

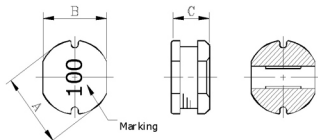
●FEATURE

1. High current capacity
2. Large terminal surface for good PCB bonding

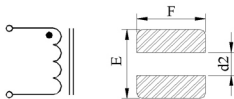
●Applications

1. DC-DC converter or LCD TV and others

●Shape and Dimension



●Schematics and Land Patterns(mm)



●Specification

Dimension in m/m

TYPE	A	B	C	E	d2	F
TP03015	3.7 Max	3.3 Max	1.5±0.30	3.60	1.00	3.50
TP0302	3.7 Max	3.3 Max	2.1±0.30	3.60	1.00	3.50
TP0403	4.5±0.30	4.0±0.30	3.2±0.30	4.70	1.30	4.10
TP0502	5.8±0.30	5.2±0.30	2.0±0.30	6.00	1.30	5.30
TP0504	5.8±0.30	5.2±0.30	4.5±0.30	6.00	1.30	5.30
TP0703	7.8±0.30	7.0±0.30	3.5±0.40	8.00	2.10	7.20
TP0705	7.8±0.30	7.0±0.30	5.0±0.50	8.00	2.10	7.20
TP1004	10.0±0.30	9.0±0.30	4.0±0.50	10.20	2.10	9.20
TP1005	10.0±0.30	9.0±0.30	5.4±0.50	10.20	2.10	9.20
TP1006	10.0±0.30	9.0±0.30	7.5 Max	10.20	2.10	9.20
TP1011	10.0±0.50	9.5±0.30	11.5±0.50	10.20	2.10	10.00
TP1307	13.0±0.70	13.0±0.70	7.0±0.30	14.00	4.50	14.00

Note1. Measurement frequency of Inductance value : at 100KHz, 0.25V

Note2. Measurement ambient temperature of L, DCR and IDC : at 25°C

Note3. IDC : This indicates the value of current when the inductances is 10% lower than its initial value at D.C. superimposition (Ta=20°C)

Note4. Inductance tolerance: M: ±20% ; K: ±10%

Note5. Ordering Code: TYPE NAME: TP0504

Main Inductance: 100 (10uH)

Tolerance : M (±20%)

Note6. Packaging: Taping

Part No.	Inductance(uH)	D.C.R.(Ω Max)/Rated D.C. Current(A)				
		TP03015	TP0302	TP0403	TP0502	TP0504
1R0	1.0			0.049 / 2.56		
2R0	2.0					
2R7	2.7			0.079 / 1.58		
3R0	3.0					
3R3	3.3		0.131 / 1.50	0.087 / 1.44		
3R9	3.9			0.094 / 1.33		
4R7	4.7	0.195 / 0.65	0.158 / 1.30	0.109 / 1.15	0.130 / 2.10	0.054 / 2.50
5R6	5.6			0.126 / 0.99		
6R3	6.3					
6R8	6.8		0.188 / 1.10	0.132 / 0.95	0.166 / 1.70	0.070 / 2.00
8R0	8.0					
8R2	8.2			0.147 / 0.84		
100	10	0.390 / 0.45	0.341 / 1.00	0.182 / 1.04	0.223 / 1.35	0.100 / 1.44
120	12			0.210 / 0.97		0.120 / 1.40
150	15	0.754 / 0.30	0.460 / 0.90	0.235 / 0.85	0.335 / 0.90	0.140 / 1.30
180	18			0.338 / 0.74		0.150 / 1.23
220	22	0.923 / 0.25	0.685 / 0.75	0.378 / 0.68	0.499 / 0.75	0.180 / 1.11
270	27		0.912 / 0.70	0.522 / 0.62	0.564 / 0.62	0.200 / 0.97
330	33	1.430 / 0.20	0.951 / 0.60	0.540 / 0.56	0.659 / 0.56	0.230 / 0.88
390	39			0.587 / 0.52		0.320 / 0.80
470	47	1.690 / 0.17	1.582 / 0.45	0.844 / 0.44	0.920 / 0.48	0.370 / 0.72
560	56			0.937 / 0.42		0.420 / 0.68
680	68	2.860 / 0.13	2.033 / 0.30	1.117 / 0.37	1.264 / 0.37	0.460 / 0.61
820	82		2.319 / 0.20		1.469 / 0.27	0.600 / 0.58
101	100	4.550 / 0.10	2.558 / 0.10		1.697 / 0.20	0.700 / 0.52
121	120					0.930 / 0.48
151	150		4.303 / 0.08		2.912 / 0.17	1.100 / 0.40
181	180					1.380 / 0.38
221	220		6.669 / 0.07		4.706 / 0.15	1.570 / 0.35
331	330		8.684 / 0.06		7.306 / 0.10	
471	470		13.091 / 0.06		9.282 / 0.10	
681	680		17.095 / 0.06		14.040 / 0.10	
821	820					
102	1000					

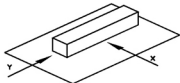
Part No.	Inductance(μ H)	D.C.R. (Ω Max)/Rated D.C. Current(A)				
		TP0703	TP0705	TP1004	TP1005	TP1006
1R0	1.0	0.023 / 3.47				
2R0	2.0					
2R7	2.7					
3R0	3.0					
3R3	3.3	0.036 / 2.89				
3R9	3.9					
4R7	4.7	0.048 / 2.60		0.035 / 5.40		
5R6	5.6	0.054 / 2.31			0.040 / 5.00	
6R3	6.3					
6R8	6.8	0.060 / 2.02	0.042 / 3.20			
8R0	8.0					
8R2	8.2	0.071 / 1.73				
100	10	0.081 / 1.44	0.070 / 2.30	0.053 / 2.38	0.060 / 2.60	0.06 / 3.50
120	12	0.090 / 1.39	0.080 / 2.00	0.061 / 2.13	0.070 / 2.45	0.07 / 3.40
150	15	0.104 / 1.24	0.090 / 1.80	0.070 / 1.87	0.080 / 2.27	0.08 / 3.10
180	18	0.111 / 1.12	0.100 / 1.60	0.081 / 1.73	0.090 / 2.15	0.09 / 3.00
220	22	0.129 / 1.07	0.110 / 1.50	0.088 / 1.60	0.100 / 1.95	0.10 / 2.60
270	27	0.153 / 0.94	0.120 / 1.30	0.100 / 1.44	0.110 / 1.76	0.11 / 2.40
330	33	0.170 / 0.85	0.130 / 1.20	0.120 / 1.26	0.120 / 1.50	0.12 / 2.30
390	39	0.217 / 0.74	0.160 / 1.10	0.151 / 1.20	0.140 / 1.37	0.14 / 2.10
470	47	0.252 / 0.68	0.180 / 1.10	0.170 / 1.10	0.170 / 1.28	0.17 / 1.95
560	56	0.282 / 0.64	0.240 / 0.94	0.199 / 1.01	0.190 / 1.17	0.19 / 1.85
680	68	0.332 / 0.59	0.280 / 0.85	0.223 / 0.91	0.220 / 1.11	0.22 / 1.65
820	82	0.406 / 0.54	0.370 / 0.78	0.252 / 0.85	0.250 / 1.00	0.25 / 1.50
101	100	0.481 / 0.51	0.430 / 0.72	0.344 / 0.74	0.350 / 0.97	0.35 / 1.40
121	120	0.536 / 0.49	0.470 / 0.66	0.396 / 0.69	0.400 / 0.89	0.40 / 1.30
151	150	0.755 / 0.40	0.640 / 0.58	0.544 / 0.61	0.470 / 0.78	0.47 / 1.20
181	180	1.022 / 0.36	0.710 / 0.51	0.621 / 0.56	0.630 / 0.72	0.63 / 1.00
221	220	1.200 / 0.31	0.960 / 0.49	0.721 / 0.53	0.730 / 0.66	0.73 / 0.95
331	330	1.495 / 0.28	1.260 / 0.40	1.100 / 0.42	1.150 / 0.52	1.15 / 0.80
471	470		1.960 / 0.34	1.526 / 0.35	1.480 / 0.42	1.48 / 0.65
681	680				2.250 / 0.28	2.45 / 0.50
821	820				2.550 / 0.24	
102	1000					

Part No.	Inductance(uH)	D.C.R. (ΩMax)/Rated D.C. Current(A)	
		TP1011	TP1307
1R5	1.5	0.018 / 6.40	0.005 / 20.00
2R2	2.2	0.021 / 5.40	0.006 / 18.00
2R7	2.7		0.008 / 16.00
3R0	3.0		
3R3	3.3	0.024 / 5.00	0.009 / 15.00
3R9	3.9	0.027 / 4.60	
4R7	4.7	0.036 / 4.00	0.010 / 13.00
5R6	5.6	0.040 / 3.80	0.015 / 11.00
6R3	6.3		
6R8	6.8	0.044 / 3.40	0.017 / 10.50
8R0	8.0		
8R2	8.2	0.048 / 3.00	0.019 / 9.80
100	10	0.060 / 2.60	0.021 / 9.20
120	12	0.070 / 2.45	0.030 / 8.00
150	15	0.080 / 2.25	0.034 / 7.50
180	18	0.090 / 2.15	0.036 / 7.00
220	22	0.100 / 1.95	0.047 / 6.50
270	27	0.110 / 1.75	0.060 / 5.50
330	33	0.120 / 1.50	0.065 / 5.00
390	39	0.140 / 1.35	0.075 / 4.60
470	47	0.170 / 1.25	0.082 / 4.20
560	56	0.190 / 1.15	0.100 / 3.80
680	68	0.220 / 1.10	0.120 / 3.50
820	82	0.250 / 1.00	0.140 / 3.20
101	100	0.350 / 0.97	0.180 / 3.00
121	120	0.400 / 0.89	0.210 / 2.80
151	150	0.470 / 0.78	0.250 / 2.60
181	180	0.630 / 0.72	0.280 / 2.30
221	220	0.730 / 0.66	0.360 / 2.10
331	330	1.150 / 0.52	0.520 / 1.60
471	470	1.480 / 0.42	0.720 / 1.40
681	680	2.250 / 0.28	1.000 / 1.20
821	820	2.550 / 0.24	1.300 / 1.10
102	1000	3.100 / 0.23	1.600 / 1.00

GENERAL CHARACTERISTICS

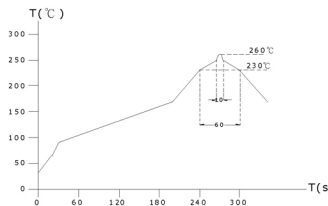
1. Operating temperature range: $-30\text{ TO }+80^{\circ}\text{C}$ (Includes temperature when the coil is heated)
2. External appearance: On visual inspection, the coil has external defects.
3. Terminal strength: After soldering. Between copper plate and terminals of coil. Push in two directions of X.Y withstanding at below conditions.

Terminal should not peel off. (refer to figure at right) 10. 0N 10 sec.



4. Insulating resistance: Over $100\text{M}\Omega$ at 100V D.C. between coil and core.
5. Dielectric strength: No dielectric breakdown at 100V D.C. for 1 minute between coil and core.
6. Temperature characteristics: Inductance coefficient $(0\sim 2,000)\times 10^{-6}/^{\circ}\text{C}$ ($-25\sim +80^{\circ}\text{C}$).
7. Humidity characteristics (Moisture Resistance): Inductance deviation within $\pm 5\%$, after 96 hours in $90\sim 95\%$ relative humidity at $40 \pm 2^{\circ}\text{C}$ and 1 hour drying under normal condition.
8. Vibration resistance: Inductance deviation within $\pm 5\%$, after vibration for 1 hour. In each of three orientations at sweep vibration ($10\sim 55\sim 10\text{ Hz}$) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within $\pm 5\%$, after being dropped once with 981m/s^2 (100G) shock attitude upon a rubber block method shock testing machine, in three different orientations.
10. Resistance to Soldering Heat: 260°C , 10 seconds (See attached recommend reflow)
11. Storage environment: Storage condition: Temperature Range: $10^{\circ}\text{C} \sim 35^{\circ}\text{C}$ (Generally: $21^{\circ}\text{C} \sim 31^{\circ}\text{C}$), Humidity Range: $50\% \sim 80\% \text{ RH}$ (Generally: $65\% \sim 75\%$); Transportation condition: Temperature Range: $-35^{\circ}\text{C} \sim 85^{\circ}\text{C}$, Humidity Range: $50\% \sim 95\% \text{ RH}$
12. Use components within 6 months. If 6 months or more have elapsed, check solderability before use.
13. Reflow profile recommend:

Lead-free heat endurance test



Lead-free the recommended reflow condition

