



HIGH CURRENT POWER INDUCTORS

HQ1009 SERIES

COMMON APPLICATIONS:

- PDA/notebook/desktop/server applications
- High current POL converters
- Low profile, high current power supplies
- Battery powered devices
- DC/DC converters in distributed power systems
- DC/DC converter for Field Programmable Gate Array (FPGA)

FEATURES:

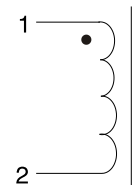
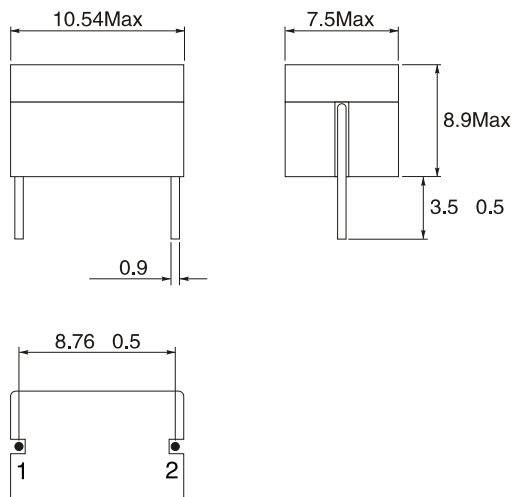
- Current Rating: up to 80Apk
- Inductance Range: 0.14 μ H to 0.31 μ H
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- Compliant to RoHS directive 2002/95/EC

ELECTRICAL CHARACTERISTICS:

Part Number	Inductance L0(μ H) $\pm$ 15% @0Adc	Heat rating current DC (A)	Saturation current DC (A)	DCR Max. (m Ω).
HQ1009-R14Y	0.14	40	80	0.49 $\pm$ 5%
HQ1009-R16Y	0.16	40	70	0.49 $\pm$ 5%
HQ1009-R19Y	0.19	40	65	0.49 $\pm$ 5%
HQ1009-R22Y	0.22	40	55	0.49 $\pm$ 5%
HQ1009-R25Y	0.25	40	50	0.49 $\pm$ 5%
HQ1009-R31Y	0.31	40	35	0.49 $\pm$ 5%

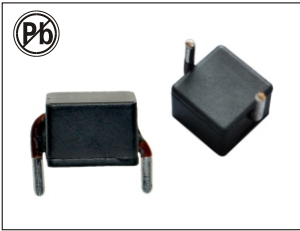
TECHNICAL INFORMATION & PHYSICAL CHARACTERISTICS:

Dimensions(mm)



NOTES:.

- The rated current listed is the lower of the saturation current @25°C or the heating current.
- Test Frequency : 100KHz / 1Vdc
- Heat Rated Current (Irms) will cause the coil temperature rise approximately, $\Delta T=40^{\circ}\text{C}$ without core loss.
- Saturation Current (Isat) will cause L0 to drop approximately 20%
- The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions. Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
- Operating Temperature & Storage Temperature: $-40^{\circ}\text{C} - +125^{\circ}\text{C}$.



HIGH CURRENT POWER INDUCTORS HQ1108 SERIES

COMMON APPLICATIONS:

- PDA/notebook/desktop/server applications
- High current POL converters
- Low profile, high current power supplies
- Battery powered devices
- DC/DC converters in distributed power systems
- DC/DC converter for Field Programmable Gate Array (FPGA)

FEATURES:

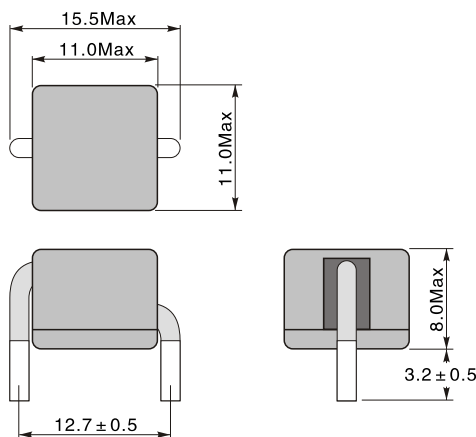
- Size: 15.5mm x 11mm x 8mm
- Current Rating: up to 50A_{pk}
- Inductance Range: 0.14 μ H to 2.25 μ H
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- Compliant to RoHS directive 2002/95/EC

ELECTRICAL CHARACTERISTICS:

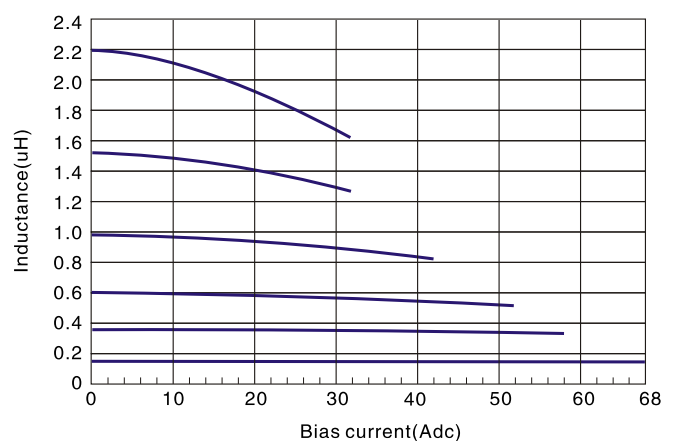
Part Number	Inductance L0(μ H) $\pm$ 15% @0A _{dc}	Inductance μ H typ. @rated current(μ H)	Heat rating current DC (A)	Saturation current DC (A)	DCR Max. (m Ω).
HQ1108-R15	0.15	0.14	38.7	50	0.80
HQ1108-R28	0.28	0.25	38.7	45	0.80
HQ1108-R35	0.35	0.32	25.5	45	1.85
HQ1108-R45	0.45	0.41	25.5	35	1.85
HQ1108-R60	0.6	0.54	20.2	35	2.80
HQ1108-R80	0.8	0.72	20.2	25	2.80
HQ1108-1R0	1.0	0.9	16.5	20	4.10
HQ1108-1R3	1.3	1.17	16.5	20	4.10
HQ1108-1R5	1.5	1.35	15.3	18	4.80
HQ1108-1R8	1.8	1.62	15.3	18	4.80
HQ1108-2R2	2.2	1.98	14.0	16	5.50
HQ1108-2R5	2.5	2.25	14.0	16	5.50

PHYSICAL CHARACTERISTICS:

Dimensions(mm)



DC BIAS CURRENT CHARACTERISTICS:



NOTES:

- The rated current listed is the lower of the saturation current @ 25°C or the heating current.
- Test Frequency : 100KHz / 0.1V_{dc}
- Testing Instrument : L:HP4284A, CH11025, CH3302, CH1320, CH1320S LCR METER/R_{dc}:CH16502, Agilent33420A MICRO OHMMETER.
- Heat Rated Current (I_{rms}) will cause the coil temperature rise approximately, $\Delta T=40^{\circ}\text{C}$ without core loss.
- Saturation Current (I_{sat}) will cause L0 to drop approximately 10%
- The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions. Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
- Operating Temperature & Storage Temperature: -40°C - +125°C.