

### **MDTA Series**

# Flat Wire Molded Inductor Size 1010



#### **FEATURES**

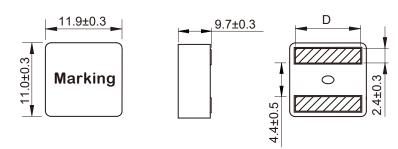
- Flat wire coil for low copper losses
- Composoite core material allows high saturation currents
- Very low acoustic noise and very low leakage flux noise
- High current capability and handles high transient current spikes
- AEC-Q200 qualified
- Operating temperature -55 to +155 °C (Including self temperature rise)
- Quantity: 300pcs

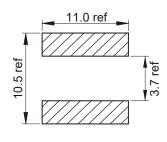
#### **APPLICATION**

- DC/DC converters for entertainment/navigation systems
   Noise suppression for motors: windshield wipers / power seats/ power mirrors / heating and ventilation blowers / HID lighting
- LED drivers

Dimensions: [mm]

Land Pattern: [mm]





# **Electrical Properties:**

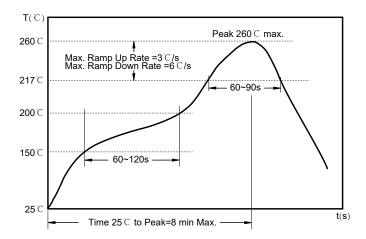
Part No	L@100KHz /0.1V (μH)	Tolerance	I <sub>SAT</sub> Typ. (A)	I <sub>R</sub> (	A)	R <sub>DC</sub> Max. (mΩ)	D (mm)
				20°C rise	40°C rise		
MDTA1010-2R2M	2.20	±20%	34.0	24.5	32.0	2.80	9.3±0.5
MDTA1010-3R3M	3.30	±20%	27.4	18.2	25.0	4.10	9.3±0.5
MDTA1010-4R7M	4.70	±20%	25.4	17.5	24.0	5.70	9.3±0.5
MDTA1010-5R6M	5.60	±20%	23.6	15.7	21.2	7.20	9.3±0.5
MDTA1010-6R8M	6.80	±20%	21.8	14.0	18.5	8.90	9.0±0.5
MDTA1010-8R2M	8.20	±20%	18.3	12.9	17.1	12.4	9.0±0.5
MDTA1010-100M	10.0	±20%	17.5	11.5	15.5	13.75	9.0±0.5
MDTA1010-150M	15.0	±20%	15.5	9.9	13.8	19.30	9.0±0.5

Saturation Current will cause L to drop approximately 30%

Temperature Rise Current that causes the specified temperature rise from 25°C ambient.



# Soldering Reflow:



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

Allowed time above 217 °C: 60~90 sec.

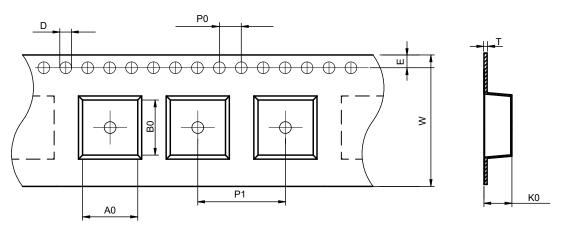
Max temperature: 260 ℃.

Max time at max temperature: 10 sec.

Allowed Reflow time: 2x max.

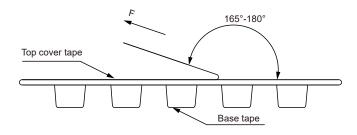
# Packaging Information:

## Tape Dimension:



Series	A0	B0	D	P0	P1	W	K0	E	T
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
MDTA1010	12.4±0.1	11.5±0.1	1.5±0.1	4.0±0.1	16.0±0.1	24.0±0.3	10.3±0.1	1.75±0.1	0.50±0.05

## Peel force of top cover tape:



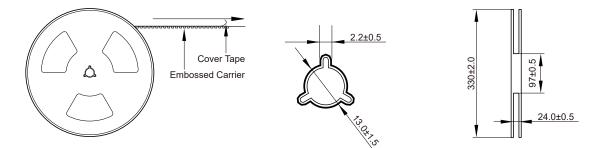
The peel force of top cover tape shall be between 0.1 to 1.3 N

## **Product Marking:**

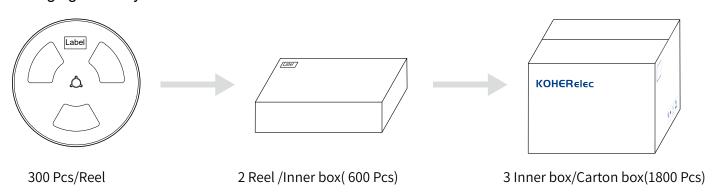
Marking	Printing (Inductance)
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### Reel Dimension: [mm]



## 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°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.