COOPER Bussmann

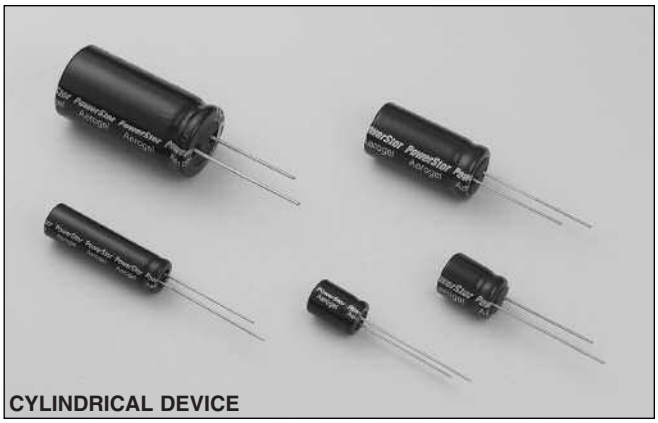
PowerStor®

Aerogel Supercapacitors
B Series

Description

RoHS 2002/95/EC

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).



CYLINDRICAL DEVICE

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

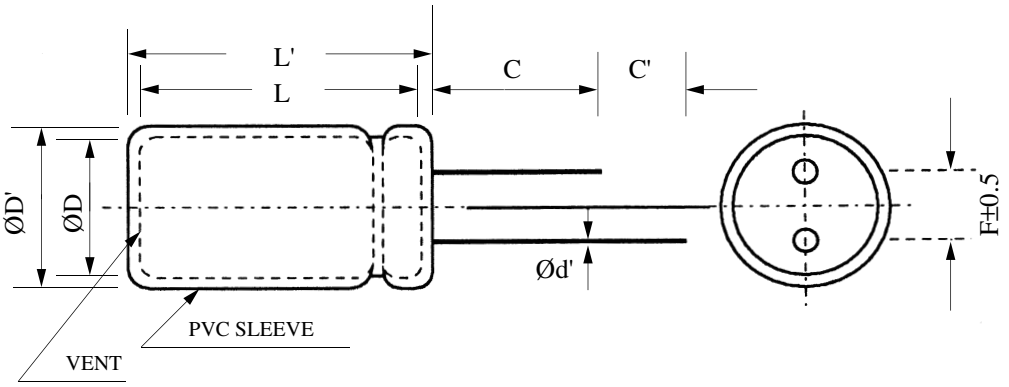
Nominal Capacitance (F)	Part Number	Nominal ESR (Equivalent Series Resistance) Measured @ 1kHz (Ω)	Nominal Dimensions	Typical Mass (grams/1 piece)
0.22	B0510-2R5224-R	3	Ø = 5 mm; L = 11 mm	0.54
1.0	B0810-2R5105-R	0.400	Ø = 8 mm; L = 13 mm	1.154
1.5	B1010-2R5155-R	0.300	Ø = 10 mm; L = 12.5 mm	1.92
2.2	B0820-2R5225-R	0.200	Ø = 8 mm; L = 20 mm	1.52
3.3	B1020-2R5335-R	0.150	Ø = 10 mm; L = 20.5 mm	2.77
4.7	B0830-2R5475-R	0.150	Ø = 8 mm; L = 30 mm	2.566
6.8	B1030-2R5685-R	0.100	Ø = 10 mm; L = 30 mm	3.874
10	B1325-2R5106-R	0.060	Ø = 13 mm; L = 26 mm	5.566
22	B1635-2R5226-R	0.040	Ø = 16 mm; L = 35 mm	11.028
33	B1835-2R5336-R	0.030	Ø = 18 mm; L = 35 mm	13.522
50	B1840-2R5506-R	0.025	Ø = 18 mm; L = 40 mm	14.71

PERFORMANCE

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

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

Note: Longer lead is positive



PART NUMBERING SYSTEM									
B	☐ ☐	☐ ☐	**-**	**2**	**R**	**5**	☐ ☐	☐	
Series Code	Dimensions (mm)			Voltage (V) R is decimal			Capacitance		
B = High Capacitance	Diameter	Length		2R5 = 2.5V			Value	Multiplier	
							Example: 475 = 47 x 10^5 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 8/06

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