

友恺

样品承认书

Parts Approval Sheet

生产供应商: 国质信

Supplier

适用项目: B340T

Type/Spec

品 牌: NQI

Brand

送样日期: 2024.01.09

Send out Date

承认日期:

Approve Date

物料名称: BT 天线

Parts Name

NQI 料号: NQI-B340T-BA2802X-ASM-V0

Parts No

客户料号:

Quantity

文件编号: NQI-RD-SPEC-20231225

Document No

样品版本: V0

Version

Supplier		Customer	
Approved By	Prepared By	Engineering Dept	Quality Dept

联系方式 (Contact): 深圳市龙岗区平吉大道 66 号康利城 7 栋 103 号 (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



承认书履历表 (Admission resume)

[illegible]

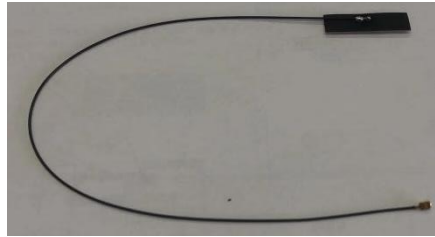


目录_(catalogue)

一. 样品及说明	Sample and description.....	4
二. 整机图片	Machine picture.....	4
三. 测试设备及项目	Test equipment and items.....	4-5
四. 暗室连接及坐标	Chamber connection and coordinates.....	6
五. 天线匹配网络	Antenna matching network.....	6
六. 天线装配方式及环境处理	Antenna assembly method and environmental treatment.....	6-7
七. 天线电性能测试数据	Antenna electrical performance test data.....	7-9
八. 天线结构图纸	Antenna structure drawing.....	10



一. 样品及说明 Sample and description:



二. 整机图片 Machine picture:

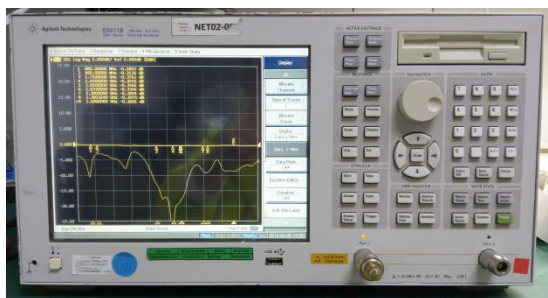
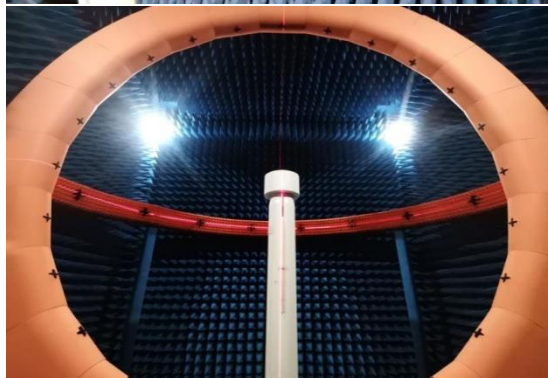
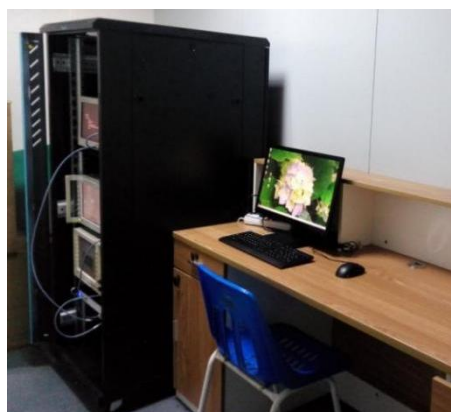
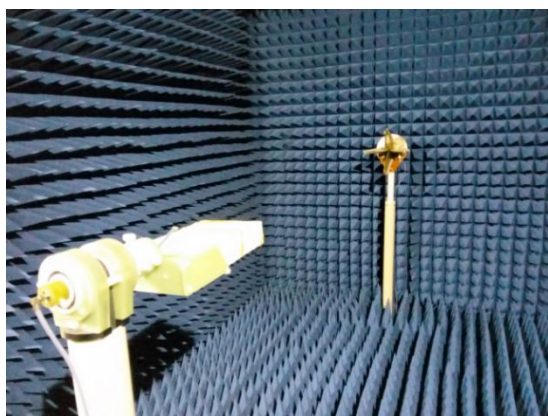


三. 测试设备及项目 Test equipment and items:

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

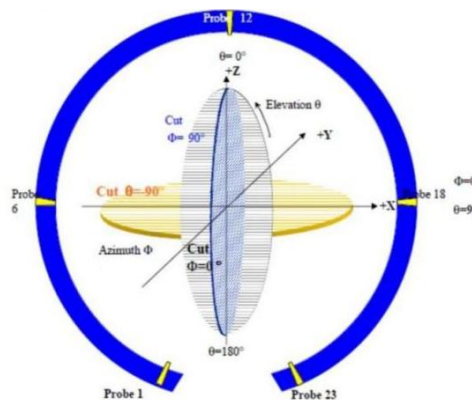
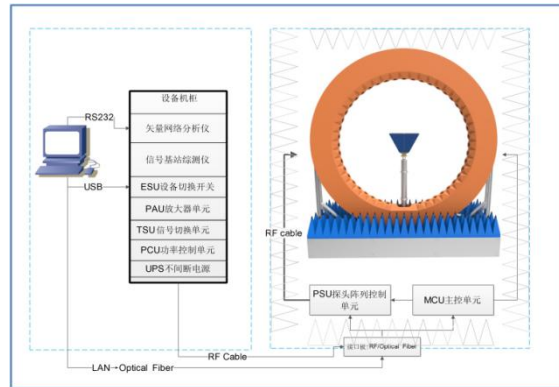


4.3D 有源测试 (Active Test)	1. 3D 功率 (TRP) 2. 3D 灵敏度 (TIS) 3. 吞吐量 (Throughput rate)	1. 3D Chamber: TEM24 3D Chamber (5x5x5) ETS 3D Chamber (5x3x3) 2.2G/3G Tester: Agilent 8960 3.4G Tester: MT8820C/CMW500 4.WIFI/BT/NB-iot Tester: CMW500 5. 5G Tester: SP9500-CTS 6.Head: HEAD-P10 (FACE-P10)
------------------------------------	--	---





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



五. 天线匹配网络 Antenna matching network:

原版匹配 Original match

六. 天线装配方式及环境处理 Antenna assembly method and environmental treatment:



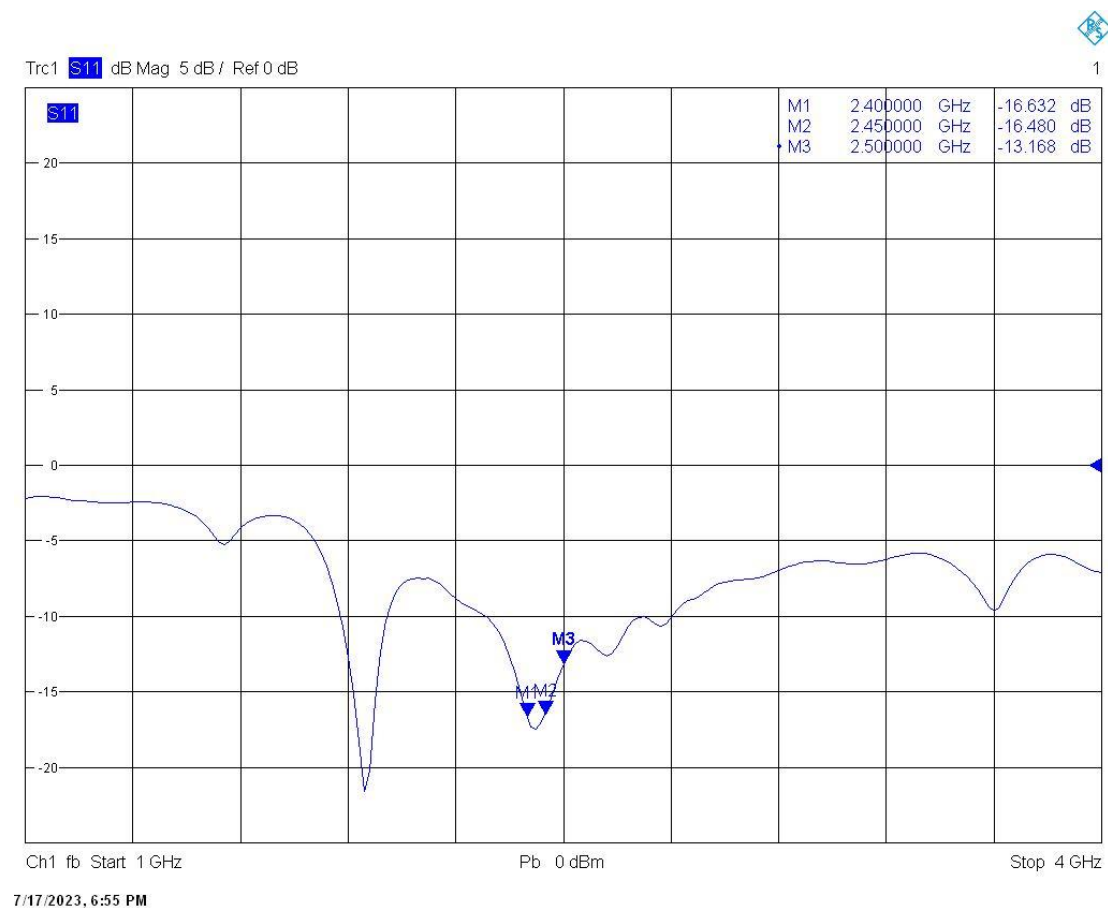


七. 天线电性能测试数据 Antenna electrical performance test data:

7. 1. 天线无源参数 Antenna passive parameters

7.1.1. 天线回波损耗 (RL) /驻波比(VSWR)

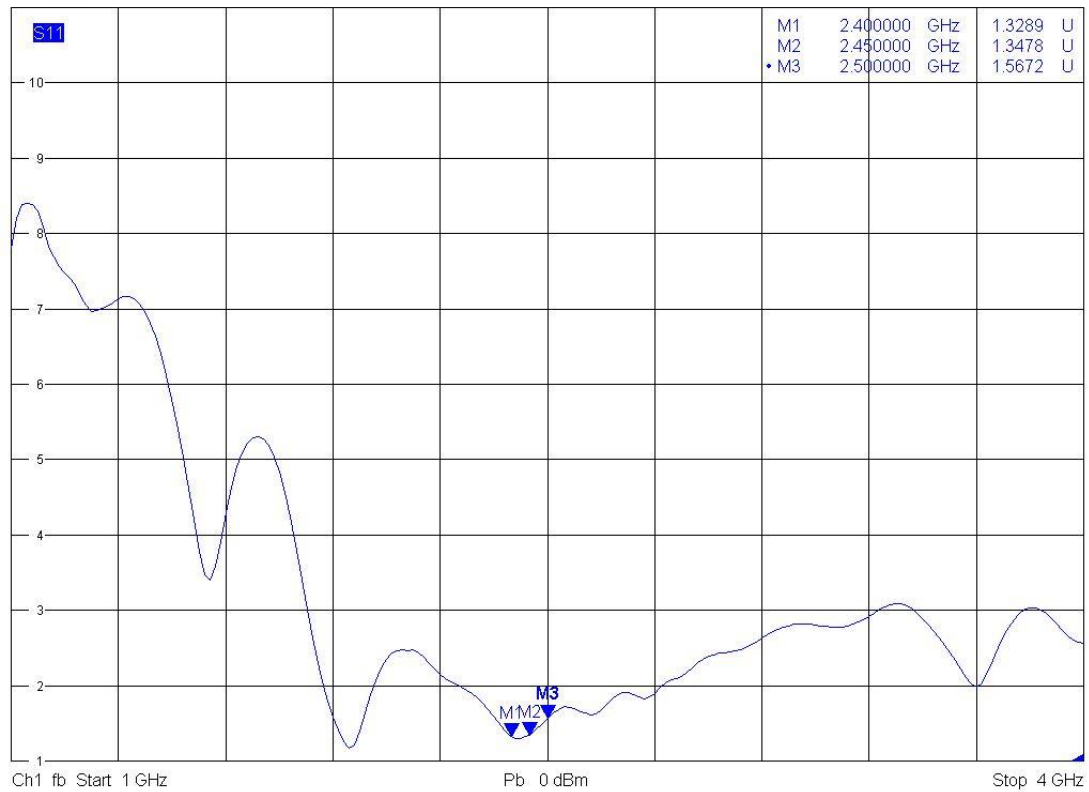
RL





VSWR

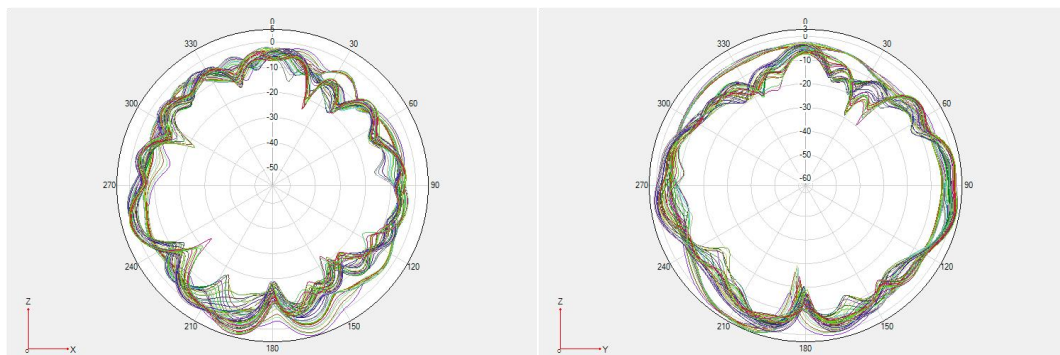
Trc1 S11 SWR 1 U / Ref 1 U



7/17/2023, 6:55 PM

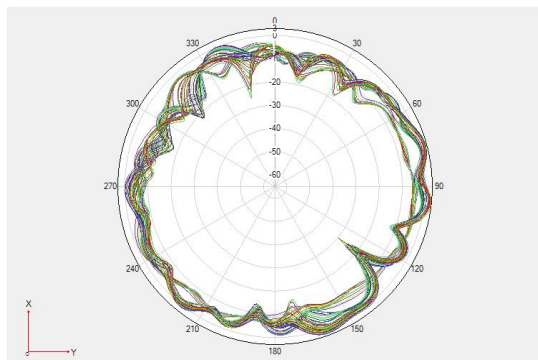
7.1.2. 天线效率 Efficiency/增益 Gain/方向图 Radiation pattern

Freq (MHz)	Effi (%)	MAXGain (dBi)	Freq (MHz)	Effi (%)	MAXGain (dBi)	Freq (MHz)	Effi (%)	MAXGain (dBi)
2400	41.11	2.79	2440	33.88	-0.3	2480	31.26	-0.51
2410	37.84	1.95	2450	32.21	-1.21	2490	35.56	0.23
2420	37.84	1.5	2460	29.11	-1.37	2500	34.51	-0.02
2430	32.96	0.12	2470	29.92	-1.04			



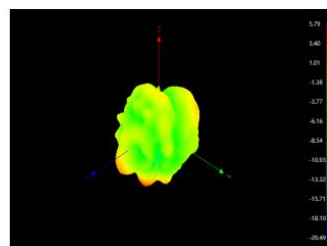
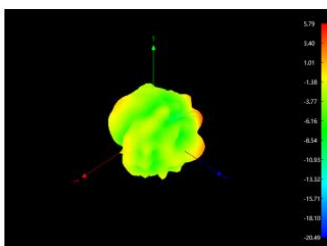
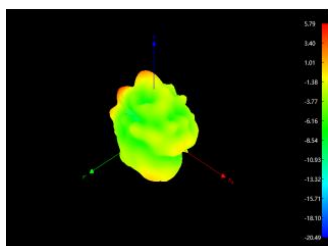
Phi=0 freq@2.4g

Phi=90 freq@2.4g

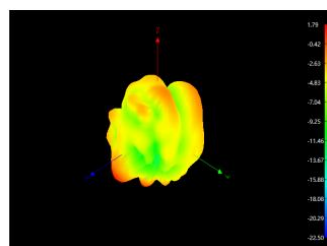
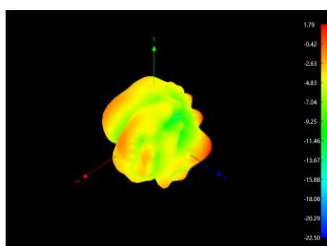
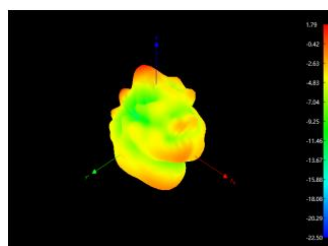


Theta=90 freq@2.4g

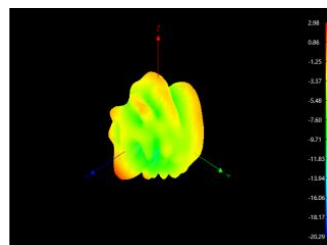
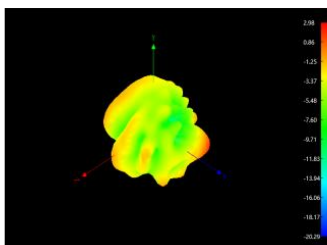
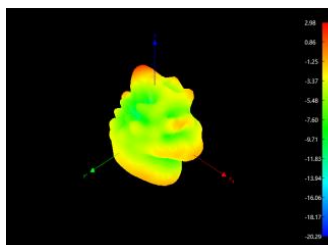
2400MHZ



2450MHZ



2500MHZ



7.2 天线有源参数 Antenna active parameter

7.2.1. TRP/TIS

NQI ANT TRP&TIS parameter Summary of B340T			
BAND	BT (主板)		
CHANNEL	0	39	78
TRP (dBm)	6.26	6.51	5.61
TIS (dBm)	-88.19	-87.28	-88.13
BAND	BT (模块)		
CHANNEL	0	39	78



TRP (dBm)	0.78	1.41	1.46
TIS (dBm)	-81.51	-82.1	-82.4

7.2.2. BT 模块传导测试数据 BT module conducts test data

BAND	BT (主板)		
CHANNEL	0	39	78
TX	8.81	9.12	8.21
RX	-91	-91	-91
BAND	BT (模块)		
CHANNEL	0	39	78
TX	3.74	4.09	4.17
RX	-84	-84	-84

注：线损设置 0DB



八. 天线结构图纸 Antenna structure drawing:

