



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

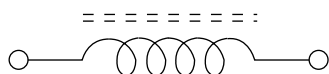
SRR1210 Series - Shielded SMD Power Inductors

Electrical Characteristics

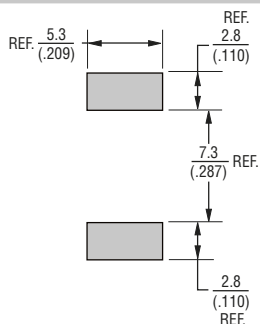
Bourns Part No.	Inductance 1 kHz / 0.25 V		Q Ref.	Test Frequency (MHz)	SRF MHz Typ.	DCR max. (mΩ)	I rms (A)	I sat (A)	**K- Factor
	uH	Tol. %							
SRR1210-1R0Y	1.0	±30	10	7.96	85	6.0	11.0	16.5	86
SRR1210-1R8Y	1.8	±30	10	7.96	56	7.5	10.2	13.2	67
SRR1210-2R2Y	2.2	±30	10	7.96	54	9.0	9.5	12.2	55
SRR1210-3R3Y	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) = $K \times L(\mu H) \times \Delta I$ (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

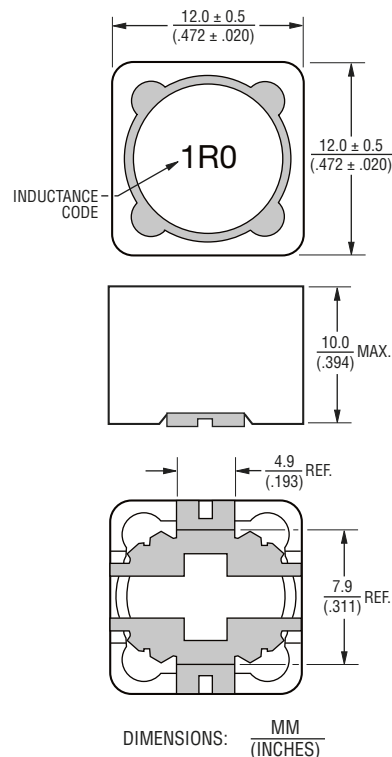
Core..... Ferrite DR & RI

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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Figure 1 is a log-log plot showing Core Loss (mW) versus Flux Density B_{p-p} (gauss). The y-axis (Core Loss) ranges from 0.01 to 10000 mW, and the x-axis (Flux Density) ranges from 10 to 1000 gauss. The plot displays seven lines representing different frequencies, showing that core loss increases with both flux density and frequency.

Frequency	Line Color	Approximate Core Loss (mW) at 100 gauss
1 MHz	Orange	~100
800 KHz	Blue	~40
500 KHz	Purple	~20
400 KHz	Green	~15
300 KHz	Dark Red	~10
200 KHz	Medium Blue	~5
100 KHz	Yellow	~2

Technical drawing of a 1R0 component showing top, side, and end views with dimensions in inches and millimeters.

Top View Dimensions:

- Overall diameter: 330 ± 0.5 (12.99)
- Inner diameter: 21.0 ± 0.8 (.827 $\pm$.031)
- Central hole diameter: 13.0 (.512)

Side View Dimensions:

- Top thickness: 30.4 (1.197)
- Inner diameter: 13.0 (.512)
- Bottom thickness: $50.0 -0$ (1.969 -0)
- Overall width: $26 +0$ (1.024 +0)

End View Dimensions:

- Thickness: 0.10 (.004) MAX.
- Labels: THICKNESS, EMBOSSED CAVITY, EMBOSSED CARRIER

End View Details:

- Labels: END, START
- Dimensions: 20.0 (.787), 4.0 (.157)
- Component labels: 1R0
- Dimensions: 24.0 (.945)
- Dimensions: NO COMPONENT 200 (7.87), COMPONENTS, NO COMPONENT 400 (15.75)
- USER DIRECTION OF FEED
- QTY: 250 PCS. PER REEL
- DIMENSIONS: MM (INCHES)

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