



Features

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

Applications

- Automotive systems:
 - Driver assistant
 - Information
 - Entertainment
 - Lighting
- DC/DC converters
- Power supplies

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

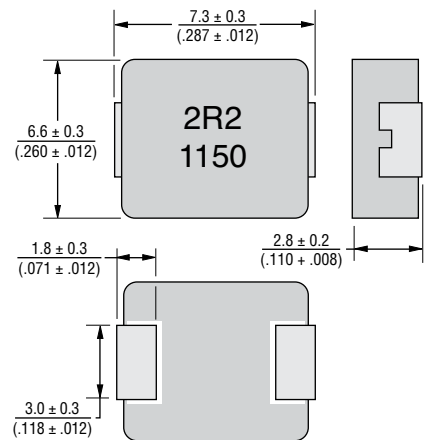
Test Voltage 1.0 V
 Test Frequency 100 KHz
 Operating Temperature -40 °C to +150 °C
 (Temperature rise included)
 Storage Temperature .. -40 °C to +125 °C
 Rated Current Inductance drops 20 % at I_{sat}
 Temperature Rise 40 °C at rated I_{rms}
 Resistance to Soldering Heat +260 °C, 40 sec. max.
 Moisture Sensitivity Level 1
 ESD Classification (HBM) 3B

Materials

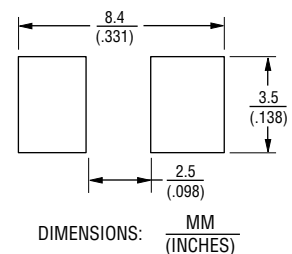
Core Carbonyl powder
 Wire Enameled copper
 Terminal Finish Sn
 Packaging 1000 pcs. per 13-inch reel

Product Dimensions

Lead Frame Terminal



Recommended Layout

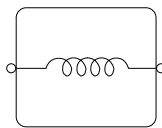


How to Order

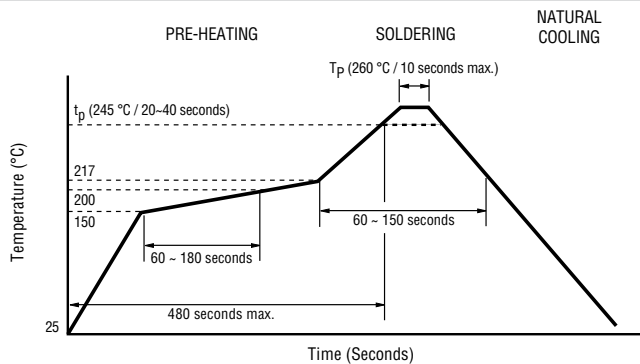
SRP7028A - 100M

Model _____
 Value Code (see table) _____

Electrical Schematic



Soldering Profile



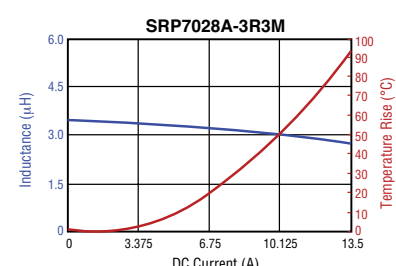
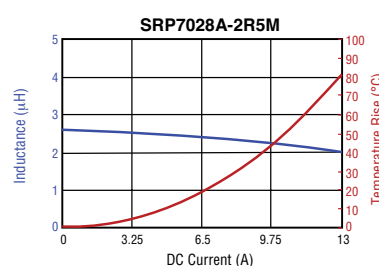
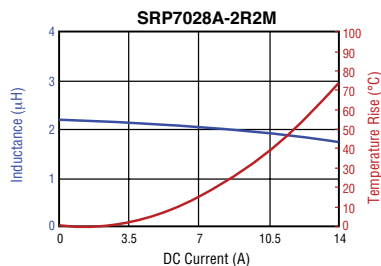
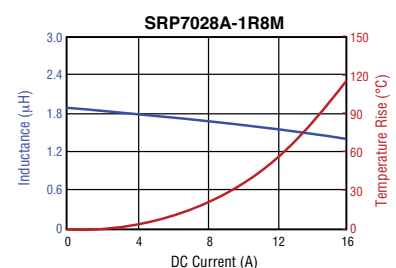
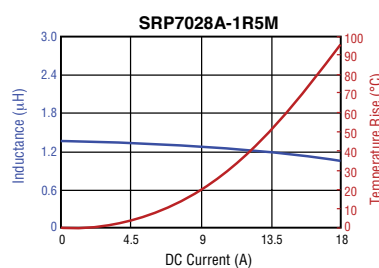
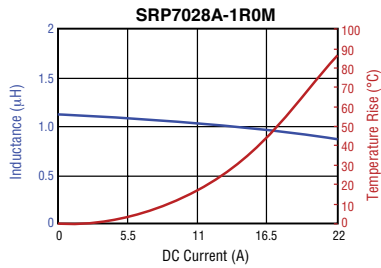
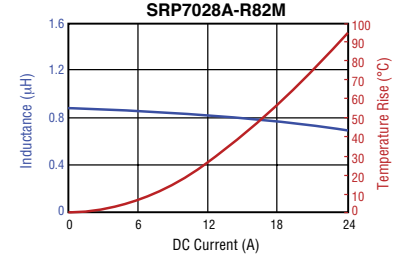
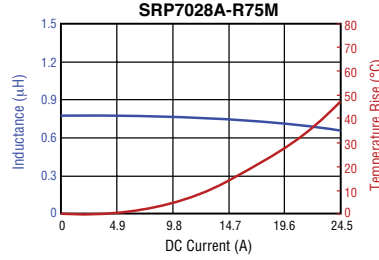
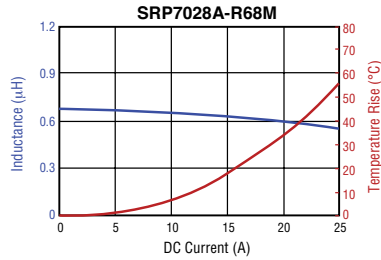
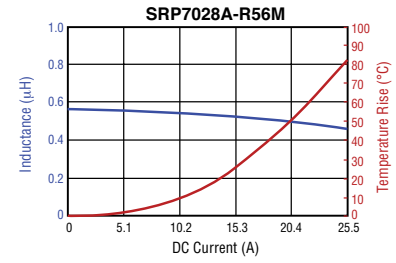
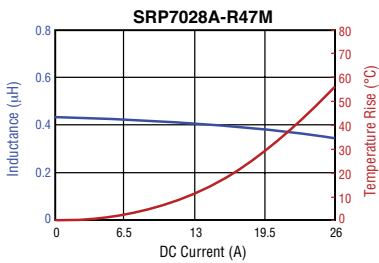
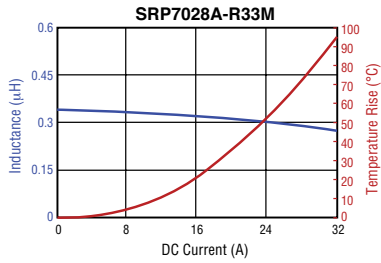
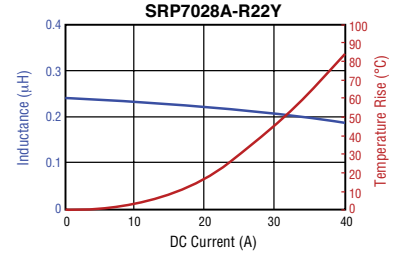
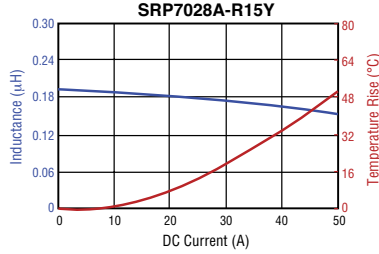
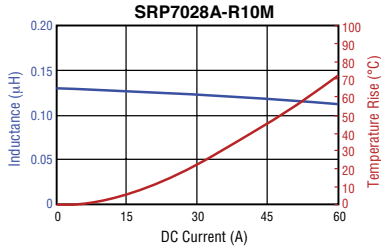
* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
 **Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less. Specifications are subject to change without notice.
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
 Users should verify actual device performance in their specific applications.

Please consult *Bourns® Model SRP-A Series Visual Inspection Guide* for detailed construction, processing and testing information.

SRP7028A Series - Shielded Power Inductors



L vs. I Charts

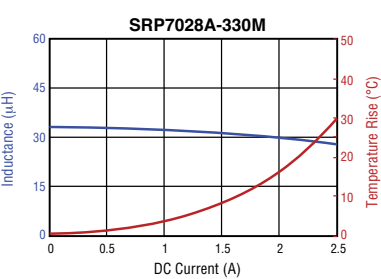
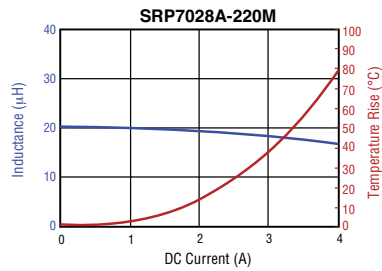
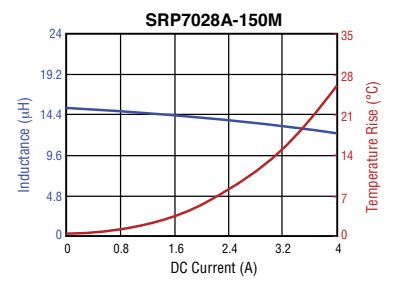
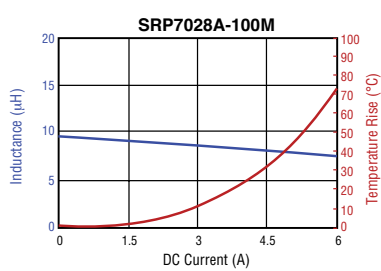
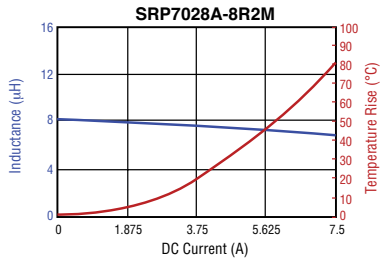
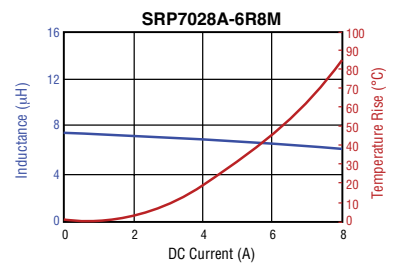
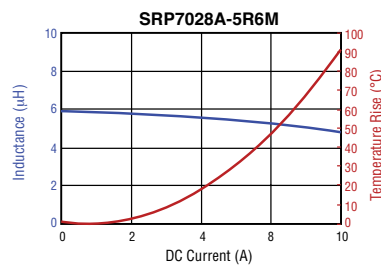
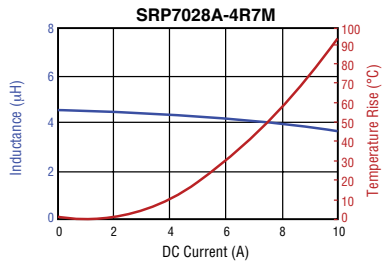


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SRP7028A Series - Shielded Power Inductors



L vs. I Charts (Continued)

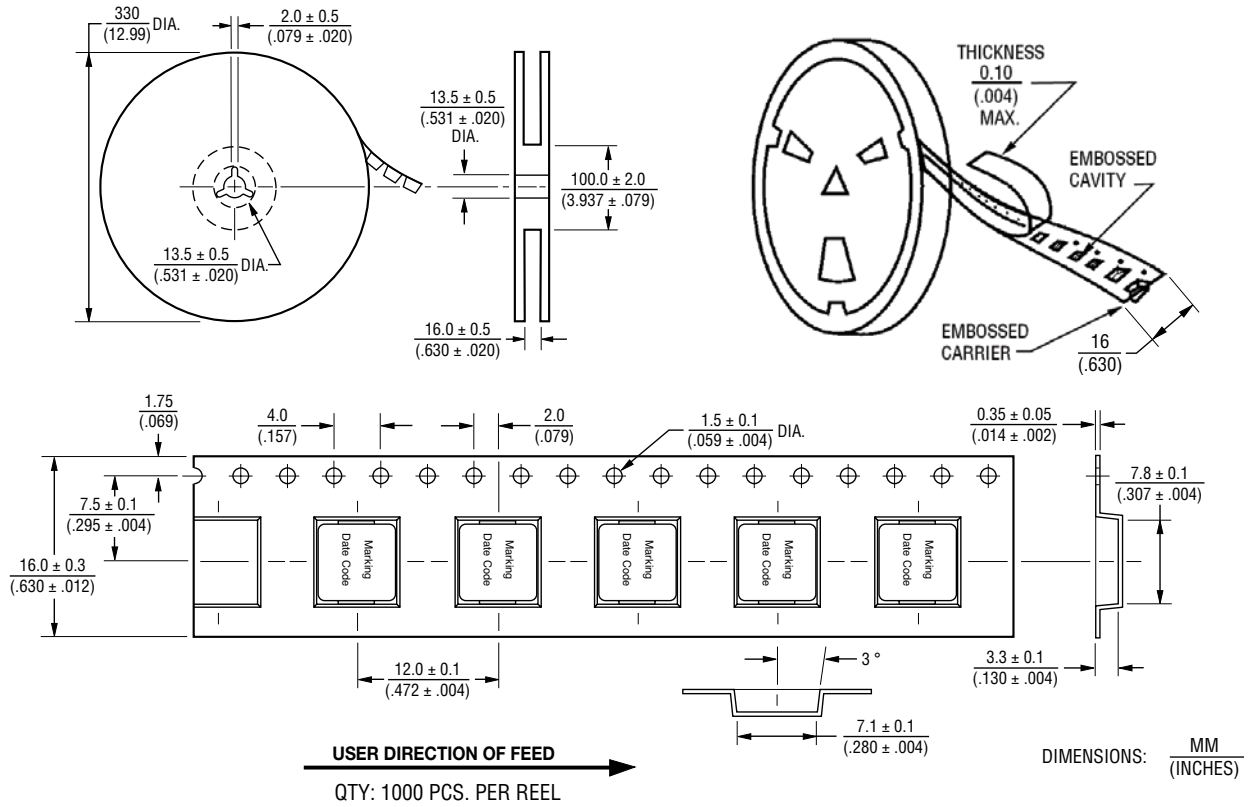


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Packaging Specifications



REV. 06/17

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