



**THE DATASHEET OF
CDEP15D90T150NP-4R7MC-125**



Low-Profile High Current Power Inductor CDEP15D90/T150



Description

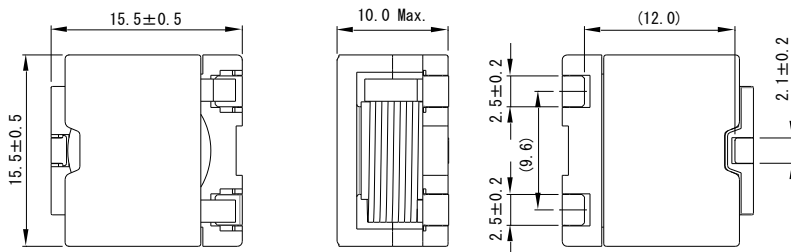
- Inductor for high withstand voltage (DC 120V) and large current
- Magnetically shielded
- Qualified AEC-Q200
- Operating temperature range: - 40°C~+150°C
(including coil's self temperature rise)



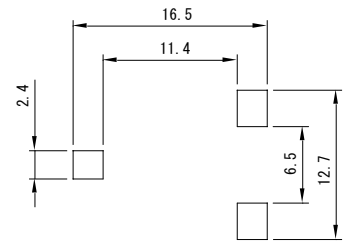
Applications

- 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.

Low-Profile High Current Power Inductor CDEP15D90/T150



Electrical Characteristics: Standard Types

| Part No. | Inductance (μH) ($\pm 20\%$) ※1 | D.C.R (m Ω) ($\pm 20\%$) | Saturation Current (A) ※2 | | Temperature Rise current (A) ※3 |
|---------------------------|--|---------------------------------------|------------------------------|----------|------------------------------------|
| | | | at 20°C | at 150°C | |
| CDEP15D90T150NP-0R5MC-125 | 0.50 | 1.20 | 63.0 | 43.0 | 33.5 |
| CDEP15D90T150NP-1R2MC-125 | 1.20 | 1.75 | 41.9 | 28.5 | 24.5 |
| CDEP15D90T150NP-2R0MC-125 | 2.00 | 2.40 | 31.0 | 22.0 | 23.0 |
| CDEP15D90T150NP-3R3MC-125 | 3.30 | 2.90 | 25.0 | 17.0 | 18.5 |
| CDEP15D90T150NP-4R7MC-125 | 4.70 | 3.50 | 21.3 | 14.8 | 16.5 |
| CDEP15D90T150NP-6R2MC-125 | 6.20 | 4.90 | 18.5 | 13.0 | 14.8 |
| CDEP15D90T150NP-100MC-125 | 10.0 | 7.90 | 15.0 | 10.5 | 12.5 |
| CDEP15D90T150NP-120MC-125 | 12.5 | 8.90 | 12.8 | 9.50 | 12.2 |
| CDEP15D90T150NP-150MC-125 | 15.0 | 10.6 | 12.0 | 8.20 | 8.50 |
| CDEP15D90T150NP-220MC-125 | 22.0 | 14.5 | 9.70 | 6.60 | 7.50 |

Electrical Characteristics: High Power Types

| Part No. | Inductance (μH) ($\pm 20\%$) ※1 | D.C.R (m Ω) ($\pm 20\%$) | Saturation Current (A) ※2 | | Temperature Rise current (A) ※3 |
|---------------------------|--|---------------------------------------|------------------------------|----------|------------------------------------|
| | | | at 20°C | at 150°C | |
| CDEP15D90T150NP-1R0MC-100 | 1.00 | 1.75 | 51.6 | 35.8 | 24.5 |
| CDEP15D90T150NP-1R6MC-100 | 1.60 | 2.40 | 42.0 | 28.0 | 23.0 |
| CDEP15D90T150NP-2R4MC-100 | 2.40 | 2.90 | 34.5 | 24.5 | 18.5 |
| CDEP15D90T150NP-3R6MC-100 | 3.60 | 3.50 | 26.5 | 18.5 | 16.5 |
| CDEP15D90T150NP-4R7MC-100 | 4.70 | 4.90 | 24.0 | 16.7 | 14.8 |
| CDEP15D90T150NP-6R8MC-100 | 6.80 | 5.50 | 20.3 | 13.8 | 13.5 |
| CDEP15D90T150NP-100MC-100 | 10.0 | 8.90 | 16.2 | 11.3 | 12.2 |
| CDEP15D90T150NP-120MC-100 | 12.5 | 10.6 | 15.0 | 10.2 | 8.50 |
| CDEP15D90T150NP-150MC-100 | 15.0 | 13.4 | 13.4 | 9.70 | 8.00 |
| CDEP15D90T150NP-220MC-100 | 22.0 | 20.1 | 11.0 | 7.50 | 6.50 |

※ 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 $\Delta T=40^\circ\text{C}$ ($T_a=20^\circ\text{C}$).

Please note that when using the product while applying current with audio-frequency (AF) signals may results 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 amplify depending on the coil mount area on the PCB.

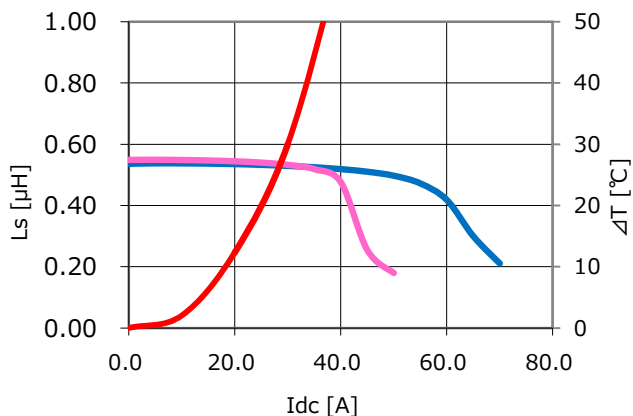
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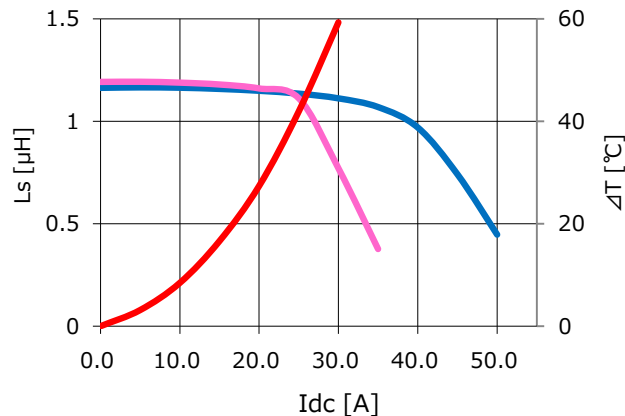


Saturation Current & Temperature Rise Graph — L (20°C) — L (150°C) — ΔT
<Standard Types>

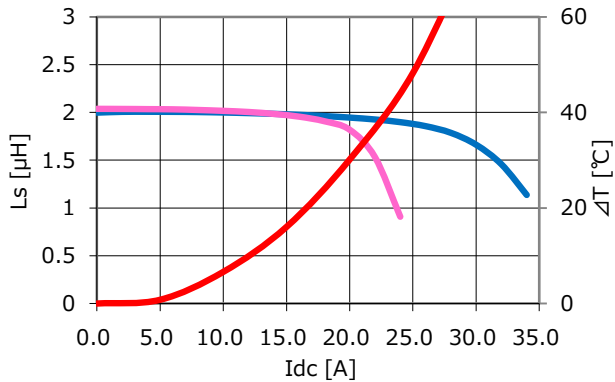
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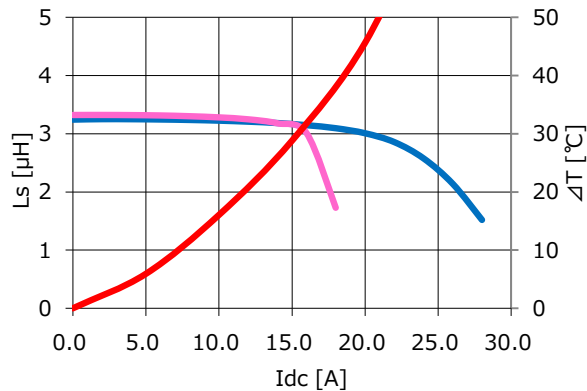
CDEP15D90T150NP-1R2MC-125



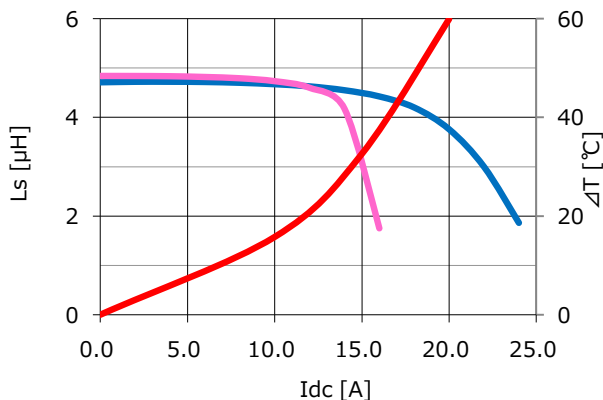
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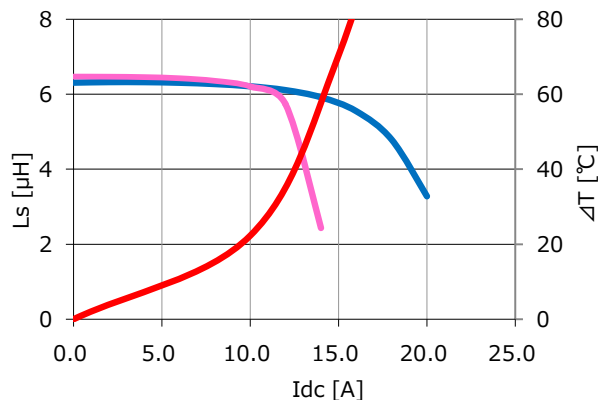
CDEP15D90T150NP-3R3MC-125



CDEP15D90T150NP-4R7MC-125



CDEP15D90T150NP-6R2MC-125



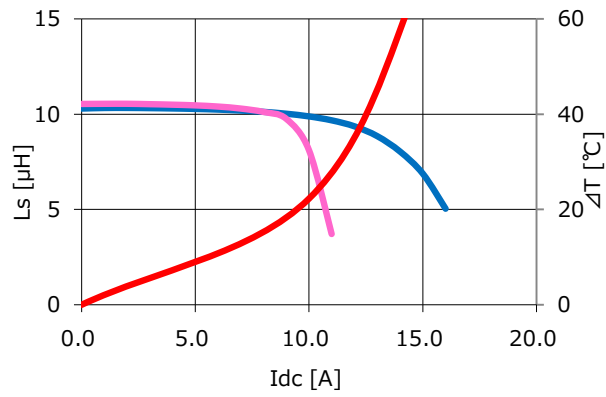
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Low-Profile High Current Power Inductor

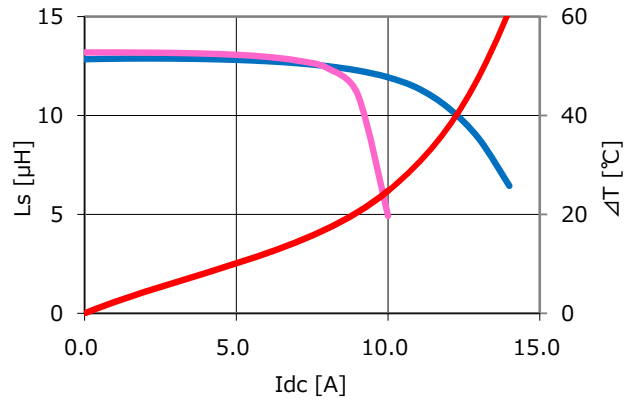
CDEP15D90/T150



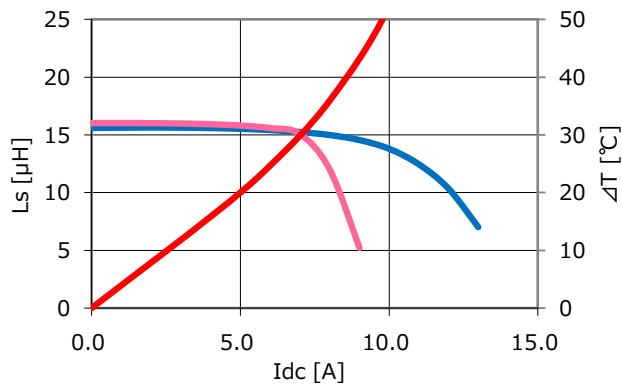
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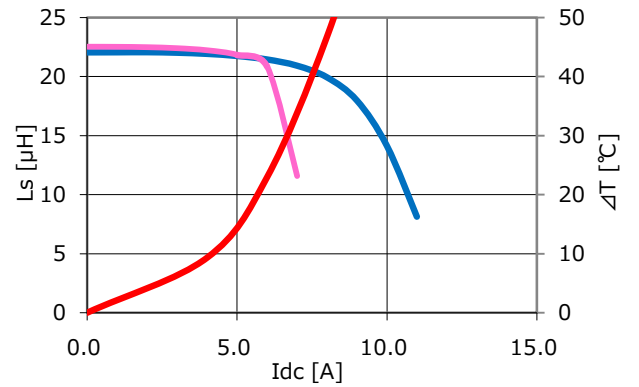
CDEP15D90T150NP-120MC-125



CDEP15D90T150NP-150MC-125



CDEP15D90T150NP-220MC-125



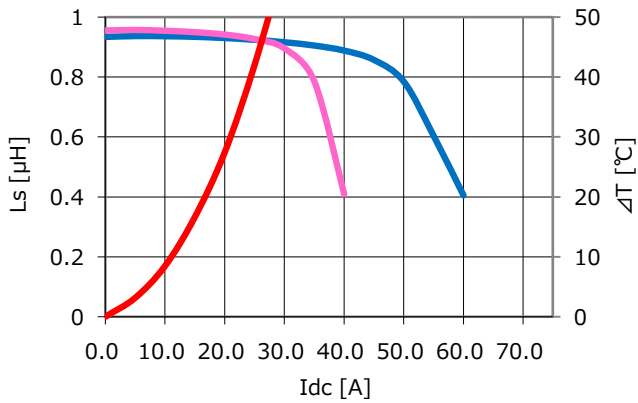
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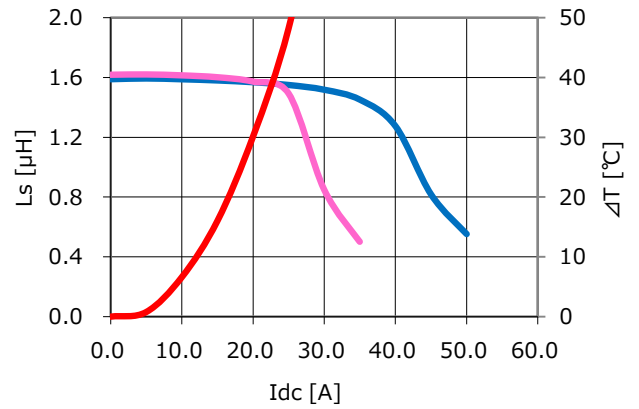


Saturation Current & Temperature Rise Graph — L (20°C) — L (150°C) — ΔT
<High Power Types>

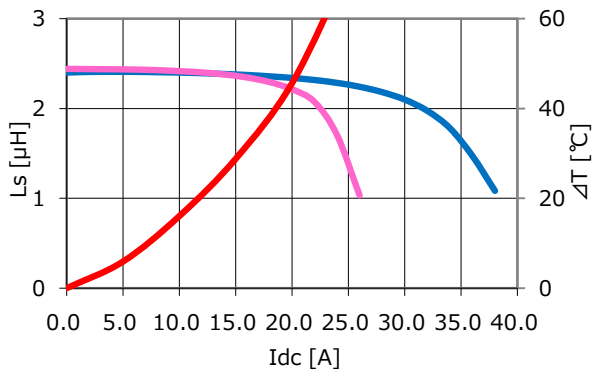
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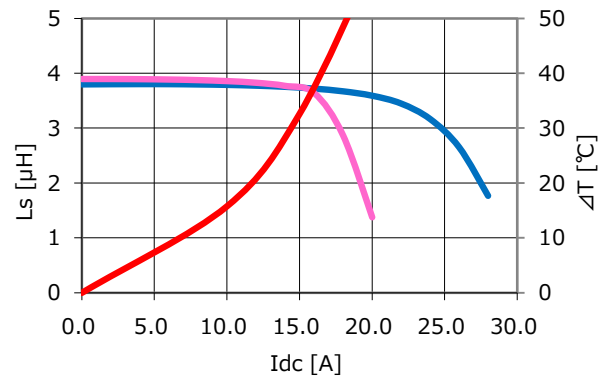
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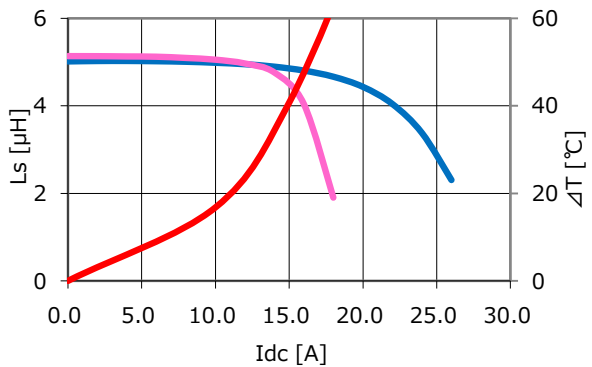
CDEP15D90T150NP-2R4MC-100



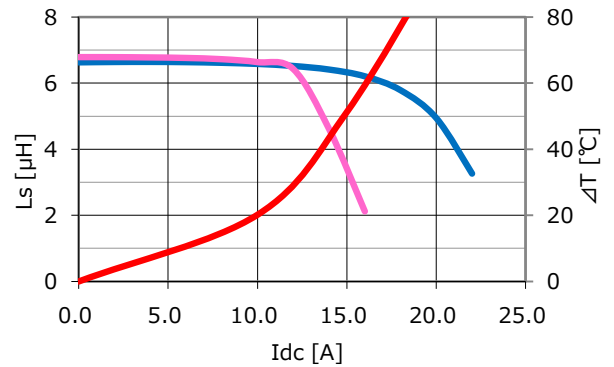
CDEP15D90T150NP-3R6MC-100



CDEP15D90T150NP-4R7MC-100



CDEP15D90T150NP-6R8MC-100

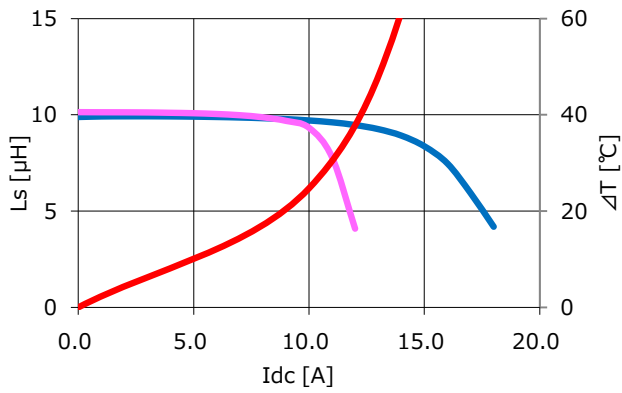


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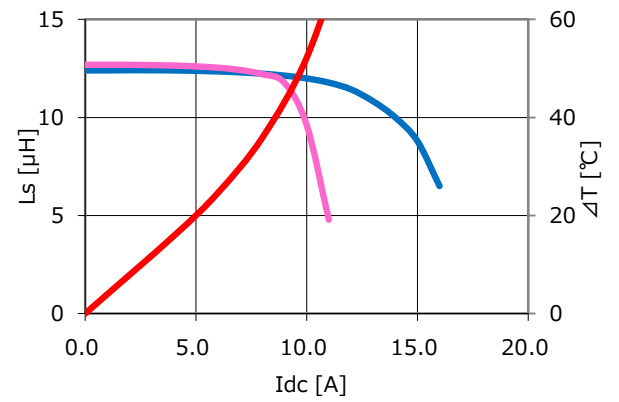
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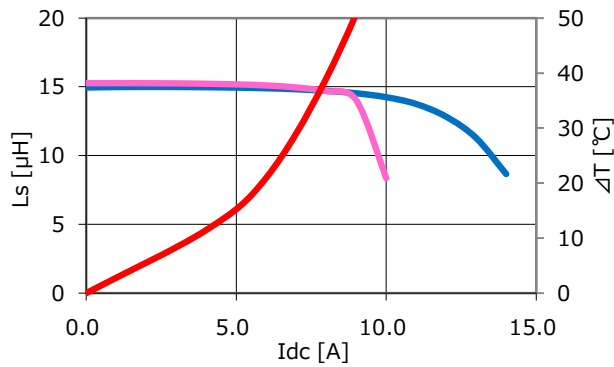
CDEP15D90T150NP-100MC-100



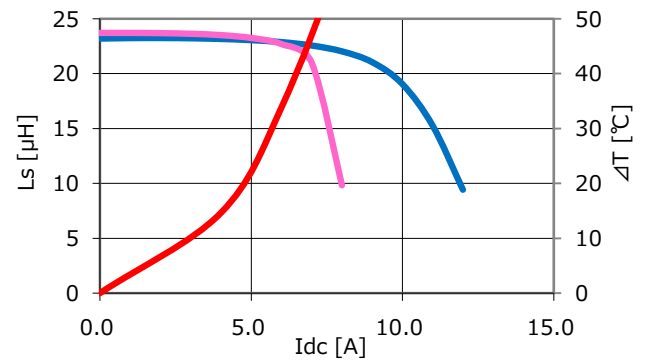
CDEP15D90T150NP-120MC-100



CDEP15D90T150NP-150MC-100



CDEP15D90T150NP-220MC-100



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