Offline Current Mode PWM Controller with Built-in CC Regulation

FEATURES

- **General Primary Side Constant-Current (CC) Control Supports DCM and CCM Operation**
- **±5% CC Regulation, ±1% CV Regulation with Fast Dynamic Response**
- **CC Algorithm Compensates for Line Variation and Transformer Inductance Tolerance**
- **Less than 75mW Standby Power for sub 30W Application**
- **Current Mode Control**
- **Built-in Frequency Shuffling**
- **Fixed 65KHz Switching Frequency**
- **Green Mode and Burst Mode Control**
- **On-chip Thermal Shutdown**
- **Cycle-by-Cycle Current Limiting**
- **Built-in Leading Edge Blanking**
- **Built-in Slope Compensation**
- **Very Low Startup and Operation Current**
- **Available with SOT23-6 Package**

APPLICATIONS

- **Chargers and Adapter**
- **Motor Driver Power Supply**

GENERAL DESCRIPTION

DP2291 is a high performance current mode PWM controller for offline flyback converter applications. The IC has built-in General Primary Side CC control, which simplifies isolated power supply design that requires CC regulation of the output.

In DP2291, PWM switching frequency with shuffling is fixed to 65KHz and is trimmed to tight range. The IC has built-in green and burst mode control for light and zero loadings, which can achieve less than 75mW standby power for sub 30W applications..

DP2291 integrates functions and protections of Under Voltage Lockout (UVLO), VDD over Voltage Protection (VDD OVP), Cycle-by-cycle Current Limiting (OCP), Short Load Protection (SLP), Over Load Protection (OLP), On-Chip Thermal Shutdown (OTP), Soft Start, VDD Clamping, etc. .

TYPICAL APPLICATION CIRCUIT (For Applications with CC/CV Control)