



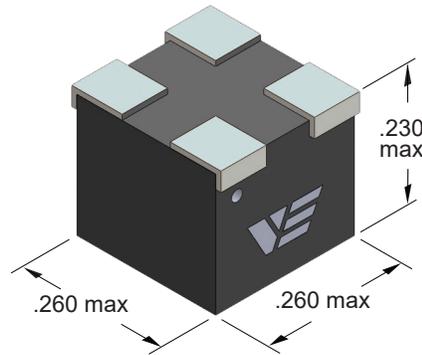
## SHCI5H SERIES HIGH CURRENT INDUCTOR



ALL PARTS AVAILABLE AS CLASS S OR CLASS B MIL-STD-981

Inductance Range	DCR max (Ohms)	Current Rating (A)
0.14 uH - 10 mH	0.008 - 57.2	6.0 - 0.08

ALL DIMENSIONS: INCHES



THRU-HOLE & GULL-WING PACKAGES ALSO AVAILABLE

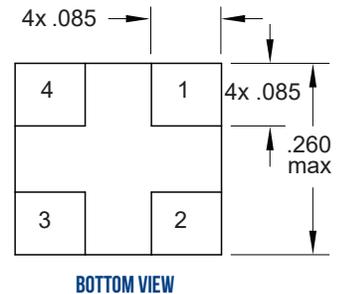
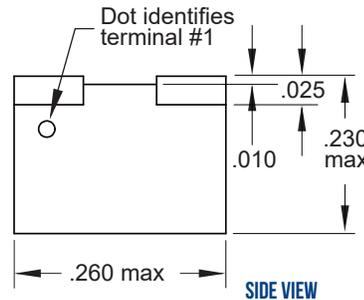
### ELECTRICAL SPECIFICATIONS

- **Operating Temperature:** -55°C to +130°C
- **Storage Temperature:** -60°C to +135°C
- **Temperature Rise:** < 30°C
- **Dielectric Withstanding Voltage:** 100 V<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%)

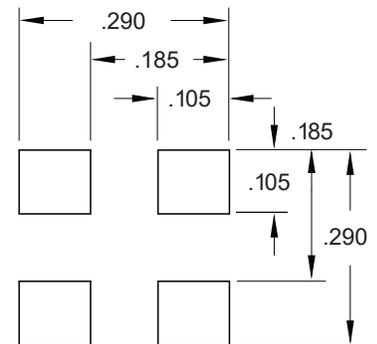
MARKINGS: LASER ETCH OR INK



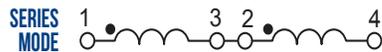
### APPLICATIONS

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

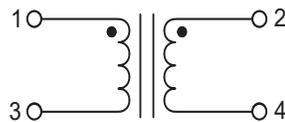
IN	MM
0.290	7.37
0.260	6.60
0.230	5.85
0.185	4.70
0.105	2.67
0.085	2.16
0.025	0.64
0.010	0.25



#### 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)
SHCI5H-R56M*-*-*	0.56	0.030	3.0	7.2	9.9
SHCI5H-121M*-*-*	1.3	0.040	2.6	4.8	6.6
SHCI5H-221M*-*-*	2.2	0.050	2.3	3.6	5.0
SHCI5H-501M*-*-*	5.0	0.080	2.0	2.4	3.3
SHCI5H-102M*-*-*	10.0	0.140	1.6	1.8	2.5
SHCI5H-252M*-*-*	25.0	0.220	1.2	1.1	1.5
SHCI5H-502M*-*-*	50.0	0.410	0.94	0.75	1.0
SHCI5H-752M*-*-*	75.0	0.490	0.94	0.62	0.86
SHCI5H-103K*-*-*	100.0	0.580	0.86	0.53	0.74
SHCI5H-253K*-*-*	250.0	1.50	0.54	0.33	0.46
SHCI5H-503K*-*-*	500.0	3.20	0.36	0.24	0.33
SHCI5H-753K*-*-*	750.0	5.10	0.28	0.20	0.27
SHCI5H-104K*-*-*	1.0 mH	7.60	0.23	0.17	0.23
SHCI5H-204K*-*-*	2.0 mH	13.1	0.17	0.12	0.17
SHCI5H-304K*-*-*	3.0 mH	20.1	0.14	0.10	0.14
SHCI5H-504K*-*-*	5.0 mH	25.8	0.12	0.08	0.11
SHCI5H-754K*-*-*	7.5 mH	40.9	0.10	0.06	0.09
SHCI5H-105K*-*-*	10.0 mH	57.2	0.08	0.05	0.07

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)
SHCI5H-R56M*-*-*	0.140	0.008	6.0	14.3	19.9
SHCI5H-121M*-*-*	0.315	0.010	5.2	9.5	13.2
SHCI5H-221M*-*-*	0.560	0.013	4.7	7.2	9.9
SHCI5H-501M*-*-*	1.25	0.020	4.0	4.8	6.6
SHCI5H-102M*-*-*	2.50	0.035	3.2	3.6	5.0
SHCI5H-252M*-*-*	6.25	0.055	2.5	2.2	3.1
SHCI5H-502M*-*-*	12.50	0.103	1.9	1.5	2.1
SHCI5H-752M*-*-*	18.75	0.123	1.9	1.2	1.7
SHCI5H-103K*-*-*	25.00	0.145	1.7	1.1	1.5
SHCI5H-253K*-*-*	62.50	0.368	1.1	0.67	0.92
SHCI5H-503K*-*-*	125.0	0.800	0.72	0.48	0.66
SHCI5H-753K*-*-*	187.5	1.30	0.55	0.39	0.54
SHCI5H-104K*-*-*	250.0	1.90	0.45	0.34	0.47
SHCI5H-204K*-*-*	500.0	3.30	0.34	0.24	0.33
SHCI5H-304K*-*-*	800.0	5.00	0.28	0.19	0.27
SHCI5H-504K*-*-*	1.250 mH	6.50	0.24	0.15	0.21
SHCI5H-754K*-*-*	1.875 mH	10.2	0.19	0.12	0.17
SHCI5H-105K*-*-*	2.500 mH	14.3	0.16	0.11	0.15

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

#### CUSTOM DESIGNS & MODIFICATIONS:

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

## SHCI5H SERIES





VE PART NUMBER  
STRUCTURE KEY

**INDUCTANCE**  
(uH) (mH)

R56 = .56 uH  
103 = 100 uH  
504 = 5 mH

EXAMPLE: SHCI5H-R56MS-3-T

**TOLERANCE**  
(%)

<b>K</b>	± 10
<b>M</b>	± 20

**TERMINATION**

<b>S</b>	SnPb
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**RELIABILITY**

<b>2</b>	Group A MIL-STD-981
<b>3</b>	Group A+B MIL-STD-981
<b>4</b>	Group A+B+C MIL-STD-981
<b>7</b>	Other

**PACKAGING**  
(Default Bulk)

<b>B</b>	Bulk
<b>T</b>	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

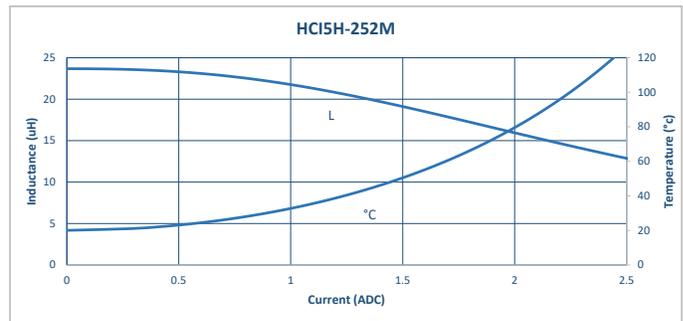
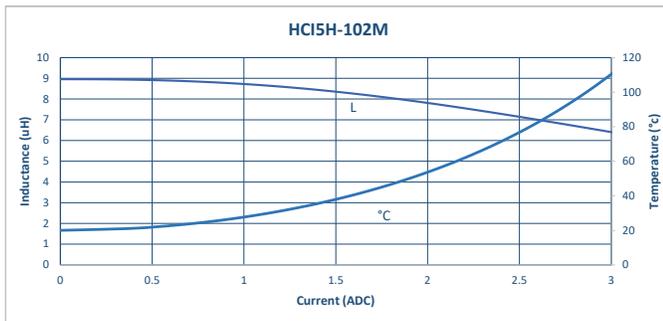
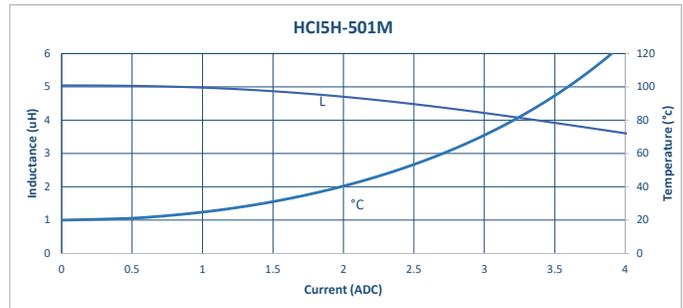
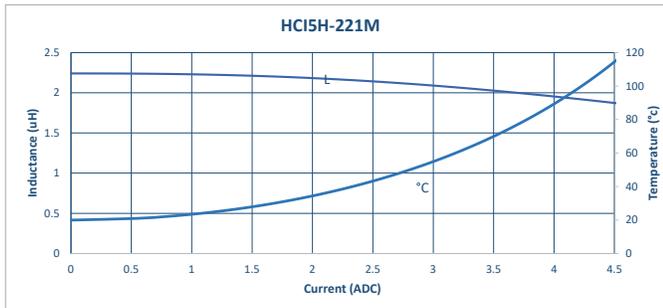
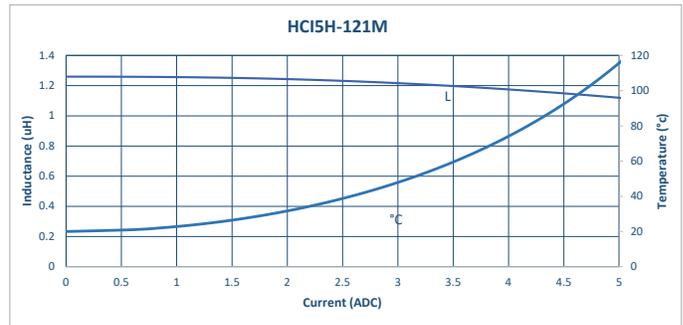
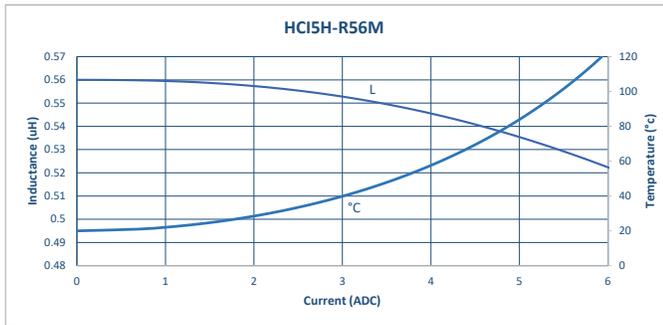
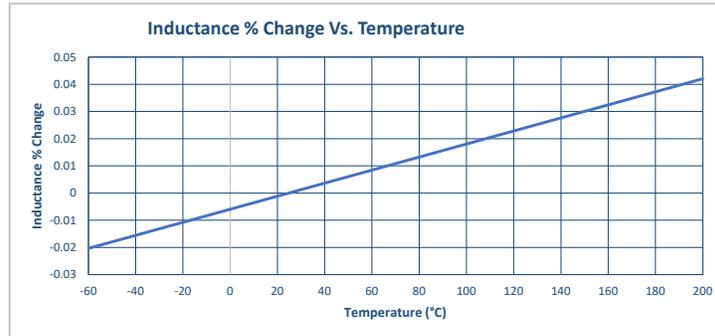
*Tape and Reel not available for Thru-Hole or Gull-Wing Packages*

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SHCI5H SERIES



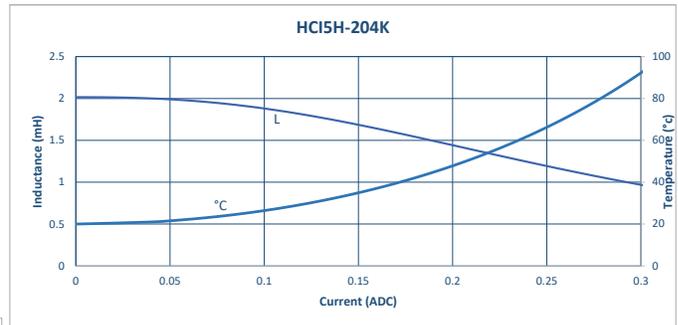
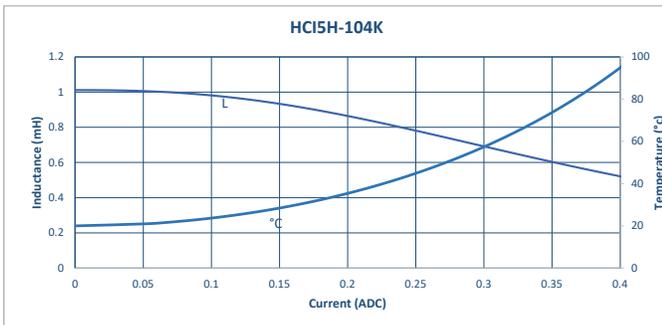
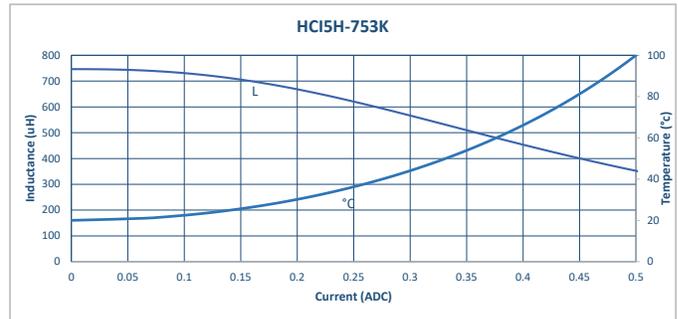
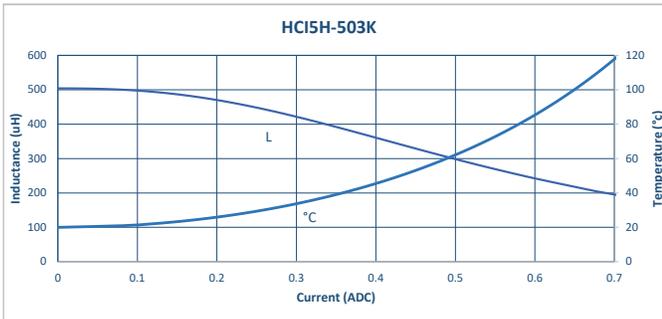
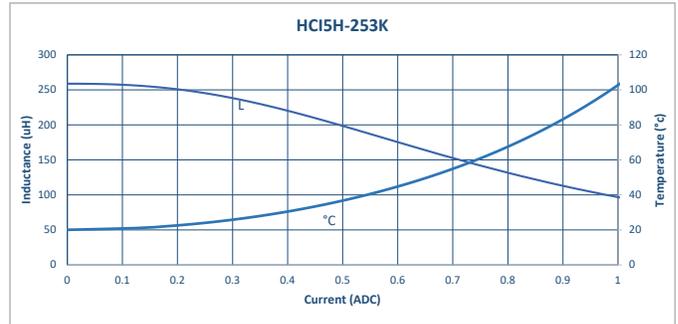
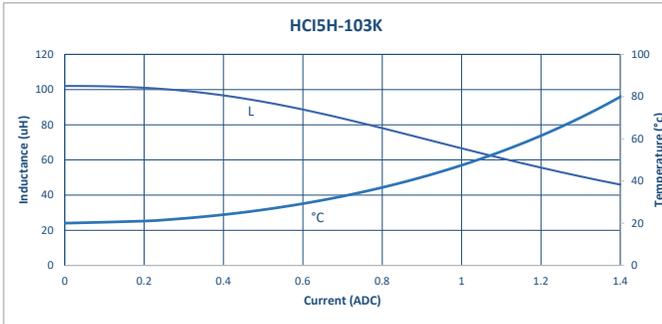
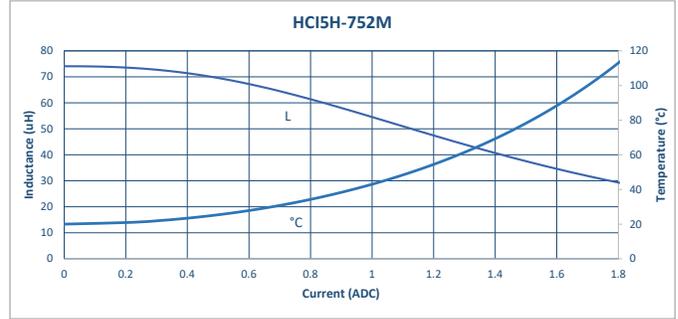
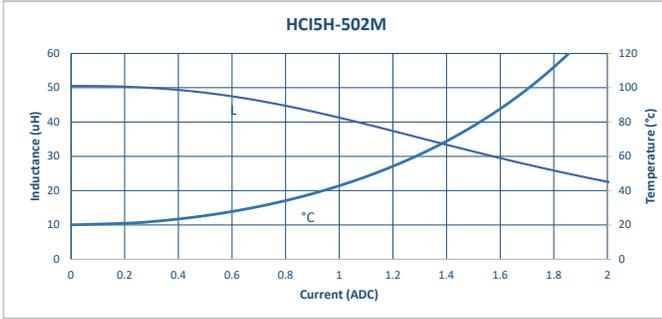


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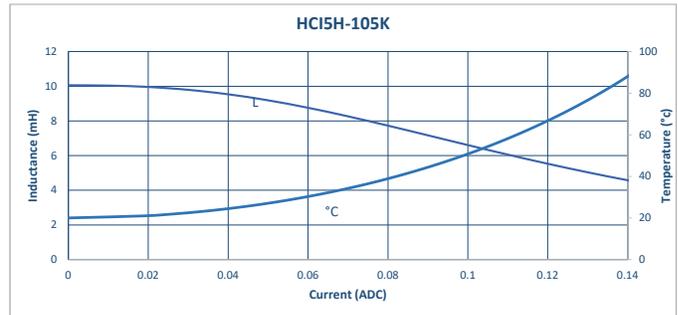
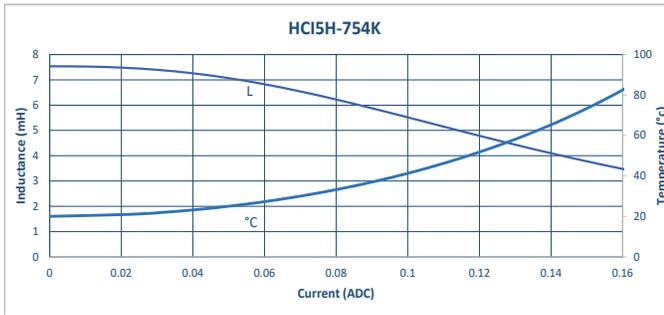
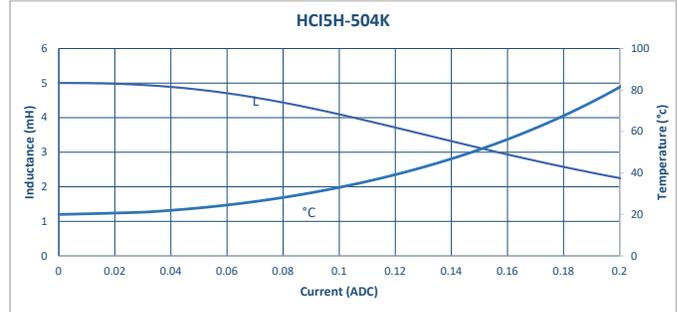
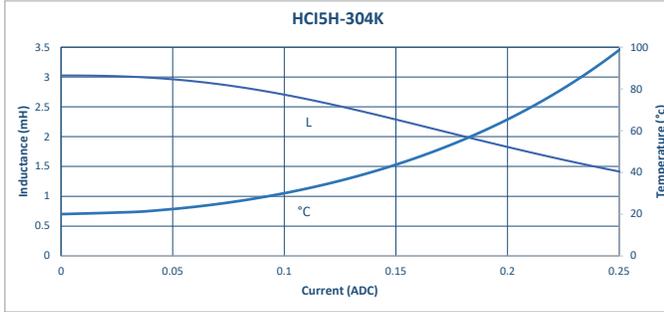


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