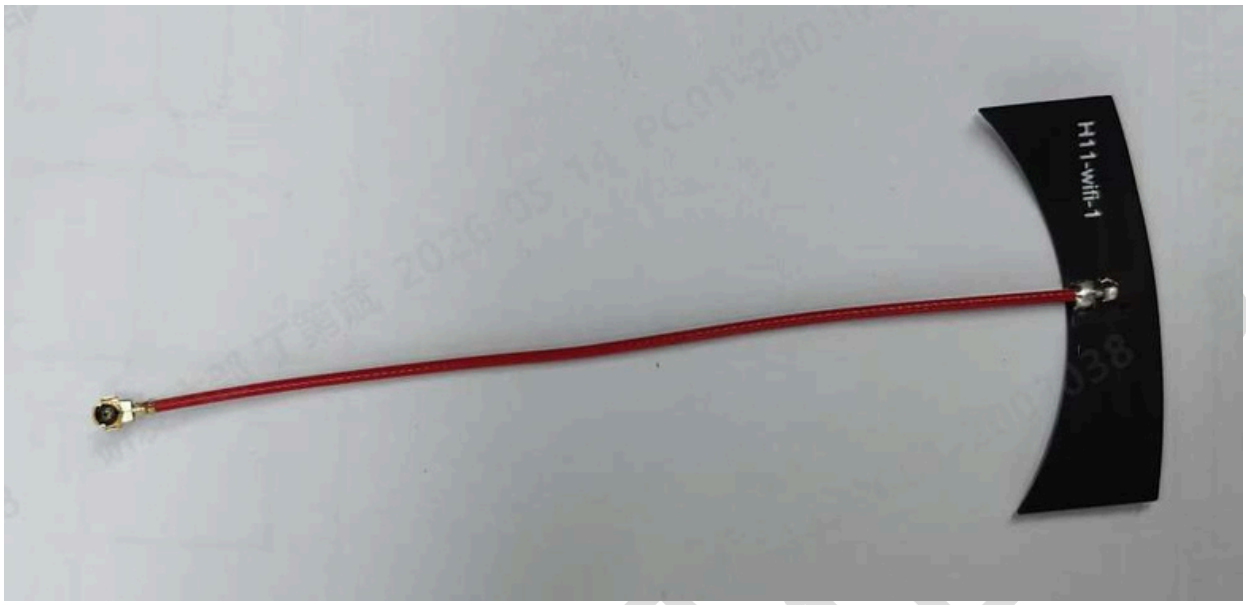
1. Antenna specification/天线标准

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	≤2/≤2	
Directional/辐射方向	Omni directional/全向天线	
Polarization/极化形式	Vertical/垂直	
Peak gain/峰值增益	3.54(dBi)/3.69(dBi)	
Test condition/测试条件	passive test/无源测试	
Total efficiency/无源效率	≥50%/≥40%	
Mechanical Specification/机械指标		
Antenna type/天线类型	FPC+Cable	
Connector type/连接器类型	USS RF Ⅰ	
RF cable type/射频线型号	1.13 LOW LOSS (L=95mm)	
Connector pull test/连接器拉力	10N MIN	
Salt spray/盐雾测试	48(H)	
Environmental specification /环境指标		
Operating temp/工作温度	-40℃～+70℃	
Storage temp/存储温度	-40℃～+75℃	

设计规格书

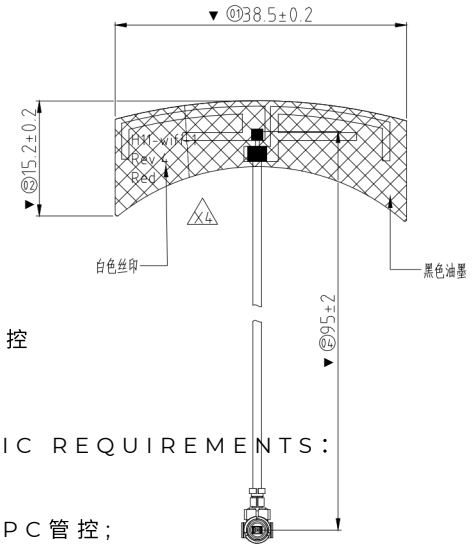
2. Antenna picture/天线图片

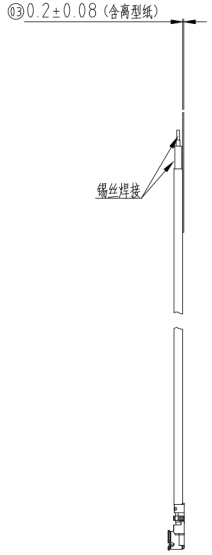


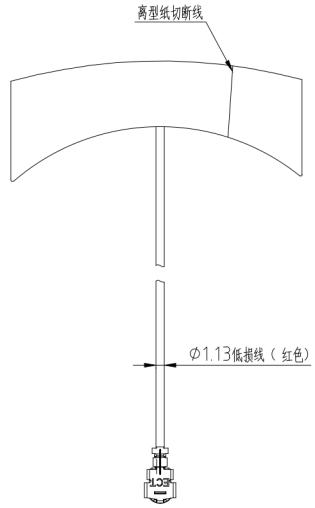
送样规格

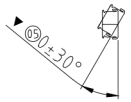
文档密级：
商业秘密

REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN
X1	ECN260393	初版发行	01/16'26	丁第斌
X2	ECN260393	△X2 ×4 更新端子方向和线材颜色	04/02'26	丁第斌
X3	ECN260393	△X3 ×1 更改线长，115改为95	04/30'26	丁第斌
X4	ECN260393	△X4 ×1 更改整体线路+更新丝印	05/14'26	丁第斌









说明

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.有害物质须符合TQE-Q-19-001环境有害物质管理基准》管控标准及最终客户要求
HSF shall conform to the standard QE-Q-19-001 nvironmental Hazardous Substances Management.

3. 尺寸特性要求DIMENSIONAL CHARACTERISTIC REQUIREMENTS:

3-1:标有"▲"为产品关键特性;
MARKED WHIT"▲":THE CRITICAL CHARACTERS;

3-2:标有"★"为产品重要特殊特性,要求做CPK或者SPC管控;
MARKED WHIT"★":THE SIGNIFICIENT CHARACTERS, REQUIRE CPK OR SPC CONTROL;

3-3:标有"▾"为产品重点检验尺寸;
MARKED WHIT"▾":THE KEY INSPECTION DIMENSIONS;

3-4:标有"Ⓧ"为产品FAI全检尺寸;
MARKED WHIT"Ⓧ":THE FAI FULL INSPECTION DIMENSIONS;

3-5:标有"Ⓜ"为产品CCD全检尺寸;MARKED WHIT"Ⓜ"
THE CCD FULL INSPECTION DIMENSIONS.

4.VSWR测试一致性(CONSISTENCY TEST)
VSWR测试频率(VSWR TEST FREQUENCY):
2400-2500MHz，VSWR:<2.0
5150-5850MHz，VSWR:<2.0
校正频率：100-6000MHz
Correction frequency: 100-6000MHz.

Connector facing d

Connector facing u

ITEM	PART No.	DESCRIPTION	QTY	BASE QTY	UNIT

ELECTRIC CONNECTOR TECHNOLOGY

GENERAL TOLERANCE	
.XX± 0.20	ANGLE
.X± 0.15	XX.°± 2°
.X± 0.10	X.°± 1°
.XX± 0.08	.X°± 0.5°

SCALE: 1:1
UNIT: mm
SIZE: A4

DRAWN:	DATE:	
CHECK:	DATE:	
APPROVE:	DATE:	

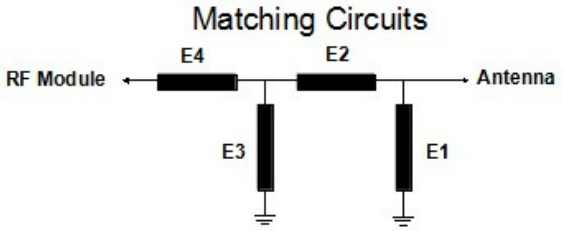
DWG No.: 600-1020109-01
PARTS No.: 8181020109

TITLE: ANT_IN_FPC+CABLE(BK)_L=95_H11_WIFI_1

REV.: X4
SHEET: 1/1

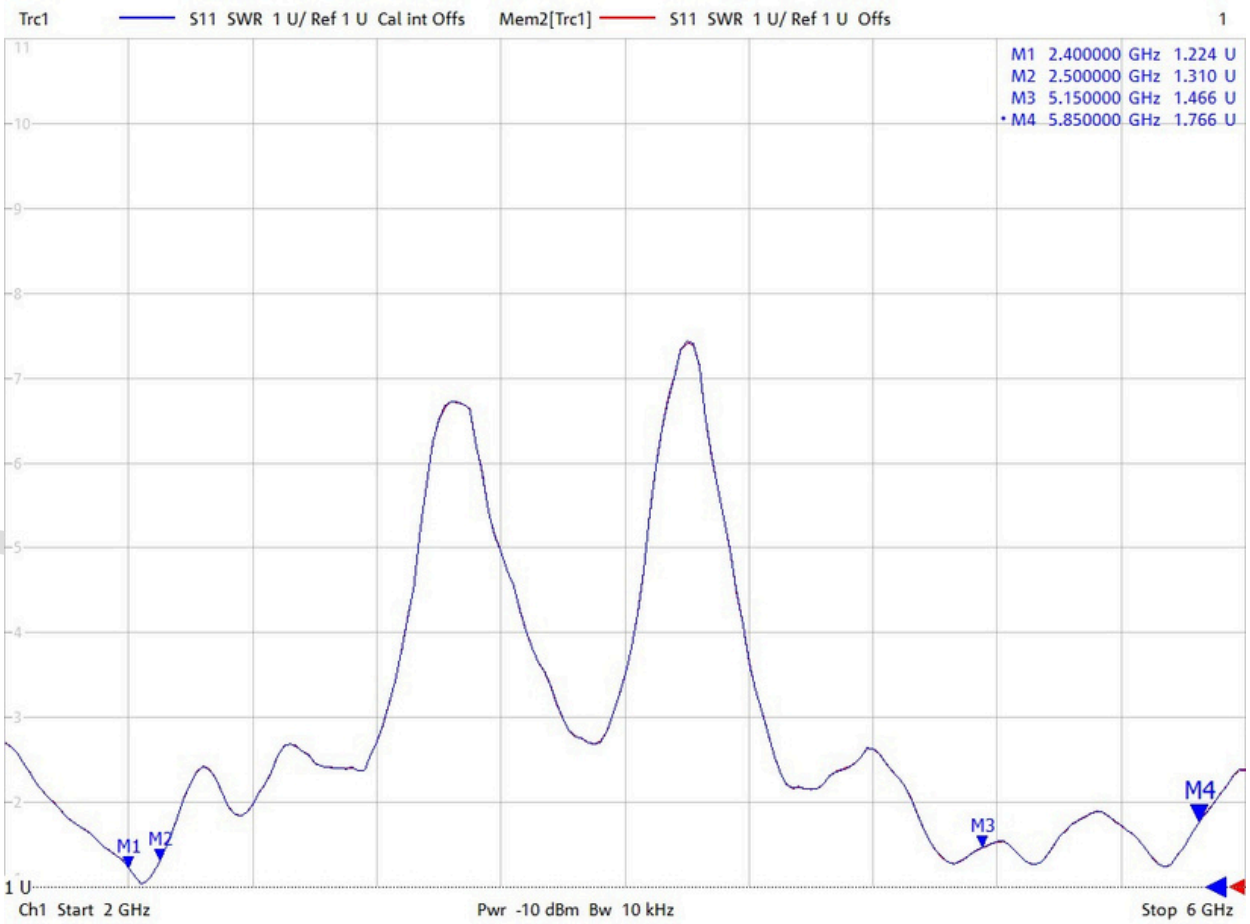
4. Antenna test result/测试结果

4.1 The matching circuits/匹配电路



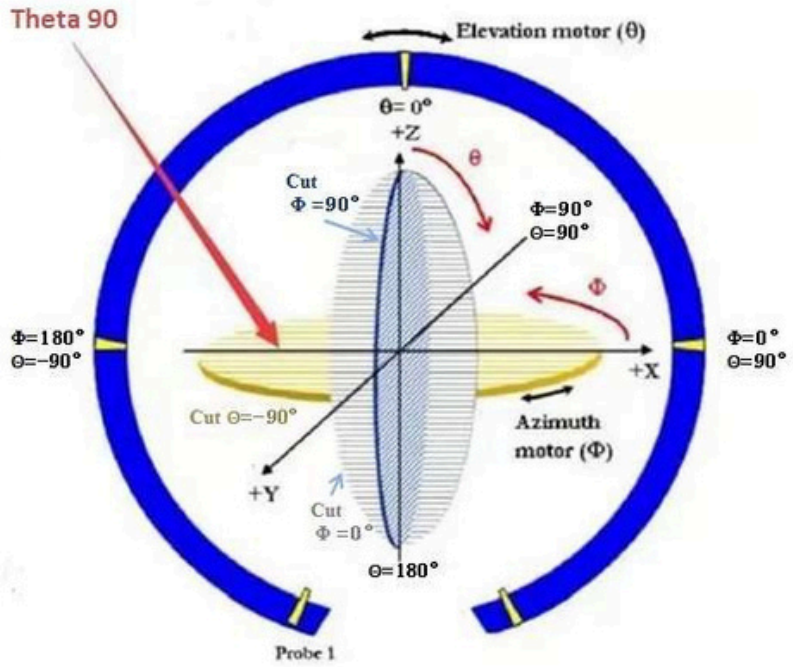
Element	Value
E1(0201)	NC
E2(0201)	0Ω
E3(0201)	NC
E4(0201)	0Ω

4.2Return loss/Smith chart/VSWR/回波损耗/史密斯图/驻波比



4.3The gain and total efficiency test/增益和效率测试

4.3.1Thedefinitionofcoordinatesystem/坐标系定义-Satimo SG24



The coordinate systemof Chamber/暗室坐标系

The production test position/天线测试放置位置

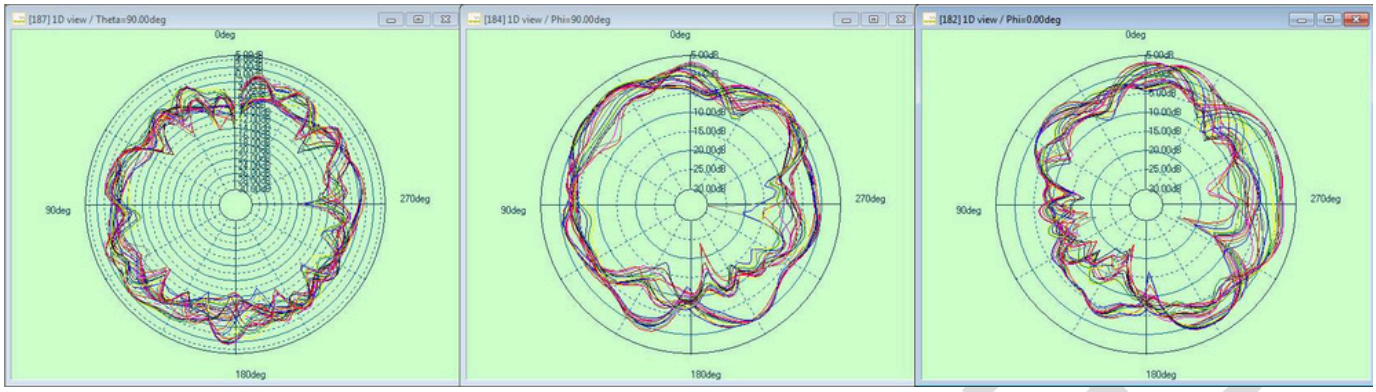
4.3.2 The test result of total efficiency and total gain/天线效率及增益测试结果

2400MHz-2500MHz/5150MHz-5850MHz		
Frequency(MHz)	Gain (dBi)	Efficiency(%)
2400MHz	3.35	59%
2410MHz	3.23	58%
2420MHz	3.11	59%
2430MHz	3.05	58%
2440MHz	2.99	59%
2450MHz	3.01	59%
2460MHz	3.09	59%
2470MHz	3.05	58%
2480MHz	3.12	57%
2490MHz	3.49	56%
2500MHz	3.54	56%
5150MHz	3.26	55%
5200MHz	3.16	52%
5250MHz	3.18	48%
5300MHz	3.61	49%
5350MHz	3.69	49%
5400MHz	3.36	47%
5450MHz	2.70	45%
5500MHz	2.76	46%
5550MHz	3.14	46%
5600MHz	3.13	46%
5650MHz	3.15	46%
5700MHz	3.36	46%
5750MHz	3.53	46%
5800MHz	3.17	46%
5850MHz	3.43	46%

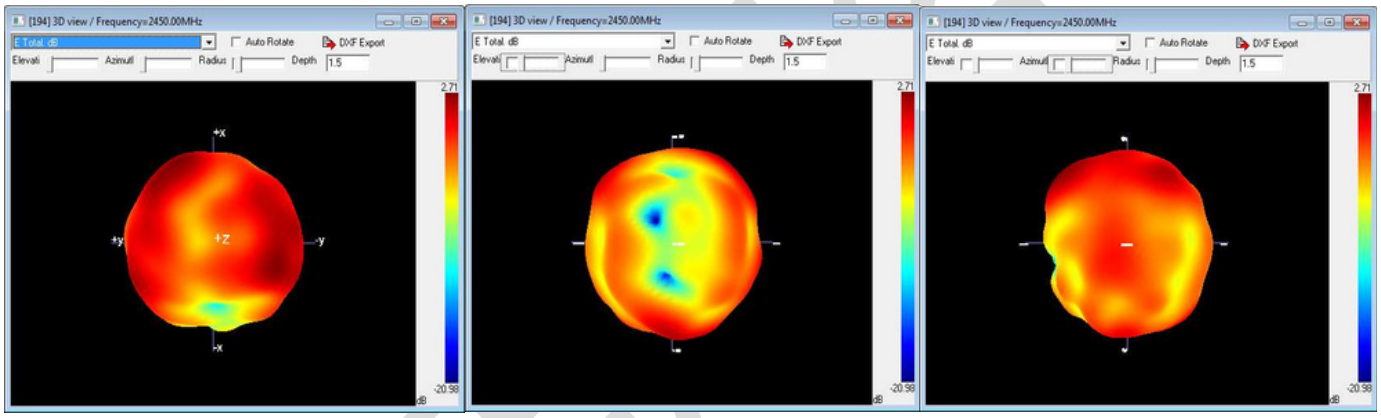
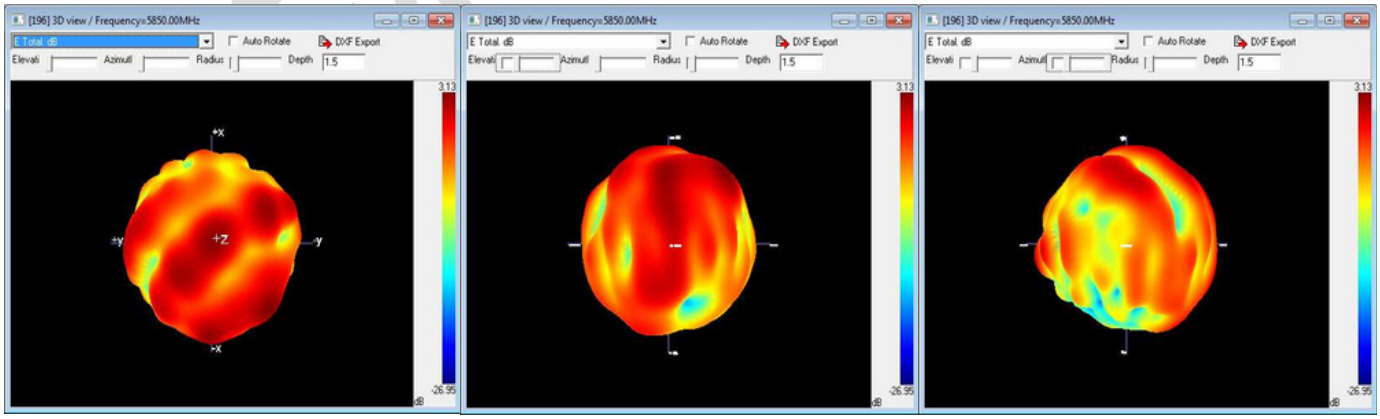
选择线格书

4.3.3The antenna radiation pattern(2D/3D View)/天线辐射方向图(2D/3D)

2400MHz-2500MHz/5150MHz-5850MHz



2450MHz



5850MHz