# MDCA Series

SMD Power Inductor

Size 4020



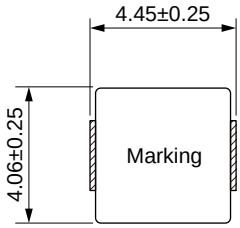
## FEATURES

- Shielded construc on.
- 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 construc on.
- 100% Lead(Pb)-Free and RoHS compliant.
- AEC-Q200 qualified
- Opera ng temperature: -55 to +125 °C(including self-temperature rise)
- Quan ty:3000pcs

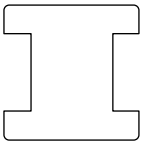
## APPLICATION

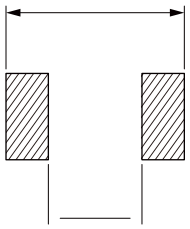
- Headlamps, tail lamps and interior ligh ng
- 
- Doors, window li and seat contro
- 
- 
- In-Vehicle Infotainment and naviga on

## Dimensions: [mm]




## Land Pattern: [mm]





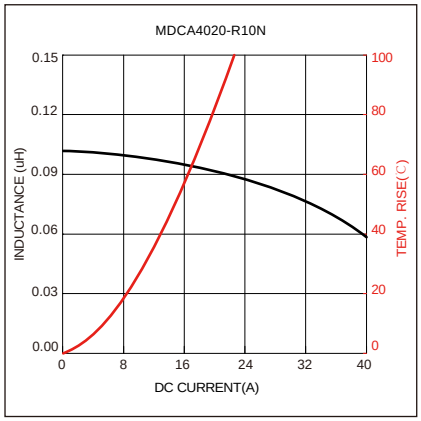
## Electrical Properties:

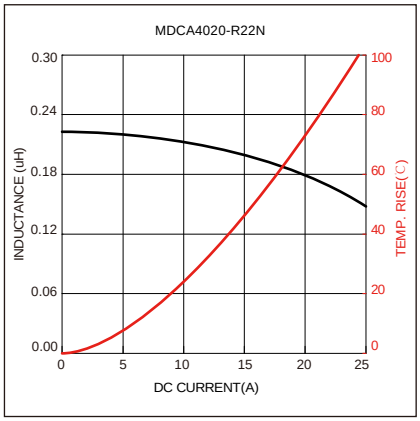
| Part No | Inductance @ 100KHz/1V | Tolerance | Temperature Rise Current Typ. | Current Typ. | | |
|---|---|---|---|---|---|---|
| | 0.10 | ±30% | 14.0 | 35.0 | 3.20 | 4.0 |
| | 0.22 | ±30% | 13.0 | 24.0 | 6.60 | 7.3 |
| MDCA4020-R33M | 0.33 | | 10.0 | 18.0 | 7.80 | 8.6 |
| MDCA4020-R56M | 0.47 | | 8.00 | 12.0 | 11.2 | |
| | 0.56 | | 7.30 | 10.0 | 13.5 | |
| | 0.68 | | 7.00 | 10.0 | 16.0 | |
| | 1.00 | | 5.00 | 8.50 | 22.0 | |
| MDCA4020-1R5M | 1.50 | | 4.50 | 7.00 | 34.8 | |
| | 2.20 | | 4.00 | 6.00 | 51.0 | |
| MDCA4020-3R3M | 3.30 | | 3.50 | 4.00 | 69.0 | |
| | 4.70 | | 2.60 | 3.50 | 95.0 | 105 |
| MDCA4020-5R6M | 5.60 | | 2.20 | 3.00 | | 125 |
| | 6.80 | | 2.10 | 2.80 | 150 | |
| | 8.20 | | 2.00 | 2.50 | 158 | |

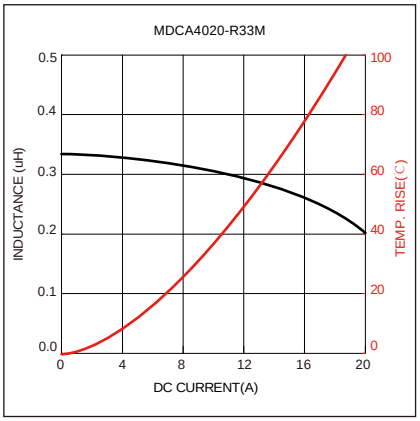
| Part No | Inductance @ 100KHz/1V | Tolerance | Temperature Rise Current Typ. | Current Typ. | DC Resistance Typ. | DC Resistance Max. |
|---|---|---|---|---|---|---|
| | 10.0 | | 1.80 | 2.30 | 215 | 243 |
| MDCA4020-150M | 15.0 | | 1.50 | 1.90 | 325 | 374 |
| | 22.0 | | 1.20 | 1.40 | | 500 |

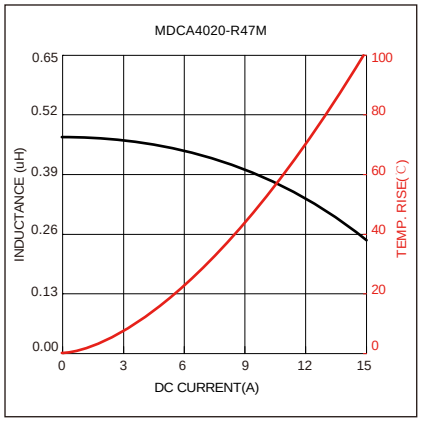
Saturation Current will cause L to drop approximately 30%
Temperature Rise Current: The actual value of DC current when the temperature rise is △T=40°C

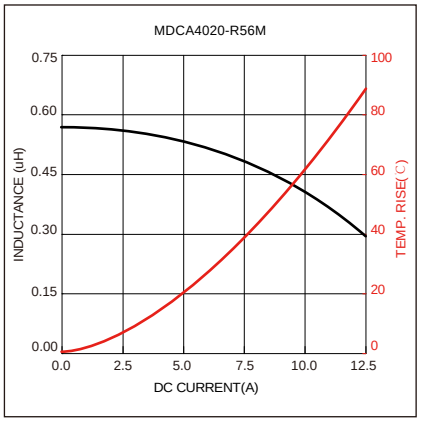
## Typical Electrical Characteristics:

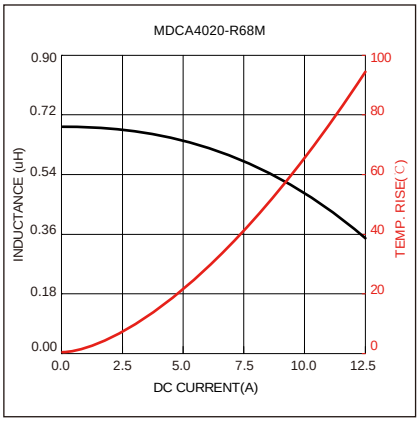


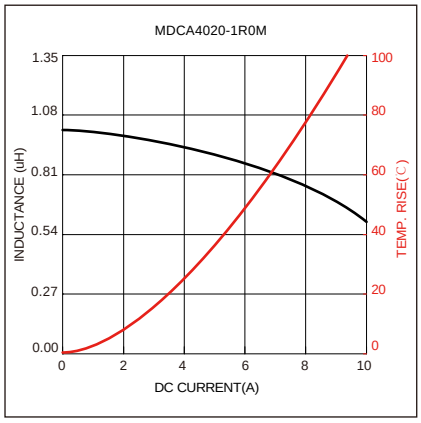



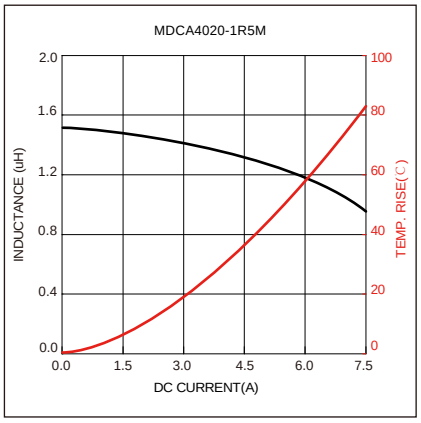



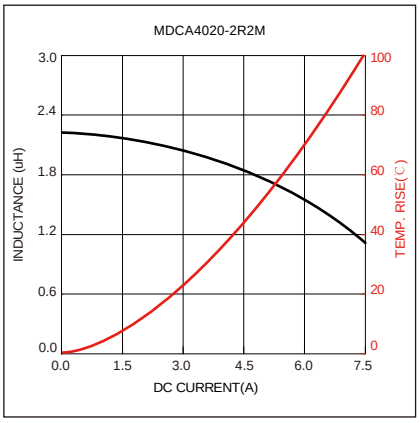



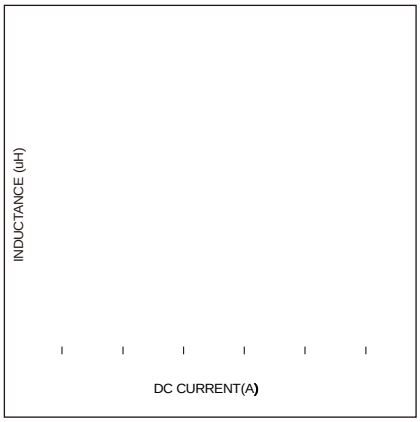



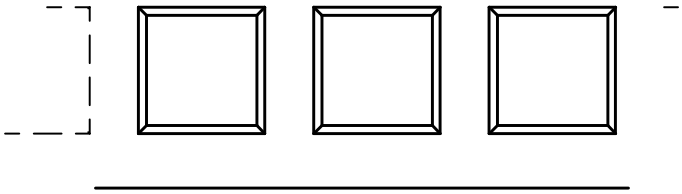




INDUCTANCE (uH)
DC CURRENT(A)

## Soldering Reflow:

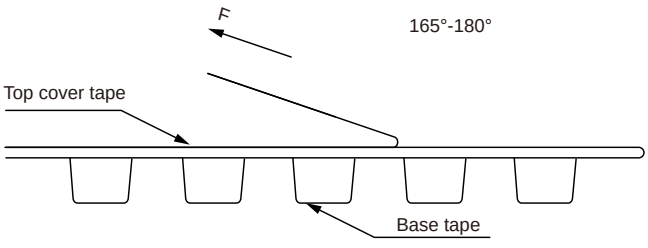
## Packaging Information:

### Tape Dimension:



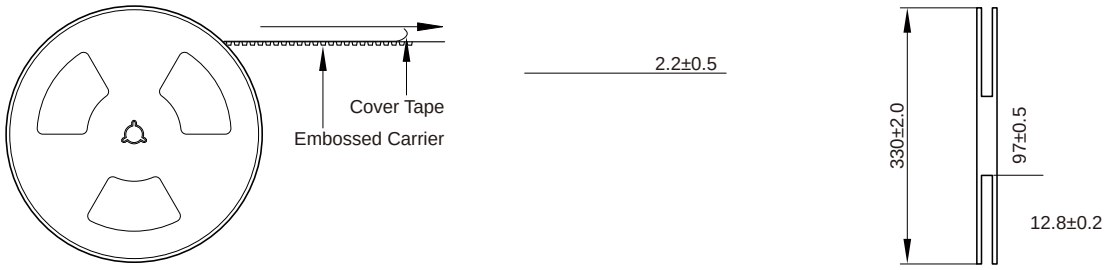
| Series | A0 (mm) | B0 (mm) | D (mm) | P0 (mm) | P1 (mm) | W (mm) | K0 (mm) | E (mm) | T (mm) |
|---|---|---|---|---|---|---|---|---|---|
| MDCA4020 | 4.5±0.1 | 4.85±0.1 | 1.5±0.1 | 4.0±0.1 | 8.0±0.1 | 12±0.3 | 2.3±0.1 | 1.75±0.1 | 0.35±0.05 |

### Peel force of top cover tape:




The peel force of top cover tape shall be between 0.1 to 1.3 N

Reel Dimension：[mm]




Packaging Quantity:



3000 Pcs/Reel　　3 Reel /Inner box( 9000 Pcs)　　3 Inner box/Carton box(27K Pcs)

## Cautions and Warnings:

Storage Conditions：

- [illegible]

Operation Instructions: