

Antenna Test Report

For

Project J7T

Version: V1

Customer	博威创新	Project	J7T
Band	WiFi2.4/5.8	Color	
Issued by	阳工	Checked by	
Confirmed by		Date	2025.12.26

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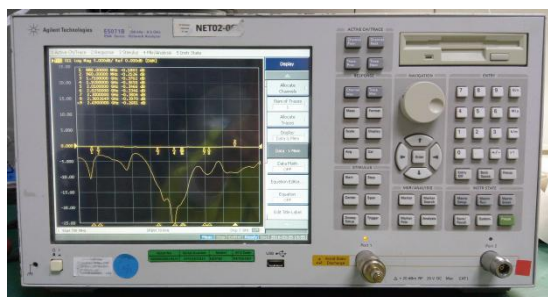
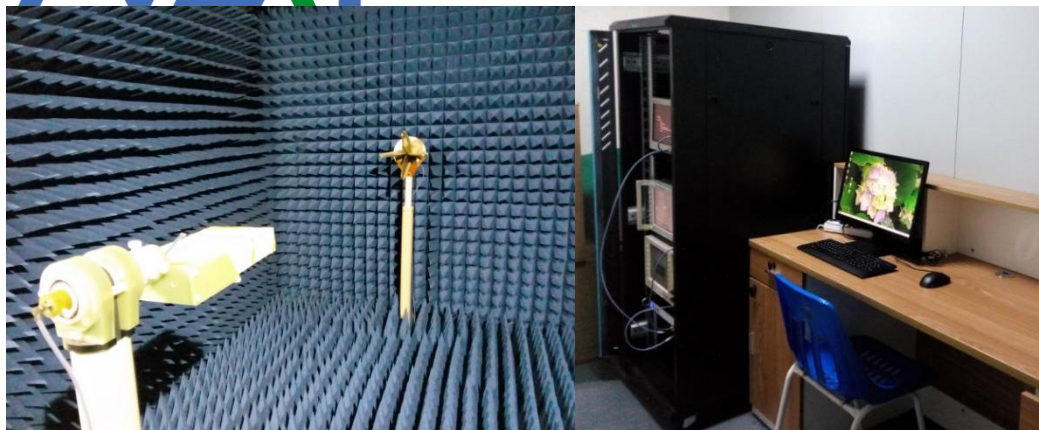
District, Shenzhen, Guangdong Province

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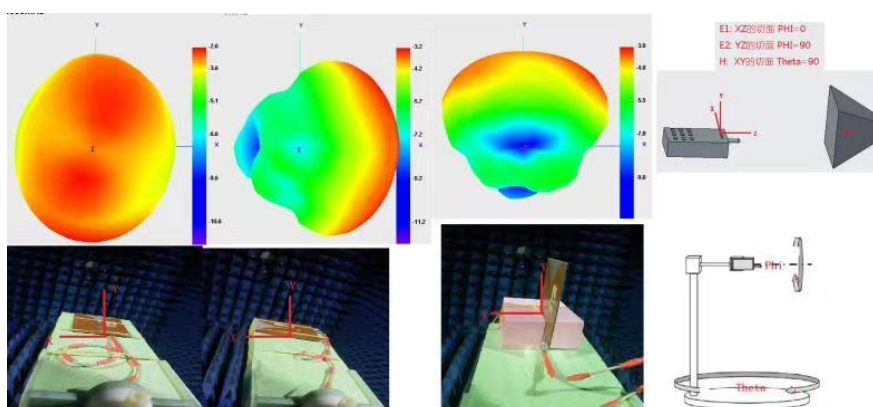


一. Test Instrumentation and item(测试设备及项目)

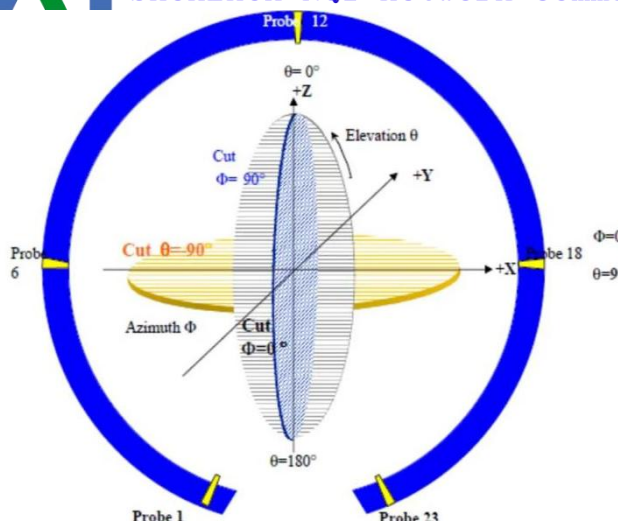
类别 (Class)	测试项目 (Test item)	设备 (Equipment)
1. S parameter	1. 回波损耗(RL) 2. 驻波比 (VSWR) 3.斯密斯原图(Smith chart)	网分 (VNA) : Agilent E5071B R&S ZVB8 Protek A333
2. 耦合测试 (Coupling testing)	1. 发射功率 (MAX Power) 2. 接收灵敏度 (MIN Sens)	1.2G/3G Tester: Agilent 8960 2.The coupling box: TESCOM TC-5060A 3. 3D Chamber: ETS 3D Chamber (5x3x3)
3. 3D 无源测试 (Passive Test)	1. 效率 (Effeciency) 2. 增益 (Gain) 3.辐射方向图 (radiation pattern)	1. 3D Chamber: TEM24 3D Chamber (5x5x5) ETS 3D Chamber (5x3x3) 2. 网分 (VNA) : Agilent E5071B R&S ZVB8
4.3D 有源测试 (Active Test)	1. 3D 功率 (TRP) 2. 3D 灵敏度 (TIS) 3.吞吐率 (Throughput rate)	1. 3D Chamber: TEM24 3D Chamber (5x5x5) ETS 3D Chamber (5x3x3) 2.2G/3G Tester: Agilent 8960 3.4G Tester: MT8820C/CMW500 4.WIFI/BT/NB-iot Tester: CMW500 5. 5G Tester: SP9500-CTS 6.Head: HEAD-P10 (FACE-P10)



二. Chamber coordinate axis (暗室坐标)



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三. Definitions (定义)

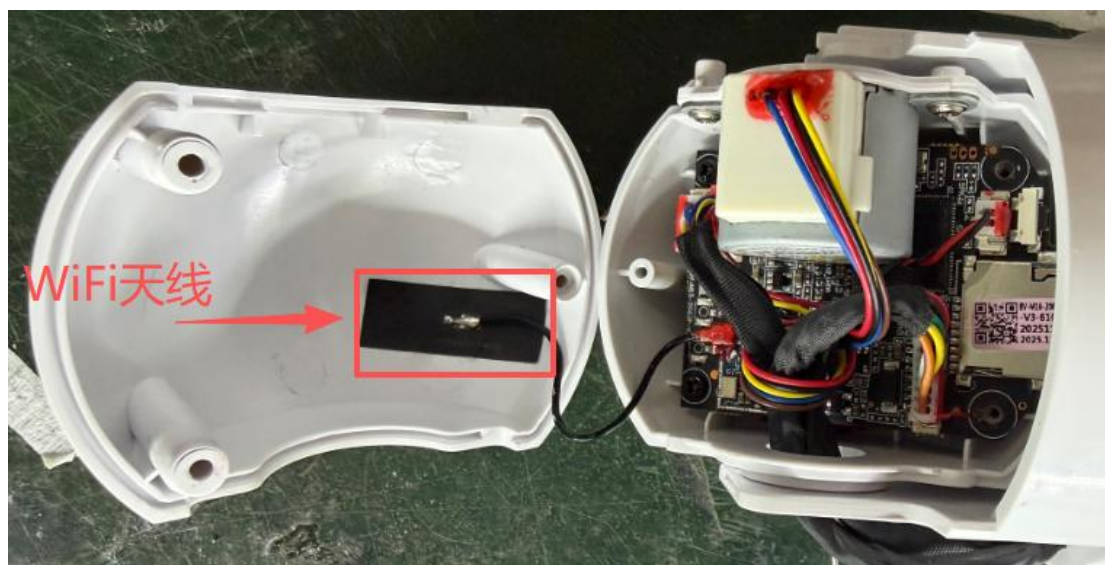
VSWR: Voltage Standing Wave Rate

RL: Return loss

TRP: total radiated power

TIS: total isotropic sensitivity

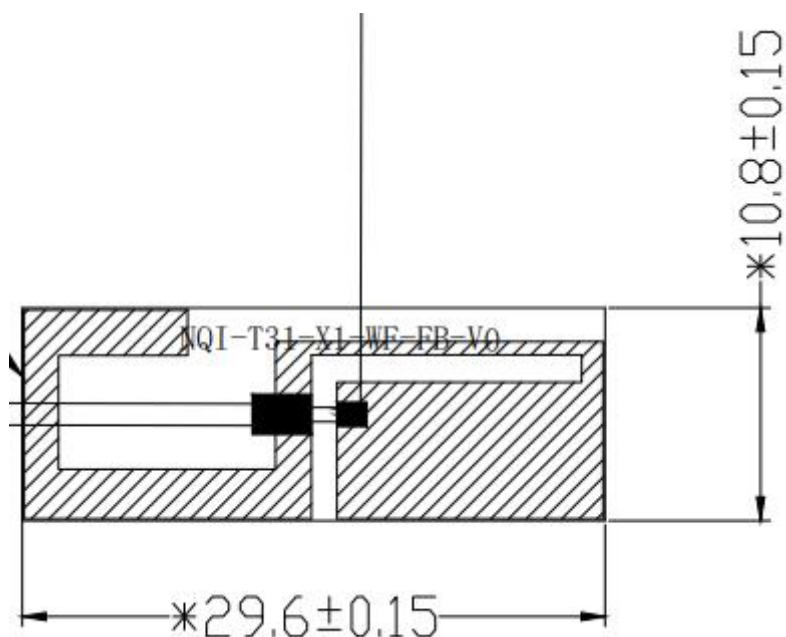
四. Antenna assembly (天线装配)





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Size: rectangle 29.6*10.8mm texture: FPC



五. Cell-Phone Photo and Dealing Methord (项目图片及环境处理)



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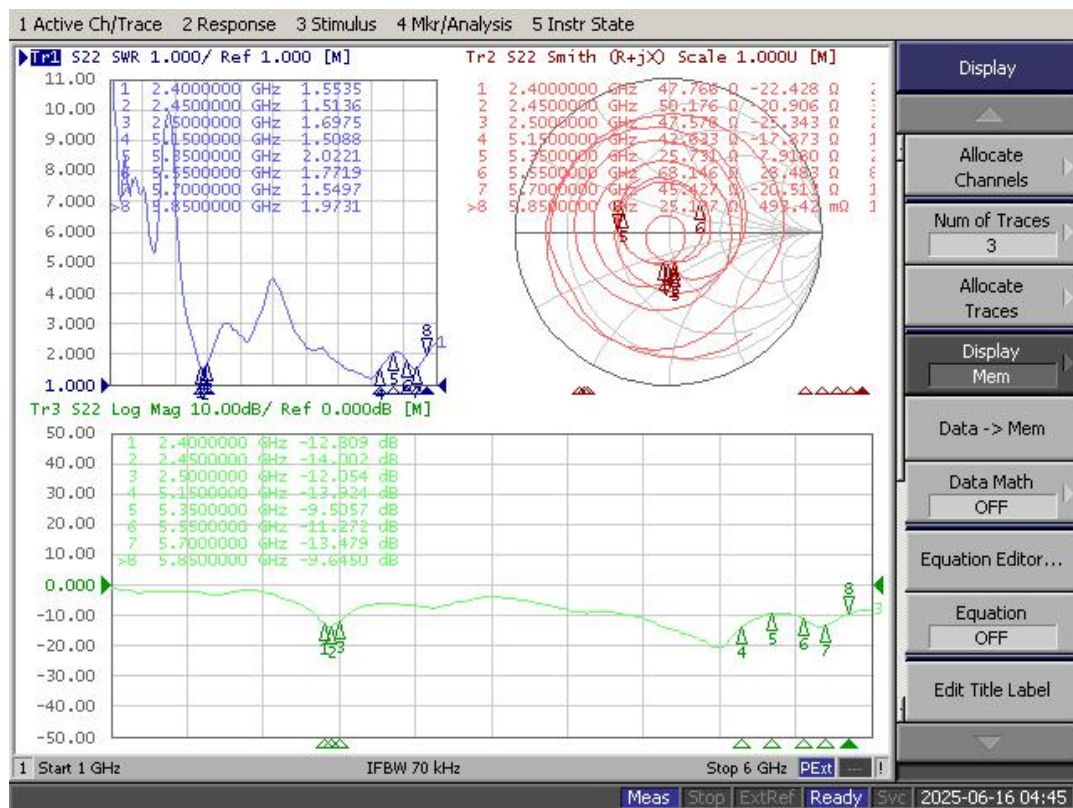


六. Matching Circuit Description (匹配描述)

No Matching

七. Passive Test (无源测试)

7.1. RL/VSWR/Smith Chat (回波损耗/驻波比/史密斯原图)

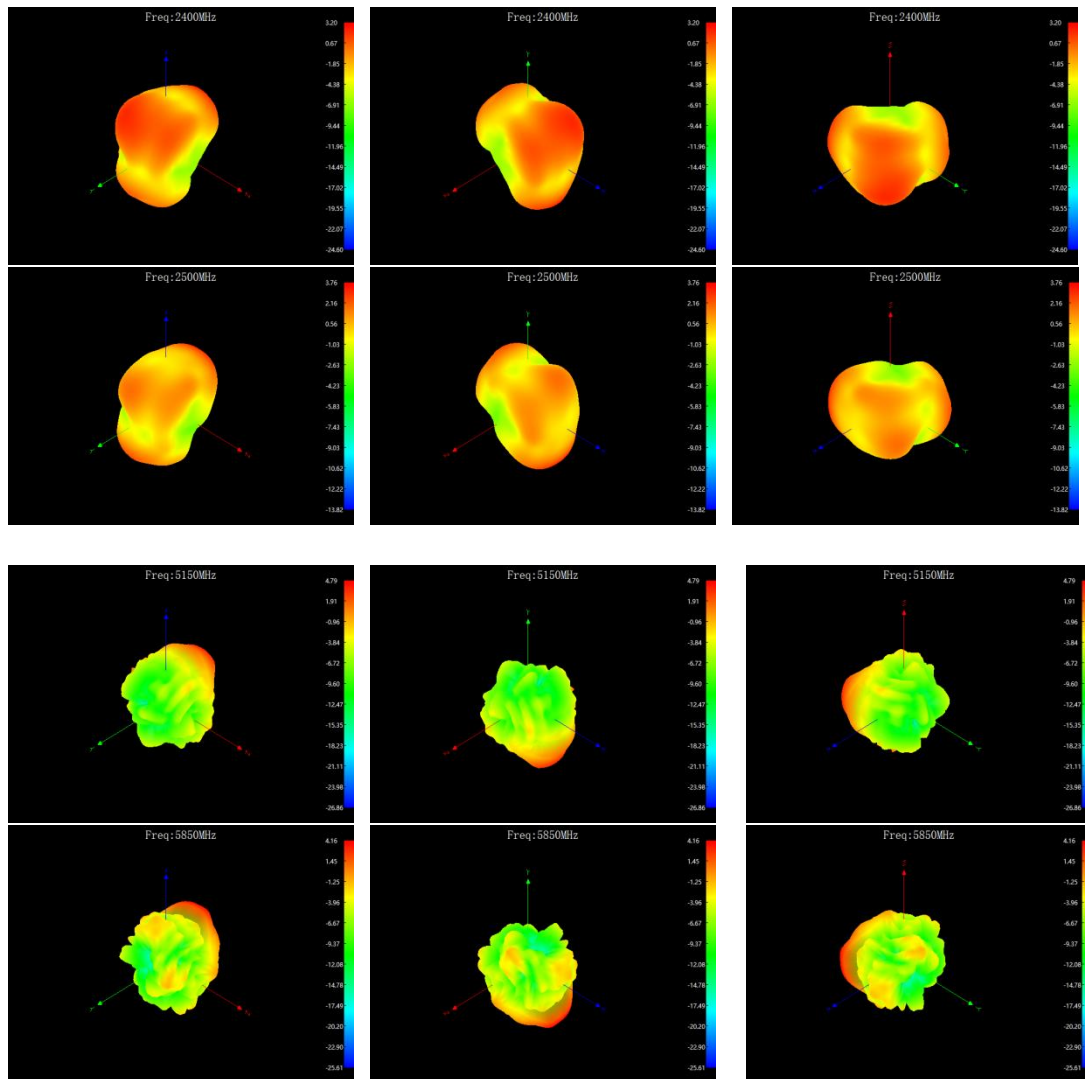


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7.2 Antenna efficiency & gain (天线效率增益)

Frequency/Mhz	MaxGain/dBi	Efficiency / %
2400	3.2	59.98
2410	2.91	59.29
2420	2.62	60.81
2430	2.52	60.39
2440	2.67	63.83
2450	3.29	66.99
2460	3.87	60.15
2470	4.12	69.98
2480	4.06	64.71
2490	3.77	65.01
2500	3.76	64.27
5150	4.79	45.92
5200	4.68	44.67
5250	3.57	42.36
5300	3.93	45.5
5350	3.46	41.21
5400	3.47	46.98
5450	3.16	45.16
5500	4.05	48.02
5550	3.98	47.76
5600	3.79	45.73
5650	3.54	43.57
5700	3.97	45.81
5750	4.62	49.45
5800	4.21	49.36
5850	4.16	47.07

7.3 3D Radiation pattern (3D 方向图)



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八、OTA data (OTA 数据)



The camera is facing the center (摄像头朝中间)				
free space (自由空间)	Test	WiFi-11B TRP&TIS		
	Result	1	6	11
	TRP (dBm)	18.42	18.16	18.51
	TIS (dBm)	-88.02	-87.64	-86.06
free space (自由空间)	Test	WiFi-11A TRP&TIS		
	Result	36	149	165
	TRP (dBm)	18.26	16.08	17.47
	TIS (dBm)	-75.35	-75.31	-73.88



The camera is facing upwards (摄像头朝上)				
free space (自由空间)	Test	WiFi-11B TRP&TIS		
	Result	1	6	11
	TRP (dBm)	19.35	19.22	18.38
	TIS (dBm)	-87.76	-88.08	-87.32
free space (自由空间)	Test	WiFi-11A TRP&TIS		
	Result	36	149	165
	TRP (dBm)	18.3	16.94	18.21
	TIS (dBm)	-75.39	-75.7	-75.36



The camera is facing down (摄像头朝下)				
free space (自由空间)	Test	WiFi-11B TRP&TIS		
	Result	1	6	11
	TRP (dBm)	19.16	19.03	19.19
	TIS (dBm)	-88.86	-88.57	-88.11
free space (自由空间)	Test	WiFi-11A TRP&TIS		
	Result	36	149	165
	TRP (dBm)	18.35	17.04	18.35
	TIS (dBm)	-75.51	-75.78	-74.91