

## TLVR Series

### Molding Power Inductors

#### Size 100510



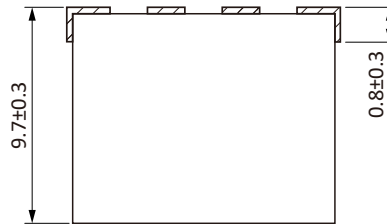
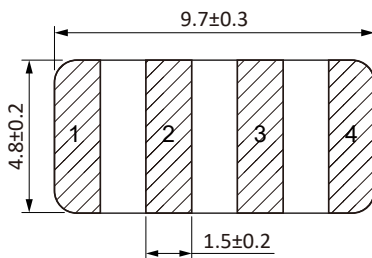
#### FEATURES

- Compliant for 100% Lead(Pb)-Free and RoHS.
- Higher current carrying Capacity, lower DCR, and more efficiency.
- Operating temperature: -55 to +125 °C(Including self - temperature rise).
- Quantity: 400PCS

#### APPLICATION

- 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]



#### Schematic:



#### Electrical Properties:

| Part No            | Inductance<br>1-4/2-3<br>@ 100KHz/1V<br>(μH) | FLL<br>1-4<br>Min.<br>(nH) | DC<br>Resistance<br>1-4<br>(mΩ) | DC<br>Resistance<br>2-3<br>(mΩ) | Temperature<br>Rise Current<br>Typ.<br>(A) | Saturation<br>Current<br>Typ.<br>(A) | Hi-Pot<br>Min.<br>(V) | Kps<br>Min. |
|--------------------|----------------------------------------------|----------------------------|---------------------------------|---------------------------------|--------------------------------------------|--------------------------------------|-----------------------|-------------|
| TLVR100510-R10M-02 | 0.1±20%                                      | 58                         | 0.125±10%                       | 0.40±10%                        | 75                                         | 130                                  | 100                   | 0.9         |

All test data is referenced to 25 °C ambient.

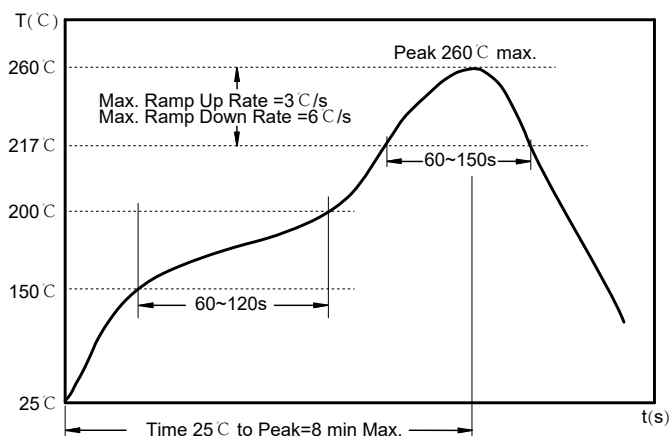
Saturation Current will cause L0 to drop approximately 30%.

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

FLL: tested @100 kHz, 1.0 Vrms, Isat, applied for +25 °C.

Hi-Pot: as pass / fail judgement, tested @ 2s,2mA, between 2 windings.

## Soldering Reflow:



Preheat condition: 150 ~200 °C/ 60~120 sec.

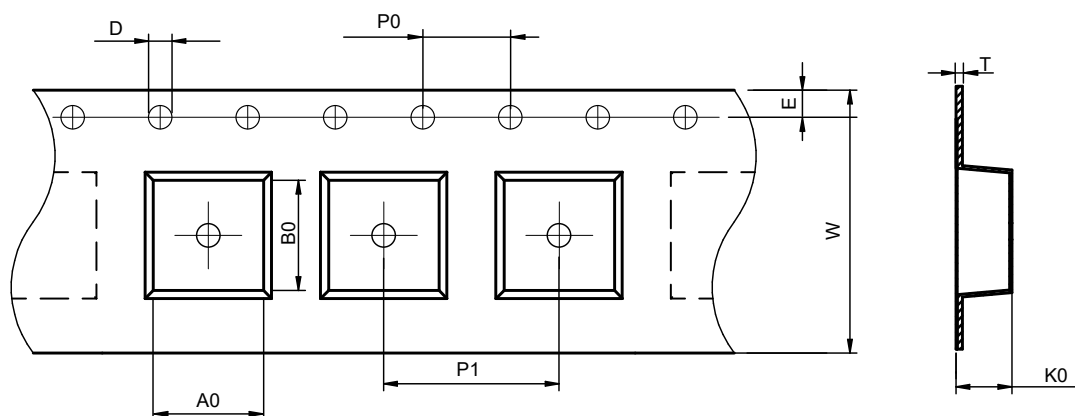
Allowed time above 217 °C: 60~150 sec.

Max temperature: 260 °C.

Time within 5 °C of actual Peak Temperature: 30 max. sec.

## Packaging Information:

### Tape Dimension:

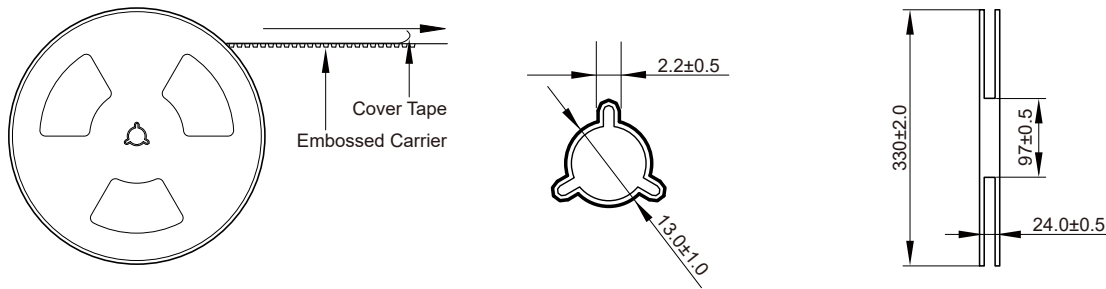


| A0<br>(mm) | B0<br>(mm) | D<br>(mm) | P0<br>(mm) | P1<br>(mm) | W<br>(mm) | K0<br>(mm) | E<br>(mm) | T<br>(mm) |
|------------|------------|-----------|------------|------------|-----------|------------|-----------|-----------|
| 5.3±0.1    | 10.3±0.1   | 1.5±0.1   | 4.0±0.1    | 12.0±0.1   | 24.0±0.3  | 10.3±0.1   | 1.75±0.1  | 0.5±0.05  |

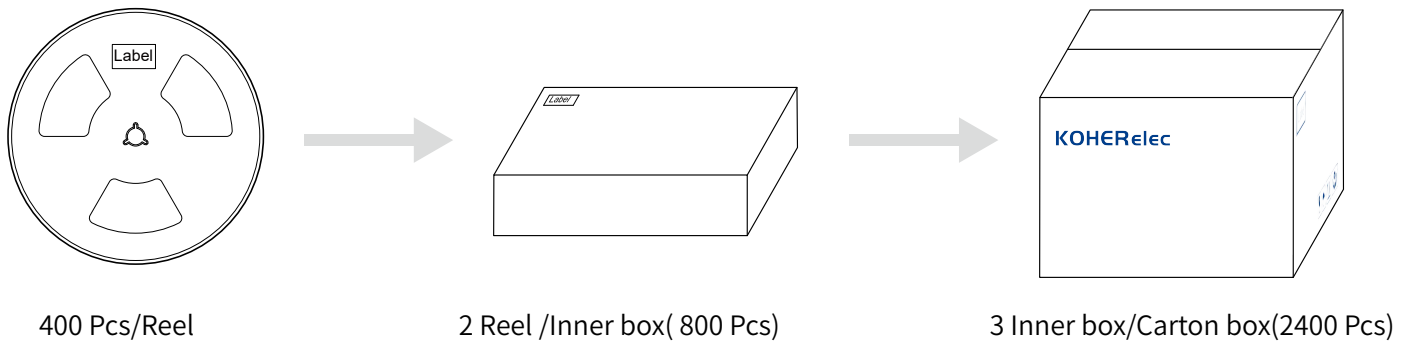
## Product Marking:

|         |                       |
|---------|-----------------------|
| Marking | 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.