

## MDTE Series

### Wire Wound Molded SMD Power Inductors

#### Size 7030



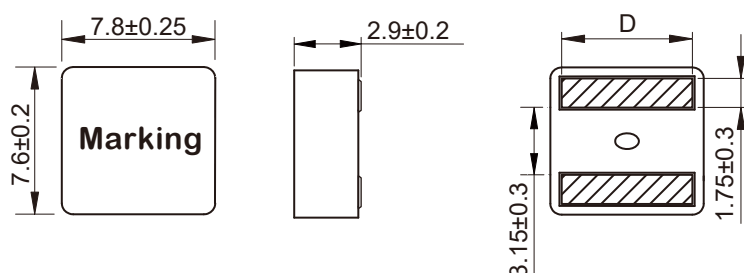
#### FEATURES

- Soft saturation
- High current, low DCR, high efficiency
- Very low acoustic noise and very low leakage flux noise
- High reliability
- 100% Lead(Pb)-Free and RoHS compliant
- Operating temperature -55~+125 °C (Including self - temperature rise)
- Quantity: 1500pcs

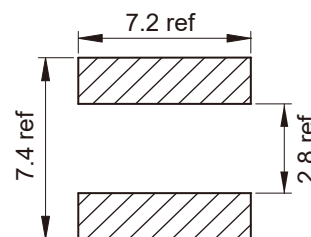
#### APPLICATION

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

#### Dimensions: [mm]



#### Land Pattern: [mm]



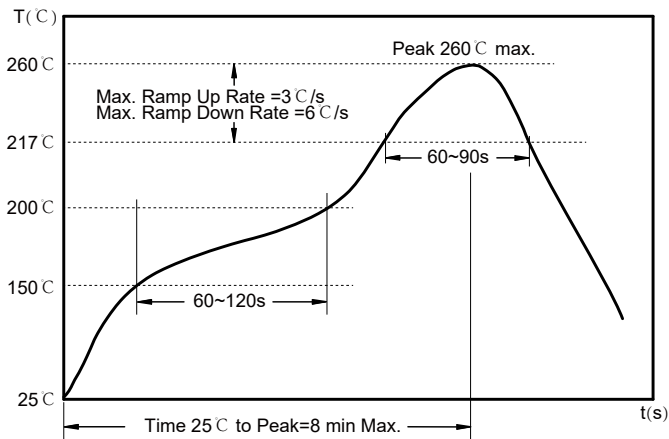
#### Electrical Properties:

Part No	Inductance @ 100KHz/0.1V (μH)	Tolerance	Saturation Current Typ. (A)	Saturation Current Max. (A)	Temperature Rise Current Typ. (A)	DC Resistance Max. (mΩ)	D (mm)
MDTE7030-1R0M	1.00	±20%	30.0	28.0	21.8	5.00	6.6±0.3
MDTE7030-1R5M	1.50	±20%	25.0	23.5	15.3	8.25	6.6±0.3
MDTE7030-2R2M	2.20	±20%	19.0	17.0	13.0	13.7	6.2±0.3
MDTE7030-2R7M	2.70	±20%	16.0	13.5	11.4	15.4	6.2±0.3
MDTE7030-3R3M	3.30	±20%	15.0	13.0	10.0	18.0	6.2±0.3
MDTE7030-4R7M	4.70	±20%	13.5	12.2	9.00	26.7	6.2±0.3
MDTE7030-5R6M	5.60	±20%	12.5	11.5	7.30	33.2	6.2±0.3
MDTE7030-6R8M	6.80	±20%	12.0	11.0	6.80	42.5	6.2±0.3
MDTE7030-8R2M	8.20	±20%	10.2	9.0	5.90	48.73	6.2±0.3

Saturation Current will cause L to drop approximately 30%

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

## Soldering Reflow:



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

Allowed time above 217 °C: 60~90 sec.

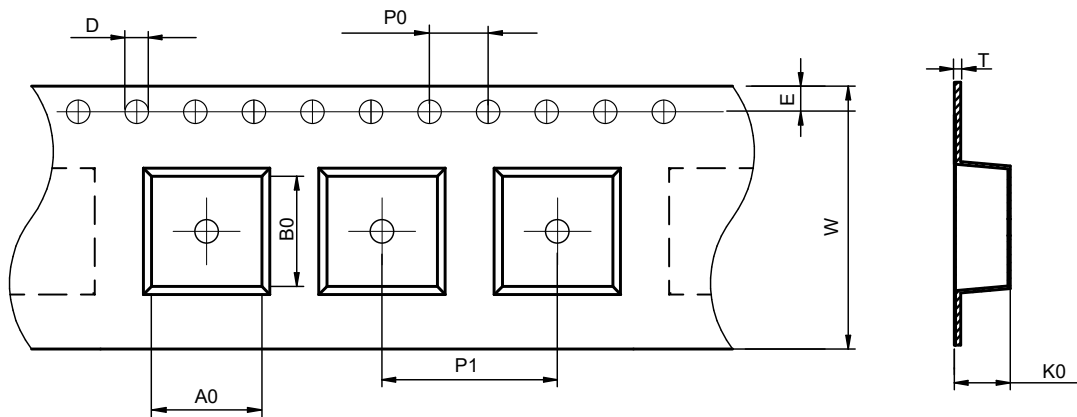
Max temperature: 260 °C.

Max time at max temperature: 10 sec.

Allowed Reflow time: 2x max.

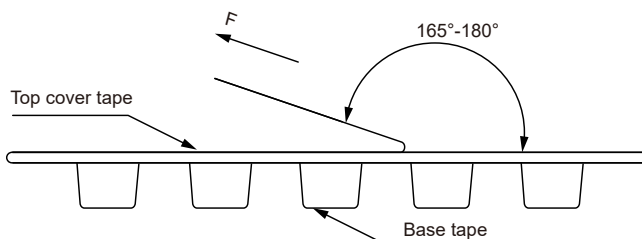
## Packaging Information:

### Tape Dimension :



Series	A0 (mm)	B0 (mm)	D (mm)	P0 (mm)	P1 (mm)	W (mm)	K0 (mm)	E (mm)	T (mm)
MDTE7030	8.2±0.1	8.0±0.1	1.5±0.1	4.0±0.1	12.0±0.1	16.0±0.3	3.3±0.1	1.75±0.1	0.35±0.05

### Peel force of top cover tape:

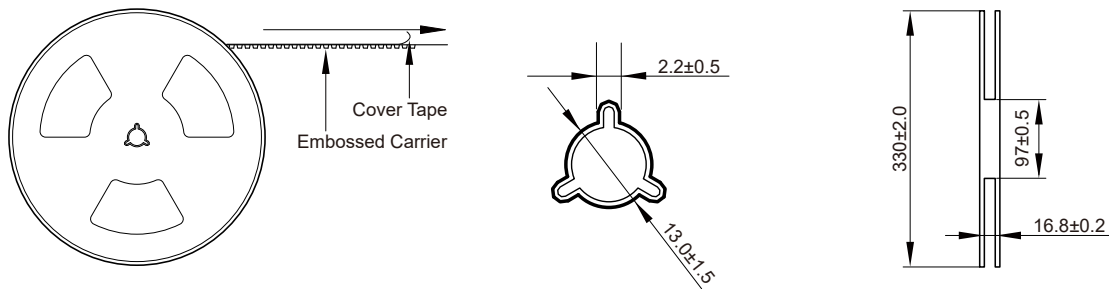


The peel force of top cover tape shall be between 0.1 to 1.3 N

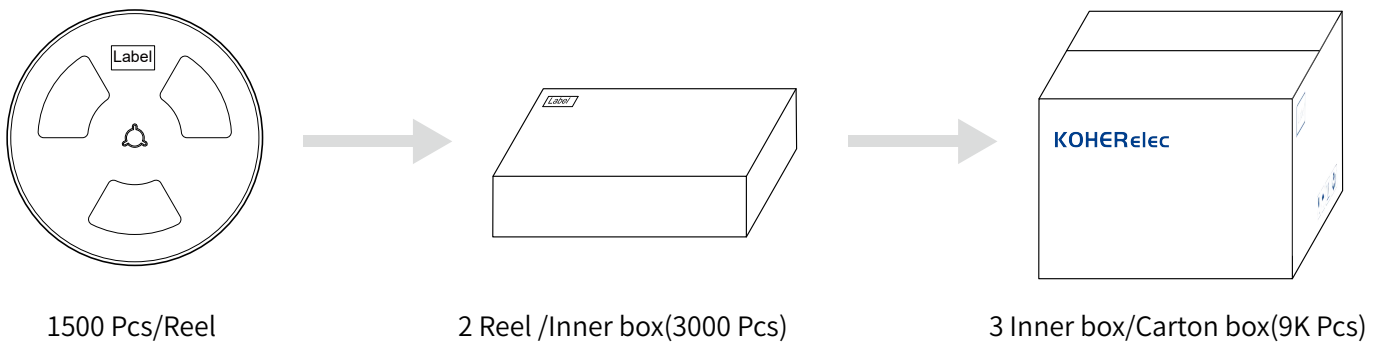
### Product Marking:

Marking	Printing (Inductance)
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## 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  $35^{\circ}\text{C}$ , 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  $150^{\circ}\text{C}$ .
- 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.