

MDSA Series

SMD Low Profile High Current Molded Inductor

Size 5030



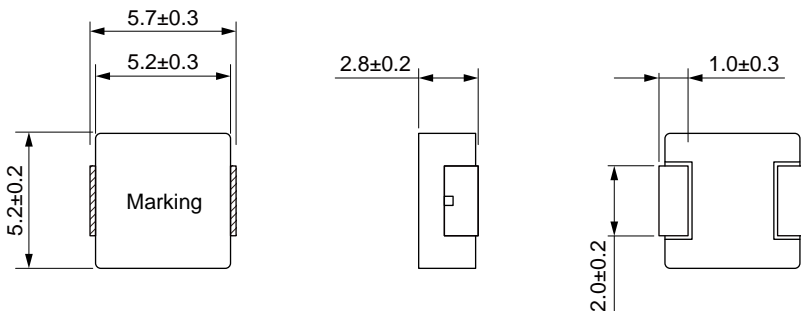
FEATURES

- 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.
- AEC-Q200 qualified
- Operating temperature: -55 to +155 °C(including self-temperature rise)
- Quantity: 2000PCS

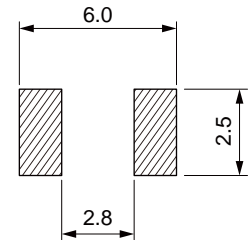
APPLICATION

- Noise filter for various drive circuitry requiring high temp. operation and peak current handling capability.
- Boost-Converter
- Buck-Converter DC/DC

Dimensions: [mm]



Land Pattern: [mm]



Electrical Properties:

| Part Number | DCR (mΩ) | DCR Tolerance (%) | Isat (A) | Isat Tolerance (%) | Inductance (μH) | Inductance Tolerance (%) |
|---------------|----------|-------------------|----------|--------------------|-----------------|--------------------------|
| MDSA5030-R20M | 0.20 | ±20% | 13.8 | ±20% | 3.80 | ±20% |
| MDSA5030-R47M | 0.47 | ±20% | 13.2 | ±20% | 9.8 | ±20% |
| MDSA5030-R68M | 0.68 | ±20% | 12.3 | ±20% | 8.7 | ±20% |
| MDSA5030-R82M | 0.82 | ±20% | 9.8 | ±20% | 8.5 | ±20% |
| MDSA5030-1R0M | 1.00 | ±20% | 8.9 | ±20% | 8.4 | ±20% |
| MDSA5030-1R5M | 1.50 | ±20% | 7.9 | ±20% | 7.3 | ±20% |
| MDSA5030-2R2M | 2.20 | ±20% | 6.9 | ±20% | 6.3 | ±20% |
| MDSA5030-3R3M | 3.30 | ±20% | 6.3 | ±20% | 5.9 | ±20% |
| MDSA5030-4R7M | 4.70 | ±20% | 5.5 | ±20% | 5.2 | ±20% |

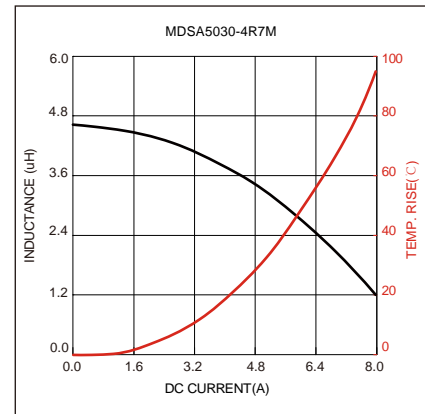
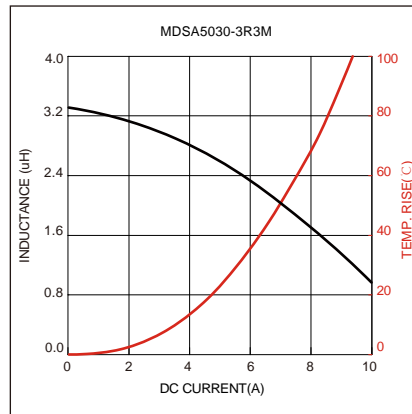
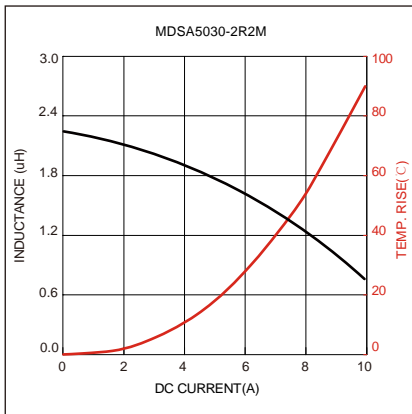
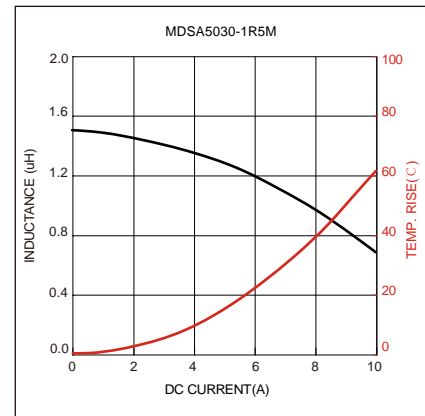
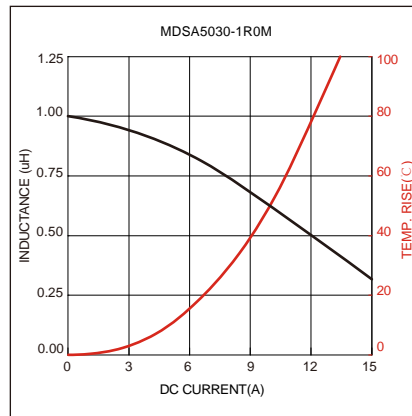
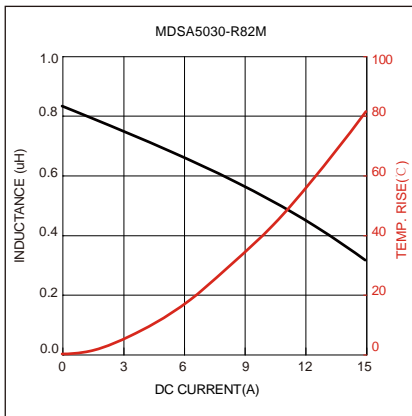
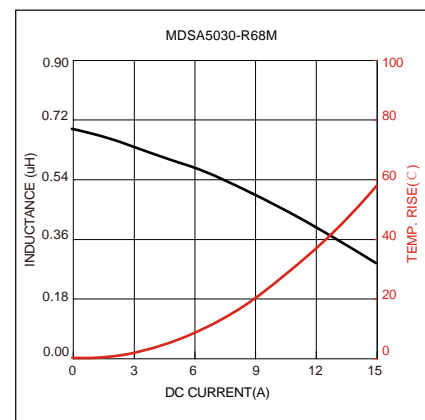
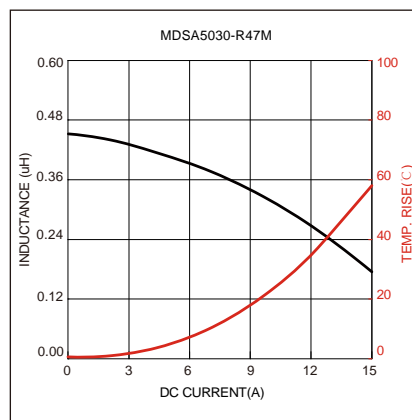
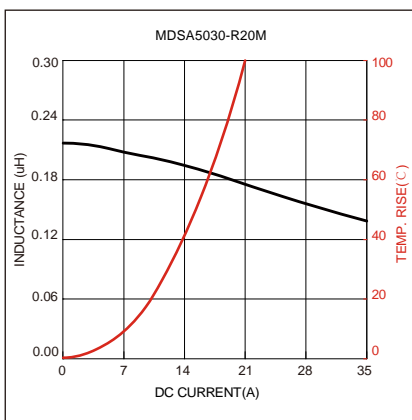


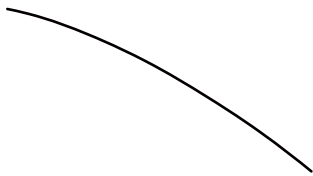
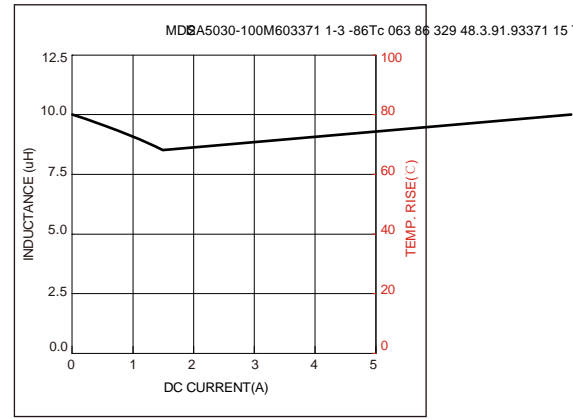
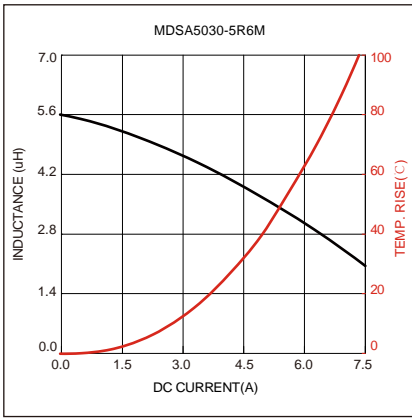
| | | | | | | |
|---------------|------|------|-----|-----|-------|-------|
| | | | | | | |
| MDSA5030-5R6M | 5.60 | ±20% | 4.9 | 4.5 | 52.0 | 60.0 |
| MDSA5030-6R8M | 6.80 | ±20% | 4.3 | 3.4 | 58.0 | 68.0 |
| MDSA5030-100M | 10.0 | ±20% | 3.7 | 2.4 | 89.0 | 105.0 |
| MDSA5030-150M | 15.0 | ±20% | 2.8 | 2.1 | 142.0 | 173.0 |

Saturation Current will cause L to drop approximately 30%

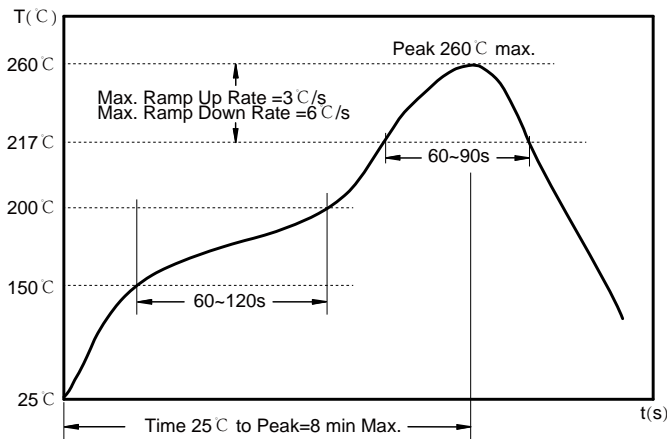
Temperature Rise Current: The actual value of DC current when the temperature rise is $\Delta T=40^{\circ}\text{C}$

Typical Electrical Characteristics:





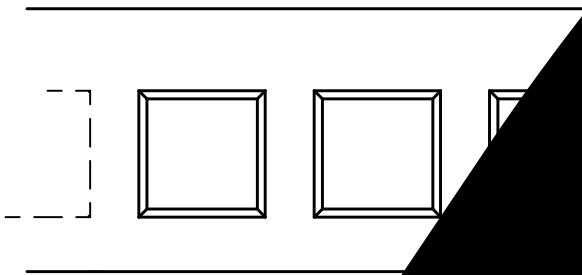
Soldering Reflow:



Preheat condition: 150 ~200°C / 60~120 s
 Allowed time above 217°C : 60~90 s
 Max temperature: 260°C .
 Max time at max temperature : 10 s
 Allowed Reflow time : 10 s

Packaging Information:

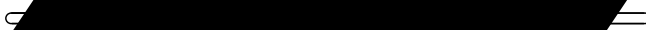
Tape Dimension :



| Series | A0 (mm) | B0 (mm) | K0 (mm) | E (mm) | T (mm) |
|----------|---------|---------|---------|----------|-----------|
| MDSA5030 | 5.5±0.1 | 5.5±0.1 | 3.3±0.1 | 1.75±0.1 | 0.35±0.05 |

Peel force of top coating

Top coating



between 0.1 to 1.3 N

Mounting (Inductance)



Reel Dimension: [mm]



Packaging Quantity: