

Super Capacitor Power Manager for Backup Power Applications

DESCRIPTION

The MT2601 is a complete solution for system with backup storage capacitor or capacitor bank. It integrated input over voltage; over current protection circuit; a reverse blocking switch and super capacitor charging control circuit. MT2601N also has built-in cell balance to provide protection over two cell super capacitor system.

When the main supply is present and above the minimum system supply voltage, system will draw power from input supply. At the same time, integrated linear charger charges the storage element at up to 300mA current. Once the storage element is charged, the circuit draws only 2.5 μ A of current while it maintains the super capacitor or other storage element in its ready state. When the main supply is removed, the integrated reverse blocking switch will block current flow from system rail to input. Linear charger will be turned on to provide power to system rail with low resistance path with up to 2A current.

MT2601N integrated cell balancing circuit will keep monitoring the cell voltage when charging and keep the two cells voltage at same level.

The MT2601 is externally programmable for input current limit, input over voltage, charge current limit, charge voltage limit. It provides a flag signal when input supply is unplugged so that main system can be taking next action. MT2601 is available in DFN3X3-10 package.

FEATURES

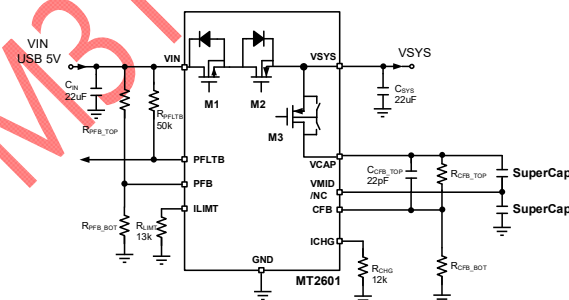
- 2.5V to 5.5V System Voltage
- 18V Input Rating with Over-Voltage Protection
- Programmable 1.1V to 5.3V Cap Voltage Range
- Programmable Super Cap Charge Current
- Programmable Input Over Current Protection
- MT2601N with Automatic Cell Balancing
- MT2601B w/o Automatic Cell Balancing
- Automatic Main/Backup Switchover
- Up to 2A Discharge Current
- Programmable Voltage and Current Thresholds
- $\pm 2\%$ Threshold Accuracy
- 2.5 μ A Ready Quiescent Current
- Small Solution Size
- DFN Package

APPLICATIONS

- Handheld Industrial Equipment
- Portable Computers
- Portable Devices with a Removable Battery

TYPICAL APPLICATIONS

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Backup Power Application with Two-series 20F Supercapacitors

