



New Product Announcement

AP31261

AP31261 Robust Green-Mode PWM Controllers

The AP31261 current-mode PWM controller is optimized for use in high-performance, low-standby power, cost effective, offline flyback converters. It is available in the SOT26 package.

AP31261 has three modes of operation to minimize power losses dependent on load.

1.Fixed 65kHz PWM switching frequency: under full-load.

2.Green Mode: At lighter loads the AP31261 automatically switches to PFM with switching frequency fold-back, improving system efficiency. A 20kHz minimum switching frequency avoids audible noise.

3.Burst Mode: Under Light- or No-load to minimize standby power.

Frequency dithering is built-in to reduce EMI emissions.

AP31261 includes comprehensive protection features such as cycle-by-cycle current limit (OCP), V_{CC} Overvoltage Protection (VOVP), internal OTP, and Overload Protection (OLP).

AP31261 has additional short protection for the current sense pin which protects the system from Bus capacitor open and current sense resistor short conditions.



The Diodes' Advantage

AP31261 is a high performance and cost effective offline AC-DC solution for portable applications and consumer and home appliances.

- **Three Modes of Operation: 65kHz PWM Mode, Green-Mode and Burst Mode**
Improves efficiency across all load levels.
- **Frequency Dithering in 65kHz PWM and Green Modes**
Reduces EMI emission.
- **Internal Slope and Line Compensation**
Simplifies the feedback loop design giving a more robust design
- **Overcurrent Protection, V_{CC} Overvoltage Protection, Internal OTP, Overload Protection**
Increases system reliability and robustness.
- **Short Protection for Current Sense Pin**
Protects the system from Bus capacitor open and current sense resistor short
- **CTRL Pin Versatile Protection**
Provides external OTP/OVP with minimal number of components

Applications

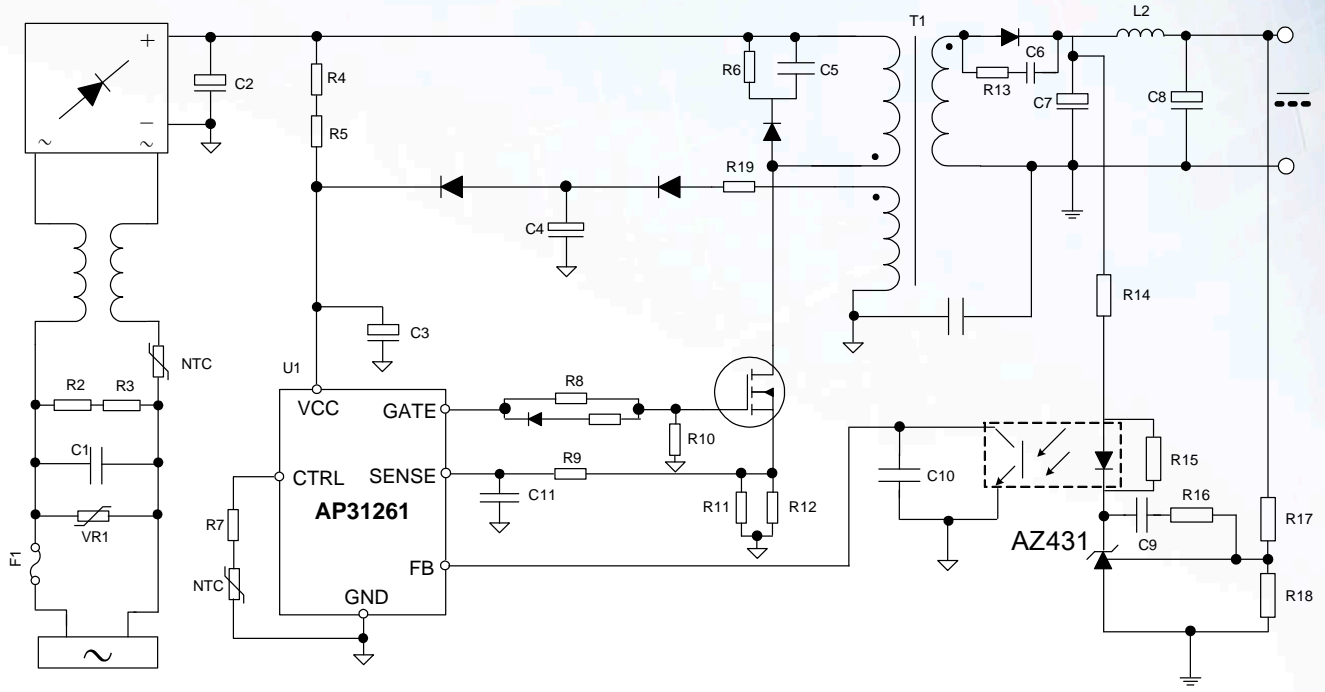
- Switching AC-DC Adapter/Charger
- ATX/BTX Auxiliary Power
- Set-top Box (STB) Power Supply
- Open Frame Switching Power Supply



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Typical Application Schematic



Diodes' Green-Mode PWM Controllers

Part	HV Start-Up Circuit	Startup Current (μA)	UVLO Threshold on/off (V)	Gate Output Current (mA)	PWM Oscillation Frequency (kHz)	CTRL Pin		VOVP	OLP & SOCP	BNO	LOVP	Package (Note 1)
						LOW	HIGH					
AP31261	No	1	15.8/7.6	350	65	Latch	Auto-recover	Auto-recover	Auto-recover	NC	NC	SOT26

Note:1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes

Ordering Information

Device	Operating Junction Temperature	Packaging	Part Mark	Reel Size	Quantity
AP31261	-40 to +150°C	SOT26	GPE	7"	3,000