



SHCI7H SERIES HIGH CURRENT INDUCTOR



ALL PARTS AVAILABLE AS CLASS S OR CLASS B

MIL-STD-981

Inductance Range	DCR max (Ohms)	Current Rating (A)
40 nH - 10 mH	0.008 - 21.1	9.4 - 0.17

ALL DIMENSIONS: INCHES

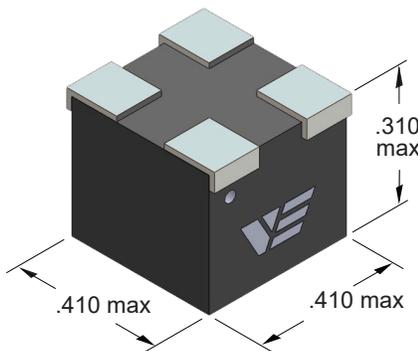
THRU-HOLE & GULL-WING PACKAGES ALSO AVAILABLE

ELECTRICAL SPECIFICATIONS

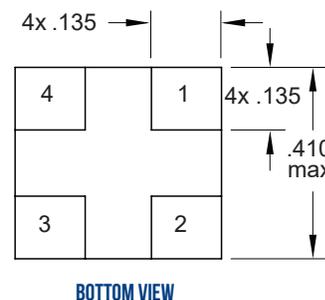
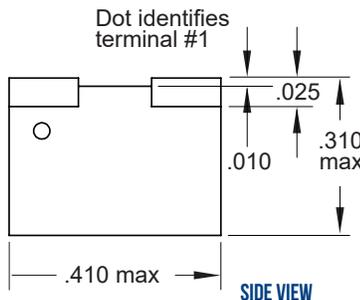
- **Operating Temperature:** -55°C to +130°C
- **Storage Temperature:** -60°C to +135°C
- **Temperature Rise:** < 30°C
- **Dielectric Withstanding Voltage:** 100 V_{RMS}
- **Different electrical values available upon request**

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%, CVM <0.1%)



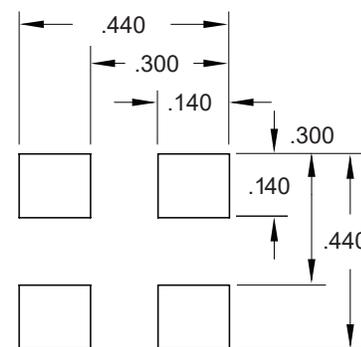
MARKINGS: LASER ETCH OR INK



APPLICATIONS

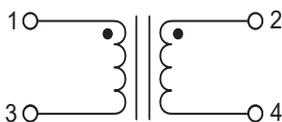
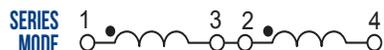
- Filter inductors
- Power supplies
- Ripple suppressors
- DC/DC converters
- Common mode chokes
- SEPIC converters
- Isolation transformers

IN	MM
0.440	11.18
0.410	10.41
0.310	7.87
0.300	7.62
0.140	3.56
0.135	3.43
0.025	0.64
0.010	0.25



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)
SHCI7H-161M	1.6	0.030	4.7	10.3	14.3
SHCI7H-371M	3.7	0.040	3.9	6.9	9.6
SHCI7H-651M	6.5	0.050	3.5	5.2	7.2
SHCI7H-102M	10.0	0.060	3.2	4.1	5.7
SHCI7H-252M	25.0	0.090	2.7	3.0	4.1
SHCI7H-502M	50.0	0.140	2.1	1.9	2.6
SHCI7H-752M	75.0	0.160	2.0	1.6	2.2
SHCI7H-103K	100.0	0.190	1.8	1.4	1.9
SHCI7H-253K	250.0	0.730	0.89	0.83	1.1
SHCI7H-503K	500.0	1.60	0.59	0.59	0.82
SHCI7H-753K	750.0	1.70	0.58	0.32	0.48
SHCI7H-104K	1.0 mH	2.50	0.48	0.28	0.41
SHCI7H-204K	2.0 mH	4.40	0.36	0.20	0.29
SHCI7H-304K	3.0 mH	5.50	0.33	0.16	0.23
SHCI7H-504K	5.0 mH	11.8	0.22	0.12	0.18
SHCI7H-754K	7.5 mH	18.3	0.18	0.10	0.15
SHCI7H-105K	10.0 mH	21.1	0.17	0.09	0.13

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)
SHCI7H-161M	0.400	0.008	9.4	20.7	28.7
SHCI7H-371M	0.925	0.010	7.8	13.8	19.1
SHCI7H-651M	1.625	0.013	6.9	10.3	14.3
SHCI7H-102M	2.50	0.015	6.3	8.3	11.5
SHCI7H-252M	6.25	0.023	5.3	5.9	8.2
SHCI7H-502M	12.50	0.035	4.3	3.8	5.2
SHCI7H-752M	18.75	0.040	3.9	3.2	4.4
SHCI7H-103K	25.0	0.048	3.7	2.8	3.8
SHCI7H-253K	62.5	0.183	1.8	1.7	2.3
SHCI7H-503K	125.0	0.400	1.2	1.2	1.6
SHCI7H-753K	187.5	0.425	1.2	0.65	0.95
SHCI7H-104K	250.0	0.625	0.96	0.56	0.82
SHCI7H-204K	500.0	1.10	0.72	0.39	0.58
SHCI7H-304K	750.0	1.38	0.65	0.32	0.47
SHCI7H-504K	1.250 mH	2.95	0.44	0.25	0.36
SHCI7H-754K	1.875 mH	4.58	0.36	0.20	0.30
SHCI7H-105K	2.500 mH	5.28	0.33	0.17	0.26

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

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)

161 = 1.6 uH
103 = 100 uH
105 = 10 mH

EXAMPLE: SHCI7H-161KS-3-T

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: (13") 430
Pitch between parts: 16 mm
Tape width: 24 mm

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

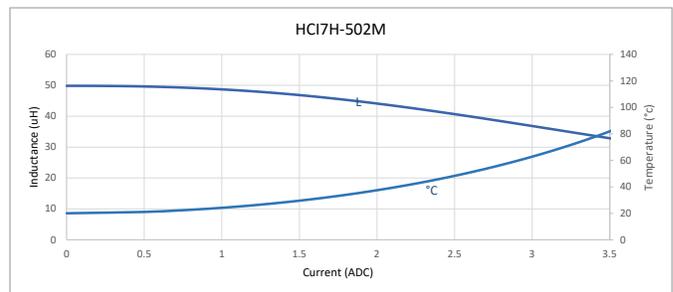
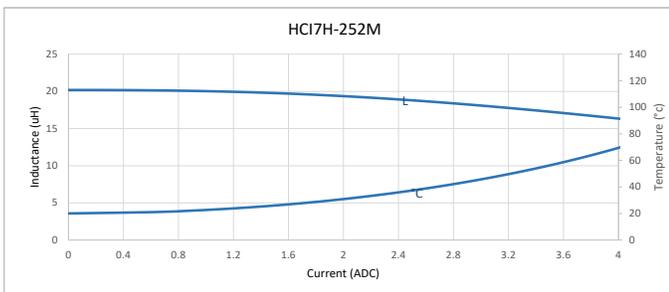
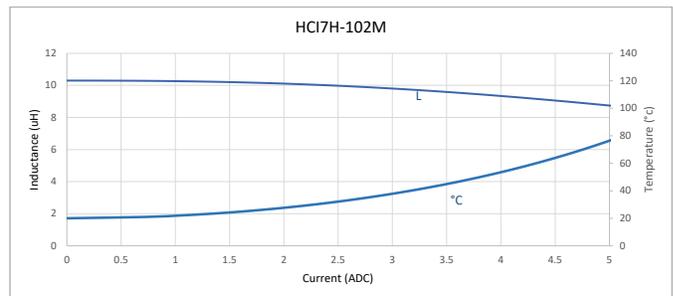
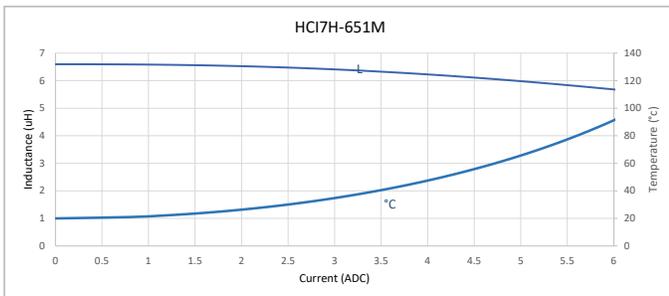
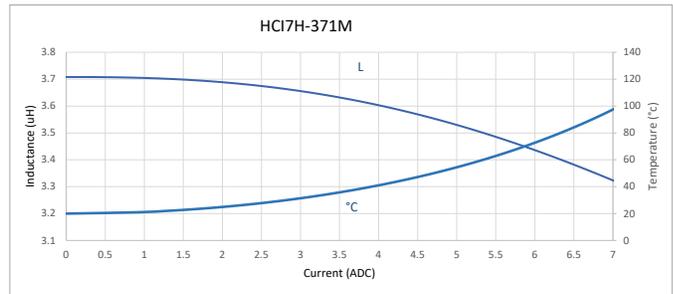
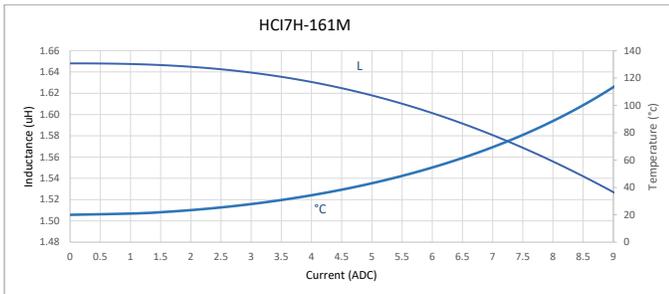
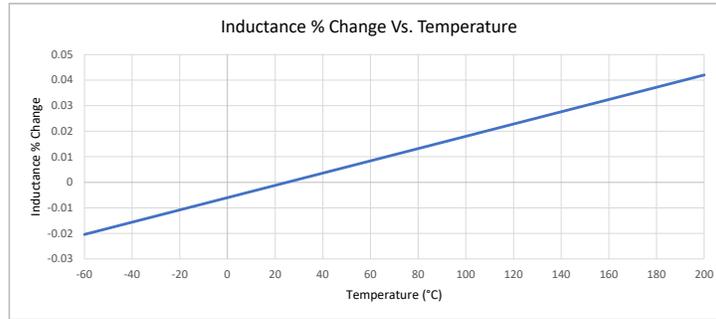
Tape and Reel not available for Thru-Hole or Gull-Wing Packages

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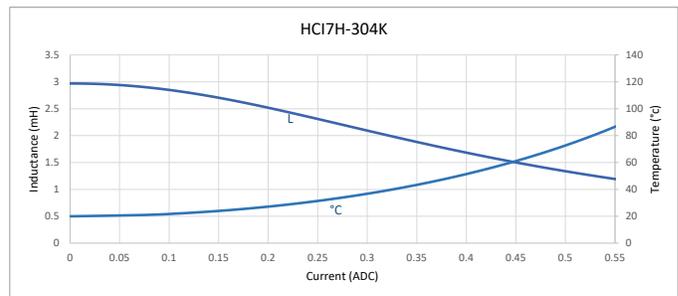
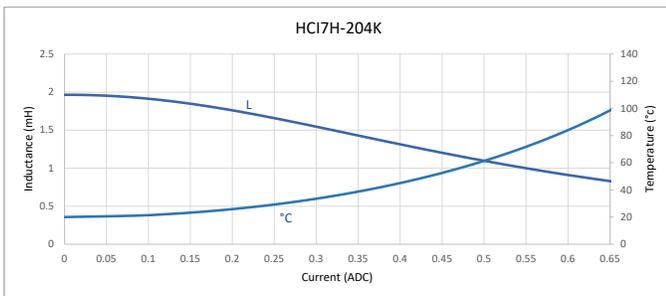
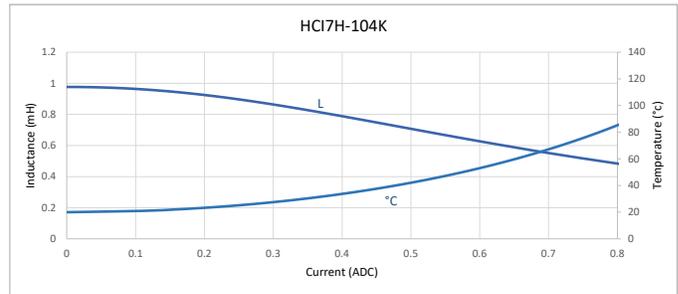
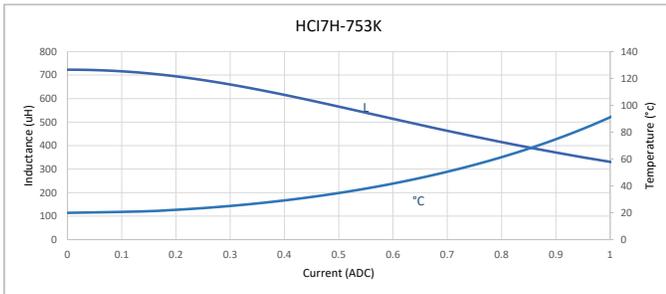
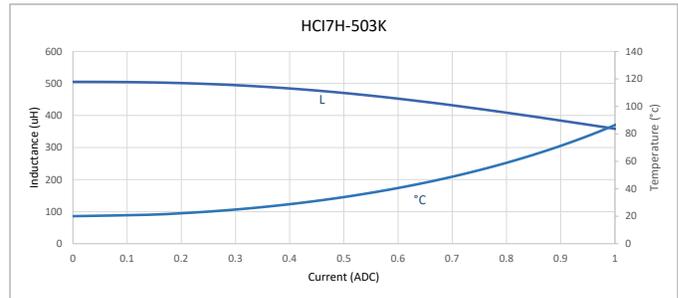
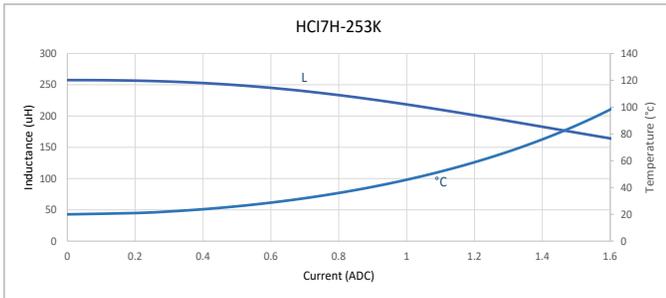
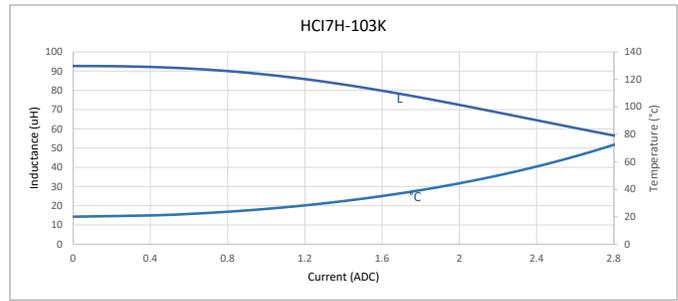
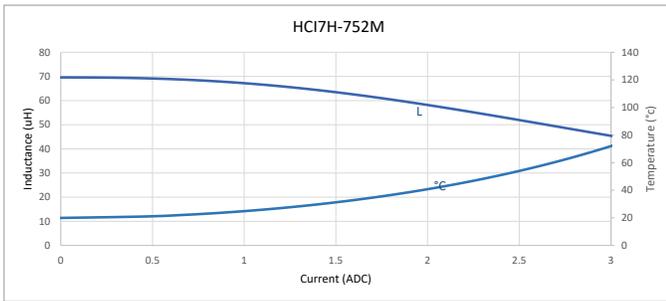


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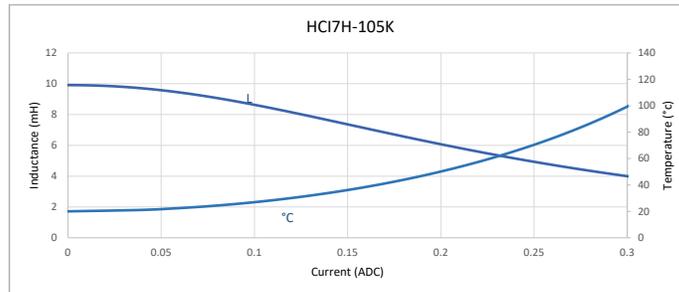
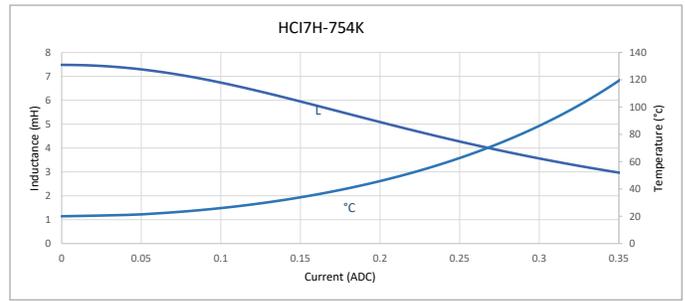
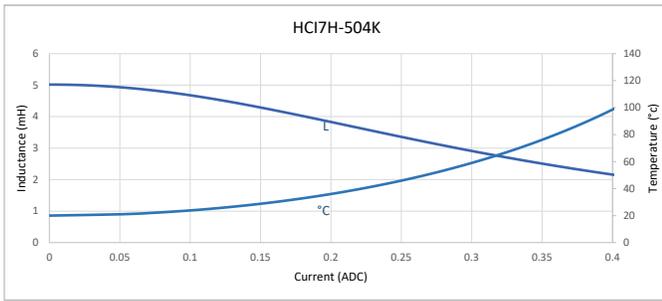


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