



深圳市国质信网络通讯有限公司
ShenZhen NQI network communication ltd

Antenna Test Report

For

Project G3

Version:

Customer	博威创新	Project	G3
Band	WIFI :2.4G/5.8G	Color	
Issued by	冯工	Checked by	
Confirmed by		Date	2026.3.24

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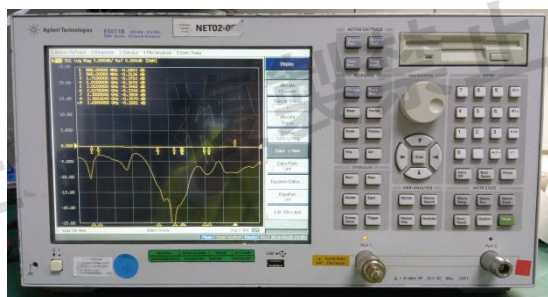
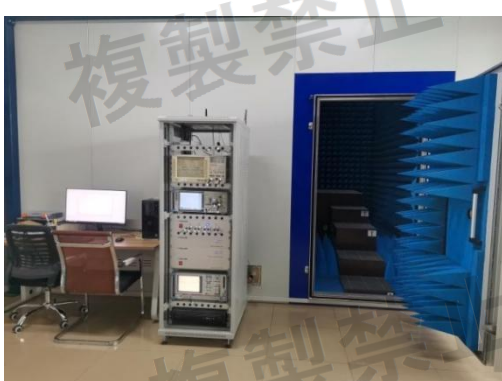
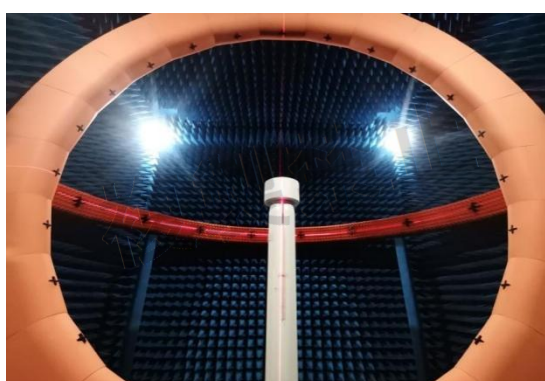
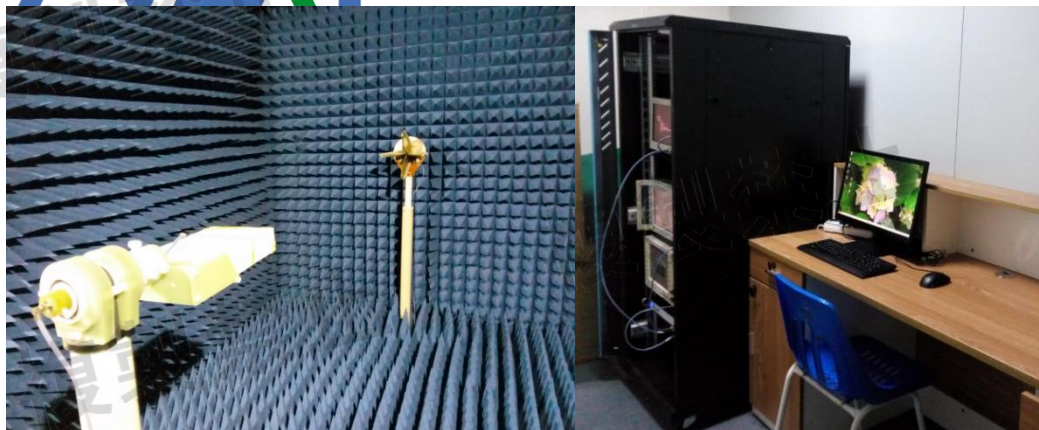


一. Test Instrumentation and item(测试设备及项目)

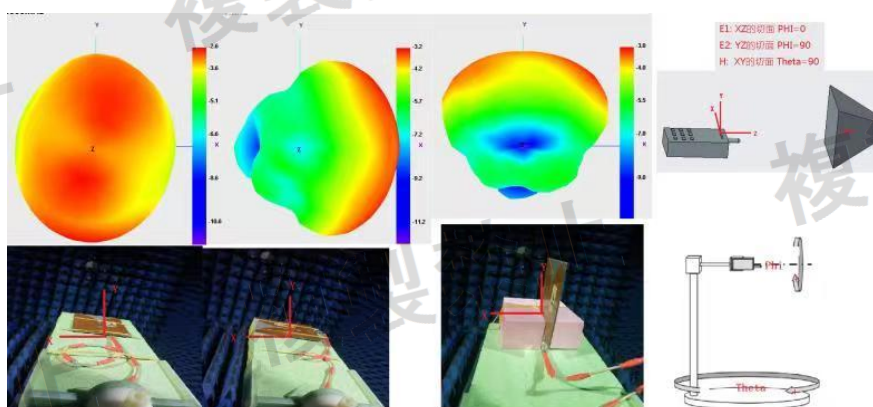
类别 (Class)	测试项目 (Test item)	设备 (Equipment)
1. S parameter	1. 回波损耗(RL) 2. 驻波比 (VSWR) 3. 史密斯原图(Smith chart)	网分 (VNA): Agilent E5071B R&S ZVB8 Protek A333
2. 耦合测试 (Coupling testing)	1. 发射功率 (MAX Power) 2. 接收灵敏度 (MIN Sens)	1. 2G/3G Tester: Agilent 8960 2. The coupling box: TESCOM TC-5060A 3. 3D Chamber: 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)



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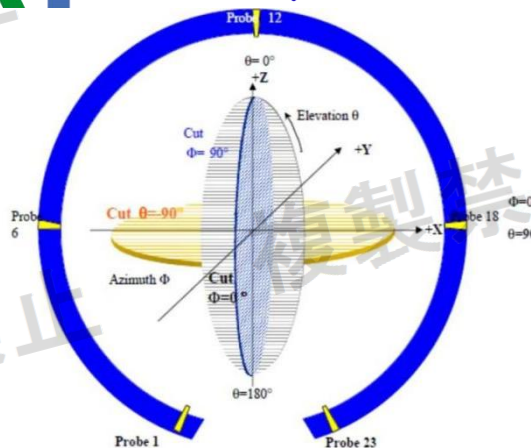
二. Chamber coordinate axis (暗室坐标)



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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. Cell-Phone Photo and Dealing Method (手机图片及环境处理)

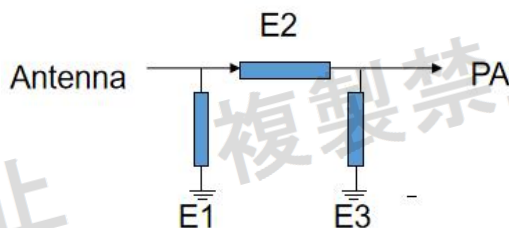


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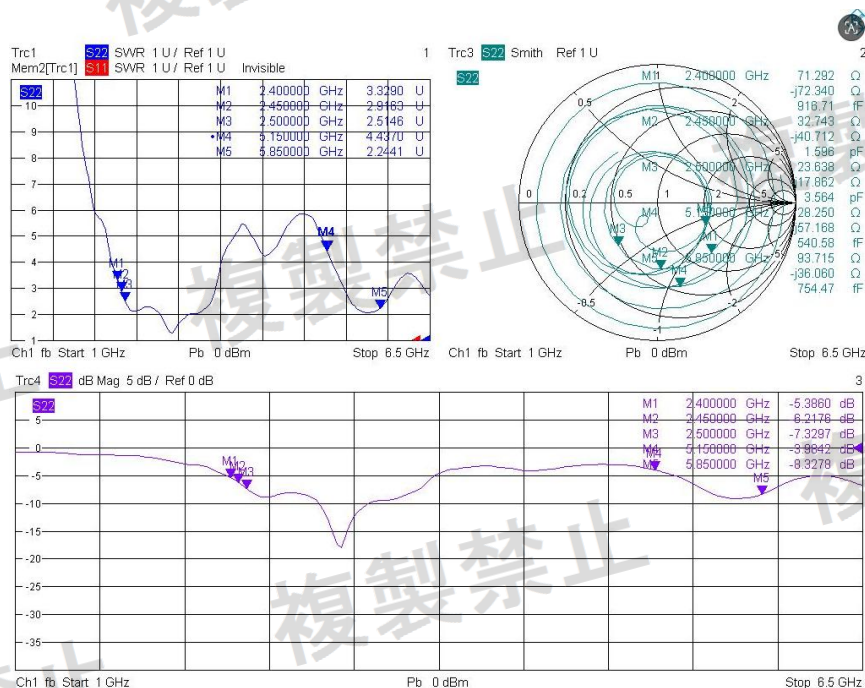
五. Matching Circuit Description (匹配描述) 匹配按照主板本身匹配, 无更改。



WIFI 天线	位号	参数
	E1	NC
	E2	0Ω
	E3	NC

六. Passive Test (无源测试)

6.1. RL/VSWR (回波损耗/驻波比)



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6.2 天线效率测试

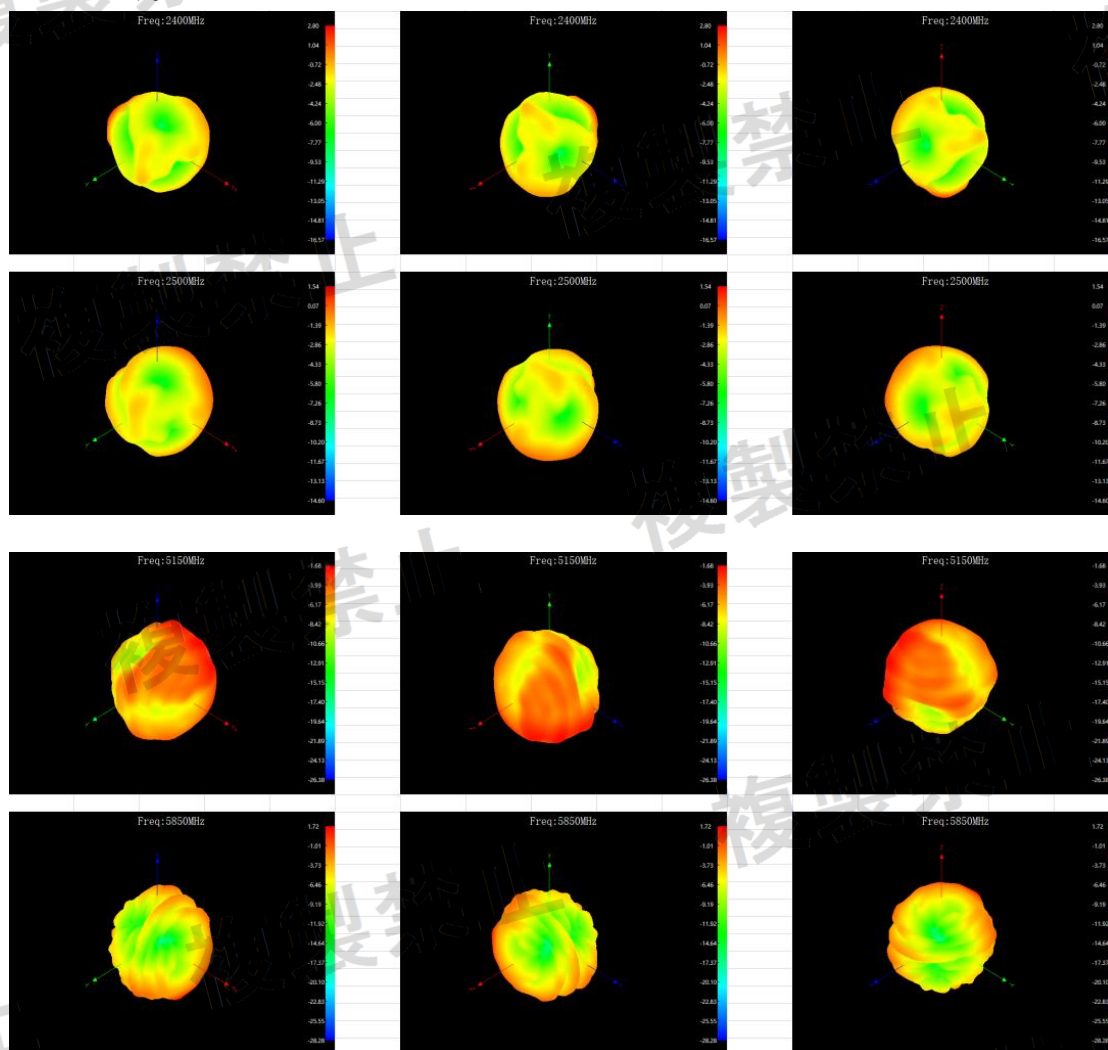
Frequenc y/Mhz	Efficiency / %	MaxGain/ dBi	Frequenc y/Mhz	Efficiency / %	MaxGain/ dBi
2400	50	2.8	5150	29.38	-1.68
2410	47.53	2.49	5200	28.38	-2.06
2420	50	2.85	5250	28.91	-1.74
2430	46.77	2.22	5300	30.48	-1.3
2440	47.97	2.13	5350	31.19	-1.03
2450	47.64	1.54	5400	30.2	-0.72
2460	47.64	1.63	5450	32.06	-0.53
2470	48.87	1.45	5500	37.15	0.35
2480	49.32	1.22	5550	37.5	0.57
2490	52.6	1.94	5600	39.08	1.01
2500	50.58	1.54	5650	39.72	0.84
			5700	43.65	1.69
			5750	45.6	2.23
			5800	44.57	1.75
			5850	41.59	1.72

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6.3 天线 3D 方向图



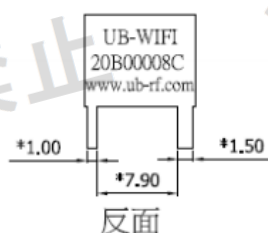
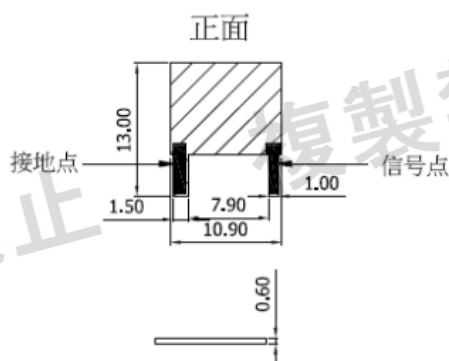
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七. TRP&TIS

NQI ANT TRP&TIS parameter Summary of						
BAND	WIFA-B (11b) (11M)			WIFI-A (11a) (54M)		
CHANNEL	1	6	11	36	149	165
TRP (dBm)	19.42	19.33	19.32	16.9	15.6	16.06
TIS (dBm)	-87.12	-86.1	-86.52	-74.08	-75.47	-73.81



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