



**THE DATASHEET OF
SRR1210A-561M**





Features

- Shielded construction
- Inductance range: 1.0 to 1000 μ H
- Heating current up to 11 A
- Dimensions: 12 x 12 x 10 mm
- AEC-Q200 qualified
- RoHS compliant* and halogen free**

SRR1210A Series - Shielded Power Inductors

Electrical Specifications @ 25 °C

| Bourns Part Number | Inductance @ 1 kHz / 0.25 V | | Q Ref. | Q Test Freq. (MHz) | SRF (MHz) Typ. | DCR (Ω) Max. | I rms (A) | I sat (A) | ***K-Factor |
|--------------------|-----------------------------|----------|--------|--------------------|----------------|-----------------------|-----------|-----------|-------------|
| | L (μ H) | Tol. (%) | | | | | | | |
| SRR1210A-1R0Y | 1.0 | ± 30 | 10 | 7.96 | 85 | 0.006 | 11.0 | 16.5 | 86 |
| SRR1210A-1R8Y | 1.8 | ± 30 | 10 | 7.96 | 56 | 0.075 | 10.2 | 13.2 | 67 |
| SRR1210A-2R2Y | 2.2 | ± 30 | 10 | 7.96 | 54 | 0.09 | 9.5 | 12.2 | 55 |
| SRR1210A-3R3Y | 3.3 | ± 30 | 15 | 7.96 | 44 | 0.01 | 9.0 | 10.5 | 46 |
| SRR1210A-4R7Y | 4.7 | ± 30 | 8 | 7.96 | 35 | 0.012 | 8.5 | 9.6 | 40 |
| SRR1210A-5R6Y | 5.6 | ± 30 | 12 | 7.96 | 28 | 0.0135 | 8.0 | 8.5 | 35 |
| SRR1210A-6R8Y | 6.8 | ± 30 | 12 | 7.96 | 20 | 0.015 | 7.85 | 8.3 | 32 |
| SRR1210A-8R2Y | 8.2 | ± 30 | 11 | 7.96 | 16 | 0.017 | 7.25 | 7.55 | 29 |
| SRR1210A-100M | 10 | ± 20 | 16 | 2.52 | 12 | 0.018 | 6.5 | 6.5 | 26 |
| SRR1210A-120M | 12 | ± 20 | 14 | 2.52 | 18 | 0.022 | 6.3 | 6.1 | 24 |
| SRR1210A-150M | 15 | ± 20 | 16 | 2.52 | 10.5 | 0.032 | 5.8 | 5.3 | 21 |
| SRR1210A-180M | 18 | ± 20 | 13 | 2.52 | 8 | 0.035 | 5.5 | 5.1 | 19 |
| SRR1210A-220M | 22 | ± 20 | 16 | 2.52 | 8 | 0.038 | 5.2 | 4.5 | 17 |
| SRR1210A-270M | 27 | ± 20 | 16 | 2.52 | 6.5 | 0.04 | 5.0 | 4.2 | 15 |
| SRR1210A-330M | 33 | ± 20 | 16 | 2.52 | 6.5 | 0.052 | 4.4 | 3.7 | 14 |
| SRR1210A-390M | 39 | ± 20 | 16 | 2.52 | 4.5 | 0.066 | 4.2 | 3.5 | 13 |
| SRR1210A-470M | 47 | ± 20 | 16 | 2.52 | 4.5 | 0.072 | 3.8 | 3.1 | 12 |
| SRR1210A-560M | 56 | ± 20 | 8 | 2.52 | 4 | 0.09 | 3.4 | 2.9 | 11 |
| SRR1210A-680M | 68 | ± 20 | 12 | 2.52 | 3.8 | 0.102 | 3.0 | 2.7 | 10 |
| SRR1210A-820M | 82 | ± 20 | 15 | 2.52 | 3.5 | 0.112 | 2.8 | 2.5 | 9 |
| SRR1210A-101M | 100 | ± 20 | 16 | 0.796 | 3 | 0.135 | 2.5 | 2.2 | 8 |
| SRR1210A-121M | 120 | ± 20 | 13 | 0.796 | 2.6 | 0.17 | 2.3 | 1.9 | 7 |
| SRR1210A-151M | 150 | ± 20 | 12 | 0.796 | 2.2 | 0.19 | 2.2 | 1.8 | 7 |
| SRR1210A-181M | 180 | ± 20 | 14 | 0.796 | 1.8 | 0.25 | 1.9 | 1.6 | 6 |
| SRR1210A-221M | 220 | ± 20 | 15 | 0.796 | 1.8 | 0.315 | 1.7 | 1.5 | 5 |
| SRR1210A-271M | 270 | ± 20 | 16 | 0.796 | 1.8 | 0.41 | 1.5 | 1.3 | 5 |
| SRR1210A-331M | 330 | ± 20 | 14 | 0.796 | 1.8 | 0.45 | 1.4 | 1.2 | 4 |
| SRR1210A-391M | 390 | ± 20 | 16 | 0.796 | 1.3 | 0.6 | 1.3 | 1.1 | 4 |
| SRR1210A-471M | 470 | ± 20 | 12 | 0.796 | 0.85 | 0.82 | 1.2 | 1.0 | 4 |
| SRR1210A-561M | 560 | ± 20 | 12 | 0.796 | 0.85 | 0.9 | 1.1 | 0.95 | 3 |
| SRR1210A-681M | 680 | ± 20 | 11 | 0.796 | 0.85 | 1.2 | 1.0 | 0.85 | 3 |
| SRR1210A-821M | 820 | ± 20 | 6 | 0.796 | 0.85 | 1.32 | 0.85 | 0.75 | 3 |
| SRR1210A-102M | 1000 | ± 20 | 22 | 0.796 | 0.85 | 1.65 | 0.75 | 0.7 | 3 |

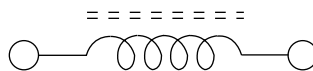
***K-Factor: To calculate core flux density, B_p -p (gauss) = $K \times L(\mu H) \times \Delta I$ (peak-to-peak ripple current, A), determine core loss from *Core Loss vs. Flux Density* plot.

How to Order

SRR1210A - 100M

Model _____
Value Code (see table) _____

Electrical Schematic



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

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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General Specifications

Operating Temperature -40 °C to +125 °C
(Temperature rise included)
Storage Temperature -40 °C to +125 °C
Temperature Rise 40 °C typ. at rated I_{rms}
Inductance drop 20 % at I_{sat}

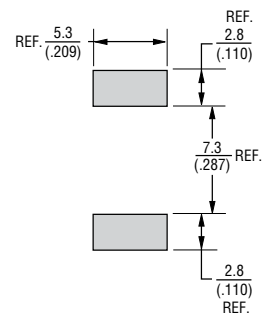
Materials

Core Ferrite
Wire Enameled copper
Terminal Finish Sn
Packaging 250 pcs. per reel

Product Dimensions



Recommended Layout



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

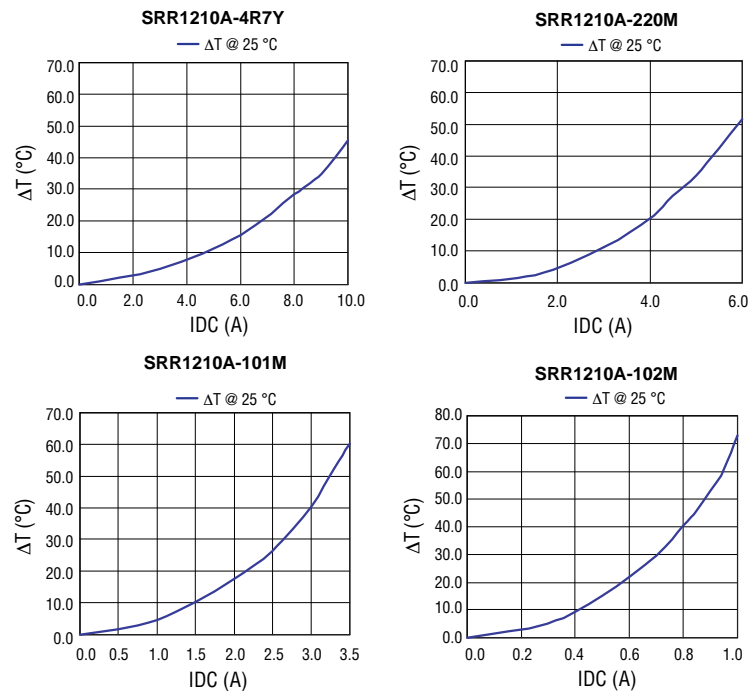
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Inductance vs. IDC



Temperature Rise vs. IDC



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Soldering Profile



Core Loss vs. Flux Density



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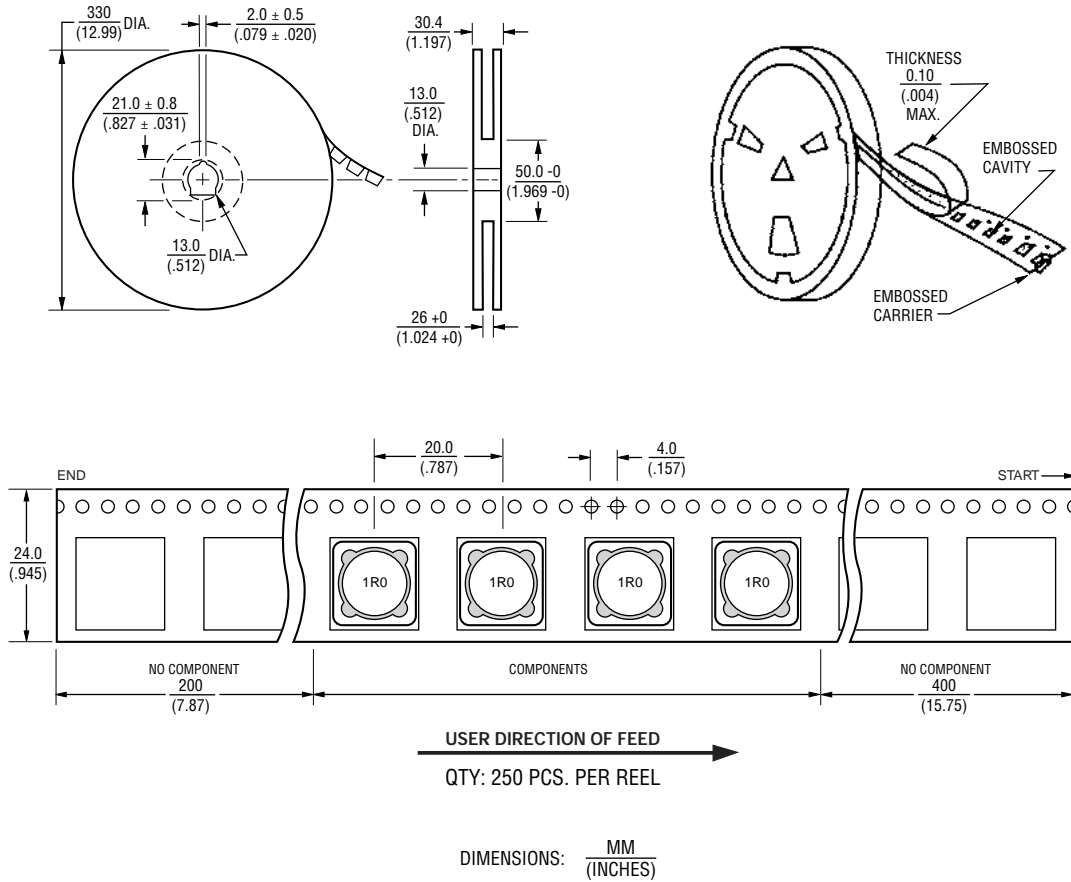
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Packaging Specifications



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REV. 11/19

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