



HIGH CURRENT 2™ **Power Inductors**

Description

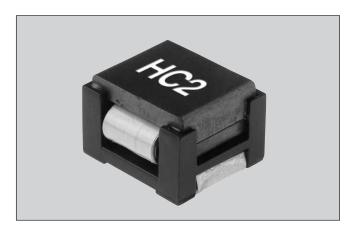
- Compact footprint for high density, high current/low voltage applications
- Foil technology that adds higher reliability factor over the traditional magnet wire used for higher frequency circuit designs
- Frequency Range up to 1MHz

Applications

- Next generation microprocessors
- Energy storage applications
- 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



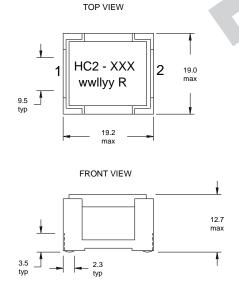
Packaging

- 45 parts per tray bulk packaging.
- Tape and reel packaging also available, 44mm width, 110 parts per 13" reel.
- Add -TR after part number for tape and reel packaging.

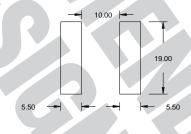
Part Number	Rated Inductance µH	OCL (1) μH ± 20%	Irms (2) Amperes (Typ.)	Isat (3) Amperes (Typ.)	DCR (4) Ohms (Max.)	Volts (5) µSec
HC2-R47	.47	.52	52.9	63.75	.0006	6.87
HC2-R68	.68	.63	52.9	50.00	.0006	6.87
HC2-1R0	1.0	1.15	33.0	42.50	.0013	10.31
HC2-2R2	2.2	2.00	24.3	31.90	.0023	13.75
HC2-4R7	4.7	4.55	17.0	21.25	.0046	20.62
HC2-6R0	6.0	6.00	17.0	16.50	.0046	20.62

- 1) Open Circuit Inductance Test Parameters: 300kHz, 0.250 Vrms, 0.0 Adc DC current for an approximate temperature change 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) Peak current for approximately 30% roll-off
- 4) Values @ 20°C
- 5) Applied Volt-Time product (V-µS) across the inductor. This value represents the applied V-µS at 300KHz necessary to generate a core loss equal to 10% of the total losses for 40°C temperature rise.

Mechanical Diagrams



RECOMMENDED PCB PAD LAYOUT

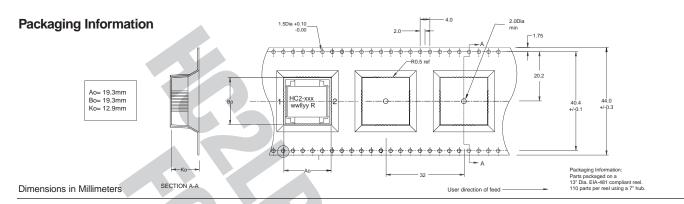




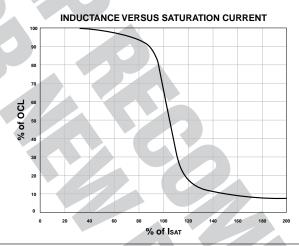




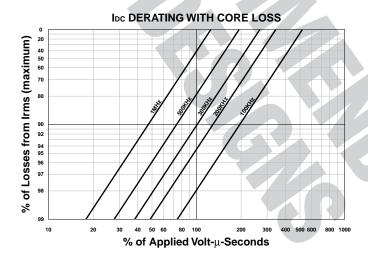
HIGH CURRENT 2[™] Power Inductors



Rolloff



Core Loss





PM-4109 4/05

Visit us on the Web at www.cooperET.com

© Cooper Electronic Technologies 2005

3601 Quantum Boulevard Boynton Beach, Florida 33426-8638 Tel: +1-561-752-5000 Toll Free: +1-888-414-2645 Fax: +1-561-742-1178

This bulletin is intended to present product design solutions and technical information that will help the end user with design applications. Cooper Electronic Technologies reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Cooper Electronic Technologies also reserves the right to change or update, without notice, any technical information contained in this bulletin. Once a product has been selected, it should be tested by the user in all possible applications.

Life Support Policy: Cooper Electronic Technologies does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.