

MDSA Series

SMD Low Profile High Current Molded Inductor

Size 1050



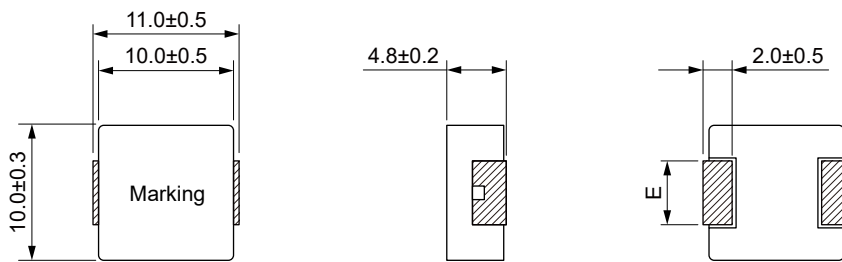
FEATURES

- Shielded construction
- Capable of corresponding high frequency .
- Low loss realized with low DCR.
- High performance (Isat) realized by metal dust core.
- Ultra low buzz noise, due to composite construction.
- 100% Lead(Pb)-Free and RoHS compliant.
- AEC-Q200 qualified
- Operating temperature: -55 to +155 °C(including self-temperature rise)
- Quantity: 500PCS

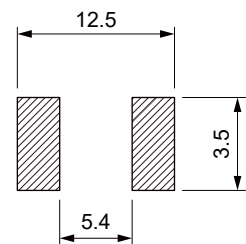
APPLICATION

- Noise filter for various drive circuitry requiring high temp. operation and peak current handling capability.
- Boost-Converter
- Buck-Converter DC/DC

Dimensions: [mm]



Land Pattern: [mm]



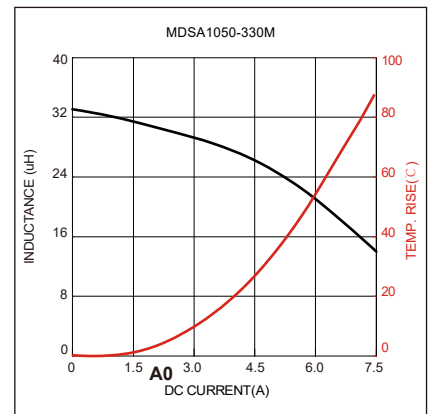
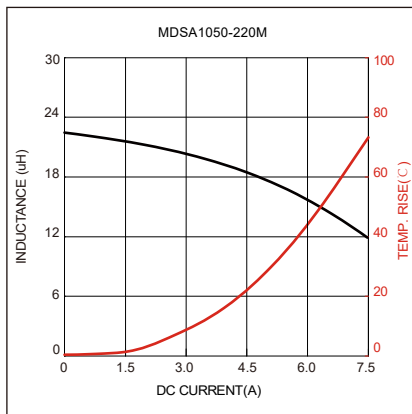
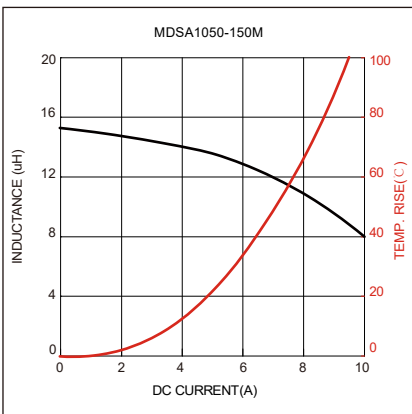
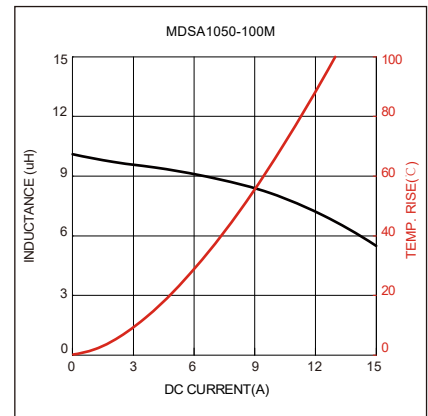
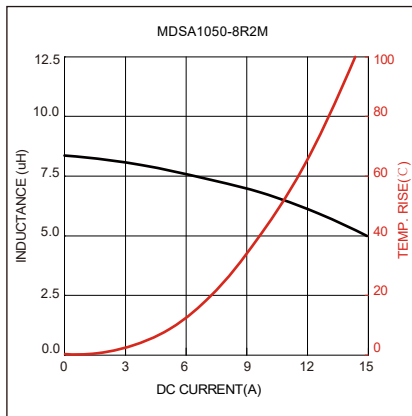
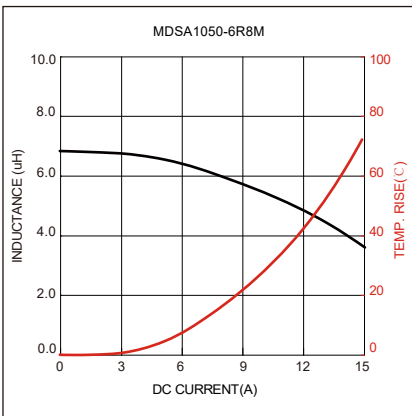
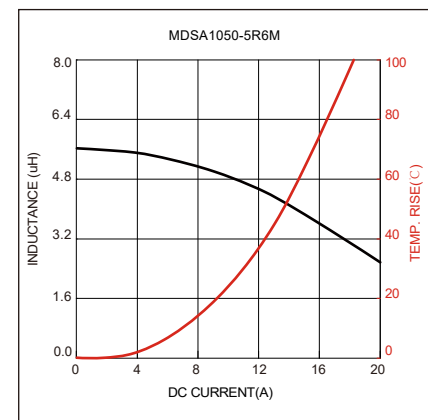
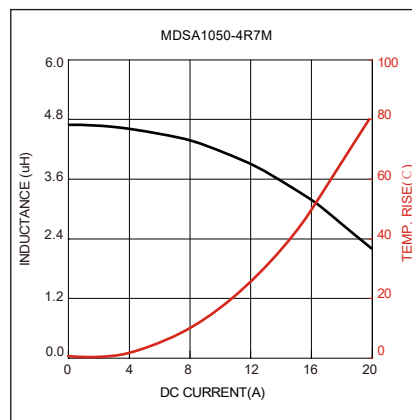
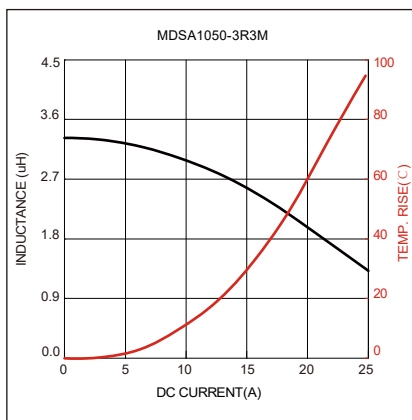
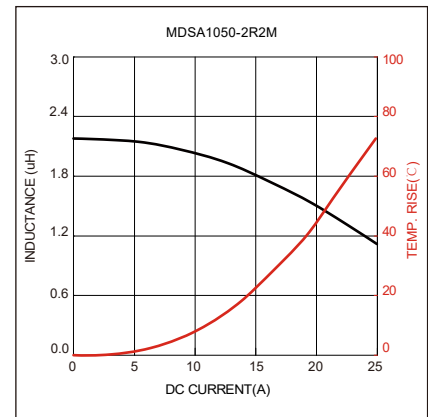
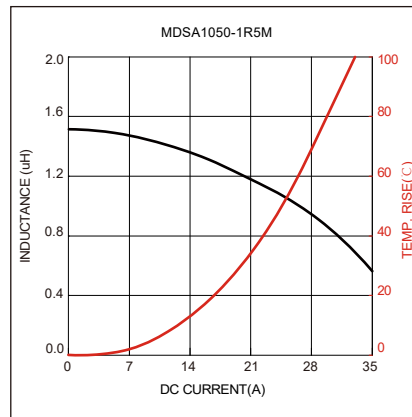
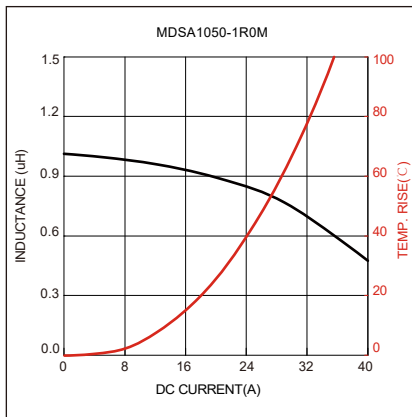
Electrical Properties:

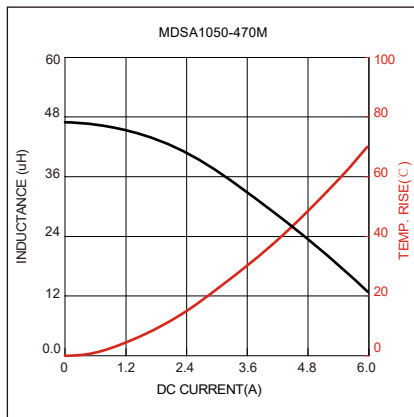
Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Saturation Current Typ. (A)	DC Resistance Typ. (mΩ)	DC Resistance Max. (mΩ)	E
MDSA1050-1R0M	1.00	±20%	24.0	32.0	2.80	3.2	2.5±0.3
MDSA1050-1R5M	1.50	±20%	22.0	26.0	3.60	4.0	2.5±0.3
MDSA1050-2R2M	2.20	±20%	19.0	19.5	5.40	6.0	3.0±0.3
MDSA1050-3R3M	3.30	±20%	16.5	17.0	8.40	9.5	3.0±0.3
MDSA1050-4R7M	4.70	±20%	14.5	15.5	9.70	10.9	3.0±0.3
MDSA1050-5R6M	5.60	±20%	12.5	14.5	13.0	14.8	3.0±0.3
MDSA1050-6R8M	6.80	±20%	11.6	13.5	15.5	17.8	3.0±0.3
MDSA1050-8R2M	8.20	±20%	9.6	13.0	16.5	19.3	3.0±0.3
MDSA1050-100M	10.0	±20%	7.2	12.5	19.5	22.4	3.0±0.3
MDSA1050-150M	15.0	±20%	6.2	8.1	33.0	40.0	3.0±0.3
MDSA1050-220M	22.0	±20%	5.7	5.7	45.0	55.0	3.0±0.3
MDSA1050-330M	33.0	±20%	5.2	5.5	75.0	88.0	3.0±0.3
MDSA1050-470M	47.0	±20%	4.2	3.8	108.0	130.0	3.0±0.3

Saturation Current will cause L to drop approximately 30%

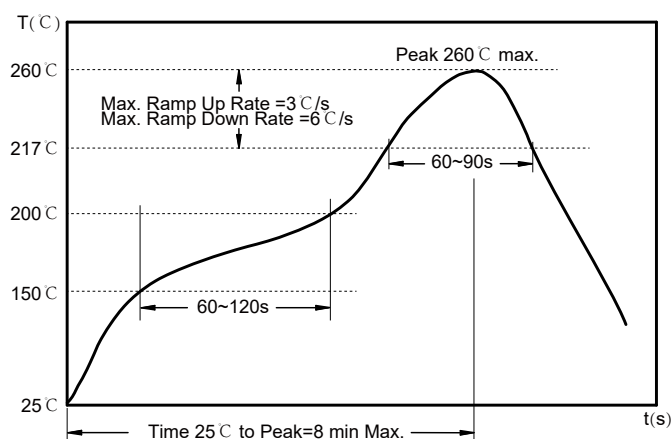
Temperature Rise Current: The actual value of DC current when the temperature rise is $\Delta T=40^{\circ}\text{C}$

Typical Electrical Characteristics:





Soldering Reflow:



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

Allowed time above 217 °C: 60~90 sec.

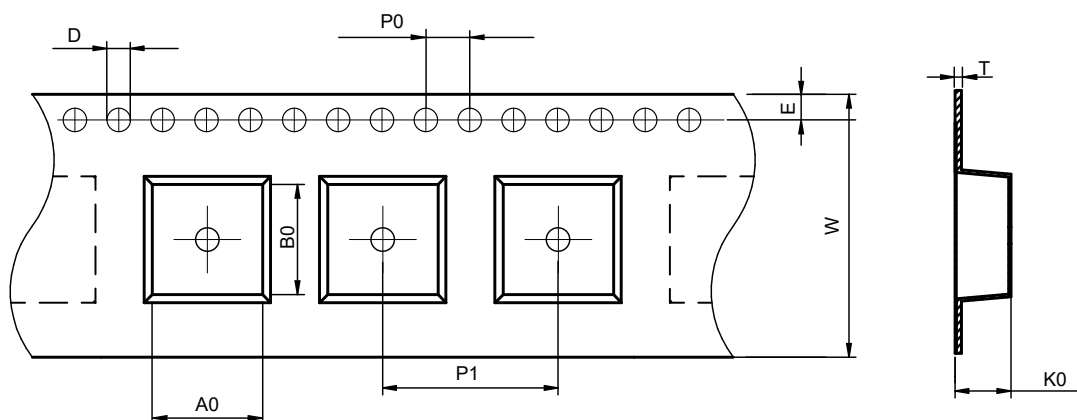
Max temperature: 260 °C.

Max time at max temperature: 10 sec.

Allowed Reflow time: 2x max.

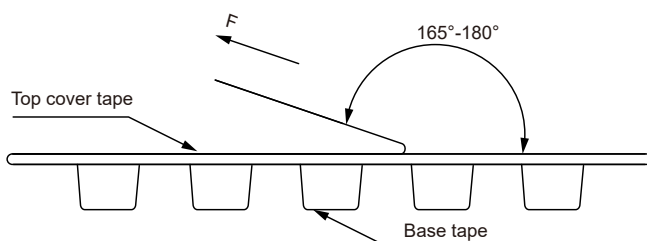
Packaging Information:

Tape Dimension:



Series	A0 (mm)	B0 (mm)	D (mm)	P0 (mm)	P1 (mm)	W (mm)	K0 (mm)	E (mm)	T (mm)
MDSA1050	10.4±0.1	11.6±0.1	1.5±0.1	4.0±0.1	16.0±0.1	24.0±0.3	5.4±0.1	1.75±0.1	0.40±0.05

Peel force of top cover tape:

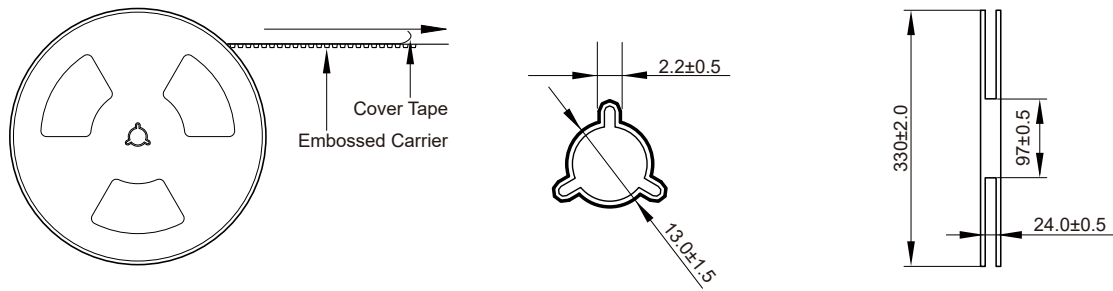


The peel force of top cover tape shall be between 0.1 to 1.3 N

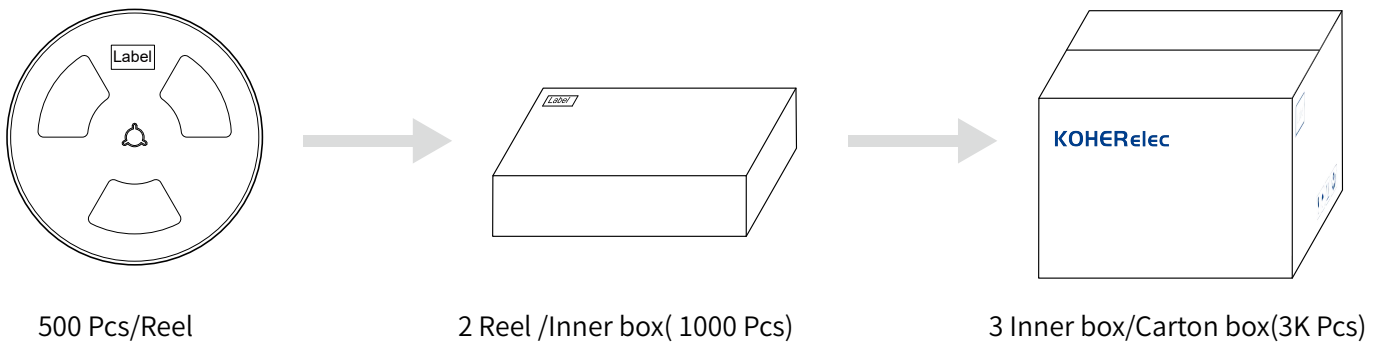
Product Marking:

Marking	KH+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.