



Features

- Shielded construction
- Carbonyl powder core
- High saturation current
- Low radiation
- Low buzz noise
- RoHS compliant* and halogen free**

SRP1770CC Series - Shielded Power Inductors

Electrical Specifications @ 25 °C

| Bourns Part No. | Inductance @ 100 kHz / 1 V | | Q Min. | SRF (MHz) Typ. | DCR (mΩ) Typ. | DCR (mΩ) Max. | I _{rms} (A) Typ. | I _{sat} (A) Typ. |
|-----------------|----------------------------|--------|--------|----------------|---------------|---------------|---------------------------|---------------------------|
| | L (μH) | Tol. % | | | | | | |
| SRP1770CC-R47M | 0.47 | 20 | 20 | 50 | 0.75 | 0.83 | 60 | 115 |
| SRP1770CC-1R0M | 1.0 | 20 | 20 | 35 | 1.3 | 1.5 | 48 | 68 |
| SRP1770CC-1R5M | 1.5 | 20 | 20 | 30 | 1.8 | 2.1 | 42 | 55 |
| SRP1770CC-2R2M | 2.2 | 20 | 20 | 22 | 2.5 | 2.8 | 40 | 45 |
| SRP1770CC-3R3M | 3.3 | 20 | 20 | 17 | 3.5 | 3.9 | 28 | 40 |
| SRP1770CC-4R7M | 4.7 | 20 | 20 | 15 | 4.8 | 5.5 | 26 | 37 |
| SRP1770CC-5R6M | 5.6 | 20 | 20 | 12 | 5.9 | 6.8 | 24 | 35 |
| SRP1770CC-6R8M | 6.8 | 20 | 20 | 11 | 8.4 | 9.2 | 22 | 30 |
| SRP1770CC-8R2M | 8.2 | 20 | 20 | 10 | 9.6 | 10.8 | 18 | 28 |
| SRP1770CC-100M | 10 | 20 | 20 | 8 | 11.6 | 13 | 17 | 25 |
| SRP1770CC-150M | 15 | 20 | 20 | 7 | 16.5 | 19.5 | 14 | 23 |
| SRP1770CC-220M | 22 | 20 | 20 | 5 | 24 | 27.6 | 12 | 19 |
| SRP1770CC-330M | 33 | 20 | 20 | 4 | 36 | 42 | 10.7 | 15 |
| SRP1770CC-470M | 47 | 20 | 20 | 3 | 46 | 53 | 8.7 | 13 |

Additional Information

Click these links for more information:



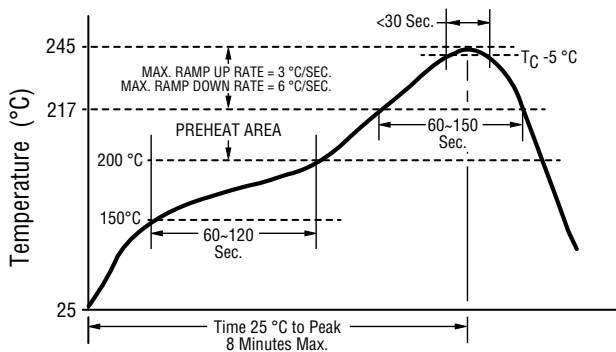
General Specifications

Operating Temperature -40 °C to +125 °C
 (Temperature rise included)
 Storage Temperature (Component) -40 °C to +125 °C
 Temperature Rise 40 °C at rated I_{rms}¹
 Rated Current Inductance drops 30 % at I_{sat}
 Moisture Sensitivity Level 1
 ESD Classification (HBM) N/A
¹Circuit 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

Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

| Profile Feature | Pb Free Assembly |
|---|------------------------------------|
| Preheat - Temperature Min. (T _{smin}) - Temperature Max. (T _{smax}) - Time (t _s) from T _{smin} to T _{smax} | 150 °C 200 °C 60-120 seconds |
| Ramp-up Rate (T _L to T _p) | 3 °C/second max. |
| Liquidous temperature (T _L) Time (t _L) maintained above T _L | 217 °C 60-120 seconds |
| Peak package body temperature (T _p) | 245 °C |
| Time within 5 °C of Actual Peak Temperature (t _p) | <30 seconds |
| Ramp-Down Rate (T _p to T _L) | 6 °C/second max. |
| Time 25 °C to Peak Temperature | 8 minutes max. |



WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

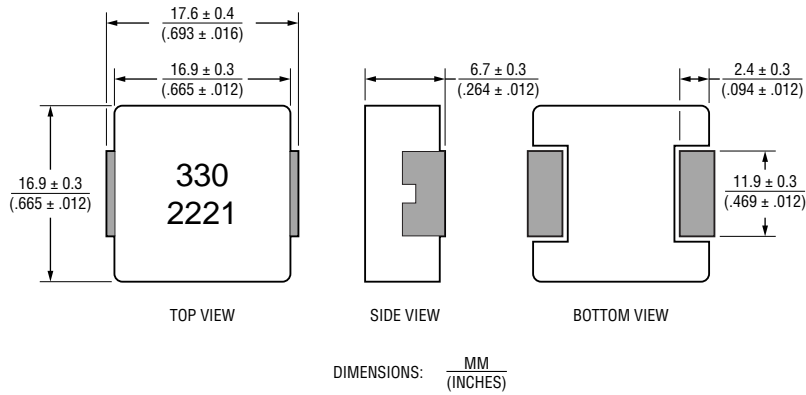
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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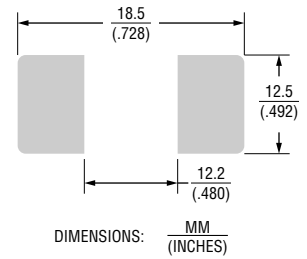
SRP1770CC Series - Shielded Power Inductors

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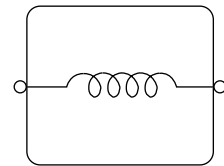
Product Dimensions



Recommended Layout



Electrical Schematic



How to Order

SRP1770CC - R47M

Model _____
Value Code (see table) _____

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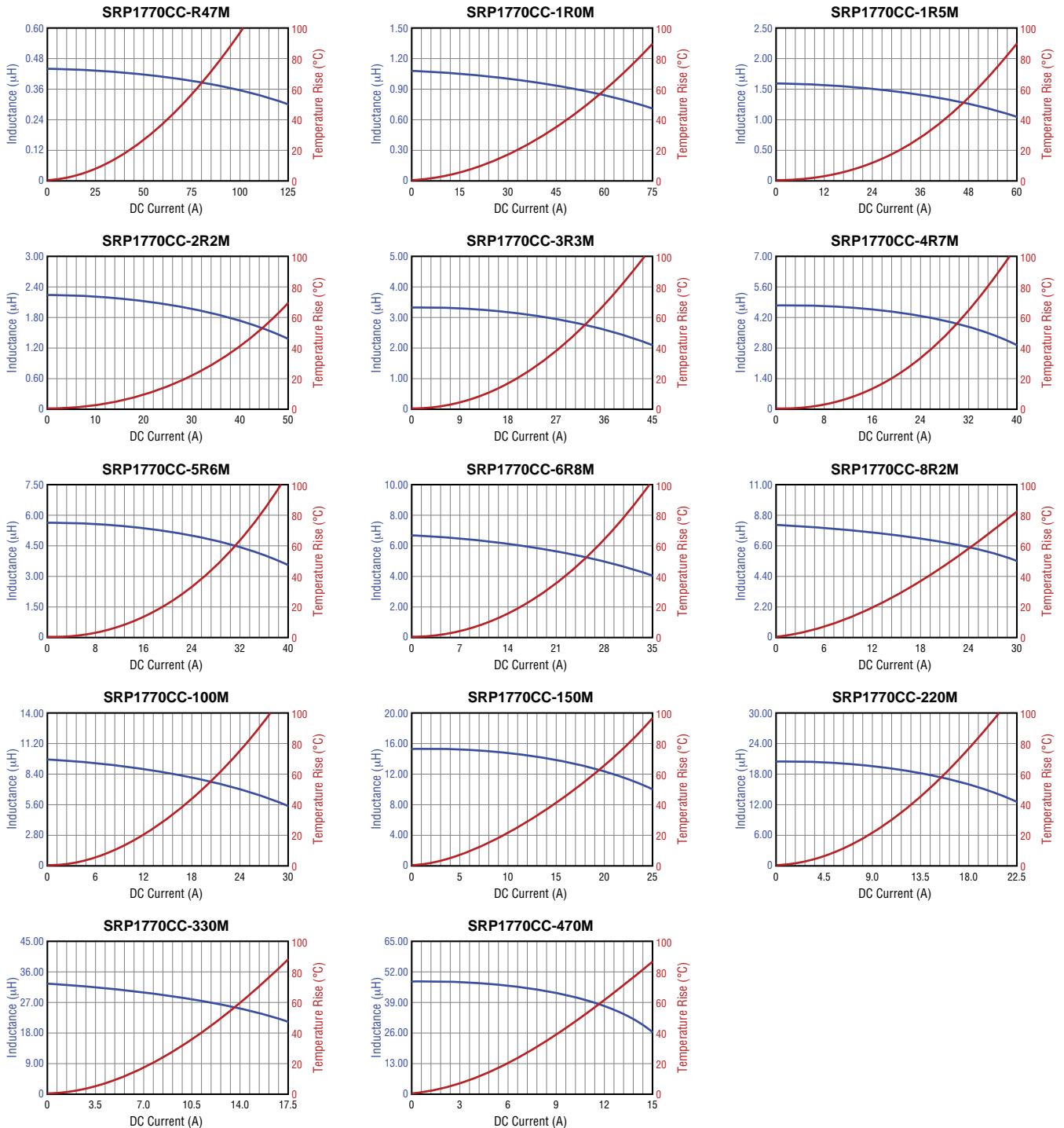
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L vs. IDC and Temperature vs. IDC Curves

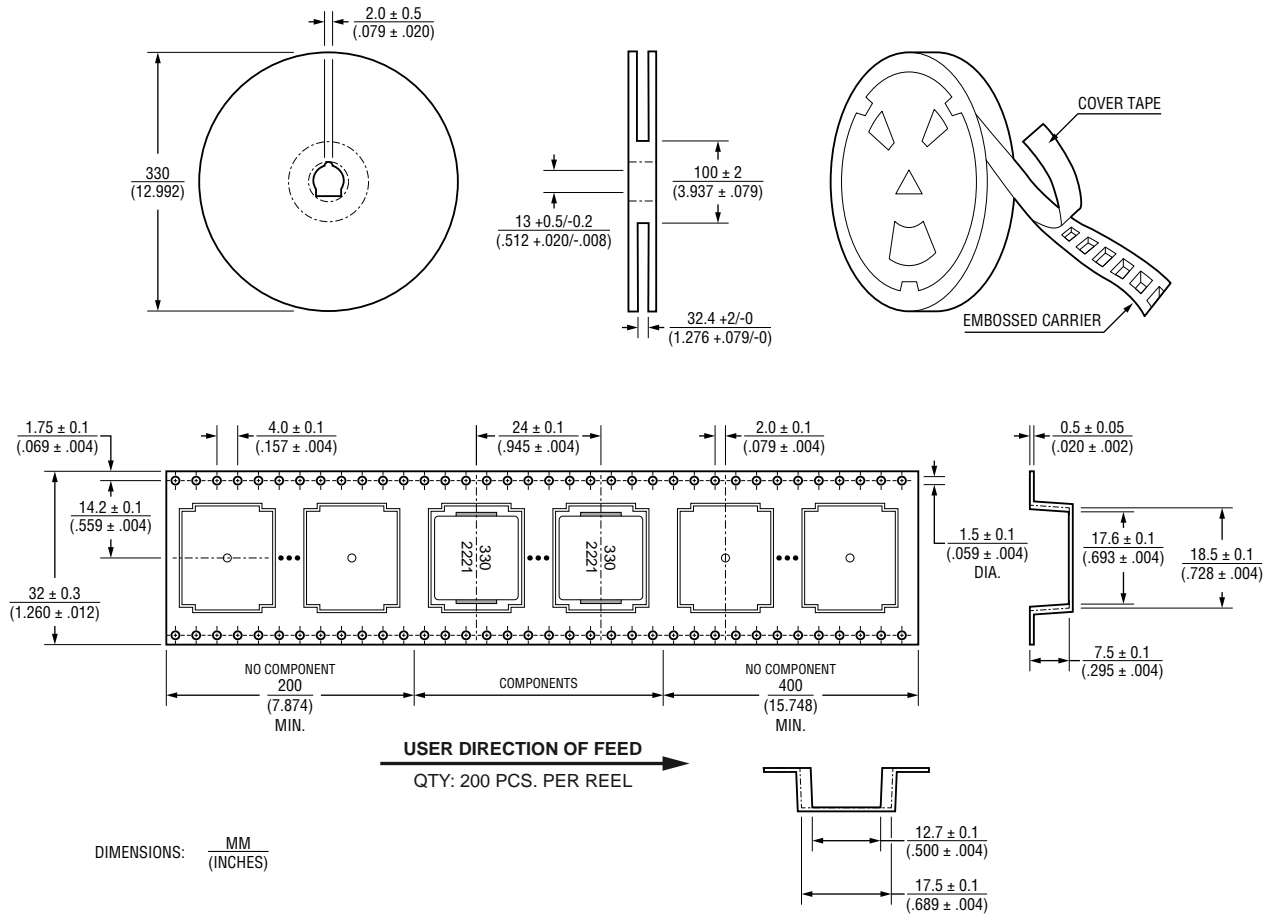


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Packaging Specifications



BOURNS®

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

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