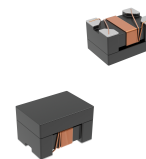


## FEATURES

- Winding type realizes small size and low profile
- Prevention of common mode noise at high frequency
- Excellent solderability
- Operating temperature -40~+125℃ (Including self - temperature rise)



## APPLICATIONS

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

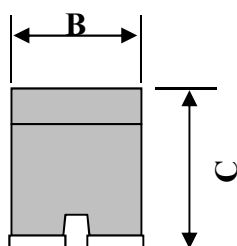
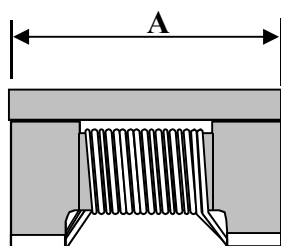
## Explanation of Part Number

**ACM 2012 -2P- 900 T F**

**1      2   3   4   5   6**

- ◆ 1:Product Series:Wire Wound Chip Common Mode Filters
- ◆ 2:Dimensions:
- ◆ 3: Number of Lines 2P=2 lines
- ◆ 4:Common Mode Impedance( $\Omega$ )
- ◆ 5:Packing(Tape & Reel)
- ◆ 6:F:Hazardous Substance Free Products

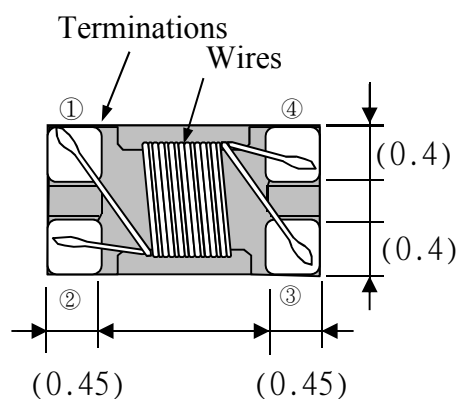
## Shapes and Dimensions [Dimensions in mm]



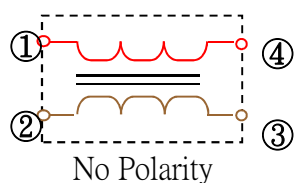
**A :  $2.0 \pm 0.2$**

**B :  $1.2 \pm 0.2$**

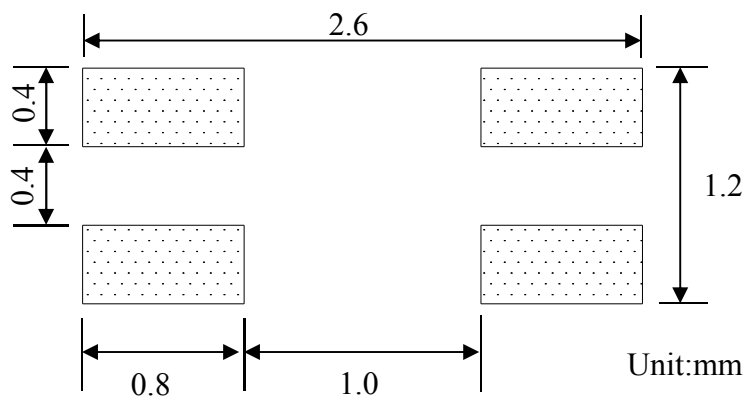
**C :  $1.2 \pm 0.2$**



## Equivalent circuit



## Land Pattern: [mm]

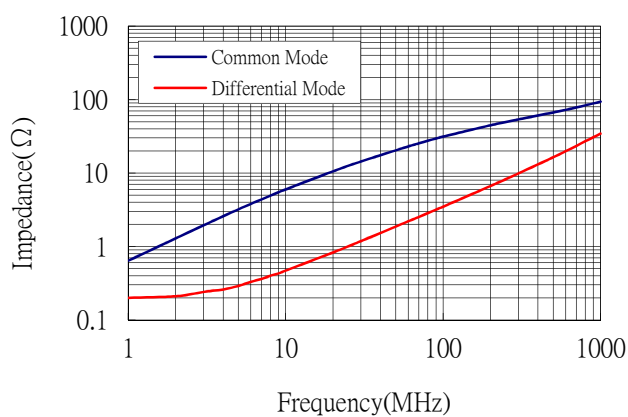


## Electrical Characteristics:

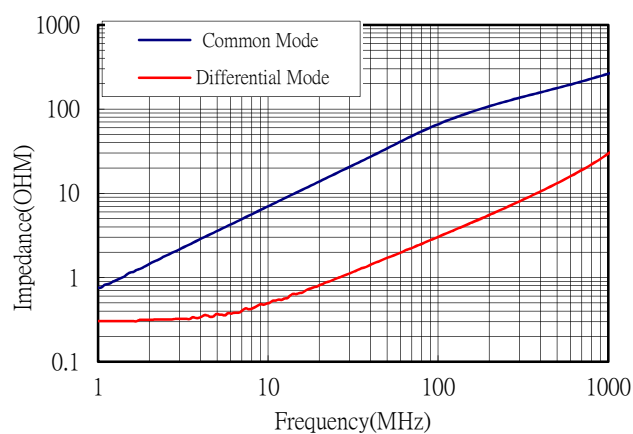
| Part Number      | Common-Mode Impedance<br>$Z(\Omega)$ at 100MHz | DC Resistance<br>$R_{dc}(\Omega)$ Max. | Rated Current<br>$I_{dc}(mA)$ Max. | Rated Voltage<br>$V_{dc}(V)$ | Insulation Resistance<br>$(M\Omega)$ Min. | Withstand Voltage<br>$V_{dc}(V)$ |
|------------------|------------------------------------------------|----------------------------------------|------------------------------------|------------------------------|-------------------------------------------|----------------------------------|
| ACM2012-2P-300TF | 30 $\pm$ 25%                                   | 0.20                                   | 450                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-670TF | 67 $\pm$ 25%                                   | 0.25                                   | 400                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-900TF | 90 $\pm$ 25%                                   | 0.30                                   | 400                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-121TF | 120 $\pm$ 25%                                  | 0.30                                   | 370                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-161TF | 160 $\pm$ 25%                                  | 0.35                                   | 350                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-181TF | 180 $\pm$ 25%                                  | 0.35                                   | 330                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-201TF | 200 $\pm$ 25%                                  | 0.40                                   | 300                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-221TF | 220 $\pm$ 25%                                  | 0.40                                   | 300                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-261TF | 260 $\pm$ 25%                                  | 0.40                                   | 300                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-361TF | 360 $\pm$ 25%                                  | 0.45                                   | 280                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-601TF | 600 $\pm$ 25%                                  | 0.55                                   | 200                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-671TF | 670 $\pm$ 25%                                  | 0.60                                   | 150                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-801TF | 800 $\pm$ 25%                                  | 0.80                                   | 150                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-901TF | 900 $\pm$ 25%                                  | 0.80                                   | 150                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-102TF | 1000 $\pm$ 25%                                 | 1.30                                   | 150                                | 50                           | 10                                        | 125                              |
| ACM2012-2P-222TF | 2200 $\pm$ 25%                                 | 2.00                                   | 100                                | 50                           | 10                                        | 125                              |

## Typical Electrical Characteristics:

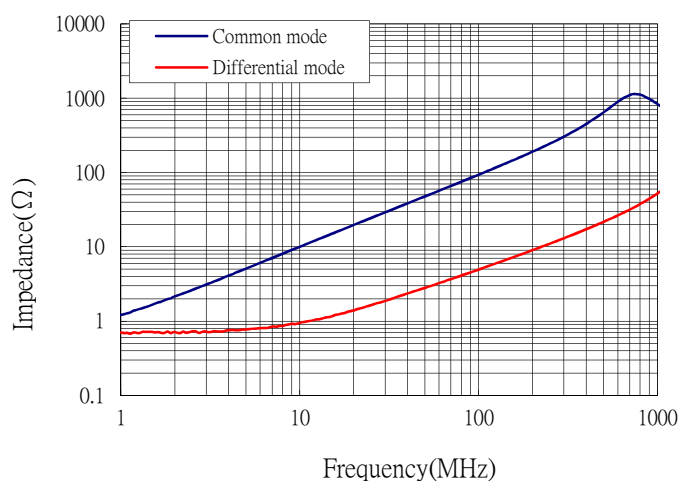
ACM2012-2P-300TF



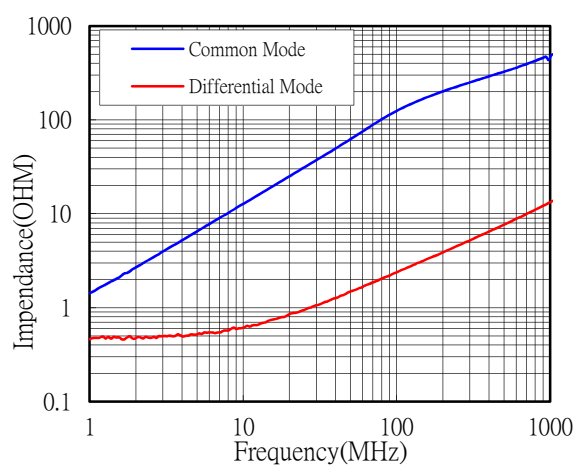
ACM2012-2P-670TF



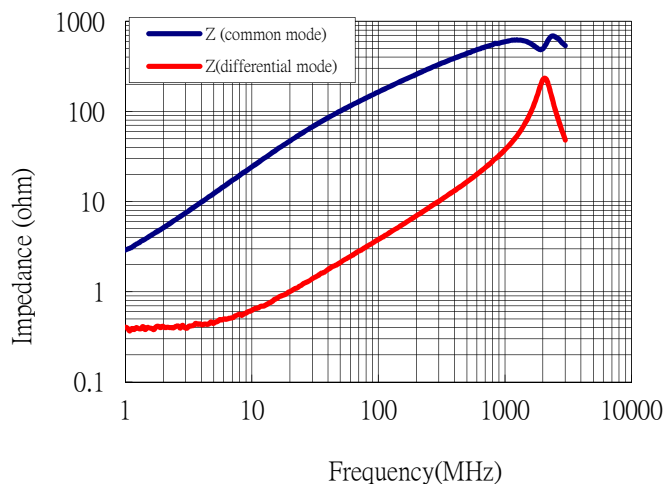
ACM2012-2P-900TF



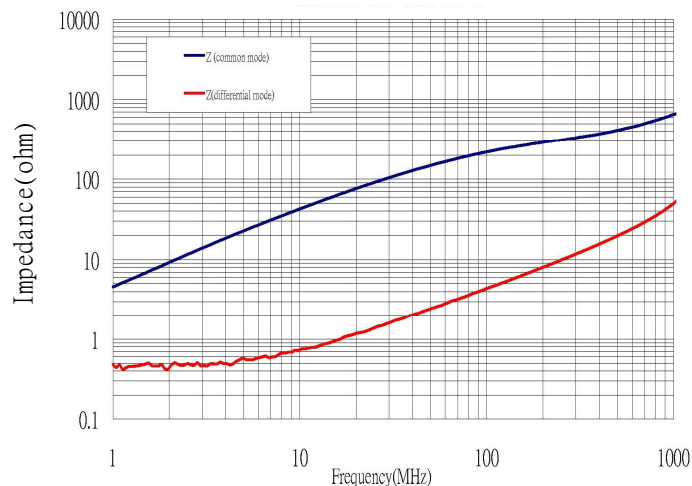
ACM2012-2P-121TF

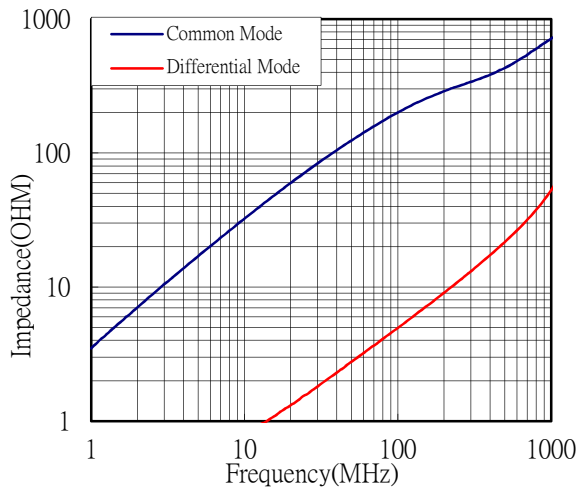
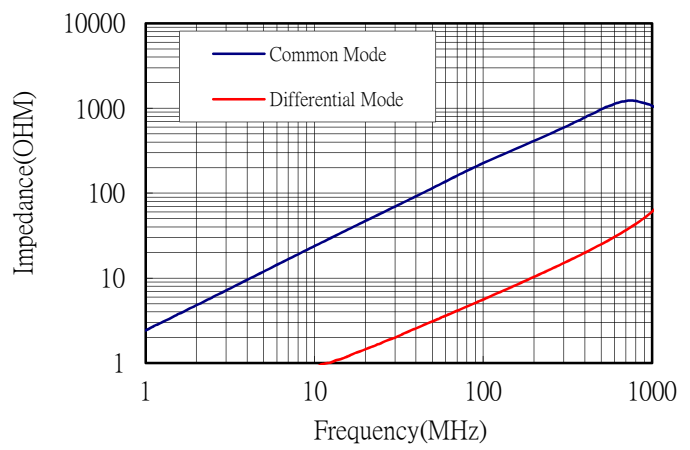
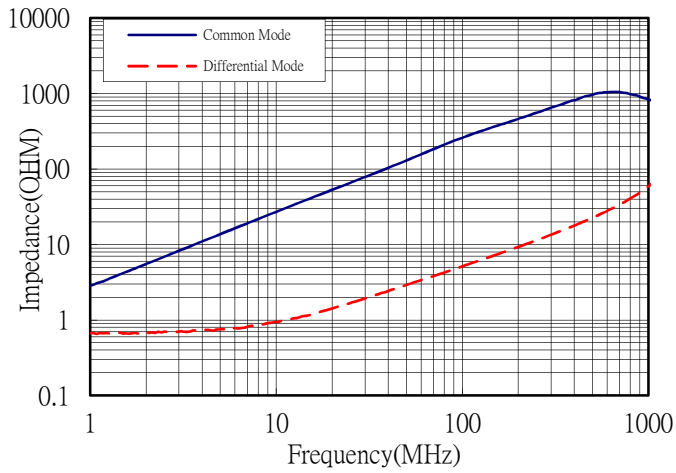
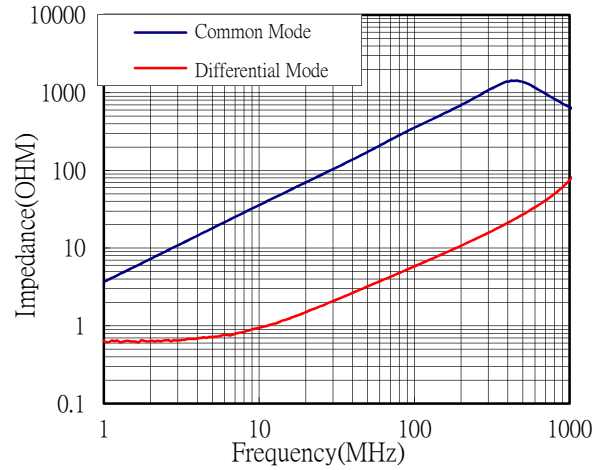
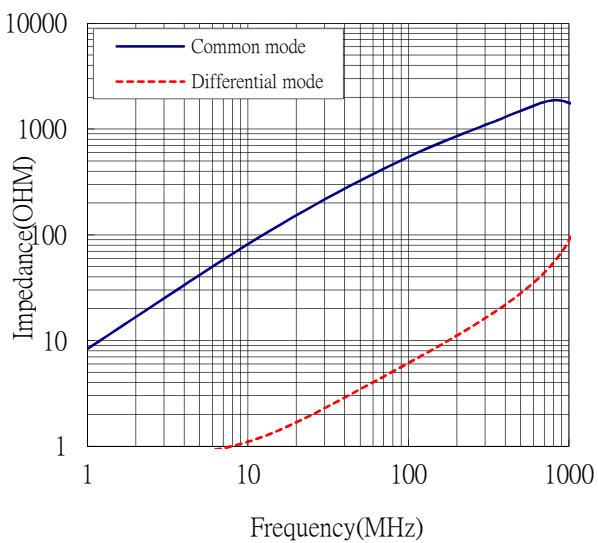
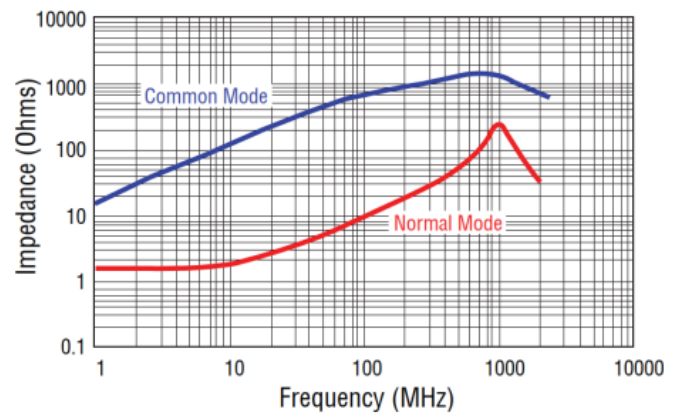


ACM2012-2P-161TF

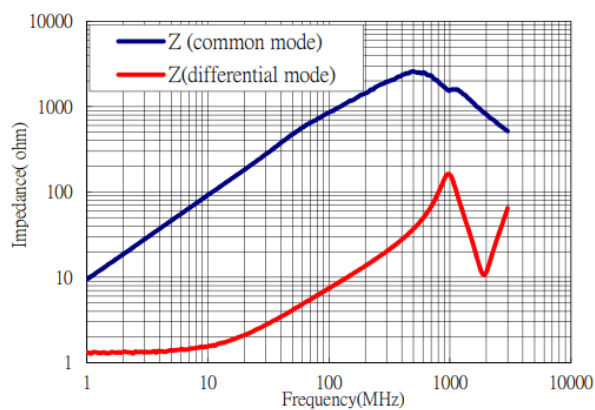


ACM2012-2P-181TF

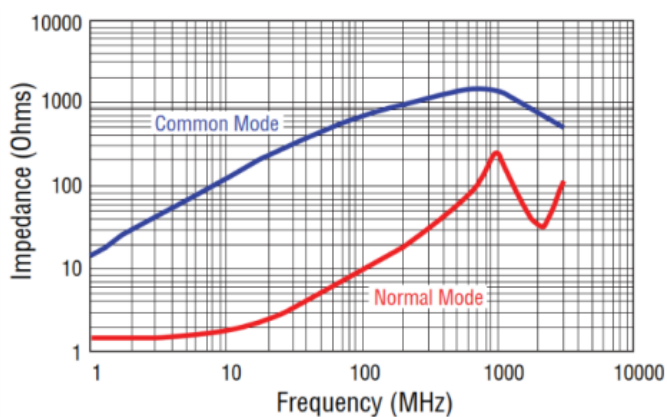


**ACM2012-2P-201TF**

**ACM2012-2P-221TF**

**ACM2012-2-261T03**

**ACM2012-2-361T028**

**ACM2012-2P-601TF**

**ACM2012-2P-671TF**


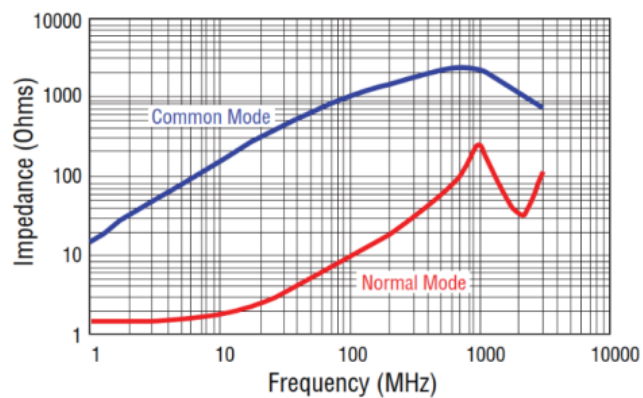
ACM2012-2P-801TF



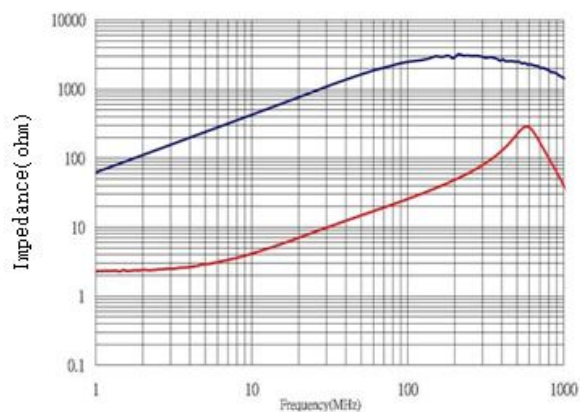
ACM2012-2P-901TF



ACM2012-2P-102TF



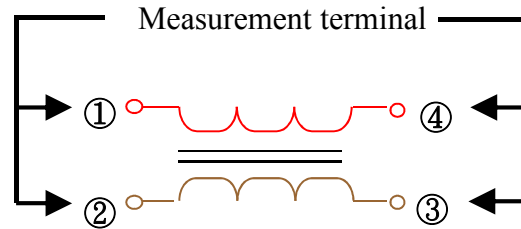
ACM2012-2P-222TF



## Test Equipment

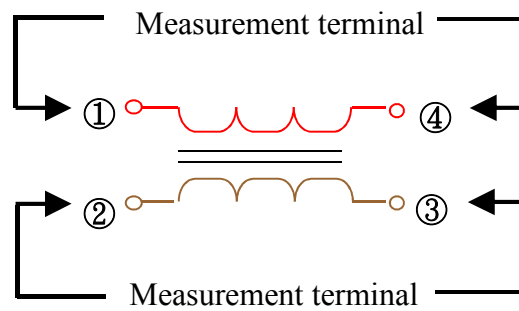
### Impedance

Measured by using Agilent E4991A RF Impedance Analyzer.



### DC Resistance

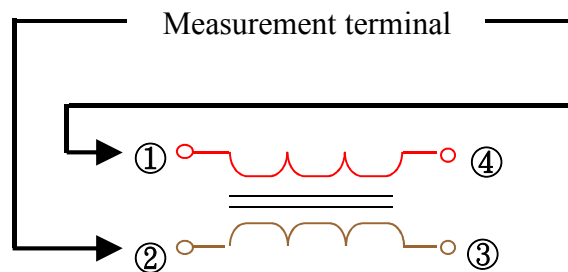
Measured by using Chroma 16502 mill ohm meter.



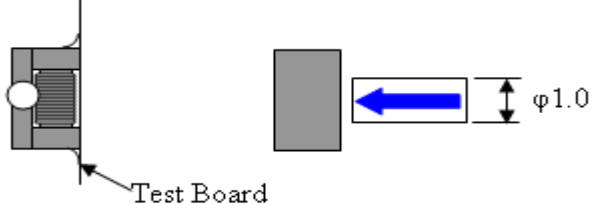
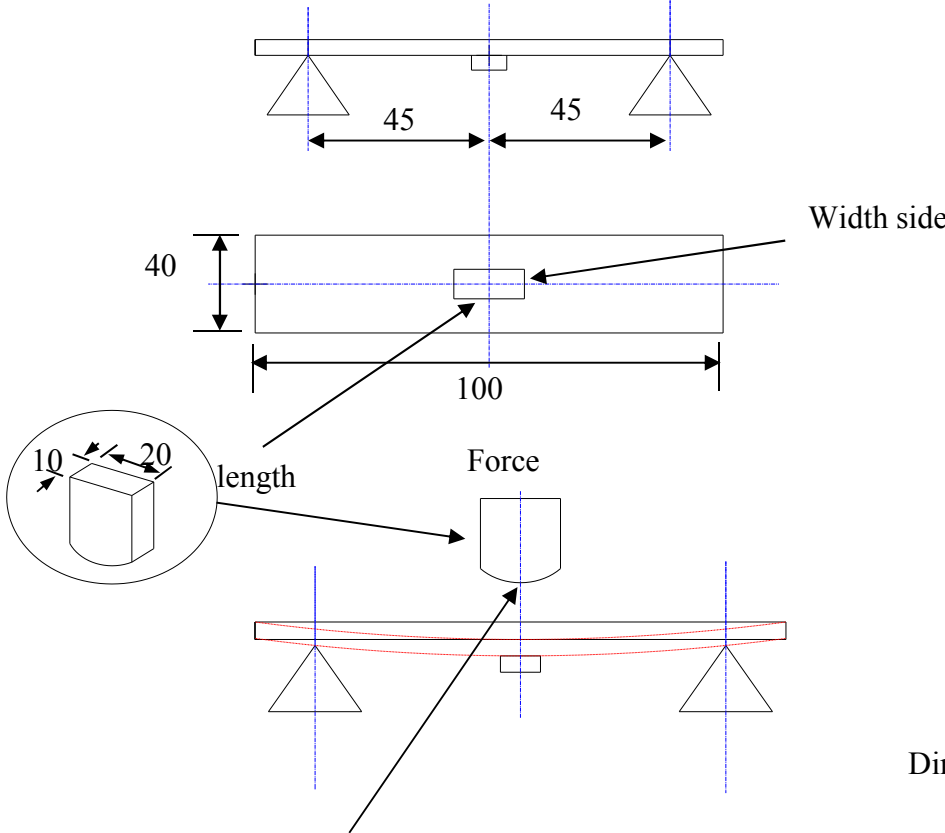
### Insulation Resistance

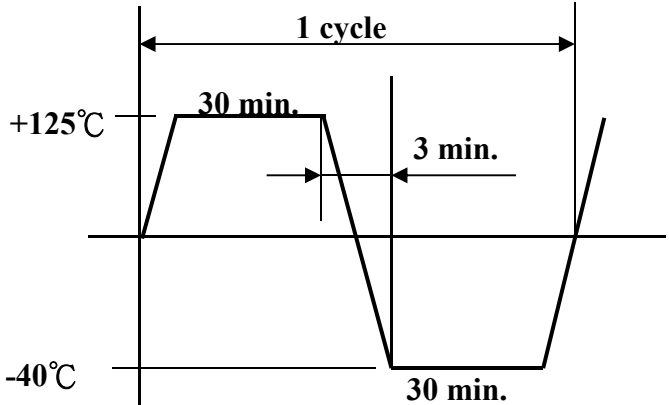
Measured by using Chroma 19073

Measurement voltage : 50v .



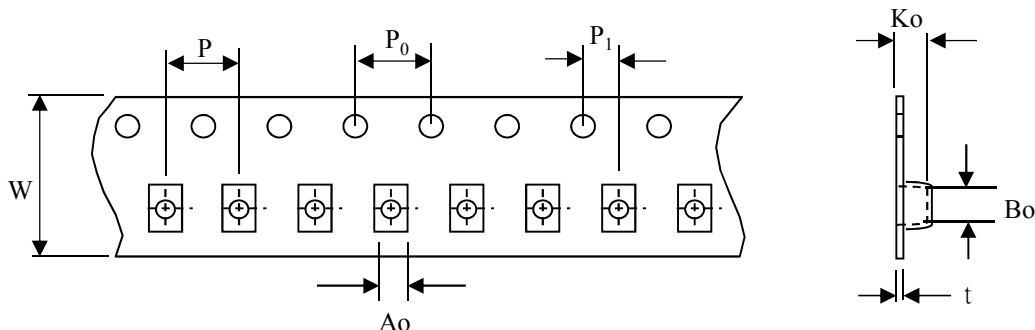
## Reliability Test

| 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,<br>It is mounted on the recommendation soldering condition.<br>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.<br>                                                                                                                                            |
| Strength on pc board bending          | The terminal electrode and the ferrite must not be damaged.    | Soldering a chip to a test substrate ,<br>bend the substrate by 2mm and then return.<br><br>Dimensions in mm<br>R10<br>Test board : Glass base epoxy multiplayer board pc board pattern.<br>PC board pattern : Recommended PC board pattern. |

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

## Packaging

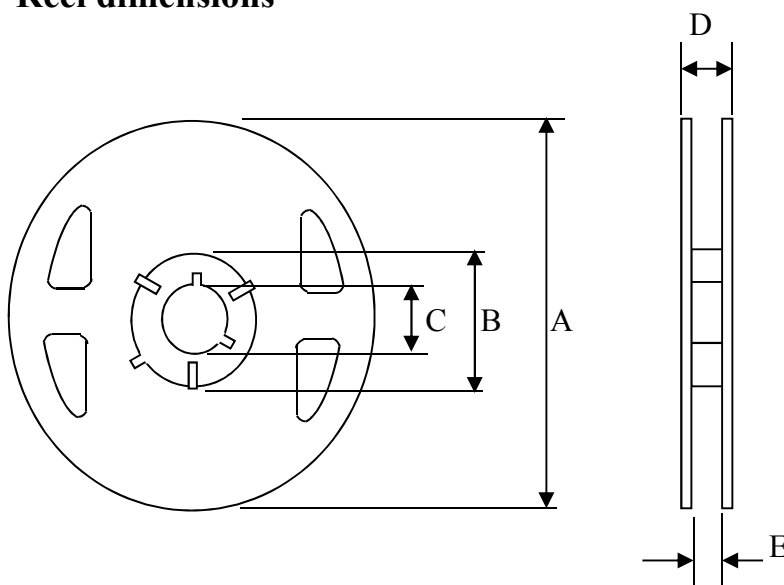
The packaging must be done not to receive any damage during transporting and storing



( Dimensions in mm; Tolerance :  $\pm 0.1$  )

| Symbol    | W | P | P <sub>0</sub> | P <sub>1</sub> | A <sub>0</sub> | B <sub>0</sub> | K <sub>0</sub> | t    |
|-----------|---|---|----------------|----------------|----------------|----------------|----------------|------|
| Dimension | 8 | 4 | 4              | 2              | 1.5            | 2.25           | 1.35           | 0.24 |

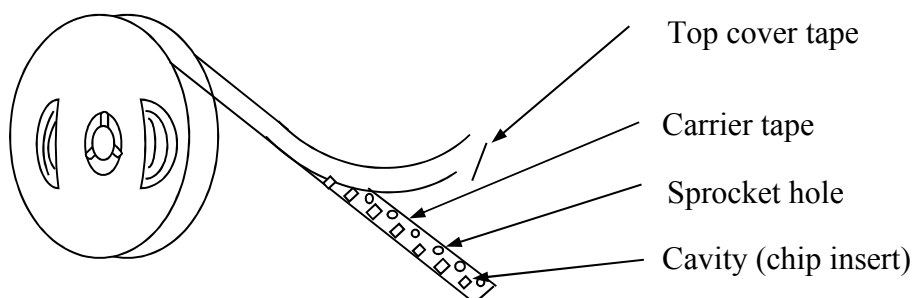
## Reel dimensions



( Dimensions in mm )

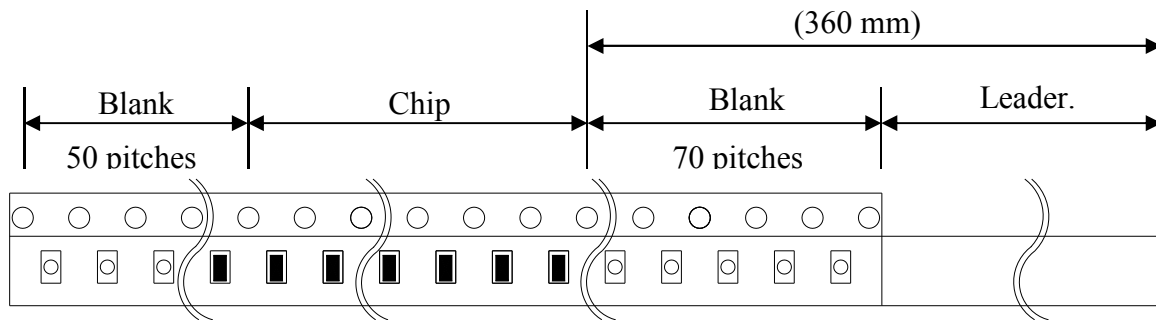
| Symbol | T    |
|--------|------|
| A      | 180  |
| B      | 60   |
| C      | 13   |
| D      | 14.4 |
| E      | 8.4  |

## 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

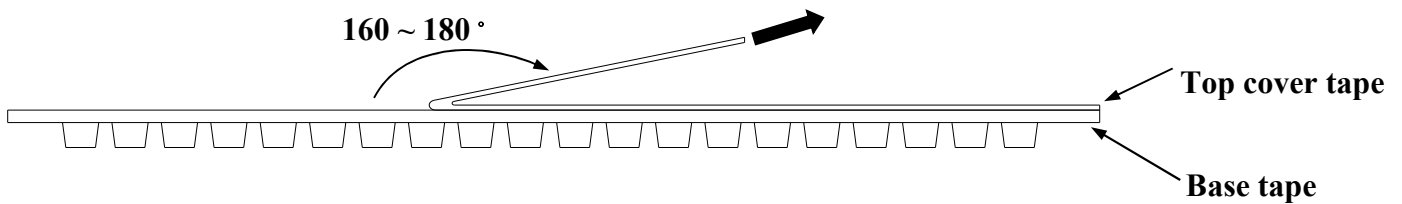
## Cover Tape Peel Strength

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

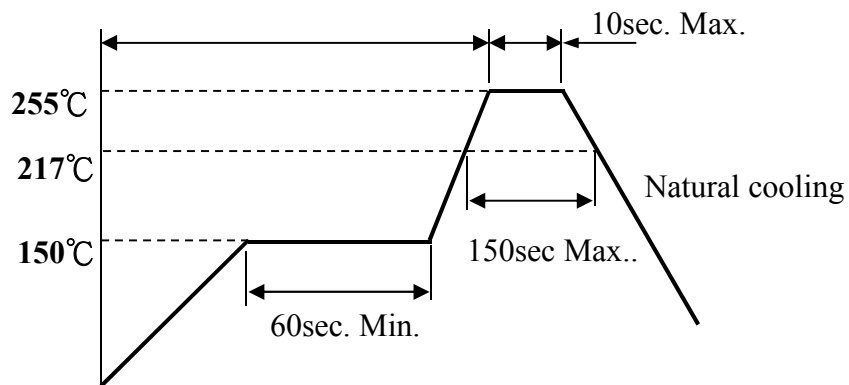


## Packing Quantity

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 .

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[AWCU00321619222M02](#) [FA040G00](#) [PAC6034.205NLT](#)