COOPER COILTRONICS®

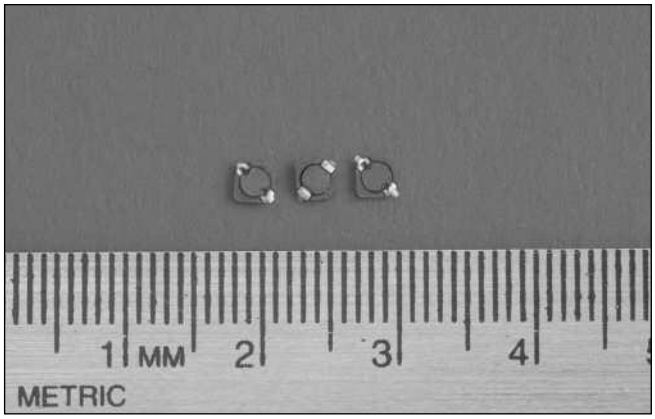
COOPER Bussmann

SD3110 Series
Low Profile Power Inductors

Description

RoHS 2002/95/EC

- 125°C maximum total temperature operation
- 3.1mm x 3.1mm x 1.0mm shielded drum core
- Ferrite core material
- Inductance range from 0.5uH to 220uH
- Current range from 2.27 Amps to 0.106 Amps
- Frequency range up to 1MHz



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)
SD3110-R50-R	0.50	0.44+/-30%	A	1.54	2.27	0.0420	216
SD3110-R82-R	0.82	0.82+/-30%	B	1.30	1.67	0.0589	191
SD3110-1R0-R	1.0	1.05+/-30%	C	1.21	1.47	0.0683	169
SD3110-1R5-R	1.5	1.60+/-30%	D	0.99	1.19	0.103	137
SD3110-2R2-R	2.2	2.27+/-30%	E	0.82	1.00	0.149	115
SD3110-3R3-R	3.3	3.48+/-30%	F	0.72	0.81	0.195	93
SD3110-4R7-R	4.7	4.96+/-30%	G	0.59	0.68	0.285	78
SD3110-6R8-R	6.8	6.70+/-30%	H	0.54	0.58	0.346	67
SD3110-8R2-R	8.2	8.01+/-30%	I	0.48	0.53	0.432	61
SD3110-100-R	10.0	10.18+/-30%	J	0.44	0.47	0.505	54
SD3110-150-R	15.0	15.32+/-20%	K	0.36	0.38	0.764	44
SD3110-220-R	22.0	21.49+/-20%	L	0.30	0.32	1.13	37
SD3110-330-R	33.0	32.72+/-20%	M	0.26	0.26	1.50	30
SD3110-470-R	47.0	46.29+/-20%	N	0.22	0.22	2.06	25
SD3110-680-R	68.0	68.04+/-20%	O	0.179	0.182	3.13	21
SD3110-820-R	82.0	82.65+/-20%	P	0.167	0.166	3.57	19
SD3110-101-R	100	101+/-20%	Q	0.146	0.150	4.72	17
SD3110-151-R	150	149+/-20%	R	0.127	0.123	6.16	14
SD3110-221-R	220	219+/-20%	S	0.106	0.120	9.46	12

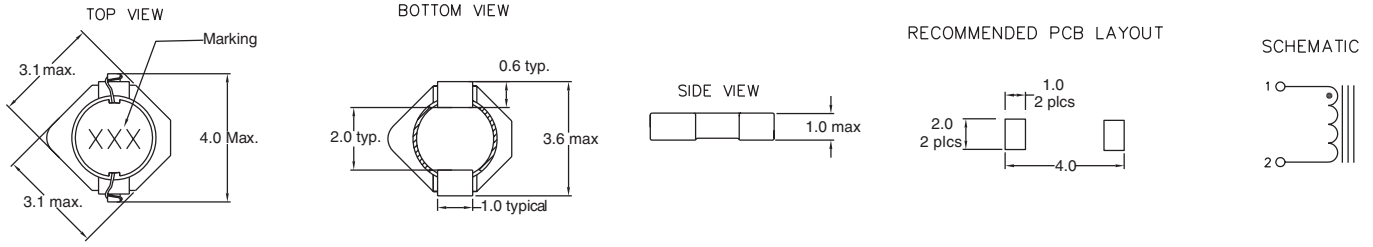
(1) Open Circuit Inductance Test Parameters: 100kHz, 0.1V, 0.0Adc.

(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).

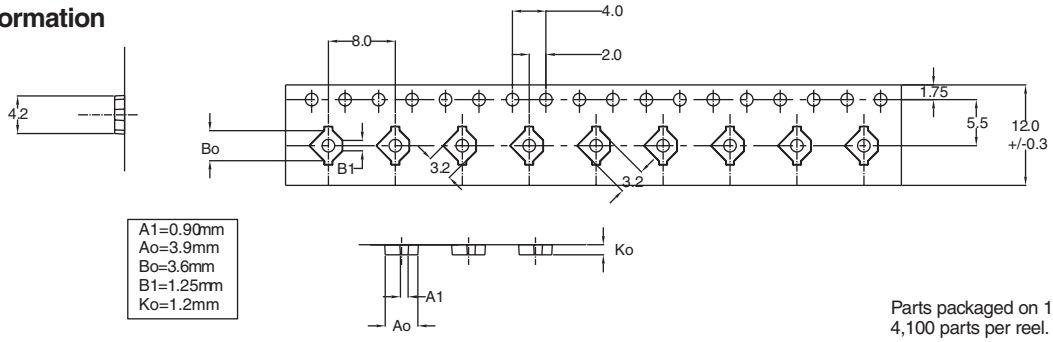
Mechanical Diagrams



Dimensions are in millimeters.

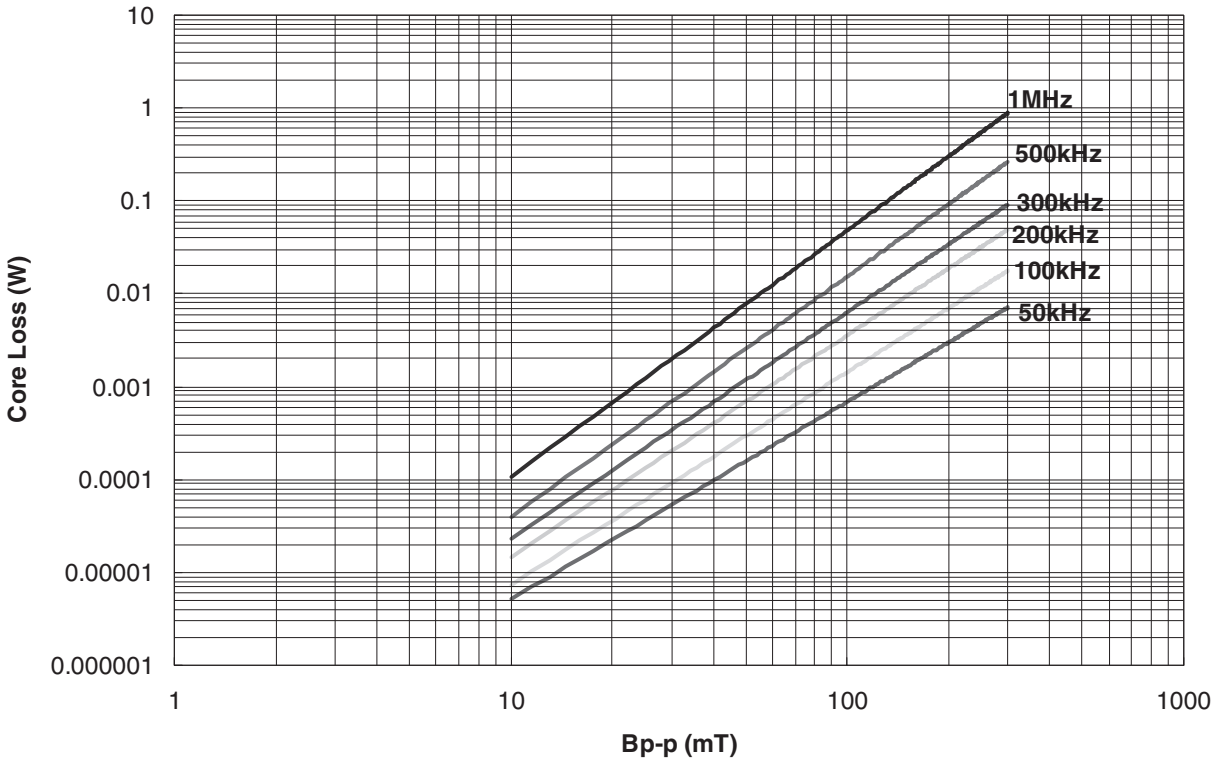
Part Marking:
3 Digit Marking: (1st digit: Indicates inductance value per letter in Part Marking Designator); (2nd digit: Bi-weekly production date code); (3rd digit: Last digit of the year produced).

Packaging Information

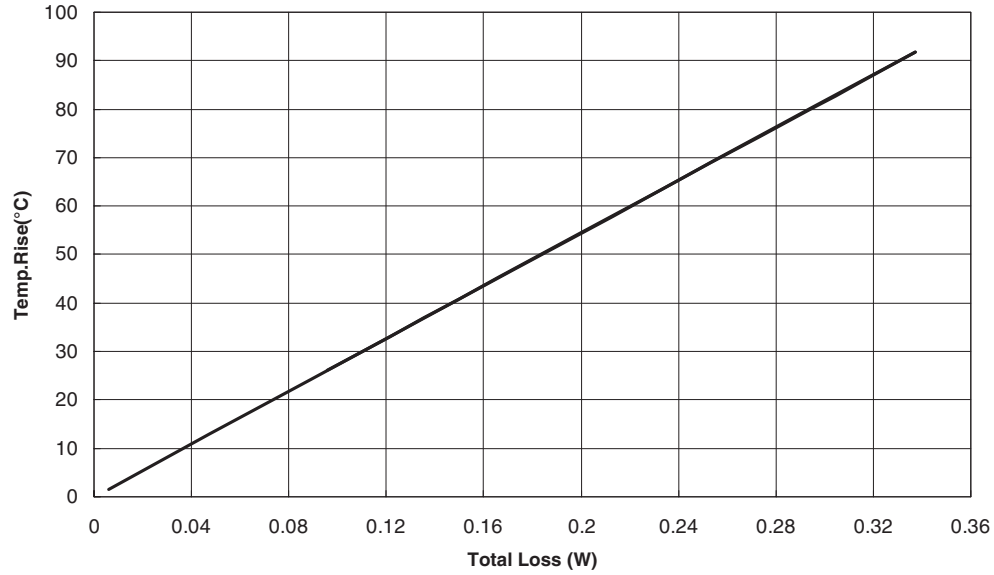


Parts packaged on 13" Diameter reel,
4,100 parts per reel.

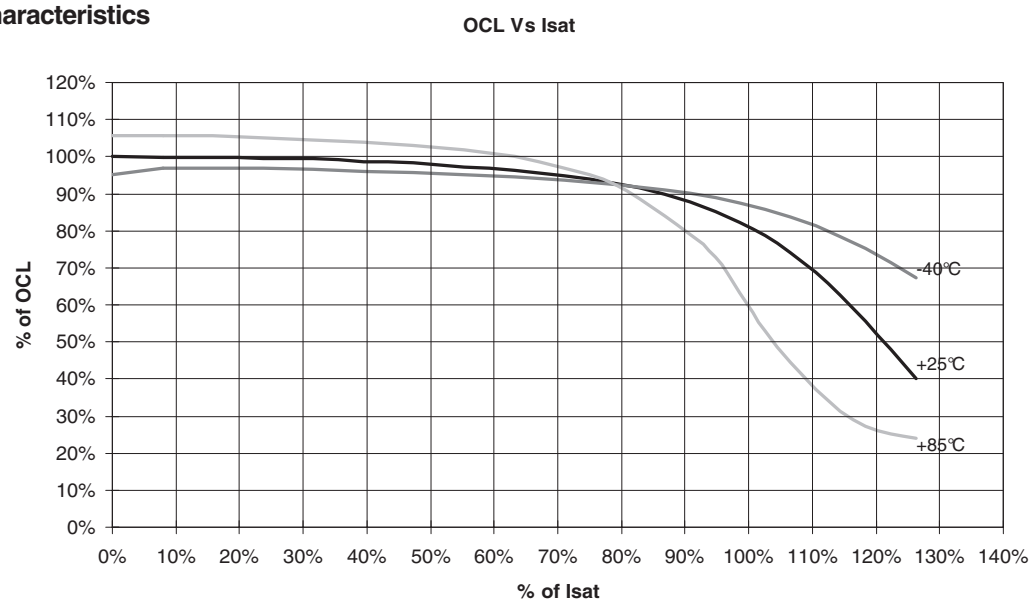
Core Loss



Temperature Rise vs. Loss



Inductance Characteristics



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