

HIGH CURRENT 1

Power Inductors



Description

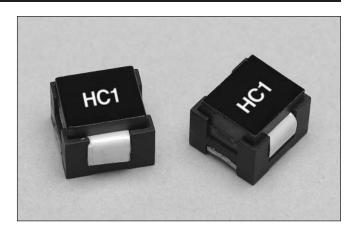
- · Designed for high current, low voltage applications
- Low DCR, high efficiency
- · Foil construction for higher frequency circuit designs
- Suited for IR and vapor reflow solder
- Frequency range 1kHz to 1MHz
- RoHS compliant (-R option)

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% μΗ	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

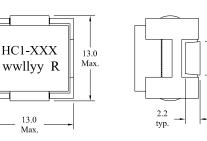
1) OCL (Open Circuit Inductance) Test parameters: 300KHz, .25Vrms, 0.0Adc & Isat.

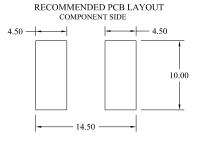
2) Irms Amperes for approximately ΔT of 40°C. DC current for an approximate ΔT of 40°C without core loss. Derating is necessary for AC currents. It is recommended that the temperature of the part not exceed 125°C under worst case operating conditions verified in the end application.

OPTION CODE				
Option Code	Description			
-R	RoHS compliant version			

Mechanical Diagrams

TOP VIEW





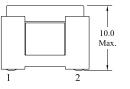
3) Isat Amperes Peak for approximately 30% rolloff @ 20°C

4) Applied Volt-Time product (V-µS) across the inductor. This value represents the

total losses for 40°C temperature rise. See Core Loss Graph. Units supplied in tape & reel packaging; 250 parts on 13" diameter reel.

applied V-µS at 200kHz necessary to generate a core loss equal to 10% of the

FRONT VIEW



SIDE VIEW

4.9 typ.

SCHEMATIC

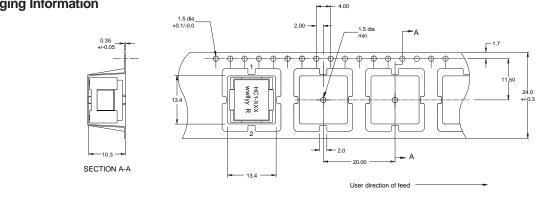




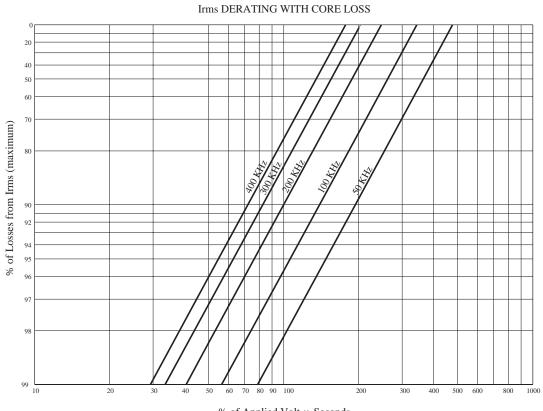
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Packaging Information



Core Loss



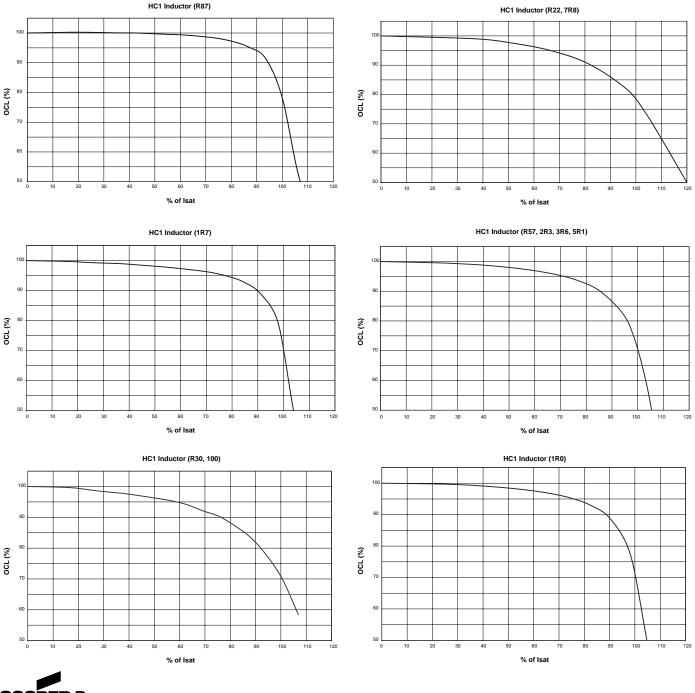
% of Applied Volt- $\mu\mbox{-}Seconds$



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Inductance vs. Idc



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PM-4113 7/05

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