COOPER COILTRONICS®

COOPER Bussmann

SD3118 Series
Low Profile Power Inductors

Description

RoHS 2002/95/EC

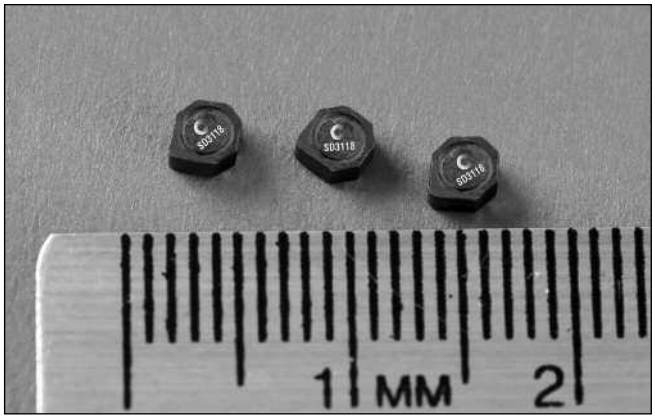
- 125°C maximum total temperature operation
- 3.1mm x 3.1mm x 1.8mm shielded drum core
- Ferrite core material
- Inductance range from 1.0uH to 1000uH
- Current range from 2.94 Amps to 0.083 Amps
- Frequency range up to 4MHz

Applications

- Cellular phones, Digital cameras, CD players, PDA's
- Small LCD displays
- LED driver and LED flash circuits
- Hard disk drives
- Backlighting
- EL panel

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, 4100 per reel

Part Number	Rated Inductance (µH)	OCL (1) (µH)	Part Marking Designator	Irms (2) Amperes	Isat (3) Amperes	DCR (Ω) typ. @ 20°C	K-factor (4)
SD3118-1R0-R	1.0	1.04+/-30%	A	2.01	3.07	0.041	84
SD3118-1R5-R	1.5	1.44+/-30%	B	1.81	2.42	0.051	68
SD3118-2R2-R	2.2	2.12+/-30%	C	1.50	2.00	0.074	57
SD3118-3R3-R	3.3	3.36+/-30%	D	1.22	1.59	0.113	56
SD3118-4R7-R	4.7	4.90+/-30%	E	1.02	1.31	0.162	39
SD3118-6R8-R	6.8	6.72+/-30%	F	0.85	1.12	0.232	32
SD3118-8R2-R	8.2	8.10+/-30%	G	0.81	1.02	0.257	29
SD3118-100-R	10.0	10.4+/-30%	H	0.75	0.90	0.295	26
SD3118-150-R	15.0	14.9+/-20%	I	0.62	0.75	0.440	21
SD3118-220-R	22.0	22.5+/-20%	J	0.50	0.61	0.676	18
SD3118-330-R	33.0	33.1+/-20%	K	0.41	0.51	0.986	14
SD3118-470-R	47.0	47.5+/-20%	L	0.370	0.42	1.21	12
SD3118-221-R	220.0	221.9+/-20%	M	0.182	0.177	4.77	6
SD3118-331-R	330.0	329.9+/-20%	N	0.146	0.145	7.40	5
SD3118-471-R	470.0	470.1+/-20%	O	0.131	0.122	9.20	4
SD3118-681-R	680.0	680.3+/-20%	P	0.107	0.101	13.70	3
SD3118-102-R	1000.0	999.4+/-20%	Q	0.087	0.083	20.90	3

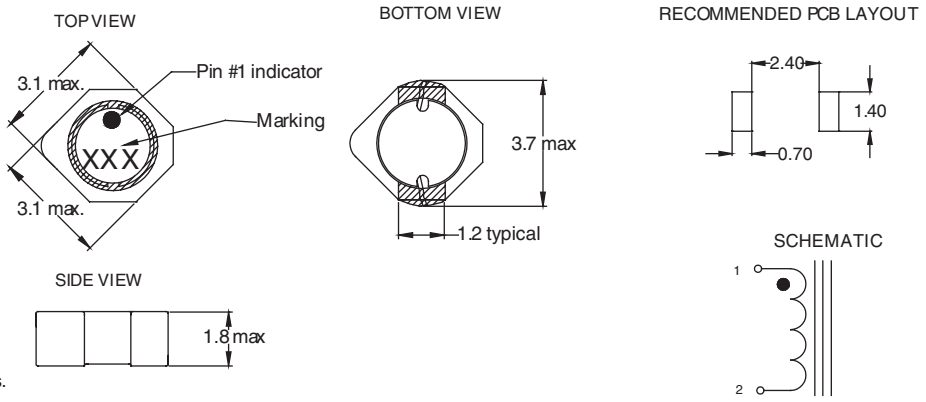
(1) Open Circuit Inductance Test Parameters: 100kHz, 0.1V, 0.0Adc.

(2) Irms: DC current for an approximate DT 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 30% rolloff (@20°C)

(4) K-factor: Used to determine B p-p for core loss (see graph).
B p-p = K*L*ΔI, B p-p(mT), K: (K factor from table), L: (Inductance in uH), ΔI (Peak to peak ripple current in Amps).

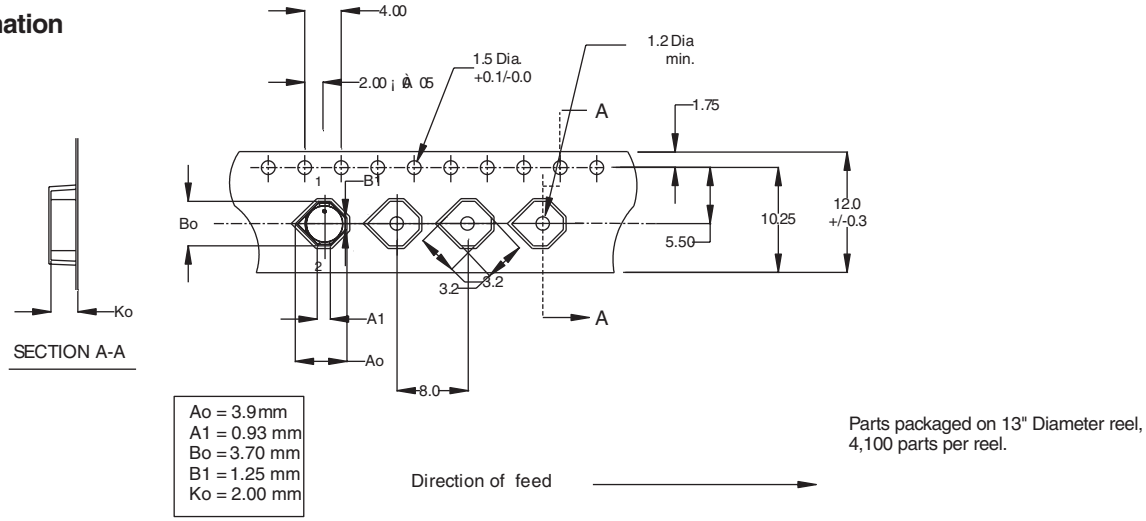
Mechanical Diagrams



Dimensions are in millimeters.

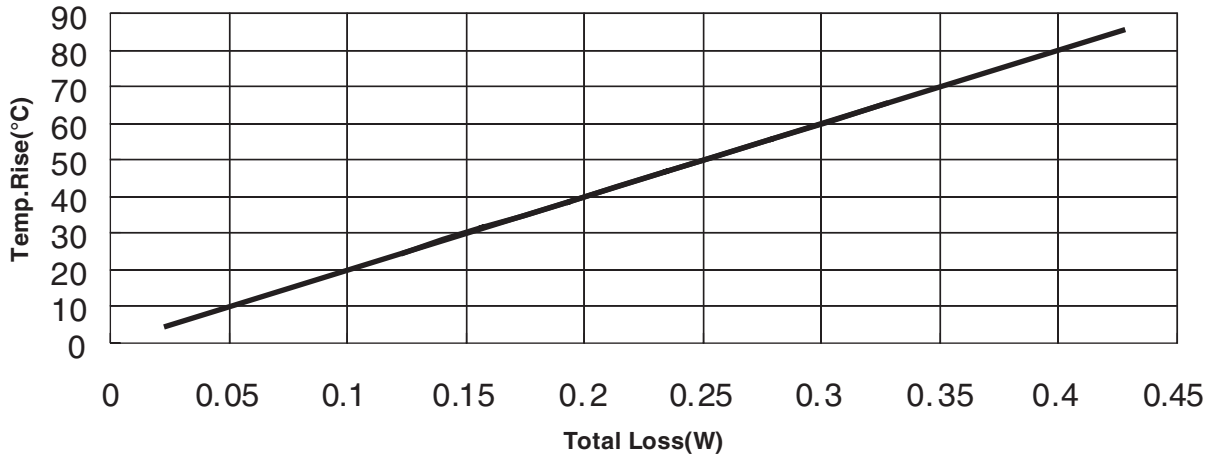
Part Marking:
3 Digit Marking: (1st digit: Indicates inductance value per letter in Part Marking Designator); (2nd digit: Bi-weekly production date code); (3rd digit: Last digit of the year produced).

Packaging Information

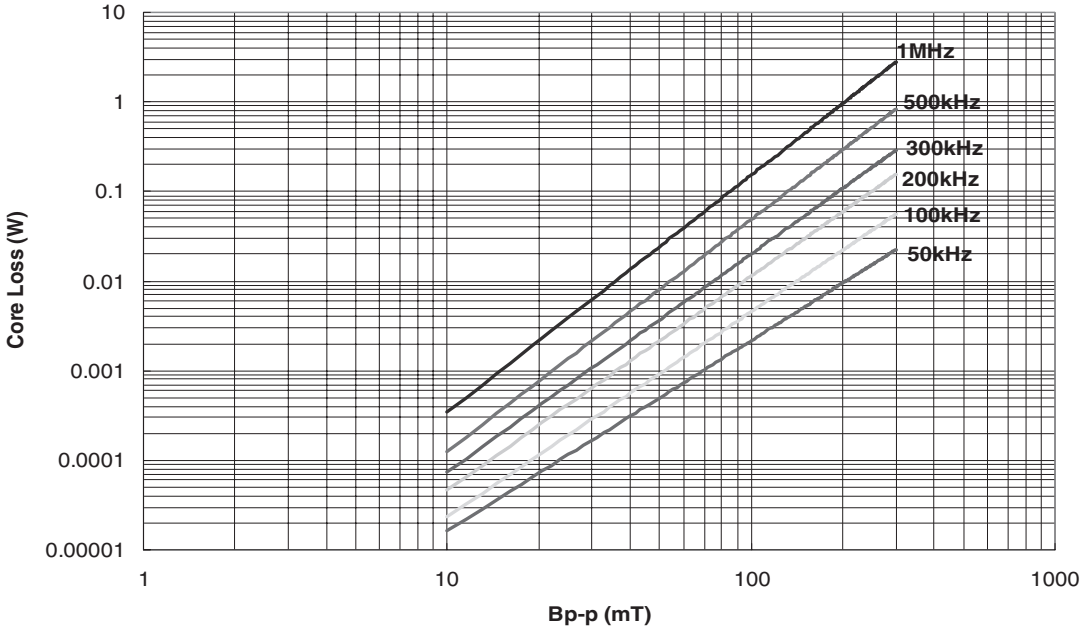


Parts packaged on 13" Diameter reel,
4,100 parts per reel.

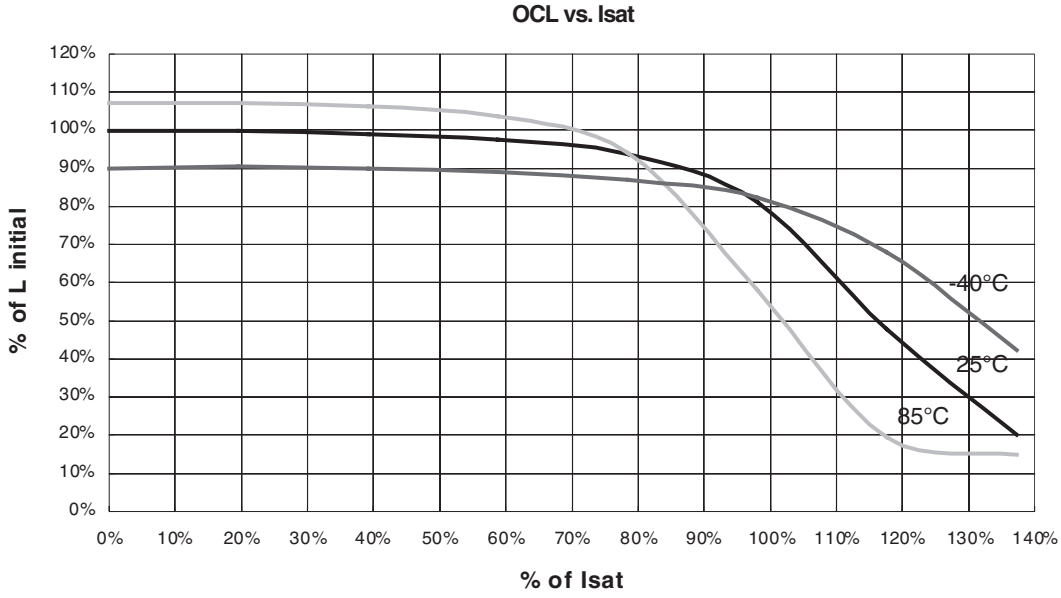
DC Current vs. Temperature



Core Loss



Inductance Characteristics



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