

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

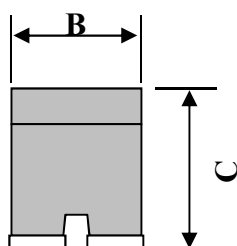
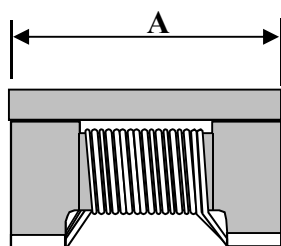
PRODUCT IDENTIFICATION

WCM 2012 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 = 90Ω
- ⑥ Packing: Tape & Reel
- ⑦ F:Hazardous Substance Free Products

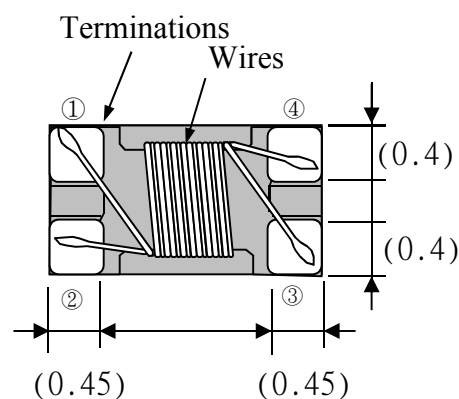
Shapes and Dimensions [Dimensions in mm]



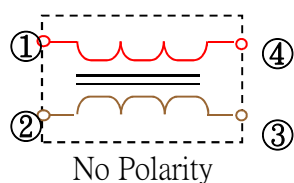
A : 2.0 ± 0.2

B : 1.2 ± 0.2

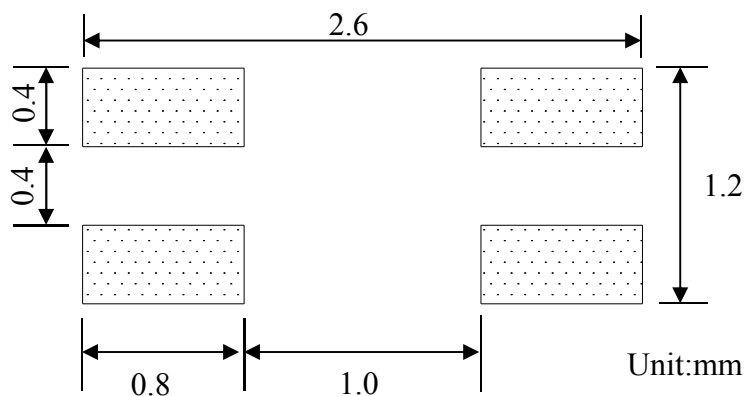
C : 1.2 ± 0.2



Equivalent circuit



Land Pattern: [mm]

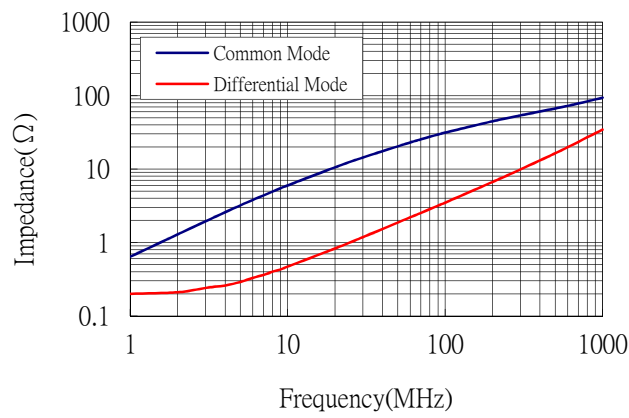


Electrical Characteristics:

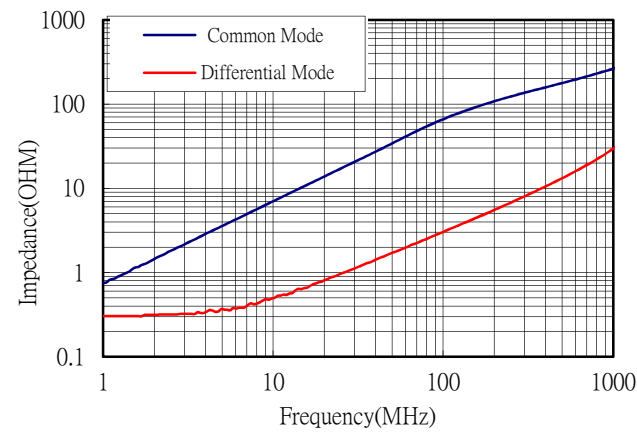
Part Number	Common-Mode Impedance $Z(\Omega)$ at 100MHz	DC Resistance $R_{dc}(\Omega)$ Max.	Rated Current $I_{dc}(mA)$ Max.	Rated Voltage $V_{dc}(V)$	Insulation Resistance ($M\Omega$)Min.	Withstand Voltage $V_{dc}(V)$
WCM2012F-2-300TF	30 $\pm$ 25%	0.20	450	50	10	125
WCM2012F-2-670TF	67 $\pm$ 25%	0.25	400	50	10	125
WCM2012F-2-900TF	90 $\pm$ 25%	0.30	400	50	10	125
WCM2012F-2-121TF	120 $\pm$ 25%	0.30	370	50	10	125
WCM2012F-2-161TF	160 $\pm$ 25%	0.35	350	50	10	125
WCM2012F-2-181TF	180 $\pm$ 25%	0.35	330	50	10	125
WCM2012F-2-201TF	200 $\pm$ 25%	0.40	300	50	10	125
WCM2012F-2-221TF	220 $\pm$ 25%	0.40	300	50	10	125
WCM2012F-2-261TF	260 $\pm$ 25%	0.40	300	50	10	125
WCM2012F-2-361TF	360 $\pm$ 25%	0.45	280	50	10	125
WCM2012F-2-601TF	600 $\pm$ 25%	0.55	200	50	10	125
WCM2012F-2-671TF	670 $\pm$ 25%	0.60	150	50	10	125
WCM2012F-2-801TF	800 $\pm$ 25%	0.80	150	50	10	125
WCM2012F-2-901TF	900 $\pm$ 25%	0.80	150	50	10	125
WCM2012F-2-102TF	1000 $\pm$ 25%	1.30	150	50	10	125
WCM2012F-2-222TF	2200 $\pm$ 25%	2.00	100	50	10	125

Typical Electrical Characteristics:

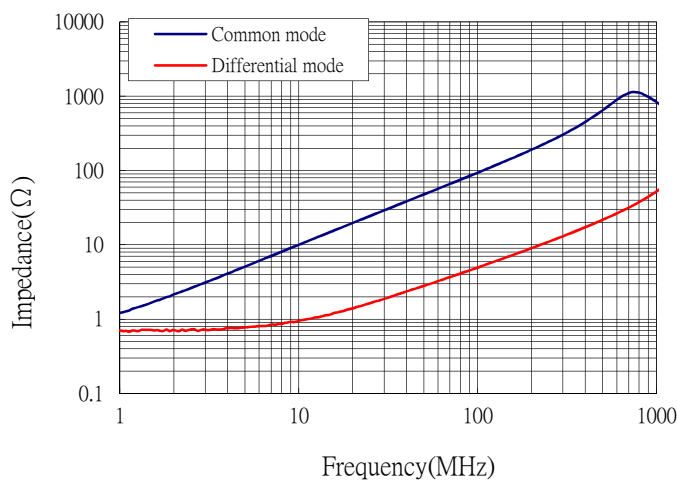
WCM2012F-2-300TF



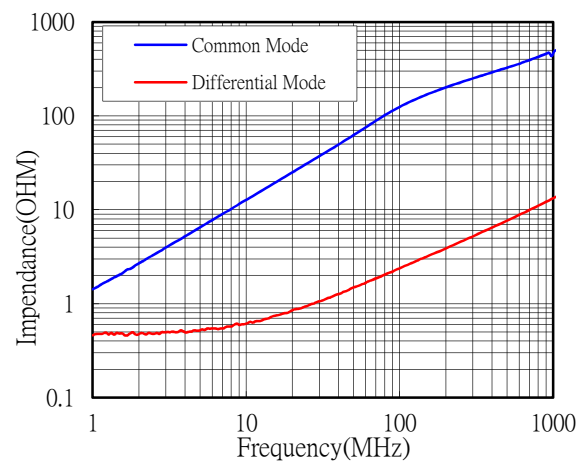
WCM2012F-2-670TF



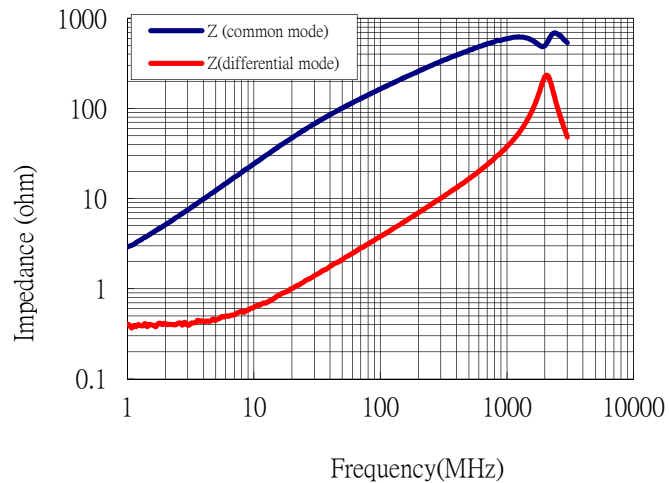
WCM2012F-2-900TF



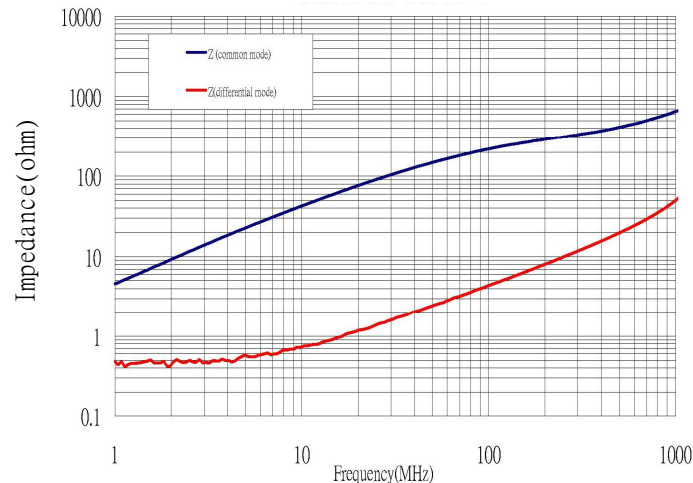
WCM2012F-2-121TF



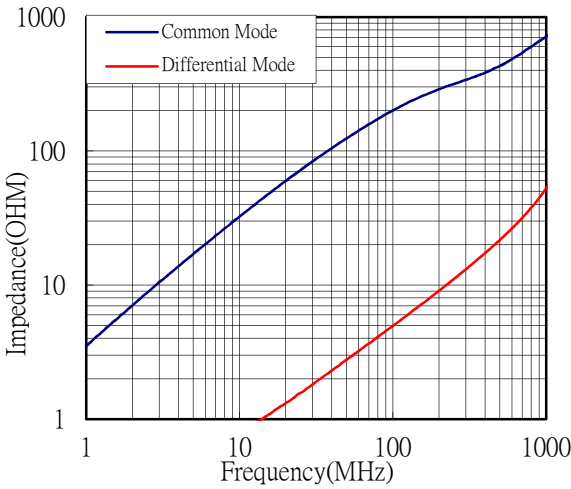
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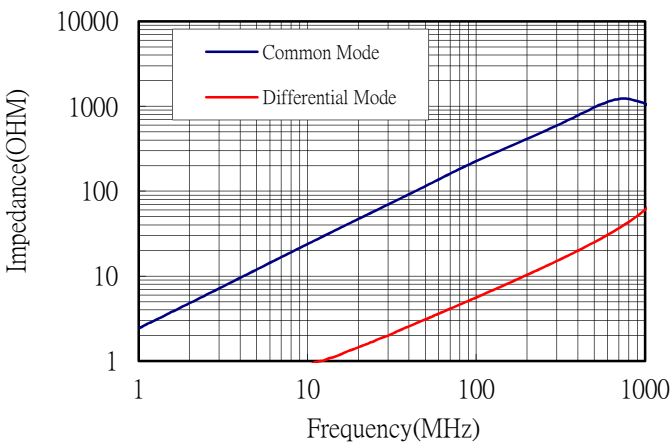
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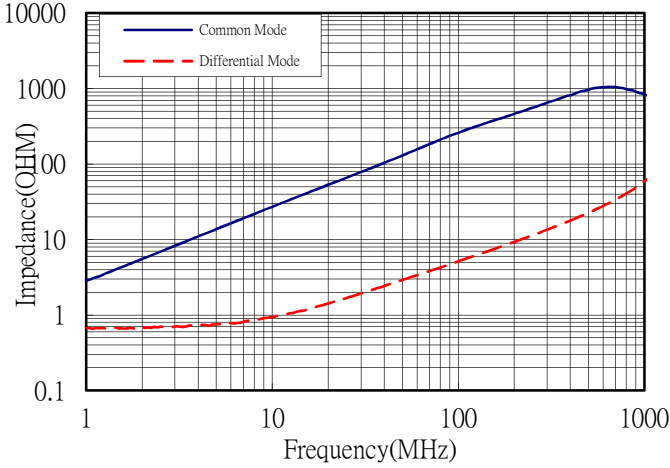
WCM2012F-2-201TF



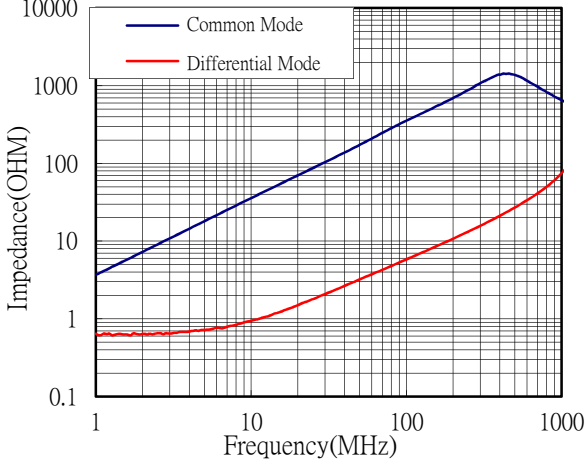
WCM2012F-2-221TF



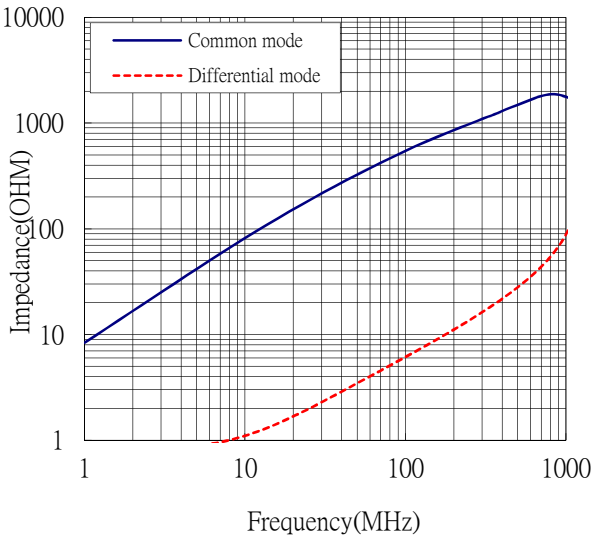
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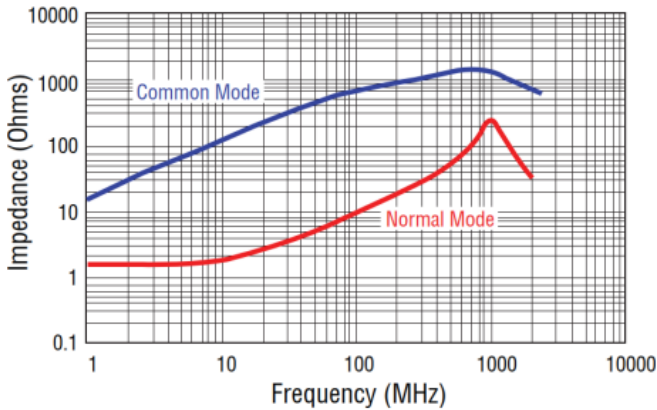
WCM2012F-2-361TF



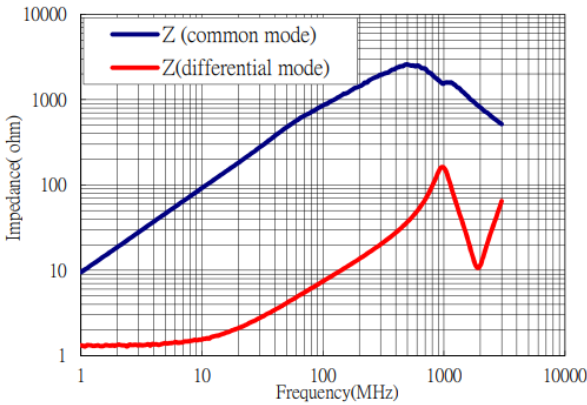
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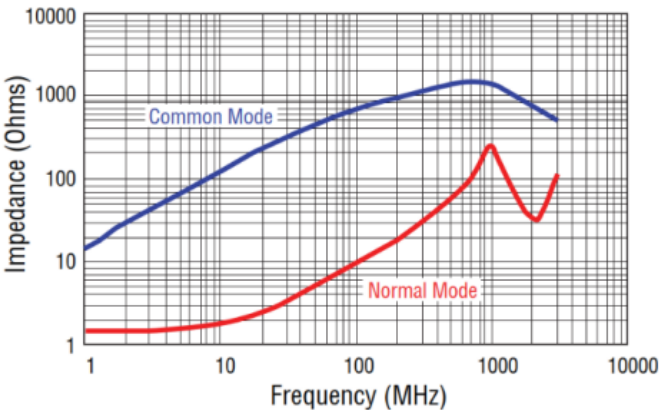
WCM2012F-2-671TF



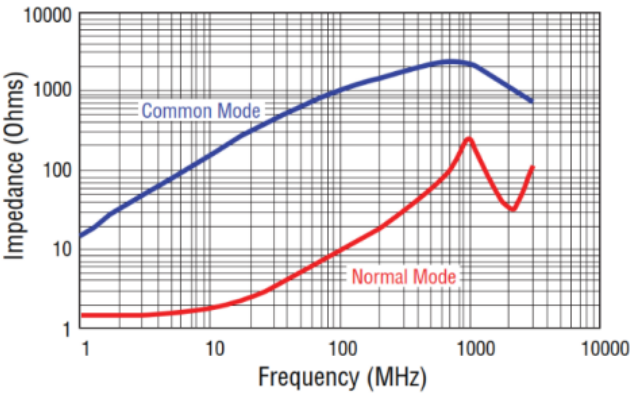
WCM2012F-2-801TF



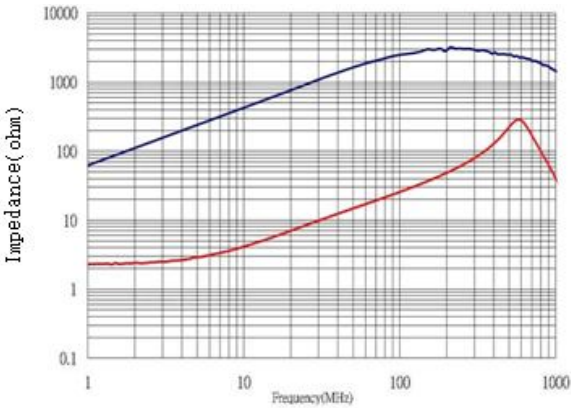
WCM2012F-2-901TF



WCM2012F-2-102TF



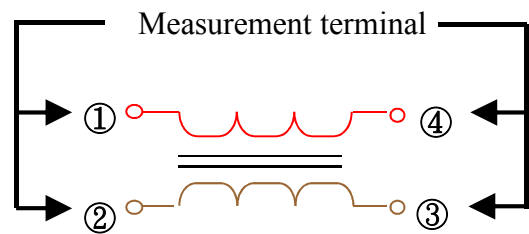
WCM2012F-2-222TF



Test Equipment

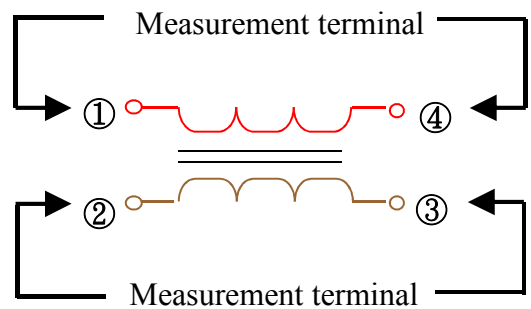
Impedance

Measured by using Agilent E4991A RF Impedance Analyzer.



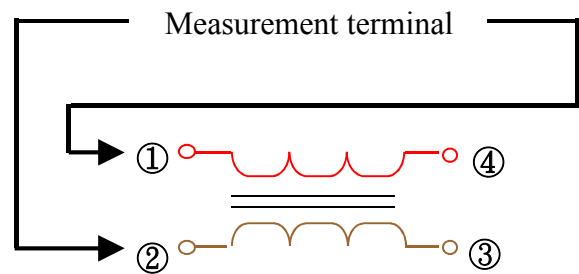
DC Resistance

Measured by using Chroma 16502 mill ohm meter.

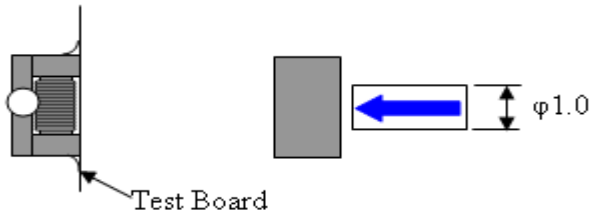
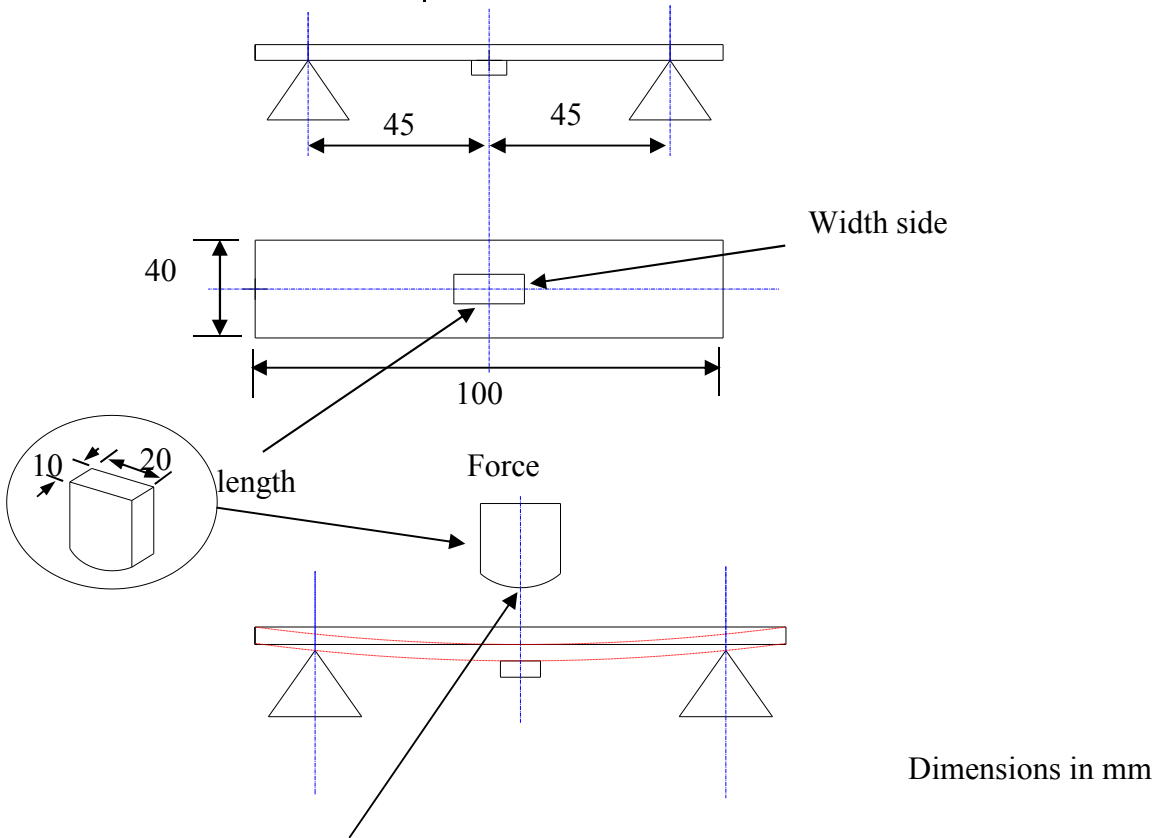


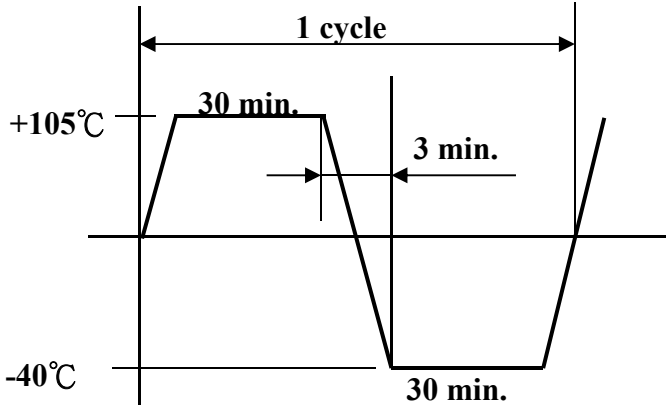
Insulation Resistance

Measured by using Chroma 19073
Measurement voltage : 50v .



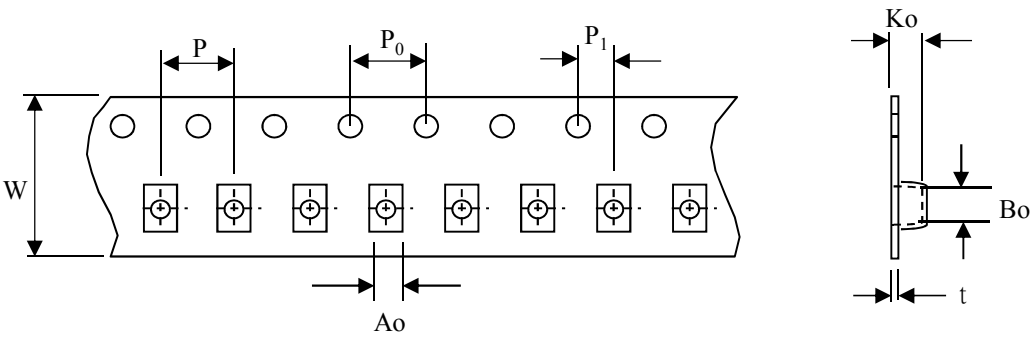
Reliability Test

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 0.5Kg 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

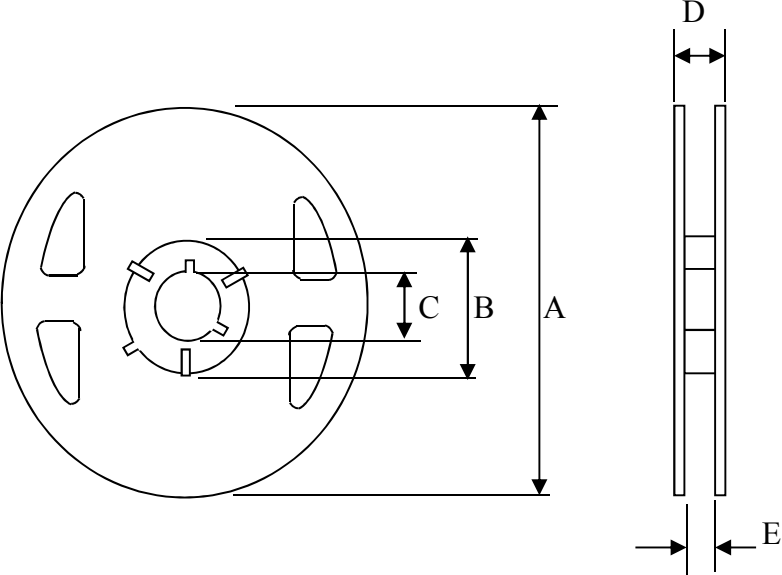
The packaging must be done not to receive any damage during transporting and storing



(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	1.5	2.25	1.35	0.24

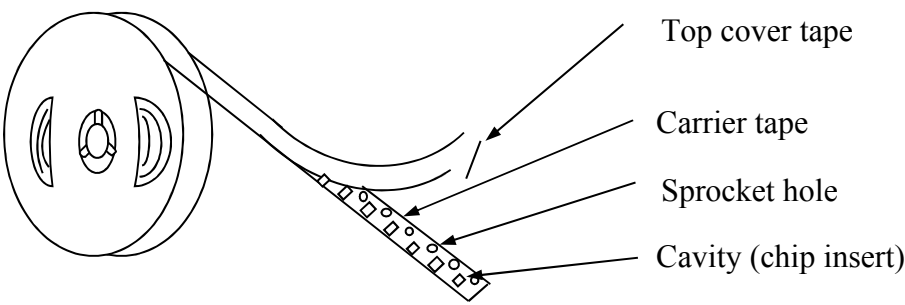
Reel dimensions



(Dimensions in mm)

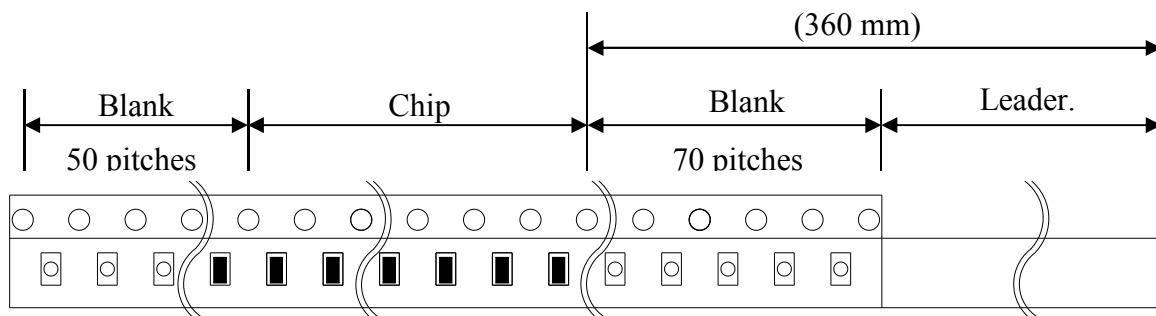
Symbol	T
A	180
B	60
C	13
D	14.4
E	8.4

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

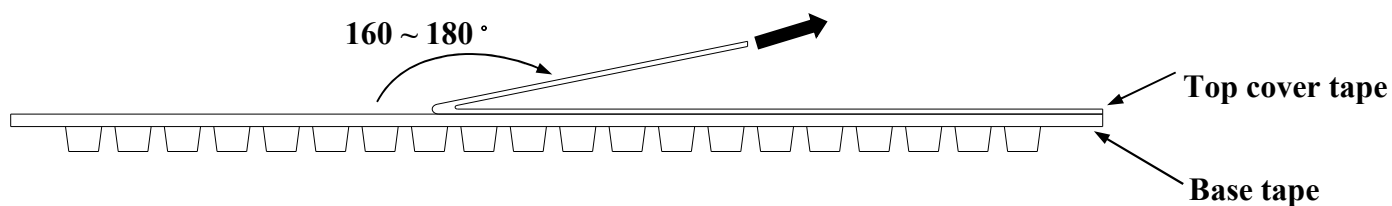
Cover Tape Peel Strength

The force for tearing off cover tape is 0.1~0.69(N) in the arrow direction at the following conditions:

Temperature : 5 ~ 35°C

Humidity : 45 ~ 85%

Atmospheric pressure : 860 ~ 1060 hpa

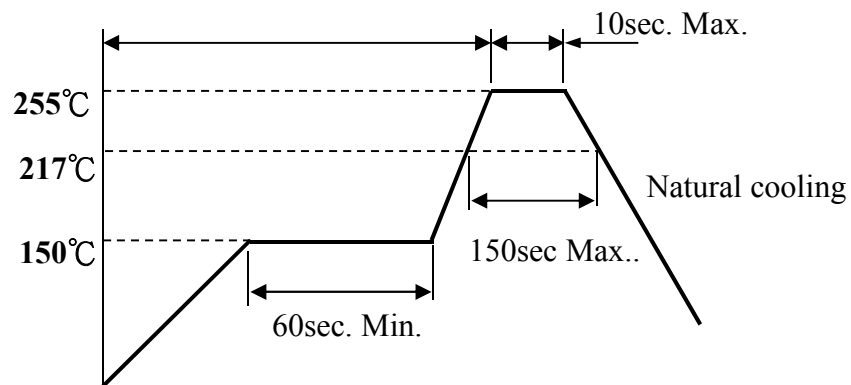


Packing Quantity

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.