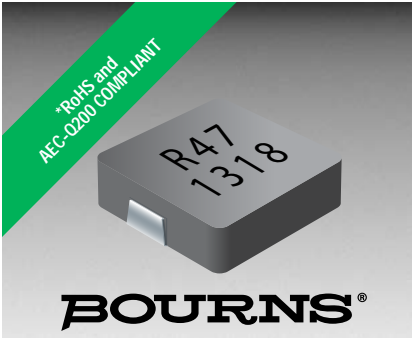




**THE DATASHEET OF  
SRP1245A-R50M**





### Features

- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 0.20 to 22  $\mu$ H
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

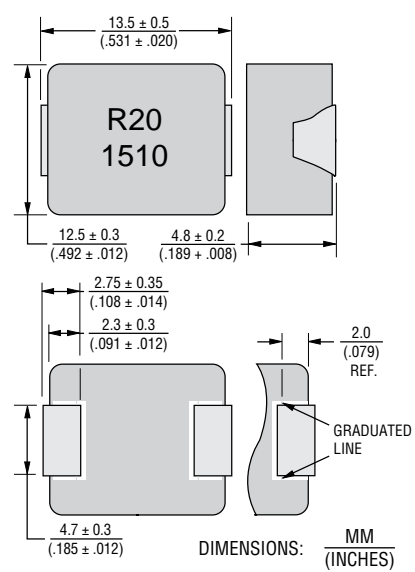
## SRP1245A Series - Shielded Power Inductors

### Electrical Specifications @ 25 °C

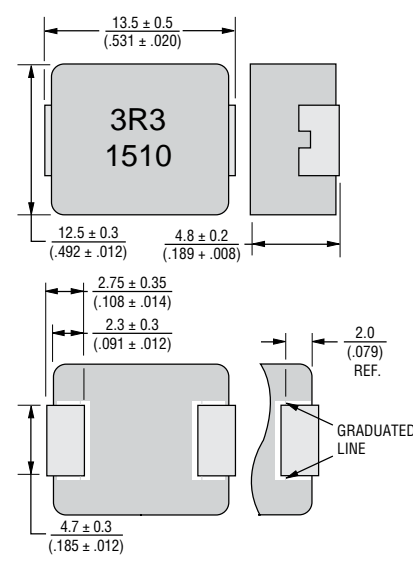
Bourns Part Number	Inductance @ 100 KHz / 1 V		Q (Min.) @ 100 KHz / 1 V	SRF (MHz) Typ.	DCR (m $\Omega$ ) Typ.	DCR (m $\Omega$ ) Max.	I <sub>rms</sub> (A)	Isat (A)	Terminal Type
	L ( $\mu$ H)	Tol. (%)							
SRP1245A-R20M	0.20	20	10	130	0.45	0.55	52	110	Non-Lead Frame
SRP1245A-R22M	0.22	20	10	120	0.5	0.7	52	110	
SRP1245A-R33M	0.33	20	15	90	0.7	0.9	42	80	
SRP1245A-R36M	0.36	20	15	80	0.75	0.95	42	75	
SRP1245A-R39M	0.39	20	15	78	0.78	0.95	42	70	
SRP1245A-R47M	0.47	20	20	70	0.86	1.1	38	65	
SRP1245A-R50M	0.50	20	20	65	0.9	1.3	37	60	
SRP1245A-R56M	0.56	20	20	60	1	1.5	36	55	
SRP1245A-R68M	0.68	20	20	50	1.4	1.7	34	54	
SRP1245A-R82M	0.82	20	20	45	1.7	2.1	31	52	
SRP1245A-1R0M	1.0	20	20	40	1.85	2.5	29	50	
SRP1245A-1R2M	1.2	20	20	35	2.5	3.0	28	49	
SRP1245A-1R5M	1.5	20	20	30	2.8	3.3	27	48	
SRP1245A-1R8M	1.8	20	20	27	4	4.9	21	40	
SRP1245A-2R2M	2.2	20	20	24	4.2	5.5	20	32	
SRP1245A-2R7M	2.7	20	20	23	4.7	6.7	17	32	
SRP1245A-3R3M	3.3	20	20	22	6.8	9.2	15	32	
SRP1245A-4R7M	4.7	20	20	15	11.4	15.0	12	27	
SRP1245A-5R6M	5.6	20	20	13	12.3	16.5	11.5	22	
SRP1245A-6R0M	6.0	20	20	12	13	16.5	11.5	21.5	
SRP1245A-6R8M	6.8	20	20	12	14.5	18.5	11	21	
SRP1245A-8R2M	8.2	20	20	11	16.8	22.5	9.5	18	
SRP1245A-100M	10	20	20	10	21.4	25.5	9	16	
SRP1245A-180M	18	20	20	7	40	45.0	7.5	11	
SRP1245A-220M	22	20	20	6	50	58	6.5	10	

### Product Dimensions

#### Non-Lead Frame Terminal



#### Lead Frame Terminal



### 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

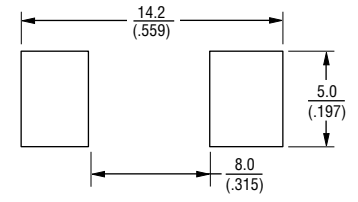
Core ..... Carbonyl powder  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Packaging ..... 500 pcs. per 13-inch reel

### How to Order

#### SRP1245A - 100M

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

### Recommended Layout



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



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

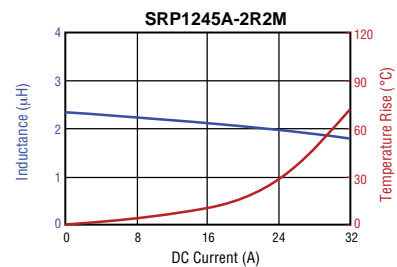
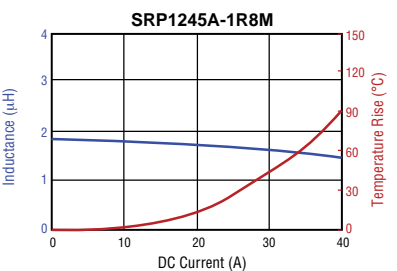
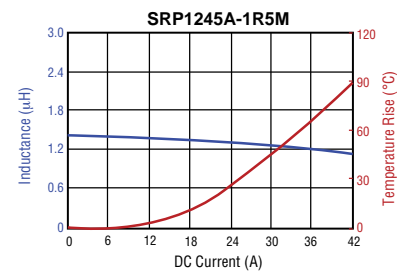
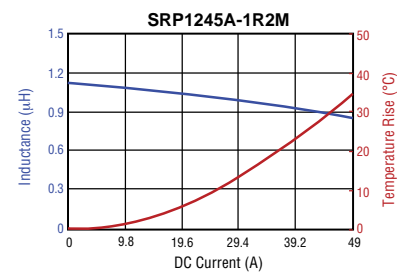
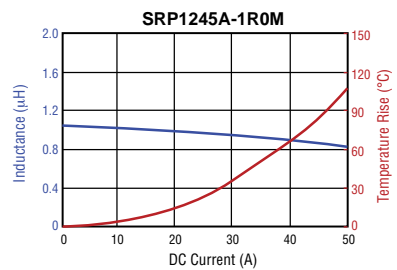
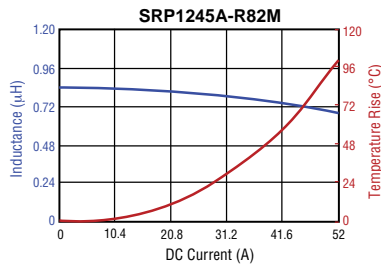
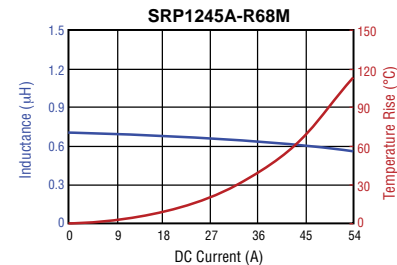
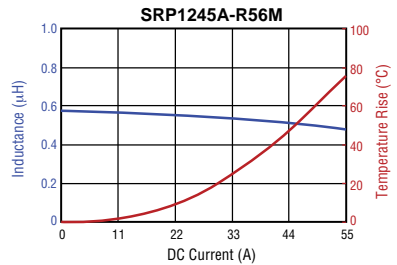
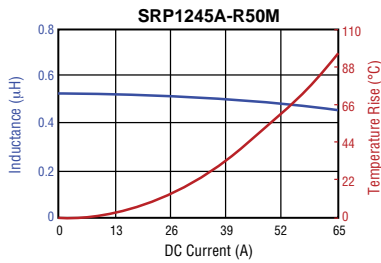
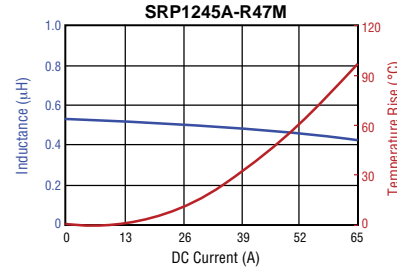
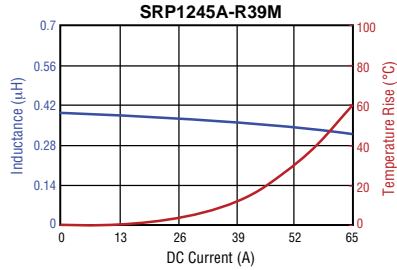
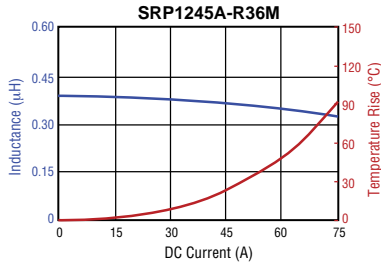
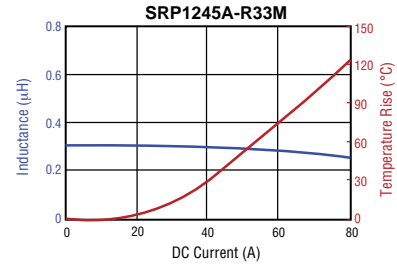
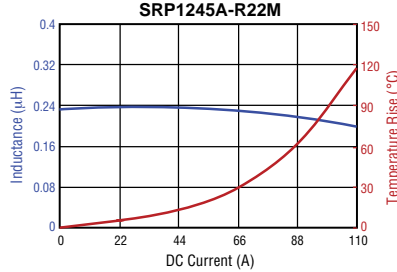
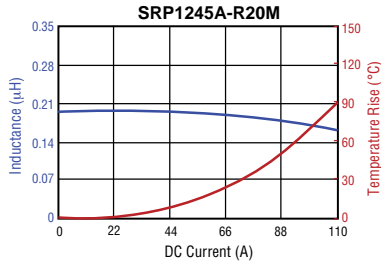
\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
 \*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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# SRP1245A Series - Shielded Power Inductors



## L vs. I Charts



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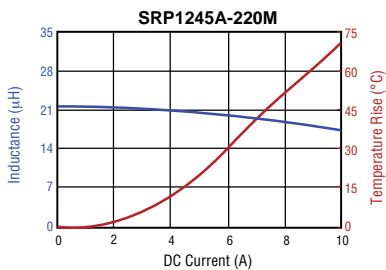
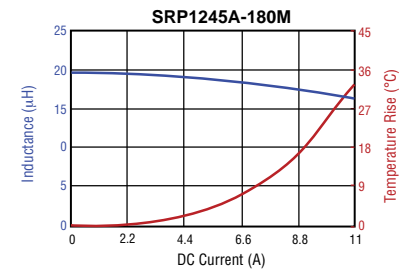
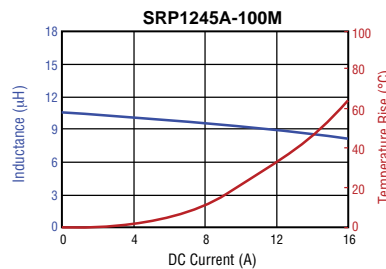
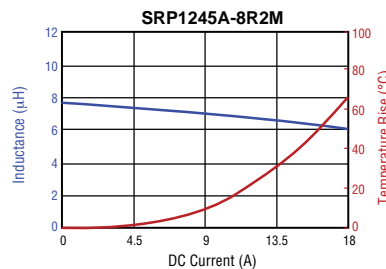
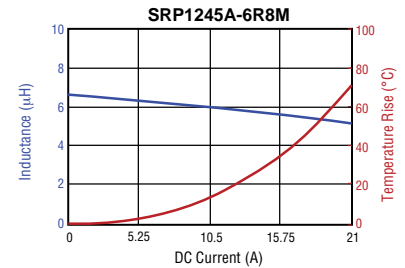
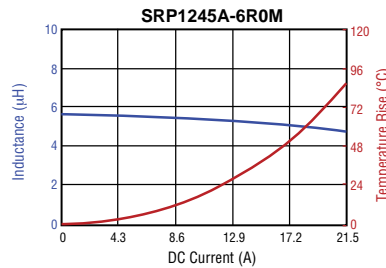
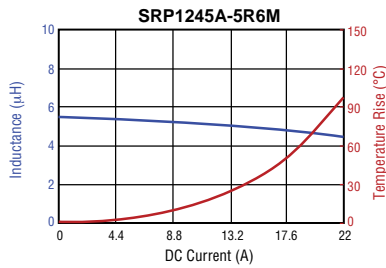
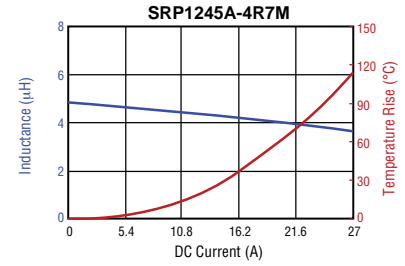
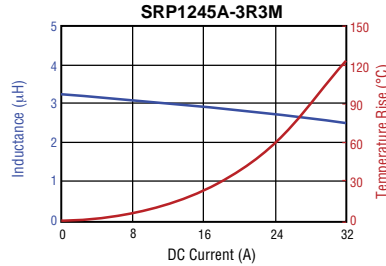
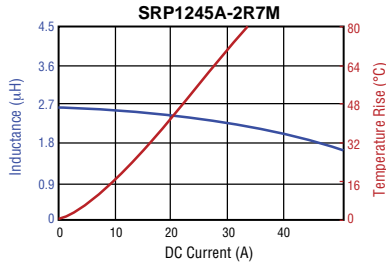
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# SRP1245A Series - Shielded Power Inductors



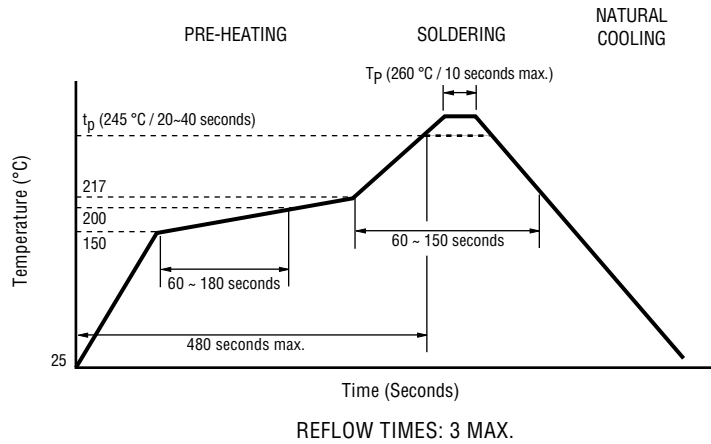
## L vs. I Charts



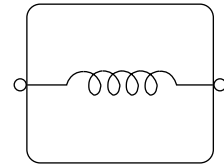
# SRP1245A Series - Shielded Power Inductors

**BOURNS®**

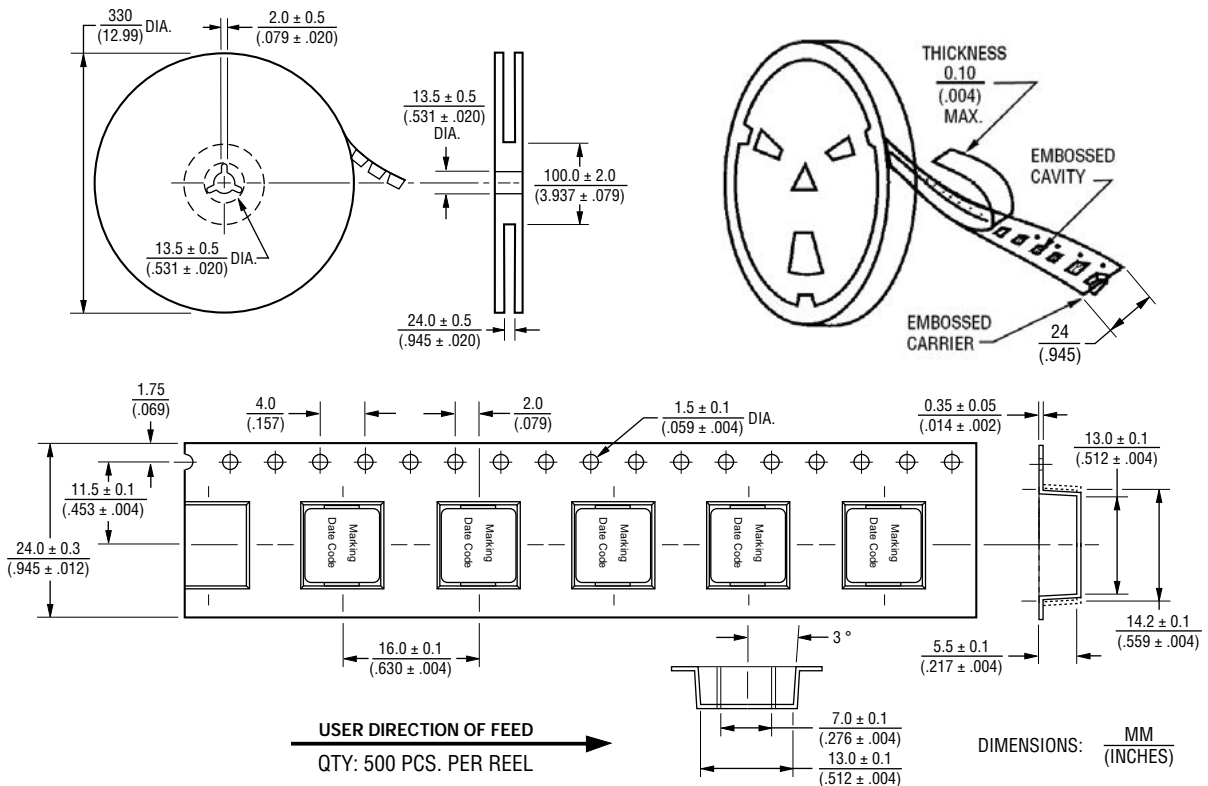
## Soldering Profile



## Electrical Schematic



## Packaging Specifications



REV. 11/19

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