



**THE DATASHEET OF  
SRR1050A-271Y**





## Features

- Shielded construction
- Inductance range: 0.68 to 330  $\mu$ H
- 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.

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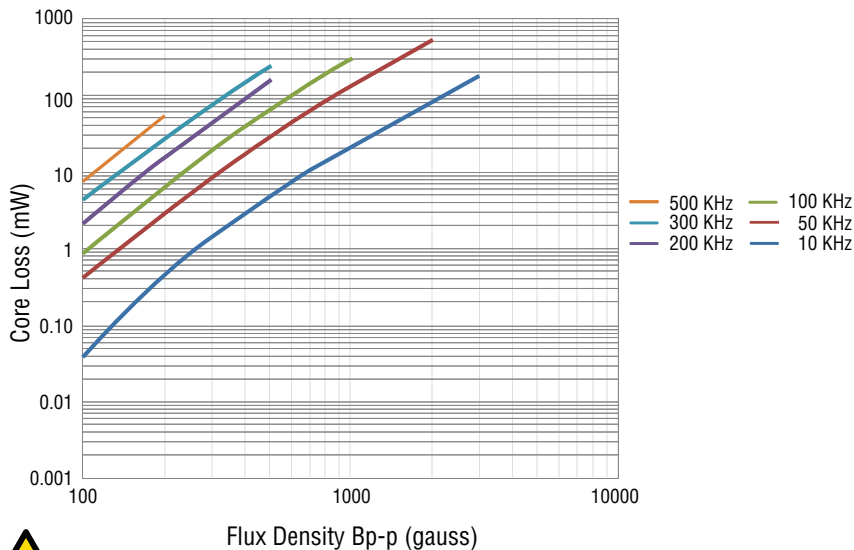
## SRR1050A Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

Bourns Part Number	Inductance @ 100 kHz/0.1V		SRF (MHz) Typ.	DCR ( $\Omega$ )		I rms (A)	I sat (A)	***K-Factor
	L ( $\mu$ H)	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,  $B_p$ -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.

### Core Loss vs. Flux Density



**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

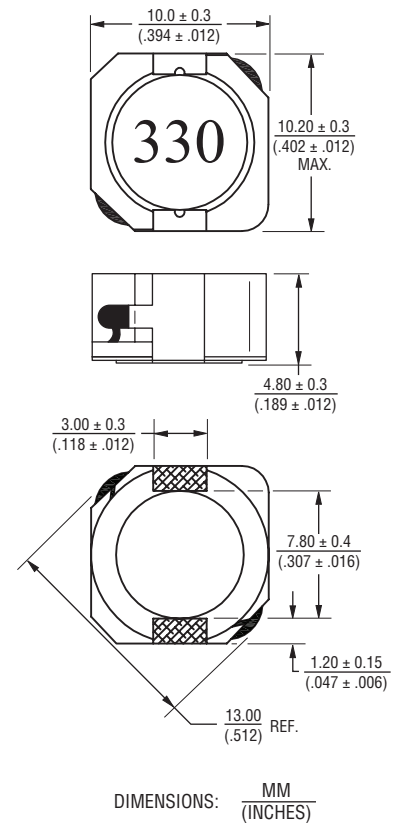
### General Specifications

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  
 Rated Current ..... Inductance drops 35 % at Isat  
 Failure In Time (FIT) ..... 24.7/10<sup>9</sup> hours  
 Mean Time Between Failures (MTBF) ..... 40.4 x 10<sup>6</sup> hours

### Materials

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

### Product Dimensions



DIMENSIONS:  $\frac{MM}{(INCHES)}$   
 \*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.

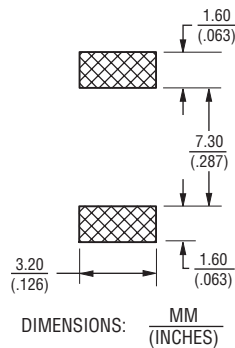
## Applications

- Automotive systems
- DC/DC converters
- Power supplies

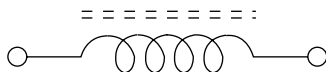
# SRR1050A Series - Shielded Power Inductors

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### Recommended Layout



### Electrical Schematic

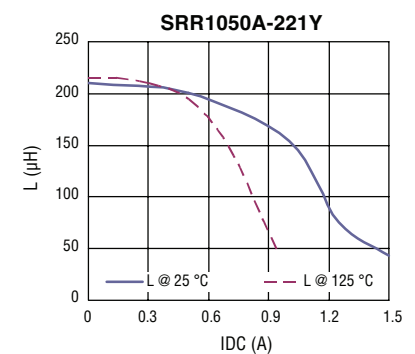
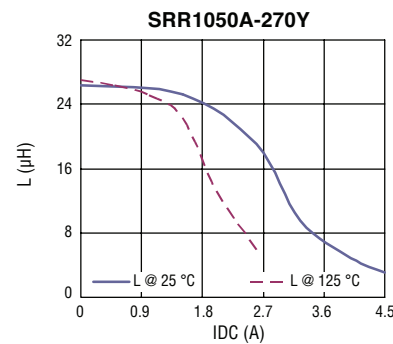
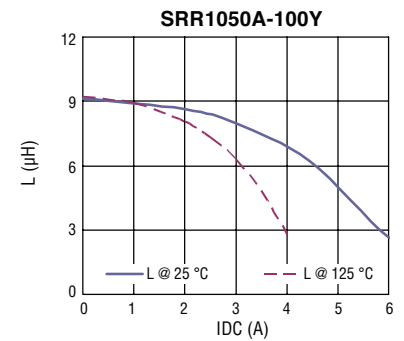
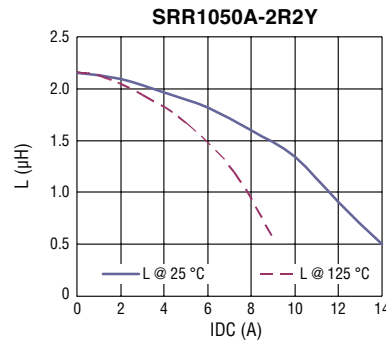


### How to Order

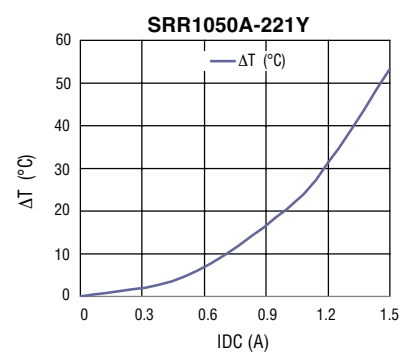
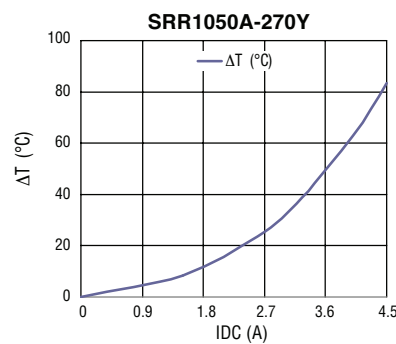
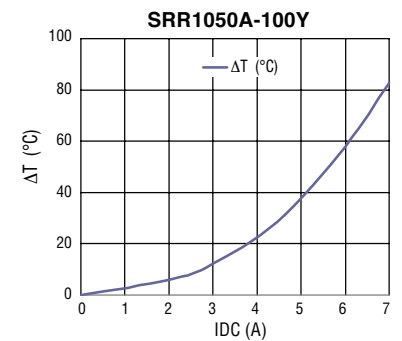
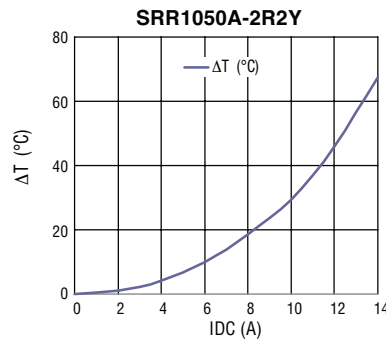
**SRR1050A - 101Y**

Model \_\_\_\_\_  
 Value Code (see table) \_\_\_\_\_

### Inductance vs. IDC



### Temperature vs. IDC



Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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# SRR1050A Series - Shielded Power Inductors

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## Soldering Profile



## Packaging Specifications



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

USER DIRECTION OF FEED

QTY: 700 PCS. PER REEL

REV. 06/23

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