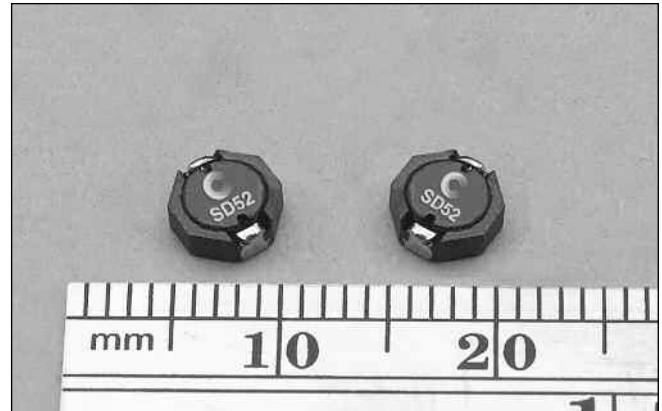


### Description

- 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% (μH)	Part Marking	I <sub>rms</sub> (2) Amperes	I <sub>sat</sub> (3) Amperes	DCR (4) (Ω) Typ.	Volt u-sec Typ.
SD52-1R2-R	1.20	1.20	A	2.33	3.14	0.0279	1.49
SD52-2R2-R	2.20	2.20	B	1.98	2.30	0.0385	2.03
SD52-3R5-R	3.50	3.50	C	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	H	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	M	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	O	0.31	0.28	1.6100	17.00

(1) Open Circuit Inductance Test Parameters: 100KHz, 0.25Vrms, 0.0Adc.

(2) 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.

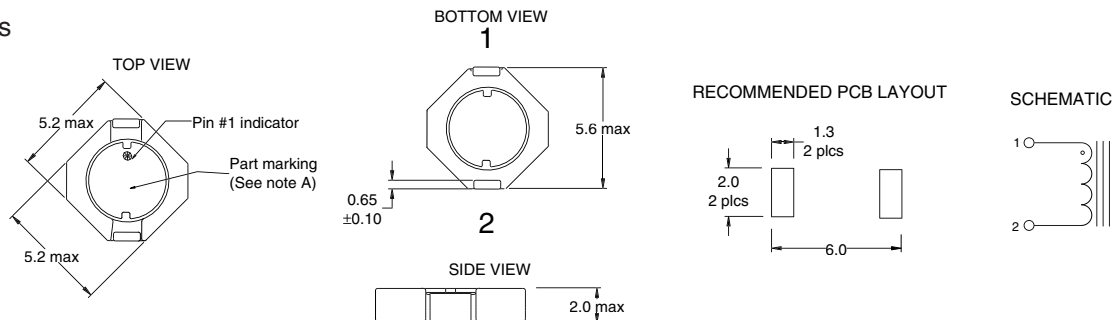
(3) Peak current for approximate 30% roll off at 20°C.

(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.

### Mechanical Diagrams

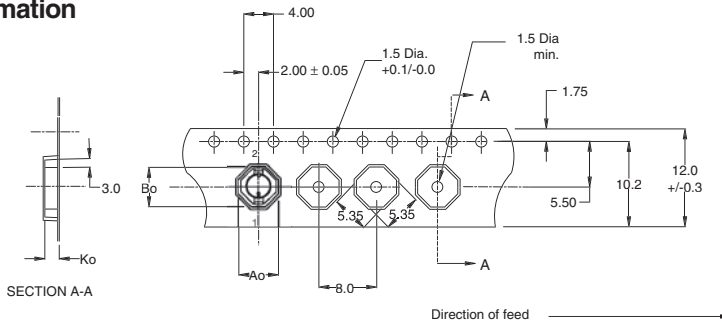
#### SD52 Series



- 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)

**Packaging Information**

SD52 Series



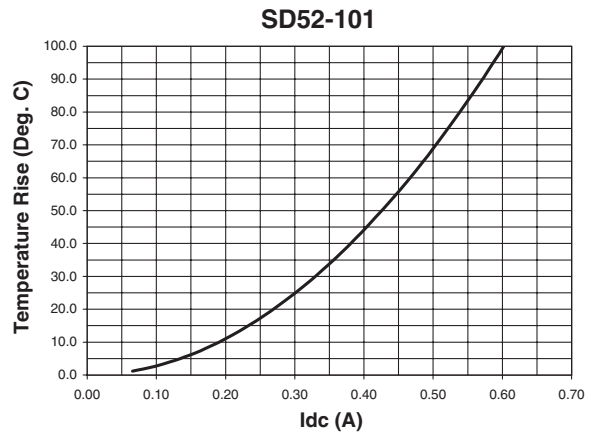
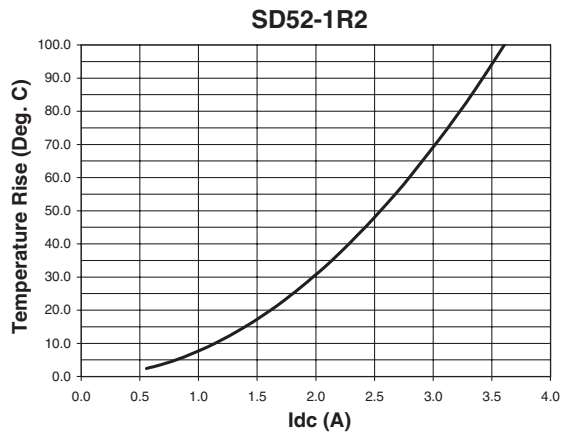
ACTUAL SIZE  
SD52

Parts packaged on 13" Diameter reel,  
3,500 parts per reel.

Ao=5.72mm  
Bo=5.72mm  
Ko=2.30mm

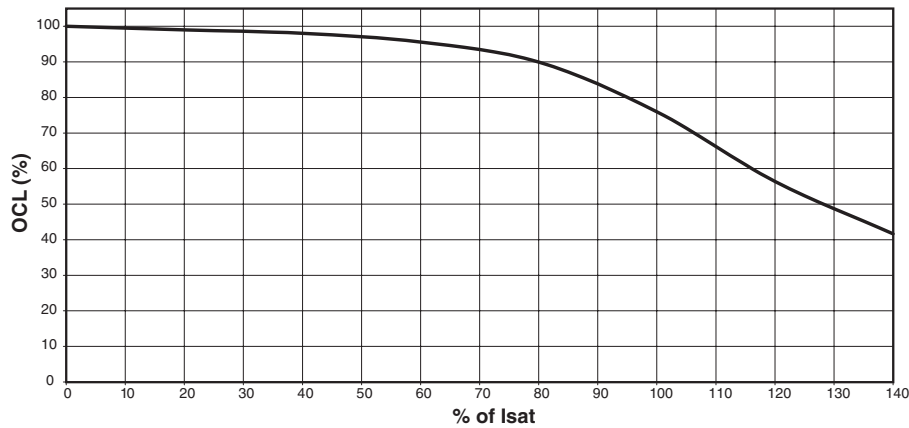
Dimensions are in millimeters.

**DC Current vs. Temperature**



**Inductance Characteristics**

OCL vs Isat  
SD52



**Core Loss**

