

DEP13D76T150NP-0R8MC-90 Datasheet



DiGi Electronics Part Number	CDEP13D76T150NP-0R8MC-90-DG
Manufacturer	Sumida America Components Inc.
Manufacturer Product Number	CDEP13D76T150NP-0R8MC-90
Description	FIXED IND 800NH 20A 1.98MOHM SMD
Detailed Description	800 nH Shielded Inductor 20 A 1.98mOhm Nonstandard

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Purchase and inquiry

Manufacturer Product Number:

CDEP13D76T150NP-0R8MC-90

Series:

CDEP13D76/T150

Type:

-

Inductance:

800 nH

Current Rating (Amps):

20 A

Shielding:

Shielded

Q @ Freq:

-

Ratings:

AEC-Q200

Inductance Frequency - Test:

100 kHz

Mounting Type:

Surface Mount

Supplier Device Package:

-

Height - Seated (Max):

0.315" (8.00mm)

Manufacturer:

Sumida America Components Inc.

Product Status:

Active

Material - Core:

-

Tolerance:

±20%

Current - Saturation (Isat):

40A

DC Resistance (DCR):

1.98mOhm

Frequency - Self Resonant:

-

Operating Temperature:

-40°C ~ 150°C

Features:

-

Package / Case:

Nonstandard

Size / Dimension:

0.531" L x 0.531" W (13.50mm x 13.50mm)

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

ECCN:

EAR99

Moisture Sensitivity Level (MSL):

1 (Unlimited)

HTSUS:

8504.50.8000



Low-Profile High Current Power Inductor

CDEP13D76/T150



Discription

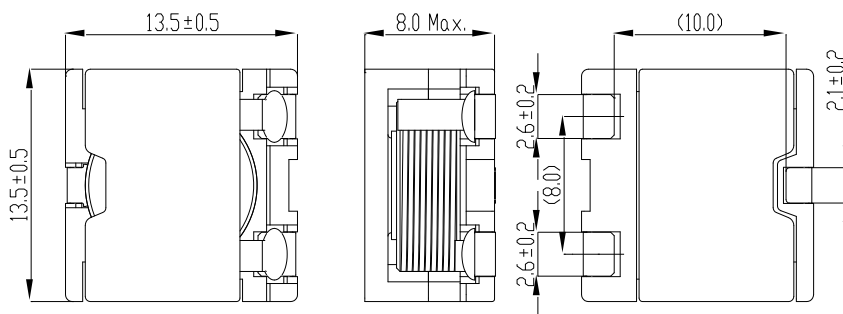
- Inductor for high withstand voltage (DC 120V) and large current
- Magnetically shielded
- Qualified AEC-Q200
- Operating temperature range: -40°C~ +150°C
(including coil's self temperature rise)



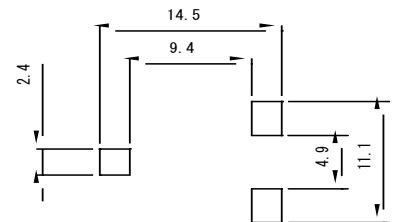
Applications

- 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) ($\pm 20\%$)	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 (μ H) ($\pm 20\%$) ※1	D.C.R. (m Ω) ($\pm 20\%$)	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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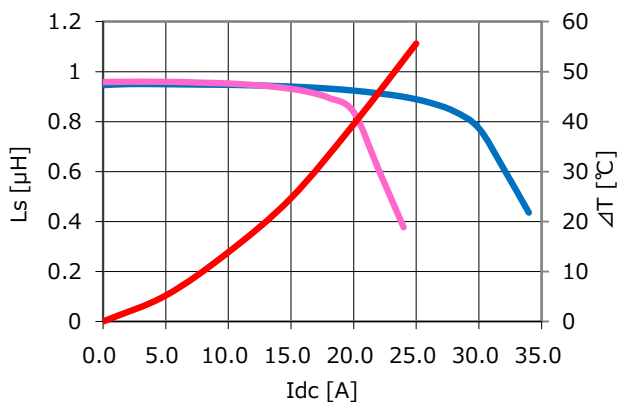
Low-Profile High Current Power Inductor

CDEP13D76/T150

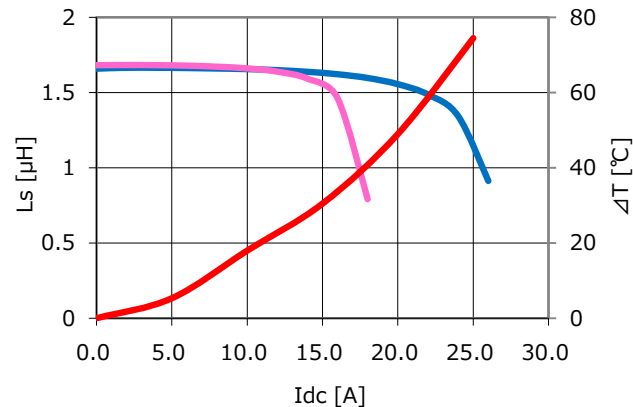


Saturation Current & Temperature Rise Graph — L (20°C) — L (150°C) — ΔT
 <Standard Types>

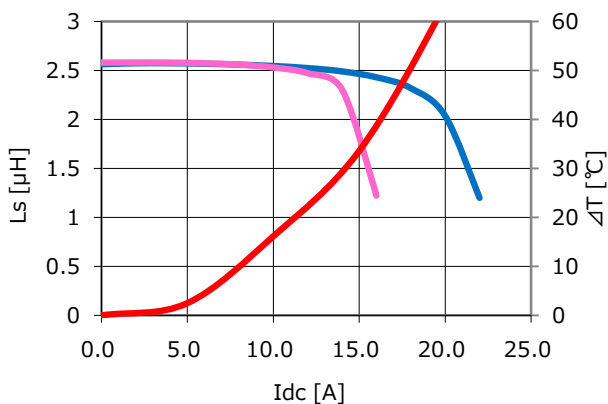
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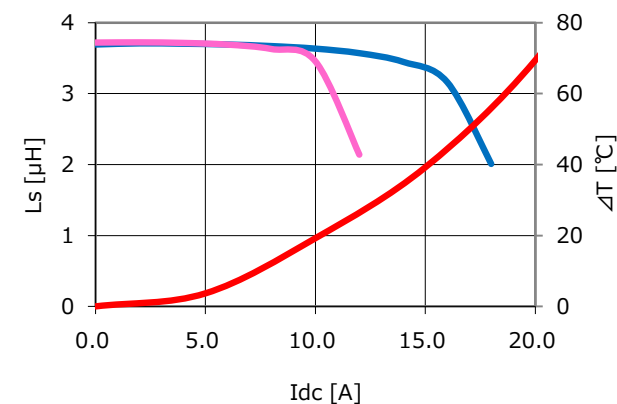
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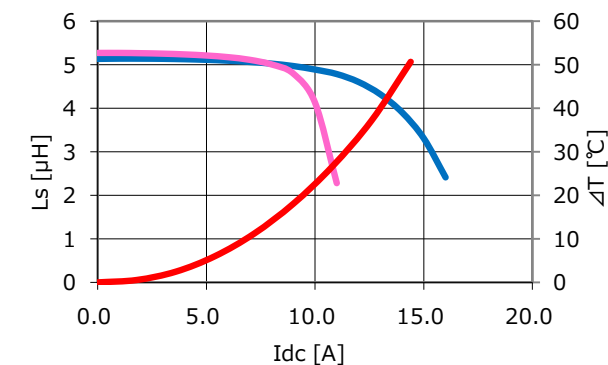
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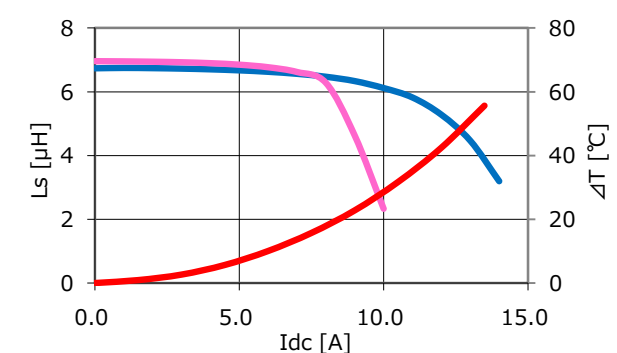
CDEP13D76T150NP-3R6MC-105



CDEP13D76T150NP-5R1MC-105



CDEP13D76T150NP-6R8MC-105



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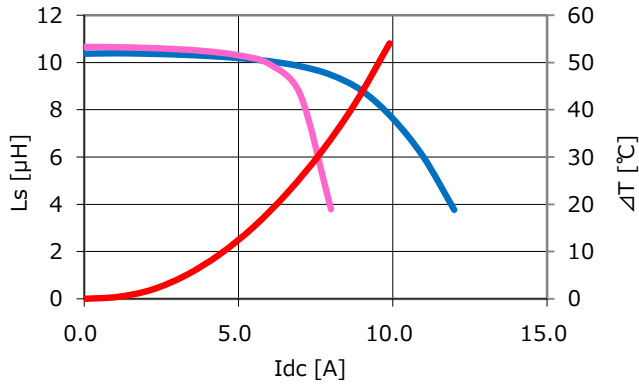


Low-Profile High Current Power Inductor

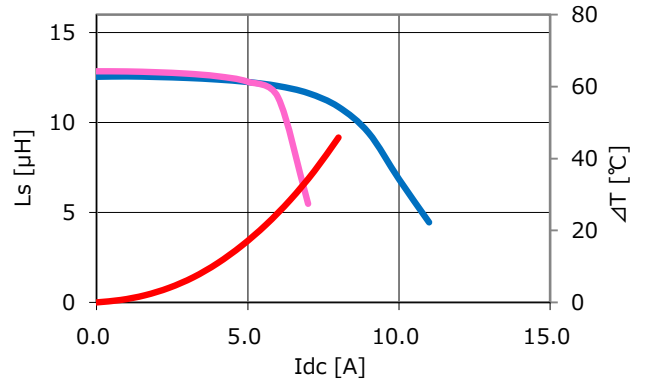
CDEP13D76/T150



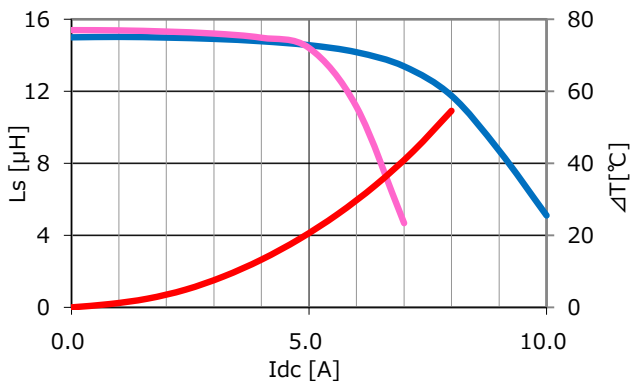
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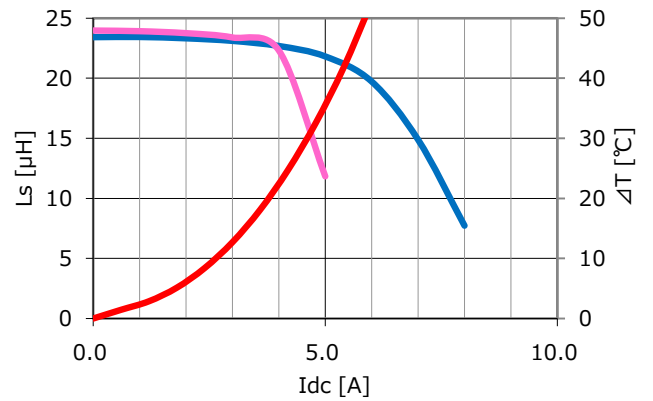
CDEP13D76T150NP-120MC-105



CDEP13D76T150NP-150MC-105



CDEP13D76T150NP-220MC-105



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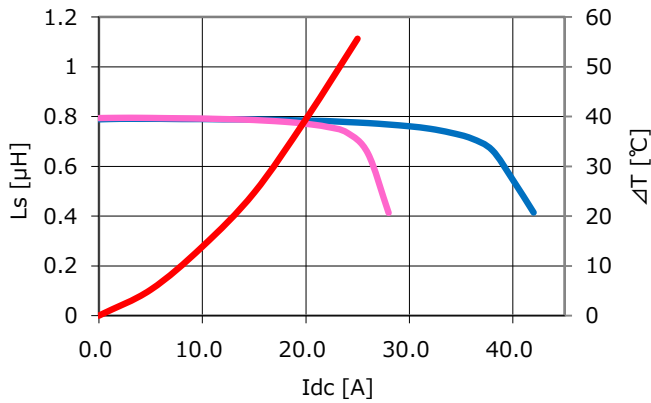
Low-Profile High Current Power Inductor

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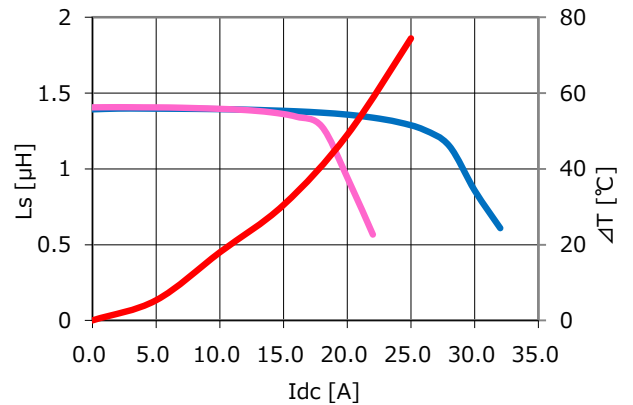


Saturation Current & Temperature Rise Graph — L (20°C) — L (150°C) — ΔT
 <High Power Types>

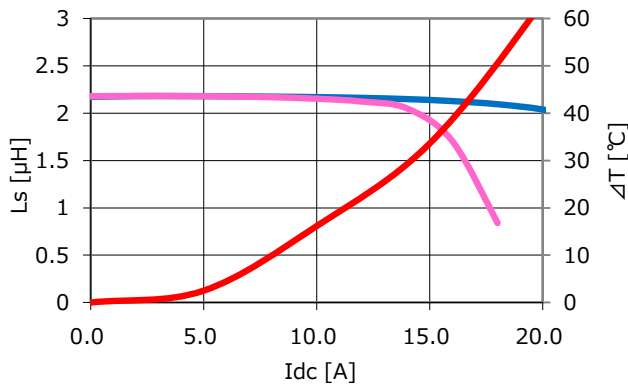
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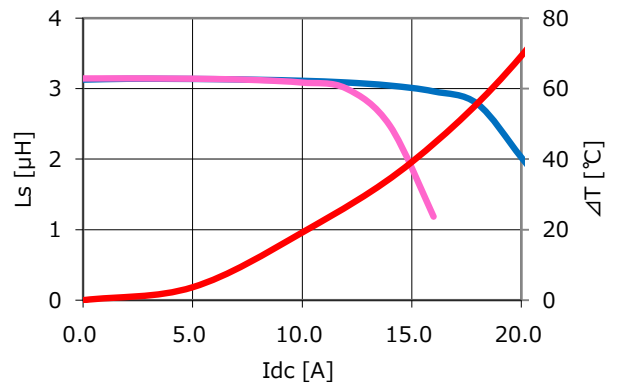
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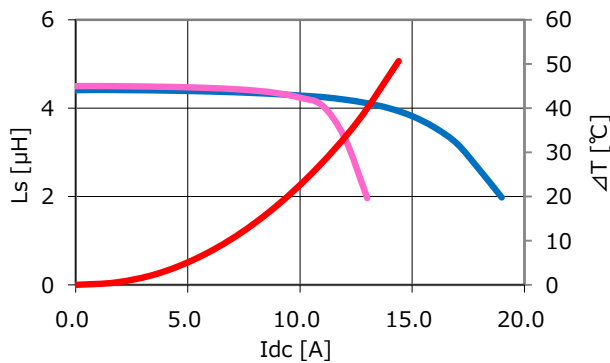
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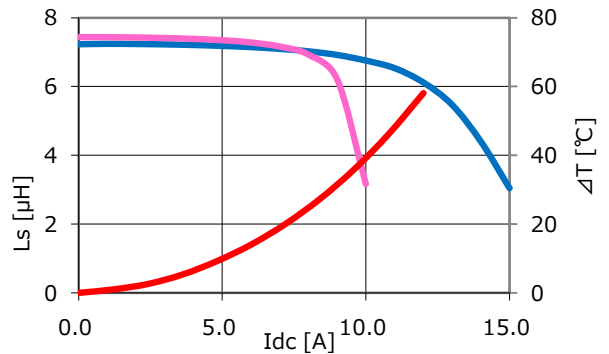
CDEP13D76T150NP-3R3MC-90



CDEP13D76T150NP-4R3MC-90



CDEP13D76T150NP-6R8MC-90



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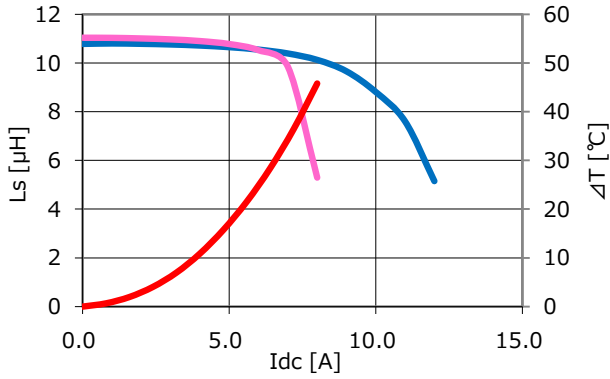


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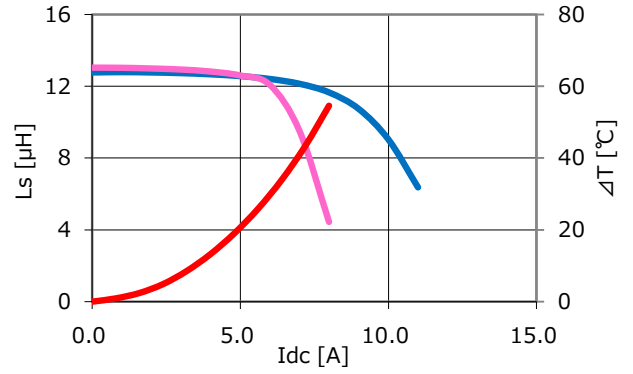
CDEP13D76/T150



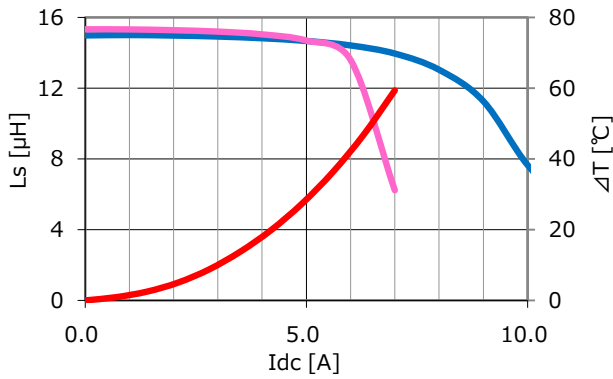
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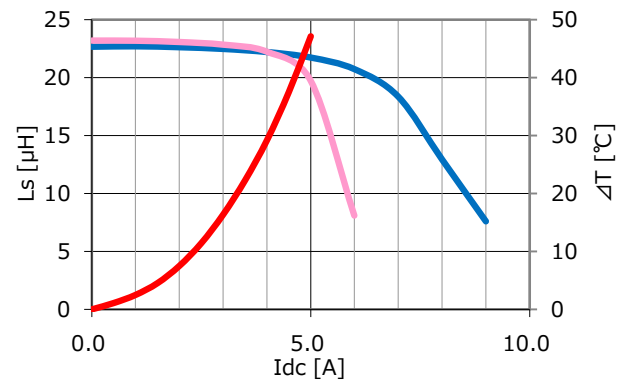
CDEP13D76T150NP-120MC-90



CDEP13D76T150NP-150MC-90



CDEP13D76T150NP-220MC-90



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