

## PCS

### SHIELDED SMD POWER INDUCTOR



#### Applications

- Power supply for VTRs.
- LCD televisions.
- Personal computers.
- Handhold communication equipment.
- DC/DC converters, etc.

#### Features

- High power, High saturation inductors.
- With magnetic shield against radiation.
- Directly connected electrode on ferrite core.
- Highly accurate dimensions for automatic mounting.

#### Inductance and rated current ranges

- |          |              |            |
|----------|--------------|------------|
| ● PCS62B | 2.9uH~330uH  | 1.94~0.19A |
| ● PCS64B | 10uH~1000uH  | 1.35~0.14A |
| ● PCS73  | 10uH~1000uH  | 1.68~0.16A |
| ● PCS74  | 6.8uH~1000uH | 3.0~0.18A  |
| ● PCS124 | 3.9uH~330uH  | 6.5~0.5A   |
| ● PCS125 | 1.3uH~1000uH | 8.0~0.4A   |
| ● PCS127 | 1.2uH~1000uH | 9.8~0.55A  |

- Test equipments:  
L: HP4284A or HP4285A LCR meter .  
DCR tested by Milli-ohm meter.  
Electrical specifications at 25°C.

## Product Identification

PCS 62B M T 101

(1) (2) (3) (4) (5)

(1)Type: Shielded SMD Power Inductor

(2)Dimensions(mm): 62B=6.2×6.6×3.0, 64B=6.2×6.6×5.0,

73=7.3×7.3×3.4, 74=7.3×7.3×4.5,

124=12×12×4.5, 125=12×12×6.0, 127=12×12×8.0

(3)Tolerance: M=20%,P=+40%-20%

(4) Packaging style: T ( Tape and Reel)

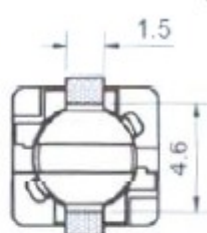
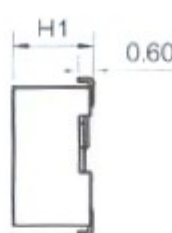
(5) Inductance: 1R1=1.1uH ,470=47uH ,101 =100uH

## Characteristics:

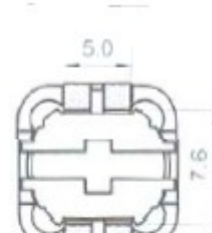
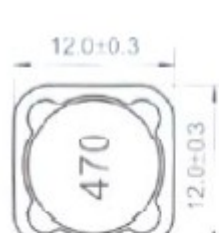
- Rated Dc Current: The current when inductance decreases to 75% of its initial value or the actual current when the temperature of coil increases to  $\Delta t=40^{\circ}\text{C}$ . The smaller one is defined as Rated DC Current. ( $T_a=25^{\circ}\text{C}$ )
- Operating temperature:  $-40\sim 85^{\circ}\text{C}$ .

## Shape and Size:(Dimension are in mm)

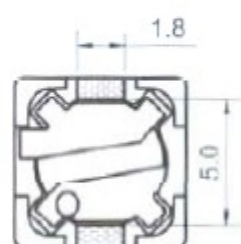
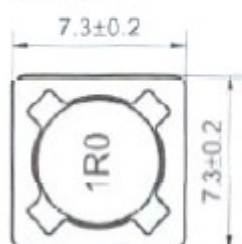
### ●62B/64B



### ●124/125/127



### ●73/74



Codes	H1 Max	H2 Max	H3 Max	H	I	J
PCS62B	3.0	-	-	1.9	1.4	4.6
PCS64B	5.0	-	-	1.9	1.4	4.6
PCS73	-	3.4	-	2.2	1.6	4.8
PCS74	-	4.5	-	2.2	1.6	4.8
PCS124	-	-	4.5	5.4	2.9	7.0
PCS125	-	-	6.0	5.4	2.9	7.0
PCS127	-	-	8.0	5.4	2.9	7.0



## Shielded SMD Power Inductor

### ● 62B / 64B / 73 / 74 TYPE

Part No.	L (uH)	DC Resistance ( $\Omega$ ) Max				Rated DC current (Amp) Max			
		PCS62B	PCS64B	PCS73	PCS74	PCS62B	PCS62B	PCS73	PCS74
2R9P	2.9	0.068	-	-	-	1.940	-	-	-
4R0P	4.0	0.080	-	-	-	1.630	-	-	-
5R5P	5.5	0.096	-	-	-	1.400	-	-	-
6R8M	6.8	-	-	-	0.045	-	-	-	3.000
100M	10	0.150	0.120	0.072	0.049	1.100	1.350	1.680	1.840
120M	12	0.200	0.130	0.098	0.058	1.000	1.220	1.520	1.710
150M	15	0.230	0.180	0.130	0.081	0.900	1.110	1.330	1.470
180M	18	0.270	0.240	0.140	0.091	0.800	1.020	1.200	1.310
220M	22	0.340	0.270	0.190	0.110	0.740	0.910	1.070	1.230
270M	27	0.380	0.300	0.210	0.150	0.660	0.820	0.960	1.120
330M	33	0.450	0.330	0.240	0.170	0.590	0.740	0.910	0.960
390M	39	0.490	0.370	0.320	0.230	0.540	0.690	0.770	0.910
470M	47	0.690	0.520	0.360	0.260	0.500	0.620	0.760	0.880
560M	56	0.780	0.560	0.470	0.350	0.460	0.580	0.680	0.750
680M	68	1.070	0.630	0.520	0.380	0.420	0.510	0.610	0.690
820M	82	1.210	0.710	0.690	0.430	0.380	0.460	0.570	0.610
101M	100	1.390	1.030	0.790	0.610	0.340	0.420	0.500	0.600
121M	120	1.900	1.150	0.890	0.660	0.310	0.380	0.490	0.520
151M	150	2.180	1.680	1.270	0.880	0.280	0.350	0.430	0.460
181M	180	2.770	1.870	1.450	0.980	0.260	0.320	0.390	0.420
221M	220	3.120	2.080	1.650	1.170	0.230	0.290	0.350	0.360
271M	270	4.380	2.370	2.310	1.640	0.220	0.260	0.320	0.340
331M	330	4.940	2.670	2.620	1.860	0.190	0.230	0.280	0.320
391M	390	-	2.940	2.940	2.850	-	0.220	0.260	0.290
471M	470	-	3.930	4.180	3.010	-	0.200	0.240	0.260
561M	560	-	5.430	4.670	3.620	-	0.180	0.220	0.230
681M	680	-	7.320	5.730	4.630	-	0.170	0.190	0.220
821M	820	-	8.240	6.540	5.200	-	0.150	0.180	0.200
102M	1000	-	9.260	9.440	6.000	-	0.140	0.160	0.180

### ● Tolerance of inductance and Measuring Freq:

PCS62B: 2.9~5.5uH (P) +40/-20%@7.67MHz 0.25V ; 10~330uH (M) $\pm$ 20%@1KHz 0.25V

PCS64B,PCS73: 10~1000uH (M) $\pm$ 20% @1KHz 0.25V

PCS74 : 6.8~1000uH (M) $\pm$ 20% @1KHz 0.25V



## Shielded SMD Power Inductor

### ● 124 / 125 / 127/ TYPE

Part No.	L (uH)	DC Resistance (Ω) Max			Rated DC current (Amp) Max		
		PCS124	PCS125	PCS127	PCS124	PCS125	PCS127
1R2	1.2	-	-	0.0070	-	-	9.80
1R3	1.3	-	0.012	-	-	8.00	-
2R1	2.1	-	0.014	-	-	7.00	-
2R4	2.4	-	-	0.0115	-	-	8.00
3R1	3.1	-	0.017	-	-	6.00	-
3R5	3.5	-	-	0.0135	-	-	7.50
3R9	3.9	0.015	-	-	6.50	-	-
4R4	4.4	-	0.020	-	-	5.00	-
4R7	4.7	0.018	-	0.0158	5.70	-	6.80
5R8	5.8	-	0.021	-	-	4.40	-
6R1	6.1	-	-	0.0176	-	-	6.60
6R8	6.8	0.023	-	-	4.90	-	-
7R5	7.5	-	0.024	-	-	4.20	-
7R6	7.6	-	-	0.0200	-	-	5.90
100	10	0.028	0.025	0.0216	4.50	4.00	5.40
120	12	0.038	0.027	0.0243	4.00	3.50	4.90
150	15	0.050	0.030	0.0270	3.20	3.30	4.50
180	18	0.057	0.034	0.0392	3.10	3.00	3.90
220	22	0.066	0.036	0.0432	2.90	2.80	3.60
270	27	0.080	0.051	0.0459	2.80	2.30	3.40
330	33	0.097	0.057	0.0648	2.70	2.10	3.00
390	39	0.132	0.068	0.0729	2.10	2.00	2.75
470	47	0.150	0.075	0.1000	1.90	1.80	2.50
560	56	0.190	0.110	0.1100-	1.80	1.70	2.35-
680	68	0.220	0.120	0.1400-	1.50	1.50	2.10-
820	82	0.260	0.140	0.1600-	1.30	1.40	1.95
101	100	0.308	0.160	0.2200	1.20	1.30	1.70
121	120	0.380	0.170	0.2500	1.10	1.10	1.60
151	150	0.530	0.230	0.2800	0.95	1.00	1.42
181	180	0.620	0.290	0.3500	0.85	0.90	1.30
221	220	0.700	0.400	0.3900	0.80	0.80	1.16
271	270	0.876	0.460	0.5600	0.60	0.75	1.06
331	330	0.990	0.510	0.6400	0.50	0.68	0.95
391	390	-	0.690	0.7000	-	0.65	0.88
471	470	-	0.770	0.9800	-	0.58	0.79
561	560	-	0.860	1.0700	-	0.54	0.73
681	680	-	1.200	1.4600	-	0.48	0.67
821	820	-	1.340	1.6400	-	0.43	0.60
102	1000	-	1.530	1.8200	-	0.40	0.55

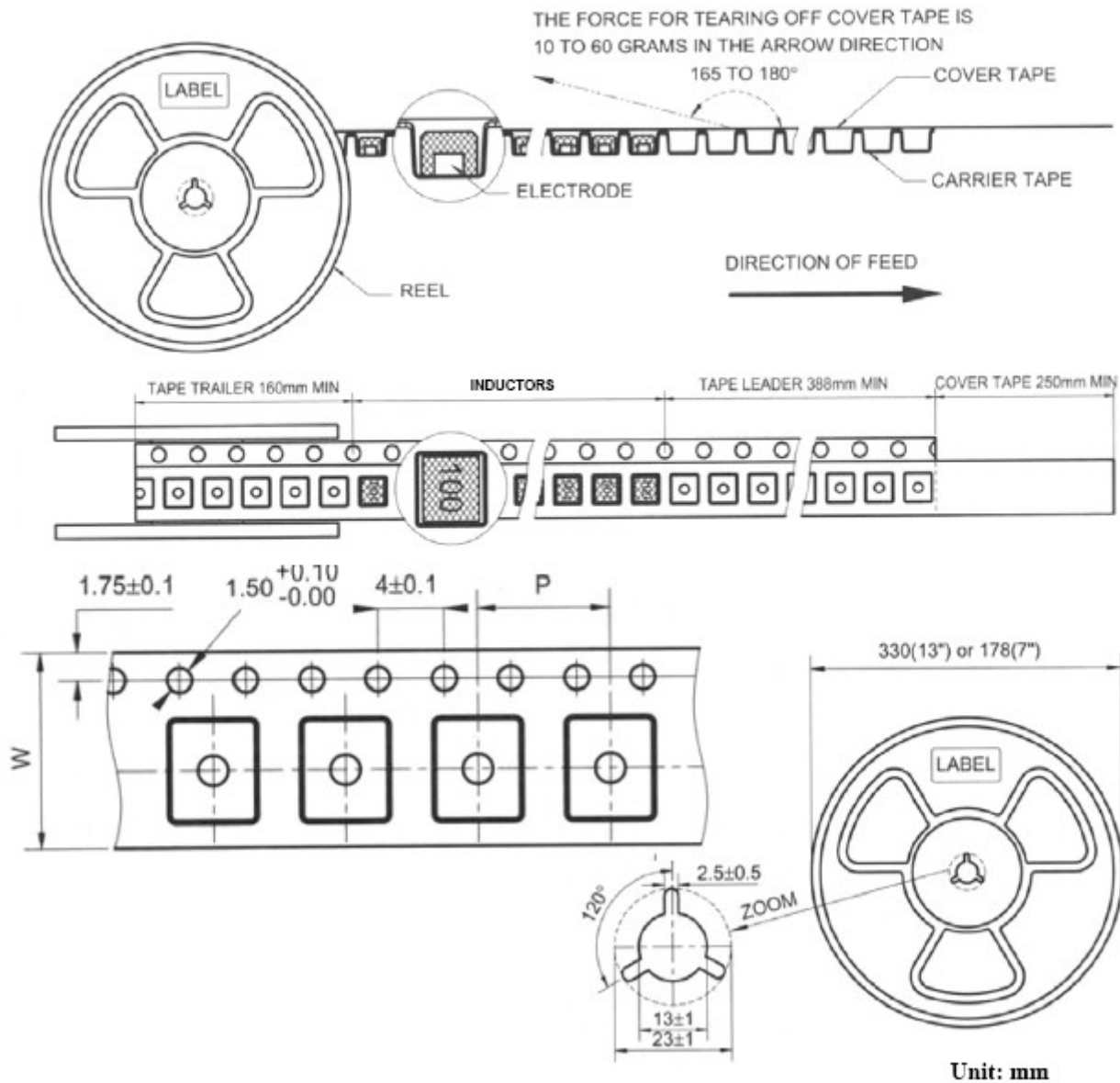
### ● Tolerance of inductance and Measuring Freq:

PCS124: 3.9~330uH (M) ±20% @100KHz 0.25V

PCS125: 1.3~7.5uH (P)+30/-20% @7.96MHz 0.25V ; 10~1000uH (M)±20% @ 1KHz 0.25V

PCS127: 1.2~7.6uH (P)+40/-20% @100KHz 0.25V ; 10~1000uH (M)±20% @ 1KHz 0.25V

## Tape and Reel specifications



Series	Tape size		Parts Per Reel
	W	P	13"
PCS62B	16	12	1500
PCS64B	16	12	1500
PCS73	16	12	1000
PCS74	16	12	1000
PCS124	24	16	500
PCS125	24	16	400
PCS127	24	16	400

### General

Items	Specifications
1. Shelf Storage conditions	Temperature range: 25±3°C; Humidity: <80% relative humidity. Recommended product should be used within six months from the time of delivery.
2. Storage temperature range	Temperature range: -40°C to +85°C.
3. Operating temperature range	Temperature range: -40 to +85°C.

### Environmental test

Test Items	Specifications	Test Conditions / Test Methods
1. High temperature Storage test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	Temperature 85±2°C, Time: 48±2 hours, Tested after 1hour at room temperature.
2. Low temperature Storage test		Temperature -40°C, Time: 48±2 hours, Tested after 1hour at room temperature.
3. Humidity test		Temperature 40±2°C, 90~95% relative humidity Time: 96±2 hours, apply rated current, Tested after 1hour at room temperature.
4. Thermal shock test		First -25°C 30minutes then 25°C 10 minutes last 85°C 30 minutes, as 1 cycle. Go through 5 cycles. Tested after 1 hour at room temperature.

### Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
1. Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at 245±5°C for 5 seconds.
2. Heat endurance of Reflow soldering	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	Refer to the reflow soldering condition. Go through 3 times.
3. Vibration test		Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
4. Shock resistance		Drop down with 981m/s <sup>2</sup> (100G) shock attitude upon a rubber block method shock testing machine, for 1 time. In each of three orientations.

The condition of reflow (recommendation):

#### Lead-free

