



## Features

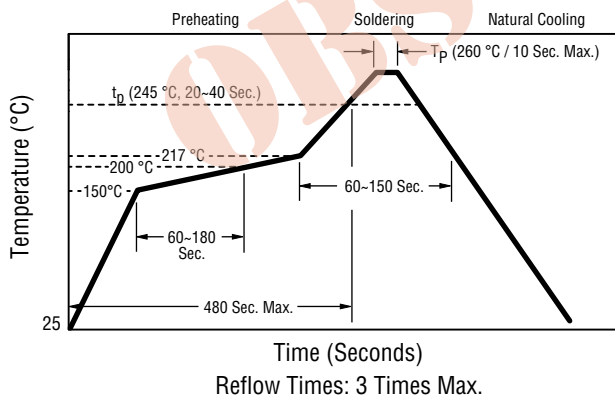
- Shielded construction
- Metal alloy powder core
- High saturation current
- Low buzz noise
- Inductance range: 0.47 to 47  $\mu$ H
- RoHS compliant\* and halogen free\*\*

## SRP1770C 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) Typ. | I <sub>sat</sub> (A) Typ. | Terminal Type |
|--------------------|----------------------------|----------|--------------------------|----------------|------------------------|------------------------|---------------------------|---------------------------|---------------|
|                    | L ( $\mu$ H)               | Tol. (%) |                          |                |                        |                        |                           |                           |               |
| SRP1770C-R47M      | 0.47                       | ± 20     | 10                       | 28             | 0.75                   | 0.83                   | 60.0                      | 115                       | Lead Frame    |
| SRP1770C-1R0M      | 1.0                        | ± 20     | 20                       | 24             | 1.30                   | 1.50                   | 48.0                      | 68                        |               |
| SRP1770C-1R5M      | 1.5                        | ± 20     | 20                       | 22             | 1.80                   | 2.10                   | 42.0                      | 55                        |               |
| SRP1770C-2R2M      | 2.2                        | ± 20     | 20                       | 21             | 2.50                   | 2.80                   | 40.0                      | 45                        |               |
| SRP1770C-3R3M      | 3.3                        | ± 20     | 20                       | 19             | 3.50                   | 3.90                   | 28.0                      | 40                        |               |
| SRP1770C-4R7M      | 4.7                        | ± 20     | 20                       | 17             | 4.80                   | 5.50                   | 26.0                      | 37                        |               |
| SRP1770C-5R6M      | 5.6                        | ± 20     | 20                       | 15             | 5.90                   | 6.80                   | 24.0                      | 35                        |               |
| SRP1770C-6R8M      | 6.8                        | ± 20     | 20                       | 14             | 8.40                   | 9.20                   | 22.0                      | 30                        |               |
| SRP1770C-8R2M      | 8.2                        | ± 20     | 20                       | 13             | 9.60                   | 10.80                  | 18.0                      | 28                        |               |
| SRP1770C-100M      | 10.0                       | ± 20     | 20                       | 12             | 11.60                  | 13.00                  | 17.0                      | 25                        |               |
| SRP1770C-150M      | 15.0                       | ± 20     | 20                       | 10             | 16.50                  | 19.50                  | 14.0                      | 23                        |               |
| SRP1770C-220M      | 22.0                       | ± 20     | 20                       | 8              | 24.00                  | 27.60                  | 12.0                      | 19                        |               |
| SRP1770C-330M      | 33.0                       | ± 20     | 20                       | 6              | 36.00                  | 42.00                  | 10.7                      | 15                        |               |
| SRP1770C-470M      | 47.0                       | ± 20     | 20                       | 5              | 46.00                  | 53.00                  | 8.7                       | 13                        |               |

### Soldering Profile

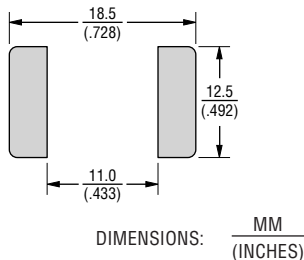


### How to Order

SRP1770C - 220M

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

### Recommended Layout



### General Specifications

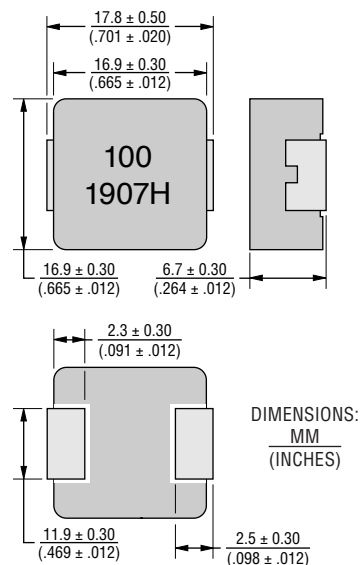
Operating Temperature .....-40 °C to +125 °C  
(Temperature rise included)  
Storage Temperature (Component) .....-40 °C to +125 °C  
Rated Current ..... Inductance drops 30 % at I<sub>sat</sub>  
Temperature Rise .....40 °C at rated I<sub>rms</sub>  
Moisture Sensitivity Level ..... 1  
ESD Classification (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.

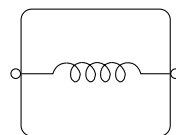
### Materials

Core ..... Metal alloy powder  
Wire ..... Enameled copper  
Terminal Finish ..... Sn/Ni  
Packaging ..... 200 pcs. per 13-inch reel

### Product Dimensions



### Schematic



**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.

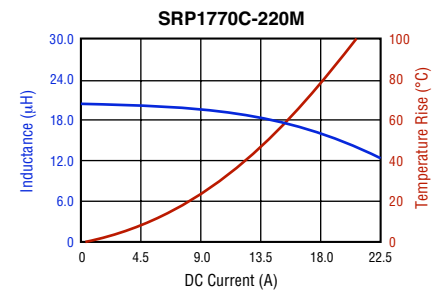
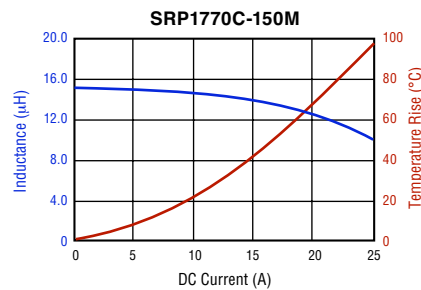
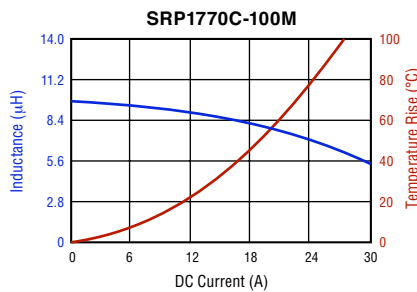
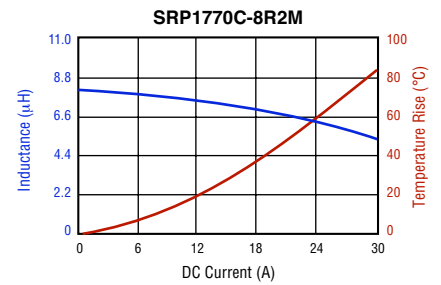
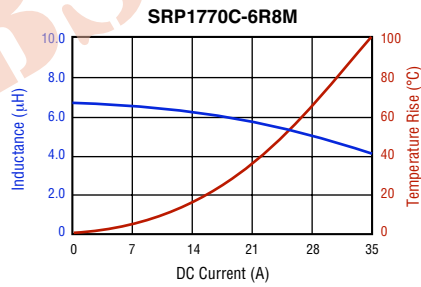
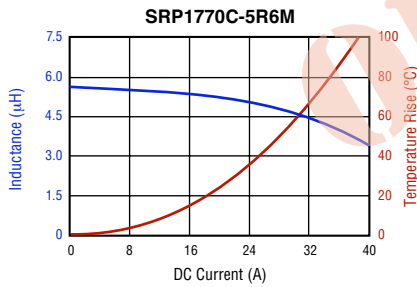
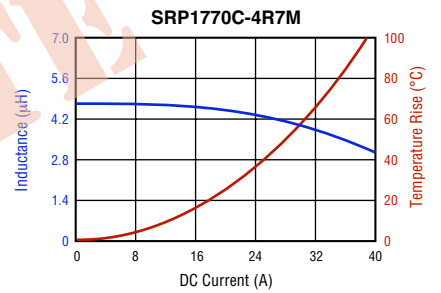
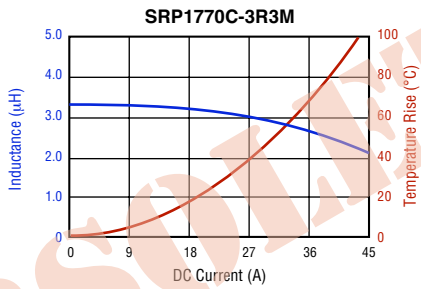
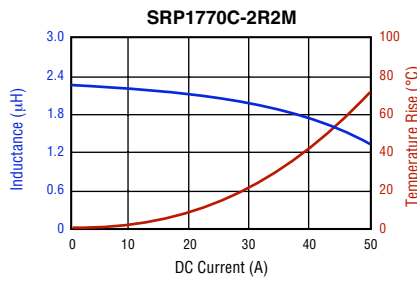
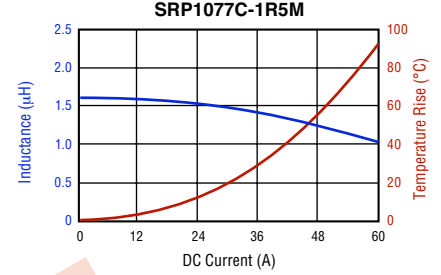
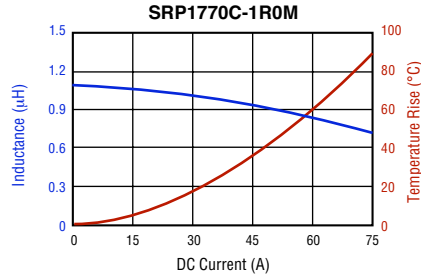
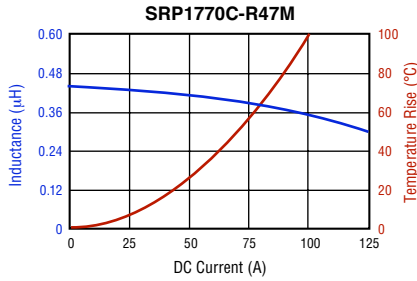
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# SRP1770C Series - Shielded Power Inductors

**BOURNS®**

## L vs. I Charts



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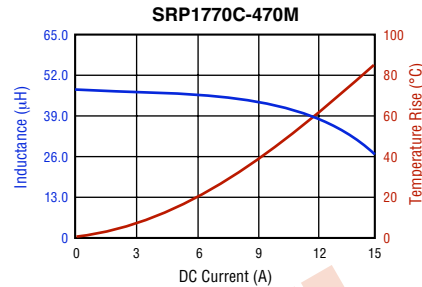
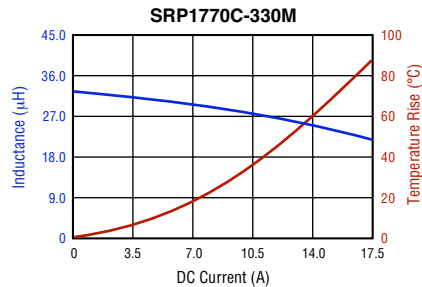
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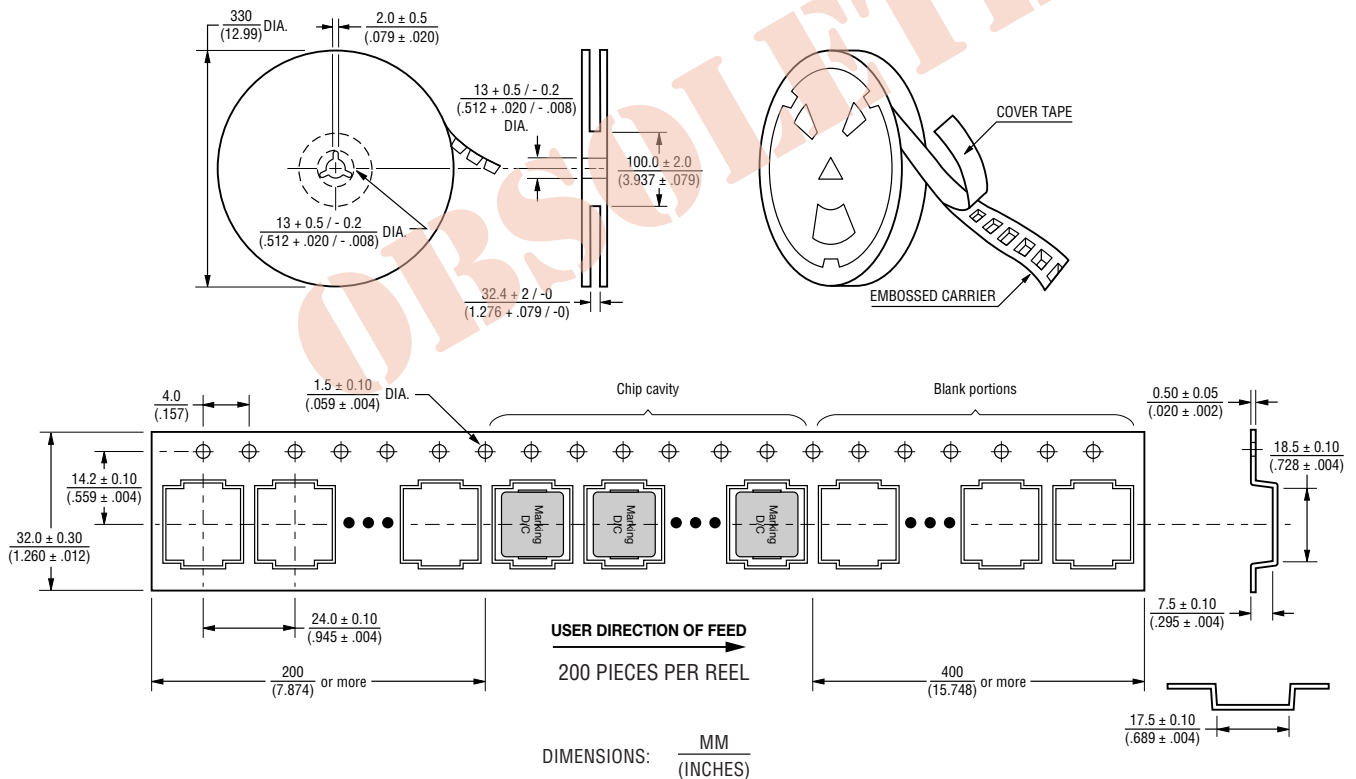
## SRP1770C Series - Shielded Power Inductors

**BOURNS®**

### L vs. I Charts (Continued)



### Packaging Specifications



**BOURNS®**

Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com

EMEA: Tel: +36 88 885 877 • Email: eurocus@bourns.com

The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com

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