TP / TP-B TYPE

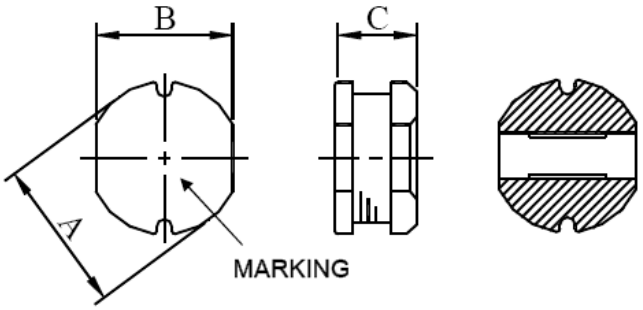
●FEATURE

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

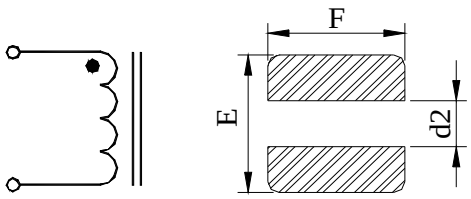
●Applications

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
TP03015B	3.7 Max	3.3 Max	1.5 Max	3.60	1.00	3.50
TP0302B	3.7 Max	3.3 Max	2.1±0.30	3.60	1.00	3.50
TP0403B	4.5±0.30	4.0±0.30	3.2±0.30	4.70	1.30	4.10
TP0502B	5.8±0.30	5.2±0.30	2.0±0.30	6.00	1.30	5.30
TP0504B	5.8±0.30	5.2±0.30	4.5±0.30	6.00	1.30	5.30
TP0703B	7.8±0.30	7.0±0.30	3.5±0.40	8.00	2.10	7.20
TP0705B	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

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

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

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

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

Note5. Ordering Code: TYPE NAME: TP0504
Main Inductance: 100 (10uH)
Tolerance : M (±20%)

Note6. Packaging: Taping

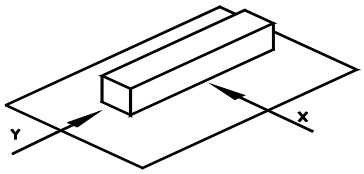
Part No.	Inductance(uH)	D.C.R.(Ω Max)/Rated D.C. Current(A)		
		TP03015B	TP0302B	TP0403B
1R0	1.0	0.048 / 1.60		0.033 / 3.80
1R5	1.5			
2R2	2.2	0.078 / 1.47	0.059 / 2.35	0.047 / 2.60
2R7	2.7			0.052 / 2.43
3R3	3.3	0.126 / 1.34	0.131 / 1.50	0.058 / 2.15
3R9	3.9			0.076 / 1.98
4R7	4.7	0.158 / 1.22	0.158 / 1.30	0.094 / 1.70
5R6	5.6			0.101 / 1.60
6R3	6.3			
6R8	6.8	0.213 / 0.96	0.188 / 1.10	0.117 / 1.41
8R0	8.0			
8R2	8.2			0.132 / 1.26
100	10	0.307 / 0.70	0.341 / 1.00	0.182 / 1.15
120	12			0.210 / 1.05
150	15	0.466 / 0.59	0.460 / 0.90	0.235 / 0.92
180	18		0.500 / 0.80	0.338 / 0.84
220	22	0.656 / 0.48	0.685 / 0.75	0.378 / 0.70
270	27		0.912 / 0.70	0.522 / 0.71
330	33	1.021 / 0.37	0.951 / 0.60	0.540 / 0.64
390	39			0.587 / 0.59
470	47	1.509 / 0.26	1.582 / 0.45	0.844 / 0.54
560	56			0.937 / 0.50
680	68	1.919 / 0.23	2.033 / 0.30	1.117 / 0.46
820	82		2.319 / 0.20	1.345 / 0.45
101	100	2.870 / 0.19	2.558 / 0.10	1.520 / 0.44
121	120	4.084 / 0.17		1.800 / 0.43
151	150	4.774 / 0.16	4.303 / 0.08	2.000 / 0.42
181	180		5.35 / 0.075	3.200 / 0.38
221	220		6.669 / 0.07	3.400 / 0.36
331	330		8.684 / 0.06	5.300 / 0.28
471	470		13.091 / 0.06	6.800 / 0.21
681	680		17.095 / 0.06	10.00 / 0.18
821	820			13.40 / 0.15
102	1000			

Part No.	Inductance(uH)	D.C.R.(Ω Max)/Rated D.C. Current(A)			
		TP0502B	TP0504B	TP0703B	TP0705B
1R0	1.0		0.025 / 4.00	0.023 / 3.47	0.020 / 7.00
2R0	2.0				
2R7	2.7	0.050 / 2.50	0.035 / 3.50		
3R0	3.0				
3R3	3.3	0.088 / 2.40	0.045 / 3.20	0.036 / 2.89	0.023 / 4.00
3R9	3.9				
4R7	4.7	0.130 / 2.10	0.054 / 2.50	0.048 / 2.60	0.025 / 3.50
5R6	5.6			0.054 / 2.31	
6R3	6.3				
6R8	6.8	0.166 / 1.70	0.070 / 2.00	0.060 / 2.02	0.042 / 3.20
8R0	8.0				
8R2	8.2		0.080 / 1.50	0.071 / 1.73	0.050 / 3.00
100	10	0.223 / 1.35	0.100 / 1.44	0.081 / 1.44	0.070 / 2.30
120	12		0.120 / 1.40	0.090 / 1.39	0.080 / 2.00
150	15	0.335 / 0.90	0.140 / 1.30	0.104 / 1.24	0.090 / 1.80
180	18		0.150 / 1.23	0.111 / 1.12	0.100 / 1.60
220	22	0.499 / 0.75	0.180 / 1.11	0.129 / 1.07	0.110 / 1.50
270	27	0.564 / 0.62	0.200 / 0.97	0.153 / 0.94	0.120 / 1.30
330	33	0.659 / 0.56	0.230 / 0.88	0.170 / 0.85	0.130 / 1.20
390	39		0.320 / 0.80	0.217 / 0.74	0.160 / 1.10
470	47	0.920 / 0.48	0.370 / 0.72	0.252 / 0.68	0.180 / 1.10
560	56		0.420 / 0.68	0.282 / 0.64	0.240 / 0.94
680	68	1.264 / 0.37	0.460 / 0.61	0.332 / 0.59	0.280 / 0.85
820	82	1.469 / 0.27	0.600 / 0.58	0.406 / 0.54	0.370 / 0.78
101	100	1.697 / 0.20	0.700 / 0.52	0.481 / 0.51	0.430 / 0.72
121	120		0.930 / 0.48	0.536 / 0.49	0.470 / 0.66
151	150	2.912 / 0.17	1.100 / 0.40	0.755 / 0.40	0.640 / 0.58
181	180		1.380 / 0.38	1.022 / 0.36	0.710 / 0.51
221	220	4.706 / 0.15	1.570 / 0.35	1.200 / 0.31	0.960 / 0.49
331	330	7.306 / 0.10		1.495 / 0.28	1.260 / 0.40
471	470	9.282 / 0.10			1.960 / 0.34
681	680	14.040 / 0.10			
821	820				
102	1000				

Part No.	Inductance(uH)	D.C.R.(Ω Max)/Rated D.C. Current(A)	
		TP1004	TP1005
1R0	1.0		
2R0	2.0		
2R7	2.7		
3R0	3.0		
3R3	3.3		
3R9	3.9		
4R7	4.7	0.038 / 4.00	0.040 / 5.40
5R6	5.6		0.040 / 5.00
6R3	6.3		
6R8	6.8		
8R0	8.0		
8R2	8.2		
100	10	0.053 / 2.38	0.060 / 2.60
120	12	0.061 / 2.13	0.070 / 2.45
150	15	0.070 / 1.87	0.080 / 2.27
180	18	0.081 / 1.73	0.090 / 2.15
220	22	0.088 / 1.60	0.100 / 1.95
270	27	0.100 / 1.44	0.110 / 1.76
330	33	0.120 / 1.26	0.120 / 1.50
390	39	0.151 / 1.20	0.140 / 1.37
470	47	0.170 / 1.10	0.170 / 1.28
560	56	0.199 / 1.01	0.190 / 1.17
680	68	0.223 / 0.91	0.220 / 1.11
820	82	0.252 / 0.85	0.250 / 1.00
101	100	0.344 / 0.74	0.350 / 0.97
121	120	0.396 / 0.69	0.400 / 0.89
151	150	0.544 / 0.61	0.470 / 0.78
181	180	0.621 / 0.56	0.630 / 0.72
221	220	0.721 / 0.53	0.730 / 0.66
331	330	1.100 / 0.42	1.150 / 0.52
471	470	1.526 / 0.35	1.480 / 0.42
681	680		2.250 / 0.28
821	820		2.550 / 0.24
102	1000		

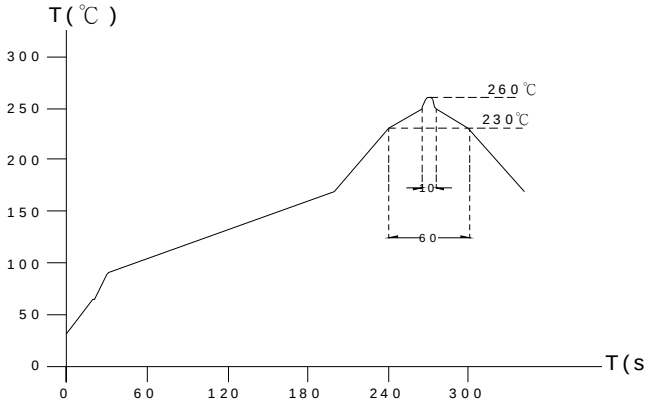
GENERAL CHARACTERISTICS

1. Operating temperature range: -40 TO + 105℃(Includes temperature when the coil is heated)
2. External appearance: On visual inspection, the coil has no 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 100MΩ 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 (0~2,000)x10-6/℃(-25~+80℃).
7. Humidity characteristics(Moisture Resistance): Inductance deviation within ±5%, after 96 hours in 90~95% relative humidity at 40 ±2℃and 1 hour drying under normal condition.
8. Vibration resistance: Inductance deviation within ±5%, after vibration for 1 hour. In each of three orientations at sweep vibration (10~55~10 Hz) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within ±5%, after being dropped once with 981m/s2 (100G) shock attitude upon a rubber block method shock testing machine, in three different orientations.
10. Resistance to Soldering Heat: 260℃, 10 seconds(See attached recommend reflow)
11. Storage environment: Storage condition: Temperature Range: 10℃ ~ 35℃ (Generally: 21℃ ~ 31℃) , Humidity Range: 50% ~ 80% RH (Generally: 65% ~ 75%) ; Transportation condition: Temperature Range: -35℃ ~ 85℃ , Humidity Range: 50% ~ 95% RH
12. Use components within 12 months. If 12 months or more have elapsed, check solderability before use.
13. Reflow profile recommend:

Lead-free heat endurance test



Lead-free the recommended reflow condition