



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!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

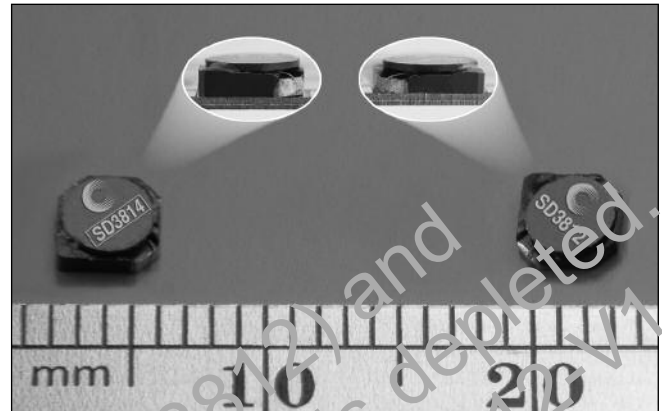
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



### Description

- 3.8mm x 3.8mm shielded drum cores available in two heights: 1.2mm and 1.4mm
- Current range from 4.44 to 0.100 Amps
- Inductance range from 0.47 uH to 680 uH
- Ferrite shielded, low EMI
- Ferrite core material



### Applications

- Digital cameras, cellular phones, CD players, and PDAs
- PCMCIA cards
- GPS systems

### Environmental Data

- Storage temperature range: -40°C to +125°C
- Operating ambient temperature range: -40°C to +85°C (range is application specific). Temperature rise is approximately 40°C at rated rms current
- Solder reflow temperature: +260°C max for 10 seconds max.

### Packaging

- Supplied in tape and reel packaging, 1,150 parts per 13" reel

Part Number	Rated Inductance (µH)	OCL (1) +/-15% (µH)	Part Marking Designator	I <sub>rms</sub> (2) Amperes	I <sub>sat</sub> (3) Amperes	DCR (4) (Ω) Typ.	Volt (5) u-sec Typ.
SD3812-R47-R	0.47	0.405	A	2.53	3.89	0.030	2.52
SD3812-1R0-R	1.0	0.845	B	2.00	2.69	0.048	3.64
SD3812-1R2-R	1.2	1.125	C	1.71	2.33	0.066	4.20
SD3812-1R5-R	1.5	1.445	D	1.58	2.06	0.078	4.76
SD3812-2R2-R	2.2	2.205	E	1.32	1.67	0.111	5.88
SD3812-3R3-R	3.3	3.125	F	1.10	1.40	0.159	7.0
SD3812-4R7-R	4.7	4.805	G	0.87	1.13	0.256	8.7
SD3812-6R8-R	6.8	6.845	H	0.80	0.95	0.299	10.4
SD3812-8R2-R	8.2	8.405	I	0.690	0.854	0.406	11.5
SD3812-100-R	10.0	10.125	J	0.662	0.778	0.441	12.6
SD3812-150-R	15.0	15.125	K	0.539	0.636	0.665	15.4
SD3812-220-R	22.0	21.125	L	0.499	0.538	0.776	18.2
SD3812-330-R	33.0	32.005	M	0.399	0.432	1.212	22.7
SD3812-470-R	47.0	47.045	N	0.327	0.361	1.809	27.2
SD3812-680-R	68.0	68.445	O	0.269	0.299	2.666	32.8
SD3814-R47-R	0.47	0.360	A	2.81	4.44	0.020	2.16
SD3814-R82-R	0.82	0.752	B	2.18	3.08	0.033	3.12
SD3814-1R2-R	1.0	1.001	C	1.85	2.67	0.046	3.60
SD3814-1R5-R	1.5	1.286	D	1.76	2.35	0.051	4.08
SD3814-2R2-R	2.2	1.962	E	1.43	1.90	0.077	5.04
SD3814-3R3-R	3.3	2.781	F	1.31	1.60	0.093	6.0
SD3814-4R7-R	4.7	4.276	G	1.06	1.29	0.141	7.4
SD3814-6R8-R	6.8	6.768	H	0.87	1.03	0.207	9.4
SD3814-8R2-R	8.2	8.228	I	0.753	0.930	0.279	10.3
SD3814-100-R	10.0	9.830	J	0.713	0.851	0.311	11.3
SD3814-150-R	15.0	14.458	K	0.574	0.702	0.481	13.7
SD3814-220-R	22.0	21.186	L	0.519	0.580	0.589	16.6
SD3814-330-R	33.0	32.151	M	0.418	0.471	0.908	20.4
SD3814-470-R	47.0	47.210	N	0.346	0.388	1.322	24.7
SD3814-680-R	68.0	67.324	O	0.285	0.325	1.951	29.5

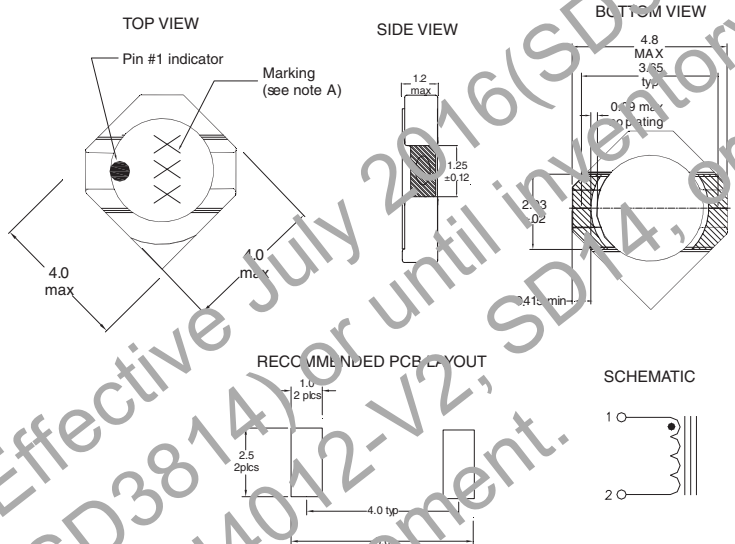
(1) Test Parameters: 100KHz, 0.100Vrms, 0.0Adc.  
 (2) RMS current for an approximate ΔT of 40°C without core loss. It is recommended that the temperature of the part not exceed 125°C. De-rating is necessary for AC currents.  
 (3) Peak current for approximately 30% rolloff at 20°C.  
 (4) DCR limits @ 20°C.  
 (5) Applied Volt-Time product (V-uS) across the inductor at 100kHz necessary to generate a core loss equal to 10% of the total losses for 40°C temperature rise. De-rating of the I<sub>rms</sub> is required to prevent excessive temperature rise.

Part Number	Rated Inductance ( $\mu\text{H}$ )	OCL (1) $\pm 15\%$ ( $\mu\text{H}$ )	Part Marking Designator	I <sub>rms</sub> (2) Amperes	I <sub>sat</sub> (3) Amperes	DCR (4) ( $\Omega$ ) Typ.	Volt (5) u-sec Typ.
SD3814-820-R	82.0	81.101	P	0.270	0.296	2.174	32
SD3814-101-R	100.0	98.794	Q	0.228	0.268	3.048	36
SD3814-151-R	150.0	149.026	R	0.191	0.219	4.359	44
SD3814-221-R	220.0	217.342	S	0.170	0.181	5.480	53
SD3814-331-R	330.0	326.812	T	0.136	0.148	8.59	65
SD3814-471-R	470.0	470.031	U	0.111	0.123	12.85	78
SD3814-681-R	680.0	680.320	V	0.100	0.102	15.78	94

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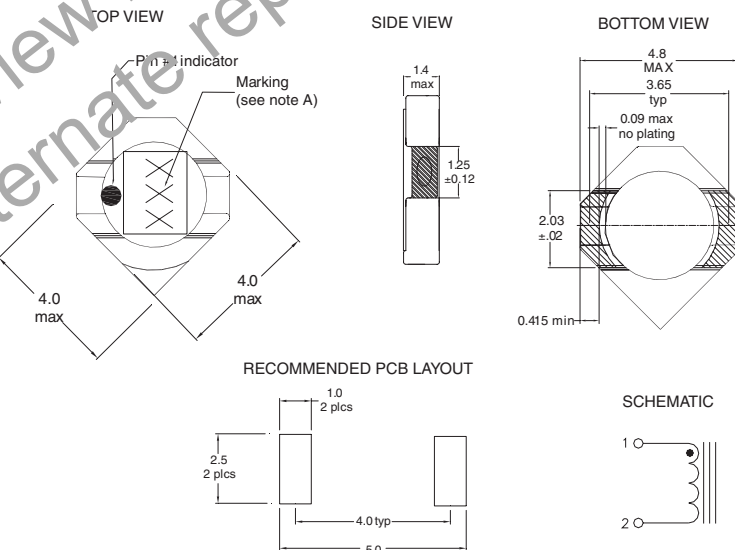
### Mechanical Diagrams

#### SD3812 Series



Note A: 3 digit marking. First digit indicates inductance value per chart above. Second digit indicates bi-weekly date code. Third digit of year produced. Box indicates SD3814 part.

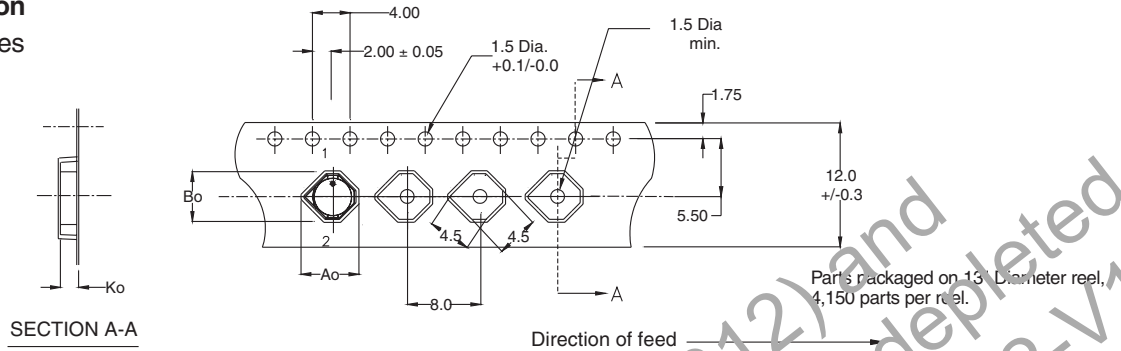
#### SD3814 Series



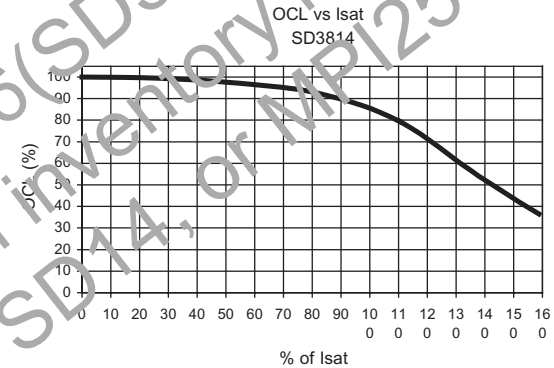
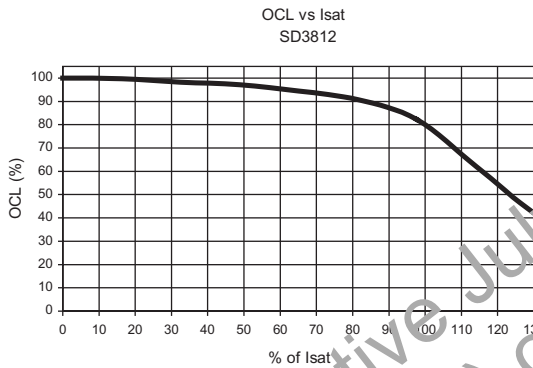
Note A: 3 digit marking. First digit indicates inductance value per chart above. Second digit indicates bi-weekly date code. Third digit of year produced. Box indicates SD3814 part.

### Packaging Information SD3812/SD3814 Series

Ao=5.1mm  
Bo=4.6mm  
Ko=1.6mm



### Inductance Characteristics



### Core Loss

