



SHCI10M SERIES HIGH CURRENT INDUCTOR



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

Inductance Range	DCR max (Ohms)	Current Rating (A)
0.250 uH - 10 mH	0.00225 - 10.7	15.3 - 0.24

ALL DIMENSIONS: INCHES

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**

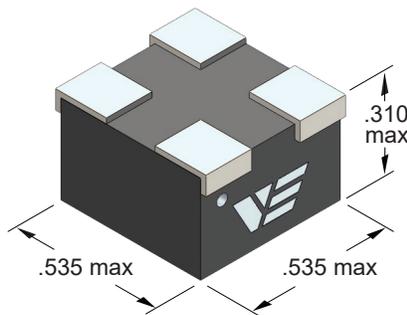
FEATURES

- **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%, CVCVM <0.1%)

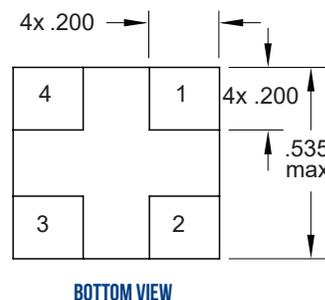
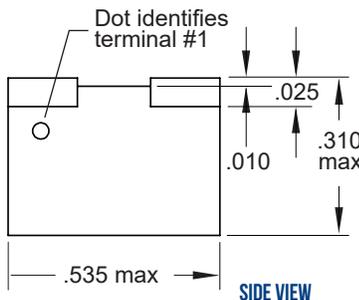
APPLICATIONS

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

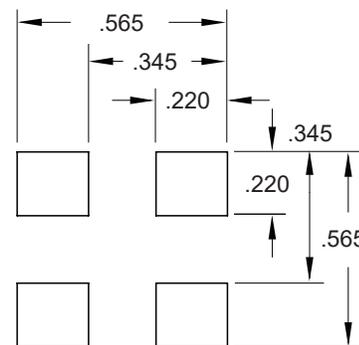
THRU-HOLE & GULL-WING PACKAGES ALSO AVAILABLE



MARKINGS: LASER ETCH OR INK

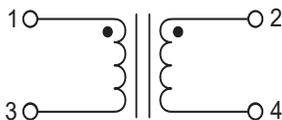
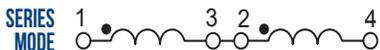


IN	MM
0.565	14.35
0.535	13.59
0.345	8.76
0.310	7.87
0.220	5.59
0.200	5.08
0.025	0.64
0.010	0.25



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)
SHCI10M-101M	1.0	0.009	7.6	10.1	13.9
SHCI10M-241M	2.4	0.012	7.1	6.7	9.2
SHCI10M-421M	4.2	0.016	6.3	5.0	6.9
SHCI10M-102M	10.0	0.020	5.2	3.4	4.6
SHCI10M-252M	25.0	0.030	4.4	2.2	3.1
SHCI10M-502M	50.0	0.060	3.2	1.4	2.0
SHCI10M-752M	75.0	0.070	2.9	1.2	1.6
SHCI10M-103K	100.0	0.090	2.7	1.0	1.4
SHCI10M-253K	250.0	0.440	1.2	0.65	0.89
SHCI10M-503K	500.0	0.900	0.81	0.47	0.65
SHCI10M-753K	750.0	1.00	0.78	0.32	0.44
SHCI10M-104K	1.0 mH	1.50	0.64	0.28	0.39
SHCI10M-204K	2.0 mH	2.70	0.48	0.19	0.27
SHCI10M-304K	3.0 mH	4.20	0.38	0.16	0.22
SHCI10M-504K	5.0 mH	6.20	0.32	0.11	0.16
SHCI10M-754K	7.5 mH	9.30	0.26	0.09	0.13
SHCI10M-105K	10.0 mH	10.7	0.24	0.08	0.11

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)
SHCI10M-101M	0.250	0.00225	15.3	20.1	27.7
SHCI10M-241M	0.600	0.003	14.2	13.4	18.5
SHCI10M-421M	1.050	0.004	12.5	10.1	13.9
SHCI10M-102M	2.50	0.005	10.4	6.7	9.2
SHCI10M-252M	6.25	0.0075	8.7	4.5	6.2
SHCI10M-502M	12.75	0.015	6.4	2.9	4.0
SHCI10M-752M	18.75	0.0175	5.8	2.4	3.3
SHCI10M-103K	25.00	0.0225	5.3	2.0	2.8
SHCI10M-253K	62.50	0.11	2.4	1.3	1.8
SHCI10M-503K	125.0	0.225	1.6	0.93	1.3
SHCI10M-753K	187.5	0.25	1.6	0.64	0.89
SHCI10M-104K	250.0	0.375	1.3	0.56	0.77
SHCI10M-204K	500.0	0.675	0.96	0.39	0.54
SHCI10M-304K	750.0	1.05	0.77	0.32	0.44
SHCI10M-504K	1.250 mH	1.55	0.64	0.23	0.32
SHCI10M-754K	1.875 mH	2.325	0.52	0.19	0.26
SHCI10M-105K	2.500 mH	2.675	0.48	0.16	0.23

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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DATA TABLE

VE PART NUMBER STRUCTURE KEY

INDUCTANCE (uH) (mH)

101 = 1.0 uH
103 = 100 uH
105 = 10 mH

EXAMPLE: SHCI10M-101MS-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") 320
Pitch between parts: 24 mm
Tape width: 24 mm

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

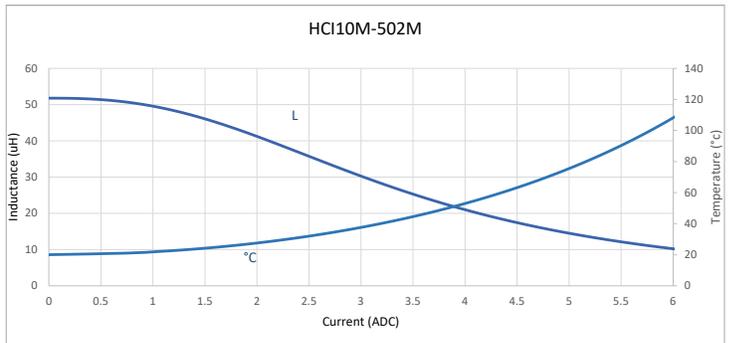
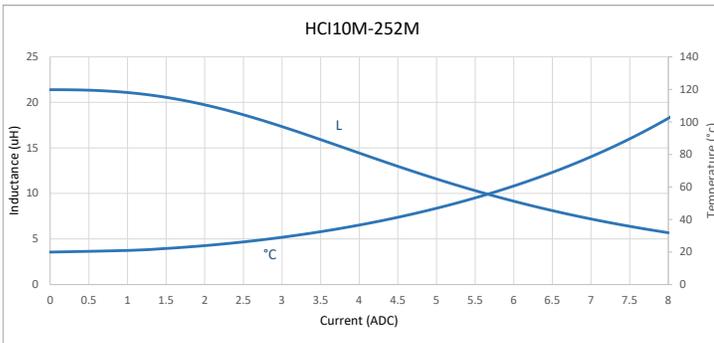
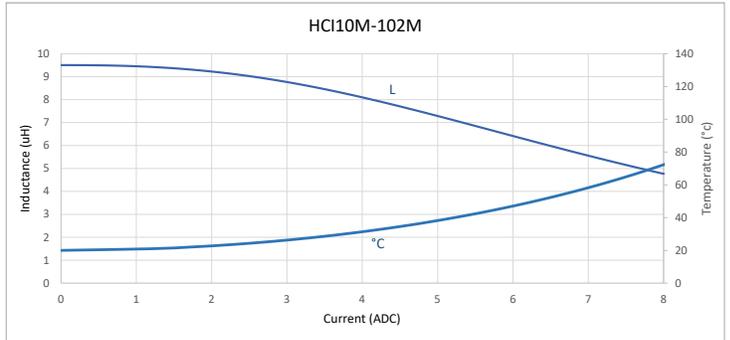
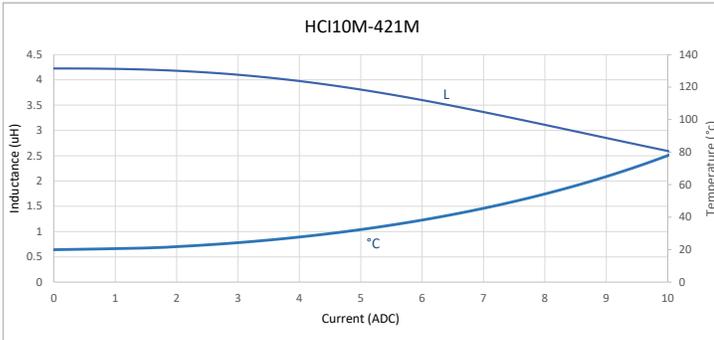
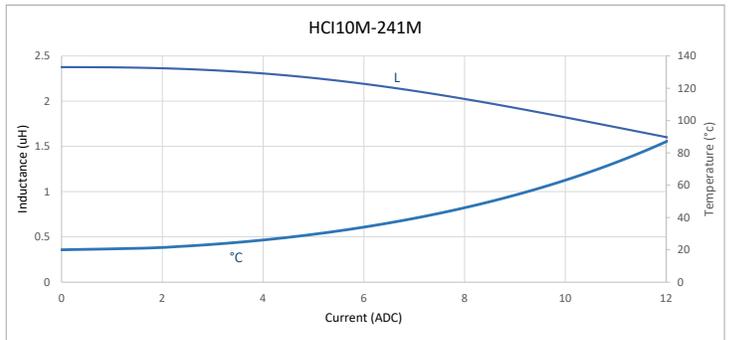
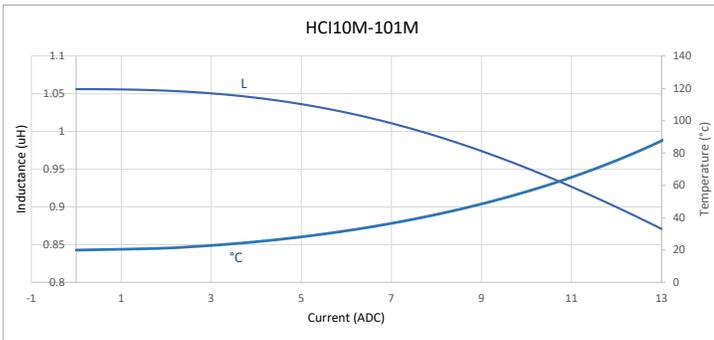
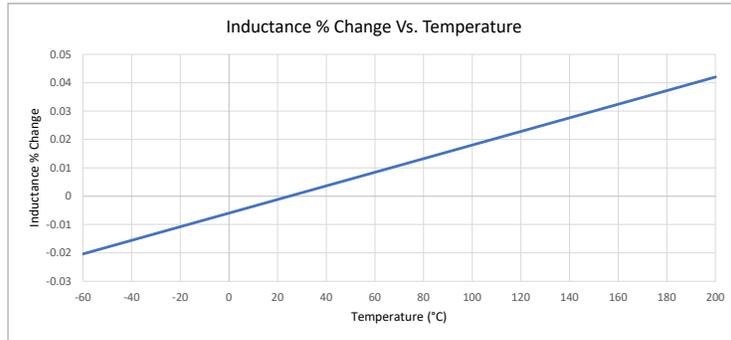
Tape and Reel not available for Thru-Hole or Gull-Wing Packages

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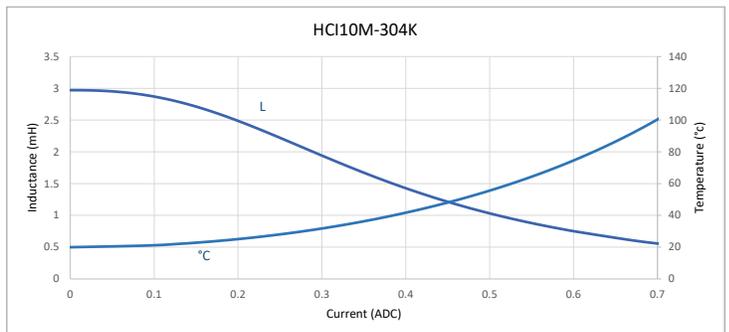
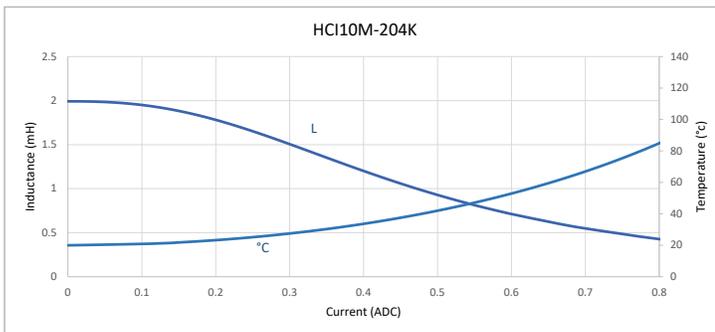
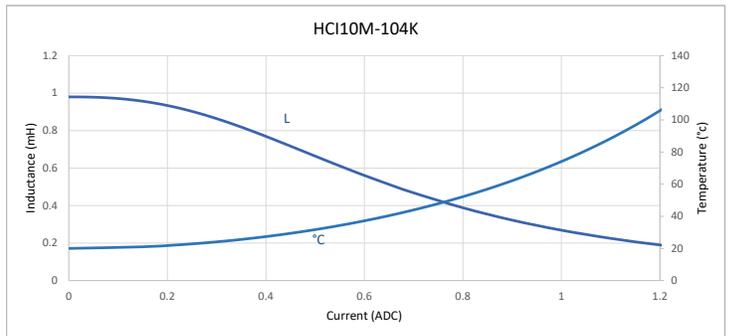
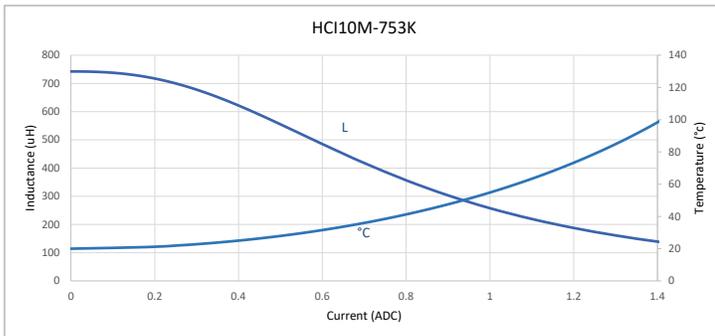
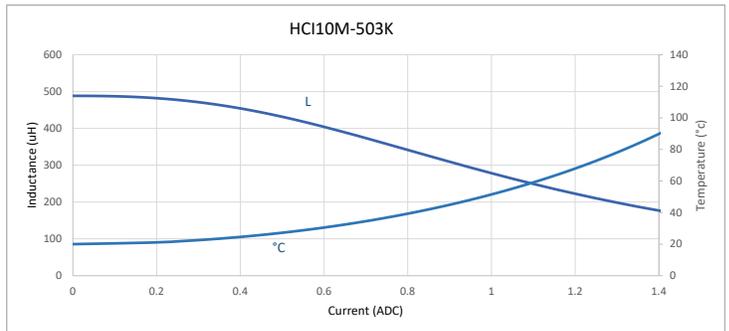
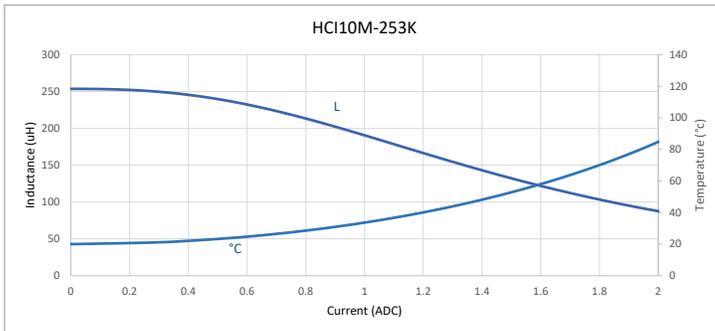
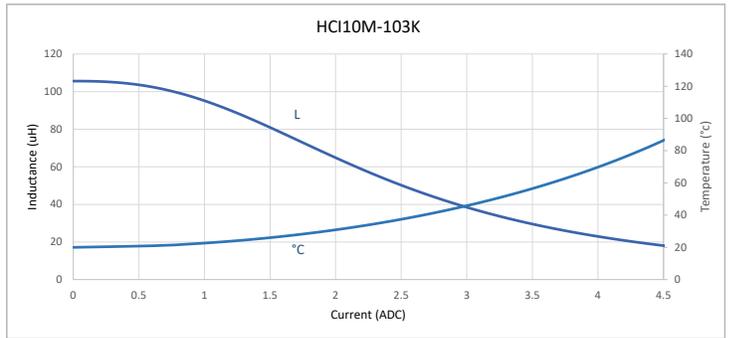
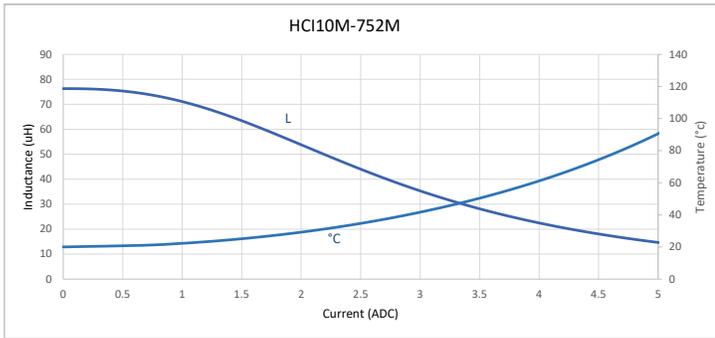


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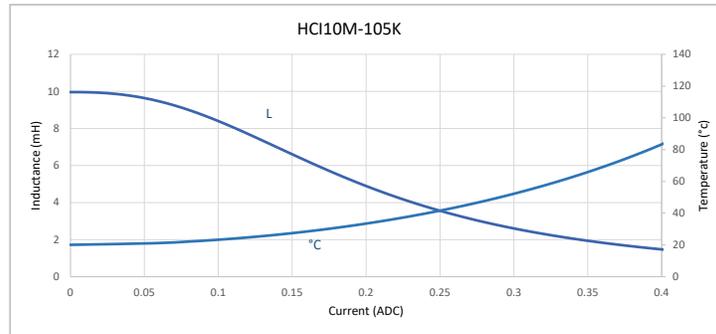
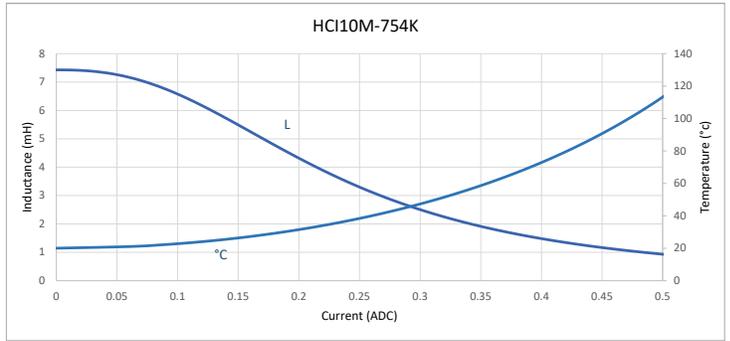
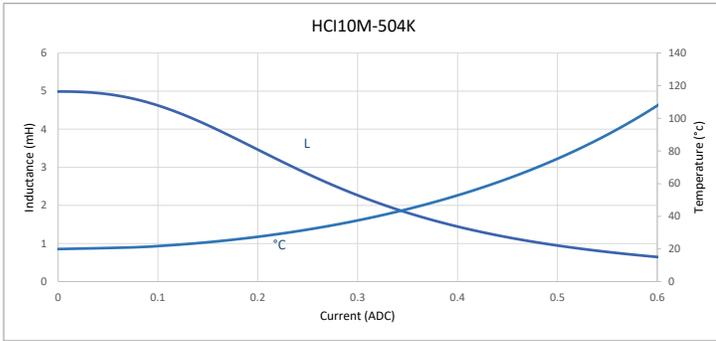


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