

# 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

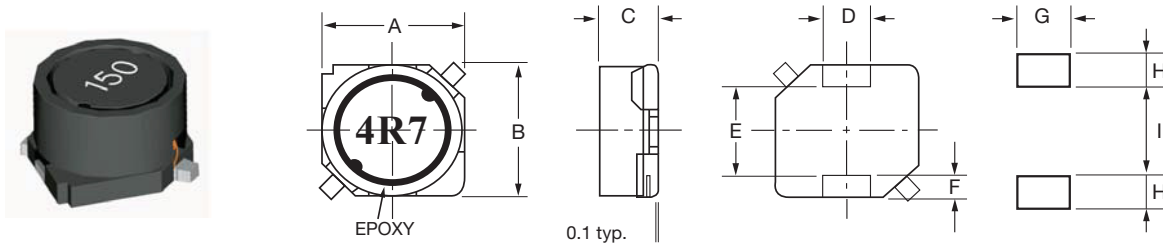
- Rated Current (IDC): The DC current that will cause an approximate  $\Delta T$  of 40°C. ( $T_a=25^\circ\text{C}$ )
- Operating temperature range:  $-40^\circ\text{C} \sim +125^\circ\text{C}$

### 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<br>(0.236 ± 0.008) | 6.00 ± 0.20<br>(0.236 ± 0.008) | 2.50 ± 0.20<br>(0.099 ± 0.008) | 2.00 ± 0.10<br>(0.079 ± 0.004) | 3.00 typ<br>(0.118 typ)        | 1.50 typ<br>(0.059 typ)        | 2.20<br>(0.087) | 2.00<br>(0.079) | 2.60<br>(0.103) |
| 06C6 | 6.00 ± 0.20<br>(0.236 ± 0.008) | 6.00 ± 0.20<br>(0.236 ± 0.008) | 2.80 ± 0.20<br>(0.110 ± 0.008) | 2.00 ± 0.10<br>(0.079 ± 0.004) | 3.00 typ<br>(0.118 typ)        | 1.50 typ<br>(0.059 typ)        | 2.20<br>(0.087) | 2.00<br>(0.079) | 2.60<br>(0.103) |
| 0707 | 7.00 ± 0.20<br>(0.276 ± 0.008) | 7.00 ± 0.20<br>(0.276 ± 0.008) | 2.80 ± 0.20<br>(0.110 ± 0.008) | 2.00 ± 0.10<br>(0.079 ± 0.004) | 4.00 typ<br>(0.193 typ)        | 1.50 typ<br>(0.059 typ)        | 2.20<br>(0.087) | 2.00<br>(0.079) | 3.60<br>(0.103) |
| 07C7 | 7.00 ± 0.20<br>(0.276 ± 0.008) | 7.00 ± 0.20<br>(0.276 ± 0.008) | 3.20 ± 0.20<br>(0.126 ± 0.008) | 2.00 ± 0.10<br>(0.079 ± 0.004) | 4.00 typ<br>(0.193 typ)        | 1.50 typ<br>(0.059 typ)        | 2.20<br>(0.087) | 2.00<br>(0.079) | 3.60<br>(0.142) |
| 07E7 | 7.00 ± 0.20<br>(0.276 ± 0.008) | 7.00 ± 0.20<br>(0.276 ± 0.008) | 4.50 ± 0.30<br>(0.177 ± 0.012) | 2.00 ± 0.10<br>(0.079 ± 0.004) | 4.00 typ<br>(0.193 typ)        | 1.50 typ<br>(0.059 typ)        | 2.20<br>(0.087) | 2.00<br>(0.079) | 3.60<br>(0.142) |
| 1010 | 10.1 ± 0.30<br>(0.398 ± 0.012) | 10.1 ± 0.30<br>(0.398 ± 0.012) | 4.50 ± 0.30<br>(0.177 ± 0.012) | 3.00 ± 0.10<br>(0.118 ± 0.004) | 6.00 ± 0.20<br>(0.236 ± 0.008) | 2.00 ± 0.15<br>(0.079 ± 0.006) | 3.20<br>(0.126) | 2.50<br>(0.099) | 5.60<br>(0.220) |
| 1313 | 12.5 ± 0.30<br>(0.492 ± 0.012) | 12.5 ± 0.30<br>(0.492 ± 0.012) | 5.50 ± 0.30<br>(0.217 ± 0.012) | 3.00 ± 0.10<br>(0.118 ± 0.004) | 8.60 ± 0.30<br>(0.339 ± 0.012) | 2.00 ± 0.15<br>(0.079 ± 0.006) | 3.20<br>(0.126) | 2.50<br>(0.099) | 8.20<br>(0.322) |
| 131H | 12.5 ± 0.30<br>(0.492 ± 0.012) | 12.5 ± 0.30<br>(0.492 ± 0.012) | 6.50 ± 0.35<br>(0.256 ± 0.014) | 3.00 ± 0.10<br>(0.118 ± 0.004) | 8.60 ± 0.30<br>(0.339 ± 0.012) | 2.00 ± 0.15<br>(0.079 ± 0.006) | 3.20<br>(0.126) | 2.50<br>(0.099) | 8.20<br>(0.322) |
| 131J | 12.5 ± 0.30<br>(0.492 ± 0.012) | 12.5 ± 0.30<br>(0.492 ± 0.012) | 7.50 ± 0.35<br>(0.295 ± 0.014) | 3.00 ± 0.10<br>(0.118 ± 0.004) | 8.60 ± 0.30<br>(0.339 ± 0.012) | 2.00 ± 0.15<br>(0.079 ± 0.006) | 3.20<br>(0.126) | 2.50<br>(0.099) | 8.20<br>(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<br>07C7 = 7x7xC(h)<br>(h = see catalog) | M = ±20%         | 2R2 = 2.20 $\mu\text{H}$<br>6R0 = 68.0 $\mu\text{H}$<br>152 = 1500 $\mu\text{H}$ |              | T = Sn Plate       | A = Standard   | S = 13" Reel     |

# LMax SMD Power Inductor

## LMXS Series – Shielded Style F

### 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       |

# LMax SMD Power Inductor

## LMXS Series – Shielded Style F



### 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         |

# LMax SMD Power Inductor

## LMXS Series – Shielded Style F



### 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         |