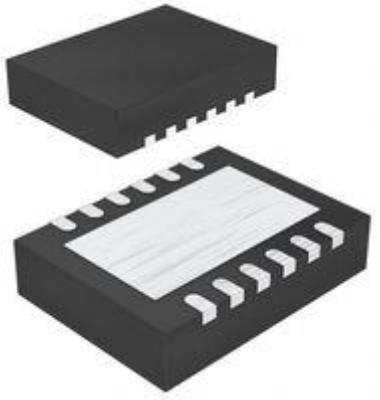
TEXAS INSTRUMENTS

BQ27541-V200 Single Cell Li-Ion Battery Fuel Gauge

General Description:

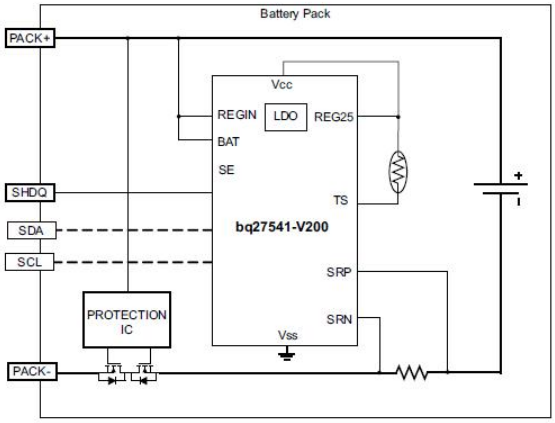


The Texas Instruments bq27541 Li-Ion battery fuel gauge is a microcontroller peripheral that provides fuel gauging for single-cell Li-Ion battery packs. The device requires little system microcontroller firmware development for accurate battery fuel gauging. The bq27541 resides within the battery pack or on the system's main-board with an embedded battery (non removable).

The bq27541 uses the patented Impedance Track™ algorithm for fuel gauging, and provides information such as remaining battery capacity (mAh), state-of-charge (%), run-time to empty (min.), battery voltage (mV), and temperature (°C).

The bq27541 also features integrated support for secure battery pack authentication, using the SHA-1/HMAC authentication algorithm.

Key Features:



- Battery Fuel Gauge for 1-Series Li-Ion Applications
- Microcontroller Peripheral Provides:
  - Accurate Battery Fuel Gauging
  - Internal Temperature Sensor for System Temperature Reporting
  - SHA-1/HMAC Authentication
  - Lifetime Data Logging
  - 96 Bytes of Non-Volatile Scratch Pad FLASH
- Battery Fuel Gauging Based on Patented Impedance Track™ Technology
  - Models Battery Discharge Curve for Accurate Time-To-Empty Predictions
  - Automatically Adjusts for Battery Aging, Battery Self-Discharge, and Temperature/Rate Inefficiencies
  - Low-Value Sense Resistor (5mΩ to 20mΩ)
- HDQ and I2C™ Interface Formats for Communication With Host System
- Small 12-pin 2,5 mm × 4 mm SON Package

Applications:

- Smartphone
- PDAs
- Digital Still and Video Cameras
- Handheld Terminals
- MP3 or Multimedia Players

Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
BQ27541DRZT-V200	1815720	67R1112	BQ27541-V200 Single Cell Li-Ion Battery Fuel Gauge SON