



● Characteristics

- I Rated DC Current: The DC current when the inductance becomes 10% lower than its initial value or DC current when temperature of coil is increased to 40 °C (Ta-25°C)
The smaller one is defined as Rated DC Current.
- II Operating temperature range: -40~125° C

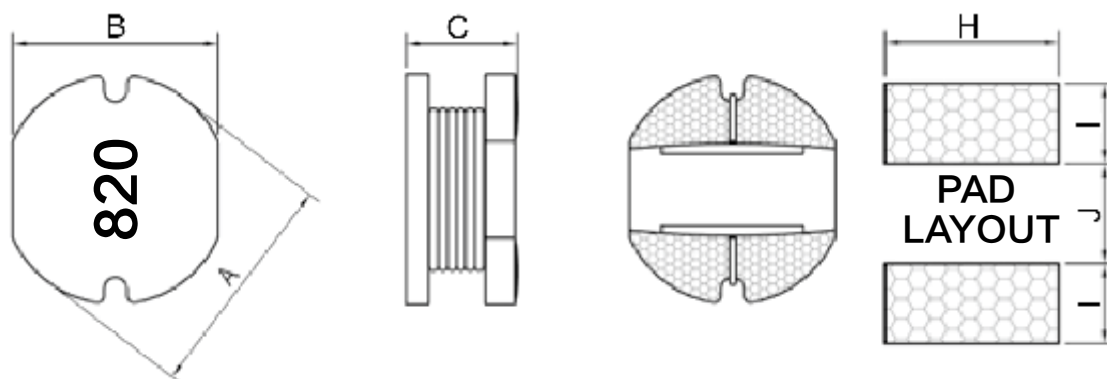
● Features

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

● Applications

- I Power Supply For VTRs..
- II LCD Televisions
- III Personal Computers.
- IV Handheld Communication
- V DC/DC Converters, etc.

● Dimensions



Type	A	B	C	H	I	J
PCD0301	3.5 ± 0.3	3.0 ± 0.3	1.15 ± 0.3	3.50	1.60	0.8
PCD0302	3.5 ± 0.3	3.0 ± 0.3	2.1 ± 0.3	3.50	1.60	0.8
PCD0403	4.5 ± 0.3	4.0 ± 0.3	3.2 ± 0.3	4.50	1.75	1.5
PCD0502	5.8 ± 0.3	5.2 ± 0.3	2.5 ± 0.3	5.50	2.15	1.7
PCD0503	5.8 ± 0.3	5.2 ± 0.3	3.0 ± 0.3	5.50	2.15	1.7
PCD0504	5.8 ± 0.3	5.2 ± 0.3	4.5 ± 0.3	5.50	2.15	1.7
PCD0703	7.8 ± 0.3	7.0 ± 0.3	3.5 ± 0.5	7.50	3.00	2.0
PCD0705	7.8 ± 0.3	7.0 ± 0.3	5.0 ± 0.5	7.50	3.00	2.0
PCD1004	10.0 ± 0.4	9.0 ± 0.3	4.0 ± 0.5	9.50	3.75	2.5
PCD1005	10.0 ± 0.4	9.0 ± 0.3	5.4 ± 0.5	9.50	3.75	2.5
PCD1006	10.0 ± 0.4	9.0 ± 0.3	7.5 max.	9.50	3.75	2.5

● Reference Standards

JISC 5201-1

● Ordering Information

Example:

PCD	1005	M	T	101
(1)	(2)	(3)	(4)	(5)
Series Name	Dimensions (AxBxC)	Inductance Tolerance	Packaging Code	Inductance

(1)Type: PCD SERIES

(2)Dimensions(AxBxC) : 0301=3.5×3.0×1.15,0302= 3.5×3.0×2.1,0403=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= 10×9.0×5.4,1006=10×9.0×7.5

(3)Inductance Tolerance: K: ± 10%,M: ± 20%

(4)Packaging Code: T: Taping Reel

(5)Inductance : 1R0= 1.0μH,470= 47μH,101= 100μH

● Inductance and rated current ranges

PCD0301	1.0 ~390μH	1.40 ~0.10A
PCD0302	1.0~ 330μH	2.20 ~0.009A
PCD0403	1.0~ 1000μH	2.70~ 0.109A
PCD0502	1.0 ~470μH	4.00 ~0.15A
PCD0503	1.0 ~1000μH	4.50~ 0.13A
PCD0504	1.0~ 1000μH	5.00~ 0.26A
PCD0703	1.0~ 1000μH	1.64 ~0.20A
PCD0705	1.0~ 1000μH	3.40 ~0.30A
PCD1004	1.0~ 560μH	8.70~ 0.32A
PCD1005	1.2 ~1000μH	8.63~ 0.20A
PCD1006	1.0~1000μH	9.50~ 0.46A
Test equipment: L: HP4284A LCR meter ,DCR: Milli-ohm meter		
Electrical specifications at 25° C		

● Electrical Characteristics

PCD0301 Type

Codes	L(μ H)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
1R0	1.0	M	100KHz, 0.25V	0.060	1.40
1R5	1.5	M	100KHz, 0.25V	0.081	1.30
1R8	1.8	M	100KHz, 0.25V	0.098	1.24
2R2	2.2	M	100KHz, 0.25V	0.240	1.20
2R7	2.7	M	100KHz, 0.25V	0.135	1.04
3R3	3.3	M	100KHz, 0.25V	0.270	1.00
3R9	3.9	M	100KHz, 0.25V	0.188	0.79
4R7	4.7	M	100KHz, 0.25V	0.400	0.90
5R6	5.6	M	100KHz, 0.25V	0.450	0.65
6R8	6.8	M	100KHz, 0.25V	0.500	0.56
8R2	8.2	M	100KHz, 0.25V	0.650	0.50
100	10	M	1KHz, 0.25V	0.750	0.45
120	12	M	1KHz, 0.25V	0.850	0.43
150	15	M	1KHz, 0.25V	1.200	0.39
180	18	M	1KHz, 0.25V	1.300	0.32
220	22	M	1KHz, 0.25V	1.500	0.28
270	27	M	1KHz, 0.25V	2.200	0.26
330	33	M	1KHz, 0.25V	2.800	0.25
470	47	M	1KHz, 0.25V	4.000	0.21
560	56	M	1KHz, 0.25V	4.500	0.20
680	68	M	1KHz, 0.25V	5.000	0.18
820	82	M	1KHz, 0.25V	6.500	0.16
101	100	M	1KHz, 0.25V	7.500	0.15
221	22	M	1KHz, 0.25V	14.00	0.13
331	330	M	1KHz, 0.25V	22.00	0.11
391	390	M	1KHz, 0.25V	25.00	0.10

PCD 0302 / 0403 / 0502 Type

Codes	L(μ H)	Tolerance	Test Condition	DCR(Ω) max.			IDC(A) max.		
				0302	0403	0502	0302	0403	0502
1R0	1.0	M	100KHz, 0.25V	0.045	0.049	0.021	2.200	2.700	4.000
1R2	1.2	M	100KHz, 0.25V	0.050	0.053	0.050	2.100	2.540	4.200
1R4	1.4	M	100KHz, 0.25V	0.050	0.056	-	2.000	2.500	-
1R5	1.5	M	100KHz, 0.25V	0.055	0.061	0.060	1.700	2.240	4.000
1R8	1.8	M	100KHz, 0.25V	0.070	0.064	0.065	1.650	2.330	3.700
2R2	2.2	M	100KHz, 0.25V	0.085	0.072	0.070	1.600	0.250	3.500
2R7	2.7	M	100KHz, 0.25V	0.100	0.079	0.080	1.400	2.160	3.200
3R3	3.3	M	100KHz, 0.25V	0.120	0.086	0.100	1.040	2.000	2.700
3R9	3.9	M	100KHz, 0.25V	0.130	0.094	0.120	1.000	1.840	2.400
4R7	4.7	M	100KHz, 0.25V	0.170	0.109	0.140	1.000	1.620	2.000
5R6	5.6	M	100KHz, 0.25V	0.185	0.126	0.150	0.950	1.480	1.800
6R8	6.8	M	100KHz, 0.25V	0.200	0.131	0.160	0.950	1.430	1.500
8R2	8.2	M	100KHz, 0.25V	0.250	0.147	0.170	0.900	1.370	1.400
100	10	K,M	1KHz, 0.25V	0.320	0.182	0.200	0.760	1.040	1.300
120	12	K,M	1KHz, 0.25V	0.350	0.210	0.230	0.685	0.970	1.100
150	15	K,M	1KHz, 0.25V	0.460	0.235	0.250	0.635	0.850	1.050
180	18	K,M	1KHz, 0.25V	0.520	0.338	0.300	0.525	0.740	1.000
220	22	K,M	1KHz, 0.25V	0.660	0.378	0.350	0.500	0.680	0.900
270	27	K,M	1KHz, 0.25V	0.760	0.522	0.400	0.405	0.620	0.850
330	33	K,M	1KHz, 0.25V	0.920	0.540	0.500	0.380	0.560	0.750
390	39	K,M	1KHz, 0.25V	1.120	0.587	0.550	0.355	0.520	0.700
470	47	K,M	1KHz, 0.25V	1.270	0.844	0.650	0.330	0.440	0.600
560	56	K,M	1KHz, 0.25V	1.500	0.937	0.760	0.290	0.420	0.550
680	68	K,M	1KHz, 0.25V	2.000	1.117	0.950	0.260	0.370	0.500
820	82	K,M	1KHz, 0.25V	2.440	1.140	1.200	0.230	0.340	0.450
101	100	K,M	1KHz, 0.25V	2.850	1.190	1.400	0.200	0.300	0.400
121	120	K,M	1KHz, 0.25V	3.400	1.400	1.750	0.180	0.256	0.350
151	150	K,M	1KHz, 0.25V	4.470	1.800	2.000	0.160	0.212	0.250
181	180	K,M	1KHz, 0.25V	5.110	1.920	2.600	0.150	0.200	0.250
221	220	K,M	1KHz, 0.25V	7.310	2.030	3.000	0.140	0.180	0.200
271	270	K,M	1KHz, 0.25V	8.500	2.890	3.700	0.100	0.174	0.180
331	330	K,M	1KHz, 0.25V	10.19	3.760	4.300	0.090	0.168	0.170
391	390	K,M	1KHz, 0.25V	-	4.260	6.000	-	0.160	0.160
471	470	K,M	1KHz, 0.25V	-	5.140	6.700	-	0.158	0.150
561	560	K,M	1KHz, 0.25V	-	6.370	-	-	0.148	-
681	680	K,M	1KHz, 0.25V	-	9.240	-	-	0.128	-
821	820	K,M	1KHz, 0.25V	-	13.40	-	-	0.110	-
102	1000	K,M	1KHz, 0.25V	-	15.60	15.00	-	0.109	0.140

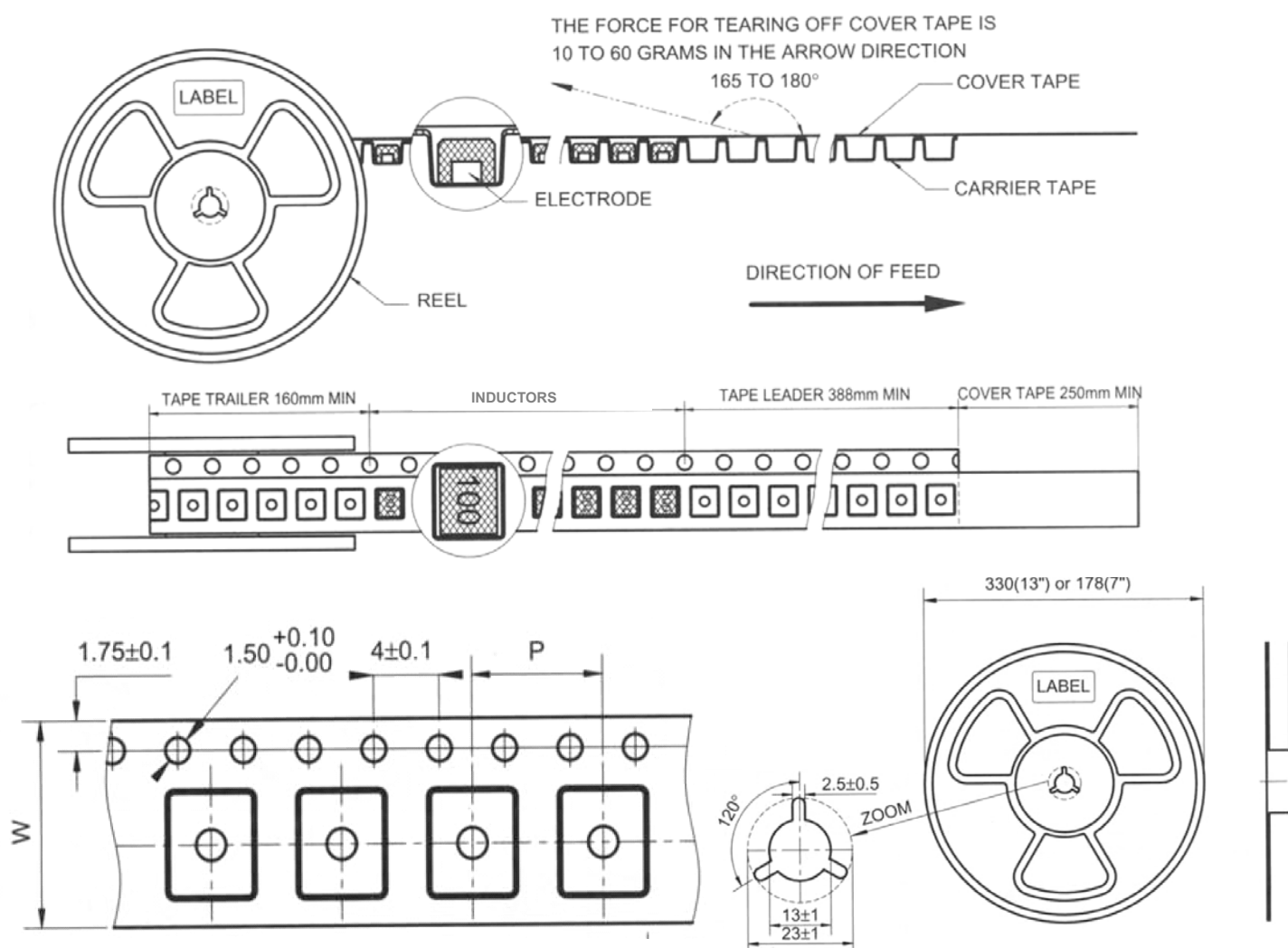
PCD0503 / 0504 / 0703 Type

Codes	L(μ H)	Tolerance	Test Condition	DCR(Ω) max.			IDC(A) max.		
				0503	0504	0703	0503	0504	0703
1R0	1.0	M	100KHz, 0.25V	0.03	0.010	0.018	4.50	5.00	1.64
1R2	1.2	M	100KHz, 0.25V	0.03	0.012	-	4.20	4.77	-
1R5	1.5	M	100KHz, 0.25V	0.03	0.013	0.020	4.10	4.50	1.60
1R8	1.8	M	100KHz, 0.25V	0.03	0.016	-	3.70	4.25	-
2R2	2.2	M	100KHz, 0.25V	0.03	0.017	0.023	3.50	4.20	1.60
2R7	2.7	M	100KHz, 0.25V	0.04	0.025	-	3.20	4.00	-
3R3	3.3	M	100KHz, 0.25V	0.05	0.034	0.025	2.80	2.50	1.59
3R9	3.9	M	100KHz, 0.25V	0.06	0.035	-	2.60	2.20	-
4R7	4.7	M	100KHz, 0.25V	0.07	0.035	0.039	2.50	2.00	1.54
5R6	5.6	M	100KHz, 0.25V	0.08	0.042	-	2.40	1.82	-
6R8	6.8	M	100KHz, 0.25V	0.09	0.060	0.040	2.20	1.69	1.49
8R2	8.2	M	100KHz, 0.25V	0.10	0.060	0.080	2.00	1.56	1.46
100	10	K,M	1KHz, 0.25V	0.13	0.100	0.080	1.80	1.44	1.44
120	12	K,M	1KHz, 0.25V	0.16	0.120	0.090	1.75	1.40	1.39
150	15	K,M	1KHz, 0.25V	0.19	0.140	0.104	1.70	1.30	1.24
180	18	K,M	1KHz, 0.25V	0.21	0.150	0.111	1.60	1.23	1.12
220	22	K,M	1KHz, 0.25V	0.28	0.180	0.129	1.50	1.11	1.07
270	27	K,M	1KHz, 0.25V	0.32	0.200	0.153	0.40	0.97	0.94
330	33	K,M	1KHz, 0.25V	0.38	0.230	0.170	0.10	0.88	0.85
390	39	K,M	1KHz, 0.25V	0.42	0.320	0.217	1.00	0.80	0.74
470	47	K,M	1KHz, 0.25V	0.43	0.370	0.252	0.90	0.72	0.68
560	56	K,M	1KHz, 0.25V	0.50	0.420	0.282	0.85	0.68	0.64
680	68	K,M	1KHz, 0.25V	0.68	0.460	0.332	0.80	0.61	0.59
820	82	K,M	1KHz, 0.25V	0.82	0.600	0.406	0.65	0.58	0.54
101	100	K,M	1KHz, 0.25V	1.10	0.700	0.481	0.60	0.52	0.51
121	120	K,M	1KHz, 0.25V	1.20	0.930	0.536	0.58	0.48	0.49
151	150	K,M	1KHz, 0.25V	1.50	1.100	0.755	0.43	0.40	0.40
181	180	K,M	1KHz, 0.25V	1.80	1.380	1.022	0.41	0.38	0.36
221	220	K,M	1KHz, 0.25V	2.00	1.570	1.200	0.38	0.35	0.31
271	270	K,M	1KHz, 0.25V	2.90	1.600	1.306	0.35	0.34	0.29
331	330	K,M	1KHz, 0.25V	3.30	1.620	0.495	0.28	0.32	0.28
391	390	K,M	1KHz, 0.25V	3.70	-	0.700	0.26	-	0.27
471	470	K,M	1KHz, 0.25V	4.90	2.760	2.100	0.20	0.30	0.26
561	560	K,M	1KHz, 0.25V	5.00	3.100	2.660	0.19	0.29	0.25
681	680	K,M	1KHz, 0.25V	6.00	4.050	3.000	0.18	0.28	0.23
821	820	K,M	1KHz, 0.25V	6.60	5.500	3.630	0.15	0.27	0.21
102	1000	K,M	1KHz, 0.25V	8.00	5.740	4.760	0.13	0.26	0.20

PCD0705 / 1004 / 1005 / 1006 Type

Codes	L(μ H)	Tolerance	Test Condition	DCR(Ω) max.				IDC(A) max.			
				0705	1004	1005	1006	0705	1004	1005	1006
1R0	1.0	M	100KHz, 0.25V	0.013	0.012	-	0.008	3.40	8.70	-	9.50
1R2	1.2	M	100KHz, 0.25V	-	0.014	0.009	-	-	8.00	8.63	-
1R5	1.5	M	100KHz, 0.25V	0.016	0.016	0.010	-	3.30	7.48	8.00	-
1R8	1.8	M	100KHz, 0.25V	0.020	0.018	-	0.011	3.20	6.80	-	8.60
2R2	2.2	M	100KHz, 0.25V	0.023	0.020	0.014	0.012	3.00	5.40	6.80	7.20
2R5	2.5	M	100KHz, 0.25V	0.026	-	-	-	2.90	-	-	-
2R7	2.7	M	100KHz, 0.25V	0.027	0.024	-	-	2.85	3.20	-	-
3R3	3.3	M	100KHz, 0.25V	0.028	0.028	0.018	0.016	2.80	2.85	3.05	6.80
3R9	3.9	M	100KHz, 0.25V	-	0.030	-	0.017	-	2.80	-	6.35
4R7	4.7	M	100KHz, 0.25V	0.045	0.038	0.020	0.019	2.70	2.75	2.90	5.45
5R6	5.6	M	100KHz, 0.25V	0.048	0.040	-	0.024	2.65	2.70	-	4.30
6R8	6.8	M	100KHz, 0.25V	0.058	0.042	0.040	0.035	2.50	2.65	2.75	3.52
8R2	8.2	M	100KHz, 0.25V	0.070	0.048	0.050	0.045	2.40	2.60	2.70	3.51
100	10	K,M	1KHz, 0.25V	0.070	0.053	0.060	0.060	2.30	2.38	2.60	3.50
120	12	K,M	1KHz, 0.25V	0.080	0.061	0.070	0.070	2.00	2.13	2.45	3.40
150	15	K,M	1KHz, 0.25V	0.090	0.070	0.080	0.080	1.80	1.87	2.27	3.10
180	18	K,M	1KHz, 0.25V	0.100	0.081	0.090	0.090	1.60	1.73	2.15	3.00
220	22	K,M	1KHz, 0.25V	0.110	0.090	0.100	0.100	1.50	1.60	1.95	2.60
270	27	K,M	1KHz, 0.25V	0.120	0.100	0.110	0.110	1.30	1.44	1.76	2.40
330	33	K,M	1KHz, 0.25V	0.130	0.120	0.120	0.120	1.20	1.26	1.50	2.30
390	39	K,M	1KHz, 0.25V	0.160	0.151	0.140	0.140	1.10	1.20	1.37	2.10
470	47	K,M	1KHz, 0.25V	0.180	0.170	0.170	0.170	1.40	1.10	1.28	1.95
560	56	K,M	1KHz, 0.25V	0.240	0.199	0.190	0.190	0.94	1.01	1.17	1.85
680	68	K,M	1KHz, 0.25V	0.280	0.223	0.220	0.220	0.85	0.91	1.11	1.65
820	82	K,M	1KHz, 0.25V	0.370	0.252	0.250	0.250	0.78	0.85	1.00	1.50
101	100	K,M	1KHz, 0.25V	0.430	0.344	0.350	0.350	0.72	0.74	0.97	1.40
121	120	K,M	1KHz, 0.25V	0.470	0.396	0.400	0.400	0.66	0.69	0.89	1.30
151	150	K,M	1KHz, 0.25V	0.640	0.544	0.470	0.470	0.58	0.61	0.78	1.20
181	180	K,M	1KHz, 0.25V	0.710	0.621	0.630	0.630	0.51	0.56	0.72	1.00
221	220	K,M	1KHz, 0.25V	0.960	0.721	0.730	0.730	0.49	0.66	0.66	0.95
271	270	K,M	1KHz, 0.25V	1.110	0.949	0.970	0.970	0.45	0.57	0.57	0.90
331	330	K,M	1KHz, 0.25V	1.260	1.100	1.150	1.150	0.42	0.52	0.52	0.80
391	390	K,M	1KHz, 0.25V	1.770	1.245	1.300	1.300	0.38	0.48	0.48	0.75
471	470	K,M	1KHz, 0.25V	1.960	1.526	1.480	1.480	0.35	0.42	0.42	0.65
561	560	K,M	1KHz, 0.25V	2.280	1.904	1.900	1.900	0.32	0.33	0.33	0.60
681	680	K,M	1KHz, 0.25V	2.480	-	2.250	2.250	-	0.28	0.28	0.50
821	820	K,M	1KHz, 0.25V	3.400	-	2.550	2.550	-	0.24	0.24	0.48
102	1000	K,M	1KHz, 0.25V	4.200	-	3.490	3.000	-	0.20	0.20	0.46

● Tape and Reel specifications



Type	Tape size		Parts Per Reel
	W	P	
PCD0301	12	8	3000
PCD0302	12	8	2000
PCD0403	12	8	1500
PCD0502	12	8	2000
PCD0503	12	8	1500
PCD0504	12	8	1500
PCD0703	16	12	1000
PCD0705	16	12	1000
PCD1004	24	16	1000
PCD1005	24	16	500
PCD1006	24	16	500

● Environmental Specifications of SMT Power Inductor

General

Items	Specifications
Shelf Storage conditions:	Temperature range: $25 \pm 3^{\circ}\text{C}$; Humidity: $<80\%$ relative humidity. Recommended product should be used within six months from the time of delivery.

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 $85 \pm 2^{\circ}\text{C}$, Time: 48 ± 2 hours, Tested after 1 hour at room temperature.
Low temperature Storage test		Temperature $-25 \pm 2^{\circ}\text{C}$, Time: 48 ± 2 hours, Tested after 1 hour at room temperature.
Humidity test		Temperature $40 \pm 2^{\circ}\text{C}$, $90\sim 95\%$ 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
Solderability test	Terminal area must have 90% minimum	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at $245 \pm 5^{\circ}\text{C}$ for 3seconds.
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 $130\sim 150^{\circ}\text{C}$.Immersing to $260 \pm 5^{\circ}\text{C}$ for 10 seconds.
Vibration test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	Apply frequency $10\sim 55\text{Hz}$. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance		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):

