

MDA T Series

SMD Low Profile High Current Molded Inductor

Size 7054



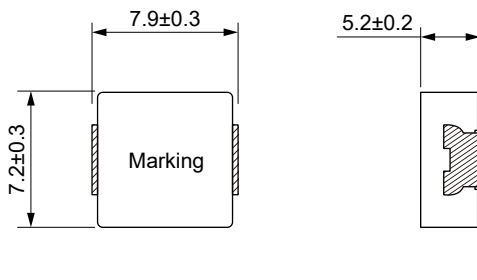
FEATURES

- Low loss realized with low DCR.
- Ultra low buzz noise, due to composite construction .
- 100% Lead(Pb)-Free and RoHS compliant.
- High performance (Isat) realized by metal dust core.
- AEC-Q200 qualified.
- Operating temperature: -55 to +165 °C (including self-temperature rise)
- Quantity: 500PCS

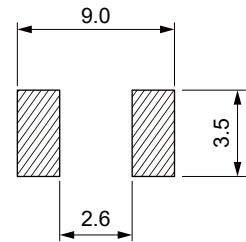
APPLICATION

- Headlamps, tail lamps and interior lighting
- HVAC
- Doors, window lift and seat control
- Audio subsystem
- Digital instrument cluster
- In-Vehicle Infotainment and navigation

Dimensions: [mm]



Land Pattern: [mm]



Electrical Properties:

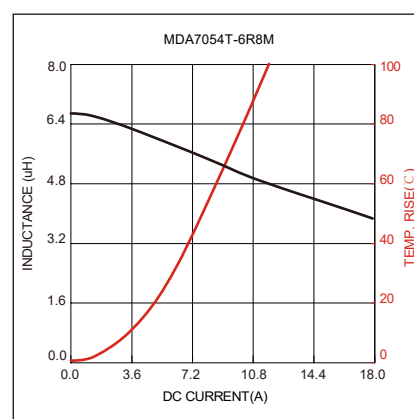
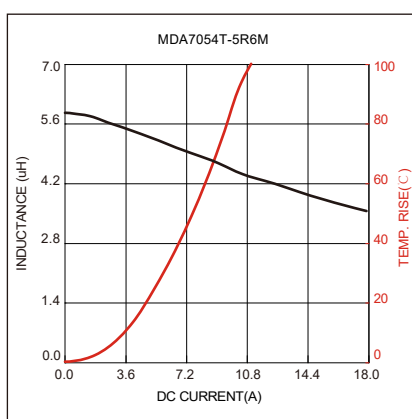
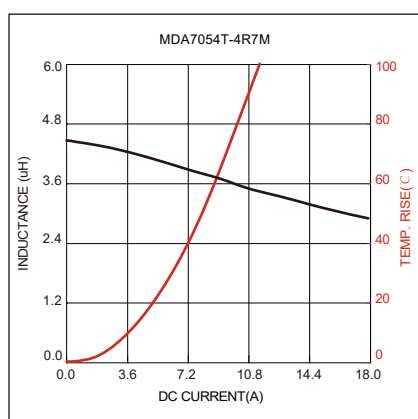
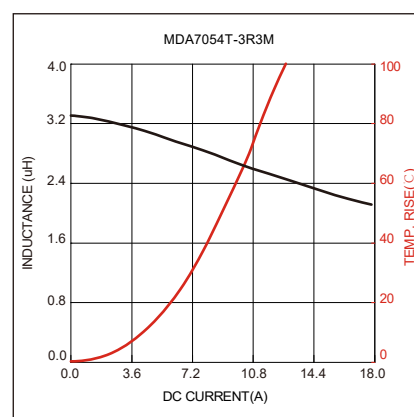
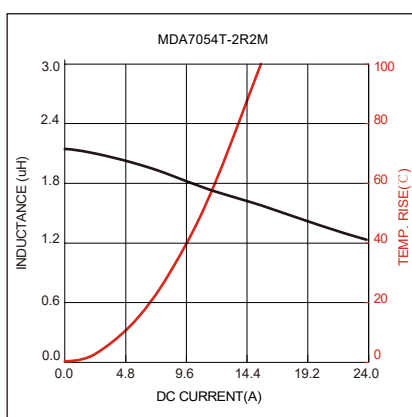
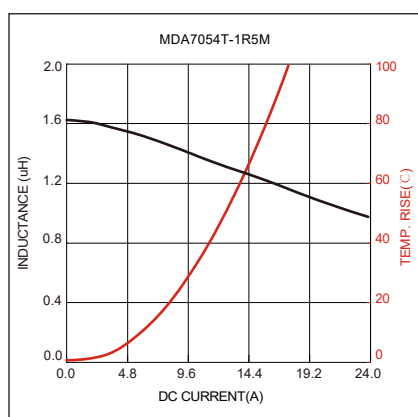
Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Temperature Rise Current Max. (A)	Saturation Current Typ. (A)	Saturation Current Max. (A)	DC Resistance Max. (mΩ)	Rated Voltage Max. (V)
MDA7054T-1R5M	1.5	±20%	11.5	10.3	16.4	14.0	7.3	80
MDA7054T-2R2M	2.2	±20%	9.8	8.7	15.0	12.7	11.4	80
MDA7054T-3R3M	3.3	±20%	8.0	7.2	13.5	11.6	15.4	80
MDA7054T-4R7M	4.7	±20%	7.0	6.3	13.2	11.2	20.9	80
MDA7054T-5R6M	5.6	±20%	6.5	5.6	10.6	9.2	24.0	80
MDA7054T-6R8M	6.8	±20%	6.2	5.5	10.2	8.7	26.6	80
MDA7054T-8R2M	8.2	±20%	5.8	5.0	9.2	7.7	31.9	80
MDA7054T-100M	10.0	±20%	5.2	4.7	8.1	6.9	38.0	80
MDA7054T-150M	15.0	±20%	3.8	3.4	7.0	5.9	66.0	80
MDA7054T-220M	22.0	±20%	3.3	3.0	6.3	5.4	93.5	80

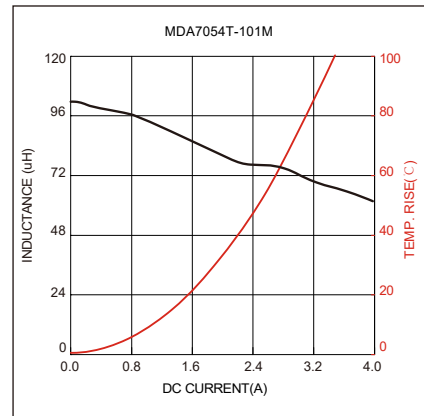
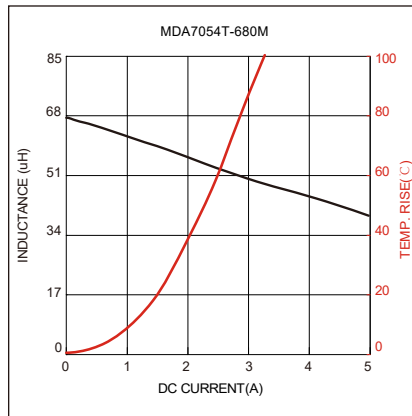
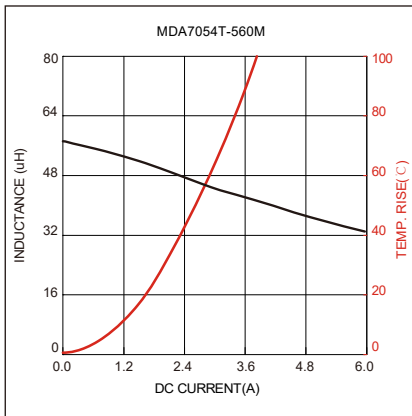
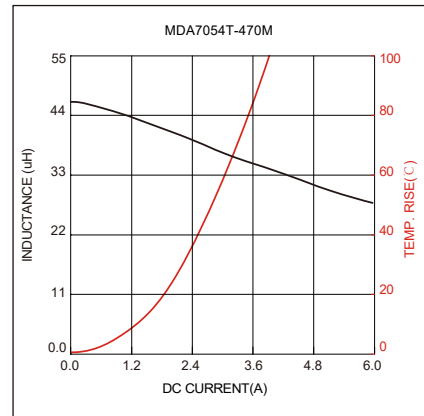
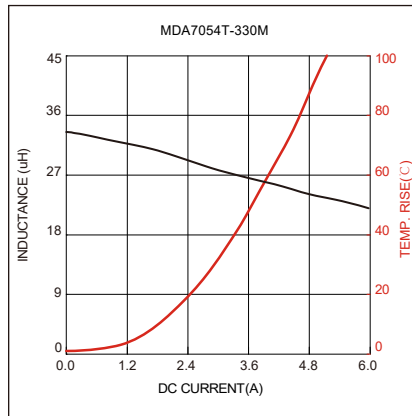
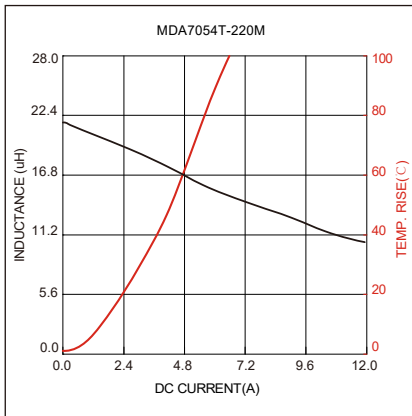
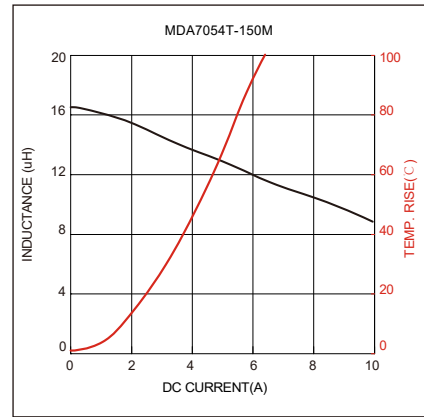
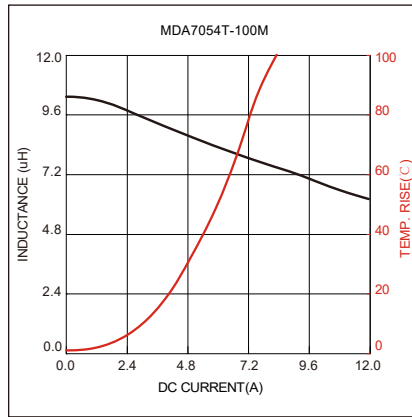
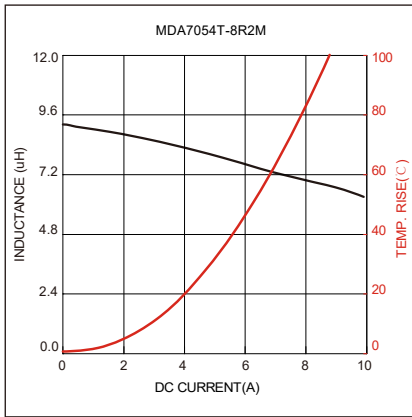
Part No	Inductance @ 100KHz/1V (μ H)	Tolerance	Temperature Rise Current Typ. (A)	Temperature Rise Current Max. (A)	Saturation Current Typ. (A)	Saturation Current Max. (A)	DC Resistance Max. (m Ω)	Rated Voltage Max. (V)
MDA7054T-330M	33.0	$\pm 20\%$	3.2	2.8	4.9	4.2	127.6	80
MDA7054T-470M	47.0	$\pm 20\%$	2.5	2.2	4.2	3.5	171.6	80
MDA7054T-560M	56.0	$\pm 20\%$	2.2	2.0	3.3	2.8	209.3	80
MDA7054T-680M	68.0	$\pm 20\%$	2.0	1.8	2.8	2.4	255.0	80
MDA7054T-101M	100	$\pm 20\%$	1.8	1.6	2.4	2.0	348.0	55

Saturation Current will cause L to drop approximately 30%

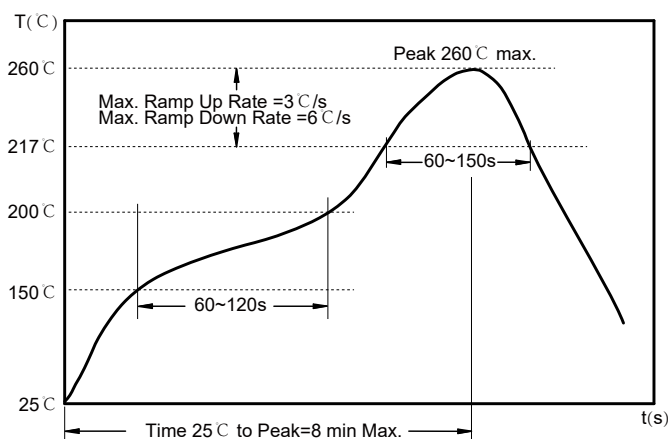
Temperature Rise Current: The actual value of DC current when the temperature rise is $\Delta T=40^{\circ}\text{C}$

Typical Electrical Characteristics:





Soldering Reflow:



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

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

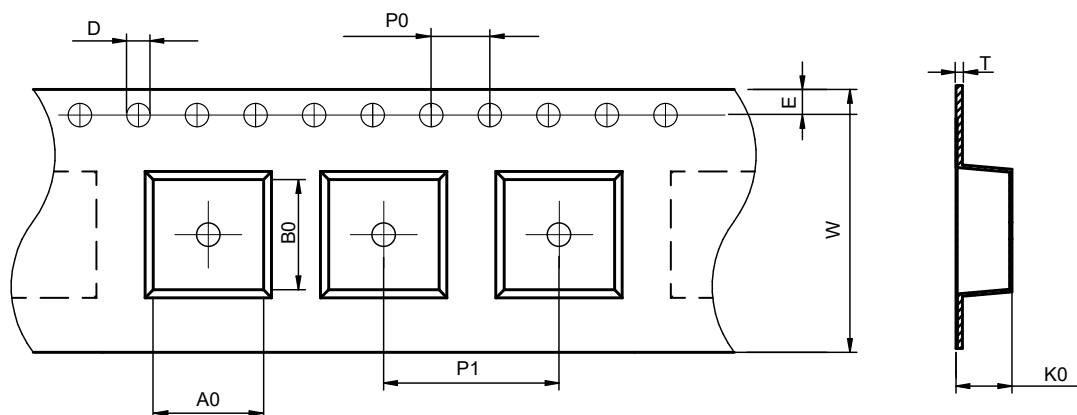
Max temperature: 260°C .

Max time at max temperature: 10 sec.

Allowed Reflow time: 2x max.

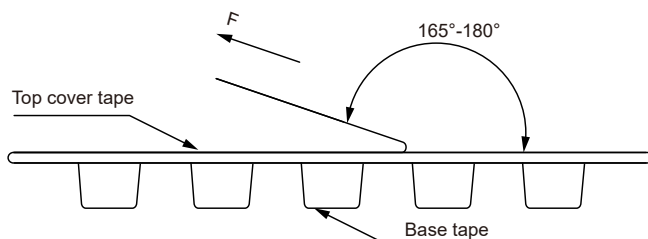
Packaging Information:

Tape Dimension :



Series	A0 (mm)	B0 (mm)	D (mm)	P0 (mm)	P1 (mm)	W (mm)	K0 (mm)	E (mm)	T (mm)
MDA7054T	7.6±0.1	8.1±0.1	1.55±0.1	4.0±0.1	12.0±0.1	16.0±0.3	5.7±0.1	1.75±0.1	0.4±0.05

Peel force of top cover tape:

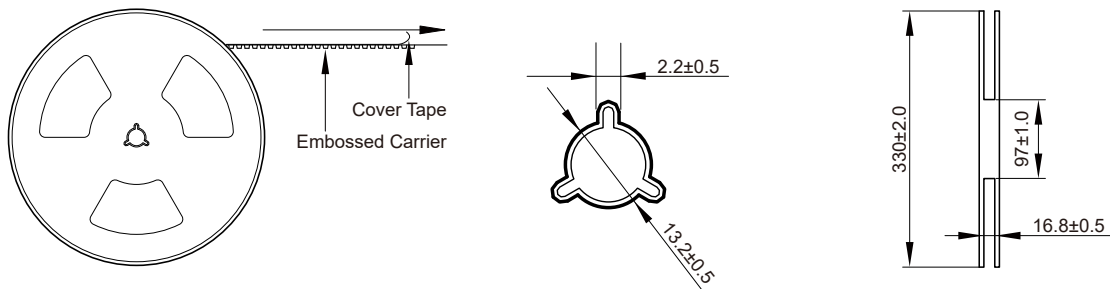


The peel force of top cover tape shall be between 0.1 to 1.3 N

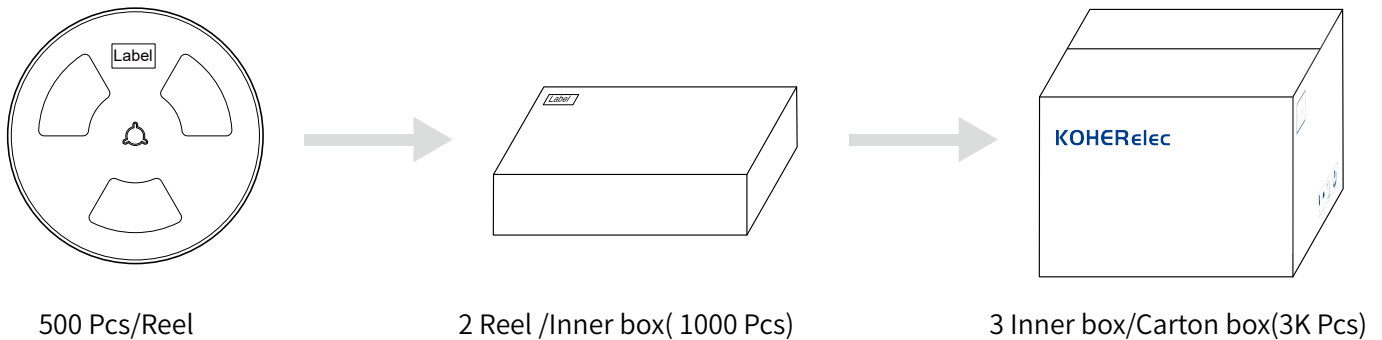
Product Marking:

Marking	K+Printing (Inductance+period)
---------	--------------------------------

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.