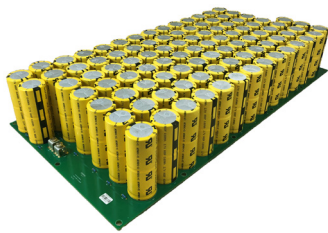


Use case

Mission critical power quality



With the ever-increasing proliferation of electrified devices, equipment and buildings, the need for constant, clean, quality power increases as well. This is especially imperative in mission critical applications such as data centers, semiconductor factories, heavy industrial and healthcare facilities.

Any power loss, even for a moment, can cause hours of downtime and cost millions of dollars in lost productivity. To help protect against brownouts and short duration power losses, Eaton has developed supercapacitor based printed circuit board assemblies (PCBA) featuring XV supercapacitor cells as the core energy storage technology.

Supercapacitors help protect your mission critical loads

The [XVM PCBA Supercapacitor modules](#) are an ideal energy storage solution that can be integrated with 40 kW and smaller uninterruptible power supplies (UPS).

Historically, these types of rack mount or tower UPS used battery technologies such as Pb-acid or Ni-MH; Lithium ion has also grown more prevalent in this application as well. The supercapacitors are unique in that they have fundamentally higher reliability due to the electrostatically storing charge rather than relying upon chemical reactions that are impacted by ambient temperature.

The XVM PCBAs offer operating temperatures between -40 °C up to +65 °C. Depending on the float voltage and temperature, they can offer lifetimes of up to 20 years.

XVM PCBAs have integrated passive cell balancing that helps balance adjacent supercapacitor cells during all charging, discharging and standby operation states to ensure the long-life operation. The PCBAs accept bare wire or ring terminals to allow for easy wiring in series and/or parallel to meet the specific application load or runtime required. The open PCBA design allows for easy mounting on UPS shelves, which can be rack mounted or inside the UPS enclosure requiring less than 3U.

By integrating supercapacitors as the primary energy storage, users experience lower total cost of ownership throughout the long life of the system. Supercapacitors are maintenance free during their operational life and pose no disposal issues at their end of life. They are inherently safe and present no thermal runaway

risks common to batteries or require any hazardous chemical spill containment. Their construction consists of non-toxic and organic materials that provide a RoHS compliant energy storage.

Having the right energy storage in a UPS system helps protect various loads from interruption. The XVM PCBA supercapacitor modules offer long life, high reliability energy storage with low total cost of ownership to protect your mission critical operations.

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