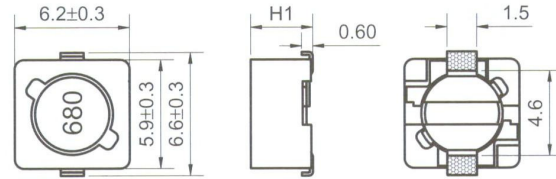


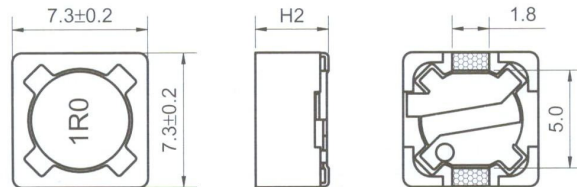
Shielded SMD Power Inductor



PCS62B / 64B



PCS73 / 74



PCS124 / 125 / 127



Features

- High power, High saturation inductors
- With magnetically shielded against radiation
- Directly connected electrode on ferrite core
- Highly accurate dimensions for surface mounting

Applications

- Power Supply for VTRs.
- LCD Televisions
- Personal Computers
- Handheld Communication Equipment
- DC/DC Converters, etc.

Characteristics except PCSH127

- Rated DC Current: The DC current at which the inductance becomes 25% lower than its initial value or when $\Delta t=40^{\circ}\text{C}$, whichever is lower. ($T_a=25^{\circ}\text{C}$)
- Operating temperature range: $-40\sim 85^{\circ}\text{C}$

Characteristics for PCSH127

- Rated DC Current: The DC current at which the inductance becomes 30% lower than its initial value. ($T_a=25^{\circ}\text{C}$)
- Operating temperature range: $-40\sim 105^{\circ}\text{C}$

Inductance and rated current ranges

- | | | |
|-----------|---------------------------------------|--------------------------|
| - PCS62B | 2.9 $\mu\text{H}\sim 330\mu\text{H}$ | 1.94 $\sim 0.19\text{A}$ |
| - PCS64B | 10 $\mu\text{H}\sim 1000\mu\text{H}$ | 1.35 $\sim 0.14\text{A}$ |
| - PCS73 | 1.0 $\mu\text{H}\sim 1000\mu\text{H}$ | 7.97 $\sim 0.16\text{A}$ |
| - PCS74 | 1.0 $\mu\text{H}\sim 1000\mu\text{H}$ | 8.0 $\sim 0.18\text{A}$ |
| - PCS124 | 1.5 $\mu\text{H}\sim 330\mu\text{H}$ | 8.75 $\sim 0.5\text{A}$ |
| - PCS125 | 1.3 $\mu\text{H}\sim 1000\mu\text{H}$ | 8.0 $\sim 0.4\text{A}$ |
| - PCS127 | 1.0 $\mu\text{H}\sim 1000\mu\text{H}$ | 10.0 $\sim 0.55\text{A}$ |
| - PCSH127 | 4.7 $\mu\text{H}\sim 1000\mu\text{H}$ | 15.9 $\sim 1.14\text{A}$ |

- Test equipment:

L: HP4284A or HP4285A LCR meter

DCR: Milli-ohm meter

- Electrical specifications at 25°C

Dimensions

Unit: mm

| Type | 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 |
| PCSH127 | - | - | 8.0 | 5.4 | 2.9 | 7.0 |

Shielded SMD Power Inductor

Product Identification

| PCS | 62B | M | T | 101 |
|-------------------------------------|--|------------------------|------------------|---------------------------------------|
| Product Type | Dimensions (AxBxC) | Inductor Tolerance | Packaging Style | Inductance |
| PCS :Standard PCSH :High Current | 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 | M: ±20% P: +40%-20% | T: Tape and Reel | 1R1: 1.1μH 470: 47μH 101: 100μH |

Standard Electrical Characteristics

PCS62B / 64B / 73 / 74 Type

| Codes | L (μH) | Tolerance | RDC (Ω) max. | | | | IDC (A) max. | | | |
|-------|--------|-----------|--------------|-------|-------|-------|--------------|-------|-------|-------|
| | | | 62B | 64B | 73 | 74 | 62B | 64B | 73 | 74 |
| 1R0 | 1.0 | M | - | - | 0.016 | 0.020 | - | - | 7.970 | 8.000 |
| 1R5 | 1.5 | M | - | - | 0.023 | 0.018 | - | - | 5.500 | 7.000 |
| 2R2 | 2.2 | M | - | - | 0.027 | 0.028 | - | - | 4.500 | 6.000 |
| 2R9 | 2.9 | M | 0.070 | - | - | - | 1.940 | - | - | - |
| 3R3 | 3.3 | M | 0.075 | - | 0.031 | 0.032 | 1.800 | - | 4.000 | 4.800 |
| 3R9 | 3.9 | M | - | - | 0.041 | 0.035 | - | - | 3.800 | 4.400 |
| 4R0 | 4.0 | M | 0.080 | - | - | - | 1.630 | - | - | - |
| 4R7 | 4.7 | M | 0.090 | - | 0.048 | 0.038 | 1.55 | - | 3.500 | 4.000 |
| 5R5 | 5.5 | M | 0.100 | - | - | - | 1.400 | - | - | - |
| 5R6 | 5.6 | M | - | - | 0.056 | 0.040 | - | - | 3.000 | 3.500 |
| 6R8 | 6.8 | M | - | - | 0.062 | 0.045 | - | - | 2.000 | 3.000 |
| 100 | 10 | M | 0.150 | 0.120 | 0.072 | 0.049 | 1.100 | 1.350 | 1.680 | 1.840 |
| 120 | 12 | M | 0.200 | 0.130 | 0.098 | 0.058 | 1.000 | 1.220 | 1.520 | 1.710 |
| 150 | 15 | M | 0.230 | 0.180 | 0.130 | 0.081 | 0.900 | 1.110 | 1.330 | 1.470 |
| 180 | 18 | M | 0.270 | 0.240 | 0.140 | 0.091 | 0.800 | 1.020 | 1.200 | 1.310 |
| 220 | 22 | M | 0.340 | 0.270 | 0.190 | 0.110 | 0.740 | 0.910 | 1.070 | 1.230 |
| 270 | 27 | M | 0.380 | 0.300 | 0.210 | 0.150 | 0.660 | 0.820 | 0.960 | 1.120 |
| 330 | 33 | M | 0.450 | 0.330 | 0.240 | 0.170 | 0.590 | 0.740 | 0.910 | 0.960 |
| 390 | 39 | M | 0.490 | 0.370 | 0.320 | 0.230 | 0.540 | 0.690 | 0.770 | 0.910 |
| 470 | 47 | M | 0.690 | 0.520 | 0.360 | 0.260 | 0.500 | 0.620 | 0.760 | 0.880 |
| 560 | 56 | M | 0.780 | 0.560 | 0.470 | 0.350 | 0.460 | 0.580 | 0.680 | 0.750 |
| 680 | 68 | M | 1.070 | 0.630 | 0.520 | 0.380 | 0.420 | 0.510 | 0.610 | 0.690 |
| 820 | 82 | M | 1.210 | 0.710 | 0.690 | 0.430 | 0.380 | 0.460 | 0.570 | 0.610 |
| 101 | 100 | M | 1.390 | 1.030 | 0.790 | 0.610 | 0.340 | 0.420 | 0.500 | 0.600 |
| 121 | 120 | M | 1.900 | 1.150 | 0.890 | 0.660 | 0.310 | 0.380 | 0.490 | 0.520 |
| 151 | 150 | M | 2.180 | 1.680 | 1.270 | 0.880 | 0.280 | 0.350 | 0.430 | 0.460 |
| 181 | 180 | M | 2.770 | 1.870 | 1.450 | 0.980 | 0.260 | 0.320 | 0.390 | 0.420 |
| 221 | 220 | M | 3.120 | 2.080 | 1.650 | 1.170 | 0.230 | 0.290 | 0.350 | 0.360 |
| 271 | 270 | M | 4.380 | 2.370 | 2.310 | 1.640 | 0.220 | 0.260 | 0.320 | 0.340 |
| 331 | 330 | M | 4.940 | 2.670 | 2.620 | 1.860 | 0.190 | 0.230 | 0.280 | 0.320 |
| 391 | 390 | M | - | 2.940 | 2.940 | 2.850 | - | 0.220 | 0.260 | 0.290 |
| 471 | 470 | M | - | 3.930 | 4.180 | 3.010 | - | 0.200 | 0.240 | 0.260 |
| 561 | 560 | M | - | 5.430 | 4.670 | 3.620 | - | 0.180 | 0.220 | 0.230 |
| 681 | 680 | M | - | 7.320 | 5.730 | 4.630 | - | 0.170 | 0.190 | 0.220 |
| 821 | 820 | M | - | 8.240 | 6.540 | 5.200 | - | 0.150 | 0.180 | 0.200 |
| 102 | 1000 | M | - | 9.260 | 9.440 | 6.000 | - | 0.140 | 0.160 | 0.180 |

Measuring Freq:

PCS62B: 2.9~5.5μH @100KHz 0.25V; 10~330μH @1KHz 0.25V
 PCS64B: 10~1000μH @1KHz 0.25V
 PCS73: 1.0~1000μH @1KHz 0.25V
 PCS74: 1.0~1000μH @1KHz 0.25V

Shielded SMD Power Inductor

Standard Electrical Characteristics

PCS124 / 125 / 127 Type

| Codes | L (μ H) | Tolerance | DCR (Ω) max. | | | IDC (A) max. | | |
|-------|-----------------|-----------|--------------------------|-------|-------|-----------------|------|-------|
| | | | 124 | 125 | 127 | 124 | 125 | 127 |
| 1R0 | 1.0 | M | - | - | 0.007 | - | - | 10.00 |
| 1R2 | 1.2 | M | - | - | 0.007 | - | - | 9.80 |
| 1R3 | 1.3 | M | - | 0.012 | - | - | 8.00 | - |
| 1R5 | 1.5 | M | 0.008 | - | - | 8.75 | - | - |
| 1R8 | 1.8 | M | - | - | 0.011 | - | - | 8.50 |
| 2R1 | 2.1 | M | - | 0.014 | - | - | 7.00 | - |
| 2R2 | 2.2 | M | - | 0.014 | 0.010 | - | 7.00 | 8.50 |
| 2R4 | 2.4 | M | - | - | 0.012 | - | - | 8.00 |
| 2R5 | 2.5 | M | 0.013 | - | - | 8.00 | - | - |
| 2R7 | 2.7 | M | - | - | 0.012 | - | - | 8.00 |
| 3R1 | 3.1 | M | - | 0.017 | - | - | 6.00 | - |
| 3R3 | 3.3 | M | 0.015 | 0.014 | 0.013 | 6.50 | 6.75 | 7.80 |
| 3R5 | 3.5 | M | - | - | 0.014 | - | - | 7.50 |
| 3R9 | 3.9 | M | 0.015 | - | - | 6.50 | - | - |
| 4R4 | 4.4 | M | - | 0.020 | - | - | 5.00 | - |
| 4R7 | 4.7 | M | 0.018 | 0.018 | 0.016 | 5.70 | 6.20 | 6.80 |
| 5R6 | 5.6 | M | - | - | 0.014 | - | - | 6.70 |
| 5R8 | 5.8 | M | - | 0.021 | - | - | 4.40 | - |
| 6R1 | 6.1 | M | - | - | 0.018 | - | - | 6.60 |
| 6R8 | 6.8 | M | 0.023 | 0.023 | 0.014 | 4.90 | 5.90 | 6.40 |
| 7R5 | 7.5 | M | - | 0.024 | - | - | 4.20 | - |
| 7R6 | 7.6 | M | - | - | 0.020 | - | - | 5.90 |
| 8R2 | 8.2 | M | 0.026 | - | 0.016 | 4.60 | - | 6.32 |
| 100 | 10 | M | 0.028 | 0.025 | 0.022 | 4.50 | 4.00 | 5.40 |
| 120 | 12 | M | 0.038 | 0.027 | 0.024 | 4.00 | 3.50 | 4.90 |
| 150 | 15 | M | 0.050 | 0.030 | 0.027 | 3.20 | 3.30 | 4.50 |
| 180 | 18 | M | 0.057 | 0.034 | 0.039 | 3.10 | 3.00 | 3.90 |
| 220 | 22 | M | 0.066 | 0.036 | 0.043 | 2.90 | 2.80 | 3.60 |
| 270 | 27 | M | 0.080 | 0.051 | 0.046 | 2.80 | 2.30 | 3.40 |
| 330 | 33 | M | 0.097 | 0.057 | 0.065 | 2.70 | 2.10 | 3.00 |
| 390 | 39 | M | 0.132 | 0.068 | 0.073 | 2.10 | 2.00 | 2.75 |
| 470 | 47 | M | 0.150 | 0.075 | 0.100 | 1.90 | 1.80 | 2.50 |
| 560 | 56 | M | 0.190 | 0.110 | 0.110 | 1.80 | 1.70 | 2.35 |
| 680 | 68 | M | 0.220 | 0.120 | 0.140 | 1.50 | 1.50 | 2.10 |
| 820 | 82 | M | 0.260 | 0.140 | 0.160 | 1.30 | 1.40 | 1.95 |
| 101 | 100 | M | 0.308 | 0.160 | 0.220 | 1.20 | 1.30 | 1.70 |
| 121 | 120 | M | 0.380 | 0.170 | 0.250 | 1.10 | 1.10 | 1.60 |
| 151 | 150 | M | 0.530 | 0.230 | 0.280 | 0.95 | 1.00 | 1.42 |
| 181 | 180 | M | 0.620 | 0.290 | 0.350 | 0.85 | 0.90 | 1.30 |
| 221 | 220 | M | 0.700 | 0.400 | 0.390 | 0.80 | 0.80 | 1.16 |
| 271 | 270 | M | 0.876 | 0.460 | 0.560 | 0.60 | 0.75 | 1.06 |
| 331 | 330 | M | 0.990 | 0.510 | 0.640 | 0.50 | 0.68 | 0.95 |
| 391 | 390 | M | - | 0.690 | 0.700 | - | 0.65 | 0.88 |
| 471 | 470 | M | - | 0.770 | 0.980 | - | 0.58 | 0.79 |
| 561 | 560 | M | - | 0.860 | 1.070 | - | 0.54 | 0.73 |
| 681 | 680 | M | - | 1.200 | 1.460 | - | 0.48 | 0.67 |
| 821 | 820 | M | - | 1.340 | 1.640 | - | 0.43 | 0.60 |
| 102 | 1000 | M | - | 1.530 | 1.820 | - | 0.40 | 0.55 |

■ Measuring Freq:

PCS124: 1.5~330 μ H @100KHz 0.25V

PCS125: 1.3~7.5 μ H @100KHz 0.25V; 10~1000 μ H @1KHz 0.25V

PCS127: 1.2~7.6 μ H @100KHz 0.25V; 10~1000 μ H @1KHz 0.25V

Shielded SMD Power Inductor

High Current Electrical Characteristics

PCSH127 Type

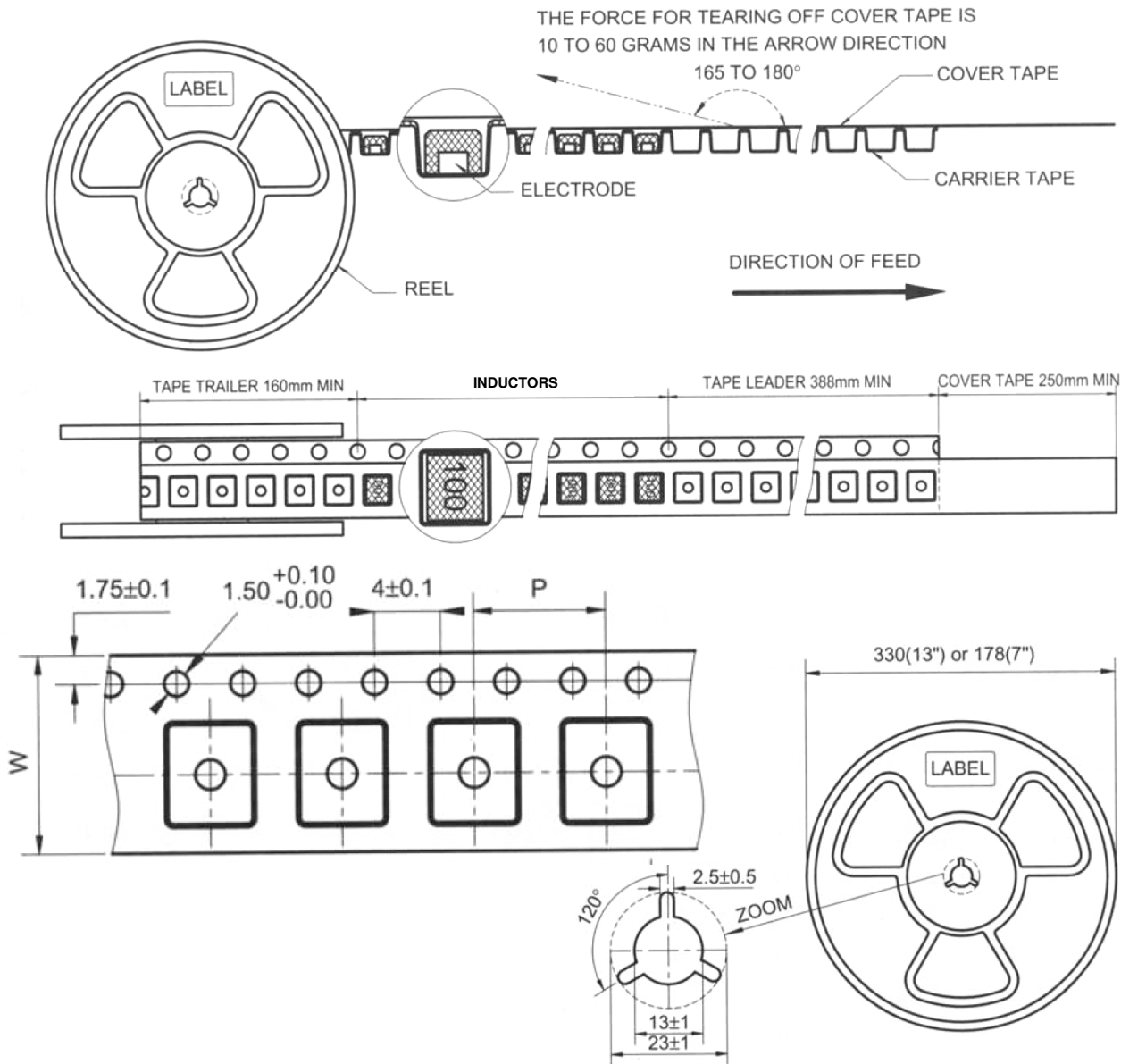
| Codes | L (uH) | Tolerance | DCR (Ω) Max | IDC (A) Max |
|-------|--------|-----------|-------------|-------------|
| 4R7 | 4.7 | M | 0.016 | 15.9 |
| 6R8 | 6.8 | M | 0.021 | 13.3 |
| 8R2 | 8.2 | M | 0.023 | 12.2 |
| 100 | 10 | M | 0.024 | 11.2 |
| 150 | 15 | M | 0.031 | 9.00 |
| 220 | 22 | M | 0.040 | 7.57 |
| 330 | 33 | M | 0.070 | 6.22 |
| 470 | 47 | M | 0.080 | 5.28 |
| 680 | 68 | M | 0.105 | 4.26 |
| 820 | 82 | M | 0.143 | 3.80 |
| 101 | 100 | M | 0.163 | 3.52 |
| 151 | 150 | M | 0.247 | 3.01 |
| 221 | 220 | M | 0.376 | 2.36 |
| 331 | 330 | M | 0.574 | 2.00 |
| 471 | 470 | M | 0.861 | 1.64 |
| 681 | 680 | M | 1.080 | 1.38 |
| 821 | 820 | M | 1.470 | 1.26 |
| 102 | 1000 | M | 1.660 | 1.14 |

■ Measuring Freq:

PCSH127: 4.7~1000μH @100KHz 0.25V

Shielded SMD Power Inductor

■Tape and Reel specifications



Unit: mm

| Type | Tape size | | Parts Per Reel |
|---------|-----------|----|----------------|
| | W | P | 13" |
| PCS62B | 16 | 12 | 1500 |
| PCS64B | 16 | 12 | 1000 |
| PCS73 | 16 | 12 | 1000 |
| PCS74 | 16 | 12 | 1000 |
| PCS124 | 24 | 16 | 500 |
| PCS125 | 24 | 16 | 400 |
| PCS127 | 24 | 16 | 400 |
| PCSH127 | 24 | 16 | 500 |

Shielded SMD Power Inductor

■ SMT Power Inductor Environmental Specifications

General

| Items | Specifications |
|---------------------------|---|
| 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. |
| Storage temperature range | Temperature range: -40°C to +85°C. |

Environmental test

| Test Items | Specifications | Test Conditions / Test Methods |
|-------------------------------|--|---|
| 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 1 hour at room temperature. |
| Low temperature Storage test | | Temperature -25±2°C, Time: 48±2 hours, Tested after 1 hour at room temperature. |
| Humidity test | | Temperature 40±2°C, 90~95% relative humidity Time: 96±2 hours Tested after 1 hour at room temperature. |
| 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 |
|------------------------------|--|---|
| Solder ability test | Terminal area must have 90% minimum solder coverage. | Dip pads in flux then dip in solder pot (SnCuNi) at 245±5°C for 3 seconds. |
| Resistance to Soldering Heat | No case deformation or change in appearance. | Flux should cover the whole of the sample before heating, then be preheated for about 2 minutes over temperature of 130~150°C. Immersing to 260±5°C for 10 seconds. |
| Vibration test | No case deformation or change in appearance. | Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours. |
| Shock resistance | $\Delta L/L \leq 10\%$ | Drop down with 981m/s ² (100G) shock attitude upon a rubber block method shock testing machine, for 1 time. In each of three orientations. |

The condition of reflow (recommendation)

