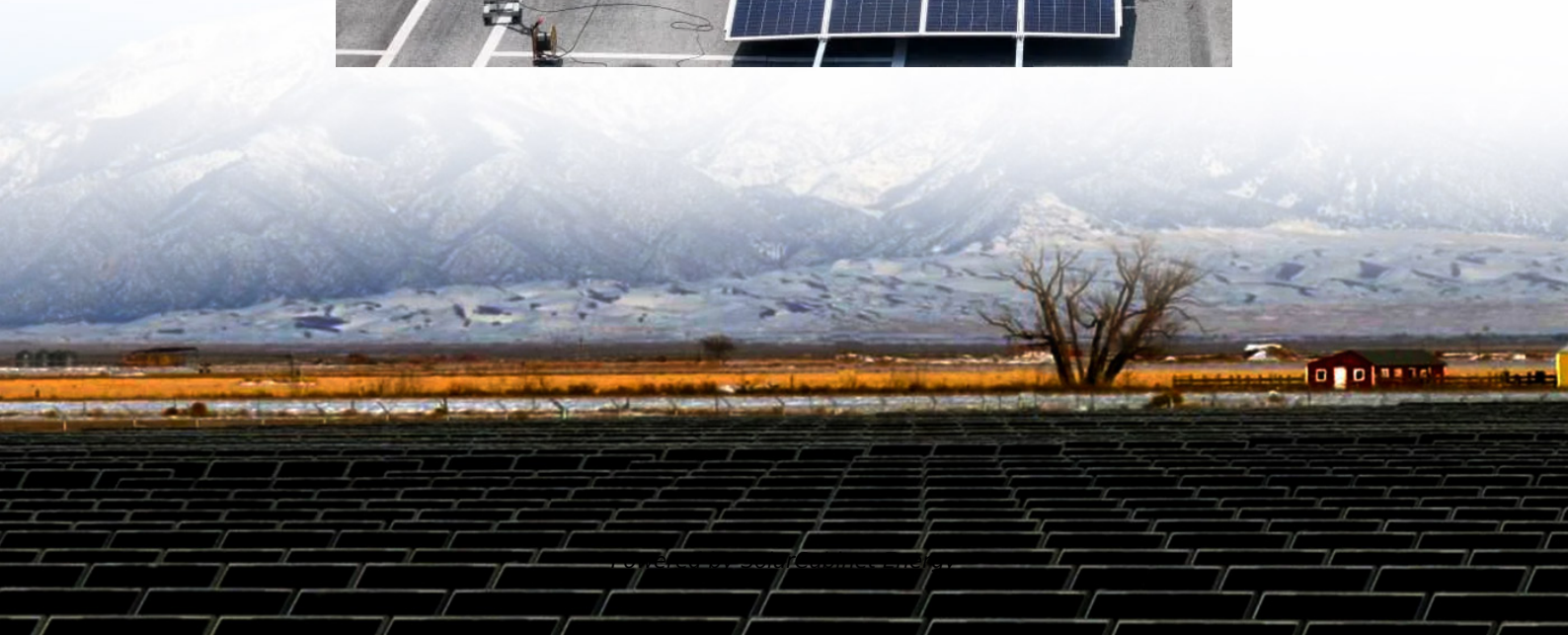


Pack battery secondary protection





Overview

How does secondary protection work?

The operation of the secondary protection is fully independent from the primary protection and protects for over-charge voltage only. Once triggered and after a delay time, an external N-channel MOSFET turns on and creates a short between the battery terminals. This will cut an internal fuse that prevents the battery pack from charging again.

What is a secondary protection IC?

In recent years, the number of applications using high energy density Li-Ion batteries has increased significantly. There is a growing need to comply with functional safety standards, secondary protection ICs are developed to provide an additional safety level for Li-Ion batteries in case the primary protection circuit fails.

What is ablic battery protection IC?

ABLIC's battery protection ICs for multi-cell pack: Our vast product lineup provides strong support for developing safety-critical battery packs with secondary protection and other features to suit customer needs such as smaller, lighter, and thinner applications and the cascade connection of a large number of battery cells in series.

Why do lithium-ion batteries need secondary protection?

However, even the protective functions of electronic circuits can occasionally fail due to abnormalities or semiconductor failures. In the case of lithium-ion batteries, secondary protection is incorporated due to the potential severe consequences of abnormalities, such as fire or explosion.

How does a SCP protect a battery?

The SCP ensures safety by severing the circuit when the battery becomes unstable or when the primary protection is not functioning correctly. The SCP's



role is to immediately halt the operation of an unstable battery and safely disconnect it from the circuit. A fuse is a protective component extensively used in electrical devices.

What is a battery protection IC?

1. ABLIC's Battery Protection ICs Battery protection ICs protect batteries from hazards such as overcharging, overdischarging and overcurrent. ABLIC has been developing and producing battery protection ICs since 1993, and has a track record of approximately 30 years in the industry.

Pack battery secondary protection



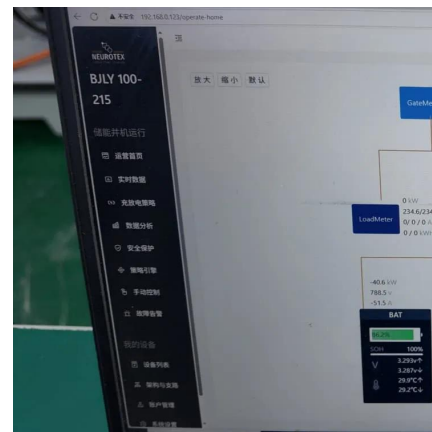
Secondary Protection Circuit Using a Protection Fuse

ABLIC's battery protection ICs for multi-cell pack:
Our vast product lineup provides strong support
for developing safety-critical battery packs with
secondary protection and other features to suit

...

Why do lithium-ion batteries need Secondary protection elements

The SCP ensures safety by severing the circuit when the battery becomes unstable or when the primary protection is not functioning correctly. The SCP's role is to immediately ...



Why do lithium-ion batteries need Secondary protection elements

The Bourns® Multifuse® PPTC resettable fuse provides overcurrent protection beyond the battery management IC, protecting the battery from surge current while also protecting against

...



Secondary protection IC, method of controlling secondary ...

A secondary protection IC is connected in parallel with a rechargeable battery and controls the charge and discharge of the rechargeable



battery separately from a primary protection IC.



[Learn about the common lithium battery protection circuit](#)

In lithium-ion batteries, lithium battery protection circuit plays an important role and affect the use of batteries. There are many types of lithium battery protection circuits, and this ...



[SGM41002 Battery Protection IC for 2-Serial to 4-Serial-Cell ...](#)

FEATURES The SGM41002 is designed for secondary protection of Li-Ion rechargeable cells. The product integrates a high-accuracy voltage detection circuit and a delay circuit required for ...



[SEFUSE® and SEREB® Battery Protectors . SCHOTT](#)

SEFUSE® battery fuses are used as secondary protection in battery management systems (BMS). The SEFUSE® battery fuse line supports rated currents from 12 to 60A and is suitable ...





Secondary protection IC, method of controlling secondary protection ...

A secondary protection IC is connected in parallel with a rechargeable battery and controls the charge and discharge of the rechargeable battery separately from a primary protection IC.



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