



## XTHCI6M SERIES

### HIGH CURRENT INDUCTOR



### +200°C

Inductance Range	DCR max (Ohms)	Current Rating (A)
215 nH - 10 mH	0.010 - 23.0	0.18 - 8.72

### 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<sub>RMS</sub>
- **Different electrical values available upon request**

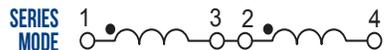
### FEATURES

- **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

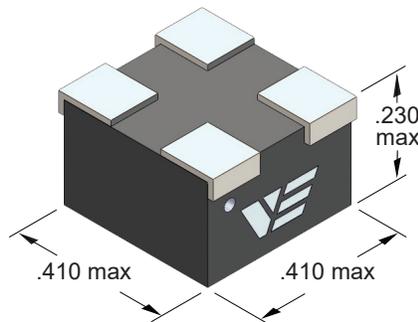
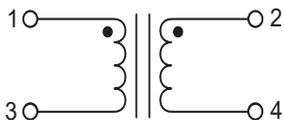
### APPLICATIONS

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

#### TYPICAL USER CONNECTIONS

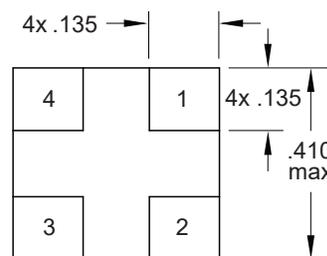
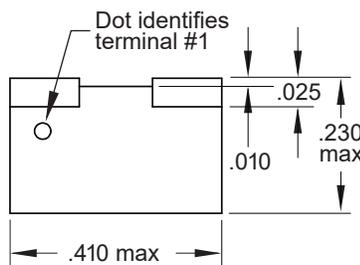


#### SCHEMATIC

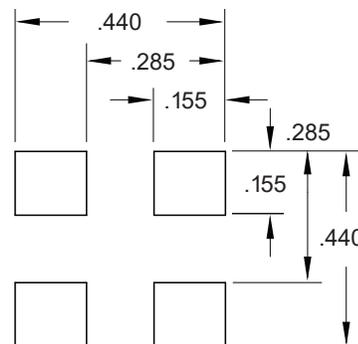


THRU-HOLE & GULL-WING PACKAGES ALSO AVAILABLE

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)
XTHCI6M-R86M*-*-*	0.86	0.040	4.4	6.3	8.7
XTHCI6M-201M*-*-*	2.0	0.060	3.6	4.2	5.8
XTHCI6M-351M*-*-*	3.5	0.070	3.2	3.1	4.3
XTHCI6M-501M*-*-*	5.0	0.090	2.9	2.5	3.5
XTHCI6M-102M*-*-*	10.0	0.120	2.5	1.8	2.5
XTHCI6M-252M*-*-*	25.0	0.180	2.0	1.1	1.6
XTHCI6M-502M*-*-*	50.0	0.250	1.7	0.84	1.2
XTHCI6M-752M*-*-*	75.0	0.320	1.5	0.66	0.91
XTHCI6M-103K*-*-*	100.0	0.360	1.5	0.57	0.79
XTHCI6M-253K*-*-*	250.0	0.910	0.89	0.37	0.51
XTHCI6M-503K*-*-*	500.0	2.50	0.54	0.26	0.36
XTHCI6M-753K*-*-*	750.0	2.70	0.52	0.18	0.25
XTHCI6M-104K*-*-*	1.0 mH	4.00	0.43	0.16	0.22
XTHCI6M-204K*-*-*	2.0 mH	7.40	0.31	0.11	0.15
XTHCI6M-304K*-*-*	3.0 mH	9.00	0.28	0.09	0.12
XTHCI6M-504K*-*-*	5.0 mH	16.4	0.21	0.06	0.09
XTHCI6M-754K*-*-*	7.5 mH	20.0	0.19	0.05	0.07
XTHCI6M-105K*-*-*	10.0 mH	23.0	0.18	0.05	0.06

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)
XTHCI6M-R86M*-*-*	0.215	0.010	8.7	12.5	17.3
XTHCI6M-201M*-*-*	0.500	0.015	7.2	8.4	11.5
XTHCI6M-351M*-*-*	0.875	0.018	6.3	6.3	8.7
XTHCI6M-501M*-*-*	1.25	0.023	5.8	5.0	6.9
XTHCI6M-102M*-*-*	2.50	0.030	4.9	3.6	4.9
XTHCI6M-252M*-*-*	6.25	0.045	4.0	2.3	3.1
XTHCI6M-502M*-*-*	12.50	0.063	3.4	1.7	2.3
XTHCI6M-752M*-*-*	18.75	0.080	3.0	1.3	1.8
XTHCI6M-103K*-*-*	25.00	0.090	3.1	1.1	1.6
XTHCI6M-253K*-*-*	62.50	0.228	1.8	0.74	1.0
XTHCI6M-503K*-*-*	125.0	0.625	1.1	0.52	0.72
XTHCI6M-753K*-*-*	187.5	0.675	1.0	0.36	0.50
XTHCI6M-104K*-*-*	250.0	1.00	0.85	0.31	0.43
XTHCI6M-204K*-*-*	500.0	1.85	0.63	0.22	0.31
XTHCI6M-304K*-*-*	750.0	2.25	0.57	0.18	0.25
XTHCI6M-504K*-*-*	1.250 mH	4.10	0.42	0.13	0.18
XTHCI6M-754K*-*-*	1.875 mH	5.00	0.38	0.11	0.15
XTHCI6M-105K*-*-*	2.500 mH	5.75	0.35	0.09	0.13

1/ Inductance measured at 10 kHz, 0.1 V<sub>RMS</sub>

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

### CUSTOM DESIGNS & MODIFICATIONS:

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

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VE PART NUMBER  
STRUCTURE KEY

EXAMPLE: XTHCI6M-R86MS-7-T

INDUCTANCE  
(uH) (mH)

R56 = 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

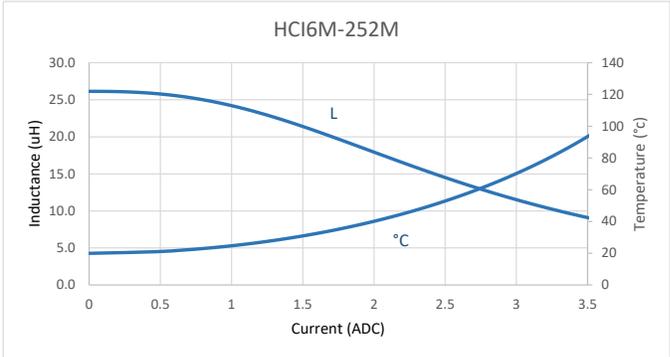
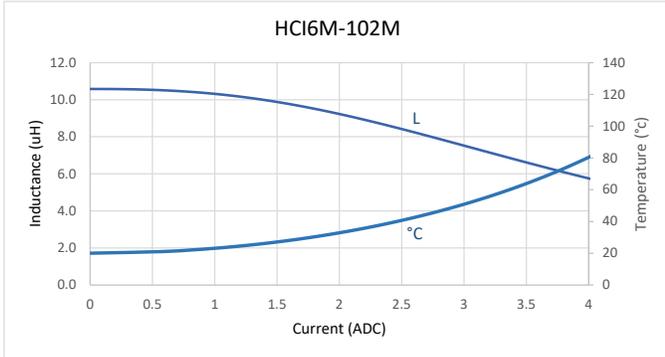
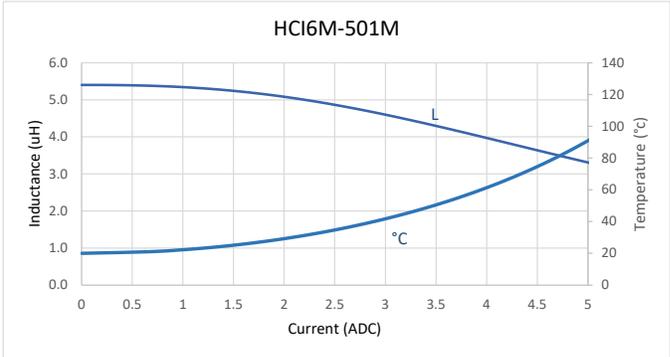
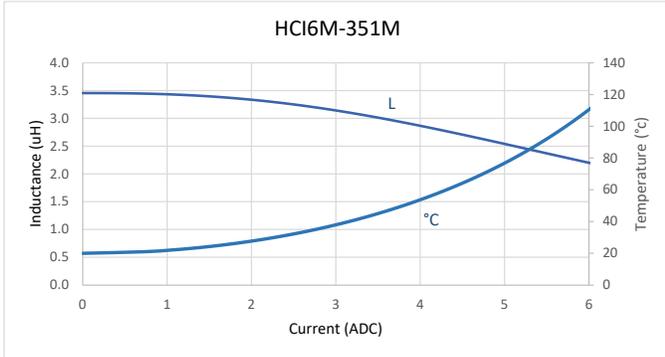
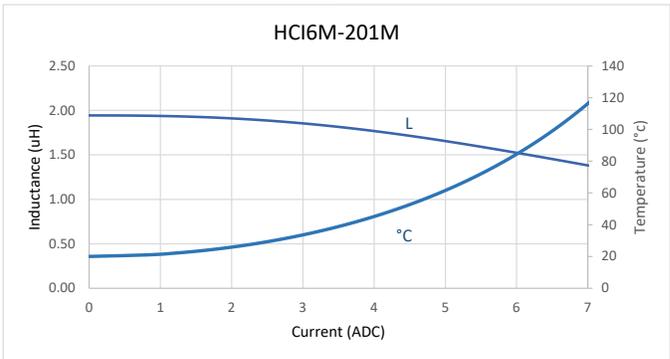
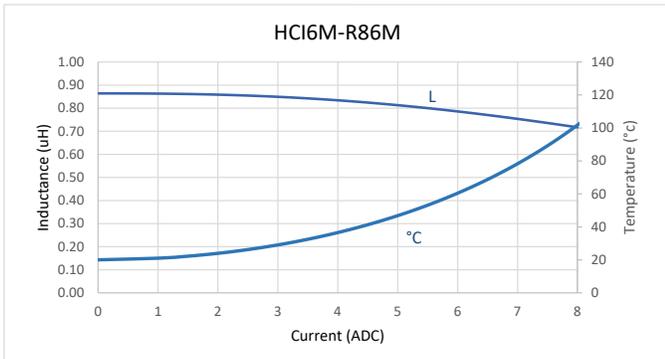
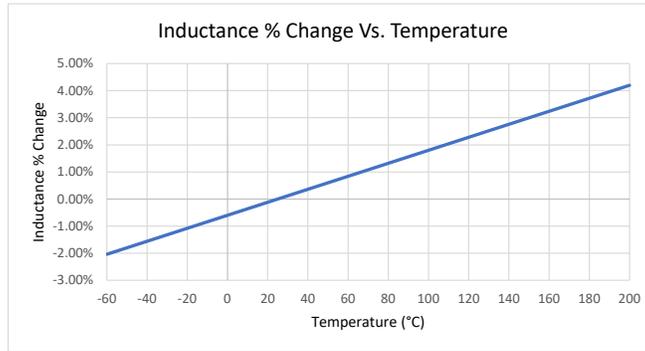
*Tape and Reel not available for Thru-Hole or Gull-Wing Packages*

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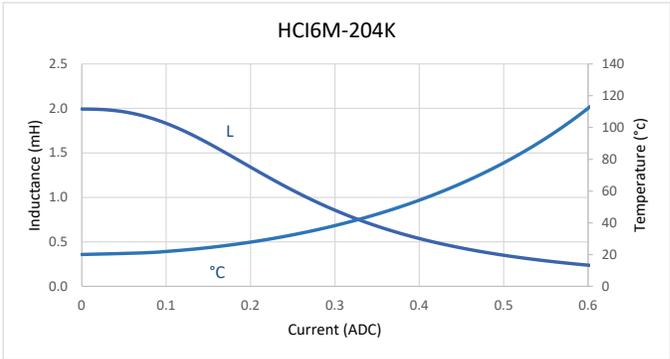
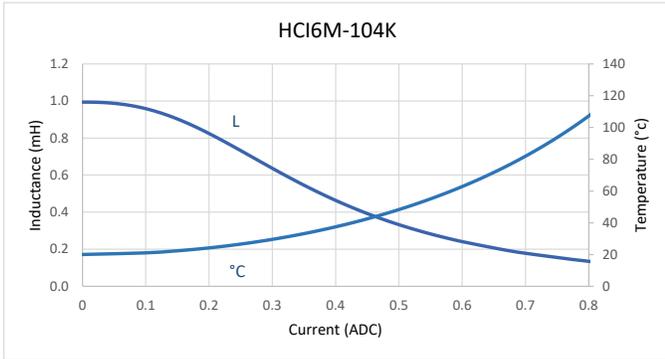
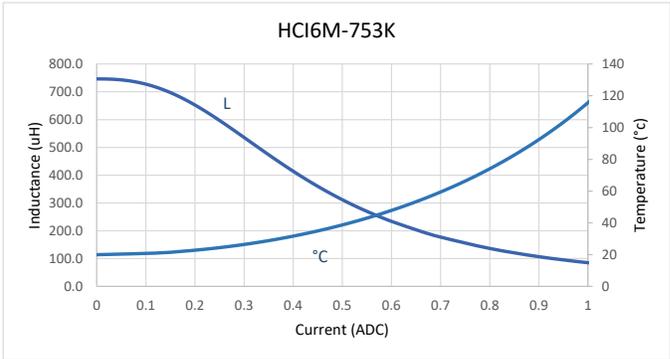
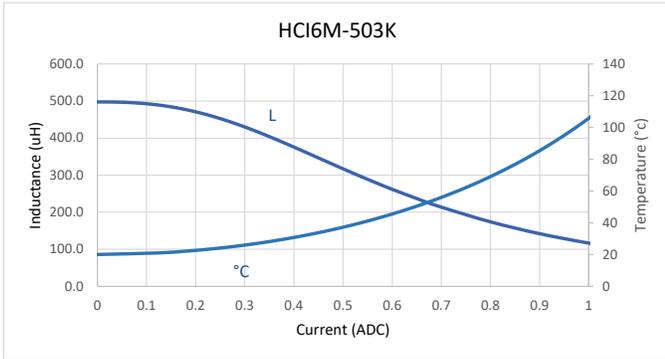
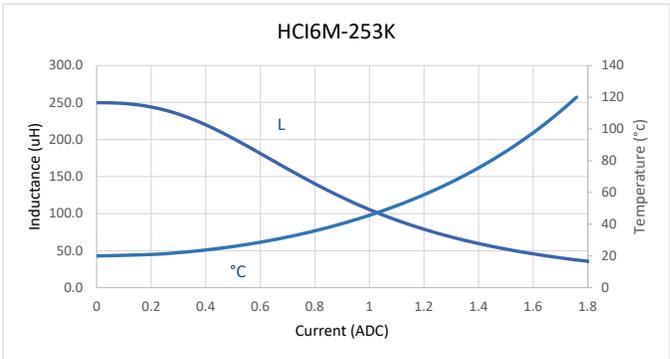
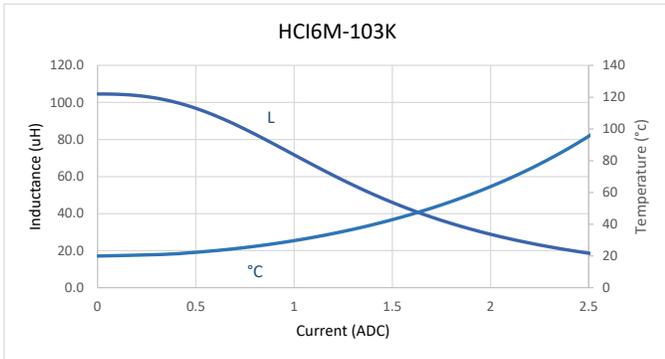
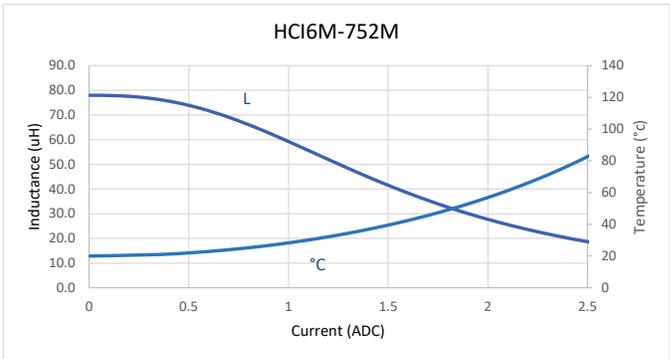
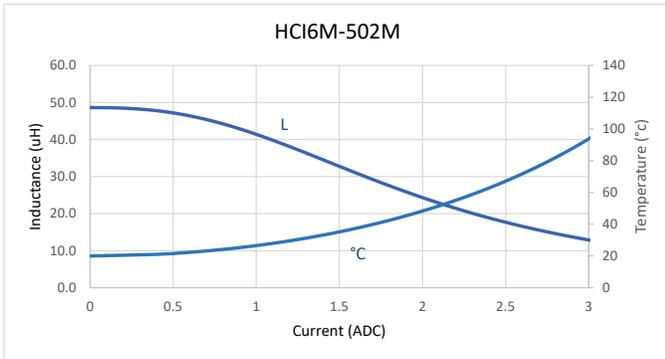


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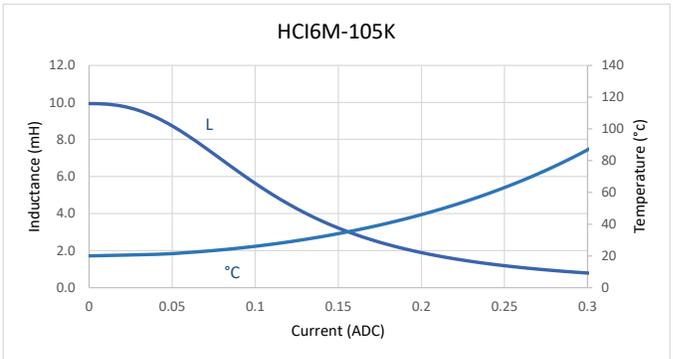
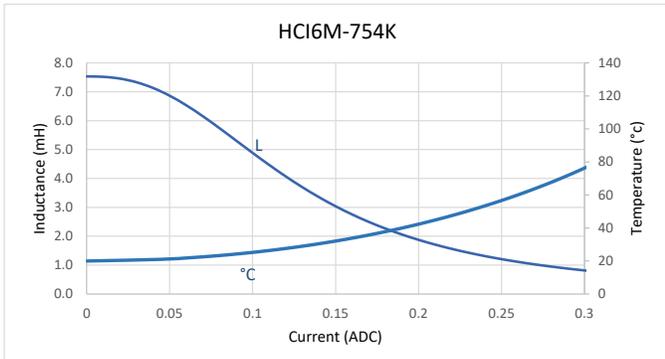
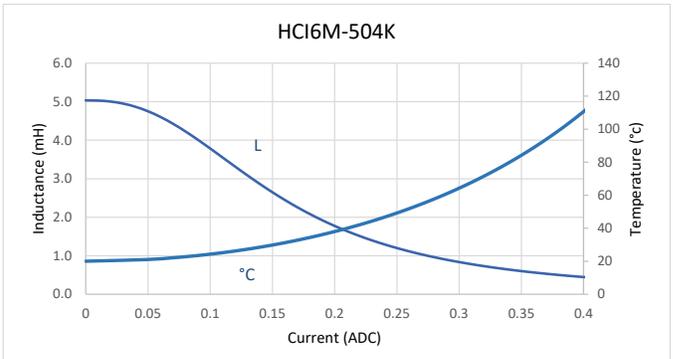
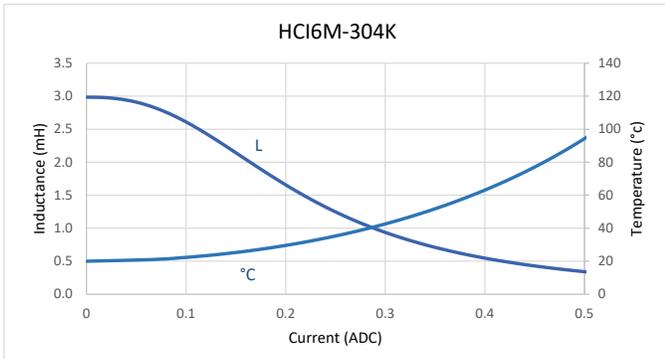


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## XTHCl6M SERIES





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XTHCl6M SERIES

