



### Features

- Multiple applications: parallel, series, dual-inductor and transformer
- Magnetically shielded, low radiation
- Inductance range: 0.47 to 1000  $\mu$ H
- Rated current up to 17.9 A
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

### Applications

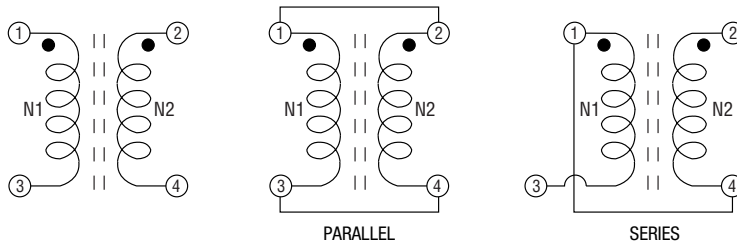
- DC/DC converters
- Power supplies
- SEPIC - DC/DC converters

## SRF1280A Series - Dual-Winding Shielded Power Inductors

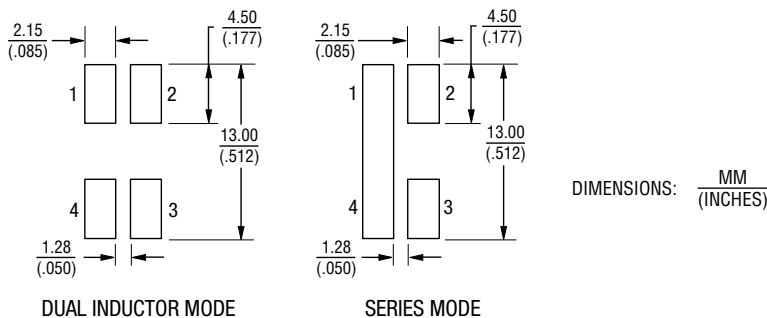
### Electrical Specifications @ 25 °C

| Bourns Part No. | Parallel Rating                   |          |                       |                      |                      | Series Rating                     |          |                       |                      |                      |
|-----------------|-----------------------------------|----------|-----------------------|----------------------|----------------------|-----------------------------------|----------|-----------------------|----------------------|----------------------|
|                 | Inductance @ 100 KHz L ( $\mu$ H) | Tol. (%) | DCR ( $\Omega$ ) Max. | I <sub>rms</sub> (A) | I <sub>sat</sub> (A) | Inductance @ 100 KHz L ( $\mu$ H) | Tol. (%) | DCR ( $\Omega$ ) Max. | I <sub>rms</sub> (A) | I <sub>sat</sub> (A) |
| SRF1280A-R47Y   | 0.47                              | ± 30     | 0.0055                | 17.9                 | 56                   | 1.676                             | ± 30     | 0.0216                | 8.94                 | 28                   |
| SRF1280A-1R0Y   | 1.0                               | ± 30     | 0.0067                | 15.5                 | 40                   | 3.284                             | ± 30     | 0.026                 | 7.74                 | 20                   |
| SRF1280A-1R5Y   | 1.5                               | ± 30     | 0.0076                | 13.5                 | 31.1                 | 5.428                             | ± 30     | 0.0306                | 6.77                 | 15.6                 |
| SRF1280A-2R2Y   | 2.2                               | ± 30     | 0.0092                | 12.5                 | 25.5                 | 8.108                             | ± 30     | 0.0338                | 6.23                 | 12.7                 |
| SRF1280A-3R3Y   | 3.3                               | ± 30     | 0.011                 | 10.4                 | 21.5                 | 11.320                            | ± 30     | 0.04                  | 5.23                 | 10.8                 |
| SRF1280A-4R7Y   | 4.7                               | ± 30     | 0.0135                | 8.25                 | 16.5                 | 19.360                            | ± 30     | 0.05                  | 4.13                 | 8.24                 |
| SRF1280A-6R8Y   | 6.8                               | ± 30     | 0.0183                | 7.34                 | 13.3                 | 29.550                            | ± 30     | 0.0656                | 3.67                 | 6.67                 |
| SRF1280A-8R2Y   | 8.2                               | ± 30     | 0.0191                | 6.32                 | 12.2                 | 35.440                            | ± 30     | 0.0714                | 3.16                 | 6.09                 |
| SRF1280A-100M   | 10                                | ± 20     | 0.0241                | 6.04                 | 11.2                 | 41.880                            | ± 20     | 0.0921                | 3.02                 | 5.6                  |
| SRF1280A-150M   | 15                                | ± 20     | 0.0333                | 5.03                 | 9.66                 | 56.360                            | ± 20     | 0.129                 | 2.51                 | 4.83                 |
| SRF1280A-220M   | 22                                | ± 20     | 0.0503                | 4                    | 7.57                 | 91.720                            | ± 20     | 0.192                 | 2                    | 3.78                 |
| SRF1280A-330M   | 33                                | ± 20     | 0.0664                | 3.23                 | 6.22                 | 135.700                           | ± 20     | 0.265                 | 1.61                 | 3.11                 |
| SRF1280A-470M   | 47                                | ± 20     | 0.0898                | 2.95                 | 5.28                 | 188.200                           | ± 20     | 0.353                 | 1.47                 | 2.64                 |
| SRF1280A-680M   | 68                                | ± 20     | 0.123                 | 2.44                 | 4.44                 | 265.900                           | ± 20     | 0.469                 | 1.22                 | 2.22                 |
| SRF1280A-820M   | 82                                | ± 20     | 0.153                 | 2.09                 | 4.06                 | 319.000                           | ± 20     | 0.578                 | 1.04                 | 2.03                 |
| SRF1280A-101M   | 100                               | ± 20     | 0.175                 | 1.96                 | 3.64                 | 397.200                           | ± 20     | 0.701                 | 0.98                 | 1.82                 |
| SRF1280A-151M   | 150                               | ± 20     | 0.261                 | 1.59                 | 3.01                 | 579.600                           | ± 20     | 1.013                 | 0.796                | 1.51                 |
| SRF1280A-221M   | 220                               | ± 20     | 0.343                 | 1.29                 | 2.43                 | 886.000                           | ± 20     | 1.38                  | 0.645                | 1.22                 |
| SRF1280A-331M   | 330                               | ± 20     | 0.54                  | 1.04                 | 2.01                 | 1294.000                          | ± 20     | 2.172                 | 0.522                | 1.01                 |
| SRF1280A-471M   | 470                               | ± 20     | 0.865                 | 0.85                 | 1.68                 | 1868.000                          | ± 20     | 3.3                   | 0.427                | 0.838                |
| SRF1280A-681M   | 680                               | ± 20     | 1.296                 | 0.76                 | 1.39                 | 2707.000                          | ± 20     | 4.888                 | 0.38                 | 0.697                |
| SRF1280A-821M   | 820                               | ± 20     | 1.632                 | 0.65                 | 1.27                 | 3272.000                          | ± 20     | 5.896                 | 0.325                | 0.633                |
| SRF1280A-102M   | 1000                              | ± 20     | 1.992                 | 0.61                 | 1.14                 | 4020.000                          | ± 20     | 7.202                 | 0.307                | 0.571                |

### Electrical Schematic



### Recommended Layout



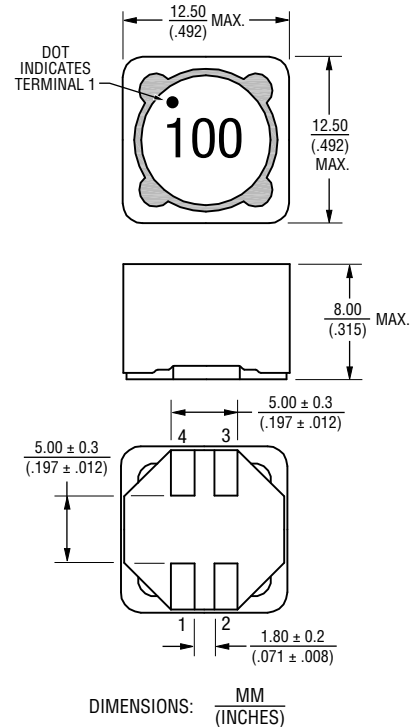
### General Specifications

Test Voltage .....0.25 V  
 Operating Temperature .....-40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature .....-40 °C to +125 °C  
 Temperature Rise .....40 °C typ. at rated I<sub>rms</sub>  
 Inductance drop .....30 % at I<sub>sat</sub>  
 Hi-pot (N1-N2) .....500 Vac/60 Hz,  
 3 mA, 1 sec  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM)..... N/A

### Materials

Core ..... Ferrite  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn  
 Packaging ..... 400 pcs. per reel

### Product Dimensions



**WARNING**  
 Cancer and Reproductive Harm  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

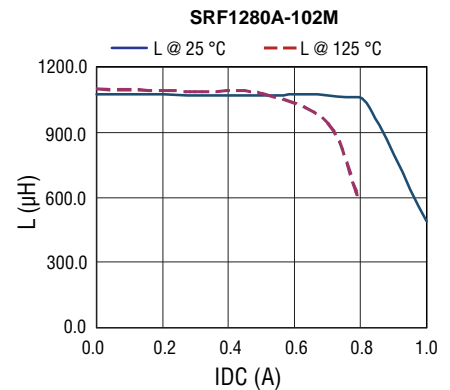
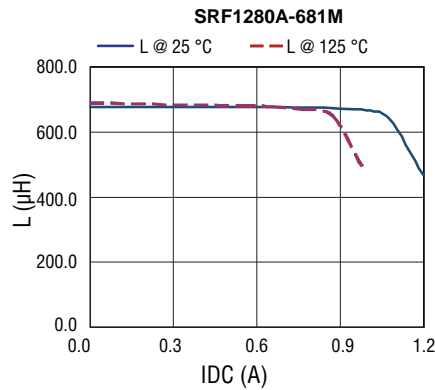
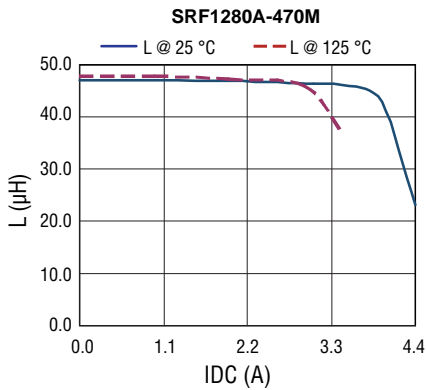
\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
 \*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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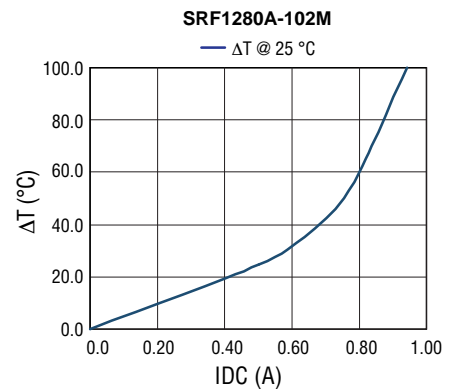
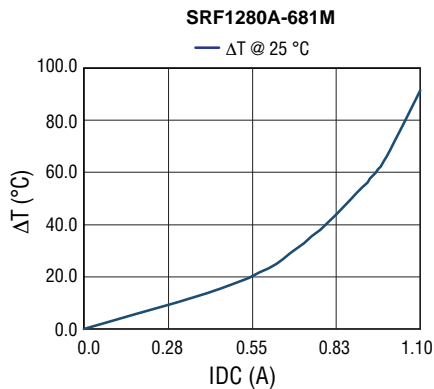
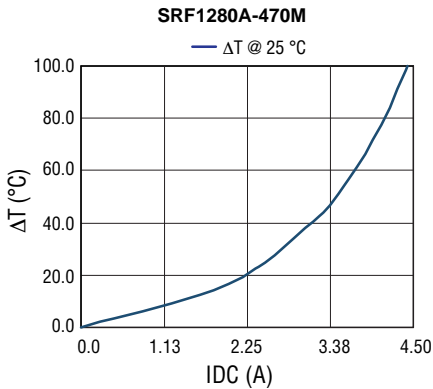
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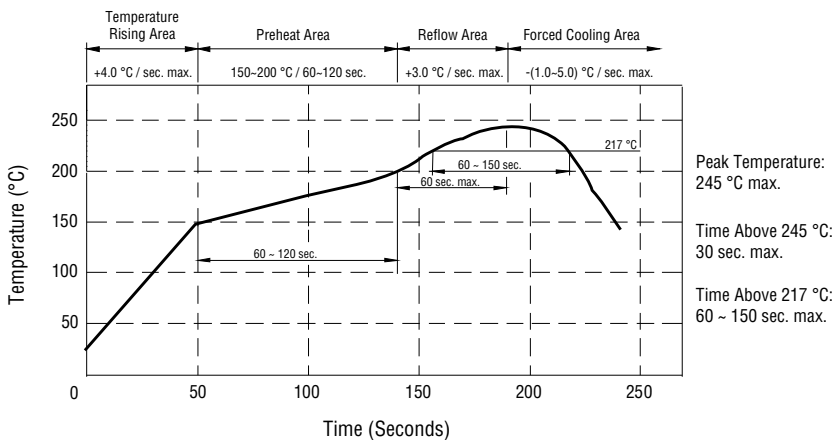
## Inductance vs. IDC



## Temperature Rise vs. IDC



## Soldering Profile



## How to Order

**SRF1280A - 100M**

Model \_\_\_\_\_

Value Code (see table) \_\_\_\_\_

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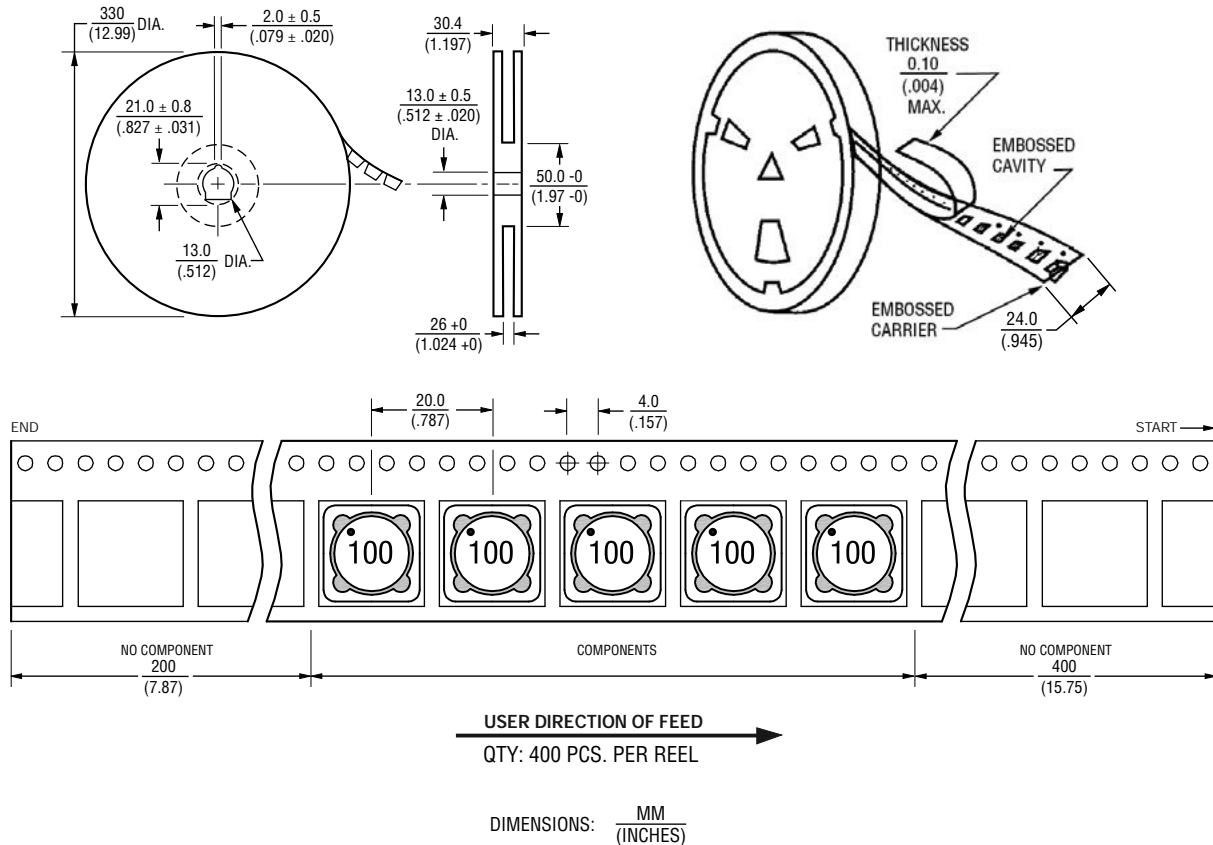
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# SRF1280A Series - Dual-Winding Shielded Power Inductors



## Packaging Specifications



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The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com

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REV. 11/19

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