PIS Series Type (5D~12)

SMD Inductor for Power Line (shielded)

FEATURES

- Various high power SMD inductors are superior to high saturation.
- These products are magnetically shielded and suitable for large current with low DC resistance.
- Provided in embossed carrier tape packaging for use with automatic mounting machines.

APPLICATIONS

• Excellent for power line DC-DC conversion application used in portable telephones, personal computers, hard disk drives, and other electronic equipment.

PRODUCT IDENTIFICATION

PIS 5D18~ 8D43

PIS 5D18 - 1R0 M - T

(1) (2) (3) (4) (5)

(1) Product name (2) Dimension (3) Taping style (T : Taping ; None : Bulk) (4) Inductance (1R0 : 1.0uH ; 100 : 10uH) (5) Tolerance (M : ±20% ; N : ±30%)

PIS 62/64/73/74/104/124/125/127

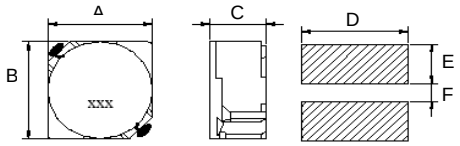
PIS 62 - 1R0 M - T

(1) (2) (3) (4) (5)

(1) Product name (2) Dimension (3) Taping style (T : Taping ; None : Bulk) (4) Inductance (1R0 : 1.0uH ; 100 : 10uH) (5) Tolerance (M : ±20% ; N : ±30%)

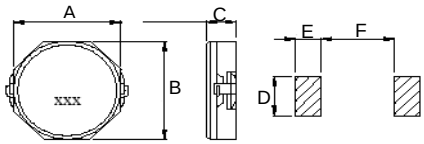
DIMENSIONS and RECOMMENDED PATTERN(Unit:mm)

PIS 5D18~ 6D38



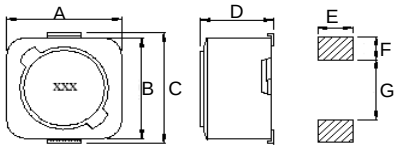
TYPE	A	B	C	D	E	F
PIS5D18	5.7 ± 0.3	5.7 ± 0.3	2.0 Max.	6.3	2.15	2
PIS5D28	5.7 ± 0.3	5.7 ± 0.3	3.0 Max.	6.3	2.15	2
PIS6D28	6.7 ± 0.3	6.7 ± 0.3	3.0 Max.	7.3	2.65	2
PIS6D38	6.7 ± 0.3	6.7 ± 0.3	4.0 Max.	7.3	2.65	2

PIS 8D28~ 8D43



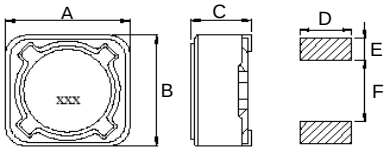
TYPE	A	B	C	D	E	F
PIS8D28	8.3 Max.	8.3 Max.	3.0 Max.	2.8	2.0	6.1
PIS8D43	8.3 Max.	8.3 Max.	4.5 Max.	2.8	2.0	6.1

PIS 62/64



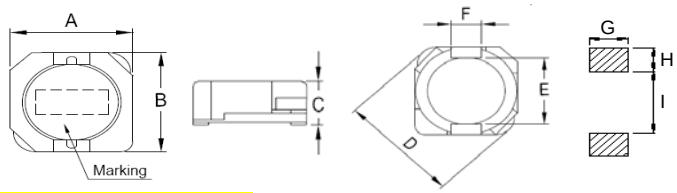
TYPE	A	B	C	D	E	F	G
PIS62	6.2 ± 0.3	5.9 ± 0.3	6.6 ± 0.3	3.0 Max.	1.9	1.4	4.6
PIS64	6.2 ± 0.3	5.9 ± 0.3	6.6 ± 0.3	5.0 Max.	1.9	1.4	4.6

PIS 73/74



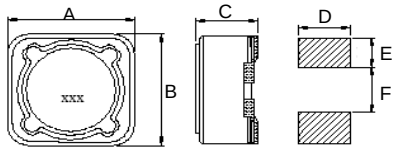
TYPE	A	B	C	D	E	F
PIS73	7.5 Max.	7.5 Max.	3.4 Max.	3.1	1.6	4.8
PIS74	7.5 Max.	7.5 Max.	4.5 Max.	3.1	1.6	4.8

PIS 104



TYPE	A	B	C	D
PIS104	10.3Max.	10.4 ± 0.3	4.0 Max.	13.5 Max.
E	**F**	**G**	**H**	**I**
7.7	3.0	3.6	1.7	7.3

PIS 124/125/127



TYPE	A	B	C	D	E	F
PIS124	12.3 Max.	12.3 Max.	4.5 Max.	5.4	2.8	7.0
PIS125	12.3 Max.	12.3 Max.	6.0 Max.	5.4	2.8	7.0
PIS127	12.3 Max.	12.3 Max.	8.0 Max.	5.4	2.9	7.0

PIS Series Type (5D~12)

SMD Inductor for Power Line (shielded)

ELECTRICAL CHARACTERISTICS

Stamp	Inductance (uH)	D.C.R (Ω) Max.													
		PIS 5D18	PIS 5D28	PIS 6D28	PIS 6D38	PIS 8D28	PIS 8D43	PIS 62	PIS 64	PIS 73	PIS 74	PIS 104	PIS 124	PIS 125	PIS 127
1R2	1.2														0.007
1R3	1.3											0.0081		0.012	
2R0	2						0.014								
2R1	2.1													0.014	
2R4	2.4														0.0115
2R5	2,5					0.0156						0.01			
2R6	2.6		0.018												
2R9	2.9							0.068	0.047						
3R0	3		0.024	0.024											
3R1	3.1													0.017	
3R3	3.3				0.02	0.0182		0.075	0.05						
3R5	3.5														0.0135
3R8	3.8											0.013			
3R9	3.9			0.027			0.019						0.015		
4R0	4							0.08	0.06						
4R1	4.1	0.057													
4R2	4.2		0.031												
4R4	4.4													0.02	
4R7	4.7					0.0247	0.022	0.09	0.065			0.019	0.018		0.0158
5R0	5			0.031	0.024										
5R2	5.2											0.022			
5R3	5.3		0.038												
5R4	5.4	0.076													
5R5	5.5							0.096	0.07						
5R8	5.8													0.021	
6R0	6			0.035											
6R1	6.1														0.0176
6R2	6.2	0.096	0.045		0.027										
6R8	6.8						0.025						0.023		
7R0	7											0.027			
7R3	7.3			0.054		0.039									
7R4	7.4				0.031										
7R5	7.5													0.024	
7R6	7.6														0.02
8R2	8.2		0.053										0.026		
8R6	8.6			0.058											
8R7	8.7				0.034										
8R9	8.9	0.116													
100	10	0.124	0.065	0.065	0.038	0.047	0.036	0.15	0.12	0.072	0.049	0.035	0.028	0.025	0.0216
120	12	0.153	0.076	0.07	0.053			0.3	0.13	0.098	0.058		0.038	0.027	0.0243
150	15	0.196	0.103	0.084	0.057	0.069	0.053	0.23	0.18	0.13	0.081	0.05	0.05	0.03	0.027
180	18	0.21	0.11	0.095	0.092			0.27	0.24	0.14	0.091		0.057	0.034	0.0392
220	22	0.29	0.122	0.128	0.096	0.099	0.075	0.34	0.27	0.19	0.11	0.073	0.066	0.036	0.0432
270	27	0.33	0.175	0.142	0.109			0.38	0.3	0.21	0.15		0.08	0.051	0.0459
330	33	0.386	0.189	0.165	0.124	0.156	0.125	0.45	0.33	0.24	0.17	0.093	0.097	0.057	0.0648
390	39	0.52	0.212	0.21	0.138			0.49	0.37	0.32	0.23		0.132	0.068	0.0729
470	47	0.595	0.26	0.238	0.15	0.195	0.15	0.69	0.52	0.36	0.26	0.128	0.15	0.075	0.1
560	56	0.665	0.305	0.277	0.202			0.78	0.56	0.47	0.35		0.19	0.11	0.11
680	68	0.84	0.355	0.304	0.234	0.286	0.24	1.07	0.63	0.52	0.38	0.213	0.22	0.12	0.14
820	82	0.978	0.463	0.39	0.324			1.21	0.71	0.69	0.43		0.26	0.14	0.16
101	100	1.2	0.52	0.535	0.358	0.43	0.36	1.39	1.03	0.79	0.61	0.304	0.308	0.16	0.22
121	120	1.5	0.56	0.75	0.47			1.9	1.15	0.89	0.66		0.38	0.17	0.25
151	150	1.71	0.68	0.95	0.58			2.18	1.68	1.27	0.88	0.506	0.53	0.23	0.28
181	180	2.24	0.93	1.2	0.69			2.77	1.87	1.45	0.98		0.62	0.29	0.35
221	220	2.44	1.15	1.5	0.89			3.12	2.08	1.65	1.17	0.756	0.7	0.4	0.39
271	270	3.38	1.56	1.7	1.29			4.38	2.37	2.31	1.64		0.87	0.46	0.56
331	330	4.34	1.98	2.15	1.7			4.94	2.67	2.62	1.86	1.09	0.99	0.51	0.64
391	390		2.5	2.25	1.75				2.94	2.94	2.85			0.69	0.7
471	470		2.7	3.15	2.2				3.93	4.18	3.01			0.77	0.98
561	560		3.12	3.75	2.85				5.43	4.67	3.62			0.86	1.07
681	680		4.15	5.15	3.2				7.32	5.73	4.63			1.2	1.46
821	820				4.05				8.24	6.54	5.2			1.34	1.64
102	1000				5.7				9.26	9.44	6			1.53	1.82

PIS Series Type (5D~12)

SMD Inductor for Power Line (shielded)

ELECTRICAL CHARACTERISTICS

Stamp	Inductance (uH)	Rated Current (A)													
		PIS 5D18	PIS 5D28	PIS 6D28	PIS 6D38	PIS 8D28	PIS 8D43	PIS 62	PIS 64	PIS 73	PIS 74	PIS 104	PIS 124	PIS 125	PIS 127
1R2	1.2														9.8
1R3	1.3											6.5		8	
2R0	2						5.5								
2R1	2.1													7	
2R4	2.4														8
2R5	2,5					4.5						6.1			
2R6	2.6		2.6												
2R9	2.9							1.94	1.8						
3R0	3		2.4	3											
3R1	3.1													6	
3R3	3.3				3.5	4		1.8	1.75						
3R5	3.5														7.5
3R8	3.8											5.5			
3R9	3.9			2.6			4.5						6.5		
4R0	4							1.63	1.65						
4R1	4.1	1.95													
4R2	4.2		2.2												
4R4	4.4													5	
4R7	4.7					3.4	4.1	1.55	1.55			5	5.7		6.8
5R0	5			2.4	2.9										
5R2	5.2											5.4			
5R3	5.3		1.9												
5R4	5.4	1.6													
5R5	5.5							1.4	1.45						
5R8	5.8													4.4	
6R0	6			2.25											
6R1	6.1														6.6
6R2	6.2	1.4	1.8		2.5										
6R8	6.8						3.9						4.9		
7R0	7											4.5			
7R3	7.3			2.1		2.8									
7R4	7.4				2.3										
7R5	7.5													4.2	
7R6	7.6														5.9
8R2	8.2		1.6										4.6		
8R6	8.6			1.85											
8R7	8.7				2.2										
8R9	8.9	1.25													
100	10	1.2	1.3	1.7	2	2.5	3.2	1.1	1.35	1.68	1.84	3.8	4.5	4	5.4
120	12	1.1	1.2	1.55	1.7			1	1.22	1.52	1.71		4	3.5	4.9
150	15	0.97	1.1	1.4	1.6	1.9	2.3	0.9	1.11	1.33	1.47	3.1	3.2	3.3	4.5
180	18	0.85	1	1.32	1.5			0.8	1.02	1.2	1.31		3.1	3	3.9
220	22	0.8	0.9	1.2	1.3	1.6	1.8	0.74	0.91	1.07	1.23	2.5	2.9	2.8	3.6
270	27	0.75	0.85	1.05	1.2			0.66	0.82	0.96	1.12		2.8	2.3	3.4
330	33	0.65	0.75	0.97	1.1	1.3	1.4	0.59	0.74	0.91	0.96	2.2	2.7	2.1	3
390	39	0.57	0.7	0.86	1			0.54	0.69	0.77	0.91		2.1	2	2.75
470	47	0.54	0.62	0.8	0.95	1.15	1.3	0.5	0.62	0.76	0.88	1.9	1.9	1.8	2.5
560	56	0.5	0.58	0.73	0.85			0.46	0.58	0.68	0.75		1.8	1.7	2.35
680	68	0.43	0.52	0.65	0.75	0.92	1	0.42	0.51	0.61	0.69	1.42	1.5	1.5	2.1
820	82	0.41	0.46	0.6	0.7			0.38	0.46	0.57	0.61		1.3	1.4	1.95
101	100	0.36	0.42	0.54	0.65	0.75	0.8	0.34	0.42	0.5	0.6	1.25	1.2	1.3	1.7
121	120	0.33	0.4	0.51	0.59			0.31	0.38	0.49	0.52		1.1	1.1	1.6
151	150	0.31	0.35	0.47	0.54			0.28	0.35	0.43	0.46	0.85	0.95	1	1.42
181	180	0.28	0.32	0.41	0.49			0.26	0.32	0.39	0.42		0.85	0.9	1.3
221	220	0.23	0.3	0.37	0.43			0.23	0.29	0.35	0.36	0.7	0.8	0.8	1.16
271	270	0.21	0.27	0.33	0.4			0.22	0.26	0.32	0.34		0.6	0.75	1.06
331	330	0.18	0.25	0.28	0.37			0.19	0.23	0.28	0.32	0.52	0.5	0.68	0.95
391	390		0.22	0.27	0.34				0.22	0.26	0.29			0.65	0.88
471	470		0.2	0.21	0.32				0.2	0.24	0.26			0.58	0.79
561	560		0.18	0.2	0.29				0.18	0.22	0.23			0.54	0.73
681	680		0.16	0.2	0.25				0.17	0.19	0.22			0.48	0.67
821	820				0.22				0.15	0.18	0.2			0.43	0.6
102	1000				0.2				0.14	0.16	0.18			0.4	0.55

ELECTRICAL CHARACTERISTICS

Test Freq.(L):

PIS5D18/5D28/6D28/6D38 => (10KHz/0.1V)
PIS62 => 2.9 ~ 5.5uH (7.96MHz/0.25V), 10 ~ 330uH (1KHz/0.25V)
PIS64/73/74/127 => (1KHz/0.25V)
PIS8D28/PIS8D43 => (100KHz/1V)
PIS104/124 => (100KHz/0.1V)
PIS125 => 1.3 ~ 7.5uH (7.96MHz/0.25V), 10 ~ 1000uH (1KHz/0.25V)

Test Instrument:

- INDUCTANCE (below 1MHz) : HP 4284A LCR METER, or equivalent
- INDUCTANCE (up 1MHz) : HP E4991A LCR METER, or equivalent
- RDC : DIGITAL MILLI OHM METER 16502 , or equivalent
- Rated D.C. Current : HP4284A+42841 test fixture

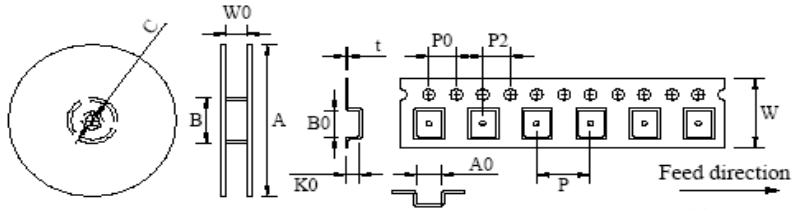
Tolerance Of Inductors

- PIS5D18 : 4.1 ~ 8.9uH ± 30%(N), 10 ~ 330uH ± 20%(M)
- PIS5D28 : 2.6 ~ 8.2uH ± 30%(N), 10 ~ 680uH ± 20%(M)
- PIS6D28 : 3.0 ~ 8.6uH ± 30%(N), 10 ~ 680uH ± 20%(M)
- PIS6D38 : 3.3 ~ 8.7uH ± 30%(N), 10 ~ 1000uH ± 20%(M)
- PIS8D28 : 2.5 ~ 47uH ± 30%(N), 68 ~ 100uH ± 20%(M)
- PIS8D43 : 2.0 ~ 100uH ± 30%(N)
- PIS62 : 2.9 ~ 5.5uH ± 30%(N), 10 ~ 330uH ± 20%(M)
- PIS64 : 2.9 ~ 5.5uH ± 30%(N), 10 ~ 1000uH ± 20%(M)
- PIS73/74 : 10 ~ 1000uH ± 20%(M)
- PIS104 : 1.3 ~ 7uH ± 30%(N), 10 ~ 330uH ± 20%(M)
- PIS124 : 3.9 ~ 8.2uH ± 30%(N), 10~ 330uH ± 20%(M)
- PIS125 : 1.3 ~ 7.5 uH ± 30%(N), 10 ~ 1000uH ± 20% (M)
- PIS127 : 1.2 ~ 7.6uH ± 30% (N), 10 ~ 1000uH ± 20% (M)

※ This indicates the value of current when the inductance is 35% lower than its initial value at D.C superposition or D.C current when at rt = 40° whichever is lower.

※ Operating temperature: -40 ℃ to 85 ℃

Tape and Reel Specifications



TYPE	Tape Dimensions								Reel Dimensions				Quantity
	A0	B0	K0	P	P0	P2	W0	t	A	B	C	D	PCS / REEL
PIS5D18	6.1	6.1	2.1	8	4	2	12	0.3	330	100	13	12.5	2000
PIS5D28	6.1	6.1	3.1	8	4	2	12	0.3	330	100	13	12.5	2000
PIS6D28	7.6	7.6	3.1	12	4	2	16	0.35	330	100	13	16.5	1000
PIS6D38	7.6	7.6	4.1	12	4	2	16	0.35	330	100	13	16.5	1000
PIS62	6.55	7.0	3.2	12	4	2	16	0.4	330	100	13	16.5	1500
PIS64	6.55	7.0	5.20	12	4	2	16	0.4	330	100	13	16.5	1000
PIS73	7.6	7.60	4.00	12	4	2	16	0.3	330	100	13	16.5	1000
PIS74	7.6	7.60	5.40	12	4	2	16	0.4	330	100	13	16.5	1000
PIS8D28	9.9	8.30	3.00	16	4	2	16	0.4	330	100	13	16.5	1000
PIS8D43	9.9	8.30	4.50	16	4	2	16	0.4	330	100	13	16.5	500
PIS104	10.3	10.50	4.10	16	4	2	24	0.35	330	100	13	24.5	1000
PIS124	12.55	12.55	5.05	16	4	2	24	0.35	330	100	13	24.4	500
PIS125	12.55	12.55	6.40	16	4	2	24	0.35	330	100	13	24.4	500
PIS127	12.55	12.55	8.10	16	4	2	24	0.35	330	100	13	24.5	500