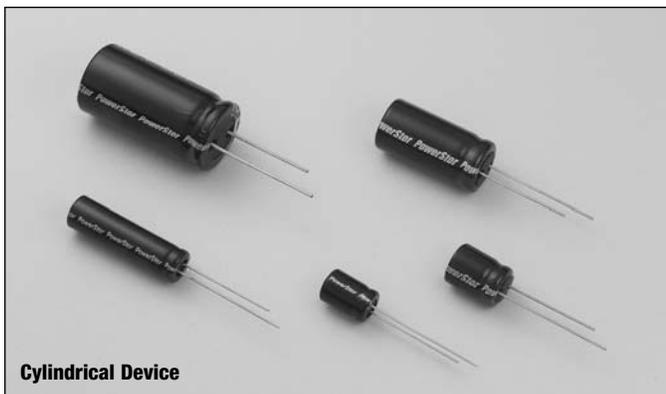


# Supercapacitors

## B Series



### Description

Cooper Bussmann PowerStor® supercapacitors are unique, ultra-high capacitance devices utilizing electrochemical double layer capacitor (EDLC) construction combined with new, high performance materials. This combination of advanced technologies allows Cooper Bussmann to offer a wide variety of capacitor solutions tailored to specific applications that range from a few micro-amps for several days to several amps for milliseconds.



### Features & Benefits

- High specific capacitance
- Very low ESR
- Low leakage currents
- Long cycle life
- Ultra low ESR also available (A Series)

### Applications

- Main power
- Hybrid battery packs
- Hold-up power
- Pulse power

### Specifications

<b>Operating Temperature Range</b>	0.22F-22F @ -25°C to 70°C	33F-100F @ -25°C to 60°C
<b>Working Voltage</b>	2.5V	
<b>Surge Voltage</b>	3.0V	
<b>Nominal Capacitance Range</b>	0.22 to 100F	
<b>Capacitance Tolerance</b>	-20% to +80% (20°C)	

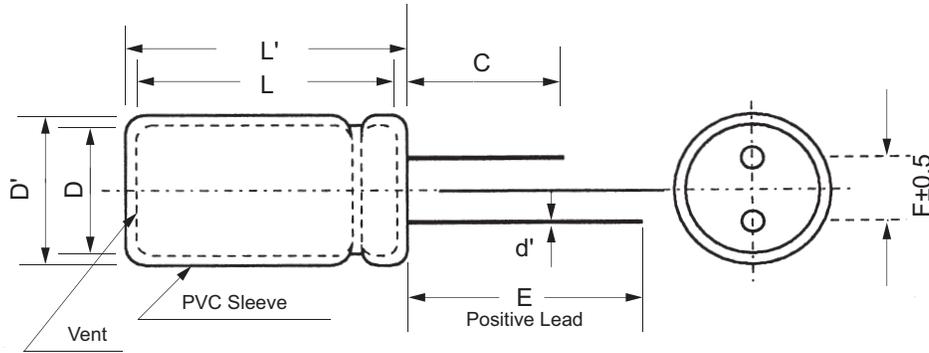
### Standard Products

Nominal Capacitance (F)	Part Number	Nominal ESR (Ω) (Equivalent Series Resistance) Measured @ 1kHz	Nominal Dimensions (mm)		Typical Mass (grams/1 piece)
			Diameter	Length	
0.22	B0510-2R5224-R	3.000	5	11	0.54
1.0	B0810-2R5105-R	0.400	8	13	1.2
1.5	B1010-2R5155-R	0.300	10	14	1.9
2.2	B0820-2R5225-R	0.200	8	20	1.5
3.3	B1020-2R5335-R	0.150	10	20.5	2.8
4.7	B0830-2R5475-R	0.150	8	30	2.6
6.8	B1030-2R5685-R	0.100	10	30	3.9
10	B1325-2R5106-R	0.060	13	26	5.6
22	B1635-2R5226-R	0.040	16	35	11.0
33	B1835-2R5336-R	0.030	18	35	13.5
50	B1840-2R5506-R	0.025	18	40	14.7
100	B1860-2R5107-R	0.020	18	60	22.0

### Performance

Parameter	Capacitance Change (% of initial measured value)	ESR (% of initial specified value)
Life (0.22F - 22F = 1000 hrs @ 70°C @ 2.5Vdc) (33F - 100F = 1000 hrs @ 60°C @ 2.5Vdc)	≤ 30	≤ 300
Storage - Low and High Temperature (0.22F - 22F = 1000 hrs @ -25°C and 70°C) (33F - 100F = 1000 hrs @ -25°C and 60°C)	≤ 30	≤ 300

Dimensions (mm)								
Part Number	D	D'	L	L'	F	d'	C	E
<b>B0510-2R5224-R</b>	5.0	5.5	11.5	12.0	2.0	0.50	20.0	25.0
<b>B0810-2R5105-R</b>	8.0	8.5	13.0	13.5	3.5	0.50	20.0	25.0
<b>B1010-2R5155-R</b>	10.0	10.5	14.3	14.8	5.0	0.60	20.0	25.0
<b>B0820-2R5225-R</b>	8.0	8.5	20.5	21.0	3.5	0.50	20.0	25.0
<b>B1020-2R5335-R</b>	10.0	10.5	21.8	22.3	5.0	0.60	20.0	25.0
<b>B0830-2R5475-R</b>	8.0	8.5	30.5	31.0	3.5	0.50	20.0	25.0
<b>B1030-2R5685-R</b>	10.0	10.5	31.0	31.5	5.0	0.60	20.0	25.0
<b>B1325-2R5106-R</b>	13.0	13.5	27.9	28.4	5.0	0.60	20.0	25.0
<b>B1635-2R5226-R</b>	16.0	16.5	37.5	38.0	7.5	0.80	20.0	25.0
<b>B1835-2R5336-R</b>	18.0	18.5	37.5	38.0	7.5	0.80	20.0	25.0
<b>B1840-2R5506-R</b>	18.0	18.5	41.5	42.0	7.5	0.80	20.0	25.0
<b>B1860-2R5107-R</b>	18.0	18.5	59.5	60.0	7.5	0.80	20.0	25.0
<i>Tolerances</i>	Maximum				± 0.5	± 0.02	Minimum	



Part Numbering System						
<b>B</b>	□ □ □ □	-	<b>2</b>	<b>R</b>	<b>5</b>	□ □ □
Series Code	Dimensions (mm)		Voltage (V) R is decimal		Capacitance	
B = High Capacitance	Diameter	Length	2R5 = 2.5V		Value	Multiplier
					Example: 475 = 47 x 10 <sup>5</sup> µF or 4.7F	

### Packaging Information

Standard packaging: Bulk, 100 units per package.  
Special packaging available upon request. Contact factory.

### Part Marking

Manufacturer  
Capacitance (F)  
Max. Operating Voltage (V)  
Series Code (or part number)  
Polarity Marking

**North America**  
Cooper Bussmann  
1225 Broken Sound Parkway NW  
Suite F  
Boca Raton, FL 33487-3533  
Tel: 1-561-998-4100  
Fax: 1-561-241-6640  
Toll Free: 1-888-414-2645

Cooper Bussmann  
P.O. Box 14460  
St. Louis, MO 63178-4460  
Tel: 1-636-394-2877  
Fax: 1-636-527-1607

**Europe**  
Cooper Bussmann  
Cooper (UK) Limited  
Burton-on-the-Wolds  
Leicestershire • LE12 5TH UK  
Tel: +44 (0) 1509 882 737  
Fax: +44 (0) 1509 882 786

Cooper Bussmann  
Avda. Santa Eulalia, 290  
08223  
Terrassa, (Barcelona), Spain  
Tel: +34 937 362 812  
+34 937 362 813  
Fax: +34 937 362 719

**Asia Pacific**  
Cooper Bussmann  
1 Jalan Kilang Timor  
#06-01 Pacific Tech Centre  
Singapore 159303  
Tel: +65 278 6151  
Fax: +65 270 4160

This bulletin is intended to present product design solutions and technical information that will help the end user with design applications. Cooper Bussmann reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Cooper Bussmann also reserves the right to change or update, without notice, any technical information contained in this bulletin. Once a product has been selected, it should be tested by the user in all possible applications.

Life Support Policy: Cooper Bussmann does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

© 2008 Cooper Bussmann  
St. Louis, MO 63178  
www.cooperbussmann.com

