

PST955

The PST9505 is a high efficiency, synchronous, fixed frequency, step-up converter designed for single-cell or dual-cell alkaline, NiMH, or NiCd battery-powered applications. The high 1.2MHz switching frequency and completely integrated control circuitry minimize the total solution footprint area while maintaining excellent regulation, ripple, and transient response throughout the full load range.

Pulse skipping mode operation and low quiescent current allow the PST9505 to maintain high efficiency performance for light load and sleep mode conditions. With a 1.2A peak switch current limit, the PST9505 is capable of delivering 100mA to the load from a single AA cell or up to 400mA from dual AA cells. The PST9505 has a 0.85V start-up voltage with operation down to 0.5V.

The PST9505 is available in the Pb-free, 6-pin SOT23 package and is rated over the -40 °C to +85 °C ambient temperature range.

Features

- VIN Operation Range: 0.5V to VOUT
- VOUT Range: 2.5V to 5.5V
- 100mA Output from a Single AA Cell Input
- 400mA Output from a Dual AA Cell Input
- High Efficiency: Up to 93% Efficiency
- Low Start-Up Voltage: 0.85V Typical
- Internal Synchronous Rectifier -VOUT ≤ 4.5: No External Schottky Diode
- Fixed Frequency Pulse Width Modulation (PWN) Current-Mode Control Scheme with Internal Compensation
- 1.2MHz Fixed Switching Frequency
- 1.2A Current Limit
- Light Load Pulse Skipping Mode Operation
- Low 80uA No Load Input Current
- Over-Current Protection
- EMI Reduction Anti-Ringing Control Circuitry
- Low Shutdown Current: <1.0uA
- -40 °C to +85 °C Ambient Temperature Range
- SOT23-6 Package