

**9. SPB Series (Unshielded Type)****Applications**

Portable telephones.  
 Personal computers.  
 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**

<b>Part Series</b>	<b>Inductances range</b>	<b>Rated Current range</b>
* SPB6028	1.5~1000 $\mu$ H	4.0~0.13A (Irms) ; 3.5~0.14A (Isat)
* SPB7030	1.0~1000 $\mu$ H	3.0~0.15A (Irms) ; 4.3~0.15A (Isat)
* SPB7045	1.2~1000 $\mu$ H	3.8~0.22A (Irms) ; 5.0~0.20A (Isat)
* SPB1030	2.7~1000 $\mu$ H	3.0~0.20A (Irms) ; 4.2~0.23A (Isat)
* SPB1045	2.7~1000 $\mu$ H	4.8~0.38A (Irms) ; 6.2~0.40A (Isat)

*(Dimension data (Refer to Fig. 1))*

<b>Part Series</b>	<b>Inductances range</b>	<b>Rated Current range</b>
* SPB0805	3.3~330 $\mu$ H	5.0~0.46A (Irms) ; 5.2~0.50A (Isat)
* SPB1005	1.0~10000 $\mu$ H	7.5~0.10A (Irms) ; 9.0~0.10A (Isat)
* SPB1806	1.0~1000 $\mu$ H	10~0.50A (Irms) ; 30~1.00A (Isat)

*(Dimension data (Refer to Fig. 2))*

<b>Part Series</b>	<b>Inductances range</b>	<b>Rated Current range</b>
* SPB1608	1.0~1000 $\mu$ H	2.9~0.10A
* SPB3308	4.7~1000 $\mu$ H	4.2~0.29A
* SPB3316	1.0~1000 $\mu$ H	9.0~0.30A
* SPB3340	0.47~1000 $\mu$ H	40.0~0.80A
* SPB5022	1.0~1000 $\mu$ H	20.0~1.00A

*(Dimension data (Refer to Fig. 3))*

9. SPB Series (Unshielded Type)

Inductance and Rated Current ranges (Cont'd)

Part Series	Inductances range	Rated Current range
* SPB0610	1.2~330μH	2.1~0.13A
* SPB0612	1.2~100μH	1.8~0.235A
* SPB0620	1.0~1000μH	2.5~0.08A

(Dimension data (Refer to Fig. 4))

Test equipment:

- L: HP4284A LCR meter @100KHz 0.1V
- DCR Resistance: Milli-ohm meter or equivalent.
- SRF: HP4291B RF Impedance Analyzer.
- Electrical Specifications at 25 .

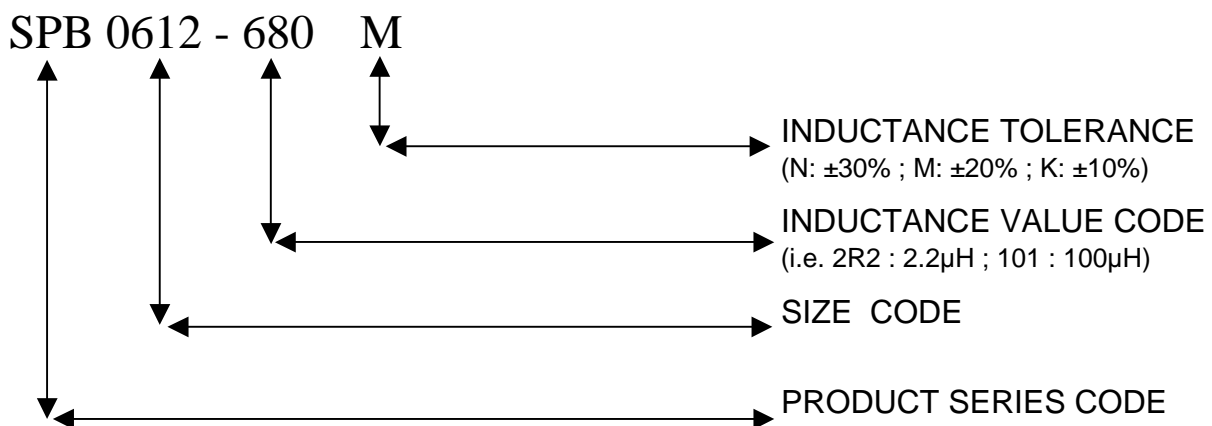
Characteristics

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

Operating temperature range:

- 40 ~+125 :  
SPB6028, SPB7030, SPB7045, SPB1030, SPB1045  
SPB1608, SPB3308, SPB3316, SPB3340, SPB5022
- 40 ~+105 :  
SPB0805, SPB1005, SPB1806
- 40 ~+100 :  
SPB0610, SPB0612, SPB0620

Part Numbering System



9. SPB Series (Unshielded Type)

Dimensions (mm)

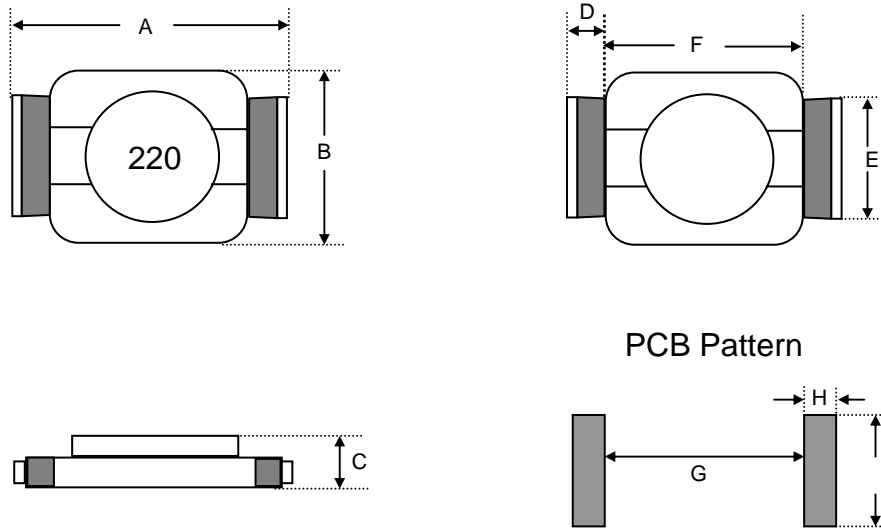


Fig. 4

Series	A max	B	C max	D	E	F	G	H	I
SPB0610	6.5	5.3±0.3	1.0	0.9	3.0	4.5	4.0	1.5	3.4
SPB0612	6.5	5.3±0.3	1.2	0.9	3.0	4.5	4.0	1.5	3.4
SPB0620	6.5	5.3±0.3	2.0	0.9	3.0	4.5	4.0	1.5	3.4

**9. SPB Series (Unshielded Type)****Electrical Characteristics****SPB 0610 / 0612 / 0620 TYPE**

Inductance value code	L (μH)	Tol.	DC Resistance (Ω) Max.			Rated DC current (A) Max.		
			0610	0612	0620	0610	0612	0620
1R0	1.0	M	-	-	0.040	-	-	2.500
1R2	1.2	M	0.080	0.060	-	2.100	1.800	-
1R5	1.5	M	0.100	-	0.060	1.900	-	2.200
2R2	2.2	M	0.120	0.125	0.070	1.600	1.200	1.800
3R3	3.3	M	0.160	0.155	0.100	1.300	0.960	1.400
4R7	4.7	M	0.200	0.206	0.120	1.100	0.900	1.200
6R8	6.8	M	0.320	0.240	0.190	0.900	0.800	1.100
100	10	M	0.410	0.370	0.300	0.800	0.700	1.000
150	15	M	0.650	0.460	0.400	0.650	0.600	0.800
180	18	M	-	0.580	-	-	0.560	-
220	22	M	0.850	0.668	0.540	0.500	0.500	0.600
270	27	M	-	0.950	-	-	0.450	-
330	33	M	1.300	1.100	0.740	0.400	0.420	0.500
390	39	M	-	1.280	-	-	0.380	-
470	47	M	1.800	1.380	1.100	0.350	0.340	0.450
560	56	M	-	1.700	-	-	0.300	-
680	68	M	2.500	2.100	1.600	0.300	0.280	0.350
820	82	M	-	2.700	-	-	0.260	-
101	100	M	3.500	3.100	2.300	0.250	0.235	0.300
151	150	M	6.500	-	3.200	0.180	-	0.250
221	220	M	8.500	-	5.700	0.160	-	0.200
331	330	M	15.000	-	8.200	0.130	-	0.160
471	470	M	-	-	10.800	-	-	0.140
681	680	M	-	-	17.200	-	-	0.120
102	1000	M	-	-	22.600	-	-	0.080

1. Rated Current: The DC current when the inductance becomes 90% lower than its initial value. (Ta=25 ).