SMD Power Inductors– *PDC1005 Series*

1. Part No. Expression:

P D C 1 0 0 5 1 0 0 M Z F

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

(a) Series Code

(b) Dimension Code

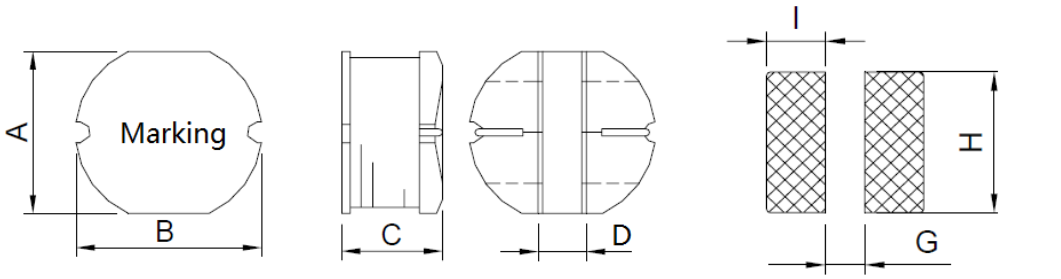
(c) Inductance Code

(d) Tolerance Code

(e) X, Y, Z: Standard Part

(f) RoHS Compliant

2. Configuration & Dimensions :



Recommended PC Board Pattern

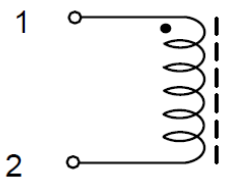
Note:

1. Marking : Inductance code (refer table on next page)

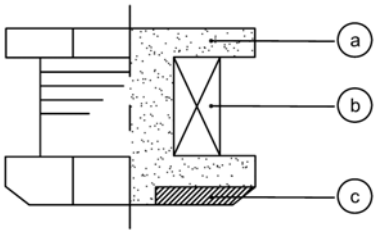
Unit: mm

A	B	C	D	G	H	I
9.0±0.4	10.0±0.4	5.4±0.4	3.0±0.3	2.50 Ref.	9.50 Ref.	3.75 Ref.

3. Schematic



4. Material List



a) Drum Core
b) Wire
c) Electrode

5. General Specification

a) Operating Temperature: - 40°C to +125°C
b) Storage Temperature: - 40°C to +125°C
c) Humidity Range: 90 - 95% RH
d) Heat Rated Current (Irms) will cause the coil temperature rise Δt of 40°C Max.
e) Storage Condition (component in its packaging)
   i) Temperature: Less than 60°C
   ii) Humidity: ≤ 90%

6. Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (Hz)	DCR(mΩ) Max.	IDC(mA) Drop%	Part Marking
PDC1005100MZF	10	1V/2.52M	60	2600	100
PDC1005120MZF	12	1V/2.52M	70	2450	120
PDC1005150MZF	15	1V/2.52M	80	2270	150
PDC1005180MZF	18	1V/2.52M	90	2150	180
PDC1005220MZF	22	1V/2.52M	100	1950	220
PDC1005270MZF	27	1V/2.52M	110	1760	270
PDC1005330MZF	33	1V/2.52M	120	1500	330
PDC1005390MZF	39	1V/2.52M	140	1370	390
PDC1005470KZF	47	1V/2.52M	170	1280	470
PDC1005560KZF	56	1V/2.52M	190	1170	560
PDC1005680KZF	68	1V/2.52M	220	1110	680
PDC1005820KZF	82	1V/2.52M	250	1000	820
PDC1005101KZF	100	1V/1K	350	970	101
PDC1005121KZF	120	1V/1K	400	890	121
PDC1005151KZF	150	1V/1K	470	780	151
PDC1005181KZF	180	1V/1K	630	720	181

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

Part Number	Inductance (uH)	Test Frequency (Hz)	DCR(mΩ) Max.	IDC(mA) Drop%	Part Marking
PDC1005221KZF	220	1V/1K	730	660	221
PDC1005271KZF	270	1V/1K	970	570	271
PDC1005331KZF	330	1V/1K	1150	520	331
PDC1005391KZF	390	1V/1K	1300	480	391
PDC1005471KZF	470	1V/1K	1480	420	471
PDC1005561KZF	560	1V/1K	1900	330	561
PDC1005681KZF	680	1V/1K	2250	280	681
PDC1005821KZF	820	1V/1K	2550	240	821

Tolerance: K = ± 10% ; M = ± 20%

7. Soldering:

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

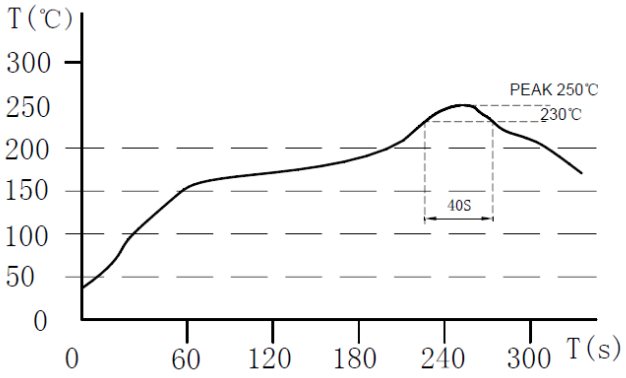
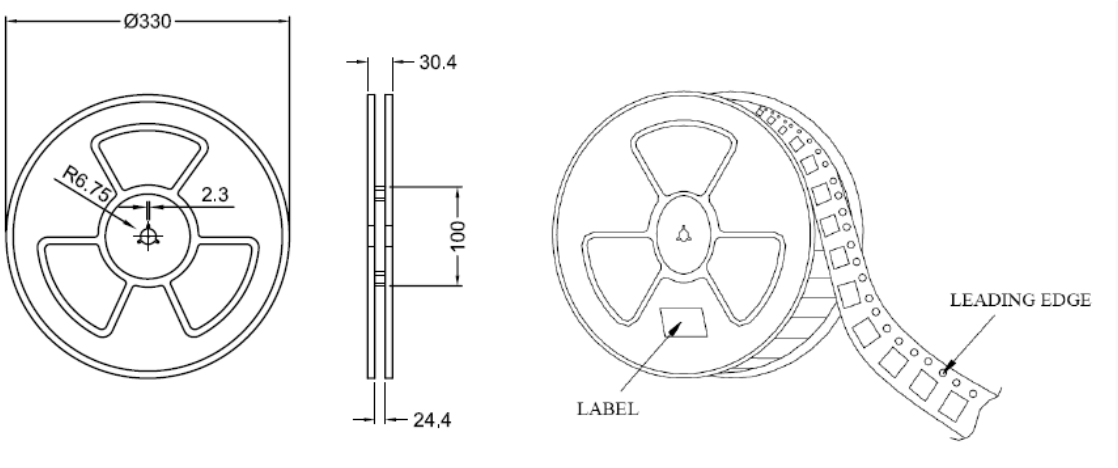


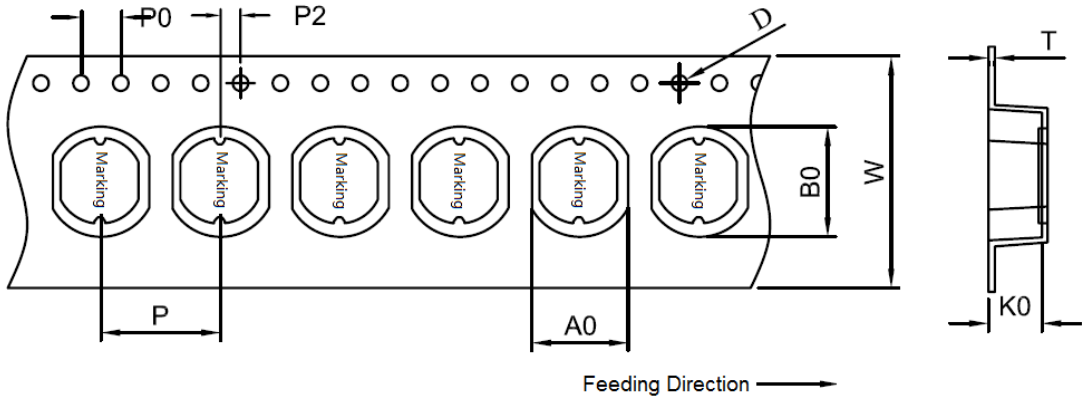
Figure 1: Reflow time: 2 times max

8. Packaging Information:

8-1 Reel Dimension:



8-2 Tape Dimension:



Bo(mm)	Ao(mm)	Ko(mm)	P(mm)	W(mm)	P0(mm)	P2(mm)	T(mm)	D(mm)
10.4±0.1	9.4±0.1	6.2±0.1	12.0±0.1	24.0+0.3/-0.1	4.0±0.1	2.0±0.1	0.40	1.5+0.1/-0

8-3 Packaging Quantity:

PDC	1005
Reel	1000
Carton	5000

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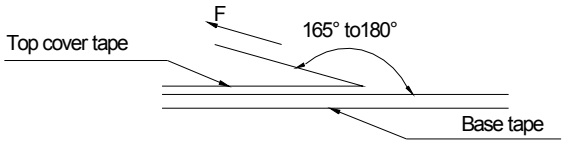
8-4 Tearing Off Force:



The force for tearing off cover tape is 0.1N to 1.3N in the arrow direction under the following conditions.

Room Temp. (°C)	Room Humidity (%)	Room atm (kPa)	Tearing Speed mm/min
15~35	25~85	86~106	300

Application Notice:

1. Storage Conditions:

To maintain the solderabililty of terminal electrodes:

a) Recommended products should be used within 6 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.