



SHUN DA CHENG TECHNOLOGY CO., LTD

SPECIFICATION FOR APPROVAL

Customer Name	Inka		
Customer Project Name	M6(Plastic)	SDC Project Name	M6(Plastic)
Customer P/N		SDC P/N	WF4643B-0814R-130(WF1) WF4644B-0814L-70(WF2)
Band	WIFI2. 4G/5. 8G/BT		
Version	A0		
Designer Information			
RF Engineer	Yong-hui Yang	R&D Diretor	FuXueRong
ME Engineer	Huang Zongbao		

Approval				Customer Approval	
	Prepared By	Checked By	Approval By	Checked By	Approval By
Signature	Huang Zongbao	Yong-hui Yang	FuXueRong		
Date	2023. 11. 15	2023. 11. 15	2023. 11. 15		

Change Log				
Version	Change Description	Person in Charge	Approval By	Date



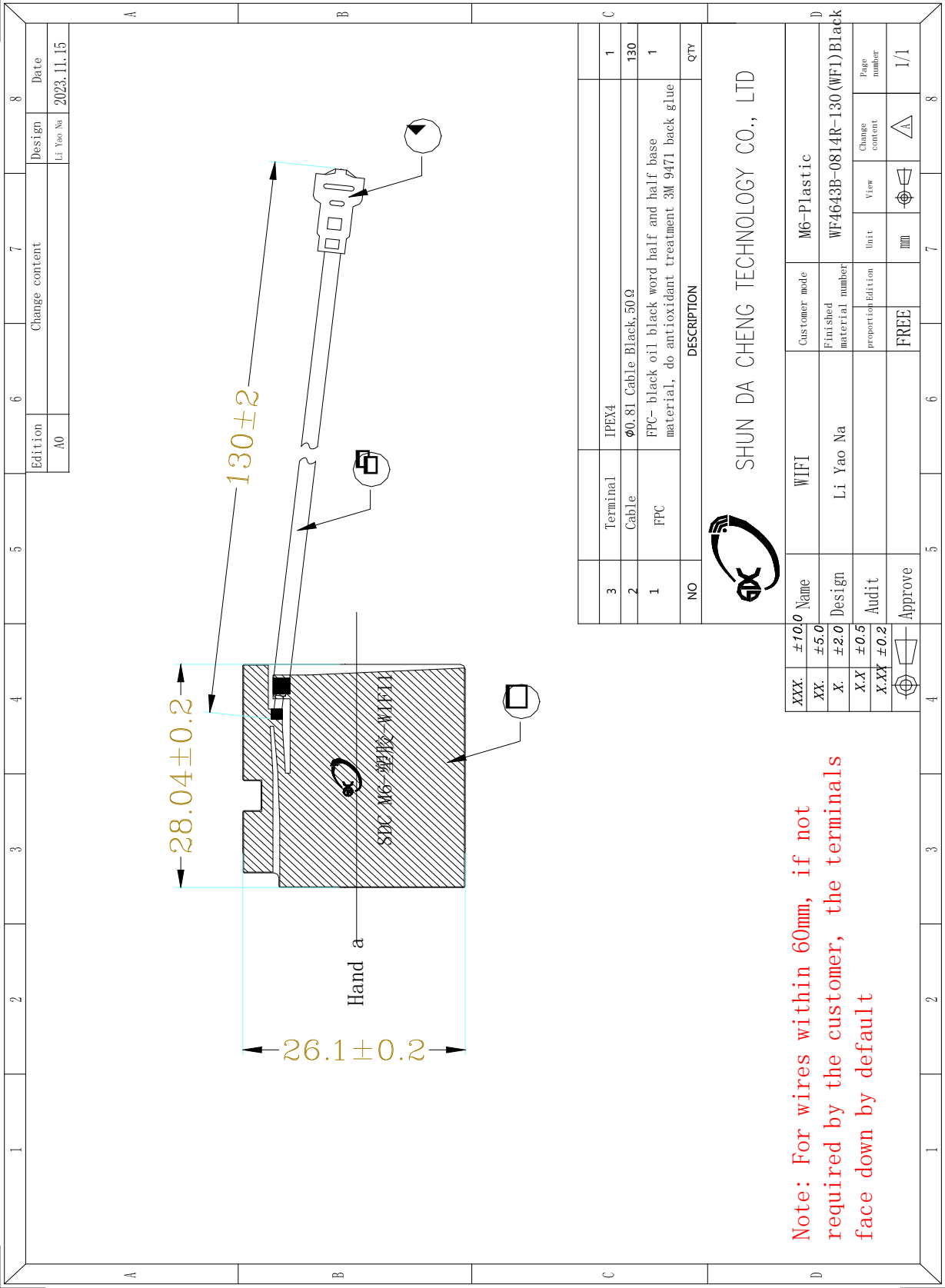
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Catalogue

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Drawing or Product Image





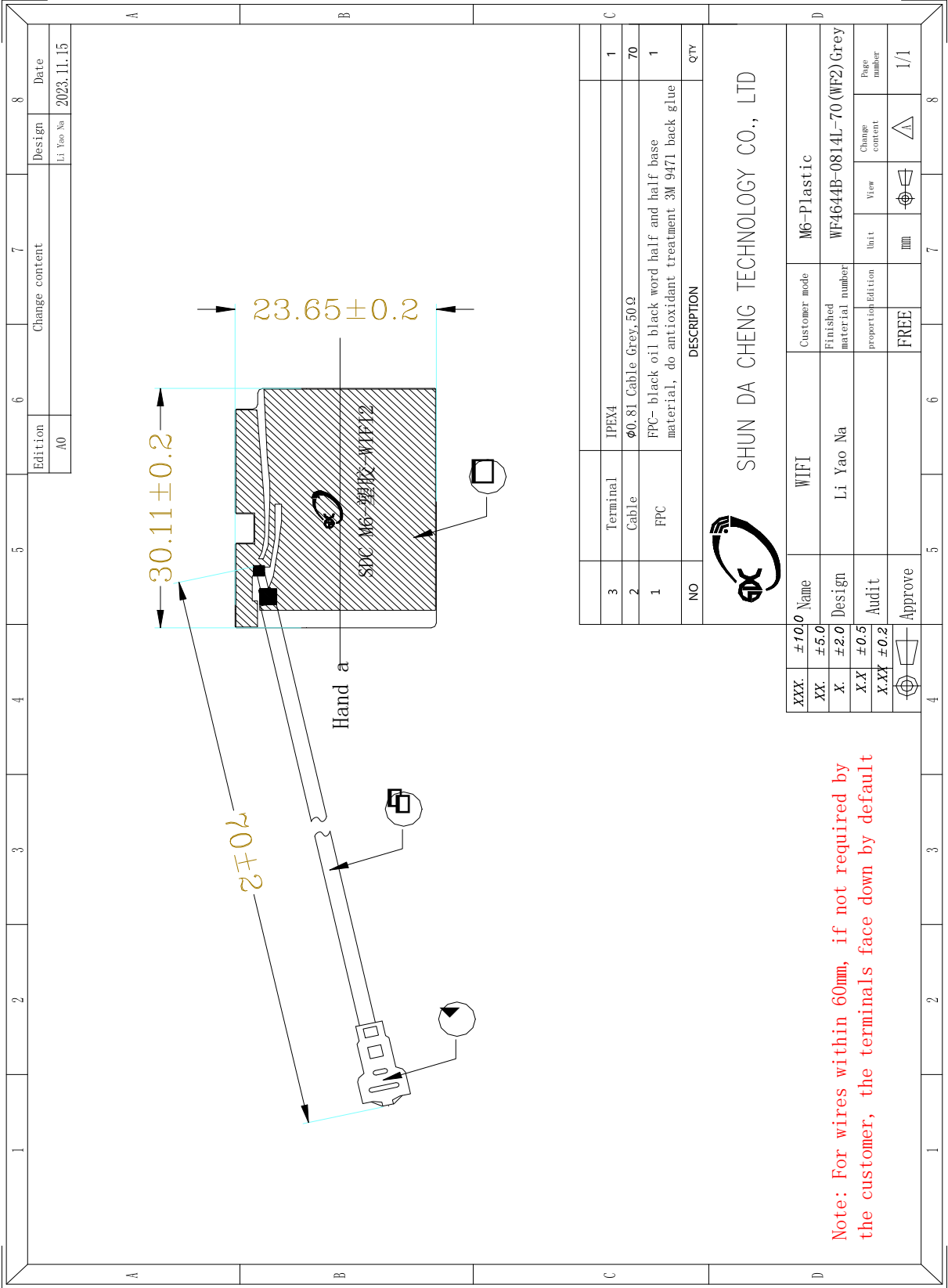
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Sample Dimensions Test Report

Test Date	2023. 11. 15	Sample Qty.	3	Inspector	Xu Yanfang
Dimension No.	Standard	Sample 1	Sample 2	Sample 3	Pass/NG
①length	28. 04±0. 2mm	28. 04	28. 14	28. 04	Pass
②width	26. 1±0. 2mm	26. 1	26. 2	26. 1	Pass
③thickness	0. 1±0. 05mm	0. 1	0. 1	0. 1	Pass
④ Line length	130±2mm	130	131	130	Pass
Conclusion					PASS
Inspector & Date	Xu Yanfang 2023. 11. 15		Approval & Date		



Drawing or Product Image





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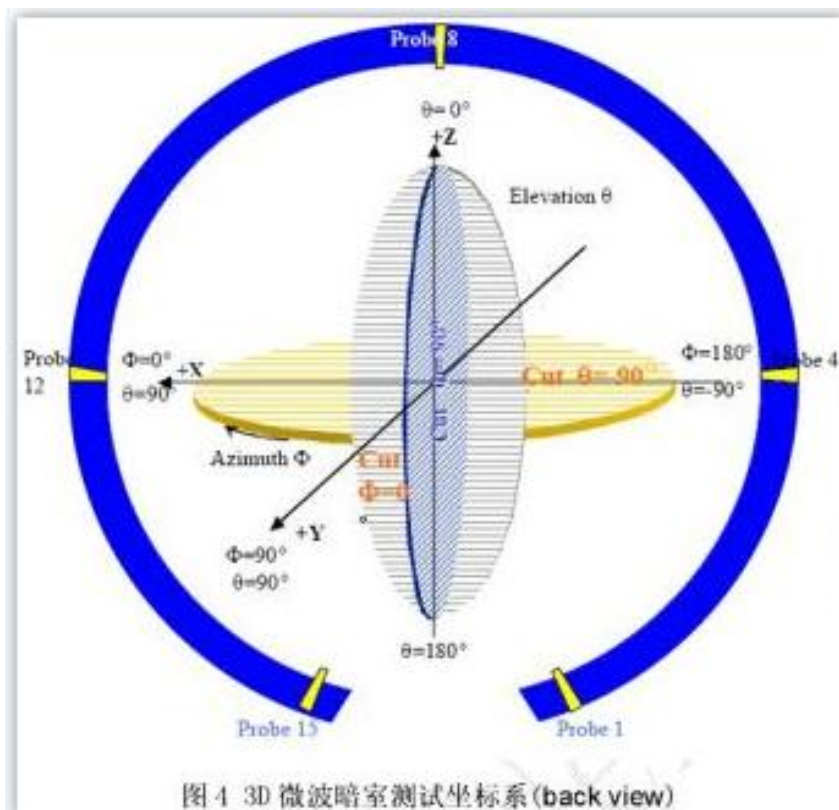
Sample Dimensions Test Report

Test Date	2023. 11. 15	Sample Qty.	3	Inspector	Xu Yanfang
Dimension No.	Standard	Sample 1	Sample 2	Sample 3	Pass/NG
①length	30. 11±0. 2mm	30. 11	30. 21	30. 21	Pass
②width	23. 65±0. 2mm	23. 65	23. 75	23. 65	Pass
③thickness	0. 1±0. 05mm	0. 1	0. 1	0. 1	Pass
④ Line length	70±2mm	70	71	70	Pass
Conclusion					PASS
Inspector & Date	Xu Yanfang 2023. 11. 15		Approval & Date		



RF Performance Test Report

Test of antenna input characteristics using **Agilent E5071C** and **Agilent 5062A** vector network analyzer; The radiation pattern of the antenna are tested using the guangping 3D near field Anechoic Chamber, and the instrument is used to agilent8960 E5515 and Agilent E4438C. The test coordinates of the darkroom are as follows:



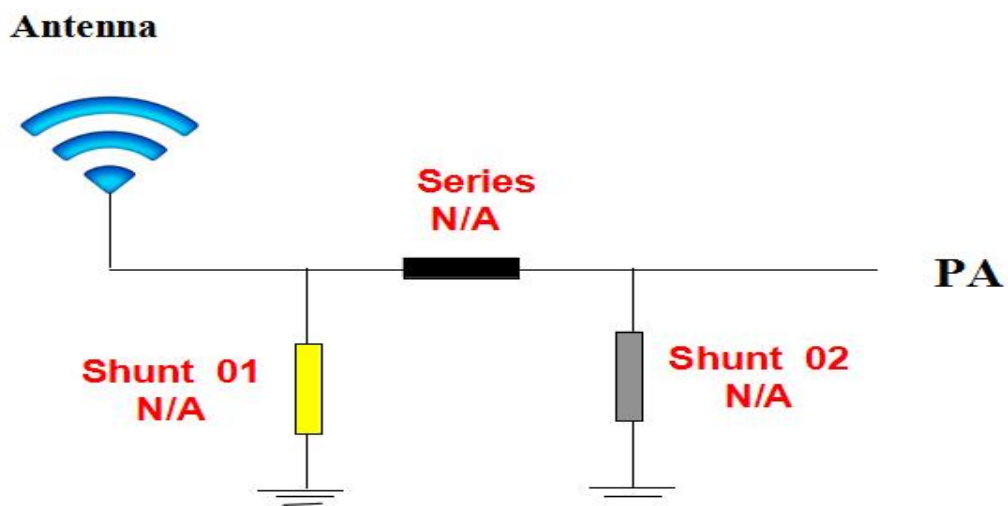
1. **S11 Parameter-VSWR**

Measuring Method is a 50 Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the S11 parameter, Keeping this fixture away from metal at least 20cm.

S11 Parameter-VSWR



2. 天线匹配网络/Antenna Matching Network



3. Gain & Efficiency

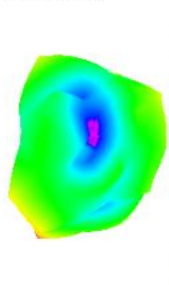


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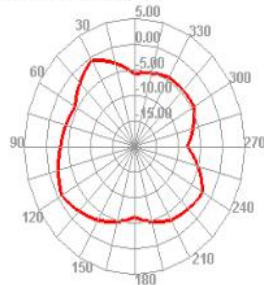
Antenna 1

Passive Test For 2.4G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	43.54	-3.61	1.03	-1.12	20.581	22.962	1.03	-15.9	4.64	15	48.93	49.09
2425	45.48	-2.97	1.96	-0.19	23.926	26.555	1.96	-16.48	4.93	15	49.09	49.22
2450	36.53	-4.37	0.87	-1.28	17.136	19.397	0.87	-19.74	5.24	15	49.25	49.27
2475	35.97	-4.44	0.52	-1.63	17.205	18.763	0.52	-23.22	4.96	75	49.98	49.91
2500	36.94	-4.32	0.32	-1.83	17.676	19.267	0.32	-18.36	4.64	75	49.71	49.62

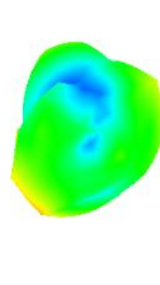
2400.000MHz



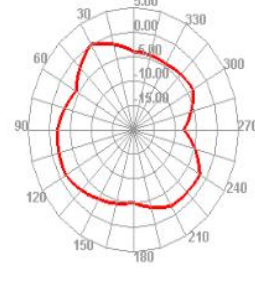
2400.000MHz H



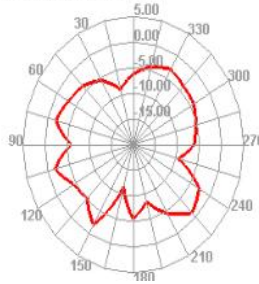
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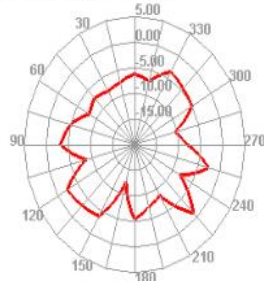
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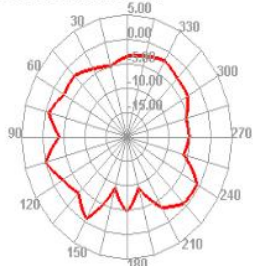
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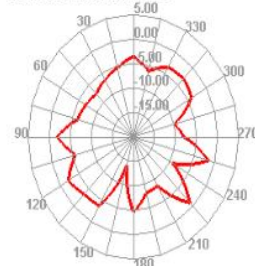
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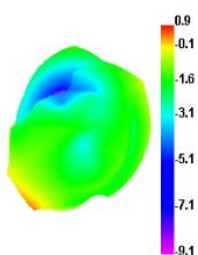
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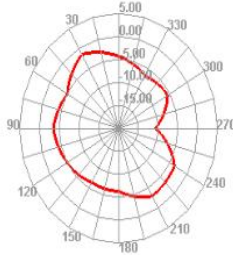
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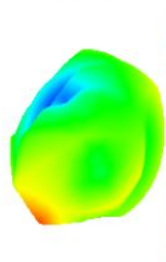
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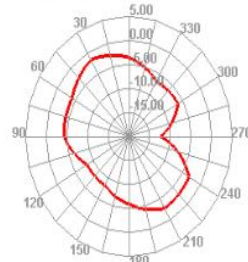
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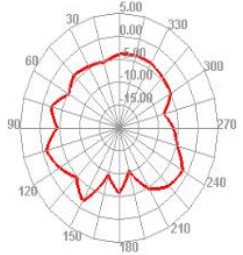
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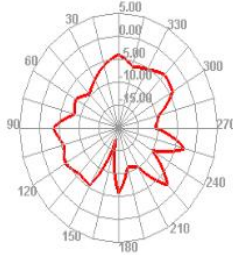
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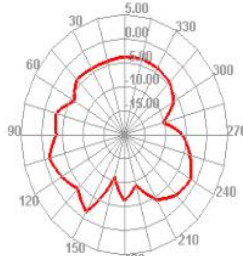
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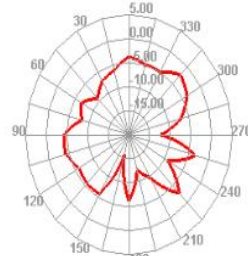
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2475.000MHz E1

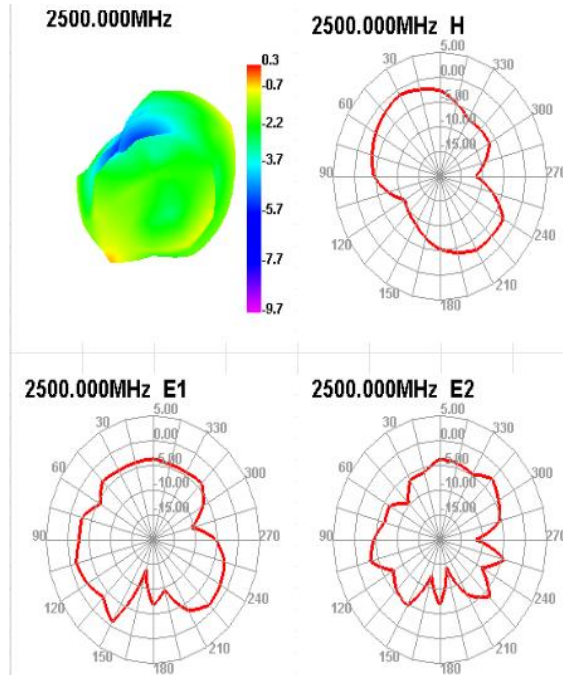


2475.000MHz E2

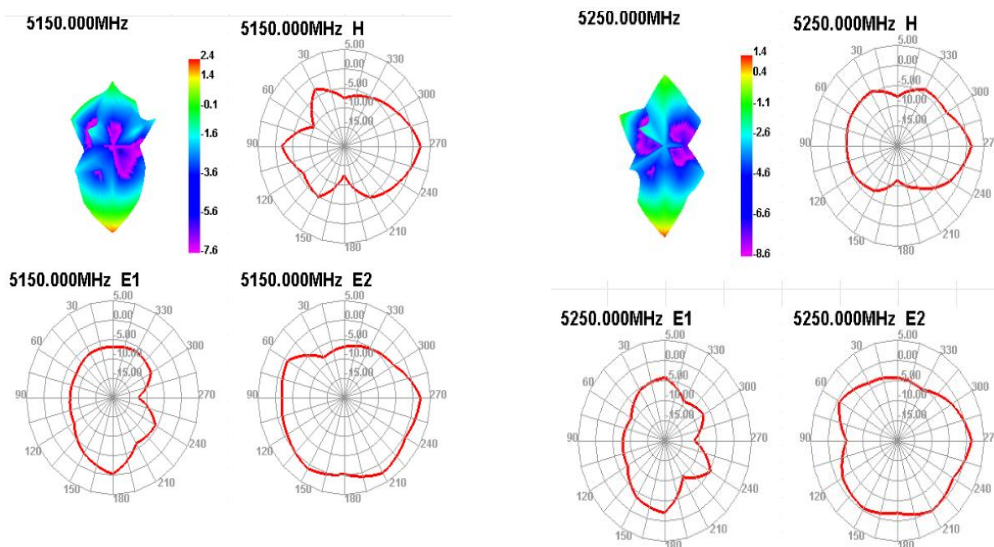




SHUN DA CHENG TECHNOLOGY CO., LTD



Passive Test For 5.8G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	42.13	-3.75	2.36	0.21	16.688	25.441	2.36	-12.69	6.11	0	58.6	58.01
5250	36.5	-4.38	1.37	-0.78	16.245	20.256	1.37	-11.52	5.75	30	58.53	57.74
5350	33.61	-4.73	1.07	-1.08	14.487	19.127	1.07	-15.18	5.81	60	57.99	57.08
5450	38.75	-4.12	2.03	-0.12	14.442	24.308	2.03	-15.14	6.15	0	59.19	57.9
5550	43.16	-3.65	2.14	-0.01	15.599	27.564	2.14	-19.43	5.79	60	60.21	58.81
5650	45.41	-3.43	2.1	-0.05	16.711	28.699	2.1	-20.47	5.53	0	60.31	59.42
5750	46.58	-3.32	2.17	0.02	17.996	28.581	2.17	-18	5.49	30	60.88	60.28
5850	44.83	-3.48	2.78	0.63	18.496	26.336	2.78	-23.77	6.27	30	61.09	60.41

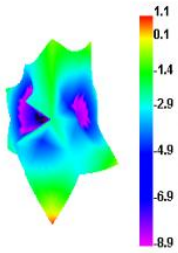


Company Address: 4th Floor, Building B5, Xinfu Industrial Park, Chongqing Road, Fuyong Town, Baoan District,
Shenzhen Telephone :0755-27211658 Fax :0755-29485750

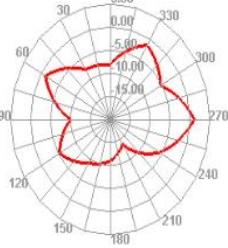


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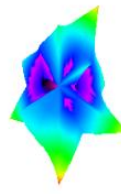
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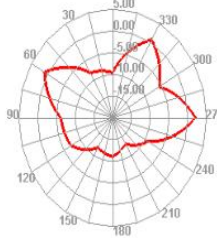
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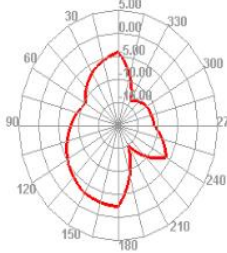
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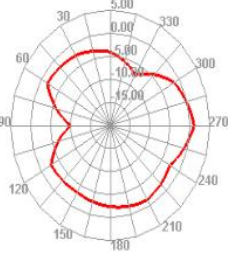
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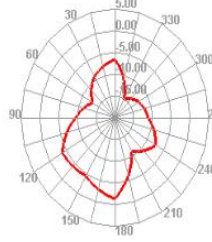
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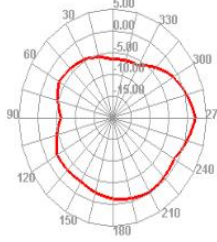
5350.000MHz E2



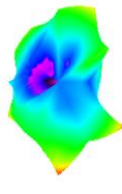
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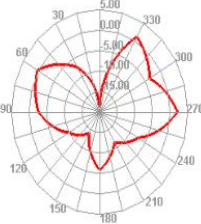
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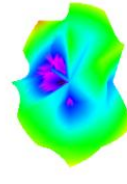
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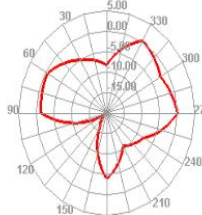
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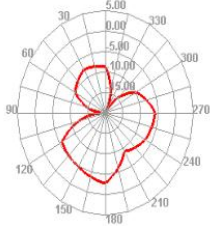
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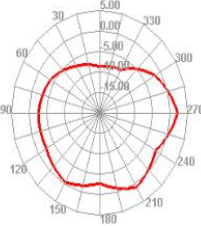
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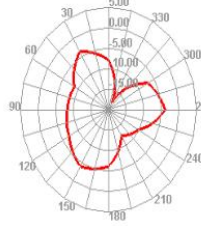
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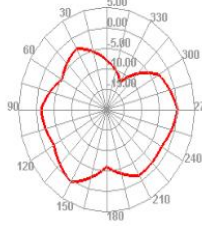
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5650.000MHz E1



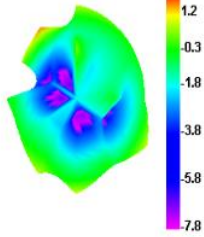
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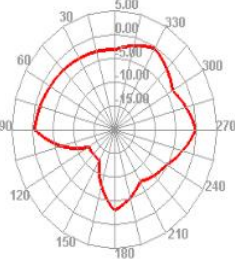


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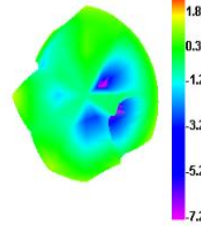
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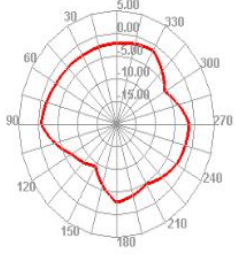
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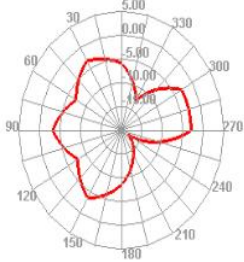
5850.000MHz



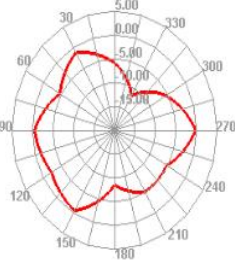
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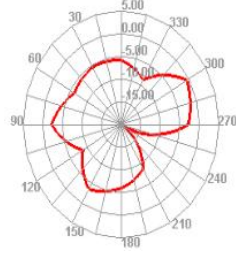
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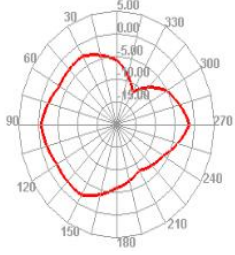
5750.000MHz E2



5850.000MHz E1



5850.000MHz E2

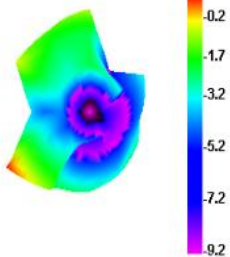


Antenna 2

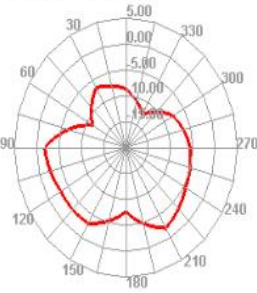
Passive Test For 2.4G

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	38.44	-5.46	0.77	-1.38	12.679	15.766	0.77	-18.83	6.23	0	47.77	47.82
2425	39.79	-5.26	0.87	-1.28	13.617	16.17	0.87	-19.66	6.13	0	48.06	48.12
2450	42.31	-4.06	2.11	-0.04	18.48	20.826	2.11	-18.63	6.17	0	48.56	48.53
2475	43.22	-3.96	2.12	-0.03	18.982	21.237	2.12	-18.5	6.07	0	48.46	48.26
2500	42.7	-3.7	2.01	-0.14	20.32	22.382	2.01	-17.46	5.7	0	48.42	48.12

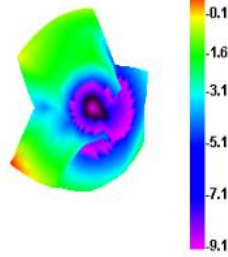
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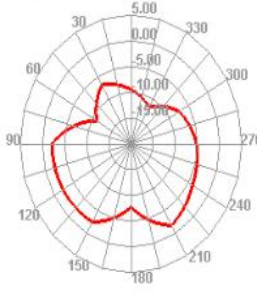
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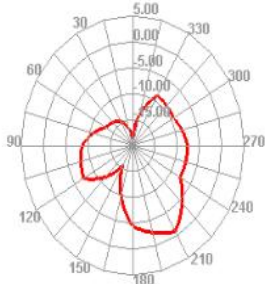
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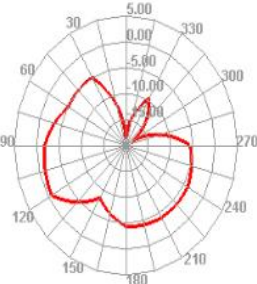
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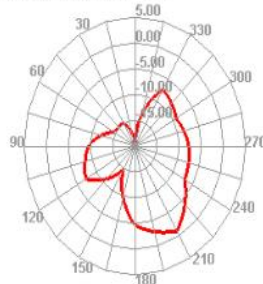
2400.000MHz E1



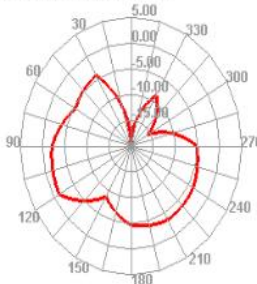
2400.000MHz E2



2425.000MHz E1



2425.000MHz E2

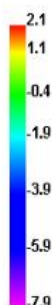
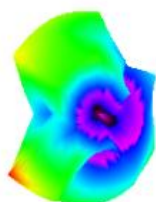


Company Address: 4th Floor, Building B5, Xinfu Industrial Park, Chongqing Road, Fuyong Town, Baoan District, Shenzhen Telephone :0755-27211658 Fax :0755-29485750

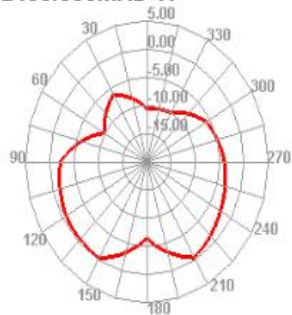


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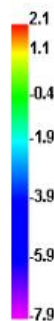
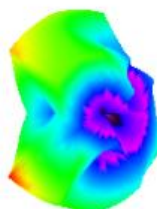
2450.000MHz



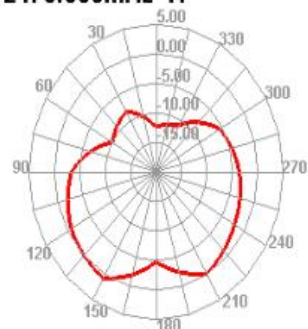
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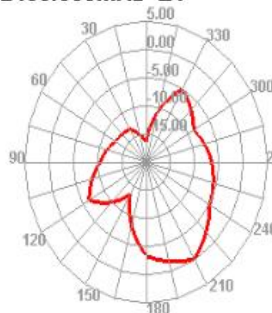
2475.000MHz



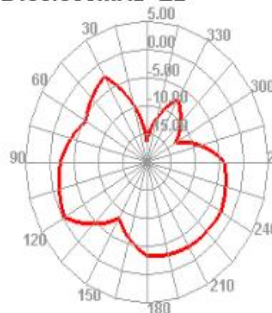
2475.000MHz H



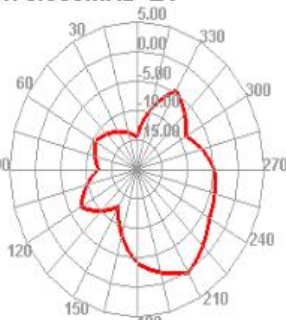
2450.000MHz E1



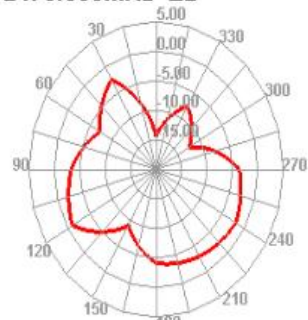
2450.000MHz E2



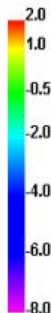
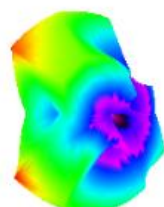
2475.000MHz E1



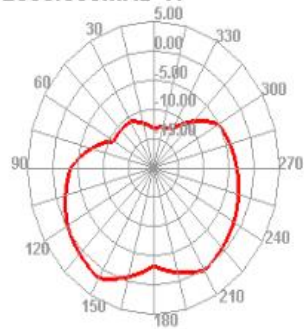
2475.000MHz E2



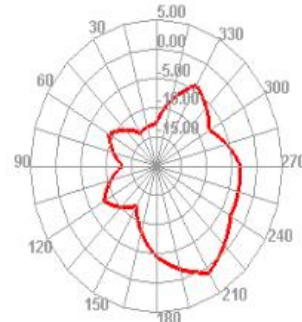
2500.000MHz



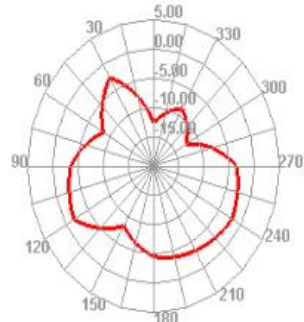
2500.000MHz H



2500.000MHz E1



2500.000MHz E2

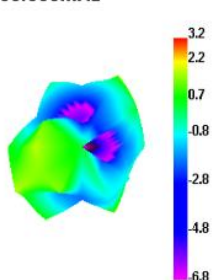




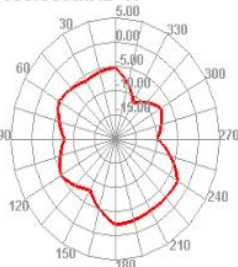
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Passive Test For 5.8G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
5150	40.29	-3.95	3.22	1.07	13.819	26.475	3.22	-21.65	7.17	30	58.6	58.01
5250	39.81	-4.84	2.89	0.74	10.959	21.849	2.89	-16.2	7.73	0	58.53	57.74
5350	37.08	-5.67	1.66	-0.49	8.676	18.408	1.66	-16.08	7.33	0	57.99	57.08
5450	38.77	-5.41	0.68	-1.47	11.252	17.523	0.68	-16.09	6.09	0	59.19	57.9
5550	39.05	-5.08	0.93	-1.22	13.257	17.792	0.93	-18.73	6.01	0	60.21	58.81
5650	40.99	-4.44	1.25	-0.9	14.61	21.381	1.25	-14.34	5.69	30	60.31	59.42
5750	39.86	-3.99	1.17	-0.98	17.494	22.366	1.17	-16.91	5.17	0	60.88	60.28
5850	40.32	-3.94	1.96	-0.19	19.19	21.132	1.96	-16.4	5.91	0	61.09	60.41

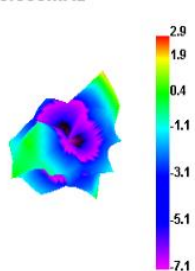
5150.000MHz



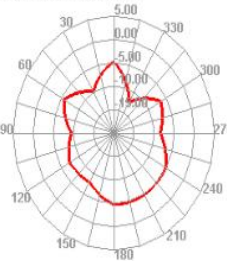
5150.000MHz H



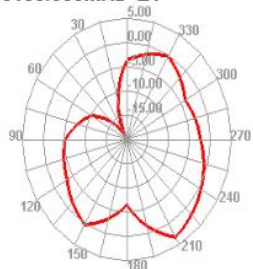
5250.000MHz



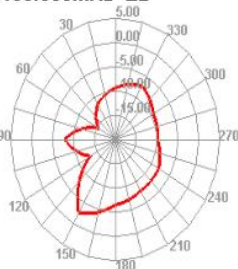
5250.000MHz H



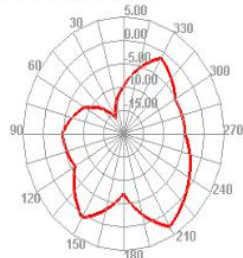
5150.000MHz E1



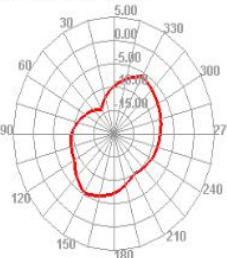
5150.000MHz E2



5250.000MHz E1



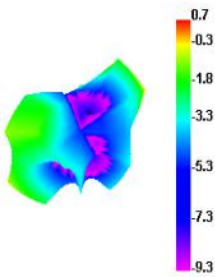
5250.000MHz E2



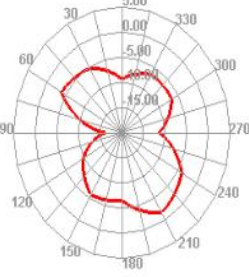


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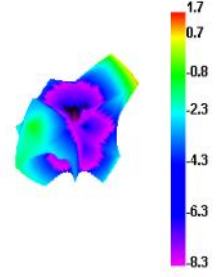
5450.000MHz



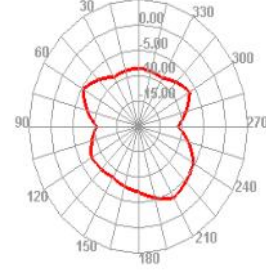
5450.000MHz H



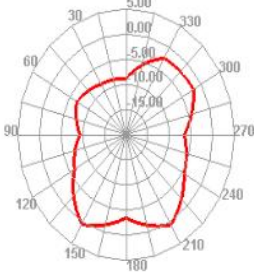
5350.000MHz



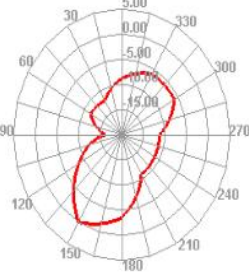
5350.000MHz H



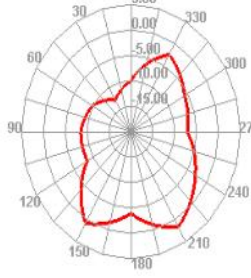
5450.000MHz E1



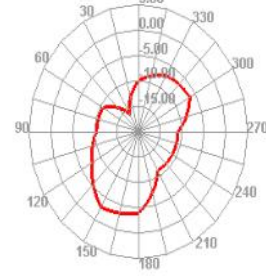
5450.000MHz E2



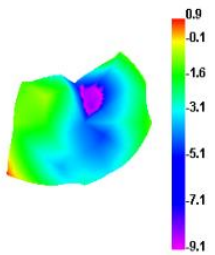
5350.000MHz E1



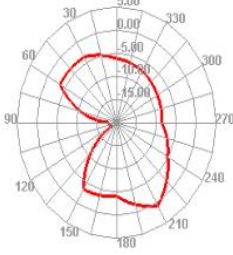
5350.000MHz E2



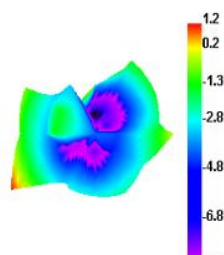
5550.000MHz



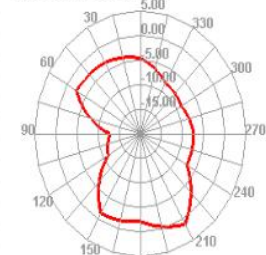
5550.000MHz H



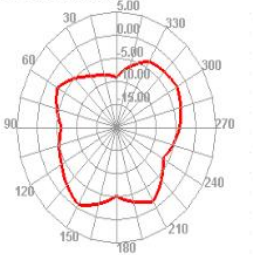
5650.000MHz



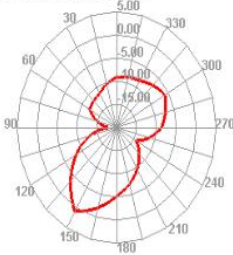
5650.000MHz H



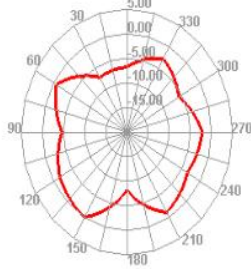
5550.000MHz E1



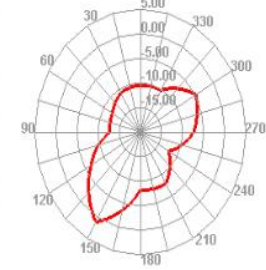
5550.000MHz E2



5650.000MHz E1



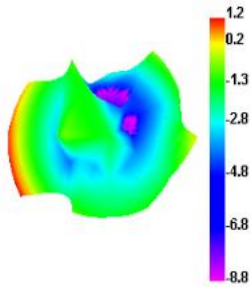
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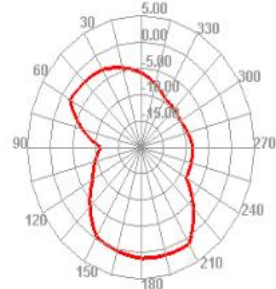


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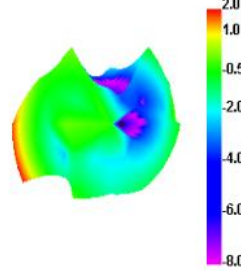
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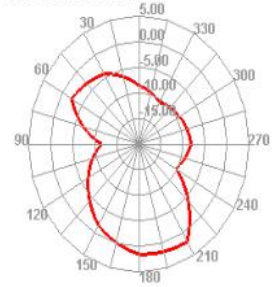
5750.000MHz H



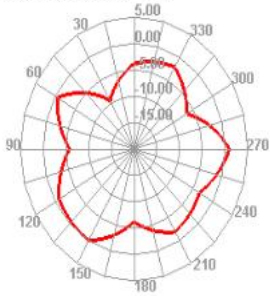
5850.000MHz



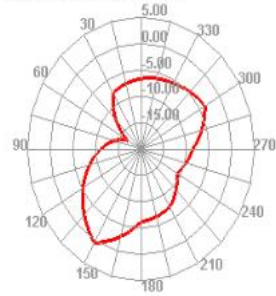
5850.000MHz H



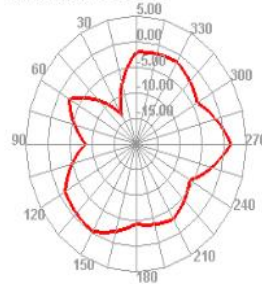
5750.000MHz E1



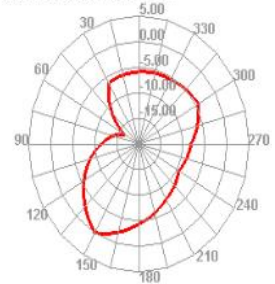
5750.000MHz E2



5850.000MHz E1



5850.000MHz E2





4. OTA Data

2.4G	802.11b, (2.4G) 11M		
Channel	CH1	CH6	CH11
TRP	13.56	13.89	12.67
TIS	-79.4	-80.09	-80.02
5.8G	802.11a, (5.8G) 54M		
Channel	CH36	CH60	CH161
TRP	11.29	11.3	11.87
TIS	-70.57	-69.9	-69.2



SHUN DA CHENG TECHNOLOGY CO., LTD

Reliability Test Report

Test Date	2023. 11. 15	Sample Qty.	3	Inspector	Xu Yanfang	
Test Item	Requirement	testing equipment	Sample 1	Sample 2	Sample 3	PASS/NG
High temperature storage	The test was carried out after 24H exposure at +85℃ and 2H recovery	Constant temperature and humidity box	OK	OK	OK	Pass
Low temperature storage	The test was carried out after 24H exposure at -40℃ and 2H recovery	Constant temperature and humidity box	OK	OK	OK	Pass
High temperature work	At +60℃ for 24H	Constant temperature and humidity box	OK	OK	OK	Pass
Work in low temperature	At -20℃ under the condition of power work for 24H	Constant temperature and humidity box	OK	OK	OK	Pass
Salt spray test	The pH value was 6.5 ~ 7.2, and the temperature of the experimental chamber was (35±2)℃ ☐ 24H ☒ 48H	Salt spray testing machine	OK	OK	OK	Pass
Connector riveting and drawing force	1. 13 线径 ≥10N 0. 81 线径 ≥8N RG174 ≥60N RG178 ≥50N	Push pull meter	≥10N	≥10N	≥10N	Pass
Conclusion						Pass
Inspector & Date	Xu Yanfang 2023. 11. 15		Approval & Date			

Company Address: 4th Floor, Building B5, Xinfu Industrial Park, Chongqing Road, Fuyong Town, Baoan District, Shenzhen Telephone :0755-27211658 Fax :0755-29485750



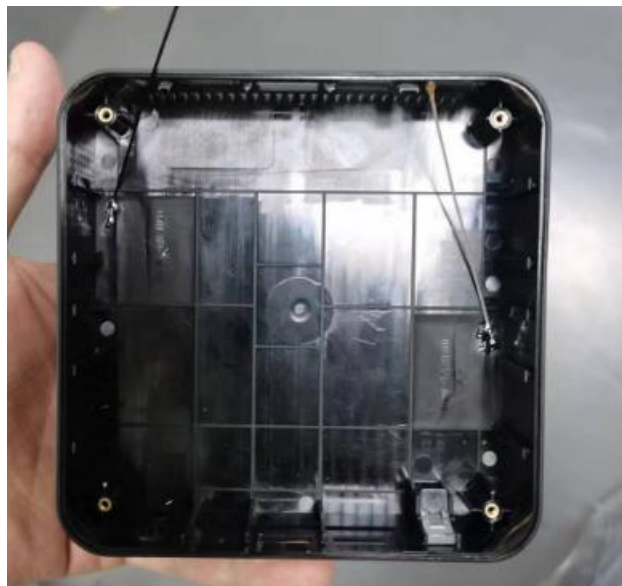
Install Wizard or Other

Installation process:

Take 1PCS of products and tear off the release paper on the back of the FPC by hand. Then align the positioning holes of the FPC with the positioning holes of the shell (positioning bars or positioning wires) and attach them to the shell smoothly. The specific positions are shown in the figure below:

Precautions for installation:

- ☐ After attaching the antenna, ensure that the FPC is fully attached to the shell;
- ☐ The positioning hole is aligned with the position of the housing positioning column;
- ☐ FPC edges are aligned with housing edges;
- ☐ When connecting the antenna with terminal to the PCBA end of the motherboard, align the terminal first and then close it vertically.
- ☐ When removing the antenna terminal, use a tool (such as a dedicated crowbar) to lift the terminal vertically. Do not pull the cable to remove the terminal directly





SHUN DA CHENG TECHNOLOGY CO., LTD

ROHS certificate of the product

Certificate

Certificate Number: UNIB23083106HC-01



Product: 5G/4G/WIFI/GPS/BT antenna
Applicant: ShenZhen ShunDaCheng Technology Co., Ltd.
4th Floor, Building B5, Xinfu Industrial Zone, Fuyong Chongqing Road,
Baoan District, Shenzhen
Manufacturer: N/A
Model No.: N/A
Trade Name: N/A
Test Methods: IEC 62321-2:2021, IEC 62321-3-1:2013, IEC 62321-4:2013 +A1:2017,
IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7-1:2015
IEC 62321-7-2:2017, IEC 62321-8:2017

The laboratory tested the product provided by the applicant according to the above test methods. According to the test results, the product conforms to RoHS Directive [(2011/65/EU and Amendment (EU) 2015/863)] issued by the European Commission. It is possible to use CE marking to demonstrate the compliance with RoHS Directive.

The certificate applies to the tested sample above mentioned only and shall not imply an assessment of the whole production. It is only valid in connection with the test report number: UNIB23083106HR-01.

Note: According to the requirements of the applicant for testing, details are shown in the test report.

RoHS

Sep. 06, 2023
Issue Date

Hoffer Lau
Hoffer Lau



Shenzhen United Testing Technology Co., Ltd.

Shenzhen: D101&D401, No. 107, Kaicheng High-Tech Park, Taoyuan Community, Dalang, Sub-District
Longhua District, Shenzhen, Guangdong, China/518109
Guangzhou: No.47-3, Industrial Road, Zhushan, Dalong Street, Panyu District, Guangzhou, Guangdong,
China/511450;

101/F, Building 2, Tongxin Industrial Park, Xinqiao Village, Dalong Street, Panyu District, Guangzhou,
Guangdong, China/511450

Tel:+86-755-86180996/+86-020-39277769 Fax:+86- 0755-86180156

Web.Site:www.uni-lab.hk/ E-mail:hofferlau@uni-lab.hk



Certificate of Compliance

Company Address: 4th Floor, Building B5, Xinfu Industrial Park, Chongqing Road, Fuyong Town, Baoan District,
Shenzhen Telephone :0755-27211658 Fax :0755-29485750