

SHILO SERIES
PLANAR INDUCTORS

ALL PARTS AVAILABLE AS CLASS S OR CLASS B

MIL-STD-981

ELECTRICAL SPECIFICATIONS

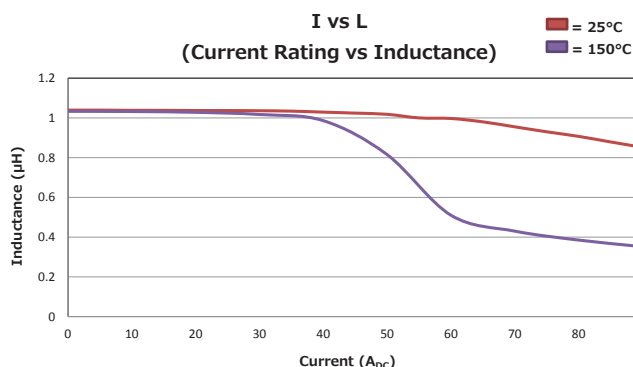
- **Operating Temperature:** -55°C to +130°C
- **Storage Temperature:** -60°C to +135°C
- **Temperature Rise @ 90°C:** < 40°C
- **Dielectric Withstanding Voltage:** 100 V_{RMS}
- **Different electrical values available upon request**
- **Outgassing compliant per ASTM E595**
(TML <1%, CVCM <0.1%)

FEATURES

- **Compact** ideal for automatic placement
- **HIGH Power Density, LOW Profile**
- **LOW Power Losses, HIGH Efficiency**
- Built to meet **MIL-STD-981** specifications
- **Terminations:** Tin-lead
- **Co-planarity:** ± 0.006
- **High reliability**
- **Other termination finishes available**

APPLICATIONS

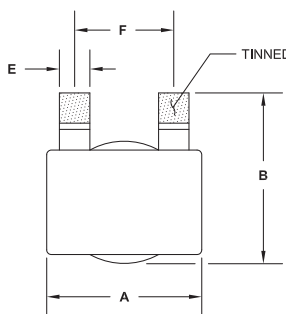
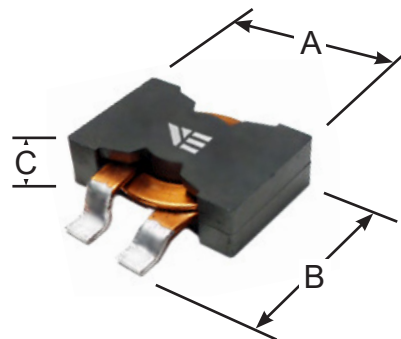
- High current inductor for POL
- High current low profile for power supplies
- Low resistance ideal for battery based systems
- Designed for use in harsh environments
- High current ideal for use with low voltage FPGA



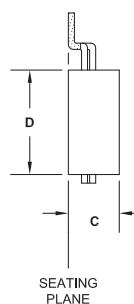
CUSTOM DESIGNS & MODIFICATIONS:

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

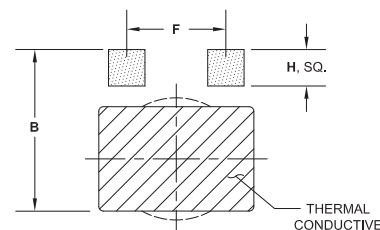
ALL DIMENSIONS: INCHES



TOP VIEW



SIDE VIEW



RECOMMENDED PAD LAYOUT

Package	A max	B* max	C max	D max	E (±.010)	F (±.030)	H ref.	Wt. ref.
SHILO3225	1.30	1.45	1.00	0.89	0.236	0.453	0.275	90g
SHILO3220	1.30	1.45	0.83	0.89	0.236	0.453	0.275	70g
SHILO2518H	1.00	1.10	0.51	0.725	0.197	0.642	0.236	30g
SHILO2518	1.00	1.10	0.35	0.725	0.197	0.642	0.236	20g
SHILO1209AL	0.49	0.55	0.22	0.365	0.071	0.300	0.085	3g
SHILO1209A	0.49	0.50	0.22	0.365	0.071	0.300	0.085	3g
SHILO1209B	0.49	0.50	0.285	0.365	0.071	0.300	0.085	3.5g
SHILO1209CL	0.49	0.55	0.33	0.365	0.071	0.300	0.085	4g
SHILO1209C	0.49	0.50	0.33	0.365	0.071	0.300	0.085	4g
SHILO1005	0.40	0.50	0.19	0.320	0.071	0.220	0.085	2g
SHILO0906	0.38	0.40	0.20	0.200	0.071	0.170	0.085	1.5g

*Dimension is based off design calculations and can be subjected to a minor modification.

SHILO SERIES





Vanguard P/N	Inductance ref. (uH)	DCR max (mOhms)	Saturation Current** (A _{DC})	Max Current Rating** (A _{RMS})
SHILO3225-8R2*-*	8.2	2.2	45	42
SHILO3225-10R*-*	10	2.2	40	42
SHILO3225-12R*-*	12	2.2	35	42
SHILO3225-15R*-*	15	2.2	30	42
SHILO3220-6R8*-*	6.8	4.5	48	40
SHILO3220-8R2*-*	8.2	4.5	42	40
SHILO3220-10R*-*	10	4.5	36	40
SHILO3220-12R*-*	12	4.5	30	40
SHILO2518H-3R3*-*	3.3	1.4	40	36
SHILO2518H-3R9*-*	3.9	1.4	36	36
SHILO2518H-4R7*-*	4.7	1.4	32	36
SHILO2518H-5R6*-*	5.6	1.4	28	36
SHILO2518-R68*-*	0.68	0.80	70	48
SHILO2518-R82*-*	0.82	0.80	65	48
SHILO2518-1R*-*	1	0.80	60	48
SHILO2518-1R2*-*	1.2	0.80	55	48
SHILO2518-1R5*-*	1.5	0.80	50	48
SHILO2518-1R8*-*	1.8	1.4	50	35
SHILO2518-2R2*-*	2.2	1.4	44	35
SHILO2518-3R3*-*	3.3	3.0	35	24
SHILO2518-4R7*-*	4.7	3.0	30	24
SHILO2518-5R6*-*	5.6	3.0	26	24
SHILO2518-6R8*-*	6.8	6.3	28	16
SHILO2518-8R2*-*	8.2	6.3	24	16
SHILO2518-10R*-*	10	6.3	20	16
SHILO2518-12R*-*	12	6.3	16	16
SHILO2518-15R*-*	15	6.3	13	16
SHILO2518-18R*-*	18	6.3	11	16
SHILO2518-20R*-*	20	6.3	10	16
SHILO1209AL-R22*-*	0.22	1.10	60	15
SHILO1209AL-R33*-*	0.33	1.10	52	15
SHILO1209AL-R47*-*	0.47	1.10	34	15
SHILO1209AL-R56*-*	0.56	1.10	30	15
SHILO1209AL-R68*-*	0.68	1.10	24	15
SHILO1209AL-R82*-*	0.82	1.10	18	15
SHILO1209AL-1R*-*	1	1.10	15	15
SHILO1209A-1R5*-*	1.5	2.10	16	10
SHILO1209A-1R8*-*	1.8	2.10	13	10
SHILO1209A-2R2*-*	2.2	2.10	10	10

Inductance measured at 10 kHz, 1.0 V_{RMS}

* Inductance drop < 30% at specified Saturation Current

** Temperature rise < 40°C at Rating Current

CUSTOM DESIGNS & MODIFICATIONS:

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

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Vanguard P/N	Inductance ref. (uH)	DCR max (mOhms)	Saturation Current** (A _{DC})	Max Current Rating** (A _{RMS})
SHILO1209A-3R3*-.*	3.3	5.40	12	6
SHILO1209A-4R7*-.*	4.7	5.40	8	6
SHILO1209A-5R6*-.*	5.6	5.40	7	6
SHILO1209A-6R8*-.*	6.8	5.40	6	6
SHILO1209A-8R2*-.*	8.2	9.60	6	5
SHILO1209A-10R*-.*	10	9.60	5	5
SHILO1209B-8R2*-.*	8.2	9.5	8	6
SHILO1209B-10R*-.*	10	9.5	7	6
SHILO1209B-12R*-.*	12	9.5	6	6
SHILO1209B-15R*-.*	15	9.5	5	6
SHILO1209B-18R*-.*	18	9.5	4	6
SHILO1209CL-R10*-.*	0.10	0.45	75	40
SHILO1209CL-R15*-.*	0.15	0.45	72	40
SHILO1209CL-R18*-.*	0.18	0.45	70	40
SHILO1209CL-R22*-.*	0.22	0.45	60	40
SHILO1209CL-R33*-.*	0.33	0.45	40	40
SHILO1209C-R47*-.*	0.47	1.40	44	20
SHILO1209C-R56*-.*	0.56	1.40	40	20
SHILO1209C-R68*-.*	0.68	1.40	38	20
SHILO1209C-R82*-.*	0.82	1.40	35	20
SHILO1209C-1R*-.*	1	1.40	30	20
SHILO1209C-1R2*-.*	1.2	1.40	20	20
SHILO1209C-1R5*-.*	1.5	2.43	24	14
SHILO1209C-1R8*-.*	1.8	2.43	18	14
SHILO1209C-2R2*-.*	2.2	2.43	16	14
SHILO1209C-3R3*-.*	3.3	2.43	12	14
SHILO1209C-4R7*-.*	4.7	4.09	11	10
SHILO1209C-5R6*-.*	5.6	4.09	10	10
SHILO1209C-6R8*-.*	6.8	6.44	10	8
SHILO1209C-8R2*-.*	8.2	6.44	8	8
SHILO1209C-10R*-.*	10	6.44	7	8
SHILO1005-R33*-.*	0.33	0.82	20	14
SHILO1005-R47*-.*	0.47	0.82	16	14
SHILO1005-R56*-.*	0.56	0.82	15	14
SHILO1005-R68*-.*	0.68	0.82	13	14
SHILO1005-R82*-.*	0.82	0.82	10	14
SHILO1005-1R*-.*	1	3.04	12	8
SHILO1005-1R5*-.*	1.5	3.04	9	8
SHILO1005-1R8*-.*	1.8	3.04	7	8

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SHILO1005-2R2*-*	2.2	3.04	7	8
SHILO1005-3R3*-*	3.3	3.04	5	8
SHILO1005-4R7*-*	4.7	6.22	4.5	4
SHILO1005-5R6*-*	5.6	6.22	3.5	4
SHILO1005-6R8*-*	6.8	6.22	3	4
SHILO1005-8R2*-*	8.2	6.22	2.5	4
SHILO1005-10R*-*	10	6.22	2	4
SHILO0906-R33*-*	0.33	1.8	20	12
SHILO0906-R47*-*	0.47	1.8	18	12
SHILO0906-R56*-*	0.56	1.8	16	12
SHILO0906-R68*-*	0.68	1.8	14	12
SHILO0906-R82*-*	0.82	1.8	12	12
SHILO0906-1R*-*	1	3.5	14	8
SHILO0906-1R5*-*	1.5	3.5	9	8
SHILO0906-1R8*-*	1.8	3.5	8	8
SHILO0906-2R2*-*	2.2	6.0	8	6
SHILO0906-3R3*-*	3.3	6.0	6	6
SHILO0906-4R7*-*	4.7	8.8	5	4
SHILO0906-5R6*-*	5.6	8.8	4	4
SHILO0906-6R8*-*	6.8	8.8	3.2	4
SHILO0906-8R2*-*	8.2	8.8	2.8	4
SHILO0906-10R*-*	10	8.8	2.4	4

Inductance measured at 10 kHz, 1.0 V_{RMS}

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VE PART NUMBER
STRUCTURE KEY

EXAMPLE: SHILO2518-R68S-1-T

INDUCTANCE
(uH)

Examples:
R68 = 0.68uH
6R8 = 6.8uH
18R = 18uH

R = Decimal Point

TERMINATION

S	SnPb
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RELIABILITY

1	EM
6	Group A (Class B)
7	Group A + B (Class S)
8	Other

PACKAGING
(Default Bulk)

B	Bulk
T	Tape and Reel

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