



## Features

- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 0.20 to 47  $\mu$ H
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

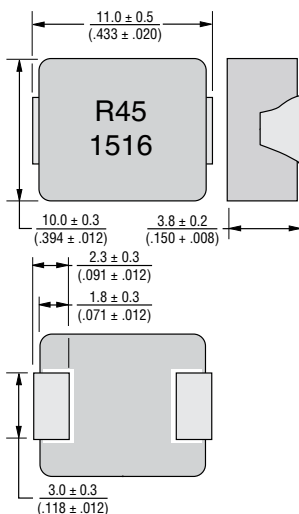
## SRP1038A Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

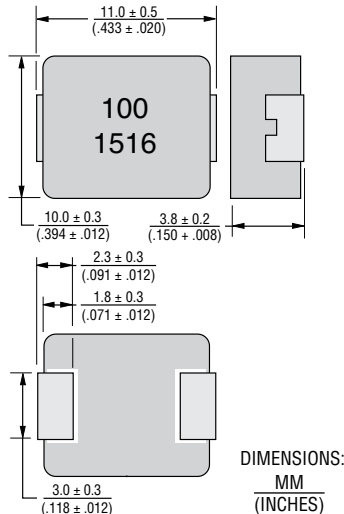
Bourns Part Number	Inductance @ 100 KHz / 1 V		Q (Min.) @ 100 KHz / 1 V	SRF (MHz) Typ.	DCR (m $\Omega$ ) Typ.	DCR (m $\Omega$ ) Max.	I <sub>rms</sub> (A)	Isat (A)	Terminal Type
	L ( $\mu$ H)	Tol. (%)							
SRP1038A-R20M	0.20	20	10	155	0.66	0.95	35	70	Non-Lead Frame
SRP1038A-R22M	0.22	20	10	155	0.8	1	35	60	
SRP1038A-R27M	0.27	20	10	120	0.82	1	33	60	
SRP1038A-R33M	0.33	20	15	108	1	1.2	31	60	
SRP1038A-R36M	0.36	20	15	105	1.05	1.2	31	60	
SRP1038A-R39M	0.39	20	15	100	1.1	1.3	30	60	
SRP1038A-R45M	0.45	20	15	75	1.3	1.5	29	45	
SRP1038A-R56M	0.56	20	15	70	1.6	1.8	25	40	
SRP1038A-1R0M	1.0	20	20	47	3	3.3	18	36	
SRP1038A-1R2M	1.2	20	20	33	3.3	3.8	17	33	
SRP1038A-1R5M	1.5	20	20	30	4	4.6	16	33	
SRP1038A-2R2M	2.2	20	20	25	6.5	7	12	27	
SRP1038A-3R3M	3.3	20	20	18	10.8	11.8	11	20	
SRP1038A-4R7M	4.7	20	20	16	15	15.5	10	17	
SRP1038A-5R6M	5.6	20	20	15	17	19.3	9	14	
SRP1038A-6R8M	6.8	20	20	13	17.5	23.3	8.5	13.5	
SRP1038A-8R2M	8.2	20	20	12	20	24	8	12.5	
SRP1038A-100M	10	20	20	10	27	30	7.5	12	
SRP1038A-150M	15	20	20	9	40	45	6.25	10	
SRP1038A-220M	22	20	20	8	64	74	5	7	
SRP1038A-330M	33	20	20	6	92	112	3.5	5	
SRP1038A-470M	47	20	20	5	145	167	3	4.5	

### Product Dimensions

#### Non-Lead Frame Terminal



#### Lead Frame Terminal



### Additional Information

Click these links for more information:



### General Specifications

Test Voltage ..... 1.0 V  
 Test Frequency ..... 100 KHz  
 Operating Temperature ..... -55 °C to +150 °C  
 (Temperature rise included)  
 Storage Temperature ..... -55 °C to +150 °C  
 Rated Current ..... Inductance drops 20 % at Isat  
 Temperature Rise ..... 40 °C at rated I<sub>rms</sub>  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM) ..... N/A

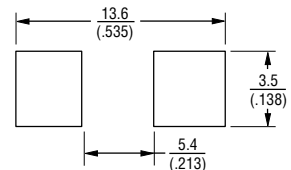
1 Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

### Materials

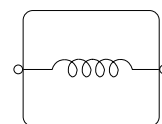
Core ..... Carbonyl powder  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Packaging ..... 500 pcs. per 13-inch reel

Please consult [Bourns® Model SRP-A Series Visual Inspection Guide](#) for detailed construction, processing and testing information.

### Recommended Layout



### Electrical Schematic



Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf).



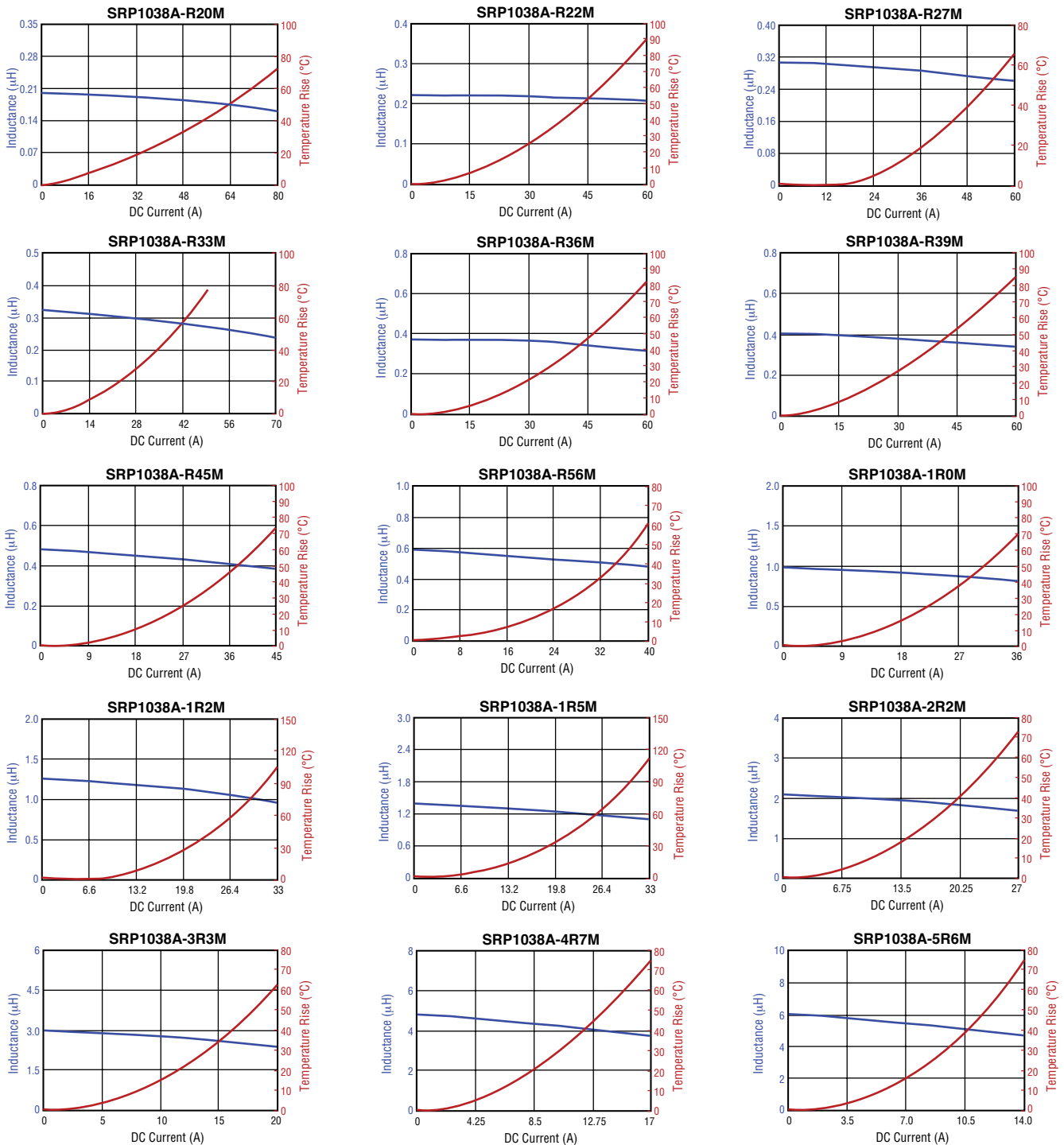
**WARNING**  
 Cancer and Reproductive Harm  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\* 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.

# SRP1038A Series - Shielded Power Inductors



## L vs. I Charts



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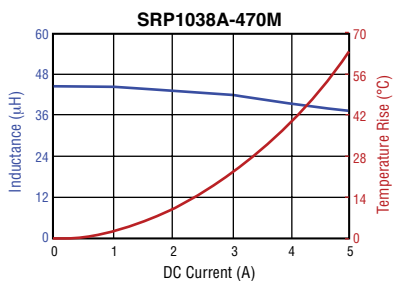
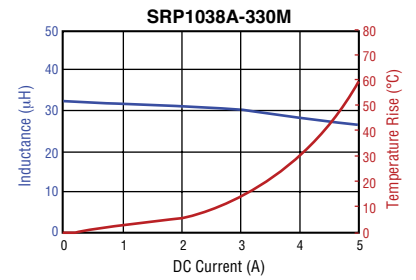
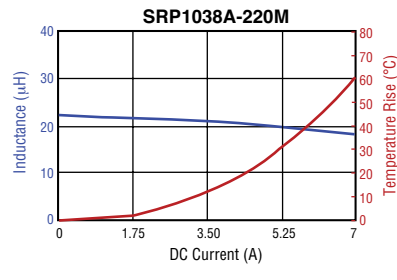
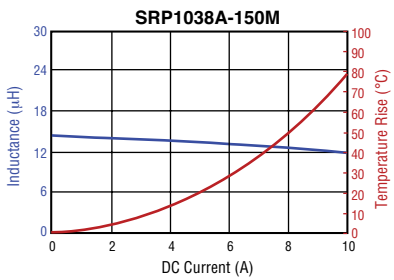
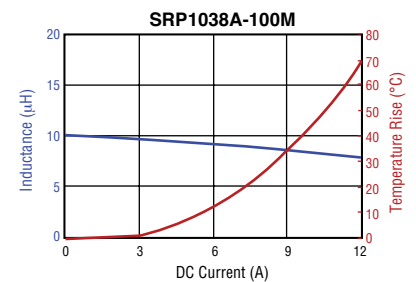
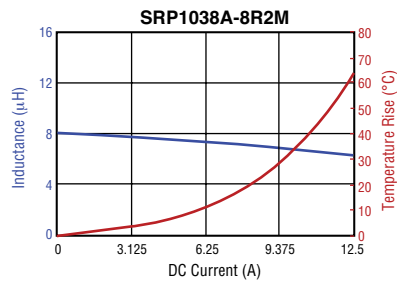
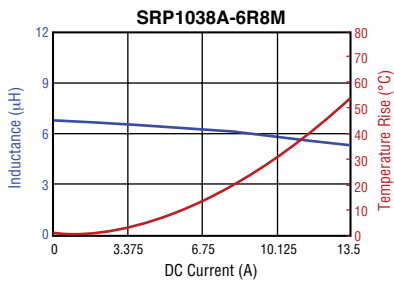
Users should verify actual device performance in their specific applications.

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# SRP1038A Series - Shielded Power Inductors



## L vs. I Charts (Continued)



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