深圳同讯精密技术有限公司
Shenzhen Tongxun Precision Technology Co., Ltd.

天线测试报告
Antenna Test Report

No. 52, Huangkeng Road, Xinhe Community, Fucheng Street, Longhua District, Shenzhen

客户 Customer	Shenzhen Kaadas Intelligent Technology Co., Ltd.
项目名 Project	VE029
版本 Antenna Revision	X/1
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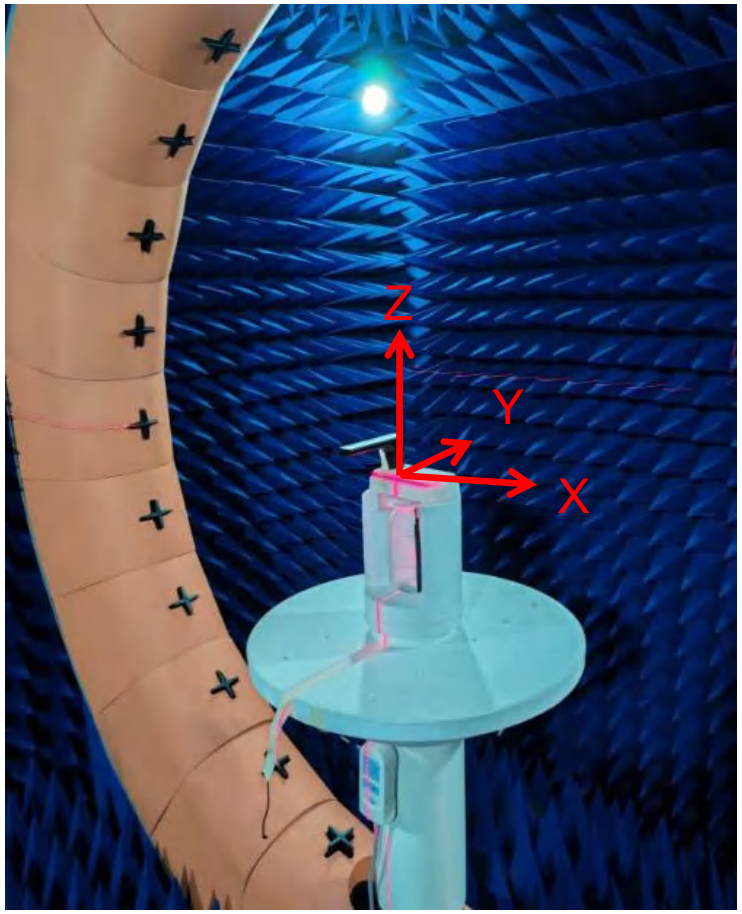
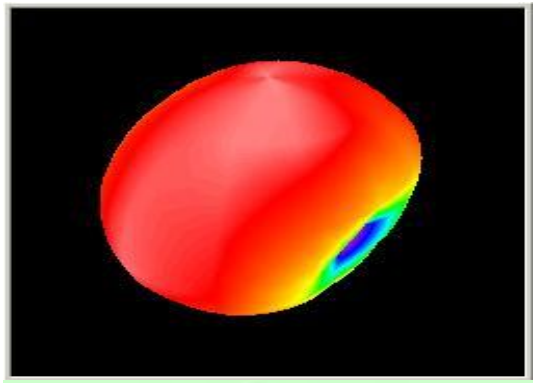
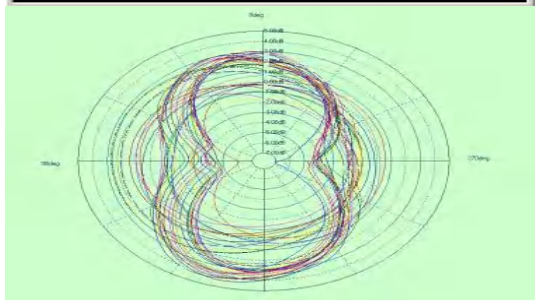
1.测试环境@天线位置
Test environment @ antenna locationn

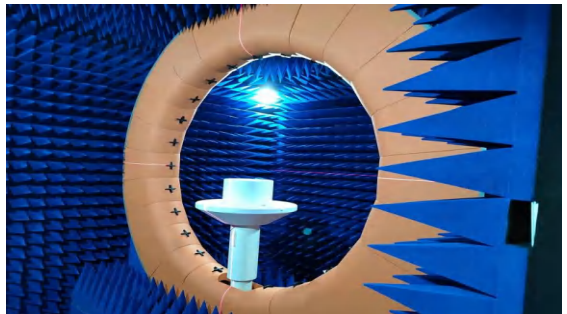


2.测试结果
Test Result

Sequence Number	Test Item	equipment
1. S parameter	VSWR	Agilent 5071C & Agilent 5062A
2. OTA Test	TRP&TIS	Agilent 8960 E5515C& Agilent 4438C&CMW500 &CMW270 KEYSIGHT-UXM5G E7515E ETS&SATIMO
3. Gain & Efficiency	Gain & Efficiency	ETS&SATIMO Agilent 5071C

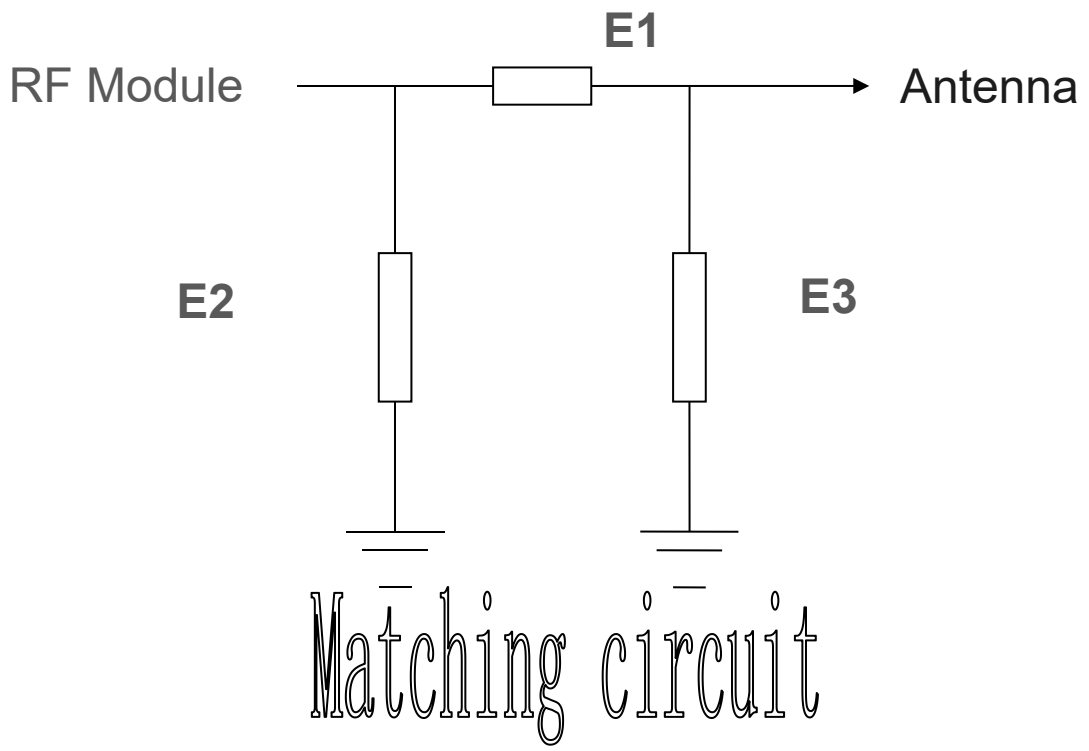






2.1 天线匹配网络
Antenna Matching Network

Element	Value
E1(0402)	0Ω
E2(0402)	NC
E3(0402)	NC
Is there any modification 是否修改匹配	NO

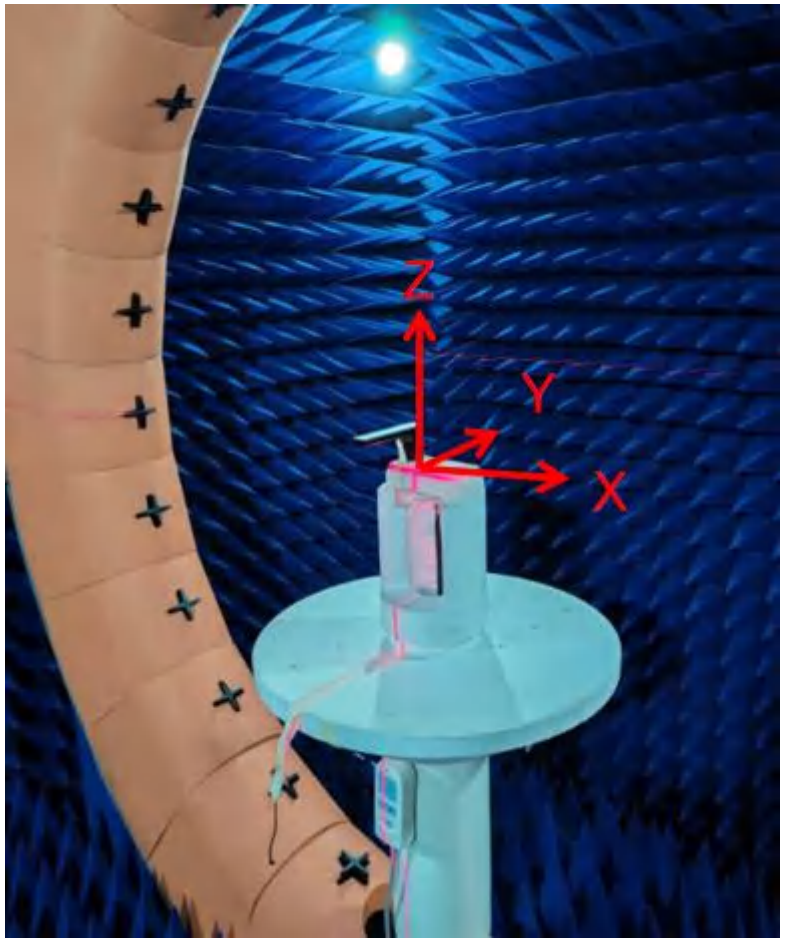


2.2 驻波比 VSWR

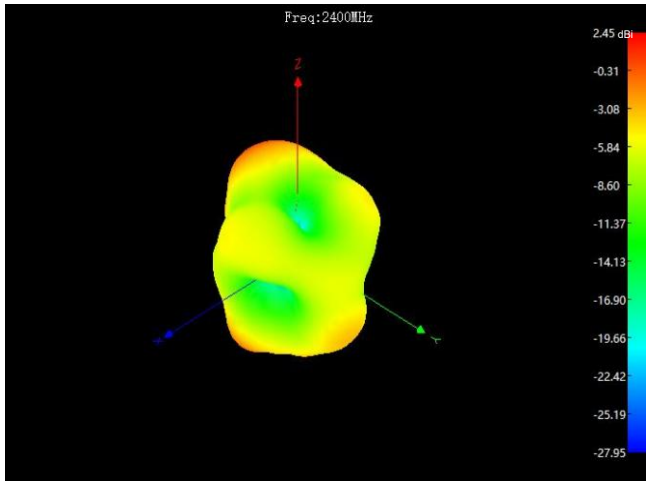
Frequency Band MHz	2400	2450	2500
VSWR:S11	1.33	1.26	1.22

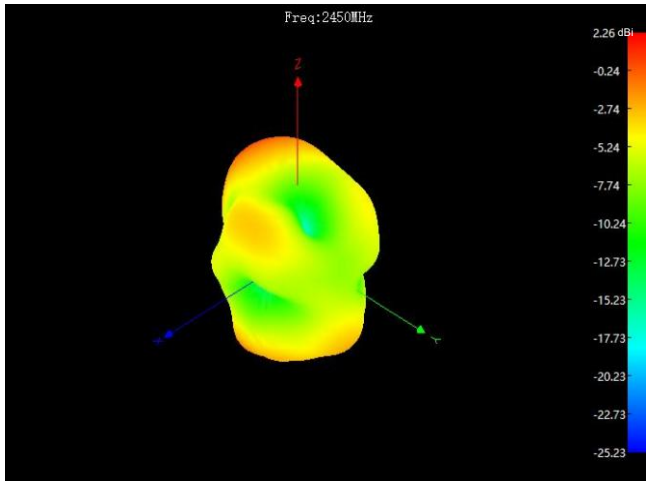
2.3 效率@增益
Gain & Efficiency

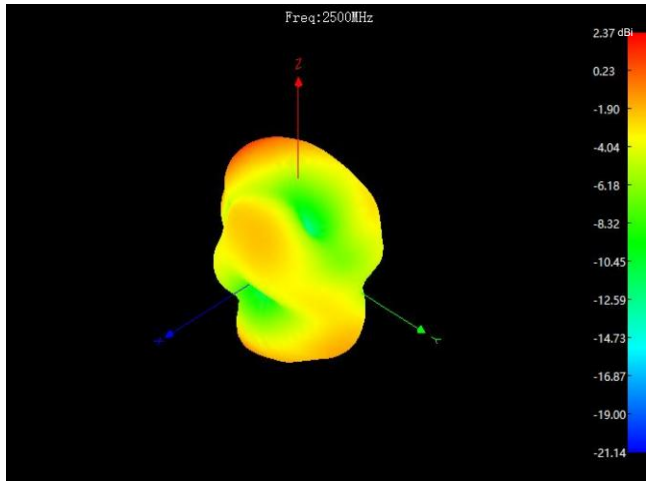
Frequency/Mhz	MaxGain/dBi	Efficiency / %
2400	2.45	51.4
2410	2.3	49.92
2420	2.14	52.72
2430	2.31	53.83
2440	2.06	48.56
2450	2.26	48.87
2460	2.21	50.39
2470	2.36	50.39
2480	2.29	51.34
2490	2.71	52.75
2500	2.37	51.75

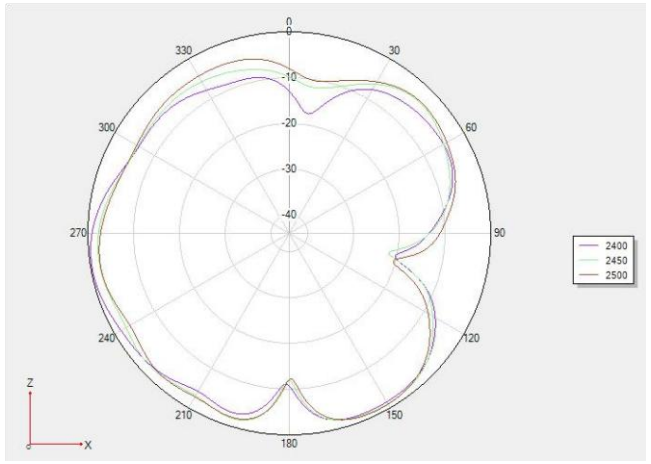


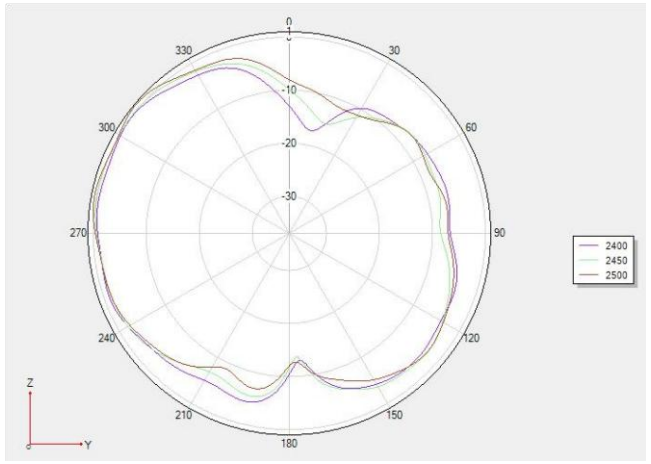
2.4 辐射方向图2D@3D
Radiation direction 2D@3D

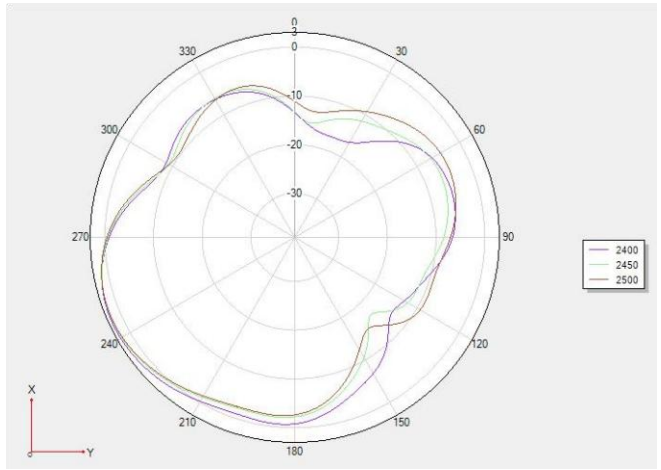






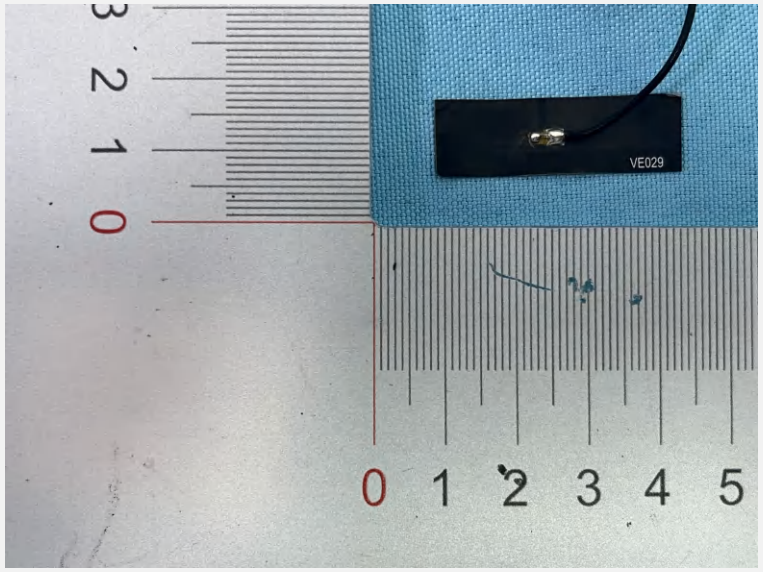


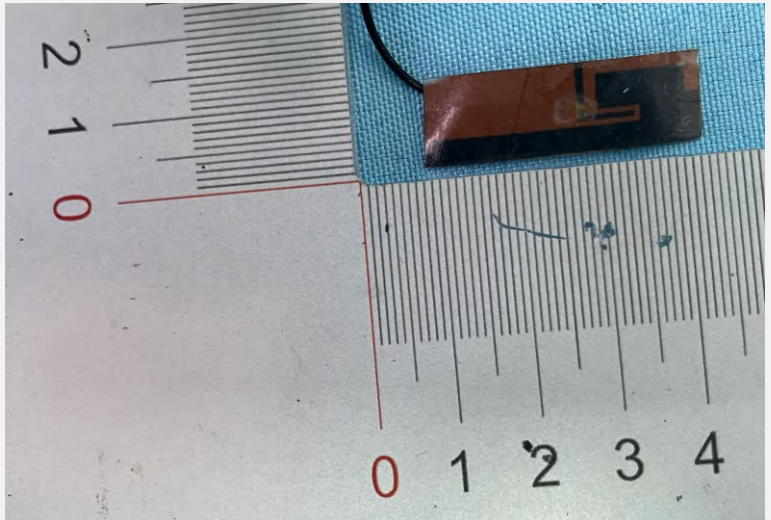




2.5 有源OTA测试OTA testing

Band	Channel	Frequency	Max	Min	Total
WIFI_B (11M)	1	2412	21.8	5.02	18.03
WIFI_B (11M)	11	2462	22.09	6.56	18.88
WIFI_B (11M)	11	2462	-73.92	-88.59	-84.58
WIFI_G (54M)	1	2412	17.37	1.15	13.41
WIFI_G (54M)	11	2462	18.15	3.03	14.8
WIFI_G (54M)	11	2462	-60.3	-75.12	-71.07
WIFI_N_ISM (65M)	1	2412	17.97	2.26	13.35
WIFI_N_ISM (65M)	11	2462	18.65	-7.2	14.52
WIFI_N_ISM (65M)	11	2462	-57.4	-74.03	-70.11





3.总结
Conclusion

The whole machine antenna test shows that the antenna efficiency is about 50%, the antenna gain is about 2.5DB, and the antenna in the whole machine environment is tested with the board of the security camera. The OTA data meets the standard! Since the whole machine cannot be turned on for testing at present, and the whole machine components may be incomplete, there are uncertain factors. We need to continue to provide a complete and working machine for testing and optimization!