

cap-XX APPLICATION BRIEF No. 1002

Uninterruptible Power Support

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Outline

Battery-powered devices such as Notebook computers and other applications often have to be shut down when the battery is changed, or when the power is to be interrupted temporarily. The result ranges from inconvenience to a risk of damaging data loss. cap-XX supercapacitors can provide a designer with a means to avoid shutdowns, possible data loss and wasted time.

The Problem

- Many applications now in use, such as Notebook computers, use removable batteries as their power source. Some devices need to be disconnected from the power for short periods, or are used where the power source is unreliable.
- The loss of power for just a short time can be a considerable inconvenience to the user, and can result in loss.
- All of these devices would benefit from a means of supporting the internal power while the short disruption or battery change occurs.

The cap-XX Solution

- cap-XX manufactures supercapacitors with very high capacitance (from a few mF to several Farads), low Equivalent Series Resistance (ESR) ($1\text{m}\Omega$ upwards), and low leakage currents (just a few μA). These supercapacitors provide a means to support the power requirement of a device for a short time.
- cap-XX supercapacitors can be designed to suit your application, in shapes and sizes to suit the space available, such as thin prismatic forms.
- Stored energy can be sufficient for a period ranging from several seconds to several minutes and much longer. DC-DC converters can provide an output at almost any required voltage, with automatic charging of the supercapacitor when power is available.
- The use of appropriate circuits can ensure that a device is never without power, even when an unexpected power outage occurs, and short-term support is required.

The Benefits

- Continuous operation while batteries are changed, or power is interrupted for a short time.
- Reduced risk of data loss, such as information stored in RAM in a Notebook, or in a device operating where mains power is unreliable.
- Convenient operation.
- The supercapacitor is maintenance-free and can be integrated into the application.
- Automatic and immediate response of power support can be designed into the application.
- Low cost.

Further Information:

cap-XX will be pleased to supply you with detailed data and design information. For further details use the contact information at the foot of this page.

cap-XX Application Briefs are produced as a means of providing product designers with useful information about cap-XX supercapacitors and their applications. They are revised periodically to include new information. For detailed specifications of cap-XX products, the reader is referred to the data sheet of the relevant product, which is available on request.



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