



THE DATASHEET OF SRU6025-6R8Y





Features

- Available in E6 series
- Unit height of 2.8 mm
- Current up to 3.5 A
- RoHS compliant*

Applications

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

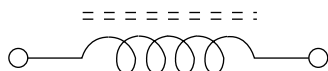
SRU6025 Series - Shielded SMD Power Inductors

Electrical Specifications

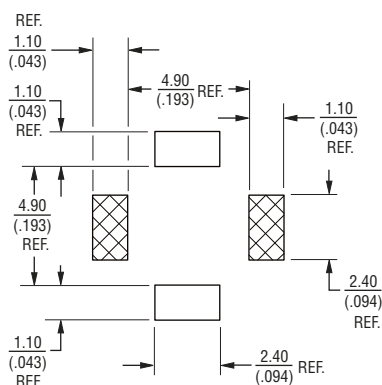
Bourns Part Number	Inductance @ 100 KHz		Q Ref.	Test Freq. (MHz)	SRF Typ. (MHz)	RDC Max. (mΩ)	I rms Max. (A)	I sat Typ. (A)	**K- Factor
	L (μH)	Tol. (%)							
SRU6025-1R2Y	1.2	±30	8	7.96	120	19	4.00	3.20	535
SRU6025-2R2Y	2.2	±30	8	7.96	65	24	3.40	2.35	370
SRU6025-3R3Y	3.3	±30	8	7.96	50	27	3.20	2.00	321
SRU6025-4R7Y	4.7	±30	8	7.96	42	35	2.70	1.55	253
SRU6025-6R8Y	6.8	±30	8	7.96	36	42	2.40	1.30	229
SRU6025-8R2Y	8.2	±30	8	7.96	30	52	2.20	1.25	193
SRU6025-100Y	10	±30	8	7.96	25	57	2.00	1.05	178
SRU6025-150Y	15	±30	12	2.52	22	86	1.80	0.92	146
SRU6025-220Y	22	±30	12	2.52	18	130	1.60	0.70	123
SRU6025-330Y	33	±30	12	2.52	12	180	1.20	0.64	98
SRU6025-470Y	47	±30	12	2.52	10	250	1.00	0.48	84
SRU6025-680Y	68	±30	10	2.52	8	365	0.80	0.40	68
SRU6025-101Y	100	±30	24	2.52	7	500	0.70	0.35	55
SRU6025-151Y	150	±30	30	2.52	5	770	0.54	0.28	47
SRU6025-221Y	220	±30	20	2.52	4	1250	0.42	0.24	39

**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 on page 2.

Electrical Schematic



Recommended Layout



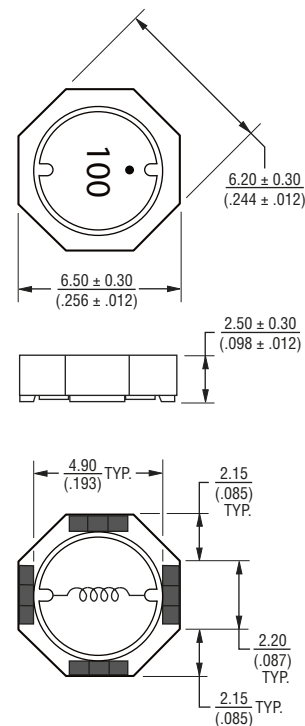
General Specifications

Test Voltage 0.1 V
 Reflow Soldering .. 230 °C, 50 sec. max.
 Operating Temp. -40 °C to +125 °C
 (Temperature rise included)
 Storage Temp. -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 DR and RI core
 Wire Enameled copper
 Terminal Ag/Ni/Sn
 Rated Current.. Ind. drop 35 % typ. at Isat
 Temp. Rise..... 30 °C max. at rated I rms
 Packaging..... 600 pcs. per reel

Product Dimensions



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



WARNING Cancer and Reproductive Harm
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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Figure 1 is a log-log plot showing Core Loss (mW) on the Y-axis versus Flux Density Bp-p (gauss) on the X-axis. The X-axis ranges from 100 to 10,000 gauss, and the Y-axis ranges from 0.01 to 1,000 mW. Six curves are plotted, corresponding to different frequencies: 1 MHz (orange), 500 KHz (light blue), 300 KHz (dark blue), 200 KHz (green), 100 KHz (red), and 50 KHz (dark blue). The curves show that core loss increases with both flux density and frequency. The 1 MHz curve is the highest, while the 50 KHz curve is the lowest.

Flux Density Bp-p (gauss)	1 MHz (mW)	500 KHz (mW)	300 KHz (mW)	200 KHz (mW)	100 KHz (mW)	50 KHz (mW)
100	5	1.5	0.8	0.4	0.2	0.08
1,000	150	150	100	60	30	12
10,000	1,500	1,500	1,000	600	300	120

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