

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℃		

供应商名称：电连技术股份有限公司

Supplier Name: Electric Connector Technology CO., Ltd.

供应商地址：深圳市光明区玉塘街道长圳社区长凤路电连技术产业园

Supplier Address: Electric Connector Technology Industrial Park, Changfeng Road,
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2. Antenna Picture/天线图片

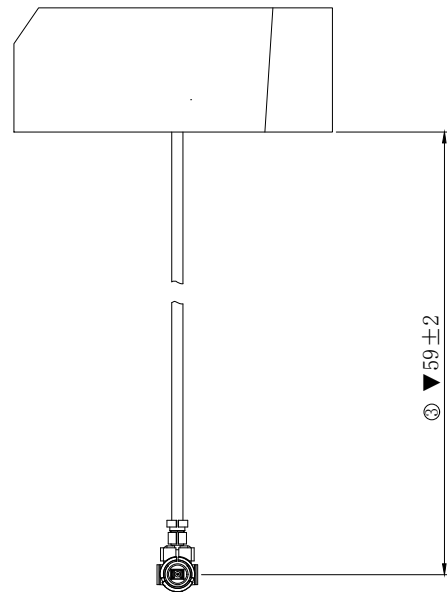
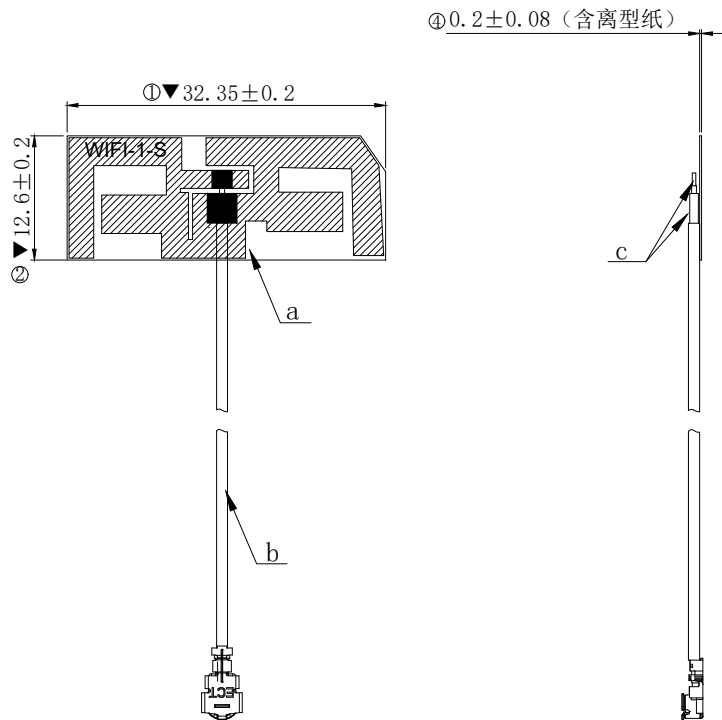
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REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
X1	ECN251288	FIRST RELEASE	03/18' 25	丁第斌	胡鹏	黄颖



NOTES:

- 焊接不能虚焊、假焊，焊点须饱满。
WELDING CAN NOT BE FALSE WELDING,
WELDING SPOT MUST BE FULL.
- 标有“④”为FAI首件全检尺寸。
MARKED“④”WAS FAI DIMENSIONS.
- 标有“▼”为QC重点检测尺寸。
MARKED“▼”WAS CRITICAL DIMENSIONS.
- 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.
- VSWR测试一致性 (VSWR CONSISTENCY TEST)
VSWR测试频率 (VSWR TEST FREQUENCY): xxxxxMHz.



Connector facing down



Connector facing up

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



GENERAL TOLERANCE		SCALE:	
XX. ± 1	XX. ° ± 2°	1:1	
X. ± 0.5	X. ° ± 1.5°	UNIT:	mm
.X ± 0.3	.X. ° ± 1°	SIZE:	
.XX ± 0.10	.X ° ± 0.5°		

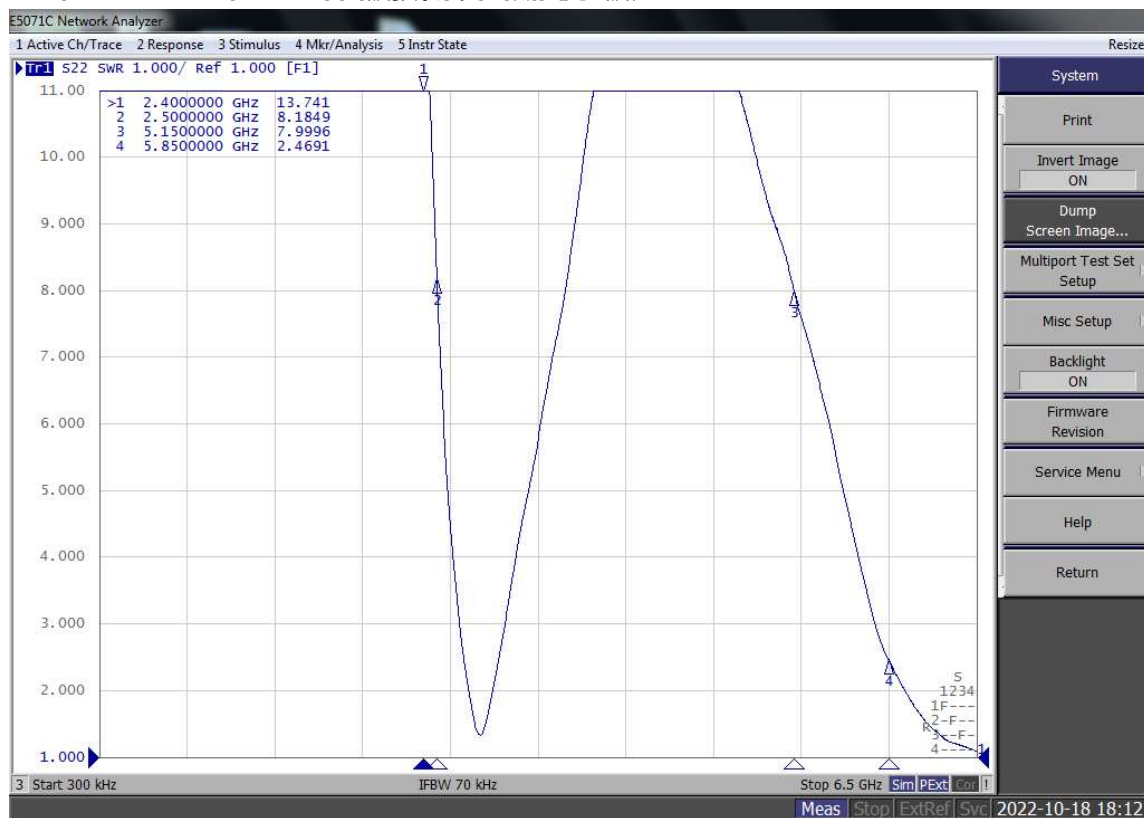
DRAWN:	丁第斌	DATE:	03/18' 25
CHECK:		DATE:	
APPROVE:		DATE:	

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

TITLE:	REV.
A28-WIFI-1-S Customer drawings 客户料号: 115-00049-00 wifil	X1
	SHEET:
	1/1

4. Antenna test result/测试结果

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



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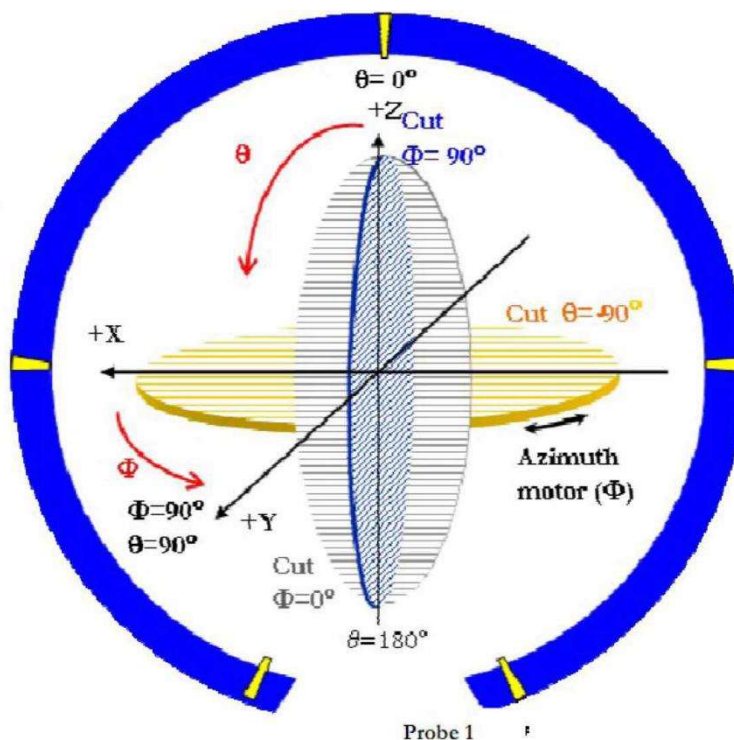
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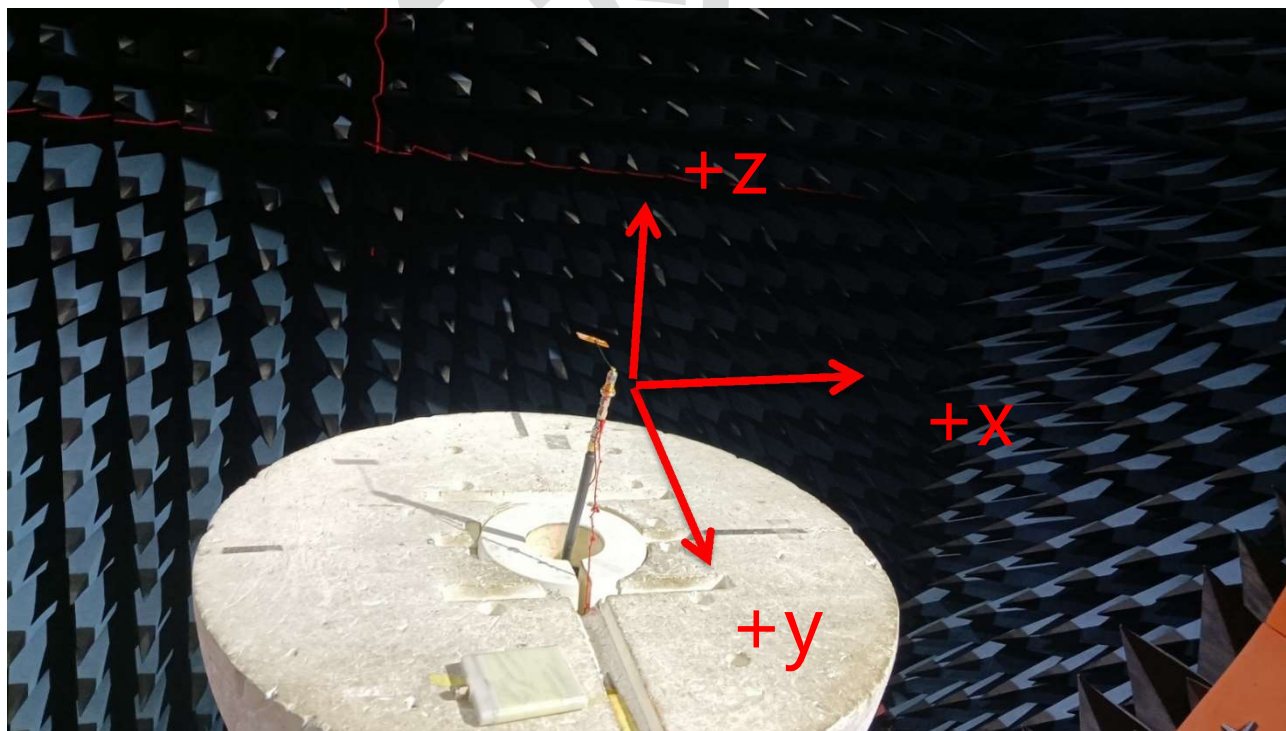
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4.2 The gain and total efficiency test/增益和效率测试

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

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 ELECTRIC CONNECTOR TECHNOLOGY	Product Specification		
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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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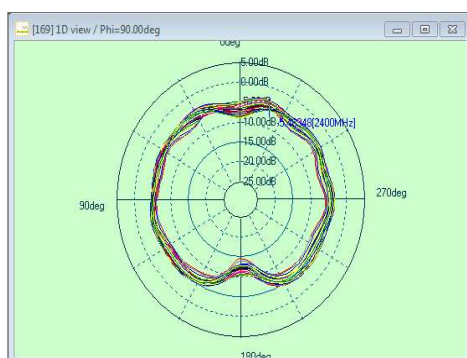
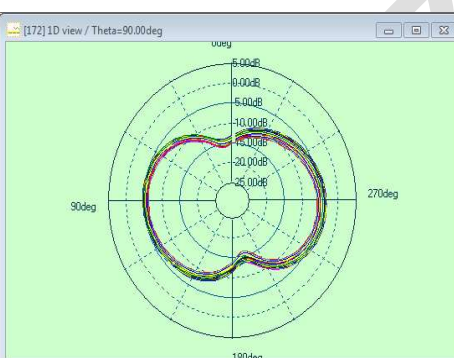
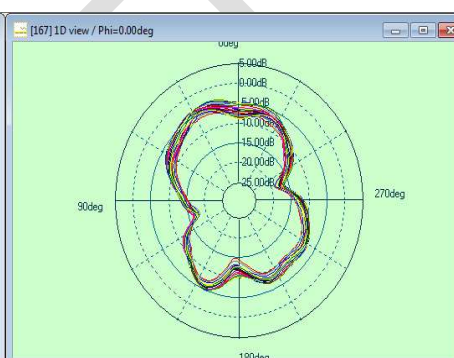
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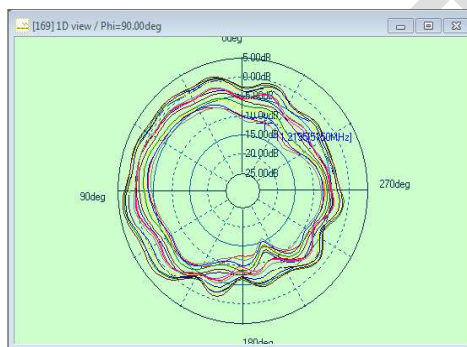
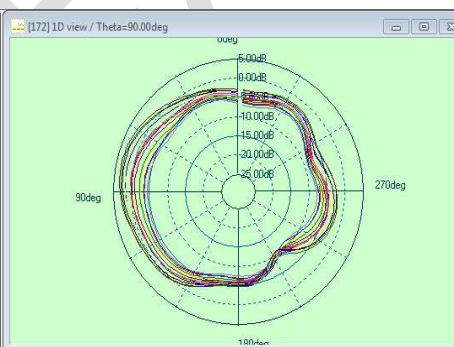
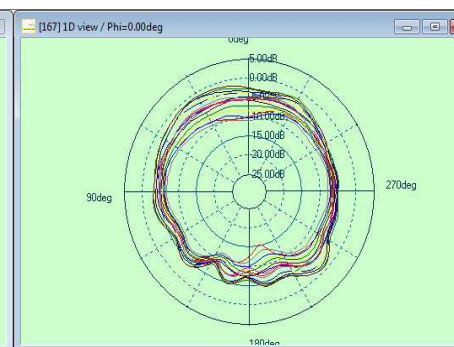
5650MHz	54%	2.24
5700MHz	54%	2.43
5750MHz	68%	3.49
5800MHz	60%	3.20
5850MHz	70%	4.07
AVG	40%	0.13

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

2400MHz -2500MHz


XOY

YOZ

XOZ

5150MHz -5850MHz


XOY

YOZ

XOZ

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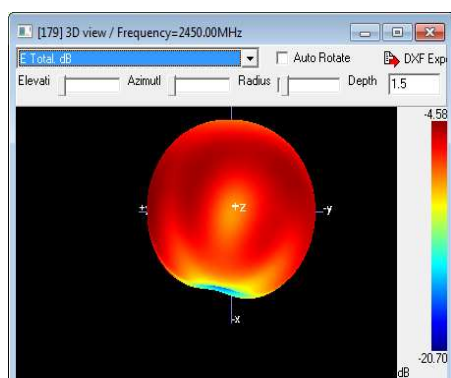
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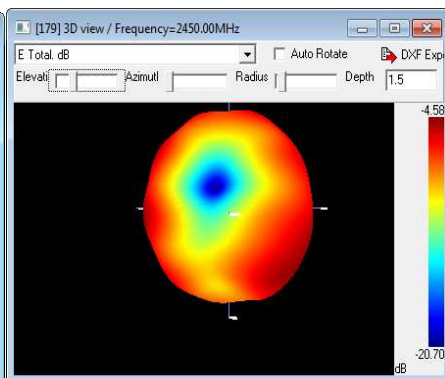
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4.2.4 The antenna radiation pattern(3D)/天线辐射方向图 (3D)

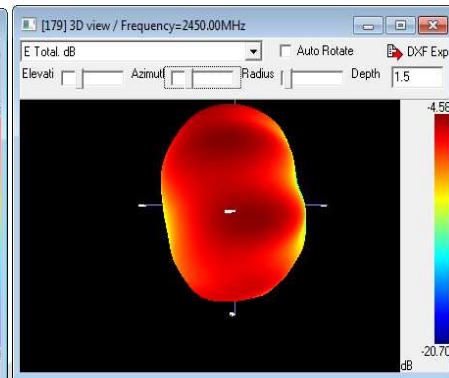
Frequency/频点 2450MHz



XOY

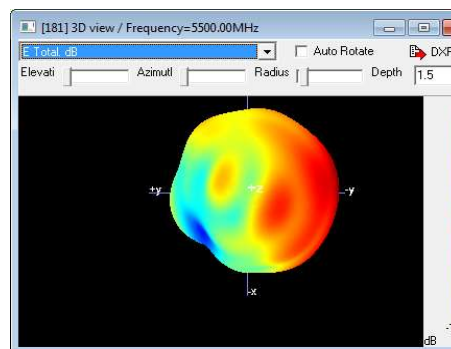


YOZ

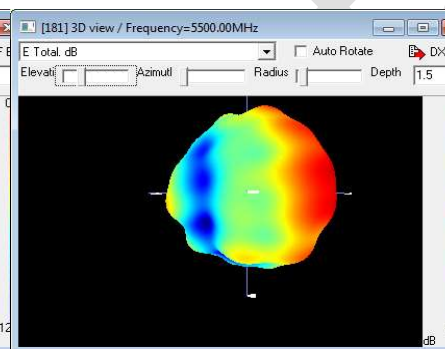


XOZ

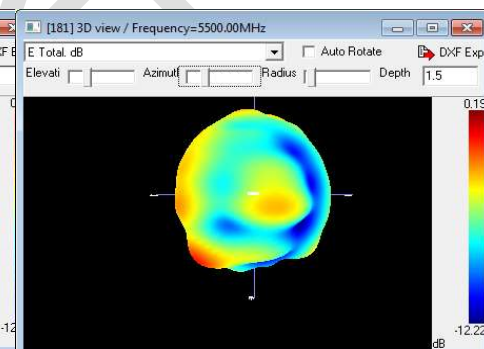
Frequency/频点 5500MHz



XOY



YOZ



XOZ

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