

FEATURES

- Winding type realizes small size and low profile
- Prevention of common mode noise at high frequency
- Excellent solderability
- Operating temperature $-40 \sim +125^{\circ}\text{C}$ (Including self - temperature rise)



APPLICATIONS

- USB2.0 of PC, peripheral equipments, small digital AV equipments, etc.
- LVDS lines of Note PC, LCD
- Audio lines

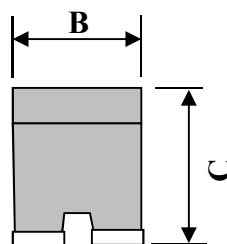
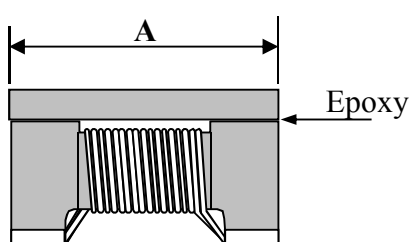
PRODUCT IDENTIFICATION

WCM 3216 F- 2 - 900 T F

① ② ③ ④ ⑤ ⑥ ⑦

- ① Series Name: Wire Wound Chip Common Mode Filters
- ② Dimensions
- ③ Feature Type: Ferrite
- ④ Number of Lines 2P=2 lines
- ⑤ Common Mode Impedance(Ω): 900 = 90 Ω
- ⑥ Packing: Tape & Reel
- ⑦ F: Hazardous Substance Free Products

Shapes and Dimensions [Dimensions in mm]

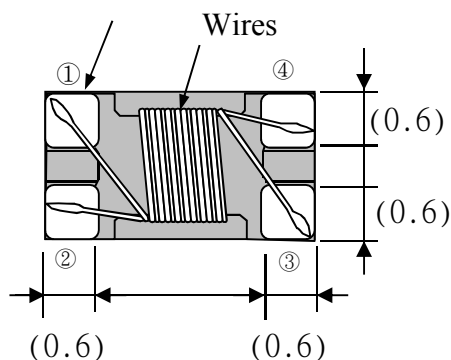


A : 3.2 ± 0.2

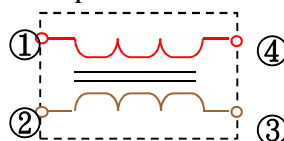
B : 1.6 ± 0.2

C : 1.9 ± 0.2

Terminations

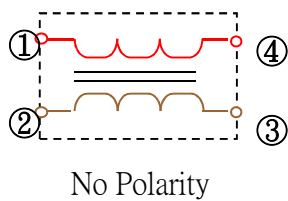


Equivalent circuit

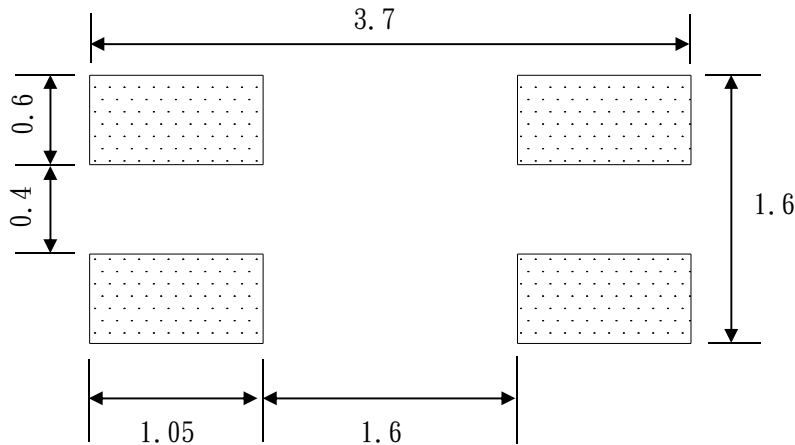


No Polarity

Equivalent circuit



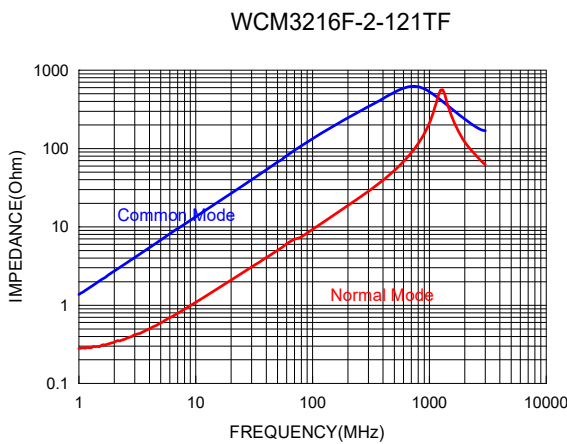
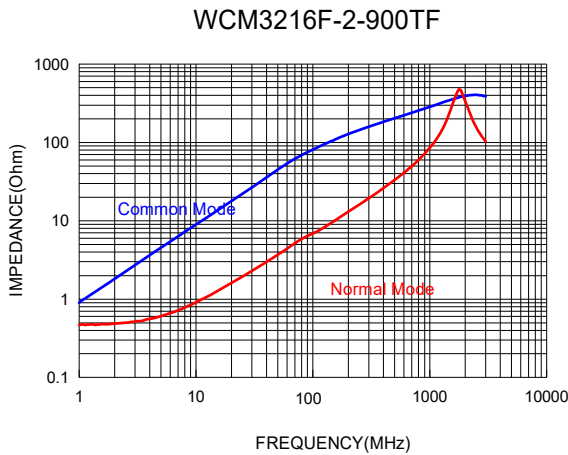
Recommended Footprint



Electrical Characteristics:

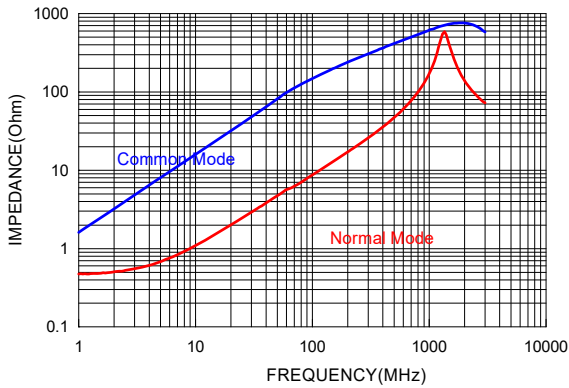
Part Number	Common mode Impedance (Ω)	Test Frequency (MHz)	DC Resistance (Ω) max.	Rated Current (mA)max.	Rated Volt. (Vdc)max.	Withstand Volt. (Vdc) Max.	IR (Ω) min.
WCM3216F-2-900TF	90 $\pm$ 25%	100	0.30	400	50	125	10M
WCM3216F-2-121TF	120 $\pm$ 25%	100	0.30	350	50	125	10M
WCM3216F-2-161TF	160 $\pm$ 25%	100	0.40	350	50	125	10M
WCM3216F-2-221TF	220 $\pm$ 25%	100	0.45	300	50	125	10M
WCM3216F-2-261TF	260 $\pm$ 25%	100	0.50	300	50	125	10M
WCM3216F-2-361TF	360 $\pm$ 25%	100	0.60	300	50	125	10M
WCM3216F-2-601TF	600 $\pm$ 25%	100	0.80	300	50	125	10M
WCM3216F-2-102TF	1000 $\pm$ 25%	100	1.00	200	50	125	10M
WCM3216F-2-222TF	2200 $\pm$ 25%	100	1.20	200	50	125	10M

Typical Electrical Characteristics:

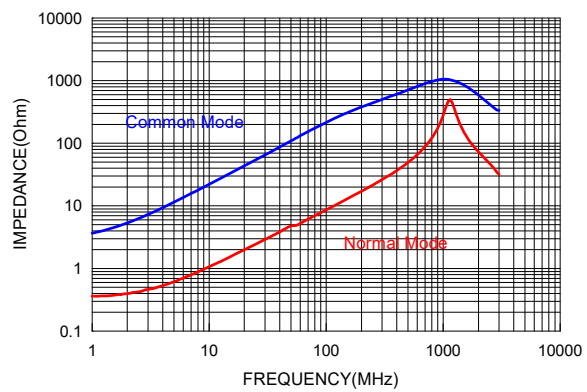


Typical Electrical Characteristics:

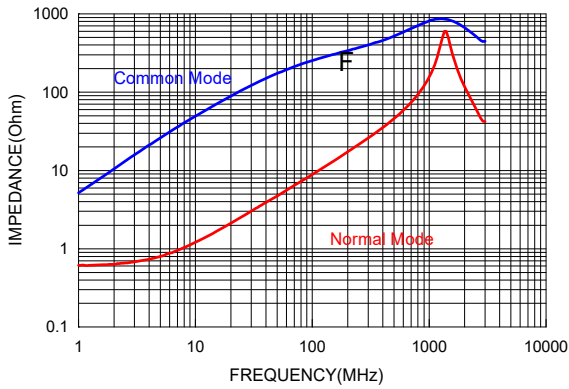
WCM3216F-2-161TF



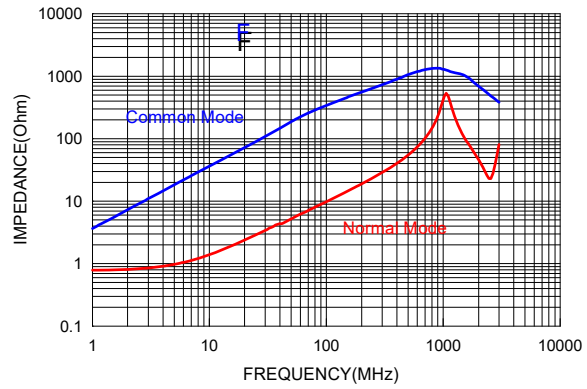
WCM3216F-2-221TF



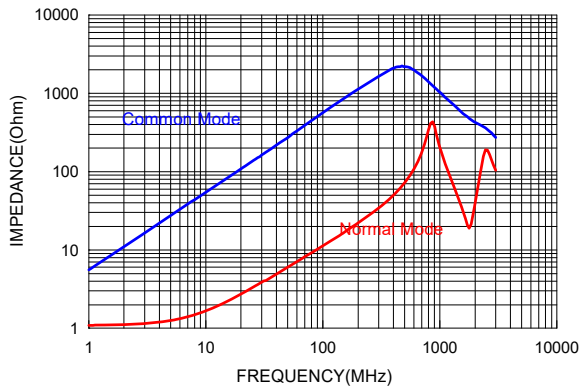
WCM3216F-2-261T



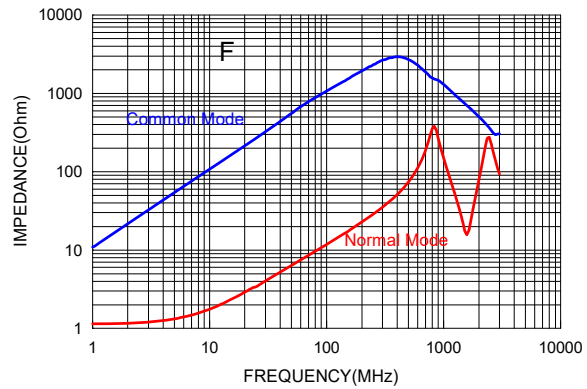
WCM3216F-2-361T



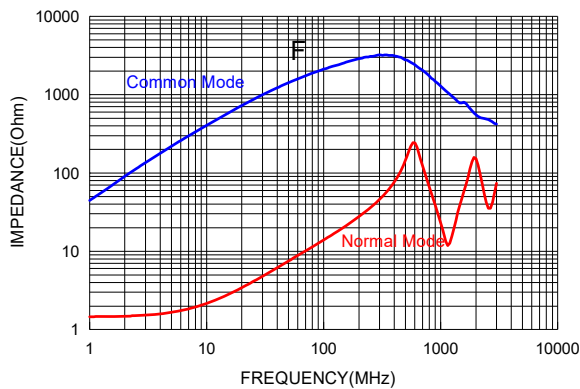
WCM3216F-2-601TF



WCM3216F-2-102T



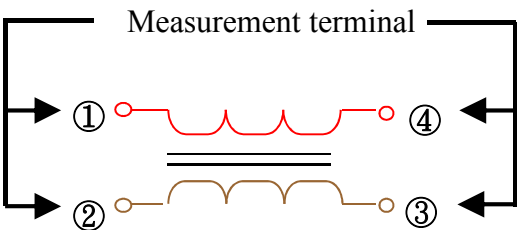
WCM3216F-2-222T



Test Equipment

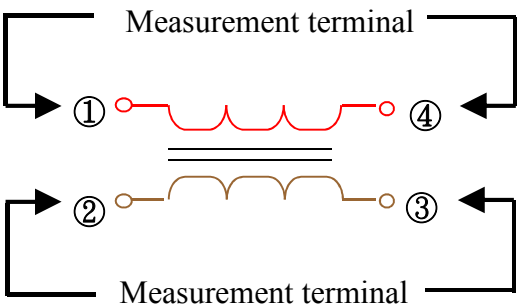
Impedance

Measured by using Agilent E4991A RF Impedance Analyzer.



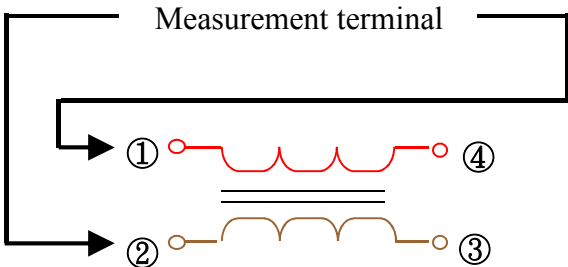
DC Resistance

Measured by using Chroma 16502 mill ohm meter.

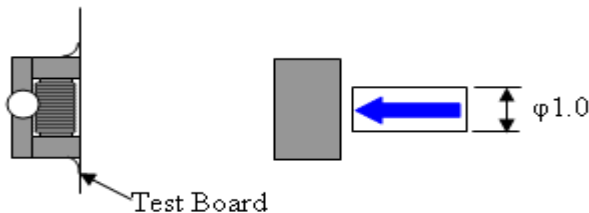
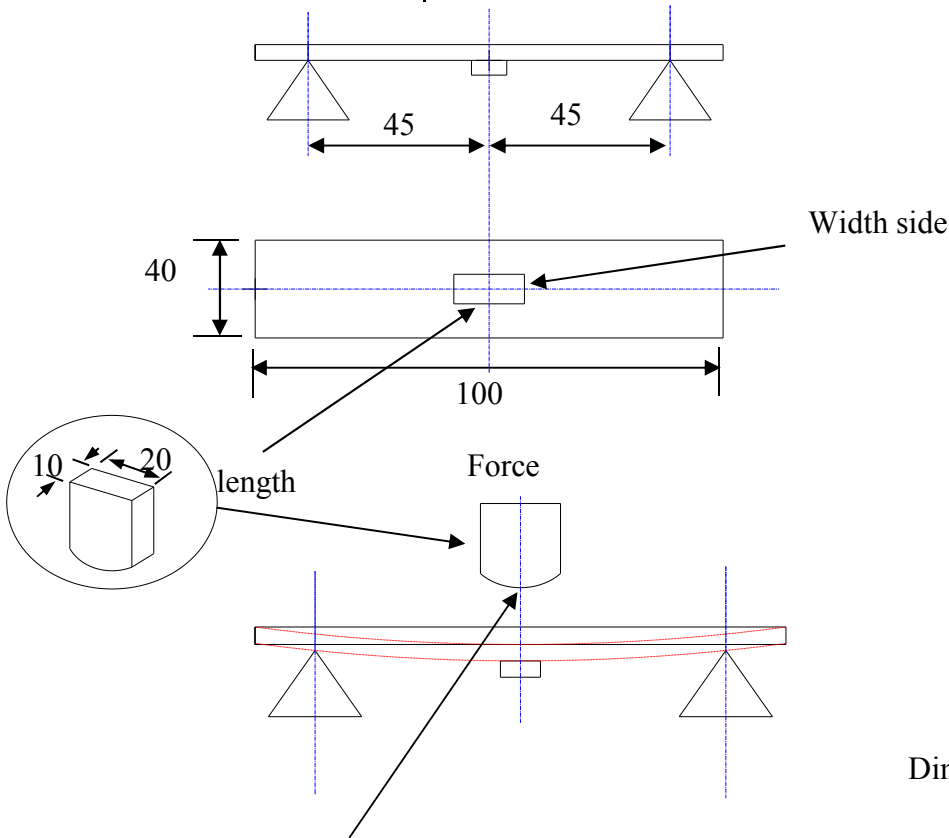


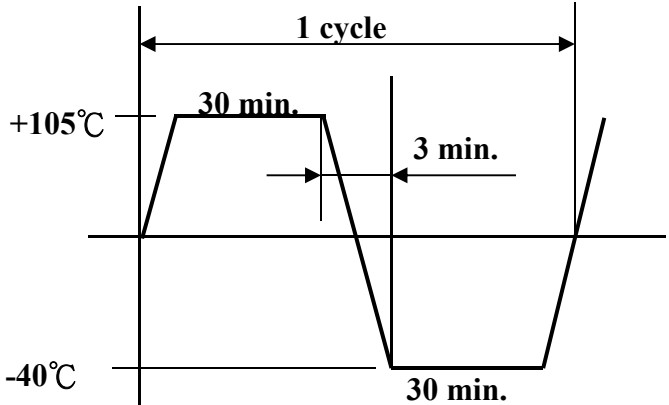
Insulation Resistance

Measured by using Chroma 19073
Measurement voltage : 50v .



Reliability Test

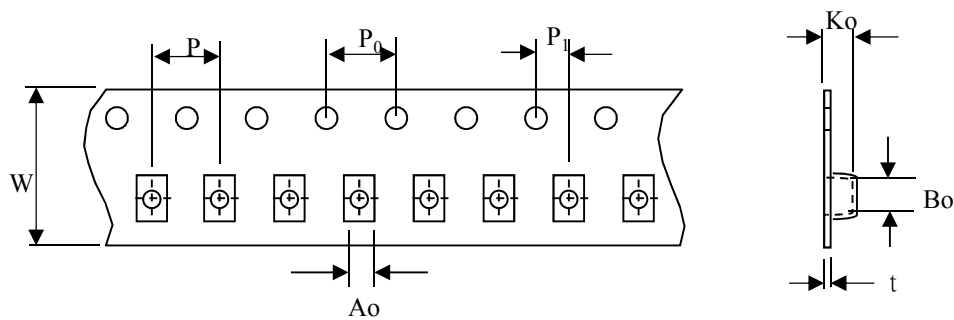
Operating temperature : -40 to +125°C		Storage temp and humidity : 20~25°C ,60%RH max.
Item	Specifications	Test conditions
Solder ability	It can be connected on the Recommendation soldering condition.	Apply cream solder to the test circuit board, It is mounted on the recommendation soldering condition. Dip pads in flux and dip in solder pot(96.5 Sn/3.5 Ag solder) at 255°C ±5°C.
Terminal strength	The terminal electrode and the ferrite must not be damaged.	Solder a chip to test substrate , and then laterally apply a load 0.9Kg in the arrow direction. 
Strength on pc board bending	The terminal electrode and the ferrite must not be damaged.	Soldering a chip to a test substrate , bend the substrate by 2mm and then return.  Dimensions in mm R10 Test board : Glass base epoxy multiplayer board pc board pattern. PC board pattern : Recommended PC board pattern.

Item	Specifications	Test conditions
High temperature resistance	Appearance : Ferrite shall not be damaged. initial value. insulation resistance: >10(MΩ) DC resistance : standard value	Temperature : +125±2°C Applied voltage : Rated voltage Applied current : Rated current Testing time : 500±12 hours Measurement : After placing for 24 hours min.
Humidity resistance	inside.	Temperature : +85±2°C Humidity : 90 to 95%RH Applied current : Rated current Applied voltage : Rated voltage Testing time : 500±12 hours Measurement : After placing for 24 hours min.
Thermal cycle		Temperature : -40°C, +125°C kept stabilized for 30 minutes each. Cycle : 100 cycle Measurement : After placing for 24 hours min. 
Low temperature resistance		Temperature : -40±2°C Testing time : 500±12 hours Measurement : After placing for 24 hours min.
Vibration	Appearance : Ferrite shall not be damaged.	Frequency : 10 to 50 Hz Amplitude : 1.52 mm Dimension and times : X ,Y and Z directions for 2 hours each.

Packaging

The packaging must be done not to receive any damage during transporting and storing

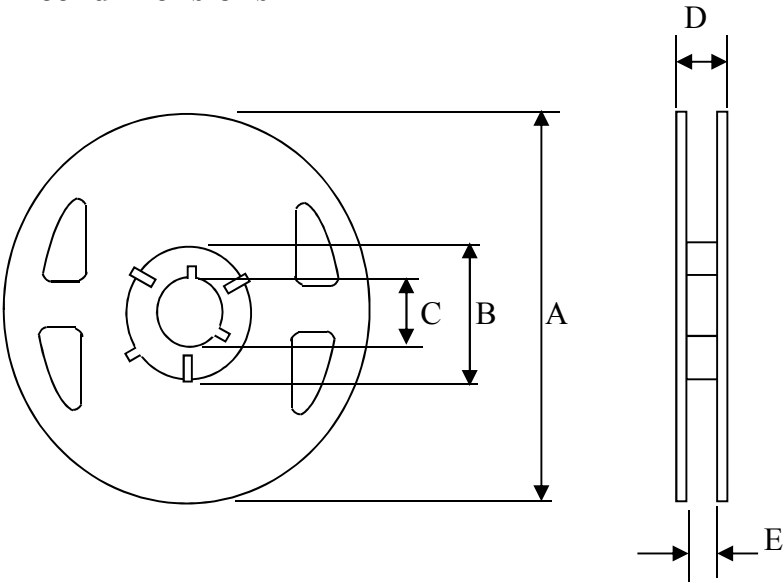
Tape dimensions



(Dimensions in mm; Tolerance : ± 0.1)

Symbol	W	P	P ₀	P ₁	A _o	B _o	K _o	t
Dimension	8	4	4	2	1.75	3.45	2.05	0.23

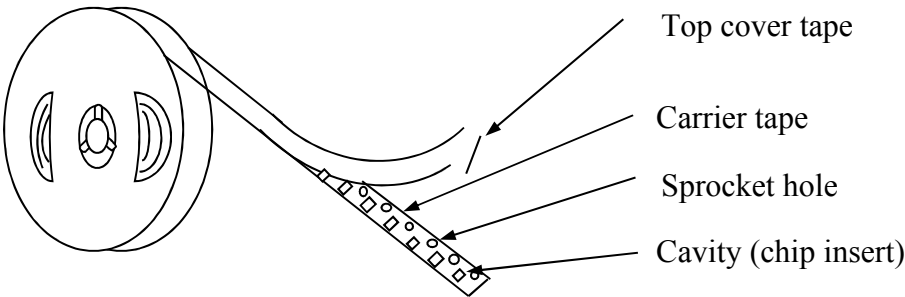
Reel dimensions



(Dimensions in mm)

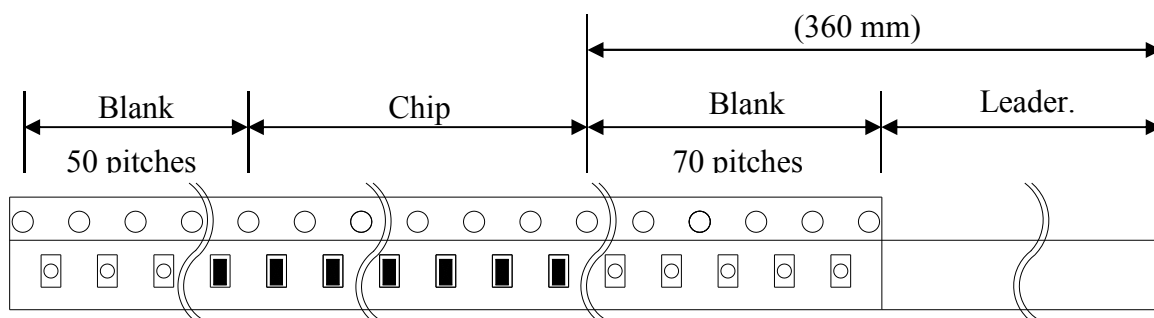
Symbol	T
A	180
B	60
C	13
D	14.4
E	8.4

Tapping figure



Packaging Form

There shall not continuation more than two vacancies of the product.



Material of carrier tape : Polystyrene

Material of cover tape : Polyester

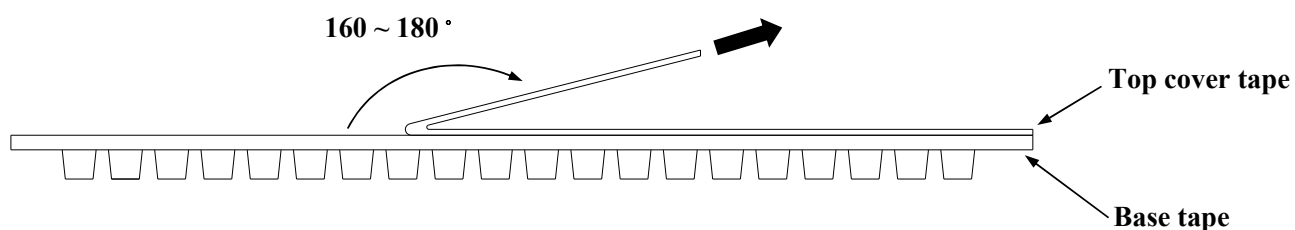
Cover Tape Peel Strength

The force for tearing off cover tape is 0.05~0.69(N) in the arrow direction at the following conditions:

Temperature : 5 ~ 35°C

Humidity : 45 ~ 85%

Atmospheric pressure : 860 ~ 1060 hpa

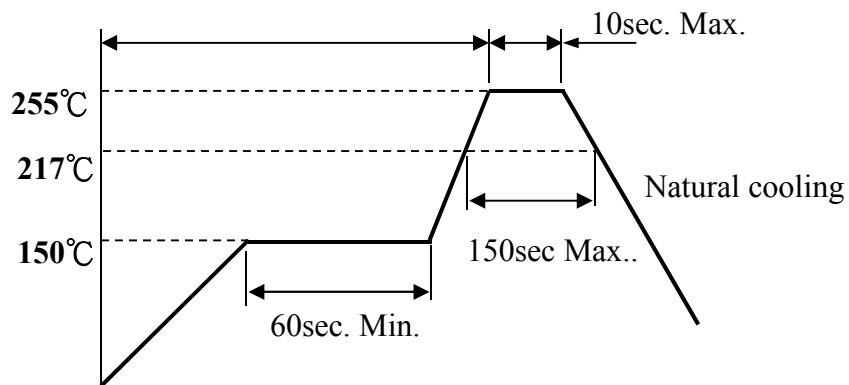


Packing Quantity

φ180 mm reel T type : 2000 pcs./reel

Recommended Reflow Pattern

Reflow : until two times



Iron Soldering

Use a solder iron of less than 30W when soldering, do not allow the soldering iron tip directly touch the ferrite body outside of terminal electrode.

5 seconds max. at 260°C.