

# SMD Power Inductor

## CY0630AT125/DS



### Description

- Metal alloy
- Magnetically shielded
- LxWxH:7.5x6.8x3.1mm Max.
- Absolute maximum voltage (across inductor): 50V
- Product weight:0.75g (Ref.)
- Moisture Sensitivity Level: 1
- AEC-Q200 qualified



### Environmental Data

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

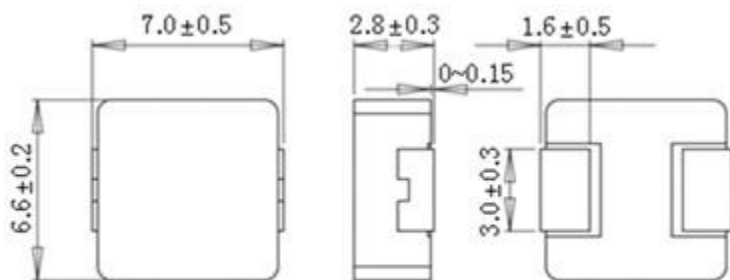
### Packaging

- Carrier tape and reel packaging
- 1500pcs per reel

### Applications

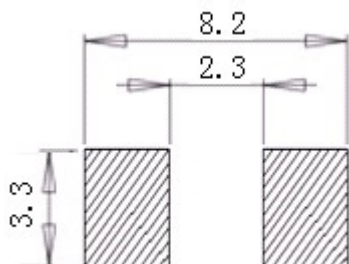
- Suitable for DC/DC converter on ECU and LED head light, the other high reliability environment for automotive application.

### Dimension - [mm]

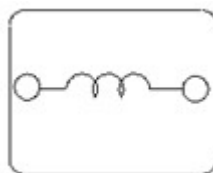


\* Dimension without tolerance is reference value.

### Recommended Land pattern - [mm]



### Wire Connection



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### Electrical Characteristics

Part Number	Inductance [Within] ( $\mu$ H) ※1	D.C.R. at 20°C Max.(Typ.) (m $\Omega$ )	Saturation Current (A) Max.(Typ.) ※2	Temperature Rise Current (A) Max.(Typ.) ※3
CY0630AT125DS-R22MC	0.22 $\pm$ 20%	2.90 (2.50)	25.60 (32.00)	18.20 (20.90)
CY0630AT125DS-R33MC	0.33 $\pm$ 20%	3.20 (2.80)	25.00 (31.60)	17.20 (19.90)
CY0630AT125DS-R47MC	0.47 $\pm$ 20%	4.40 (3.80)	18.90 (23.70)	14.40 (16.40)
CY0630AT125DS-R68MC	0.68 $\pm$ 20%	5.40 (4.70)	15.60 (19.60)	13.20 (15.10)
CY0630AT125DS-R82MC	0.82 $\pm$ 20%	6.30 (5.50)	12.90 (16.20)	12.00 (14.00)
CY0630AT125DS-1R0MC	1.00 $\pm$ 20%	8.10 (7.00)	12.60 (15.80)	10.50 (12.00)
CY0630AT125DS-1R5MC	1.50 $\pm$ 20%	12.20 (10.60)	11.80 (14.80)	8.50 (9.60)
CY0630AT125DS-2R2MC	2.20 $\pm$ 20%	17.30 (15.00)	9.60 (12.00)	7.00 (8.00)
CY0630AT125DS-3R3MC	3.30 $\pm$ 20%	26.00 (22.60)	8.40 (10.60)	5.90 (6.70)
CY0630AT125DS-4R7MC	4.70 $\pm$ 20%	38.30 (33.30)	6.50 (8.40)	4.80 (5.40)
CY0630AT125DS-6R8MC	6.80 $\pm$ 20%	54.10 (47.00)	6.20 (7.80)	3.40 (3.90)
CY0630AT125DS-8R2MC	8.20 $\pm$ 20%	58.10 (50.50)	5.20 (6.50)	3.20 (3.70)
CY0630AT125DS-100MC	10.00 $\pm$ 20%	68.00 (59.00)	5.00 (6.20)	3.00 (3.50)
CY0630AT125DS-150MC	15.00 $\pm$ 20%	111.60 (97.00)	4.20 (5.30)	2.30 (2.60)
CY0630AT125DS-220MC	22.00 $\pm$ 20%	161 (140)	3.20 (4.10)	2.10 (2.40)
CY0630AT125DS-330MC	33.00 $\pm$ 20%	253 (220)	2.50 (3.30)	1.70 (2.00)

※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

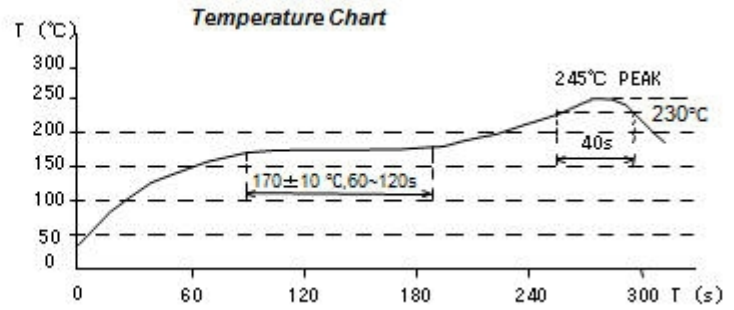
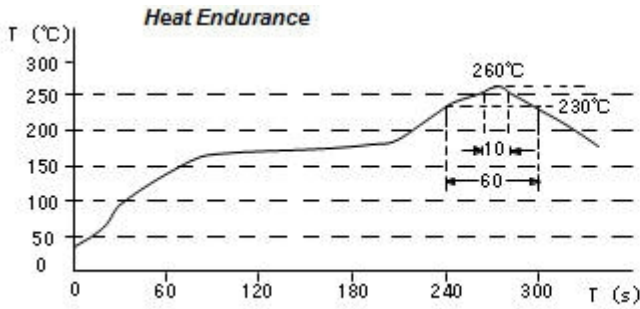
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Recommended Type

### Solder Reflow Condition



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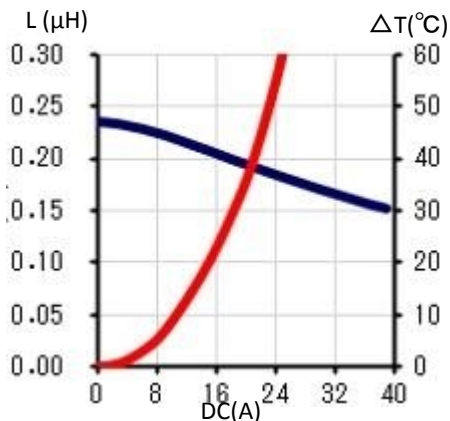
Recommended Type

### Saturation Current & Temperature Rise Graph

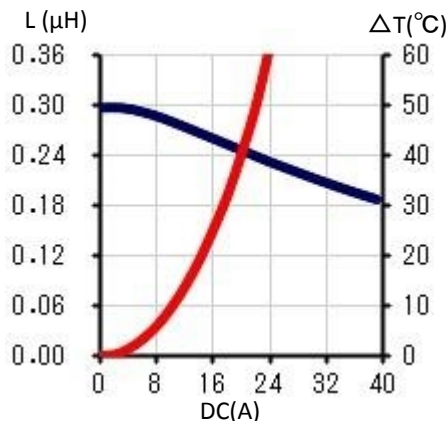
— L (25°C)

—  $\Delta T$

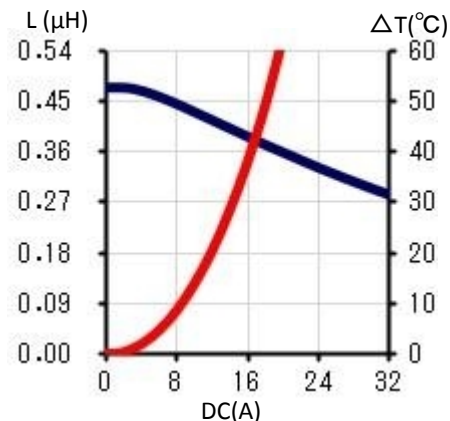
1. CY0630AT125DS-R22MC



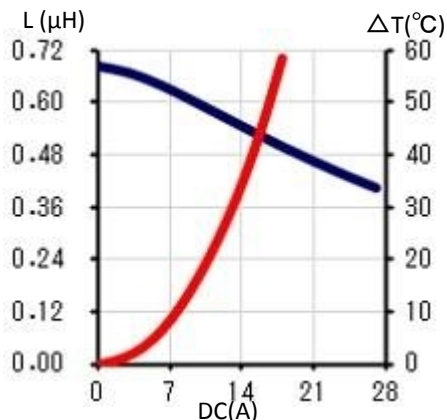
2. CY0630AT125DS-R33MC



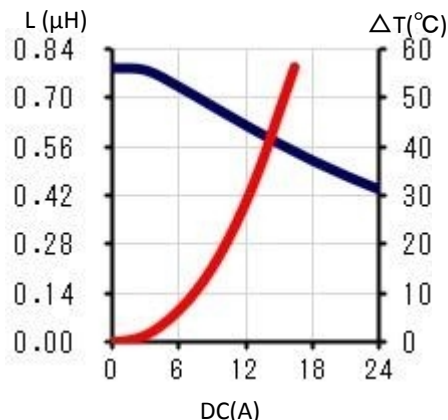
3. CY0630AT125DS-R47MC



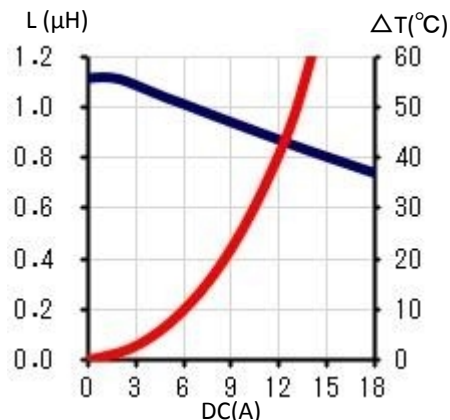
4. CY0630AT125DS-R68MC



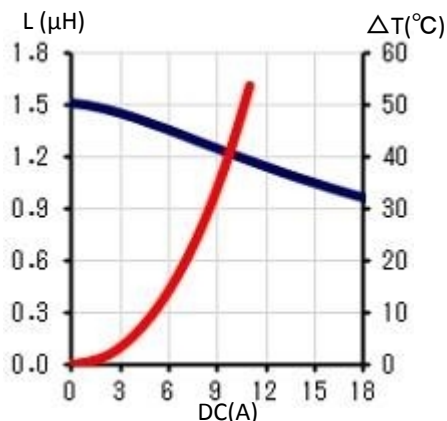
5. CY0630AT125DS-R82MC



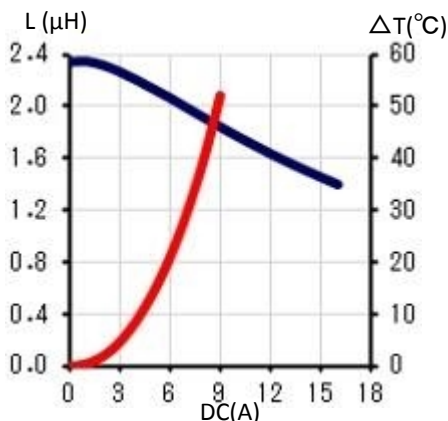
6. CY0630AT125DS-1R0MC



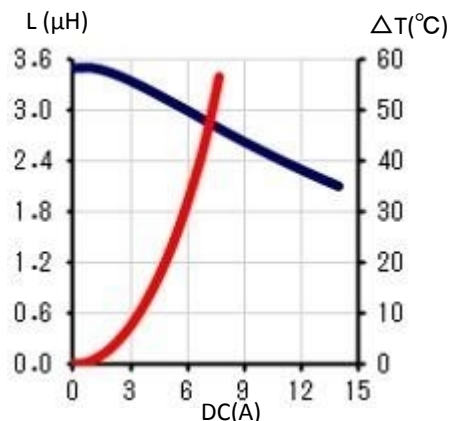
7. CY0630AT125DS-1R5MC



8. CY0630AT125DS-2R2MC



9. CY0630AT125DS-3R3MC



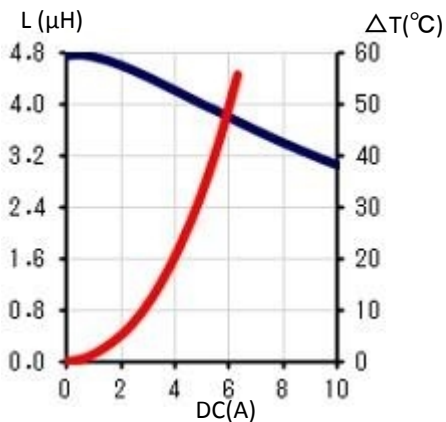
Note: This specification is subject to change without notice. Please contact your nearest sales office for updated information when placing an order.

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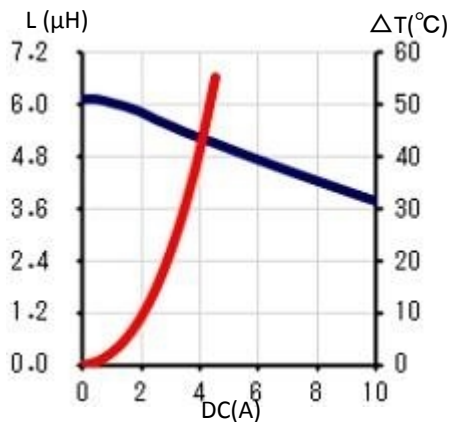
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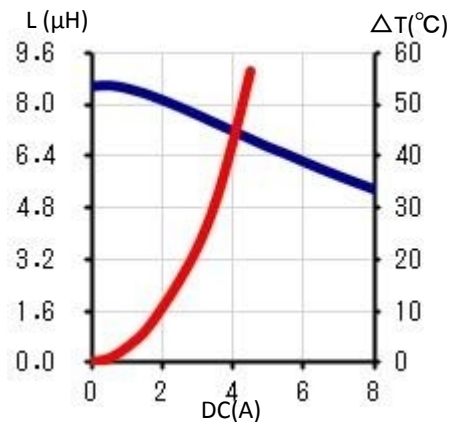
10. CY0630AT125DS-4R7MC



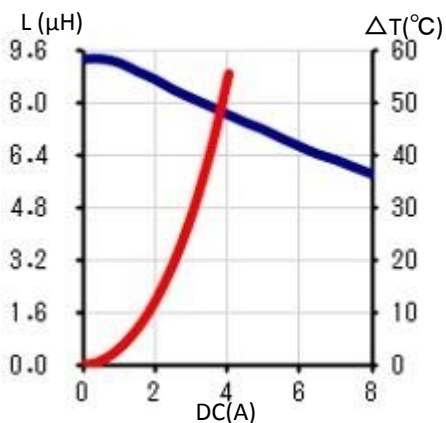
11. CY0630AT125DS-6R8MC



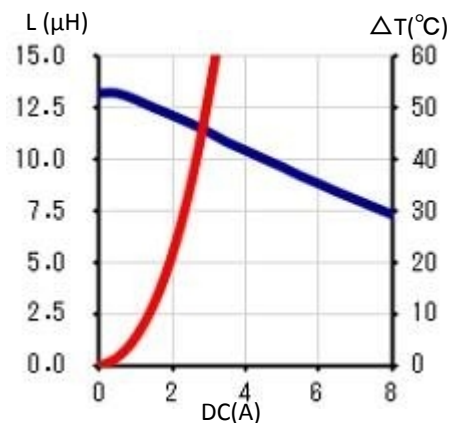
12. CY0630AT125DS-8R2MC



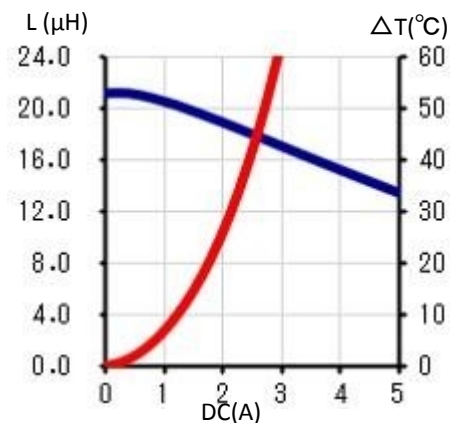
13. CY0630AT125DS-100MC



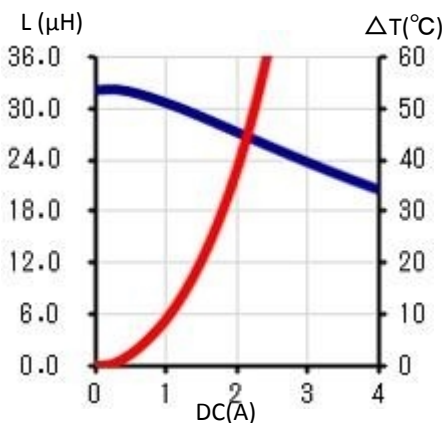
14. CY0630AT125DS-150MC



15. CY0630AT125DS-220MC



16. CY0630AT125DS-330MC



For sales office information, please [click here](#) to visit our website.