COILTRONICS®

COOPER Bussmann

HIGH CURRENT 1
Power Inductors

Description

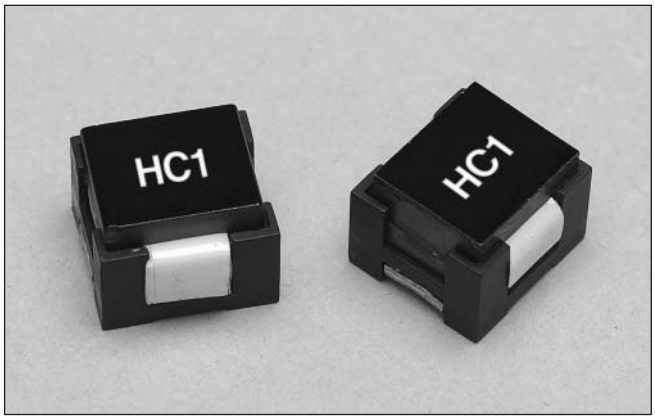
- Designed for high current, low voltage applications
- Low DCR, high efficiency
- Foil construction for higher frequency circuit designs
- Suited for IR and vapor reflow solder
- Frequency range 1kHz to 1MHz

Applications

- Next generation microprocessors
- High current DC-DC converters
- Computers

Environmental Data

- Storage temperature range: -40C to +125C
- Operating ambient temperature range: -40C to +85C (range is application specific).
- Infrared reflow temperature: +260C for 10 seconds maximum



Packaging

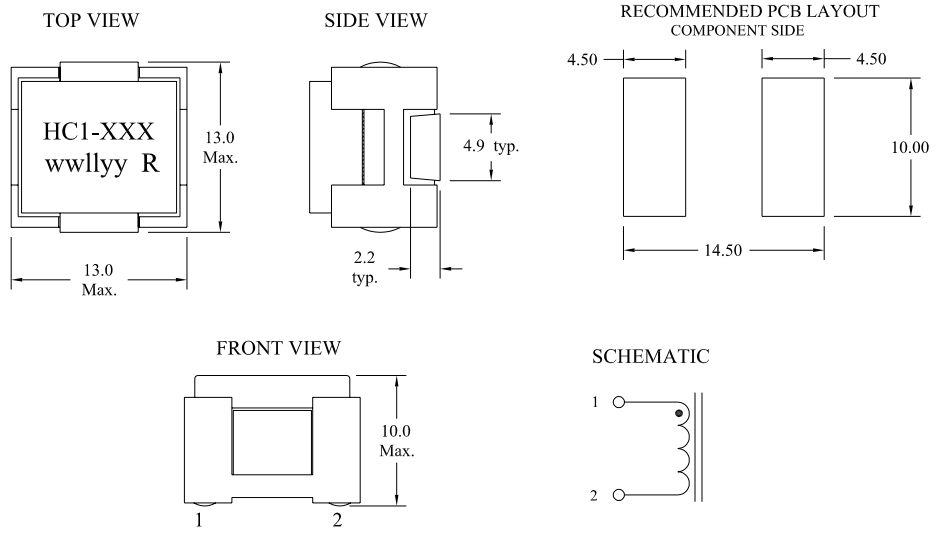
- Supplied in tape and reel packaging, 250 per reel

Part Number	Rated Inductance µH	OCL (1) ± 15% µH	Irms (2) Amperes (Approx.)	Isat (3) Amperes (Approx.)	DCR (Ω) Max. @ 20°C	Volt-µSec (4) (VµS) (ref.)
HC1-R22	0.22	0.218	51.42	40.5	0.00034	1.83
HC1-R30	0.30	0.291	51.42	31.8	0.00034	1.83
HC1-R57	0.57	0.572	37.83	33.4	0.00063	3.66
HC1-R87	0.87	0.866	28.01	31.0	0.00138	5.49
HC1-1R0	1.0	1.12	28.01	25.4	0.00138	5.49
HC1-1R7	1.7	1.66	22.30	22.2	0.0018	7.33
HC1-2R3	2.3	2.29	22.30	16.7	0.0018	7.33
HC1-3R6	3.6	3.59	16.76	13.4	0.0032	9.16
HC1-5R1	5.1	5.15	12.79	11.2	0.0054	10.99
HC1-7R8	7.8	7.85	12.79	6.7	0.0054	10.99
HC1-100	10	10.5	12.79	5.3	0.0054	10.99

1) OCL (Open Circuit Inductance) Test parameters: 300KHz, .25Vrms, 0.0Adc & Isat.
2) Irms Amperes for approximately ΔT of 40°C. DC current for an approximate ΔT of 40°C without core loss. Derating is necessary for AC currents. It is recommended that the temperature of the part not exceed 125°C under worst case operating conditions verified in the end application.
3) Isat Amperes Peak for approximately 30% rolloff @ 20°C
4) Applied Volt-Time product (V-µS) across the inductor. This value represents the applied V-µS at 200kHz necessary to generate a core loss equal to 10% of the total losses for 40°C temperature rise. See Core Loss Graph.

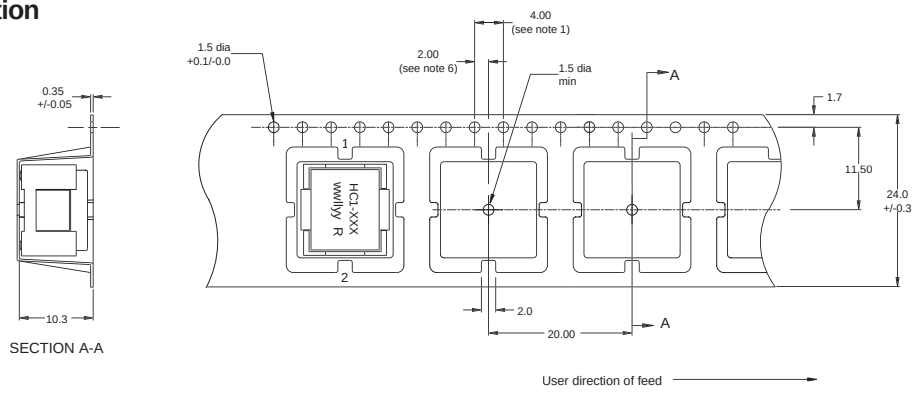
Units supplied in tape & reel packaging; 250 parts on 13" diameter reel.

Mechanical Diagrams

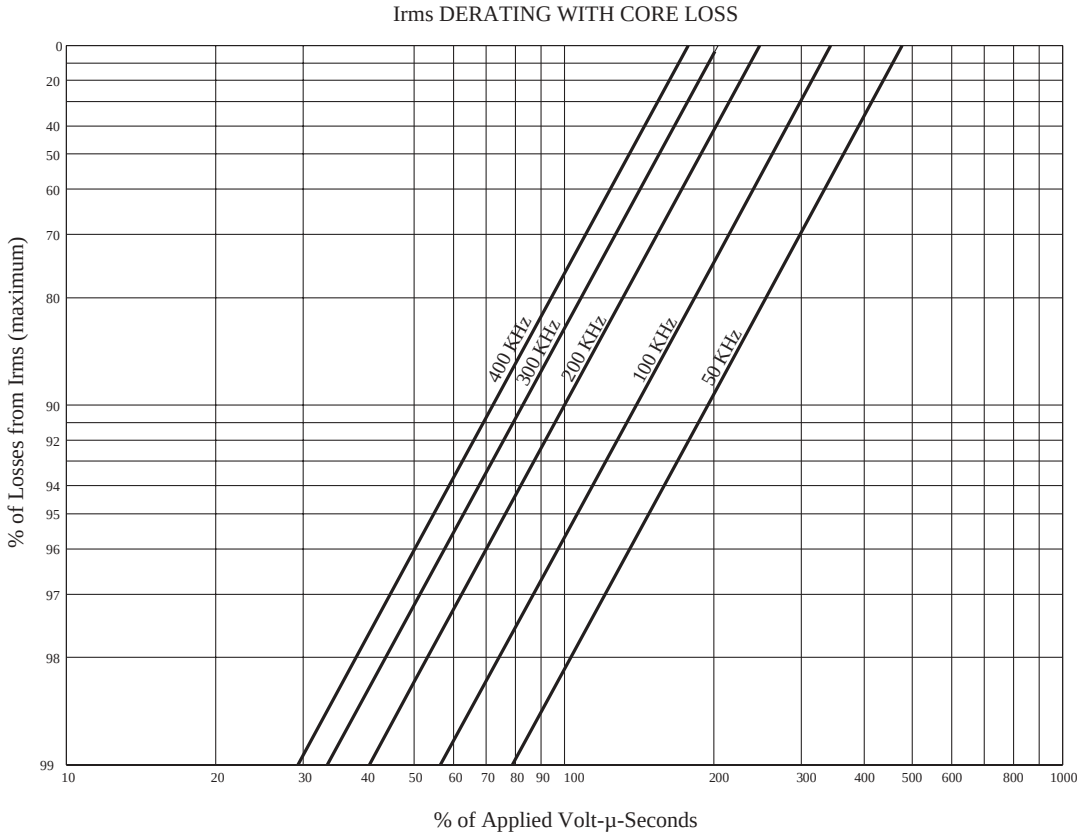


Dimensions in Millimeters

Packaging Information

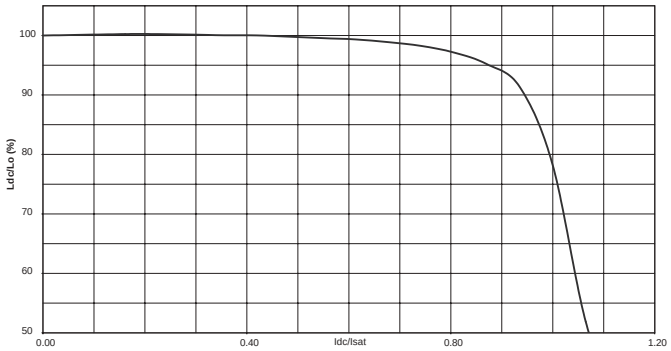


Core Loss

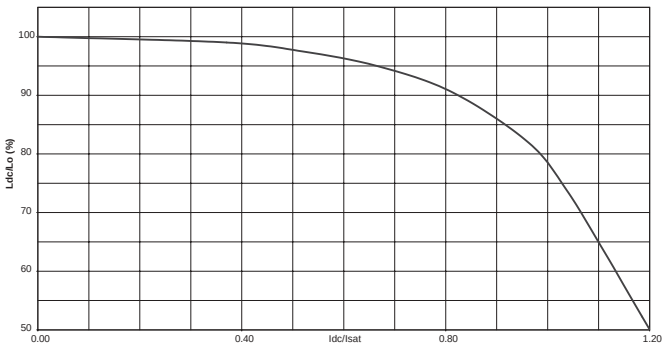


Inductance vs. Idc

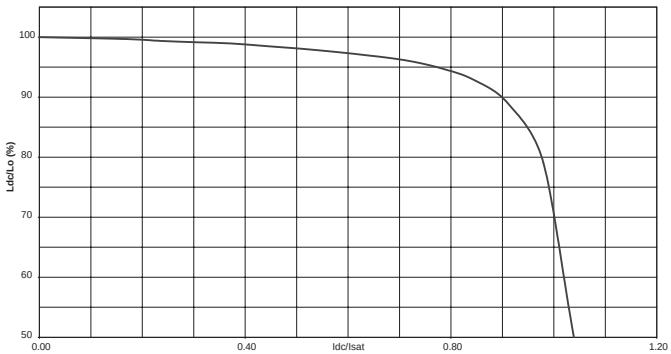
HC1 Inductor (R87)



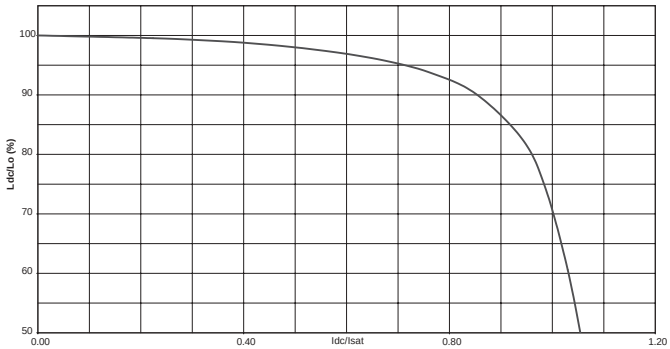
HC1 Inductor (R22, 7R8)



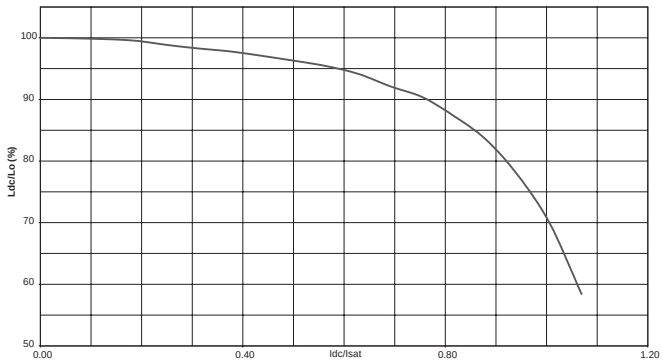
HC1 Inductor (1R7)



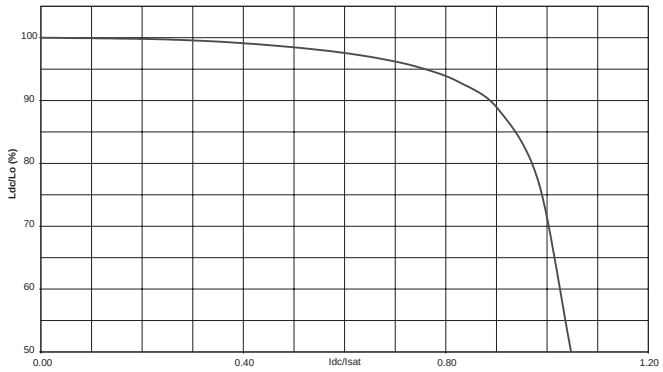
HC1 Inductor (R57, 2R3, 3R6, 5R1)



HC1 Inductor (R30, 100)



HC1 Inductor (1R0)



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