MDSA Series

SMD Low Profile High Current Molded Inductor

Size 1870

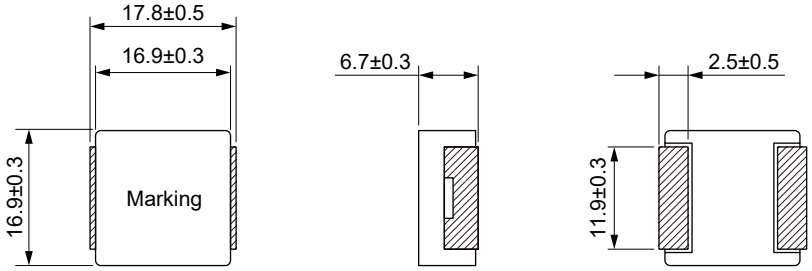
FEATURES

- 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: 200PCS

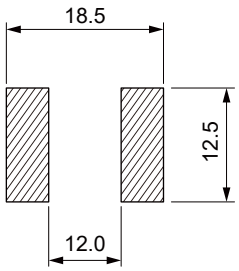
APPLICATION

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

Dimensions: [mm]



Land Pattern: [mm]



Electrical Properties:

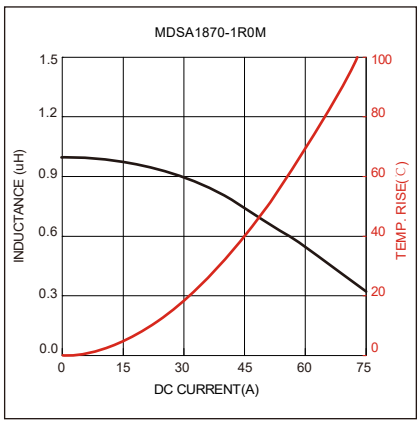
Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Saturation Current Typ. (A)	DC Resistance Typ. (mΩ)	DC Resistance Max. (mΩ)
MDSA1870-1R0M	1.00	±20%	45.0	48.0	1.20	1.40
MDSA1870-1R5M	1.50	±20%	38.0	45.0	1.60	1.90
MDSA1870-2R2M	2.20	±20%	31.0	34.0	2.00	2.50
MDSA1870-3R3M	3.30	±20%	29.0	31.0	3.00	3.80
MDSA1870-4R7M	4.70	±20%	27.0	28.0	4.00	5.00
MDSA1870-6R8M	6.80	±20%	23.0	24.0	6.50	7.80
MDSA1870-100M	10.0	±20%	20.0	21.0	10.0	11.5
MDSA1870-150M	15.0	±20%	15.0	15.0	13.5	16.5
MDSA1870-220M	22.0	±20%	13.0	13.0	21.5	25.0
MDSA1870-330M	33.0	±20%	11.5	11.5	33.0	38.0
MDSA1870-470M	47.0	±20%	9.0	9.0	41.0	48.0
MDSA1870-680M	68.0	±20%	7.8	8.1	68.0	78.0
MDSA1870-820M	82.0	±20%	6.3	7.8	71.0	85.0

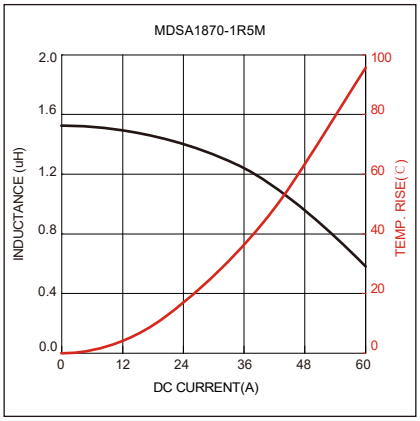
Saturation Current will cause L to drop approximately 30%

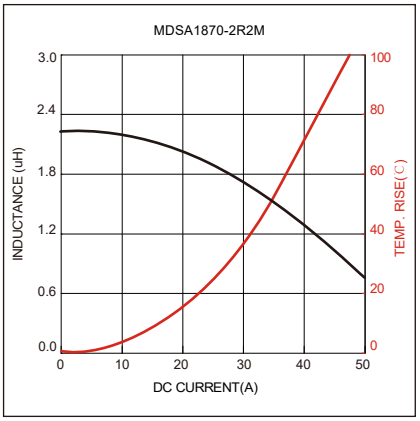
Temperature Rise Current: The actual value of DC current when the temperature rise is △T=40°C

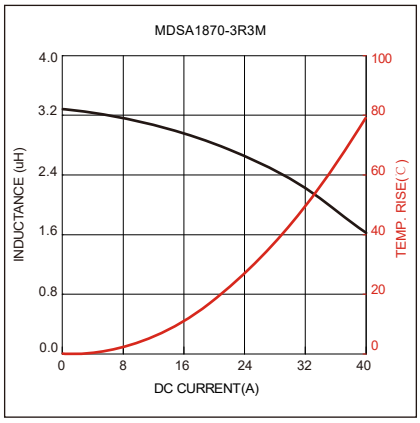
KOHER Electronic
4546 BATES DRIVE, YORBLINDA CA 92886 USA
714-325-4789 Contact@kohergroup.com

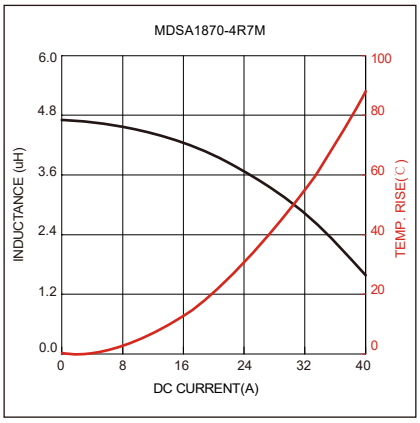
Typical Electrical Characteristics:

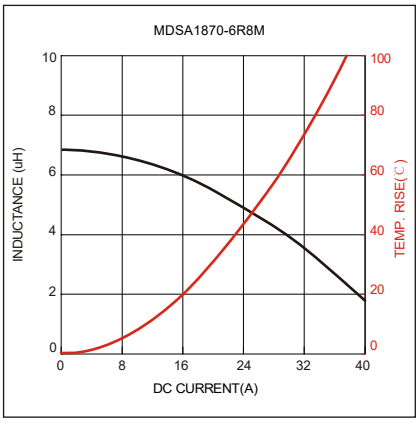


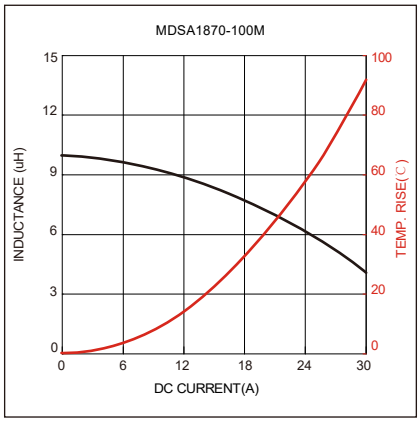


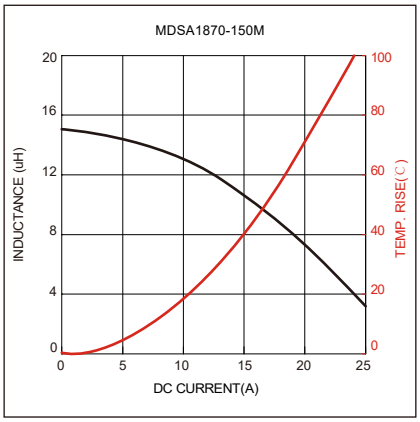


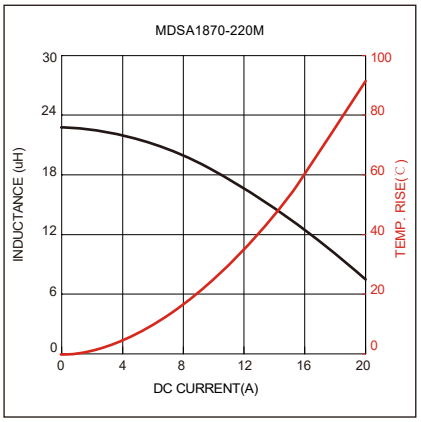


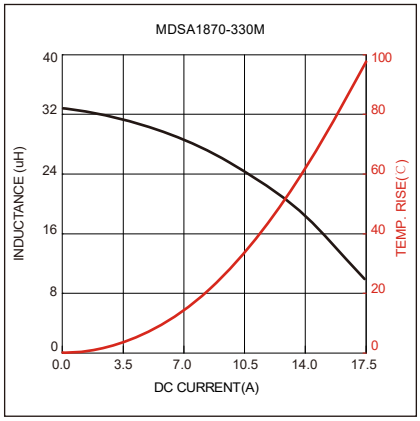


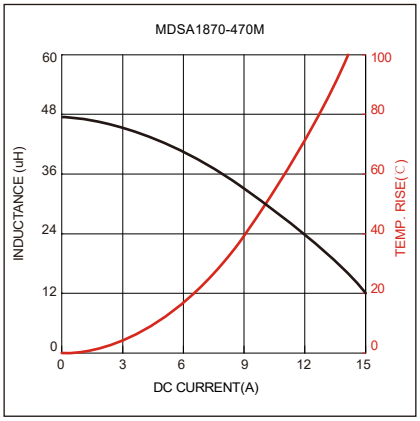


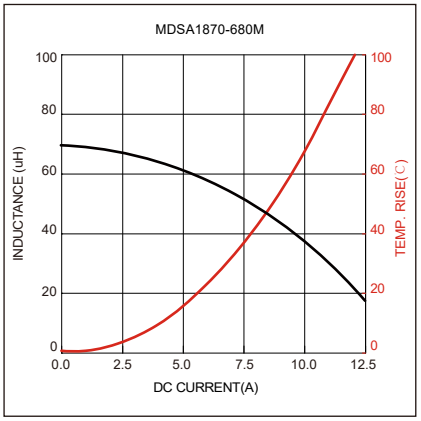






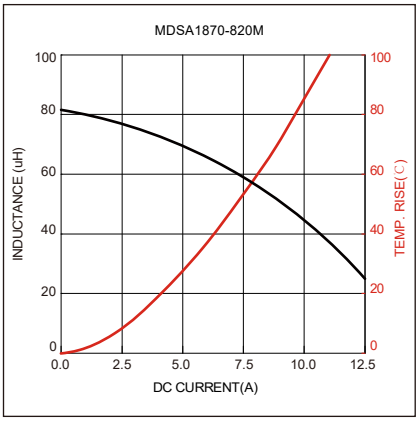




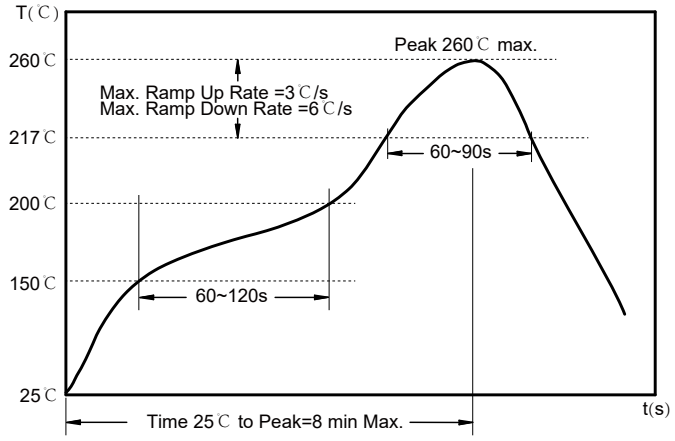


KOHER Electronic
4546 BATES DRIVE, YORBLINDA CA 92886 USA
714-325-4789 Contact@kohergroup.com

Typical Electrical Characteristics:



Soldering Reflow:



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

Allowed time above 217℃: 60~90 sec.

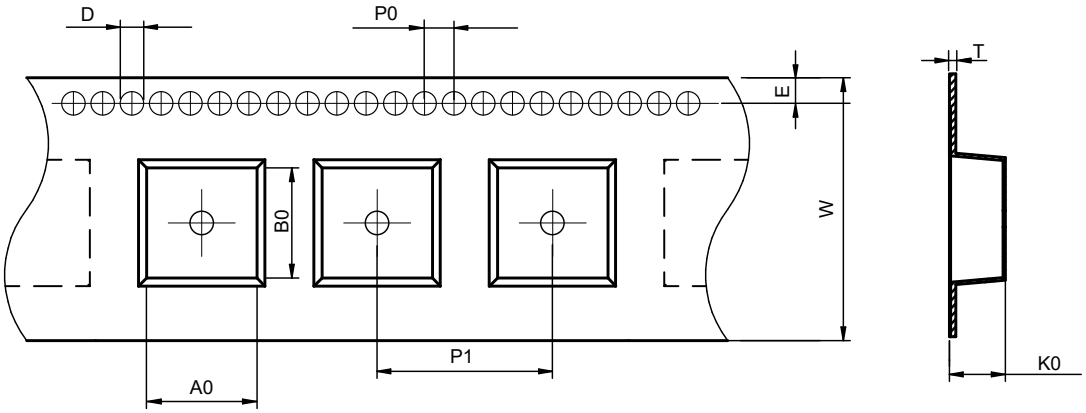
Max temperature: 260℃.

Max time at max temperature: 10 sec.

Allowed Reflow time: 2x max.

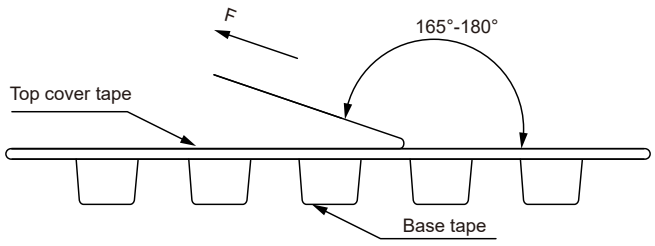
Packaging Information:

Tape Dimension:



Series	A0 (mm)	B0 (mm)	D (mm)	P0 (mm)	P1 (mm)	W (mm)	K0 (mm)	E (mm)	T (mm)
MDSA1870	17.5±0.1	18.1±0.1	1.5±0.1	4.0±0.1	24.0±0.1	32.0±0.3	7.3±0.1	1.75±0.1	0.50±0.05

Peel force of top cover tape:

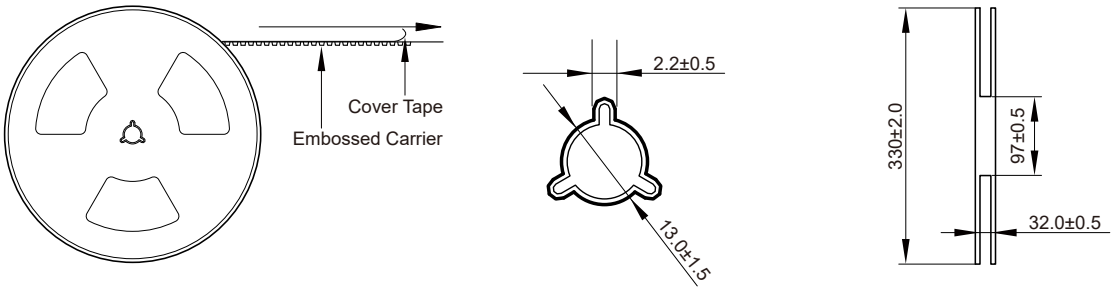


The peel force of top cover tape shall be between 0.1 to 1.3 N

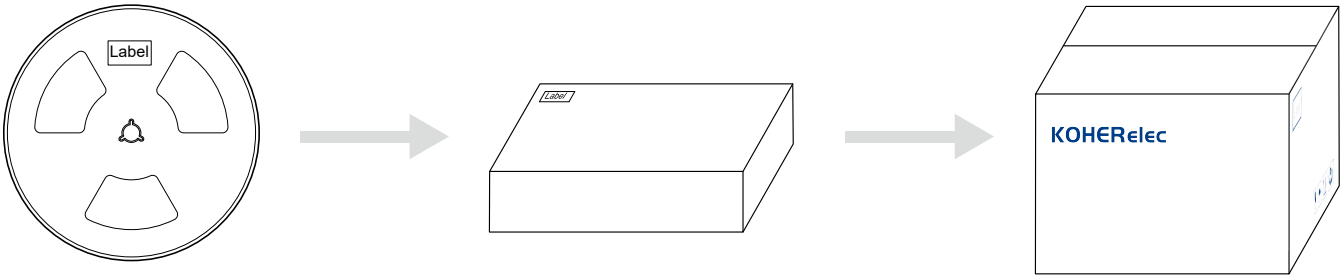
Product Marking:

Marking	KH+Printing(Inductance)

Reel Dimension：[mm]



Packaging Quantity:



200 Pcs/Reel

2 Reel /Inner box(400 Pcs)

2 Inner box/Carton box(800 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.