



ANTENNA DATASHEET

2.4G FPC Antenna

Model No:

BF2.4FNX26X10B1L120

Description:

2.4G FPC Antenna IPEX-1 Connector with RG1.13 Cable & 120mm Length

Features:

2400-2500MHz

IPEX-1 connector

Structure: 360° Omnidirectional Radiation

Cable Type: RG1.13

Cable Length: 120mm

Dimension: 25.4mm x 8.9mm

RoHS & REACH Complaint



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BF2.4FNX26X10B1L120

Part Number Description

BF	Company	Bat Wireless
2.4	Frequency	2400-2500MHz
F	Name	FPC Antenna
N	Type	Internal
X	Constant	X
26X10	Approximate Dimensions	26X10mm
B1	Connector	IPEX1 / IPEX1
L	Length	Length
120	Wire Length	120 mm

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	RG1.13	RG1.13	RG0.81	RG0.81	RG0.81	RG316	Customizable

1. Description

Bat Wireless BF2.4FNX26X10B1L120 is a widely used wireless communication product that uses a flexible substrate that can be bent, folded, and installed on curved surfaces or in narrow spaces. Flexible substrates (such as polyimide) enable circuits to adapt to complex spatial layouts and are suitable for wearable devices, folding screen mobile phones, etc. The thickness is usually 0.1~0.3mm which reduces the weight of the device and improves portability. 2.4G FPC has high- frequency performance, flexibility and high integration as its core advantages, and is a key component for miniaturization and high performance of wireless devices.

Classic application scenarios:

Consumer electronics: Bluetooth headsets, smart watches, drone remote controls

Industrial: RFID tags, wireless sensors

Automotive electronics: tire pressure monitoring, vehicle antennas

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	FPC Antenna		
Frequency Range	2400-2500	MHz	
Input Impendence	50	Ω	
V.S.W.R	<2.5		
Gain	0.8	dBi	
Polarization Type	Vertical		
Power Capacity	50	W	
Lightning Protection	-		
DC Voltage	-	V	
Radiator	-		
Mechanical Characteristics			
Dimensions	25.4 x 8.9	mm	
Connector Type	IPEX-1 (Customizable)		
Cable Type	RG1.13 (Customizable)		
Cable Length	120 (Customizable)	mm	
Mount way	Crimp Connection		
Color	Black		
Material	FPC		
Weight	0.17	g	
Environmental Characteristics			
Waterproof Rating	-		
ROHS Compliant	Conform		
Operating Temperature	-45~ +85	°C	
Storage Temperature	-45~ +85	°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.



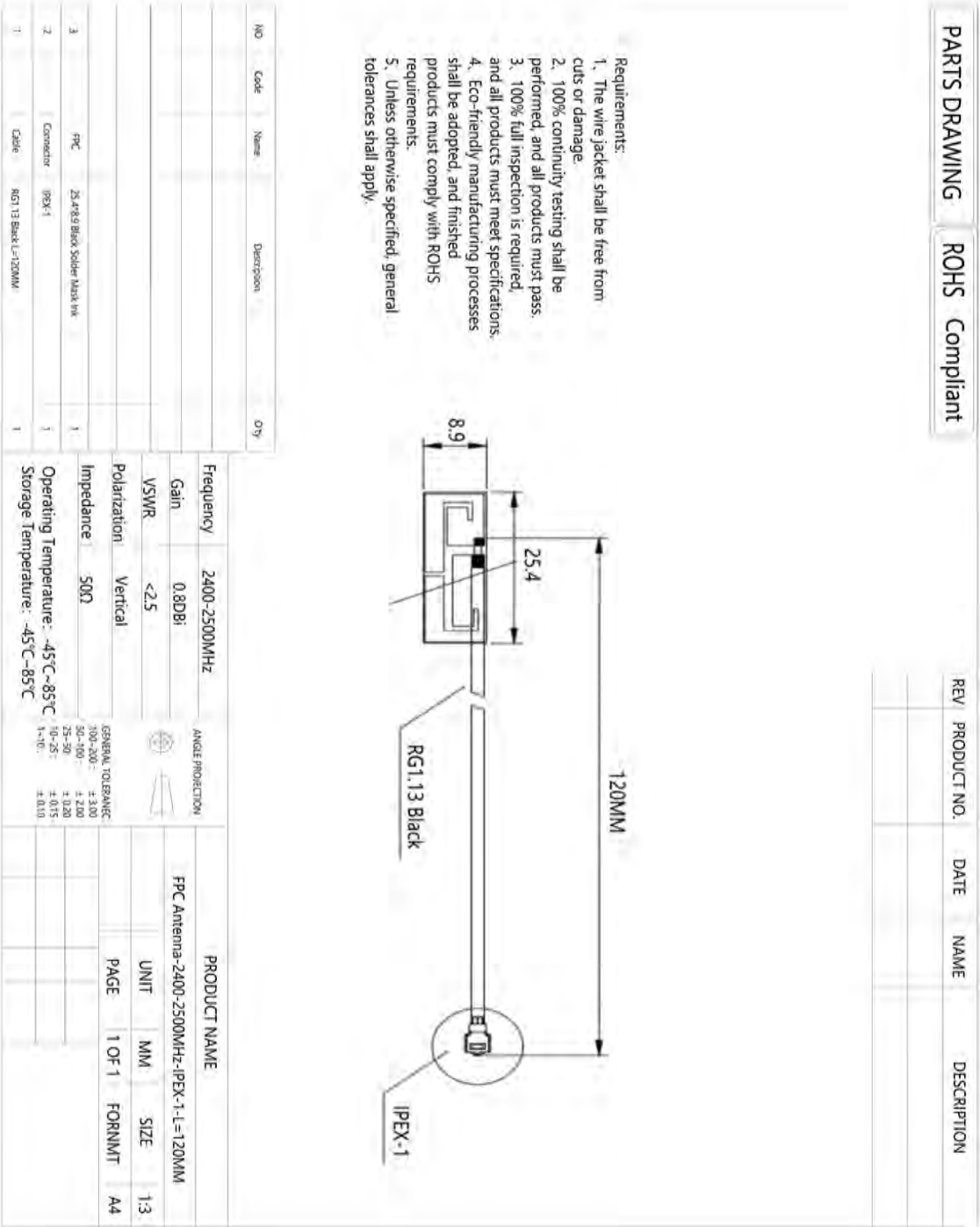
3. Product Picture



* Product images are for reference only



4. Mechanical Drawing





5. Test Equipment



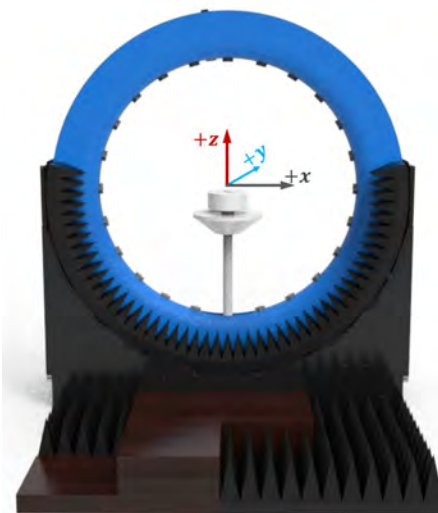
Keysight/E5071C Network Analyzer



R&S/CMW500 Comprehensive tester



R&S/SMBV100B Signal Source



DT-3500 Datasheet

Specification:	Description
Test Frequency	400MHz-8.5GMHz
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

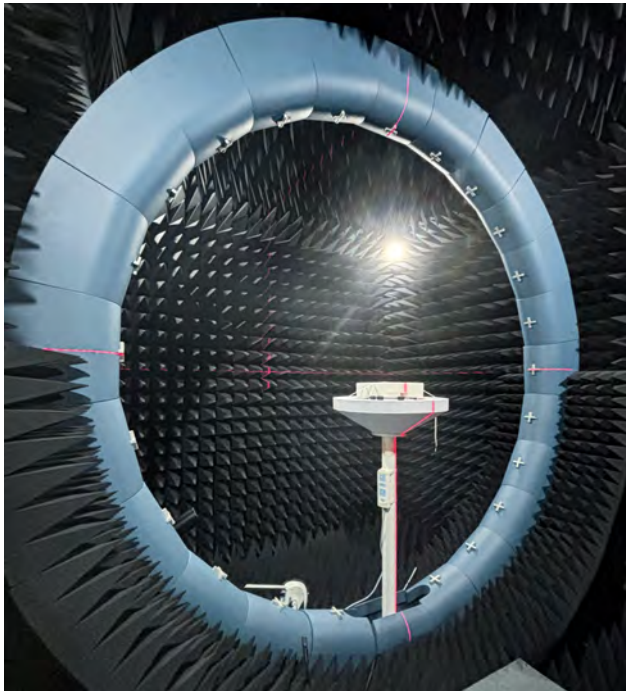
Description

Active measurement

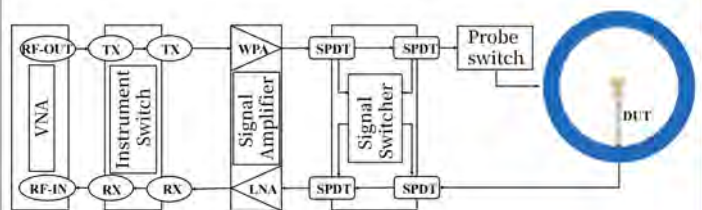
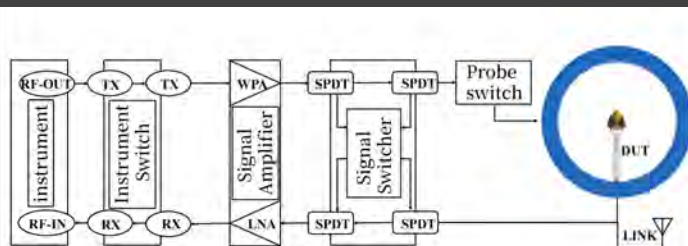
Capability : TRP、TIS、EIRP、EIS,. etc
Mode : 2G/3G/4G/5G、Wi-Fi b/g/n/a/ac/ax、BT、NB-IOT、Cat-M (eMTC)、GPS/BEIDOU/GLONASS、ZigBee、LoRa(Non-Signaling),.etc

Pasive measurement

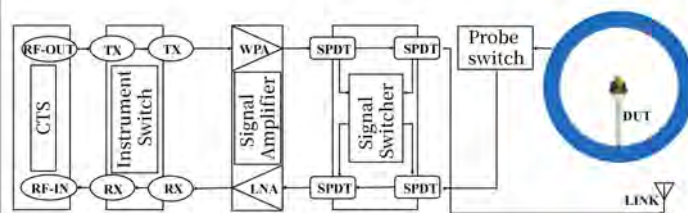
Test categor : Gain、Efficiency、2D pattern、3D pattern、Pattern roundness、Axial Ratio、ECC,Phase center,. etc
Polarization : Circular polarization, linear polarization, elliptical polarization



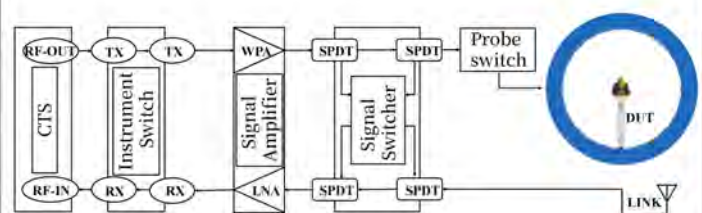
RF Link diagram of multi probe spherical near-field testing system



RF Link Overview



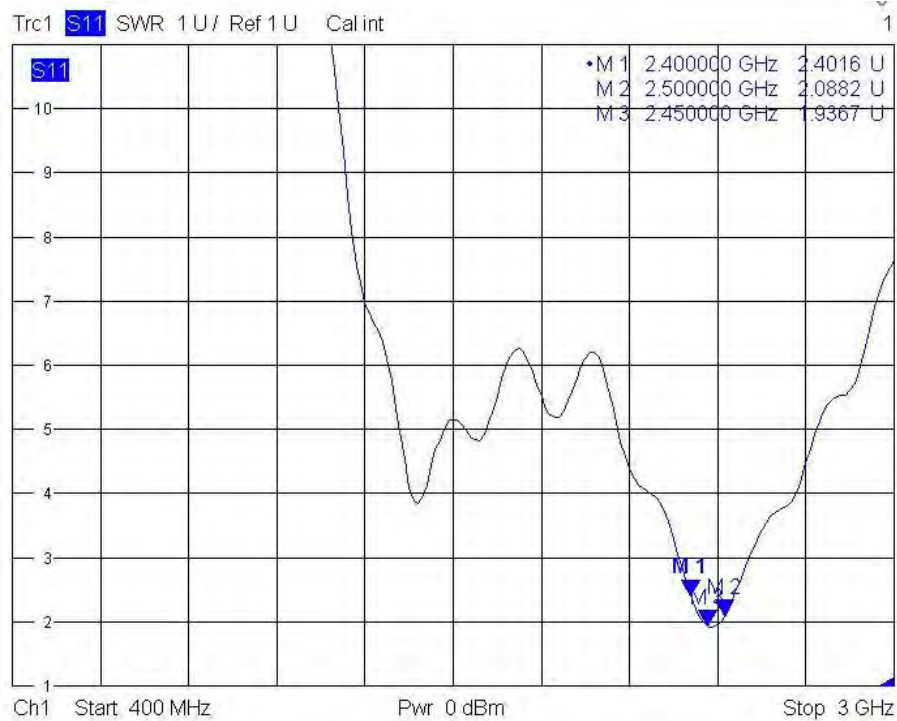
RF Link of Passive measurement



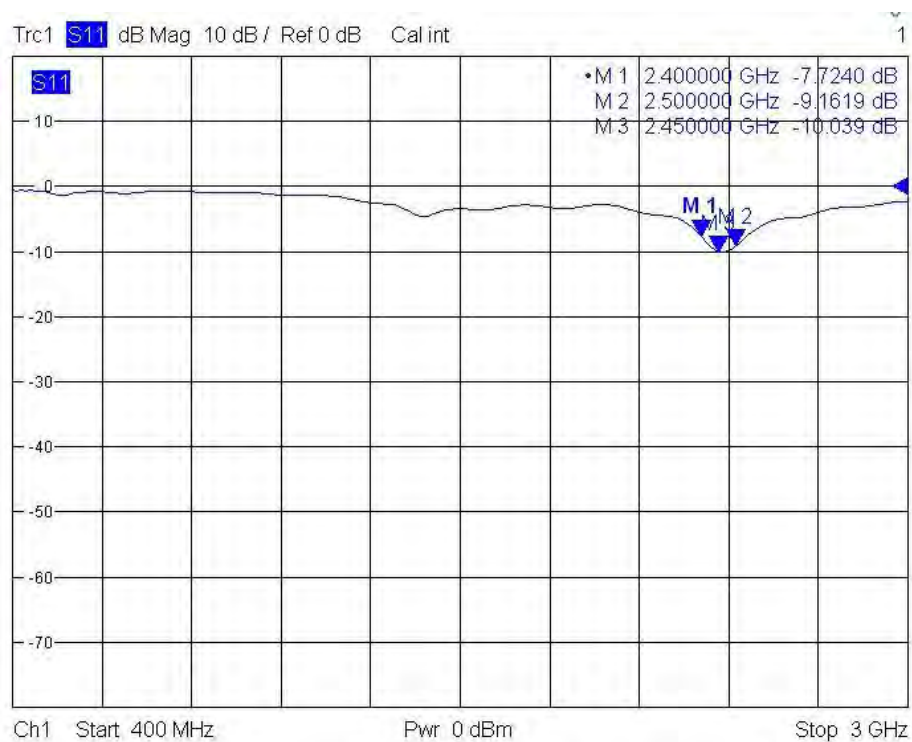


6. Performance Data

6.1 VSWR



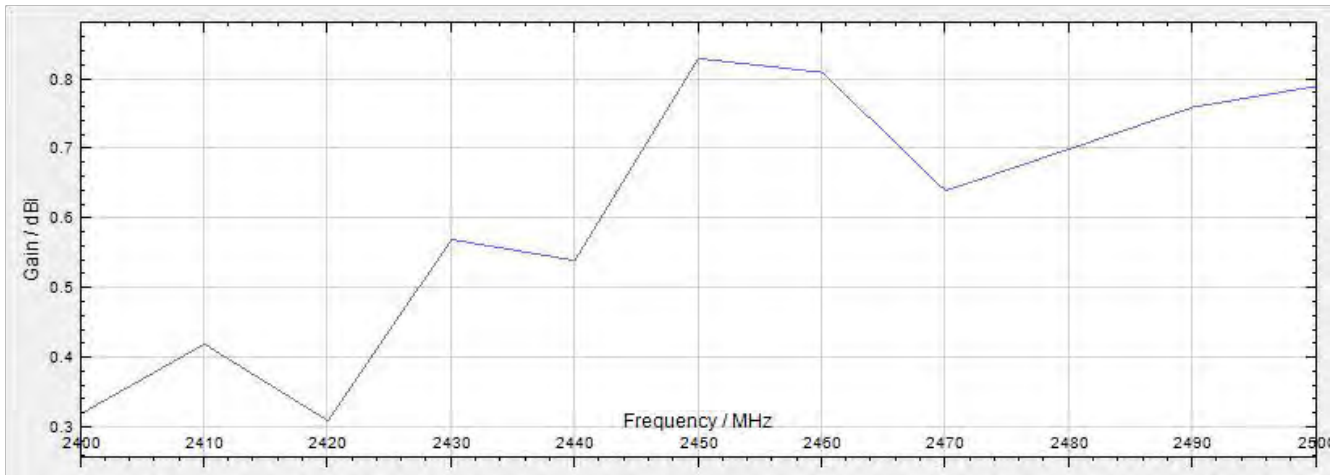
6.2 Return Loss



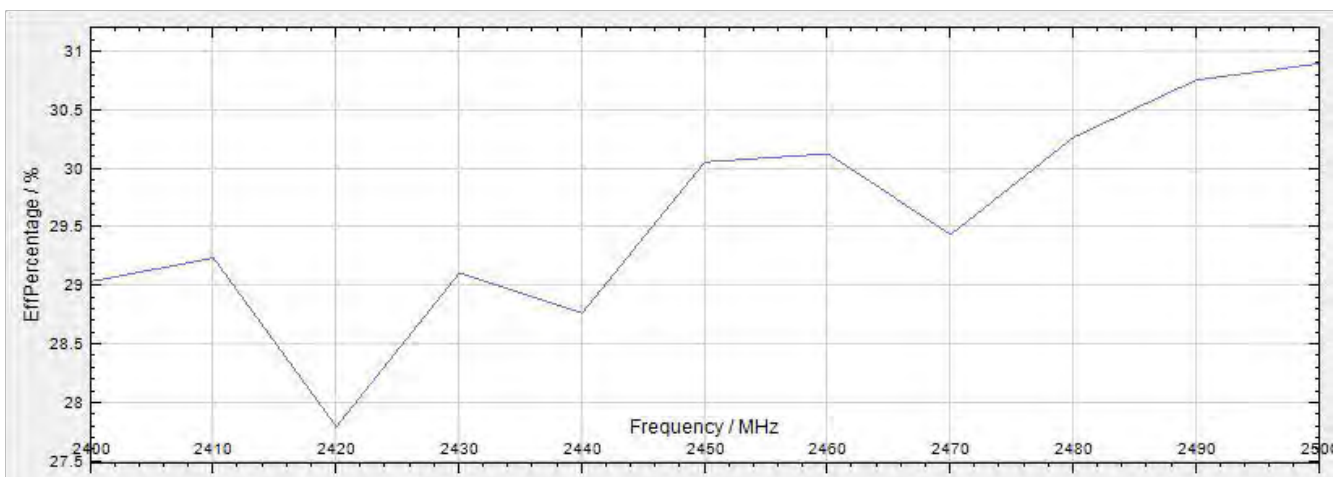


6. Performance Data

6.3 Gain



6.4 Efficiency



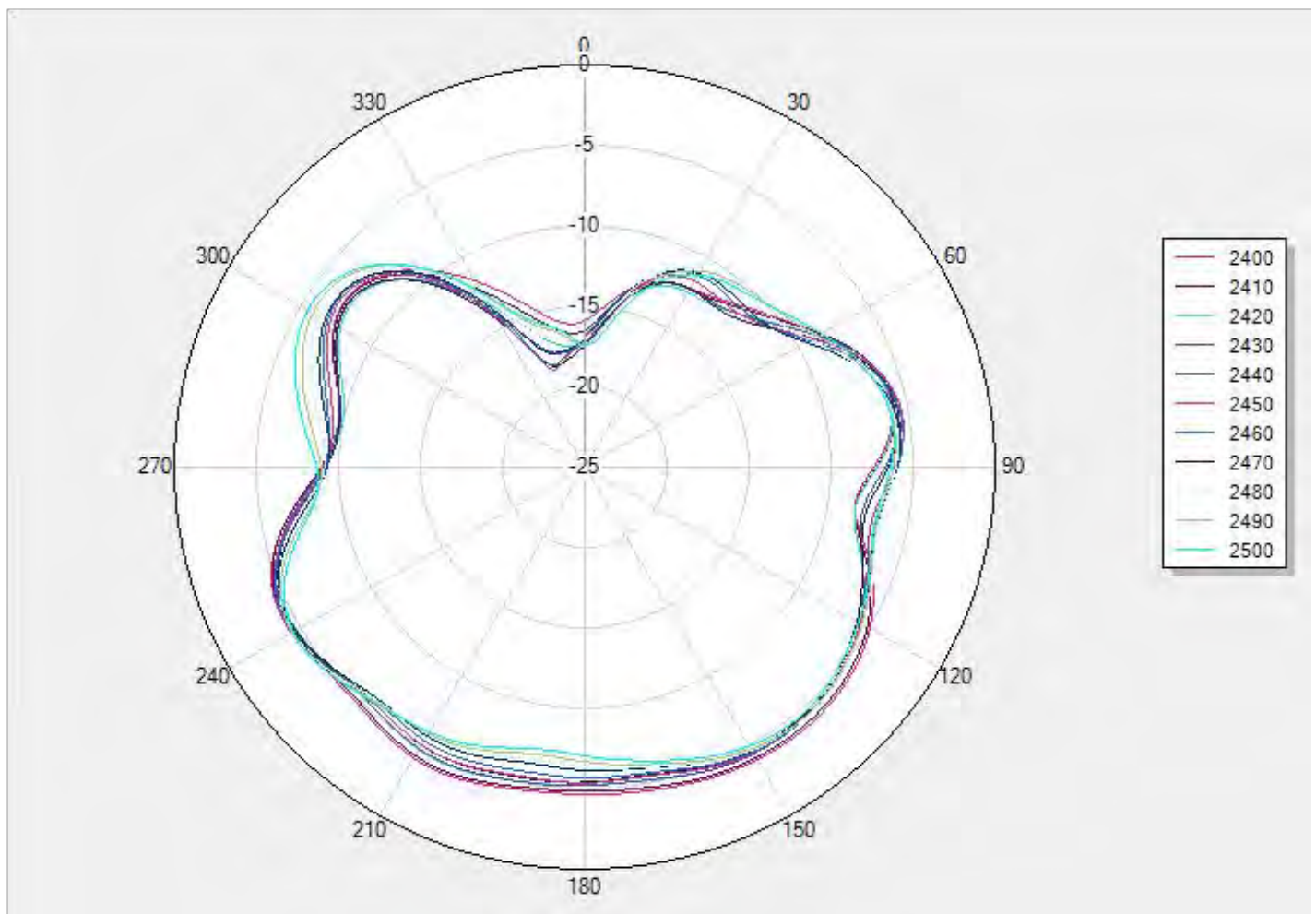
6.5 Antenna Gain & Efficiency

Frequency (MHz)	2400	2450	2500
Gain (dBi)	0.32	0.83	0.79
Efficiency (%)	29.04	30.06	30.9

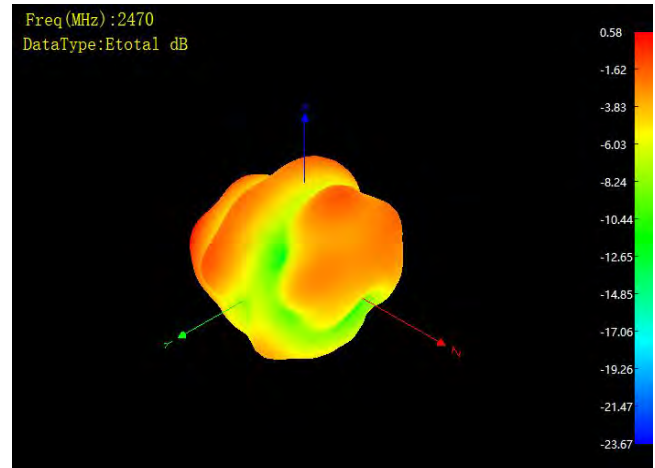
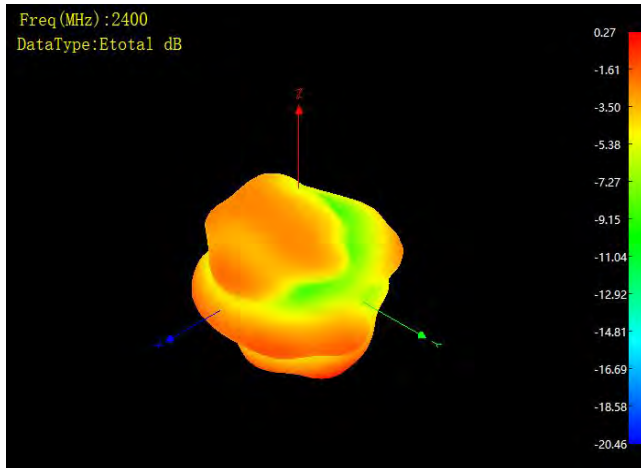


7. Radiation Patterns

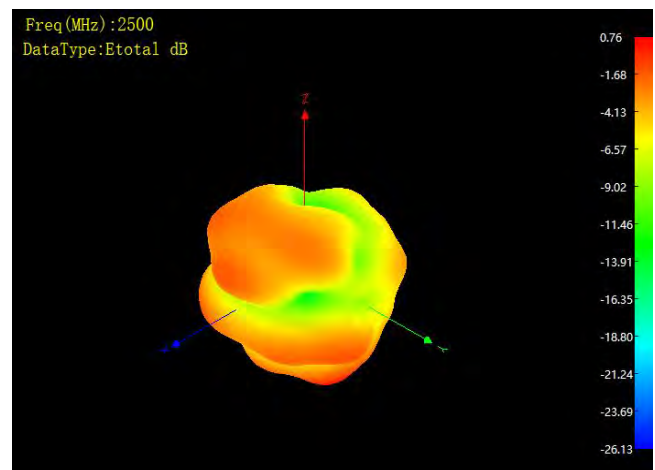
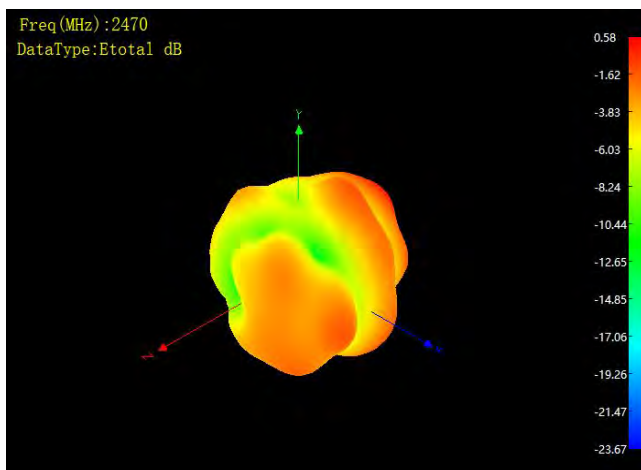
7.1 2D Radiation Patterns



7.2 3D Radiation Patterns—2400MHz、2450MHz



7.2 3D Radiation Patterns—2470MHz、2500MHz





DECLARATION:

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