MDA Series

SMD Low Profile High Current Molded Inductor

Size 2313

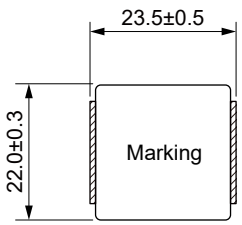
FEATURES

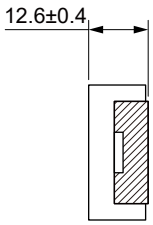
- Shielded construction
- Capable of corresponding high frequency .
- Low loss realized with low DCR.
- High performance (Isat) realized by metal dust core.
- Ultra low buzz noise, due to composite construction.
- 100% Lead(Pb)-Free and RoHS compliant.
- AEC-Q200 qualified
- Operating temperature: -55 to +155 °C (including self-temperature rise)
- Quantity: 80PCS

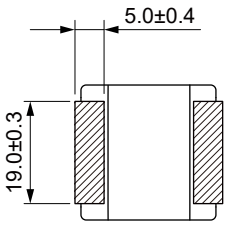
APPLICATION

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

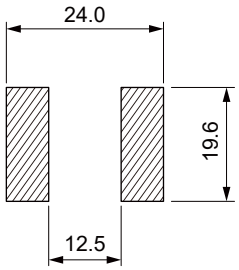
Dimensions: [mm]







Land Pattern: [mm]



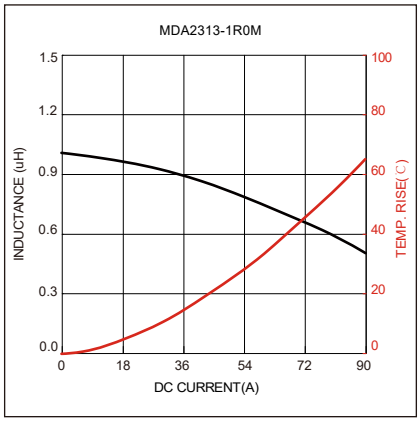
Electrical Properties:

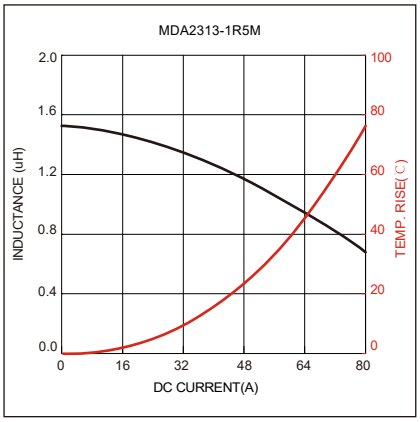
Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Saturation Current Typ. (A)	DC Resistance Typ. (mΩ)	DC Resistance Max. (mΩ)
MDA2313-1R0M	1.00	±20%	70.0	60.0	0.80	0.95
MDA2313-1R5M	1.50	±20%	62.0	52.0	1.00	1.15
MDA2313-2R2M	2.20	±20%	58.0	48.0	1.05	1.25
MDA2313-3R3M	3.30	±20%	49.0	41.0	1.50	1.75
MDA2313-4R7M	4.70	±20%	47.0	38.0	1.90	2.20
MDA2313-6R8M	6.80	±20%	40.0	36.0	2.70	3.10
MDA2313-100M	10.0	±20%	33.0	28.0	3.80	4.15
MDA2313-150M	15.0	±20%	26.0	23.0	5.10	6.12
MDA2313-220M	22.0	±20%	22.0	15.0	9.20	11.0
MDA2313-330M	33.0	±20%	19.0	12.0	13.5	15.4
MDA2313-470M	47.0	±20%	17.0	12.0	17.3	20.8

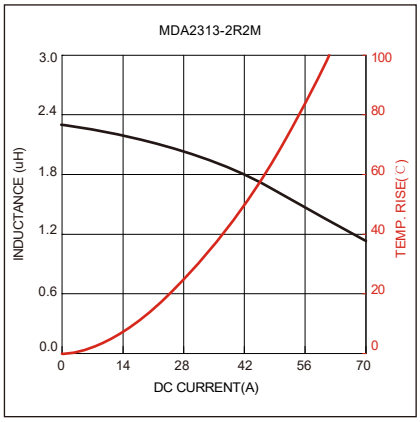
Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Saturation Current Typ. (A)	DC Resistance Typ. (mΩ)	DC Resistance Max. (mΩ)
MDA2313-680M	68.0	±20%	14.0	12.0	26.2	29.5
MDA2313-820M	82.0	±20%	12.0	9.0	31.0	34.2
MDA2313-101M	100	±20%	11.0	9.0	36.0	40.0

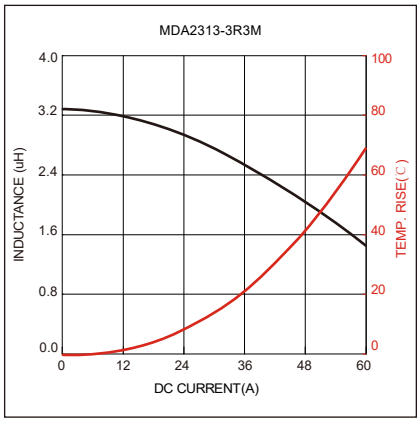
Saturation Current will cause L to drop approximately 30%
Temperature Rise Current: The actual value of DC current when the temperature rise is △T=40°C

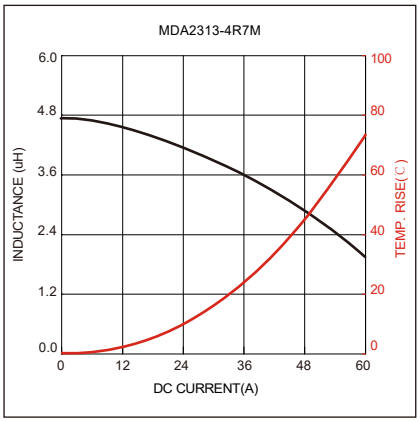
Typical Electrical Characteristics:

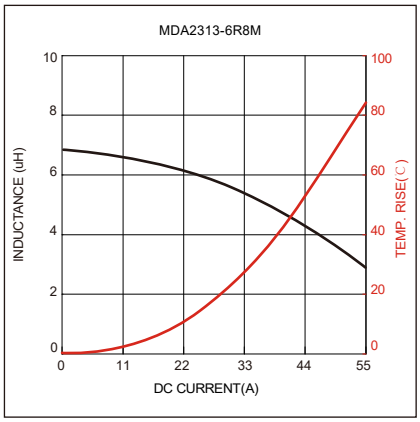


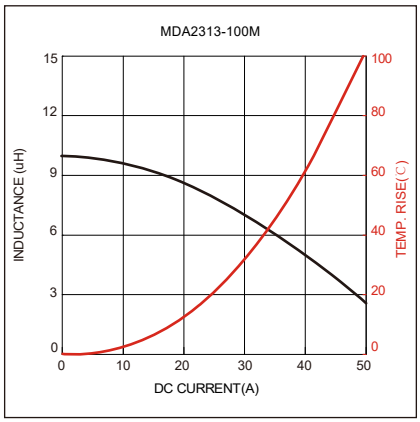


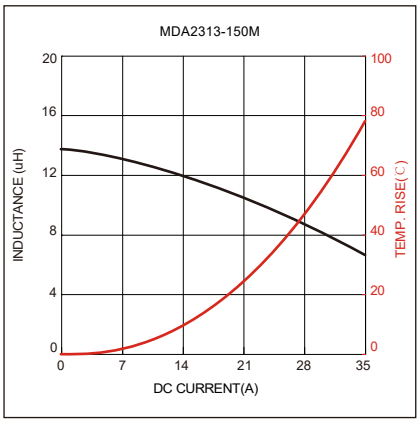


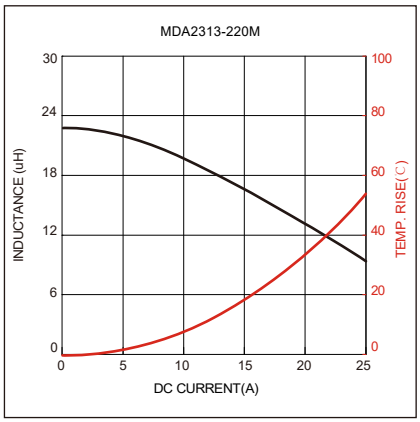












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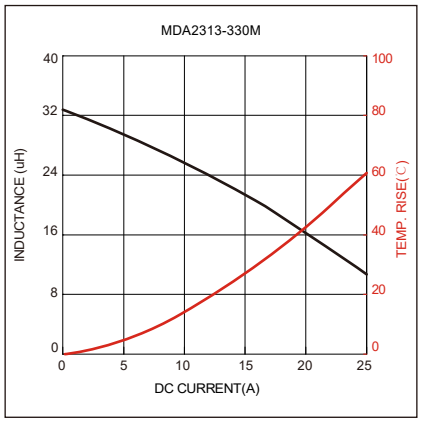
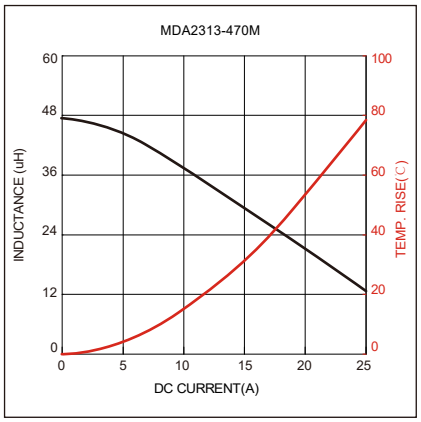
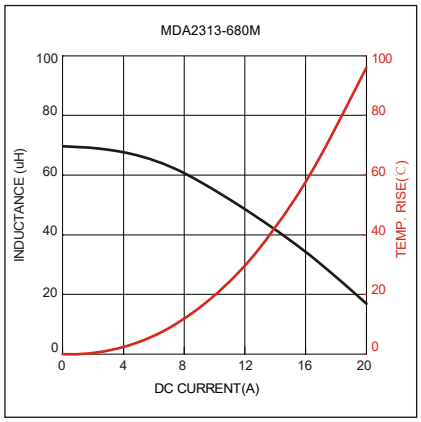
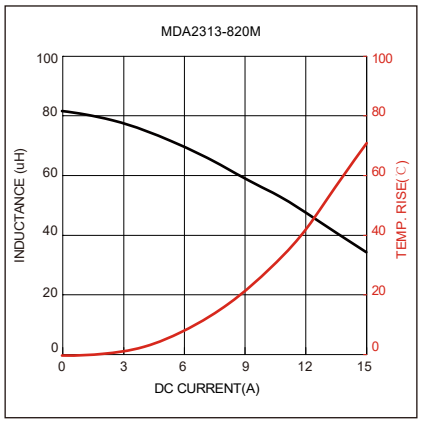
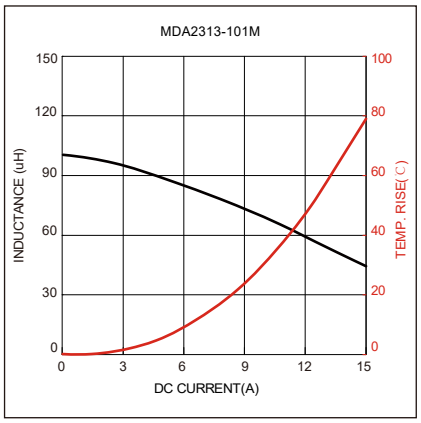


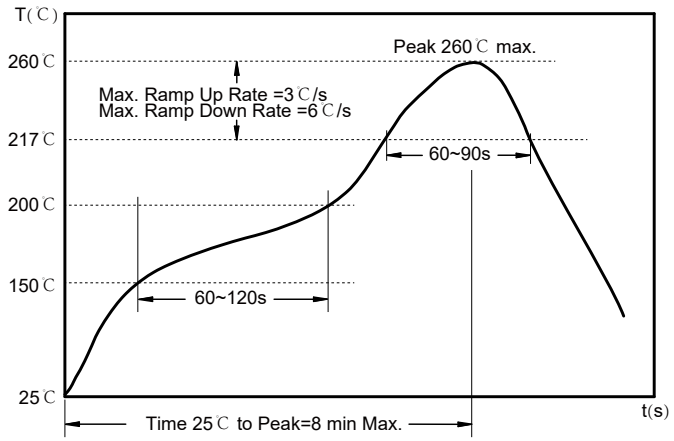








Soldering Reflow:



Preheat condition: 150 ~200℃/ 60~120 sec.

Allowed time above 217℃: 60~90 sec.

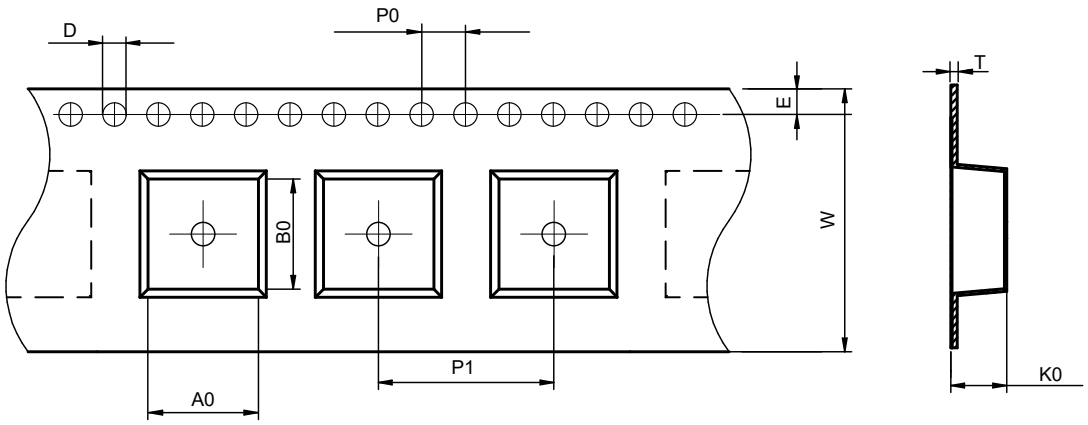
Max temperature: 260℃.

Max time at max temperature: 10 sec.

Allowed Reflow time: 2x max.

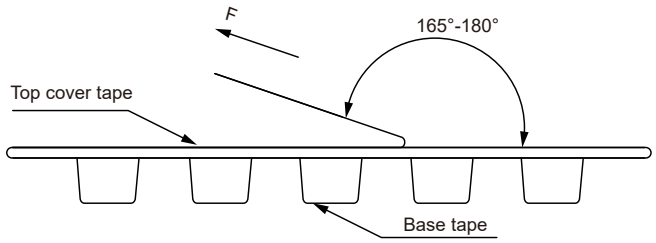
Packaging Information:

Tape Dimension:



A0 (mm)	B0 (mm)	D (mm)	P0 (mm)	P1 (mm)	W (mm)	K0 (mm)	E (mm)	T (mm)
23.0±0.1	24.0±0.1	1.5±0.1	4.0±0.1	32.0±0.1	44.0±0.3	13.4±0.1	1.75±0.1	0.5±0.05

Peel force of top cover tape:

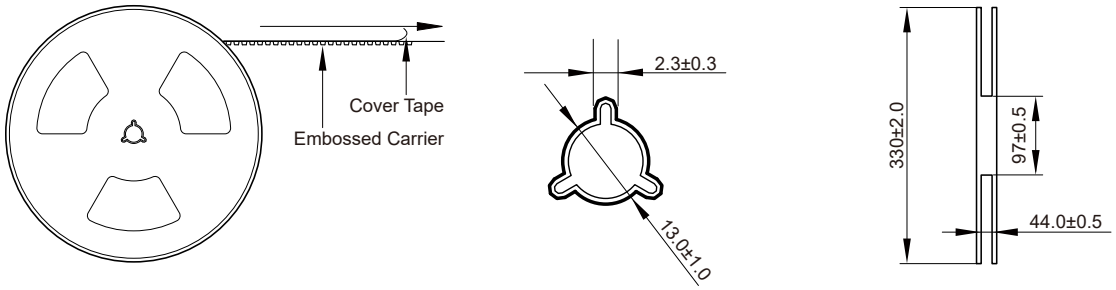


The peel force of top cover tape shall be between 0.1 to 1.3 N

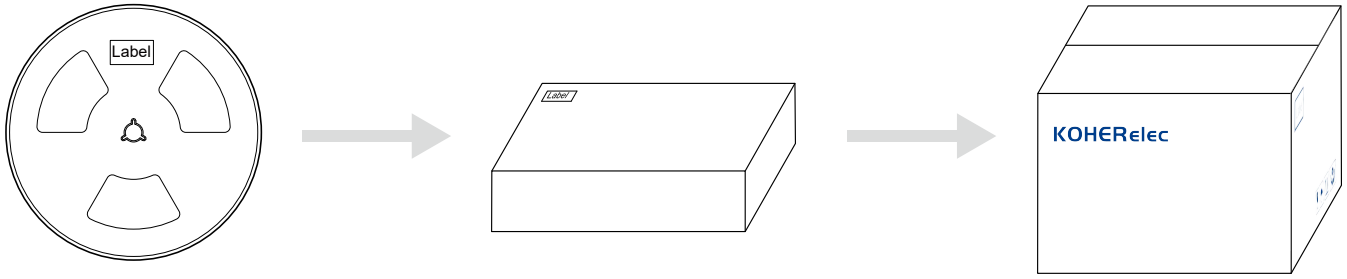
Product Marking:

Marking	KH+Printing (Inductance+period)

Reel Dimension：[mm]



Packaging Quantity:



80 Pcs/Reel

1 Reel /Inner box(80 Pcs)

3 Inner box/Carton box(240 Pcs)

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.