




**THE DATASHEET OF  
SDE6603-221M**





### Features

- Unit height of 2.9 mm
- Inductance range: 1 to 1000  $\mu$ H
- Rated current up to 2.9 A
- RoHS compliant\*

 This series is currently available but not recommended for new designs. The [SDR6603 Series](#) is a possible replacement - see [Product Obsolescence Memo](#) for more info.

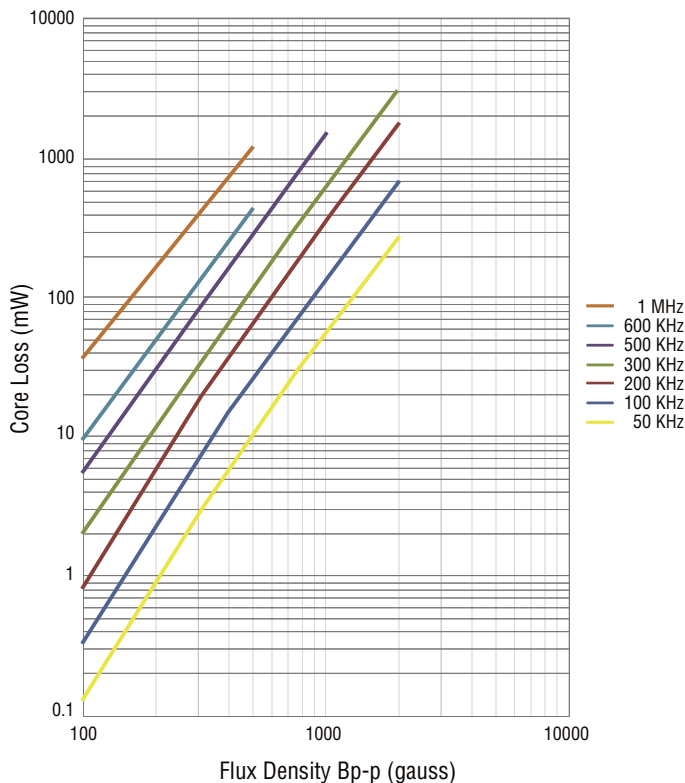
## SDE6603 Series - SMD Power Inductors

### Electrical Characteristics

Bourns Part No.	Inductance @ 100KHz L ( $\mu$ H) $\pm$ 20 %	SRF (MHz) Typ.	DCR ( $\Omega$ ) Max.	I rms (A)	I sat (A)	**K-Factor
SDE6603-1R0M	1.0	130	0.05	2.9	2.9	1000
SDE6603-1R5M	1.5	115	0.06	2.8	2.6	867
SDE6603-2R2M	2.2	90	0.07	2.4	2.3	684
SDE6603-3R3M	3.3	70	0.08	2.0	2.0	520
SDE6603-4R7M	4.7	50	0.09	1.5	1.5	448
SDE6603-6R8M	6.8	45	0.13	1.4	1.2	371
SDE6603-100M	10	35	0.16	1.1	1.1	302
SDE6603-150M	15	30	0.23	1.0	0.9	245
SDE6603-220M	22	20	0.37	0.8	0.7	200
SDE6603-330M	33	15	0.51	0.6	0.58	160
SDE6603-470M	47	14	0.64	0.5	0.5	137
SDE6603-680M	68	11	0.86	0.4	0.4	70
SDE6603-101M	100	9	1.27	0.3	0.31	57
SDE6603-151M	150	6	2.0	0.25	0.27	45
SDE6603-221M	220	5.5	3.11	0.2	0.22	38
SDE6603-331M	330	5	3.8	0.16	0.18	30
SDE6603-471M	470	4	5.06	0.15	0.16	26
SDE6603-681M	680	3	9.2	0.12	0.14	22
SDE6603-102M	1000	2	13.8	0.07	0.1	18

\*\*K-Factor: To calculate core flux density, Bp-p (gauss) = K x L( $\mu$ H) x  $\Delta$  I (peak-to-peak ripple current, A), determine core loss from *Core Loss vs. Flux Density* plot.

### Core Loss vs. Flux Density



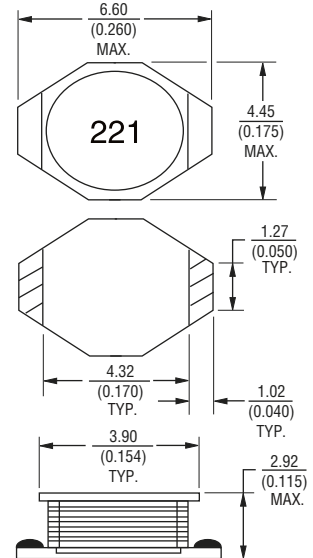
### General Specifications

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.  
 Moisture Sensitivity Level..... 1  
 ESD Classification (HBM)..... N/A

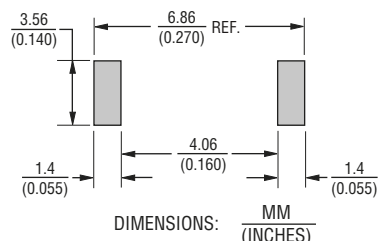
### Materials

Core ..... Ferrite  
 Wire ..... Enameled copper  
 Base ..... Ceramic  
 Adhesive ..... Epoxy resin  
 Terminal ..... Ag/Ni/Au  
 Rated Current.. Ind. drop of 10 % typ. at Isat  
 Temperature Rise ..... 40 °C typical at Irms  
 Packaging..... 2000 pcs. per 13-inch reel

### Product Dimensions



### Recommended Layout



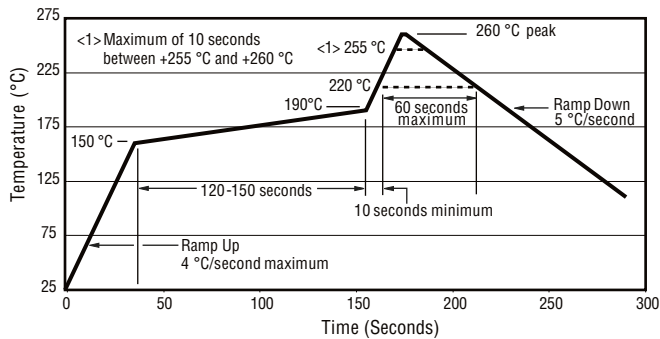
**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
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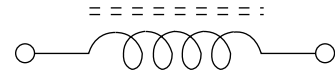
# SDE6603 Series - SMD Power Inductors



## Soldering Profile



## Schematic

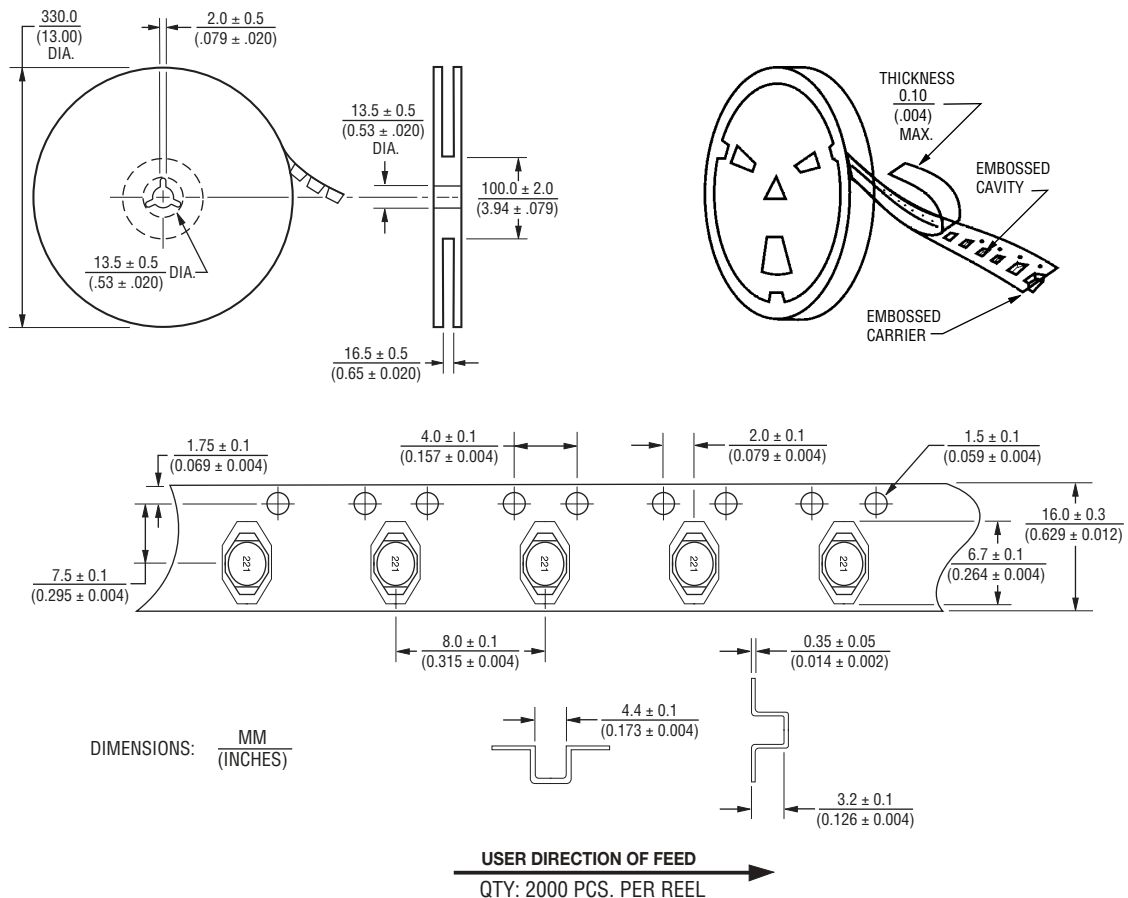


## How to Order

**SDE6603 - 100M**

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

## 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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