



# MDCA Series

## SMD Power Inductor

### Size 3020



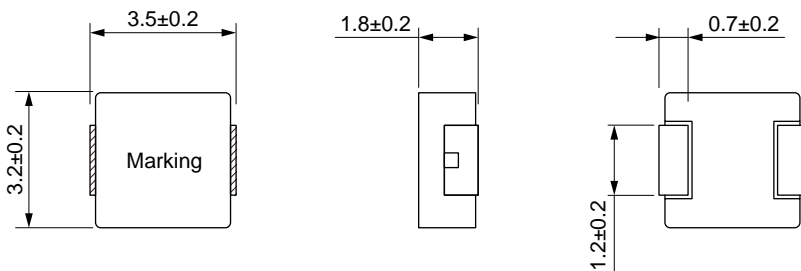
#### FEATURES

- Carbonyl Powder.
- Compact design.
- High current, low DCR, high efficiency.
- Very low acoustic noise and very low leakage flux noise.
- High reliability.
- 100% Lead(Pb)-Free and RoHS compliant.
- AEC-Q200 qualified
- Operating temperature: -55 to +125 °C (including self-temperature rise)
- Quantity: 3000pcs

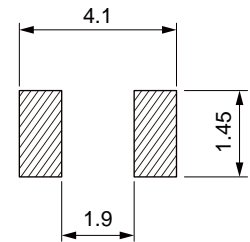
#### APPLICATION

- Note PC power system, incl. IMVP-6
- DC/DC converter

#### Dimensions: [mm]



#### Land Pattern: [mm]

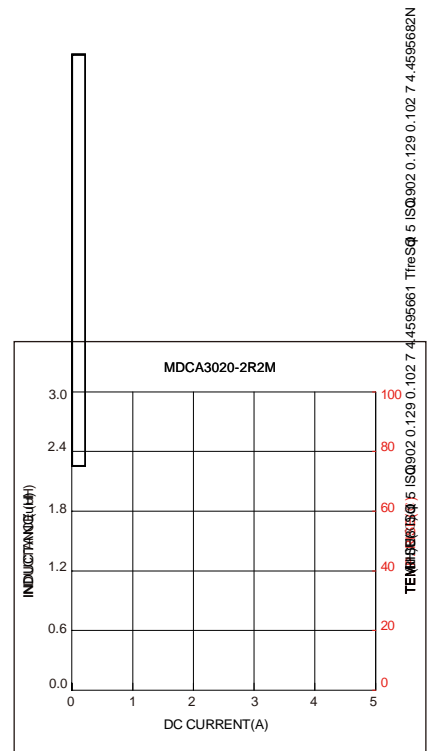
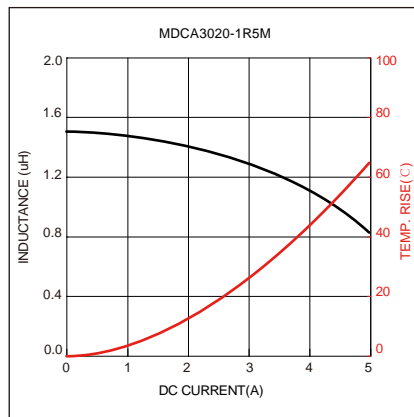


#### Electrical Properties:

| Part No       | Inductance<br>@ 100KHz/1V<br>( $\mu$ H) | Tolerance | Temperature<br>Rise Current<br>Typ.<br>(A) | Saturation<br>Current<br>Typ.<br>(A) | DC<br>Resistance<br>Typ.<br>(m $\Omega$ ) | DC<br>Resistance<br>Max.<br>(m $\Omega$ ) |
|---------------|---|-----------|--|--------------------------------------|---|---|
| MDCA3020-R10N | 0.10                                    | ±30%      | 10.5                                       | 14.0                                 | 6.6                                       | 9.0                                       |
| MDCA3020-R22N | 0.22                                    | ±30%      | 9.0  | 11.2                                 | 11.0                                      | 14.0                                      |
| MDCA3020-R33M | 0.33                                    | ±20%      | 8.0  | 10.0                                 | 17.0                                      | 21.0                                      |
| MDCA3020-R47M | 0.47                                    | ±20%      | 7.0  | 9.0                                  | 19.7                                      | 23.0                                      |
| MDCA3020-R68M | 0.68                                    | ±20%      | 5.5  | 7.0                                  | 25.5                                      | 29.0                                      |
| MDCA3020-R82M | 0.82                                    | ±20%      | 4.8  | 6.0                                  | 27.0                                      | 32.0                                      |
| MDCA3020-1R0M | 1.00                                    | ±20%      | 4.0  | 5.0                                  | 32.0                                      | 38.0                                      |
| MDCA3020-1R5M | 1.50                                    | ±20%      | 3.8  | 4.0                                  | 42.0                                      | 50.0                                      |
| MDCA3020-2R2M | 2.20                                    | ±20%      | 3.5  | 3.7                                  | 65.0                                      | 75.0                                      |
| MDCA3020-3R3M | 3.30                                    | ±20%      | 3.0  | 3.5                                  | 125                                       | 145                                       |
| MDCA3020-4R7M | 4.70                                    | ±20%      | 2.6  | 3.0                                  | 172                                       | 200                                       |
| MDCA3020-5R6M | 5.60                                    | ±20%      | 2.2  | 2.6                                  | 205                                       | 238                                       |
| MDCA3020-6R8M | 6.80                                    | ±20%      | 1.9  | 2.2                                  | 260                                       | 300                                       |
| MDCA3020-8R2M | 8.20                                    | ±20%      | 1.6  | 1.9                                  | 340                                       | 390                                       |
| MDCA3020-100M | 10.0                                    | ±20%      | 1.4  | 1.6                                  | 366                                       | 422                                       |

Saturation Current will cause L to drop approximately 30%

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



ISO 9002 0.129 0.102 7 4.4595661 TtreSQ 5 ISO 902 0.129 0.102 7 4.4595682N

