

SD6030 Series

Low Profile Power Inductors

COOPER Bussmann

Description

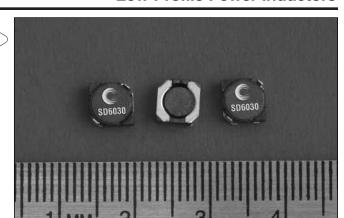
- 125°C maximum total temperature operation
- Low profile surface mount inductors
- 6.0mm x 6.0mm x 3.0mm surface mount package
- Ferrite core material
- Shielded drum core reduces EMI
- Inductance range from 2.7µH to 680µH
- Current range from 4.08 Amps to 0.16 Amps
- Frequency range up to 1MHz

Applications

- Notebook computers, Digital cameras
- DSL modems, PDA's
- High Power LED driver
- MP3, CD players, GPS receivers
- Cellular phones, Smart phones
- Wireless notebook adapters
- Battery power, TFT-LCD Bias supplies
- PCMCIA, Cardbus32, MiniPCI cards

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, 2600 per reel



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Part Number	Rated Inductance (µH)	OCL (1) μH ± 30%	Irms (2) Amperes	Isat (3) Amperes	DCR mΩ@20°C (Typical)	DCR mΩ@20°C (Maximum)	K-factor (4)
SD6030-2R7-R	2.7	2.7	4.08	2.60	13	18	34
SD6030-3R3-R	3.3	3.3	3.54	2.40	18	24	30
SD6030-4R2-R	4.2	4.1	3.11	2.20	23	31	27
SD6030-5R0-R	5.0	4.9	2.81	1.90	28	38	24
SD6030-5R8-R	5.8	5.8	2.58	1.80	33	45	22
SD6030-7R8-R	7.8	7.8	2.38	1.60	39	53	19
SD6030-100-R	10	9.3	2.15	1.30	48	65	17
SD6030-120-R	12	11.3	1.99	1.20	56	76	16
SD6030-150-R	15	14.1	1.71	1.10	76	103	14
SD6030-180-R	18	17.1	1.65	1.00	82	110	13
SD6030-220-R	22	20.4	1.57	0.90	90	122	12
SD6030-270-R	27	26.0	1.31	0.85	130	175	11
SD6030-330-R	33	32.4	1.26	0.75	140	189	9.3
SD6030-360-R	36	34.4	1.19	0.70	157	212	8.7
SD6030-440-R	44	44.0	1.10	0.62	185	250	7.9
SD6030-520-R	52	52.0	0.99	0.58	226	305	7.2
SD6030-680-R	68	65.6	0.92	0.52	263	355	6.5
SD6030-820-R	82	81.6	0.80	0.46	343	463	5.9
SD6030-101-R	100	94.4	0.76	0.42	385	520	5.6
SD6030-121-R	120	110.1	0.70	0.40	517	620	5.6
SD6030-151-R	150	144.5	0.64	0.35	608	730	5.0
SD6030-181-R	180	175.7	0.55	0.32	817	980	4.5
SD6030-221-R	220	210.9	0.50	0.30	1000	1200	4.0
SD6030-271-R	270	264.2	0.44	0.27	1300	1560	3.6
SD6030-331-R	330	313.5	0.38	0.25	1733	2080	3.3
SD6030-391-R	390	373.7	0.35	0.22	2083	2500	3.0
SD6030-471-R	470	460.0	0.33	0.20	2250	2700	2.8
SD6030-561-R	560	546.2	0.30	0.18	2767	3320	2.5
SD6030-681-R	680	659.4	0.27	0.16	3458	4150	2.3

 (1) Open Circuit Inductance Test Parameters: 100kHz, 0.1V, 0.0Adc.
 (2) Irms: DC current for an approximate ∆T 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.

(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).
(5) Part Number Definition: SD6030-xxx-R

SD6030 = Product code and size; -xxx = Inductance value in uH;

R = decimal point; If no R is present, third character = # of zeros. -R suffix = RoHS compliant

(3) Isat Amperes peak for 35% rolloff (@25°C)

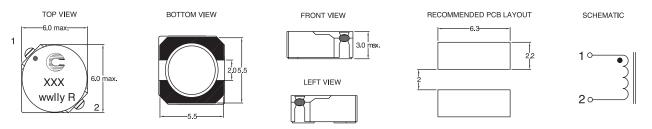
RoHS 2002/95/EC



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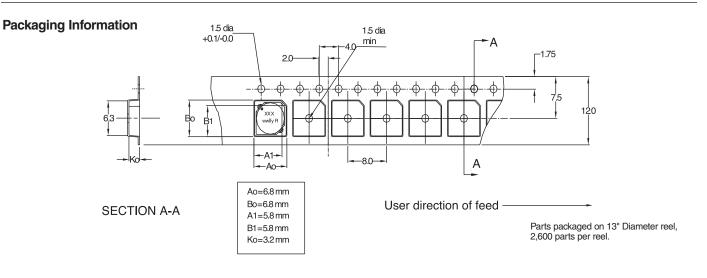
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Mechanical Diagrams

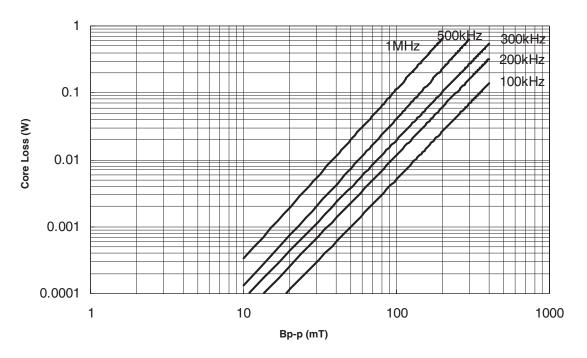


Dimensions are in millimeters.

xxx = Inductance value in uH. R = decimal point. If no R is present third character = # of zeros. wwllyy = Date code, R = Revision level.



Core Loss

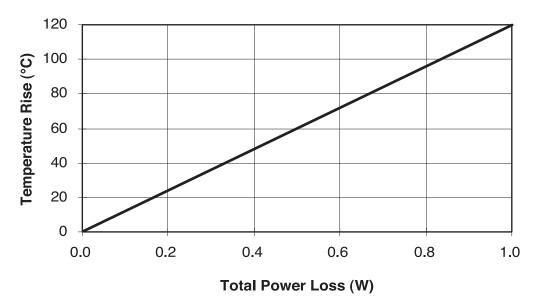




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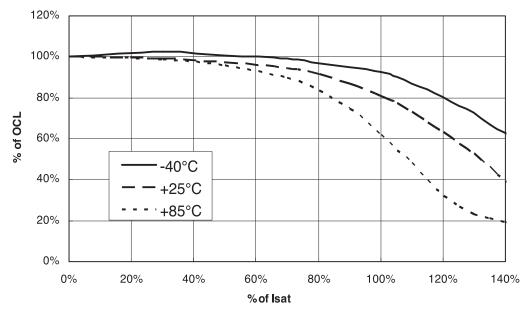


Temperature Rise vs. Loss





OCL Vs. Isat



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