

Low-Profile High Current Power Inductor

CDEP13D76/T150



Discription

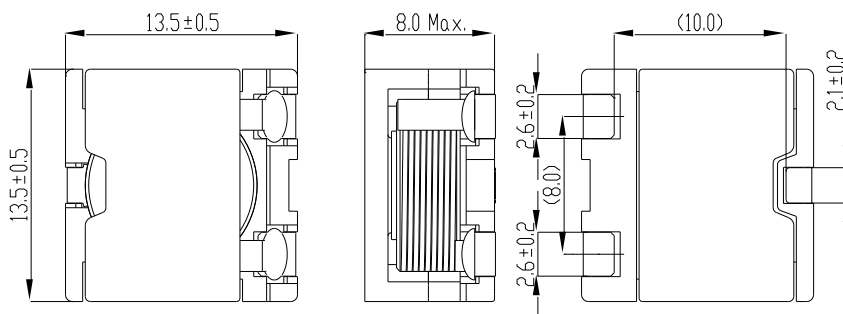
- Inductor for high withstand voltage (DC 120V) and large current
- Magnetically shielded
- Qualified AEC-Q200
- Operating temperature range: -40°C~ +150°C (including coil's self temperature rise)



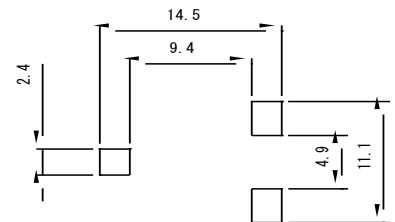
Applications

- LED head light for automobile.
- ECU
- Automotive and other high temperature, high reliability application

Dimension - [mm]



Reference Land pattern – [mm]



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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Electrical Characteristics: Standard Types

| Part No. | Inductance (μ H) ($\pm 20\%$) ※1 | D.C.R. (m Ω) ($\pm 20\%$) Max. (Typ.) | Saturation Current (A) Max. (Typ.) ※2 | | Temperature Rise Current (A) Max. (Typ.) ※3 |
|---------------------------|---|---|--|-------------|---|
| | | | at 20°C | at 150°C | |
| CDEP13D76T150NP-1R0MC-105 | 1.00 | 2.30 (1.98) | 24.8 (31.0) | 16.8 (21.0) | 17.0 (20.0) |
| CDEP13D76T150NP-1R6MC-105 | 1.60 | 3.12 (2.60) | 20.0 (25.0) | 13.6 (17.0) | 15.0 (17.8) |
| CDEP13D76T150NP-2R4MC-105 | 2.40 | 3.96 (3.30) | 16.8 (21.0) | 12.0 (15.0) | 14.0 (16.1) |
| CDEP13D76T150NP-3R6MC-105 | 3.60 | 4.68 (3.90) | 13.8 (17.2) | 9.20 (11.5) | 13.0 (15.0) |
| CDEP13D76T150NP-5R1MC-105 | 5.10 | 5.76 (4.80) | 11.7 (14.6) | 8.20 (10.3) | 11.4 (13.0) |
| CDEP13D76T150NP-6R8MC-105 | 6.80 | 7.08 (5.90) | 10.2 (12.7) | 7.20 (9.00) | 10.3 (11.5) |
| CDEP13D76T150NP-100MC-105 | 10.0 | 12.4 (10.3) | 8.40 (10.5) | 5.80 (7.30) | 7.50 (8.50) |
| CDEP13D76T150NP-120MC-105 | 12.5 | 16.1 (13.4) | 7.40 (9.30) | 5.20 (6.50) | 6.50 (7.50) |
| CDEP13D76T150NP-150MC-105 | 15.0 | 18.2 (15.2) | 6.60 (8.50) | 4.90 (6.20) | 6.00 (7.00) |
| CDEP13D76T150NP-220MC-105 | 22.0 | 28.1 (23.4) | 5.50 (6.90) | 3.80 (4.70) | 4.60 (5.30) |

Electrical Characteristics: High Power Types

| Part No. | Inductance (μ H) ($\pm 20\%$) ※1 | D.C.R. (m Ω) ($\pm 20\%$) Max. (Typ.) | Saturation Current (A) Max. (Typ.) ※2 | | Temperature Rise Current (A) Max. (Typ.) ※3 |
|--------------------------|---|---|--|-------------|--|
| | | | at 20°C | at 150°C | |
| CDEP13D76T150NP-0R8MC-90 | 0.80 | 2.38 (1.98) | 32.0 (40.0) | 21.6 (27.0) | 17.0 (20.0) |
| CDEP13D76T150NP-1R5MC-90 | 1.50 | 3.12 (2.60) | 22.8 (28.5) | 15.2 (19.0) | 15.0 (17.8) |
| CDEP13D76T150NP-2R2MC-90 | 2.20 | 3.96 (3.30) | 19.6 (24.5) | 13.2 (16.5) | 14.1 (16.1) |
| CDEP13D76T150NP-3R3MC-90 | 3.30 | 4.68 (3.90) | 15.5 (19.4) | 11.4 (14.2) | 13.0 (15.0) |
| CDEP13D76T150NP-4R3MC-90 | 4.30 | 5.76 (4.80) | 13.8 (17.2) | 9.80 (12.2) | 11.4 (13.0) |
| CDEP13D76T150NP-6R8MC-90 | 6.80 | 8.88 (7.40) | 11.0 (13.7) | 7.60 (9.50) | 8.70 (10.0) |
| CDEP13D76T150NP-100MC-90 | 10.0 | 16.1 (13.4) | 9.00 (11.3) | 6.20 (7.70) | 6.50 (7.50) |
| CDEP13D76T150NP-120MC-90 | 12.5 | 18.2 (15.2) | 8.20 (10.2) | 5.80 (7.20) | 6.00 (7.00) |
| CDEP13D76T150NP-150MC-90 | 15.0 | 23.9 (19.9) | 7.40 (9.30) | 5.20 (6.50) | 5.10 (6.00) |
| CDEP13D76T150NP-220MC-90 | 22.0 | 36.5 (30.4) | 6.00 (7.50) | 4.30 (5.40) | 4.00 (4.70) |

※1 Measuring frequency at 100kHz, 0.1V

※2 Saturation current: This indicates the actual value of D.C. current when the inductance becomes 30% lower than its nominal value.

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

Note: Please note that when using the product while applying current with audio-frequency (AF) signals may result in audible noises due to magnetostriction. Also, in order to avoid an audible noise problem, operating with non-AF signals would be recommended. The noise amplifies depending on the coil mount area on the PCB.

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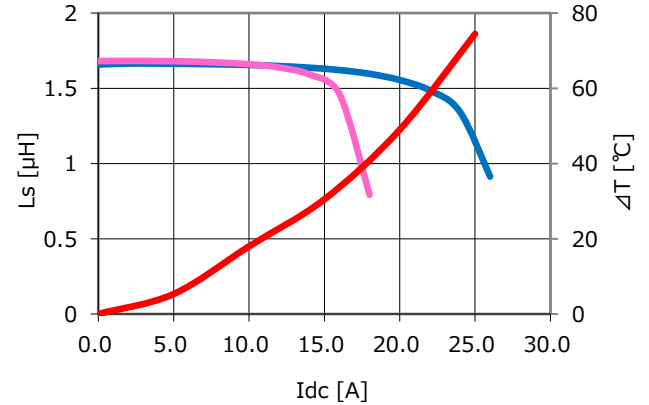
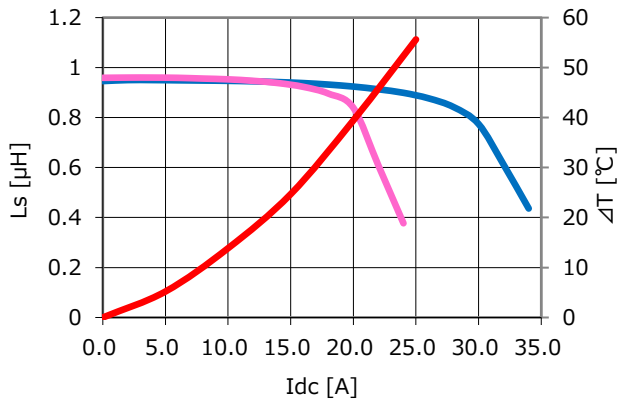
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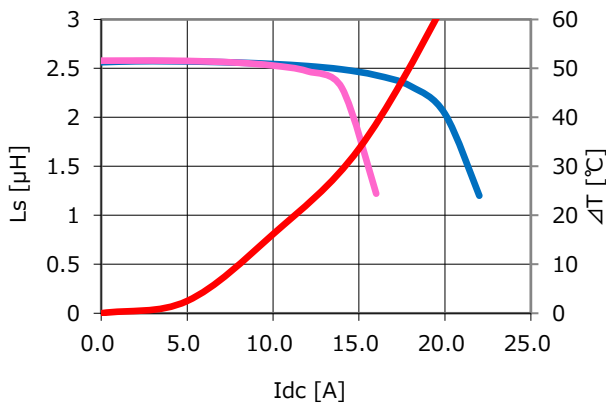


<Standard Types>

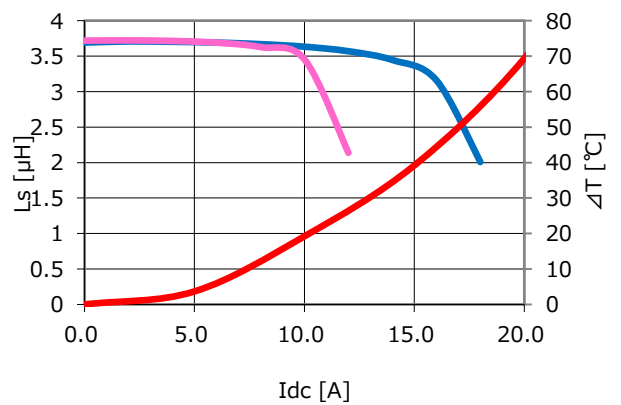
Saturation Current & Temperature Rise Graph — L (20°C) — L (150°C) — ΔT



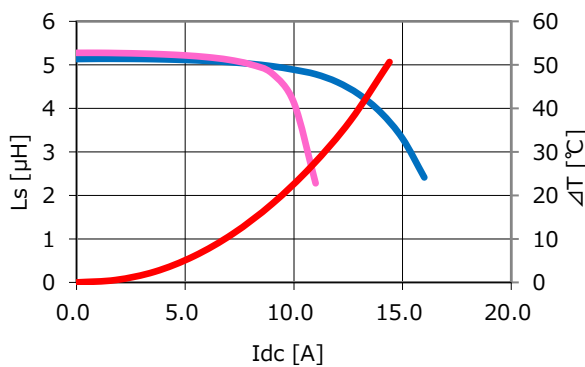
CDEP13D76T150NP-2R4MC-105



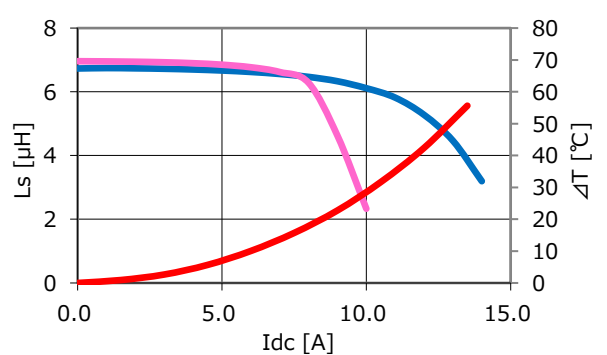
CDEP13D76T150NP-3R6MC-105



CDEP13D76T150NP-5R1MC-105



CDEP13D76T150NP-6R8MC-105



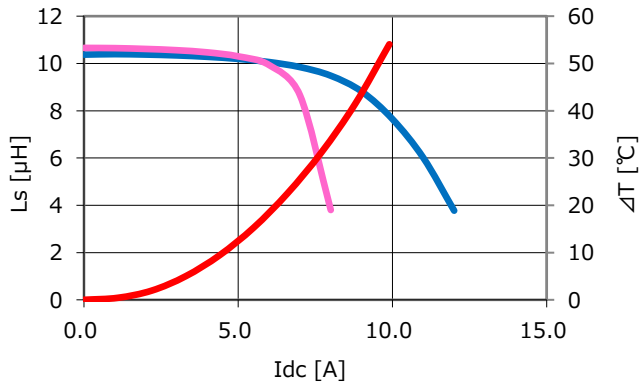
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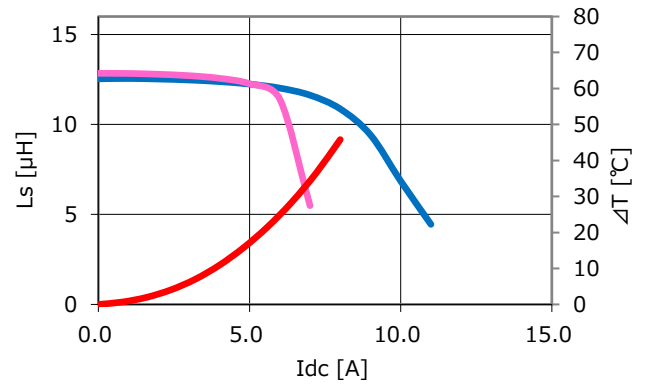
CDEP13D76/T150



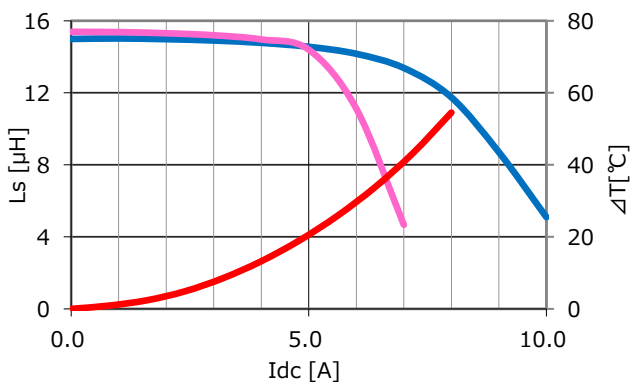
CDEP13D76T150NP-100MC-105



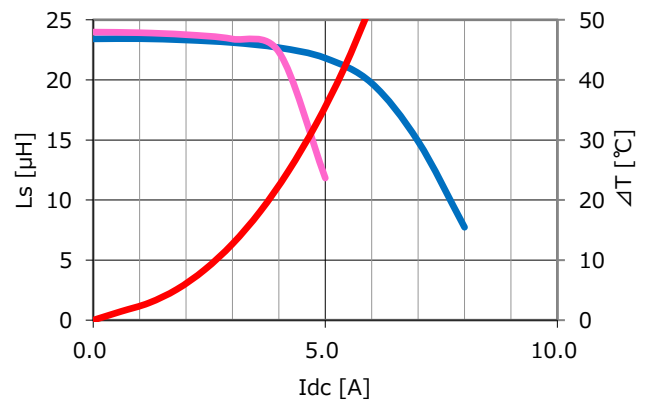
CDEP13D76T150NP-120MC-105



CDEP13D76T150NP-150MC-105



CDEP13D76T150NP-220MC-105



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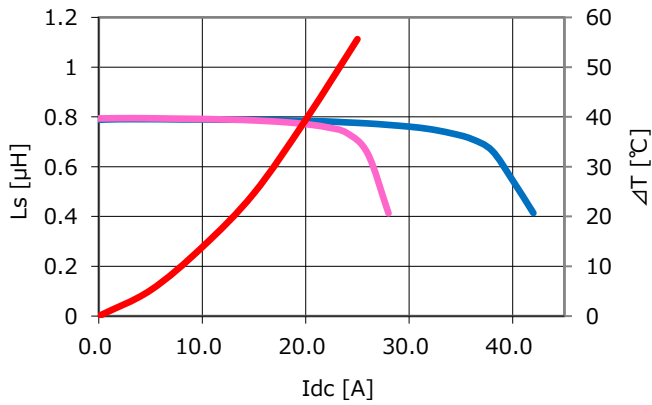
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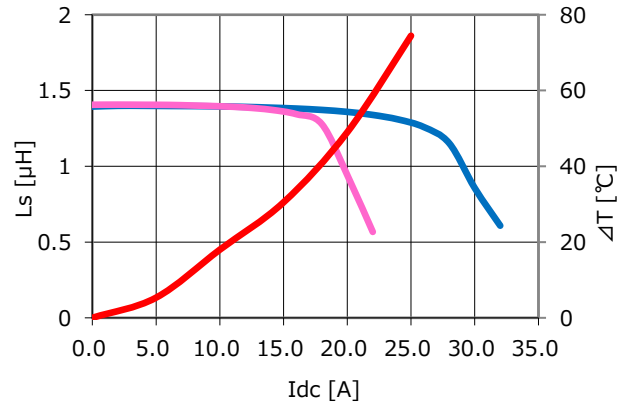


<High Power Types>

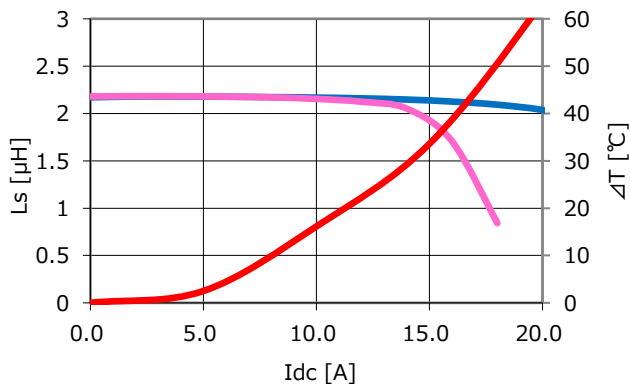
CDEP13D76T150NP-0R8MC-90



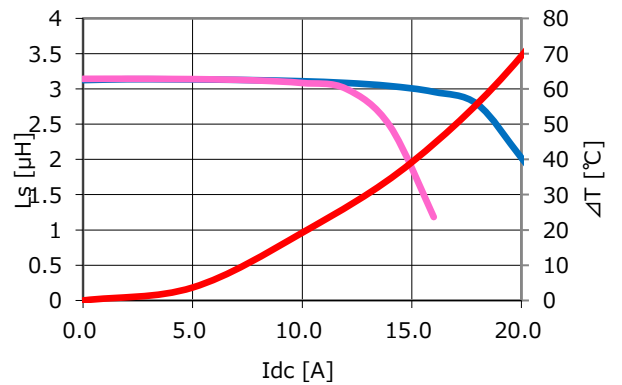
CDEP13D76T150NP-1R5MC-90



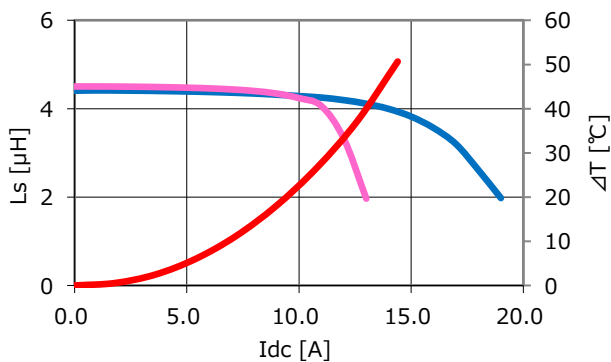
CDEP13D76T150NP-2R2MC-90



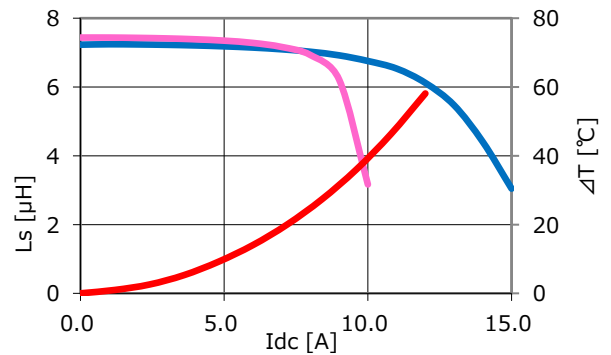
CDEP13D76T150NP-3R3MC-90



CDEP13D76T150NP-4R3MC-90



CDEP13D76T150NP-6R8MC-90



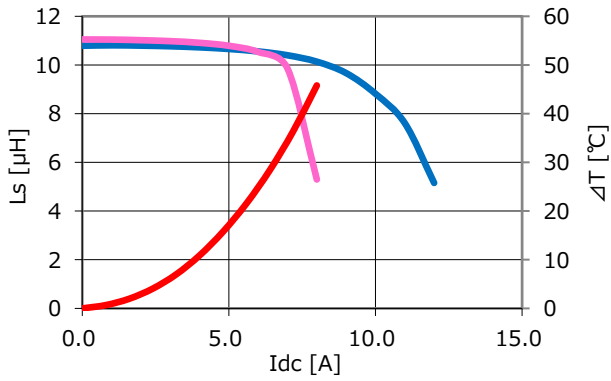
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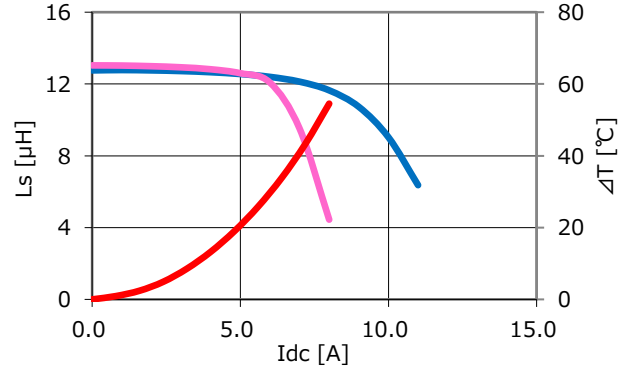
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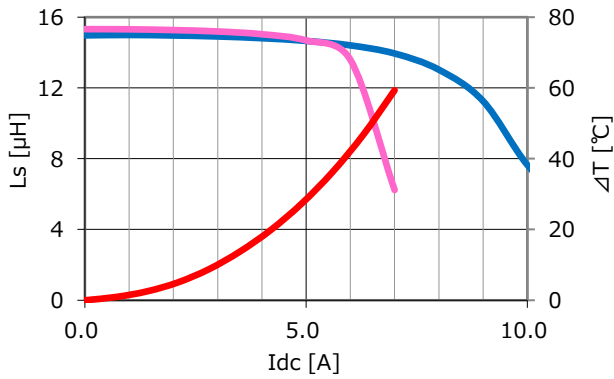
CDEP13D76T150NP-100MC-90



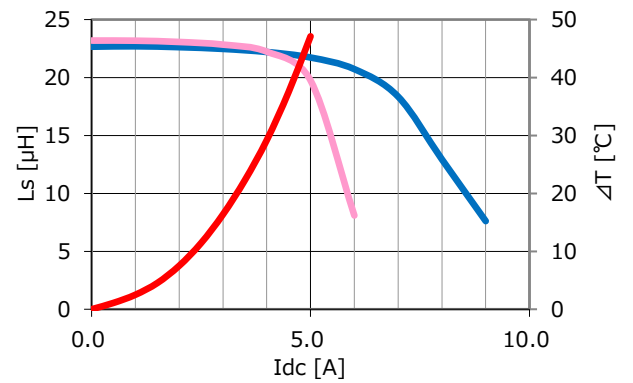
CDEP13D76T150NP-120MC-90



CDEP13D76T150NP-150MC-90



CDEP13D76T150NP-220MC-90



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