



**THE DATASHEET OF  
SRR1210-221M**





## 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<br>1 kHz / 0.25 V |        | Q<br>Ref. | Test<br>Frequency<br>(MHz) | SRF<br>MHz<br>Typ. | DCR<br>max.<br>(mΩ) | I rms<br>(A) | I sat<br>(A) | **K-<br>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

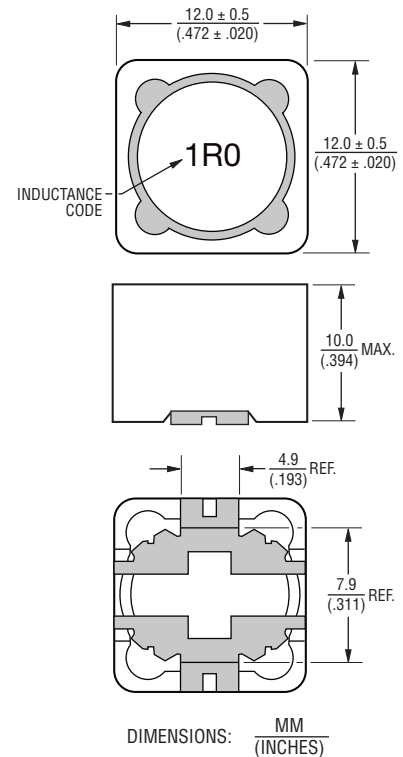
Core..... Ferrite DR & RI

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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**WARNING Cancer and Reproductive Harm**  
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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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