



## Features

- Multiple applications: parallel, series, dual-inductor and transformer
- Magnetically shielded, low radiation
- Inductance range: 0.47 to 4000  $\mu$ H
- Rated current up to 17.9 A
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## Applications

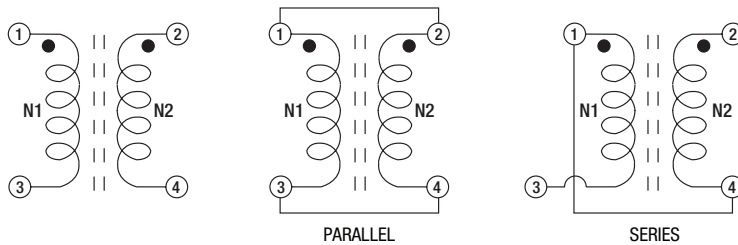
- DC/DC converters
- Power supplies
- SEPIC - DC/DC converters

## SRF1280A Series - Dual-Winding Shielded Power Inductors

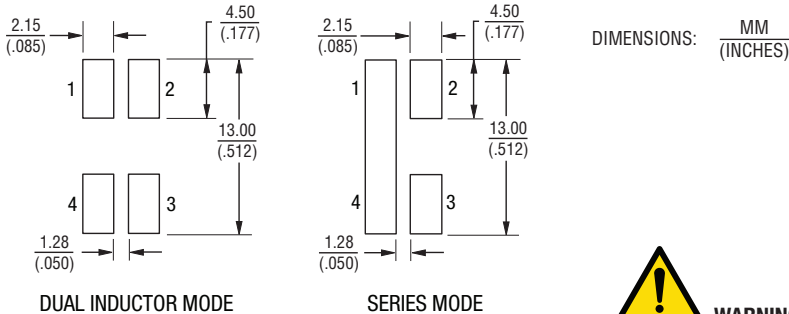
### Electrical Specifications @ 25 °C

| Bourns Part No. | Parallel Rating                   |          |                       |                      |          | Series Rating                     |          |                       |                      |          |
|-----------------|-----------------------------------|----------|-----------------------|----------------------|----------|-----------------------------------|----------|-----------------------|----------------------|----------|
|                 | Inductance @ 100 KHz L ( $\mu$ H) | Tol. (%) | DCR ( $\Omega$ ) Max. | I <sub>rms</sub> (A) | Isat (A) | Inductance @ 100 KHz L ( $\mu$ H) | Tol. (%) | DCR ( $\Omega$ ) Max. | I <sub>rms</sub> (A) | Isat (A) |
| SRF1280A-R47Y   | 0.47                              | ±30      | 0.0055                | 17.9                 | 56       | 1.88                              | ±30      | 0.0216                | 8.94                 | 28       |
| SRF1280A-1R0Y   | 1.0                               | ±30      | 0.0067                | 15.5                 | 40       | 4                                 | ±30      | 0.026                 | 7.74                 | 20       |
| SRF1280A-1R5Y   | 1.5                               | ±30      | 0.0076                | 13.5                 | 31.1     | 6                                 | ±30      | 0.0306                | 6.77                 | 15.6     |
| SRF1280A-2R2Y   | 2.2                               | ±30      | 0.0092                | 12.5                 | 25.5     | 8.8                               | ±30      | 0.0338                | 6.23                 | 12.7     |
| SRF1280A-3R3Y   | 3.3                               | ±30      | 0.011                 | 10.4                 | 21.5     | 13.2                              | ±30      | 0.04                  | 5.23                 | 10.8     |
| SRF1280A-4R7Y   | 4.7                               | ±30      | 0.0135                | 8.25                 | 16.5     | 18.8                              | ±30      | 0.05                  | 4.13                 | 8.24     |
| SRF1280A-6R8Y   | 6.8                               | ±30      | 0.0183                | 7.34                 | 13.3     | 27.2                              | ±30      | 0.0656                | 3.67                 | 6.67     |
| SRF1280A-8R2Y   | 8.2                               | ±30      | 0.0191                | 6.32                 | 12.2     | 32.8                              | ±30      | 0.0714                | 3.16                 | 6.09     |
| SRF1280A-100M   | 10                                | ±20      | 0.0241                | 6.04                 | 11.2     | 40                                | ±20      | 0.0921                | 3.02                 | 5.6      |
| SRF1280A-150M   | 15                                | ±20      | 0.0333                | 5.03                 | 9.66     | 60                                | ±20      | 0.129                 | 2.51                 | 4.83     |
| SRF1280A-220M   | 22                                | ±20      | 0.0503                | 4                    | 7.57     | 88                                | ±20      | 0.192                 | 2                    | 3.78     |
| SRF1280A-330M   | 33                                | ±20      | 0.0664                | 3.23                 | 6.22     | 132                               | ±20      | 0.265                 | 1.61                 | 3.11     |
| SRF1280A-470M   | 47                                | ±20      | 0.0898                | 2.95                 | 5.28     | 188                               | ±20      | 0.353                 | 1.47                 | 2.64     |
| SRF1280A-680M   | 68                                | ±20      | 0.123                 | 2.44                 | 4.44     | 272                               | ±20      | 0.469                 | 1.22                 | 2.22     |
| SRF1280A-820M   | 82                                | ±20      | 0.153                 | 2.09                 | 4.06     | 328                               | ±20      | 0.578                 | 1.04                 | 2.03     |
| SRF1280A-101M   | 100                               | ±20      | 0.175                 | 1.96                 | 3.64     | 400                               | ±20      | 0.701                 | 0.98                 | 1.82     |
| SRF1280A-151M   | 150                               | ±20      | 0.261                 | 1.59                 | 3.01     | 600                               | ±20      | 1.013                 | 0.796                | 1.51     |
| SRF1280A-221M   | 220                               | ±20      | 0.343                 | 1.29                 | 2.43     | 880                               | ±20      | 1.38                  | 0.645                | 1.22     |
| SRF1280A-331M   | 330                               | ±20      | 0.54                  | 1.04                 | 2.01     | 1320                              | ±20      | 2.172                 | 0.522                | 1.01     |
| SRF1280A-471M   | 470                               | ±20      | 0.865                 | 0.85                 | 1.68     | 1880                              | ±20      | 3.3                   | 0.427                | 0.838    |
| SRF1280A-681M   | 680                               | ±20      | 1.296                 | 0.76                 | 1.39     | 2720                              | ±20      | 4.888                 | 0.38                 | 0.697    |
| SRF1280A-821M   | 820                               | ±20      | 1.632                 | 0.65                 | 1.27     | 3280                              | ±20      | 5.896                 | 0.325                | 0.633    |
| SRF1280A-102M   | 1000                              | ±20      | 1.992                 | 0.61                 | 1.14     | 4000                              | ±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  
 Resistance to Solder Heat .....+245 °C for 10 sec.  
 Temperature Rise .....40 °C typ. at rated I<sub>rms</sub>  
 Inductance drop .....30 % at Isat  
 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 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
 \*\* Bourns follows the prevailing definition of "halogen free" in the industry. 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.

Users should verify actual device performance in their specific applications.

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# SRF1280A Series - Dual-Winding Shielded Power Inductors



## Inductance vs. IDC



## Temperature Rise vs. IDC



## Soldering Profile



## How to Order

**SRF1280A - 100M**

Model \_\_\_\_\_

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

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# SRF1280A Series - Dual-Winding Shielded Power Inductors



## Packaging Specifications



REV. 11/18

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- Оценку стоимости проекта по компонентам.
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