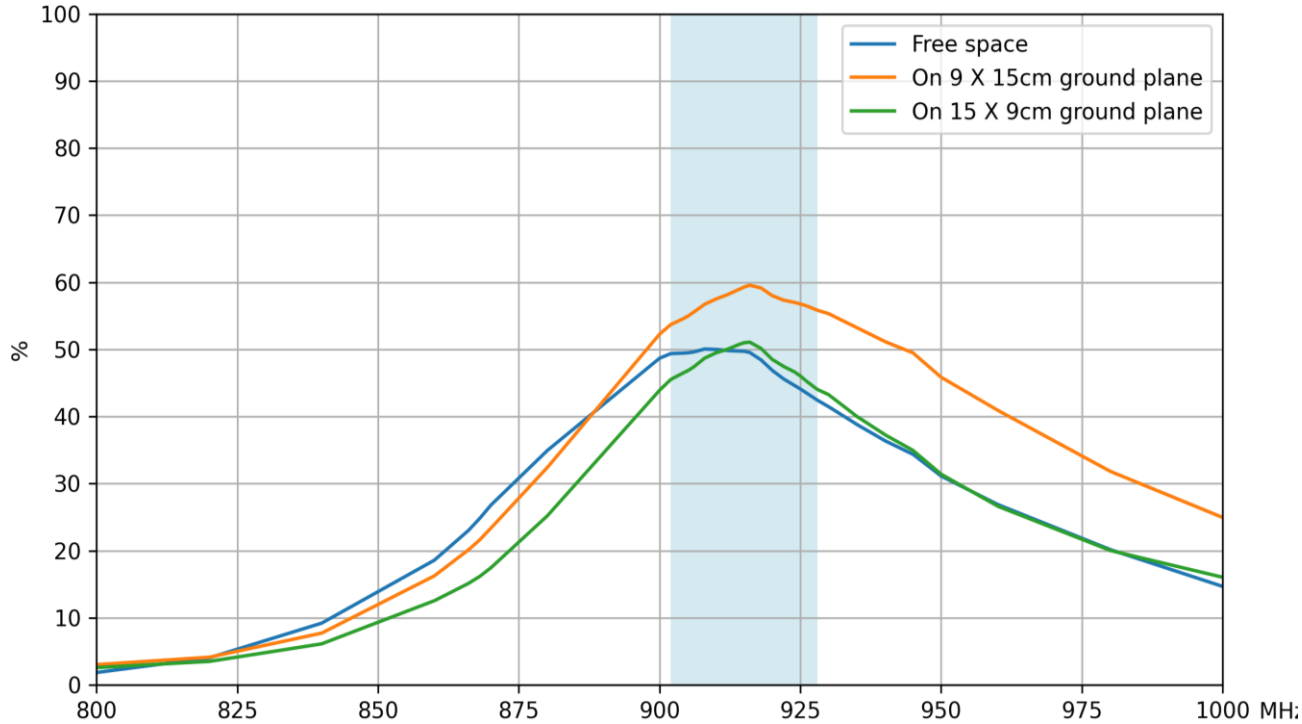
Mechanical	
Dimensions	168x12mm
Weight	21g
Material	TPU
Connector	SMA (M) ST
Environmental	
Temperature Range	-40°C ~ +85°C
Storage Temperature	-40°C ~ +85°C

3. Antenna Characteristics

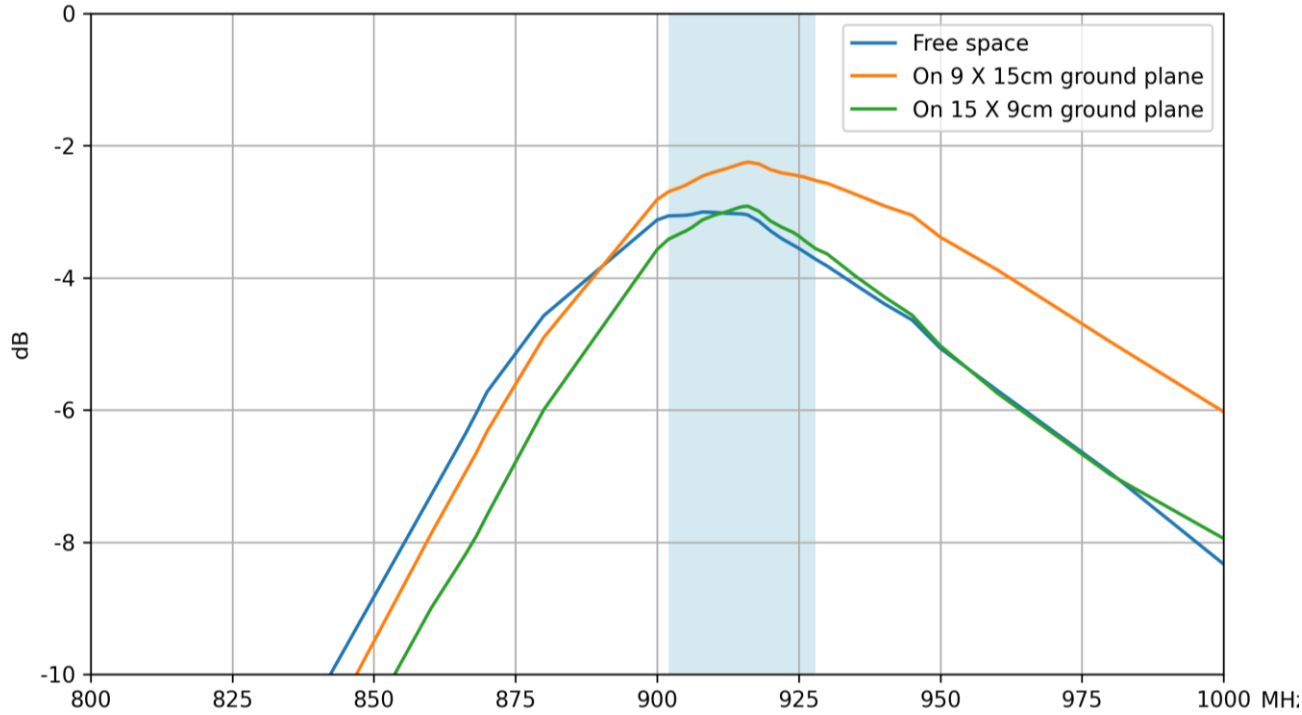
3.1 Return Loss



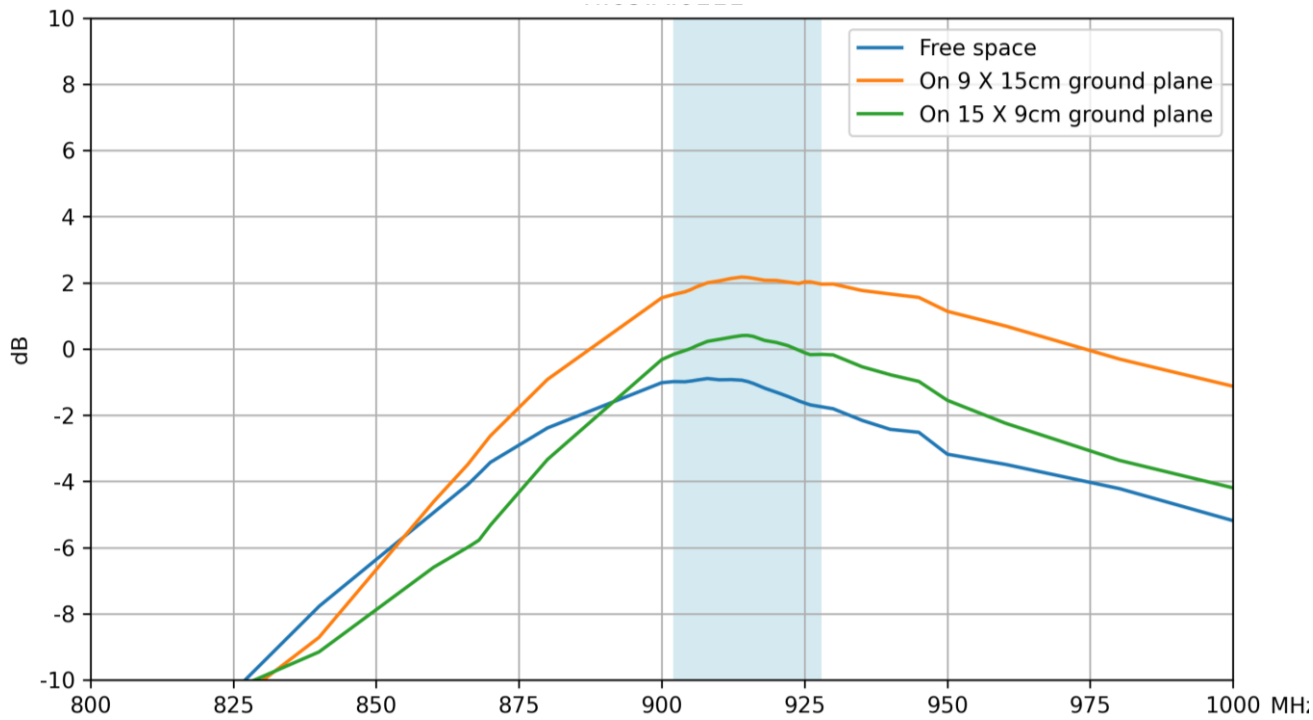
3.2 Efficiency



3.3 Average Gain

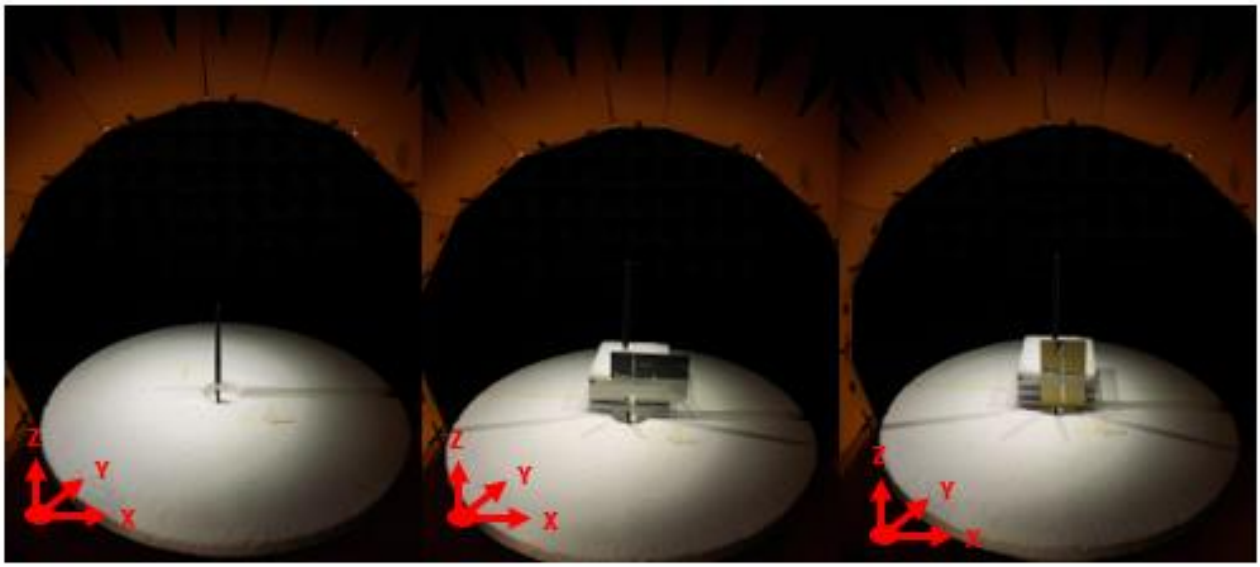


3.4 Peak Gain



4. Radiation Patterns

4.1 Test Setup - Chamber

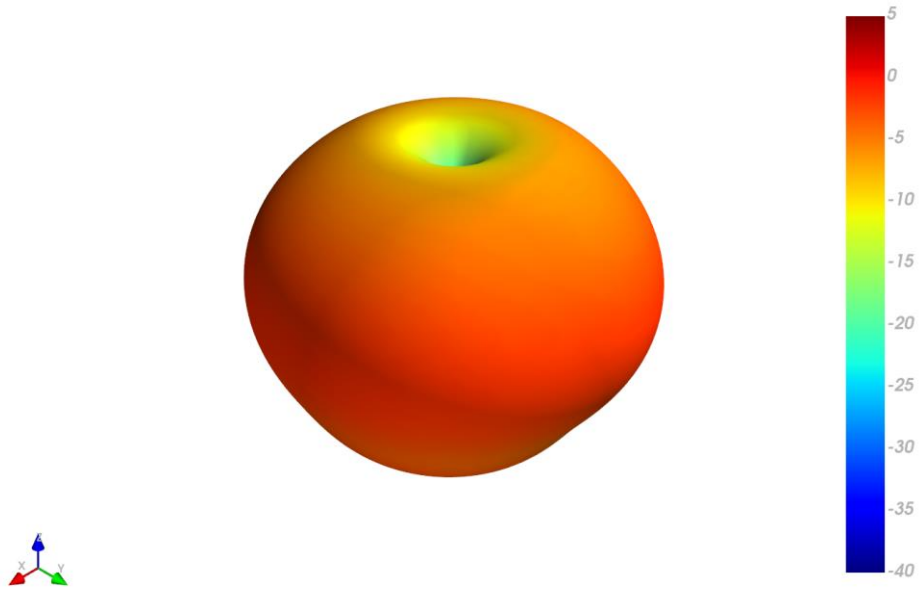


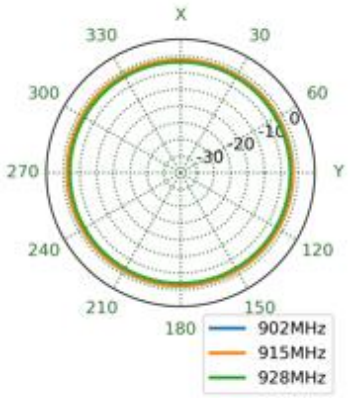
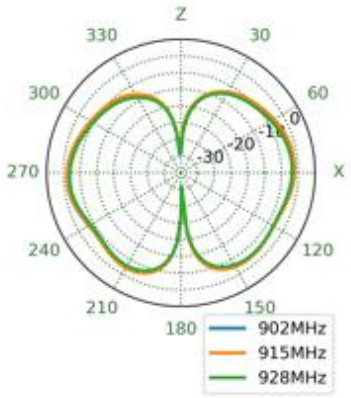
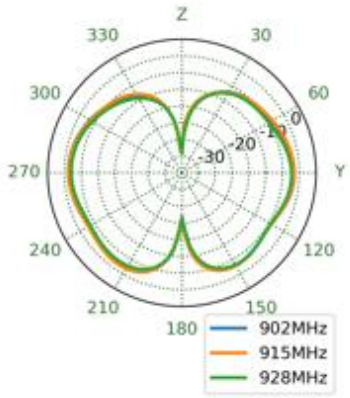
Freespace | On 9x15cm Ground Plane (long side) | On 15x9cm Ground Plane (short side)

4.2 Test Setup - VNA

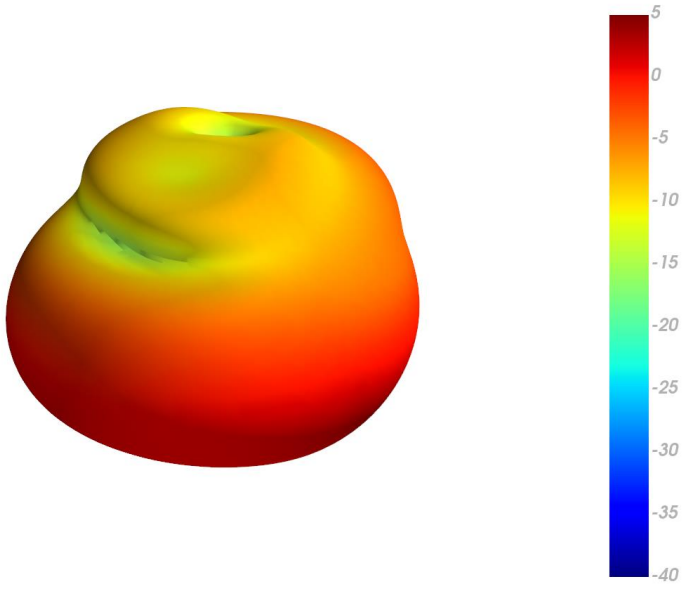
Freespace | On 9x15cm Ground Plane (long side) | On 15x9cm Ground Plane (short side)

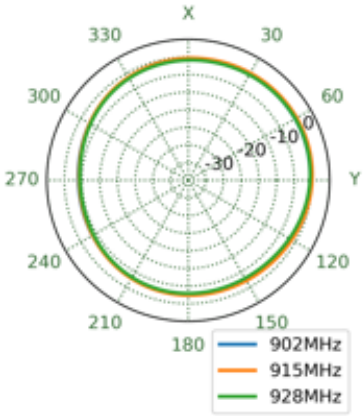
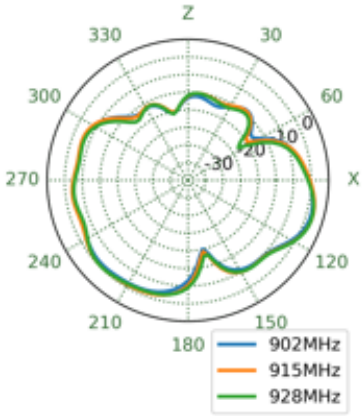
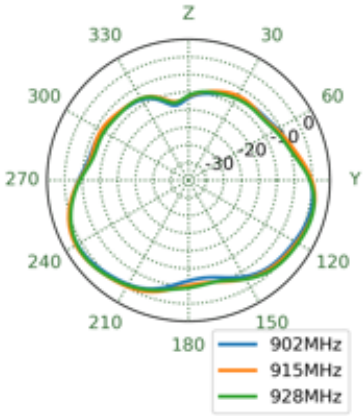
4.2 902MHz_Freespace - 2D & 3D Radiation Patterns



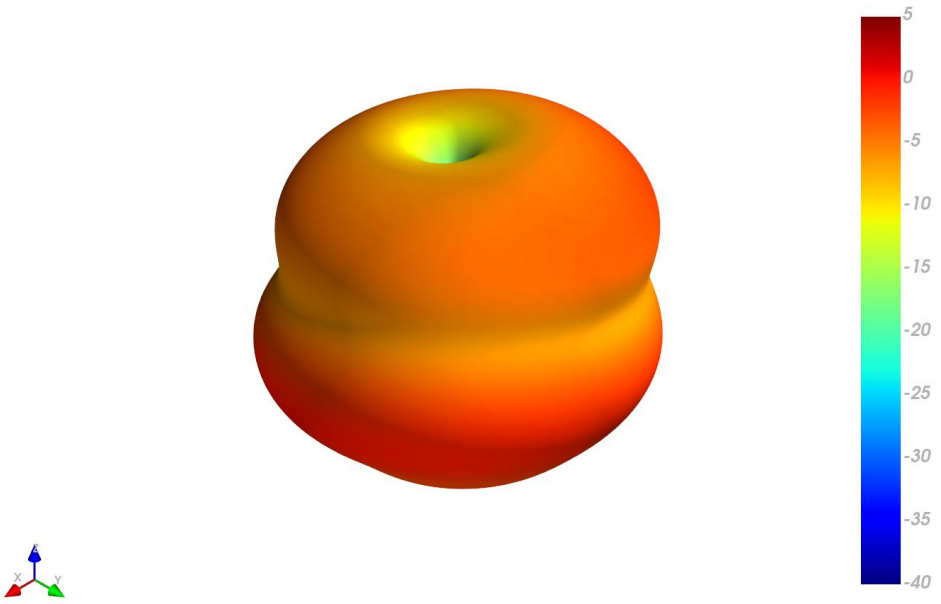
XY Plane	XZ Plane	YZ Plane
		

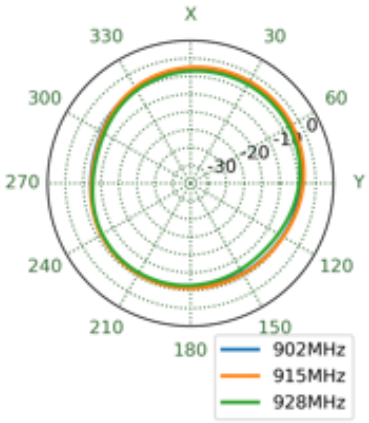
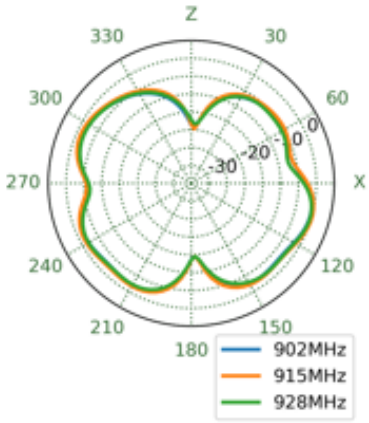
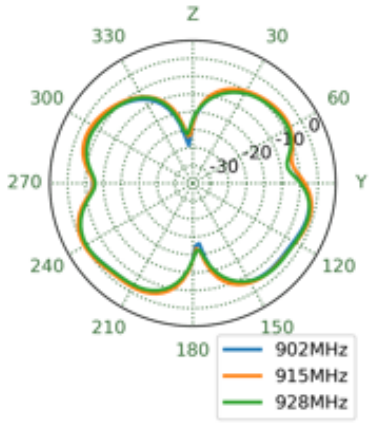
4.3 915MHz_On 9x15cm Ground plane - 2D & 3D Radiation Patterns



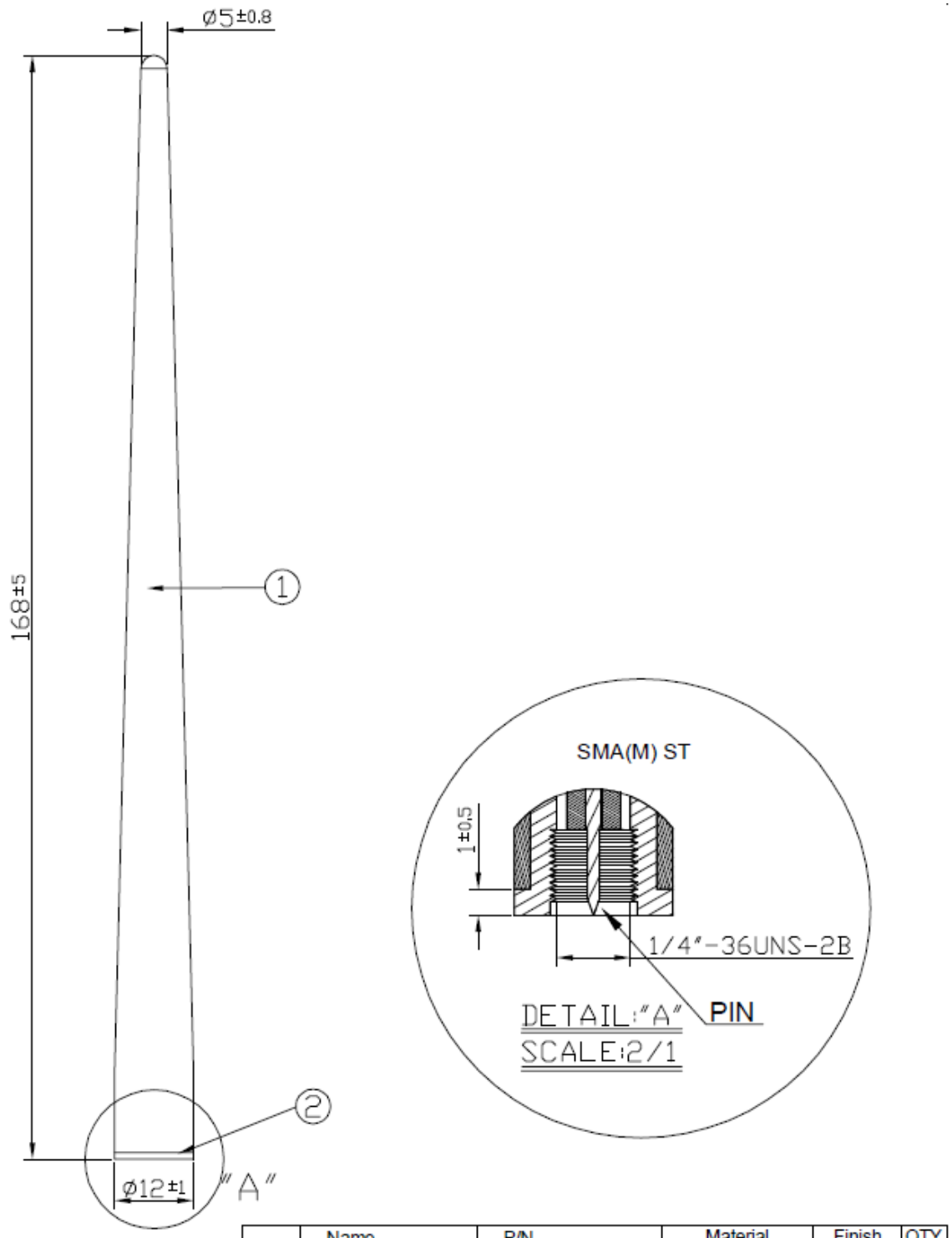
XY Plane	XZ Plane	YZ Plane
		

4.4 928MHz_On 15x9cm Ground plane - 2D & 3D Radiation Patterns



XY Plane	XZ Plane	YZ Plane
		

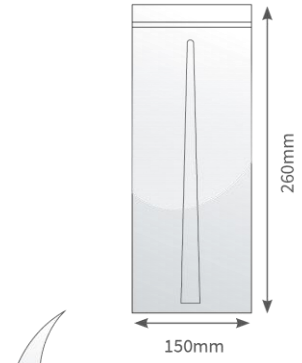
5. Mechanical Drawing (Units: mm)



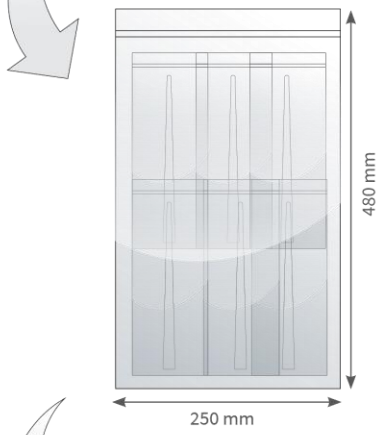
	Name	P/N	Material	Finish	QTY
①	Antenna Housing	000111L000002A	TPU	Black	1
②	SMA(M) ST	210211L000002A	Brass	Black	1

6. Packaging

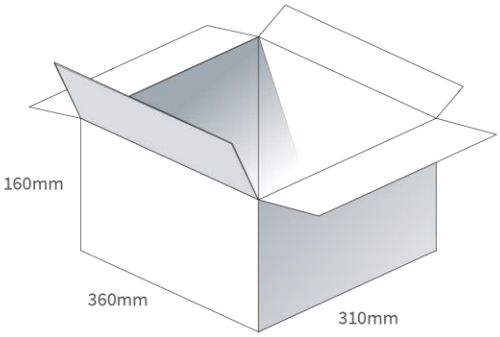
1 pcs TI.09.A.0111 per PE Bag
PE Bag Dimensions - 150*260mm
Weight - 0.021kg



100 PE Bags per Large PE Bag
100 pcs TI.09.A.0111 per Large PE Bag
Large PE Dimensions - 250*480mm
Weight - 0.221kg



15 Large PE bags per carton
1500 pcs TI.09.A.0111 per carton
Carton Dimensions - 360*310*160mm
Weight - 3.915kg



Changelog for the datasheet

SPE-15-8-018 – TI.09.A.0111

Revision: B (Current Version)	
Date:	2022-06-07
Changes:	Full datasheet update
Changes Made by:	Gary West

Previous Revisions

Revision: A (Original First Release)	
Date:	2015-04-23
Notes:	
Author:	Technical Writer

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