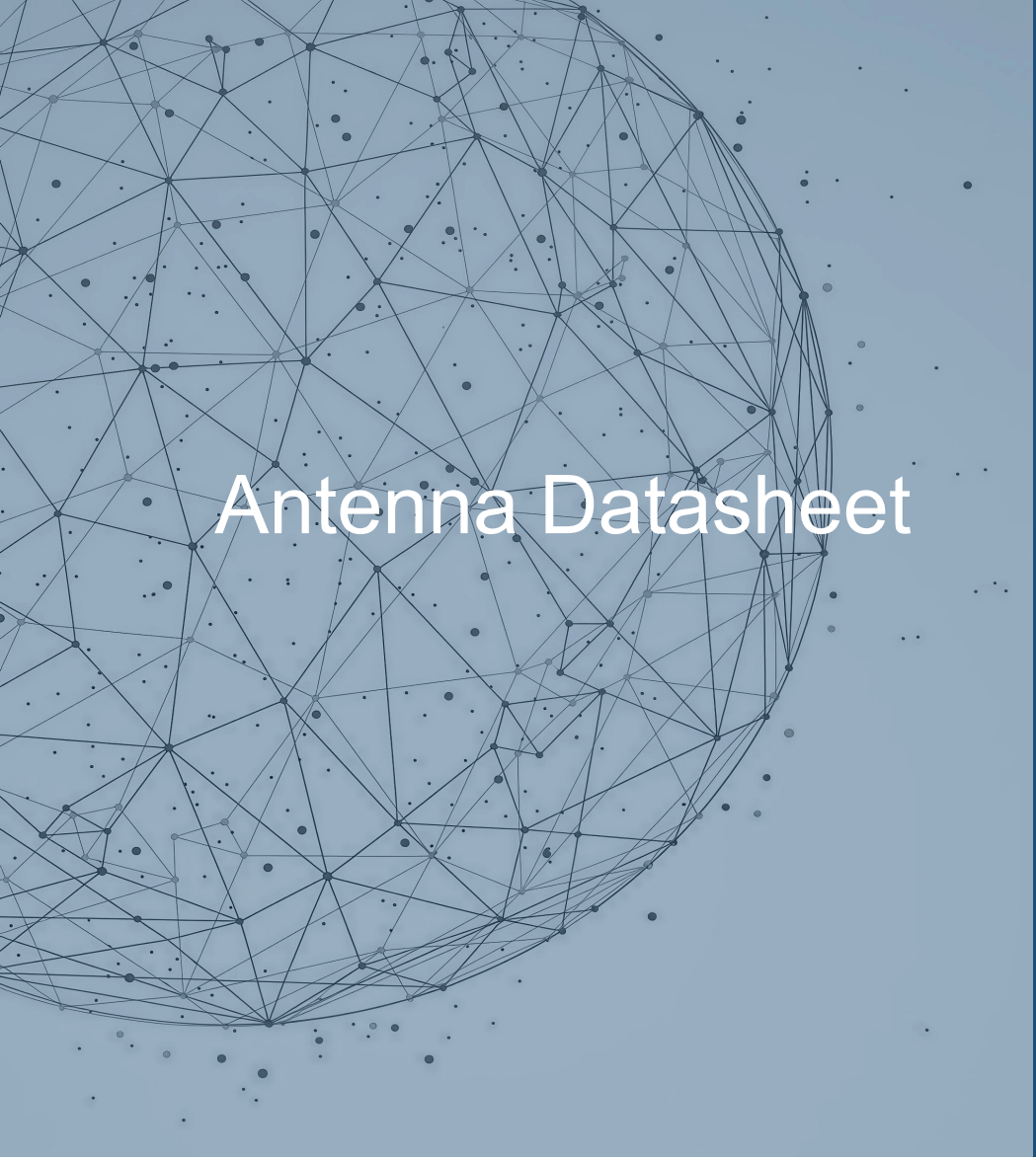

BAT WIRELESS

# Antenna Datasheet

## GMR Rubber Antenna

Model:

BWGMRJWX50-10WJ

Description:

GMR Rubber Antenna with SMA Male Jack

Features:

800-2200 MHz Frequency Range
SMA Male Jack (Inner Thread, Inner Pin) Connector
Structure: Angled
360º Omnidirectional Radiation
Dimensions: 50mm x 10.3 mm
Compliant with RoHS & REACH Regulations

# Contents

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# BWGMRJWX50-10WJ

## Part Number Explanation

| | | |
|---|---|---|
| B | Company | Bat Wireless |
| 433 | Frequency | 433MHz |
| J | Name | Rubber Antenna |
| W | Type | Enternal |
| X | Constant | X |
| 50-10 | Dimensions | 50-10mm |
| W | Feature | Angled |
| J | Connector | SMA Male Jack |

## Selection Table

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Connector | IPEX-1 | IPEX-2 | IPEX-3 | IPEX-4 | IPEX-5 | SMA | Customizable |
| Cable Length | 100 | 150 | 200 | 250 | 300 | 500 | Customizable |
| Cable Type | RG0.81 | RG1.13 | RG1.37 | RG174 | RG178 | RG316 | Customizable |

## 1. Description

Bat Wireless **BWGMRJWX50-10WJ** is a high-performance omnidirectional antenna with excellent penetration capability, ultra-long communication distance, strong environmental adaptability, small size and light weight. It adopts a high-quality plastic shell, with a non-foldable angled head, and has excellent signal receiving and transmitting capabilities, providing stable and reliable support for device connection. Its compact and lightweight rubber rod design makes it easy to install, transport and carry.

Classic Application Scenarios:

Railway small base stations: Base stations along the railway tracks, covering specific sections.

Train on-board communication: Installed on on-board communication equipment to realize mobile communication.

Handheld terminal devices: Used during inspection, maintenance and other operations.

Bat Wireless provides customized services to optimize your equipment. We have a mature R&D team that can respon d quickly to meet your needs. If you have any requirements, please contact our sales and FAE.

## 2. Specification

| Parameters | Typ. | Unites | Notes |
|---|---|---|---|
| **Electrical Characteristics** | | | |
| Antenna Type | Rubber Antenna | | |
| Frequency Range | 800-2200 | MHz | |
| Input Impendence | 50 | Ω | |
| V.S.W.R | <1.2 | | |
| Gain | -1,9 | dBi | |
| Polarization Type | Vertical | | |
| Power Capacity | 50 | W | |
| Lightning Protection | - | | |
| DC Voltage | - | V | |
| Radiator | - | | |
| **Mechanical Characteristics** | | | |
| Dimensions | 50 x 10.3 | mm | |
| Connector Type | SMA-J Male（Customizable） | | |
| Cable Type | - | | |
| Cable Length | - | mm | |
| Mount way | Screw-on | | |
| Color | Black | | |
| Meterial | ABS | | |
| Weight | 6.86 | g | |
| **Environmental Characteristics** | | | |
| Waterproof Rating | - | | |
| ROHS Complaint | Compliant | | |
| Operating Temperature | -45~ +85 | ℃ | |
| Storage Temperature | -45~ +85 | ℃ | |

## 3. Product Picture

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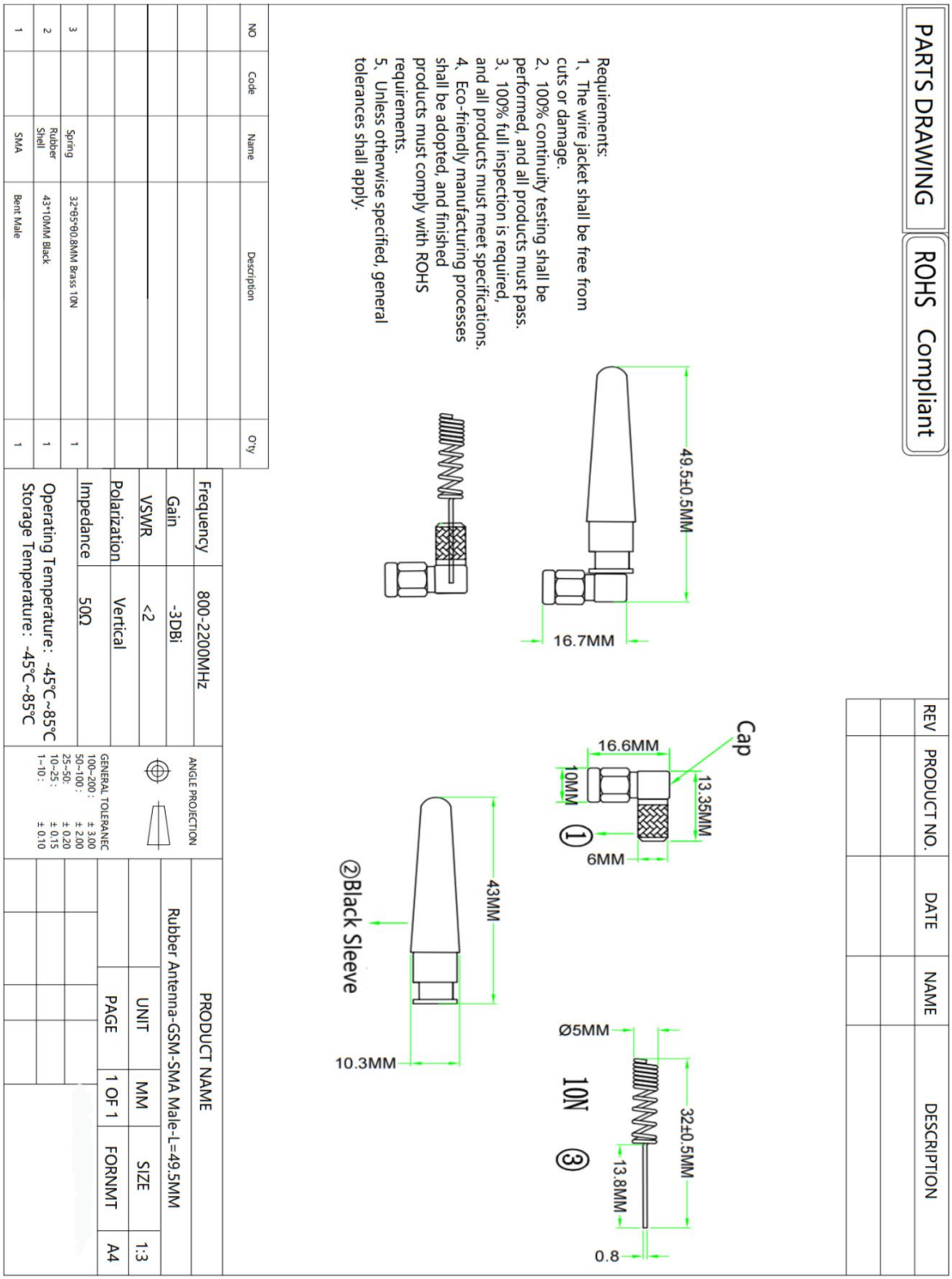
## 4. Mechanical Drawing

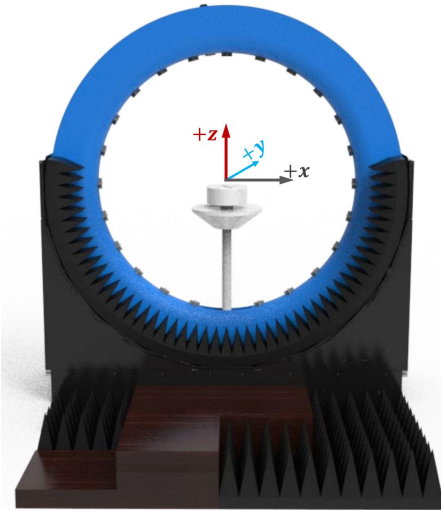


## 5. Test Equipment

Keysight/E5071C Network Analyzer

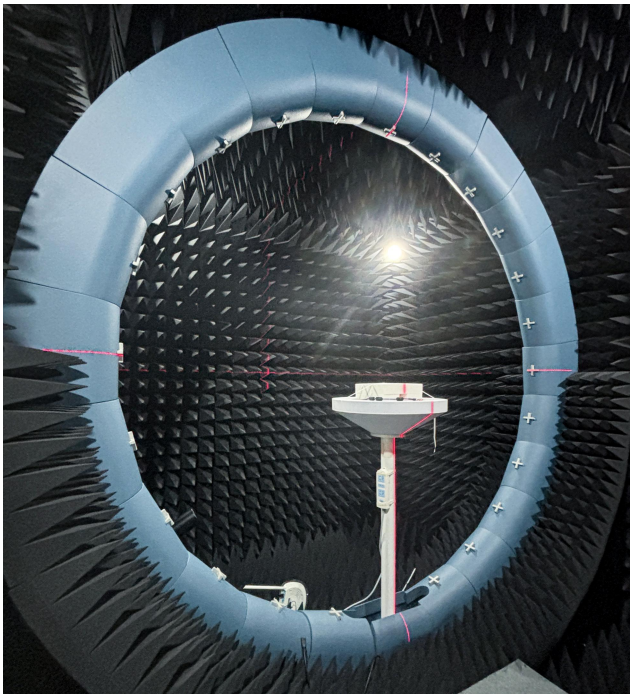
R&S/CMW500 Comprehensive Tester

R&S/SMBV100B Signal Generator



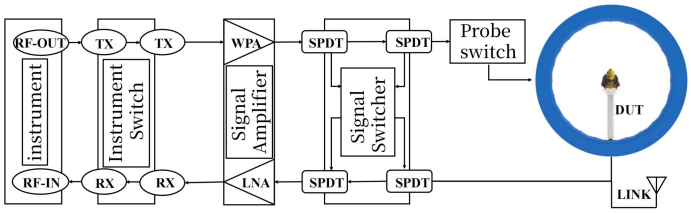

| DT-3500 Datasheet | |
|---|---|
| **Specification:** | **Description** |
| Test Frequency | 400MHz-8.5GHz |
| System Size | L*W*H=4*3.5*3.5m |
| Number of Probes | 23 (Probe) + 1 (link) |
| Interval Angle | 15º |
| Sampling Diameter | 2200mm |
| Carring Capacity | ≦40kg |

| Testing Capability | Description |
|---|---|
| **Active measurement** | **Capability :** TRP、TIS、EIRP、EIS,. etc<br>**Mode :** 2G/3G/4G/5G、Wi-Fi b/g/n/a/ac/ax、BT、NB-IOT、Cat-M (eMTC)、GPS/BEIDOU/GLONASS、ZigBee、LoRa(Non-Signaling),.etc |
| **Pasive measurement** | **Test category :** Gain、Efficiency、2D pattern、3D pattern、Pattern roundness、Axial Ratio, ECC,Phase center,. etc<br>**Polarization :** Circular polarization, linear polarization, elliptical polarization |

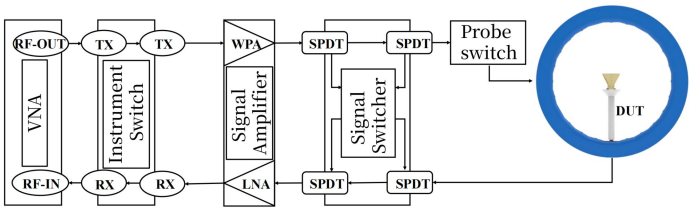


## RF Link diaram of multi probe spherical near-field testing system

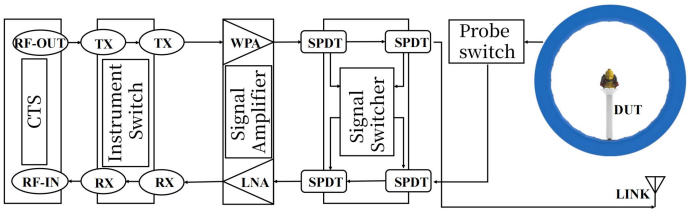
### RF Link Overview



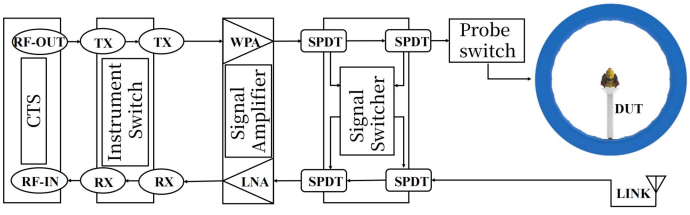

### RF Link of Passive measurement




### RF Link Overview

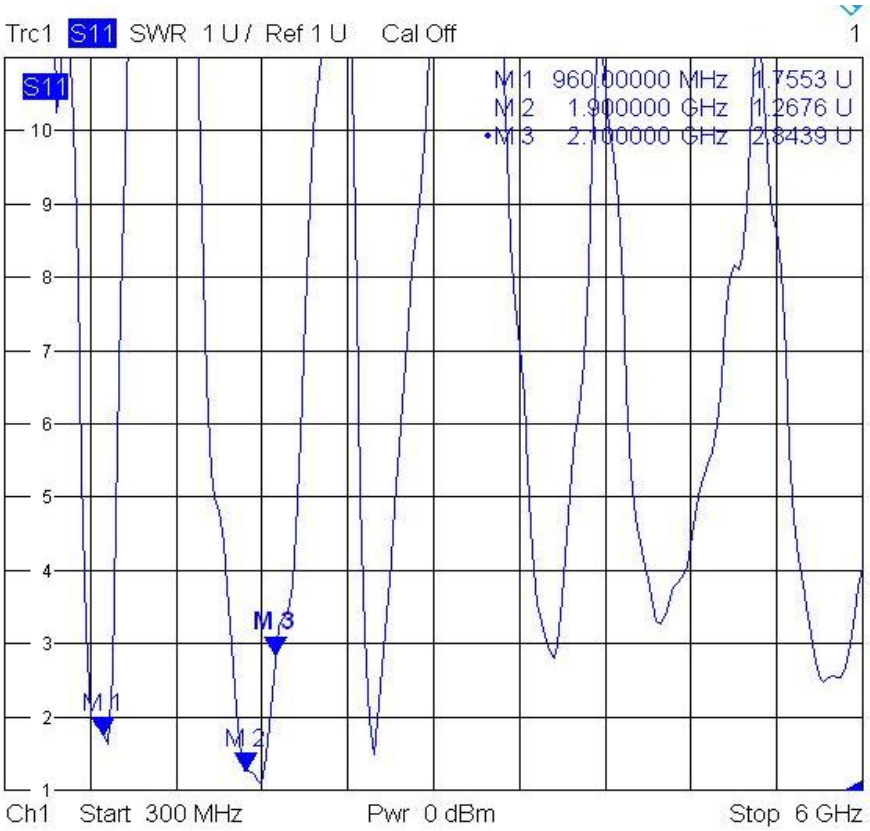



### RF Link of Passive measurement

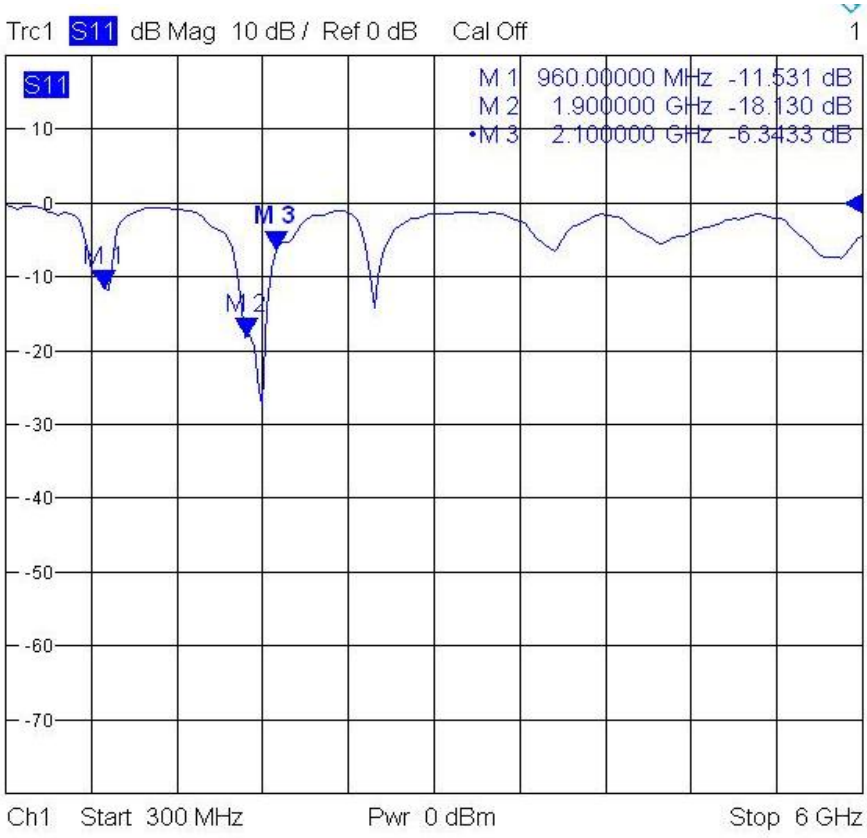


## 6. Performance Data

### 6.1 VSWR

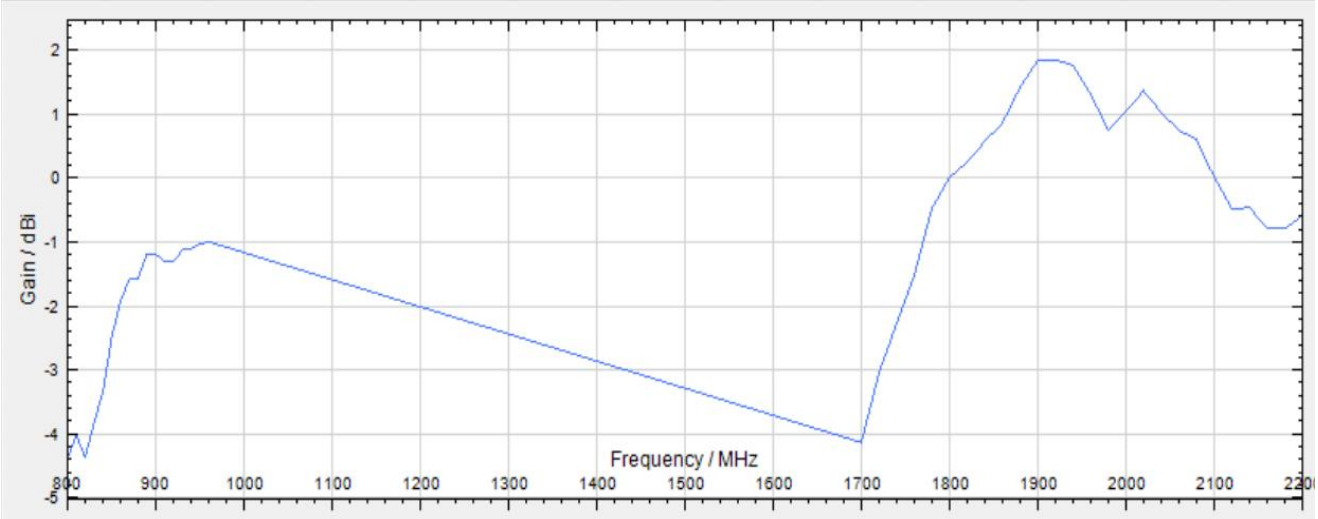



### 6.2 Return Loss

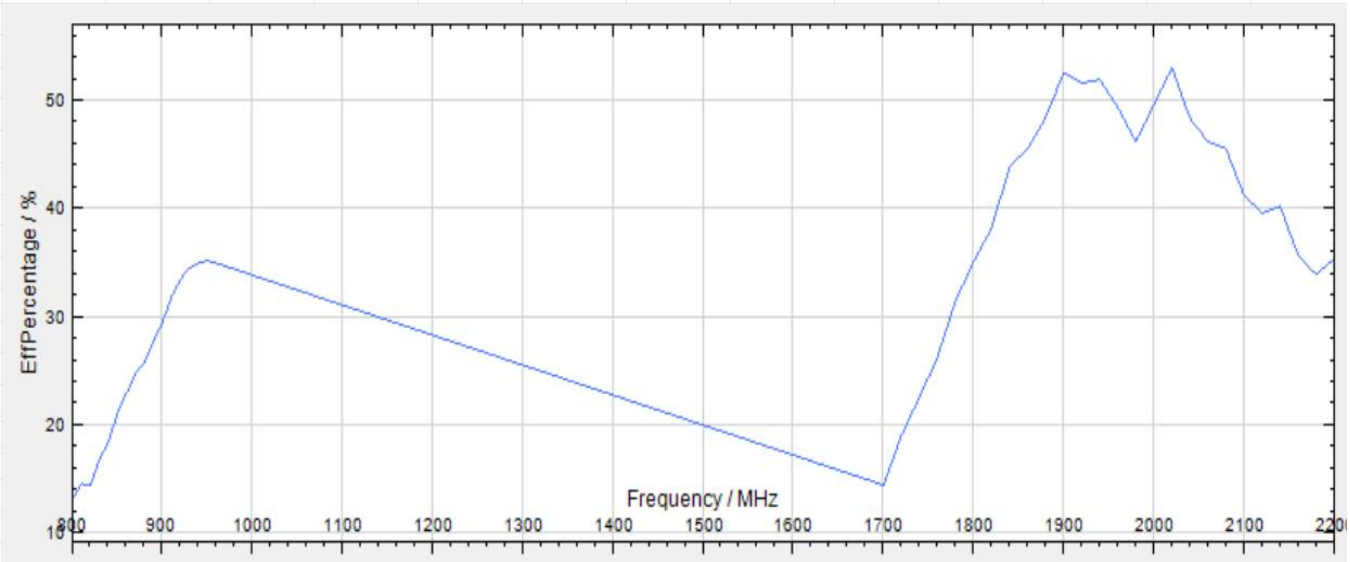


## 6. Performance Data

### 6.3 Gain




### 6.4 Efficiency

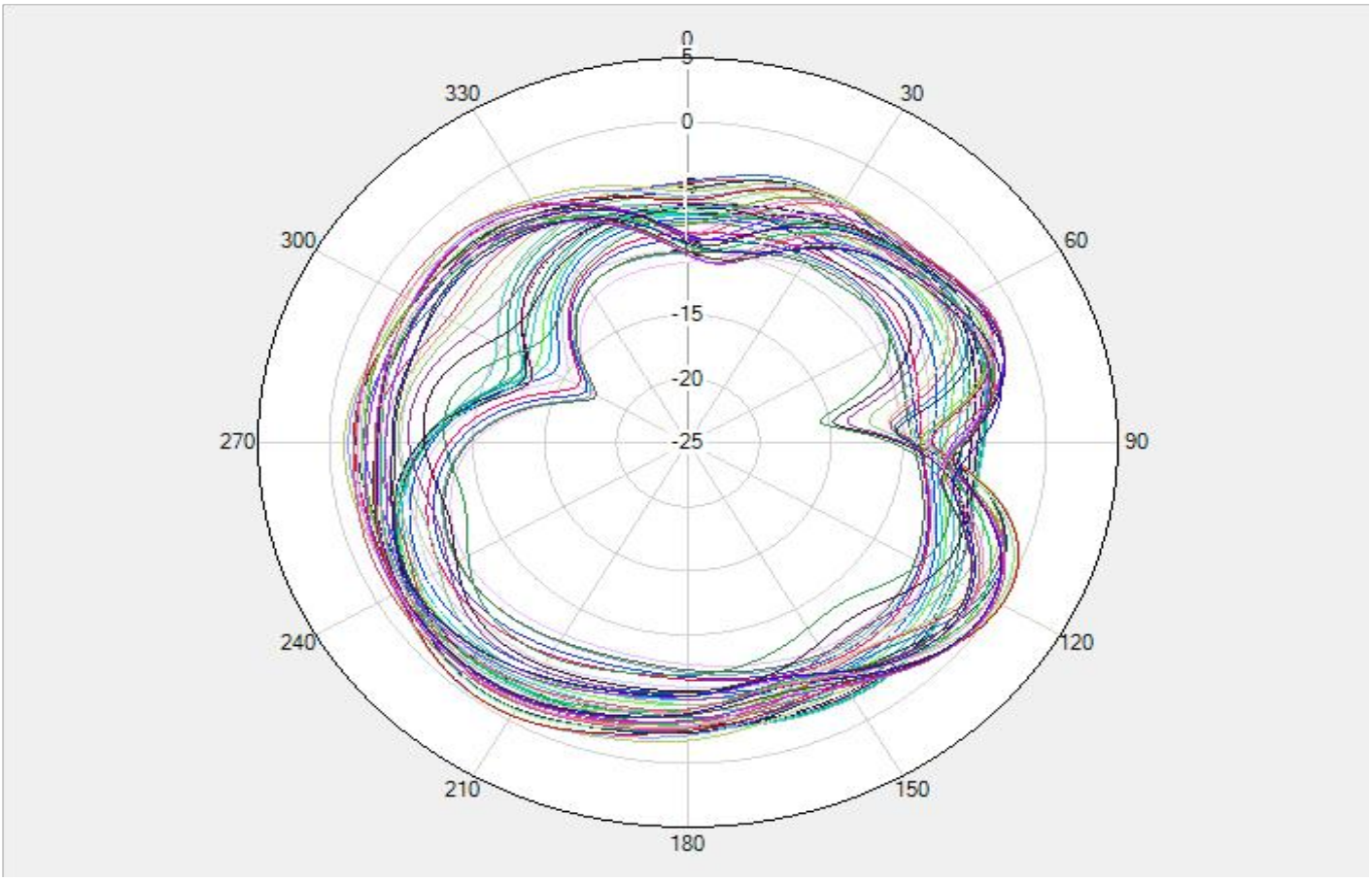



### 6.5 Gain and Efficiency

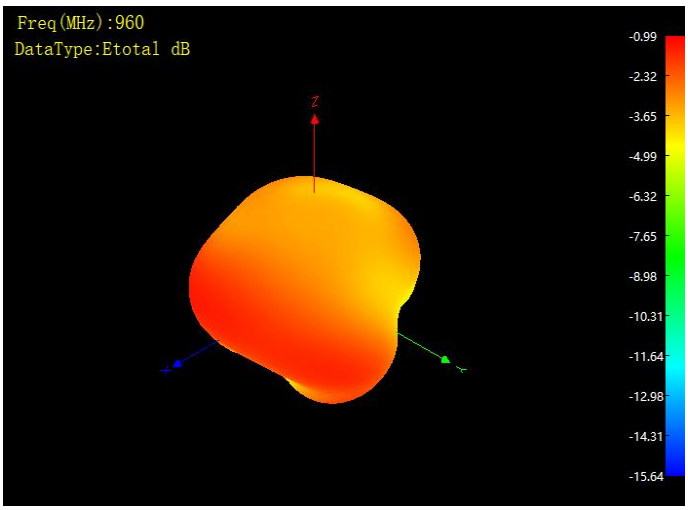
| Frequency (MHz) | 820-960 | 1700-2100 | 2100-2200 |
|---|---|---|---|
| Gain (dBi) | -0.98 | -1.85 | 0.03 |
| Efficiency (%) | 34.99 | 52.60 | 41.30 |

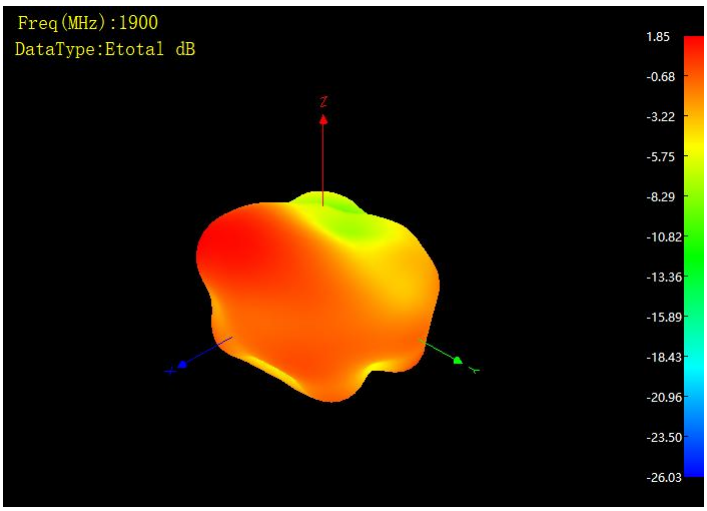
# 7. Radiation Patterns

## 7.1 2 D Radiation Patterns

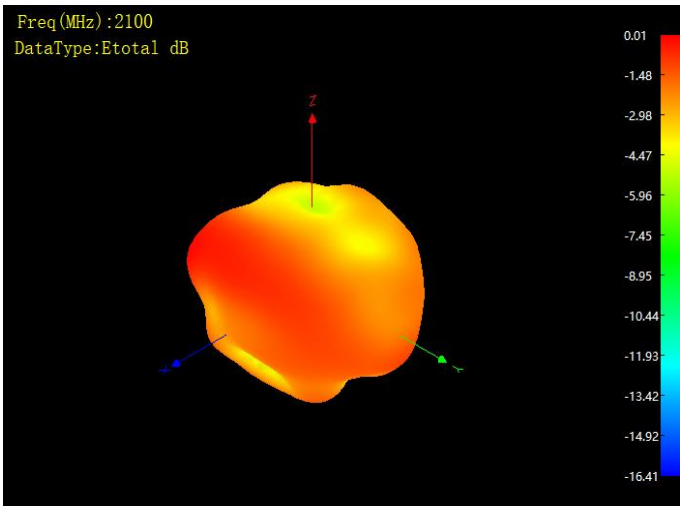


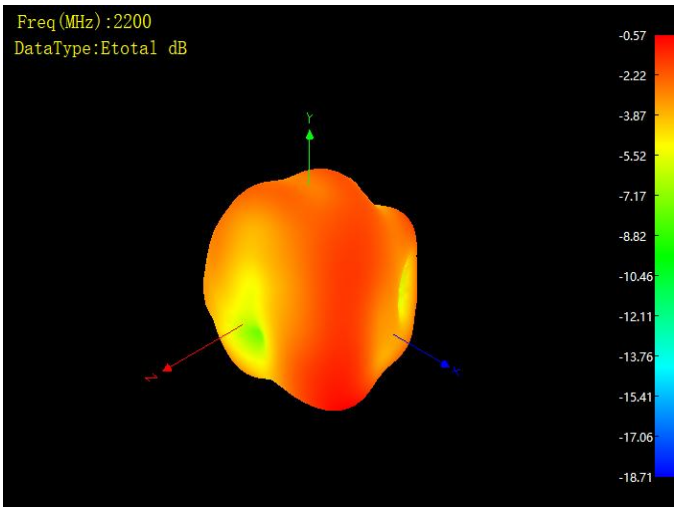
## 7.2 3D Radiation Patterns—960MHz、1900MHz




## 7.2 3D Radiation Patterns—2100、2200MHz



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