

## MD Series

### SMD Low Profile High Current Molded Inductor Size 4012



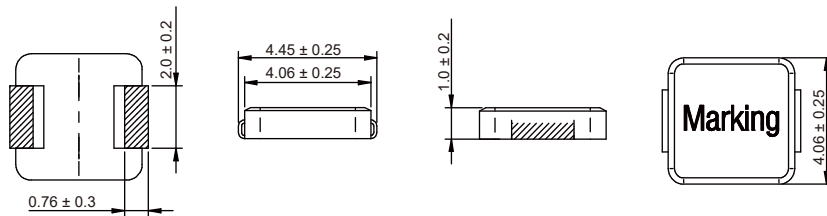
#### CHARACTERISTICS

- Molded type
- High saturation current due to CIP material
- Nature air gap and no acoustic noise
- Different sizes available
- Quantity: 4000pcs

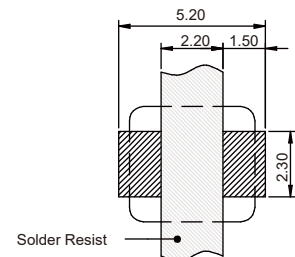
#### APPLICATION

- High current DC/DC converter
- LC filter

Dimensions: [mm]



Land Pattern: [mm]



#### Electrical Properties:

| Part No     | Inductance (μH) | Tolerance | Temperature Rise Current Typ. (A) | Saturation current Typ. (A) | DCR Typ. (mΩ) | DCR Max. (mΩ) |
|-------------|-----------------|-----------|-----------------------------------|-----------------------------|---------------|---------------|
| MD4012-R10N | 0.10            | ±30%      | 11.5                              | 25.0                        | 4.3           | 5.5           |
| MD4012-R15N | 0.15            | ±30%      | 10.0                              | 21.5                        | 5.5           | 6.8           |
| MD4012-R22M | 0.22            | ±20%      | 8.5                               | 20.0                        | 6.6           | 8.0           |
| MD4012-R33M | 0.33            | ±20%      | 7.0                               | 11.0                        | 13.6          | 16            |
| MD4012-R47M | 0.47            | ±20%      | 6.0                               | 6.5                         | 18            | 20            |
| MD4012-R60M | 0.60            | ±20%      | 5.3                               | 6.0                         | 22.5          | 26            |
| MD4012-R68M | 0.68            | ±20%      | 5.0                               | 6.0                         | 32            | 37            |
| MD4012-1R0M | 1.00            | ±20%      | 4.0                               | 6.0                         | 41            | 47            |
| MD4012-1R2M | 1.20            | ±20%      | 3.5                               | 5.0                         | 48            | 56            |
| MD4012-1R5M | 1.50            | ±20%      | 3.0                               | 4.0                         | 55            | 63.3          |
| MD4012-2R2M | 2.20            | ±20%      | 2.8                               | 3.5                         | 69.2          | 80            |
| MD4012-3R3M | 3.30            | ±20%      | 2.3                               | 3.0                         | 84            | 97            |
| MD4012-4R7M | 4.70            | ±20%      | 2.0                               | 2.5                         | 128           | 145           |
| MD4012-5R6M | 5.60            | ±20%      | 1.7                               | 2.3                         | 180           | 208           |
| MD4012-6R8M | 6.80            | ±20%      | 1.5                               | 1.7                         | 300           | 360           |

| Part No     | Inductance (μH) | Tolerance | Temperature Rise Current Typ. (A) | Saturation current Typ. (A) | DCR Typ. (mΩ) | DCR Max. (mΩ) |
|-------------|-----------------|-----------|-----------------------------------|-----------------------------|---------------|---------------|
| MD4012-8R2M | 8.20            | ±20%      | 1.4                               | 1.6                         | 313           | 376           |
| MD4012-100M | 10.0            | ±20%      | 1.3                               | 1.4                         | 410           | 463           |
| MD4012-220M | 22.0            | ±20%      | 0.8                               | 1.0                         | 950           | 1050          |

Operating temperature : -40 °C ~ +125 °C

Temperature rise current : The actual value of DC current when the temperature rise is ΔT40 °C

Saturation Current that will cause initial inductance to drop 20% approximately .

## Typical Electrical Characteristics:

