

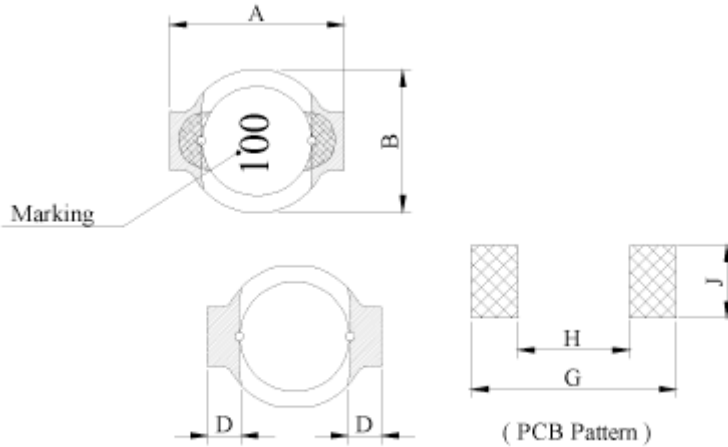
# PSC2505 & PSC2507

## SMD Power Inductors Unshielded



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### 1. Configuration & Dimensions



Series	Dimensions [mm]									
	A	B	C	D(typ.)	E(typ.)	F(typ.)	G(ref.)	H(ref.)	I(ref.)	J(ref.)
PSC2505	6.40±0.3	5.50±0.3	1.65±0.15	0.80	2.00	4.50	6.80	4.00	1.40	2.60
PSC2507	6.40±0.3	5.50±0.3	2.00±0.15	0.80	2.00	4.50	6.80	4.00	1.40	2.60

### 2. Schematic Diagram

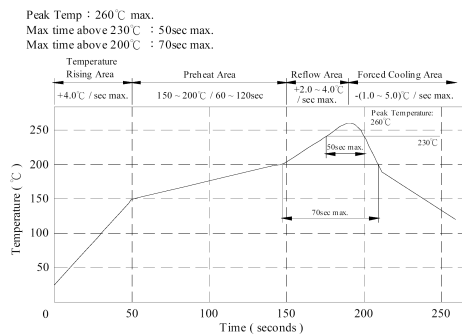


### 3. Materials

- a.- Core : Ferrite DR core
- b.- Base : Ceramic base
- c.- Wire : Enamelled copper wire (class F)
- d.- Terminal : W / Ni / Au
- e.- Adhesive : Epoxy resin
- f.- 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



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### 5. Electrical Characteristics

#### PSC2505 (1.2 $\mu$ H – 330 $\mu$ H)

DWG No.	Inductance ( $\mu$ H)	Q ref.	Test Freq.		SRF (MHz) typ.	RDC ( $\Omega$ ) max.	I <sub>rms</sub> (A) $\Delta T=40^{\circ}C$ max.	I <sub>sat</sub> (A) $\Delta L/LOA=10\%$ typ.
			L (KHz)	Q (MHz)				
PSC2505 - 1R2M	1.2 $\pm$ 20%	17	100	7.96	120.0	0.09	2.30	3.40
PSC2505 - 1R5M	1.5 $\pm$ 20%	18	100	7.96	110.0	0.10	2.00	3.00
PSC2505 - 2R5M	2.5 $\pm$ 20%	14	100	7.96	85.0	0.12	1.70	2.40
PSC2505 - 3R3M	3.3 $\pm$ 20%	16	100	7.96	75.0	0.15	1.50	2.20
PSC2505 - 3R9M	3.9 $\pm$ 20%	15	100	7.96	70.0	0.20	1.40	2.10
PSC2505 - 4R7M	4.7 $\pm$ 20%	15	100	7.96	65.0	0.22	1.30	1.90
PSC2505 - 5R6M	5.6 $\pm$ 20%	14	100	7.96	60.0	0.25	1.25	1.80
PSC2505 - 6R8M	6.8 $\pm$ 20%	11	100	7.96	55.0	0.27	1.20	1.65
PSC2505 - 8R2M	8.2 $\pm$ 20%	14	100	7.96	50.0	0.32	1.08	1.45
PSC2505 - 100M	10.0 $\pm$ 20%	13	100	2.52	45.0	0.35	1.00	1.25
PSC2505 - 120M	12.0 $\pm$ 20%	12	100	2.52	40.0	0.40	0.90	1.15
PSC2505 - 150M	15.0 $\pm$ 20%	13	100	2.52	32.0	0.56	0.80	1.00
PSC2505 - 220M	22.0 $\pm$ 20%	14	100	2.52	26.0	0.70	0.70	0.90
PSC2505 - 270M	27.0 $\pm$ 20%	18	100	2.52	25.0	1.00	0.55	0.80
PSC2505 - 330K	33.0 $\pm$ 10%	17	100	2.52	23.0	1.10	0.50	0.72
PSC2505 - 470K	47.0 $\pm$ 10%	14	100	2.52	20.0	1.45	0.46	0.67
PSC2505 - 560K	56.0 $\pm$ 10%	16	100	2.52	18.0	2.00	0.36	0.52
PSC2505 - 680K	68.0 $\pm$ 10%	24	100	2.52	15.0	2.40	0.32	0.48
PSC2505 - 820K	82.0 $\pm$ 10%	23	100	2.52	14.0	2.70	0.30	0.44
PSC2505 - 101K	100.0 $\pm$ 10%	50	100	0.796	13.0	3.00	0.28	0.42
PSC2505 - 121K	120.0 $\pm$ 10%	45	100	0.796	12.0	3.50	0.26	0.40
PSC2505 - 151K	150.0 $\pm$ 10%	55	100	0.796	10.0	4.80	0.24	0.34
PSC2505 - 181K	180.0 $\pm$ 10%	55	100	0.796	9.0	5.50	0.22	0.32
PSC2505 - 221K	220.0 $\pm$ 10%	50	100	0.796	8.0	8.00	0.18	0.26
PSC2505 - 271K	270.0 $\pm$ 10%	60	100	0.796	7.0	9.00	0.15	0.23
PSC2505 - 331K	330.0 $\pm$ 10%	60	100	0.796	6.0	10.0	0.13	0.22

# PSC2505 & PSC2507

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### PSC2507 (1.2μH - 470μH)

DWG No.	Inductance (μH)	Q ref.	Test Freq.		SRF (MHz) typ.	RDC (Ω) max.	I <sub>rms</sub> (A) ΔT=40°C max.	I <sub>sat</sub> (A) ΔI/L0A=10% typ.
			L (KHz)	Q (MHz)				
PSC2507 - 1R2M	1.2±20%	15	100	7.96	130.0	0.036	2.60	3.20
PSC2507 - 1R5M	1.5±20%	13	100	7.96	120.0	0.042	2.40	2.80
PSC2507 - 1R8M	1.8±20%	12	100	7.96	105.0	0.046	2.20	2.60
PSC2507 - 2R5M	2.5±20%	16	100	7.96	85.0	0.065	2.00	2.40
PSC2507 - 3R5M	3.5±20%	18	100	7.96	70.0	0.100	1.70	2.20
PSC2507 - 4R7M	4.7±20%	15	100	7.96	60.0	0.135	1.50	1.90
PSC2507 - 5R6M	5.6±20%	13	100	7.96	55.0	0.140	1.40	1.70
PSC2507 - 6R8M	6.8±20%	13	100	7.96	53.0	0.180	1.30	1.50
PSC2507 - 8R2M	8.2±20%	12	100	7.96	50.0	0.200	1.20	1.40
PSC2507 - 100M	10.0±20%	14	100	2.52	42.0	0.260	1.10	1.30
PSC2507 - 120M	12.0±20%	14	100	2.52	38.0	0.280	1.00	1.20
PSC2507 - 150M	15.0±20%	13	100	2.52	35.0	0.350	0.90	1.10
PSC2507 - 180M	18.0±20%	12	100	2.52	25.0	0.400	0.85	0.90
PSC2507 - 220M	22.0±20%	14	100	2.52	26.0	0.520	0.80	0.85
PSC2507 - 270M	27.0±20%	11	100	2.52	25.0	0.600	0.75	0.80
PSC2507 - 330K	33.0±10%	12	100	2.52	23.0	0.720	0.62	0.75
PSC2507 - 390K	39.0±10%	12	100	2.52	20.0	0.780	0.56	0.65
PSC2507 - 470K	47.0±10%	12	100	2.52	18.0	1.130	0.50	0.60
PSC2507 - 560K	56.0±10%	15	100	2.52	16.0	1.400	0.46	0.52
PSC2507 - 680K	68.0±10%	20	100	2.52	14.0	1.700	0.40	0.48
PSC2507 - 820K	82.0±10%	18	100	2.52	13.0	1.850	0.36	0.42
PSC2507 - 101K	100.0±10%	35	100	0.796	11.0	2.800	0.32	0.38
PSC2507 - 121K	120.0±10%	35	100	0.796	9.0	2.900	0.28	0.34
PSC2507 - 151K	150.0±10%	45	100	0.796	8.5	4.500	0.24	0.32
PSC2507 - 181K	180.0±10%	50	100	0.796	7.5	5.200	0.22	0.30
PSC2507 - 221K	220.0±10%	55	100	0.796	6.6	7.500	0.20	0.28
PSC2507 - 271K	270.0±10%	55	100	0.796	6.0	9.200	0.18	0.24
PSC2507 - 331K	330.0±10%	55	100	0.796	5.0	10.500	0.16	0.20
PSC2507 - 391K	390.0±10%	60	100	0.796	4.0	11.500	0.14	0.18
PSC2507 - 471K	470.0±10%	60	100	0.796	3.0	12.600	0.13	0.16

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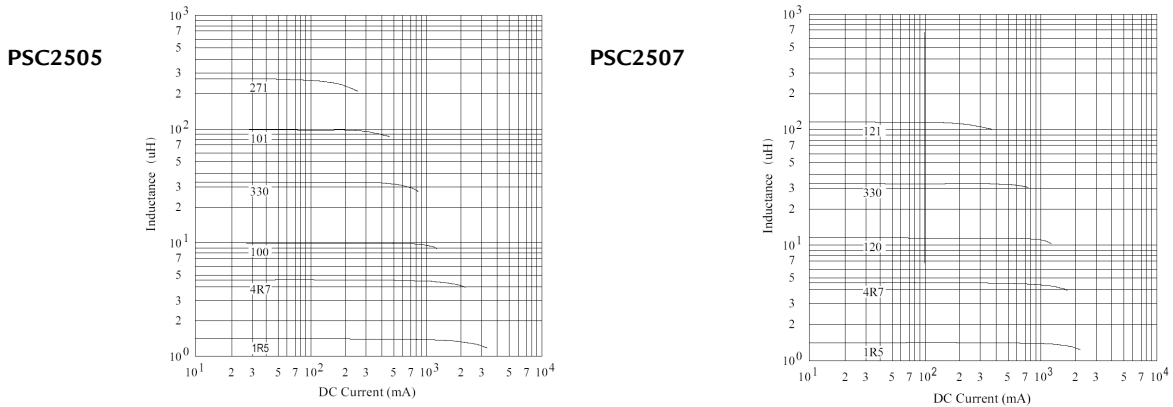
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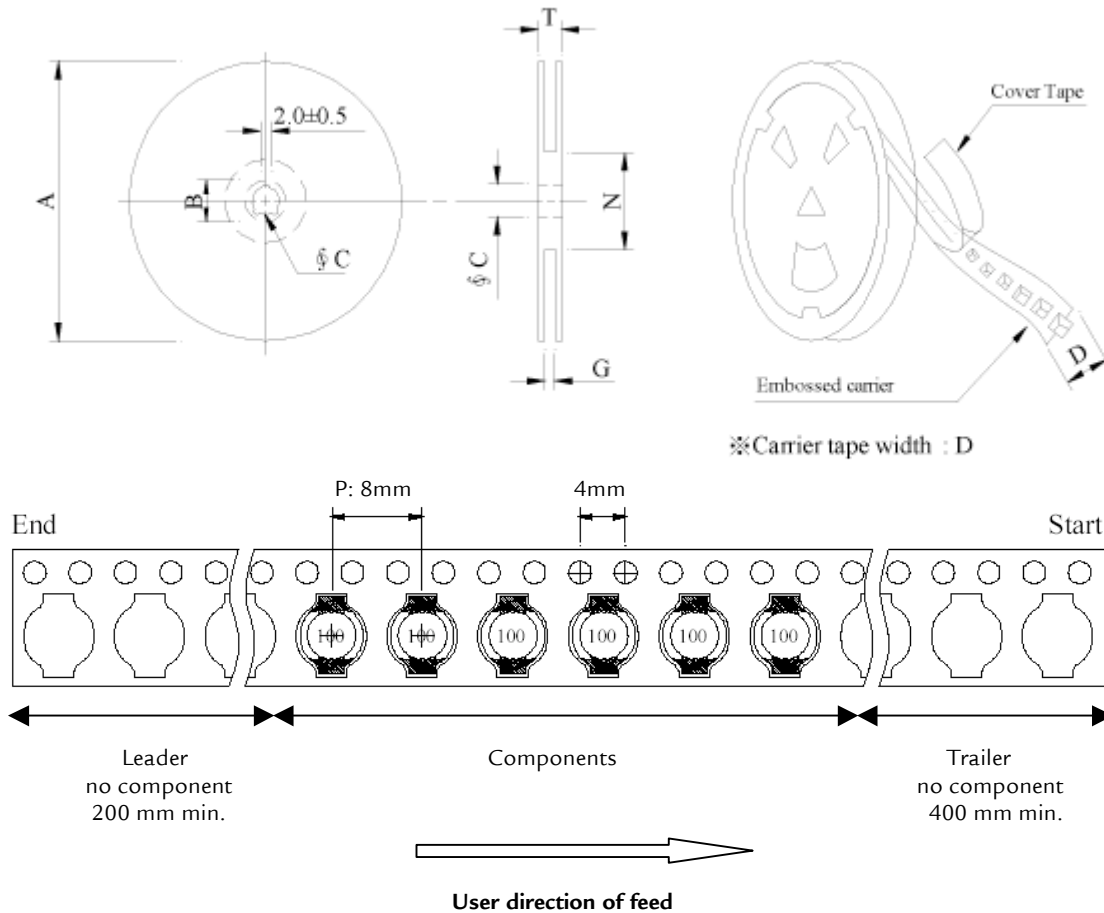
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### 6. Curve

**Inductance VS. DC Current Curve**



### 7. Packaging Information



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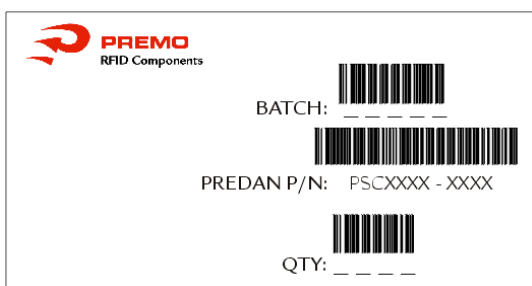


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Style	Dimensions [mm]						
	A	B	C	D	G	N	T
07 - 12	178	21±0.8	13±0.5	12	14 <sup>+0</sup>	50 <sup>0</sup>	18.4

Series	Inner : Reel			Outer : Carton		
	Q'TY(pcs)	G.W.(gw)	Style	Q'TY(pcs)	G.W.(Kg)	Size(cm)
PSC2505	800	250	07 - 12	32,000	11.5	42 x 41 x 24
PSC2507	800	250	07 - 12	32,000	11.5	42 x 41 x 24

### 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 colspan="3"> </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																

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### 10. Edition Control

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