

## Features

- Shielded construction for low radiation
- Low ACR and DCR
- Low loss – high efficiency
- Available in 2520 size
- Developed for use with DDR5 PMIC
- RoHS compliant\* and halogen free\*\*

## Applications

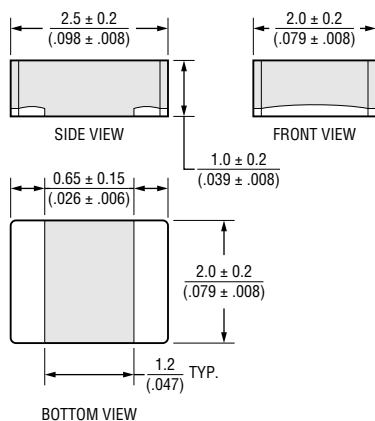
- Client DDR5 modules
- Desktop PCs, notebooks, tablets

## SRP2512CL Series – Shielded Power Inductors

### Electrical Specifications @ 25 °C

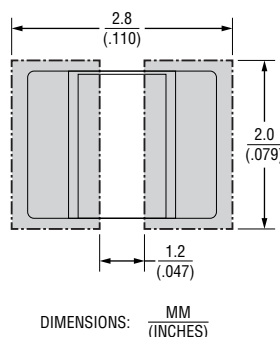
Bourns Part No.	Inductance ( $\mu$ H) $\pm 20\%$ @ 500 kHz / 1.0 V			DCR (m $\Omega$ )		ACR (m $\Omega$ ) @ 1 MHz Max.	I <sub>rms</sub> (A)		I <sub>sat</sub> (A)	
	L0A	L3.5A Min.	L6A Min.	Typ.	Max.		Typ.	Max.	Typ.	Max.
SRP2512CL-1R0M	1.0	0.6	0.38	20	24	152	5.0	4.5	4.5	4.0
SRP2512CL-1R5M	1.5	0.84	0.46	30	36	210	4.2	3.8	3.8	3.4

### Product Dimensions

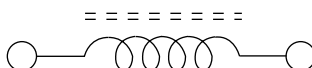


DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

### Recommended Layout



### Electrical Schematic



### 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 ..... Nanocrystalline core  
Wire ..... Enameled copper  
Terminal Finish ..... Cu/Ni/Sn  
Packaging ..... 2000 pcs. per 7-inch reel

### How to Order

**SRP2512CL - 1R0 M**

Model .....  
Value Code (see table) .....  
Tolerance .....  
M =  $\pm 20\%$

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**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.

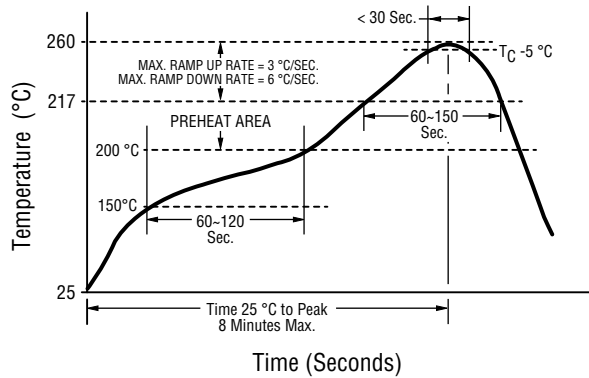
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# SRP2512CL Series – Shielded Power Inductors

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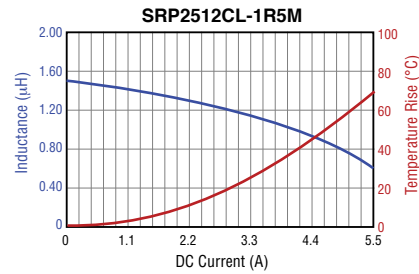
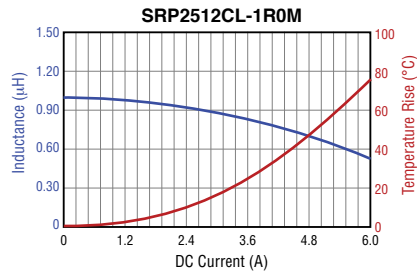
## Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

Profile Feature	Pb Free Assembly
Preheat <ul style="list-style-type: none"> <li>- Temperature Min. (<math>T_{smin}</math>)</li> <li>- Temperature Max. (<math>T_{smax}</math>)</li> <li>- Time(<math>t_s</math>) from <math>T_{smin}</math> to <math>T_{smax}</math></li> </ul>	150 °C 200 °C 60-120 seconds
Ramp-up Rate ( $T_L$ to $T_P$ )	3 °C/second max.
Liquidous temperature ( $T_L$ )	217 °C
Time ( $t_L$ ) maintained above $T_L$	60-150 seconds
Peak package body temperature ( $T_P$ )	260 °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.

## L vs. I Charts



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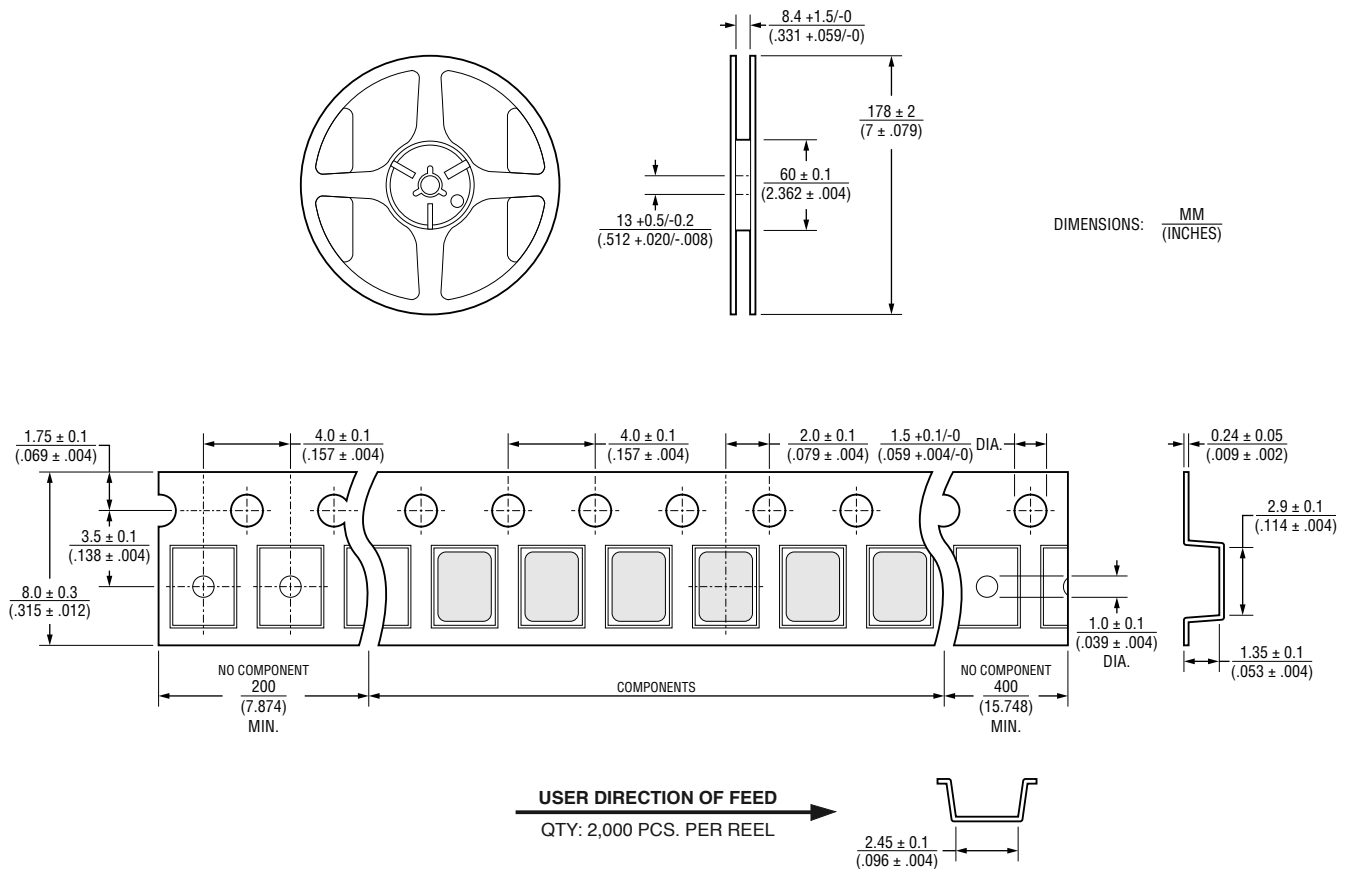
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# SRP2512CL Series – Shielded Power Inductors

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## Packaging Specifications



REV. 05/25

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