



**THE DATASHEET OF
SRR1240-221K**





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 100 KHz | | Q Typ. | Test Freq. (MHz) | SRF Typ. (MHz) | RDC Max. (mΩ) | I rms Max. (A) | I sat Typ. (A) | **K- 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



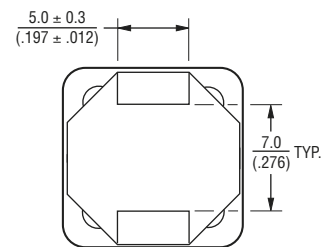
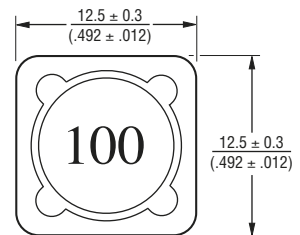
General Specifications

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 Irms
 Packaging 800 pcs. per reel

Product Dimensions



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



WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*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. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

SRR1240 Series - Shielded SMD Power Inductors

BOURNS®

Core Loss vs. Flux Density



Packaging Specifications



REV. 03/18

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