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

Antenna Test Report

For

Project XRYJ-IPC

Version：

Customer	纬联技术	**Project**	**XRYJ-IPC**
Band	**WIFI 2.4G**	**Color**	
Issued by	**LH**	**Checked by**	
Confirmed by		**Date**	**2023.02.18**

Manufacturer: ShenZhen NQI network communication ltd.
Address: Room 103, Building 7, Conley City, No. 66 Pingji Avenue, Longgang 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）

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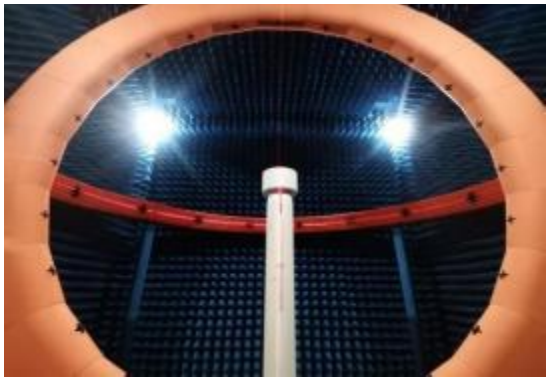
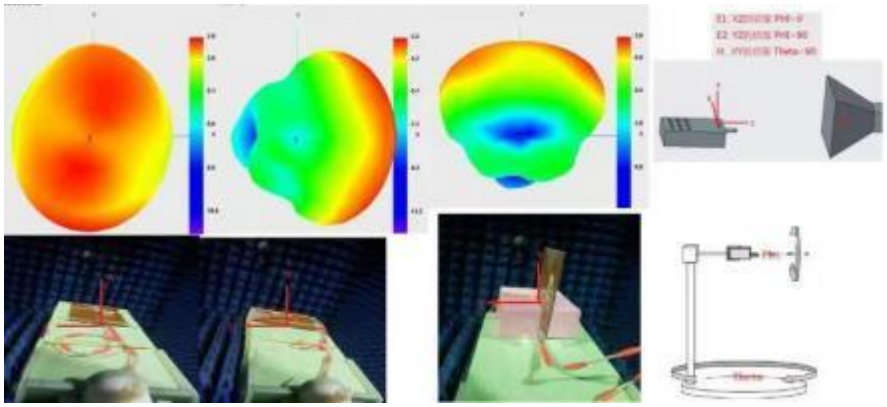


二. Chamber coordinate axis（暗室坐标）



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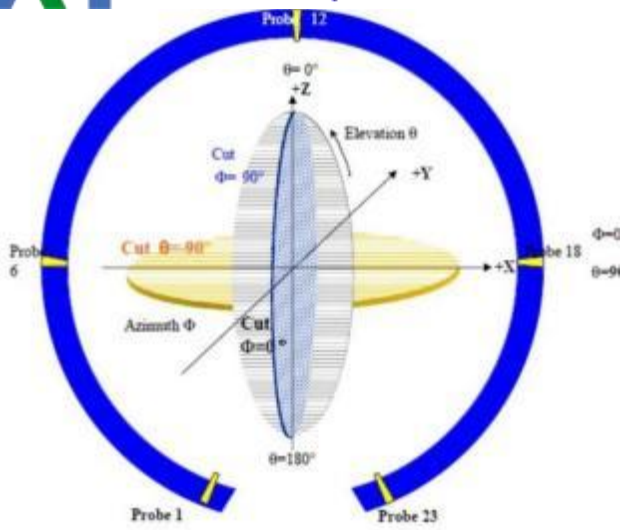

三． Definitions（定义）

VSWR：Voltage Standing Wave Rate

RL：Return loss

TRP：total radiated power

TIS：total istropic sensitivity

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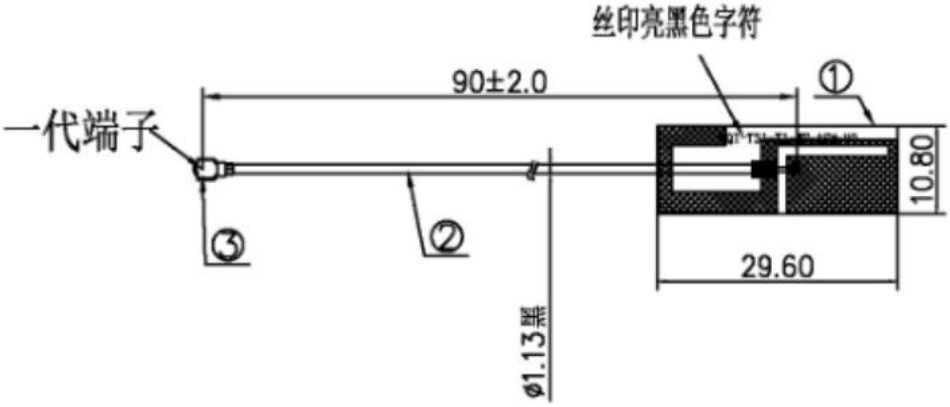
四. Cell-Phone Photo and Dealing Methord（手机图片及环境处理）



五. Matching Circuit Description（匹配描述）

原版匹配

六. Passive Test（无源测试）

6.1. RL/VSWR/Smith chart（回波损耗/驻波比/史密斯图圆）

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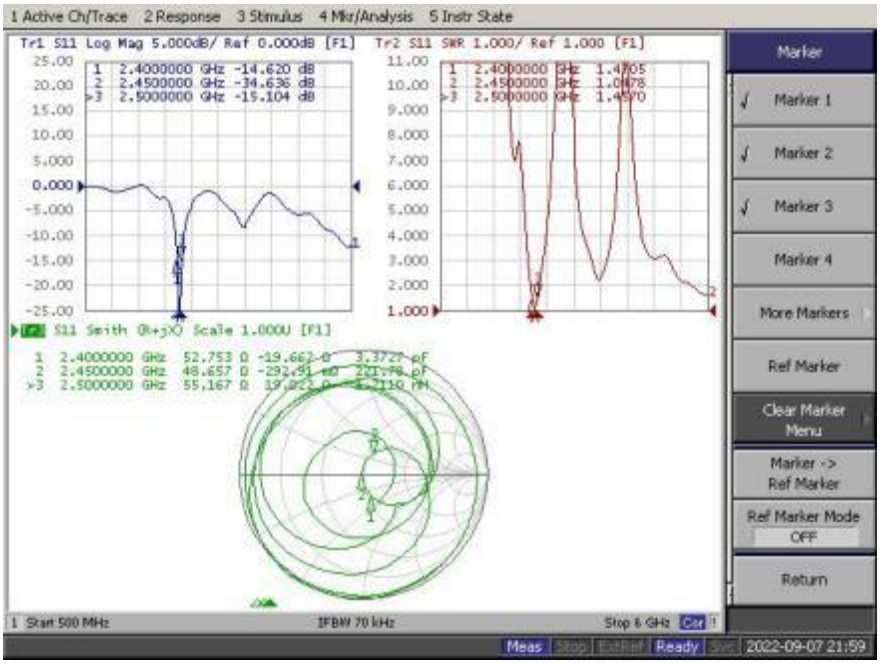

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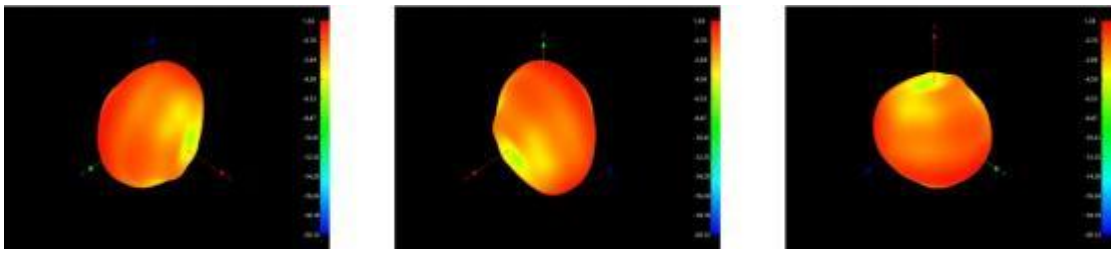
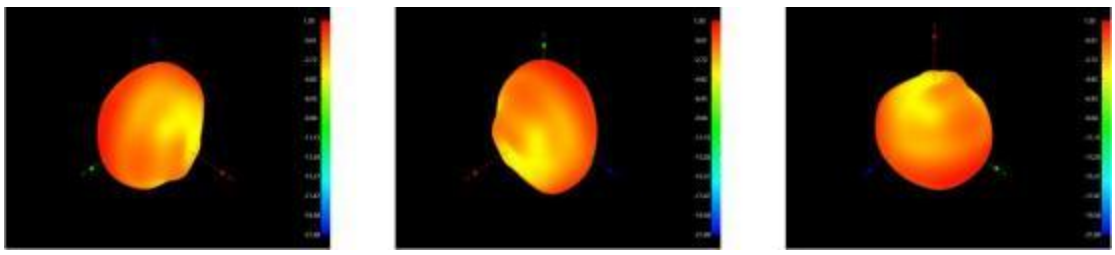
6.2.Effeciency、Gain、Radiation pattern

Freq (MHz)	Effi (%)	Gain (dBi)
2400	61.52	1.24
2410	62.09	1.17
2420	65.46	1.45
2430	62.37	0.9
2440	67.3	1.29
2450	67.3	1.5
2460	64.71	2.05
2470	64.86	2.54
2480	66.07	2.88
2490	70.31	3.22
2500	66.22	2.69

2400



2450



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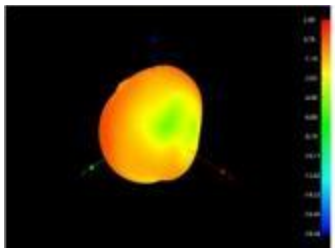
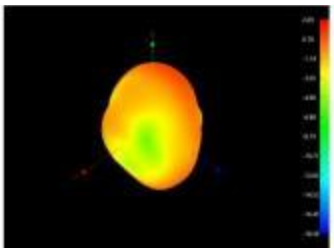
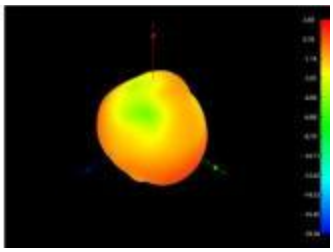

七. TRP&TIS

NQIANT TRP&TIS parameter Summary of XRYJ IPC			
BAND	WIFI-B (11b)		
CHANNEL	1	6	11
TRP(dBm)	22.67	22.7	21.69
TIS(dBm)	-83.59	-87	-87.13
BAND	WIFI-G (11G) DATA RATE (54M)		
CHANNEL	1	6	11
TRP(dBm)	19.28	19.41	18.25
TIS(dBm)	-69.15	-73.84	-73.6
BAND	WIFI-G (11G) DATA RATE (6M)		
CHANNEL	1	6	11
TRP(dBm)	20.81	20.9	19.8
TIS(dBm)	-87.63	-91.32	-91.52
BAND	WIFI-N (11N) DATA RATE (65M)		
CHANNEL	1	6	11
TRP(dBm)	19.26	19.4	18.25
TIS(dBm)	-65.74	-66.7	-69.84
BAND	WIFI-N (11N) DATA RATE (6.5M)		
CHANNEL	1	6	11
TRP(dBm)	20.66	20.8	19.81
TIS(dBm)	-85.63	-88.95	-86.28

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