

# Low-Profile High Current Power Inductor CY0420AT125/DS



## Description

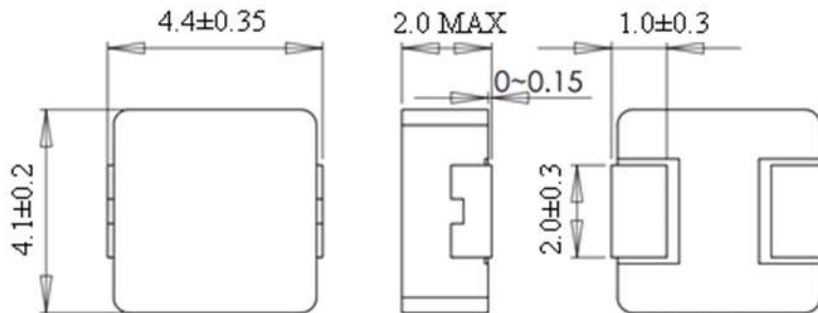
- Metal compound molding type
- L x W x H: 4.30 x 4.75 x 2.00 mm Max.
- Absolute maximum voltage (across inductor): 50V
- Magnetically shielded
- Qualified AEC-Q200
- Operating temperature range: -40°C~ +125°C (including self-heating)



## Applications

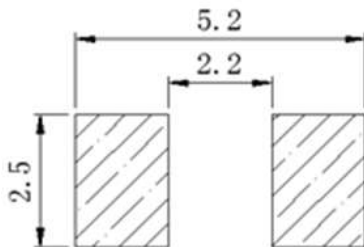
- Infotainment system, ADAS, LED lighting
- ECU
- Automotive and other high temperature, high reliability applications

## Dimension - [mm]

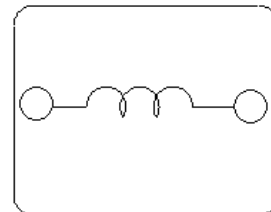


\* Dimension without tolerance is reference value.

## Reference Land pattern - [mm]



## Connection



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

# Low-Profile High Current Power Inductor

## CY0420AT125/DS



### Electrical Characteristics

Part No.	Stamp	Inductance [within] ( $\mu$ H) ※1	D.C.R (m $\Omega$ ) at 25°C Max. (Typ.)	Saturation Current (A) (at 25°C) Max. (Typ.) ※2	Temperature Rise Current (A) Max. (Typ.) ※3
CY0420AT125DS-R22MC	B	0.22 $\pm$ 20%	6.9 (6.0)	18.4 (23.0)	8.0 (9.0)
CY0420AT125DS-R47MC	C	0.47 $\pm$ 20%	13.5 (11.5)	10.2 (12.8)	6.4 (7.0)
CY0420AT125DS-R56MC	D	0.56 $\pm$ 20%	14.0 (12.0)	8.6 (10.8)	6.0 (6.5)
CY0420AT125DS-R68MC	E	0.68 $\pm$ 20%	17.0 (14.5)	8.0 (10.0)	5.6 (6.3)
CY0420AT125DS-R82MC	F	0.82 $\pm$ 20%	23.0 (20.0)	7.2 (9.0)	4.4 (5.0)
CY0420AT125DS-1R0MC	G	1.00 $\pm$ 20%	26.0 (22.5)	6.2 (7.8)	4.2(4.8)
CY0420AT125DS-1R2MC	H	1.2 $\pm$ 20%	31.0 (27.0)	6.1 (7.7)	4.1 (4.5)
CY0420AT125DS-2R2MC	I	2.2 $\pm$ 20%	53.0 (46.0)	5.5 (6.9)	3.2 (3.6)
CY0420AT125DS-3R3MC	J	3.3 $\pm$ 20%	85.0 (74.0)	4.4 (5.6)	2.2 (2.5)
CY0420AT125DS-4R7MC	K	4.7 $\pm$ 20%	115 (100)	3.8 (4.8)	2.0 (2.2)
CY0420AT125DS-6R8MC	L	6.8 $\pm$ 20%	152 (132)	2.8 (3.5)	1.7 (2.0)
CY0420AT125DS-8R2MC	M	8.2 $\pm$ 20%	178 (155)	2.3 (2.9)	1.6 (1.8)
CY0420AT125DS-100MC	N	10.0 $\pm$ 20%	190 (165)	2.0 (2.5)	1.5 (1.7)

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

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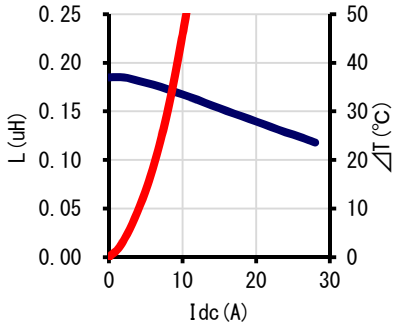


Saturation Current & Temperature Rise Graph

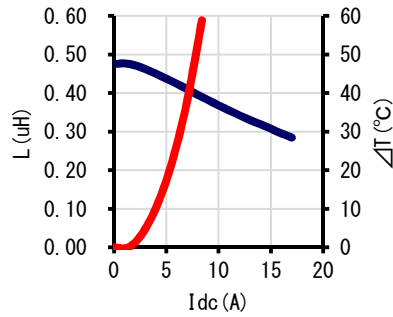
— L (25°C)

—  $\Delta T$

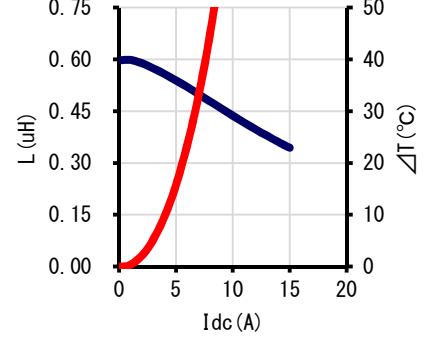
CY0420AT125DS-R22MC



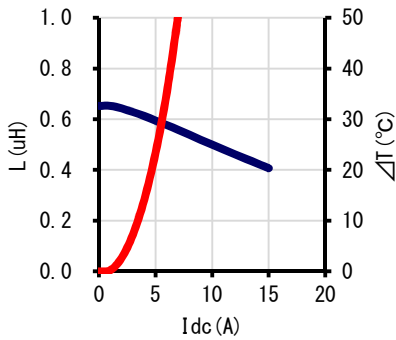
CY0420AT125DS-R47MC



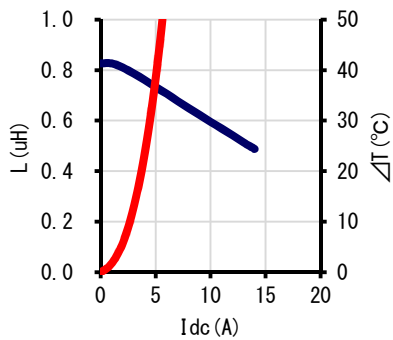
CY0420AT125DS-R56MC



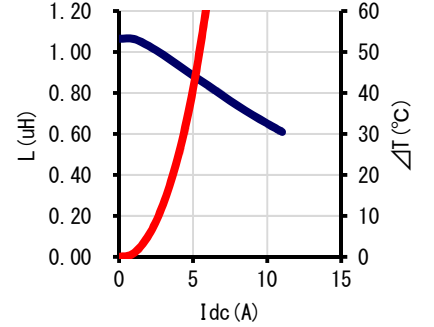
CY0420AT125DS-R68MC



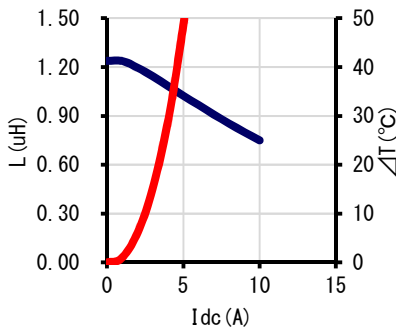
CY0420AT125DS-R82MC



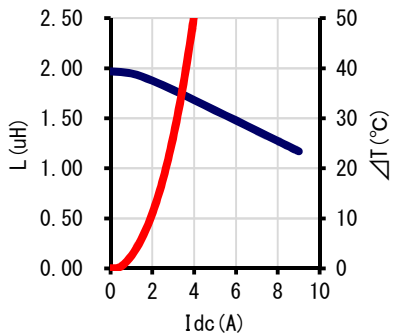
CY0420AT125DS-1R0MC



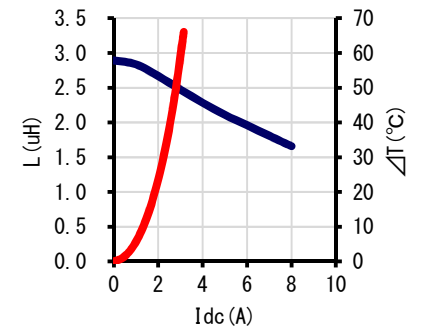
CY0420AT125DS-1R2MC



CY0420AT125DS-2R2MC



CY0420AT125DS-3R3MC



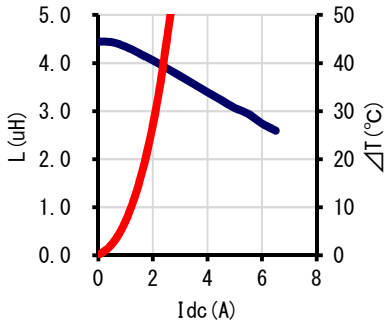
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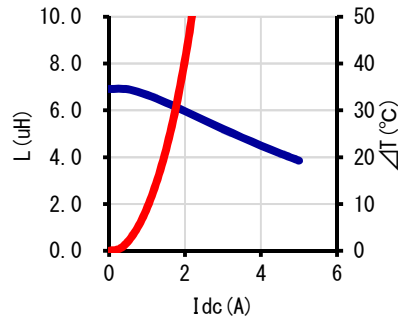


Saturation Current & Temperature Rise Graph — L (25°C) —  $\Delta T$

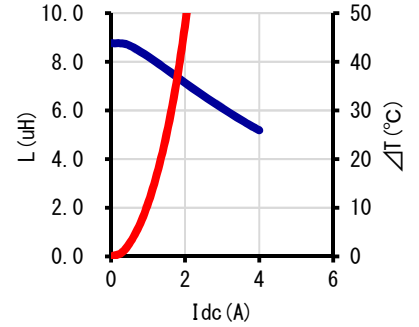
CY0420AT125DS-4R7MC



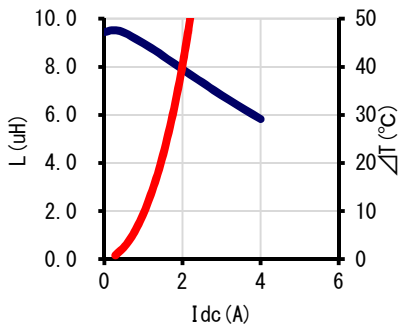
CY0420AT125DS-6R8MC



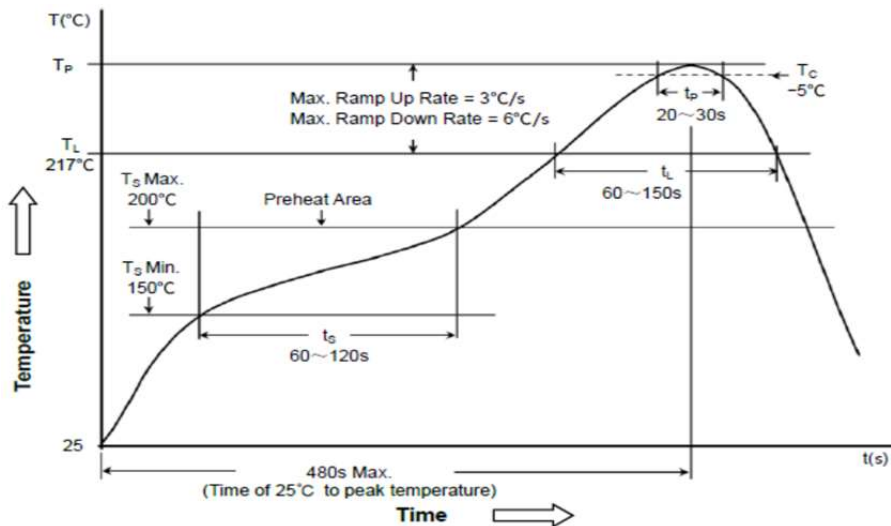
CY0420AT125DS-8R2MC



CY0420AT125DS-100MC



## Solder Reflow Condition



For sales office information, please visit our website (<https://www.sumida.com/>).

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