

P/N:HLX160808D06

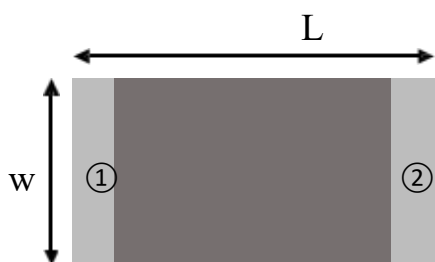
Features

- 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 beatifying the housing of final product.
- 3.High stability and low tolerance.

Applications

1. Bluetooth
2. Wireless LAN
3. ISMband 2.4GHz wireless applications

Dimensions (Unit: mm)



(Top View)

Number	Terminal Name
①	INPUT
②	NC



(Bottom View)



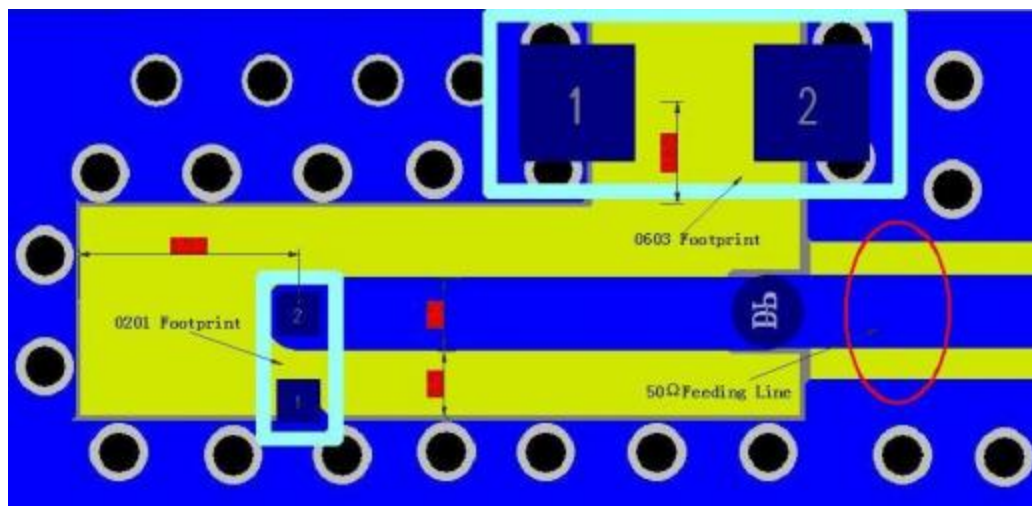
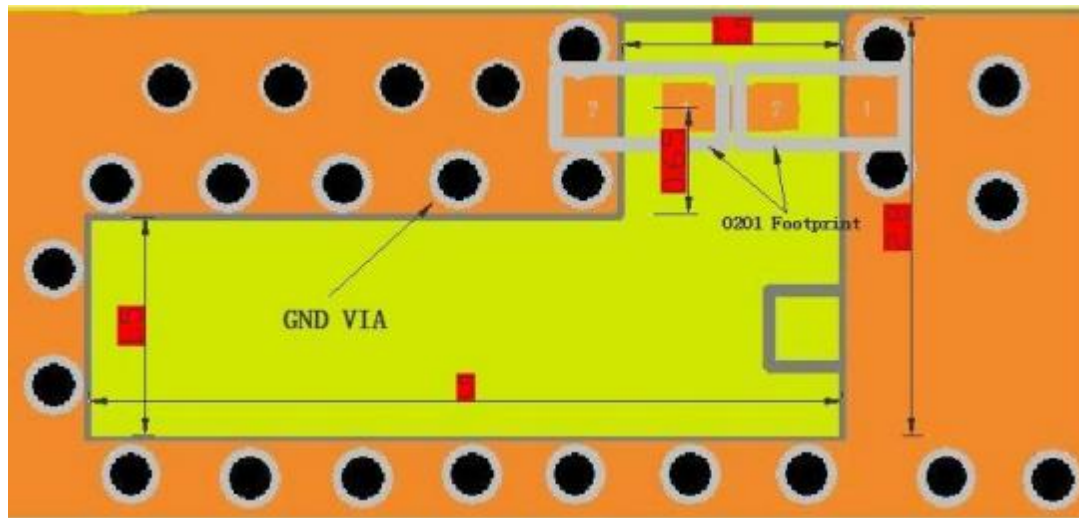
(Side View)

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

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Evaluation Board and Matching Circuits



S11-Parameter



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

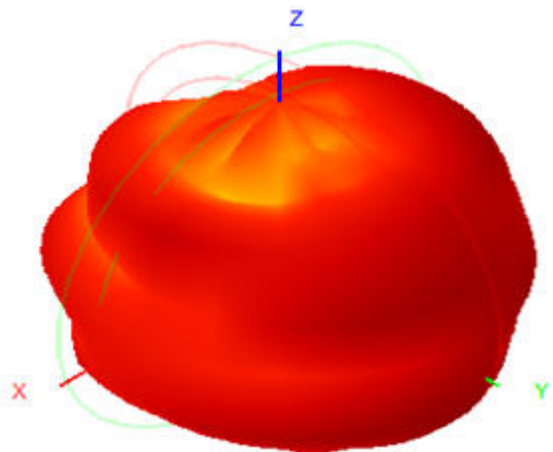
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Radiation Pattern

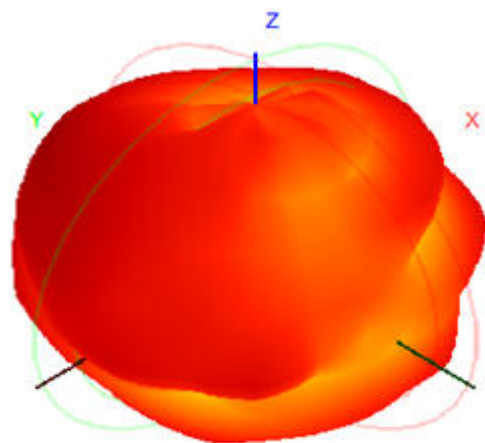
Frequency	2400MHz	2450MHz	2500MHz
Average Gain (dBi)	1.30	0.93	0.45
Peak Gain (dBi)	2.70	2.60	2.50
Efficiency (%)	57%	54%	53%

Y-Z Plane

2400MHz

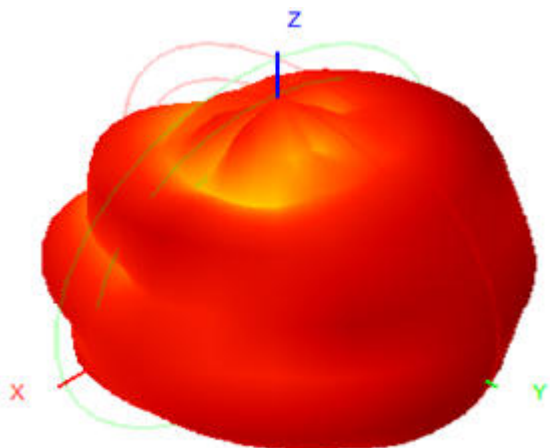


2450MHz



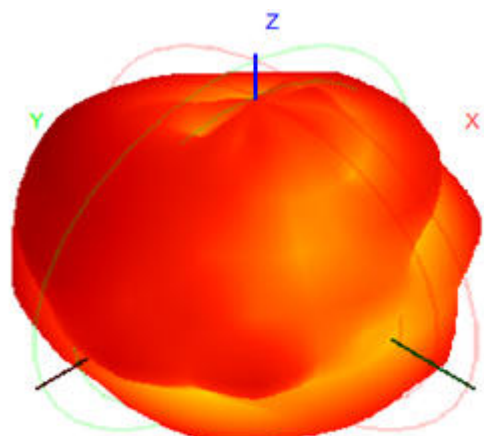
Y-Z Plane

2500MHz



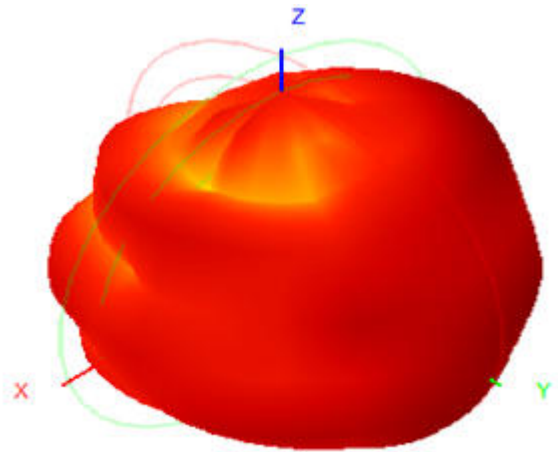
X Z Plane

2400MHz

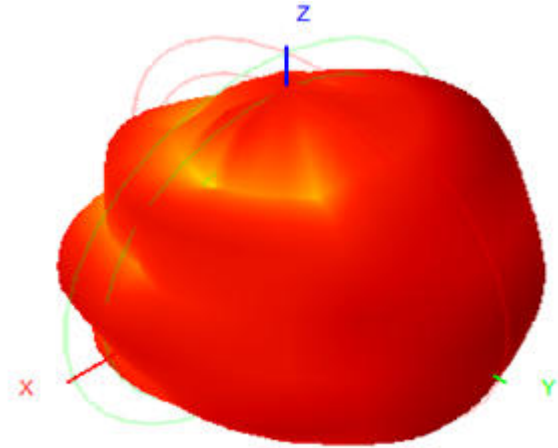


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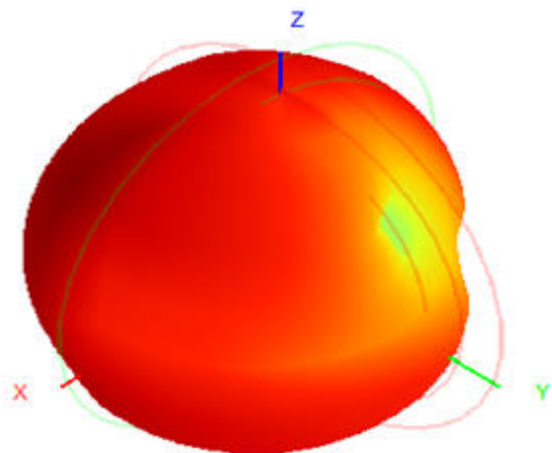
X Z Plane
2450MHz



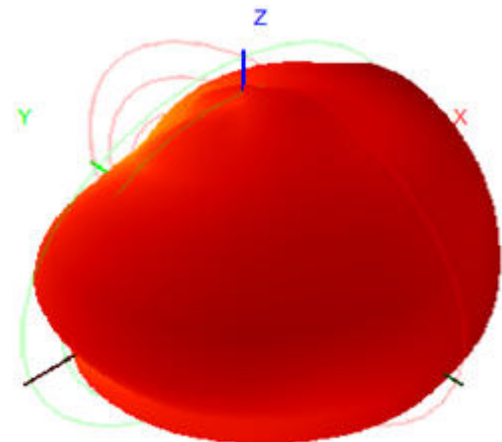
2500MHz



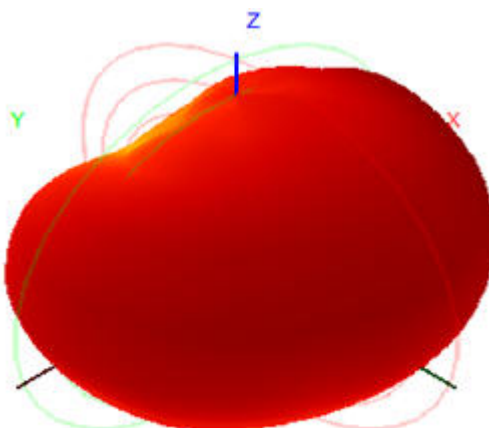
X-Y Plane
2400MHz



2450MHz



2500MHz



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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)

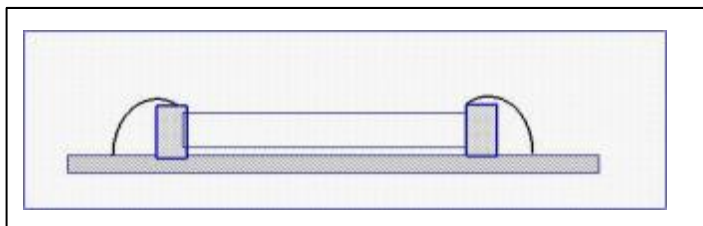
Solderability

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

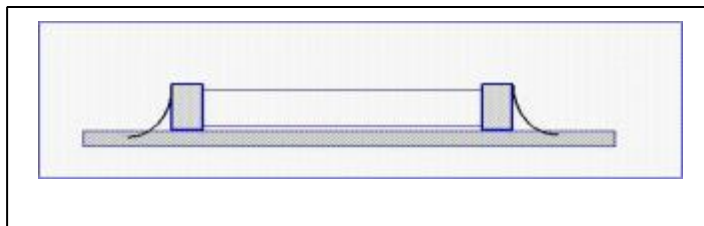
Optimum Solder Amount for Reflow Soldering

Too much solder



Cracks tend to occur due to large stress.

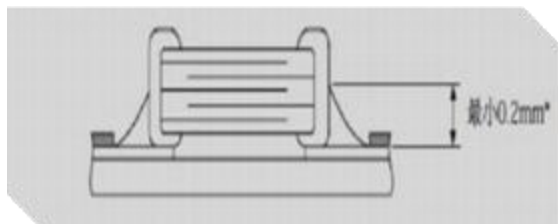
Not enough solder



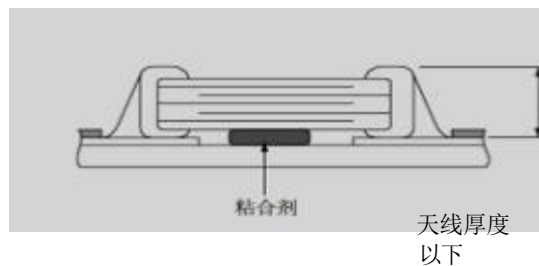
Weak holding force may cause bad connection between the capacitor and PCB.

Recommended Soldering amounts

The optimal solder fillet amounts for re-flow soldering



The optimal solder fillet amounts for wave soldering



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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(40℃X75%至-55℃ Y3V-25 Z5U-10)	30
第2步	常温 (+20)	2~3
第3步	上限温度(40℃X75%+125℃ Y3V-25U10X5R-85 M6S-105)	30
第4步	常温 (+20)	2~3

Resistance to Soldering Heat

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

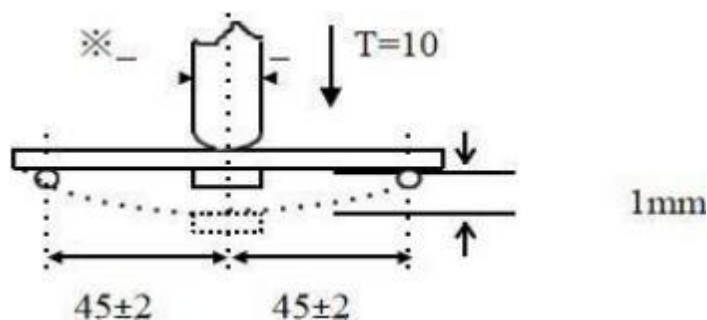
Solder Temperature: 265±5℃ Duration: 10±1s

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



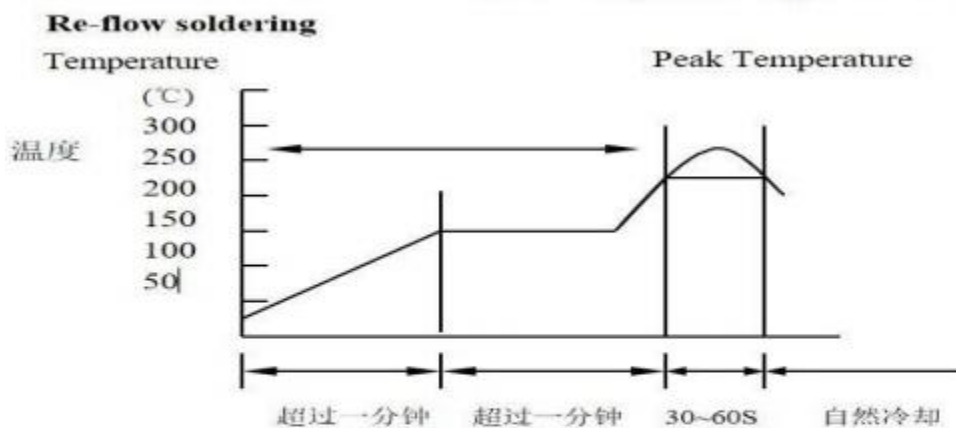
Test Board: Al₂O₃ or PCB Warp: 1mm Speed: 0.5mm/sec.

Unit: mm

The measurement should be made with the board in

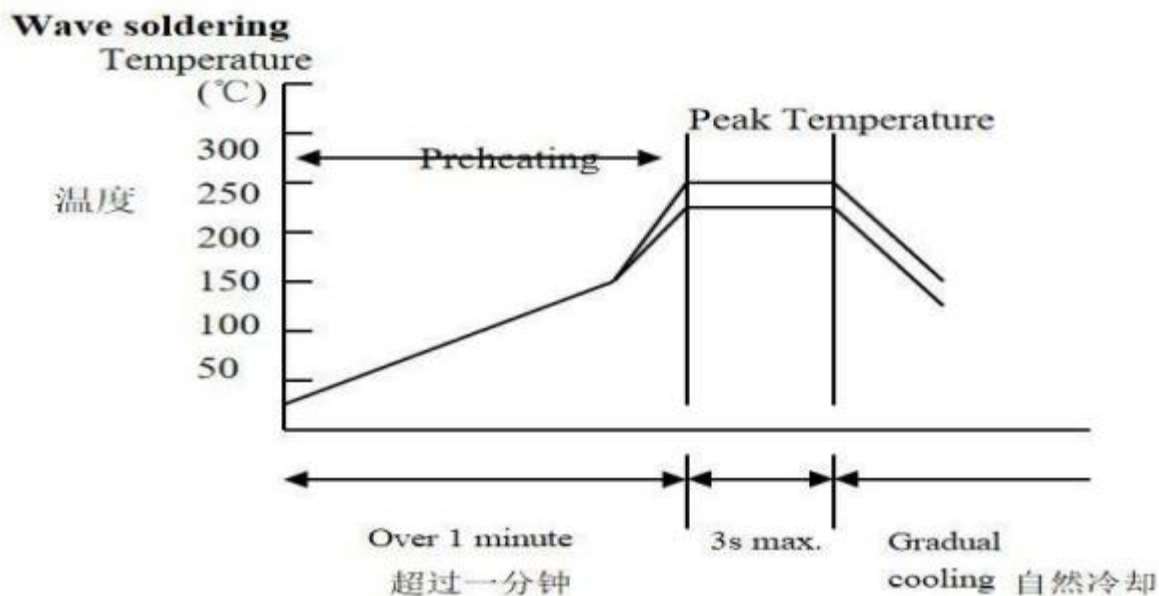
the bending position.

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℃~250℃	240℃~260℃

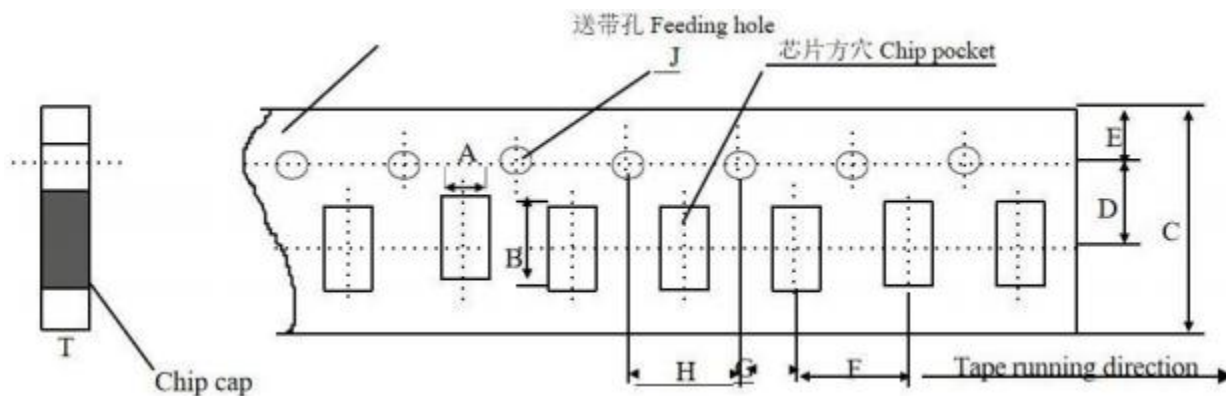
While in preheating, please keep the temperature difference between soldering temperature and surface temperature of chips as: $T \leq 150^{\circ}\text{C}$.



	Pb-Sn 焊接 Pb-Sn soldering	无铅焊接 Lead-free soldering
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Dimensions of paper taping for 0603types



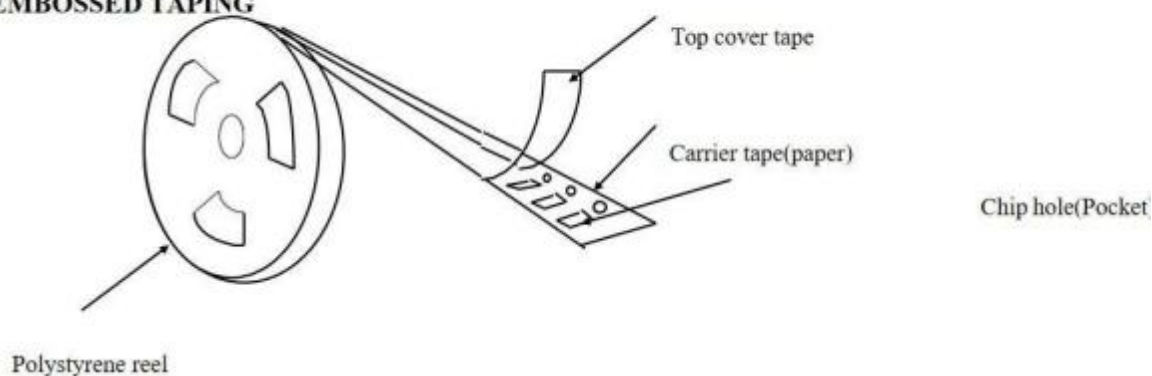
Unit: mm

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 ±0.10	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℃ /Relative Humidity20~70%