



睿魔

样品承认书

Parts Approval Sheet

生产供应商: <u>国质信</u>	物料名称: <u>ANT3 天线</u>
Supplier	Parts Name
适用项目: <u>CM103</u>	NQI 料号: <u>NQI-CM103-ANT3-ASM-V0</u>
Type/Spec	Parts No
品 牌: <u>NQI</u>	客户料号: <u>M. E. H. 00107</u>
Brand	Quantity
送样日期: <u>2024/10/19</u>	文件编号: <u>NQI-RD-SPEC-20240918</u>
Send out Date	Document No
承认日期: _____	样品版本: <u>V0</u>
Approve Date	Version

Supplier		Customer	
Approved By	Prepared By	Engineering Dept	Quality Dept

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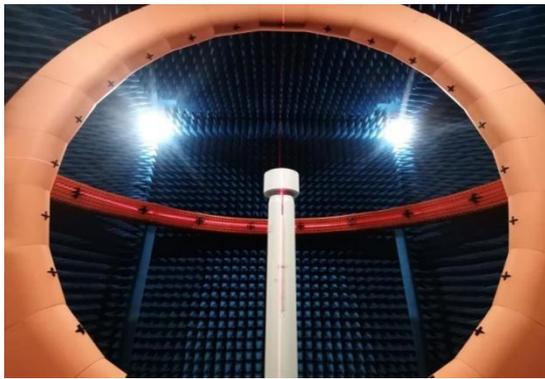
一. 样品图片. 电器参数说明及装配方式 (Sample picture and description) :



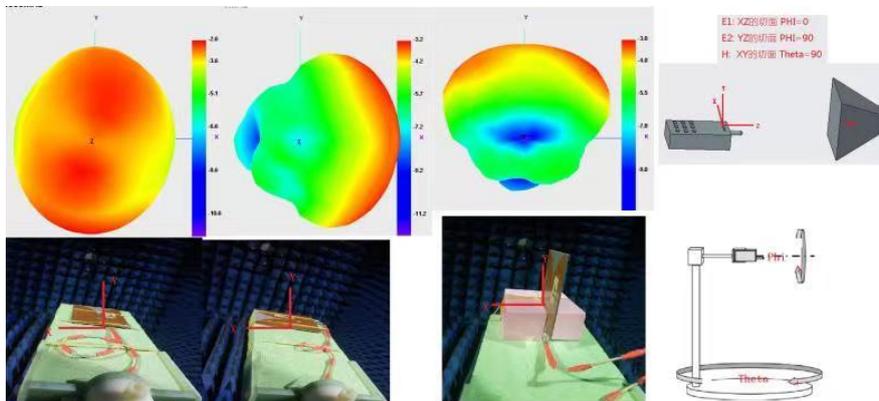
电气参数说明 (Electrical Specifications)	
天线类型 (Antenna type)	FPC PIFA
天线型号 (Antenna model number)	NQI-CM103-ANT3-FB-V0
频率范围 (Frequency range)	(2400-2500)MHz
特性阻抗 (impedance)	50 ohm
电压驻波比 (VSWR)	≤3
峰值增益 (Gain)	4.67dBi
极化形式 (Polarization)	线性
辐射方向 (Radiation direction)	全向
连接方式说明 (Connection Mode Description)	
连接器 (connector)	/
线缆规格 (Cable specifications)	/
工作/储存温度 (Working/Storage temperature)	
工作温度 (Working temperature)	-30℃~65℃
储存温度 (Storage temperature)	-30℃~75℃

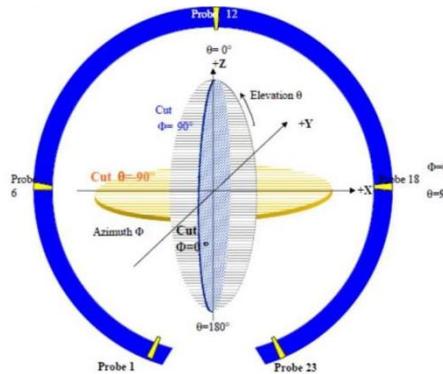
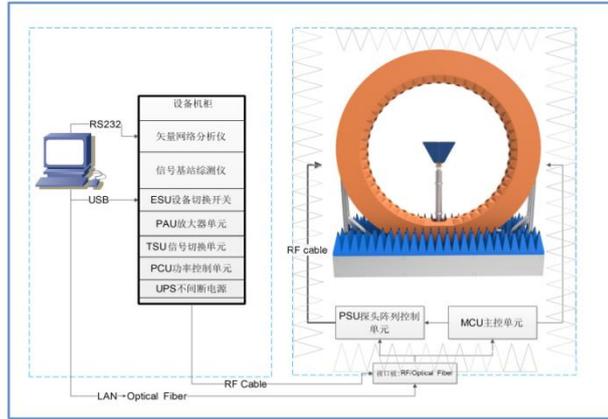
二.测试设备及项目 (Test equipment and items) :

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.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)



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





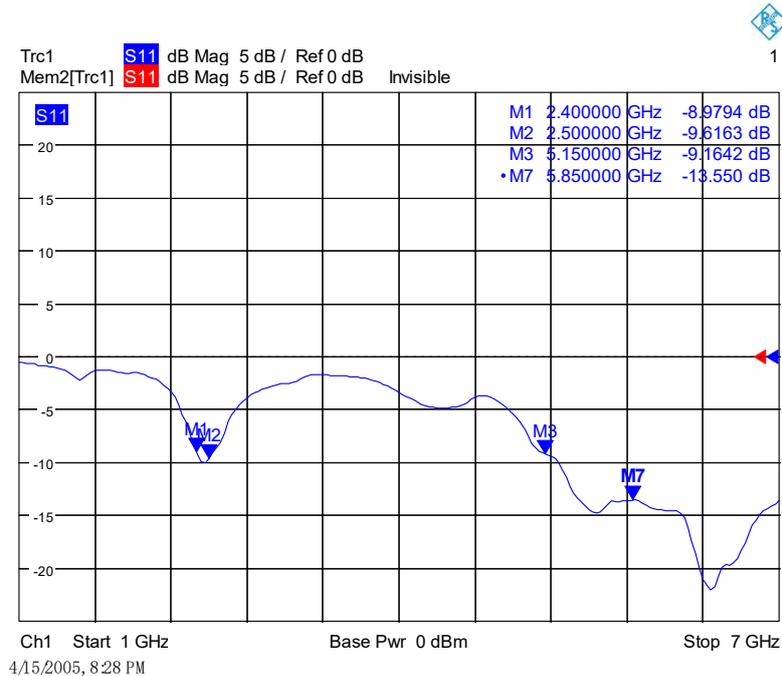
四.天线匹配网络 (Antenna matching network) :

原版匹配

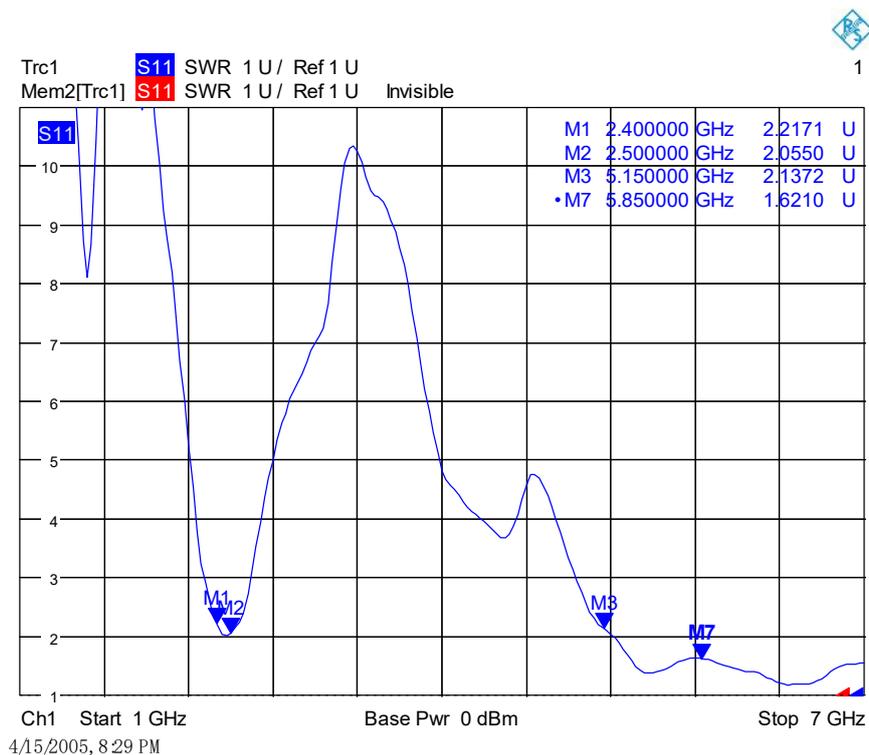
五.天线电性能测试数据 (Antenna electrical performance test data) :

5.1..天线回波损耗/驻波比 (RL/VSWR)

RL



VSWR

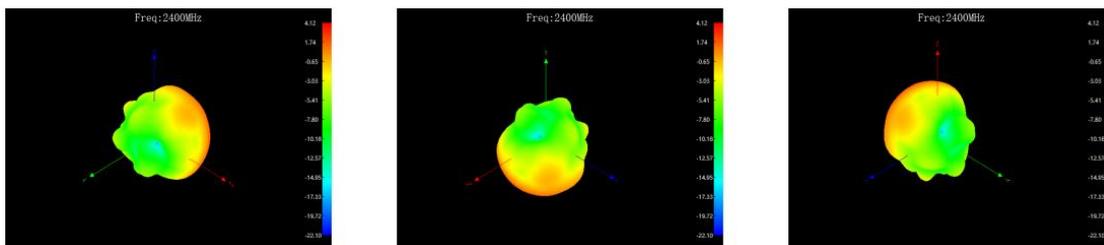


5. 2. 天线效率/增益 (Effeciency/Gain)

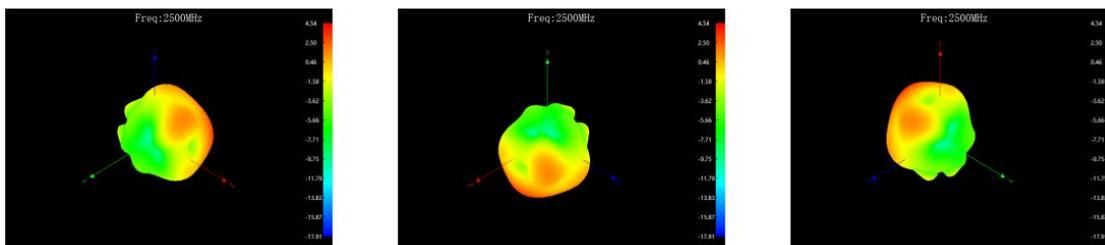
ANT3

Freq (MHz)	Effi (%)	MAXGain (dBi)
2400	58.34	4.12
2410	52.97	3.68
2420	55.34	3.73
2430	56.49	3.83
2440	60.12	3.99
2450	59.43	4.09
2460	62.37	4.38
2470	65.31	4.64
2480	64.71	4.65
2490	67.3	4.67
2500	65.77	4.54

2400MHZ



2500MHZ



5. 3. TRP&TIS

ANT3		NQI ANT TRP&TIS parameter Summary of CM103			
Free space (自由状态)	Test	Bluetooth TRP&TIS			
	Result	0	39	78	
	TRP (dBm)	4.52	5.04	5.38	
	TIS (dBm)	-82.19	-82.38	-82.78	



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

