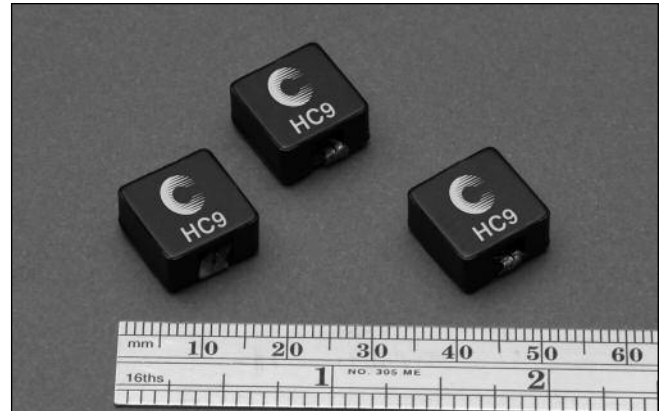


Description

- 155°C maximum total temperature operation
- Surface mount inductors designed for higher speed switch mode applications requiring lower inductance, low voltage and high current
- Design utilizes high temperature powder iron material with a non-organic binder to eliminate thermal aging
- Inductance Range from 0.2 uH to 47.0 uH
- Current Range from 95.0 Amps to 3.65 Amps
- Frequency Range 1kHz to 500kHz



Applications

- Next generation processors
- High current DC-DC converters
- VRM, multi-phase buck regulator
- PC, Workstations, Routers, Servers

Environmental Data

- Storage temperature range: -40°C to +155°C
- Operating temperature range: -40°C to +155°C (range is application specific)
- Solder reflow temperature: +260°C max for 10 seconds maximum

Packaging

- Supplied in tape and reel packaging, 450 parts per reel

Part Number	Rated Inductance μH	OCL (1) nominal $\pm 15\% \mu\text{H}$	I _{rms} (2) Amperes (Typ.)	Isat (3) Amperes 20% rolloff	Isat (4) Amperes 30% rolloff	DCR (m Ω) max. @ 20°C	Volts (5) μSec (V μS)
HC9-R20-R	0.20	0.218	46.7	65	95	0.50	2.87
HC9-R47-R	0.47	0.544	33.7	40	57	0.88	4.78
HC9-1R0-R	1.0	1.04	23.7	28	41	1.87	6.70
HC9-1R5-R	1.5	1.70	21.0	22	32	2.27	8.46
HC9-2R2-R	2.2	2.53	17.2	18	26	3.37	10.4
HC9-3R3-R	3.3	3.52	14.3	15	22	4.87	12.4
HC9-4R3-R	4.3	4.67	13.0	13.2	19.1	5.90	14.4
HC9-6R8-R	6.8	7.45	10.3	11.4	15.1	9.40	18.1
HC9-100-R	10.0	10.9	8.50	8.6	12.5	14.0	22.0
HC9-220-R	22.0	22.4	6.30	6.0	8.7	25.7	31.5
HC9-330-R	33.0	34.5	4.42	4.8	7.0	48.8	37.3
HC9-470-R	47.0	49.2	3.65	3.9	5.7	72.3	44.8

- 1) Test Parameters: 100KHz, 1.0Vrms
- 2) I_{rms} Amperes for approximately ΔT of 40°C without core loss. De-rating is necessary for AC currents. PCB layout, trace thickness and width, airflow, and proximity of other heat generating components will affect the temperature rise. It is recommended that the temperature of the part not exceed 155°C under worst case conditions verified in the end application.
- 3) Peak current for approximately 20% rolloff @20°C
- 4) Peak current for approximately 30% rolloff @20°C
- 5) Applied Volt-Time product (V- μS) across the inductor. This value represents the applied V- μS at operating frequency necessary to generate additional core loss which contributes to the 40°C temperature rise. De-rating of the I_{rms} is required to prevent excessive temperature rise. The 100% V-uS rating is equivalent to a ripple current I_{p-p} of 20% of Isat (30% rolloff option).

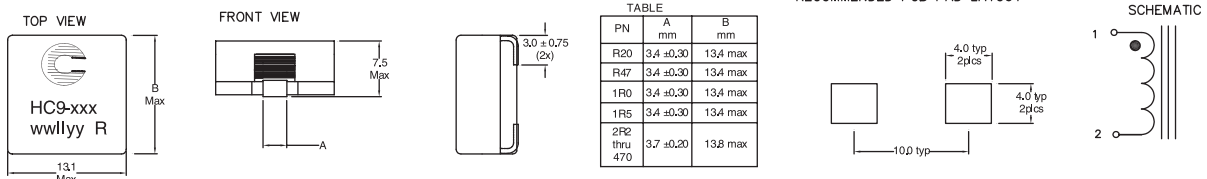
Part number definition:
 First 3 characters = Product code and size.
 Last 3 characters = Inductance in μH . R = decimal point.
 If no R is present third character = # of zeros.

Ihr Vertriebspartner:
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 URL: www.hy-line.ch

Mechanical Diagrams



Dimensions in Millimeters. All dimensions ± 0.2 mm unless otherwise specified.
 wwlyyy = Date Code, R = Revision Level

