



**THE DATASHEET OF
SRR1210-6R8Y**





Features

- Available in E12 series
- Height of 10 mm
- Current rating up to 11 A
- RoHS compliant*

Applications

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

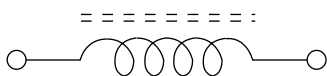
SRR1210 Series - Shielded SMD Power Inductors

Electrical Characteristics

| Bourns Part No. | Inductance 1 kHz / 0.25 V | | Q Ref. | Test Frequency (MHz) | SRF MHz Typ. | DCR max. (mΩ) | I rms (A) | I sat (A) | **K- Factor |
|-----------------|------------------------------|--------|-----------|----------------------------|--------------------|---------------------|--------------|--------------|----------------|
| | μH | Tol. % | | | | | | | |
| SRR1210-1R0Y | 1.0 | ±30 | 10 | 7.96 | 85 | 6.0 | 11.0 | 16.5 | 86 |
| SRR1210-1R8Y | 1.8 | ±30 | 10 | 7.96 | 56 | 7.5 | 10.2 | 13.2 | 67 |
| SRR1210-2R2Y | 2.2 | ±30 | 10 | 7.96 | 54 | 9.0 | 9.5 | 12.2 | 55 |
| SRR1210-3R3Y | 3.3 | ±30 | 15 | 7.96 | 44 | 10 | 9.0 | 10.5 | 46 |
| SRR1210-4R7Y | 4.7 | ±30 | 8 | 7.96 | 35 | 12 | 8.5 | 9.6 | 40 |
| SRR1210-5R6Y | 5.6 | ±30 | 12 | 7.96 | 28 | 14 | 8.0 | 8.5 | 35 |
| SRR1210-6R8Y | 6.8 | ±30 | 12 | 7.96 | 20 | 15 | 7.9 | 8.3 | 32 |
| SRR1210-8R2Y | 8.2 | ±30 | 11 | 7.96 | 16 | 17 | 7.3 | 7.5 | 29 |
| SRR1210-100M | 10 | ±20 | 16 | 2.52 | 12 | 18 | 6.5 | 6.5 | 26 |
| SRR1210-120M | 12 | ±20 | 14 | 2.52 | 18 | 22 | 6.3 | 6.1 | 24 |
| SRR1210-150M | 15 | ±20 | 16 | 2.52 | 10.5 | 32 | 5.8 | 5.3 | 21 |
| SRR1210-180M | 18 | ±20 | 13 | 2.52 | 8.0 | 35 | 5.5 | 5.1 | 19 |
| SRR1210-220M | 22 | ±20 | 16 | 2.52 | 8.0 | 38 | 5.2 | 4.5 | 17 |
| SRR1210-270M | 27 | ±20 | 16 | 2.52 | 6.5 | 40 | 5.0 | 4.2 | 15 |
| SRR1210-330M | 33 | ±20 | 16 | 2.52 | 6.5 | 52 | 4.4 | 3.7 | 14 |
| SRR1210-390M | 39 | ±20 | 16 | 2.52 | 4.5 | 66 | 4.2 | 3.5 | 13 |
| SRR1210-470M | 47 | ±20 | 16 | 2.52 | 4.5 | 72 | 3.8 | 3.1 | 12 |
| SRR1210-560M | 56 | ±20 | 8 | 2.52 | 4.0 | 90 | 3.4 | 2.9 | 11 |
| SRR1210-680M | 68 | ±20 | 12 | 2.52 | 3.8 | 102 | 3.0 | 2.7 | 10 |
| SRR1210-820M | 82 | ±20 | 15 | 2.52 | 3.5 | 112 | 2.8 | 2.5 | 9 |
| SRR1210-101M | 100 | ±20 | 16 | 0.796 | 3.0 | 135 | 2.5 | 2.2 | 8 |
| SRR1210-121M | 120 | ±20 | 13 | 0.796 | 2.6 | 170 | 2.3 | 1.9 | 7 |
| SRR1210-151M | 150 | ±20 | 12 | 0.796 | 2.2 | 190 | 2.2 | 1.8 | 7 |
| SRR1210-181M | 180 | ±20 | 14 | 0.796 | 1.8 | 250 | 1.9 | 1.6 | 6 |
| SRR1210-221M | 220 | ±20 | 15 | 0.796 | 1.8 | 315 | 1.7 | 1.5 | 5 |
| SRR1210-271M | 270 | ±20 | 16 | 0.796 | 1.8 | 410 | 1.5 | 1.3 | 5 |
| SRR1210-331M | 330 | ±20 | 14 | 0.796 | 1.8 | 450 | 1.4 | 1.2 | 4 |
| SRR1210-391M | 390 | ±20 | 16 | 0.796 | 1.3 | 600 | 1.3 | 1.1 | 4 |
| SRR1210-471M | 470 | ±20 | 12 | 0.796 | 0.85 | 820 | 1.2 | 1.0 | 4 |
| SRR1210-561M | 560 | ±20 | 12 | 0.796 | 0.85 | 900 | 1.1 | 0.95 | 3 |
| SRR1210-681M | 680 | ±20 | 11 | 0.796 | 0.85 | 1200 | 1.0 | 0.85 | 3 |
| SRR1210-821M | 820 | ±20 | 6 | 0.796 | 0.85 | 1320 | 0.85 | 0.75 | 3 |
| SRR1210-102M | 1000 | ±20 | 22 | 0.796 | 0.85 | 1650 | 0.75 | 0.70 | 3 |

**K-Factor: To calculate core flux density, Bp-p (gauss) = K x L(μH) x Δ I (peak-to-peak ripple current, A), determine core loss from Core Loss vs. Flux Density plot.

Schematic



Recommended Layout



General Specifications

Operating Temperature
..... -40 °C to +125 °C
(Temperature rise included)

Storage Temperature
..... -40 °C to +125 °C

Resistance to Soldering Heat
..... 260 °C for 5 sec.

Rated Current
..... Ind. drop of 20 % typ. at Isat

Temperature Rise .. 40 °C typical at Irms

Moisture Sensitivity Level..... 1

ESD Classification (HBM)..... N/A

Materials

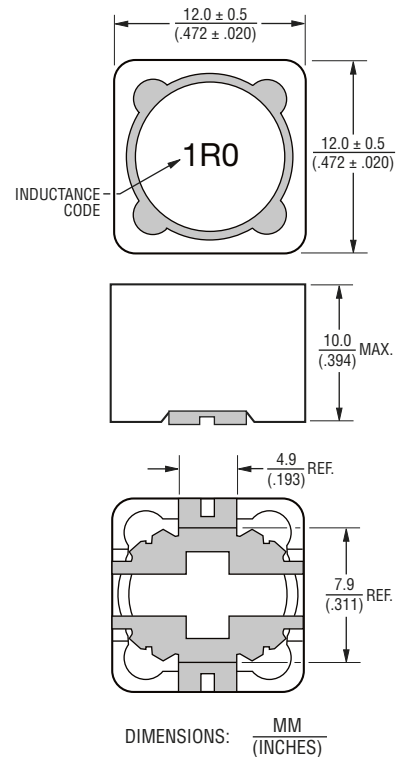
Core..... Ferrite DR & RI

Wire Enameled copper

Terminal coating Matte Sn

Packaging..... 250 pcs. per reel

Product Dimensions



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

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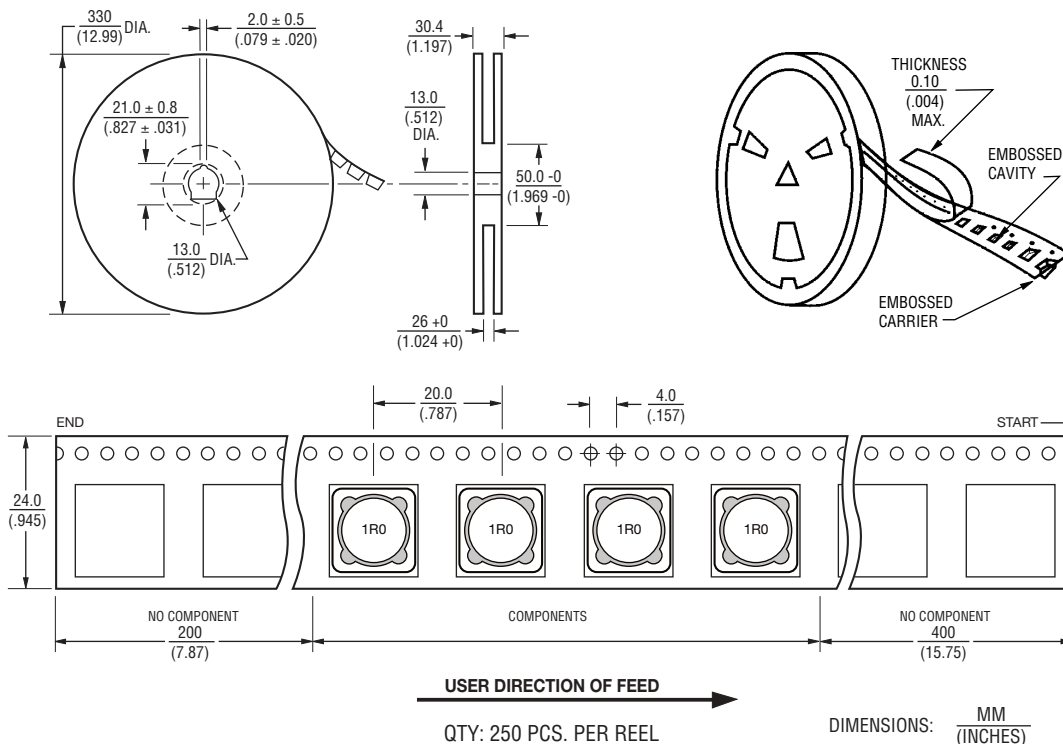
SRR1210 Series - Shielded SMD Power Inductors

BOURNS®

Core Loss vs. Flux Density



Packaging Specifications



REV. 03/18

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