

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 μ H	2.10~0.17A (Irms) ; 1.85~0.18A (Isat)
* SBS0704	1.00~1000 μ 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 μ H	12.00~2.50A (Irms) ; 22.00~4.00A (Isat)
* SBS0520	0.10~4.70 μ H	17.00~2.80A (Irms) ; 45.00~5.00A (Isat)
* SBS0530	0.10~4.70 μ H	23.00~3.50A (Irms) ; 27.00~8.20A (Isat)
* SBS0620	0.10~4.70 μ H	18.00~3.00A (Irms) ; 40.00~8.00A (Isat)
* SBS0625	0.10~10.0 μ H	30.00~2.50A (Irms) ; 50.00~7.00A (Isat)
* SBS0630	0.10~22.0 μ H	32.50~2.50A (Irms) ; 60.00~4.50A (Isat)
* SBS0650	0.56~10.0 μ H	20.00~4.50A (Irms) ; 12.00~4.50A (Isat)
* SBS1040	0.19~15.0 μ H	40.00~5.00A (Irms) ; 90.00~8.00A (Isat)
* SBS1340	0.10~10.0 μ H	43.00~7.00A (Irms) ; 84.00~14.00A (Isat)
* SBS1350	0.10~10.0 μ H	55.00~9.00A (Irms) ; 118.00~16.00A (Isat)
* SBS1365	0.10~22.0 μ 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 μ H	6.00~1.80A (Irms) ; 6.80~2.80A (Isat)
* SBS0420R	0.22~10.0 μ H	9.50~1.60A (Irms) ; 12.50~2.20A (Isat)
* SBS0518R	0.47~10.0 μ H	10.50~2.50A (Irms) ; 15.50~3.00A (Isat)
* SBS0530R	0.20~10.0 μ H	14.00~3.20A (Irms) ; 14.50~3.50A (Isat)
* SBS0618R	0.68~22.0 μ H	9.50~1.80A (Irms) ; 17.00~2.30A (Isat)
* SBS0624R	0.33~10.0 μ H	18.00~3.10A (Irms) ; 24.50~4.00A (Isat)
* SBS0630R	0.22~33.0 μ H	24.00~2.00A (Irms) ; 34.00~2.50A (Isat)
* SBS1040R	0.15~33.0 μ 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.

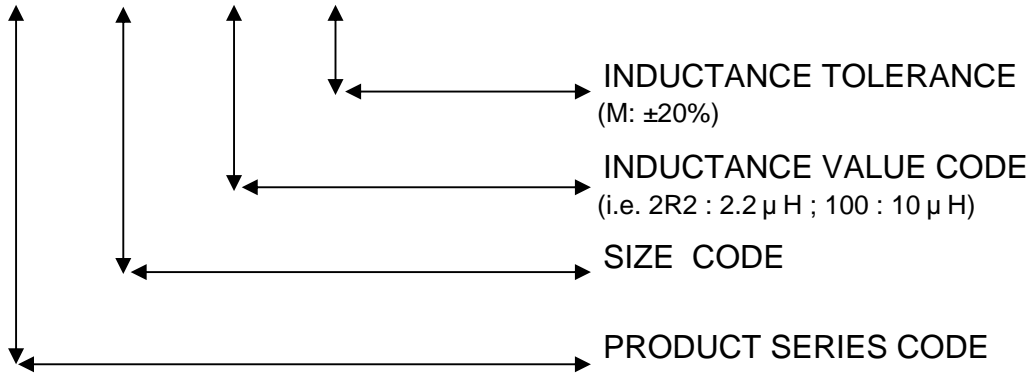
DCR: Milli-ohm meter or equivalent.

Electrical specifications at 25 .

6. SBS Series (Shielded Type)

Part Numbering System

SBS 0630 - 2R2 M



Dimensions (mm)

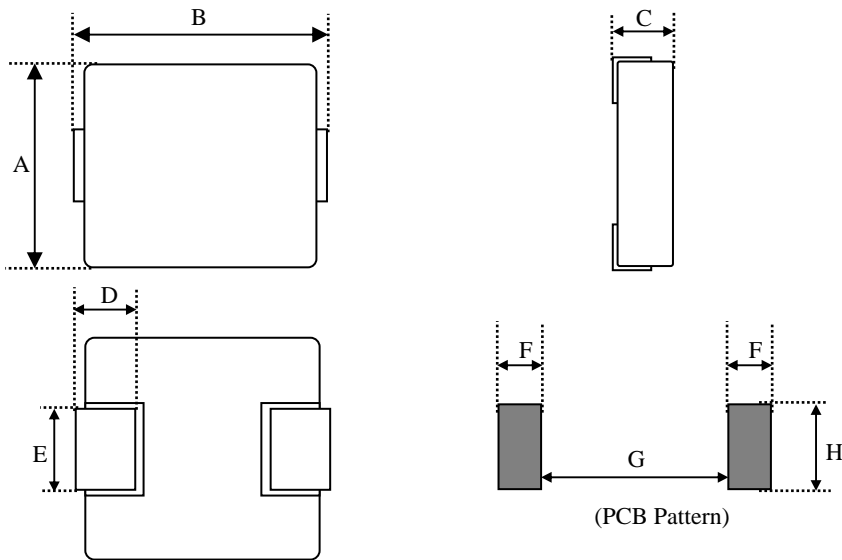


Fig. 2

Series	A	B	C (max.)	D	E	F	G	H
SBS0420	4.10±0.50	4.50±0.50	2.10	0.80±0.50	1.50±0.50	1.50	2.50	2.20
SBS0520	5.00±0.50	5.50±0.50	2.00	1.20±0.50	1.50±0.50	2.00	3.00	2.50
SBS0530	5.00±0.50	5.50±0.50	3.00	1.20±0.50	1.50±0.50	2.00	3.00	2.50
SBS0620	6.80 Max	7.60 Max	2.00	1.60±0.50	2.90±0.50	2.50	3.70	3.50
SBS0625	6.80 Max	7.60 Max	2.50	1.60±0.50	2.90±0.50	2.50	3.70	3.50
SBS0630	6.80 Max	7.60 Max	3.00	1.60±0.50	2.90±0.50	2.50	3.70	3.50
SBS0650	6.80 Max	7.60 Max	5.00	1.60±0.50	2.90±0.50	2.50	3.70	3.50
SBS1040	10.40 Max	11.50 Max	4.00	2.20±0.50	2.90±0.50	3.50	6.00	4.00
SBS1340	13.00 Max	14.20 Max	4.00	2.30±0.50	3.60±0.50	2.90	7.90	5.00
SBS1350	13.00 Max	14.20 Max	5.00	2.30±0.50	3.60±0.50	2.90	7.90	5.00
SBS1365	13.00 Max	14.20 Max	6.50	2.30±0.50	3.60±0.50	2.90	7.90	5.00

6. SBS Series (Shielded Type)

Electrical Characteristics

SBS 0620 / 0625 / 0630 / 0650 TYPE

Inductance value code	L (μH)	Tol.	DC Resistance (mΩ) Max.				Rated DC current (A) Typ.							
							I rms				I sat			
			0620	0625	0630	0650	0620	0625	0630	0650	0620	0625	0630	0650
R10	0.10	M	3.50	1.70	1.70	-	18.00	30.00	32.50	-	40.00	50.00	60.00	-
R15	0.15	M	5.20	-	-	-	15.00	-	-	-	38.00	-	-	-
R22	0.22	M	5.70	3.20	2.80	-	14.00	21.00	23.00	-	26.00	34.00	40.00	-
R33	0.33	M	7.00	4.10	3.90	-	12.00	18.00	20.00	-	18.00	22.00	30.00	-
R47	0.47	M	9.30	6.50	4.20	-	11.00	13.50	17.50	-	18.00	21.00	26.00	-
R56	0.56	M	-	-	4.50	3.60	-	-	16.50	20.00	-	-	24.50	12.00
R68	0.68	M	13.90	9.40	5.50	4.50	9.00	11.00	15.50	18.00	17.00	18.00	25.00	11.50
R82	0.82	M	15.90	11.80	8.00	4.90	8.00	10.00	13.00	16.50	17.00	17.00	24.00	13.00
1R0	1.0	M	18.30	14.20	10.00	6.50	7.00	9.00	11.00	13.00	14.00	16.00	22.00	15.00
1R5	1.5	M	34.00	21.20	15.00	9.00	4.00	7.50	9.00	12.00	13.00	15.00	18.00	12.00
2R2	2.2	M	46.00	34.00	20.00	13.60	3.75	6.50	8.00	10.00	11.50	14.00	14.00	10.00
3R3	3.3	M	60.10	51.60	30.00	20.90	3.25	5.00	6.00	8.00	10.00	13.00	13.50	8.00
4R7	4.7	M	78.00	63.00	40.00	30.30	3.00	4.50	5.50	6.50	8.00	10.00	10.00	7.00
5R6	5.6	M	-	-	-	34.40	-	-	-	6.00	-	-	-	7.00
6R8	6.8	M	-	95.00	60.00	44.60	-	3.50	4.50	5.50	-	9.00	8.00	5.50
8R2	8.2	M	-	106.00	68.00	50.70	-	3.00	4.00	5.00	-	8.00	7.50	5.00
100	10	M	-	129.00	105.00	71.30	-	2.50	3.00	4.50	-	7.00	7.00	4.50
220	22	M	-	-	160.00	-	-	-	2.50	-	-	-	4.50	-

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 : -40 ~+125