



## Features

- Multiple configurations: parallel, series, dual-inductor, and transformer
- Magnetically shielded, low radiation
- High operating temperature up to 150 °C
- AEC-Q200 compliant
- RoHS compliant\* and halogen free\*\*

## Applications

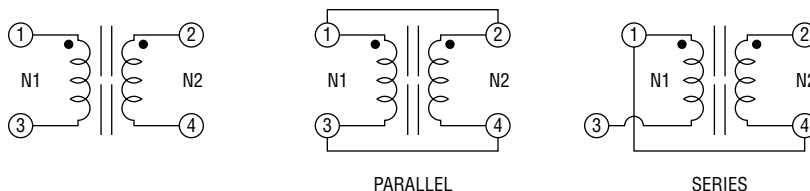
- SEPIC topology
- Power supplies

## SRF0703HA Series – Dual-Winding Shielded Power Inductors

### Electrical Specifications @ 25 °C

Bourns Part No.	Parallel Ratings				Series Ratings			
	Inductance ( $\mu$ H) $\pm 20$ %	RDC (m $\Omega$ ) Max.	I <sub>rms</sub> (A) Typ.	Isat (A) Typ.	Inductance ( $\mu$ H) $\pm 20$ %	RDC (m $\Omega$ ) Max.	I <sub>rms</sub> (A) Typ.	Isat (A) Typ.
SRF0703HA-4R7M	4.70	50.0	2.70	3.78	18.8	200	1.35	1.89
SRF0703HA-8R2M	8.20	77.2	2.19	2.66	34.1	306	1.100	1.33
SRF0703HA-100M	10.00	82.6	2.08	2.47	39.6	342	1.040	1.24
SRF0703HA-150M	15.00	119.0	1.83	2.05	59.6	470	0.916	1.03
SRF0703HA-220M	22.00	150.0	1.62	1.67	89.5	620	0.811	0.83
SRF0703HA-330M	33.00	240.0	1.31	1.35	140.5	1000	0.653	0.68
SRF0703HA-470M	47.00	338.0	1.08	1.14	194.2	1280	0.542	0.57
SRF0703HA-680M	68.00	507.0	0.89	0.96	289.3	1920	0.444	0.48
SRF0703HA-820M	82.00	610.0	0.86	0.89	324.7	2280	0.430	0.44
SRF0703HA-101M	100.00	715.0	0.73	0.79	397.6	2640	0.367	0.39
SRF0703HA-151M	150.00	986.0	0.58	0.65	608.2	3630	0.289	0.32
SRF0703HA-221M	220.00	1480.0	0.52	0.53	922.6	5500	0.260	0.27
SRF0703HA-331M	330.00	2160.0	0.42	0.44	1335	8250	0.211	0.22
SRF0703HA-471M	470.00	2820.0	0.35	0.37	1859	11220	0.173	0.18
SRF0703HA-681M	680.00	3960.0	0.29	0.31	2930	16170	0.143	0.15
SRF0703HA-821M	820.00	5010.0	0.27	0.28	3559	20070	0.134	0.14
SRF0703HA-102M	1000.00	6110.0	0.26	0.25	4120	24420	0.128	0.13

### Electrical Schematic



### Additional Information

Click these links for more information:



### General Specifications

Operating Temperature  
..... -55 °C to +150 °C  
(Temperature rise included)  
Storage Temperature ... -55 °C to +150 °C  
Temperature Rise  
..... 40 °C typ. at rated I<sub>rms</sub><sup>1</sup>  
Rated Current  
..... Inductance drops 30 % at Isat  
Hi-pot (N1-N2)  
..... 500 VAC / 60 Hz, 3 mA, 1 sec.  
Moisture Sensitivity Level..... 1  
ESD Classification (HBM)..... N/A  
<sup>1</sup>Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

### Materials

Core Material..... Ferrite  
Wire ..... Enameled copper  
Terminal Finish ..... Sn  
Packaging..... 1500 pcs. per 13-inch reel

### How to Order

Model **SRF0703HA - 4R7 M**  
Inductance Value Code \_\_\_\_\_  
4R7 = 4.70  $\mu$ H  
8R2 = 8.20  $\mu$ H  
100 = 10.00  $\mu$ H  
150 = 15.00  $\mu$ H  
220 = 22.00  $\mu$ H  
330 = 33.00  $\mu$ H  
470 = 47.00  $\mu$ H  
680 = 68.00  $\mu$ H  
820 = 82.00  $\mu$ H  
101 = 100.00  $\mu$ H  
151 = 150.00  $\mu$ H  
221 = 220.00  $\mu$ H  
331 = 330.00  $\mu$ H  
471 = 470.00  $\mu$ H  
681 = 680.00  $\mu$ H  
821 = 820.00  $\mu$ H  
102 = 1000.00  $\mu$ H  
Tolerance Code \_\_\_\_\_  
M =  $\pm 20$  %



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

\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

\*\*Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice.

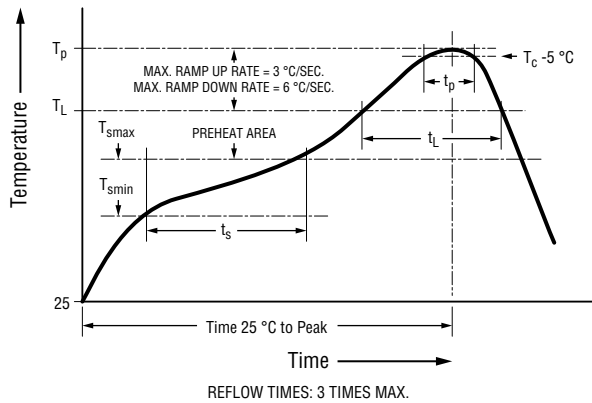
Users should verify actual device performance in their specific applications.

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# SRF0703HA Series – Dual-Winding Shielded Power Inductors

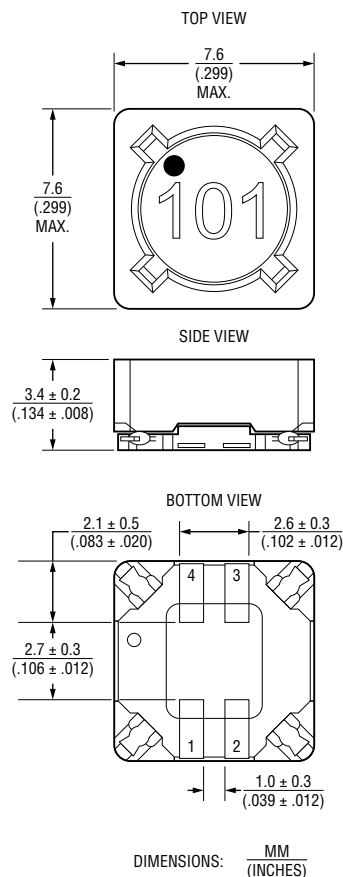
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## Soldering Profile

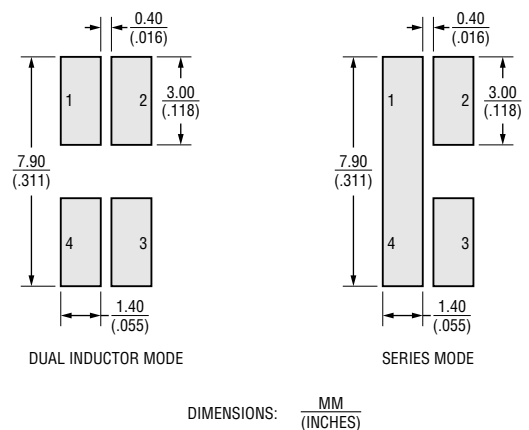


Profile Feature	Pb Free Assembly
Preheat <ul style="list-style-type: none"> <li>- Temperature Min. (<math>T_{smin}</math>)</li> <li>- Temperature Max. (<math>T_{smax}</math>)</li> <li>- Time(<math>t_S</math>) from <math>T_{smin}</math> to <math>T_{smax}</math></li> </ul>	150 °C 200 °C 60-120 seconds
Ramp-up Rate ( $T_L$ to $T_P$ )	3 °C/second max.
Liquidous temperature ( $T_L$ ) Time ( $t_L$ ) maintained above $T_L$	217 °C 60-150 seconds
Peak package body temperature ( $T_P$ )	250 °C
Time ( $t_P$ ) at $T_c - 5^\circ\text{C}$ ( $T_P$ should be equal to or less than $T_c$ )	< 30 seconds
Ramp-Down Rate ( $T_P$ to $T_L$ )	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

## Product Dimensions



## Recommended Layout



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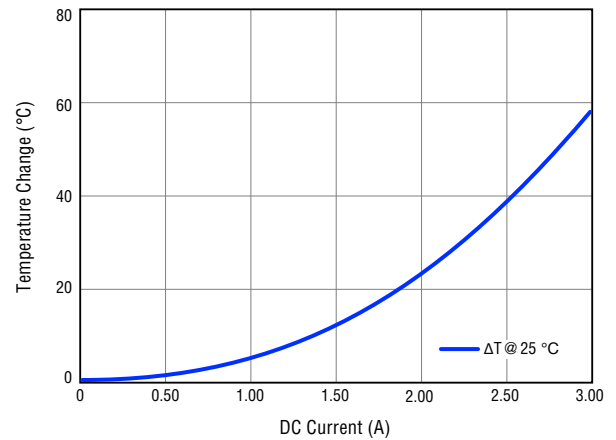
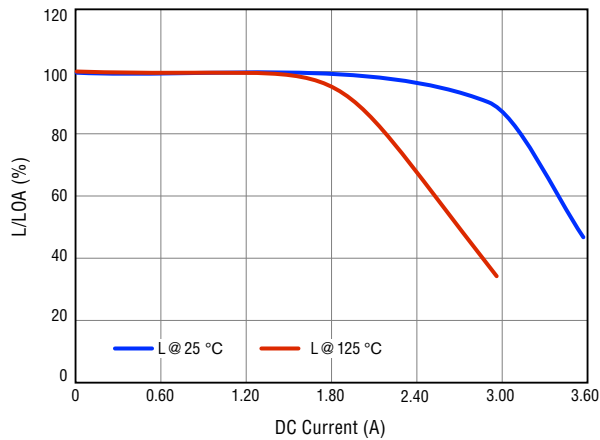
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## SRF0703HA Series – Dual-Winding Shielded Power Inductors

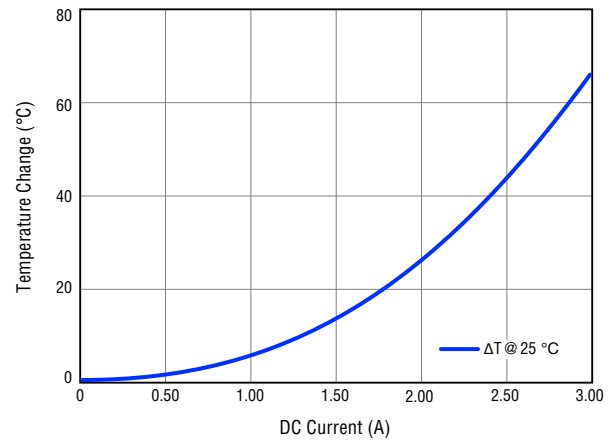
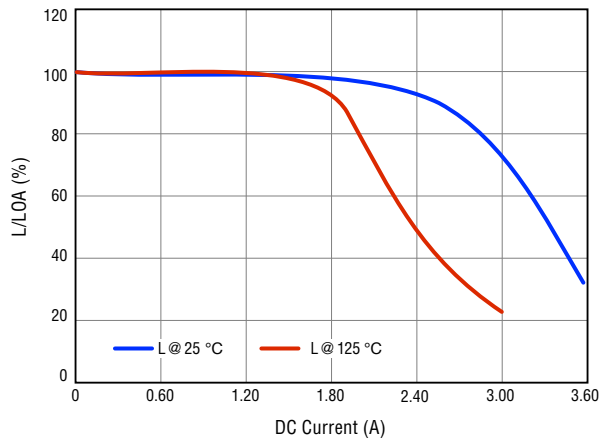
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### Typical Current Characteristics

#### SRF0703HA-8R2M



#### SRF0703HA-100M



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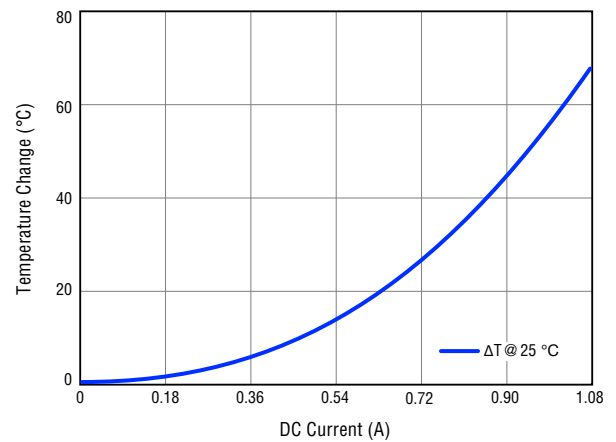
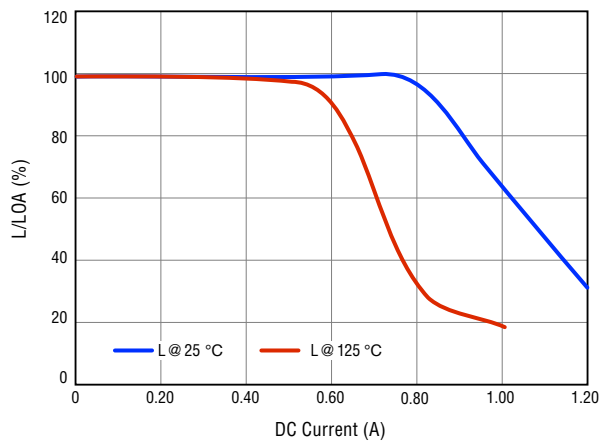
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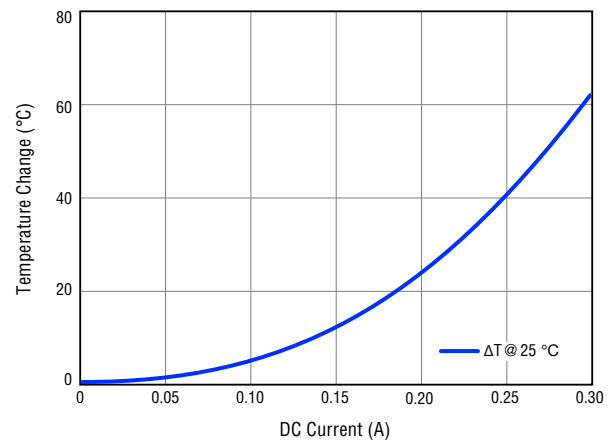
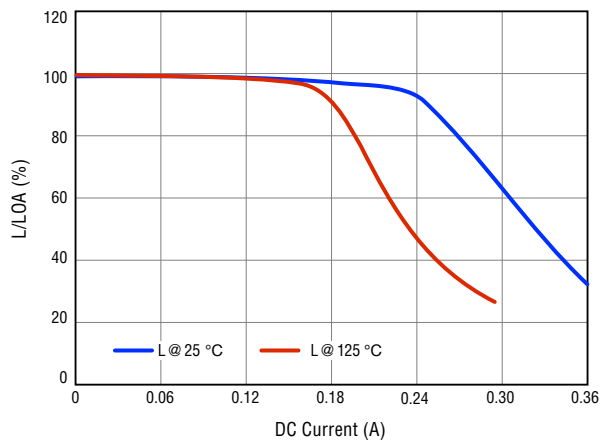
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### Typical Current Characteristics

#### SRF0703HA-101M



#### SRF0703HA-102M



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Technical drawing of a 101 component on a reel. The drawing includes three views: a top view, a side view, and a perspective view of the component on the reel.

**Top View Dimensions:**

- Overall Diameter: 330 (12.99)
- Central Hole Diameter:  $2.00 \pm 0.50$  (.079  $\pm$  .020)
- Tab Width:  $21 \pm 0.8$  (.827  $\pm$  .031)

**Side View Dimensions:**

- Thickness: 18 (.709) MAX.
- Central Hole Diameter: 50 (1.967) DIA. MAX.

**Perspective View Dimensions:**

- Carrier Width: 16 (.630)
- Overall Width: 22.4 (.882)

**Bottom View Dimensions (Reel Layout):**

- Trailer (No Component): 350 (13.78) MIN.
- Components: 12 (.472)
- Leader (No Component): 400 (15.748) MIN.

**Labels:**

- COVER TAPE
- EMBOSSED CARRIER
- END
- START
- TRAILER NO COMPONENT
- COMPONENTS
- LEADER NO COMPONENT

**Notes:**

- DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$
- USER DIRECTION OF FEED  $\rightarrow$
- QTY: 1,500 PCS PER REEL

**BOURNS®**

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