

TPRH □□□□ TYPE

● FEATURE

1. Low core loss for high frequency power application
2. Large terminal surface

● Applications

1. Portable communication equipment, notebook computer

● Shape and Dimension

● Schematics and Land Patterns(mm)

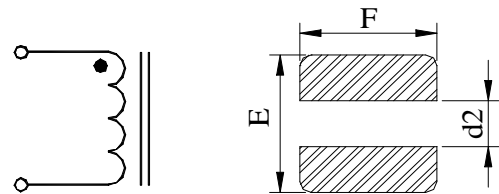
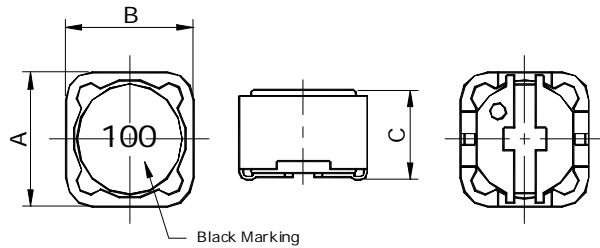


Figure 1

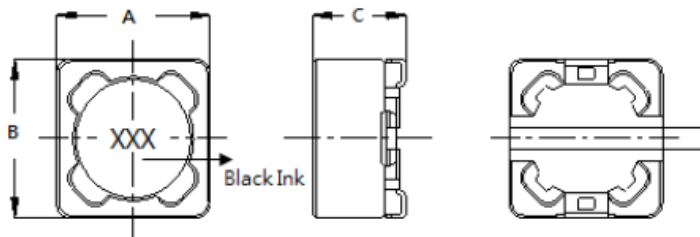


Figure 2

● Specification

Dimension in m/m

TYPE	A	B	C	E	d2	F	FIG.
TPRH1203	12.0±0.30	12.0±0.30	3.90Max	12.80	7.00	5.40	1
TPRH1204	12.0±0.30	12.0±0.30	5.00Max	12.80	7.00	5.40	1
TPRH1205	12.0±0.30	12.0±0.30	6.00Max	12.80	7.00	5.40	1
TPRH1207	12.0±0.30	12.0±0.30	8.00Max	12.80	7.00	5.40	1
TPRH0603	6.60±0.30	6.20±0.30	3.00Max	8.00	4.80	1.50	2
TPRH0605	6.60±0.30	6.20±0.30	5.00Max	8.00	4.80	1.50	2
TPRH0703	7.30±0.20	7.30±0.20	3.50Max	8.00	4.80	2.20	2
TPRH0704	7.30±0.20	7.30±0.20	4.50Max	8.00	4.80	2.20	2

Note1. Measurement frequency of Inductance value : 1KHz

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

Note3. The rated current indicates the current when the inductance decreases to 75% over of it's nominal value or D.C. current when the temperature rising Δt=30°C lower, whichever is lower

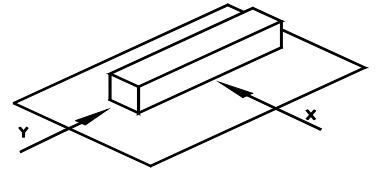
Note4. Inductance tolerance: M: ±20%

Part No.	Inductance(uH)	D.C.R.(Ω Max)/Rated D.C. Current(A)			
		TPRH1203	TPRH1204	TPRH1205	TPRH1207
1R3	1.3			0.012 / 8.00	
2R1	2.1			0.014 / 7.00	
2R2	2.2	0.015 / 7.00			
3R1	3.1			0.017 / 6.00	
3R9	3.9		0.015 / 6.50		
4R4	4.4			0.020 / 5.00	
4R7	4.7		0.018 / 5.70		0.016 / 6.80
5R6	5.6	0.037 / 5.00			
6R8	6.8		0.023 / 4.90	0.022 / 4.30	
7R5	7.5			0.024 / 4.20	
100	10	0.060 / 3.60	0.028 / 4.50	0.025 / 4.00	0.022 / 5.40
120	12		0.038 / 4.00	0.027 / 3.50	0.025 / 4.90
150	15	0.077 / 3.00	0.050 / 3.20	0.030 / 3.30	0.027 / 4.50
180	18		0.057 / 3.10	0.034 / 3.00	0.040 / 3.90
220	22	0.102 / 2.50	0.066 / 2.90	0.036 / 2.80	0.044 / 3.60
270	27		0.080 / 2.80	0.051 / 2.30	0.046 / 3.40
330	33		0.097 / 2.70	0.057 / 2.10	0.065 / 3.00
390	39		0.132 / 2.10	0.068 / 2.00	0.073 / 2.75
470	47		0.150 / 1.90	0.075 / 1.80	0.100 / 2.50
560	56		0.190 / 1.80	0.110 / 1.70	0.110 / 2.35
680	68		0.220 / 1.50	0.120 / 1.50	0.140 / 2.10
820	82		0.260 / 1.30	0.140 / 1.40	0.160 / 1.95
101	100		0.308 / 1.20	0.160 / 1.30	0.220 / 1.70
121	120		0.380 / 1.10	0.170 / 1.10	0.250 / 1.60
151	150		0.530 / 0.95	0.230 / 1.00	0.280 / 1.42
181	180		0.620 / 0.85	0.290 / 0.90	0.350 / 1.30
221	220		0.700 / 0.80	0.400 / 0.80	0.390 / 1.16
271	270		0.876 / 0.60	0.460 / 0.75	0.560 / 1.06
331	330		0.990 / 0.50	0.510 / 0.68	0.640 / 0.95
391	390			0.690 / 0.65	0.700 / 0.88
471	470			0.770 / 0.58	0.980 / 0.79
561	560			0.860 / 0.54	1.070 / 0.73
681	680			1.200 / 0.48	1.460 / 0.67
821	820			1.340 / 0.43	1.640 / 0.60
102	1000			1.530 / 0.40	1.820 / 0.55

Part No.	Inductance(uH)	D.C.R.(Ω Max)/Rated D.C. Current(A)			
		TPRH0603	TPRH0605	TPRH0703	TPRH0704
2R2	2.2			0.025 / 4.32	0.020 / 5.00
3R3	3.3	0.07 / 1.80			0.045 / 3.50
3R9	3.9				
4R2	4.2				
4R7	4.7	0.09 / 1.50		0.055 / 2.00	0.051 / 3.00
5R6	5.6				
6R0	6.0			0.063 / 1.80	
6R8	6.8				
7R0	7.0				
8R2	8.2				
100	10	0.15 / 1.10	0.12 / 1.35	0.072 / 1.68	0.049 / 1.84
120	12	0.20 / 1.00	0.13 / 1.22	0.098 / 1.52	0.058 / 1.71
150	15	0.23 / 0.90	0.18 / 1.11	0.130 / 1.33	0.081 / 1.47
180	18	0.27 / 0.80	0.24 / 1.02	0.140 / 1.20	0.091 / 1.31
220	22	0.34 / 0.74	0.27 / 0.91	0.190 / 1.07	0.110 / 1.23
270	27	0.38 / 0.66	0.30 / 0.82	0.210 / 0.96	0.150 / 1.12
330	33	0.45 / 0.59	0.33 / 0.74	0.240 / 0.91	0.170 / 0.96
390	39	0.49 / 0.54	0.37 / 0.69	0.320 / 0.77	0.230 / 0.91
470	47	0.69 / 0.50	0.52 / 0.62	0.360 / 0.64	0.260 / 0.88
560	56	0.78 / 0.46	0.56 / 0.58	0.470 / 0.68	0.350 / 0.75
680	68	1.07 / 0.42	0.63 / 0.51	0.520 / 0.61	0.380 / 0.69
820	82	1.21 / 0.38	0.71 / 0.46	0.690 / 0.57	0.430 / 0.61
101	100	1.39 / 0.34	1.03 / 0.42	0.790 / 0.50	0.610 / 0.60
121	120	1.90 / 0.31	1.15 / 0.38	0.890 / 0.49	0.660 / 0.52
151	150	2.18 / 0.28	1.68 / 0.35	1.270 / 0.43	0.880 / 0.46
181	180	2.77 / 0.26	1.87 / 0.32	1.450 / 0.39	0.980 / 0.42
221	220	3.12 / 0.23	2.08 / 0.29	1.650 / 0.35	1.170 / 0.36
271	270	4.38 / 0.22	2.37 / 0.26	2.310 / 0.32	1.640 / 0.34
331	330	4.94 / 0.19	2.67 / 0.23	2.620 / 0.28	1.860 / 0.32
391	390		2.94 / 0.22	2.940 / 0.26	2.850 / 0.29
471	470		3.93 / 0.20	4.180 / 0.24	3.010 / 0.26
561	560		5.43 / 0.18	4.670 / 0.22	3.620 / 0.23
681	680		7.32 / 0.17	5.730 / 0.19	4.630 / 0.22
821	820		8.24 / 0.15	6.540 / 0.18	5.200 / 0.20
102	1000		9.26 / 0.14	9.440 / 0.16	6.000 / 0.18

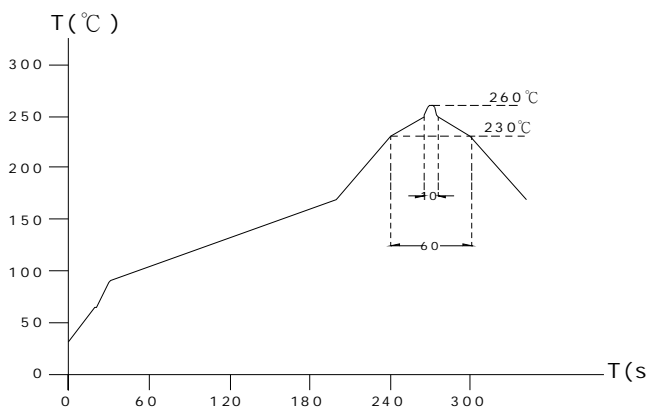
## GENERAL CHARACTERISTICS

1. Operating temperature range: -40 TO + 105°C (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) 5. 0N 60 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  $(0\sim 2,000)\times 10^{-6}/^{\circ}\text{C}$  (-25~+80°C degree Celsius), inductance deviation within  $\pm 5.0\%$ , after 96 hours.
7. Humidity characteristics (Moisture Resistance): Inductance deviation within  $\pm 5\%$ , after 96 hours in 90~95% 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 (10~55~10 Hz) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within  $\pm 5\%$ , after being dropped once with 981m/s<sup>2</sup> (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 condition: Temperature Range: 0°C ~ 35°C ; -40°C ~ 105°C (after PCB) , Humidity Range: 50% ~ 70% 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

