

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

