



SHCI13E SERIES HIGH CURRENT INDUCTOR



ALL PARTS AVAILABLE AS CLASS S OR CLASS B

MIL-STD-981

Inductance Range	DCR max (Ohms)	Current Rating (A)
1.25 uH - 10 mH	0.005 - 16.9	34.8 - 0.22

ALL DIMENSIONS: INCHES

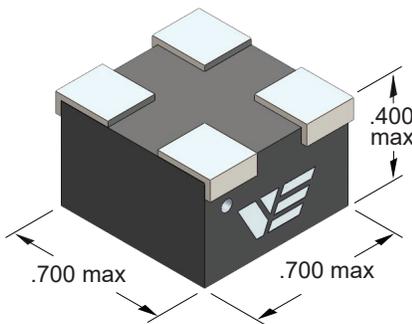
THRU-HOLE & GULL-WING PACKAGES ALSO AVAILABLE

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

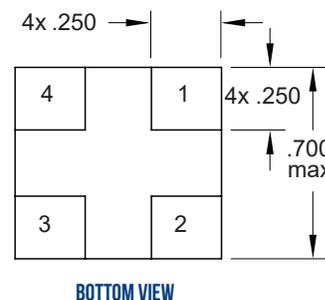
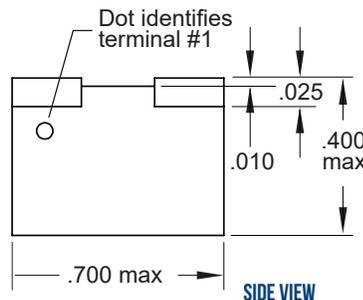
- **Compact**, low profile, ideal for automatic placement
- **Terminations:** Tin-lead
- **Welded Internal Connections**
- **Moisture, Shock and Immersion Resistant**
- **Magnetically Shielded**
- **Other termination finishes available upon request**
- **Multiple Configurations:** Series, parallel, transformer, dual inductor
- Built to meet **MIL-STD-981** specifications
- **NASA outgassing compliant per ASTM E595** (TML <1%, CVMC <0.1%)



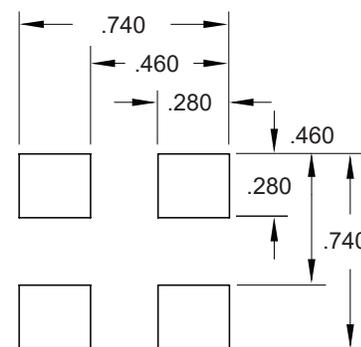
MARKINGS: LASER ETCH OR INK

APPLICATIONS

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

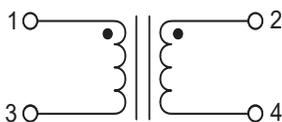
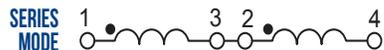


IN	MM
0.740	18.80
0.700	17.78
0.460	11.68
0.400	10.16
0.280	7.11
0.250	6.35
0.025	0.64
0.010	0.25



TYPICAL USER CONNECTIONS

SCHEMATIC



CUSTOM DESIGNS & MODIFICATIONS:

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

SHCI13E SERIES





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)
SHCI13E-501K	5.0	0.017	7.1	13.7	17.4
SHCI13E-102K	10.0	0.024	6.0	9.8	12.4
SHCI13E-182K	18.0	0.036	4.8	7.6	9.7
SHCI13E-252K	25.0	0.046	4.3	6.9	8.7
SHCI13E-502K	50.0	0.087	3.1	4.6	5.8
SHCI13E-752K	75.0	0.116	2.7	3.8	4.8
SHCI13E-103K	100.0	0.169	2.2	3.3	4.1
SHCI13E-203K	200.0	0.380	1.5	2.3	2.9
SHCI13E-253K	250.0	0.540	1.3	2.1	2.6
SHCI13E-503K	500.0	0.960	0.94	1.5	1.8
SHCI13E-753K	750.0	1.47	0.76	1.2	1.5
SHCI13E-104K	1.0 mH	1.70	0.70	1.0	1.3
SHCI13E-204K	2.0 mH	3.85	0.47	0.73	0.92
SHCI13E-304K	3.0 mH	5.96	0.38	0.60	0.76
SHCI13E-504K	5.0 mH	7.72	0.33	0.46	0.58
SHCI13E-754K	7.5 mH	14.7	0.24	0.37	0.47
SHCI13E-105K	10.0 mH	16.9	0.22	0.32	0.41

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)
SHCI13E-501K	1.25	0.005	34.8	14.1	27.4
SHCI13E-102K	2.50	0.006	24.8	11.9	19.6
SHCI13E-182K	4.50	0.009	19.3	9.7	15.2
SHCI13E-252K	6.25	0.012	17.4	8.6	13.7
SHCI13E-502K	12.50	0.022	11.6	6.2	9.1
SHCI13E-752K	18.75	0.029	9.7	5.4	7.6
SHCI13E-103K	25.0	0.042	8.3	4.5	6.5
SHCI13E-203K	50.0	0.095	5.8	3.0	4.6
SHCI13E-253K	62.5	0.135	5.3	2.5	4.2
SHCI13E-503K	125.0	0.240	3.7	1.9	2.9
SHCI13E-753K	187.5	0.368	3.0	1.5	2.4
SHCI13E-104K	250.0	0.425	2.6	1.4	2.0
SHCI13E-204K	500.0	0.963	1.8	0.94	1.5
SHCI13E-304K	750.0	1.49	1.5	0.75	1.2
SHCI13E-504K	1.250 mH	1.93	1.2	0.66	0.92
SHCI13E-754K	1.875 mH	3.67	0.95	0.48	0.75
SHCI13E-105K	2.500 mH	4.24	0.82	0.45	0.65

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)

501 = 5.0 uH
103 = 100 uH
105 = 10 mH

EXAMPLE: SHCI13E-501KS-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") 250
Pitch between parts: 24 mm
Tape width: 32 mm

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

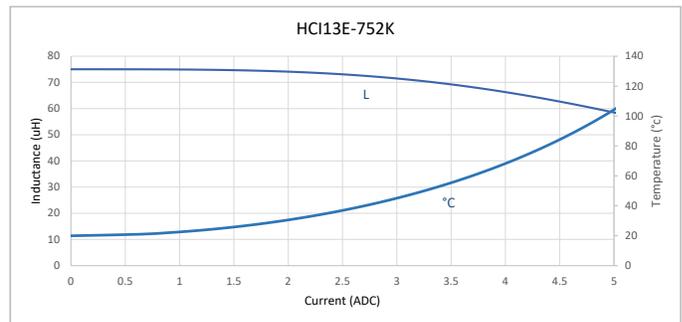
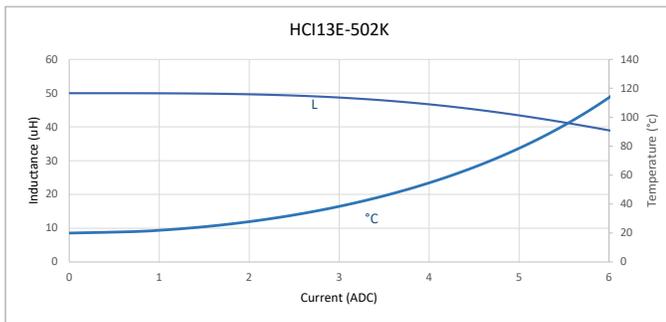
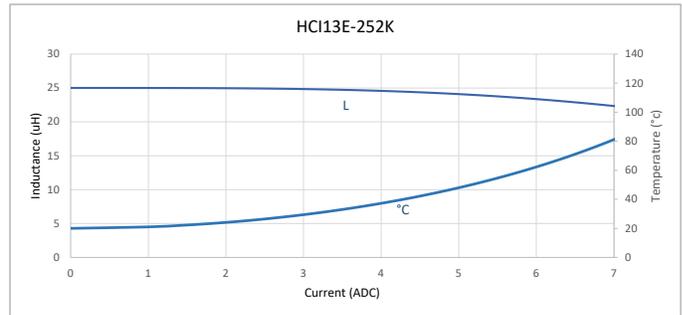
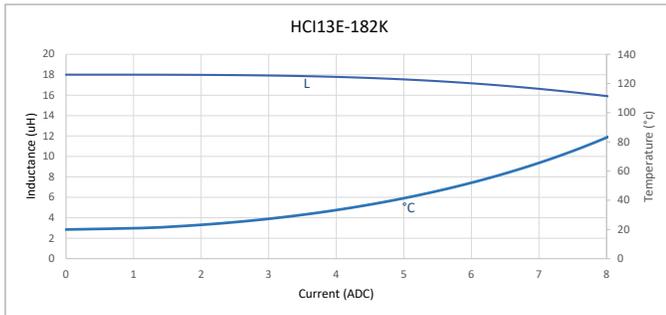
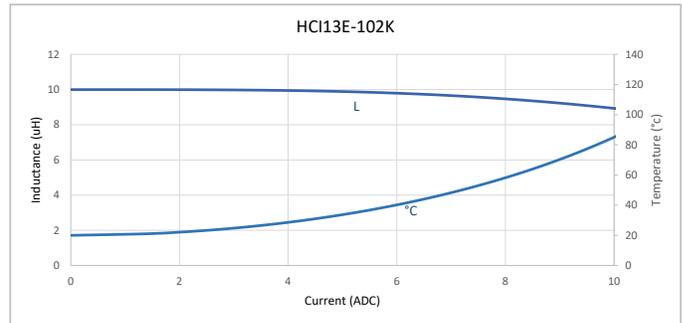
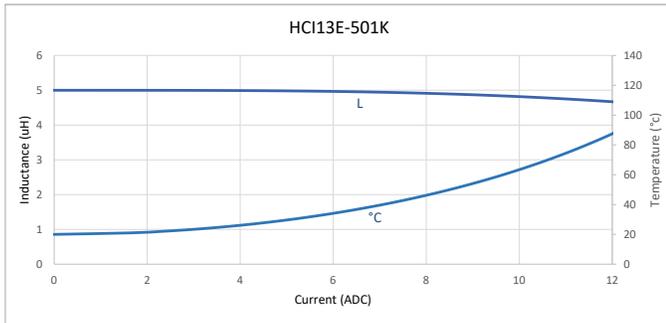
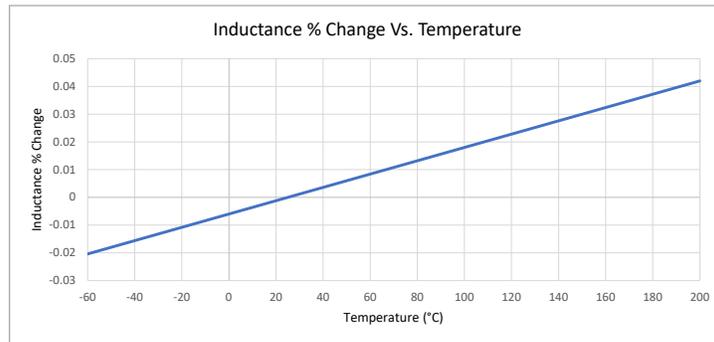
Tape and Reel not available for Thru-Hole or Gull-Wing Packages

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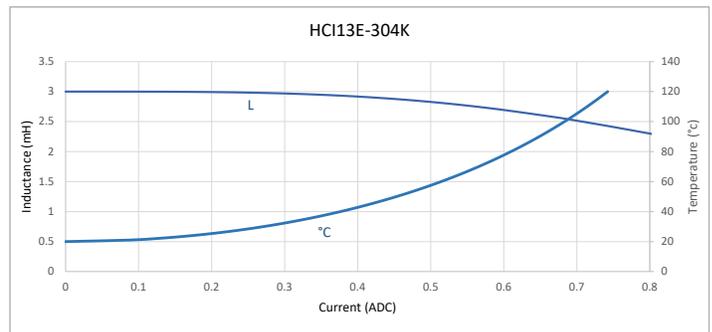
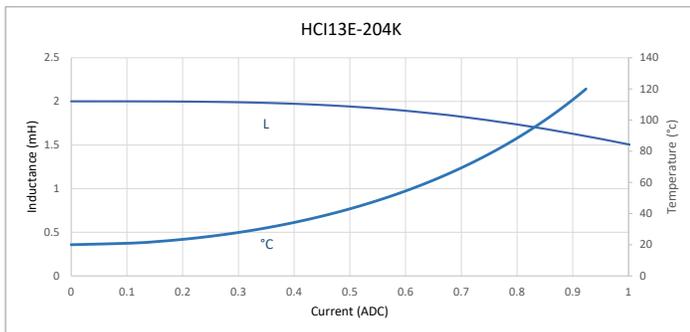
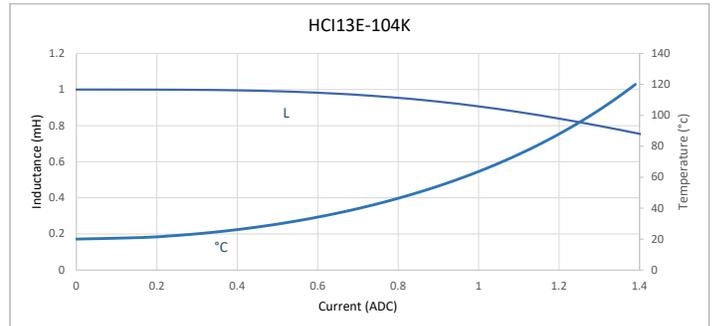
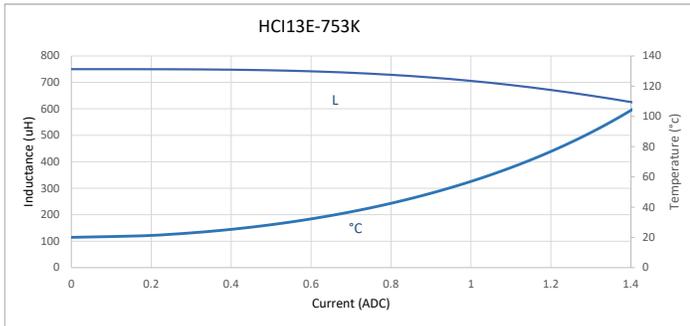
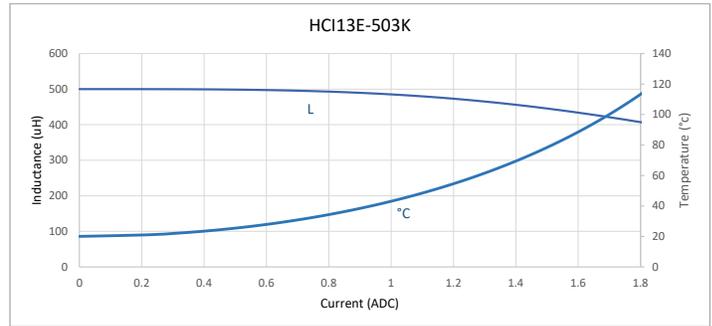
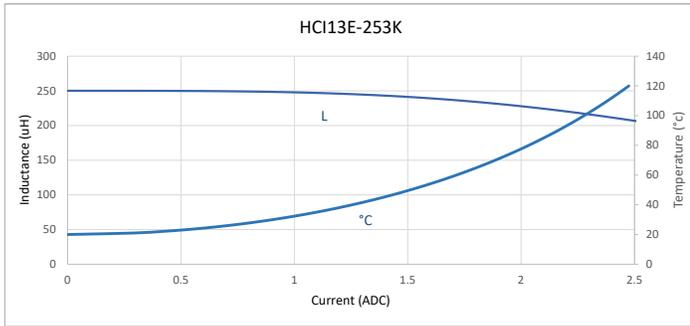
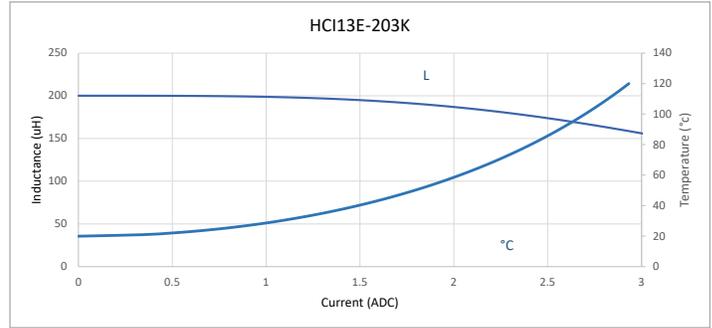
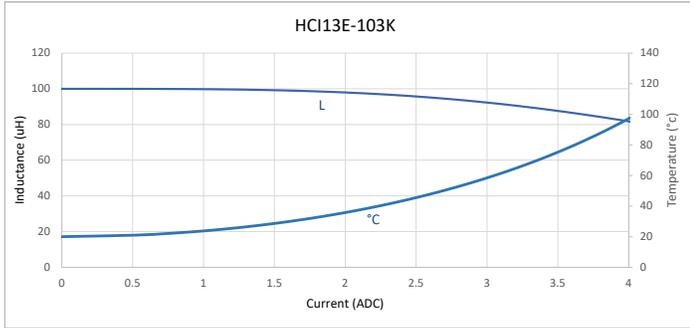


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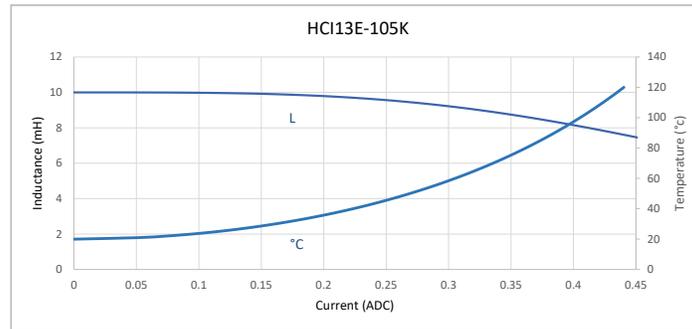
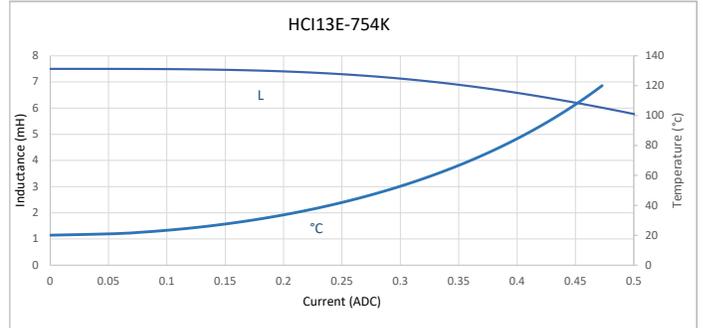
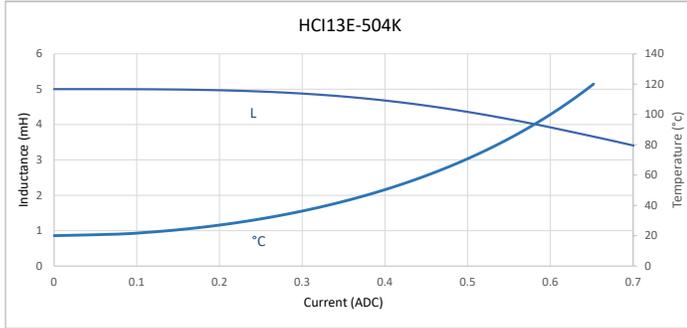


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