



Features:

- Long lifetime of several hundred thousand cycles
- Fast charging with high currents and very high discharge currents
- Resistant against reverse polarity
- Ultra-low internal resistance
- Environmentally friendly
- Low weight and volume
- Shock- and vibration-proof



BCAP0010

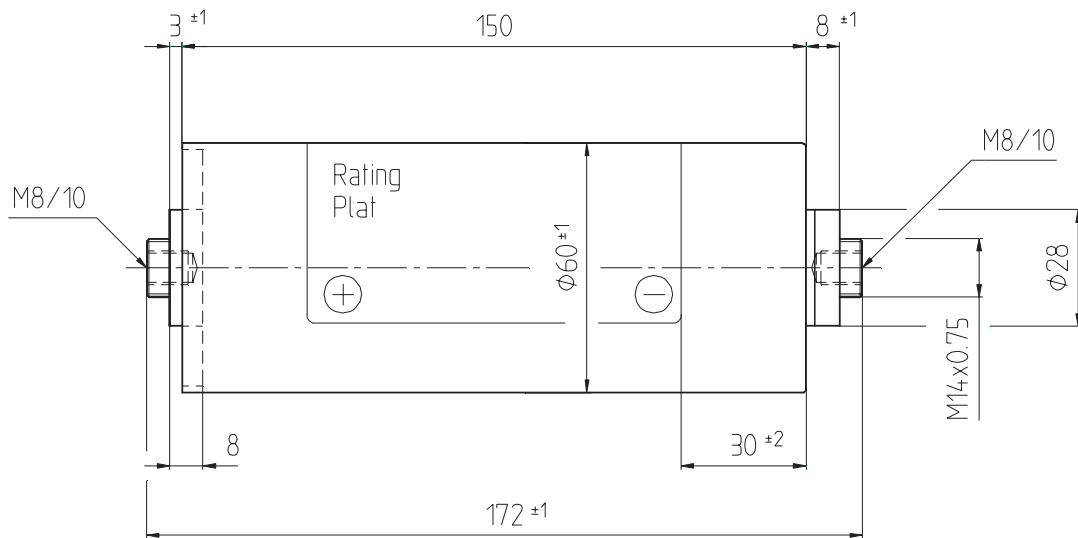
BOOSTCAP® Ultracapacitor

BOOSTCAP® Ultracapacitors provide extended power availability, allowing critical information and functions to remain available during dips, sags, and outages in the main power source. In addition, it can relieve batteries of burst power functions, thereby reducing costs and maximizing space and

energy efficiency. The ultracapacitor features a cylindrical design and an electrostatic storage capability that can cycle hundreds of thousands of charges and discharges without performance degradation.

BATTERY vs. ULTRACAPACITOR vs. CAPACITOR COMPARISON

Available Performance	Lead Acid Battery	Ultracapacitor	Conventional Capacitor
Charge Time	1 to 5 hours	0.3 to 30 seconds	10 ⁻³ to 10 ⁻⁶ seconds
Discharge Time	0.3 to 3 hours	0.3 to 30 seconds	10 ⁻³ to 10 ⁻⁶ seconds
Energy (Wh/kg)	10 to 100	1 to 10	<0.1
Cycle Life	1,000	>500,000	>500,000
Specific Power (W/kg)	<1000	<10,000	<100,000
Charge/discharge efficiency	0.7 to 0.85	0.85 to 0.98	>0.95



Specifications

Capacitance	• 2,600 Farads (DCC, 25°C)
Capacitance Tolerance	• +20%/-20%
Voltage	Rated Surge
	• 2.5 V
	• 2.8 V
Series Resistance (Maximum)	• 0.7 mΩ (DCC, 25°C)
Specific Power Density	• 4,300 (W/kg) (2.5 V)
Current (Maximum)	• 600 A
Stored Energy (Maximum)	• 8,125 J
Specific Energy Density	• 4.3 (Wh/kg) (2.5 V)
Leakage Current (Maximum)	• 5 mA (12h, 25°C)
Weight	• 525 g
Volume	• 0.42 L
Temperature¹	Operating Storage
	• -35° C to 65° C
	• -35° C to 65° C
Life Time (25°C)	• 10 y ΔC >20%, ESR < 200% of initial value
Cyclability (25°C, I = 20 A)	• 500,000 ΔC >20%, ESR < 200% of initial value

With a capacitance of 2600 farads at 2.5 volts, and in a cylindrical 60 x 172 mm package, Maxwell's BCAP0010 ultracapacitor is ideal for automotive subsystems, medical devices, UPS/backup power, and many other applications requiring a pulse of energy that cannot be efficiently provided by a battery or power supply alone.

The BCAP0010 works in tandem with batteries for applications that require both a constant low power discharge for continual function and a pulse power for peak loads. In these applications, the device relieves batteries of peak power functions resulting in an extension of battery life and a reduction of overall battery size and cost.

The BCAP0010 is also an ideal source of back-up power and pulse. It can provide extended power availability, allowing critical information and functions to remain available during dips, sags, and outages in a power supply or battery change. And, like all Maxwell ultracapacitors, the BCAP0010 is capable of accepting charges at the identical rate of discharge.

Physical Characteristics

Dimensions (Reference only)	• 60 x 172 mm (+/- 1 mm)
Screw Terminals	• M8/10mm
Electrical Connections	• M8/10mm Internal Threads
Torque (Maximum)	• 10Nm
General Tolerance	• ISO2768-v

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