EVKT-MP2662 Product Brief

MP2662 Evaluation Kit

500mA, I^{2}C Controlled Battery Charger with Power-Path Management,
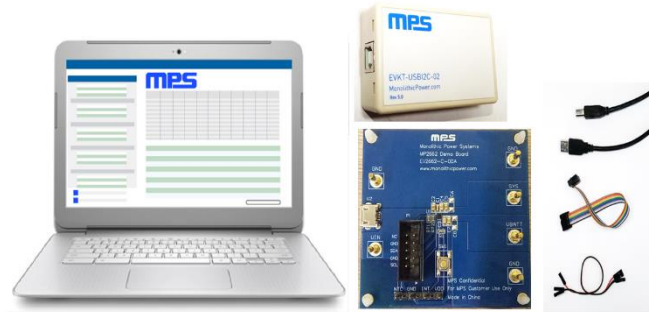1mA Termination and <1µA Battery Leakage for Single-Cell Li-Ion Battery

The MP2662 is a highly integrated, single-cell, Li-ion/Li-polymer battery charger with system power-path management for space-limited portable applications. The MP2662 takes input power from either an AC adapter or a USB port to supply the system load and charge the battery simultaneously. The charger function features pre-charge (PRE.C), fast current (CC) constant voltage (CV) regulation, charge termination, and auto-recharge.

The power-path management function ensures continuous power to the system by automatically selecting the input, battery, or both to power the system. This function features a low dropout regulator from the input to the system and a 100mΩ switch from the battery to the system. Power-path management separates the charging current from the system load, which allows for proper charge termination and keeps the battery in full-charge mode.

The MP2662 provides a system short-circuit protection (SCP) function by limiting the current from the input to the system and the battery to the system. This feature is especially critical for preventing the Li-ion battery from being damaged due to an excessively high current. An on-chip battery under-voltage lockout (UVLO) cuts off the path between the battery and the system if the battery voltage drops below a programmable battery UVLO threshold. This prevents the Li-ion battery from being over-discharged. An integrated I^{2}C control interface allows the MP2662 to program the charging parameters.

Feature	Specification
Supply for Board	4.35V - 5.5V
Operating Input Voltage	4.35V - 5.5V
Battery Regulation Voltage	3.6V - 4.545V
Fast Charge Current	8mA - 535mA
Input Voltage Regulation	V_{BATT} + 400mV
Input Current Limit	85mA - 455mA
Discharge Current	400mA - 3200mA
Operating Systems Supported	Windows XP, 7, and later
System Requirements	Minimum 22.2 MB free
GUI Software	MP2662 V1.0
EVB Size (L x W)	6.35 cm x 6.35 cm

Kit Contents

- EV2662 evaluation board (EV2662-C-00A)
- EVKT-USBI2C-02
    - USB to I^{2}C communication interface
    - Ribbon cable
    - USB flash drive for installing GUI

- Online resources that includes: datasheet, user guide, product brief, and GUI

Quick Start (Refer to user guide for more details.)

1. Install the GUI software.
2. Use the provided ribbon cable to connect the EVB and the USB to I^{2}C communication interface.
3. Preset the power supply output between 4.35V and 5.5V and connect the EVB.
4. Connect the communication interface to the PC and turn the power supply on.
5. Open the GUI software and program as needed.

Kit offers rapid application assessment and requires minimal external components