

High Performance B Series RFI Line Filters

SB Series



UL Recognized
CSA Certified
VDE Approved



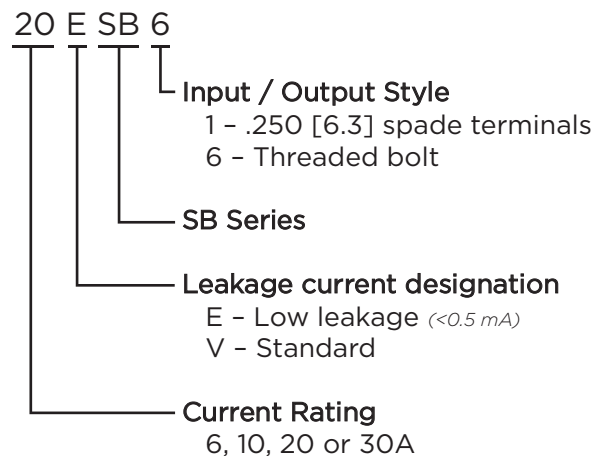
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RFI Power Line Filters

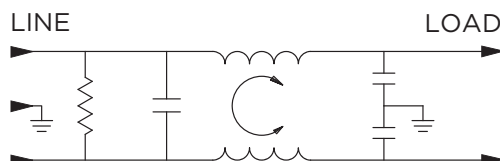
SB Series

- Enhanced performance version of our popular B Series of RFI line filters
- Small size with enhanced performance
- 30A version half the size of other 30A filters
- Low leakage version available that meets current requirements of VDE portable equipment and non-patient care medical equipment

Ordering Information



Electrical Schematic



Specifications

Maximum leakage current each Line to Ground:

	VSB Models	ESB Models
@ 120 VAC 60 Hz:	.75 mA	.22 mA
@ 250 VAC 50 Hz:	1.25 mA	.36 mA

Hipot rating (one minute):

Line to Ground:	2250 VDC
Line to Line:	1450 VDC

Rated Voltage (max):

250 VAC
250 VDC

Operating Frequency:

50/60 Hz

Rated Current:

6 to 30A

Operating Ambient Temperature Range

(at rated current I_r): -10°C to +40°C
In an ambient temperature (T_a) higher than +40°C the maximum operating current (I_o) is calculated as follows: $I_o = I_r \sqrt{(85 - T_a)/45}$

Available Part Numbers

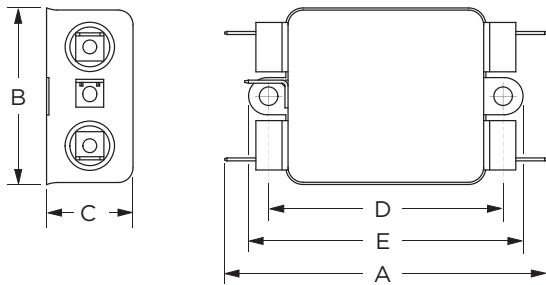
6ESB1	6VSB1
10ESB1	10VSB1
10ESB6	10VSB6
20ESB1	20VSB1
20ESB6	20VSB6
30ESB6	30VSB6

High Performance B Series RFI Line Filters *(continued)*

SB Series

Case Styles

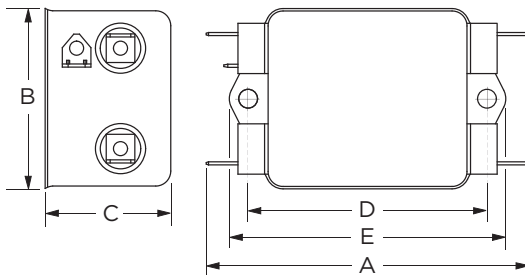
6ESB1 & 6VSB1



Typical Dimensions:

Line/Load Terminals (4): .250 [6.3] with .07 [1.8] Dia. hole
Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot
Mounting Holes (2): .188 [4.75] Dia.

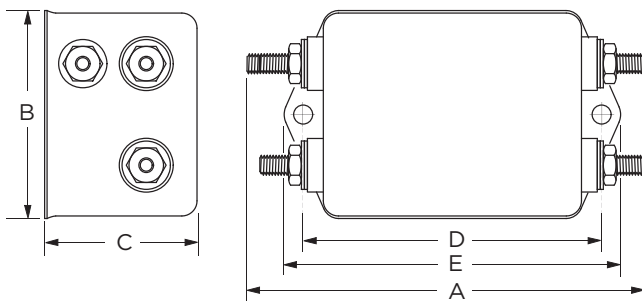
10ESB1, 10VSB1, 20ESB1 & 20VSB1



Typical Dimensions:

Line/Load Terminals (4): .250 [6.3] with .07 [1.8] Dia. hole
Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot
Mounting Holes (2): .188 [4.75] Dia.

ESB6 & VSB6



Typical Dimensions:

Terminals (5): 8-32, Torque 18 lbf-in. [2.03 N-m] max. ± 2 [22]
Mounting Holes (2): .188 [4.75] Dia.

Case Dimensions

Part No.	A (max)	B (max)	C (max)	D $\pm .015$ $\pm .38$	E (max)
6ESB1, 6VSB1	3.36 85.34	1.82 46.23	0.91 23.11	2.375 60.325	2.78 70.61
10ESB1, 10VSB1	3.36 85.34	1.82 46.23	1.28 32.51	2.375 60.325	2.78 70.61
10ESB6, 10VSB6	3.47 88.14	1.82 46.23	1.53 38.86	2.375 60.325	2.78 70.61
20ESB1, 20VSB1	3.85 97.79	2.07 52.58	1.31 33.27	2.938 74.625	3.35 85.09
20ESB6, 20VSB6	4.00 101.60	2.07 52.58	1.53 38.86	2.938 74.625	3.35 85.09
30ESB6, 30VSB6	4.92 124.97	2.07 52.58	1.53 38.86	3.947 100.254	4.33 109.98

High Performance B Series RFI Line Filters *(continued)*

SB Series

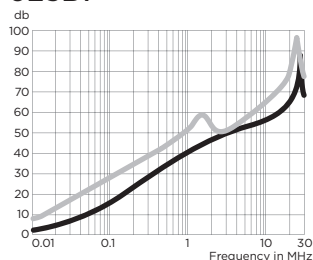
Performance Data

Typical Insertion Loss

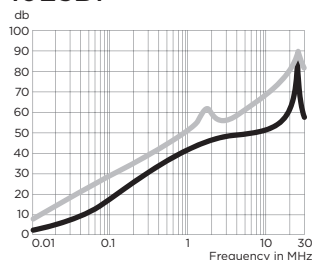
Measured in closed 50 Ohm system

ESB Models

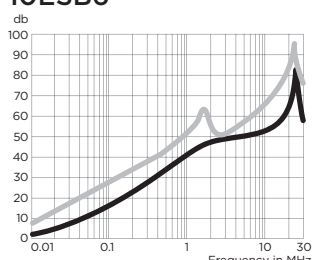
6ESB1



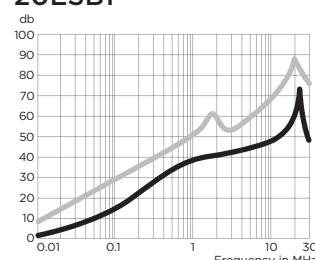
10ESB1



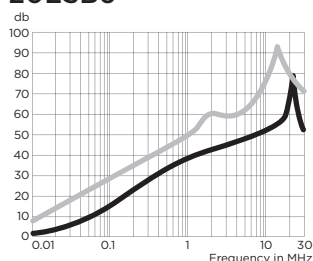
10ESB6



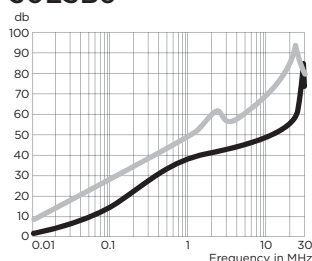
20ESB1



20ESB6

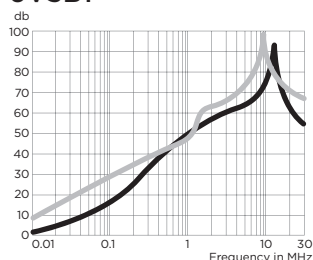


30ESB6

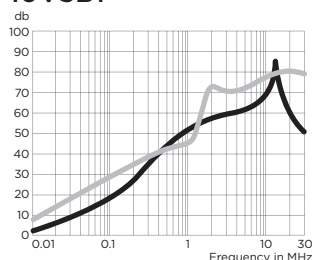


VSB Models

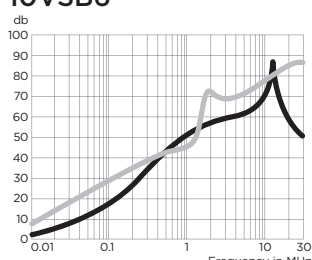
6VSB1



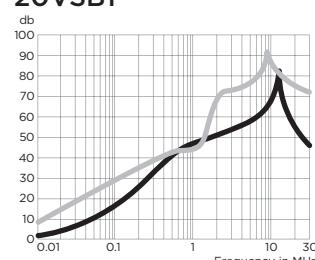
10VSB1



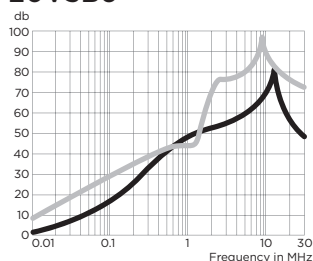
10VSB6



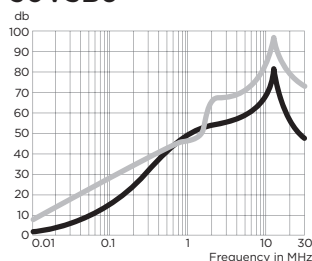
20VSB1



20VSB6



30VSB6



— Common Mode / Asymmetrical (L-G)
— Differential Mode / Symmetrical (L-L)

High Performance B Series RFI Line Filters *(continued)*

SB Series

Performance Data *(continued)*

Minimum Insertion Loss

Measured in closed 50 Ohm system

Common Mode / Asymmetrical (Line to Ground)

Part No.	Frequency – MHz										
	.03	.05	.1	.15	.5	1	2	5	10	20	30
ESB Models											
6ESB1	3	8	13	17	31	37	40	47	50	58	62
10ESB1	3	9	15	19	31	39	41	44	47	54	51
10ESB6	3	9	14	18	31	39	41	44	47	54	54
20ESB1	3	7	13	15	30	35	37	39	40	46	40
20ESB6	3	7	13	16	30	35	39	40	44	58	46
30ESB6	3	7	13	17	30	34	37	40	42	49	58
VSB Models											
6VSB1	3	8	14	19	37	47	51	58	66	59	49
10VSB1	3	9	15	21	41	49	50	56	64	54	46
10VSB6	4	9	15	21	39	49	50	56	64	54	44
20VSB1	3	7	14	19	37	45	47	50	60	48	40
20VSB6	3	7	14	19	37	44	49	52	62	48	41
30VSB6	3	6	13	18	37	45	49	51	60	50	42

Differential Mode / Symmetrical (Line to Line)

Part No.	Frequency – MHz											
	.01	.03	.05	.1	.15	.5	1	2	5	10	20	30
ESB Models												
6ESB1	5	14	20	25	29	41	49	47	50	60	74	72
10ESB1	5	15	20	26	29	41	47	50	54	64	74	74
10ESB6	5	14	20	25	29	41	47	48	50	60	62	64
20ESB1	5	15	21	26	29	41	45	48	54	63	70	66
20ESB6	5	15	21	26	29	41	44	48	54	63	70	66
30ESB6	5	14	20	25	29	40	46	50	50	58	70	70
VSB Models												
6VSB1	5	14	20	25	29	40	41	57	66	78	56	62
10VSB1	5	15	21	26	29	39	40	60	64	67	67	64
10VSB6	5	14	20	25	29	39	40	60	64	68	70	64
20VSB1	5	15	20	26	29	40	42	60	68	70	70	67
20VSB6	5	15	21	26	29	39	38	58	68	70	70	66
30VSB6	5	15	20	25	29	39	39	56	62	70	70	66