

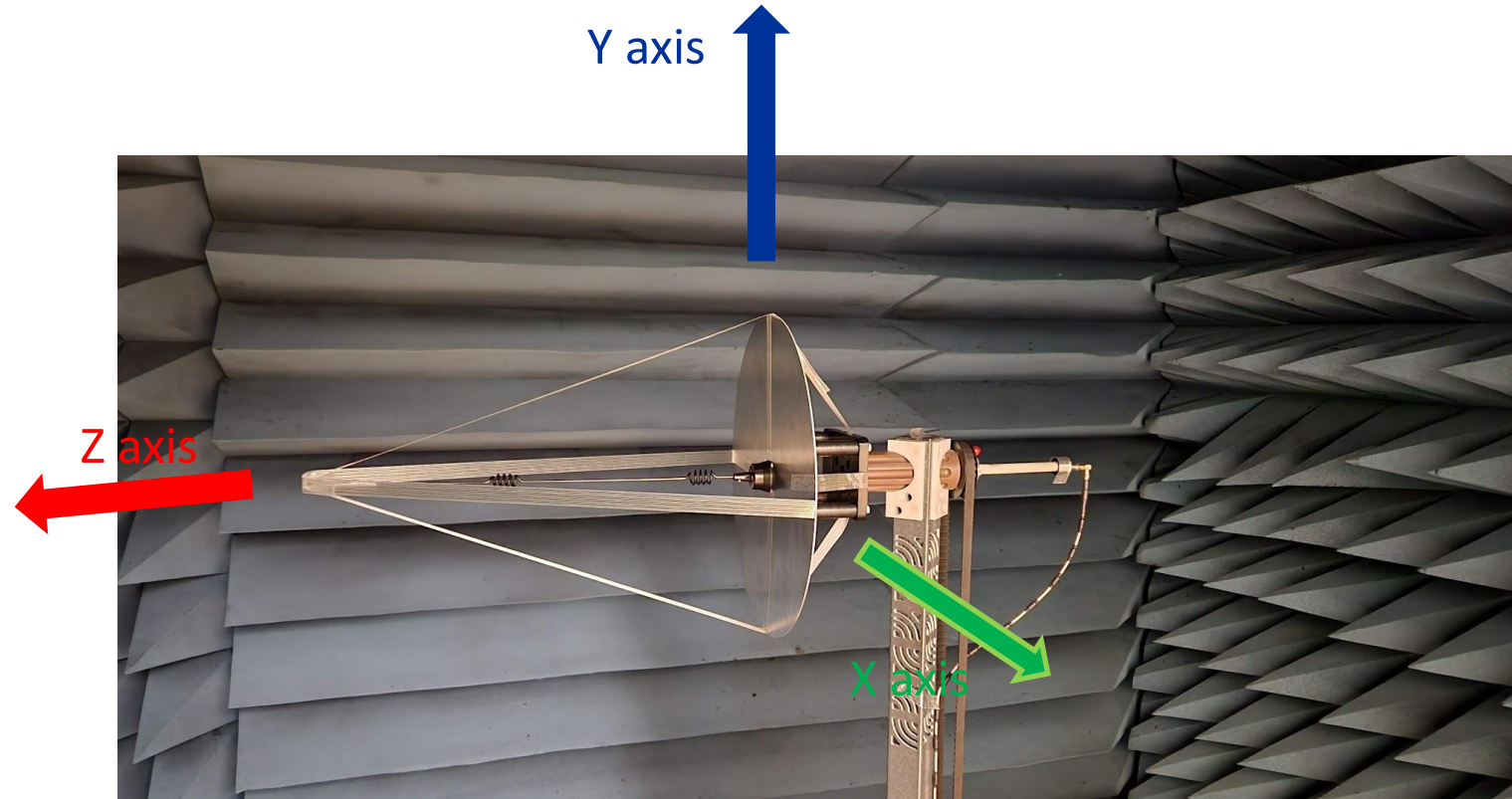
Measurement Results of NMO5T900B

Rev 01

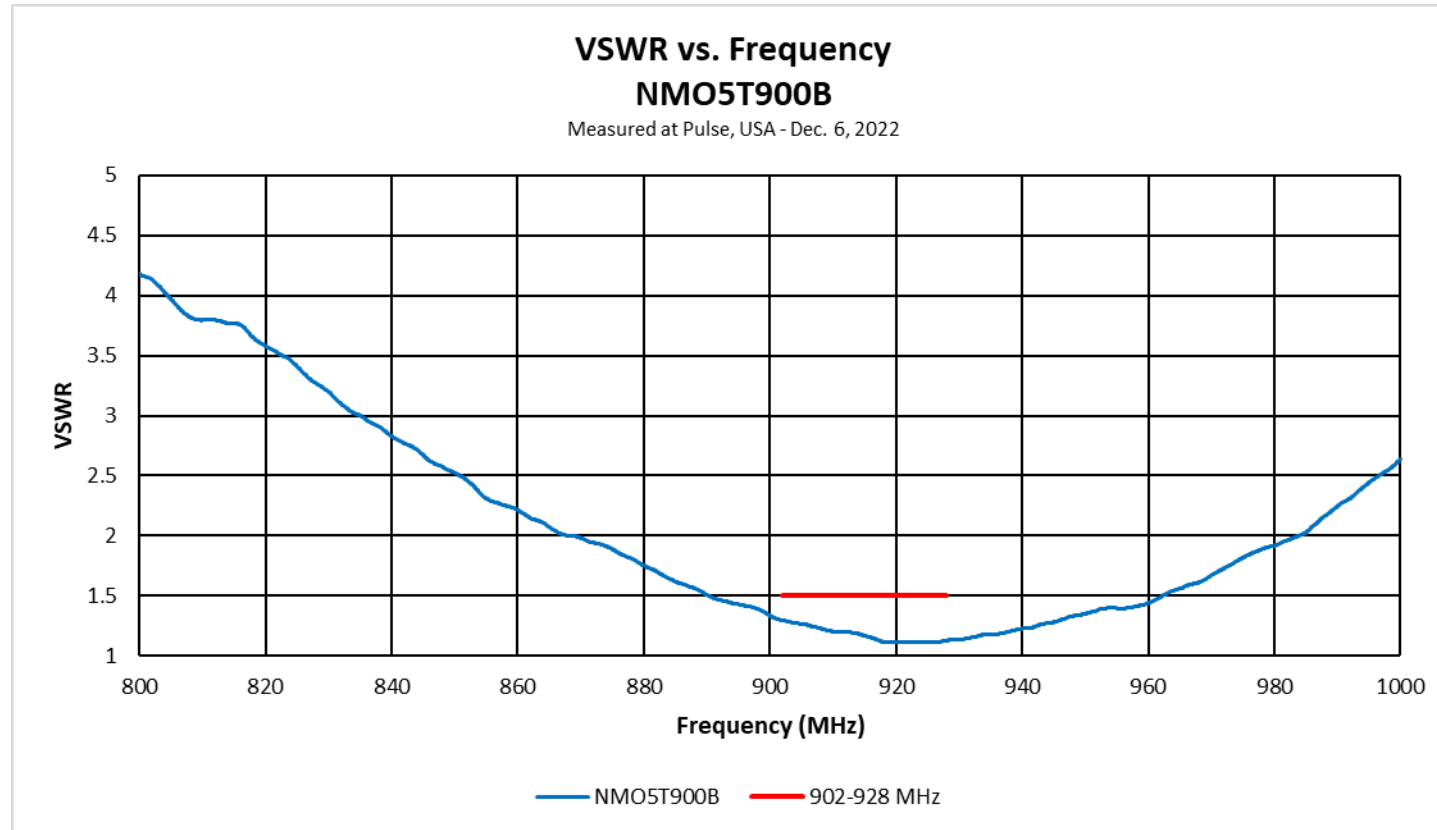
December 7, 2022

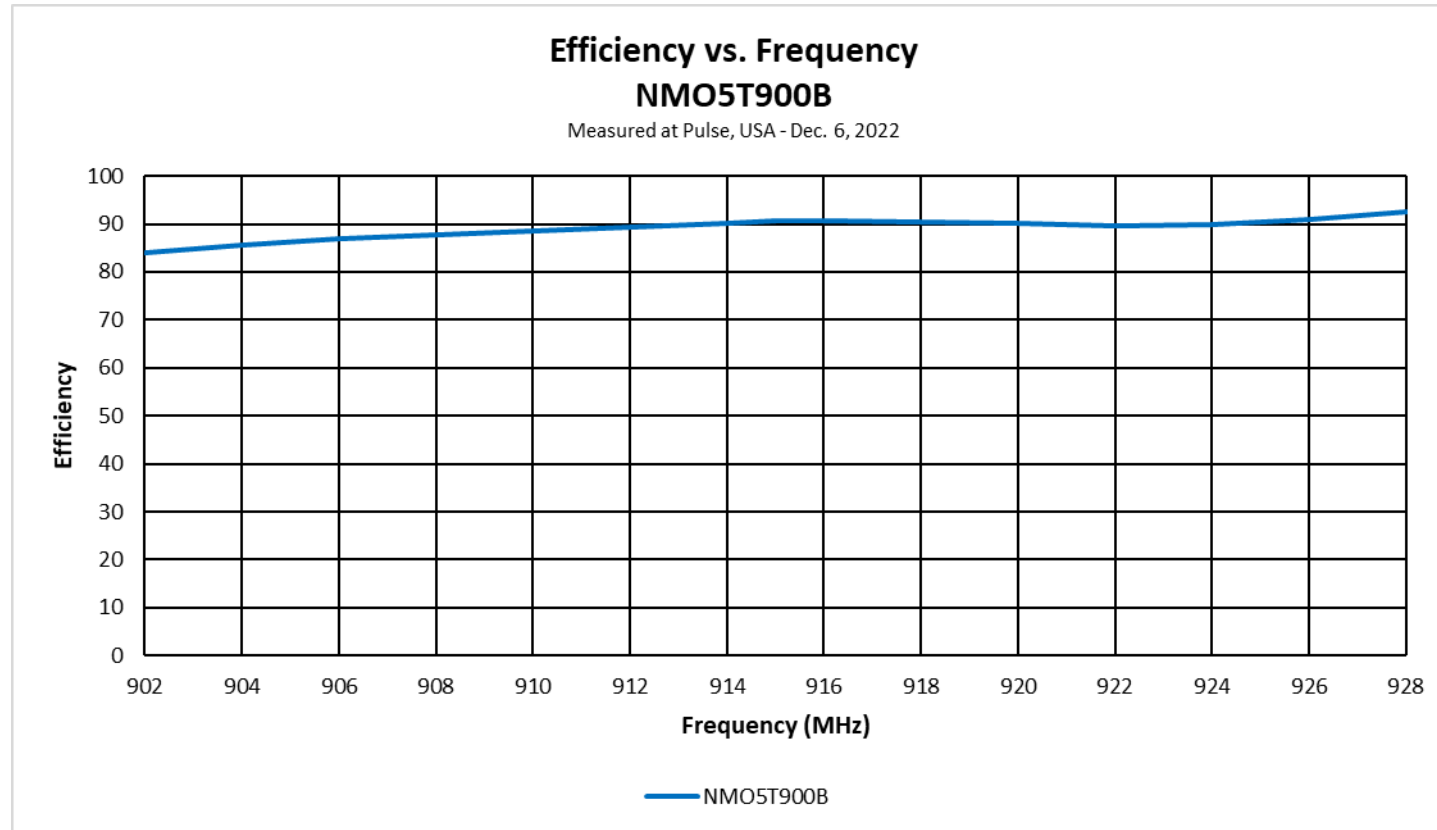


Test Setup

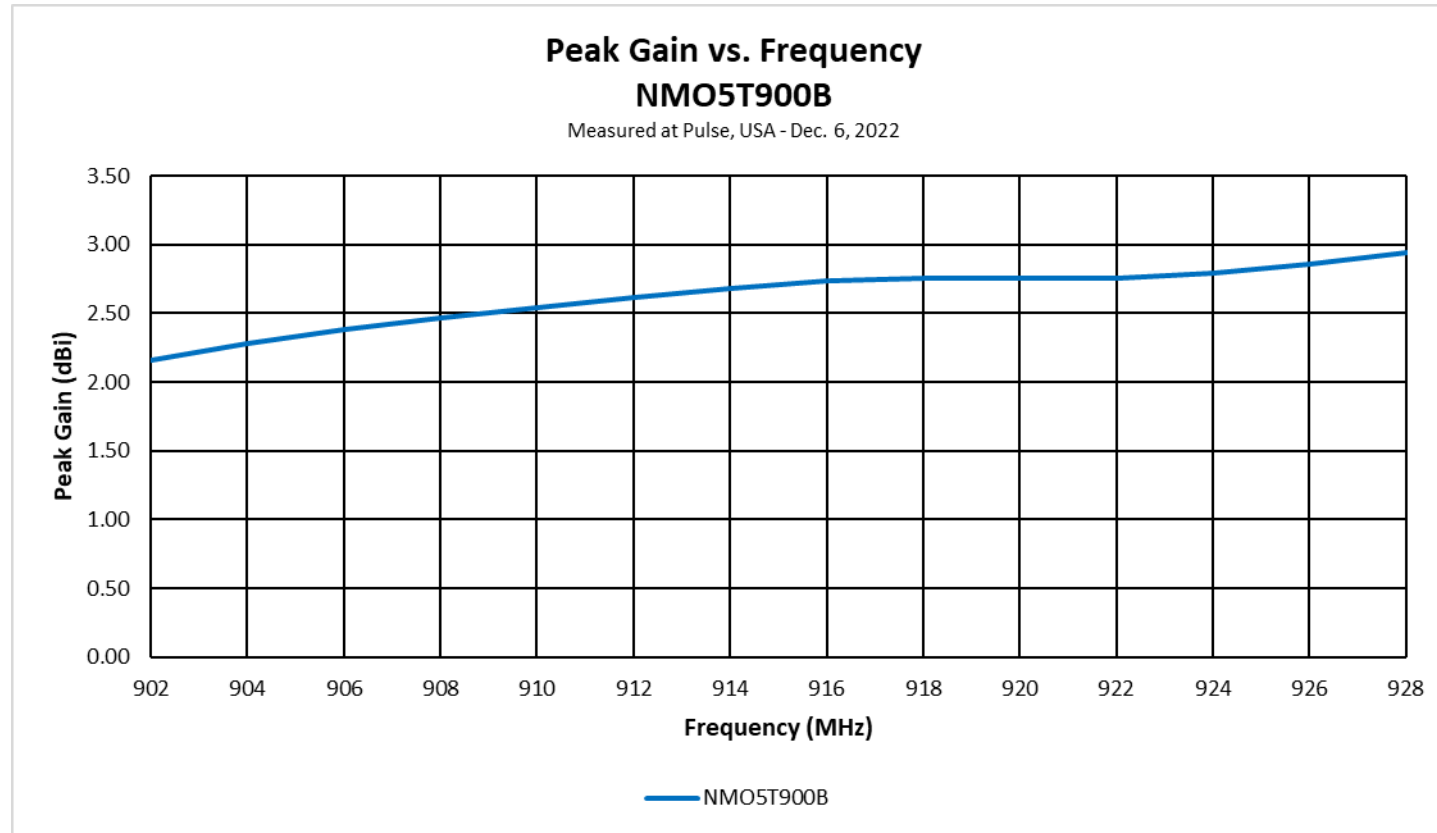


Return Loss

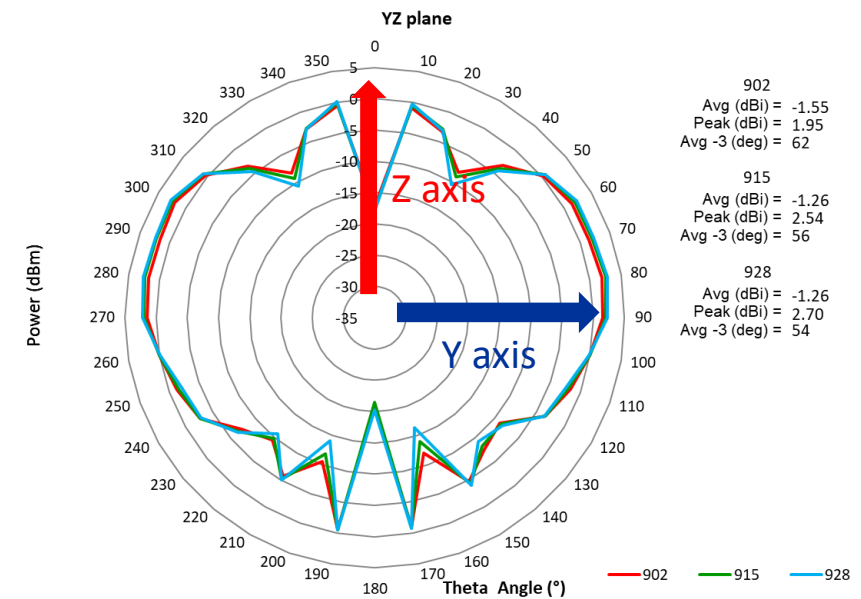
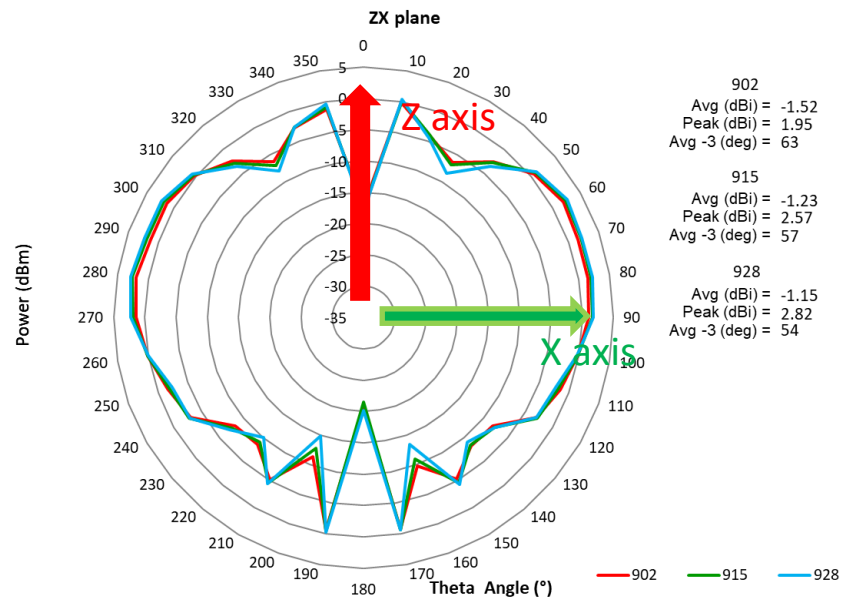
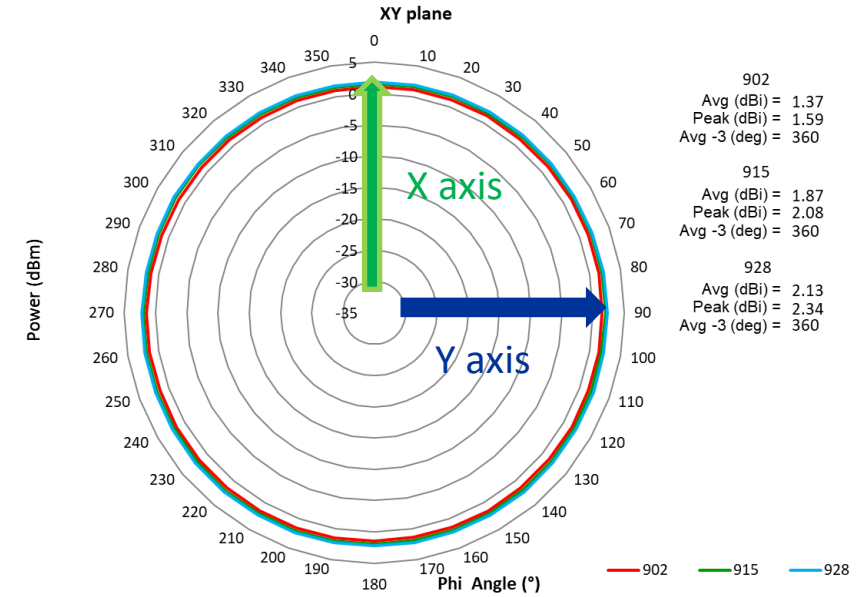
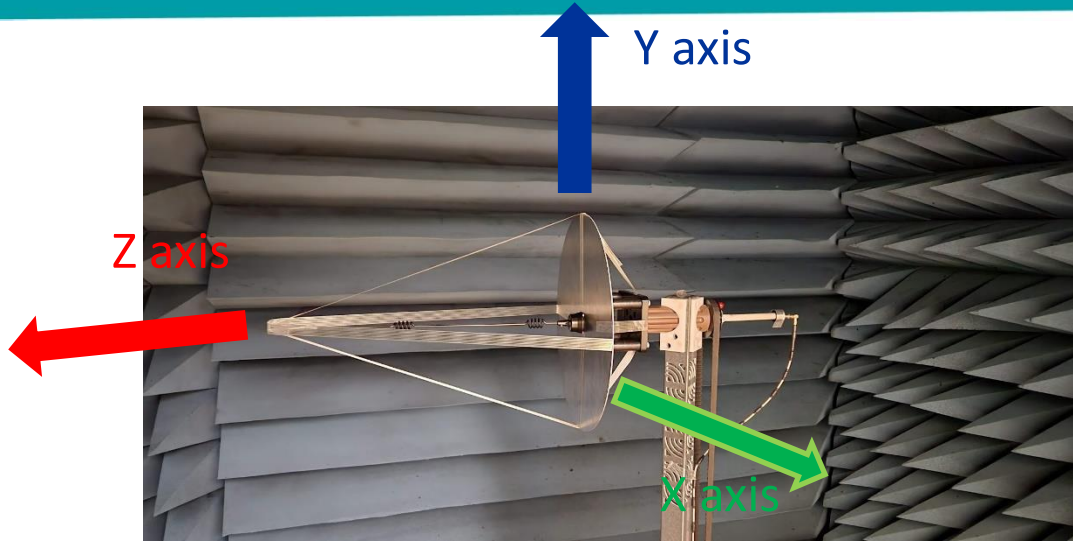




Peak Gain



Radiation Patterns



Thank You





TAOGLAS®



Datasheet

Meteor

Part No:
FW.95.B.SMA.M

Description:

ISM Band 915Mhz Flexible Whip Monopole Antenna SMA(M) Straight

Features:

External 915MHz Monopole Antenna

Designed for Outdoor Use

Over 60% high efficiency*

2.71dBi high peak gain*

Robust Inner Steel Core

Antenna Length: 226mm

SMA Type(M) Straight Connector

IP65 dust and water-resistant

*Tested on 30cm*30cm Ground Plane

RoHS Compliant

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1. Introduction



The FW.95 is a flexible 915MHz whip antenna with a SMA type (M) connector for outdoor use. It features excellent efficiency (>60%) and high peak gain (>2.71 dBi) at 915MHz on a 30x30 cm ground plane.

The antenna was developed for monitoring systems, such as weather monitoring, motion / vibration sensors, and pollutants monitoring.

The FW.95 has an excellent omni-directional radiation pattern, ensuring wide coverage. The antenna's high efficiency means that it allows your radio to consume less power than with a lower efficiency antenna when transferring data. It also means a better signal strength and better sensitivity in areas of low signal levels. The antenna performs at its best while attached to a ground plane with dimensions of at least 30x30 cm. For an environment where there is no ground-plane available we recommend to use the terminal mount antenna the TI.19 or the outdoor fiberglass omni antenna the OMB.915.

The FW.95 whip is made of a flexible inner steel core covered by PE so it is extremely resistant to abrasion and maintains its original shape and RF performance even after shock. This rugged design and IP65 rating on the housing ensure high reliability.

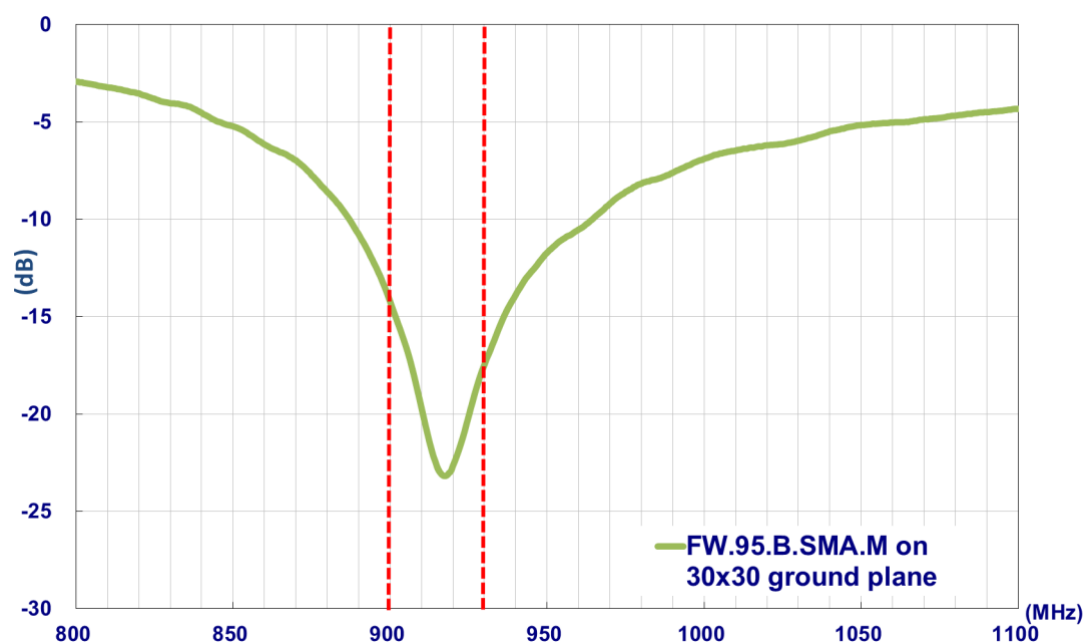
This antenna comes with SMA(M) connector as standard. Other custom variants can be provided subject to NRE and MOQ. Contact your regional Taoglas office for details..

2. Specifications

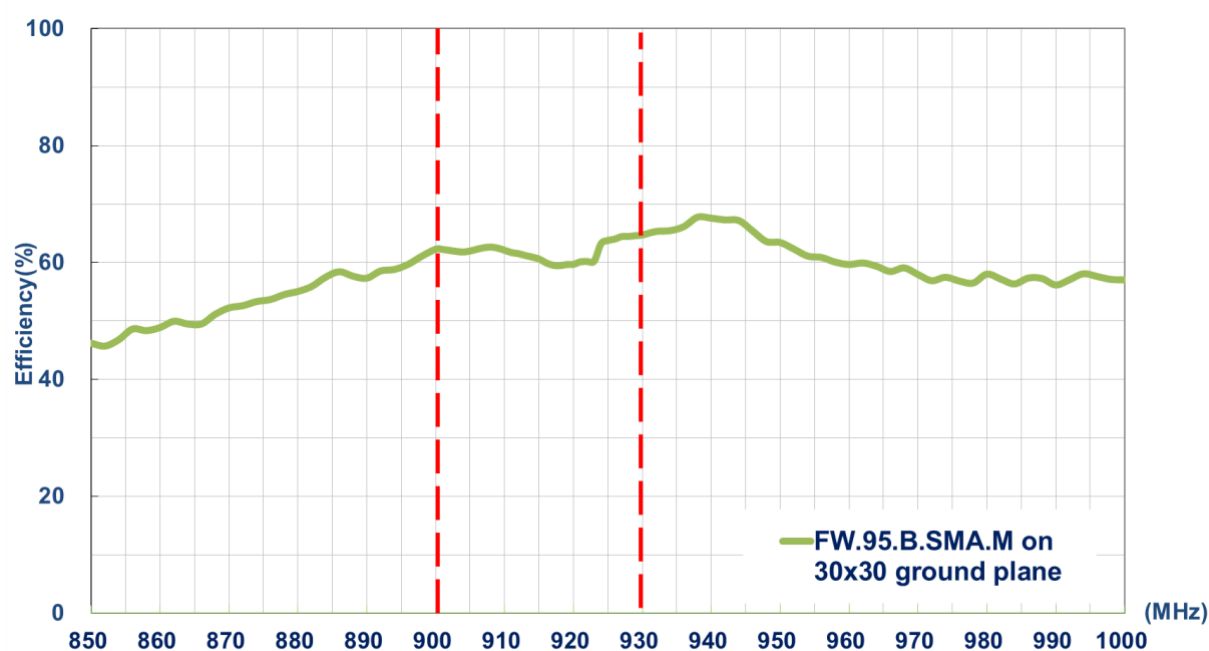
ISM Band 915MHz			
Center Frequency	902MHz	915MHz	928MHz
Design Environment	On 30x30cm ground		
Efficiency	62.07 %	60.60 %	64.46 %
Peak Gain	2.30 dBi	2.71 dBi	3.75 dBi
Return loss	< -10 dB		
VSWR	≤ 2:1		
Impedance	50 Ω		
Polarization	Linear		
Radiation Pattern	Omni-Directional		
Input Power	2 W		
Tested Power	10 W		
Mechanical			
Dimensions	Length 226 ± 6 mm		
Base Diameter	16 ± 0.6 mm		
Whip Diameter	6.2 ± 0.6 mm		
Casing	ABS		
Connector	SMA Type(M) Straight		
Weight	38 g		
Dust and Water Resistance	IP65		
Environmental			
Temperature Range	-40°C to 85°C		
Humidity	Non-condensing 65°C 95% RH		

3. Antenna Characteristics

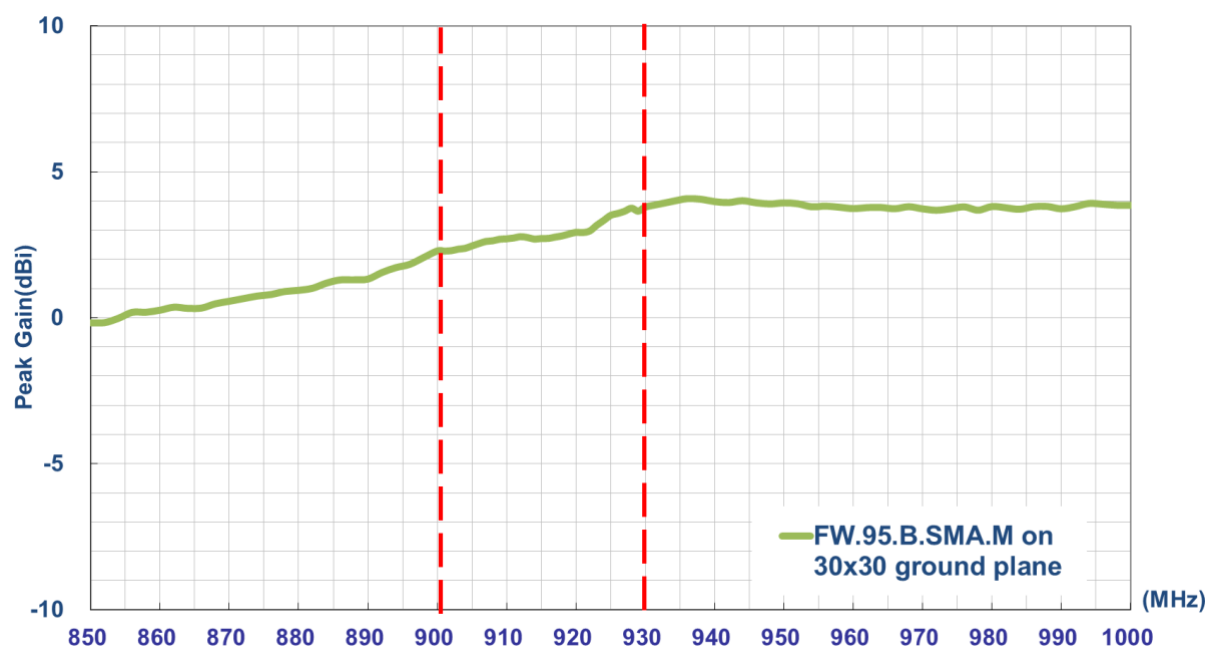
3.1 Return Loss



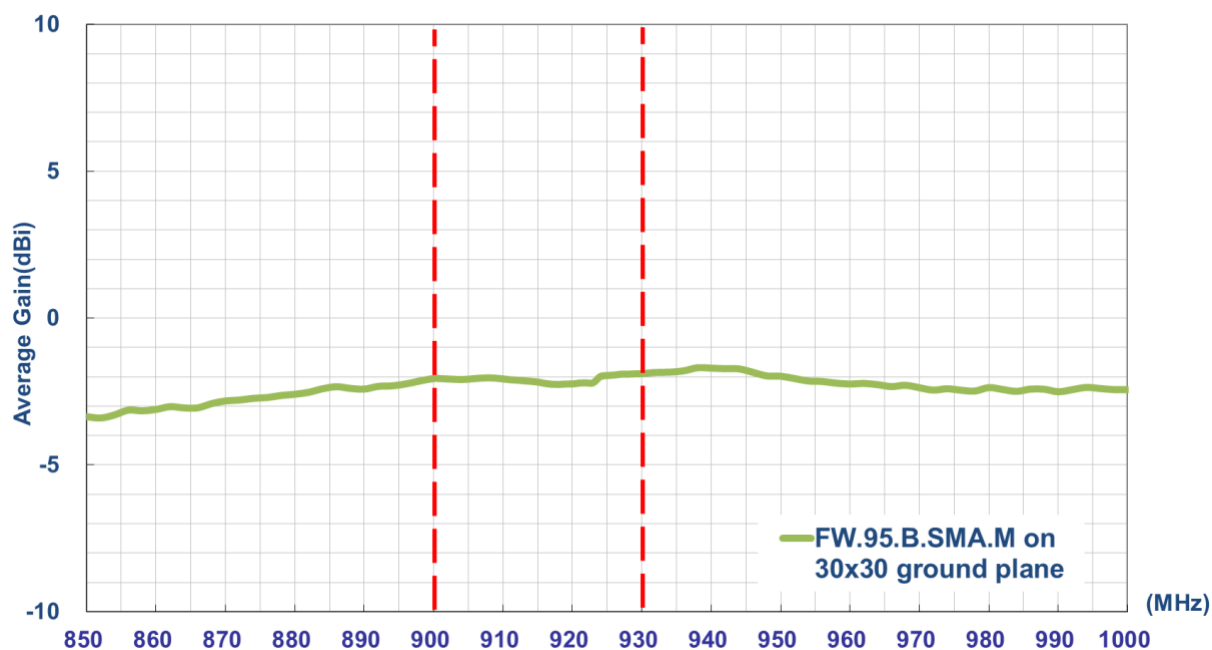
3.2 Efficiency



3.3 Peak Gain

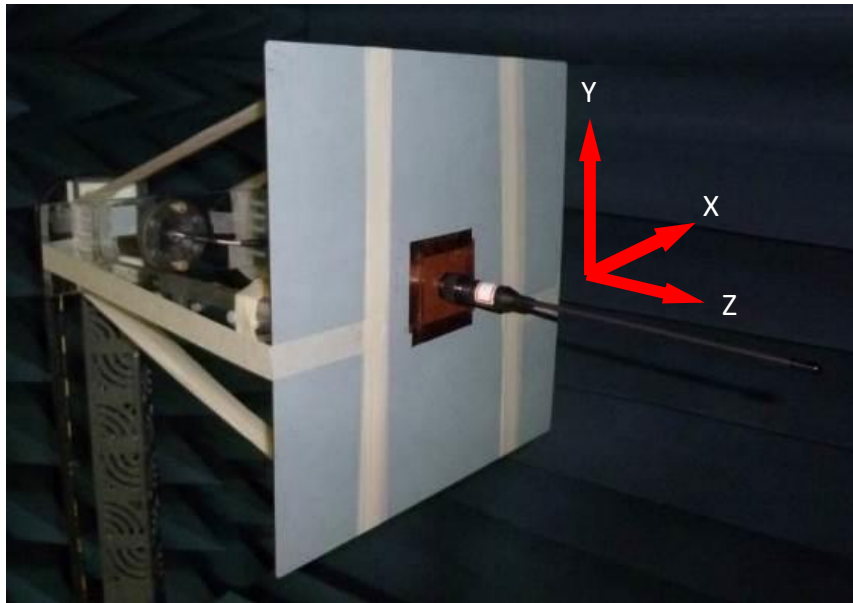


3.4 Average Gain



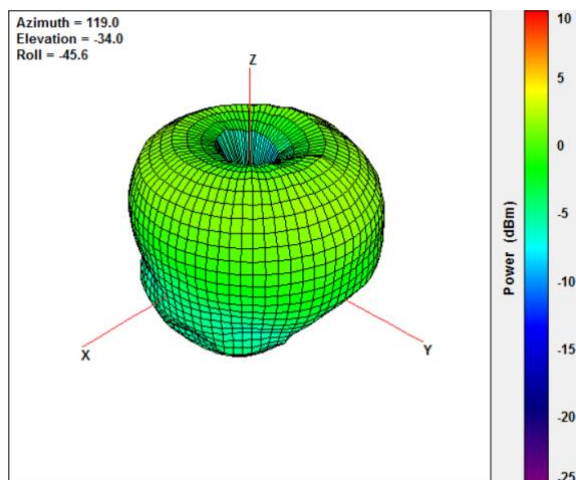
4. Radiation Patterns

4.1 Test Setup

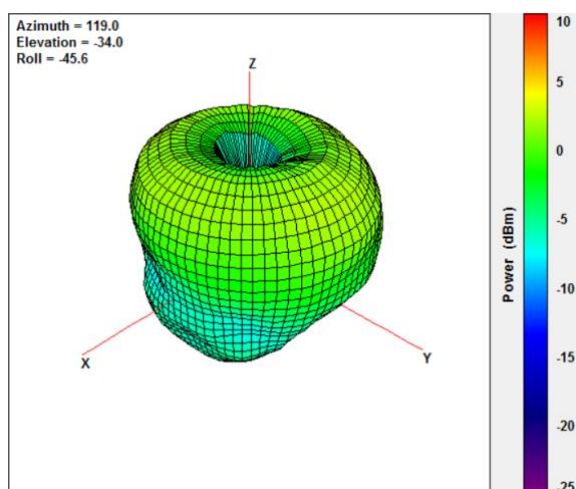
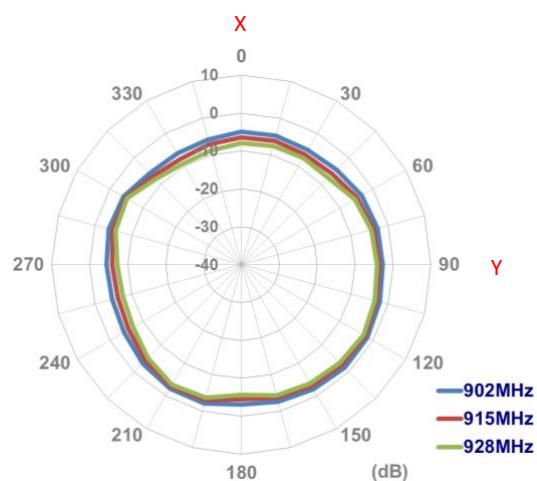


On 30x30 cm ground plane

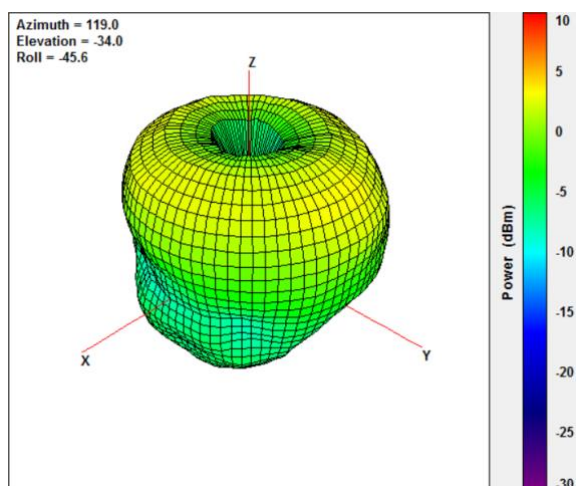
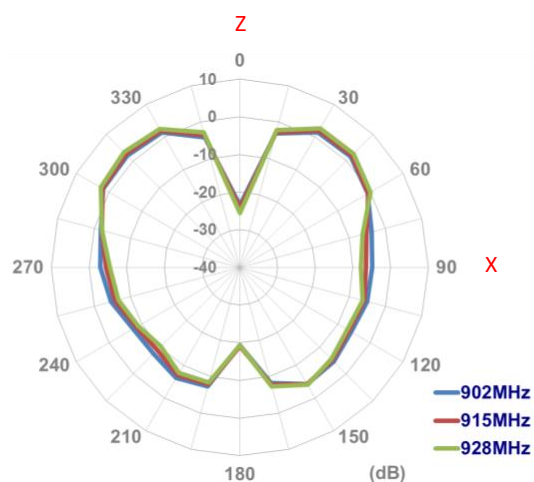
4.2 3D and 2D Radiation Patterns (On 30cm*30cm Ground Plane)



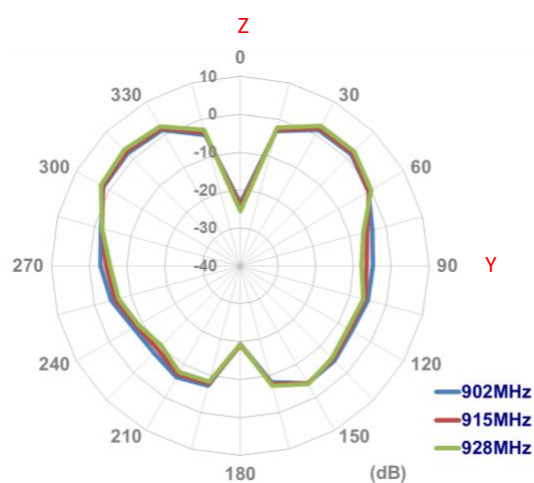
XZ Plane



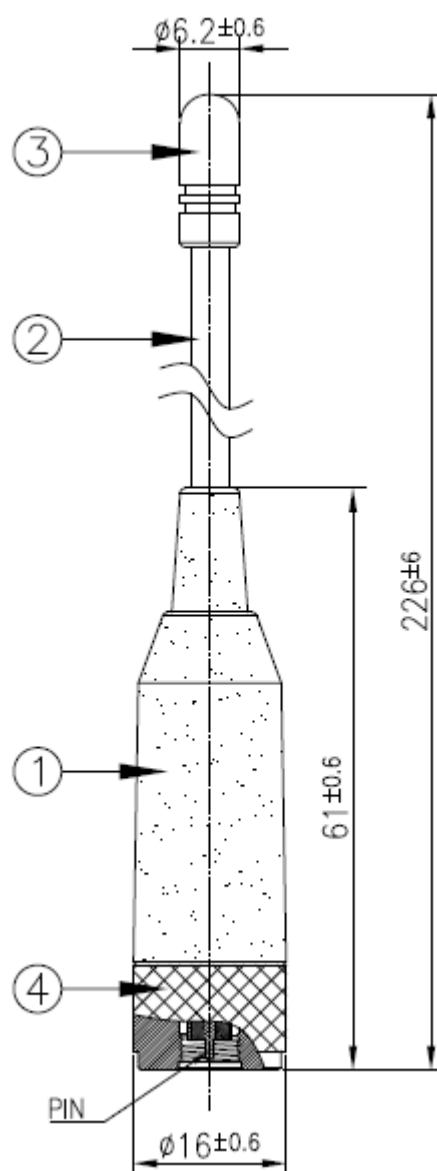
XZ Plane



YZ Plane



5. Mechanical Drawing (Units: mm)



	Name	Material	Finish	QTY
1	Housing	ABS	Black	1
2	Flexible Whip	Steel+PE Jacket	Black	1
3	Cap	ABS	Black	1
4	SMA(M)ST	Brass	Black	1

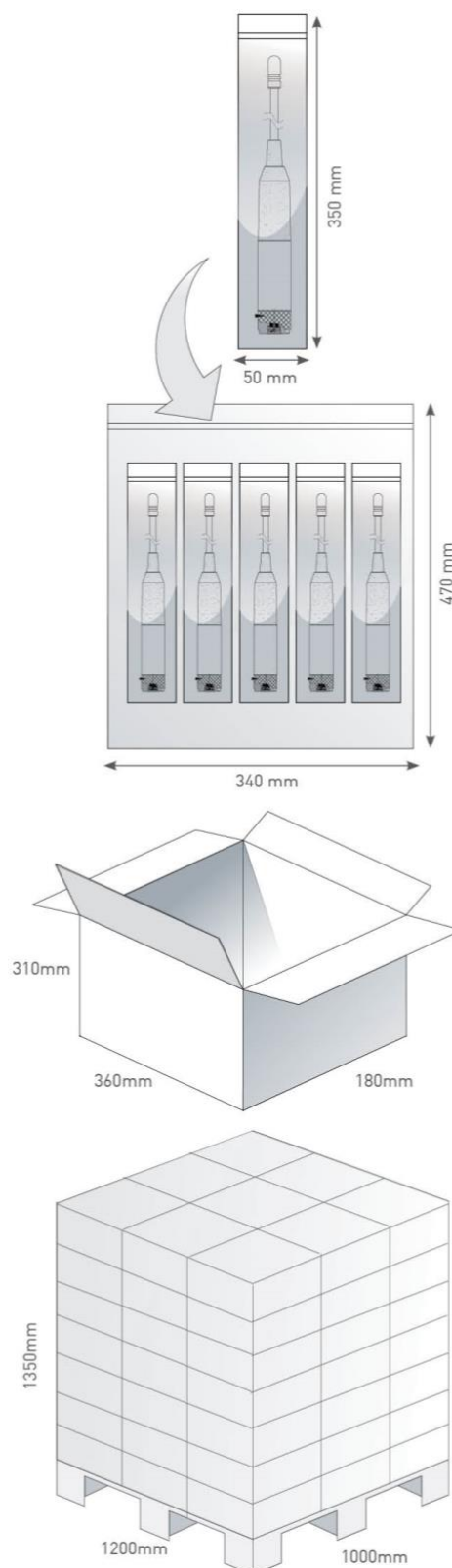
6. Packaging

1 pcs FW.95.B.SMA.M per PE Bag
Bag Dimensions - 380*50mm
Weight - 38g

50 PE Bags per Large PE Bag
50 pcs FW.95.B.SMA.M per Large PE Bag
Large PE Bag Dimensions - 470*340mm
Weight - 2Kg

5 Large PE Bags per Carton
50 pcs FW.95.B.SMA.M per Carton
Carton Dimensions - 360*310*180mm
Weight - 10.5Kg

Pallet Dimensions:
1200*1000*1350mm
63 Cartons Per Pallet
9 Cartons Per Layer
7 Layers



Changelog for the datasheet

SPE-16-8-007 - FW.95.B.SMA.M

Revision: B

Date:	2019-08-16
Changes:	Updated to new format
Changes Made by:	Dan Cantwell

Previous Revisions

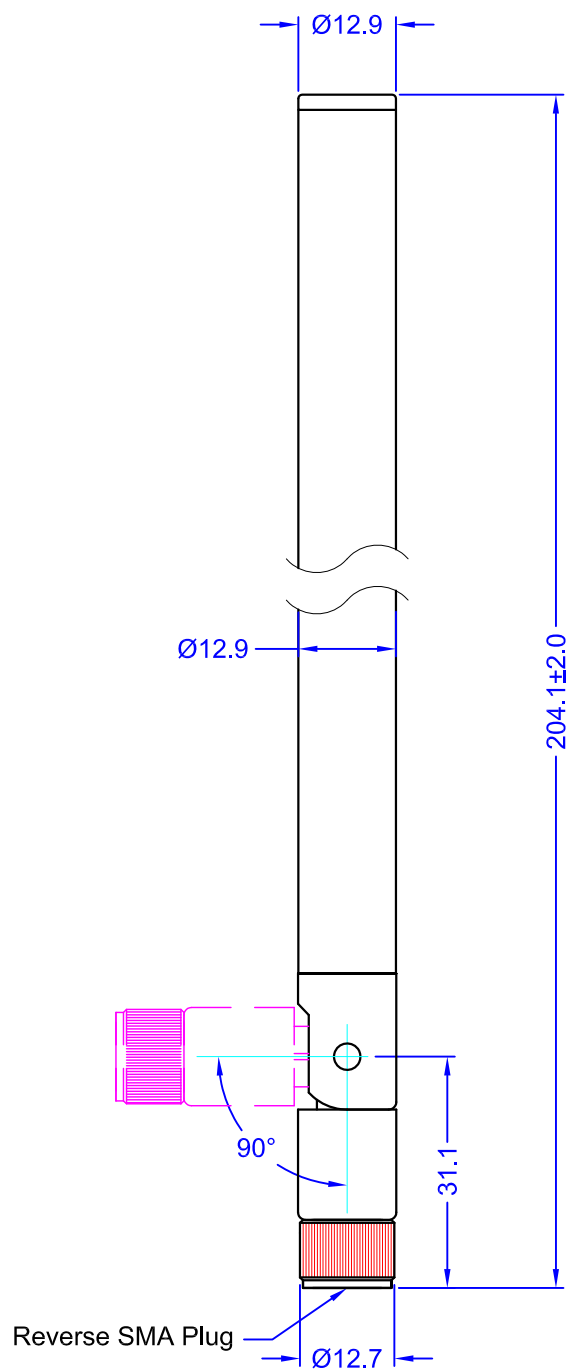
Revision: A (Original First Release)

Date:	2015-12-01
Notes:	
Author:	Wayne Yang



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Electrical Properties:

Frequency Range:	902~928 MHz
Impedance:	50Ω nominal
VSWR:	<2.0
Gain:	2.0 dBi
Radiation:	Omni
Polarization:	Vertical

Mechanical Properties:

Material:	PC-1250Y
Radome:	Reverse SMA Plug Brass with black chrome plating
Connector:	Reverse SMA Plug Brass with black chrome plating
Ingress Protection:	IP67
Weight:	31 g(est)
Operation Temp.:	-40°C to +85°C

TITLE	900 MHz ISM Band Swivel Antenna -1551 Model		Rev. Date	SHEET
			04/08/15	1 of 1
UNIT	DWG. NO.	S1551AH - 915S		
in.(mm)				
SCALE				
none				

NEARSON