

General Description

The AP2420 is a 1.2MHz constant frequency current mode PWM step-down converter. It is ideal for portable equipment requiring very high current up to 2A from single-cell Lithium-ion batteries while still achieving over 90% efficiency during peak load conditions. The AP2420 also can run at 100% duty cycle for low dropout operation, extending battery life in portable systems while light load operation provides very low output ripple for noise sensitive applications. The AP2420 can supply up to 2A output load current from a 2.5V to 6.0V input voltage and the output voltage can be regulated as low as 0.6V. The high switching frequency minimizes the size of external components while keeping switching losses low. The internal slope compensation setting allows the device to operate with smaller inductor values to optimize size and provide efficient operation. The AP2420 is available in two kind's Pb-free packages, 3mm x 3mm 10-lead DFNWB & MSOP package and is rated over the -40°C to +85°C temperature range.

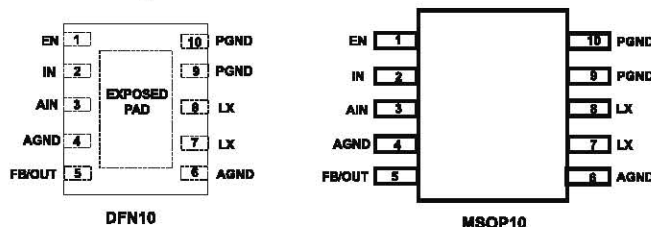
Features

- Input Voltage Range: 2.5V to 6.0V
- Output Voltages from 0.6V to V_{IN}
- 2A Output Current
- High Efficiency: Up to 95%
- 1.2MHz Constant Switching Frequency
- Low RDS(ON) Internal Switches: 0.15Ω
- Allows Use of Ceramic Capacitors
- Current Mode Operation for Excellent Line and Load Transient Response
- Short-Circuit and Thermal Fault Protection
- Soft Start
- Low Dropout Operation: 100% Duty Cycle
- Low Shutdown Current: $I_{SHUTDOWN} < 1\mu A$
- DFNWB33-10L Package; MSOP10 Package
- -40°C to +85°C Temperature Range

Applications

- Cellular Phones
- Digital Cameras
- DSP Core Supplies
- Printers
- Portable Instruments
- xDSL
- MID or UMPC

Pin Assignment



Typical Application Circuit

