



SHCI5M SERIES HIGH CURRENT INDUCTOR

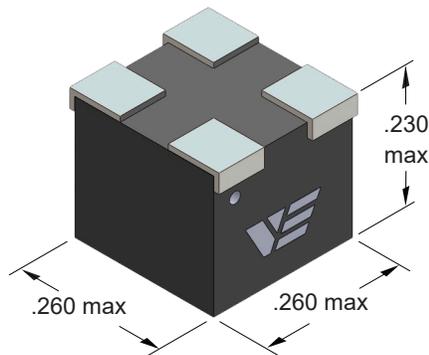


ALL PARTS AVAILABLE AS CLASS S OR CLASS B

MIL-STD-981

Inductance Range	DCR max (Ohms)	Current Rating (A)
0.15 uH - 10 mH	0.0075 - 57.2	0.08 - 6.0

ALL DIMENSIONS: INCHES



THRU-HOLE & GULL-WING PACKAGES ALSO AVAILABLE

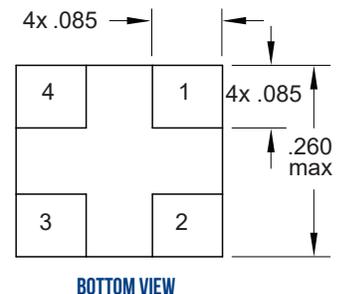
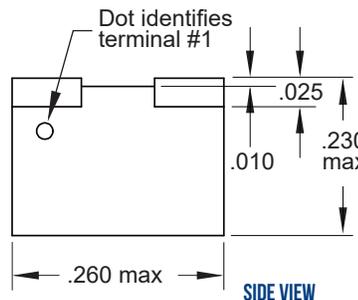
ELECTRICAL SPECIFICATIONS

- **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%, CVCVM <0.1%)

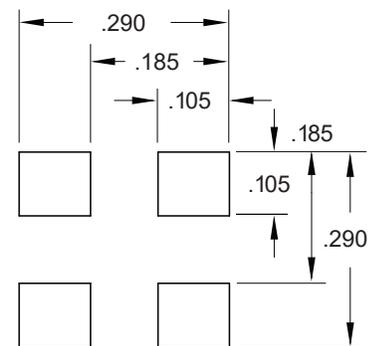
MARKINGS: LASER ETCH OR INK



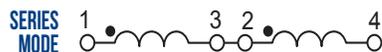
APPLICATIONS

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

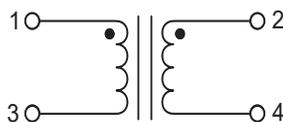
IN	MM
0.290	7.37
0.260	6.60
0.230	5.85
0.185	4.70
0.105	2.67
0.085	2.16
0.025	0.64
0.010	0.25



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)
SHCI5M-R56M*-*	0.56	0.030	3.0	4.3	6.0
SHCI5M-121M*-*	1.3	0.040	2.6	2.9	4.0
SHCI5M-221M*-*	2.2	0.050	2.3	2.2	3.0
SHCI5M-501M*-*	5.0	0.080	2.0	1.4	2.0
SHCI5M-102M*-*	9.0	0.140	1.6	1.1	1.5
SHCI5M-252M*-*	25.0	0.250	1.2	0.67	0.92
SHCI5M-502M*-*	50.0	0.400	0.94	0.46	0.63
SHCI5M-752M*-*	75.0	0.500	0.94	0.38	0.52
SHCI5M-103K*-*	100.0	0.600	0.86	0.32	0.44
SHCI5M-253K*-*	250.0	1.50	0.54	0.20	0.28
SHCI5M-503K*-*	500.0	3.20	0.36	0.14	0.20
SHCI5M-753K*-*	750.0	5.00	0.28	0.12	0.16
SHCI5M-104K*-*	1.0 mH	7.50	0.23	0.10	0.14
SHCI5M-204K*-*	2.0 mH	13.0	0.17	0.07	0.10
SHCI5M-304K*-*	3.0 mH	20.0	0.14	0.06	0.08
SHCI5M-504K*-*	5.0 mH	26.0	0.12	0.05	0.06
SHCI5M-754K*-*	7.5 mH	41.0	0.10	0.04	0.05
SHCI5M-105K*-*	10.0 mH	57.0	0.08	0.03	0.04

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)
SHCI5M-R56M*-*	0.15	0.0075	6.0	8.7	12.0
SHCI5M-121M*-*	0.32	0.010	5.2	5.8	8.0
SHCI5M-221M*-*	0.55	0.013	4.7	4.3	6.0
SHCI5M-501M*-*	1.25	0.020	4.0	2.9	4.0
SHCI5M-102M*-*	2.25	0.035	3.2	2.2	3.0
SHCI5M-252M*-*	6.25	0.055	2.5	1.3	1.8
SHCI5M-502M*-*	12.5	0.105	1.9	0.91	1.3
SHCI5M-752M*-*	18.8	0.125	1.9	0.76	1.0
SHCI5M-103K*-*	25.0	0.145	1.7	0.64	0.89
SHCI5M-253K*-*	62.5	0.365	1.1	0.40	0.56
SHCI5M-503K*-*	125.0	0.800	0.72	0.29	0.40
SHCI5M-753K*-*	187.5	1.30	0.55	0.24	0.33
SHCI5M-104K*-*	250.0	1.90	0.45	0.20	0.28
SHCI5M-204K*-*	500.0	3.30	0.34	0.14	0.20
SHCI5M-304K*-*	750.0	5.00	0.28	0.12	0.16
SHCI5M-504K*-*	1.250 mH	6.45	0.24	0.09	0.13
SHCI5M-754K*-*	1.875 mH	10.25	0.19	0.07	0.10
SHCI5M-105K*-*	2.500 mH	14.30	0.16	0.06	0.09

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)

R56 = 0.56 uH
103 = 100 uH
504 = 5 mH

EXAMPLE: SHCI5M-R56MS-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: (7") 200, (13") 800
Pitch between parts: 12 mm
Tape width: 16 mm

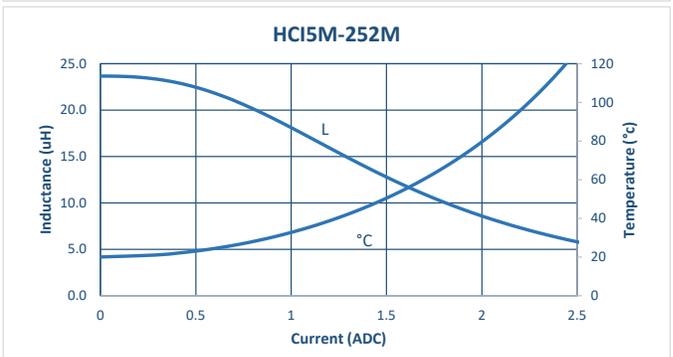
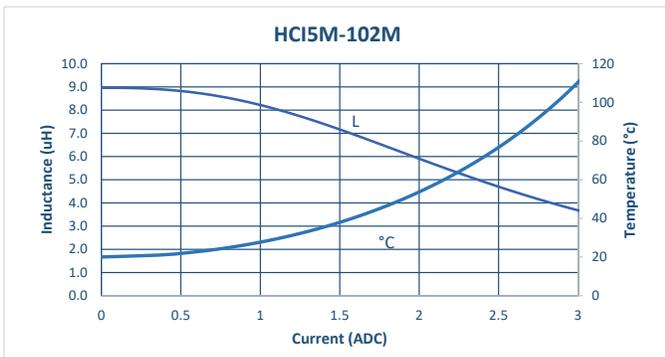
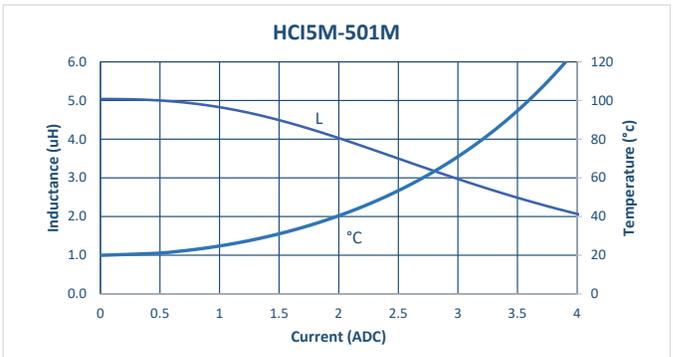
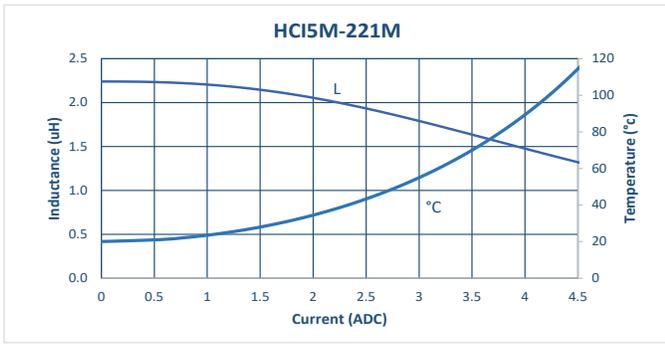
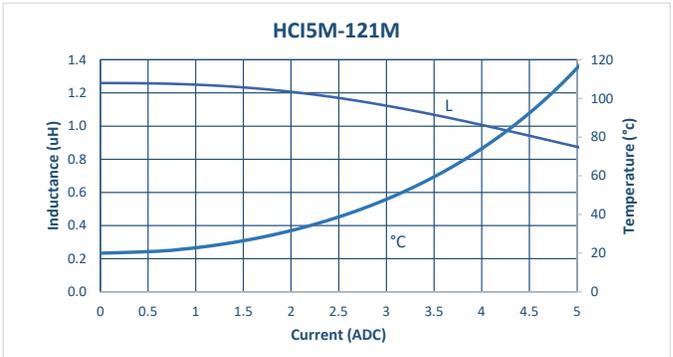
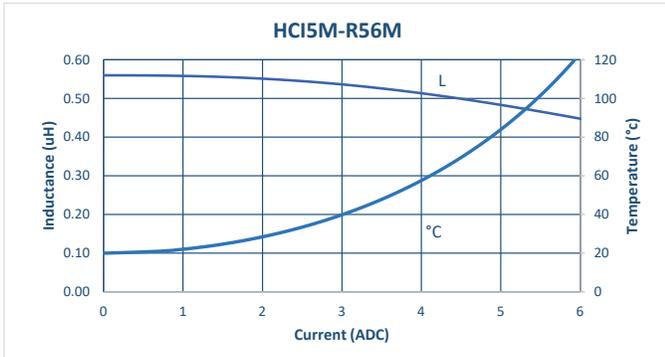
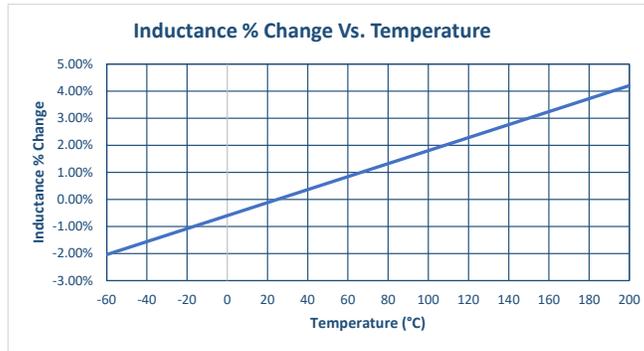
Parts that don't meet minimum reel requirements will be supplied on cut tape

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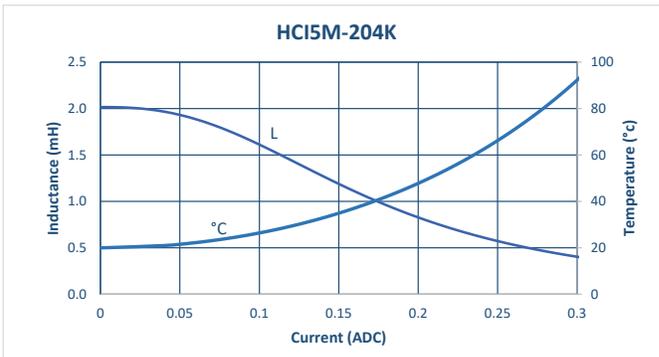
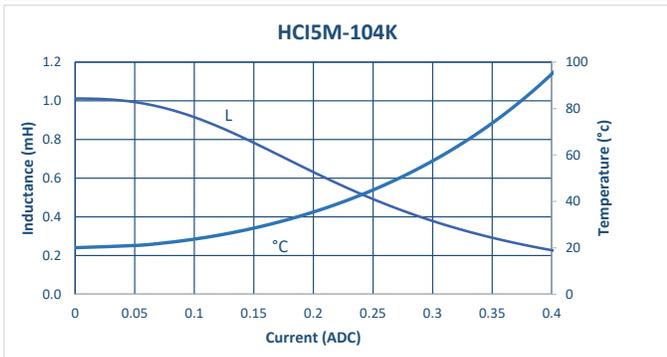
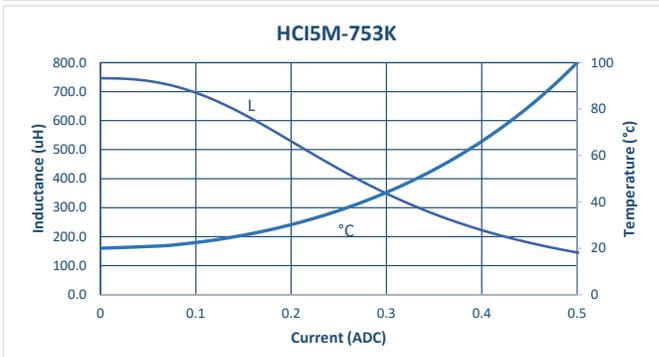
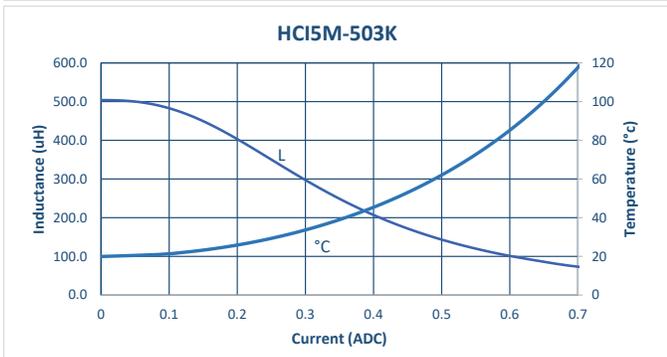
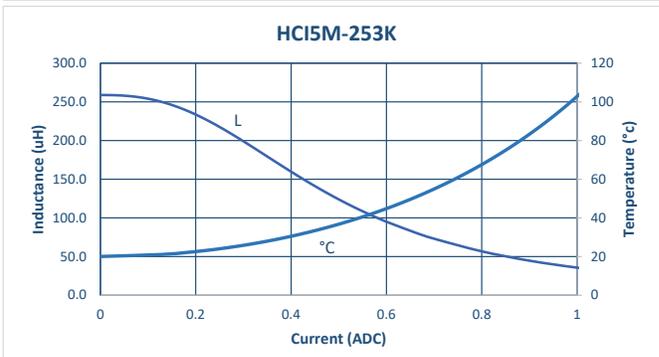
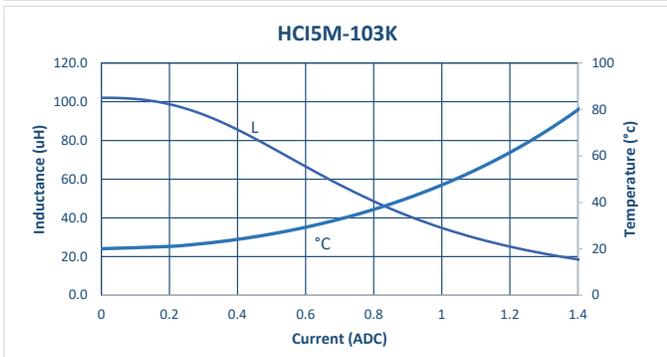
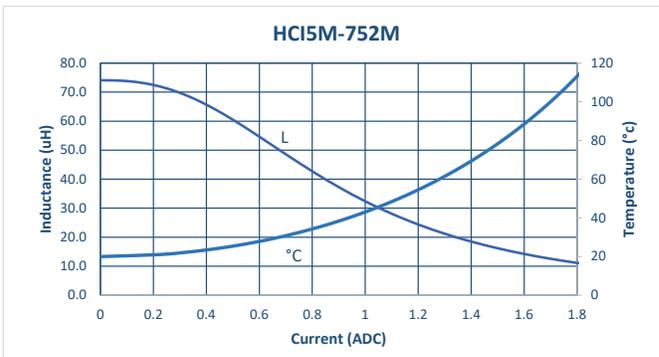
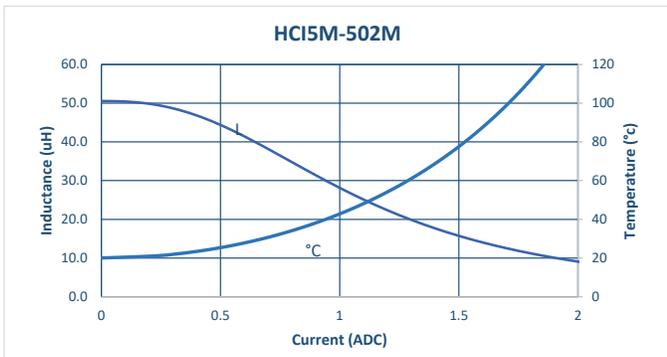


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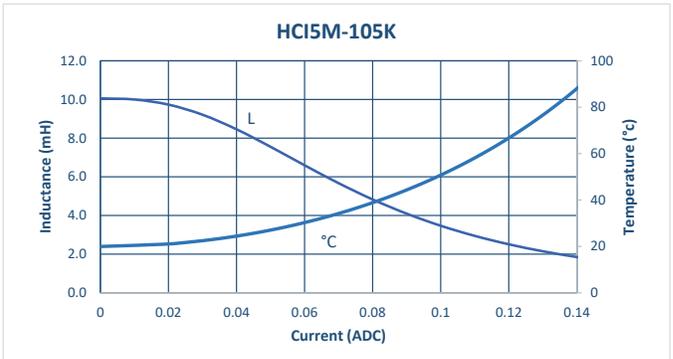
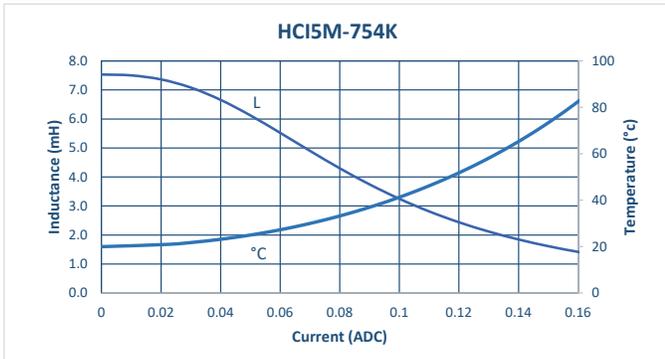
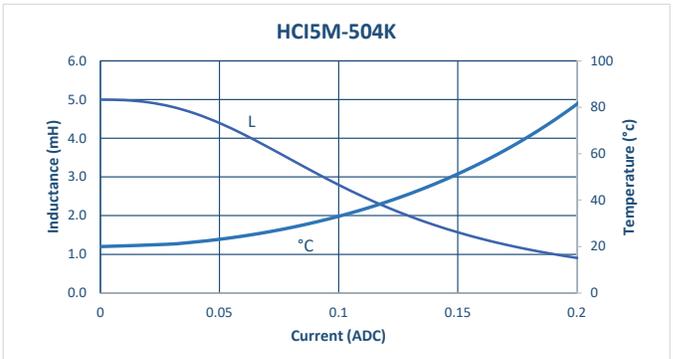
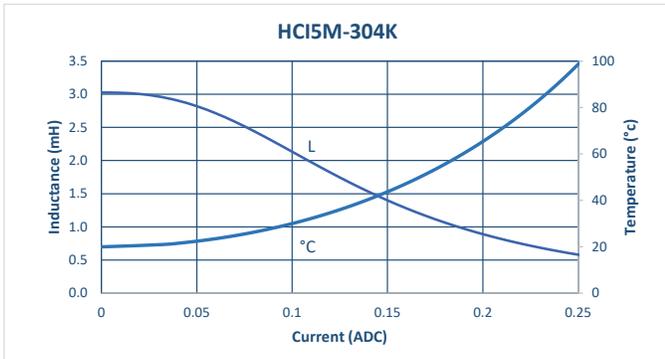


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