# MDTE Series

Wire Wound Molded SMD Power Inductors

Size 5030

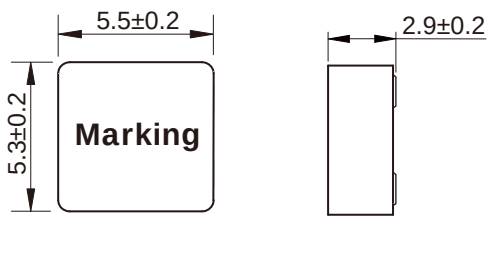
## FEATURES

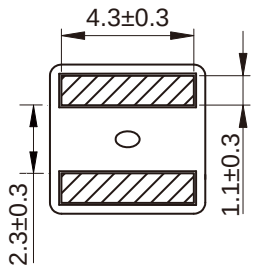
- So satura on
- High current,low DCR,high e ciency
- Very low acous c noise and very low leakage flux noise
- High reliability
- 100% Lead(Pb)-Free and RoHS compliant
- Opera ng temperature -55~+125℃(Including self - temperature rise)
- Quan ty: 2000pcs

## APPLICATION

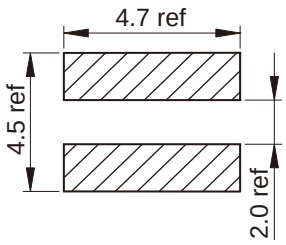
- Note PC power system,incl. IMVP-6
- DC/DC converter

## Dimensions: [mm]




## Land Pattern: [mm]




## Electrical Properties:

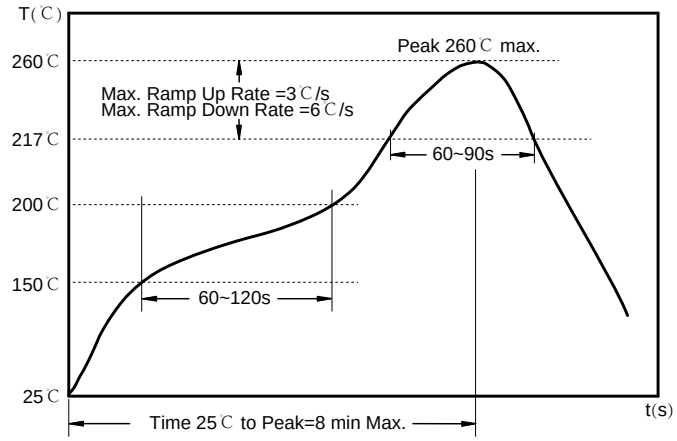
| Part No | Inductance @ 100KHz/0.1V | Tolerance | Current Typ. | Current Max. | Temperature Rise Current Typ. | DC Resistance Max. |
|---|---|---|---|---|---|---|
| MDTE5030-R15M | 0.15 | ±20% | 36.0 | 32.5 | 22.2 | 2.31 |
| MDTE5030-R16M | 0.16 | ±20% | 35.0 | 32.0 | 22.2 | 2.33 |
| MDTE5030-R33M | 0.33 | ±20% | 28.0 | 26.0 | 19.2 | 3.52 |
| MDTE5030-R47M | 0.47 | ±20% | 26.0 | 24.0 | 18.4 | 4.13 |
| MDTE5030-R56M | 0.56 | ±20% | 22.2 | 20.2 | 17.7 | 4.52 |
| MDTE5030-R60M | 0.60 | ±20% | 22.0 | 20.0 | 17.7 | 4.52 |
| MDTE5030-R80M | 0.80 | ±20% | 20.0 | 18.0 | 13.1 | 5.65 |
| MDTE5030-R82M | 0.82 | ±20% | 19.7 | 17.6 | 12.9 | 5.78 |
| MDTE5030-1R0M | 1.00 | ±20% | 16.5 | 14.3 | 12.2 | 7.60 |
| MDTE5030-1R2M | 1.20 | ±20% | 15.0 | 13.5 | 11.0 | 9.70 |
| MDTE5030-1R5M | 1.50 | ±20% | 14.0 | 12.5 | 10.5 | 11. в |
| MDTE5030-1R8M | 1.80 | ±20% | 12.3 | 11.3 | 10.1 | 2 |
| MDTE5030-2R2M | 2.20 | ±20% | 10.0 | 9.00 | 9.70 | |
| MDTE5030-3R3M | 3.30 | ±20% | 9.50 | 8.70 | 8.10 | |
| MDTE5030-4R7M | 4.70 | ±20% | 8.20 | 7.00 | 5.90 | |

Saturation Current will cause L to drop approximately 30%

Temperature Rise Current: The actual value of DC current when the temperature rise is △T=40°C


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## Soldering Reflow:




Preheat condition: 150 ~200℃/ 60~120 sec.

Allowed time above 217℃: 60~90 sec.

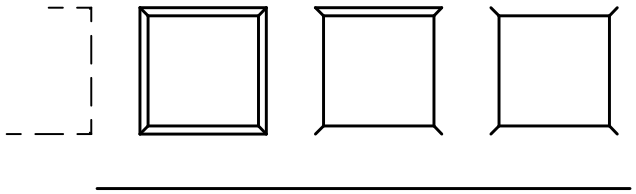
Max temperature: 260℃.

Max time at max temperature: 10 sec.

Allowed Reflow time: 2x max.

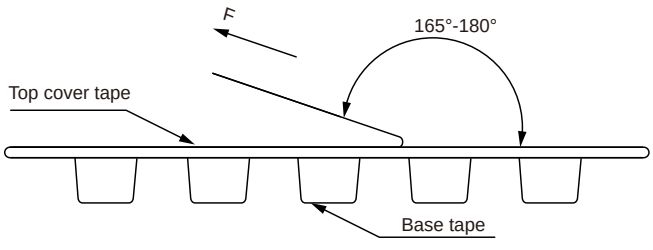
## Packaging Information:

### Tape Dimension:



| Series | A0 (mm) | B0 (mm) | D (mm) | P0 (mm) | P1 (mm) | W (mm) | K0 (mm) | E (mm) | T (mm) |
|---|---|---|---|---|---|---|---|---|---|
| MDTE5030 | 6.0±0.1 | 5.7±0.1 | 1.5±0.1 | 4.0±0.1 | 8.0±0.1 | 16.0±0.3 | 3.3±0.1 | 1.75±0.1 | 0.35±0.05 |

### Peel force of top cover tape:

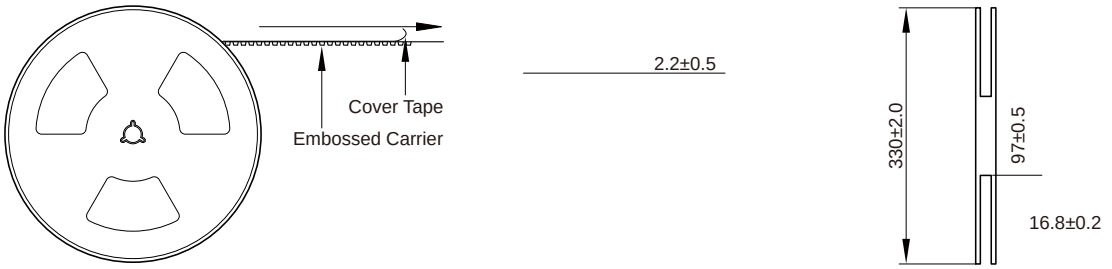



The peel force of top cover tape shall be between 0.1 to 1.3 N

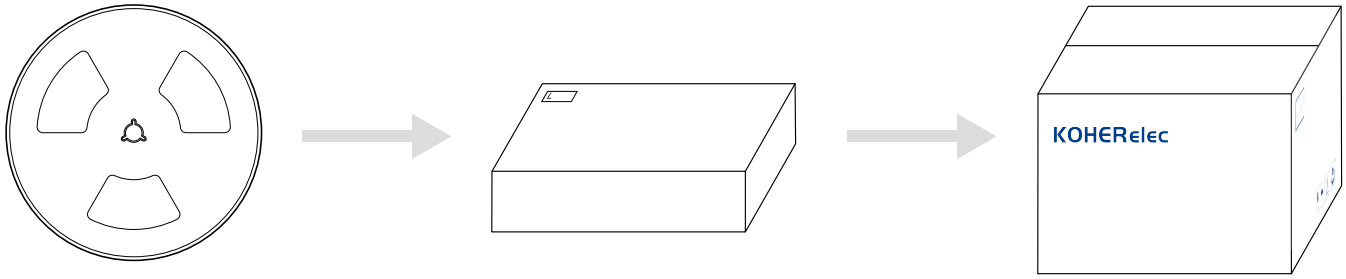
### Product Marking:

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

## Reel Dimension：[mm]




## Packaging Quantity:




2000 Pcs/Reel

3 Reel /Inner box(6000 Pcs)

3 Inner box/Carton box(18K Pcs)

# 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.
- 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.