



XTHCI6H SERIES

HIGH CURRENT INDUCTOR



+200°C

Inductance Range	DCR max (Ohms)	Current Rating (A)
216 nH - 10 mH	0.010 - 32.3	8.7 - 0.15

ELECTRICAL SPECIFICATIONS

- **Operating Temperature:** -40°C to +200°C
- **Storage Temperature:** -40°C to +200°C
- **Temperature Rise:** < 30°C
- **Dielectric Withstanding Voltage:** 100 V_{RMS}
- **Different electrical values available upon request**

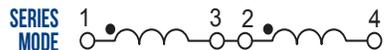
FEATURES

- **Ideal** for geophysical application in environments < 200°C, (for +200°C high temperature version, see product key)
- **Compact**, low profile, ideal for automatic placement
- **Terminations:** HMP required high temperature version
- **Welded Internal Connections**
- **Moisture, Shock and Immersion Resistant**
- **Magnetically Shielded**
- **Other termination finishes available upon request**
- **Resistance to Soldering Heat:** 265°C for 10 seconds high temperature version
- **Multiple Configurations:** Series, parallel, transformer, dual inductor

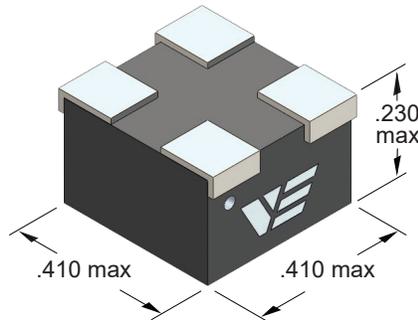
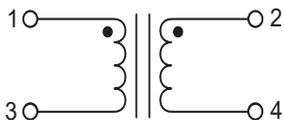
APPLICATIONS

- Filter inductors
- Power supplies
- Ripple suppressors
- DC/DC converters
- Common mode chokes
- SEPIC converters
- Isolation transformers

TYPICAL USER CONNECTIONS

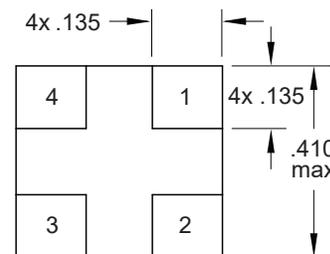
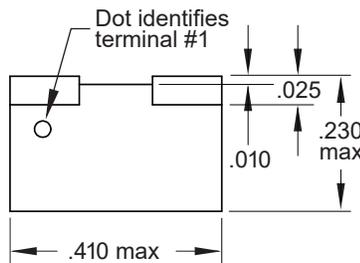


SCHEMATIC

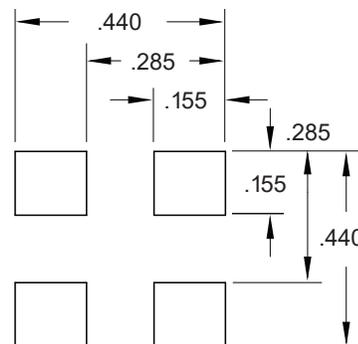


THRU-HOLE & GULL-WING PACKAGES ALSO AVAILABLE

MARKINGS: LASER ETCH OR INK



IN	MM
0.440	11.18
0.410	10.41
0.230	5.84
0.285	7.24
0.155	3.94
0.135	3.43
0.025	0.64
0.010	0.25



CUSTOM DESIGNS & MODIFICATIONS:

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





DATA TABLE

Vanguard P/N	Series Inductance (uH)	Series DCR max (Ohms)	Series Rated Current (Adc)	Series Inc. Current ΔL 10% (Adc)	Series Inc. Current ΔL 20% (Adc)
XTHCI6H-R86M*-*-*	0.86	0.040	4.4	10.3	14.3
XTHCI6H-201M*-*-*	1.9	0.060	3.6	6.9	9.6
XTHCI6H-351M*-*-*	3.5	0.070	3.2	5.2	7.2
XTHCI6H-501M*-*-*	5.4	0.090	2.9	4.1	5.7
XTHCI6H-102M*-*-*	10.6	0.120	2.5	3.0	4.1
XTHCI6H-252M*-*-*	26.1	0.180	2.0	1.9	2.6
XTHCI6H-502M*-*-*	50.0	0.250	1.7	1.4	1.9
XTHCI6H-752M*-*-*	75.0	0.320	1.5	1.1	1.5
XTHCI6H-103K*-*-*	100.0	0.360	1.5	0.94	1.3
XTHCI6H-253K*-*-*	250.0	0.910	0.89	0.61	0.84
XTHCI6H-503K*-*-*	500.0	2.50	0.54	0.43	0.60
XTHCI6H-753K*-*-*	750.0	2.70	0.52	0.23	0.34
XTHCI6H-104K*-*-*	1.0 mH	4.00	0.43	0.20	0.29
XTHCI6H-204K*-*-*	2.0 mH	7.40	0.31	0.14	0.21
XTHCI6H-304K*-*-*	3.0 mH	9.00	0.28	0.11	0.17
XTHCI6H-504K*-*-*	5.0 mH	18.3	0.20	0.09	0.13
XTHCI6H-754K*-*-*	7.5 mH	28.0	0.16	0.07	0.11
XTHCI6H-105K*-*-*	10.0 mH	32.3	0.15	0.06	0.09

Vanguard P/N	Parallel Inductance (uH)	Parallel DCR max (Ohms)	Parallel Rated Current (Adc)	Parallel Inc. Current ΔL 10% (Adc)	Parallel Inc. Current ΔL 20% (Adc)
XTHCI6H-R86M*-*-*	0.216	0.010	8.7	20.7	28.7
XTHCI6H-201M*-*-*	0.486	0.015	7.2	13.8	19.1
XTHCI6H-351M*-*-*	0.864	0.018	6.3	10.3	14.3
XTHCI6H-501M*-*-*	1.35	0.023	5.8	8.3	11.5
XTHCI6H-102M*-*-*	2.65	0.030	4.9	5.9	8.2
XTHCI6H-252M*-*-*	6.50	0.045	4.0	3.8	5.2
XTHCI6H-502M*-*-*	12.50	0.063	3.4	2.8	3.8
XTHCI6H-752M*-*-*	18.75	0.080	3.0	2.2	3.0
XTHCI6H-103K*-*-*	25.00	0.090	3.1	1.9	2.6
XTHCI6H-253K*-*-*	62.50	0.228	1.8	1.2	1.7
XTHCI6H-503K*-*-*	125.0	0.625	1.1	0.86	1.2
XTHCI6H-753K*-*-*	187.5	0.675	1.0	0.46	0.68
XTHCI6H-104K*-*-*	250.0	1.00	0.85	0.40	0.59
XTHCI6H-204K*-*-*	500.0	1.85	0.63	0.28	0.41
XTHCI6H-304K*-*-*	750.0	2.25	0.57	0.23	0.34
XTHCI6H-504K*-*-*	1.250 mH	4.58	0.40	0.18	0.26
XTHCI6H-754K*-*-*	1.875 mH	7.00	0.32	0.14	0.21
XTHCI6H-105K*-*-*	2.500 mH	8.08	0.30	0.13	0.19

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

2/ DCR measured at room temperature

3/ Current Rating is based on a 30°C maximum temperature rise at an ambient temperature of 100°C

4/ Incremental current is the approximate value that will result in a percentage drop of inductance as indicated in the table

5/ Maximum Weight: TBD

6/ Units are series mode tested only, parallel mode values are reference only

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VE PART NUMBER
STRUCTURE KEY

EXAMPLE: XTHCI6H-R86MS-7-T

INDUCTANCE
(uH) (mH)

R86 = 0.86 uH
103 = 100 uH
504 = 5 mH

TOLERANCE
(%)

K	± 10
M	± 20

TERMINATION

S	HMP
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RELIABILITY

7	Other
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PACKAGING
(Default Bulk)

B	Bulk
T	Tape and Reel

Tape and reel specs
Pcs. / reel maximum: (13") 530
Pitch between parts: 16 mm
Tape width: 24 mm

Parts that don't meet minimum reel requirements will be supplied on cut tape

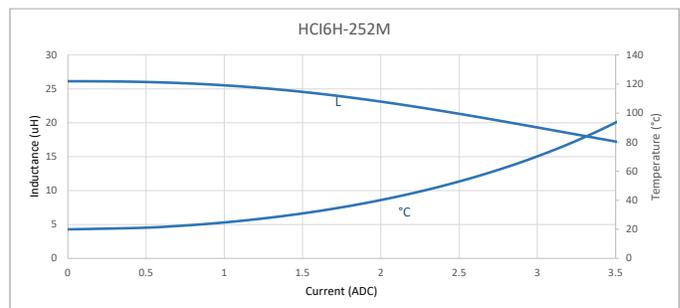
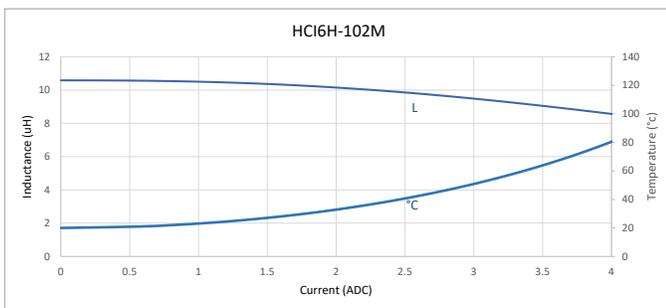
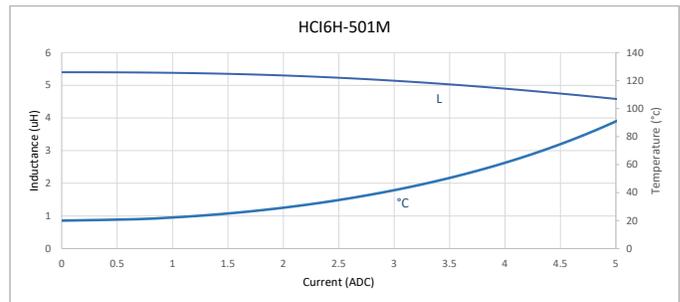
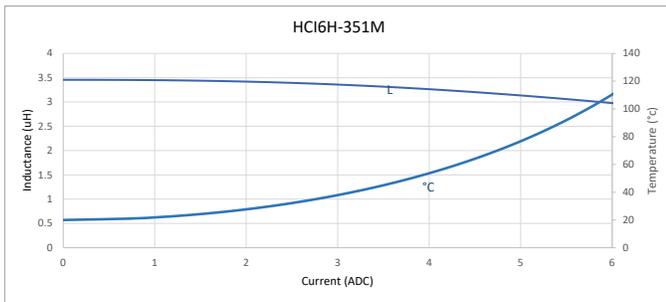
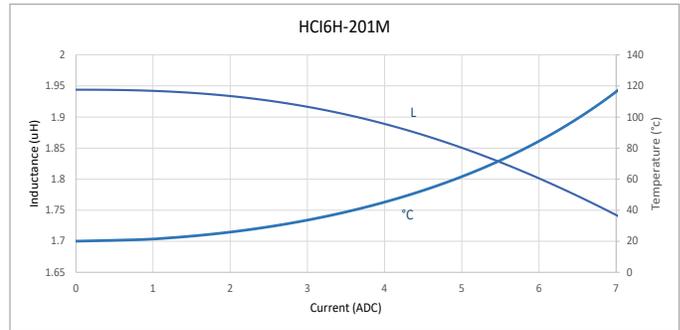
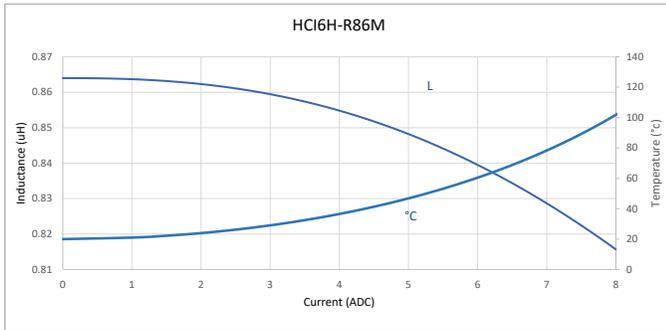
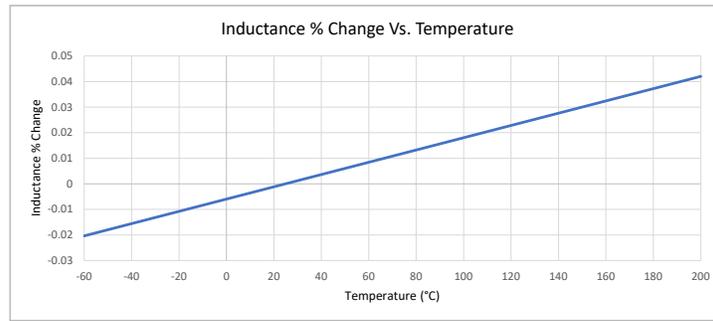
Tape and Reel not available for Thru-Hole or Gull-Wing Packages

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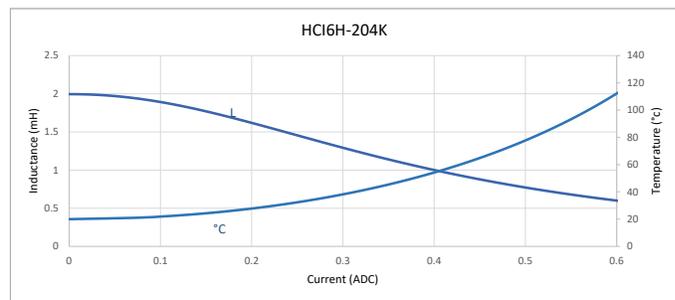
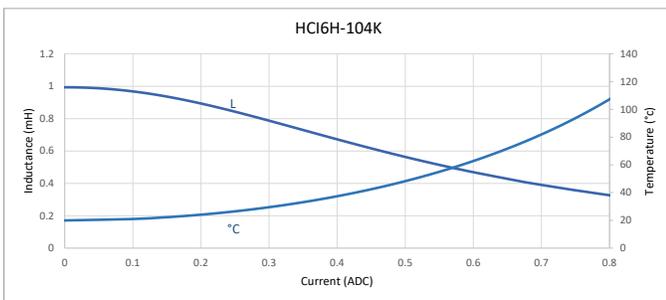
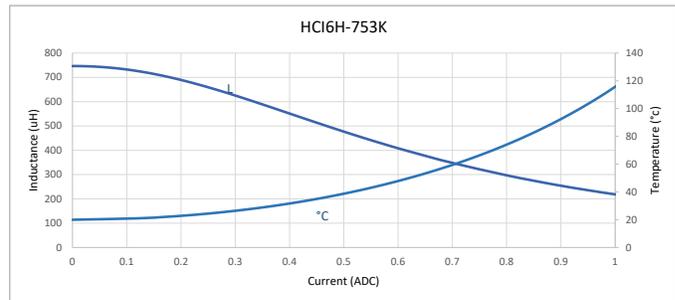
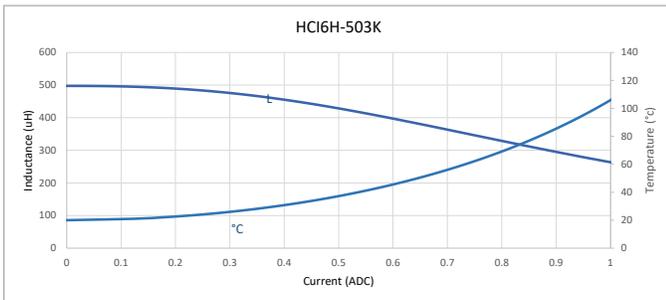
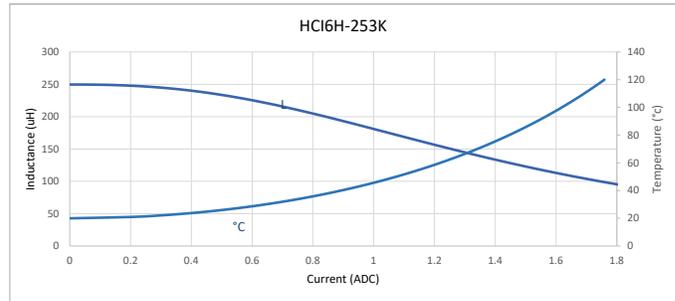
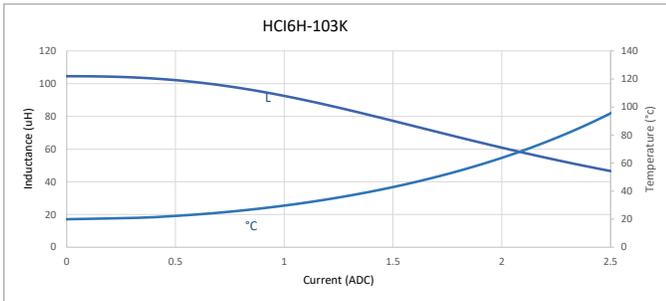
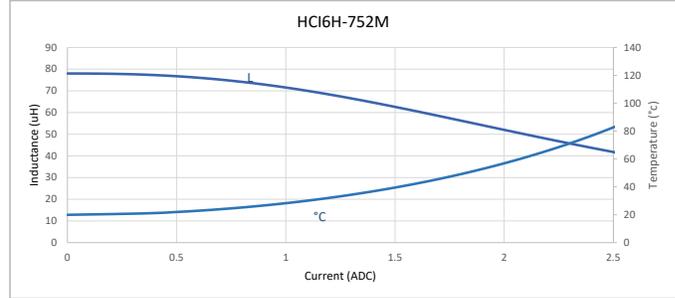
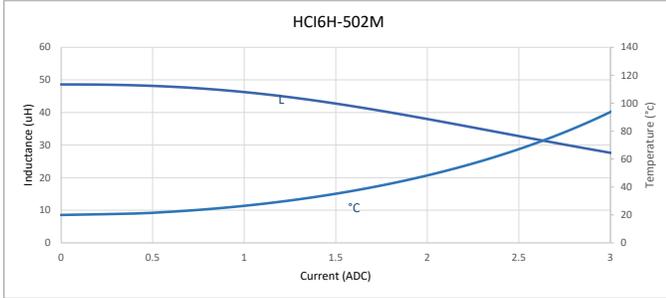




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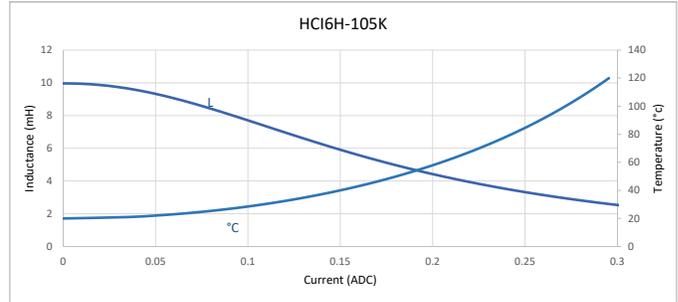
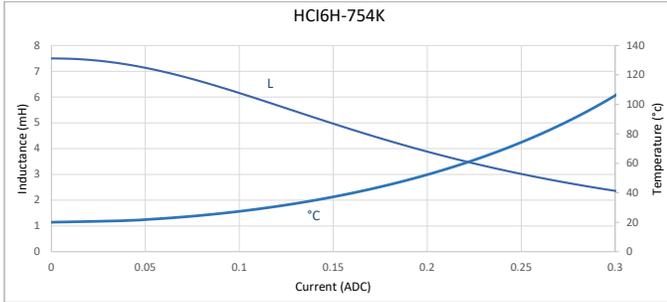
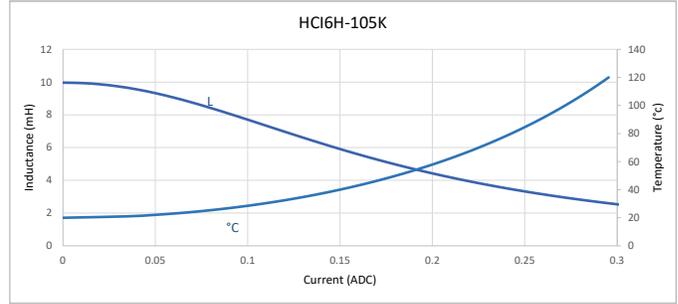
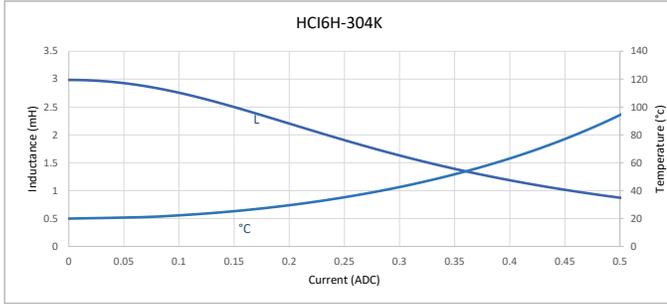


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