

Caution when Using Hybrid Supercaps (HS, HSL, HSH Series)

Handling:

In case of hybrid-supercaps, the most important thing to avoid is the short of the leads, since they are delivered in pre-charged condition.

When leads are shorted, the cell voltage drops below to the specified minimum voltage, which degrades/damages the hybrid supercaps.

Additionally, there is a risk of injury, when touching the leads of higher capacitance cells.

For a transportation, thanks to the original packaging design, it is guaranteed that the leads cannot touch each other.

This requirement (the leads cannot be shorted) is valid also for the storage, handling during production and soldering.

Soldering:

Recommended soldering is a hand soldering or a selective wave soldering, which guarantees that the leads are not shorted via the solder tin.

Alternative solution would be to connect the hybrid supercaps to the PCB via a cable-connector.

EATON has a cable solution which can be placed directly to the leads.

Usage in a circuit:

Due to the specified 2.2V minimum voltage of the hybrid supercaps, a deep discharge protection needs to be placed, which can guarantee that the minimum voltage does not drop below 2.2V during the usage.