



# SD38 Series Low Profile, Shielded Inductors

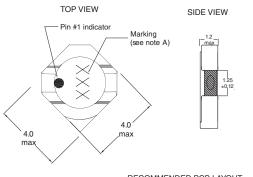
Part Number	Rated Inductance (µH)	OCL (1) +/-15% (µH)	Part Marking Designator	Irms (2) Amperes	Isat (3) Amperes	DCR (4) (Ω) Typ.	Volt (5) u-sec Typ.
SD3814-820-R	82.0	81.101	Р	0.270	0.296	2.174	32
SD3814-101-R	100.0	98.794	Q	0.228	0.268	3.048	36
SD3814-151-R	150.0	149.026	R	0.191	0.219	4.359	44
SD3814-221-R	220.0	217.342	S	0.170	0.181	5.480	53
SD3814-331-R	330.0	326.812	Т	0.136	0.148	8.59	65
SD3814-471-R	470.0	470.031	U	0.111	0.123	12.85	78
SD3814-681-R	680.0	680.320	V	0.100	0.102	15.78	94

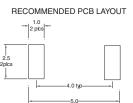
- (1) Test Parameters: 100KHz, 0.100Vrms, 0.0Adc. (2) RMS current for an approximate  $\Delta T$  of 40°C without core loss. It is recommended that the temperature of the part not exceed 125°C. De-rating is necessary for AC currents.
- (3) Peak current for approximately 30% rolloff at 20°C.

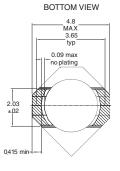
- (4) DCR limits @ 20°C.
- (5) Applied Volt-Time product (V-uS) across the inductor at 100kHz necessary to generate a core loss equal to 10% of the total losses for 40°C temperature rise. De-rating of the Irms is required to prevent excessive temperature rise.

## **Mechanical Diagrams**

SD3812 Series









Note A: 3 digit marking. First digit indicates inductance value per chart above. Second digit indicates bi-weekly date code.
Third digit of year produced. Box indicates SD3814 part.

SD3814 Series TOP VIEW SIDE VIEW BOTTOM VIEW 4.8 MA X Pin #1 indicator Marking (see note A) typ 0.09 max no plating 2.03 ±.02 40 4.0 0.415 min-RECOMMENDED PCB LAYOUT **SCHEMATIC** 2 plcs

Note A: 3 digit marking. First digit indicates inductance value per chart above. Second digit indicates bi-weekly date code.
Third digit of year produced. Box indicates SD3814 part.



COILTRONICS



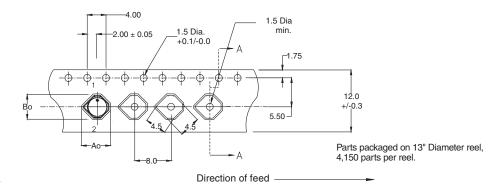


## **Packaging Information**

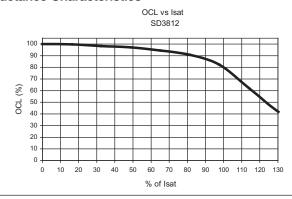
SD3812/SD3814 Series

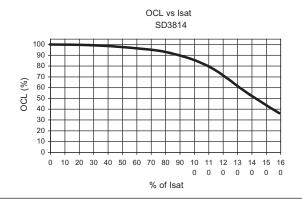
Ao=5.1mm Bo=4.6mm Ko=1.6mm



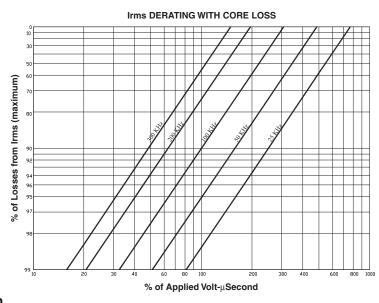


## **Inductance Characteristics**





#### **Core Loss**





PM-4318 3/07

#### Visit us on the Web at www.cooperbussmann.com

© Cooper Electronic Technologies 2007 1225 Broken Sound Pkwy. Suite F Boca Raton, FL 33487 Tel: +1-561-998-4100 Toll Free: +1-888-414-2645 Fax: +1-561-241-6640

This bulletin is intended to present product design solutions and technical information that will help the end user with design applications. Cooper Electronic Technologies reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Cooper Electronic Technologies also reserves the right to change or update, without notice, any technical information contained in this bulletin. Once a product has been selected, it should be tested by the user in all possible applications.

Life Support Policy: Cooper Electronic Technologies does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.