

# LMax SMD Power Inductor

## LMXS Series – Shielded Style F

### FEATURES

- Magnetically Shielded Construction
- Large Current
- Low DCR

### APPLICATIONS

- Telephones
- PCs
- Notebooks
- Hard Disk Drives
- Peripherals

### CHARACTERISTICS

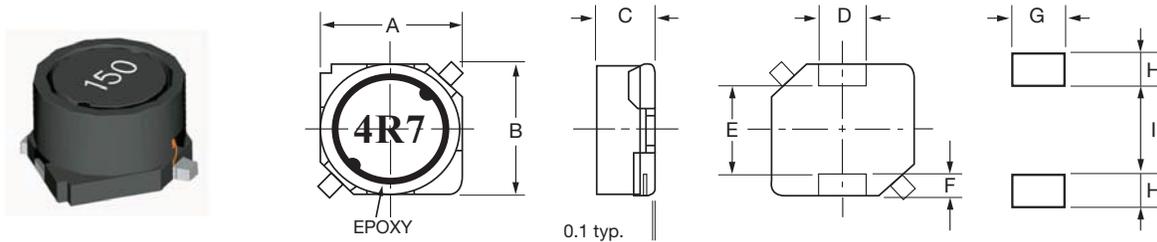
- Rated Current (IDC): The DC current that will cause an approximate  $\Delta T$  of 40°C. ( $T_a=25^\circ\text{C}$ )
- Operating temperature range:  $-40^\circ\text{C} \sim +125^\circ\text{C}$

### INDUCTANCE AND RATED CURRENT RANGES

- 0606 4.7 $\mu\text{H}$  ~ 100.0 $\mu\text{H}$  1.50 ~ 0.33A
- 06C6 4.7 $\mu\text{H}$  ~ 100.0 $\mu\text{H}$  1.60 ~ 0.42A
- 0707 3.3 $\mu\text{H}$  ~ 47.0 $\mu\text{H}$  1.60 ~ 0.54A
- 07C7 3.3 $\mu\text{H}$  ~ 1000.0 $\mu\text{H}$  1.90 ~ 0.13A
- 07E7 3.3 $\mu\text{H}$  ~ 1000.0 $\mu\text{H}$  2.30 ~ 0.14A
- 1010 10.0 $\mu\text{H}$  ~ 1500.0 $\mu\text{H}$  2.50 ~ 0.22A
- 1313 6.0 $\mu\text{H}$  ~ 1500.0 $\mu\text{H}$  3.60 ~ 0.29A
- 131H 2.0 $\mu\text{H}$  ~ 220.0 $\mu\text{H}$  6.20 ~ 1.00A
- 131J 1.2 $\mu\text{H}$  ~ 220.0 $\mu\text{H}$  8.20 ~ 1.30A
- Electrical specifications at 25°C



### DIMENSIONS



mm (inches)

Type	A	B	C	D	E	F	G	H	I
0606	6.00 ± 0.20 (0.236 ± 0.008)	6.00 ± 0.20 (0.236 ± 0.008)	2.50 ± 0.20 (0.099 ± 0.008)	2.00 ± 0.10 (0.079 ± 0.004)	3.00 typ (0.118 typ)	1.50 typ (0.059 typ)	2.20 (0.087)	2.00 (0.079)	2.60 (0.103)
06C6	6.00 ± 0.20 (0.236 ± 0.008)	6.00 ± 0.20 (0.236 ± 0.008)	2.80 ± 0.20 (0.110 ± 0.008)	2.00 ± 0.10 (0.079 ± 0.004)	3.00 typ (0.118 typ)	1.50 typ (0.059 typ)	2.20 (0.087)	2.00 (0.079)	2.60 (0.103)
0707	7.00 ± 0.20 (0.276 ± 0.008)	7.00 ± 0.20 (0.276 ± 0.008)	2.80 ± 0.20 (0.110 ± 0.008)	2.00 ± 0.10 (0.079 ± 0.004)	4.00 typ (0.193 typ)	1.50 typ (0.059 typ)	2.20 (0.087)	2.00 (0.079)	3.60 (0.103)
07C7	7.00 ± 0.20 (0.276 ± 0.008)	7.00 ± 0.20 (0.276 ± 0.008)	3.20 ± 0.20 (0.126 ± 0.008)	2.00 ± 0.10 (0.079 ± 0.004)	4.00 typ (0.193 typ)	1.50 typ (0.059 typ)	2.20 (0.087)	2.00 (0.079)	3.60 (0.142)
07E7	7.00 ± 0.20 (0.276 ± 0.008)	7.00 ± 0.20 (0.276 ± 0.008)	4.50 ± 0.30 (0.177 ± 0.012)	2.00 ± 0.10 (0.079 ± 0.004)	4.00 typ (0.193 typ)	1.50 typ (0.059 typ)	2.20 (0.087)	2.00 (0.079)	3.60 (0.142)
1010	10.1 ± 0.30 (0.398 ± 0.012)	10.1 ± 0.30 (0.398 ± 0.012)	4.50 ± 0.30 (0.177 ± 0.012)	3.00 ± 0.10 (0.118 ± 0.004)	6.00 ± 0.20 (0.236 ± 0.008)	2.00 ± 0.15 (0.079 ± 0.006)	3.20 (0.126)	2.50 (0.099)	5.60 (0.220)
1313	12.5 ± 0.30 (0.492 ± 0.012)	12.5 ± 0.30 (0.492 ± 0.012)	5.50 ± 0.30 (0.217 ± 0.012)	3.00 ± 0.10 (0.118 ± 0.004)	8.60 ± 0.30 (0.339 ± 0.012)	2.00 ± 0.15 (0.079 ± 0.006)	3.20 (0.126)	2.50 (0.099)	8.20 (0.322)
131H	12.5 ± 0.30 (0.492 ± 0.012)	12.5 ± 0.30 (0.492 ± 0.012)	6.50 ± 0.35 (0.256 ± 0.014)	3.00 ± 0.10 (0.118 ± 0.004)	8.60 ± 0.30 (0.339 ± 0.012)	2.00 ± 0.15 (0.079 ± 0.006)	3.20 (0.126)	2.50 (0.099)	8.20 (0.322)
131J	12.5 ± 0.30 (0.492 ± 0.012)	12.5 ± 0.30 (0.492 ± 0.012)	7.50 ± 0.35 (0.295 ± 0.014)	3.00 ± 0.10 (0.118 ± 0.004)	8.60 ± 0.30 (0.339 ± 0.012)	2.00 ± 0.15 (0.079 ± 0.006)	3.20 (0.126)	2.50 (0.099)	8.20 (0.322)

### HOW TO ORDER

<b>LM</b>	<b>XS</b>	<b>0707</b>	<b>M</b>	<b>2R2</b>	<b>F</b>	<b>T</b>	<b>A</b>	<b>S</b>
<b>Family</b>	<b>Series</b>	<b>Size</b>	<b>Tolerance</b>	<b>Inductance</b>	<b>Style</b>	<b>Termination</b>	<b>Special</b>	<b>Packaging</b>
LM = Power Inductor	XS = Shielded	0707 = 7x7xh 07C7 = 7x7xC(h) (h = see catalog)	M = ±20%	2R2 = 2.20 $\mu\text{H}$ 680 = 68.0 $\mu\text{H}$ 152 = 1500 $\mu\text{H}$		T = Sn Plate	A = Standard	S = 13" Reel

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### ELECTRICAL CHARACTERISTICS

#### 0606

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
4R7	4.7	M	100KHz, 1.0V	0.050	1.50
6R8	6.8	M	100KHz, 1.0V	0.080	1.30
100	10	M	100KHz, 1.0V	0.098	1.00
150	15	M	100KHz, 1.0V	0.140	0.88
220	22	M	100KHz, 1.0V	0.208	0.73
330	33	M	100KHz, 1.0V	0.310	0.59
470	47	M	100KHz, 1.0V	0.390	0.48
680	68	M	100KHz, 1.0V	0.540	0.42
101	100	M	100KHz, 1.0V	0.810	0.33

#### 06C6

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
4R7	4.7	M	100KHz, 1.0V	0.050	1.60
6R8	6.8	M	100KHz, 1.0V	0.073	1.50
100	10	M	100KHz, 1.0V	0.098	1.30
150	15	M	100KHz, 1.0V	0.128	1.00
220	22	M	100KHz, 1.0V	0.172	0.77
330	33	M	100KHz, 1.0V	0.290	0.69
470	47	M	100KHz, 1.0V	0.420	0.59
680	68	M	100KHz, 1.0V	0.533	0.50
101	100	M	100KHz, 1.0V	0.730	0.42

#### 0707

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
3R3	3.3	M	100KHz, 1.0V	0.045	1.60
4R7	4.7	M	100KHz, 1.0V	0.054	1.50
6R8	6.8	M	100KHz, 1.0V	0.071	1.30
100	10	M	100KHz, 1.0V	0.100	1.10
150	15	M	100KHz, 1.0V	0.156	0.88
220	22	M	100KHz, 1.0V	0.220	0.75
330	33	M	100KHz, 1.0V	0.290	0.65
470	47	M	100KHz, 1.0V	0.410	0.54

#### 07C7

Codes	L(μH)	Tolerance	TestCondition	DCR(Ω)max.	IDC(A)max.
3R3	3.3	M	100KHz, 1.0V	0.028	1.90
4R7	4.7	M	100KHz, 1.0V	0.044	1.70
6R8	6.8	M	100KHz, 1.0V	0.050	1.60
100	10	M	100KHz, 1.0V	0.064	1.40
150	15	M	100KHz, 1.0V	0.090	1.10
220	22	M	100KHz, 1.0V	0.132	0.96
330	33	M	100KHz, 1.0V	0.192	0.75
470	47	M	100KHz, 1.0V	0.290	0.67
680	68	M	100KHz, 1.0V	0.372	0.59
101	100	M	100KHz, 1.0V	0.540	0.45
151	150	M	100KHz, 1.0V	0.780	0.37
221	220	M	100KHz, 1.0V	1.260	0.29
331	330	M	100KHz, 1.0V	2.000	0.22
471	470	M	100KHz, 1.0V	2.460	0.20
681	680	M	100KHz, 1.0V	3.780	0.16
102	1000	M	100KHz, 1.0V	5.740	0.13

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### 07E7

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
3R3	3.3	M	100KHz, 1.0V	0.024	2.30
4R7	4.7	M	100KHz, 1.0V	0.036	2.00
6R8	6.8	M	100KHz, 1.0V	0.047	1.70
100	10	M	100KHz, 1.0V	0.045	1.30
150	15	M	100KHz, 1.0V	0.063	1.10
220	22	M	100KHz, 1.0V	0.075	0.90
330	33	M	100KHz, 1.0V	0.120	0.82
470	47	M	100KHz, 1.0V	0.150	0.75
680	68	M	100KHz, 1.0V	0.210	0.60
101	100	M	100KHz, 1.0V	0.300	0.50
151	150	M	100KHz, 1.0V	0.410	0.40
221	220	M	100KHz, 1.0V	0.624	0.33
331	330	M	100KHz, 1.0V	0.890	0.25
471	470	M	100KHz, 1.0V	1.260	0.22
681	680	M	100KHz, 1.0V	1.780	0.20
102	1000	M	100KHz, 1.0V	2.740	0.14

### 1010

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
100	10	M	100KHz, 1.0V	0.044	2.50
150	15	M	100KHz, 1.0V	0.057	2.20
220	22	M	100KHz, 1.0V	0.071	1.90
330	33	M	100KHz, 1.0V	0.100	1.60
470	47	M	100KHz, 1.0V	0.120	1.40
680	68	M	100KHz, 1.0V	0.170	1.20
101	100	M	100KHz, 1.0V	0.240	1.00
151	150	M	100KHz, 1.0V	0.420	0.79
221	220	M	100KHz, 1.0V	0.570	0.65
331	330	M	100KHz, 1.0V	0.820	0.54
471	470	M	100KHz, 1.0V	1.240	0.47
681	680	M	100KHz, 1.0V	1.920	0.38
102	1000	M	100KHz, 1.0V	3.360	0.29
152	1500	M	100KHz, 1.0V	4.080	0.22

### 1313

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
6R0	6	M	100KHz,1.0V	0.020	3.60
100	10	M	100KHz,1.0V	0.026	3.40
150	15	M	100KHz,1.0V	0.032	2.80
220	22	M	100KHz,1.0V	0.041	2.30
330	33	M	100KHz,1.0V	0.050	1.90
470	47	M	100KHz,1.0V	0.075	1.60
680	68	M	100KHz,1.0V	0.100	1.30
101	100	M	100KHz,1.0V	0.140	1.10
151	150	M	100KHz,1.0V	0.230	0.88
221	220	M	100KHz,1.0V	0.330	0.72
331	330	M	100KHz,1.0V	0.500	0.59
471	470	M	100KHz,1.0V	0.630	0.49
681	680	M	100KHz,1.0V	0.920	0.43
102	1000	M	100KHz,1.0V	1.350	0.34
152	1500	M	100KHz,1.0V	2.080	0.29

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### 131H

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
2R0	2.0	M	100KHz,1.0V	0.014	6.20
4R2	4.2	M	100KHz,1.0V	0.018	5.50
7R0	7.0	M	100KHz,1.0V	0.022	5.00
100	10	M	100KHz,1.0V	0.025	4.80
150	15	M	100KHz,1.0V	0.029	4.20
220	22	M	100KHz,1.0V	0.038	3.50
330	33	M	100KHz,1.0V	0.049	2.80
470	47	M	100KHz,1.0V	0.070	2.40
680	68	M	100KHz,1.0V	0.095	2.00
101	100	M	100KHz,1.0V	0.150	1.60
221	220	M	100KHz,1.0V	0.330	1.00

### 131J

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
1R2	1.2	M	100KHz,1.0V	0.009	8.20
2R7	2.7	M	100KHz,1.0V	0.012	7.00
3R9	3.9	M	100KHz,1.0V	0.013	6.70
5R6	5.6	M	100KHz,1.0V	0.014	6.30
6R8	6.8	M	100KHz,1.0V	0.016	5.90
100	10	M	100KHz,1.0V	0.019	5.40
150	15	M	100KHz,1.0V	0.022	4.70
220	22	M	100KHz,1.0V	0.032	4.00
330	33	M	100KHz,1.0V	0.048	3.20
470	47	M	100KHz,1.0V	0.064	2.70
680	68	M	100KHz,1.0V	0.094	2.00
101	100	M	100KHz,1.0V	0.150	1.90
151	150	M	100KHz,1.0V	0.210	1.50
221	220	M	100KHz,1.0V	0.310	1.30