

## P/N:YC1608FX02, YC1608FX03, YC1608FX04

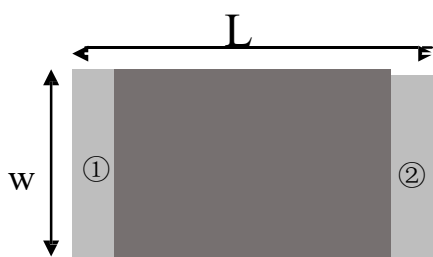
### Features

1. Surface mounted devices with a small dimension of  $1.6 \times 0.8 \times 0.8$  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

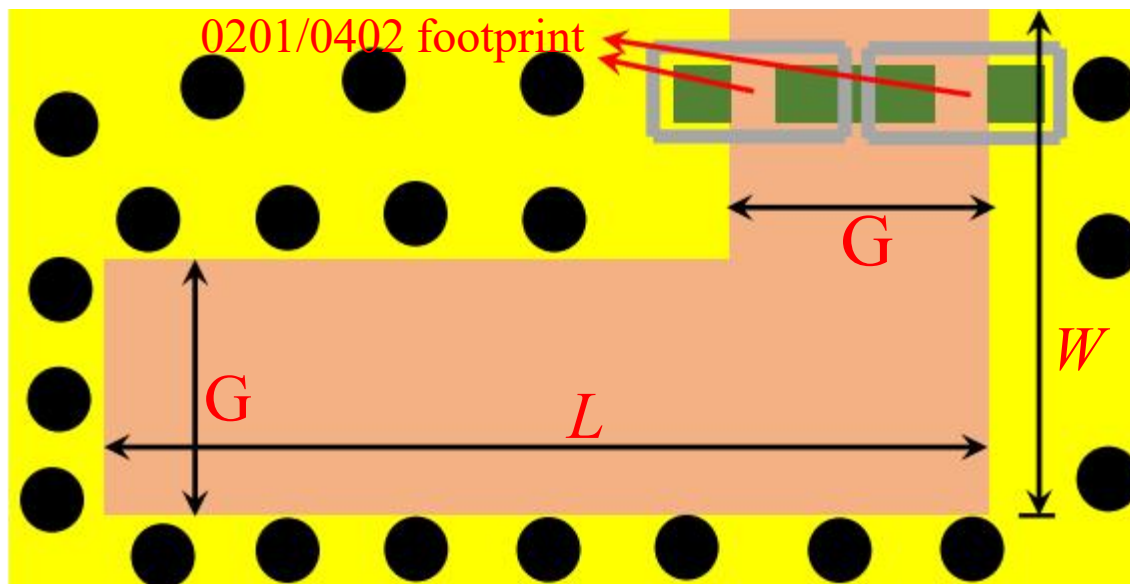


( Bottom View )

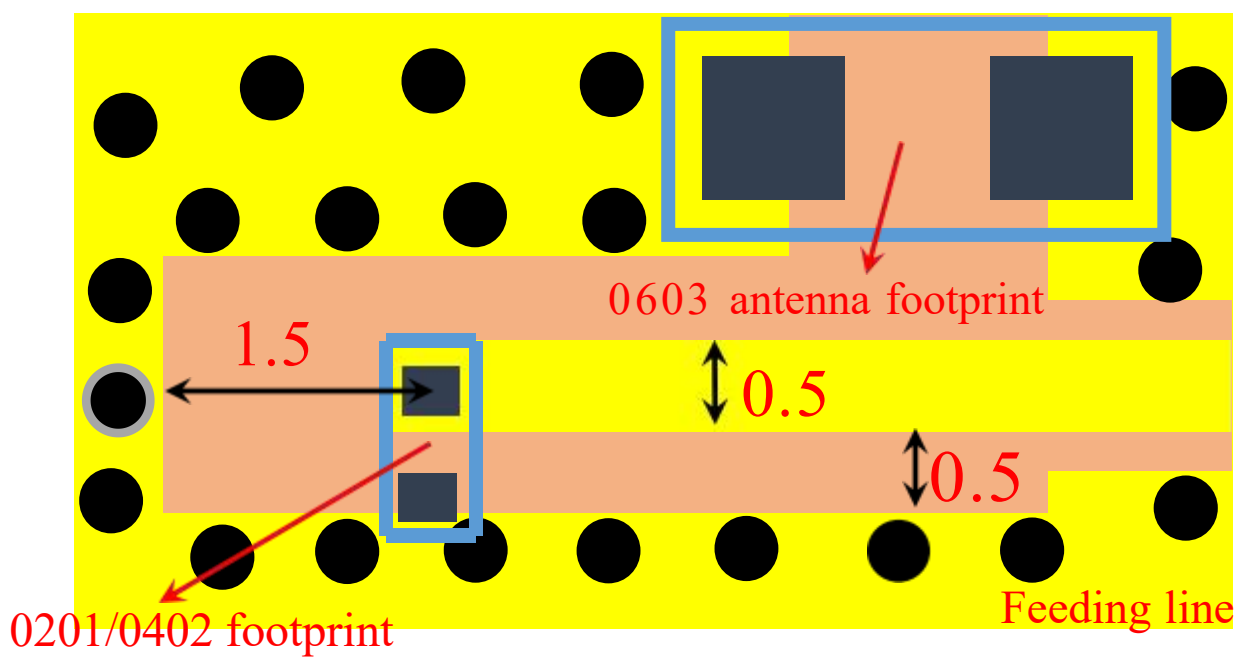


( Side View )

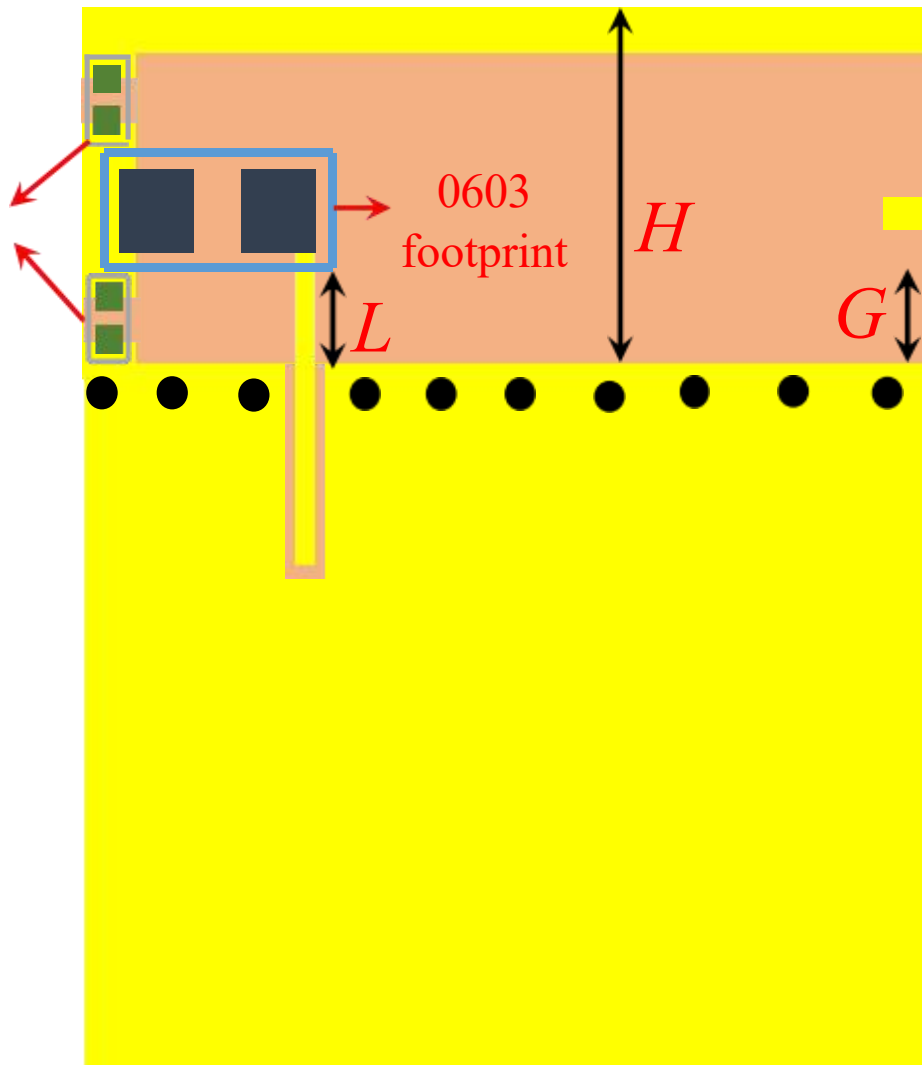
Symbols	L	W	T	A
Dimensions	$1.60 \pm 0.20$	$0.80 \pm 0.20$	$0.80 \pm 0.20$	$0.30 \pm 0.10$



Unit:mm



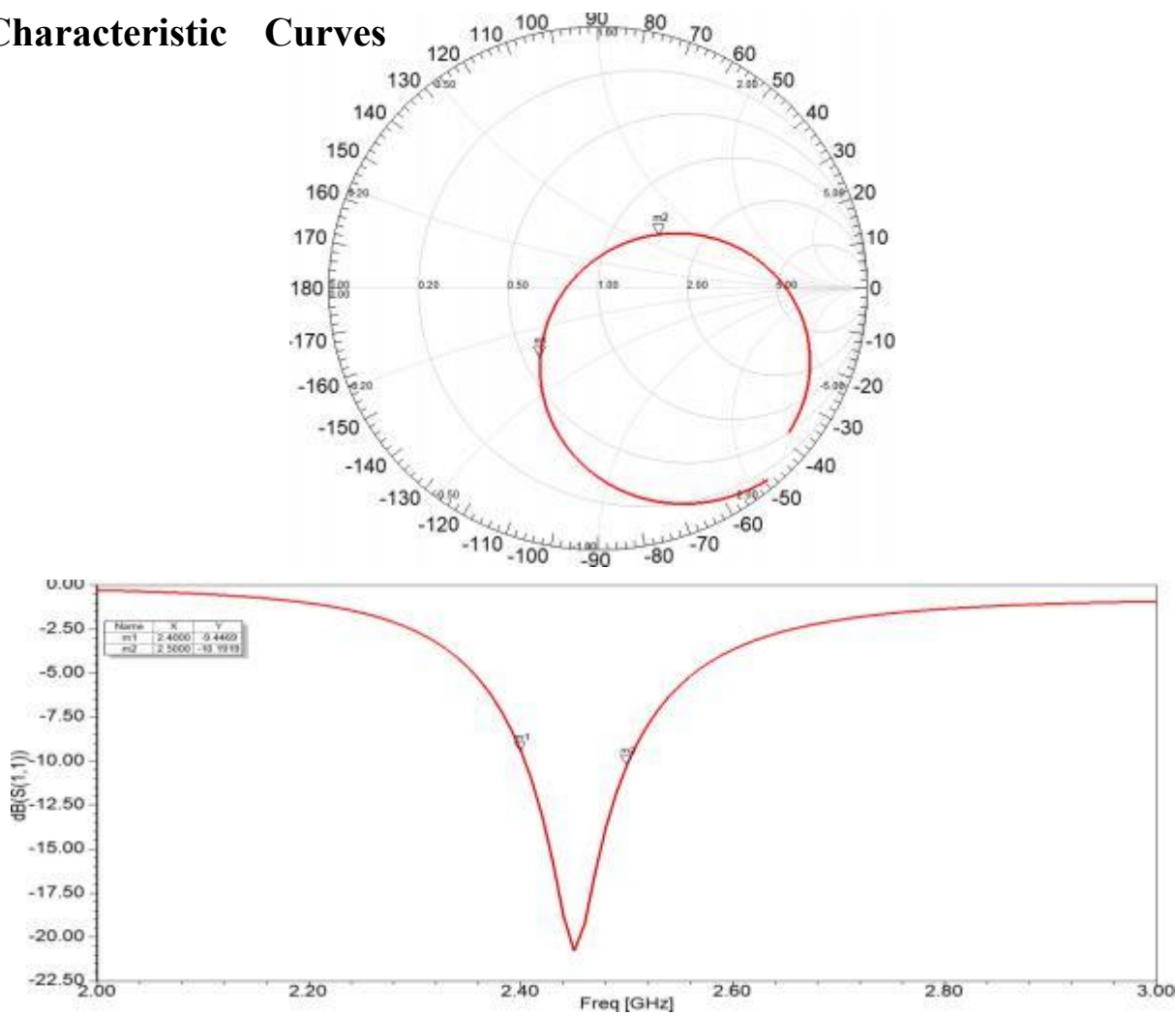
P/N:YC1608FX07/08

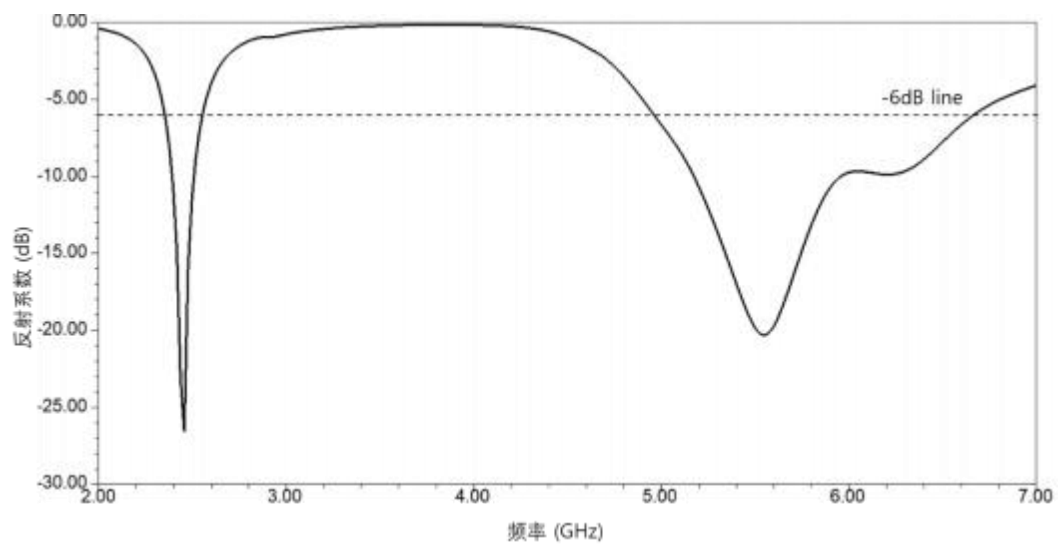


Electrical    Characteristics

	Feature	Specification
1	Central frequency	2.45GHz&5.5GHz
2	Bandwidth	>100MHz
3	Peak gain	3dBi
4	VSWR	<2
5	Polarization	Linear
6	Azimuth beamwidth	Omnidirectional
7	Impedance	50 Ω

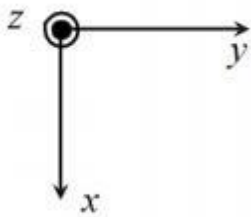
Characteristic    Curves



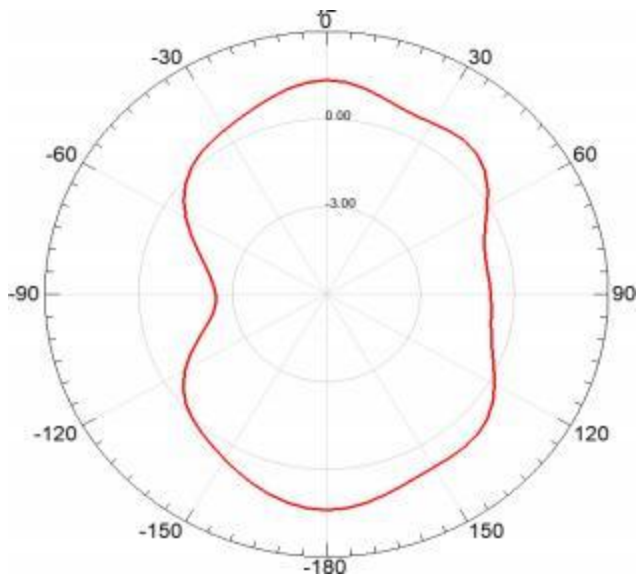


## Radiation Pattern

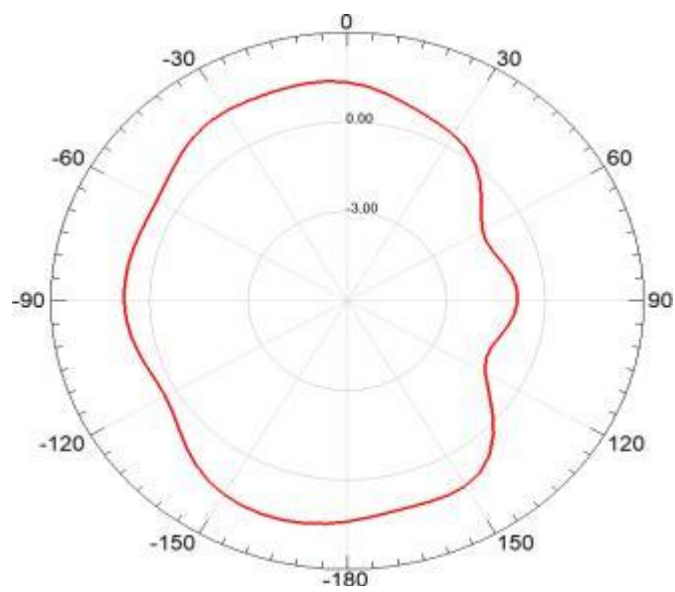
coordinates :

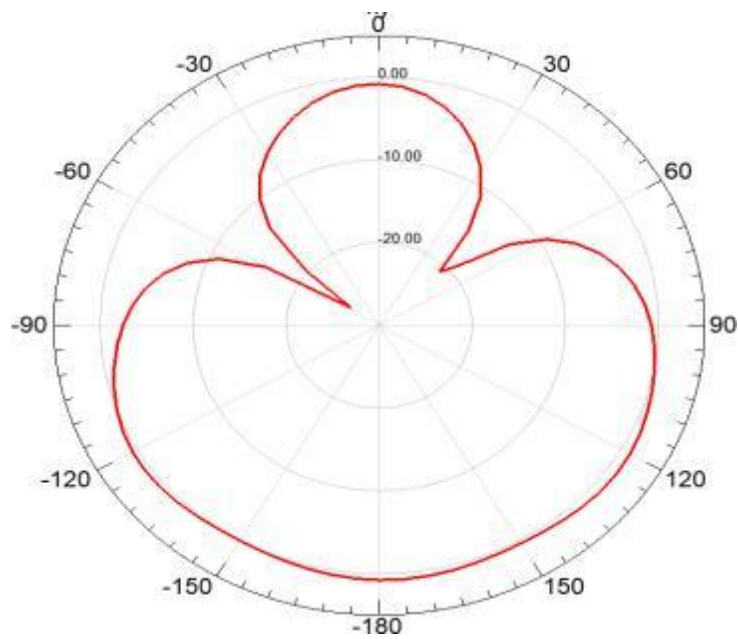


Y-Z Plane

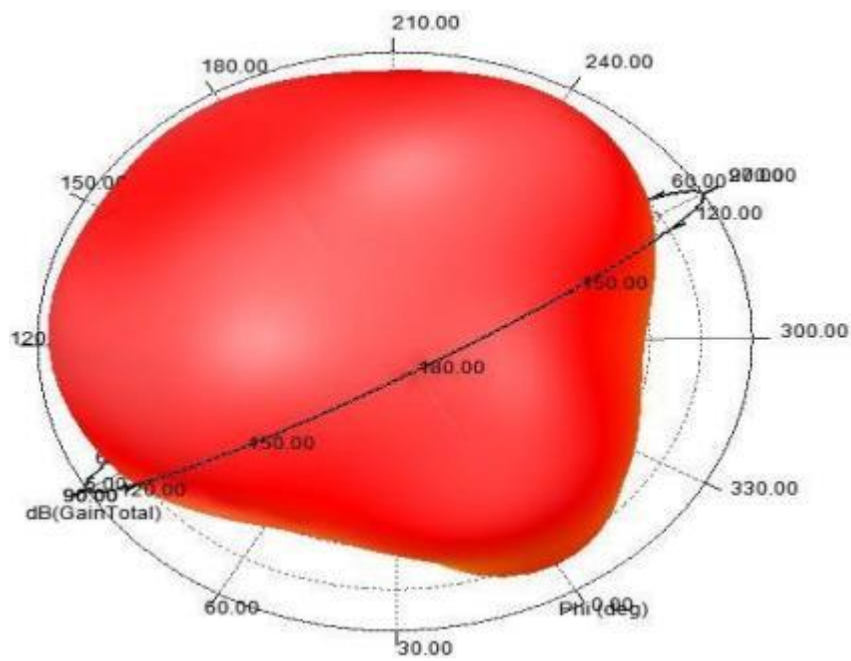


X-Z Plane





### 3 D Radiation Pattern



Frequency	2450MHz
Avg. gain	-0.85
Peak gain	3.0
Efficiency	82%

## Dependability Test

Test Temperature	$25^{\circ}\text{C} \pm 3^{\circ}\text{C}$
Operating Temperature	$-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Temperature	$5 \sim 40^{\circ}\text{C}$
Relative Humidity	20~70%

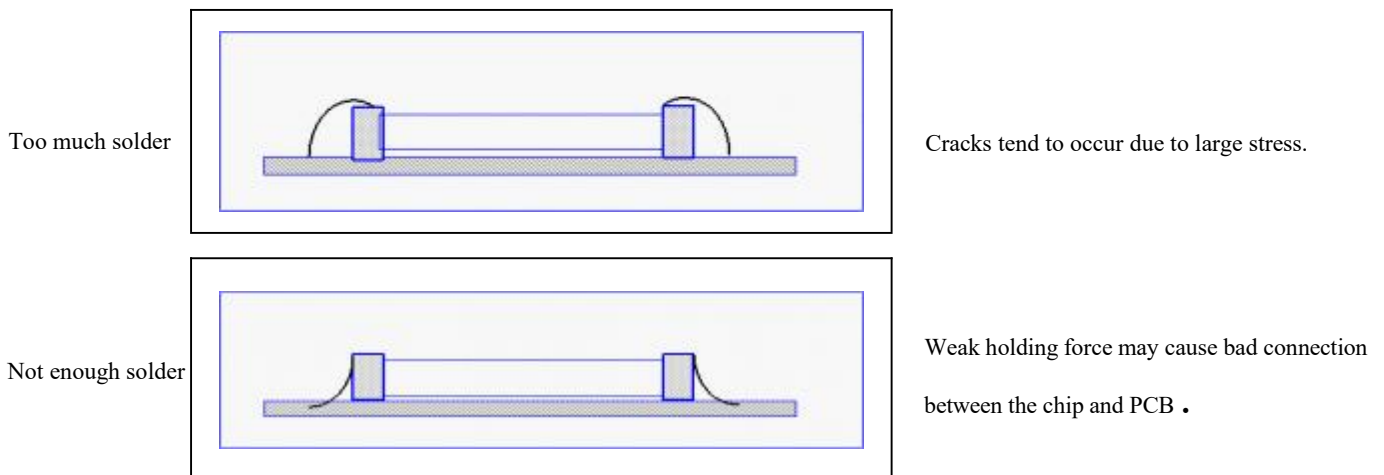
## Moisture Proof

Temperature:  $40 \pm 2^{\circ}\text{C}$  Humidity: 90~95%RH  
Duration: 500h  
Recovery conditions : Room temperature Recovery Time: 24h (Class1) or 48h (Class2)

## Solderability

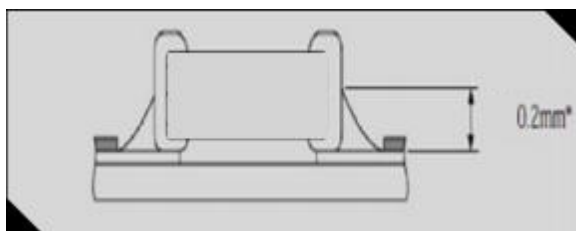
At least 95% of the terminal electrode is covered by new solder.  
Preheating conditions:  $80$  to  $120^{\circ}\text{C}$ ; 10~30s.  
Solder Temperature:  $235 \pm 5^{\circ}\text{C}$  Duration:  $2 \pm 0.5\text{s}$ , Solder Temperature:  $245 \pm 5^{\circ}\text{C}$  Duration:  $2 \pm 0.5\text{s}$

## Optimum Solder Amount for Reflow Soldering

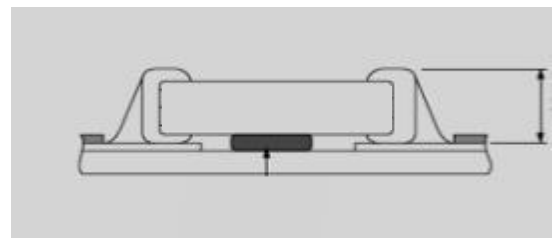


## Recommended Soldering Amounts

The optimal solder fillet amounts for re-flow soldering



The optimal solder fillet amounts for wave soldering



# Temperature Cycle Test

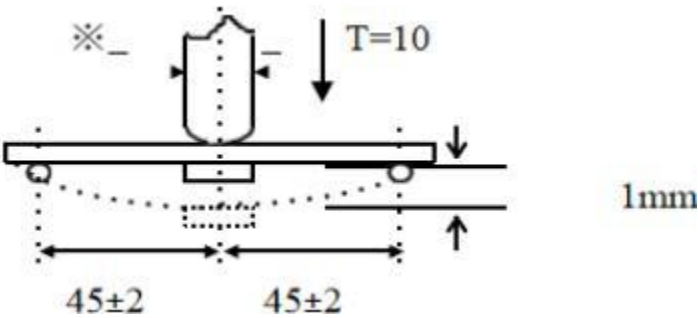
10±1S Applied Force: 5N Duration: 10±1S  
Preheating conditions: up-category temperature, 1h  
Recovery time: 24±1h  
Initial Measurement  
Cycling Times: 5 times, 1 cycle, 4 steps:

阶段	温度 (℃)	时间 (分钟)
第 1 步	下限温度( NPOX/X7R/X7S/X7M/X5R-55 Y5V-25 Z5U-30 )	30
第 2 步	常温 (+20)	2~3
第 3 步	上限温度( NPOX/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.SolderTemperature:235±5°C; Duration:2±0.5s; SolderTemperature:245±5°C  
Duration: 2±0.5s; Preheating100 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

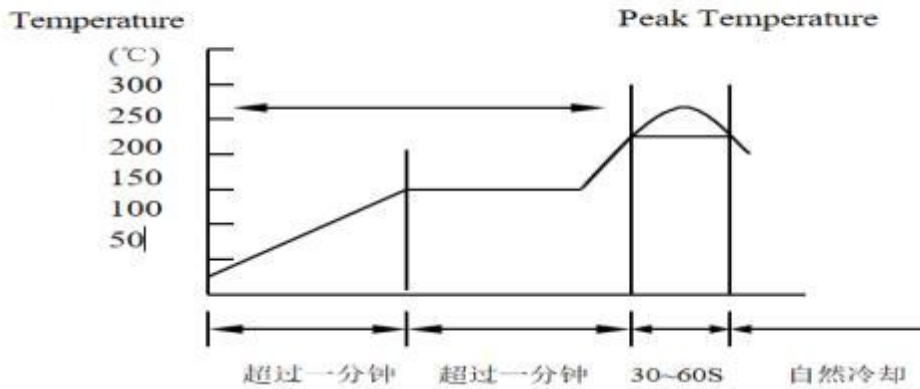


Test Board: Al<sub>2</sub>O<sub>3</sub> or PCB Warp: 1mm Speed: 0.5mm/sec.  
Unit: mm  
The measurement should be made with the board in the bending position.



## The temperature profile for soldering

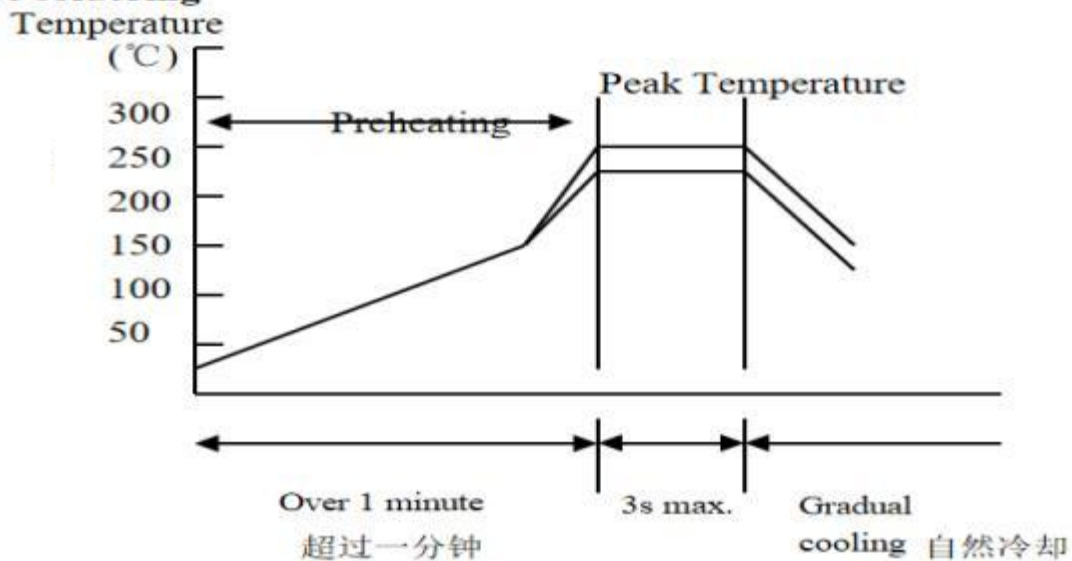
### Re-flow soldering



	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

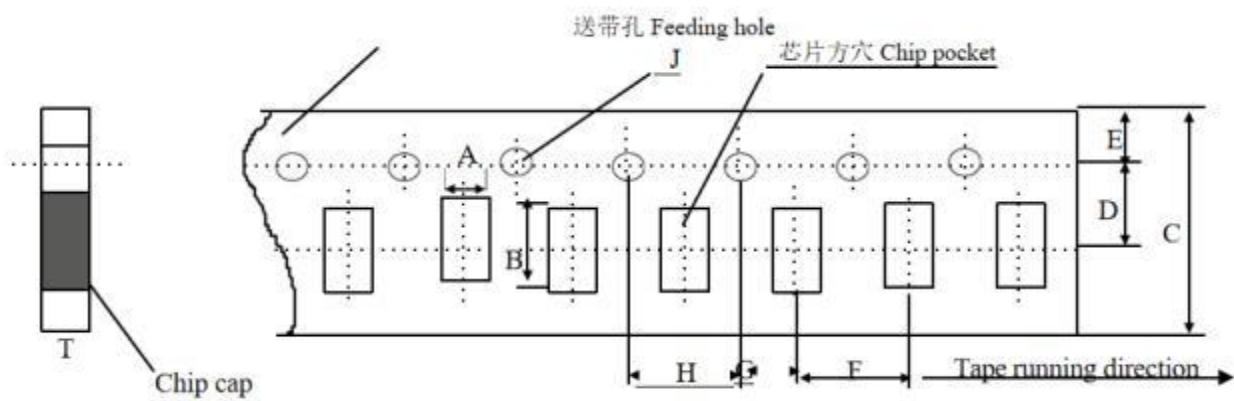
While in preheating, please keep the temperature difference between soldering temperature and surface temperature of chips as:  $T \leq 150^{\circ}\text{C}$ .

### 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

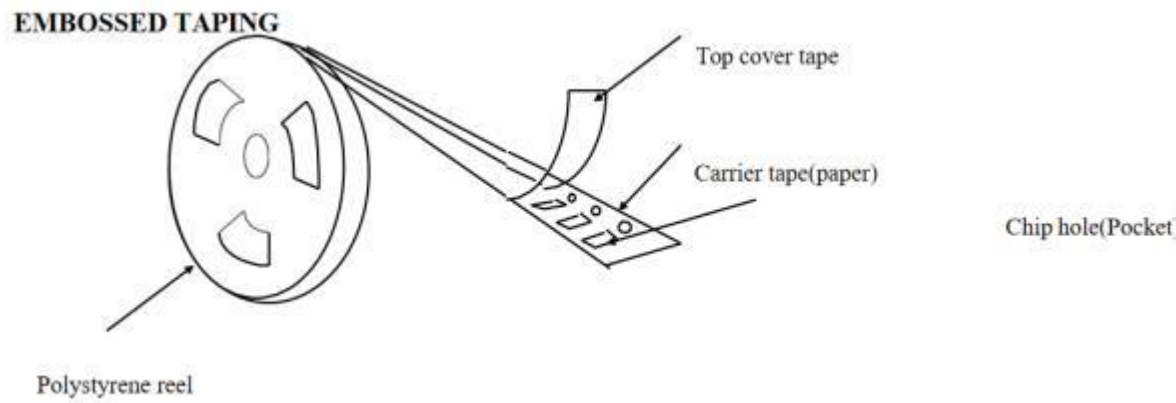
Dimensions of paper taping



Unit: mm

代号Code 纸带规格 papersize	A	B	C	D*	E	F	G*	H	J	T
尺寸	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)



Storage Period

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