



深圳市国质信网络通讯有限公司
ShenZhen NQI network communication ltd

样品承认书

Parts Approval Sheet

生产厂商: NQI Network
Supplier

物料名称: BT ATN
Parts Name

适用项目: UC600-6.0
Applicable Items

NQI 料号: NQI-3216-P2450A
NQI Parts No.

品 牌: NQI
Brand

天线类型: Ceramic Antenna
Antenna type

送样日期: 2026.07.08
Send out Date

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Approve Date

版 本: V0
Version

Supplier		Customer	
Approved By	Prepared By	Engineering Dept.	Quality Dept.

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Revision history

serial number	version	Date	Modify status
1	V0	2026-07-08	first edition
2			
3			
4			
5			
6			



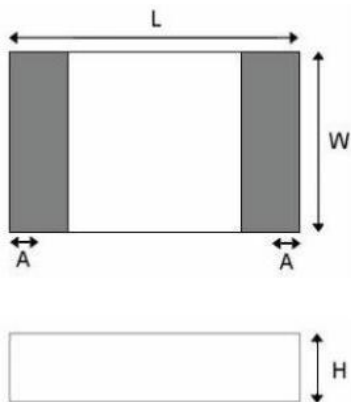
1. Operating frequency

Antenna Frequency for 2400-2500 MHz

2. Applications

For Miniaturized Bluetooth/WIFI System

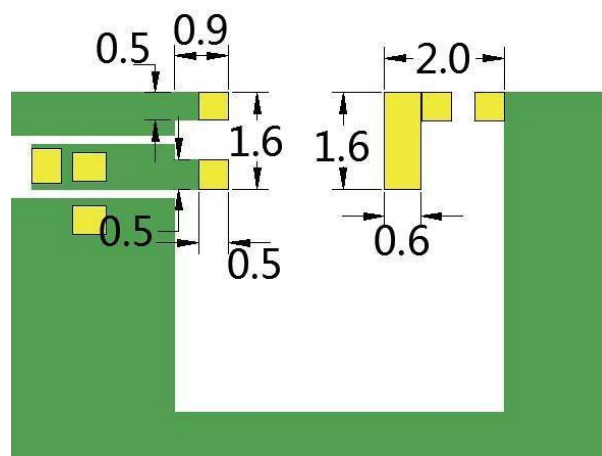
2.1. Appearance and Dimensions(Unit : mm):



L	W	A	H
3.10±0.10	1.55±0.10	0.40±0.20	0.55±0.1



2.2. PCB Top Layout (Unit : mm)

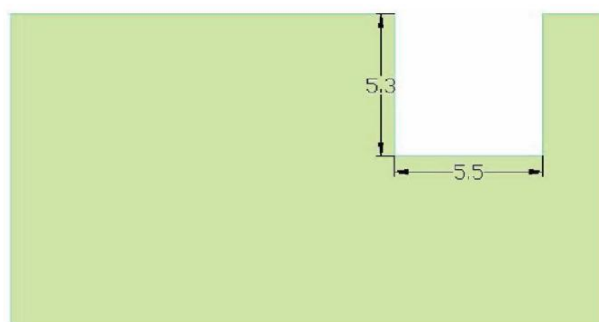
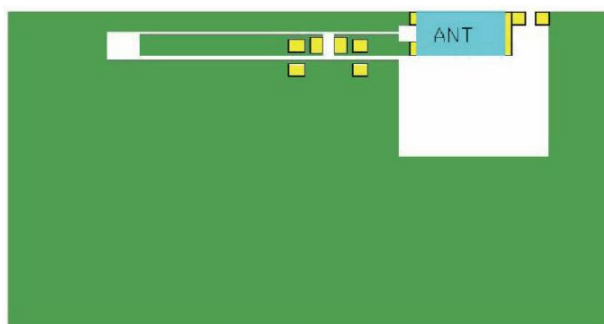
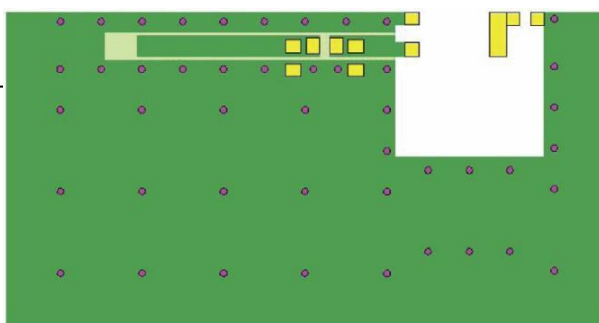




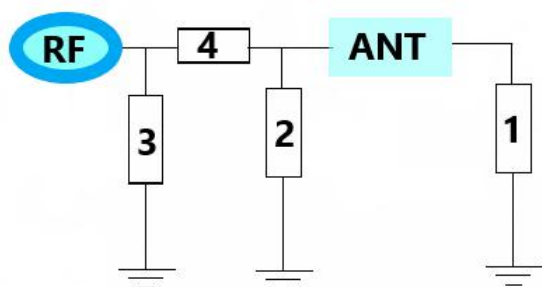
3. The DEMO Board and Matching Circuits

3.1. The DEMO Board

50 ohm
impedance
line



3.2. Matching Circuits



系统匹配电路元件建议值(村田)		
System Matching Circuit Component (Murata)		
Location	Description	Tolerance
1	3.3pF	±5%
2	2.4pF	±5%
3	NC	±5%
4	0 Ω	±5%

以上使用推荐的匹配值仅限于我司规定尺寸 DEMO 板，中心频率约为 2450mhz。不同电路板、零件供应商及终端整机发生变化时或需要重新优化。

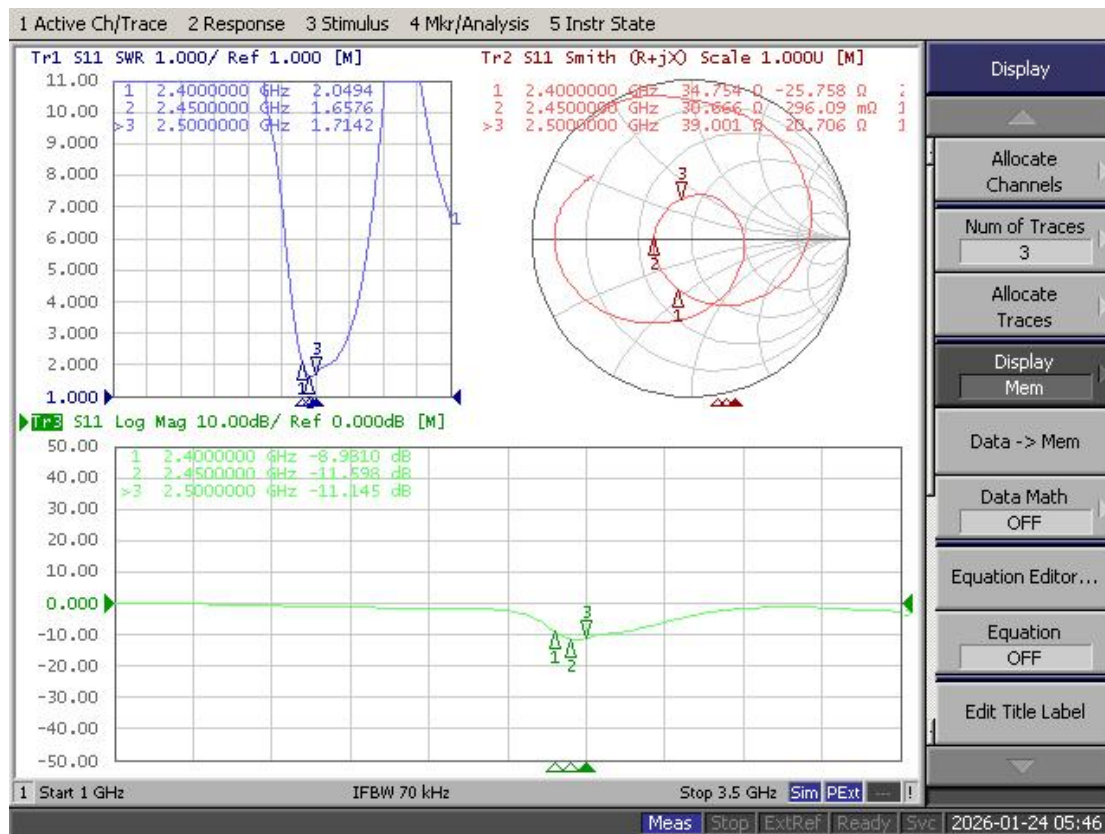
The recommended matching values for the above use are limited to our specified size DEMO board, with a center frequency of approximately 2440mhz。Different circuit boards, parts suppliers and terminals may need to be heavy when changed。



4. Electrical Characteristics

Outline Dimensions	3.2*1.6*0.6mm	
Central Frequency	2450	MHz
Bandwidth	100	MHz
VSWR	<2.5	
Efficiency	47.75	%
Peak Gain	2.23	dBi
Impedance	50	Ω
Polarization	Linear	
Azimuth Beamwidth	Omni-directional	

4.1.S11

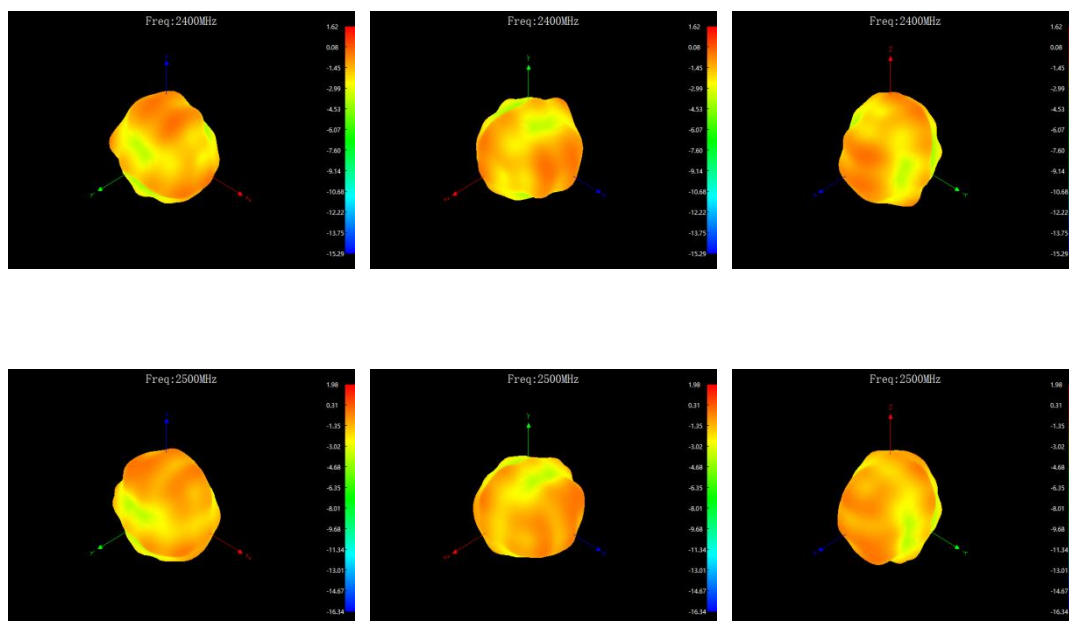




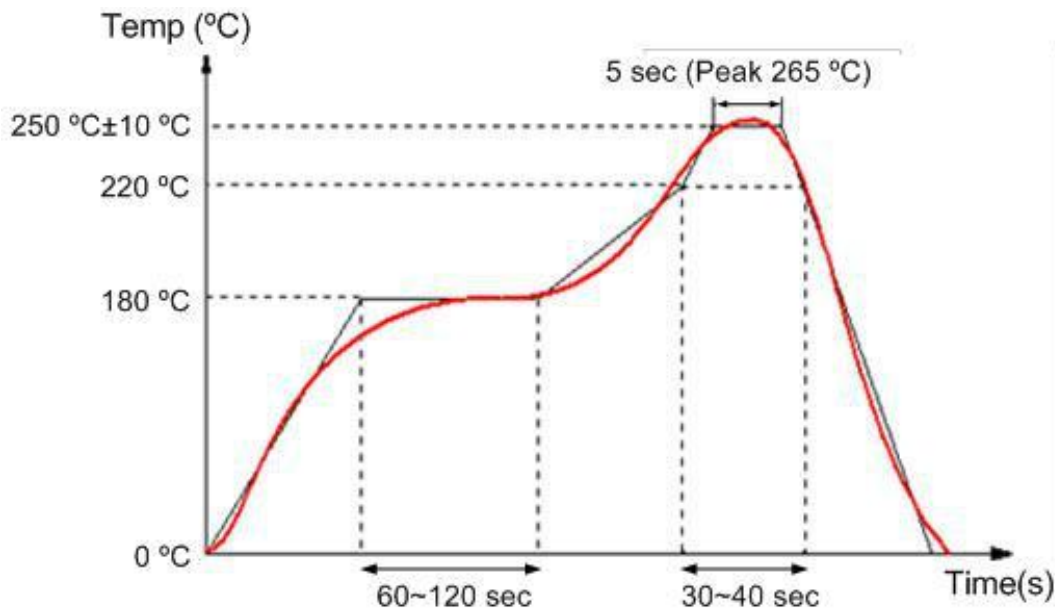
4.2.Efficiency and Gain

Freq (MHz)	Effi (%)	Gain (dBi)
2400	40.64	1.62
2410	40.27	1.67
2420	43.55	2.15
2430	41.88	1.47
2440	42.66	1.46
2450	42.66	1.43
2460	43.15	1.64
470	44.16	1.76
2480	43.75	1.73
2490	47.75	2.23
2500	46.45	1.98

4.3.3D Direction Map (3D 方向图)

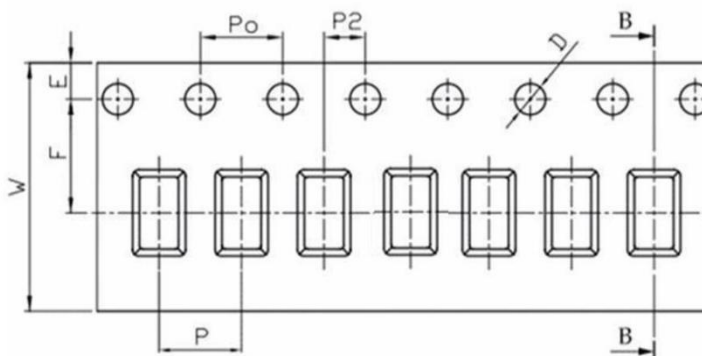


5. Reflow Soldering Standard Condition



6. Packaging Information

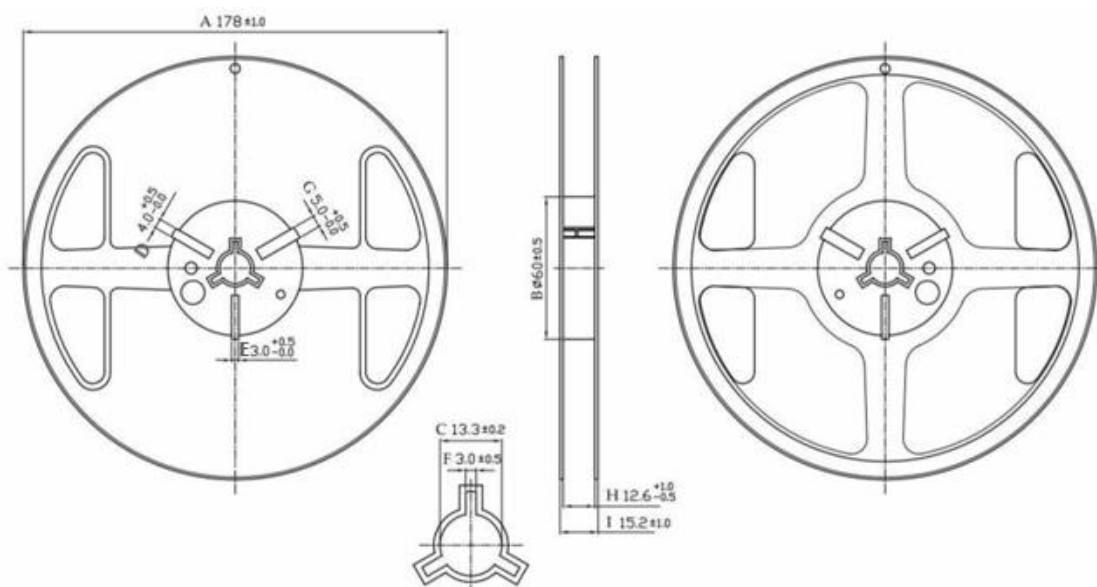
6.1. Tape specification (Unit : mm)



Feature	Specifications	Tolerances
W	8.00	±0.30
P	4.00	±0.10
E	1.75	±0.10
F	3.50	±0.10
P ₂	2.00	±0.10
D	1.50	+0.10 -0.00
P ₀	4.00	±0.10
10P ₀	40.00	±0.20



6.2.Reel specification (5000 pcs / Reel, Unit : mm)



Index	A	B	C	D	E
Dimension (mm)	178±1.0	φ60±0.5	13.3±0.2	4.0+0.5/-0	3.0+0.3/-0
Index	F	G	H	I	
Dimension (mm)	3.0±0.5	5+0.5/-0	12.6+1/-0.5	15.2±1	

6.3.Storage Conditions

- A. Oxidizable Material, 12 months in vacuum sealed bag, please repack within 168 hours by re-seal the package treatment after using.
- B. Recommended products should be used within 6 months form the time of delivery.
- C. Storage Temperature Range : <30 degree C, and Humidity : <60%RH.
- D. The packaging material should be kept where no chlorine or sulfur exists in the air.
- E. Products should be storage in the warehouse without heat shock,vibration,direct sunlight and so on.



7. Dependability Test

Test item	Test condition / Test method	Specification
Solderability IEC 60068-2-58 GB/T2423.28	*Solder bath temperature: 240±5°C *Immersion time: 2±0.5 sec Solder: Sn96.5Ag3.0Gu0.5 for lead-free.	At least 95% of a surface of each terminal electrode must be covered by fresh solder.
Leaching (Resistance to dissolution of metallization) JIS C5101	*Solder bath temperature: 260±5°C *Leaching immersion time: 10±1 sec Solder : Sn96.5 Ag3.0 Gu0.5 for lead-free.	Loss of metallization on the edges of each electrode shall not exceed 25%.
Resistance to soldering heat IEC 60068-2-58 GB/T2423.28	*Preheating temperature: 120~150°C, 1 minute. *Solder temperature: 260±5°C *Immersion time: 10±1 sec Solder: Sn96.5Ag3.0Gu0.5 for lead-free Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature. Loss of metallization on the edges of each electrode shall not exceed 25%.
Drop Test IEC 60068-2-32 GB/T2423.8 Customer's specification	*Height: 50 cm *Test Surface: Rigid surface of concrete or steel. *Times: 6 surfaces for each units; 2 times for each side.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Vibration IEC 60068-2-6 GB/T 2423.10	*Frequency: 10Hz~55Hz~10Hz(1min) *Total amplitude: 1.5mm *Test times: 6hrs.(Two hrs each in three mutually perpendicular directions)	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Adhesive Strength of Termination IEC60068-2-21 GB/T 2423.6	*Pressurizing force: 5N(≤0603); 10N(>0603) *Test time:10±1 sec	No remarkable damage or removal of the termination.

Bending test IEC 60068-2-21 GB/T 2423.29	The middle part of substrate shall be pressurized by means of the pressurizing rod at a rate of about 1 mm/s per second until the deflection becomes 2mm and then pressure shall be maintained for 10±1 sec. Measurement to be made after keeping at room temperature for 24±2 hours.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Temperature cycle IEC60068-2-14 GB/T 2423.22	30 minutes at -40°C±2°C. 10~15 minutes at room temperature. 30minutes at +85°C±2°C. 10~15 minutes at room temperature. Total 100 continuous cycles Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
High temperature IEC 60068-2-2 GB/T2423.2	*Temperature: 85±2°C. *Test duration: 500+24/-0 hours. Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics.
Humidity (steady conditions) IEC60068-2-3 GB/T 2423.3	*Humidity: 85±5%R.H. *Temperature: 85±2°C. *Time: 500+24/-0 hrs. Measurement to be made after keeping at room temperature for 24±2 hrs ※ 200hrs measuring the first data then 300hrs data.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Low temperature IEC 60068-2-1 GB/T2423.1	*Temperature: -40±2°C. *Test duration: 500+24/-0 hours Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.

8.Antenna structure drawing

