

HIGH CURRENT 2LP

Low Profile Power Inductors



Description

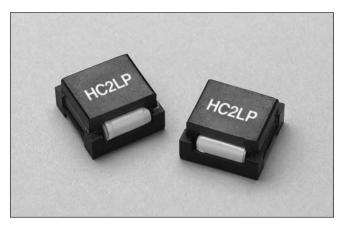
- Compact footprint for high density, high current/low voltage applications
- Foil technology that adds higher reliability factor over the traditional magnet wire used for higher frequency circuit designs
- Frequency Range up to 1MHz

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

- Supplied in tape and reel packaging, 44mm width, 130 parts per 13" reel
- 45 parts per tray, bulk packaging also available

| Part Number | Rated Inductance µH | OCL (1) μH ± 20% | Irms (2) Amperes (Typ.) | Isat (3) Amperes (Typ.) | DCR (4) Ohms (Max.) | Volts (5) µSec |
|----------------|---------------------------|---------------------|-------------------------------|-------------------------------|---------------------------|-------------------|
| HC2LP-R47 | .47 | .52 | 52.9 | 63.75 | .0006 | 6.87 |
| HC2LP-R68 | .68 | .63 | 52.9 | 50.00 | .0006 | 6.87 |
| HC2LP-1R0 | 1.0 | 1.15 | 33.0 | 42.50 | .0013 | 10.31 |
| HC2LP-2R2 | 2.2 | 2.00 | 24.3 | 31.90 | .0023 | 13.75 |
| HC2LP-4R7 | 4.7 | 4.55 | 17.0 | 21.25 | .0046 | 20.62 |
| HC2LP-6R0 | 6.0 | 6.00 | 17.0 | 16.50 | .0046 | 20.62 |

 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

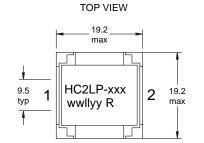
4) Values @ 20°C

2.8

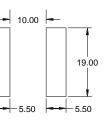
tvp

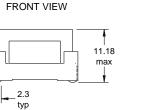
5) Applied Volt-Time product (V-μS) across the inductor. This value represents the applied V-μS at 300KHz necessary to generate a core loss equal to 10% of the total losses for 40°C temperature rise.

Mechanical Diagrams



RECOMMENDED PCB PAD LAYOUT

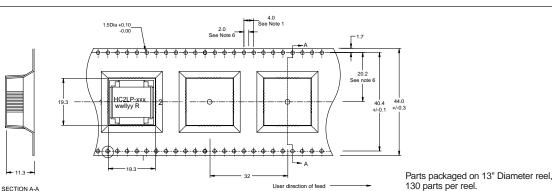




SCHEMATIC



Packaging Information



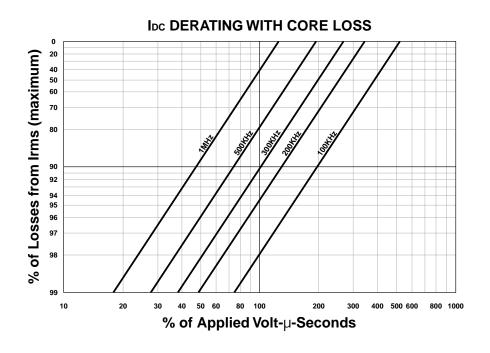
Dimensions in Millimeters

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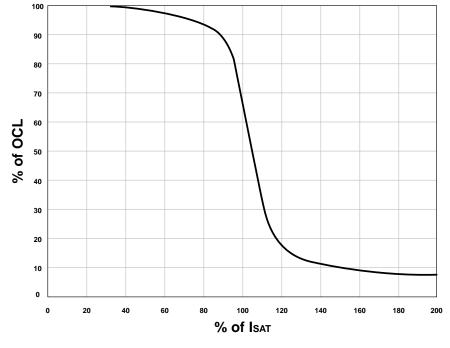




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INDUCTANCE VERSUS SATURATION CURRENT



COOPER Bussmann

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