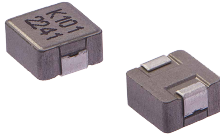




**THE DATASHEET OF  
MDA5030-1R0M**



**MDA Series**  
**SMD Low Profile High Current Molded Inductor**  
**Size 5030**



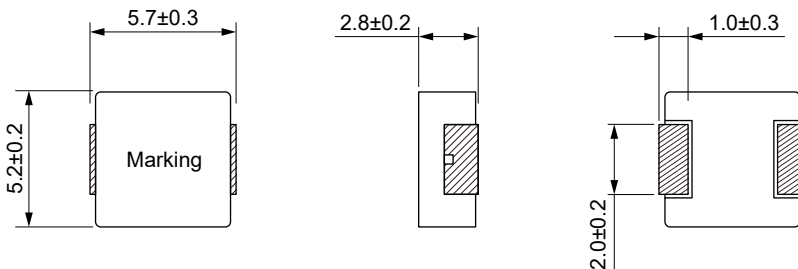
**FEATURES**

- 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: 2000PCS

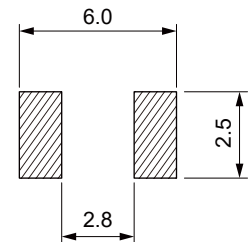
**APPLICATION**

- 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:**

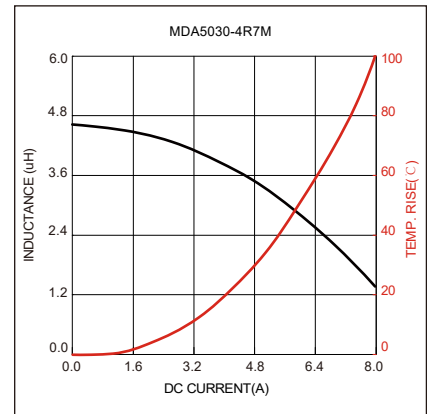
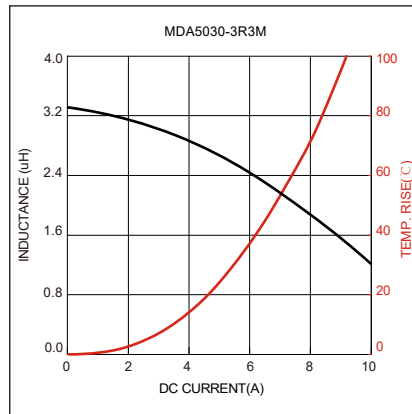
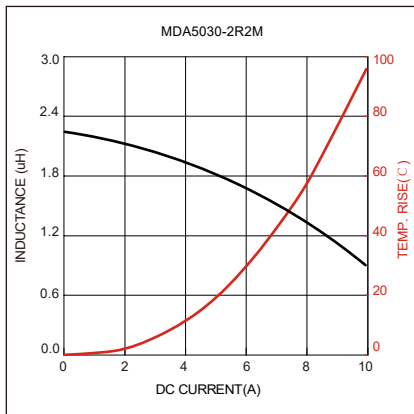
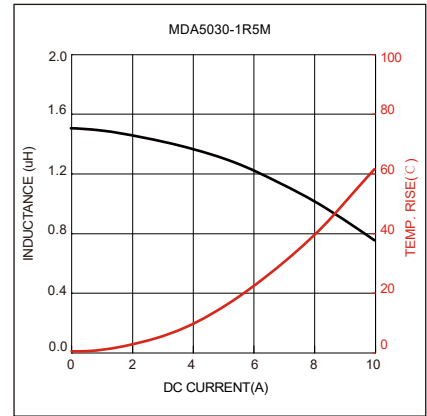
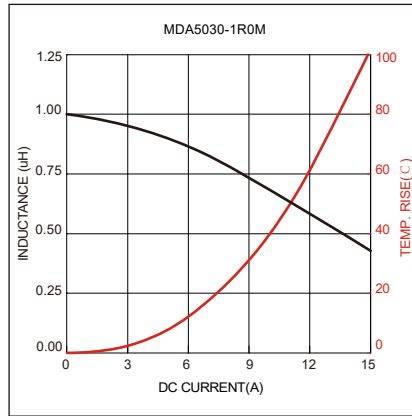
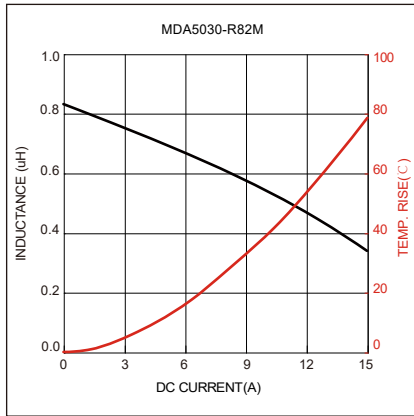
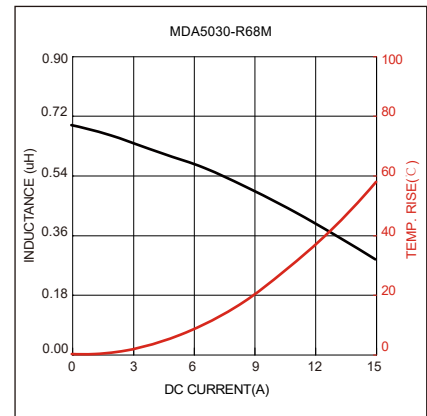
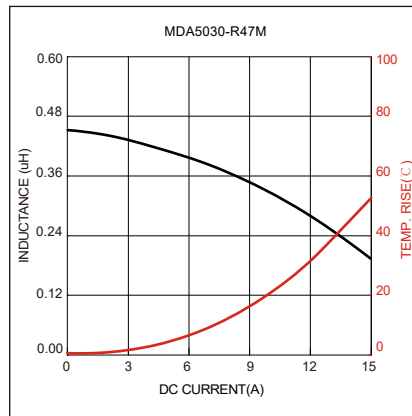
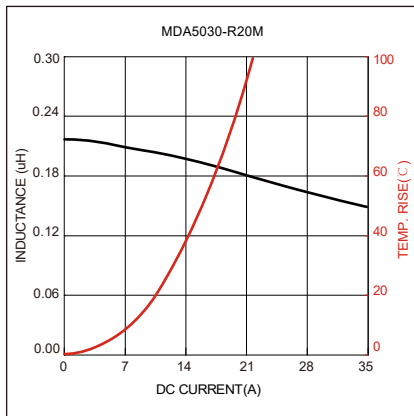
Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Temperature Rise Current Max. (A)	Saturation Current Typ. (A)	Saturation Current Max. (A)	DC Resistance Typ. (mΩ)	DC Resistance Max. (mΩ)
MDA5030-R20M	0.20	±20%	14.0	13.0	20.0	16.0	3.60	3.90
MDA5030-R47M	0.47	±20%	13.5	12.0	10.0	9.0	5.20	6.00
MDA5030-R68M	0.68	±20%	12.5	11.0	9.0	8.0	7.40	8.50
MDA5030-R82M	0.82	±20%	10.0	9.0	8.8	7.7	8.00	9.20
MDA5030-1R0M	1.00	±20%	9.0	8.0	8.5	7.5	10.5	12.0
MDA5030-1R5M	1.50	±20%	8.0	7.0	7.5	6.5	13.6	15.7
MDA5030-2R2M	2.20	±20%	7.0	6.5	6.5	5.8	21.6	25.0
MDA5030-3R3M	3.30	±20%	6.3	5.8	6.0	5.3	28.0	33.0
MDA5030-4R7M	4.70	±20%	5.5	4.8	5.3	4.6	38.0	44.0
MDA5030-5R6M	5.60	±20%	5.0	4.3	4.6	4.0	50.0	58.0

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 Typ. (mΩ)	DC Resistance Max. (mΩ)
MDA5030-6R8M	6.80	±20%	4.3	3.7	3.5	3.1	57.0	66.0
MDA5030-100M	10.0	±20%	3.8	3.4	2.5	2.1	88.0	103.0
MDA5030-150M	15.0	±20%	2.9	2.5	2.2	1.7	140.0	170.0

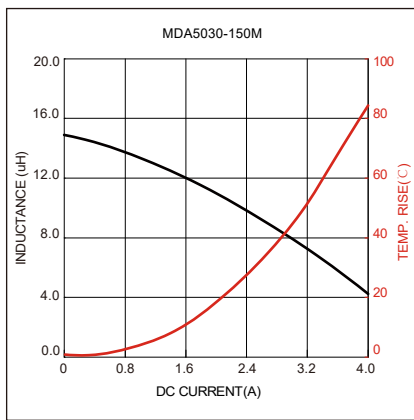
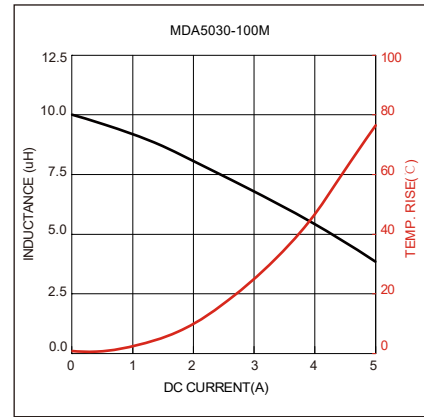
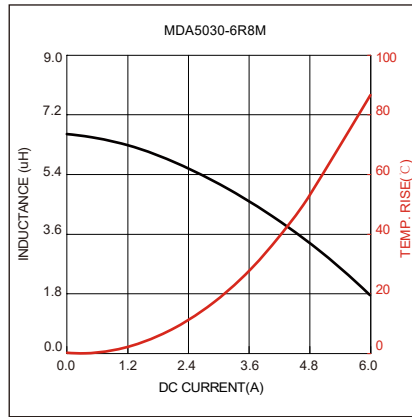
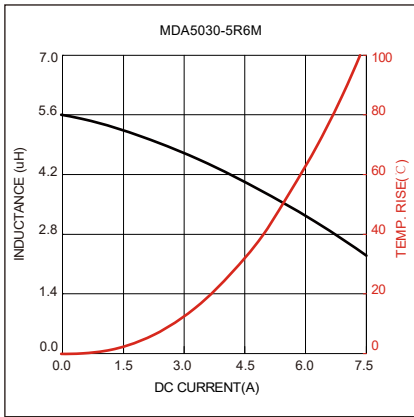
Saturation Current will cause L to drop approximately 30%

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

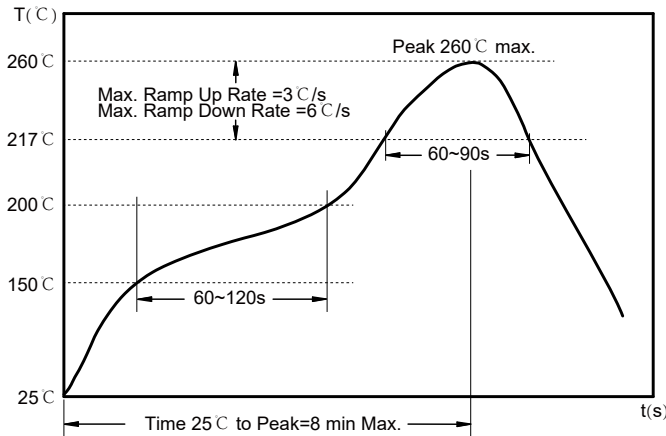
### Typical Electrical Characteristics:



Typical Electrical Characteristics:



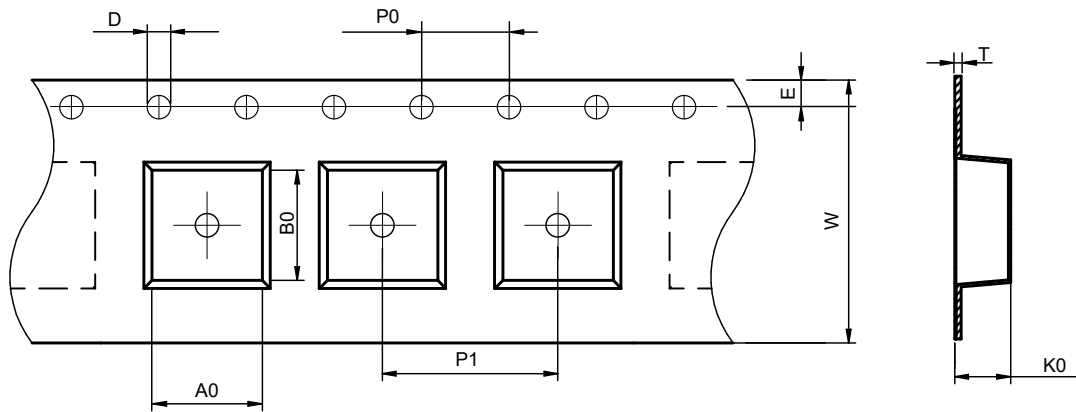
Soldering Reflow:



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.

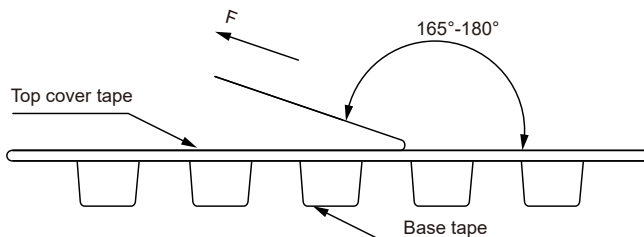
Packaging Information:

Tape Dimension :



Series	A0 (mm)	B0 (mm)	D (mm)	P0 (mm)	P1 (mm)	W (mm)	K0 (mm)	E (mm)	T (mm)
MDA5030	5.5±0.1	5.9±0.1	1.5±0.1	4.0±0.1	8.0±0.1	12.0±0.3	3.3±0.1	1.75±0.1	0.35±0.05

Peel force of top cover tape:

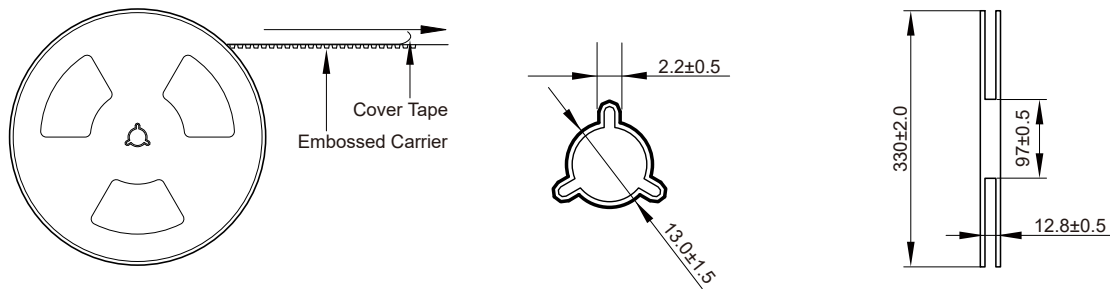


The peel force of top cover tape shall be between 0.1 to 1.3 N

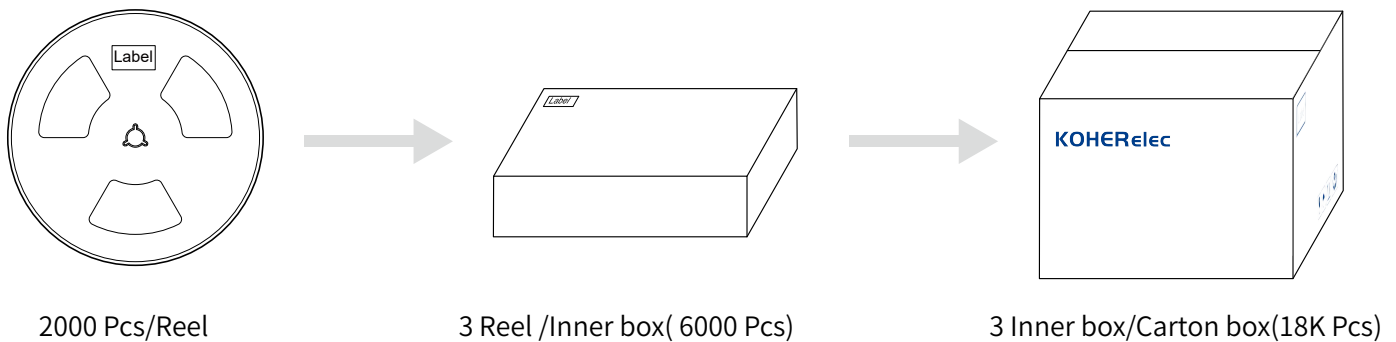
Product Marking:

Marking	K+Printing (Inductance+period)
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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.

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- [View MDA5030-1R0M on WIN SOURCE](#)
- [KOHERShanghaiElectronics Co.,Ltd Information](#)

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- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management