

4.5V to 23V Input, 10A Sync Step-Down Converter with 3.3V/5V LDOs

Features

- ★ **Input Voltage Range:**
 - 4.5V to 23V for PS1210A/AL/B/BL
 - 5.2V to 23V for PS1210C/CL
- ★ **Output Voltage Range:**
 - 0.6V to 5.5V for PS1210A/AL
 - 3.3V for PS1210B/BL
 - 5.1V for PS1210C/CL
- ★ **V²COT-based Architecture with 500kHz Support MLCCs Output Capacitors**
- ★ **10A Continuous Output Current**
- ★ **Selectable DEM/SDM for Longer Battery Life/Avoiding Audio Noise**
- ★ **100mA Capability for LDO3 and LDO5**
 - LDO3 for PS1210B/BL
 - LDO5 for PS1210C/CL
- ★ **Over Current Protection (OCP)**
 - Adjustable OCP for PS1210A/AL
 - 15A OCP for PS1210B/BL/C/CL
- ★ **UVP, OVP and OTP Protections:**
 - Non-Latched Mode OTP, OVP and Hiccup Mode UVP for PS1210A/B/C
 - Latched Mode for PS1210AL/BL/CL
- ★ **Non-Latch UVLO Protection**
- ★ **UQFN-23L 3x3 (FC) package**
- ★ **RoHS Compliant and Halogen Free**

General Description

The PS1210 series are cost-effective synchronous step-down DC-DC converters. The device achieves low power consumption with external pin selectable DEM/SDM, respectively which could be beneficial for long battery life and avoid audio noise. V²COT-based architecture with current injection supports MLCCs output capacitors application without an external compensation network. The PS1210 provides open-drain Power Good indicator for power sequence control. The device integrates full protection features, including the cycle-by-cycle OCP, OVP, UVP, input UVLO and OTP. The PS1210 is available in a UQFN-23L 3x3 (FC) package and is specified from -40°C to +85°C ambient temperature range.

Applications

- ★ Tablet PCs
- ★ Laptop Computers
- ★ Servers
- ★ Network Systems

Simplified Application Circuit

