

SD3112 Series Low Profile Power Inductors



Description

- 125°C maximum total temperature operation
- 3.1mm x 3.1mm x 1.2mm shielded drum core
- Ferrite core material
- Inductance range from 1.0uH to 220uH
- Current range from 1.65 Amps to 0.113 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	OCL (1) (µH)	Part Marking	Irms (2) Amperes	Isat (3) Amperes	DCR (Ω) typ. @	K-factor (4)
	μH)	(µ1)	Designator	Amperes	Amperes	20°C	(4)
SD3112-1R0-R	1.0	1.11+/-30%	A	1.39	1.65	0.069	135
SD3112-1R5-R	1.5	1.70+/-30%	В	1.16	1.33	0.099	110
SD3112-2R2-R	2.2	2.41+/-30%	С	0.97	1.12	0.140	92
SD3112-3R3-R	3.3	3.24+/-30%	D	0.90	0.97	0.165	79
SD3112-4R7-R	4.7	4.72+/-30%	E	0.74	0.80	0.246	66
SD3112-6R8-R	6.8	6.47+/-30%	F	0.68	0.68	0.291	56
SD3112-8R2-R	8.2	8.50+/-30%	G	0.57	0.60	0.408	49
SD3112-100-R	10.0	10.01+/-30%	Н	0.55	0.55	0.446	45
SD3112-150-R	15.0	15.28+/-20%		0.45	0.44	0.654	37
SD3112-220-R	22.0	21.66+/-20%	J	0.37	0.37	0.953	31
SD3112-330-R	33.0	33.30+/-20%	К	0.30	0.30	1.48	25
SD3112-470-R	47.0	47.44+/-20%	L	0.270	0.25	1.85	21
SD3112-680-R	68.0	68.10+/-20%	М	0.228	0.211	2.56	17
SD3112-820-R	82.0	83.19+/-20%	Ν	0.213	0.190	2.93	16
SD3112-101-R	100.0	99.8+/-20%	0	0.184	0.174	3.95	14
SD3112-151-R	150.0	149.4+/-20%	Р	0.149	0.142	6.01	12
SD3112-221-R	220.0	219.9+/-20%	Q	0.121	0.117	9.12	10

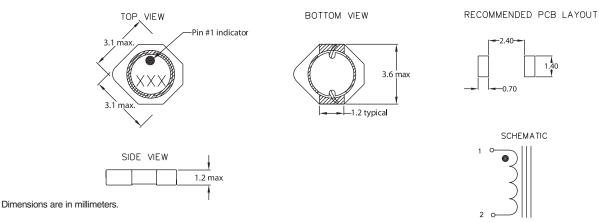
 Open Circuit Inductance Test Parameters: 100kHz, 0.1V, 0.0Adc.
 Irms: DC current for an approximate DT of 40°C without core loss. Derating is necessary for AC currents. PCB layout, trace thickness and width, air-flow, and proximity of other heat generating components will affect the temperature rise. 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*∆I, B p-p(mT), K: (K factor from table), L: (Inductance in uH), ∆I (Peak to peak ripple current in Amps).

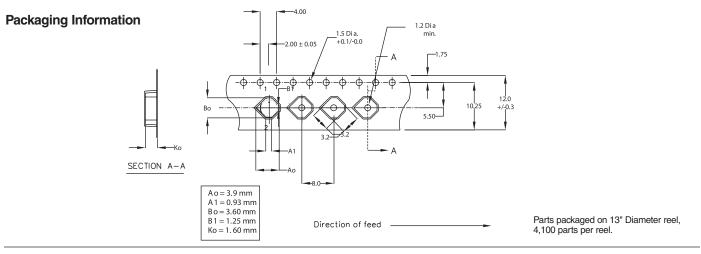


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Mechanical Diagrams



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).



DC Current vs. Temperature

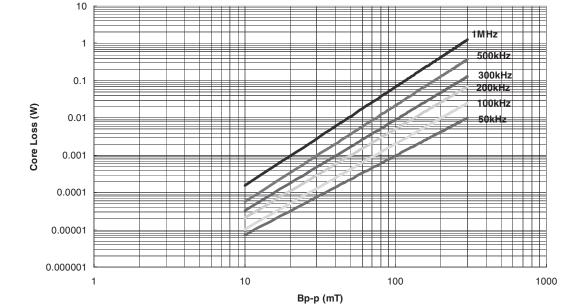




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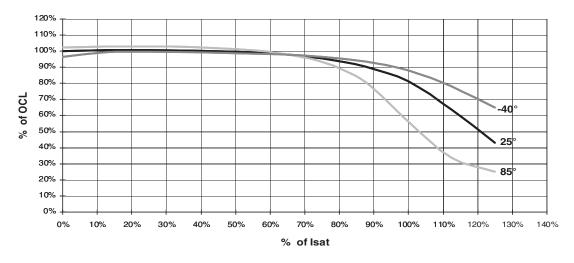
Core Loss

COOPER Bussmann



Inductance Characteristics

OCL vs Isat





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