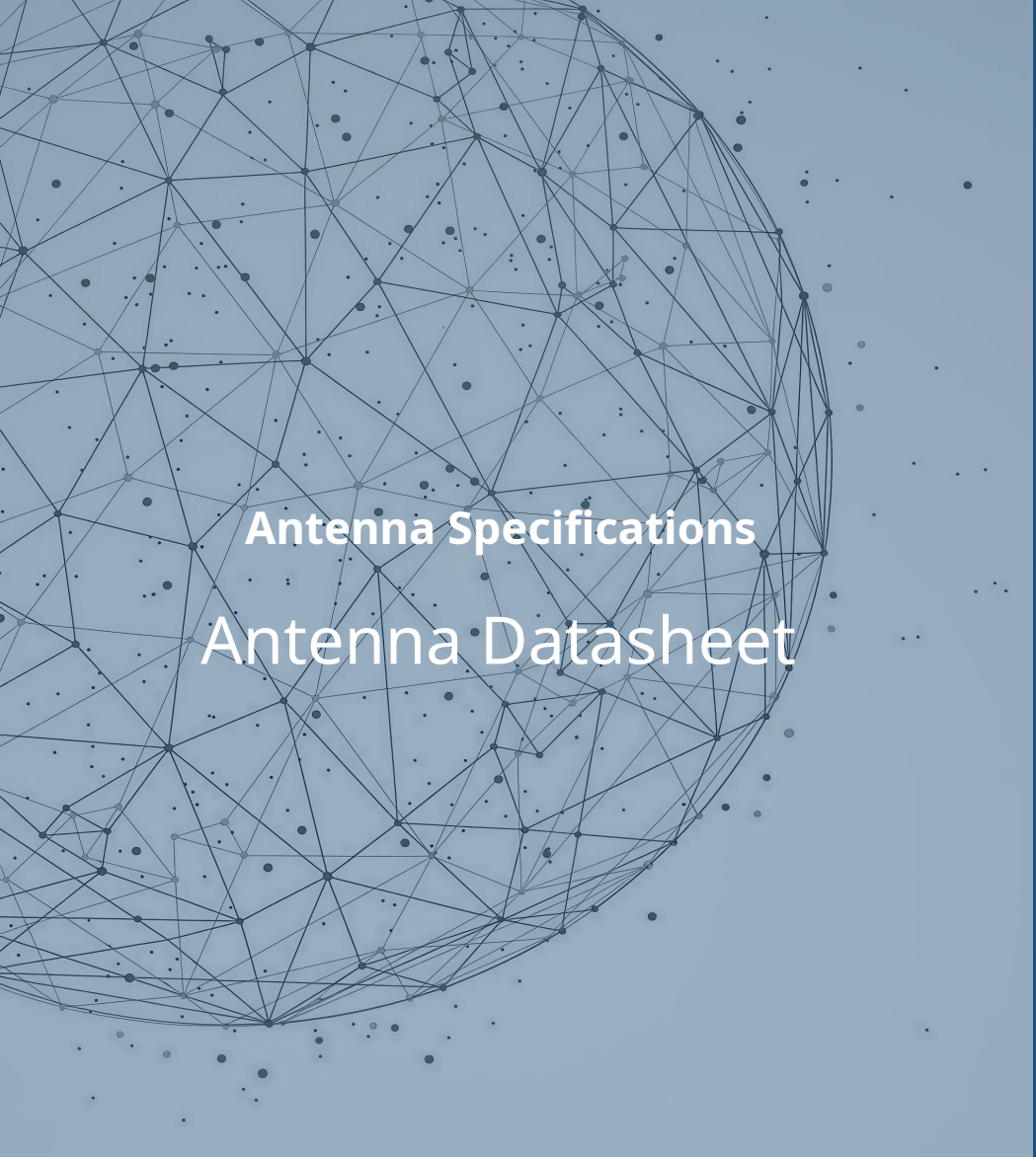

Bat Wireless
BAT WIRELESS

Antenna Specifications

Antenna Datasheet

2.4G**Glue stick antenna**

model:

BW2.4JWX105-7KJ

describe:

2.4GGlue stick antennaSMAInternal screw and internal needle interface

characteristic:

2400-2500MHzFull frequency band coverage

SMAInternal screw and internal needle interface

Structure: Foldable

360°Omnidirectional radiation

size:105mm x⌀7mm conform to
RoHS & REACHRegulation

Table of contents

In the spirit of providing the best service to our users, Shenzhen Bat Wireless Technology Co., Ltd. (hereinafter referred to as "Bat Wireless") strives to provide users with detailed and accurate product information in this manual. However, due to the timeliness of the content in this manual, Bat Wireless cannot guarantee its currency and applicability at all times. Bat Wireless reserves the right to update the content of this manual without prior notice. To obtain the latest version of this information, please regularly visit the Bat Wireless official website or contact Bat Wireless staff. Thank you for your understanding and support!

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BW2.4JWX105-7KJ

Part Number Description		
BW	company /Company	Bat Wireless /Bat Wireless
2.4G	Frequency band /Frequency	2400-2500MHz / 2400-2500MHz
J	Name /Name	glue stick /Rubber Antenna
W	type /Type	External /External
X	constant /Constant	X / X
105-7	size /Dimensions	105x7mm / 105x7mm
K	Features /Feature	Foldable /Foldable
J	Interface /Connector	SMAInternal screw and internal needle /SMA Male

1. **Product Description**/Description

Bat WirelessBW2.4JWX105-7KJThis high-performance omnidirectional antenna combines high performance and portability, designed specifically for devices that require frequent movement or temporary networking. Featuring a foldable, high-quality plastic housing, it offers excellent signal reception and transmission capabilities, providing stable and reliable support for device connections. Its compact and lightweight rubber-stick design makes it easy to install and transport.

Classic application scenarios:

industry4.0: Real-time monitoring of CNC machine tools

Smart Healthcare: Surgical Robot Control

Intelligent Transportation: Rail Contact Network Monitoring

Energy Internet of Things: Substation Inspection Robot

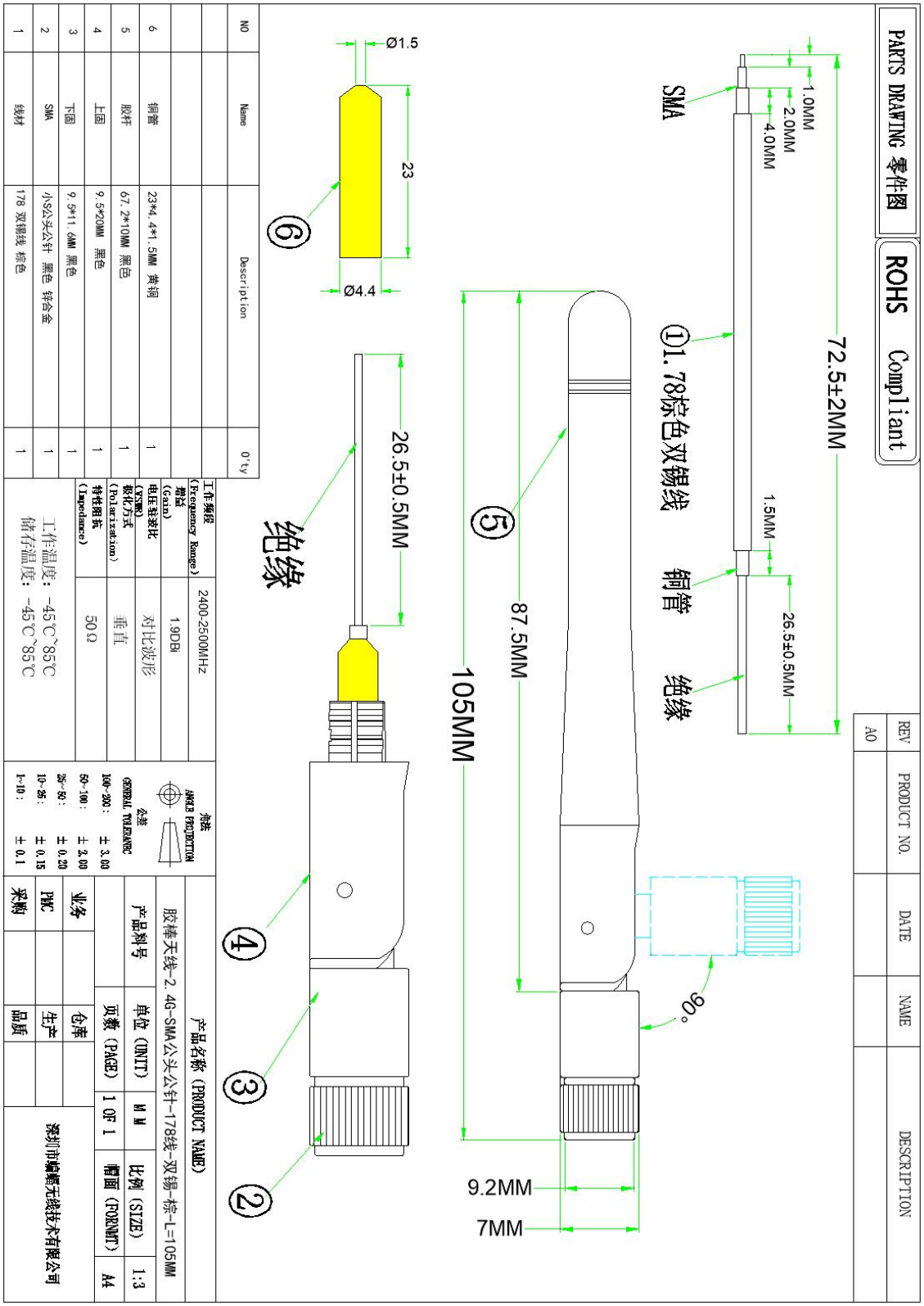
Bat Wireless provides customized services to optimize your equipment. We have a mature R&D team that can respond quickly to meet your needs. If you have any requirements, please contact our sales andFAE.

2. **Product Specifications**/Specification

Parameters /Parameters	Typical value /Typ.	Unit /Unites	Remark /Notes
Electrical characteristics /Electrical Characteristics			
type /Antenna Type	Glue stick antenna /Rubber Antenna		
Frequency /Frequency Range	2400-2500	MHz	
Input impedance /Input Impendence	50	Ω	
Standing wave ratio /VSWR	<1.5		
Gain /Gain	1.9	dBi	
Polarization mode /Polarization Type	vertical /Vertical		
Power capacity /Power Capacity	50	W	
Lightning protection /Lightning Protection	-		
Working voltage /DC Voltage	-	V	
Radiator /Radiator	-		
Mechanical properties /Mechanical Characteristics			
size /Dimensions	105 x⌀7	mm	
Interface type /Connector Type	SMAInternal screw and internal needle /SMA-J Male		
Cable Model /Cable Type	-		
Cable length /Cable Length	-	mm	
Installation method /Mount way	Twist		
color /Color	black		
Material /Meterial	ABS		
weight /Weight	6.22	g	
Environmental characteristics /Environmental Characteristics			
Protection level /Waterproof Rating	-		
ROHSstandard /ROHS Complaint	conform to		
Operating temperature /Operating Temperature	-45~+85	℃	
Storage temperature /Storage Temperature	-45~+85	℃	

3. **Actual picture**/Dimensions

4.

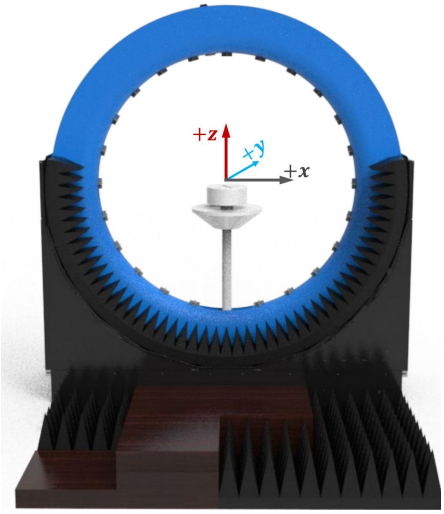

PARTS DRAWING 零件图
ROHS Compliant
REV
A0
PRODUCT NO.
DATE
NAME
DESCRIPTION
72.5±2MM
1.0MM
2.0MM
4.0MM
SMA
①1.78棕色双锡线
铜管
绝缘
1.5MM
26.5±0.5MM
87.5MM
105MM
9.2MM
7MM
90°
Ø1.5
23
Ø4.4
⑥
⑤
④
③
②
26.5±0.5MM
绝缘
NO
Name
Description
Q'ty
6 铜管 23*4.4*1.5MM 黄铜 1
5 胶杆 67.2*10MM 黑色 1
4 上固 9.5*20MM 黑色 1
3 下固 9.5*11.6MM 黑色 1
2 SMA 小S公头公针 黑色 锌合金 1
1 线材 178 双锡线 棕色 1
工作频段 (Frequency Range) 2400-2500MHz
增益 (Gain) 1.9DBi
电压驻波比 (VSWR) 对比波形
极化方式 (Polarization) 垂直
特性阻抗 (Impedance) 50Ω
工作温度：-45℃~85℃
储存温度：-45℃~85℃
角度 ANGLE PROJECTION
公差 GENERAL TOLERANCE
100~200 : ± 3.00
50~100 : ± 2.00
25~50 : ± 0.20
10~25 : ± 0.15
1~10 : ± 0.1
产品名称 (PRODUCT NAME)
胶棒天线-2.4G-SMA公头公针-178线-双锡-棕-L=105MM
产品料号
单位 (UNIT) MM
比例 (SIZE) 1:3
页数 (PAGE) 1 OF 1
幅面 (FORMAT) A4
业务
PMC
采购
仓库
生产
品质
深圳市蝙蝠无线技术有限公司

5. **Test equipment**/Test Equipment

Keysight/E5071CNetwork Analyzer

R&S/CMW500Comprehensive tester

R&S/SMBV100BSignal Source



DT-3500 Datasheet /System Specifications	
Specification:	**Description**
Test Frequency /Test frequency domain:	400MHz-8.5GMHz
System Size /System size:	L*W*H=4*3.5*3.5m
Number of Probes /Number of probes:	23 (Probe) + 1 (link)
Interval Angle /Sampling clamp:	15°
Sampling Diameter /Sampling diameter:	2200mm
Carring Capacity /Carrying capacity:	≦40kg

Testing CapabilityTesting capabilities	Description /Ability Description
Active measurement **Active testing**	**Capability /Test indicators:**TRP、TIS、EIRP、EIS, etc **Mode /Test format:**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 **Passive testing**	**Test category /Test Type:**Gain、Efficiency、2D pattern、3D pattern、Pattern roundness、Axial Ratio, ECC, Phase center,. etc **Polarization / Polarization:**Circular polarization, linear polarization, elliptical polarization

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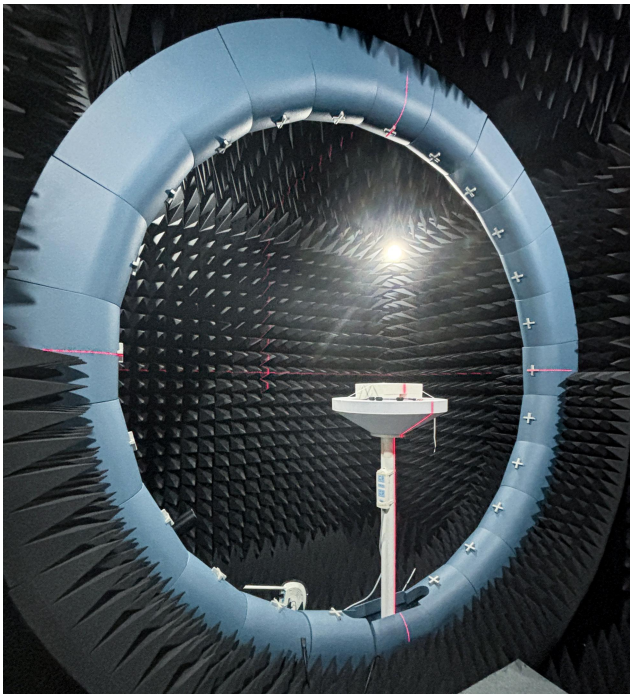
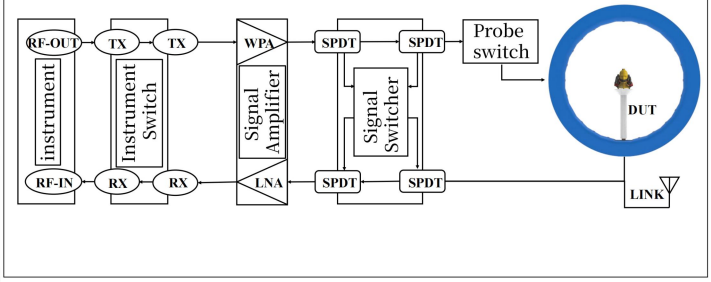


RF Link diaram of multi probe spherical near-field testing system

RF link diagram of multi-probe spherical near-field test system

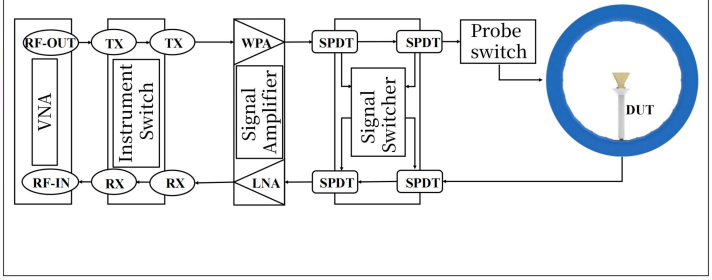
RF Link Overview

Total RF chain diagram



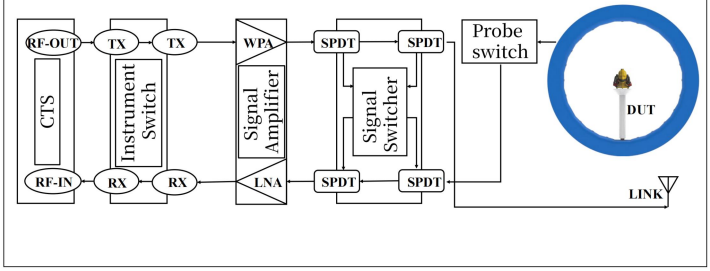
RF Link of Passive Measurement

Passive test link diagram



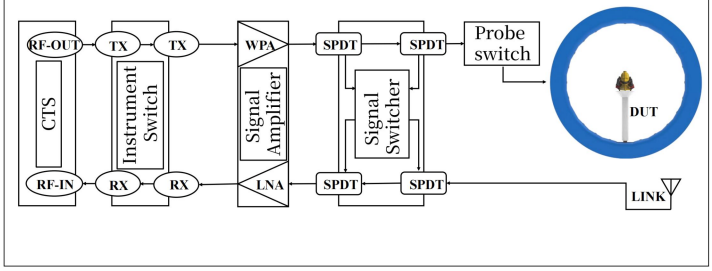
RF Link Overview

Total RF chain diagram



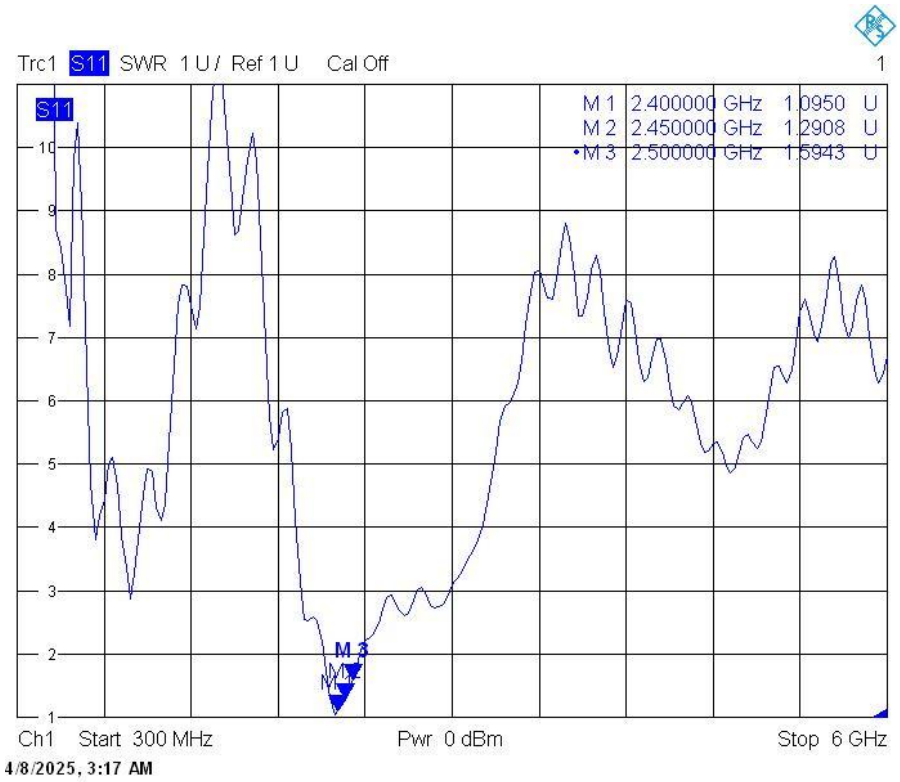
RF Link of Passive Measurement

Passive test link diagram

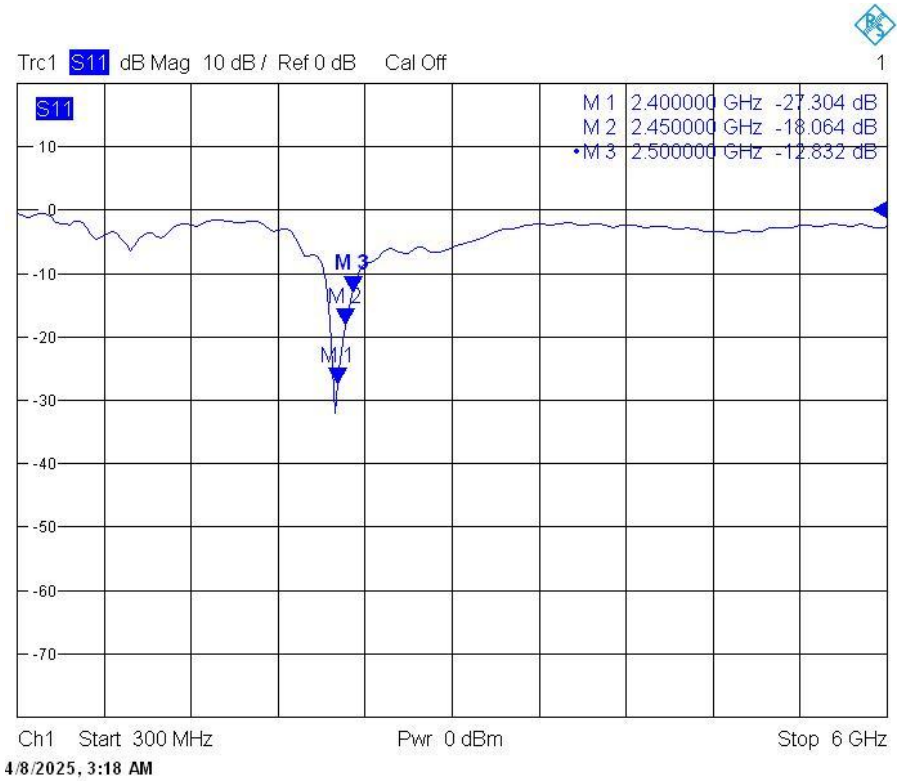


6. **Performance data**/Performance Data

6.1**VSWR**/VSWR

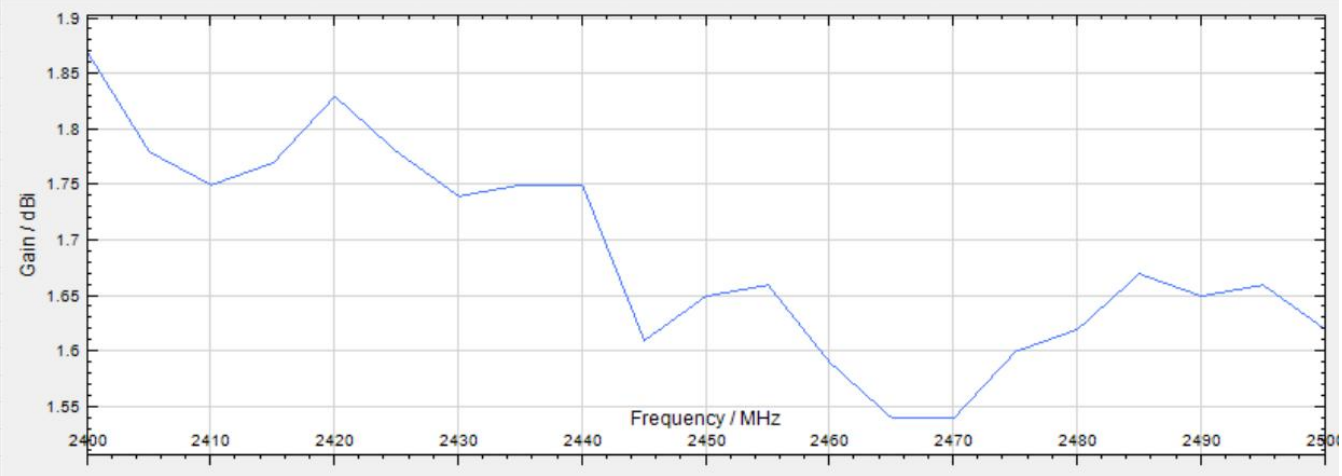


6.2**Return loss**/Return Loss

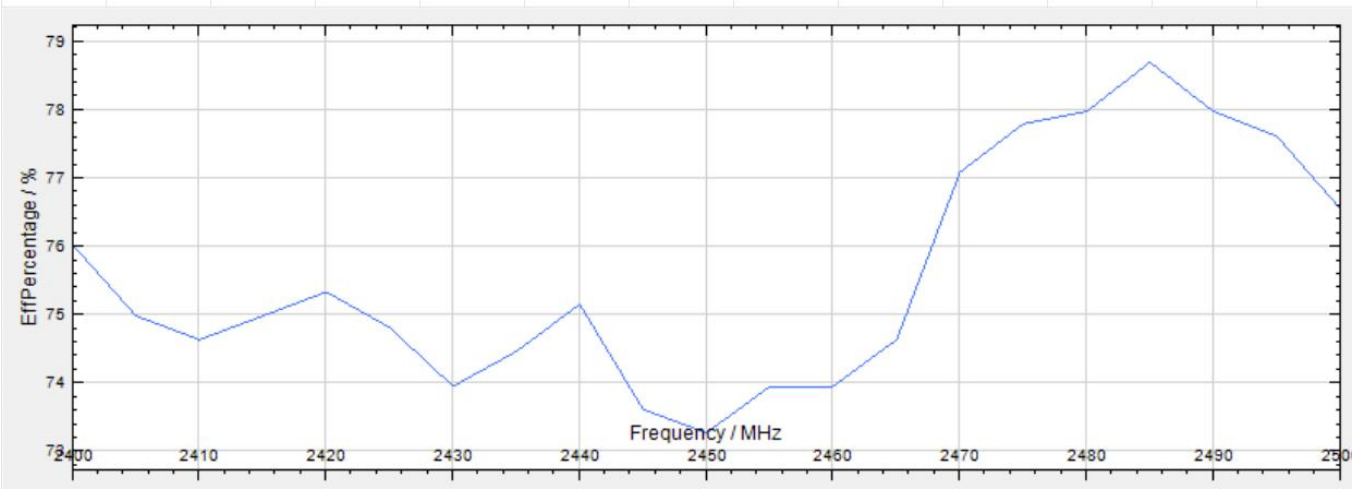


6. **Performance data**/Performance Data

6.3**Gain**/Gain



6.4**efficiency**/Efficiency

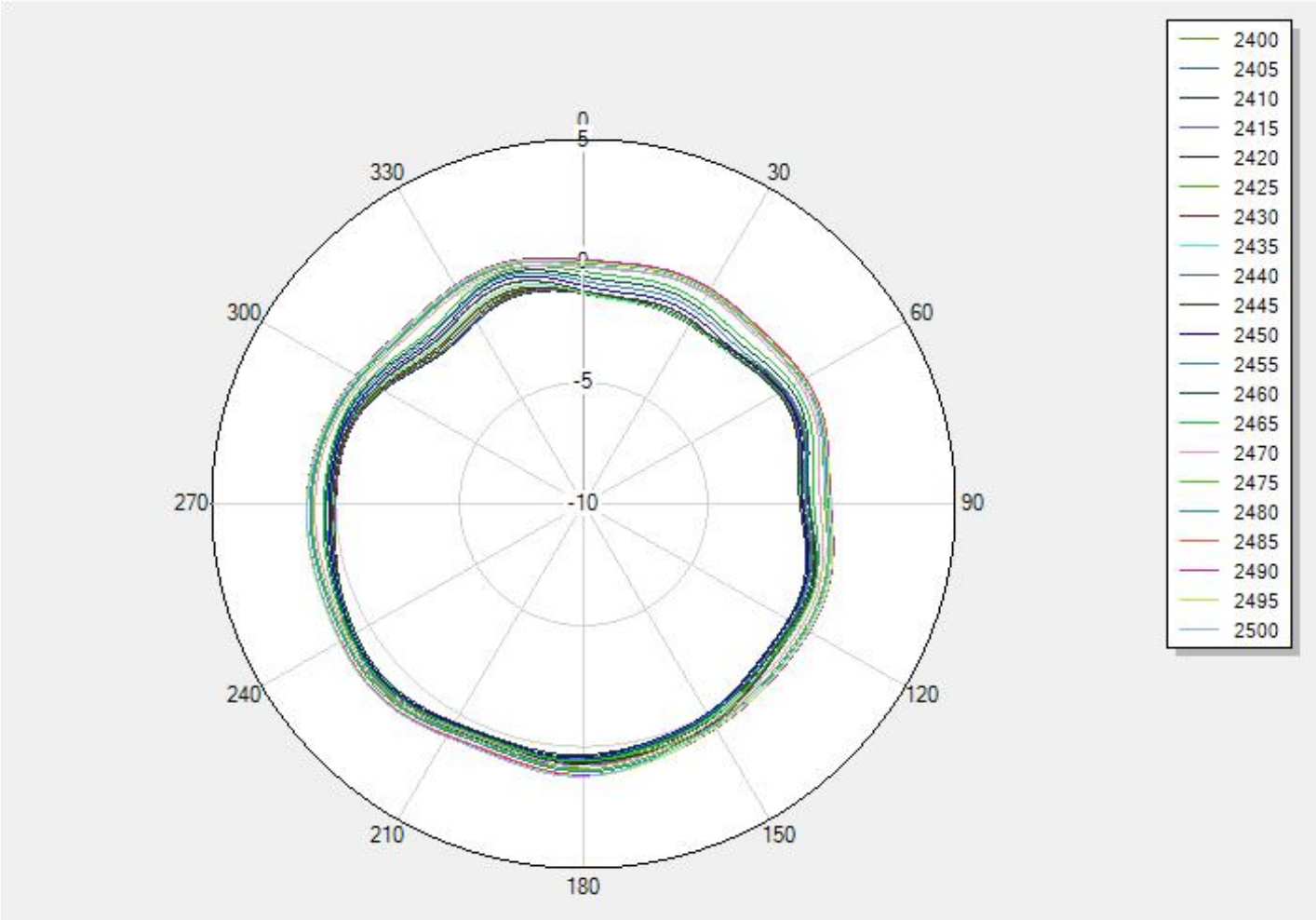


6.5**Antenna Gain and Efficiency**

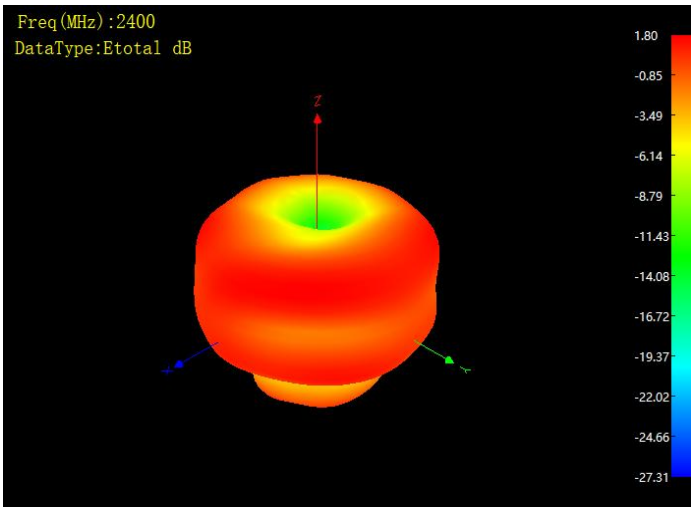
Frequency /Frequency (MHz)	2400	2425	2450	2474	2500
Maximum gain /Gain (dBi)	1.87	1.78	1.65	1.6	1.62
efficiency /Efficiency (%)	76.03	74.82	73.28	77.8	76.56

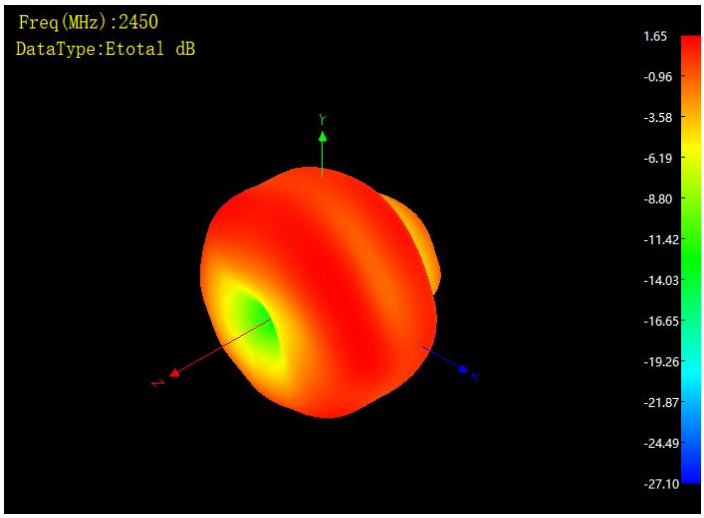
7. **Radiation pattern**/Radiation Patterns

7.1 2D**Radiation pattern diagram**/Radiation Patterns

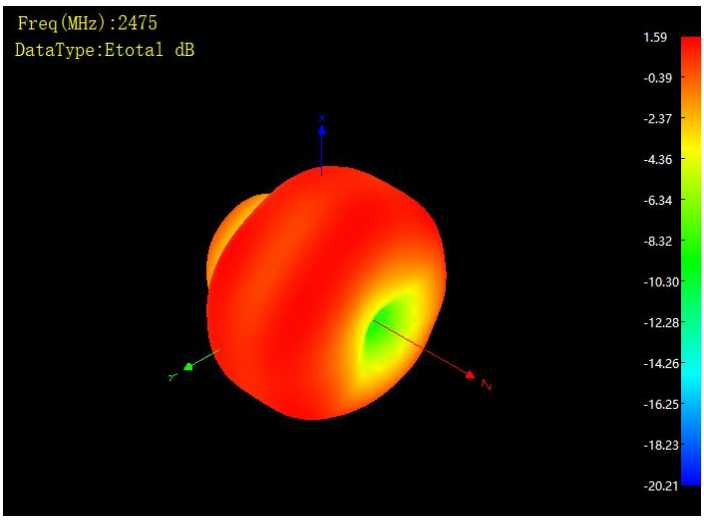


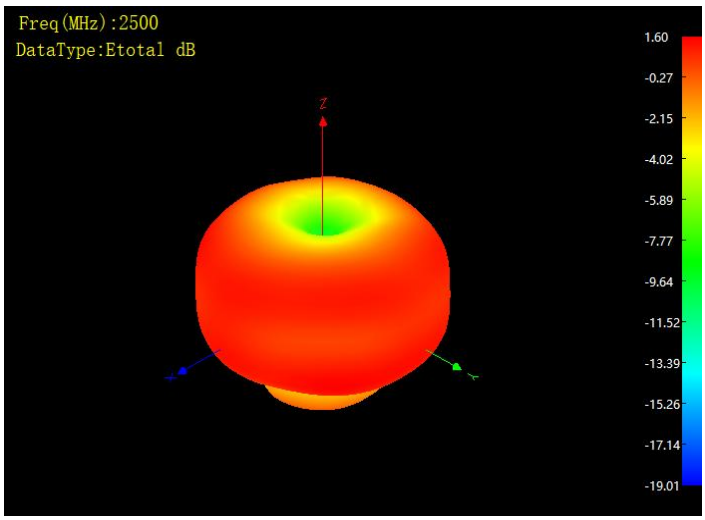
7.2 3D**Radiation pattern diagram**/3D Radiation Patterns—2400MHz、2450MHz





7.3 3D**Radiation pattern diagram**/3D Radiation Patterns—2475MHz、2500MHz





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date:	2025-4-14
Remark:	First update
author:	Carly

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