



## Features

- Available in E12 series
- Low profile - 3.8 mm unit height
- High current
- RoHS compliant\*

## Applications

- Input/output of DC/DC converters
- Power supplies for:
  - Portable communication equipment
  - Camcorders
  - LCD TVs

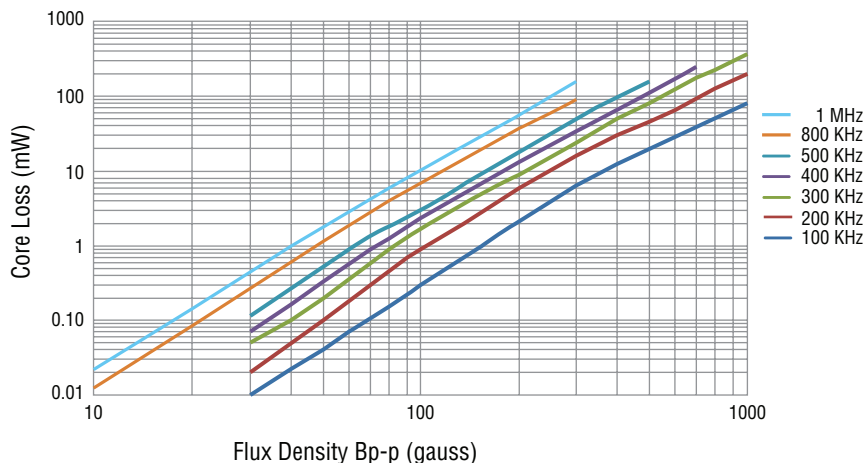
# SRR0804 Series - Shielded Power Inductors

## Electrical Specifications

| Bourns Part No. | Inductance<br>1 KHz |        | Q<br>Ref. | Test<br>Frequency<br>(MHz) | SRF<br>Min.<br>(MHz) | RDC<br>Max.<br>(Ω) | I rms<br>Max.<br>(A) | I sat<br>Typ.<br>(A) | **K-<br>Factor |
|-----------------|---------------------|--------|-----------|----------------------------|----------------------|--------------------|----------------------|----------------------|----------------|
|                 | μH                  | Tol. % |           |                            |                      |                    |                      |                      |                |
| SRR0804-5R0M    | 5.0                 | ± 20   | 20        | 7.96M                      | 45.0                 | 0.08               | 1.70                 | 2.80                 | 141            |
| SRR0804-7R5M    | 7.5                 | ± 20   | 20        | 7.96M                      | 40.0                 | 0.10               | 1.40                 | 2.60                 | 120            |
| SRR0804-100M    | 10                  | ± 20   | 38        | 2.52M                      | 32.0                 | 0.12               | 1.20                 | 2.20                 | 105            |
| SRR0804-120M    | 12                  | ± 20   | 38        | 2.52M                      | 28.0                 | 0.15               | 1.10                 | 1.90                 | 93             |
| SRR0804-150M    | 15                  | ± 20   | 38        | 2.52M                      | 25.0                 | 0.17               | 1.00                 | 1.60                 | 83             |
| SRR0804-180Y    | 18                  | ± 15   | 35        | 2.52M                      | 23.0                 | 0.19               | 0.90                 | 1.50                 | 76             |
| SRR0804-220Y    | 22                  | ± 15   | 30        | 2.52M                      | 22.0                 | 0.25               | 0.80                 | 1.30                 | 69             |
| SRR0804-270Y    | 27                  | ± 15   | 28        | 2.52M                      | 18.0                 | 0.27               | 0.70                 | 1.30                 | 61             |
| SRR0804-330Y    | 33                  | ± 15   | 26        | 2.52M                      | 17.0                 | 0.30               | 0.65                 | 1.10                 | 55             |
| SRR0804-390Y    | 39                  | ± 15   | 26        | 2.52M                      | 16.0                 | 0.38               | 0.60                 | 1.00                 | 52             |
| SRR0804-470K    | 47                  | ± 10   | 24        | 2.52M                      | 14.0                 | 0.46               | 0.55                 | 0.95                 | 47             |
| SRR0804-560K    | 56                  | ± 10   | 24        | 2.52M                      | 12.0                 | 0.60               | 0.50                 | 0.85                 | 43             |
| SRR0804-680K    | 68                  | ± 10   | 22        | 2.52M                      | 11.0                 | 0.70               | 0.45                 | 0.80                 | 39             |
| SRR0804-820K    | 82                  | ± 10   | 20        | 2.52M                      | 10.0                 | 0.80               | 0.40                 | 0.73                 | 36             |
| SRR0804-101K    | 100                 | ± 10   | 50        | 0.796M                     | 9.0                  | 0.95               | 0.37                 | 0.65                 | 33             |
| SRR0804-121K    | 120                 | ± 10   | 50        | 0.796M                     | 8.5                  | 1.00               | 0.35                 | 0.55                 | 30             |
| SRR0804-151K    | 150                 | ± 10   | 53        | 0.796M                     | 7.0                  | 1.30               | 0.30                 | 0.50                 | 27             |
| SRR0804-181K    | 180                 | ± 10   | 53        | 0.796M                     | 6.0                  | 1.45               | 0.28                 | 0.45                 | 24             |
| SRR0804-221K    | 220                 | ± 10   | 55        | 0.796M                     | 5.5                  | 1.90               | 0.24                 | 0.40                 | 22             |
| SRR0804-271K    | 270                 | ± 10   | 50        | 0.796M                     | 5.5                  | 2.15               | 0.22                 | 0.35                 | 20             |
| SRR0804-331K    | 330                 | ± 10   | 60        | 0.796M                     | 5.0                  | 2.80               | 0.19                 | 0.32                 | 18             |
| SRR0804-391K    | 390                 | ± 10   | 55        | 0.796M                     | 4.5                  | 3.30               | 0.17                 | 0.30                 | 16             |
| SRR0804-471K    | 470                 | ± 10   | 60        | 0.796M                     | 4.0                  | 3.60               | 0.16                 | 0.28                 | 15             |

\*\*K-Factor: To calculate core flux density,  $B_p$ -p (gauss) =  $K \times (\mu H) \times \Delta I$  (peak-to-peak ripple current, A), determine core loss from *Core Loss vs. Flux Density* plot.

## Core Loss vs. Flux Density



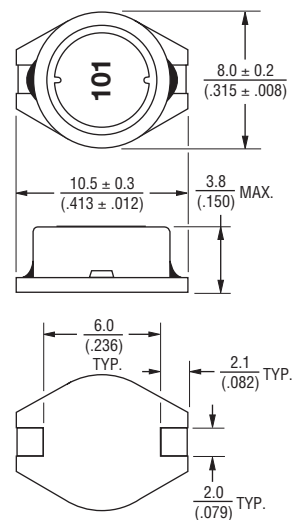
## General Specifications

Test Voltage ..... 1 V  
 Reflow Soldering .. 250 °C, 10 sec. max.  
 (In compliance with JEDEC,  
 J-STD-020C, Table 4-2)  
 Operating Temperature  
 ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature .. -40 °C to +125 °C  
 Resistance to Soldering Heat  
 ..... 250 °C, 10 sec. max.  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM)..... N/A

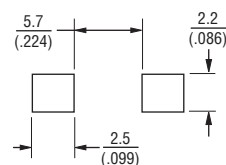
## Materials

Core ..... Ferrite DR & RI  
 Wire ..... Enameled copper  
 Base ..... LCP E4008  
 Terminal ..... Cu/Ni/Sn  
 Rated Current  
 ..... Ind. drop of 10 % typ. at Isat  
 Temperature Rise  
 ..... 40 °C max. at rated I rms  
 Packaging ..... 1000 pcs. per reel

## Product Dimensions



## Recommended Layout



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

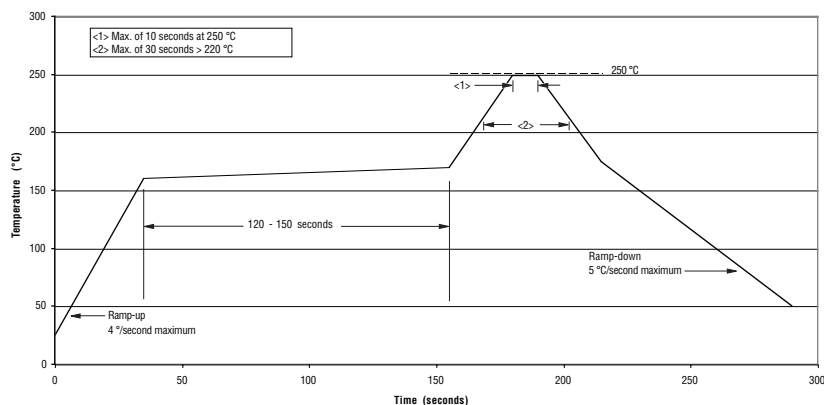
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

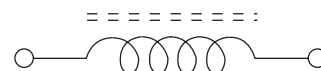
# SRR0804 Series - Shielded Power Inductors

**BOURNS®**

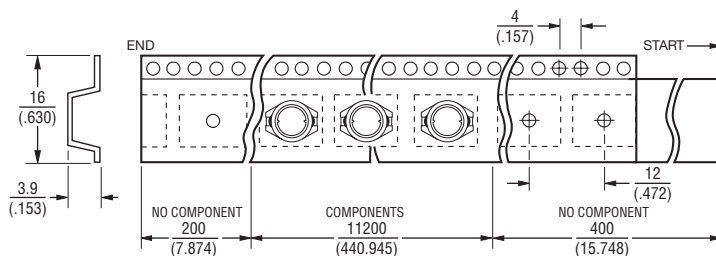
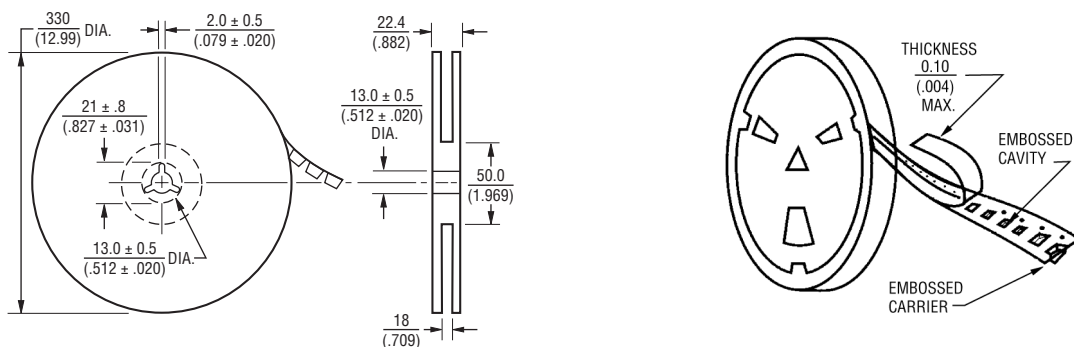
## Soldering Profile



## Schematic



## Packaging Specifications



USER DIRECTION OF FEED

QTY: 1000 PCS. PER REEL

DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

REV. 03/18

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# Mouser Electronics

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## Bourns:

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[SRR0804-101KL](#) [SRR0804-150ML](#) [SRR0804-221KL](#) [SRR0804-680KL](#) [SRR0804-330YL](#) [SRR0804-470K](#) [SRR0804-100M](#) [SRR0804-331K](#) [SRR0804-120M](#) [SRR0804-820K](#) [SRR0804-270Y](#) [SRR0804-680K](#) [SRR0804-180Y](#)  
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[SRR0804-391K](#)