

PowerStor XV Series

Snap-in cylindrical supercapacitors



Features and benefits

- Over 10-year operating life at room temperature
- Ultra low ESR for high power density
- Large capacitance for high energy density
- Long cycle life
- 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 microamps for several days to several amps for milliseconds.



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	2.7V
Surge voltage	2.85V
Capacitance tolerance	-5% to +10%
Operating temperature range	-40°C to 65°C
Extended operating temperature range	-40°C to 85°C (with voltage derating to 2.3V @ 85°C)

Standard Product¹

Capacitance (F)	Part Number	Max. initial DC ESR (mΩ) (Equivalent Series Resistance)	Max continuous current (A) ²	Peak current (A) ³	Max leakage current (mA) ⁴	Max power (W) ⁵	Stored energy (Wh) ⁶	Typical mass (g)
300	XV3550-2R7307-R	4.5	20	160	0.60	410	0.30	62
400	XV3560-2R7407-R	3.2	26	220	0.85	570	0.41	72
600	XV3585-2R7607-R	2.6	33	320	1.30	790	0.60	108

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 = $1/2 \text{ Working Voltage} \times \text{Capacitance} / (1 + \text{DC ESR} \times \text{Capacitance})$

4. Leakage current measured after 72 hours, 20°C

5. Max. Power = $\text{Working Voltage}^2 / 4 / \text{DC ESR}$

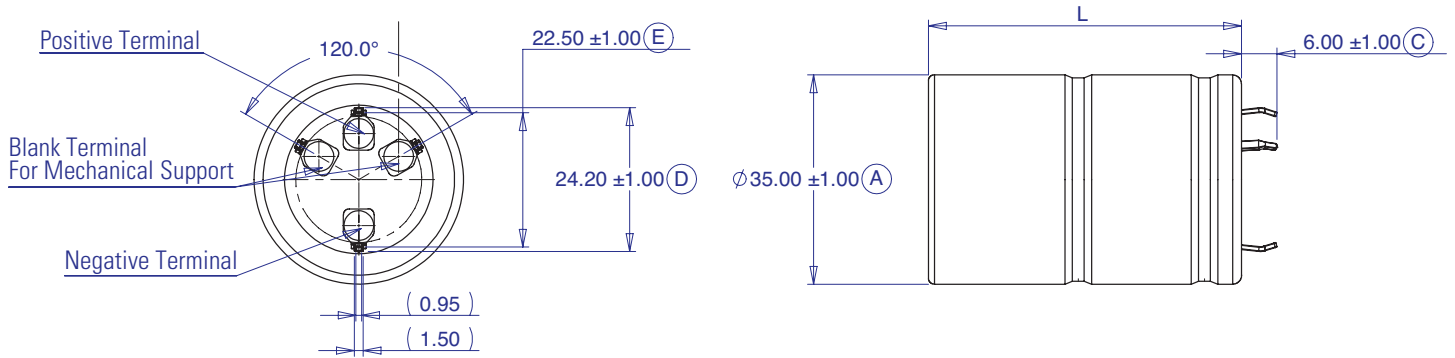
6. Stored energy = $1/2 \text{ Capacitance} \times \text{Working Voltage}^2 / 3600$

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			
-40°C to +65°C	1500 hours	≤ 20%	≤ 200%
≤ 30%	3 years	≤ 5%	≤ 10%

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

Dimensions (mm)



Part Number	L ± 1.0
XV3550-2R7307-R	53
XV3560-2R7407-R	63
XV3585-2R7607-R	87.5

Part Numbering System

Series Code	Dimensions	Voltage (V) R = Decimal	Capacitance (µF)	RoHS Compliant
XV = Series	Diameter Length	2R7 = 2.7V	Value Multiplier	RoHS Compliant
			Example: 407 = 40 x 10 ⁷ µF or 400F	

Packaging Information

- Standard packaging: 20 pieces per box

Part Marking

- Manufacturer
- Capacitance (F)
- Max operating voltage (V)
- Series 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.

Eaton
Electronics Division
1000 Eaton Boulevard
Cleveland, OH 44122
United States
www.eaton.com/elx

© 2015 Eaton
All Rights Reserved
Printed in USA
Publication No. 4424- BU-SB15053
October 2014



Eaton is a registered trademark.
All other trademarks are property of their respective owners.