



### Features

- Unit height of 2.9 mm
- Inductance range: 1 to 10,000  $\mu$ H
- Rated current up to 3 A
- RoHS compliant\*



Models SRE6603-1R0M through SRE6603-102M are currently available, but not recommended for new designs. Model **SRR6603** is the replacement with same form and function but the fit may be slightly taller.

## SRE6603 Series - Shielded SMD Power Inductors

### Electrical Characteristics

| Bourns Part No. | Inductance @ 100 KHz L ( $\mu$ H) $\pm 20\%$ | Q (Ref.) | Test Frequency (KHz) | SRF (MHz) Typ. | DCR ( $\Omega$ ) Max. | I rms (A) | I sat (A) |
|-----------------|--|----------|----------------------|----------------|-----------------------|-----------|-----------|
| SRE6603-1R0M    | 1.0  | 30       | 200                  | 250            | 0.040                 | 3.0       | 1.4       |
| SRE6603-1R5M    | 1.5  | 30       | 200                  | 125            | 0.045                 | 2.8       | 0.93      |
| SRE6603-2R2M    | 2.2  | 40       | 200                  | 120            | 0.05                  | 1.8       | 0.92      |
| SRE6603-3R3M    | 3.3  | 40       | 200                  | 120            | 0.055                 | 1.6       | 0.75      |
| SRE6603-4R7M    | 4.7  | 40       | 200                  | 105            | 0.06                  | 1.4       | 0.58      |
| SRE6603-6R8M    | 6.8  | 40       | 200                  | 50             | 0.065                 | 1.2       | 0.58      |
| SRE6603-100M    | 10   | 40       | 200                  | 38             | 0.075                 | 1.0       | 0.37      |
| SRE6603-150M    | 15   | 40       | 100                  | 33             | 0.09                  | 0.80      | 0.31      |
| SRE6603-220M    | 22   | 40       | 100                  | 25             | 0.11                  | 0.70      | 0.30      |
| SRE6603-330M    | 33   | 40       | 100                  | 20             | 0.19                  | 0.60      | 0.24      |
| SRE6603-470M    | 47   | 40       | 100                  | 20             | 0.23                  | 0.50      | 0.24      |
| SRE6603-680M    | 68   | 40       | 100                  | 15             | 0.29                  | 0.40      | 0.17      |
| SRE6603-101M    | 100  | 40       | 100                  | 10             | 0.48                  | 0.30      | 0.13      |
| SRE6603-151M    | 150  | 40       | 100                  | 9              | 0.59                  | 0.26      | 0.10      |
| SRE6603-221M    | 220  | 40       | 100                  | 6              | 0.77                  | 0.22      | 0.10      |
| SRE6603-331M    | 330  | 40       | 100                  | 5              | 1.4                   | 0.20      | 0.07      |
| SRE6603-471M    | 470  | 40       | 100                  | 4              | 1.8                   | 0.19      | 0.06      |
| SRE6603-681M    | 680  | 40       | 100                  | 3              | 2.2                   | 0.18      | 0.055     |
| SRE6603-102M    | 1000   | 40       | 100                  | 2              | 3.4                   | 0.15      | 0.045     |
| SRE6603-152M    | 1500   | 50       | 100                  | 2              | 4.2                   | 0.12      | 0.035     |
| SRE6603-222M    | 2200   | 50       | 100                  | 2              | 8.5                   | 0.10      | 0.028     |
| SRE6603-332M    | 3300   | 50       | 100                  | 1              | 11                    | 0.08      | 0.024     |
| SRE6603-472M    | 4700   | 50       | 100                  | 1              | 13.9                  | 0.06      | 0.021     |
| SRE6603-682M    | 6800   | 50       | 100                  | 1              | 25                    | 0.04      | 0.019     |
| SRE6603-103M    | 10,000                                       | 50       | 100                  | 0.8            | 32.8                  | 0.02      | 0.017     |

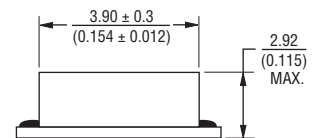
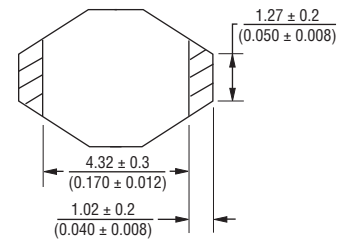
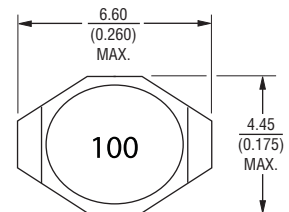
### General Specifications

Test Voltage ..... 0.1 V  
 Reflow Soldering ... 230 °C, 50 sec max.  
 Operating Temperature ..... -25 °C to +105 °C  
 (Temperature rise included)  
 Storage Temperature ..... -40 °C to +125 °C  
 Resistance to Soldering Heat ..... 260 °C for 10 sec.

### Materials

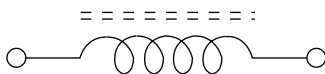
Core ..... Ferrite  
 Wire ..... Enameled copper  
 Base ..... Ceramic  
 Adhesive ..... Epoxy resin  
 Terminal ..... Ag/Ni/Au  
 Rated Current ..... Ind. drop of 30 % typ. at Isat  
 Temperature Rise ... 40 °C typical at Irms  
 Packaging ..... 2000 pcs. per 13-inch reel

### Product Dimensions

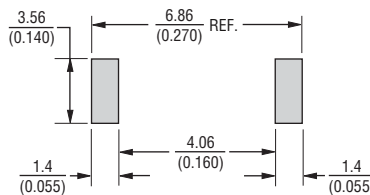


DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

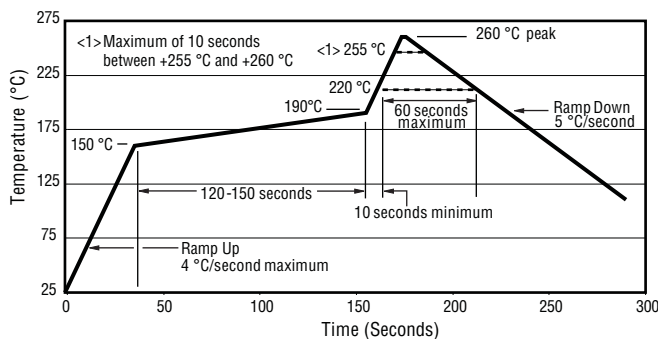
### Schematic



### Recommended Layout



### Soldering Profile



\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. 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.

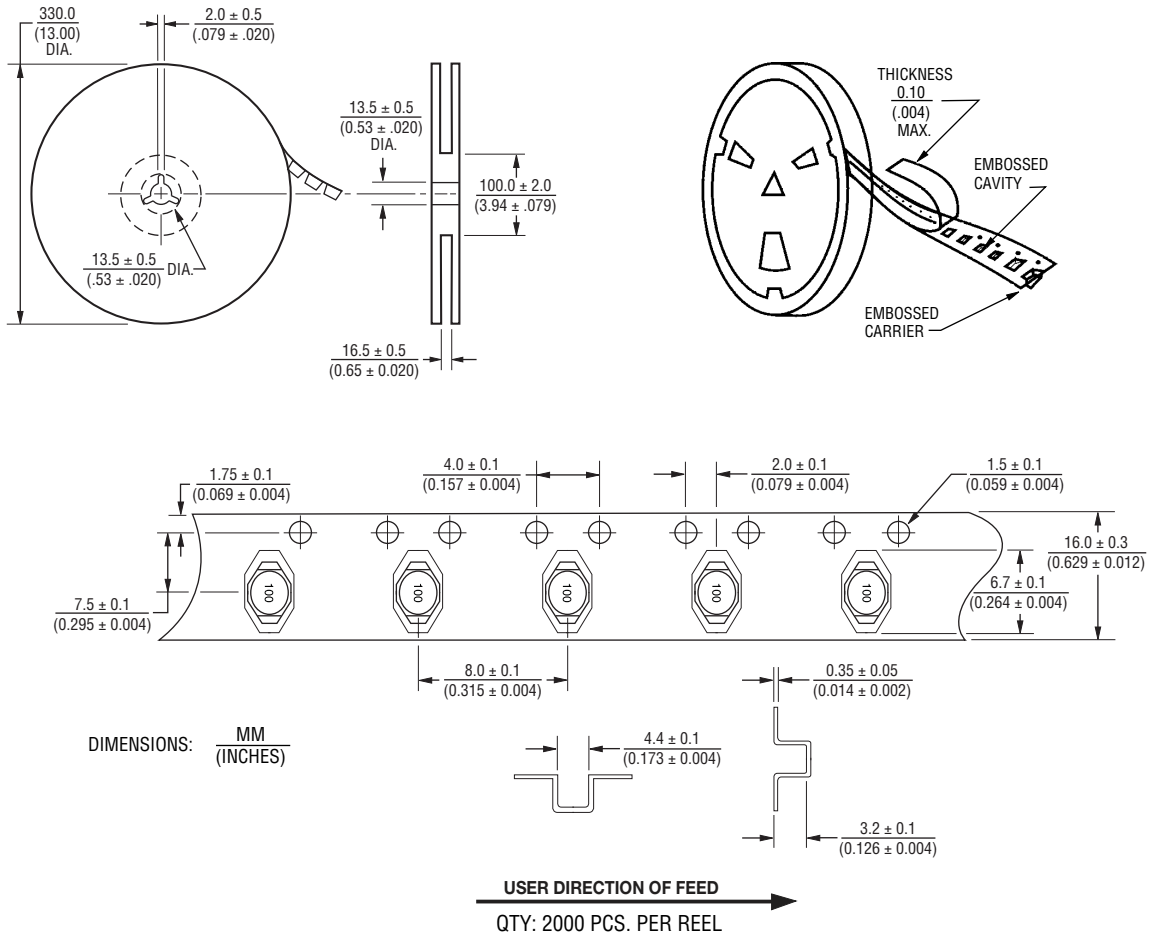
## Applications

- DC/DC converters
- Power supplies for:
  - Portable communication equipment
  - Laptop computers
  - Camcorders, HDTV, car audio systems

## SRE6603 Series - Shielded SMD Power Inductors

**BOURNS®**

### Packaging Specifications



**BOURNS®**

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