

# AVX SMD Power Inductors



Version 14.5

## LMax SMD Non-Shield Power Inductor

|                                                                                   |                                                                     |             |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------|
|  | <b>LMXN Series – Non-Shielded Style B</b>                           | <b>2-3</b>  |
|                                                                                   | Inductance Range: 0.47 - 470 $\mu$ H<br>Rated Current: 0.53 - 30 A  |             |
|  | <b>LMXN Series – Non-Shielded Style C</b>                           | <b>4-7</b>  |
|                                                                                   | Inductance Range: 0.47 - 1000 $\mu$ H<br>Rated Current: 0.10 - 40 A |             |
|  | <b>LMXN Series – Non-Shielded Style D</b>                           | <b>8-11</b> |
|                                                                                   | Inductance Range: 1.0 - 820 $\mu$ H<br>Rated Current: 0.24 - 3.30 A |             |

## LMax SMD Shielded Power Inductor

|                                                                                     |                                                                         |              |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------|
|    | <b>LMXS Series – Shielded Style B</b>                                   | <b>12-15</b> |
|                                                                                     | Inductance Range: 0.47 - 6,800 $\mu$ H<br>Rated Current: 0.017 - 4.70 A |              |
|    | <b>LMXS Series – Shielded Style C</b>                                   | <b>16-19</b> |
|                                                                                     | Inductance Range: 0.36 - 2,500 $\mu$ H<br>Rated Current: 0.026 - 9.24 A |              |
|  | <b>LMXS Series – Shielded Style D</b>                                   | <b>20-22</b> |
|                                                                                     | Inductance Range: 1.0 - 10,000 $\mu$ H<br>Rated Current: 0.02 - 5.0 A   |              |
|  | <b>LMXS Series – Shielded Style F</b>                                   | <b>23-26</b> |
|                                                                                     | Inductance Range: 1.2 - 1,500 $\mu$ H<br>Rated Current: 0.13 - 8.20 A   |              |
|  | <b>LMXS Series – Shielded Style G</b>                                   | <b>27-28</b> |
|                                                                                     | Inductance Range: 10 - 1,000 $\mu$ H<br>Rated Current: 0.16 - 1.84 A    |              |

|                                                                                   |                                                                         |              |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------|
|  | <b>LMXS Series – Shielded Style H</b>                                   | <b>29-31</b> |
|                                                                                   | Inductance Range: 2.4 - 1,000 $\mu$ H<br>Rated Current: 0.40 - 8.0 A    |              |
|  | <b>LMXS Series – Shielded Style J</b>                                   | <b>32-33</b> |
|                                                                                   | Inductance Range: 1.30 - 1,000 $\mu$ H<br>Rated Current: 0.40 - 10.50 A |              |
|  | <b>LMXS Series – Shielded Style L</b>                                   | <b>34-35</b> |
|                                                                                   | Inductance Range: 0.80 - 330 $\mu$ H<br>Rated Current: 0.70 - 11.20 A   |              |
|  | <b>LMXS Series – Shielded Style M</b>                                   | <b>36-37</b> |
|                                                                                   | Inductance Range: 1.0 - 100 $\mu$ H<br>Rated Current: 0.75 - 9.0 A      |              |
|  | <b>LMXS Series – Shielded Style P</b>                                   | <b>38-41</b> |
|                                                                                   | Inductance Range: 1.0 - 180 $\mu$ H<br>Rated Current: 0.22 - 3.50 A     |              |

## LMax SMD Miniature Power Inductor

|                                                                                    |                                                                        |              |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------|
|  | <b>LMMN Series – Miniature Style M</b>                                 | <b>42-49</b> |
|                                                                                    | Inductance Range: 0.12 - 10,000 $\mu$ H<br>Rated Current: 0.03 - 6.0 A |              |

## LMax Low Profile Power Inductor

|                                                                                     |                                                                     |              |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------|
|  | <b>LMLP Series –Style C</b>                                         | <b>50-57</b> |
|                                                                                     | Inductance Range: 0.8 - 220 $\mu$ H<br>Rated Current: 0.22 - 11.0 A |              |
|  | <b>LMLP Series –Style D</b>                                         | <b>58-64</b> |
|                                                                                     | Inductance Range: 0.10 - 47 $\mu$ H<br>Rated Current: 3.0 - 120 A   |              |

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# LMax SMD Power Inductor

## LMXN Series – Non-Shielded Style B



### FEATURES

- Miniature surface mount design
- High power, High saturation inductors
- Very low resistance
- Maximum power density
- Ideal inductors for DC-DC converters
- Available on tape and reel for auto surface mounting

### APPLICATIONS

- Notebook Computers
- Handheld Communications
- LCD Televisions
- Power Supply For VTRs
- DC/DC Converters, etc.

### CHARACTERISTICS

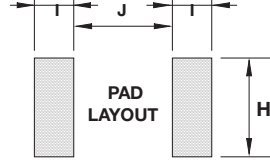
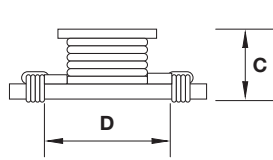
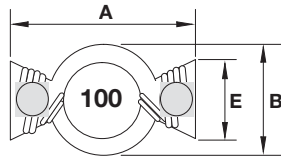
- Saturation Rated Current: The current when the inductance becomes 30% lower than its initial value. (Ta=25°C)
- Operating temperature range: -40 ~ 85°C

### INDUCTANCE AND RATED CURRENT RANGES

- 0705 0.47μH ~ 22.0μH 7.7 ~ 0.70A
- 0906 0.56μH ~ 100μH 7.7 ~ 0.53A
- 1310 0.47μH ~ 100μH 11.4 ~ 0.95A
- 1913 0.47μH ~ 100μH 25.1 ~ 1.80A
- 2216 0.78μH ~ 470μH 30.0 ~ 0.8A
- Electrical specifications at 25°C



### DIMENSIONS



mm (inches)

| Type | A max.           | B max.           | C max.          | D               | E               | H               | I               | J                |
|------|------------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| 0705 | 7.50<br>(0.295)  | 5.20<br>(0.205)  | 3.20<br>(0.126) | 4.60<br>(0.181) | 2.50<br>(0.098) | 4.00<br>(0.157) | 2.00<br>(0.079) | 4.00<br>(0.157)  |
| 0906 | 8.89<br>(0.350)  | 6.40<br>(0.252)  | 5.00<br>(0.197) | 5.84<br>(0.230) | 2.60<br>(0.103) | 4.06<br>(0.160) | 2.00<br>(0.079) | 5.08<br>(0.200)  |
| 1310 | 13.20<br>(0.560) | 9.90<br>(0.390)  | 6.35<br>(0.250) | 9.50<br>(0.374) | 4.50<br>(0.177) | 6.50<br>(0.256) | 2.30<br>(0.091) | 9.00<br>(0.344)  |
| 1913 | 19.40<br>(0.764) | 13.30<br>(0.524) | 6.80<br>(0.268) | 12.7<br>(0.500) | 6.60<br>(0.260) | 8.00<br>(0.315) | 3.80<br>(0.150) | 11.7<br>(0.460)  |
| 2216 | 22.35<br>(0.880) | 16.26<br>(0.604) | 8.00<br>(0.315) | 16.0<br>(0.630) | 8.00<br>(0.315) | 8.64<br>(0.340) | 4.30<br>(0.169) | 14.35<br>(0.565) |

### HOW TO ORDER

| LM                  | XN                | 0705                              | M                            | R04                                                                                               | B     | T            | A            | S            |
|---------------------|-------------------|-----------------------------------|------------------------------|---------------------------------------------------------------------------------------------------|-------|--------------|--------------|--------------|
| Family              | Series            | Size                              | Tolerance                    | Inductance                                                                                        | Style | Termination  | Special      | Packaging    |
| LM = Power Inductor | XN = Non-Shielded | 0705 = 7x5xh<br>(h = see catalog) | M = ±20%<br>P = +40%<br>-20% | R04 = 0.039μH<br>R39 = 0.390μH<br>3R9 = 3.900μH<br>390 = 39.00μH<br>391 = 390.0μH<br>392 = 3900μH |       | T = Sn Plate | A = Standard | S = 13" Reel |

# LMax SMD Power Inductor



## LMXN Series – Non-Shielded Style B

### ELECTRICAL CHARACTERISTICS

#### 0705/0906/1310/1913/2216

| Codes | L<br>( $\mu$ H) | Tolerance |              |              | Test<br>Condition | DCR ( $\Omega$ ) max. |       |       |       |       | I sat (A) max* |      |      |      |      |
|-------|-----------------|-----------|--------------|--------------|-------------------|-----------------------|-------|-------|-------|-------|----------------|------|------|------|------|
|       |                 | 705       | 0906<br>2216 | 1310<br>1913 |                   | 0705                  | 0906  | 1310  | 1913  | 2216  | 0705           | 0906 | 1310 | 1913 | 2216 |
| R47   | 0.47            | P         | –            | P            | 100KHz, 0.1V      | 0.025                 | –     | 0.005 | 0.003 | –     | 7.7            | –    | 11.4 | 25.1 | –    |
| R56   | 0.56            | –         | M            | –            | 100KHz, 0.1V      | –                     | 0.010 | –     | –     | –     | –              | 7.7  | –    | –    | –    |
| R78   | 0.78            | –         | M            | –            | 100KHz, 0.1V      | –                     | –     | –     | –     | 0.003 | –              | –    | –    | –    | 30   |
| 1R0   | 1.0             | M         | –            | P            | 100KHz, 0.1V      | 0.050                 | –     | 0.006 | 0.004 | –     | 2.9            | –    | 9.9  | 15.3 | –    |
| 1R5   | 1.5             | M         | M            | P            | 100KHz, 0.1V      | 0.050                 | –     | 0.008 | 0.006 | 0.004 | 2.6            | –    | 7.9  | 12   | 25   |
| 2R2   | 2.2             | M         | M            | M            | 100KHz, 0.1V      | 0.070                 | 0.035 | 0.011 | 0.008 | 0.006 | 2.3            | 3.5  | 6.1  | 10.2 | 20   |
| 3R3   | 3.3             | M         | M            | M            | 100KHz, 0.1V      | 0.080                 | 0.040 | 0.014 | 0.009 | 0.009 | 2              | 3    | 5.1  | 9.3  | 17   |
| 3R9   | 3.9             | –         | M            | –            | 100KHz, 0.1V      | –                     | –     | –     | –     | 0.010 | –              | –    | –    | –    | 15   |
| 4R7   | 4.7             | M         | M            | M            | 100KHz, 0.1V      | 0.090                 | 0.054 | 0.018 | 0.012 | 0.014 | 1.5            | 2.6  | 4.2  | 7.7  | 13   |
| 6R0   | 6.0             | –         | M            | –            | 100KHz, 0.1V      | –                     | –     | –     | –     | 0.017 | –              | –    | –    | –    | 12   |
| 6R8   | 6.8             | M         | M            | M            | 100KHz, 0.1V      | 0.130                 | 0.08  | 0.027 | 0.019 | –     | 1.2            | 2.2  | 3.6  | 6.2  | –    |
| 7R8   | 7.8             | –         | M            | –            | 100KHz, 0.1V      | –                     | –     | –     | –     | 0.018 | –              | –    | –    | –    | 11   |
| 100   | 10              | M         | M            | M            | 100KHz, 0.1V      | 0.160                 | 0.111 | 0.038 | 0.027 | 0.026 | 1.1            | 1.9  | 3.3  | 5.2  | 10   |
| 150   | 15              | M         | M            | M            | 100KHz, 0.1V      | 0.230                 | 0.170 | 0.045 | 0.032 | 0.032 | 0.9            | 1.5  | 2.4  | 4.3  | 8    |
| 220   | 22              | M         | M            | M            | 100KHz, 0.1V      | 0.370                 | 0.250 | 0.070 | 0.050 | 0.043 | 0.7            | 1.2  | 2    | 3.7  | 7    |
| 330   | 33              | –         | M            | M            | 100KHz, 0.1V      | –                     | 0.350 | 0.100 | 0.069 | 0.066 | –              | 0.99 | 1.7  | 3    | 6    |
| 470   | 47              | –         | M            | M            | 100KHz, 0.1V      | –                     | 0.470 | 0.150 | 0.109 | 0.096 | –              | 0.87 | 1.4  | 2.4  | 5    |
| 680   | 68              | –         | M            | M            | 100KHz, 0.1V      | –                     | 0.730 | 0.220 | 0.156 | 0.115 | –              | 0.68 | 1.2  | 2    | 4    |
| 101   | 100             | –         | M            | M            | 100KHz, 0.1V      | –                     | 1.110 | 0.280 | 0.206 | 0.165 | –              | 0.53 | 0.95 | 1.8  | 3    |
| 221   | 220             | –         | M            | –            | 100KHz, 0.1V      | –                     | –     | –     | –     | 0.396 | –              | –    | –    | –    | 2.4  |
| 331   | 330             | –         | M            | –            | 100KHz, 0.1V      | –                     | –     | –     | –     | 0.588 | –              | –    | –    | –    | 1    |
| 471   | 470             | –         | M            | –            | 100KHz, 0.1V      | –                     | –     | –     | –     | 0.950 | –              | –    | –    | –    | 0.8  |

\*Saturation Current: The current when the inductance becomes 30% lower than its initial value. (Ta=25°C)

# LMax SMD Power Inductor



## LMXN Series – Non-Shielded Style C

### FEATURES

- High power, High saturation inductors
- Ideal inductors for DC-DC converters in notebook computers, PDAs, Step-up or step-down converters, flash memory programmers, etc.
- 0705 has ceramic base with gold-plating
- Others have LCP plastic base

### APPLICATIONS

- Portable Telephones
- Personal Computers
- DC/DC Converters
- Various Electronic Appliances

### CHARACTERISTICS

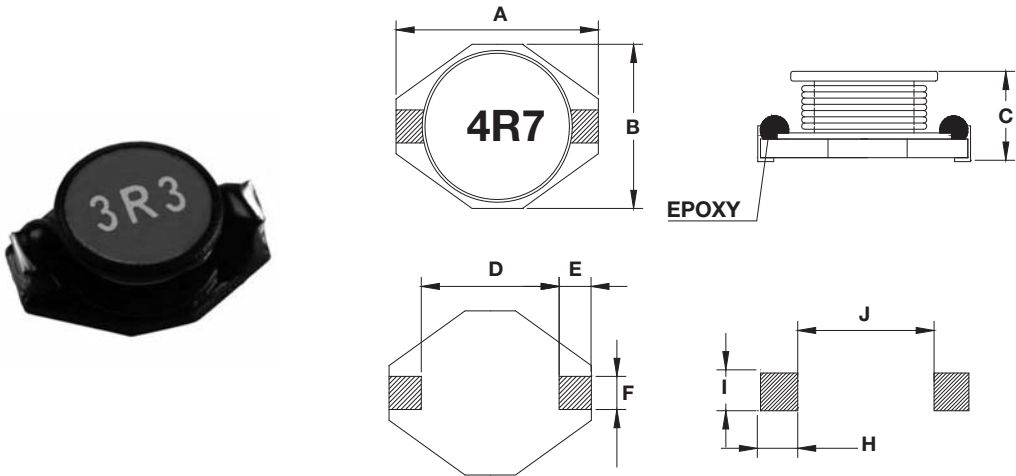
- Saturation Rated Current: The current when the inductance becomes 10% lower than its initial value. (Ta=25°C)
- Operating temperature range: -40 ~ 125°C

### INDUCTANCE AND RATED CURRENT RANGES

- 0705 1.0μH ~ 1000μH 2.9 ~ 0.10A
- 1309 4.7μH ~ 1000μH 4.2 ~ 0.29A
- 13E9 1.0μH ~ 1000μH 9.0 ~ 0.30A
- 13L9 0.47μH ~ 1000μH 40 ~ 0.8A
- 1915 1.0μH ~ 1000μH 20 ~ 1.0A
- Electrical specifications at 25°C



### DIMENSIONS



mm (inches)

| Type | A max.           | B max.           | C max.           | D               | E               | F               | H               | I               | J                |
|------|------------------|------------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| 0705 | 6.60<br>(0.260)  | 4.45<br>(0.175)  | 2.92<br>(0.115)  | 4.32<br>(0.170) | 1.27<br>(0.050) | 1.02<br>(0.040) | 3.56<br>(0.140) | 1.40<br>(0.055) | 4.06<br>(0.160)  |
| 1309 | 12.95<br>(0.510) | 9.40<br>(0.370)  | 3.00<br>(0.118)  | 7.62<br>(0.300) | 2.54<br>(0.100) | 2.54<br>(0.100) | 2.79<br>(0.110) | 2.92<br>(0.115) | 7.37<br>(0.290)  |
| 13E9 | 12.95<br>(0.510) | 9.40<br>(0.370)  | 5.21<br>(0.205)  | 7.62<br>(0.300) | 2.54<br>(0.100) | 2.54<br>(0.100) | 2.79<br>(0.110) | 2.92<br>(0.115) | 7.37<br>(0.290)  |
| 13L9 | 12.95<br>(0.510) | 9.40<br>(0.370)  | 11.43<br>(0.450) | 7.62<br>(0.300) | 2.54<br>(0.100) | 2.54<br>(0.100) | 2.79<br>(0.110) | 2.92<br>(0.115) | 7.37<br>(0.290)  |
| 1915 | 18.54<br>(0.730) | 15.24<br>(0.600) | 7.11<br>(0.280)  | 12.7<br>(0.500) | 2.54<br>(0.100) | 2.54<br>(0.100) | 2.79<br>(0.110) | 2.92<br>(0.115) | 12.45<br>(0.490) |

# LMax SMD Power Inductor



## LMXN Series – Non-Shielded Style C

### HOW TO ORDER

| LM                  | XN                | 1309                                                   | M                    | R04                                                                                               | C            | T                  | A              | S                |
|---------------------|-------------------|--------------------------------------------------------|----------------------|---------------------------------------------------------------------------------------------------|--------------|--------------------|----------------|------------------|
| <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 | XN = Non-shielded | 1309 = 13x9xh<br>13E9 = 13x9xE(h)<br>(h = see catalog) | M = ±20%<br>N = ±30% | R04 = 0.039µH<br>R39 = 0.390µH<br>3R9 = 3.900µH<br>390 = 39.00µH<br>391 = 390.0µH<br>392 = 3900µH |              | T = Sn Plate       | A = Standard   | S = 13" Reel     |

### ELECTRICAL CHARACTERISTICS

#### 0705

| Codes | L (µH) | Tolerance | Test Condition | DCR (Ω) max. | I sat (A) max* |
|-------|--------|-----------|----------------|--------------|----------------|
| 1R0   | 1.0    | M         | 100KHz, 0.1V   | 0.05         | 2.90           |
| 1R5   | 1.5    | M         | 100KHz, 0.1V   | 0.06         | 2.60           |
| 2R2   | 2.2    | M         | 100KHz, 0.1V   | 0.07         | 2.30           |
| 3R3   | 3.3    | M         | 100KHz, 0.1V   | 0.08         | 2.00           |
| 4R7   | 4.7    | M         | 100KHz, 0.1V   | 0.09         | 1.50           |
| 6R8   | 6.8    | M         | 100KHz, 0.1V   | 0.13         | 1.20           |
| 8R2   | 8.2    | M         | 100KHz, 0.1V   | 0.16         | 1.15           |
| 100   | 10     | M         | 100KHz, 0.1V   | 0.16         | 1.10           |
| 150   | 15     | M         | 100KHz, 0.1V   | 0.23         | 0.90           |
| 220   | 22     | M         | 100KHz, 0.1V   | 0.37         | 0.70           |
| 330   | 33     | M         | 100KHz, 0.1V   | 0.51         | 0.58           |
| 470   | 47     | M         | 100KHz, 0.1V   | 0.64         | 0.50           |
| 680   | 68     | M         | 100KHz, 0.1V   | 0.86         | 0.40           |
| 101   | 100    | M         | 100KHz, 0.1V   | 1.27         | 0.31           |
| 151   | 150    | M         | 100KHz, 0.1V   | 2.00         | 0.27           |
| 221   | 220    | M         | 100KHz, 0.1V   | 3.11         | 0.22           |
| 331   | 330    | M         | 100KHz, 0.1V   | 3.80         | 0.18           |
| 471   | 470    | M         | 100KHz, 0.1V   | 5.06         | 0.16           |
| 681   | 680    | M         | 100KHz, 0.1V   | 9.20         | 0.14           |
| 102   | 1000   | M         | 100KHz, 0.1V   | 13.8         | 0.10           |

#### 1309

| Codes | L (µH) | Tolerance | Test Condition | DCR (Ω) max. | I sat (A) max* |
|-------|--------|-----------|----------------|--------------|----------------|
| 4R7   | 4.7    | M         | 100KHz, 0.1V   | 0.036        | 4.20           |
| 6R8   | 6.8    | M         | 100KHz, 0.1V   | 0.060        | 3.90           |
| 100   | 10     | M         | 100KHz, 0.1V   | 0.085        | 2.70           |
| 150   | 15     | M         | 100KHz, 0.1V   | 0.12         | 2.30           |
| 220   | 22     | M         | 100KHz, 0.1V   | 0.18         | 1.80           |
| 330   | 33     | M         | 100KHz, 0.1V   | 0.25         | 1.60           |
| 470   | 47     | M         | 100KHz, 0.1V   | 0.32         | 1.30           |
| 680   | 68     | M         | 100KHz, 0.1V   | 0.54         | 1.10           |
| 101   | 100    | M         | 100KHz, 0.1V   | 0.69         | 0.87           |
| 151   | 150    | M         | 100KHz, 0.1V   | 0.94         | 0.74           |
| 221   | 220    | M         | 100KHz, 0.1V   | 1.60         | 0.56           |
| 331   | 330    | M         | 100KHz, 0.1V   | 2.15         | 0.50           |
| 471   | 470    | M         | 100KHz, 0.1V   | 3.30         | 0.40           |
| 681   | 680    | M         | 100KHz, 0.1V   | 4.40         | 0.33           |
| 102   | 1000   | M         | 100KHz, 0.1V   | 7.00         | 0.29           |

\*Saturation Current: The current when the inductance becomes 10% lower than its initial value. (Ta=25°C)

# LMax SMD Power Inductor



## LMXN Series – Non-Shielded Style C

### 13E9

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | I sat (A) max* |
|-------|--------|-----------|----------------|--------------|----------------|
| 1R0   | 1.0    | M         | 100KHz, 0.1V   | 0.009        | 9.00           |
| 1R5   | 1.5    | M         | 100KHz, 0.1V   | 0.010        | 8.00           |
| 2R2   | 2.2    | M         | 100KHz, 0.1V   | 0.012        | 7.00           |
| 3R3   | 3.3    | M         | 100KHz, 0.1V   | 0.015        | 6.40           |
| 4R7   | 4.7    | M         | 100KHz, 0.1V   | 0.018        | 5.40           |
| 6R8   | 6.8    | M         | 100KHz, 0.1V   | 0.027        | 4.60           |
| 100   | 10     | M         | 100KHz, 0.1V   | 0.038        | 3.80           |
| 150   | 15     | M         | 100KHz, 0.1V   | 0.046        | 3.00           |
| 220   | 22     | M         | 100KHz, 0.1V   | 0.085        | 2.60           |
| 330   | 33     | M         | 100KHz, 0.1V   | 0.100        | 2.00           |
| 470   | 47     | M         | 100KHz, 0.1V   | 0.140        | 1.60           |
| 680   | 68     | M         | 100KHz, 0.1V   | 0.200        | 1.40           |
| 101   | 100    | M         | 100KHz, 0.1V   | 0.280        | 1.20           |
| 151   | 150    | M         | 100KHz, 0.1V   | 0.400        | 1.00           |
| 221   | 220    | M         | 100KHz, 0.1V   | 0.610        | 0.80           |
| 331   | 330    | M         | 100KHz, 0.1V   | 1.020        | 0.60           |
| 471   | 470    | M         | 100KHz, 0.1V   | 1.270        | 0.50           |
| 681   | 680    | M         | 100KHz, 0.1V   | 2.020        | 0.40           |
| 102   | 1000   | M         | 100KHz, 0.1V   | 3.000        | 0.30           |

### 13L9

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | I sat (A) max* |
|-------|--------|-----------|----------------|--------------|----------------|
| R47   | 0.47   | N         | 100KHz, 0.1V   | 0.008        | 40.0           |
| R82   | 0.82   | N         | 100KHz, 0.1V   | 0.009        | 34.7           |
| 1R2   | 1.2    | N         | 100KHz, 0.1V   | 0.010        | 28.4           |
| 1R5   | 1.5    | N         | 100KHz, 0.1V   | 0.010        | 25.7           |
| 2R2   | 2.2    | N         | 100KHz, 0.1V   | 0.012        | 23.0           |
| 3R5   | 3.5    | N         | 100KHz, 0.1V   | 0.015        | 21.0           |
| 4R7   | 4.7    | N         | 100KHz, 0.1V   | 0.020        | 18.0           |
| 5R6   | 5.6    | N         | 100KHz, 0.1V   | 0.022        | 16.0           |
| 6R8   | 6.8    | N         | 100KHz, 0.1V   | 0.030        | 15.0           |
| 8R2   | 8.2    | N         | 100KHz, 0.1V   | 0.033        | 10.0           |
| 100   | 10     | M         | 100KHz, 0.1V   | 0.040        | 8.00           |
| 150   | 15     | M         | 100KHz, 0.1V   | 0.050        | 7.00           |
| 220   | 22     | M         | 100KHz, 0.1V   | 0.066        | 5.50           |
| 330   | 33     | M         | 100KHz, 0.1V   | 0.080        | 4.00           |
| 470   | 47     | M         | 100KHz, 0.1V   | 0.11         | 3.80           |
| 680   | 68     | M         | 100KHz, 0.1V   | 0.17         | 3.00           |
| 101   | 100    | M         | 100KHz, 0.1V   | 0.22         | 2.50           |
| 151   | 150    | M         | 100KHz, 0.1V   | 0.34         | 2.00           |
| 221   | 220    | M         | 100KHz, 0.1V   | 0.44         | 1.60           |
| 331   | 330    | M         | 100KHz, 0.1V   | 0.70         | 1.20           |
| 471   | 470    | M         | 100KHz, 0.1V   | 0.95         | 1.00           |
| 681   | 680    | M         | 100KHz, 0.1V   | 1.20         | 1.00           |
| 102   | 1000   | M         | 100KHz, 0.1V   | 2.00         | 0.80           |

\*Saturation Current: The current when the inductance becomes 10% lower than its initial value. (Ta=25°C)

# LMax SMD Power Inductor



## Non-Shielded Style C

1915

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | I sat (A) max* |
|-------|--------|-----------|----------------|--------------|----------------|
| 1R0   | 1.0    | M         | 100KHz, 0.1V   | 0.009        | 20             |
| 2R2   | 2.2    | M         | 100KHz, 0.1V   | 0.014        | 16             |
| 3R3   | 3.3    | M         | 100KHz, 0.1V   | 0.018        | 14             |
| 5R6   | 5.6    | M         | 100KHz, 0.1V   | 0.020        | 12             |
| 100   | 10     | M         | 100KHz, 0.1V   | 0.031        | 10             |
| 150   | 15     | M         | 100KHz, 0.1V   | 0.036        | 8.0            |
| 220   | 22     | M         | 100KHz, 0.1V   | 0.047        | 7.0            |
| 330   | 33     | M         | 100KHz, 0.1V   | 0.066        | 5.5            |
| 470   | 47     | M         | 100KHz, 0.1V   | 0.095        | 4.5            |
| 680   | 68     | M         | 100KHz, 0.1V   | 0.130        | 3.5            |
| 101   | 100    | M         | 100KHz, 0.1V   | 0.190        | 3.0            |
| 151   | 150    | M         | 100KHz, 0.1V   | 0.250        | 2.6            |
| 221   | 220    | M         | 100KHz, 0.1V   | 0.380        | 2.4            |
| 331   | 330    | M         | 100KHz, 0.1V   | 0.560        | 1.9            |
| 471   | 470    | M         | 100KHz, 0.1V   | 0.850        | 1.4            |
| 681   | 680    | M         | 100KHz, 0.1V   | 1.100        | 1.2            |
| 102   | 1000   | M         | 100KHz, 0.1V   | 1.800        | 1.0            |

\*Saturation Current: The current when the inductance becomes 10% lower than its initial value. (Ta=25°C)

# LMax SMD Power Inductor



## LMXN Series – Non-Shielded Style D

### FEATURES

- Open Magnetic Circuit Construction
- Small Surface Area

### APPLICATIONS

- LCD Televisions
- Notebooks
- Portable Communication
- DC/DC Converters, etc.

### CHARACTERISTICS

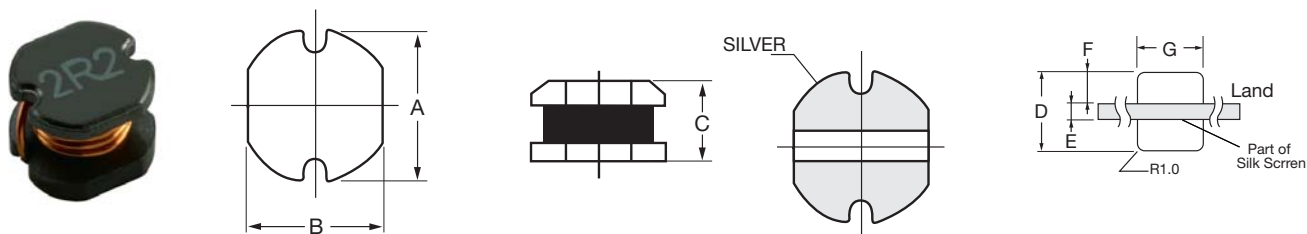
- Rated Current (IDC): The DC current that will cause an approximate  $\Delta T$  of 40°C. ( $T_a=25^\circ\text{C}$ )
- Operating temperature range:  $-40^\circ\text{C} \sim +125^\circ\text{C}$

### INDUCTANCE AND RATED CURRENT RANGES

- 0504 1.0 $\mu\text{H} \sim 33 \mu\text{H}$  3.30 ~ 0.56A
- 0605 10.0 $\mu\text{H} \sim 220 \mu\text{H}$  1.44 ~ 0.35A
- 0808 10.0 $\mu\text{H} \sim 330 \mu\text{H}$  1.44 ~ 0.28A
- 08G8 10.0 $\mu\text{H} \sim 470 \mu\text{H}$  2.30 ~ 0.34A
- 1009 10.0 $\mu\text{H} \sim 560 \mu\text{H}$  2.38 ~ 0.32A
- 10F9 10.0 $\mu\text{H} \sim 820 \mu\text{H}$  2.6 ~ 0.24A
- Electrical specifications at 25°C



### DIMENSIONS



mm (inches)

| Type | A                             | B                              | C                              | D               | E               | F               | G               |
|------|-------------------------------|--------------------------------|--------------------------------|-----------------|-----------------|-----------------|-----------------|
| 0504 | 4.50 ± 0.30<br>(0.177 ± .012) | 4.00 ± 0.30<br>(0.158 ± 0.012) | 3.20 ± 0.30<br>(0.126 ± 0.012) | 5.00<br>(0.197) | 1.50<br>(0.059) | 1.75<br>(0.069) | 4.50<br>(0.177) |
| 0605 | 5.80 ± 0.30<br>(0.228 ± .012) | 5.20 ± 0.30<br>(0.205 ± 0.012) | 4.50 ± 0.35<br>(0.177 ± 0.014) | 6.00<br>(0.236) | 1.70<br>(0.067) | 2.15<br>(0.085) | 5.50<br>(0.217) |
| 0808 | 7.80 ± 0.30<br>(0.307 ± .012) | 7.30 ± 0.30<br>(0.276 ± 0.012) | 3.50 ± 0.50<br>(0.140 ± 0.020) | 8.00<br>(0.315) | 2.00<br>(0.079) | 3.00<br>(0.118) | 7.50<br>(0.295) |
| 08G8 | 7.80 ± 0.30<br>(0.307 ± .012) | 7.30 ± 0.30<br>(0.287 ± 0.012) | 5.08 ± 0.50<br>(0.200 ± 0.020) | 8.00<br>(0.315) | 2.00<br>(0.079) | 3.00<br>(0.118) | 7.50<br>(0.295) |
| 1009 | 10.0 ± 0.30<br>(0.394 ± .012) | 9.00 ± 0.30<br>(0.354 ± 0.012) | 4.00 ± 0.50<br>(0.158 ± 0.020) | 10.0<br>(0.394) | 2.50<br>(0.098) | 3.75<br>(0.148) | 9.50<br>(0.374) |
| 10F9 | 10.0 ± 0.40<br>(0.394 ± .016) | 9.00 ± 0.40<br>(0.354 ± 0.016) | 5.40 ± 0.40<br>(0.213 ± 0.016) | 10.0<br>(0.394) | 2.50<br>(0.098) | 3.75<br>(0.148) | 9.50<br>(0.374) |

### HOW TO ORDER

| LM                  | XN                | 1009                                                   | M         | R04                                                                                | D     | T            | A            | S            |
|---------------------|-------------------|--------------------------------------------------------|-----------|------------------------------------------------------------------------------------|-------|--------------|--------------|--------------|
| Family              | Series            | Size                                                   | Tolerance | Inductance                                                                         | Style | Termination  | Special      | Packaging    |
| LM = Power Inductor | XN = Non-shielded | 1009 = 10x9xh<br>10F9 = 10x9xF(h)<br>(h = see catalog) | M = ±20%  | 1R0 = 1.00 $\mu\text{H}$<br>390 = 39.00 $\mu\text{H}$<br>391 = 390.0 $\mu\text{H}$ |       | T = Sn Plate | A = Standard | S = 13" Reel |

# LMax SMD Power Inductor



## LMXN Series – Non-Shielded Style D

### ELECTRICAL CHARACTERISTICS

#### 0504

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 1R0   | 1.0    | M         | 100KHz, 1.0V   | 0.048        | 3.30         |
| 1R4   | 1.4    | M         | 100KHz, 1.0V   | 0.056        | 2.80         |
| 1R8   | 1.8    | M         | 100KHz, 1.0V   | 0.063        | 2.45         |
| 2R2   | 2.2    | M         | 100KHz, 1.0V   | 0.071        | 2.21         |
| 2R7   | 2.7    | M         | 100KHz, 1.0V   | 0.078        | 2.00         |
| 3R3   | 3.3    | M         | 100KHz, 1.0V   | 0.086        | 1.81         |
| 3R9   | 3.9    | M         | 100KHz, 1.0V   | 0.093        | 1.66         |
| 4R7   | 4.7    | M         | 100KHz, 1.0V   | 0.108        | 1.51         |
| 5R6   | 5.6    | M         | 100KHz, 1.0V   | 0.125        | 1.40         |
| 6R8   | 6.8    | M         | 100KHz, 1.0V   | 0.131        | 1.26         |
| 8R2   | 8.2    | M         | 100KHz, 1.0V   | 0.146        | 1.14         |
| 100   | 10     | M         | 100KHz, 1.0V   | 0.182        | 1.04         |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.210        | 0.97         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.235        | 0.85         |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.338        | 0.74         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.378        | 0.68         |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.522        | 0.62         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.540        | 0.56         |

#### 0605

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 100   | 10     | M         | 100KHz, 1.0V   | 0.100        | 1.44         |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.120        | 1.40         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.140        | 1.30         |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.150        | 1.23         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.180        | 1.11         |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.200        | 0.97         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.230        | 0.88         |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.320        | 0.80         |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.370        | 0.72         |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.420        | 0.68         |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.460        | 0.61         |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.600        | 0.58         |
| 101   | 100    | M         | 100KHz, 1.0V   | 0.700        | 0.52         |
| 121   | 120    | M         | 100KHz, 1.0V   | 0.930        | 0.48         |
| 151   | 150    | M         | 100KHz, 1.0V   | 1.100        | 0.40         |
| 181   | 180    | M         | 100KHz, 1.0V   | 1.380        | 0.38         |
| 221   | 220    | M         | 100KHz, 1.0V   | 1.570        | 0.35         |

# LMax SMD Power Inductor



## LMXN Series – Non-Shielded Style D

### 0808

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 100   | 10     | M         | 100KHz, 1.0V   | 1.44         | 0.081        |
| 120   | 12     | M         | 100KHz, 1.0V   | 1.39         | 0.089        |
| 150   | 15     | M         | 100KHz, 1.0V   | 1.24         | 0.104        |
| 180   | 18     | M         | 100KHz, 1.0V   | 1.12         | 0.111        |
| 220   | 22     | M         | 100KHz, 1.0V   | 1.07         | 0.129        |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.94         | 0.153        |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.85         | 0.170        |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.74         | 0.217        |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.68         | 0.252        |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.64         | 0.282        |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.59         | 0.332        |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.54         | 0.406        |
| 101   | 100    | M         | 100KHz, 1.0V   | 0.51         | 0.481        |
| 121   | 120    | M         | 100KHz, 1.0V   | 0.49         | 0.536        |
| 151   | 150    | M         | 100KHz, 1.0V   | 0.40         | 0.755        |
| 181   | 180    | M         | 100KHz, 1.0V   | 0.36         | 1.022        |
| 221   | 220    | M         | 100KHz, 1.0V   | 0.31         | 1.200        |
| 271   | 270    | M         | 100KHz, 1.0V   | 0.29         | 1.306        |
| 331   | 330    | M         | 100KHz, 1.0V   | 0.28         | 1.495        |

### 08G8

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 100   | 10     | M         | 100KHz, 1.0V   | 0.070        | 2.30         |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.080        | 2.00         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.090        | 1.80         |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.100        | 1.60         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.110        | 1.50         |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.120        | 1.30         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.130        | 1.20         |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.180        | 1.00         |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.240        | 0.94         |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.280        | 0.85         |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.370        | 0.78         |
| 101   | 100    | M         | 100KHz, 1.0V   | 0.430        | 0.72         |
| 121   | 120    | M         | 100KHz, 1.0V   | 0.470        | 0.66         |
| 151   | 150    | M         | 100KHz, 1.0V   | 0.640        | 0.58         |
| 221   | 220    | M         | 100KHz, 1.0V   | 0.960        | 0.49         |
| 331   | 330    | M         | 100KHz, 1.0V   | 1.260        | 0.40         |
| 391   | 390    | M         | 100KHz, 1.0V   | 1.770        | 0.36         |
| 471   | 470    | M         | 100KHz, 1.0V   | 1.960        | 0.34         |

# LMax SMD Power Inductor



## LMXN Series – Non-Shielded Style D

### 1009

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 100   | 10     | M         | 100KHz, 1.0V   | 0.053        | 2.38         |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.061        | 2.13         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.070        | 1.87         |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.081        | 1.73         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.088        | 1.60         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.120        | 1.26         |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.170        | 1.10         |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.199        | 1.01         |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.223        | 0.91         |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.252        | 0.85         |
| 101   | 100    | M         | 100KHz, 1.0V   | 0.344        | 0.74         |
| 121   | 120    | M         | 100KHz, 1.0V   | 0.396        | 0.69         |
| 181   | 180    | M         | 100KHz, 1.0V   | 0.621        | 0.56         |
| 221   | 220    | M         | 100KHz, 1.0V   | 0.721        | 0.53         |
| 331   | 330    | M         | 100KHz, 1.0V   | 1.100        | 0.42         |
| 471   | 470    | M         | 100KHz, 1.0V   | 1.526        | 0.35         |
| 561   | 560    | M         | 100KHz, 1.0V   | 1.904        | 0.32         |

### 10F9

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 100   | 10     | M         | 100KHz, 1.0V   | 0.060        | 2.60         |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.070        | 2.45         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.080        | 2.27         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.100        | 1.95         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.120        | 1.50         |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.140        | 1.37         |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.170        | 1.28         |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.190        | 1.17         |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.220        | 1.11         |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.250        | 1.00         |
| 101   | 100    | M         | 100KHz, 1.0V   | 0.350        | 0.97         |
| 121   | 120    | M         | 100KHz, 1.0V   | 0.400        | 0.89         |
| 151   | 150    | M         | 100KHz, 1.0V   | 0.470        | 0.78         |
| 221   | 220    | M         | 100KHz, 1.0V   | 0.730        | 0.66         |
| 271   | 270    | M         | 100KHz, 1.0V   | 0.970        | 0.57         |
| 331   | 330    | M         | 100KHz, 1.0V   | 1.150        | 0.52         |
| 471   | 470    | M         | 100KHz, 1.0V   | 1.480        | 0.42         |
| 561   | 560    | M         | 100KHz, 1.0V   | 1.900        | 0.33         |
| 821   | 820    | M         | 100KHz, 1.0V   | 2.550        | 0.24         |

# LMax SMD Power Inductor



## LMXS Series – Shielded Style B

### FEATURES

- Directly connected electrode on ferrite core
- Excellent property with high saturation for surface mounting

### APPLICATIONS

- OA Equipment
- Notebook PCs
- LCD Monitor
- Portable Terminal Equipment
- DC/DC Converters, etc.
- Power Supply for VTR

### CHARACTERISTICS

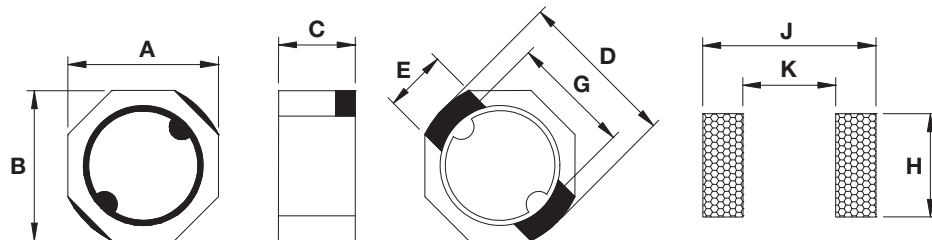
- Rated DC Current: The current when the inductance becomes 30% lower than its initial value.
- Operating temperature: -40 ~ 85°C

### INDUCTANCE AND RATED CURRENT RANGES

- 04B4 0.47 ~ 2200μH 1.84 ~ 0.035A
- 04C4 1.0 ~ 6800μH 1.90 ~ 0.017A
- 04A4 1.0 ~ 100μH 1.50 ~ 0.100A
- 0505 0.47 ~ 820μH 2.33 ~ 0.030A
- 05C5 0.47 ~ 2500μH 4.82 ~ 0.045A
- 0606 1.0 ~ 3300μH 4.70 ~ 0.026A
- Electrical specifications at 25°C



### DIMENSIONS



mm (inches)

| Type | A                              | B                              | C max.          | D                             | E               | G               | H               | K               | J               |
|------|--------------------------------|--------------------------------|-----------------|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 04B4 | 3.85 ± 0.30<br>(0.152 ± 0.012) | 3.85 ± 0.30<br>(0.152 ± 0.012) | 2.00<br>(0.079) | 3.9 ± 0.20<br>(0.154 ± 0.008) | 1.60<br>(0.063) | 3.20<br>(0.126) | 1.90<br>(0.075) | 3.00<br>(0.118) | 4.55<br>(0.179) |
| 04C4 | 3.85 ± 0.30<br>(0.152 ± 0.012) | 3.85 ± 0.30<br>(0.152 ± 0.012) | 3.00<br>(0.118) | 3.9 ± 0.20<br>(0.154 ± 0.008) | 1.60<br>(0.063) | 3.20<br>(0.126) | 1.90<br>(0.075) | 3.00<br>(0.118) | 4.55<br>(0.179) |
| 04A4 | 3.85 ± 0.30<br>(0.152 ± 0.012) | 3.85 ± 0.30<br>(0.152 ± 0.012) | 1.50<br>(0.059) | 4.80 max.<br>(0.189 max.)     | 1.60<br>(0.063) | 3.00<br>(0.118) | 2.00<br>(0.079) | 2.60<br>(0.102) | 5.20<br>(0.205) |
| 0505 | 5.30 max.<br>(0.207 max.)      | 5.30 max.<br>(0.207 max.)      | 2.00<br>(0.079) | 5.7 ± 0.40<br>(0.224 ± 0.016) | 1.60<br>(0.063) | 4.20<br>(0.165) | 1.90<br>(0.075) | 3.90<br>(0.154) | 5.70<br>(0.224) |
| 05C5 | 5.30 max.<br>(0.207 max.)      | 5.30 max.<br>(0.207 max.)      | 3.00<br>(0.118) | 5.7 ± 0.40<br>(0.224 ± 0.016) | 1.60<br>(0.063) | 4.20<br>(0.165) | 1.90<br>(0.075) | 3.90<br>(0.154) | 5.70<br>(0.224) |
| 0606 | 5.90 ± 0.20<br>(0.232 ± 0.008) | 5.90 ± 0.20<br>(0.232 ± 0.008) | 3.00<br>(0.118) | 6.4 ± 0.30<br>(0.252 ± 0.012) | 2.40<br>(0.094) | 4.70<br>(0.185) | 2.70<br>(0.106) | 4.40<br>(0.173) | 6.50<br>(0.256) |

### HOW TO ORDER

| LM                  | XS            | 0505                                                 | M                                | R04                                                                                               | B     | T            | A            | S            |
|---------------------|---------------|------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------|-------|--------------|--------------|--------------|
| Family              | Series        | Size                                                 | Tolerance                        | Inductance                                                                                        | Style | Termination  | Special      | Packaging    |
| LM = Power Inductor | XS = Shielded | 0505 = 5x5xh<br>05A5 = 5x5xA(h)<br>(h = see catalog) | M = ±20%<br>N = ±30%<br>P = ±40% | R04 = 0.039μH<br>R39 = 0.390μH<br>3R9 = 3.900μH<br>390 = 39.00μH<br>391 = 390.0μH<br>392 = 3900μH |       | T = Sn Plate | A = Standard | S = 13" Reel |

# LMax SMD Power Inductor



## LMXS Series – Shielded Style B

### ELECTRICAL CHARACTERISTICS

#### 04B4/04C4

| Codes | L<br>( $\mu$ H) | Tolerance | Test           | DCR ( $\Omega$ ) max. |       | I sat (A) max* |       |
|-------|-----------------|-----------|----------------|-----------------------|-------|----------------|-------|
|       |                 |           | Condition      | 04B4                  | 04C4  | 04B4           | 04C4  |
| R47   | 0.47            | N         | 100 KHz, 0.25V | 0.017                 | –     | 1.84           | –     |
| 1R0   | 1.0             | N         | 100 KHz, 0.25V | 0.030                 | 0.009 | 1.80           | 1.90  |
| 1R2   | 1.2             | N         | 100 KHz, 0.25V | 0.043                 | 0.010 | 1.70           | 1.75  |
| 1R5   | 1.5             | N         | 100 KHz, 0.25V | 0.052                 | 0.013 | 1.60           | 1.45  |
| 1R8   | 1.8             | N         | 100 KHz, 0.25V | 0.056                 | –     | 1.55           | –     |
| 2R0   | 2.0             | N         | 100 KHz, 0.25V | 0.057                 | 0.016 | 1.51           | 1.25  |
| 2R2   | 2.2             | N         | 100 KHz, 0.25V | 0.058                 | 0.025 | 1.50           | 1.15  |
| 2R4   | 2.4             | N         | 100 KHz, 0.25V | 0.059                 | –     | 1.41           | –     |
| 2R5   | 2.5             | N         | 100 KHz, 0.25V | 0.059                 | 0.018 | 1.40           | 1.05  |
| 2R7   | 2.7             | N         | 100 KHz, 0.25V | 0.060                 | 0.020 | 1.35           | 1.00  |
| 3R3   | 3.3             | N         | 100 KHz, 0.25V | 0.064                 | 0.030 | 1.30           | 0.96  |
| 3R5   | 3.5             | N         | 100 KHz, 0.25V | 0.127                 | 0.025 | 1.30           | 0.95  |
| 3R9   | 3.9             | N         | 100 KHz, 0.25V | –                     | 0.033 | –              | 0.87  |
| 4R7   | 4.7             | N         | 100 KHz, 0.25V | 0.146                 | 0.039 | 1.10           | 0.78  |
| 5R6   | 5.6             | N         | 100 KHz, 0.25V | 0.176                 | 0.044 | 0.95           | 0.74  |
| 6R2   | 6.2             | N         | 100 KHz, 0.25V | 0.220                 | –     | 0.91           | –     |
| 6R8   | 6.8             | N         | 100 KHz, 0.25V | 0.238                 | 0.051 | 0.90           | 0.68  |
| 8R2   | 8.2             | N         | 100 KHz, 0.25V | 0.272                 | 0.065 | 0.80           | 0.57  |
| 100   | 10              | M         | 1KHz, 0.25V    | 0.299                 | 0.092 | 0.70           | 0.43  |
| 120   | 12              | M         | 1KHz, 0.25V    | –                     | 0.100 | –              | 0.38  |
| 150   | 15              | M         | 1KHz, 0.25V    | 0.472                 | 0.113 | 0.61           | 0.33  |
| 180   | 18              | M         | 1KHz, 0.25V    | 0.552                 | 0.125 | 0.58           | 0.30  |
| 220   | 22              | M         | 1KHz, 0.25V    | 0.592                 | 0.146 | 0.52           | 0.28  |
| 270   | 27              | M         | 1KHz, 0.25V    | 0.630                 | 0.176 | 0.44           | 0.26  |
| 330   | 33              | M         | 1KHz, 0.25V    | 1.075                 | 0.214 | 0.43           | 0.23  |
| 390   | 39              | M         | 1KHz, 0.25V    | 1.269                 | 0.225 | 0.37           | 0.21  |
| 470   | 47              | M         | 1KHz, 0.25V    | 1.309                 | 0.304 | 0.34           | 0.19  |
| 500   | 50              | M         | 1KHz, 0.25V    | –                     | –     | –              | –     |
| 560   | 56              | M         | 1KHz, 0.25V    | 1.960                 | 0.324 | 0.29           | 0.170 |
| 680   | 68              | M         | 1KHz, 0.25V    | 2.613                 | 0.472 | 0.25           | 0.156 |
| 820   | 82              | M         | 1KHz, 0.25V    | 2.950                 | 0.539 | 0.20           | 0.142 |
| 101   | 100             | M         | 1KHz, 0.25V    | 3.255                 | 0.608 | 0.19           | 0.128 |
| 121   | 120             | M         | 1KHz, 0.25V    | 3.350                 | 0.757 | 0.15           | 0.116 |
| 151   | 150             | M         | 1KHz, 0.25V    | 3.550                 | 0.882 | 0.12           | 0.106 |
| 181   | 180             | M         | 1KHz, 0.25V    | 4.000                 | 1.130 | 0.10           | 0.095 |
| 221   | 220             | M         | 1KHz, 0.25V    | 4.900                 | 1.269 | 0.09           | 0.087 |
| 271   | 270             | M         | 1KHz, 0.25V    | –                     | 1.570 | –              | 0.080 |
| 331   | 330             | M         | 1KHz, 0.25V    | 7.280                 | 1.930 | 0.08           | 0.078 |
| 391   | 390             | M         | 1KHz, 0.25V    | –                     | 2.360 | –              | 0.073 |
| 471   | 470             | M         | 1KHz, 0.25V    | –                     | 2.770 | –              | 0.068 |
| 561   | 560             | M         | 1KHz, 0.25V    | –                     | 3.520 | –              | 0.065 |
| 681   | 680             | M         | 1KHz, 0.25V    | 13.37                 | 4.250 | 0.07           | 0.056 |
| 821   | 820             | M         | 1KHz, 0.25V    | –                     | 4.830 | –              | 0.050 |
| 102   | 1000            | M         | 1KHz, 0.25V    | 19.55                 | 6.260 | 0.065          | 0.047 |
| 122   | 1200            | M         | 1KHz, 0.25V    | –                     | 7.860 | –              | 0.043 |
| 152   | 1500            | M         | 1KHz, 0.25V    | 36.15                 | 9.980 | 0.038          | 0.039 |

\*Saturation Current: The current when the inductance becomes 30% lower than its initial value.

# LMax SMD Power Inductor



## LMXS Series – Shielded Style B

### 04A4

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | I sat (A) max* |
|-------|--------|-----------|----------------|--------------|----------------|
| 1R0   | 1.0    | N         | 100KHz, 0.1V   | 0.058        | 1.50           |
| 1R2   | 1.2    | N         | 100KHz, 0.1V   | 0.070        | 1.40           |
| 2R2   | 2.2    | N         | 100KHz, 0.1V   | 0.082        | 1.00           |
| 3R3   | 3.3    | N         | 100KHz, 0.1V   | 0.105        | 0.92           |
| 3R9   | 3.9    | N         | 100KHz, 0.1V   | 0.120        | 0.80           |
| 4R7   | 4.7    | N         | 100KHz, 0.1V   | 0.150        | 0.76           |
| 5R6   | 5.6    | N         | 100KHz, 0.1V   | 0.180        | 0.69           |
| 6R8   | 6.8    | N         | 100KHz, 0.1V   | 0.220        | 0.62           |
| 8R2   | 8.2    | N         | 100KHz, 0.1V   | 0.240        | 0.56           |
| 100   | 10     | N         | 100KHz, 0.1V   | 0.255        | 0.50           |
| 150   | 15     | N         | 100KHz, 0.1V   | 0.390        | 0.40           |
| 220   | 22     | M         | 100KHz, 0.1V   | 0.610        | 0.32           |
| 330   | 33     | M         | 100KHz, 0.1V   | 0.920        | 0.28           |
| 470   | 47     | M         | 100KHz, 0.1V   | 1.130        | 0.20           |
| 680   | 68     | M         | 100KHz, 0.1V   | 1.520        | 0.15           |
| 101   | 100    | M         | 100KHz, 0.1V   | 2.120        | 0.10           |

\*Saturation Current: The current when the inductance becomes 30% lower than its initial value.

# LMax SMD Power Inductor



## LMXS Series – Shielded Style B

### 0505/05C5/0606

| Codes | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | DCR ( $\Omega$ ) max. |       |       | I sat (A) max* |       |       |
|-------|-----------------|-----------|-------------------|-----------------------|-------|-------|----------------|-------|-------|
|       |                 |           |                   | 0505                  | 05C5  | 0606  | 0505           | 05C5  | 0606  |
| R47   | 0.47            | N         | 100KHz, 0.25V     | 0.015                 | 0.010 | –     | 2.33           | 4.82  | –     |
| 1R0   | 1.0             | N         | 100KHz, 0.25V     | 0.024                 | 0.015 | 0.014 | 2.27           | 4.00  | 4.70  |
| 1R1   | 1.1             | N         | 100KHz, 0.25V     | –                     | 0.020 | –     | –              | 3.87  | –     |
| 1R2   | 1.2             | N         | 100KHz, 0.25V     | 0.044                 | 0.022 | 0.016 | 2.15           | 3.80  | 3.90  |
| 1R5   | 1.5             | N         | 100KHz, 0.25V     | –                     | –     | 0.018 | –              | –     | 3.52  |
| 1R8   | 1.8             | N         | 100KHz, 0.25V     | –                     | –     | 0.019 | –              | –     | 3.25  |
| 2R0   | 2.0             | N         | 100KHz, 0.25V     | 0.046                 | 0.027 | 0.022 | 1.90           | 2.92  | 2.95  |
| 2R2   | 2.2             | N         | 100KHz, 0.25V     | 0.059                 | 0.029 | 0.022 | 1.63           | 2.41  | 2.95  |
| 2R4   | 2.4             | N         | 100KHz, 0.25V     | 0.062                 | 0.034 | 0.024 | 1.50           | 2.36  | 2.75  |
| 2R7   | 2.7             | N         | 100KHz, 0.25V     | –                     | –     | 0.027 | –              | –     | 2.55  |
| 3R3   | 3.3             | N         | 100KHz, 0.25V     | 0.073                 | 0.040 | 0.030 | 1.34           | 1.95  | 2.45  |
| 3R9   | 3.9             | N         | 100KHz, 0.25V     | 0.081                 | –     | 0.034 | 1.20           | –     | 2.35  |
| 4R1   | 4.1             | N         | 100KHz, 0.25V     | 0.087                 | 0.045 | –     | 1.14           | 1.87  | –     |
| 4R7   | 4.7             | N         | 100KHz, 0.25V     | –                     | 0.052 | 0.042 | –              | 1.60  | 2.25  |
| 5R6   | 5.6             | N         | 100KHz, 0.25V     | –                     | –     | 0.048 | –              | –     | 2.05  |
| 6R8   | 6.8             | N         | 100KHz, 0.25V     | 0.105                 | 0.068 | 0.054 | 0.95           | 1.51  | 1.85  |
| 8R2   | 8.2             | N         | 100KHz, 0.25V     | 0.139                 | 0.084 | 0.058 | 0.90           | 1.38  | 1.65  |
| 100   | 10              | M         | 1KHz, 0.25V       | 0.150                 | 0.090 | 0.065 | 0.76           | 1.33  | 1.45  |
| 120   | 12              | M         | 1KHz, 0.25V       | –                     | 0.120 | 0.082 | –              | 1.06  | 1.35  |
| 150   | 15              | M         | 1KHz, 0.25V       | 0.210                 | 0.142 | 0.096 | 0.63           | 1.05  | 1.25  |
| 180   | 18              | M         | 1KHz, 0.25V       | –                     | 0.192 | 0.110 | –              | 0.90  | 1.15  |
| 220   | 22              | M         | 1KHz, 0.25V       | 0.275                 | 0.208 | 0.140 | 0.56           | 0.86  | 0.98  |
| 270   | 27              | M         | 1KHz, 0.25V       | 0.452                 | 0.222 | 0.170 | 0.48           | 0.75  | 0.90  |
| 330   | 33              | M         | 1KHz, 0.25V       | 0.455                 | 0.257 | 0.210 | 0.44           | 0.72  | 0.80  |
| 390   | 39              | M         | 1KHz, 0.25V       | –                     | 0.320 | 0.240 | –              | 0.64  | 0.72  |
| 470   | 47              | M         | 1KHz, 0.25V       | 0.730                 | 0.352 | 0.280 | 0.35           | 0.62  | 0.70  |
| 560   | 56              | M         | 1KHz, 0.25V       | –                     | 0.459 | 0.340 | –              | 0.53  | 0.66  |
| 680   | 68              | M         | 1KHz, 0.25V       | 0.935                 | 0.525 | 0.410 | 0.30           | 0.51  | 0.58  |
| 820   | 82              | M         | 1KHz, 0.25V       | 1.300                 | 0.770 | 0.490 | 0.27           | 0.48  | 0.52  |
| 101   | 100             | M         | 1KHz, 0.25V       | 1.500                 | 0.801 | 0.550 | 0.23           | 0.43  | 0.46  |
| 121   | 120             | M         | 1KHz, 0.25V       | 1.910                 | 0.850 | 0.700 | 0.22           | 0.34  | 0.42  |
| 151   | 150             | M         | 1KHz, 0.25V       | 2.680                 | 1.100 | 0.780 | 0.21           | 0.26  | 0.36  |
| 181   | 180             | M         | 1KHz, 0.25V       | 3.040                 | 1.190 | 0.960 | 0.20           | 0.24  | 0.34  |
| 221   | 220             | M         | 1KHz, 0.25V       | 3.520                 | 1.530 | 1.080 | 0.195          | 0.20  | 0.32  |
| 271   | 270             | M         | 1KHz, 0.25V       | 4.380                 | –     | 1.360 | 0.193          | –     | 0.28  |
| 331   | 330             | M         | 1KHz, 0.25V       | 5.560                 | 2.030 | 1.820 | 0.190          | 0.19  | 0.24  |
| 391   | 390             | M         | 1KHz, 0.25V       | –                     | 3.000 | 2.050 | –              | 0.16  | 0.22  |
| 471   | 470             | M         | 1KHz, 0.25V       | 7.820                 | 3.500 | 2.580 | 0.180          | 0.15  | 0.20  |
| 561   | 560             | M         | 1KHz, 0.25V       | –                     | 4.080 | 3.160 | –              | 0.14  | 0.18  |
| 681   | 680             | M         | 1KHz, 0.25V       | –                     | –     | 4.040 | –              | –     | 0.16  |
| 821   | 820             | M         | 1KHz, 0.25V       | 15.00                 | –     | 4.900 | 0.120          | –     | 0.14  |
| 102   | 1000            | M         | 1KHz, 0.25V       | –                     | –     | 6.000 | –              | –     | 0.13  |
| 122   | 1200            | M         | 1KHz, 0.25V       | –                     | 8.500 | 7.600 | –              | 0.070 | 0.12  |
| 152   | 1522            | M         | 1KHz, 0.25V       | –                     | 10.00 | 9.440 | –              | 0.065 | 0.10  |
| 182   | 1800            | M         | 1KHz, 0.25V       | –                     | 13.15 | 11.70 | –              | 0.062 | 0.098 |
| 222   | 2200            | M         | 1KHz, 0.25V       | –                     | 19.00 | 13.40 | –              | 0.050 | 0.095 |
| 252   | 2500            | M         | 1KHz, 0.25V       | –                     | 20.00 | –     | –              | 0.045 | –     |
| 272   | 2700            | M         | 1KHz, 0.25V       | –                     | –     | 17.30 | –              | –     | 0.086 |
| 332   | 3300            | M         | 1KHz, 0.25V       | –                     | –     | 22.10 | –              | –     | 0.078 |

\*Saturation Current: The current when the inductance becomes 30% lower than its initial value.

# LMax SMD Power Inductor



## LMXS Series – Shielded Style C

### FEATURES

- Directly connected electrode on ferrite core
- Available in magnetically shielded
- Low DC resistance
- Suitable for large current
- Available on tape and reel for auto surface mounting

### APPLICATIONS

- Power Supply For VTRs
- OA Equipment.
- Notebook PCs
- Portable Communication Equipment
- DC/DC Converters, etc.

### INDUCTANCE AND RATED CURRENT RANGES

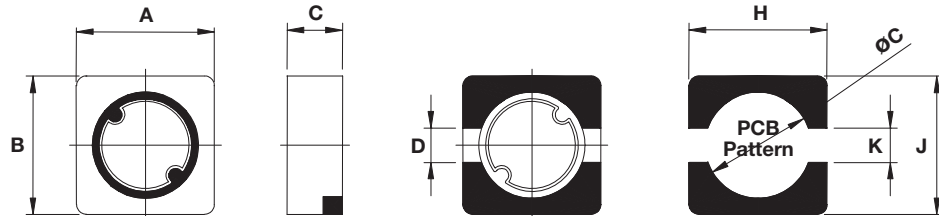
- 0404 1.0 ~ 180μH 1.60 ~ 0.110A
- 04B4 0.47 ~ 1800μH 1.84 ~ 0.036A
- 04C4 1.5 ~ 560μH 1.90 ~ 0.090A
- 0505 1.2 ~ 1000μH 1.77 ~ 0.067A
- 05B5 1.0 ~ 820μH 2.70 ~ 0.026A
- 05C5 1.0 ~ 2500μH 4.00 ~ 0.045A
- 0707 1.0 ~ 820μH 3.28 ~ 0.100A
- 07B7 1.0 ~ 1500μH 3.52 ~ 0.095A
- 07D7 0.36 ~ 1000μH 9.24 ~ 0.180A
- Electrical specifications at 25°C



### CHARACTERISTICS

- Rated Current:  
0404/04B4/0505/05B5/05C5/0707/07B7/07D7: The DC current when the inductance becomes 30% lower than its initial value.  
04C4/101B/101D/101H: The DC current when the inductance becomes 35% lower than its initial value. (Ta=25°C)
- Operating temperature range: -40 ~ +105°C

### DIMENSIONS



mm (inches)

| Type | A                              | B                              | C max.          | D               | H               | J               | K               | øC              |
|------|--------------------------------|--------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 0404 | 3.80 ± 0.30<br>(0.150 ± 0.012) | 3.80 ± 0.30<br>(0.150 ± 0.012) | 1.25<br>(0.049) | 1.20<br>(0.047) | 4.40<br>(0.173) | 4.40<br>(0.173) | 1.10<br>(0.043) | 3.00<br>(0.118) |
| 04B4 | 3.80 ± 0.30<br>(0.150 ± 0.012) | 3.80 ± 0.30<br>(0.150 ± 0.012) | 2.00<br>(0.079) | 1.20<br>(0.047) | 4.40<br>(0.173) | 4.40<br>(0.173) | 1.10<br>(0.043) | 3.00<br>(0.118) |
| 04C4 | 3.80 ± 0.30<br>(0.150 ± 0.012) | 3.80 ± 0.30<br>(0.150 ± 0.012) | 3.00<br>(0.118) | 1.20<br>(0.047) | 4.40<br>(0.173) | 4.40<br>(0.173) | 1.10<br>(0.043) | 3.00<br>(0.118) |
| 0505 | 5.00 ± 0.30<br>(0.197 ± 0.012) | 5.00 ± 0.30<br>(0.197 ± 0.012) | 1.20<br>(0.047) | 2.00<br>(0.079) | 5.90<br>(0.232) | 5.90<br>(0.232) | 1.90<br>(0.075) | 4.20<br>(0.165) |
| 05B5 | 5.00 ± 0.30<br>(0.197 ± 0.012) | 5.00 ± 0.30<br>(0.197 ± 0.012) | 2.00<br>(0.079) | 2.00<br>(0.079) | 5.90<br>(0.232) | 5.90<br>(0.232) | 1.90<br>(0.075) | 4.20<br>(0.165) |
| 05C5 | 5.00 ± 0.30<br>(0.197 ± 0.012) | 5.00 ± 0.30<br>(0.197 ± 0.012) | 3.00<br>(0.118) | 2.00<br>(0.079) | 5.90<br>(0.232) | 5.90<br>(0.232) | 1.90<br>(0.075) | 4.20<br>(0.165) |
| 0707 | 6.90 ± 0.30<br>(0.272 ± 0.012) | 6.90 ± 0.30<br>(0.272 ± 0.012) | 1.50<br>(0.059) | 2.50<br>(0.098) | 7.30<br>(0.287) | 7.30<br>(0.287) | 2.00<br>(0.079) | 5.30<br>(0.209) |
| 07B7 | 6.90 ± 0.30<br>(0.272 ± 0.012) | 6.90 ± 0.30<br>(0.272 ± 0.012) | 1.90<br>(0.075) | 2.50<br>(0.098) | 7.30<br>(0.287) | 7.30<br>(0.287) | 2.00<br>(0.079) | 5.30<br>(0.209) |
| 07D7 | 7.00 ± 0.40<br>(0.276 ± 0.016) | 7.00 ± 0.40<br>(0.276 ± 0.016) | 4.30<br>(0.169) | 1.80<br>(0.071) | 8.00<br>(0.315) | 8.00<br>(0.315) | 1.60<br>(0.063) | 6.00<br>(0.236) |

# LMax SMD Power Inductor



## LMXS Series – Shielded Style C

### HOW TO ORDER

| LM                  | XS            | 0707                                                 | M                    | R04                                                                                               | C     | T            | A            | S            |
|---------------------|---------------|------------------------------------------------------|----------------------|---------------------------------------------------------------------------------------------------|-------|--------------|--------------|--------------|
| Family              | Series        | Size                                                 | Tolerance            | Inductance                                                                                        | Style | Termination  | Special      | Packaging    |
| LM = Power Inductor | XS = Shielded | 0707 = 7x7xh<br>07D7 = 7x7xD(h)<br>(h = see catalog) | M = ±20%<br>N = ±30% | R04 = 0.039µH<br>R39 = 0.390µH<br>3R9 = 3.900µH<br>390 = 39.00µH<br>391 = 390.0µH<br>392 = 3900µH |       | T = Sn Plate | A = Standard | S = 13" Reel |

### ELECTRICAL CHARACTERISTICS

#### 0404/04B4/04C4

| Codes | L<br>(µH) | Tolerance | Test<br>Condition | DCR (Ω) max. |        |       | I sat (A) max* |       |       |
|-------|-----------|-----------|-------------------|--------------|--------|-------|----------------|-------|-------|
|       |           |           |                   | 0404         | 04B4   | 04C4  | 0404           | 04B4  | 04C4  |
| R47   | 0.47      | N         | 100KHz, 0.25V     | –            | 0.017  | –     | –              | 1.840 | –     |
| 1R0   | 1.0       | M, N      | 100KHz, 0.25V     | 0.060        | 0.030  | –     | 1.600          | 1.800 | –     |
| 1R2   | 1.2       | M, N      | 100KHz, 0.25V     | 0.065        | 0.043  | –     | 1.400          | 1.700 | –     |
| 1R5   | 1.5       | M, N      | 100KHz, 0.25V     | 0.077        | 0.052  | 0.015 | 1.240          | 1.600 | 1.900 |
| 1R8   | 1.8       | M, N      | 100KHz, 0.25V     | 0.093        | –      | 0.018 | 1.220          | –     | 1.760 |
| 2R2   | 2.2       | M, N      | 100KHz, 0.25V     | 0.125        | 0.058  | 0.020 | 1.200          | 1.500 | 1.670 |
| 2R4   | 2.4       | M, N      | 100KHz, 0.25V     | 0.139        | –      | 0.022 | 0.980          | –     | 1.650 |
| 2R5   | 2.5       | M, N      | 100KHz, 0.25V     | –            | 0.059  | –     | –              | 1.400 | –     |
| 2R7   | 2.7       | M, N      | 100KHz, 0.25V     | –            | 0.059  | 0.028 | –              | 1.400 | 1.450 |
| 3R3   | 3.3       | M, N      | 100KHz, 0.25V     | 0.187        | 0.064  | 0.032 | 0.890          | 1.300 | 1.440 |
| 3R5   | 3.5       | M, N      | 100KHz, 0.25V     | 0.210        | 0.127  | –     | 0.850          | 1.300 | –     |
| 3R6   | 3.6       | M, N      | 100KHz, 0.25V     | –            | –      | 0.035 | –              | –     | 1.430 |
| 3R9   | 3.9       | M, N      | 100KHz, 0.25V     | 0.220        | 0.135  | 0.037 | 0.780          | 1.120 | 1.320 |
| 4R3   | 4.3       | M, N      | 100KHz, 0.25V     | –            | –      | 0.043 | –              | –     | 1.000 |
| 4R7   | 4.7       | M, N      | 100KHz, 0.25V     | 0.240        | 0.146  | 0.045 | 0.710          | 1.100 | 0.970 |
| 5R1   | 5.1       | M, N      | 100KHz, 0.25V     | –            | –      | 0.046 | –              | –     | 0.940 |
| 5R6   | 5.6       | M, N      | 100KHz, 0.25V     | 0.320        | 0.176  | –     | 0.620          | 0.950 | –     |
| 6R2   | 6.2       | M, N      | 100KHz, 0.25V     | –            | 0.220  | –     | –              | 0.910 | –     |
| 6R8   | 6.8       | M, N      | 100KHz, 0.25V     | 0.350        | 0.238  | 0.065 | 0.570          | 0.900 | 0.870 |
| 7R5   | 7.5       | M, N      | 100KHz, 0.25V     | –            | –      | 0.079 | –              | –     | 0.820 |
| 8R2   | 8.2       | M, N      | 100KHz, 0.25V     | 0.470        | 0.272  | 0.071 | 0.520          | 0.800 | 0.770 |
| 100   | 10        | M         | 1KHz, 0.25V       | 0.570        | 0.299  | 0.105 | 0.470          | 0.700 | 0.700 |
| 120   | 12        | M         | 1KHz, 0.25V       | 0.750        | –      | 0.119 | 0.430          | –     | 0.670 |
| 150   | 15        | M         | 1KHz, 0.25V       | 0.810        | 0.472  | 0.140 | 0.380          | 0.610 | 0.540 |
| 180   | 18        | M         | 1KHz, 0.25V       | 1.060        | –      | 0.175 | 0.350          | –     | 0.500 |
| 220   | 22        | M         | 1KHz, 0.25V       | 1.150        | 0.592  | 0.201 | 0.320          | 0.520 | 0.480 |
| 270   | 27        | M         | 1KHz, 0.25V       | 1.670        | 0.630  | 0.227 | 0.290          | 0.440 | 0.400 |
| 330   | 33        | M         | 1KHz, 0.25V       | 1.840        | 1.075  | 0.287 | 0.280          | 0.430 | 0.350 |
| 390   | 39        | M         | 1KHz, 0.25V       | 2.310        | –      | 0.341 | 0.250          | –     | 0.330 |
| 470   | 47        | M         | 1KHz, 0.25V       | 2.630        | 1.309  | 0.430 | 0.220          | 0.340 | 0.320 |
| 560   | 56        | M         | 1KHz, 0.25V       | 2.860        | –      | 0.471 | 0.200          | –     | 0.300 |
| 680   | 68        | M         | 1KHz, 0.25V       | 3.940        | 2.613  | 0.532 | 0.180          | 0.250 | 0.270 |
| 820   | 82        | M         | 1KHz, 0.25V       | 4.900        | 2.950  | 0.675 | 0.160          | 0.200 | 0.230 |
| 101   | 100       | M         | 1KHz, 0.25V       | 5.740        | 3.255  | 0.850 | 0.140          | 0.190 | 0.210 |
| 121   | 120       | M         | 1KHz, 0.25V       | 7.310        | –      | 1.110 | 0.130          | –     | 0.200 |
| 151   | 150       | M         | 1KHz, 0.25V       | 9.080        | 3.550  | 1.230 | 0.120          | 0.120 | 0.170 |
| 181   | 180       | M         | 1KHz, 0.25V       | 9.500        | –      | 1.560 | 0.110          | –     | 0.150 |
| 221   | 220       | M         | 1KHz, 0.25V       | –            | 4.900  | 1.800 | –              | 0.090 | 0.140 |
| 271   | 270       | M         | 1KHz, 0.25V       | –            | –      | 2.200 | –              | –     | 0.130 |
| 331   | 330       | M         | 1KHz, 0.25V       | –            | 7.280  | 2.640 | –              | 0.080 | 0.120 |
| 471   | 470       | M         | 1KHz, 0.25V       | –            | –      | 3.820 | –              | –     | 0.100 |
| 561   | 560       | M         | 1KHz, 0.25V       | –            | –      | 4.620 | –              | –     | 0.090 |
| 681   | 680       | M         | 1KHz, 0.25V       | –            | 13.370 | –     | –              | 0.070 | –     |
| 102   | 1000      | M         | 1KHz, 0.25V       | –            | 19.550 | –     | –              | 0.065 | –     |
| 152   | 1500      | M         | 1KHz, 0.25V       | –            | 36.150 | –     | –              | 0.038 | –     |
| 182   | 1800      | M         | 1KHz, 0.25V       | –            | 57.620 | –     | –              | 0.036 | –     |

\*Saturation Current (0404/04B4): The DC current when the inductance becomes 30% lower than its initial value. (Ta=25°C)

\*Saturation Current (04C4): The DC current when the inductance becomes 35% lower than its initial value. (Ta=25°C)



# LMax SMD Power Inductor



## LMXS Series – Shielded Style C

### 0505/05B5/05C5

| Codes | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | DCR ( $\Omega$ ) max. |       |       | I sat (A) max* |       |       |
|-------|-----------------|-----------|-------------------|-----------------------|-------|-------|----------------|-------|-------|
|       |                 |           |                   | 0505                  | 05B5  | 05C5  | 0505           | 05B5  | 05C5  |
| 1R0   | 1.0             | M, N      | 100KHz, 0.25V     | –                     | 0.030 | 0.015 | –              | 2.700 | 4.000 |
| 1R1   | 1.1             | M, N      | 100KHz, 0.25V     | –                     | –     | 0.020 | –              | –     | 3.870 |
| 1R2   | 1.2             | M, N      | 100KHz, 0.25V     | 0.050                 | 0.044 | 0.022 | 1.770          | 2.150 | 3.800 |
| 1R5   | 1.5             | M, N      | 100KHz, 0.25V     | 0.069                 | –     | –     | 1.710          | –     | –     |
| 2R0   | 2.0             | M, N      | 100KHz, 0.25V     | 0.100                 | 0.046 | 0.027 | 1.440          | 1.900 | 2.920 |
| 2R2   | 2.2             | M, N      | 100KHz, 0.25V     | 0.110                 | 0.059 | 0.029 | 1.400          | 1.630 | 2.410 |
| 3R3   | 3.3             | M, N      | 100KHz, 0.25V     | 0.140                 | 0.062 | 0.034 | 1.140          | 1.500 | 2.360 |
| 3R5   | 3.5             | M, N      | 100KHz, 0.25V     | 0.150                 | 0.073 | –     | 1.100          | 1.340 | –     |
| 4R1   | 4.1             | M, N      | 100KHz, 0.25V     | –                     | 0.081 | –     | –              | 1.200 | –     |
| 4R7   | 4.7             | M, N      | 100KHz, 0.25V     | 0.190                 | 0.087 | 0.045 | 0.950          | 1.140 | 1.870 |
| 5R6   | 5.6             | M, N      | 100KHz, 0.25V     | 0.193                 | 0.093 | 0.052 | 0.900          | 1.000 | 1.600 |
| 6R2   | 6.2             | M, N      | 100KHz, 0.25V     | 0.200                 | –     | –     | 0.840          | –     | –     |
| 6R8   | 6.8             | M, N      | 100KHz, 0.25V     | 0.200                 | 0.105 | 0.068 | 0.800          | 0.950 | 1.510 |
| 8R2   | 8.2             | M, N      | 100KHz, 0.25V     | 0.300                 | 0.139 | 0.084 | 0.750          | 0.900 | 1.380 |
| 100   | 10              | M         | 1KHz, 0.25V       | 0.350                 | 0.150 | 0.090 | 0.660          | 0.760 | 1.330 |
| 120   | 12              | M         | 1KHz, 0.25V       | 0.430                 | 0.170 | –     | 0.620          | 0.660 | –     |
| 150   | 15              | M         | 1KHz, 0.25V       | 0.440                 | 0.210 | 0.142 | 0.590          | 0.630 | 1.050 |
| 180   | 18              | M         | 1KHz, 0.25V       | 0.750                 | –     | –     | 0.570          | –     | –     |
| 220   | 22              | M         | 1KHz, 0.25V       | 0.820                 | 0.275 | 0.208 | 0.560          | 0.560 | 0.860 |
| 270   | 27              | M         | 1KHz, 0.25V       | –                     | –     | 0.222 | –              | –     | 0.750 |
| 330   | 33              | M         | 1KHz, 0.25V       | 1.160                 | 0.455 | 0.257 | 0.430          | 0.440 | 0.720 |
| 390   | 39              | M         | 1KHz, 0.25V       | –                     | 0.540 | –     | –              | 0.380 | –     |
| 470   | 47              | M         | 1KHz, 0.25V       | 1.590                 | 0.730 | 0.352 | 0.340          | 0.350 | 0.620 |
| 560   | 56              | M         | 1KHz, 0.25V       | –                     | 0.800 | –     | –              | 0.320 | –     |
| 680   | 68              | M         | 1KHz, 0.25V       | 2.140                 | 0.935 | 0.525 | 0.290          | 0.300 | 0.510 |
| 820   | 82              | M         | 1KHz, 0.25V       | 2.720                 | –     | –     | 0.250          | –     | –     |
| 101   | 100             | M         | 1KHz, 0.25V       | 3.550                 | 1.500 | 0.801 | 0.220          | 0.230 | 0.430 |
| 121   | 120             | M         | 1KHz, 0.25V       | 4.890                 | 1.910 | 0.850 | 0.200          | 0.220 | 0.340 |
| 151   | 150             | M         | 1KHz, 0.25V       | 5.200                 | 2.680 | 1.100 | 0.190          | 0.210 | 0.260 |
| 181   | 180             | M         | 1KHz, 0.25V       | 7.550                 | 3.045 | 1.190 | 0.170          | 0.200 | 0.240 |
| 221   | 220             | M         | 1KHz, 0.25V       | 7.760                 | 3.520 | 1.530 | 0.150          | 0.195 | 0.200 |
| 271   | 270             | M         | 1KHz, 0.25V       | 10.13                 | 4.380 | –     | 0.145          | 0.193 | –     |
| 331   | 330             | M         | 1KHz, 0.25V       | 11.23                 | 5.560 | 2.030 | 0.140          | 0.190 | 0.190 |
| 391   | 390             | M         | 1KHz, 0.25V       | –                     | –     | 3.000 | –              | –     | 0.160 |
| 471   | 470             | M         | 1KHz, 0.25V       | 16.86                 | 7.820 | 3.500 | 0.098          | 0.180 | 0.150 |
| 561   | 560             | M         | 1KHz, 0.25V       | 22.78                 | 9.790 | 4.450 | 0.097          | 0.170 | 0.140 |
| 681   | 680             | M         | 1KHz, 0.25V       | 24.87                 | –     | –     | 0.085          | –     | –     |
| 821   | 820             | M         | 1KHz, 0.25V       | 28.09                 | 15.00 | –     | 0.077          | 0.120 | –     |
| 102   | 1000            | M         | 1KHz, 0.25V       | 45.07                 | –     | –     | 0.067          | –     | –     |
| 122   | 1200            | M         | 1KHz, 0.25V       | –                     | –     | 8.500 | –              | –     | 0.070 |
| 152   | 1500            | M         | 1KHz, 0.25V       | –                     | –     | 10.00 | –              | –     | 0.065 |
| 182   | 1800            | M         | 1KHz, 0.25V       | –                     | –     | 13.15 | –              | –     | 0.062 |
| 222   | 2200            | M         | 1KHz, 0.25V       | –                     | –     | 19.00 | –              | –     | 0.050 |
| 252   | 2500            | M         | 1KHz, 0.25V       | –                     | –     | 20.00 | –              | –     | 0.045 |

\*Saturation Current (0505/05B5/05C5): The DC current when the inductance becomes 30% lower than its initial value.

# LMax SMD Power Inductor



## LMXS Series – Shielded Style C

### 0707/07B7/07D7

| Codes | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | DCR ( $\Omega$ ) max. |       |        | I sat (A) max* |       |       |
|-------|-----------------|-----------|-------------------|-----------------------|-------|--------|----------------|-------|-------|
|       |                 |           |                   | 0707                  | 07B7  | 07D7   | 0707           | 07B7  | 07D7  |
| R36   | 0.36            | N         | 100KHz, 0.25V     | –                     | –     | 0.005  | –              | –     | 9.240 |
| R56   | 0.56            | N         | 100KHz, 0.25V     | –                     | –     | 0.006  | –              | –     | 8.500 |
| R80   | 0.80            | N         | 100KHz, 0.25V     | –                     | –     | 0.009  | –              | –     | 5.800 |
| 1R0   | 1.0             | M, N      | 100KHz, 0.25V     | 0.050                 | 0.035 | 0.040  | 3.280          | 3.520 | 2.100 |
| 1R2   | 1.2             | M, N      | 100KHz, 0.25V     | –                     | –     | 0.040  | –              | –     | 2.100 |
| 1R5   | 1.5             | M, N      | 100KHz, 0.25V     | 0.067                 | –     | 0.040  | 2.530          | –     | 2.100 |
| 1R8   | 1.8             | M, N      | 100KHz, 0.25V     | –                     | 0.052 | 0.040  | –              | 3.050 | 2.090 |
| 2R0   | 2.0             | M, N      | 100KHz, 0.25V     | 0.085                 | –     | –      | 2.060          | –     | –     |
| 2R2   | 2.2             | M, N      | 100KHz, 0.25V     | –                     | 0.071 | 0.0410 | –              | 2.500 | 2.080 |
| 2R5   | 2.5             | M, N      | 100KHz, 0.25V     | –                     | –     | 0.0410 | –              | –     | 2.080 |
| 2R7   | 2.7             | M, N      | 100KHz, 0.25V     | 0.110                 | –     | –      | 1.870          | –     | –     |
| 3R0   | 3.0             | M, N      | 100KHz, 0.25V     | –                     | 0.086 | –      | –              | 2.150 | –     |
| 3R3   | 3.3             | M, N      | 100KHz, 0.25V     | 0.130                 | –     | 0.0410 | 1.580          | –     | 2.070 |
| 3R9   | 3.9             | M, N      | 100KHz, 0.25V     | 0.160                 | 0.110 | –      | 1.460          | 2.010 | –     |
| 4R3   | 4.3             | M, N      | 100KHz, 0.25V     | –                     | –     | 0.041  | –              | –     | 2.060 |
| 4R7   | 4.7             | M, N      | 100KHz, 0.25V     | 0.200                 | 0.130 | 0.042  | 1.300          | 1.950 | 2.050 |
| 5R6   | 5.6             | M, N      | 100KHz, 0.25V     | 0.230                 | 0.150 | 0.043  | 1.220          | 1.820 | 2.040 |
| 6R8   | 6.8             | M, N      | 100KHz, 0.25V     | 0.280                 | 0.170 | 0.044  | 1.160          | 1.670 | 2.040 |
| 8R2   | 8.2             | M, N      | 100KHz, 0.25V     | 0.310                 | 0.190 | –      | 1.130          | 1.520 | –     |
| 100   | 10              | M         | 1KHz, 0.25V       | 0.330                 | 0.240 | 0.049  | 1.030          | 1.390 | 2.000 |
| 120   | 12              | M         | 1KHz, 0.25V       | 0.460                 | 0.290 | 0.058  | 0.870          | 1.220 | 1.900 |
| 150   | 15              | M         | 1KHz, 0.25V       | 0.530                 | 0.380 | 0.081  | 0.800          | 1.090 | 1.600 |
| 180   | 18              | M         | 1KHz, 0.25V       | 0.620                 | 0.440 | 0.091  | 0.730          | 1.030 | 1.480 |
| 220   | 22              | M         | 1KHz, 0.25V       | 0.700                 | 0.490 | 0.110  | 0.710          | 0.950 | 1.320 |
| 270   | 27              | M         | 1KHz, 0.25V       | 0.910                 | 0.640 | 0.150  | 0.650          | 0.840 | 1.260 |
| 330   | 33              | M         | 1KHz, 0.25V       | 1.150                 | 0.740 | 0.170  | 0.570          | 0.800 | 1.100 |
| 390   | 39              | M         | 1KHz, 0.25V       | 1.380                 | 0.910 | 0.230  | 0.500          | 0.750 | 1.050 |
| 470   | 47              | M         | 1KHz, 0.25V       | 1.540                 | 1.020 | 0.260  | 0.480          | 0.690 | 1.000 |
| 560   | 56              | M         | 1KHz, 0.25V       | 1.860                 | 1.260 | 0.350  | 0.450          | 0.630 | 0.850 |
| 680   | 68              | M         | 1KHz, 0.25V       | 2.320                 | 1.570 | 0.380  | 0.410          | 0.560 | 0.780 |
| 820   | 82              | M         | 1KHz, 0.25V       | 2.540                 | 1.890 | 0.430  | 0.370          | 0.510 | 0.740 |
| 101   | 100             | M         | 1KHz, 0.25V       | 3.20                  | 2.12  | 0.61   | 0.32           | 0.47  | 0.70  |
| 121   | 120             | M         | 1KHz, 0.25V       | 4.24                  | 2.55  | 0.66   | 0.29           | 0.42  | 0.60  |
| 151   | 150             | M         | 1KHz, 0.25V       | 4.77                  | 3.37  | 0.88   | 0.27           | 0.37  | 0.52  |
| 181   | 180             | M         | 1KHz, 0.25V       | 6.04                  | 3.73  | 0.98   | 0.24           | 0.32  | 0.46  |
| 221   | 220             | M         | 1KHz, 0.25V       | 7.95                  | 4.54  | 1.17   | 0.22           | 0.29  | 0.40  |
| 271   | 270             | M         | 1KHz, 0.25V       | 10.51                 | 5.97  | 1.64   | 0.19           | 0.25  | 0.36  |
| 331   | 330             | M         | 1KHz, 0.25V       | 11.63                 | 7.74  | 1.86   | 0.18           | 0.23  | 0.32  |
| 391   | 390             | M         | 1KHz, 0.25V       | 12.97                 | 9.92  | 2.85   | 0.16           | 0.21  | 0.28  |
| 471   | 470             | M         | 1KHz, 0.25V       | 16.87                 | 12.95 | 3.01   | 0.15           | 0.18  | 0.26  |
| 561   | 560             | M         | 1KHz, 0.25V       | 22.3                  | 14.36 | 3.62   | 0.13           | 0.16  | 0.24  |
| 681   | 680             | M         | 1KHz, 0.25V       | 25.11                 | 18.52 | 4.63   | 0.12           | 0.14  | 0.22  |
| 821   | 820             | M         | 1KHz, 0.25V       | 28.41                 | 20.23 | 5.20   | 0.10           | 0.13  | 0.20  |
| 102   | 1000            | M         | 1KHz, 0.25V       | –                     | 28.25 | 6.00   | –              | 0.11  | 0.18  |
| 122   | 1200            | M         | 1KHz, 0.25V       | –                     | 31.85 | –      | –              | 0.10  | –     |
| 152   | 1500            | M         | 1KHz, 0.25V       | –                     | 36.72 | –      | –              | 0.095 | –     |

\*Saturation Current (0707/07B7/07D7): The DC current when the inductance becomes 30% lower than its initial value.

# LMax SMD Power Inductor

## LMXS Series – Shielded Style D



### FEATURES

- Magnetically shielded against radiation
- 0704 can help achieve longer battery life significantly in handheld communication devices.
- 1309 / 1915 designed for the higher current requirements of portable computers.
- 0704 has ceramic base with gold-plating
- 1309 / 1915 has LCP plastic base

### APPLICATIONS

- Portable Telephones
- Personal Computers
- Other Various Electronic Appliances
- DC/DC Converters, etc.

### CHARACTERISTICS

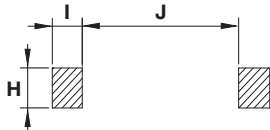
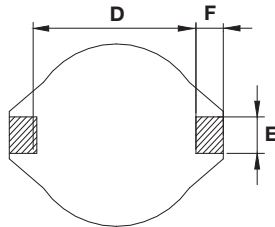
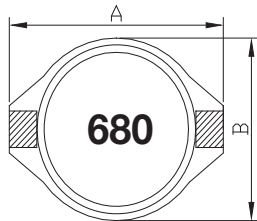
- Saturation Rated Current (IDC): The DC current when the inductance becomes 10% lower than its initial value. (Ta=25°C)
- Temperature Rise Current (I rms): The actual current when temperature of coil becomes  $\Delta 40^{\circ}\text{C}$ . (Ta=25°C)
- Operating temperature range: -40 ~ 85°C

### INDUCTANCE AND RATED CURRENT RANGES

- 0704 1.0 ~ 10000 $\mu\text{H}$  3.0 ~ 0.02A
- 1309 1.0 ~ 1000 $\mu\text{H}$  5.0 ~ 0.17A
- 1915 10 ~ 1000 $\mu\text{H}$  3.9 ~ 0.53A
- Electrical specifications at 25°C



### DIMENSIONS



mm (inches)

| Type | A max.           | B max.           | C max.          | D                | E               | F               | H               | I               | J                |
|------|------------------|------------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|------------------|
| 0704 | 6.60<br>(0.260)  | 4.45<br>(0.175)  | 2.92<br>(0.115) | 4.32<br>(0.170)  | 1.27<br>(0.050) | 1.02<br>(0.040) | 3.56<br>(0.140) | 1.40<br>(0.055) | 4.06<br>(0.160)  |
| 1309 | 12.95<br>(0.510) | 9.40<br>(0.370)  | 5.21<br>(0.205) | 7.62<br>(0.300)  | 2.54<br>(0.100) | 2.54<br>(0.100) | 2.79<br>(0.110) | 2.92<br>(0.115) | 7.37<br>(0.290)  |
| 1915 | 18.54<br>(0.730) | 15.24<br>(0.600) | 7.62<br>(0.300) | 12.70<br>(0.500) | 2.54<br>(0.100) | 2.54<br>(0.100) | 2.79<br>(0.110) | 2.92<br>(0.115) | 12.45<br>(0.490) |

### HOW TO ORDER

**LM**



**Family**

LM = Power Inductor

**XS**



**Series**

XS = Shielded

**0704**



**Size**

0704 = 7x4xh  
1309 = 13x9xh  
(h = see catalog)

**M**



**Tolerance**

M =  $\pm 20\%$

**R04**



**Inductance**

R04 = 0.039 $\mu\text{H}$   
R39 = 0.390 $\mu\text{H}$   
3R9 = 3.900 $\mu\text{H}$   
390 = 39.00 $\mu\text{H}$   
391 = 390.0 $\mu\text{H}$   
392 = 3900 $\mu\text{H}$

**D**



**Style**

**T**



**Termination**

T = Sn Plate

**A**



**Special**

A = Standard

**S**



**Packaging**

S = 13" Reel

# LMax SMD Power Inductor



## LMXS Series – Shielded Style D

### ELECTRICAL CHARACTERISTICS

#### 0704

| Codes | L<br>( $\mu$ H) | Tolerance | Test Condition |              | DCR<br>( $\Omega$ ) max. | SRF ref<br>(MHz) | Q min. | I rms<br>(A) max. |
|-------|-----------------|-----------|----------------|--------------|--------------------------|------------------|--------|-------------------|
|       |                 |           | L              | Q            |                          |                  |        |                   |
| 1R0   | 1.0             | M         | 100KHz, 0.1V   | 200KHz, 0.1V | 0.040                    | 250              | 30     | 3.00              |
| 1R5   | 1.5             | M         | 100KHz, 0.1V   | 200KHz, 0.1V | 0.045                    | 125              | 30     | 2.30              |
| 2R2   | 2.2             | M         | 100KHz, 0.1V   | 200KHz, 0.1V | 0.050                    | 120              | 40     | 1.80              |
| 3R3   | 3.3             | M         | 100KHz, 0.1V   | 200KHz, 0.1V | 0.055                    | 120              | 40     | 1.60              |
| 4R7   | 4.7             | M         | 100KHz, 0.1V   | 200KHz, 0.1V | 0.060                    | 105              | 40     | 1.40              |
| 6R8   | 6.8             | M         | 100KHz, 0.1V   | 200KHz, 0.1V | 0.065                    | 50               | 40     | 1.20              |
| 100   | 10              | M         | 100KHz, 0.1V   | 200KHz, 0.1V | 0.075                    | 38               | 40     | 1.00              |
| 150   | 15              | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 0.090                    | 33               | 40     | 0.80              |
| 220   | 22              | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 0.11                     | 25               | 40     | 0.70              |
| 330   | 33              | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 0.19                     | 20               | 40     | 0.60              |
| 470   | 47              | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 0.23                     | 20               | 40     | 0.50              |
| 680   | 68              | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 0.29                     | 15               | 40     | 0.40              |
| 101   | 100             | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 0.48                     | 10               | 40     | 0.30              |
| 151   | 150             | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 0.59                     | 9                | 40     | 0.26              |
| 221   | 220             | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 0.90                     | 6                | 40     | 0.22              |
| 331   | 330             | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 1.40                     | 5                | 40     | 0.20              |
| 471   | 470             | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 1.80                     | 4                | 40     | 0.19              |
| 681   | 680             | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 2.20                     | 3                | 40     | 0.18              |
| 102   | 1000            | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 3.40                     | 2                | 40     | 0.15              |
| 152   | 1500            | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 4.20                     | 2                | 50     | 0.12              |
| 222   | 2200            | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 8.50                     | 2                | 50     | 0.10              |
| 332   | 3300            | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 11.0                     | 1                | 50     | 0.08              |
| 472   | 4700            | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 13.9                     | 1                | 50     | 0.06              |
| 682   | 6800            | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 25.0                     | 1                | 50     | 0.04              |
| 103   | 10000           | M         | 100KHz, 0.1V   | 100KHz, 0.1V | 32.8                     | 0.8              | 50     | 0.02              |

#### 1309

| Codes | L<br>( $\mu$ H) | Tolerance | Test Condition | DCR<br>( $\Omega$ ) max. | SRF ref<br>(MHz) | IDC<br>(A) max | I rms<br>(A) max. |
|-------|-----------------|-----------|----------------|--------------------------|------------------|----------------|-------------------|
| 1R0   | 1.0             | M         | 100KHz, 0.1V   | 0.021                    | 140              | 5.6            | 5.0               |
| 1R5   | 1.5             | M         | 100KHz, 0.1V   | 0.022                    | 120              | 5.2            | 4.5               |
| 2R2   | 2.2             | M         | 100KHz, 0.1V   | 0.032                    | 80               | 5.0            | 3.8               |
| 3R3   | 3.3             | M         | 100KHz, 0.1V   | 0.039                    | 70               | 3.9            | 3.3               |
| 4R7   | 4.7             | M         | 100KHz, 0.1V   | 0.054                    | 40               | 3.2            | 2.7               |
| 6R8   | 6.8             | M         | 100KHz, 0.1V   | 0.075                    | 38               | 2.8            | 2.2               |
| 100   | 10              | M         | 100KHz, 0.1V   | 0.101                    | 35               | 2.4            | 2.0               |
| 150   | 15              | M         | 100KHz, 0.1V   | 0.150                    | 25               | 2.0            | 1.5               |
| 220   | 22              | M         | 100KHz, 0.1V   | 0.207                    | 19               | 1.6            | 1.3               |
| 330   | 33              | M         | 100KHz, 0.1V   | 0.334                    | 15               | 1.4            | 1.1               |
| 470   | 47              | M         | 100KHz, 0.1V   | 0.472                    | 13               | 1.0            | 0.8               |
| 680   | 68              | M         | 100KHz, 0.1V   | 0.660                    | 10               | 0.9            | 0.7               |
| 101   | 100             | M         | 100KHz, 0.1V   | 1.110                    | 7                | 0.8            | 0.6               |
| 151   | 150             | M         | 100KHz, 0.1V   | 1.550                    | 6                | 0.6            | 0.5               |
| 221   | 220             | M         | 100KHz, 0.1V   | 2.000                    | 5                | 0.5            | 0.37              |
| 102   | 1000            | M         | 100KHz, 0.1V   | 8.300                    | 2                | 0.32           | 0.17              |

# LMax SMD Power Inductor



## LMXS Series – Shielded Style D

1915

| Codes | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | DCR<br>( $\Omega$ ) max. | SRF ref<br>(MHz) | IDC<br>(A) max. | I rms<br>(A) max. |
|-------|-----------------|-----------|-------------------|--------------------------|------------------|-----------------|-------------------|
| 100   | 10              | M         | 100KHz, 0.1V      | 0.040                    | 30               | 8.0             | 3.9               |
| 150   | 15              | M         | 100KHz, 0.1V      | 0.048                    | 20               | 7.00            | 3.4               |
| 220   | 22              | M         | 100KHz, 0.1V      | 0.059                    | 18               | 6.00            | 3.1               |
| 330   | 33              | M         | 100KHz, 0.1V      | 0.075                    | 14               | 5.00            | 2.8               |
| 470   | 47              | M         | 100KHz, 0.1V      | 0.097                    | 10               | 4.00            | 2.4               |
| 680   | 68              | M         | 100KHz, 0.1V      | 0.138                    | 9.0              | 3.00            | 2.0               |
| 101   | 100             | M         | 100KHz, 0.1V      | 0.207                    | 7.0              | 2.40            | 1.7               |
| 151   | 150             | M         | 100KHz, 0.1V      | 0.293                    | 6.0              | 2.10            | 1.3               |
| 221   | 220             | M         | 100KHz, 0.1V      | 0.470                    | 5.0              | 1.90            | 1.1               |
| 331   | 330             | M         | 100KHz, 0.1V      | 0.780                    | 4.0              | 1.10            | 0.86              |
| 471   | 470             | M         | 100KHz, 0.1V      | 1.080                    | 3.0              | 1.10            | 0.73              |
| 681   | 680             | M         | 100KHz, 0.1V      | 1.400                    | 2.5              | 0.96            | 0.64              |
| 102   | 1000            | M         | 100KHz, 0.1V      | 2.010                    | 2.0              | 0.80            | 0.53              |

# 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

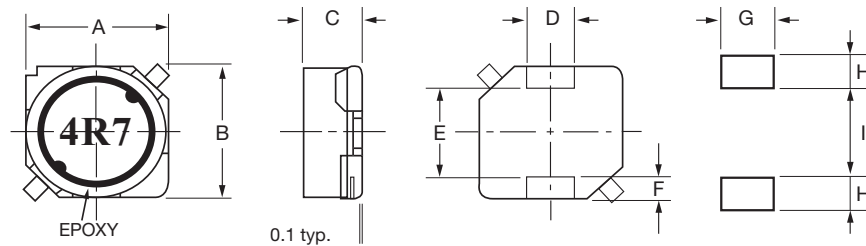
- Rated Current (IDC): The DC current that will cause an approximate  $\Delta T$  of 40°C. ( $T_a=25^\circ\text{C}$ )
- Operating temperature range:  $-40^\circ\text{C} \sim +125^\circ\text{C}$

### INDUCTANCE AND RATED CURRENT RANGES

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



### DIMENSIONS



mm (inches)

| Type | A                                      | B                                      | C                                      | D                                      | E                                      | F                                      | G               | H               | I               |
|------|----------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|-----------------|-----------------|-----------------|
| 0606 | 6.00 $\pm$ 0.20<br>(0.236 $\pm$ 0.008) | 6.00 $\pm$ 0.20<br>(0.236 $\pm$ 0.008) | 2.50 $\pm$ 0.20<br>(0.099 $\pm$ 0.008) | 2.00 $\pm$ 0.10<br>(0.079 $\pm$ 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 $\pm$ 0.20<br>(0.236 $\pm$ 0.008) | 6.00 $\pm$ 0.20<br>(0.236 $\pm$ 0.008) | 2.80 $\pm$ 0.20<br>(0.110 $\pm$ 0.008) | 2.00 $\pm$ 0.10<br>(0.079 $\pm$ 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 $\pm$ 0.20<br>(0.276 $\pm$ 0.008) | 7.00 $\pm$ 0.20<br>(0.276 $\pm$ 0.008) | 2.80 $\pm$ 0.20<br>(0.110 $\pm$ 0.008) | 2.00 $\pm$ 0.10<br>(0.079 $\pm$ 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 $\pm$ 0.20<br>(0.276 $\pm$ 0.008) | 7.00 $\pm$ 0.20<br>(0.276 $\pm$ 0.008) | 3.20 $\pm$ 0.20<br>(0.126 $\pm$ 0.008) | 2.00 $\pm$ 0.10<br>(0.079 $\pm$ 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 $\pm$ 0.20<br>(0.276 $\pm$ 0.008) | 7.00 $\pm$ 0.20<br>(0.276 $\pm$ 0.008) | 4.50 $\pm$ 0.30<br>(0.177 $\pm$ 0.012) | 2.00 $\pm$ 0.10<br>(0.079 $\pm$ 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 $\pm$ 0.30<br>(0.398 $\pm$ 0.012) | 10.1 $\pm$ 0.30<br>(0.398 $\pm$ 0.012) | 4.50 $\pm$ 0.30<br>(0.177 $\pm$ 0.012) | 3.00 $\pm$ 0.10<br>(0.118 $\pm$ 0.004) | 6.00 $\pm$ 0.20<br>(0.236 $\pm$ 0.008) | 2.00 $\pm$ 0.15<br>(0.079 $\pm$ 0.006) | 3.20<br>(0.126) | 2.50<br>(0.099) | 5.60<br>(0.220) |
| 1313 | 12.5 $\pm$ 0.30<br>(0.492 $\pm$ 0.012) | 12.5 $\pm$ 0.30<br>(0.492 $\pm$ 0.012) | 5.50 $\pm$ 0.30<br>(0.217 $\pm$ 0.012) | 3.00 $\pm$ 0.10<br>(0.118 $\pm$ 0.004) | 8.60 $\pm$ 0.30<br>(0.339 $\pm$ 0.012) | 2.00 $\pm$ 0.15<br>(0.079 $\pm$ 0.006) | 3.20<br>(0.126) | 2.50<br>(0.099) | 8.20<br>(0.322) |
| 131H | 12.5 $\pm$ 0.30<br>(0.492 $\pm$ 0.012) | 12.5 $\pm$ 0.30<br>(0.492 $\pm$ 0.012) | 6.50 $\pm$ 0.35<br>(0.256 $\pm$ 0.014) | 3.00 $\pm$ 0.10<br>(0.118 $\pm$ 0.004) | 8.60 $\pm$ 0.30<br>(0.339 $\pm$ 0.012) | 2.00 $\pm$ 0.15<br>(0.079 $\pm$ 0.006) | 3.20<br>(0.126) | 2.50<br>(0.099) | 8.20<br>(0.322) |
| 131J | 12.5 $\pm$ 0.30<br>(0.492 $\pm$ 0.012) | 12.5 $\pm$ 0.30<br>(0.492 $\pm$ 0.012) | 7.50 $\pm$ 0.35<br>(0.295 $\pm$ 0.014) | 3.00 $\pm$ 0.10<br>(0.118 $\pm$ 0.004) | 8.60 $\pm$ 0.30<br>(0.339 $\pm$ 0.012) | 2.00 $\pm$ 0.15<br>(0.079 $\pm$ 0.006) | 3.20<br>(0.126) | 2.50<br>(0.099) | 8.20<br>(0.322) |

### HOW TO ORDER

| LM                  | XS            | 0707                                                 | M              | 2R2                                                                              | F     | T            | A            | S            |
|---------------------|---------------|------------------------------------------------------|----------------|----------------------------------------------------------------------------------|-------|--------------|--------------|--------------|
| Family              | Series        | Size                                                 | Tolerance      | Inductance                                                                       | Style | Termination  | Special      | Packaging    |
| LM = Power Inductor | XS = Shielded | 0707 = 7x7xh<br>07C7 = 7x7xC(h)<br>(h = see catalog) | M = $\pm 20\%$ | 2R2 = 2.20 $\mu\text{H}$<br>680 = 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         |

# LMax SMD Power Inductor



## LMXS Series – Shielded Style G

### FEATURES

- Magnetically Shielded Construction
- Large Current
- Low DCR

### APPLICATIONS

- LCD Televisions
- Notebooks
- Handheld Communication
- DC/DC Converters, etc.

### CHARACTERISTICS

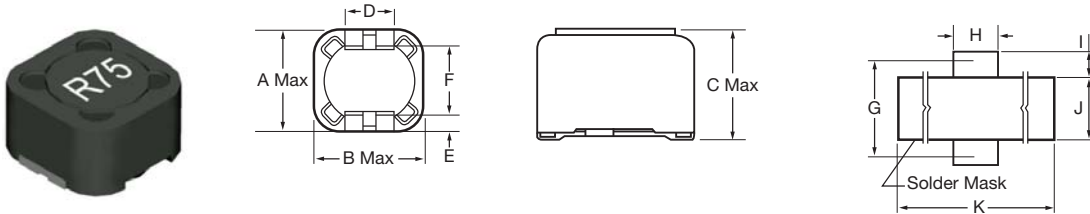
- Rated Current (IDC): The DC current that will cause an approximate  $\Delta T$  of 40°C. (Ta=25°C)
- Operating temperature range: -40°C ~ +125°C

### INDUCTANCE AND RATED CURRENT RANGES

- 0707 10 $\mu$ H ~ 1000 $\mu$ H 1.68 ~ 0.16A
- 07D7 10 $\mu$ H ~ 1000 $\mu$ H 1.84 ~ 0.18A
- Electrical specifications at 25°C



### DIMENSIONS



mm (inches)

| Type | A max.          | B max.          | C max.          | D               | E               | F               | G               | H               | I               | J               | K               |
|------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 0707 | 7.50<br>(0.295) | 7.50<br>(0.295) | 3.50<br>(0.138) | 2.00<br>(0.079) | 1.10<br>(0.043) | 5.08<br>(0.200) | 6.30<br>(0.248) | 3.00<br>(0.118) | 1.91<br>(0.075) | 4.50<br>(0.177) | 10.5<br>(0.413) |
| 07D7 | 7.50<br>(0.295) | 7.50<br>(0.295) | 4.50<br>(0.177) | 2.00<br>(0.079) | 1.10<br>(0.043) | 5.08<br>(0.200) | 6.30<br>(0.248) | 3.00<br>(0.118) | 1.91<br>(0.075) | 4.50<br>(0.177) | 10.5<br>(0.413) |

### HOW TO ORDER

| LM                  | XS            | 0707                                                 | M                | R04                                                                                   | G            | T                  | A              | S                |
|---------------------|---------------|------------------------------------------------------|------------------|---------------------------------------------------------------------------------------|--------------|--------------------|----------------|------------------|
| <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 = $\pm 20\%$   | 3R9 = 3.900 $\mu$ H<br>390 = 39.00 $\mu$ H<br>391 = 390 $\mu$ H<br>102 = 1000 $\mu$ H |              | T = Sn Plate       | A = Standard   | S = 13" Reel     |

# LMax SMD Power Inductor



## LMXS Series – Shielded Style G

### ELECTRICAL CHARACTERISTICS

#### 0707

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 100   | 10     | M         | 100KHz, 1.0V   | 0.072        | 1.68         |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.098        | 1.52         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.130        | 1.33         |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.140        | 1.20         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.190        | 1.07         |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.210        | 0.96         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.240        | 0.91         |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.320        | 0.77         |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.360        | 0.76         |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.470        | 0.68         |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.520        | 0.61         |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.690        | 0.57         |
| 101   | 100    | M         | 100KHz, 1.0V   | 0.790        | 0.50         |
| 121   | 120    | M         | 100KHz, 1.0V   | 0.890        | 0.49         |
| 151   | 150    | M         | 100KHz, 1.0V   | 1.270        | 0.43         |
| 181   | 180    | M         | 100KHz, 1.0V   | 1.450        | 0.39         |
| 221   | 220    | M         | 100KHz, 1.0V   | 1.650        | 0.35         |
| 271   | 270    | M         | 100KHz, 1.0V   | 2.310        | 0.32         |
| 331   | 330    | M         | 100KHz, 1.0V   | 2.620        | 0.28         |
| 391   | 390    | M         | 100KHz, 1.0V   | 2.940        | 0.26         |
| 471   | 470    | M         | 100KHz, 1.0V   | 4.180        | 0.24         |
| 561   | 560    | M         | 100KHz, 1.0V   | 4.670        | 0.22         |
| 681   | 680    | M         | 100KHz, 1.0V   | 5.730        | 0.19         |
| 821   | 820    | M         | 100KHz, 1.0V   | 6.540        | 0.18         |
| 102   | 1000   | M         | 100KHz, 1.0V   | 9.440        | 0.16         |

#### 07D7

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 100   | 10     | M         | 100KHz, 1.0V   | 0.060        | 1.84         |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.070        | 1.71         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.081        | 1.47         |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.091        | 1.31         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.110        | 1.23         |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.150        | 1.12         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.170        | 0.96         |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.230        | 0.91         |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.260        | 0.88         |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.350        | 0.75         |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.380        | 0.69         |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.430        | 0.61         |
| 101   | 100    | M         | 100KHz, 1.0V   | 0.610        | 0.60         |
| 121   | 120    | M         | 100KHz, 1.0V   | 0.660        | 0.52         |
| 151   | 150    | M         | 100KHz, 1.0V   | 0.880        | 0.46         |
| 181   | 180    | M         | 100KHz, 1.0V   | 0.980        | 0.42         |
| 221   | 220    | M         | 100KHz, 1.0V   | 1.170        | 0.36         |
| 271   | 270    | M         | 100KHz, 1.0V   | 1.640        | 0.34         |
| 331   | 330    | M         | 100KHz, 1.0V   | 1.860        | 0.32         |
| 391   | 390    | M         | 100KHz, 1.0V   | 2.850        | 0.29         |
| 561   | 560    | M         | 100KHz, 1.0V   | 3.620        | 0.23         |
| 681   | 680    | M         | 100KHz, 1.0V   | 4.630        | 0.22         |
| 821   | 820    | M         | 100KHz, 1.0V   | 5.200        | 0.20         |
| 102   | 1000   | M         | 100KHz, 1.0V   | 6.000        | 0.18         |

# LMax SMD Power Inductor

## LMXS Series – Shielded Style H



### FEATURES

- Magnetically Shielded Construction
- Large Current
- Low DCR

### APPLICATIONS

- LCD Televisions
- Notebooks
- Handheld Communication
- DC/DC Converters, etc.

### CHARACTERISTICS

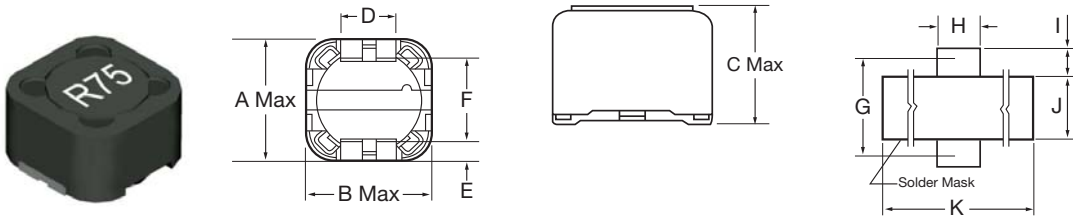
- Rated Current (IDC): The DC Current that will cause a drop in inductance value of approximately 20%.
- Operating temperature range: -40°C ~ +125°C

### INDUCTANCE AND RATED CURRENT RANGES

- 1212 3.9μH ~ 330μH 6.5 ~ 0.50A
- 121G 2.4μH ~ 47μH 8.0 ~ 2.5A
- 121J 10μH ~ 1000μH 4.0 ~ 0.40A
- Electrical specifications at 25°C



### DIMENSIONS



mm (inches)

| Type | A max.          | B max.          | C max.          | D               | E               | F               | G                | H               | I               | J               | K               |
|------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|
| 1212 | 12.5<br>(0.492) | 12.5<br>(0.492) | 4.50<br>(0.177) | 5.00<br>(0.197) | 2.00<br>(0.079) | 7.60<br>(0.299) | 10.00<br>(0.393) | 6.00<br>(0.236) | 3.00<br>(0.118) | 7.00<br>(0.276) | 18.0<br>(0.709) |
| 121G | 12.5<br>(0.492) | 12.5<br>(0.492) | 6.20<br>(0.244) | 5.00<br>(0.197) | 2.00<br>(0.079) | 7.60<br>(0.299) | 10.00<br>(0.394) | 6.00<br>(0.236) | 3.00<br>(0.118) | 7.00<br>(0.276) | 18.0<br>(0.709) |
| 121J | 12.5<br>(0.492) | 12.5<br>(0.492) | 8.00<br>(0.315) | 5.00<br>(0.197) | 2.00<br>(0.079) | 7.60<br>(0.299) | 10.00<br>(0.394) | 6.00<br>(0.236) | 3.00<br>(0.118) | 7.00<br>(0.276) | 18.0<br>(0.709) |

### HOW TO ORDER

|                     |               |                                                          |                  |                                                               |              |                    |                |                  |
|---------------------|---------------|----------------------------------------------------------|------------------|---------------------------------------------------------------|--------------|--------------------|----------------|------------------|
| <b>LM</b>           | <b>XS</b>     | <b>1212</b>                                              | <b>M</b>         | <b>R04</b>                                                    | <b>H</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 | 1212 = 12x12xh<br>121G = 12x12xG(h)<br>(h = see catalog) | M = ±20%         | 3R9 = 3.900μH<br>390 = 39.00μH<br>391 = 390μH<br>102 = 1000μH |              | T = Sn Plate       | A = Standard   | S = 13" Reel     |

# LMax SMD Power Inductor



## LMXS Series – Shielded Style H

### ELECTRICAL CHARACTERISTICS

#### 1212

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 3R9   | 3.9    | M         | 100KHz, 1.0V   | 0.015        | 6.50         |
| 4R7   | 4.7    | M         | 100KHz, 1.0V   | 0.018        | 5.70         |
| 6R8   | 6.8    | M         | 100KHz, 1.0V   | 0.023        | 4.90         |
| 100   | 10     | M         | 100KHz, 1.0V   | 0.028        | 4.50         |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.038        | 4.00         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.050        | 3.20         |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.057        | 3.10         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.066        | 2.90         |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.080        | 2.80         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.097        | 2.70         |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.132        | 2.10         |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.150        | 1.90         |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.190        | 1.80         |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.220        | 1.50         |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.260        | 1.30         |
| 101   | 100    | M         | 100KHz, 1.0V   | 0.308        | 1.20         |
| 121   | 120    | M         | 100KHz, 1.0V   | 0.380        | 1.10         |
| 151   | 150    | M         | 100KHz, 1.0V   | 0.530        | 0.95         |
| 181   | 180    | M         | 100KHz, 1.0V   | 0.620        | 0.85         |
| 221   | 220    | M         | 100KHz, 1.0V   | 0.700        | 0.80         |
| 271   | 270    | M         | 100KHz, 1.0V   | 0.876        | 0.60         |
| 331   | 330    | M         | 100KHz, 1.0V   | 0.990        | 0.50         |

#### 121G

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 100   | 10     | M         | 100KHz, 1.0V   | 0.025        | 4.00         |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.027        | 3.50         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.030        | 3.30         |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.038        | 3.00         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.045        | 2.80         |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.055        | 2.30         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.063        | 2.10         |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.075        | 2.00         |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.085        | 1.80         |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.110        | 1.70         |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.120        | 1.50         |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.140        | 1.040        |
| 101   | 100    | M         | 100KHz, 1.0V   | 0.165        | 1.30         |
| 121   | 120    | M         | 100KHz, 1.0V   | 0.195        | 1.10         |
| 151   | 150    | M         | 100KHz, 1.0V   | 0.250        | 1.00         |
| 181   | 180    | M         | 100KHz, 1.0V   | 0.290        | 0.90         |
| 221   | 220    | M         | 100KHz, 1.0V   | 0.0400       | 0.80         |
| 271   | 270    | M         | 100KHz, 1.0V   | 0.0460       | 0.75         |
| 331   | 330    | M         | 100KHz, 1.0V   | 0.510        | 0.68         |
| 391   | 390    | M         | 100KHz, 1.0V   | 0.690        | 0.65         |
| 471   | 470    | M         | 100KHz, 1.0V   | 0.770        | 0.58         |
| 561   | 560    | M         | 100KHz, 1.0V   | 0.880        | 0.54         |
| 681   | 680    | M         | 100KHz, 1.0V   | 1.200        | 0.048        |
| 821   | 820    | M         | 100KHz, 1.0V   | 1.340        | 0.043        |
| 102   | 1000   | M         | 100KHz, 1.0V   | 1.530        | 0.040        |

# LMax SMD Power Inductor



## LMXS Series – Shielded Style H

### 121J

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 2R4   | 2.4    | M         | 100KHz, 1.0V   | 0.012        | 8.00         |
| 4R7   | 4.7    | M         | 100KHz, 1.0V   | 0.016        | 6.80         |
| 7R6   | 7.6    | M         | 100KHz, 1.0V   | 0.020        | 5.90         |
| 100   | 10     | M         | 100KHz, 1.0V   | 0.022        | 5.40         |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.025        | 4.90         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.027        | 4.50         |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.039        | 3.90         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.043        | 3.60         |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.046        | 3.40         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.065        | 3.00         |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.073        | 2.75         |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.100        | 2.50         |

# LMax SMD Power Inductor



## LMXS Series – Shielded Style J

### FEATURES

- Directly connected electrode on ferrite core
- High power, High saturation inductors
- Ideal inductors for DC/DC converters
- Magnetically shielded against radiation
- Available on tape and reel for automatic surface mounting

### APPLICATIONS

- Power Supply for VTRs
- LCD Televisions
- Notebook PCs
- Portable Communication
- DC/DC Converters, etc.

### CHARACTERISTICS

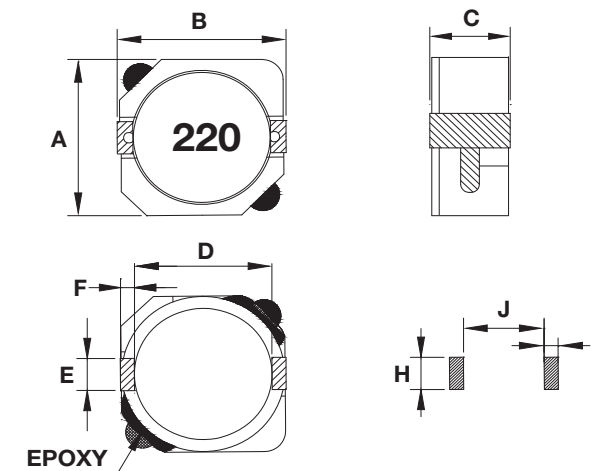
- Rated DC current: The current when the inductance becomes 35% lower than its initial value or the actual current when the temperature of coil increases to  $\Delta T=40^{\circ}\text{C}$ . The smaller one is defined as Rated DC Current. ( $T_a=25^{\circ}\text{C}$ )
- Operating temperature range:  $-40 \sim 85^{\circ}\text{C}$

### INDUCTANCE AND RATED CURRENT RANGES

- 0606 2.5 ~ 100 $\mu\text{H}$  2.60 ~ 0.40A
- 1010 10 ~ 150 $\mu\text{H}$  2.70 ~ 0.70A
- 101D 1.3 ~ 330 $\mu\text{H}$  10.0 ~ 0.70A
- 101E 1.5 ~ 1000 $\mu\text{H}$  10.5 ~ 0.35A
- Electrical specifications at  $25^{\circ}\text{C}$



### DIMENSIONS



| Type | A max.          | B max.          | C max.          | D               | E               | F               | H               | I               | J               |
|------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 0606 | 6.20<br>(0.244) | 6.30<br>(0.248) | 3.00<br>(0.118) | 4.70<br>(0.185) | 2.00<br>(0.079) | 0.60<br>(0.024) | 2.60<br>(0.102) | 1.00<br>(0.039) | 4.60<br>(0.181) |
| 1010 | 10.3<br>(0.406) | 10.4<br>(0.409) | 3.10<br>(0.122) | 7.70<br>(0.303) | 3.00<br>(0.118) | 1.20<br>(0.047) | 3.20<br>(0.126) | 1.60<br>(0.063) | 7.30<br>(0.287) |
| 101D | 10.3<br>(0.406) | 10.4<br>(0.409) | 4.00<br>(0.157) | 7.70<br>(0.303) | 3.00<br>(0.118) | 1.20<br>(0.047) | 3.20<br>(0.126) | 1.60<br>(0.063) | 7.30<br>(0.287) |
| 101E | 10.3<br>(0.406) | 10.4<br>(0.409) | 5.00<br>(0.197) | 7.70<br>(0.303) | 3.00<br>(0.118) | 1.20<br>(0.047) | 3.20<br>(0.126) | 1.60<br>(0.063) | 7.30<br>(0.287) |

mm (inches)

### HOW TO ORDER

|                     |               |                                                                          |                  |                                                                                                                                                                           |              |                    |                |                  |
|---------------------|---------------|--------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------|----------------|------------------|
| <b>LM</b>           | <b>XS</b>     | <b>0606</b>                                                              | <b>N</b>         | <b>R04</b>                                                                                                                                                                | <b>J</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 | 0606 = 6x6xh<br>1010 = 10x10xh<br>101D = 10x10xD(h)<br>(h = see catalog) | N = $\pm 30\%$   | R04 = 0.039 $\mu\text{H}$<br>R39 = 0.390 $\mu\text{H}$<br>3R9 = 3.900 $\mu\text{H}$<br>390 = 39.00 $\mu\text{H}$<br>391 = 390.0 $\mu\text{H}$<br>392 = 3900 $\mu\text{H}$ |              | T = Sn Plate       | A = Standard   | S = 13" Reel     |



# LMax SMD Power Inductor



## LMXS Series – Shielded Style J

### 0606/1010/101D/101E

| Codes | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | DCR (m $\Omega$ ) max. |      |      |      | IDC (A) max. |      |      |      |
|-------|-----------------|-----------|-------------------|------------------------|------|------|------|--------------|------|------|------|
|       |                 |           |                   | 0606                   | 1010 | 101D | 101E | 0606         | 1010 | 101D | 101E |
| 1R3   | 1.3             | N         | 100KHz, 0.1V      | –                      | –    | 8    | –    | –            | –    | 10.0 | –    |
| 1R5   | 1.5             | N         | 100KHz, 0.1V      | –                      | –    | 8    | 6    | –            | –    | 10.0 | 10.5 |
| 2R2   | 2.2             | N         | 100KHz, 0.1V      | –                      | –    | 11   | 7    | –            | –    | 8.00 | 9.25 |
| 2R5   | 2.5             | N         | 100KHz, 0.1V      | 17.6                   | –    | 12   | –    | 2.60         | –    | 7.50 | –    |
| 3R3   | 3.3             | N         | 100KHz, 0.1V      | 20.3                   | –    | 13   | 10   | 2.30         | –    | 6.50 | 7.80 |
| 3R8   | 3.8             | N         | 100KHz, 0.1V      | –                      | –    | 17   | –    | –            | –    | 6.00 | –    |
| 4R0   | 4.0             | N         | 100KHz, 0.1V      | 27.0                   | –    | –    | –    | 2.10         | –    | –    | –    |
| 4R7   | 4.7             | N         | 100KHz, 0.1V      | –                      | –    | 21   | 12   | –            | –    | 5.70 | 6.40 |
| 5R0   | 5.0             | N         | 100KHz, 0.1V      | 31.1                   | –    | –    | –    | 1.85         | –    | –    | –    |
| 5R2   | 5.2             | N         | 100KHz, 0.1V      | –                      | –    | 22   | –    | –            | –    | 5.50 | –    |
| 5R6   | 5.6             | N         | 100KHz, 0.1V      | –                      | –    | 25   | –    | –            | –    | 5.20 | –    |
| 6R0   | 6.0             | N         | 100KHz, 0.1V      | 41.9                   | –    | –    | –    | 1.70         | –    | –    | –    |
| 6R8   | 6.8             | N         | 100KHz, 0.1V      | –                      | –    | 26   | 18   | –            | –    | 4.90 | 5.40 |
| 7R0   | 7.0             | N         | 100KHz, 0.1V      | –                      | –    | 27   | –    | –            | –    | 4.80 | –    |
| 8R0   | 8.0             | N         | 100KHz, 0.1V      | 49.9                   | –    | –    | –    | 1.50         | –    | –    | –    |
| 8R2   | 8.2             | N         | 100KHz, 0.1V      | –                      | –    | –    | 20   | –            | –    | –    | 4.85 |
| 100   | 10              | N         | 100KHz, 0.1V      | 54.0                   | 58   | 35   | 26   | 1.30         | 2.70 | 4.40 | 3.45 |
| 120   | 12              | N         | 100KHz, 0.1V      | 71.6                   | 72   | –    | 33   | 1.20         | 2.25 | –    | 3.40 |
| 150   | 15              | N         | 100KHz, 0.1V      | 82.4                   | 86   | 50   | 41   | 1.10         | 2.22 | 3.60 | 2.83 |
| 180   | 18              | N         | 100KHz, 0.1V      | 101.5                  | 116  | –    | 46   | 1.05         | 1.90 | –    | 2.62 |
| 220   | 22              | N         | 100KHz, 0.1V      | 119.0                  | 145  | 73   | 61   | 0.95         | 1.78 | 2.90 | 2.44 |
| 270   | 27              | N         | 100KHz, 0.1V      | 146.0                  | 176  | 83   | 69   | 0.85         | 1.63 | 2.80 | 2.24 |
| 330   | 33              | N         | 100KHz, 0.1V      | 182.5                  | 213  | 93   | 84   | 0.76         | 1.46 | 2.30 | 1.88 |
| 390   | 39              | N         | 100KHz, 0.1V      | 209.5                  | 270  | –    | 106  | 0.68         | 1.32 | –    | 1.70 |
| 470   | 47              | N         | 100KHz, 0.1V      | 229.5                  | 299  | 128  | 130  | 0.60         | 1.18 | 2.10 | 1.56 |
| 560   | 56              | N         | 100KHz, 0.1V      | 305.0                  | 335  | –    | 149  | 0.55         | 1.10 | –    | 1.39 |
| 680   | 68              | N         | 100KHz, 0.1V      | 351.0                  | 451  | 213  | 201  | 0.48         | 1.04 | 1.50 | 1.36 |
| 820   | 82              | N         | 100KHz, 0.1V      | 418.5                  | 513  | –    | 227  | 0.45         | 0.94 | –    | 1.20 |
| 101   | 100             | N         | 100KHz, 0.1V      | 520.0                  | 700  | 304  | 253  | 0.40         | 0.84 | 1.35 | 1.09 |
| 121   | 120             | N         | 100KHz, 0.1V      | –                      | 765  | –    | 303  | –            | 0.76 | –    | 1.00 |
| 151   | 150             | N         | 100KHz, 0.1V      | –                      | 876  | 506  | 370  | –            | 0.70 | 1.15 | 0.91 |
| 181   | 180             | N         | 100KHz, 0.1V      | –                      | –    | 631  | 419  | –            | –    | 1.03 | 0.84 |
| 221   | 220             | N         | 100KHz, 0.1V      | –                      | –    | 756  | 500  | –            | –    | 0.92 | 0.75 |
| 271   | 270             | N         | 100KHz, 0.1V      | –                      | –    | –    | 672  | –            | –    | –    | 0.68 |
| 331   | 330             | N         | 100KHz, 0.1V      | –                      | –    | 1090 | 812  | –            | –    | 0.70 | 0.60 |
| 391   | 390             | N         | 100KHz, 0.1V      | –                      | –    | –    | 953  | –            | –    | –    | 0.57 |
| 471   | 470             | N         | 100KHz, 0.1V      | –                      | –    | –    | 1289 | –            | –    | –    | 0.50 |
| 561   | 560             | N         | 100KHz, 0.1V      | –                      | –    | –    | 1430 | –            | –    | –    | 0.47 |
| 681   | 680             | N         | 100KHz, 0.1V      | –                      | –    | –    | 1599 | –            | –    | –    | 0.43 |
| 821   | 820             | N         | 100KHz, 0.1V      | –                      | –    | –    | 1768 | –            | –    | –    | 0.39 |
| 102   | 1000            | N         | 100KHz, 0.1V      | –                      | –    | –    | 1989 | –            | –    | –    | 0.35 |

# LMax SMD Power Inductor



## LMXS Series – Shielded Style L

### FEATURES

- Magnetically Shielded Construction
- Large Current
- Low DCR

### APPLICATIONS

- LCD Televisions
- Notebooks
- Camcorders
- Digital Cameras
- DC/DC Converters for Portable Devices

### CHARACTERISTICS

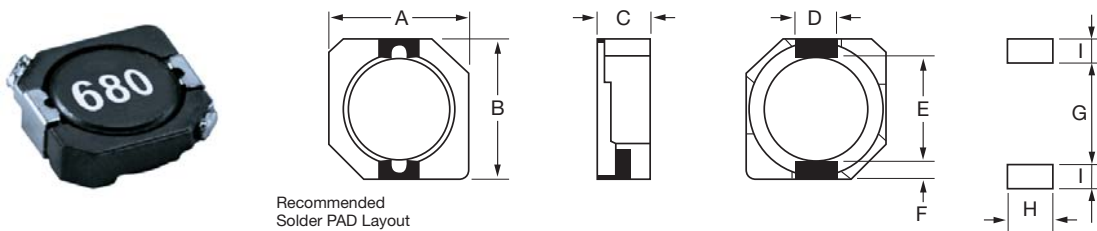
- Rated Current (IDC): The DC current that will cause an approximate  $\Delta T$  of 40°C. (Ta=25°C)
- Operating temperature range: -40°C ~ +125°C

### INDUCTANCE AND RATED CURRENT RANGES

- 1010 0.8uH ~ 47.0uH 11.2 ~ 1.43A
- 101D 1.5uH ~ 330uH 10.0 ~ 0.70A
- Electrical specifications at 25°C



### DIMENSIONS



Recommended Solder PAD Layout

mm (inches)

| Type | A max           | B max           | C max                          | D                              | E                              | F                               | G               | H               | I               |
|------|-----------------|-----------------|--------------------------------|--------------------------------|--------------------------------|---------------------------------|-----------------|-----------------|-----------------|
| 1010 | 10.3<br>(0.398) | 10.5<br>(0.414) | 3.10<br>(0.122)                | 3.00 ± 0.10<br>(0.119 ± 0.004) | 7.70 ± 0.30<br>(0.303 ± 0.012) | 1.20 ± 0.150<br>(0.048 ± 0.006) | 7.30<br>(0.288) | 3.20<br>(0.126) | 1.60<br>(0.630) |
| 101D | 10.3<br>(0.398) | 10.5<br>(0.414) | 3.80 ± 0.20<br>(0.150 ± 0.008) | 3.00 ± 0.1<br>(0.119 ± 0.004)  | 7.70 ± 0.30<br>(0.303 ± 0.012) | 1.2 ± 0.15<br>(0.048 ± 0.006)   | 7.30<br>(0.288) | 3.20<br>(0.126) | 1.60<br>(0.630) |

### HOW TO ORDER

|                     |               |                                                          |                  |                                               |              |                    |                |                  |
|---------------------|---------------|----------------------------------------------------------|------------------|-----------------------------------------------|--------------|--------------------|----------------|------------------|
| <b>LM</b>           | <b>XS</b>     | <b>1010</b>                                              | <b>N</b>         | <b>2R2</b>                                    | <b>L</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 | 1010 = 10x10xh<br>101D = 10x10xD(h)<br>(h = see catalog) | N = ±30%         | 0R8 = 0.8uH<br>470 = 47.00uH<br>331 = 330.0uH |              | T = Sn Plate       | A = Standard   | S = 13" Reel     |



# LMax SMD Power Inductor



## LMXS Series – Shielded Style L

### ELECTRICAL CHARACTERISTICS

#### 1010

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 0R8   | 0.8    | N         | 100KHz, 1.0V   | 0.0057       | 11.2         |
| 1R5   | 1.5    | N         | 100KHz, 1.0V   | 0.011        | 8.00         |
| 2R2   | 2.2    | N         | 100KHz, 1.0V   | 0.0159       | 6.70         |
| 3R3   | 3.3    | N         | 100KHz, 1.0V   | 0.021        | 5.56         |
| 4R7   | 4.7    | N         | 100KHz, 1.0V   | 0.030        | 4.55         |
| 6R8   | 6.8    | N         | 100KHz, 1.0V   | 0.035        | 3.84         |
| 8R0   | 8.0    | N         | 100KHz, 1.0V   | 0.050        | 3.54         |
| 100   | 10     | N         | 100KHz, 1.0V   | 0.059        | 3.18         |
| 150   | 15     | N         | 100KHz, 1.0V   | 0.091        | 2.60         |
| 220   | 22     | N         | 100KHz, 1.0V   | 0.143        | 2.16         |
| 330   | 33     | N         | 100KHz, 1.0V   | 0.202        | 1.74         |
| 470   | 47     | N         | 100KHz, 1.0V   | 0.299        | 1.43         |

#### 101D

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 1R5   | 1.5    | N         | 100KHz, 1.0V   | 0.0081       | 10.0         |
| 2R5   | 2.5    | N         | 100KHz, 1.0V   | 0.010        | 7.50         |
| 3R8   | 3.8    | N         | 100KHz, 1.0V   | 0.013        | 6.00         |
| 4R7   | 4.7    | N         | 100KHz, 1.0V   | 0.022        | 5.50         |
| 5R2   | 5.2    | N         | 100KHz, 1.0V   | 0.022        | 5.50         |
| 7R0   | 7.0    | N         | 100KHz, 1.0V   | 0.027        | 4.80         |
| 100   | 10     | N         | 100KHz, 1.0V   | 0.035        | 4.40         |
| 150   | 15     | N         | 100KHz, 1.0V   | 0.050        | 3.60         |
| 220   | 22     | N         | 100KHz, 1.0V   | 0.073        | 2.90         |
| 330   | 33     | N         | 100KHz, 1.0V   | 0.093        | 2.30         |
| 470   | 47     | N         | 100KHz, 1.0V   | 0.128        | 2.10         |
| 680   | 68     | N         | 100KHz, 1.0V   | 0.213        | 1.50         |
| 101   | 100    | N         | 100KHz, 1.0V   | 0.304        | 1.35         |
| 151   | 150    | N         | 100KHz, 1.0V   | 0.506        | 1.15         |
| 221   | 220    | N         | 100KHz, 1.0V   | 0.756        | 0.92         |
| 331   | 330    | N         | 100KHz, 1.0V   | 1.090        | 0.70         |

# LMax SMD Power Inductor

## LMXS Series – Shielded Style M



### FEATURES

- Magnetically shielded construction
- RoHS compliance

### APPLICATIONS

- LCD TV
- DC to DC Converters
- Notebook PC

### CHARACTERISTICS

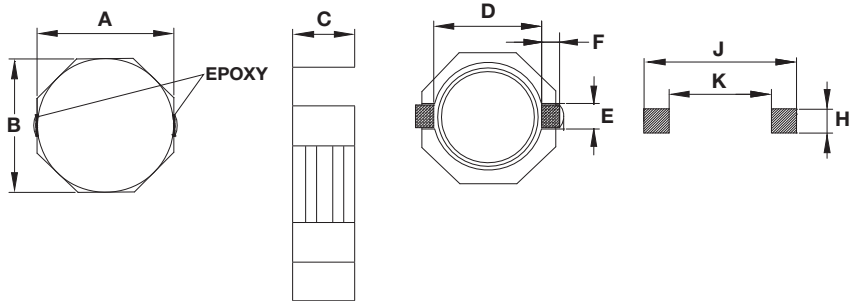
- Rated DC Current: The current when the inductance becomes 35% lower than its initial value.
- Operating temperature: -40 ~ 85°C

### INDUCTANCE AND RATED CURRENT RANGES

- 0808 1.0 ~ 100μH 6.5 ~ 0.75A
- 08D8 1.8 ~ 100μH 7.0 ~ 1.05A
- 08E8 1.0 ~ 100μH 9.0 ~ 1.30A
- Electrical specifications at 25°C



### DIMENSIONS



mm (inches)

| Type | A                              | B                              | C max.          | D Ref.          | E Ref.          | F Ref.          | H               | J               | K               |
|------|--------------------------------|--------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 0808 | 8.00 ± 0.30<br>(0.315 ± 0.012) | 8.00 ± 0.30<br>(0.315 ± 0.012) | 3.00<br>(0.118) | 6.30<br>(0.248) | 2.50<br>(0.098) | 1.20<br>(0.047) | 2.80<br>(0.110) | 10.1<br>(0.398) | 6.10<br>(0.240) |
| 08D8 | 8.00 ± 0.30<br>(0.315 ± 0.012) | 8.00 ± 0.30<br>(0.315 ± 0.012) | 4.00<br>(0.157) | 6.30<br>(0.248) | 2.50<br>(0.098) | 1.20<br>(0.047) | 2.80<br>(0.110) | 10.1<br>(0.398) | 6.10<br>(0.240) |
| 08E8 | 8.0 ± 0.30<br>(0.315 ± 0.012)  | 8.00 ± 0.30<br>(0.315 ± 0.012) | 4.50<br>(0.177) | 6.30<br>(0.248) | 2.50<br>(0.098) | 1.20<br>(0.047) | 2.80<br>(0.110) | 10.1<br>(0.398) | 6.10<br>(0.240) |

### HOW TO ORDER

**LM**



**Family**

LM = Power Inductor

**XS**



**Series**

XN = Non-shielded

**0808**



**Size**

0808 = 8x8xh  
08D8 = 8x8xD(h)  
(h = see catalog)

**N**



**Tolerance**

N = ±30%

**R04**



**Inductance**

3R9 = 3.900μH  
390 = 39.00μH  
391 = 390.0μH  
392 = 3900μH

**M**



**Style**

**T**



**Termination**

T = Sn Plate

**A**



**Special**

A = Standard

**S**



**Packaging**

S = 13" Reel

# LMax SMD Power Inductor



## LMXS Series – Shielded Style M

### ELECTRICAL CHARACTERISTICS

#### 0808/08D8/08E8

| Codes | L<br>( $\mu$ H) | Tolerance | Test Condition |              | DCR ( $\Omega$ ) max. |      |      | I sat (A) max* |      |      |
|-------|-----------------|-----------|----------------|--------------|-----------------------|------|------|----------------|------|------|
|       |                 |           | 0808           | 08D8/08E8    | 0808                  | 08D8 | 08E8 | 0808           | 08D8 | 0838 |
| 1R0   | 1.0             | N         | 100KHz, 0.25V  | 100KHz, 0.1V | 11.0                  | –    | 9.50 | 6.5            | –    | 9.0  |
| 1R2   | 1.2             | N         | 100KHz, 0.25V  | 100KHz, 0.1V | –                     | –    | 12.2 | –              | –    | 8.0  |
| 1R8   | 1.8             | N         | 100KHz, 0.25V  | 100KHz, 0.1V | –                     | 15.6 | –    | –              | 7.0  | –    |
| 2R0   | 2.0             | N         | 100KHz, 0.25V  | 100KHz, 0.1V | –                     | –    | 14.0 | –              | –    | 7.0  |
| 2R5   | 2.5             | N         | 100KHz, 0.25V  | 100KHz, 0.1V | 15.6                  | 17.5 | –    | 4.5            | 6.5  | –    |
| 3R3   | 3.3             | N         | 100KHz, 0.25V  | 100KHz, 0.1V | 18.2                  | –    | –    | 4.0            | –    | –    |
| 3R5   | 3.5             | N         | 100KHz, 0.25V  | 100KHz, 0.1V | –                     | 24.0 | –    | –              | 5.0  | –    |
| 3R9   | 3.9             | N         | 100KHz, 0.25V  | 100KHz, 0.1V | –                     | –    | 19.0 | –              | –    | 5.9  |
| 4R7   | 4.7             | N         | 100KHz, 0.25V  | 100KHz, 0.1V | 24.7                  | 29.0 | 22.0 | 3.4            | 4.6  | 5.6  |
| 6R0   | 6.0             | N         | 100KHz, 0.25V  | 100KHz, 0.1V | –                     | 32.0 | –    | –              | 4.2  | –    |
| 6R8   | 6.8             | N         | 100KHz, 0.25V  | 100KHz, 0.1V | –                     | –    | 25.0 | –              | –    | 4.4  |
| 7R3   | 7.3             | N         | 100KHz, 0.25V  | 100KHz, 0.1V | 39.0                  | –    | –    | 2.80           | –    | –    |
| 100   | 10              | N         | 100KHz, 0.25V  | 100KHz, 0.1V | 47.0                  | 48.0 | 36.0 | 2.50           | 3.00 | 4.0  |
| 150   | 15              | N         | 100KHz, 0.25V  | 100KHz, 0.1V | 69.0                  | 67.0 | 53.0 | 1.90           | 2.75 | 2.9  |
| 220   | 22              | N         | 100KHz, 0.25V  | 100KHz, 0.1V | 99.0                  | 105  | 75.0 | 1.60           | 2.30 | 2.6  |
| 330   | 33              | N         | 100KHz, 0.25V  | 100KHz, 0.1V | 156                   | 157  | 125  | 1.30           | 1.75 | 2.2  |
| 470   | 47              | N         | 100KHz, 0.25V  | 100KHz, 0.1V | 195                   | 189  | 150  | 1.15           | 1.52 | 1.8  |
| 680   | 68              | N         | 100KHz, 0.25V  | 100KHz, 0.1V | 286                   | 290  | 240  | 0.92           | 1.30 | 1.5  |
| 101   | 100             | N         | 100KHz, 0.25V  | 100KHz, 0.1V | 430                   | 410  | 360  | 0.75           | 1.05 | 1.3  |

\*Saturation Current: The current when the inductance becomes 35% lower than its initial value.

# LMax SMD Power Inductor



## LMXS Series – Shielded Style P

### FEATURES

- Magnetically Shielded Construction
- Large Current
- Low DCR

### APPLICATIONS

- LCD Televisions
- Notebooks
- Camcorders
- Digital Cameras
- DC/DC Converters for Portable Devices

### CHARACTERISTICS

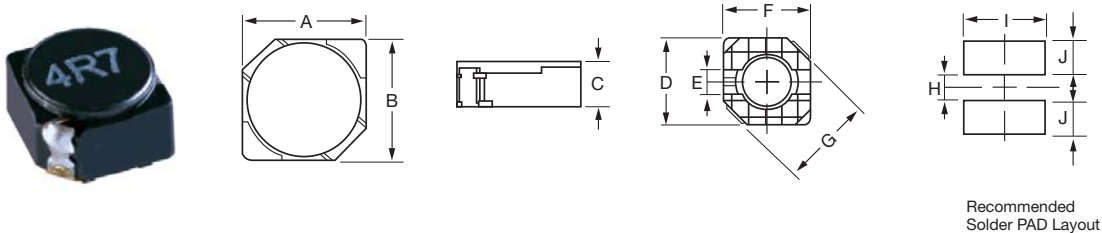
- Rated Current (IDC): The DC current that will cause an approximate  $\Delta T$  of 40°C. ( $T_a=25^\circ\text{C}$ )
- Operating temperature range:  $-40^\circ\text{C} \sim +125^\circ\text{C}$

### INDUCTANCE AND RATED CURRENT RANGES

- 0404 1.5 ~ 33 $\mu\text{H}$  1.55 ~ 0.32A
- 0505 1.0 ~ 39 $\mu\text{H}$  1.72 ~ 0.30A
- 05C5 1.2 ~ 180 $\mu\text{H}$  2.56 ~ 0.22A
- 0606 4.1 ~ 100 $\mu\text{H}$  1.95 ~ 0.36A
- 06C6 2.6 ~ 100 $\mu\text{H}$  2.6 ~ 0.42A
- 0707 3.3 ~ 10 $\mu\text{H}$  3.00 ~ 1.8A
- 07C7 3.0 ~ 100 $\mu\text{H}$  3.00 ~ 0.54A
- 07D7 3.3 ~ 100 $\mu\text{H}$  3.50 ~ 0.65A
- Electrical specifications at 25°C



### DIMENSIONS



| mm (inches) |                                |                                |                               |                 |                 |                 |                 |                 |                 |
|-------------|--------------------------------|--------------------------------|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Type        | A                              | B max                          | C max                         | D               | E               | F max           | G max           | H               | I               |
| 0404        | 3.80 ± 0.50<br>(0.150 ± 0.012) | 3.80 ± 0.50<br>(0.150 ± 0.012) | 1.80 ± 0.20<br>(0.071 ± .008) | 3.80<br>(0.150) | 1.10<br>(0.044) | 3.80<br>(0.150) | 5.00<br>(0.196) | 1.10<br>(0.044) | 4.60<br>(0.181) |
| 0505        | 4.70 ± 0.50<br>(0.185 ± 0.012) | 4.70 ± 0.50<br>(0.185 ± 0.012) | 2.00<br>(0.079)               | 4.50<br>(0.177) | 1.50<br>(0.059) | 4.50<br>(0.177) | 6.90<br>(0.272) | 1.50<br>(0.059) | 5.30<br>(0.209) |
| 05C5        | 4.70 ± 0.50<br>(0.185 ± 0.012) | 4.70 ± 0.50<br>(0.185 ± 0.012) | 3.00<br>(0.119)               | 4.50<br>(0.177) | 1.50<br>(0.059) | 4.50<br>(0.177) | 6.90<br>(0.272) | 1.50<br>(0.059) | 5.30<br>(0.209) |
| 0606        | 5.7 ± 0.50<br>(0.225 ± 0.012)  | 5.70 ± 0.50<br>(0.225 ± 0.012) | 2.10<br>(0.083)               | 5.50<br>(0.217) | 2.00<br>(0.079) | 5.50<br>(0.217) | 8.20<br>(0.323) | 2.00<br>(0.079) | 6.30<br>(0.248) |
| 06C6        | 5.70 ± 0.50<br>(0.225 ± 0.012) | 5.70 ± 0.50<br>(0.225 ± 0.012) | 3.00<br>(0.119)               | 5.50<br>(0.217) | 2.00<br>(0.079) | 5.50<br>(0.217) | 8.20<br>(0.323) | 2.00<br>(0.079) | 6.30<br>(0.248) |
| 0707        | 6.70 ± 0.40<br>(0.264 ± 0.158) | 6.70 ± 0.40<br>(0.264 ± 0.158) | 1.90<br>(0.075)               | 6.50<br>(0.256) | 2.00<br>(0.079) | 6.50<br>(0.256) | 9.50<br>(0.375) | 2.00<br>(0.079) | 7.30<br>(0.288) |
| 07C7        | 6.70 ± 0.50<br>(0.264 ± 0.012) | 6.70 ± 0.50<br>(0.264 ± 0.012) | 3.00<br>(0.119)               | 6.50<br>(0.256) | 2.00<br>(0.079) | 6.50<br>(0.256) | 9.50<br>(0.375) | 2.00<br>(0.079) | 7.30<br>(0.288) |
| 07D7        | 6.70 ± 0.50<br>(0.264 ± 0.012) | 6.70 ± 0.50<br>(0.264 ± 0.012) | 4.00<br>(0.158)               | 6.50<br>(0.256) | 2.00<br>(0.079) | 6.50<br>(0.256) | 9.50<br>(0.375) | 2.00<br>(0.079) | 7.30<br>(0.288) |

### HOW TO ORDER

| LM                  | XS            | 0505                                                 | M         | 2R2                                                                               | P     | T            | A            | S            |
|---------------------|---------------|------------------------------------------------------|-----------|-----------------------------------------------------------------------------------|-------|--------------|--------------|--------------|
| Family              | Series        | Size                                                 | Tolerance | Inductance                                                                        | Style | Termination  | Special      | Packaging    |
| LM = Power Inductor | XS = Shielded | 0505 = 5x5xh<br>05C5 = 5x5xC(h)<br>(h = see catalog) | M = ±20%  | 0R8 = 0.8 $\mu\text{H}$<br>470 = 47.00 $\mu\text{H}$<br>331 = 330.0 $\mu\text{H}$ |       | T = Sn Plate | A = Standard | S = 13" Reel |

# LMax SMD Power Inductor



## LMXS Series – Shielded Style P

### ELECTRICAL CHARACTERISTICS

#### 0404

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 1R5   | 1.5    | M         | 100KHz, 1.0V   | 0.052        | 1.55         |
| 2R2   | 2.2    | M         | 100KHz, 1.0V   | 0.072        | 1.20         |
| 3R3   | 3.3    | M         | 100KHz, 1.0V   | 0.085        | 1.10         |
| 4R7   | 4.7    | M         | 100KHz, 1.0V   | 0.105        | 0.90         |
| 6R8   | 6.8    | M         | 100KHz, 1.0V   | 0.170        | 0.73         |
| 100   | 10     | M         | 100KHz, 1.0V   | 0.210        | 0.55         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.295        | 0.45         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.430        | 0.40         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.675        | 0.32         |

#### 0505

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 1R0   | 1.0    | M         | 100KHz, 1.0V   | 0.045        | 1.72         |
| 2R2   | 2.2    | M         | 100KHz, 1.0V   | 0.060        | 1.32         |
| 2R7   | 2.7    | M         | 100KHz, 1.0V   | 0.070        | 1.28         |
| 3R3   | 3.3    | M         | 100KHz, 1.0V   | 0.085        | 1.04         |
| 3R9   | 3.9    | M         | 100KHz, 1.0V   | 0.110        | 0.88         |
| 4R7   | 4.7    | M         | 100KHz, 1.0V   | 0.128        | 0.84         |
| 5R6   | 5.6    | M         | 100KHz, 1.0V   | 0.145        | 0.80         |
| 6R8   | 6.8    | M         | 100KHz, 1.0V   | 0.158        | 0.76         |
| 8R2   | 8.2    | M         | 100KHz, 1.0V   | 0.185        | 0.68         |
| 100   | 10     | M         | 100KHz, 1.0V   | 0.200        | 0.61         |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.210        | 0.56         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.240        | 0.50         |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.338        | 0.48         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.397        | 0.41         |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.441        | 0.35         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.694        | 0.32         |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.709        | 0.30         |

#### 05C5

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 1R2   | 1.2    | M         | 100KHz, 1.0V   | 0.0236       | 2.56         |
| 1R8   | 1.8    | M         | 100KHz, 1.0V   | 0.0275       | 2.20         |
| 2R2   | 2.2    | M         | 100KHz, 1.0V   | 0.0313       | 2.04         |
| 2R7   | 2.7    | M         | 100KHz, 1.0V   | 0.0433       | 1.60         |
| 3R3   | 3.3    | M         | 100KHz, 1.0V   | 0.0492       | 1.57         |
| 3R9   | 3.9    | M         | 100KHz, 1.0V   | 0.0648       | 1.44         |
| 4R7   | 4.7    | M         | 100KHz, 1.0V   | 0.0720       | 1.32         |
| 5R6   | 5.6    | M         | 100KHz, 1.0V   | 0.1009       | 1.17         |
| 6R8   | 6.8    | M         | 100KHz, 1.0V   | 0.1089       | 1.12         |
| 8R2   | 8.2    | M         | 100KHz, 1.0V   | 0.1175       | 1.04         |
| 100   | 10     | M         | 100KHz, 1.0V   | 0.1283       | 1.00         |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.1316       | 0.84         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.1490       | 0.76         |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.1660       | 0.72         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.2350       | 0.70         |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.2610       | 0.58         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.3780       | 0.56         |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.3837       | 0.50         |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.5870       | 0.48         |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.6245       | 0.41         |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.6990       | 0.35         |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.9148       | 0.32         |
| 101   | 100    | M         | 100KHz, 1.0V   | 1.020        | 0.29         |
| 121   | 120    | M         | 100KHz, 1.0V   | 1.270        | 0.27         |
| 151   | 150    | M         | 100KHz, 1.0V   | 1.350        | 0.24         |
| 181   | 180    | M         | 100KHz, 1.0V   | 1.540        | 0.22         |



# LMax SMD Power Inductor



## LMXS Series – Shielded Style P

### 0606

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 4R1   | 4.1    | M         | 100KHz, 1.0V   | 0.057        | 1.95         |
| 5R4   | 5.4    | M         | 100KHz, 1.0V   | 0.076        | 1.6          |
| 6R2   | 6.2    | M         | 100KHz, 1.0V   | 0.096        | 1.4          |
| 8R9   | 8.9    | M         | 100KHz, 1.0V   | 0.116        | 1.25         |
| 100   | 10     | M         | 100KHz, 1.0V   | 0.124        | 1.2          |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.153        | 1.1          |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.196        | 0.97         |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.21         | 0.85         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.29         | 0.8          |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.33         | 0.75         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.386        | 0.65         |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.52         | 0.57         |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.595        | 0.54         |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.665        | 0.5          |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.84         | 0.43         |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.978        | 0.41         |
| 101   | 100    | M         | 100KHz, 1.0V   | 1.2          | 0.36         |

### 06C6

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 2R6   | 2.6    | M         | 100KHz, 1.0V   | 0.018        | 2.6          |
| 3R0   | 3      | M         | 100KHz, 1.0V   | 0.024        | 2.4          |
| 4R2   | 4.2    | M         | 100KHz, 1.0V   | 0.031        | 2.2          |
| 5R3   | 5.3    | M         | 100KHz, 1.0V   | 0.038        | 1.9          |
| 6R2   | 6.2    | M         | 100KHz, 1.0V   | 0.045        | 1.8          |
| 8R2   | 8.2    | M         | 100KHz, 1.0V   | 0.053        | 1.6          |
| 100   | 10     | M         | 100KHz, 1.0V   | 0.065        | 1.3          |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.076        | 1.2          |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.103        | 1.1          |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.11         | 1            |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.122        | 0.9          |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.175        | 0.85         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.189        | 0.75         |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.212        | 0.7          |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.26         | 0.62         |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.305        | 0.58         |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.355        | 0.52         |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.463        | 0.46         |
| 101   | 100    | M         | 100KHz, 1.0V   | 0.52         | 0.42         |

# LMax SMD Power Inductor



## LMXS Series – Shielded Style P

### 0707

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 3R3   | 3.3    | M         | 100KHz, 1.0V   | 0.069        | 3            |
| 4R7   | 4.7    | M         | 100KHz, 1.0V   | 0.075        | 2.4          |
| 6R8   | 6.8    | M         | 100KHz, 1.0V   | 0.106        | 2.2          |
| 100   | 10     | M         | 100KHz, 1.0V   | 0.15         | 1.8          |

### 07C7

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 3R0   | 3      | M         | 100KHz, 1.0V   | 0.024        | 3            |
| 3R9   | 3.9    | M         | 100KHz, 1.0V   | 0.027        | 2.6          |
| 5R0   | 5      | M         | 100KHz, 1.0V   | 0.031        | 2.4          |
| 6R0   | 6      | M         | 100KHz, 1.0V   | 0.035        | 2.25         |
| 7R3   | 7.3    | M         | 100KHz, 1.0V   | 0.054        | 2.1          |
| 8R6   | 8.6    | M         | 100KHz, 1.0V   | 0.058        | 1.85         |
| 100   | 10     | M         | 100KHz, 1.0V   | 0.065        | 1.7          |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.07         | 1.55         |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.084        | 1.4          |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.095        | 1.32         |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.128        | 1.2          |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.142        | 1.05         |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.165        | 0.97         |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.21         | 0.86         |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.238        | 0.8          |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.277        | 0.73         |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.304        | 0.65         |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.39         | 0.6          |
| 101   | 100    | M         | 100KHz, 1.0V   | 0.535        | 0.54         |

### 07D7

| Codes | L (μH) | Tolerance | Test Condition | DCR (Ω) max. | IDC (A) max. |
|-------|--------|-----------|----------------|--------------|--------------|
| 3R3   | 3.3    | M         | 100KHz, 1.0V   | 0.02         | 3.5          |
| 5R0   | 5      | M         | 100KHz, 1.0V   | 0.024        | 2.9          |
| 6R0   | 6      | M         | 100KHz, 1.0V   | 0.027        | 2.5          |
| 7R3   | 7.3    | M         | 100KHz, 1.0V   | 0.031        | 2.3          |
| 8R6   | 8.6    | M         | 100KHz, 1.0V   | 0.034        | 2.2          |
| 100   | 10     | M         | 100KHz, 1.0V   | 0.038        | 2            |
| 120   | 12     | M         | 100KHz, 1.0V   | 0.053        | 1.7          |
| 150   | 15     | M         | 100KHz, 1.0V   | 0.057        | 1.6          |
| 180   | 18     | M         | 100KHz, 1.0V   | 0.092        | 1.5          |
| 220   | 22     | M         | 100KHz, 1.0V   | 0.096        | 1.3          |
| 270   | 27     | M         | 100KHz, 1.0V   | 0.109        | 1.2          |
| 330   | 33     | M         | 100KHz, 1.0V   | 0.124        | 1.1          |
| 390   | 39     | M         | 100KHz, 1.0V   | 0.138        | 1            |
| 470   | 47     | M         | 100KHz, 1.0V   | 0.155        | 0.95         |
| 560   | 56     | M         | 100KHz, 1.0V   | 0.202        | 0.85         |
| 680   | 68     | M         | 100KHz, 1.0V   | 0.234        | 0.75         |
| 820   | 82     | M         | 100KHz, 1.0V   | 0.324        | 0.7          |
| 101   | 100    | M         | 100KHz, 1.0V   | 0.358        | 0.65         |

# LMax SMD Power Inductor



## LMMN Series – Miniature Style M

### FEATURES

- The miniature chip inductors is wound on a special ferrite core.
- 0302/ 03A2/ 0403 are high Q value at high frequency and low DC resistance.
- 03A2/ 0403/ 0605 are low DC resistance, high current capacity, and high impedance characteristics. They are excellent for using as a choke coil in DC power supply circuits.

### APPLICATIONS

- Pagers, Cordless Phone
- High Frequency Communication Products
- Personal Computers
- Disk Drives And Computer Peripherals
- DC Power Supply Circuits

### CHARACTERISTICS

Except 0202/02A2/02B2/0302

- Rated DC Current: The current when the inductance becomes 10% lower than its initial value or the current when the temperature of coil increases A T20°C. The smaller one is defined as Rated DC Current. (Ta=25°C)
- Operating temperature range: -40 ~ 85°C

### CHARACTERISTICS FOR 0202/02A2/02B2/0302

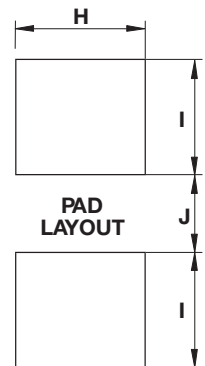
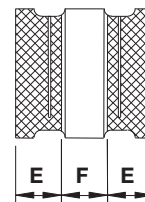
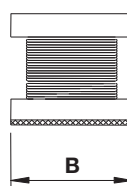
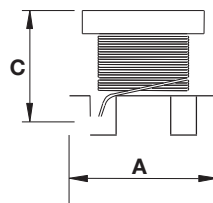
- Rated DC Current (Isat): The current when the inductance becomes 30% typical its initial value (Ta=25°C)
- Temperature Rise Current (I rms): The actual current when the temperature of coil becomes A T=40°C (Ta=25°C)
- Operating temperature range: -40 ~ 105°C

### INDUCTANCE AND RATED CURRENT RANGES

- 0202 1.00 ~ 10μH 2.80 ~ 0.65A
- 02A2 1.00 ~ 10μH 3.70 ~ 0.90A
- 02B2 1.00 ~ 22μH 2.30 ~ 0.51A
- 0302 1.00 ~ 100μH 1.00 ~ 0.1A
- 03A2 1.00 ~ 560μH 0.445 ~ 0.04A
- 0403 1.00 ~ 2200μH 0.50 ~ 0.03A
- 0302 (C) 0.47 ~ 120μH 3.40 ~ 0.17A
- 03A2 (C) 1.00 ~ 560μH 1.00 ~ 0.06A
- 0403 (C) 1.00 ~ 470μH 1.08 ~ 0.09A
- 0605 (C) 0.12 ~ 10000μH 6.00 ~ 0.05A
- Electrical specifications at 25°C



### DIMENSIONS



mm (inches)

| Type            | A                              | B                              | C                              | E                              | F                              | H               | I               | J               |
|-----------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-----------------|-----------------|-----------------|
| 0202            | 2.50 ± 0.20<br>(0.098 ± 0.008) | 2.00 ± 0.20<br>(0.079 ± 0.008) | 1.00 max.<br>(0.039)           | 0.40 ± 0.20<br>(0.016 ± 0.008) | 1.00 min.<br>(0.039)           | 2.10<br>(0.083) | 0.90<br>(0.035) | 0.80<br>(0.031) |
| 02A2            | 2.50 ± 0.20<br>(0.098 ± 0.008) | 2.00 ± 0.20<br>(0.079 ± 0.008) | 1.25 max.<br>(0.049)           | 0.40 ± 0.20<br>(0.016 ± 0.008) | 1.00 min.<br>(0.039)           | 2.10<br>(0.083) | 0.90<br>(0.035) | 0.80<br>(0.031) |
| 02B2            | 2.50 ± 0.20<br>(0.098 ± 0.008) | 2.50 ± 0.20<br>(0.098 ± 0.008) | 1.05 max.<br>(0.041)           | 0.85 ref<br>(0.033)            | 0.85 ref<br>(0.033)            | 2.50<br>(0.098) | 1.20<br>(0.047) | 0.80<br>(0.031) |
| 0302 / 0302 (C) | 3.20 ± 0.30<br>(0.126 ± 0.012) | 2.50 ± 0.20<br>(0.098 ± 0.008) | 1.55 ± 0.30<br>(0.061 ± 0.012) | 1.05 ± 0.30<br>(0.041 ± 0.012) | 1.05 ± 0.30<br>(0.041 ± 0.012) | 2.00<br>(0.079) | 1.50<br>(0.059) | 1.00<br>(0.039) |
| 03A2 / 03A2 (C) | 3.20 ± 0.30<br>(0.126 ± 0.012) | 2.50 ± 0.20<br>(0.098 ± 0.008) | 2.00 ± 0.30<br>(0.079 ± 0.012) | 1.05 ± 0.30<br>(0.041 ± 0.012) | 1.05 ± 0.30<br>(0.041 ± 0.012) | 2.00<br>(0.079) | 1.50<br>(0.059) | 1.00<br>(0.039) |
| 0403 / 0403 (C) | 4.50 ± 0.30<br>(0.177 ± 0.012) | 3.20 ± 0.20<br>(0.126 ± 0.008) | 2.60 ± 0.30<br>(0.102 ± 0.012) | 1.00 min.<br>(0.039)           | 1.00 min.<br>(0.039)           | 3.00<br>(0.118) | 2.00<br>(0.079) | 1.20<br>(0.047) |
| 0605 (C)        | 5.70 ± 0.30<br>(0.224 ± 0.012) | 5.00 ± 0.30<br>(0.197 ± 0.012) | 4.70 ± 0.50<br>(0.185 ± 0.020) | 1.30 min.<br>(0.051)           | 1.70 min.<br>(0.067)           | 5.00<br>(0.197) | 2.00<br>(0.079) | 2.00<br>(0.079) |

# LMax SMD Power Inductor



## LMMN Series – Miniature Style M

### HOW TO ORDER

| LM                  | MN                | 0202                              | N                                           | R04                                                                              | M            | T                  | A                         | R                |
|---------------------|-------------------|-----------------------------------|---------------------------------------------|----------------------------------------------------------------------------------|--------------|--------------------|---------------------------|------------------|
| <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 | XN = Non-shielded | 0202 = 2x2xh<br>(h = see catalog) | J = ±5%<br>K = ±10%<br>M = ±20%<br>N = ±30% | R39 = 0.390μH<br>3R9 = 3.900μH<br>390 = 39.00μH<br>391 = 390.0μH<br>392 = 3900μH |              | T = Sn Plate       | A = Standard<br>C = Choke | R = 7" Reel      |

### ELECTRICAL CHARACTERISTICS

#### 0202

| Codes | L<br>(μH) | Tolerance | Test<br>Condition | DCR<br>(Ω) max. | I rms (A)<br>Typical | I sat (A)<br>Typical |
|-------|-----------|-----------|-------------------|-----------------|----------------------|----------------------|
| 1R0   | 1.00      | M         | 1MHz, 0.1V        | 0.085           | 1.70                 | 2.00                 |
| 1R5   | 1.50      | M         | 1MHz, 0.1V        | 0.128           | 1.40                 | 1.70                 |
| 2R2   | 2.20      | M         | 1MHz, 0.1V        | 0.19            | 1.10                 | 1.40                 |
| 3R3   | 3.30      | M         | 1MHz, 0.1V        | 0.304           | 0.94                 | 1.20                 |
| 4R7   | 4.70      | M         | 1MHz, 0.1V        | 0.44            | 0.78                 | 0.98                 |
| 6R8   | 6.80      | M         | 1MHz, 0.1V        | 0.541           | 0.70                 | 0.82                 |
| 100   | 10.0      | M         | 1MHz, 0.1V        | 0.854           | 0.52                 | 0.65                 |

#### 02A2

| Codes | L<br>(μH) | Tolerance | Test<br>Condition | DCR<br>(Ω) max. | I rms (A)<br>Typical | I sat (A)<br>Typical |
|-------|-----------|-----------|-------------------|-----------------|----------------------|----------------------|
| 1R0   | 1.00      | M         | 1MHz, 0.1V        | 0.088           | 1.80                 | 2.70                 |
| 1R5   | 1.50      | M         | 1MHz, 0.1V        | 0.126           | 1.50                 | 2.20                 |
| 2R2   | 2.20      | M         | 1MHz, 0.1V        | 0.155           | 1.30                 | 2.00                 |
| 3R3   | 3.30      | M         | 1MHz, 0.1V        | 0.272           | 1.00                 | 1.60                 |
| 4R7   | 4.70      | M         | 1MHz, 0.1V        | 0.45            | 0.81                 | 1.20                 |
| 5R6   | 5.60      | M         | 1MHz, 0.1V        | 0.45            | 0.72                 | 1.15                 |
| 6R8   | 6.80      | M         | 1MHz, 0.1V        | 0.612           | 0.66                 | 1.10                 |
| 100   | 10.0      | M         | 1MHz, 0.1V        | 0.756           | 0.59                 | 0.90                 |

#### 02B2

| Codes | L<br>(μH) | Tolerance | Test<br>Condition | DCR<br>(Ω) max. | I rms (A)<br>Typical | I sat (A)<br>Typical |
|-------|-----------|-----------|-------------------|-----------------|----------------------|----------------------|
| 1R0   | 1.00      | M         | 1MHz, 0.1V        | 0.085           | 1.90                 | 2.30                 |
| 1R5   | 1.50      | M         | 1MHz, 0.1V        | 0.115           | 1.50                 | 1.90                 |
| 2R2   | 2.20      | M         | 1MHz, 0.1V        | 0.168           | 1.20                 | 1.50                 |
| 3R3   | 3.30      | M         | 1MHz, 0.1V        | 0.239           | 1.10                 | 1.30                 |
| 4R7   | 4.70      | M         | 1MHz, 0.1V        | 0.316           | 0.90                 | 1.10                 |
| 5R6   | 5.60      | M         | 1MHz, 0.1V        | 0.42            | 0.83                 | 0.98                 |
| 6R8   | 6.80      | M         | 1MHz, 0.1V        | 0.487           | 0.80                 | 0.90                 |
| 8R2   | 8.20      | M         | 1MHz, 0.1V        | 0.548           | 0.71                 | 0.84                 |
| 100   | 10.0      | M         | 1MHz, 0.1V        | 0.61            | 0.68                 | 0.79                 |
| 220   | 22.0      | M         | 1MHz, 0.1V        | 1.552           | 0.40                 | 0.51                 |

# LMax SMD Power Inductor



## LMMN Series – Miniature Style M

### 0302

| Codes | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | DCR<br>( $\Omega$ ) max. | IDC<br>(A) max. | SRF<br>(MHz) min. |
|-------|-----------------|-----------|-------------------|--------------------------|-----------------|-------------------|
| 1R0   | 1.00            | N         | 1MHz, 0.1V        | 0.078                    | 1.00            | 100               |
| 1R5   | 1.50            | N         | 1MHz, 0.1V        | 0.068                    | 1.20            | 100               |
| 2R2   | 2.20            | M         | 1MHz, 0.1V        | 0.126                    | 0.79            | 64.0              |
| 3R3   | 3.30            | M         | 1MHz, 0.1V        | 0.18                     | 0.70            | 50.0              |
| 4R7   | 4.70            | M         | 1MHz, 0.1V        | 0.195                    | 0.65            | 43.0              |
| 100   | 10.0            | K         | 1MHz, 0.1V        | 0.42                     | 0.45            | 26.0              |
| 150   | 15.0            | K         | 1MHz, 0.1V        | 0.75                     | 0.30            | 22.0              |
| 220   | 22.0            | K         | 1MHz, 0.1V        | 1.00                     | 0.25            | 19.0              |
| 330   | 33.0            | K         | 1MHz, 0.1V        | 1.40                     | 0.20            | 17.0              |
| 470   | 47.0            | K         | 1MHz, 0.1V        | 2.20                     | 0.17            | 13.0              |
| 680   | 68.0            | K         | 1MHz, 0.1V        | 3.20                     | 0.13            | 9.00              |
| 101   | 100             | K         | 1MHz, 0.1V        | 4.50                     | 0.10            | 8.00              |

### 03A2

| Codes | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | Quality Factor |                | DCR<br>( $\Omega$ ) max. | IDC<br>(A) max. | SRF<br>(MHz) min. |
|-------|-----------------|-----------|-------------------|----------------|----------------|--------------------------|-----------------|-------------------|
|       |                 |           |                   | Spec. min.     | Test Condition |                          |                 |                   |
| 1R0   | 1.00            | M         | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.50                     | 0.445           | 100               |
| 1R2   | 1.20            | M         | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.60                     | 0.425           | 100               |
| 1R5   | 1.50            | K, M      | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.60                     | 0.40            | 75.0              |
| 1R8   | 1.80            | K, M      | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.70                     | 0.39            | 60.0              |
| 2R2   | 2.20            | K, M      | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.80                     | 0.37            | 50.0              |
| 2R7   | 2.70            | K, M      | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.90                     | 0.32            | 43.0              |
| 3R3   | 3.30            | K, M      | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 1.00                     | 0.30            | 38.0              |
| 3R9   | 3.90            | K, M      | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 1.10                     | 0.29            | 35.0              |
| 4R7   | 4.70            | K, M      | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 1.20                     | 0.27            | 31.0              |
| 5R6   | 5.60            | K, M      | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 1.30                     | 0.25            | 28.0              |
| 6R8   | 6.80            | K, M      | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 1.50                     | 0.24            | 25.0              |
| 8R2   | 8.20            | K, M      | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 1.60                     | 0.225           | 23.0              |
| 100   | 10.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 1.80                     | 0.19            | 20.0              |
| 120   | 12.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 2.00                     | 0.18            | 18.0              |
| 150   | 15.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 2.20                     | 0.17            | 16.0              |
| 180   | 18.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 2.50                     | 0.165           | 15.0              |
| 220   | 22.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 2.80                     | 0.15            | 14.0              |
| 270   | 27.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 3.10                     | 0.125           | 13.0              |
| 330   | 33.0            | J, K      | 1MHz, 0.1V        | 40             | 1MHz, 0.1V     | 3.50                     | 0.115           | 12.0              |
| 390   | 39.0            | J, K      | 1MHz, 0.1V        | 40             | 1MHz, 0.1V     | 3.90                     | 0.11            | 11.0              |
| 470   | 47.0            | J, K      | 1MHz, 0.1V        | 40             | 1MHz, 0.1V     | 4.30                     | 0.10            | 11.0              |
| 560   | 56.0            | J, K      | 1MHz, 0.1V        | 40             | 1MHz, 0.1V     | 4.90                     | 0.085           | 10.0              |
| 680   | 68.0            | J, K      | 1MHz, 0.1V        | 40             | 1MHz, 0.1V     | 5.50                     | 0.08            | 9.00              |
| 820   | 82.0            | J, K      | 1MHz, 0.1V        | 40             | 1MHz, 0.1V     | 6.20                     | 0.07            | 8.50              |
| 101   | 100             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 7.00                     | 0.08            | 8.00              |
| 121   | 120             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 8.00                     | 0.075           | 7.50              |
| 151   | 150             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 9.30                     | 0.07            | 7.00              |
| 181   | 180             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 10.20                    | 0.065           | 6.00              |
| 221   | 220             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 11.80                    | 0.065           | 5.50              |
| 271   | 270             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 12.50                    | 0.065           | 5.00              |
| 331   | 330             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 15.00                    | 0.065           | 5.00              |
| 391   | 390             | J, K      | 1MHz, 0.1V        | 50             | 796KHz, 0.1V   | 22.00                    | 0.05            | 5.00              |
| 471   | 470             | J, K      | 1KHz, 0.1V        | 50             | 796KHz, 0.1V   | 25.00                    | 0.045           | 5.00              |
| 561   | 560             | J, K      | 1KHz, 0.1V        | 50             | 796KHz, 0.1V   | 28.00                    | 0.04            | 5.00 ref          |

# LMax SMD Power Inductor



## LMMN Series – Miniature Style M

0403

| Codes | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | Quality Factor |                | DCR<br>( $\Omega$ ) max. | IDC<br>(A) max. | SRF<br>(MHz) min. |
|-------|-----------------|-----------|-------------------|----------------|----------------|--------------------------|-----------------|-------------------|
|       |                 |           |                   | Spec. min.     | Test Condition |                          |                 |                   |
| 1R0   | 1.00            | M         | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.20                     | 0.50            | 120               |
| 1R2   | 1.20            | M         | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.20                     | 0.50            | 100               |
| 1R5   | 1.50            | M         | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.30                     | 0.50            | 85.0              |
| 1R8   | 1.80            | M         | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.30                     | 0.50            | 75.0              |
| 2R2   | 2.20            | M         | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.30                     | 0.50            | 62.0              |
| 2R7   | 2.70            | M         | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.32                     | 0.50            | 53.0              |
| 3R3   | 3.30            | M         | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.35                     | 0.50            | 47.0              |
| 3R9   | 3.90            | M         | 1MHz, 0.1V        | 20             | 1MHz, 0.1V     | 0.38                     | 0.50            | 41.0              |
| 4R7   | 4.70            | K, M      | 1MHz, 0.1V        | 30             | 1MHz, 0.1V     | 0.40                     | 0.50            | 38.0              |
| 5R6   | 5.60            | K, M      | 1MHz, 0.1V        | 30             | 1MHz, 0.1V     | 0.47                     | 0.50            | 33.0              |
| 6R8   | 6.80            | K, M      | 1MHz, 0.1V        | 30             | 1MHz, 0.1V     | 0.50                     | 0.45            | 31.0              |
| 8R2   | 8.20            | K, M      | 1MHz, 0.1V        | 30             | 1MHz, 0.1V     | 0.56                     | 0.45            | 27.0              |
| 100   | 10.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 0.56                     | 0.40            | 23.0              |
| 120   | 12.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 0.62                     | 0.38            | 21.0              |
| 150   | 15.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 0.73                     | 0.36            | 19.0              |
| 180   | 18.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 0.82                     | 0.34            | 17.0              |
| 220   | 22.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 0.94                     | 0.32            | 15.0              |
| 270   | 27.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 1.10                     | 0.30            | 14.0              |
| 330   | 33.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 1.20                     | 0.27            | 12.0              |
| 390   | 39.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 1.40                     | 0.24            | 11.0              |
| 470   | 47.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 1.50                     | 0.22            | 10.0              |
| 560   | 56.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 1.70                     | 0.20            | 9.30              |
| 680   | 68.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 1.90                     | 0.18            | 8.40              |
| 820   | 82.0            | J, K      | 1MHz, 0.1V        | 35             | 1MHz, 0.1V     | 2.20                     | 0.17            | 7.50              |
| 101   | 100             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 2.50                     | 0.16            | 6.80              |
| 121   | 120             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 3.00                     | 0.15            | 6.20              |
| 151   | 150             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 3.70                     | 0.13            | 5.50              |
| 181   | 180             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 4.50                     | 0.12            | 5.00              |
| 221   | 220             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 5.40                     | 0.11            | 4.50              |
| 271   | 270             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 6.80                     | 0.10            | 4.00              |
| 331   | 330             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 8.20                     | 0.095           | 3.60              |
| 391   | 390             | J, K      | 1MHz, 0.1V        | 40             | 796KHz, 0.1V   | 9.70                     | 0.09            | 3.30              |
| 471   | 470             | J, K      | 1KHz, 0.1V        | 40             | 796KHz, 0.1V   | 11.80                    | 0.08            | 3.00              |
| 561   | 560             | J, K      | 1KHz, 0.1V        | 40             | 796KHz, 0.1V   | 14.50                    | 0.07            | 2.70              |
| 681   | 680             | J, K      | 1KHz, 0.1V        | 40             | 796KHz, 0.1V   | 17.00                    | 0.065           | 2.50              |
| 821   | 820             | J, K      | 1KHz, 0.1V        | 40             | 796KHz, 0.1V   | 20.50                    | 0.06            | 2.20              |
| 102   | 1000            | J, K      | 1KHz, 0.1V        | 40             | 252KHz, 0.1V   | 25.00                    | 0.05            | 2.00              |
| 122   | 1200            | J, K      | 1KHz, 0.1V        | 40             | 252KHz, 0.1V   | 30.00                    | 0.045           | 1.80              |
| 152   | 1500            | J, K      | 1KHz, 0.1V        | 40             | 252KHz, 0.1V   | 37.00                    | 0.04            | 1.60              |
| 182   | 1800            | J, K      | 1KHz, 0.1V        | 40             | 252KHz, 0.1V   | 45.00                    | 0.035           | 1.50              |
| 222   | 2200            | J, K      | 1KHz, 0.1V        | 40             | 252KHz, 0.1V   | 50.00                    | 0.03            | 1.30              |

# LMax SMD Power Inductor



## LMMN Series – Miniature Style M

### 0302 (C)

| Codes | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | DCR<br>( $\Omega$ ) $\pm 20\%$ | I sat<br>(A) max. | I rms<br>(A) max. | SRF<br>(MHz) min. |
|-------|-----------------|-----------|-------------------|--------------------------------|-------------------|-------------------|-------------------|
| R47   | 0.47            | N         | 1MHz, 0.1V        | 0.03                           | 3.40              | 2.55              | 100               |
| 1R0   | 1.00            | N         | 1MHz, 0.1V        | 0.045                          | 2.30              | 2.05              | 100               |
| 1R5   | 1.50            | N         | 1MHz, 0.1V        | 0.057                          | 1.75              | 1.75              | 70.0              |
| 2R2   | 2.20            | N         | 1MHz, 0.1V        | 0.076                          | 1.55              | 1.60              | 70.0              |
| 3R3   | 3.30            | N         | 1MHz, 0.1V        | 0.12                           | 1.25              | 1.20              | 50.0              |
| 4R7   | 4.70            | N         | 1MHz, 0.1V        | 0.18                           | 1.00              | 1.00              | 40.0              |
| 6R8   | 6.80            | N         | 1MHz, 0.1V        | 0.24                           | 0.85              | 0.85              | 40.0              |
| 100   | 10.0            | M         | 1MHz, 0.1V        | 0.38                           | 0.75              | 0.70              | 30.0              |
| 150   | 15.0            | M         | 1MHz, 0.1V        | 0.57                           | 0.60              | 0.52              | 20.0              |
| 220   | 22.0            | M         | 1MHz, 0.1V        | 0.81                           | 0.50              | 0.45              | 20.0              |
| 330   | 33.0            | M         | 1MHz, 0.1V        | 1.15                           | 0.38              | 0.39              | 13.0              |
| 470   | 47.0            | M         | 1MHz, 0.1V        | 1.78                           | 0.33              | 0.31              | 11.0              |
| 680   | 68.0            | M         | 1MHz, 0.1V        | 2.28                           | 0.28              | 0.275             | 11.0              |
| 101   | 100             | M         | 1MHz, 0.1V        | 2.70                           | 0.18              | 0.25              | 8.00              |
| 121   | 120             | M         | 1MHz, 0.1V        | 4.38                           | 0.17              | 0.20              | 8.00              |

### 03A2 (C)

| Codes | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | DCR<br>( $\Omega$ ) max. | IDC<br>(A) max. | SRF<br>(MHz) min. |
|-------|-----------------|-----------|-------------------|--------------------------|-----------------|-------------------|
| 1R0   | 1.00            | M         | 1MHz, 0.1V        | 0.078                    | 1.00            | 100               |
| 2R2   | 2.20            | M         | 1MHz, 0.1V        | 0.126                    | 0.79            | 64.0              |
| 3R3   | 3.30            | M         | 1MHz, 0.1V        | 0.165                    | 0.50            | 50.0              |
| 4R7   | 4.70            | M         | 1MHz, 0.1V        | 0.195                    | 0.45            | 43.0              |
| 6R8   | 6.80            | M         | 1MHz, 0.1V        | 0.33                     | 0.45            | 38.0              |
| 100   | 10.0            | M         | 1MHz, 0.1V        | 0.572                    | 0.30            | 26.0              |
| 220   | 22.0            | K, M      | 1MHz, 0.1V        | 0.923                    | 0.25            | 19.0              |
| 470   | 47.0            | K, M      | 1MHz, 0.1V        | 1.69                     | 0.17            | 12.0              |
| 101   | 100             | J, K      | 1MHz, 0.1V        | 4.55                     | 0.10            | 8.00              |
| 151   | 150             | J, K      | 1MHz, 0.1V        | 9.10                     | 0.08            | 7.00              |
| 221   | 220             | J, K      | 1MHz, 0.1V        | 10.92                    | 0.07            | 5.50              |
| 331   | 330             | J, K      | 1MHz, 0.1V        | 13.0                     | 0.06            | 4.50              |
| 391   | 390             | J, K      | 1MHz, 0.1V        | 22.1                     | 0.06            | 4.00              |
| 471   | 470             | J, K      | 1MHz, 0.1V        | 24.7                     | 0.06            | 3.70              |
| 561   | 560             | J, K      | 1MHz, 0.1V        | 28.6                     | 0.06            | 3.40              |

### 0403 (C)

| Codes | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | DCR<br>( $\Omega$ ) max. | IDC<br>(A) max. | SRF<br>(MHz) min. |
|-------|-----------------|-----------|-------------------|--------------------------|-----------------|-------------------|
| 1R0   | 1.00            | M         | 1MHz, 0.1V        | 0.08                     | 1.08            | 100               |
| 1R5   | 1.50            | M         | 1MHz, 0.1V        | 0.09                     | 1.00            | 85.0              |
| 2R2   | 2.20            | M         | 1MHz, 0.1V        | 0.11                     | 0.90            | 60.0              |
| 3R3   | 3.30            | M         | 1MHz, 0.1V        | 0.13                     | 0.80            | 47.0              |
| 4R7   | 4.70            | K, M      | 1MHz, 0.1V        | 0.15                     | 0.75            | 35.0              |
| 6R8   | 6.80            | K, M      | 1MHz, 0.1V        | 0.20                     | 0.72            | 30.0              |
| 100   | 10.0            | J, K      | 1MHz, 0.1V        | 0.24                     | 0.65            | 23.0              |
| 150   | 15.0            | J, K      | 1MHz, 0.1V        | 0.32                     | 0.57            | 20.0              |
| 220   | 22.0            | J, K      | 1MHz, 0.1V        | 0.60                     | 0.42            | 15.0              |
| 330   | 33.0            | J, K      | 1MHz, 0.1V        | 1.00                     | 0.31            | 12.0              |
| 470   | 47.0            | J, K      | 1MHz, 0.1V        | 1.10                     | 0.28            | 10.0              |
| 680   | 68.0            | J, K      | 1MHz, 0.1V        | 1.70                     | 0.22            | 8.40              |
| 101   | 100             | J, K      | 1MHz, 0.1V        | 2.20                     | 0.19            | 6.80              |
| 151   | 150             | J, K      | 1MHz, 0.1V        | 3.50                     | 0.13            | 5.50              |
| 221   | 220             | J, K      | 1MHz, 0.1V        | 4.00                     | 0.11            | 4.50              |
| 331   | 330             | J, K      | 1MHz, 0.1V        | 6.80                     | 0.10            | 3.60              |
| 471   | 470             | J, K      | 1KHz, 0.1V        | 8.50                     | 0.09            | 3.00              |

# LMax SMD Power Inductor



## LMMN Series – Miniature Style M

### 0605 (C)

| Codes | L<br>( $\mu$ H) | Tolerance | Test<br>Condition | DCR<br>( $\Omega$ ) max. | IDC<br>(A) max. | SRF<br>(MHz) min. |
|-------|-----------------|-----------|-------------------|--------------------------|-----------------|-------------------|
| R12   | 0.12            | M         | 1MHz, 0.1V        | 0.0098                   | 6.00            | 450               |
| R27   | 0.27            | M         | 1MHz, 0.1V        | 0.014                    | 5.30            | 300               |
| R47   | 0.47            | M         | 1MHz, 0.1V        | 0.0182                   | 4.80            | 200               |
| 1R0   | 1.00            | M         | 1MHz, 0.1V        | 0.027                    | 4.00            | 150               |
| 1R5   | 1.50            | M         | 1MHz, 0.1V        | 0.031                    | 3.70            | 110               |
| 2R2   | 2.20            | M         | 1MHz, 0.1V        | 0.041                    | 3.20            | 80.0              |
| 3R3   | 3.30            | M         | 1MHz, 0.1V        | 0.050                    | 2.90            | 40.0              |
| 4R7   | 4.70            | M         | 1MHz, 0.1V        | 0.0574                   | 2.70            | 30.0              |
| 6R8   | 6.80            | M         | 1MHz, 0.1V        | 0.104                    | 2.00            | 25.0              |
| 100   | 10.0            | K, M      | 1MHz, 0.1V        | 0.130                    | 1.70            | 20.0              |
| 150   | 15.0            | K, M      | 1MHz, 0.1V        | 0.21                     | 1.40            | 17.0              |
| 220   | 22.0            | K, M      | 1MHz, 0.1V        | 0.266                    | 1.20            | 15.0              |
| 330   | 33.0            | K, M      | 1MHz, 0.1V        | 0.448                    | 0.90            | 12.0              |
| 470   | 47.0            | K, M      | 1MHz, 0.1V        | 0.56                     | 0.80            | 10.0 ref          |
| 680   | 68.0            | K, M      | 1MHz, 0.1V        | 0.938                    | 0.64            | 7.60              |
| 101   | 100             | K, M      | 100KHz, 0.1V      | 1.204                    | 0.56            | 6.50              |
| 151   | 150             | K, M      | 100KHz, 0.1V      | 2.66                     | 0.42            | 5.00              |
| 221   | 220             | K, M      | 100KHz, 0.1V      | 3.36                     | 0.32            | 4.00              |
| 331   | 330             | K, M      | 100KHz, 0.1V      | 6.16                     | 0.27            | 3.10              |
| 471   | 470             | K, M      | 100KHz, 0.1V      | 7.56                     | 0.24            | 2.40              |
| 681   | 680             | K, M      | 100KHz, 0.1V      | 11.34                    | 0.19            | 1.90              |
| 102   | 1000            | K, M      | 10KHz, 0.1V       | 14.42                    | 0.15            | 1.70              |
| 222   | 2200            | K, M      | 10KHz, 0.1V       | 30.1                     | 0.10            | 1.20              |
| 472   | 4700            | K, M      | 10KHz, 0.1V       | 61.04                    | 0.07            | 0.80              |
| 103   | 10000           | K, M      | 10KHz, 0.1V       | 140.                     | 0.05            | 0.50              |

# LMax SMD Power Inductor



## LMMN Series – Miniature Style M

### SHELF STORAGE SPECIFICATIONS

| Items                    | Specifications                                                                                                                                                          |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shelf Storage Conditions | Temperature range: $25\pm 3^{\circ}\text{C}$ • Humidity: <80% relative humidity.<br>Recommendation: Product should be used within six months from the time of delivery. |

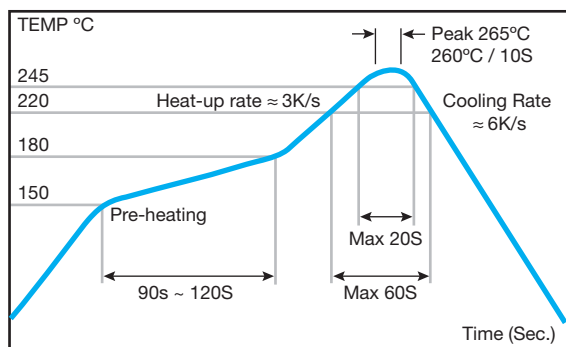
### ENVIRONMENTAL SPECIFICATIONS

| Items                         | Specification                                                                                   | Test Method/Conditions                                                                                                                                                                              |
|-------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High Temperature Storage Test | No case deformation or change in appearance<br>$\Delta L/L \leq 10\%$<br>$\Delta Q/Q \leq 30\%$ | Temperature: $85\pm 2^{\circ}\text{C}$<br>Time: $48\pm 2$ hours<br>Tested after 1 hour at room temperature.                                                                                         |
| Low Temperature Storage Test  |                                                                                                 | Temperature: $-25\pm 2^{\circ}\text{C}$<br>Time: $48\pm 2$ hours<br>Tested after 1 hour at room temperature.                                                                                        |
| Humidity Test                 |                                                                                                 | Temperature: $40\pm 2^{\circ}\text{C}$ , 90~95% relative humidity<br>Time: $96\pm 2$ hours<br>Tested after 1 hour at room temperature.                                                              |
| Thermal Shock Test            |                                                                                                 | 1 Cycle:<br>$-25^{\circ}\text{C}$ for 30 minutes<br>$+25^{\circ}\text{C}$ for 10 minutes<br>$85^{\circ}\text{C}$ for 30 minutes<br>Go through 5 cycles.<br>Tested after 1 hour at room temperature. |

### MECHANICAL SPECIFICATIONS

| Items                     | Specification                                                                                   | Test Method/Conditions                                                                                                                                                                                    |
|---------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Solderability Test        | Terminal area must have 90% minimum solder coverage                                             | Lead-free termination: Dip pads in flux then dip in solder pot at $245\pm 5^{\circ}\text{C}$ for 3 seconds.                                                                                               |
| Resistance to solder heat | No case deformation or change in appearance.                                                    | Flux should cover the whole of the sample before heating, then be preheated for about 2 minutes over temperature $130 - 150^{\circ}\text{C}$ .<br>Immersing to $260\pm 5^{\circ}\text{C}$ for 10 seconds. |
| Vibration Test            | No case deformation or change in appearance<br>$\Delta L/L \leq 10\%$<br>$\Delta Q/Q \leq 30\%$ | Apply frequency at 10 – 55 Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.                                                                                                            |
| Shock Resistance          |                                                                                                 | Drop down with $981\text{m/s}^2$ (100G) shock attitude upon a rubber block method shock testing machine – 1 time. In each three orientations.                                                             |

### RELOW SOLDERING RECOMMENDATION

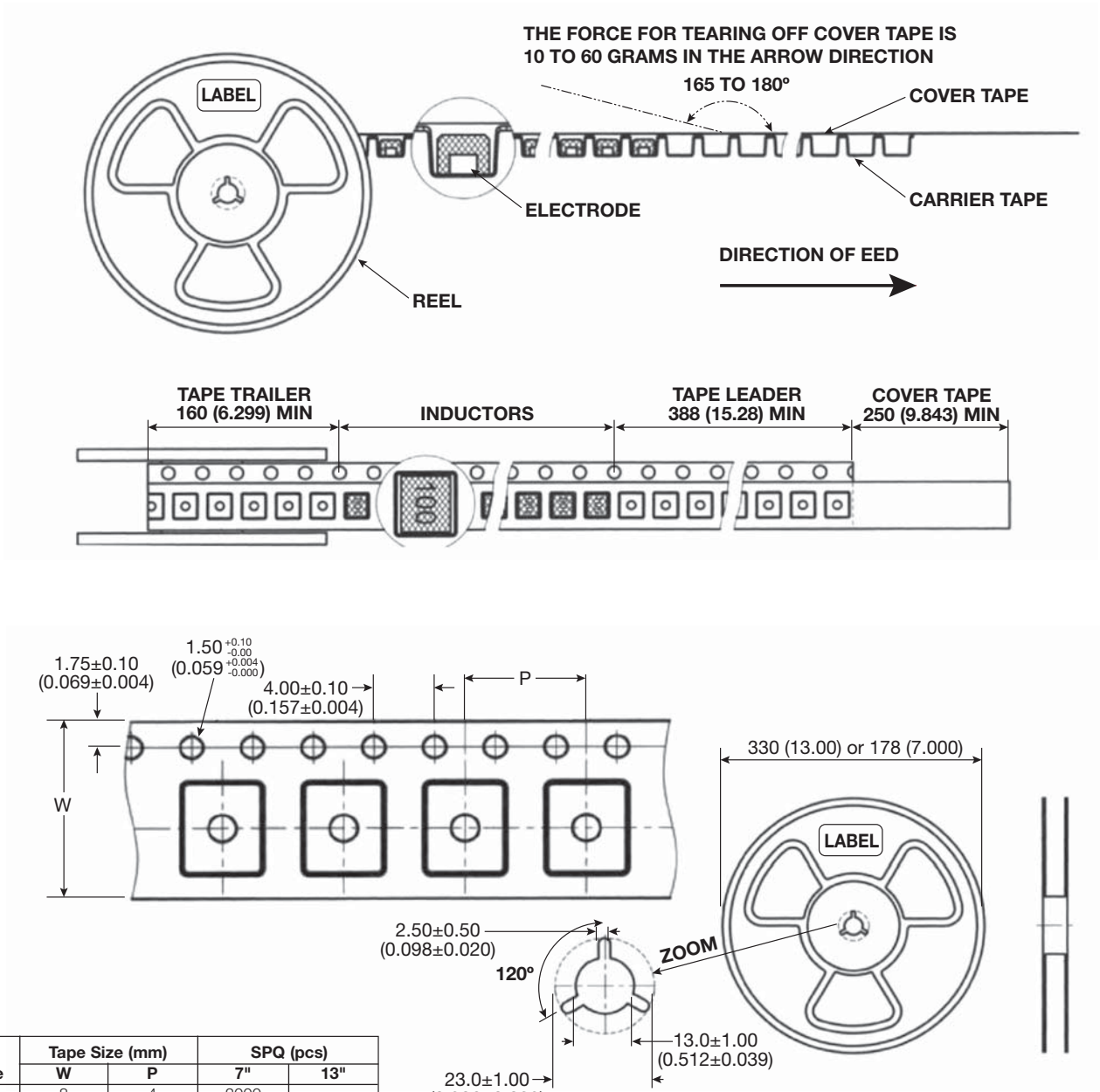


# LMax SMD Power Inductor

## LMMN Series – Miniature Style M



### PACKAGING SPECIFICATIONS



| Size Code | Tape Size (mm) |    | SPQ (pcs) |      |
|-----------|----------------|----|-----------|------|
|           | W              | P  | 7"        | 13"  |
| 0202      | 8              | 4  | 2000      | —    |
| 02A2      | 8              | 4  | 2000      | —    |
| 02B2      | 8              | 4  | 2000      | —    |
| 0302      | 8              | 4  | 2000      | —    |
| 03A2      | 8              | 4  | 2000      | —    |
| 0403      | 12             | 8  | 500       | —    |
| 0605      | 16             | 12 | —         | 1000 |

# LMax Low Profile Power Inductor



## LMLP Series – Style C

### FEATURES

- Small and low profile inductor
- It corresponds to high current
- Simple and original magnetic shield structure

### APPLICATIONS

- For small DC/DC converter (cellular phone, HDD, DVC, DSC, PDA, LCD display etc.)

### CHARACTERISTICS

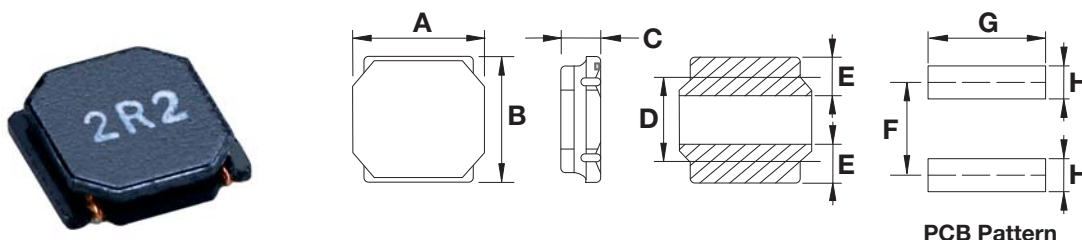
- Operating Temperature Range: -40°C to +125°C
- Storage Temperature Range: -40°C to +85°C
- Saturation Current: The saturation current value (ISAT) is the DC current value when the inductance decreases by 30% of its initial value (at 20°C).
- Temperature Rise Current: The temperature rise current value (IRMS) is the DC current value that increases component temperature by up to 40°C.

### INDUCTANCE AND RATED CURRENT RANGES

|        |               |                |
|--------|---------------|----------------|
| • 0202 | 2.2 ~ 22μH    | 1.290 ~ 0.390A |
| • 0303 | 1.0 ~ 47μH    | 1.30 ~ 0.220A  |
| • 03A3 | 1.0 ~ 47μH    | 1.50 ~ 0.250A  |
| • 03B3 | 1.0 ~ 47μH    | 2.10 ~ 0.320A  |
| • 0404 | 1.0 ~ 47μH    | 1.80 ~ 0.240A  |
| • 04A4 | 1.0 ~ 47μH    | 2.50 ~ 0.350A  |
| • 04B4 | 1.0 ~ 220μH   | 4.0 ~ 0.270A   |
| • 0505 | 10μH          | 1.00A          |
| • 05B5 | 1.50 ~ 22.0μH | 3.35 ~ 0.90A   |
| • 05D5 | 1.50 ~ 47.0μH | 6.00 ~ 1.10A   |
| • 0606 | 4.7 ~ 10.0μH  | 1.40 ~ 1.00A   |
| • 06A6 | 2.50 ~ 100μH  | 2.10 ~ 0.35A   |
| • 06B6 | 0.80 ~ 22.0μH | 5.50 ~ 1.05A   |
| • 06C6 | 1.50 ~ 100μH  | 5.00 ~ 0.62A   |
| • 06D6 | 1.30 ~ 100μH  | 8.00 ~ 0.80A   |
| • 0808 | 0.90 ~ 100μH  | 11.0 ~ 1.00A   |



### DIMENSIONS



PCB Pattern

mm (inches)

| Type | A                              | B                              | C max                          | D                              | E                              | F               | G               | H               |
|------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-----------------|-----------------|-----------------|
| 0202 | 2.40 ± 0.10<br>(0.095 ± 0.004) | 2.40 ± 0.10<br>(0.095 ± 0.004) | 1.00<br>(0.039)                | 1.45 ± 0.20<br>(0.057 ± 0.008) | 0.60 ± 0.20<br>(0.240 ± 0.008) | 1.45<br>(0.057) | 2.00<br>(0.079) | 0.70<br>(0.028) |
| 0303 | 3.00 ± 0.20<br>(0.118 ± 0.008) | 3.00 ± 0.20<br>(0.118 ± 0.008) | 1.00<br>(0.039)                | 1.90 ± 0.20<br>(0.075 ± 0.008) | 0.90 ± 0.20<br>(0.035 ± 0.008) | 2.20<br>(0.087) | 2.70<br>(0.106) | 0.80<br>(0.032) |
| 03A3 | 3.00 ± 0.20<br>(0.118 ± 0.008) | 3.00 ± 0.20<br>(0.118 ± 0.008) | 1.20<br>(0.047)                | 1.90 ± 0.20<br>(0.075 ± 0.008) | 0.90 ± 0.20<br>(0.035 ± 0.008) | 2.20<br>(0.087) | 2.70<br>(0.106) | 0.80<br>(0.032) |
| 03B3 | 3.00 ± 0.20<br>(0.118 ± 0.008) | 3.00 ± 0.20<br>(0.118 ± 0.008) | 1.50<br>(0.059)                | 1.90 ± 0.20<br>(0.075 ± 0.008) | 0.90 ± 0.20<br>(0.035 ± 0.008) | 2.20<br>(0.087) | 2.70<br>(0.106) | 0.80<br>(0.032) |
| 0404 | 4.00 ± 0.20<br>(0.157 ± 0.008) | 4.00 ± 0.20<br>(0.157 ± 0.008) | 1.00<br>(0.039)                | 2.50 ± 0.20<br>(0.099 ± 0.008) | 1.10 ± 0.20<br>(0.043 ± 0.008) | 2.80<br>(0.110) | 3.70<br>(0.146) | 1.20<br>(0.047) |
| 04A4 | 4.00 ± 0.20<br>(0.157 ± 0.008) | 4.00 ± 0.20<br>(0.157 ± 0.008) | 1.20<br>(0.047)                | 2.50 ± 0.20<br>(0.099 ± 0.008) | 1.10 ± 0.20<br>(0.043 ± 0.008) | 2.80<br>(0.110) | 3.70<br>(0.146) | 1.20<br>(0.047) |
| 04B4 | 4.00 ± 0.20<br>(0.157 ± 0.008) | 4.00 ± 0.20<br>(0.157 ± 0.008) | 1.80<br>(0.071)                | 2.50 ± 0.20<br>(0.099 ± 0.008) | 1.10 ± 0.20<br>(0.043 ± 0.008) | 2.80<br>(0.110) | 3.70<br>(0.146) | 1.20<br>(0.047) |
| 0505 | 5.00 ± 0.20<br>(0.197 ± 0.008) | 5.00 ± 0.20<br>(0.197 ± 0.008) | 1.00<br>(0.039)                | 3.50 ± 0.20<br>(0.138 ± 0.008) | 1.50 ± 0.20<br>(0.059 ± 0.008) | 3.80<br>(0.150) | 4.70<br>(0.185) | 1.60<br>(0.063) |
| 05B5 | 5.00 ± 0.20<br>(0.197 ± 0.008) | 5.00 ± 0.20<br>(0.197 ± 0.008) | 2.00<br>(0.078)                | 3.50 ± 0.20<br>(0.138 ± 0.008) | 1.50 ± 0.20<br>(0.059 ± 0.008) | 3.80<br>(0.150) | 4.70<br>(0.185) | 1.60<br>(0.063) |
| 05D5 | 5.00 ± 0.20<br>(0.197 ± 0.008) | 5.00 ± 0.20<br>(0.197 ± 0.008) | 4.00<br>(0.157)                | 3.50 ± 0.20<br>(0.138 ± 0.008) | 1.50 ± 0.20<br>(0.059 ± 0.008) | 3.80<br>(0.150) | 4.70<br>(0.185) | 1.60<br>(0.063) |
| 0606 | 6.00 ± 0.20<br>(0.236 ± 0.008) | 6.00 ± 0.20<br>(0.236 ± 0.008) | 1.00 ± 0.10<br>(0.039 ± 0.004) | 4.00 ± 0.20<br>(0.157 ± 0.008) | 1.35 ± 0.20<br>(0.053 ± 0.008) | 4.70<br>(0.185) | 5.70<br>(0.224) | 1.60<br>(0.063) |
| 06A6 | 6.00 ± 0.20<br>(0.236 ± 0.008) | 6.00 ± 0.20<br>(0.236 ± 0.008) | 1.20<br>(0.047)                | 4.00 ± 0.20<br>(0.157 ± 0.008) | 1.35 ± 0.20<br>(0.053 ± 0.008) | 4.70<br>(0.185) | 5.70<br>(0.224) | 1.60<br>(0.063) |
| 06B6 | 6.00 ± 0.20<br>(0.236 ± 0.008) | 6.00 ± 0.20<br>(0.236 ± 0.008) | 2.00<br>(0.078)                | 4.00 ± 0.20<br>(0.157 ± 0.008) | 1.35 ± 0.20<br>(0.053 ± 0.008) | 4.70<br>(0.185) | 5.70<br>(0.224) | 1.60<br>(0.063) |
| 06C6 | 6.00 ± 0.20<br>(0.236 ± 0.008) | 6.00 ± 0.20<br>(0.236 ± 0.008) | 2.80<br>(0.110)                | 4.00 ± 0.20<br>(0.157 ± 0.008) | 1.35 ± 0.20<br>(0.053 ± 0.008) | 4.70<br>(0.185) | 5.70<br>(0.224) | 1.60<br>(0.063) |
| 06D6 | 6.00 ± 0.20<br>(0.236 ± 0.008) | 6.00 ± 0.20<br>(0.236 ± 0.008) | 4.50<br>(0.177)                | 4.00 ± 0.20<br>(0.157 ± 0.008) | 1.35 ± 0.20<br>(0.053 ± 0.008) | 4.70<br>(0.185) | 5.70<br>(0.224) | 1.60<br>(0.063) |
| 0808 | 8.00 ± 0.20<br>(0.315 ± 0.008) | 8.00 ± 0.20<br>(0.315 ± 0.008) | 4.20<br>(0.165)                | 5.60 ± 0.30<br>(0.220 ± 0.011) | 1.60 ± 0.30<br>(0.063 ± 0.011) | 5.60<br>(0.220) | 7.50<br>(0.188) | 1.80<br>(0.071) |

# LMax Low Profile Power Inductor



## LMLP Series – Style C

### HOW TO ORDER

| LM                  | LP               | 0303                                                 | M                  | R04                                                              | C            | T                  | A              | S                           |
|---------------------|------------------|------------------------------------------------------|--------------------|------------------------------------------------------------------|--------------|--------------------|----------------|-----------------------------|
| <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 | LP = Low Profile | 0303 = 3x3xh<br>03A3 = 3x3xA(h)<br>(h = see catalog) | M = 20%<br>N = 30% | R39 = 0.390μH<br>3R9 = 3.900μH<br>390 = 39.00μH<br>391 = 390.0μH |              | T = Sn Plate       | A = Standard   | R = 7" Reel<br>S = 13" Reel |

### ELECTRICAL CHARACTERISTICS

#### 0202

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP0202N2R2CTAR | 2.2                         | ±30%      | 1.29                      | 0.97                       | 0.15            |
| LMLP0202N3R3CTAR | 3.3                         | ±30%      | 1                         | 0.77                       | 0.22            |
| LMLP0202N4R7CTAR | 4.7                         | ±30%      | 0.88                      | 0.67                       | 0.29            |
| LMLP0202N6R8CTAR | 6.8                         | ±30%      | 0.75                      | 0.57                       | 0.41            |
| LMLP0202M100CTAR | 10                          | ±20%      | 0.55                      | 0.45                       | 0.69            |
| LMLP0202M150CTAR | 15                          | ±20%      | 0.47                      | 0.37                       | 1.02            |
| LMLP0202M220CTAR | 22                          | ±20%      | 0.39                      | 0.3                        | 1.47            |

#### 0303

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP0303N1R0CTAR | 1.0                         | ±30%      | 1.3                       | 1.4                        | 0.065           |
| LMLP0303N1R5CTAR | 1.5                         | ±30%      | 1.2                       | 1.3                        | 0.08            |
| LMLP0303N2R2CTAR | 2.2                         | ±30%      | 1.1                       | 1.1                        | 0.095           |
| LMLP0303N3R3CTAR | 3.3                         | ±30%      | 0.87                      | 0.94                       | 0.14            |
| LMLP0303N4R7CTAR | 4.7                         | ±30%      | 0.75                      | 0.78                       | 0.19            |
| LMLP0303N6R8CTAR | 6.8                         | ±30%      | 0.61                      | 0.63                       | 0.3             |
| LMLP0303M100CTAR | 10                          | ±20%      | 0.5                       | 0.51                       | 0.45            |
| LMLP0303M150CTAR | 15                          | ±20%      | 0.4                       | 0.4                        | 0.74            |
| LMLP0303M220CTAR | 22                          | ±20%      | 0.35                      | 0.35                       | 1.03            |
| LMLP0303M330CTAR | 33                          | ±20%      | 0.26                      | 0.275                      | 1.55            |
| LMLP0303M470CTAR | 47                          | ±20%      | 0.22                      | 0.235                      | 2.05            |

#### 03A2

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP03A2N1R0CTAR | 1.0                         | ±30%      | 1.5                       | 1.49                       | 0.05            |
| LMLP03A2N1R5CTAR | 1.5                         | ±30%      | 1.36                      | 1.4                        | 0.06            |
| LMLP03A2N2R2CTAR | 2.2                         | ±30%      | 1.1                       | 1.2                        | 0.08            |
| LMLP03A2N3R3CTAR | 3.3                         | ±30%      | 0.91                      | 1.05                       | 0.1             |
| LMLP03A2N4R7CTAR | 4.7                         | ±30%      | 0.77                      | 0.98                       | 0.13            |
| LMLP03A2N6R8CTAR | 6.8                         | ±30%      | 0.67                      | 0.74                       | 0.19            |
| LMLP03A2M100CTAR | 10                          | ±20%      | 0.54                      | 0.63                       | 0.29            |
| LMLP03A2M150CTAR | 15                          | ±20%      | 0.44                      | 0.485                      | 0.45            |
| LMLP03A2M220CTAR | 22                          | ±20%      | 0.37                      | 0.42                       | 0.63            |
| LMLP03A2M330CTAR | 33                          | ±20%      | 0.31                      | 0.33                       | 1.03            |
| LMLP03A2M470CTAR | 47                          | ±20%      | 0.25                      | 0.28                       | 1.45            |

\*The saturation current value (ISAT) is the DC current value when the inductance decreases by 30% of its initial value (at 20°C).

\*\*The temperature rise current value (IRMS) is the DC current value that increases component temperature by up to 40°C.



# LMax Low Profile Power Inductor



## LMLP Series – Style C

### 03B3

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP03B3N1R0CTAR | 1.0                         | ±30%      | 2.1                       | 2.1                        | 0.03            |
| LMLP03B3N1R5CTAR | 1.5                         | ±30%      | 1.8                       | 1.82                       | 0.04            |
| LMLP03B3N2R2CTAR | 2.2                         | ±30%      | 1.48                      | 1.5                        | 0.06            |
| LMLP03B3N3R3CTAR | 3.3                         | ±30%      | 1.21                      | 1.23                       | 0.08            |
| LMLP03B3N4R7CTAR | 4.7                         | ±30%      | 1.02                      | 1.04                       | 0.12            |
| LMLP03B3N6R8CTAR | 6.8                         | ±30%      | 0.87                      | 0.88                       | 0.16            |
| LMLP03B3M100CTAR | 10                          | ±20%      | 0.7                       | 0.71                       | 0.23            |
| LMLP03B3M150CTAR | 15                          | ±20%      | 0.56                      | 0.56                       | 0.36            |
| LMLP03B3M220CTAR | 22                          | ±20%      | 0.47                      | 0.47                       | 0.52            |
| LMLP03B3M330CTAR | 33                          | ±20%      | 0.39                      | 0.37                       | 0.84            |
| LMLP03B3M470CTAR | 47                          | ±20%      | 0.32                      | 0.3                        | 1.34            |

### 0404

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP0404N1R0CTAS | 1.0                         | ±30%      | 1.8                       | 1.05                       | 0.1             |
| LMLP0404N2R2CTAS | 2.2                         | ±30%      | 1.15                      | 0.89                       | 0.15            |
| LMLP0404N3R3CTAS | 3.3                         | ±30%      | 1.1                       | 0.82                       | 0.18            |
| LMLP0404N4R7CTAS | 4.7                         | ±30%      | 0.9                       | 0.75                       | 0.21            |
| LMLP0404N6R8CTAS | 6.8                         | ±30%      | 0.74                      | 0.62                       | 0.3             |
| LMLP0404N100CTAS | 10                          | ±30%      | 0.56                      | 0.6                        | 0.38            |
| LMLP0404M150CTAS | 15                          | ±20%      | 0.47                      | 0.51                       | 0.51            |
| LMLP0404M220CTAS | 22                          | ±20%      | 0.36                      | 0.4                        | 0.87            |
| LMLP0404M330CTAS | 33                          | ±20%      | 0.28                      | 0.3                        | 1.54            |
| LMLP0404M470CTAS | 47                          | ±20%      | 0.24                      | 0.28                       | 1.81            |

### 04A4

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP04A4N1R0CTAS | 1.0                         | ±30%      | 2.5                       | 1.5                        | 0.06            |
| LMLP04A4N2R2CTAS | 2.2                         | ±30%      | 1.65                      | 1.2                        | 0.09            |
| LMLP04A4N3R3CTAS | 3.3                         | ±30%      | 1.2                       | 0.98                       | 0.13            |
| LMLP04A4N4R7CTAS | 4.7                         | ±30%      | 1.05                      | 0.96                       | 0.14            |
| LMLP04A4N6R8CTAS | 6.8                         | ±30%      | 0.9                       | 0.84                       | 0.18            |
| LMLP04A4M100CTAS | 10                          | ±20%      | 0.74                      | 0.77                       | 0.24            |
| LMLP04A4M150CTAS | 15                          | ±20%      | 0.56                      | 0.6                        | 0.4             |
| LMLP04A4M220CTAS | 22                          | ±20%      | 0.51                      | 0.54                       | 0.48            |
| LMLP04A4M330CTAS | 33                          | ±20%      | 0.4                       | 0.42                       | 0.81            |
| LMLP04A4M470CTAS | 47                          | ±20%      | 0.35                      | 0.37                       | 1               |

\*The saturation current value (ISAT) is the DC current value when the inductance decreases by 30% of its initial value (at 20°C).

\*\*The temperature rise current value (IRMS) is the DC current value that increases component temperature by up to 40°C.

# LMax Low Profile Power Inductor



## LMLP Series – Style C

### 04B4

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP04B4N1R0CTAS | 1.0                         | ±30%      | 4                         | 1.83                       | 0.03            |
| LMLP04B4N2R2CTAS | 2.2                         | ±30%      | 2.7                       | 1.44                       | 0.06            |
| LMLP04B4N3R3CTAS | 3.3                         | ±30%      | 2                         | 1.23                       | 0.07            |
| LMLP04B4N4R7CTAS | 4.7                         | ±30%      | 1.7                       | 1.2                        | 0.09            |
| LMLP04B4N6R8CTAS | 6.8                         | ±30%      | 1.45                      | 1.06                       | 0.11            |
| LMLP04B4M100CTAS | 10                          | ±20%      | 1.2                       | 0.84                       | 0.18            |
| LMLP04B4M150CTAS | 15                          | ±20%      | 0.94                      | 0.65                       | 0.28            |
| LMLP04B4M220CTAS | 22                          | ±20%      | 0.8                       | 0.59                       | 0.36            |
| LMLP04B4M330CTAS | 33                          | ±20%      | 0.65                      | 0.49                       | 0.53            |
| LMLP04B4M470CTAS | 47                          | ±20%      | 0.57                      | 0.42                       | 0.65            |
| LMLP04B4M680CTAS | 68                          | ±20%      | 0.47                      | 0.32                       | 1               |
| LMLP04B4M101CTAS | 100                         | ±20%      | 0.4                       | 0.27                       | 1.5             |
| LMLP04B4M151CTAS | 150                         | ±20%      | 0.31                      | 0.22                       | 2.5             |
| LMLP04B4M221CTAS | 220                         | ±20%      | 0.27                      | 0.17                       | 4               |

### 0505

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP0505M100CTAR | 10                          | ±20%      | 1                         | 0.94                       | 0.48            |

### 05B5

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP05B5N1R5CTAR | 1.5                         | ±30%      | 3.35                      | 3.2                        | 0.026           |
| LMLP05B5N2R2CTAR | 2.2                         | ±30%      | 2.9                       | 2.9                        | 0.035           |
| LMLP05B5N3R3CTAR | 3.3                         | ±30%      | 2.4                       | 2.4                        | 0.048           |
| LMLP05B5N4R7CTAR | 4.7                         | ±30%      | 2                         | 2                          | 0.06            |
| LMLP05B5N6R8CTAR | 6.8                         | ±30%      | 1.6                       | 1.65                       | 0.09            |
| LMLP05B5M100CTAR | 10                          | ±20%      | 1.3                       | 1.45                       | 0.12            |
| LMLP05B5M150CTAR | 15                          | ±20%      | 1.1                       | 1.2                        | 0.165           |
| LMLP05B5M220CTAR | 22                          | ±20%      | 0.9                       | 1                          | 0.26            |

### 05D5

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP05D5N1R5CTAS | 1.5                         | ±30%      | 6                         | 3.6                        | 0.02            |
| LMLP05D5N2R2CTAS | 2.2                         | ±30%      | 4.6                       | 3.5                        | 0.022           |
| LMLP05D5N3R3CTAS | 3.3                         | ±30%      | 3.8                       | 3.3                        | 0.027           |
| LMLP05D5N4R7CTAS | 4.7                         | ±30%      | 3.3                       | 3.1                        | 0.029           |
| LMLP05D5N6R8CTAS | 6.8                         | ±30%      | 2.6                       | 2.3                        | 0.049           |
| LMLP05D5M100CTAS | 10                          | ±20%      | 2.3                       | 2.1                        | 0.056           |
| LMLP05D5M150CTAS | 15                          | ±20%      | 2                         | 1.8                        | 0.08            |
| LMLP05D5M220CTAS | 22                          | ±20%      | 1.6                       | 1.4                        | 0.126           |
| LMLP05D5M330CTAS | 33                          | ±20%      | 1.3                       | 1.2                        | 0.18            |
| LMLP05D5M470CTAS | 47                          | ±20%      | 1.1                       | 0.9                        | 0.31            |

\*The saturation current value (ISAT) is the DC current value when the inductance decreases by 30% of it initial value (at 20°C).

\*\*The temperature rise current value (IRMS) is the DC current value that increases component temperature by up to 40°C.

# LMax Low Profile Power Inductor



## LMLP Series – Style C

### 0606

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP0606N4R7CTAR | 4.7                         | ±30%      | 1.4                       | 1.4                        | 0.29            |
| LMLP0606N6R8CTAR | 6.8                         | ±30%      | 1.2                       | 1                          | 0.372           |
| LMLP0606M100CTAR | 10                          | ±20%      | 1                         | 0.85                       | 0.5             |

### 06A6

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP06A6N2R5CTAR | 2.5                         | ±30%      | 2.1                       | 1.73                       | 0.09            |
| LMLP06A6N4R0CTAR | 4                           | ±30%      | 1.8                       | 1.57                       | 0.105           |
| LMLP06A6N5R0CTAR | 5                           | ±30%      | 1.5                       | 1.4                        | 0.11            |
| LMLP06A6N6R8CTAR | 6.8                         | ±30%      | 1.3                       | 1.18                       | 0.165           |
| LMLP06A6M100CTAR | 10                          | ±20%      | 1                         | 1                          | 0.235           |
| LMLP06A6M150CTAR | 15                          | ±20%      | 0.8                       | 0.79                       | 0.33            |
| LMLP06A6M220CTAR | 22                          | ±20%      | 0.76                      | 0.63                       | 0.53            |
| LMLP06A6M330CTAR | 33                          | ±20%      | 0.59                      | 0.53                       | 0.7             |
| LMLP06A6M470CTAR | 47                          | ±20%      | 0.52                      | 0.46                       | 1.05            |
| LMLP06A6M680CTAR | 68                          | ±20%      | 0.44                      | 0.41                       | 1.35            |
| LMLP06A6M101CTAR | 100                         | ±20%      | 0.35                      | 0.32                       | 2.18            |

### 06B6

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP06B6N0R8CTAS | 0.8                         | ±30%      | 5.5                       | 3.8                        | 0.02            |
| LMLP06B6N1R5CTAS | 1.5                         | ±30%      | 4                         | 3.2                        | 0.026           |
| LMLP06B6N2R2CTAS | 2.2                         | ±30%      | 3.2                       | 2.7                        | 0.034           |
| LMLP06B6N3R3CTAS | 3.3                         | ±30%      | 2.8                       | 2.6                        | 0.04            |
| LMLP06B6N4R7CTAS | 4.7                         | ±30%      | 2.4                       | 2                          | 0.058           |
| LMLP06B6N6R8CTAS | 6.8                         | ±30%      | 2                         | 1.8                        | 0.085           |
| LMLP06B6M100CTAS | 10                          | ±20%      | 1.7                       | 1.4                        | 0.125           |
| LMLP06B6M220CTAS | 22                          | ±20%      | 1.05                      | 0.95                       | 0.29            |

### 06C6

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP06C6N1R5CTAS | 1.5                         | ±30%      | 5                         | 4.2                        | 0.016           |
| LMLP06C6N2R2CTAS | 2.2                         | ±30%      | 4.2                       | 3.7                        | 0.02            |
| LMLP06C6N3R0CTAS | 3                           | ±30%      | 3.6                       | 3.4                        | 0.023           |
| LMLP06C6N4R7CTAS | 4.7                         | ±30%      | 2.7                       | 3                          | 0.031           |
| LMLP06C6N6R0CTAS | 6                           | ±30%      | 2.5                       | 2.5                        | 0.04            |
| LMLP06C6M100CTAS | 10                          | ±20%      | 1.9                       | 1.9                        | 0.065           |
| LMLP06C6M150CTAS | 15                          | ±20%      | 1.6                       | 1.8                        | 0.095           |
| LMLP06C6M220CTAS | 22                          | ±20%      | 1.3                       | 1.4                        | 0.135           |
| LMLP06C6M330CTAS | 33                          | ±20%      | 1.1                       | 1.1                        | 0.22            |
| LMLP06C6M470CTAS | 47                          | ±20%      | 0.95                      | 0.92                       | 0.3             |
| LMLP06C6M680CTAS | 68                          | ±20%      | 0.76                      | 0.77                       | 0.42            |
| LMLP06C6M101CTAS | 100                         | ±20%      | 0.62                      | 0.66                       | 0.6             |

\*The saturation current value (ISAT) is the DC current value when the inductance decreases by 30% of its initial value (at 20°C).

\*\*The temperature rise current value (IRMS) is the DC current value that increases component temperature by up to 40°C.

# LMax Low Profile Power Inductor



## LMLP Series – Style C

### 06D6

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP06D6N1R3CTAS | 1.3                         | ±30%      | 8                         | 4                          | 0.016           |
| LMLP06D6N1R8CTAS | 1.8                         | ±30%      | 7                         | 3.7                        | 0.018           |
| LMLP06D6N2R3CTAS | 2.3                         | ±30%      | 6                         | 3.5                        | 0.021           |
| LMLP06D6N3R0CTAS | 3                           | ±30%      | 5                         | 3.2                        | 0.024           |
| LMLP06D6N4R5CTAS | 4.5                         | ±30%      | 4                         | 3                          | 0.031           |
| LMLP06D6N6R3CTAS | 6.3                         | ±30%      | 3.8                       | 2.8                        | 0.038           |
| LMLP06D6M100CTAS | 10                          | ±20%      | 3                         | 2.5                        | 0.047           |
| LMLP06D6M150CTAS | 15                          | ±20%      | 2.3                       | 1.9                        | 0.077           |
| LMLP06D6M220CTAS | 22                          | ±20%      | 1.9                       | 1.5                        | 0.115           |
| LMLP06D6M330CTAS | 33                          | ±20%      | 1.5                       | 1.4                        | 0.145           |
| LMLP06D6M470CTAS | 47                          | ±20%      | 1.3                       | 1.1                        | 0.22            |
| LMLP06D6M680CTAS | 68                          | ±20%      | 1                         | 0.9                        | 0.33            |
| LMLP06D6M101CTAS | 100                         | ±20%      | 0.8                       | 0.7                        | 0.5             |

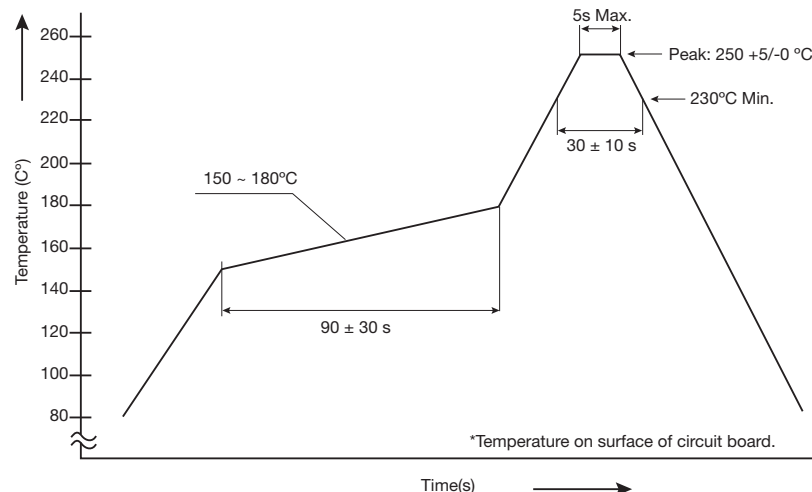
### 0808

| AVX PN           | L (μH)<br>at 100KHz<br>1.0V | Tolerance | I <sub>SAT</sub> *<br>(A) | I <sub>RMS</sub> **<br>(A) | DCR ±20%<br>(Ω) |
|------------------|-----------------------------|-----------|---------------------------|----------------------------|-----------------|
| LMLP0808N0R9CTAS | 0.9                         | ±30%      | 11                        | 7.8                        | 0.006           |
| LMLP0808N1R4CTAS | 1.4                         | ±30%      | 9                         | 7                          | 0.007           |
| LMLP0808N2R0CTAS | 2                           | ±30%      | 7.4                       | 6.3                        | 0.009           |
| LMLP0808N3R6CTAS | 3.6                         | ±30%      | 5.3                       | 4.9                        | 0.015           |
| LMLP0808N4R7CTAS | 4.7                         | ±30%      | 4.7                       | 4.1                        | 0.018           |
| LMLP0808N6R8CTAS | 6.8                         | ±30%      | 4                         | 3.7                        | 0.025           |
| LMLP0808M100CTAS | 10                          | ±20%      | 3.4                       | 3.1                        | 0.034           |
| LMLP0808M150CTAS | 15                          | ±20%      | 2.7                       | 2.4                        | 0.05            |
| LMLP0808M220CTAS | 22                          | ±20%      | 2.2                       | 2.2                        | 0.066           |
| LMLP0808M330CTAS | 33                          | ±20%      | 1.9                       | 1.7                        | 0.1             |
| LMLP0808M470CTAS | 47                          | ±20%      | 1.5                       | 1.4                        | 0.15            |
| LMLP0808M680CTAS | 68                          | ±20%      | 1.2                       | 1.1                        | 0.23            |
| LMLP0808M101CTAS | 100                         | ±20%      | 1                         | 1                          | 0.29            |

\*The saturation current value (ISAT) is the DC current value when the inductance decreases by 30% of its initial value (at 20°C).

\*\*The temperature rise current value (IRMS) is the DC current value that increases component temperature by up to 40°C.

## RECOMMENDED REFLOW PROFILE



The products may be exposed to reflow soldering process of above profile up to two times.

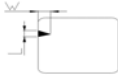
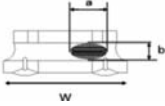
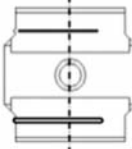


# LMax Low Profile Power Inductor



## LMLP Series – Style C

### TEST CONDITIONS

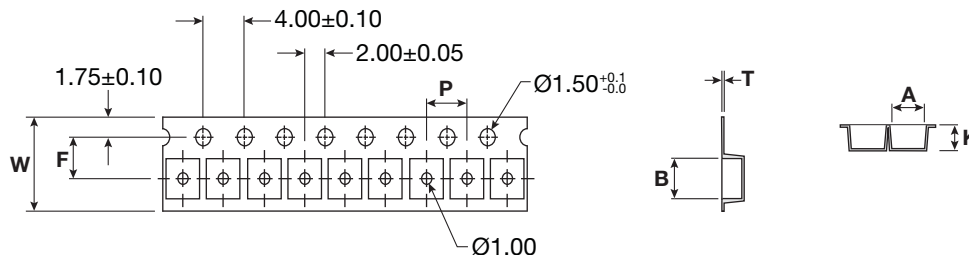
| ITEM                                            | SPECIFICATION DESCRIPTION                                                                                                                                                                                                                                                                                                                                                           | TEST METHOD                                                                                                                                                                                                                                                        |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature Range                               | Operation temp.: -40°C ~ +125°C (Including self-generated heat)<br>Storage temp.: -40°C ~ +85°C                                                                                                                                                                                                                                                                                     | –                                                                                                                                                                                                                                                                  |
| Appearance                                      | No defects or abnormalities.                                                                                                                                                                                                                                                                                                                                                        | Visual inspection                                                                                                                                                                                                                                                  |
| Core Chipping                                   | The appearance standard of the chipping size in top side, of bottom side ferrite core is following dimension.<br>L: 0.5 mm (max)<br>W: 0.5 mm (max)                                                                                                                                                                                                                                 | <br>Using calipers                                                                                                                                                              |
| Void Appearance Exposed                         | Size of voids occurring to coating resin is specified as following.<br>1. Width direction (dimension a): acceptable when $a \leq w/2$ nonconforming when $a > w/2$<br>2. Length direction (dimension b): it is not specified.<br>3. When total area of voids (including one exposing coil) occurring to each sides is not greater than 50% of coating resin area that is acceptable | <br>Using calipers                                                                                                                                                              |
| Electrode Appearance Criterion for Exposed Wire |  <Cross section of wire joint part><br>Only top side of wire exposed. (regardless of whole top side of wire exposed)                                                                                                                                                                               | <Appearance judgement><br>Conforming                                                                                                                                                                                                                               |
| Solderability                                   |  Wire is soldered insufficiently and less than half of outer diameter is covered with solder.<br>Less than 1/2 of joint side Length (More than 1/2 is selected as defect)                                                                                                                          | Solder heat proof:<br>1. Preheating: 160±10°C 90s<br>2. Retention time: 245±5°C for 3 ± 1 sec                                                                                                                                                                      |
| Vibration                                       | Inductance change: within ± 10% without mechanical damage such as break                                                                                                                                                                                                                                                                                                             | 1. Vibration frequency: (10Hz to 55Hz to 10Hz) in 60 sec. as a period<br>2. Vibration time: period cycled for 2 hr in each of 3 mutual perpendicular directions<br>3. Amplitude: 1.5mm max.                                                                        |
| Terminal Strength                               | No detachment of terminal pin and no breakage of wire                                                                                                                                                                                                                                                                                                                               | Add static load 4.9N(500gf) to inductor through hole of test board for 10 ± 2 sec                                                                                                                                                                                  |
| Thermal Shock                                   | Inductance change: within ± 10% without mechanical damage such as break                                                                                                                                                                                                                                                                                                             | 1. Repeat 100 cycles as follow:<br>(-40°C ± 2°C, 30 ± 3 minutes) →<br>(room temperature, 5 minutes) →<br>(+125°C ± 2°C, 30 ± 3 minutes) →<br>(room temperature, 5 minutes)<br>2. Recovery: 48 +4/-0 hours of recovery under the standard condition after the test. |
| High Temperature Resistance                     | Inductance change: within ± 10% without mechanical damage such as break                                                                                                                                                                                                                                                                                                             | 1. Environment condition: 85°C ± 2°C<br>2. Applied current: rated current<br>3. Duration: 500 +4/-0 hours                                                                                                                                                          |
| Humidity Resistance                             | Inductance change: within ± 10% without mechanical damage such as break                                                                                                                                                                                                                                                                                                             | 1. Environment condition: 60°C ± 2°C<br>2. Humidity: 90~95%<br>3. Applied current: rated current<br>4. Duration: 500 +4/-0 hours                                                                                                                                   |
| Low Temperature Storage                         | Inductance change: within ± 10% without mechanical damage such as break                                                                                                                                                                                                                                                                                                             | Store temperature:<br>-40°C ± 2°C for total<br>500 +4/-0 hours                                                                                                                                                                                                     |
| High Temperature Storage                        | Inductance change: within ± 10% without mechanical damage such as break                                                                                                                                                                                                                                                                                                             | Store temperature:<br>+125°C ± 2°C for total<br>500 +4/-0 hours                                                                                                                                                                                                    |
| Inductance                                      | a. Temperature: 25 ± 3°C<br>b. Relative Humidity: 45 to 75%RH<br>c. Measuring equipment:<br>Current measure: Chroma 3302 + Chroma 1320                                                                                                                                                                                                                                              | Within specified tolerance                                                                                                                                                                                                                                         |
| DC Resistance                                   | Measuring instrument: Chroma A165022                                                                                                                                                                                                                                                                                                                                                | In accordance with electrical specification.                                                                                                                                                                                                                       |

# LMax Low Profile Power Inductor



## LMLP Series – Style C

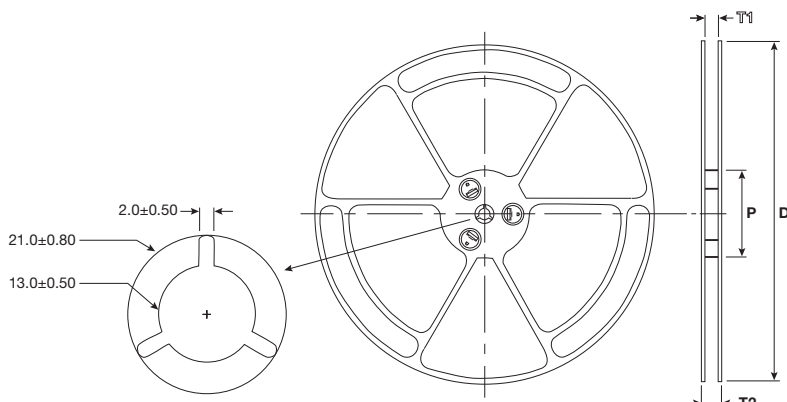
### PACKAGING SPECIFICATIONS – CARRIER TAPE DIMENSIONS



mm (inches)

| AVX PN           | A                             | B                             | P                             | F                            | W                             | T                              | K                            | Reel Size | SPQ  |
|------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|-------------------------------|--------------------------------|------------------------------|-----------|------|
| LMLP0202****CTAR | 2.6 ± 0.1<br>(0.102 ± 0.004)  | 2.6 ± 0.1<br>(0.102 ± 0.004)  | 4 ± 0.1<br>(0.157 ± 0.004)    | 3.5 ± 0.1<br>(0.138 ± 0.004) | 8.0 ± 0.2<br>(0.315 ± 0.008)  | 0.25 ± 0.05<br>(0.009 ± 0.002) | 1.3 ± 0.1<br>(0.051 ± 0.004) | 7"        | 2500 |
| LMLP0303****CTAR | 3.2 ± 0.1<br>(0.126 ± 0.004)  | 3.2 ± 0.1<br>(0.126 ± 0.004)  | 4.0 ± 0.1<br>(0.157 ± 0.004)  | 3.5 ± 0.1<br>(0.138 ± 0.004) | 8.0 ± 0.2<br>(0.315 ± 0.008)  | 0.3 ± 0.05<br>(0.012 ± 0.002)  | 1.4 ± 0.1<br>(0.055 ± 0.004) | 7"        | 2000 |
| LMLP03A3****CTAR | 3.2 ± 0.1<br>(0.126 ± 0.004)  | 3.2 ± 0.1<br>(0.126 ± 0.004)  | 4.0 ± 0.1<br>(0.157 ± 0.004)  | 3.5 ± 0.1<br>(0.138 ± 0.004) | 8.0 ± 0.2<br>(0.315 ± 0.008)  | 0.3 ± 0.05<br>(0.012 ± 0.002)  | 1.6 ± 0.1<br>(0.063 ± 0.004) | 7"        | 2000 |
| LMLP03B3****CTAR | 3.2 ± 0.1<br>(0.126 ± 0.004)  | 3.2 ± 0.1<br>(0.126 ± 0.004)  | 4.0 ± 0.1<br>(0.157 ± 0.004)  | 3.5 ± 0.1<br>(0.138 ± 0.004) | 8.0 ± 0.2<br>(0.315 ± 0.008)  | 0.3 ± 0.05<br>(0.012 ± 0.002)  | 1.9 ± 0.1<br>(0.075 ± 0.004) | 7"        | 2000 |
| LMLP0404****CTAS | 4.3 ± 0.1<br>(0.169 ± 0.004)  | 4.3 ± 0.1<br>(0.169 ± 0.004)  | 8.0 ± 0.1<br>(0.315 ± 0.004)  | 5.5 ± 0.1<br>(0.217 ± 0.004) | 12.0 ± 0.3<br>(0.472 ± 0.012) | 0.3 ± 0.1<br>(0.012 ± 0.004)   | 1.4 ± 0.1<br>(0.055 ± 0.004) | 13"       | 5000 |
| LMLP04A4****CTAS | 4.3 ± 0.1<br>(0.169 ± 0.004)  | 4.3 ± 0.1<br>(0.169 ± 0.004)  | 8.0 ± 0.1<br>(0.315 ± 0.004)  | 5.5 ± 0.1<br>(0.217 ± 0.004) | 12.0 ± 0.3<br>(0.472 ± 0.012) | 0.3 ± 0.1<br>(0.012 ± 0.004)   | 1.6 ± 0.1<br>(0.063 ± 0.004) | 13"       | 4500 |
| LMLP04B4****CTAS | 4.3 ± 0.1<br>(0.169 ± 0.004)  | 4.3 ± 0.1<br>(0.169 ± 0.004)  | 8.0 ± 0.1<br>(0.315 ± 0.004)  | 5.5 ± 0.1<br>(0.217 ± 0.004) | 12.0 ± 0.3<br>(0.472 ± 0.012) | 0.3 ± 0.1<br>(0.012 ± 0.004)   | 2.1 ± 0.1<br>(0.083 ± 0.004) | 13"       | 3500 |
| LMLP0505****CTAR | 5.25 ± 0.1<br>(0.207 ± 0.004) | 5.25 ± 0.1<br>(0.207 ± 0.004) | 8.0 ± 0.1<br>(0.315 ± 0.004)  | 5.5 ± 0.1<br>(0.217 ± 0.004) | 12.0 ± 0.3<br>(0.472 ± 0.012) | 0.3 ± 0.1<br>(0.012 ± 0.004)   | 1.4 ± 0.1<br>(0.055 ± 0.004) | 7"        | 1000 |
| LMLP05B5****CTAR | 5.25 ± 0.1<br>(0.207 ± 0.004) | 5.25 ± 0.1<br>(0.207 ± 0.004) | 8.0 ± 0.1<br>(0.315 ± 0.004)  | 5.5 ± 0.1<br>(0.217 ± 0.004) | 12.0 ± 0.3<br>(0.472 ± 0.012) | 0.3 ± 0.1<br>(0.012 ± 0.004)   | 2.3 ± 0.1<br>(0.091 ± 0.004) | 7"        | 800  |
| LMLP05D5****CTAS | 5.15 ± 0.1<br>(0.203 ± 0.004) | 5.15 ± 0.1<br>(0.203 ± 0.004) | 8.0 ± 0.1<br>(0.315 ± 0.004)  | 5.5 ± 0.1<br>(0.217 ± 0.004) | 12.0 ± 0.3<br>(0.472 ± 0.012) | 0.4 ± 0.1<br>(0.016 ± 0.004)   | 4.2 ± 0.1<br>(0.165 ± 0.004) | 13"       | 1500 |
| LMLP0606****CTAR | 6.3 ± 0.1<br>(0.248 ± 0.004)  | 6.3 ± 0.1<br>(0.248 ± 0.004)  | 8.0 ± 0.1<br>(0.315 ± 0.004)  | 5.5 ± 0.1<br>(0.217 ± 0.004) | 12.0 ± 0.3<br>(0.472 ± 0.012) | 0.4 ± 0.1<br>(0.016 ± 0.004)   | 1.4 ± 0.1<br>(0.055 ± 0.004) | 7"        | 1000 |
| LMLP06A6****CTAR | 6.3 ± 0.1<br>(0.248 ± 0.004)  | 6.3 ± 0.1<br>(0.248 ± 0.004)  | 8.0 ± 0.1<br>(0.315 ± 0.004)  | 5.5 ± 0.1<br>(0.217 ± 0.004) | 12.0 ± 0.3<br>(0.472 ± 0.012) | 0.4 ± 0.1<br>(0.016 ± 0.004)   | 1.6 ± 0.1<br>(0.063 ± 0.004) | 7"        | 1000 |
| LMLP06B6****CTAS | 6.3 ± 0.1<br>(0.248 ± 0.004)  | 6.3 ± 0.1<br>(0.248 ± 0.004)  | 8.0 ± 0.1<br>(0.315 ± 0.004)  | 5.5 ± 0.1<br>(0.217 ± 0.004) | 12.0 ± 0.3<br>(0.472 ± 0.012) | 0.4 ± 0.1<br>(0.016 ± 0.004)   | 2.3 ± 0.1<br>(0.091 ± 0.004) | 13"       | 2500 |
| LMLP06C6****CTAS | 6.3 ± 0.1<br>(0.248 ± 0.004)  | 6.3 ± 0.1<br>(0.248 ± 0.004)  | 8.0 ± 0.1<br>(0.315 ± 0.004)  | 5.5 ± 0.1<br>(0.217 ± 0.004) | 12.0 ± 0.3<br>(0.472 ± 0.012) | 0.4 ± 0.1<br>(0.016 ± 0.004)   | 3.1 ± 0.1<br>(0.122 ± 0.004) | 13"       | 2000 |
| LMLP06D6****CTAS | 6.3 ± 0.1<br>(0.248 ± 0.004)  | 6.3 ± 0.1<br>(0.248 ± 0.004)  | 8.0 ± 0.1<br>(0.315 ± 0.004)  | 5.5 ± 0.1<br>(0.217 ± 0.004) | 12.0 ± 0.3<br>(0.472 ± 0.012) | 0.4 ± 0.1<br>(0.016 ± 0.004)   | 4.7 ± 0.1<br>(0.185 ± 0.004) | 13"       | 1500 |
| LMLP0808****CTAS | 8.3 ± 0.1<br>(0.327 ± 0.004)  | 8.3 ± 0.1<br>(0.327 ± 0.004)  | 12.0 ± 0.1<br>(0.472 ± 0.004) | 7.5 ± 0.1<br>(0.295 ± 0.004) | 16.0 ± 0.3<br>(0.630 ± 0.012) | 0.5 ± 0.1<br>(0.020 ± 0.004)   | 4.5 ± 0.1<br>(0.177 ± 0.004) | 13"       | 1000 |

### PACKAGING SPECIFICATIONS – REEL DIMENSIONS



| Code | 7" Reel   | 13" Reel |
|------|-----------|----------|
| D    | 180±1.50  | 330±1.50 |
| P    | 62.0±1.50 | 100±1.50 |



# 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

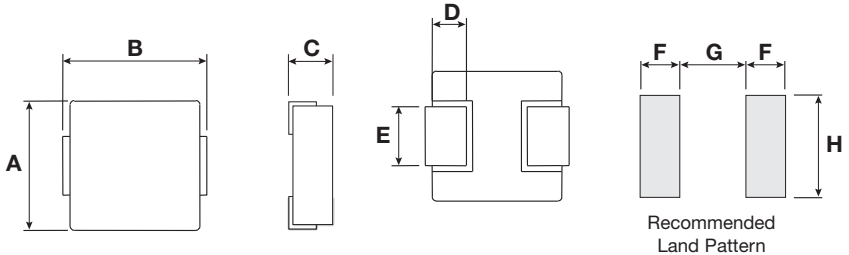
### INDUCTANCE AND RATED CURRENT RANGES

|        |                           |              |
|--------|---------------------------|--------------|
| • 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



Recommended Land Pattern

mm (inches)

| Type | A                          | B                          | C               | D                          | E                          | F               | G               | H               |
|------|----------------------------|----------------------------|-----------------|----------------------------|----------------------------|-----------------|-----------------|-----------------|
| 0405 | 4.10±0.50<br>(0.161±0.020) | 4.50±0.50<br>(0.177±0.020) | 2.10<br>(0.083) | 0.80±0.50<br>(0.031±0.020) | 1.50±0.50<br>(0.059±0.020) | 1.50<br>(0.059) | 2.50<br>(0.098) | 2.20<br>(0.087) |
| 05A6 | 5.00±0.50<br>(0.197±0.020) | 5.50±0.50<br>(0.217±0.020) | 2.00<br>(0.083) | 1.20±0.50<br>(0.047±0.020) | 1.50±0.50<br>(0.059±0.020) | 2.00<br>(0.079) | 3.00<br>(0.118) | 2.50<br>(0.098) |
| 0506 | 5.00±0.50<br>(0.197±0.020) | 5.50±0.50<br>(0.217±0.020) | 3.00<br>(0.118) | 1.20±0.50<br>(0.047±0.020) | 1.50±0.50<br>(0.059±0.020) | 2.00<br>(0.079) | 3.00<br>(0.118) | 2.50<br>(0.098) |
| 0707 | 6.80 max<br>(0.278 max)    | 7.50 max<br>(0.295 max)    | 2.00<br>(0.083) | 1.60±0.50<br>(0.063±0.020) | 2.90±0.50<br>(0.114±0.020) | 2.50<br>(0.098) | 3.70<br>(0.146) | 3.50<br>(0.138) |
| 07B7 | 6.80 max<br>(0.278 max)    | 7.50 max<br>(0.295 max)    | 2.50<br>(0.098) | 1.60±0.50<br>(0.063±0.020) | 2.90±0.50<br>(0.114±0.020) | 2.50<br>(0.098) | 3.70<br>(0.146) | 3.50<br>(0.138) |
| 07A7 | 6.80 max<br>(0.278 max)    | 7.50 max<br>(0.295 max)    | 3.00<br>(0.118) | 1.60±0.50<br>(0.063±0.020) | 2.90±0.50<br>(0.114±0.020) | 2.50<br>(0.098) | 3.70<br>(0.146) | 3.50<br>(0.138) |
| 07C7 | 6.80 max<br>(0.278 max)    | 7.50 max<br>(0.295 max)    | 5.00<br>(0.197) | 1.60±0.50<br>(0.063±0.020) | 2.90±0.50<br>(0.114±0.020) | 2.50<br>(0.098) | 3.70<br>(0.146) | 3.50<br>(0.138) |
| 1011 | 10.4 max<br>(0.409 max)    | 11.5 max<br>(0.453 max)    | 4.00<br>(0.157) | 2.00±0.50<br>(0.079±0.020) | 2.90±0.50<br>(0.114±0.020) | 3.50<br>(0.138) | 6.00<br>(0.236) | 4.00<br>(0.157) |
| 13A3 | 13.0 max<br>(0.512 max)    | 14.2 max<br>(0.559 max)    | 4.00<br>(0.157) | 2.30±0.50<br>(0.091±0.020) | 3.80±0.50<br>(0.150±0.020) | 2.90<br>(0.114) | 7.90<br>(0.311) | 5.00<br>(0.197) |
| 1313 | 13.0 max<br>(0.512 max)    | 14.2 max<br>(0.559 max)    | 5.00<br>(0.197) | 2.30±0.50<br>(0.091±0.020) | 3.80±0.50<br>(0.150±0.020) | 2.90<br>(0.114) | 7.90<br>(0.311) | 5.00<br>(0.197) |
| 13B3 | 13.0 max<br>(0.512 max)    | 14.2 max<br>(0.559 max)    | 6.50<br>(0.256) | 2.30±0.50<br>(0.091±0.020) | 3.80±0.50<br>(0.150±0.020) | 2.90<br>(0.114) | 7.90<br>(0.311) | 5.00<br>(0.197) |

# LMax Low Profile/High Current Power Inductor



## LMLP Series – Style D

### HOW TO ORDER

| LM                  | LP               | 0707                                                 | M                | R04                                                              | D            | T                  | A              | S                |
|---------------------|------------------|------------------------------------------------------|------------------|------------------------------------------------------------------|--------------|--------------------|----------------|------------------|
| <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 | LP = Low Profile | 0707 = 7x7xh<br>07A7 = 7x7xA(h)<br>(h = see catalog) | M = 20%          | R39 = 0.390μH<br>3R9 = 3.900μH<br>390 = 39.00μH<br>391 = 390.0μH |              | T = Sn Plate       | A = Standard   | S = 13" Reel     |

### ELECTRICAL CHARACTERISTICS

#### 0405

| AVX PN           | Inductance (μH) | Tolerance | Test Condition | DCR (mΩ) | ISAT (A) | IDC (A) |
|------------------|-----------------|-----------|----------------|----------|----------|---------|
| LMLP0405MR10DTAS | 0.1             | ±20%      | 100KHz, 0.25V  | 4        | 22       | 12      |
| LMLP0405MR22DTAS | 0.22            | ±20%      | 100KHz, 0.25V  | 6.6      | 12.5     | 9       |
| LMLP0405MR47DTAS | 0.47            | ±20%      | 100KHz, 0.25V  | 14       | 9.5      | 7       |
| LMLP0405MR56DTAS | 0.56            | ±20%      | 100KHz, 0.25V  | 16       | 8.5      | 6.5     |
| LMLP0405M1R0DTAS | 1               | ±20%      | 100KHz, 0.25V  | 27       | 7        | 4.5     |
| LMLP0405M1R5DTAS | 1.5             | ±20%      | 100KHz, 0.25V  | 46       | 6        | 4       |
| LMLP0405M2R2DTAS | 2.2             | ±20%      | 100KHz, 0.25V  | 58       | 5        | 3       |
| LMLP0405M3R3DTAS | 3.3             | ±20%      | 100KHz, 0.25V  | 87       | 4        | 2.5     |

#### 05A6

| AVX PN           | Inductance (μH) | Tolerance | Test Condition | DCR (mΩ) | ISAT (A) | IDC (A) |
|------------------|-----------------|-----------|----------------|----------|----------|---------|
| LMLP05A6MR10DTAS | 0.1             | ±20%      | 100KHz, 0.25V  | 3.9      | 45       | 17      |
| LMLP05A6MR22DTAS | 0.22            | ±20%      | 100KHz, 0.25V  | 5.2      | 22       | 15      |
| LMLP05A6MR33DTAS | 0.33            | ±20%      | 100KHz, 0.25V  | 8.2      | 25       | 12      |
| LMLP05A6MR47DTAS | 0.47            | ±20%      | 100KHz, 0.25V  | 9.4      | 21       | 11.5    |
| LMLP05A6MR68DTAS | 0.68            | ±20%      | 100KHz, 0.25V  | 12.4     | 15       | 10      |
| LMLP05A6M1R0DTAS | 1               | ±20%      | 100KHz, 0.25V  | 20       | 16       | 7       |
| LMLP05A6M2R2DTAS | 2.2             | ±20%      | 100KHz, 0.25V  | 50.1     | 12.5     | 4.2     |
| LMLP05A6M3R3DTAS | 3.3             | ±20%      | 100KHz, 0.25V  | 85.5     | 8.5      | 3.3     |
| LMLP05A6M4R7DTAS | 4.7             | ±20%      | 100KHz, 0.25V  | 116.6    | 5        | 2.8     |

#### 0506

| AVX PN           | Inductance (μH) | Tolerance | Test Condition | DCR (mΩ) | ISAT (A) | IDC (A) |
|------------------|-----------------|-----------|----------------|----------|----------|---------|
| LMLP0506MR10DTAS | 0.1             | ±20%      | 100KHz, 0.25V  | 3.16     | 27       | 23      |
| LMLP0506MR22DTAS | 0.22            | ±20%      | 100KHz, 0.25V  | 4.52     | 21       | 15.5    |
| LMLP0506MR33DTAS | 0.33            | ±20%      | 100KHz, 0.25V  | 5.56     | 19       | 13.7    |
| LMLP0506MR47DTAS | 0.47            | ±20%      | 100KHz, 0.25V  | 7.04     | 16       | 12.2    |
| LMLP0506MR68DTAS | 0.68            | ±20%      | 100KHz, 0.25V  | 8.96     | 13.5     | 10.2    |
| LMLP0506MR82DTAS | 0.82            | ±20%      | 100KHz, 0.25V  | 11.9     | 13       | 9.3     |
| LMLP0506M1R0DTAS | 1               | ±20%      | 100KHz, 0.25V  | 13.7     | 12       | 9.2     |
| LMLP0506M1R5DTAS | 1.5             | ±20%      | 100KHz, 0.25V  | 20.7     | 11       | 7.2     |
| LMLP0506M2R2DTAS | 2.2             | ±20%      | 100KHz, 0.25V  | 29.2     | 10       | 5.8     |
| LMLP0506M3R3DTAS | 3.3             | ±20%      | 100KHz, 0.25V  | 54.7     | 8.5      | 5       |
| LMLP0506M4R7DTAS | 4.7             | ±20%      | 100KHz, 0.25V  | 77.5     | 8.2      | 3.5     |

ISAT: The current that causes an inductance drop of approximately 25% (30% on 0405 size).

IDC: DC Current that causes an approximate ΔT of 40°C.



# LMax Low Profile/High Current Power Inductor



## LMLP Series – Style D

### 0707

| AVX PN           | Inductance (μH) | Tolerance | Test Condition | DCR (mΩ) | IsAT (A) | I <sub>DC</sub> (A) |
|------------------|-----------------|-----------|----------------|----------|----------|---------------------|
| LMLP0707MR10DTAS | 0.1             | ±20%      | 100KHz, 0.25V  | 3.5      | 40       | 18                  |
| LMLP0707MR15DTAS | 0.15            | ±20%      | 100KHz, 0.25V  | 5.2      | 38       | 15                  |
| LMLP0707MR22DTAS | 0.22            | ±20%      | 100KHz, 0.25V  | 5.7      | 26       | 14                  |
| LMLP0707MR33DTAS | 0.33            | ±20%      | 100KHz, 0.25V  | 7        | 18       | 12                  |
| LMLP0707MR47DTAS | 0.47            | ±20%      | 100KHz, 0.25V  | 9.3      | 18       | 11                  |
| LMLP0707MR68DTAS | 0.68            | ±20%      | 100KHz, 0.25V  | 13.9     | 17       | 9                   |
| LMLP0707MR82DTAS | 0.82            | ±20%      | 100KHz, 0.25V  | 15.9     | 17       | 8                   |
| LMLP0707M1R0DTAS | 1               | ±20%      | 100KHz, 0.25V  | 18.3     | 14       | 7                   |
| LMLP0707M1R5DTAS | 1.5             | ±20%      | 100KHz, 0.25V  | 34       | 11.5     | 4                   |
| LMLP0707M2R2DTAS | 2.2             | ±20%      | 100KHz, 0.25V  | 46       | 13       | 3.75                |
| LMLP0707M3R3DTAS | 3.3             | ±20%      | 100KHz, 0.25V  | 60.1     | 10       | 3.25                |
| LMLP0707M4R7DTAS | 4.7             | ±20%      | 100KHz, 0.25V  | 78       | 8        | 3                   |

### 07B7

| AVX PN           | Inductance (μH) | Tolerance | Test Condition | DCR (mΩ) | IsAT (A) | I <sub>DC</sub> (A) |
|------------------|-----------------|-----------|----------------|----------|----------|---------------------|
| LMLP07B7MR10DTAS | 0.1             | ±20%      | 100KHz, 0.25V  | 1.7      | 50       | 30                  |
| LMLP07B7MR22DTAS | 0.22            | ±20%      | 100KHz, 0.25V  | 3.2      | 34       | 21                  |
| LMLP07B7MR33DTAS | 0.33            | ±20%      | 100KHz, 0.25V  | 4.1      | 22       | 18                  |
| LMLP07B7MR47DTAS | 0.47            | ±20%      | 100KHz, 0.25V  | 6.5      | 21       | 13.5                |
| LMLP07B7MR68DTAS | 0.68            | ±20%      | 100KHz, 0.25V  | 9.4      | 18       | 11                  |
| LMLP07B7MR82DTAS | 0.82            | ±20%      | 100KHz, 0.25V  | 11.8     | 17       | 10                  |
| LMLP07B7M1R0DTAS | 1               | ±20%      | 100KHz, 0.25V  | 14.2     | 16       | 9                   |
| LMLP07B7M1R5DTAS | 1.5             | ±20%      | 100KHz, 0.25V  | 21.2     | 15       | 7.5                 |
| LMLP07B7M2R2DTAS | 2.2             | ±20%      | 100KHz, 0.25V  | 34       | 14       | 6.5                 |
| LMLP07B7M3R3DTAS | 3.3             | ±20%      | 100KHz, 0.25V  | 51.6     | 13       | 5                   |
| LMLP07B7M4R7DTAS | 4.7             | ±20%      | 100KHz, 0.25V  | 63       | 10       | 4.5                 |
| LMLP07B7M6R8DTAS | 6.8             | ±20%      | 100KHz, 0.25V  | 95       | 9        | 3.5                 |
| LMLP07B7M8R2DTAS | 8.2             | ±20%      | 100KHz, 0.25V  | 106      | 8        | 3                   |
| LMLP07B7M100DTAS | 10              | ±20%      | 100KHz, 0.25V  | 129      | 7        | 2.5                 |

### 07A7

| AVX PN           | Inductance (μH) | Tolerance | Test Condition | DCR (mΩ) | IsAT (A) | I <sub>DC</sub> (A) |
|------------------|-----------------|-----------|----------------|----------|----------|---------------------|
| LMLP07A7MR10DTAS | 0.1             | ±20%      | 100KHz, 0.25V  | 1.7      | 60       | 32.5                |
| LMLP07A7MR22DTAS | 0.22            | ±20%      | 100KHz, 0.25V  | 2.8      | 40       | 23                  |
| LMLP07A7MR33DTAS | 0.33            | ±20%      | 100KHz, 0.25V  | 3.9      | 30       | 20                  |
| LMLP07A7MR47DTAS | 0.47            | ±20%      | 100KHz, 0.25V  | 4.2      | 26       | 17.5                |
| LMLP07A7MR68DTAS | 0.68            | ±20%      | 100KHz, 0.25V  | 5.5      | 25       | 15.5                |
| LMLP07A7MR82DTAS | 0.82            | ±20%      | 100KHz, 0.25V  | 8        | 24       | 13                  |
| LMLP07A7M1R0DTAS | 1               | ±20%      | 100KHz, 0.25V  | 10       | 22       | 11                  |
| LMLP07A7M1R5DTAS | 1.5             | ±20%      | 100KHz, 0.25V  | 15       | 18       | 9                   |
| LMLP07A7M2R2DTAS | 2.2             | ±20%      | 100KHz, 0.25V  | 20       | 14       | 8                   |
| LMLP07A7M3R3DTAS | 3.3             | ±20%      | 100KHz, 0.25V  | 30       | 13.5     | 6                   |
| LMLP07A7M4R7DTAS | 4.7             | ±20%      | 100KHz, 0.25V  | 40       | 10       | 5.5                 |
| LMLP07A7M6R8DTAS | 6.8             | ±20%      | 100KHz, 0.25V  | 60       | 8        | 4.5                 |
| LMLP07A7M8R2DTAS | 8.2             | ±20%      | 100KHz, 0.25V  | 68       | 7.5      | 4                   |
| LMLP07A7M100DTAS | 10              | ±20%      | 100KHz, 0.25V  | 105      | 7        | 3                   |

I<sub>SA</sub>T: The current that causes an inductance drop of approximately 25%.

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

### 07C7

| AVX PN           | Inductance (μH) | Tolerance | Test Condition | DCR (mΩ) | IsAT (A) | I <sub>DC</sub> (A) |
|------------------|-----------------|-----------|----------------|----------|----------|---------------------|
| LMLP07C7MR56DTAS | 0.56            | ±20%      | 100KHz, 0.25V  | 3.6      | 12       | 20                  |
| LMLP07C7MR68DTAS | 0.68            | ±20%      | 100KHz, 0.25V  | 4.5      | 11.5     | 18                  |
| LMLP07C7MR82DTAS | 0.82            | ±20%      | 100KHz, 0.25V  | 4.9      | 13       | 16.5                |
| LMLP07C7M1R0DTAS | 1               | ±20%      | 100KHz, 0.25V  | 6.5      | 15       | 13                  |
| LMLP07C7M1R5DTAS | 1.5             | ±20%      | 100KHz, 0.25V  | 9        | 12       | 12                  |
| LMLP07C7M2R2DTAS | 2.2             | ±20%      | 100KHz, 0.25V  | 13.6     | 10       | 10                  |
| LMLP07C7M3R3DTAS | 3.3             | ±20%      | 100KHz, 0.25V  | 20.9     | 8        | 8                   |
| LMLP07C7M4R7DTAS | 4.7             | ±20%      | 100KHz, 0.25V  | 30.3     | 7        | 6.5                 |
| LMLP07C7M5R6DTAS | 5.6             | ±20%      | 100KHz, 0.25V  | 34.4     | 7        | 6                   |
| LMLP07C7M6R8DTAS | 6.8             | ±20%      | 100KHz, 0.25V  | 44.6     | 5.5      | 5.5                 |
| LMLP07C7M8R2DTAS | 8.2             | ±20%      | 100KHz, 0.25V  | 50.7     | 5        | 5                   |
| LMLP07C7M100DTAS | 10              | ±20%      | 100KHz, 0.25V  | 71.3     | 4.5      | 4.5                 |

### 1011

| AVX PN           | Inductance (μH) | Tolerance | Test Condition | DCR (mΩ) | IsAT (A) | I <sub>DC</sub> (A) |
|------------------|-----------------|-----------|----------------|----------|----------|---------------------|
| LMLP1011MR19DTAS | 0.19            | ±20%      | 100KHz, 0.25V  | 0.95     | 90       | 40                  |
| LMLP1011MR36DTAS | 0.36            | ±20%      | 100KHz, 0.25V  | 1.4      | 60       | 31.5                |
| LMLP1011MR47DTAS | 0.47            | ±20%      | 100KHz, 0.25V  | 1.6      | 38       | 26                  |
| LMLP1011MR56DTAS | 0.56            | ±20%      | 100KHz, 0.25V  | 1.8      | 49       | 27.5                |
| LMLP1011M1R0DTAS | 1               | ±20%      | 100KHz, 0.25V  | 4.1      | 36       | 17.5                |
| LMLP1011M1R5DTAS | 1.5             | ±20%      | 100KHz, 0.25V  | 5.8      | 27.5     | 15                  |
| LMLP1011M2R2DTAS | 2.2             | ±20%      | 100KHz, 0.25V  | 9        | 25.6     | 12                  |
| LMLP1011M3R3DTAS | 3.3             | ±20%      | 100KHz, 0.25V  | 11.8     | 18.6     | 10                  |
| LMLP1011M4R7DTAS | 4.7             | ±20%      | 100KHz, 0.25V  | 16.5     | 17       | 9.5                 |
| LMLP1011M5R6DTAS | 5.6             | ±20%      | 100KHz, 0.25V  | 19.3     | 16       | 8.5                 |
| LMLP1011M6R8DTAS | 6.8             | ±20%      | 100KHz, 0.25V  | 23.3     | 13.5     | 8                   |
| LMLP1011M100DTAS | 10              | ±20%      | 100KHz, 0.25V  | 36.5     | 12       | 6.8                 |
| LMLP1011M150DTAS | 15              | ±20%      | 100KHz, 0.25V  | 65       | 7        | 3.5                 |
| LMLP1011M220DTAS | 22              | ±20%      | 100KHz, 0.25V  | 120      | 3        | 2                   |
| LMLP1011M330DTAS | 33              | ±20%      | 100KHz, 0.25V  | 200      | 2.8      | 1.8                 |
| LMLP1011M470DTAS | 47              | ±20%      | 100KHz, 0.25V  | 210      | 3        | 1.2                 |

### 13A3

| AVX PN           | Inductance (μH) | Tolerance | Test Condition | DCR (mΩ) | IsAT (A) | I <sub>DC</sub> (A) |
|------------------|-----------------|-----------|----------------|----------|----------|---------------------|
| LMLP13A3MR10DTAS | 0.1             | ±20%      | 100KHz, 0.25V  | 0.96     | 84       | 43                  |
| LMLP13A3MR15DTAS | 0.15            | ±20%      | 100KHz, 0.25V  | 1.2      | 75       | 41                  |
| LMLP13A3MR22DTAS | 0.22            | ±20%      | 100KHz, 0.25V  | 1.3      | 65       | 38.5                |
| LMLP13A3MR33DTAS | 0.33            | ±20%      | 100KHz, 0.25V  | 1.5      | 62       | 36.5                |
| LMLP13A3MR47DTAS | 0.47            | ±20%      | 100KHz, 0.25V  | 2        | 55       | 32                  |
| LMLP13A3MR60DTAS | 0.6             | ±20%      | 100KHz, 0.25V  | 2.2      | 51       | 29                  |
| LMLP13A3MR68DTAS | 0.68            | ±20%      | 100KHz, 0.25V  | 2.5      | 49       | 28                  |
| LMLP13A3MR82DTAS | 0.82            | ±20%      | 100KHz, 0.25V  | 3        | 44       | 25                  |
| LMLP13A3M1R0DTAS | 1               | ±20%      | 100KHz, 0.25V  | 3.5      | 40       | 24                  |
| LMLP13A3M1R5DTAS | 1.5             | ±20%      | 100KHz, 0.25V  | 5.5      | 35       | 19                  |
| LMLP13A3M1R8DTAS | 1.8             | ±20%      | 100KHz, 0.25V  | 7        | 30       | 16.5                |
| LMLP13A3M2R2DTAS | 2.2             | ±20%      | 100KHz, 0.25V  | 8        | 29       | 16                  |
| LMLP13A3M3R3DTAS | 3.3             | ±20%      | 100KHz, 0.25V  | 12       | 27       | 12                  |
| LMLP13A3M4R7DTAS | 4.7             | ±20%      | 100KHz, 0.25V  | 15       | 24       | 10                  |
| LMLP13A3M5R6DTAS | 5.6             | ±20%      | 100KHz, 0.25V  | 19       | 19       | 9.5                 |
| LMLP13A3M6R8DTAS | 6.8             | ±20%      | 100KHz, 0.25V  | 22       | 18       | 9                   |
| LMLP13A3M8R2DTAS | 8.2             | ±20%      | 100KHz, 0.25V  | 28       | 16       | 8.5                 |
| LMLP13A3M100DTAS | 10              | ±20%      | 100KHz, 0.25V  | 34       | 14       | 7                   |

I<sub>SAT</sub>: The current that causes an inductance drop of approximately 25%.

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

### 1313

| AVX PN           | Inductance (μH) | Tolerance | Test Condition | DCR (mΩ) | IsAT (A) | I <sub>DC</sub> (A) |
|------------------|-----------------|-----------|----------------|----------|----------|---------------------|
| LMLP1313MR10DTAS | 0.1             | ±20%      | 100KHz, 0.25V  | 6        | 118      | 55                  |
| LMLP1313MR22DTAS | 0.22            | ±20%      | 100KHz, 0.25V  | 0.8      | 110      | 51                  |
| LMLP1313MR33DTAS | 0.33            | ±20%      | 100KHz, 0.25V  | 1.1      | 80       | 42                  |
| LMLP1313MR47DTAS | 0.47            | ±20%      | 100KHz, 0.25V  | 1.3      | 65       | 38                  |
| LMLP1313MR56DTAS | 0.56            | ±20%      | 100KHz, 0.25V  | 1.5      | 55       | 36                  |
| LMLP1313MR68DTAS | 0.68            | ±20%      | 100KHz, 0.25V  | 1.7      | 54       | 34                  |
| LMLP1313MR82DTAS | 0.82            | ±20%      | 100KHz, 0.25V  | 2.3      | 53       | 31                  |
| LMLP1313M1R0DTAS | 1               | ±20%      | 100KHz, 0.25V  | 2.5      | 50       | 29                  |
| LMLP1313M1R5DTAS | 1.5             | ±20%      | 100KHz, 0.25V  | 4.1      | 48       | 23                  |
| LMLP1313M1R8DTAS | 1.8             | ±20%      | 100KHz, 0.25V  | 4.9      | 40       | 19                  |
| LMLP1313M2R2DTAS | 2.2             | ±20%      | 100KHz, 0.25V  | 5.5      | 32       | 20                  |
| LMLP1313M3R3DTAS | 3.3             | ±20%      | 100KHz, 0.25V  | 9.2      | 32       | 15                  |
| LMLP1313M4R7DTAS | 4.7             | ±20%      | 100KHz, 0.25V  | 15       | 27       | 12                  |
| LMLP1313M5R6DTAS | 5.6             | ±20%      | 100KHz, 0.25V  | 16.5     | 22       | 11.5                |
| LMLP1313M6R8DTAS | 6.8             | ±20%      | 100KHz, 0.25V  | 18.5     | 21       | 11                  |
| LMLP1313M7R8DTAS | 7.8             | ±20%      | 100KHz, 0.25V  | 20.5     | 18       | 10                  |
| LMLP1313M8R2DTAS | 8.2             | ±20%      | 100KHz, 0.25V  | 22.5     | 18       | 9.5                 |
| LMLP1313M100DTAS | 10              | ±20%      | 100KHz, 0.25V  | 25.5     | 16       | 9                   |

### 13B3

| AVX PN           | Inductance (μH) | Tolerance | Test Condition | DCR (mΩ) | IsAT (A) | I <sub>DC</sub> (A) |
|------------------|-----------------|-----------|----------------|----------|----------|---------------------|
| LMLP13B3MR10DTAS | 0.1             | ±20%      | 100KHz, 0.25V  | 0.5      | 120      | 60                  |
| LMLP13B3MR15DTAS | 0.15            | ±20%      | 100KHz, 0.25V  | 0.6      | 118      | 55                  |
| LMLP13B3MR22DTAS | 0.22            | ±20%      | 100KHz, 0.25V  | 0.7      | 112      | 53                  |
| LMLP13B3MR30DTAS | 0.3             | ±20%      | 100KHz, 0.25V  | 0.8      | 72       | 48                  |
| LMLP13B3MR33DTAS | 0.33            | ±20%      | 100KHz, 0.25V  | 0.9      | 65       | 46                  |
| LMLP13B3MR40DTAS | 0.4             | ±20%      | 100KHz, 0.25V  | 1        | 64       | 44                  |
| LMLP13B3MR47DTAS | 0.47            | ±20%      | 100KHz, 0.25V  | 1.2      | 63       | 41                  |
| LMLP13B3MR56DTAS | 0.56            | ±20%      | 100KHz, 0.25V  | 1.4      | 62       | 37                  |
| LMLP13B3MR68DTAS | 0.68            | ±20%      | 100KHz, 0.25V  | 1.6      | 60       | 35                  |
| LMLP13B3MR82DTAS | 0.82            | ±20%      | 100KHz, 0.25V  | 1.9      | 50       | 33                  |
| LMLP13B3M1R0DTAS | 1               | ±20%      | 100KHz, 0.25V  | 2        | 49       | 32                  |
| LMLP13B3M1R2DTAS | 1.2             | ±20%      | 100KHz, 0.25V  | 2.5      | 48       | 30                  |
| LMLP13B3M1R5DTAS | 1.5             | ±20%      | 100KHz, 0.25V  | 3        | 45       | 27                  |
| LMLP13B3M1R8DTAS | 1.8             | ±20%      | 100KHz, 0.25V  | 3.2      | 41       | 24                  |
| LMLP13B3M2R2DTAS | 2.2             | ±20%      | 100KHz, 0.25V  | 4.2      | 40       | 22                  |
| LMLP13B3M3R3DTAS | 3.3             | ±20%      | 100KHz, 0.25V  | 6.8      | 35       | 18                  |
| LMLP13B3M4R7DTAS | 4.7             | ±20%      | 100KHz, 0.25V  | 8.7      | 32       | 13.5                |
| LMLP13B3M5R6DTAS | 5.6             | ±20%      | 100KHz, 0.25V  | 10       | 32       | 13.5                |
| LMLP13B3M6R8DTAS | 6.8             | ±20%      | 100KHz, 0.25V  | 14       | 16.5     | 11.5                |
| LMLP13B3M8R2DTAS | 8.2             | ±20%      | 100KHz, 0.25V  | 15.5     | 16       | 10.5                |
| LMLP13B3M100DTAS | 10              | ±20%      | 100KHz, 0.25V  | 17.2     | 15.5     | 10                  |

I<sub>SAT</sub>: The current that causes an inductance drop of approximately 25%.

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

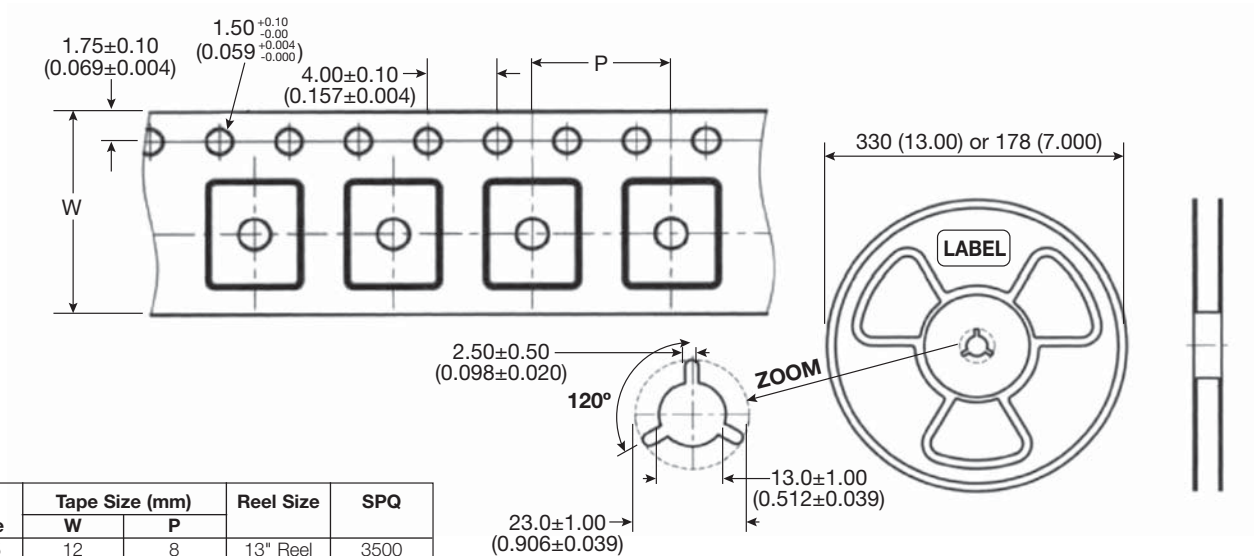
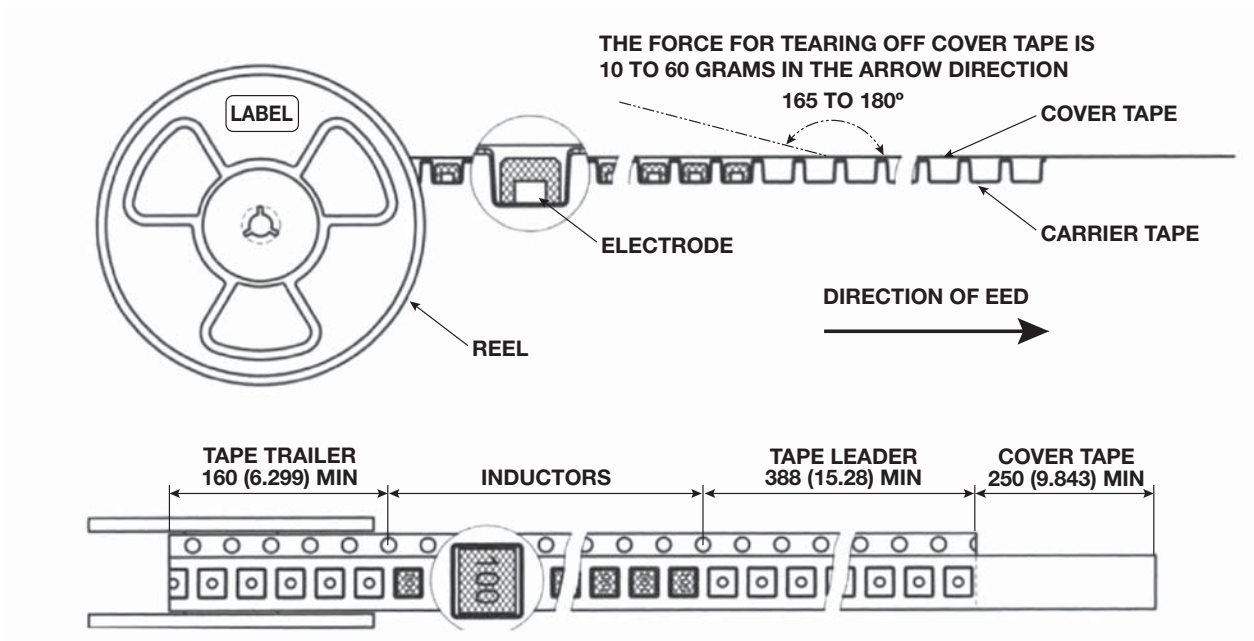
### GENERAL CHARACTERISTICS

| 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.<br>No disconnection or short circuit.<br>No change in appearance. | 260±5°C for 4±1 seconds                                                                                                                                                                                                                                                                                                |      |                  |             |   |         |    |   |                  |   |   |         |    |   |                  |   |
| Heat Resistance        | Inductance value must remain within 20% of initial value.<br>No disconnection or short circuit.<br>No change in appearance. | Temperature: 125±5°C<br>Time: 500 hours<br>Tested after 2 hours at room temperature                                                                                                                                                                                                                                    |      |                  |             |   |         |    |   |                  |   |   |         |    |   |                  |   |
| Cold Resistance        | Inductance value must remain within 20% of initial value.<br>No disconnection or short circuit.<br>No change in appearance. | Temperature: -40±5°C<br>Time: 500 hours<br>Tested after 2 hours at room temperature                                                                                                                                                                                                                                    |      |                  |             |   |         |    |   |                  |   |   |         |    |   |                  |   |
| Thermal Shock          | Inductance value must remain within 20% of initial value.<br>No disconnection or short circuit.<br>No change in appearance. | <b>One Cycle</b> <table> <tr> <th>Step</th><th>Temperature (°C)</th><th>Time (min.)</th></tr> <tr> <td>1</td><td>-40±5°C</td><td>30</td></tr> <tr> <td>2</td><td>Room Temperature</td><td>3</td></tr> <tr> <td>3</td><td>125±5°C</td><td>30</td></tr> <tr> <td>4</td><td>Room Temperature</td><td>3</td></tr> </table> | Step | Temperature (°C) | Time (min.) | 1 | -40±5°C | 30 | 2 | Room Temperature | 3 | 3 | 125±5°C | 30 | 4 | Room Temperature | 3 |
| 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.<br>No disconnection or short circuit.<br>No change in appearance. | Temperature: 40±2°C at 90~95% relative humidity .<br>Time: 500 Hours<br>Tested after 2 hours at room temperature                                                                                                                                                                                                       |      |                  |             |   |         |    |   |                  |   |   |         |    |   |                  |   |
| Vibration Test         | Inductance value must remain within ±5% of initial value.<br>No change in appearance                                        | 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



| Size Code | Tape Size (mm) |    | Reel Size | SPQ  |
|-----------|----------------|----|-----------|------|
|           | W              | P  |           |      |
| 0405      | 12             | 8  | 13" Reel  | 3500 |
| 05A6      | 12             | 8  | 13" Reel  | 3000 |
| 0506      | 12             | 8  | 13" Reel  | 2500 |
| 0707      | 16             | 12 | 13" Reel  | 2000 |
| 07B7      | 16             | 12 | 13" Reel  | 2000 |
| 07A7      | 16             | 12 | 13" Reel  | 1500 |
| 07C7      | 16             | 12 | 13" Reel  | 800  |
| 1011      | 24             | 16 | 13" Reel  | 1000 |
| 13A3      | 24             | 16 | 13" Reel  | 1000 |
| 1313      | 24             | 16 | 13" Reel  | 500  |
| 13B3      | 24             | 16 | 13" Reel  | 500  |



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