

BOURNS®

Features

- Shielded construction
- Inductance range: 0.68 to 330 µH
- Heating current up to 9.5A
- AEC-Q200 qualified
- RoHS compliant* and halogen free**

This series is currently available but not recommended for new designs. The Model SRR1050HA Series is the recommended replacement.

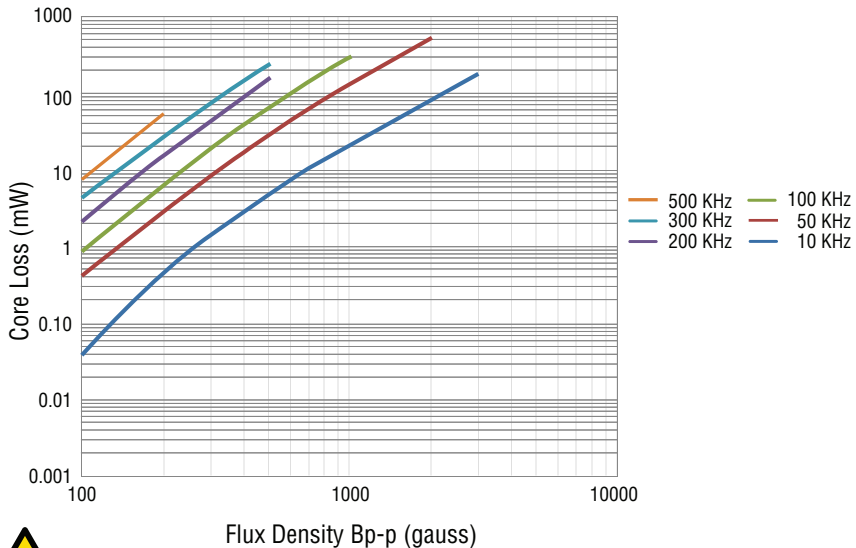
SRR1050A Series - Shielded Power Inductors

Electrical Specifications @ 25 °C

Bourns Part Number	Inductance @ 100 kHz/0.1V		SRF (MHz) Typ.	DCR (Ω)		I rms (A)	I sat (A)	***K-Factor
	L (µH)	Tol. (%)		Typ.	Max.			
SRR1050A-R68Y	0.68	± 30	110	0.0045	0.0055	9.50	13.5	221
SRR1050A-1R2Y	1.2	± 30	85	0.0058	0.007	8.30	10.5	158
SRR1050A-2R2Y	2.2	± 30	53	0.0071	0.009	7.20	8.20	123
SRR1050A-3R3Y	3.3	± 30	40	0.0086	0.011	6.50	7.80	100
SRR1050A-4R2Y	4.2	± 30	29	0.0104	0.014	6.10	6.40	85
SRR1050A-6R8Y	6.8	± 30	27	0.0151	0.019	5.40	5.40	65
SRR1050A-8R2Y	8.2	± 30	21	0.0181	0.022	5.00	4.85	58
SRR1050A-100Y	10	± 30	16.5	0.023	0.031	4.50	4.45	58
SRR1050A-120Y	12	± 30	15	0.026	0.035	3.80	4.00	53
SRR1050A-150Y	15	± 30	14	0.035	0.047	3.40	3.60	44
SRR1050A-180Y	18	± 30	11	0.038	0.051	3.10	3.20	41
SRR1050A-220Y	22	± 30	10.5	0.046	0.062	2.90	2.95	38
SRR1050A-270Y	27	± 30	10	0.057	0.077	2.60	2.70	33
SRR1050A-330Y	33	± 30	9	0.069	0.093	2.50	2.40	30
SRR1050A-390Y	39	± 30	6.8	0.079	0.106	2.25	2.30	28
SRR1050A-470Y	47	± 30	5.9	0.094	0.127	2.00	2.00	26
SRR1050A-560Y	56	± 30	5.5	0.124	0.160	1.90	1.90	24
SRR1050A-680Y	68	± 30	5	0.138	0.208	1.60	1.65	22
SRR1050A-820Y	82	± 30	4.5	0.150	0.230	1.45	1.50	20
SRR1050A-101Y	100	± 30	4.2	0.179	0.255	1.35	1.35	18
SRR1050A-121Y	120	± 30	3.8	0.213	0.305	1.18	1.28	16
SRR1050A-151Y	150	± 30	3.6	0.253	0.370	1.10	1.12	15
SRR1050A-181Y	180	± 30	3.4	0.307	0.420	1.00	1.04	13
SRR1050A-221Y	220	± 30	3	0.373	0.500	0.94	0.94	12
SRR1050A-271Y	270	± 30	2.4	0.491	0.675	0.80	0.84	11
SRR1050A-331Y	330	± 30	2	0.613	0.815	0.73	0.75	10

***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.

Core Loss vs. Flux Density



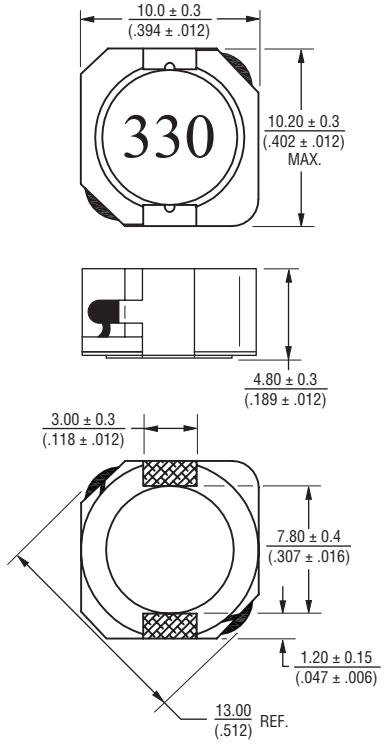
General Specifications

Operating Temperature ..... -40 °C to +125 °C (Temperature rise included)
Storage Temperature .. -40 °C to +125 °C
Temperature Rise ..... 40 °C typ. at rated Irms
Rated Current ..... Inductance drops 35 % at Isat
Failure In Time (FIT) ..... $24.7/10^9$ hours
Mean Time Between Failures (MTBF) ..... 40.4×10^6 hours

Materials

Core ..... Ferrite
Wire ..... Enameled copper
Terminal Finish ..... Sn
Packaging ..... 700 pcs. per 13-inch reel

Product Dimensions



DIMENSIONS: MM (INCHES)

*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.

Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.

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

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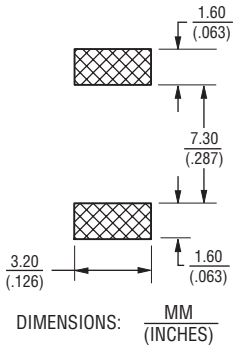
Applications

- Automotive systems
- DC/DC converters
- Power supplies

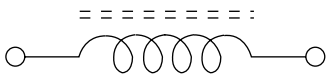
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Recommended Layout



Electrical Schematic



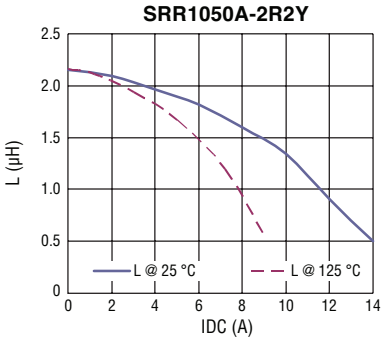
How to Order

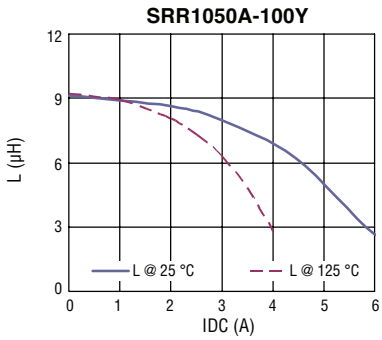
SRR1050A - 101Y

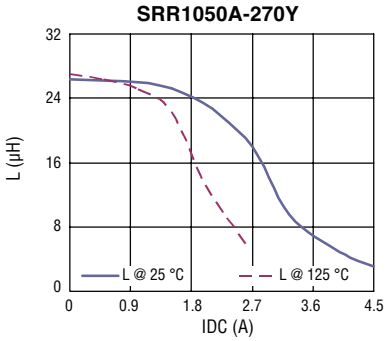
Model

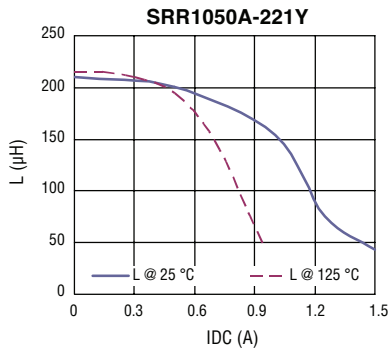
Value Code (see table)

Inductance vs. IDC

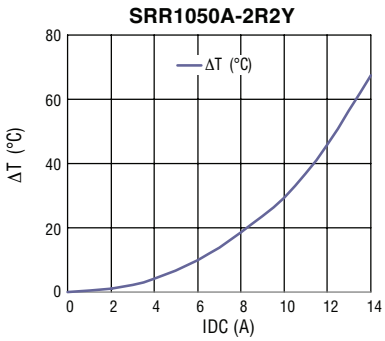


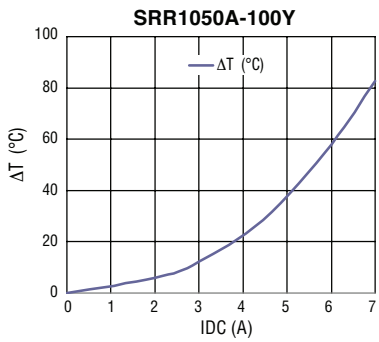


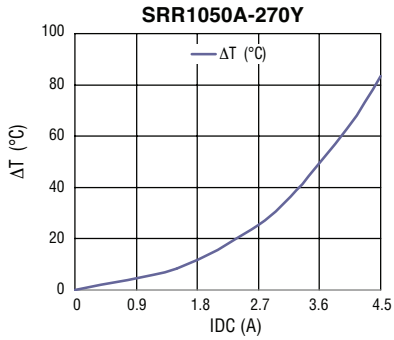


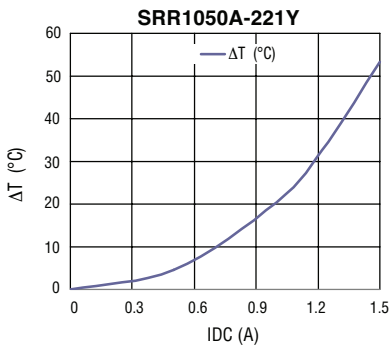


Temperature vs. IDC





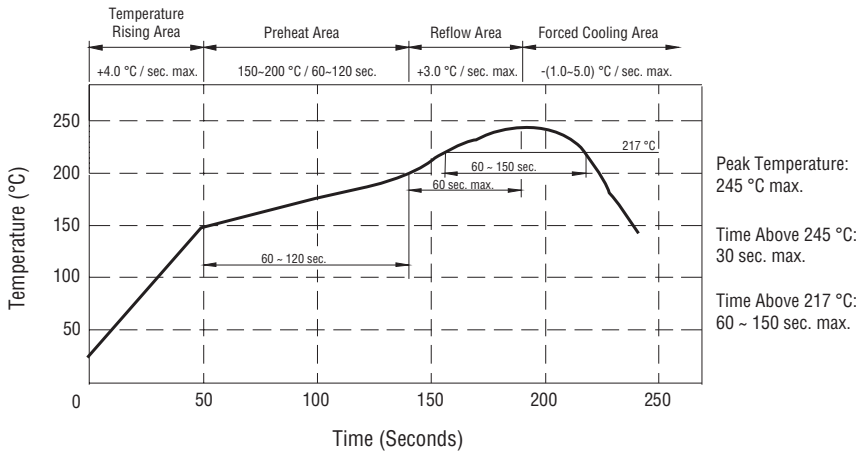




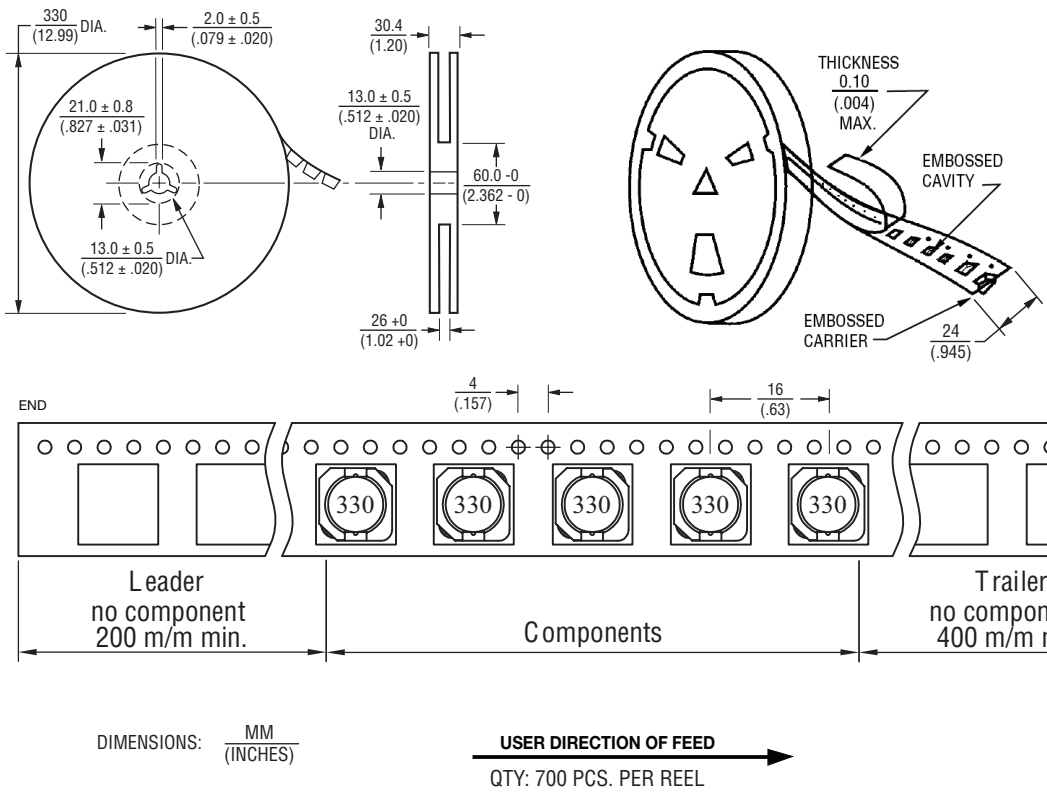
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Soldering Profile



Packaging Specifications



REV. 06/23

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