

Description

TCS6175 is a switch-mode charging IC with maximum 1.75A current for lithium battery and lithium polymer battery. The TCS6175 has 5V, 700mA OTG function, and I2C function. The charging parameter such as charging current, full charging voltage and input current can be precisely configured by I2C function. The package type is WLCSP (1.901mmx1.501mm) with 20 pins.

The TCS6175 is designed with standard four-stage charging process: active, pre-charging, constant current, constant voltage and perfect protection mechanism for over current, over voltage, under voltage and over temperature. It is integrated with synchronous PWM control, high power MOSFET, and high voltage OVP circuits. The TCS6175 has high charging efficiency (94%), low internal resistance (45mΩ), and high DC withstand voltage (29V).

Feature

- Fully Integrated, High-Efficiency Charger for Single-Cell Li-Ion and Li-Polymer Battery Packs
- Charge Voltage Accuracy: $\pm 0.5\%$ 25°C
- $\pm 5\%$ Charge Current Regulation Accuracy
- 29V Absolute Maximum Input Voltage
- 6V Maximum Input Operating Voltage
- 1.75A Maximum Charge Rate
- 5V, 700mA Boost Mode for USB OTG for 3.0 to 4.5V Battery Input
- 1.901 mm x 1.501mm 20-Pin WCSP Package

- Programmable through I²C Interface:
 - Input Current
 - Fast-Charge/Termination Current
 - Charger Voltage
 - Termination Enable
- Synchronous Buck PWM Controller with Wide Duty Cycle Range
- Small Footprint 1μH External Inductor
- Perfect protection mechanism:
 - OVP, OCP, OTP

Application

Cellular Phones, Smart Phones, PDAs
 Tablet, Portable Media Players
 Gaming Device, Digital Cameras

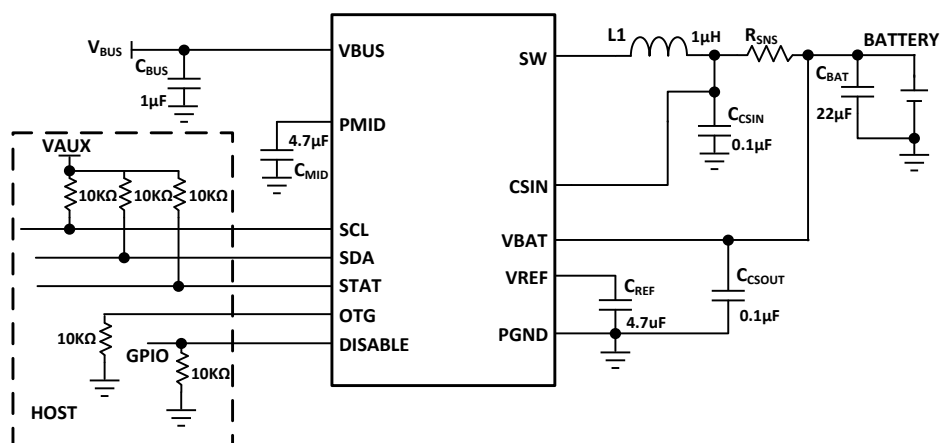


Figure 1: Typical Application