

MDCA Series
SMD Power Inductor
Size 1870



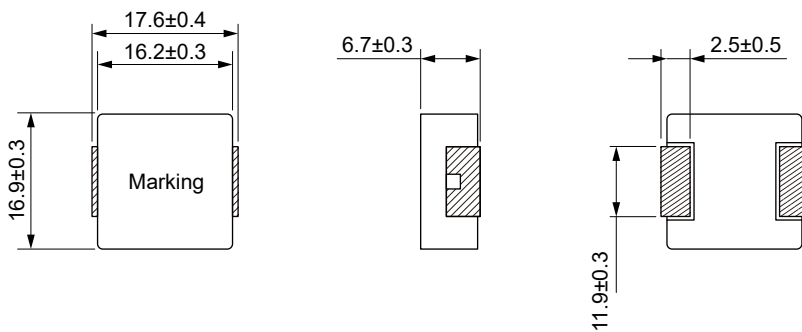
FEATURES

- Shielded construction.
- Capable of corresponding high frequency.
- Low loss realized with low DCR.
- High performance (Isat) realized by Carbonyl Powder.
- Ultra low buzz noise, due to composite construction.
- 100% Lead(Pb)-Free and RoHS compliant.
- AEC-Q200 qualified
- Operating temperature: -55 to +125 °C(including self-temperature rise)
- Quantity: 200PCS

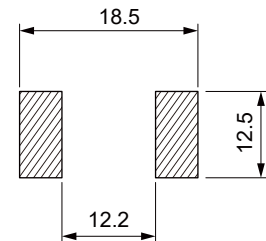
APPLICATION

- Headlamps, tail lamps and interior lighting
- HVAC
- Doors, window lift and seat control
- Audio subsystem
- Digital instrument cluster
- In-Vehicle Infotainment and navigation

Dimensions: [mm]



Land Pattern: [mm]



Electrical Properties:

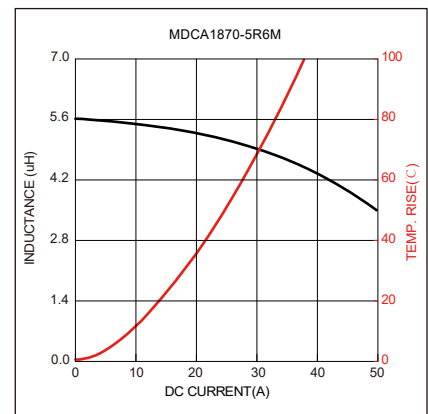
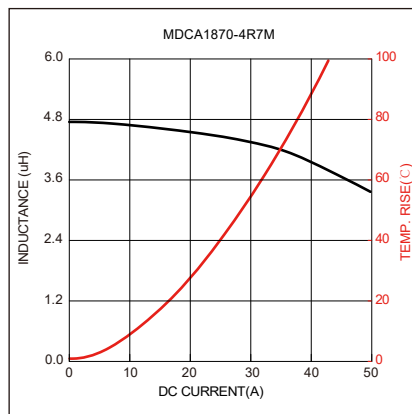
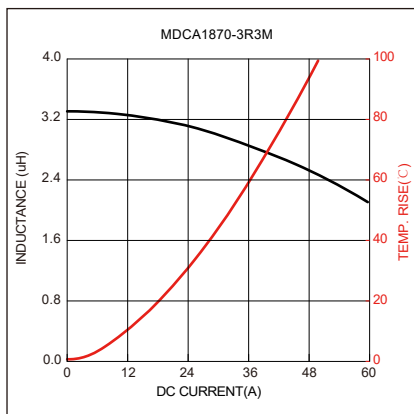
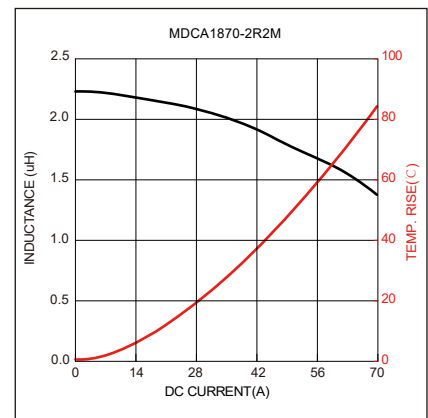
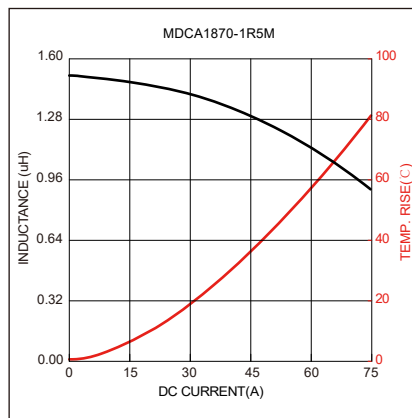
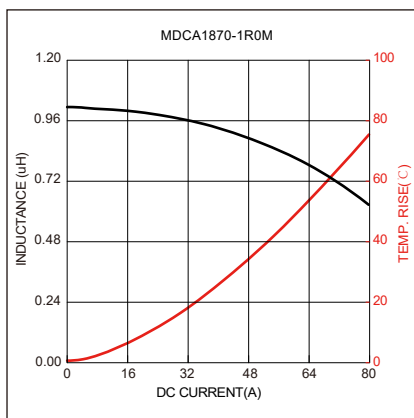
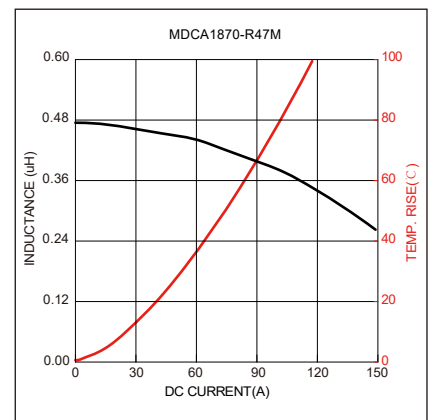
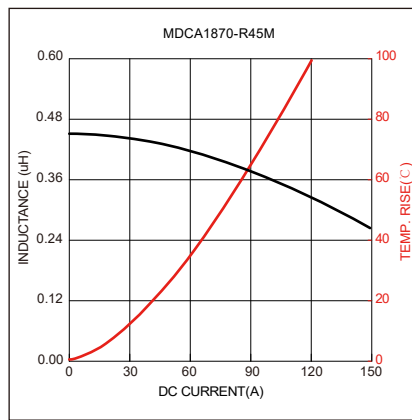
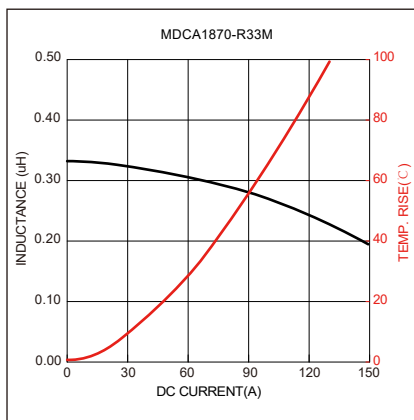
Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Saturation Current Typ. (A)	DC Resistance Typ. (mΩ)	DC Resistance Max. (mΩ)
MDCA1870-R33M	0.33	±20%	70.0	130	0.75	0.90
MDCA1870-R45M	0.45	±20%	62.0	125	0.80	0.96
MDCA1870-R47M	0.47	±20%	62.0	123	0.95	1.03
MDCA1870-1R0M	1.00	±20%	52.0	70	1.60	2.00
MDCA1870-1R5M	1.50	±20%	47.0	65	2.00	2.50
MDCA1870-2R2M	2.20	±20%	43.5	62	2.40	2.70
MDCA1870-3R3M	3.30	±20%	28.0	54	3.50	3.90
MDCA1870-4R7M	4.70	±20%	25.0	50	4.80	5.50
MDCA1870-5R6M	5.60	±20%	21.0	45	5.80	7.05
MDCA1870-6R8M	6.80	±20%	19.0	39	8.40	9.20
MDCA1870-8R2M	8.20	±20%	18.0	31	9.60	10.8
MDCA1870-100M	10.0	±20%	16.5	29	11.8	13.0
MDCA1870-150M	15.0	±20%	12.5	27	17.8	20.5
MDCA1870-220M	22.0	±20%	12.0	23	25.1	26.5
MDCA1870-330M	33.0	±20%	10.7	20	38.0	44.0

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MDCA1870-470M	47.0	±20%	8.7	16	48.0	55.0
MDCA1870-560M	56.0	±20%	7.8	15	54.0	62.0
MDCA1870-680M	68.0	±20%	7.0	13	68.0	80.0
MDCA1870-820M	82.0	±20%	5.7	12	87.0	100
MDCA1870-101M	100	±20%	5.3	12	102	118

Saturation Current will cause L to drop approximately 30%

Temperature Rise Current: The actual value of DC current when the temperature rise is $\Delta T=40^{\circ}\text{C}$

Typical Electrical Characteristics:



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