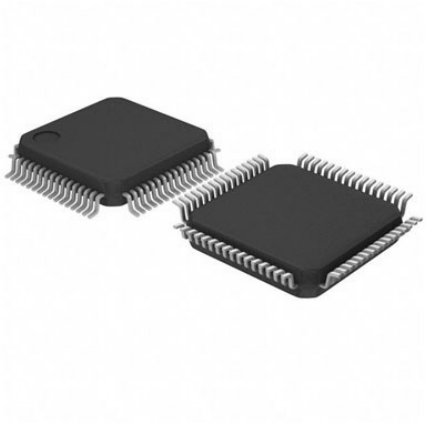
ADBMS1818ASWZ

Data Sheet

18-Cell Battery Monitor with Daisy Chain Interface

Manufacturers	Analog Devices, Inc
Package/Case	64-Lead LQFP (10mm x 10mm w/ EP)
Product Type	Power Management ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ADBMS1818ASWZ or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The ADBMS1818[1] is a multicell battery stack monitor that measures up to 18 series connected battery cells with a total measurement error of less than 3.0 mV. The cell measurement range of 0 V to 5 V makes the ADBMS1818 suitable for most battery chemistries. All 18 cells can be measured in 290 µs, and lower data acquisition rates can be selected for high noise reduction.

Multiple ADBMS1818 devices can be connected in series, permitting simultaneous cell monitoring of long, high voltage battery strings. Each ADBMS1818 has an isoSPI™ interface for high speed, RF immune, long distance communications. Multiple devices are connected in a daisy chain with one host processor connection for all devices. This daisy chain can be operated bidirectionally, ensuring communication integrity, even in the event of a fault along the communication path.

The ADBMS1818 can be powered directly from the battery stack or from an isolated supply. The ADBMS1818 includes passive balancing for each cell, with individual PWM duty cycle control for each cell. Other features include an on-board 5 V regulator, nine general purpose I/O lines, and a sleep mode, where current consumption is reduced to 6 µA.

[1] Protected by multiple U.S. patents, including 8908779, 9182428, and 9270133.

APPLICATIONS

Features

Measures up to 18 battery cells in series

3 mV maximum total measurement error

Stackable architecture for high voltage systems

Built-in isoSPI interface

Application

Backup battery systems

Grid energy storage

Residential energy storage

UPS

1 Mb isolated serial communications

High power portable equipment

Uses a single twisted pair, up to 100 meters

Low EMI susceptibility and emissions

Bidirectional for broken wire protection

290 µs to measure all cells in a system

Synchronized voltage and current measurement

1 Mb isolated serial communications

Uses a single twisted pair, up to 100 meters

Low EMI susceptibility and emissions

Bidirectional for broken wire protection

16-bit Δ-Σ ADC with programmable third-order noise filter

Passive cell balancing up to 200 mA (maximum) with programmable pulse-width modulation

9 general purpose digital I/O or analog inputs

Temperature or other sensor inputs

Configurable as an I

2

C or SPI master

6 µA sleep mode supply current

64-lead LQFP_EP package

Temperature or other sensor inputs

Configurable as an I

2

C or SPI master

Related Products

ADP3336ARMZ-REEL7

Analog Devices, Inc

MSOP-8

AD737JRZ

Analog Devices, Inc

SOP-8

[ADP3367ARZ]

Analog Devices, Inc

SOIC-8

[AD636JH]

Analog Devices, Inc

TO-100-10

[ADP3330ARTZ3.3-RL7]

Analog Devices, Inc

SOT-23-6

[ADR434BRZ]

Analog Devices, Inc

SOIC-8

[ADR421ARZ]

Analog Devices, Inc

SOP-8

[ADR3412ARJZ-R7]

Analog Devices, Inc

SOT-23-6