PREMO RFID Components

PN0805 , PN3316 & PN5022
SMD Power Inductors Unshielded

RoHS COMPLIANT 2002/95/EC

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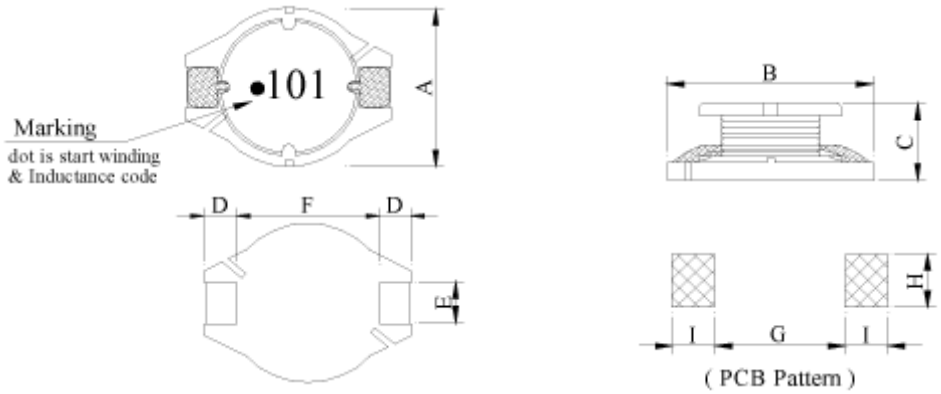
1. Configuration & Dimensions

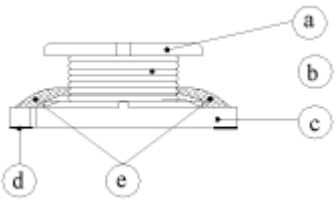


Series	Dimensions [mm]								
	A	B	C	D	E	F	G(ref.)	H(ref.)	I(ref.)
PN0805	8.0±0.3	10.5±0.3	5.0±0.3	2.1±0.2	2.0±0.2	6.0±0.3	5.7	2.2	2.4
PN3316	10.0±0.3	12.7±0.3	5.0±0.3	2.4±0.2	2.5±0.2	7.6±0.3	7.3	2.8	3.0
PN5022	14.0±0.5	18.2±0.5	6.6±0.5	2.5±0.2	2.6±0.2	13.4±0.3	12.7	2.9	3.2

2. Schematic Diagram

3. Materials

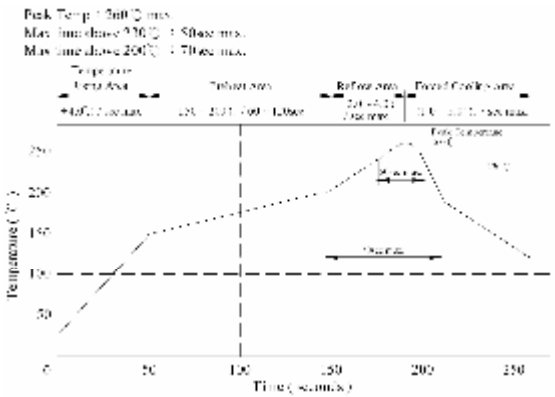
a.- Core : Ferrite DR Core
b.- Wire : Enamelled copper wire (class F)
c.- Base : LCP E4008
d.- Terminal : Cu / Ni / Sn
e.- Adhesive : Epoxy resin
f.- Solder wire : Sn97 / Cu3 solder Alloys
g.- Remark : Lead content 200ppm max. include ferrite



4. General Specification

a.- Temp. rise
- 40°C max. (PN0805,PN5022)
- 15°C typ. (PN3316)

b.- Storage temp. : -40°C ~ +125°C
c.- Operating temp. : -40°C ~ +105°C
d.- Resistance to solder heat : 260°C. 10 secs



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5. Electrical Characteristics

PN0805 (3.3µH – 330µH)

DWG No.	Inductance (mH)	Test Freq. L (KHz)	RDC (W) max.	Irms (A) max.	Isat (A) typ.
PN0805 – 3R3M	3.3±20%	100	0.022	5.00	5.20
PN0805 – 4R7M	4.7±20%	100	0.028	4.20	4.00
PN0805 – 6R8M	6.8±20%	100	0.040	3.40	3.40
PN0805 – 100M	10.0±20%	100	0.050	3.00	2.80
PN0805 – 150M	15.0±20%	100	0.070	2.40	2.30
PN0805 – 220M	22.0±20%	100	0.100	2.00	1.85
PN0805 – 330M	33.0±20%	100	0.145	1.72	1.54
PN0805 – 470L	47.0±15%	100	0.200	1.40	1.28
PN0805 – 680L	68.0±15%	100	0.270	1.20	1.15
PN0805 – 101L	100.0±15%	100	0.400	1.00	0.92
PN0805 – 151L	150.0±15%	100	0.560	0.75	0.75
PN0805 – 221L	220.0±15%	100	0.860	0.62	0.62
PN0805 – 331L	330.0±15%	100	1.500	0.46	0.50

PN3316 (1µH – 10000µH)

DWG No.	Inductance (mH)	Test Freq. L (KHz)	SRF (MHz) typ.	RDC (W) max.	Irms (A) max.	Isat (A) max.
PN3316 – 1R0M	1.0±20%	100	130.0	0.007	7.50	9.00
PN3316 – 1R5M	1.5±20%	100	90.0	0.009	6.50	8.00
PN3316 – 2R2M	2.2±20%	100	65.0	0.012	5.50	7.00
PN3316 – 3R3M	3.3±20%	100	50.0	0.015	5.00	6.40
PN3316 – 4R7M	4.7±20%	100	45.0	0.019	4.50	5.40
PN3316 – 6R8M	6.8±20%	100	35.0	0.034	3.40	4.50
PN3316 – 100M	10.0±20%	100	25.0	0.045	2.90	3.70
PN3316 – 150M	15.0±20%	100	23.0	0.060	2.50	3.00
PN3316 – 220M	22.0±20%	100	18.0	0.095	2.00	2.50
PN3316 – 330K	33.0±10%	100	15.0	0.120	1.80	2.00
PN3316 – 470K	47.0±10%	100	12.0	0.190	1.40	1.60
PN3316 – 680K	68.0±10%	100	10.0	0.240	1.20	1.40
PN3316 – 101K	100.0±10%	100	8.0	0.330	1.00	1.20
PN3316 – 151K	150.0±10%	100	6.0	0.590	0.80	1.00
PN3316 – 221K	220.0±10%	100	5.0	0.780	0.70	0.80
PN3316 – 331K	330.0±10%	100	4.0	1.150	0.55	0.60
PN3316 – 471K	470.0±10%	100	3.5	1.700	0.45	0.50

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PN3316 (1µH – 10000µH)

PN3316 – 681K	680.0±10%	100	3.0	2.600	0.35	0.40
PN3316 – 102K	1000.0.0±10%	100	2.0	3.900	0.30	0.30
PN3316 – 152K	1500.0±10%	100	1.9	6.300	0.25	0.25
PN3316 – 222K	2200.0±10%	100	1.6	8.200	0.20	0.20
PN3316 – 332K	3300.0±10%	100	1.2	14.000	0.16	0.17
PN3316 – 472K	4700.0±10%	100	1.1	17.000	0.15	0.15
PN3316 – 682K	6800.0±10%	100	0.9	30.000	0.11	0.12
PN3316 – 103K	10000.0.0±10%	100	0.7	39.000	0.10	0.10

PN5022 (1µH – 1000µH)

DWG No.	Inductance (mH)	Test Freq. L (KHz)	SRF (MHz) typ.	RDC (mW) max.	Irms (A)	Isat (A)
PN5022 – 1R0M	1.0±20%	100	100.0	4.0	10.00	30.0
PN5022 – 2R2M	2.2±20%	100	55.0	6.8	9.00	22.0
PN5022 – 3R3M	3.3±20%	100	40.0	9.8	7.60	17.0
PN5022 – 5R6M	5.6±20%	100	30.0	15.0	6.40	12.80
PN5022 – 100M	10.0±20%	100	25.0	25.0	5.30	10.00
PN5022 – 150M	15.0±20%	100	17.0	35.0	4.30	8.00
PN5022 – 220M	22.0±20%	100	13.0	45.0	3.60	6.70
PN5022 – 330M	33.0±20%	100	11.0	68.0	3.00	5.40
PN5022 – 470M	47.0±20%	100	9.0	95.0	2.50	4.60
PN5022 – 680M	68.0±20%	100	8.0	130.0	2.10	3.80
PN5022 – 101K	100.0±10%	100	7.0	190.0	1.70	3.20
PN5022 – 151K	150.0±10%	100	5.0	270.0	1.40	2.60
PN5022 – 221K	220.0±10%	100	4.5	420.0	1.10	2.20
PN5022 – 331K	330.0±10%	100	3.5	580.0	1.00	1.80
PN5022 – 471K	470.0±10%	100	3.0	820.0	0.80	1.50
PN5022 – 681K	680.0±10%	100	2.5	1200.0	0.70	1.20
PN5022 – 102K	1000.0±10%	100	2.0	1800.0	0.50	1.00

[Inductance tested at 0.1V] [Irms base on temp. rise 40ºC max. (PN0805,PN5022)] [Isat base on ΔL/L0A = 10 % typ. (PN0805,PN5022)]

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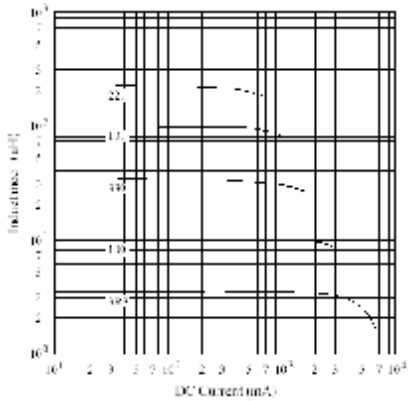
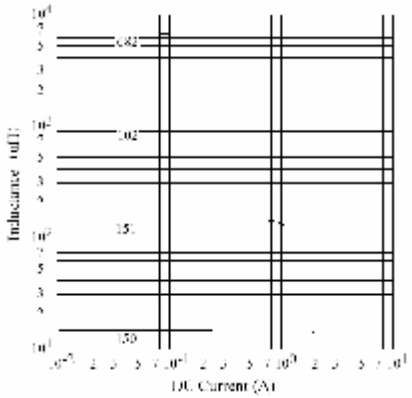
6. Curve

Inductance VS. DC Current Curve

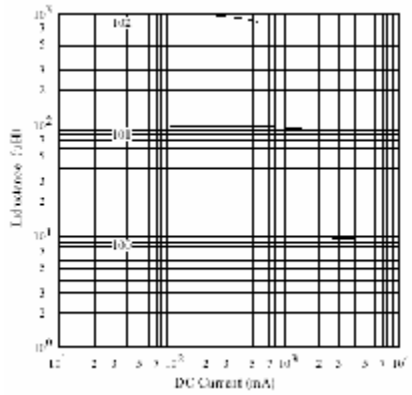
PN0805



PN3316

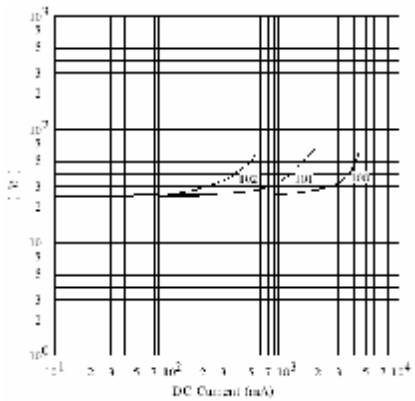


PN5022



DC Current VS. Temp. Rise Curve

PN5022



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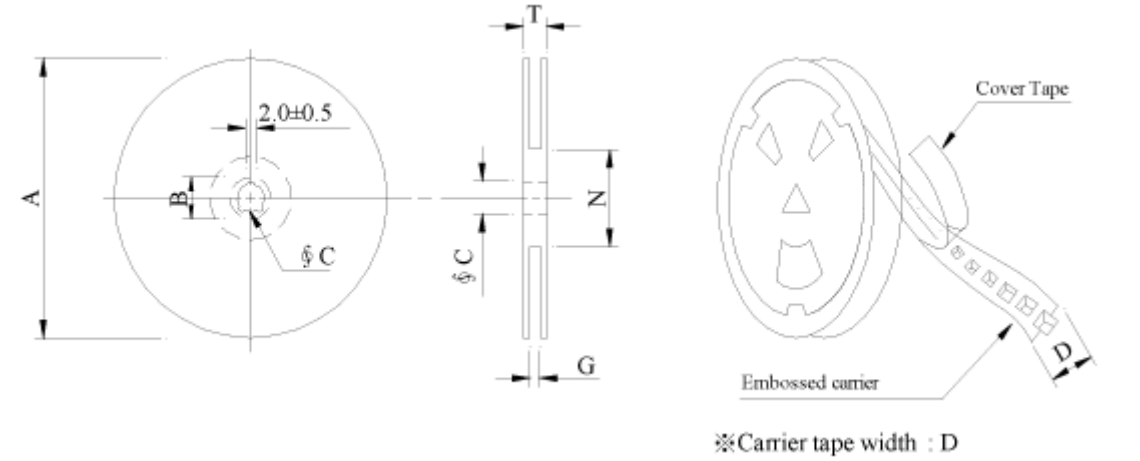
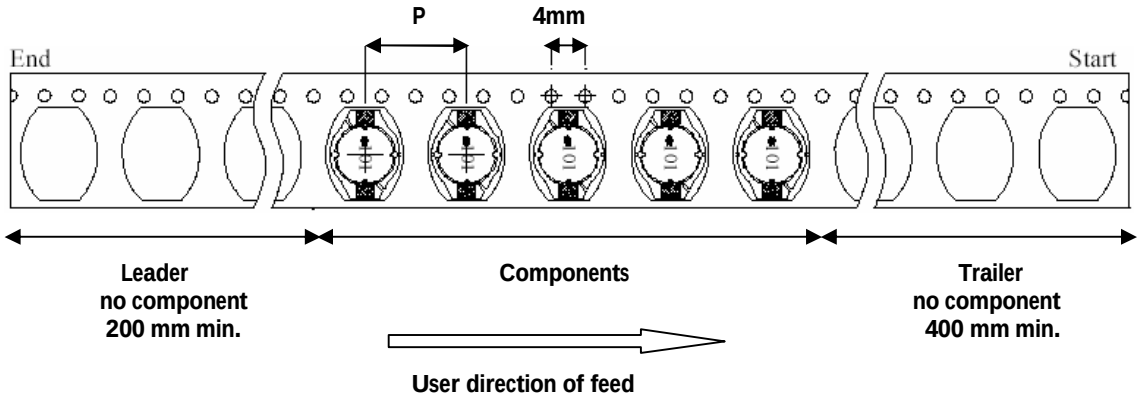
7. Packaging Information





(PN0805 à P = 12mm) (PN3316 à P = 16mm) (PN5022 à P = 20mm)

PN0805 & PN3316

Style	Dimensions [mm]						
	A	B	C	D	G	N	T
13 – 24	330	21±0.8	13±0.5	24	26^{+0}	50^{-0}	30.4

PN5022

Style	Dimensions [mm]						
	A	B	C	D	G	N	T
13 – 32	330	21±0.8	13±0.5	32	34^{+0}	100^{-0}	38.4

Series	Inner : Reel			Outer : Carton		
	Q'TY(pcs)	G.W.(gw)	Style	Q'TY(pcs)	G.W.(Kg)	Size(cm)
PN0805	800	880	13 – 24	3,200	4.5	40 x 40 x 24
PN3316	600	1,100	13 – 24	2,400	6.6	40 x 40 x 24
PN5022	250	1,250	13 – 32	1,000	6.8	40 x 40 x 24

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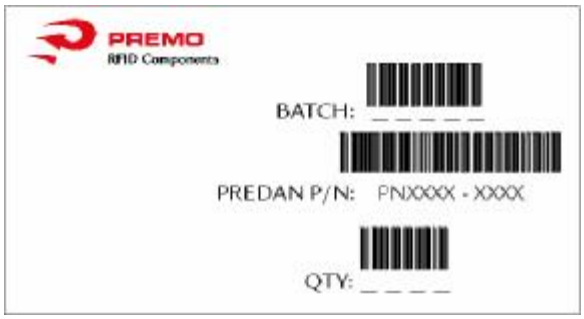
8. Labelling



9. Reliability Test

Test item	Specification	Test condition
Solderability	More than 90% of the terminal electrode shall be covered with fresh solder	Preheat : 150±25% for 60 seconds Solder : Sn96.5 / Ag3 / Cu0.5 or equivalent Solder temp. : 235±5ºC Flux : Rosin Dip time : 4±1 seconds
Thermal shock test (Temp. cycle)	Inductance shall not change more than ±20%	Room temp. 15 minutes → -25±2ºC 30 minutes Room temp. 15 minutes → 85±2ºC 30 minutes Total : 50 cycles
Humidity Resistance test		Temperature : 40±2ºC Humidity : 90 ~ 95% Applied current : Per specifications Time : 500 hours
High temp. Resistance test		Temperature : 105±2ºC Applied current : Per specifications Time : 500 hours

10. Edition Control

Edition	Date	Change description	Made by
1st	31/08/06	Update Specification	Pablo Pozo

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