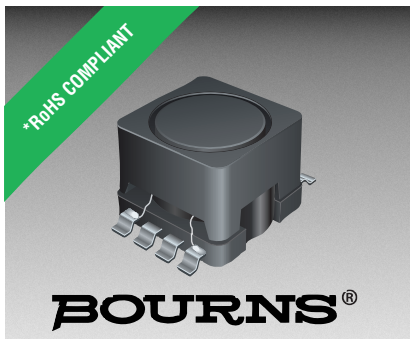




# THE DATASHEET OF SRR0906-2R7ML





## Features

- Available in E6 series
- High inductance up to 10 mH
- Low 6.0 mm profile
- Gull wing leads
- RoHS compliant\*

## Applications

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

# SRR0906 Series - SMD Shielded Power Inductors

## Electrical Specifications

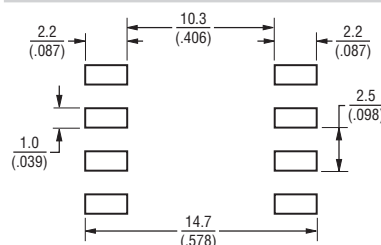
| Bourns Part No. | Inductance<br>1 KHz |        | Q<br>Ref. | Test<br>Frequency<br>(MHz) | SRF<br>Min.<br>(MHz) | RDC<br>Max.<br>(Ω) | I rms<br>Max.<br>(A) | I sat<br>Typ.<br>(A) | **K-<br>Factor |
|-----------------|---------------------|--------|-----------|----------------------------|----------------------|--------------------|----------------------|----------------------|----------------|
|                 | μH                  | Tol. % |           |                            |                      |                    |                      |                      |                |
| SRR0906-2R7ML   | 2.7                 | ±20    | 23        | 7.96                       | 85.0                 | 0.032              | 3.20                 | 5.80                 | 173            |
| SRR0906-3R5ML   | 3.5                 | ±20    | 23        | 7.96                       | 80.0                 | 0.036              | 2.90                 | 5.20                 | 148            |
| SRR0906-4R7ML   | 4.7                 | ±20    | 23        | 7.96                       | 40.0                 | 0.040              | 2.70                 | 4.30                 | 130            |
| SRR0906-5R6ML   | 5.6                 | ±20    | 23        | 7.96                       | 57.0                 | 0.046              | 2.50                 | 4.20                 | 115            |
| SRR0906-6R8ML   | 6.8                 | ±20    | 23        | 7.96                       | 38.0                 | 0.050              | 2.30                 | 3.40                 | 104            |
| SRR0906-8R2ML   | 8.2                 | ±20    | 23        | 7.96                       | 30.0                 | 0.055              | 2.10                 | 3.20                 | 94             |
| SRR0906-100ML   | 10                  | ±20    | 35        | 2.52                       | 29.0                 | 0.080              | 1.80                 | 2.70                 | 80             |
| SRR0906-120ML   | 12                  | ±20    | 35        | 2.52                       | 26.0                 | 0.085              | 1.70                 | 2.60                 | 74             |
| SRR0906-150ML   | 15                  | ±20    | 35        | 2.52                       | 23.0                 | 0.100              | 1.60                 | 2.40                 | 65             |
| SRR0906-180ML   | 18                  | ±20    | 35        | 2.52                       | 22.0                 | 0.110              | 1.50                 | 2.00                 | 61             |
| SRR0906-220ML   | 22                  | ±20    | 35        | 2.52                       | 19.0                 | 0.130              | 1.40                 | 1.90                 | 52             |
| SRR0906-270ML   | 27                  | ±20    | 35        | 2.52                       | 17.0                 | 0.140              | 1.30                 | 1.80                 | 47             |
| SRR0906-330ML   | 33                  | ±20    | 35        | 2.52                       | 15.0                 | 0.150              | 1.20                 | 1.60                 | 43             |
| SRR0906-390ML   | 39                  | ±20    | 35        | 2.52                       | 14.0                 | 0.160              | 1.10                 | 1.40                 | 42             |
| SRR0906-470ML   | 47                  | ±20    | 35        | 2.52                       | 12.0                 | 0.180              | 1.00                 | 1.30                 | 36             |
| SRR0906-560ML   | 56                  | ±20    | 35        | 2.52                       | 12.0                 | 0.300              | 0.93                 | 1.20                 | 34             |
| SRR0906-680ML   | 68                  | ±20    | 40        | 2.52                       | 9.0                  | 0.350              | 0.85                 | 1.00                 | 31             |
| SRR0906-820ML   | 82                  | ±20    | 40        | 2.52                       | 8.0                  | 0.370              | 0.78                 | 0.90                 | 28             |
| SRR0906-101YL   | 100                 | ±15    | 40        | 0.796                      | 7.5                  | 0.420              | 0.70                 | 0.90                 | 25             |
| SRR0906-121YL   | 120                 | ±15    | 40        | 0.796                      | 7.0                  | 0.480              | 0.65                 | 0.75                 | 23             |
| SRR0906-151YL   | 150                 | ±15    | 40        | 0.796                      | 6.0                  | 0.550              | 0.60                 | 0.70                 | 20             |
| SRR0906-181YL   | 180                 | ±15    | 40        | 0.796                      | 5.5                  | 0.820              | 0.52                 | 0.70                 | 19             |
| SRR0906-221YL   | 220                 | ±15    | 40        | 0.796                      | 5.0                  | 1.000              | 0.48                 | 0.60                 | 16             |
| SRR0906-271YL   | 270                 | ±15    | 40        | 0.796                      | 5.0                  | 1.100              | 0.44                 | 0.55                 | 15             |
| SRR0906-331YL   | 330                 | ±15    | 40        | 0.796                      | 4.5                  | 1.300              | 0.40                 | 0.51                 | 13             |
| SRR0906-391YL   | 390                 | ±15    | 40        | 0.796                      | 4.2                  | 1.400              | 0.38                 | 0.50                 | 12             |
| SRR0906-471YL   | 470                 | ±15    | 40        | 0.796                      | 4.0                  | 1.600              | 0.35                 | 0.40                 | 11             |
| SRR0906-561YL   | 560                 | ±15    | 60        | 0.796                      | 3.2                  | 2.700              | 0.28                 | 0.35                 | 11             |
| SRR0906-681YL   | 680                 | ±15    | 60        | 0.796                      | 2.7                  | 3.200              | 0.25                 | 0.33                 | 9              |
| SRR0906-821YL   | 820                 | ±15    | 85        | 0.796                      | 2.6                  | 3.500              | 0.23                 | 0.30                 | 9              |
| SRR0906-102YL   | 1000                | ±15    | 100       | 0.252                      | 2.3                  | 4.000              | 0.22                 | 0.26                 | 8              |
| SRR0906-122YL   | 1200                | ±15    | 100       | 0.252                      | 2.3                  | 4.400              | 0.20                 | 0.24                 | 7              |
| SRR0906-152YL   | 1500                | ±15    | 100       | 0.252                      | 2.0                  | 5.200              | 0.18                 | 0.22                 | 6              |
| SRR0906-182YL   | 1800                | ±15    | 100       | 0.252                      | 1.7                  | 7.000              | 0.17                 | 0.20                 | 6              |
| SRR0906-222YL   | 2200                | ±15    | 100       | 0.252                      | 1.5                  | 8.500              | 0.16                 | 0.18                 | 5              |
| SRR0906-272YL   | 2700                | ±15    | 100       | 0.252                      | 1.4                  | 9.200              | 0.14                 | 0.17                 | 5              |
| SRR0906-332YL   | 3300                | ±15    | 100       | 0.252                      | 1.3                  | 11.000             | 0.12                 | 0.15                 | 4              |
| SRR0906-392YL   | 3900                | ±15    | 100       | 0.252                      | 1.2                  | 16.000             | 0.11                 | 0.13                 | 4              |
| SRR0906-472YL   | 4700                | ±15    | 100       | 0.252                      | 1.0                  | 19.000             | 0.10                 | 0.11                 | 4              |
| SRR0906-562YL   | 5600                | ±15    | 100       | 0.252                      | 0.9                  | 21.000             | 0.09                 | 0.11                 | 3              |
| SRR0906-682YL   | 6800                | ±15    | 100       | 0.252                      | 0.9                  | 24.000             | 0.09                 | 0.10                 | 3              |
| SRR0906-822YL   | 8200                | ±15    | 100       | 0.252                      | 0.8                  | 31.000             | 0.08                 | 0.09                 | 3              |
| SRR0906-103YL   | 10000               | ±15    | 100       | 0.0796                     | 0.7                  | 38.000             | 0.07                 | 0.08                 | 2              |

Multiple windings possible (up to four windings).

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

\*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.

## Recommended Layout



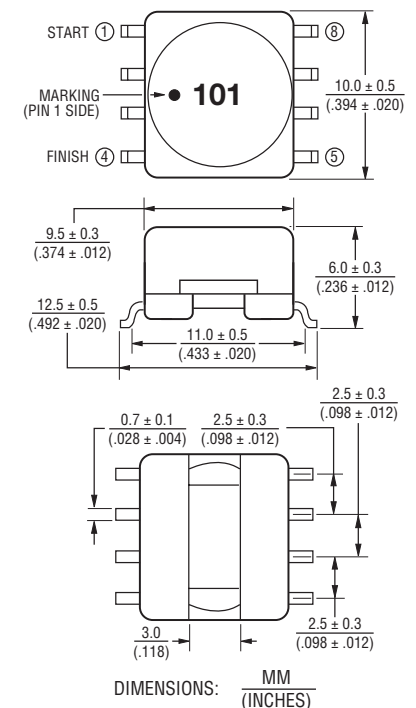
## General Specifications

Test Voltage..... 1 V  
 Reflow Soldering .. 230 °C, 50 sec. max.  
 Operating Temperature  
 ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature .. -40 °C to +125 °C  
 Resistance to Soldering Heat  
 ..... 260 °C for 5 sec.  
 Moisture Sensitivity Level..... 1  
 ESD Classification (HBM)..... N/A

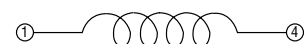
## Materials

Core..... Ferrite DR & RI  
 Wire..... Enameled copper  
 Base..... LCP  
 Terminal..... Cu/Ni/Sn  
 Adhesive..... Epoxy resin  
 Rated Current  
 ..... Ind. drop of 10 % typ. at Isat  
 Temp. Rise..... 40 °C max. at rated I rms  
 Packaging..... 600 pcs. per reel

## Product Dimensions



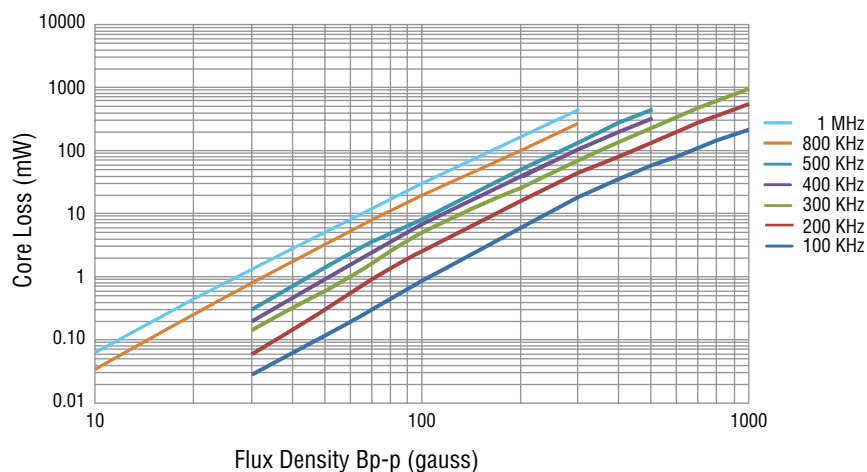
## Schematic



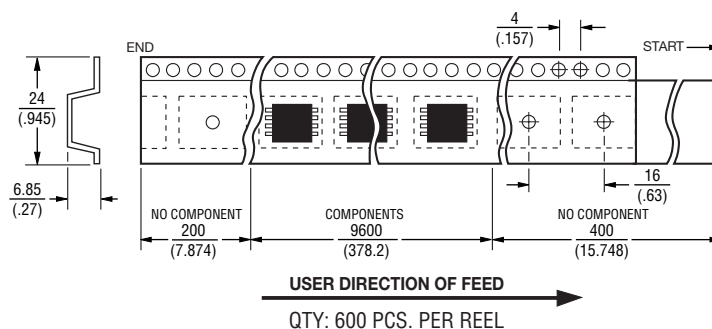
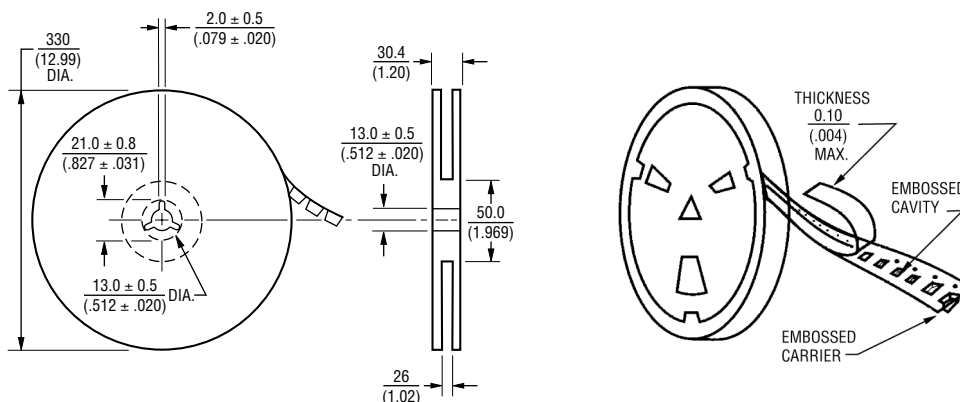
# SRR0906 Series - SMD Shielded Power Inductors

**BOURNS®**

## Core Loss vs. Flux Density



## Packaging Specifications



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

REV. 03/18

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