

# Supercapacitors

## PM Series



### 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.

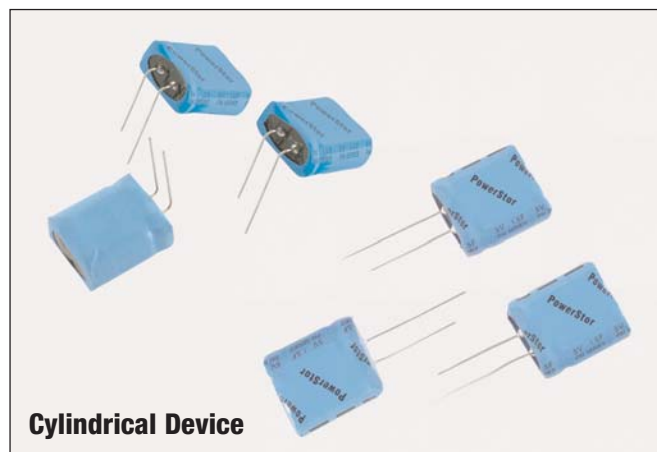
### Features & Benefits

- Low ESR with high energy density
- 5.0 Volts
- High capacitance
- Long cycle life
- Low leakage currents
- UL Recognized



### Applications

- Pulse power
- Bridge or hold-up power



**Cylindrical Device**

### Specifications

|                                      |                                            |
|--------------------------------------|--------------------------------------------|
| Working Voltage                      | 5.0V                                       |
| Surge Voltage                        | 5.5V                                       |
| Nominal Capacitance                  | 0.47F to 3.0F                              |
| Capacitance Tolerance                | -20% to +80% (20°C)                        |
| Operating Temperature Range          | -40°C to 60°C                              |
| Extended Operating Temperature Range | -40°C to 85°C (Max. working voltage: 3.9V) |

### Standard Product

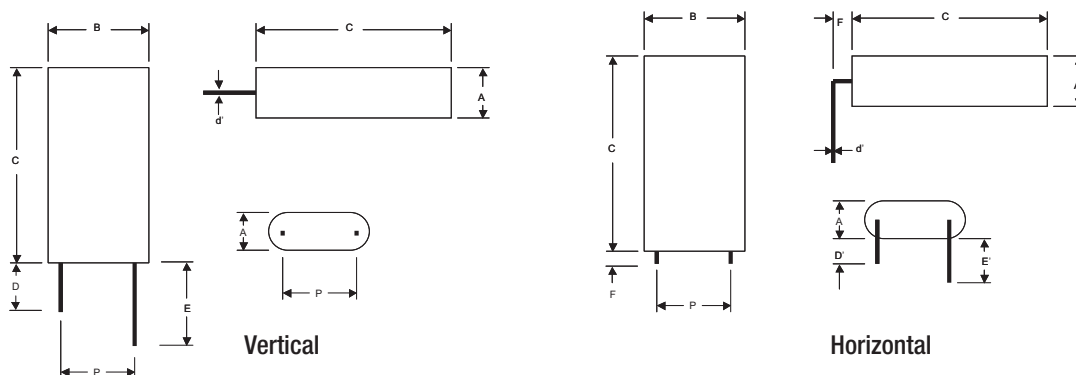
| Nominal Capacitance (F) | Part Number  |              | Nominal ESR ( $\Omega$ )<br>(Equivalent Series Resistance)<br>Measured @ |       | Nominal Leakage Current ( $\mu$ A)<br>After 100 Hrs.<br>@ 5V, 20°C | Nominal Dimensions (mm) | Typical Mass (grams/piece) |
|-------------------------|--------------|--------------|--------------------------------------------------------------------------|-------|--------------------------------------------------------------------|-------------------------|----------------------------|
|                         | Vertical     | Horizontal   | 1kHz                                                                     | 100Hz |                                                                    |                         |                            |
| 0.47                    | PM-5R0V474-R | PM-5R0H474-R | 0.42                                                                     | 0.50  | 8                                                                  | 8.5 x 16.8 x 14.0       | 2.4                        |
| 1.0                     | PM-5R0V105-R | PM-5R0H105-R | 0.15                                                                     | 0.20  | 10                                                                 | 8.5 x 16.8 x 21.5       | 3.5                        |
| 1.5                     | PM-5R0V155-R | PM-5R0H155-R | 0.07                                                                     | 0.10  | 15                                                                 | 10.5 x 20.8 x 22.5      | 5.4                        |
| 3.0                     | PM-5R0V305-R | PM-5R0H305-R | 0.05                                                                     | 0.07  | 20                                                                 | 10.5 x 20.8 x 32        | 7.8                        |

### Performance

| Parameter                                                         | Capacitance Change<br>(% of specified value) | ESR<br>(% of specified value) |
|-------------------------------------------------------------------|----------------------------------------------|-------------------------------|
| Life (1000 hrs @ 60°C @ 5Vdc)                                     | $\leq 30\%$                                  | $\leq 200\%$                  |
| Storage - Low and High Temperature<br>(1000 hrs @ -40°C and 60°C) | $\leq 30\%$                                  | $\leq 200\%$                  |

| Dimensions (mm) |                  |         |      |      |        |         |    |    |    |       |      |
|-----------------|------------------|---------|------|------|--------|---------|----|----|----|-------|------|
| Vertical Part#  | Horizontal Part# | A       | B    | C    | d'     | D       | D' | E  | E' | F     | P    |
| PM-5ROV474-R    | PM-5ROH474-R     | 9.0     | 17.3 | 14.5 | 0.5    | 20      | 15 | 25 | 20 | 2.0   | 11.8 |
| PM-5ROV105-R    | PM-5ROH105-R     | 9.0     | 17.3 | 22.0 | 0.5    | 20      | 15 | 25 | 20 | 2.0   | 11.8 |
| PM-5ROV155-R    | PM-5ROH155-R     | 11.0    | 21.3 | 23.0 | 0.6    | 20      | 15 | 25 | 20 | 2.0   | 5.3  |
| PM-5ROV305-R    | PM-5ROH305-R     | 11.0    | 21.3 | 32.5 | 0.6    | 20      | 15 | 25 | 20 | 2.0   | 5.3  |
| Tolerances      |                  | Maximum |      |      | ± 0.02 | Minimum |    |    |    | ± 0.5 |      |

Note: Longer lead is positive.



| Part Numbering System |         |   |                            |   |            |                                |                                                 |   |   |   |                |
|-----------------------|---------|---|----------------------------|---|------------|--------------------------------|-------------------------------------------------|---|---|---|----------------|
| P                     | M       | - | 5                          | R | 0          | □                              | □                                               | □ | □ | - | R              |
| Series Code           | Version |   | Voltage (V)<br>R = Decimal |   |            | Configuration                  | Capacitance (μF)                                |   |   |   | RoHS Compliant |
|                       |         |   | Value                      |   | Multiplier |                                |                                                 |   |   |   |                |
| P = Pack              |         |   | 5R0 = 5.0V                 |   |            | V = Vertical<br>H = Horizontal | Example: 474 = 47 x 10 <sup>4</sup> μF or 0.47F |   |   |   |                |

## Packaging Information

Standard packaging: Bulk, 100 units per package.

Large, bulk packaging available upon request.

## Part Marking

Manufacturer  
Capacitance (F)  
Max. Operating Voltage (V)  
Series Code (or part number)  
Polarity

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Components Supply Platform

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