

# Supercapacitors

## B Series - High Capacitance



### Description

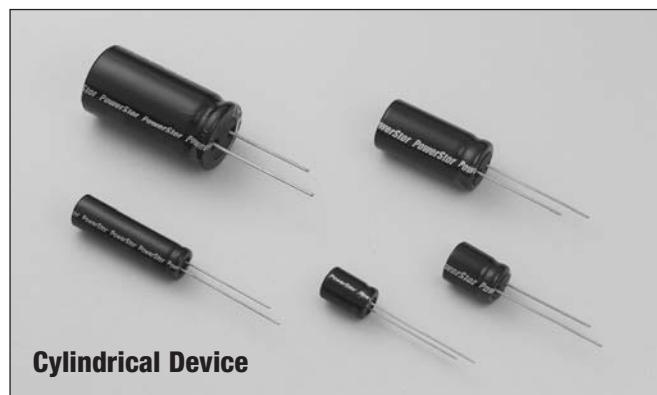
Cooper Bussmann PowerStor® supercapacitors are unique, ultra-high capacitance devices utilizing electrochemical double layer capacitor (EDLC) construction combined with new, high performance materials. This combination of advanced technologies allows Cooper Bussmann to offer a wide variety of capacitor 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

### Applications

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



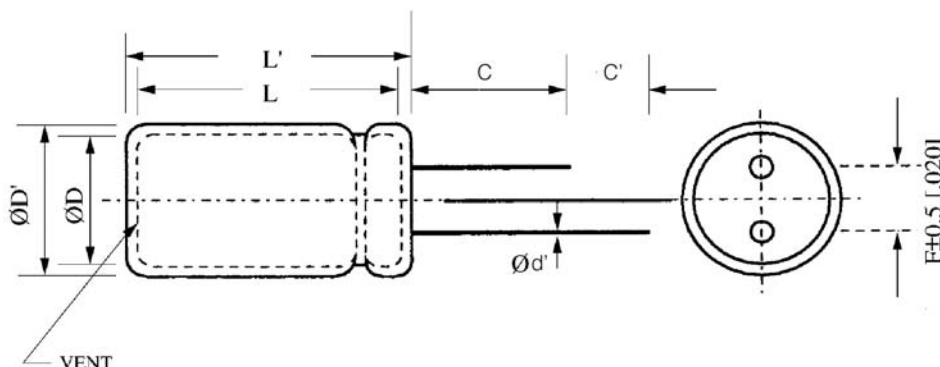
| Specifications              |                                                  |
|-----------------------------|--------------------------------------------------|
| Working Voltage             | 2.5V                                             |
| Surge Voltage               | 3.0V                                             |
| Capacitance                 | 3.3F to 100F                                     |
| Capacitance Tolerance       | -20% to +80% (20°C)                              |
| Operating Temperature Range | 3.3-22F = -25°C to 70°C, 33-100F = -25°C to 60°C |

| Standard Product        |                |                                                                      |                         |        |                            |
|-------------------------|----------------|----------------------------------------------------------------------|-------------------------|--------|----------------------------|
| Nominal Capacitance (F) | Part Number    | Nominal ESR (Ω)<br>(Equivalent Series Resistance)<br>Measured @ 1kHz | Nominal Dimensions (mm) |        | Typical Mass (grams/piece) |
|                         |                |                                                                      | Diameter                | Length |                            |
| 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<br>(% of initial measured value) | ESR<br>(% of initial specified value) |
| Life<br>(3.3F - 22F = 1000 hrs @ 70°C @ 2.5Vdc)<br>(33F - 100F = 1000 hrs @ 60°C @ 2.5Vdc)                               | ≤ 30 %                                              | ≤ 300 %                               |
| Storage Low and High Temperature<br>(3.3F - 22F = 1000 hrs @ -25°C and 70°C)<br>(33F - 100F = 1000 hrs @ -25°C and 60°C) | ≤ 30 %                                              | ≤ 300 %                               |

| Dimensions (mm) |         |      |      |      |       |        |         |     |
|-----------------|---------|------|------|------|-------|--------|---------|-----|
| Part Number     | D       | D'   | L    | L'   | F     | d'     | C       | C'  |
| 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 |
| B1860-2R5107-R  | 18.0    | 18.5 | 59.5 | 60.5 | 7.5   | 0.80   | 20.0    | 5.0 |
| Tolerances      | Maximum |      |      |      | ± 0.5 | ± 0.02 | Minimum |     |

Note: Longer lead is positive.



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

### Packaging Information

#### Packaging:

- Standard packaging: Bulk, 100 units per bag.
- Larger bulk packages available on request.

### Part Marking

#### Manufacturer

#### Capacitance (F)

#### Max Operating Voltage (V)

#### Series Code (or part number)

#### Polarity

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- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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