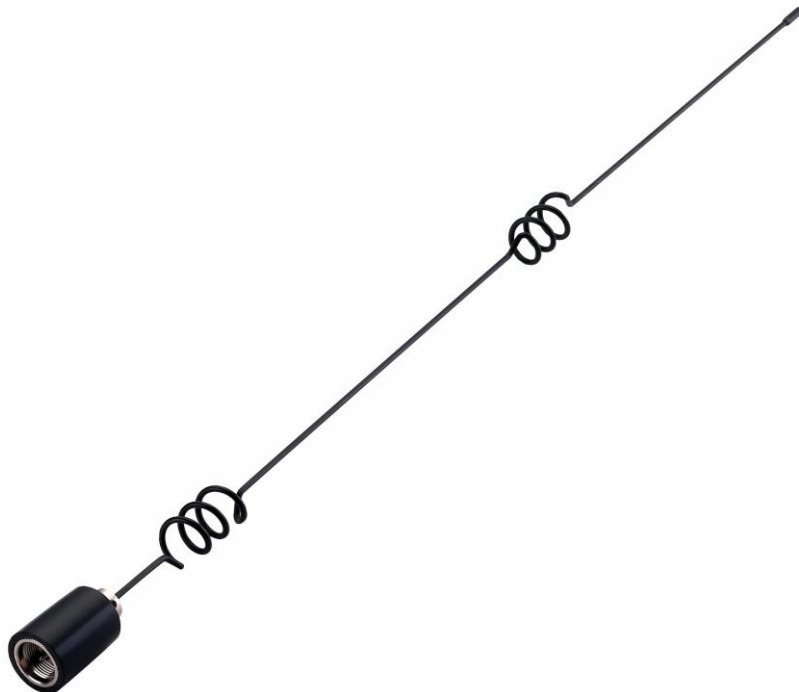


## SPECIFICATION

|              |                                                                                                                                                                                                 |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part No.     | : <b>TI.16.5F11</b>                                                                                                                                                                             |
| Product Name | : 915MHz 5dBi<br>Outdoors Omni-Directional Rigid Whip Antenna                                                                                                                                   |
| Feature      | : Stable performance at 902 MHz to 928MHz<br>Omni-directional pattern in the azimuth<br>Robust Weatherproof Brass Whip and Casing<br>High Efficiency<br>N-type Male Connector<br>RoHS compliant |



## I. Introduction

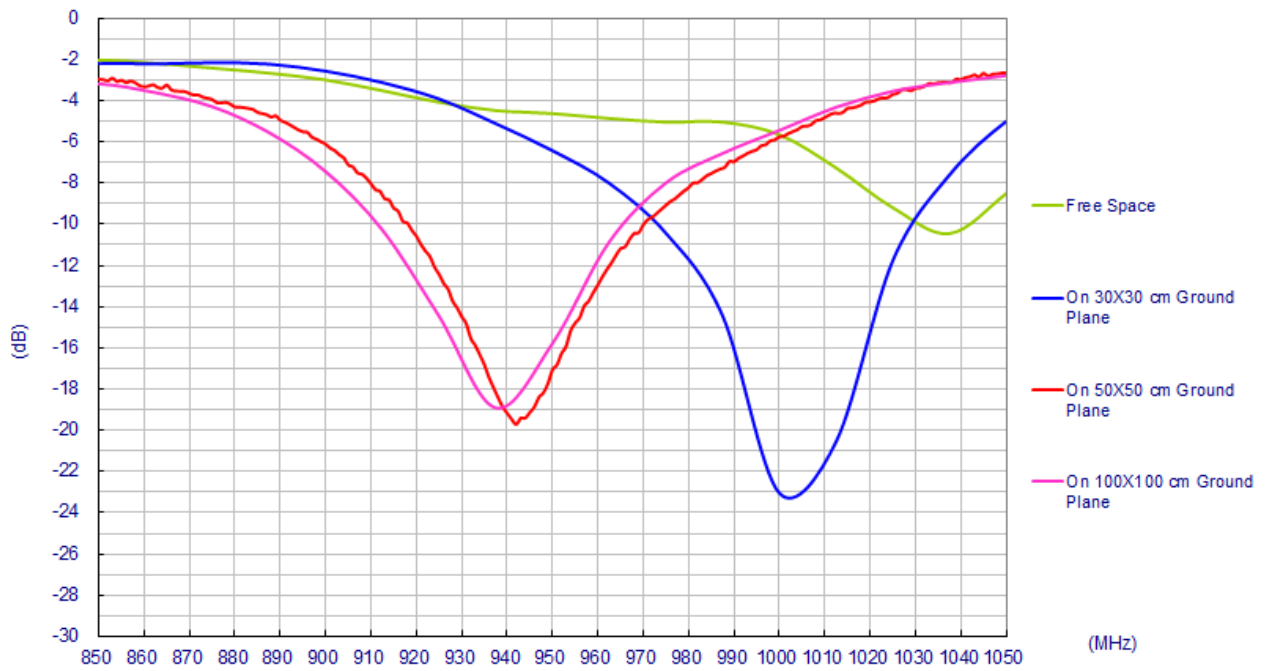
TI.16 is a 5dBi 915MHz ISM band (902MHz to 928MHz) Dipole Omni-directional antenna. This robust whip is suitable for outdoors applications where wide coverage is required especially in the azimuth plane, including metering, remote monitoring. As standard low frequency monopole antenna, its radiation property improves with mounting on metal plate. Connector can be customized on request.

## II. Specification Table

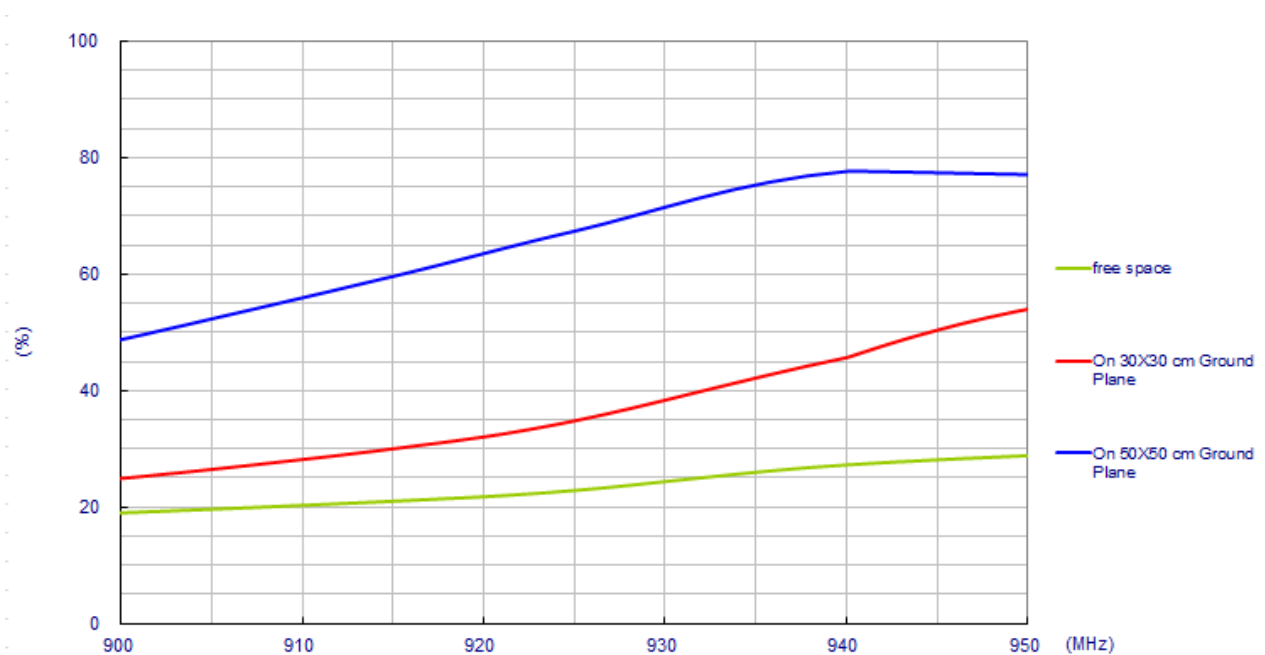
| ISM 915MHz         |                  |                            |      |       |
|--------------------|------------------|----------------------------|------|-------|
| Frequency (MHz)    |                  | 900                        | 915  | 925   |
| Peak Gain (dBi)    | Free Space       | -2.3                       | -1.7 | -1.27 |
|                    | Ground (30x30cm) | -1.1                       | -0.3 | 0.2   |
|                    | Ground (50x50cm) | 3.9                        | 4.6  | 4.9   |
| Average Gain (dBi) | Free Space       | -7.2                       | -6.8 | -6.4  |
|                    | Ground (30x30cm) | -6.0                       | -5.2 | -4.6  |
|                    | Ground (50x50cm) | -3.1                       | -2.2 | -1.7  |
| Efficiency         | Free Space       | 19%                        | 21%  | 22%   |
|                    | Ground (30x30cm) | 25%                        | 30%  | 35%   |
|                    | Ground (50x50cm) | 49%                        | 60%  | 68%   |
| Impedance          |                  | 50Ω                        |      |       |
| Polarization       |                  | Linear                     |      |       |
| Radiation Pattern  |                  | Omni                       |      |       |
| Input Power        |                  | 50 W                       |      |       |
| MECHANICAL         |                  |                            |      |       |
| Dimensions         |                  | 620mm                      |      |       |
| Base Diameter      |                  | 25mm                       |      |       |
| Whip Diameter      |                  | 19mm at widest             |      |       |
| Whip Material      |                  | Coated Brass               |      |       |
| Connector          |                  | N Male Straight            |      |       |
| ENVIRONMENTAL      |                  |                            |      |       |
| Temperature Range  |                  | -40°C to 85°C              |      |       |
| Humidity           |                  | Non-condensing 65°C 95% RH |      |       |

## III. Antenna Characteristics

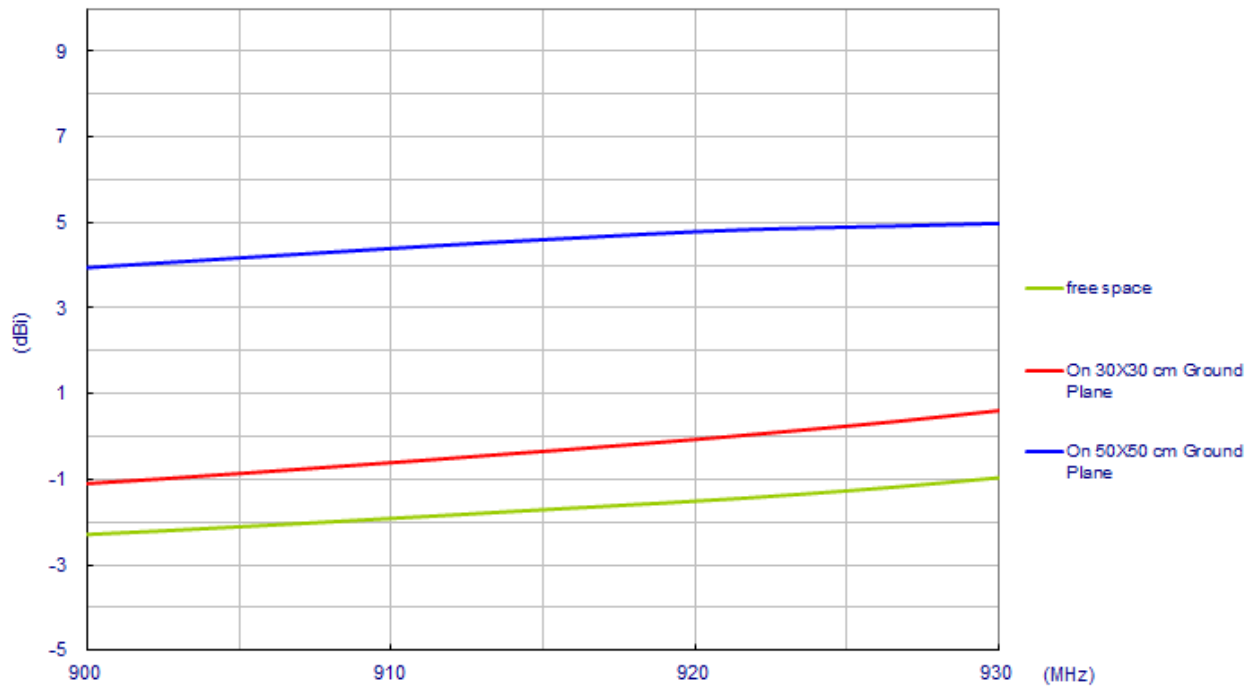
### III.1. Return Loss



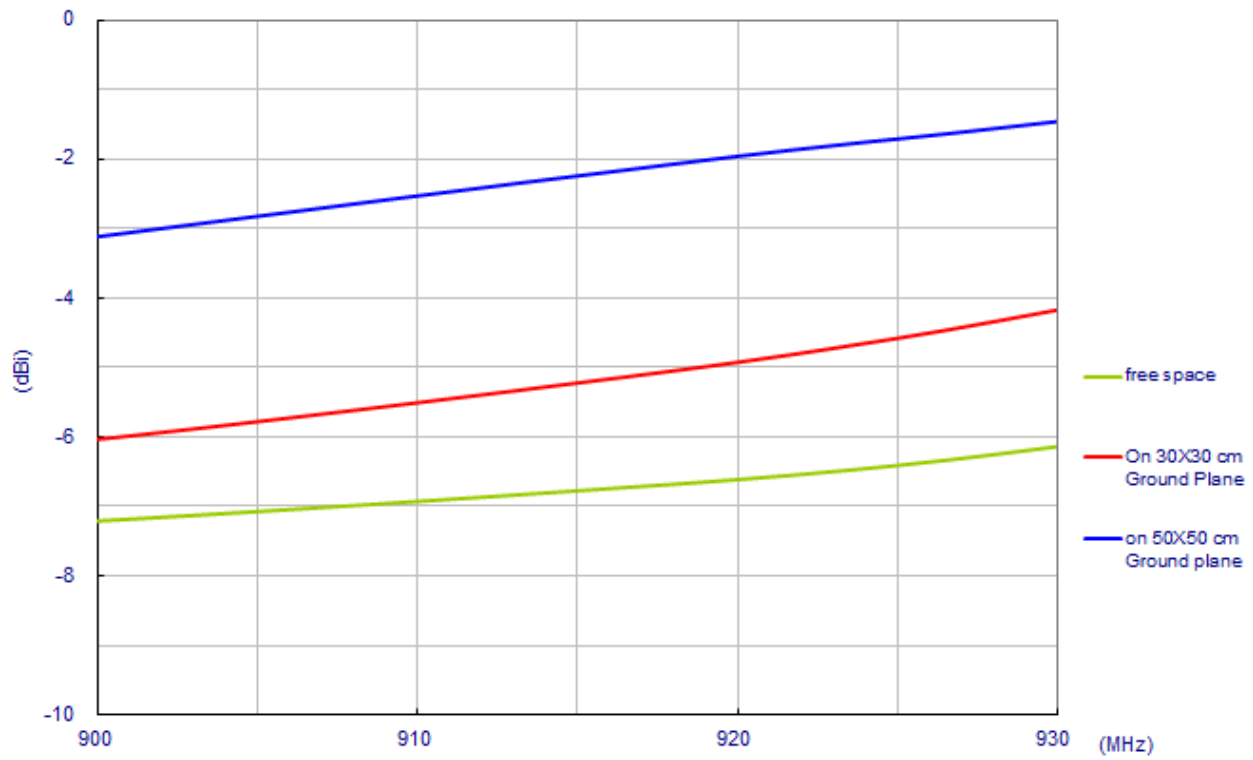
### III.2. Antenna Efficiency



### III.3. Peak Gain

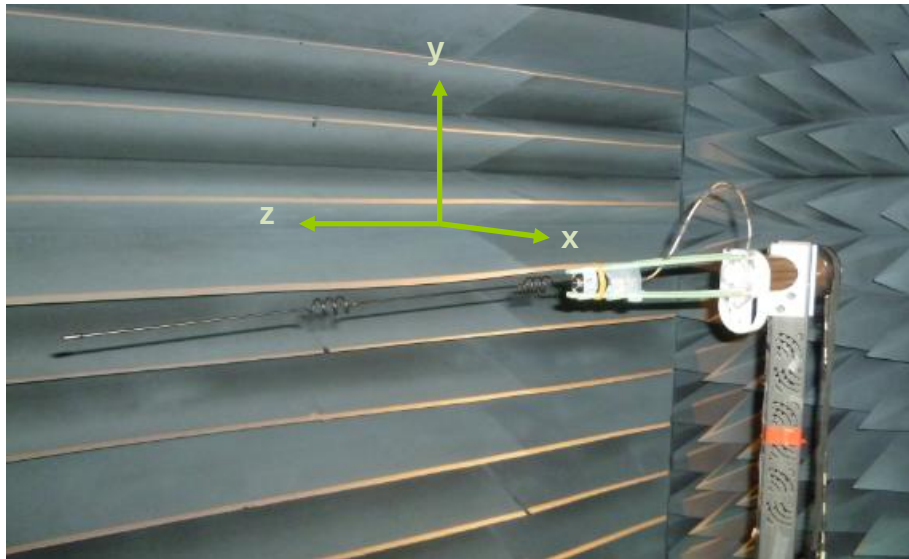


### III.4. Average Gain



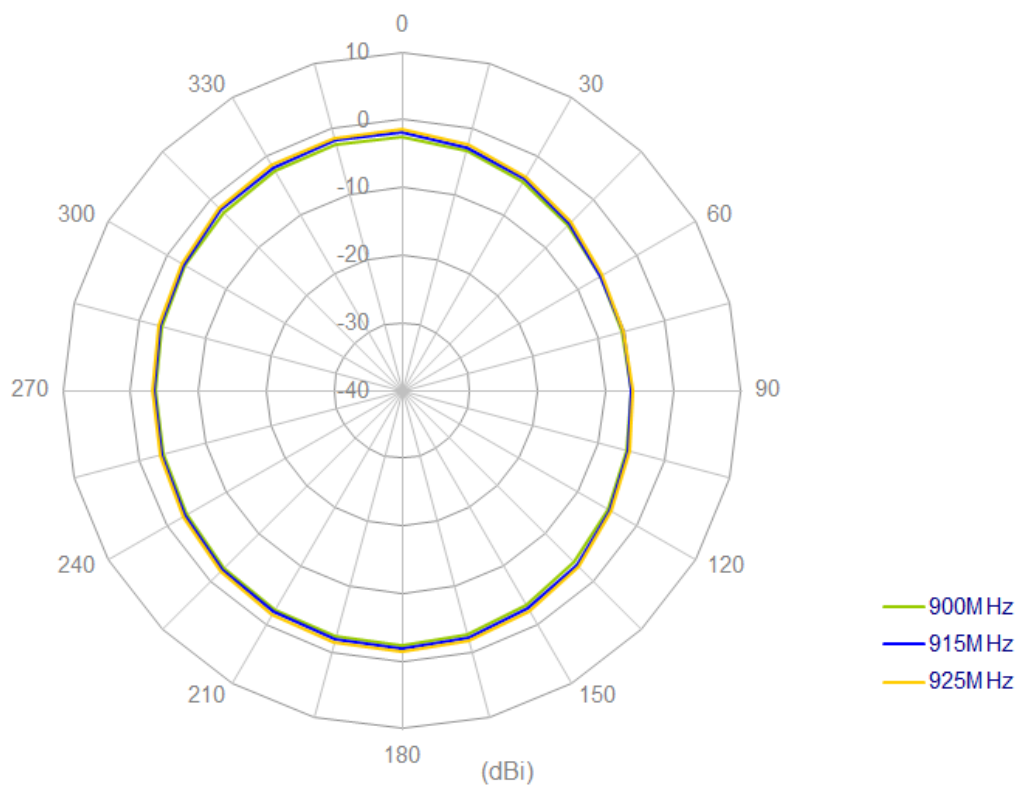
## IV. Radiation Patterns

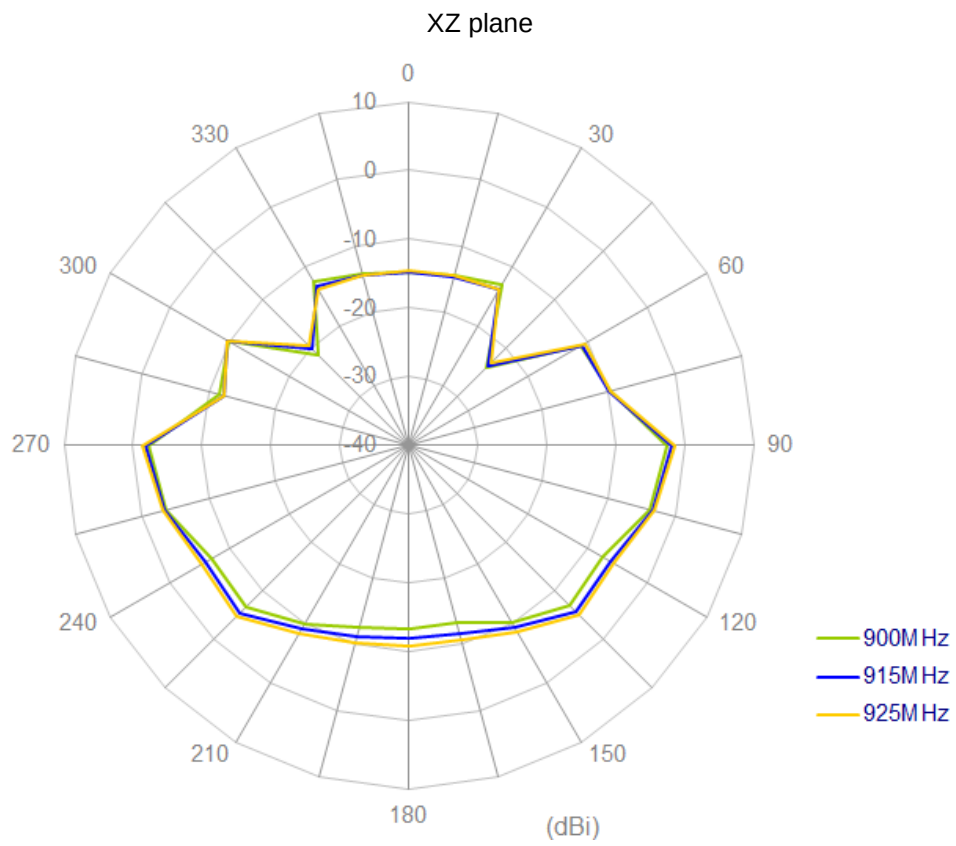
### IV.1. Antenna setup (Free Space)



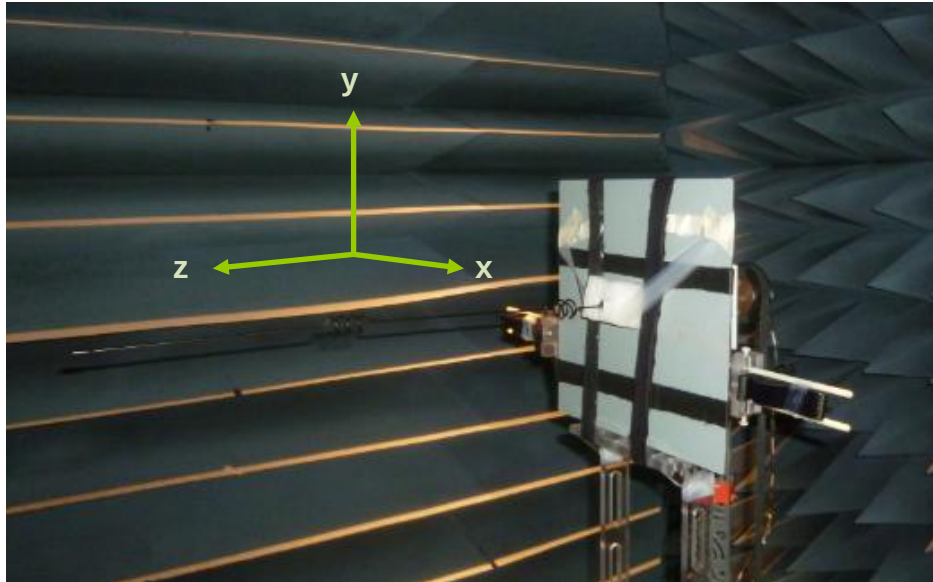
### Radiation Pattern

XY plane



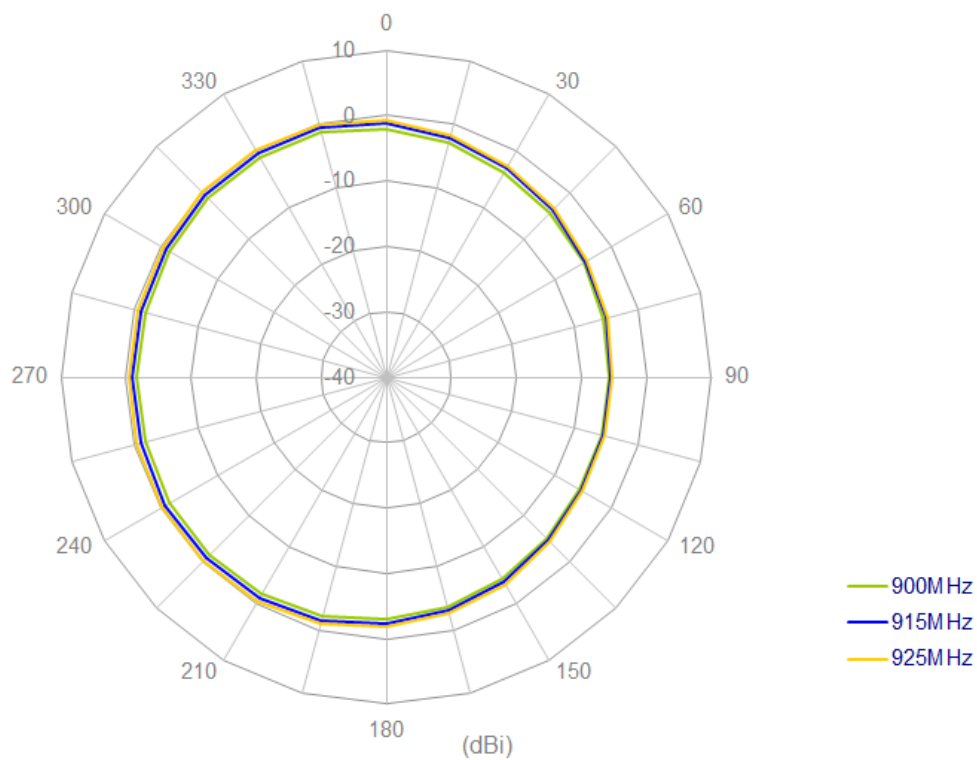


## IV.2. Antenna setup (with 300x300mm ground plane)



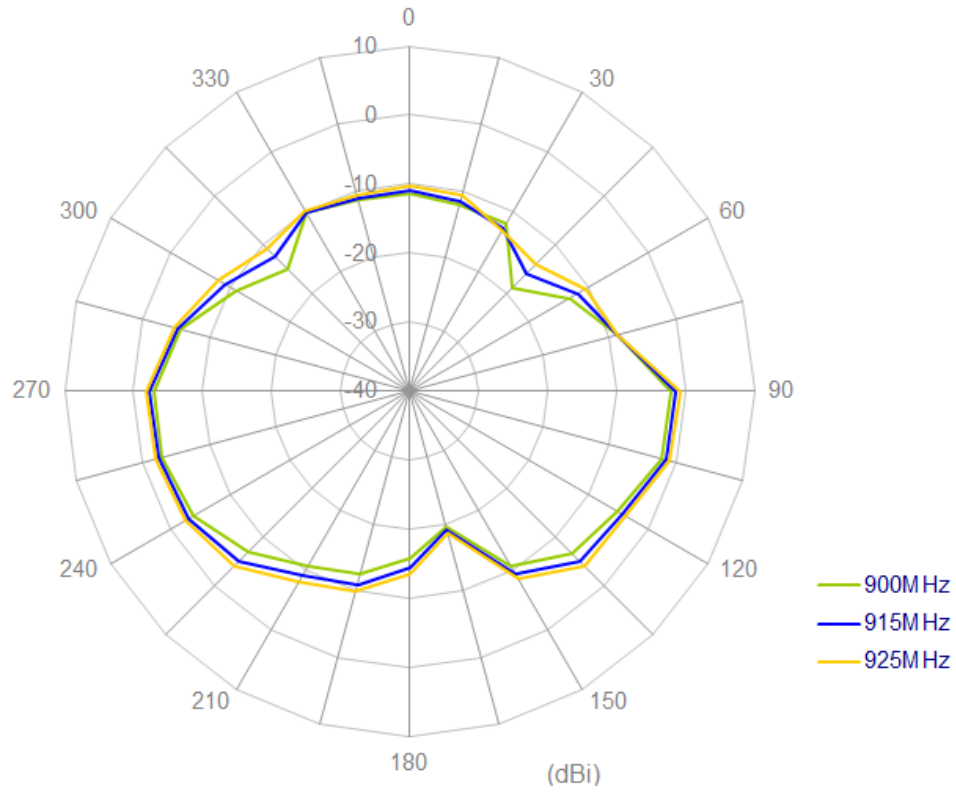
## Radiation Pattern

XY plane

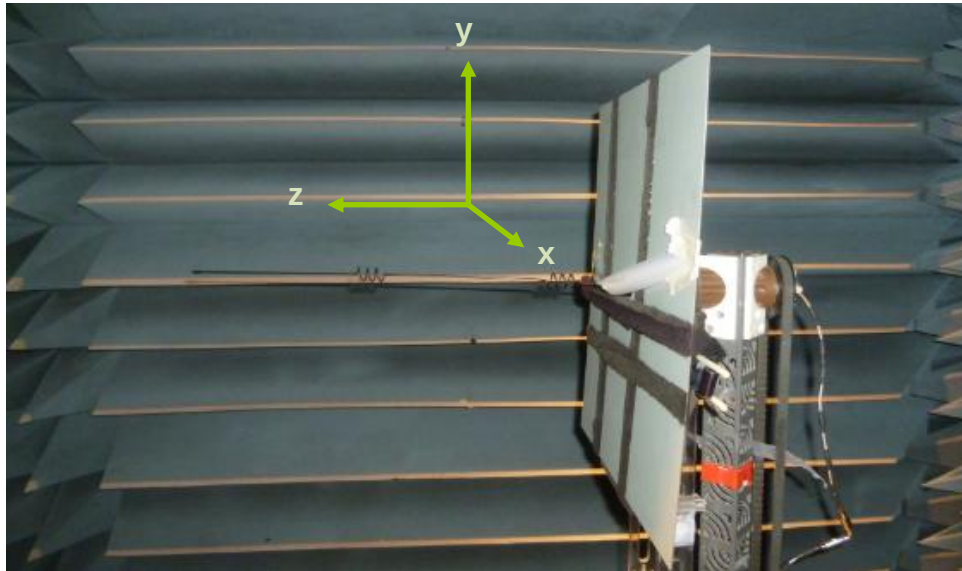




XZ plane

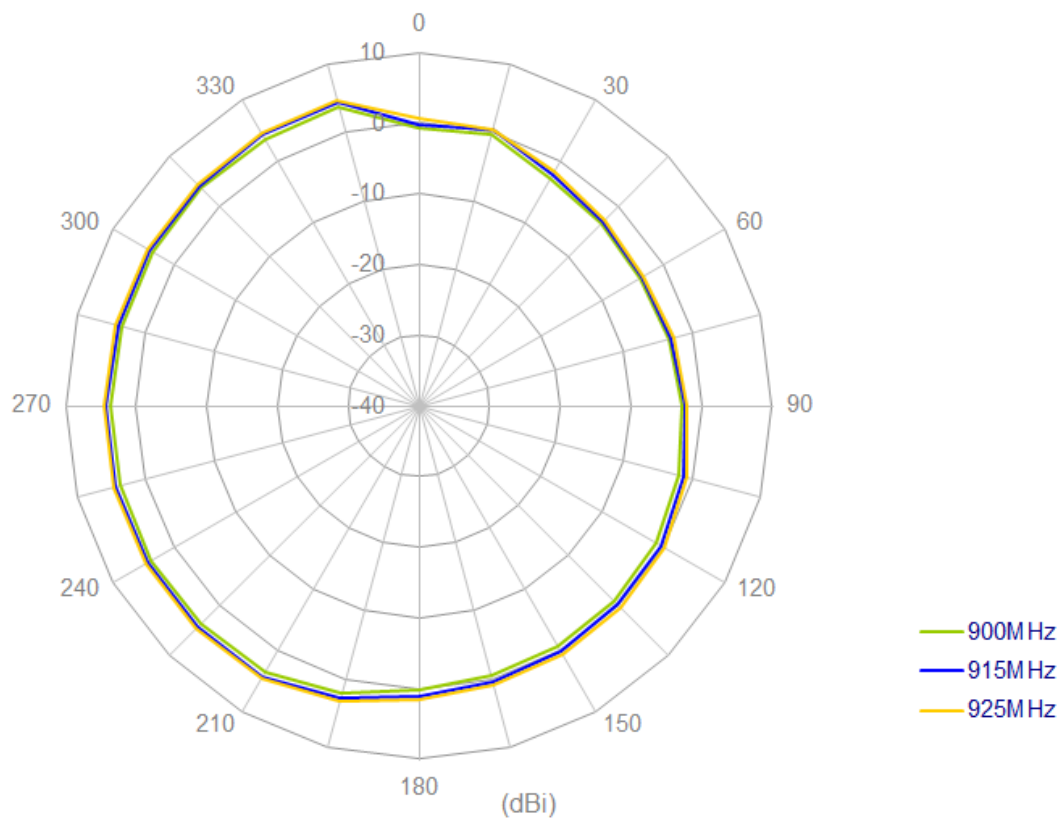


### IV.3. Antenna setup (with 500x500mm ground plane)

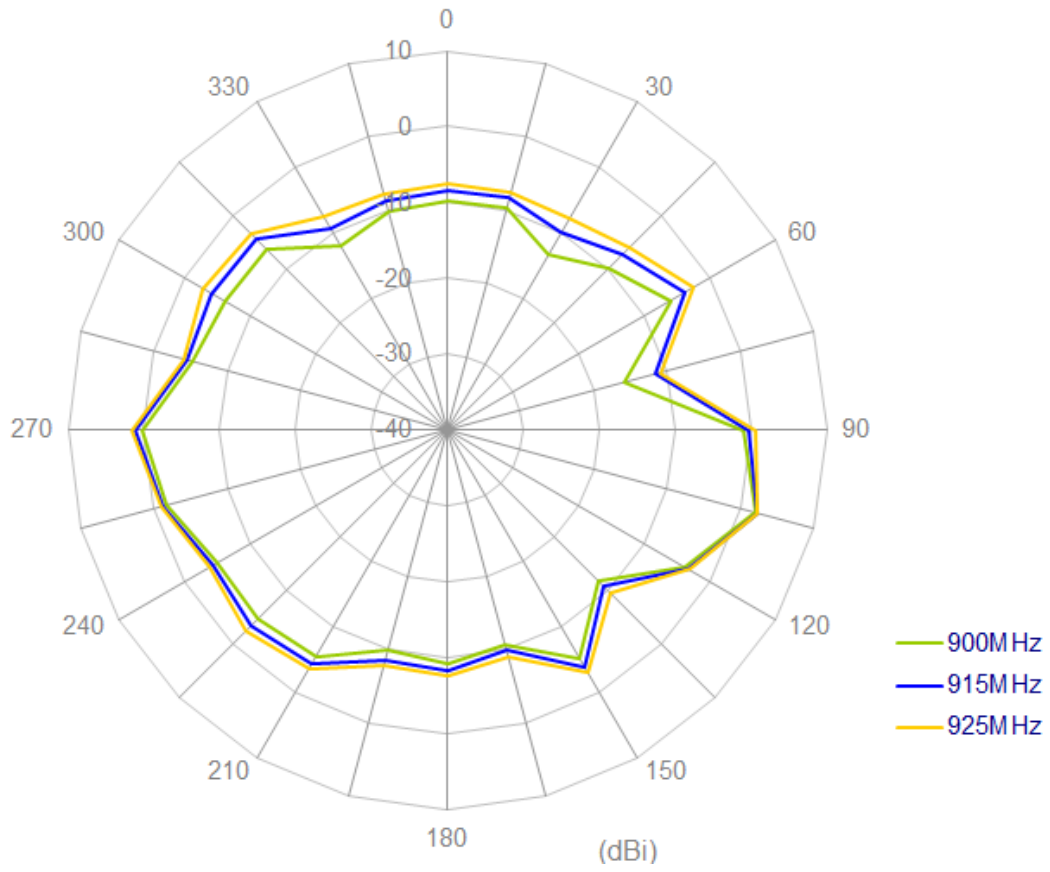


### Radiation Pattern

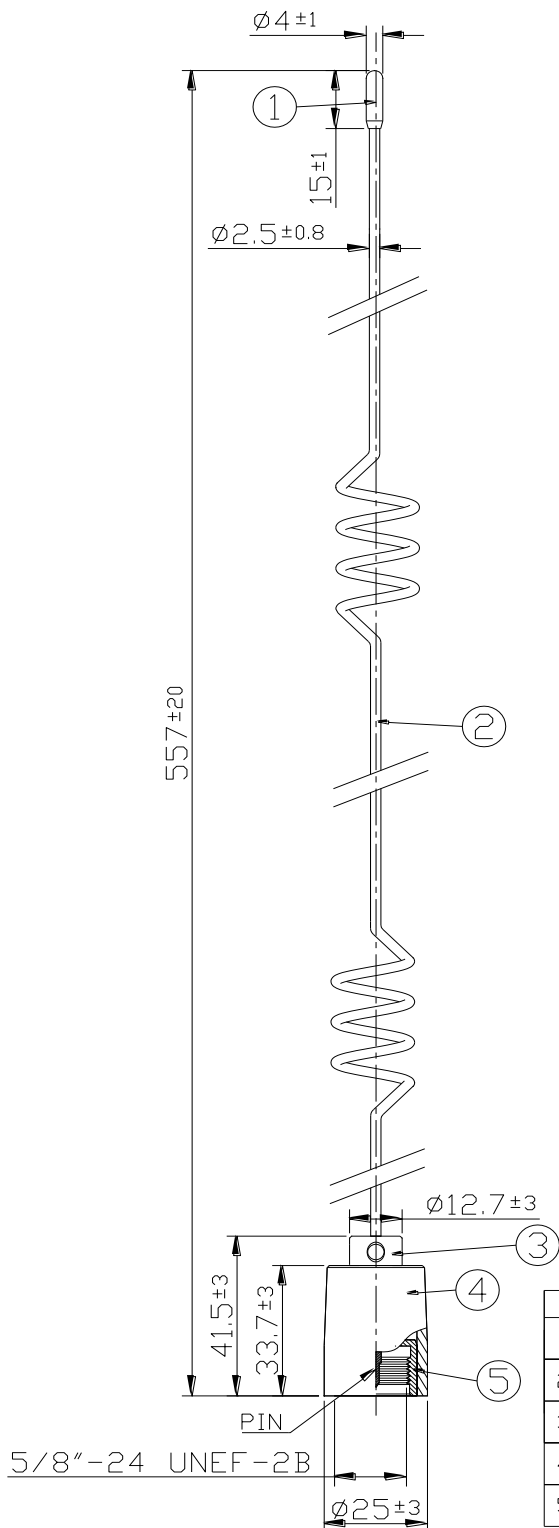
XY plane



XZ plane

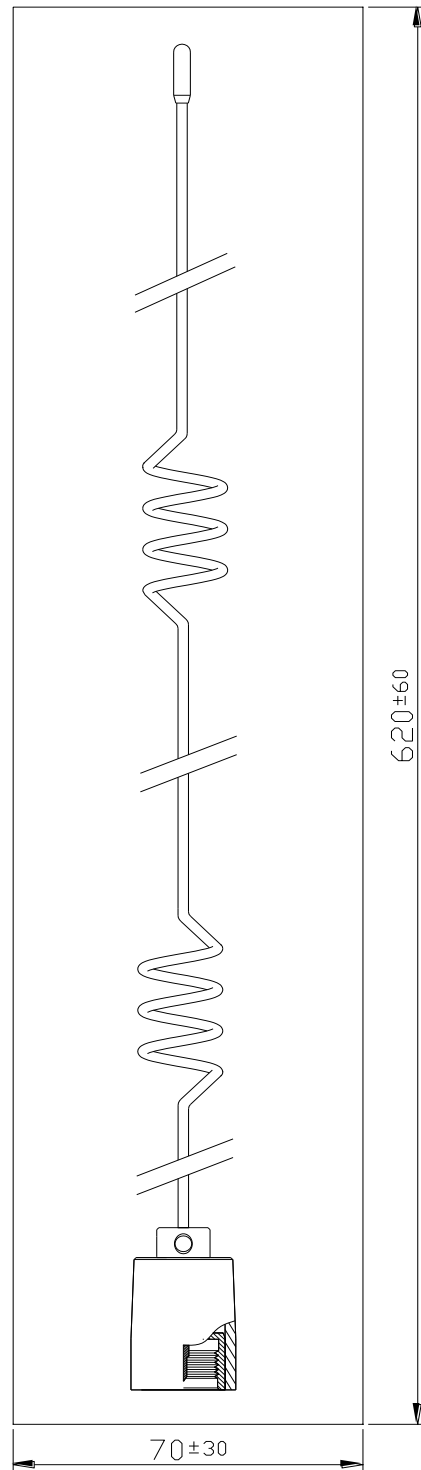


## V. Drawing



|   | Name             | P/N            | Material | Finish    | QTY |
|---|------------------|----------------|----------|-----------|-----|
| 1 | Top Cap          | 000612C000002A | Brass    | Black     | 1   |
| 2 | Spring Antenna   | 000812C000002A | Brass    | Black     | 1   |
| 3 | Axis             | 000612C010002A | Brass    | Ni Plated | 1   |
| 4 | NTYPE(M) Housing | 000612C030002A | POM      | Black     | 1   |
| 5 | NTYPE(M) Thread  | 000612C020002A | Brass    | Ni Plated | 1   |

## VI. Packaging



1PCS/BAG

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Taoglas:](#)

[TI.16.5F11](#)