

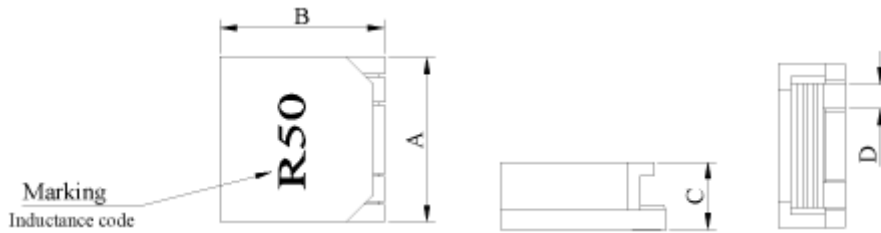
# PS1204 , PS1205A , PS1205B , PS1206 & PS1206B

## SMD Power Inductors Shielded



C/Severo Ochoa 33 - Parque Tecnológico de Andalucía. 29590 Campanillas .Málaga (Spain) **Phone** +34 951 231 320 Fax +34 951 231 321  
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### 1. Configuration & Dimensions



PS1204, PS1205B, PS1206B	PS1205A, PS1206
<p>( PCB Pattern )</p>	<p>( PCB Pattern )</p>

Series	Dimensions [mm]									
	A	B	C	D	E(nom.)	E1(ref.)	E2(ref.)	F	F1(ref.)	F2(ref.)
PS1204	12.50±0.3	12.50±0.3	4.00±0.3	1.90±0.2	2.50	3.00	2.00	7.50±0.25	6.40	5.20
PS1205A	12.50±0.3	12.50±0.3	5.00±0.3	1.90±0.2	2.50	3.00	2.00	7.50±0.25	6.40	5.20
PS1205B	12.50±0.3	12.50±0.3	5.00±0.3	1.90±0.2	2.50	3.00	2.00	7.50±0.25	6.40	5.20
PS1206	12.50±0.3	12.50±0.3	5.70±0.3	1.90±0.2	2.50	2.00	2.00	7.50±0.25	6.40	5.20
PS1206B	12.50±0.3	12.50±0.3	5.70±0.3	1.90±0.2	2.50	2.00	2.00	7.50±0.25	6.40	5.20

H(ref.)	I(ref.)	J(ref.)	K(ref.)	M(ref.)	N(ref.)	P(ref.)	P1(ref.)	P2(ref.)
10.50	4.15	3.00	13.00	4.70	4.50	7.50	3.75	3.75

### 2. Schematic Diagram



# PS1204 , PS1205A , PS1205B , PS1206 & PS1206B

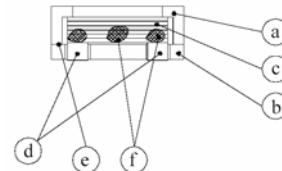
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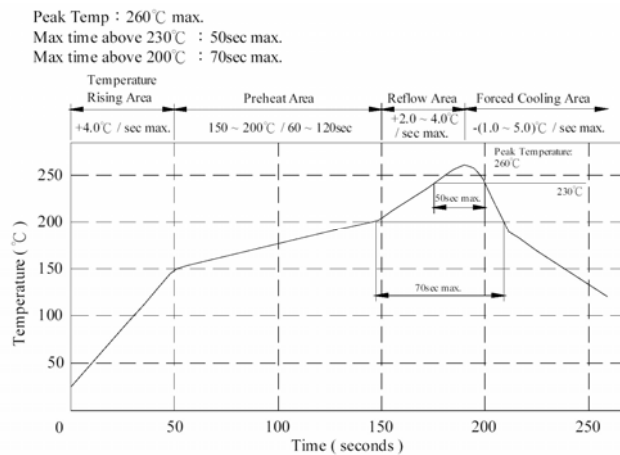
### 3. Materials

- a.- Core : Ferrite ER core
- b.- Core : Ferrite SB core
- c.- Wire : Ultra - fine rectangular enamelled copper wire (class F)
- d.- Terminal : Cu / Sn
- e.- Adhesive : Epoxy resin
- f.- Adhesive : Epoxy resin
- g.- Remark : Lead content 200ppm max. include ferrite



### 4. General Specification

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



### 5. Electrical Characteristics

#### PS1204 (0.75µH - 2µH)

DWG No.	Initial Inductance L0 (µH)	Inductance at flatpoint L1 (µH)	Flat Point ref. (A)	RDC (mΩ) max.	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)
PS1204 - R50M	0.75±20%	0.55±20%	2.0	3.0	13.0	14.0
PS1204 - 1R1M	1.30±20%	1.10±20%	2.0	4.5	12.0	13.0
PS1204 - 1R8M	2.00±20%	1.80±20%	2.0	6.0	10.0	11.0

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### PS1205A (0.9µH – 10.5µH)

DWG No.	Initial Inductance L0 (µH)	Inductance at flatpoint L1 (µH)	Flat Point ref. (A)	RDC (mΩ) max.	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)
PS1205A - R90	0.90±25%	0.75±25%	5.0	2.5	18.0	20.0
PS1205A - 1R4	1.40±25%	1.25±25%	5.0	3.4	15.0	16.0
PS1205A - 2R0	2.00±25%	1.80±25%	4.0	4.6	12.0	13.0
PS1205A - 3R2	3.50±25%	3.20±25%	2.0	9.0	8.6	9.0
PS1205A - 4R6	4.80±25%	4.60±25%	2.0	10.5	8.2	7.2
PS1205A - 6R4	6.80±25%	6.40±25%	3.0	11.0	7.8	6.0
PS1205A - 8R2	8.60±25%	8.20±25%	3.0	12.0	7.2	5.4
PS1205A - 100	10.50±25%	10.00±25%	2.0	13.5	6.5	4.7

### PS1205B (0.9µH – 10.5µH)

DWG No.	Initial Inductance L0 (µH)	Inductance at flatpoint L1 (µH)	Flat Point ref. (A)	RDC (mΩ) max.	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)
PS1205B - R90	0.90±25%	0.75±25%	5.0	2.5	18.0	20.0
PS1205B - 1R4	1.40±25%	1.25±25%	5.0	3.4	15.0	16.0
PS1205B - 2R0	2.00±25%	1.80±25%	4.0	4.6	12.0	13.0
PS1205B - 3R2	3.50±25%	3.20±25%	2.0	9.0	8.6	9.0
PS1205B - 4R6	4.80±25%	4.60±25%	2.0	10.5	8.2	7.2
PS1205B - 6R4	6.80±25%	6.40±25%	3.0	11.0	7.8	6.0
PS1205B - 8R2	8.60±25%	8.20±25%	3.0	12.0	7.2	5.4
PS1205B - 100	10.50±25%	10.00±25%	2.0	13.5	6.5	4.7

### PS1206 (2.7µH – 4.8µH)

DWG No.	Initial Inductance L0 (µH)	Inductance at flatpoint L1 (µH)	Flat Point ref. (A)	RDC (mΩ) max.	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)
PS1206 - 2R5	2.70±25%	2.50±25%	5.0	6.0	13.0	12.0
PS1206 - 2R3	2.50±25%	2.30±25%	4.0	4.6	10.5	11.0
PS1206 - 3R2	3.60±25%	3.20±25%	3.0	6.0	10.0	8.5
PS1206 - 4R6	4.80±25%	4.60±25%	2.0	7.0	9.0	7.5

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### PS1206B (0.7µH - 3µH)

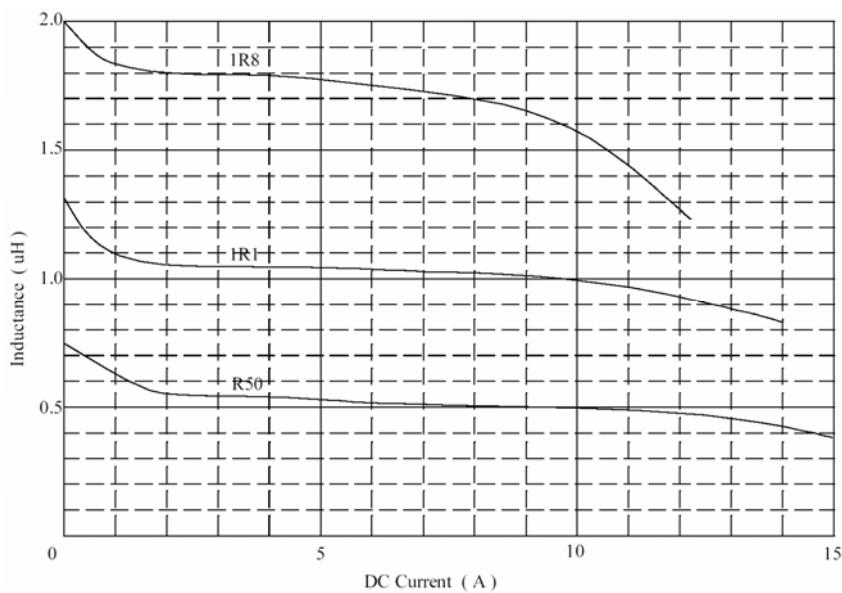
DWG No.	Initial Inductance L0 (µH)	Inductance at flatpoint L1 (µH)	Flat Point ref. (A)	RDC (mΩ) max.	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)
PS1206B - R47	0.70±25%	0.47±25%	5.0	2.30	16.50	30.00
PS1206B - R60	0.90±25%	0.60±25%	5.0	2.30	15.50	26.00
PS1206B - R80	1.10±25%	0.80±25%	5.0	3.20	14.50	25.00
PS1206B - 1R3	1.50±25%	1.30±25%	4.0	3.60	12.50	19.00
PS1206B - 2R0	2.20±25%	2.00±25%	4.0	6.00	11.50	15.00
PS1206B - 2R8	3.00±25%	2.80±25%	3.0	7.00	10.50	13.00

[Inductance tested at 100KHz / 1V] [I<sub>rms</sub> base on temp. rise 40°C max.] [I<sub>sat</sub> base on inductance drop 20% max. of L1 value]

## 6. Curve

### Inductance VS. DC Superposition Characteristics

#### PS1204



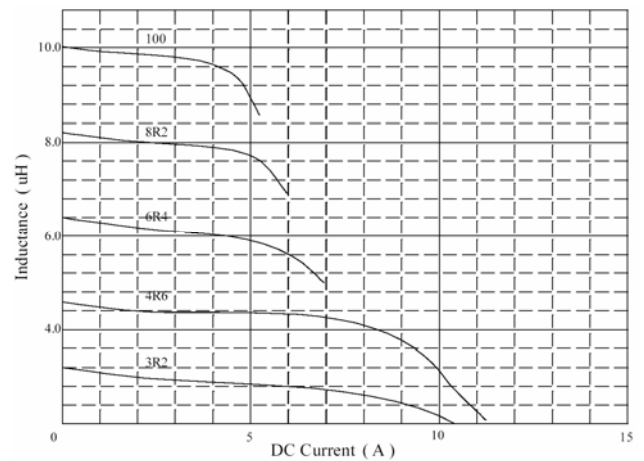
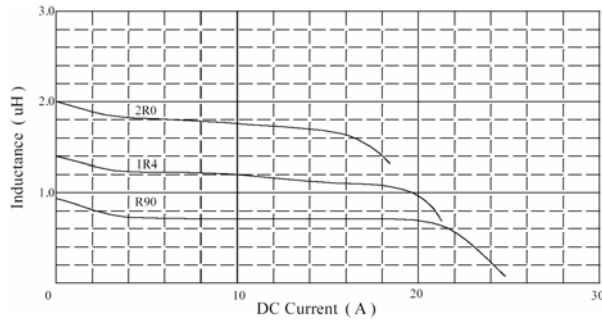
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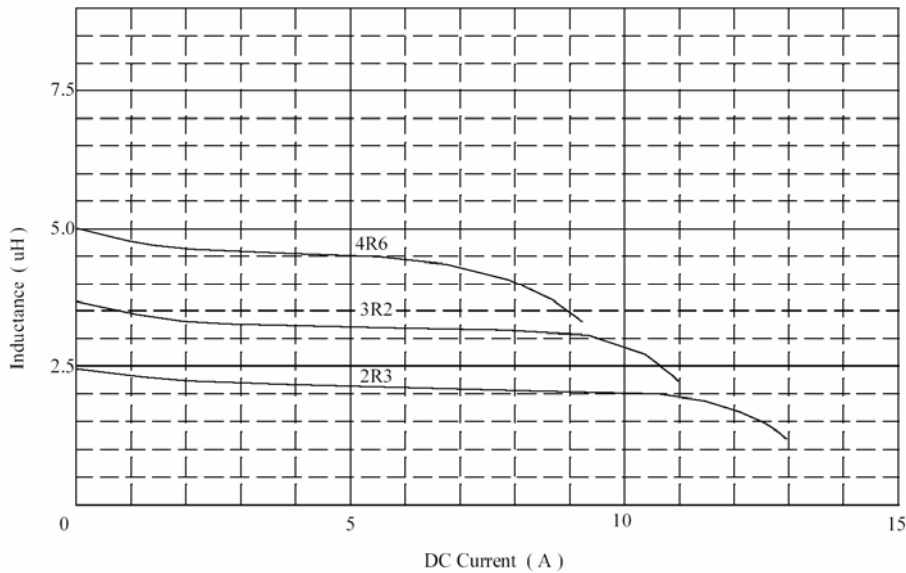


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### PS1205A & PS1205B



### PS1206 & PS1206B



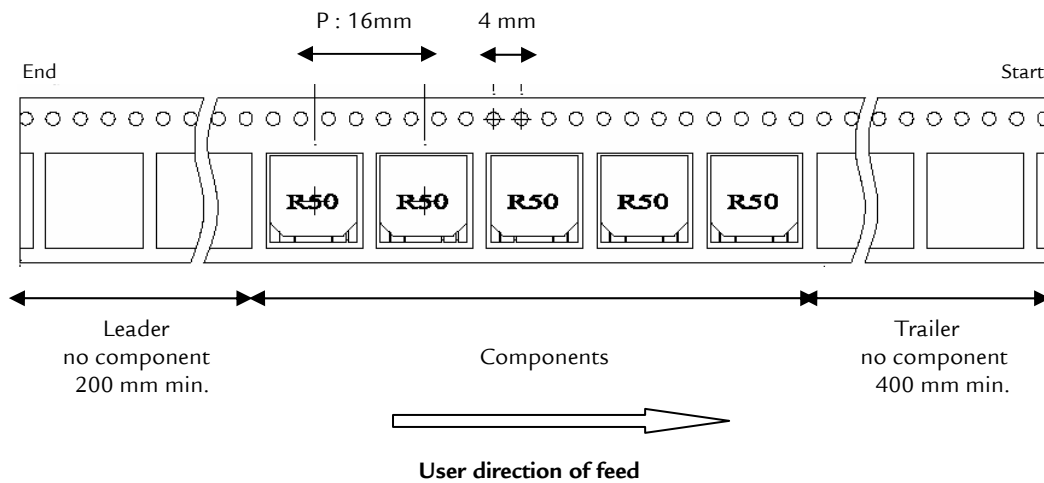
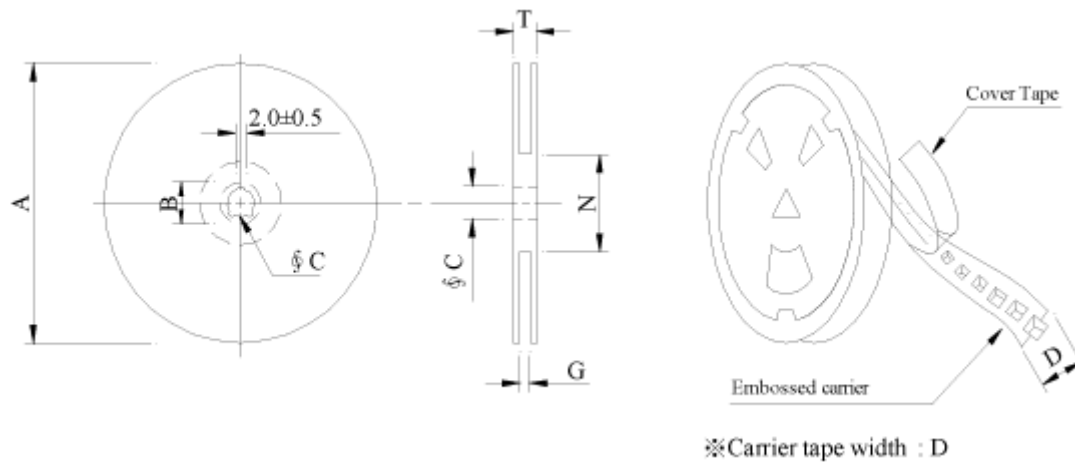
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### 7. Packaging Information



Style	Dimensions [mm]						
	A	B	C	D	G	N	T
13 - 24	330	21±0.8	13	24	26 <sup>+0</sup>	50 <sup>-0</sup>	30.4

Series	Inner : Reel			Outer : Carton		
	Q'TY(pcs)	G.W.(gw)	Style	Q'TY(pcs)	G.W.(Kg)	Size(cm)
PS1204	800	2,150	13 - 24	3,200	11.30	40 x 40 x 24
PS1205A	600	2,150	13 - 24	2,400	11.30	40 x 40 x 24
PS1205B	600	2,150	13 - 24	2,400	11.30	40 x 40 x 24
PS1206	600	2,150	13 - 24	2,400	11.30	40 x 40 x 24
PS1206B	600	2,150	13 - 24	2,400	11.30	40 x 40 x 24

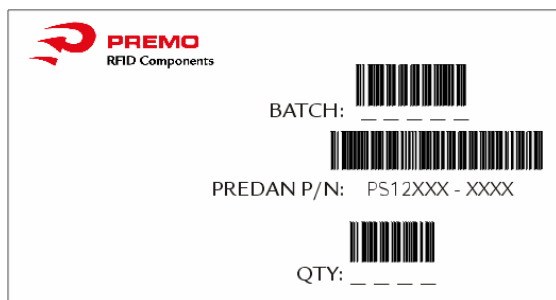
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### 8. Labelling



### 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±5°C Flux : Rosin Dip time : 4±1 seconds												
Thermal shock test (Temp. cycle)	Inductance shall not change more than ±20%	<table border="0"> <tr> <td>Room temp.</td> <td>→</td> <td>-25±2°C</td> </tr> <tr> <td>15 minutes</td> <td></td> <td>30 minutes</td> </tr> <tr> <td>Room temp.</td> <td>→</td> <td>85±2°C</td> </tr> <tr> <td>15 minutes</td> <td></td> <td>30 minutes</td> </tr> </table> <p>Total : 50 cycles</p>	Room temp.	→	-25±2°C	15 minutes		30 minutes	Room temp.	→	85±2°C	15 minutes		30 minutes
Room temp.		→	-25±2°C											
15 minutes			30 minutes											
Room temp.	→	85±2°C												
15 minutes		30 minutes												
Humidity Resistance test	Temperature : 40±2°C Humidity : 90 ~ 95% Applied current : Per specifications Time : 500 hours													
High temp. Resistance test	Temperature : 105±2°C Applied current : Per specifications Time : 500 hours													

### 10. Edition Control

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

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