

## SPECIFICATION

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

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

Features : External 915MHz Monopole Antenna  
Designed for Outdoor Use  
Over 60% high efficiency\*  
2.71 dBi 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 ✓



## 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 IP67 rating on the housing ensure high reliability.

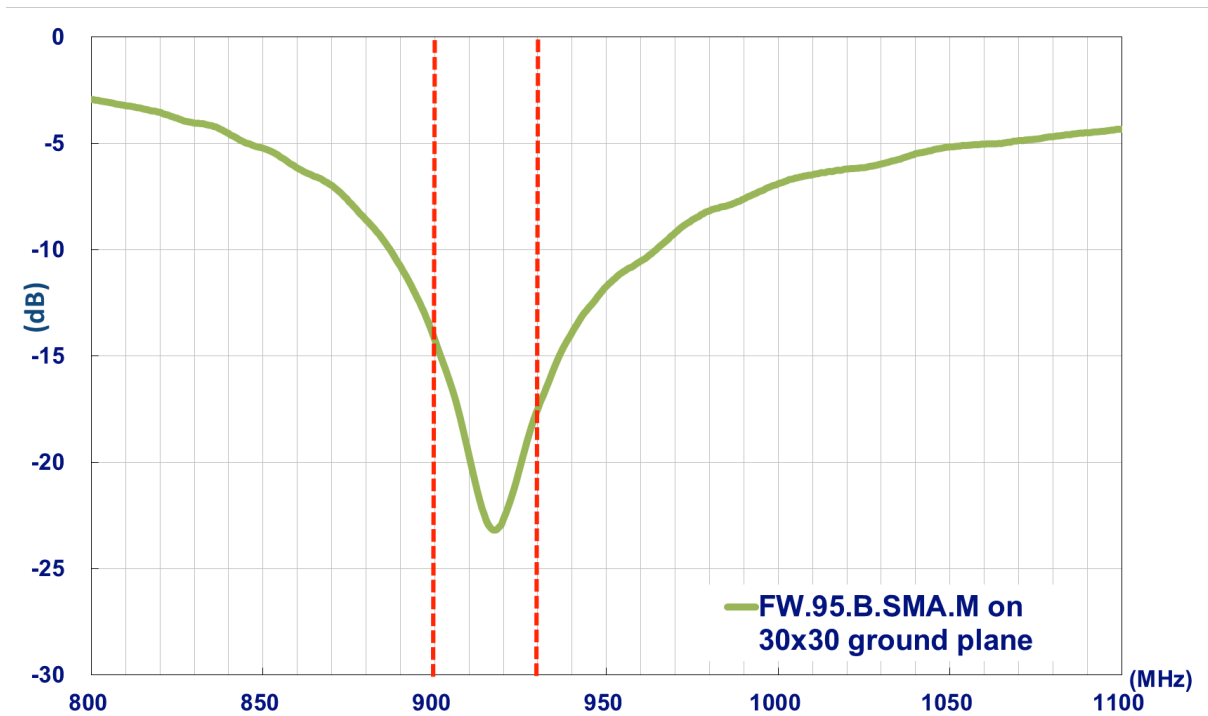
This antenna comes with SMA(M) connector as standard. Other custom variants can be provided subject to NRE and MOQ. Contact your regional Taoglas office for details.

## 2. Specification

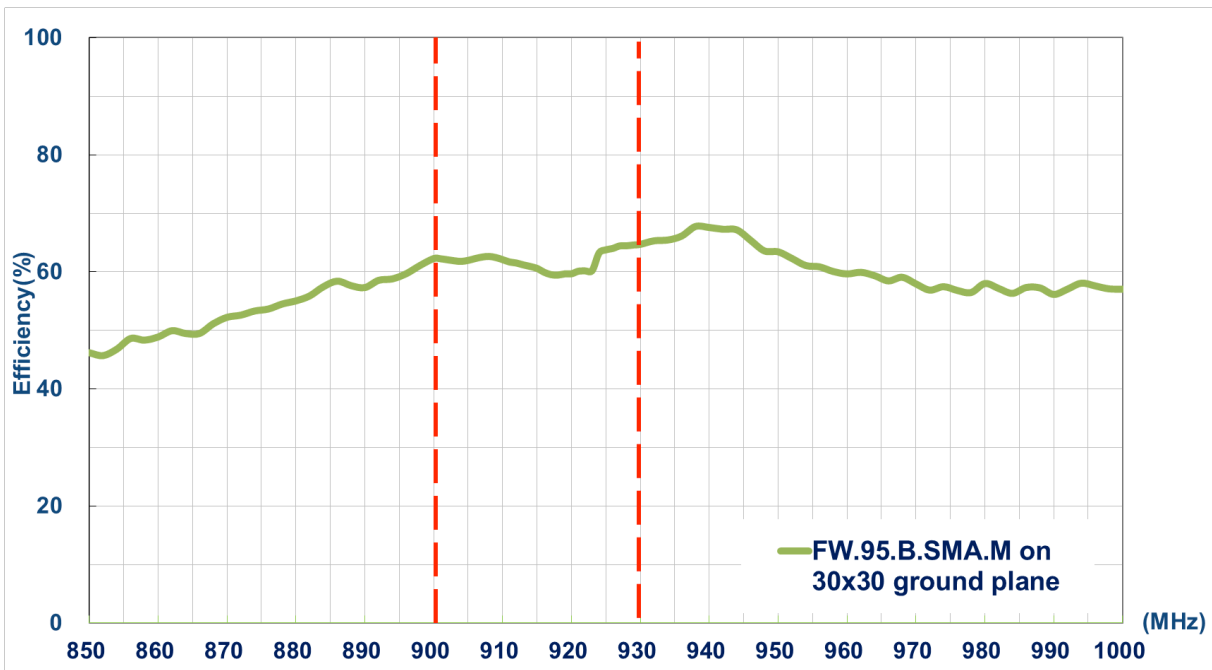
ISM Band 915 MHz			
Center Frequency	902MHz	915MHz	928MHz
Design Environment	On 30x30cm ground		
Efficiency	62.07 %	60.60 %	64.46 %
Peak Gain	2.30 dBi	2.71 dBi	3.75 dBi
Return loss	< -10 dB		
VSWR	≤ 2:1		
Impedance	50 Ω		
Polarization	Linear		
Radiation Pattern	Omni-Directional		
Input Power	2 W		
MECHANICAL			
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

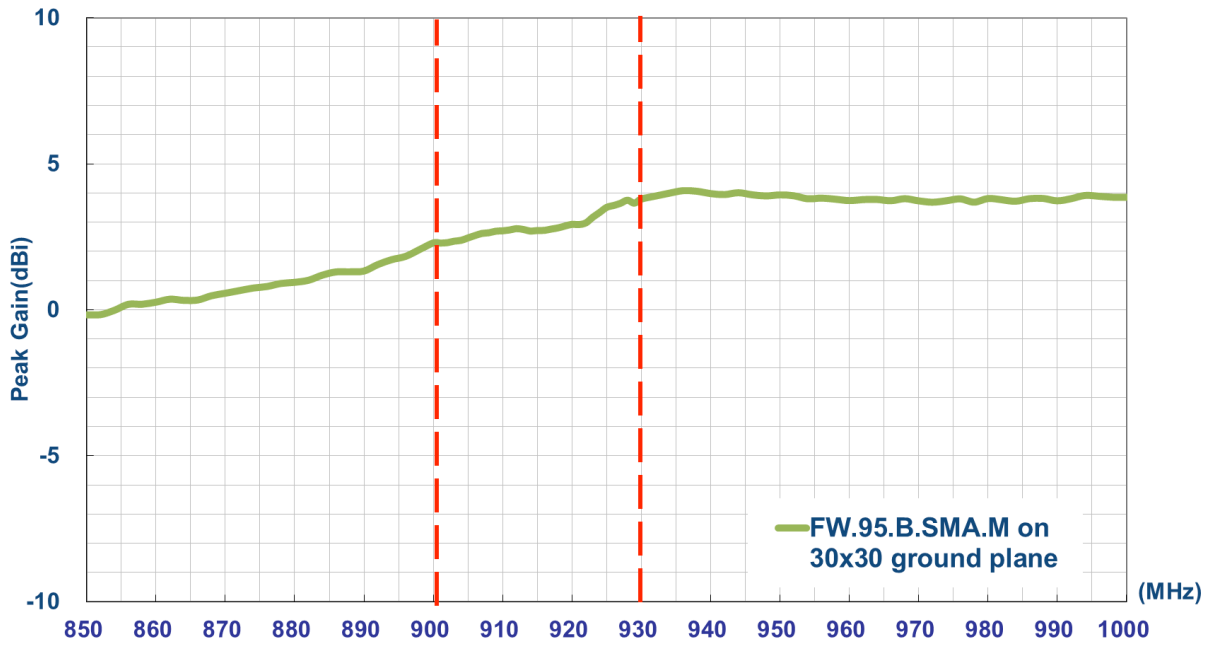
#### 3.1. Return Loss



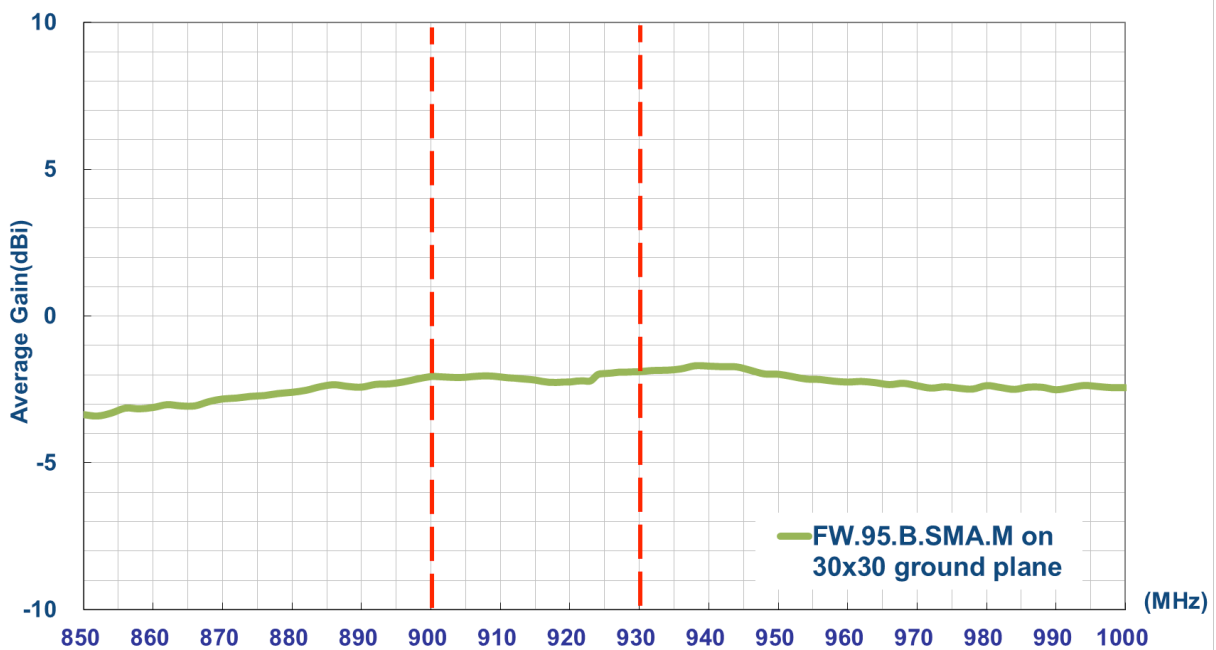
#### 3.2. Antenna Efficiency



### 3.3. Peak Gain



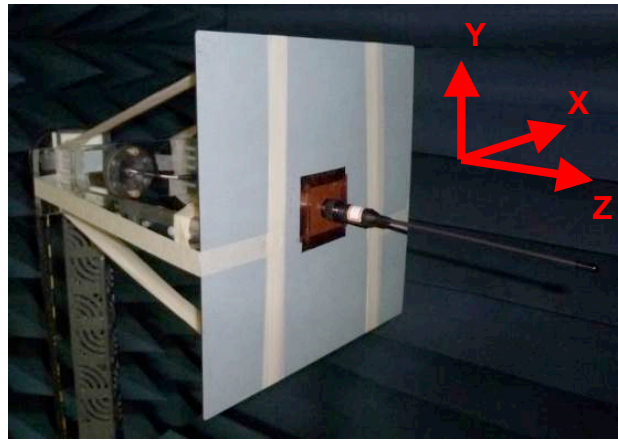
### 3.4. Average Gain



## 4. Antenna Radiation Pattern

### 4.1. Antenna Setup

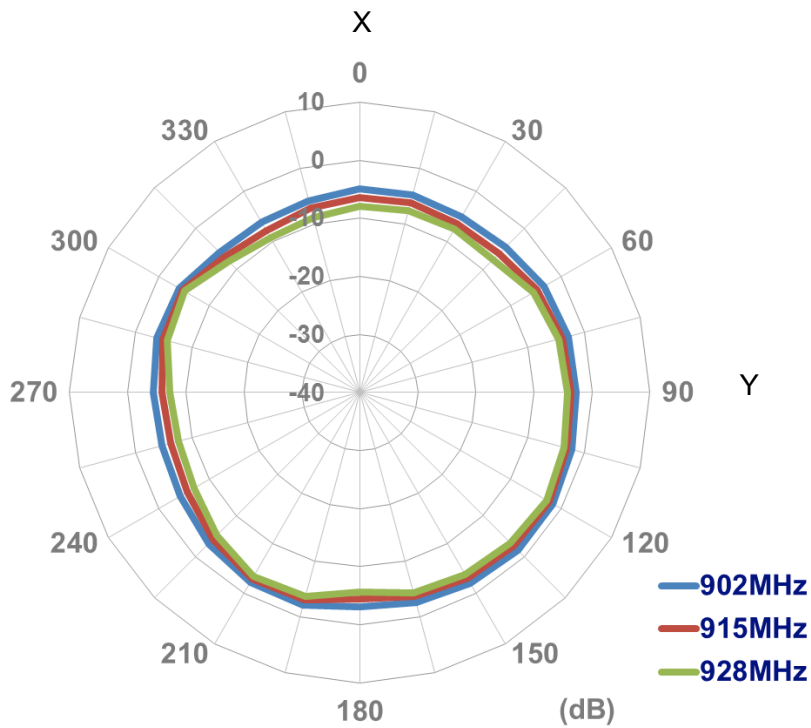
On 30x30 cm ground plane



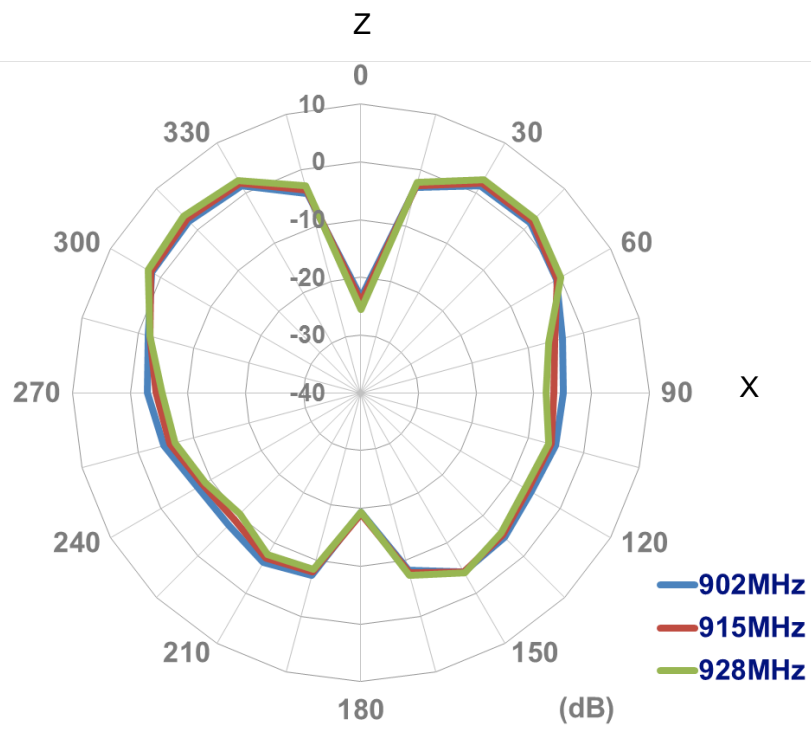
## 4.2. 2-D Radiation Pattern

- On 30cm\*30cm Ground Plane

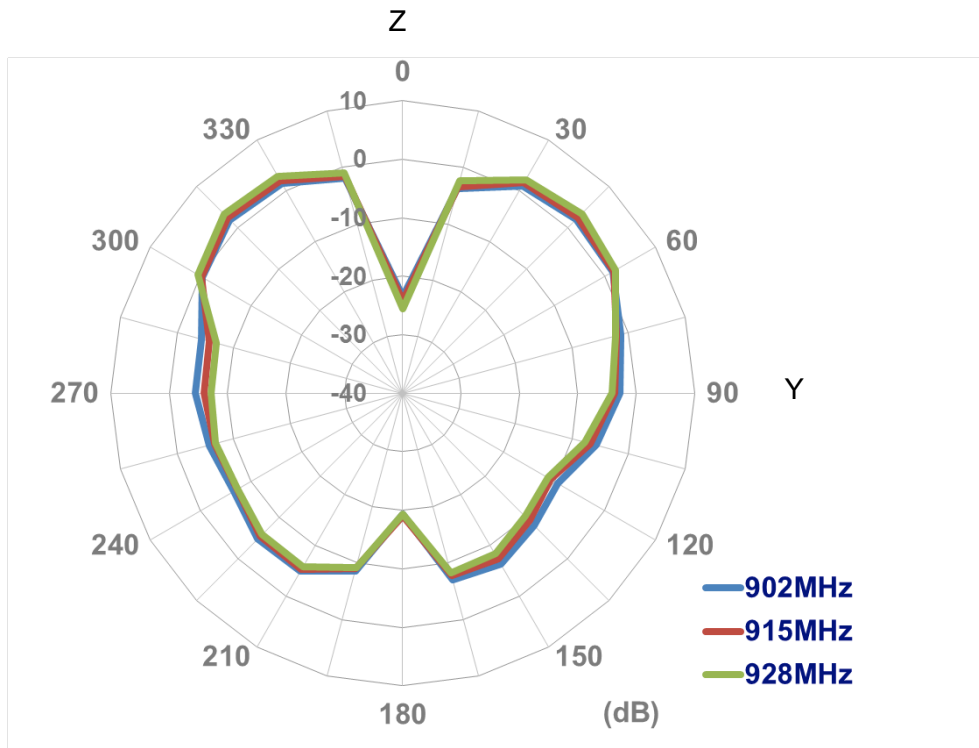
XY-plane



XZ-plane



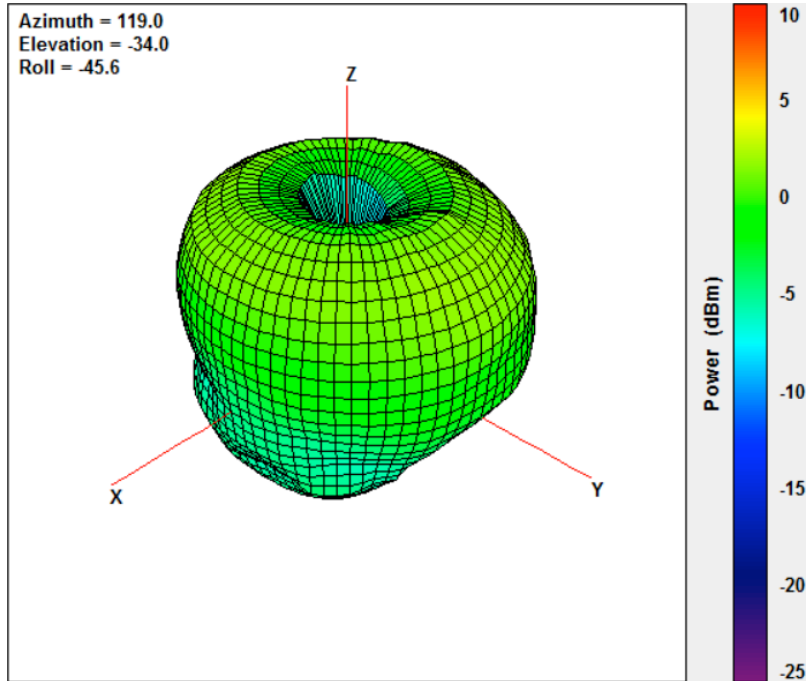
YZ-plane



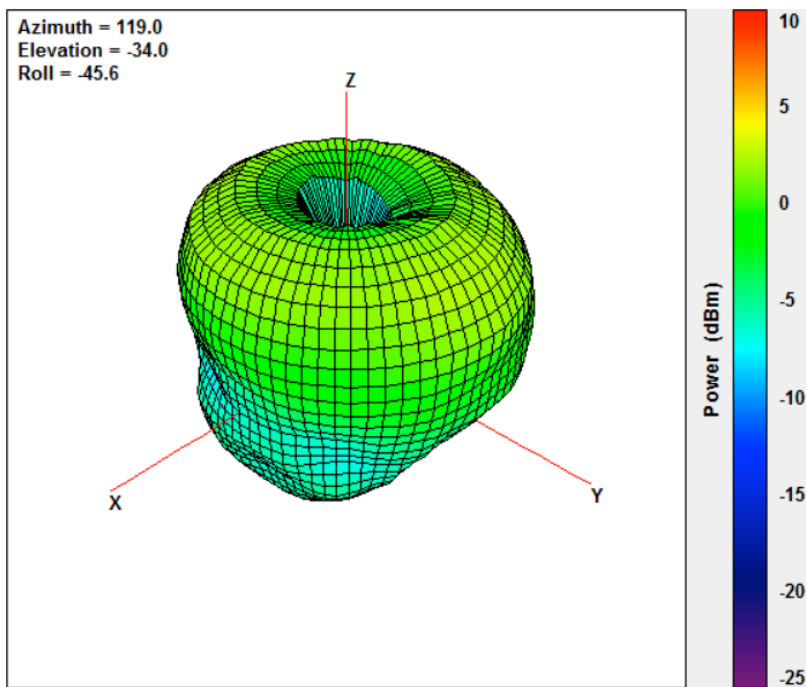


### 4.3. 3-D Radiation Pattern

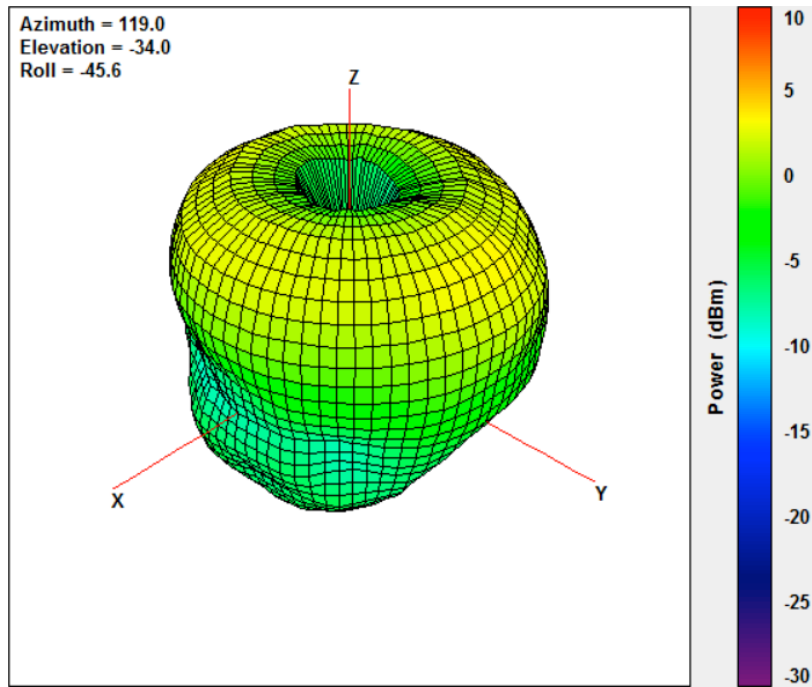
- On 30cm\*30cm Ground Plane



@ 902MHz

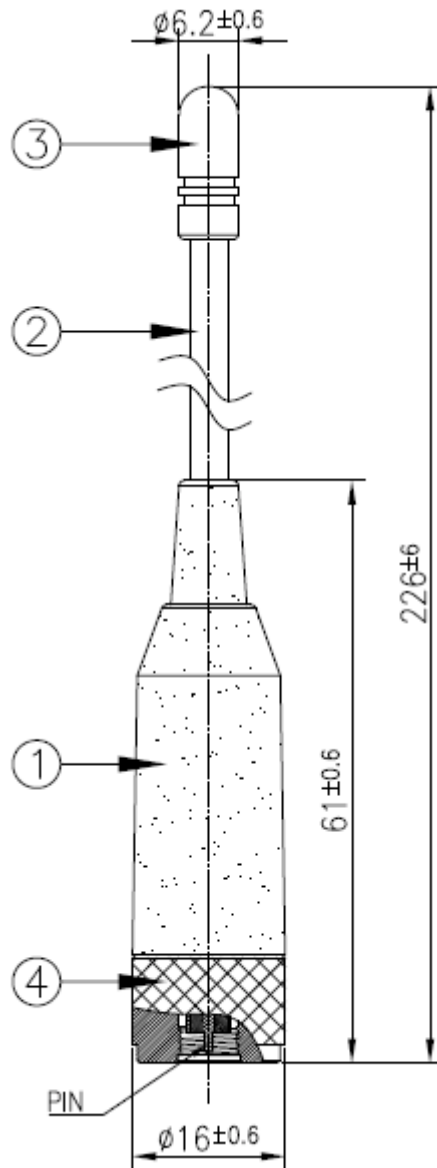


@ 915MHz



@ 928MHz

## 5. Antenna Drawing



Unit: mm

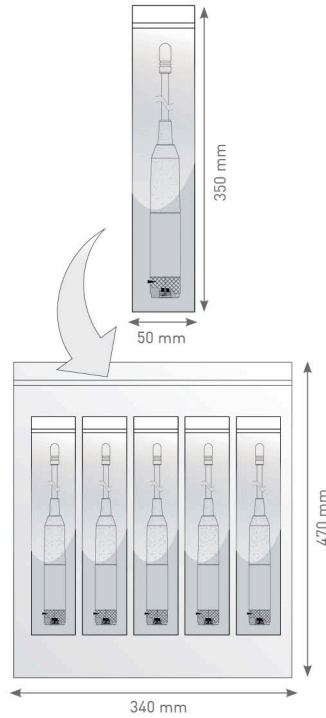
	Name	Material	Finish	QTY
1	Housing	ABS	Black	1
2	Flexible Whip	Steel+PE Jacket	Black	1
3	Cap	ABS	Black	1
4	SMA(M)ST	Brass	Black	1

## 6. Packaging

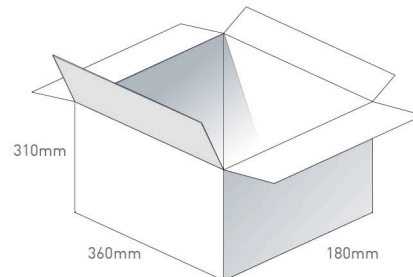
### FW.95.B.SMA.M Packaging Specifications

1 pcs FW.95.B.SMA.M per PE Bag  
PE Bag Dimensions - 350 x 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 x 340mm  
Weight - 2kg



5 Large PE Bags per carton  
250 pcs FW.95.B.SMA.M per carton  
Carton Dimensions - 360 x 310 x 180mm  
Weight - 10.5kg



Pallet Dimensions 1200 x 1000 x 1350mm  
63 Cartons per Pallet  
9 Cartons per layer  
7 Layers

