



## XTHCI 13M SERIES

### HIGH CURRENT INDUCTOR

**+200°C**

Inductance Range	DCR max (Ohms)	Current Rating (A)
1.25 uH - 10 mH	0.004 - 13.4	15.9 - 0.25

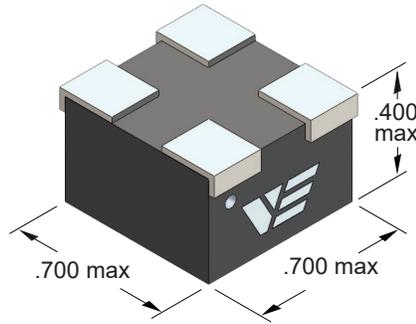
ALL DIMENSIONS: INCHES

### 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**

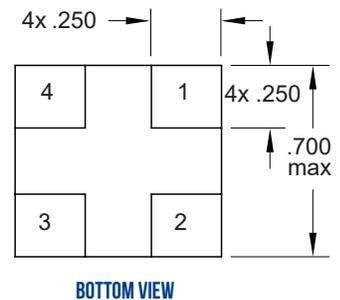
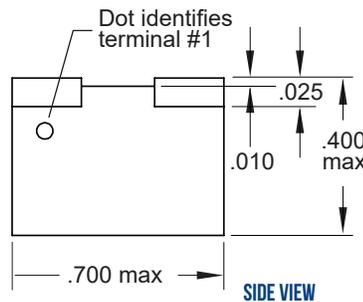
### FEATURES

- **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



THRU-HOLE &amp; GULL-WING PACKAGES ALSO AVAILABLE

MARKINGS: LASER ETCH OR INK

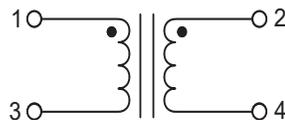
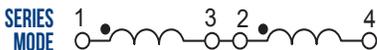


### APPLICATIONS

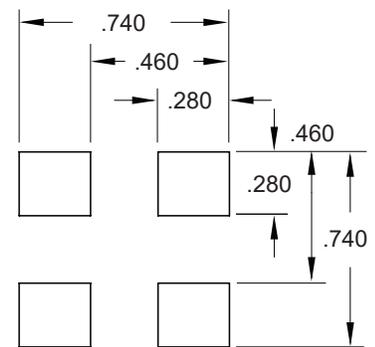
- Filter inductors
- Power supplies
- Ripple suppressors
- DC/DC converters
- Common mode chokes
- SEPIC converters
- Isolation transformers

#### TYPICAL USER CONNECTIONS

#### SCHEMATIC



IN	MM
0.740	18.80
0.700	17.78
0.460	11.68
0.400	10.16
0.280	7.11
0.250	6.35
0.025	0.64
0.010	0.25



RECOMMENDED MOUNTING PAD CIRCUIT SIDE

#### 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)
XTHCI13M-501K	5.0	0.017	7.1	5.8	7.9
XTHCI13M-102K	10.0	0.024	6.0	4.1	5.7
XTHCI13M-182K	18.0	0.036	4.8	3.2	4.4
XTHCI13M-252K	25.0	0.051	4.1	2.9	4.0
XTHCI13M-502K	50.0	0.075	3.3	1.9	2.6
XTHCI13M-752K	75.0	0.090	3.1	1.6	2.2
XTHCI13M-103K	100.0	0.17	2.2	1.4	1.9
XTHCI13M-203K	200.0	0.35	1.6	1.1	1.1
XTHCI13M-253K	250.0	0.50	1.3	1.0	1.0
XTHCI13M-503K	500.0	0.85	1.0	0.68	0.71
XTHCI13M-753K	750.0	1.3	0.81	0.56	0.58
XTHCI13M-104K	1.0 mH	1.4	0.79	0.55	0.48
XTHCI13M-204K	2.0 mH	3.1	0.52	0.38	0.33
XTHCI13M-304K	3.0 mH	4.7	0.42	0.32	0.27
XTHCI13M-504K	5.0 mH	6.1	0.37	0.24	0.21
XTHCI13M-754K	7.5 mH	11.6	0.27	0.20	0.17
XTHCI13M-105K	10.0 mH	13.4	0.25	0.17	0.15

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)
XTHCI13M-501K	1.25	0.004	15.9	14.1	11.5
XTHCI13M-102K	2.50	0.006	11.3	11.9	8.2
XTHCI13M-182K	4.50	0.009	8.8	9.7	6.4
XTHCI13M-252K	6.25	0.013	7.9	8.2	5.8
XTHCI13M-502K	12.50	0.019	5.3	6.7	3.8
XTHCI13M-752K	18.75	0.023	4.4	6.1	3.2
XTHCI13M-103K	25.00	0.042	3.8	4.5	2.7
XTHCI13M-203K	50.00	0.083	2.3	3.2	2.2
XTHCI13M-253K	62.50	0.12	2.1	2.7	2.0
XTHCI13M-503K	125.0	0.22	1.4	2.0	1.4
XTHCI13M-753K	187.5	0.33	1.2	1.6	1.1
XTHCI13M-104K	250.0	0.33	0.96	1.6	1.1
XTHCI13M-204K	500.0	0.77	0.66	1.0	0.77
XTHCI13M-304K	750.0	1.2	0.55	0.85	0.63
XTHCI13M-504K	1.250 mH	1.5	0.42	0.74	0.49
XTHCI13M-754K	1.875 mH	2.9	0.34	0.54	0.40
XTHCI13M-105K	2.500 mH	3.4	0.30	0.50	0.34

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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### VE PART NUMBER STRUCTURE KEY

#### INDUCTANCE ( uH ) ( mH )

501 = 5.0 uH  
103 = 100 uH  
105 = 10 mH

EXAMPLE: XTHCI13M-501KS-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") 250  
Pitch between parts: 24 mm  
Tape width: 32 mm

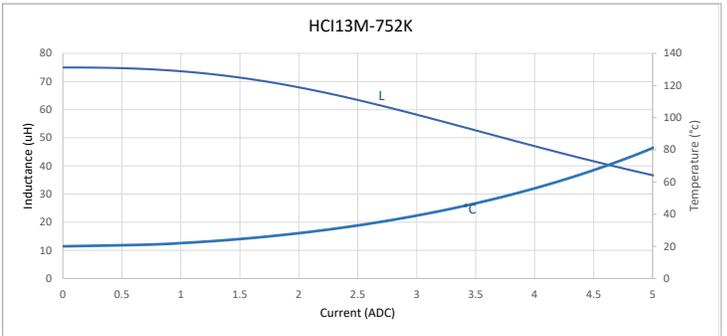
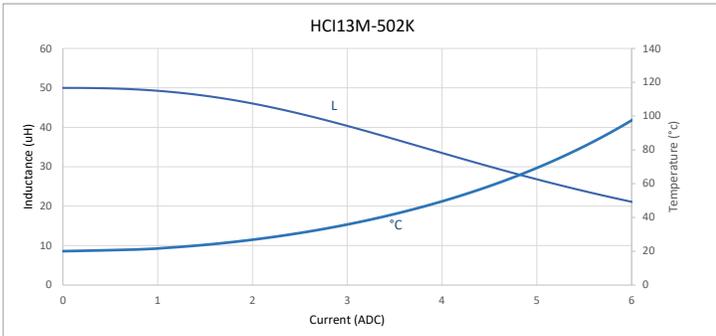
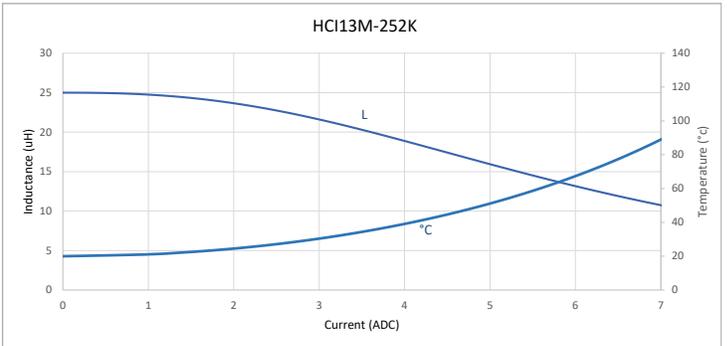
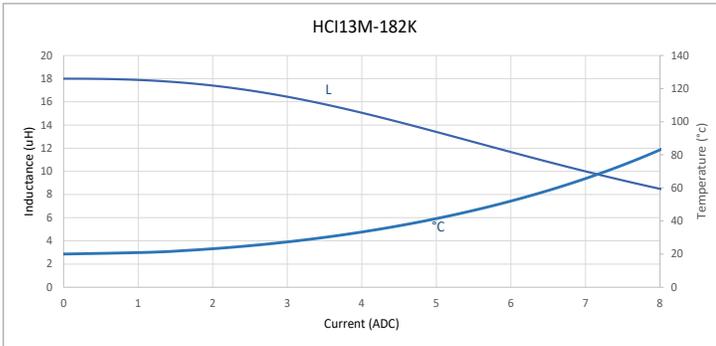
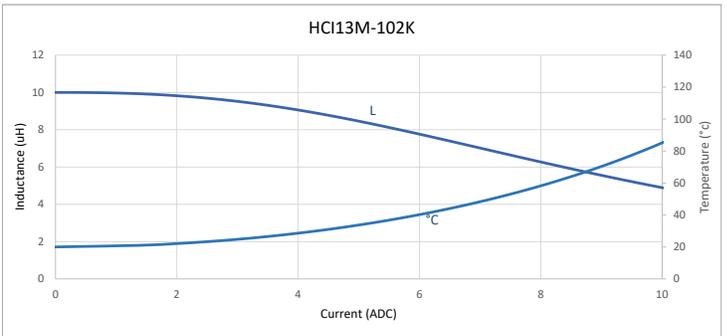
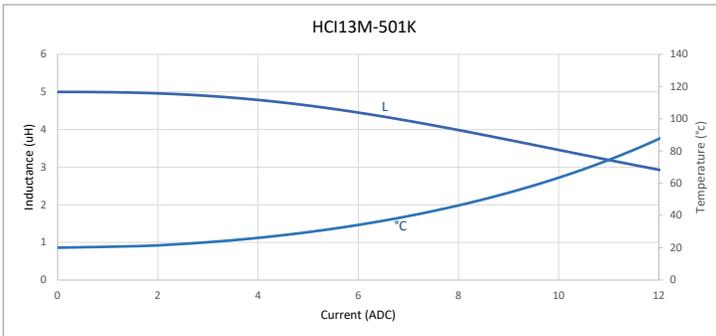
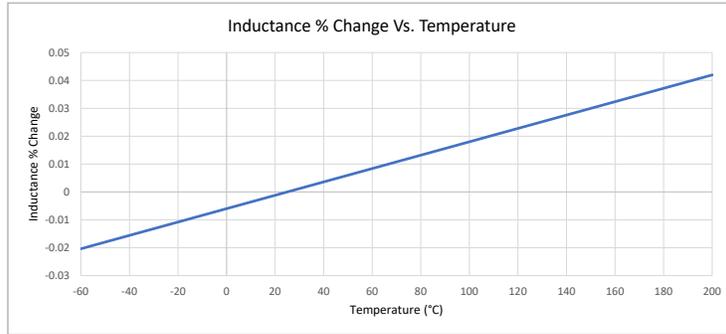
Parts that don't meet minimum reel requirements will be supplied on cut tape

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

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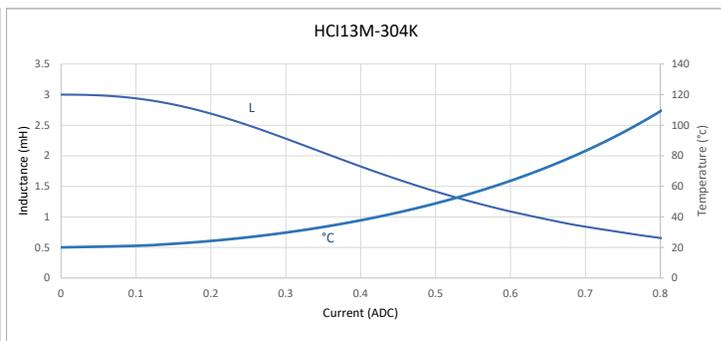
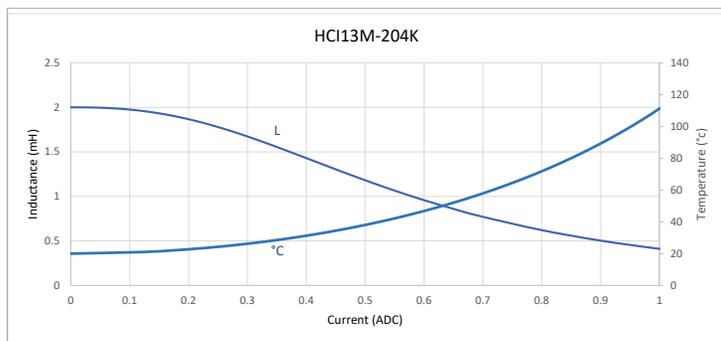
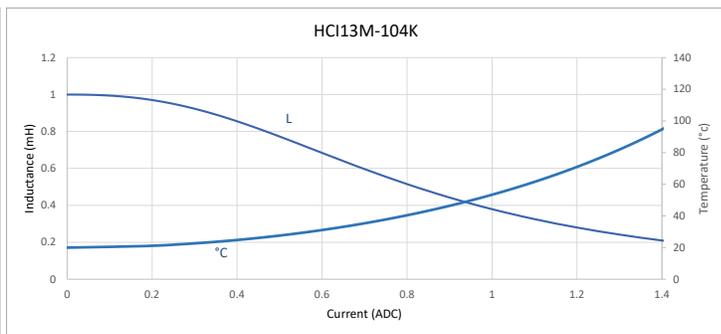
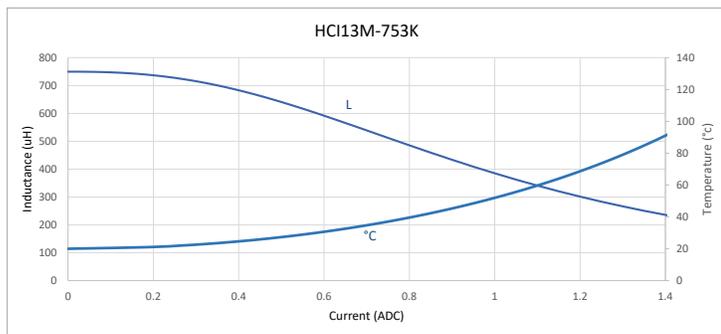
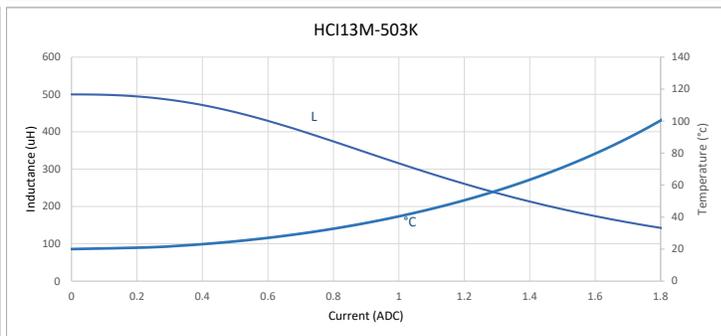
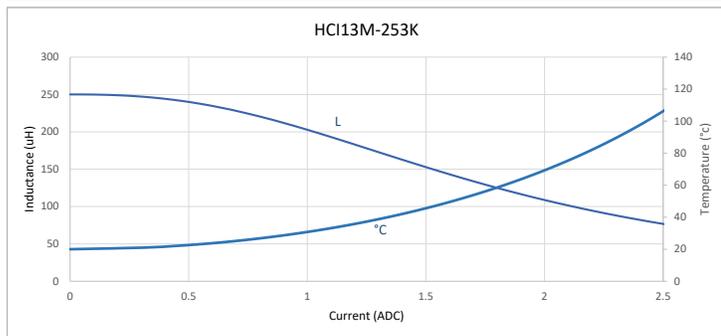
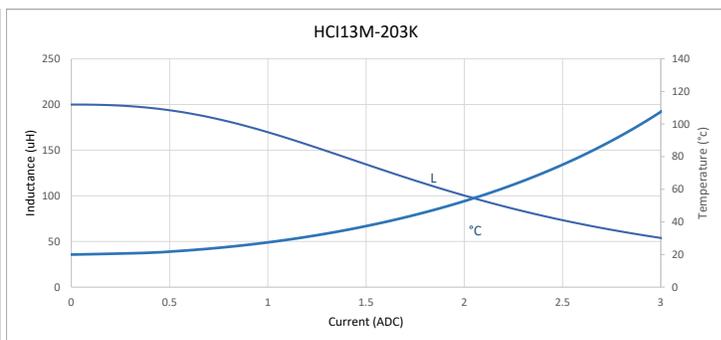
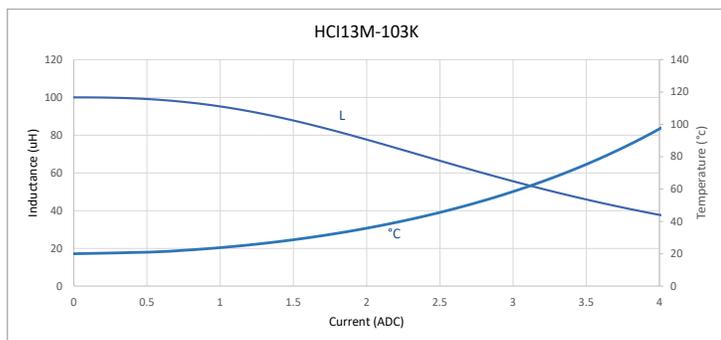
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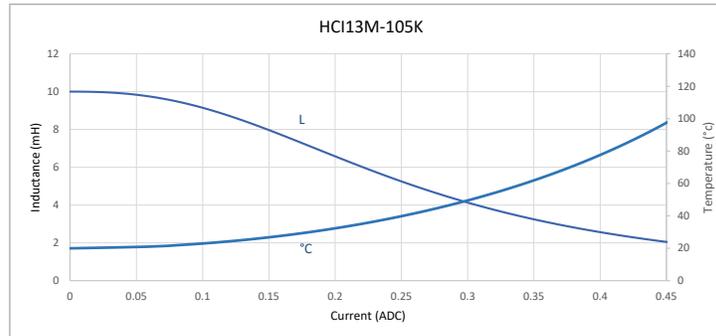
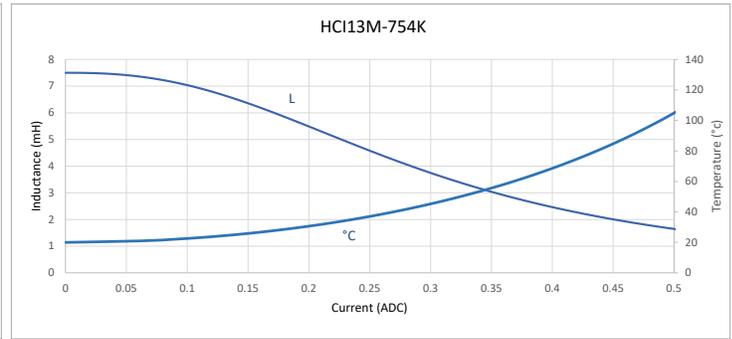
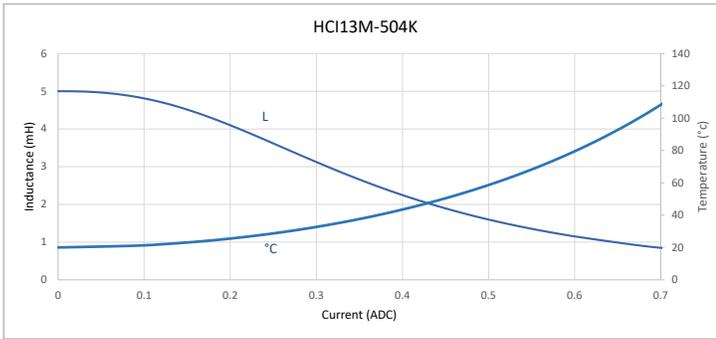


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