

**General Purpose RFI Filters for High Impedance Loads at Low Current**

# B Series



UL Recognized  
CSA Certified  
VDE Approved



## B Series

- Small size & low cost
- General purpose
- Wide variety of termination options
- Meets low leakage current requirements of VDE portable equipment and non-patient medical equipment

## Ordering Information



## Electrical Schematic



## Specifications

**Maximum leakage current each Line to Ground:**

	VB Models	EB Models
@ 120 VAC 60 Hz:	.4 mA	.21 mA
@ 250 VAC 50 Hz:	.7 mA	.36 mA

**Hipot rating (one minute):**

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

**Rated Voltage (max):** 250 VAC

**Operating Frequency:** 50/60 Hz

**Rated Current:** 1 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

1VB1	1EB1
1VB3	1EB3
2VB1	2EB1
2VB3	2EB3
3VB1	3EB1
3VB3	3EB3
5VB1	5EB1
5VB3	5EB3
10VB1	10EB1
10VB3	10EB3
10VB6	20EB1
20VB1	
20VB6	
30VB6	

**General Purpose RFI Filters for High Impedance/ Low Current** *(continued)*

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## Case Styles

### B1



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.

### 30VB6



Typical Dimensions:  
 Terminals (5): 8-32, Torque 18 lbf-in. [2.03 N-m] max. ± 2 [2.2]  
 Mounting Slots (4): .250 x .156 [6.35 x 3.96]

### B3



Typical Dimensions:  
 Wire leads (5): 4.0 [101.6] Min. AWG18, (AWG16 for 10A)  
 Mounting Holes (2): .188 [4.75] Dia.

### 10VB6 & 20VB6



Typical Dimensions:  
 Terminals (5): 8-32, Torque 18 lbf-in. [2.03 N-m] max. ± 2 [2.2]  
 Mounting Holes (4): .188 [4.75] Dia.

## Case Dimensions

Part No.	A (max)	B (max)	C (max)	D $\pm .015$ $\pm .38$	E (max)
1VB1, 1EB1,	<b>2.25</b>	<b>1.82</b>	<b>0.66</b>	<b>2.125</b>	<b>2.53</b>
2VB1, 2EB1	57.2	46.2	16.8	53.98	64.3
1VB3, 1EB3,	<b>0.96</b>	<b>1.82</b>	<b>0.66</b>	<b>2.125</b>	<b>2.53</b>
2VB3, 2EB3	24.4	46.2	16.8	53.98	64.3
3VB1, 3EB1,	<b>2.61</b>	<b>1.82</b>	<b>0.78</b>	<b>2.125</b>	<b>2.53</b>
5VB1, 5EB1	66.3	46.2	193.8	53.98	64.3
3VB3, 3EB3,	<b>1.32</b>	<b>1.82</b>	<b>0.78</b>	<b>2.125</b>	<b>2.53</b>
5VB3, 5EB3	33.5	46.2	19.8	53.98	64.3
10VB1, 10EB1	<b>2.61</b>	<b>1.82</b>	<b>1.16</b>	<b>2.125</b>	<b>2.53</b>
	66.3	46.2	29.5	53.98	6.3
10VB3, 10EB3	<b>1.32</b>	<b>1.82</b>	<b>1.16</b>	<b>2.125</b>	<b>2.53</b>
	33.5	46.2	29.5	53.98	64.3
10VB6	<b>2.72</b>	<b>1.82</b>	<b>1.16</b>	<b>2.125</b>	<b>2.53</b>
	69.1	46.2	29.5	53.98	64.3
20VB1, 20EB1	<b>3.36</b>	<b>2.07</b>	<b>1.16</b>	<b>2.375</b>	<b>2.81</b>
	85.3	52.6	29.5	60.33	71.4
20VB6	<b>3.46</b>	<b>2.07</b>	<b>1.16</b>	<b>2.375</b>	<b>2.81</b>
	87.9	52.6	29.5	60.33	71.4
30VB6	<b>5.34</b>	<b>3.38</b>	<b>1.53</b>	<b>3.75</b>	<b>4.20</b>
	135.6	85.9	38.9	95.3	106.7

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## Performance Data

### Typical Insertion Loss

Measured in closed 50 Ohm system

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

**1EB & 3EB**



**2EB, 5EB & 10EB**



**20EB**



**1VB**



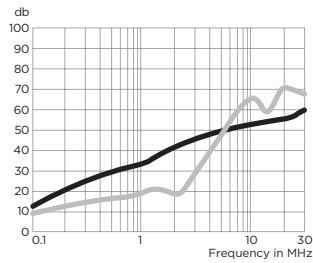
**2VB**



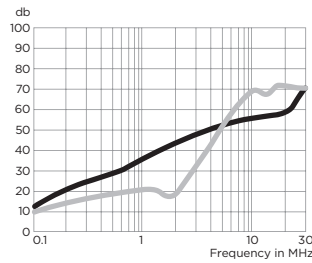
**3VB**



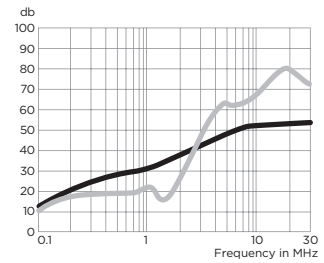
**10VB**



**20VB**



**30VB**



## Minimum Insertion Loss

Measured in closed 50 Ohm system

Common Mode / Asymmetrical (Line to Ground)

Current Rating	Frequency – MHz					
	.15	.5	1	5	10	30
<b>VB Models</b>						
1A, 3A	15	30	38	50	50	50
2A, 5A, 10A, 20A, 30A	7	20	25	40	45	48
<b>EB Models</b>						
1A, 3A	15	29	35	45	45	48
2A, 5A, 10A, 20A	7	19	23	34	37	42