

## 6. SBS Series (Shielded Type)

### Applications

Smart Home Systems.  
DC/DC Converter in distributed Power System.  
Other various electronic appliances.

### Features

Large current adaptable.  
Flat bottom surface allows reliable mounting onto the board.  
High power, high saturation inductors.



### Inductance and Rated Current ranges

Part Series	Inductances range	Rated Current range
* SBS0703	10.00~1000 $\mu$ H	2.10~0.17A (Irms) ; 1.85~0.18A (Isat)
* SBS0704	1.00~1000 $\mu$ H	5.00~0.20A (Irms) ; 5.60~0.24A (Isat)

(Dimension data (Refer to Fig. 1))

Part Series	Inductances range	Rated Current range
* SBS0420	0.10~3.30 $\mu$ H	12.00~2.50A (Irms) ; 22.00~4.00A (Isat)
* SBS0520	0.10~4.70 $\mu$ H	17.00~2.80A (Irms) ; 45.00~5.00A (Isat)
* SBS0530	0.10~4.70 $\mu$ H	23.00~3.50A (Irms) ; 27.00~8.20A (Isat)
* SBS0620	0.10~4.70 $\mu$ H	18.00~3.00A (Irms) ; 40.00~8.00A (Isat)
* SBS0625	0.10~10.0 $\mu$ H	30.00~2.50A (Irms) ; 50.00~7.00A (Isat)
* SBS0630	0.10~22.0 $\mu$ H	32.50~2.50A (Irms) ; 60.00~4.50A (Isat)
* SBS0650	0.56~10.0 $\mu$ H	20.00~4.50A (Irms) ; 12.00~4.50A (Isat)
* SBS1040	0.19~15.0 $\mu$ H	40.00~5.00A (Irms) ; 90.00~8.00A (Isat)
* SBS1340	0.10~10.0 $\mu$ H	43.00~7.00A (Irms) ; 84.00~14.00A (Isat)
* SBS1350	0.10~10.0 $\mu$ H	55.00~9.00A (Irms) ; 118.00~16.00A (Isat)
* SBS1365	0.10~22.0 $\mu$ H	60.00~10.00A (Irms) ; 120.00~10.00A (Isat)

(Dimension data (Refer to Fig. 2))

Part Series	Inductances range	Rated Current range
* SBS0412R	0.47~4.70 $\mu$ H	6.00~1.80A (Irms) ; 6.80~2.80A (Isat)
* SBS0420R	0.22~10.0 $\mu$ H	9.50~1.60A (Irms) ; 12.50~2.20A (Isat)
* SBS0518R	0.47~10.0 $\mu$ H	10.50~2.50A (Irms) ; 15.50~3.00A (Isat)
* SBS0530R	0.20~10.0 $\mu$ H	14.00~3.20A (Irms) ; 14.50~3.50A (Isat)
* SBS0618R	0.68~22.0 $\mu$ H	9.50~1.80A (Irms) ; 17.00~2.30A (Isat)
* SBS0624R	0.33~10.0 $\mu$ H	18.00~3.10A (Irms) ; 24.50~4.00A (Isat)
* SBS0630R	0.22~33.0 $\mu$ H	24.00~2.00A (Irms) ; 34.00~2.50A (Isat)
* SBS1040R	0.15~33.0 $\mu$ H	45.00~4.40A (Irms) ; 75.00~5.00A (Isat)

(Dimension data (Refer to Fig. 3))

### Characteristics

Rated DC current (Irms): Base on the temperature rise T=40

Rated DC current (Isat): Base on L/L0A = 25% Typ. (SBS0420, SBS-R series base on L/L0A = 30% Typ.)

Operating temperature range:

-40 ~+125 :

SBS0703, SBS0704, SBS0420, SBS0520, SBS0530, SBS0620, SBS0625, SBS0630, SBS0650, SBS1040, SBS1340, SBS1350, SBS1365

-55 ~+125 :

SBS0412R, SBS0420R, SBS0518R, SBS0530R, SBS0618R, SBS0624R, SBS0630R, SBS1040R

Test equipment:

L: HP4284A LCR Meter or equivalent.

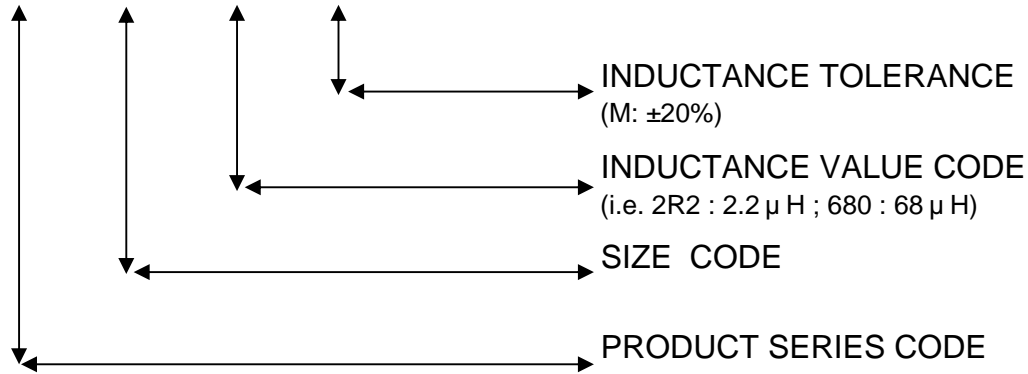
DCR: Milli-ohm meter or equivalent.

Electrical specifications at 25 .

6. SBS Series (Shielded Type)

**Part Numbering System**

SBS 0704 - 680 M



**Dimensions (mm)**

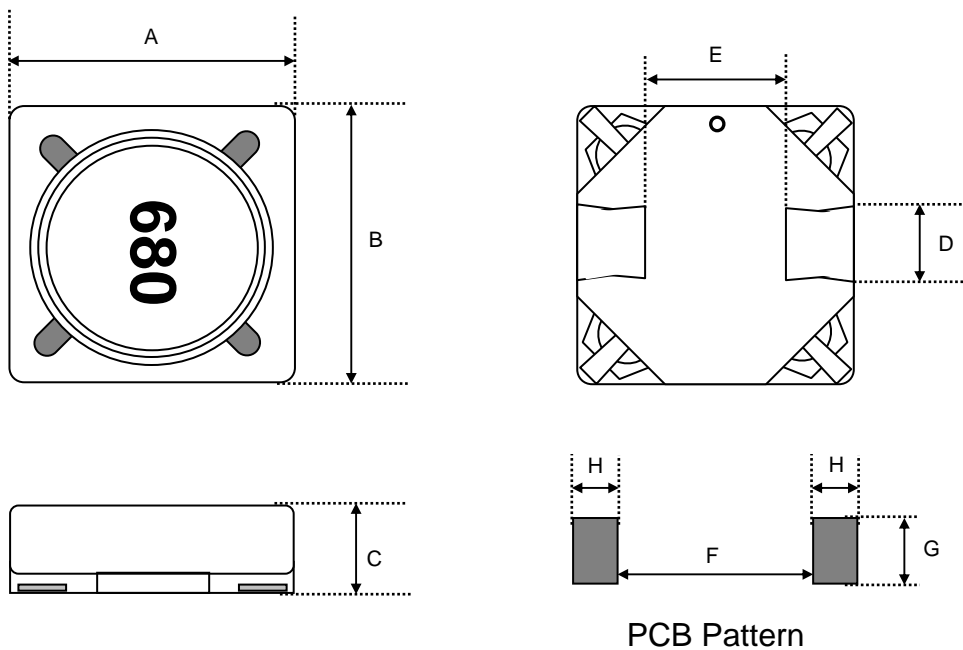


Fig. 1

Series	A	B	C	D (typ.)	E (typ.)	F (ref.)	G (ref.)	H (ref.)
SBS0703	7.30±0.20	7.30±0.20	3.50±0.20	2.00	4.60	4.80	2.40	1.50
SBS0704	7.30±0.20	7.30±0.20	4.50±0.20	2.00	4.60	4.80	2.40	1.50

## 6. SBS Series (Shielded Type)

### Electrical Characteristics

#### SBS 0703 / 0704 TYPE

Inductance value code	L (μH)	Tol.	DC Resistance ( ) Max.		Rated DC current (A) Max.			
					I rms		I sat	
			0703	0704	0703	0704	0703	0704
1R0	1.0	M	-	0.013	-	5.00	-	5.60
2R2	2.2	M	-	0.018	-	4.20	-	5.00
3R3	3.3	M	-	0.022	-	3.80	-	4.40
4R7	4.7	M	-	0.028	-	3.60	-	4.00
5R6	5.6	M	-	0.032	-	3.00	-	3.40
6R8	6.8	M	-	0.040	-	2.80	-	3.20
100	10	M	0.072	0.052	2.10	2.10	1.85	2.50
120	12	M	0.085	0.062	1.90	2.00	1.60	2.30
150	15	M	0.105	0.075	1.60	1.90	1.52	2.10
180	18	M	0.125	0.090	1.40	1.80	1.40	1.95
220	22	M	0.160	0.096	1.20	1.65	1.28	1.75
270	27	M	0.185	0.130	1.10	1.45	1.15	1.62
330	33	M	0.220	0.150	1.00	1.35	1.04	1.45
390	39	M	0.250	0.190	0.95	1.17	0.96	1.30
470	47	M	0.320	0.210	0.85	1.05	0.88	1.20
560	56	M	0.350	0.240	0.78	0.95	0.80	1.10
680	68	M	0.400	0.300	0.72	0.86	0.74	0.96
820	82	M	0.480	0.400	0.63	0.78	0.65	0.90
101	100	M	0.630	0.450	0.54	0.70	0.60	0.78
121	120	M	0.720	0.550	0.53	0.60	0.55	0.70
151	150	M	0.930	0.760	0.47	0.48	0.48	0.58
181	180	M	1.150	0.820	0.43	0.46	0.45	0.54
221	220	M	1.320	0.950	0.40	0.42	0.42	0.50
271	270	M	1.700	1.200	0.37	0.38	0.38	0.46
331	330	M	2.000	1.500	0.33	0.34	0.33	0.40
391	390	M	2.300	1.850	0.30	0.32	0.30	0.36
471	470	M	2.800	2.200	0.26	0.29	0.27	0.34
561	560	M	3.500	2.600	0.23	0.26	0.25	0.30
681	680	M	4.000	2.800	0.21	0.24	0.22	0.28
821	820	M	5.200	3.500	0.19	0.22	0.21	0.26
102	1000	M	5.800	4.100	0.17	0.20	0.18	0.24

#### Notes:

1. Test Frequency : 1KHz / 1.0V
- 2a). I rms: base on temp. rise 40 °C Max.
- 2b). I sat: base on L/LOA = 25% Max.
3. Operating temperature range : -40 °C ~ +125 °C