

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China











## SD8328 Series Low Profile Power Inductors

### **Description**

- 125°C maximum temperature operation
- · Low profile surface mount inductor
- 8.3mm x 9.5mm x 3.0mm shielded drum core
- Ferrite core material
- Inductance range from 2.7μH to 100μH
- Current range from 6.6 Amps to 0.8 Amps
- Frequency range up to 1MHz

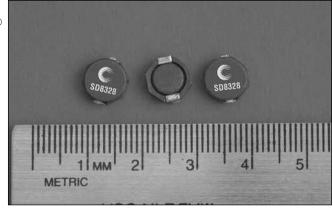
### **Applications**

- Buck or Boost inductor
- Noise filtering output filter chokes
- Notebook power/display
- LCD Monitors/Displays/Televisions
- Battery chargers, LCD bias supplies
- Battery and Industrial power systems
- Computer, DVD players
- Portable power devices, DC-DC converters

#### **Environmental Data**

- Storage temperature range: -40°C to +125°C
- Operating temperature range: -40°C to +125°C (range is application specific)
- Solder reflow temperature: +260°C max. for 10 seconds maximum





## **Packaging**

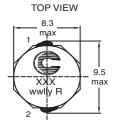
• Supplied in tape and reel packaging, 1280 per reel

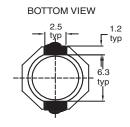
Part Number	Rated Inductance (µH)	OCL (1) μH±30%	Irms(2) Amperes	Isat (3) Amperes	DCR (Ω) mΩ @20°C (Typical)	DCR (Ω) mΩ @20°C (Maximum)	K-factor (4)
SD8328-2R5-R	2.5	2.7	6.6	4.5	12	15.6	43
SD8328-3R3-R	3.3	3.4	6.1	4.0	14	18.0	33
SD8328-4R7-R	4.7	5.0	4.5	3.6	19	24.7	23
SD8328-7R3-R	7.3	7.6	3.4	2.9	30	39	15
SD8328-100-R	10	9.1	3.3	2.6	36	45	11
SD8328-150-R	15	14.5	2.35	2.0	53	69	7.2
SD8328-220-R	22	21.1	1.85	1.7	76	99	4.9
SD8328-330-R	33	31.9	1.45	1.4	120	156	3.3
SD8328-470-R	47	44.9	1.30	1.2	150	194	2.3
SD8328-680-R	68	64.2	0.98	1.0	220	286	1.6
SD8328-101-R	100	97.0	0.80	0.8	330	430	1.1

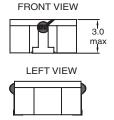
- (1) Open Circuit Inductance Test Parameters: 100kHz, 0.1V, 0.0Adc.
- (2) Irms: DC current for an approximate ΔT of 40°C without core loss. Derating is necessary for AC currents. PCB layout, trace thickness and width, air-flow, and proximity of other heat generating components will affect the temperature rise. It is recommended that the temperature of the part not exceed 125°C under worst case operating conditions verified in the end application.
- (3) Isat Amperes peak for approximately 35% rolloff (@25°C)

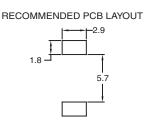
- (4) K-factor: Used to determine B p-p for core loss (see graph). B p-p = K\*L\* $\Delta$ I, B p-p(mT), K: (K factor from table), L: (Inductance in  $\mu$ H),  $\Delta$ I (Peak to peak ripple current in Amps).
- (5) Part Number Definition: SD8328-xxx-R SD8328 = Product code and size; -xxx = Inductance value in uH; R = decimal point; If no R is present, third character = # of zeros. -R suffix = RoHS compliant

#### **Mechanical Diagrams**











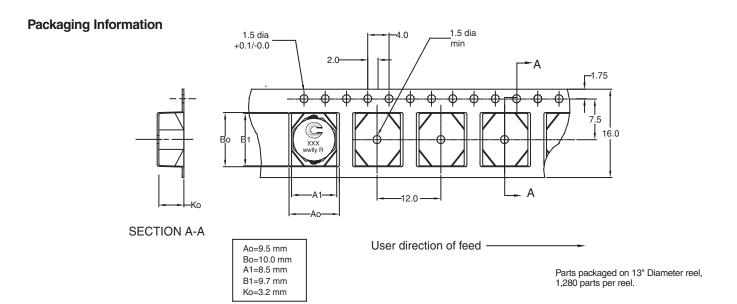
**SCHEMATIC** 

Dimensions are in millimeters.

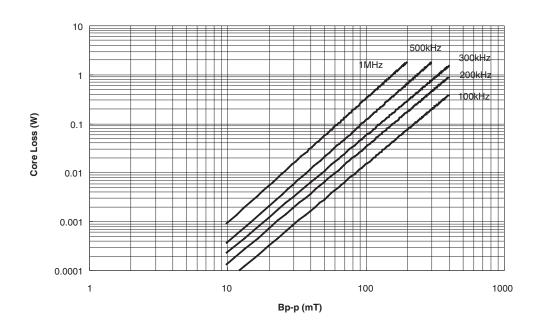
COILTRONICS







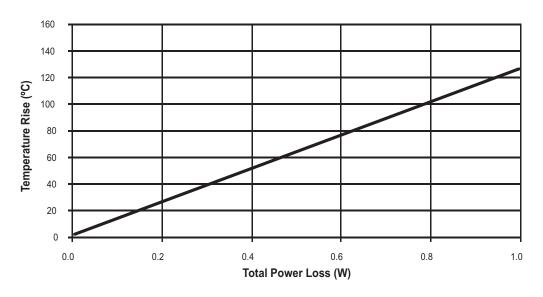
## **Core Loss**





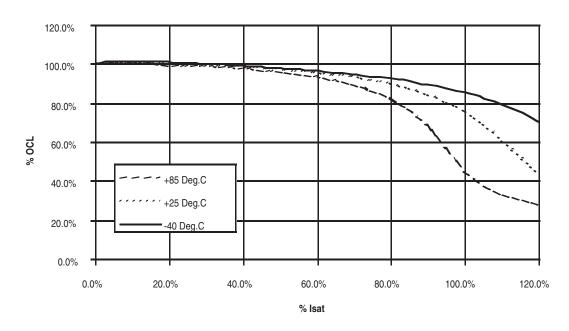


## Temperature Rise vs. Loss



#### **Inductance Characteristics**

#### OCL Vs. Isat





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© 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

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