



**THE DATASHEET OF
SRP7028A-6R8M**





Features

- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 0.10 to 33 μ H
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

SRP7028A 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) | I _{sat} (A) | Terminal Type |
|--------------------|----------------------------|----------|--------------------------|----------------|------------------------|------------------------|----------------------|----------------------|---------------|
| | L (μ H) | Tol. (%) | | | | | | | |
| SRP7028A-R10M | 0.10 | ± 20 | 5 | 300 | 1.2 | 1.7 | 32.5 | 60 | Lead Frame |
| SRP7028A-R15Y | 0.15 | ± 30 | 5 | 220 | 1.5 | 1.9 | 27 | 45 | |
| SRP7028A-R22Y | 0.22 | ± 30 | 5 | 150 | 2.1 | 2.8 | 23 | 40 | |
| SRP7028A-R33M | 0.33 | ± 20 | 10 | 140 | 3.5 | 3.9 | 20 | 32 | |
| SRP7028A-R47M | 0.47 | ± 20 | 10 | 80 | 4 | 4.2 | 17.5 | 26 | |
| SRP7028A-R56M | 0.56 | ± 20 | 15 | 70 | 4.7 | 5.0 | 16.5 | 25.5 | |
| SRP7028A-R68M | 0.68 | ± 20 | 15 | 67 | 4.8 | 5.5 | 15.5 | 25 | |
| SRP7028A-R75M | 0.75 | ± 20 | 15 | 65 | 5.5 | 6.6 | 14.5 | 24.5 | |
| SRP7028A-R82M | 0.82 | ± 20 | 15 | 61 | 6.7 | 8.0 | 13 | 24 | |
| SRP7028A-1R0M | 1.0 | ± 20 | 20 | 58 | 8.3 | 10.0 | 11 | 22 | |
| SRP7028A-1R5M | 1.5 | ± 20 | 20 | 38 | 13 | 15.0 | 9 | 18 | |
| SRP7028A-1R8M | 1.8 | ± 20 | 20 | 36 | 14 | 17.0 | 8.5 | 16 | |
| SRP7028A-2R2M | 2.2 | ± 20 | 20 | 32 | 18 | 20.0 | 8 | 14 | |
| SRP7028A-2R5M | 2.5 | ± 20 | 20 | 30 | 20 | 22.0 | 7 | 13 | |
| SRP7028A-3R3M | 3.3 | ± 20 | 20 | 25 | 28 | 30.0 | 6 | 12 | |
| SRP7028A-4R7M | 4.7 | ± 20 | 20 | 21 | 37 | 40.0 | 5.5 | 10 | |
| SRP7028A-5R6M | 5.6 | ± 20 | 20 | 19 | 43 | 48.0 | 5 | 9 | |
| SRP7028A-6R8M | 6.8 | ± 20 | 20 | 18 | 54 | 60.0 | 4.5 | 8 | |
| SRP7028A-8R2M | 8.2 | ± 20 | 20 | 17 | 64 | 68.0 | 4 | 7.5 | |
| SRP7028A-100M | 10 | ± 20 | 20 | 14 | 75 | 85.0 | 3.5 | 6 | |
| SRP7028A-150M | 15 | ± 20 | 20 | 12 | 107 | 123.0 | 3.0 | 4 | |
| SRP7028A-220M | 22 | ± 20 | 20 | 10 | 165 | 190.0 | 2.0 | 3.5 | |
| SRP7028A-330M | 33 | ± 20 | 20 | 8 | 200 | 240.0 | 2.0 | 2.5 | |

General Specifications

Test Voltage 1.0 V
 Test Frequency 100 KHz
 Operating Temperature -55 °C to +150 °C
 (Temperature rise included)
 Storage Temperature .. -55 °C to +150 °C
 Rated Current Inductance drops 20 % 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.

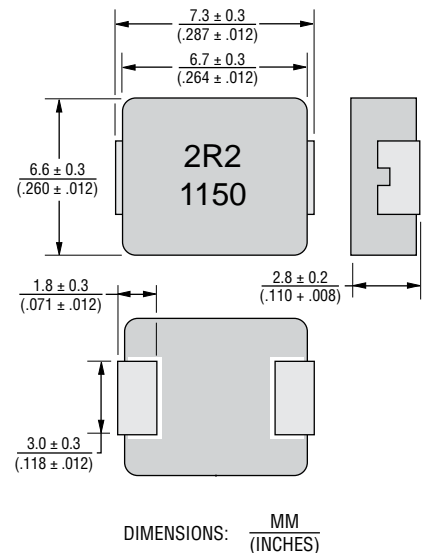
Materials

Core Carbonyl powder
 Wire Enameled copper
 Terminal Finish Sn
 Packaging 1000 pcs. per 13-inch reel

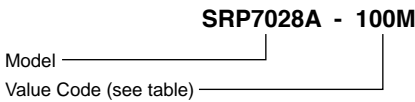
Please consult [Bourns® Model SRP-A Series Visual Inspection Guide](#) for detailed construction, processing and testing information.

Product Dimensions

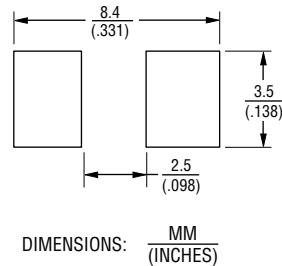
Lead Frame Terminal



How to Order



Recommended Layout



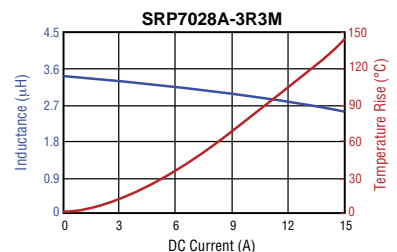
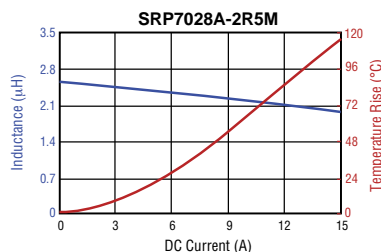
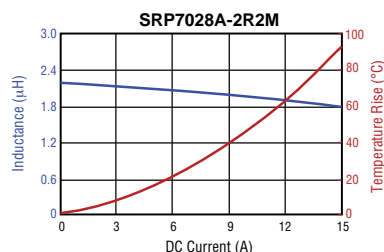
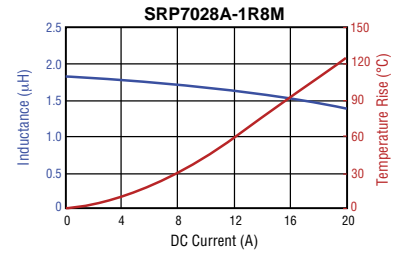
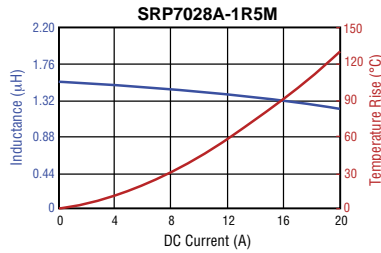
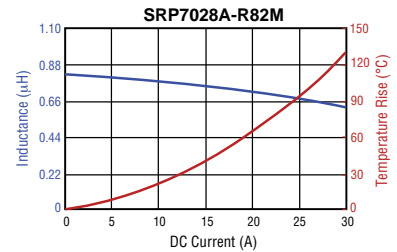
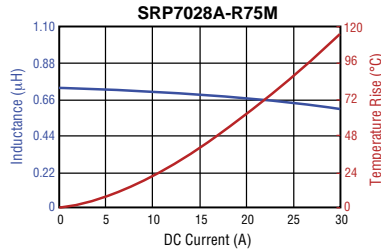
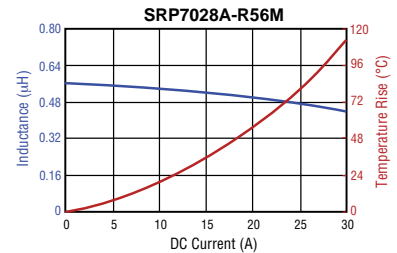
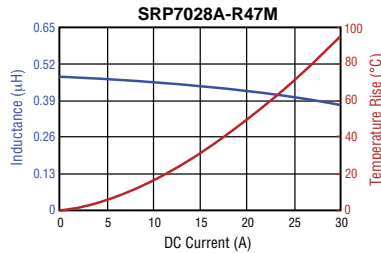
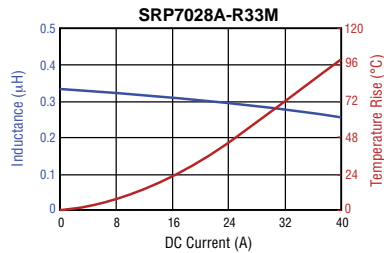
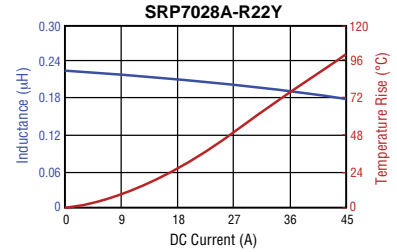
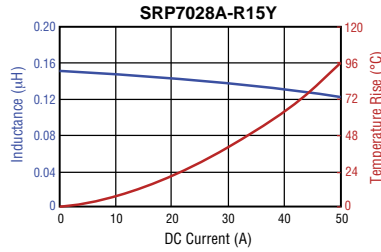
WARNING Cancer and Reproductive Harm www.P65Warnings.ca.gov

* 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.
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SRP7028A Series - Shielded Power Inductors



L vs. I Charts

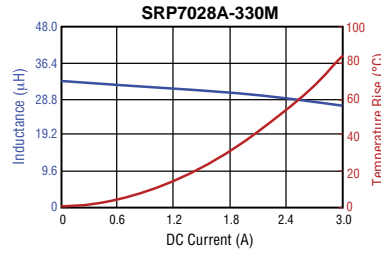
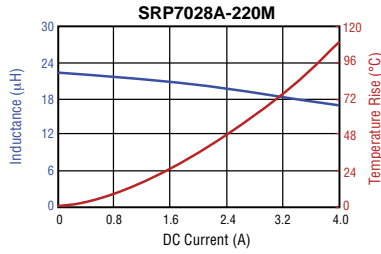
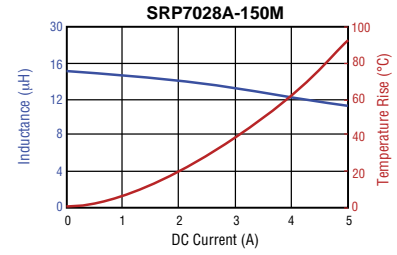
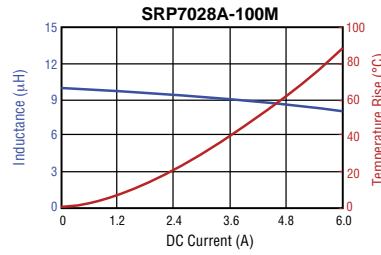
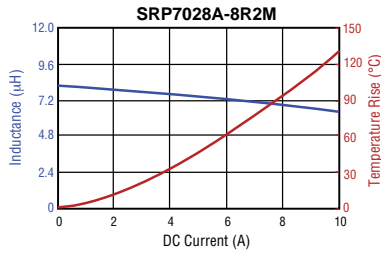
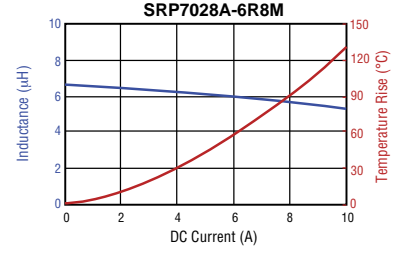
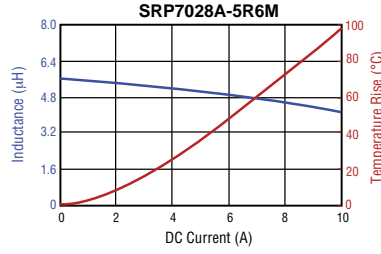
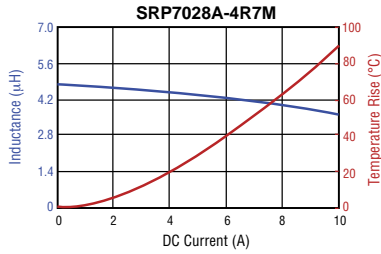


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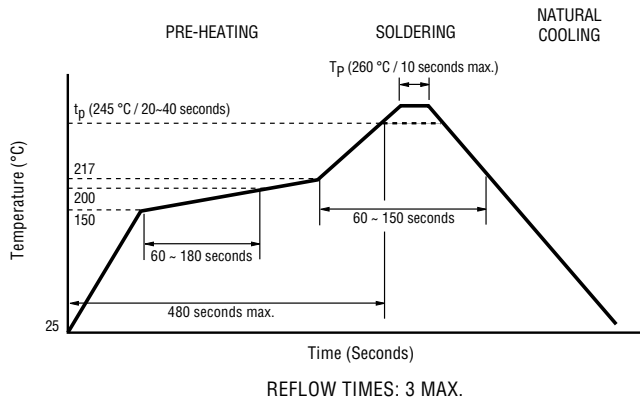
SRP7028A Series - Shielded Power Inductors



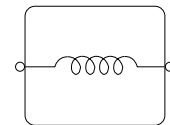
L vs. I Charts (Continued)



Soldering Profile



Electrical Schematic



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