



SHCI6M SERIES

HIGH CURRENT INDUCTOR



ALL PARTS AVAILABLE AS CLASS S OR CLASS B

MIL-STD-981

Inductance Range	DCR max (Ohms)	Current Rating (A)
215 nH - 10 mH	0.010 - 23.0	0.18 - 8.72

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**

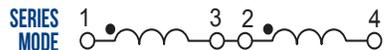
FEATURES

- **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%, CVCM <0.1%)

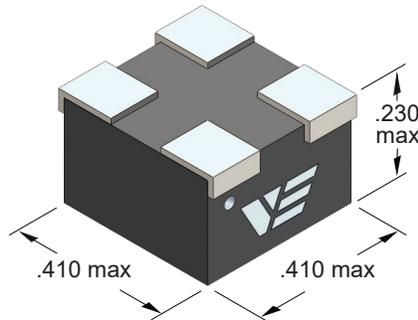
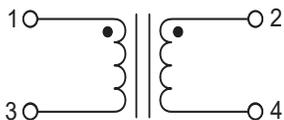
APPLICATIONS

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

TYPICAL USER CONNECTIONS

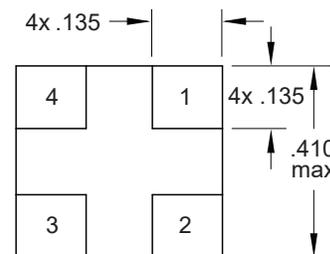
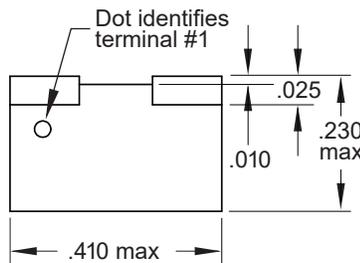


SCHEMATIC

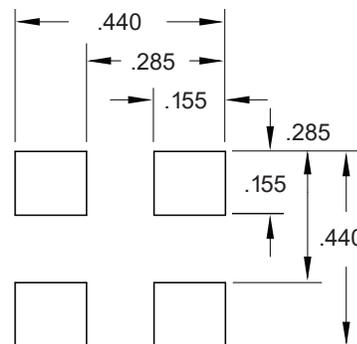


THRU-HOLE & GULL-WING PACKAGES ALSO AVAILABLE

MARKINGS: LASER ETCH OR INK



IN	MM
0.440	11.18
0.410	10.41
0.230	5.84
0.285	7.24
0.155	3.94
0.135	3.43
0.025	0.64
0.010	0.25



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)
SHCI6M-R86M*-*-*	0.86	0.040	4.4	6.3	8.7
SHCI6M-201M*-*-*	2.0	0.060	3.6	4.2	5.8
SHCI6M-351M*-*-*	3.5	0.070	3.2	3.1	4.3
SHCI6M-501M*-*-*	5.0	0.090	2.9	2.5	3.5
SHCI6M-102M*-*-*	10.0	0.120	2.5	1.8	2.5
SHCI6M-252M*-*-*	25.0	0.180	2.0	1.1	1.6
SHCI6M-502M*-*-*	50.0	0.250	1.7	0.84	1.2
SHCI6M-752M*-*-*	75.0	0.320	1.5	0.66	0.91
SHCI6M-103K*-*-*	100.0	0.360	1.5	0.57	0.79
SHCI6M-253K*-*-*	250.0	0.910	0.89	0.37	0.51
SHCI6M-503K*-*-*	500.0	2.50	0.54	0.26	0.36
SHCI6M-753K*-*-*	750.0	2.70	0.52	0.18	0.25
SHCI6M-104K*-*-*	1.0 mH	4.00	0.43	0.16	0.22
SHCI6M-204K*-*-*	2.0 mH	7.40	0.31	0.11	0.15
SHCI6M-304K*-*-*	3.0 mH	9.00	0.28	0.09	0.12
SHCI6M-504K*-*-*	5.0 mH	16.4	0.21	0.06	0.09
SHCI6M-754K*-*-*	7.5 mH	20.0	0.19	0.05	0.07
SHCI6M-105K*-*-*	10.0 mH	23.0	0.18	0.05	0.06

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)
SHCI6M-R86M*-*-*	0.215	0.010	8.7	12.5	17.3
SHCI6M-201M*-*-*	0.500	0.015	7.2	8.4	11.5
SHCI6M-351M*-*-*	0.875	0.018	6.3	6.3	8.7
SHCI6M-501M*-*-*	1.25	0.023	5.8	5.0	6.9
SHCI6M-102M*-*-*	2.50	0.030	4.9	3.6	4.9
SHCI6M-252M*-*-*	6.25	0.045	4.0	2.3	3.1
SHCI6M-502M*-*-*	12.50	0.063	3.4	1.7	2.3
SHCI6M-752M*-*-*	18.75	0.080	3.0	1.3	1.8
SHCI6M-103K*-*-*	25.00	0.090	3.1	1.1	1.6
SHCI6M-253K*-*-*	62.50	0.228	1.8	0.74	1.0
SHCI6M-503K*-*-*	125.0	0.625	1.1	0.52	0.72
SHCI6M-753K*-*-*	187.5	0.675	1.0	0.36	0.50
SHCI6M-104K*-*-*	250.0	1.00	0.85	0.31	0.43
SHCI6M-204K*-*-*	500.0	1.85	0.63	0.22	0.31
SHCI6M-304K*-*-*	750.0	2.25	0.57	0.18	0.25
SHCI6M-504K*-*-*	1.250 mH	4.10	0.42	0.13	0.18
SHCI6M-754K*-*-*	1.875 mH	5.00	0.38	0.11	0.15
SHCI6M-105K*-*-*	2.500 mH	5.75	0.35	0.09	0.13

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

EXAMPLE: SHCI6M-R86MS-3-T

INDUCTANCE (uH) (mH)

R86 = 0.86 uH
103 = 100 uH
504 = 5 mH

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") 530
Pitch between parts: 16 mm
Tape width: 24 mm

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

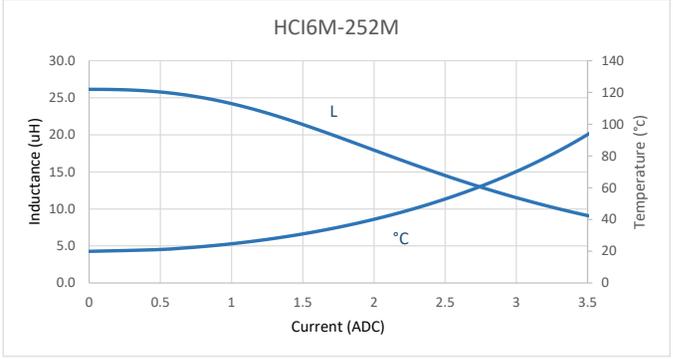
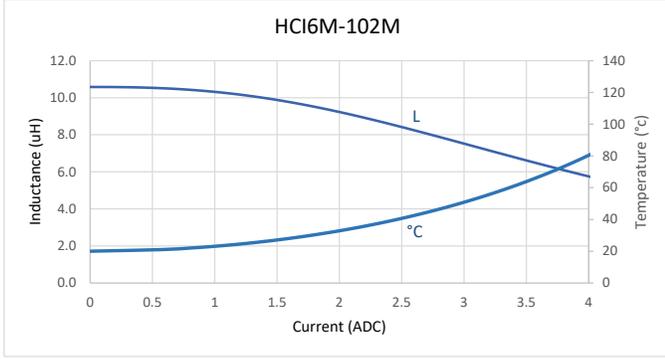
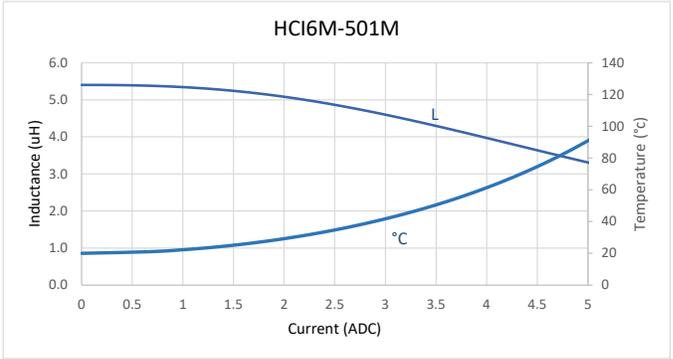
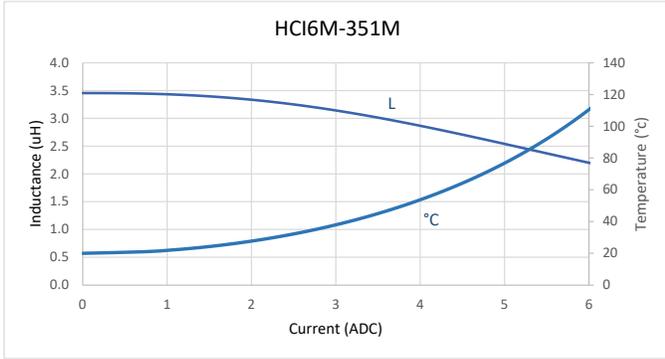
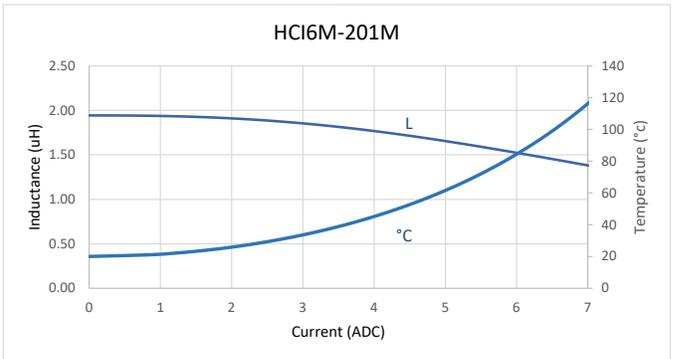
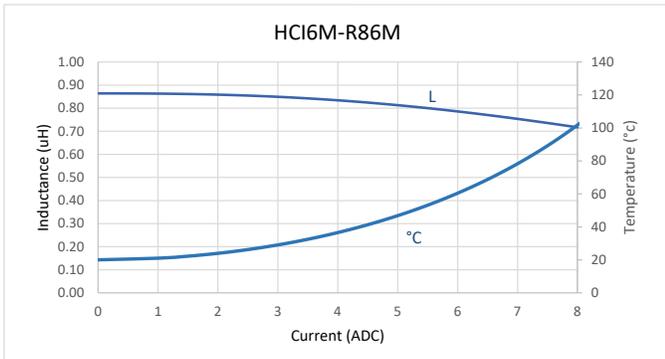
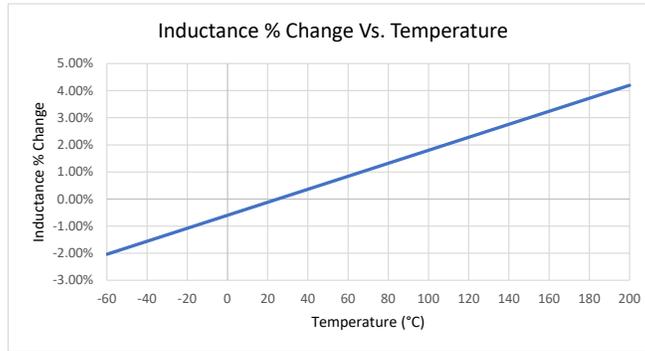
Tape and Reel not available for Thru-Hole or Gull-Wing Packages

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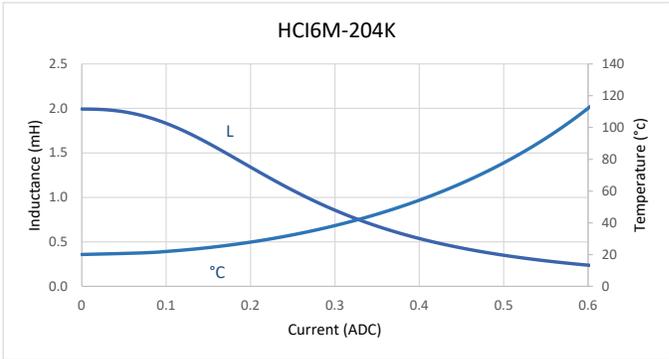
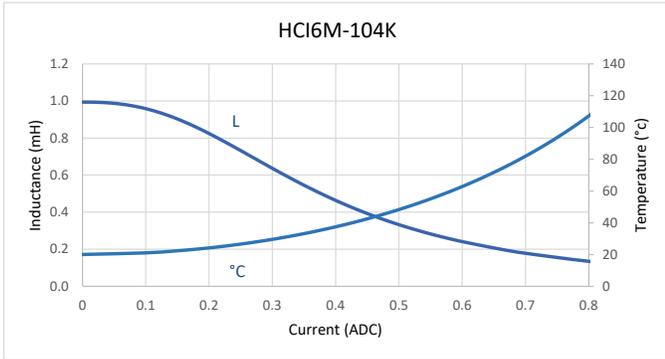
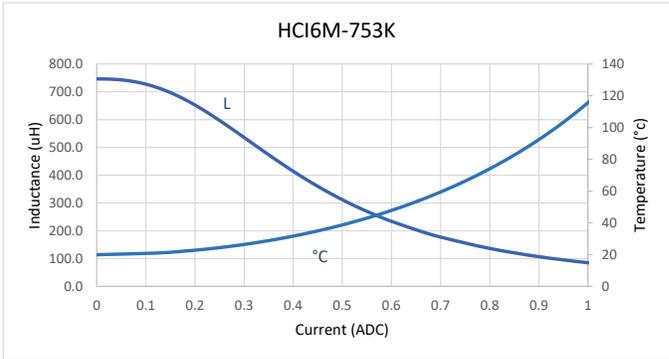
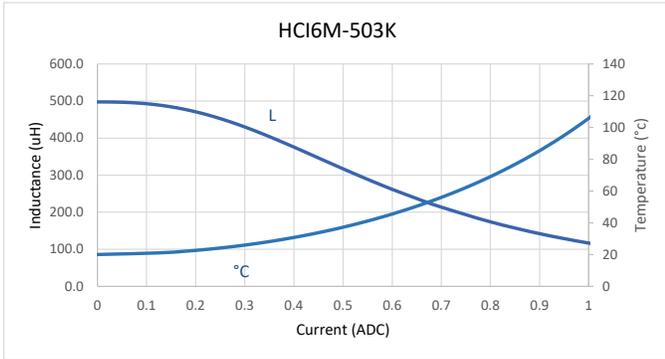
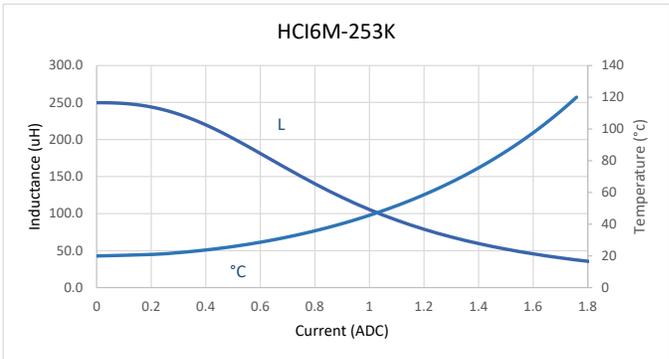
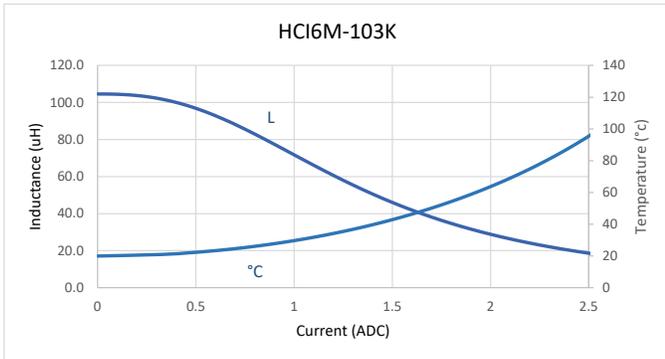
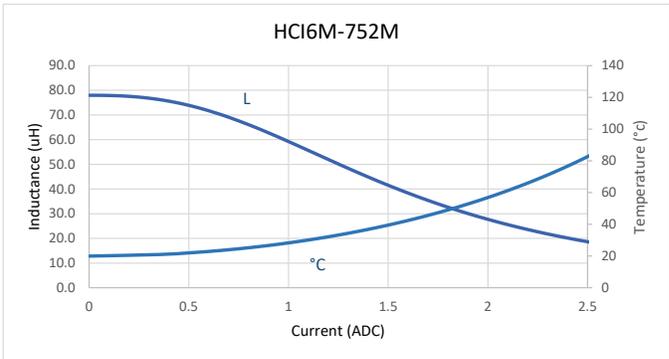
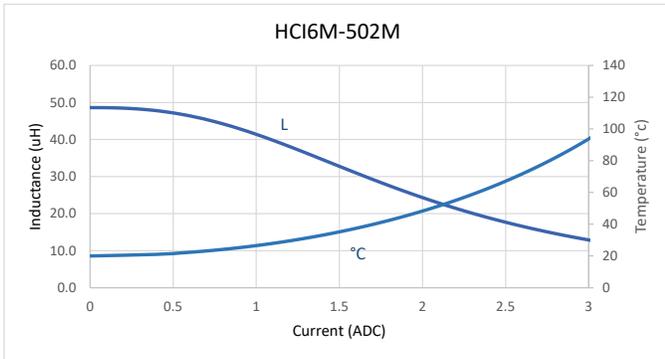




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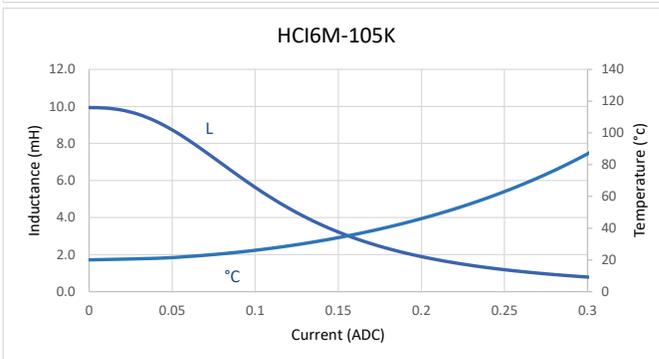
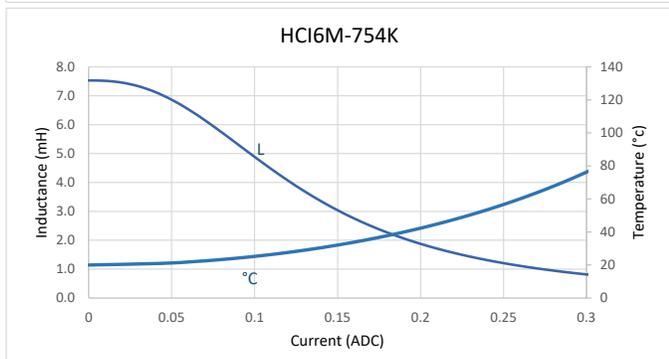
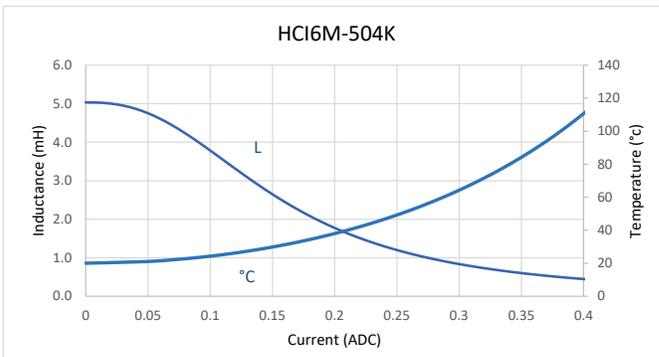
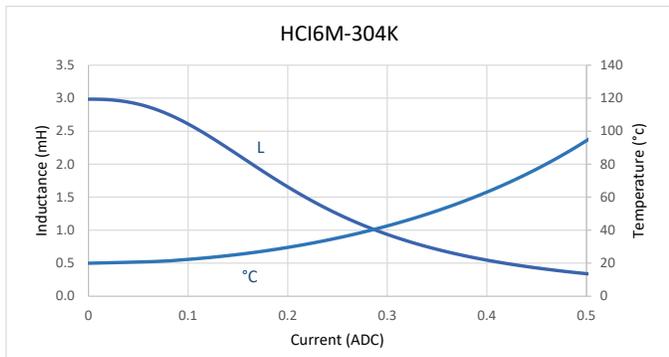


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