

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.

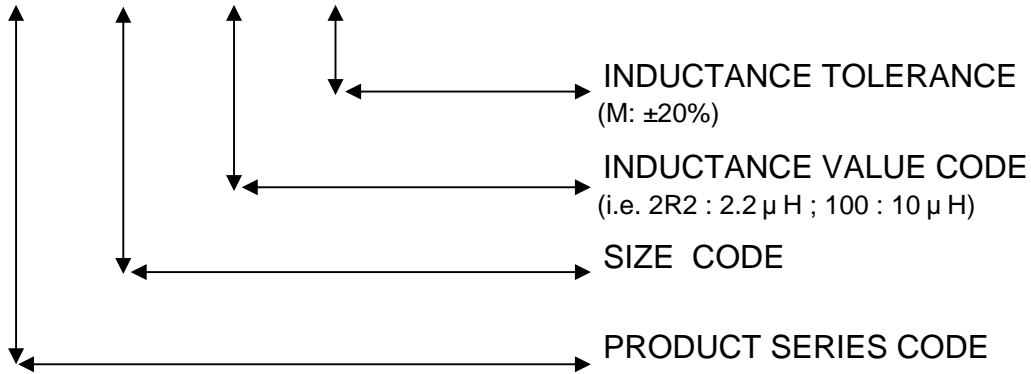
DCR: Milli-ohm meter or equivalent.

Electrical specifications at 25 .

6. SBS Series (Shielded Type)

Part Numbering System

SBS 0530 - 2R2 M



Dimensions (mm)

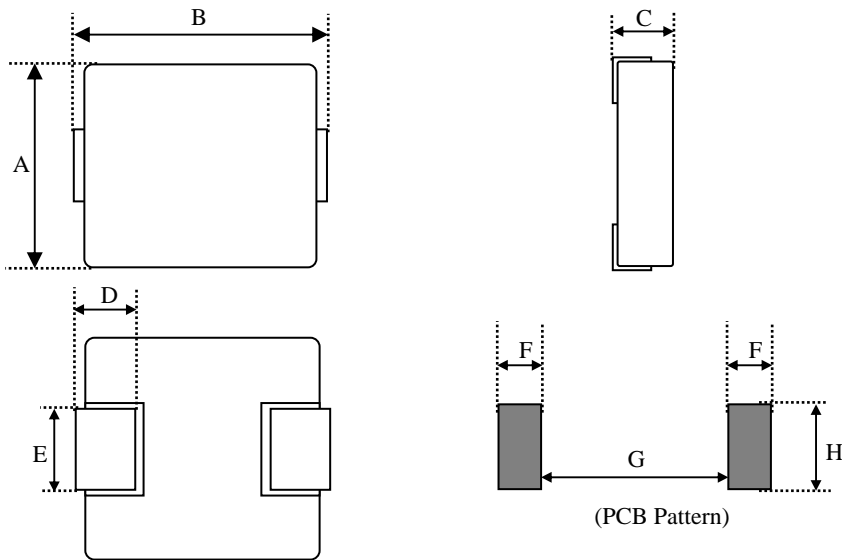


Fig. 2

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 0420 / 0520 / 0530 TYPE

Inductance value code	L (μH)	Tol.	DC Resistance (mΩ) Max.			Rated DC current (A) Typ.					
						I rms			I sat		
			0420	0520	0530	0420	0520	0530	0420	0520	0530
R10	0.10	M	4.00	3.90	3.16	12.00	17.00	23.00	22.00	45.00	27.00
R22	0.22	M	6.60	5.20	4.52	9.00	15.00	15.50	12.50	22.00	21.00
R33	0.33	M	-	8.20	5.56	-	12.00	13.70	-	25.00	19.00
R47	0.47	M	14.00	9.40	7.04	7.00	11.50	12.20	9.50	21.00	16.00
R56	0.56	M	16.00	-	-	6.50	-	-	8.50	-	-
R68	0.68	M	18.00	12.40	8.96	6.00	10.00	10.20	9.00	15.00	13.50
R82	0.82	M	-	-	11.90	-	-	9.30	-	-	13.00
1R0	1.0	M	27.00	20.00	13.70	4.50	7.00	9.20	7.00	16.00	12.00
1R5	1.5	M	46.00	-	20.70	4.00	-	7.20	6.00	-	11.00
2R2	2.2	M	58.00	50.10	29.20	3.00	4.20	5.80	5.00	12.50	10.00
3R3	3.3	M	87.00	85.50	54.70	2.50	3.30	5.00	4.00	8.50	8.50
4R7	4.7	M	-	116.60	77.50	-	2.80	3.50	-	5.00	8.20

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/L0A = 25% Typ. (SBS0420: 30%)
4. Operating temperature range : -40 ~+125