



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# PowerStor XL60 Series

## 2.7V Supercapacitor cells



### 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. The XL60 Series supercapacitor cells offers high energy and power in a standardized form factor. Terminal design is optimized for high reliability and low contact resistance.

### Features and benefits

- Long life energy storage, up to 20 years
- Ultra low ESR for very high power density
- Wide operating temperature range
- Maintenance free
- Cost effective backup power and large energy recapture
- Low operating costs
- High efficiency (>98%) under broad environmental conditions
- High reliability, green solution

### Applications

- Backup power
- Peak power shaving, pulse power
- Engine starting
- Energy capture and re-use (Hybrids) for automotive, trucks, mining and construction, equipment, cranes
- Remote power for sensors, LEDs, switches



## Specifications

Capacitance	3000F
Maximum working voltage	2.7V
Surge voltage	2.85V
Capacitance tolerance	-0% to +20%
Operating temperature range	-40°C to 65°C @ 2.7V
Extended operating temperature range	-40°C to 85°C (with voltage derating to 2.3V @ 85°C)

## Standard Product

Capacitance (F)	Part Number	Max. initial DC ESR (mΩ) (Equivalent Series Resistance)	Continuous current 15°C rise (A) <sup>1</sup>	Peak power (kW) <sup>2</sup>	Max leakage current (mA) <sup>3</sup>	Max current (A) <sup>4</sup>	Stored energy (Wh) <sup>5</sup>	Typical thermal resistance (Rth - °C/W)	Typical mass (g)
3000	XL60-2R7308W-R	0.23	140	7.9	5.0	2400	3.0	3.2	525
3000	XL60-2R7308T-R	0.23	140	7.9	5.0	2400	3.0	3.2	535

1. Continuous Current =  $\sqrt{\Delta T / (DC\ ESR \times R_{th})}$
2. Peak Power =  $V^2 / DC\ ESR / 4$
3. After 72 hour charge and hold, 25°C
4. Max Current, 1 sec discharge =  $1/2\ C\ V / (1 + DC\ ESR \times C)$
5. Stored Energy =  $1/2\ C\ V^2 / 3600$

## Performance

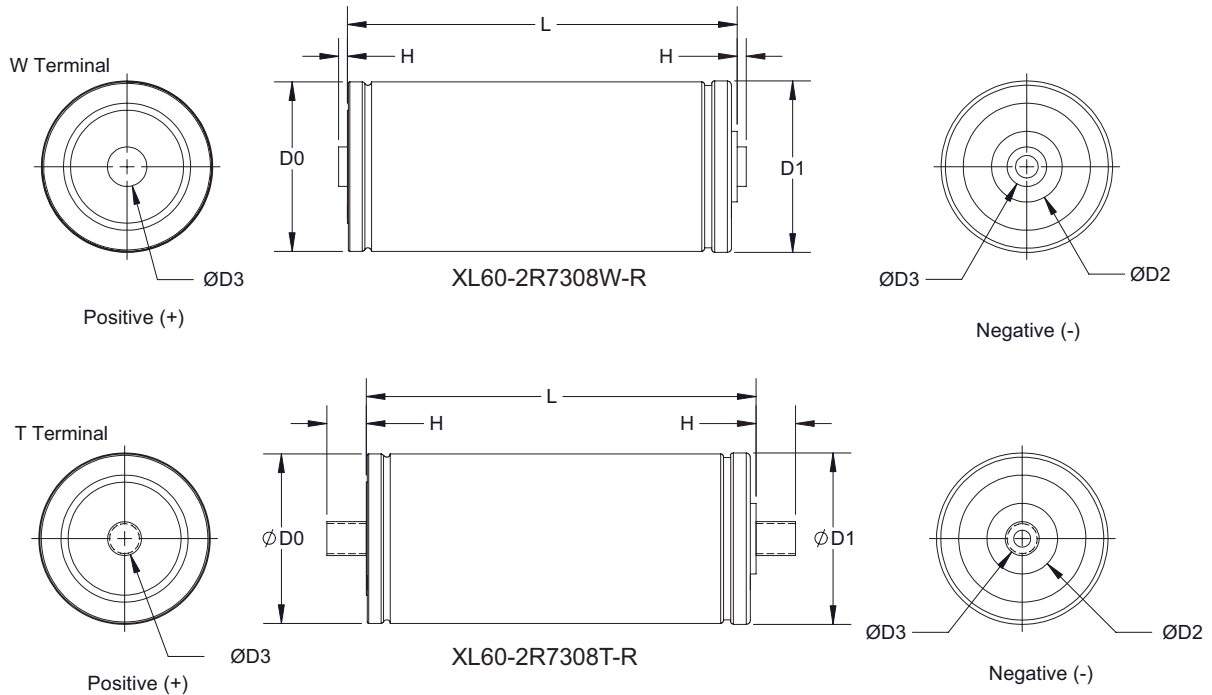
Parameter	Capacitance Change (% of initial value)	ESR (% of max. initial value)
Life — 1500 hours @ rated voltage and maximum operating temperature	≤ 20%	≤ 100%
Life — 10 years @ rated voltage and 25°C	≤ 20%	≤ 100%
Shelf life, uncharged, up to 35°C — 3 years	≤ 5%	≤ 10%
Charge/discharge cycling <sup>1</sup> — 1,000,000	≤ 20%	≤ 100%

1. Cycling between 2.7V and 1.35V, 100A, 3s rest

## Standards and Certifications

Agency information	UL Recognized, Guide BBBG2, File MH46887
Shock and vibration	IEC 61373 Category 1, Class B, IEC 60068-2-6
Safety	UL 810A
Environmental	RoHS compliant, lead free, halogen free
Altitude, Operating	10,000 ft
Altitude, Non-operating	40,000 ft

Dimensions (mm)



Part Number	D0 (±0.3)	D1 (±0.7)	D2 (±0.1)	D3 (±0.1)	H (±0.125)	L (±0.5)
XL60-2R7308W-R	60.3	60.7	25.0	Ø14.0	3.18	138.0
XL60-2R7308T-R	60.3	60.7	25.0	M12, P1.75	14.0	138.0

Packaging Information

- Standard packaging: 20 pieces per box

Part Marking

- Manufacturer
- Capacitance (F)
- Nominal Working 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.

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