

# SMD Power Inductor CR54



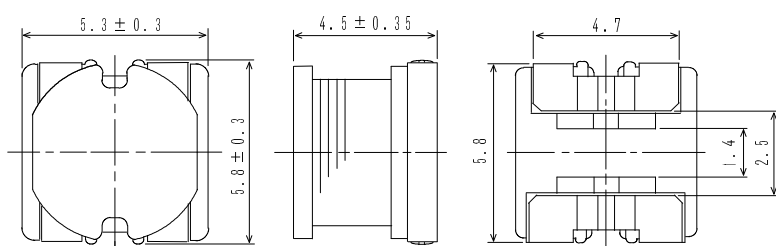
Halogen  
Free



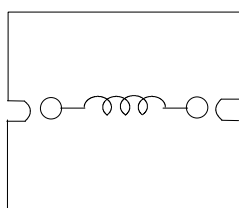
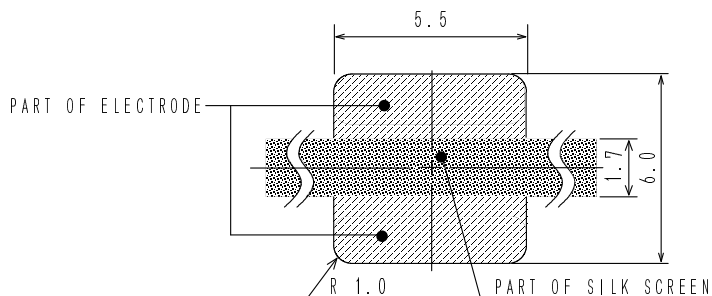
## Description

- Ferrite drum core construction.
- Magnetically unshielded.
- L × W × H: 6.1 × 5.6 × 4.85 mm Max.
- Product weight: 0.41g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.
- Halogen Free available.

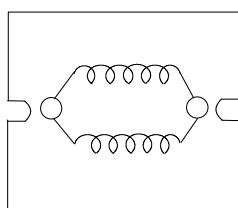
## Dimension - [mm]



## Land pattern and Schematics - [mm]



10 μH ~ 220 μH



2.2 μH ~ 8.5 μH

## Environmental Data

- Operating temperature range: -40°C ~ +100°C (including coil's self temperature rise)
- Storage temperature range: -40°C ~ +100°C
- Solder reflow temperature: 260 °C peak.

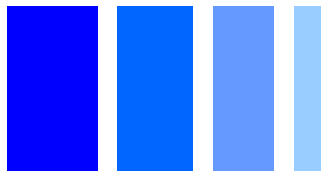
## Packaging

- Carrier tape and reel packaging
- 12.9" diameter reel
- 1500pcs per reel

## Applications

- Ideally used in A/V equipment, LCD TV, DSC/DVC, Game Machine, DVC, HDD, Notebook PC, etc as DC-DC converter inductors.

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## Electrical Characteristics

| Part Name    | Stamp | Inductance<br>( $\mu$ H)<br>[ within ] ※ 1 | D.C.R. ( $\Omega$ )<br>[Max.]<br>(at 20°C) | Rated Current<br>(A)※2 |
|--------------|-------|--------------------------------------------|--------------------------------------------|------------------------|
| CR54NP-2R2MC | 2R2   | 2.2 $\pm$ 20 %                             | 23.4m                                      | 3.84                   |
| CR54NP-2R7MC | 2R7   | 2.7 $\pm$ 20 %                             | 26.0m                                      | 3.44                   |
| CR54NP-3R3MC | 3R3   | 3.3 $\pm$ 20 %                             | 28.6m                                      | 3.20                   |
| CR54NP-3R9MC | 3R9   | 3.9 $\pm$ 20 %                             | 35.1m                                      | 3.00                   |
| CR54NP-4R4MC | 4R4   | 4.4 $\pm$ 20 %                             | 39.0m                                      | 2.80                   |
| CR54NP-5R0MC | 5R0   | 5.0 $\pm$ 20 %                             | 44.2m                                      | 2.60                   |
| CR54NP-5R6MC | 5R6   | 5.6 $\pm$ 20 %                             | 49.4m                                      | 2.48                   |
| CR54NP-6R4MC | 6R4   | 6.4 $\pm$ 20 %                             | 52.0m                                      | 2.20                   |
| CR54NP-7R6MC | 7R6   | 7.6 $\pm$ 20 %                             | 62.4m                                      | 2.08                   |
| CR54NP-8R5MC | 8R5   | 8.5 $\pm$ 20 %                             | 67.6m                                      | 1.84                   |
| CR54NP-100MC | 100   | 10 $\pm$ 20 %                              | 0.10                                       | 1.44                   |
| CR54NP-120MC | 120   | 12 $\pm$ 20 %                              | 0.12                                       | 1.40                   |
| CR54NP-150MC | 150   | 15 $\pm$ 20 %                              | 0.14                                       | 1.30                   |
| CR54NP-180MC | 180   | 18 $\pm$ 20 %                              | 0.15                                       | 1.23                   |
| CR54NP-220MC | 220   | 22 $\pm$ 20 %                              | 0.18                                       | 1.11                   |
| CR54NP-270MC | 270   | 27 $\pm$ 20 %                              | 0.20                                       | 0.97                   |
| CR54NP-330LC | 330   | 33 $\pm$ 15 %                              | 0.23                                       | 0.88                   |
| CR54NP-390LC | 390   | 39 $\pm$ 15 %                              | 0.32                                       | 0.80                   |
| CR54NP-470LC | 470   | 47 $\pm$ 15 %                              | 0.37                                       | 0.72                   |
| CR54NP-560KC | 560   | 56 $\pm$ 10 %                              | 0.42                                       | 0.68                   |
| CR54NP-680KC | 680   | 68 $\pm$ 10 %                              | 0.46                                       | 0.61                   |
| CR54NP-820KC | 820   | 82 $\pm$ 10 %                              | 0.60                                       | 0.58                   |
| CR54NP-101KC | 101   | 100 $\pm$ 10 %                             | 0.70                                       | 0.52                   |
| CR54NP-121KC | 121   | 120 $\pm$ 10 %                             | 0.93                                       | 0.48                   |
| CR54NP-151KC | 151   | 150 $\pm$ 10 %                             | 1.10                                       | 0.40                   |
| CR54NP-181KC | 181   | 180 $\pm$ 10 %                             | 1.38                                       | 0.38                   |
| CR54NP-221KC | 221   | 220 $\pm$ 10 %                             | 1.57                                       | 0.35                   |

※1. Inductance measuring frequency: 2.2  $\mu$  H  $\sim$  8.5  $\mu$  H ; at 7.96 MHz  
 10  $\mu$  H  $\sim$  82  $\mu$  H ; at 2.52 MHz  
 100  $\mu$  H  $\sim$  220  $\mu$  H ; at 1 kHz

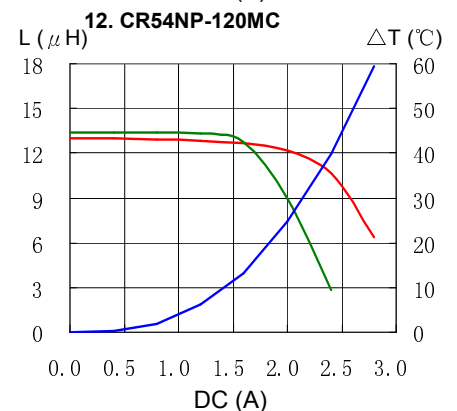
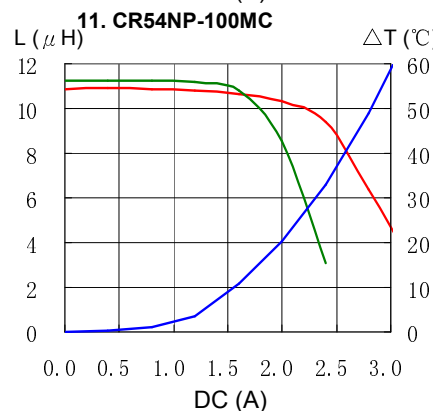
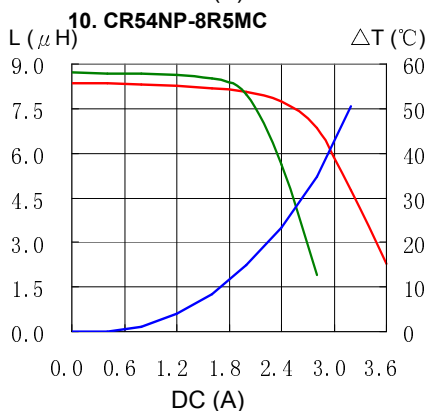
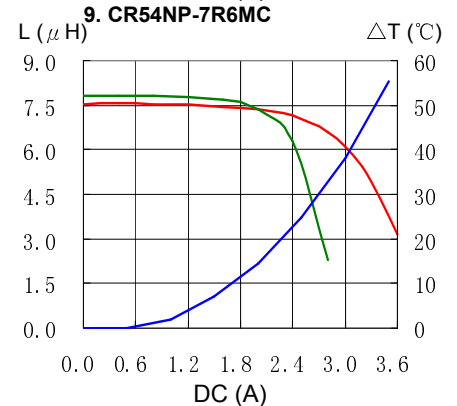
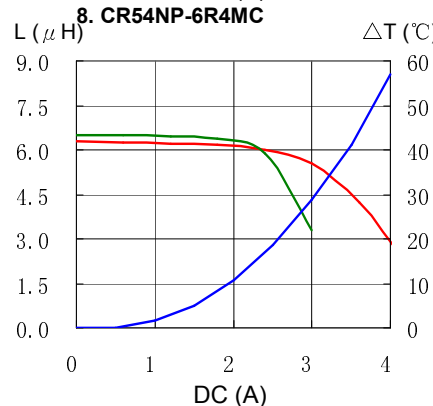
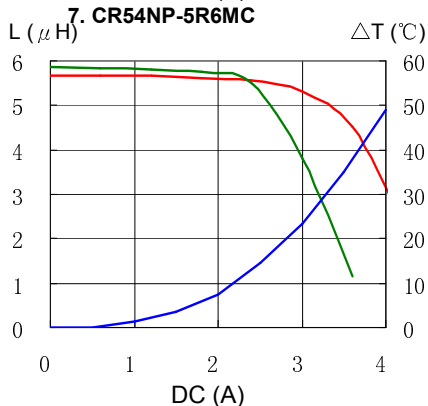
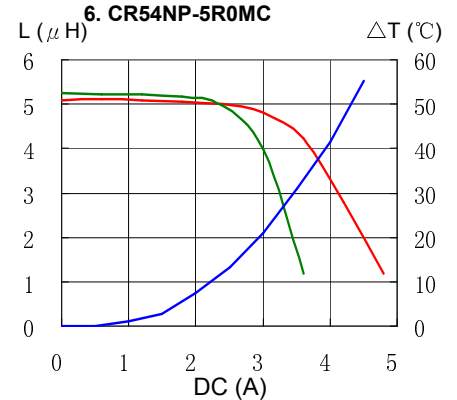
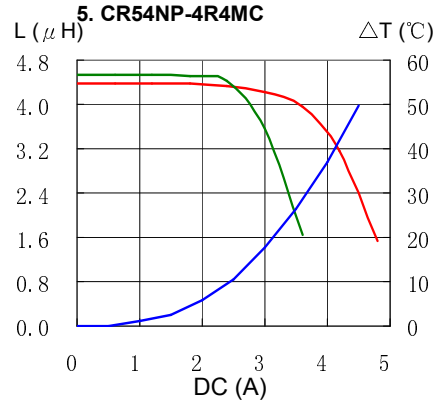
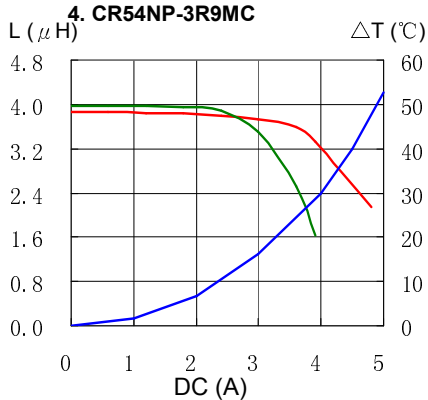
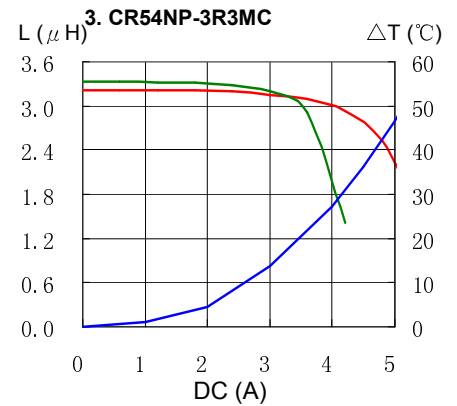
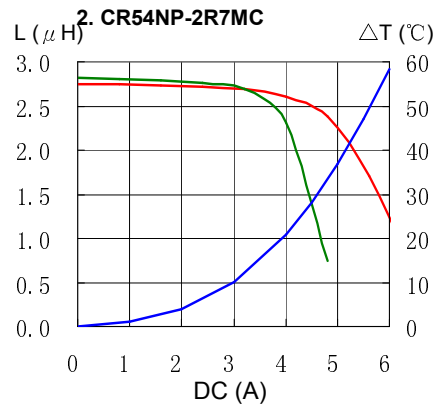
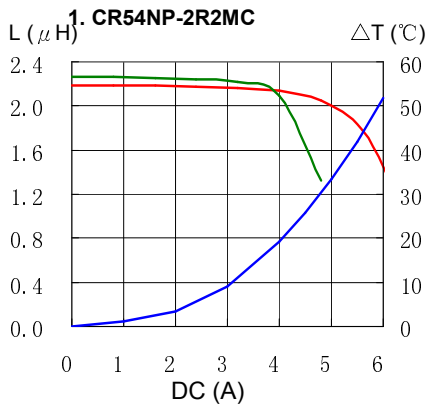
※2. Rated current: The D.C. current at which the inductance decreases to 90% of it's initial value or when  $\Delta t=40^{\circ}\text{C}$ , whichever is lower ( $T_a=20^{\circ}\text{C}$ ).

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## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$

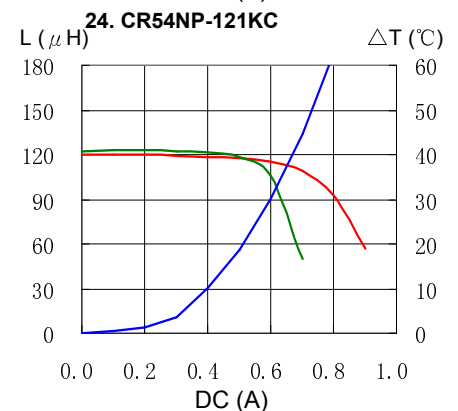
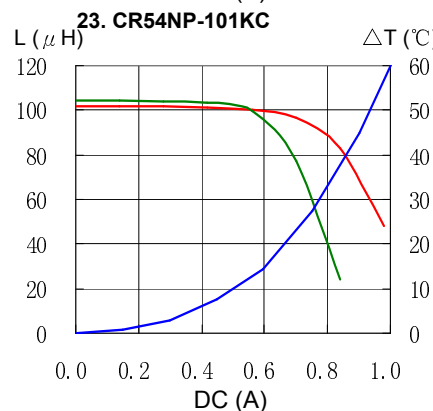
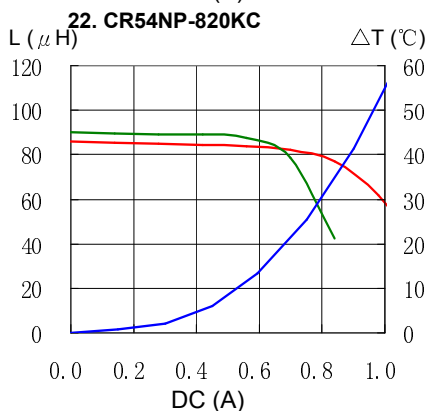
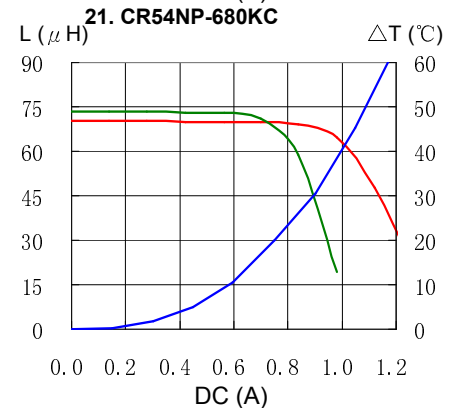
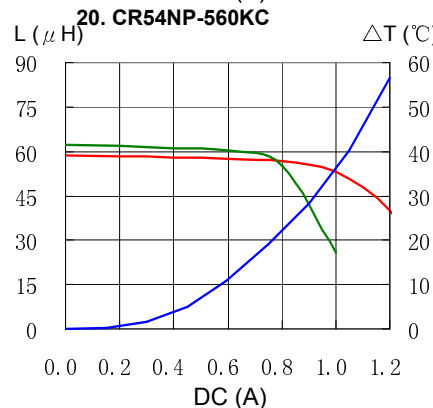
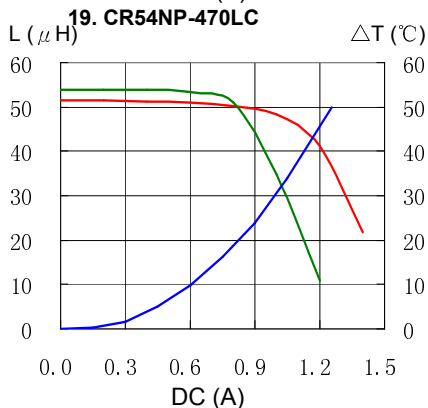
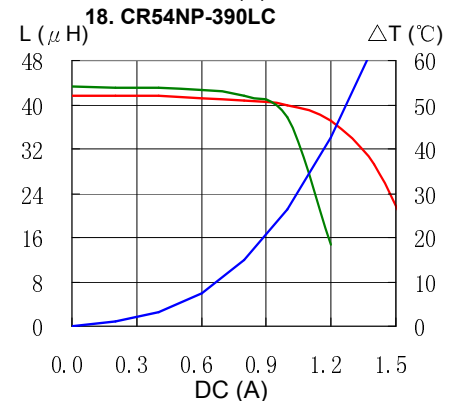
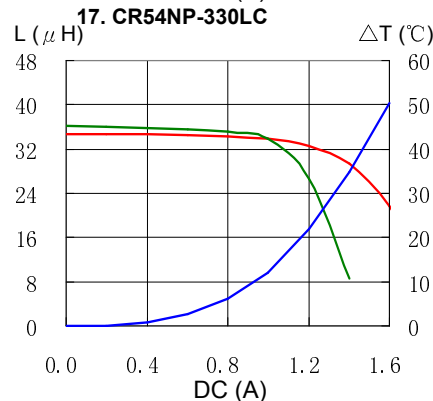
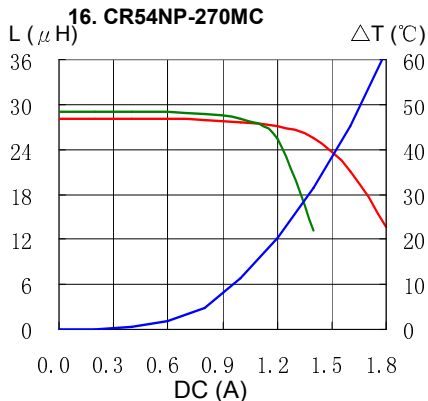
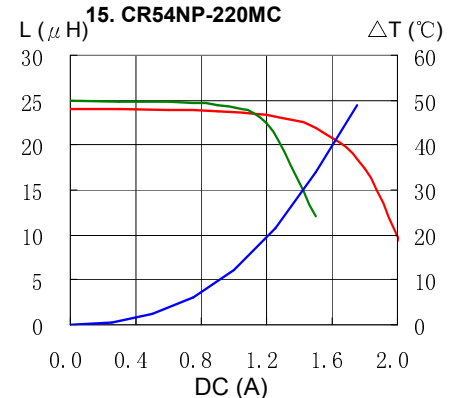
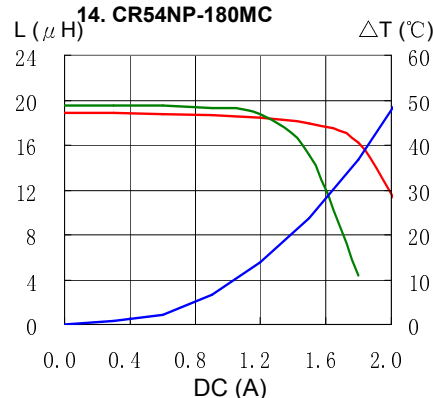
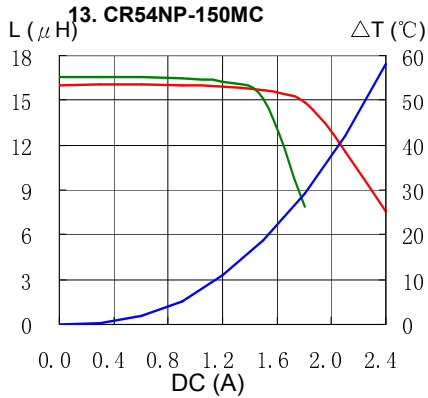


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## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$

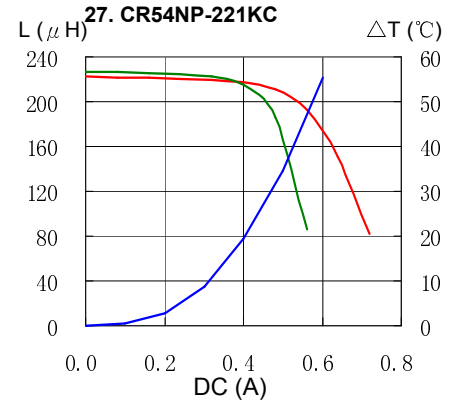
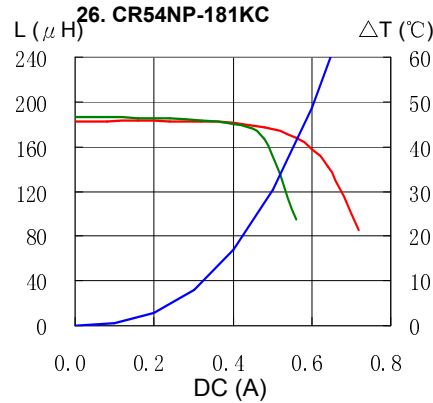
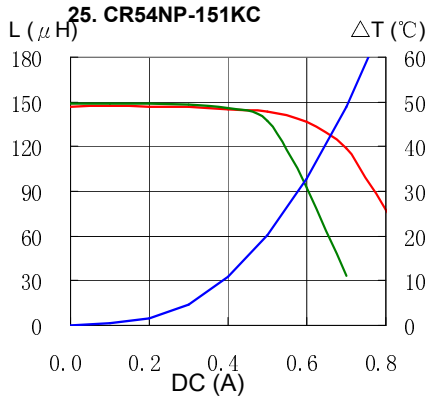


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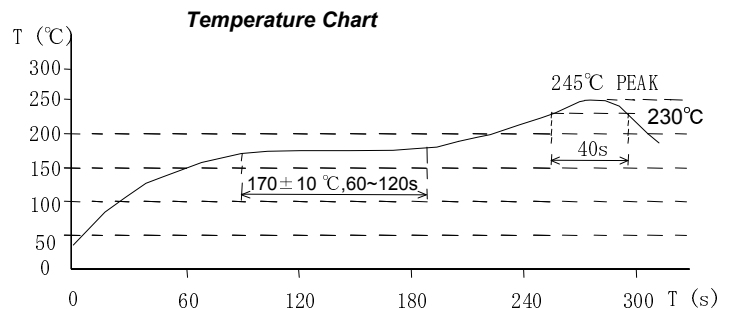
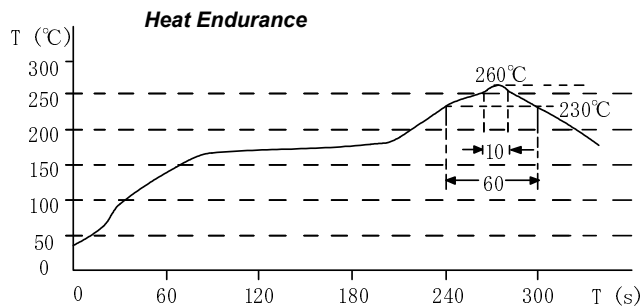


## Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) —  $\Delta T$



## Solder Reflow Condition



Please refer to the sales offices on our website - <http://www.sumida.com>

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