



## Features

- Available in E12 values
- Height of 4.5 mm maximum
- Current rating to 9.3 amps
- RoHS compliant\*

## Applications

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

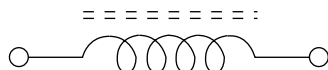
# SRR1240 Series - Shielded SMD Power Inductors

## Electrical Specifications

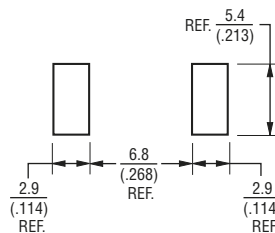
| Bourns Part No. | Inductance<br>100 KHz |        | Q<br>Typ. | Test<br>Freq.<br>(MHz) | SRF<br>Typ.<br>(MHz) | RDC<br>Max.<br>(mΩ) | I rms<br>Max.<br>(A) | I sat<br>Typ.<br>(A) | **K-<br>Factor |
|-----------------|-----------------------|--------|-----------|------------------------|----------------------|---------------------|----------------------|----------------------|----------------|
|                 | (μH)                  | Tol. % |           |                        |                      |                     |                      |                      |                |
| SRR1240-1R0Y    | 1.0                   | ± 30   | 10        | 7.96                   | 85                   | 7.0                 | 9.30                 | 9.20                 | 160            |
| SRR1240-1R5Y    | 1.5                   | ± 30   | 16        | 7.96                   | 80                   | 9.5                 | 9.20                 | 9.00                 | 131            |
| SRR1240-2R4Y    | 2.4                   | ± 30   | 10        | 7.96                   | 54                   | 11.5                | 8.00                 | 7.80                 | 111            |
| SRR1240-3R3Y    | 3.3                   | ± 30   | 14        | 7.96                   | 43                   | 15.0                | 6.80                 | 6.50                 | 96             |
| SRR1240-3R9Y    | 3.9                   | ± 30   | 14        | 7.96                   | 39                   | 15.0                | 6.35                 | 6.20                 | 96             |
| SRR1240-4R7M    | 4.7                   | ± 20   | 16        | 7.96                   | 33                   | 18.0                | 6.00                 | 5.60                 | 85             |
| SRR1240-5R6M    | 5.6                   | ± 20   | 14        | 7.96                   | 35                   | 20.0                | 5.40                 | 5.10                 | 76             |
| SRR1240-6R8M    | 6.8                   | ± 20   | 14        | 7.96                   | 34                   | 23.0                | 5.20                 | 4.70                 | 69             |
| SRR1240-8R2M    | 8.2                   | ± 20   | 10        | 7.96                   | 32                   | 27.0                | 4.50                 | 4.30                 | 63             |
| SRR1240-100M    | 10.0                  | ± 20   | 17        | 2.52                   | 27                   | 32.0                | 4.00                 | 4.00                 | 58             |
| SRR1240-120M    | 12.0                  | ± 20   | 16        | 2.52                   | 25                   | 38.0                | 3.80                 | 3.60                 | 50             |
| SRR1240-150M    | 15.0                  | ± 20   | 16        | 2.52                   | 22                   | 47.0                | 3.50                 | 3.20                 | 47             |
| SRR1240-180M    | 18.0                  | ± 20   | 14        | 2.52                   | 20                   | 55.0                | 3.20                 | 3.00                 | 41             |
| SRR1240-220M    | 22.0                  | ± 20   | 18        | 2.52                   | 16                   | 67.5                | 3.00                 | 2.60                 | 37             |
| SRR1240-270M    | 27.0                  | ± 20   | 16        | 2.52                   | 15.5                 | 85.0                | 2.55                 | 2.35                 | 34             |
| SRR1240-330M    | 33.0                  | ± 20   | 19        | 2.52                   | 15                   | 97.0                | 2.30                 | 2.10                 | 31             |
| SRR1240-390M    | 39.0                  | ± 20   | 14        | 2.52                   | 14                   | 120.0               | 2.15                 | 2.00                 | 28             |
| SRR1240-470M    | 47.0                  | ± 20   | 19        | 2.52                   | 13                   | 135.0               | 2.00                 | 1.80                 | 26             |
| SRR1240-560M    | 56.0                  | ± 20   | 16        | 2.52                   | 12                   | 170.0               | 1.80                 | 1.65                 | 24             |
| SRR1240-680M    | 68.0                  | ± 20   | 19        | 2.52                   | 11                   | 200.0               | 1.50                 | 1.50                 | 22             |
| SRR1240-820M    | 82.0                  | ± 20   | 16        | 2.52                   | 10                   | 250.0               | 1.35                 | 1.35                 | 20             |
| SRR1240-101M    | 100.0                 | ± 20   | 14        | 0.796                  | 8                    | 300.0               | 1.25                 | 1.20                 | 18             |
| SRR1240-121K    | 120.0                 | ± 10   | 12        | 0.796                  | 7.8                  | 370.0               | 1.20                 | 1.15                 | 16             |
| SRR1240-151K    | 150.0                 | ± 10   | 12        | 0.796                  | 7.5                  | 440.0               | 1.10                 | 1.05                 | 14             |
| SRR1240-181K    | 180.0                 | ± 10   | 12        | 0.796                  | 7.0                  | 550.0               | 0.98                 | 0.95                 | 13             |
| SRR1240-221K    | 220.0                 | ± 10   | 12        | 0.796                  | 6.6                  | 660.0               | 0.92                 | 0.90                 | 12             |
| SRR1240-271K    | 270.0                 | ± 10   | 10        | 0.796                  | 6.0                  | 780.0               | 0.80                 | 0.80                 | 11             |
| SRR1240-331K    | 330.0                 | ± 10   | 12        | 0.796                  | 5.5                  | 950.0               | 0.75                 | 0.75                 | 10             |
| SRR1240-391K    | 390.0                 | ± 10   | 12        | 0.796                  | 5.0                  | 1150.0              | 0.70                 | 0.65                 | 9              |
| SRR1240-471K    | 470.0                 | ± 10   | 12        | 0.796                  | 4.5                  | 1350.0              | 0.62                 | 0.60                 | 8              |
| SRR1240-561K    | 560.0                 | ± 10   | 12        | 0.796                  | 4.0                  | 1500.0              | 0.55                 | 0.52                 | 7              |
| SRR1240-681K    | 680.0                 | ± 10   | 14        | 0.796                  | 3.8                  | 2000.0              | 0.50                 | 0.48                 | 7              |
| SRR1240-821K    | 820.0                 | ± 10   | 10        | 0.796                  | 3.5                  | 2400.0              | 0.45                 | 0.42                 | 6              |
| SRR1240-102K    | 1000.0                | ± 10   | 16        | 0.252                  | 2.8                  | 3000.0              | 0.42                 | 0.40                 | 6              |

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

## Electrical Schematic



## Recommended Layout



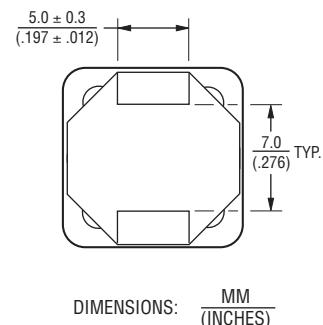
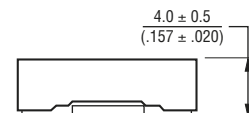
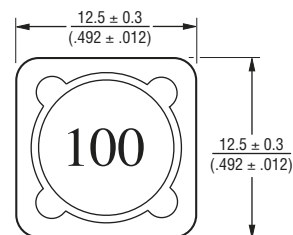
## General Specifications

Test Voltage ..... 0.1 V  
 Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature ..... -40 °C to +125 °C  
 Resistance to Soldering Heat ..... 260 °C for 10 sec.  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM) ..... N/A

## Materials

Core ..... Ferrite DR & RI  
 Wire ..... Enameled copper wire 130  
 Terminal ..... Cu/Ni/Sn  
 Rated Current ..... Ind. drop of 25 % typ. at Isat  
 Temperature Rise ..... 40 °C max. at rated I rms  
 Packaging ..... 800 pcs. per reel

## Product Dimensions



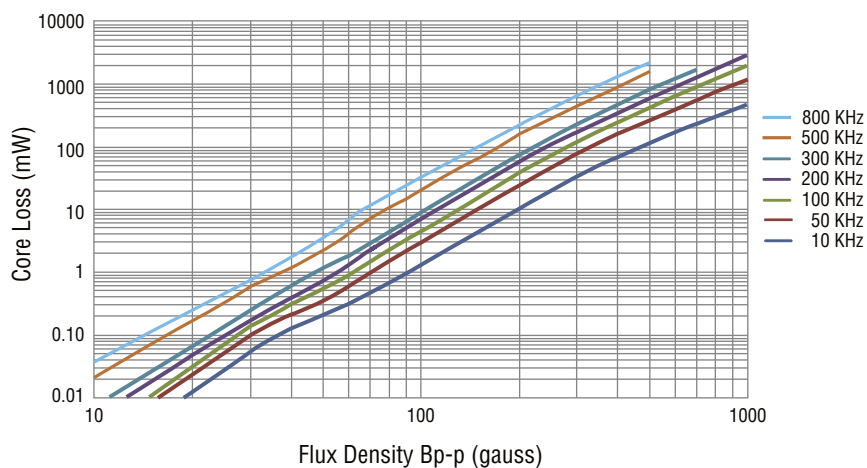
**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
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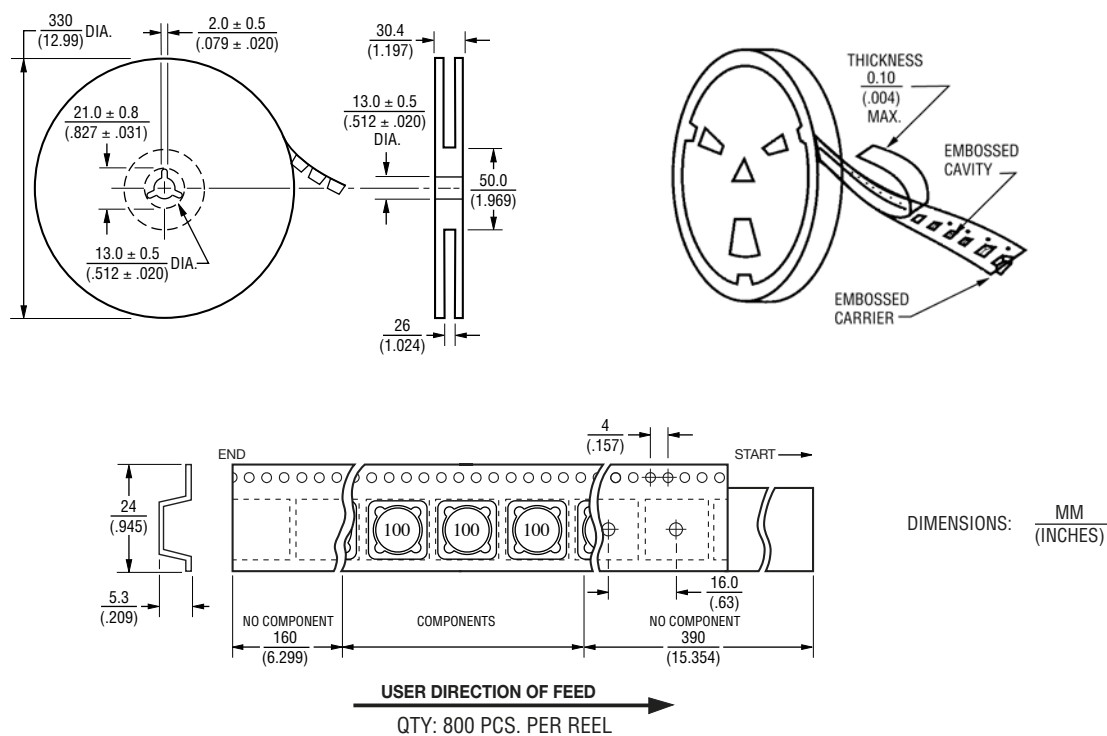
# SRR1240 Series - Shielded SMD Power Inductors

**BOURNS®**

## Core Loss vs. Flux Density



## Packaging Specifications



REV. 03/18

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Users should verify actual device performance in their specific applications.

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