



THE DATASHEET OF SRR1280-330M



Features

- Available in E12 values
- Inductance range as low as 1.1 μH
- Current rating to 10.2 amps
- RoHS compliant*

Applications

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

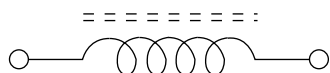
SRR1280 Series - Shielded SMD Power Inductors

Electrical Specifications

Bourns Part Number	Inductance		Q (Typ.)	Test Freq. (MHz)	SRF Typ. (MHz)	RDC Max. (m Ω)	I rms Max. (A)	I sat Typ. (A)	**K-Factor
	(μH)	Tol. (%)							
SRR1280-1R1Y	1.1	± 30	26	7.96	85	6.5	10.20	14.00	94
SRR1280-1R2Y	1.2	± 30	28	7.96	83	18.0	6.60	7.80	90
SRR1280-1R4Y	1.4	± 30	24	7.96	80	9.8	9.80	12.00	90
SRR1280-2R4Y	2.4	± 30	20	7.96	45	10.0	9.20	10.50	62
SRR1280-3R3Y	3.3	± 30	20	7.96	40	12.0	8.80	9.80	54
SRR1280-3R5Y	3.5	± 30	20	7.96	36	12.0	8.80	9.80	56
SRR1280-4R5Y	4.5	± 30	20	7.96	34	13.5	8.50	9.00	48
SRR1280-4R7Y	4.7	± 30	22	7.96	30	15.5	8.20	8.80	48
SRR1280-5R6Y	5.6	± 30	20	7.96	24	16.0	8.00	8.50	44
SRR1280-6R1Y	6.1	± 30	20	7.96	23	18.0	6.60	7.80	43
SRR1280-6R8Y	6.8	± 30	20	7.96	22	18.5	7.60	8.00	39
SRR1280-7R5Y	7.5	± 30	16	7.96	21	17.5	6.40	7.00	37
SRR1280-7R6Y	7.6	± 30	15	7.96	21	20.0	5.90	6.50	35
SRR1280-8R2Y	8.2	± 30	22	2.52	20	20.5	6.20	6.80	35
SRR1280-100M	10.0	± 20	24	2.52	17	19.5	6.00	6.30	32
SRR1280-120M	12.0	± 20	26	2.52	15	28.0	5.60	6.60	30
SRR1280-150M	15.0	± 20	26	2.52	13	28.5	5.20	5.00	28
SRR1280-180M	18.0	± 20	24	2.52	12	35.0	4.80	4.60	23
SRR1280-220M	22.0	± 20	20	2.52	11	38.6	4.30	4.10	21
SRR1280-270M	27.0	± 20	26	2.52	10	52.0	3.90	3.70	20
SRR1280-330M	33.0	± 20	28	2.52	9.5	57.0	3.50	3.30	17
SRR1280-390M	39.0	± 20	24	2.52	8.5	70.0	3.20	3.10	16
SRR1280-470M	47.0	± 20	24	2.52	7.5	80.0	2.90	2.80	15
SRR1280-560M	56.0	± 20	24	2.52	7.0	100.0	2.60	2.50	13
SRR1280-680M	68.0	± 20	20	2.52	6.5	120.0	2.40	2.30	12
SRR1280-820M	82.0	± 20	20	0.796	5.0	130.0	2.30	2.20	11
SRR1280-101M	100.0	± 20	18	0.796	4.5	150.0	2.10	2.00	10
SRR1280-121K	120.0	± 10	16	0.796	4.3	200.0	1.95	1.95	9
SRR1280-151K	150.0	± 10	24	0.796	4.1	270.0	1.85	1.90	8
SRR1280-181K	180.0	± 10	24	0.796	4.0	300.0	1.75	1.88	7
SRR1280-221K	220.0	± 10	24	0.796	3.4	400.0	1.60	1.70	7
SRR1280-271K	270.0	± 10	20	0.796	3.1	450.0	1.20	1.60	6
SRR1280-331K	330.0	± 10	18	0.796	2.9	600.0	1.10	1.40	5
SRR1280-391K	390.0	± 10	20	0.796	2.7	680.0	1.00	1.40	5
SRR1280-471K	470.0	± 10	20	0.796	2.2	880.0	0.90	1.25	5
SRR1280-561K	560.0	± 10	20	0.796	2.0	960.0	0.80	1.15	4
SRR1280-681K	680.0	± 10	26	0.796	1.7	1300.0	0.75	0.97	4
SRR1280-821K	820.0	± 10	20	0.796	1.4	1500.0	0.70	0.94	4
SRR1280-102K	1000.0	± 10	40	0.252	1.3	1700.0	0.68	0.80	3

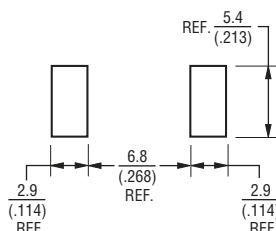
**K-Factor: To calculate core flux density, Bp-p (gauss) = $K \times L(\mu\text{H}) \times \Delta I$ (peak-to-peak ripple current, A), determine core loss from Core Loss vs. Flux Density plot.

Electrical Schematic



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

Recommended Layout



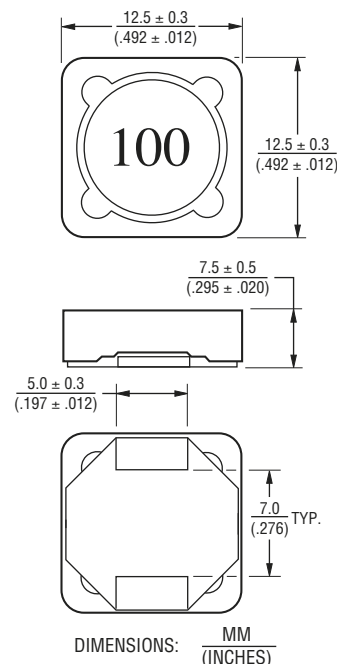
General Specifications

Inductance Test Frequency / Voltage
 SRR1280-1R1Y to -8R2Y ... 100 kHz/1 V
 SRR1280-100M to -102K 1 kHz/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.
 Temperature Rise
 40 °C max. at rated I rms
 Inductance Drop 25 % typ. at I sat
 Moisture Sensitivity Level 1
 ESD Classification (HBM) N/A

Materials

Core Ferrite DR and RI
 Wire Enamelled copper wire 130
 Terminal Cu/Ni/Sn
 Packaging 400 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 ranges from 0.001 to 10,000 mW, and the x-axis ranges from 10 to 1,000 gauss. The plot displays seven curves representing different switching frequencies: 800 KHz, 500 KHz, 300 KHz, 200 KHz, 100 KHz, 50 KHz, and 10 KHz. The curves show that core loss increases with both flux density and switching frequency. The 10 KHz curve is the lowest, while the 800 KHz curve is the highest.

Technical drawing of a 100 ohm resistor showing top, side, and end views with dimensions in inches and millimeters.

Top View Dimensions:

- Overall diameter: 330 (12.99) DIA.
- Distance from center to lead hole center: 2.0 ± 0.5 (.079 $\pm$.020)
- Lead hole diameter: 13.0 (.512) DIA.
- Distance from center to resistor body center: 21.0 ± 0.8 (.827 $\pm$.031)

Side View Dimensions:

- Lead thickness: 30.4 (1.197)
- Resistor body thickness: 13.0 (.512) DIA.
- Distance from lead center to resistor body center: 50.0 (1.969)
- Lead width: 26 (1.024)

End View Dimensions:

- Thickness: 0.10 (.004) MAX.
- Embossed cavity width: 24.0 (.945)
- Embossed carrier width: 24.0 (.945)

End View Details:

- END and START arrows indicate the direction of feed.
- Dimensions for the end view: 4.0 (.157) and 20.0 (.787).
- Labels for the end view: NO COMPONENT 200 (7.87), COMPONENTS, NO COMPONENT 400 (15.75).

USER DIRECTION OF FEED (indicated by an arrow pointing right).

QTY: 400 PCS. PER REEL

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