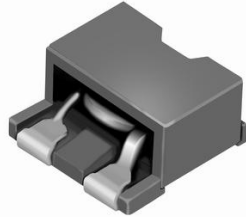




**THE DATASHEET OF
CDEP105-0R4MC-50**



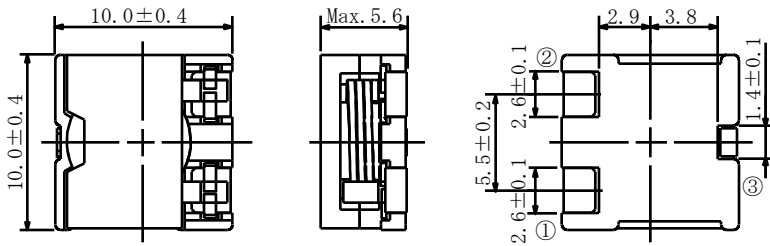
SMD Power Inductor CDEP105



Description

- Ferrite core construction.
- Magnetically shielded.
- L × W × H: 10.4 × 10.4 × 5.6 mm Max.
- Product weight: 1.5g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.

Dimension - [mm]



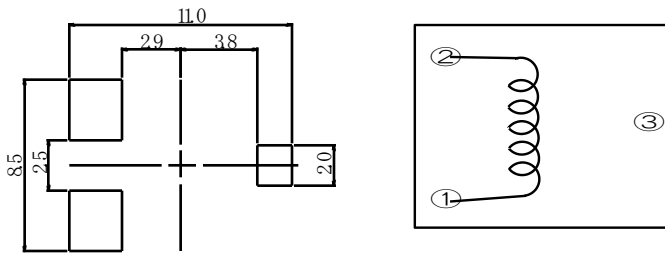
Environmental Data

- Operating temperature range: -40°C ~ +125°C (including coil's self temperature rise)
- Storage temperature range: -40°C ~ +125°C
- Solder reflow temperature: 260 °C peak.

Packaging

- Carrier tape and reel packaging
- 13.0" diameter reel
- 500pcs per reel

Land pattern and Schematics - [mm]



Applications

- Ideally used in PC and other high current power supply.

Electrical Characteristics1 – Low D.C.R. Type

| PART NO. | STAMP | INDUCTANCE (μ H) ※1 | D.C.R.. (m Ω) [MAX.] (at 20°C) | SATURATION CURRENT(A) ※2 | | TEMPERATURE RISE CURRENT (A) ※3 Δ T=40°C |
|--------------------|-------|-----------------------------|--|-----------------------------|------------|--|
| | | | | (at 20°C) | (at 100°C) | |
| CDEP105NP-0R3NC-88 | 0R3NL | 0.36 ± 30% | 1.7(1.4) | 24.0 | 20.0 | 19.0 |
| CDEP105NP-0R8MC-88 | 0R8ML | 0.8 ± 20% | 2.4(2.0) | 16.0 | 13.2 | 17.7 |
| CDEP105NP-1R4MC-88 | 1R4ML | 1.4 ± 20% | 4.1(3.4) | 12.0 | 10.0 | 13.0 |
| CDEP105NP-2R2MC-88 | 2R2ML | 2.2 ± 20% | 5.3(4.4) | 9.6 | 8.0 | 11.2 |
| CDEP105NP-3R2MC-88 | 3R2ML | 3.2 ± 20% | 7.5(6.2) | 7.8 | 6.6 | 9.0 |
| CDEP105NP-4R3MC-88 | 4R3ML | 4.3 ± 20% | 10.5(8.7) | 6.8 | 5.7 | 7.8 |
| CDEP105NP-5R7MC-88 | 5R7ML | 5.7 ± 20% | 12.4(10.3) | 5.8 | 4.9 | 7.4 |
| CDEP105NP-7R2MC-88 | 7R2ML | 7.2 ± 20% | 18.0(15.0) | 5.3 | 4.2 | 6.2 |
| CDEP105NP-8R8MC-88 | 8R8ML | 8.8 ± 20% | 23.8(19.8) | 4.8 | 4.0 | 4.9 |



Electrical Characteristics2 – Standard Type

| PART NO. | STAMP | INDUCTANCE (μH) ※1 | D.C.R. (m Ω) [MAX.] (at 20°C) | SATURATION CURRENT (A) ※2 | | TEMPERATURE RISE CURRENT (A) ※3 $\Delta T=40^\circ\text{C}$ |
|--------------------|-------|------------------------------------|---|------------------------------|------------|--|
| | | | | (at 20°C) | (at 100°C) | |
| CDEP105NP-0R2NC-50 | 0R2NS | 0.22 \pm 30% | 1.7(1.4) | 40.0 | 30.9 | 19.0 |
| CDEP105NP-0R4MC-50 | 0R4MS | 0.45 \pm 20% | 2.4(2.0) | 26.4 | 21.2 | 17.7 |
| CDEP105NP-0R8MC-50 | 0R8MS | 0.8 \pm 20% | 4.1(3.4) | 20.8 | 16.7 | 13.0 |
| CDEP105NP-1R3MC-50 | 1R3MS | 1.3 \pm 20% | 5.3(4.4) | 16.8 | 13.4 | 11.2 |
| CDEP105NP-1R8MC-50 | 1R8MS | 1.8 \pm 20% | 7.5(6.2) | 13.8 | 11.0 | 9.0 |
| CDEP105NP-2R5MC-50 | 2R5MS | 2.5 \pm 20% | 10.5(8.7) | 11.8 | 9.6 | 7.8 |
| CDEP105NP-3R2MC-50 | 3R2MS | 3.2 \pm 20% | 12.4(10.3) | 10.5 | 8.4 | 7.4 |
| CDEP105NP-4R0MC-50 | 4R0MS | 4.0 \pm 20% | 18.0(15.0) | 9.3 | 7.4 | 6.2 |
| CDEP105NP-5R0MC-50 | 5R0MS | 5.0 \pm 20% | 23.8(19.8) | 8.4 | 6.7 | 4.9 |

Electrical Characteristics3 – High Power Type

| PART NO. | STAMP | INDUCTANCE (μH) ※1 | D.C.R. (m Ω) [MAX.] (at 20°C) | SATURATION CURRENT (A) ※2 | | TEMPERATURE RISE CURRENT (A) ※3 $\Delta T=40^\circ\text{C}$ |
|--------------------|-------|------------------------------------|---|------------------------------|------------|--|
| | | | | (at 20°C) | (at 100°C) | |
| CDEP105NP-0R1NC-32 | 0R1NH | 0.15 \pm 30% | 1.7(1.4) | 55.0 | 46.0 | 19.0 |
| CDEP105NP-0R3NC-32 | 0R3NH | 0.3 \pm 30% | 2.4(2.0) | 40.0 | 33.0 | 17.7 |
| CDEP105NP-0R5MC-32 | 0R5MH | 0.5 \pm 20% | 4.1(3.4) | 30.4 | 25.0 | 13.0 |
| CDEP105NP-0R8MC-32 | 0R8MH | 0.8 \pm 20% | 5.3(4.4) | 25.2 | 20.7 | 11.2 |
| CDEP105NP-1R2MC-32 | 1R2MH | 1.2 \pm 20% | 7.5(6.2) | 21.0 | 17.4 | 9.0 |
| CDEP105NP-1R5MC-32 | 1R5MH | 1.5 \pm 20% | 10.5(8.7) | 18.0 | 15.0 | 7.8 |
| CDEP105NP-2R0MC-32 | 2R0MH | 2.0 \pm 20% | 12.4(10.3) | 15.8 | 13.1 | 7.4 |
| CDEP105NP-2R5MC-32 | 2R5MH | 2.5 \pm 20% | 18.0(15.0) | 14.0 | 11.7 | 6.2 |
| CDEP105NP-3R0MC-32 | 3R0MH | 3.0 \pm 20% | 23.8(19.8) | 12.6 | 10.5 | 4.9 |

※1. Measuring condition: at 100kHz.

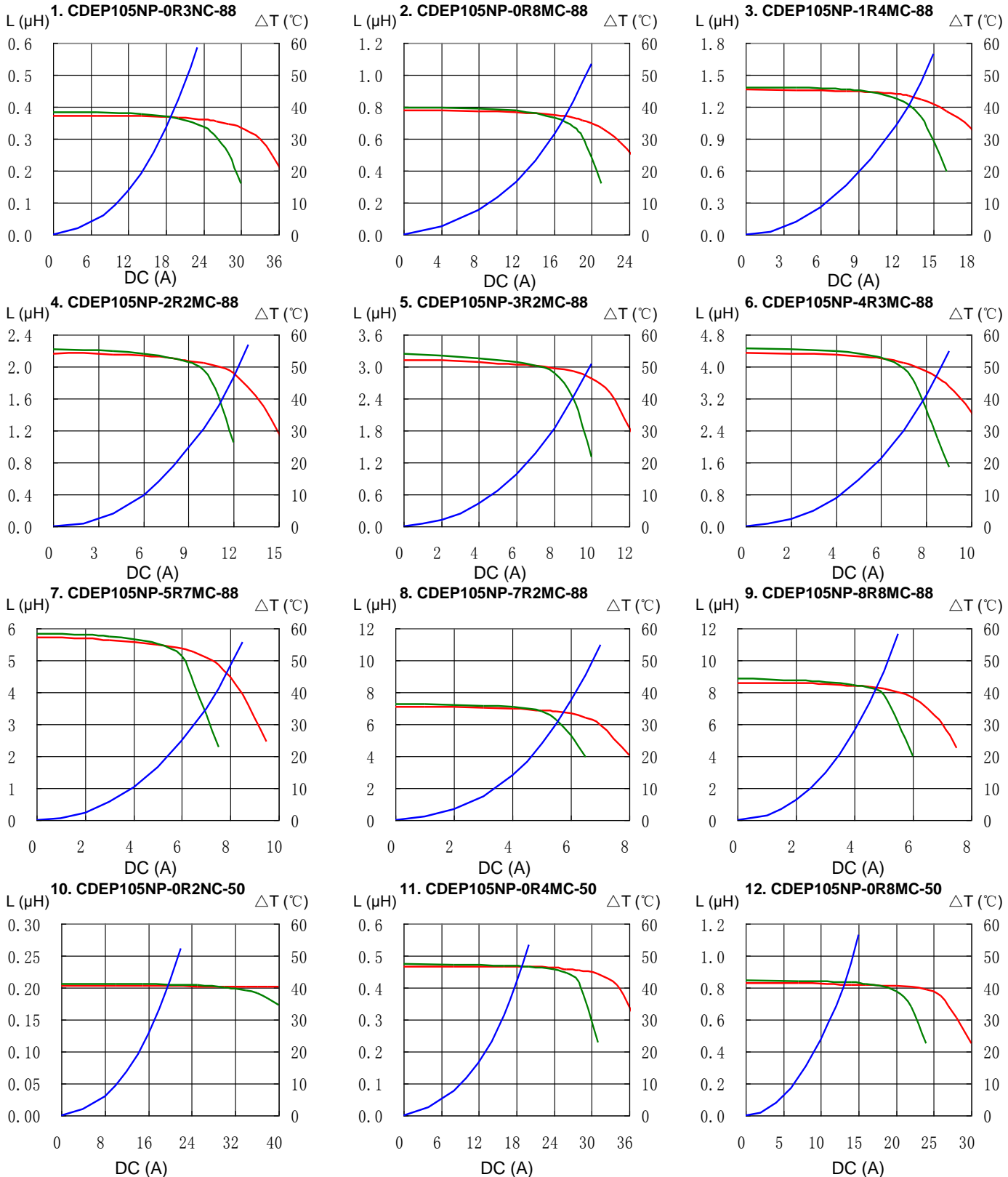
※2. Saturation current: The value of D.C. current when the inductance decreases to 65% (while the tolerance is $\pm 30\%$) or 75% (while the tolerance is $\pm 20\%$) of it's nominal.

※3. Temperature rise current: The value of D.C. current when the temperature rise is $\Delta t=40^\circ\text{C}$ ($T_a=20^\circ\text{C}$).

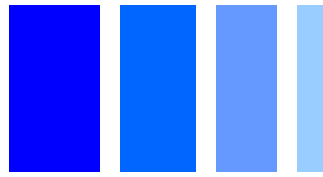


Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) — ΔT

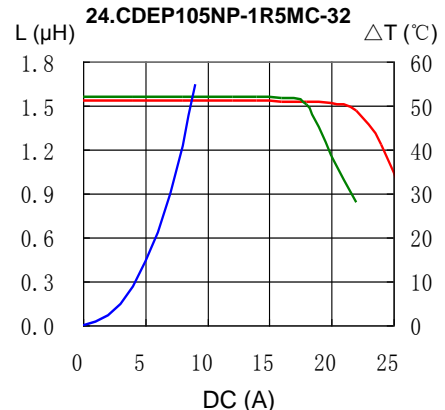
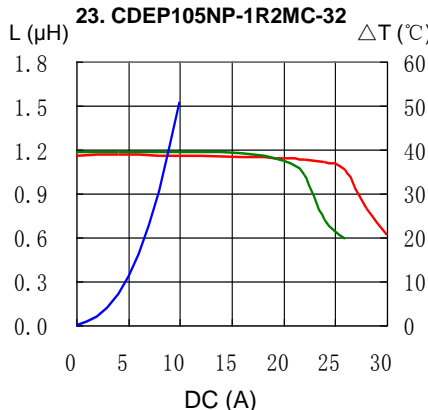
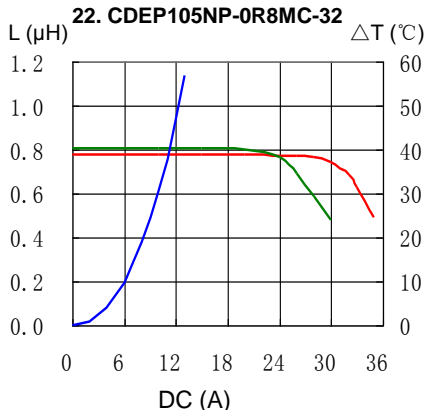
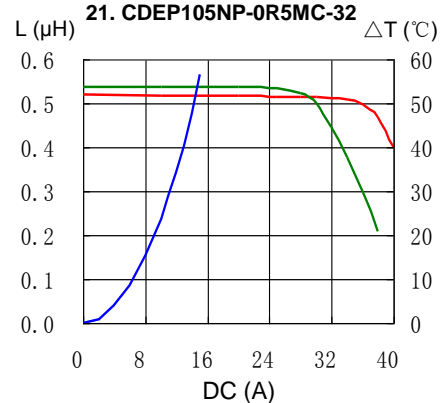
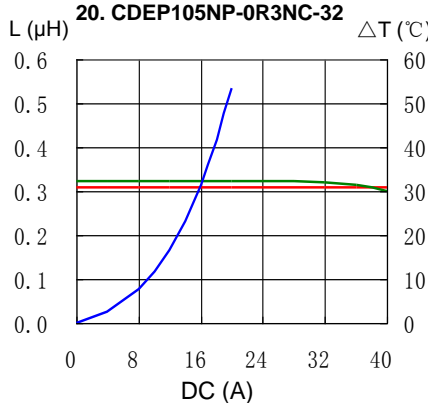
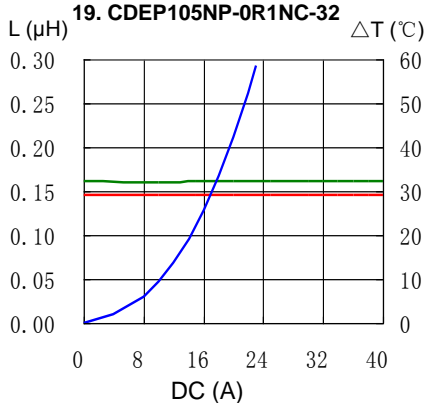
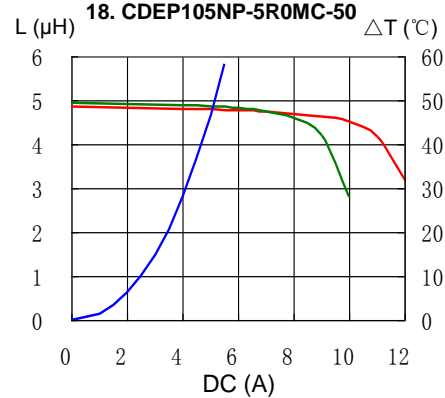
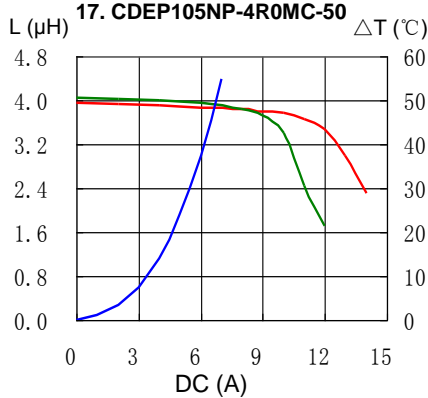
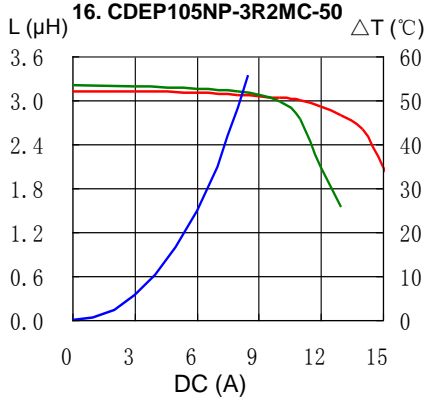
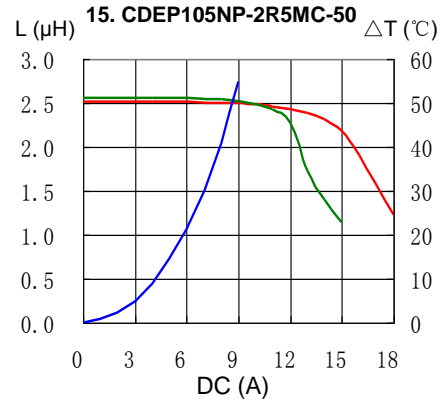
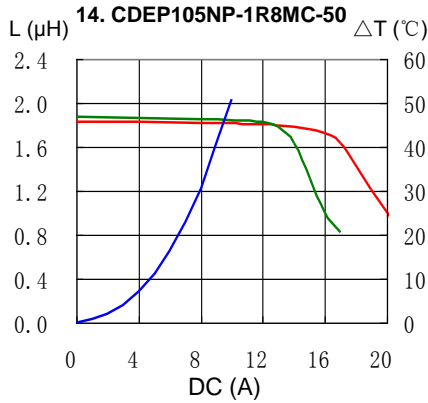
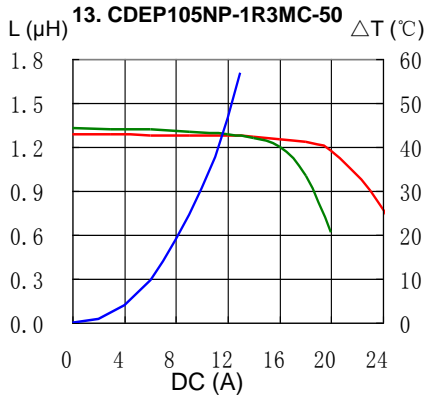


SMD Power Inductor CDEP105



Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) — ΔT

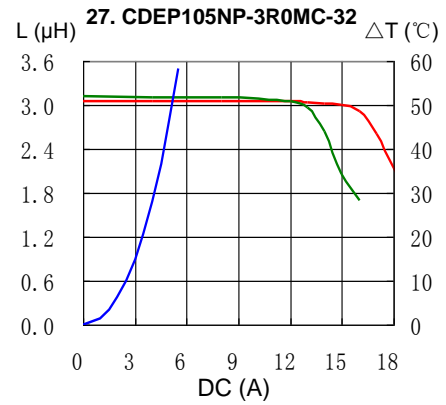
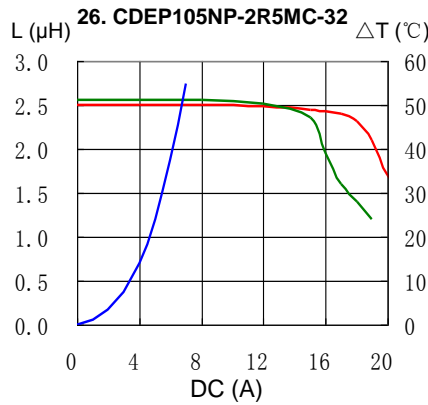
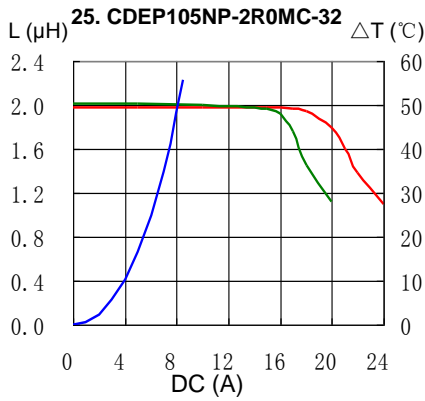


SMD Power Inductor CDEP105



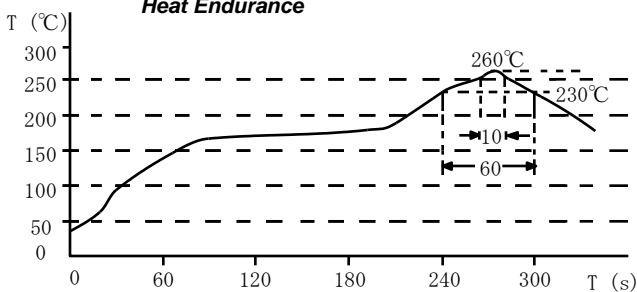
Saturation Current & Temperature Rise Graph

— L (20°C) — L (100°C) — ΔT

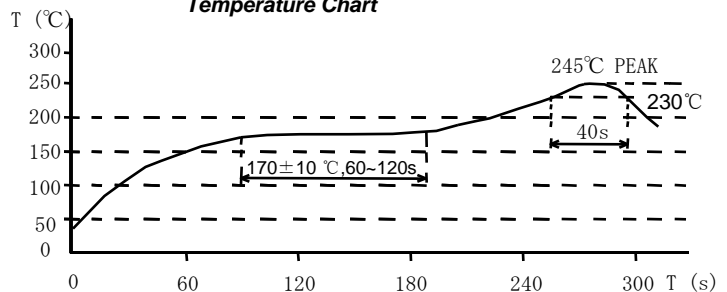


Solder Reflow Condition

Heat Endurance



Temperature Chart



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Hong Kong

Tel.+852-2880-6781
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Saitama(Japan)

Tel.+81-48-691-7300
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Tel.+1-847-545-6700
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Shanghai

Tel.+86-21-5836-3299
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shanghai.sales@cn.sumida.com

Seoul

Tel.+82-2-6237-0777
FAX.+82-2-6237-0778
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Obernzell

Tel.+49-8591-937-0
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Shenzhen

Tel.+86-755-8291-0228
FAX.+86-755-8291-0338
shenzhen.sales@cn.sumida.com

Singapore

Tel.+65-6296-3388
FAX.+65-6841-4426
sales@sg.sumida.com

Neumarkt

Tel.+49-9181-4509-110
FAX. +49-9181-4509-310
infocomp@eu.sumida.com

Taipei

Tel.+886-2-8751-2737
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