

## 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.

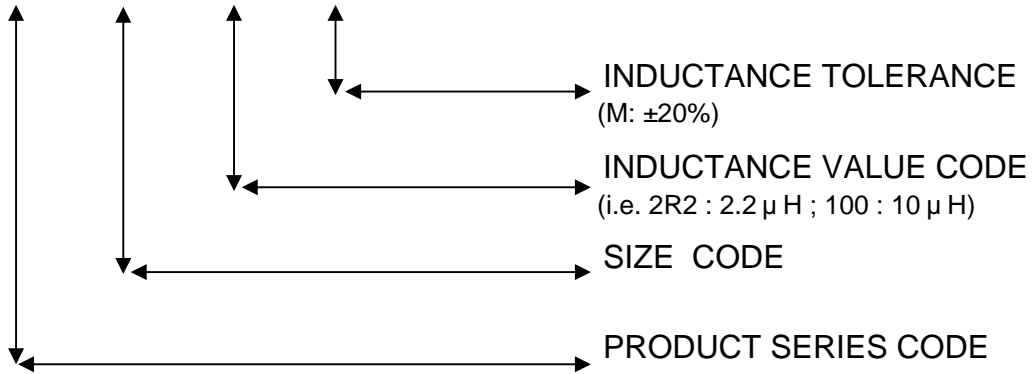
DCR: Milli-ohm meter or equivalent.

Electrical specifications at 25 .

6. SBS Series (Shielded Type)

**Part Numbering System**

SBS 0530R-2R2 M



**Dimensions (mm)**

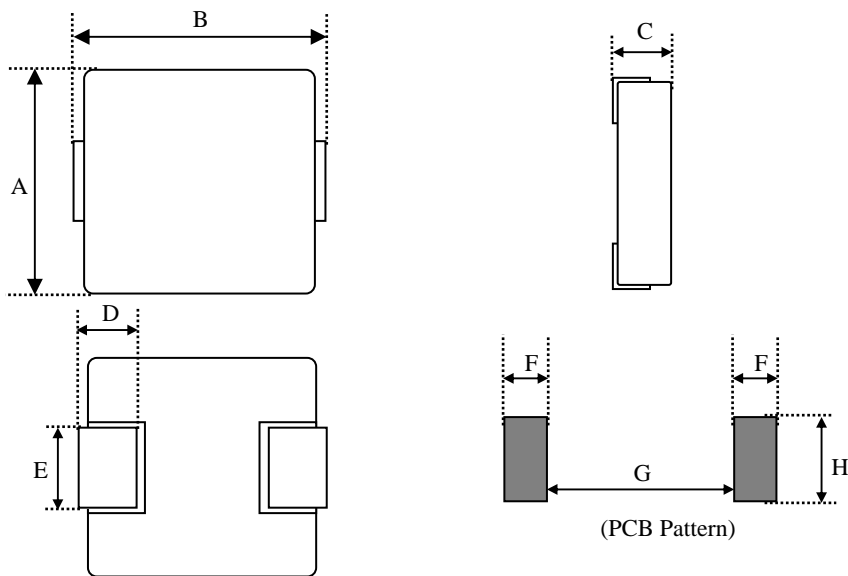


Fig. 3

Series	A	B	C	D	E	F	G	H
SBS0412R	4.20±0.25	4.40±0.35	1.00±0.20	0.80±0.30	2.00±0.30	1.50	2.20	2.50
SBS0420R	4.20±0.25	4.40±0.35	1.80±0.20	0.80±0.30	2.00±0.30	1.50	2.20	2.50
SBS0518R	5.20±0.20	5.40±0.30	1.60±0.20	1.20±0.20	2.20±0.30	1.90	2.20	2.50
SBS0530R	5.20±0.20	5.40±0.30	2.80±0.20	1.20±0.20	2.20±0.30	1.90	2.20	2.50
SBS0618R	6.60±0.20	7.00±0.30	1.60±0.20	1.60±0.30	3.00±0.30	2.35	3.70	3.50
SBS0624R	6.60±0.20	7.00±0.30	2.20±0.20	2.00±0.10	3.00±0.30	2.35	3.70	3.50
SBS0630R	6.60±0.20	7.00±0.30	2.80±0.20	1.60±0.30	3.00±0.30	2.35	3.70	3.50
SBS1040R	10.00±0.30	11.50 Max	3.80±0.20	2.00±0.50	3.00±0.50	4.10	5.40	4.10

6. SBS Series (Shielded Type)

Electrical Characteristics

SBS 0412R / 0420R / 0518R / 0530R TYPE

Inductance value code	L (μH)	Tol.	DC Resistance (mΩ) Max.				Rated DC current (A) Typ.							
							I rms				I sat			
			0412R	0420R	0518R	0530R	0412R	0420R	0518R	0530R	0412R	0420R	0518R	0530R
R20	0.20	M	-	-	-	3.90	-	-	-	14.00	-	-	-	14.50
R22	0.22	M	-	6.60	-	-	-	9.50	-	-	-	12.50	-	-
R47	0.47	M	21.00	14.00	9.00	8.50	6.00	7.50	10.50	11.00	6.80	9.50	15.50	12.00
R68	0.68	M	-	18.00	-	12.00	-	7.00	-	9.00	-	9.00	-	11.50
1R0	1.0	M	47.00	27.00	17.00	14.00	4.50	6.00	8.00	8.50	5.50	7.00	9.00	11.00
1R5	1.5	M	-	46.00	26.00	25.00	-	5.00	7.50	8.20	-	6.00	9.00	8.50
2R2	2.2	M	83.50	58.00	35.00	29.00	2.75	4.50	5.00	7.00	3.50	5.00	6.50	7.50
3R3	3.3	M	-	87.00	58.00	38.00	-	3.30	4.50	5.50	-	4.00	5.00	6.00
4R7	4.7	M	195.00	105.00	85.00	60.00	1.80	2.80	3.50	4.50	2.80	3.00	4.00	5.00
6R8	6.8	M	-	175.00	120.00	90.00	-	2.40	2.80	3.50	-	2.50	3.40	4.00
100	10	M	-	282.00	155.00	125.00	-	1.60	2.50	3.20	-	2.20	3.00	3.50

Notes:

1. Test Frequency : 100KHz / 0.25V
2. Test equipment :  
L/Q : HP-4284A LCR meter  
DC Resistance : Milli-ohm meter
- 3a). Irms: base on temp. rise 40 Typ.
- 3b). Isat: base on L/LOA = 30% Typ.
4. Operating temperature range : -55 ~+125