

样品承认书

Parts Approval Sheet

生产供应商: 国质信Guozhixin

物料名称: WIFI Antenna天线

Supplier

Parts Name

适用项目: BM1

NQI 料号: NQI-BM1-BB70X-ASM-V0

Type/Spec

Parts No

品 牌: NQI

客户料号:

Brand

Quantity

送样日期: 2023.11.24

文件编号: NQI-RD-SPEC-20231121

Send out Date

Document No

承认日期:

样品版本: V0

Approve Date

Version

Supplier		Customer	
Approved By	Prepared By	Engineering Dept	Quality Dept

联系方式 (Contact): No. 103, Building 7, Kangli City, 66

Pingji Avenue, Longgang District, Shenzhen

Email: nqi@nqi.com.cn

Tel: +86-0755-28500656

Fax: +86-0755-28700656



(Resume)

[illegible]



目录

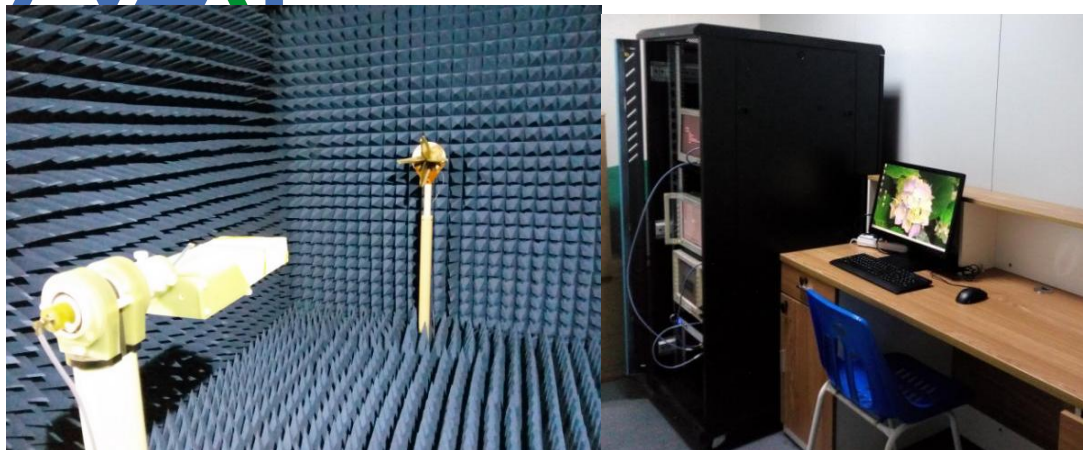
1 Sample and Description.....	4
2. Testing equipment and projects.....	4-5
3. Chamber connection and coordinates.....	5-6
4. Antenna assembly method and environmental treatment.....	6
5. Antenna Matching Network.....	6
6. Antenna electrical performance test data.....	6-9
7. Antenna structure drawing.....	10

一. 样品图片及说明 (Sample picture and description) :

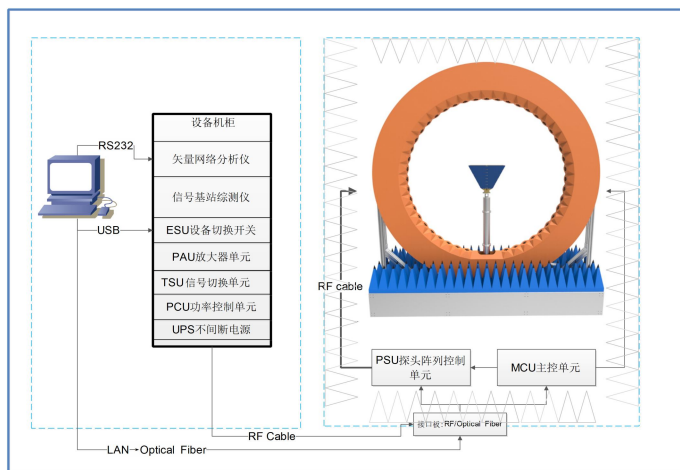


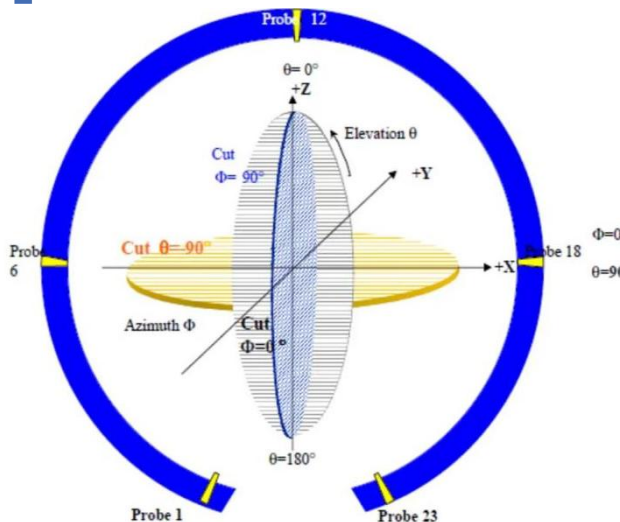
二. 测试设备及项目 (Test equipment and items) :

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)

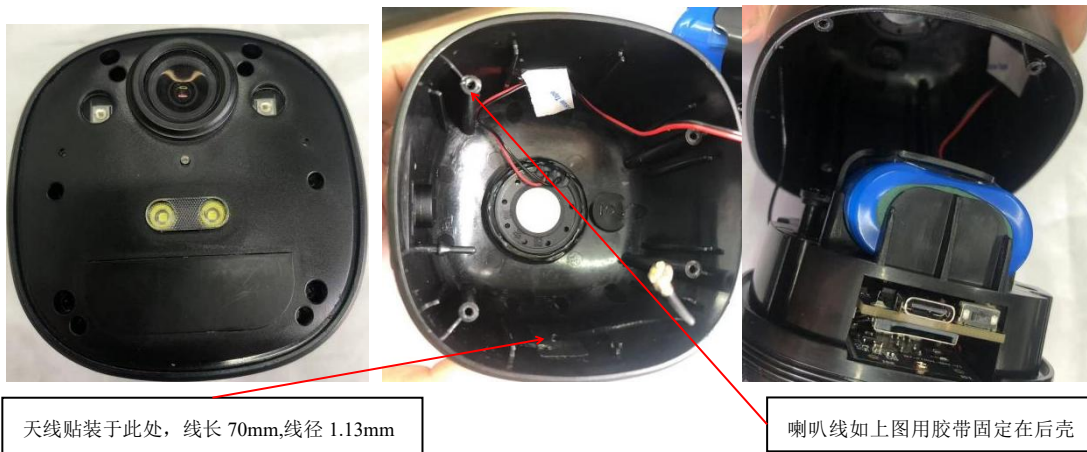


三. 暗室连接及坐标 (Chamber connection and coordinates) :





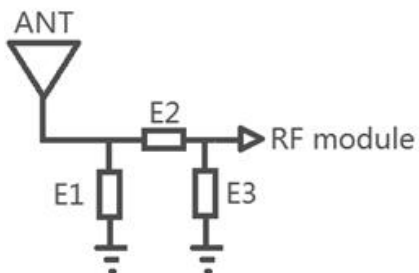
四. 天线装配方式及环境处理 (Antenna assembly and environmental treatment) :



天线贴装于此处, 线长 70mm, 线径 1.13mm

喇叭线如上图用胶带固定在后壳

五. 天线匹配网络: (Matching Circuit Description)



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

注: 天线匹配未改动, 原版匹配

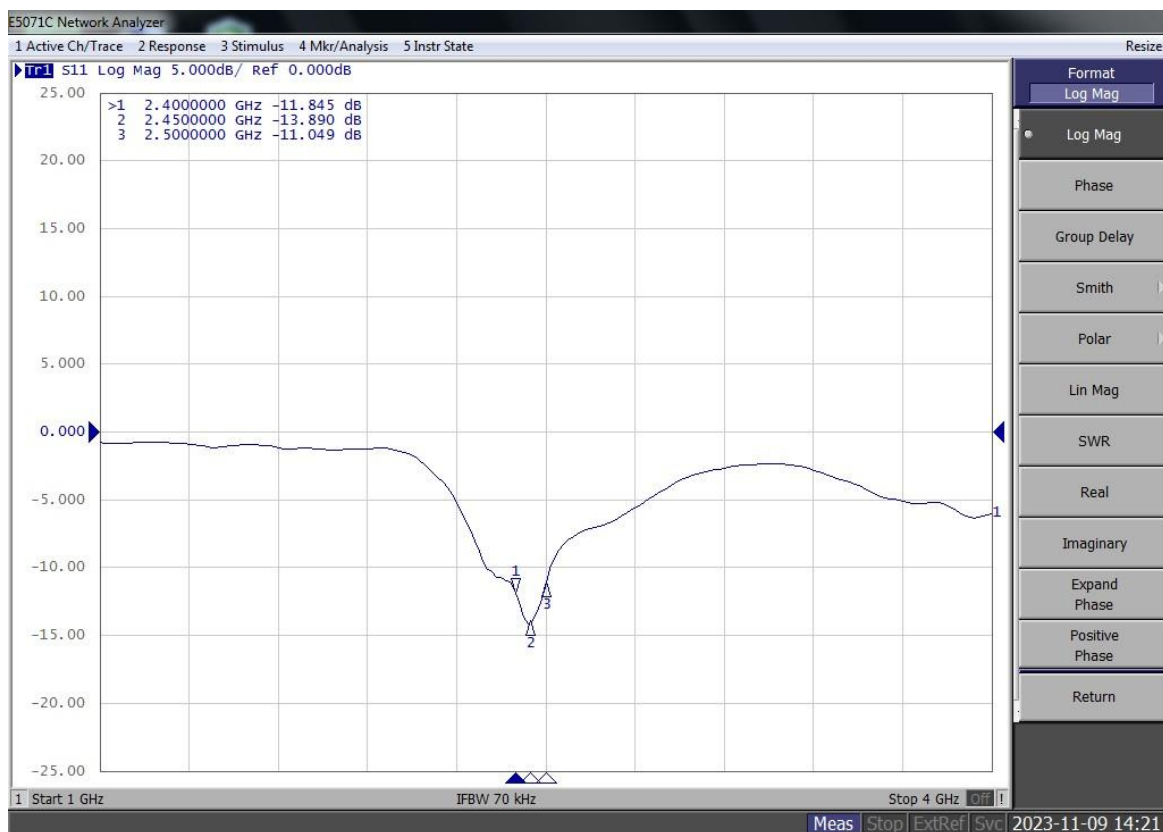
六. 天线电性能测试数据 (Antenna electrical performance test data) :

6. 1. 天线无源参数 (Antenna passive parameters)

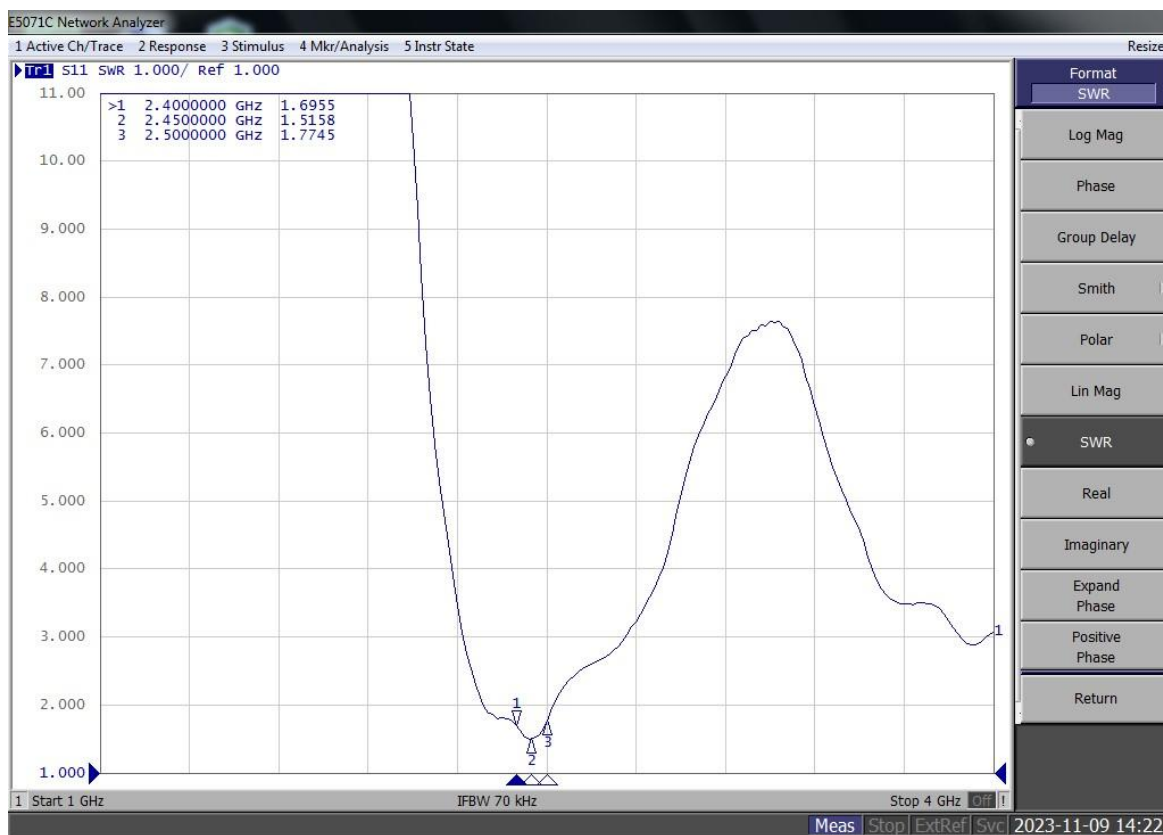
6.1.1. 天线回波损耗/驻波比 (RL/VSWR)



RL



VSWR

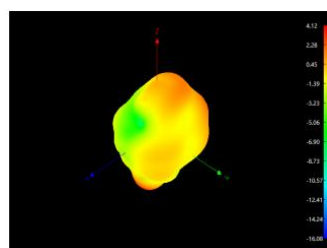
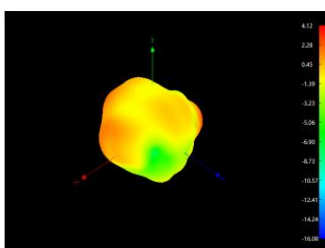
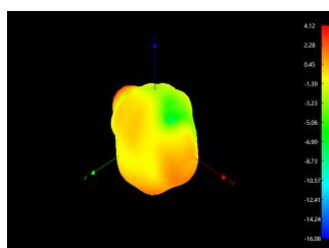




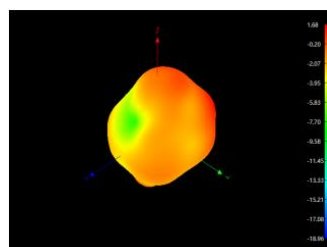
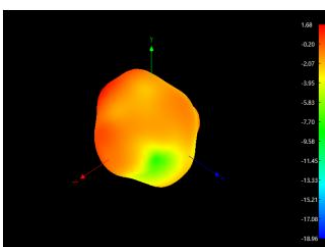
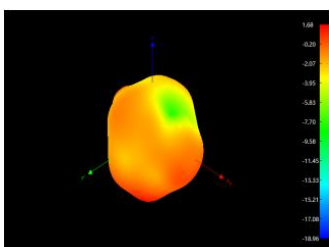
6.1.2. 天线效率/增益/方向图 (Antenna Efficiency/Gain/3D Etotal)

Freq (MHz)	Effi (%)	Gain (dBi)
2400	54.95	4.12
2410	54.45	3.38
2420	56.49	2.9
2430	53.09	1.57
2440	55.85	1.76
2450	53.95	1.68
2460	49.89	1.37
2470	50.35	1.23
2480	52.36	1.6
2490	55.46	2.13
2500	51.76	1.81

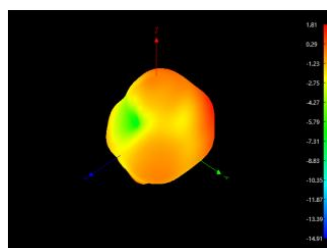
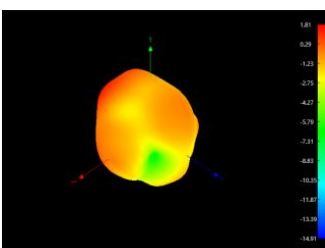
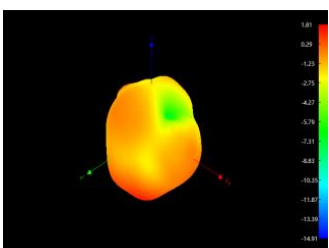
2400MHZ



2450MHZ



2500MHZ



6. 2. 天线有源参数 (Antenna Active parameter)

NQI ANT TRP&TIS parameter Summary of BM1			
BAND	WIFI-B		
CHANNEL	1	6	11
TRP (dBm)	15.15	13.68	13.2
TIS (dBm)	-84.99	-84.35	-85.55
BAND	WIFI-G DATA RATE (54M)		
CHANNEL	1	6	11
TRP (dBm)	13.89	12.79	12.05
TIS (dBm)	-71.76	-69.04	-71.42
BAND	WIFI-N DATA RATE (65M)		
CHANNEL	1	6	11
TRP (dBm)	15.34	14.78	14.09
TIS (dBm)	-68.2	-66.66	-68.55



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

