

Antenna Specification

For

Project S20

Version:

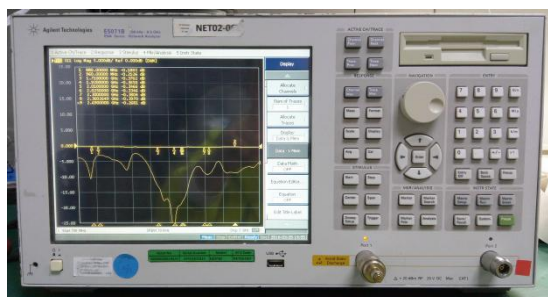
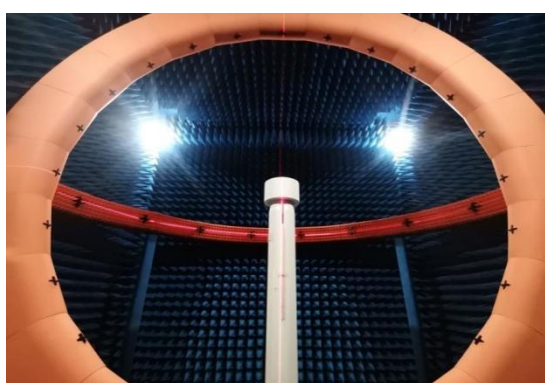
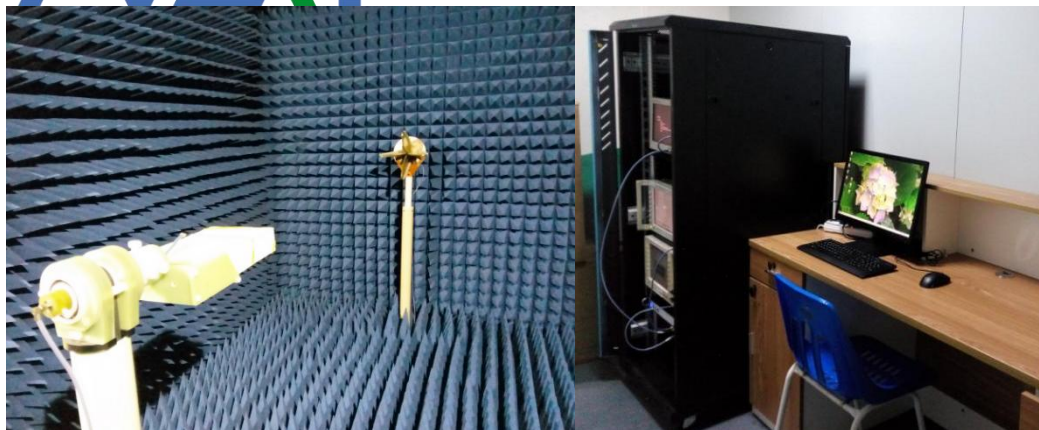
Customer	晨韵	Project	S20
Band	BT	Color	
Issued by	LH	Checked by	
Confirmed by		Date	2024.10.22

This test report belongs to ShenZhen NQI network communication ltd. and related clients to file, please keeping it propely, without our company and related clients allowed, anybody has no rights to reval it to public.

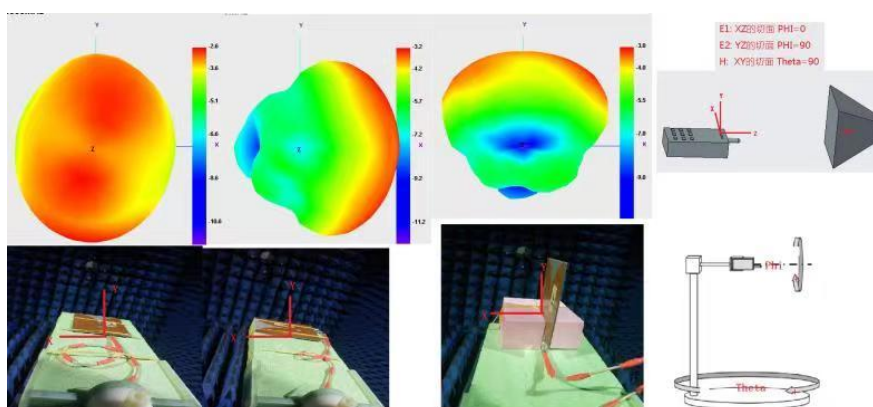


一. Test Instrumentation and item(测试设备及项目)

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)



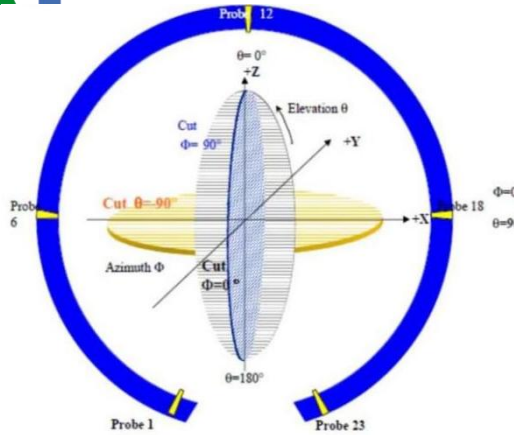
二. Chamber coordinate axis (暗室坐标)



This test report belongs to ShenZhen NQI network communication ltd. and related clients to file, please keeping it propely, without our company and related clients allowed, anybody has no rights to reval it to public.



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



三. Definitions (定义)

VSWR: Voltage Standing Wave Rate

RL: Return loss

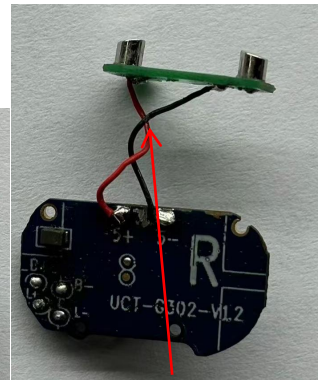
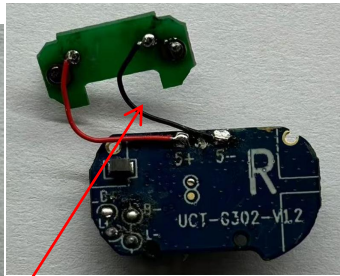
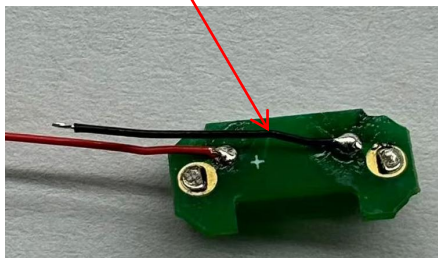
TRP: total radiated power

TIS: total isotropic sensitivity

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

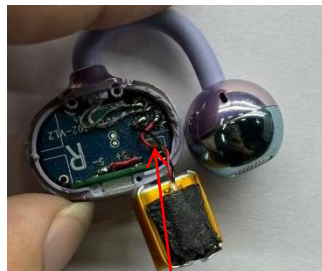
如图所示两根电子线朝小板上标注正
极的方向焊接在充电小板上，线长各
15mm。

右耳



如图所示充电小板上两根电子线朝主板上标
注正极的方向焊接在主板上。

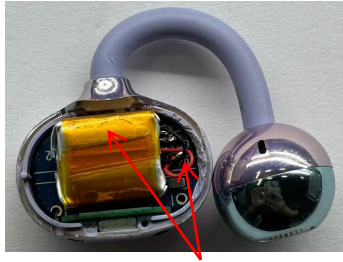
如图所示两根电子线
逆时针方向绞线 1 圈



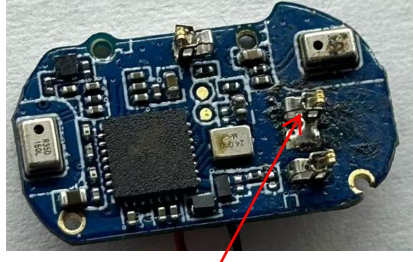
注意两根电子线如图所示摆放，
电子线不要压在主板上。

如图所示电池线逆时针方向绞线 2 圈，
电池线长 20mm；喇叭线不绞线。

This test report belongs to ShenZhen NQI network communication ltd. and related clients to file, please keeping it propely, without our company and related clients allowed, anybody has no rights to reval it to public.

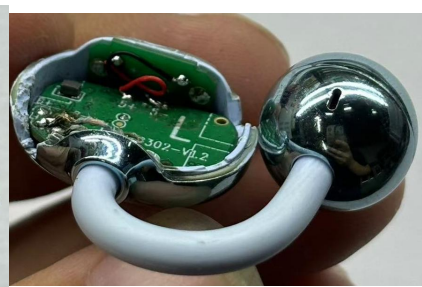
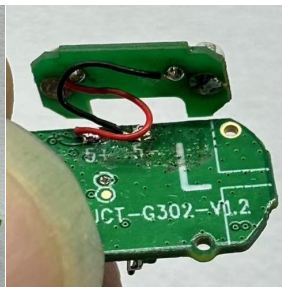
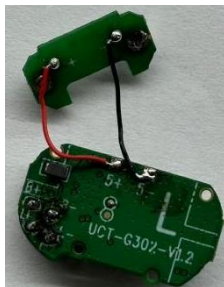


如图所示电池摆放在主板中间，多余电
池线不压在电池下方，摆放在电池右侧。



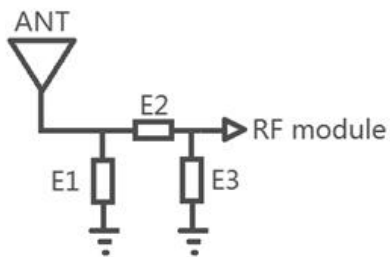
如图所示注意弹片的焊接方向
及位置

左耳

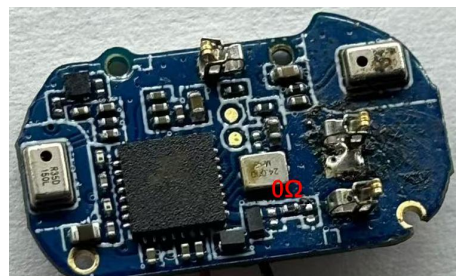
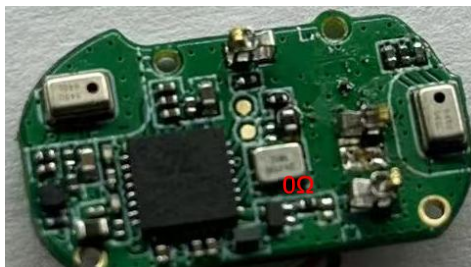


左右耳的装配方式相同。

五. Matching Circuit Description (匹配描述)



Element	L (Value)	R (Value)
E1(0201)	NC	NC
E2(0201)	0 Ω	0 Ω
E3(0201)	NC	NC



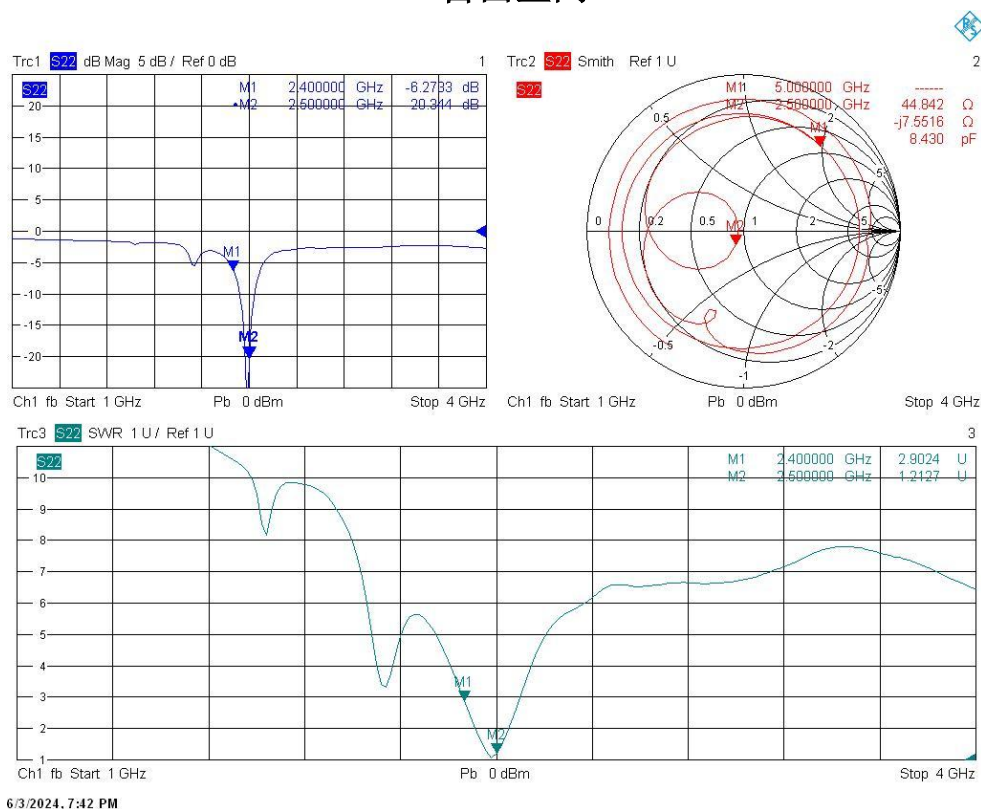
六. Passive Test (无源测试)

6.1. RL/VSWR (回波损耗/驻波比)

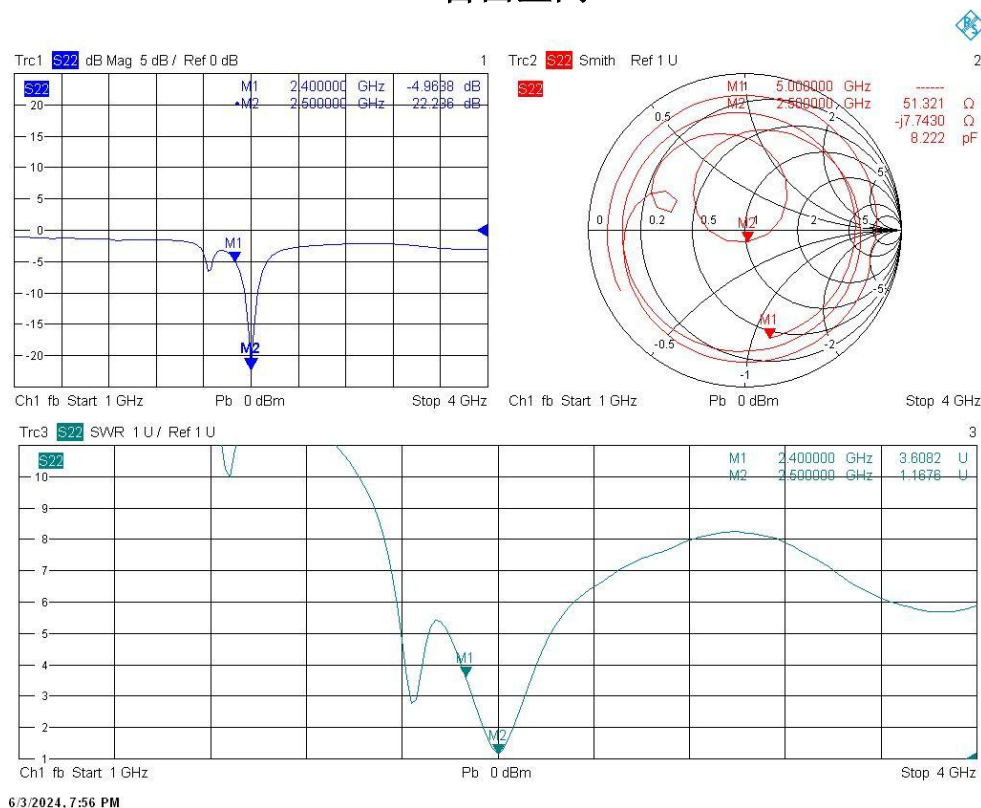
This test report belongs to ShenZhen NQI network communication ltd. and related clients to file, please keeping it propely, without our company and related clients allowed, anybody has no rights to revel it to public.



L 自由空间



R 自由空间



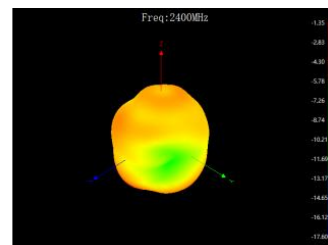
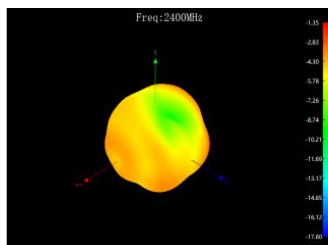
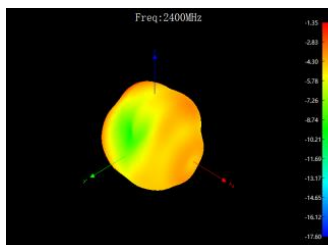
This test report belongs to ShenZhen NQI network communication ltd. and related clients to file, please keeping it properly, without our company and related clients allowed, anybody has no rights to reveal it to public.

6.2.Efficiency、Gain、 Radiation pattern

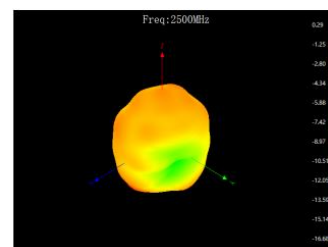
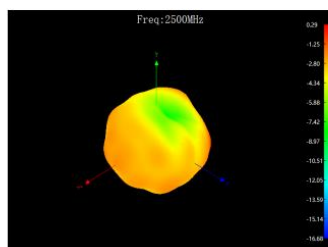
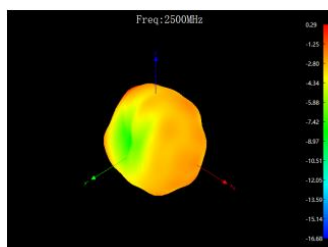
L 自由空间

Freq (MHz)	Effi (%)	MAXGain (dBi)	Freq (MHz)	Effi (%)	MAXGain (dBi)
2400	17.26	-1.35	2460	28.44	0.36
2410	17.46	-1.73	2470	29.58	0.8
2420	19.86	-0.75	2480	28.18	0.3
2430	21.04	-0.65	2490	28.18	0.65
2440	24.32	-0.18	2500	27.16	0.29
2450	26.24	0.21			

2400



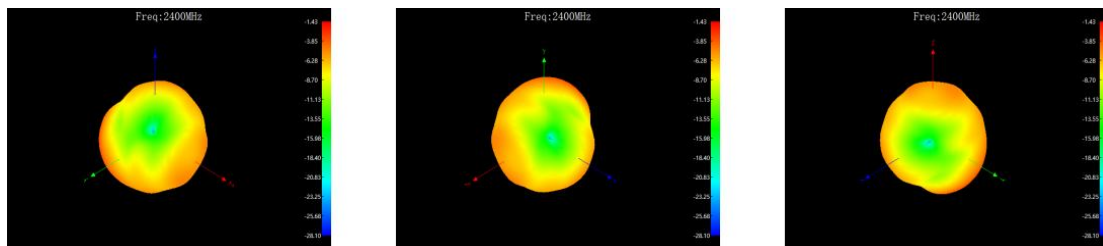
2500



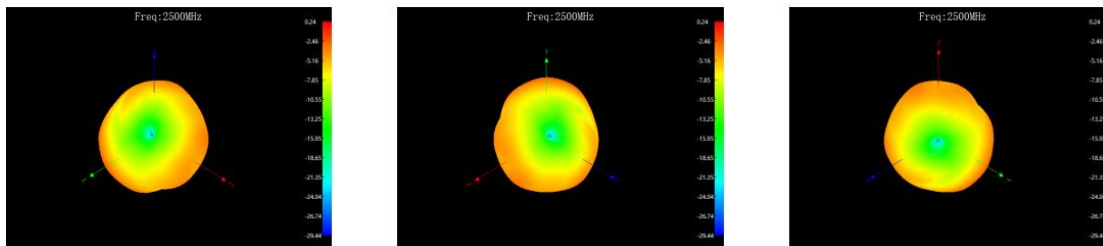
R 自由空间

Freq (MHz)	Effi (%)	MAXGain (dBi)	Freq (MHz)	Effi (%)	MAXGain (dBi)
2400	21.58	-1.43	2460	33.57	0.01
2410	22.34	-1.18	2470	34.75	0.1
2420	25.41	-0.28	2480	33.34	0.21
2430	26.49	-0.4	2490	33.73	0.56
2440	29.72	-0.19	2500	33.04	0.24
2450	31.33	-0.2			

2400



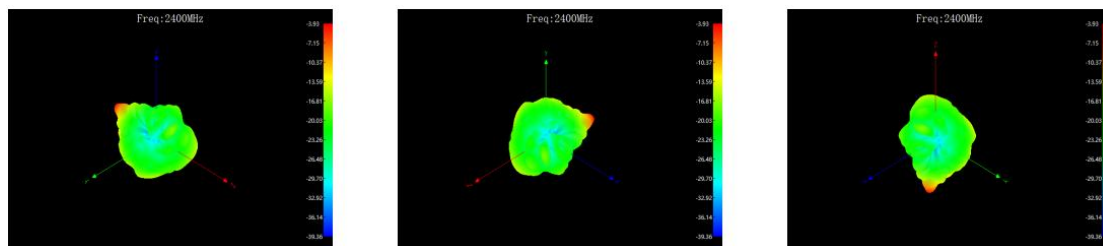
2500



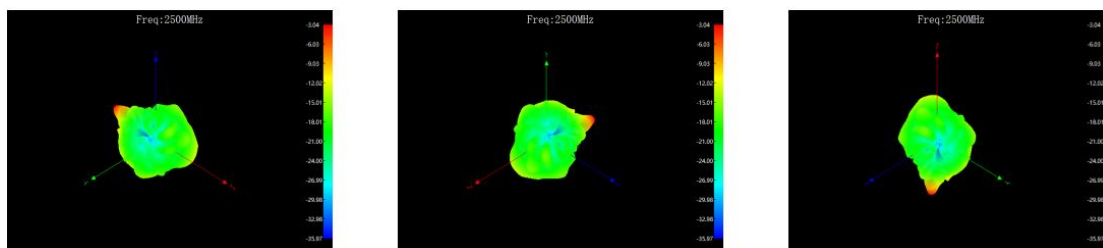
L 头模

Freq (MHz)	Effi (%)	MAXGain (dBi)	Freq (MHz)	Effi (%)	MAXGain (dBi)
2400	2.94	-3.93	2460	3.54	-3.28
2410	2.89	-4.06	2470	3.61	-2.79
2420	3.19	-3.23	2480	3.42	-3.02
2430	3.14	-3.52	2490	3.43	-2.65
2440	3.35	-3.53	2500	3.26	-3.04
2450	3.36	-3.47			

2400



2500

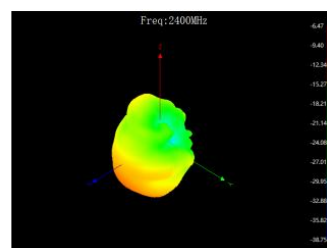
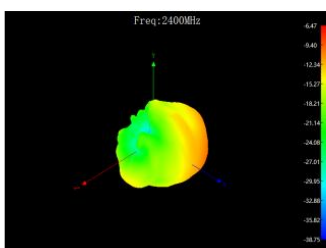
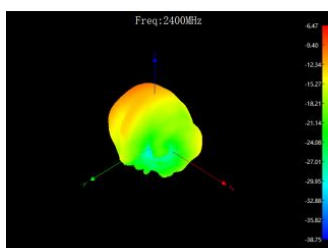


This test report belongs to ShenZhen NQi network communication ltd. and related clients to file, please keeping it propely, without our company and related clients allowed, anybody has no rights to reval it to public.

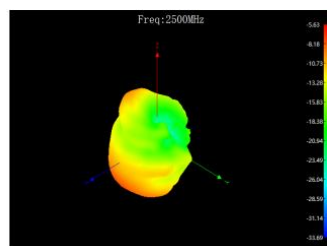
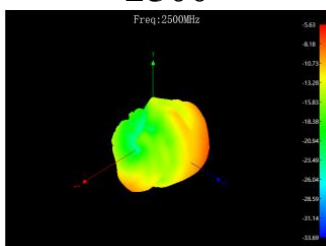
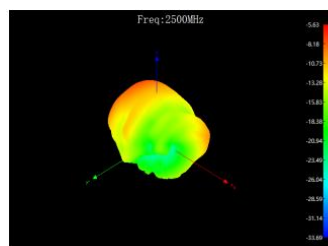
R 头模

Freq (MHz)	Effi (%)	MAXGain (dBi)	Freq (MHz)	Effi (%)	MAXGain (dBi)
2400	2.77	-6.47	2460	4.23	-6.14
2410	2.86	-6.72	2470	4.39	-5.39
2420	3.3	-6.27	2480	4.31	-5.4
2430	3.4	-6.97	2490	4.48	-5.09
2440	3.68	-7.15	2500	4.44	-5.63
2450	3.81	-6.8			

2400



2500



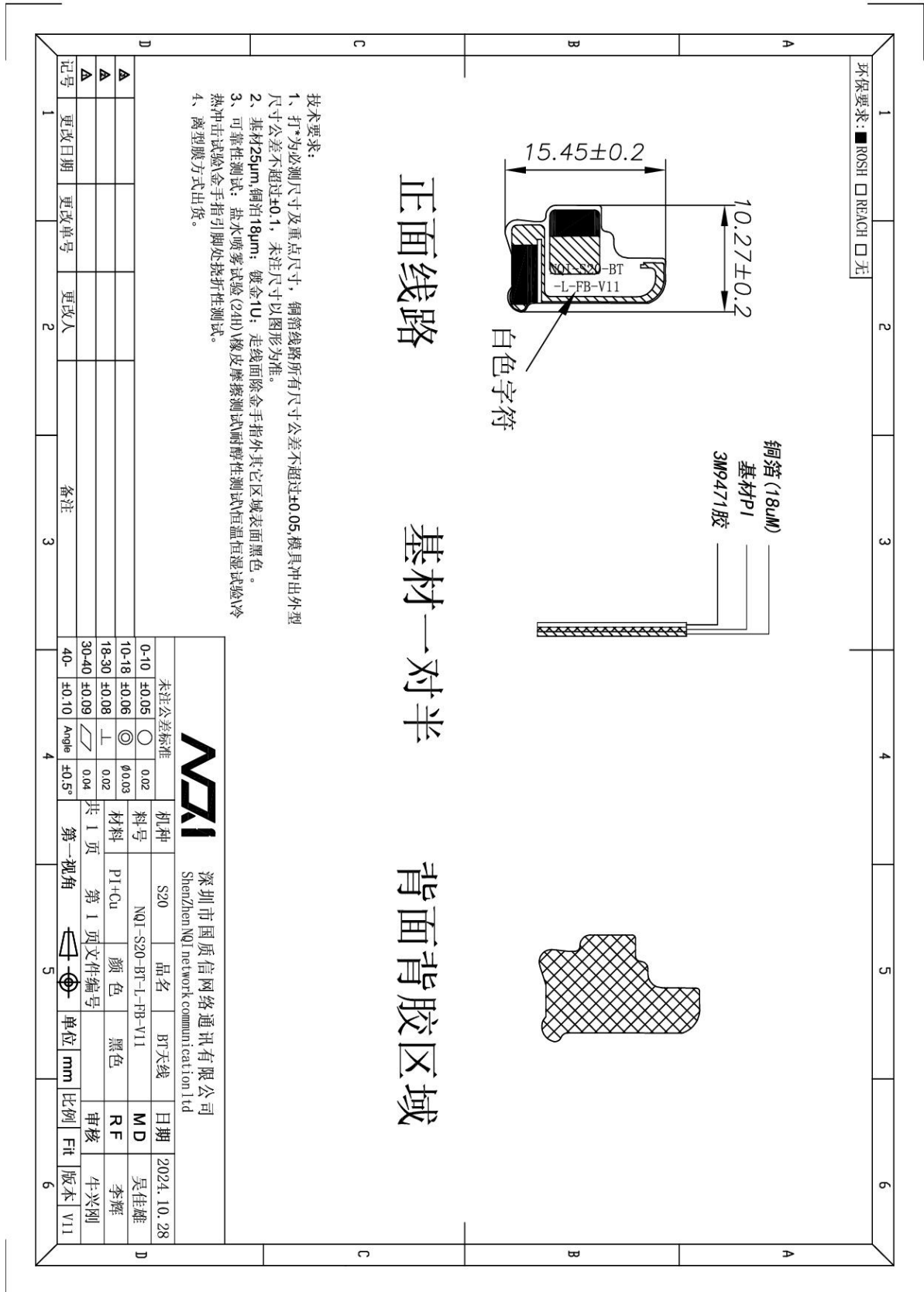
七. TRP&TIS

NQI ANT TRP&TIS parameter Summary of S20					
Free space (自由状态)		Test	Bluetooth TRP&TIS		
		Result	0	39	78
	L	TRP (dBm)	-4.04	-2.39	-0.43
		TIS (dBm)	-78.92	-82.64	-85.01
	R	TRP (dBm)	-5.89	-4.37	-1.9
		TIS (dBm)	-78.33	-82.22	-84.94
Head and ear (二代人头耳)		Test	Bluetooth TRP&TIS		
		Result	0	39	78
	L	TRP (dBm)	-4.28	-4.49	-6.04
		TIS (dBm)	-80.83	-81.34	-81.43
	R	TRP (dBm)	-6.53	-5.54	-5.09
		TIS (dBm)	-78.28	-81.07	-81.48

This test report belongs to ShenZhen NQi network communication ltd. and related clients to file, please keeping it properly, without our company and related clients allowed, anybody has no rights to reveal it to public.



六.天线结构图纸 (Antenna structure drawing) :





六.天线结构图纸 (Antenna structure drawing) :

