Silicon Mitus

Fuel Gauge for Battery Pack

Description

The SM5603 is a stand-alone fuel gauge device with a flash programmable MCU that supports a wide range of battery capacities for wearable, tablet and other devices through an adjustable external sense resistor. The device features SHA-256 authentication and single-wire interface for battery pack-side. The device supports auto-calibration for aging battery by analyzing all kinds of information about battery characteristic such as cell voltage and current in real time. The device is available in a 12-bump, 1.67 mm x 2.05 mm WLCSP package.

Applications

- Mobile and Smart Phones
- Tablets
- Wearable Devices
- Internet of Things (IoT)

Features

- 1-Series Cell Battery Fuel Gauge
  - Supports Pack-side Gauging
  - Supports Low-side or High-side Current Sensing
  - Embedded a 32KB Flash programmable MCU
- Adjustable External Sense Resistor
  - Down to 1 mΩ for High current sensing
  - Up to 150 mΩ for Enhanced current Resolution
- Automatically Refreshes SOC for Aging Battery (SOH)
- SHA-256 Authentication for a higher-level Security
- Supports Single-wire or 400 kHz Full-Speed I²C interface
- Eco-Friendly Technology in Normal Mode (35 µA)
- Rapidly-adapting SOC in Low Temperature
- Supports Thermistor in Battery Module or System Side
- Resistance Compensation Functions
  - Current Sensing Compensation
  - Voltage Sensing Compensation
- 12-Bump, 1.67 mm x 2.05 mm WLCSP Package

Ordering Information

Part	Temp. Range	Pb-Free	Package
SM5603	-40°C to +85°C	Yes	12 WLCSP 0.5 mm Pitch

SM5603