



Address: 103, No.7, Kangli City, No. 66, Pingji Avenue, Lilang Community, Nanwan Street, Longgang District, Shenzhen
Antenna Type: Ceramic Antenna

样品承认书

Parts Approval Sheet

生产厂商: _____
Supplier

物料名称: _____
Parts Name

适用项目: _____
Applicable Items

Nqi 料号: Nqi-1608-P2450C
Nqi Parts No.

品 牌: Nqi
Brand

样品数量: _____
Quantity

送样日期: _____
Send out Date

文件编号: Nqi-RD-SPEC-20240810
Document No.

承认日期: _____
Approve Date

版 本: V0
Version

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



1. Operating frequency

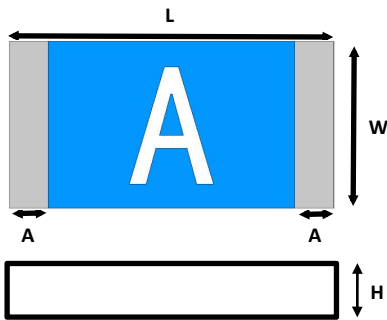
Antenna Frequency for 2400MHz-2500 MHz

2. Applications

For Miniaturized Bluetooth/WIFI2.4System

Antenna Type: Ceramic

2.1. Appearance and Dimensions(Unit : mm):



Units:mm

L	W	H	A
1.60±0.20	0.80±0.20	0.40±0.10	0.2±0.07

Weight: 0.002g

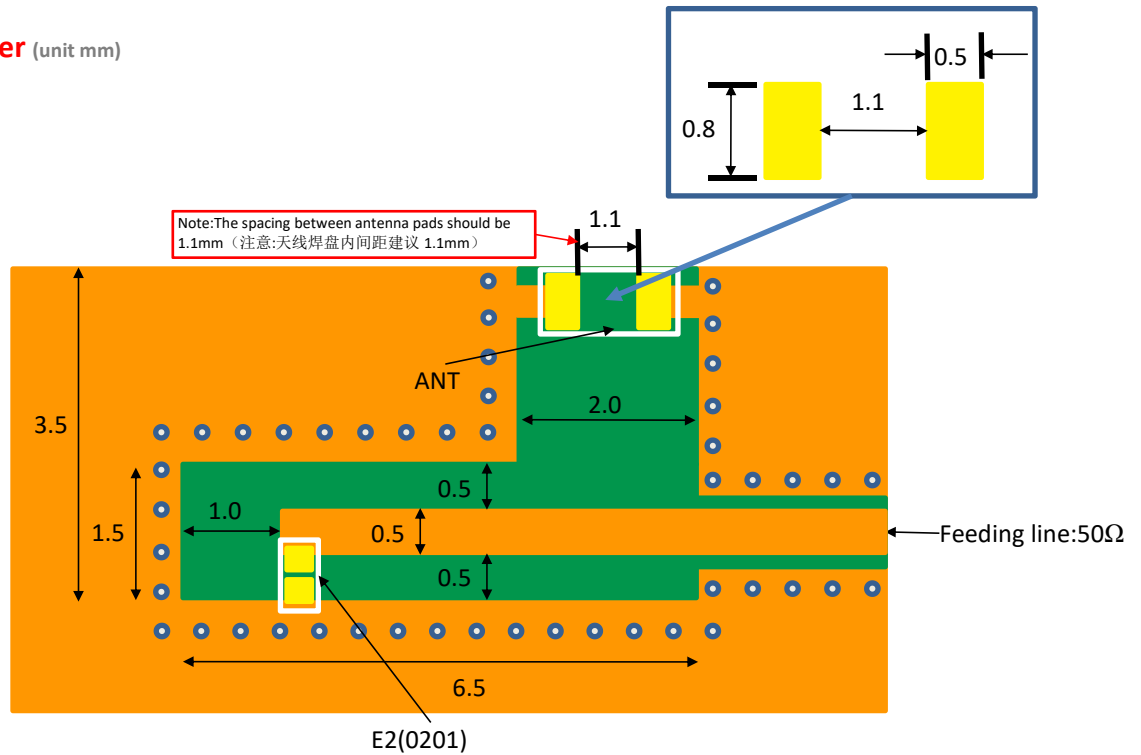


3. The DEMO Board and Matching Circuits

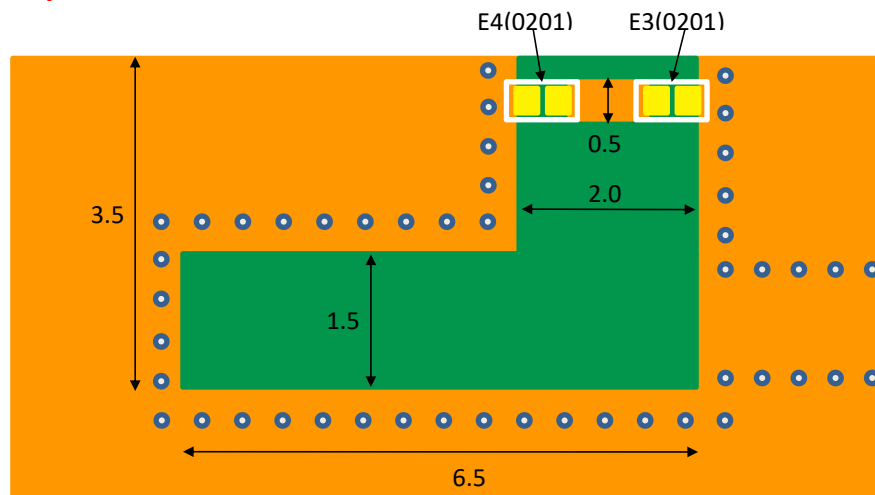
3.1. The DEMO Board

Recommend PCB Layout1;Test condition: Test board size 70*60 mm;

Top Layer (unit mm)



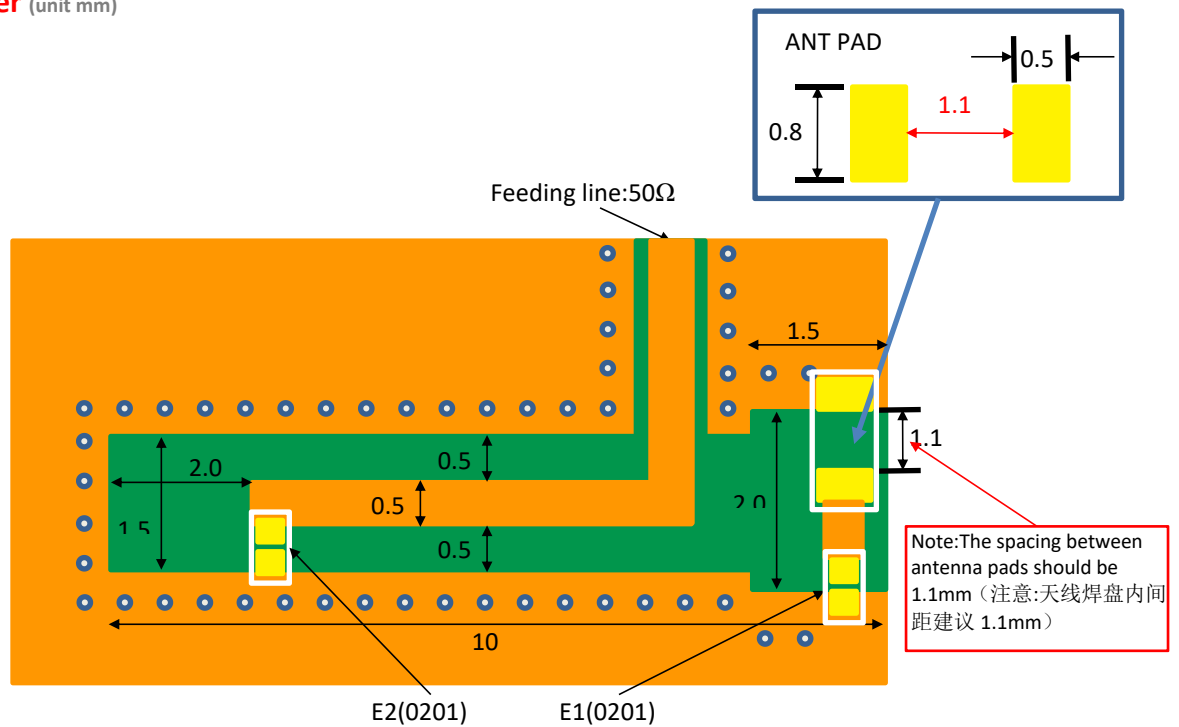
Bottom Layer (unit mm)



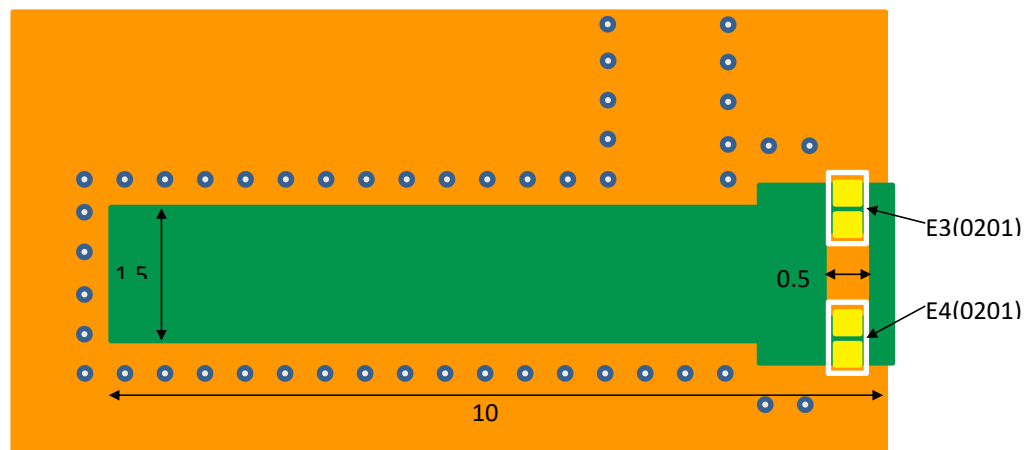


Recommend PCB Layout2;Test condition: Test board size 70*60 mm;

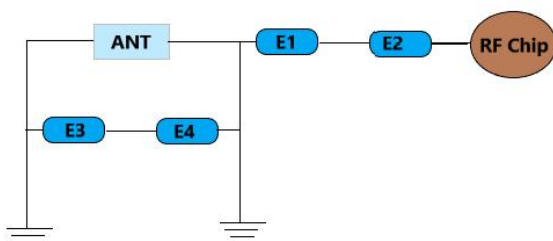
Top Layer (unit mm)



Bottom Layer (unit mm)



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
E1	C/L/R(0201)	±5%
E2	C (0201)	±5%
E3	C (0201)	±5%
E4	C (0201)	±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 2450mhz。

Different circuit boards, parts suppliers and terminals may need to be heavy when changed。



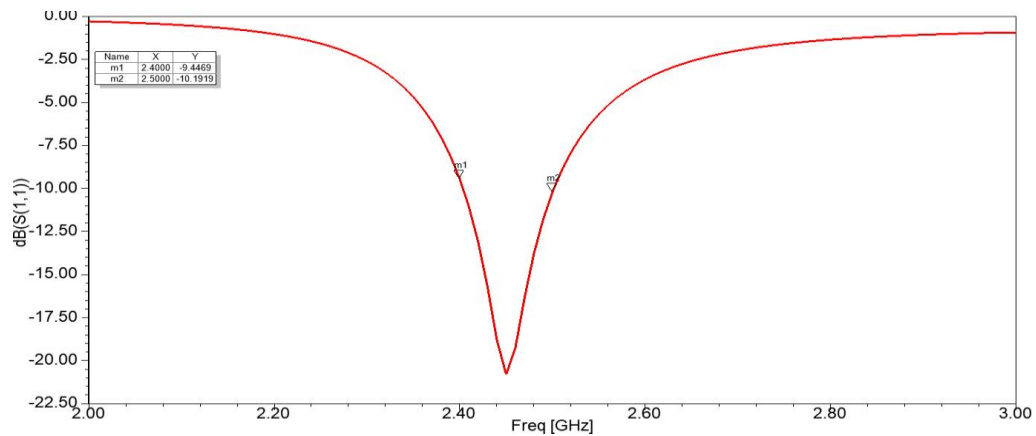
4. Electrical Characteristics(TA=25℃)

Parameter	Specification	Units
Frequency Band	2400~2500	MHz
Polarization	Linear	
Peak Gain	2.78	dBi
Peak Efficiency	80.25	%
Impendence	50	Ω

Test condition: Test board size 70*60 mm;

Matching circuit: Pi or Double-L matching circuit will be required.

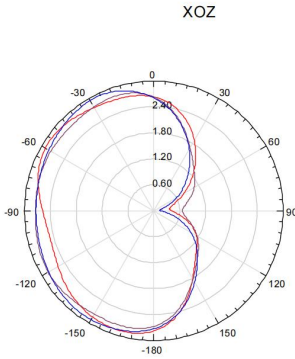
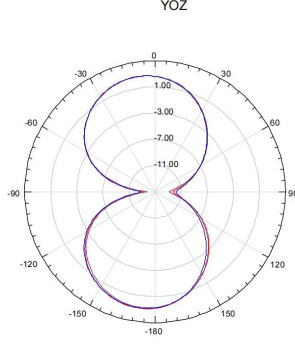
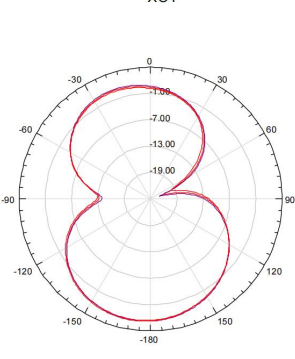
4.1.S11



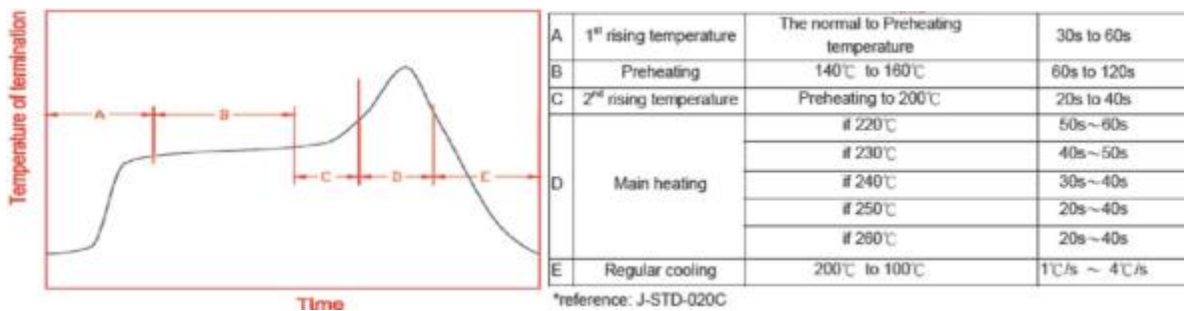


4.2.Efficiency and Gain

Antenna Radiation Pattern

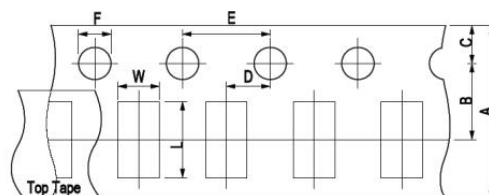
Frequency	ZX plane		ZY plane		XY plane	
	Max Value	Average	Max Value	Average	Max Value	Average
[MHz]	[dBi]	[dBi]	[dBi]	[dBi]	[dBi]	[dBi]
2400	2.71	2.09	2.73	-3.00	2.67	-4.14
2450	2.33	2.13	2.78	-3.12	2.71	-4.13
2500	2.65	2.07	2.77	-3.00	2.69	-4.05
Radiation Pattern XOZ		Radiation Pattern YOZ		Radiation Pattern XOY		
						

5. Reflow Soldering Standard Condition



6. Packaging Information

6.1.Tape specification (Unit :mm)

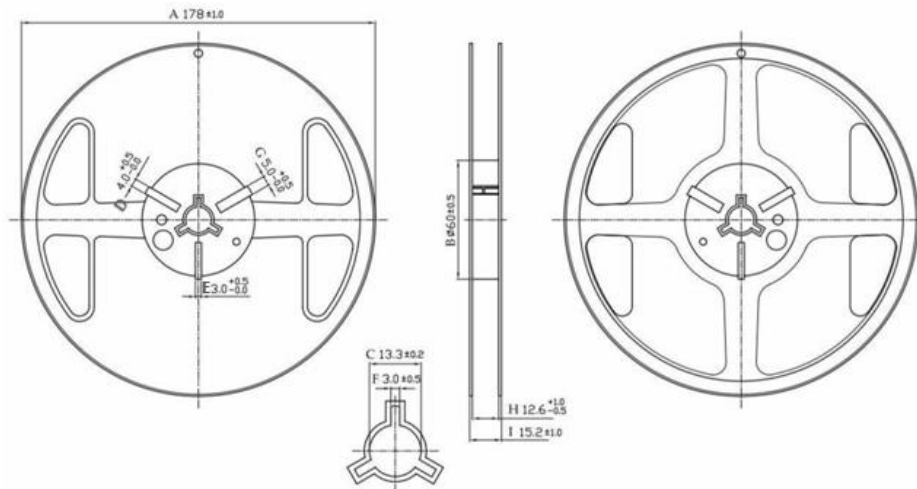


A	B	C	D	E	F	L	W
8.00±0.3	3.50± 0.05	1.75±0.1	2.00±0.05	4.00±0.1	1.50±0.1	1.87± 0.1	1.12± 0.1



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ShenZhen NQI network communication ltd

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)At warehouse: The temperature should be within 0 ~ 30 °C and humidity should be less than 60% RH.The product should be used within 1 year from the time of elivery.

(b)On board: The temperature should be within -40 ~85 °C and humidity should be less than 85% RH.

6.4.Operating Conditions

Operating temperature range : -40 °C to +85 °C .

7. Dependability Test

Item	Condition	Specification
Thermal shock	1. 30±3 minutes at -40 °C±5 °C , 2. Convert to +105 °C (5 minutes) 3. 30±3 minutes at +105 °C±5 °C , 4. Convert to -40 °C (5 minutes) 5 . Total 100 continuous cycles	No apparent damage Fulfill the electrical spec. after test.
Humidity resistance	1. Humidity: 85% R.H.; 2.Temperature: 85±5 °C; 3 . Time: 1000 hours .	No apparent damage Fulll the electrical spec. after test.
High temperature resistance	No apparent damage Fulfill the electrical spec. after test.	1 . Temperature: 150 °C±5 °C 2 . Time: 1000 hours .
Low temperature resistance	1 . Temperature: -40 °C±5 °C; 2 . Time: 1000 hours .	No apparent damage Fulll the electrical spec. after test.
Soldering heat resistance	1. Solder bath temperature : 260±5°C 2. Bathing time: 10±1 seconds	No apparent damage
Solderability	The dipped surface of the terminal shall be at least 95% covered with solder after dipped in solder bath of 245±5 for 3±1 seconds .	No apparent damage