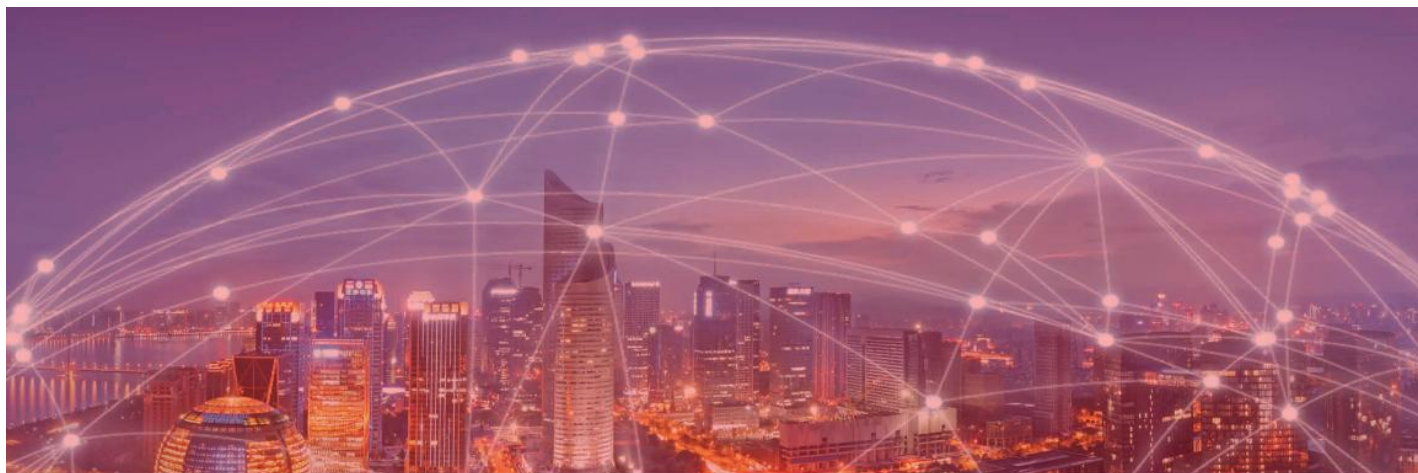




深圳市天逸源电子科技有限公司
Shenzhen Tianyiyuan Elec&Technology CO.,Ltd

联系电话唐工：13244864327（微信同号）

地址：深圳市宝安区福海街道凤塘大道 50 号鑫龙欣工业园 A 栋六层



项目信息

客户 <u>Customer</u>	深圳市鑫创锦科技有限公司
项目名 <u>Project</u>	--
频段 <u>Band</u>	2400/5150/5850 MHz
TTY 料号 <u>Part number</u>	TTY-TX4515
版本 <u>Version</u>	01
射频 <u>RF</u>	唐工
结构 <u>ME</u>	蒋工
日期 <u>Date</u>	2025.03.21
报告版本 <u>project Version</u>	V1.0
客户料号 <u>Customer part number</u>	



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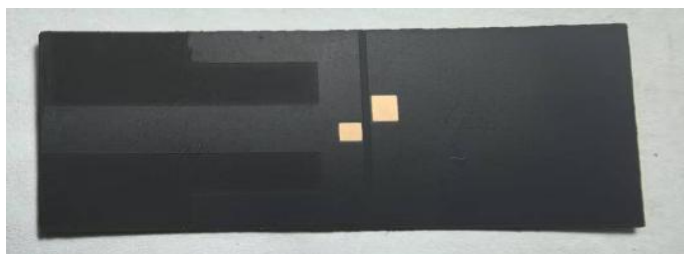
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WIFI Specification

1、规格

报告主要提供深圳市鑫创锦科技有限公司机型各项电性能参数的测试。TYY-TX4515 天线为 WIFI 内置天线，WIFI 天线是由 FPC+RF 线组成。（如下图 1 所示）

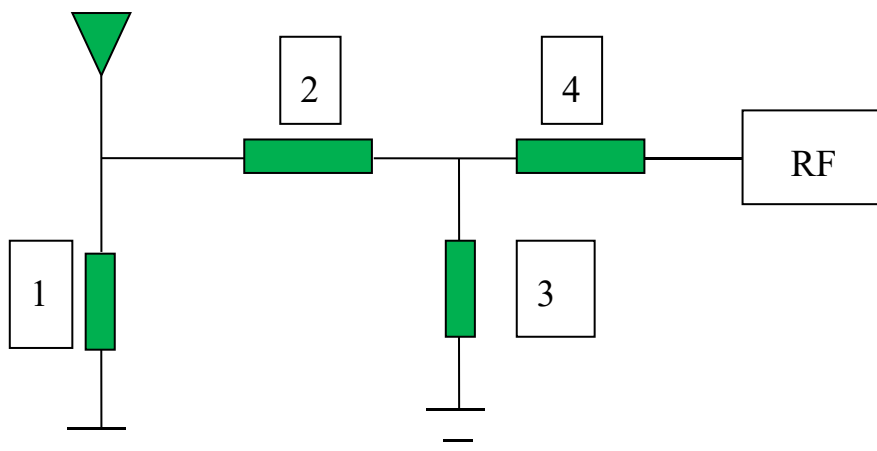
The finished product features			
电 性 能 指 标		Electrical Specifications	
频率范围	2400/5150/5850MHZ	Frequency Range	2400/5150/5850MHZ
电压驻波比	≤ 1.5	VSWR	≤ 1.5
最大增益	3DBI	Max GAIN	3DBI
输入阻抗	50 Ω	Input Impedance	50 Ω
机 械 指 标		Mechanical Specifications	
天线颜色	黑色	Antenna Color	BLACK
接口形式	IPEX-1	Input connector	IPEX-1
线长度	125mm	Cable length	125mm
工作温度	-40°C~+85°C	Working Temperature	-40°C~+85°C
工作湿度	20~80%	Working Humidity	20~80%

图 1 TYY-TX4515**图 2 TYY-TX4515 WIFI 天线成品(线长 125mm 带 1 代端子)****图 3 装配图（WIFI 天线）**

注意事项：先撕开 FPC 背后胶纸，贴在凹出中间位置，靠近柱子或骨架直角贴平，远离屏背面的金属，远离喇叭五金件，若天线靠近金属导致 WIFI 信号频率偏移，按照上图标识的贴天线位置，谢谢！

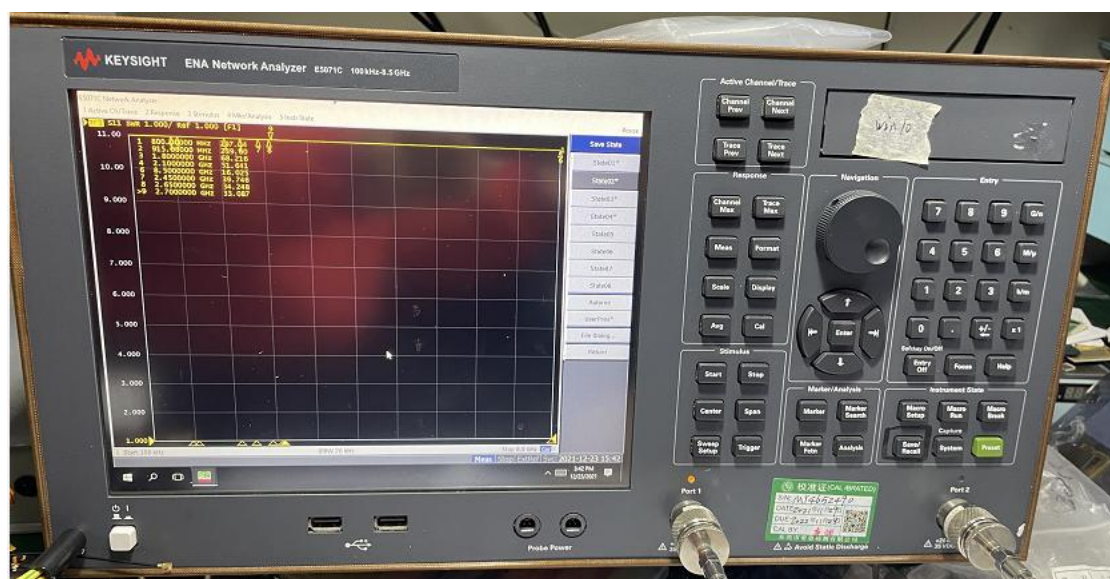
2. 电器性能

2.1WIFI 天线的匹配电路，此项目匹配电路由客户提供。



元件编号	1	2	3	4
WIFI 最佳	NC	0 欧姆	NC	
原始（备用）	50 欧姆匹配			

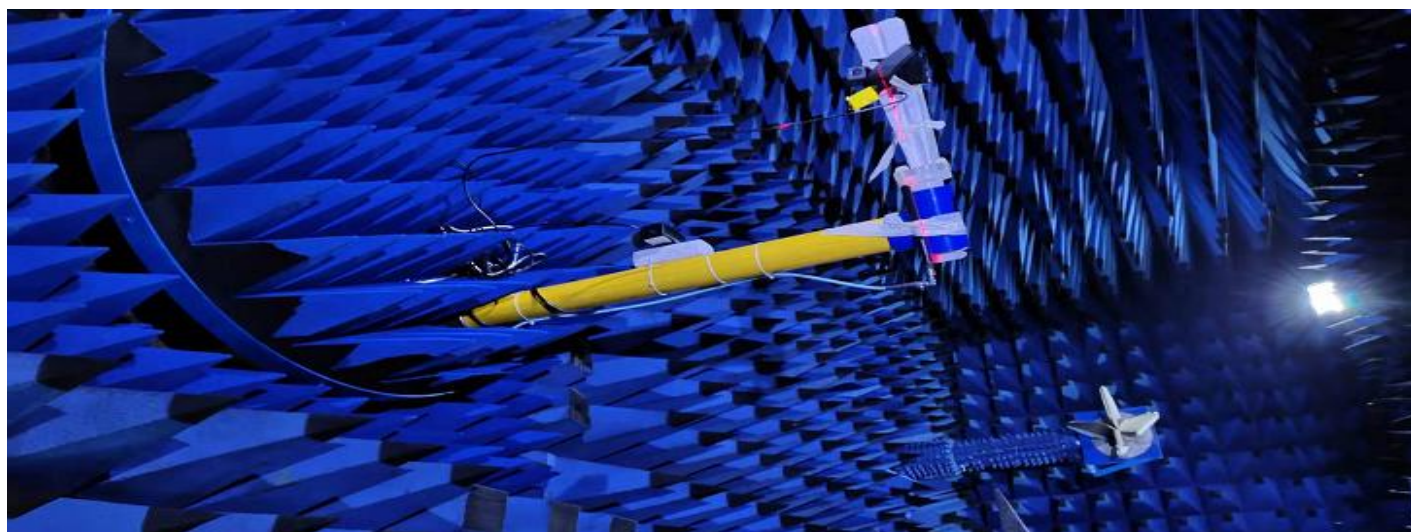
图 4 Agilent E5071C 络分析仪



OTA 微波暗室：测试频率范围为 800MHz—6GHz, 静区范围为 50cm 圆周, 反射率小于 -90 dB。

2.4.2 测试的仪表 Agilent E5071C 网络分析仪、对数周期天线、电脑、发射转台、接收天线、打印机、外套扼流圈的（为了减少信号连接线的损耗）。

图 5 OTA 微波暗室





深圳市天逸源电子科技有限公司

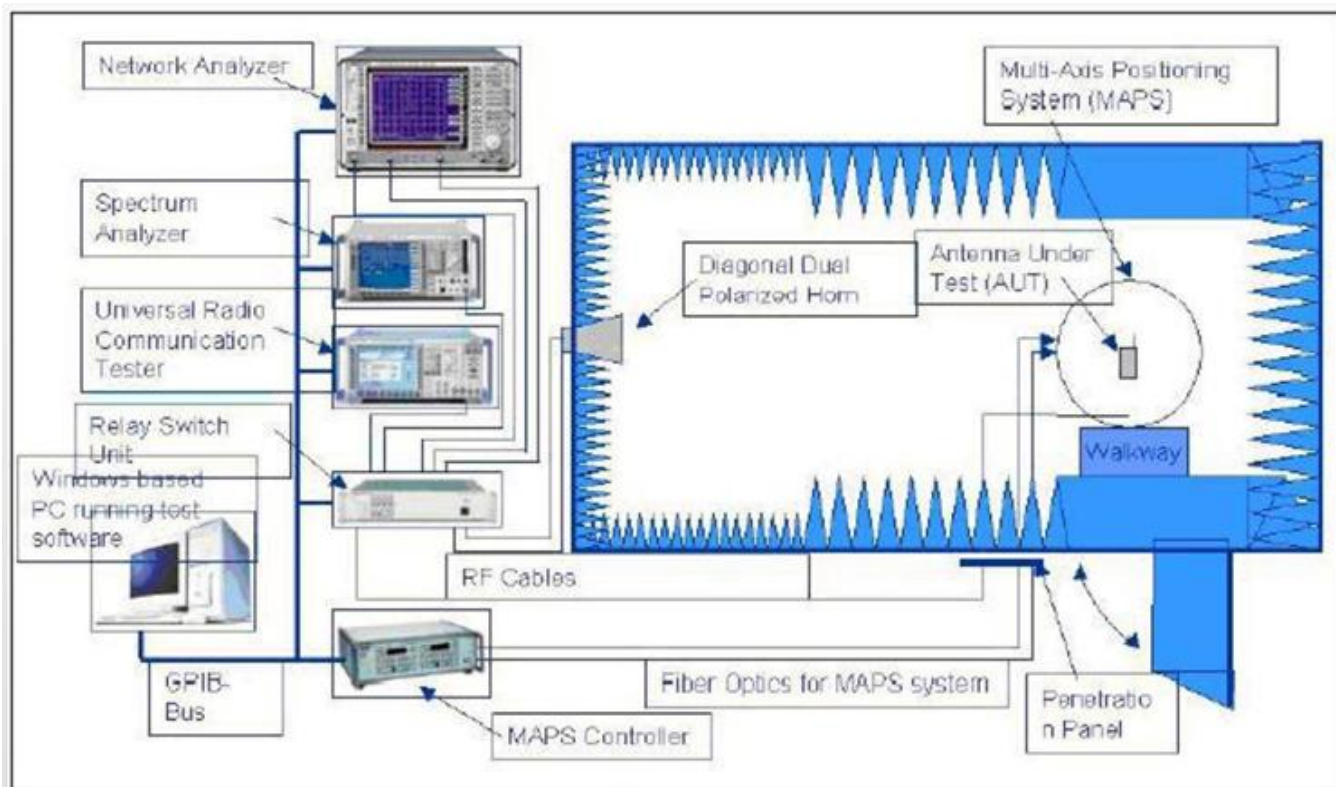
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图 6 测试环境：OTA743 暗室，8960/W500/8753ES/5071C，机 器背向放置离标准喇叭天线 4 米转台处



销售：熊小姐 13249844286

技术支持：电话微信号：唐先生 13244864327 QQ: 2813565803

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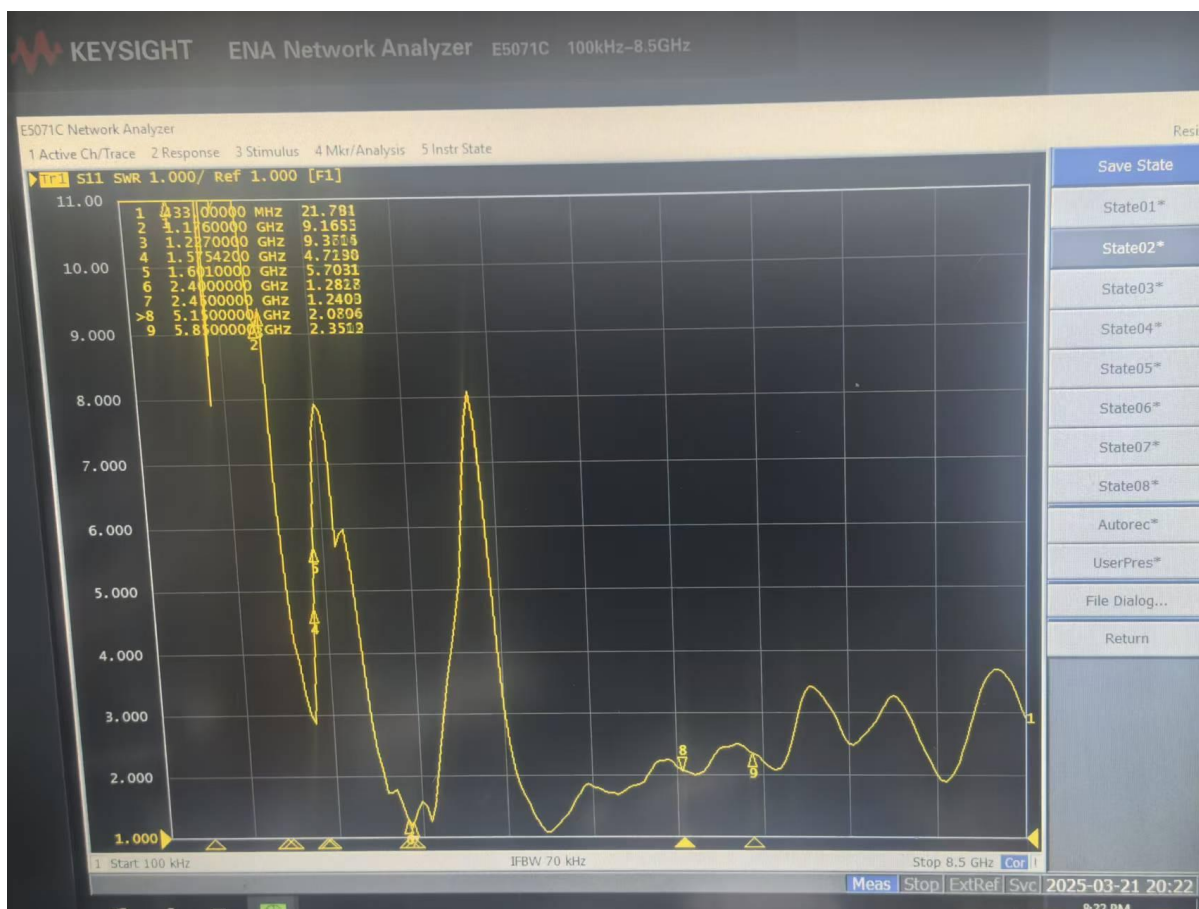
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2.3 驻波比(VSWR)的测试

2.3.1. 测试的设置

VSWR 测试装置依次的连接为：Agilent E5071C网络分析仪⑤50 欧姆的同轴 Cable④45mm长的铜管④测试治具测试治具的处理：从平板PCB 上天线 50 欧姆测试点处用一根硬质电缆引出 SMA-J 接头，与套有扼流圈的铜管连接，再依次连接其他装置。

图 7 驻波比图(VSWR)



VSWR 驻波比

制式	2.4~2.5GHz		5.7~5.8GHz		
频率(MHz)	2450	2500	5120	5850	
VSWR	1.28	1.24	2.0	2.3	



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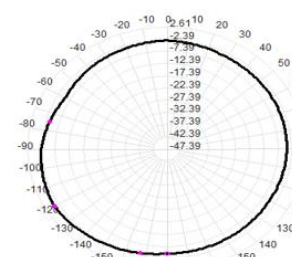
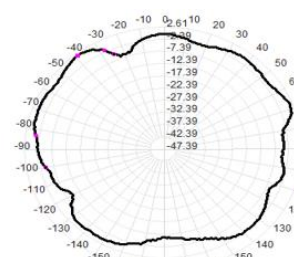
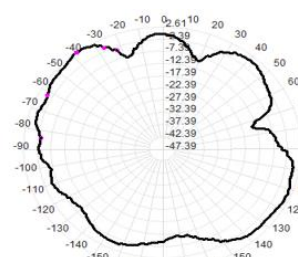
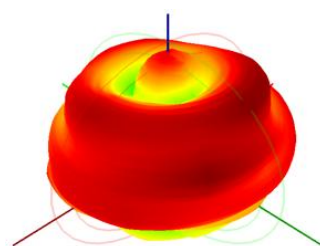
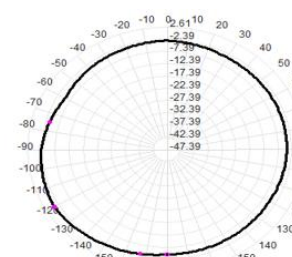
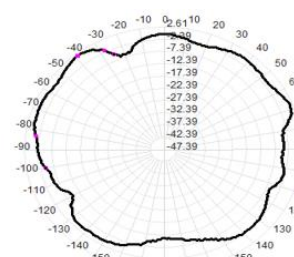
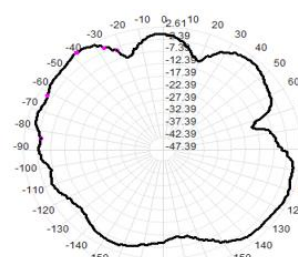
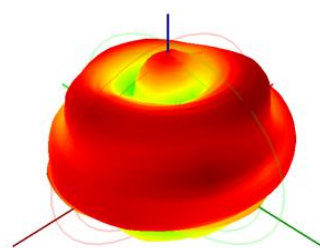
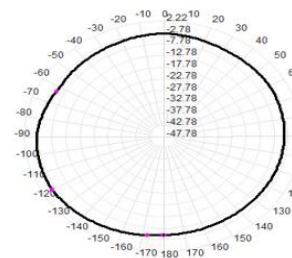
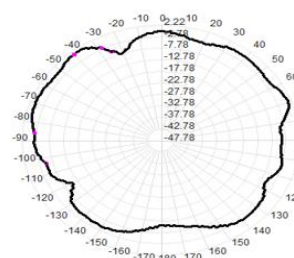
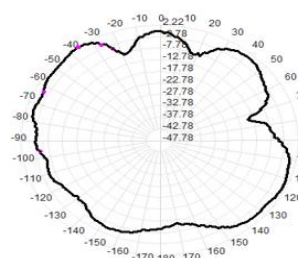
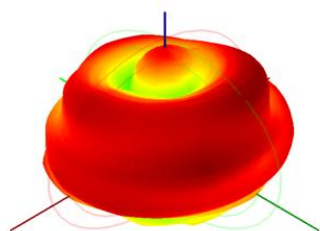
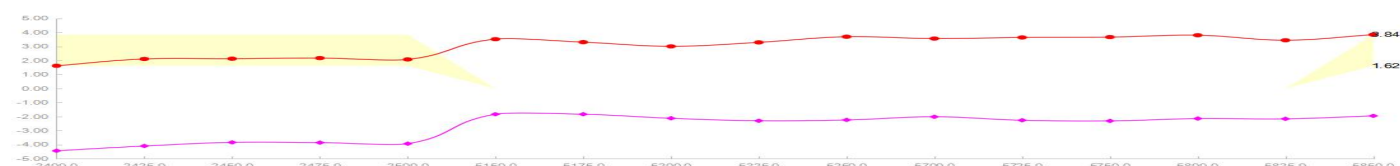
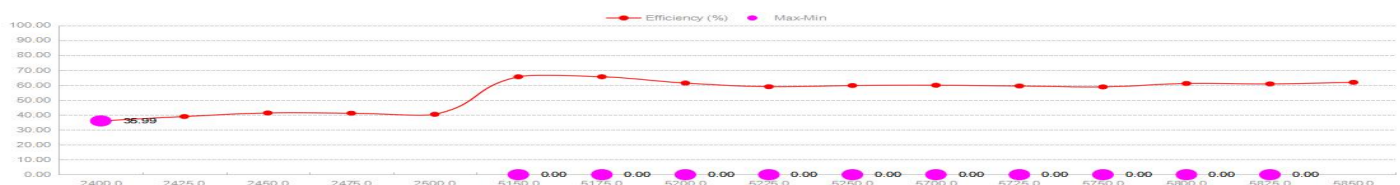
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WIFI 测试报告

Frequency ID	1	2	3	4	5	7	8	9	10	11	13	14	15	16	17	18
Frequency (MHz)	2400.0	2425.0	2450.0	2475.0	2500.0	5150.0	5175.0	5200.0	5225.0	5250.0	5700.0	5725.0	5750.0	5800.0	5825.0	5850.0
Efficiency (dBi)	-4.44	-4.10	-3.84	-3.86	-3.93	-1.83	-1.83	-2.12	-2.30	-2.24	-2.01	-2.26	-2.31	-2.14	-2.16	-1.95
Gain (dBi)	1.62	2.11	2.12	2.17	2.07	3.52	3.30	3.00	3.29	3.69	3.56	3.64	3.66	3.80	3.44	3.84
Efficiency (%)	35.99	38.92	41.31	41.14	40.43	65.56	65.57	61.34	58.90	59.69	59.89	59.39	58.76	61.07	60.77	61.82
Directivity (dB)	6.06	6.20	5.96	6.03	6.01	6.35	6.14	6.13	6.59	6.93	7.01	6.90	6.97	6.94	6.60	7.03
Peak Gain Position (Theta)	135.00	135.00	135.00	150.00	150.00	45.00	45.00	60.00	90.00	60.00	30.00	60.00	30.00	30.00	30.00	30.00
Peak Gain Position (Phi)	345.00	345.00	345.00	15.00	15.00	240.00	210.00	255.00	270.00	255.00	240.00	270.00	225.00	225.00	225.00	225.00
Efficiency ThetaPol (%)	17.68	19.25	20.67	20.73	20.70	23.42	22.68	21.66	20.12	17.99	25.83	24.11	24.64	26.08	25.83	27.97
Efficiency PhiPol (%)	18.31	19.67	20.65	20.42	19.73	42.14	42.88	39.68	38.78	41.70	37.06	35.28	34.11	34.99	34.95	35.85
Upper Hem. Efficiency (%)	14.67	16.28	17.21	16.78	16.24	44.88	44.35	41.15	39.03	41.59	42.93	40.40	39.48	39.62	40.04	41.95
Lower Hem. Efficiency (%)	21.32	22.64	24.10	24.37	24.19	20.67	21.22	20.19	19.87	18.10	19.96	19.00	19.28	21.45	20.73	21.87



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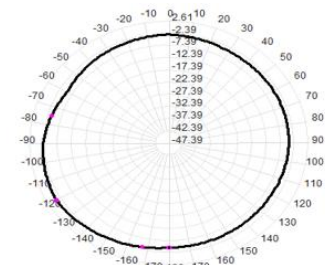
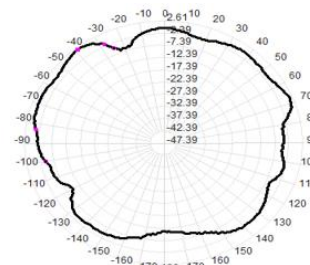
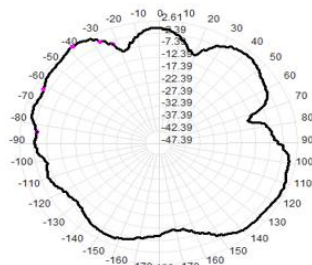
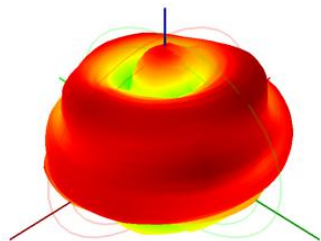
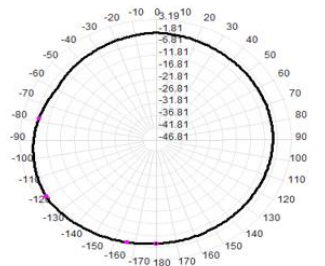
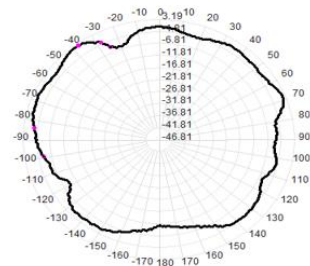
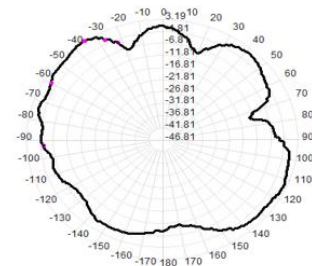
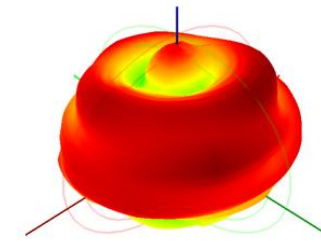
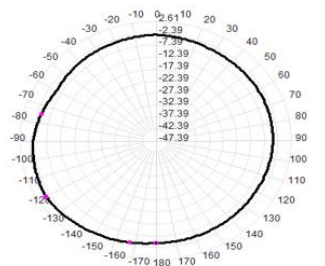
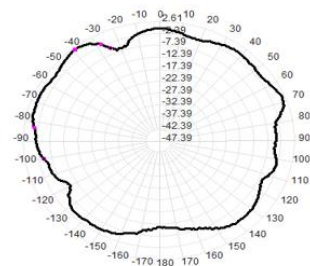
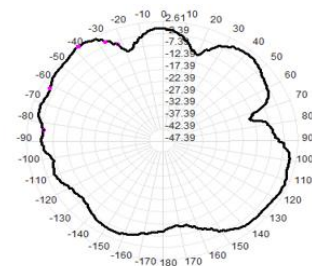
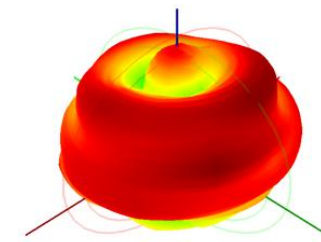
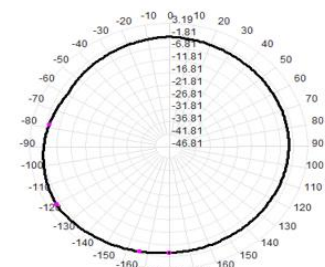
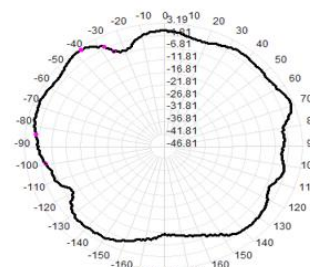
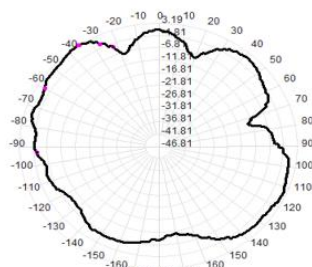
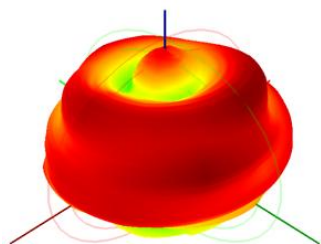
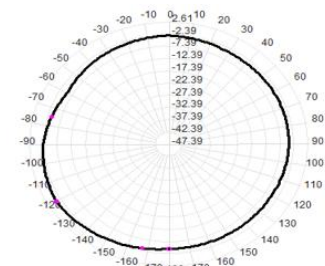
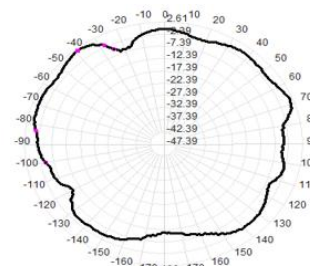
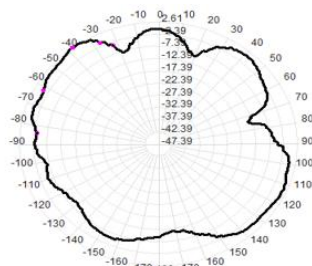
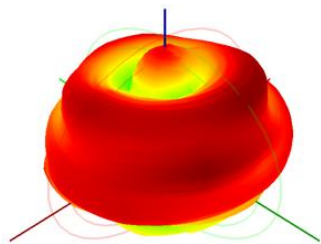


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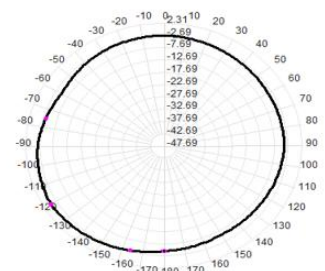
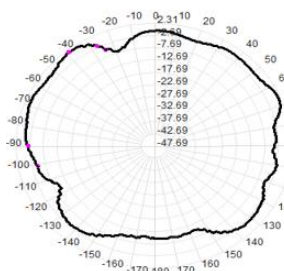
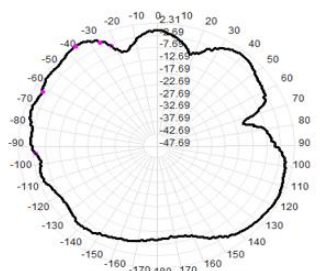
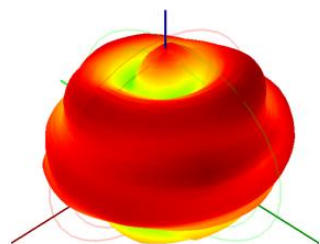
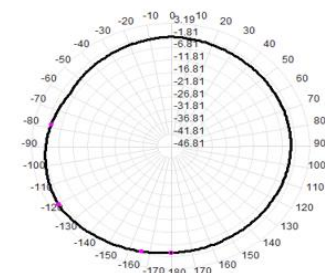
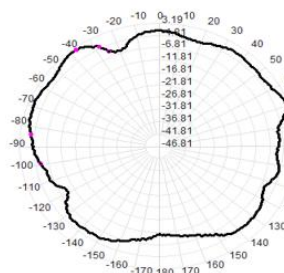
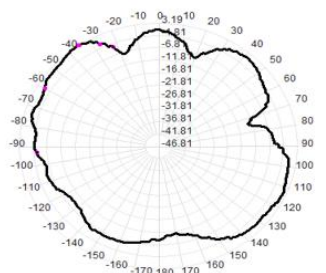
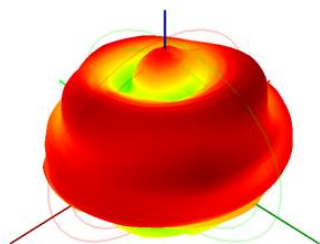
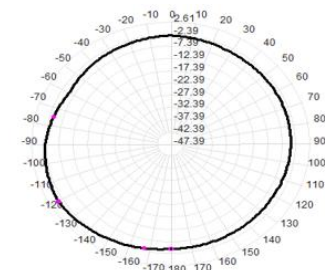
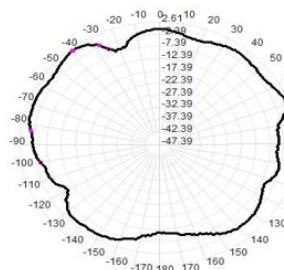
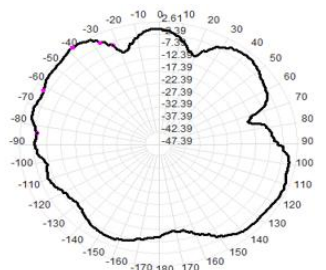
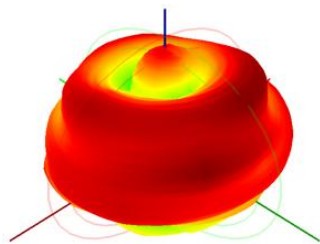


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4、建议与结论

此报告是根据客户深圳市鑫创锦科技有限公司提机型项目, 最终版测得的天线电器性能。

从如上测试数据可以看到, 此天线提供了较好的电器性能。

天逸源研发期盼您的确认, 谢谢合作!