



XTHCI4M SERIES

HIGH CURRENT INDUCTOR

**+200°C**

Inductance Range	DCR max (Ohms)	Current Rating (A)
20 nH - 100 uH	0.0005 - 8.62	0.27 - 11.39

ALL DIMENSIONS: INCHES

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**

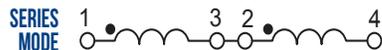
FEATURES

- **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:** Tin-lead, Lead Free (RoHS), 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

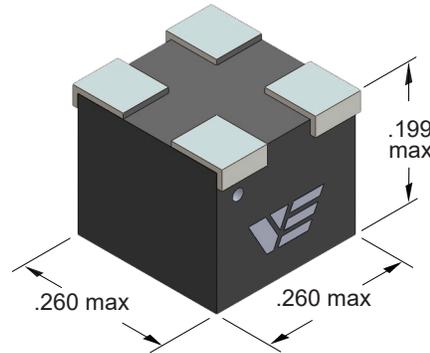
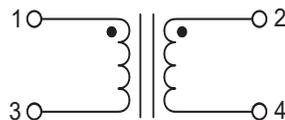
APPLICATIONS

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

TYPICAL USER CONNECTIONS

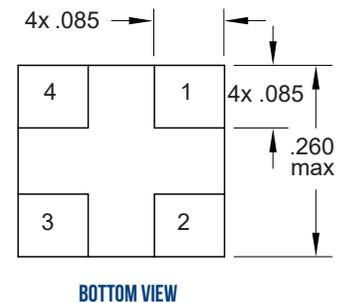
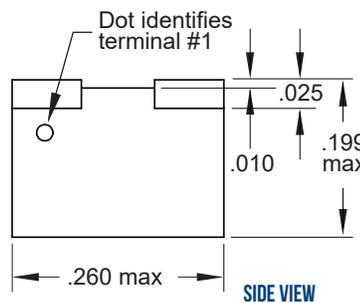


SCHEMATIC

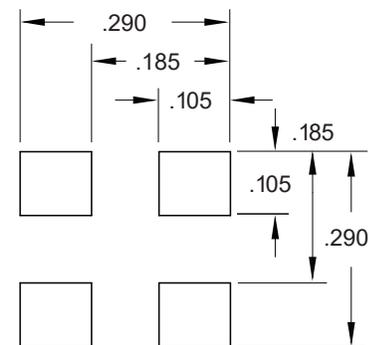


THRU-HOLE & GULL-WING PACKAGES ALSO AVAILABLE

MARKINGS: LASER ETCH OR INK



IN	MM
0.290	7.37
0.260	6.60
0.199	5.05
0.185	4.70
0.105	2.67
0.085	2.16
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)
XTHCI4M-R08M*-*	0.08	0.002	5.7	4.5	6.3
XTHCI4M-R14M*-*	0.14	0.003	5.0	3.4	4.8
XTHCI4M-R22M*-*	0.22	0.004	3.9	2.7	3.8
XTHCI4M-R44M*-*	0.44	0.007	3.0	1.9	2.7
XTHCI4M-R56M*-*	0.56	0.010	2.5	1.7	2.4
XTHCI4M-R60M*-*	0.60	0.011	2.4	1.7	2.3
XTHCI4M-R86M*-*	0.86	0.013	2.2	1.4	1.9
XTHCI4M-141M*-*	1.4	0.020	1.7	1.1	1.5
XTHCI4M-191M*-*	1.9	0.025	1.6	0.93	1.3
XTHCI4M-241M*-*	2.4	0.035	1.4	0.83	1.1
XTHCI4M-351M*-*	3.5	0.050	1.1	0.69	0.95
XTHCI4M-441M*-*	4.4	0.075	0.93	0.61	0.85
XTHCI4M-541M*-*	5.4	0.080	0.88	0.55	0.77
XTHCI4M-781K*-*	7.8	0.125	0.71	0.46	0.64
XTHCI4M-112K*-*	11.0	0.180	0.59	0.39	0.55
XTHCI4M-122K*-*	12.0	0.195	0.57	0.37	0.51
XTHCI4M-142K*-*	14.0	0.255	0.50	0.35	0.48
XTHCI4M-172K*-*	17.0	0.360	0.42	0.31	0.43
XTHCI4M-192K*-*	19.0	0.380	0.41	0.29	0.40
XTHCI4M-222K*-*	22.0	0.400	0.40	0.28	0.38
XTHCI4M-262K*-*	26.0	0.440	0.38	0.25	0.35
XTHCI4M-312K*-*	31.0	0.480	0.36	0.23	0.32
XTHCI4M-492K*-*	49.0	0.600	0.32	0.18	0.26
XTHCI4M-592K*-*	59.0	0.610	0.31	0.17	0.23
XTHCI4M-782K*-*	78.0	0.760	0.29	0.15	0.20
XTHCI4M-912K*-*	91.0	0.820	0.28	0.13	0.19
XTHCI4M-103K*-*	100.0	0.860	0.27	0.13	0.18

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)
XTHCI4M-R08M*-*	0.020	0.0005	11.4	9.1	12.6
XTHCI4M-R14M*-*	0.035	0.0006	9.9	6.9	9.5
XTHCI4M-R22M*-*	0.055	0.001	7.8	5.5	7.6
XTHCI4M-R44M*-*	0.11	0.002	5.9	3.9	5.4
XTHCI4M-R56M*-*	0.14	0.003	4.9	3.4	4.8
XTHCI4M-R60M*-*	0.15	0.003	4.8	3.3	4.6
XTHCI4M-R86M*-*	0.22	0.004	4.4	2.8	3.8
XTHCI4M-141M*-*	0.35	0.005	3.5	2.2	3.0
XTHCI4M-191M*-*	0.48	0.006	3.2	1.9	2.6
XTHCI4M-241M*-*	0.60	0.009	2.7	1.7	2.3
XTHCI4M-351M*-*	0.88	0.013	2.2	1.4	1.9
XTHCI4M-441M*-*	1.10	0.019	1.9	1.2	1.7
XTHCI4M-541M*-*	1.35	0.020	1.8	1.1	1.5

CUSTOM DESIGNS & MODIFICATIONS:

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

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DATA TABLE

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)
XTHCI4M-781K*-*	1.95	0.030	1.4	0.92	1.3
XTHCI4M-112K*-*	2.65	0.045	1.2	0.79	1.1
XTHCI4M-122K*-*	3.05	0.050	1.1	0.73	1.0
XTHCI4M-142K*-*	3.45	0.065	1.0	0.69	0.96
XTHCI4M-172K*-*	4.38	0.090	0.83	0.61	0.85
XTHCI4M-192K*-*	4.88	0.095	0.81	0.58	0.81
XTHCI4M-222K*-*	5.40	0.100	0.79	0.55	0.77
XTHCI4M-262K*-*	6.55	0.110	0.75	0.50	0.69
XTHCI4M-312K*-*	7.80	0.120	0.72	0.46	0.64
XTHCI4M-492K*-*	12.2	0.150	0.65	0.37	0.51
XTHCI4M-592K*-*	14.7	0.165	0.62	0.33	0.46
XTHCI4M-782K*-*	19.5	0.190	0.57	0.29	0.40
XTHCI4M-912K*-*	22.7	0.205	0.55	0.27	0.37
XTHCI4M-103K*-*	25.0	0.215	0.54	0.26	0.36

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

VE PART NUMBER STRUCTURE KEY

INDUCTANCE
(nH) (uH)

R08 = 80 nH
141 = 1.4 uH
222 = 22.0 uH

EXAMPLE: XTHCI4M-R08MS-7-T

TOLERANCE
(%)

K	± 10
M	± 20

TERMINATION

S	SnPb
R	Pure Tin

RELIABILITY

7	Other
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PACKAGING
(Default Bulk)

B	Bulk
T	Tape and Reel

Tape and reel specs
Pcs. / reel maximum: (7") 200, (13") 800
Pitch between parts: 12 mm
Tape width: 16 mm

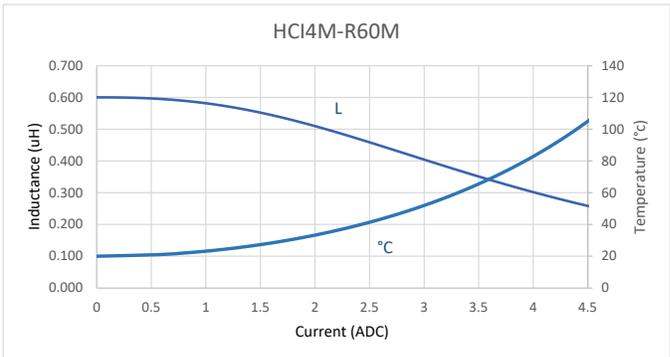
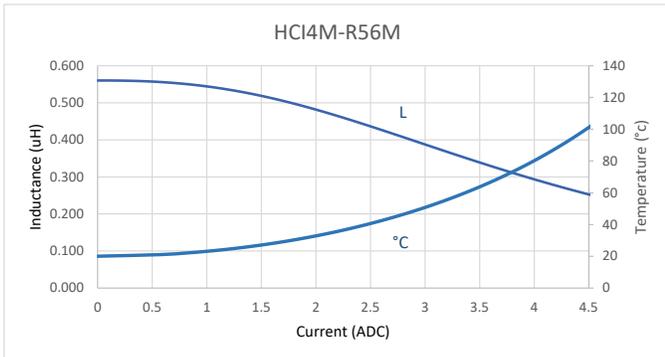
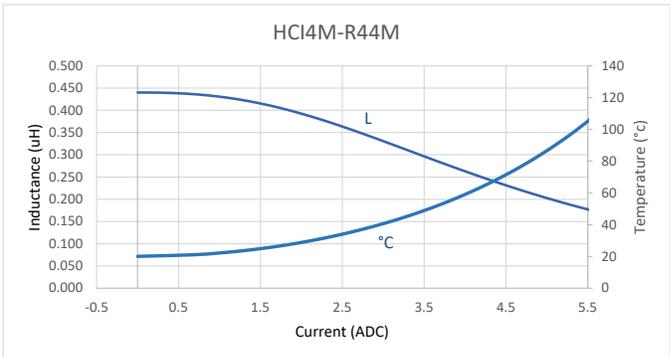
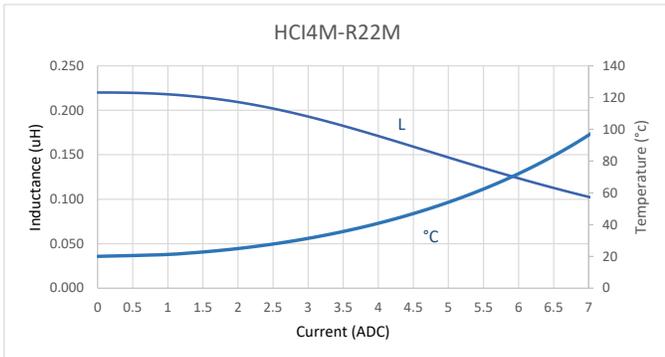
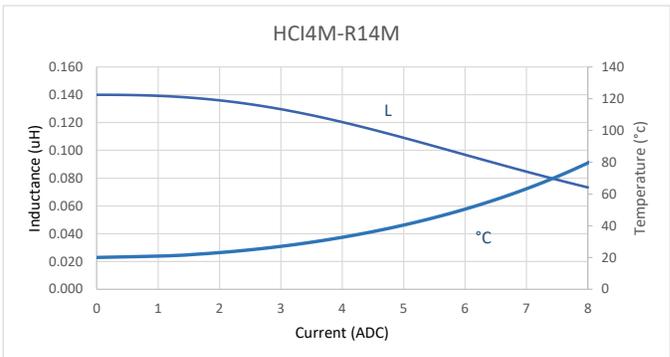
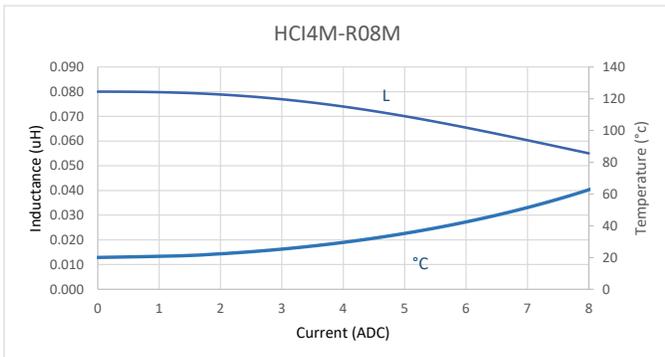
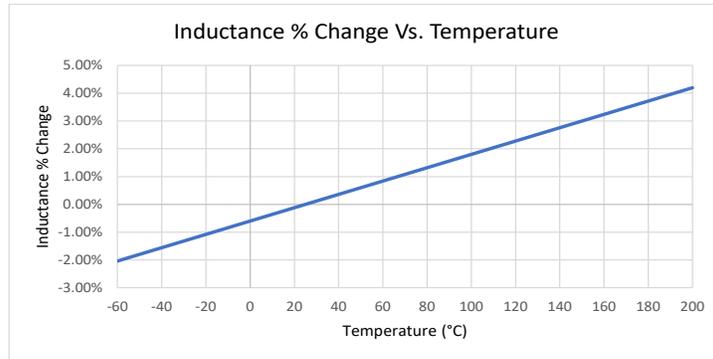
Parts that don't meet minimum reel requirements will be supplied on cut tape

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

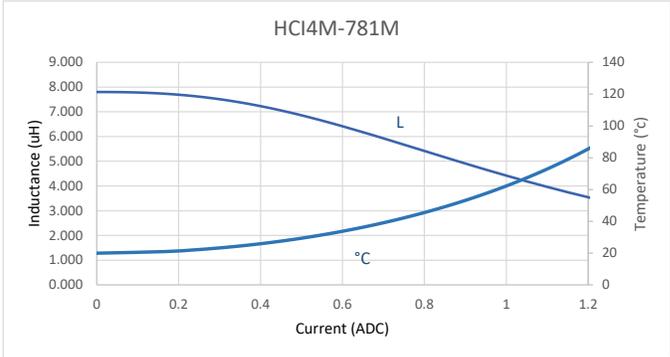
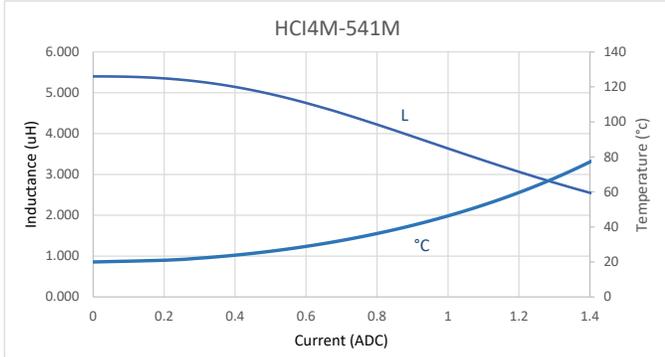
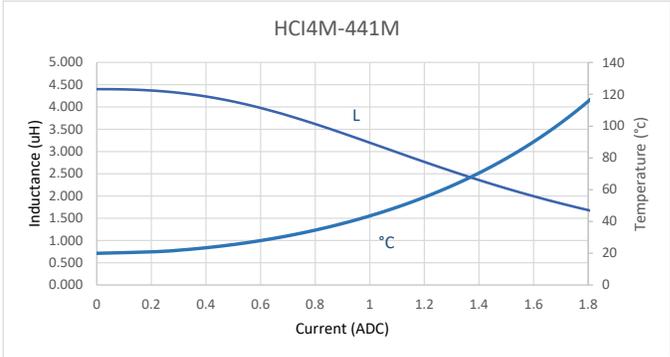
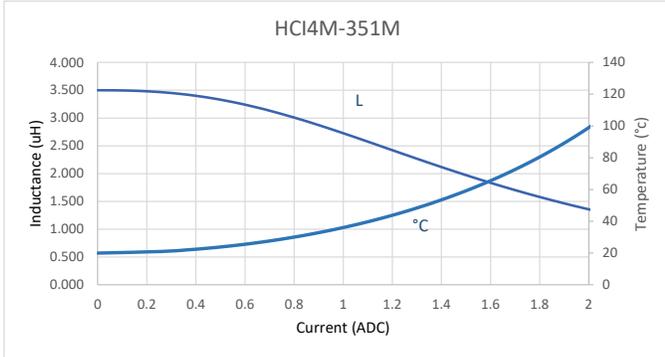
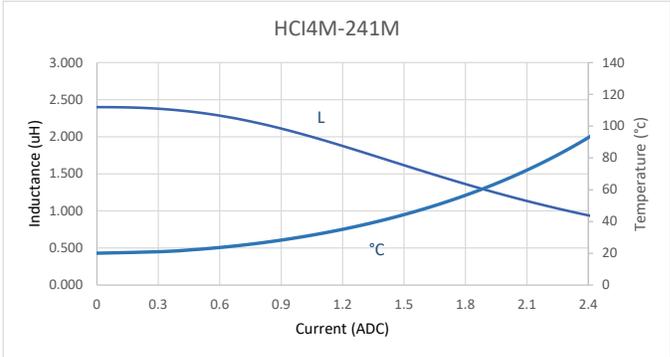
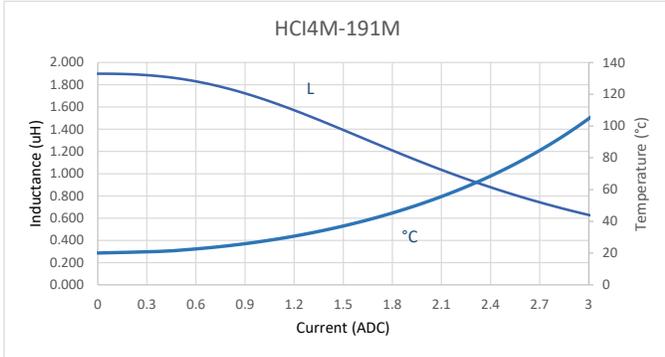
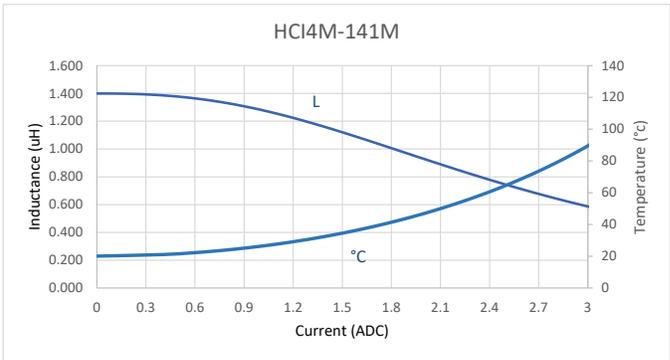
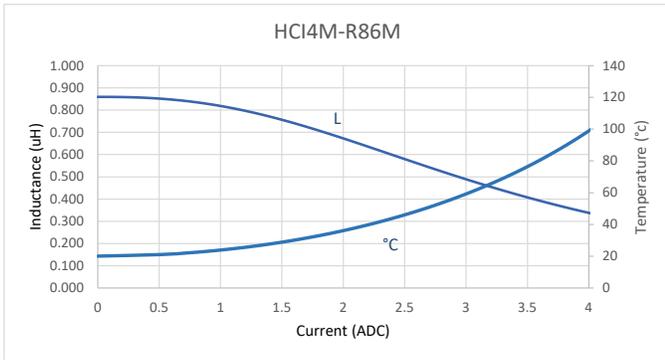
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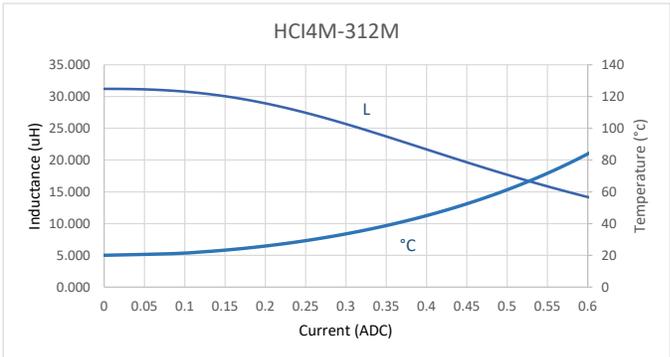
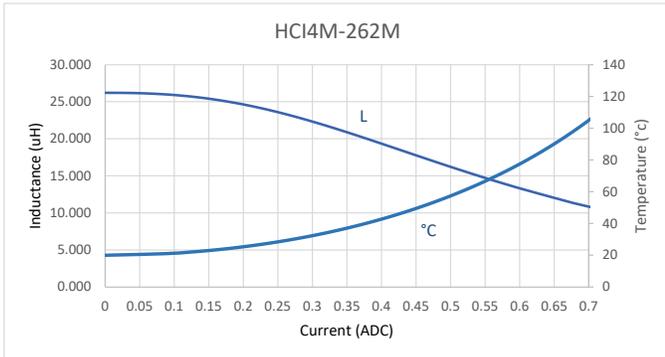
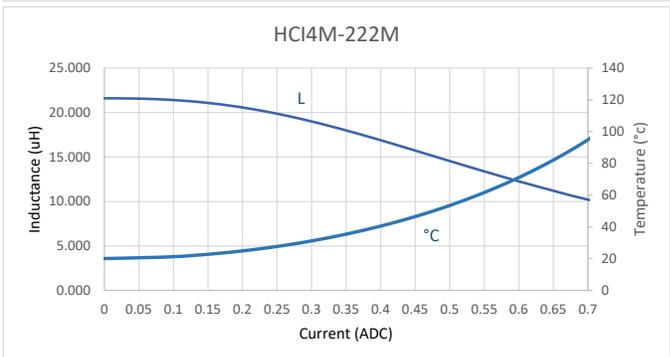
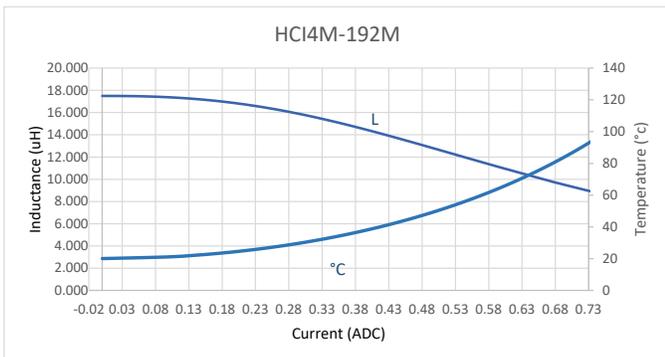
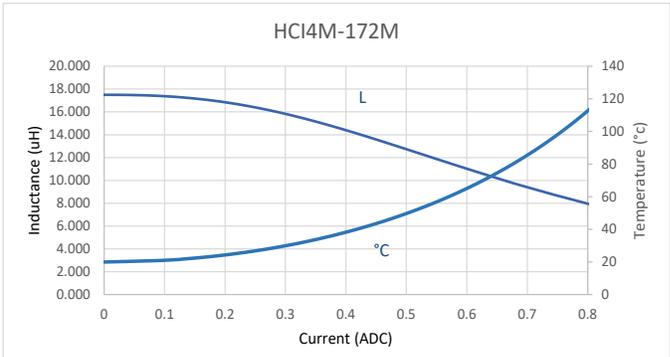
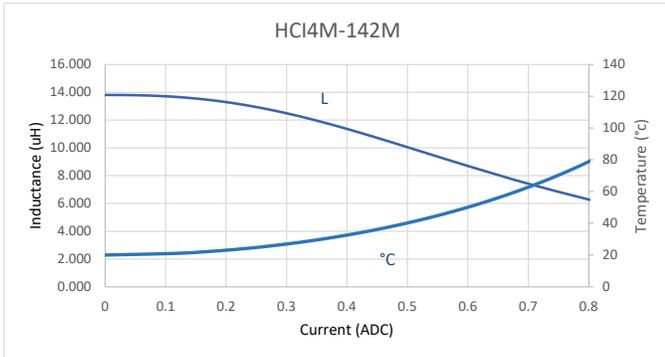
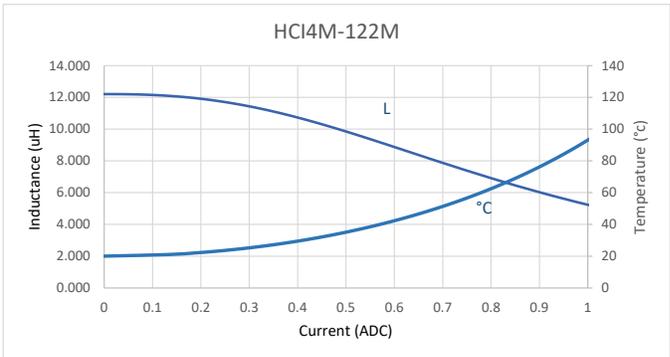
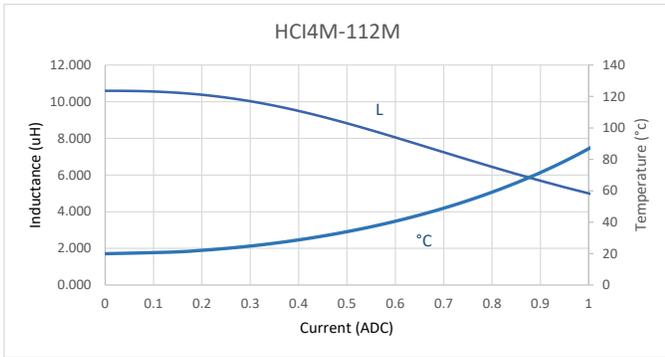


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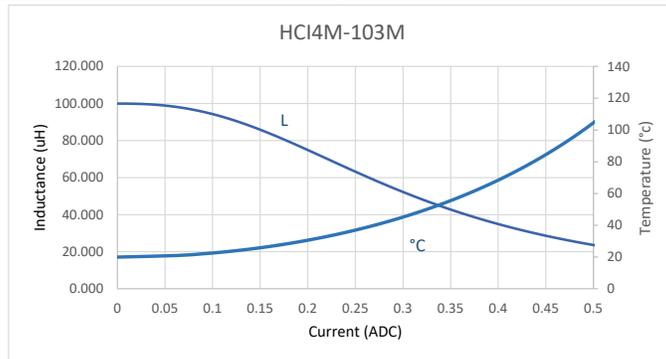
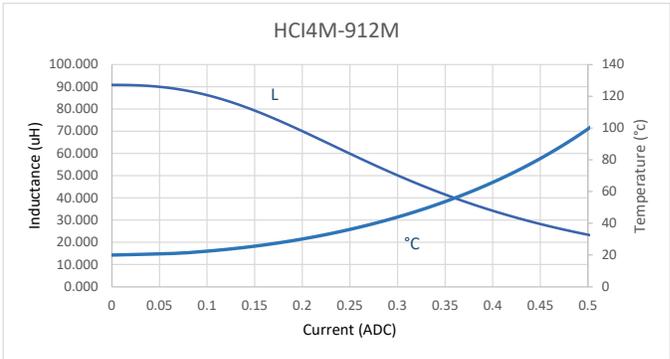
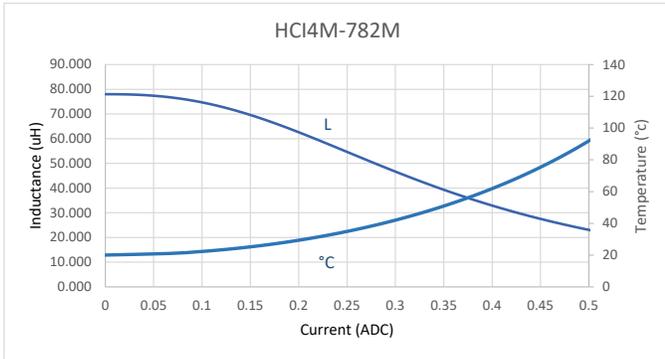
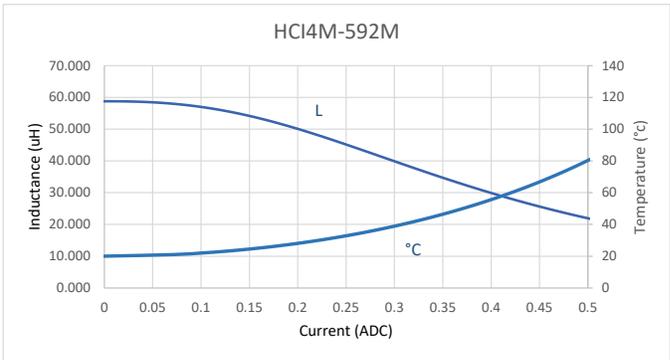
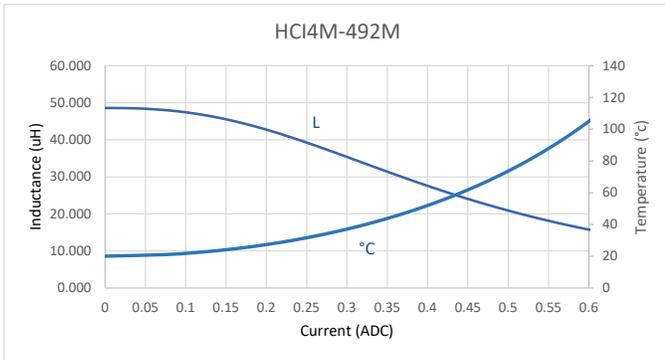


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