



**THE DATASHEET OF  
SRP1238A-2R2M**





### Features

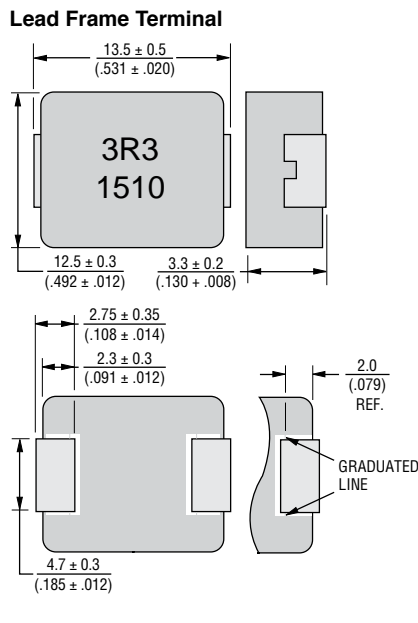
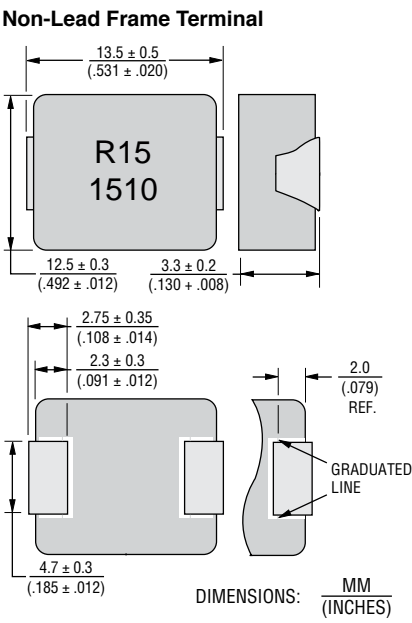
- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 0.10 to 10  $\mu$ H
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## SRP1238A 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. (%)							
SRP1238A-R10Y	0.10	$\pm 30$	10	175	0.36	0.43	43	84	Non-Lead Frame
SRP1238A-R15Y	0.15	$\pm 30$	10	140	0.4	0.48	41	75	
SRP1238A-R22M	0.22	$\pm 20$	10	125	0.7	0.81	38.5	65	
SRP1238A-R33M	0.33	$\pm 20$	10	85	0.85	1.0	36.5	62	
SRP1238A-R47M	0.47	$\pm 20$	10	80	1.2	1.8	32	55	
SRP1238A-R60M	0.60	$\pm 20$	15	53	1.5	2.2	29	51	
SRP1238A-R68M	0.68	$\pm 20$	15	50	1.9	2.5	28	49	
SRP1238A-R82M	0.82	$\pm 20$	15	45	2.2	3.0	25	44	
SRP1238A-1R0M	1.0	$\pm 20$	15	40	2.7	3.5	24	40	
SRP1238A-1R2M	1.2	$\pm 20$	20	35	4	4.0	21	37	
SRP1238A-1R5M	1.5	$\pm 20$	20	30	4.8	5.5	19	35	
SRP1238A-1R8M	1.8	$\pm 20$	20	27	5.2	7.0	17	30	
SRP1238A-2R2M	2.2	$\pm 20$	20	25	6.3	8.0	16	29	
SRP1238A-3R3M	3.3	$\pm 20$	20	20	11	13.5	12	27	
SRP1238A-4R7M	4.7	$\pm 20$	20	15	15.3	18.5	10	24	
SRP1238A-5R6M	5.6	$\pm 20$	20	15	18	22.0	9.5	19	
SRP1238A-6R8M	6.8	$\pm 20$	20	13	20	24.0	9	18	
SRP1238A-8R2M	8.2	$\pm 20$	20	12	23	28.0	8.5	16	
SRP1238A-100M	10	$\pm 20$	20	11	29	34.0	7	14	

### Product Dimensions



### 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

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.

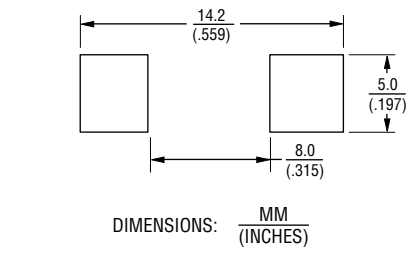
### Materials

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

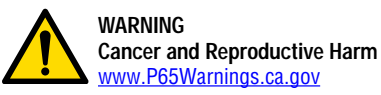
### How to Order



### Recommended Layout



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

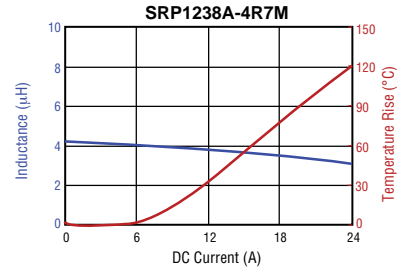
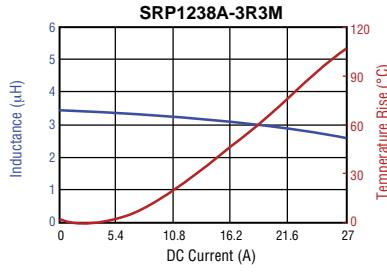
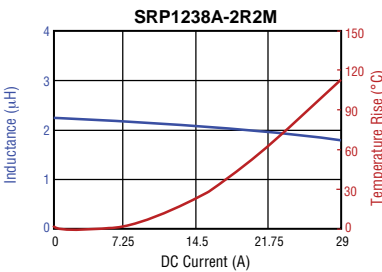
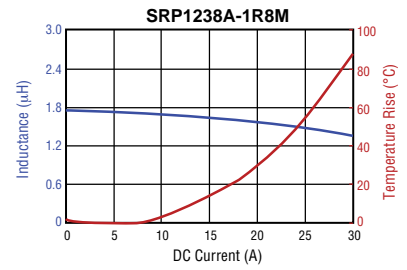
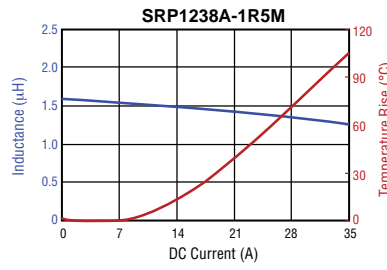
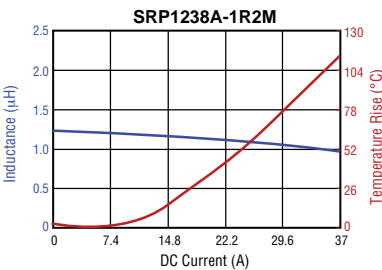
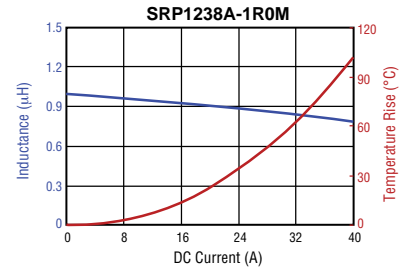
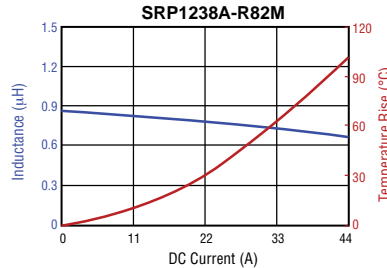
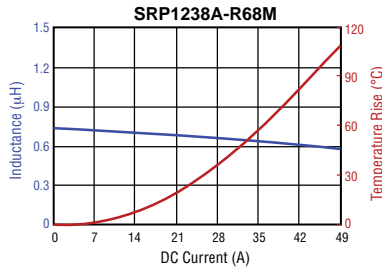
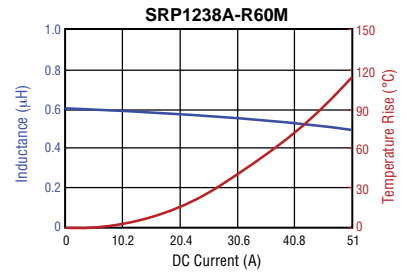
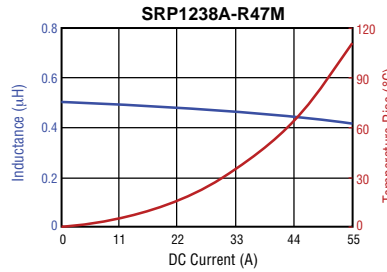
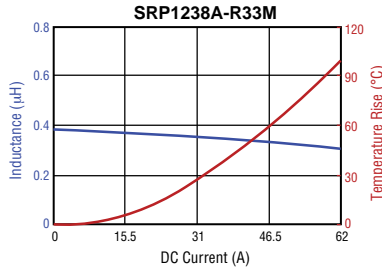
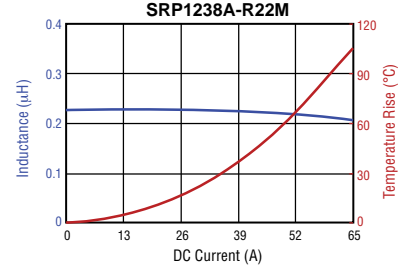
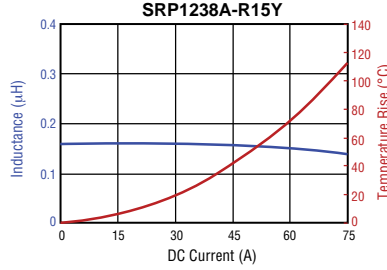
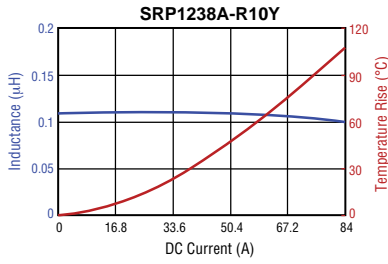


\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
 \*\*Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.  
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# SRP1238A Series - Shielded Power Inductors



## L vs. I Charts



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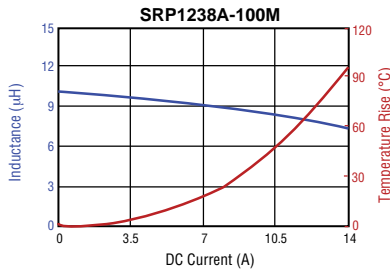
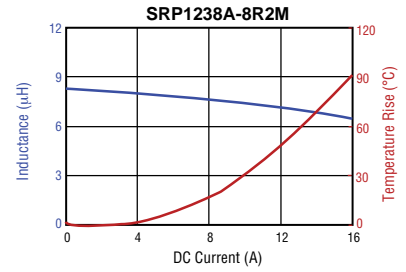
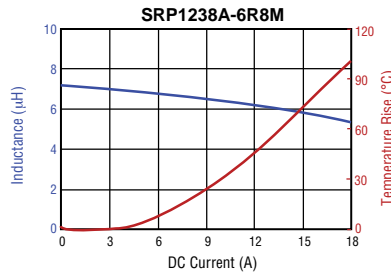
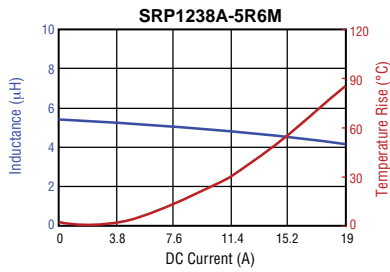
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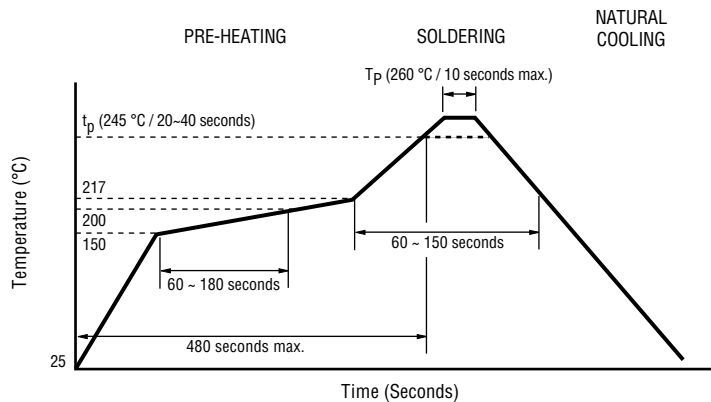
# SRP1238A Series - Shielded Power Inductors



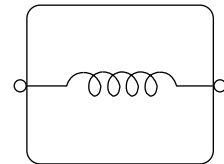
## L vs. I Charts (Continued)



## Soldering Profile



## Electrical Schematic



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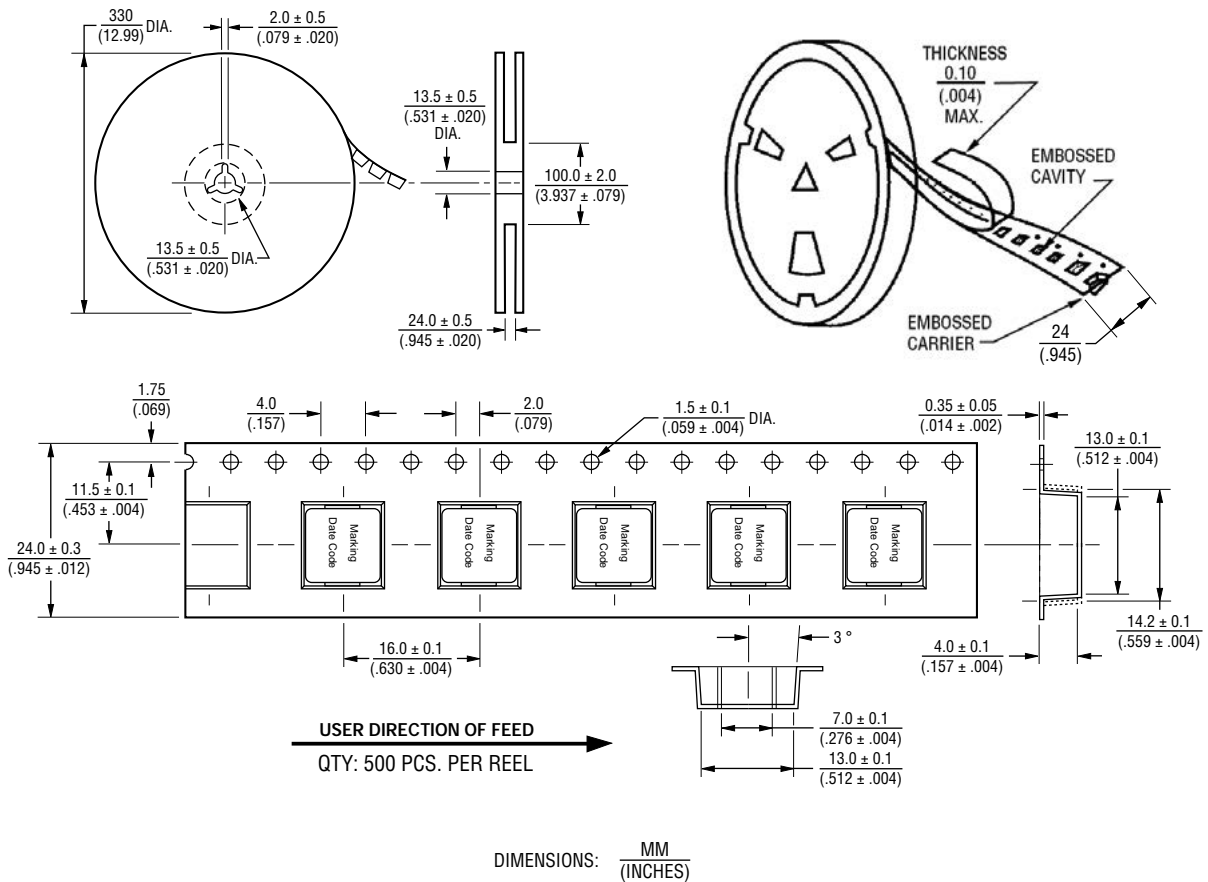
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# SRP1238A Series - Shielded Power Inductors

**BOURNS®**

## Packaging Specifications



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