Features:

- Delivers up to 100 times the energy of conventional capacitors and delivers ten times the power of ordinary batteries
- Is optimized for individual applications through its capacity to repeatedly charge and discharge
- Designed for smaller and lighter-weight products
- Offers instantaneous ride-through power

PC100

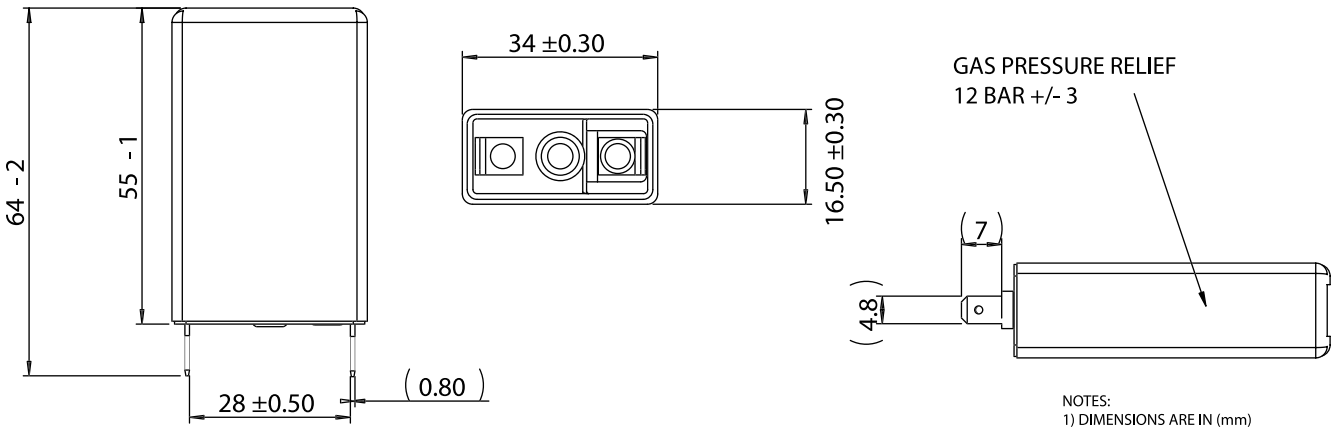
Ultracapacitor

Maxwell's PowerCache ultracapacitors are a new energy storage technology ideally suited for applications needing repeated bursts of power for fractions of a second to several minutes. They pack up to 100 times more energy than conventional capacitors and deliver ten times the power of ordinary batteries. To make power available when needed by the application, PowerCache ultracapacitors "cache" reserved power from a primary energy source. This power is then discharged from the ultracapacitor at rates demanded by the application. The ultracapacitor can be repeatedly charged and discharged at rates optimized for the application.

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

PC100 Ultracapacitor



Specifications:

Capacitance	100 Farads (-10%/+30%)	
Series Resistance (at 25°C)		
DC	13 mΩ	(-25%/+25%)
1kHz	9 mΩ	(-25%/+25%)
Voltage		
Continuous	2.5 V	
Peak	2.7 V	
Rated current[1,2]	25 A	
Dimensions (reference only)	34 x 64 x 16 mm	
Weight	37 g	
Volume	.032 L	
Temperature[3]		
Operating	-40°C to 70°C	
Storage	-40°C to 85°C	
Leakage Current (after 72 hrs)	0.300 mA	

Measuring 34 x 64 x 16 mm, the PC100 caches approximately 300 Joules of energy at a nominal 2.5 volts for high-powered discharges ranging from fractions of a second to one minute. The PC100 is packaged in a durable, lightweight aluminum prismatic can. Its small size and pulsed power capacity can decrease the weight and cost of batteries in devices requiring bursts of power.

The PC100 can provide power during an application's peak periods with roughly 10 times the power density of ordinary batteries, such as when backing important data systems. By doing so, the PC100 relieves batteries of peak power functions, so a product's life can be drastically extended and easily maintained while the overall system cost is simultaneously reduced.

In addition, the PC100 can provide extended back-up power availability, allowing critical information and functions to remain available during dips, sags, and outages in the main power supply or battery charge. The PC100 is capable of accepting charge at the identical rate of discharge for systems that can benefit from regenerative energy.

NOTES

[1] Rated current: 5 sec discharge rate to ½V

[2] Device can withstand short circuit current if kept within the operating temperature

[3] Steady state case temperature

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