

**NKOSITHANDILEB SOLAR**

# **Supercapacitor reverse connection protection price**



## Overview

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Which power management solution is best for a supercapacitor backup system?

For optimal performance, a reliable, adaptable power management solution is vital. The LS0502SCD33 (dual channel solution) and the LS0502SCD33S (single channel solution) offer fully integrated power management solutions tailored for systems with supercapacitor backup power applications.

Why should you use a supercapacitor?

In today's world, ensuring data integrity and safety under all conditions is emerging as a critical concern. The supercapacitor offers key benefits for rugged environments, high backup power, standby duration, and extended cycles. It's becoming popular in various applications needing dependable backup power.

How do you program a supercapacitor?

The charging process progresses until the supercapacitor reaches a target voltage, which can be programmed using the VCAP feedback circuit:  $VCAP = [(RCFB\_Top + RCFB\_Bot) * 1.1V] / (RCFB\_Bot)$ . The constant voltage loop comes into action at this point, accurately controlling the supercapacitor's charge level to prevent overcharging.

What happens if a supercapacitor starts in a discharged state?

In any system, the capacitor starts in a discharged state. The supercapacitor acts as a low-value resistor upon applying the supply voltage, which may lead to a significant inrush current ( see Figure 4 and 5 below for example). Without proper control or limitation of this current, it could cause damage.

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They include various features such as input overvoltage and overcurrent protection, a reverse blocking switch, and a supercapacitor charging control circuit with active ...

Supercapacitor Backup Power Supply With Current Limit and Active Cell Balancing Reference Design Description This reference design automatically provides a back-up voltage ...

The price of a supercapacitor depends on several factors including type, capacitance (farads), voltage rating, materials used, and application-specific design. Below is a detailed breakdown ...

The supercapacitor module SYE-90V series have high power density and low equivalent series internal resistance. Specifically ...

Littelfuse's protection IC is a complete solution for backup power applications Littelfuse's LS0502SCD33 is a complete solution for systems with a backup storage capacitor or capacitor ...

Littelfuse LS0502SCD33 Supercapacitor IC integrates input overvoltage protection, an overcurrent protection circuit, a reverse blocking switch, and a supercapacitor charging control ...

Figure 3. A low-side logic-level NMOS FET for reverse-current protection handles more current than an equivalent bipolar transistor. A low-side switch has one drawback: Ground-return ...

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The supercapacitor module SYE-90V series have high power density and low equivalent series internal resistance. Specifically designed for backup power of pitch systems ...

Replace ordinary high current diodes, batteries, solar panels, anti-backflow, anti-reverse connection. When used in series with the power input, the anti-reverse connection effect is ...

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Littelfuse's LS0502SCD33 supercapacitor protection IC is a complete solution for systems with backup storage capacitors or capacitor banks.

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## Contact Us

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For catalog requests, pricing, or partnerships, please contact:

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