

MDCA Series
SMD Power Inductor
Size 1040



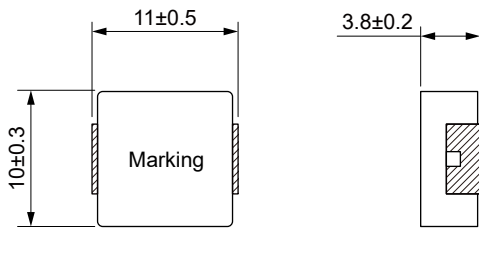
FEATURES

- 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)

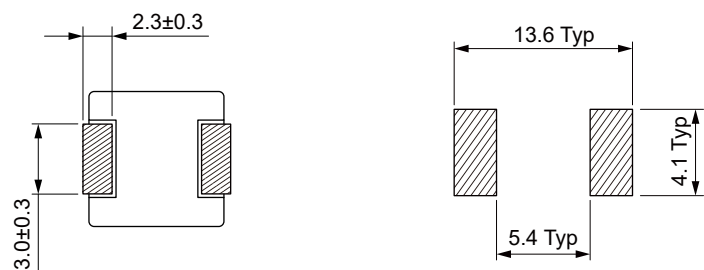
APPLICATION

- 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)
MDCA1040-R15N	0.15	±30%	42.0	74.0	0.60	0.70
MDCA1040-R22M	0.22	±20%	34.0	59.0	0.90	1.10
MDCA1040-R33M	0.33	±20%	30.0	59.0	1.10	1.30
MDCA1040-R36M	0.36	±20%	30.0	59.0	1.15	1.30
MDCA1040-R47M	0.47	±20%	27.0	42.0	1.40	1.60
MDCA1040-R56M	0.56	±20%	24.4	39.0	1.70	1.90
MDCA1040-R68M	0.68	±20%	21.5	38.0	2.50	2.82
MDCA1040-1R0M	1.00	±20%	17.4	35.2	3.12	3.48
MDCA1040-1R5M	1.50	±20%	15.5	32.0	4.15	4.80
MDCA1040-2R2M	2.20	±20%	11.6	26.4	6.70	7.20
MDCA1040-3R3M	3.30	±20%	10.5	19.4	11.0	12.0
MDCA1040-4R7M	4.70	±20%	9.60	16.5	15.3	15.8
MDCA1040-5R6M	5.60	±20%	8.70	13.7	17.3	19.8
MDCA1040-6R8M	6.80	±20%	8.20	13.1	18.0	23.4

Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Saturation Current Typ. (A)	DC Resistance Typ. (mΩ)	DC Resistance Max. (mΩ)
MDCA1040-8R2M	8.20	±20%	7.80	12.2	20.8	23.8
MDCA1040-100M	10.0	±20%	7.30	11.6	27.8	31.0
MDCA1040-150M	15.0	±20%	6.00	9.70	41.0	46.0
MDCA1040-220M	22.0	±20%	4.80	6.80	65.0	75.0
MDCA1040-330M	33.0	±20%	3.30	4.80	94.0	115
MDCA1040-470M	47.0	±20%	2.90	4.30	147	169

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:

