



# TAOGLAS®



# Datasheet

## 915MHz ISM Band Terminal Antenna

Part No:  
TI.93.A111

### Description

915MHz Terminal Antenna SMA Male Straight

### Features:

902-928MHz Band Operation  
IP67 Waterproof Rated  
Low-profile Terminal Antenna  
SMA(M) Straight Connector  
Dimensions:  $\varnothing$ 8.9mm x 21mm  
RoHS & Reach Compliant

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# 1. Introduction



The TI.93 is one of a range of super small form factor, lightweight, IP67 rated terminal mount antennas from Taoglas. It is ideal for wireless applications operating on ISM or LoRa bands covering 902-928MHz. Its robust silicone enclosure is engineered to perform in the most challenging of external environments when connecting IoT devices to smart grid and smart monitoring applications.

With its IP67 rating, the TI.93 can withstand dust, dirt, and even complete submersion in water, making it the perfect choice for any IoT application that demands both reliable connectivity and extreme durability. Whether you're connecting sensors for remote agricultural, monitoring equipment in industrial settings, or building the infrastructure for smart cities, the TI.93 is a great solution.

If you are looking for an antenna that's small, tough, and versatile, look no further than the TI.93. Contact your regional Taoglas Customer Services Team for more information or to discuss your project.

## 2. Specification

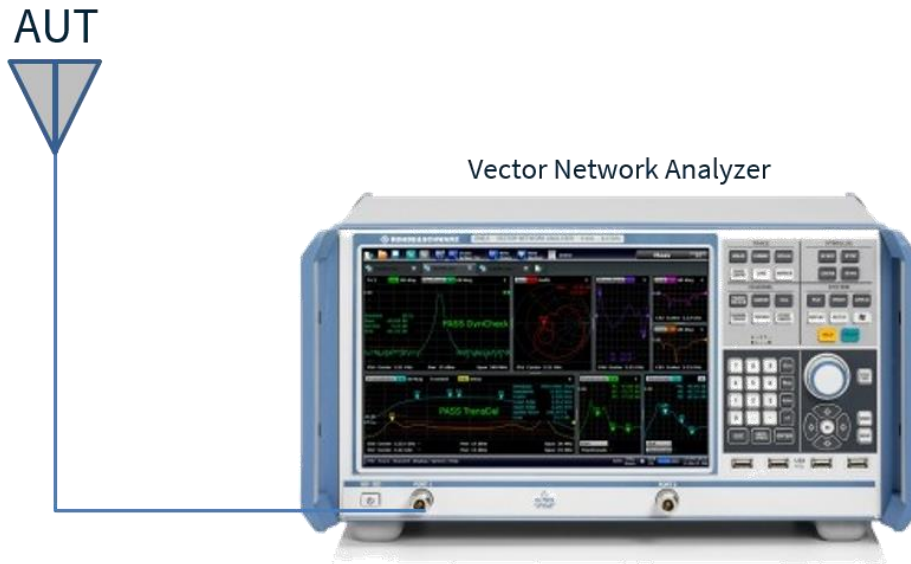
ISM Electrical							
Band		Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Polarization	Radiation Pattern
ISM 902-928MHz	In Free space	16.7	-7.78	-1.73	50 $\Omega$	Linear	Omni
	On 15x9cm Ground plane (Long side)	62.2	-2.06	1.12			
	On 9x15cm Ground plane (Short side)	52.5	-2.80	2.06			

Mechanical	
Dimensions	ø8.9mm x 21mm
Weight	3.3g
Material	Silicone
Connector	SMA(M)

Environmental	
Operating Temperature	-40°C ~ +85°C
Waterproof Rating	IP67

### 3. Antenna Characteristics

#### 3.1 Test Setup

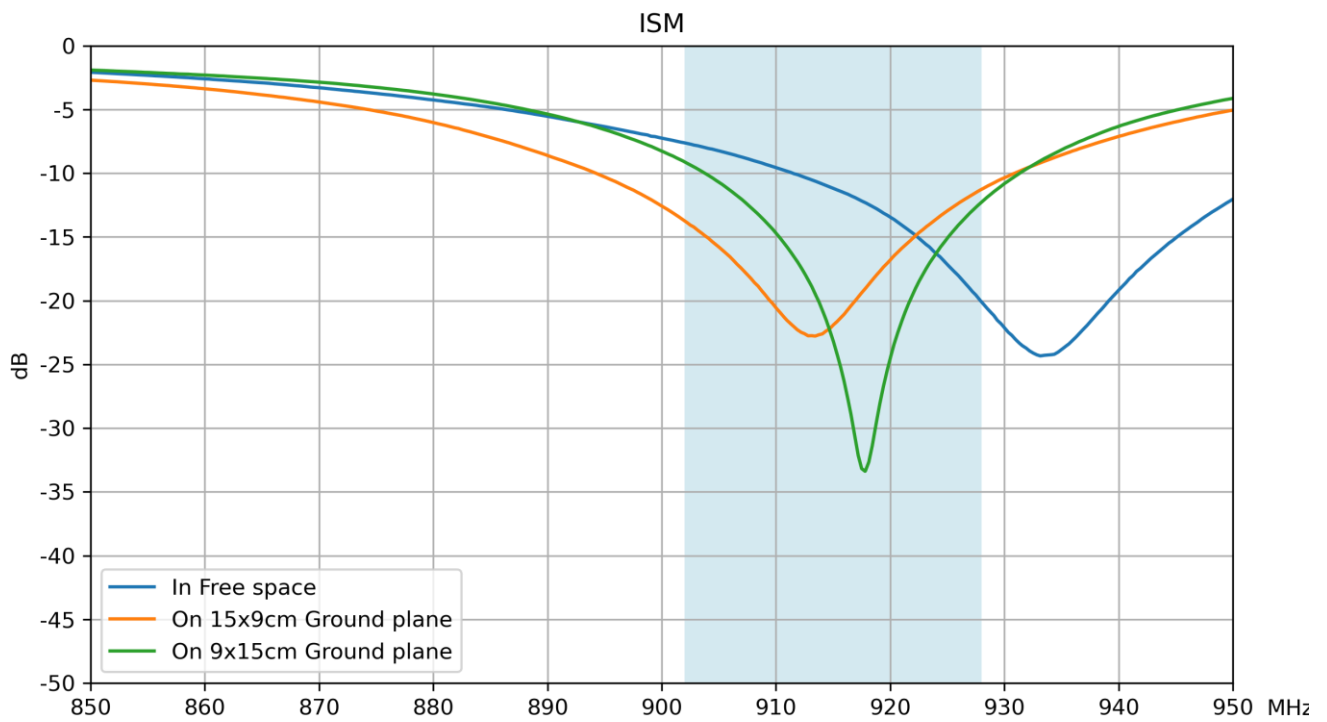


In Free Space

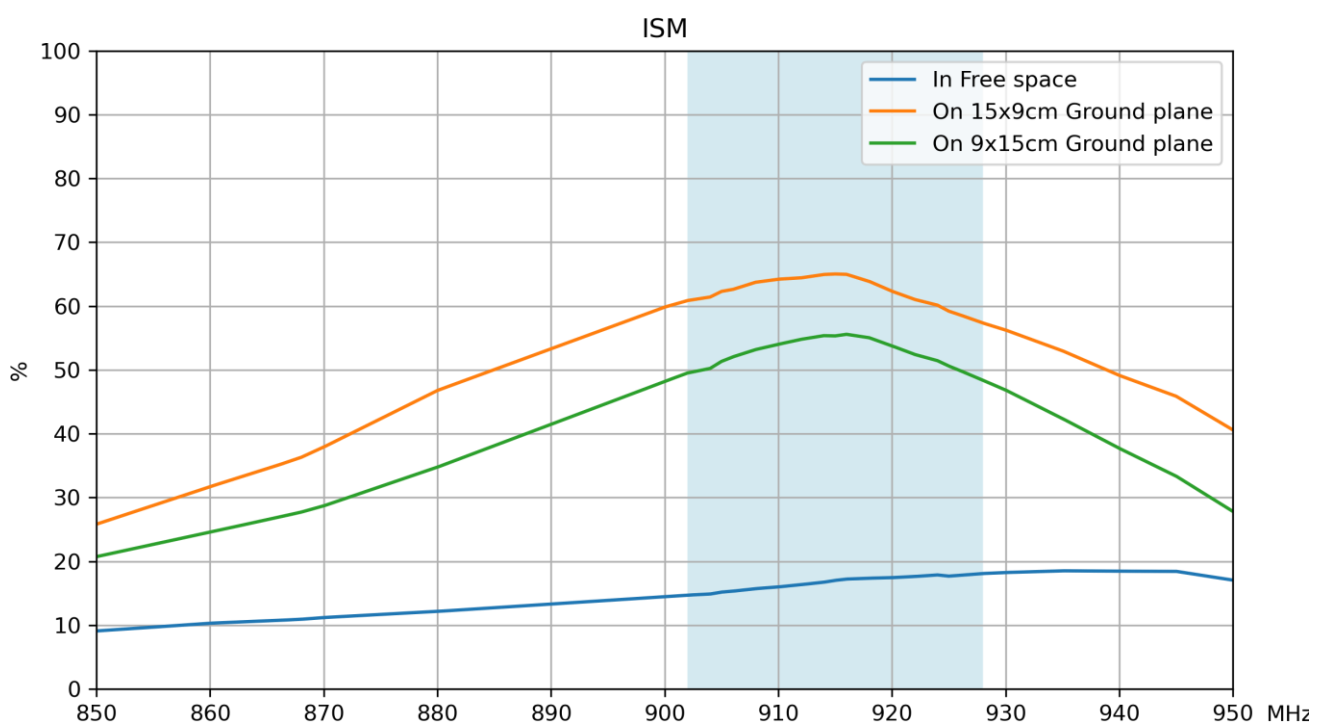
On 15x9cm Ground plane

On 9x15cm Ground plane

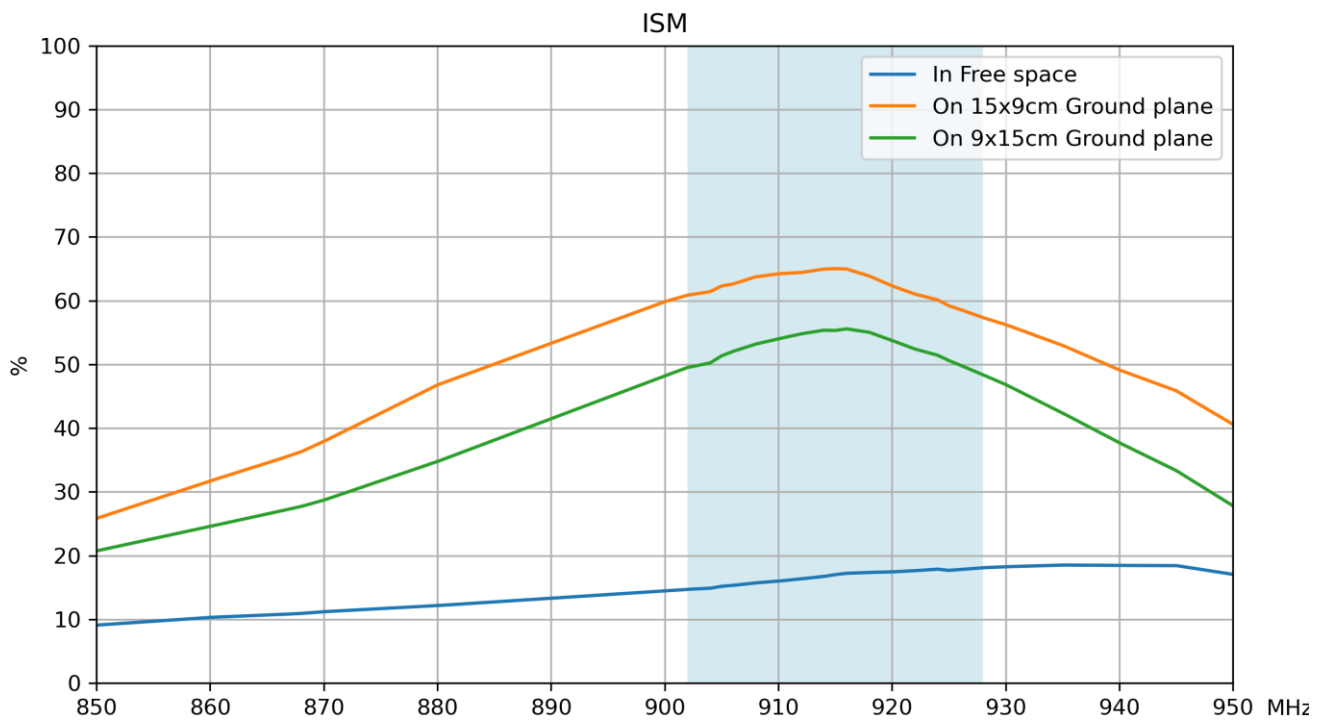
### 3.2 Return Loss



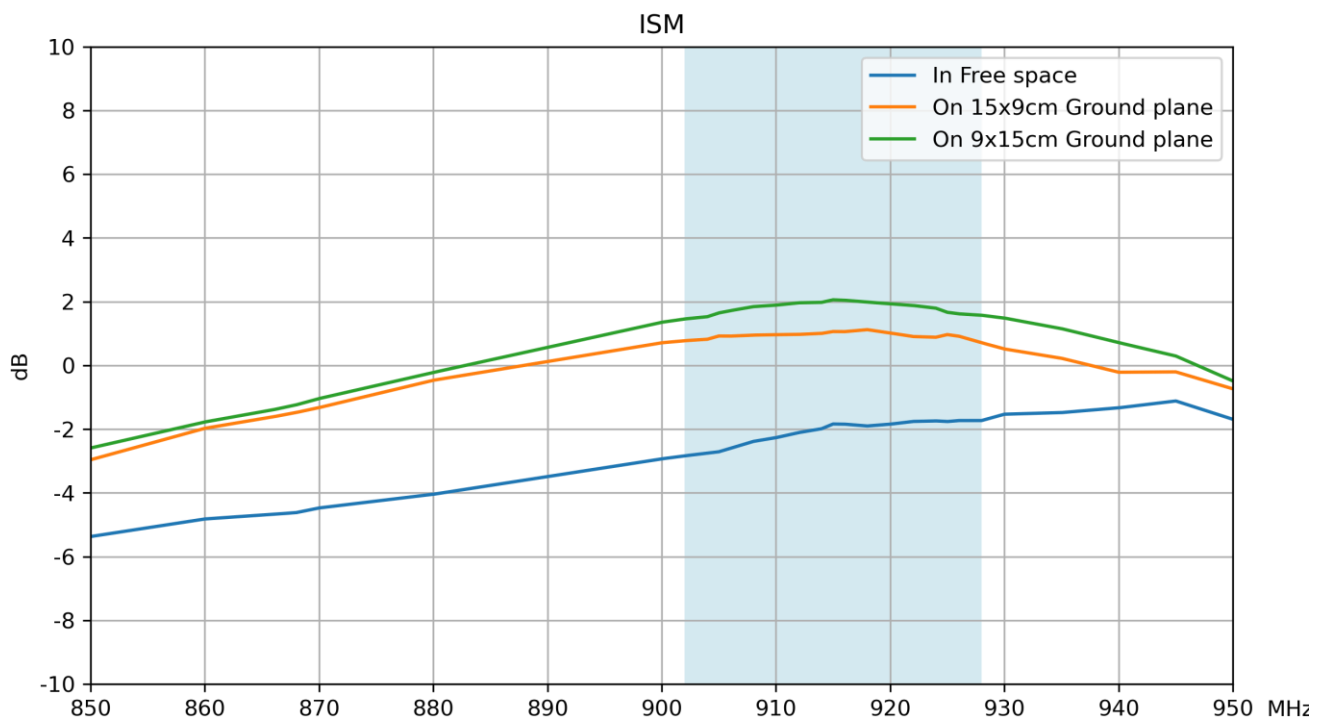
### 3.3 Efficiency



### 3.4 Average Gain

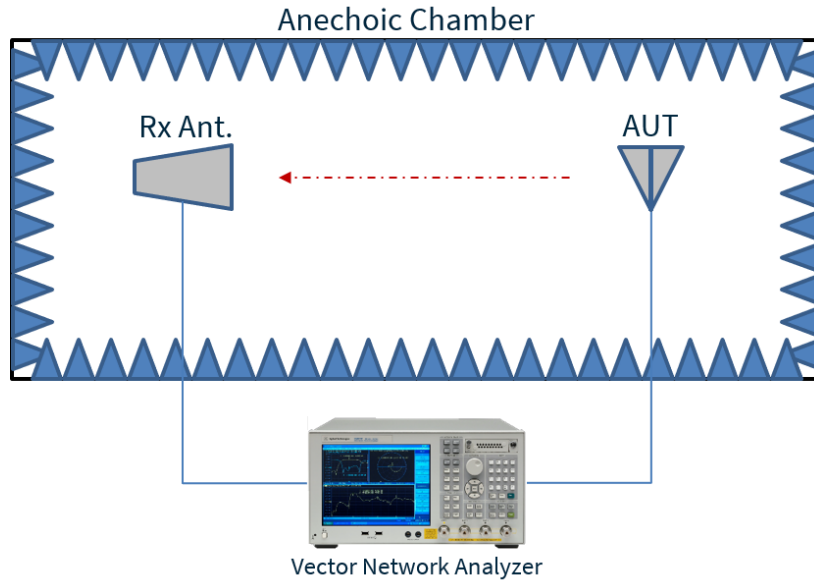


### 3.5 Peak Gain



## 4. Radiation Patterns

### 4.1 Test Setup



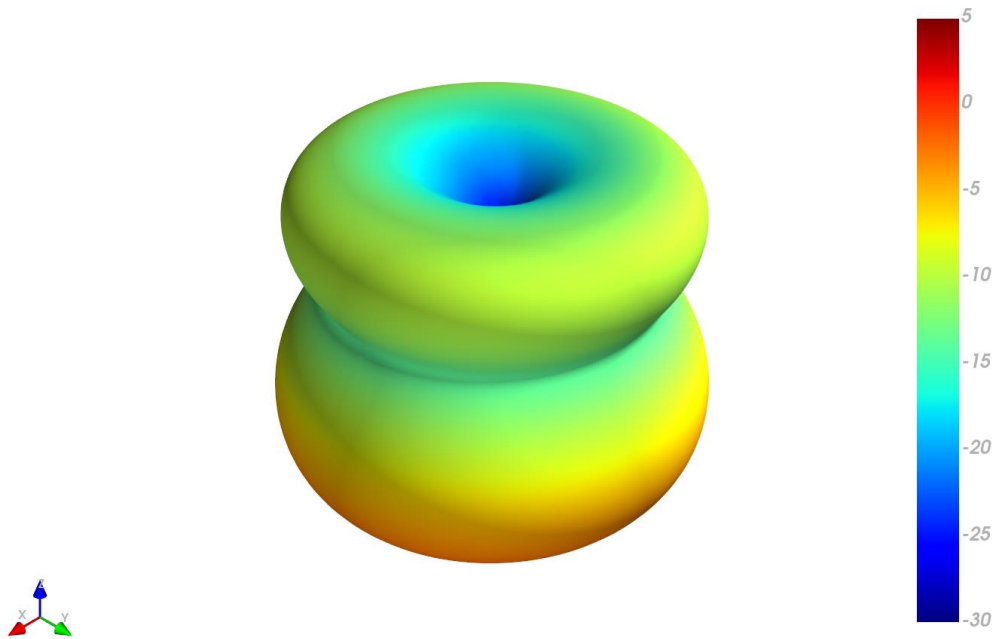
In Free Space

On 15x9cm Ground plane

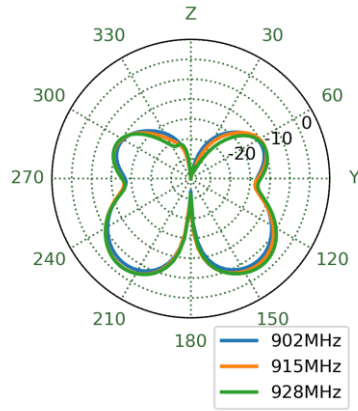
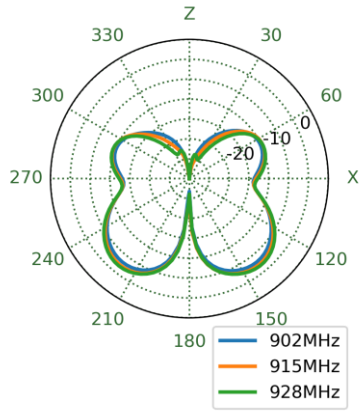
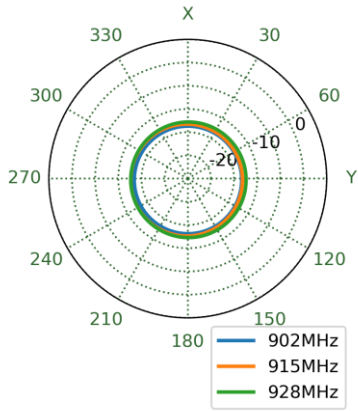
On 9x15cm Ground plane



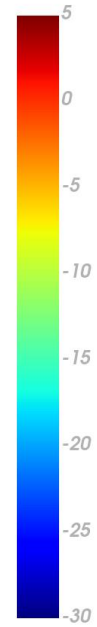
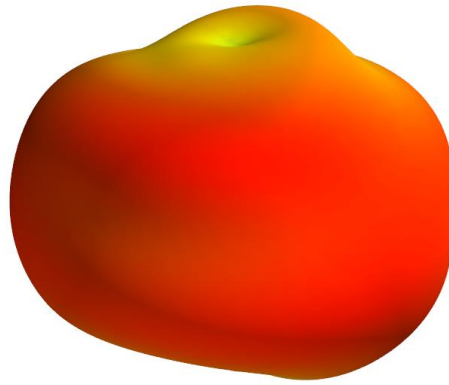
4.2 TI.93.A.111 - Patterns at 915 MHz in Free Space



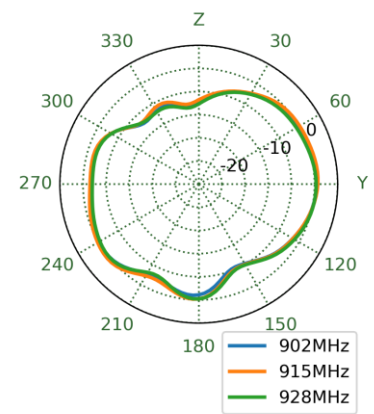
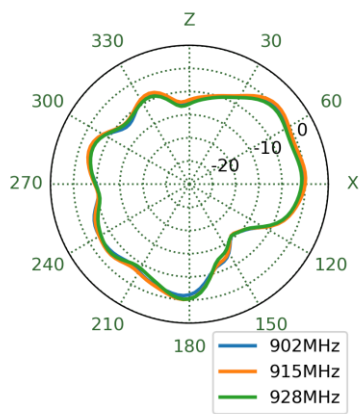
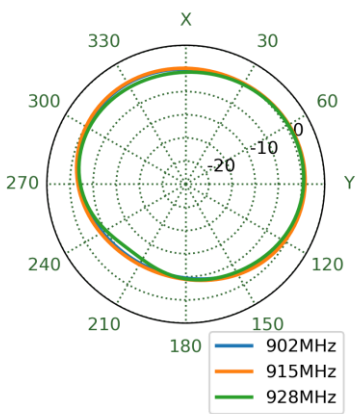
XZ Plane                      YZ Plane                      XY Plane



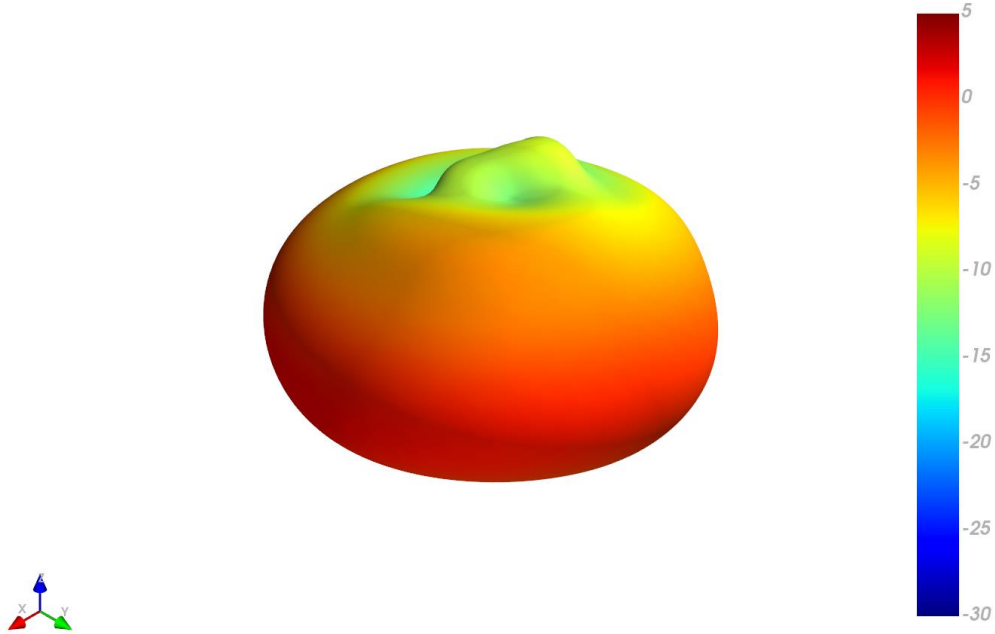
4.3 TI.93.A111 - Patterns at 915 MHz on 15x9cm ground plane



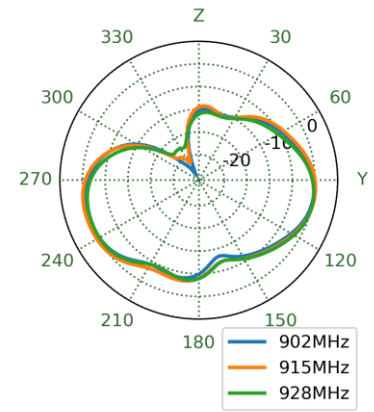
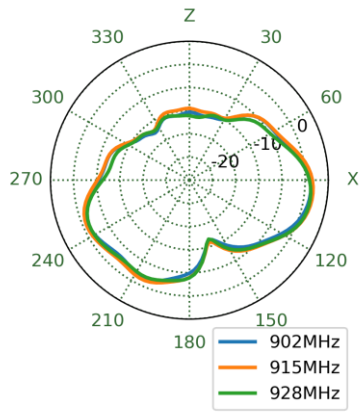
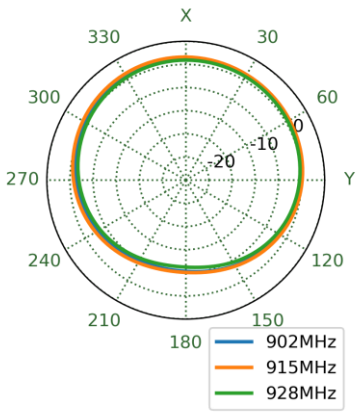
XZ Plane      YZ Plane      XY Plane



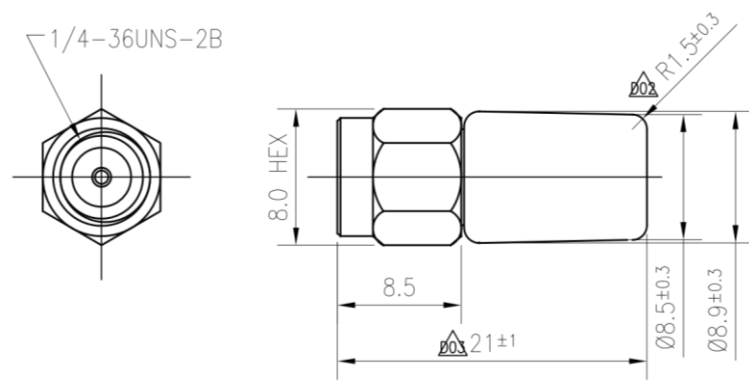
4.4 TI.93.A111- Patterns at 915 MHz on 9x15cm ground plane



XZ Plane                      YZ Plane                      XY Plane

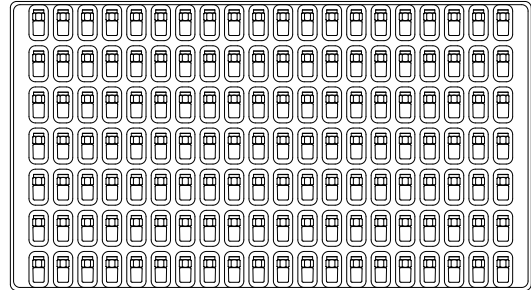


# 5. Mechanical Drawing

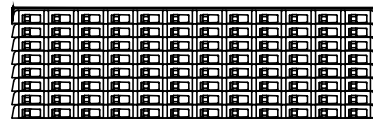
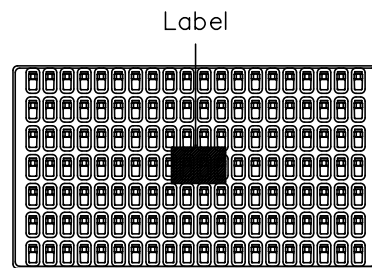


## 6. Packaging

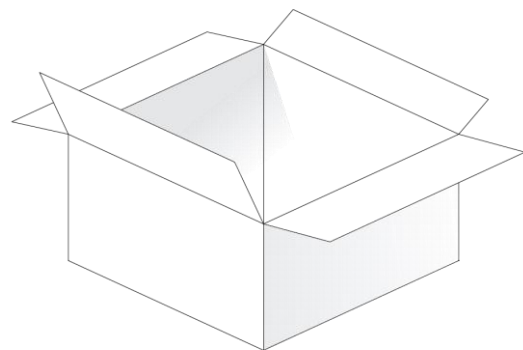
140pcs TI.93.A111 per Tray  
Weight: 0.52Kg



8 SET per Tray  
Weight: 4.2Kg



1120pcs per Carton  
Dimensions: 425x240x130mm  
Weight: 4.65Kg



Changelog for the datasheet

SPE-24-8-017- TI.93.A111

**Revision: A (First Release)**

Date:	2024-01-19
Notes:	
Author:	Cesar Sousa

**Previous Revisions**

**Revision:**

Date:	
Notes:	
Author:	




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