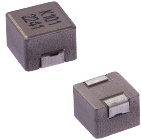


MDA Series
SMD Low Profile High Current Molded Inductor
Size 7050



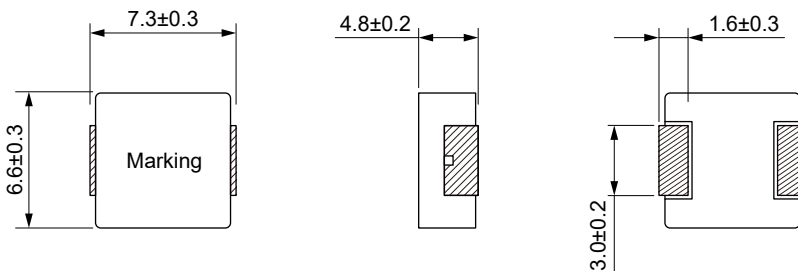
FEATURES

- 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: 800PCS

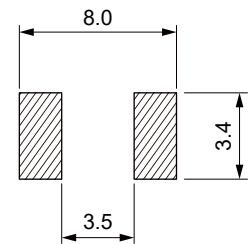
APPLICATION

- 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]



Land Pattern: [mm]



Electrical Properties:

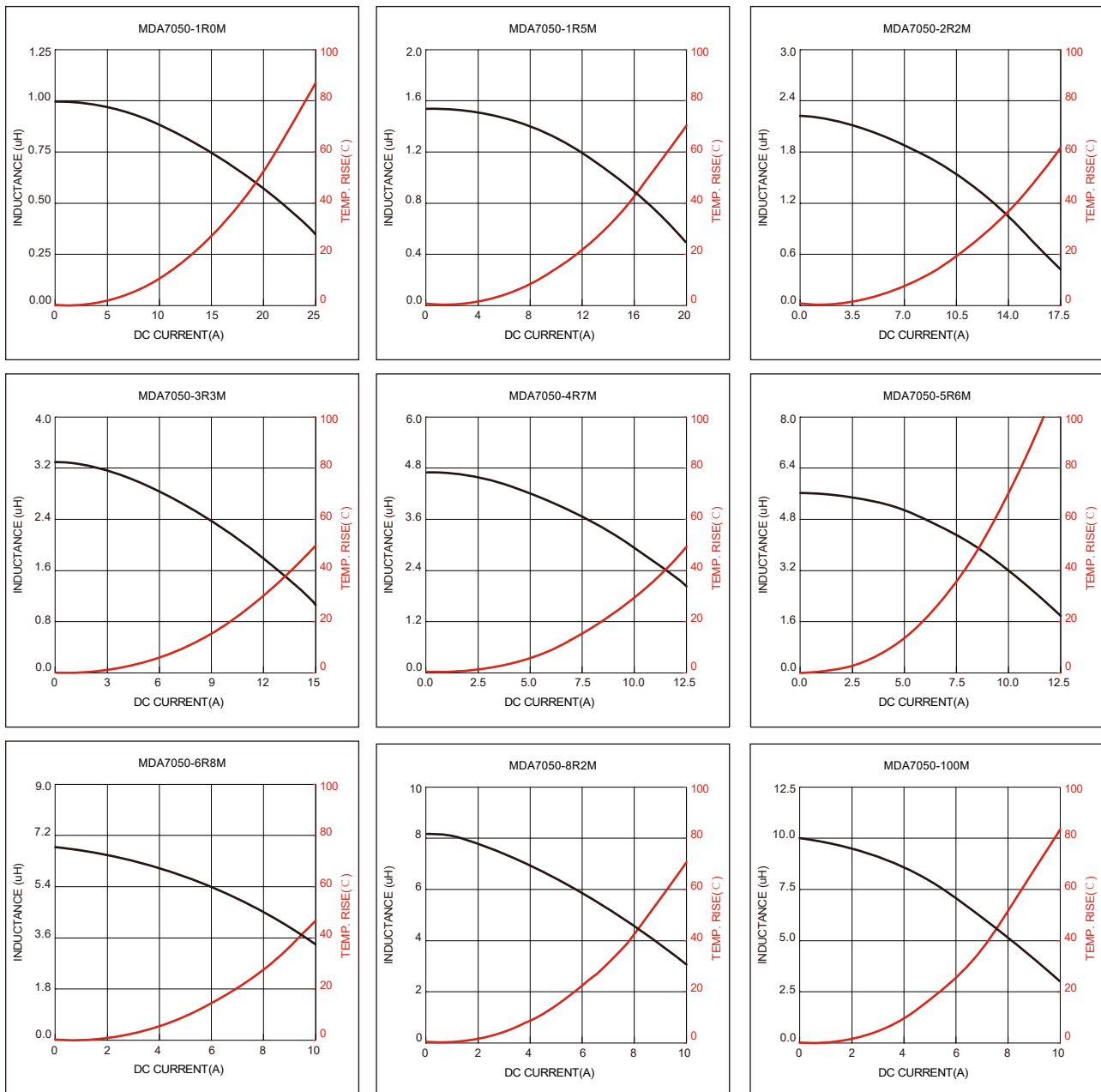
| Part No | Inductance @ 100KHz/1V (μH) | Tolerance | Temperature Rise Current Typ. (A) | Temperature Rise Current Max. (A) | Saturation Current Typ. (A) | Saturation Current Max. (A) | DC Resistance Typ. (mΩ) | DC Resistance Max. (mΩ) |
|--------------|-----------------------------|-----------|-----------------------------------|-----------------------------------|-----------------------------|-----------------------------|-------------------------|-------------------------|
| MDA7050-1R0M | 1.00 | ±20% | 17.0 | 15.0 | 16.0 | 13.0 | 5.60 | 6.20 |
| MDA7050-1R5M | 1.50 | ±20% | 15.0 | 13.0 | 13.0 | 10.5 | 6.60 | 7.30 |
| MDA7050-2R2M | 2.20 | ±20% | 14.0 | 12.0 | 10.0 | 8.5 | 10.0 | 11.5 |
| MDA7050-3R3M | 3.30 | ±20% | 13.0 | 11.0 | 9.5 | 8.0 | 14.0 | 16.2 |
| MDA7050-4R7M | 4.70 | ±20% | 11.0 | 9.5 | 8.8 | 7.5 | 20.8 | 24.0 |
| MDA7050-5R6M | 5.60 | ±20% | 10.0 | 8.5 | 8.0 | 7.2 | 28.0 | 33.0 |
| MDA7050-6R8M | 6.80 | ±20% | 9.0 | 8.0 | 7.6 | 7.0 | 30.0 | 36.0 |
| MDA7050-8R2M | 8.20 | ±20% | 7.5 | 6.5 | 6.5 | 6.0 | 38.5 | 45.0 |
| MDA7050-100M | 10.0 | ±20% | 7.0 | 6.0 | 6.0 | 5.7 | 44.0 | 53.0 |
| MDA7050-150M | 15.0 | ±20% | 5.0 | 4.0 | 4.0 | 3.2 | 73.0 | 85.0 |

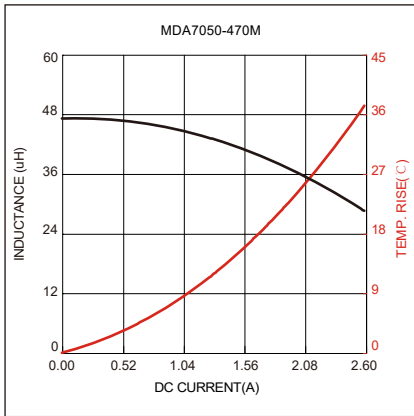
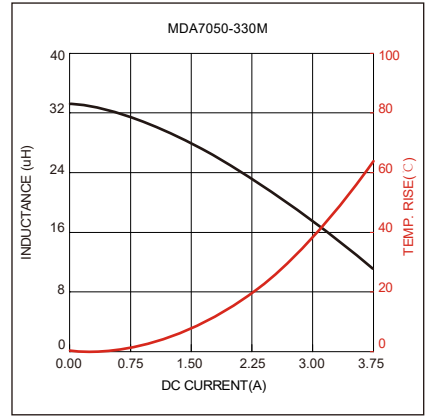
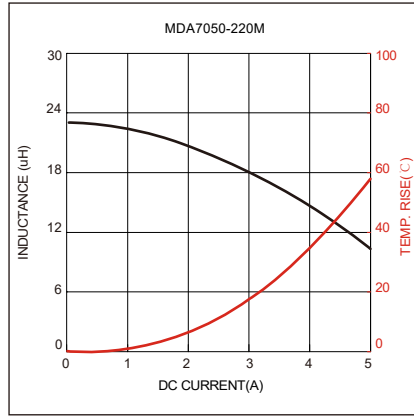
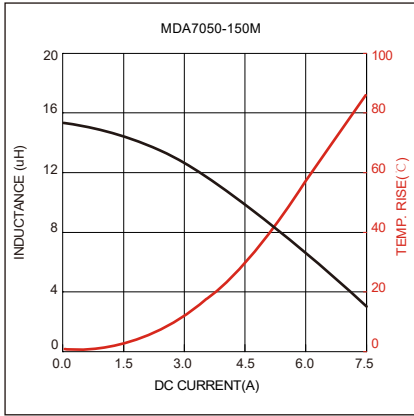
| Part No | Inductance @ 100KHz/1V (μH) | Tolerance | Temperature Rise Current Typ. (A) | Temperature Rise Current Max. (A) | Saturation Current Typ. (A) | Saturation Current Max. (A) | DC Resistance Typ. (mΩ) | DC Resistance Max. (mΩ) |
|--------------|-----------------------------|-----------|-----------------------------------|-----------------------------------|-----------------------------|-----------------------------|-------------------------|-------------------------|
| MDA7050-220M | 22.0 | ±20% | 4.2 | 3.6 | 3.6 | 3.1 | 122 | 142 |
| MDA7050-330M | 33.0 | ±20% | 3.0 | 2.5 | 2.3 | 1.8 | 142 | 170 |
| MDA7050-470M | 47.0 | ±20% | 2.6 | 2.0 | 1.8 | 1.5 | 275 | 320 |

Saturation Current will cause L to drop approximately 30%

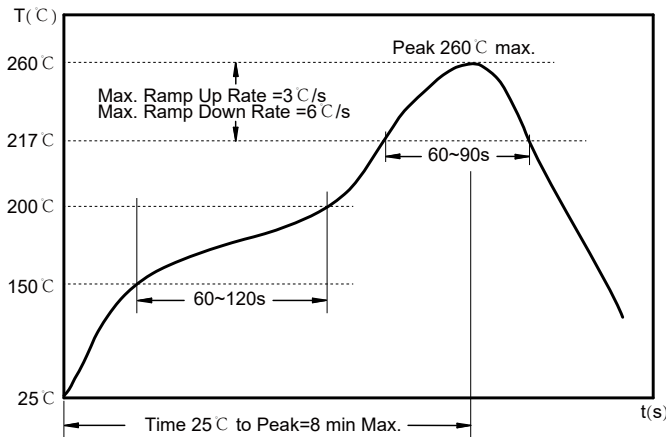
Temperature Rise Current: The actual value of DC current when the temperature rise is $\Delta T=40^{\circ}\text{C}$

Typical Electrical Characteristics:





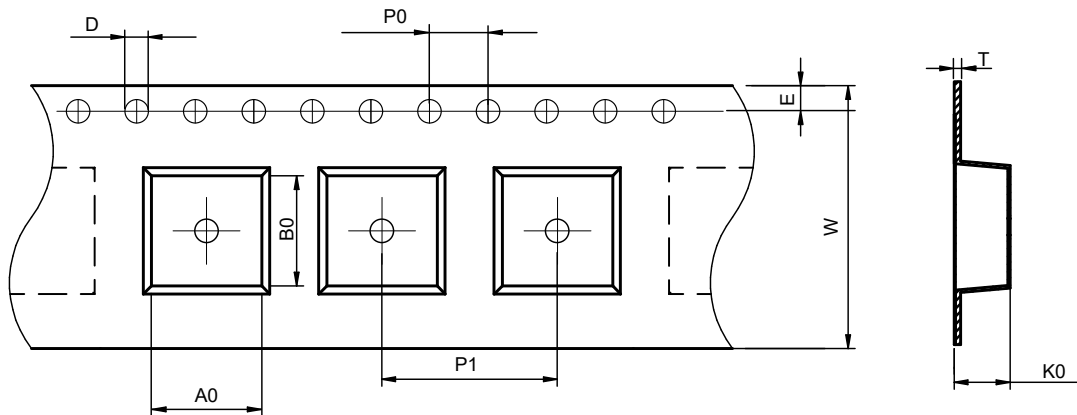
Soldering Reflow:



Preheat condition: 150 ~200 °C / 60~120 sec.
 Allowed time above 217 °C : 60~90 sec.
 Max temperature: 260 °C .
 Max time at max temperature: 10 sec.
 Allowed Reflow time: 2x max.

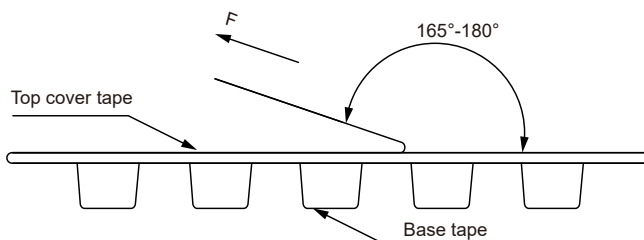
Packaging Information:

Tape Dimension :



| Series | A0 (mm) | B0 (mm) | D (mm) | P0 (mm) | P1 (mm) | W (mm) | K0 (mm) | E (mm) | T (mm) |
|---------|---------|---------|---------|---------|----------|----------|---------|----------|-----------|
| MDA7050 | 6.9±0.1 | 7.5±0.1 | 1.5±0.1 | 4.0±0.1 | 12.0±0.1 | 16.0±0.3 | 5.4±0.1 | 1.75±0.1 | 0.40±0.05 |

Peel force of top cover tape:

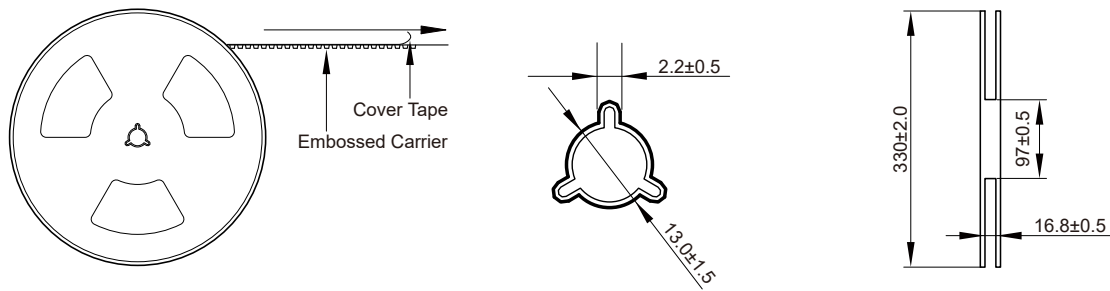


The peel force of top cover tape shall be between 0.1 to 1.3 N

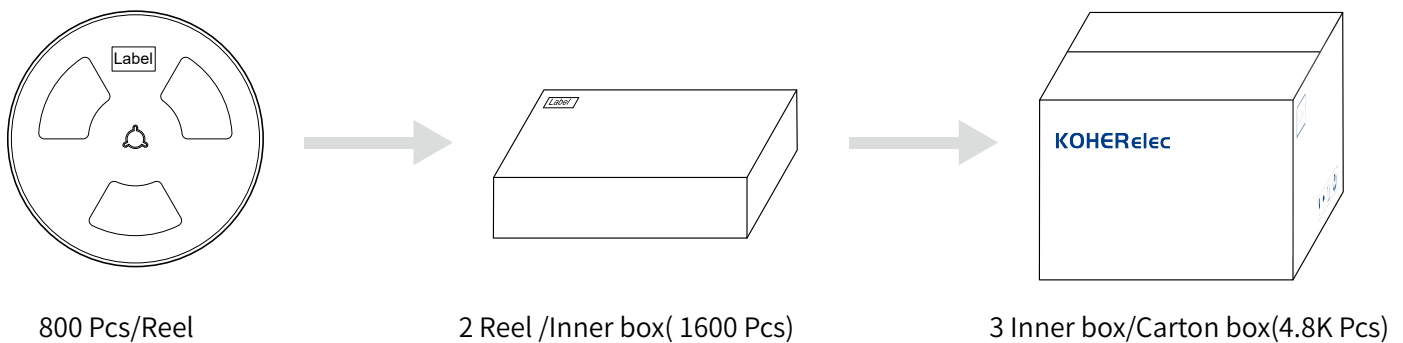
Product Marking:

| | |
|---------|-------------------------|
| Marking | K+Printing (Inductance) |
|---------|-------------------------|

Reel Dimension: [mm]



Packaging Quantity:



Cautions and Warnings:

Storage Conditions:

- The storage period is within 12 months after the completion of production. Be sure to follow the storage conditions (temperature: -5 to 35°C, humidity: 75% RH Max).If the storage period elapses, the soldering of the terminal electrodes may deteriorate.The warranty period is one year.
- Product should not be exposed to environment with high temperature, high humidity, dust, corrosive gas and etc.
- Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- Please always handle products carefully to prevent any damage caused by dropping down or inappropriate removing.

Operation Instructions:

- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- Before soldering, be sure to preheat components.The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.
- Soldering corrections after mounting should be within the range of the conditions determined in the specifications.If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
- Generally, Koher might not be familiar with either customer's specific application or actual requests as customer does.As a result customer shall be responsible for checking and confirming whether Koher product with the performance described in the product specification is suitable for using in customer's particular application or not.