

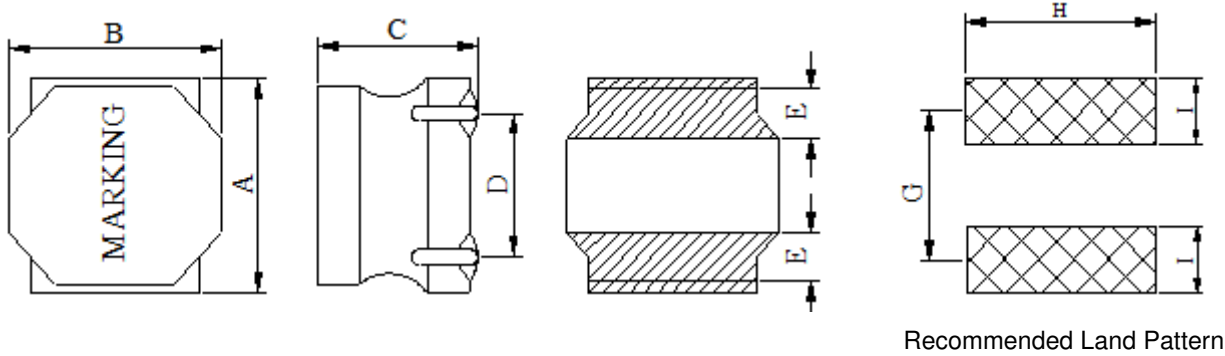
1. Part No. Expression

PNS60451R0YWF

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

- | | |
|---------------------|--------------------|
| (a) Series Code | (d) Tolerance Code |
| (b) Dimension Code | (e) Special Code |
| (c) Inductance Code | (f) Packaging Code |

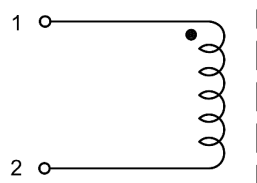
2. Configuration & Dimensions: (Unit:- mm)



Note: Solder paste thickness at 0.12mm and above is recommended.

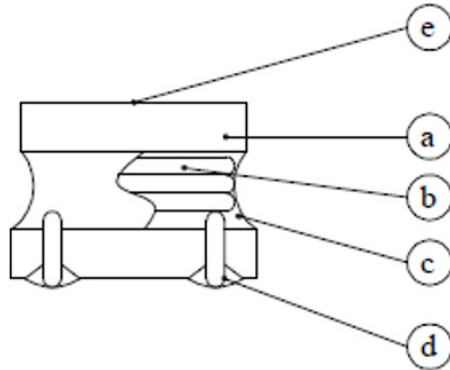
A	B	C	D	E	G	H	I
6.0±0.2	6.0±0.2	4.5 Max	4.0±0.2	1.35±0.2	4.7 Ref	5.7 Ref	1.6 Ref

3. Schematic



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

4. Material List



- a) Core
- b) Wire
- c) Adhesive
- d) Terminal
- e) Ink

5. General Specifications

- (a) Operating Temp. : -40°C to +125°C (Including self-temperature rise).
- (b) Storage Temp. : -40°C to +125°C.
- (c) Irms: Based on temperature rise (ΔT : 40°C Typ).
- (d) Isat: Based on inductance change ($\Delta L/L_0$: 30% Max).
- (e) Storage condition (component in its packaging)
 - i) Temperature: Less than 40°C
 - ii) Humidity: 60% RH

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6. Electrical Characteristics

Part Number	Inductance (uH)	Test Freq. (Hz)	DCR (Ω) ±30%	Isat (A) Max	Irms (A) Max	SRF (MHz) Typ	Marking
PNS60451R0YWF	1.0±30%	1V/100K	0.014	8.5	4.2	110	1R0
PNS60451R2YWF	1.2±30%	1V/100K	0.016	8.0	4.0	100	1R2
PNS60451R3YWF	1.3±30%	1V/100K	0.016	8.0	4.0	95	1R3
PNS60451R5YWF	1.5±30%	1V/100K	0.018	7.0	3.7	65	1R5
PNS60451R8YWF	1.8±30%	1V/100K	0.018	7.0	3.7	60	1R8
PNS60452R0YWF	2.0±30%	1V/100K	0.021	6.0	3.5	52	2R0
PNS60452R2YWF	2.2±30%	1V/100K	0.021	6.0	3.5	52	2R2
PNS60452R3YWF	2.3±30%	1V/100K	0.021	6.0	3.5	52	2R3
PNS60453R0YWF	3.0±30%	1V/100K	0.024	5.0	3.2	35	3R0
PNS60453R3YWF	3.3±30%	1V/100K	0.024	5.0	3.2	32	3R3
PNS60453R6MWF	3.6±20%	1V/100K	0.028	4.4	3.1	28	3R6
PNS60454R5MWF	4.5±20%	1V/100K	0.031	4.0	3.0	25	4R5
PNS60454R7MWF	4.7±20%	1V/100K	0.031	4.0	3.0	24	4R7
PNS60455R6MWF	5.6±20%	1V/100K	0.036	3.9	2.9	23	5R6
PNS60456R3MWF	6.3±20%	1V/100K	0.038	3.8	2.8	15	6R3
PNS60456R8MWF	6.8±20%	1V/100K	0.038	3.8	2.8	14	6R8
PNS6045100MWF	10.0±20%	1V/100K	0.047	3.0	2.5	12	100
PNS6045150MWF	15.0±20%	1V/100K	0.077	2.3	1.9	10	150
PNS6045220MWF	22.0±20%	1V/100K	0.115	1.9	1.5	7	220
PNS6045330MWF	33.0±20%	1V/100K	0.145	1.5	1.4	6	330
PNS6045470MWF	47.0±20%	1V/100K	0.220	1.3	1.1	5	470
PNS6045560MWF	56.0±20%	1V/100K	0.310	1.1	1.0	4.5	560
PNS6045680MWF	68.0±20%	1V/100K	0.330	1.0	0.90	4	680
PNS6045820MWF	82.0±20%	1V/100K	0.460	0.90	0.80	3.9	820
PNS6045101MWF	100.0±20%	1V/100K	0.500	0.80	0.70	3	101
PNS6045121MWF	120.0±20%	1V/100K	0.620	0.75	0.70	3	121
PNS6045151MWF	150.0±20%	1V/100K	0.800	0.70	0.65	2.8	151
PNS6045181MWF	180.0±20%	1V/100K	0.930	0.65	0.60	2.6	181
PNS6045221MWF	220.0±20%	1V/100K	1.200	0.60	0.50	2.4	221
PNS6045331MWF	330.0±20%	1V/100K	1.800	0.50	0.40	2.2	331
PNS6045471MWF	470.0±20%	1V/100K	2.000	0.40	0.35	2.0	471

Tolerance: Y = ±30%; M = ±20%

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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.

Note:

- a) Preheat circuit and products to 150°C.
- b) 350°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 sec.

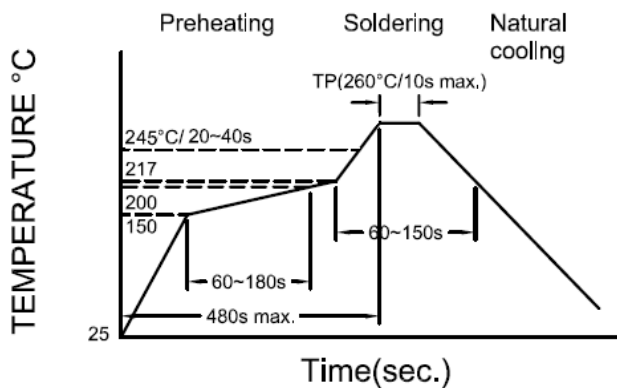


Figure 1: Re-flow Soldering Time
3 times Max.

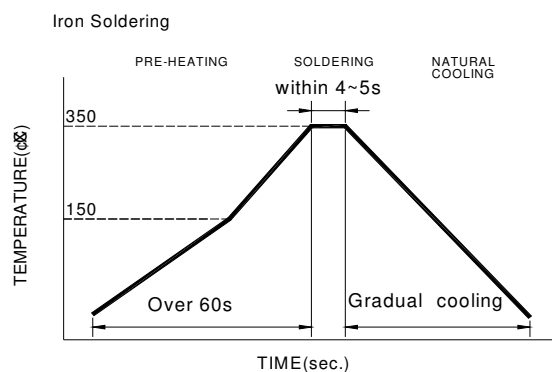
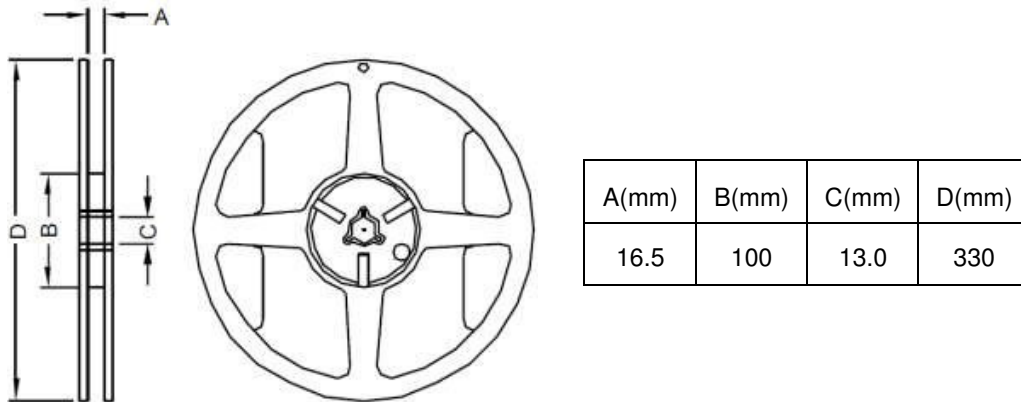


Figure 2: Iron Soldering Time
1 times Max.

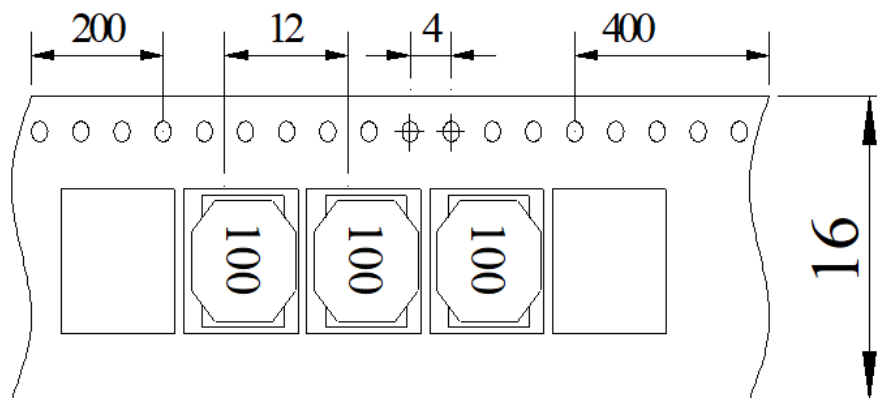
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8. Packaging Information

8-1. Reel Dimension



8-2. Tape Dimension

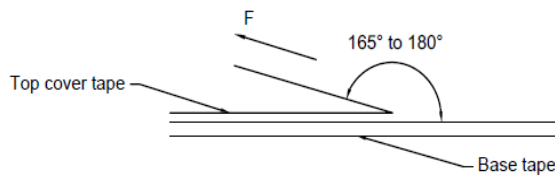


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8-3 Packaging Quantity

Chip Size	PNS6045
Chip/Reel	1000
Carton	6000

8-4 Tearing Off Force



The force for tearing off cover tape is 10 to 130 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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