

# 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

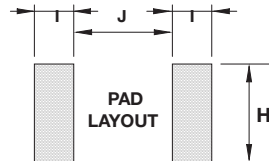
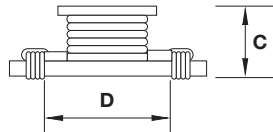
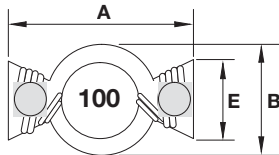
- Saturation Rated Current: The current when the inductance becomes 30% lower than its initial value. (Ta=25°C)
- Operating temperature range: -40 ~ 85°C

### 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)

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