

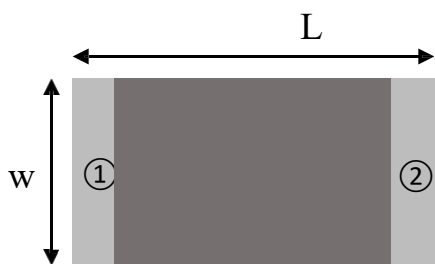
## Features

- 1.Surface Mounted Devices with a small dimension of 1.6 x 0.8 x 0.8 mm meet future miniaturization trend.
- 2,Embedded and LTCC (low temperature co-fired ceramic) technology is able to integrate with system design as well as beautifying the housing of final product.
- 3.High stability and low tolerance.

## Applications

1. Bluetooth
2. Wireless LAN
3. ISM band 2.4GHz wireless applications

### Dimensions (Unit: mm)



( Top View )

Number	Terminal Name
①	INPUT
②	NC



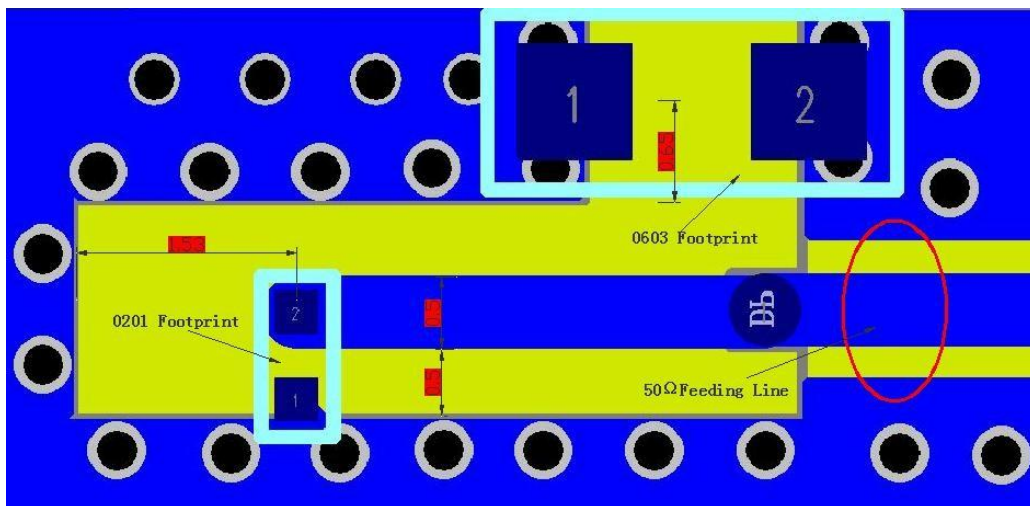
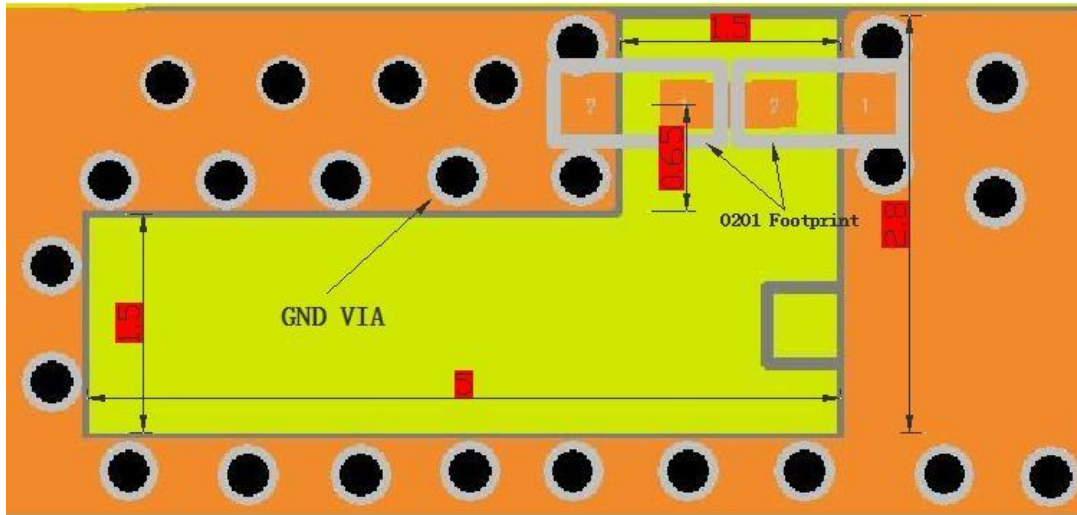
( Bottom View )



( Side View )

Symbols	L	W	T	A
Dimensions	1.60±0.20	0.80±0.20	0.80±0.20	0.30±0.10

### Evaluation Board and Matching Circuits



地址：深圳市宝安区西乡街道共乐社区铁仔路九方广场2栋1905  
TEL: 0755-23591525, FAX: 0755-23591525

S11-Parameter



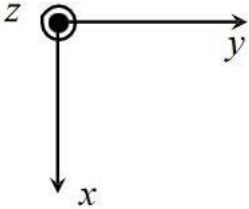
Frequency(MHz)	2400	2450	2480	2500
VSWR	1.56	1.16	1.48	1.79

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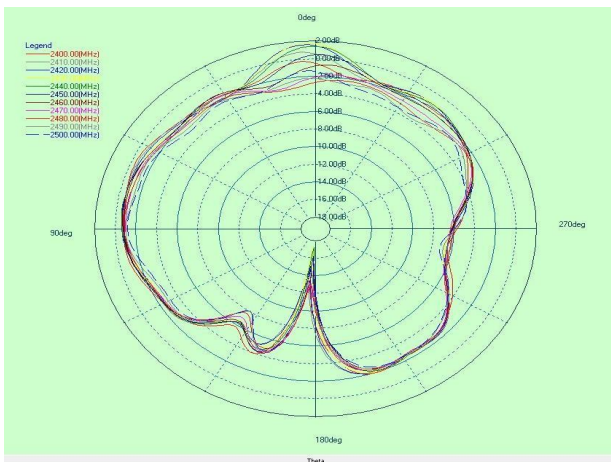
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### Radiation Pattern

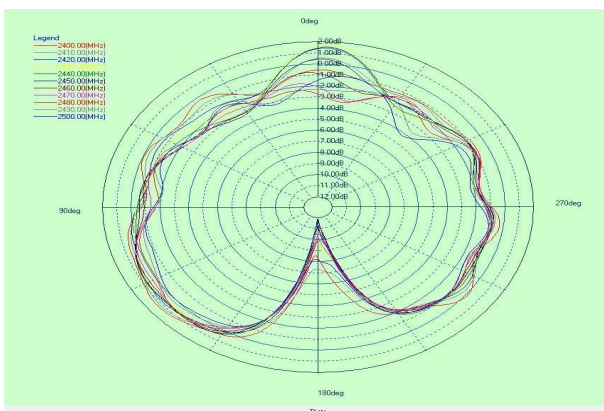
coordinates:



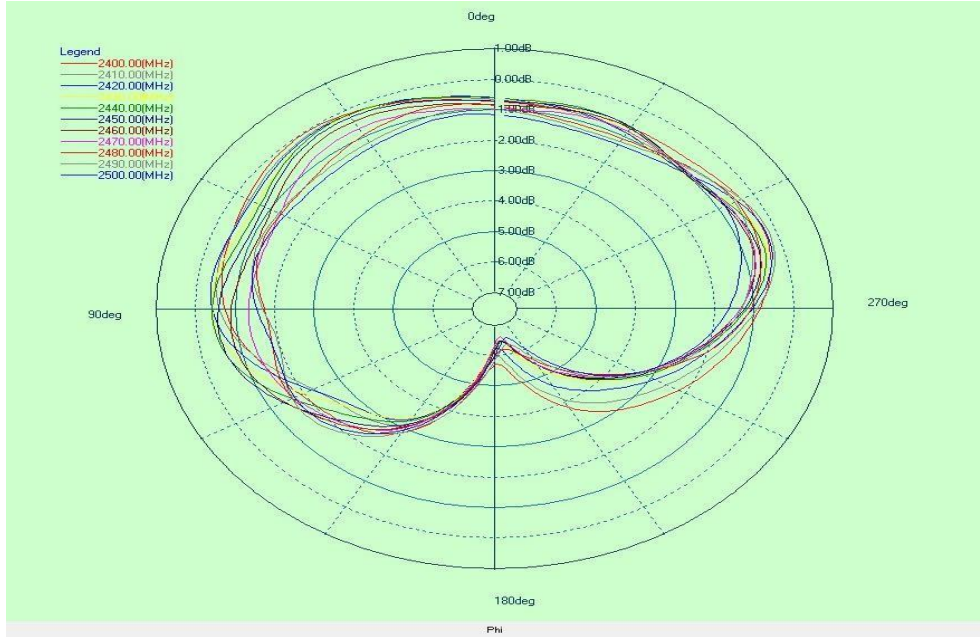
### Y-Z Plane



### X-Z Plane



X-Y Plane



Frequency	2400MHz	2450MHz	2490MHz
Avg. gain	1.30	0.93	0.45
Peak gain (dBi)	2.7	2.6	2.5
Efficiency	57%	54%	53%

### Dependability Test

	Test Temperature: 25°C±3°C
Operating Temperature	-25°C~+85°C
Temperature	5~40°C
Relative Humidity	20~70%

### Moisture Proof

Temperature: 40±2°C Humidity: 90~95%RH

Duration: 500h

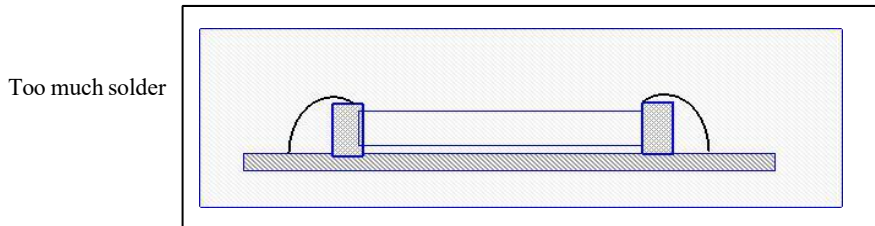
Recovery conditions: Room temperature Recovery Time: 24h (Class1) or 48h (Class2)

### Solderability

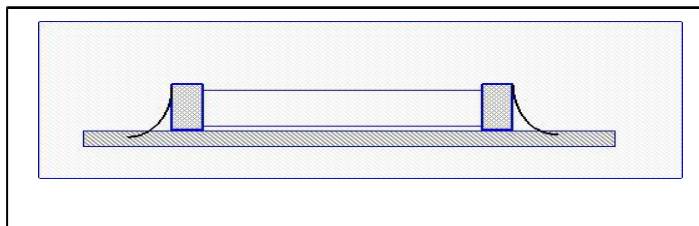
At least 95% of the terminal electrode is covered by new solder. Preheating conditions: 80 to 120°C; 10~30s.

Solder Temperature: 235±5°C Duration: 2±0.5s, Solder Temperature: 245±5°C Duration: 2±0.5s

### Optimum Solder Amount for Reflow Soldering



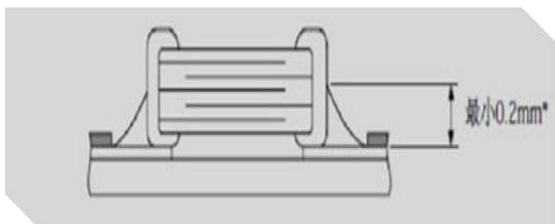
Cracks tend to occur due to large stress.



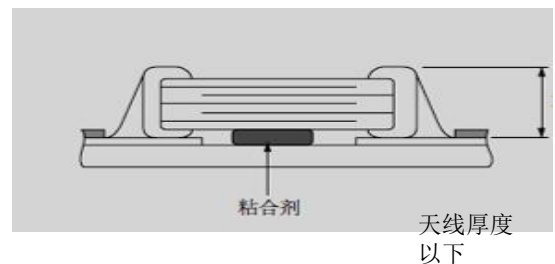
Weak holding force may cause bad connection between the capacitor and PCB.

### Recommended Soldering amounts

The optimal solder fillet amounts for re-flow soldering



The optimal solder fillet amounts for wavesoldering





### Temperature Cycle Test

10±1S Applied Force: 5N Duration: 10±1S

Preheating conditions: up-category temperature, 1h

Recovery time: 24±1h

Initial Measurement

Cycling Times: 5 times, 1 cycle, 4 steps:

阶段	温度 (°C)	时间 (分钟)
第1步	下限温度 (NPO/X7R/X7S/X6S/X5R-55) Y5V-25 Z5U-10	30
第2步	常温 (+20)	2~3
第3步	上限温度 (NPO/X7R/X7S-125) Y5V/Z5U/X5R-85 X6S-105	30
第4步	常温 (+20)	2~3

### Resistance to Soldering Heat

Preheating 80 to 120°C; 10~30s. Solder Temperature: 235±5°C Duration: 2±0.5s, Solder Temperature: 245±5°C Duration: 2±0.5s, Preheating 100 to 200°C; 10±2min.

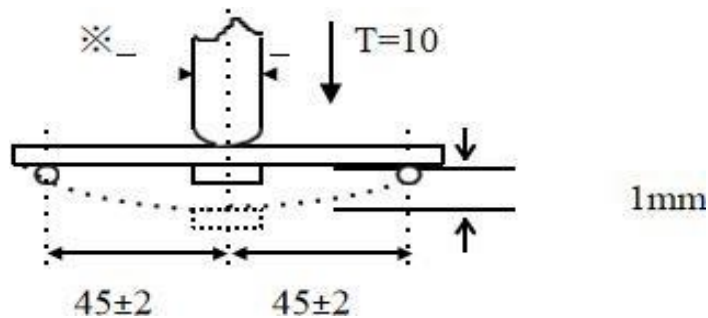
Solder Temperature: 265±5°C Duration: 10±1s

Clean the capacitor with solvent and examine it with a 10X(min.) microscope.

Recovery Time: 24±2h

Recovery condition: Room temperature

### Resistance to Flexure of Substrate

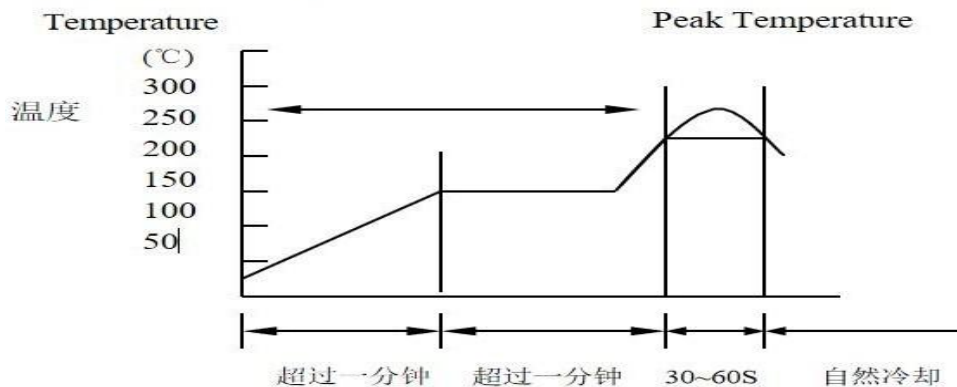


Test Board: Al<sub>2</sub>O<sub>3</sub> or PCB Warp: 1mm Speed: 0.5mm/sec.  
Unit: mm

The measurement should be made with the board in the bending position.

### The temperature profile for soldering

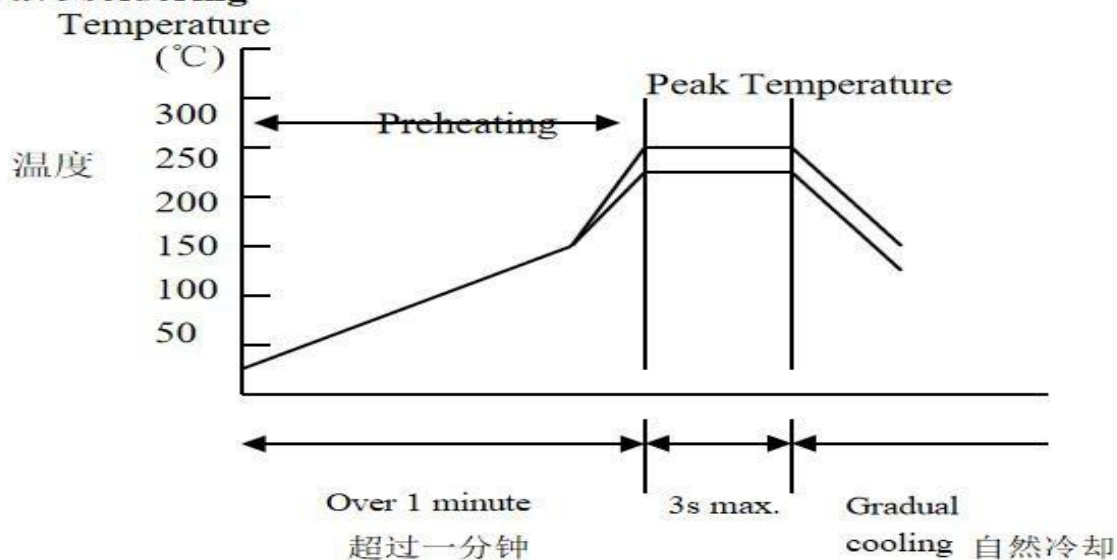
#### Re-flow soldering



	Pb-Sn 焊接 Pb-Sn soldering	无铅焊接 Lead-free soldering
尖峰温度 Peak temperature	230°C~250°C	240°C~260°C

While in preheating, please keep the temperature difference between soldering temperature and surface temperature of chips as:  $T \leq 150^{\circ}\text{C}$ .

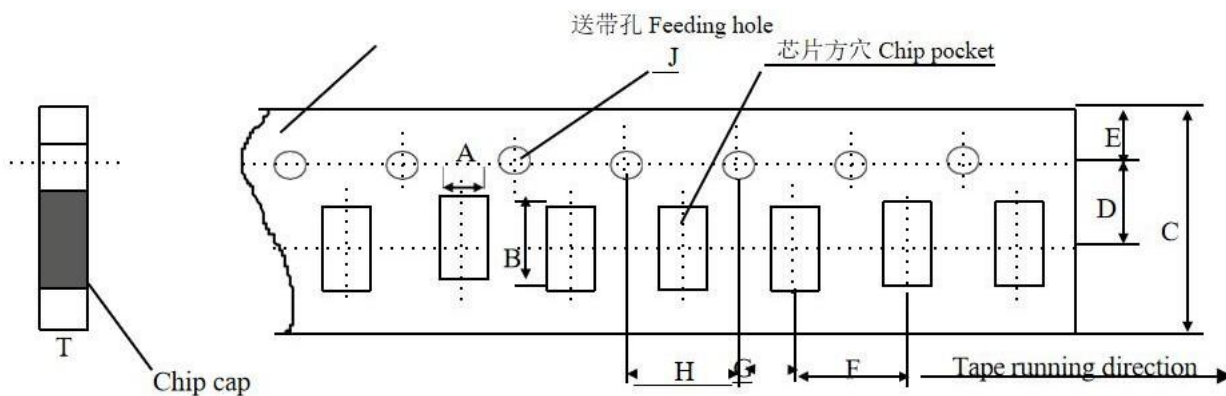
#### Wave soldering



	Pb-Sn 焊接 Pb-Sn soldering	无铅焊接 Lead-free soldering
尖峰温度 Peak temperature	230°C~260°C	240°C~270°C



Dimensions of paper taping for 0603types



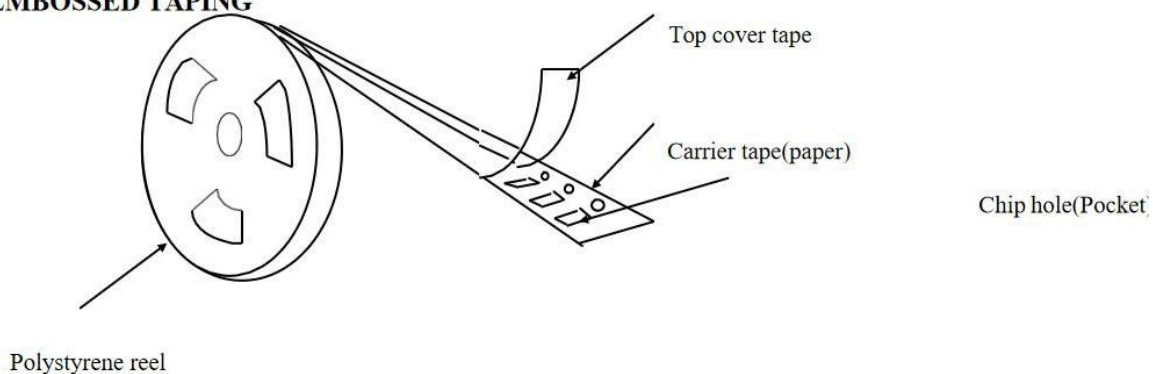
Unit: mm

代号 Code 纸带规格 papersize	A	B	C	D*	E	F	G*	H	J	T
0603	1.10 ±0.10	1.90 ±0.10	8.00 ±0.10	3.50 ±0.05	1.75 ±0.10	4.00 ±0.10	2.00 ±0.10	4.00 ±0.10	1.50 -0/+0.10	1.10 Max

Reel (4000 pcs/Reel)

Note: The place with \* means where needs exactly dimensions.

### EMBOSED TAPING



### Storage Period

The guaranteed period for solderability is 6 months (Under deliver package condition). Temperature 5~40°C /Relative Humidity 20~70%