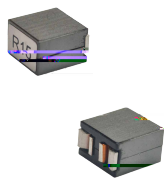
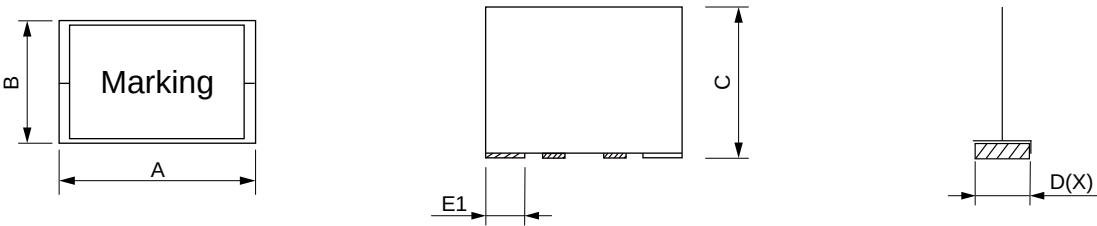


# Molding SMD Power Inductors



- High saturation characteristic core for large saturation current and low loss.
  - Closed magnetic circuit design reduces leakage flux.
  - High precision DCR.
  - Halogen Free & ROHS compliant.
  - Operating temperature: -40 to +125 °C
- 
- AI Servers, Data Centers, GPU/AI Accelerators.
  - Desktop Motherboards, CPU/GPU Power Delivery.
  - Multi-phase VRM, High-current DC-DC Converters.
  - Networking Equipment, Communication Infrastructure.

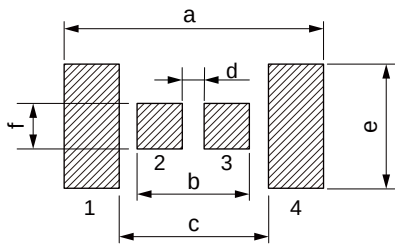
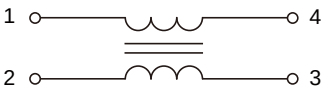
## Dimensions: [mm]



| MDVR090610 | 9.6 max  | 6.4 max | 10.4 max | 3.2 typ  | 3.2 typ  | 1.50 typ | 1.00 typ |
|------------|----------|---------|----------|----------|----------|----------|----------|
| MDVR10056  | 10.2 max | 5.0 max | 6.0 max  | 4.0±0.3  | 1.4±0.5  | 1.25 typ | 1.20 typ |
| MDVR120612 | 12.0 max | 6.0 max | 12.2 max | 2.55 typ | 2.55 typ | 1.63 typ | 1.27 typ |

## Land Pattern: [mm]

## Schematic:



| MDVR090610 | 10.1 | 3.9  | 5.8  | 1.0  | 3.8  | 3.8  |
|------------|------|------|------|------|------|------|
| MDVR10056  | 10.4 | 4.4  | 6.9  | 1.0  | 4.5  | 1.9  |
| MDVR120612 | 12.2 | 4.39 | 7.94 | 0.85 | 3.05 | 3.05 |

## Electrical Properties:

|                 |     |      |    |    |       |      |
|-----------------|-----|------|----|----|-------|------|
|                 |     |      |    |    |       |      |
| MDVR090610-R15L | 150 | ±15% | 71 | 65 | 0.125 | 0.45 |

|                 |     |      |    |    |      |      |
|-----------------|-----|------|----|----|------|------|
|                 |     |      |    |    |      |      |
| MDVR10056F-R12K | 120 | ±10% | 40 | 54 | 0.29 | 0.70 |

|                 |     |      |    |     |       |      |
|-----------------|-----|------|----|-----|-------|------|
|                 |     |      |    |     |       |      |
| MDVR120612-R10K | 100 | ±10% | 75 | 130 | 0.125 | 0.37 |

Saturation Current will cause L0 to drop approximately 30%.

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

Soldering Reflow:

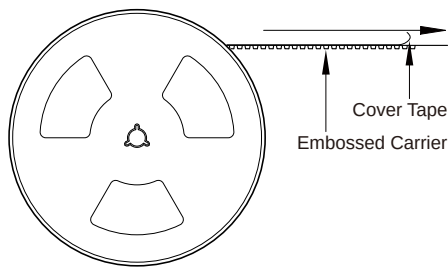
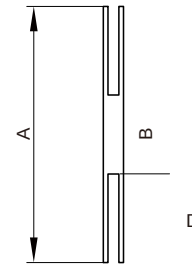
Packaging Information:

Tape Dimension : [mm]

Product Marking:

|         |                       |
|---------|-----------------------|
| Marking | Printing (Inductance) |
|---------|-----------------------|

Reel Dimension : [mm]



## 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.