



Antenna Specification Document Antenna Datasheet

Dual-Band Adhesive Rod Antenna

model :

BW258JWX157-14KJ

description :

Characteristics of the dual-frequency adhesive rod antenna SMA internal thread and hole interface:

Frequency range: 2400–2500 MHz; Frequency range: 5150–5850 MHz; SMA internal threaded port

Structure: Foldable, 360° omnidirectional radiation
Dimensions: 157 mm x 12.8 mm;
compliant with RoHS and REACH regulations



Catalogue

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BW258JWX157-14KJ

Part Number Description		
BW	Company / Company	Bat Wireless / Bat Wireless
258	Frequency Band / Frequency	2400-2500MHz, 51500-5850MHz
J	Name / Name	Rubber rod / Rubber antenna
W	Type / Type	External / External
X	Constant / Constant	X / X
157-14	Approximate dimensions	157-14mm / 157-14mm
K	Feature	Foldable
J	Interface/Connector	SMA internal threaded hole

1. Product Description/ Description

The Bat Wireless BW258JWX157-14KJ is a high-performance omnidirectional antenna supporting both 2.4GHz and 5.8GHz bands, ideal for applications such as Wi-Fi, drone video transmission, and industrial control. Featuring a premium plastic housing with foldable design, it delivers exceptional signal reception and transmission capabilities, providing stable and reliable connectivity support. Its compact, lightweight stick-shaped design facilitates easy installation and portability.

Common application scenarios:

- Smart Home/Wi-Fi Extension: Enhanced Wireless Network Coverage
- Security Monitoring: Ensures stable signal transmission for outdoor cameras
- Industrial Internet of Things (IIoT): Wireless data interaction between devices
- Drone Communication: Provides stable remote control and high-definition video transmission

Bat Wireless offers customized services to optimize your devices. With a seasoned R&D team, we can respond swiftly to meet your requirements. For any inquiries, please contact our sales or FAE team.



2. Product Specifications/Specification

Parameters / Parameters	Typical value / Typ.	Unit / Units	Notes
Electrical Characteristics			
Type /Antenna Type	Rubber Antenna / Rubber Antenna		
Frequency / Frequency Range	2400-2500, 5150-5850	MHz	
Input Impedance / Input Impedance	50	Ω	
Standing wave ratio /V.S.W.R	3		
Gain / Gain	2 21	dBi	
Polarization Type	Vertical / Vertical		
Power Capacity / Power Capacity	50	W	
Lightning Protection / Lightning Protection	-		
Working voltage / DC Voltage	-	V	
Radiator / Radiator	-		
Mechanical Characteristics			
Dimensions / Dimensions	157 x $\varnothing$ 12.8	mm	
Interface Type / Connector Type	SMA internal thread hole / SMA internal threaded hole		
Cable Type / Cable Type	-		
Cable length / Cable Length	-	mm	
Installation method / Mounting method	Twist		
Color / Color	Black		
Material / Material	ABS		
Weight /Weight	-	g	
Environmental Characteristics			
Waterproof Rating	-		
ROHS Standard / ROHS Complaint	Accord with		
Operating Temperature / Operating Temperature	-45~ +85	$^{\circ}\text{C}$	
Storage Temperature / Storage Temperature	-45~ +85	$^{\circ}\text{C}$	



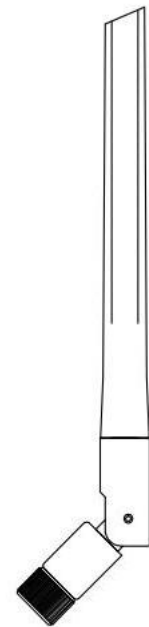
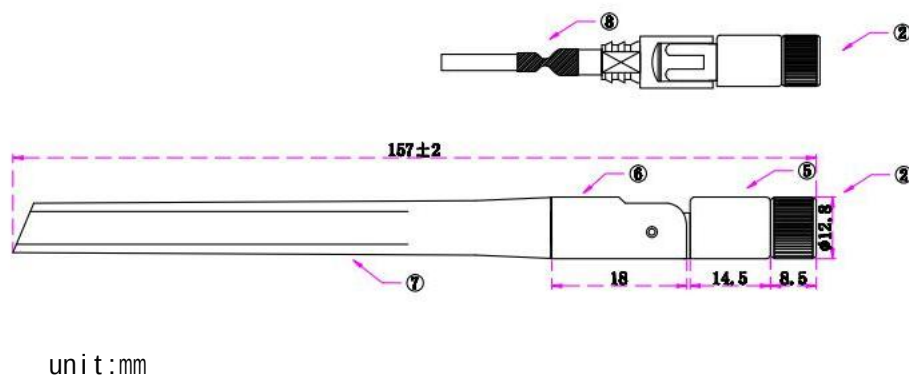
3. Physical Figure/ Dimensions



The image is for reference only; the actual product shall prevail.



4. Dimension Drawing/Mechanical Drawing





5. Test equipment/Test Equipment



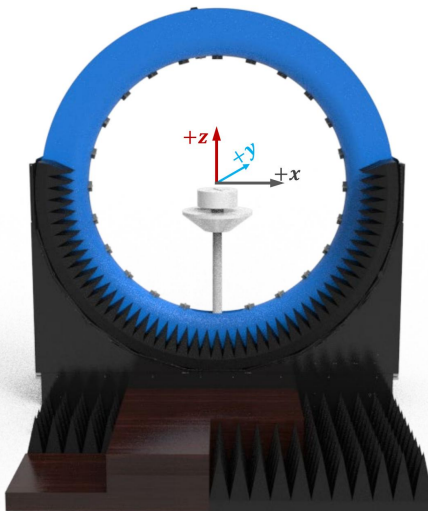
Keysight/E5071C Network Analyzer



R&S/CMW500 Comprehensive tester



R&S/SMBV100B Signal Source



DT-3500 Data Sheet / System Specifications

Specification:	Description
Test Frequency / Test Frequency Range:	400MHz-8.5GHz
System Size / System Dimension:	L*W*H=4*3.5*3.5m
Number of Probes:	23 (Probe) + 1 (link)
Interval Angle / Sampling Clamping Foot:	15°
Sampling Diameter / Sampling Diameter:	2200mm
Carring Capacity / Carrying Capacity:	≤40 kg

Testing Capability / Testing Capacity

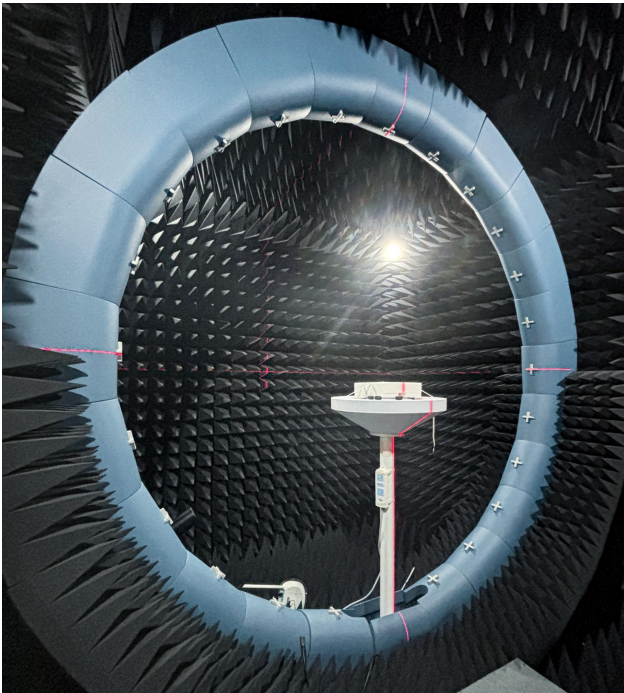
Description/Capability Description

Active measurement Active testing

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

Passive measurement Passive testing

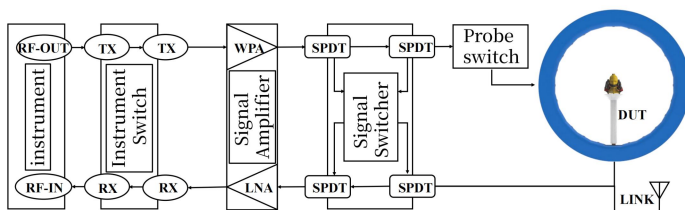
Test category/Type:Gain, Efficiency, 2D pattern, 3D pattern, Pattern roundness, Axial Ratio, ECC, Phase center, etc.
Polarization/Method: Circular polarization, Linear polarization, Elliptical polarization



RF Link Diagram for the Multi-Probe Spherical Near-Field Testing System

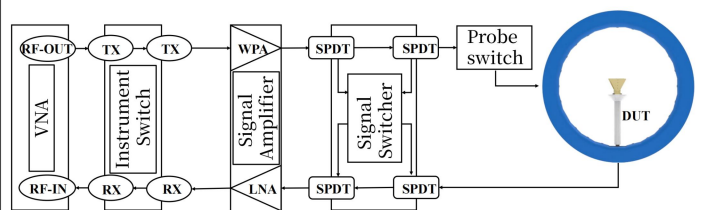
RF Link Overview

Total RF Link Diagram



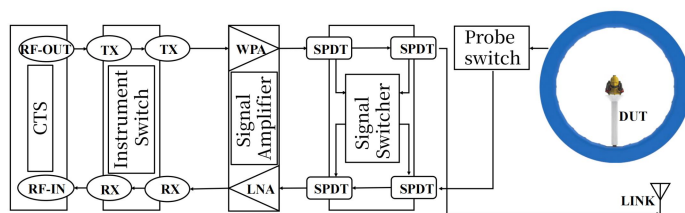
RF Link of Passive measurement

Passive Test Link Diagram



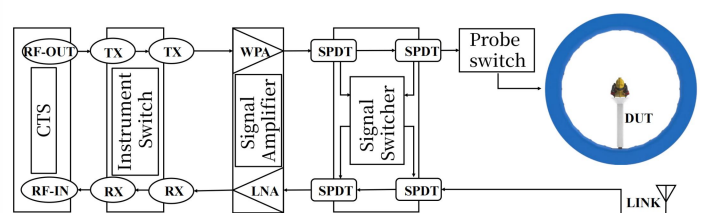
RF Link Overview

Overall RF Link Diagram



RF Link of Passive measurement

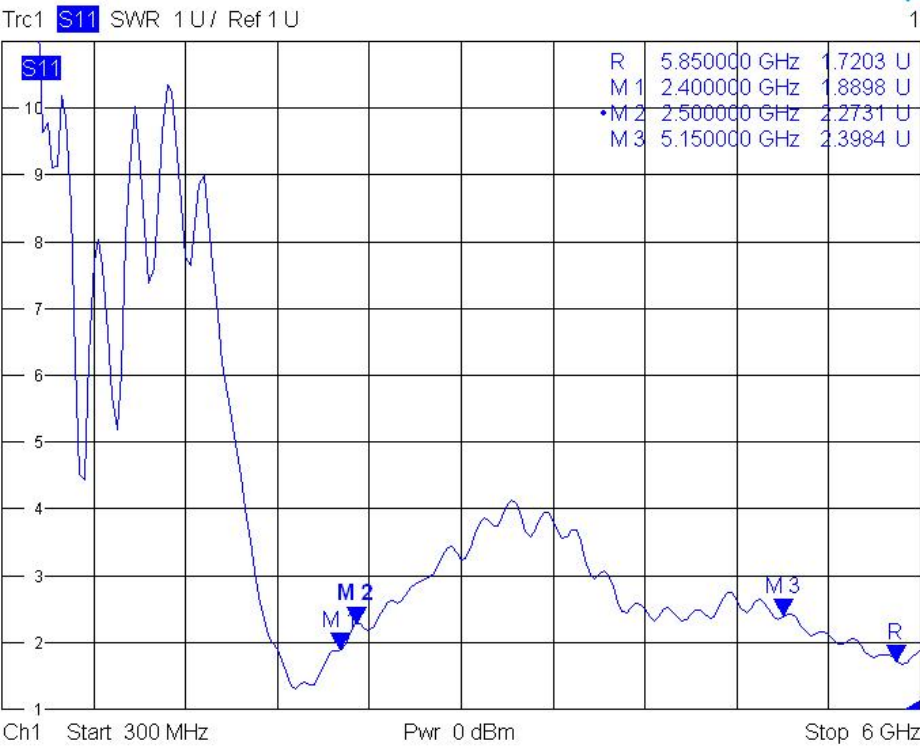
Passive Test Link Diagram



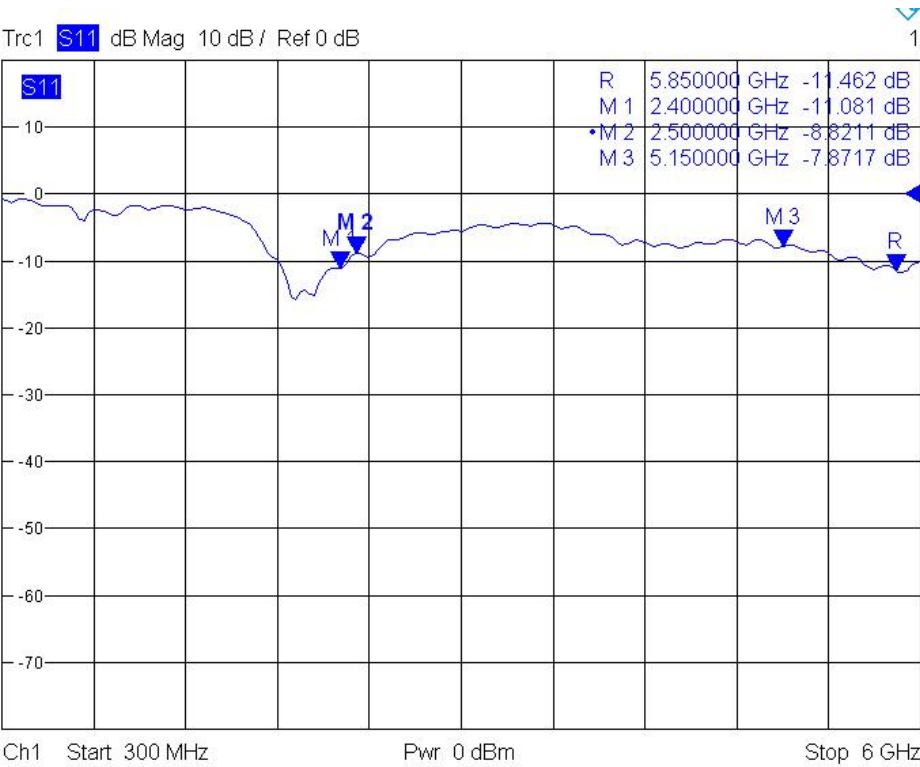


6. Performance Data/ Performance Data

6.1 Voltage Standing Wave Ratio / VSWR



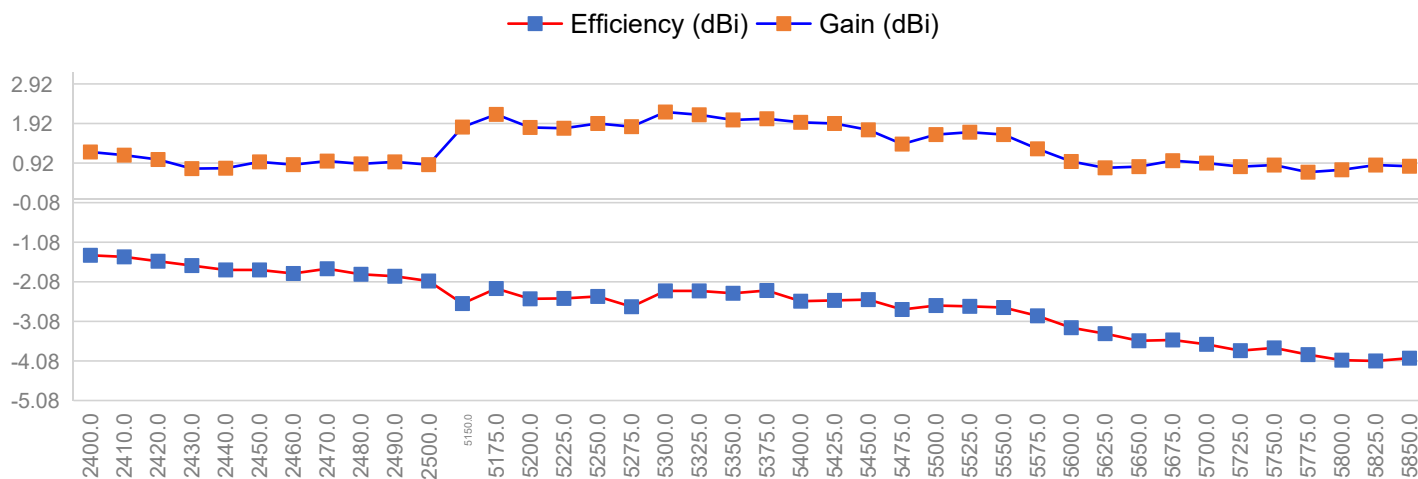
6.2 Return Loss/Return Loss



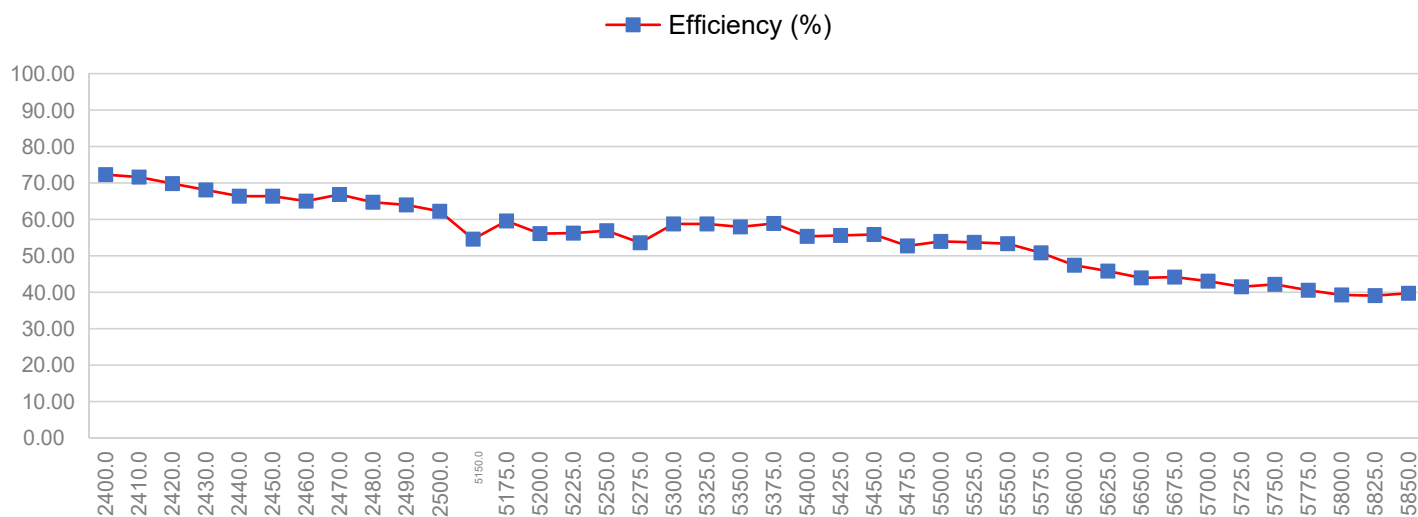


6. Performance Data/ Performance Data

6.3 Gain/ Gain



6.4 Efficiency/Efficiency



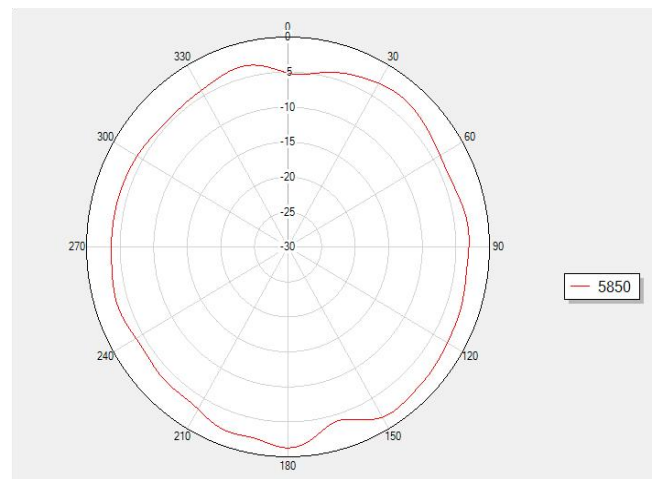
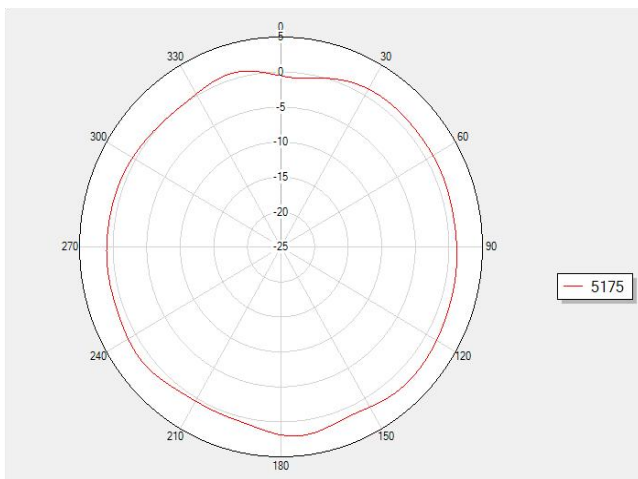
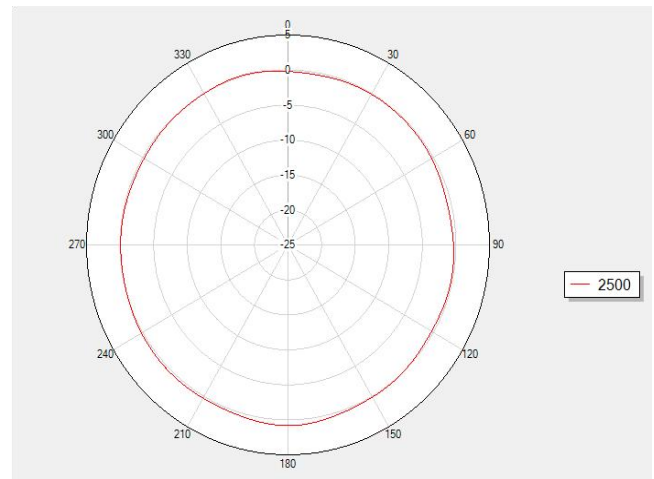
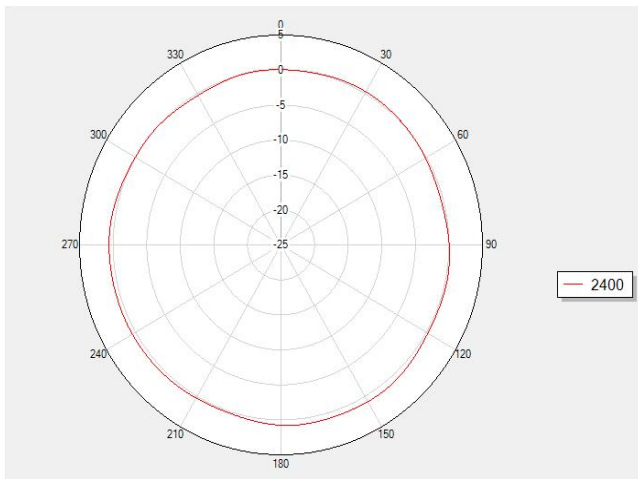
6.5 Antenna Gain and Efficiency

Frequency / Frequency (MHz)	2400-2500	5150-5500	5500-5850
Maximum gain / Gain (dBi)	1.2	2.21	1.7
Efficiency (%)	72.28	59.57	53.95



7. Radiation Patterns

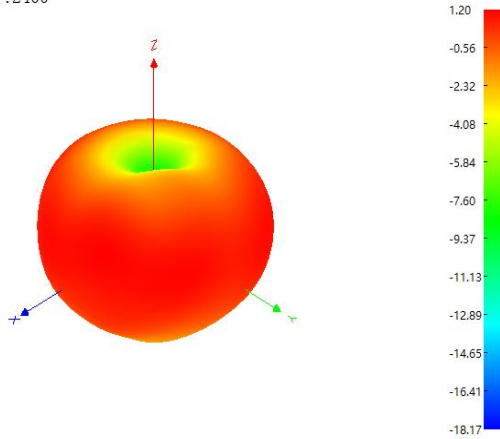
7.1 2D Radiation Pattern Diagram/ Radiation Patterns



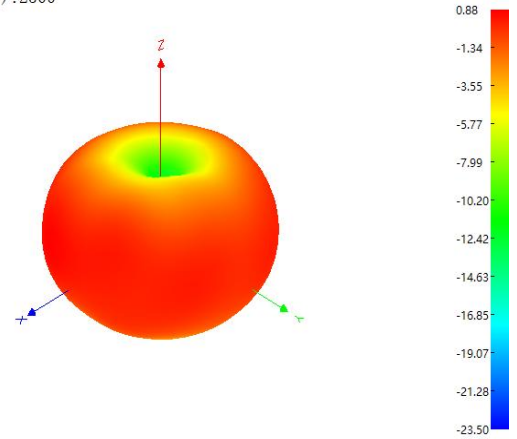


7.2 3D Radiation Pattern Diagram/3D Radiation Patterns

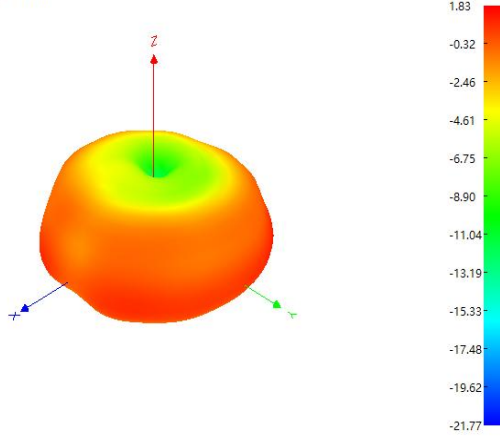
Frequency (MHz) : 2400



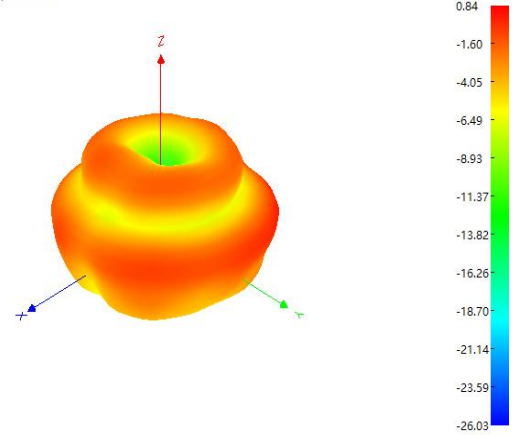
Frequency (MHz) : 2500



Frequency (MHz) : 5150



Frequency (MHz) : 5850





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Author:	Carly

Change Log



Bat Wireless
BAT WIRELESS

www.batwireless.cn

Shenzhen Bat Wireless Techno-
logy Co., Ltd.

Address: 1301, No.8 Langhua Road, Xinshi Community, Dalang Street, Longhua District, Shenzhen

Office Add: Room 1301, 13th Floor, No. 8 Langhua Road, Xinshi Community, Dalang Street, Longhua District, Shenzhen

Email: sales@batwireless.com

Tel: +86-0755-21031236