

# APPROVAL SHEET

客户名称 CUSTOMER :

名称 NAME :

2.4/5.8G built-in antenna

物料代码 PART CODE :

规格型号 MODEL NO :

日期 DATE : 2023. 08. 14

制作 drawing	审核 check	批准 approved

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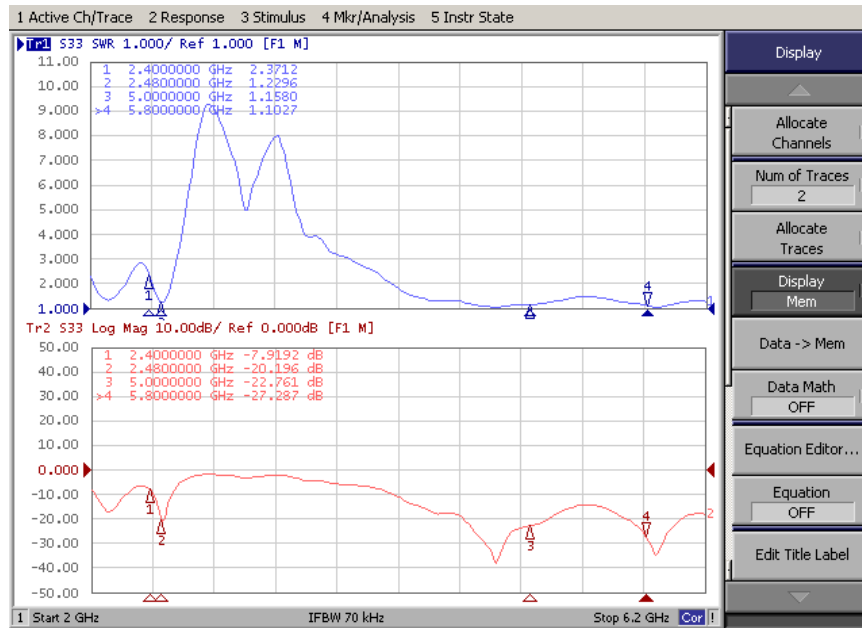
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## 电性能指标 Electrical Performance Index

电 器 性 能 指 标		Electrical Specifications	
频率范围		2400-2500/5100-5850MHZ	
电压驻波比	$\leq 2.5$	VSWR	$\leq 2.5$
增益	2.4G $\leq$ 3.1DBI 5.8G $\leq$ 3.3DBI	GAIN	2.4G $\leq$ 3.1DBI 5.8G $\leq$ 3.3DBI
辐射方式	全向	Radiation	OMNI
极化方式	线极化	Polarizatin	LINEAR
输入阻抗	50 $\Omega$	Input Impedance	50 $\Omega$
机 械 性 能 指 标		Mechanical Specifications	
接口形式	IPEX-1	Input connector	IPEX-1
天线材质	PCB	Antenna materia	PCB
工作温度	-30 $^{\circ}$ C $\sim$ +80 $^{\circ}$ C	Working Tempera ture	-30 $^{\circ}$ C $\sim$ +80 $^{\circ}$ C
工作湿度	40 $\sim$ 85%	Working Humidit y	40 $\sim$ 85%

# 测试报告 Test report

## 1. 天线驻波图天线效率



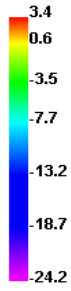
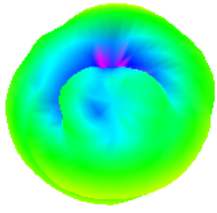
## 2. 天线效率

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)
2400	51.89	-2.85	2.13	-0.02
2405	48.23	-3.17	1.75	-0.4
2410	49.1	-3.09	1.7	-0.45
2415	49.48	-3.06	1.74	-0.41
2420	47.2	-3.26	1.64	-0.51
2425	54.3	-2.65	2.3	0.15
2430	51.53	-2.88	2.12	-0.03
2435	54.41	-2.64	2.34	0.19
2440	53.18	-2.74	2.45	0.3
2445	52.17	-2.83	2.55	0.4
2450	50.48	-2.97	2.2	0.05
2455	47.53	-3.23	2.1	-0.05
2460	52.43	-2.8	2.71	0.56
2465	49.74	-3.03	2.58	0.43
2470	54.02	-2.67	2.61	0.46
2475	54.72	-2.62	3.16	1.01
2480	54.33	-2.65	2.88	0.73
2485	56.54	-2.48	3	0.85
2490	52.63	-2.79	2.62	0.47
2495	56.24	-2.5	3.07	0.92
2500	53.72	-2.7	2.8	0.65

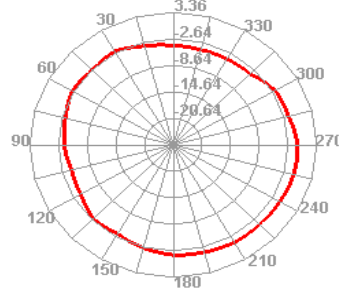
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)
5000	65.78	-1.82	3.68	1.53
5050	60.49	-2.18	2.3	0.15
5100	62.19	-2.06	2.93	0.78
5150	60.45	-2.19	2.55	0.4
5200	55.84	-2.53	1.57	-0.58
5250	61.56	-2.11	3.06	0.91
5300	62.25	-2.06	3.53	1.38
5350	66.9	-1.75	2.86	0.71
5400	65.97	-1.81	2.87	0.72
5450	55.9	-2.53	2.8	0.65
5500	49.36	-3.07	2.24	0.09
5550	41.48	-3.82	1.89	-0.26
5600	50.69	-2.95	3.1	0.95
5650	50.16	-3	2.42	0.27
5700	57.83	-2.38	3.39	1.24
5750	56.43	-2.48	3.98	1.83
5800	51.6	-2.87	2.16	0.01
5850	56.85	-2.45	2.35	0.2
5900	49.04	-3.09	2.95	0.8
5950	45.9	-3.38	3.35	1.2
6000	34.06	-4.68	0.62	-1.53

### 3. 天线方向图

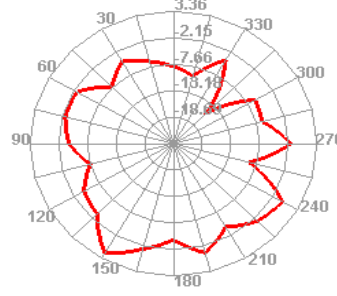
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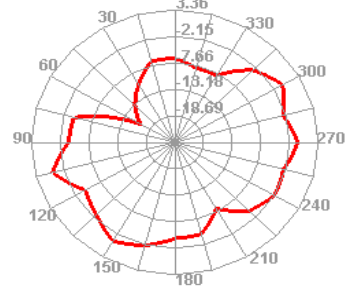
2400.000MHz H



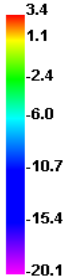
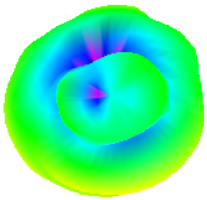
2400.000MHz E1



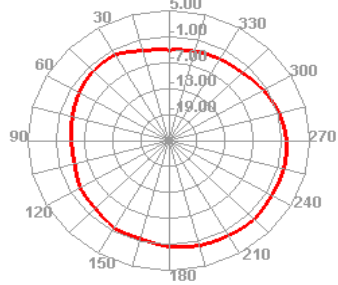
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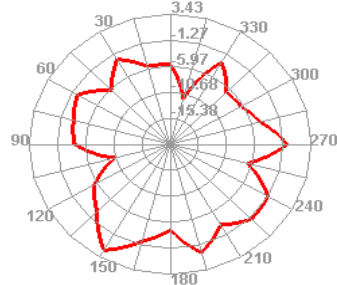
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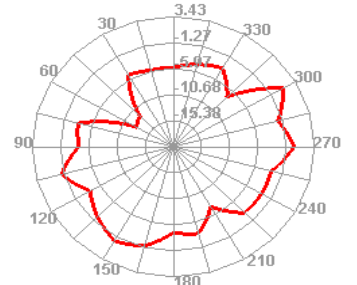
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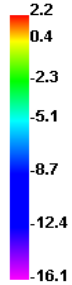
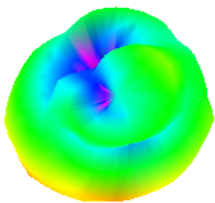
2450.000MHz E1



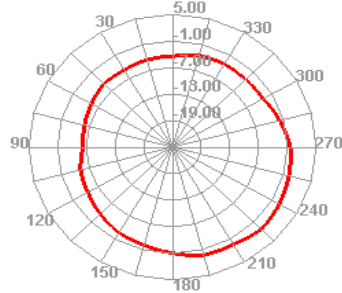
2450.000MHz E2



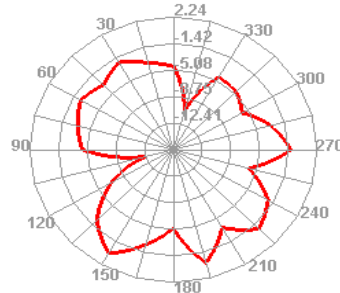
2500.000MHz



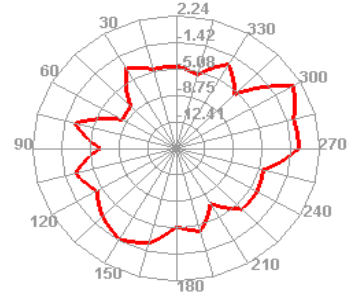
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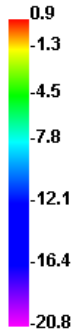
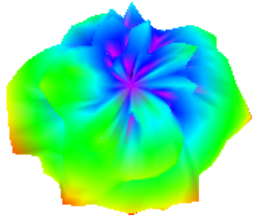
2500.000MHz E1



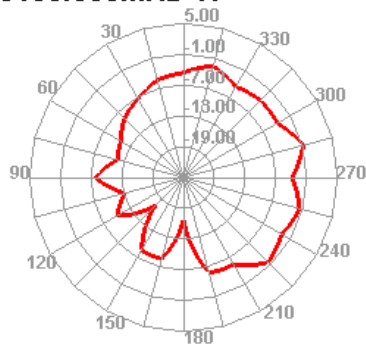
2500.000MHz E2



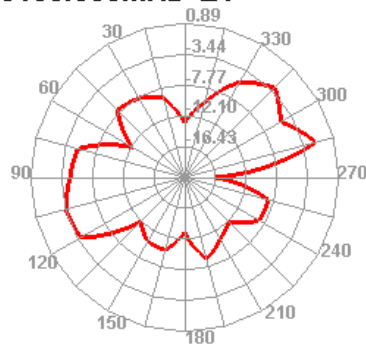
5150.000MHz



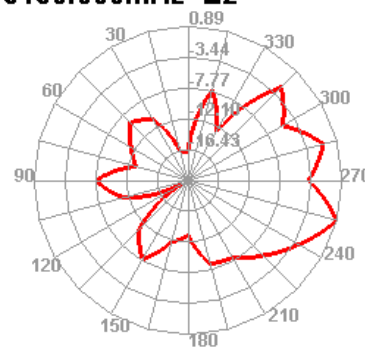
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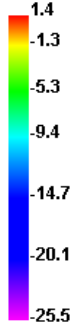
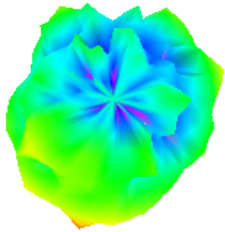
5150.000MHz E1



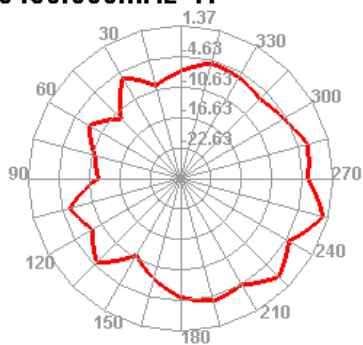
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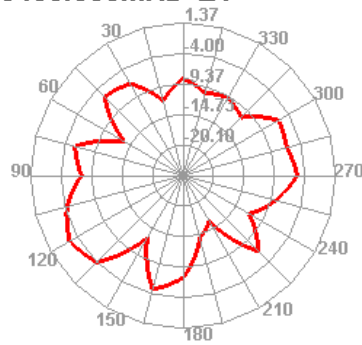
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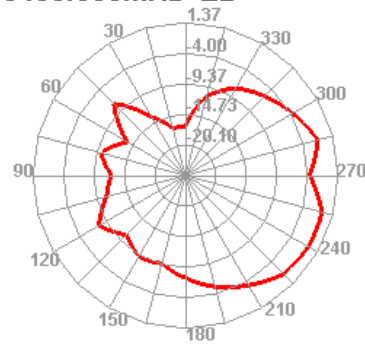
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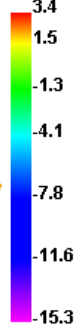
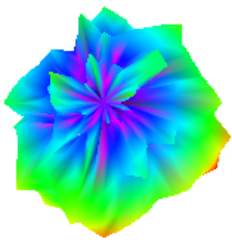
5450.000MHz E1



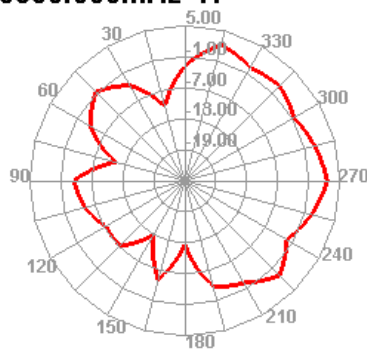
5450.000MHz E2



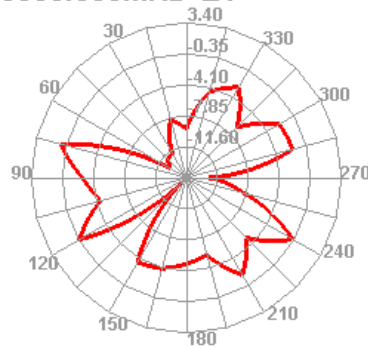
5850.000MHz



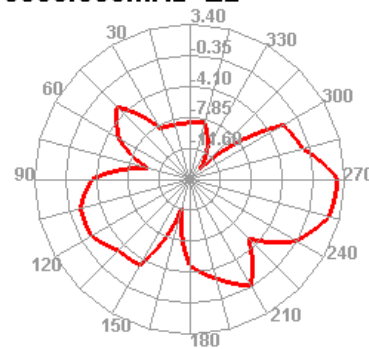
5850.000MHz H



5850.000MHz E1



5850.000MHz E2



# 测试设备及原理 Testing Equipment and Principle

## 1. 测试设备:

网络分析仪 Network Analyzers :

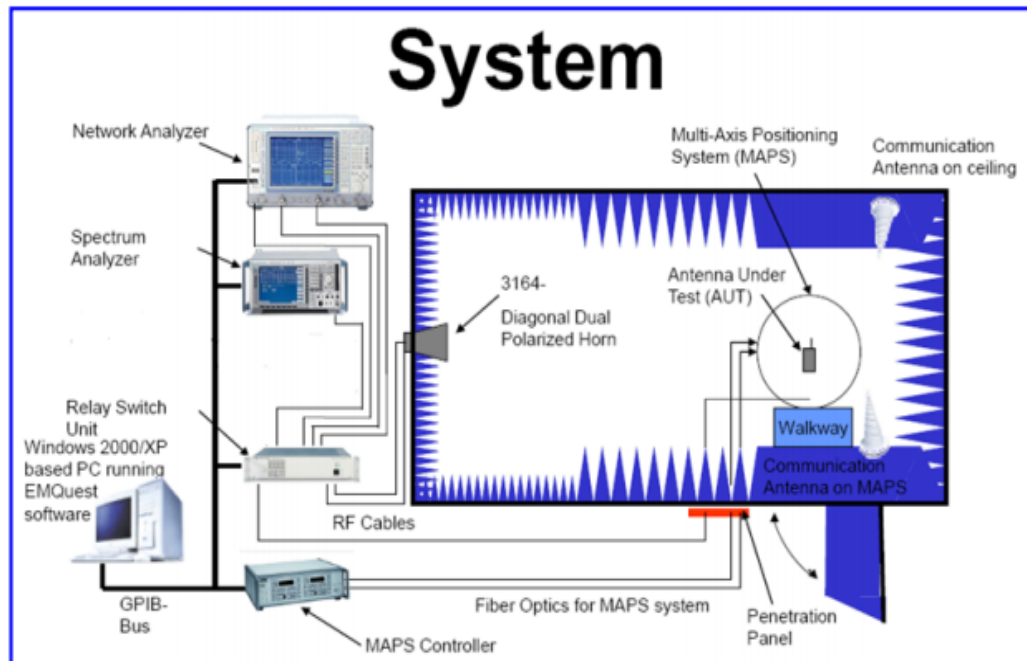
Agilent 8753D 5071B

综合测试仪 Communications Test Set:

Agilent E5515C/CMW500

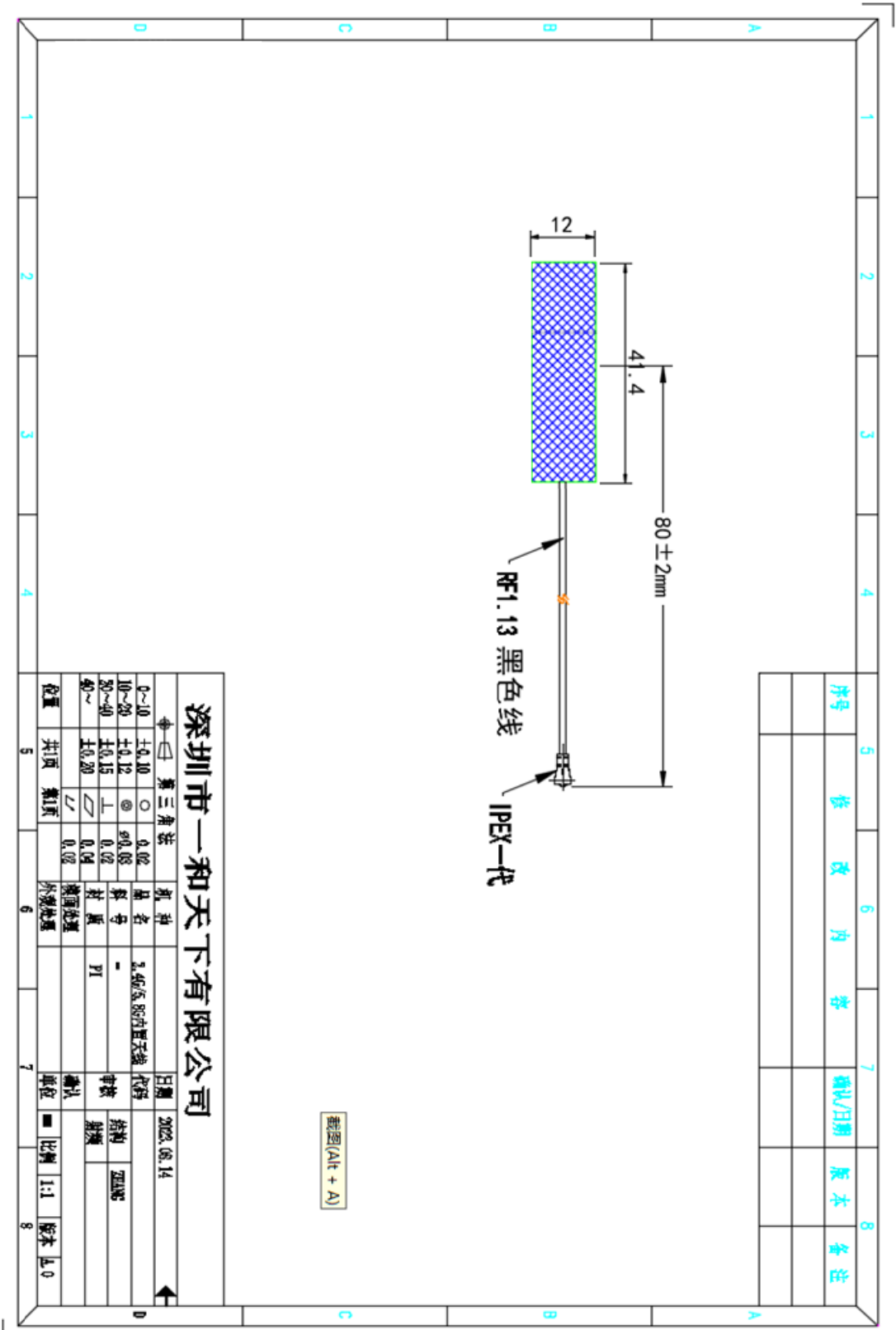
3D 暗室测试系统 3D Chamber Test System:

## 2. 测试原理:





# 工程图纸 Product Drawing



序号	修改内容	修订/日期	版本	备注

绘图(A1t + A)

<b>深圳市一和天下有限公司</b> 第三角法		孔种	孔名	孔径	材料	日期	2023.03.14
			料号			审核	
0~10	±0.10	○		0.02			
10~30	±0.12	◎		φ0.03			
30~40	±0.15	⊖		0.02			
40~	±0.20	∇		0.04			
位置	共顶	第1顶		0.02			
5							
6							
7							
8							
9							