

# LMLP13B3M8R2DTAS Datasheet

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DiGi Electronics Part Number	LMLP13B3M8R2DTAS-DG
Manufacturer	<a href="#">KYOCERA AVX</a>
Manufacturer Product Number	LMLP13B3M8R2DTAS
Description	FIXED IND 8.2UH 10.5A 15.5 MOHM
Detailed Description	8.2 $\mu$ H Shielded Inductor 10.5 A 15.5mOhm Max No nstandard



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DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

LMLP13B3M8R2DTAS

Series:

LMLP

Type:

-

Inductance:

8.2  $\mu$ H

Current Rating (Amps):

10.5 A

Shielding:

Shielded

Q @ Freq:

-

Ratings:

-

Inductance Frequency - Test:

100 kHz

Mounting Type:

Surface Mount

Supplier Device Package:

-

Height - Seated (Max):

0.256" (6.50mm)

Manufacturer:

KYOCERA AVX

Product Status:

Active

Material - Core:

Iron Powder

Tolerance:

$\pm$ 20%

Current - Saturation (Isat):

16A

DC Resistance (DCR):

15.5mOhm Max

Frequency - Self Resonant:

-

Operating Temperature:

-55°C ~ 155°C

Features:

-

Package / Case:

Nonstandard

Size / Dimension:

0.531" L x 0.504" W (13.50mm x 12.80mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

ECCN:

EAR99

Moisture Sensitivity Level (MSL):

1 (Unlimited)

HTSUS:

8504.50.8000



# LMax Low Profile/High Current Power Inductor



## LMLP Series – Style D

### FEATURES

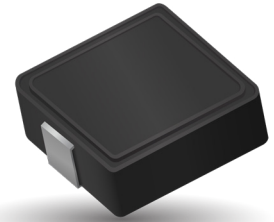
- Shielded Construction
- Large Current Rating
- Lower Temperature Rise
- Low Profile
- Available on tape and reel

### APPLICATIONS

- Personal Computers
- Servers
- High Current POL Converters
- Low Profile High Current Power Supplies
- DC/DC Converters
- DC/DC Converters for FPGA

### INDUCTANCE AND RATED CURRENT RANGES

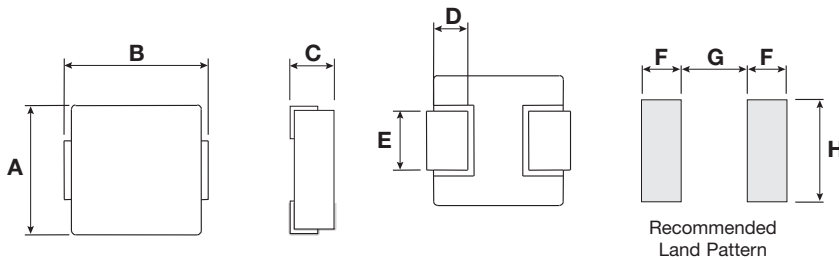
- 0405 0.1  $\mu$ H ~ 3.3  $\mu$ H 22 ~ 4 A
- 05A6 0.1  $\mu$ H ~ 4.7  $\mu$ H 45 ~ 5 A
- 0506 0.1  $\mu$ H ~ 4.7  $\mu$ H 27 ~ 8.2 A
- 0707 0.1  $\mu$ H ~ 4.7  $\mu$ H 40 ~ 8 A
- 07A7 0.1  $\mu$ H ~ 10  $\mu$ H 50 ~ 7 A
- 07B7 0.1  $\mu$ H ~ 10  $\mu$ H 60 ~ 7 A
- 07C7 0.56  $\mu$ H ~ 10  $\mu$ H 12 ~ 4.5 A
- 1011 0.19  $\mu$ H ~ 47  $\mu$ H 90 ~ 3 A
- 13A3 0.1  $\mu$ H ~ 10  $\mu$ H 84 ~ 14 A
- 1313 0.1  $\mu$ H ~ 10  $\mu$ H 118 ~ 16 A
- 13B3 0.1  $\mu$ H ~ 10  $\mu$ H 120 ~ 15.5 A



- All test data taken at 25°C
- Operating Temperature Range: -55°C ~ +155°C
- $I_{SAT}$ : The current that causes an inductance drop of approximately 25% (30% on 0405 size).
- $I_{DC}$ : DC Current that causes an approximate  $\Delta T$  of 40°C.



### DIMENSIONS



mm

Type	A	B	C	D	E	F	G	H
0405	4.0±0.3	4.45±0.25	1.8±0.2	0.8±0.3	1.5±0.3	1.5	2.22	2.5
05A6	5.2±0.2	5.7±0.7	1.8±0.2	1.1±0.3	2.5±0.3	2	2.2	2.8
0506	5.2±0.3	5.4±0.3	3.0±MAX	1.2±0.2	2.2±0.3	1.9	2.2	2.5
0707	6.6±0.3	7.0±0.3	1.8±0.2	1.8±0.3	3.0±0.3	2.6	2.5	3.5
07B7	6.6±0.3	7.3±0.3	2.2±0.2	1.8±0.3	3.0±0.3	2.6	2.5	3.5
07A7	6.6±0.2	7.3±MAX	3.0±MAX	1.6±0.3	3.0±0.3	1.85	3.7	3.5
07C7	6.6±0.3	7.3±0.3	4.8±0.2	1.8±0.3	3.0±0.3	2.95	2.5	3.5
1011	10.0±0.3	11.15±0.35	4.0±MAX	2.0±0.5	3.0±0.5	4.05	5.4	4.4
1313	12.8±0.5	13.5±1.0	5.0±MAX	2.5±0.5	3.8±0.5	3.25	8	5
13B3	12.8±0.5	13.5±1.0	6.5±MAX	2.5±0.5	3.2±0.5	3.25	8	5

### HOW TO ORDER

<b>LM</b>	<b>LP</b>	<b>0707</b>	<b>M</b>	<b>R04</b>	<b>D</b>	<b>T</b>	<b>A</b>	<b>S</b>
Family	Series	Size	Tolerance	Inductance	Style	Termination	Special	Packaging
LM = Power Inductor	LP = Low Profile	0707 = 7x7xh 07A7 = 7x7xA(h) (h = see catalog)	M = 20%	R39 = 0.390 $\mu$ H 3R9 = 3.900 $\mu$ H 390 = 39.00 $\mu$ H 391 = 390.0 $\mu$ H		T = Sn Plate	A = Standard	S = 13" Reel

# LMax Low Profile/High Current Power Inductor



## LMLP Series – Style D

### ELECTRICAL CHARACTERISTICS

#### 0405

Part Number	Inductance (μH)	Tolerance	Test Condition	DCR (mΩ) Typical	DCR (mΩ) Max	I <sub>DC</sub> (A) Typical	I <sub>sat</sub> (A) Typical
LMLP0405MR10DTAS	0.1	±20%	100KHz, 0.25V	3.5	4	12	22
LMLP0405MR15DTAS	0.15	±20%	100KHz, 0.25V	6	6.6	9	13
LMLP0405MR22DTAS	0.22	±20%	100KHz, 0.25V	6	6.6	9	12.5
LMLP0405MR47DTAS	0.47	±20%	100KHz, 0.25V	12.5	14	7	9.5
LMLP0405MR56DTAS	0.56	±20%	100KHz, 0.25V	14	16	6.5	10
LMLP0405MR68DTAS	0.68	±20%	100KHz, 0.25V	16	18	6	9
LMLP0405M1R0DTAS	1	±20%	100KHz, 0.25V	24	27	4.5	7
LMLP0405M1R2DTAS	1.2	±20%	100KHz, 0.25V	24	27	4.5	7
LMLP0405M1R5DTAS	1.5	±20%	100KHz, 0.25V	38	46	4	6
LMLP0405M2R2DTAS	2.2	±20%	100KHz, 0.25V	52	58	3	5
LMLP0405M3R3DTAS	3.3	±20%	100KHz, 0.25V	74	87	2.5	4
LMLP0405M4R7DTAS	4.7	±20%	100KHz, 0.25V	98	110	2.2	3.5
LMLP0405M5R6DTAS	5.6	±20%	100KHz, 0.25V	105	115	1.8	3.5
LMLP0405M6R8DTAS	6.8	±20%	100KHz, 0.25V	160	175	1.5	2.5
LMLP0405M100DTAS	10	±20%	100KHz, 0.25V	256	282	1.2	2.2

#### 05A6

Part Number	Inductance (μH)	Tolerance	Test Condition	DCR (mΩ) Typical	DCR (mΩ) Max	I <sub>DC</sub> (A) Typical	I <sub>sat</sub> (A) Typical
LMLP05A6MR10DTAS	0.1	±20%	100KHz, 0.25V	3.6	4	18	45
LMLP05A6MR15DTAS	0.15	±20%	100KHz, 0.25V	3.8	4.6	16	27
LMLP05A6MR22DTAS	0.22	±20%	100KHz, 0.25V	4	5.5	15	25
LMLP05A6MR24DTAS	0.24	±20%	100KHz, 0.25V	6	7	13	23
LMLP05A6MR33DTAS	0.33	±20%	100KHz, 0.25V	6.3	7.3	12	21.3
LMLP05A6MR47DTAS	0.47	±20%	100KHz, 0.25V	7.3	8.6	11.5	18
LMLP05A6MR68DTAS	0.68	±20%	100KHz, 0.25V	11	12.4	10	12.8
LMLP05A6M1R0DTAS	1	±20%	100KHz, 0.25V	17.5	20	7	13.7
LMLP05A6M1R2DTAS	1.2	±20%	100KHz, 0.25V	23	28	6.2	11
LMLP05A6M1R5DTAS	1.5	±20%	100KHz, 0.25V	26.5	30.5	5.5	9.8
LMLP05A6M2R2DTAS	2.2	±20%	100KHz, 0.25V	42	50	4.2	9
LMLP05A6M3R3DTAS	3.3	±20%	100KHz, 0.25V	66	76	3.3	7.3
LMLP05A6M4R7DTAS	4.7	±20%	100KHz, 0.25V	103	116	2.8	5
LMLP05A6M5R6DTAS	5.6	±20%	100KHz, 0.25V	112	122	2.5	4
LMLP05A6M6R8DTAS	6.8	±20%	100KHz, 0.25V	130	150	2.4	3.8
LMLP05A6M8R2DTAS	8.2	±20%	100KHz, 0.25V	148	171	2.3	3.5
LMLP05A6M100DTAS	10	±20%	100KHz, 0.25V	180	199	2.3	3.4
LMLP05A6M150DTAS	15	±20%	100KHz, 0.25V	240	270	1.9	2.8
LMLP05A6M220DTAS	22	±20%	100KHz, 0.25V	350	390	1.5	1.8

I<sub>SAT</sub>: The current that causes an inductance drop of approximately 25% (30% on 0405 size).  
I<sub>DC</sub>: DC Current that causes an approximate ΔT of 40°C.

# LMax Low Profile/High Current Power Inductor



## LMLP Series – Style D

### 0506

Part Number	Inductance (μH)	Tolerance	Test Condition	DCR (mΩ) Typical	DCR (mΩ) Max	I <sub>DC</sub> (A) Typical	I <sub>sat</sub> (A) Typical
LMLP0506MR20DTAS	0.2	±20%	100KHz, 0.25V	3.5	3.9	18	14.5
LMLP0506MR47DTAS	0.47	±20%	100KHz, 0.25V	7.4	8.5	13.5	12
LMLP0506MR68DTAS	0.68	±20%	100KHz, 0.25V	11	12	8.5	14
LMLP0506M1R0DTAS	1	±20%	100KHz, 0.25V	13	14	7	11
LMLP0506M1R2DTAS	1.2	±20%	100KHz, 0.25V	15	16	6.5	11
LMLP0506M1R5DTAS	1.5	±20%	100KHz, 0.25V	20	25	6	8.5
LMLP0506M2R2DTAS	2.2	±20%	100KHz, 0.25V	25	29	5.5	7.5
LMLP0506M3R3DTAS	3.3	±20%	100KHz, 0.25V	32	38	5	6
LMLP0506M4R7DTAS	4.7	±20%	100KHz, 0.25V	50	60	3.5	5
LMLP0506M6R8DTAS	6.8	±20%	100KHz, 0.25V	75	90	3	4
LMLP0506M100DTAS	10	±20%	100KHz, 0.25V	110	125	2.5	3.5

### 0707

Part Number	Inductance (μH)	Tolerance	Test Condition	DCR (mΩ) Typical	DCR (mΩ) Max	I <sub>DC</sub> (A) Typical	I <sub>sat</sub> (A) Typical
LMLP0707MR10DTAS	0.1	±20%	100KHz, 0.25V	2	2.4	21	40
LMLP0707MR15DTAS	0.15	±20%	100KHz, 0.25V	2.3	2.7	18	39
LMLP0707MR16DTAS	0.16	±20%	100KHz, 0.25V	2.3	2.7	18	38
LMLP0707MR18DTAS	0.18	±20%	100KHz, 0.25V	2.4	2.9	18	36
LMLP0707MR20DTAS	0.2	±20%	100KHz, 0.25V	2.5	3	18	35
LMLP0707MR22DTAS	0.22	±20%	100KHz, 0.25V	3.5	4	15	32
LMLP0707MR24DTAS	0.24	±20%	100KHz, 0.25V	3.6	4.3	14.5	32
LMLP0707MR33DTAS	0.33	±20%	100KHz, 0.25V	4.5	5	14	25
LMLP0707MR47DTAS	0.47	±20%	100KHz, 0.25V	7.1	8.3	11.7	20
LMLP0707MR56DTAS	0.56	±20%	100KHz, 0.25V	7.9	9.3	11	18
LMLP0707MR68DTAS	0.68	±20%	100KHz, 0.25V	8.3	10	10.5	16
LMLP0707M1R0DTAS	1	±20%	100KHz, 0.25V	16.5	18	8	14
LMLP0707M1R2DTAS	1.2	±20%	100KHz, 0.25V	19	23	7.5	13
LMLP0707M1R5DTAS	1.5	±20%	100KHz, 0.25V	23	27	7	12
LMLP0707M2R2DTAS	2.2	±20%	100KHz, 0.25V	32	37	6	10
LMLP0707M3R3DTAS	3.3	±20%	100KHz, 0.25V	43	48	5	8
LMLP0707M4R7DTAS	4.7	±20%	100KHz, 0.25V	53	60	4.5	7
LMLP0707M5R6DTAS	5.6	±20%	100KHz, 0.25V	59	68	4	6
LMLP0707M6R8DTAS	6.8	±20%	100KHz, 0.25V	63	73	4	5.5
LMLP0707M8R2DTAS	8.2	±20%	100KHz, 0.25V	101	116	3.2	5
LMLP0707M100DTAS	10	±20%	100KHz, 0.25V	134	154	2.8	4
LMLP0707M150DTAS	15	±20%	100KHz, 0.25V	190	210	2.1	3.3
LMLP0707M220DTAS	22	±20%	100KHz, 0.25V	236	280	1.5	2.5

I<sub>SAT</sub>: The current that causes an inductance drop of approximately 25% (30% on 0405 size).  
I<sub>DC</sub>: DC Current that causes an approximate ΔT of 40°C.

# LMax Low Profile/High Current Power Inductor



## LMLP Series – Style D

### 07B7

Part Number	Inductance ( $\mu\text{H}$ )	Tolerance	Test Condition	DCR ( $\text{m}\Omega$ ) Typical	DCR ( $\text{m}\Omega$ ) Max	$I_{\text{DC}}$ (A) Typical	$I_{\text{sat}}$ (A) Typical
LMLP07B7MR10DTAS	0.1	$\pm 20\%$	100KHz, 0.25V	1.4	1.7	30	70
LMLP07B7MR15DTAS	0.15	$\pm 20\%$	100KHz, 0.25V	1.8	2.3	30	45
LMLP07B7MR20DTAS	0.2	$\pm 20\%$	100KHz, 0.25V	1.9	2.8	23	40
LMLP07B7MR22DTAS	0.22	$\pm 20\%$	100KHz, 0.25V	2	3.2	21	34
LMLP07B7MR33DTAS	0.33	$\pm 20\%$	100KHz, 0.25V	3.6	4.4	18	30
LMLP07B7MR36DTAS	0.36	$\pm 20\%$	100KHz, 0.25V	3.8	4.6	17	29
LMLP07B7MR47DTAS	0.47	$\pm 20\%$	100KHz, 0.25V	4.8	5.1	15	26
LMLP07B7MR56DTAS	0.56	$\pm 20\%$	100KHz, 0.25V	5.5	6.5	13	24
LMLP07B7MR60DTAS	0.6	$\pm 20\%$	100KHz, 0.25V	5.7	6.9	13	22
LMLP07B7MR68DTAS	0.68	$\pm 20\%$	100KHz, 0.25V	6.4	7.2	13	21
LMLP07B7MR82DTAS	0.82	$\pm 20\%$	100KHz, 0.25V	8	9.5	11	17
LMLP07B7M1R0DTAS	1	$\pm 20\%$	100KHz, 0.25V	10.5	13.5	11	16
LMLP07B7M1R5DTAS	1.5	$\pm 20\%$	100KHz, 0.25V	17	20	9	15
LMLP07B7M2R2DTAS	2.2	$\pm 20\%$	100KHz, 0.25V	23	28	7	14
LMLP07B7M3R3DTAS	3.3	$\pm 20\%$	100KHz, 0.25V	34	39	6	10
LMLP07B7M4R7DTAS	4.7	$\pm 20\%$	100KHz, 0.25V	41	50	5.5	9
LMLP07B7M5R6DTAS	5.6	$\pm 20\%$	100KHz, 0.25V	56	62	5	8
LMLP07B7M6R8DTAS	6.8	$\pm 20\%$	100KHz, 0.25V	65	72	4	7
LMLP07B7M8R2DTAS	8.2	$\pm 20\%$	100KHz, 0.25V	81	95	3.6	6
LMLP07B7M100DTAS	10	$\pm 20\%$	100KHz, 0.25V	92	101	3.2	5
LMLP07B7M150DTAS	15	$\pm 20\%$	100KHz, 0.25V	150	180	2.5	3.5
LMLP07B7M220DTAS	22	$\pm 20\%$	100KHz, 0.25V	185	215	1.8	3

### 07A7

Part Number	Inductance ( $\mu\text{H}$ )	Tolerance	Test Condition	DCR ( $\text{m}\Omega$ ) Typical	DCR ( $\text{m}\Omega$ ) Max	$I_{\text{DC}}$ (A) Typical	$I_{\text{sat}}$ (A) Typical
LMLP07A7MR22DTAS	0.22	$\pm 20\%$	100KHz, 0.25V	2.5	2.8	23	40
LMLP07A7MR33DTAS	0.33	$\pm 20\%$	100KHz, 0.25V	3.5	3.9	20	30
LMLP07A7MR47DTAS	0.47	$\pm 20\%$	100KHz, 0.25V	4	4.2	17.5	26
LMLP07A7MR56DTAS	0.56	$\pm 20\%$	100KHz, 0.25V	4.7	5	16.5	25.5
LMLP07A7MR68DTAS	0.68	$\pm 20\%$	100KHz, 0.25V	5	5.5	15.5	25
LMLP07A7MR82DTAS	0.82	$\pm 20\%$	100KHz, 0.25V	6.7	8	13	20
LMLP07A7M1R0DTAS	1	$\pm 20\%$	100KHz, 0.25V	9	10	11	20
LMLP07A7M1R5DTAS	1.5	$\pm 20\%$	100KHz, 0.25V	14	15	9	16
LMLP07A7M2R2DTAS	2.2	$\pm 20\%$	100KHz, 0.25V	17	20	8	12
LMLP07A7M3R3DTAS	3.3	$\pm 20\%$	100KHz, 0.25V	28	30	6	10
LMLP07A7M4R7DTAS	4.7	$\pm 20\%$	100KHz, 0.25V	37	40	5.5	7
LMLP07A7M5R6DTAS	5.6	$\pm 20\%$	100KHz, 0.25V	40	44	5.5	6
LMLP07A7M6R8DTAS	6.8	$\pm 20\%$	100KHz, 0.25V	54	60	4.5	6.5
LMLP07A7M8R2DTAS	8.2	$\pm 20\%$	100KHz, 0.25V	54	60	4.5	6
LMLP07A7M100DTAS	10	$\pm 20\%$	100KHz, 0.25V	62	68	4	5.5

$I_{\text{SAT}}$ : The current that causes an inductance drop of approximately 25% (30% on 0405 size).  
 $I_{\text{DC}}$ : DC Current that causes an approximate  $\Delta T$  of 40°C.

# LMax Low Profile/High Current Power Inductor



## LMLP Series – Style D

### 07C7

Part Number	Inductance ( $\mu$ H)	Tolerance	Test Condition	DCR (m $\Omega$ ) Typical	DCR (m $\Omega$ ) Max	I <sub>DC</sub> (A) Typical	I <sub>sat</sub> (A) Typical
LMLP07C7MR33DTAS	0.33	±20%	100KHz, 0.25V	2.5	3	25	32
LMLP07C7MR40DTAS	0.4	±20%	100KHz, 0.25V	3.1	3.7	23	31
LMLP07C7MR47DTAS	0.47	±20%	100KHz, 0.25V	3.5	3.9	22	30
LMLP07C7MR56DTAS	0.56	±20%	100KHz, 0.25V	3.6	4.2	20	27
LMLP07C7MR60DTAS	0.6	±20%	100KHz, 0.25V	3.8	4.3	19	25
LMLP07C7MR68DTAS	0.68	±20%	100KHz, 0.25V	4	4.5	18	24
LMLP07C7MR82DTAS	0.82	±20%	100KHz, 0.25V	4.6	4.9	15	22
LMLP07C7M1R0DTAS	1	±20%	100KHz, 0.25V	6.1	6.5	15	20
LMLP07C7M1R2DTAS	1.2	±20%	100KHz, 0.25V	6.7	7.5	14	18
LMLP07C7M1R5DTAS	1.5	±20%	100KHz, 0.25V	8.6	9	12	16.5
LMLP07C7M1R8DTAS	1.8	±20%	100KHz, 0.25V	9.5	11	12	15
LMLP07C7M2R2DTAS	2.2	±20%	100KHz, 0.25V	11.2	12	10	14
LMLP07C7M3R3DTAS	3.3	±20%	100KHz, 0.25V	19	20.9	8	12
LMLP07C7M4R7DTAS	4.7	±20%	100KHz, 0.25V	28	30.8	6.5	10
LMLP07C7M5R6DTAS	5.6	±20%	100KHz, 0.25V	43.5	49	6	9
LMLP07C7M6R8DTAS	6.8	±20%	100KHz, 0.25V	46	51.5	5.5	8.5
LMLP07C7M8R2DTAS	8.2	±20%	100KHz, 0.25V	56	63	5	8
LMLP07C7M100DTAS	10	±20%	100KHz, 0.25V	60	69	4	7.5
LMLP07C7M150DTAS	15	±20%	100KHz, 0.25V	81	92	3.5	6
LMLP07C7M220DTAS	22	±20%	100KHz, 0.25V	140	170	2.5	5.5
LMLP07C7M330DTAS	33	±20%	100KHz, 0.25V	173	200	2	3.5
LMLP07C7M470DTAS	47	±20%	100KHz, 0.25V	290	330	1.9	2.7
LMLP07C7M560DTAS	56	±20%	100KHz, 0.25V	342	396	1.6	2.1
LMLP07C7M680DTAS	68	±20%	100KHz, 0.25V	386	445	1.2	2

### 1011

Part Number	Inductance ( $\mu$ H)	Tolerance	Test Condition	DCR (m $\Omega$ ) Typical	DCR (m $\Omega$ ) Max	I <sub>DC</sub> (A) Typical	I <sub>sat</sub> (A) Typical
LMLP1011MR22DTAS	0.22	±20%	100KHz, 0.25V	0.8	1	30	50
LMLP1011MR36DTAS	0.36	±20%	100KHz, 0.25V	1.1	1.2	34	40
LMLP1011MR47DTAS	0.47	±20%	100KHz, 0.25V	1.3	1.55	25	35
LMLP1011MR56DTAS	0.56	±20%	100KHz, 0.25V	1.6	1.8	25	32
LMLP1011MR68DTAS	0.68	±20%	100KHz, 0.25V	2.4	2.7	22	30
LMLP1011M1R0DTAS	1	±20%	100KHz, 0.25V	3	3.3	18	28
LMLP1011M1R5DTAS	1.5	±20%	100KHz, 0.25V	3.8	4.2	16	21
LMLP1011M2R2DTAS	2.2	±20%	100KHz, 0.25V	6.7	7	12	18
LMLP1011M3R3DTAS	3.3	±20%	100KHz, 0.25V	10.8	11.8	10	16
LMLP1011M4R7DTAS	4.7	±20%	100KHz, 0.25V	17	20	8.5	15
LMLP1011M6R8DTAS	6.8	±20%	100KHz, 0.25V	22.5	25	6.5	9
LMLP1011M8R2DTAS	8.2	±20%	100KHz, 0.25V	26	29	7	9
LMLP1011M100DTAS	10	±20%	100KHz, 0.25V	27	30	7.5	8.5
LMLP1011M150DTAS	15	±20%	100KHz, 0.25V	40	45	6.25	7
LMLP1011M220DTAS	22	±20%	100KHz, 0.25V	60	66	5	5.5
LMLP1011M470DTAS	47	±20%	100KHz, 0.25V	130	145	3.3	3.5

I<sub>SAT</sub>: The current that causes an inductance drop of approximately 25% (30% on 0405 size).  
I<sub>DC</sub>: DC Current that causes an approximate  $\Delta$ T of 40°C.

# LMax Low Profile/High Current Power Inductor



## LMLP Series – Style D

### 1313

Part Number	Inductance (μH)	Tolerance	Test Condition	DCR (mΩ) Typical	DCR (mΩ) Max	I <sub>DC</sub> (A) Typical	I <sub>sat</sub> (A) Typical
LMLP1313MR10DTAS	0.1	±20%	100KHz, 0.25V	0.53	0.6	55	118
LMLP1313MR22DTAS	0.22	±20%	100KHz, 0.25V	0.64	0.8	51	110
LMLP1313MR33DTAS	0.33	±20%	100KHz, 0.25V	0.85	1.1	42	80
LMLP1313MR47DTAS	0.47	±20%	100KHz, 0.25V	1.1	1.3	38	65
LMLP1313MR56DTAS	0.56	±20%	100KHz, 0.25V	1.3	1.5	36	55
LMLP1313MR68DTAS	0.68	±20%	100KHz, 0.25V	1.5	1.7	34	54
LMLP1313MR82DTAS	0.82	±20%	100KHz, 0.25V	2	2.3	31	53
LMLP1313M1R0DTAS	1	±20%	100KHz, 0.25V	2.1	2.5	29	50
LMLP1313M1R2DTAS	1.2	±20%	100KHz, 0.25V	2.8	3.5	25	49
LMLP1313M1R5DTAS	1.5	±20%	100KHz, 0.25V	3.4	4.1	23	48
LMLP1313M1R8DTAS	1.8	±20%	100KHz, 0.25V	4.2	4.9	19	40
LMLP1313M2R2DTAS	2.2	±20%	100KHz, 0.25V	4.6	5.5	20	32
LMLP1313M3R3DTAS	3.3	±20%	100KHz, 0.25V	7.7	9.2	15	32
LMLP1313M4R7DTAS	4.7	±20%	100KHz, 0.25V	12.8	15	12	27
LMLP1313M5R6DTAS	5.6	±20%	100KHz, 0.25V	14	16.5	11.5	22
LMLP1313M6R8DTAS	6.8	±20%	100KHz, 0.25V	15.4	18.5	11	21
LMLP1313M7R8DTAS	7.8	±20%	100KHz, 0.25V	17.2	20.5	10	18
LMLP1313M8R2DTAS	8.2	±20%	100KHz, 0.25V	18.9	22.5	9.5	18
LMLP1313M100DTAS	10	±20%	100KHz, 0.25V	21.4	25.5	9	16

### 13B3

Part Number	Inductance (μH)	Tolerance	Test Condition	DCR (mΩ) Typical	DCR (mΩ) Max	I <sub>DC</sub> (A) Typical	I <sub>sat</sub> (A) Typical
LMLP13B3MR10DTAS	0.1	±20%	100KHz, 0.25V	0.47	0.5	60	120
LMLP13B3MR15DTAS	0.15	±20%	100KHz, 0.25V	0.53	0.6	55	118
LMLP13B3MR22DTAS	0.22	±20%	100KHz, 0.25V	0.63	0.7	53	112
LMLP13B3MR30DTAS	0.3	±20%	100KHz, 0.25V	0.7	0.8	48	72
LMLP13B3MR33DTAS	0.33	±20%	100KHz, 0.25V	0.83	0.9	46	65
LMLP13B3MR47DTAS	0.47	±20%	100KHz, 0.25V	1	1.2	41	63
LMLP13B3MR56DTAS	0.56	±20%	100KHz, 0.25V	1.2	1.4	37	62
LMLP13B3MR68DTAS	0.68	±20%	100KHz, 0.25V	1.4	1.6	35	60
LMLP13B3MR82DTAS	0.82	±20%	100KHz, 0.25V	1.6	1.9	33	50
LMLP13B3M1R0DTAS	1	±20%	100KHz, 0.25V	1.7	2	32	49
LMLP13B3M1R2DTAS	1.2	±20%	100KHz, 0.25V	2.1	2.5	30	48
LMLP13B3M1R5DTAS	1.5	±20%	100KHz, 0.25V	2.5	3	27	45
LMLP13B3M1R8DTAS	1.8	±20%	100KHz, 0.25V	2.8	3.2	24	41
LMLP13B3M2R2DTAS	2.2	±20%	100KHz, 0.25V	3.5	4.2	22	40
LMLP13B3M3R3DTAS	3.3	±20%	100KHz, 0.25V	5.7	6.8	18	35
LMLP13B3M4R7DTAS	4.7	±20%	100KHz, 0.25V	9.3	11.2	13.5	30
LMLP13B3M5R6DTAS	5.6	±20%	100KHz, 0.25V	11.8	12.8	12	26.5
LMLP13B3M6R8DTAS	6.8	±20%	100KHz, 0.25V	13.1	14	11.5	16.5
LMLP13B3M8R2DTAS	8.2	±20%	100KHz, 0.25V	14.5	15.5	10.5	16
LMLP13B3M100DTAS	10	±20%	100KHz, 0.25V	15.8	16.8	10	15.5
LMLP13B3M150DTAS	15	±20%	100KHz, 0.25V	25	29	6	9
LMLP13B3M220DTAS	22	±20%	100KHz, 0.25V	34	39.5	5	7.5
LMLP13B3M330DTAS	33	±20%	100KHz, 0.25V	55	65	4	6
LMLP13B3M470DTAS	47	±20%	100KHz, 0.25V	80	92	3	5
LMLP13B3M680DTAS	68	±20%	100KHz, 0.25V	122	134	2	3.5

I<sub>SAT</sub>: The current that causes an inductance drop of approximately 25% (30% on 0405 size).

I<sub>DC</sub>: DC Current that causes an approximate ΔT of 40°C.



# LMax Low Profile/High Current Power Inductor

## LMLP Series – Style D



### GENERAL CHARACTERISTICS

Items	Requirement	Test Methods		
Solderability	More than 90% of the terminal electrode should be covered with solder.	230±5°C for 4±1 seconds		
Solder Heat Resistance	Inductance value must remain within 20% of initial value. No disconnection or short circuit. No change in appearance.	260±5°C for 4±1 seconds		
Heat Resistance	Inductance value must remain within 20% of initial value. No disconnection or short circuit. No change in appearance.	Temperature: 125±5°C		
		Time: 500 hours		
Cold Resistance	Inductance value must remain within 20% of initial value. No disconnection or short circuit. No change in appearance.	Tested after 2 hours at room temperature		
		Temperature: -40±5°C		
Thermal Shock	Inductance value must remain within 20% of initial value. No disconnection or short circuit. No change in appearance.	Time: 500 hours		
		Tested after 2 hours at room temperature		
		One Cycle		
		Step	Temperature (°C)	Time (min.)
		1	-40±5°C	30
2	Room Temperature	3		
3	125±5°C	30		
4	Room Temperature	3		
Humidity Resistance	Inductance value must remain within 20% of initial value. No disconnection or short circuit. No change in appearance.	Temperature: 40±2°C at 90~95% relative humidity .		
		Time: 500 Hours		
Vibration Test	Inductance value must remain within ±5% of initial value. No change in appearance	Tested after 2 hours at room temperature		
		After 1 hour of vibrations testing, in each of three orientations at 10Hz, then increase to 55Hz, then decrease to 10Hz with 1.52mm P-P amplitudes.		

# LMax Low Profile/High Current Power Inductor

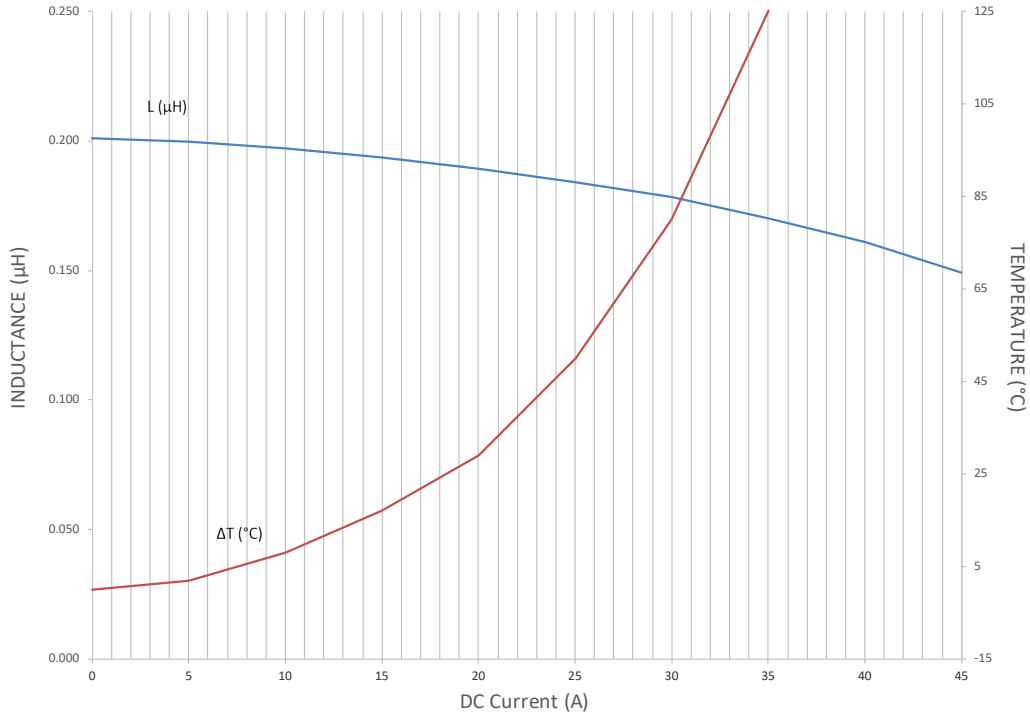
## LMLP Series – Style D



### LMLP07A7M-R22

#### L&I Curve

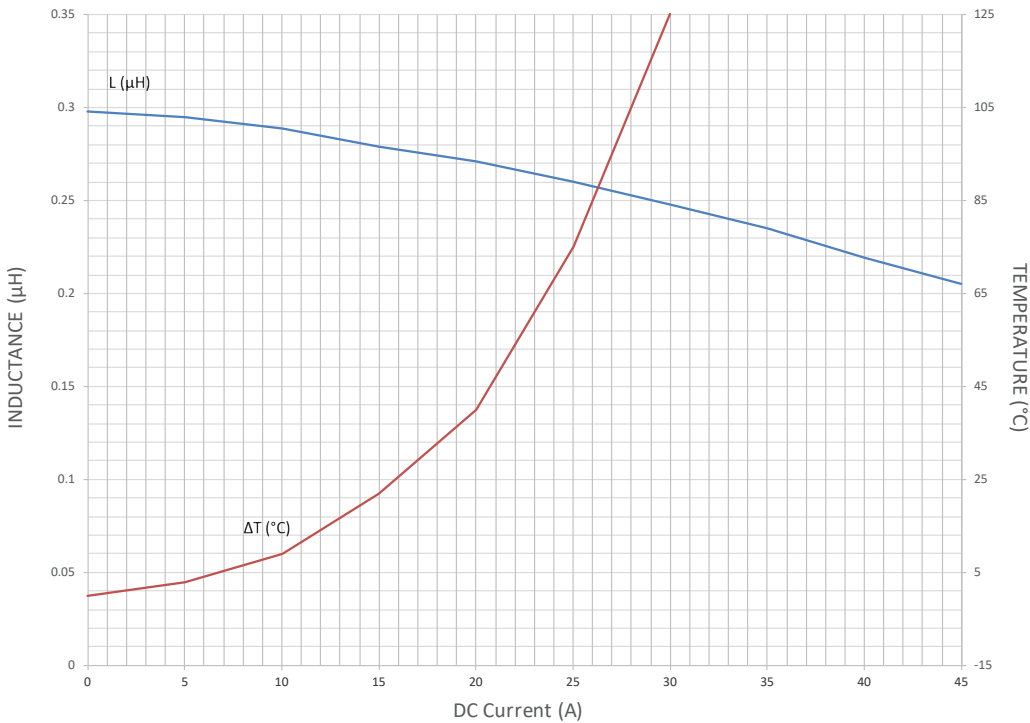
R22



### LMLP07A7M-R33

#### L&I Curve

R33



# LMax Low Profile/High Current Power Inductor

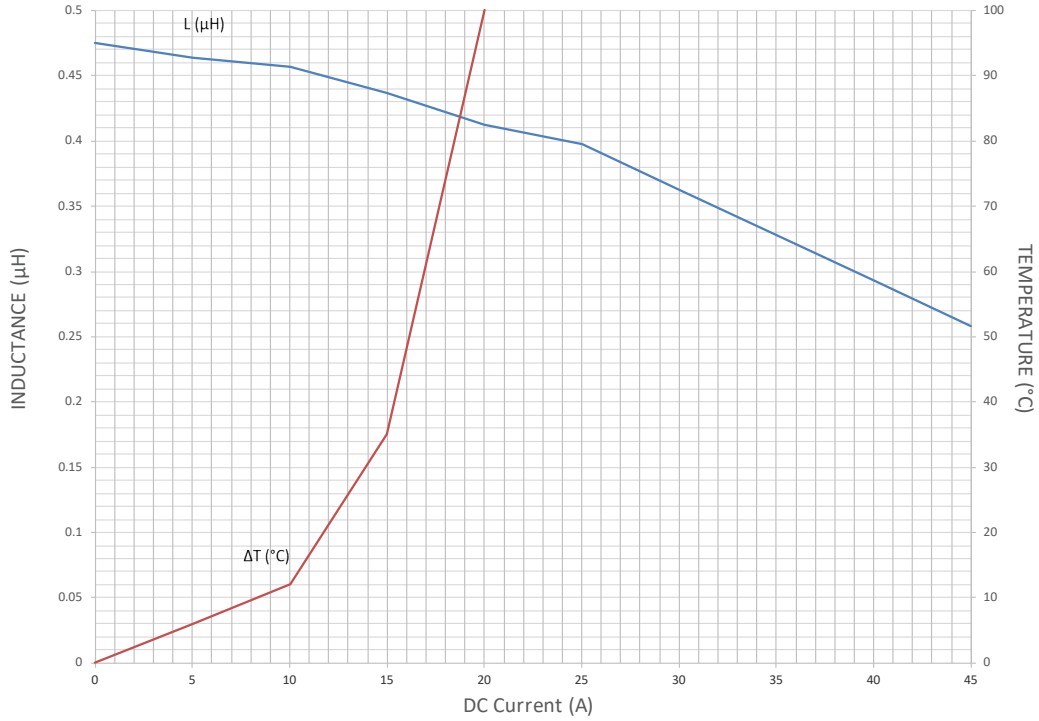


## LMLP Series – Style D

### LMLP07A7M-R47

L&I Curve

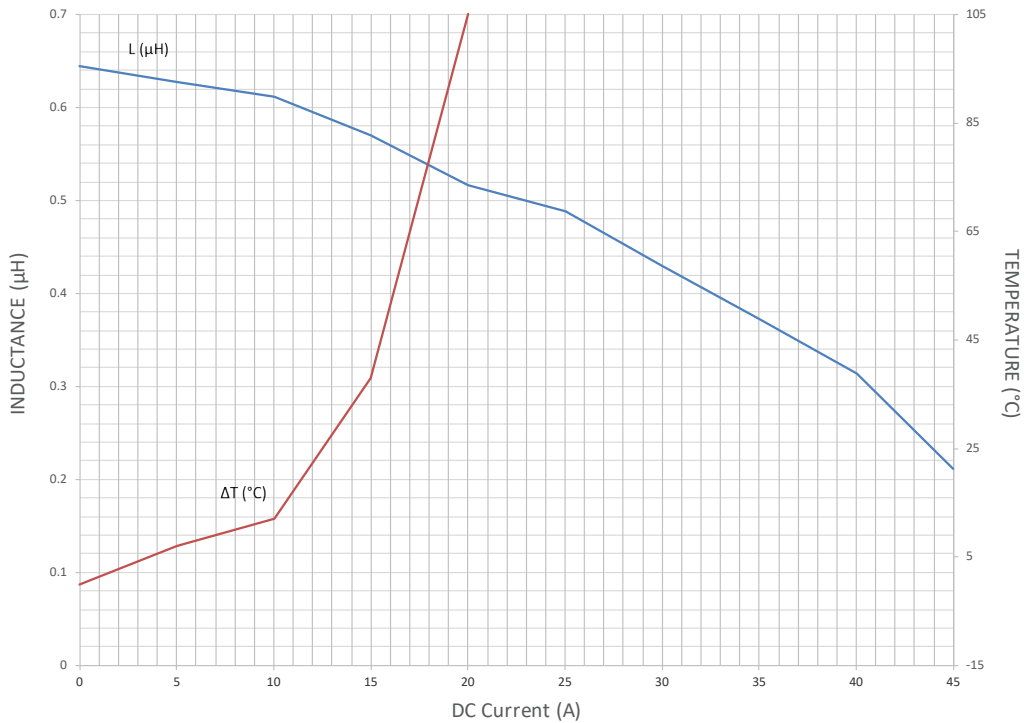
R47



### LMLP07A7M-R68

L&I Curve

R68



# LMax Low Profile/High Current Power Inductor

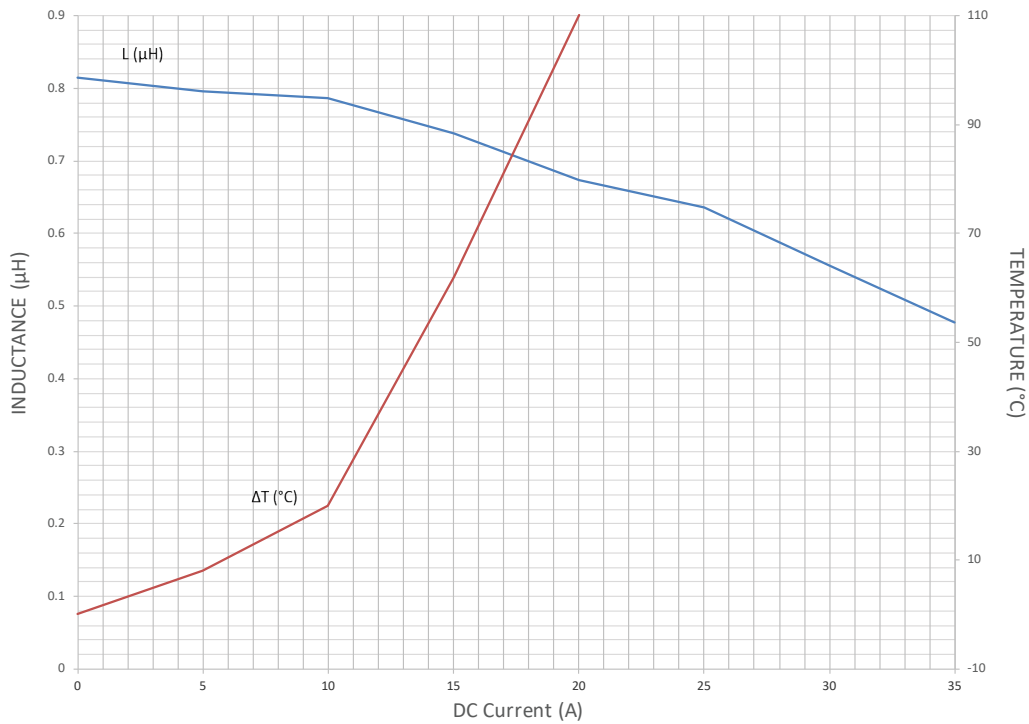


## LMLP Series – Style D

### LMLP07A7M-R82

L&I Curve

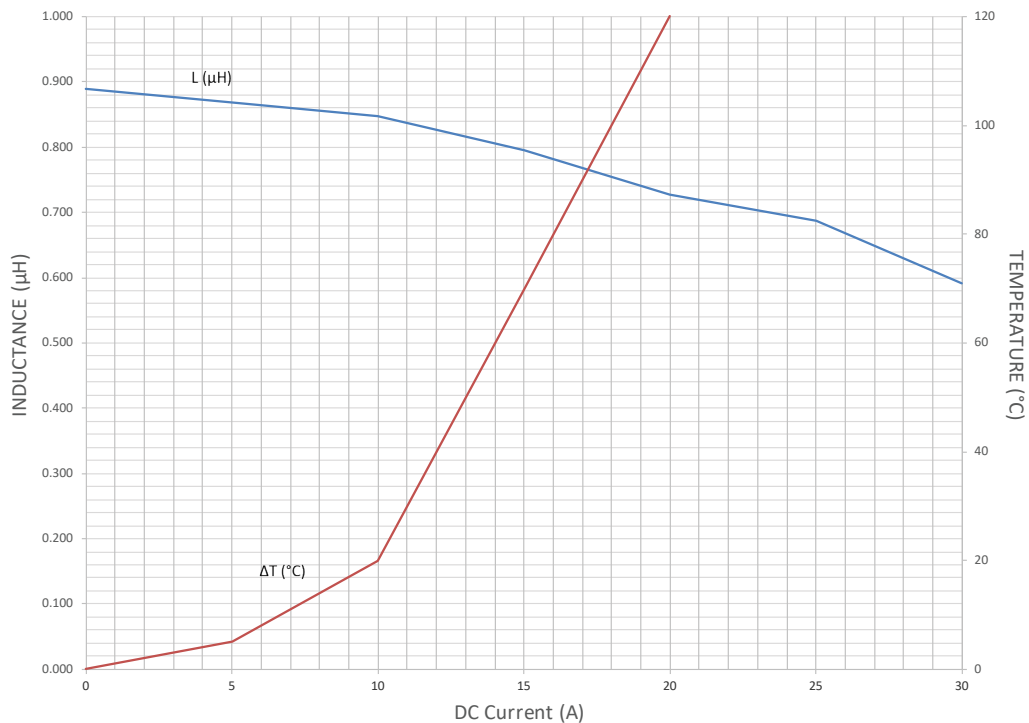
R82



### LMLP07A7M-1R0

L&I Curve

1R0





# LMax Low Profile/High Current Power Inductor

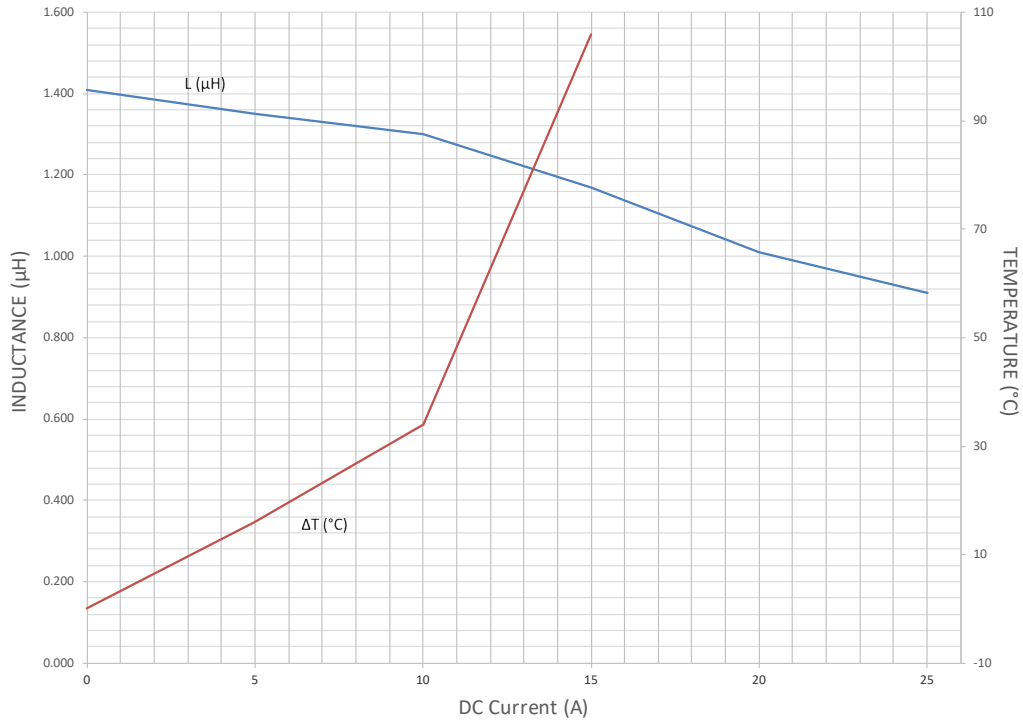
## LMLP Series – Style D



### LMLP07A7M-1R5

L&I Curve

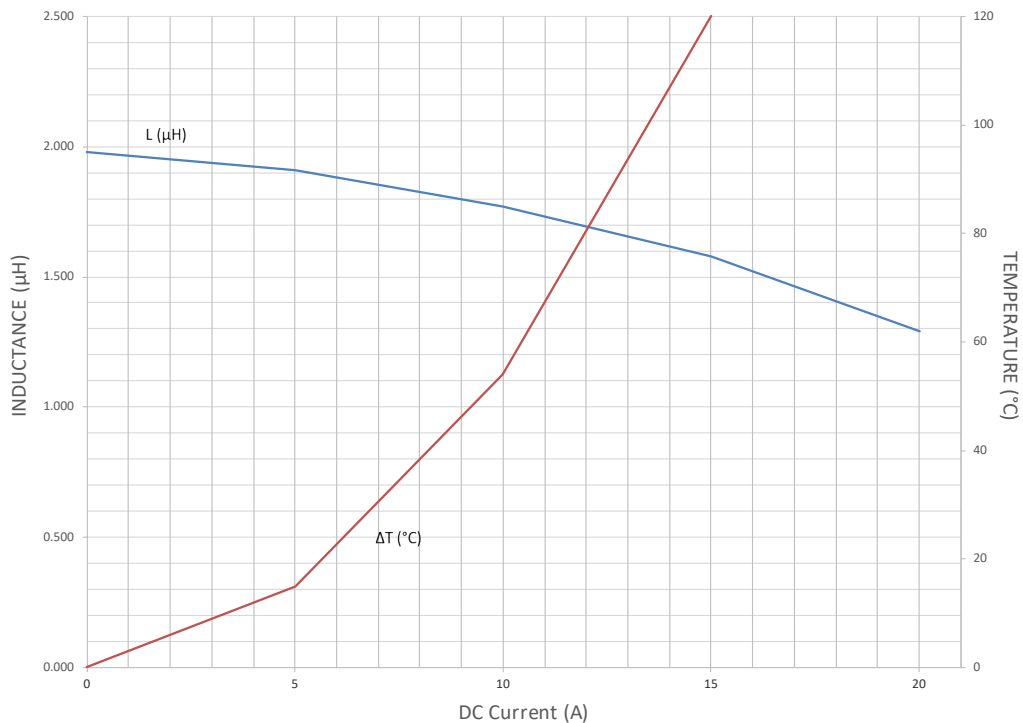
1R5



### LMLP07A7M-2R2

L&I Curve

2R2



# LMax Low Profile/High Current Power Inductor

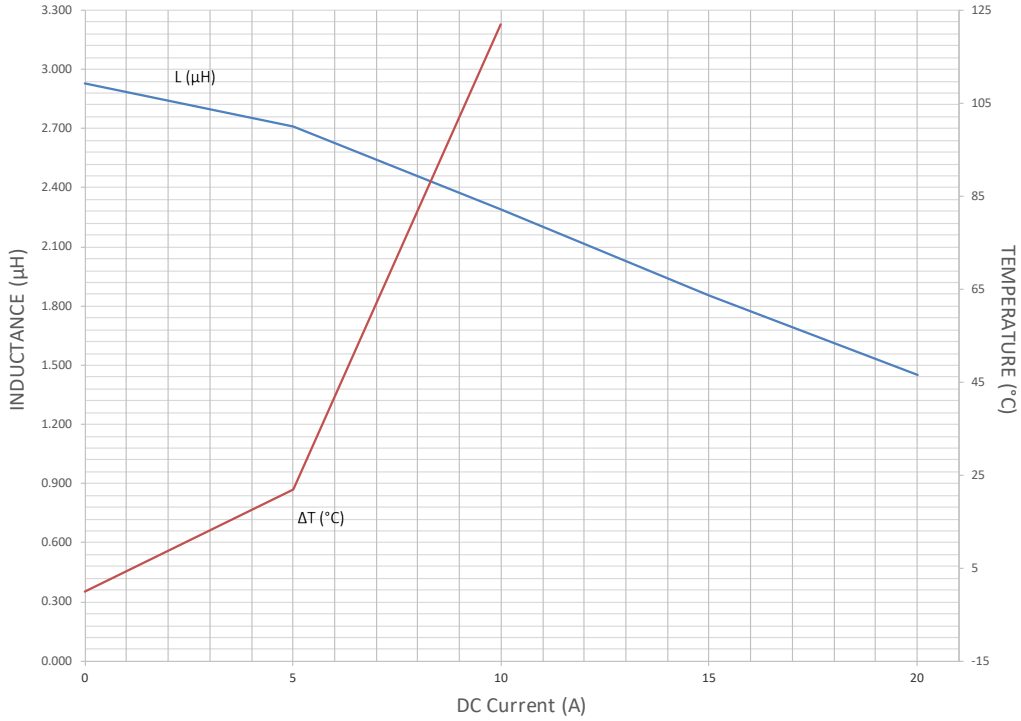


## LMLP Series – Style D

### LMLP07A7M-3R3

L&I Curve

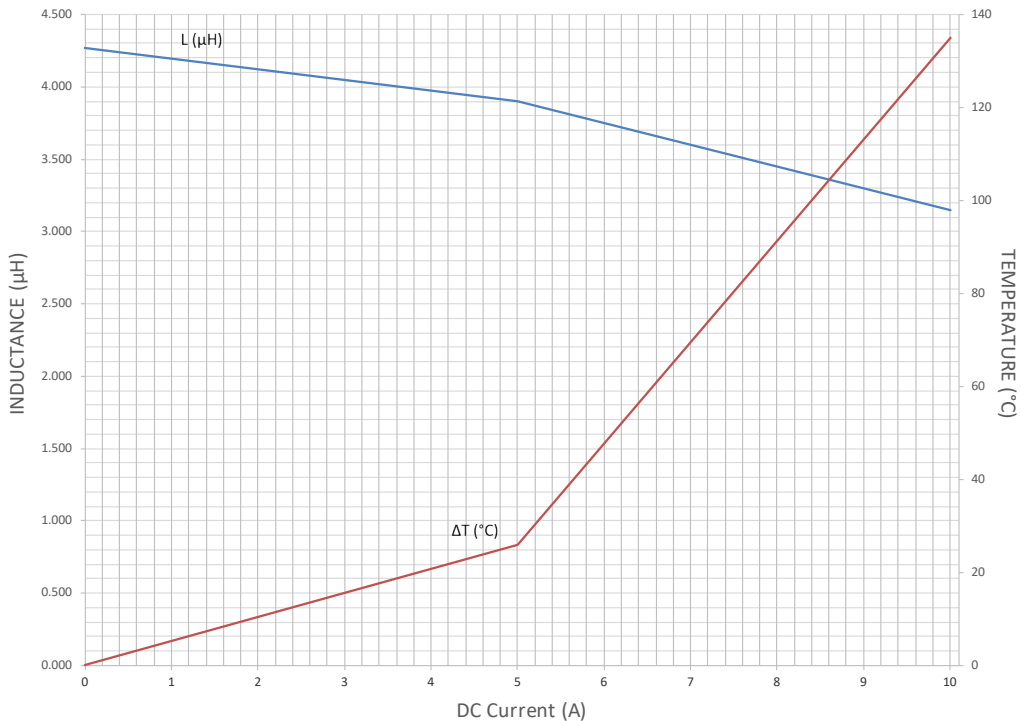
3R3



### LMLP07A7M-4R7

L&I Curve

4R7



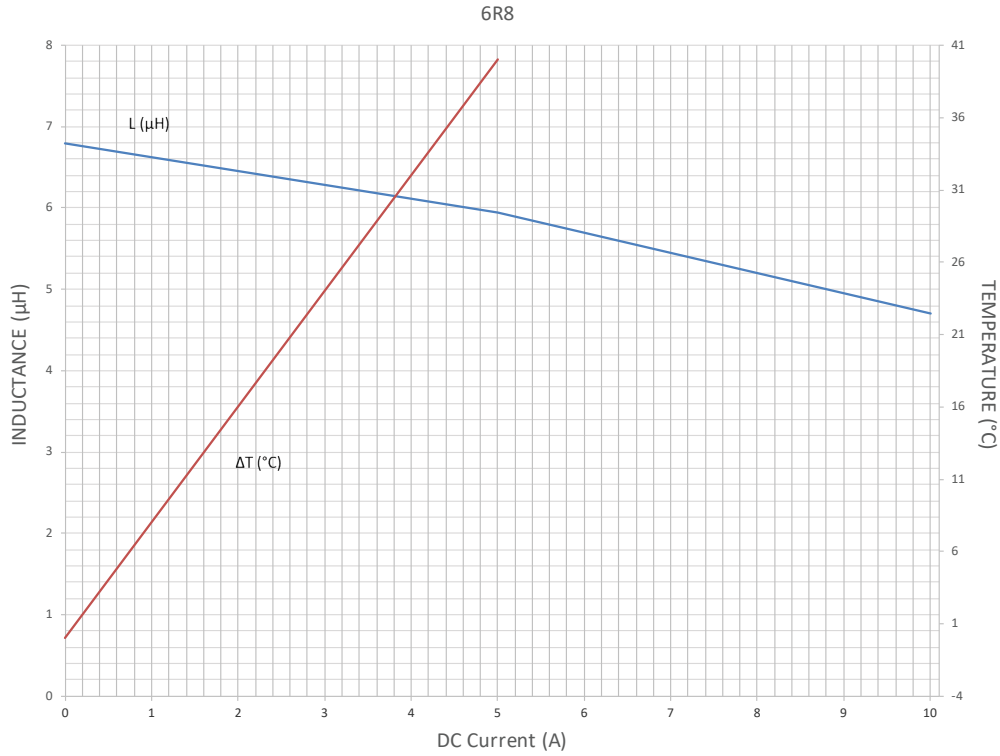
# LMax Low Profile/High Current Power Inductor



## LMLP Series – Style D

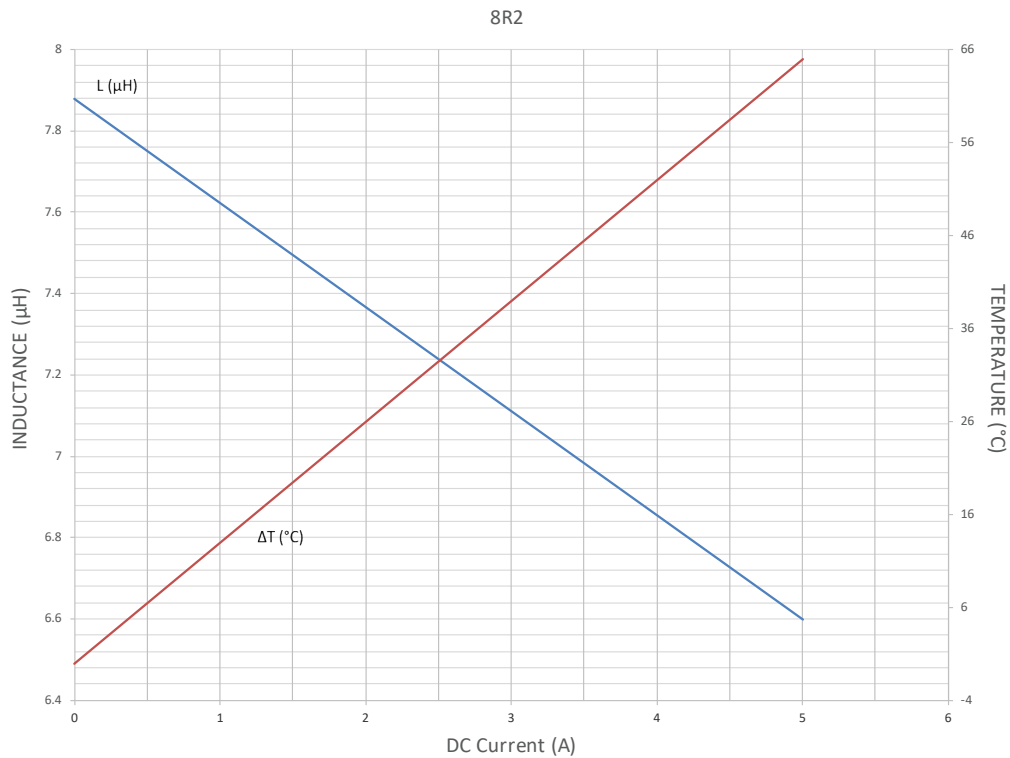
### LMLP07A7M-6R8

L&I Curve



### LMLP07A7M-8R2

L&I Curve



# LMax Low Profile/High Current Power Inductor

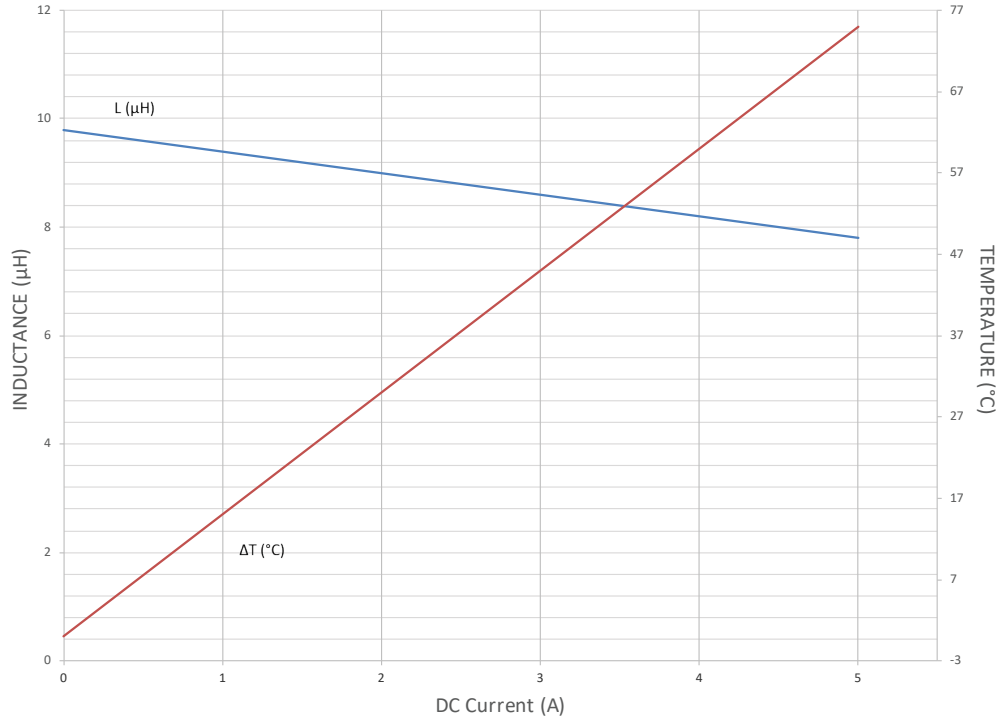


## LMLP Series – Style D

### LMLP07A7M-100

L&I Curve

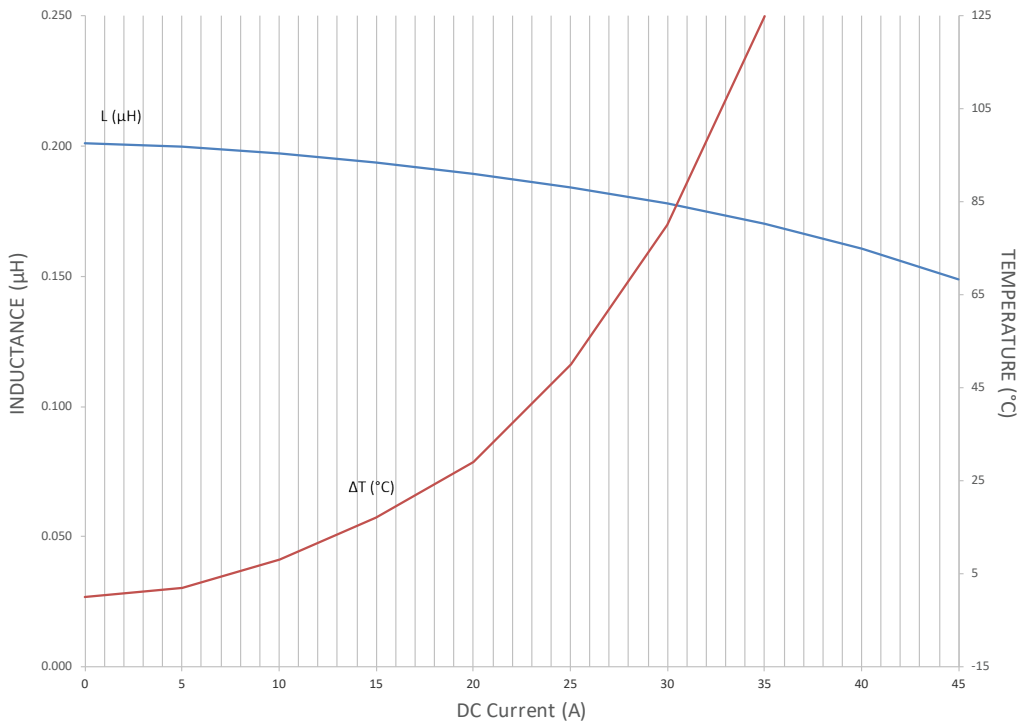
100



### LMLP07A7M-R22

I&T Curve

R22





# LMax Low Profile/High Current Power Inductor

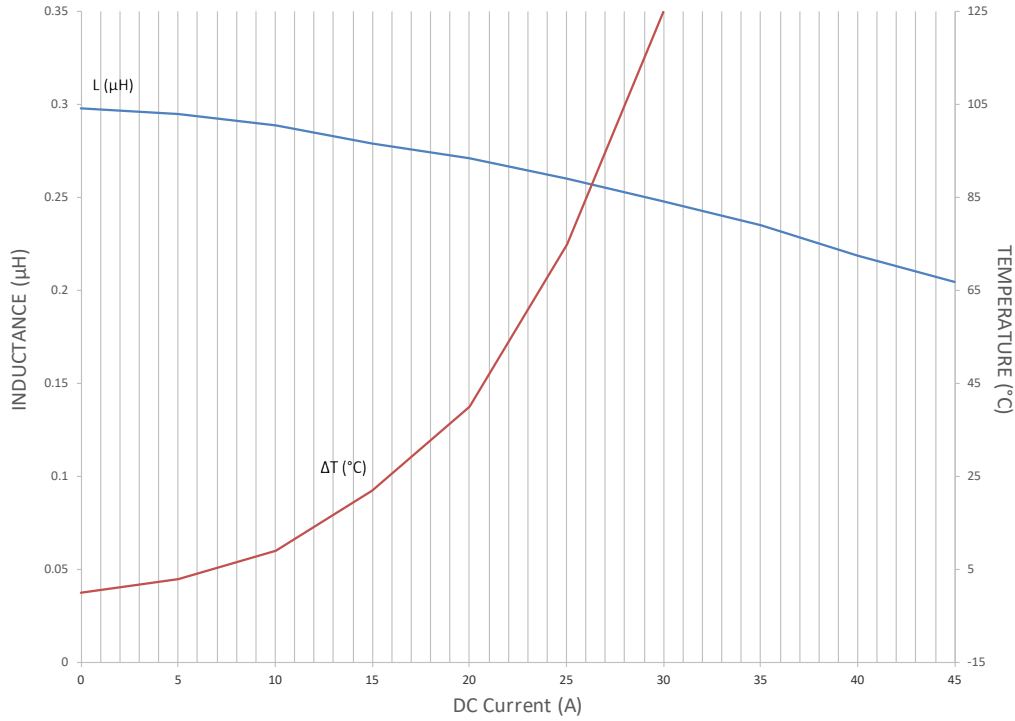
## LMLP Series – Style D



### LMLP07A7M-R33

#### I&T Curve

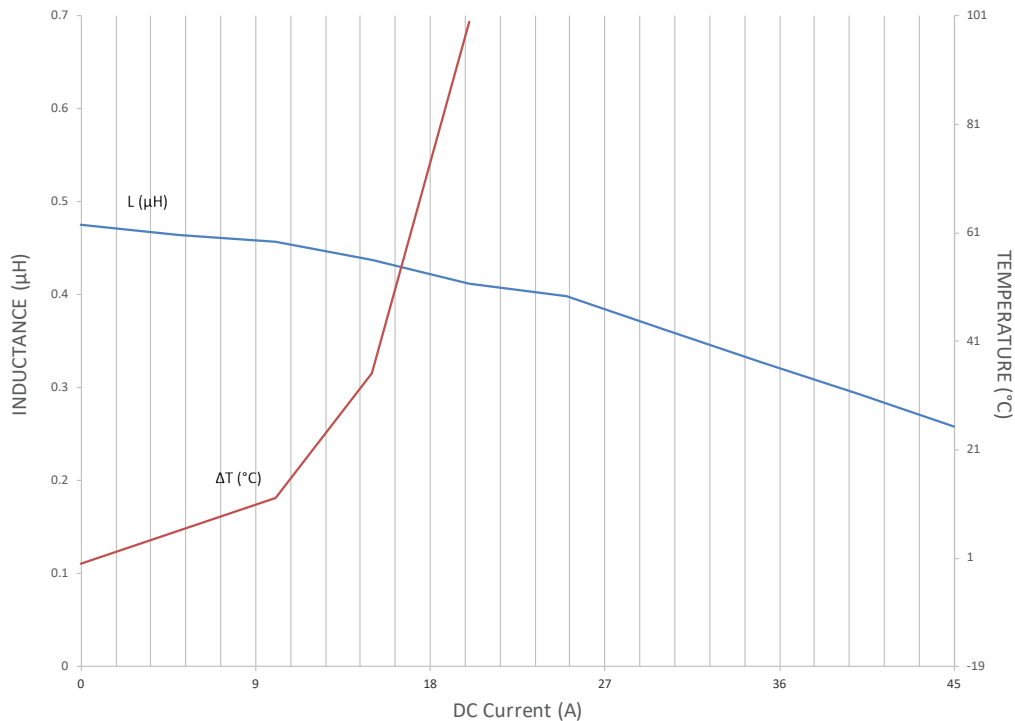
R33



### LMLP07A7M-R47

#### I&T Curve

R47



# LMax Low Profile/High Current Power Inductor

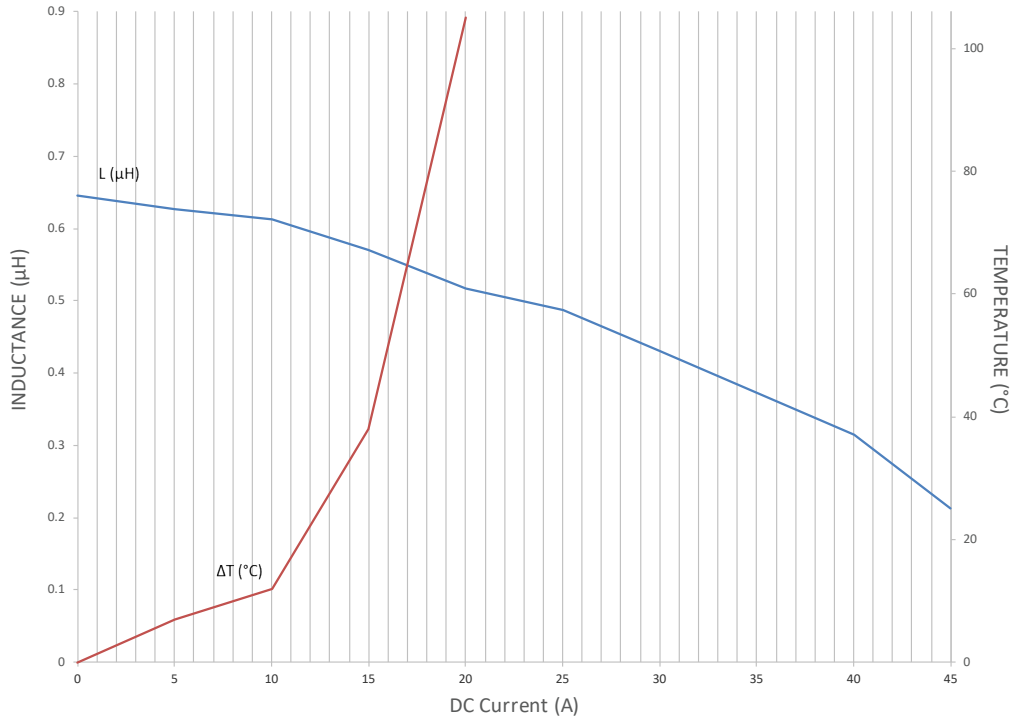


## LMLP Series – Style D

### LMLP07A7M-R68

I&T Curve

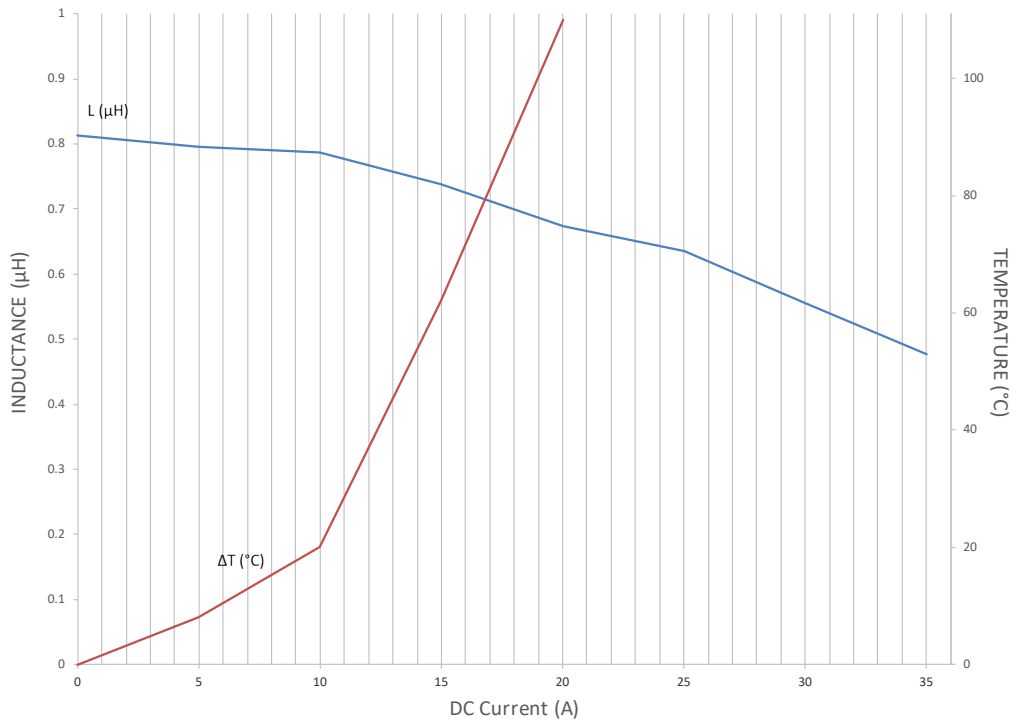
R68



### LMLP07A7M-R82

I&T Curve

R82



# LMax Low Profile/High Current Power Inductor

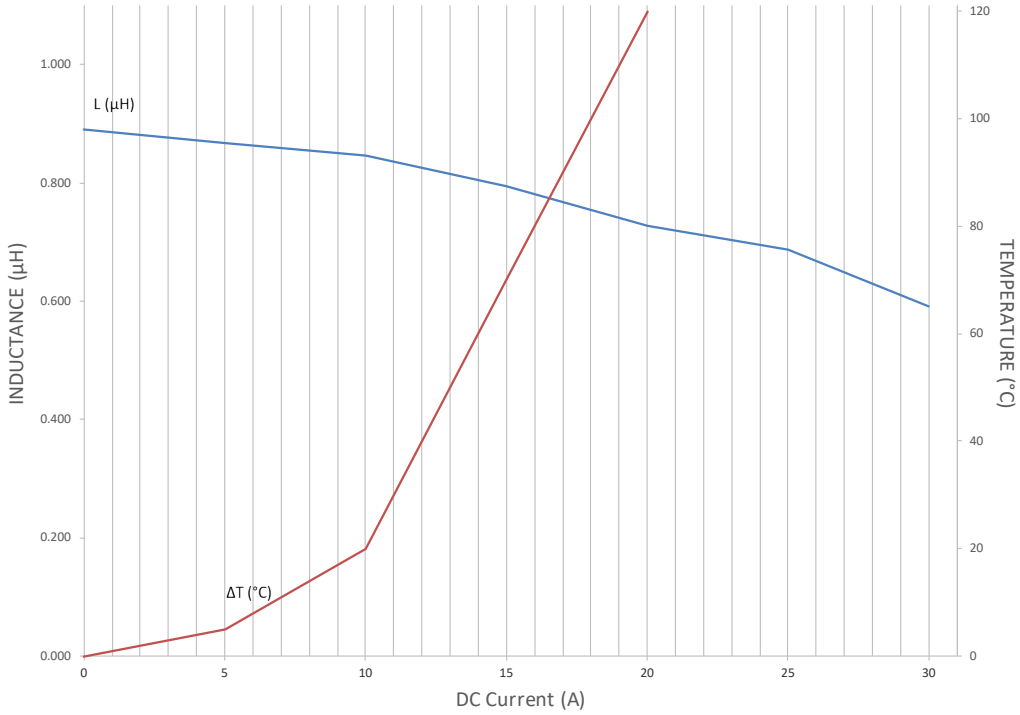
## LMLP Series – Style D



### LMLP07A7M-1R0

I&T Curve

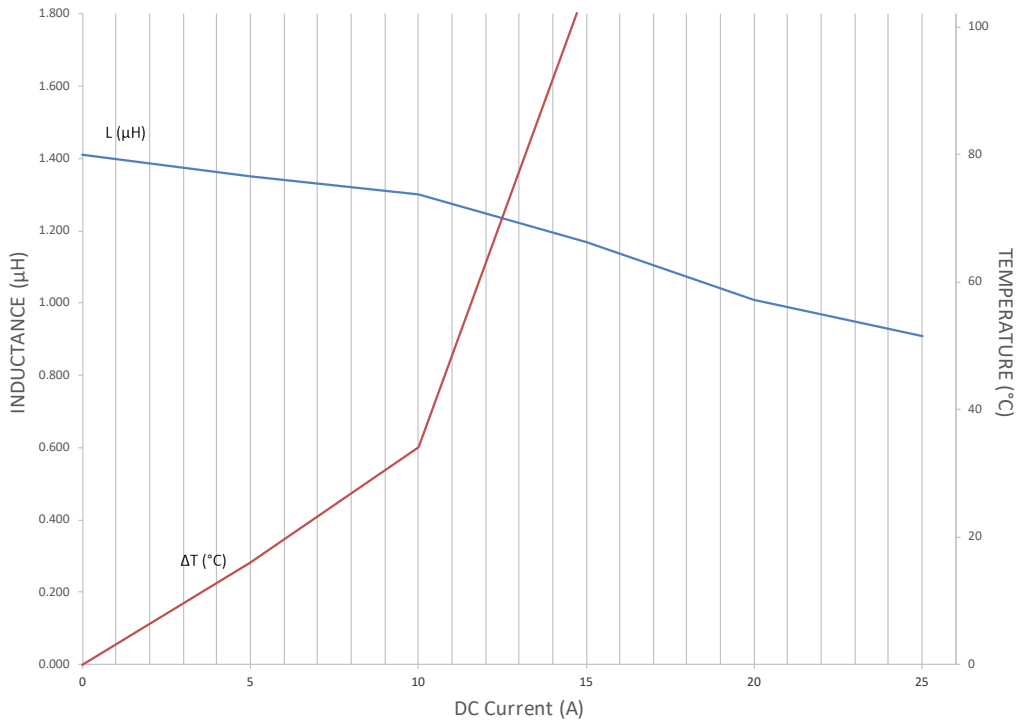
1R0



### LMLP07A7M-1R5

I&T Curve

1R5



# LMax Low Profile/High Current Power Inductor

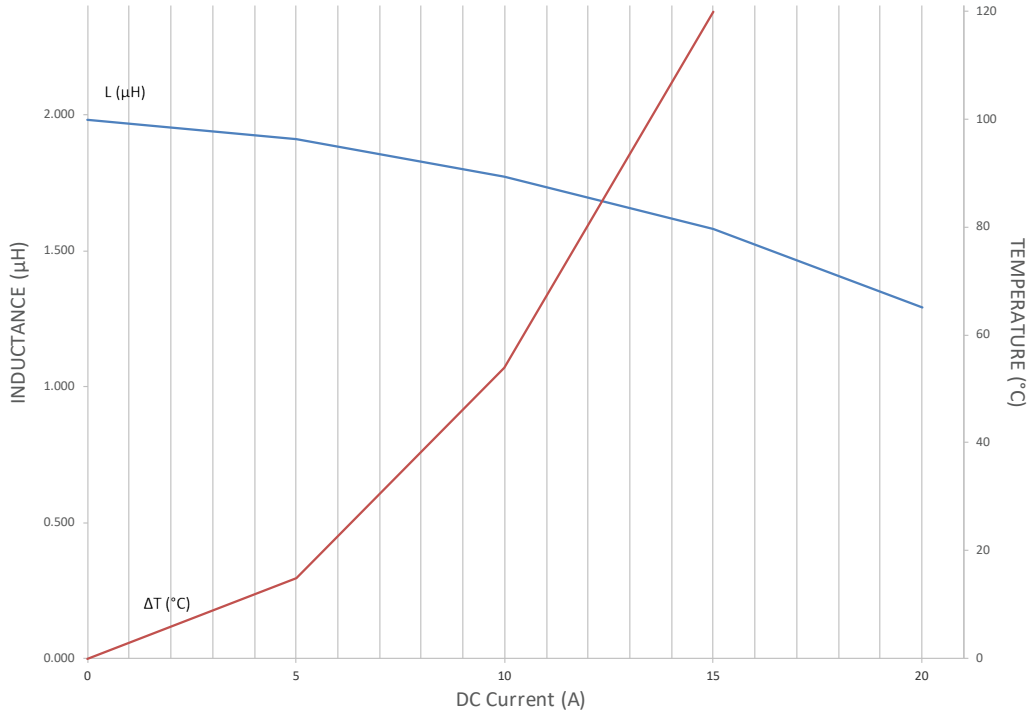


## LMLP Series – Style D

### LMLP07A7M-2R2

#### I&T Curve

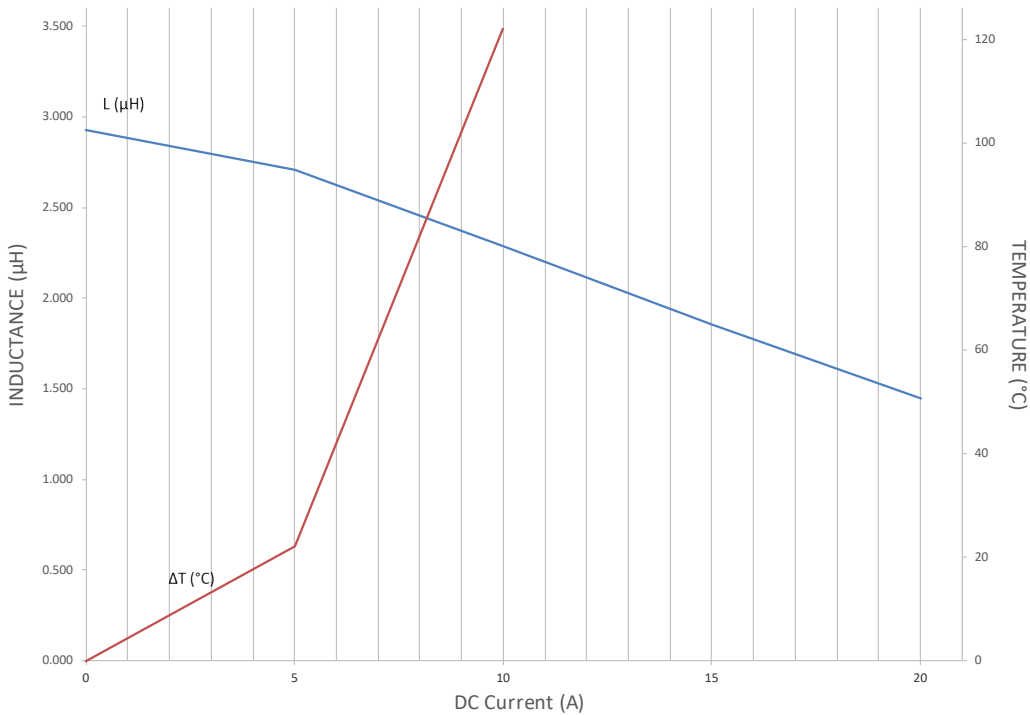
2R2



### LMLP07A7M-3R3

#### I&T Curve

3R3





# LMax Low Profile/High Current Power Inductor

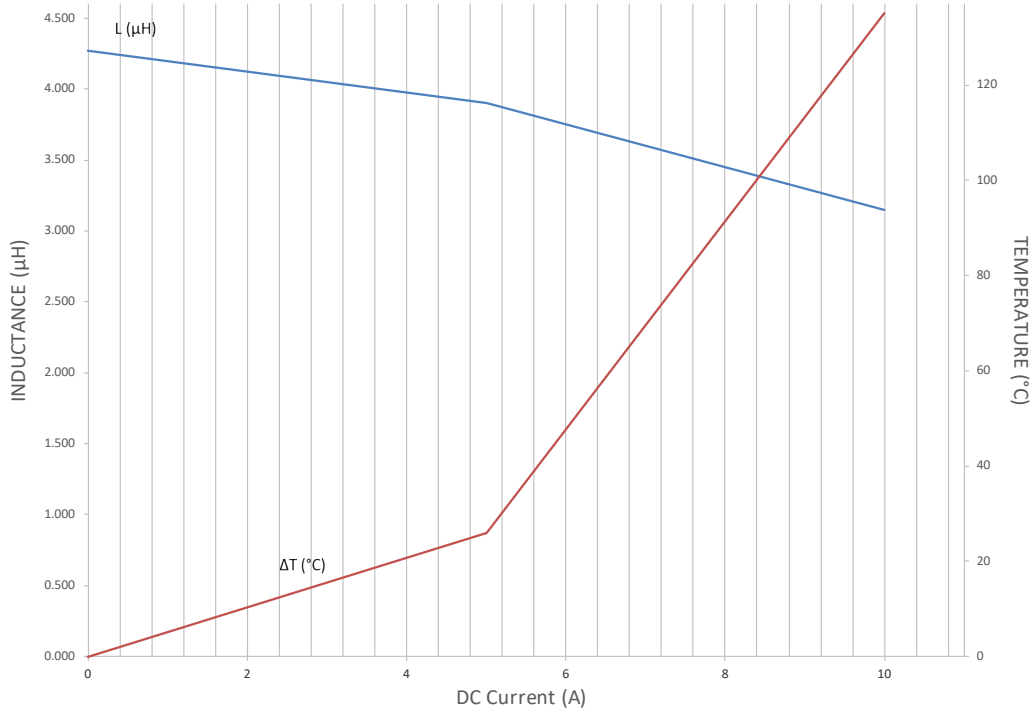
## LMLP Series – Style D



### LMLP07A7M-4R7

#### I&T Curve

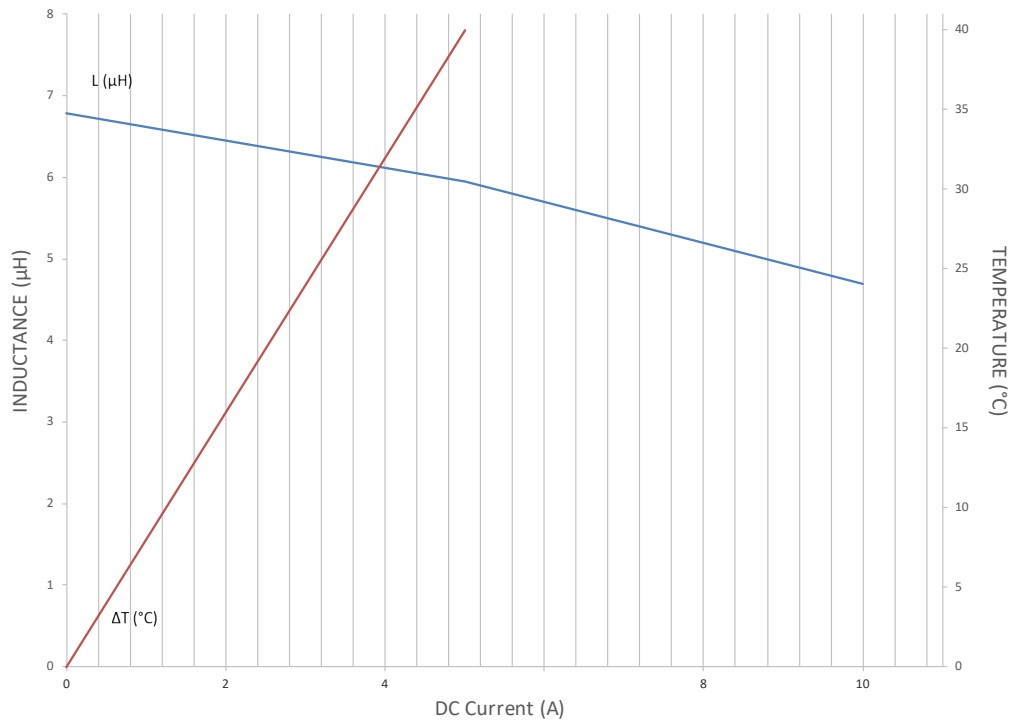
4R7



### LMLP07A7M-6R8

#### I&T Curve

6R8



# LMax Low Profile/High Current Power Inductor

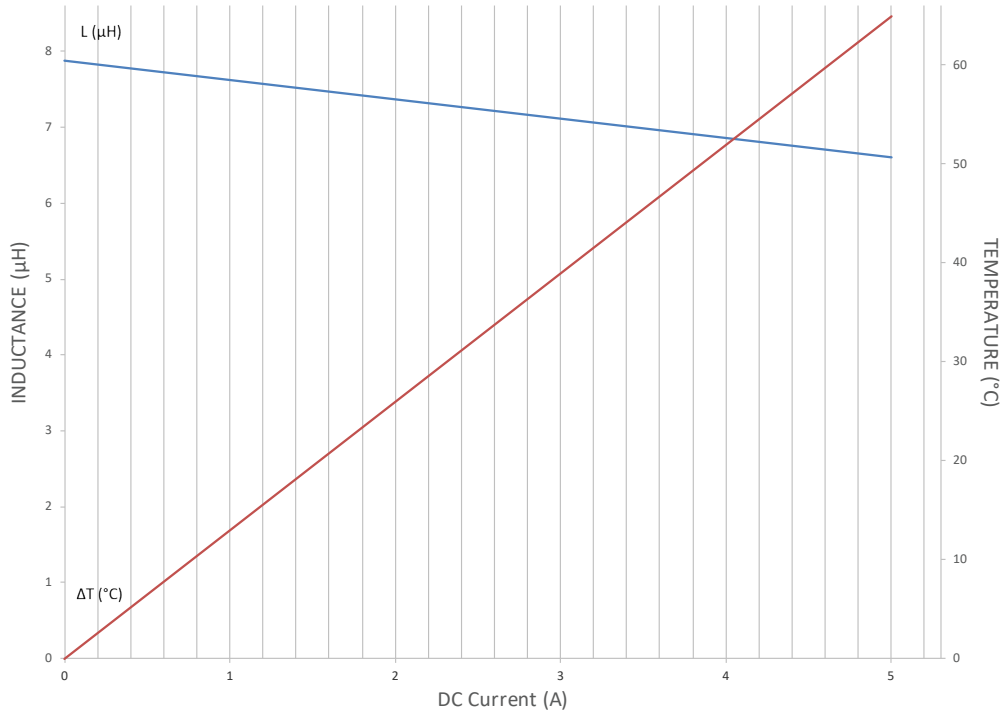
## LMLP Series – Style D



### LMLP07A7M-8R2

#### I&T Curve

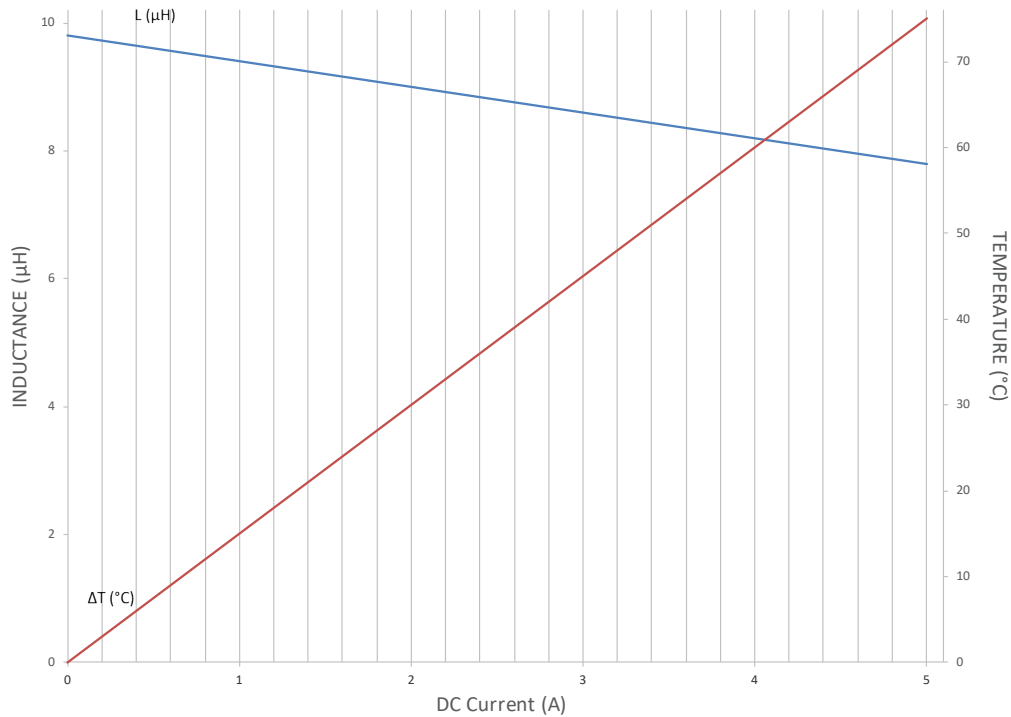
8R2



### LMLP07A7M-100

#### I&T Curve

100



# LMax Low Profile/High Current Power Inductor

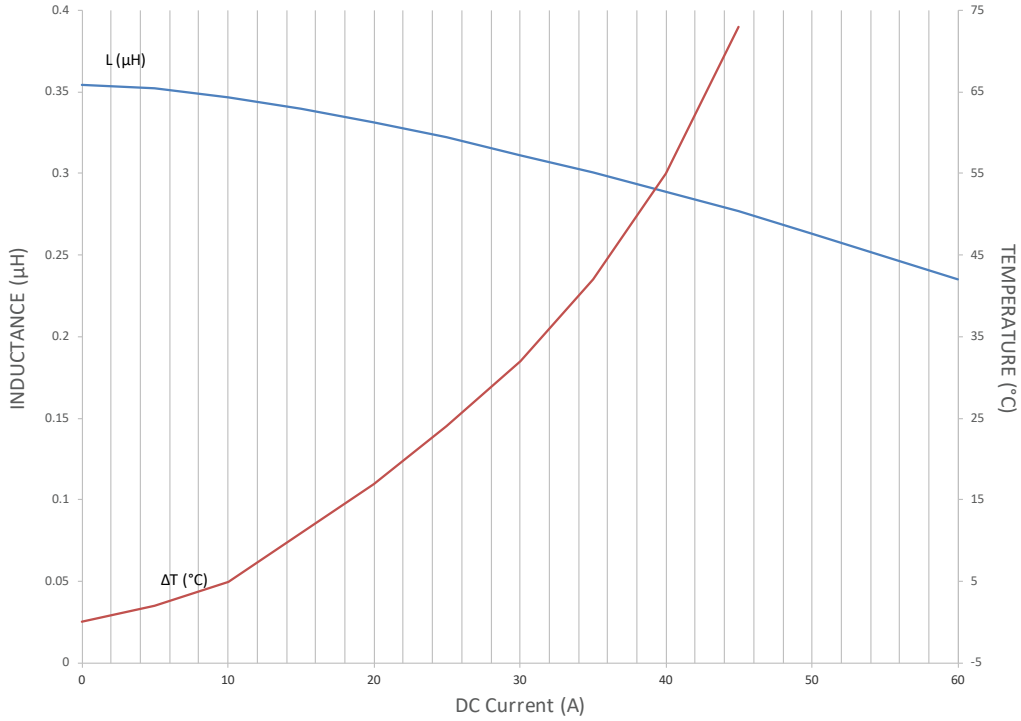


## LMLP Series – Style D

### LMLP1011M-R36

L&I Curve

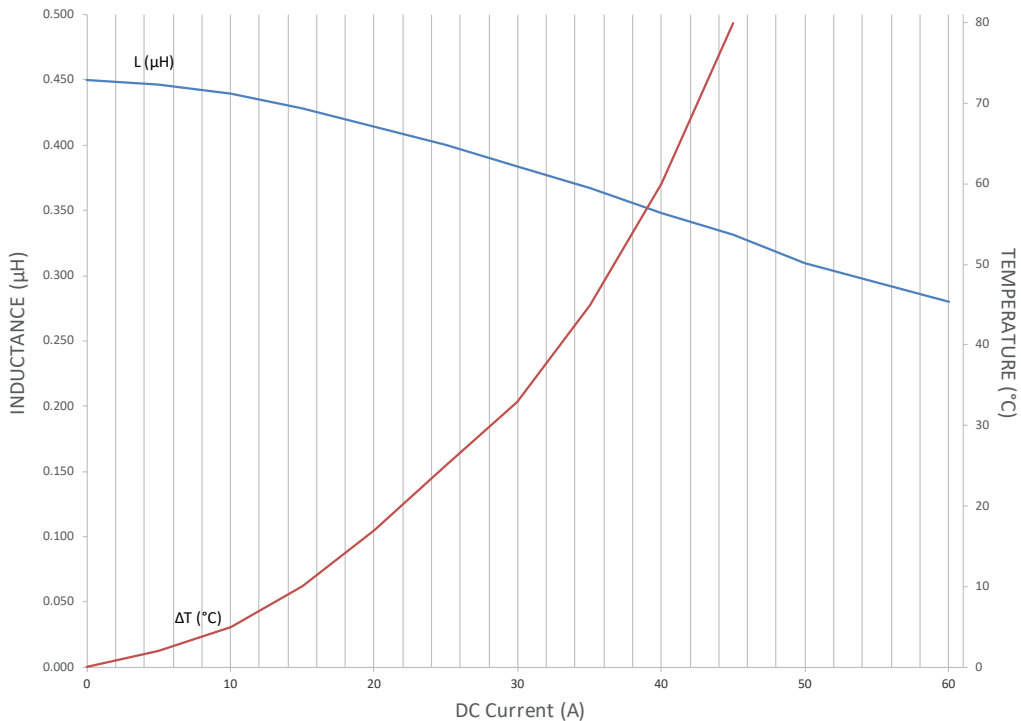
R36



### LMLP1011M-R47

L&I Curve

R47



# LMax Low Profile/High Current Power Inductor

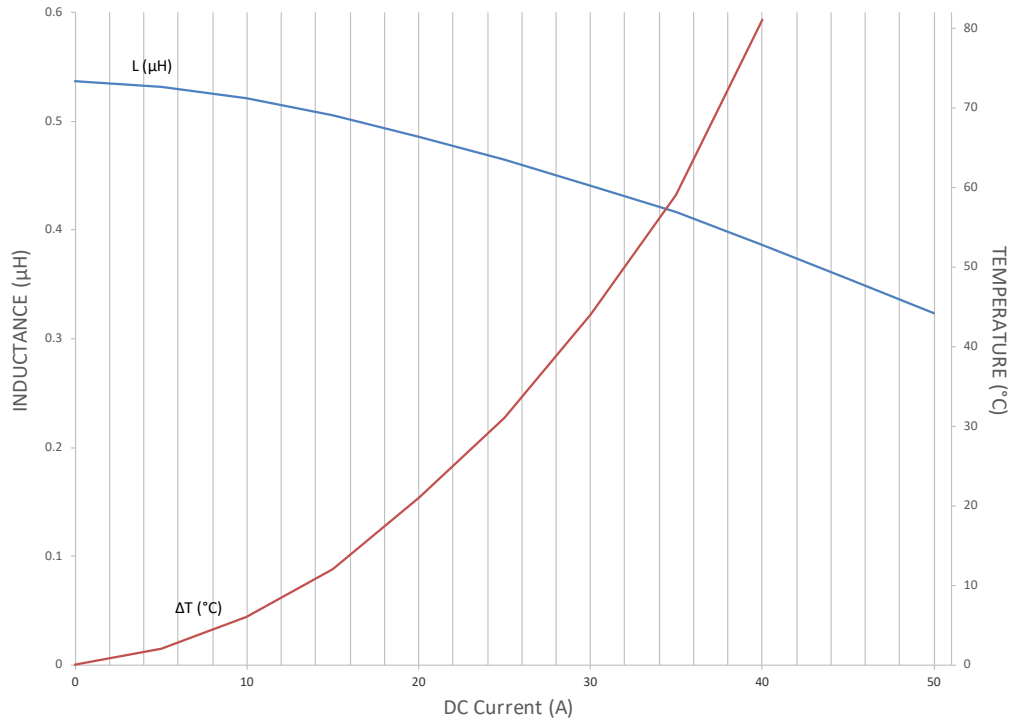


## LMLP Series – Style D

### LMLP1011M-R56

#### L&I Curve

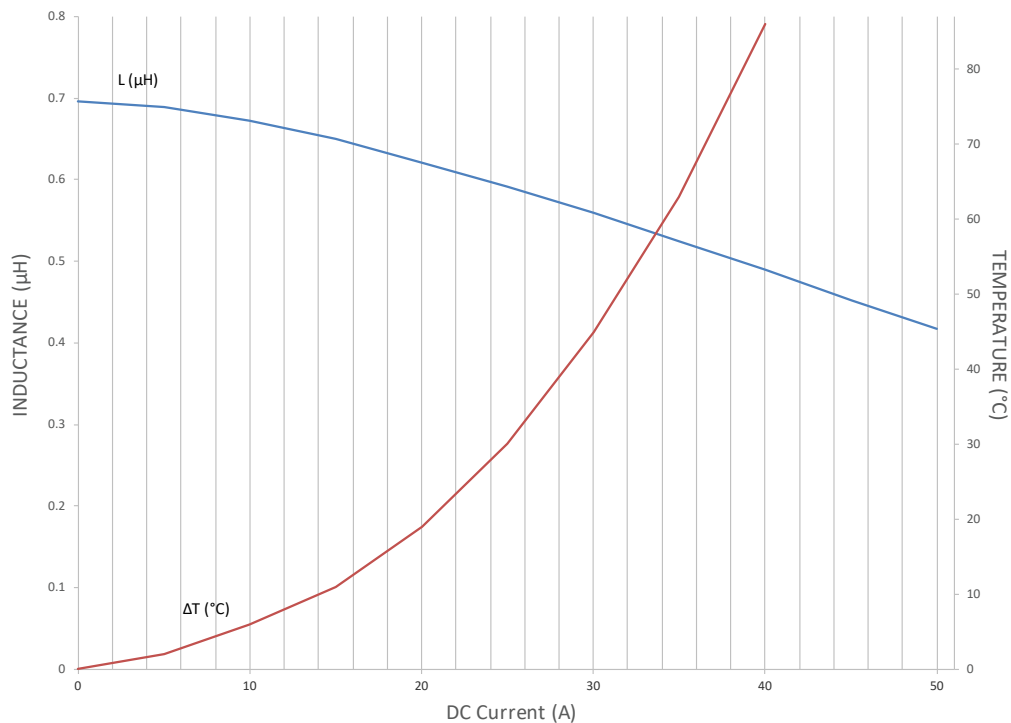
R56



### LMLP1011M-R68

#### L&I Curve

R68



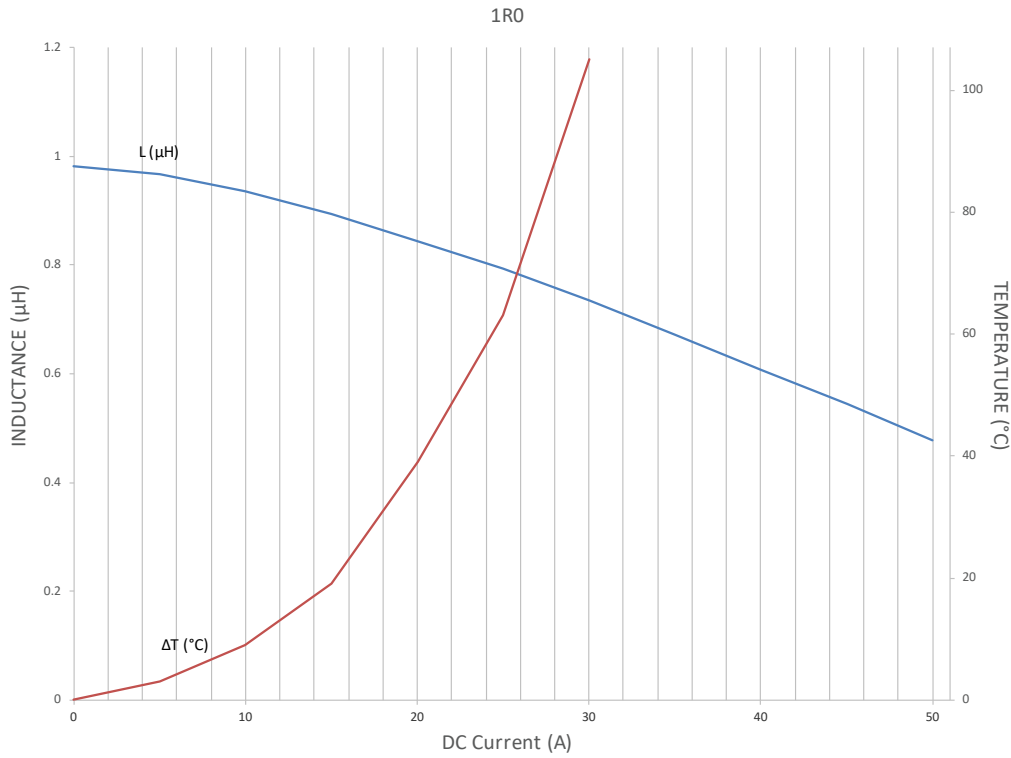
# LMax Low Profile/High Current Power Inductor



## LMLP Series – Style D

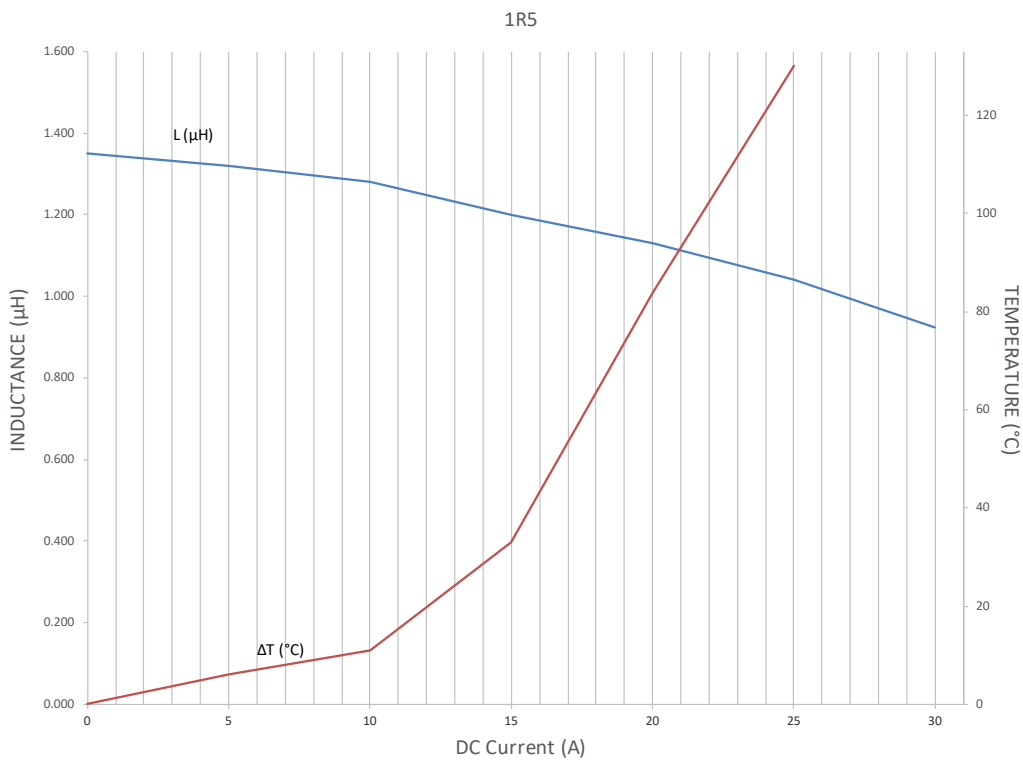
### LMLP1011M-1R0

L&I Curve



### LMLP1011M-1R5

L&I Curve



# LMax Low Profile/High Current Power Inductor

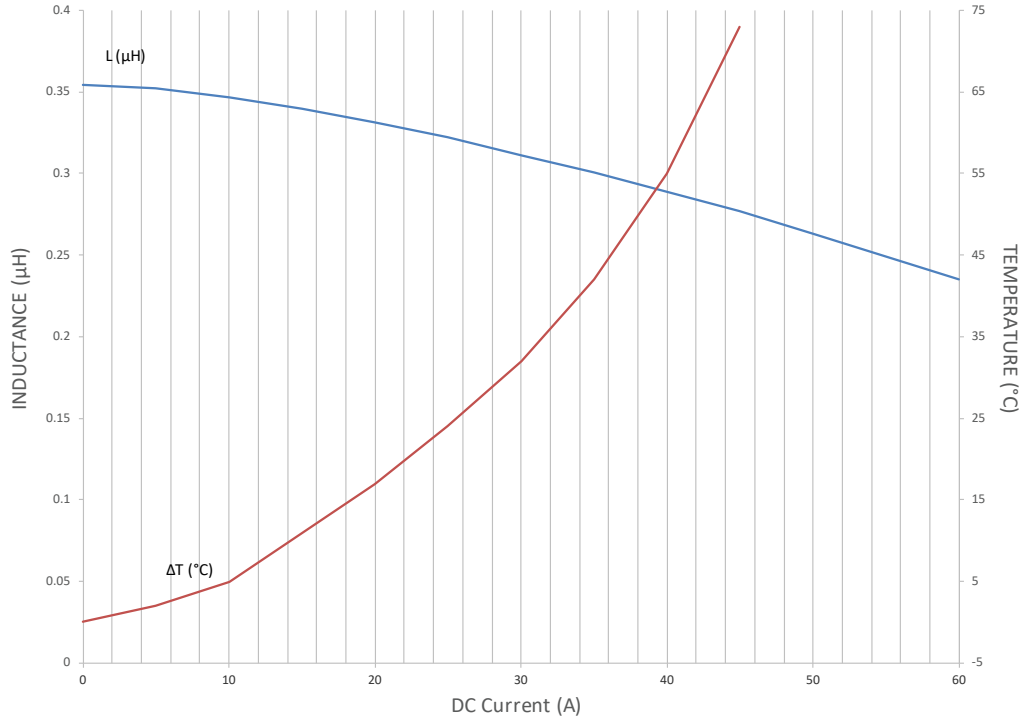


## LMLP Series – Style D

### LMLP1011M-R36

#### I&T Curve

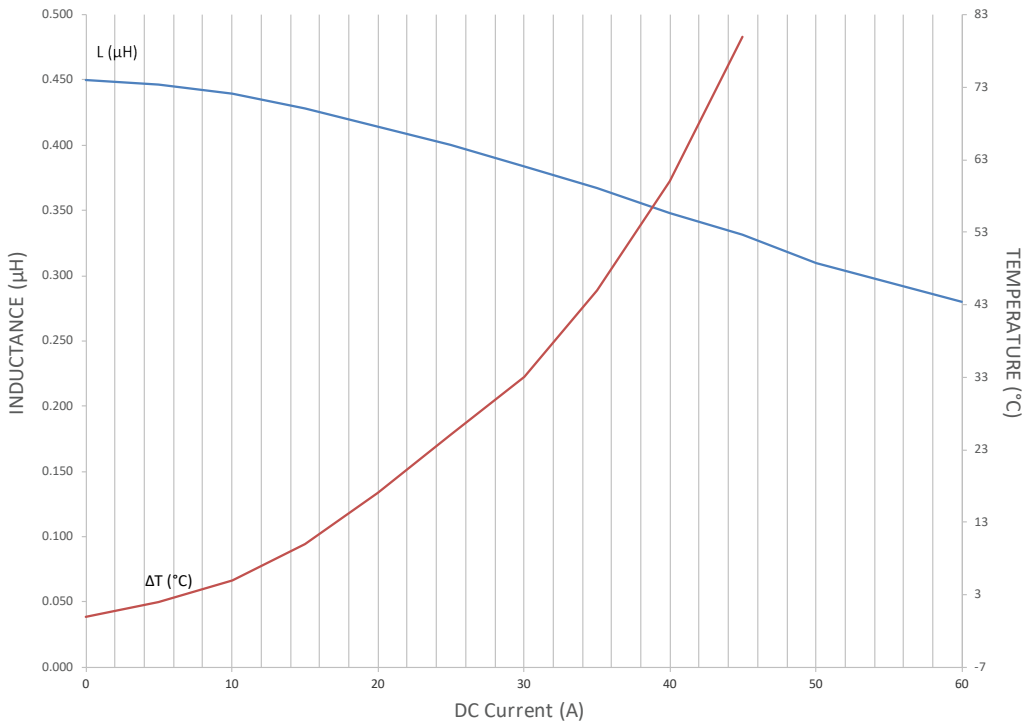
R36



### LMLP1011M-R47

#### I&T Curve

R47



# LMax Low Profile/High Current Power Inductor

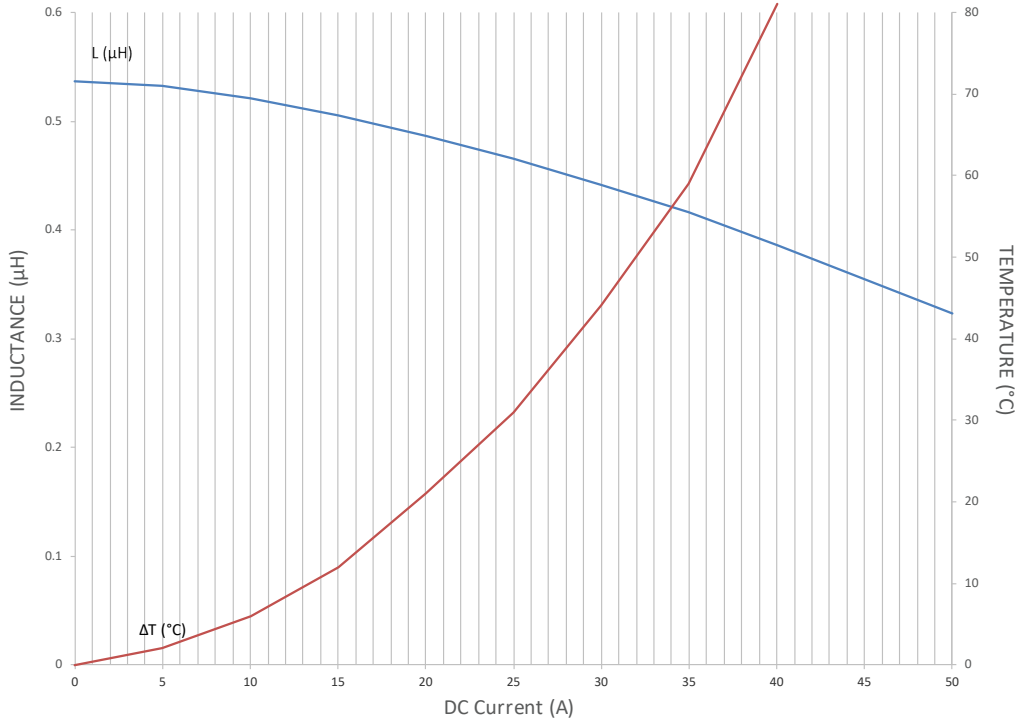
## LMLP Series – Style D



### LMLP1011M-R56

I&T Curve

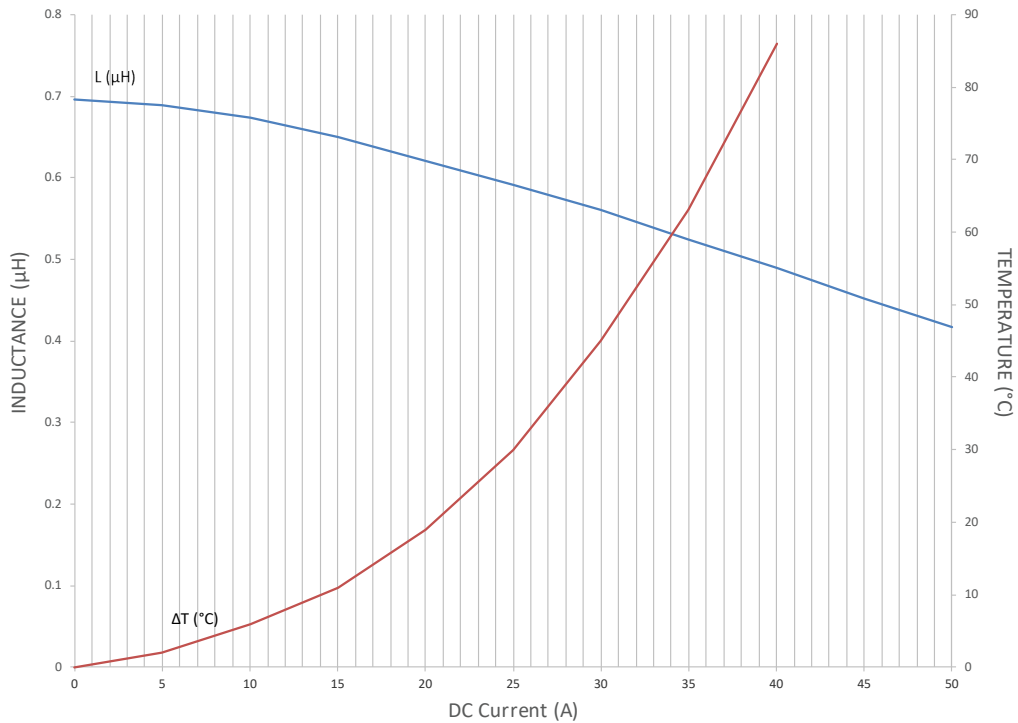
R56



### LMLP1011M-R68

I&T Curve

R68





# LMax Low Profile/High Current Power Inductor

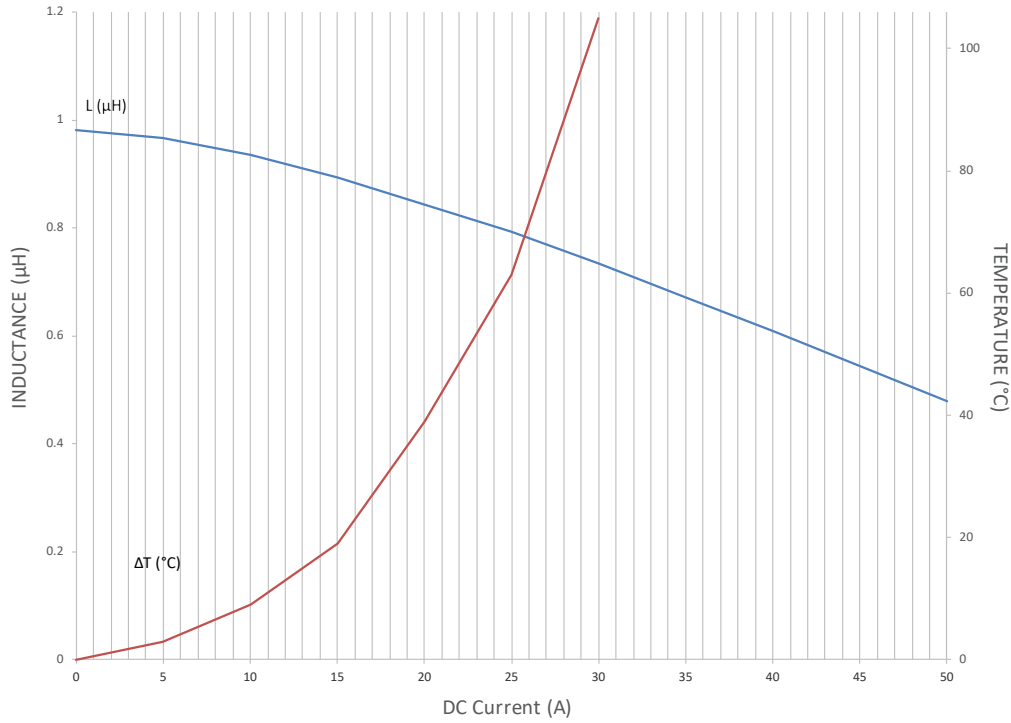


## LMLP Series – Style D

### LMLP1011M-1R0

I&T Curve

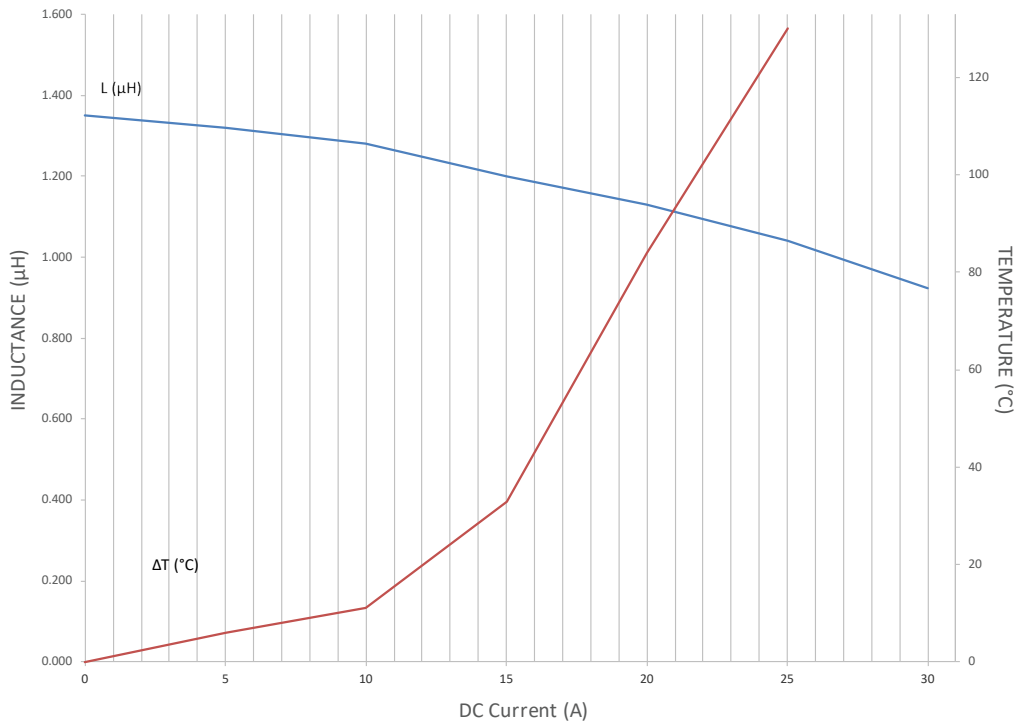
1R0



### LMLP1011M-1R5

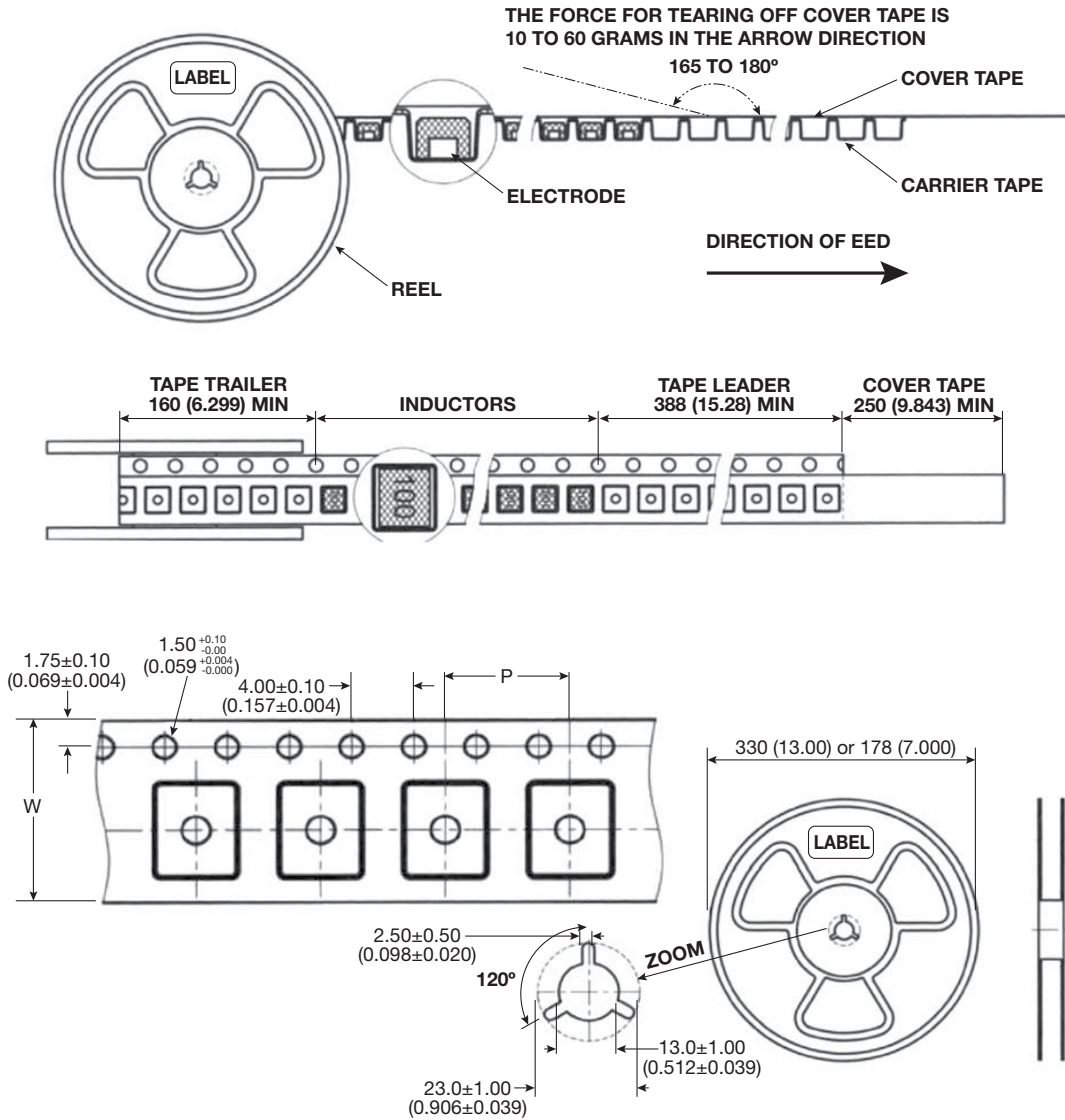
I&T Curve

1R5



# LMax Low Profile/High Current Power Inductor

## LMLP Series – Style D



Size Code	Tape Size (mm)		Reel Size	SPQ
	W	P		
0405	12	8	13" Reel	2000
05A6	12	8	13" Reel	3000
0506	12	8	13" Reel	2000
0707	16	12	13" Reel	1500
07B7	16	12	13" Reel	1500
07A7	16	12	13" Reel	1000
07C7	16	12	13" Reel	800
1011	24	16	13" Reel	500
1313	24	16	13" Reel	500
13B3	24	20	13" Reel	400



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