



**THE DATASHEET OF  
SRR1005-820Y**





### Features

- Available in E12 series
- Unit height of 5.2 mm
- Current up to 4.5 A
- RoHS compliant\*

### Applications

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

## SRR1005 Series - Shielded Power Inductors

### Electrical Specifications

Bourns Part No.	Inductance 1 KHz		Q Ref.	Test Frequency (MHz)	SRF Min. (MHz)	RDC Max. (Ω)	I rms Max. (A)	I sat Typ. (A)	**K- Factor
	μH	Tol. %							
SRR1005-1R0M	1.0	± 20	25	7.96M	120	0.017	4.50	8.00	218
SRR1005-1R5M	1.5	± 20	25	7.96M	100	0.020	3.60	7.00	179
SRR1005-2R2M	2.2	± 20	25	7.96M	90.0	0.027	3.10	6.10	151
SRR1005-3R0M	3.0	± 20	25	7.96M	80.0	0.030	2.90	5.00	131
SRR1005-3R3M	3.3	± 20	25	7.96M	75.0	0.039	3.30	3.90	131
SRR1005-4R7M	4.7	± 20	25	7.96M	50.0	0.040	2.50	3.80	103
SRR1005-6R8M	6.8	± 20	22	7.96M	35.0	0.075	2.20	2.80	85
SRR1005-7R0M	7.0	± 20	22	7.96M	32.0	0.055	2.20	3.20	85
SRR1005-100M	10	± 20	48	2.52M	30.0	0.065	2.00	3.00	73
SRR1005-120M	12	± 20	45	2.52M	25.0	0.080	1.80	2.30	63
SRR1005-150M	15	± 20	40	2.52M	20.0	0.085	1.70	2.10	56
SRR1005-180Y	18	± 15	35	2.52M	19.0	0.090	1.60	2.10	53
SRR1005-220Y	22	± 15	42	2.52M	18.0	0.100	1.40	1.90	48
SRR1005-270Y	27	± 15	40	2.52M	17.0	0.120	1.30	1.60	44
SRR1005-330Y	33	± 15	40	2.52M	15.0	0.160	1.20	1.56	39
SRR1005-390Y	39	± 15	40	2.52M	13.0	0.180	1.05	1.40	36
SRR1005-470Y	47	± 15	35	2.52M	12.0	0.190	1.00	1.30	33
SRR1005-560Y	56	± 15	35	2.52M	11.0	0.210	0.90	1.10	30
SRR1005-680Y	68	± 15	35	2.52M	9.0	0.340	0.82	1.10	27
SRR1005-820Y	82	± 15	35	2.52M	8.0	0.380	0.75	0.95	25
SRR1005-101K	100	± 10	35	0.796M	7.5	0.420	0.68	0.90	23
SRR1005-121K	120	± 10	30	0.796M	7.2	0.460	0.60	0.80	20
SRR1005-151K	150	± 10	28	0.796M	6.2	0.520	0.55	0.66	18
SRR1005-181K	180	± 10	28	0.796M	5.8	0.700	0.50	0.65	17
SRR1005-221K	220	± 10	30	0.796M	5.2	0.800	0.45	0.63	15
SRR1005-271K	270	± 10	30	0.796M	4.8	1.100	0.40	0.52	14
SRR1005-331K	330	± 10	30	0.796M	4.5	1.200	0.35	0.48	12
SRR1005-391K	390	± 10	25	0.796M	4.2	1.400	0.33	0.45	11
SRR1005-471K	470	± 10	40	0.796M	3.0	1.600	0.30	0.45	10
SRR1005-561K	560	± 10	40	0.796M	2.7	1.800	0.28	0.42	9
SRR1005-681K	680	± 10	37	0.796M	2.6	2.300	0.26	0.38	9
SRR1005-821K	820	± 10	37	0.796M	2.5	2.600	0.24	0.36	8
SRR1005-102K	1000	± 10	65	0.252M	2.0	3.200	0.22	0.32	7
SRR1005-122K	1200	± 10	58	0.252M	2.0	3.600	0.20	0.29	6
SRR1005-152K	1500	± 10	53	0.252M	1.6	5.200	0.17	0.24	6
SRR1005-182K	1800	± 10	65	0.252M	1.4	5.700	0.16	0.23	5
SRR1005-222K	2200	± 10	55	0.252M	1.4	6.500	0.14	0.21	5
SRR1005-272K	2700	± 10	55	0.252M	1.2	8.600	0.12	0.18	4
SRR1005-332K	3300	± 10	50	0.252M	1.2	10.00	0.10	0.17	4

\*\*K-Factor: To calculate core flux density,  $B_p-p$  (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.



**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).

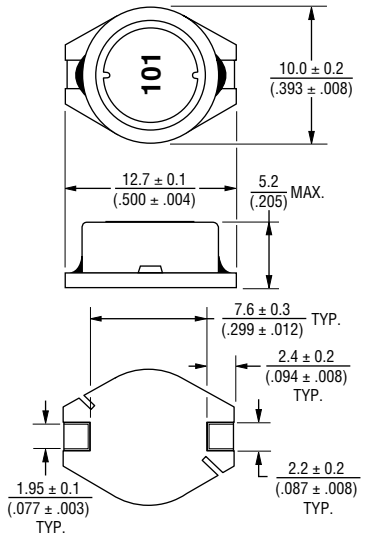
### General Specifications

Test Voltage ..... 1 V  
 Reflow Soldering .. 250 °C, 10 sec. max.  
 (In compliance with JEDEC, J-STD-020C, Table 4-2)  
 Operating Temperature ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature ..... -40 °C to +125 °C  
 Resistance to Soldering Heat ..... 250 °C, 10 sec. max.  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM) ..... N/A

### Materials

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

### Product Dimensions



### Recommended Layout



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

# SRR1005 Series - Shielded Power Inductors



## Core Loss vs. Flux Density



## Schematic



## Soldering Profile

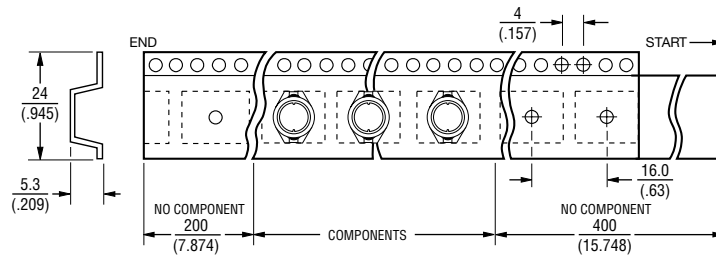
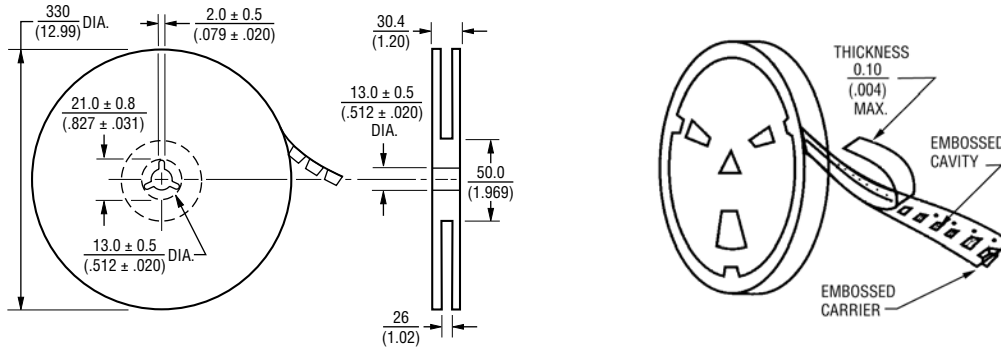
Peak Temperature: 245 °C max.  
 Max. Peak Temperature -5 °C: 30 sec. max.  
 Max. Time Above 217 °C: 60-150 sec. max.



# SRR1005 Series - Shielded Power Inductors

# BOURNS®

## Packaging Specifications



USER DIRECTION OF FEED  
QTY: 600 PCS. PER REEL

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

REV. 05/19

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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