

COILTRONICS



# **COOPER** Bussmann

#### Description

- 125°C maximum total temperature operation
- Octagonal shape shielded drum core
- · 2mm max height
- Inductance range from 1.2uH to 100uH
- Current range from 3.14 to 0.35 Amps
- Ferrite shielded, low EMI
- Ferrite core material

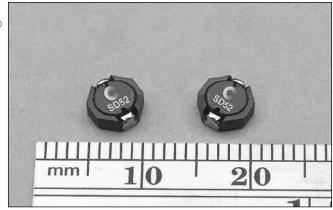
#### **Applications**

- Digital cameras, CD players, cellular phones, and PDAs
- PCMCIA cards
- GPS systems

### **Environmental Data**

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





#### **Packaging**

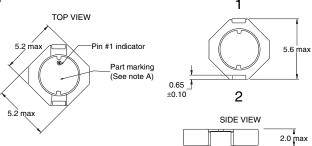
Supplied in tape and reel packaging, 3500 per reel

Part Number	Rated Inductance (µH)	OCL (1) +/-20% (μΗ)	Part Marking	Irms (2) Amperes	Isat (3) Amperes	DCR (4) (Ω) Typ.	Volt u-sec
SD52-1R2-R	1.20	1.20	Α	2.33	3.14	0.0279	<b>Typ.</b> 1.49
SD52-2R2-R	2.20	2.20	В	1.98	2.30	0.0385	2.03
SD52-3R5-R	3.50	3.50	С	1.73	1.82	0.0503	2.57
SD52-4R7-R	4.70	4.70	D	1.63	1.64	0.0568	2.84
SD52-6R8-R	6.80	6.80	E	1.39	1.28	0.0777	3.65
SD52-100-R	10.0	10.0	F	1.11	1.11	0.1215	4.19
SD52-150-R	15.0	15.0	G	0.97	0.88	0.1618	5.27
SD52-220-R	22.0	22.0	Н	0.86	0.73	0.2042	6.35
SD52-270-R	27.0	27.0	J	0.73	0.65	0.2864	7.16
SD52-330-R	33.0	33.0	K	0.70	0.61	0.3074	7.70
SD52-470-R	47.0	47.0	L	0.58	0.50	0.4465	9.32
SD52-680-R	68.0	68.0	М	0.47	0.42	0.6829	11.21
SD52-101-R	100	100	N	0.39	0.35	1.0000	13.37
SD52-151-R	150	150	0	0.31	0.28	1.6100	17.00

**BOTTOM VIEW** 

#### **Mechanical Diagrams**

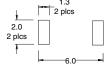




A) Part Marking: Line 1: (1st digit indicates the inductance value per part marking designator in chart above)

(2nd digit is a bi-weekly production date code) (3rd digit is the last digit of the year produced) Line 2: 52 (indicates the product size code)

# RECOMMENDED PCB LAYOUT





**SCHEMATIC** 

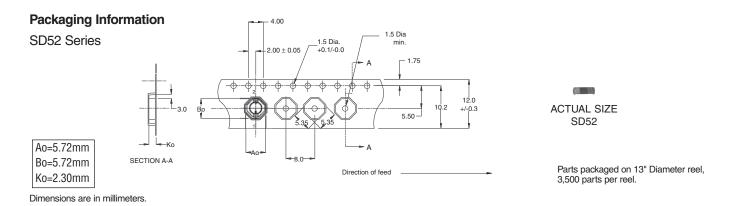
Open Circuit Inductance Test Parameters: 100KHz, 0.25Vrms, 0.0Adc.
RMS current for an approximate ΔT of 40°C without core loss. It is recommended that the temperature of the part not exceed 125°C.

<sup>(3)</sup> Peak current for approximate 30% roll off at 20°C

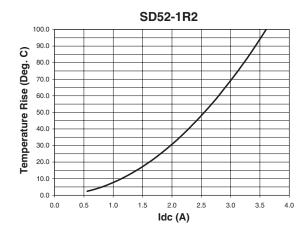
<sup>(4)</sup> DCR limits @ 20°C.

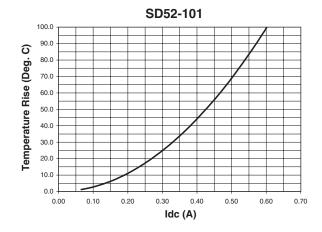
<sup>5)</sup> Applied Volt-Time product (V-uS) across the inductor at 100kHz necessary to generate a core loss equal to 10% of the total losses for 40°C temperature rise.

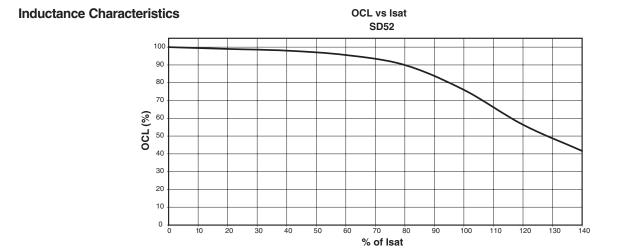




## DC Current vs. Temperature



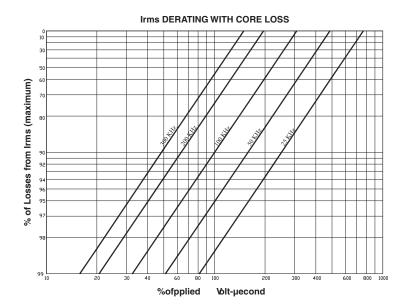




COILTRONICS®



**Core Loss** 





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Visit us on the Web at www.cooperbussmann.com

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