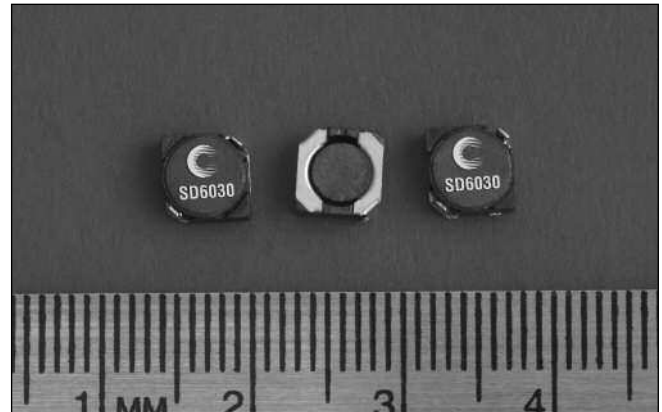


Description

- 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

Ihr Vertriebspartner:
HY-LINE
POWER COMPONENTS

Inselkammerstraße 10
D-82008 Unterhaching
Tel.: +49 (0)89 614503 10
Fax: +49 (0)89 614503 20
E-Mail: power@hy-line.de
URL: www.hy-line.de

Gründenstrasse 10
CH-8247 Flurlingen
Tel.: +41 (0)52 647 42 00
Fax: +41 (0)52 647 42 01
E-Mail: power@hy-line.ch
URL: www.hy-line.ch

| Part Number | Rated Inductance (µH) | OCL (1) µH ± 30% | I _{rms} (2) Amperes | I _{sat} (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) I_{rms}: DC current for an approximate ΔT 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 35% rolloff (@25°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).

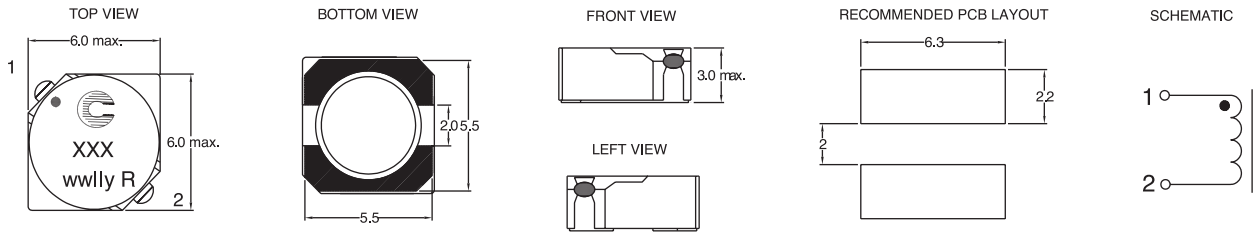
(5) Part Number Definition: SD6030-xxx-R

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

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

-R suffix = RoHS compliant

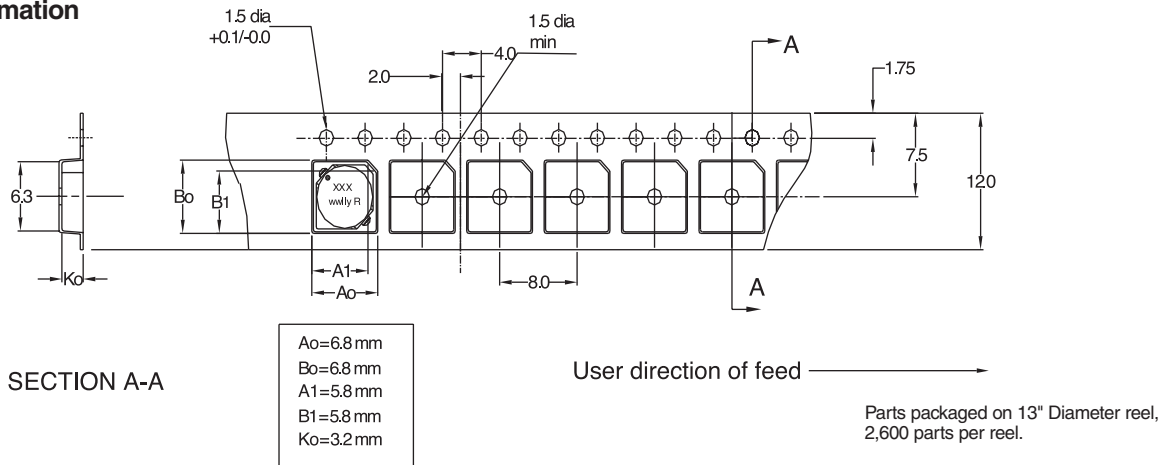
Mechanical Diagrams



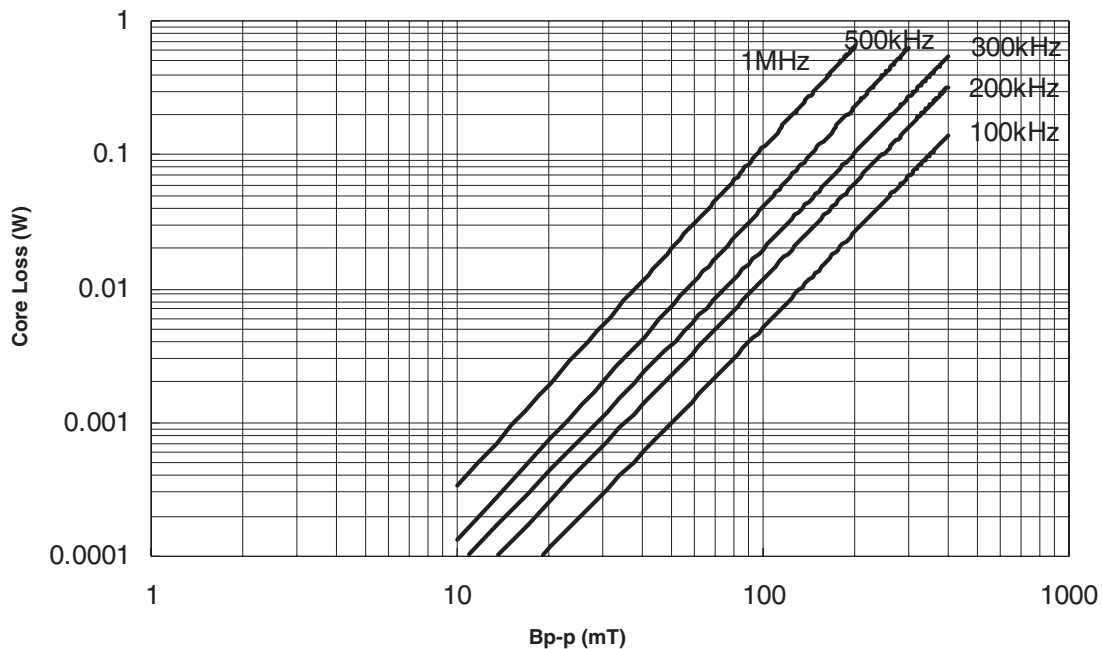
Dimensions are in millimeters.

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

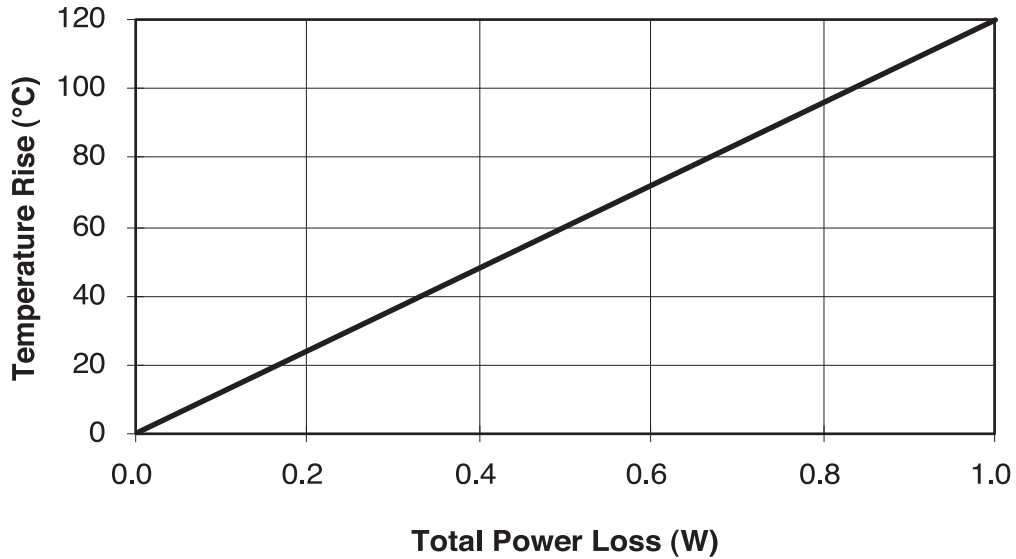
Packaging Information



Core Loss



Temperature Rise vs. Loss



Inductance Characteristics

OCL Vs. Isat

