



## Features

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

## Applications

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

# SRE6603 Series - Shielded SMD Power Inductors

## Electrical Characteristics

| Bourns Part No. | Inductance<br>@ 100 KHz<br>L ( $\mu$ H) $\pm$ 20 % | Q<br>(Ref.) | Test<br>Frequency<br>(KHz) | SRF<br>(MHz)<br>Typ. | DCR<br>( $\Omega$ )<br>Max. | I rms<br>(A) | I sat<br>(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        |

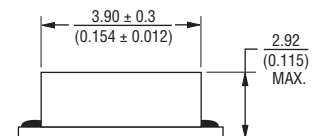
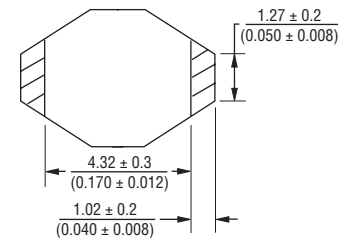
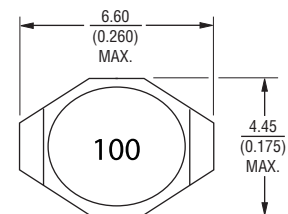
## General Specifications

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

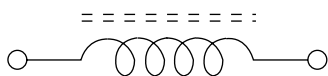
Core.....Ferrite  
 Wire ..... Enameled copper  
 Base ..... Ceramic  
 Adhesive..... Epoxy resin  
 Terminal ..... Ag/Ni/Au  
 Rated Current  
 ..... Ind. drop of 30 % typ. at Isat  
 Temperature Rise .. 40 °C typical at Irms  
 Packaging.....2000 pcs. per 13-inch reel

## Product Dimensions

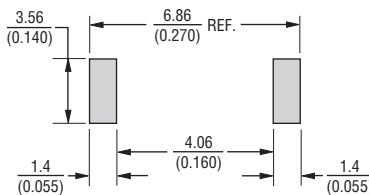


DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

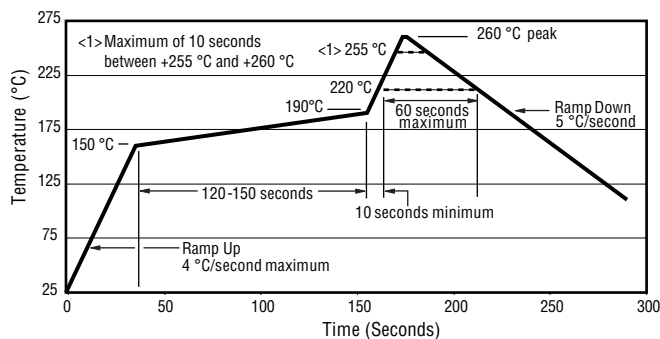
## Schematic



## Recommended Layout



## Soldering Profile

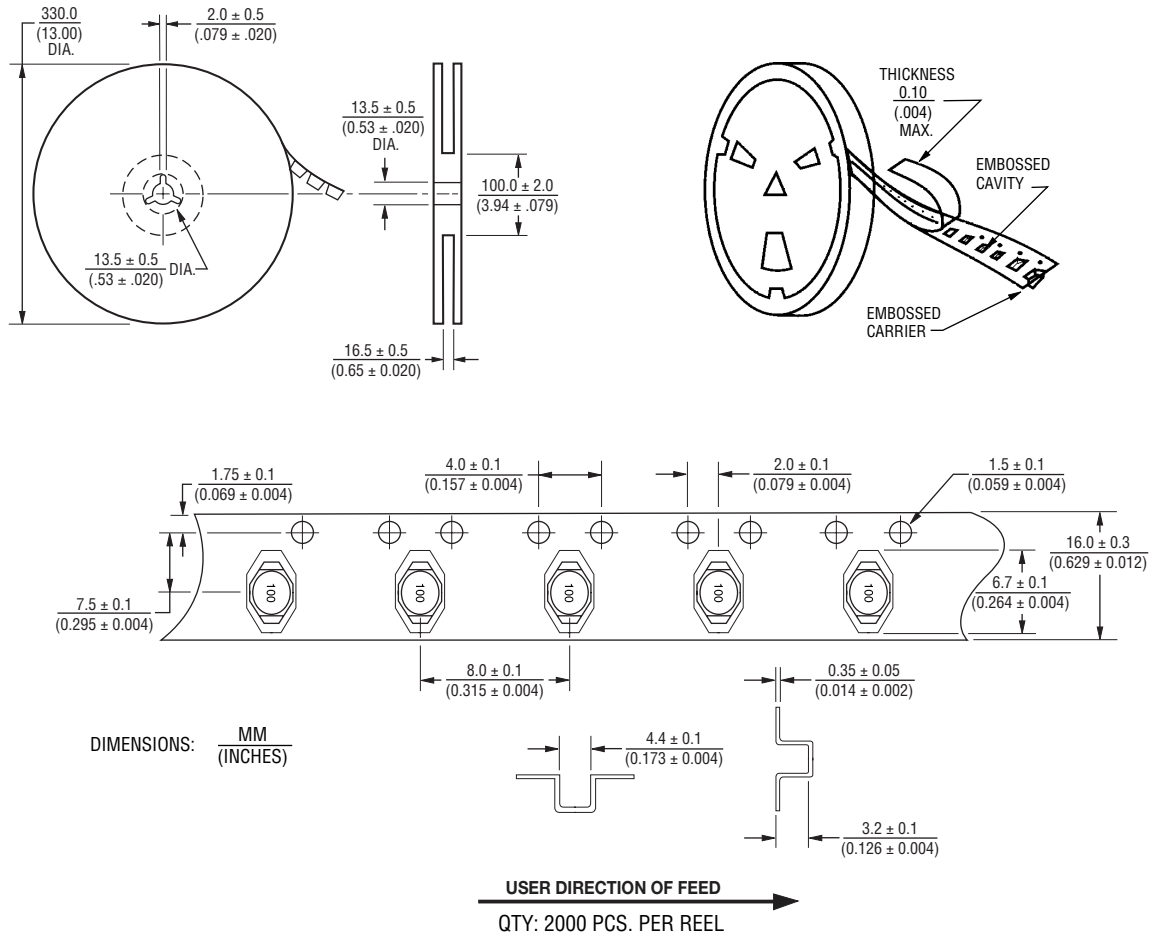


\*RoHS Directive 2002/95/EC Jan 27, 2003 including Annex.  
 Specifications are subject to change without notice.  
 Customers should verify actual device performance in their specific applications.

# SRE6603 Series - Shielded SMD Power Inductors

**BOURNS®**

## Packaging Specifications



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