

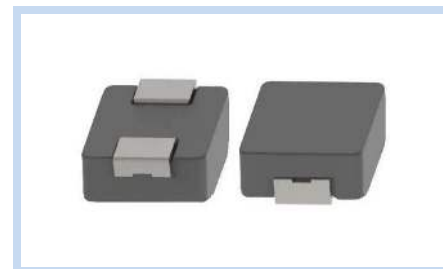
Molded Power Inductor High Current Type

PIM-1004A3 Series

MERITEK

FEATURE

- Low Loss, Low DCR, High Performance (Isat)
- Ultra-Low Buzz Noise
- Capable of Corresponding High Frequency
- Shielded and Compact Construction Design
- Application: Notebook, PC, Servers, DC/DC Converter, High Current Converter, Battery Powered Devices



ELECTRICAL CHARACTERISTICS

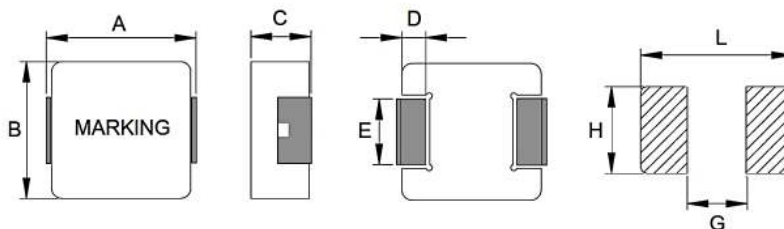
Item	Inductance (μH)	Tolerance (%)	DCR Typ. (mΩ)	DCR Max. (mΩ)	ISAT Typ. (A)	IRMS Typ. (A)
PIMR15N1004A3	0.15	±30%	0.50	0.60	82.0	44.0
PIMR22M1004A3	0.22	±20%	0.72	0.83	70.0	36.0
PIMR36M1004A3	0.36	±20%	1.05	1.18	51.0	33.0
PIMR47M1004A3	0.47	±20%	1.3	1.5	46.0	32.0
PIMR56M1004A3	0.56	±20%	1.6	1.8	34.0	25.0
PIMR68M1004A3	0.68	±20%	1.9	2.2	31.0	23.0
PIM1R0M1004A3	1.0	±20%	2.9	3.25	29.0	20.0
PIM1R5M1004A3	1.5	±20%	3.7	4.2	26.0	17.5
PIM1R8M1004A3	1.8	±20%	5.1	5.7	23.0	16.5
PIM2R2M1004A3	2.2	±20%	5.8	6.7	20.0	15.0
PIM3R3M1004A3	3.3	±20%	10.5	11.8	17.5	11.0
PIM4R7M1004A3	4.7	±20%	15.8	19.0	15.2	8.8
PIM5R6M1004A3	5.6	±20%	19.0	22.8	14.1	8.0
PIM6R8M1004A3	6.8	±20%	22.0	24.5	12.2	7.8
PIM8R2M1004A3	8.2	±20%	25.0	28.0	9.5	7.6
PIM100M1004A3	10.0	±20%	27.0	30.0	8.6	7.5
PIM150M1004A3	15.0	±20%	41.0	45.0	7.0	6.25
PIM220M1004A3	22.0	±20%	58.0	66.0	6.2	5.0
PIM330M1004A3	33.0	±20%	84.0	91.0	5.5	4.4
PIM470M1004A3	47.0	±20%	125.0	143.0	4.0	3.5

Note:

1. Inductance test under 100KHz, 1.0V,
2. All test data referenced to 25°C ambient
3. Testing Instrument(orequ) : L: HP4284A, CH11025, CH3302, CH1320, CH1320S
LCR METER / Rdc: CH16502, Agilent33420A MICRO OHMMETER

4. ISAT based on inductance change ($\Delta L/L0: \leq 30\%$) approximately
5. IRMS based on temperature rise ($\Delta T: 40^\circ C$) approximately
6. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.

DIMENSIONS



(Unit: mm)

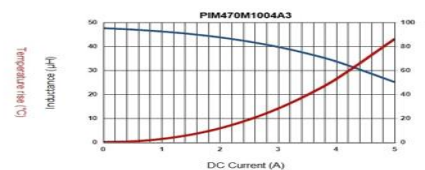
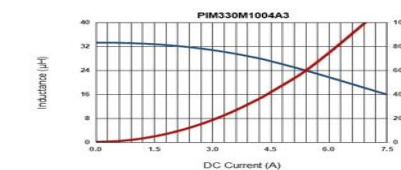
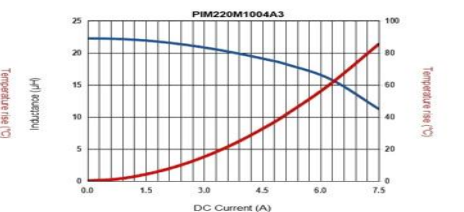
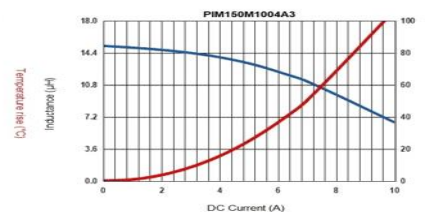
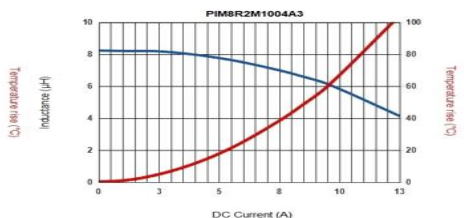
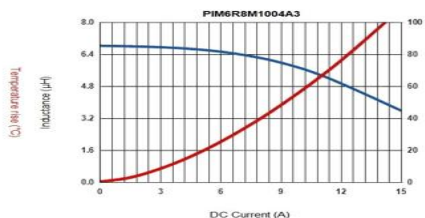
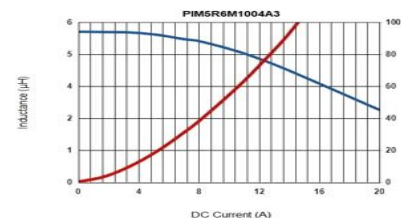
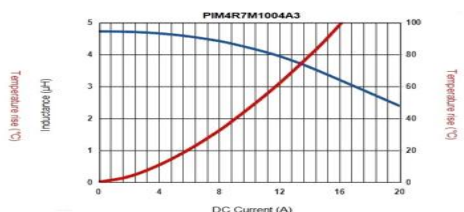
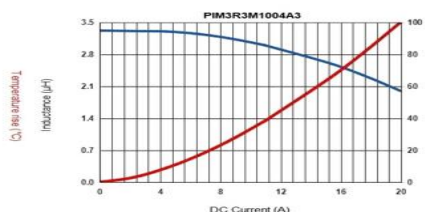
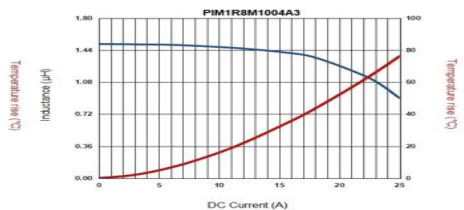
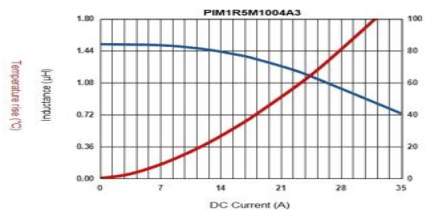
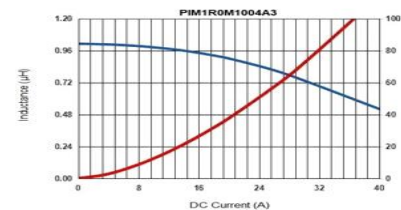
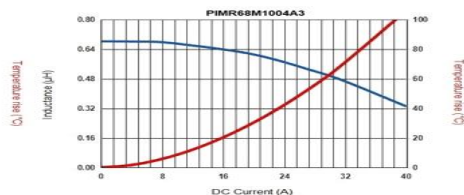
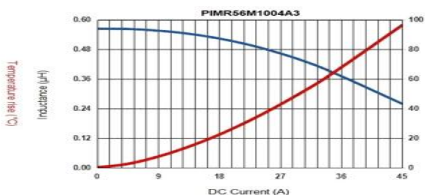
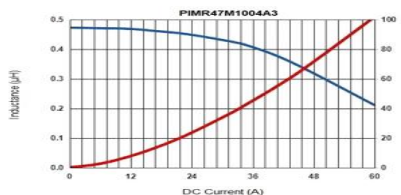
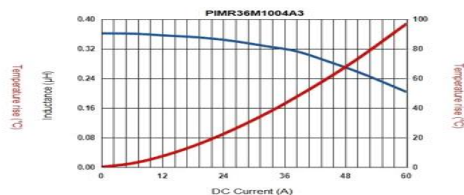
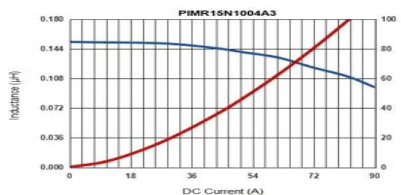
Size Code	A	B	C	D	E	L	G	H
1004	11.0±0.3	10.0±0.3	2.8±0.2	1.0±0.3	2.0±0.2	6.0	2.8	2.5

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CHARACTERISTIC CURVES

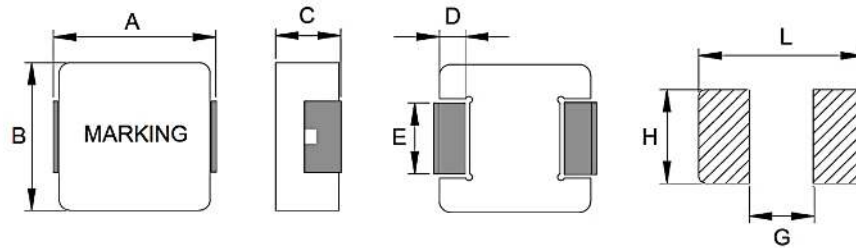


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DIMENSIONS – PIM-A3 series



(Unit: mm)

Size Code	A	B	C	D	E	L	G	H
0402	4.45±0.25	4.1±0.2	1.8±0.2	0.8±0.25	2.0±0.2	8.0	3.7	3.4
0502	5.7±0.3	5.2±0.2	1.8±0.2	1.0±0.3	2.5±0.2	6.0	2.8	2.5
0503	5.7±0.3	5.2±0.2	2.8±0.2	1.0±0.3	2.0±0.2	6.0	2.8	2.5
053T	4.9±0.3	4.7±0.2	2.8±0.2	1.0±0.3	1.5±0.2	5.5	2.5	1.8
0602	7.1±0.3	6.6±0.2	1.8±0.2	1.6±0.3	3.0±0.2	8.0	3.7	3.4
0624	7.1±0.3	6.7±0.2	2.2±0.2	1.6±0.3	3.0±0.2	8.0	3.7	3.4
0603	7.1±0.3	6.6±0.2	2.8±0.2	1.6±0.3	3.0±0.2	8.0	3.7	3.4
0604	7.1±0.3	6.6±0.2	3.8±0.2	1.6±0.3	3.0±0.2	8.0	3.7	3.4
0605	7.3±0.3	6.6±0.3	4.8±0.2	1.6±0.3	3.0±0.2	8.0	3.5	3.4
1003	11.0±0.5	10.0±0.3	2.8±0.2	2.0±0.3	See Table	13.6	5.4	3.5
1004	11.0±0.3	10.0±0.3	3.8±0.2	2.0±0.3	See Table	12.5	5.4	3.5
1005	11.0±0.5	10.0±0.3	4.8±0.2	2.0±0.3	See Table	12.5	5.4	3.5
1205	13.5±0.5	12.6±0.2	4.7±0.3	2.3±0.3	See Table	14.5	8.0	5.0
1206	13.5±0.5	12.6±0.2	5.7±0.3	2.3±0.3	See Table	14.5	8.0	5.0
1265	13.5±0.5	12.6±0.2	6.2±0.3	2.3±0.3	See Table	14.5	8.0	5.0
1707	17.8±0.5	16.9±0.3	6.7±0.3	2.3±0.3	11.9±0.3	18.5	12.0	12.5
2313	23.5±0.5	22.0±0.3	12.6±0.4	5.0±0.4	19±0.3	24.0	12.5	19.6
4040	4.20±0.20	4.15±0.20	0.83±0.2	0.9±0.20	1.8±0.20	4.4	2.2	2.0
6060	6.1±0.3	6.1±0.3	0.8±0.2	1.75±0.3	4±0.2	7.0	2.8	4.5

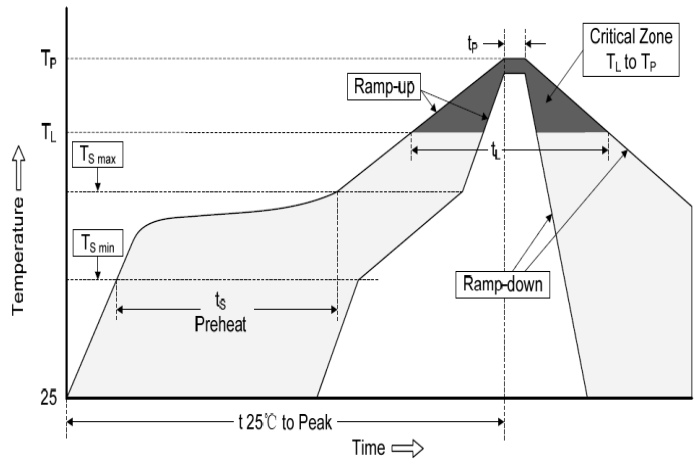
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RECOMMENDED SOLDERING PROFILES

Reflow Condition		
Pre Heat	Temp. Min $T_{s(min)}$	150°C
	Temp. Max $T_{s(max)}$	200°C
	Time (min. to max.) (t_s)	60~120 seconds
Average ramp up rate $T_{s(max)}$ to T_L		3°C/second max.
Average ramp up rate T_L to peak		3°C/second max.
Reflow	Temp. (T_L)	217°C
	Time (min. to max.) (t_L)	60~150 seconds
Peak Temperature (T_P)		245°C
Time within 5°C of actual peak Temperature (t_p)		10 seconds
Ramp-down Rate		6°C/second max.
Reflow Times		3 times max.



PART NUMBERING SYSTEM

PIM 1R0 M 1004 A3
(1) (2) (3) (4) (5)

No	Item	Code	Description
(1)	Product Code	PIM	Power Inductor Series High Current Molded Type
(2)	Inductance	1R0	1R0: 1.0μH R47: 0.47μH, 2R2: 2.2μH, 100: 10μH
(3)	Tolerance	M	M: ±20% N: ±30%
(4)	Size Code	0530	0530: 5.7 x 2.8mm Width x Height (mm)
(5)	Series Code	A3	High Current Type

*Specifications subject to change without notice.