

**MDA Series**  
**SMD Low Profile High Current Molded Inductor**  
**Size 1040**



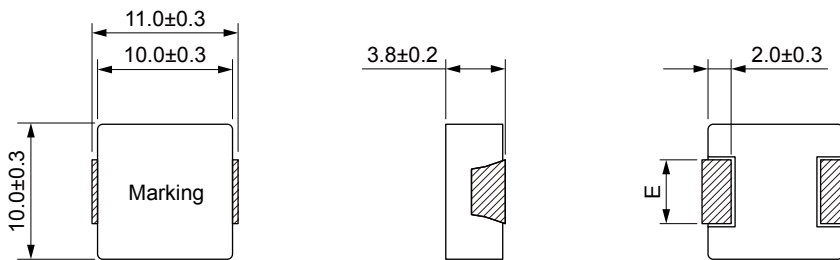
**FEATURES**

- 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: 500PCS

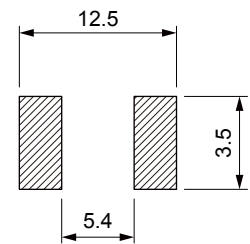
**APPLICATION**

- Headlamps, tail lamps and interior lighting
- HVAC
- Doors, window lift and seat control
- Audio subsystem
- Digital instrument cluster
- In-Vehicle Infotainment and navigation

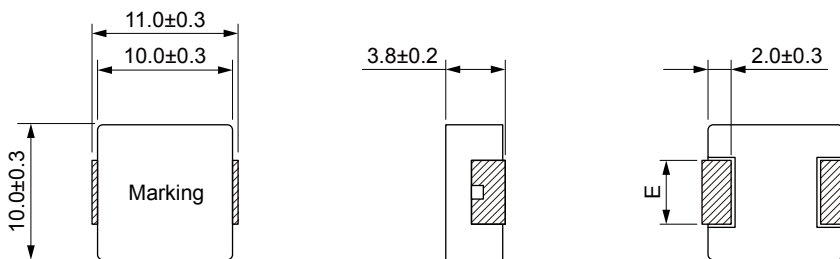
**Dimensions: [mm] 0.15μH-1.50μH**



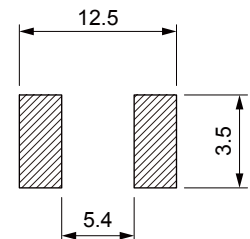
**Land Pattern: [mm]**



**Dimensions: [mm] 1.8μH-47μH**



**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) | E       |
|--------------|-----------------------------|-----------|-----------------------------------|-----------------------------|-------------------------|-------------------------|---------|
| MDA1040-R15N | 0.15                        | ±30%      | 44.0                              | 82.0                        | 0.50                    | 0.60                    | 3.0±0.3 |
| MDA1040-R22M | 0.22                        | ±20%      | 36.0                              | 70.0                        | 0.72                    | 0.83                    | 3.0±0.3 |
| MDA1040-R36M | 0.36                        | ±20%      | 33.0                              | 51.0                        | 1.05                    | 1.18                    | 3.0±0.3 |

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|--------------|-----------------------------|-----------|-----------------------------------|-----------------------------|-------------------------|-------------------------|---------|
| MDA1040-R47M | 0.47                        | ±20%      | 32.0                              | 46.0                        | 1.30                    | 1.50                    | 3.0±0.3 |
| MDA1040-R56M | 0.56                        | ±20%      | 25.0                              | 34.0                        | 1.60                    | 1.80                    | 2.5±0.3 |
| MDA1040-R68M | 0.68                        | ±20%      | 23.0                              | 31.0                        | 1.90                    | 2.20                    | 2.5±0.3 |
| MDA1040-1R0M | 1.00                        | ±20%      | 20.0                              | 29.0                        | 2.90                    | 3.25                    | 2.5±0.3 |
| MDA1040-1R5M | 1.50                        | ±20%      | 17.5                              | 26.0                        | 3.70                    | 4.20                    | 2.5±0.3 |
| MDA1040-1R8M | 1.80                        | ±20%      | 16.5                              | 23.0                        | 5.10                    | 5.70                    | 3.0±0.3 |
| MDA1040-2R2M | 2.20                        | ±20%      | 15.0                              | 20.0                        | 5.80                    | 6.70                    | 3.0±0.3 |
| MDA1040-3R3M | 3.30                        | ±20%      | 11.0                              | 17.5                        | 10.5                    | 11.8                    | 3.0±0.3 |
| MDA1040-4R7M | 4.70                        | ±20%      | 8.80                              | 15.2                        | 15.8                    | 19.0                    | 3.0±0.3 |
| MDA1040-5R6M | 5.60                        | ±20%      | 8.00                              | 14.1                        | 19.0                    | 22.8                    | 3.0±0.3 |
| MDA1040-6R8M | 6.80                        | ±20%      | 7.80                              | 12.2                        | 22.0                    | 24.5                    | 3.0±0.3 |
| MDA1040-8R2M | 8.20                        | ±20%      | 7.60                              | 9.50                        | 25.0                    | 28.0                    | 3.0±0.3 |
| MDA1040-100M | 10.0                        | ±20%      | 7.50                              | 8.60                        | 27.0                    | 30.0                    | 3.0±0.3 |
| MDA1040-150M | 15.0                        | ±20%      | 6.25                              | 7.00                        | 41.0                    | 45.0                    | 3.0±0.3 |
| MDA1040-220M | 22.0                        | ±20%      | 5.00                              | 6.20                        | 58.0                    | 66.0                    | 3.0±0.3 |
| MDA1040-330M | 33.0                        | ±20%      | 4.40                              | 5.50                        | 84.0                    | 91.0                    | 3.0±0.3 |
| MDA1040-470M | 47.0                        | ±20%      | 3.50                              | 4.00                        | 125                     | 143                     | 3.0±0.3 |

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:

