

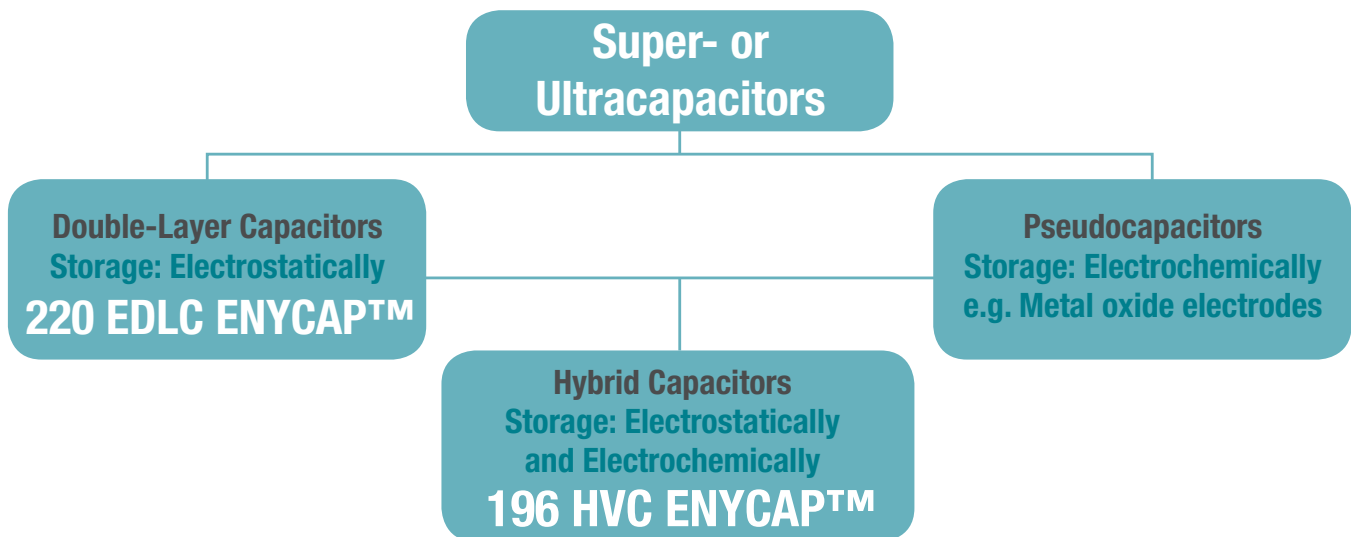


DID YOU KNOW?

PRINCIPLES OF 196 HVC ENYCAP™

The 196 HVC ENYCAP™ is a hybrid energy storage capacitor. Energy is stored by electrochemical processes in the electrodes and electrostatically in the Helmholtz layers. Usable and stored energy is a complex and non-linear function that is dependent in the first order on voltage, charge status, current density, and time. Consequently, capacitor calculation formulas for the electrostatic model are only an approximation and may not be valid over the full working range.

Electrochemical capacitors, or pseudocapacitors, play an important role in energy management because of their ability to store significantly larger amounts of energy than conventional dielectric or double-layer (EDLC) devices. Their exceptional properties originate from nanometric scale capacitors built from electrode material and layers of attracted ions on their surface (non-Faradaic storage); electrochemical processes and redox-reactions (Faradaic storage) have the highest contribution to energy storage.



FEATURES:

- Polarized energy storage capacitor with high capacity and energy density
- Voltage flexibility: 1.4 V (single cell) to 2.8 V, 4.2 V, 5.6 V, 7.0 V, and 8.4 V (multiple cells)
- Capacitance value: 4 F, 15 F, 45 F, and 90 F
- Available as stacked through-hole (STH, radial) and surface-mount flat (SMF, LFC)
- Wire and connectors on request
- Useful life: up to 2000 h at 85 °C
- No cell balancing necessary
- Soft and low transient voltage controlled charging characteristics
- Non-hazardous electrolyte
- Evaluation kits for engineering are available under ordering code MAL219699001E3
- Moderately lower internal resistance compared to the 196DLC

APPLICATIONS:

- Power backup for memory controllers, flash backup, RAID systems, SRAM, and DRAM
- Power failure and write cache protection for enterprise SSD and HDD
- Real-time clock power source
- Burst power support for flashlights and wireless transmitters
- Backup power for industrial PCs and industrial controls
- Storage device for energy harvesting
- Emergency light and micro UPS power source
- Wearables and miniaturized mobile equipment