

Antenna Datasheet

433Mhz Rubber Antenna

Model:

BW433JWX108-7KJ

Description:

433Mhz Rubber Antenna with SMA Male Jack

Features:

433Mhz Frequency Range

SMA Male Jack (Inner Thread, Inner Pin) Connector

Structure: Foldable

360° Omnidirectional Radiation

Dimensions: 108mm x 7mm

Compliant with RoHS & REACH Regulations



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BW433JWX108-7KJ

Part Number Explanation

BW	Company	Bat Wireless
433	Frequency	433Mhz
J	Name	Rubber Antenna
W	Type	Enternal
X	Constant	X
108-7	Dimensions	108-7mm
K	Feature	Foldable
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 **BW433JWX108-7KJ** 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 Straight 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.

Typical Application Scenarios:

Industry 4.0: Real-time monitoring of CNC machine tools

Smart Medical: Surgical robot control

Intelligent Transportation: Monitoring of rail catenary

Energy IoT: Substation inspection robots

Bat Wireless provides customized services to optimize your equipment. 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	433	MHz	
Input Impedence	50	Ω	
V.S.W.R	<1.7		
Gain	-3	dBi	
Polarization Type	Vertical		
Power Capacity	50	W	
Lightning Protection	-		
DC Voltage	-	V	
Radiator	-		
Mechanical Characteristics			
Dimensions	108 x 7	mm	
Connector Type	SMA-J Male (Customizable)		
Cable Type	-		
Cable Length	-	mm	
Mount way	Screw-on		
Color	Black		
Meterial	ABS		
Weight	7.38	g	
Environmental Characteristics			
Waterproof Rating	-		
ROHS Compliant	Compliant		
Operating Temperature	-45~ +85	$^{\circ}\text{C}$	
Storage Temperature	-45~ +85	$^{\circ}\text{C}$	

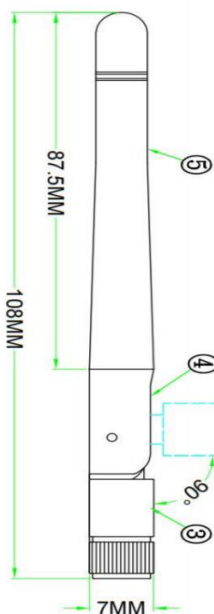
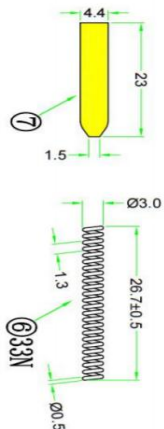
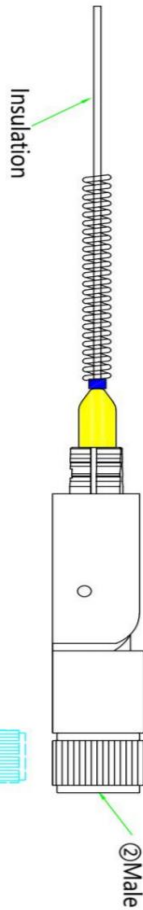
3. Product Picture



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
7		Copper Tube	23*4.4*1.5MM Brass	1
6		Spring	26.7*3*0.5MM Brass 33N	1
5		Rubber Shell	87.5*9.4MM Black	1
4		Up Base	Black	1
3		Down Base	Black	1
2		SMA	Male Black	1
1		Wire	RG178 Double-5n Plated Wire Brown L=95MM	1

Frequency		433MHz	ANGLE PROJECTION	
Gain		-3DBI		
VSWR		<1.7		
Polarization		Vertical	PRODUCT NAME Rubber Antenna-433MHz-SMA Male-L=108MM	
Impedance		50Ω	UNIT	MM
Operating Temperature: -45°C~85°C			PAGE	1 OF 1
Storage Temperature: -45°C~85°C			ENDPART	A4
GENERAL TOLERANCE		100-200: ±3.00		
		50-100: ±2.00		
		25-50: ±0.20		
		10-25: ±0.15		
		1-10: ±0.10		

5. Test Equipment



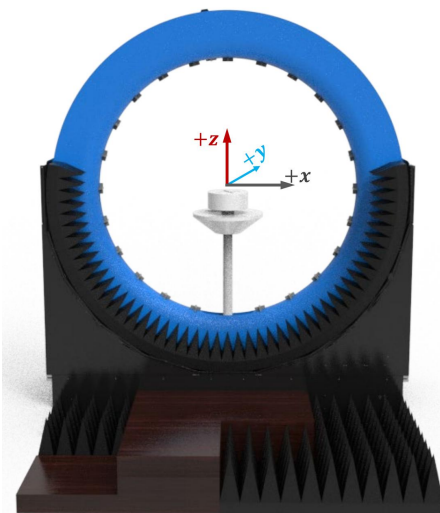
Keysight/E5071C Network Analyzer



R&S/CMW500 Comprehensive Tester



R&S/SMBV100B Signal Generator



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

RF Link Overview



RF Link of Passive measurement



RF Link Overview

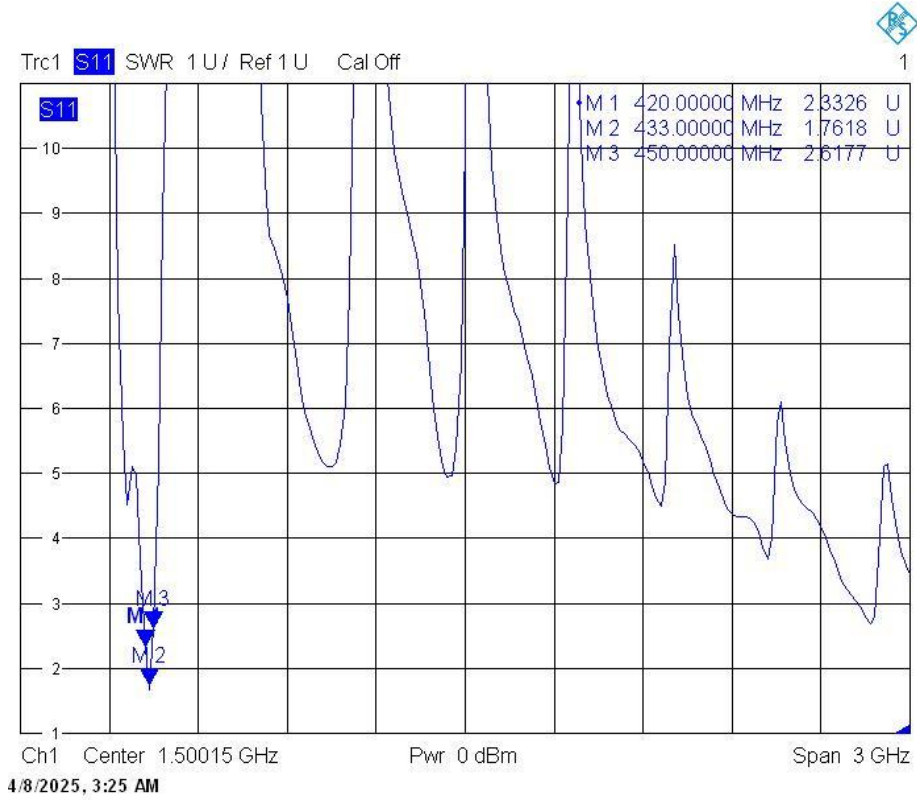


RF Link of Passive measurement

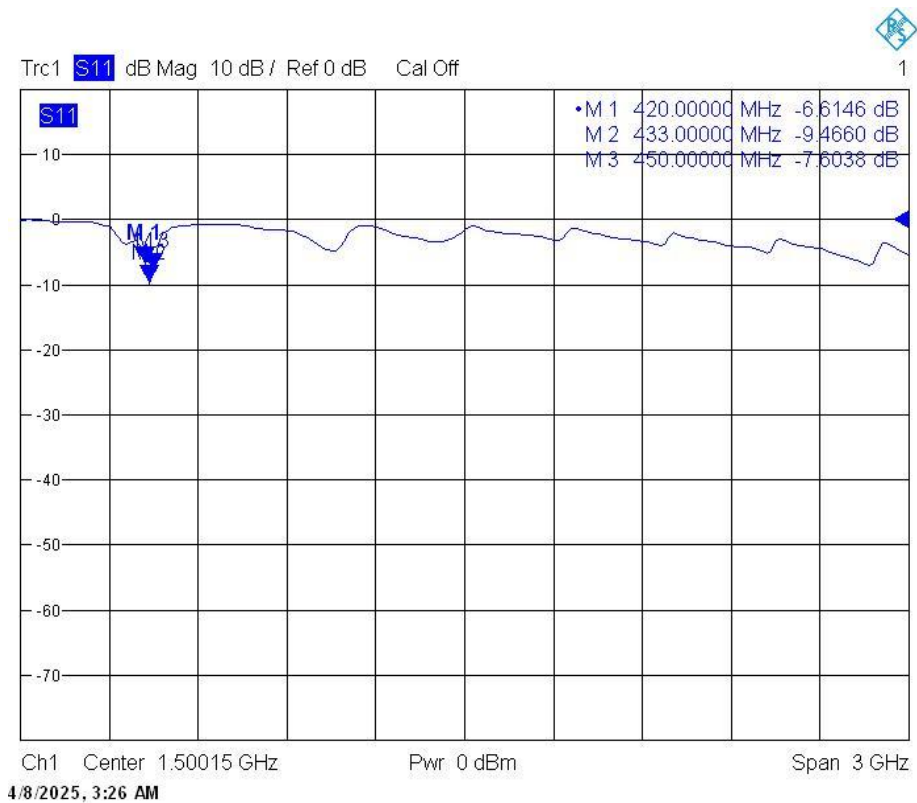


6. Performance Data

6.1 VSWR

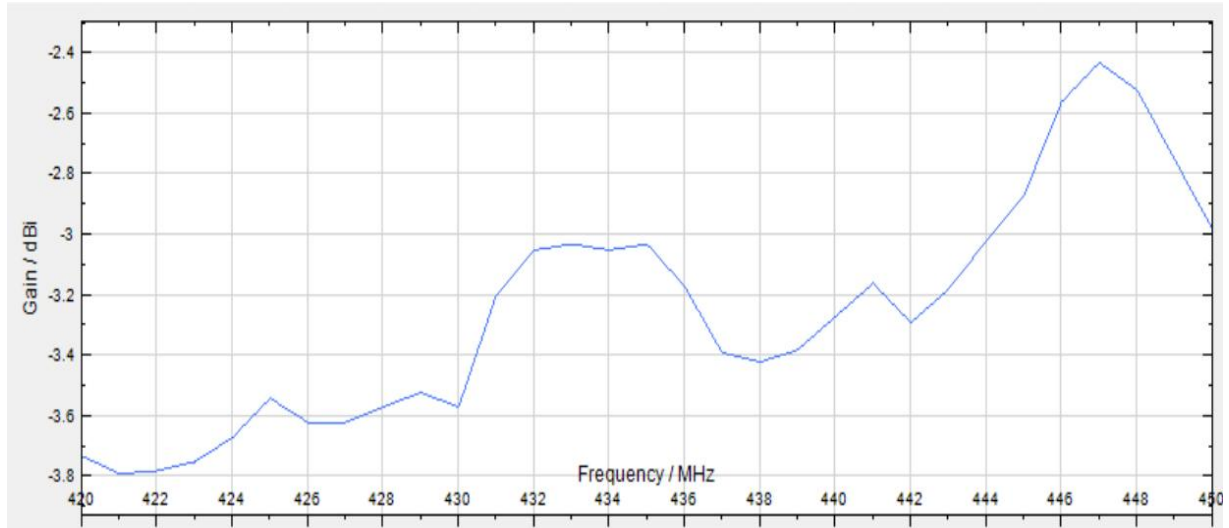


6.2 Return Loss

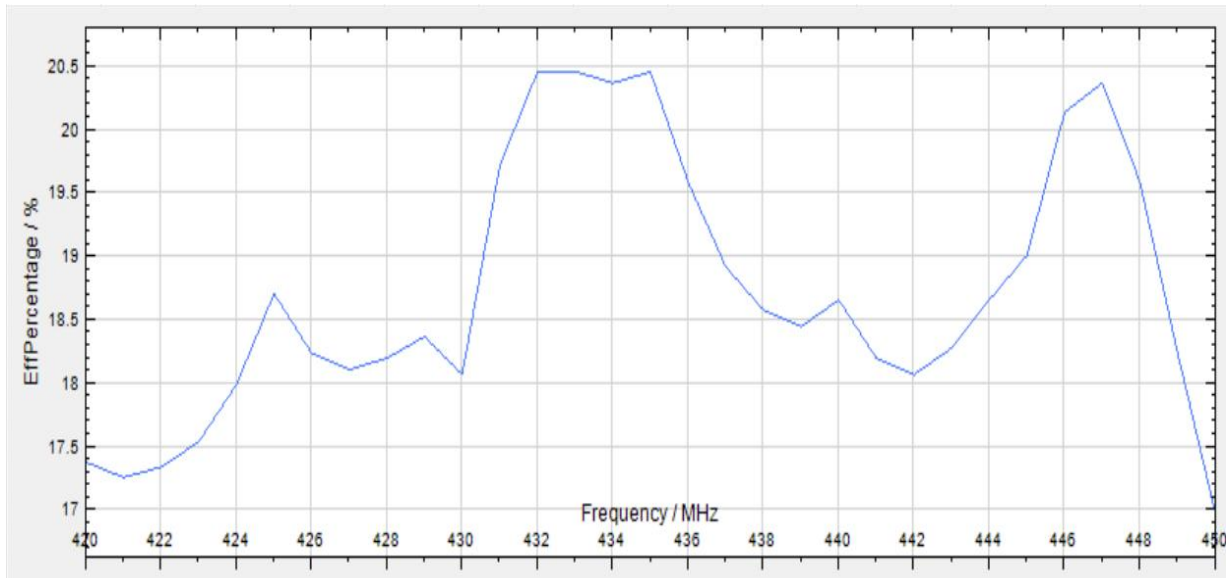


6. Performance Data

6.3 Gain



6.4 Efficiency



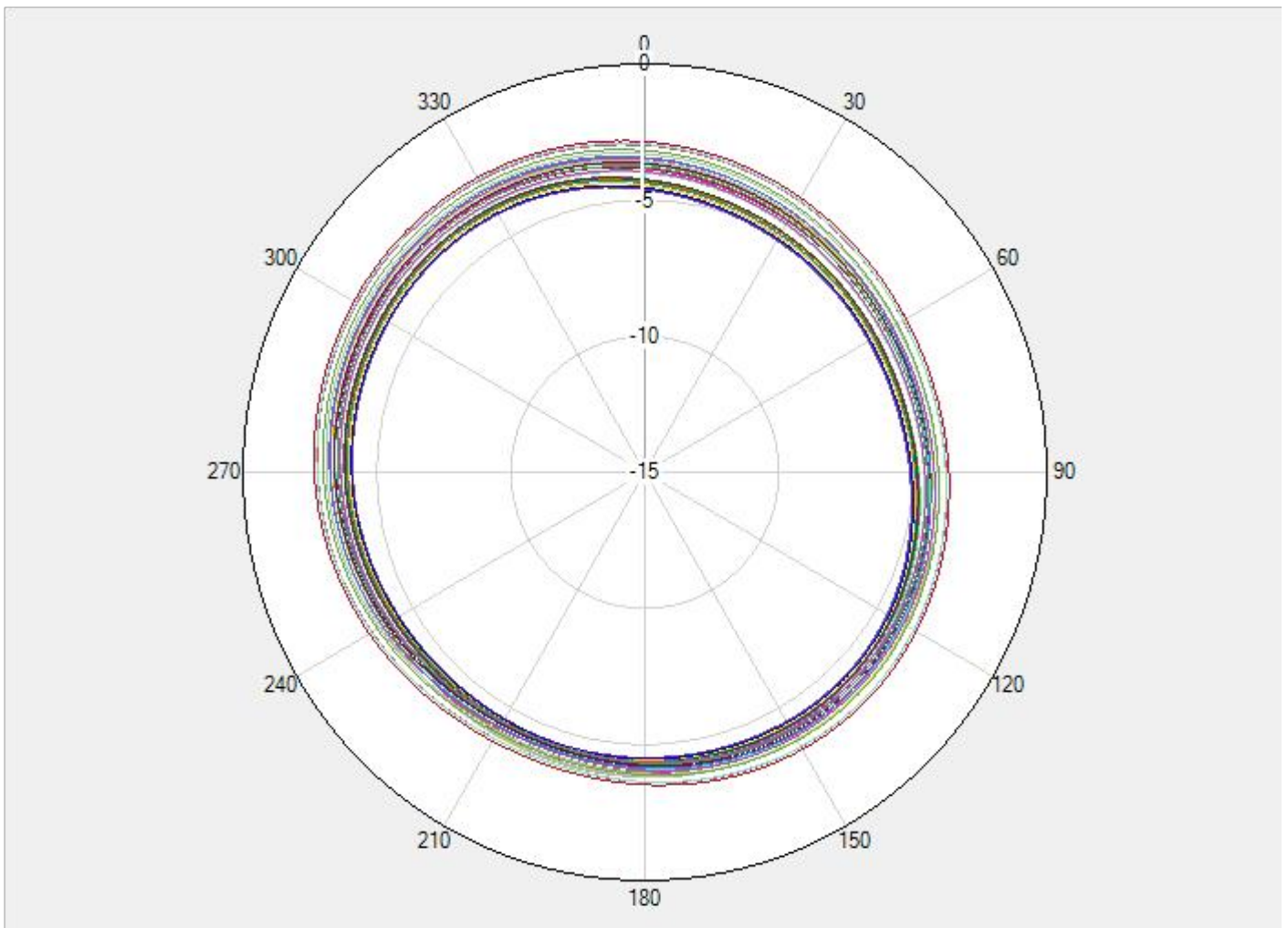
6.5 Gain and Efficiency

Frequency (MHz)	420	433	450
Gain (dBi)	-3.73	-3.03	-2.98
Efficiency (%)	17.38	20.46	16.98



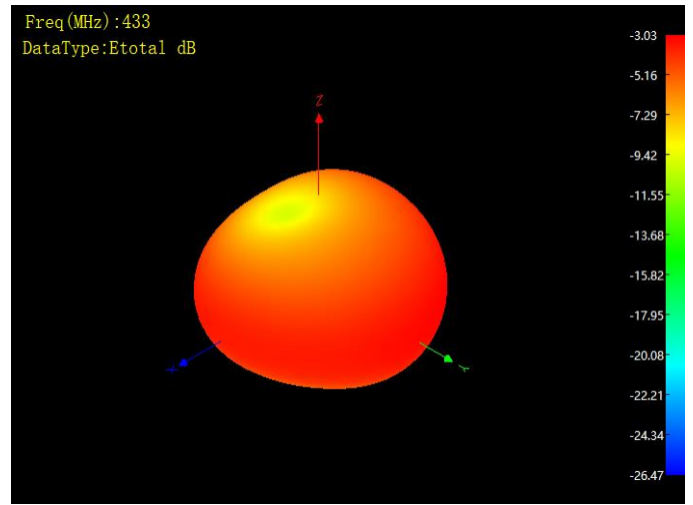
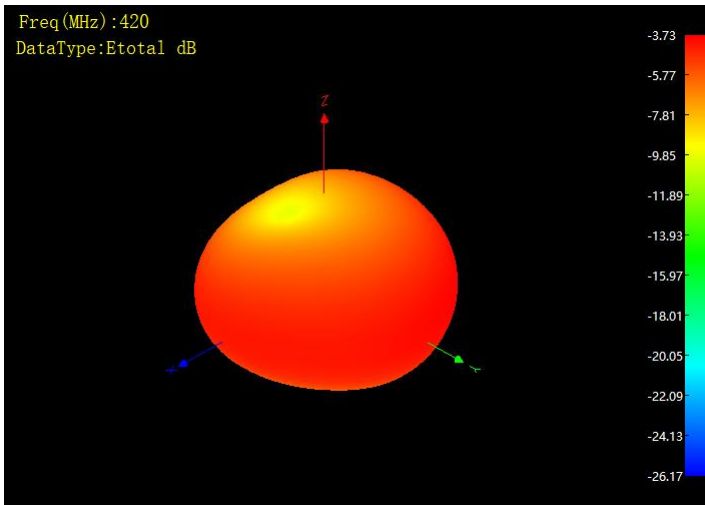
7. Radiation Patterns

7.1 2 D Radiation Patterns

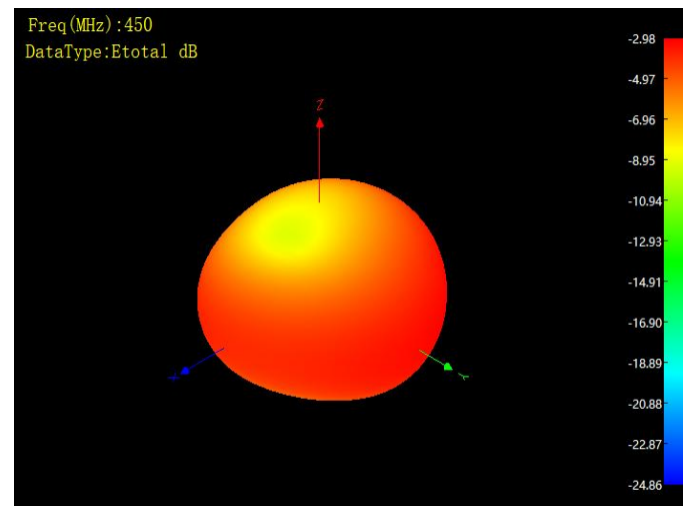
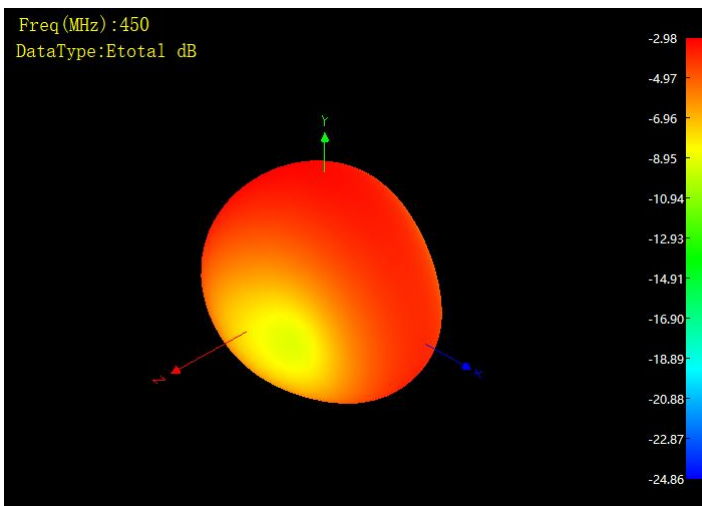




7.2 3D Radiation Patterns—420MHz、433Mhz



7.2 3D Radiation Patterns—450MHz





DECLARATION:

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