Mounting Methods for JEDEC Standard Energy Cell

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Abstract:
A modular carrier disclosed which allows for securing modular backup energy cells of varying sizes.

MO334-A is a JEDEC volumetric standard for energy backup cells. There are three length variations of this standard that can be interchanged to suit varying applications. The embodiments shown define several methods for mounting that can be used for each length variation.

The first embodiment is a collar that captures the end of the cell. Two collars can be placed on each end of the cell and then fixed to the system sheet metal or PCB with screws, tabs, etc. Several cells may be ganged together by sharing one collar between two cells. This method can be repeated to support any combination of cell length and quantity. Some examples shown below.
The second embodiment is a case that covers the cell and is then fixed to the system with screws, tabs, etc. The case can support a monolithic host backup cell or multiple discrete device backup cells. The case has retention features that capture each individual cell to prevent lateral movement when the case is not fully populated. When these features are not being used they are displaced by the cell. See below for an example.

The third embodiment is a carrier for system verification of a monolithic host backup or multiple discrete device backup cells. It uses the same retention features detailed in embodiment 2 to accommodate several configurations of cell size and quantity. This carrier uses an interface to the host (RFID, connector, etc.) to validate the device as an HPE approved device. The host is fixed to the system (screw, tab, etc.) and delivers information to the system (RFID, connector, etc.).