

Features

- Shielded construction
- Carbonyl powder core
- High saturation current
- Inductance range: 0.20 to 22 μ H
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

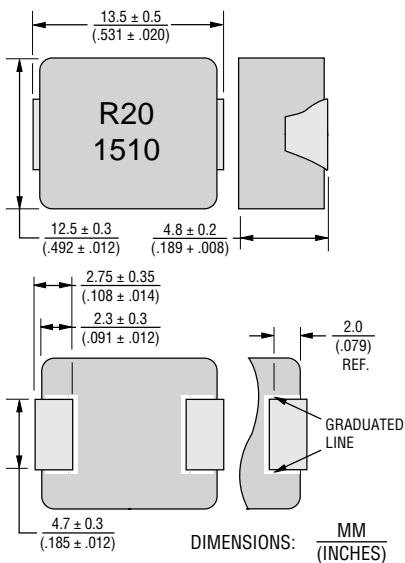
SRP1245A Series - Shielded Power Inductors

Electrical Specifications @ 25 °C

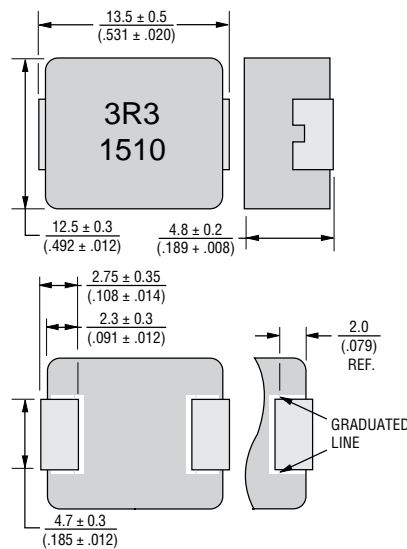
| Bourns Part Number | Inductance @ 100 KHz / 1 V | | Q (Min.) @ 100 KHz / 1 V | SRF (MHz) Typ. | DCR (m Ω) Typ. | DCR (m Ω) Max. | I _{rms} (A) | Isat (A) | Terminal Type |
|--------------------|----------------------------|----------|--------------------------|----------------|------------------------|------------------------|----------------------|----------|----------------|
| | L (μ H) | Tol. (%) | | | | | | | |
| SRP1245A-R20M | 0.20 | 20 | 10 | 130 | 0.45 | 0.55 | 52 | 110 | Non-Lead Frame |
| SRP1245A-R22M | 0.22 | 20 | 10 | 120 | 0.5 | 0.7 | 52 | 110 | |
| SRP1245A-R33M | 0.33 | 20 | 15 | 90 | 0.7 | 0.9 | 42 | 80 | |
| SRP1245A-R36M | 0.36 | 20 | 15 | 80 | 0.75 | 0.95 | 42 | 75 | |
| SRP1245A-R39M | 0.39 | 20 | 15 | 78 | 0.78 | 0.95 | 42 | 70 | |
| SRP1245A-R47M | 0.47 | 20 | 20 | 70 | 0.86 | 1.1 | 38 | 65 | |
| SRP1245A-R50M | 0.50 | 20 | 20 | 65 | 0.9 | 1.3 | 37 | 60 | |
| SRP1245A-R56M | 0.56 | 20 | 20 | 60 | 1 | 1.5 | 36 | 55 | |
| SRP1245A-R68M | 0.68 | 20 | 20 | 50 | 1.4 | 1.7 | 34 | 54 | |
| SRP1245A-R82M | 0.82 | 20 | 20 | 45 | 1.7 | 2.1 | 31 | 52 | |
| SRP1245A-1R0M | 1.0 | 20 | 20 | 40 | 1.85 | 2.5 | 29 | 50 | |
| SRP1245A-1R2M | 1.2 | 20 | 20 | 35 | 2.5 | 3.0 | 28 | 49 | |
| SRP1245A-1R5M | 1.5 | 20 | 20 | 30 | 2.8 | 3.3 | 27 | 48 | |
| SRP1245A-1R8M | 1.8 | 20 | 20 | 27 | 4 | 4.9 | 21 | 40 | |
| SRP1245A-2R2M | 2.2 | 20 | 20 | 24 | 4.2 | 5.5 | 20 | 32 | |
| SRP1245A-2R7M | 2.7 | 20 | 20 | 23 | 4.7 | 6.7 | 17 | 32 | |
| SRP1245A-3R3M | 3.3 | 20 | 20 | 22 | 6.8 | 9.2 | 15 | 32 | |
| SRP1245A-4R7M | 4.7 | 20 | 20 | 15 | 11.4 | 15.0 | 12 | 27 | |
| SRP1245A-5R6M | 5.6 | 20 | 20 | 13 | 12.3 | 16.5 | 11.5 | 22 | |
| SRP1245A-6R0M | 6.0 | 20 | 20 | 12 | 13 | 16.5 | 11.5 | 21.5 | |
| SRP1245A-6R8M | 6.8 | 20 | 20 | 12 | 14.5 | 18.5 | 11 | 21 | |
| SRP1245A-8R2M | 8.2 | 20 | 20 | 11 | 16.8 | 22.5 | 9.5 | 18 | |
| SRP1245A-100M | 10 | 20 | 20 | 10 | 21.4 | 25.5 | 9 | 16 | |
| SRP1245A-180M | 18 | 20 | 20 | 7 | 40 | 45.0 | 7.5 | 11 | |
| SRP1245A-220M | 22 | 20 | 20 | 6 | 50 | 58 | 6.5 | 10 | |

Product Dimensions

Non-Lead Frame Terminal



Lead Frame Terminal



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 Isat
 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

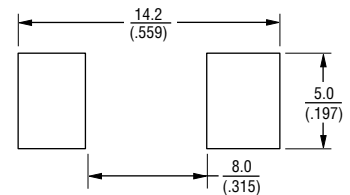
Core Carbonyl powder
 Wire Enameled copper
 Terminal Finish Sn
 Packaging 500 pcs. per 13-inch reel

How to Order

SRP1245A - 100M

Model _____
 Value Code (see table) _____

Recommended Layout



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



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

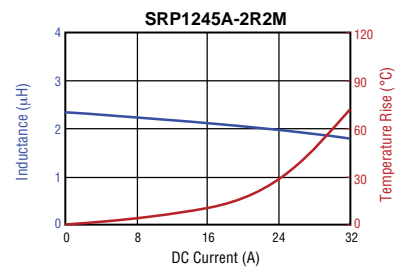
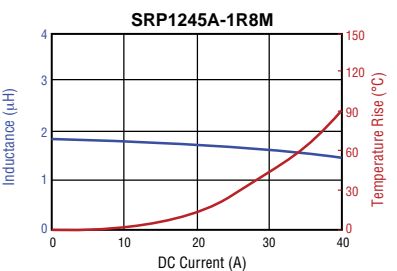
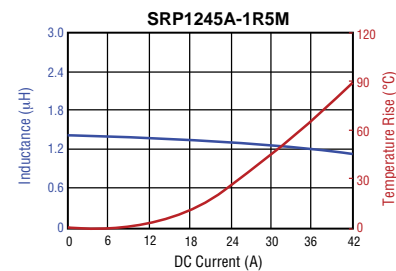
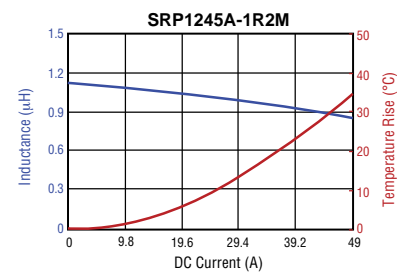
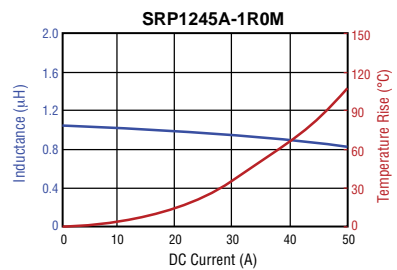
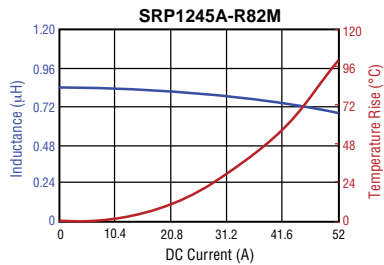
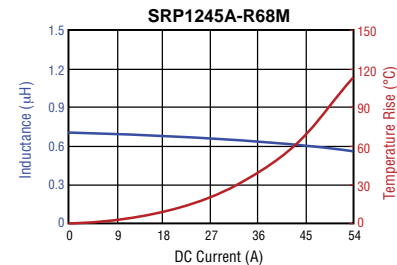
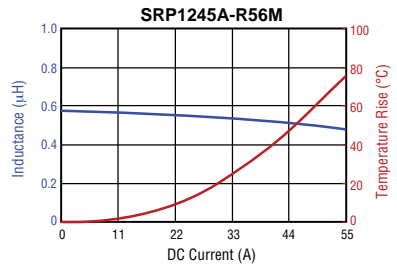
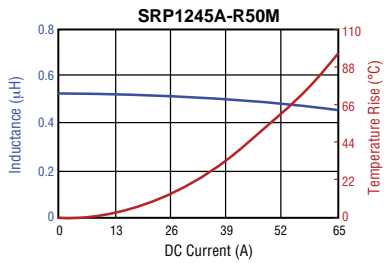
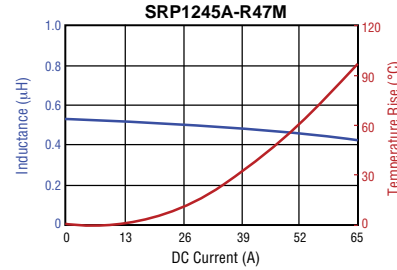
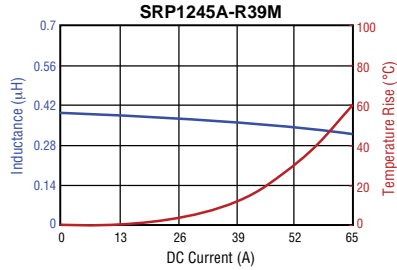
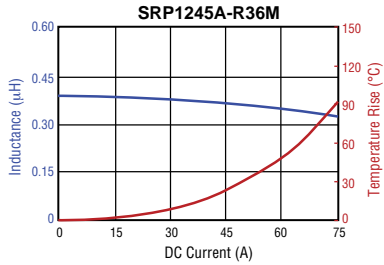
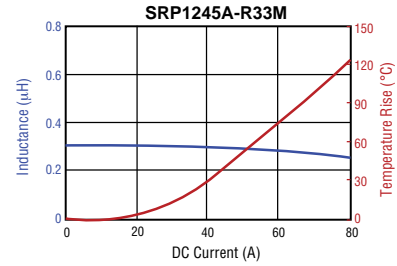
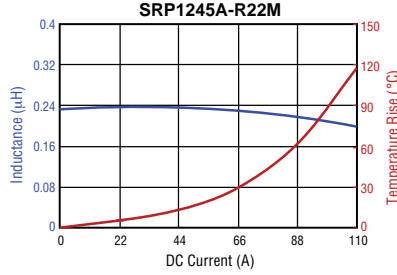
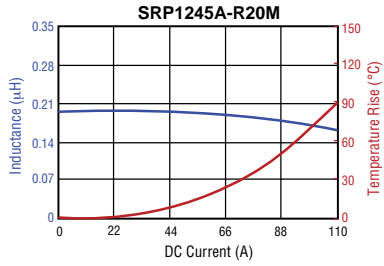
* RoHS Directive 2015/863, Mar 31, 2015 and Annex.
 ** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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L vs. I Charts



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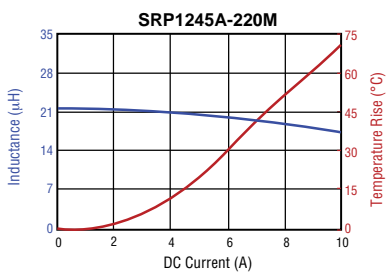
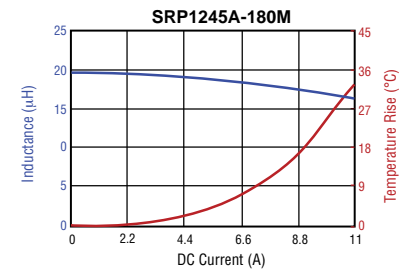
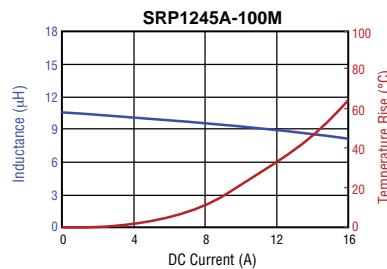
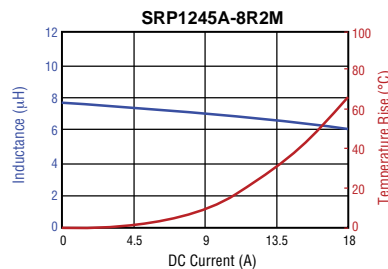
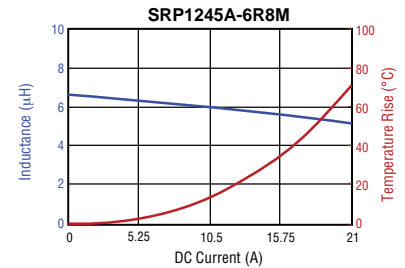
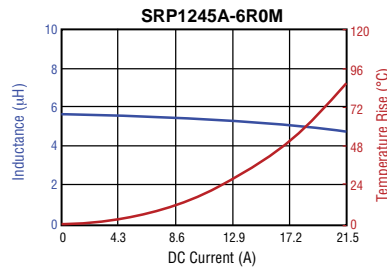
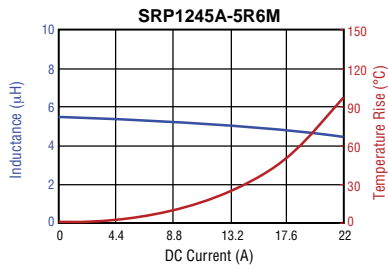
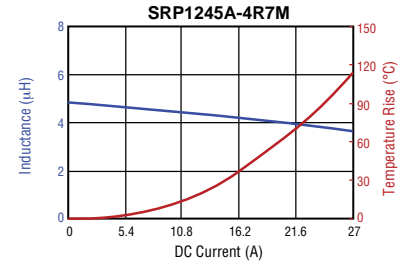
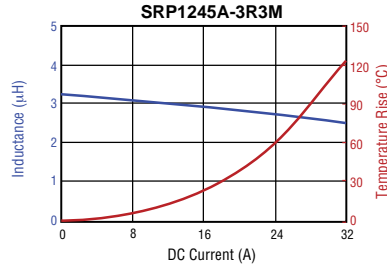
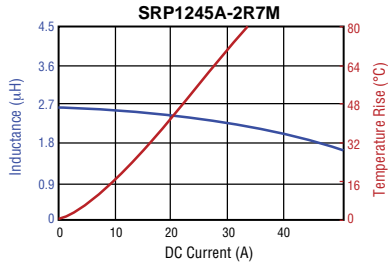
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L vs. I Charts



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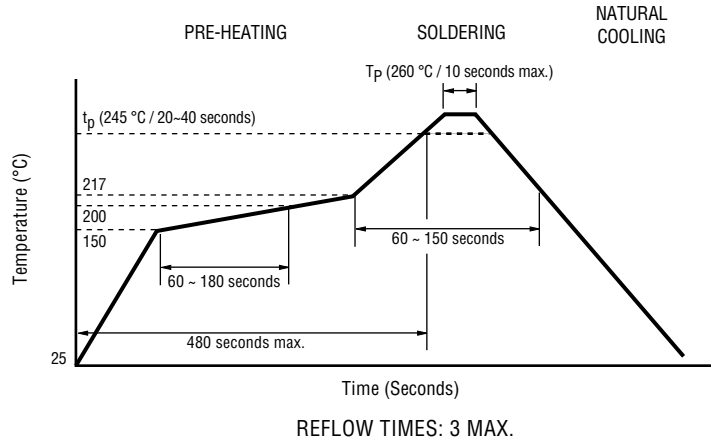
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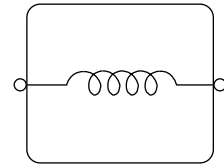
SRP1245A Series - Shielded Power Inductors

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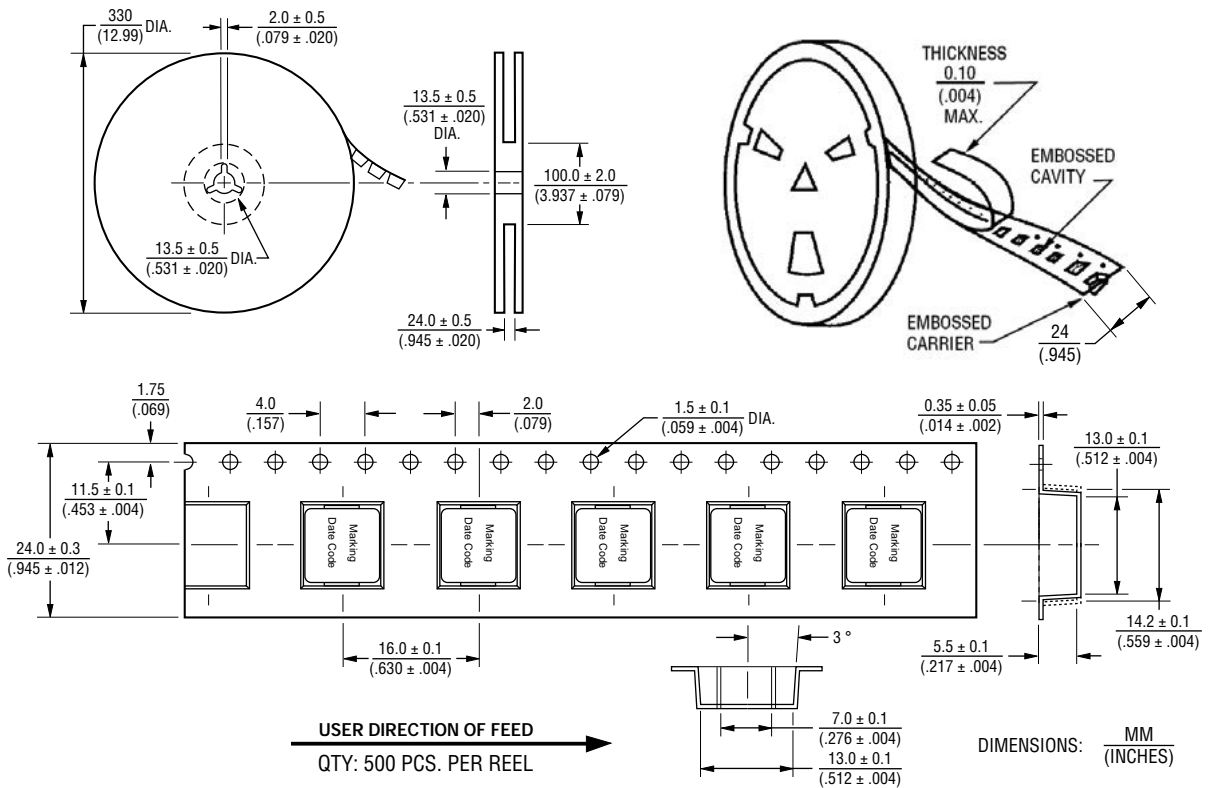
Soldering Profile



Electrical Schematic



Packaging Specifications



REV. 11/19

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