

10. SPB Series (Unshielded Type)

Applications

- Portable telephones.
- DC/DC converters, etc.
- Other various electronic appliances.

Features

- High power, high saturation inductors.
- SPB1608 series used ceramic base with gold-plating.
- The others used LCP plastic base.
- Ideal inductor for DC-DC conversion in notebook computer, Step-up or Step-down converters, etc.



Inductance and Rated Current ranges

Part Series	Inductances range	Rated Current range
* SPB0805	3.3~330μH	5.0~0.46A (Irms) ; 5.2~0.50A (Isat)
* SPB1005	1.0~10000μH	7.5~0.10A (Irms) ; 9.0~0.10A (Isat)

(Dimension data (Refer to Fig. 1))

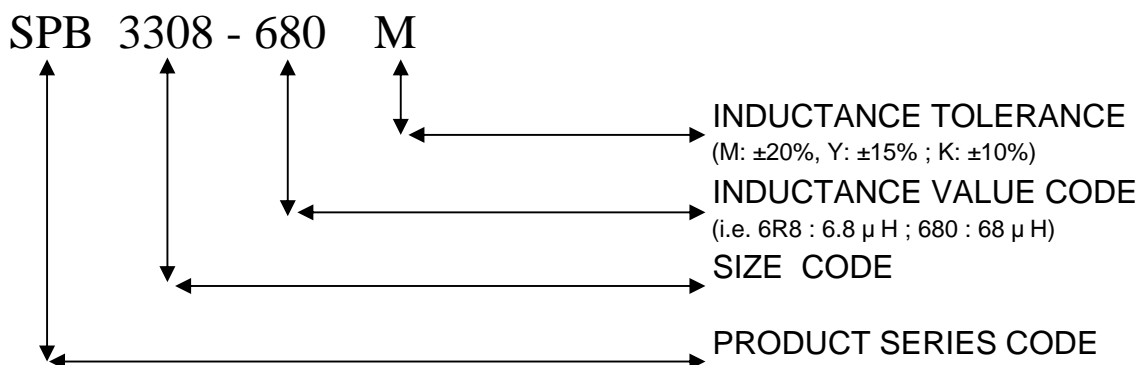
Part Series	Inductances range	Rated Current range
* SPB1608	1.0~1000μH	2.90~0.10A
* SPB3308	1.0~1000μH	5.15~0.10A
* SPB3316	0.68~1000μH	11.0~0.35A
* SPB3340	0.47~1000μH	20.0~0.80A
* SPB5022	1.0~1000μH	20.0~1.00A

(Dimension data (Refer to Fig. 2))

Characteristics

- Rated DC Current : the inductance becomes 10% lower than its initial value or temperature of coil increases to T=40 . (Ta=25)
- Operating temperature range : -40 ~+125 .
- Test equipment (Electrical specifications at 25) :
L: HP4284A LCR meter; DCR: Milli-ohm meter.

Part Numbering System



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Dimensions (mm)

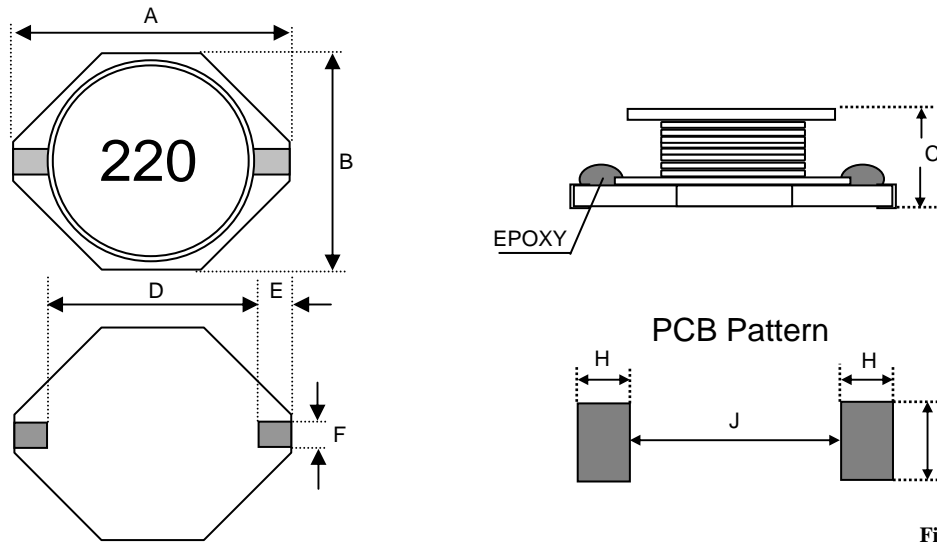


Fig. 2

Series	A max	B max	C max	D	E	F	H	I	J
SPB1608	6.60	4.45	2.92	4.32	1.27	1.02	3.56	1.40	4.06
SPB3308	12.95	9.40	3.00	7.62	2.54	2.54	2.79	2.92	7.37
SPB3316	12.95	9.40	5.21	7.62	2.54	2.54	2.79	2.92	7.37
SPB3340	12.95	9.40	11.43	7.62	2.54	2.54	2.79	2.92	7.37
SPB5022	18.54	15.24	7.11	12.70	2.54	2.54	2.79	2.92	12.45

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Electrical Characteristics

SPB 1608 / 3308 / 3316 / 3340 / 5022 TYPE

Inductance value code	L (μH)	Tol.	DC Resistance () Max.					Rated DC current (A) Max.				
			1608	3308	3316	3340	5022	1608	3308	3316	3340	5022
R47	0.47	M	-	-	-	0.008	-	-	-	-	20.00	-
R68	0.68	M	-	-	0.008	-	-	-	-	11.00	-	-
R82	0.82	M	-	-	-	0.009	-	-	-	-	20.00	-
1R0	1.0	M	0.050	0.024	0.009	-	0.009	2.90	5.15	9.00	-	20.00
1R2	1.2	M	-	-	0.010	0.010	-	-	-	8.50	20.00	-
1R5	1.5	M	0.060	-	0.010	0.010	-	2.60	-	8.00	20.00	-
1R8	1.8	M	-	-	0.011	-	-	-	-	7.50	-	-
2R2	2.2	M	0.070	-	0.012	0.012	0.014	2.30	-	7.10	18.50	16.00
2R7	2.7	M	-	-	0.014	-	-	-	-	6.60	-	-
3R3	3.3	M	0.080	-	0.015	-	0.018	2.00	-	6.50	-	14.00
3R5	3.5	M	-	-	-	0.015	-	-	-	-	18.00	-
4R7	4.7	M	0.090	0.036	0.018	0.020	0.019	1.50	4.20	5.50	13.00	13.00
5R6	5.6	M	-	-	0.025	0.022	0.020	-	-	4.80	12.00	12.00
6R8	6.8	M	0.130	0.060	0.027	0.030	0.022	1.20	3.90	4.70	10.00	10.60
8R2	8.2	M	0.160	0.080	0.036	0.033	0.024	1.15	2.42	4.10	9.00	10.30
100	10	M	0.160	0.110	0.038	0.040	0.031	1.10	2.40	3.90	8.00	10.00
120	12	M	-	-	0.044	0.042	0.034	-	-	3.30	7.20	8.20
150	15	M	0.230	0.120	0.046	0.050	0.036	0.90	2.30	3.10	7.00	8.00
180	18	M	-	-	0.066	0.052	0.045	-	-	2.80	5.70	7.20
220	22	M	0.370	0.180	0.085	0.066	0.047	0.70	1.80	2.60	5.50	7.00
270	27	M	-	-	0.095	0.072	0.056	-	-	2.10	4.20	5.80
330	33	M	0.510	0.250	0.100	0.080	0.066	0.58	1.60	2.00	4.00	5.50
390	39	M	-	-	0.130	0.092	0.080	-	-	1.80	3.90	4.60
470	47	M	0.640	0.320	0.140	0.110	0.095	0.50	1.30	1.70	3.80	4.50
560	56	M	-	-	0.190	0.150	0.128	-	-	1.60	3.20	3.70
680	68	M	0.860	0.540	0.200	0.170	0.130	0.40	1.10	1.50	3.00	3.50
820	82	M	-	-	0.260	0.200	0.180	-	-	1.30	2.60	3.10
101	100	M	1.270	0.690	0.280	0.220	0.190	0.31	0.87	1.25	2.50	3.00
121	120	M	-	-	0.360	0.320	0.240	-	-	1.05	2.20	2.80
151	150	M	2.000	0.940	0.400	0.340	0.250	0.27	0.74	1.05	2.00	2.60
181	180	M	-	-	0.540	0.420	0.360	-	-	0.85	1.80	2.50
221	220	M	3.110	1.600	0.610	0.440	0.380	0.22	0.56	0.82	1.60	2.40
271	270	M	-	-	0.840	0.600	0.520	-	-	0.65	1.30	2.00
331	330	M	3.800	2.150	1.020	0.700	0.560	0.18	0.50	0.62	1.20	1.90
391	390	M	-	-	1.250	0.850	0.720	-	-	0.55	1.10	1.50
471	470	M	6.000	3.300	1.270	0.950	0.850	0.14	0.40	0.52	1.00	1.40
561	560	M	-	-	1.850	1.100	1.080	-	-	0.45	1.00	1.30
681	680	M	10.500	4.400	2.020	1.200	1.100	0.12	0.33	0.42	1.00	1.20
821	820	M	-	5.800	2.530	1.500	1.600	-	0.15	0.38	0.82	1.03
102	1000	M	13.800	8.400	3.000	2.000	1.800	0.10	0.10	0.35	0.80	1.00

Test Frequency : 100KHz 0.1V

Rated Current: The DC current when the inductance becomes 10% lower than its initial value. (Ta=25)

Operating temperature range : -40 ~+125 .