



**THE DATASHEET OF  
SRP1770TA-6R8M**





### Features

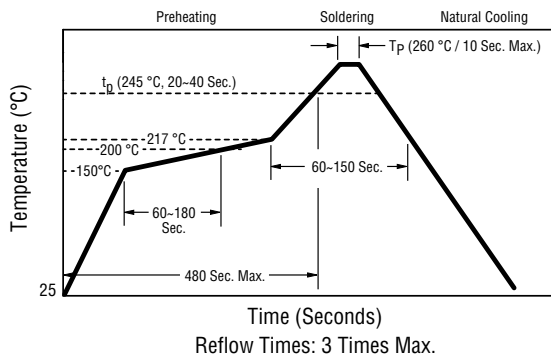
- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 0.45 to 100  $\mu$ H
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## 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

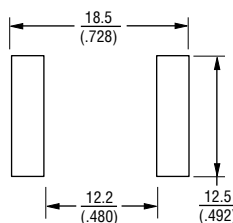


### How to Order

**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

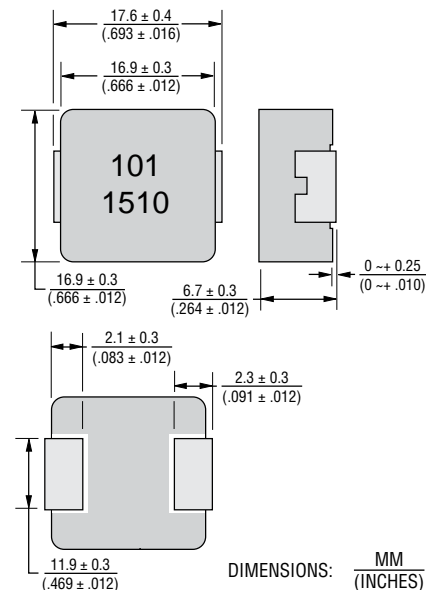
1 Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

### 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.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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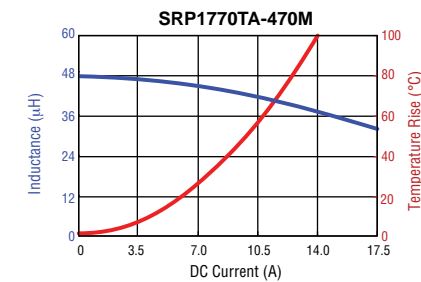
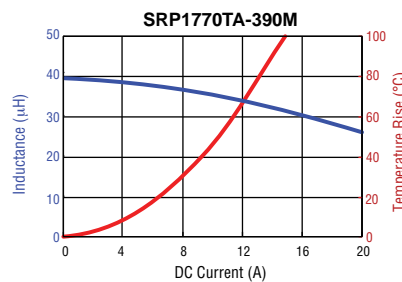
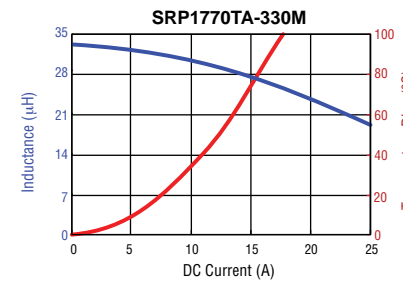
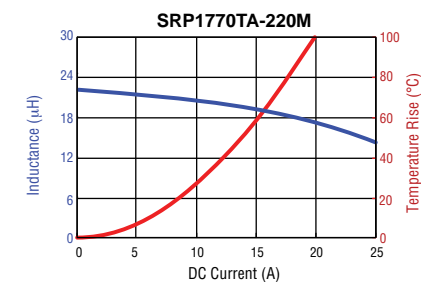
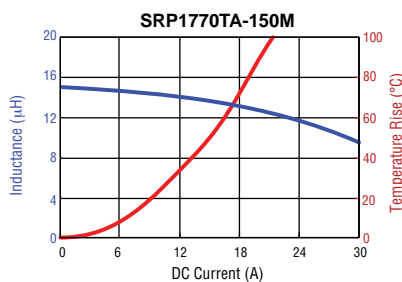
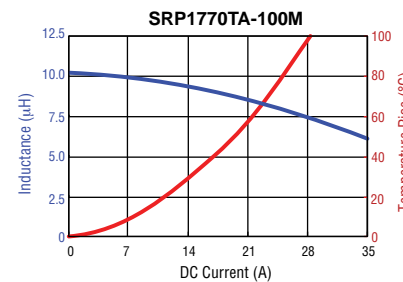
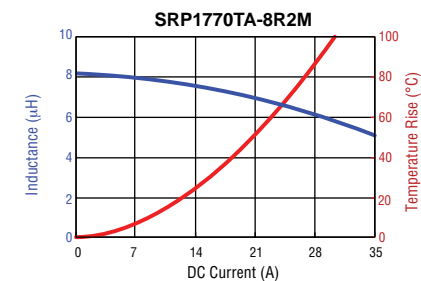
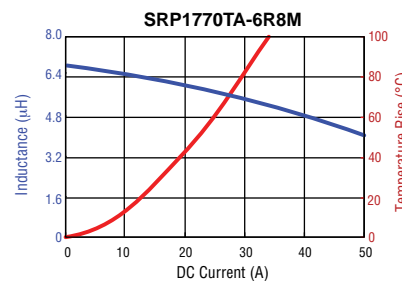
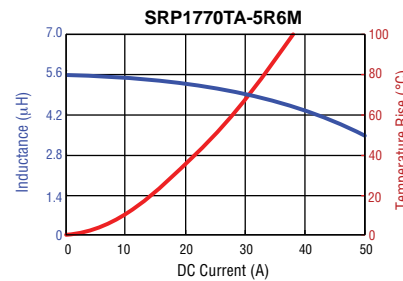
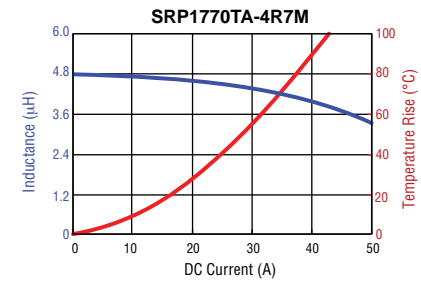
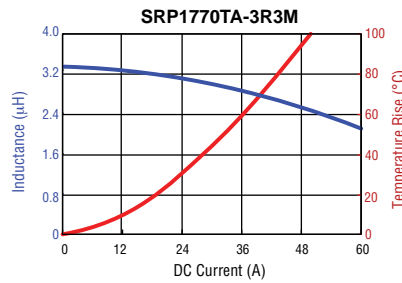
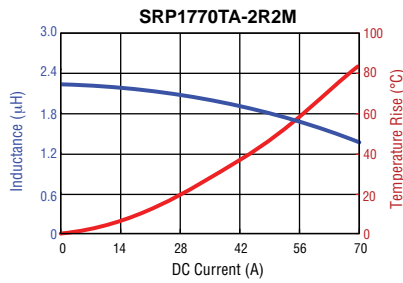
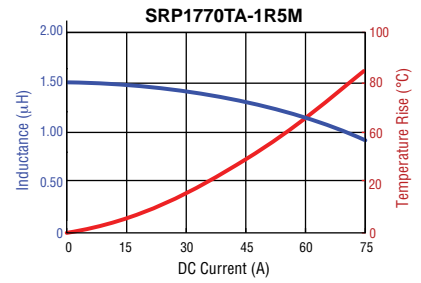
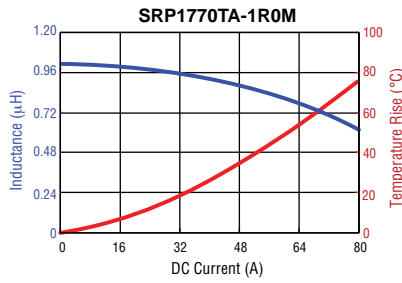
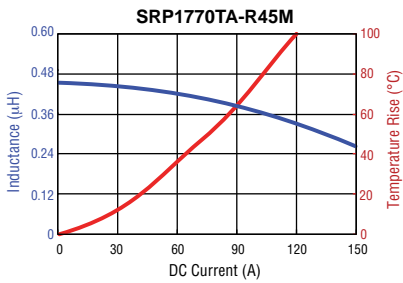


**WARNING**  
**Cancer and Reproductive Harm**  
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# SRP1770TA Series - Shielded Power Inductors



## L vs. I Charts



Specifications are subject to change without notice.

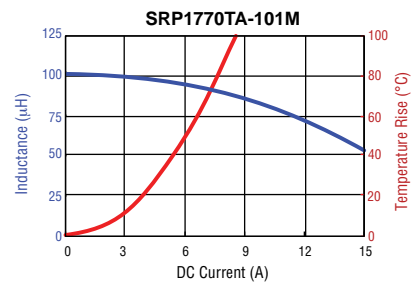
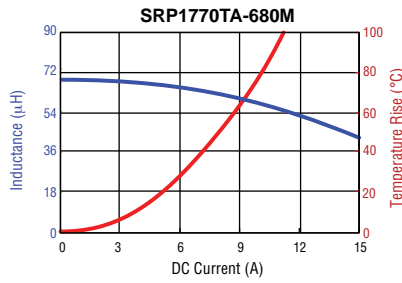
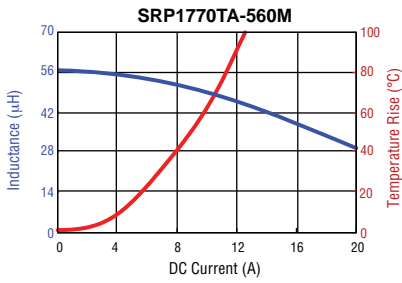
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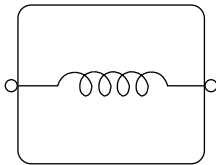
# SRP1770TA Series - Shielded Power Inductors

**BOURNS®**

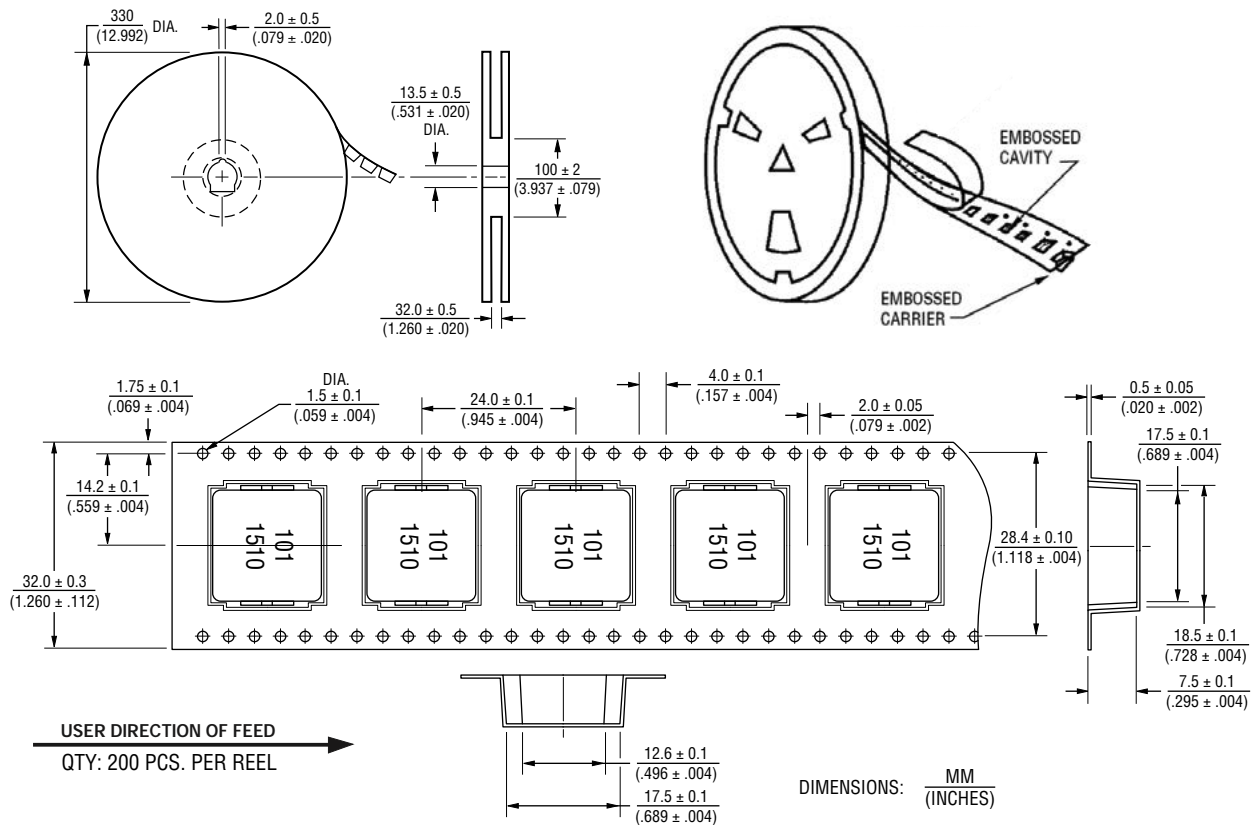
## L vs. I Charts (Continued)



## Schematic



## Packaging Specifications



REV. 11/19

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