

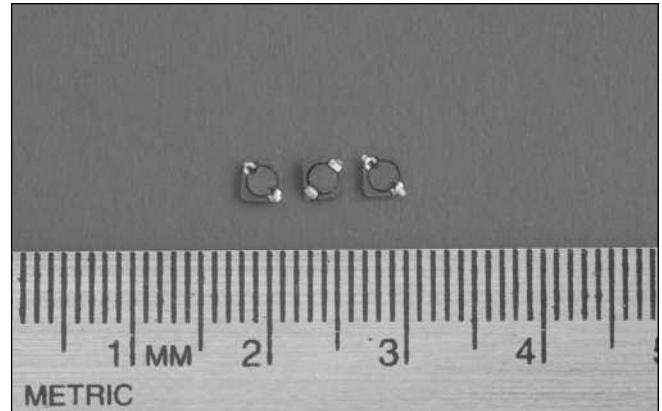


**THE DATASHEET OF
SD3110-R50-R**



Description

- 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	I _{rms} (2) Amperes	I _{sat} (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

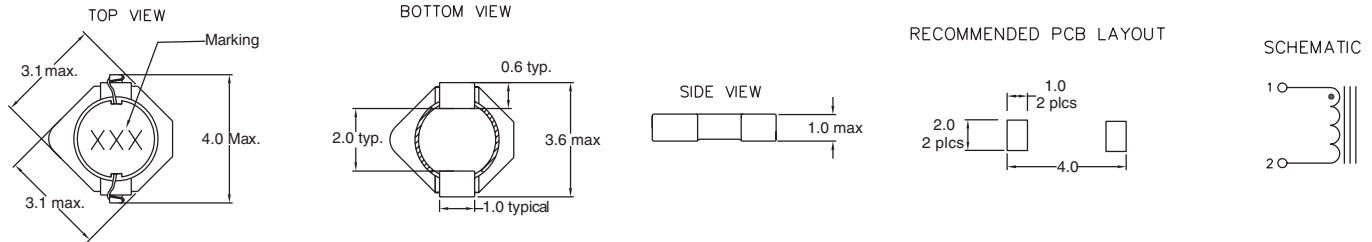
(1) Open Circuit Inductance Test Parameters: 100kHz, 0.1V, 0.0Adc.

(2) I_{rms}: 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) I_{sat} Amperes peak for approximately 30% rolloff (@20°C)

(4) K-factor: Used to determine B p-p for core loss (see graph).
 $B_{p-p} = K \cdot L \cdot \Delta I$, B p-p(mT), K: (K factor from table), L: (Inductance in uH),
 ΔI (Peak to peak ripple current in Amps).

Mechanical Diagrams

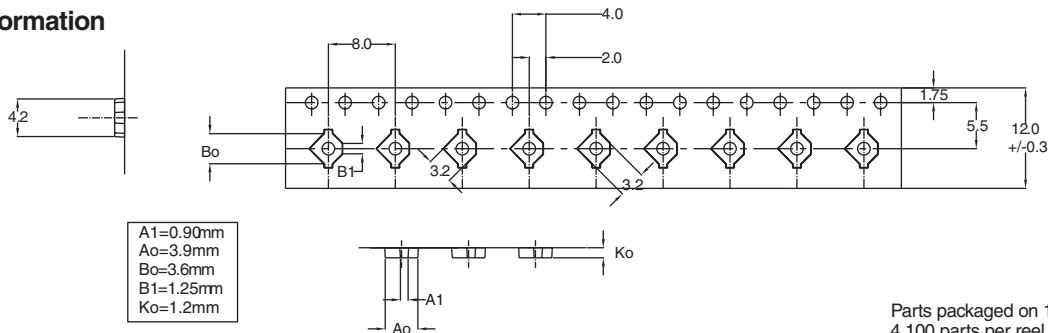


Dimensions are in millimeters.

Part Marking:

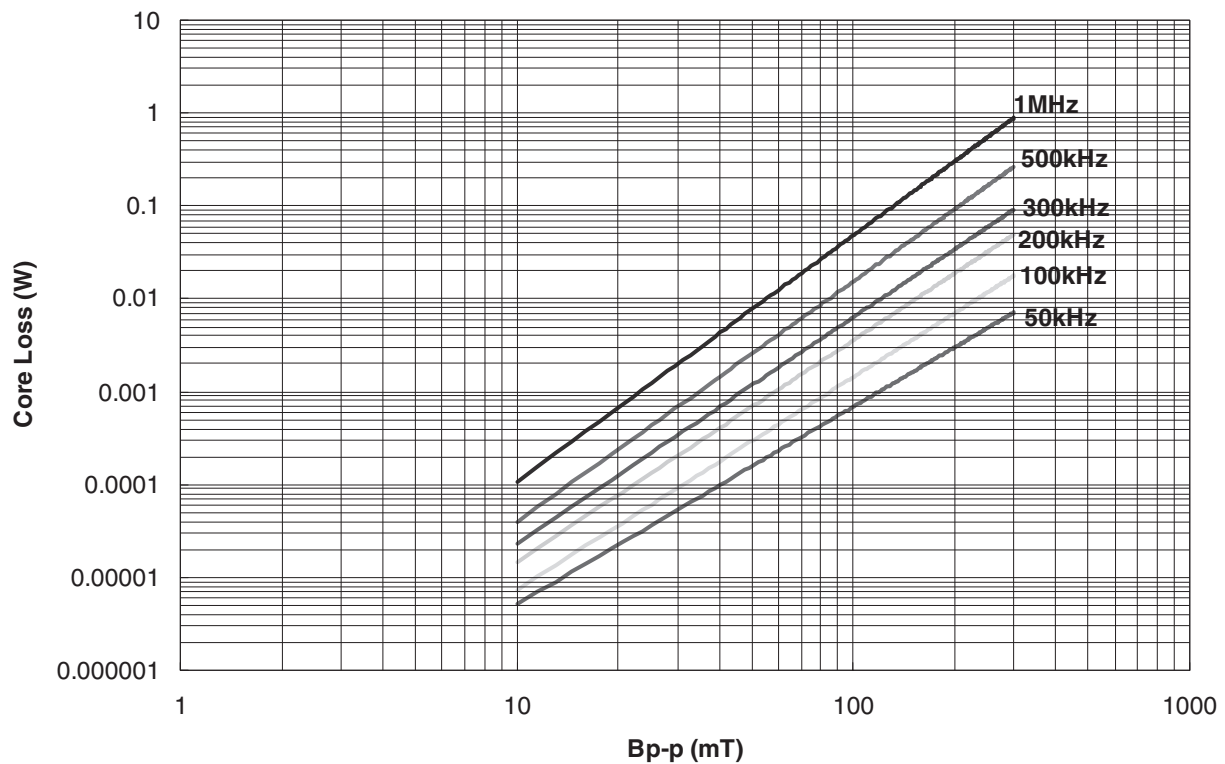
3 Digit Marking: (1st digit: Indicates inductance value per letter in Part Marking Designator); (2nd digit: Bi-weekly production date code); (3rd digit: Last digit of the year produced).

Packaging Information

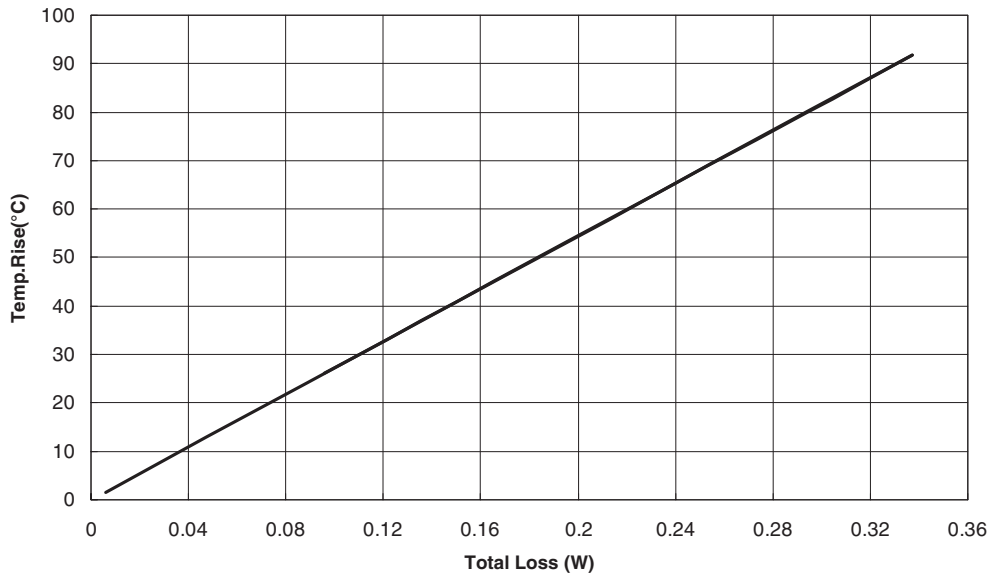


Parts packaged on 13" Diameter reel, 4,100 parts per reel.

Core Loss

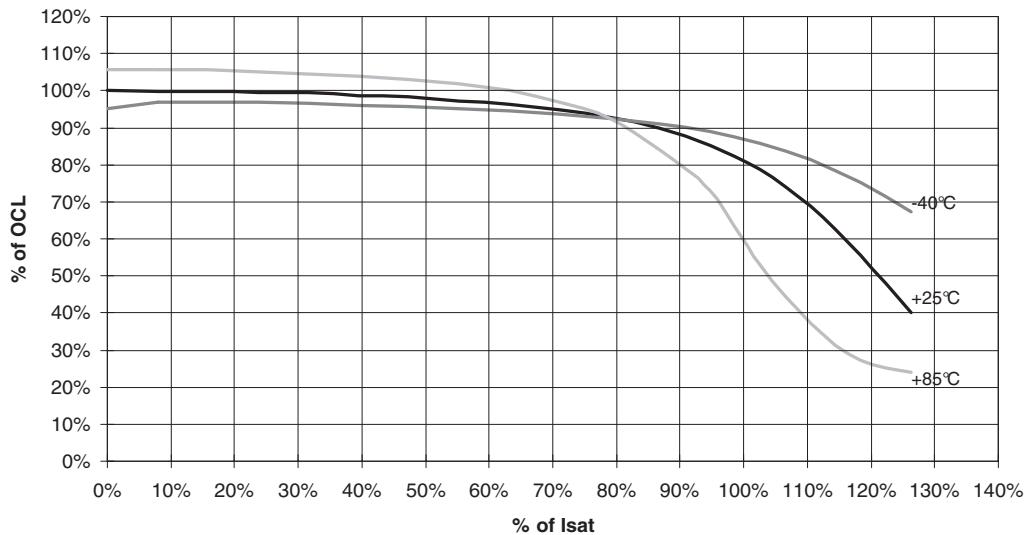


Temperature Rise vs. Loss



Inductance Characteristics

OCL Vs Isat



Looking for pricing, stock, or lifecycle information?

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