

AT717

2.25MHz, 800mA Synchronous Step-Down Regulator



Immense Advance Tech.

FEATURES

- Up to 96% Efficiency
- 800mA Load Current
- 2.5V to 5.5V Operating Input Voltage Range
- Fixed 2.25MHz Oscillator Frequency at PWM Operation
- Maximum Duty Cycle up to 100%
- 0.6V Reference Voltage
- Shutdown Current $\leq 1\mu\text{A}$
- Current Mode Operation for Excellent Line and Load Transient Response
- Over Current Protecton / Thermal Shutdown
- Build-in Low $R_{\text{DS(ON)}}$ Power MOSFET switch / No Schottky Diode Required

APPLICATION

- Cell Phone, Smart Phone, PDA.
- WLAN
- Digital Cameras
- Portable Media Players
- Personal Information Appliances

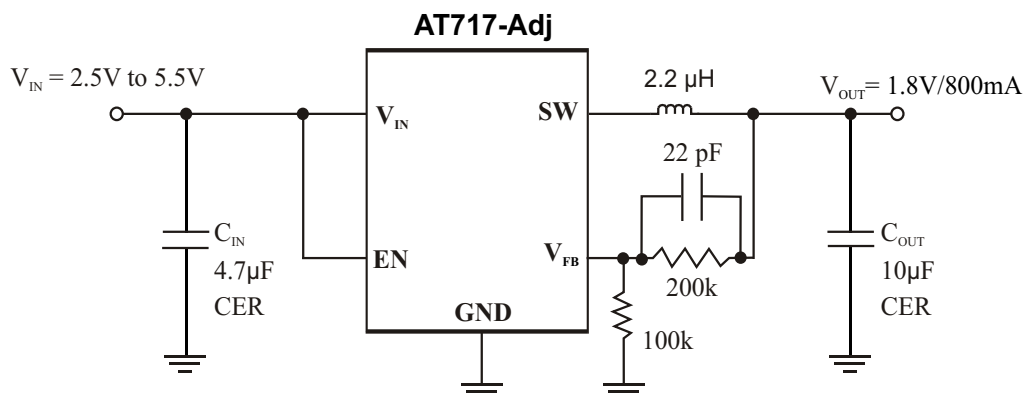
DESCRIPTION

The AT717 is a high-efficiency, synchronous step-down converter ideally suited for portable systems powered by 1-cell Li-Ion or 3-cell NiMH/NiCd batteries. The devices are also suitable to operate from a standard 3.3V to 5V voltage rail. The AT717 is available in an adjustable version and fixed output voltages. The output current is up to 800mA, the AT717 is ideal for powering the low voltage processors used in PDAs, pocket PCs, and smart phones.

Under nominal load current, the devices operate with a fixed switching frequency of typically 2.25 MHz. The Current Mode operation achieves fast line and load transient response. The full duty cycle allows the AT717 works at very low difference voltage. Low output voltages are easily supported with the 0.6V feedback reference voltage.

The AT717 needs only three small external components except the resistive divider. The internal synchronous switch increases efficiency and eliminates the need for an external Schottky diode.

TYPICAL APPLICATION CIRCUITS



<Figure 1.> High Efficiency Step-Down Converter

