

## Description

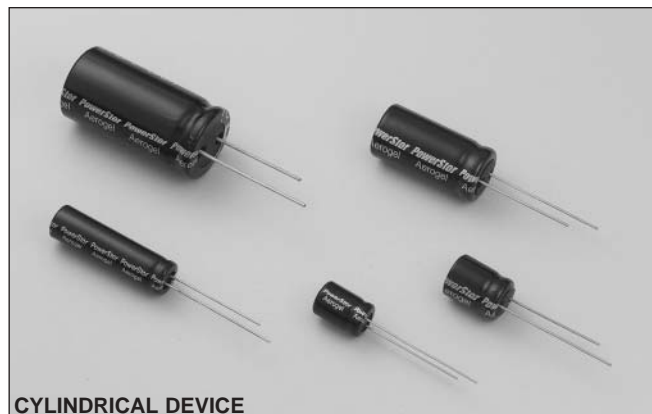
The PowerStor Aerogel Capacitor is a unique, ultra-high capacitance device based on a novel type of carbon foam, known as carbon aerogel. Aerogel capacitors are similar to supercapacitors, ultracapacitors and electrochemical double layer capacitors (EDLCs) with the added benefit of low ESR (Equivalent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

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

## STANDARD PRODUCTS

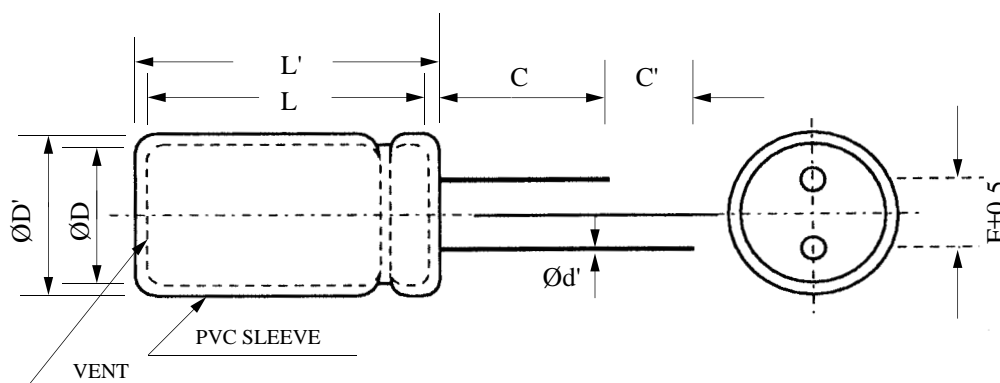
| Nominal Capacitance (F) | Part Number  | Nominal ESR (Equivalent Series Resistance) Measured @ 1kHz (Ω) | Nominal Dimensions     |
|-------------------------|--------------|--|------------------------|
| 0.22                    | B0510-2R5224 | 3  | Ø = 5 mm; L = 11 mm    |
| 1.0                     | B0810-2R5105 | 0.400  | Ø = 8 mm; L = 11.5 mm  |
| 1.5                     | B1010-2R5155 | 0.300  | Ø = 10 mm; L = 12.5 mm |
| 2.2                     | B0820-2R5225 | 0.200  | Ø = 8 mm; L = 20 mm    |
| 3.3                     | B1020-2R5335 | 0.150  | Ø = 10 mm; L = 20.5 mm |
| 4.7                     | B0830-2R5475 | 0.150  | Ø = 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 (% 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    | 5.0  | 5.5  | 11.5 | 12.0 | 2.0   | 0.50   | 20.0    | 5.0 |
| B0810-2R5105    | 8.0  | 8.5  | 12.7 | 13.2 | 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 | Minimum |     |

Note: Longer lead is positive



| PART NUMBERING SYSTEM |                 |        |   |   |   |                             |   |             |   |            |   |
|-----------------------|-----------------|--------|---|---|---|-----------------------------|---|-------------|---|------------|---|
| B                     | □               | □      | □ | □ | -   | 2                           | R | 5           | □ | □          | □ |
| Series Code           | Dimensions (mm) |        |   |   |   | Voltage (V)<br>R is decimal |   | Capacitance |   |            |   |
| B = High Capacitance  | Diameter        | Length |   |   |   | 2R5 = 2.5V                  |   | Value       |   | Multiplier |   |
|                       |                 |        |   |   | Example:<br>475 = 47 x 10 <sup>5</sup> 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