



## Features

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

## SRP4020CC 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 <sub>rms</sub> (A) Typ.	I <sub>sat</sub> (A) Typ.
	L (μH)	Tol. %						
SRP4020CC-R10Y	0.10	30	5	300	3.2	4.0	14	35
SRP4020CC-R22Y	0.22	30	5	270	6.6	7.3	13	24
SRP4020CC-R33M	0.33	20	5	130	7.8	8.6	10	18
SRP4020CC-R47M	0.47	20	5	120	11.2	14	8.0	12
SRP4020CC-R56M	0.56	20	5	105	13.5	16	7.3	10
SRP4020CC-R68M	0.68	20	5	100	16	19	7.0	10
SRP4020CC-1R0M	1.0	20	5	65	22	27	5.0	8.5
SRP4020CC-1R5M	1.5	20	10	62	34.8	42	4.5	7.0
SRP4020CC-2R2M	2.2	20	10	45	51	61	4.0	6.0
SRP4020CC-3R3M	3.3	20	10	40	69	76	3.5	4.0
SRP4020CC-4R7M	4.7	20	10	27	95	105	2.6	3.5
SRP4020CC-5R6M	5.6	20	10	25	112	125	2.2	3.0
SRP4020CC-6R8M	6.8	20	10	24	150	172	2.1	2.8
SRP4020CC-8R2M	8.2	20	10	21	158	180	2.0	2.5
SRP4020CC-100M	10	20	10	19	215	243	1.8	2.3
SRP4020CC-150M	15	20	10	17	325	374	1.5	1.9
SRP4020CC-220M	22	20	10	12	470	500	1.2	1.4

### Additional Information

Click these links for more information:



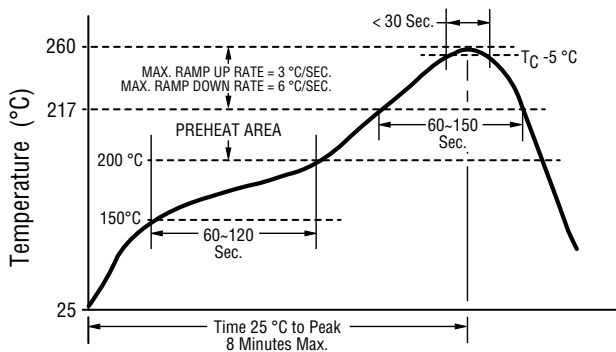
### General Specifications

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<sub>rms</sub><sup>1</sup>  
 Rated Current ..... Inductance drops 30 % at I<sub>sat</sub>  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM) ..... N/A  
<sup>1</sup>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 ..... 3000 pcs. per 13-inch reel

### Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

Profile Feature	Pb Free Assembly
Preheat - Temperature Min. (T <sub>smin</sub> ) - Temperature Max. (T <sub>smax</sub> ) - Time (t <sub>s</sub> ) from T <sub>smin</sub> to T <sub>smax</sub>	150 °C 200 °C 60-120 seconds
Ramp-up Rate (T <sub>L</sub> to T <sub>p</sub> )	3 °C/second max.
Liquidous temperature (T <sub>L</sub> ) Time (t <sub>L</sub> ) maintained above T <sub>L</sub>	217 °C 60-120 seconds
Peak package body temperature (T <sub>p</sub> )	260 °C
Time within 5 °C of Actual Peak Temperature (t <sub>p</sub> )	<30 seconds
Ramp-Down Rate (T <sub>p</sub> to T <sub>L</sub> )	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.



### WARNING Cancer and Reproductive Harm

[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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

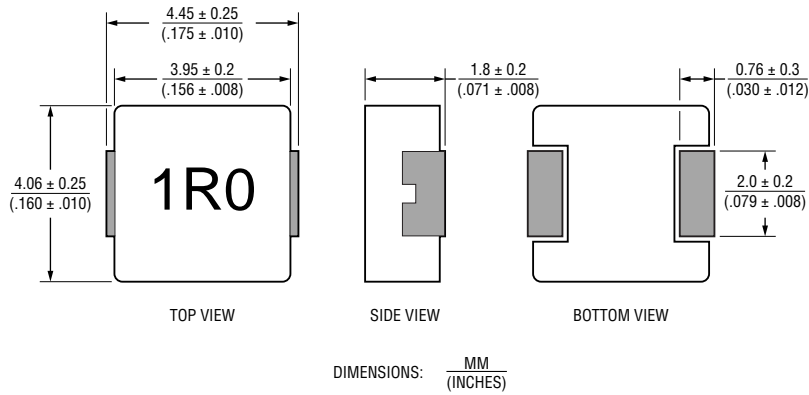
\*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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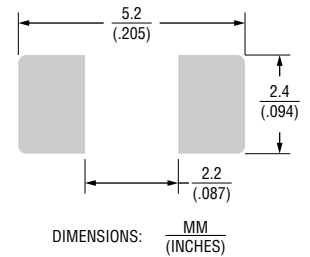
# SRP4020CC Series - Shielded Power Inductors

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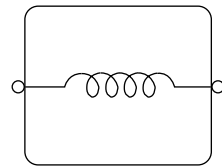
## Product Dimensions



## Recommended Layout



## Electrical Schematic

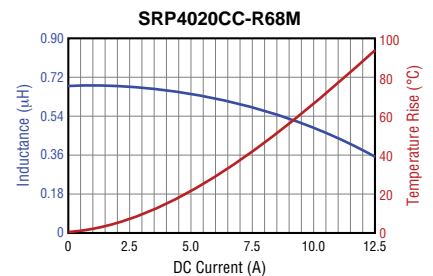
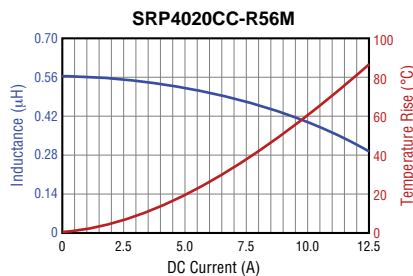
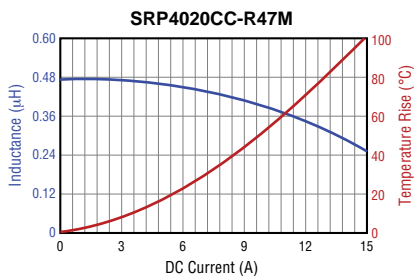
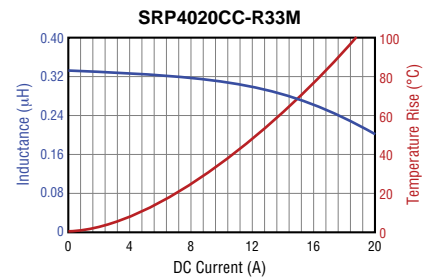
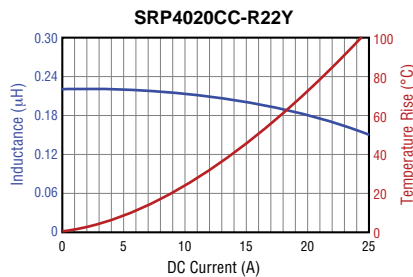
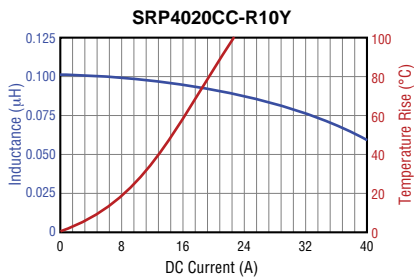


## How to Order

**SRP4020CC - R10Y**

Model   
 Value Code (see table)

## L vs. IDC and Temperature vs. IDC Curves



Specifications are subject to change without notice.

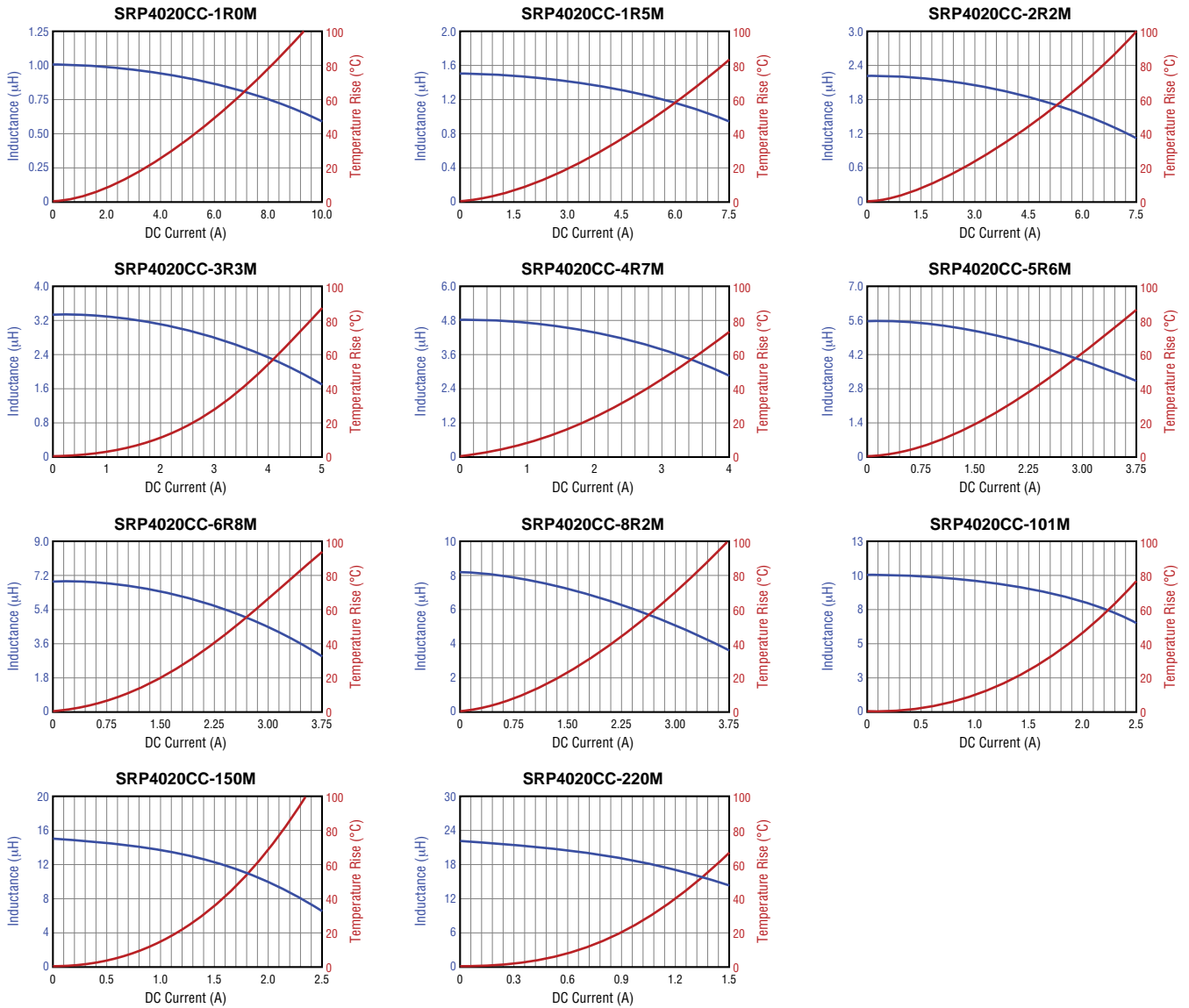
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# SRP4020CC Series - Shielded Power Inductors



## L vs. IDC and Temperature vs. IDC Curves (continued)



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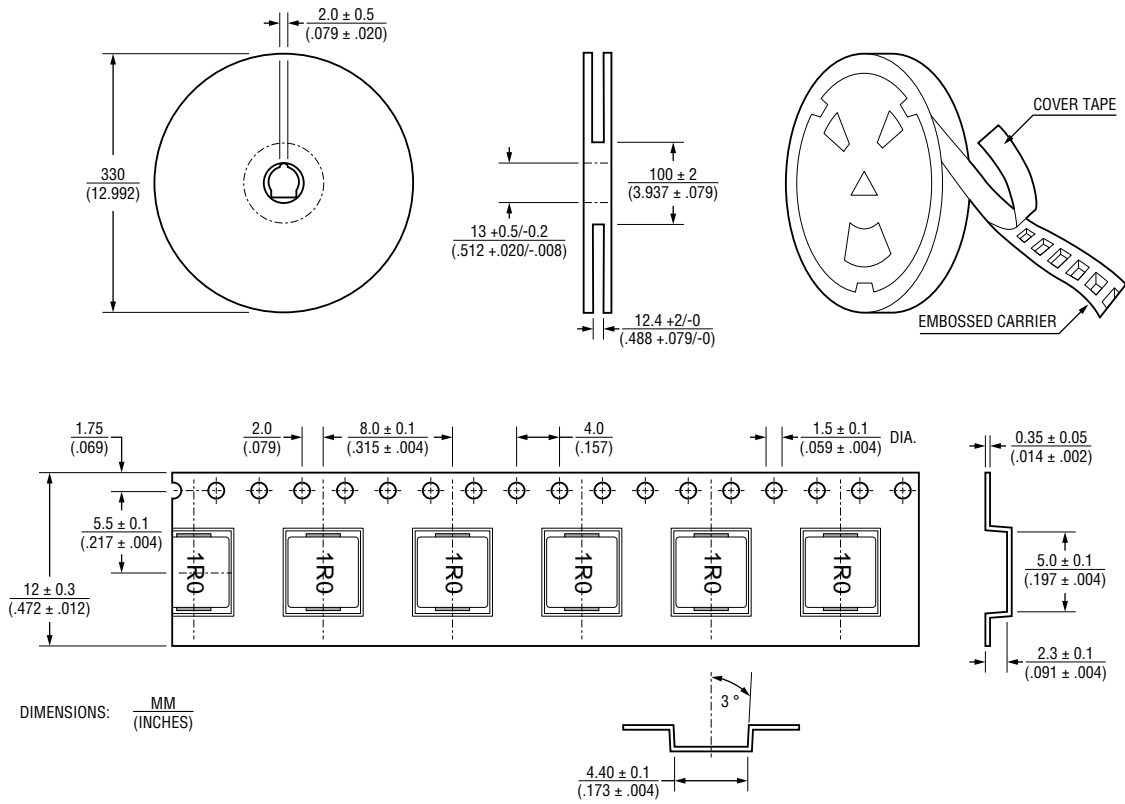
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# SRP4020CC Series - Shielded Power Inductors

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## Packaging Specifications



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

USER DIRECTION OF FEED  $\rightarrow$   
 QTY: 3000 PCS. PER REEL

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