



ANTENNA DATASHEET

4G LTE Rubber Antenna

Model No:
BW4GJWX195-13KJ

Description:
4G Rubber Antenna with SMA Male Connector

Features:
700-2700MHz Full Band
SMA Male connector
Foldable

Structure: 360° Omnidirectional Radiation
Connector Type : SMA Male (Customizable)
Dimension:195mm x 13mm

RoHS & REACH Complaint



CONTENTS

1.	Description	3
2.	Specifications	4
3.	Product Picture	5
4.	Mechanical Drawing	6
5.	Test Equipment	7-8
6.	Performance Data	9-10
	6.1 VSWR	9
	6.2 Return Loss	9
	6.3 Gain	10
	6.4 Efficiency	10
	6.5 Gain &Efficiency	10
7.	Radiation Patterns	11-12
	7.1 2D Radiation Patterns	11
	7.2 3D Radiation Patterns	12



BW4GJWX195-13KJ

Part Number Description

BW	Company	Bat Wireless
4G	Frequency	4G LTE
J	Name	Rubber Antenna
W	Type	External
X	Constant	X
195-13	Approximate Dimensions	195-13mm
K	Feature	Foldable
J	Connector	SMA Male

1. Description

Bat Wireless BW4GJWX195-13KJ is a high-performance omnidirectional antenna specifically optimised for wireless communication devices such as 4G LTE (Cat1/Cat 4), NB-IoT, and LoRa. It features a high-quality plastic housing, is foldable, and offers excellent signal reception and transmission capabilities, providing stable and reliable support for 4G network connections. Its compact and lightweight rod-shaped design makes it easy to install and transport.

Classic application scenarios:

- Industrial IOT: DTU/RTU, PLC wireless communication
- Smart Cities: Smart street lights, manhole cover monitoring
- Vehicle Terminals: 4G vehicle T-Box, logistics tracking
- Security Monitoring: 4G cameras, remote alarm systems
- Mobile Devices: External antennas for routers

Bat Wireless provides customized services to optimize your device, we have a mature R&D team that can respond 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	700-2700	MHz	
Input Impedence	50	Ω	
V.S.W.R	<1.8		
Gain	3	dBi	
Polarization Type	Vertical		
Power Capacity	50	W	
Lightning Protection	-		
DC Voltage	-	V	
Radiator	-		
Mechanical Characteristics			
Dimensions	195 x 13	mm	
Connector Type	SMA Male (Customizable)		
Cable Type	/		
Cable Length	/	mm	
Mount way	SMA Connection		
Color	Black		
Material	ABS		
Weight	16	g	
Environmental Characteristics			
Waterproof Rating	-		
ROHS Compliant	Conform		
Operating Temperature	-45~ +85	$^{\circ}\text{C}$	
Storage Temperature	-45~ +85	$^{\circ}\text{C}$	

*Note: The above data is for reference only. Since the antenna function is relatively sensitive, please inform us for evaluation if there are any changes to the structural components around the main body of the antenna.



3. Product Picture



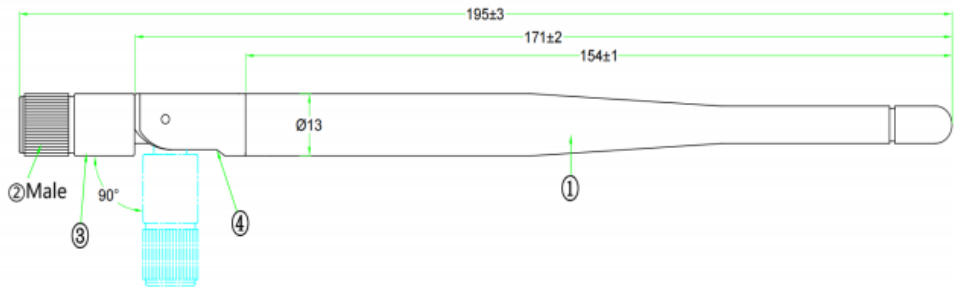
* Product images are for reference only.



4. Mechanical Drawing

PARTS DRAWING		ROHS Compliant		REV	PRODUCT NO.	DATE	NAME	DESCRIPTION

- Requirements:
1. The wire jacket shall be free from cuts or damage.
 2. 100% continuity testing shall be performed, and all products must pass.
 3. 100% full inspection is required, and all products must meet specifications.
 4. Eco-friendly manufacturing processes shall be adopted, and finished products must comply with ROHS requirements.
 5. Unless otherwise specified, general tolerances shall apply.



NO	Code	Name	Description	Qty
5		Wire	RG178 Brown	1
4		Up Base	18*13MM Black	1
3		Down Base	14.5*13MM Black	1
2		SMA	Male Black Titanium Alloy	1
1		Rubber Shell	154*13MM Black	1

Frequency	700-2700MHz
Gain	3DBi
VSWR	<1.8
Polarization	Vertical
Impedance	50Ω
Operating Temperature: -45°C~85°C	
Storage Temperature: -45°C~85°C	

ANGLE PROJECTION		PRODUCT NAME			
		Rubber Antenna-700-2700MHz-SMA Male-L=195MM			
		UNIT	MM	SIZE	1:3
<small>GENERAL TOLERANCE</small> 100-200: ± 3.00 50-100: ± 2.00 25-50: ± 0.20 10-25: ± 0.15 1-10: ± 0.10		PAGE	1 OF 1	FORNMT	A4



5. Test Equipment



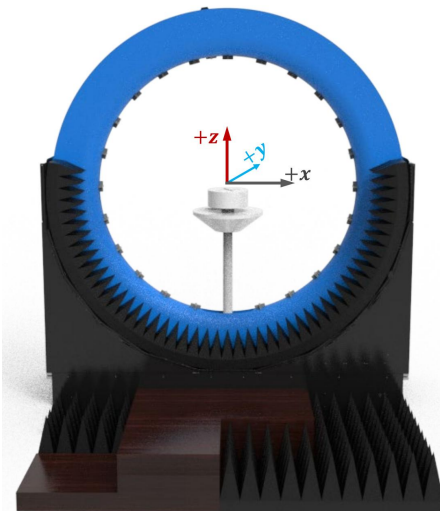
Keysight/E5071C Network Analyzer



R&S/CMW500 Comprehensive test equipment



R&S/SMBV100B Signal Source



DT-3500 Datasheet

Specification:

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	15°
Sampling Diameter	2200mm
Carring Capacity	≤40kg

Testing Capability

Description

Active measurement

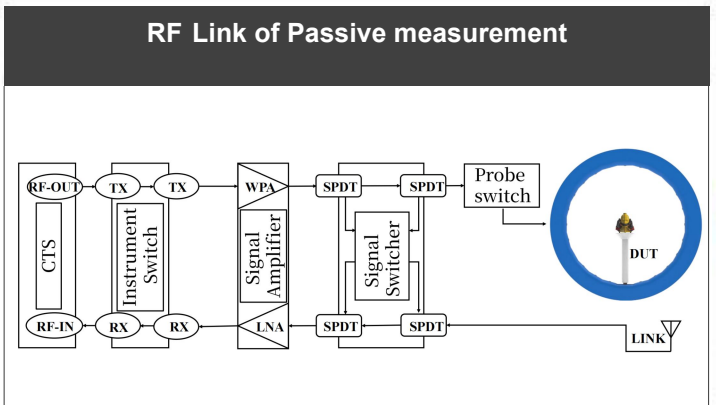
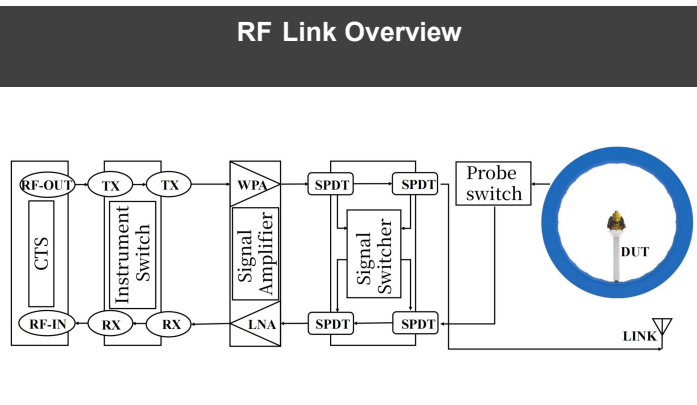
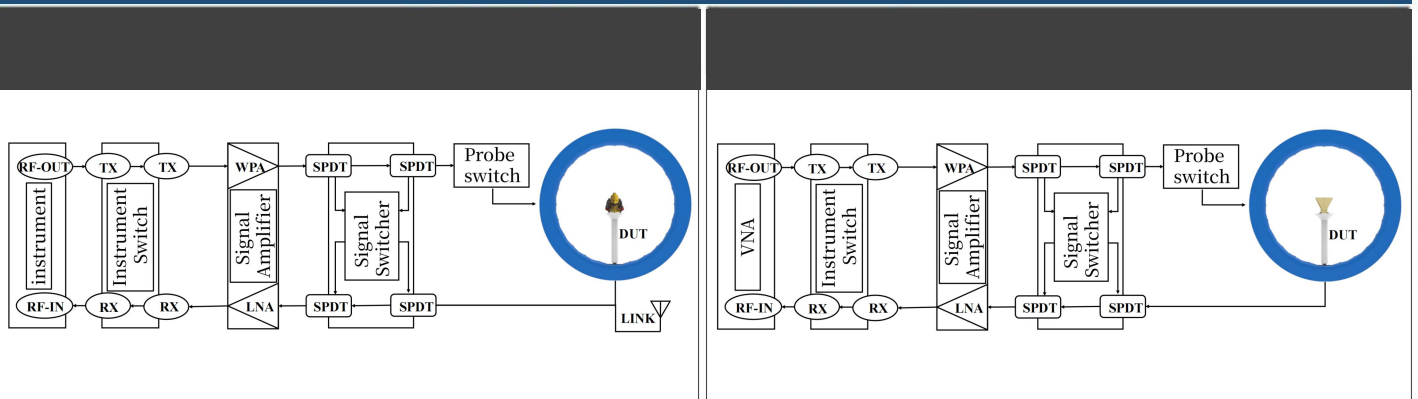
Capability : TRP、TIS、EIRP、EIS,. etc
Mode : 2G/3G/4G/5G、Wi-Fi b/g/n/a/ac/ax、BT、NB-IOT、Cat-M (eMTC)、GPS/BEIDOU/GLONASS、ZigBee、LoRa(Non-Signaling),.etc

Passive measurement

Test category : Gain、Efficiency、2D pattern、3D pattern、Pattern roundness、Axial Ratio、ECC,Phase center,. etc
Polarization : Circular polarization, linear polarization, elliptical polarization



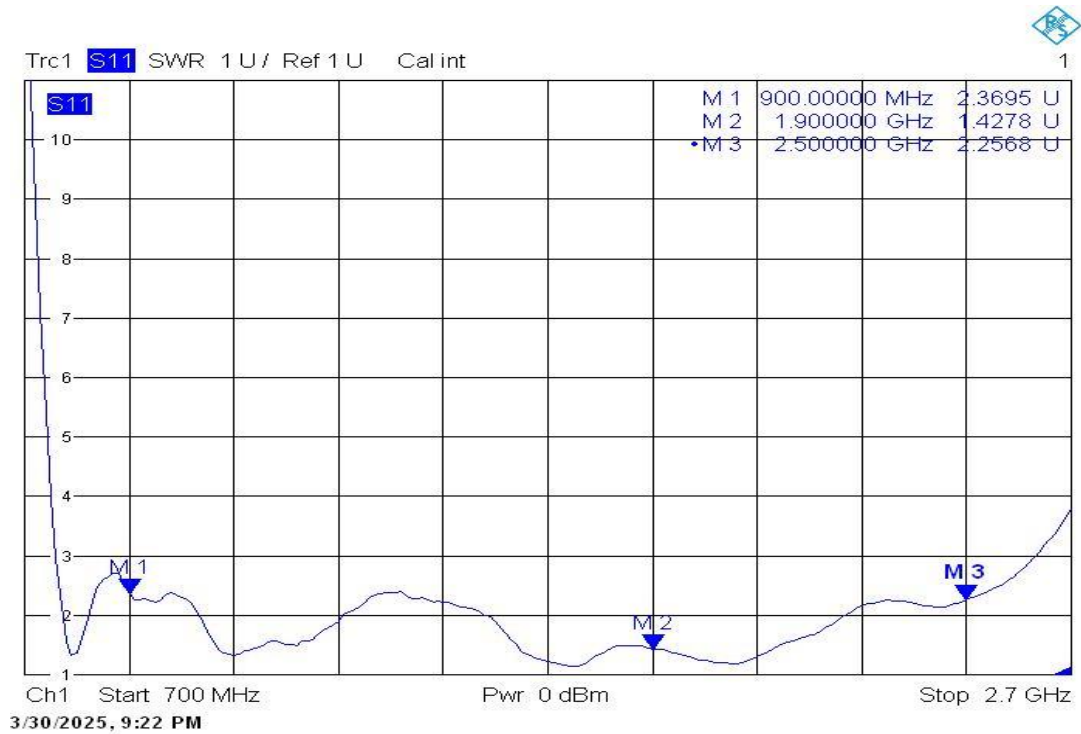
RF Link diaram of multi probe spherical near-field testing system



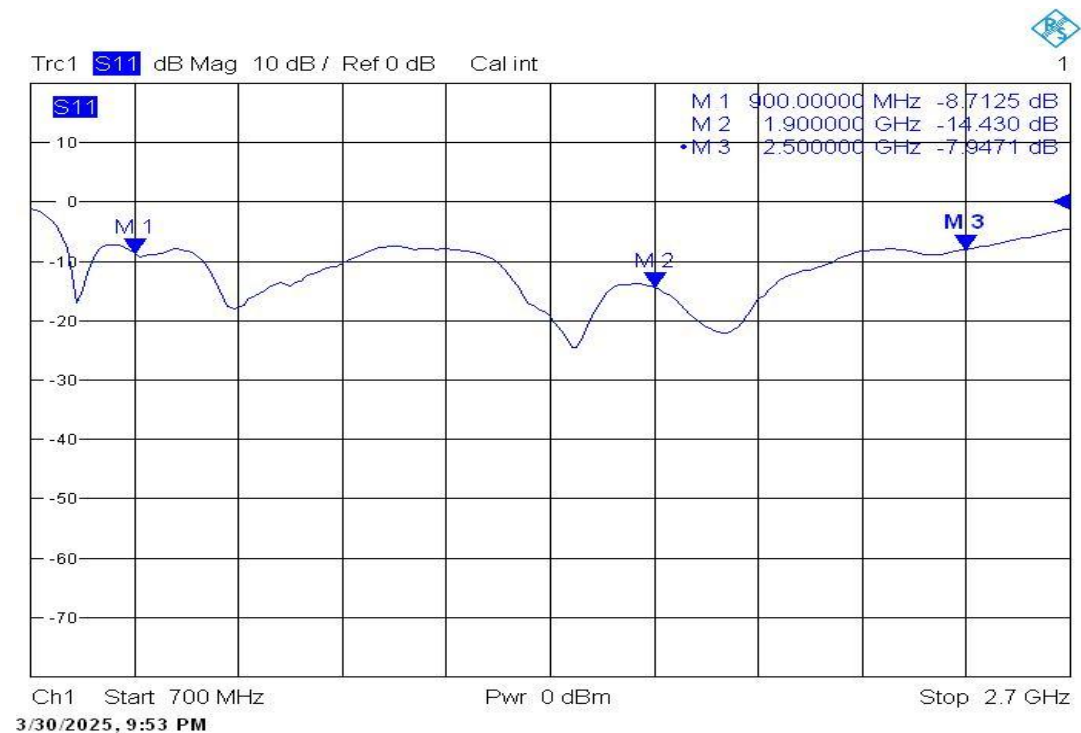


6. Performance Data

6.1 VSWR



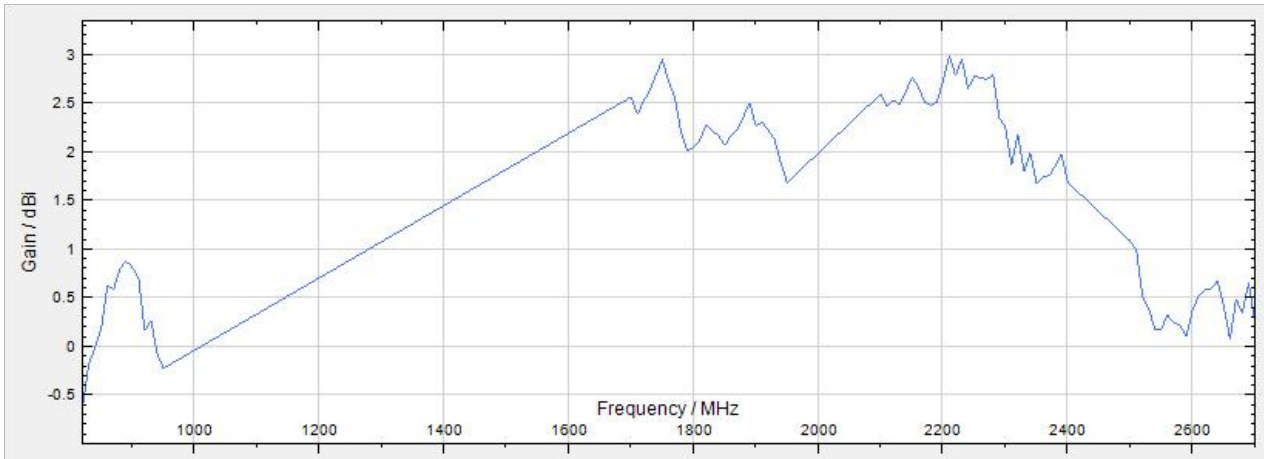
6.2 Return Loss



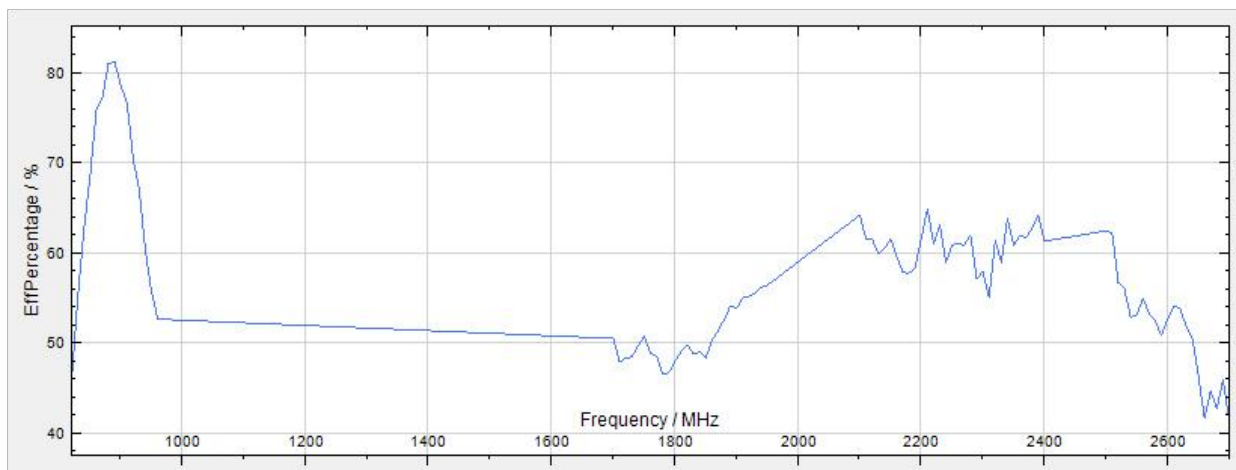


6. Performance Data

6.3 Gain



6.4 Efficiency



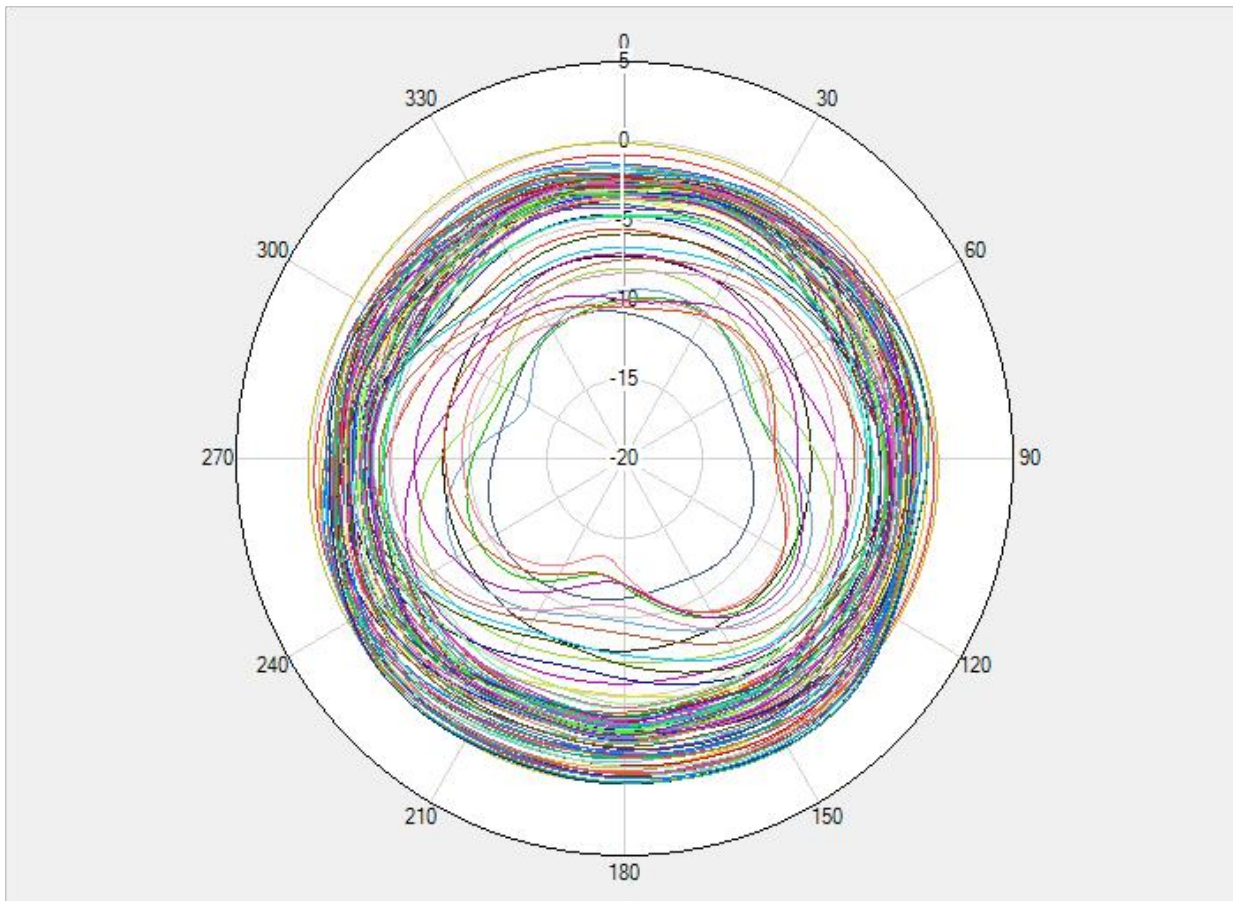
6.5 Antenna Gain & Efficiency

频率 / Frequency (MHz)	820-960	1700-1950	2100-2400	2500-2700
最大增益 / Gain (dBi)	0.88	2.95	2.99	1.09
效率 / Efficiency (%)	81.28	56.49	65.01	62.52



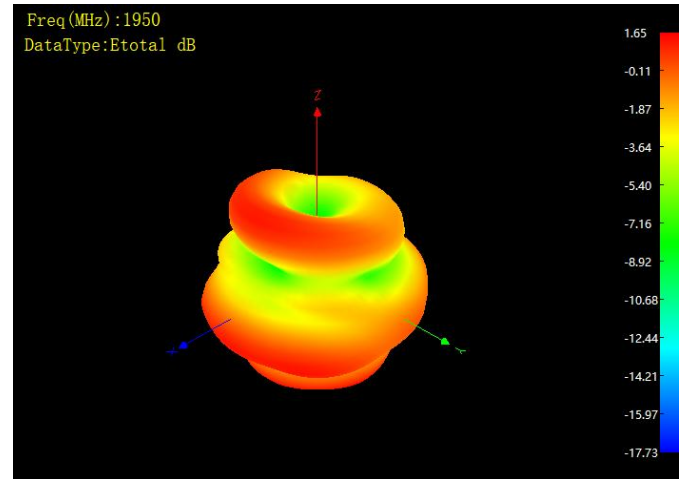
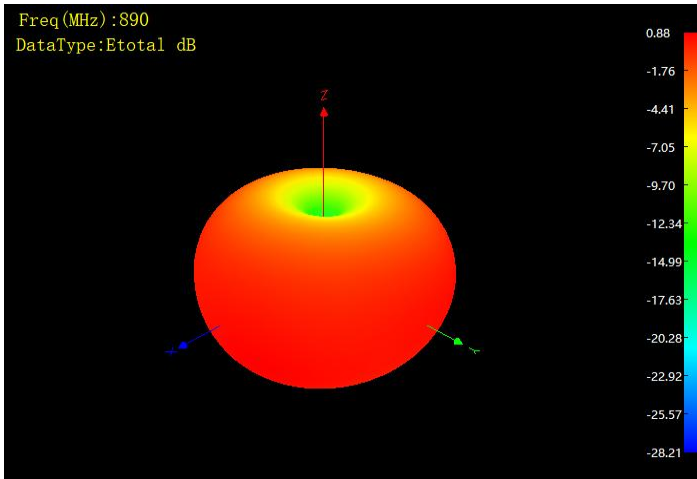
7. Radiation Patterns

7.1 2D Radiation Patterns

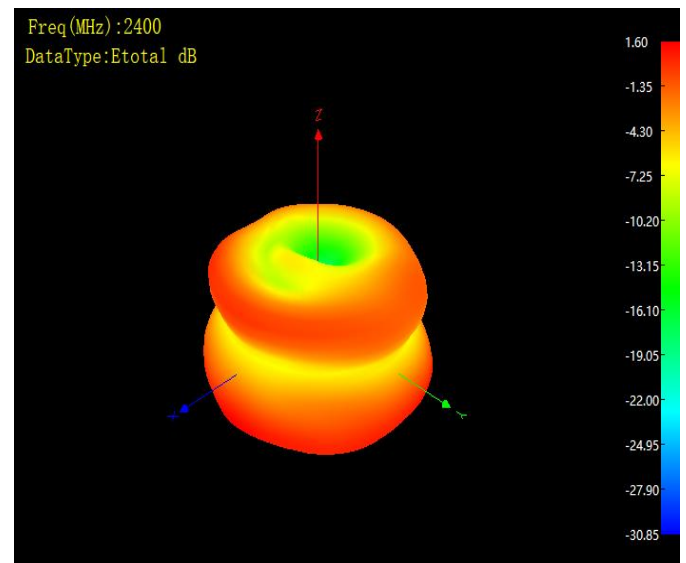
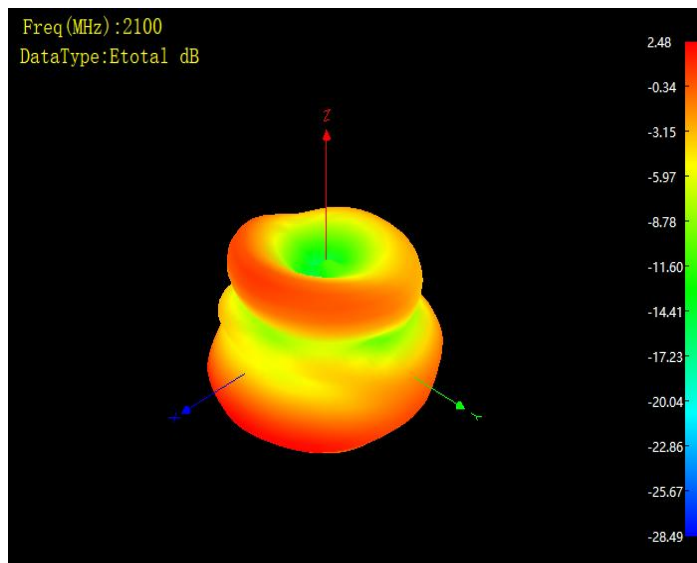




7.2 3D Radiation Patterns—890MHz、1950MHz

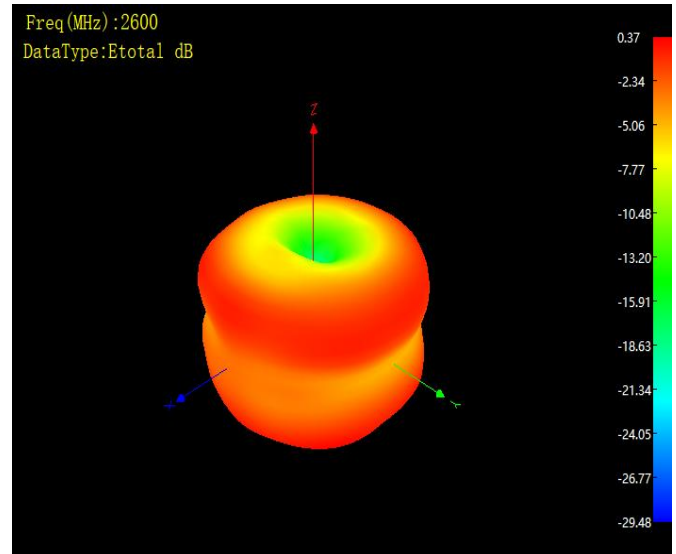
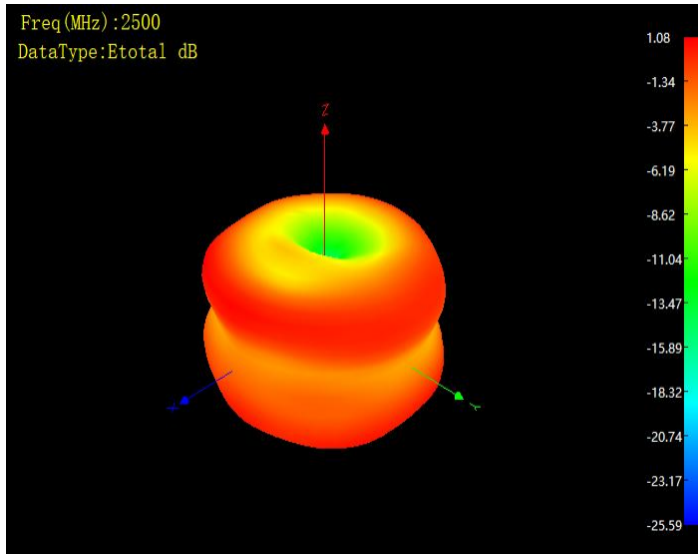


7.3 3D Radiation Patterns—2100MHz、2400MHz

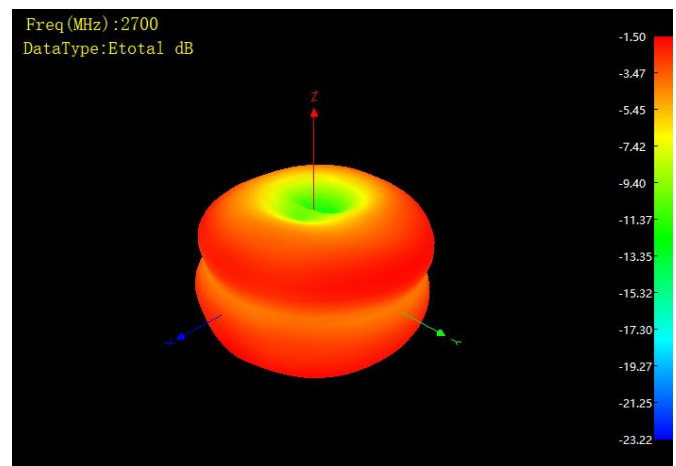
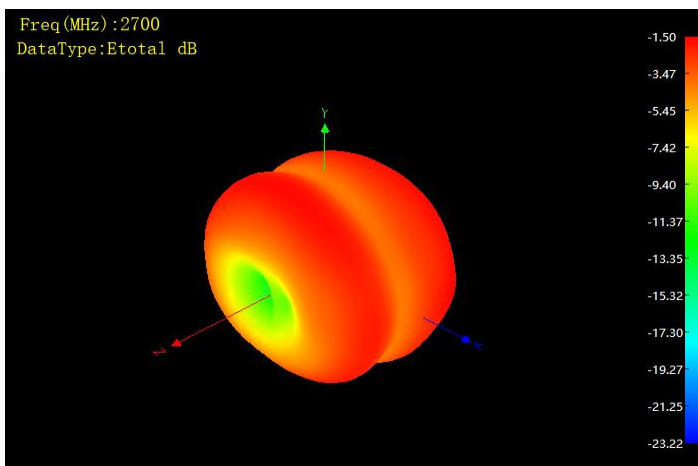




7.4 3D Radiation Patterns—2500MHz、 2600MHz



7.5 3D Radiation Patterns—2700MHz





DECLARATION:

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