WIFI6 Passive antenna report

client：	乐逍遥
item：	N100-SE
Antenna modification：	A0
Preparation engineering：	Guoxi（18970988655）
auditor：	Li Sheng（13683276589）
date：	2024.11.29

Contents:

This report is to debug the performance of N100-SE, antenna operating frequency of 主： 2400-2500MHz 5150-5850MHz
副： 2400-2500MHz 5150-5850MHz

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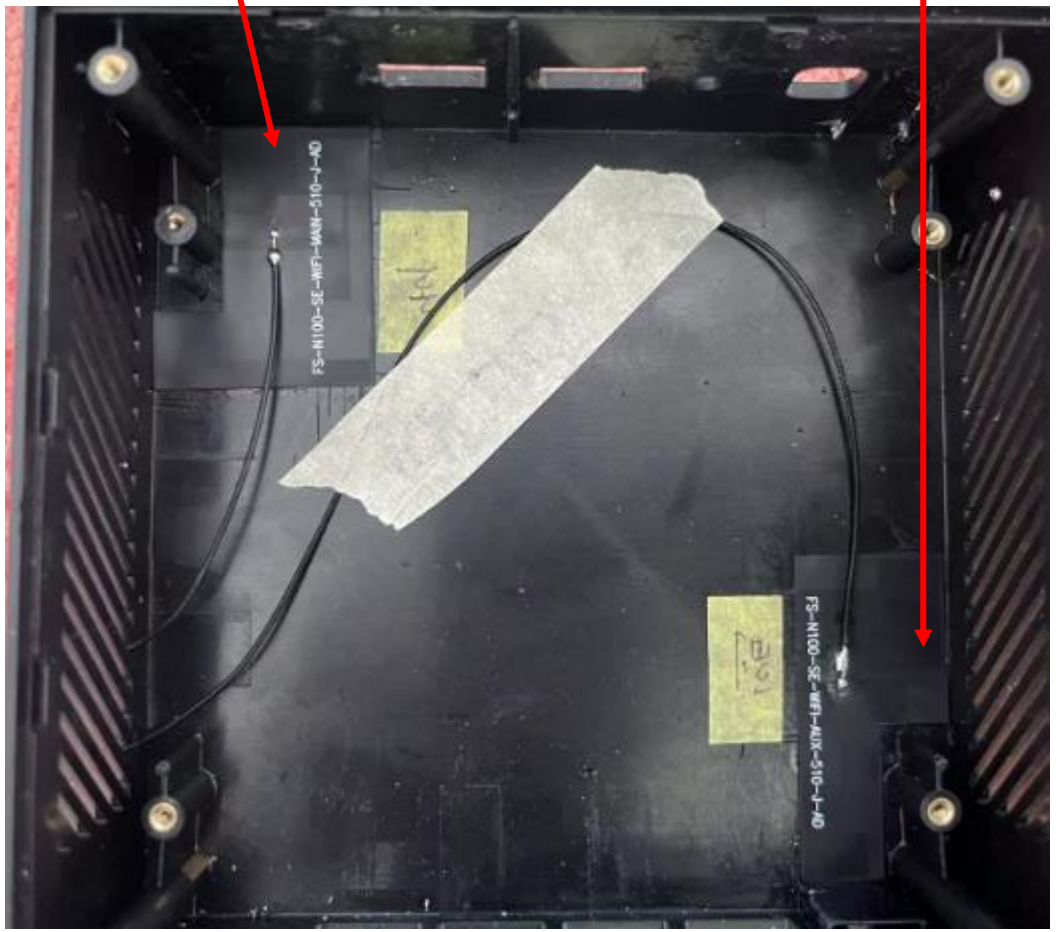
1、 Product graphics

Product pictures

Main antenna

AUX antenna



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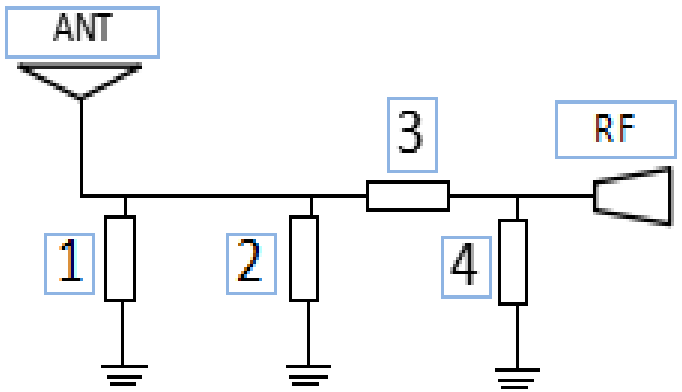
2、Test system

Serial number	Testing instrument
S11 Parameters	Agilent 5071B
OTA testing	Agilent 5071B &CMW500 & Agilent 8960 & 飞图暗室
Gain and efficiency	Agilent 5071B &飞图暗室

3、 Antenna matching



Serial number	capacitance	inductance
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A

PCB end matching circuit is unchanged

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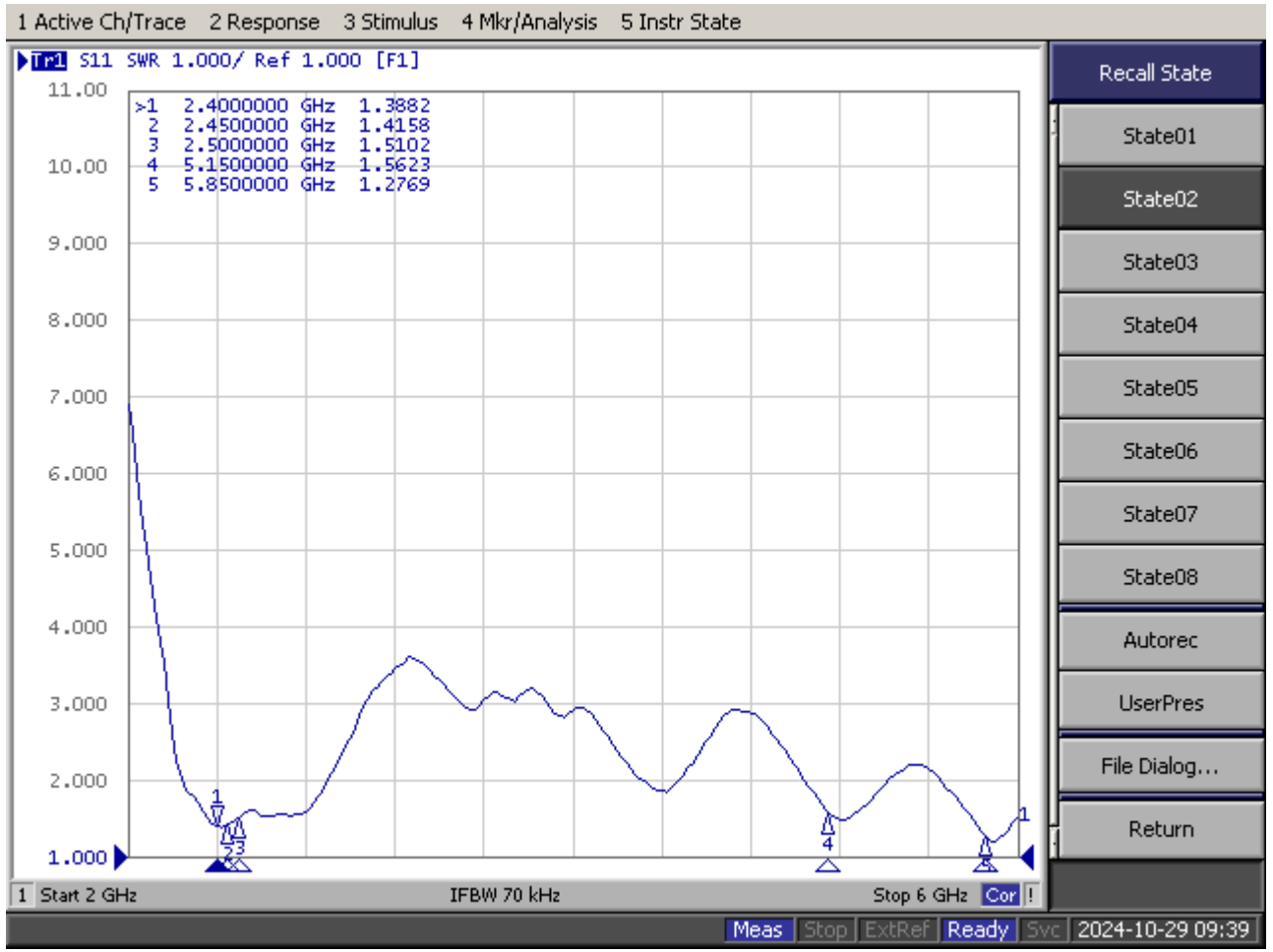
4、 The antenna test results

4.1 S11 Parameters——Main



Frequency（工作频段）	2400	2450	2500	5150	5850
VSWR（驻波比）	1.38	1.41	1.51	1.56	1.27

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4、 Antenna test result

4.2 Efficiency gain ——Main

Frequency (MHz) （工作频段）	Efficiency (%) （效率）	Peak GAIN (dBi) （增益）
2400	63.68	2.43
2450	65.39	2.74
2500	66.32	2.31
5150	55.15	2.48
5850	55.40	3.45

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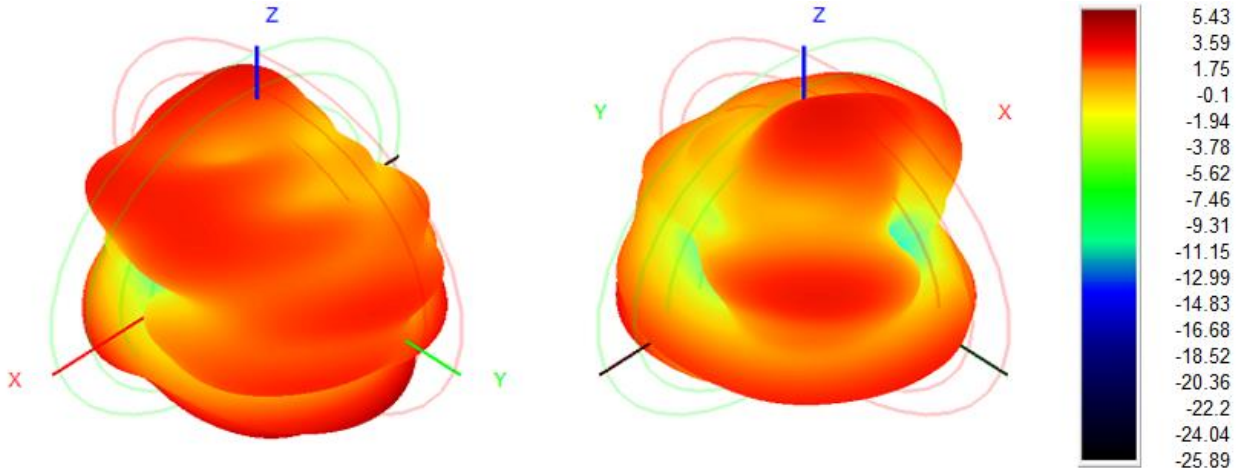
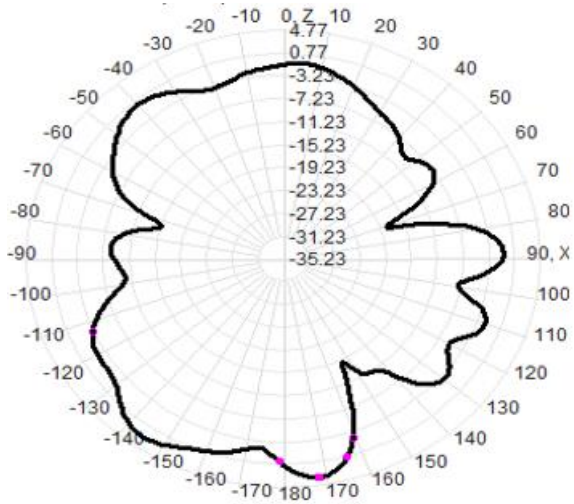
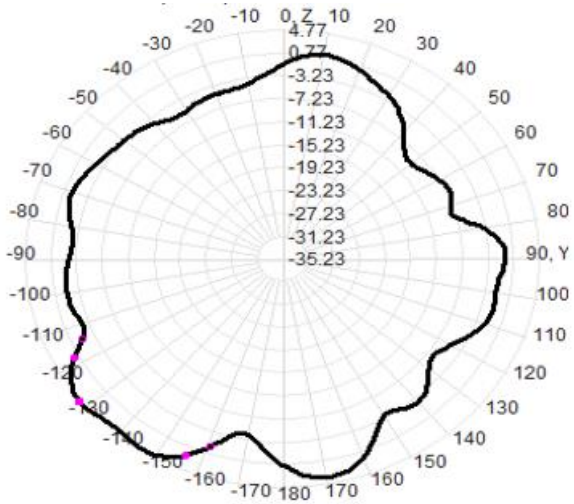
4、 Antenna test result

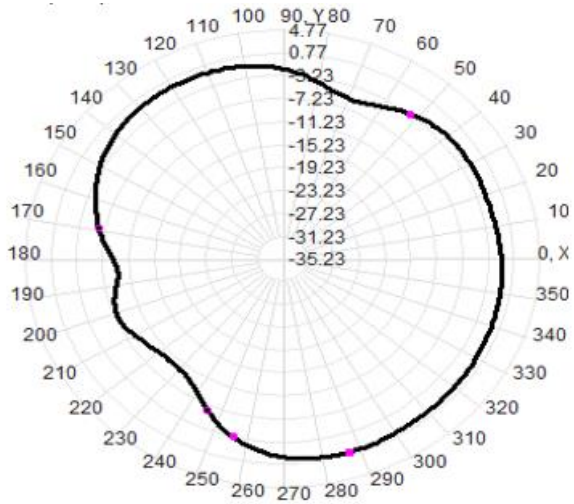
4.3 Two, three-dimensional graphics ——Main

2400MHz





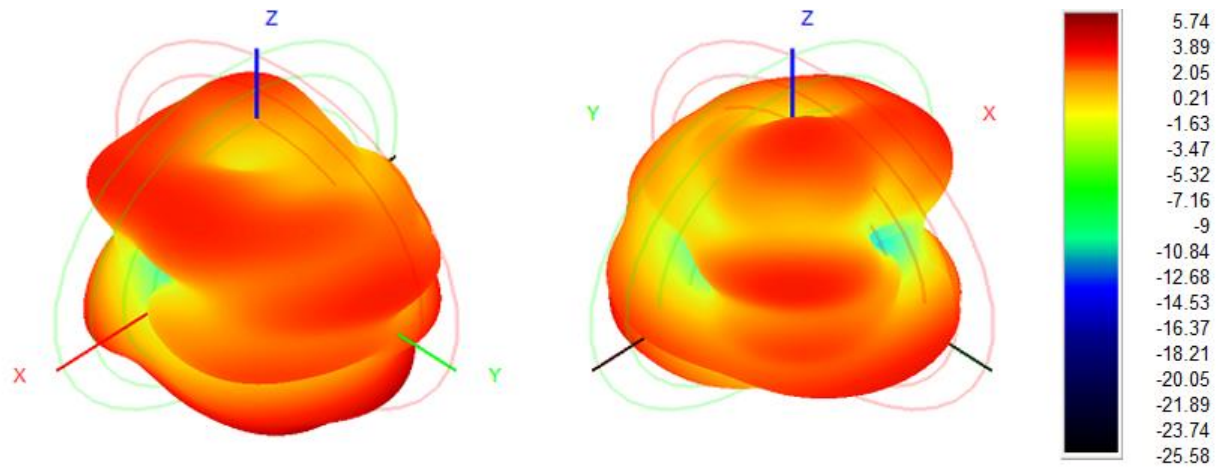


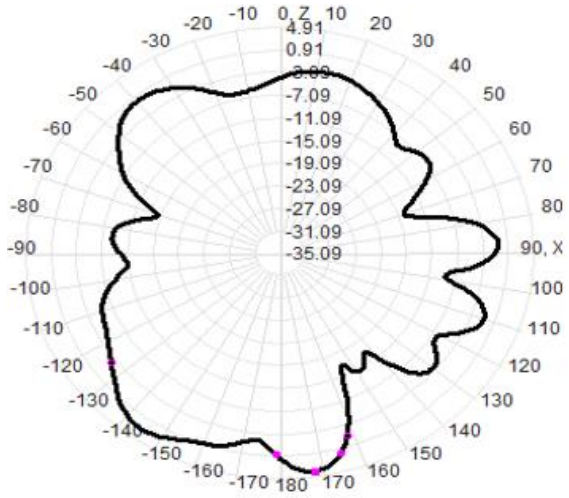


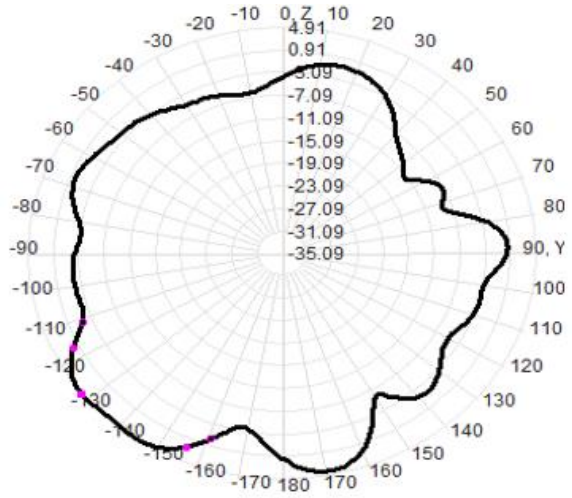
4、 Antenna test result

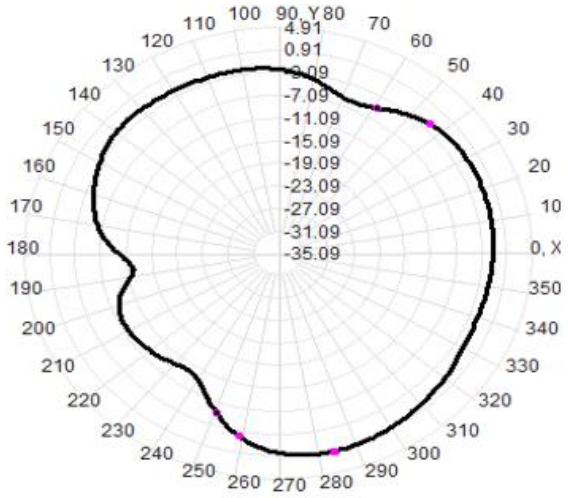
4.3 Two, three-dimensional graphics ——Main

2450MHz









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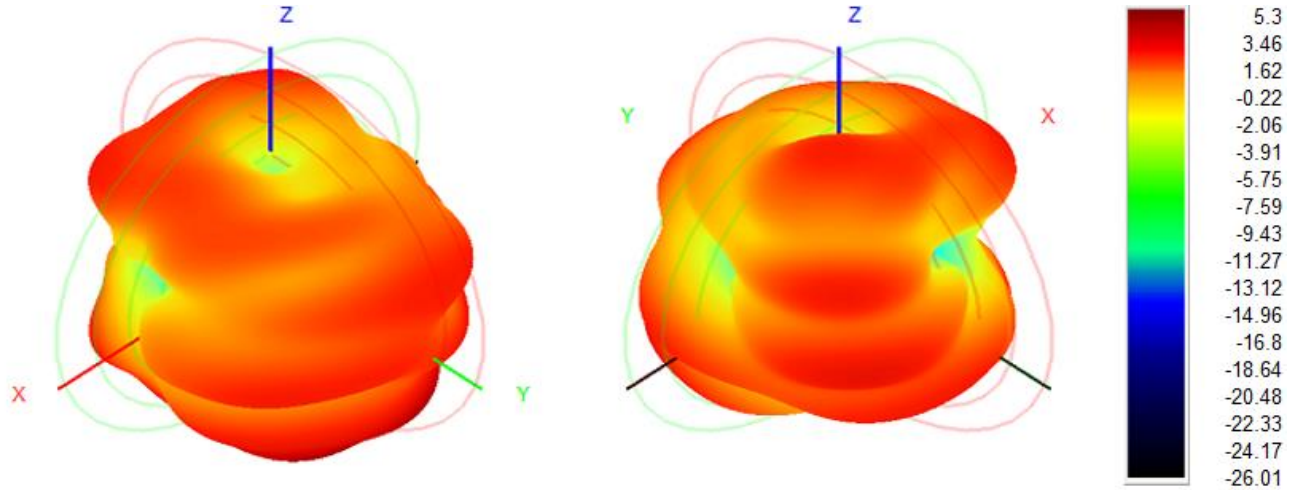
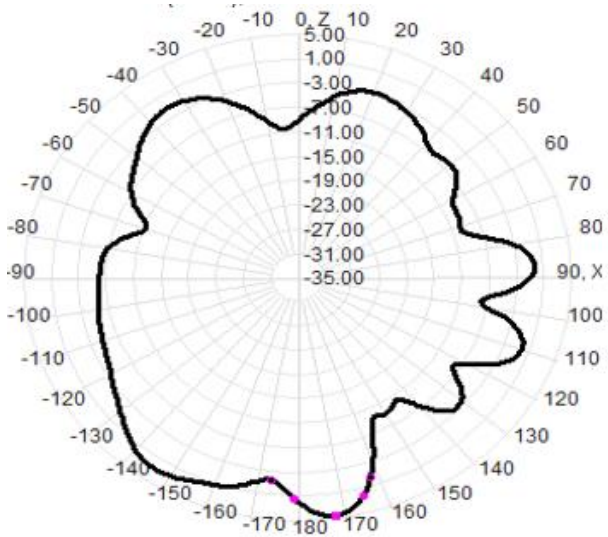
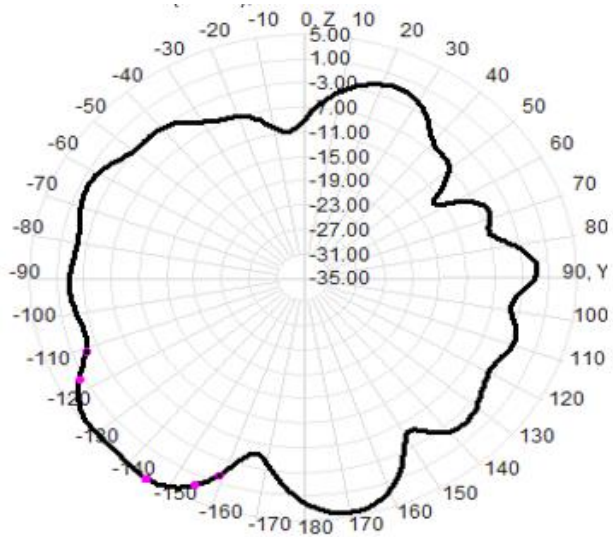
4、 Antenna test result

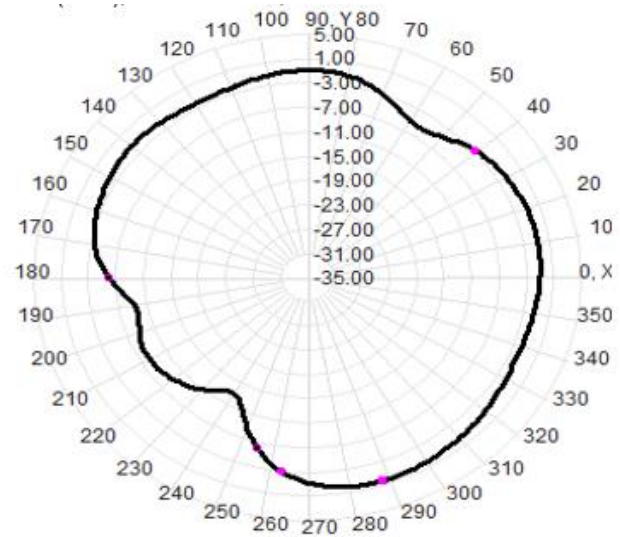
4.3 Two, three-dimensional graphics ——Main

2500MHz





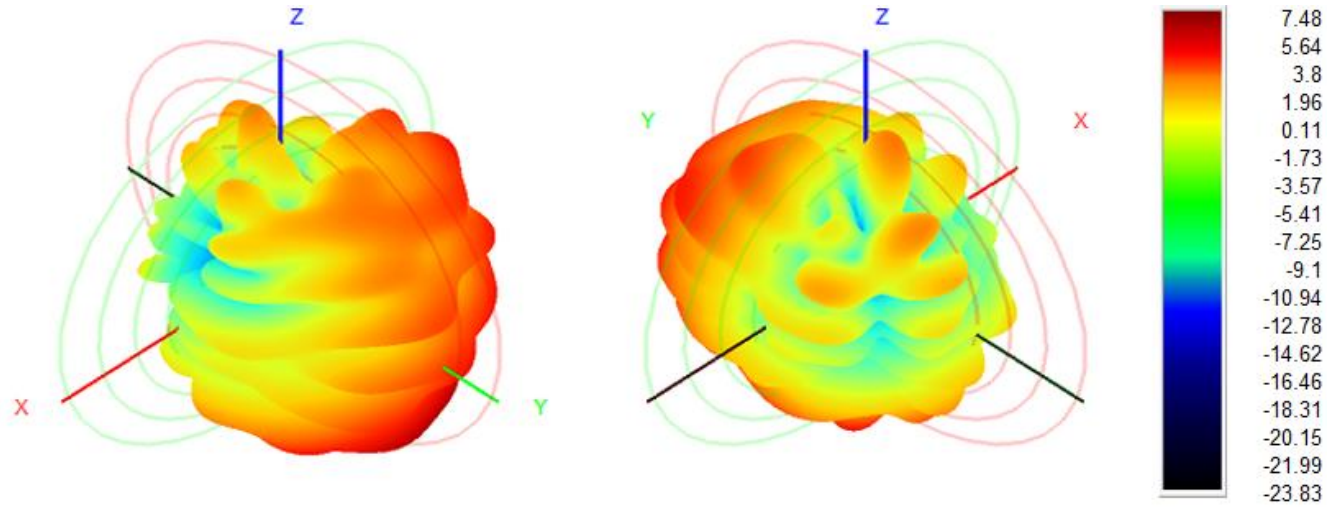


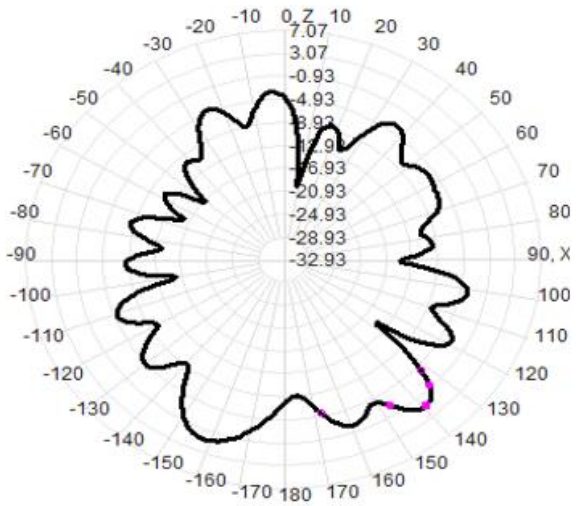


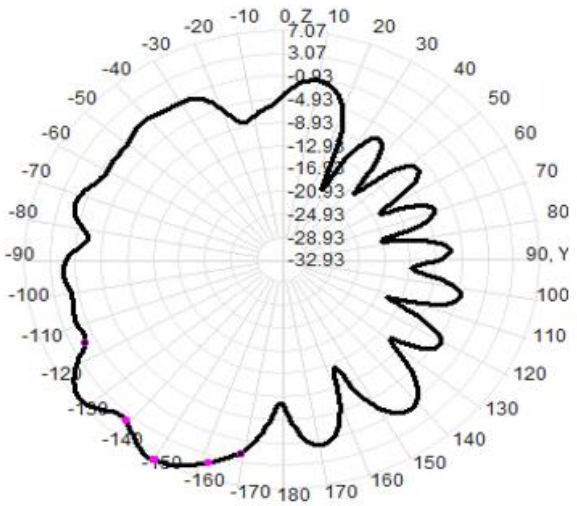
4、 Antenna test result

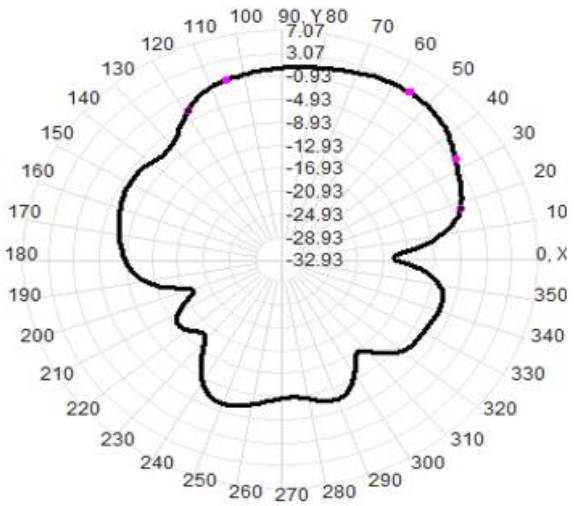
4.3 Two, three-dimensional graphics ——Main

5150MHz





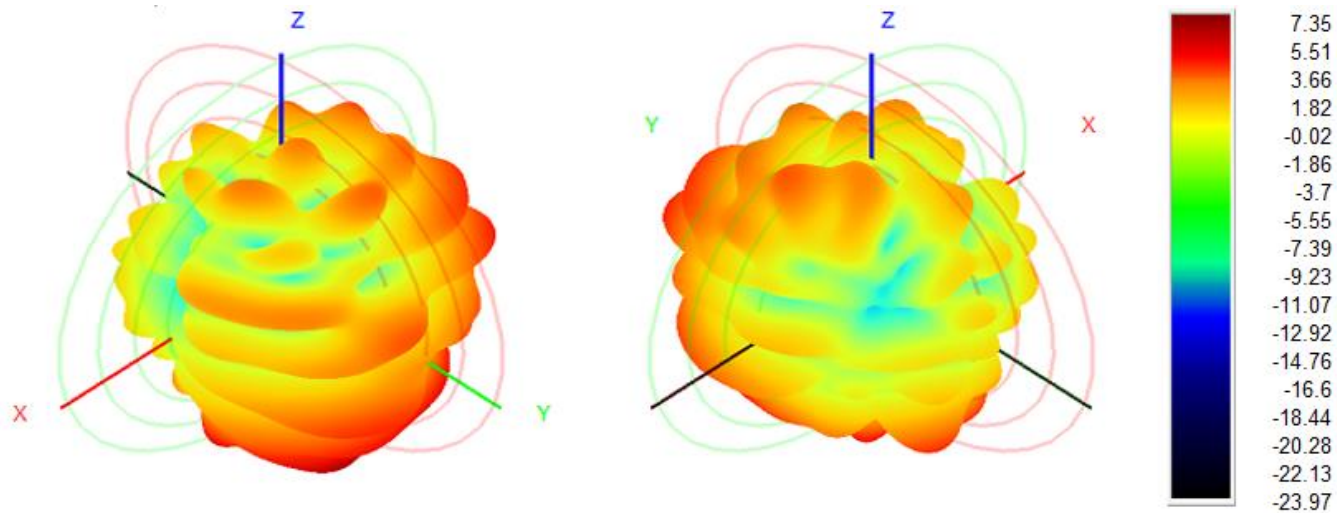


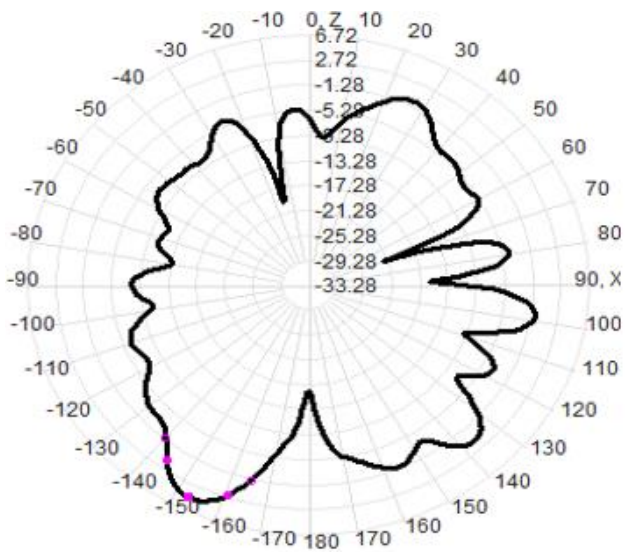


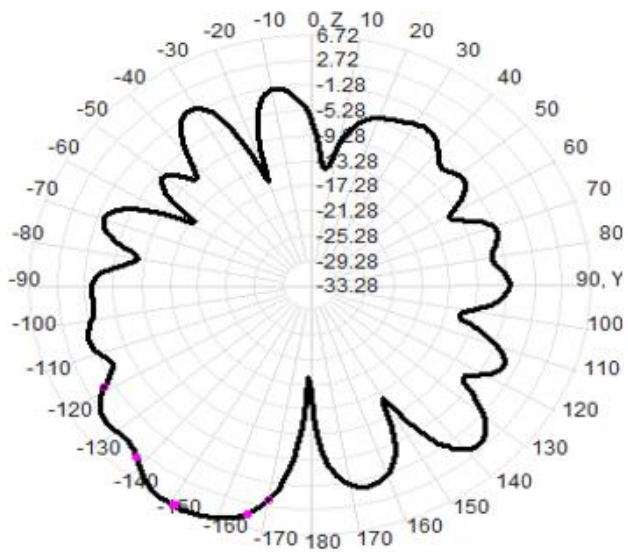
4、 Antenna test result

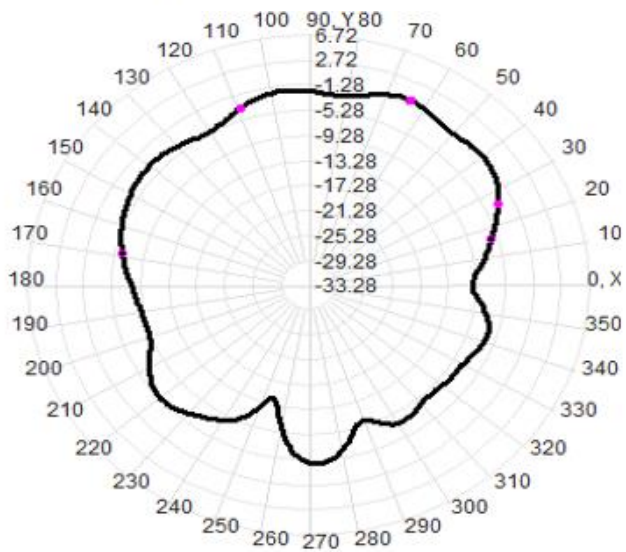
4.3 Two, three-dimensional graphics ——Main

5850MHz









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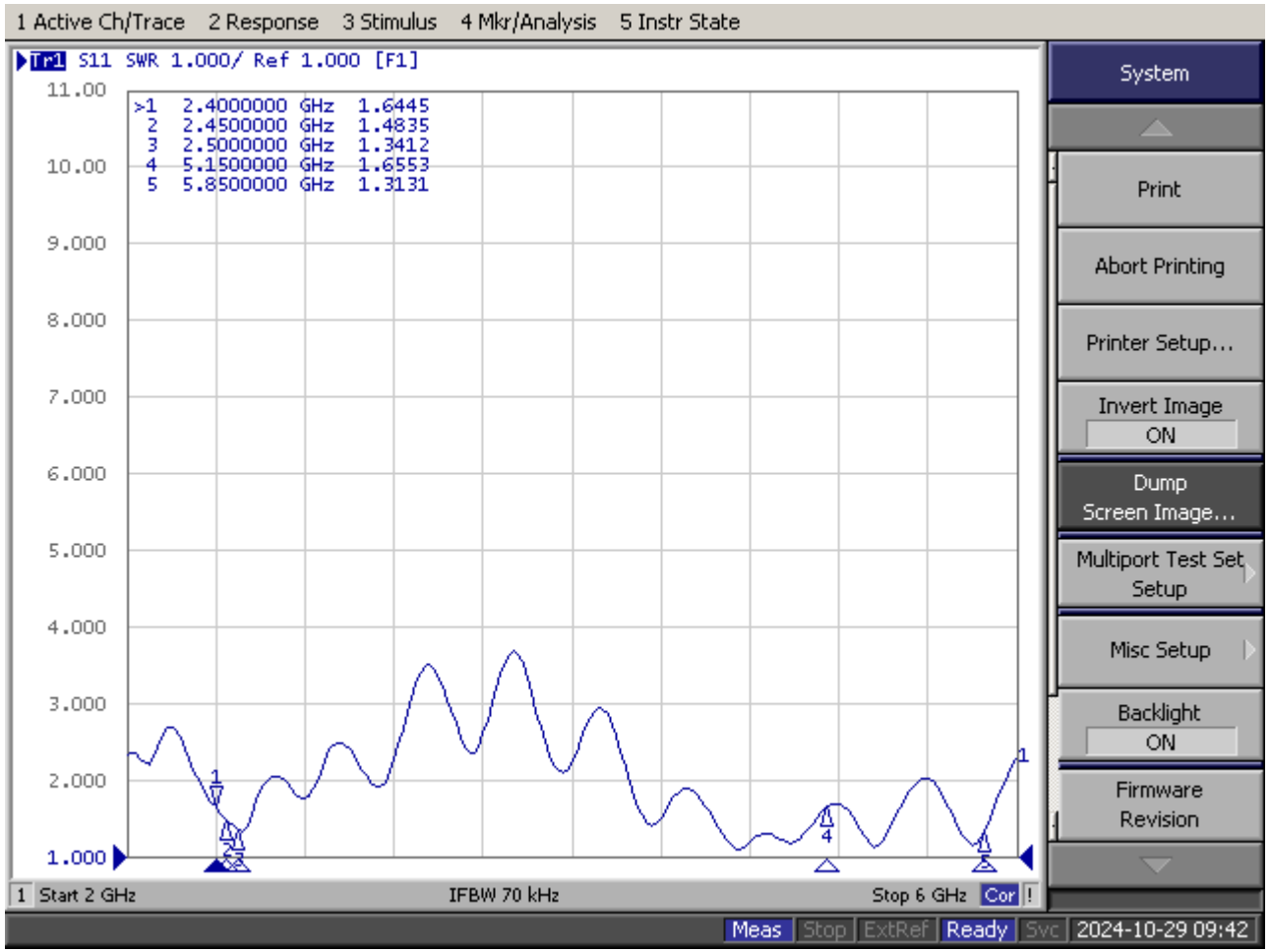
5、 The antenna test results

5.1 S11 Parameters——AUX



Frequency（工作频段）	2400	2450	2500	5150	5850
VSWR（驻波比）	1.64	1.48	1.36	1.65	1.31

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5、 Antenna test result

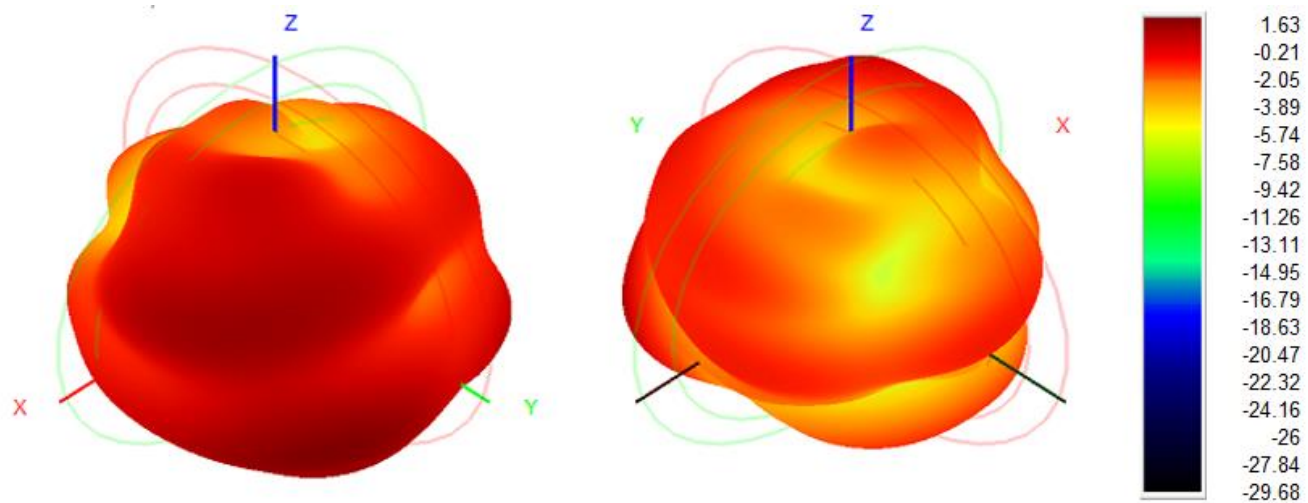
5.2 Efficiency gain ——AUX

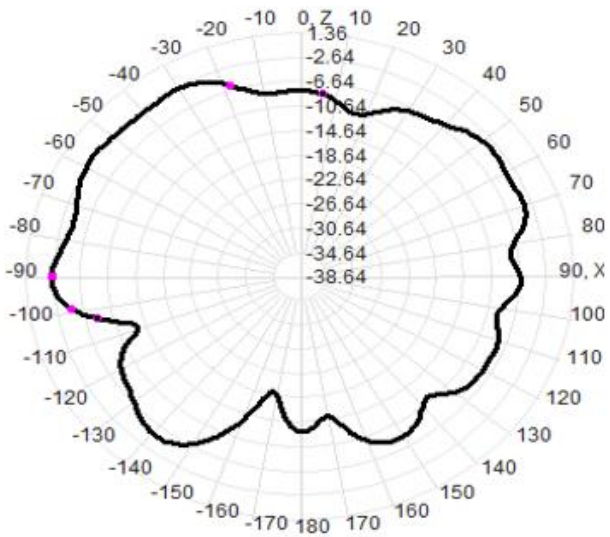
Frequency (MHz) （工作频段）	Efficiency (%) （效率）	Peak GAIN (dBi) （增益）
2400	38.59	1.63
2450	42.99	2.20
2500	48.74	2.28
5150	49.28	2.92
5850	46.67	2.22

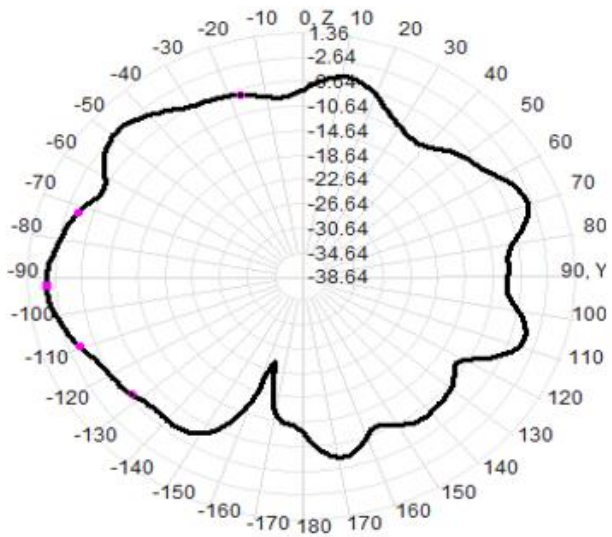
5、 Antenna test result

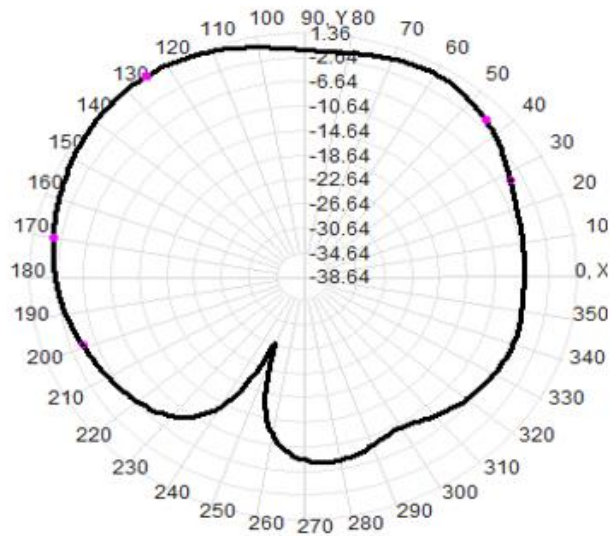
5.3 Two, three-dimensional graphics ——AUX

2400MHz









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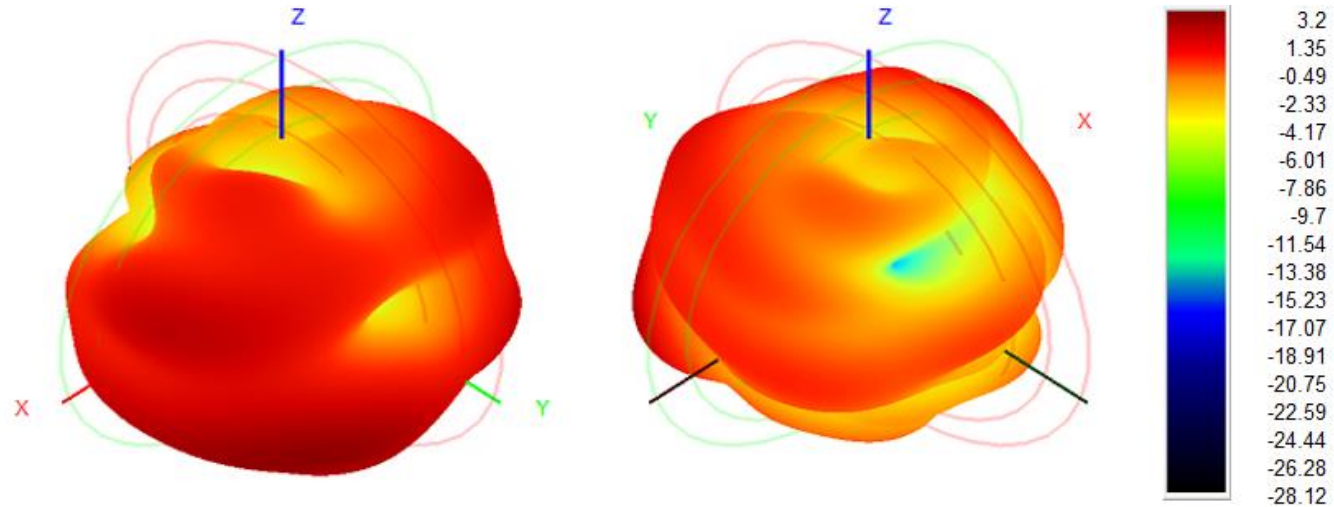
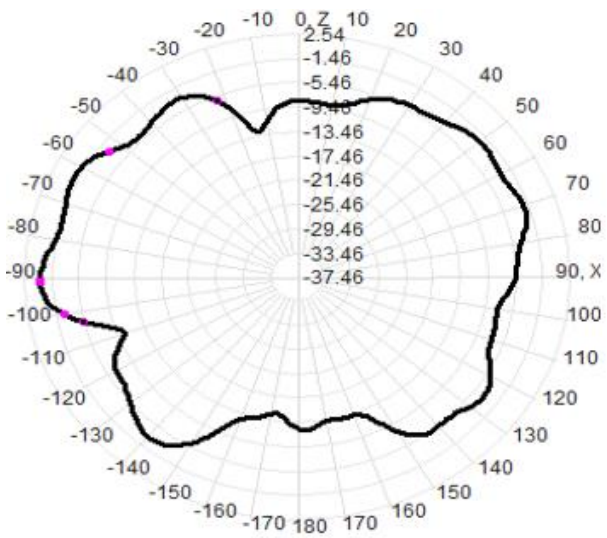
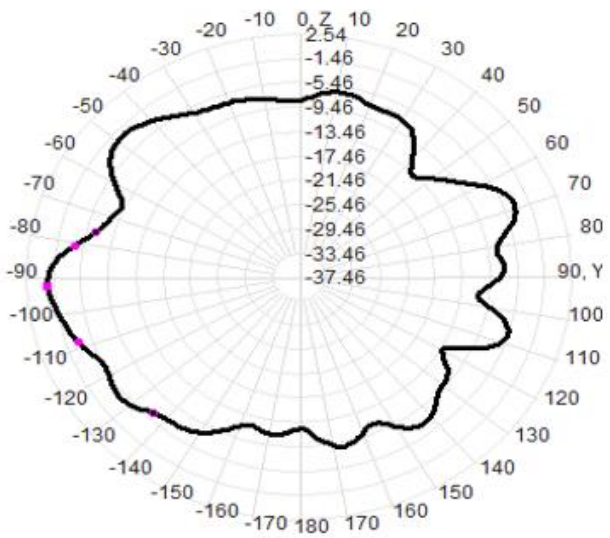
5、 Antenna test result

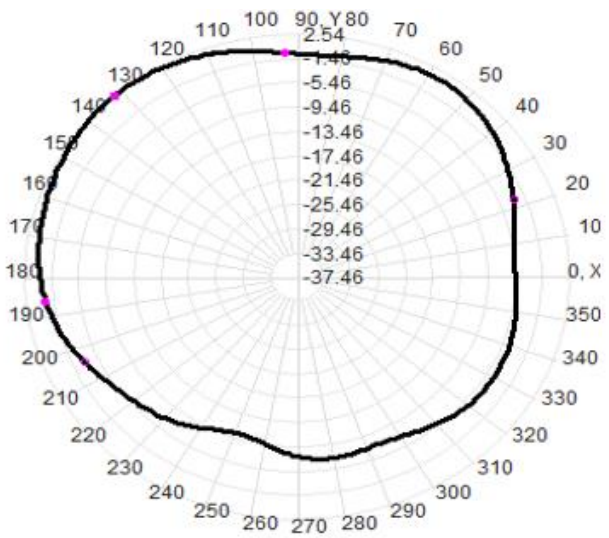
5.3 Two, three-dimensional graphics ——AUX

2450MHz









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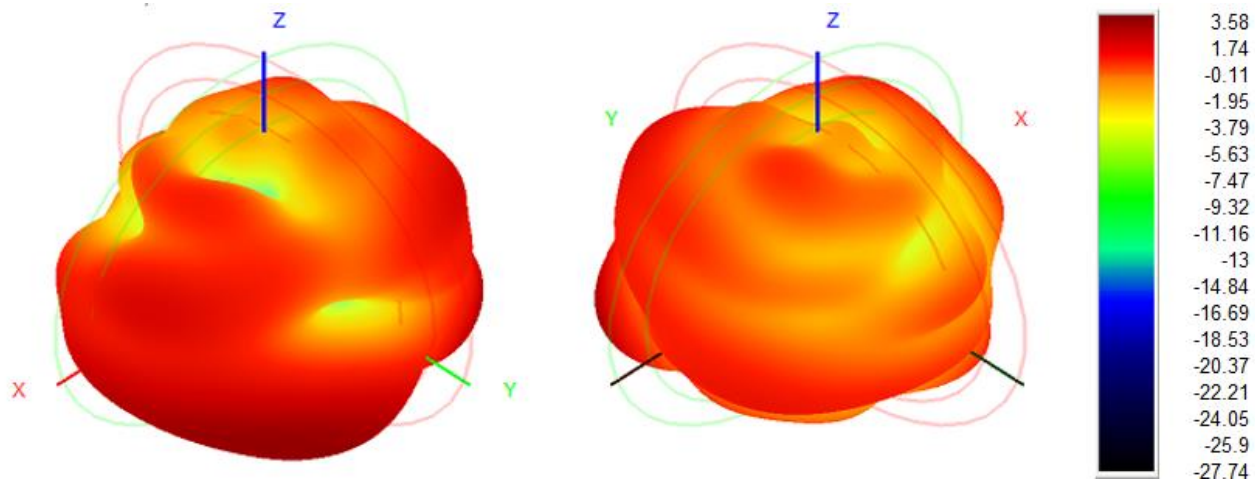
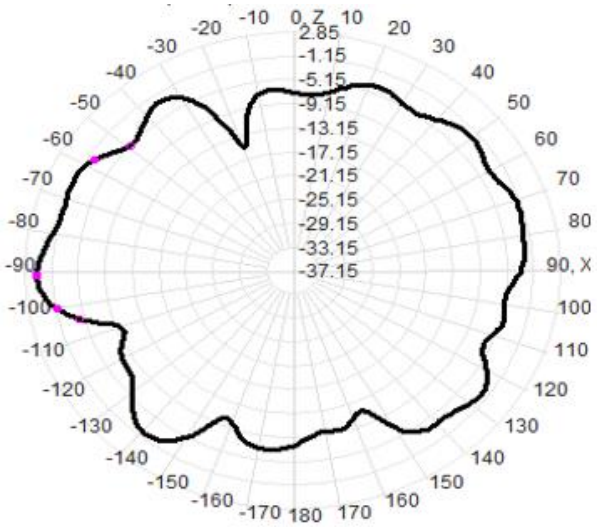
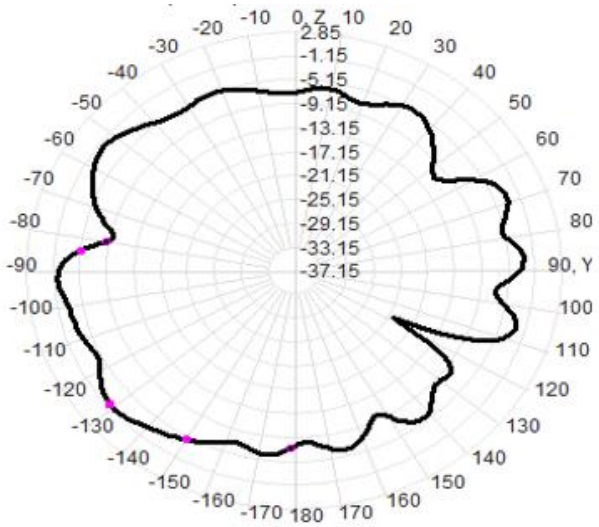
5、 Antenna test result

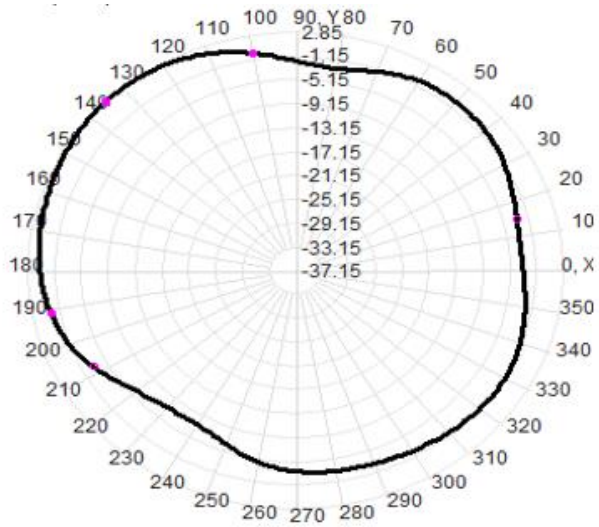
5.3 Two, three-dimensional graphics ——AUX

2500MHz





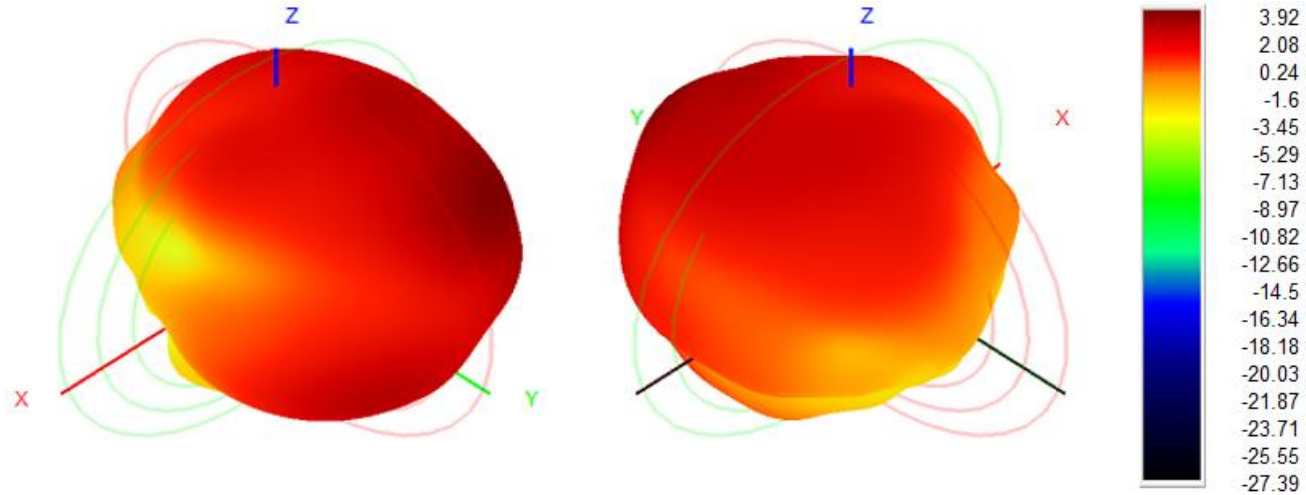


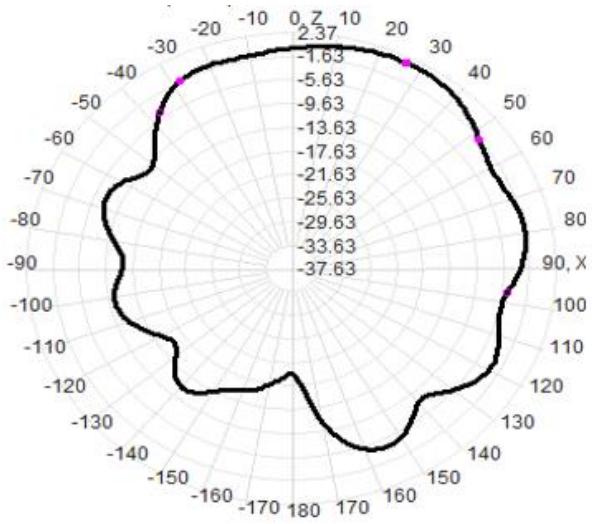


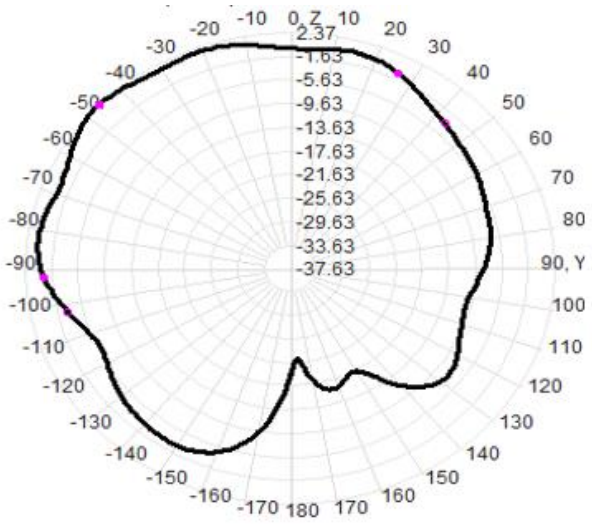
5、 Antenna test result

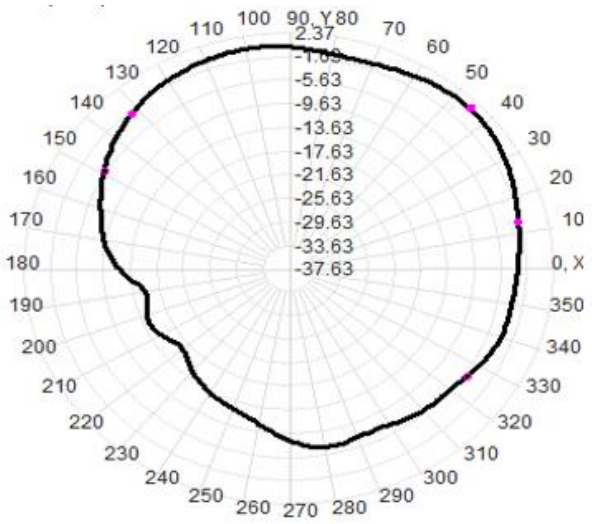
5.3 Two, three-dimensional graphics ——AUX

5150MHz





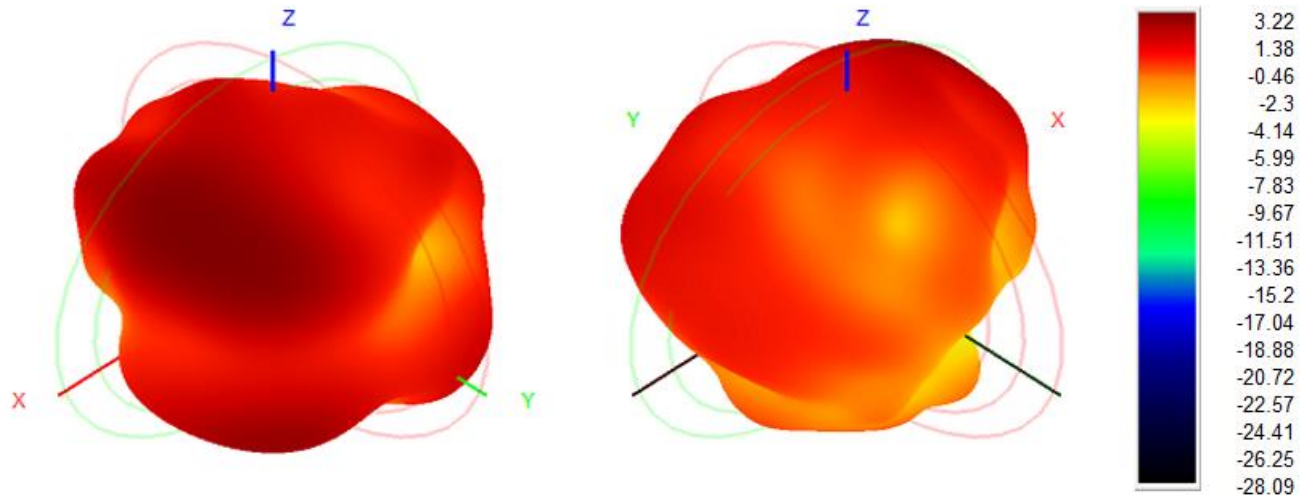


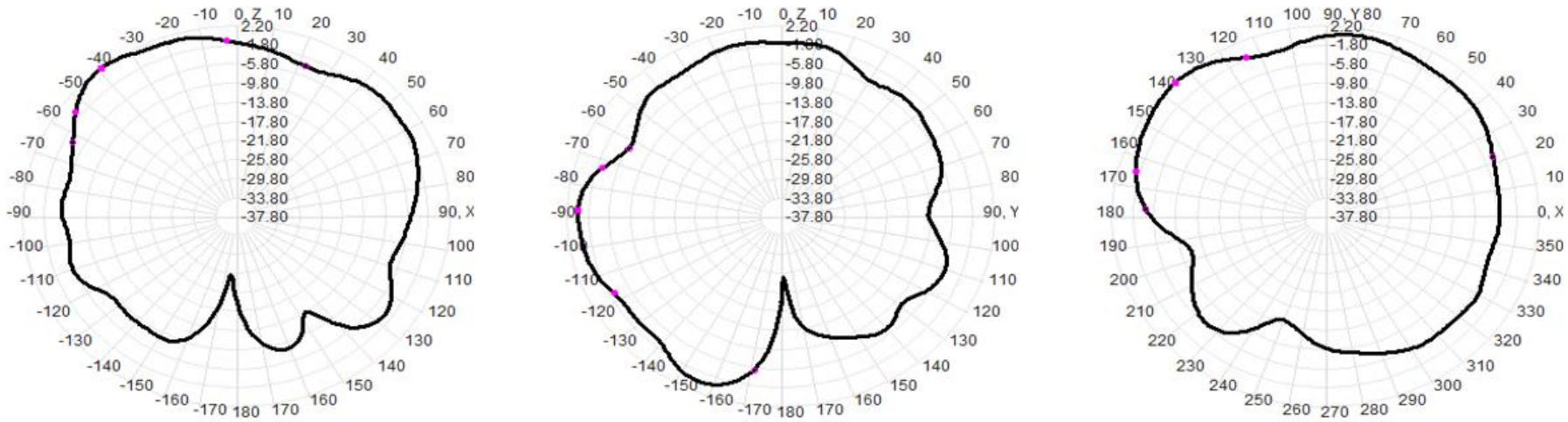


5、 Antenna test result

5.3 Two, three-dimensional graphics ——AUX

5850MHz





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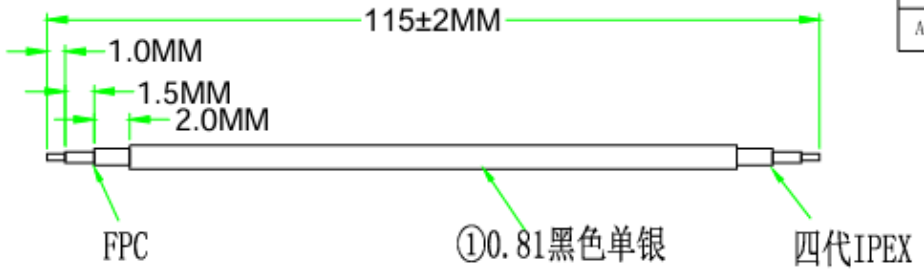
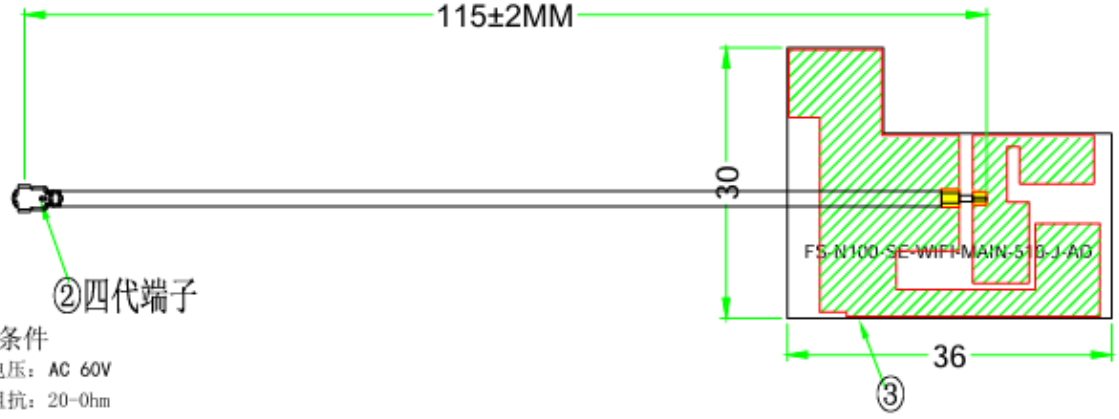
6、BOOM

6.1 Main——BOOM

PARTS DRAWING 零件图 | ROHS Compliant

REV	PRODUCT NO.	DATE	NAME	DESCRIPTION
A0	FS-NZ-FPC-415	2024.10.29		初始发行
A1				





主天线

要求
1. 线材外被无破皮.损伤。
2. 成品须100%测试导通 OK。
3. 成品须100%全检OK.
4. 采用环保制程.成品符合ROHS要求。
5. 未注公差请以一般公差为准。

测试条件
额定电压：AC 60V
接触阻抗：20-Ohm
耐电压：AC300V
绝缘阻抗;500m-Ohm
特性阻抗：50 Ohm

NO	Code	Name	Description	Q'ty
3	1.002.00138	FPC	表面黑油，白色丝印	1
2		IPEX	0.81四代端子	1
1	5.005.187	线材	0.81线 黑色 单银 L=115MM	1

工作频段 (Frequency Range)	2400-2500/5150-5850MHz
增益 (Gain)	2DBi
电压驻波比 (VSWR)	对比波形
极化方式 (Polarization)	垂直
特性阻抗 (Impedance)	50 Ω

工作温度：-45℃~85℃
储存温度：-45℃~85℃

角法 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)					
FPC天线-WIFI-0.81四代IPEX-0.81线-单银-黑色-L=115MM					
产品料号	单位 (UNIT)	MM	比例 (SIZE)	1:3	
FS-NZ-FPC-415	页数 (PAGE)	1 OF 1	幅面 (FORMAT)	A4	
业务	李胜	仓库		深圳市飞胜电子有限公司 SHENZHEN FEISHENG ELECTRONIC CO.,LTD	
PMC		生产			
采购		品质			

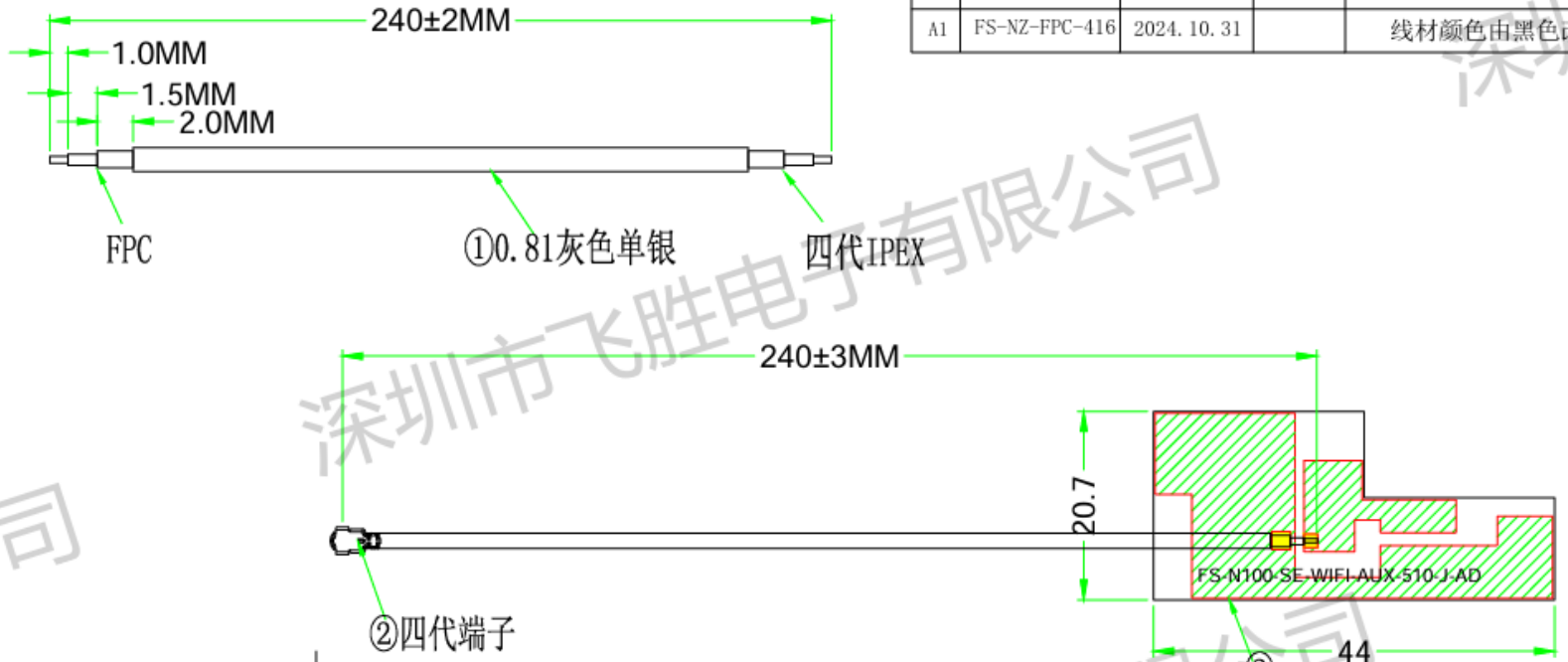
飞胜电子
FEI SHENG DIAN ZI

6、BOOM

6.2 AUX——BOOM

PARTS DRAWING 零件图 | ROHS Compliant

REV	PRODUCT NO.	DATE	NAME	DESCRIPTION
A0	FS-NZ-FPC-416	2024.10.29		初始发行
A1	FS-NZ-FPC-416	2024.10.31		线材颜色由黑色改为灰色



副天线

要求
1. 线材外被无破皮.损伤。
2. 成品须100%测试导通 OK。
3. 成品须100%全检OK.
4. 采用环保制程.成品符合ROHS要求。
5. 未注公差请以一般公差为准。

测试条件
额定电压：AC 60V
接触阻抗：20-Ohm
耐电压：AC300V
绝缘阻抗:500m-Ohm
特性阻抗：50 Ohm

NO	Code	Name	Description	Q'ty
3	1.002.00139	FPC	表面黑油，白色丝印	1
2		IPEX	0.81四代端子	1
1	5.005.188	线材	0.81线 灰色 单银 L=240MM	1

工作频段 (Frequency Range)	2400-2500/5150-5850MHz
增益 (Gain)	2DBi
电压驻波比 (VSWR)	对比波形
极化方式 (Polarization)	垂直
特性阻抗 (Impedance)	50 Ω

工作温度：-45℃~85℃
储存温度：-45℃~85℃

角法 ANGLE PROJECTION

公差 GENERAL TOLERANEC

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）
FPC天线-WIFI-0.81四代IPEX-0.81线-单银-灰色-L=240MM

产品料号	单位（UNIT）	M M	比例（SIZE）	1:3
FS-NZ-FPC-416	页数（PAGE）	1 OF 1	帽面（FORNMT）	A4

业务	李胜	仓库	
PMC		生产	
采购		品质	

深圳市飞胜电子有限公司
SHENZHEN FEISHENG ELECTRONIC CO.,LTD

深圳市飞胜电子有限公司

7、conclusion

The passive test shows that the antenna works well. If you have any other questions, please contact us. Thank you.