

# Low-Profile High Current Power Inductor

## CDEP13D76/T150



### Description

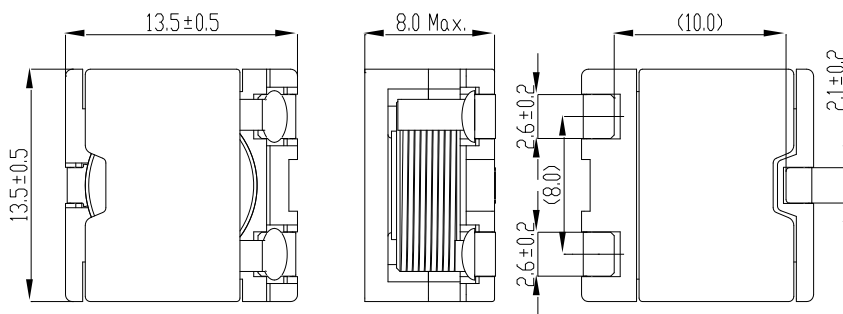
- Inductor for high withstand voltage (DC 120V) and large current
- Magnetically shielded
- Qualified AEC-Q200
- Operating temperature range:  $-40^{\circ}\text{C} \sim +150^{\circ}\text{C}$   
(including coil's self temperature rise)



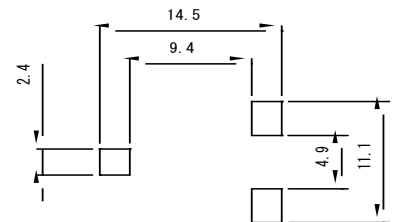
### Applications

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

### Dimension - [mm]



### Reference Land pattern - [mm]



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## CDEP13D76/T150



### Electrical Characteristics: Standard Types

Part No.	Inductance ( $\mu$ H) ( $\pm 20\%$ ) ※1	D.C.R. (m $\Omega$ ) ( $\pm 20\%$ )	Saturation Current (A) Typ. ※2		Temperature Rise Current (A) ※3
			at 20°C	at 150°C	
CDEP13D76T150NP-1R0MC-105	1.00	1.98	31.0	21.0	20.0
CDEP13D76T150NP-1R6MC-105	1.60	2.60	25.0	17.0	17.8
CDEP13D76T150NP-2R4MC-105	2.40	3.30	21.0	15.0	16.1
CDEP13D76T150NP-3R6MC-105	3.60	3.90	17.2	11.5	15.0
CDEP13D76T150NP-5R1MC-105	5.10	4.80	14.6	10.3	13.0
CDEP13D76T150NP-6R8MC-105	6.80	5.90	12.7	9.00	11.5
CDEP13D76T150NP-100MC-105	10.0	10.3	10.5	7.30	8.50
CDEP13D76T150NP-120MC-105	12.5	13.4	9.30	6.50	7.50
CDEP13D76T150NP-150MC-105	15.0	15.2	8.50	6.20	7.00
CDEP13D76T150NP-220MC-105	22.0	23.4	6.90	4.70	5.30

### Electrical Characteristics: High Power Types

Part No.	Inductance ( $\mu$ H) ( $\pm 20\%$ ) ※1	D.C.R. (m $\Omega$ ) ( $\pm 20\%$ )	Saturation Current (A) Typ. ※2		Temperature Rise Current (A) ※3
			at 20°C	at 150°C	
CDEP13D76T150NP-0R8MC-90	0.80	1.98	40.0	27.0	20.0
CDEP13D76T150NP-1R5MC-90	1.50	2.60	28.5	19.0	17.8
CDEP13D76T150NP-2R2MC-90	2.20	3.30	24.5	16.5	16.1
CDEP13D76T150NP-3R3MC-90	3.30	3.90	19.4	14.2	15.0
CDEP13D76T150NP-4R3MC-90	4.30	4.80	17.2	12.2	13.0
CDEP13D76T150NP-6R8MC-90	6.80	7.40	13.7	9.50	10.0
CDEP13D76T150NP-100MC-90	10.0	13.4	11.3	7.70	7.50
CDEP13D76T150NP-120MC-90	12.5	15.2	10.2	7.20	7.00
CDEP13D76T150NP-150MC-90	15.0	19.9	9.30	6.50	6.00
CDEP13D76T150NP-220MC-90	22.0	30.4	7.50	5.40	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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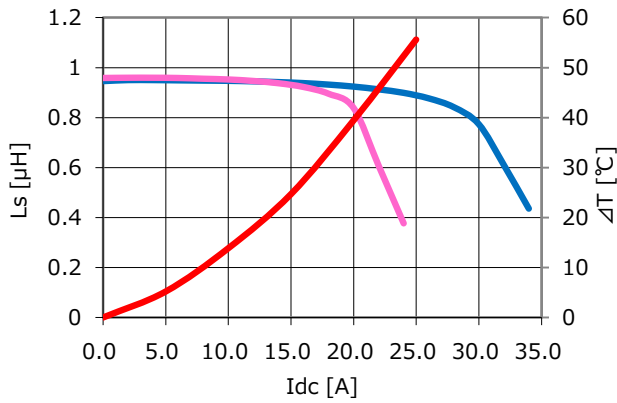
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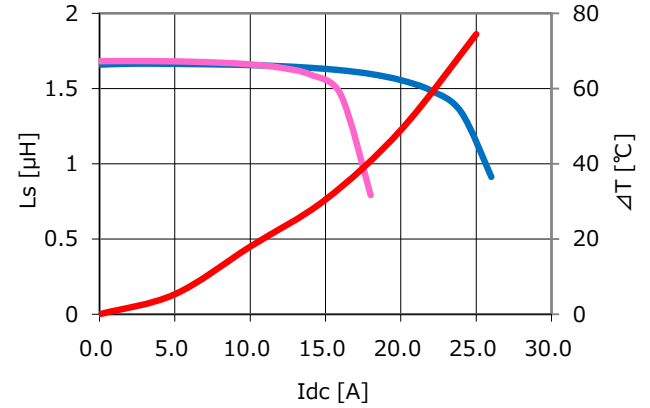


Saturation Current & Temperature Rise Graph — L (20°C) — L (150°C) —  $\Delta T$   
 <Standard Types>

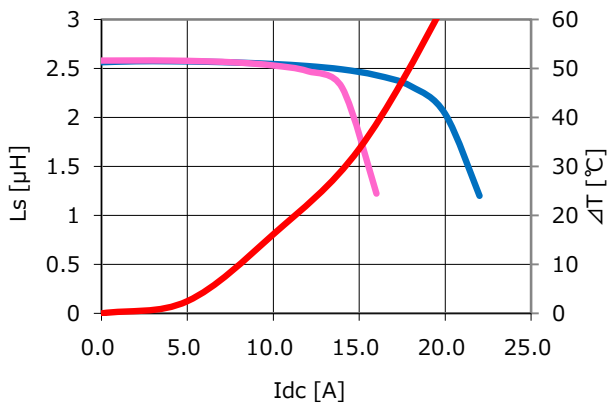
**CDEP13D76T150NP-1R0MC-105**



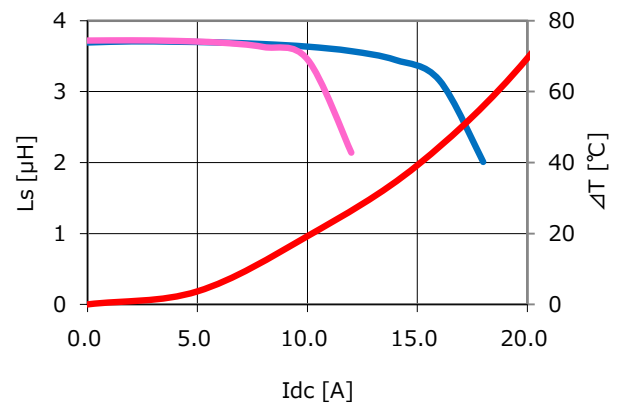
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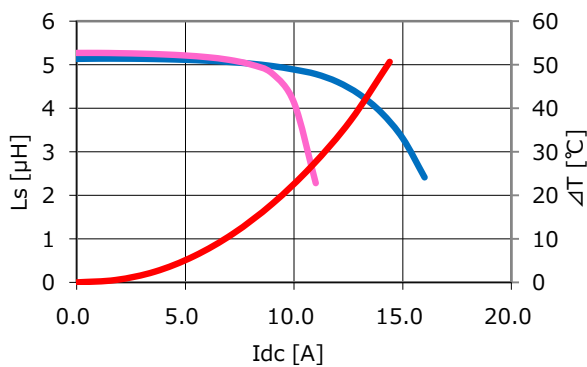
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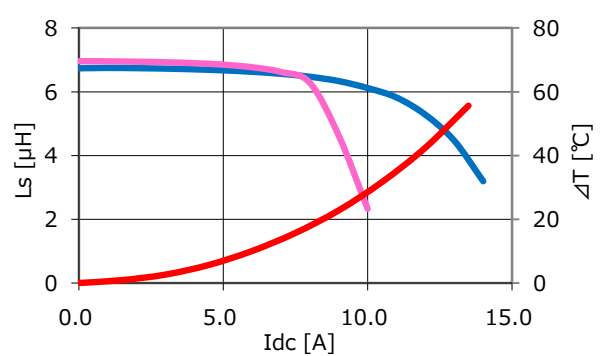
**CDEP13D76T150NP-3R6MC-105**



**CDEP13D76T150NP-5R1MC-105**



**CDEP13D76T150NP-6R8MC-105**



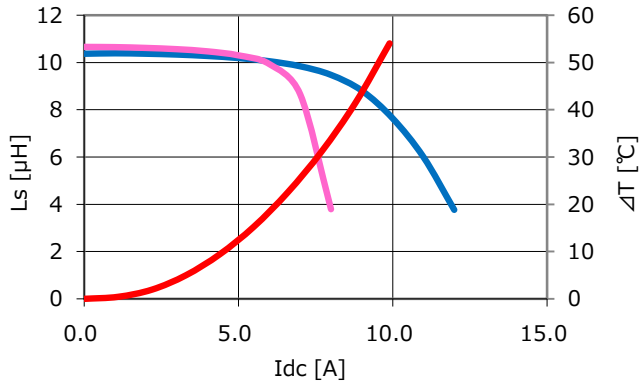
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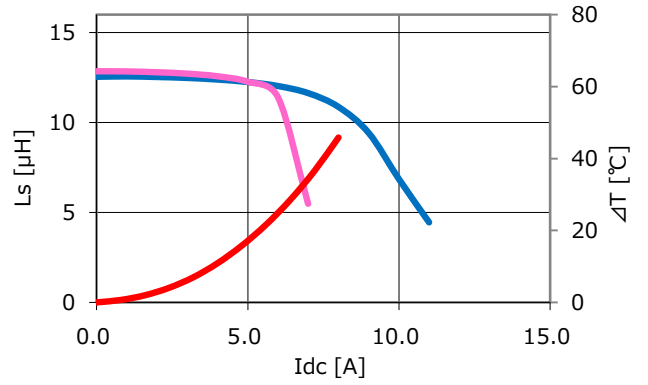
## CDEP13D76/T150



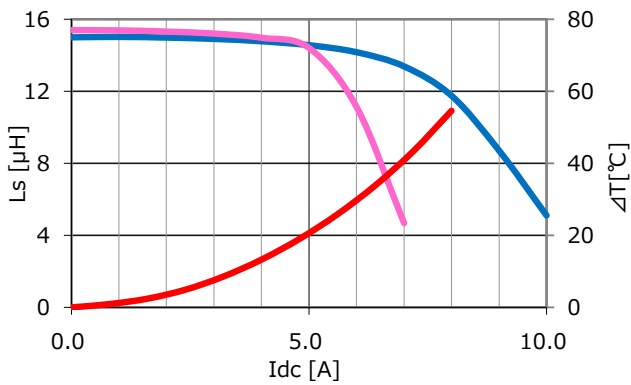
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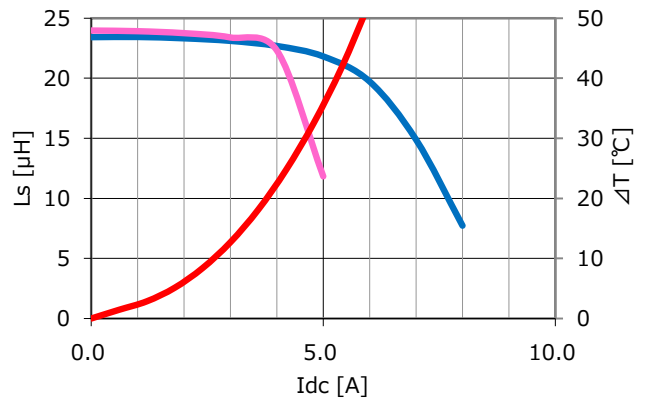
**CDEP13D76T150NP-120MC-105**



**CDEP13D76T150NP-150MC-105**



**CDEP13D76T150NP-220MC-105**



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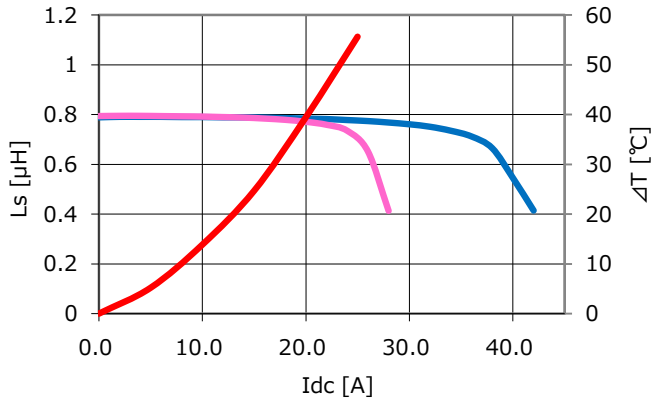
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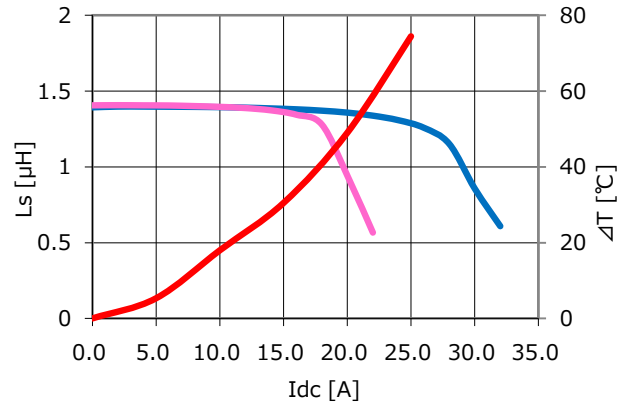


Saturation Current & Temperature Rise Graph — L (20°C) — L (150°C) —  $\Delta T$   
 <High Power Types>

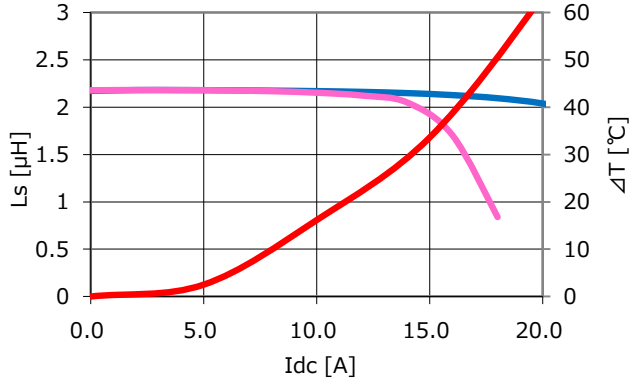
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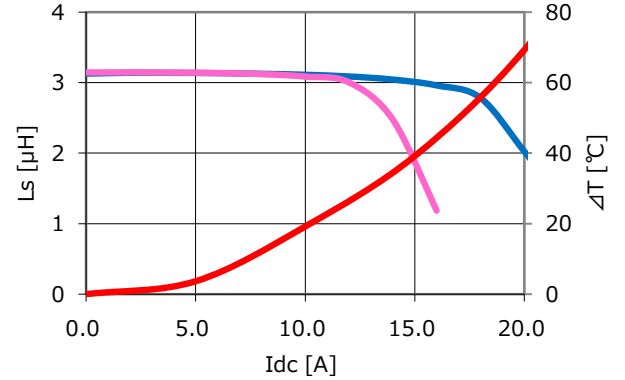
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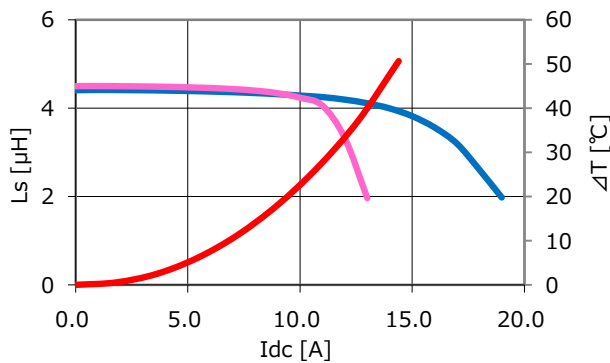
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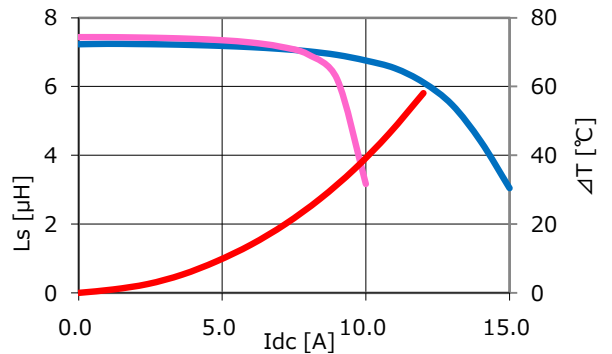
CDEP13D76T150NP-3R3MC-90



CDEP13D76T150NP-4R3MC-90



CDEP13D76T150NP-6R8MC-90



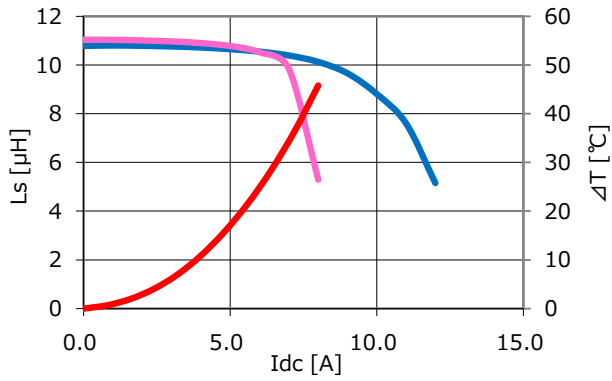
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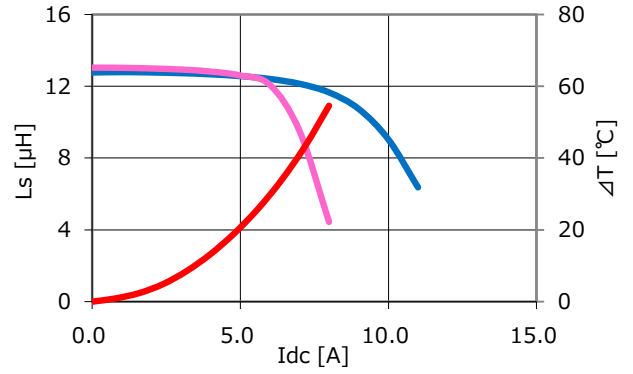
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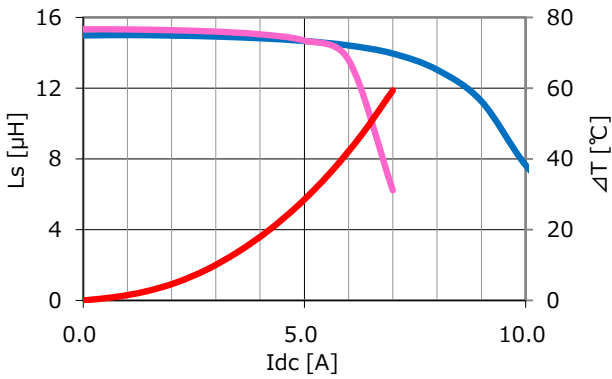
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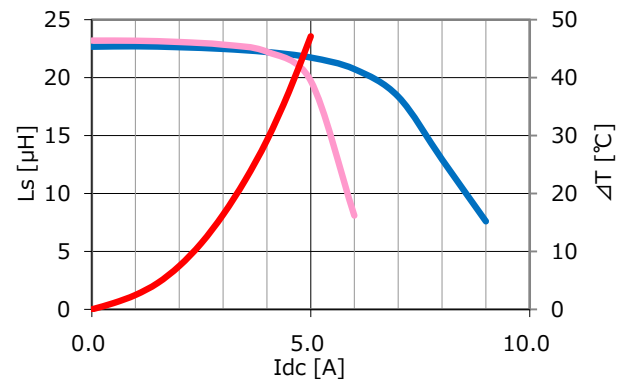
CDEP13D76T150NP-120MC-90



CDEP13D76T150NP-150MC-90



CDEP13D76T150NP-220MC-90



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