

## Ultra-Small Package PWM/PFM Switching Control

### Step-Up Switching Regulator

#### Description

The ME2179 series is a CMOS step-up switching regulator which mainly consists of a reference voltage source, an oscillation circuit, an error amplifier, a phase compensation circuit, a timer latch short-circuit protection circuit, a PWM / PFM switching control circuit. With an external low-ON-resistance Nch Power MOS, this product is ideal for applications requiring high efficiency and a high output current.

During light-load, ME2179 Series switches its operation to the PFM control by the PWM / PFM switching control circuit in order to prevent efficiency decline due to the IC operating current. Ceramic capacitors can be used for output capacitor.

#### Feature

- Input voltage range: 1.8 V to 5.5 V
- Duty ratio: Built-in PWM/PFM switching control circuit 28% to 85%
- oscillator frequency: 1.2MHz
- Reference voltage :  $0.6 \times (1 \pm 2\%) \text{ V}$
- Maximum output current: 2.0A typ. (VDD=3V, Vout=5.0V)
- Soft start function: 8ms typ.
- Low current consumption: 70 $\mu$ A typ. at switching off
- Shutdown function: Current consumption 1.0 $\mu$ A max. at shutdown
- External parts: Inductor, diode, capacitor, transistor
- Timer latch short-circuit protection circuit: Selectable with / without short-circuit protection circuit for each product;
- Settable delay time by external capacitor (in the product with short-circuit protection)
- UVLO (under-voltage lockout) function: Selectable with UVLO for each product

#### Typical Application

- MP3 players, digital audio players
- Digital cameras, GPS, wireless transceiver
- Portable devices

#### Selection Guide

