



## XTHCI10M SERIES

### HIGH CURRENT INDUCTOR



### +200°C

Inductance Range	DCR max (Ohms)	Current Rating (A)
0.250 uH - 10 mH	0.00225 - 10.7	15.3 - 0.24

ALL DIMENSIONS: INCHES

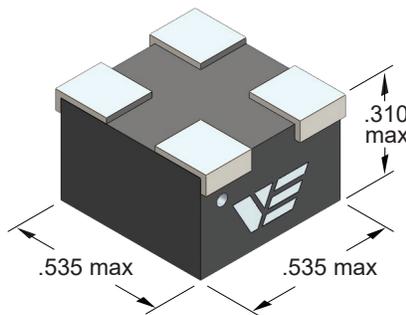
THRU-HOLE & GULL-WING PACKAGES ALSO AVAILABLE

### ELECTRICAL SPECIFICATIONS

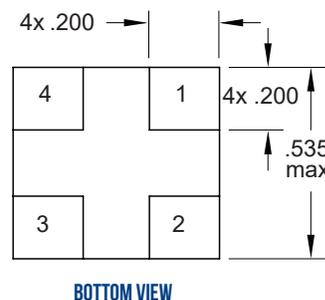
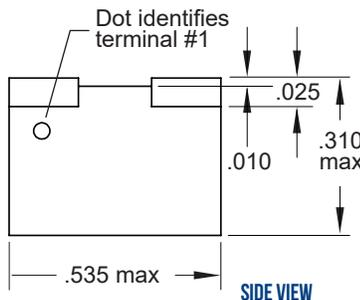
- **Operating Temperature:** -40°C to +200
- **Storage Temperature:** -40°C to +200
- **Temperature Rise:** < 30°C
- **Dielectric Withstanding Voltage:** 100 V<sub>RMS</sub>
- **Different electrical values available upon request**

### 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



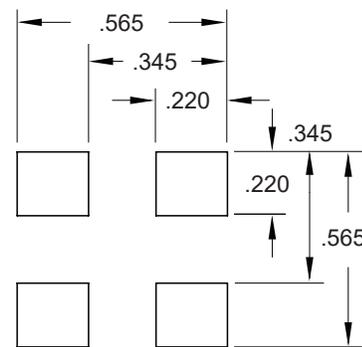
MARKINGS: LASER ETCH OR INK



### APPLICATIONS

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

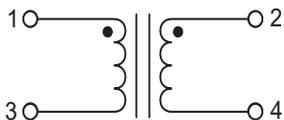
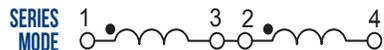
IN	MM
0.565	14.35
0.535	13.59
0.345	8.76
0.310	7.87
0.220	5.59
0.200	5.08
0.025	0.64
0.010	0.25



RECOMMENDED MOUNTING PAD CIRCUIT SIDE

#### TYPICAL USER CONNECTIONS

#### SCHEMATIC



#### 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)
XTHCI10M-101M	1.0	0.009	7.6	10.1	13.9
XTHCI10M-241M	2.4	0.012	7.1	6.7	9.2
XTHCI10M-421M	4.2	0.016	6.3	5.0	6.9
XTHCI10M-102M	10.0	0.020	5.2	3.4	4.6
XTHCI10M-252M	25.0	0.030	4.4	2.2	3.1
XTHCI10M-502M	50.0	0.060	3.2	1.4	2.0
XTHCI10M-752M	75.0	0.070	2.9	1.2	1.6
XTHCI10M-103K	100.0	0.090	2.7	1.0	1.4
XTHCI10M-253K	250.0	0.440	1.2	0.65	0.89
XTHCI10M-503K	500.0	0.900	0.81	0.47	0.65
XTHCI10M-753K	750.0	1.00	0.78	0.32	0.44
XTHCI10M-104K	1.0 mH	1.50	0.64	0.28	0.39
XTHCI10M-204K	2.0 mH	2.70	0.48	0.19	0.27
XTHCI10M-304K	3.0 mH	4.20	0.38	0.16	0.22
XTHCI10M-504K	5.0 mH	6.20	0.32	0.11	0.16
XTHCI10M-754K	7.5 mH	9.30	0.26	0.09	0.13
XTHCI10M-105K	10.0 mH	10.7	0.24	0.08	0.11

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)
XTHCI10M-101M	0.250	0.00225	15.3	20.1	27.7
XTHCI10M-241M	0.600	0.003	14.2	13.4	18.5
XTHCI10M-421M	1.050	0.004	12.5	10.1	13.9
XTHCI10M-102M	2.50	0.005	10.4	6.7	9.2
XTHCI10M-252M	6.25	0.0075	8.7	4.5	6.2
XTHCI10M-502M	12.75	0.015	6.4	2.9	4.0
XTHCI10M-752M	18.75	0.0175	5.8	2.4	3.3
XTHCI10M-103K	25.00	0.0225	5.3	2.0	2.8
XTHCI10M-253K	62.50	0.11	2.4	1.3	1.8
XTHCI10M-503K	125.0	0.225	1.6	0.93	1.3
XTHCI10M-753K	187.5	0.25	1.6	0.64	0.89
XTHCI10M-104K	250.0	0.375	1.3	0.56	0.77
XTHCI10M-204K	500.0	0.675	0.96	0.39	0.54
XTHCI10M-304K	750.0	1.05	0.77	0.32	0.44
XTHCI10M-504K	1.250 mH	1.55	0.64	0.23	0.32
XTHCI10M-754K	1.875 mH	2.325	0.52	0.19	0.26
XTHCI10M-105K	2.500 mH	2.675	0.48	0.16	0.23

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

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DATA TABLE

VE PART NUMBER  
STRUCTURE KEY

INDUCTANCE  
( uH )  
( mH )

101 = 1.0 uH  
103 = 100 uH  
105 = 10 mH

EXAMPLE: XTHCI10M-101MS-7-T

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") 320  
Pitch between parts: 24 mm  
Tape width: 24 mm

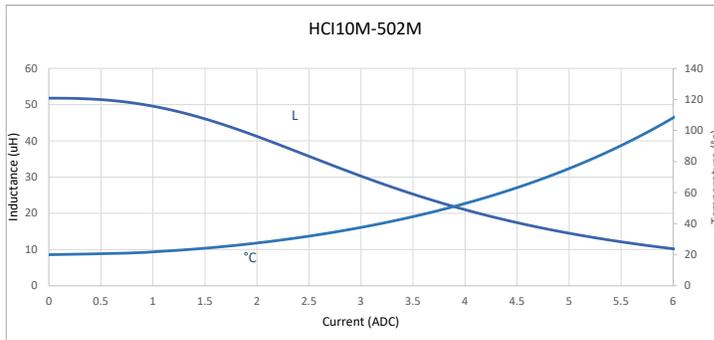
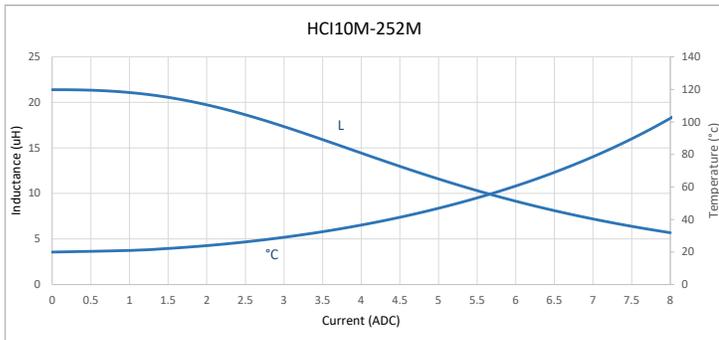
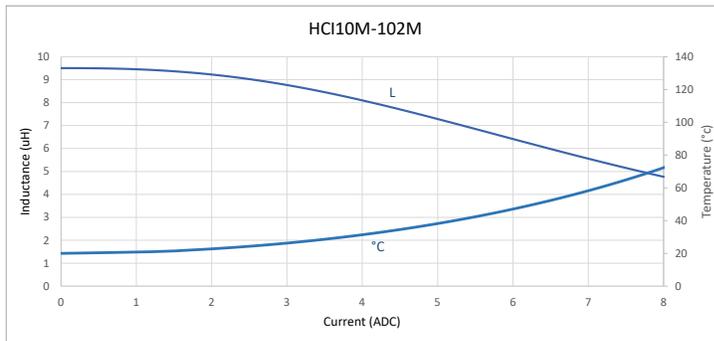
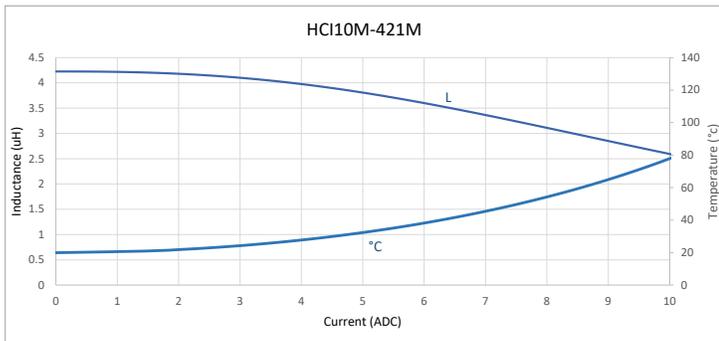
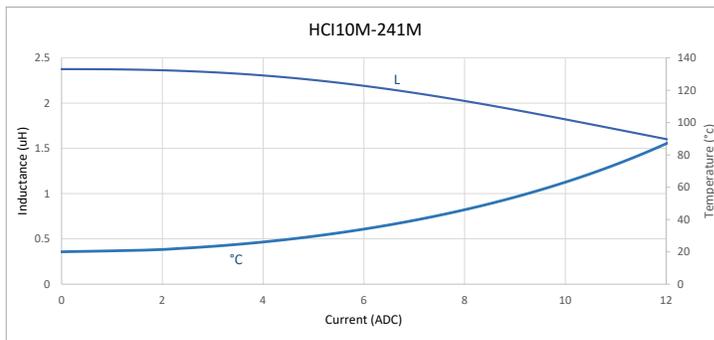
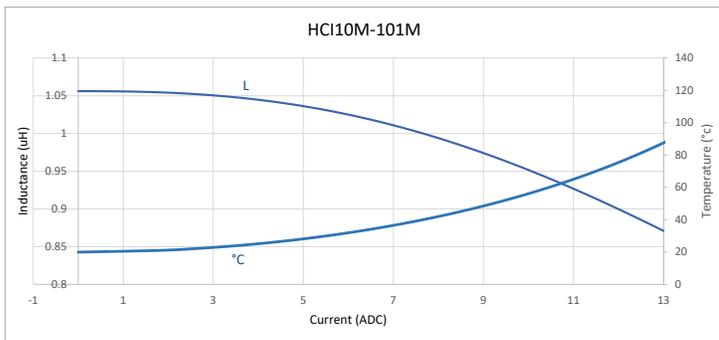
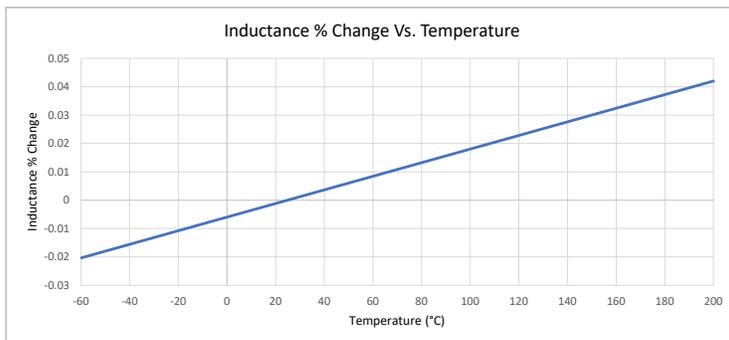
Parts that don't meet minimum reel requirements will be supplied on cut tape

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

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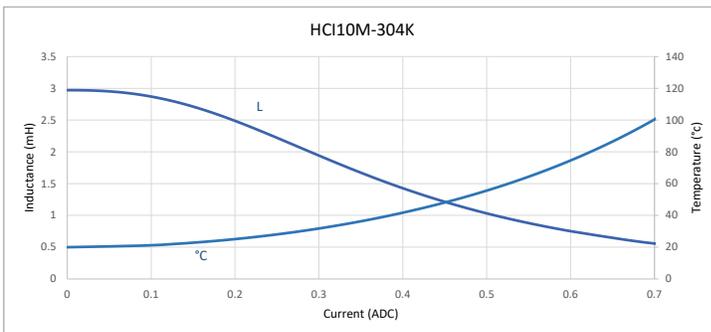
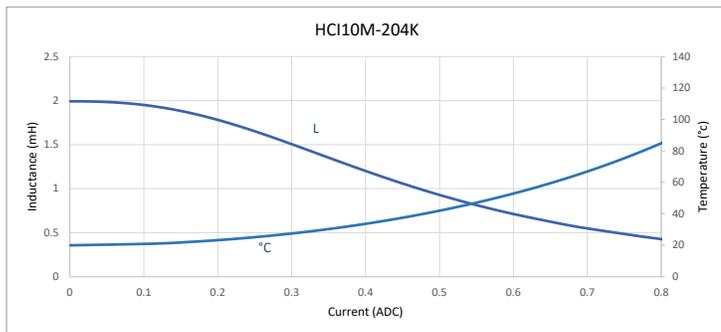
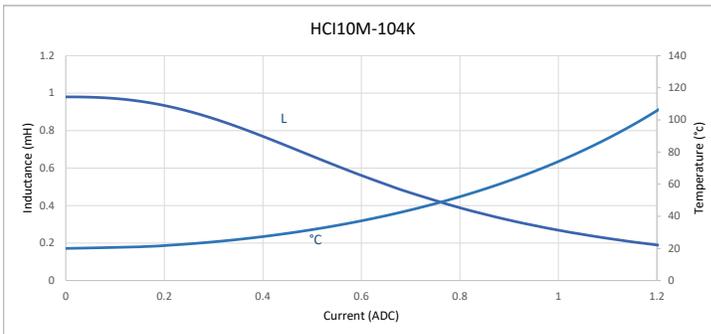
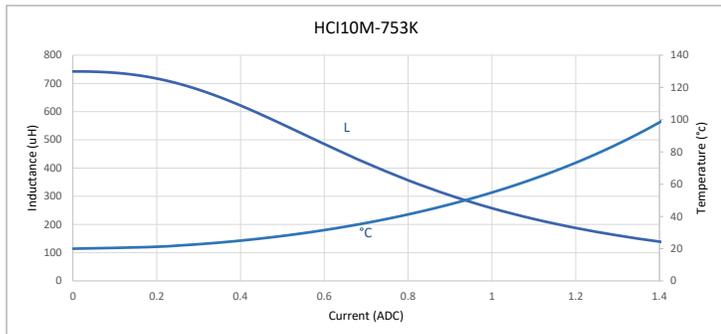
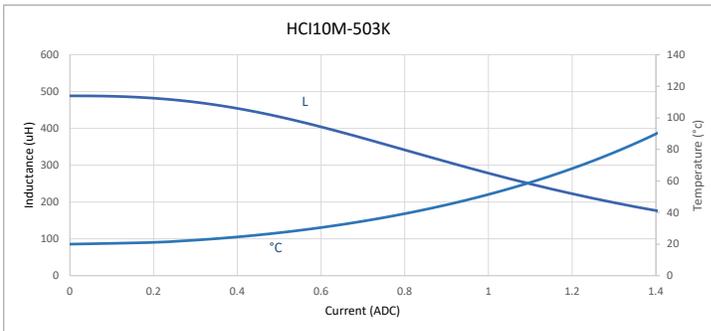
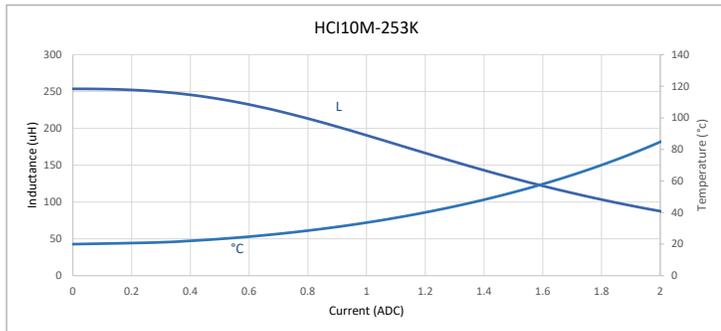
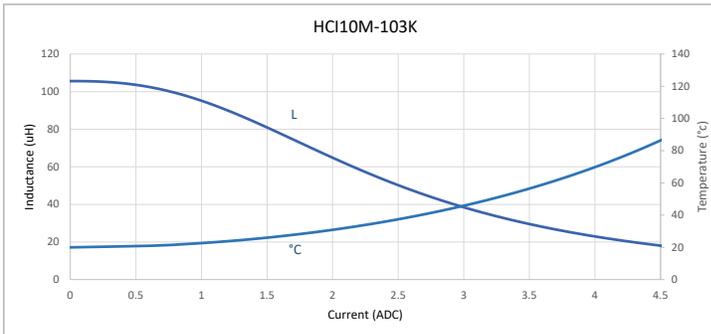
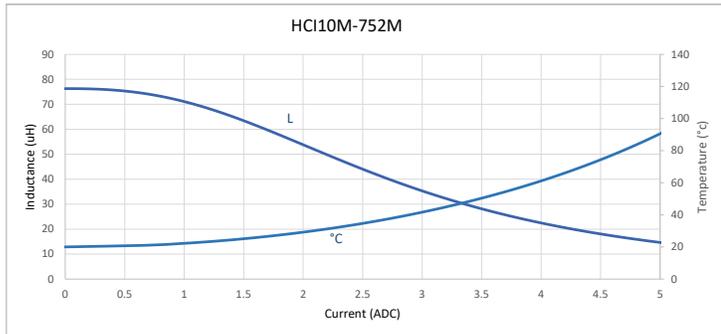


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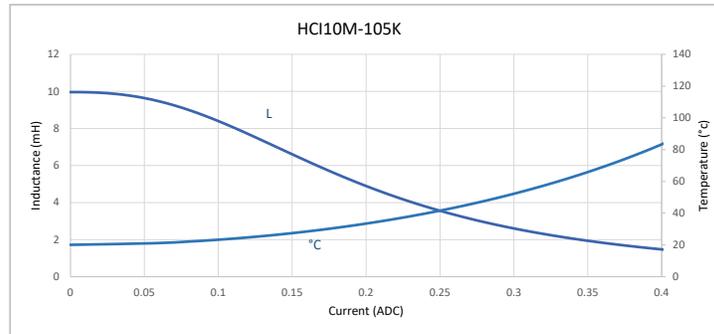
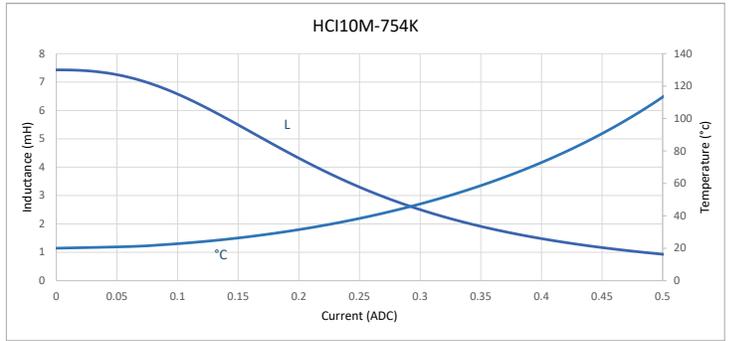
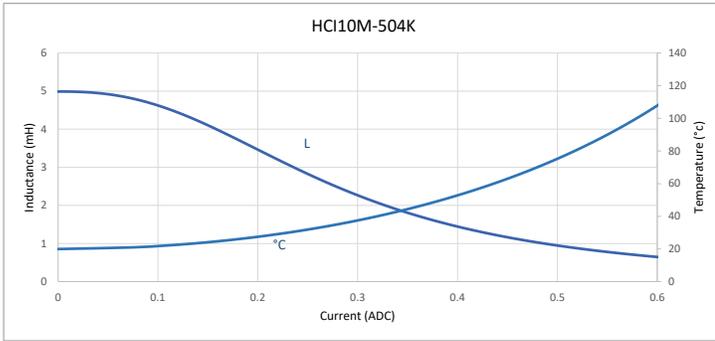


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