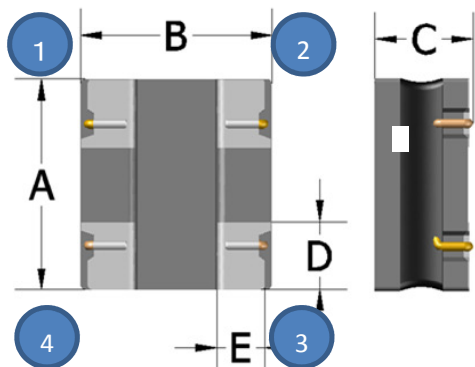
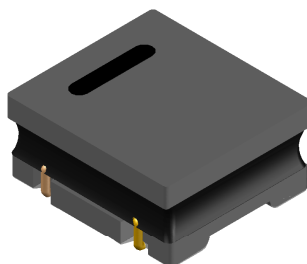


PACKING DIMENSIONS (mm)

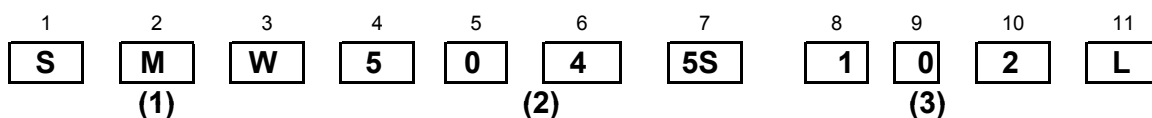


Marking



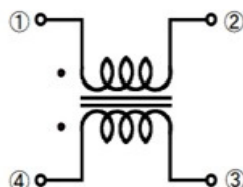
| 5045 | Dimensions |
|------|------------|
| A | 5.0 ± 0.3 |
| B | 4.5 ± 0.3 |
| C | 2.5 Max. |
| D | 1.6 ± 0.3 |
| E | 1.4 ± 0.3 |

EXPLANATION OF PART NUMBERS



- (1) Product name
- (2) Shapes and dimension
- (3) Impedance 【 at 100MHz
101:100Ω

Equivalent Circuits



No polarity

ELECTRICAL CHARACTERISTICS

| P/N | Z(Ω) | | Rated current | DCR (Ω) | Rated Voltage | Withstand Voltage | Insulation Resistance |
|----------------|---------------------|---------------|----------------|---------|----------------|-------------------|-----------------------|
| | Point1-Point2 | point3-point4 | | | | | |
| | Impedance at 100MHz | | Idc(A) [Max] | ±40% | Vdc (V)Typical | Vdc (V)Typical | IR (MΩ)Min. |
| SMW5045S102LTT | 1000 Typ. | | 3 | 0.024 | 50 | 125 | 10 |

Operating temperature : -40 to +85°C

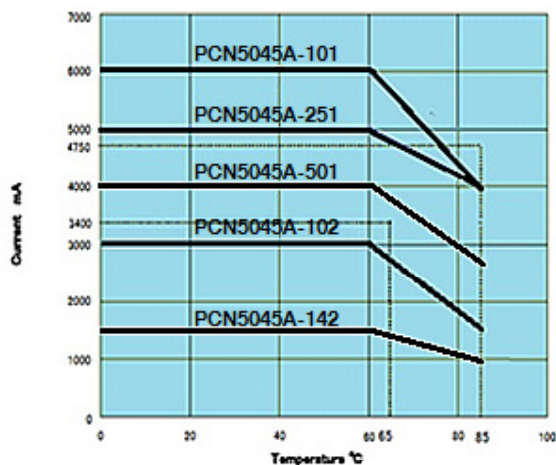
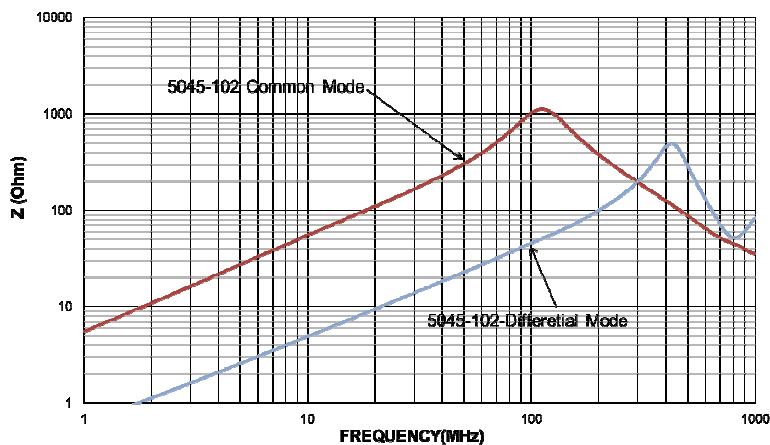
Storage temp. and humidity : -40 to +85°C ,70%RH max

Typical Heat Rating DC Current would cause an approximately ΔT of 40°C

If Use Wave soldering is there will be some risk. Re-flow soldering temperatures below 240 degrees, there will be unwitting risk

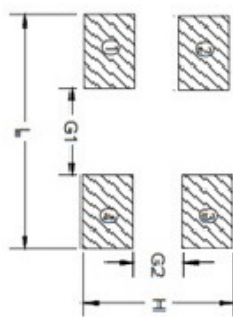
Solder standard according to IPC-A-610D 8.2.1 Chip Components - Bottom Only Terminations

PERFORMANCE CURVES



Recommended Footprint(mm)

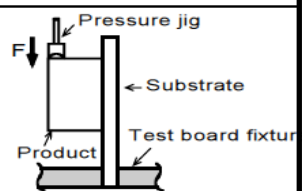
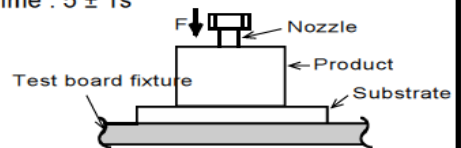
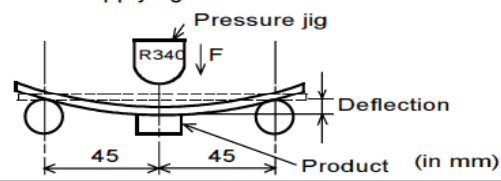
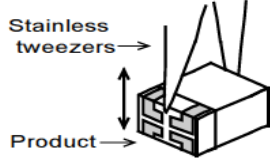
| 5045 | Dimensions |
|------|------------|
| L | 5.5 ref. |
| H | 4.6 ref. |
| G1 | 2.35 ref. |
| G2 | 1.85 ref. |



Electrical Performance

| No. | Item | Specifications | Test Method |
|-----|--------------------------------|--------------------------------|---|
| 1 | Impedance ($ Z $) (at 10MHz) | Meet item 3. | Measuring Equipment : 4291B or the equivalents. Measuring Frequency : 10MHz |
| 2 | Insulation Resistance (I.R.) | | Measuring Equipment : 4339B or the equivalents. Test Voltage : 2times for Rated Voltage Time : within 60 s |
| 3 | DC Resistance (Rdc) | | Measuring Current : 100 mA max. (In case of doubt in the above mentioned standard condition,measure by 4 terminal method.) |
| 4 | Withstanding Voltage | Products shall not be damaged. | Voltage : 125 V(DC) Time : 60 s Charge Current : 1 mA max. |

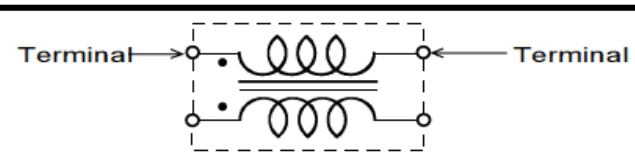
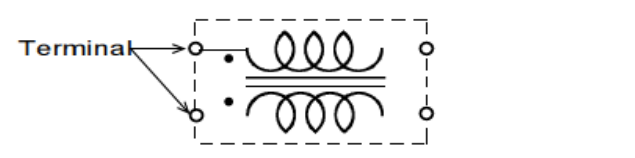
Mechanical Performance

| No. | Item | Specifications | Test Method | | | | | | | | | | |
|-----------------------------|------------------------------------|---|---|--|------------|-------------|-----------------------------|--------------|------|-----------|----------------------|-------------|---|
| 1 | Appearance and Dimensions | | Visual Inspection and measured with Slide Calipers. | | | | | | | | | | |
| 2 | Bonding Strength and Core Strength | No evidence of chipping, breakage. No evidence of coming off glass-epoxy substrate. | Applying Force (F) : 10N Applying Time : 5 ± 1s  | | | | | | | | | | |
| 3 | Body strength | No evidence of chipping, breakage. | Applying Force (F) : 10N Applying Time : 5 ± 1s  | | | | | | | | | | |
| 4 | Bending Strength | Meet Table 1. <table border="1" data-bbox="438 884 821 1108"> <thead> <tr> <th colspan="2">Table 1</th> </tr> </thead> <tbody> <tr> <td>Appearance</td> <td>No damaged.</td> </tr> <tr> <td>Impedance change (at 10MHz)</td> <td>within ± 20%</td> </tr> <tr> <td>I.R.</td> <td>10MΩ min.</td> </tr> <tr> <td>Withstanding Voltage</td> <td>No damaged.</td> </tr> </tbody> </table> | Table 1 | | Appearance | No damaged. | Impedance change (at 10MHz) | within ± 20% | I.R. | 10MΩ min. | Withstanding Voltage | No damaged. | Substrate : Glass-epoxy (t=1.6mm) Deflection : 2.0mm Keeping Time : 30 s Speed of Applying Force : 0.5 mm/s  |
| Table 1 | | | | | | | | | | | | | |
| Appearance | No damaged. | | | | | | | | | | | | |
| Impedance change (at 10MHz) | within ± 20% | | | | | | | | | | | | |
| I.R. | 10MΩ min. | | | | | | | | | | | | |
| Withstanding Voltage | No damaged. | | | | | | | | | | | | |
| 5 | Vibration | | Products shall be soldered on the substrate. Oscillation Frequency : 10 to 55 to 10Hz for 1 min. Total Amplitude : 1.5mm Testing Time : A period of 2 hours in each of 3 mutually perpendicular directions (Total 6 hours). | | | | | | | | | | |
| 6 | Drop | | Products shall be dropped concrete or steel board. Method : free fall Height : 1m The Number of Times : 10 Times | | | | | | | | | | |
| 7 | Solderability | The electrodes shall be at least 90% covered with new solder coating. | Flux : Ethanol solution of rosin, 25(wt)% Pre heating : 150 ± 10°C, 1 minute. Solder : (1) Sn/Pb = 60/40 (2) Sn-3.0Ag-0.5Cu Solder Temperature : (1) 230±5°C (2) 245±5°C Immersion Time : 4 ± 1s Immersion and Immersion rates : 25mm/s  | | | | | | | | | | |
| 8 | Resistance to Soldering heat | Meet Table 1. | Flux : Ethanol solution of rosin, 25(wt)% Pre heating : 150 ± 10°C, 1 minute. Solder : Sn/Pb = 60/40 or Sn-3.0Ag-0.5Cu Solder Temperature : 270 ± 5°C Immersion Time : 5 ± 1s Immersion and Immersion rates : 25mm/s Then measured after exposure in the room condition for 4 to 48 hours. | | | | | | | | | | |

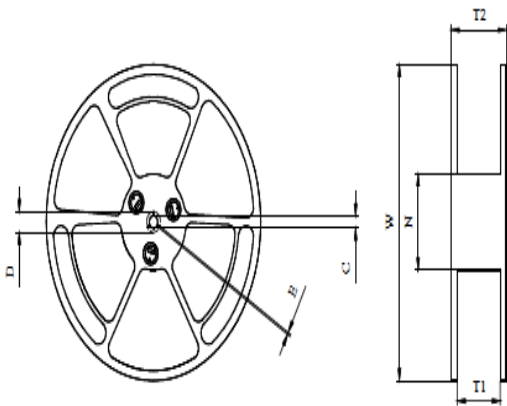
Enviromental Performance
(Product shall be solderd on the glass-epoxy substrate (t=1.6mm))

| No. | Item | Specifications | Test Method |
|-----|-------------------|----------------|--|
| 1 | Temperature Cycle | Meet Table 1. | 1 cycle 1 step : -25 °C (+0, -3)°C / 30min (+ 3,- 0) min 2 step : Ordinary temp. / 3 min max. 3 step : +85 °C (+3, -0)°C / 30min (+ 3,- 0) min 4 step : Ordinary temp. / 3 min max. Total of 10 cycles Then measured after exposure in the room condition for 4 to 48 hours. |
| 2 | Humidity | | Temperature : 40 ± 2 °C Humidity : 90 to 95 %(RH) Time : 1000 h (+48 h , -0 h) Then measured after exposure in the room condition for 4 to 48 hours. |
| 3 | Humidity Load | | Temperature : 40 ± 2 °C Humidity : 90 to 95 %(RH) Test Voltage : Rated Voltage Time : 1000 h (+48 h , -0 h) Then measured after exposure in the room condition for 4 to 48 hours. (ref. Item) |
| 4 | Heat life | | Temperature : 85 ± 2 °C Test Voltage : 2times for Rated Voltage Time : 1000 h (+48 h , -0 h) Then measured after exposure in the room condition for 4 to 48 hours. (ref. Item) |
| 5 | Cold Resistance | | Temperature : - 40 ± 2 °C Time : 1000 h (+48 h , -0 h) Then measured after exposure in the room condition for 4 to 48 hours. (ref. Item) |

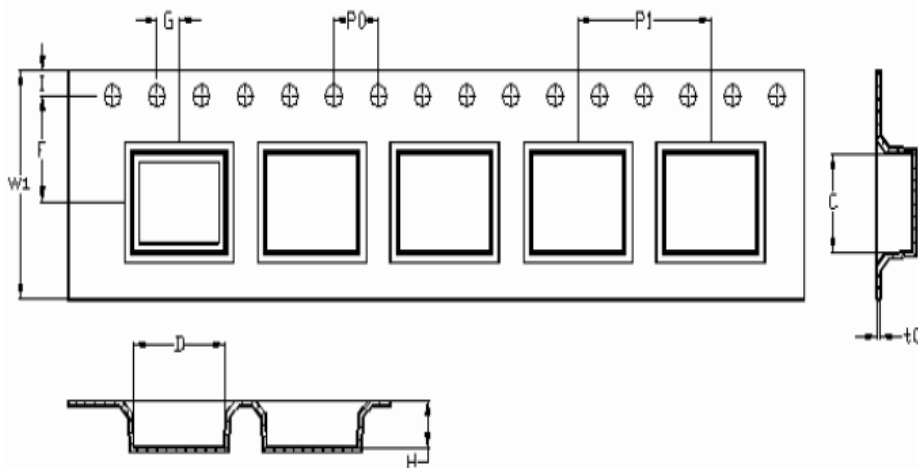
Terminal to be Tested
When measuring and suppling the voltage, the following terminal is applied.

| No. | Item | Terminal to be Tested |
|-----|--|--|
| 1 | Impedance (Z) (Measurement Terminal) |  |
| 2 | DC Resistance (Rdc) (Measurement Terminal) | |
| 3 | Insulation Resistance (I.R.) (Measurement Terminal) |  |
| 4 | Withstanding Voltage (Measurement Terminal) | |
| 5 | Humidity Load (Supply Terminal) | |
| 6 | Heat Life (Supply Terminal) | |

Reel Dimension & Tape Dimension



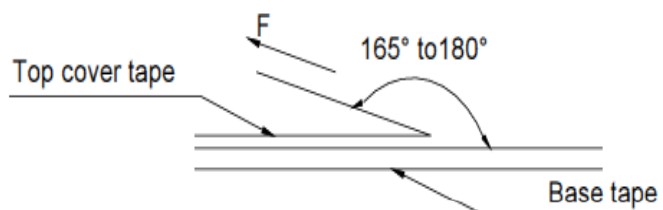
| Type | W(mm) | D(mm) | C(mm) | T1(mm) | N(mm) | T2(mm) | E(mm) |
|-------|---------|-------------|------------|------------|---------|----------|----------|
| φ 330 | 330±1.5 | 21.5+0.5/-0 | 13+0.5-0.2 | 2.5+0.5/-0 | 100±1.5 | 16.9±0.4 | 2.00±0.5 |



| Series | size | W1(mm) | l(mm) | F(mm) | P0(mm) | G(mm) | P1(mm) | C(mm) | t0(mm) | D(mm) | H(mm) |
|----------|------|-----------|----------|----------|----------|----------|----------|---------|-----------|----------|----------|
| PCN5045A | 5045 | 12.00±0.3 | 1.75±0.1 | 5.50±0.1 | 4.00±0.1 | 2.00±0.1 | 8.00±0.1 | 4.9±0.1 | 0.35±0.05 | 5.10±0.1 | 2.70±0.1 |

Packaging Information

| Chip size | Chip/Reel |
|-----------|-----------|
| PCN5045A | 2500 |

Tearing Off Force


The force for tearing off cover tape is 15 to 80 grams in the arrow direction under the following conditions.

| Room Temp. (°C) | Room Humidity (%) | Room atm (hPa) | Tearing Speed mm/min |
|-----------------|-------------------|----------------|----------------------|
| 5~35 | 45~85 | 860~1060 | 300 |

Application Notice
• Storage Conditions

To maintain the solderability of terminal electrodes:

1. products meet IPC/JEDEC J-STD-020D standard-MSL, level 1.
2. Temperature and humidity conditions: Less than 40°C and 60% RH.
3. Recommended products should be used within 12 months form the time of delivery.
4. The packaging material should be kept where no chlorine or sulfur exists in the air.

• Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

Soldering and Mounting

1. Soldering

Mildly activated rosin fluxes are preferred. terminations are suitable for all wave and re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

1.1 Solder re-flow:

Recommended temperature profiles for re-flow soldering in Figure 1.

1.2 Soldering Iron(Figure 2):

Products attachment with a soldering iron is discouraged due to the inherent process control limitations. In the case that a soldering iron must be employed, the following precautions are recommended.

- Preheat circuit and products to 150°C
- Never contact the ceramic with the iron tip
- Use a 20 watt soldering iron with tip diameter of 1.0mm
- 355°C tip temperature (max)
- 1.0mm tip diameter (max)
- Limit soldering time to 4~5 sec.

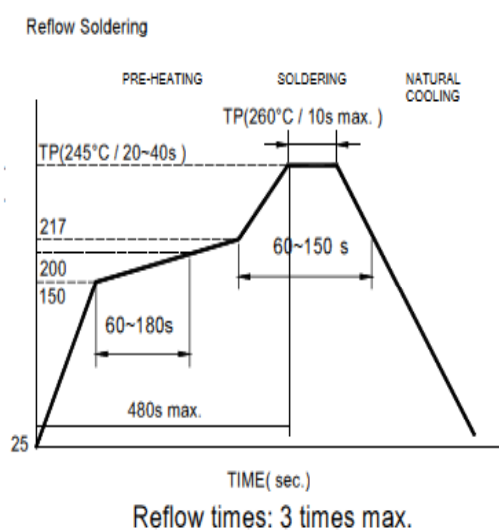


Fig.1

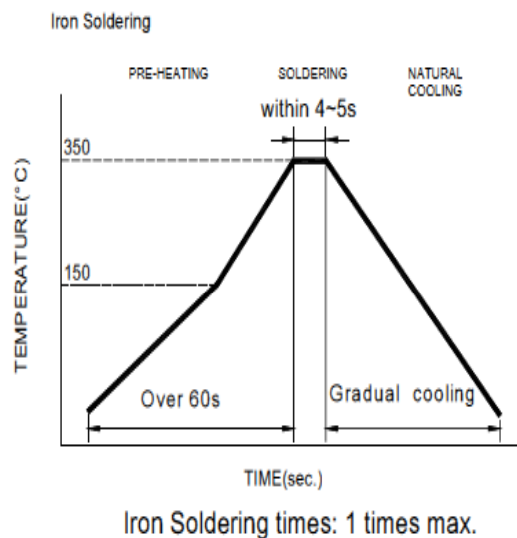


Fig.2

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