

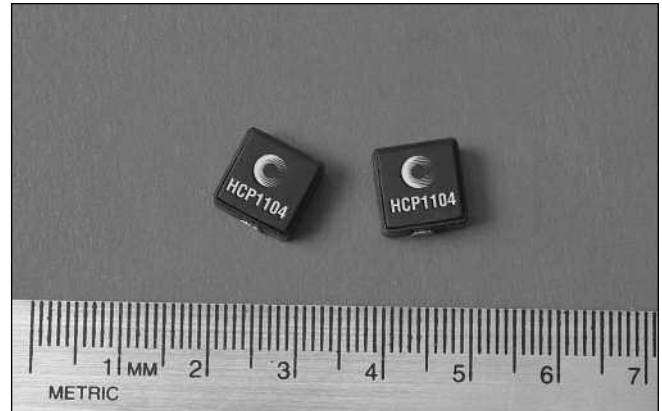


**THE DATASHEET OF
HCP1104-R56-R**



Description

- 125°C maximum total temperature operation
- Low profile surface mount inductors
- 10mm x 11.5mm x 4.0mm package
- Pressed powder iron core material
- Enhanced core coating eliminates rusting and provides high insulation impedance
- Inductance range from 0.2µH to 0.9µH
- Current range from 42.0 Amps to 22 Amps
- Frequency range up to 1MHz



Applications

- Notebook power
- VRM, multi-phase buck regulator
- DC-DC converters
- PC workstations/Servers
- Routers

Environmental Data

- Storage temperature range: -55°C to +125°C
- Operating temperature range: -55°C to +125°C (range is application specific)
- Solder reflow temperature: +260°C max. for 10 seconds maximum

Packaging

- Supplied in tape and reel packaging, 950 parts per reel

Part Number	Rated Inductance (µH)	OCL (1) µH ± 20%	Irms (2) Amperes	Isat (3) Amperes	DCR mΩ@20°C (Typical)	DCR mΩ@20°C (Maximum)	K-factor (4)
HCP1104-R20-R	0.20	0.20	32	42	0.7	0.9	505
HCP1104-R36-R	0.36	0.36	30	40	1.0	1.2	289
HCP1104-R45-R	0.45	0.45	30	35	1.25	1.4	334
HCP1104-R56-R	0.56	0.56	25	32	1.60	1.8	287
HCP1104-R90-R	0.90	0.90	22	25	2.30	2.5	168

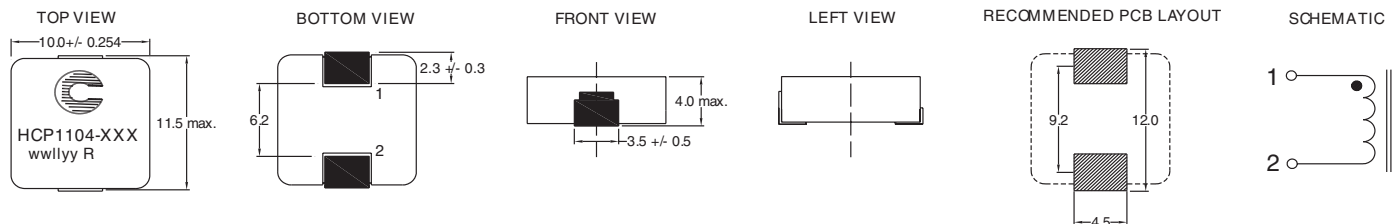
(1) Open Circuit Inductance Test Parameters: 100kHz, 0.25V, 0.0Adc.

(2) Irms: DC current for an approximate ΔT 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) Isat Amperes peak for approximately 20% rolloff (@20°C)

(4) K-factor: Used to determine B p-p for core loss (see graph).
 $B_{p-p} = K \cdot L \cdot \Delta I$, B-p-p: (Gauss), K: (K factor from table), L: (Inductance in uH),
 ΔI (Peak to peak ripple current in Amps).

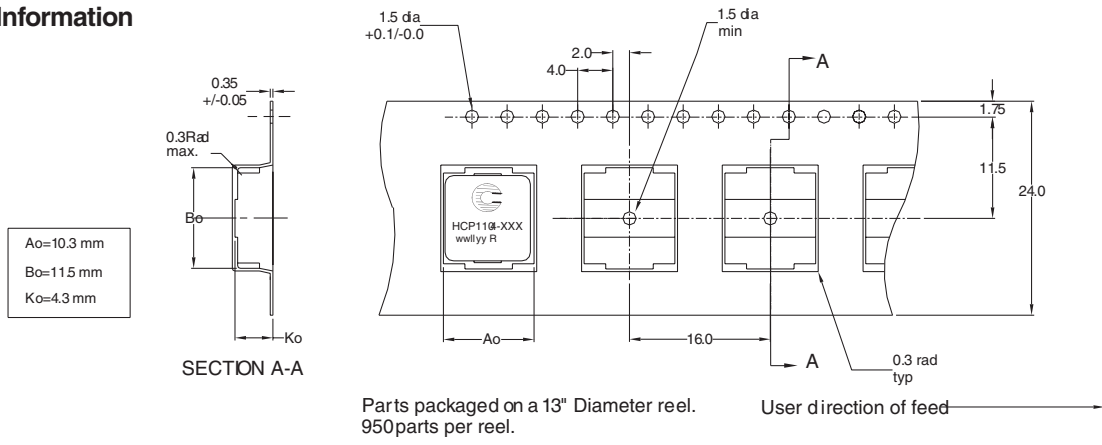
Mechanical Diagrams



Dimensions are in millimeters.

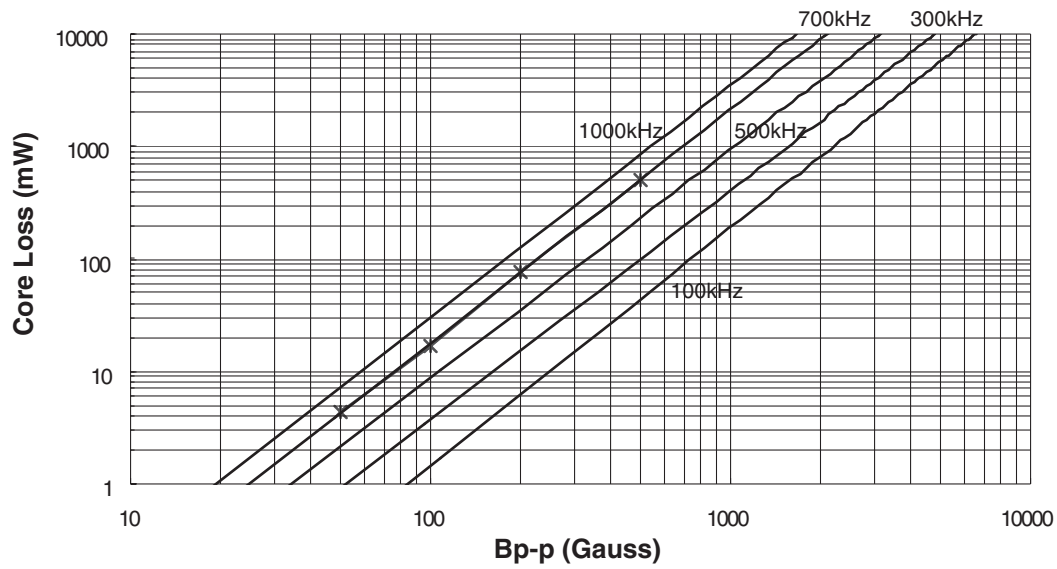
wwlly = Date Code. R = Revision Level.

Packaging Information

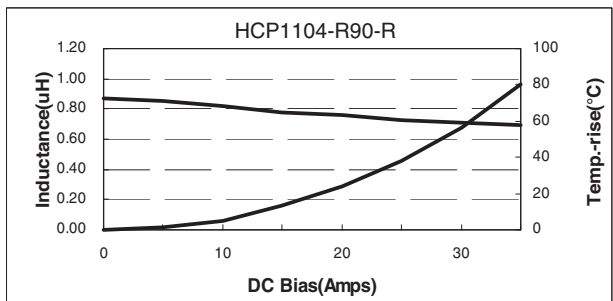
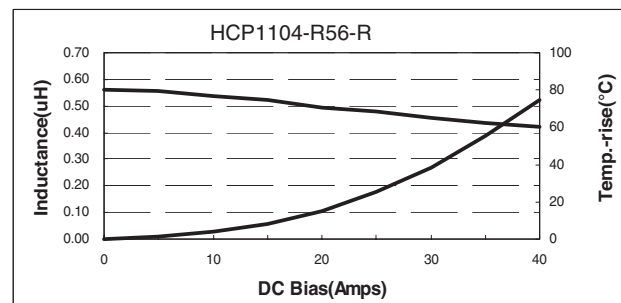
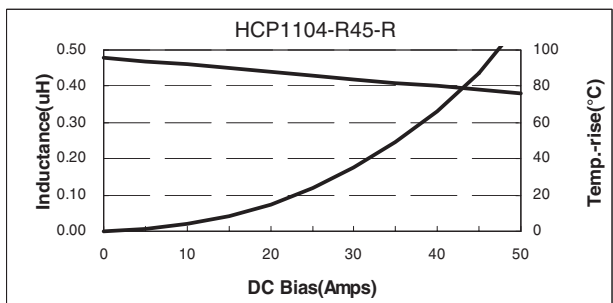
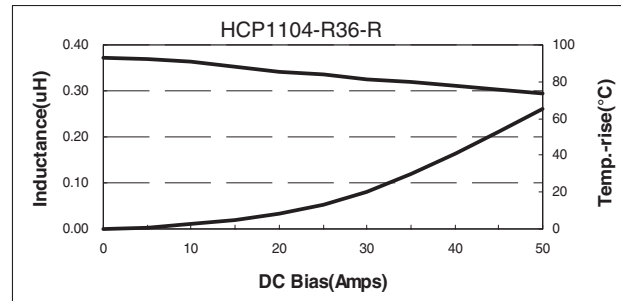
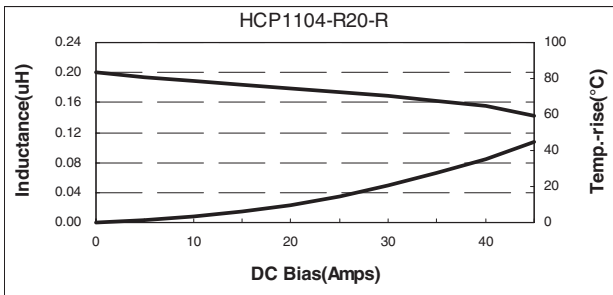


Core Loss

Core Loss vs Bp-p



Performance Graphs



Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

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 [Eaton Bussmann Information](#)

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