



SHCL 1 SERIES

MAXIMUM POWER DENSITY



ELECTRICAL SPECIFICATIONS

- **Operating Temperature:** -55°C to +180°C
- **Storage Temperature:** -55°C to +180°C
- **Temperature Rise:** See Performance Curves
- **Dielectric Withstanding Voltage:** 500 V_{RMS}
- **Different electrical values available upon request**

FEATURES

- **Terminations:** Tin-lead
- **Moisture, Shock and Immersion Resistant**
- **Magnetically Shielded**
- Built to meet **MIL-STD-981** specifications
- **NASA outgassing compliant per ASTM E595** (TML <1%, CVCM <0.1%)

APPLICATIONS

- DC power choke
- Resonant inductor
- Input/Output filter
- Swinging inductor

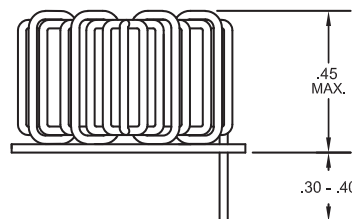
ALL PARTS AVAILABLE AS CLASS S OR CLASS B

MIL-STD-981

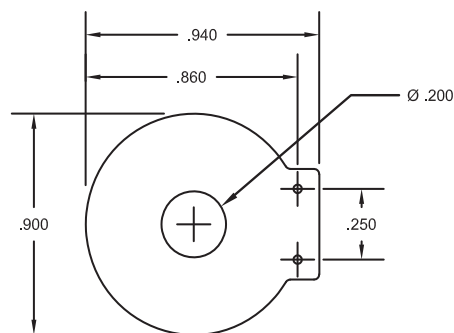
Inductance Range	DCR max (Ohms)	Current Rating (A)
14 uH - 2.50 mH	0.010 - 1.72	2.0 - 30

ALL DIMENSIONS: INCHES

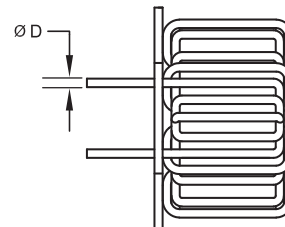
MARKINGS: LASER ETCH OR INK



SIDE VIEW

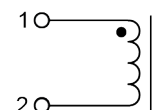


BOTTOM VIEW



SIDE VIEW

Tolerances ±.010 inches



SCHEMATIC

CUSTOM DESIGNS & MODIFICATIONS:

Other electrical configurations and performance characteristics are available in various sizes and package types

SHCL 1 SERIES





DATA TABLE

Vanguard P/N	Inductance $\pm 10\%$	Inc. Inductance (uH)	DCR max (Ohms)	Rated Current (Adc) ^{6/}	Rated Current (Adc) ^{7/}	Lead Dimension "D"
SHCL1-140	14 uH	9.2	0.010	15.3	30	0.052
SHCL1-500	50 uH	31	0.017	9.9	15	0.046
SHCL1-111	110 uH	71	0.05	6.4	9.5	0.037
SHCL1-201	200 uH	126	0.15	4.9	8.3	0.033
SHCL1-391	390 uH	265	0.16	3.3	4.5	0.026
SHCL1-591	590 uH	446	0.28	2.4	4.0	0.021
SHCL1-751	750 uH	541	1.28	2.2	3.7	0.021
SHCL1-102	1.00 mH	748	1.28	1.8	3.1	0.019
SHCL1-182	1.85 mH	1346	0.83	1.4	2.4	0.017
SHCL1-222	2.20 mH	1540	0.72	1.3	2.3	0.017
SHCL1-252	2.50 mH	1873	1.72	1.2	2.0	0.015

^{1/} Inductance measured at 10 kHz, 0.1 V_{RMS}

^{2/} DCR measured at room temperature

^{3/} Incremental inductance is the approximate value that the inductance will drop to when rated current is applied

^{4/} Maximum Weight: TBD

^{5/} All electrical values above are referenced at room temperature prior to burn-in, after burn-in the inductance can shift to approximately +/- 20%

^{6/} Based on 40°C temperature rise at an ambient temperature of 130°C. All burn-in testing is performed per this current value and MIL-PRF-27 Class T (170°C) operating temperature

^{7/} See performance curves for operating temperature versus applied current

VE PART NUMBER
STRUCTURE KEYINDUCTANCE
(uH)

The first two digits are significant. The last digit specifies zeroes to follow:

111 = 110uH

102 = 1.0mH

252 = 2.5mH

EXAMPLE: SHCL1-140KS-3-B

TOLERANCE
(%)

K

± 10

TERMINATION

S

SnPb

RELIABILITY

2

Group A
MIL-STD-981

3

Group A+B
MIL-STD-981

4

Group A+B+C
MIL-STD-981

7

Other

PACKAGING
(Default Bulk)

B

Bulk

CUSTOM DESIGNS & MODIFICATIONS:

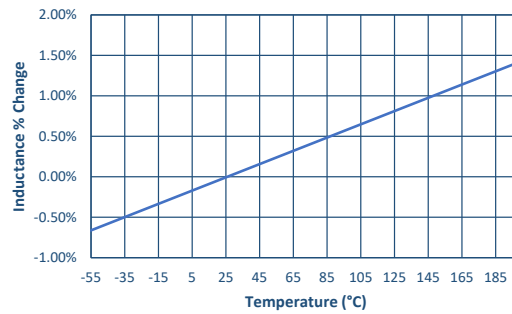
Other electrical configurations and performance characteristics are available in various sizes and package types

SHCL 1 SERIES

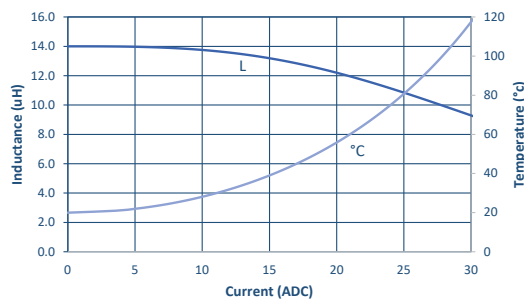




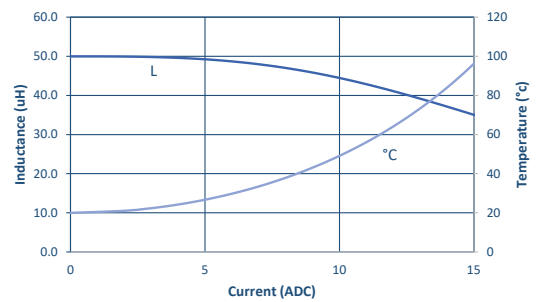
Inductance % Change Vs. Temperature



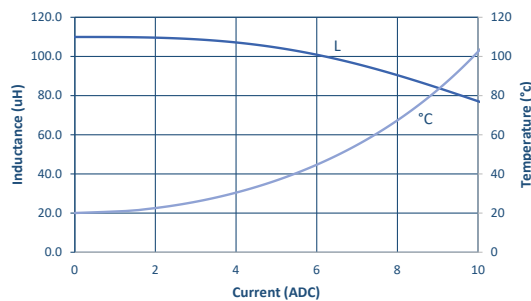
HCL1-140



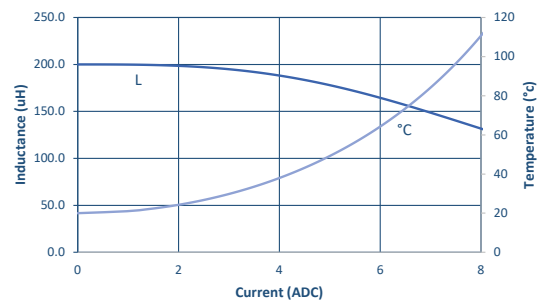
HCL1-500



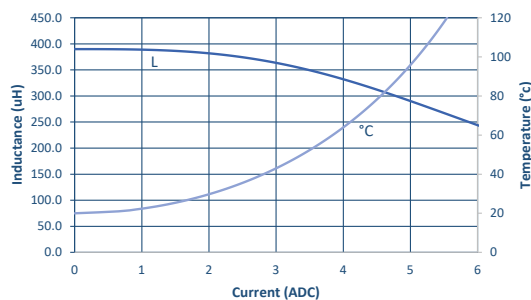
HCL1-111



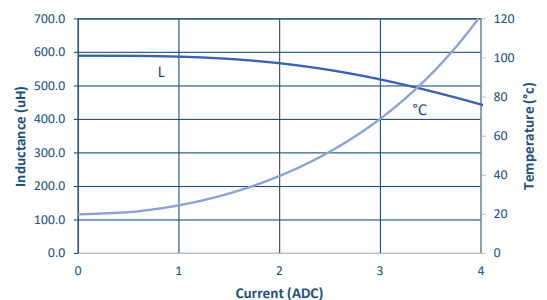
HCL1-201



HCL1-391



HCL1-591

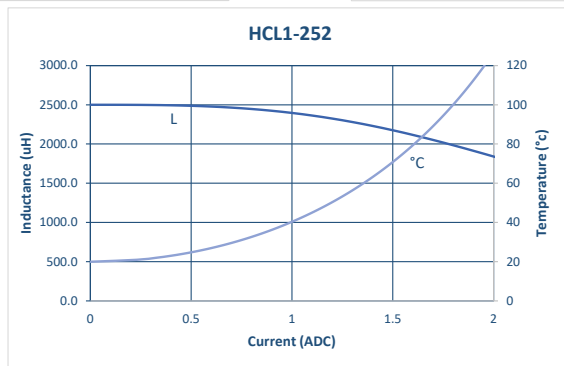
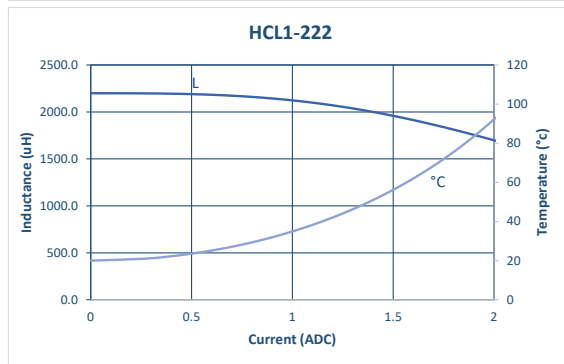
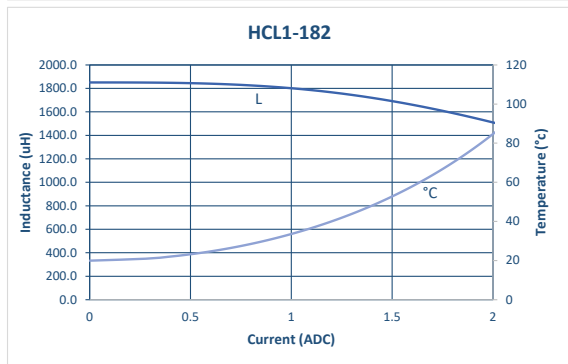
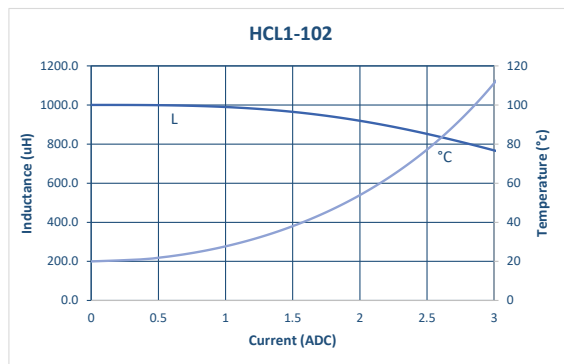
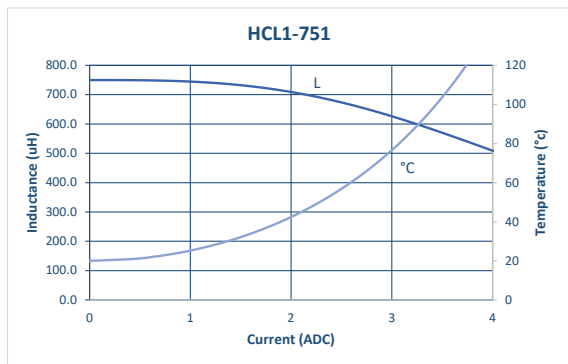


CUSTOM DESIGNS & MODIFICATIONS:

Other electrical configurations and performance characteristics are available in various sizes and package types

SHCL1 SERIES





CUSTOM DESIGNS & MODIFICATIONS:

Other electrical configurations and performance characteristics are available in various sizes and package types

SHCL 1 SERIES

