High power 4-series lithium battery pack protection IC

What is a lithium-ion battery protection IC?

For general use | For automotive A lithium-ion battery protection IC is an IC that monitors overcharge, overdischarge, and overcurrent to protect lithium-ion batteries, ensuring safe operation. ABLIC has been developing and producing lithium-ion battery protection ICs since 1993, and has a track record of over 30 years in the industry.

Who makes lithium-ion battery protection ICS?

ABLIChas been developing and producing lithium-ion battery protection ICs since 1993,and has a track record of over 30 years in the industry. We offer a diverse lineup of approximately 2,100 battery protection ICs covering a wide range of cell counts,applications and protection functions.

Why are battery protection ICs needed?

Battery protection ICs are designed to enhance the safety of your battery packby detecting various fault conditions such as overvoltage,undervoltage,discharge overcurrent,and short circuit in single-cell and multi-cell batteries.

What does a battery protection IC detect?

Our battery protection ICs are designed to detect a variety of fault conditions including overvoltage,undervoltage,discharge overcurrent and short circuit in single-cell and multi-cell batteries. This helps enhance the safety of your battery pack.

What is a battery protection circuit / IC?

A battery protection circuit /IC is a solution that ensures safe charging and discharging,preventing damage and failures. Infineon Technologies offers easy-to-design-in IC solutions and reference designs for battery protection.

How to detect a rechargeable lithium ion or lithium-polymer battery?

The overcharge, overdischarge, discharging overcurrent, charging overcurrent, and short protection of the rechargeable Lithium-ion or Lithium-polymer battery can be detected. Each of these IC composed of four voltage detectors, short detection circuit, reference voltage sources, oscillator, counter circuit and logical circuits.

o One-Cell Li-ion Battery Pack o Power Bank o One-Cell Li-poly Battery Pack o IOT Sensor/Electronic Toys General Description . The +0 is a high integration solution for lithium-ion/polymer battery protection. +0 contains internal power MOSFET, high-accuracy voltage detection circuits and delay circuits. +0 has all the protection

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BATTERY PROTECTION IC FOR 2-SERIAL-CELL PACK Rev.2.4_00 S-82A2A/B/C Series 3 2. S-82A2B Series Control logic Delay circuit Oscillator CO DO Overcharge detection comparator 1 Overdischarge detection comparator 1 Load short-circuiting detection comparator Charge overcurrent detection comparator Pull-up / pull-down selection circuit Charger detection

In the high side protection, the disconnect MOSFETs are connected in series with the positive terminal of the battery pack. Benefits: No bypass of the ground, no hanging ground. Drawback: Requires gate drivers with charge pumps to drive the MOSFETs.

The bq29330 is a 2-series, 3-series, and 4-series cell lithium-ion battery pack full-protection analog front end (AFE) IC that incorporates a 2.5-V, 16-mA and 3.3-V, 25-mA low dropout regulator (LDO). ... enter different power modes, set current protection levels, and ...

Diodes" AP9101C is a protection solution developed for lithium-ion and lithium-polymer rechargeable batteries with a high-precision voltage detection circuit. Its functions protect batteries by detecting over-charge voltage, over-discharge voltage, over-charge current, over-discharge current, and other abnormalities, and turning off the external MOSFET switch.

The overcharge, overdischarge, discharging overcurrent, charging overcurrent, and short protection of the rechargeable Lithium-ion or Lithium-polymer battery can be detected. Each of these IC composed of four voltage detectors, short detection circuit, reference voltage sources, oscillator, counter circuit and logical circuits.

The S-8254A series is a protection IC for 3-serial or 4-serial cell lithium ion rechargeable batteries and includes a high-accuracy voltage detector and de ... Power-down function Available High-withstand voltage Absolute maximum rating: 26 V ... (+25°C) Lead-free, Sn100%, halogen-free. Applications. Lithium-ion rechargeable battery packs ...

The S-8254A Series is a protection IC for 3-serial- or 4-serial-cell lithium-ion / lithium polymer rechargeable batteries and includes a high-accuracy voltage detector and delay circuit. The S-8254A Series protects both 3-serial or 4-serial cells using the SEL pin for switching.

The S-8245A/C Series is a protection IC for 3-serial to 5-serial cell lithium-ion rechargeable batteries, which includes high-accuracy voltage detection circuits and delay circuits. It is suitable for protecting 3-serial to 5-serial cell lithium-ion rechargeable battery packs from overcharge, overdischarge, and overcurrent.

The S-82M1A Series is a protection IC for lithium-ion / lithium polymer rechargeable batteries, which includes high-accuracy voltage detection circuits and delay circuits. It is suitable for protecting 1- cell lithium -ion / lithium polymer rechargeable battery packs from overcharge, overdischarge, and overcurrent.

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Battery protection unit The battery protection circuit disconnects the battery from the load when a critical condition is observed, such as short circuit, undercharge, overcharge or overheating. Additionally, the battery protection circuit manages current rushing into and out of the battery, such as during pre-charge or hotswap turn on. BMS IC ...

This IC is used for secondary protection of lithium-ion rechargeable batteries, incorporating high-accuracy voltage detection circuits and delay circuits in a small 8-pin package. Short-circuiting between cells makes it possible for serial connection of 3-cell to 5-cell. By cascade connection of these ICs, it is possible to protect 6-serial or more cells lithium-ion ...

Mitsumi battery protection ICs for Li-ion/Li-polymer cell precisely monitor battery cell voltage and current in order to prevent adverse events during charging and discharging such as overcharge, overdischarge, overcurrent and ...

[5] Maxim, "12-Channel, High-Voltage Battery-Pack Fault Monitors," MAX11080 datasheet, April 2009 [Revised June 2010]. [6] Texas Instruments, "bq296xxx Overvoltage Protection for 2-Series, 3-Series, and 4-Series Cell Li-Ion Batteries with Regulated Output Supply," BQ2961 datasheet, February 2014 [Revised January 2017].

The high-withstand voltage CMOS process used in ABLIC"s 1-cell battery protection ICs endows them with high accuracy and low power consumption. These ICs are also provided with the latest distinctive state-of-the-art functions optimized for a variety of applications enabling our customers to create battery packs with the performance they require.

The S-82N1A Series is a protection IC for lithium-ion / lithium polymer rechargeable batteries, which includes high-accuracy voltage detection circuits and delay circuits. It is suitable for protecting 1-cell lithium-ion / lithium polymer rechargeable battery packs from overcharge, overdischarge, and overcurrent.

Protection boards for lithium batteries offer monitoring protection. Low-voltage lithium batteries require a protection board. When using high-voltage lithium batteries, a battery management system (BMS) is typically chosen since these systems contain more functions for monitoring the state of the battery pack. Main Parts of a Protection Board

The total power of this pack is now 48.96 Wh. This configuration is called 2SP2. If the configuration consists of eight cells with the configuration of 4SP2, two cells are in parallel, and four packs of this parallel combination are ...

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.