



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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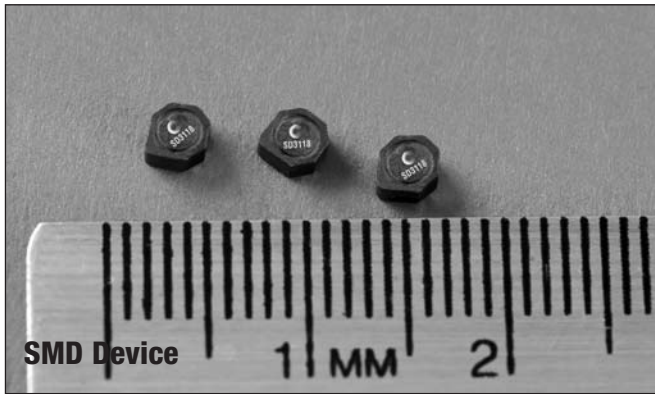
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Low Profile Power Inductors

SD3118 Series



Description

- 125°C maximum total temperature operation
- 3.2mm x 3.2mm x 1.8mm maximum shielded drum core
- Ferrite core material
- Inductance range from 1.0μH to 1000μH
- Current range from 2.94 Amps to 0.083 Amps
- Frequency range up to 4MHz
- RoHS compliant

Applications

- Cellular phones, Digital cameras, CD players, PDAs
- 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 (with derated current)
- Solder reflow temperature: +260°C max. for 10 seconds maximum

Packaging

- Supplied in tape and reel packaging, 4100 per reel, 13" diameter reel

Product Specifications

Part Number ⁵	Rated Inductance (μH)	OCL ¹ (μH)	Part Marking Designator	I _{rms} ² (Amps)	I _{sat} ³ (Amps)	DCR (Ω) @ 20°C (Typical)	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 OCL: Open Circuit Inductance (OCL) Test Parameters: 100kHz, 0.10V_{rms}, 0.0Adc

2 I_{rms}: DC current for an approximate temperature rise of 40°C without core loss. Derating is necessary for AC currents. PCB pad layout, trace thickness and width, air-flow and proximity of other heat generating components will affect the temperature rise. It is recommended the part temperature not exceed 125°C under worst case operating conditions verified in the end application.

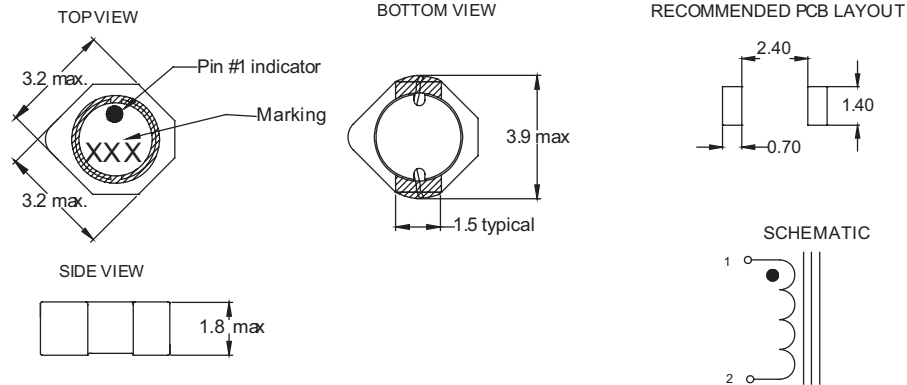
3 I_{sat}: Peak current for approximately 30% rolloff at +20°C.

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 μH), ΔI (peak-to-peak ripple current in amps).

5 Part Number Definition: HCF1007-xxx-R

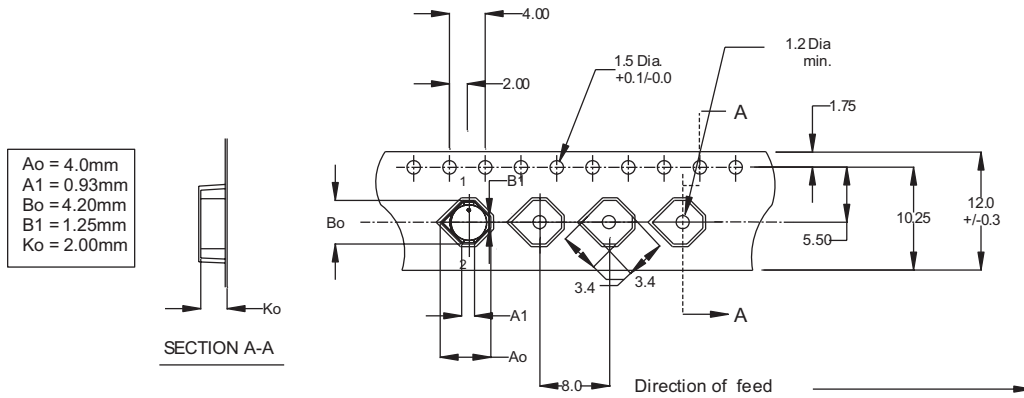
- SD3118 = Product code and size
- xxx= Inductance value in μH, R = decimal point.
- If no "R" is present then third character =# of zeros
- -R suffix = RoHS compliant

Dimensions - mm



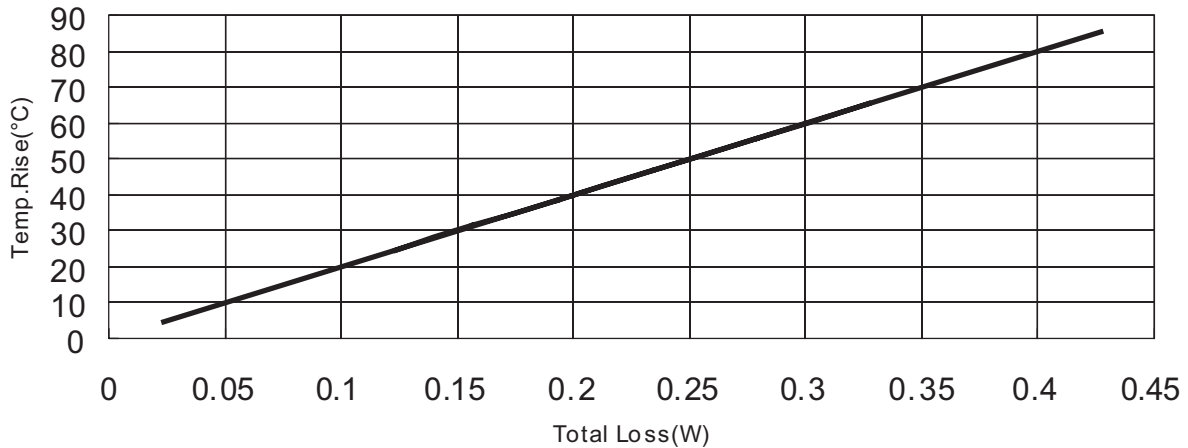
3 Digit Part Marking: (1st digit: Indicates inductance value per letter in Part Marking Designator); (2nd digit: Bi-weekly production date code); (3rd digit: Last digit of the year produced).

Packaging Information - mm



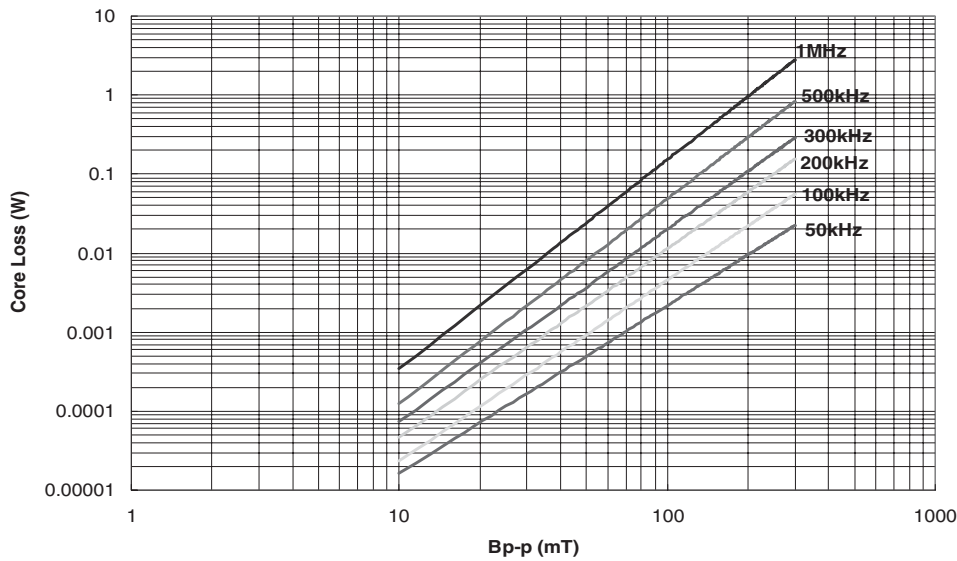
Supplied in tape-and-reel packaging, 4100 parts per reel, 13" diameter reel.

Temperature Rise vs. Total Loss



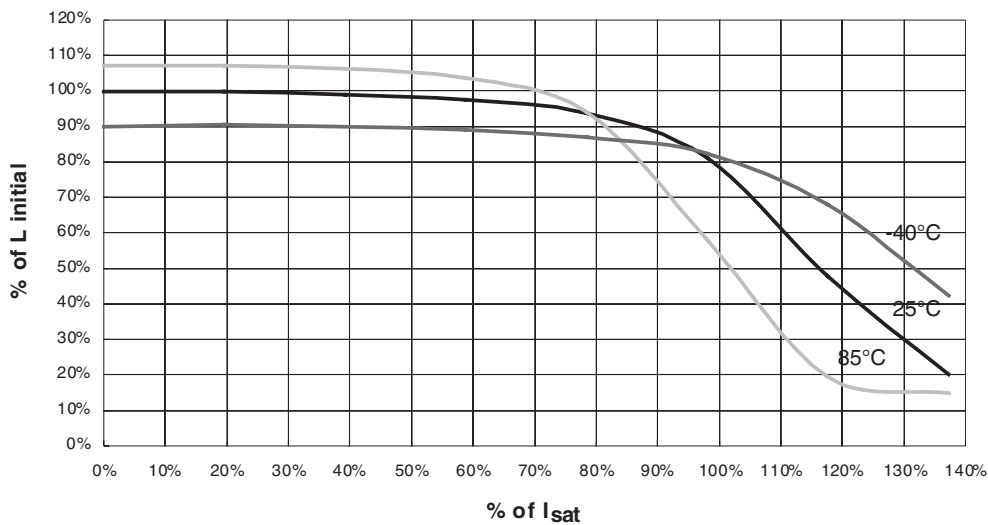


Core Loss



Inductance Characteristics

OCL vs. I_{sat}



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