

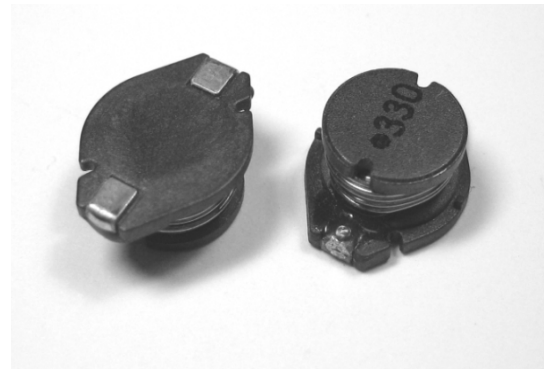
10. SPB Series (Unshielded Type)

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))

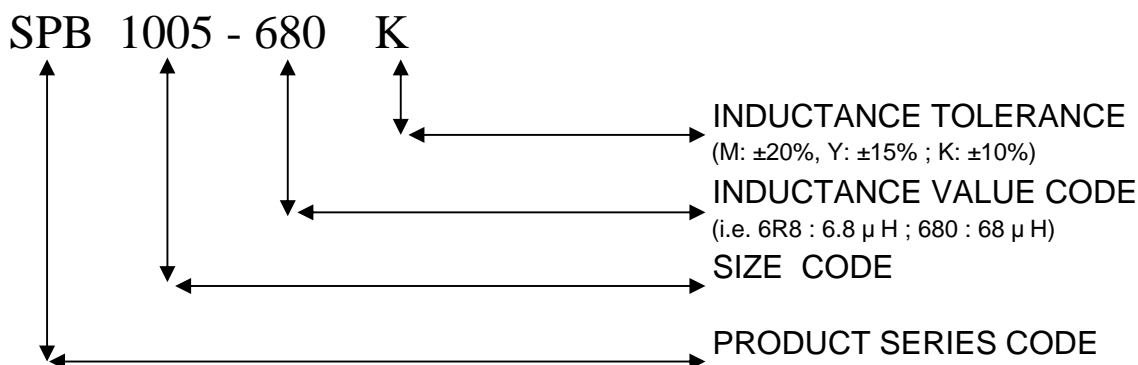
Part Series	Inductances range	Rated Current range
* SPB1608	1.0~1000μH	2.90~0.10A
* SPB3308	1.0~1000μH	5.15~0.10A
* SPB3316	0.68~1000μH	11.0~0.35A
* SPB3340	0.47~1000μH	20.0~0.80A
* SPB5022	1.0~1000μH	20.0~1.00A

(Dimension data (Refer to Fig. 2))

Characteristics

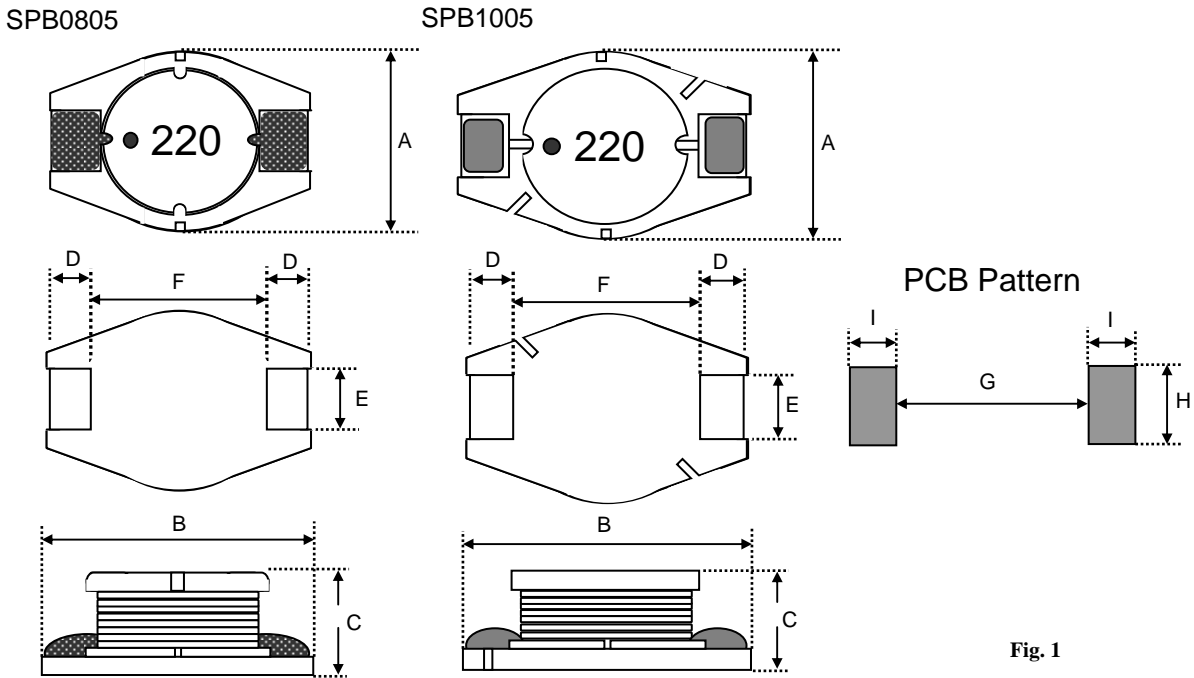
- Rated DC Current : the inductance becomes 10% lower than its initial value or temperature of coil increases to T=40 . (Ta=25 )
- Operating temperature range : -40 ~+125 .
- Test equipment (Electrical specifications at 25 ) :  
L: HP4284A LCR meter; DCR: Milli-ohm meter.

Part Numbering System



**10. SPB Series (Unshielded Type)**

**Dimensions (mm)**



Series	A	B	C	D	E	F	G (ref.)	H (ref.)	I (ref.)
SPB0805	8.0±0.3	10.5±0.3	5.0±0.3	2.1±0.2	2.0±0.2	6.0±0.3	5.7	2.2	2.4
SPB1005	10.0±0.3	12.7±0.3	5.0±0.3	2.4±0.2	2.2±0.2	7.6±0.3	7.3	2.8	3.0

## 10. SPB Series (Unshielded Type)

### Electrical Characteristics

#### SPB 0805 / 1005 TYPE

Inductance value code	L (μH)	Tolerance		DC Resistance ( ) Max.		Rated DC current (A) Max.			
		SPB0805	SPB1005	SPB0805	SPB1005	I rms		I sat	
						SPB0805	SPB1005	SPB0805	SPB1005
1R0	1.0	-	M	-	0.007	-	7.50	-	9.00
1R5	1.5	-	M	-	0.009	-	6.50	-	8.00
2R5	2.5	-	M	-	0.012	-	5.50	-	7.00
3R3	3.3	M	M	0.022	0.015	5.00	5.00	5.20	6.40
4R7	4.7	M	M	0.028	0.019	4.20	4.50	4.00	5.40
6R8	6.8	M	M	0.040	0.034	3.40	3.40	3.40	4.50
100	10.0	M	M	0.050	0.045	3.00	2.90	2.80	3.70
150	15.0	M	M	0.070	0.060	2.40	2.50	2.30	3.00
220	22.0	M	M	0.100	0.095	2.00	2.00	1.85	2.50
330	33.0	M	K	0.145	0.120	1.72	1.80	1.54	2.00
470	47.0	Y	K	0.200	0.190	1.40	1.40	1.28	1.60
680	68.0	Y	K	0.270	0.240	1.20	1.20	1.15	1.40
101	100	Y	K	0.400	0.330	1.00	1.00	0.92	1.20
151	150	Y	K	0.560	0.590	0.75	0.80	0.75	1.00
221	220	Y	K	0.860	0.780	0.62	0.70	0.62	0.80
331	330	Y	K	1.500	1.150	0.46	0.55	0.50	0.60
471	470	-	K	-	1.700	-	0.45	-	0.50
681	680	-	K	-	2.600	-	0.35	-	0.40
102	1000	-	K	-	3.900	-	0.30	-	0.30
152	1500	-	K	-	6.300	-	0.25	-	0.25
222	2200	-	K	-	8.200	-	0.20	-	0.20
332	3300	-	K	-	14.000	-	0.16	-	0.17
472	4700	-	K	-	17.000	-	0.15	-	0.15
682	6800	-	K	-	30.000	-	0.11	-	0.12
103	10000	-	K	-	39.000	-	0.10	-	0.10

Test Frequency : 100KHz 0.1V

a). I rms: base on temp. rise 40 <Max.>

b). Isat: base on L/LOA = 10% <Typ.>

Operating temperature range : -40 ~+125 . (Temp. rise included)