

Ultra-Low Quiescent Dual Synchronous Step-Down Controller with 5V and 3.3V LDOs

Features

- ★ Input Voltage Range: 5V to 26.4V
- ★ Output Voltage Range: 5V for Buck1 and 3.3V for Buck2 (Adjustable Range +/-10%)
- ★ 100mA Capability for LDO3 and LDO5
 - Always-on LDO3 for PS1585A
 - Always-on LDO3 and LDO5 for PS1585B
- ★ +/-1% Reference Accuracy
- ★ V²COT-based Architecture with 400kHz (CH1) and 475kHz (CH2) Support MLCCs Output Capacitors
- ★ Separate Enable Input for Bucks
- ★ Power Good Indicator
- ★ Selectable DEM/SDEM for Longer Battery Life/Avoiding Audio Noise
- ★ Individual Overcurrent Setting Pins with 4200ppm/°C Current Source
- ★ Undervoltage and Overvoltage Protection
- ★ Non-Latch Undervoltage Lockout and Overtemperature Protection
- ★ 20-pin 3x3 (mm) WQFN Package
- ★ RoHS Compliant and Halogen Free

General Description

PS1585A/B is a cost-effective, dual synchronous step-down controller with 5V and 3.3V LDOs, aimed for system-power supply solution of each computer fields. The device could achieve ultra-low quiescent current when system enters sleep mode or low power consumption. The selectable DEM/SDEM could also be beneficial for long battery life in system stand-by mode. During normal operation, an internal bypass switch is enabled in order to increase the efficiency of LDOs. V²COT-based architecture with current injection supports MLCCs output capacitors application without external compensation network. The PS1585A/B operates with supply input voltage range from 5V to 26.4V and supports output voltages of 5V and 3.3V. The PS1585A/B is available in a 20-pin 3x3 (mm) WQFN package and is specified from -40°C to +85°C ambient temperature range.

Applications

- ★ Desktop Computers
- ★ Notebook Computers
- ★ Tablet Computers

Simplified Application Circuit

