

2.5A, 3MHz Switching Charger with Dynamic Power Path Management

DESCRIPTION

ETA6003 is a switching Li-Ion battery charger with dynamic power-path control and input current limiting. When a battery is connected, depending on the battery voltage, the DC-DC switching regulator either pre-conditions, fast-charges the battery or just regulates a system voltage (V_{SYS}) to a preset voltage. It does not require an external sense resistor for current sensing. The fast-charging current is determined by programming ISET1 or ISET2 pin, depending on the state of the USB_DET. If USB_DET is high, indicating a valid USB input is present, the fast charge current is set by ISET2; otherwise, it is set by ISET1. When the battery voltage reaches the termination voltage i.e. 4.2V, the charging path disconnects SYS to BATT. The ETA6003 also includes a dynamic power path when the SYS load current exceeds current limit of the DCDC regulator internally set, the SYS voltage falls below V_{BATT} , ETA6003 turns on the power-path to supplement the system load through the battery.

FEATURES

- ◆ Switching Charger with Power Path Management
- ◆ Up to 95% DC-DC Efficiency
- ◆ 50mΩ Power Path MOSFET
- ◆ Up to 2.5A Max charging current
- ◆ Instant on with a dead Battery or no Battery
- ◆ No battery detection
- ◆ No External Sense resistor
- ◆ Programmable USB and AC IN Charging Current

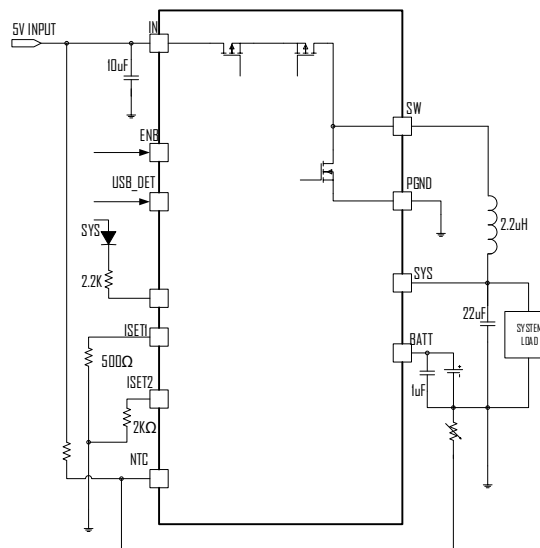
APPLICATIONS

- ◆ Tablet, MID
- ◆ Smart Phone
- ◆ Power Bank

ORDERING INFORMATION

PART	PACKAGE PIN	TOP MARK
ETA6003Q3Q-T	QFN3X3-16	ETA-42

TYPICAL APPLICATION



2A Switching Charger with Dynamic Power Path