

SPV1040: solar battery charger for portable

Embedding MPPT algorithm to maximize energy harvesting



May 2011

SPV1040: main characteristics



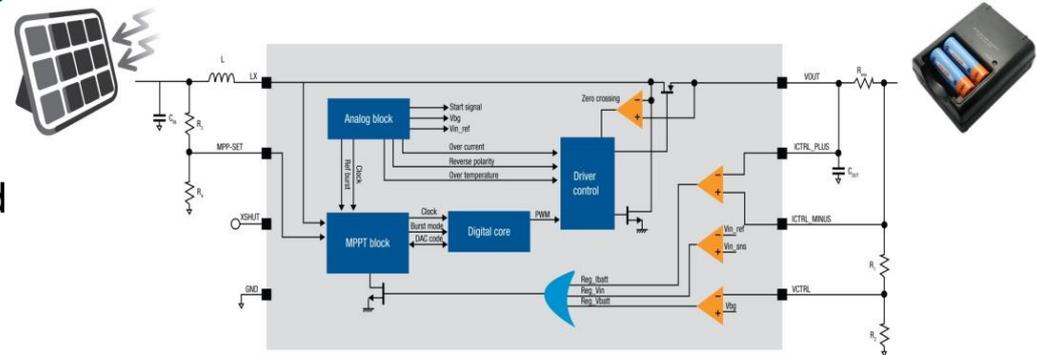
Key features

- High-efficiency monolithic step-up DC-DC converter
- Proprietary Perturb and Observe embedded MPPT algorithm
- Very low input voltage (down to 0.3 V)
- Very low $R_{DS(on)}$ integrated N-MOSFET and P-MOSFET
- Overcurrent and over-temperature protection
- Input reverse polarity protection

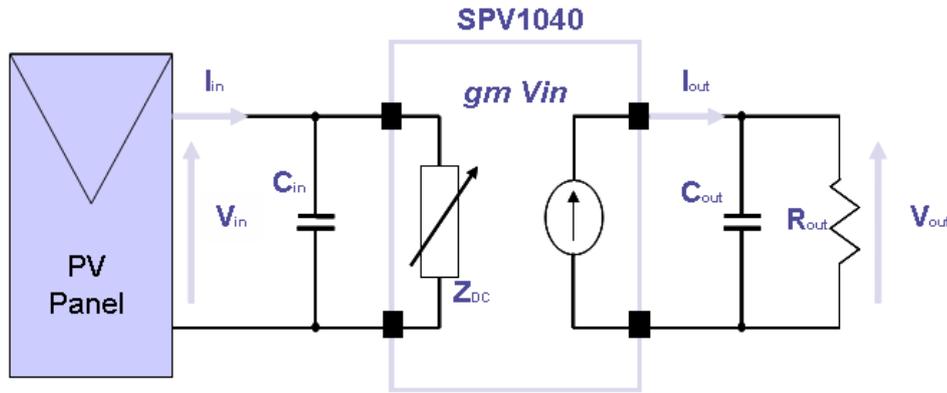


Main benefits

- Energy harvesting
- Up to 95% efficiency
- Optimized battery charging profile
- Suitable for low-power applications powered by only a few solar cells
- Battery and system safety guaranteed

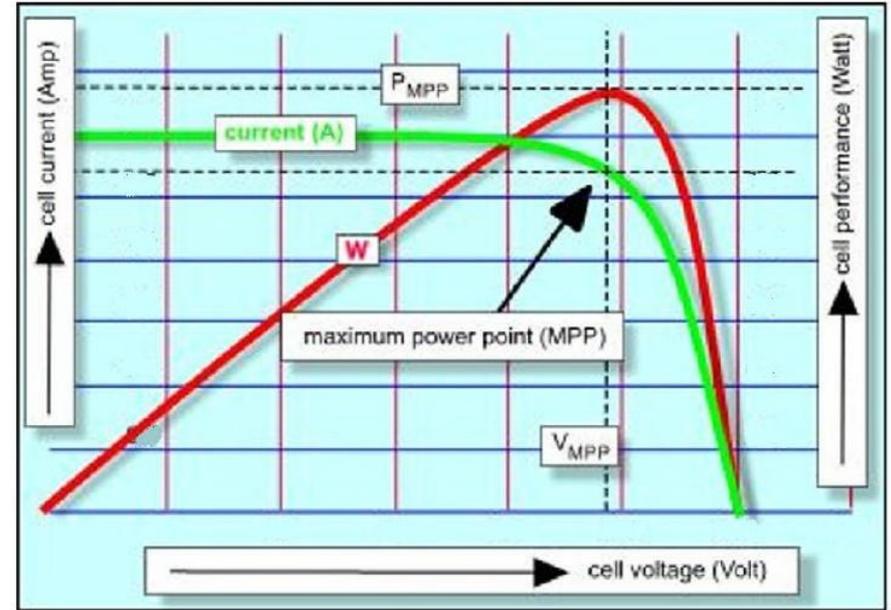


Maximum power point tracking (MPPT) algorithm



Key principle

- Maximized energy transfer through impedance matching between SPV1040 and PV panel



Low-power solar battery charger



Key applications

- Home lighting
- Small appliances
- Smartphones and wireless headsets
- Portable consumer devices and toys
- Sensors
- Digital still cameras
- Portable healthcare

SPV1040 main benefits

- Fast battery charging
- Overcurrent and over-temperature protections

Support tools

- [STEVAL-ISV006V2](#)



Lithium-ion solar battery charger



Key applications

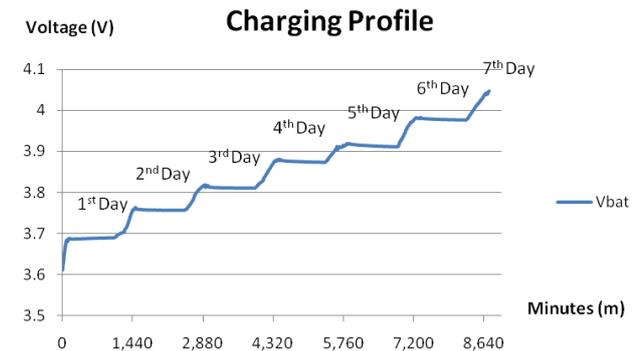
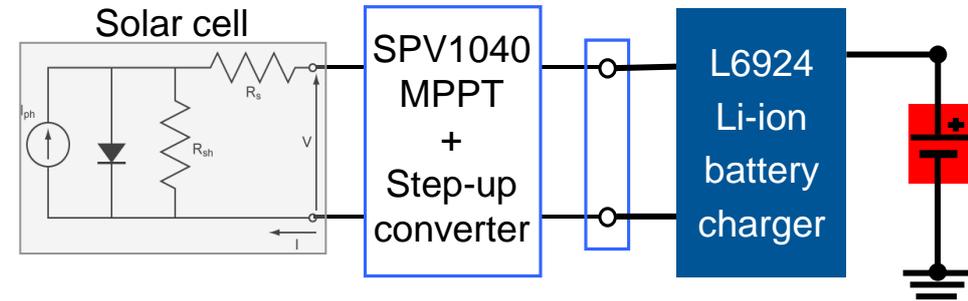
- Mobile phones
- Digital cameras
- Camcorders
- Watches
- Thermometers
- Calculators
- Car remote controls and locks

Associated product

- [L6924D](#): charge controller for Li-ion batteries

Support tools

- [STEVAL-ISV012V1](#)





Thank you!

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