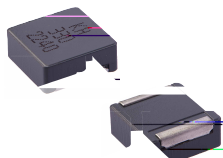


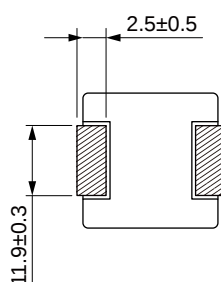
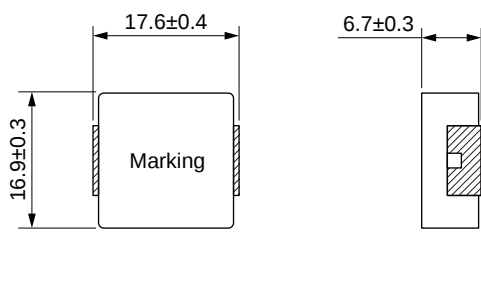
SMD Power Inductor Size 1870



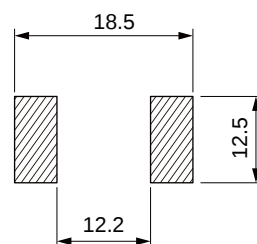
- Shielded construction.
- Capable of corresponding high frequency.
- Low loss realized with low DCR.
- High performance (Isat) realized by Carbonyl Powder.
- Ultra low buzz noise, due to composite construction.
- 100% Lead(Pb)-Free and RoHS compliant.
- AEC-Q200 qualified
- Operating temperature: -55 to +125 °C(including self-temperature rise)
- Quantity: 200PCS

- Headlamps, tail lamps and interior lighting
-
- Doors, window lift and seat control
-
-
- In-Vehicle Infotainment and navigation

Dimensions: [mm]



Land Pattern: [mm]



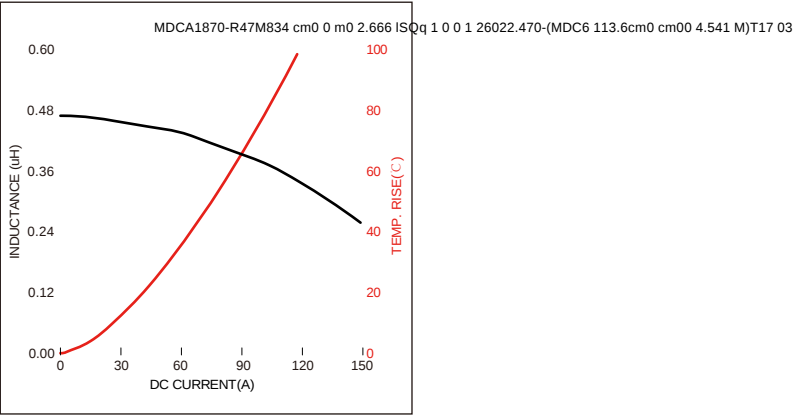
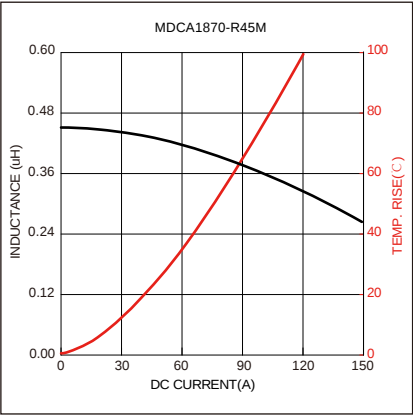
Electrical Properties:

Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Saturation Current Typ. (A)	DC Resistance Typ. (mΩ)	DC Resistance Max. (mΩ)
MDCA1870-R45M	0.45		62.0	125	0.80	0.96
MDCA1870-R47M	0.47		62.0		0.95	1.03
MDCA1870-1R0M	1.00		52.0		1.60	2.00
MDCA1870-1R5M	1.50		47.0	65	2.00	2.50
MDCA1870-2R2M	2.20		43.5		2.40	2.70
MDCA1870-3R3M	3.30		28.0	54	3.50	3.90
MDCA1870-4R7M	4.70		25.0	50	4.80	5.50
MDCA1870-5R6M	5.60		21.0	45	5.80	7.05
MDCA1870-6R8M	6.80		19.0		8.40	9.20
MDCA1870-8R2M	8.20		18.0		9.60	10.8
MDCA1870-100M	10.0		16.5		11.8	13.0
MDCA1870-150M	15.0		12.5		17.8	20.5
MDCA1870-220M	22.0		12.0		25.1	26.5
MDCA1870-330M	33.0		10.7		38.0	44.0

Part No	Inductance @ 100KHz/1V (μ H)	Tolerance			DC Resistance Typ. (m Ω)	DC Resistance Max. (m Ω)
MDCA1870-470M	47.0		8.7		48.0	55.0
MDCA1870-560M	56.0		7.8	15	54.0	62.0
MDCA1870-680M	68.0		7.0		68.0	80.0
MDCA1870-820M	82.0		5.7		87.0	
MDCA1870-101M			5.3			118

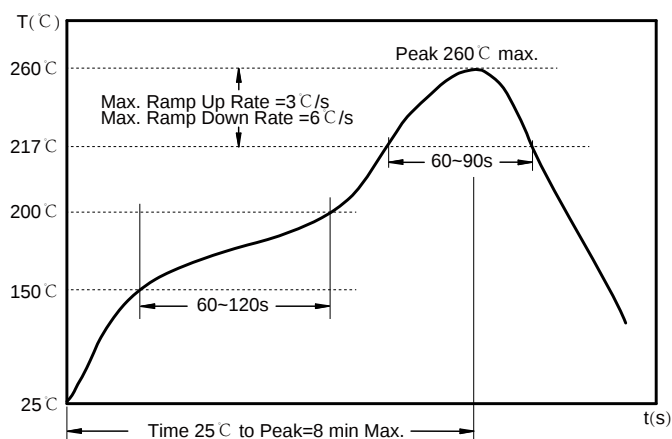
Saturation Current will cause L to drop approximately 30%
 Temperature Rise Current: The actual value of DC current when the temperature rise is $\Delta T=40^{\circ}\text{C}$

Typical Electrical Characteristics:



Typical Electrical Characteristics:

Soldering Reflow:



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

Allowed time above 217°C : 60~90 sec.

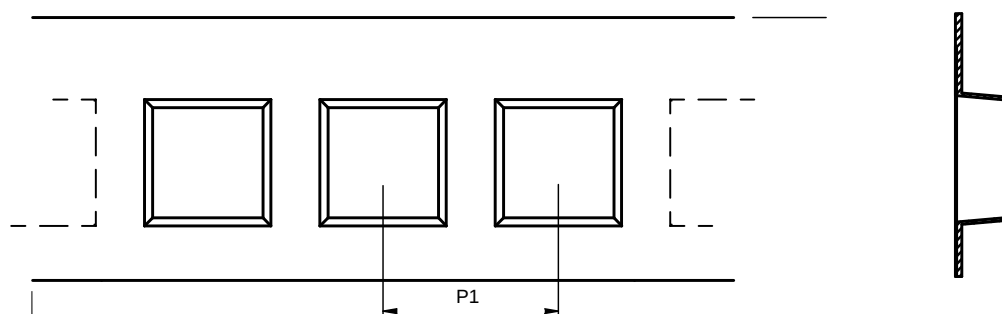
Max temperature: 260°C.

Max time at max temperature: 10 sec.

Allowed Reflow time: 2x max.

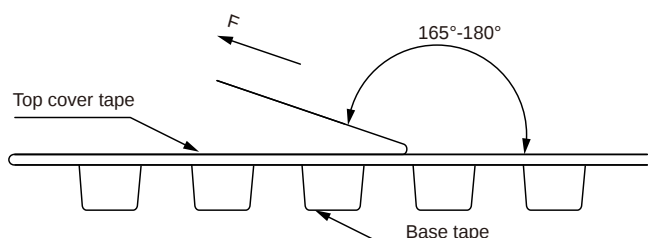
Packaging Information:

Tape Dimension:



Series	A0 (mm)	B0 (mm)	D (mm)	P0 (mm)	P1 (mm)	W (mm)	K0 (mm)	E (mm)	T (mm)
MDCA1870	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:

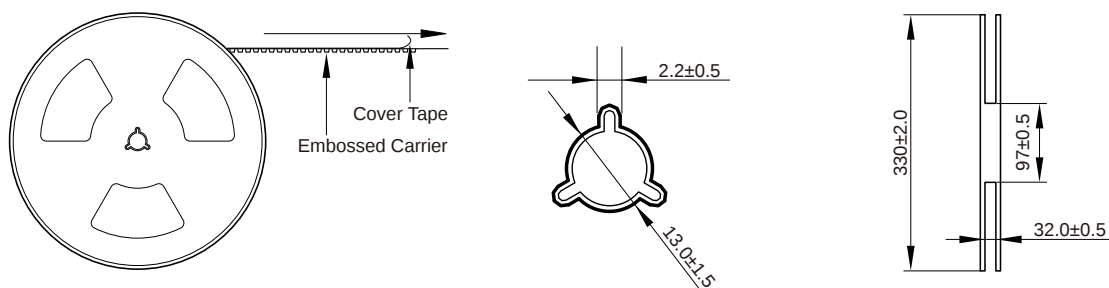


The peel force of top cover tape shall be between 0.1 to 1.3 N

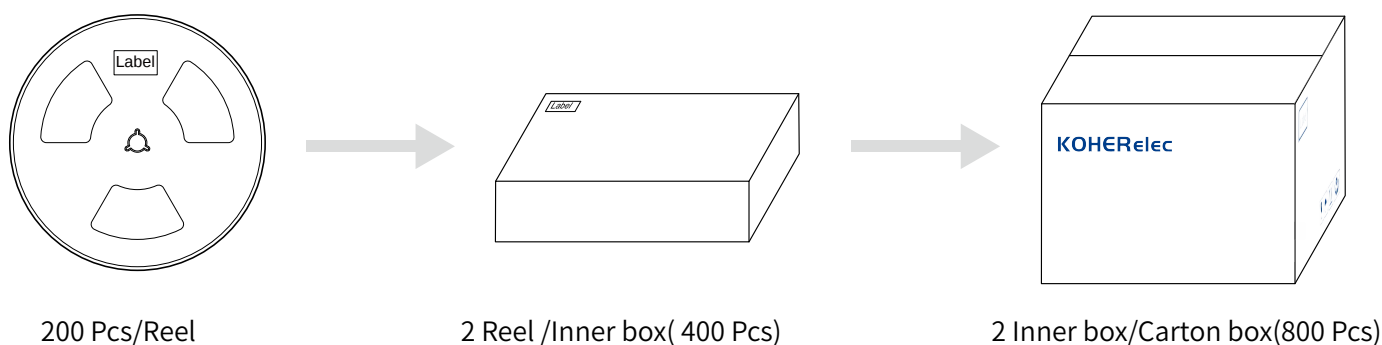
Product Marking:

Marking	KH+Printing (Inductance+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.