



Features

- Shielded construction
- Metal alloy powder core
- High saturation current
- Low buzz noise
- Inductance range: 0.47 to 47 μ H
- RoHS compliant* and halogen free**



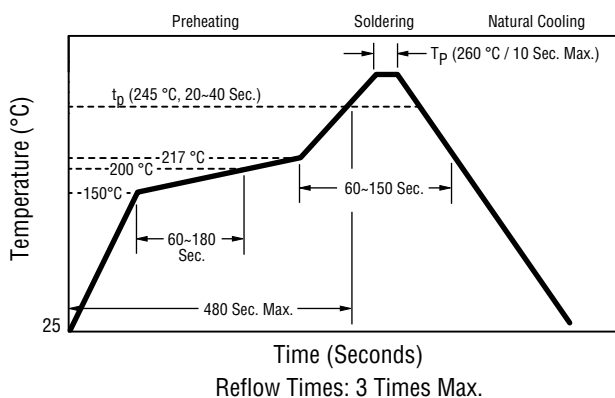
This series is currently available but not recommended for new designs.

SRP1770C Series - Shielded Power Inductors

Electrical Specifications @ 25 °C

Bourns Part Number	Inductance @ 100 kHz / 1 V		Q (Min.) @ 100 kHz / 1 V	SRF (MHz) Typ.	DCR (m Ω) Typ.	DCR (m Ω) Max.	I _{rms} (A) Typ.	I _{sat} (A) Typ.	Terminal Type
	L (μ H)	Tol. (%)							
SRP1770C-R47M	0.47	± 20	10	28	0.75	0.83	60.0	115	Lead Frame
SRP1770C-1R0M	1.0	± 20	20	24	1.30	1.50	48.0	68	
SRP1770C-1R5M	1.5	± 20	20	22	1.80	2.10	42.0	55	
SRP1770C-2R2M	2.2	± 20	20	21	2.50	2.80	40.0	45	
SRP1770C-3R3M	3.3	± 20	20	19	3.50	3.90	28.0	40	
SRP1770C-4R7M	4.7	± 20	20	17	4.80	5.50	26.0	37	
SRP1770C-5R6M	5.6	± 20	20	15	5.90	6.80	24.0	35	
SRP1770C-6R8M	6.8	± 20	20	14	8.40	9.20	22.0	30	
SRP1770C-8R2M	8.2	± 20	20	13	9.60	10.80	18.0	28	
SRP1770C-100M	10.0	± 20	20	12	11.60	13.00	17.0	25	
SRP1770C-150M	15.0	± 20	20	10	16.50	19.50	14.0	23	
SRP1770C-220M	22.0	± 20	20	8	24.00	27.60	12.0	19	
SRP1770C-330M	33.0	± 20	20	6	36.00	42.00	10.7	15	
SRP1770C-470M	47.0	± 20	20	5	46.00	53.00	8.7	13	

Soldering Profile

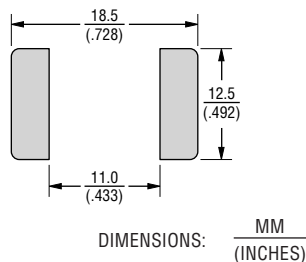


How to Order

SRP1770C - 220M

Model _____
Value Code (see table) _____

Recommended Layout



General Specifications

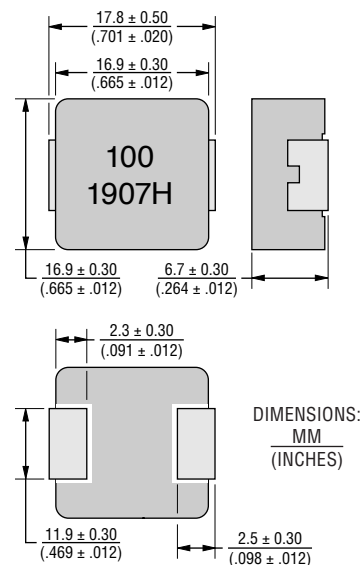
Operating Temperature -40 °C to +125 °C
(Temperature rise included)
Storage Temperature (Component) -40 °C to +125 °C
Rated Current Inductance drops 30 % at I_{sat}
Temperature Rise 40 °C at rated I_{rms}
Moisture Sensitivity Level 1
ESD Classification (HBM) N/A

1 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.

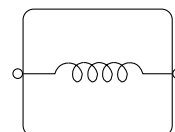
Materials

Core Metal alloy powder
Wire Enameled copper
Terminal Finish Sn/Ni
Packaging 200 pcs. per 13-inch reel

Product Dimensions



Schematic



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.

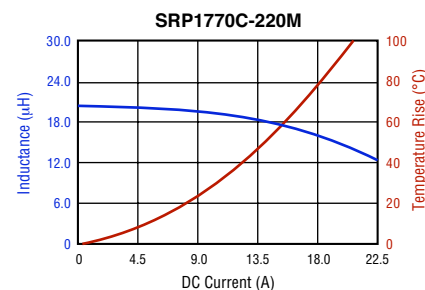
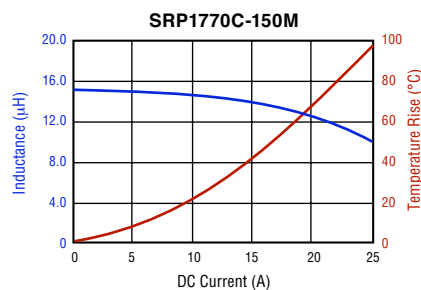
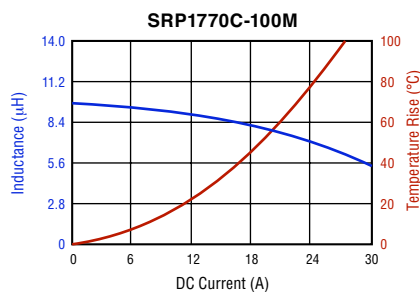
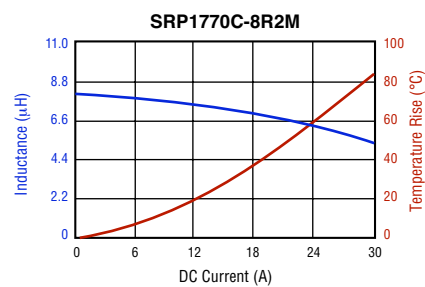
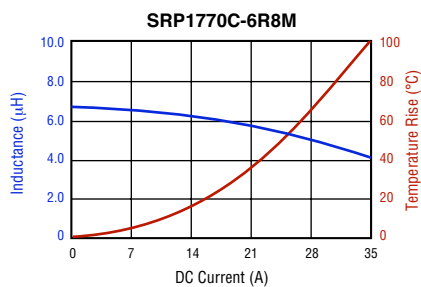
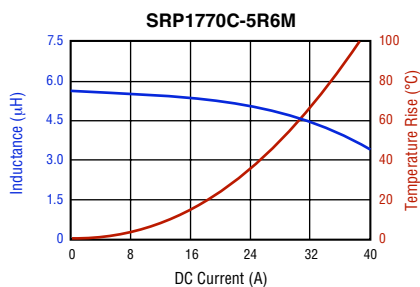
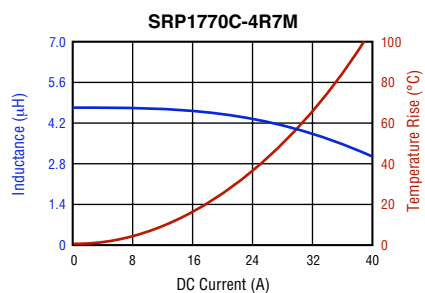
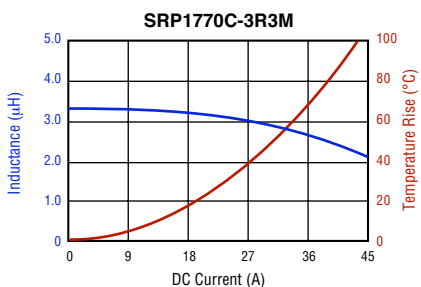
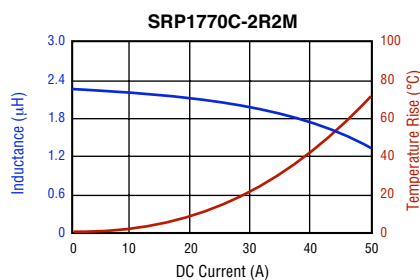
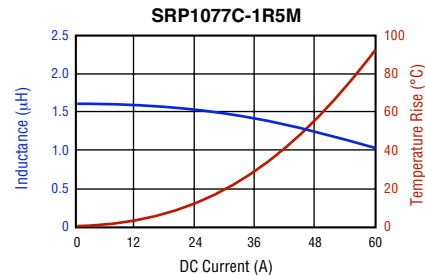
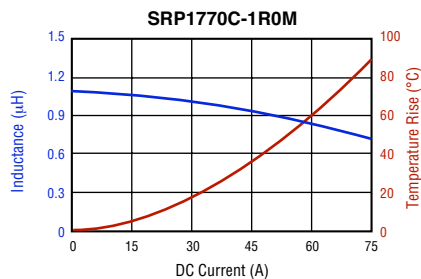
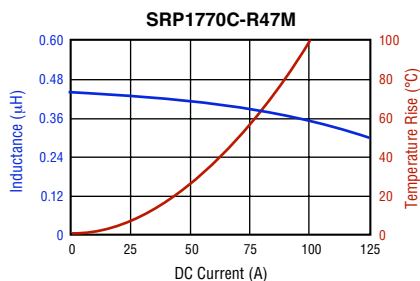
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SRP1770C Series - Shielded Power Inductors

BOURNS®

L vs. I Charts



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SRP1770C-330M

This graph shows the relationship between DC Current (A) and two other variables: Inductance (μH) and Temperature Rise ($^{\circ}\text{C}$).

The X-axis represents DC Current (A), ranging from 0 to 17.5 A.

The left Y-axis represents Inductance (μH), ranging from 0 to 45.0 μH .

The right Y-axis represents Temperature Rise ($^{\circ}\text{C}$), ranging from 0 to 100 $^{\circ}\text{C}$.

The Inductance curve (blue line) starts at approximately 36.0 μH at 0 A and decreases linearly to approximately 21.0 μH at 17.5 A.

The Temperature Rise curve (red line) starts at 0 $^{\circ}\text{C}$ at 0 A and increases non-linearly, reaching approximately 65 $^{\circ}\text{C}$ at 17.5 A.

DC Current (A)	Inductance (μH)	Temperature Rise ($^{\circ}\text{C}$)
0	36.0	0
3.5	33.0	5
7.0	30.0	15
10.5	27.0	30
14.0	24.0	50
17.5	21.0	65



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