



**THE DATASHEET OF  
SRP7028A-5R6M**





### Features

- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 0.10 to 33  $\mu$ H
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## SRP7028A 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)	I <sub>sat</sub> (A)	Terminal Type
	L ( $\mu$ H)	Tol. (%)							
SRP7028A-R10M	0.10	$\pm 20$	5	300	1.2	1.7	32.5	60	Lead Frame
SRP7028A-R15Y	0.15	$\pm 30$	5	220	1.5	1.9	27	45	
SRP7028A-R22Y	0.22	$\pm 30$	5	150	2.1	2.8	23	40	
SRP7028A-R33M	0.33	$\pm 20$	10	140	3.5	3.9	20	32	
SRP7028A-R47M	0.47	$\pm 20$	10	80	4	4.2	17.5	26	
SRP7028A-R56M	0.56	$\pm 20$	15	70	4.7	5.0	16.5	25.5	
SRP7028A-R68M	0.68	$\pm 20$	15	67	4.8	5.5	15.5	25	
SRP7028A-R75M	0.75	$\pm 20$	15	65	5.5	6.6	14.5	24.5	
SRP7028A-R82M	0.82	$\pm 20$	15	61	6.7	8.0	13	24	
SRP7028A-1R0M	1.0	$\pm 20$	20	58	8.3	10.0	11	22	
SRP7028A-1R5M	1.5	$\pm 20$	20	38	13	15.0	9	18	
SRP7028A-1R8M	1.8	$\pm 20$	20	36	14	17.0	8.5	16	
SRP7028A-2R2M	2.2	$\pm 20$	20	32	18	20.0	8	14	
SRP7028A-2R5M	2.5	$\pm 20$	20	30	20	22.0	7	13	
SRP7028A-3R3M	3.3	$\pm 20$	20	25	28	30.0	6	12	
SRP7028A-4R7M	4.7	$\pm 20$	20	21	37	40.0	5.5	10	
SRP7028A-5R6M	5.6	$\pm 20$	20	19	43	48.0	5	9	
SRP7028A-6R8M	6.8	$\pm 20$	20	18	54	60.0	4.5	8	
SRP7028A-8R2M	8.2	$\pm 20$	20	17	64	68.0	4	7.5	
SRP7028A-100M	10	$\pm 20$	20	14	75	85.0	3.5	6	
SRP7028A-150M	15	$\pm 20$	20	12	107	123.0	3.0	4	
SRP7028A-220M	22	$\pm 20$	20	10	165	190.0	2.0	3.5	
SRP7028A-330M	33	$\pm 20$	20	8	200	240.0	2.0	2.5	

### 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 I<sub>sat</sub>  
 Temperature Rise ..... 40 °C at rated I<sub>rms</sub>  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM) ..... N/A

<sup>1</sup> 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.

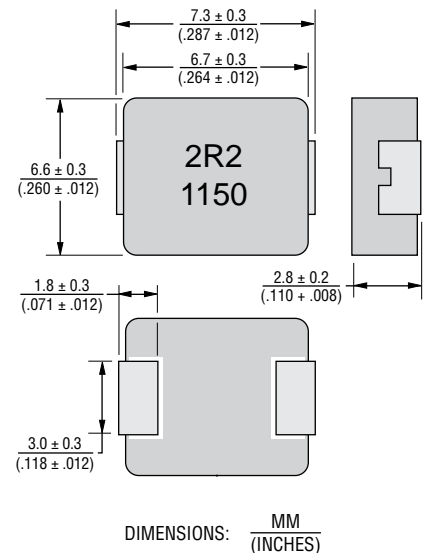
### Materials

Core ..... Carbonyl powder  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Packaging ..... 1000 pcs. per 13-inch reel

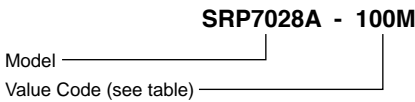
Please consult [Bourns® Model SRP-A Series Visual Inspection Guide](#) for detailed construction, processing and testing information.

### Product Dimensions

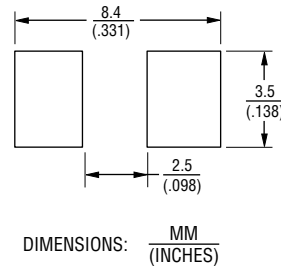
#### Lead Frame Terminal



### How to Order



### Recommended Layout



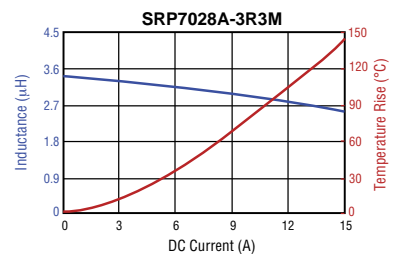
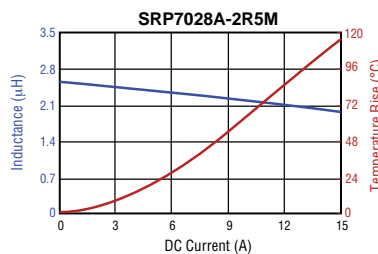
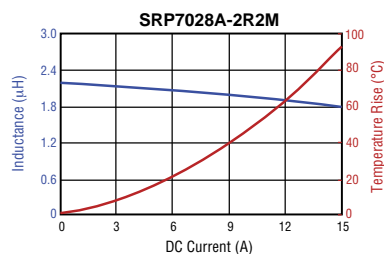
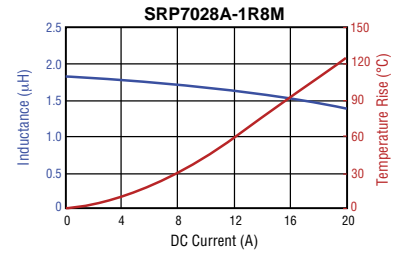
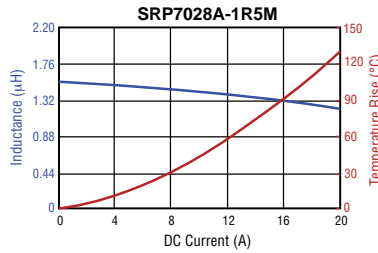
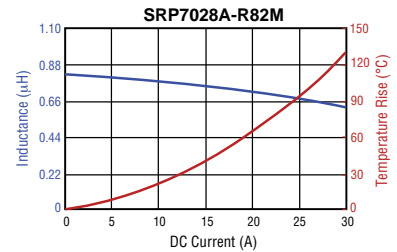
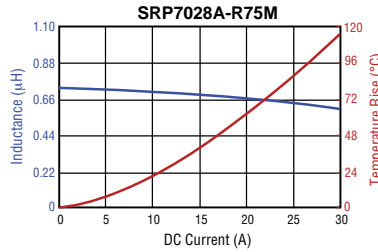
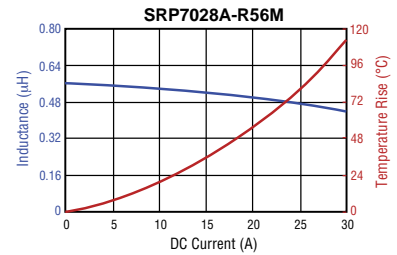
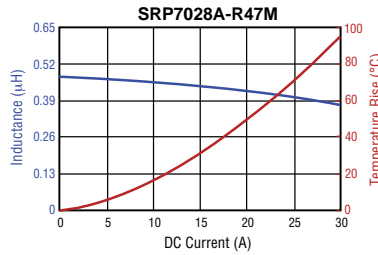
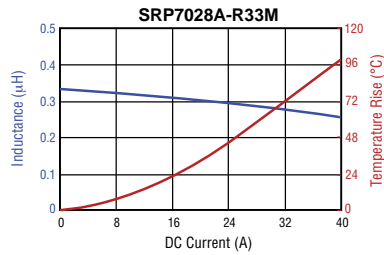
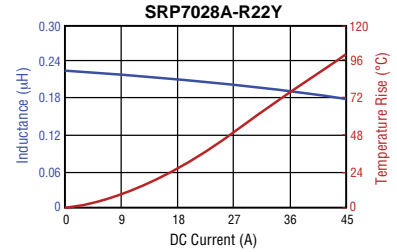
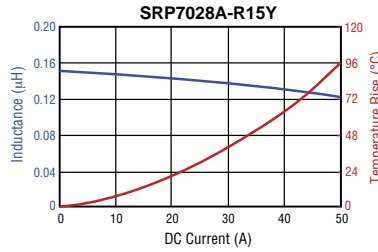
**WARNING Cancer and Reproductive Harm** [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\* 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.  
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# SRP7028A Series - Shielded Power Inductors



## L vs. I Charts

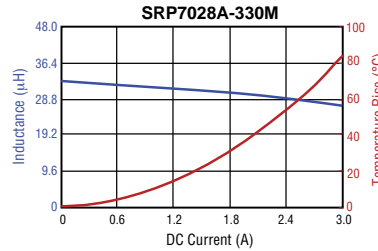
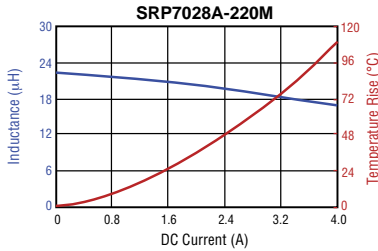
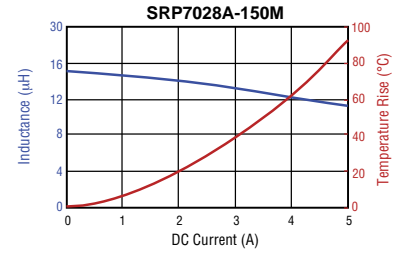
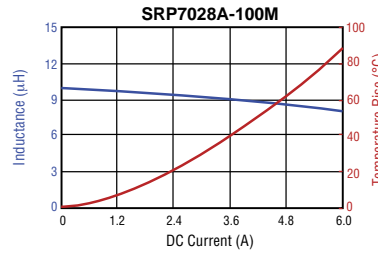
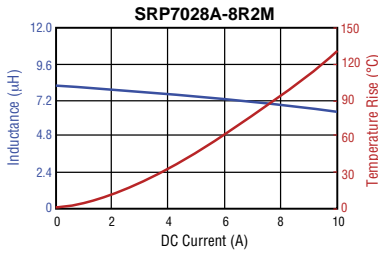
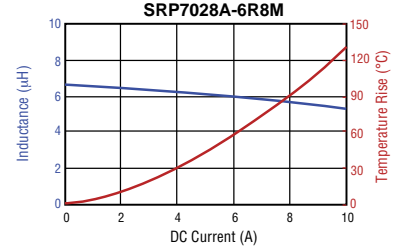
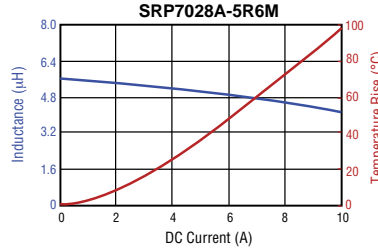
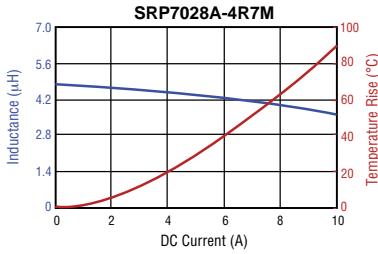


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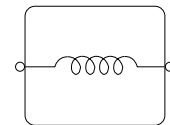
## L vs. I Charts (Continued)



## Soldering Profile



## Electrical Schematic



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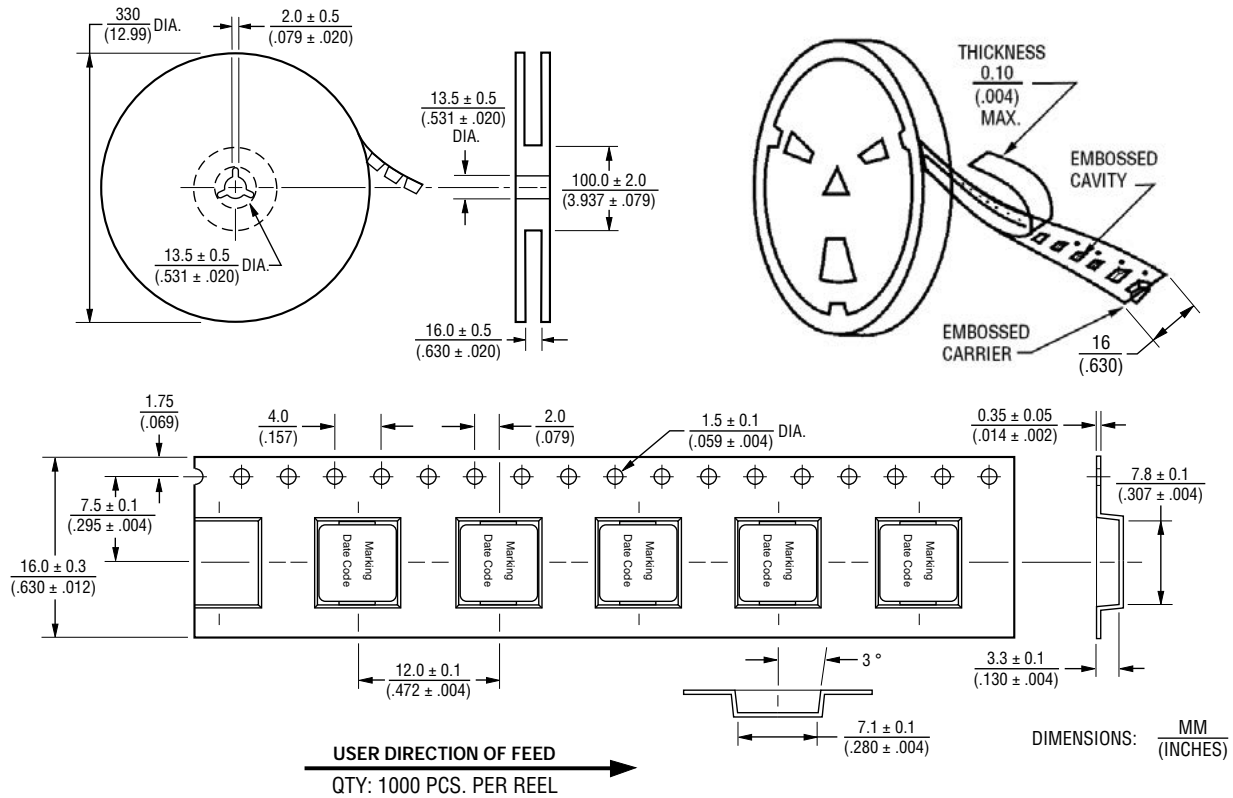
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# SRP7028A Series - Shielded Power Inductors

**BOURNS®**

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