



样品承认书

Parts Approval Sheet

生产供应商: NQI

物料名称: Dongle ANT

Supplier

Parts Name

适用项目: G11

NQI 料号: NQI-G11-D-FB-V4

Type/Spec

Parts No

品 牌: NQI

客户料号: ET.GZX11DBT14

Brand

Quantity

送样日期: 2023/12/12

文件编号: NQI-RD-SPEC-20231214

Send out Date

Document No

承认日期:

样品版本: V4

Approve Date

Version

Supplier		Customer	
Approved By	Prepared By	Engineering Dept	Quality Dept

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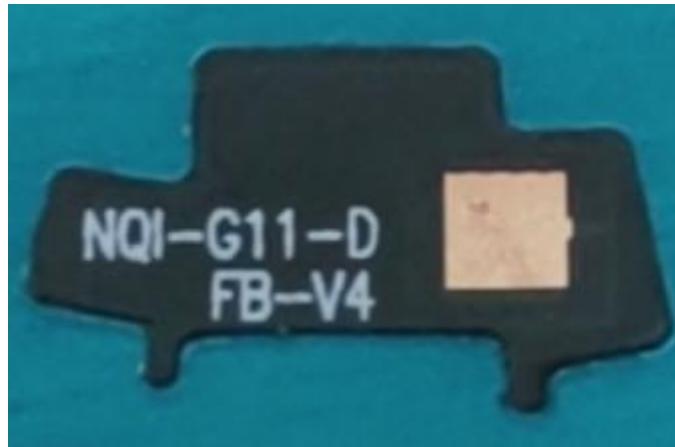
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承认书履历表 (Resume)



电气参数说明 (Electrical Specifications)	
频率范围 (Frequency range)	(2400-2500)MHz
特性阻抗 (impedance)	50 ohm
电压驻波比 (VSWR)	≤2.75
峰值增益 (Gain)	0.79dBi
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)	/
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℃

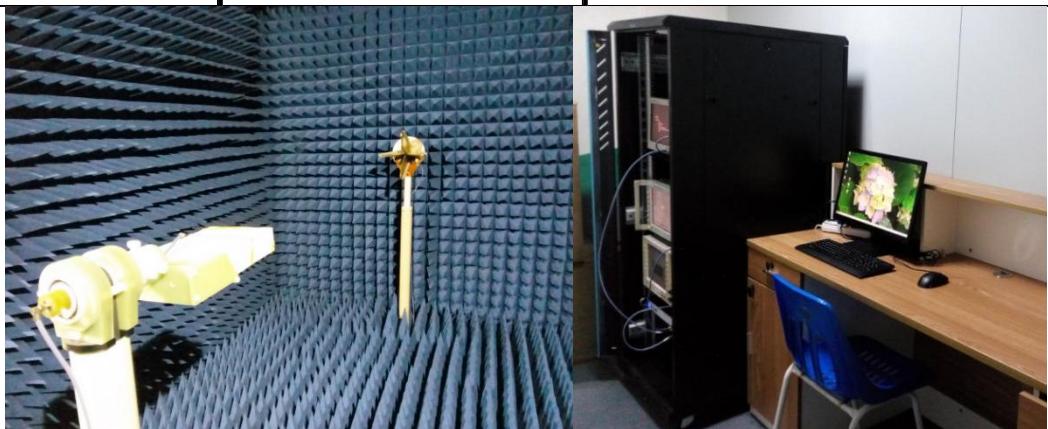
二. 测试设备及项目 (Test equipment and items) :



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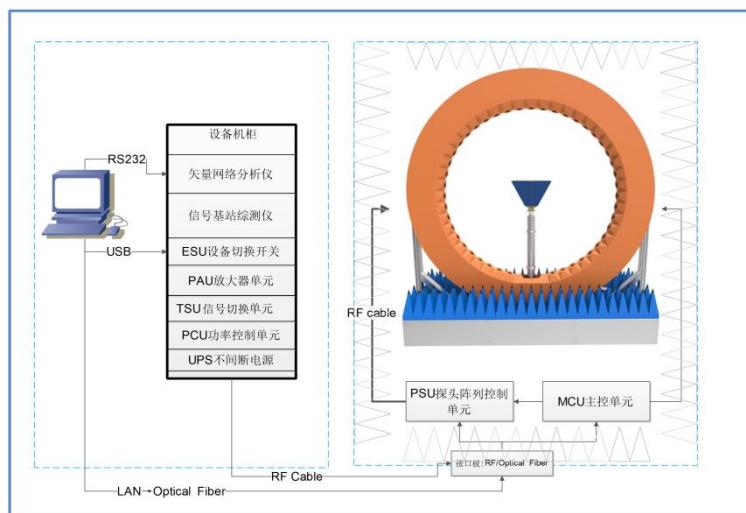
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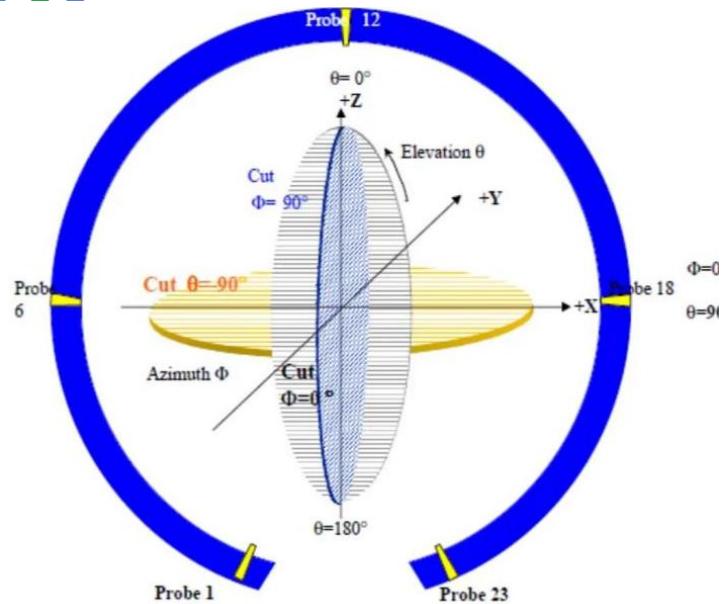
类别 (Class)	测试项目 (Test item)	设备 (Equipment)
1. S parameter	1. 回波损耗(RL) 2. 驻波比 (VSWR) 3. 斯密斯原图(Smith chart)	网分 (VNA) : Agilent E5071B R&S ZVB8 Protek A333
2. 耦合测试 (Coupling testing)	1. 发射功率 (MAX Power) 2. 接收灵敏度 (MIN Sens)	1.2G/3G Tester: Agilent 8960 2.The coupling box: TESCOM TC-5060A 3. 3D Chamber: ETS 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)



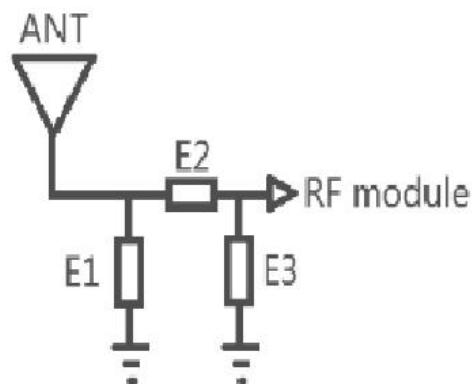


三. 暗室连接及坐标 (Chamber connection and coordinates) :





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



Element	Value
E1(0201)	1.5PF
E2(0201)	0 Ω
E3(0201)	NF

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

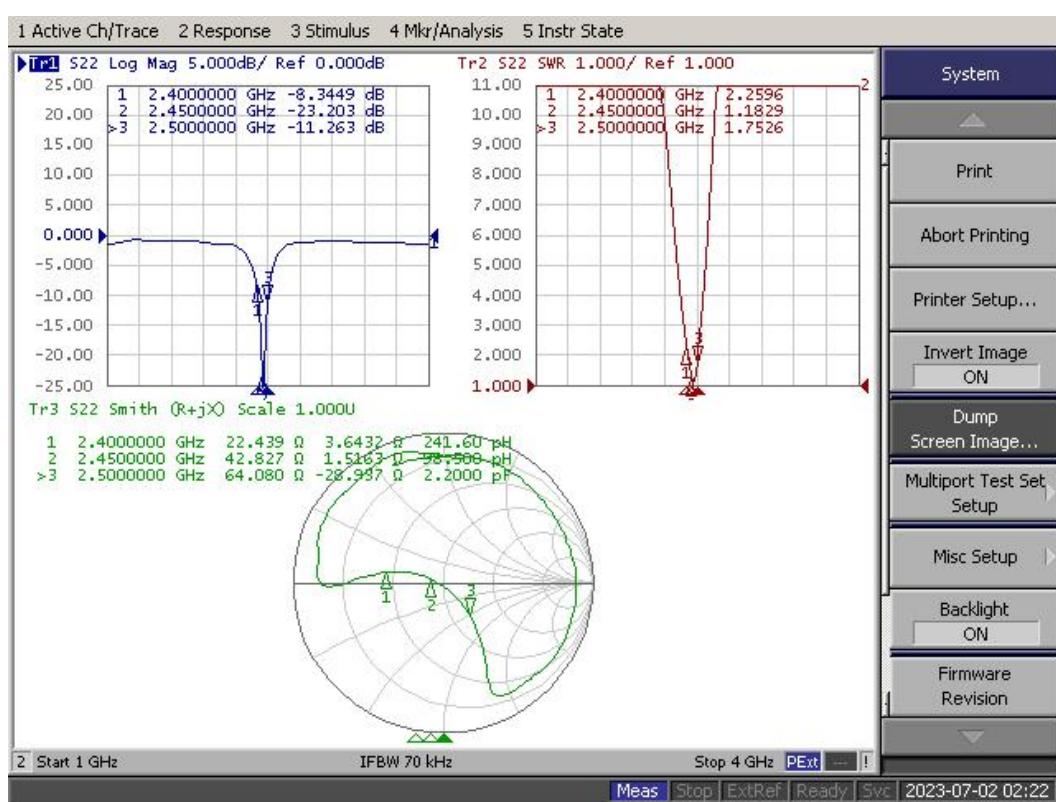
5. 1. 天线无源参数 (Antenna passive parameters)



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5.1.1. 天线回波损耗/驻波比/史密斯圆图 (RL/VSWR/Smith Chant)



5.1.2. 天线效率/增益 (Effeciency/Gain)

Frequency (MHz)	Efficiency (%)	Gain (dBi)	Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	17.58	-1.89	2450	31.62	-0.6
2410	19.28	-1.67	2460	31.48	-0.58
2420	22.91	-0.99	2470	33.65	0.06
2430	24.49	-0.97	2480	35.97	0.79
2440	29.44	-0.47			

5.2 天线有源参数 (Antenna Active parameter)

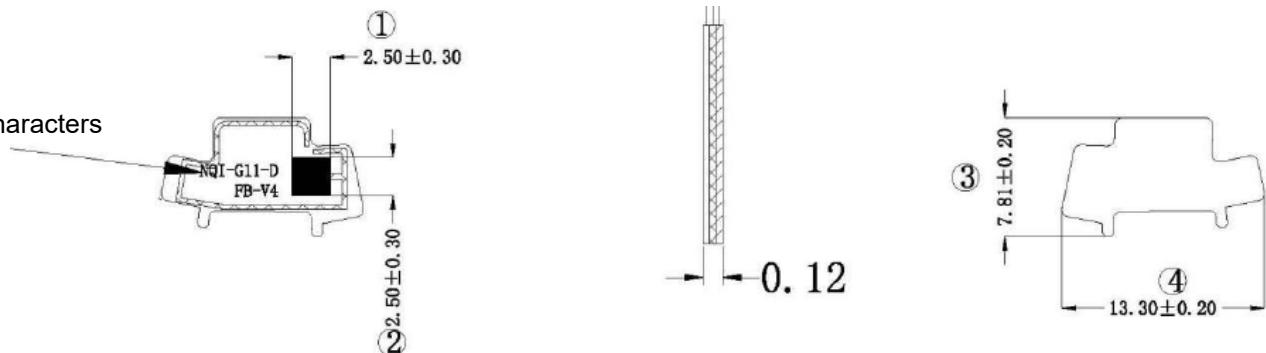
5.2.1 TRP/TIS

NQIANT TRP&TIS parameter Summary of G11			
自由空间	Test	Bluetooth TRP&TIS	
	Result	0	39
	TRP (dBm)	3.41	6.45
	TIS (dBm)	-87.07	-90.99
			-90.09



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

White characters





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七. 天线包装图纸 (Antenna package drawing) :

