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Datasheet

IP67 Rated Terminal Antenna

Part No:
TI.96.A113

Description

900-940MHz IP67 Terminal Antenna SMA(M)

Features:

Covering 915MHz ISM Bands

IP67 Waterproof Enclosure

Dimensions: Ø12.7 x 203mm

Connector: SMA(M)

RoHS & Reach Compliant

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ISO 9001 CERTIFICATION EUROPE
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UKAS QUALITY MANAGEMENT 046
IATF16949

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1. Introduction



The TI.96.A113 is a high performance 915MHz Terminal mount dipole antenna, it is 203mm tall and 13mm in diameter and can be mounted straight or right angled due to its hinged SMA(M) connector which comes as standard. This antenna performs very well in free space, making it an ideal solution in areas where there may be no ground plane.

The TI.96's IP67 Rating allows it to be used in areas where conventional Terminal mount antennas can't be used, it can be used outdoors or indoors without the fear of water ingress.

Typical Applications include:

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

The TI.96 is manufactured using TPEE which makes it very lightweight at just 22.5g. The swivel and hinge mechanism allows the antenna to be orientated in different directions which helps to avoid other antennas or objects. The antenna connector type can be customizable, 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.

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2. Specification

LTE Electrical							
Frequency (MHz)	**Test Set-up**	**Efficiency (%)**	**Average Gain (dB)**	**Peak Gain (dBi)**	**Impedance**	**Polarization**	**Radiation Pattern**
902-928 (915 ISM)	Free space	91.1	-0.41	2.63	50 Ω	Linear	Omni
	on 15x9 Ground	94.8	-0.23	3.84			
	on 9x15 Ground	91.0	-0.41	3.11			

Mechanical	
Dimensions	Ø12.7 x 203
Material	PC+PBT
Connector	SMA(M)

Environmental	
Operation Temperature	-40°C - +85°C
Storage Temperature	-40°C - +85°C
Waterproof Rating	IP67

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3. Antenna Characteristics

3.1 Test Set-up

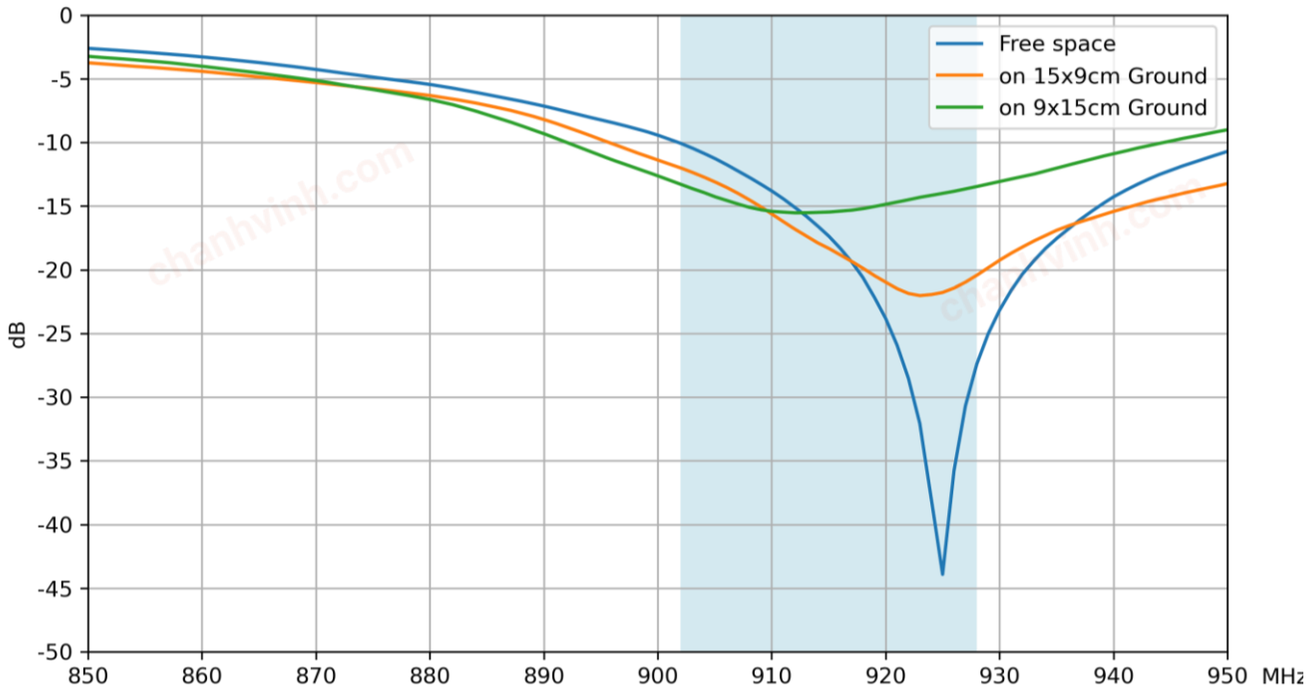




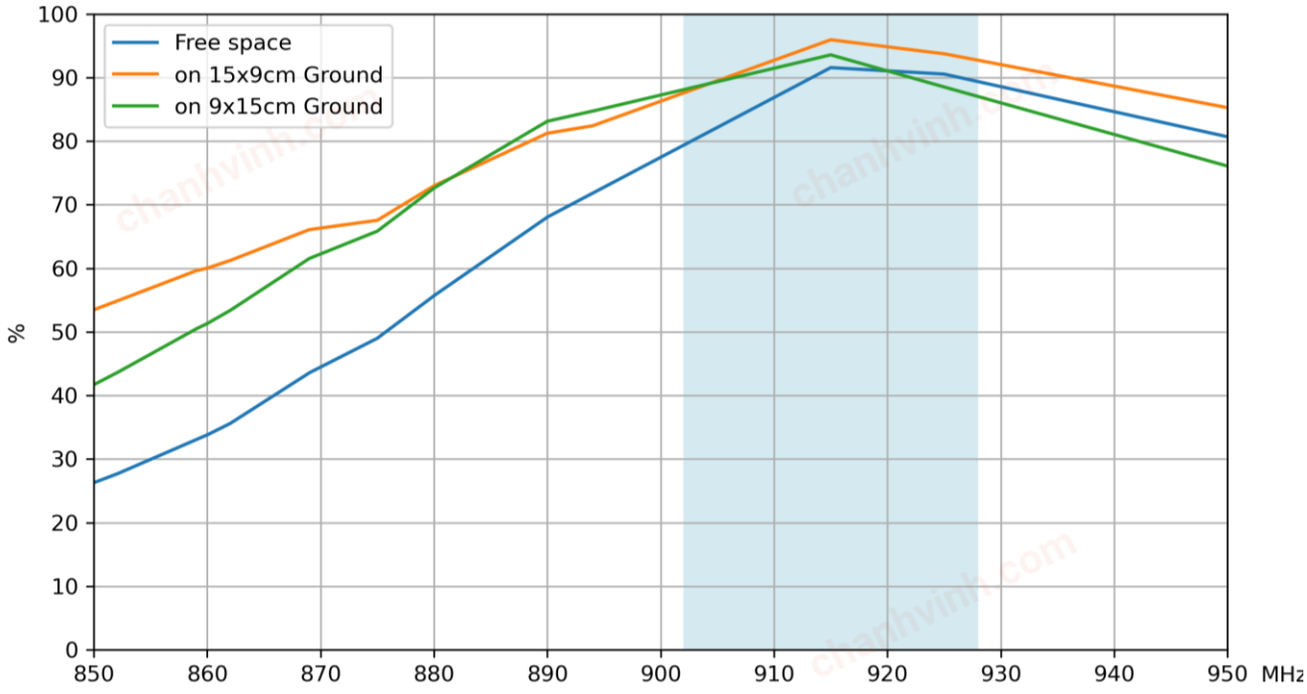
Free space | On 15x9cm Ground | On 9x15cm Ground

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3.2 Return Loss

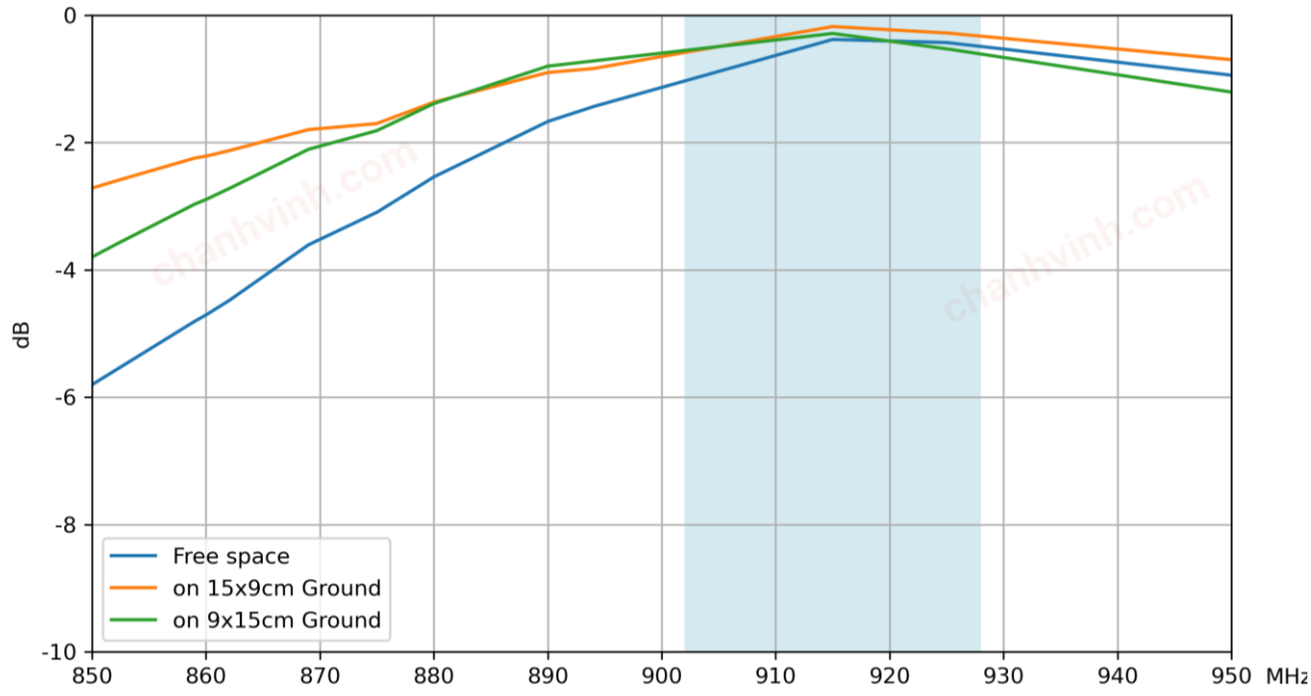


3.3 Efficiency

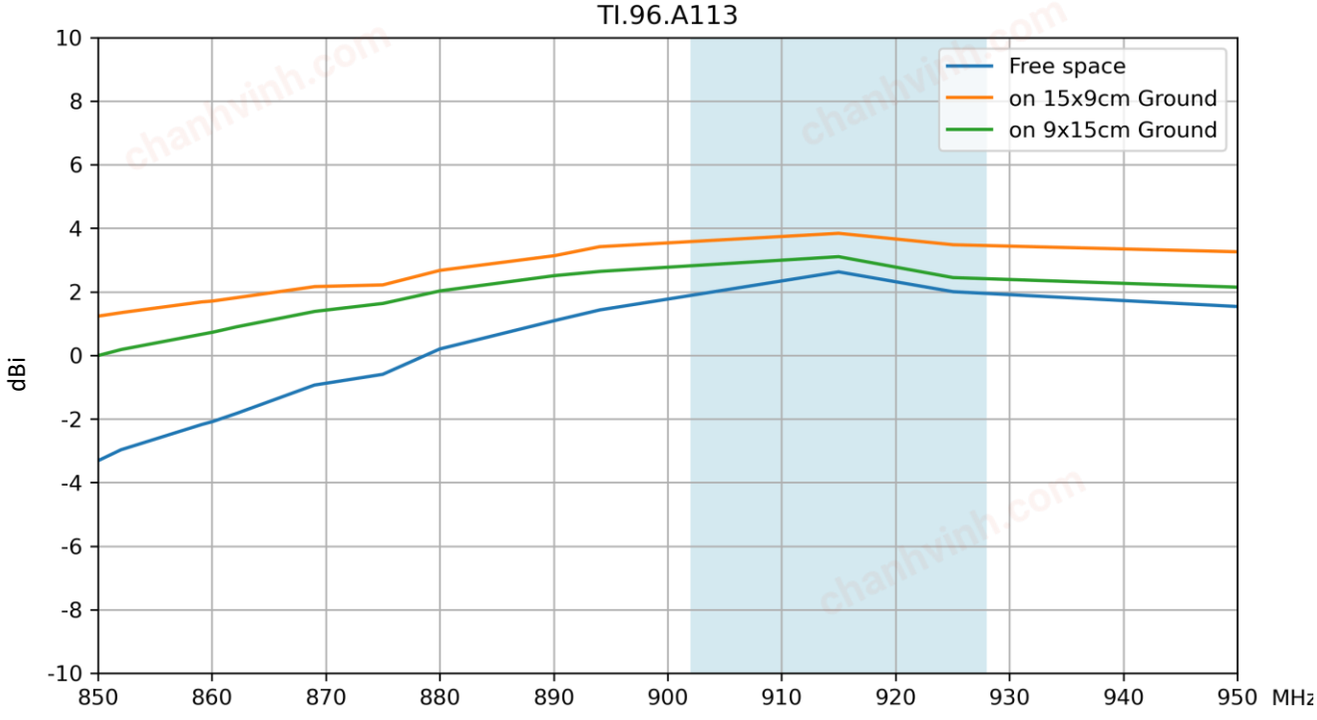


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3.4 Average Gain



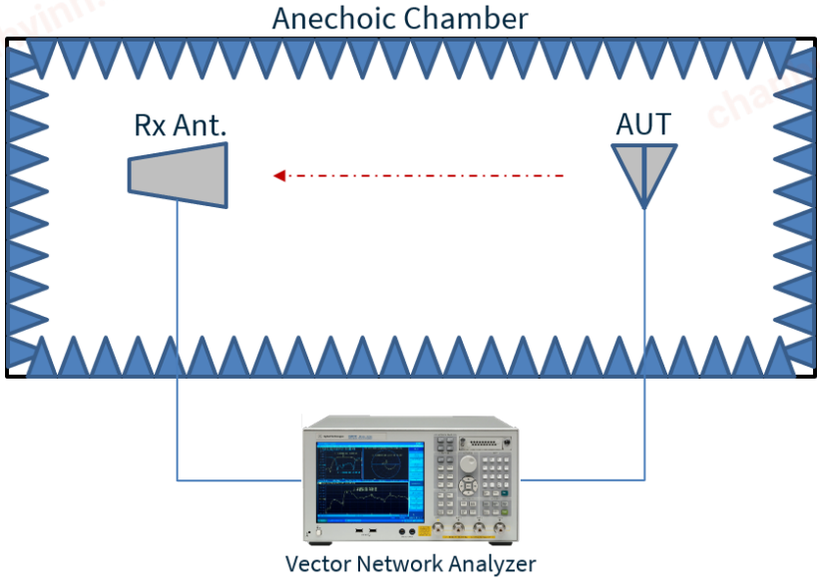
3.5 Peak Gain

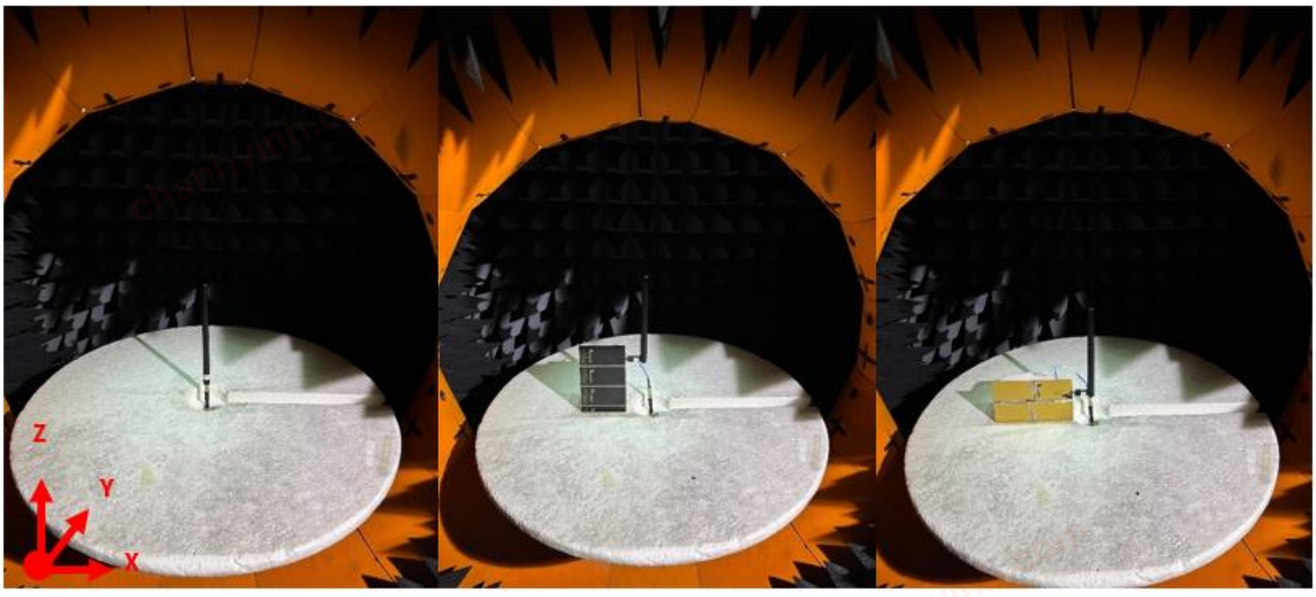


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4. Radiation Patterns

4.1 Test Setup

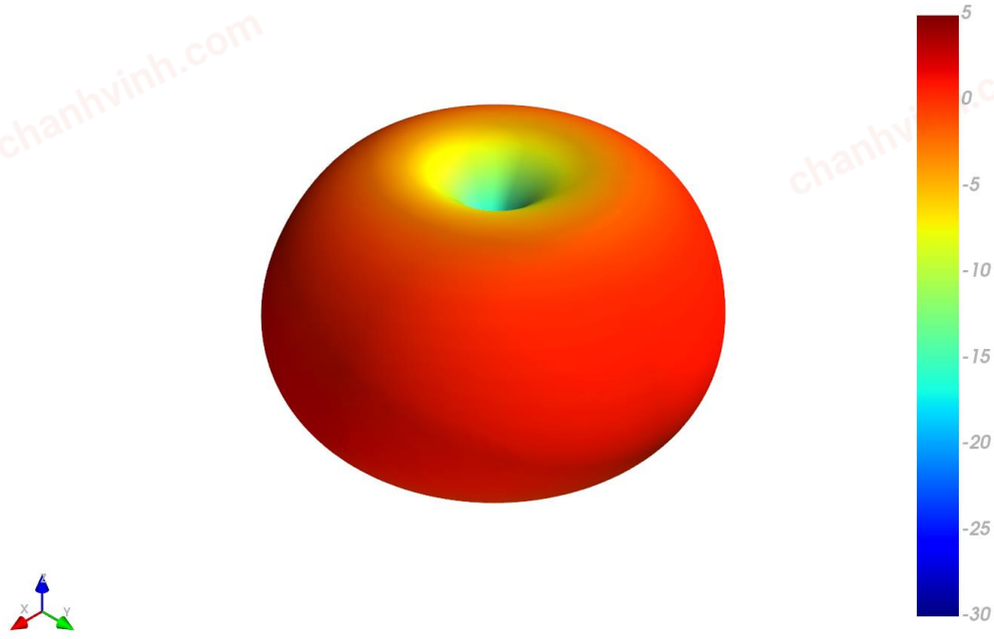


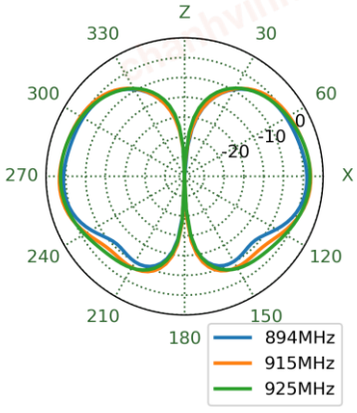
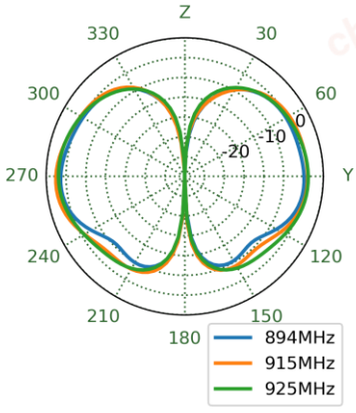
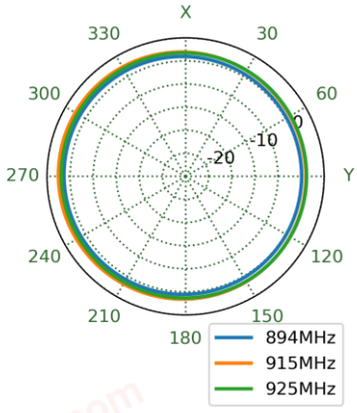


Free space | On 15x9cm Ground | On 9x15cm Ground

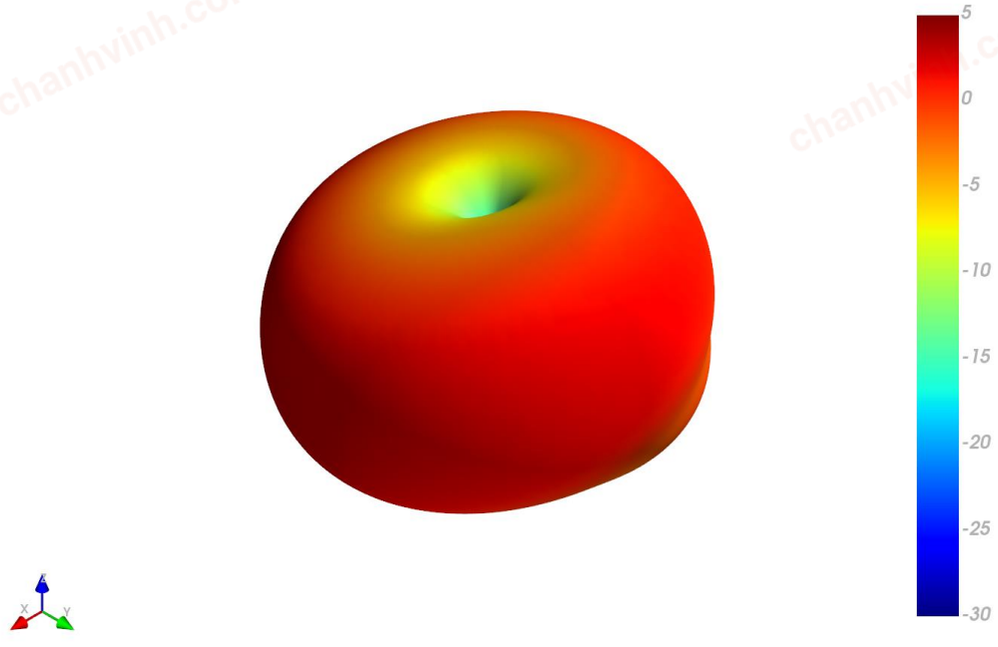
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4.2 Free space - Patterns at 915 MHz

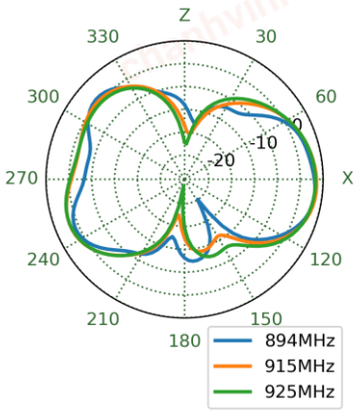


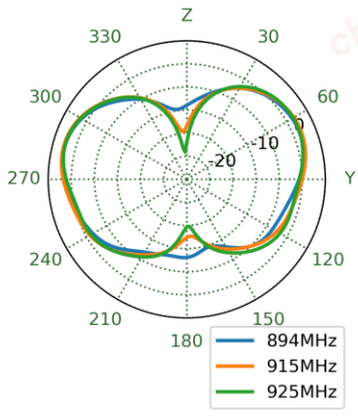
XZ Plane	YZ Plane	XY Plane
		

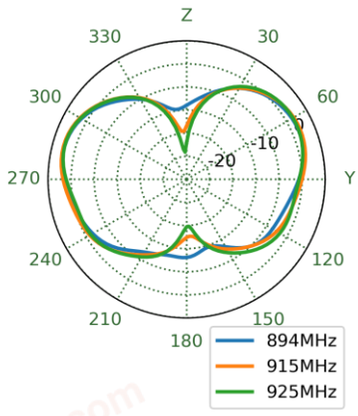
4.3 On 15x9cm Ground - Patterns at 915 MHz



XZ Plane	YZ Plane	XY Plane

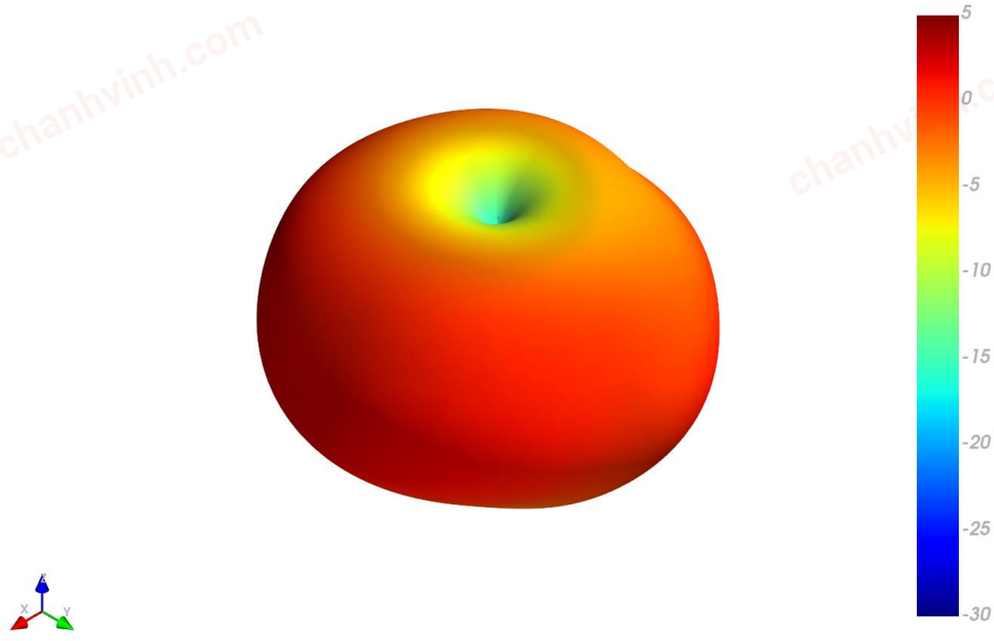


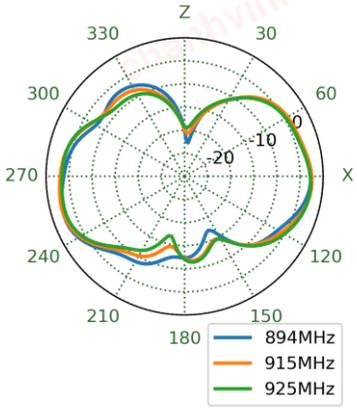
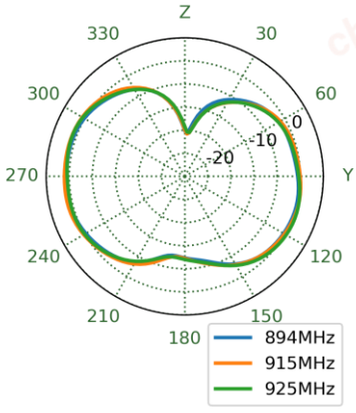
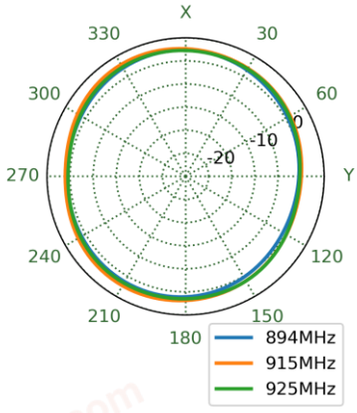




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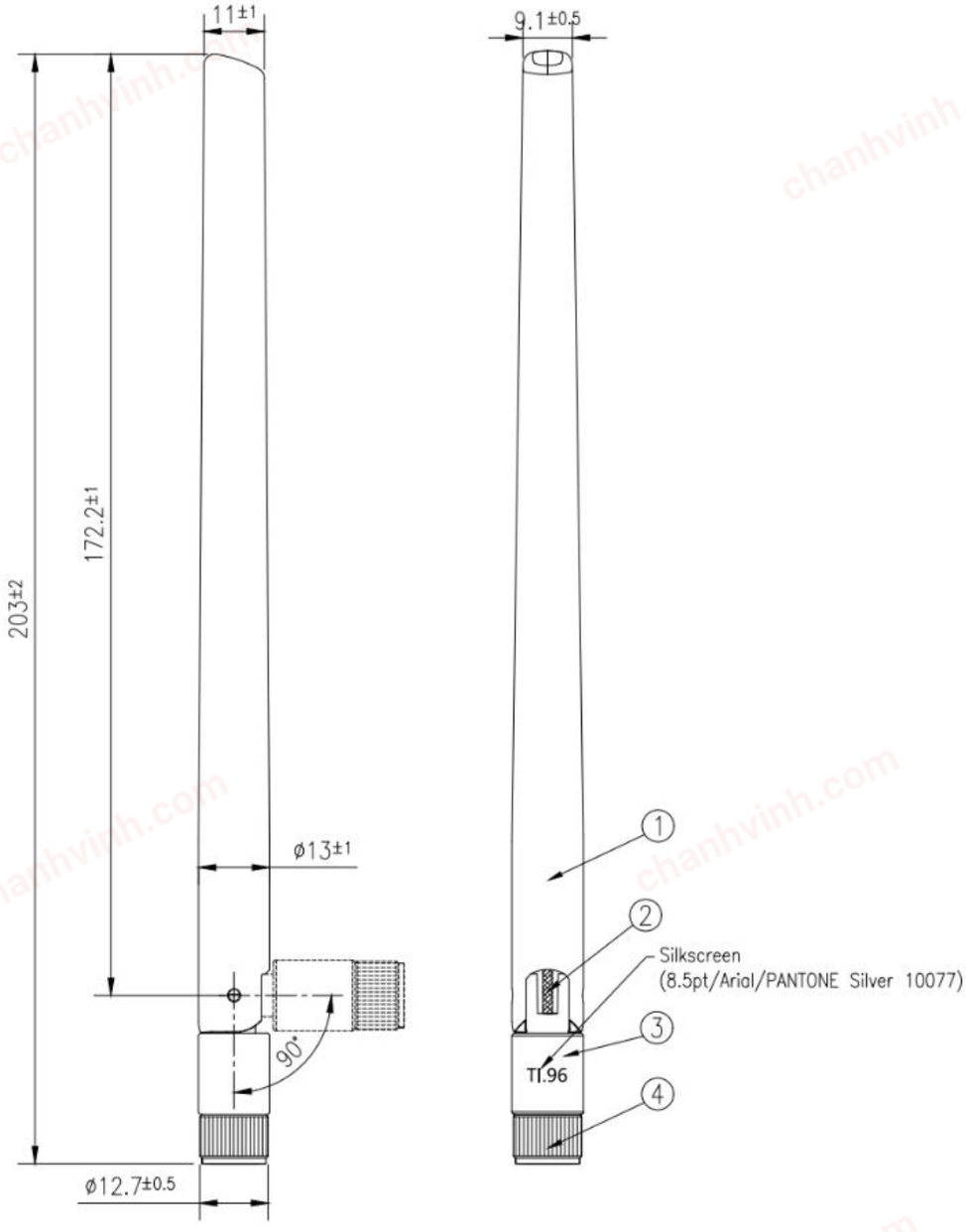
4.4 On 9x15cm Ground - Patterns at 915 MHz



XZ Plane	YZ Plane	XY Plane
		

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5. Mechanical Drawing



	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	SMA(M)	PC+PBT	Black	1

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6. Packaging

TBD

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Changelog for the datasheet

SPE-23-8-276 – TI.96.A113

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

Previous Revisions

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