



## Features

- Shielded construction
- Low profile
- Metal alloy powder core
- High saturation current
- Low DCR
- Low buzz noise
- RoHS compliant\* and halogen free\*\*

## Applications

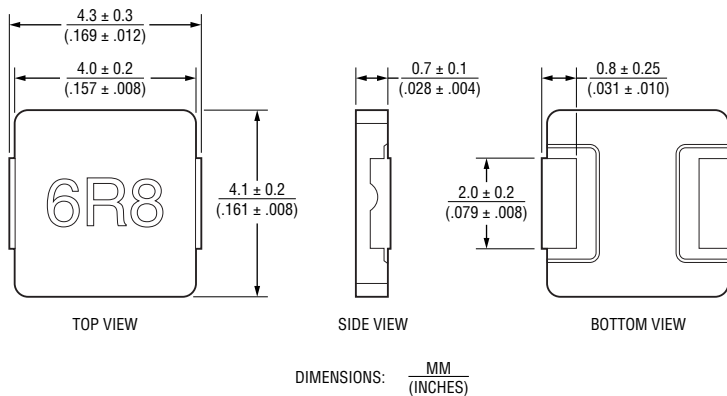
- DC-DC converters
- Power supplies in consumer, industrial and telecom electronics

# SRP0408F Series - Shielded Power Inductors

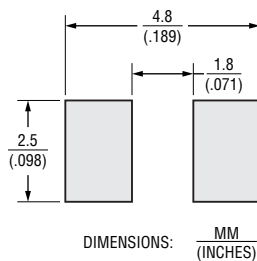
### Electrical Specifications

Bourns Part No.	Inductance @ 100 kHz / 1.0 V		Q @ 100 kHz Min.	SRF (MHz) Typ.	DCR (mΩ)		Irms (A) Typ.	Isat (A) Typ.
	L (μH)	Tol. %			Typ.	Max.		
SRP0408F-6R8M	6.8	±20	5	17	265	318	1.7	1.9
SRP0408F-100M	10.0			13	410	450	1.2	1.5

### Product Dimensions



### Recommended Layout



### Additional Information

Click these links for more information:



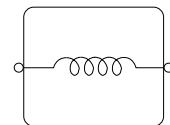
### General Specifications

Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature (Component) ..... -40 °C to +125 °C  
 Temperature Rise ..... 40 °C typ. at rated Irms<sup>1</sup> (25 °C)  
 Rated Current ..... Inductance drops 30 % at Isat  
 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 Material.....Metal alloy powder  
 Wire .....Enameled copper  
 Terminal..... Cu/Ni/Sn  
 Packaging..... 5000 pcs. per 13-inch reel

### Electrical Schematic



### How to Order

**SRP0408F - 6R8 M**  
 Model \_\_\_\_\_  
 Inductance Value Code \_\_\_\_\_  
 6R8 = 6.8 μH  
 100 = 10.0 μH  
 Tolerance Code \_\_\_\_\_  
 M = ±20 %



**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.

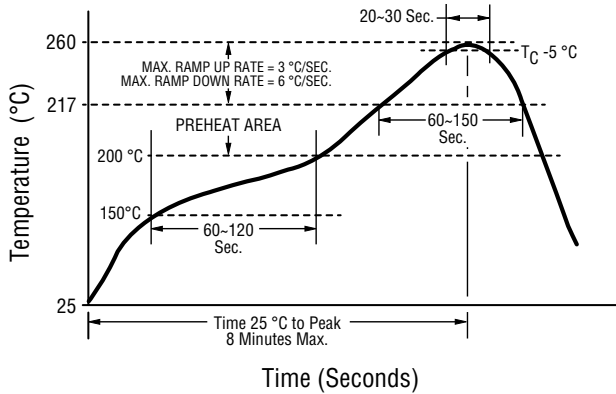
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# SRP0408F Series – Shielded Power Inductors

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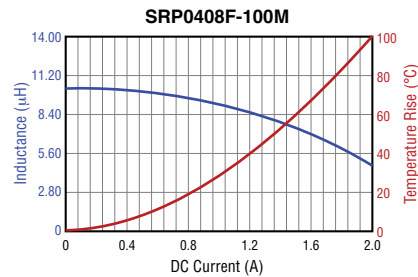
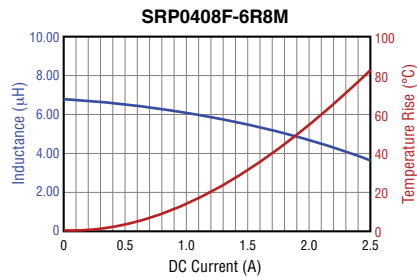
## Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

Profile Feature	Pb Free Assembly
Preheat	
- Temperature Min. ( $T_{smin}$ )	150 °C
- Temperature Max. ( $T_{smax}$ )	200 °C
- Time ( $t_s$ ) from $T_{smin}$ to $T_{smax}$	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.

## Inductance vs. IDC



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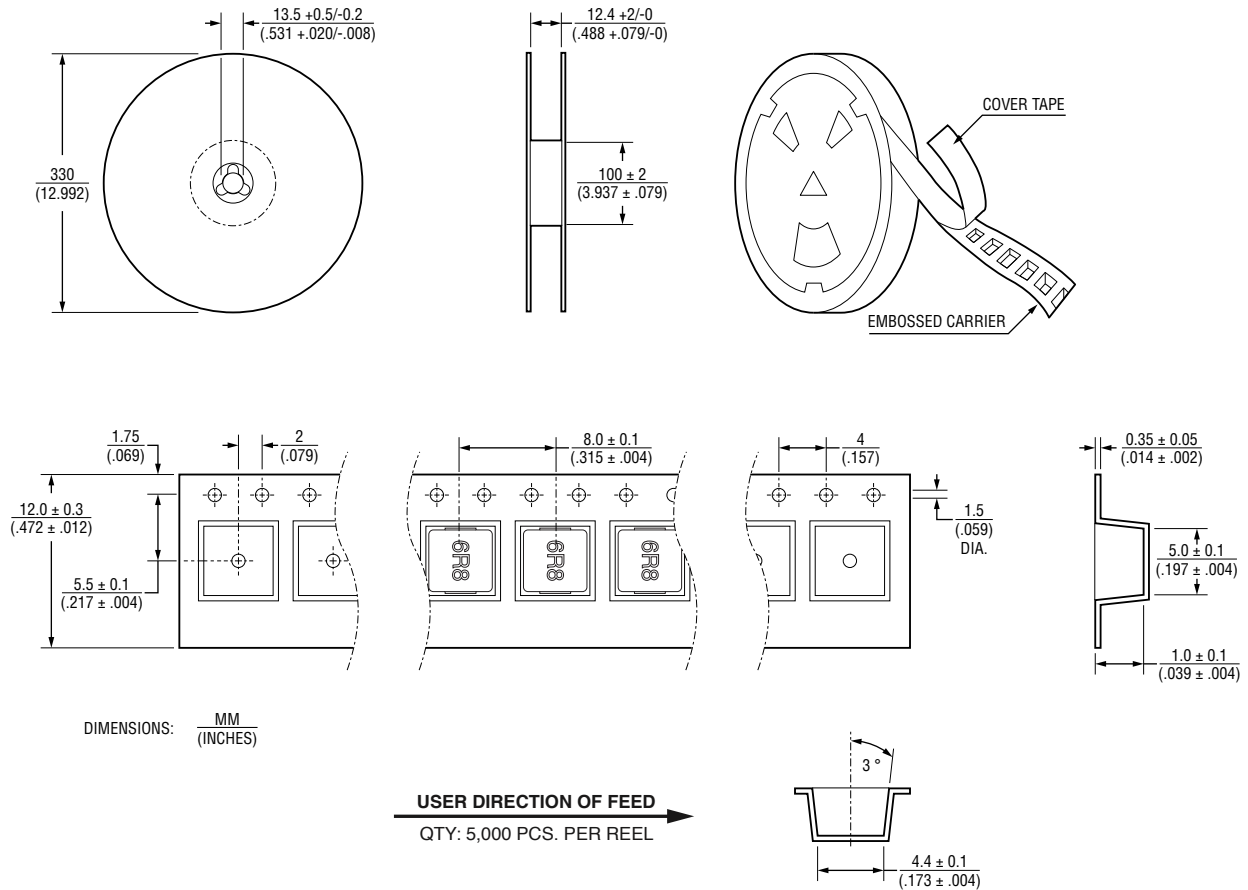
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# SRP0408F Series – Shielded Power Inductors

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## Packaging Specifications



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