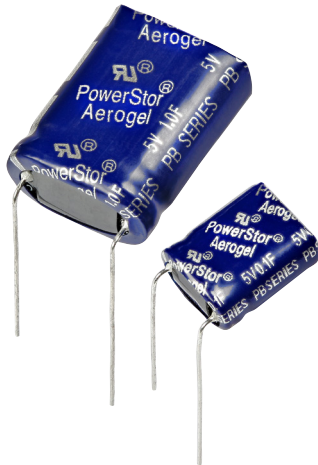


PowerStor PB Family

5.0 volt cylindrical supercapacitors



Description

Eaton 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 Eaton 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

- 5.0 volts
- Low Equivalent Series Resistance (ESR)
- High capacitance
- Long cycle life
- Low leakage currents
- UL recognized

Applications

- Bridge or hold-up power
- Memory backup
- Battery swap out

General Specifications

| | |
|-----------------------------|-----------------------------------|
| Working voltage | 5.0V |
| Surge voltage | 6.0V |
| Capacitance | 0.1F to 1.0F |
| Capacitance tolerance | -20% to +80% (20°C) |
| Operating temperature range | -25°C to 70°C extended to 85°C |



Specifications

| Nominal Capacitance (F) | Vertical Part Number | Horizontal Part Number | Maximum Initial ESR (Ω) (Equivalent Series Resistance) Measured @ 100Hz | Nominal leakage current (μ A) after 72 hours @ 20°C | Nominal dimensions (mm) | Typical mass (grams/piece) |
|-------------------------|----------------------|------------------------|--|--|-------------------------|----------------------------|
| 0.1 | PB-5ROV104-R | PB-5ROH104-R | 4.0 | 3 | 5.5 x 10.8 x 12.5 | 1.1 |
| 0.47 | PB-5ROV474-R | PB-5ROH474-R | 1.0 | 7 | 8.5 x 16.8 x 14.0 | 2.4 |
| 1.0 | PB-5ROV105-R | PB-5ROH105-R | 0.5 | 12 | 8.5 x 16.8 x 21.5 | 3.5 |

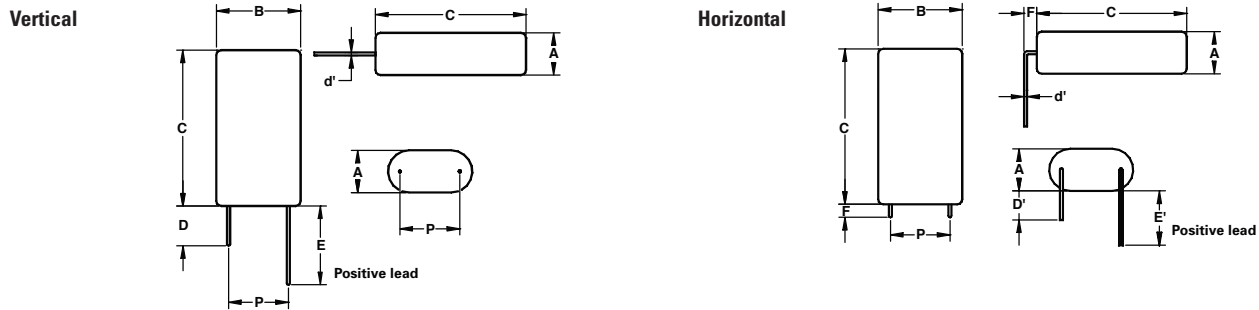
Performance

| Parameter | Capacitance change (% of initial value) | ESR (% of max. initial value) |
|--|---|-------------------------------|
| Life (1000 hours @ 70°C, 5.0Vdc or 85°C, 4.2Vdc) | ≤ 30% | ≤ 300% |
| Storage - Low and High Temperature (1000 hours @ -25°C to +70°C) | ≤ 30% | ≤ 300% |

Dimensions (mm)

| Vertical Part Number | Horizontal Part Number | A | B | C | d' | D | D' | E | E' | F | P |
|----------------------|------------------------|----------------|------|------|-----|--------|----------------|----|----|-----|-------|
| PB-5ROV104-R | PB-5ROH104-R | 6.0 | 11.3 | 13.0 | 0.5 | 20 | 15 | 25 | 20 | 2.0 | 7.3 |
| PB-5ROV474-R | PB-5ROH474-R | 9.0 | 17.3 | 14.5 | 0.5 | 20 | 15 | 25 | 20 | 2.0 | 11.8 |
| PB-5ROV105-R | PB-5ROH105-R | 9.0 | 17.3 | 22.0 | 0.5 | 20 | 15 | 25 | 20 | 2.0 | 11.8 |
| Tolerances | | Maximum | | | | ± 0.02 | Minimum | | | | ± 0.5 |

Note: Longer lead is positive.



Part numbering system

| P | B | — | 5 | R | 0 | □ | □ | □ | □ | — | R |
|-------------|------------------|---|----------------------------|-----------------------------|--|------------|--------|---|---|---|----------------|
| Family Code | Version | | Voltage (V) R = Decimal | Configuration | Capacitance (μ F) | | Option | | | | |
| | | | | | Value | Multiplier | | | | | |
| P Family | High capacitance | | 5R0 = 5.0V | V = Vertical H = Horizontal | Example: 474 = 47 x 104 μ F or 0.47F | | | | | | RoHS Compliant |

Packaging information

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

Part marking

- Manufacturer
- Capacitance (F)
- Max operating voltage (V)
- Family code (or part number)
- Polarity

Life Support Policy: Eaton does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

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