Storage Conditions Recommendations for Supercapacitors

General Storage Conditions

Store supercapacitors in a controlled indoor location. Specifically, this involves ensuring the following conditions:

Temperature-Controlled Environment: Ensure the storage area maintains a stable temperature as per the specified guidelines.
Humidity-Controlled Environment: Use dehumidifiers or air conditioning to keep relative humidity within the recommended range.
Clean Environment: The storage area should be free from dust, dirt, and other contaminants.

Temperature Control

- Avoid extreme temperatures, moisture, and corrosive environments.
- Ensure the relative humidity is below 75%, ideally between 40% and 60%.
- Avoid environments with more than 85% relative humidity.
- Optimal Storage Temperature: Store supercapacitors indoors at temperatures between 5°C and 35°C (41°F and 95°F). The ideal range is between 10°C and 25°C (50°F and 77°F).
- Temperature Stability: Minimize temperature fluctuations to prevent condensation and thermal stress.
- Avoid Extreme Temperatures: Always refer to the datasheet values provided by the Skeleton Technologies for specific temperature guidelines. The datasheet values prevail over the recommendations in this document. If not available, do not store below -40°C (-40°F) or above 50°C (122°F).

Environmental Conditions to Avoid

- Avoid direct exposure to water, saltwater, oil, or condensation
- Avoid gaseous oils or salts environments.
- Avoid environments with toxic gases such as hydrogen sulfide, sulfurous acid, chlorine, ammonia, bromine, or methyl bromide.
- Chemical Exposure: Avoid acidic or alkaline solvents.
- Radiation and Light: Protect from direct sunlight, ozone, ultraviolet rays, and radiation.
- Physical Stress: Avoid environments with severe vibrations or shocks.
- Protection from Physical Damage: Use protective containers to shield from physical damage and static discharge. Avoid stacking heavy objects on them.
- Do not store together with explosives, radioactive substances and infectious substances.
- Fire Prevention: Keep supercapacitors away from heat sources and open flames.

Shelf Life and Maintenance

- Regular Inspections: Periodically check for signs of damage or degradation.
- Discharge State: Store supercapacitors fully discharged and shorted with a wire across the terminals (applicable on a module level only).