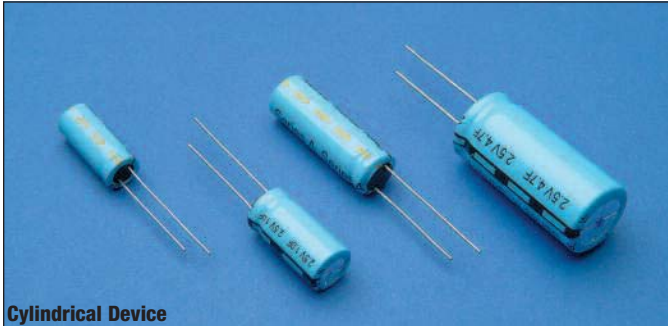


## Supercapacitors A Series



Cylindrical Device

### Description

Cooper Bussmann<sup>®</sup> PowerStor<sup>®</sup> 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

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

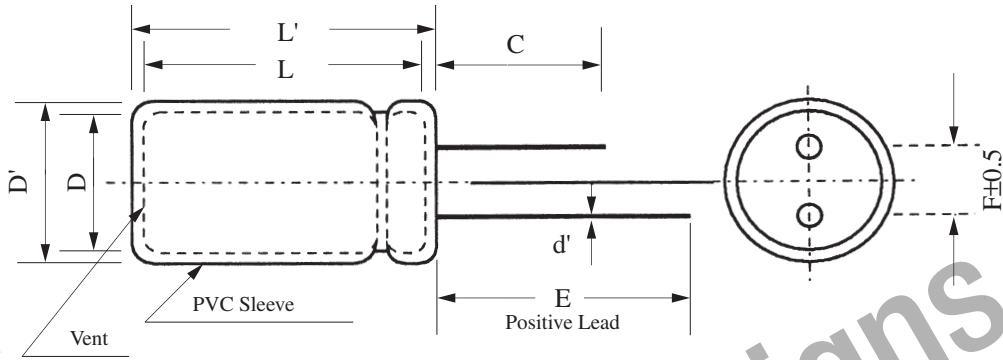
### Standard Products

| Nominal Capacitance (F) | Part Number    | Nominal ESR ( $\Omega$ )<br>(Equivalent Series Resistance)<br>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<br>(% of initial measured value) | ESR<br>(% of initial specified value) |
|---|---|---------------------------------------|
| Life (1000 hrs @ 70°C @ 2.5Vdc)                                   | ≤ 30  | ≤ 300                                 |
| Storage - Low and High Temperature<br>(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 |  |
| <b>Tolerances</b> | Maximum |      |      |      | ± 0.5 | ± 0.02 | Minimum |      |  |



| Part Numbering System |                 |   |        |   |   |                             |          |   |            |   |   |
|-----------------------|-----------------|---|--------|---|---|-----------------------------|----------|---|------------|---|---|
| <b>A</b>              | □               | □ | □      | □ | - | <b>2</b>                    | <b>R</b> | <b>5</b>  | □          | □ | □ |
| Series Code           | Dimensions (mm) |   |        |   |   | Voltage (V)<br>R is decimal |          | Capacitance (µF)                                  |            |   |   |
| B = Very Low ESR      | Diameter        |   | Length |   |   | 2R5 = 2.5V                  |          | Value   | Multiplier |   |   |
|                       |                 |   |        |   |   |                             |          | Example:<br>475 = 47 x 10 <sup>5</sup> 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

#### North America

Cooper Bussmann  
1225 Broken Sound Parkway NW  
Suite F  
Boca Raton, FL 33487-3533  
Tel: 1-561-998-4100  
Fax: 1-561-241-6640  
Toll Free: 1-888-414-2645

Cooper Bussmann  
P.O. Box 14460  
St. Louis, MO 63178-4460  
Tel: 1-636-394-2877  
Fax: 1-636-527-1607

#### Europe

Cooper Bussmann  
Cooper (UK) Limited  
Burton-on-the-Wolds  
Leicestershire • LE12 5TH UK  
Tel: +44 (0) 1509 882 737  
Fax: +44 (0) 1509 882 786

Cooper Bussmann  
Avda. Santa Eulalia, 290  
08223  
Terrassa, (Barcelona), Spain  
Tel: +34 937 362 812  
+34 937 362 813  
Fax: +34 937 362 719

#### Asia Pacific

Cooper Bussmann  
1 Jalan Kilang Timor  
#06-01 Pacific Tech Centre  
Singapore 159303  
Tel: +65 278 6151  
Fax: +65 270 4160

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St. Louis, MO 63178  
www.cooperbussmann.com

