



MP5505A

7V, 4A, High-Efficiency Energy Storage and Management Unit

DESCRIPTION

MP5505A is a lossless energy storage and management unit • Wide 2.7V to 7V Operating Input Range targeted at solid-state and hard-disk drive applications. Its • Input-Current Limiter with Integrated 60mΩ MOSFET highly integrated input-current limit and energy storage and • Up to 4.5A Input-Current Limit release management makes the system solution very • Reverse-Current Protection compact.

The internal input-current-limit block with dv/dt control • Power-On-Reset prevents inrush current during system start-up; the bus • Adjustable dv/dt Slew Rate for Bus Voltage Start-Up voltage start-up slew rate is programmable. Also, it includes a • Internal 30mΩ Disconnect Switch power-on-reset function for hot-swapping. MPS' patented • Internal $70m\Omega$ and $60m\Omega$ Power Switches for Energy Storage energy storage and release management control circuit and Release Management Circuits minimizes the storage capacitor requirement. It pumps the • Thermal Protection input voltage to a higher storage voltage and releases the • EN and Power Good Indicators energy over a hold-up time to the system in the case of an · Available in a QFN-20 (3mm×4mm) Package input outage. The storage voltage and the release voltage are both programmable for different system applications.

The MP5505A requires a minimal number of readily available, standard, external components and is available in a QFN-20 (3mm×4mm) package.

FEATURES

- 6V Bus-Clamping Voltage

APPLICATIONS

- · Solid-State Drives
- Hard-Disk Drives
- · Power Back-Up/Battery Hold-Up Supplies

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TYPICAL APPLICATION

