PT1301
High Efficiency, Low Voltage Step-up DC/DC Converter

GENERAL DESCRIPTION

The PT1301 is a compact, high efficiency, and low voltage step-up DC/DC converter with an Adaptive Current Mode PWM control loop. It comprises of an error amplifier, a ramp generator, a PWM comparator, a switch pass element and the driver. It provides stable and high efficient operation over a wide range of load currents without external compensation. The below 1V start-up input voltage makes PT1301 suitable for single battery cell applications. The built-in power transistor is able to provide up to 300mA output current while working under Li-Battery Supply. Besides, it provides extra pin to drive external power devices (NMOS or NPN) in case higher output current is needed. The output voltage is set with two external resistors. The 500KHz high switching rate reduces the size of external components. Besides, the 14μA low quiescent current together with high efficiency maintains long battery lifetime.

FEATURES

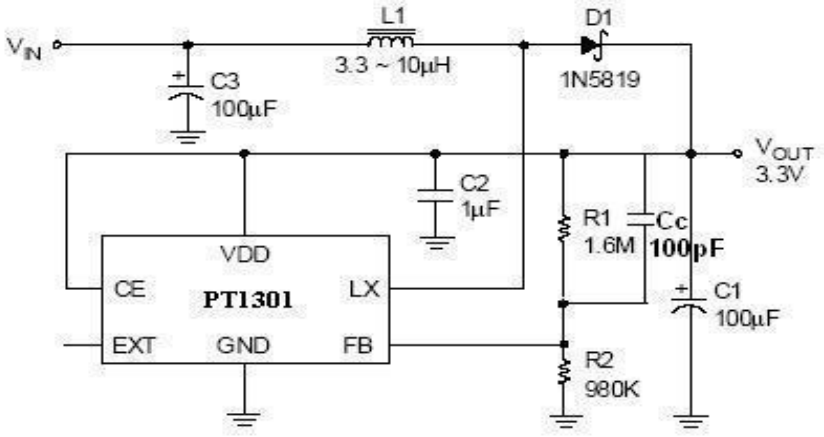
- Low Profile SOT Package
- Low Quiescent (Switch-off) Supply Current: 14μA
- Low Start-up Input Voltage: typical 0.8V
- High Supply Capability: Deliver 3.3V 100mA with 1Alkaline Cell; 5V 300mA with 1 Li-Cell
- Zero Shutdown Mode Supply Current
- High efficiency: 90%
- Fixed switching frequency: 500KHz
- Options for internal or external power switches
- Package type: SOT-26, SOT-89-5

APPLICATIONS

- MP3 Player
- PDA
- Electronic Dictionary
- DSC
- LCD
- RF-Tag
- Portable Devices
- Wireless Devices

TYPICAL APPLICATION

DC-DC



PT1301 Typical Application

Note: Cc for better Stability