1. Antenna Specification/天线标准

Antenna Specification/天线技术参数			
Electrical Specification/电气特性			
Item/目录	**Specification/规格**		**Comment/备注**
Freq. Range/频段范围	2400MHz-2500MHz/5150MHz-5850MHz		
Impedance/阻抗	50 (Ω)		
VSWR/驻波比	<14.0	<8.0	
Directional/辐射方向	Omni directional/全向辐射		
Polarization/极化形式	Vertical polarization/垂直极化		
Peak Gain/峰值增益	-3.02dBi	4.07dBi	
Test condition/测试条件	passive test（无源测试）		
Total Efficiency/无源效率	10%	15%	
Mechanical Specification/机械指标			
Antenna type/天线类型	FPC 天线		
Connector Type/连接器类型	USS RF PLUG 1 代端子		
RF Cable Type/射频线型号	USS RF Coaxial Cable,32AWG D=1.13(S+T)黑色		
Connector Torque Test/连接器扭力	N/A		
Connector Pull Test/连接器拉力	≥1.0Kgf		
Salt Spray/盐雾测试	24 (H)		
Environmental Specification /环境指标			
Operating temp/工作温度	-40℃ ~ +75℃		
Storage temp/存储温度	-40℃ ~ +75℃		

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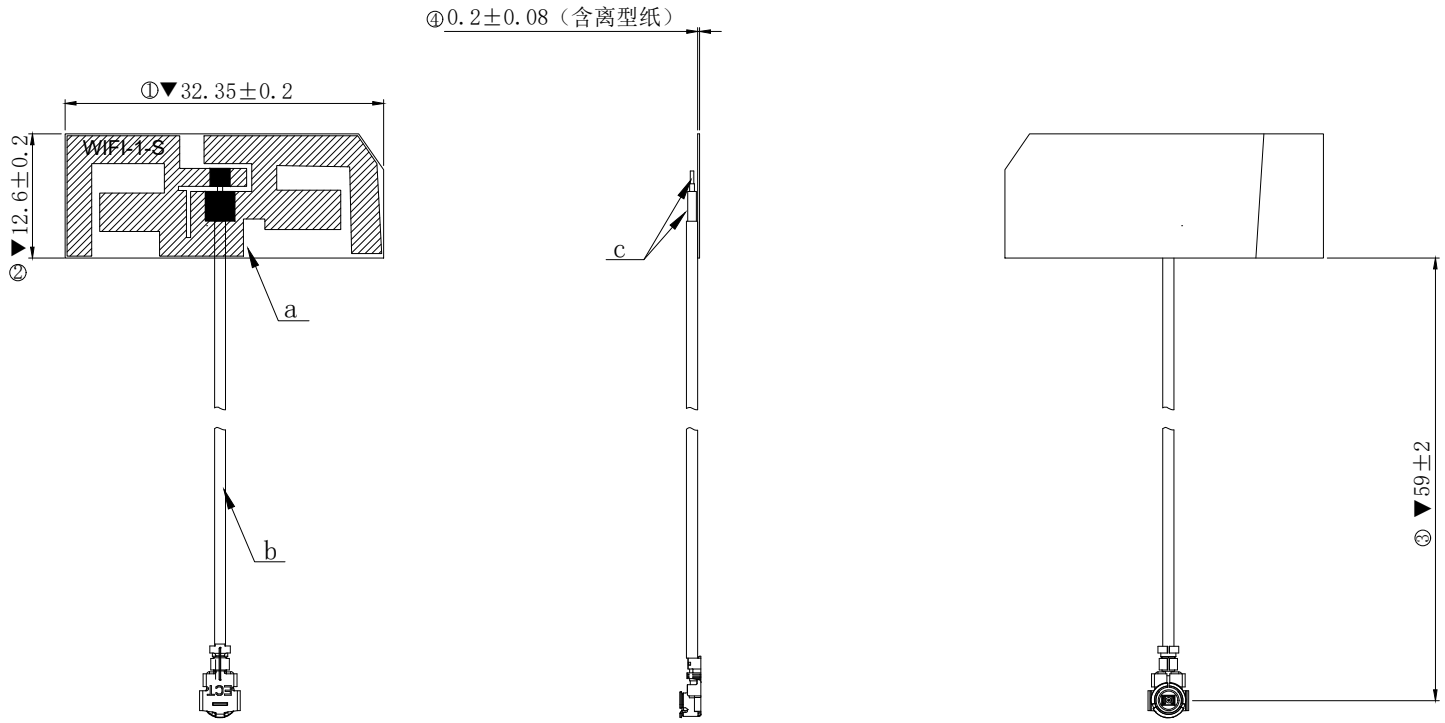
2. Antenna Picture/天线图片

REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
X1	ECN251288	FIRST RELEASE	03/18'25	丁第斌	胡鹏	黄颖



NOTES:

1.焊接不能虚焊、假焊，焊点须饱满。
WELDING CAN NOT BE FALSE WELDING, WELDING SPOT MUST BE FULL.

2.标有“Ⓧ”为FAI首件全检尺寸。
MARKED"Ⓧ"WAS FAI DIMENSIONS.

3.标有“▼”为QC重点检测尺寸。
MARKED"▼"WAS CRITICAL DIMENSIONS.

4.所有材料需符合ROHS2.0、REACH和无卤。
ALL MATERIALS MUST CONFORM TO ROHS2.0,RREACH AND HALOGEN-FREE.
无卤要求：Br≤900PPM，Cl≤900PPM，Br+Cl≤1500PPM。
HALOGEN-FREE REQUEST:Br≤900PPM，Cl≤900PPM，Br+Cl≤1500PPM.

5.VSWR测试一致性（VSWR CONSISTENCY TEST）
VSWR测试频率（VSWR TEST FREQUENCY）：xxxxxMHz。

Connector facing down

Connector facing up

NO	ITEM	Q'TY	MATERIAL/FINISH
c	Sn	1	Purun,OD0.6mm
b	Cable Assy	1	USS RF CABLE试,G1,SG,113BK,68,089
a	FPC	1	FPC,32.35*12.6*T0.13mm

ELECTRIC CONNECTOR TECHNOLOGY

GENERAL TOLERANCE	
XX.± 1	XX.° ± 2°
X.± 0.5	X.° ± 1.5°
.X± 0.3	X.° ± 1°
.XX± 0.10	.X° ± 0.5°

SCALE: 1:1
UNIT: mm
SIZE: A4

DRAWN: 丁第斌 DATE: 03/18'25
CHECK: DATE:
APPROVE: DATE:

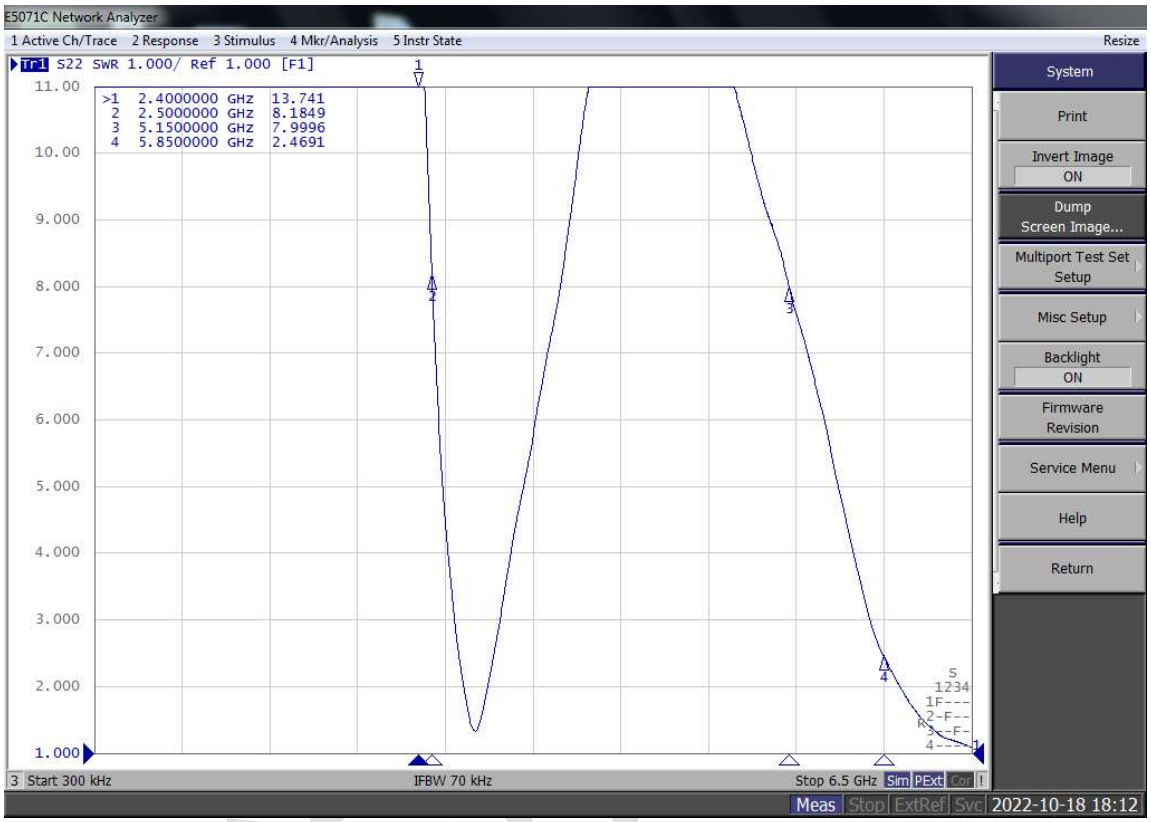
DWG.NO: 600-1020091-01
PARTS NO.(INTENDED USE): 8181020091

TITLE: A28-WIFI-1-S
Customer drawings
客户料号：115-00049-00 wifi1

REV. X1
SHEET: 1/1

4. Antenna test result/测试结果

4.1Return loss/Smith chart/VSWR/回波损耗/史密斯图/驻波比



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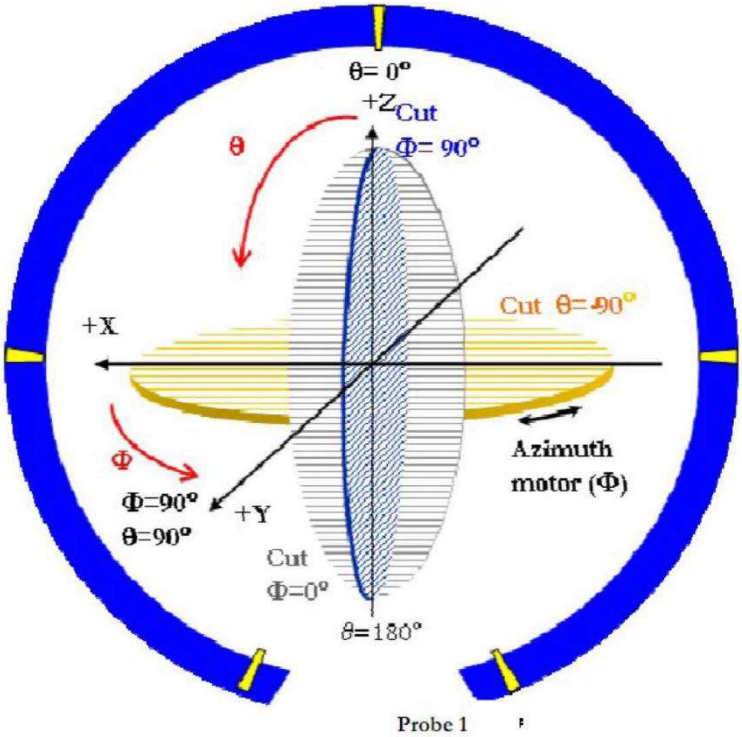
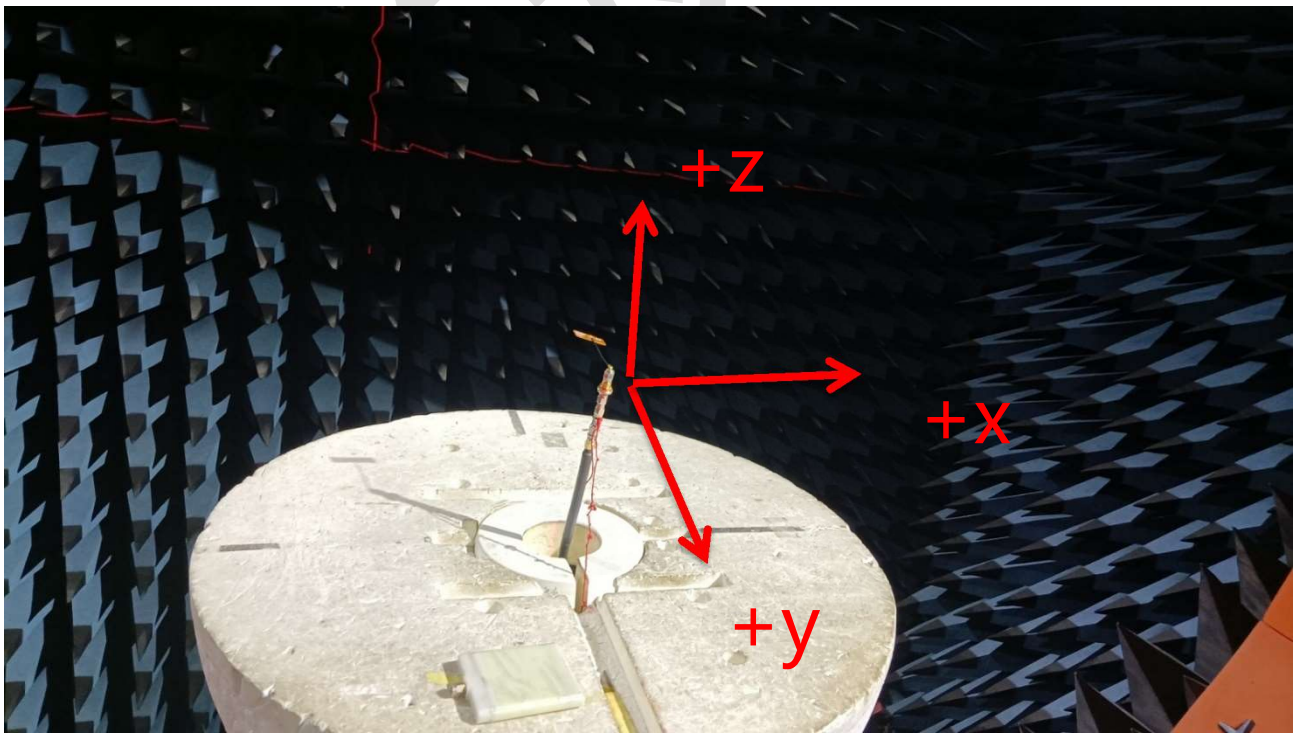
4.2The gain and total efficiency test/增益和效率测试

4.2.1 The definition of coordinate system/坐标系定义-Satimo SG24



The coordinate system of Chamber/暗室坐标系



The production test position/天线测试放置位置

4.2.2 The test result of total efficiency and total gain/天线效率及增益测试结果

2400MHz-2500MHz

Frequency	Efficiency(%)	Gain (dBi)
2400MHz	14%	-5.48
2405MHz	14%	-5.13
2410MHz	15%	-4.87
2415MHz	17%	-4.55
2420MHz	17%	-4.39
2425MHz	18%	-4.48
2430MHz	18%	-4.69
2435MHz	18%	-4.66
2440MHz	18%	-4.65
2445MHz	18%	-4.60
2450MHz	18%	-4.58
2455MHz	19%	-4.45
2460MHz	20%	-4.15
2465MHz	22%	-3.68
2470MHz	23%	-3.37
2475MHz	24%	-3.15
2480MHz	25%	-3.10
2485MHz	25%	-3.02
2490MHz	25%	-3.11
2495MHz	24%	-3.25
2500MHz	23%	-3.23
AVG	20%	-4.12

5150MHz-5850MHz

Frequency	Efficiency(%)	Gain (dBi)
5150MHz	21%	-3.24
5200MHz	18%	-3.89
5250MHz	20%	-3.01
5300MHz	24%	-2.08
5350MHz	25%	-1.92
5400MHz	39%	0.16
5450MHz	31%	-0.70
5500MHz	38%	0.19
5550MHz	38%	0.29
5600MHz	40%	0.74

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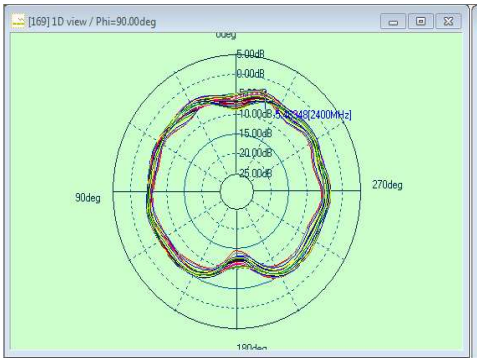
5650MHz	54%	2.24
5700MHz	54%	2.43
5750MHz	68%	3.49
5800MHz	60%	3.20
5850MHz	70%	4.07
AVG	40%	0.13

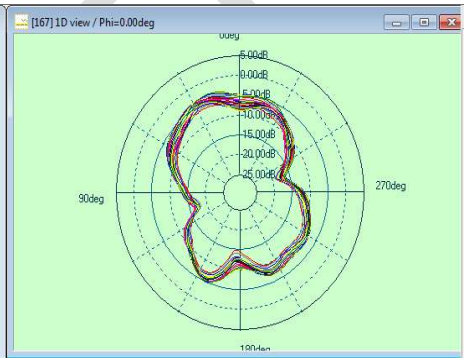
4.2.3The antenna radiation pattern(2D)/天线辐射方向图（2D）

2400MHz -2500MHz



XOY

YOZ



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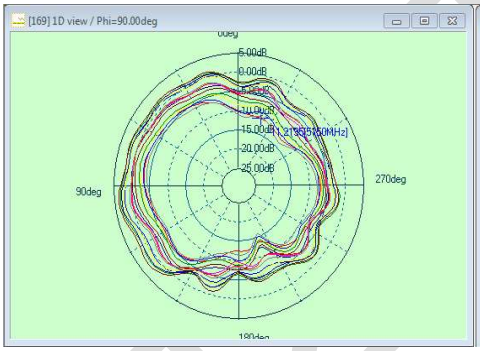
5150MHz -5850MHz



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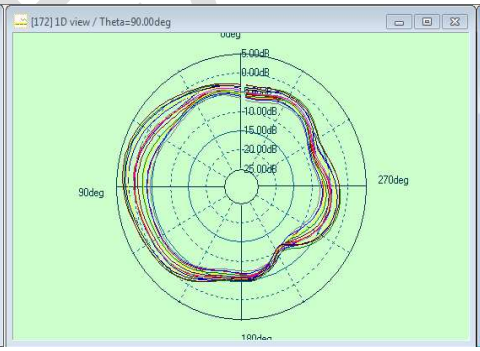

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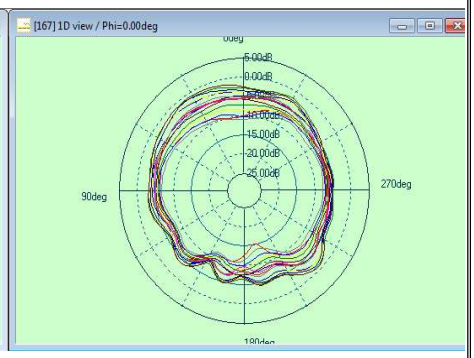

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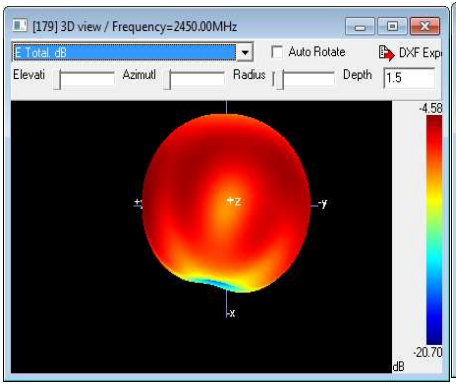
4.2.4The antenna radiation pattern(3D)/天线辐射方向图（3D）

Frequency/频点 2450MHz



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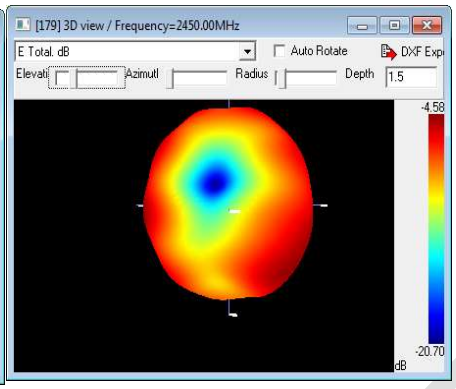

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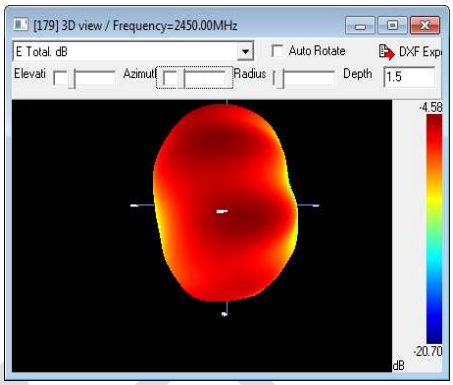

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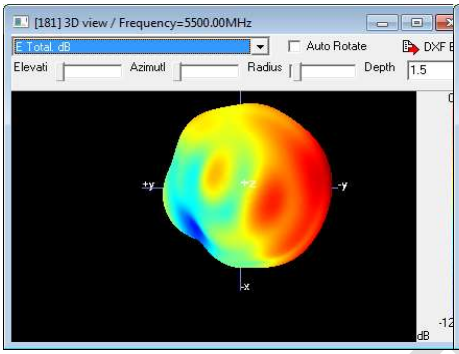
Frequency/频点 5500MHz



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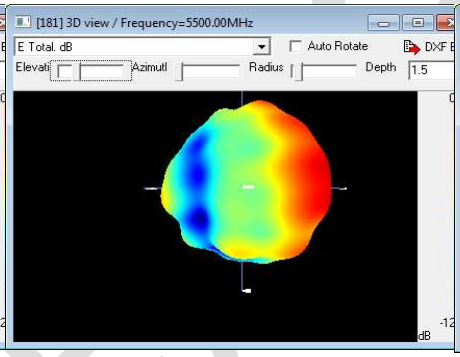

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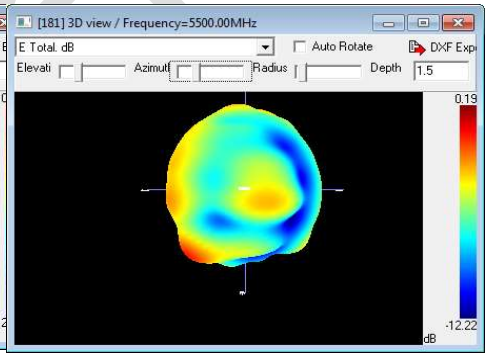

XOZ

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