



# Aerogel Supercapacitors B Series

# Description

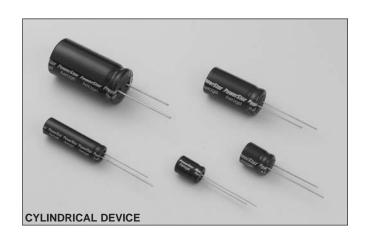
The PowerStor Aerogel Capacitor is a unique, ultra-high capacitance device based on a novel type of carbon foam, known as carbon aerogel. Aerogel capacitors are similar to supercapacitors, ultracapacitors and electrochemical double layer capacitors (EDLCs) with the added benefit of low ESR (Equivalent Series Resistance).

### 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					
Working Voltage 2.5 volts					
Surge Voltage	3.0 volts				
Nominal Capacitance Range	0.22 to 50 F				
Capacitance Tolerance	-20% to +80% (20°C)				
Operating Temperature Range	-25°C to 70°C				

STANDARD PRODUCTS						
Nominal Part		Nominal ESR	Nominal Dimensions			
Capacitance	Number	(Equivalent Series Resistance)				
(F)		Measured @ 1kHz ( $\Omega$ )				
0.22	B0510-2R5224	3	Ø = 5  mm; L = 11  mm			
1.0	B0810-2R5105	0.400	Ø = 8 mm; L = 13 mm			
1.5	B1010-2R5155	0.300	$\emptyset$ = 10 mm; L = 12.5 mm			
2.2	B0820-2R5225	0.200	$\emptyset$ = 8 mm; L = 20 mm			
3.3	B1020-2R5335	0.150	$\emptyset$ = 10 mm; L = 20.5 mm			
4.7	B0830-2R5475	0.150	$\emptyset$ = 8 mm; L = 30 mm			
6.8	B1030-2R5685	0.100	Ø = 10 mm; L = 30 mm			
10	B1325-2R5106	0.060	Ø = 13 mm; L = 26 mm			
22	B1635-2R5226	0.040	Ø = 16 mm; L = 35 mm			
33	B1835-2R5336	0.030	Ø = 18 mm; L = 35 mm			
50	B1840-2R5506	0.025	Ø = 18 mm; L = 40 mm			

PERFORMANCE						
Parameter	Capacitance Change	ESR				
	(% of initial measured value)	(% of initial specified value)				
Life (1000 hrs @ 70°C @ 2.5 volts DC)	≤ 30	≤ 300				
Storage - low and high temperature	≤ 30	≤ 300				
(1000 hrs @ -25°C and 70°C)						



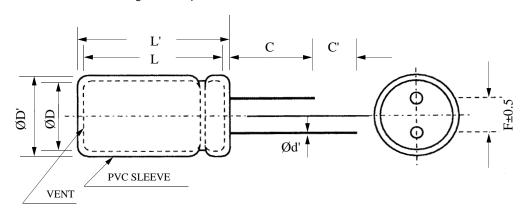




# Aerogel Supercapacitors B Series

	DIMENSIONS (mm)								
Part Number	D	D'	L	L'	F	d'	С	C'	
B0510-2R5224	5.0	5.5	11.5	12.0	2.0	0.50	20.0	5.0	
B0810-2R5105	8.0	8.5	13.0	13.5	3.5 0.50		20.0	5.0	
B1010-2R5155	10.0	10.5	13.9	14.4	5.0	0.60	20.0	5.0	
B0820-2R5225	8.0	8.5	20.5	21.0	3.5	0.50	20.0	5.0	
B1020-2R5335	10.0	10.5	21.8	22.3	5.0	0.60	20.0	5.0	
B0830-2R5475	8.0	8.5	30.5	31.0	3.5	0.50	20.0	5.0	
B1030-2R5685	10.0	10.5	31.0	31.5	5.0	0.60	20.0	5.0	
B1325-2R5106	13.0	13.5	27.9	28.4	5.0	0.60	20.0	5.0	
B1635-2R5226	16.0	16.5	37.5	38.0	7.5	0.80	20.0	5.0	
B1835-2R5336	18.0	18.5	37.5	38.0	7.5	0.80	20.0	5.0	
B1840-2R5506	18.0	18.5	41.5	42.0	7.5	0.80	20.0	5.0	
	Maximum				± 0.5	± 0.02	Minii	mum	

Note: Longer lead is positive



PART NUMBERING SYSTEM								
В			-	2	R	5		
Series	Dimensions (mm)			Voltage (V)		<b>V</b> )	Capacitance	
Code				R is decimal		nal		
B = High	Diameter	Length					Value	Multiplier
Capacitance				2R5 = 2.5V		δV	Exa	mple:
							475 = 47 x 1	0⁵ μ F or 4.7 F

#### 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



PS-5102 9/02

© Cooper Electronic Technologies 2002 Visit us on the Web at www.cooperET.com

3601 Quantum Boulevard Boynton Beach, Florida 33426-8638 Tel: +1-561-752-5000 Toll Free: +1-888-414-2645 Fax: +1-561-742-1178

This bulletin is intended to present product design solutions and technical information that will help the end user with design applications. Cooper Electronic Technologies reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Cooper Electronic Technologies 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.