



# THE DATASHEET OF SDR6603-820M



## Features

- Height of 2.92 mm
- Current rating up to 2.9 amps
- RoHS compliant\*

## Applications

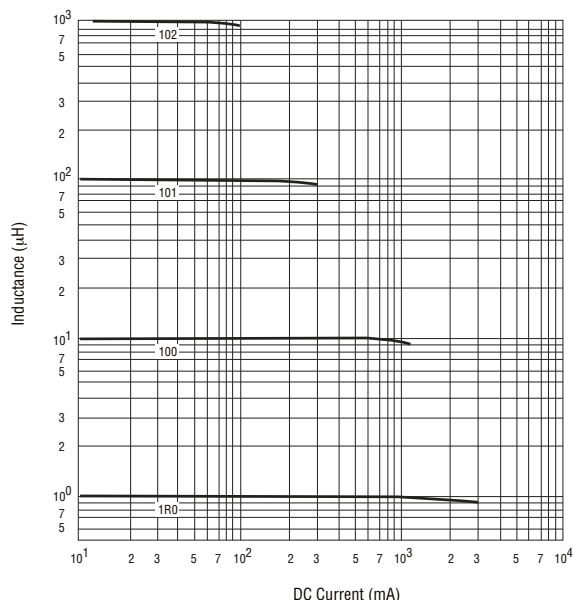
- Input/output of DC/DC converters
- Power supplies for:
  - Portable communications equipment
  - Camcorders
  - LCD TVs

# SDR6603 Series - SMD Power Inductors

## Electrical Specifications

| Bourns<br>Part Number | Inductance<br>100 kHz |        | Q<br>Ref. | Test<br>Frequency<br>(MHz) | SRF<br>Typ.<br>(MHz) | RDC<br>Max.<br>(Ω) | I rms<br>Max.<br>(A) | I sat<br>Typ.<br>(A) |
|-----------------------|-----------------------|--------|-----------|----------------------------|----------------------|--------------------|----------------------|----------------------|
|                       | (μH)                  | Tol. % |           |                            |                      |                    |                      |                      |
| SDR6603-1R0M          | 1.0                   | ± 20   | 20        | 7.96                       | 130                  | 0.05               | 2.9                  | 2.9                  |
| SDR6603-1R5M          | 1.5                   | ± 20   | 19        | 7.96                       | 115                  | 0.05               | 2.8                  | 2.6                  |
| SDR6603-2R2M          | 2.2                   | ± 20   | 18        | 7.96                       | 90                   | 0.07               | 2.4                  | 2.3                  |
| SDR6603-3R3M          | 3.3                   | ± 20   | 18.5      | 7.96                       | 70                   | 0.08               | 2.0                  | 2.0                  |
| SDR6603-4R7M          | 4.7                   | ± 20   | 17        | 7.96                       | 50                   | 0.09               | 1.5                  | 1.5                  |
| SDR6603-6R8M          | 6.8                   | ± 20   | 15.5      | 7.96                       | 45                   | 0.13               | 1.4                  | 1.2                  |
| SDR6603-8R2M          | 8.2                   | ± 20   | 10        | 7.96                       | 40                   | 0.16               | 1.3                  | 1.15                 |
| SDR6603-100M          | 10                    | ± 20   | 17        | 2.52                       | 35                   | 0.16               | 1.1                  | 1.1                  |
| SDR6603-150M          | 15                    | ± 20   | 17        | 2.52                       | 30                   | 0.23               | 1.0                  | 0.90                 |
| SDR6603-220M          | 22                    | ± 20   | 16        | 2.52                       | 20                   | 0.37               | 0.80                 | 0.70                 |
| SDR6603-330M          | 33                    | ± 20   | 24        | 2.52                       | 15                   | 0.51               | 0.60                 | 0.58                 |
| SDR6603-470M          | 47                    | ± 20   | 15        | 2.52                       | 14                   | 0.64               | 0.50                 | 0.50                 |
| SDR6603-680M          | 68                    | ± 20   | 18        | 2.52                       | 11                   | 0.86               | 0.40                 | 0.40                 |
| SDR6603-820M          | 82                    | ± 20   | 10        | 2.52                       | 10                   | 1.18               | 0.35                 | 0.35                 |
| SDR6603-101M          | 100                   | ± 20   | 29        | 0.796                      | 9                    | 1.3                | 0.30                 | 0.31                 |
| SDR6603-151M          | 150                   | ± 20   | 41        | 0.796                      | 6                    | 2.0                | 0.25                 | 0.27                 |
| SDR6603-221M          | 220                   | ± 15   | 33        | 0.796                      | 5.5                  | 3.2                | 0.20                 | 0.22                 |
| SDR6603-331M          | 330                   | ± 15   | 42        | 0.796                      | 5                    | 3.8                | 0.16                 | 0.18                 |
| SDR6603-471M          | 470                   | ± 15   | 42        | 0.796                      | 4                    | 5.1                | 0.15                 | 0.16                 |
| SDR6603-681M          | 680                   | ± 15   | 58        | 0.796                      | 3                    | 9.2                | 0.12                 | 0.14                 |
| SDR6603-821M          | 820                   | ± 15   | 40        | 0.796                      | 2.5                  | 12.6               | 0.10                 | 0.12                 |
| SDR6603-102M          | 1000                  | ± 15   | 71        | 0.252                      | 2                    | 13.8               | 0.07                 | 0.10                 |

## Inductance vs. Current



**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. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.pdf)

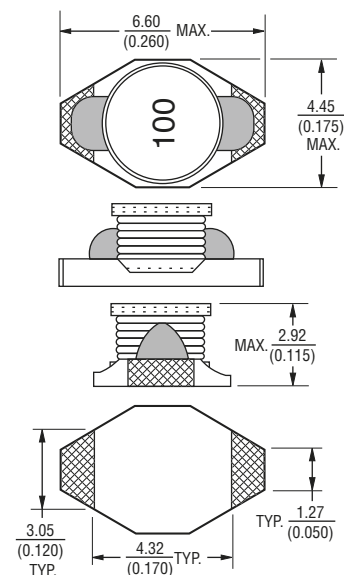
## General Specifications

Test Voltage ..... 0.1 V  
 Reflow Soldering ... 230 °C, 50 sec. max  
 Operating Temp. .... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature.. -40 °C to +125 °C  
 Resistance to Soldering Heat  
 ..... 260 °C, 10 sec. max.  
 Moisture Sensitivity Level..... 1  
 ESD Classification (HBM)..... N/A

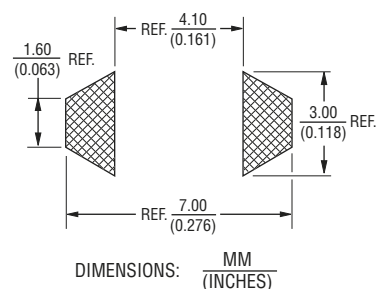
## Materials

Core ..... Ferrite  
 Wire ..... Enamelled copper  
 Base ..... Ceramic  
 Adhesive..... Epoxy resin  
 Terminal..... Ag/Ni/Au  
 Rated Current  
 ..... Ind. drop 10 % typ. at Isat  
 Temp. Rise ... 15 °C typical at rated Irms  
 Packaging..... 600 pcs. per reel

## Product Dimensions



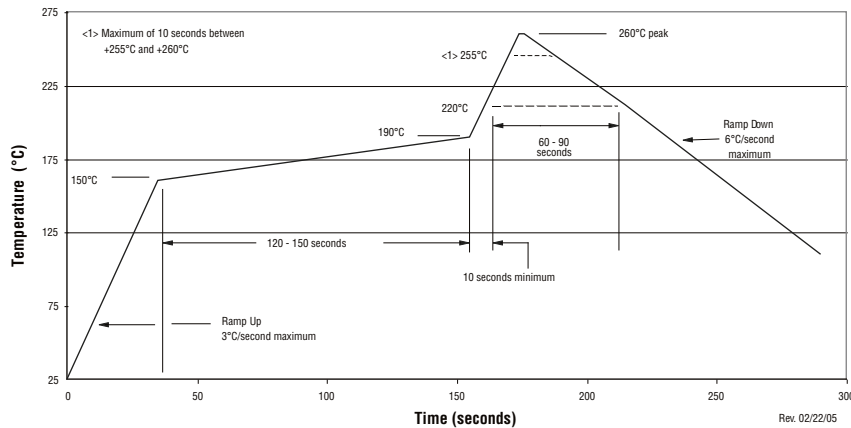
## Recommended Layout



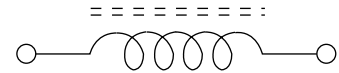
# SDR6603 Series - SMD Power Inductors

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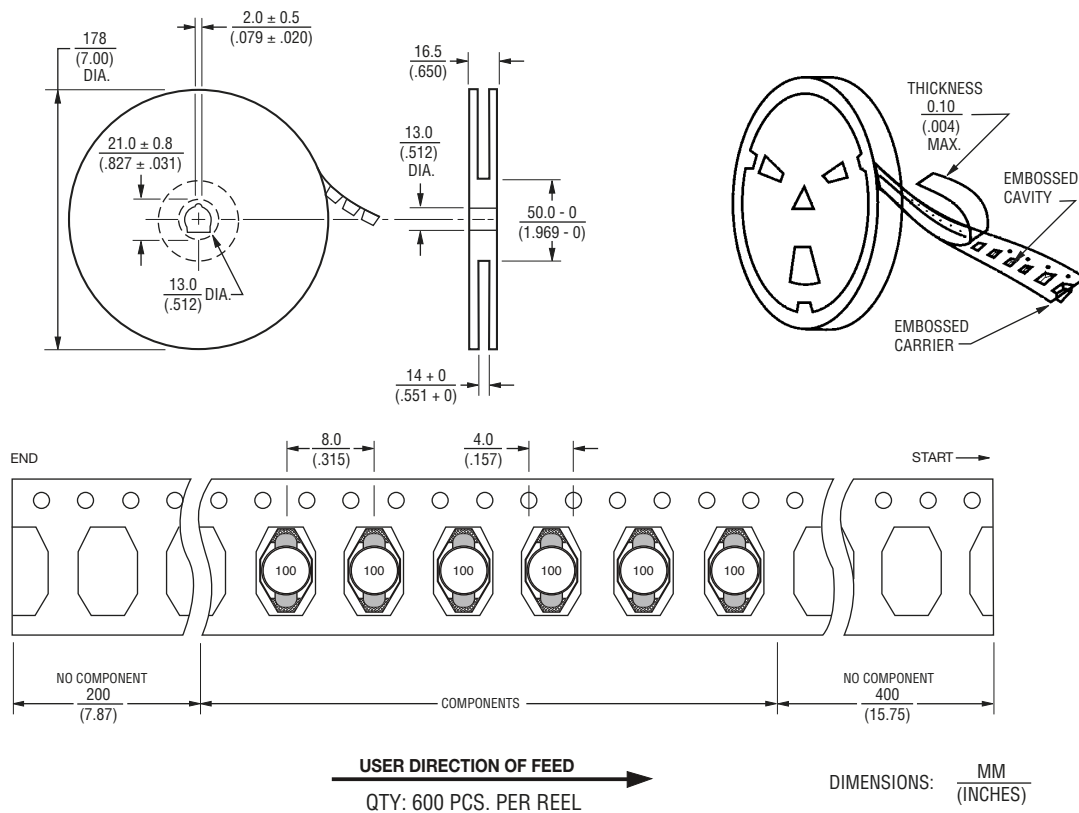
## Soldering Profile



## Electrical Schematic



## Packaging Specifications



REV. 03/18

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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