



SHILO SERIES

PLANAR INDUCTORS



ALL PARTS AVAILABLE AS CLASS S OR CLASS B

MIL-STD-981

Current Rating (A)	DCR max (mΩ)	Inductance ref (uH)
4 to 75	0.21 to 9.6	0.10 to 10

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:** 500 V_{RMS}
- **Different electrical values available upon request**
- **Outgassing compliant per ASTM E595**
(TML <1%, CVCM <0.1%)

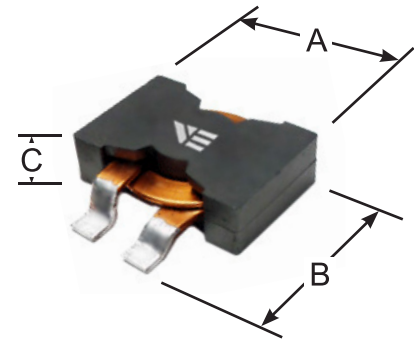
FEATURES

- **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 or RoHS compliant
- **Co-planarity:** ± 0.006
- **High reliability**
- **Other termination finishes available**

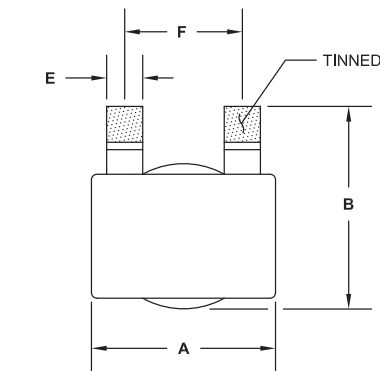
APPLICATIONS

- 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

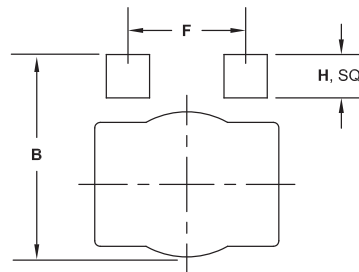
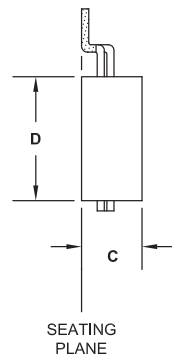
ALL DIMENSIONS: INCHES



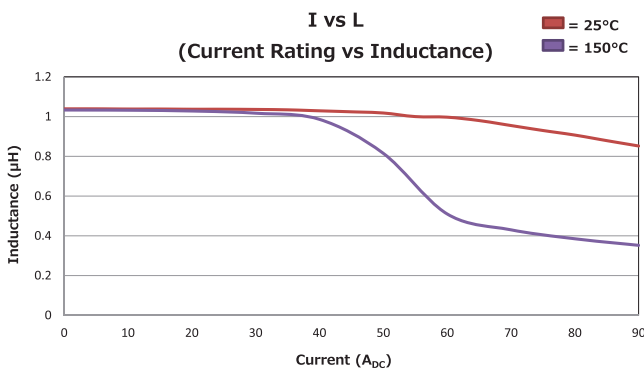
TOP VIEW



SIDE VIEW



RECOMMENDED PAD LAYOUT



Package	A max	B* max	C max	D max	E (±.010)	F (±.030)	H Ref.	Wt Ref.
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
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.

CUSTOM DESIGNS & MODIFICATIONS:

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





Vanguard P/N	Inductance ref (uH)	DCR max (mΩ)	Saturation Current* (A _{DC})	Max Current Rating** (A _{RMS})
SHILO2518-R68*-**	0.68	0.80	70	48
SHILO2518-R82*-**	0.82	0.80	65	48
SHILO2518-1R0*-**	1.0	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*-**	10.0	6.3	20	16
SHILO1209AL-R10*-**	0.10	0.21	70	35
SHILO1209AL-R15*-**	0.15	0.21	60	35
SHILO1209AL-R18*-**	0.18	0.21	40	35
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-1R0*-**	1.0	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
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*-**	10.0	9.60	5	5
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
SHILO1209CL-R47*-**	0.47	1.40	44	20
SHILO1209CL-R56*-**	0.56	1.40	40	20

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

SHILO SERIES







Vanguard P/N	Inductance ref (uH)	DCR max (mΩ)	Saturation Current* (A _{DC})	Max Current Rating** (A _{RMS})
SHILO1209C-R68*-*-*	0.68	1.40	38	22
SHILO1209C-R82*-*-*	0.82	1.40	35	22
SHILO1209C-1R0*-*-*	1.0	1.40	30	22
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*-*-*	10.0	6.44	7	8
SHILO1005-R10*-*-*	0.10	0.43	40	20
SHILO1005-R15*-*-*	0.15	0.43	28	20
SHILO1005-R18*-*-*	0.18	0.43	20	20
SHILO1005-R22*-*-*	0.22	0.43	16	20
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
SHILO1005-1R0*-*-*	1.0	3.04	12	10
SHILO1005-1R5*-*-*	1.5	3.04	9	10
SHILO1005-1R8*-*-*	1.8	3.04	7	10
SHILO1005-2R2*-*-*	2.2	3.04	7	6
SHILO1005-3R3*-*-*	3.3	3.04	5	6
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*-*-*	10.0	6.22	2	4
SHILO0906-R10*-*-*	0.1	0.6	40	22
SHILO0906-R15*-*-*	0.15	0.6	30	22
SHILO0906-R18*-*-*	0.18	0.6	28	22
SHILO0906-R22*-*-*	0.22	0.6	22	22
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

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

SHILO SERIES







Vanguard P/N	Inductance ref (uH)	DCR max (mΩ)	Saturation Current* (A _{DC})	Max Current Rating** (A _{RMS})
SHILO0906-R82*-*	0.82	1.8	12	12
SHILO0906-1R0*-*	1.0	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}

*Inductance drop < 30% at specified Saturation Current

** Temperature rise < 40°C at rating current

VE PART NUMBER STRUCTURE KEY

EXAMPLE: SHILO2518-R68S-1-T

INDUCTANCE (μH)

0.68
R68

*R = Decimal point

10μ = 10R

TERMINATION

S	SnPb
----------	------

RELIABILITY

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

PACKAGING (Default Bulk)

B	Bulk
T	Tape and Reel

CUSTOM DESIGNS & MODIFICATIONS:

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

SHILO SERIES

