

# SMD Power Inductor

## CY0530AT125/DS



### 特点

- Metal alloy
- Magnetically shielded
- L×W×H:5.8×5.5×3.1mm Max.
- Absolute maximum voltage (across inductor): 50V
- Product weight:0.42 g (Ref.)
- Moisture Sensitivity Level: 1
- AEC-Q200 qualified



### 环境规格

- Operating temperature range: -40°C~+125°C (including coil' s self temperature rise)

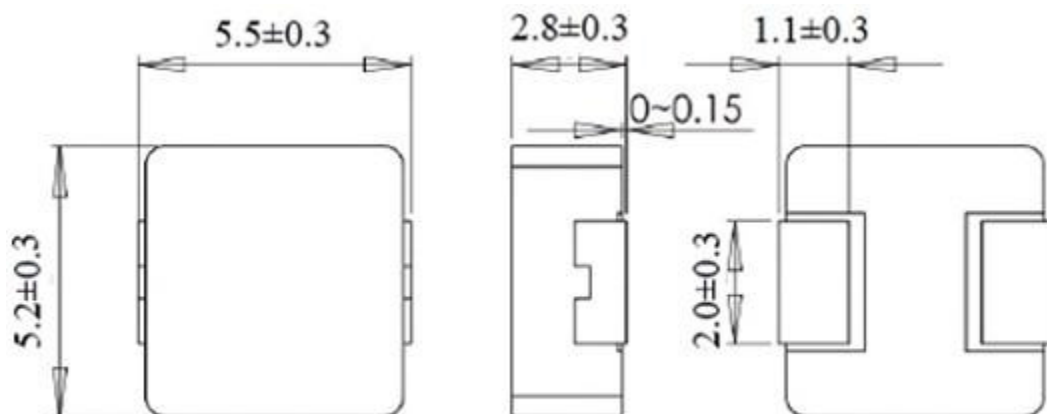
### 包装

- Carrier tape and reel packaging
- 2000pcs per reel

### 用途

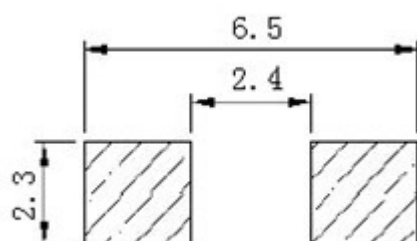
- Suitable for DC/DC converters in ECUs, LED head light systems, or other high reliability designs for automotive applications (Note: these products are not intended for use in Airbag or Braking System applications)

### 外形尺寸 - [mm]

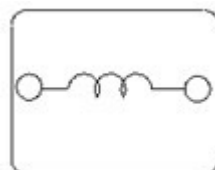


\* Dimension without tolerance is reference value.

### 推荐焊盘尺寸 - [mm]



### 接线图 (底面)





### 电气特性规格

| 品名                   | 电感值<br>[within]<br>( $\mu$ H) ※1 | 直流电阻 (20℃)<br>Max. (Typ.) (m $\Omega$ ) | 饱和电流 (A)<br>Max. (Typ.) ※2 | 温度上升电流<br>(A) Max.<br>(Typ.) ※3 |
|----------------------|----------------------------------|---|----------------------------|---------------------------------|
| CY0530AT125DS-R47MCY | 0.47 $\pm$ 20%                   | 7.50 (6.50)                             | 12.00 (15.00)              | 9.50<br>(10.80)                 |
| CY0530AT125DS-R68MCY | 0.68 $\pm$ 20%                   | 9.00 (7.80)                             | 10.80 (13.50)              | 8.20 (9.50)                     |
| CY0530AT125DS-1R0MCY | 1.00 $\pm$ 20%                   | 14.00 (12.00)                           | 8.30 (10.40)               | 7.20 (8.00)                     |
| CY0530AT125DS-1R5MCY | 1.50 $\pm$ 20%                   | 15.00 (13.00)                           | 7.80 (9.80)                | 6.40 (7.10)                     |
| CY0530AT125DS-2R2MCY | 2.20 $\pm$ 20%                   | 17.30 (15.00)                           | 6.70 (8.40)                | 6.00 (6.80)                     |
| CY0530AT125DS-3R3MCY | 3.30 $\pm$ 20%                   | 31.00 (27.00)                           | 5.60 (7.00)                | 4.50 (5.20)                     |
| CY0530AT125DS-4R7MCY | 4.70 $\pm$ 20%                   | 40.30 (35.00)                           | 4.30 (5.40)                | 4.30 (4.90)                     |
| CY0530AT125DS-6R8MCY | 6.80 $\pm$ 20%                   | 63.30 (55.00)                           | 4.10 (5.20)                | 3.40 (3.80)                     |
| CY0530AT125DS-100MCY | 10.00 $\pm$ 20%                  | 98.00 (85.00)                           | 3.50 (4.40)                | 2.80 (3.20)                     |
| CY0530AT125DS-150MCY | 15.00 $\pm$ 20%                  | 168 (145)                               | 2.40 (3.00)                | 1.90 (2.20)                     |
| CY0530AT125DS-220MCY | 22.00 $\pm$ 20%                  | 270 (235)                               | 2.00 (2.50)                | 1.60 (1.80)                     |

※1 Measuring frequency Inductance at 100kHz, 0.25V

※2 Saturation current: This indicates the value of DC current when the inductance becomes 30% lower than its initial value.

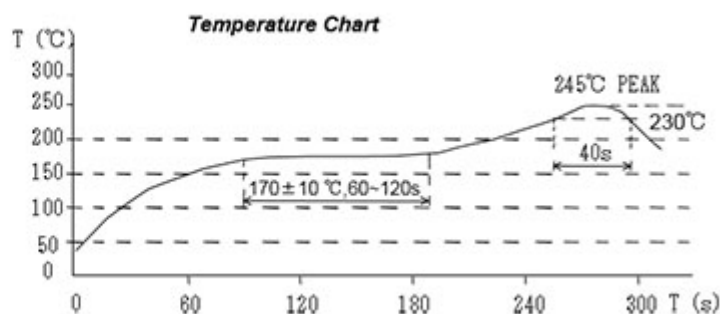
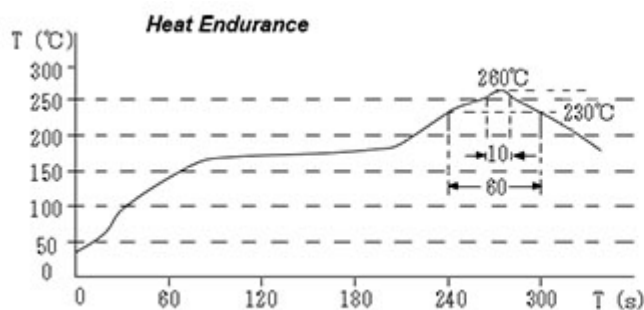
※3 Temperature rise current: The value of DC current when the temperature of coil becomes  $\Delta T=40^{\circ}\text{C}$  ( $T_a=25^{\circ}\text{C}$ ).

※ The allowable current shall be defined smaller value of either the saturation current or the temperature rise current, when being generated DC current.

※ Within a suitable application, the part temperature depends on circuit design and certain heat dissipation conditions. This should be checked in a worst case operation mode. In normal case, the max standard operating temperature of  $+125^{\circ}\text{C}$  should not be exceeded.

※ Absolute maximum voltage(across inductor): 50V

### 回流焊耐热与推荐温度曲线图



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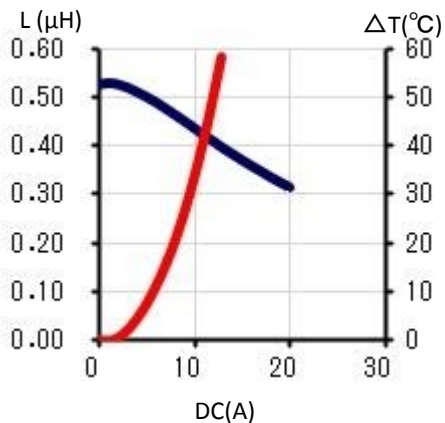


### 直流饱和电流&温度上升曲线图

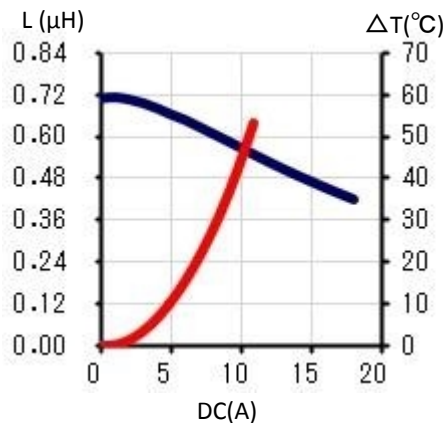
— L (25°C)

—  $\Delta T$

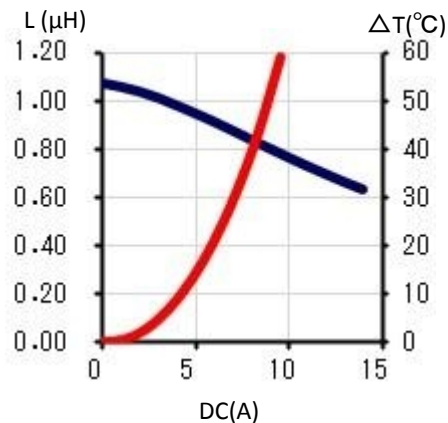
1. CY0530AT125DS-R47MCY



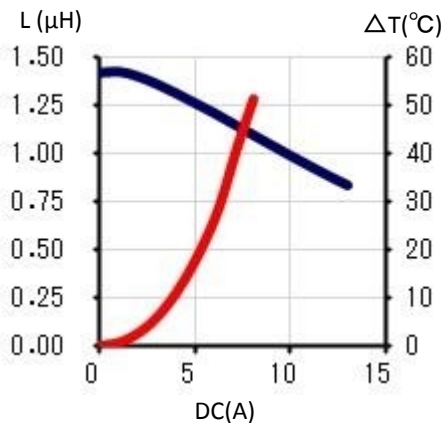
2. CY0530AT125DS-R68MCY



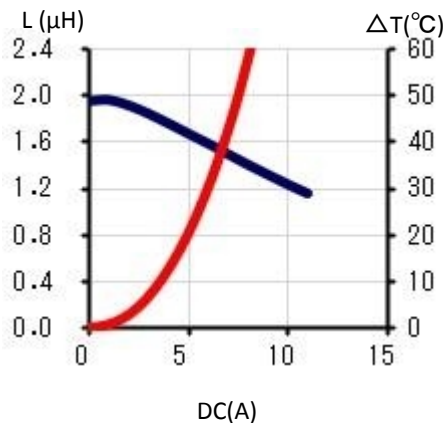
3. CY0530AT125DS-1R0MCY



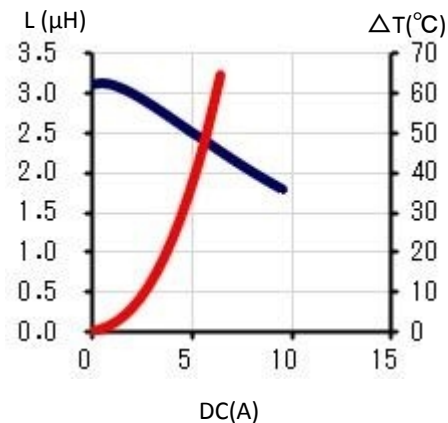
4. CY0530AT125DS-1R5MCY



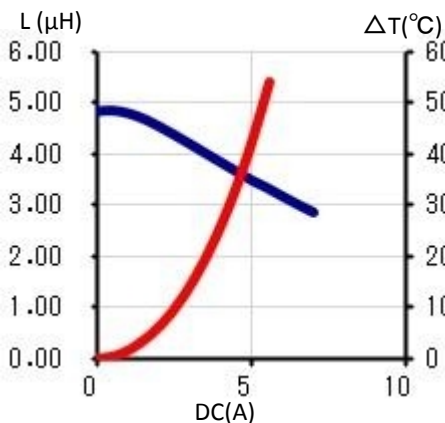
5. CY0530AT125DS-2R2MCY



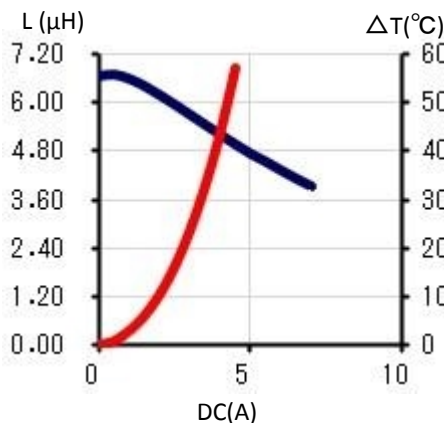
6. CY0530AT125DS-3R3MCY



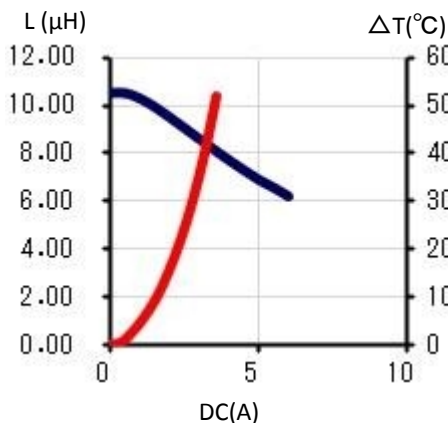
7. CY0530AT125DS-4R7MCY



8. CY0530AT125DS-6R8MCY



9. CY0530AT125DS-100MCY



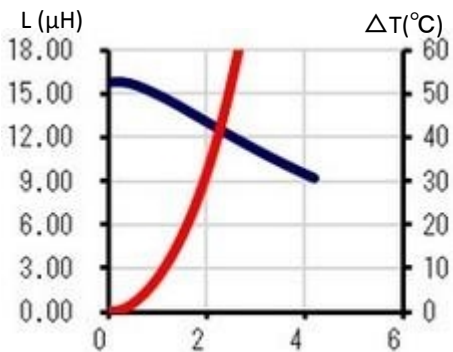
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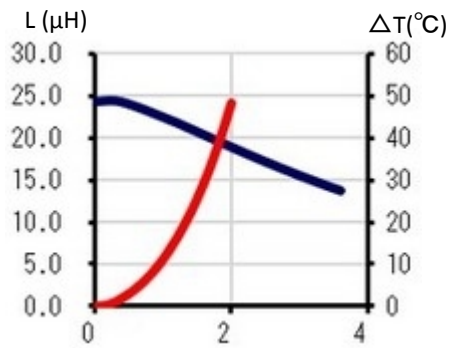


10. CY0530AT125DS-150MCY



DC(A)

11. CY0530AT125DS-220MCY



DC(A)



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