

P/N: YC1608FX01, YC1608FX07, YC1608FX08

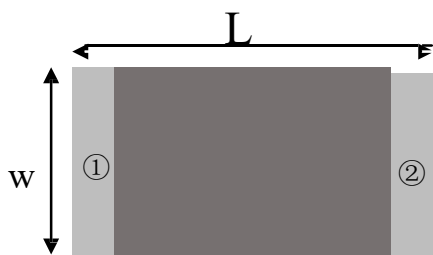
Features

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

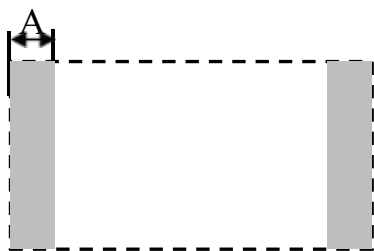
1. Bluetooth
2. Wireless LAN
3. ISM band 2.4GHz wireless applications

Dimensions (Unit: mm)

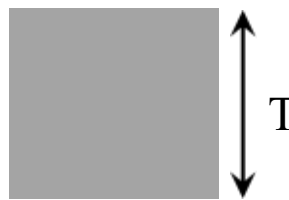


(Top View)

Number	Terminal Name
①	INPUT
②	NC



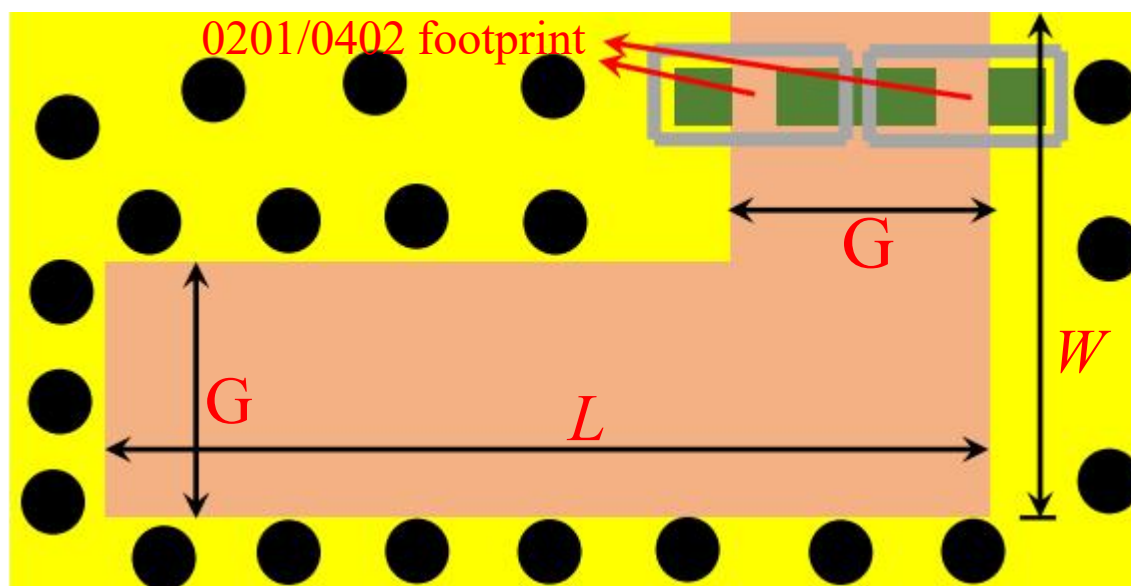
(Bottom View)



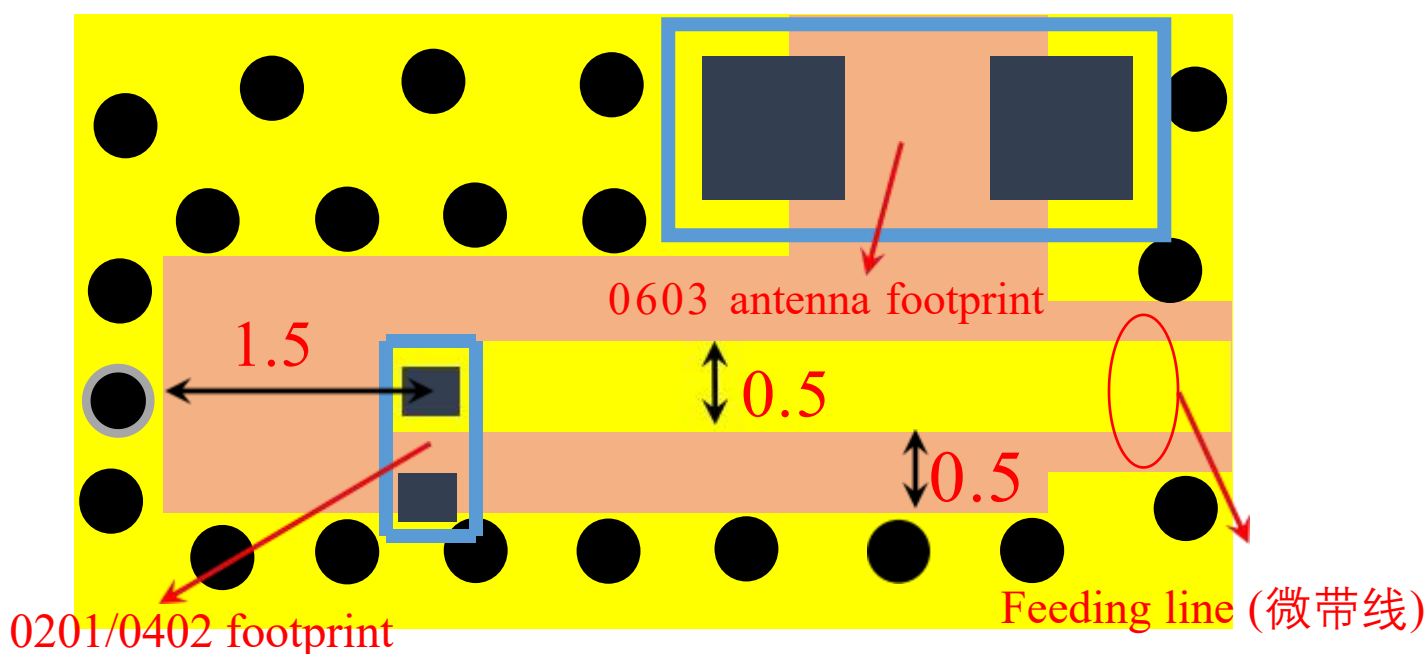
(Side View)

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

天线位于板子内部或中间位置时(长条式耳机):



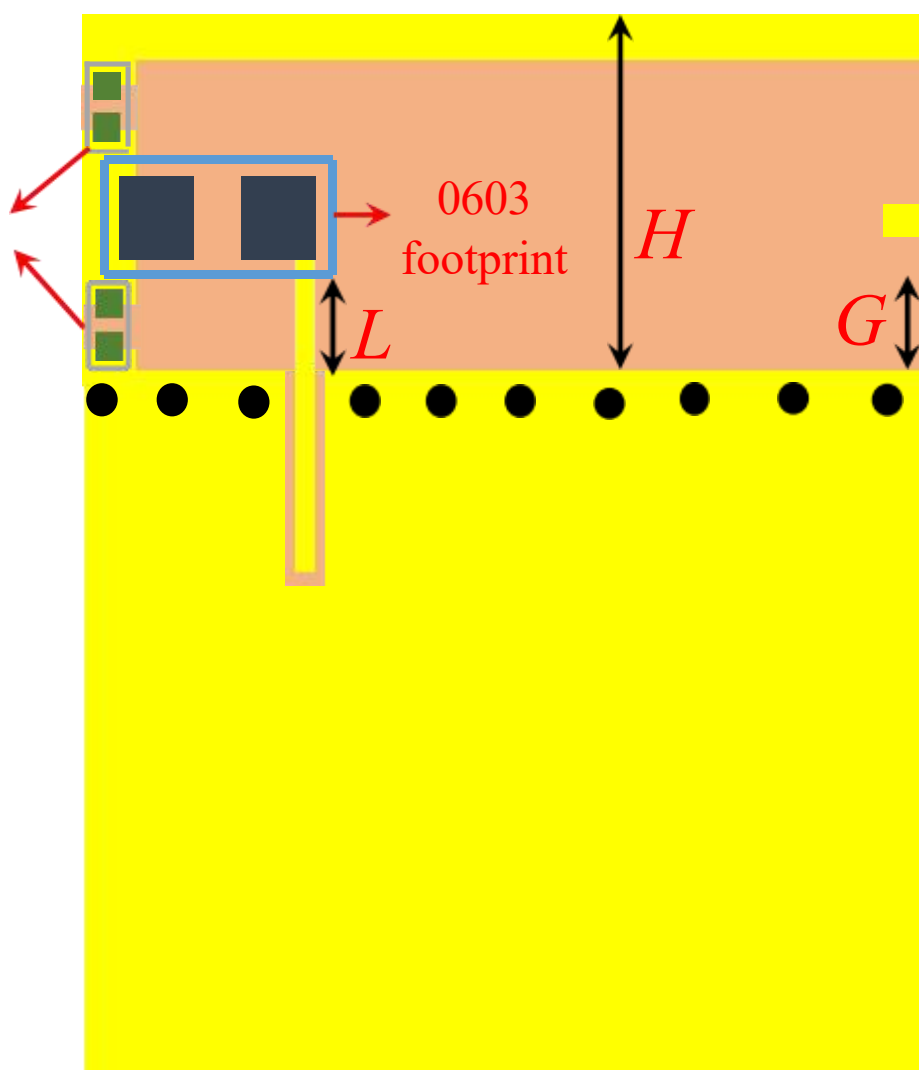
Unit:mm



设计标准：

1. 图示中的尺寸为标准封装，仅作为参考；净空区的尺寸会根据每个版型进行调整和优化。
2. 天线最优放置于PCBA的中间区域。
3. 净空区周围最优需要至少一排过孔，与PCBA上的其它回路或物料进行隔离。
4. G 最优为 $1.5\sim 2\text{mm}$, W 最优为 $3\sim 5\text{mm}$, L 最优为 $4\sim 6\text{mm}$ 。
5. 天线性能与版型、组装、佩戴等相关，因而各版型的性能会有所不同。

天线位于板子边缘位置时(入耳式耳机和部分长条式耳机)



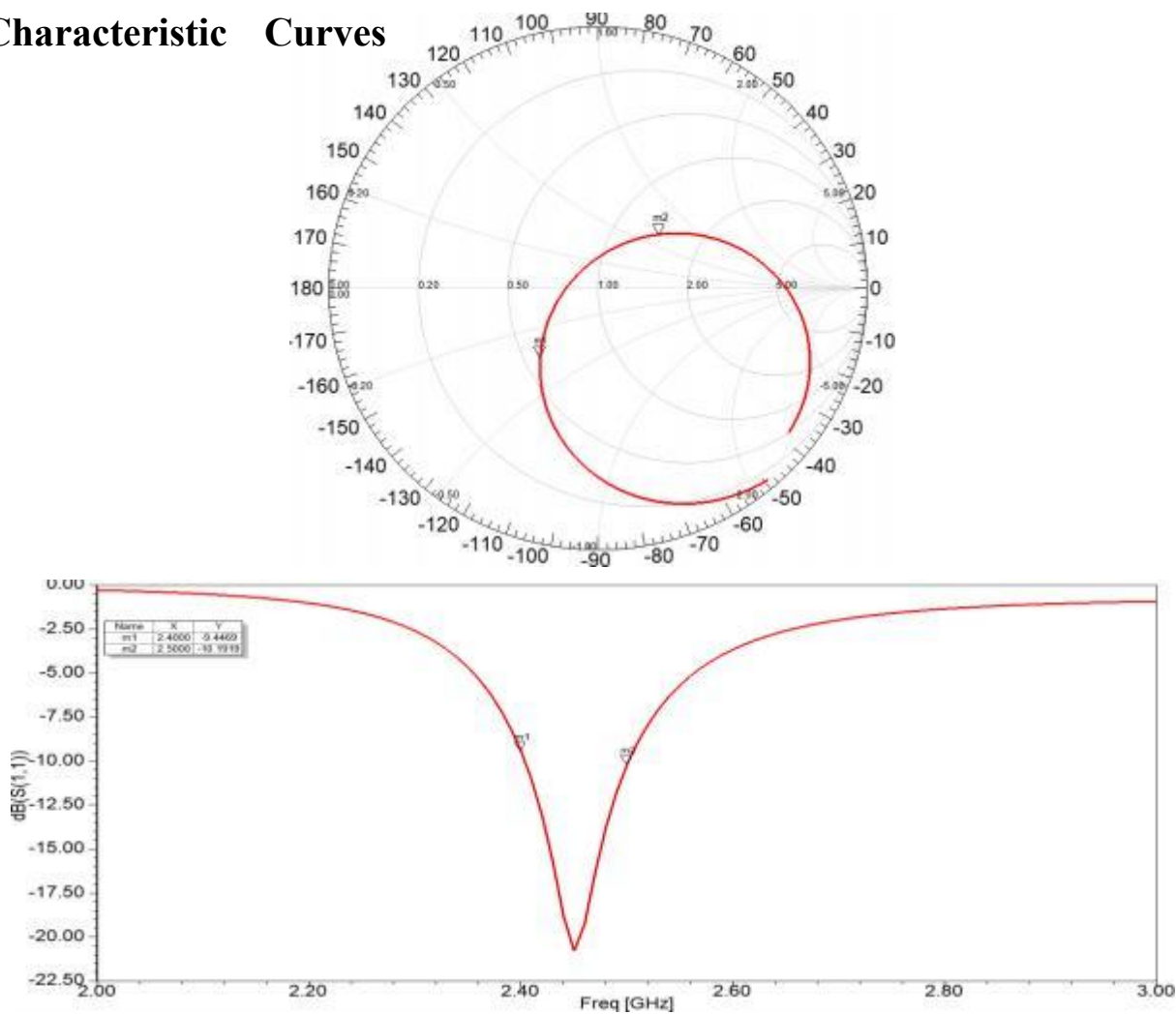
设计标准：

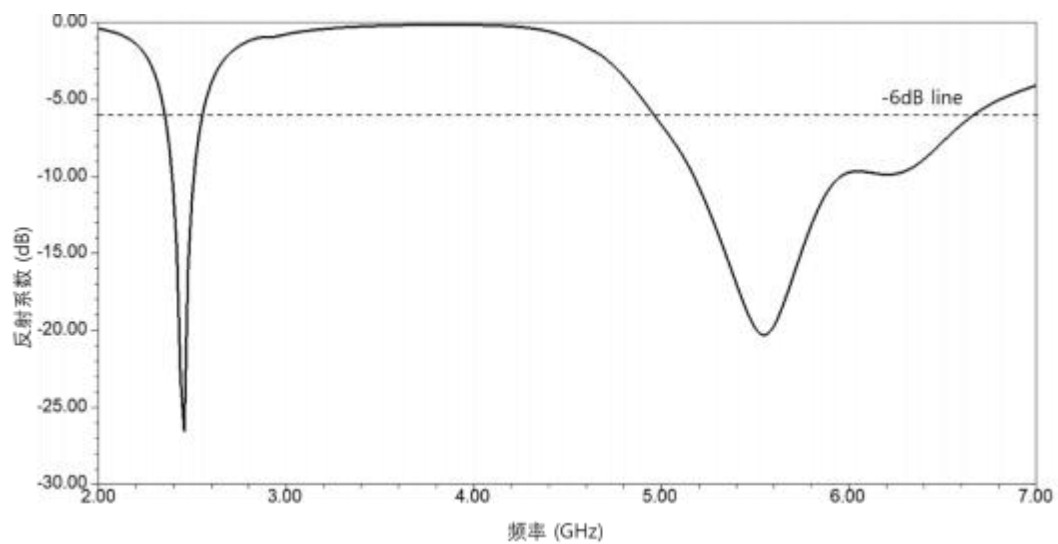
1. 图示中的尺寸为标准封装，仅作为参考；净空区的尺寸会根据每个版型进行调整和优化。
2. 天线最优放置于PCBA的边缘； 天线及其走线设置在单层；
3. 净空区周围最优需要至少一排过孔，与PCBA上的其它回路或物料进行隔离。
4. G最优为1~2mm, H最优为最大，L最优为2~3mm。
5. 天线性能与版型、组装、佩戴等相关，因而各版型的性能会有所不同。

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

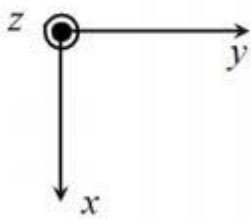
Characteristic Curves



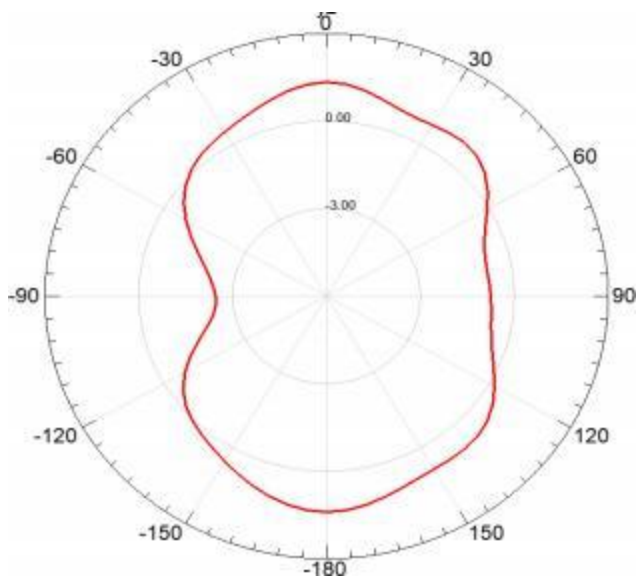


Radiation Pattern

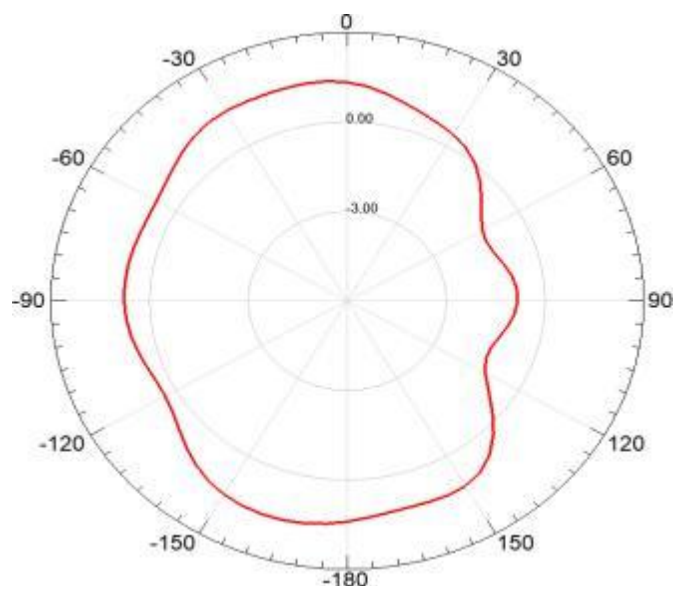
coordinates :

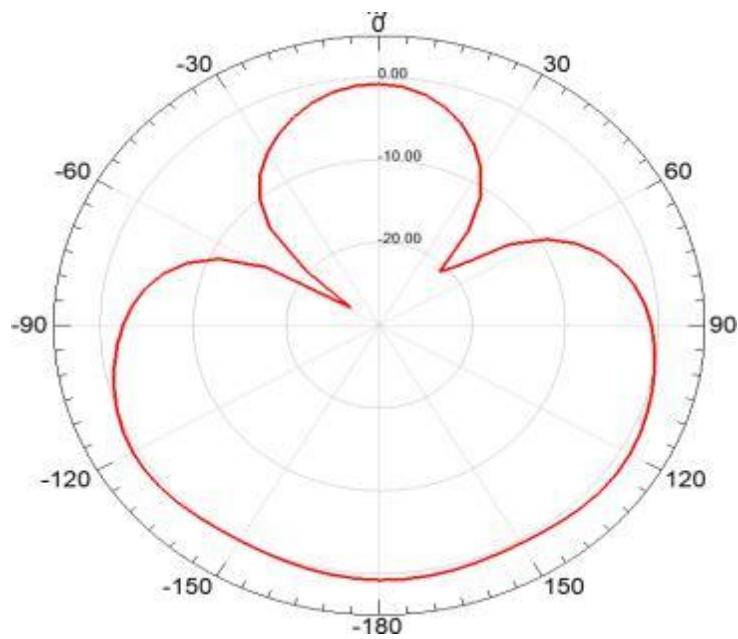


Y-Z Plane

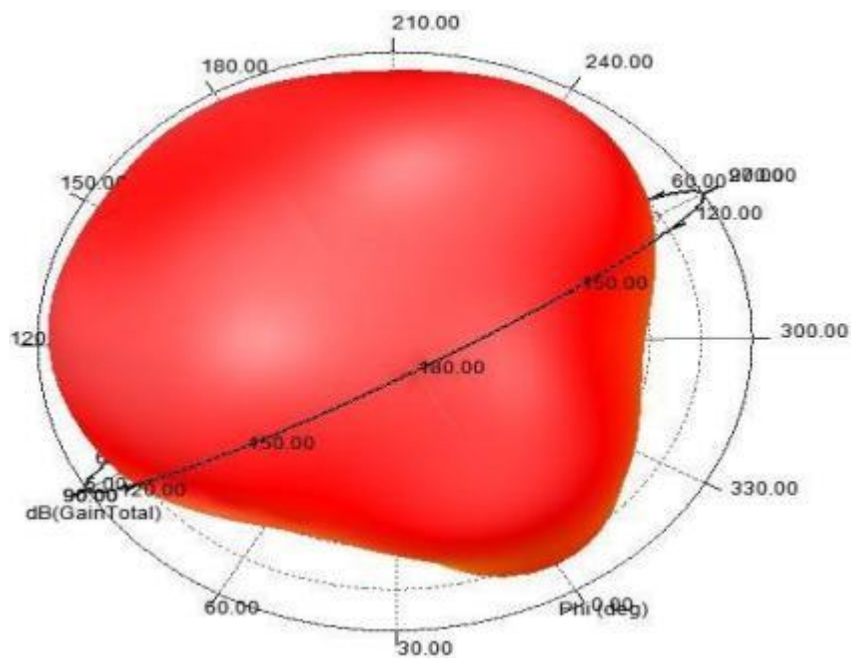


X-Z Plane





3 D Radiation Pattern



Frequency	2450MHz	5500MHz
Avg. gain	-0.85	- 1.30
Peak gain	3.0	3.5
Efficiency	82%	78%

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%

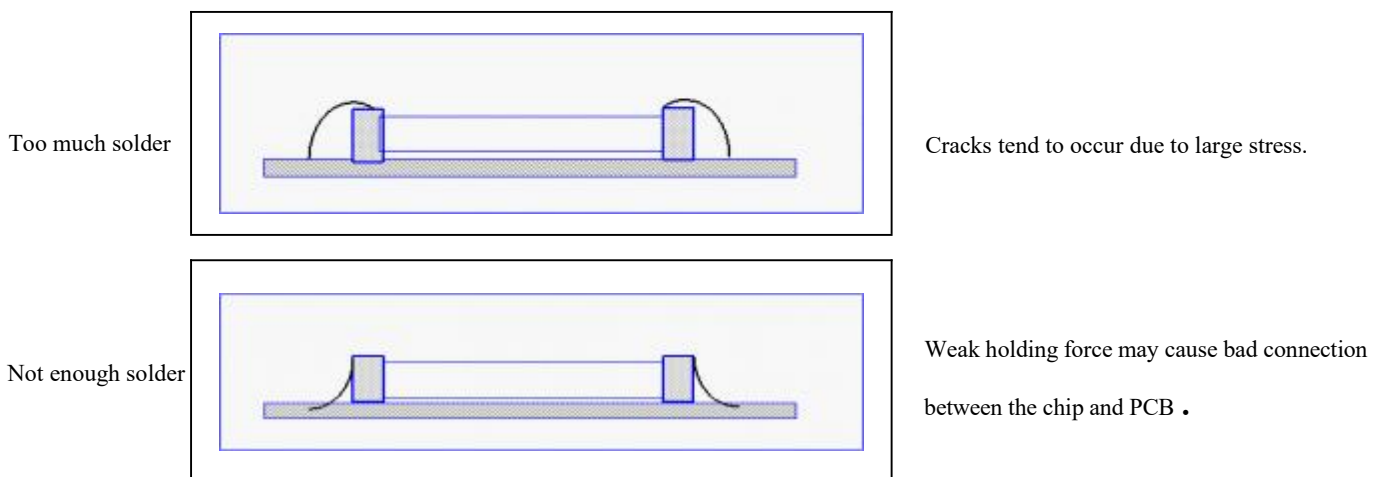
Moisture Proof

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

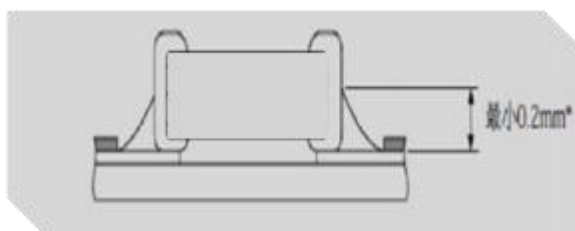
At least 95% of the terminal electrode is covered by new solder.
Preheating conditions: 80 to 120°C ; 10~30s.
Solder Temperature: $235 \pm 5^{\circ}\text{C}$ Duration: $2 \pm 0.5\text{s}$, Solder Temperature: $245 \pm 5^{\circ}\text{C}$ Duration: $2 \pm 0.5\text{s}$

Optimum Solder Amount for Reflow Soldering

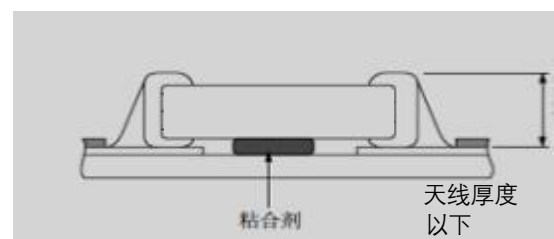


Recommended Soldering Amounts

The optimal solder fillet amounts for re-flow soldering



The optimal solder fillet amounts for wave soldering



Temperature Cycle Test

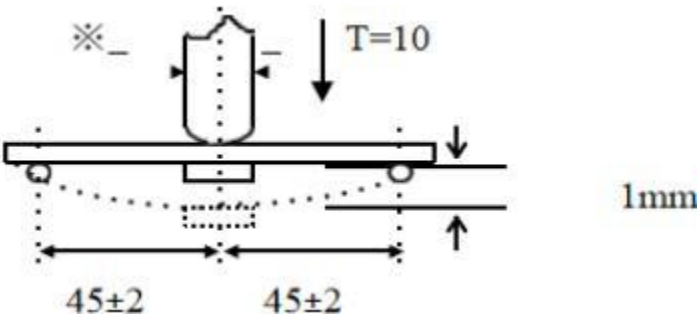
10±1S Applied Force: 5N Duration: 10±1S
Preheating conditions: up-category temperature, 1h
Recovery time: 24±1h
Initial Measurement
Cycling Times: 5 times, 1 cycle, 4 steps:

阶段	温度 (℃)	时间 (分钟)
第 1 步	下限温度(NPOX7R/X7S/X7K/X5R-55 Y5V-25 Z5U-30)	30
第 2 步	常温 (+20)	2~3
第 3 步	上限温度(NPOX7R/X7S-125 Y5V/Z5U/X5R-85 X6S-105)	30
第 4 步	常温 (+20)	2~3

Resistance to Soldering Heat

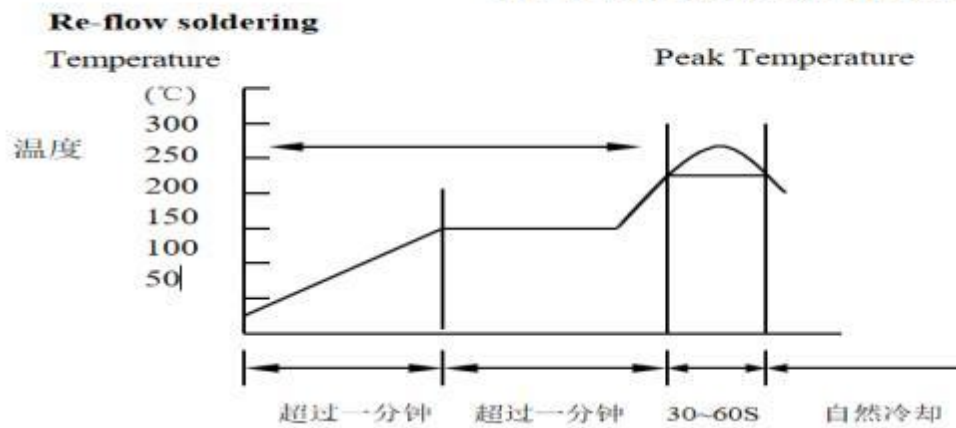
Preheating 80 to 120°C; 10~30s.SolderTemperature:235±5°C; Duration:2±0.5s; SolderTemperature:245±5°C
Duration: 2±0.5s; Preheating100 to 200°C; 10±2min.
Solder Temperature: 265±5°C; Duration: 10±1s
Clean the capacitor with solvent and examine it with a 10X(min.) microscope.
Recovery Time: 24±2h
Recovery condition: Room temperature

Resistance to Flexure of Substrate



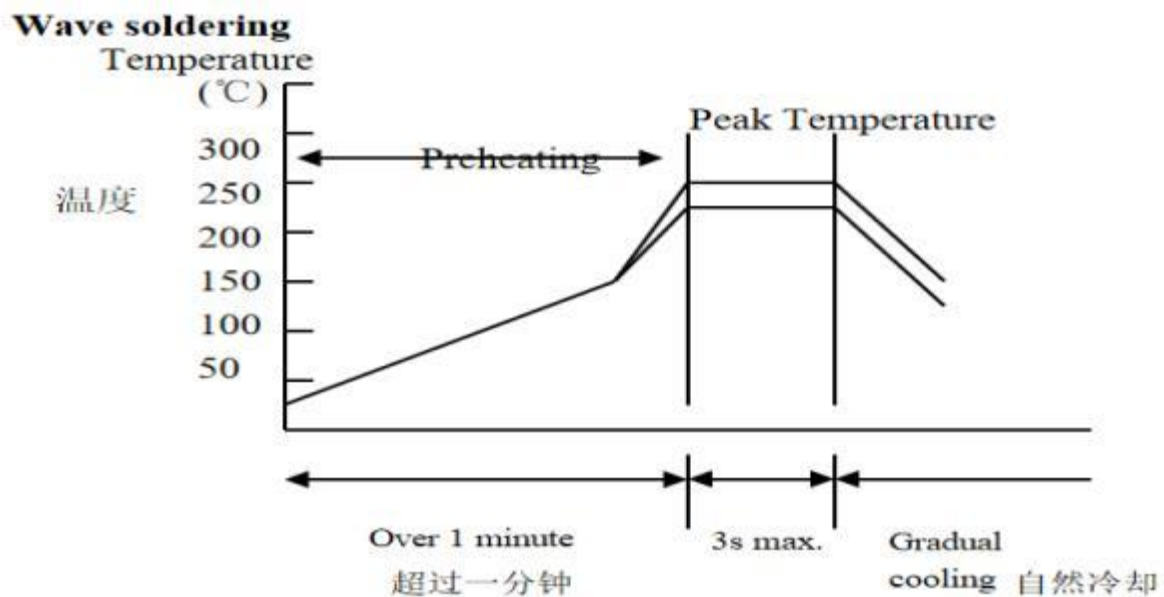
Test Board: Al₂O₃ or PCB Warp: 1mm Speed: 0.5mm/sec.
Unit: mm
The measurement should be made with the board in the bending position.

The temperature profile for soldering



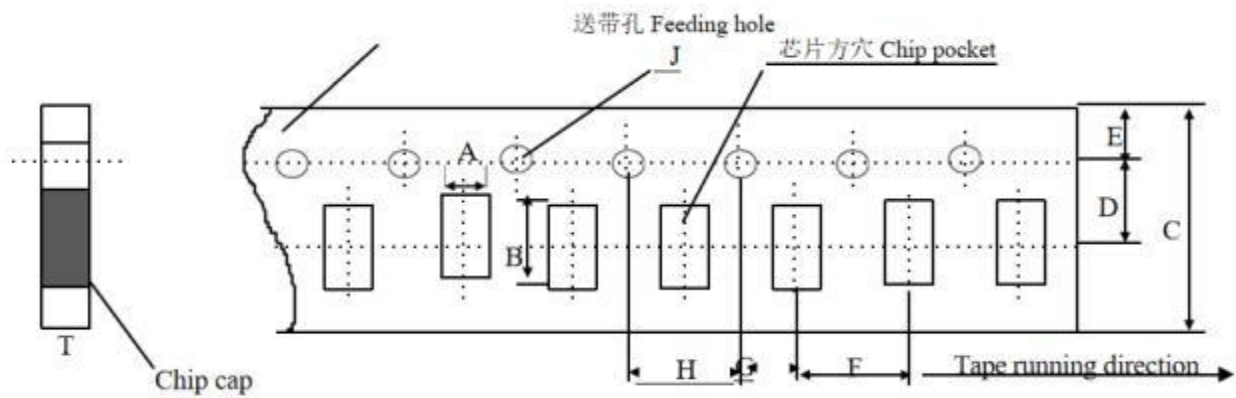
	Pb-Sn 焊接 Pb-Sn soldering	无铅焊接 Lead-free soldering
尖峰温度 Peak temperature	230°C ~ 250°C	240°C ~ 260°C

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



	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

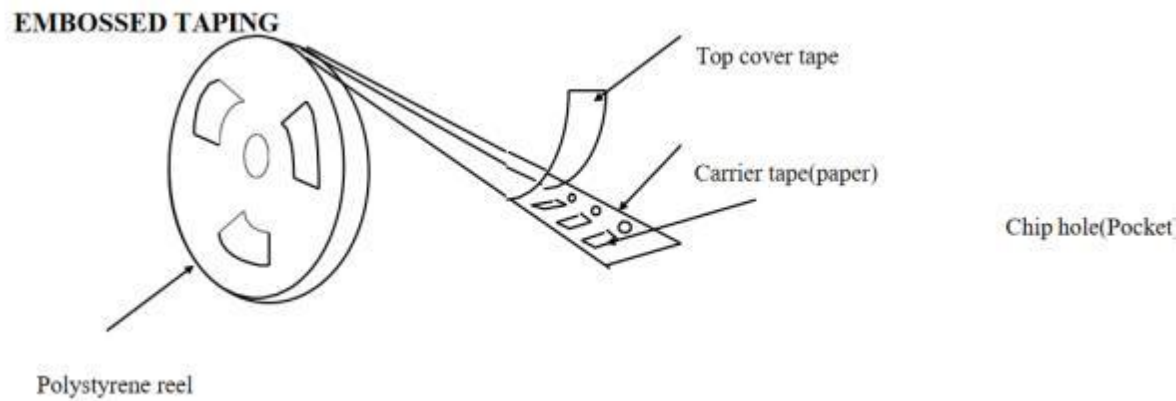
Dimensions of paper taping



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%