

# AXP717C Single Cell NVDC PMU with E-gauge

## 1 Features

- 3.9V – 5.5V Input Operating Range and Support single Cell Battery
- Battery fuel gauge: E-gauge 3.0
- Support TWSI(Two Wire Serial Interface)
- 3A switch charger, CV accuracy +/-0.5%
- Support USB BC1.2& type C CC input
- High battery discharge efficiency with 30 mΩ
- High integration includes all MOSFETS, current sensing and loop compensation
- Power off current <35uA (BATFET off, RTCLDO output on)
- 3 DCDCS
  - DCDC1: 0.5~1.54V, IMAX=4A
  - DCDC2: 0.5~3.4V, IMAX=3A
  - DCDC3: 0.5~1.84V, IMAX=1.5A
- 14 LDOS

RTCLDO: 1.8V/ 2.5V/ 3V/ 3.3V, 30mA; Support supplied by backup battery (button battery)

A/B/CLDO: 0.5~3.5V, 0.1V/step

ALDO2, BLDO1/3, CLDO1/3/4: IMAX=500mA

ALDO1/4, BLDO4, CLDO2: IMAX=400mA

ALDO3, BLDO2: IMAX=200mA

CPUSLDO: for CPUs, 0.5~1.4V, IMAX=30mA, Supplied by DCDC3

- Startup sequence and default voltage of DCDC/LDO setting
- Charging LED with breathing function
- Protection

### Input Over-Voltage Protection

Battery Thermal Sense Hot/Cold Charge Suspend

Programmable Safety Timer for Charger

Die Thermal regulation for Charger

Thermal Shutdown

DCDC Over-Voltage/Under-Voltage Protection

LDO Current Limit Protection

## 2 Applications

- Tablets, E-ink , Smart speaker

## 3 Description

AXP717C is a highly integrated power management IC (PMIC) targeting at single cell Li-battery(Li-ion or Li-polymer) applications that require multi-channel power conversion outputs. It provides an easy and flexible power management solution for multi-core processors to meet the complex and accurate requirements of power control.

AXP717C supports NVDC switch charge. Besides, it supports 17 channel power outputs which include 3 channels DCDC and 14 channels LDO. To ensure the security and stability of the system, AXP717C provides multiple channels 14-bit ADC for voltage/temperature monitor and integrates protection circuits such as over-voltage protection (OVP), over-current protection (OCP) and over-temperature protection (OTP). Moreover, AXP717C features a unique E-Gauge™ (Fuel Gauge) system, making power gauge easy and exact.

AXP717C supports TWSI for system to dynamically adjust output voltages, charge current and configure interrupt condition.

### Device Information

Part Number	Package	Body Size
AXP717C	QFN-52	6mm * 6mm

## Simplified Application Diagram

