

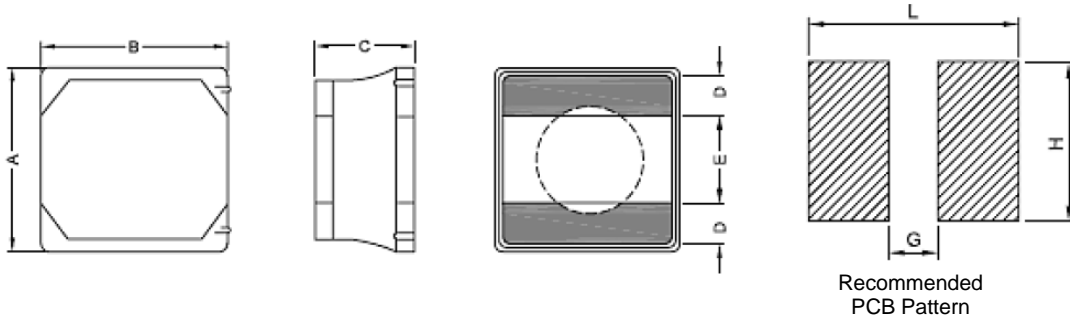
1. Part No. Expression

**PNS4010T1R0MF**

(a) (b) (c) (d) (e)(f)

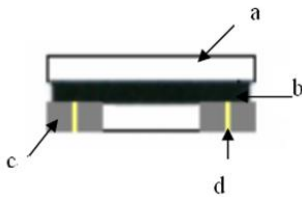
- (a) Series Code
- (b) Dimension Code
- (c) Material Code
- (d) Inductance Code
- (e) Tolerance Code
- (f) RoHS Compliant

2. Configuration & Dimensions (Unit: mm)



A	B	C	D	E	L	G	H
4.0±0.2	4.0±0.2	1.0 Max	1.2 Ref	1.2 Ref	4.2 Ref	1.2 Ref	4.2 Ref

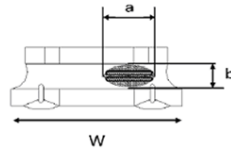
3. Material List



- a) Core
- b) Coating
- c) Termination
- d) Wire

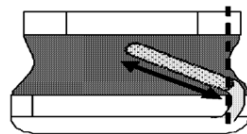
Void appearance tolerance Limit

Size of voids occurring to coating resin is specified below.



External appearance criterion for exposed wire

Exposed end of the winding wire at the secondary side should be 2mm and below.



Appearance of exposed wire tolerance limit:

1. Width direction ( dimension a ) : Acceptable when  $a \leq w/2$   
Nonconforming when  $a > w/2$
2. Length direction ( dimension b ) : Dimension b is not specified.
3. The total area of exposed wire occurring to each sides is not greater than 50% of coating resin area, and is acceptable.

NOTE: Specifications subject to change without notice. Please check our website for latest information.



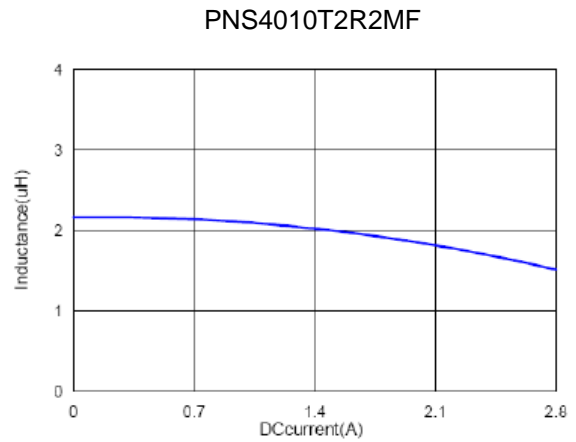
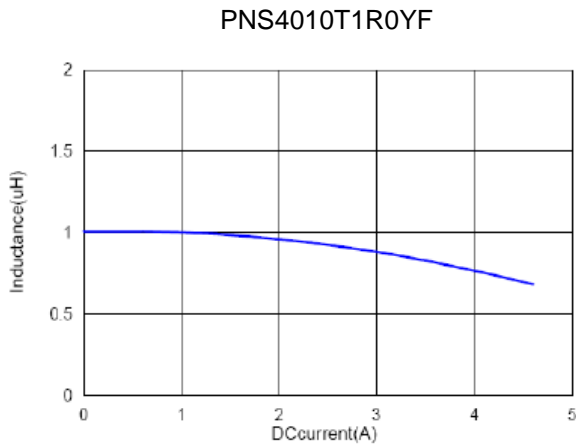
4. General Specification

- a) Isat: Based on inductance change ( $\Delta L/L_0: \leq -30\%$ )@ ambient temp. 25°C
- b) Irms: Based on temperature rise ( $\Delta T: 40^\circ\text{C typ.}$ ) max
- c) Operating Temperature: -40°C to +125°C
- d) Storage condition (component in its packaging)
  - i) Temperature: -10 to +40° C
  - ii) Humidity: 60% RH

5. Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	SRF (MHz) Typ	DCR (Ω) ±20%	Isat (A) Typ	Irms (A) Typ
PNS4010T1R0YF	1.0	±30%	1V100K	116	0.056	2.00	1.90
PNS4010T2R2MF	2.2	±20%	1V100K	73	0.085	1.20	1.50
PNS4010T3R3MF	3.3	±20%	1V100K	58	0.100	1.10	1.40
PNS4010T4R7MF	4.7	±20%	1V100K	47	0.140	0.95	1.20
PNS4010T6R8MF	6.8	±20%	1V100K	38	0.200	0.80	1.00
PNS4010T100MF	10	±20%	1V100K	31	0.300	0.62	0.75
PNS4010T150MF	15	±20%	1V100K	24	0.430	0.54	0.60
PNS4010T220MF	22	±20%	1V100K	19	0.570	0.45	0.50

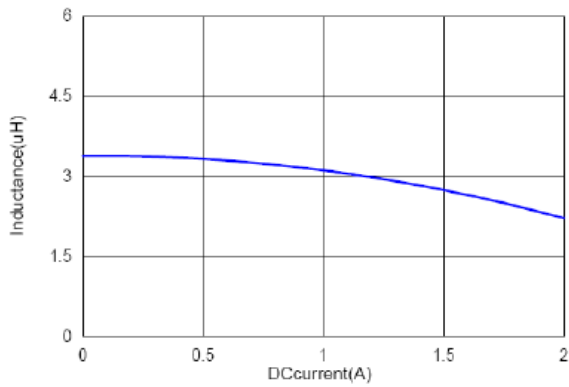
6. Characteristics Curves



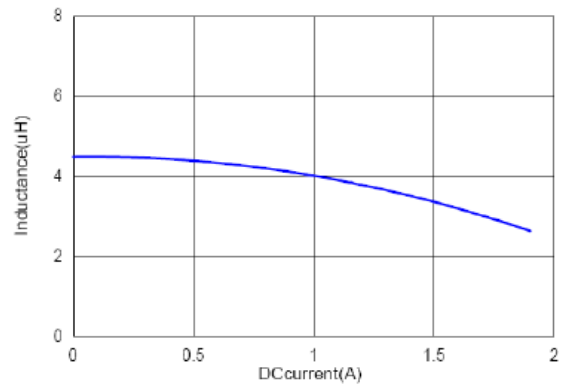
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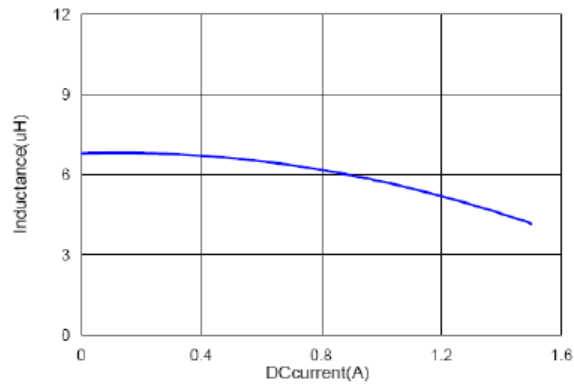
PNS4010T3R3MF



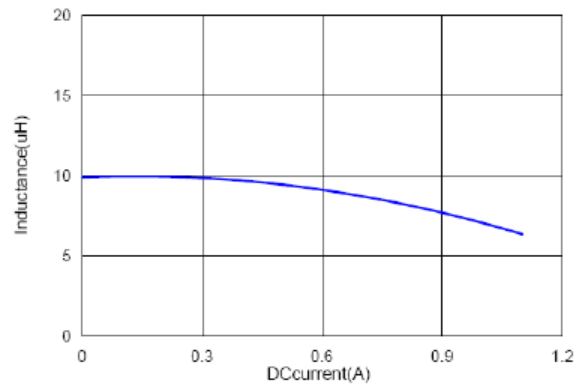
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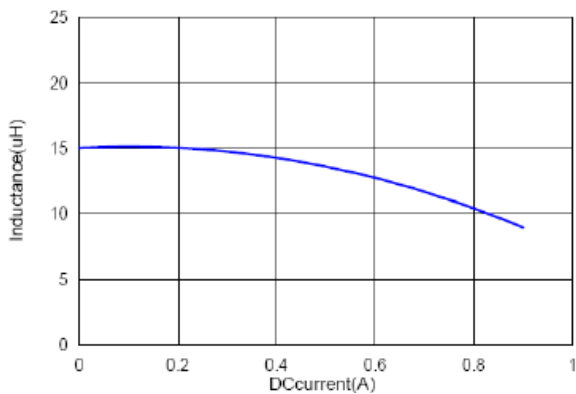
PNS4010T6R8MF



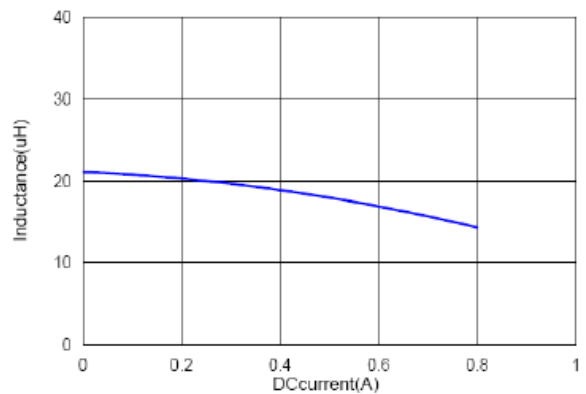
PNS4010T100MF



PNS4010T150MF



PNS4010T220MF



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## 7. Soldering and Mounting

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

### 7-1 Solder Re-flow

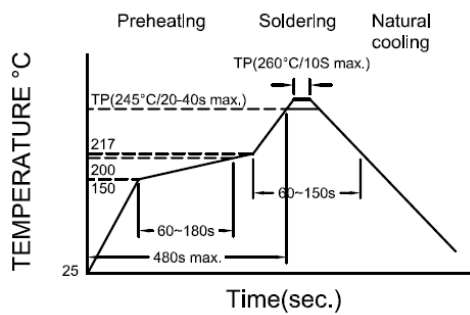
Recommended temperature profiles for re-flow soldering in Figure 1.

### 7-2 Soldering Iron (Figure 2)

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

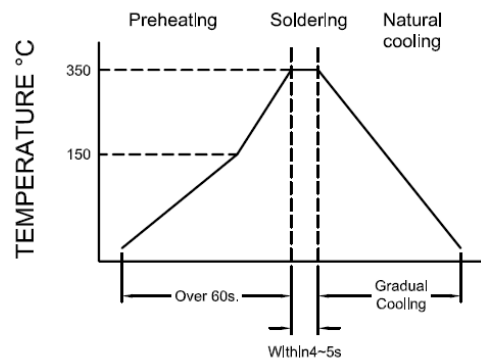
Notes:

- a) Preheat circuit and products to 150°C.
- b) 355°C tip temperature (Max.)
- c) Never contact the ceramic with the iron tip.
- d) 1.0mm tip diameter (Max.)
- e) Use a 20 Watt soldering iron with tip diameter of 1.0mm
- f) Limit soldering time to 4~5 secs.



Reflow times: 3 times max

Fig.1



Iron Soldering times: 1 times max

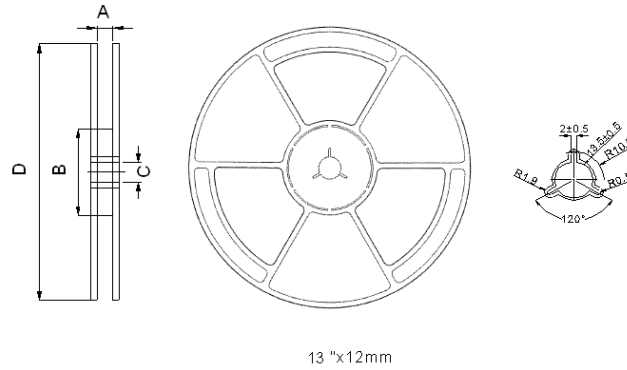
Fig.2

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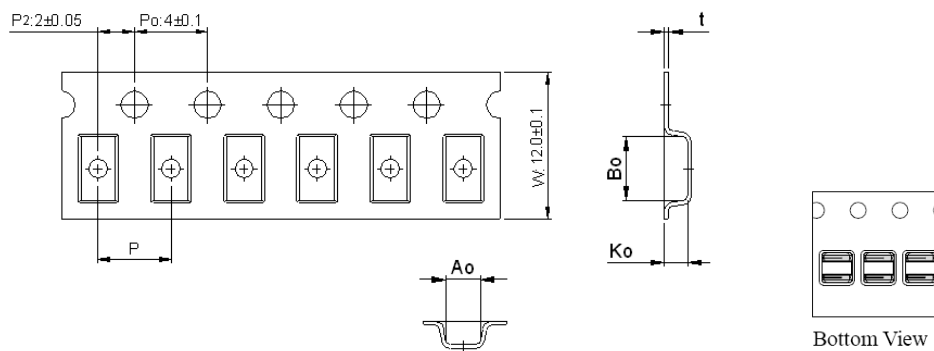
## 8. Packaging Information

### 8-1 Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13"x12mm	12±1.5	100±0.5	13.2±0.5	330±0.5

### 8-2 Tape Dimension (Unit: mm)



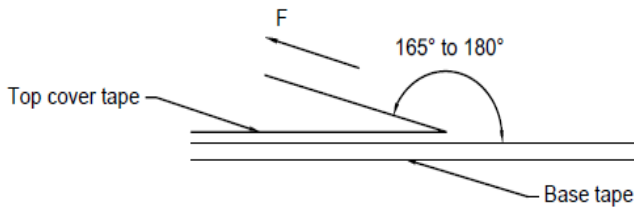
Bo(mm)	Ao(mm)	Ko(mm)	P(mm)	t(mm)
4.35±0.1	4.50±0.1	1.55±0.1	8.0±0.10	0.25±0.05

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8-3 Packaging Quantity

Chip / Reel	5,000
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8-4 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:**

1. Storage Conditions:

To maintain the solderability of terminal electrodes:

- a) Recommended products should be used within 12 months from the time of delivery.
- b) The packaging material should be kept where no chlorine or sulfur exists in the air.

2. Transportation:

- a) Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- b) Vacuum pick up is strongly recommended for individual components.
- c) Bulk handling should ensure that abrasion and mechanical shock are minimized.

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