

# SDDA Series

## SMD Shielded Power Inductor

### Size 1280



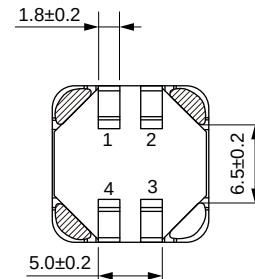
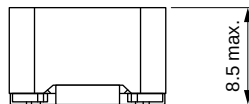
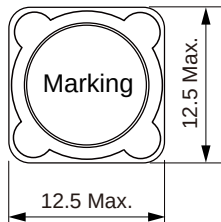
#### FEATURES

- Low loss realized with low DCR.
- High performance realized by metal dust core.  
Ultra low buzz noise, due to composite construction.
- 100% Lead(Pb)-Free and RoHS compliant.
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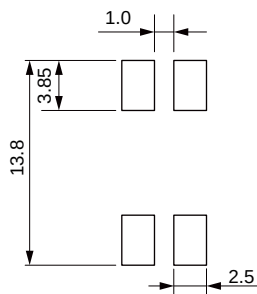
#### APPLICATION

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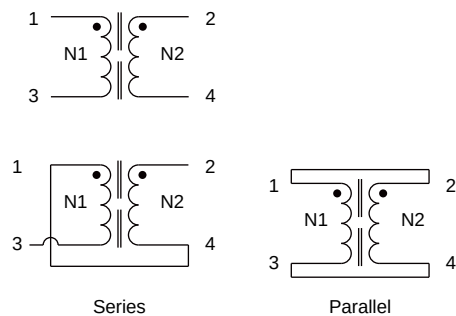
#### Dimensions: [mm]



#### Land Patterns: [mm]



#### Schematic:



## Electrical Properties:

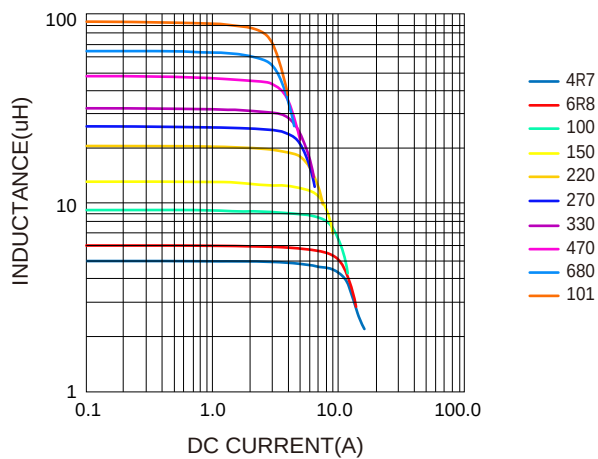
| Part No       | Inductance<br>@ 100kHz/0.1V | Tolerance | Temperature<br>Rise current<br>Typ. | urrent<br>Typ. | urrent<br>Max. | Resistance<br>Max. | Hi-POT       |
|---------------|-----------------------------|-----------|-------------------------------------|----------------|----------------|--------------------|--------------|
| SDDA1280-4R7M | 4.7                         | ±20%      | 5.0                                 | 12.9           | 9.2            | 25                 | DC 500V/1Sec |
| SDDA1280-6R8M | 6.8                         | ±20%      | 4.5                                 | 11.4           | 8.1            | 29                 | DC 500V/1Sec |
| SDDA1280-100M | 10                          | ±20%      | 4.1                                 | 9.8            | 6.8            | 36                 | DC 500V/1Sec |
| SDDA1280-150M | 15                          | ±20%      | 3.6                                 | 7.0            | 5.2            | 40                 | DC 500V/1Sec |
| SDDA1280-220M | 22                          | ±20%      | 3.0                                 | 6.7            | 4.7            | 72                 | DC 500V/1Sec |
| SDDA1280-270M | 27                          | ±20%      | 2.7                                 | 5.7            | 3.9            | 96                 | DC 500V/1Sec |
| SDDA1280-330M | 33                          | ±20%      | 2.5                                 | 5.2            | 3.6            | 105                | DC 500V/1Sec |
| SDDA1280-470M | 47                          | ±20%      | 2.2                                 | 4.3            | 3.1            | 132                | DC 500V/1Sec |
| SDDA1280-680M | 68                          | ±20%      | 1.8                                 | 3.6            | 2.5            | 206                | DC 500V/1Sec |
| SDDA1280-101M | 100                         | ±20%      | 1.5                                 | 3.0            | 2.1            | 280                | DC 500V/1Sec |

Saturation Current will cause L to drop approximately 30%

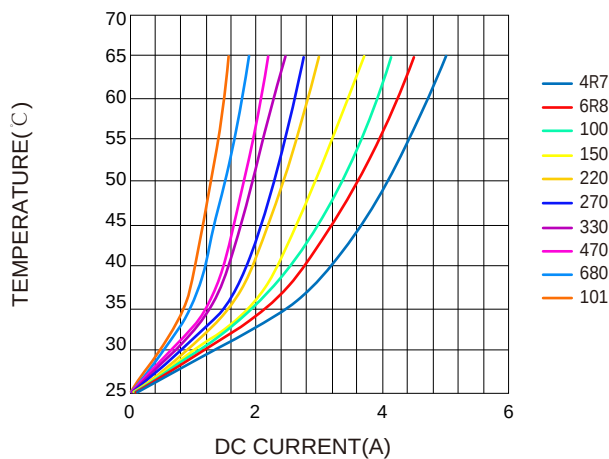
Temperature Rise Current: The actual value of DC current when the temperature rise is  $\Delta T=40^{\circ}\text{C}$

## Typical Electrical Characteristics:

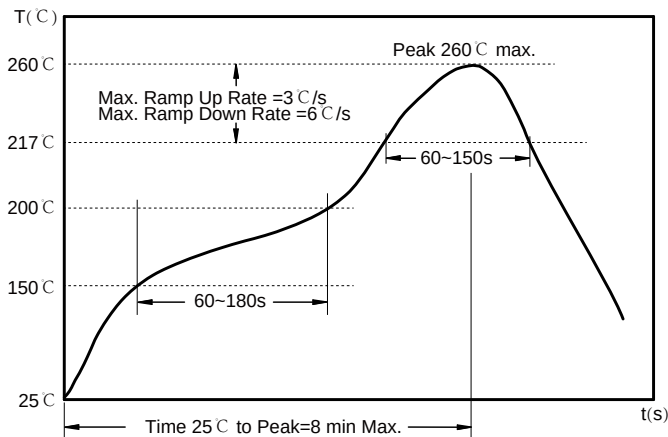
Inductance VS. DC Current Characteristics:



Temperature VS. DC Current Characteristics:



## Soldering Reflow:



Preheat condition: 150 ~200°C / 60~180 sec.

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

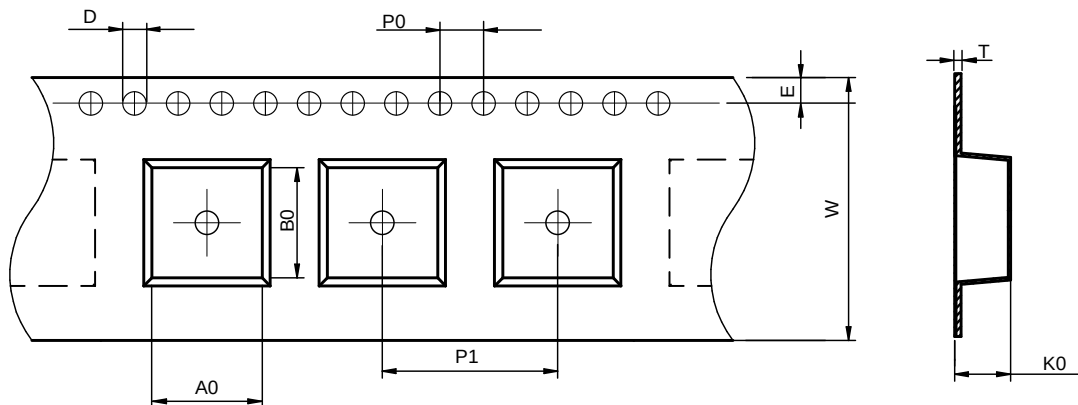
Max temperature: 260°C.

Max time at max temperature: 5 sec.

Allowed Reflow time: 3x max.

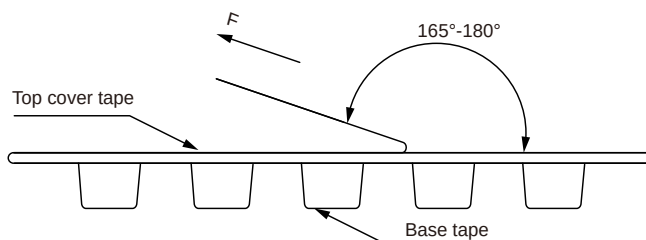
## Packaging Information:

### Tape Dimension:



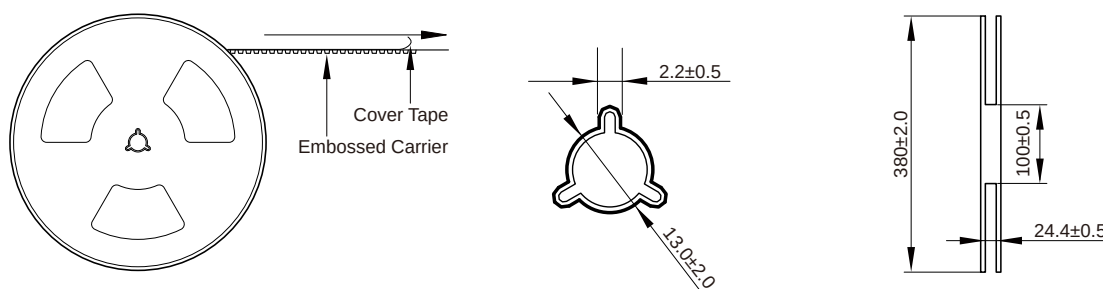
| Series   | A0<br>(mm) | B0<br>(mm) | D<br>(mm) | P0<br>(mm) | P1<br>(mm) | W<br>(mm) | K0<br>(mm) | E<br>(mm) | T<br>(mm) |
|----------|------------|------------|-----------|------------|------------|-----------|------------|-----------|-----------|
| SDDA1280 | 12.5±0.1   | 12.5±0.1   | 1.5±0.1   | 4.0±0.1    | 20.0±0.1   | 24.0±0.3  | 8.4±0.1    | 1.75±0.1  | 0.50±0.05 |

### Peel force of top cover tape:

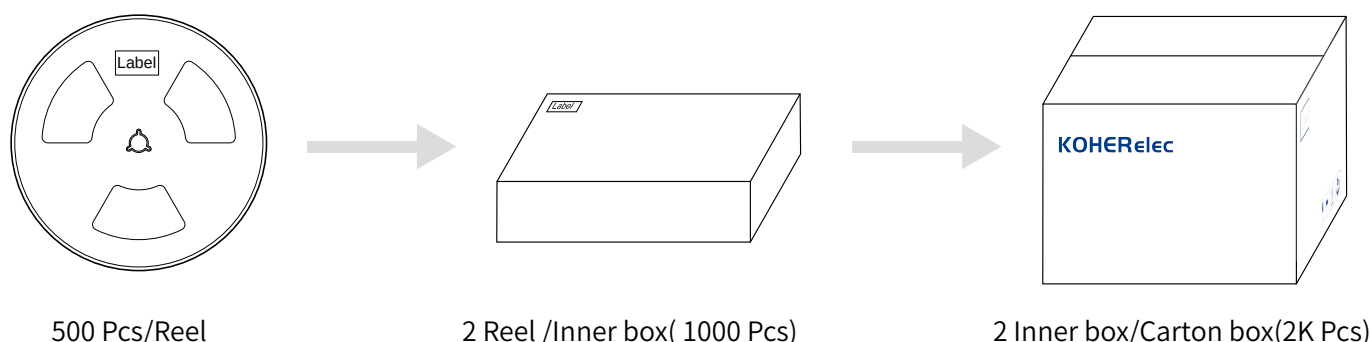


The peel force of top cover tape shall be between 0.1 to 1.3 N

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.