

Molded Power Inductor High Current Type

PIM-1003A3 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



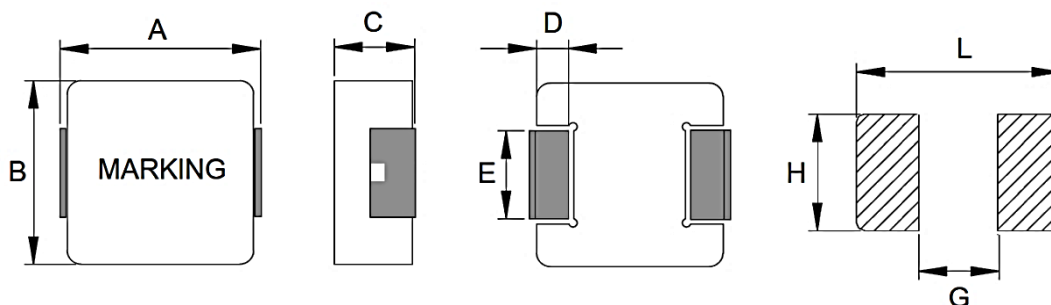
ELECTRICAL CHARACTERISTICS

Item	Inductance (μH)	Tolerance (%)	DCR Typ. (mΩ)	DCR Max. (mΩ)	IsAT Typ. (A)	I _{RMS} Typ. (A)
PIMR22M1003A3	0.22	±20%	0.90	1.0	50.0	33.0
PIMR36M1003A3	0.36	±20%	1.3	1.4	40.0	28.0
PIMR47M1003A3	0.47	±20%	1.8	2.2	36.0	26.0
PIMR82M1003A3	0.82	±20%	3.1	3.7	28.0	20.0
PIM2R2M1003A3	2.2	±20%	7.8	8.8	18.0	14.0
PIM8R2M1003A3	8.2	±20%	32.0	38.0	7.2	7.2

Note:

1. Inductance test under 100KHz, 1.0V
2. All test data referenced to 25 °C ambient
3. Testing Instrument (or equ): L: HP4284A, CH11025, GH3302, CH1320, CH1320S LCR METER / Rdc:CH16502, Agilent33420A MICRO OHMMETER
4. IsAT based on inductance change ($\Delta L/L_0$: $\leq 30\%$) approximately
5. I_{RMS} based on temperature rise (ΔT : 40 °C) approximately
6. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions. Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
7. Special inquiries besides the above common used types can be met on your requirement.

DIMENSIONS



(Unit: mm)

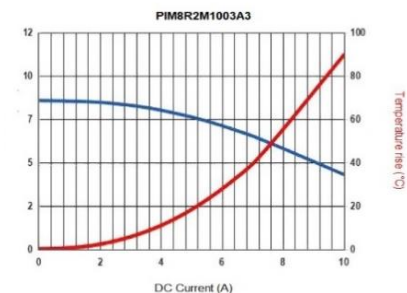
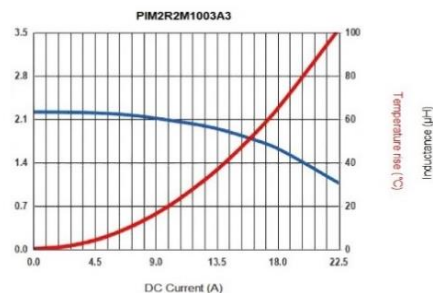
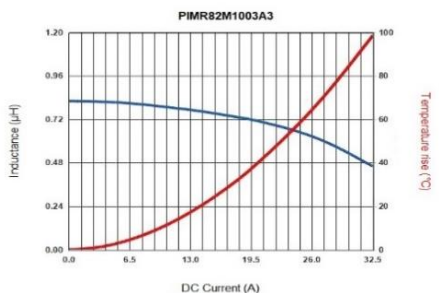
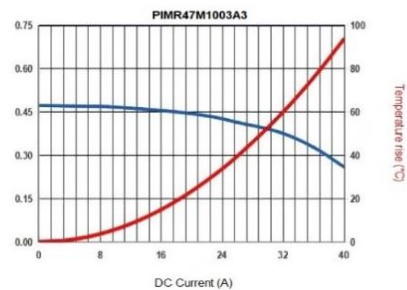
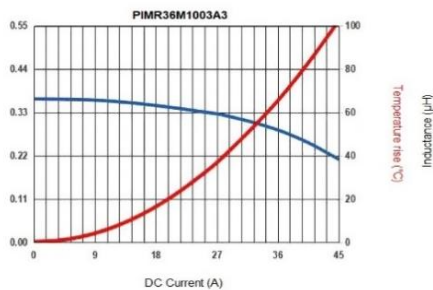
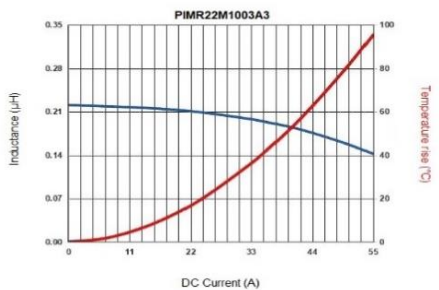
Size Code	A	B	C	D	E	L	G	H
1003	11.0±0.5	10.0±0.3	2.8±0.2	2.0±0.3	See Table	13.6	5.4	3.5

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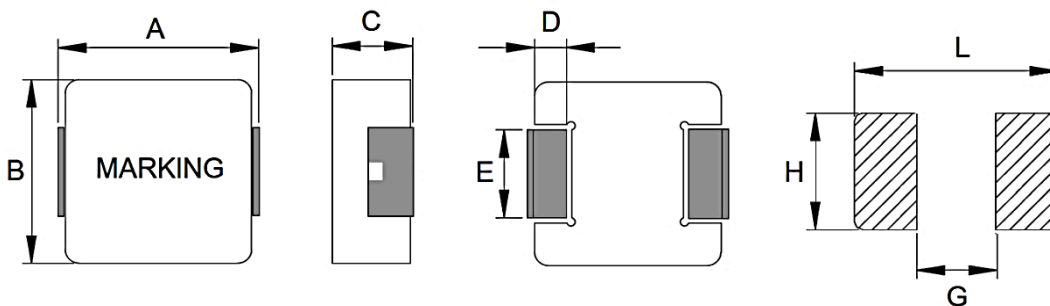
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CHARACTERISTIC CURVES



DIMENSIONS – PIM-A3 series



(Unit: mm)

Size Code	A	B	C	D	E	L	G	H
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
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	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

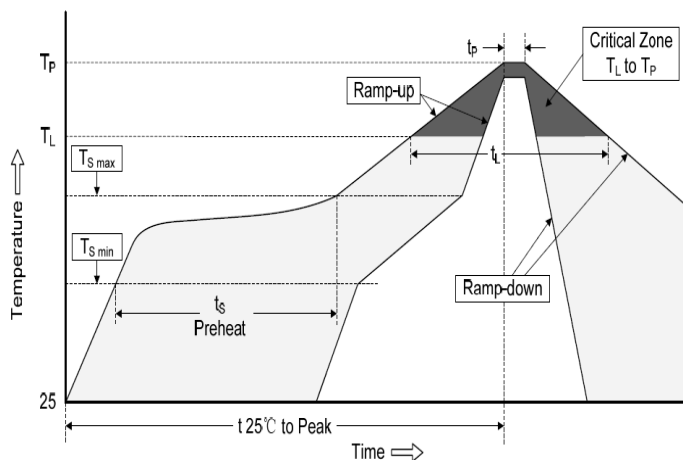
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RECOMMENDED SOLDERING PROFILES

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 1003 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	1003	1003: 11.0 x 2.8mm	Width x Height (mm)
(5)	Series Code	A3	High Current Type	

*Specifications subject to change without notice.