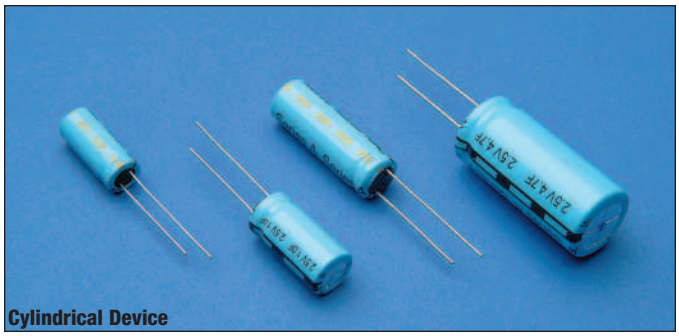
PowerStor®

# Supercapacitors
## A Series



Cylindrical Device

### Description

RoHS 2002/95/EC

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

- Very low ESR
- Low leakage current
- Long cycle life
- High useable capacity
- Very high specific capacitance also available (B Series)

### Applications

- Pulse power
- Hold-up power
- DC/DC converters
- Hybrid battery packs
- Valve / solenoid actuation

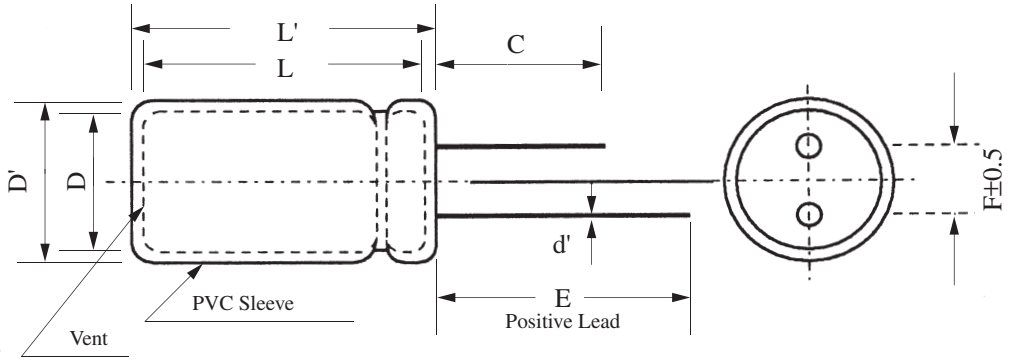
| Specifications | |
|---|---|
| **Working Voltage** | 2.5V |
| **Surge Voltage** | 3.0V |
| **Nominal Capacitance Range** | 0.47 to 4.7F |
| **Capacitance Tolerance** | -20% to +80% (20°C) |
| **Operating Temperature Range** | -25°C to 70°C |

**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 | |
| 0.47 | A0820-2R5474-R | 0.150 | 8 | 20 | 1.8 |
| 1.0 | A1020-2R5105-R | 0.090 | 10 | 20.5 | 2.6 |
| 1.5 | A1030-2R5155-R | 0.060 | 10 | 30 | 3.8 |
| 4.7 | A1635-2R5475-R | 0.025 | 16 | 35 | 10.7 |

| Performance | | |
|---|---|---|
| **Parameter** | **Capacitance Change (% of initial measured value)** | **ESR (% of initial specified value)** |
| Life (1000 hrs @ 70°C @ 2.5Vdc) | ≤ 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** | **E** |
| **A0820-2R5474-R** | 8.0 | 8.5 | 20.5 | 21.0 | 3.5 | 0.50 | 20.0 | 25.0 |
| **A1020-2R5105-R** | 10.0 | 10.5 | 21.8 | 22.3 | 5.0 | 0.60 | 20.0 | 25.0 |
| **A1030-2R5155-R** | 10.0 | 10.5 | 31.0 | 31.5 | 5.0 | 0.60 | 20.0 | 25.0 |
| **A1635-2R5475-R** | 16.0 | 16.5 | 37.5 | 38.0 | 7.5 | 0.80 | 20.0 | 25.0 |
| ***Tolerances*** | Maximum | | | | ± 0.5 | ± 0.02 | Minimum | |




| Part Numbering System | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **A** | ☐ ☐ | ☐ ☐ | **-** | **2** | **R** | **5** | ☐ ☐ | ☐ | |
| Series Code | Dimensions (mm) | | | Voltage (V) R is decimal | | | Capacitance (µF) | | |
| B = Very Low ESR | Diameter | Length | | 2R5 = 2.5V | | | Value | Multiplier | |
| | | | | | | | Example: 475 = 47 x $10^5$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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