

Molded Power Inductor

High Current Low DCR AEC-Q200

PIM-1508BMA2 series

MERITEK

FEATURE

- High Current, Low DCR, High Efficiency
- Soft Saturation
- Minimized acoustic and leakage flux noise.
- Shielded and compact construction design
- AEC-Q200 Compliant
- Application: Note PC Power System, incl. IMVP-6, DC/DC Converter



RoHS

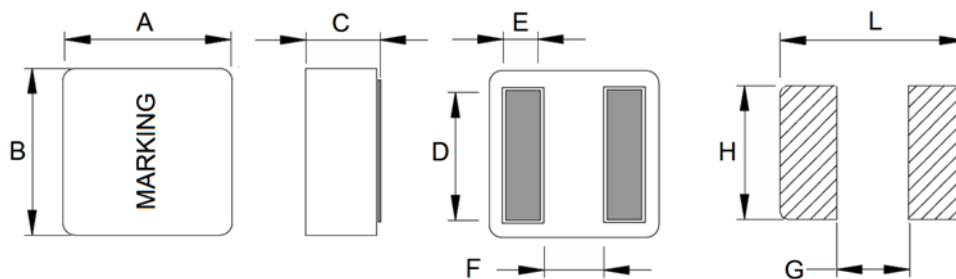
ELECTRICAL CHARACTERISTICS

Item	Inductance (μH)	Tolerance (%)	DCR Typ. (mΩ)	DCR Max. (mΩ)	I _{SAT} Typ. (A)	I _{RMS} (A)	
						20°C Rise	40°C Rise
PIM2R0M1508BMA2	2.0	±20%	1.92	2.21	57.0	29.5	40.0
PIM2R2M1508BMA2	2.2	±20%	2.15	2.48	55.0	28.0	37.0
PIM3R0M1508BMA2	3.0	±20%	2.50	3.00	46.0	26.0	34.5
PIM4R2M1508BMA2	4.2	±20%	3.90	4.68	38.0	20.5	27.0
PIM4R7M1508BMA2	4.7	±20%	4.30	5.16	37.0	20.0	26.5
PIM5R3M1508BMA2	5.3	±20%	4.45	5.34	35.0	19.5	26.0
PIM6R2M1508BMA2	6.2	±20%	5.40	6.50	34.0	17.0	23.0
PIM7R2M1508BMA2	7.2	±20%	6.00	7.20	32.0	15.0	21.0
PIM8R2M1508BMA2	8.2	±20%	6.60	7.92	28.0	13.0	19.0
PIM100M1508BMA2	10.0	±20%	8.00	9.60	24.0	11.0	16.0
PIM150M1508BMA2	15.0	±20%	12.50	15.00	21.0	10.0	13.0
PIM220M1508BMA2	22.0	±20%	19.30	23.20	19.0	9.0	12.0

Note:

1. Inductance test under 100KHz, 0.1V
2. All test data referenced to 25°C ambient
3. I_{SAT} based on inductance change ($\Delta L/L_0$: $\leq 30\%$) approximately
4. Operating temperature: -55°C ~ +155°C (Including Self-temperature rise)

DIMENSIONS



(Unit: mm)

Size Code	A	B	C	D	E	F	L	G	H
1508B	17.5±0.3	16.5±0.3	7.7±0.3	13.2±0.5	3.2±0.2	7.0±0.3	15.0 ref	6.0 ref	15.0 ref

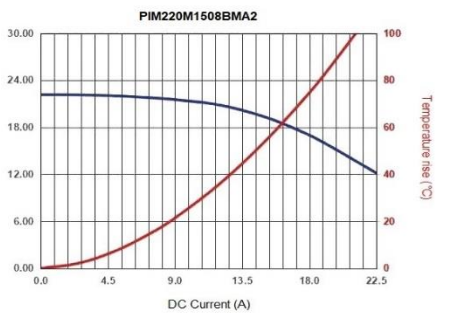
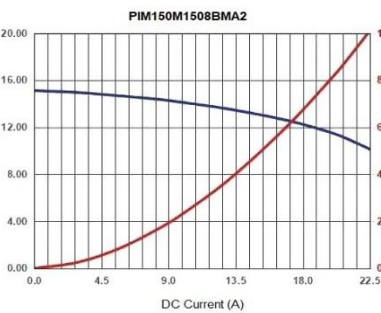
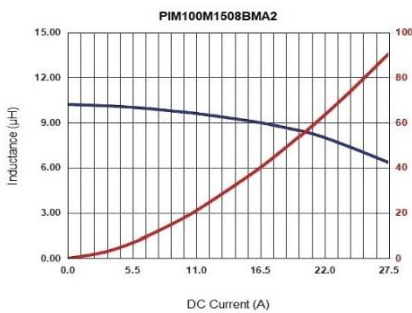
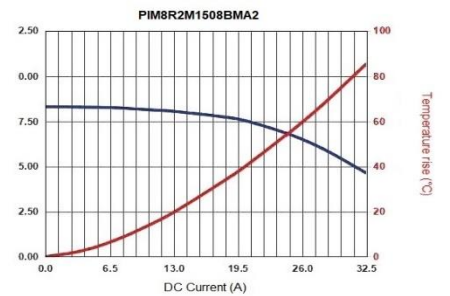
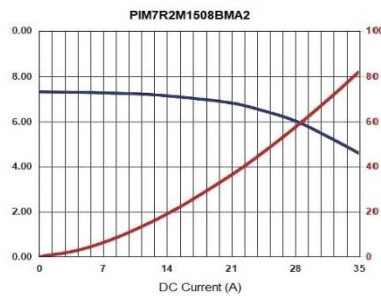
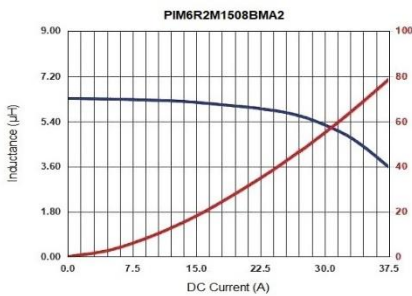
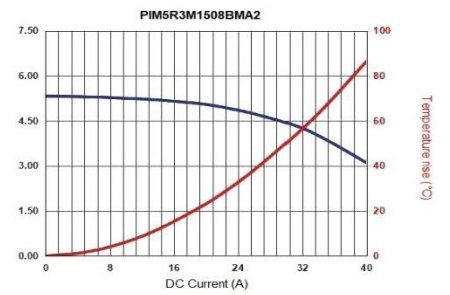
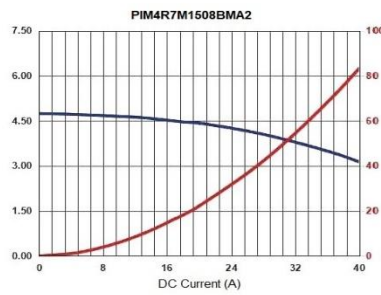
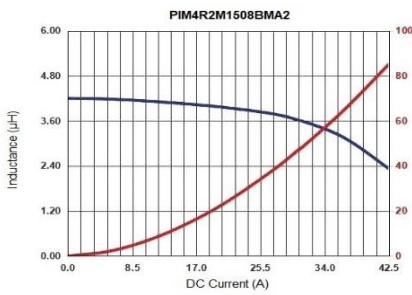
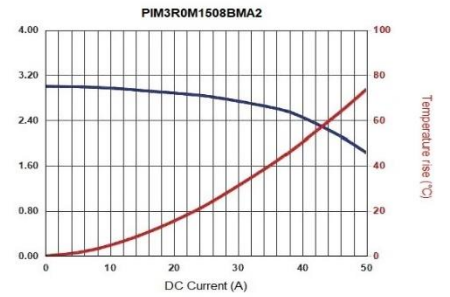
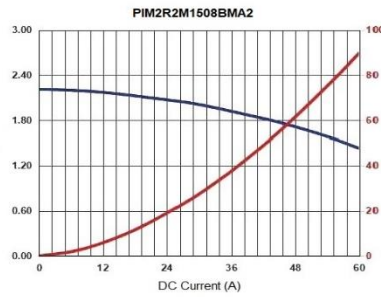
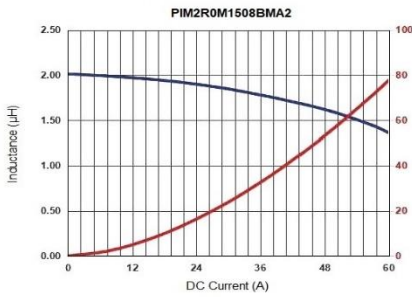
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CHARACTERISTIC CURVES



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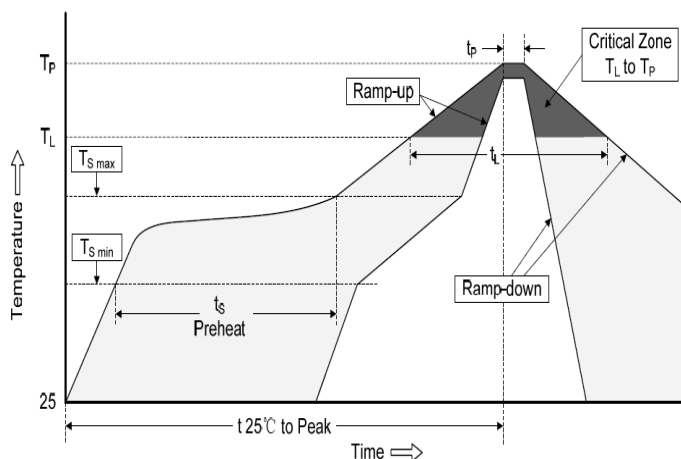
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RECOMMENDED SOLDERING PROFILES

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 2R0 M 1508B MA2
 (1) (2) (3) (4) (5)

No	Item	Code	Description
(1)	Product Code	PIM	Power Inductor, Molded Type
(2)	Inductance	2R0	2R0: 2.0μH R47: 0.47μH, 2R2: 2.2μH, 100: 10μH
(3)	Tolerance	M	M: ±20% +20% ~ -20%
(4)	Size Code	1508B	1508B: 17.5 x 7.7mm Width x Height (mm)
(5)	Series Code	MA2	Molded High Current, Low RDC AEC-Q200 series

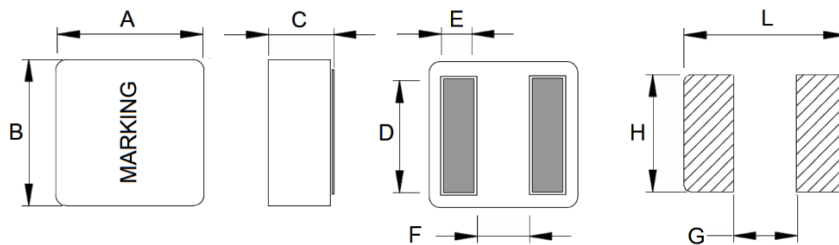
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High Current Low DCR AEC-Q200

PIM-1508BMA2 series

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DIMENSIONS – PIM-MA2 series



(Unit: mm)

Size Code	A	B	C	D	E	F	L	G	H
0402A/R	4.1±0.2	4.1±0.2	1.9±0.2	3.4±0.3	0.88±0.2	1.6±0.25	3.4 ref	1.4 ref	3.8 ref
0402B/L	4.4±0.2	4.4±0.2	1.9±0.2	3.4±0.3	0.88±0.2	1.6±0.25	3.4 ref	1.4 ref	3.8 ref
0403R	4.1±0.25	4.1±0.25	2.8±0.2	3.4±0.3	0.88±0.2	1.6±0.25	3.4 ref	1.4 ref	3.8 ref
0403L	4.4±0.2	4.4±0.2	2.8±0.2	3.4±0.3	0.88±0.2	1.6±0.25	3.4 ref	1.4 ref	3.8 ref
0502A	5.5±0.2	5.3±0.2	1.9±0.2	4.3±0.3	1.1±0.2	2.3±0.25	4.5 ref	2.0 ref	4.7 ref
0502B	6.0±0.2	5.7±0.2	1.9±0.2	4.3±0.3	1.1±0.2	2.3±0.25	4.5 ref	2.0 ref	4.7 ref
0503A	5.5±0.2	5.3±0.2	2.9±0.2	4.3±0.3	1.1±0.2	2.3±0.25	4.5 ref	2.0 ref	4.7 ref
0503B	6.0±0.2	5.7±0.2	2.9±0.2	4.3±0.3	1.1±0.2	2.3±0.25	4.5 ref	2.0 ref	4.7 ref
0505R	5.5±0.2	5.3±0.2	4.8±0.2	4.3±0.3	1.1±0.2	2.3±0.25	4.5 ref	2.0 ref	4.7 ref
0505L	6.0±0.2	5.7±0.2	4.8±0.2	4.3±0.3	1.1±0.2	2.3±0.25	4.5 ref	2.0 ref	4.7 ref
0603A	6.6±0.2	6.4±0.2	2.9±0.2	See Table	1.4±0.2	2.6±0.25	5.8 ref	2.5 ref	5.6 ref
0603B	7.2±0.2	6.9±0.2	2.9±0.2	See Table	1.4±0.2	2.6±0.25	5.6 ref	2.5 ref	5.6 ref
0604B	7.2±0.2	6.9±0.2	3.8±0.2	See Table	1.4±0.2	2.6±0.25	5.6 ref	2.5 ref	5.6 ref
0605A	6.6±0.2	6.4±0.2	4.8±0.2	See Table	1.4±0.2	2.6±0.25	5.8 ref	2.5 ref	5.6 ref
0605B	7.2±0.2	6.9±0.2	4.8±0.2	See Table	1.4±0.2	2.6±0.25	5.6 ref	2.5 ref	5.6 ref
0606R	6.6±0.2	6.4±0.2	5.8±0.2	5.3±0.3	1.4±0.2	2.6±0.25	5.6 ref	2.5 ref	5.6 ref
0606B/L	7.2±0.2	6.9±0.2	5.8±0.2	5.3±0.3	1.4±0.2	2.6±0.25	5.6 ref	2.5 ref	5.6 ref
0702A	7.80±0.25	7.60±0.20	1.85±0.2	6.2±0.3	1.75±0.2	3.15±0.25	7.4 ref	2.8 ref	7.2 ref
0702B	8.4±0.3	8.0±0.3	1.85±0.2	See Table	1.75±0.2	3.15±0.25	7.4 ref	2.8 ref	7.2 ref
0703A	7.80±0.25	7.60±0.20	2.90±0.2	See Table	1.75±0.2	3.15±0.25	7.4 ref	2.8 ref	7.2 ref
0703B	8.4±0.3	8.0±0.3	2.9±0.2	See Table	1.75±0.2	3.15±0.25	7.4 ref	2.8 ref	7.2 ref
0705A	7.80±0.25	7.80±0.25	4.80±0.2	6.2±0.3	1.75±0.2	3.15±0.25	7.4 ref	2.8 ref	7.2 ref
0705B	8.4±0.3	8.0±0.3	4.8±0.2	6.2±0.3	1.75±0.2	3.15±0.25	7.4 ref	2.8 ref	7.2 ref
0707A	7.80±0.25	7.80±0.25	6.70±0.30	See Table	1.75±0.20	3.15±0.25	7.8 ref	2.8 ref	6.7 ref
0707B	8.4±0.3	8.0±0.3	6.7±0.3	See Table	1.75±0.2	3.15±0.25	7.8 ref	2.8 ref	6.7 ref
0808B	8.9±0.3	8.5±0.3	7.7±0.3	6.9±0.4	1.8±0.2	3.5±0.3	8.0 ref	2.7 ref	7.8 ref
1010B	11.9±0.3	11.0±0.3	9.7±0.3	See Table	2.4±0.2	4.4±0.3	10.5 ref	3.7 ref	12.0 ref
1031L	11.9±0.3	11.0±0.30	2.9±0.2	9.0±0.5	2.4±0.2	4.4±0.3	10.5 ref	3.7 ref	13.0 ref
1006B	11.9±0.3	11.0±0.3	5.7±0.3	See Table	2.4±0.2	4.5±0.3	10.5 ref	3.7 ref	11.0 ref
1508A	16.5±0.3	15.5±0.3	7.7±0.3	13.2±0.5	3.2±0.2	7.0±0.3	15.0 ref	6.0 ref	15.0 ref
1508B	17.5±0.3	16.5±0.3	7.7±0.3	13.2±0.5	3.2±0.2	7.0±0.3	15.0 ref	6.0 ref	15.0 ref
1510A	16.5±0.3	15.5±0.3	9.7±0.3	13.2±0.5	3.2±0.2	7.0±0.3	15.0 ref	6.0 ref	15.0 ref
1510B	17.5±0.3	16.5±0.3	9.7±0.3	13.2±0.5	3.2±0.2	7.0±0.3	15.0 ref	6.0 ref	15.0 ref
1513A	16.5±0.3	15.5±0.3	12.7±0.3	13.2±0.5	3.2±0.2	7.0±0.3	15.0 ref	6.0 ref	15.0 ref
1513B	17.5±0.3	16.5±0.3	12.7±0.3	13.2±0.5	3.2±0.2	7.0±0.3	15.0 ref	6.0 ref	15.0 ref

*Specifications subject to change without notice.