



## SHCI4M SERIES HIGH CURRENT INDUCTOR



ALL PARTS AVAILABLE AS CLASS S OR CLASS B

MIL-STD-981

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

### ELECTRICAL SPECIFICATIONS

- **Operating Temperature:** -55°C to +130°C
- **Storage Temperature:** -60°C to +135°C
- **Temperature Rise:** < 30°C
- **Dielectric Withstanding Voltage:** 100 V<sub>RMS</sub>
- **Different electrical values available upon request**

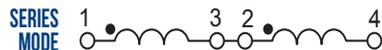
### FEATURES

- **Compact**, low profile, ideal for automatic placement
- **Terminations:** Tin-lead
- **Welded Internal Connections**
- **Moisture, Shock and Immersion Resistant**
- **Magnetically Shielded**
- **Other termination finishes available upon request**
- **Multiple Configurations:** Series, parallel, transformer, dual inductor
- Built to meet **MIL-STD-981** specifications
- **NASA outgassing compliant per ASTM E595** (TML <1%, CVMC <0.1%)

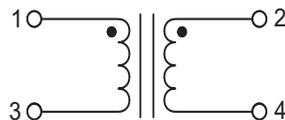
### APPLICATIONS

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

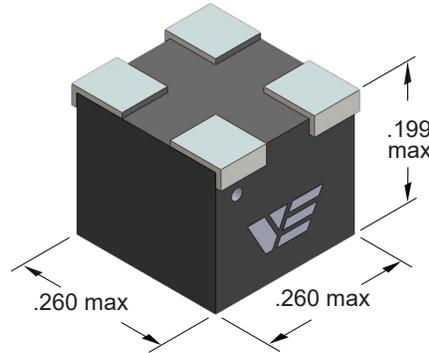
#### TYPICAL USER CONNECTIONS



#### SCHEMATIC

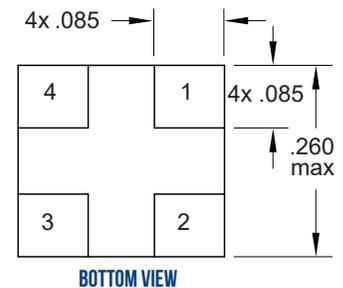
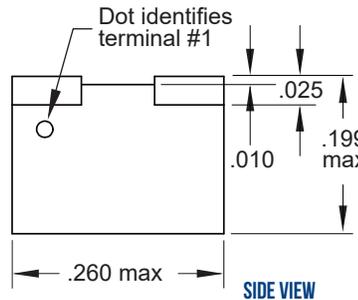


ALL DIMENSIONS: INCHES

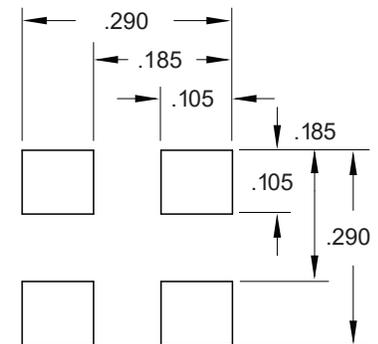


THRU-HOLE & GULL-WING PACKAGES ALSO AVAILABLE

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)
SHCI4M-R08M*-*	0.08	0.002	5.7	4.5	6.3
SHCI4M-R14M*-*	0.14	0.003	5.0	3.4	4.8
SHCI4M-R22M*-*	0.22	0.004	3.9	2.7	3.8
SHCI4M-R44M*-*	0.44	0.007	3.0	1.9	2.7
SHCI4M-R56M*-*	0.56	0.010	2.5	1.7	2.4
SHCI4M-R60M*-*	0.60	0.011	2.4	1.7	2.3
SHCI4M-R86M*-*	0.86	0.013	2.2	1.4	1.9
SHCI4M-141M*-*	1.4	0.020	1.7	1.1	1.5
SHCI4M-191M*-*	1.9	0.025	1.6	0.93	1.3
SHCI4M-241M*-*	2.4	0.035	1.4	0.83	1.1
SHCI4M-351M*-*	3.5	0.050	1.1	0.69	0.95
SHCI4M-441M*-*	4.4	0.075	0.93	0.61	0.85
SHCI4M-541M*-*	5.4	0.080	0.88	0.55	0.77
SHCI4M-781K*-*	7.8	0.125	0.71	0.46	0.64
SHCI4M-112K*-*	11.0	0.180	0.59	0.39	0.55
SHCI4M-122K*-*	12.0	0.195	0.57	0.37	0.51
SHCI4M-142K*-*	14.0	0.255	0.50	0.35	0.48
SHCI4M-172K*-*	17.0	0.360	0.42	0.31	0.43
SHCI4M-192K*-*	19.0	0.380	0.41	0.29	0.40
SHCI4M-222K*-*	22.0	0.400	0.40	0.28	0.38
SHCI4M-262K*-*	26.0	0.440	0.38	0.25	0.35
SHCI4M-312K*-*	31.0	0.480	0.36	0.23	0.32
SHCI4M-492K*-*	49.0	0.600	0.32	0.18	0.26
SHCI4M-592K*-*	59.0	0.610	0.31	0.17	0.23
SHCI4M-782K*-*	78.0	0.760	0.29	0.15	0.20
SHCI4M-912K*-*	91.0	0.820	0.28	0.13	0.19
SHCI4M-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)
SHCI4M-R08M*-*	0.020	0.0005	11.4	9.1	12.6
SHCI4M-R14M*-*	0.035	0.0006	9.9	6.9	9.5
SHCI4M-R22M*-*	0.055	0.001	7.8	5.5	7.6
SHCI4M-R44M*-*	0.11	0.002	5.9	3.9	5.4
SHCI4M-R56M*-*	0.14	0.003	4.9	3.4	4.8
SHCI4M-R60M*-*	0.15	0.003	4.8	3.3	4.6
SHCI4M-R86M*-*	0.22	0.004	4.4	2.8	3.8
SHCI4M-141M*-*	0.35	0.005	3.5	2.2	3.0
SHCI4M-191M*-*	0.48	0.006	3.2	1.9	2.6
SHCI4M-241M*-*	0.60	0.009	2.7	1.7	2.3
SHCI4M-351M*-*	0.88	0.013	2.2	1.4	1.9
SHCI4M-441M*-*	1.10	0.019	1.9	1.2	1.7
SHCI4M-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

## SHCI4M SERIES





### DATA TABLE

Vanguard P/N	Parallel Inductance (uH)	Parallel DCR max (Ohms)	Parallel Rated Current (Adc)	Parallel Inc. Current $\Delta L$ 10% (Adc)	Parallel Inc. Current $\Delta L$ 20% (Adc)
SHCI4M-781K*-**	1.95	0.030	1.4	0.92	1.3
SHCI4M-112K*-**	2.65	0.045	1.2	0.79	1.1
SHCI4M-122K*-**	3.05	0.050	1.1	0.73	1.0
SHCI4M-142K*-**	3.45	0.065	1.0	0.69	0.96
SHCI4M-172K*-**	4.38	0.090	0.83	0.61	0.85
SHCI4M-192K*-**	4.88	0.095	0.81	0.58	0.81
SHCI4M-222K*-**	5.40	0.100	0.79	0.55	0.77
SHCI4M-262K*-**	6.55	0.110	0.75	0.50	0.69
SHCI4M-312K*-**	7.80	0.120	0.72	0.46	0.64
SHCI4M-492K*-**	12.2	0.150	0.65	0.37	0.51
SHCI4M-592K*-**	14.7	0.165	0.62	0.33	0.46
SHCI4M-782K*-**	19.5	0.190	0.57	0.29	0.40
SHCI4M-912K*-**	22.7	0.205	0.55	0.27	0.37
SHCI4M-103K*-**	25.0	0.215	0.54	0.26	0.36

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

### VE PART NUMBER STRUCTURE KEY

EXAMPLE: SHCI4M-R08MS-3-T

**INDUCTANCE**  
(nH) (uH)

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

**TOLERANCE**  
(%)

K	± 10
M	± 20

**TERMINATION**

S	SnPb
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**RELIABILITY**

2	Group A MIL-STD-981
3	Group A+B MIL-STD-981
4	Group A+B+C MIL-STD-981
7	Other

**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

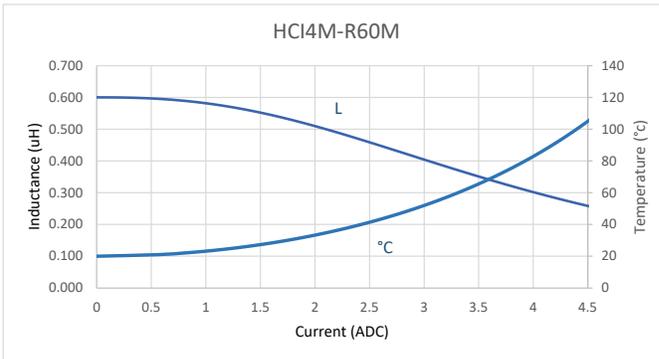
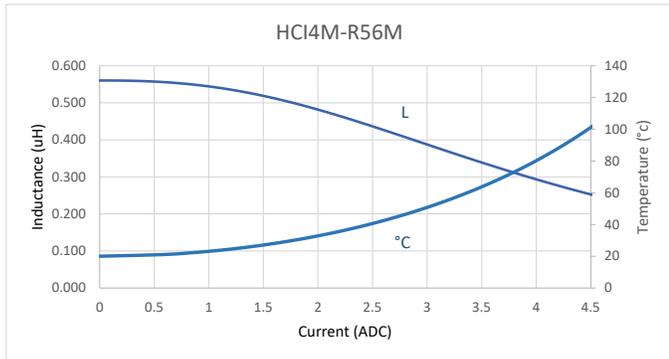
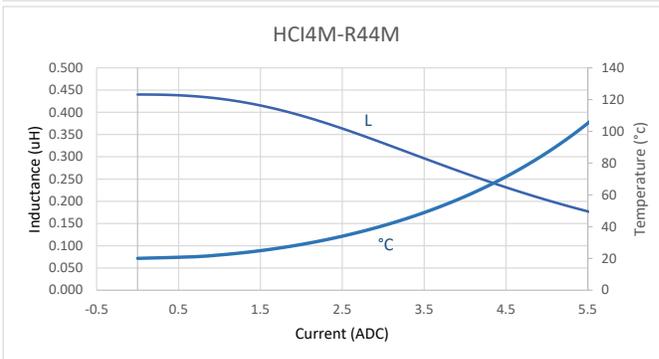
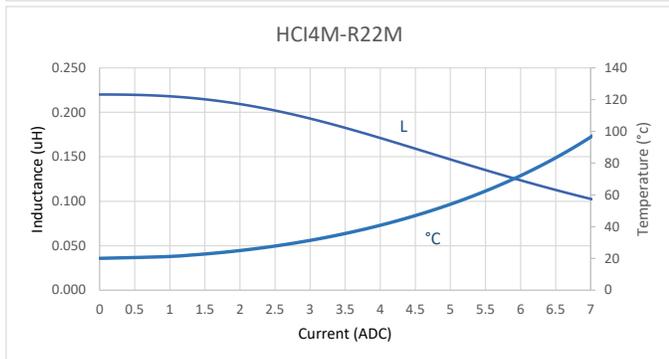
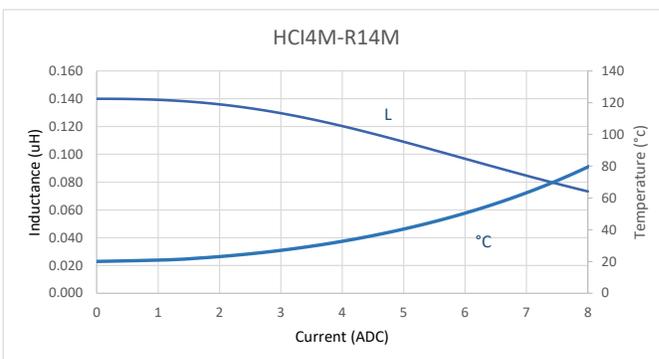
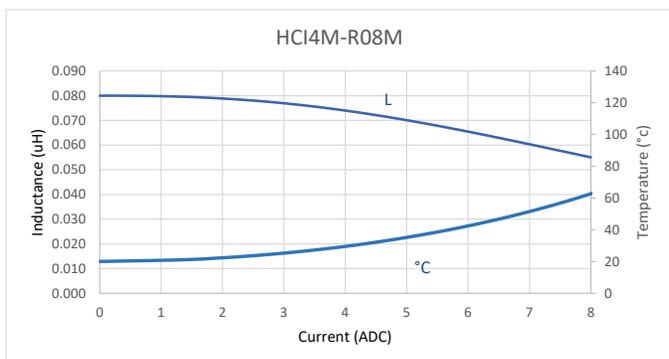
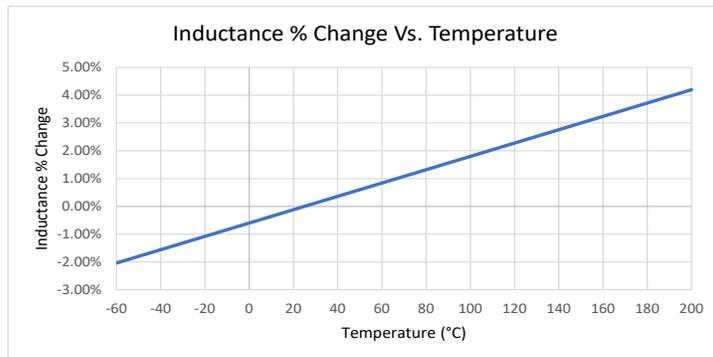
Parts that don't meet minimum reel requirements will be supplied on cut tape

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

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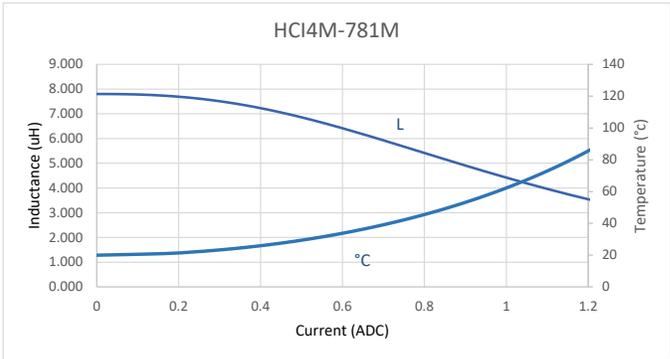
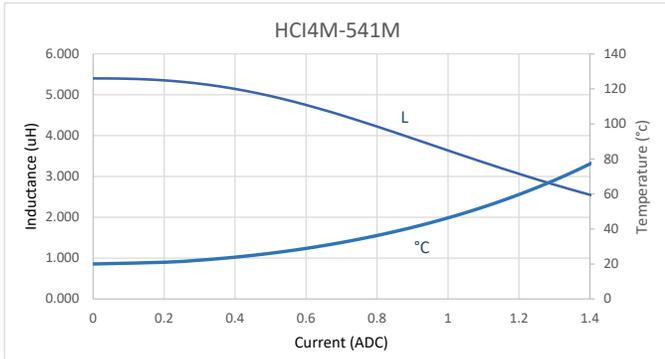
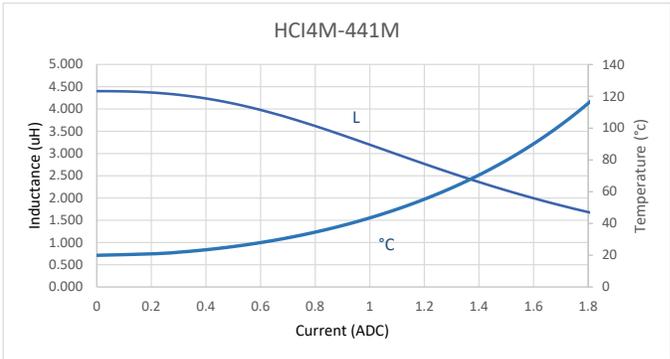
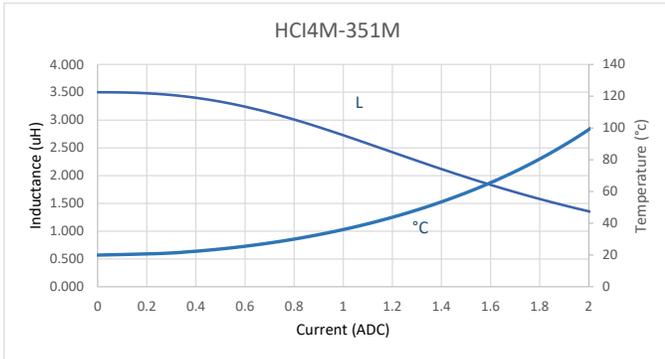
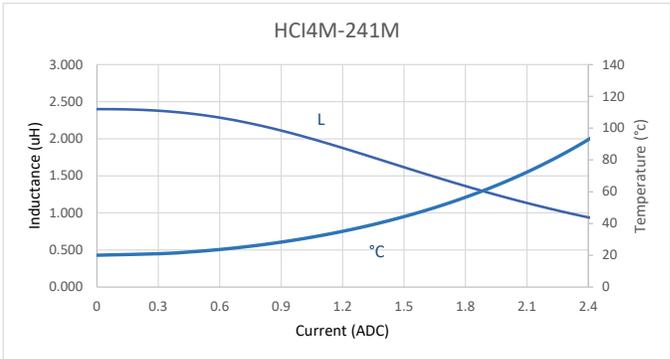
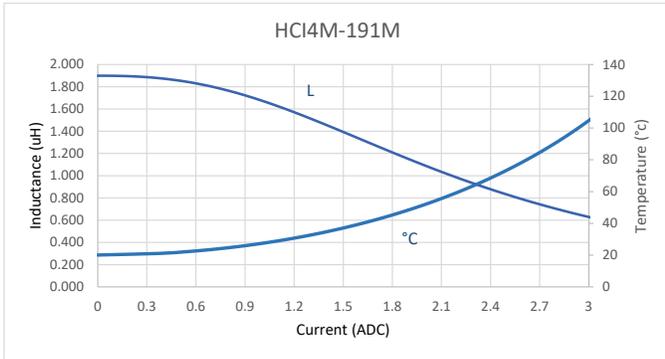
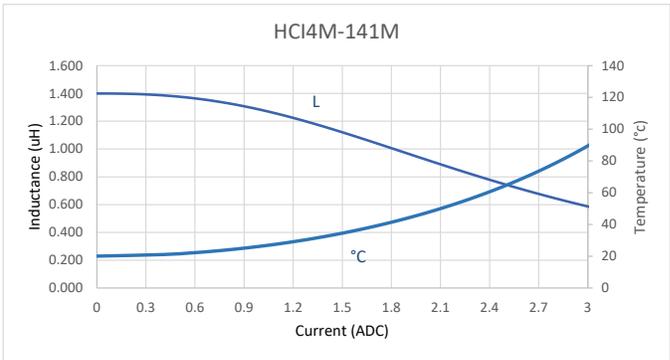
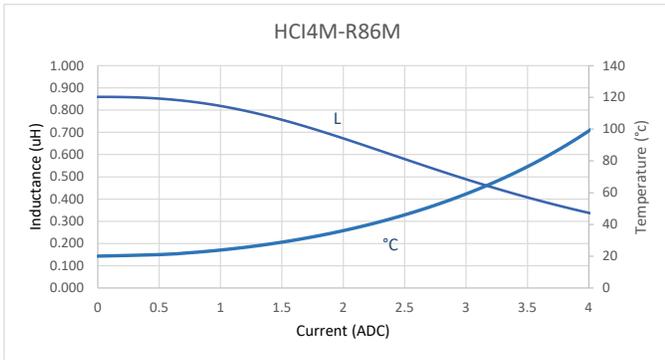


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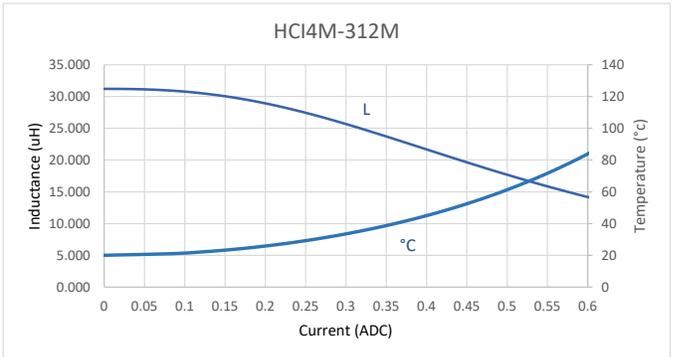
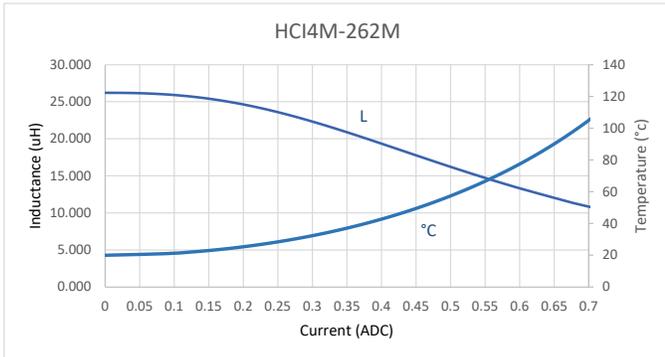
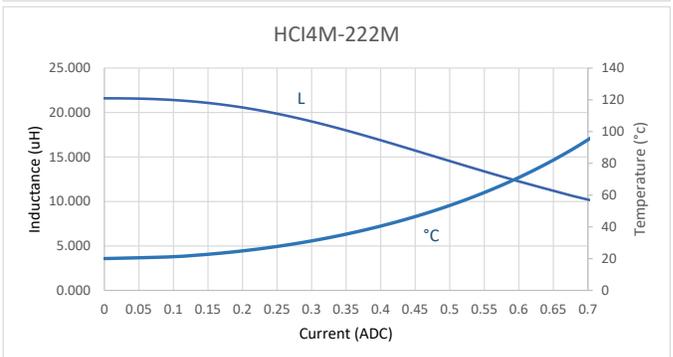
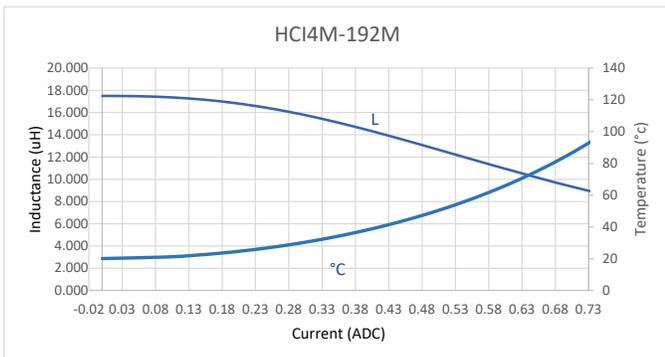
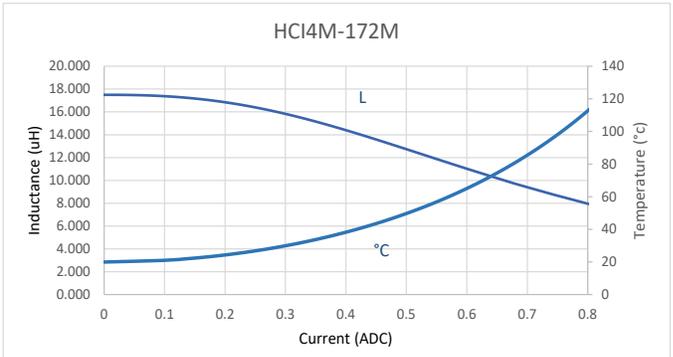
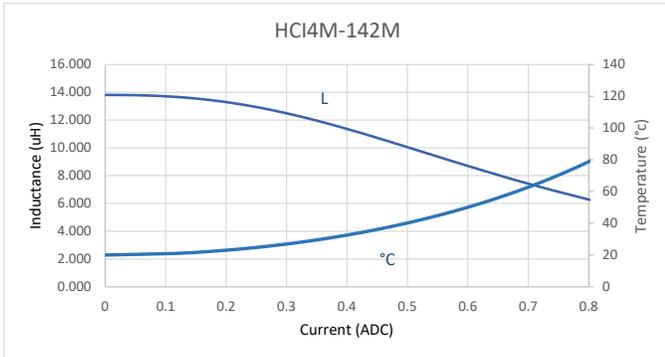
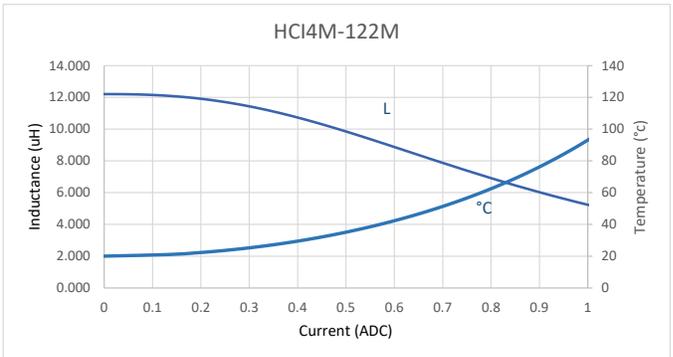
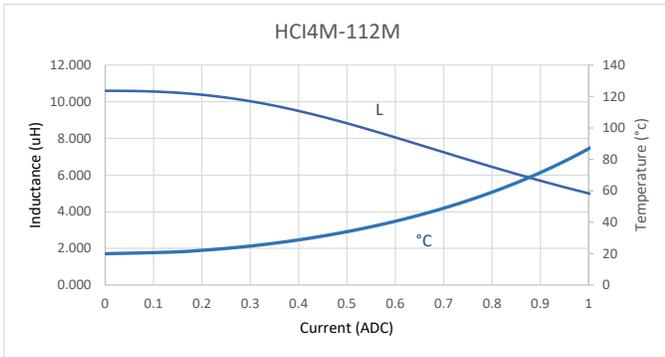


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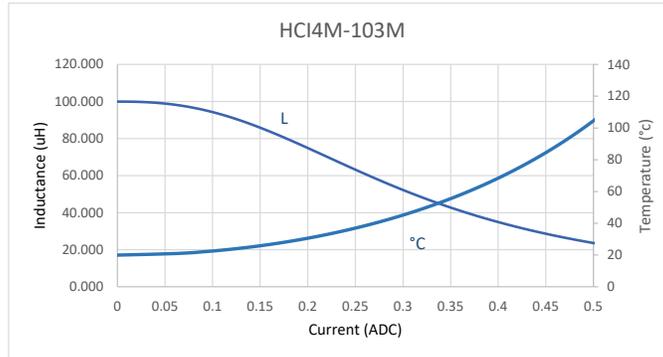
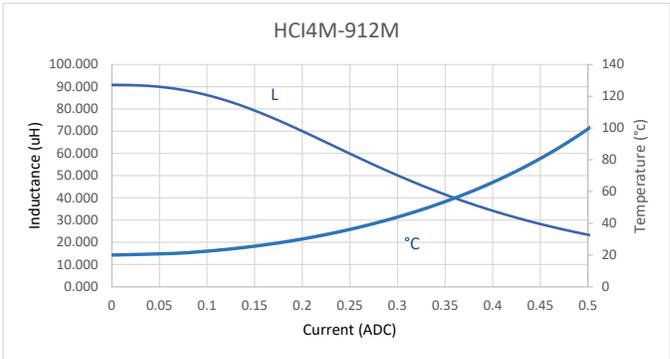
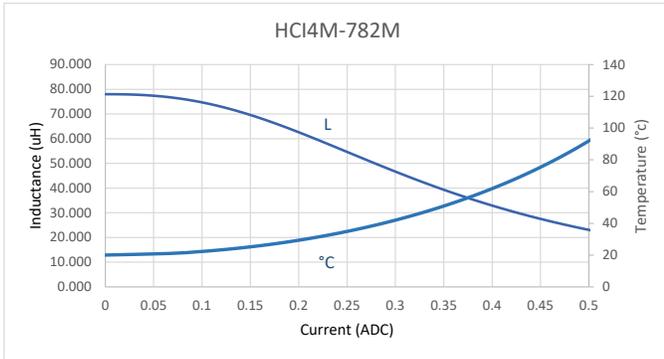
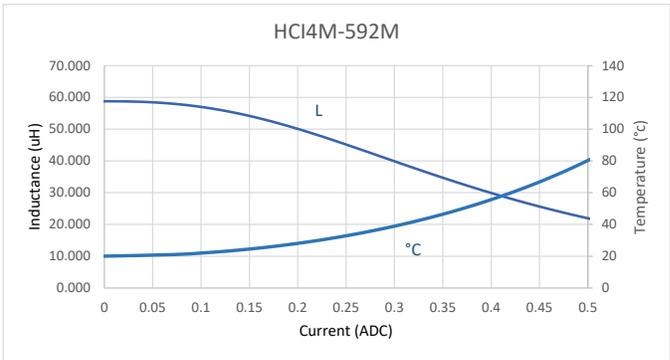
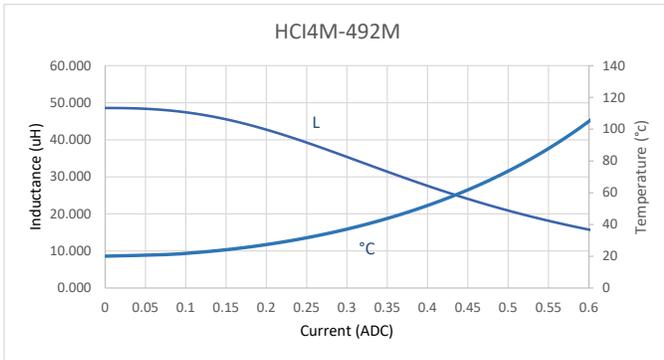


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