

Features

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

SRP0612F Series - Shielded Power Inductors

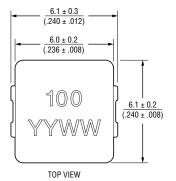
Applications

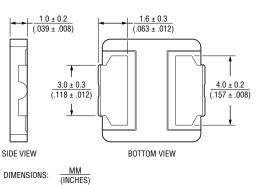
- DC-DC converters
- Power supplies in consumer, industrial and telecom electronics

Electrical Specifications

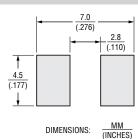
		tance Hz / 1.0 V	Q @ 100 kHz	SRF (MHz)	DCR (mΩ)		Irms (A)	Isat (A)
Bourns Part No.	L (μ H)	Tol. %	Min.	Typ.	Тур.	Max.	Тур.	Тур.
SRP0612F-R47M	0.47		10	100	14.3	16.5	8.5	16.0
SRP0612F-R68M	0.68			77	19.5	22	7.2	15.0
SRP0612F-1R0M	1.0			60	23	26.5	6.5	12.0
SRP0612F-1R5M	1.5			35	28.5	32.8	6.1	9.0
SRP0612F-2R2M	2.2	±20		32	33.2	38.8	5.6	8.0
SRP0612F-3R3M	3.3	1		27	50	60	5.0	7.5
SRP0612F-4R7M	4.7		15	20	70	82	4.2	6.3
SRP0612F-6R8M	6.8			16	115	138	3.5	4.6
SRP0612F-100M	10.0			11	150	180	2.8	4.0

Product Dimensions





Recommended Layout



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. Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

Additional Information

Click these links for more information:



General Specifications

Operating Temperature

.....--40 °C to +125 °C Temperature Rise

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 Material	Metal alloy powder
Wire	Enameled copper
Terminal	Cu/Ni/Sn
Packaging 3000	pcs. per 13-inch reel

Electrical Schematic



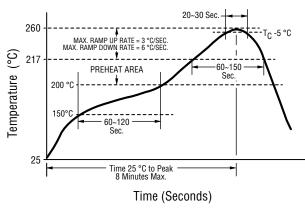
How to Order

Model ———	SRP0612F	-	R47	М
Inductance Value (R47 = $0.47 \ \mu H$ R68 = $0.68 \ \mu H$ 1R0 = $1.0 \ \mu H$ 1R5 = $1.5 \ \mu H$ 2R2 = $2.2 \ \mu H$ 3R3 = $3.3 \ \mu H$ 4R7 = $4.7 \ \mu H$ 6R8 = $6.8 \ \mu H$ 100 = $10.0 \ \mu H$	Code ———			
Tolerance Code – M = ±20 %				

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BOURNS

Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

20

0

10.00

8.0

6.00

4.00

2.0

0

Inductance (µH)

2.0

1.1

4.0

DC Current (A)

SRP0612F-6R8M

6.0

3.3

11.0

8.8

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 (TL) Time (tL) maintained above TL	217 °C 60-150 seconds		
Peak package body temperature (Tp)	260 °C		
Time within 5 °C of Actual Peak Temperature (t_p)	<30 seconds		
Ramp-Down Rate (Tp to TL)	6 °C/second max.		
Time 25 °C to Peak Temperature	8 minutes max.		

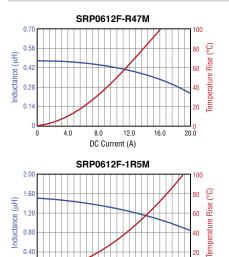
Inductance vs. IDC

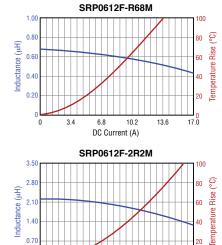
0.40

0

2.2

4.4





10.0

00

80

60

40

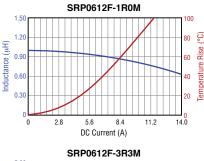
20

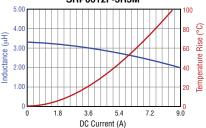
0 5.5

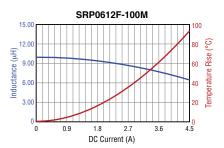
Temperature Rise (°C)

8.0

4.4







DC Current (A) SRP0612F-4R7M 7.00 100 Temperature Rise (°C) 5.6 30 Inductance (µH) 4.20 60 2.80 40 20 14 0 🖵 8.0 1.6 3.2 4.8 6.4 0 DC Current (A)

6.6

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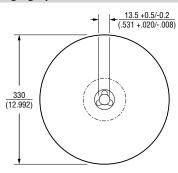
DC Current (A)

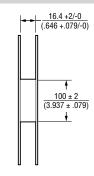
2.2

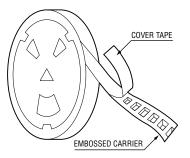
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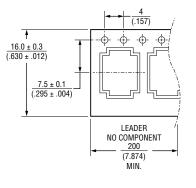
BOURNS®

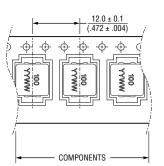
Packaging Specifications

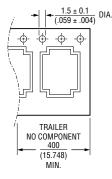


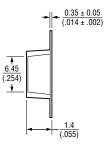




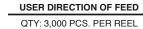








DIMENSIONS: $\frac{MM}{(INCHES)}$





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