

SMD POWER CHOKES INDUCTOR

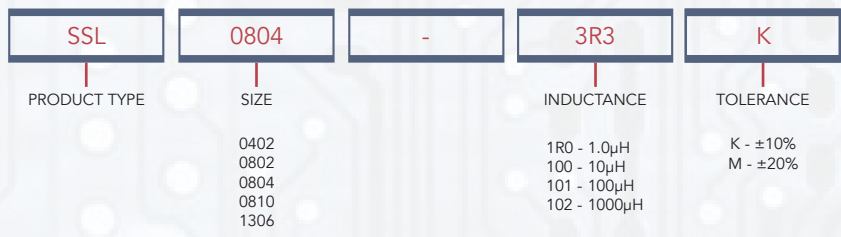
- SSL SERIES -



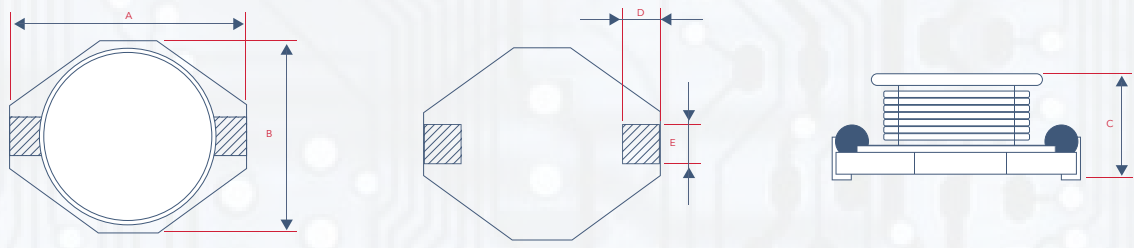
FEATURES

- These new SSL Series is designed for the smallest possible size, low cost and high performance.
- It's high energy storage and very low DC resistance offer higher saturated current which is suitable for DC to DC conversion for Notebook, Palm Top, Step up or Step down converters etc.

PART NUMBERING



MECHANICAL DIMENSION (in MM)



TYPE	A	B	C	D (ref.)	E (ref.)
SSL0402	6.60 max	4.45 max	2.92 max	1.27	1.02
SSL0802	12.9 ± 0.4	9.0 ± 0.4	3.0 max	2.6	1.2
SSL0804	12.9 ± 0.4	9.0 ± 0.4	5.21 max	2.6	1.2
SSL0810	12.9 ± 0.4	9.0 ± 0.4	11.43 max	2.6	1.2
SSL1306	18.5 ± 0.5	15.5 ± 0.5	7.5 max	2.6	2.54

ELECTRICAL

TYPE	INDUCTANCE	RATED CURRENT
SSL0402 - - - - -	1.0μH to 1000μH	2.9 Amps to 0.10Amps
SSL0802 - - - - -	10μH to 1000μH	2.4 Amps to 0.1Amps
SSL0804 - - - - -	1.0μH to 1000μH	9.0 Amps to 0.3Amps
SSL0810 - - - - -	10μH to 1000μH	8.0 Amps to 0.8Amps
SSL1306 - - - - -	1.0μH to 1000μH	8.6 Amps to 0.56Amps

■ SSL - 0402 - SERIES

PART NO.	INDUCTANCE (μ H) $\pm 20\%$	SRF (MHz)	RDC (Ω) MAX.	I SAT (A)	IRMS (A)
SSL0402-1R0M	1.0	130	0.05	2.90	2.90
SSL0402-1R5M	1.5	115	0.05	2.60	2.80
SSL0402-2R2M	2.2	90	0.07	2.30	2.4
SSL0402-3R3M	3.3	70	0.08	2.00	2.0
SSL0402-4R7M	4.7	50	0.09	1.50	1.5
SSL0402-6R8M	6.8	45	0.13	1.20	1.4
SSL0402-100M	10	35	0.16	1.10	1.1
SSL0402-150M	15	30	0.23	0.90	1.0
SSL0402-220M	22	20	0.37	0.70	0.8
SSL0402-330M	33	15	0.51	0.58	0.6
SSL0402-470M	47	14	0.64	0.50	0.5
SSL0402-680M	68	11	0.86	0.40	0.4
SSL0402-101M	100	9	1.27	0.31	0.3
SSL0402-151M	150	6	2.00	0.27	0.25
SSL0402-221M	220	5.5	2.65	0.22	0.2
SSL0402-331M	330	5	3.80	0.18	0.16
SSL0402-471M	470	4	506	0.16	0.15
SSL0402-681M	680	3	9.20	0.14	0.12
SSL0402-102M	1000	2	13.8	0.10	0.07

M = $\pm 20\%$, K = $\pm 10\%$, J = $\pm 5\%$

■ SSL - 0802 - SERIES

PART NO.	INDUCTANCE AT 100kHz 0.1VRMS (μ H $\pm 20\%$)	DC RESISTANCE ($\Omega \pm 15\%$)	I SAT ² (AMPS) INDUCTANCE DROP - 10%
SSL0802-100M	10	0.09	2.4
SSL0802-150M	15	0.12	2.0
SSL0802-220M	22	0.19	1.6
SSL0802-330M	33	0.25	1.4
SSL0802-470M	47	0.32	1.0
SSL0802-680M	68	0.55	0.9
SSL0802-101M	100	0.70	0.7
SSL0802-151M	150	1.0	0.6
SSL0802-221M	220	1.6	0.5
SSL0802-331M	330	2.2	0.4
SSL0802-471M	470	3.3	0.3
SSL0802-681M	680	4.4	0.2
SSL0802-102M	1000	7.0	0.1

M = $\pm 20\%$, K = $\pm 10\%$, J = $\pm 5\%$

Tested at 100 KHz, 0.1 Vrms

Inductance drop = 10% Typical at rated Isat

$\Delta T = 30^\circ\text{C}$ Typical at Irms

Operating Temperature range -40°C to $+85^\circ\text{C}$



■ SSL - 0804 - SERIES

PART NO.	INDUCTANCE AT 100kHz 0.1VRMS ($\mu\text{H} \pm 20\%$)	DC RESISTANCE ($\Omega \pm 15\%$)	I SAT ² (AMPS) INDUCTANCE DROP - 10%
SSL0804-1R0M	1.0	0.008	9.0
SSL0804-1R5M	1.5	0.009	8.0
SSL0804-2R2M	2.2	0.010	7.0
SSL0804-3R3M	3.3	0.013	6.4
SSL0804-4R7M	4.7	0.016	5.4
SSL0804-6R8M	6.8	0.019	4.6
SSL0804-100M	10	0.025	3.8
SSL0804-150M	15	0.040	3.0
SSL0804-220M	22	0.050	2.6
SSL0804-330M	33	0.088	2.0
SSL0804-470M	47	0.12	1.6
SSL0804-680M	68	0.16	1.4
SSL0804-101M	100	0.23	1.2
SSL0804-151M	150	0.33	1.0
SSL0804-221M	220	0.53	0.8
SSL0804-331M	330	0.81	0.6
SSL0804-471M	470	1.10	0.5
SSL0804-681M	680	1.60	0.4
SSL0804-102M	1000	2.15	0.3

M = $\pm 20\%$, K = $\pm 10\%$, J = $\pm 5\%$

■ SSL - 0810 - SERIES

PART NO.	INDUCTANCE ($\mu\text{H} \pm 20\%$)	DC RESISTANCE (Ω MAX)	I SAT ² (AMPS)
SSL0810-100M	10	0.033	8.0
SSL0810-150M	15	0.042	7.0
SSL0810-220M	22	0.054	5.5
SSL0810-330M	33	0.080	4.0
SSL0810-470M	47	0.10	3.8
SSL0810-680M	68	0.17	3.0
SSL0810-101M	100	0.22	2.5
SSL0810-151M	150	0.34	2.0
SSL0810-221M	220	0.44	1.6
SSL0810-331M	330	0.70	1.2
SSL0810-471M	470	0.95	1.0
SSL0810-681M	680	1.20	1.0
SSL0810-102M	1000	2.00	0.8

M = $\pm 20\%$, K = $\pm 10\%$, J = $\pm 5\%$

Tested at 100 KHz, 0.1 Vrms

Inductance drop = 10% Typical at rated Isat

ΔT = 30°C Typical at Irms

Operating Temperature range -40°C to +85°C

■ SSL - 1306 - SERIES

PART NO.	INDUCTANCE ($\mu\text{H} \pm 20\%$)	DC RESISTANCE ($\Omega \pm 15\%$)	I SAT ² (AMPS)	I RMS ³ (AMPS)
SSL1306-1R0M	1.0	0.011	20	8.6
SSL1306-2R2M	2.2	0.014	16	7.1
SSL1306-3R3M	3.3	0.016	14	6.2
SSL1306-5R6M	5.6	0.022	12	5.3
SSL1306-100M	10	0.032	10	4.3
SSL1306-150M	15	0.036	8.0	4.0
SSL1306-220M	22	0.047	7.0	3.5
SSL1306-330M	33	0.066	5.5	3.0
SSL1306-470M	47	0.089	4.5	2.6
SSL1306-680M	68	0.130	3.5	2.3
SSL1306-101M	100	0.190	3.0	1.8
SSL1306-151M	150	0.250	2.6	1.5
SSL1306-221M	220	0.380	2.4	1.2
SSL1306-331M	330	0.560	1.9	1.0
SSL1306-471M	470	0.850	1.4	0.82
SSL1306-681M	680	1.200	1.2	0.72
SSL1306-102M	1000	1.800	1.0	0.56

M = $\pm 20\%$, K = $\pm 10\%$, J = $\pm 5\%$

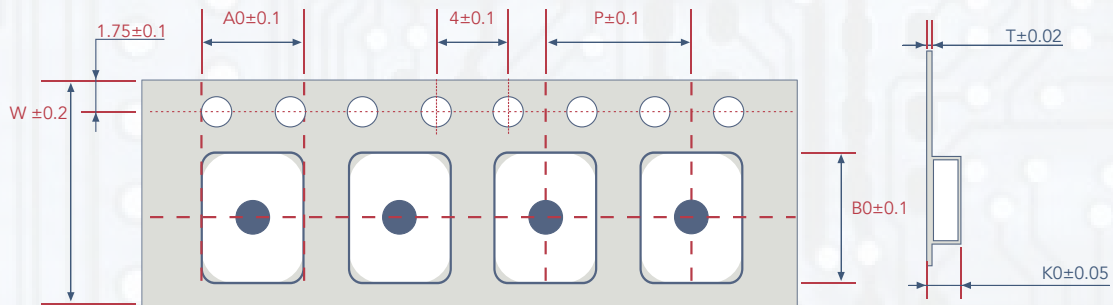
Tested at 100 KHz, 0.1 Vrms

$\Delta T = 30^\circ\text{C}$ Typical at Irms

Inductance drop = 10% Typical at rated Isat

Operating Temperature range -40°C to $+85^\circ\text{C}$

■ DIMENSIONS OF TAPING



SERIES	W	P	A0	B0	K0	T	QUANTITY	
							7" REEL	13" REEL
SSL0402	12	8	4.8	6.9	3.0	0.25	750	2000
SSL0802	24	12	9.7	13.25	3.3	0.3		1000
SSL0804	24	12	9.7	13.25	5.4	0.3		500
SSL0810	24	12	9.7	13.25	11.7	0.3		225
SSL1306	32	20	15.4	18.8	8	0.4		250



RELIABILITY TEST (ENVIRONMENTAL PERFORMANCES):

NO.	ITEM	SPECIFICATION	TEST CONDITION															
1	Temperature Cycle	Appearance No damage Impedance within $\pm 20\%$ Of the initial value	One Cycle <table border="1"> <thead> <tr> <th>STEP</th> <th>TEMPERATURE</th> <th>TIME (MIN)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-55°C</td> <td>30</td> </tr> <tr> <td>2</td> <td>25°C</td> <td>3</td> </tr> <tr> <td>3</td> <td>125°C</td> <td>30</td> </tr> <tr> <td>4</td> <td>25°C</td> <td>3</td> </tr> </tbody> </table> Total 100 Cycles Measured after exposure in room condition = 24hrs	STEP	TEMPERATURE	TIME (MIN)	1	-55°C	30	2	25°C	3	3	125°C	30	4	25°C	3
STEP	TEMPERATURE		TIME (MIN)															
1	-55°C		30															
2	25°C		3															
3	125°C	30																
4	25°C	3																
2	Humidity Resistance	Temperature: $+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ Humidity: 90% to 95% Time 1000 ± 12 Hours Measured after exposure in room condition = 24hrs																
3	High Temperature Resistance	Temperature = $125^{\circ}\text{C} \pm 3^{\circ}\text{C}$ Relative Humidity = 0% Applied Current = Rated Current as state Time = 1000 hrs ± 12 hrs Measure after exposure in room Condition = 24hrs																
4	Temperature Shock	10 cycles (air to Air) (1 cycles shall consist of) 30 minutes exposure to -55°C 30 minutes exposure to 125°C 15 seconds maximum transition between temperatures Measure after exposure in room Condition = 24hrs																

RELIABILITY TEST (MECHANICAL PERFORMANCES):

NO.	ITEM	SPECIFICATION	TEST CONDITION
1	Solderability	More than 90% of the terminal Electrode shall be covered with fresh solder	Pre-Heat - 150°C Pre-Heat Time - 1 minute Solder - Sn/Ag 3.0/Cu0.5 (Pb-Free) Solder Temperature - $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Immersion Time - 4 - 1 sec
2	Resistance to Soldering Heat	The chips shall not crack. More than 75% for the terminal Electrode Shall be cover with solder.	Pre-Heat - 150°C Pre-Heat Time - 1 minute Solder - Sn/Ag 3.0/Cu0.5 (Pb-Free) Solder Temperature - $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Immersion Time - 10 - 1 sec
3	Vibration		Test Device shall be soldered on the substrate Oscillation Freq. - 10 to 55 to 10Hz for 1 min Amplitude - 1.5mm Time - 2hrs for each axis (X, Y & Z) total 6 hrs