BOURNS®

Features

- Available in E12 series
- Height of 2.9 mm
- Current rating up to 2.1 A
- RoHS compliant*

Applications

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

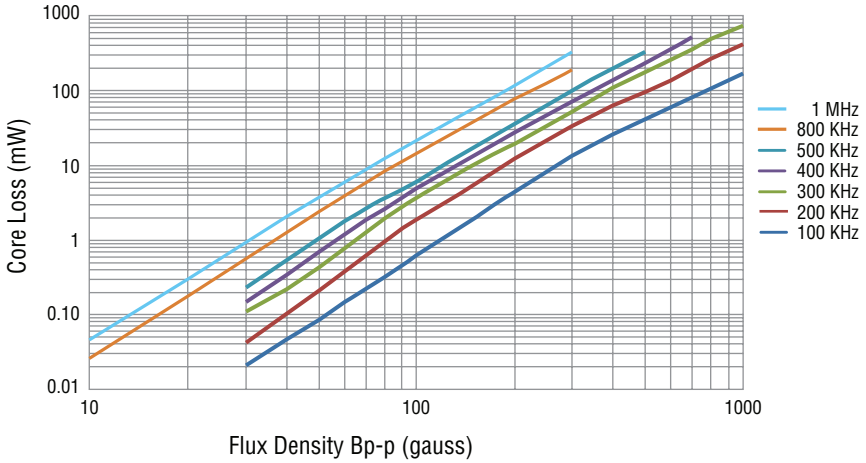
SRR0905 Series - Shielded SMD Power Inductors

Electrical Specifications

Bourns Part No.	Inductance µH	Inductance Tol. %	Q Ref.	Test Frequency (MHz)	SRF Typ. (MHz)	DCR Max. (Ω)	Idc (A)	**K-Factor
SRR0905-100M	10	± 20	39	2.52	29	0.06	2.1	77
SRR0905-120M	12	± 20	40	2.52	26	0.07	1.9	65
SRR0905-150M	15	± 20	35	2.52	24	0.07	1.7	57
SRR0905-180M	18	± 20	39	2.52	21	0.08	1.6	53
SRR0905-220M	22	± 20	35	2.52	18	0.08	1.4	48
SRR0905-270M	27	± 20	35	2.52	17	0.10	1.3	43
SRR0905-330Y	33	± 15	27	2.52	14	0.11	1.2	41
SRR0905-390Y	39	± 15	31	2.52	14	0.12	1.1	36
SRR0905-470Y	47	± 15	27	2.52	11	0.14	1.0	32
SRR0905-560Y	56	± 15	26	2.52	11	0.19	0.93	30
SRR0905-680Y	68	± 15	26	2.52	10	0.21	0.85	27
SRR0905-820Y	82	± 15	26	2.52	9	0.28	0.79	26
SRR0905-101K	100	± 10	29	1 V / 1K	8	0.34	0.72	22
SRR0905-121K	120	± 10	31	1 V / 1K	7	0.37	0.63	21
SRR0905-151K	150	± 10	24	1 V / 1K	6	0.51	0.55	18
SRR0905-181K	180	± 10	24	1 V / 1K	5	0.57	0.50	16
SRR0905-221K	220	± 10	27	1 V / 1K	5	0.78	0.47	15
SRR0905-271K	270	± 10	30	1 V / 1K	5	0.87	0.41	13
SRR0905-331K	330	± 10	29	1 V / 1K	4	1.20	0.37	13
SRR0905-391K	390	± 10	26	1 V / 1K	3	1.34	0.35	11
SRR0905-471K	470	± 10	26	1 V / 1K	3	1.50	0.33	10

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

Core Loss vs. Flux Density



CALIFORNIA WARNING: Can expose you to lead, a carcinogen and reproductive toxicant. See www.P65Warnings.ca.gov

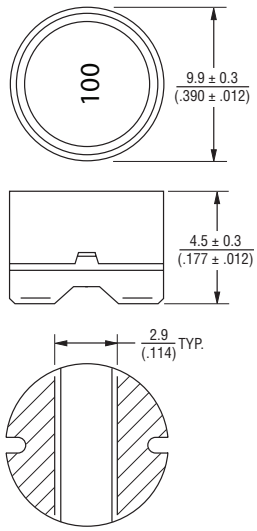
General Specifications

Inductance Test Frequency/Voltage
SRR0905-100M to -820Y.. 2.52 MHz/1 V
SRR0905-101K to 471K ..... 1 kHz/1 V
Operating Temperature
.....-40 °C to +125 °C
(Temperature rise included)
Storage Temperature .. -40 °C to +125 °C
Moisture Sensitivity Level.....1
ESD Classification (HBM)..... N/A

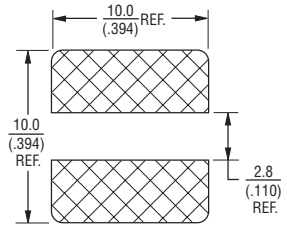
Materials

Core Material..... Ferrite DR & RI
Wire .....Enameled copper
Terminal .....SnAgCu
Rated Current
.....Ind. drop of 10 % typ.t
Temperature Rise
..... 15 °C typ.
Packaging..... 800 pcs. per reel

Product Dimensions



Recommended Layout



DIMENSIONS: MM / (INCHES)

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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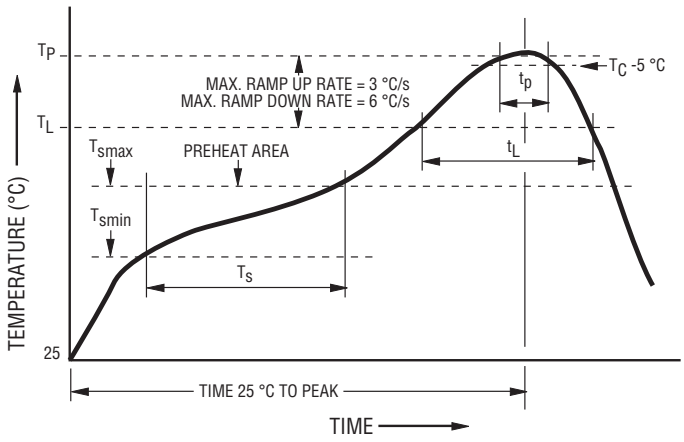
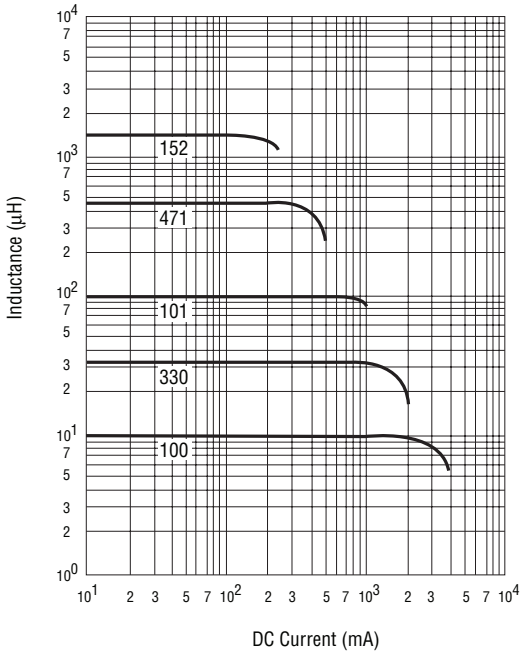
Soldering Profile



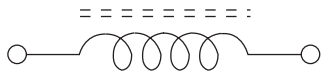
Profile Feature	Pb-Free Assembly
Preheat / Soak: Temperature Min. (T_{smin}) Temperature Max. (T_{smax}) Time (t_s) from (T_{smin} to T_{smax})	 150 °C 200 °C 60~120 seconds
Ramp Up Rate (T_L to T_p)	3 °C / second max.
Liquidous Temperature (T_L) Time (t_L) maintained above T_L	217 °C 60~150 seconds
Classification Temperature (T_c)	245 °C
Time (t_p) within 5 °C of the specified classification temperature (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.

NOTE: The product has been tested under this reflow condition. Deviations from this, especially higher temperatures or longer durations, could impact performance.

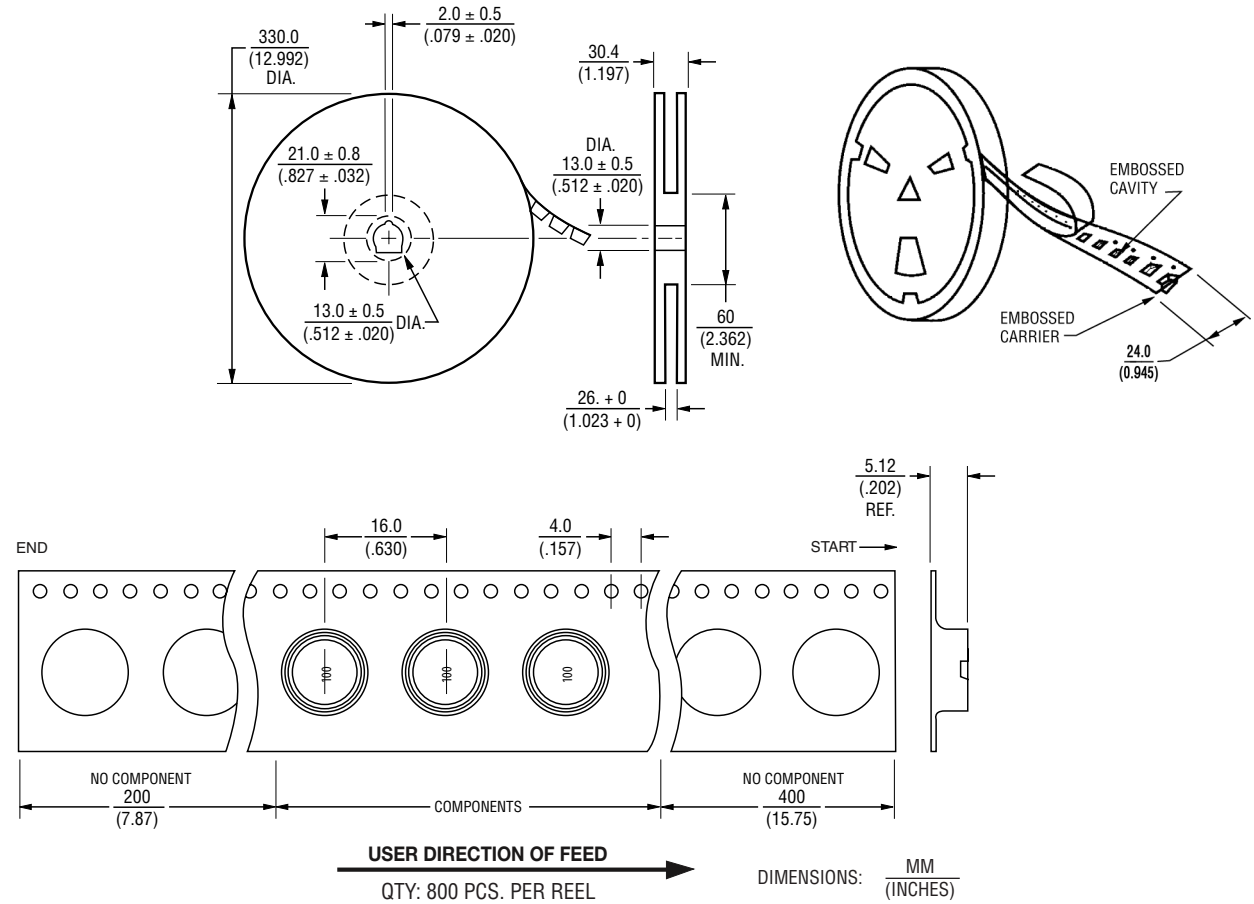
Inductance vs. Current



Schematic



Packaging Specifications



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