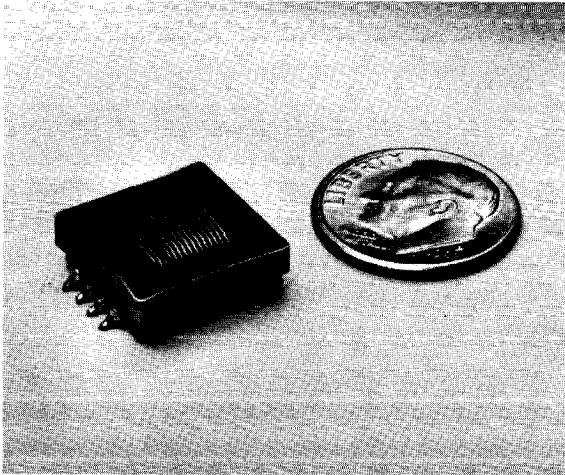




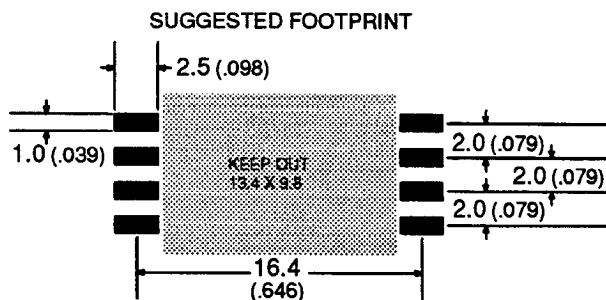
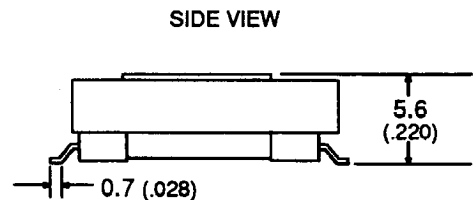
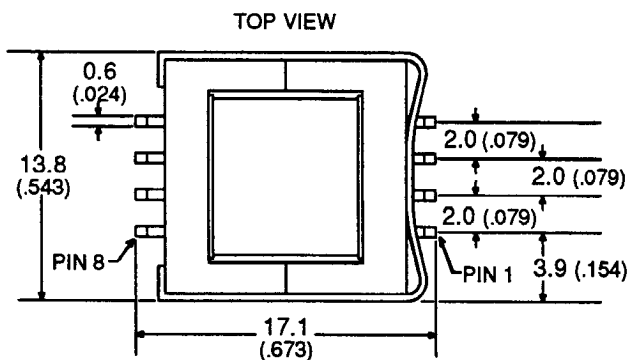
SL1 SERIES (13.8 W X 17.1 D X 5.6 H) HIGH CURRENT SURFACE MOUNT INDUCTORS



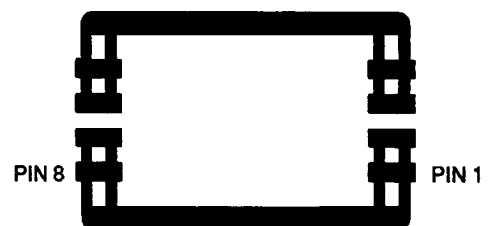
Features

- Surface Mount
- Miniature 13.8 W x 17.1 D x 5.6 H mm
- Low Profile, 5.6 mm
- Multiple Versions to Match Applications
- High Frequency Power Ferrite Core
- No External Air Gap for Low EMI
- Designed for Voltage Regulator ICs
- Inductance Range, 1 μ H to 1000 μ H
- High Peak Current Ratings, up to 32 Amps
- High RMS Current Ratings, up to 12 Amps
- Operating Temperature -40°C to 120°C

Pin Configuration and Dimensions



UNIVERSAL CIRCUIT LAYOUT FOR TYPE A, B AND C INDUCTORS



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SL1 SERIES

Ordering Information

Part Number: **SL1 - B 30 - 223**

MODEL

Surface Mount Inductor
13.8 W x 17.1 D x 5.6 H

TYPE

A = Schematic A
B = Schematic B
C = Schematic C

PEAK TO RMS CURRENT

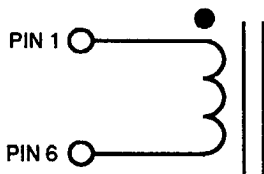
20 = Approx. 4 to 1
30 = Approx. 2 to 1
50 = Approx. 1 to 1
60 = Approx. 1 to 1

INDUCTANCE VALUE

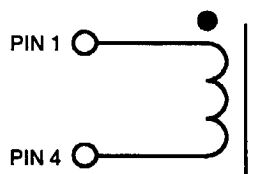
Two significant figures plus
number of zeros to follow
in nH.

Schematics

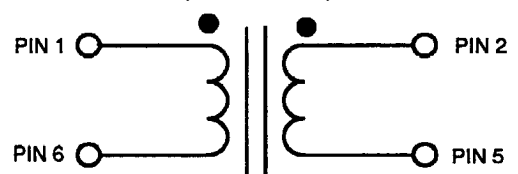
SCHMATIC A
TYPE A INDUCTOR



SCHMATIC B
TYPE B INDUCTOR



SCHMATIC C
TYPE C INDUCTOR
(SEE NOTE 10)



Connect windings in parallel,
Pin 1 to pin 2 and pin 5 to pin 6.
See Universal Circuit Layout

Notes

1. Part number see ordering information
2. Inductance in uH $\pm 15\%$ tolerance.
3. RMS (DC) Current in amps for a coil temperature rise of 20°C.
4. RMS (DC) Current in amps for a coil temperature rise of 40°C.
5. Peak Current in amps for a 10% drop in inductance at 60°C core temperature.
6. Peak Current in amps for a 10% drop in inductance at 85°C core temperature.
7. Peak Current in amps for a 20% drop in inductance at 60°C core temperature.
8. Peak Current in amps for a 20% drop in inductance at 85°C core temperature.
9. DC Resistance in ohms.
10. A solder bridge between pins 1 and 2 or 5 and 6 may sometimes occur. This is not a cause for concern due to the fact that pin 1 will be connected to pin 2 and pin 5 will be connected to pin 6 during hook up.

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SL1 SERIES

PART NUMBER (Note 1)	INDUCTANCE uH (Note 2)	RMS CURRENT, AMPS		PEAK AMPS (10% L DROP)		PEAK AMPS (20% L DROP)		DCR OHMS (Note 9)
		20°C RISE (Note 3)	40°C RISE (Note 4)	60°C CORE (Note 5)	85°C CORE (Note 6)	60°C CORE (Note 7)	85°C CORE (Note 8)	
SL1-C20-102	1.0	6.78	9.59	28.35	26.00	32.13	29.47	0.008
SL1-C60-102	1.0	8.97	12.68	13.01	11.93	15.21	13.96	0.005
SL1-C20-152	1.5	5.98	8.46	22.05	20.23	24.99	22.92	0.011
SL1-C60-152	1.5	8.02	11.35	10.41	9.55	12.17	11.16	0.006
SL1-C20-222	2.2	5.67	8.02	19.85	18.20	22.49	20.63	0.012
SL1-C60-222	2.2	7.32	10.36	8.67	7.96	10.14	9.30	0.007
SL1-C20-332	3.3	4.98	7.04	15.27	14.00	17.30	15.87	0.015
SL1-C30-332	3.3	5.67	8.02	12.35	11.33	14.11	12.94	0.012
SL1-C50-332	3.3	6.34	8.97	8.16	7.48	9.48	8.70	0.010
SL1-C20-472	4.7	4.11	5.82	13.23	12.14	14.99	13.75	0.023
SL1-C30-472	4.7	4.98	7.04	9.50	8.71	10.86	9.96	0.015
SL1-C50-472	4.7	5.67	8.02	6.53	5.99	7.59	6.96	0.012
SL1-B20-682	6.8	2.99	4.23	11.03	10.11	12.50	11.46	0.043
SL1-C30-682	6.8	4.11	5.82	8.23	7.55	9.41	8.63	0.023
SL1-C50-682	6.8	5.18	7.32	5.44	4.99	6.32	5.80	0.014
SL1-B20-103	10.0	2.70	3.82	9.02	8.27	10.22	9.38	0.052
SL1-B30-103	10.0	2.99	4.23	6.86	6.29	7.84	7.19	0.043
SL1-C50-103	10.0	4.79	6.78	4.66	4.28	5.42	4.97	0.017
SL1-B20-153	15.0	2.44	3.45	7.35	6.74	8.33	7.64	0.064
SL1-B30-153	15.0	2.70	3.82	5.61	5.15	6.41	5.88	0.052
SL1-B50-153	15.0	3.08	4.35	3.84	3.52	4.46	4.09	0.040
SL1-B20-223	22.0	1.96	2.77	6.01	5.52	6.82	6.25	0.100
SL1-B30-223	22.0	2.44	3.45	4.57	4.19	5.23	4.79	0.064
SL1-B50-223	22.0	2.77	3.91	3.11	2.85	3.61	3.31	0.050
SL1-B20-333	33.0	1.39	1.97	4.84	4.44	5.49	5.03	0.197
SL1-B30-333	33.0	1.96	2.77	3.74	3.43	4.28	3.92	0.100
SL1-B50-333	33.0	2.49	3.52	2.51	2.30	2.92	2.68	0.062
SL1-A20-473	47.0	1.16	1.63	4.13	3.79	4.69	4.30	0.287
SL1-B30-473	47.0	1.41	2.00	3.09	2.83	3.53	3.24	0.192
SL1-B50-473	47.0	2.02	2.86	2.11	1.93	2.45	2.24	0.093
SL1-A20-683	68.0	1.05	1.49	3.42	3.14	3.88	3.56	0.346
SL1-A30-683	68.0	1.16	1.63	2.57	2.36	2.94	2.70	0.287
SL1-B50-683	68.0	1.47	2.08	1.76	1.62	2.05	1.88	0.178
SL1-A20-104	100.0	0.84	1.19	2.80	2.56	3.17	2.91	0.541
SL1-A30-104	100.0	1.05	1.49	2.13	1.95	2.43	2.23	0.346
SL1-B50-104	100.0	1.19	1.69	1.45	1.33	1.69	1.55	0.269
SL1-A20-154	150.0	0.61	0.86	2.28	2.09	2.59	2.37	1.036
SL1-A30-154	150.0	0.84	1.19	1.74	1.60	1.99	1.82	0.541
SL1-A50-154	150.0	1.08	1.53	1.19	1.09	1.38	1.26	0.328
SL1-B20-224	220.0	0.55	0.78	1.89	1.73	2.14	1.96	1.251
SL1-A30-224	220.0	0.61	0.86	1.44	1.32	1.64	1.51	1.024
SL1-A50-224	220.0	0.99	1.39	0.99	0.91	1.15	1.05	0.394
SL1-B20-334	330.0	0.44	0.63	1.55	1.42	1.76	1.61	1.935
SL1-B30-334	330.0	0.55	0.78	1.18	1.08	1.34	1.23	1.251
SL1-A50-334	330.0	0.70	0.99	0.81	0.74	0.94	0.86	0.779
SL1-B30-474	470.0	0.51	0.72	0.99	0.91	1.13	1.04	1.489
SL1-B50-474	470.0	0.58	0.81	0.67	0.62	0.78	0.72	1.156
SL1-B30-684	680.0	0.36	0.51	0.82	0.75	0.93	0.86	2.900
SL1-B50-684	680.0	0.52	0.74	0.56	0.51	0.65	0.59	1.394
SL1-A30-105	1000.0	0.33	0.47	0.67	0.62	0.77	0.71	3.514
SL1-B50-105	1000.0	0.42	0.60	0.46	0.42	0.54	0.49	2.131

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SL1 SERIES

Inductor Cross Reference For Voltage Regulator ICs

IC MANUFACTURE	IC PART NUMBER	OUTPUT VOLTAGE CURRENT	INDUCTOR PART NUMBER
LINEAR TECHNOLOGY	LT1171 LT1172 LTC1147, 1148, 1149 LTC11478, 1149	12V / 1A 12V .5A 3.3V, 5V / 1A, 2A -5V / 1.4A	SL1-A20-473 SL1-A20-104 SL1-B50-473, 683, 104 SL1-B30-473
MAXIM INTEGRATED PRODUCTS	MAX726-729 MAX730, 738, 750, 758 MAX741 MAX741 MAX741 MAX741 MAX742 MAX742 MAX743 MAX746, MAX747	3V, 3.3V, 5V / 2A 5v / 300, 750mA 5V / 3A 12, 15 / 400mA -5.2V / 1.5A $\pm 12V, \pm 15V / \pm 250mA, \pm 200mA$ $\pm 12V, \pm 15V / \pm 950mA, \pm 750mA$ $\pm 12V, \pm 15V / \pm 125mA, \pm 100mA$ 3.3V, 5V / 2.5A	SL1-B50-473 SL1-B50-104 SL1-C50-103 SL1-B30-333 SL1-B20-223 SL1-A20-104 SL1-B20-223 SL2-A20-104 SL1-B50-223, -333, -473
MICRO LINEAR	ML4852	3.3V, 5V / 1.5A	SL1-B50-473
SILICONIX	Si9150	3.3V, 5V 1.5A	SL1-B50-473

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