LMax Low Profile Power Inductor

LMLP Series – Style D

FEATURES

- Large current adaptable
- Lower temperature rise at large current
- Low profile, low DCR
- Available on tape and reel for auto surface mounting

APPLICATIONS

- Laptop, Desktop, Notebook Computers
- Terminals, Portable Servers,Workstation
- DCIDC Converter in Distributed Power
- Systems or VRM Applications
- Thin Type On-board Power Supply Module for Exchanger

CHARACTERISTICS

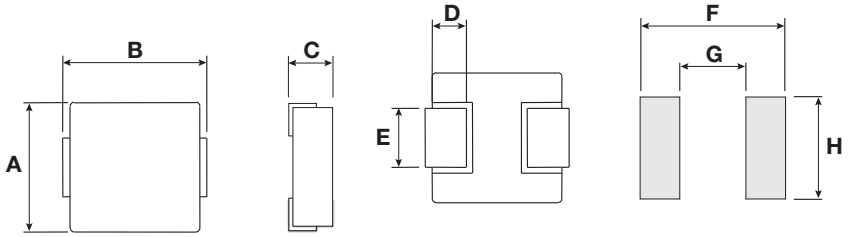
- Typical Saturation DC Current would cause Lo to drop approximately 30% (Typical)
- Typical Heat Rating DC Current would cause an approximate ΔT of 40°C
- All test data is referenced at 25°C ambient

INDUCTANCE AND RATED CURRENT RANGES

- 0506 0.68µH ~ 4.7µH @ Saturation DC Current: 14 ~ 5A
- 0707 0.10µH ~ 6.8µH @ Saturation DC Current: 70 ~ 6A
- 07A7 0.10µH ~ 10µH @ Saturation DC Current: 60 ~ 7A
- 1011 0.22µH ~ 47µH @ Saturation DC Current: 50 ~ 2.0A
- 1313 0.36µH ~ 2.2µH @ Saturation DC Current: 75 ~ 32A
- Electrical specifications at 25°C
- Operating temperature range: -55°C ~ +125°C
- The part temperature(ambient + temp rise)should not exceed 125°C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part's temperature. Part temperature should be verified in the end application.
- The rated current as listed is either the saturation current or the heating current depending on which value is lower.

RoHS COMPLIANT

DIMENSIONS



mm (inches)

Type	A	B	C	D	E	F	G	H
0506	4.90 ± 0.20 (0.193 ± 0.008)	5.80 ± 0.20 (0.228 ± 0.008)	2.80 ± 0.20 (0.110 ± 0.008)	1.00 ± 0.30 (0.039 ± 0.012)	1.50 ± 0.30 (0.059 ± 0.012)	7.00 (0.276)	3.00 (0.118)	2.50 (0.098)
0707	6.60 ± 0.20 (0.260 ± 0.008)	7.20 ± 0.30 (0.283 ± 0.012)	2.20 ± 0.20 (0.110 ± 0.008)	1.60 ± 0.30 (0.063 ± 0.012)	3.00 ± 0.30 (0.118 ± 0.012)	8.40 (0.331)	3.70 (0.146)	3.50 (0.138)
07A7	6.60 ± 0.20 (0.260 ± 0.008)	7.20 ± 0.30 (0.283 ± 0.012)	2.80 ± 0.20 (0.110 ± 0.008)	1.60 ± 0.30 (0.063 ± 0.012)	3.00 ± 0.30 (0.118 ± 0.012)	8.40 (0.331)	3.70 (0.146)	3.50 (0.138)
1011	10.0 ± 0.30 (0.394 ± 0.008)	11.1 ± 0.35 (0.437 ± 0.014)	3.80 ± 0.20 (0.150 ± 0.008)	2.00 ± 0.50 (0.079 ± 0.020)	3.00 ± 0.50 (0.118 ± 0.020)	13.6 (0.535)	5.40 (0.213)	4.10 (0.161)
1313	12.8 ± 0.20 (0.504 ± 0.008)	13.45 ± 0.35 (0.437 ± 0.014)	4.80 ± 0.20 (0.189 ± 0.008)	2.20 ± 0.50 (0.087 ± 0.020)	3.80 ± 0.50 (0.150 ± 0.020)	14.5 (0.571)	8.00 (0.315)	5.00 (0.197)

HOW TO ORDER

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

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LMLP Series – Style D

ELECTRICAL CHARACTERISTICS

0506

Codes	Inductance LO @OA (uH)	Tolerance	Test Condition	DCR (mΩ)		Heat Rating Current IDC (A) Typical	Saturation Current I sat (A) Typical
				Typical	Max.		
R68	0.68	M	100KHz, 0.1V	11.0	12.0	8.5	14.0
1R0	1.0	M	100KHz, 0.1V	13.0	14.0	7.0	11.0
1R2	1.2	M	100KHz, 0.1V	15.0	16.0	6.5	11.0
1R5	1.5	M	100KHz, 0.1V	20.0	25.0	6.0	10.0
2R2	2.2	M	100KHz, 0.1V	29.0	35.0	5.5	9.0
3R3	3.3	M	100KHz, 0.1V	32.0	38.0	5.0	7.0
4R7	4.7	M	100KHz, 0.1V	50.0	60.0	4.0	5.0

0707

Codes	Inductance LO @OA (uH)	Tolerance	Test Condition	DCR (mΩ)		Heat Rating Current IDC (A) Typical	Saturation Current I sat (A) Typical
				Typical	Max.		
R10	0.10	M	100KHz, 0.1V	1.5	1.7	30.0	70.0
R20	0.20	M	100KHz, 0.1V	2.2	2.8	25.0	50.0
R22	0.22	M	100KHz, 0.1V	2.6	3.2	21.0	34.0
R47	0.47	M	100KHz, 0.1V	4.9	5.5	15.0	22.0
R56	0.56	M	100KHz, 0.1V	5.9	6.5	13.0	20.0
R81	0.81	M	100KHz, 0.1V	8.3	9.5	11.0	14.0
1R0	1.0	M	100KHz, 0.1V	11.2	13.5	9.0	16.0
1R5	1.5	M	100KHz, 0.1V	17.0	20.0	9.0	15.0
2R2	2.2	M	100KHz, 0.1V	23.0	28.0	7.0	14.0
3R3	3.3	M	100KHz, 0.1V	31.0	39.0	5.5	13.0
4R7	4.7	M	100KHz, 0.1V	41.0	50.0	5.0	10.0
6R8	6.8	M	100KHz, 0.1V	57.0	70.0	4.0	6.0

07A7

Codes	Inductance LO @OA (uH)	Tolerance	Test Condition	DCR (mΩ)		Heat Rating Current IDC (A) Typical	Saturation Current I sat (A) Typical
				Typical	Max.		
R10	0.10	M	100KHz, 0.1V	1.5	1.7	32.5	60.0
R15	0.15	M	100KHz, 0.1V	1.9	2.5	30.0	45.0
R20	0.20	M	100KHz, 0.1V	2.4	3.0	24.0	41.0
R22	0.22	M	100KHz, 0.1V	2.5	2.8	23.0	40.0
R33	0.33	M	100KHz, 0.1V	3.5	3.9	20.0	30.0
R36	0.36	M	100KHz, 0.1V	2.6	3.9	20.0	26.0
R47	0.47	M	100KHz, 0.1V	4.0	4.2	17.5	26.0
R56	0.56	M	100KHz, 0.1V	4.7	5.0	16.5	25.5
R68	0.68	M	100KHz, 0.1V	5.0	5.5	15.5	25.0
R82	0.82	M	100KHz, 0.1V	6.7	8.0	13.0	24.0
1R0	1.0	M	100KHz, 0.1V	9.0	10	11.0	22.0
1R5	1.5	M	100KHz, 0.1V	14	15	9.0	18.0
2R2	2.2	M	100KHz, 0.1V	18	20	8.0	14.0
2R5	2.5	M	100KHz, 0.1V	20	22	7.0	14.0
3R3	3.3	M	100KHz, 0.1V	28	30	6.0	13.5
4R7	4.7	M	100KHz, 0.1V	37	40	5.5	10.0
5R6	5.6	M	100KHz, 0.1V	39	42	5.5	6.0
6R8	6.8	M	100KHz, 0.1V	54	60	4.5	8.0
7R5	7.5	M	100KHz, 0.1V	54	60	4.2	7.8
8R2	8.2	M	100KHz, 0.1V	64	68	4.0	7.5
100	10	M	100KHz, 0.1V	102	105	3.0	7.0

LMax Low Profile Power Inductor

LMLP Series – Style D

1011

Codes	Inductance LO @OA (uH)	Tolerance	Test Condition	DCR (mΩ)		Heat Rating Current IDC (A) Typical	Saturation Current I sat (A) Typical
				Typical	Max.		
R22	0.22	M	100KHz, 0.1V	1.1	1.5	32.0	50.0
R36	0.36	M	100KHz, 0.1V	1.5	1.7	31.5	50.0
R47	0.47	M	100KHz, 0.1V	1.5	1.9	27.5	49.0
R56	0.56	M	100KHz, 0.1V	1.9	2.3	27.5	49.0
R68	0.68	M	100KHz, 0.1V	2.0	2.5	23.0	40.0
R88	0.88	M	100KHz, 0.1V	2.7	3.0	20.0	38.0
1R0	1.0	M	100KHz, 0.1V	3.7	4.1	17.5	36.0
1R5	1.5	M	100KHz, 0.1V	5.3	6.0	15.0	27.5
1R8	1.8	M	100KHz, 0.1V	7.0	8.2	15.0	27.5
2R2	2.2	M	100KHz, 0.1V	8.2	9.0	12.0	25.6
3R3	3.3	M	100KHz, 0.1V	10.8	11.8	10.0	18.6
4R7	4.7	M	100KHz, 0.1V	15.0	16.5	9.5	17.0
5R6	5.6	M	100KHz, 0.1V	17.6	19.3	8.5	16.0
6R8	6.8	M	100KHz, 0.1V	17.5	25.0	8.0	14.0
8R2	8.2	M	100KHz, 0.1V	21.2	26.3	8.0	13.5
100	10	M	100KHz, 0.1V	33.2	36.5	6.8	12.0
150	15	M	100KHz, 0.1V	51.0	65.0	3.5	7.0
220	22	M	100KHz, 0.1V	90.0	120.0	2.0	3.0
330	33	M	100KHz, 0.1V	155.0	200.0	1.8	2.8
470	47	M	100KHz, 0.1V	170.0	210.0	1.2	2.0

1313

Codes	Inductance LO @OA (uH)	Tolerance	Test Condition	DCR (mΩ)		Heat Rating Current IDC (A) Typical	Saturation Current I sat (A) Typical
				Typical	Max.		
R36	0.36	M	100KHz, 0.1V	0.77	1.1	41.0	75.0
R47	0.47	M	100KHz, 0.1V	1.10	1.3	38.0	65.0
R68	0.68	M	100KHz, 0.1V	1.50	1.7	34.0	54.0
1R0	1.0	M	100KHz, 0.1V	2.10	2.5	29.0	50.0
1R5	1.5	M	100KHz, 0.1V	3.40	4.1	23.0	48.0
1R8	1.8	M	100KHz, 0.1V	4.20	4.9	19.0	40.0
2R2	2.2	M	100KHz, 0.1V	4.60	5.5	20.0	32.0