■ Ceramic Structure

◆ Feature

* The Ceramic Structure product has high insulation, high temperature resistance is strong, strength performance
* Excellent solder resistance and high adhesion strength.
* Suitable for reflow soldering and wave soldering

◆ How To Order

0805

Size Code		
Size Code	L×W inch	L×W mm
0805	0.08×0.05	2.00×1.25

B

Dielectric Code	
Dielectric Code	Dielectric
RF	C0G

1050000

internal markup

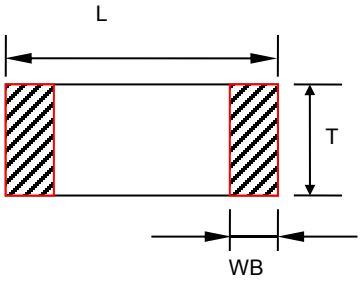
N

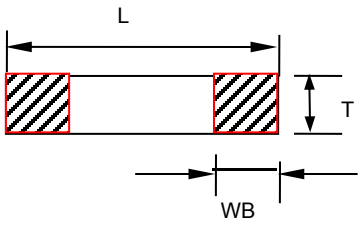
Terminal Material Styles	
Termination Styles	Express Method
Nickel Barrier Termination	N

T

Package Styles	
Express Method	Package Styles
B	Bulk Bag
T	Taping Package

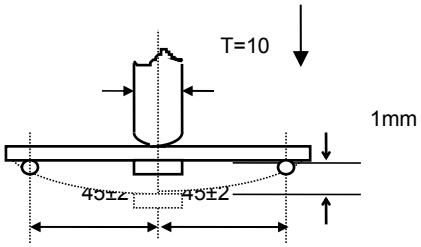
◆ Product Dimensions





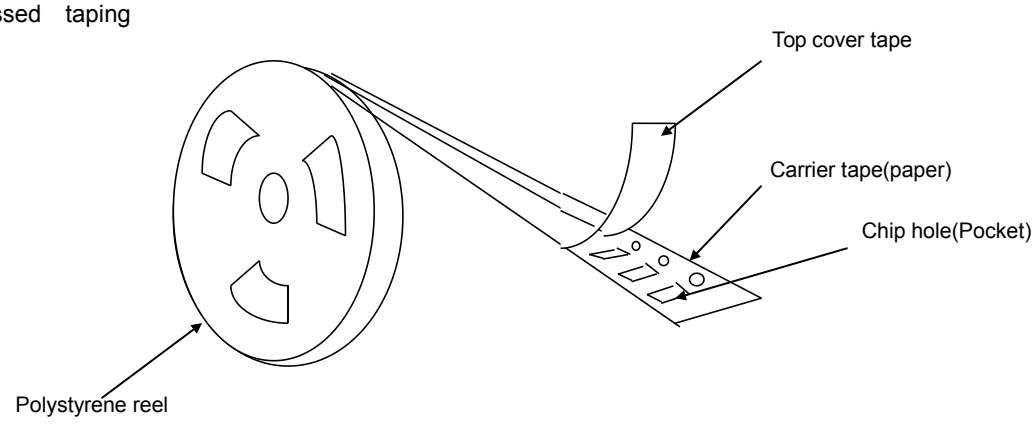
Type		Dimensions (mm)			
British expression	Metric expression	L	W	T	WB
0805	2012	2.00±0.2	1.25±0.2	1.0±0.05	0.4±0.10

◆ Reliability Test

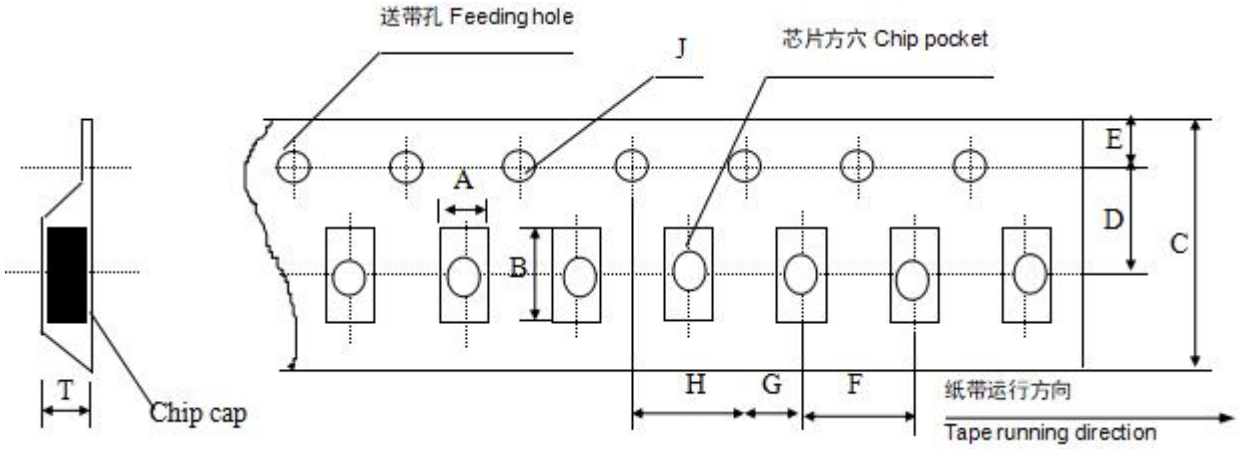
Item	Technical Specification	Test Method and Remarks	
Solderability	At least 95% of the terminal electrode is covered by new solder. Visual Appearance: No visible damage.	Preheating conditions:80 to 120℃; 10~30s.	
		Solder Temperature: 235±5℃ Duration: 2±0.5s	Solder Temperature: 245±5℃ Duration: 2±0.5s
Resistance to Flexure of Substrate (Bending Strength)	Appearance: No visible damage.	Test Board: PCB Warp: 1mm Speed: 0.5mm/sec. Unit: mm The measurement should be made with the board in the bending position. 	
Termination Adhesion	No visible damage.	Applied Force: 5N Duration: 10±1S	
Porcelain body strength	No visible damage.	Applied Force:20N Duration: 10±1S	

◆Package

* Embossed taping



* Dimensions of embossed taping

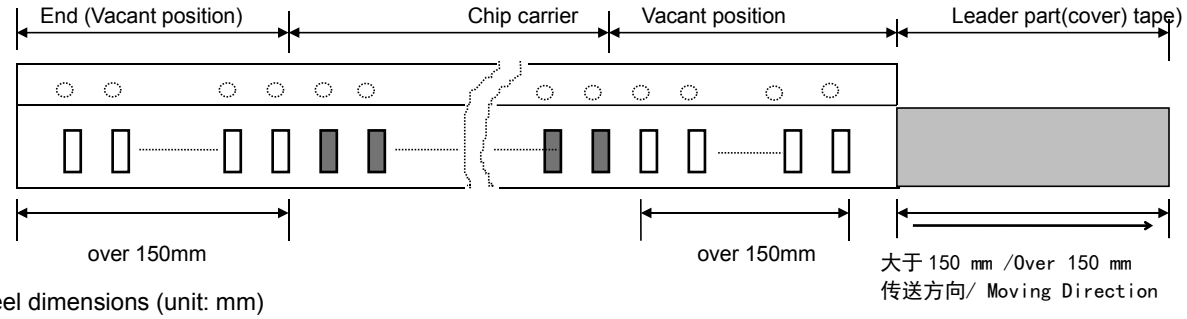


Unit：mm

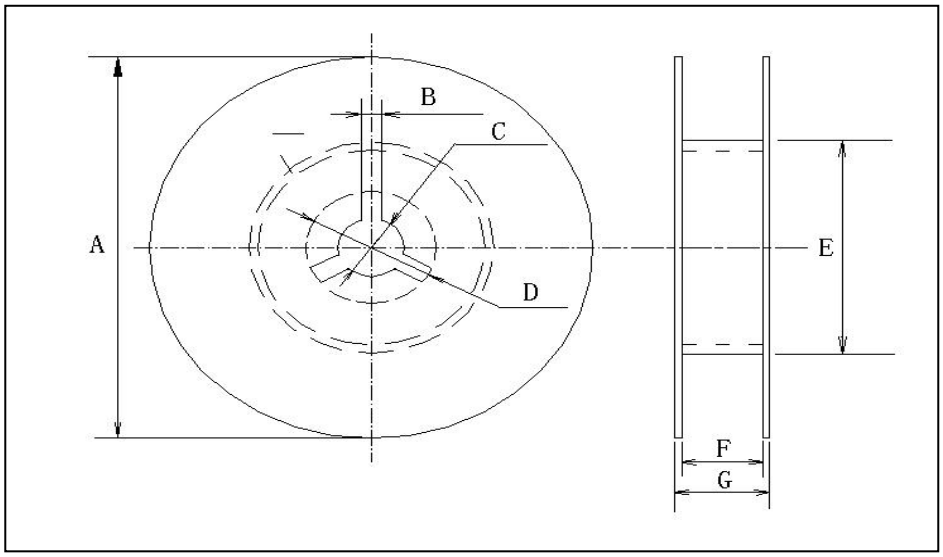
Code / paper size	A	B	C	D*	E	F	G*	H	J	T
0805	1.55 ±0.20	2.35 ±0.20	8.00 ± 0.20	3.50 ± 0.05	1.75 ± 0.10	4.00 ± 0.10	2.00 ±0.10	4.00 ± 0.10	1.50 -0/+0.10	1.50 Max

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

* Structure of leader part and end part of the carrier paper



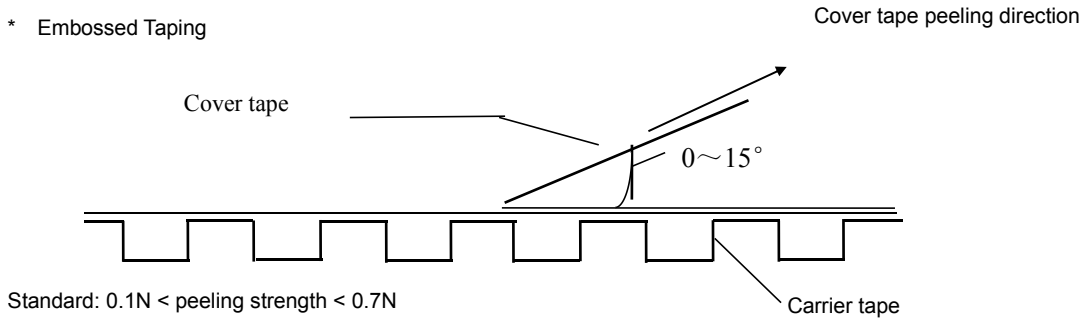
* Reel dimensions (unit: mm)



Reel model	A	B	C	D	E	F	G
7′REEL	φ178±2.0	3.0	φ13±0.5	φ21±0.8	φ50 或更大 φ50 or more	10.0±1.5	12max

* Explanation on tape winding: Peel strength of surface adhesive

* Embossed Taping



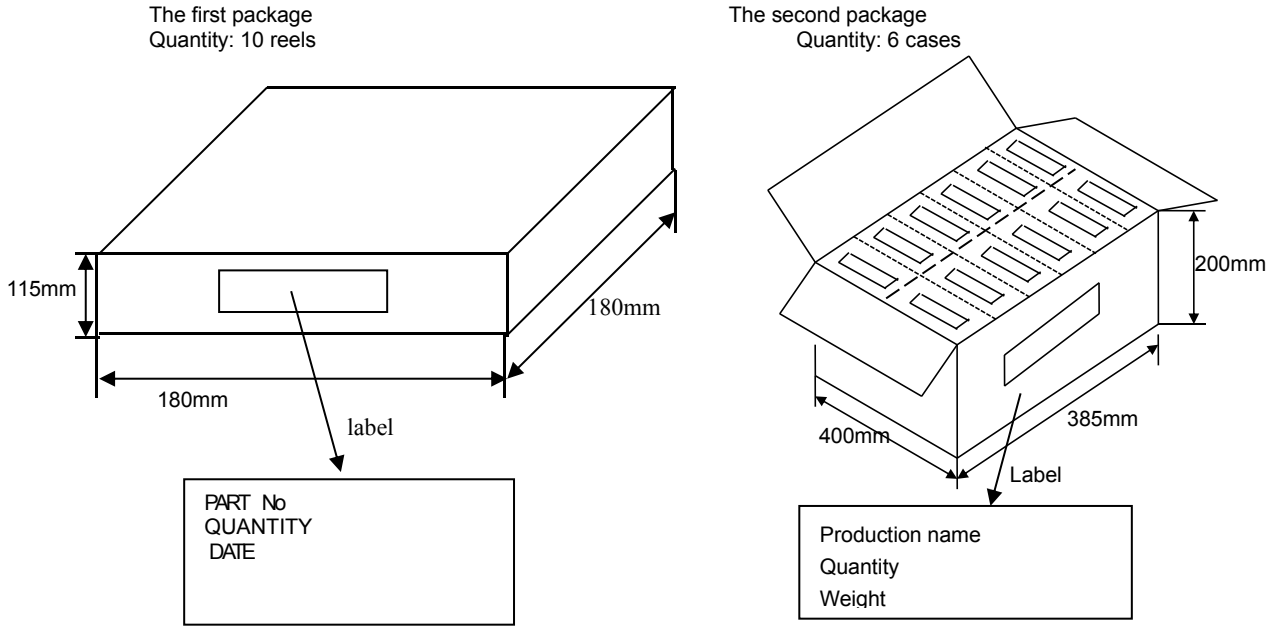
Standard: 0.1N < peeling strength < 0.7N

* Packing Quantity

(SIZE)	Package Style & Quantity unit: pcs		
	ET	BC	BP
0805	3000	10000	5000

Note：We can choose packing style and quantity can be according to the customer's requirement.

*Outer packing



*Storage Methods

* The guaranteed period for solderability is 12 months (Under deliver package condition).
* Storage conditions：

Temperature 5~40℃ Relative Humidity 20~70%

◆ Precautions For Use

The Multi-layer Ceramic Capacitors (MLCC) may fail in a short circuit modern in an open circuit mode when subjected to severe conditions of electrical environment and / or mechanical stress beyond the specified "rating" and specified "conditions" in the specification, which will result in burn out, flaming or glowing in the worst case. Following "precautions for "safety" and Application Notes shall be taken in your major consideration. If you have a question about the precautions for handling, please contact our engineering section or factory.

* Soldering Profile

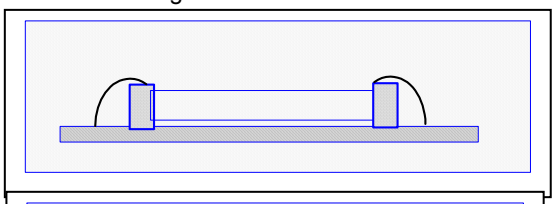
To avoid the crack problem by sudden temperature change, follow the temperature profile in the adjacent graph (refer to the graph in the enclosure page).

* Manual Soldering

Manual soldering can pose a great risk of creating thermal cracks in capacitors. The hot soldering iron tip comes into direct contact with the end terminations, and operator's careless may cause the tip of the soldering iron to come into direct contact with the ceramic body of the capacitor. Therefore the soldering iron must be handled carefully, and pay much attention to the selection of the soldering iron tip and temperature contact of the tip.

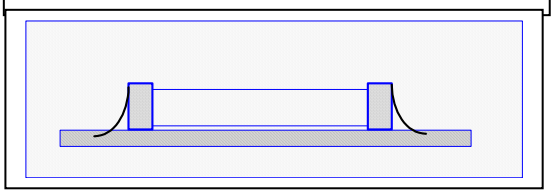
*Optimum Solder Amount for Reflow Soldering

Too much solder



Cracks tend to occur due to large stress.

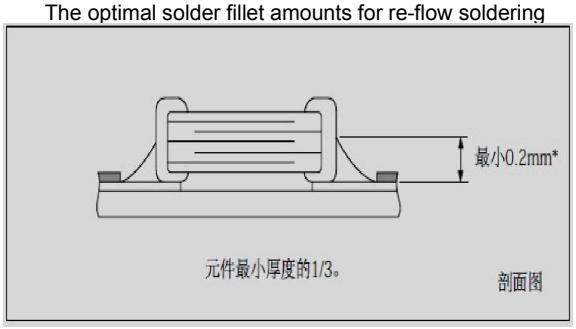
Not enough solder



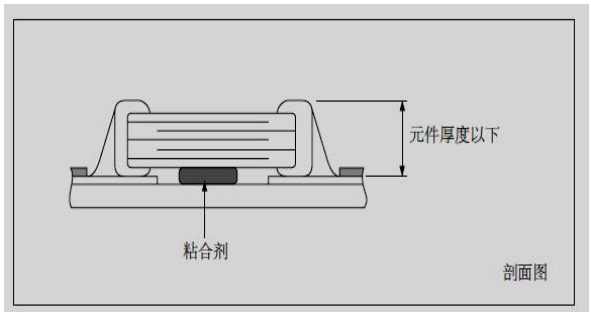
Weak holding force may cause badconnection between the capacitor and PCB.

* Recommended Soldering amounts

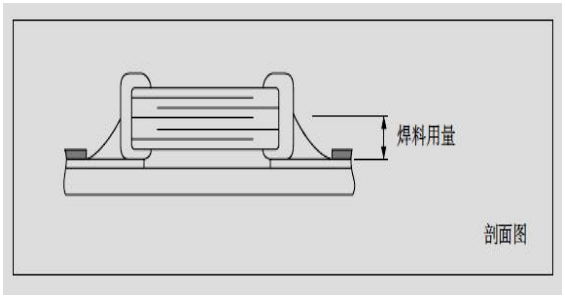
The optimal solder fillet amounts for re-flow soldering



The optimal solder fillet amounts for wave soldering



The optimal solder fillet amounts for reworking by using soldering iron



* Recommended Soldering Method

Size	Temperature Characteristics	RatedVoltage	Capacitance	Soldering Method
0805	C0G/X7R	/	/	R/W

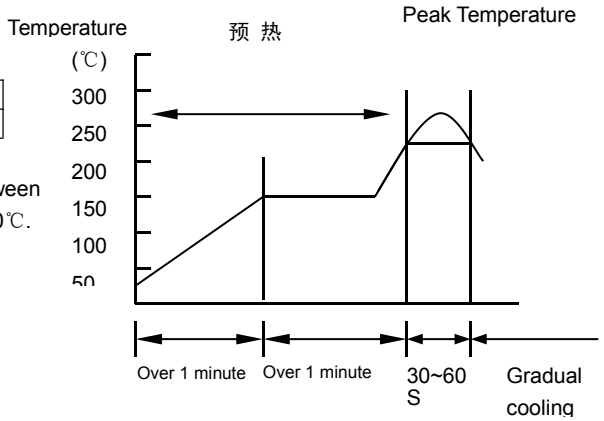
Soldering method： Reflow Solering Wave Soldering

◆ The temperature profile for soldering

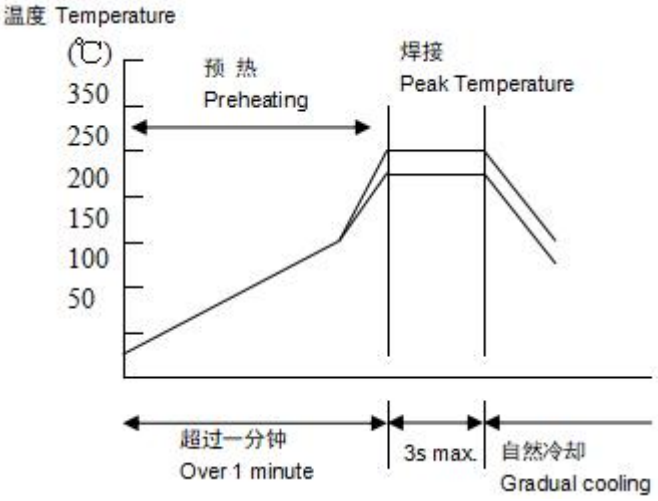
* Re-flow soldering

	Pb-Sn soldering	Lead-free soldering
Peak temperature	230℃~250℃	240℃~260℃

While in preheating,please keep the temperature difference between soldering temperature and surface temperature of chips as: T≤150℃.



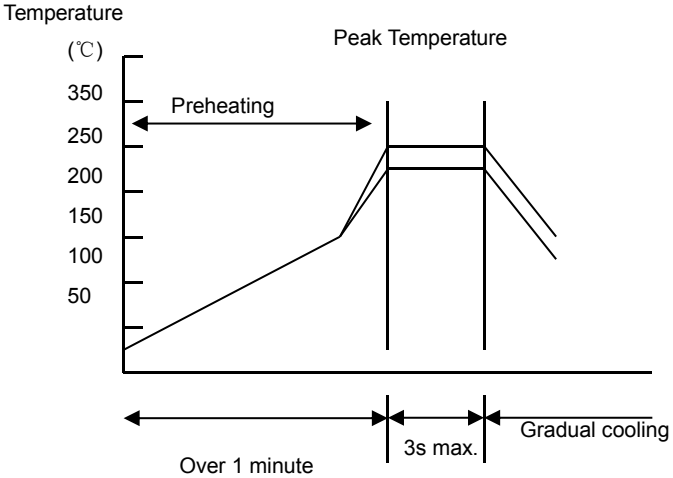
* Wave soldering



	Pb-Sn soldering	Lead-free soldering
Peak temperature	230℃~260℃	240℃~270℃

While in preheating,please keep the temperature difference between soldering temperature and surface temperature of chips as: T≤150℃.

* Hand soldering



Conditions：

Preheating	Temperature of soldering iron head	Power of soldering iron	Diameter of soldering iron head	Soldering time	Solder paste amount	Restricted conditions
△≤130℃	Highest temperature:350℃	20W at the highest	1mm recommended	3s at the longest	≤1/2 chip thickness	Please avoid the derect contact between soldering iron head and ceramic components

*The latest version of the content shall prevail