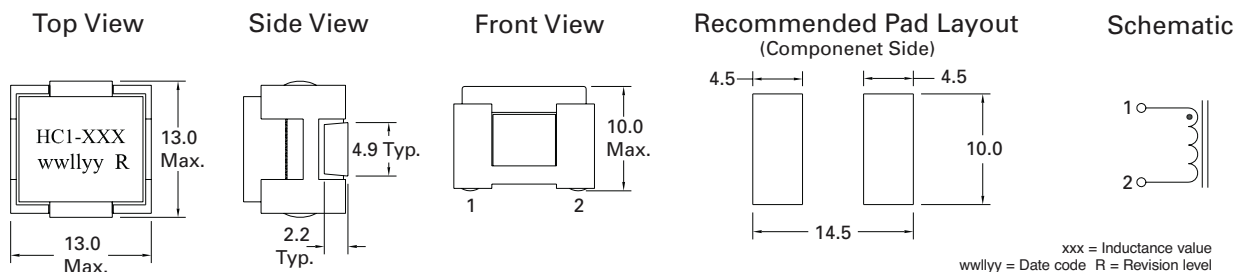


Product specifications

Part number	OCL ¹ (μH) ±15%	I _{rms} ² amps (approx.)	I _{sat} ³ amps (approx.)	DCR (Ω) maximum @ 20°C	Volt-μsec ⁴ (V μs) ref.
HC1-R22-R	0.218	51.42	40.5	0.00036	1.83
HC1-R30-R	0.291	51.42	31.8	0.00036	1.83
HC1-R57-R	0.572	37.83	33.4	0.00068	3.66
HC1-R87-R	0.866	28.01	31.0	0.00123	5.49
HC1-1R0-R	1.12	28.01	25.4	0.00123	5.49
HC1-1R7-R	1.66	22.30	22.2	0.0020	7.33
HC1-2R3-R	2.29	22.30	16.7	0.0020	7.33
HC1-3R6-R	3.59	16.76	13.4	0.0035	9.16
HC1-5R1-R	5.15	12.79	11.2	0.0057	10.99
HC1-7R8-R	7.85	12.79	6.7	0.0057	10.99
HC1-100-R	10.5	12.79	5.3	0.0057	10.99

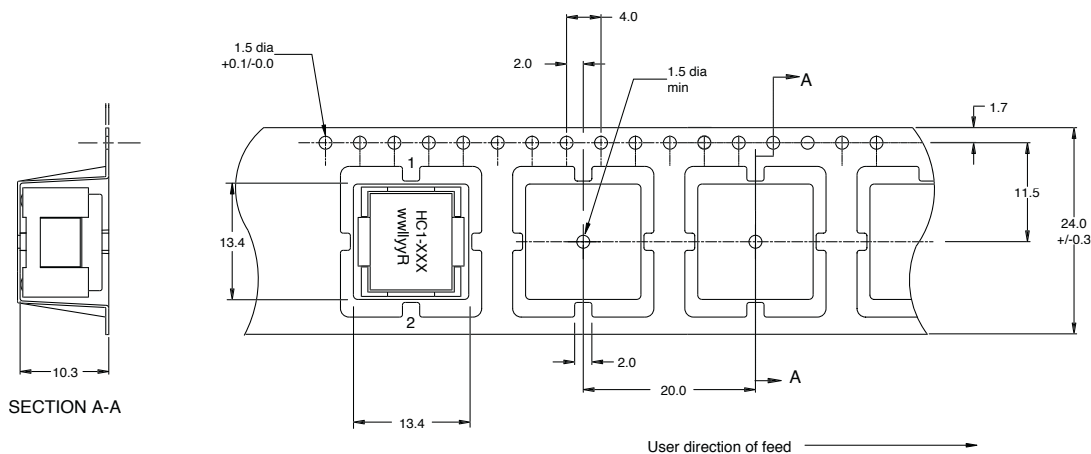
- OCL (Open Circuit Inductance) Test parameters: 300kHz, .25V_{rms}, 0.0Adc & I_{sat}.
- I_{rms} Amps for approximately ΔT of 40°C. DC current for an approximate ΔT of 40°C without core loss. Derating is necessary for AC currents. It is recommended that the temperature of the part not exceed 125°C under worst case operating conditions verified in the end application.
- I_{sat} Amps Peak for approximately 30% rolloff @ 20°C.
- 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.
- Part number definition - HC1-xxx-R:
HC1 = Product code and size
-xxx = Inductance value
R = Decimal point (if no "R" is present, last character equals number of zeros)
-R Suffix = RoHS compliant

Dimensions—mm

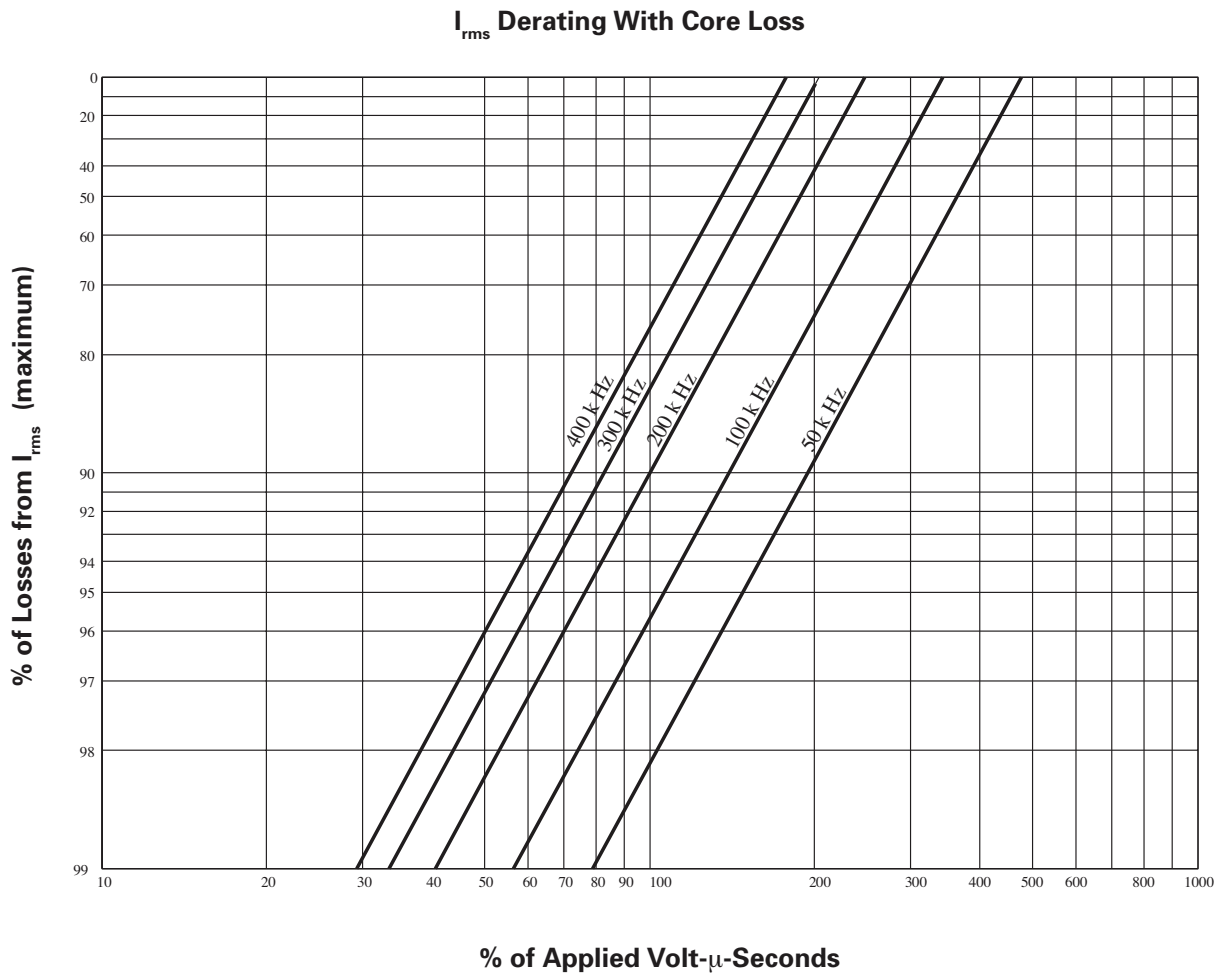


Packaging information (mm)

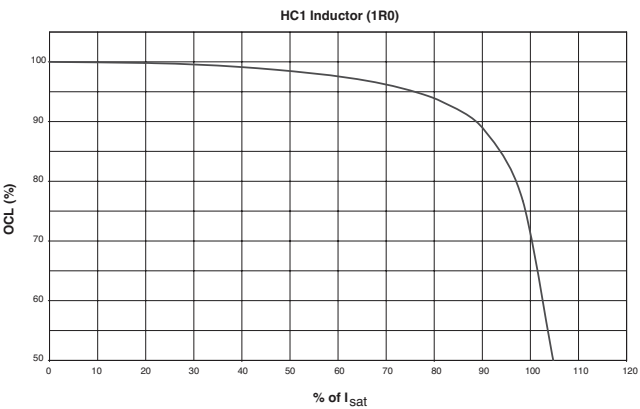
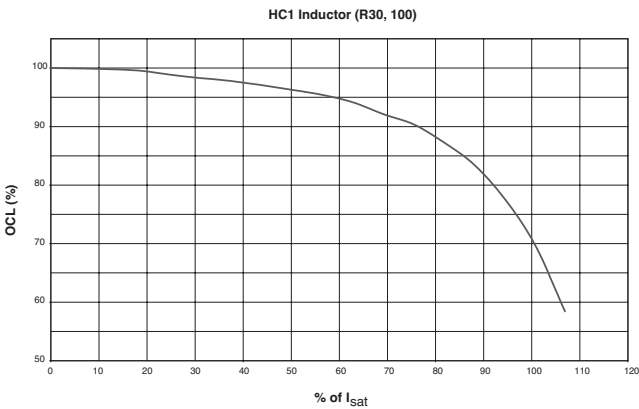
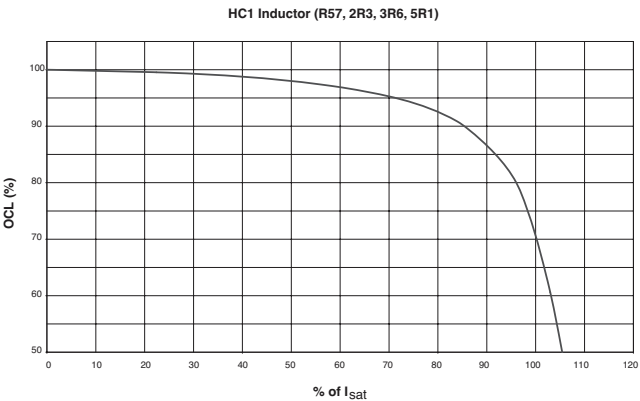
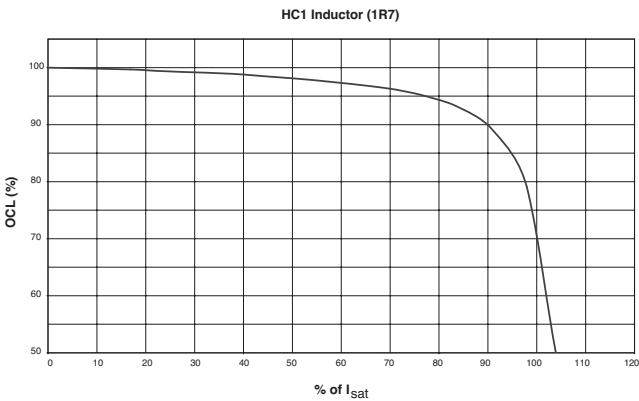
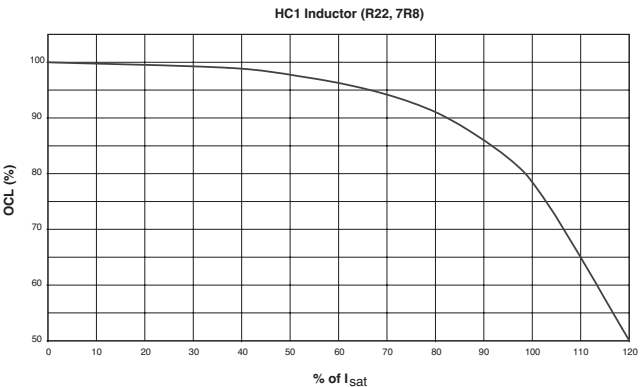
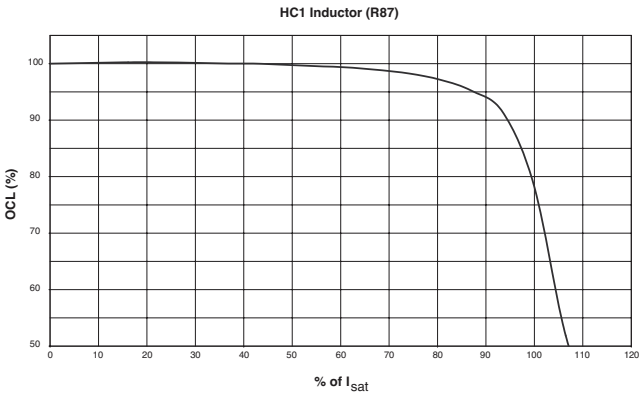
Supplied in tape and reel packaging, 250 parts per reel, 13" diameter reel.



Core loss



Inductance characteristics



Solder reflow profile

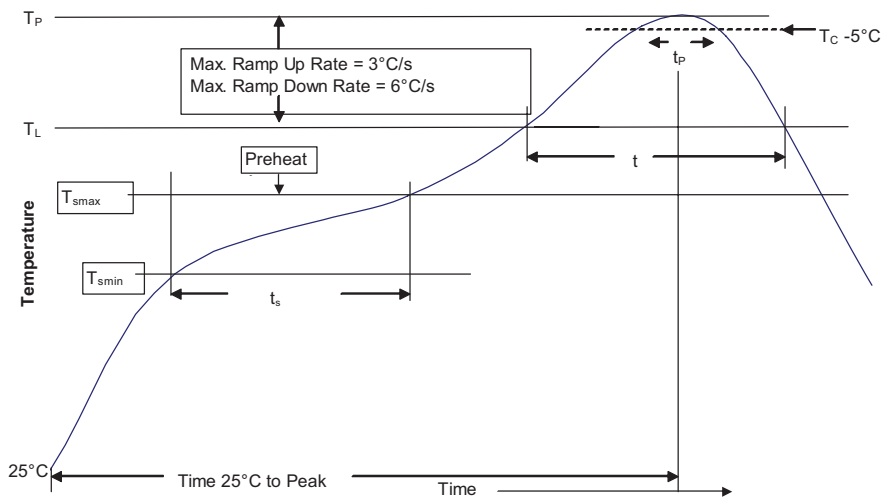


Table 1 - Standard SnPb Solder (T_C)

Package Thickness	Volume mm ³ <350	Volume mm ³ ≥350
<2.5mm)	235°C	220°C
≥2.5mm	220°C	220°C

Table 2 - Lead (Pb) Free Solder (T_C)

Package Thickness	Volume mm ³ <350	Volume mm ³ 350 - 2000	Volume mm ³ >2000
<1.6mm	260°C	260°C	260°C
1.6 – 2.5mm	260°C	250°C	245°C
>2.5mm	250°C	245°C	245°C

Reference JEDEC J-STD-020D

Profile Feature	Standard SnPb Solder	Lead (Pb) Free Solder
Preheat and Soak		
• Temperature min. (T_{smin})	100°C	150°C
• Temperature max. (T_{smax})	150°C	200°C
• Time (T_{smin} to T_{smax}) (t_s)	60-120 Seconds	60-120 Seconds
Average ramp up rate T_{smax} to T_p	3°C/ Second Max.	3°C/ Second Max.
Liquidous temperature (T_L)	183°C	217°C
Time at liquidous (t_L)	60-150 Seconds	60-150 Seconds
Peak package body temperature (T_p)*	Table 1	Table 2
Time (t_p)** within 5 °C of the specified classification temperature (T_C)	20 Seconds**	30 Seconds**
Average ramp-down rate (T_p to T_{smax})	6°C/ Second Max.	6°C/ Second Max.
Time 25°C to Peak Temperature	6 Minutes Max.	8 Minutes Max.

* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

** Tolerance for time at peak profile temperature (t_p) is defined as a supplier minimum and a user maximum.

Life Support Policy: Eaton 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.

Eaton reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Eaton also reserves the right to change or update, without notice, any technical information contained in this bulletin.

Eaton
Electronics Division
1000 Eaton Boulevard
Cleveland, OH 44122
United States
www.eaton.com/elx

© 2015 Eaton
All Rights Reserved
Printed in USA
Publication No. 4328 BU-SB08064
October 2015

EATON
Powering Business Worldwide

Eaton is a registered trademark.

All other trademarks are property of their respective owners.