

PowerStor XB Series

Snap-in cylindrical supercapacitors



Features and benefits

- Over 10-year operating life at room temperature
- Low ESR for high power density
- Large capacitance for high energy density
- Long cycle life
- Environmentally friendly electrolyte
- UL Recognized

Applications

- Hybrid battery or fuel cell systems
- High pulse current applications
- UPS / hold up power

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.



Powering Business Worldwide



The PowerStor brand of supercapacitors (formerly of the Bussmann Division of Cooper Industries) is now part of Eaton's Electrical Group, Electronics Division.

PowerStor is now part of Eaton
Same great products plus even more.

Specifications

Capacitance	300F to 600F
Working voltage	2.5V
Surge voltage	2.85V
Capacitance tolerance	-10% to +10%
Operating temperature range	-25°C to 70°C

Standard Product¹

Capacitance (F)	Part number	Max. initial DC ESR (mΩ) (Equivalent Series Resistance)	Max continous current (A) ²	Peak current (A) ³	Max leakage current (mA) ⁴	Max power (W) ⁵	Stored energy (Wh) ⁶	Typical mass (g)
300	XB3550-2R5307-R	7	15	120	0.30	220	0.26	69
400	XB3560-2R5407-R	4.5	19	180	0.45	350	0.35	80
600	XB3585-2R5607-R	3.7	29	235	0.70	420	0.52	122

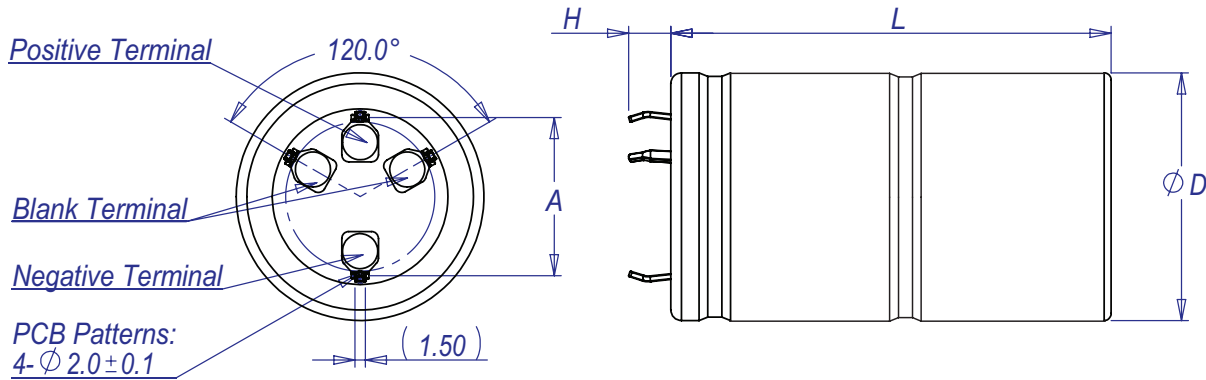
1. Capacitance, ESR and Leakage current are all measured according to IEC 62391-1 at 20°C
2. 15°C Temperature Rise
3. Peak Current is for 1 second = $\frac{1}{2} \text{ Working Voltage} \times \text{Capacitance} / (1 + \text{DC ESR} \times \text{Capacitance})$
4. Leakage current measured after 72 hours, 20°C
5. Max. Power = $\text{Working Voltage}^2 / 4 / \text{DC ESR}$
6. Stored energy = $\frac{1}{2} \text{ Capacitance} \times \text{Working Voltage}^2 / 3600$

Performance

Parameter		Capacitance change (% of initial value)	ESR (% of max. initial value)
Life			
@ Max. operating voltage and temp)	1500 hours	≤ 20%	≤ 200%
Charge/discharge cycling ¹	500,000	≤ 20%	≤ 200%
Storage Life			
-25°C to +70°C	1500 hours	≤ 20%	≤ 200%
≤ 30°C	3 years	≤ 5%	≤ 10%

1. Cycling between max operating and 50% of max operating voltage at room temperature

Dimensions - mm



Part number	D ±1.0	L ±1.0	H ±1.0	A ±0.1
XV3550-2R7307-R	35	53	6	22.5
XV3560-2R7407-R	35	63	6	22.5
XV3585-2R7607-R	35	87.5	6	22.5

Part Numbering System

XB	□	□	□	□	-	□	R	□	□	□	□	-R
Series Code	Dimensions					Voltage (V) R = Decimal		Capacitance (μF)				RoHS Compliant
XB = Series	Diameter	Length			2R5 = 2.5V		Value	Multiplier	Example: 407 = 40 x 10 ⁷ μF or 400F			

Packaging information

- Standard packaging: 20 pieces per box

Part marking

- Manufacturer
- Capacitance (F)
- Nominal Working Voltage (V)
- Series Code (or part number)
- Polarity

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