

**MDA Series**  
**SMD Low Profile High Current Molded Inductor**  
**Size 1870**



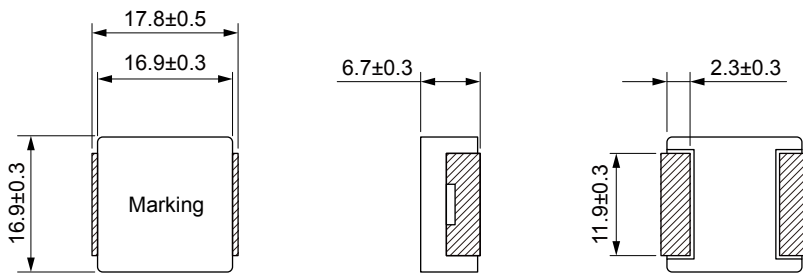
**FEATURES**

- Shielded construction
- Capable of corresponding high frequency .
- Low loss realized with low DCR.
- High performance (Isat) realized by metal dust core.
- Ultra low buzz noise, due to composite construction.
- 100% Lead(Pb)-Free and RoHS compliant.
- High reliability -Reliability test complied to AEC-Q200
- Operating temperature: -55 to +155 °C (including self-temperature rise)
- Quantity: 200PCS

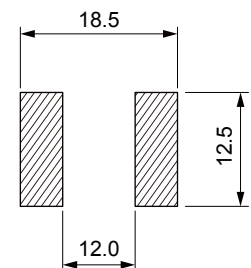
**APPLICATION**

- 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:**

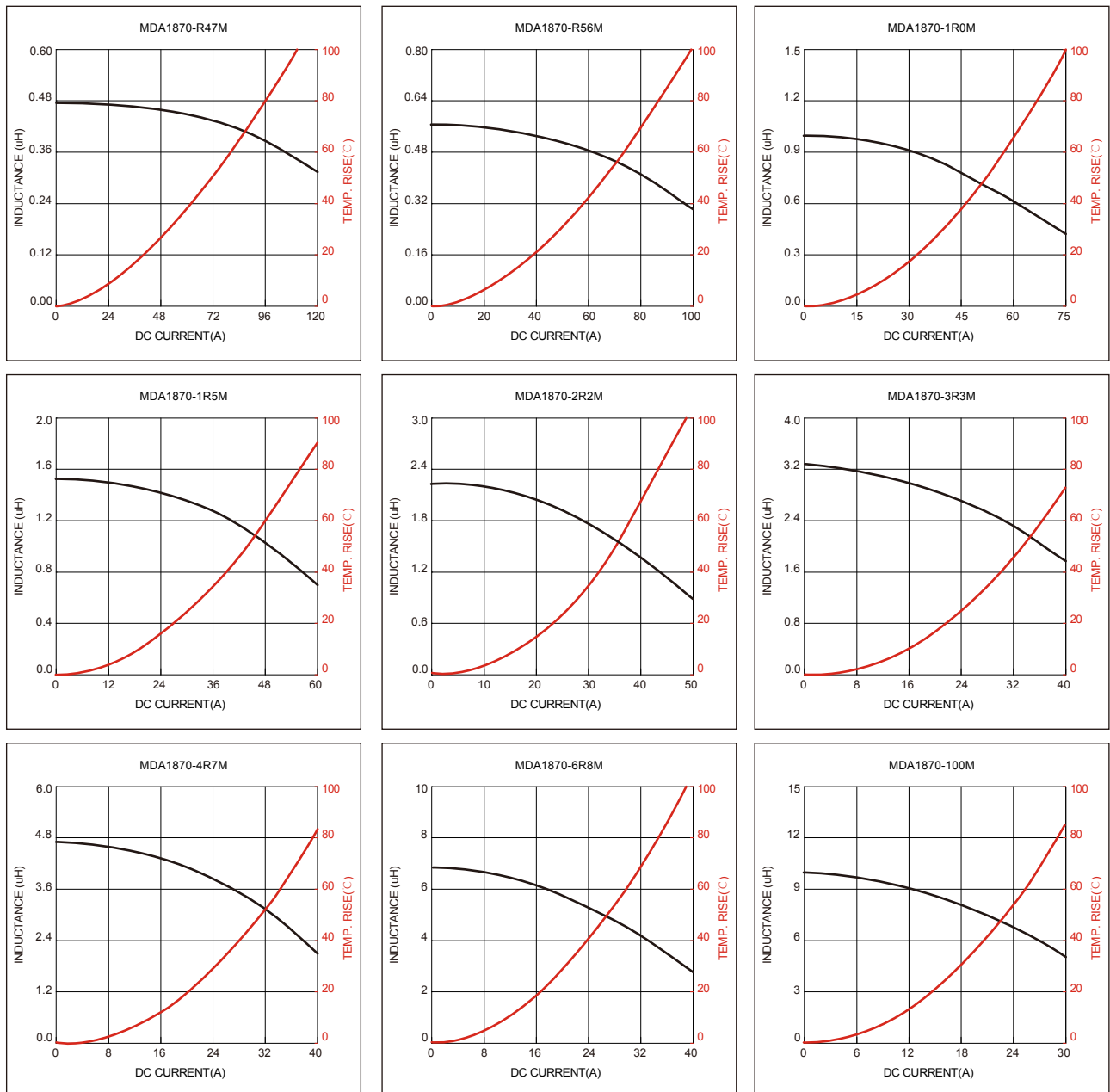
Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Saturation Current Typ. (A)	DC Resistance Typ. (mΩ)	DC Resistance Max. (mΩ)
MDA1870-R47M	0.47	±20%	60.0	110	0.70	0.90
MDA1870-R56M	0.56	±20%	56.0	80.0	0.81	0.97
MDA1870-1R0M	1.00	±20%	46.0	50.0	1.06	1.30
MDA1870-1R5M	1.50	±20%	39.0	46.0	1.50	1.80
MDA1870-2R2M	2.20	±20%	32.0	35.0	1.80	2.20
MDA1870-3R3M	3.30	±20%	30.0	32.0	2.70	3.30
MDA1870-4R7M	4.70	±20%	28.0	29.0	3.70	4.50
MDA1870-6R8M	6.80	±20%	24.0	25.0	6.00	7.20
MDA1870-100M	10.0	±20%	21.0	22.0	9.20	10.6
MDA1870-150M	15.0	±20%	16.0	16.0	12.8	15.5

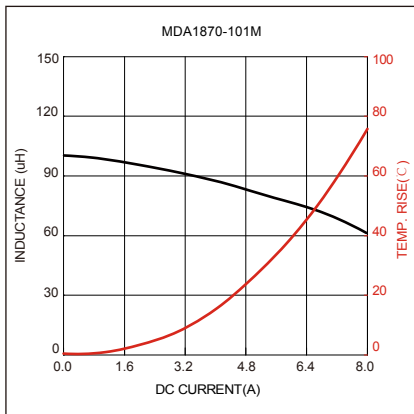
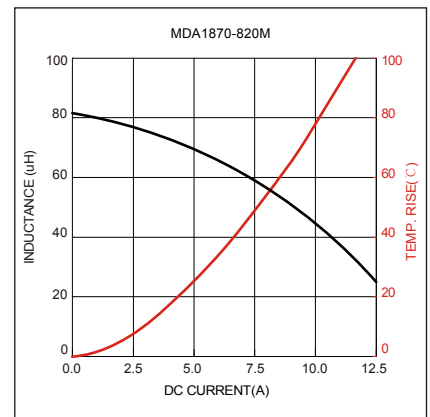
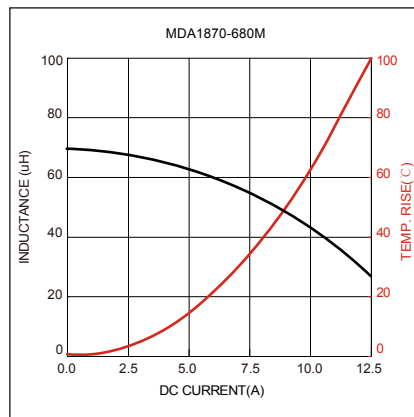
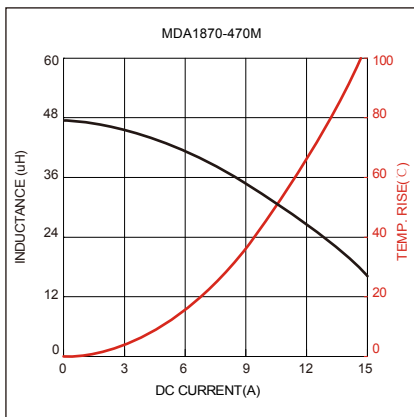
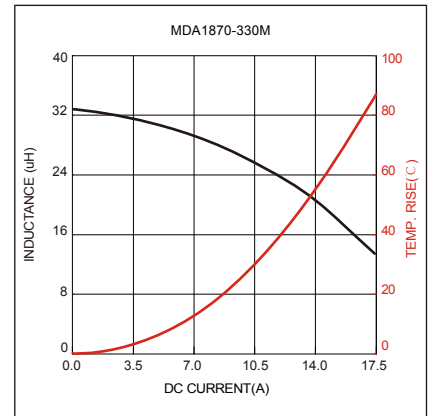
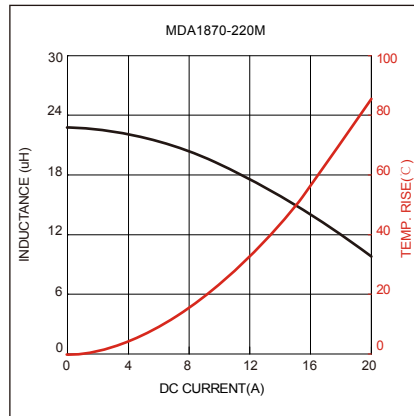
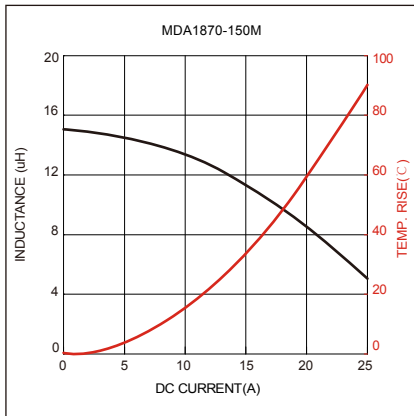
Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Saturation Current Typ. (A)	DC Resistance Typ. (mΩ)	DC Resistance Max. (mΩ)
MDA1870-220M	22.0	±20%	13.5	13.5	20.5	24.0
MDA1870-330M	33.0	±20%	12.0	12.0	32.0	37.0
MDA1870-470M	47.0	±20%	9.5	9.5	40.0	47.0
MDA1870-680M	68.0	±20%	8.0	8.5	66.0	76.0
MDA1870-820M	82.0	±20%	6.5	8.0	69.0	83.0
MDA1870-101M	100	±20%	6.0	6.5	90.0	105

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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