

样品承认书

Parts Approval Sheet

生产供应商: 国质信

Supplier

适用项目: CMA10

Type/Spec

品 牌: NQI

Brand

送样日期: 2025/09/08

Send out Date

承认日期:

Approve Date

物料名称: BT 天线

Parts Name

NQI 规格: NQI-CMA10-BT-53X2

Parts No

客户料号:

Quantity

文件编号: NQI-RD-SPEC-20250904

Document No

样品版本: V0

Version

Supplier		Customer	
Approved By	Prepared By	Engineering Dept	Quality Dept

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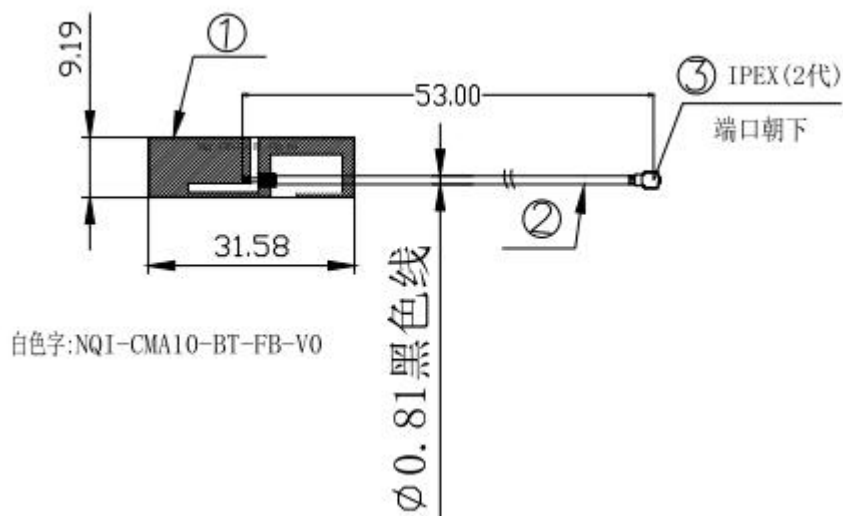
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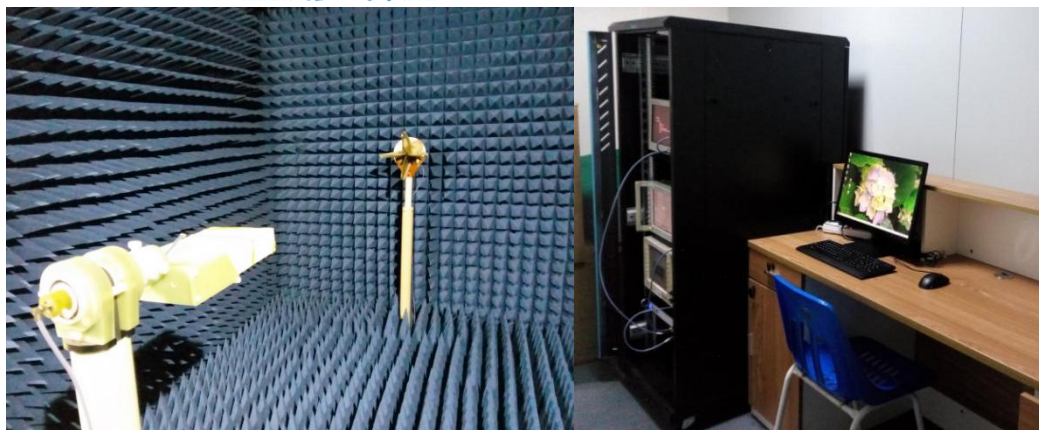
一. 样品图片及说明 (Sample picture and description) :



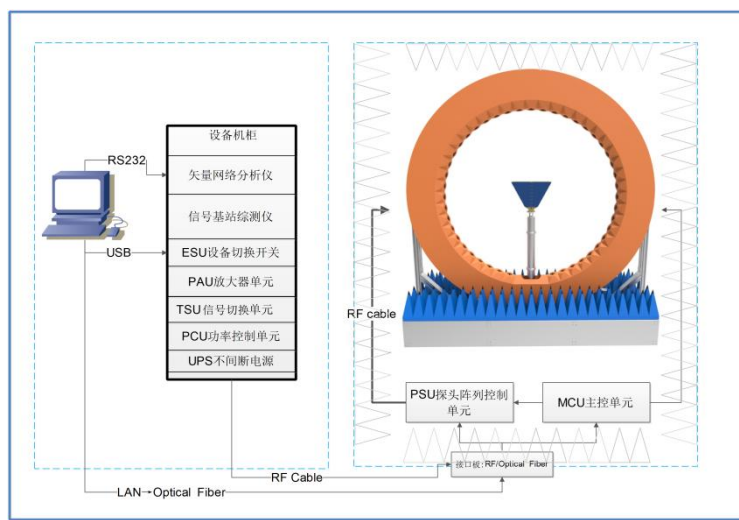
电气参数说明 (Electrical Specifications)	
频率范围 (Frequency range)	(2400-2500、5150-5850)MHz
特性阻抗 (impedance)	50 ohm
电压驻波比 (VSWR)	≤3.0
峰值增益 (Gain)	9.9 DBi
极化形式 (Polarization)	水平
辐射方向 (Radiation direction)	全向
连接方式说明 (Connection Mode Description)	
连接器 (connector)	FPC+同轴线+二代端子
线缆规格 (Cable specifications)	0.81*53MM
工作/储存温度 (Working/Storage temperature)	
工作温度 (Working temperature)	-30℃~65℃
	-30℃~75℃

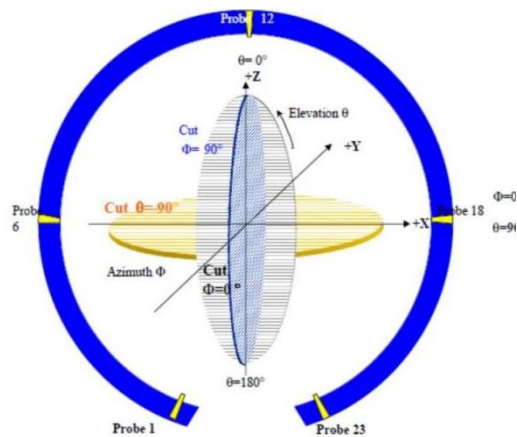
二. 试设备及项目 (Test equipment and items) :

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)

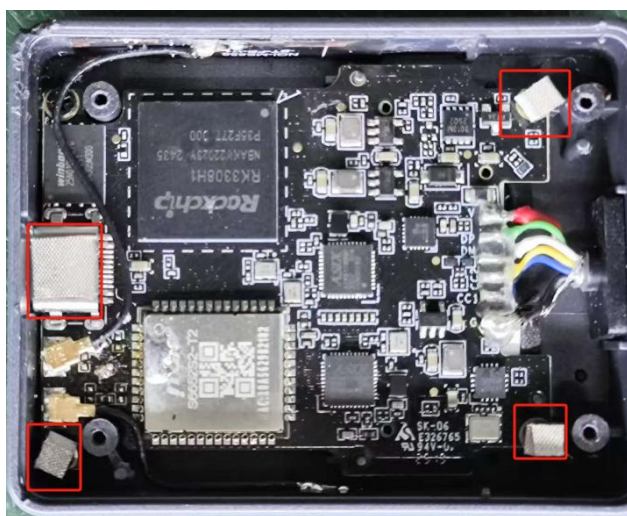


三. 暗室连接及坐标 (Chamber connection and coordinates) :





3.1 环境处理

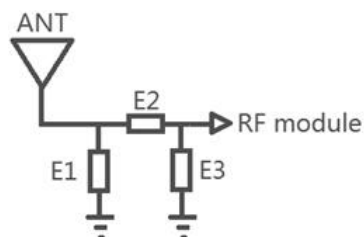


红框内贴导电泡绵与金属接地



BT 天线贴装区域以及同轴线摆放方式

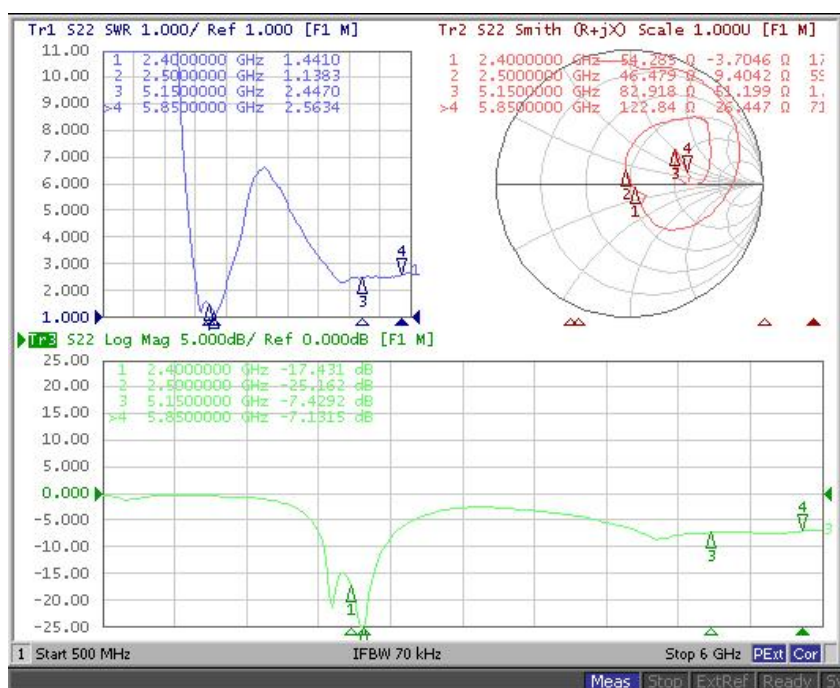
四. 天线匹配网络 (Antenna matching network) :



Element	(Value)
ANT0	
E1(0201)	NC
E2(0201)	0 Ω
E3(0201)	NC

五. 天线电气性能及测试数据 (Electrical performance test Data) :

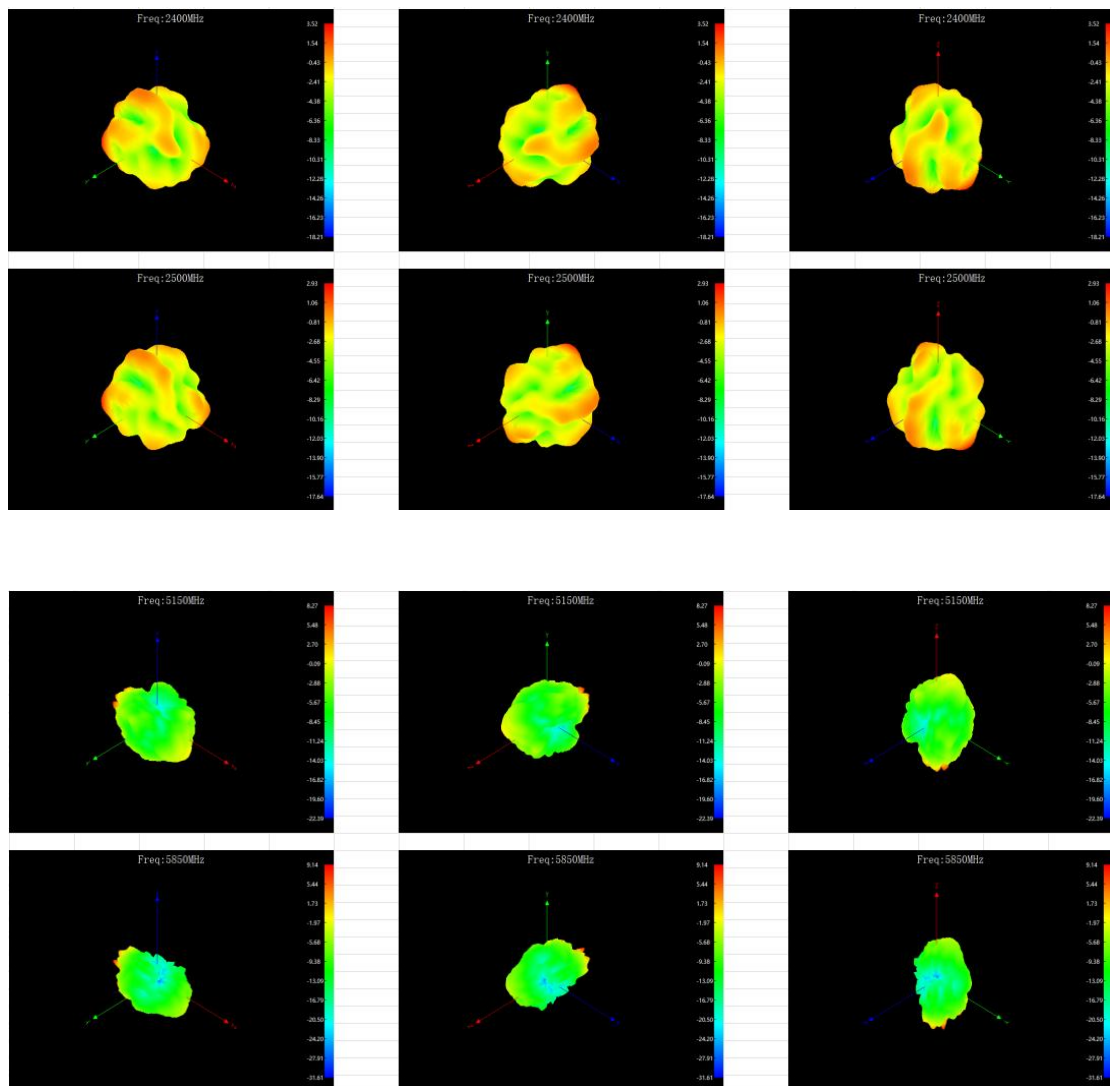
5.1. 回波损耗/驻波比/斯密斯图 (RL/VSWR/Smith Chart)



5.2.增益及效率 (Gain/Radiation Efficiency)

Frequency/Mhz	Efficiency / dB	Efficiency / %	MaxGain/dBi	Frequency/Mhz	Efficiency / dB	Efficiency / %	MaxGain/dBi
2400	-2.81	52.36	3.52	5150	-2.71	53.58	8.27
2410	-3.17	48.19	3.05	5200	-3.03	49.77	8.2
2420	-3.23	47.53	3.18	5250	-3.39	45.81	7.73
2430	-3.56	44.06	2.77	5300	-3.25	47.32	7.82
2440	-3.42	45.5	2.71	5350	-3.55	44.16	7.69
2450	-3.27	47.1	3.08	5400	-4.1	38.9	7.62
2460	-3.35	46.24	2.93	5450	-4.28	37.33	8.04
2470	-3.44	45.29	2.86	5500	-4.13	38.64	8.65
2480	-3.71	42.56	2.53	5550	-4.31	37.07	8.39
2490	-3.41	45.6	3.11	5600	-4.36	36.64	8.68
2500	-3.36	46.13	2.93	5650	-4.59	34.75	8.44
				5700	-4.54	35.16	8.79
				5750	-4.08	39.08	9.9
				5800	-3.94	40.36	9.72
				5850	-4.35	36.73	9.14

5.3. 3 D Radiation pattern



5.4. TRP&TIS OTA Data

NQI ANT TRP&TIS parameter Summary of BT 天线						
BAND	WIFI-B (11b) (11M)			WIFI-A (11a) (54M)		
CHANNEL	1	6	11	36	149	165
TRP (dBm)	13.7	14.14	14.25	15.07	15.12	15.53
TIS (dBm)	-84.24	-85.17	-85.63	-73.87	-75.69	-75.76
BAND	Bluetooth					
CHANNEL	0	39	78			
TRP (dBm)	3.08	4.05	5.33			
TIS (dBm)	-88.18	-90.13	-92.48			

六、结构图纸 (Antenna structure drawing)

