PREMO
RFID Components

PS5009 , PS5014 , PS5017 , PS5023 & PS6011

SMD Power Inductors Unshielded

RoHS COMPLIANT 2002/95/EC

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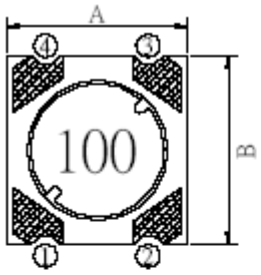
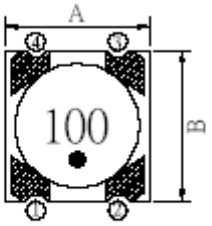
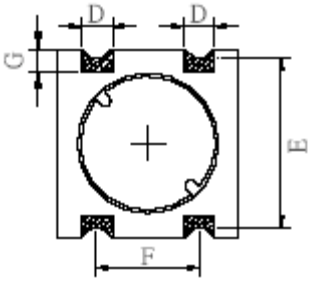
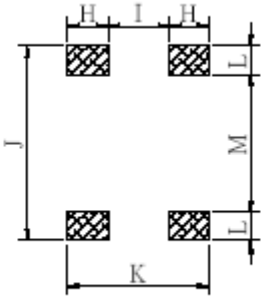
1. Configuration & Dimensions

PS5009, PS5014 & PS6011	PS5017 & PS5023
	





(PCB Pattern Sugestion)

Series	Dimensions [mm]												
	A	B	C	D(typ.)	E(typ.)	F(typ.)	G(ref.)	H(ref.)	I(ref.)	J(ref.)	K(ref.)	L(ref.)	M(ref.)
PS5009	5.60±0.3	6.00±0.3	0.95±0.1	1.00	5.20	3.20	0.80	1.30	2.00	6.40	4.60	1.30	3.80
PS5014	5.60±0.3	5.60±0.3	1.45±0.1	1.00	5.20	3.20	0.80	1.30	2.00	6.40	4.60	1.30	3.80
PS5017	5.60±0.3	5.60±0.3	1.90±0.2	1.00	5.20	3.20	0.80	1.30	2.00	6.40	4.60	1.30	3.80
PS5023	5.60±0.3	5.60±0.3	2.50±0.2	1.00	5.20	3.20	0.80	1.30	2.00	6.40	4.60	1.30	3.80
PS6011	6.80±0.3	7.50±0.3	1.05±0.1	1.20	6.70	4.00	1.10	1.40	2.60	7.90	5.40	1.50	4.90

2. Schematic Diagram

PS5009 , PS5014 , PS5017 , PS5023 & PS6011

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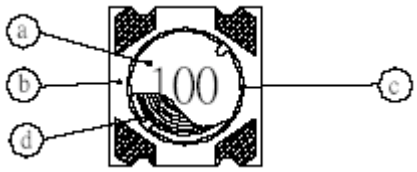
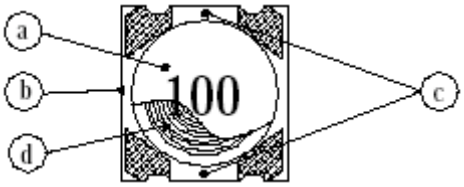
3. Materials

a.- Core : Ferrite DR core
b.- Base : PCB Base FR4
c.- Adhesive : Epoxy resin
d.- Wire : Enamelled copper wire (class F)
e.- Terminal : Cu / Ni / Au
f.- Remark : Lead content 200ppm max. include ferrite

PS5009, PS5014 & PS6011

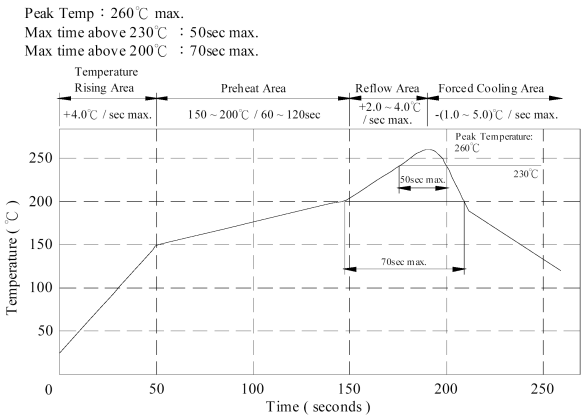


PS5017 & PS5023



4. General Specification

a.- Temp. rise : 40°C typ.
b.- Storage temp. : -40°C ~ +125°C
c.- Operating temp. : -40°C ~ +125°C
(Temp. rise included)
d.- Resistance to solder heat : 260°C. 10 secs



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5. Electrical Characteristics

PS5009 (1µH – 100µH)

DWG No.	Inductance (µH)	Test Freq. L (KHz)	RDC (Ω) max.	Irms (A) typ.	Isat (A) typ.
PS5009 – 1R0M	1.0±20%	100	0.060	1.50	1.80
PS5009 – 2R2M	2.2±20%	100	0.098	1.20	1.35
PS5009 – 3R3M	3.3±20%	100	0.130	1.05	1.10
PS5009 – 4R7M	4.7±20%	100	0.165	0.90	1.00
PS5009 – 6R8M	6.8±20%	100	0.250	0.70	0.82
PS5009 – 100M	10.0±20%	100	0.320	0.60	0.68
PS5009 – 150M	15.0±20%	100	0.500	0.47	0.55
PS5009 – 220M	22.0±20%	100	0.750	0.38	0.43
PS5009 – 330M	33.0±20%	100	1.150	0.30	0.35
PS5009 – 470M	47.0±20%	100	1.650	0.23	0.28
PS5009 – 680M	68.0±20%	100	2.560	0.18	0.22
PS5009 – 101M	100.0±20%	100	3.200	0.15	0.18

PS5014 (1µH – 100µH)

DWG No.	Inductance (µH)	Test Freq. L (KHz)	RDC (Ω) max.	Irms (A) typ.	Isat (A) typ.
PS5014 – 1R0M	1.0±20%	100	0.032	2.50	2.80
PS5014 – 2R2M	2.2±20%	100	0.058	1.80	2.10
PS5014 – 3R3M	3.3±20%	100	0.078	1.60	1.72
PS5014 – 4R7M	4.7±20%	100	0.105	1.20	1.40
PS5014 – 6R8M	6.8±20%	100	0.150	1.05	1.15
PS5014 – 100M	10.0±20%	100	0.185	0.90	1.00
PS5014 – 150M	15.0±20%	100	0.300	0.65	0.80
PS5014 – 220M	22.0±20%	100	0.430	0.60	0.66
PS5014 – 330M	33.0±20%	100	0.625	0.45	0.53
PS5014 – 470M	47.0±20%	100	0.890	0.35	0.46
PS5014 – 680M	68.0±20%	100	1.250	0.30	0.35
PS5014 – 101M	100.0±20%	100	1.950	0.22	0.28

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PS5017 (2.2µH – 3300µH)

DWG No.	Inductance (µH)	Test Freq. L (KHz)	RDC (Ω) max. / typ.	Irms (mA) max.	Isat (mA) typ.
PS5017 – 2R2	2.2±25%	100	0.055 / 0.040	2000	1800
PS5017 – 4R7	4.7±25%	100	0.092 / 0.071	1400	1300
PS5017 – 100	10.0±25%	100	0.195 / 0.155	900	800
PS5017 – 220	22.0±25%	100	0.420 / 0.327	700	580
PS5017 – 470L	47.0±15%	100	0.800 / 0.650	500	380
PS5017 – 101L	100.0±15%	100	1.800 / 1.450	320	270
PS5017 – 221L	220.0±15%	100	4.200 / 3.400	220	200
PS5017 – 471L	470.0±15%	100	8.500 / 6.850	150	130
PS5017 – 102L	1000.0±15%	100	18.50 / 15.50	90	80
PS5017 – 222L	2200.0±15%	100	40.00 / 34.00	60	55
PS5017 – 332L	3300.0±15%	100	68.00 / 57.00	50	40

PS5023 (2.2µH – 1000µH)

DWG No.	Inductance (µH)	Test Freq. L (KHz)	RDC (Ω) max. / typ.	Irms (mA) max.	Isat (mA) typ.
PS5023 – 2R2	2.2±25%	100	0.036 / 0.028	2200	2300
PS5023 – 3R3	3.3±25%	100	0.056 / 0.042	1750	1900
PS5023 – 4R7	4.7±25%	100	0.073 / 0.056	1550	1600
PS5023 – 100	10.0±25%	100	0.136 / 0.105	1300	1150
PS5023 – 220	22.0±25%	100	0.300 / 0.230	800	750
PS5023 – 470	47.0±25%	100	0.620 / 0.480	520	500
PS5023 – 101L	100.0±15%	100	1.100 / 0.900	350	360
PS5023 – 221L	220.0±15%	100	2.400 / 2.000	270	250
PS5023 – 471L	470.0±15%	100	5.500 / 4.600	180	160
PS5023 – 102L	1000.0±15%	100	13.50 / 11.50	100	85

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PS6011 (4.7µH – 100µH)

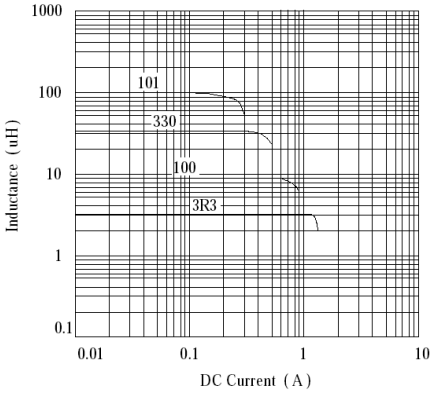
DWG No.	Inductance (µH)	Test Freq. L (KHz)	RDC (Ω)		Irms (A) typ.	Isat (A) max.
			typ.	max.		
PS6011 – 4R7M	4.7±20%	100	0.096	0.130	1.20	1.30
PS6011 – 100M	10.0±20%	100	0.210	0.260	0.80	0.86
PS6011 – 220M	22.0±20%	100	0.450	0.560	0.50	0.57
PS6011 – 330M	33.0±20%	100	0.650	0.780	0.39	0.46
PS6011 – 470M	47.0±20%	100	0.910	1.100	0.32	0.38
PS6011 – 101M	100.0±20%	100	2.050	2.500	0.21	0.25

[Inductance test freq. at: 1V (PS5009, PS5014, PS5017, PS5023); 0.1V (PS6011)] [Irms base on temp. rise 40°C] [Isat base on ΔL/L0A = 10 %]

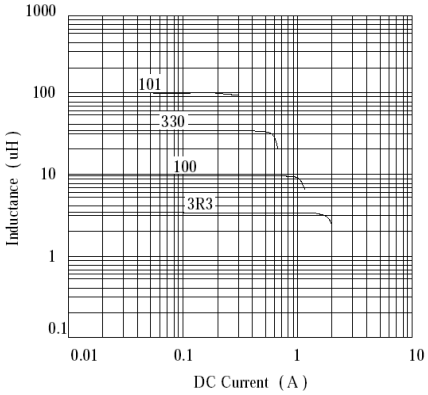
6. Curve

Inductance VS. DC Current Curve

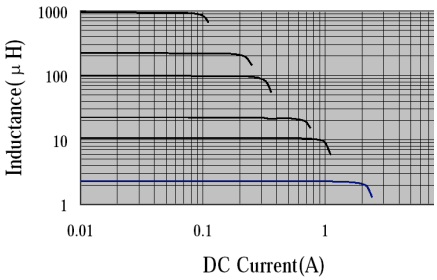
PS5009



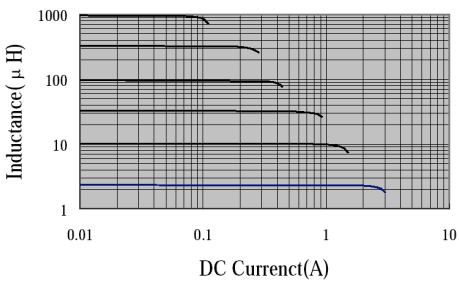
PS5014



PS5017



PS5023



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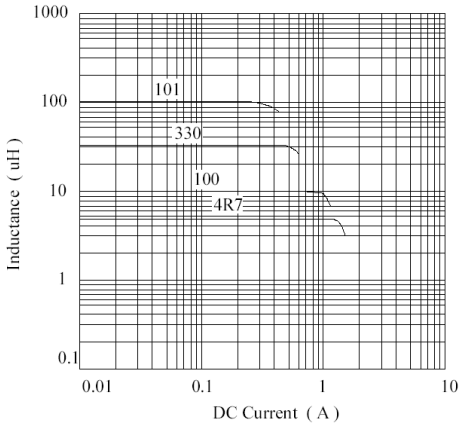
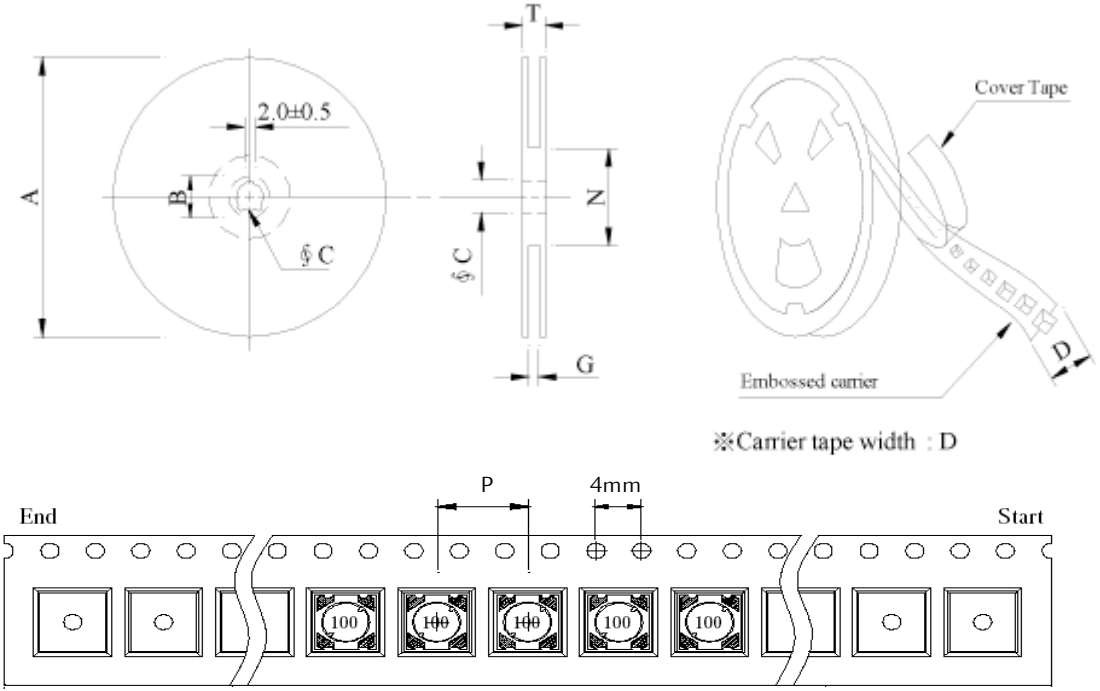
Inductance VS. DC Current Curve

PS6011



7. Packaging Information



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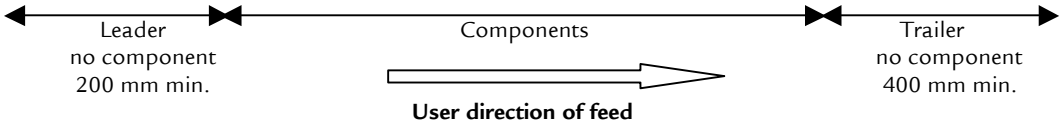


(PS5009, PS5014 → P = 8mm) (PS5017, PS5023, PS6011 → P = 12mm)

PS5009 & PS5014

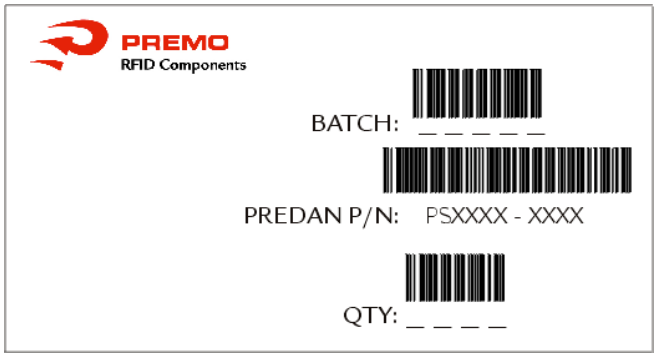
Style	Dimensions [mm]						
	A	B	C	D	G	N	T
07 – 12	178	21±0.8	13	12	14^{+0}	50^{-0}	16.5

PS5017, PS5023 & PS6011

Style	Dimensions [mm]						
	A	B	C	D	G	N	T
07 – 16	178	21±0.8	13	16	18^{+0}	50^{-0}	20.5

Series	Inner : Reel			Outer : Carton		
	Q'TY(pcs)	G.W.(gw)	Style	Q'TY(pcs)	G.W.(Kg)	Size(cm)
PS5009	1,200	99	07 – 12	4,800	3.95	42 x 41 x 24
PS5014	1,000	120	07 – 12	40,000	4.7	42 x 41 x 24
PS5017	600	650	07 – 16	18,000	4.56	42 x 41 x 24
PS5023	400	600	07 – 16	12,000	6.00	42 x 41 x 24
PS6011	1,000	120	07 – 16	30,000	4.6	42 x 41 x 24

8. Labelling



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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±5°C Flux : Rosin Dip time : 4±1 seconds
Thermal shock test (Temp. cycle)	Inductance shall not change more than ±20%	Room temp. 15 minutes → -25±2°C 30 minutes Room temp. 15 minutes → 85±2°C 30 minutes Total : 50 cycles
Humidity Resistance test		Temperature : 40±2°C Humidity : 90 ~ 95% Applied current : Per specifications Time : 500 hours
High temp. Resistance test		Temperature : 85±2°C Applied current : Per specifications Time : 500 hours

10. Edition Control

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