

**FEATURES**

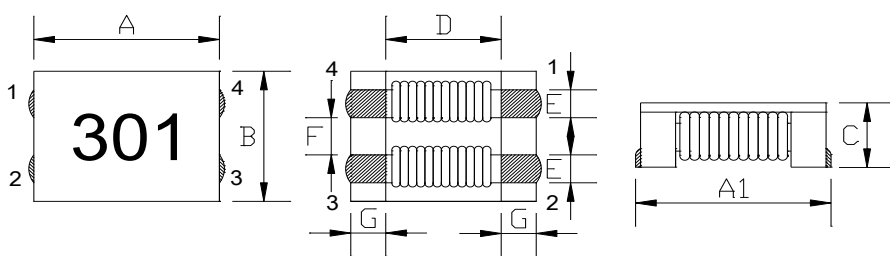
- Winding type realizes small size and low profile
- Prevention of common mode noise at high frequency
- Excellent solderability
- Operating temperature -40~+125℃ (Including self - temperature rise)
- RoHS Compliant


**FEATURES**

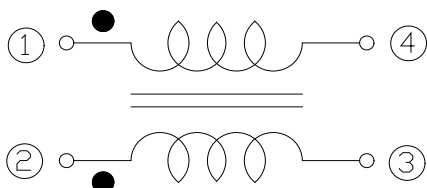
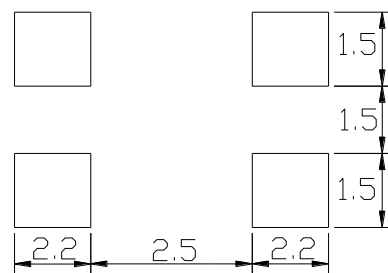
- Power line noise countermeasure for electronic equipment (Notebook, server applications, Battery , etc.)
- Best for high current circuit such as car
- Wireless charging and power device design

**Explanation of Part Number**
**ACM 7060 F- 701 T40**
**1 2 3 4 5 6**

- ◆ 1:Product Series:Wire Wound Common Mode Chokes
- ◆ 2:Dimensions:
- ◆ 3: Material Code:Ferrite
- ◆ 4:Common Mode Impedance( $\Omega$ )
- ◆ 5:Packing(Tape & Reel)
- ◆ 6:Rated Current:40=4.0A

**Shapes and Dimensions [Dimensions in mm]**


|            |                 |           |
|------------|-----------------|-----------|
| <b>A:</b>  | <b>7.0±0.5</b>  | <b>mm</b> |
| <b>A1:</b> | <b>7.5±0.5</b>  | <b>mm</b> |
| <b>B:</b>  | <b>6.0±0.5</b>  | <b>mm</b> |
| <b>C:</b>  | <b>3.8Max.</b>  | <b>mm</b> |
| <b>D:</b>  | <b>3.5Typ.</b>  | <b>mm</b> |
| <b>E:</b>  | <b>1.5±0.2</b>  | <b>mm</b> |
| <b>F:</b>  | <b>1.5±0.2</b>  | <b>mm</b> |
| <b>G:</b>  | <b>1.75±0.2</b> | <b>mm</b> |

**Equivalent circuit**

**Land Pattern: [mm]**


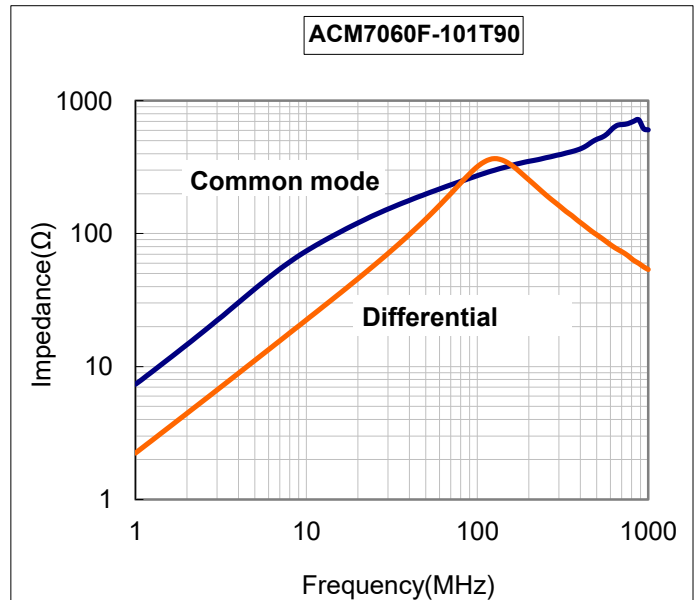
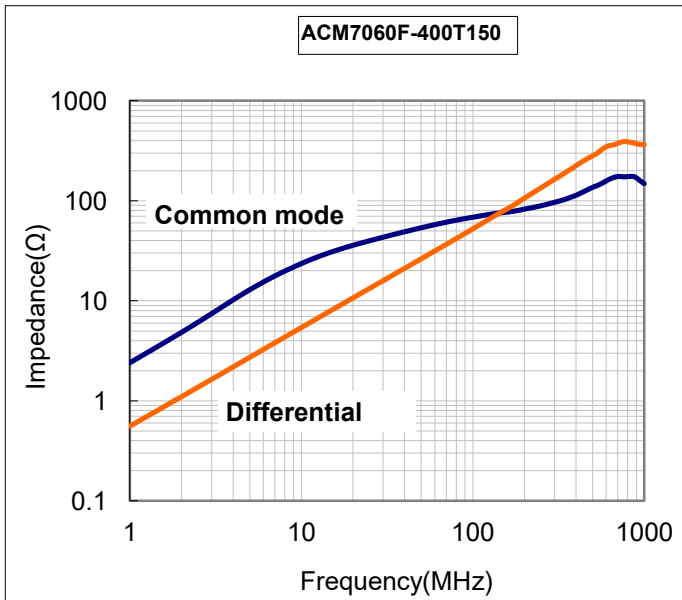
## Electrical Characteristics:

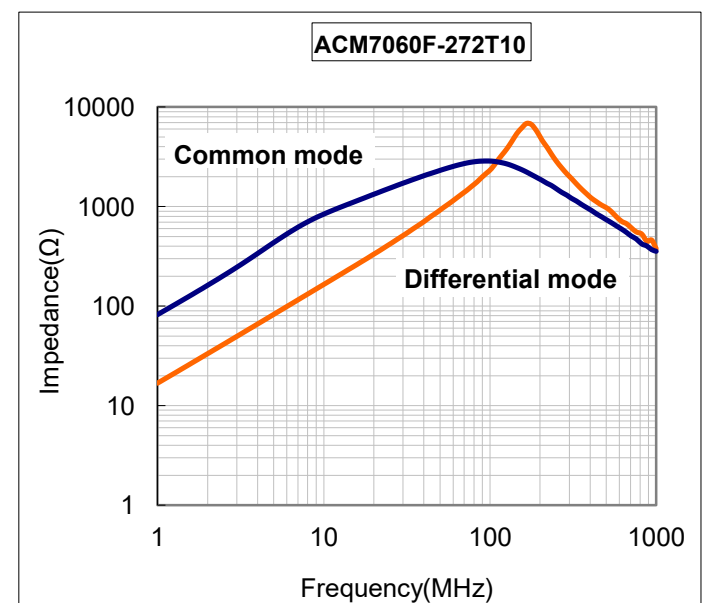
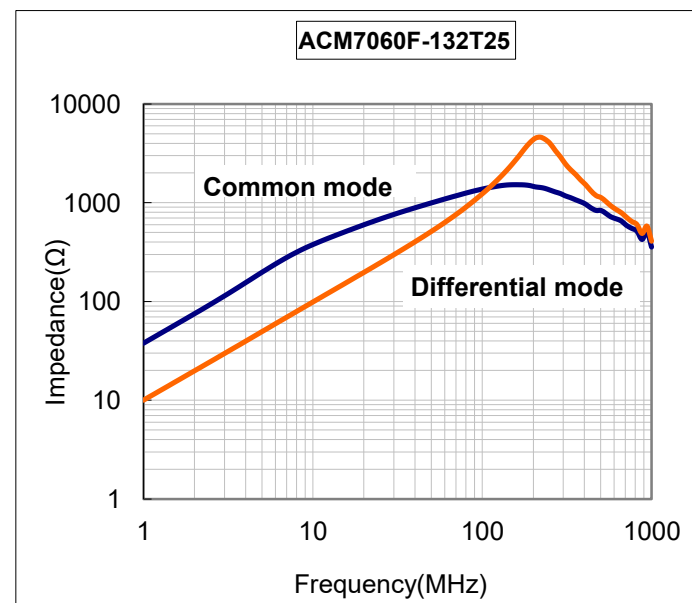
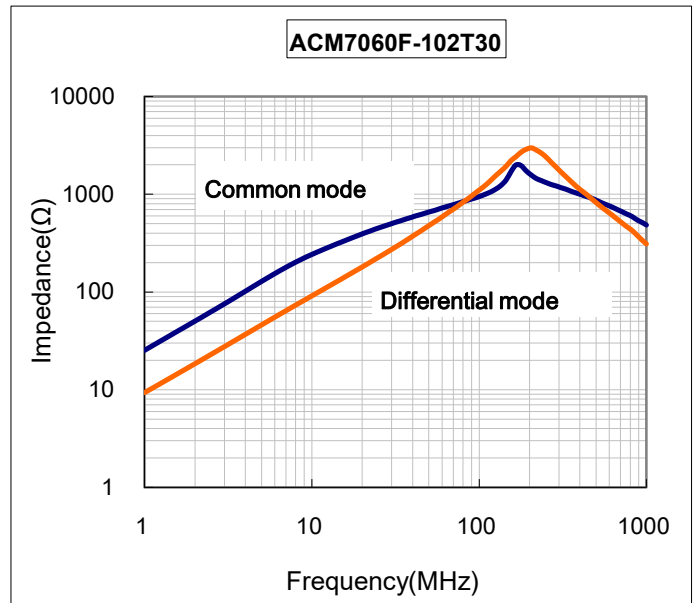
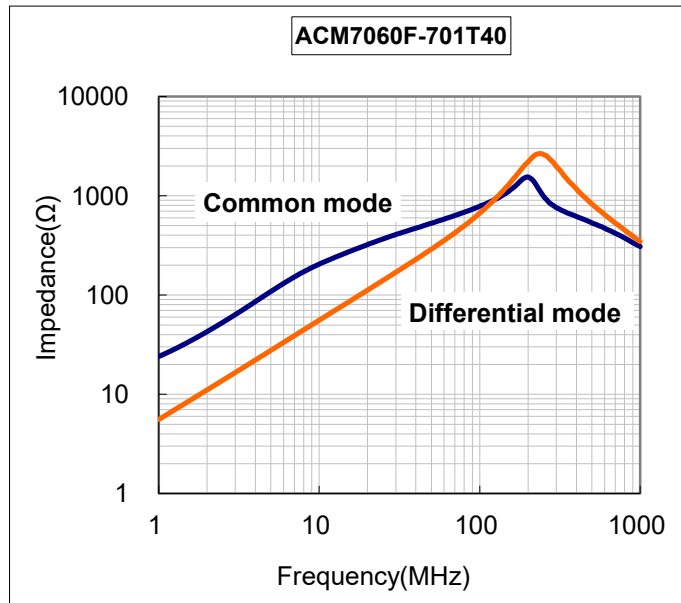
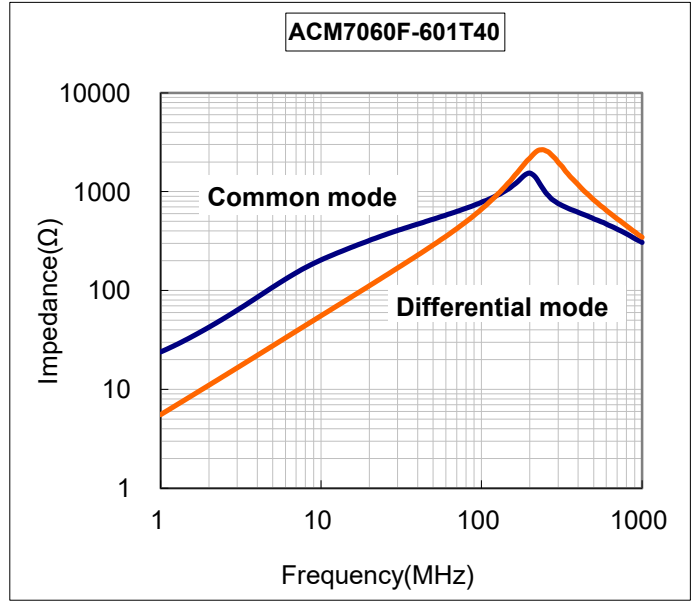
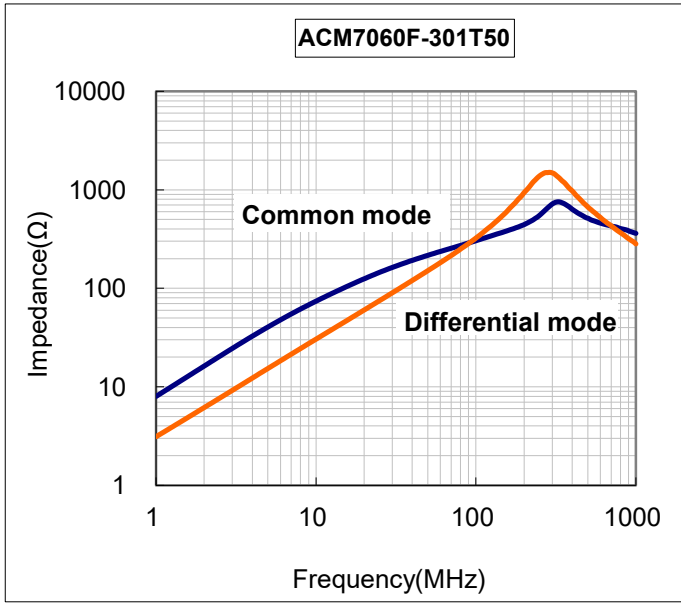
| PT/NO.           | Impedance( $\Omega$ )<br>at 100MHz |      | Resistance RDC( $\Omega$ )<br>Max.(1 line) | Rated<br>Current<br>(A) Max. | Insulation<br>Resistance<br>(M $\Omega$ ) Min. | Rated<br>Voltage<br>(V)Max. |
|------------------|------------------------------------|------|--|------------------------------|--|-----------------------------|
|                  | Min.                               | Typ. |  |                              |  |                             |
| ACM7060F-400T150 | 40                                 | 70   | 5m   | 15                           | 10   | 125                         |
| ACM7060F-101T90  | 100                                | 140  | 10m  | 9.0                          | 10   | 125                         |
| ACM7060F-301T50  | 225                                | 300  | 10m  | 5.0                          | 10   | 125                         |
| ACM7060F-501T50  | 275                                | 350  | 10m  | 5.0                          | 10   | 125                         |
| ACM7060F-601T40  | 500                                | 700  | 15m  | 4.0                          | 10   | 125                         |
| ACM7060F-701T40  | 500                                | 700  | 15m  | 4.0                          | 10   | 125                         |
| ACM7060F-102T30  | 800                                | 1020 | 17m  | 3.0                          | 10   | 125                         |
| ACM7060F-132T25  | 910                                | 1300 | 21m  | 2.5                          | 10   | 125                         |
| ACM7060F-272T10  | 2000                               | 2700 | 63m  | 1.0                          | 10   | 125                         |
| ACM7060F-302T09  | 2500                               | 3000 | 75m  | 0.9                          | 10   | 125                         |

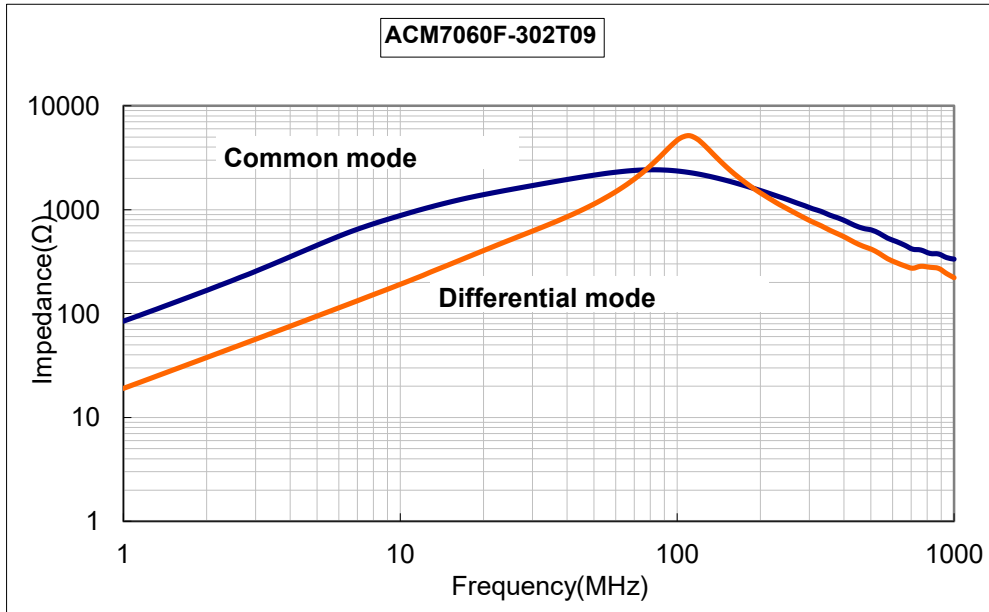
Rated Current : Based on temperature rise ( $\Delta T$  : 40°C TYP.)

## TYPICAL ELECTRICAL CHARACTERISTICS

### Impedance VS. Frequency



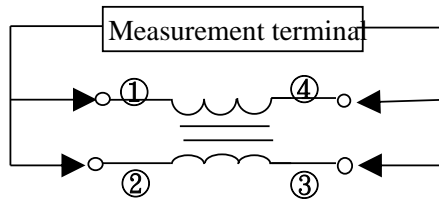




## TEST EQUIPMENT

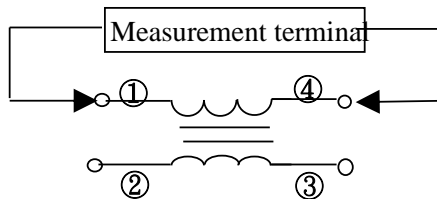
### Impedance

Measured by using HP4291B RF Impedance Analyzer.



### DC Resistance

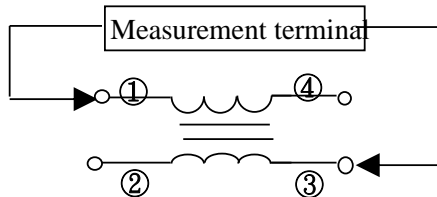
Measured by using Chroma 16502 milliohm meter.



### Insulation Resistance

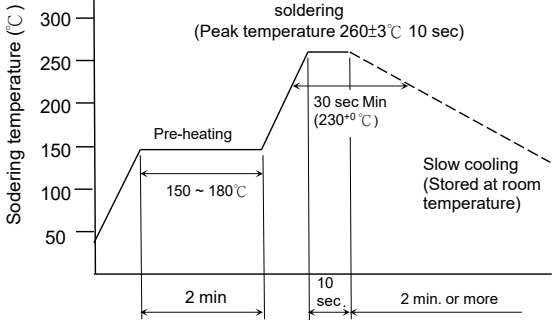
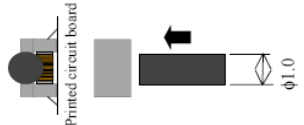
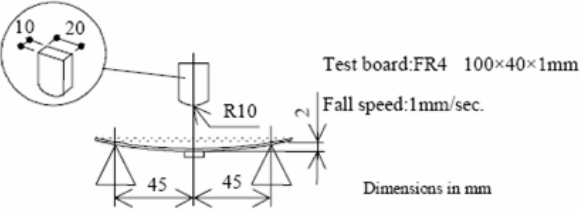
Measured by using Chroma 19073

Measurement voltage : 50v , Measurement time : 60 sec.

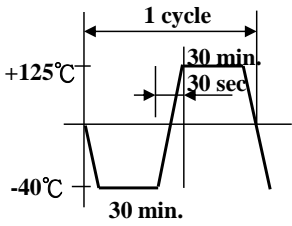


# Reliability Test

## MECHANICAL

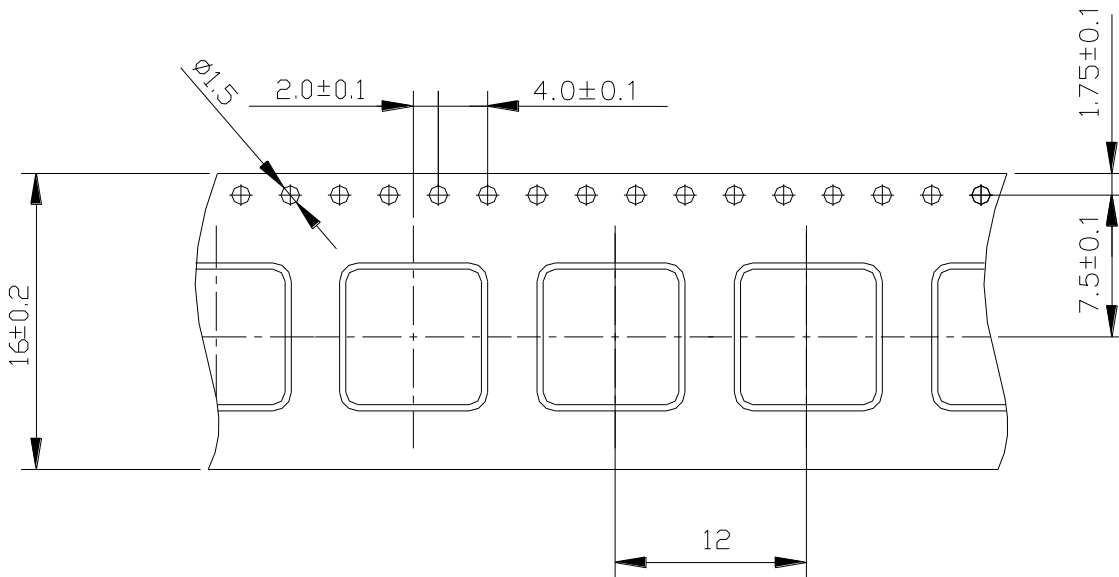
| TEST ITEM                                       | SPECIFICATION   | TEST DETAILS   |
|---|---|--|
| Solder ability                                  | The product shall be connected to the test circuit board by the fillet (the height is 0.2mm).   | Apply cream solder to the printed circuit board .<br>Refer to clause 8 for Reflow profile.   |
| Resistance to Soldering heat (reflow soldering) | There shall be no damage or problems.   | <p><b>Temperature profile of reflow soldering</b></p>  <p>The specimen shall be passed through the reflow oven with the condition shown in the above profile for 1 time.<br/>The specimen shall be stored at standard atmospheric eric conditions for 1 hour, after which the measurement shall be made.</p> |
| Terminal strength                               | The terminal electrode and the ferrite must not be damaged.   | <p>Solder a chip to test substrate , and then laterally apply a load 9.8N in the arrow direction.</p>    |
| Strength on PC board bending                    | The terminal electrode and the ferrite must not be damaged.   | <p>Solder a chip to test substrate and then apply a load.</p>  <p>Test board:FR4 100×40×1mm<br/>Fall speed:1mm/sec.<br/>Dimensions in mm</p>   |
| High temperature resistance                     | <p>Impedance:Within±20% of the initial value.</p> <p>Insulation resistance and DC resistance on the specification(refer to clause 2-1) shall be met.</p> <p>The terminal electrode and the ferrite must not be damaged.</p> | <p>After the samples shall be soldered onto the test circuit board,the test shall be done.</p> <p>Measurement : After placing for 24 hours min.</p> <p>Temperature : +125±2°C</p> <p>Applied voltage : Rated voltage</p> <p>Applied current : Rated current</p> <p>Testing time : 500±12 hours</p>   |

## MECHANICAL

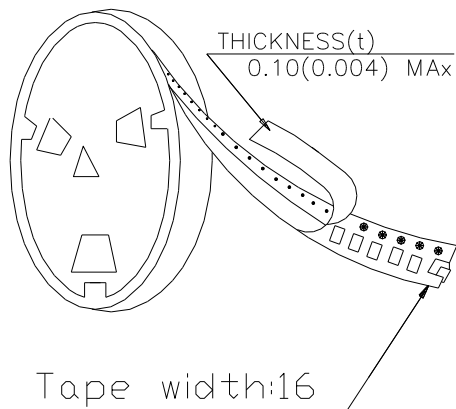
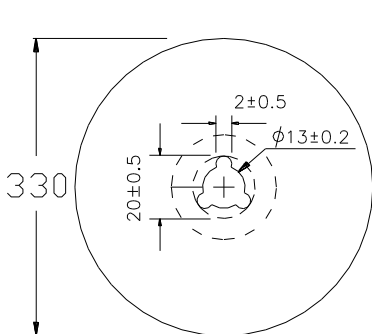
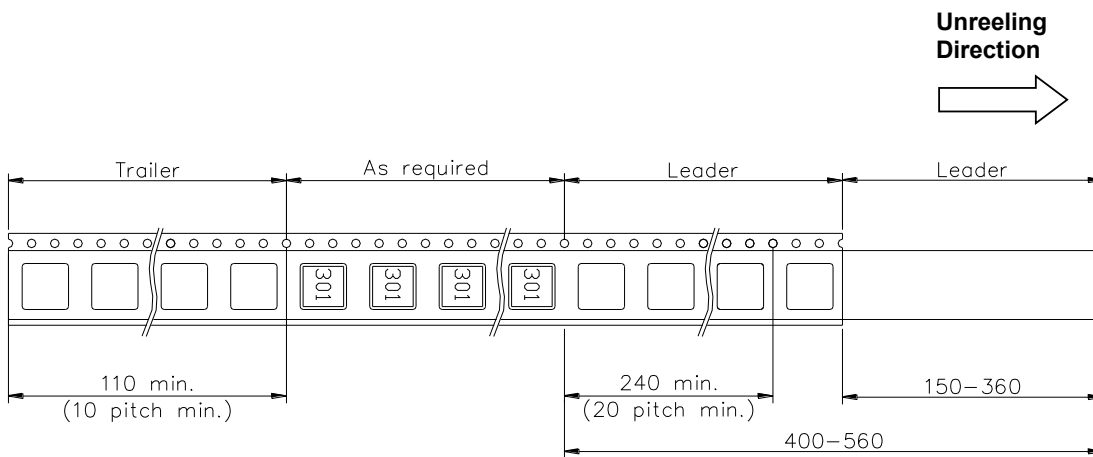
| TEST ITEM               | SPECIFICATION   | TEST DETAILS  |
|-------------------------|---|---|
| Humidity resistance     | <p>Impedance: Within <math>\pm 20\%</math> of the initial value.</p> <p>Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met.</p> <p>The terminal electrode and the ferrite must not be damaged.</p> | <p>After the samples shall be soldered onto the test circuit board, the test shall be done.</p> <p>Measurement : After placing for 24 hours min.</p> <p>Temperature : <math>+60 \pm 2^\circ\text{C}</math> , Humidity : 90 to 95 %RH</p> <p>Applied voltage : Rated voltage</p> <p>Applied current : Rated current</p> <p>Testing time : <math>500 \pm 12</math> hours</p>  |
| Thermal shock           | <p>Impedance: Within <math>\pm 20\%</math> of the initial value.</p> <p>Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met.</p> <p>The terminal electrode and the ferrite must not be damaged.</p> |   |
| Low temperature storage | <p>Impedance: Within <math>\pm 20\%</math> of the initial value.</p> <p>Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met.</p> <p>The terminal electrode and the ferrite must not be damaged.</p> | <p>After the samples shall be soldered onto the test circuit board, the test shall be done.</p> <p>Measurement : After placing for 24 hours min.</p> <p>Temperature : <math>-40 \pm 2^\circ\text{C}</math></p> <p>Testing time : <math>500 \pm 12</math> hours</p>  |
| Vibration               | <p>Impedance: Within <math>\pm 20\%</math> of the initial value.</p> <p>Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met.</p> <p>The terminal electrode and the ferrite must not be damaged.</p> | <p>After the samples shall be soldered onto the test circuit board, the test shall be done.</p> <p>Frequency : 10 to 55 Hz</p> <p>Amplitude : 1.52 mm</p> <p>Dimension and times : X ,Y and Z directions for 2 hours each.</p>  |
| Solderability           | <p>New solder More than 75%</p>   | <p>Flux (rosin, isopropyl alcohol{JIS-K-1522}) shall be coated over the whole of the sample before hard, the sample shall then be preheated for about 2 minutes in a temperature of <math>130 \sim 150^\circ\text{C}</math> and after it has been immersed to a depth 0.5mm below for <math>3 \pm 0.2</math> seconds fully in molten solder M705 with a temperature of <math>245 \pm 2^\circ\text{C}</math>. More than 75% of the electrode sections shall be covered with new solder smoothly when the sample is taken out of the solder bath.</p> |

## Packaging

### CARRIER TAPE DIMENSIONS (mm)



### TAPING DIMENSIONS (mm)



### Packing Quantity

1500 pcs./reel

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