

SMD Power Inductor—PCD



Inductance and rated current ranges

- PCD0302 1.0~330 μ H 2.20~0.09A
- PCD0403 1.0~68 μ H 2.56~0.37A
- PCD0502 1.2~470 μ H 3.50~0.15A
- PCD0503 1.0~470 μ H 4.50~0.20A
- PCD0504 10~220 μ H 1.44~0.35A
- PCD0703 10~330 μ H 1.44~0.28A
- PCD0705 10~470 μ H 2.30~0.34A
- PCD1004 10~560 μ H 2.38~0.32A
- PCD1005 10~820 μ H 2.60~0.24A

- Test equipment:

L: HP4284A or HP4285A LCR meter.

DCR tested by Milli-ohm meter.

Electrical specifications at 25°C.

Applications

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

Features

- High power, High saturation inductors.
- Silver Plated Type, Low cost design.
- Ideal inductors for DC-DC conversion.
- Available on tape and reel for auto surface mounting.

Product Identification

PCD 1005 M I 101

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

(1)Type: SMD Power Inductors

(2)Dimensions(mm):0302=3.5×3.0×2.0, 0403=4.5×4.0×3.2,

0502=5.8×5.2×2.5, 0503=5.8×5.2×3.0,

0504=5.8×5.2×4.5, 0703=7.8×7.0×3.5,

0705=7.8×7.0×5.0, 1004=10×9.0×4.0,

1005=10×9.0×5.4

(3)Tolerance: M=20%, L=15%, K=10%

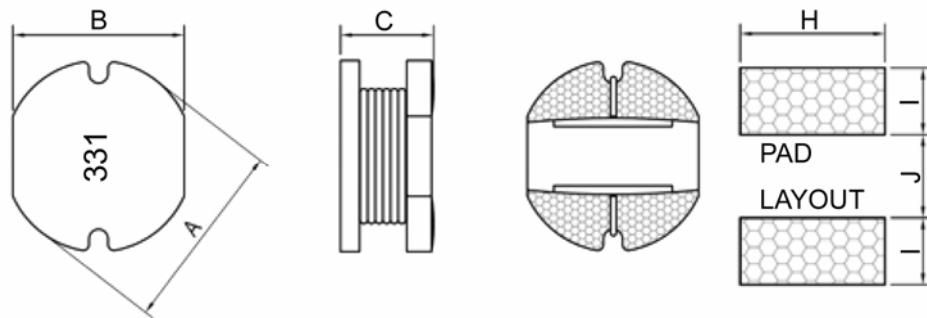
(4)Packaging style: T (Tape and Reel)

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

Characteristics:

- Rated DC Current: The DC current when the inductance decreases to 90% of its initial value or DC current when temperature of coil is increased to 30°C. (Ta=25°C)
The smaller one is defined as Rated DC Current.
- Operating Temperature: -20~80°C.

Dimension



Unit: mm

Codes	A	B	C	H	I	J
PCD0302	3.5±0.3	3.0±0.3	2.0±0.30	2.83	1.45	0.7
PCD0403	4.5±0.3	4.0±0.3	3.2±0.30	4.50	1.75	1.5
PCD0502	5.8±0.3	5.2±0.3	2.5±0.30	5.50	2.15	1.7
PCD0503	5.8±0.3	5.2±0.3	3.0±0.30	5.50	2.15	1.7
PCD0504	5.8±0.3	5.2±0.3	4.5±0.35	5.50	2.15	1.7
PCD0703	7.8±0.3	7.0±0.3	3.5±0.50	7.50	3.00	2.0
PCD0705	7.8±0.3	7.0±0.3	5.0±0.50	7.50	3.00	2.0
PCD1004	10.0±0.3	9.0±0.3	4.0±0.50	9.50	3.75	2.5
PCD1005	10.0±0.4	9.0±0.4	5.4±0.40	9.50	3.75	2.5

Electrical Characteristics

0703 / 0705 / 1004 / 1005 TYPE

Part No.	L (μH)	DC Resistance (Ω) Max				Rated DC current (A) Max			
		0703	0705	1004	1005	0703	0705	1004	1005
100	10	0.0803	0.07	0.053	0.06	1.44	2.30	2.38	2.60
120	12	0.0897	0.08	0.061	0.07	1.39	2.00	2.13	2.45
150	15	0.1040	0.09	0.070	0.08	1.24	1.80	1.87	2.27
180	18	0.1110	0.10	0.081	0.09	1.12	1.60	1.73	2.15
220	22	0.1290	0.11	0.088	0.10	1.07	1.50	1.60	1.95
270	27	0.1530	0.12	0.100	0.11	0.94	1.30	1.44	1.76
330	33	0.1700	0.13	0.120	0.12	0.85	1.20	1.26	1.50
390	39	0.2170	0.16	0.151	0.14	0.74	1.10	1.20	1.37
470	47	0.2520	0.18	0.170	0.17	0.68	1.10	1.10	1.28
560	56	0.2820	0.24	0.199	0.19	0.64	0.94	1.01	1.17
680	68	0.3320	0.28	0.223	0.22	0.59	0.85	0.91	1.11
820	82	0.4060	0.37	0.252	0.25	0.54	0.78	0.85	1.00
101	100	0.4810	0.43	0.344	0.35	0.51	0.72	0.74	0.97
121	120	0.5360	0.47	0.396	0.40	0.49	0.66	0.69	0.89
151	150	0.7550	0.64	0.544	0.47	0.40	0.58	0.61	0.78
181	180	1.0220	0.71	0.621	0.63	0.36	0.51	0.56	0.72
221	220	1.2000	0.96	0.721	0.73	0.31	0.49	0.53	0.66
271	270	1.3060	1.11	0.949	0.97	0.29	0.42	0.45	0.57
331	330	1.4950	1.26	1.100	1.15	0.28	0.40	0.42	0.52
391	390	-	1.77	1.245	1.30	-	0.36	0.38	0.48
471	470	-	1.96	1.526	1.48	-	0.34	0.35	0.42
561	560	-	-	1.904	1.90	-	-	0.32	0.33
681	680	-	-	-	2.25	-	-	-	0.28
821	820	-	-	-	2.55	-	-	-	0.24

- Measuring Freq:
10~82μH @2.52MHz 0.25V ; 100~330μH @1KHz 0.25V
- Tolerance of inductance:
PCD0703 10~470μH (K)±10%
PCD0705 10~470μH (K)±10%
PCD1004 10~47μH(M)±20% ; 56μH~560μH(K)±10%
PCD1005 10~39μH(M)±20% ; 47μH~820μH(K)±10%

Electrical Characteristics

0302 / 0403 / 0502 / 0503 / 0504 TYPE

Part No.	L (μH)	DC Resistance (Ω) Max					Rated DC current (A) Max				
		0302	0403	0502	0503	0504	0302	0403	0502	0503	0504
1R0	1.0	0.045	0.0487	-	0.03	-	2.20	2.56	-	4.50	-
1R2	1.2	0.050	-	0.050	0.03	-	2.10	-	4.20	4.20	-
1R4	1.4	-	0.0562	-	-	-	-	2.52	-	-	-
1R5	1.5	0.055	-	0.060	0.03	-	1.70	-	4.00	4.10	-
1R8	1.8	0.070	0.0637	0.065	0.03	-	1.65	1.95	3.70	3.70	-
2R2	2.2	0.085	0.0712	0.070	0.03	-	1.60	1.75	3.50	3.50	-
2R7	2.7	0.100	0.0787	0.080	0.04	-	1.40	1.58	3.20	3.20	-
3R3	3.3	0.120	0.0862	0.100	0.05	-	1.04	1.44	2.70	2.80	-
3R9	3.9	0.125	0.0937	0.120	0.06	-	1.00	1.33	2.40	2.60	-
4R7	4.7	0.135	0.1087	0.140	0.07	-	1.00	1.15	2.00	2.50	-
5R6	5.6	0.145	0.1257	0.150	0.08	-	0.95	0.99	1.80	2.40	-
6R8	6.8	0.200	0.1312	0.160	0.09	-	0.95	0.95	1.50	2.20	-
8R2	8.2	0.250	0.1462	0.170	0.10	-	0.92	0.84	1.40	2.00	-
100	10	0.320	0.1820	0.200	0.13	0.10	0.90	1.05	1.30	1.80	1.44
120	12	0.350	0.2100	0.230	0.16	0.12	0.85	0.97	1.10	1.75	1.40
150	15	0.460	0.2350	0.250	0.19	0.14	0.75	0.85	1.05	1.70	1.30
180	18	0.520	0.3380	0.300	0.21	0.15	0.70	0.74	1.00	1.60	1.23
220	22	0.650	0.3780	0.350	0.28	0.18	0.60	0.68	0.90	1.50	1.11
270	27	0.750	0.5220	0.400	0.32	0.20	0.55	0.62	0.85	1.40	0.97
330	33	0.920	0.5400	0.500	0.38	0.23	0.50	0.56	0.75	1.10	0.88
390	39	1.120	0.5870	0.550	0.42	0.32	0.48	0.52	0.70	1.00	0.80
470	47	1.270	0.844	0.650	0.52	0.37	0.45	0.44	0.60	0.90	0.72
560	56	1.500	0.9370	0.750	0.50	0.42	0.30	0.42	0.55	0.85	0.68
680	68	2.000	1.1170	0.950	0.68	0.46	0.26	0.37	0.50	0.80	0.61
820	82	2.150	-	1.200	0.82	0.60	0.23	-	0.45	0.65	0.58
101	100	2.850	-	1.400	1.10	0.70	0.20	-	0.40	0.60	0.52
121	120	3.400	-	1.750	1.20	0.93	0.18	-	0.35	0.58	0.48
151	150	4.200	-	2.000	1.50	1.10	0.16	-	0.25	0.43	0.40
181	180	4.500	-	2.600	1.80	1.38	0.15		0.22	0.41	0.38
221	220	5.700	-	3.000	2.00	1.57	0.14		0.20	0.38	0.35
271	270	8.500	-	3.700	2.90	-	0.10		0.18	0.35	-
331	330	9.500	-	4.300	3.30	-	0.09		0.17	0.28	-
391	390	-	-	6.000	3.70	-	-		0.16	0.26	-
471	470	-	-	6.700	4.90	-	-		0.15	0.20	-

- **Measuring Freq:**
1.0~8.2μH @7.96MHz 0.25V ; 10~82μH @2.52MHz 0.25V ; 100~470μH @1KHz 0.25V
- **Tolerance of inductance:**
PCD0302 1.0~18μH (M)±20% ; 22μH~330μH(K)±10%.
PCD0403 1.0~27μH (M)±20% ; 33μH~68μH(K)±10%.
PCD0502 1.2~18μH (M)±20% ; 22μH~470μH(K)±10%.
PCD0503 1.0~18μH (M)±20% ; 22μH~470μH(K)±10%.
PCD0504 10~27μH (M)±20% ; 33μH~220μH(K)±10%.