



● FEATURE

1. Low profile and Compact Size
2. Low DC resistance
3. Open magnetic circuit construction

● APPLICATION

1. LCD panels, DC/DC Converters
2. Digital camera, PDA
3. Portable communication equipment
4. Notebook, Server



PIP3015	PIP10040
PIP3020	PIP10050
PIP4032	
PIP5020	
PIP5045	
PIP7030	
PIP7050	

● ORDERING INFORMATION

PIP3015

PN

-1R0

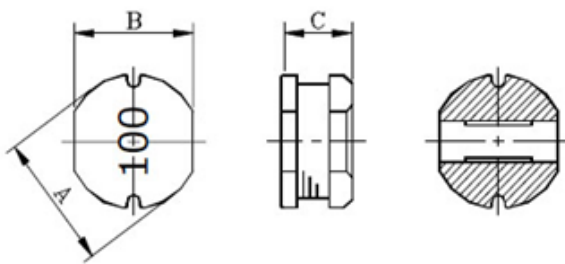
Inductance

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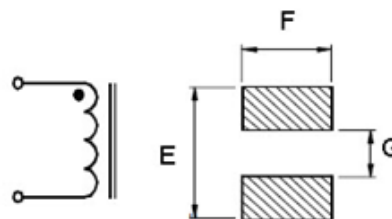
M:±20%

K:±10%

● SHAPE AND DIMENSION



● SCHEMATICS AND LAND PATTERNS(mm)



PIP3015	PIP7030
PIP3020	PIP7050
PIP4032	PIP10040
PIP5020	PIP10050
PIP5045	



●SPECIFICATION

Dimension in mm

TYPE	A	B	C	E	G	F
PIP3015	3.7 Max	3.3 Max	1.5Max	3.60	1.00	3.50
PIP3020	3.7 Max	3.3 Max	2.1±0.30	3.60	1.00	3.50
PIP4032	4.5±0.30	4.0±0.30	3.2±0.30	4.70	1.30	4.10
PIP5020	5.8±0.30	5.2±0.30	2.0±0.30	6.00	1.30	5.30
PIP5045	5.8±0.30	5.2±0.30	4.5±0.30	6.00	1.30	5.30
PIP7030	7.8±0.30	7.0±0.30	3.5±0.40	8.00	2.10	7.20
PIP7050	7.8±0.30	7.0±0.30	5.0±0.50	8.00	2.10	7.20
PIP10040	10.0±0.30	9.0±0.30	4.0±0.50	10.20	2.10	9.20
PIP10050	10.0±0.30	9.0±0.30	5.4±0.50	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°C

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

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

Note5. Ordering Code: PIP5045, Main Inductance: 100(10uH), Tolerance: M (±20%)



●ELECTRICAL CHARACTERISTICS

PART NUMBER	Inductance (μ H)	D.C.R.(Ω Max)/Rated D.C. Current(A)		
		PIP3015	PIP3020	PIP4032
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 NUMBER	Inductance (μ H)	D.C.R.(Ω Max)/Rated D.C. Current(A)			
		PIP5020	PIP0504	PIP7030	PIP7050
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				

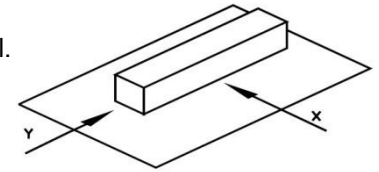


PART NUMBER	Inductance (uH)	D.C.R.(Ω Max)/Rated D.C. Current(A)	
		PIP10040	PIP10050
1R0	1.0		
2R0	2.0		
2R7	2.7		
3R0	3.0		
3R3	3.3		
3R9	3.9		
4R7	4.7	0.038 / 4.00	0.040 / 5.40
5R6	5.6		0.040 / 5.00
6R3	6.3		
6R8	6.8		
8R0	8.0		
8R2	8.2		
100	10	0.053 / 2.38	0.060 / 2.60
120	12	0.061 / 2.13	0.070 / 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		

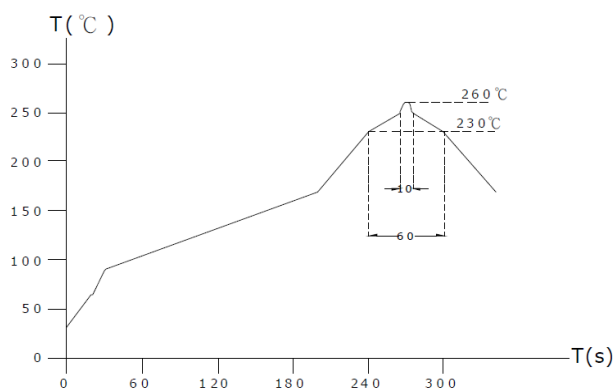


●GENERAL CHARACTERISTICS

1. Operating temperature range: -40 TO $+105^{\circ}\text{C}$ (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. ON 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.
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 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

