



**THE DATASHEET OF  
SRP1770TA-470M**





### Features

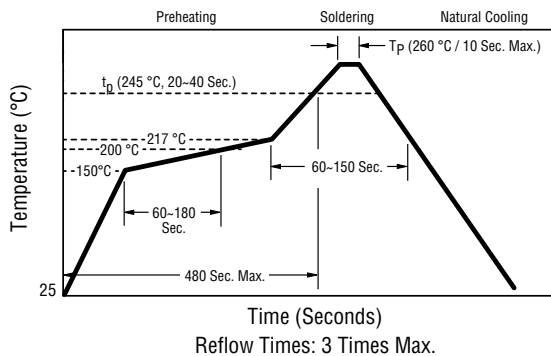
- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 0.45 to 100  $\mu$ H
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## SRP1770TA 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)	Isat1 (A)	Isat2 (A)	Terminal Type
	L ( $\mu$ H)	Tol. (%)								
SRP1770TA-R45M	0.45	$\pm 20$	20	56	0.8	0.96	62	85	125	Lead Frame
SRP1770TA-1R0M	1	$\pm 20$	20	35	1.6	2	52	60	70	
SRP1770TA-1R5M	1.5	$\pm 20$	20	30	2	2.5	47	52	65	
SRP1770TA-2R2M	2.2	$\pm 20$	20	22	2.4	2.7	43.5	47	62	
SRP1770TA-3R3M	3.3	$\pm 20$	20	17	3.5	3.9	28	45	54	
SRP1770TA-4R7M	4.7	$\pm 20$	20	15	4.8	5.5	25	41	50	
SRP1770TA-5R6M	5.6	$\pm 20$	20	12	5.8	7.05	21	40	45	
SRP1770TA-6R8M	6.8	$\pm 20$	20	11	8.4	9.2	19	32	39	
SRP1770TA-8R2M	8.2	$\pm 20$	20	10	9.6	10.8	18	25	31	
SRP1770TA-100M	10	$\pm 20$	20	8	11.8	13	16.5	24	29	
SRP1770TA-150M	15	$\pm 20$	20	7	17.8	20.5	12.5	23	27	
SRP1770TA-220M	22	$\pm 20$	20	5	25.1	26.5	12	18	23	
SRP1770TA-330M	33	$\pm 20$	20	4	38	44	10.7	15	20	
SRP1770TA-390M	39	$\pm 20$	20	4	40	48	9.2	11	18	
SRP1770TA-470M	47	$\pm 20$	20	3	48	55	8.7	9.5	16	
SRP1770TA-560M	56	$\pm 20$	20	3	54	62	7.8	9	15	
SRP1770TA-680M	68	$\pm 20$	20	2	68	80	7	8	13	
SRP1770TA-101M	100	$\pm 20$	20	2	102	118	5.3	6.5	12	

### Soldering Profile

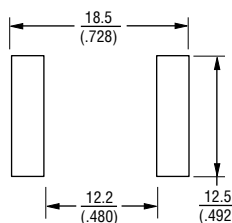


### How to Order

**SRP1770TA - 220 M**

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

### Recommended Layout



### General Specifications

Operating Temperature .....-55 °C to +150 °C  
 (Temperature rise included)  
 Storage Temperature .....-55 °C to +150 °C  
 Rated Current ..... Inductance drops 20 % at Isat1,  
 30 % at Isat2  
 Temperature Rise .....40 °C at rated I<sub>rms</sub>  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM)..... N/A

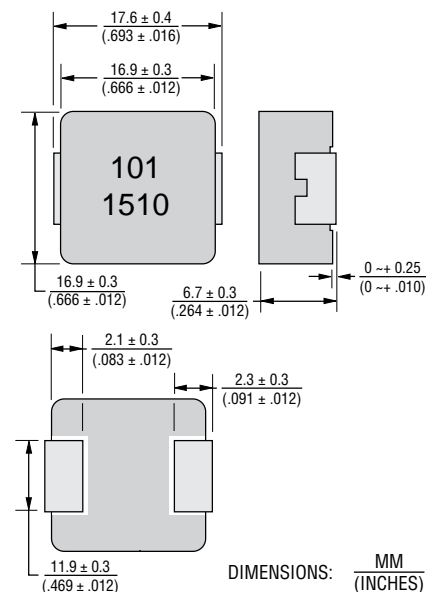
1 Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

### Materials

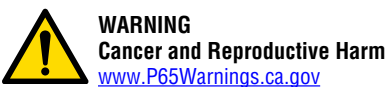
Core ..... Carbonyl powder  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Packaging ..... 200 pcs. per 13-inch reel

### Product Dimensions

#### Lead Frame Terminal



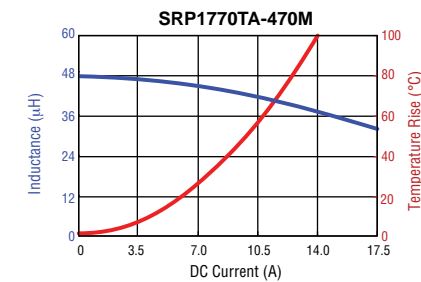
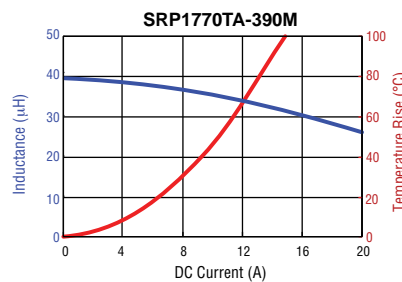
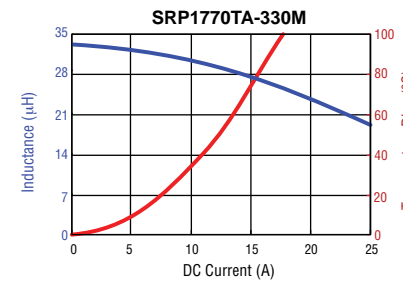
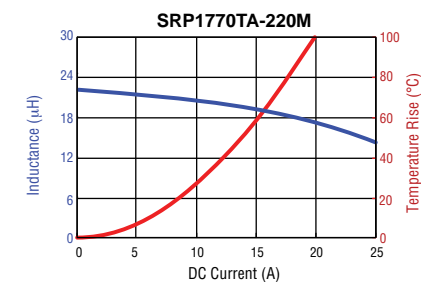
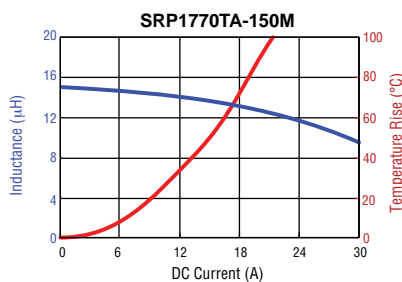
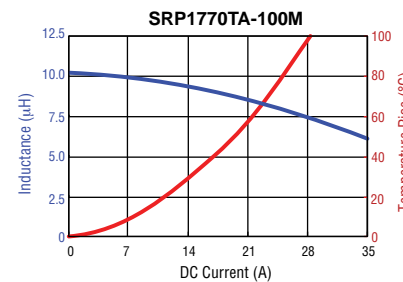
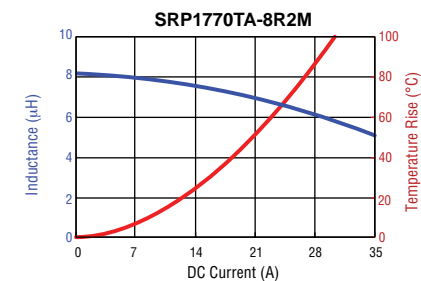
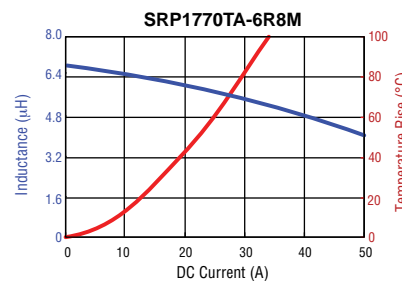
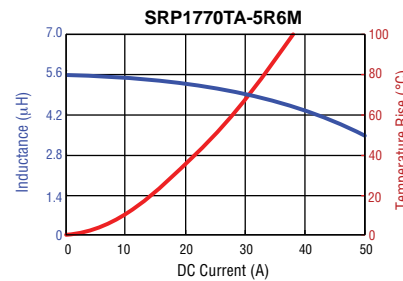
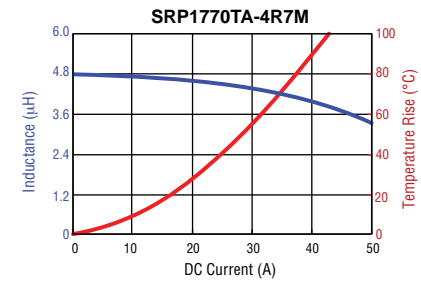
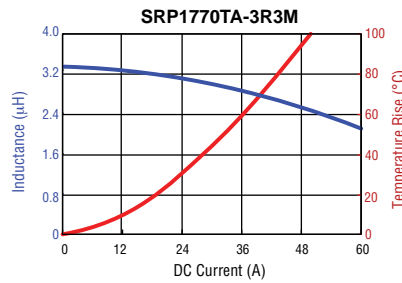
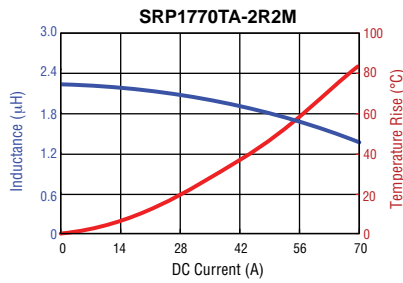
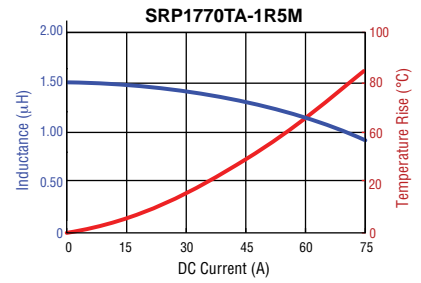
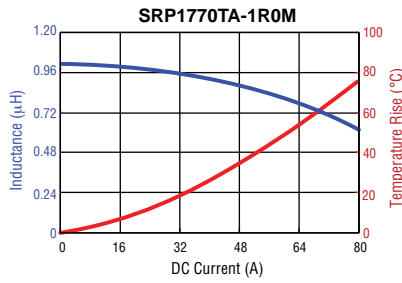
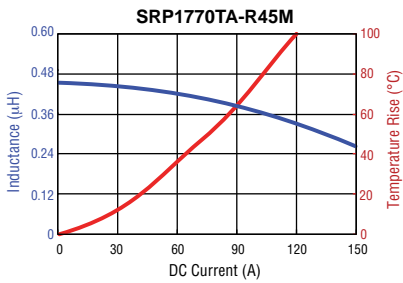
\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
 \*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.  
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# SRP1770TA Series - Shielded Power Inductors

**BOURNS®**

## L vs. I Charts



Specifications are subject to change without notice.

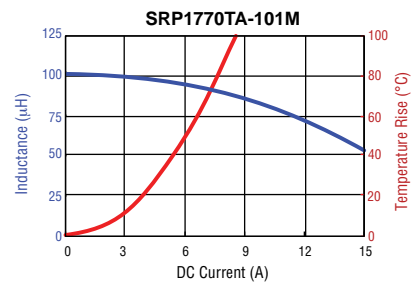
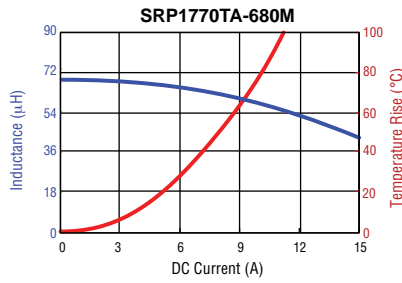
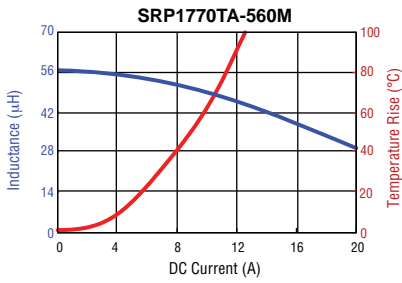
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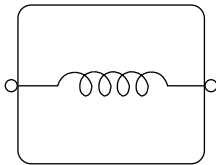
# SRP1770TA Series - Shielded Power Inductors

**BOURNS®**

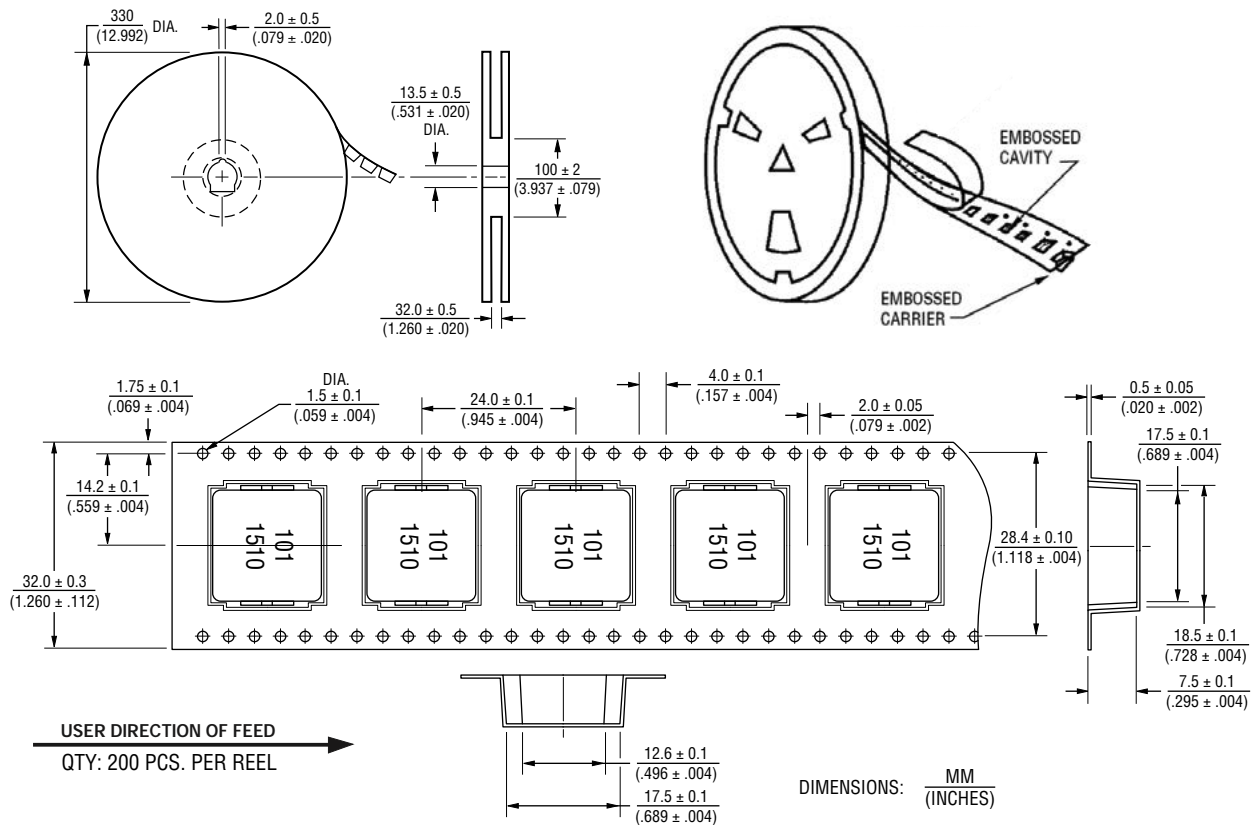
## L vs. I Charts (Continued)



## Schematic



## Packaging Specifications



REV. 11/19

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