



# New Product Announcement

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## AP3127/H

## AP3127/H Cost Effective PWM Controllers for Quick Charge Applications

The AP3127/H current mode PWM controllers are optimized for high performance and cost effective Quick Charge application systems and are available in the SOT26 package.

AP3127/H has three modes of operation to minimize power losses at all loads:

**1. Fixed 65kHz/100kHz PWM** switching frequency under Full-Load.

**2. Green Mode:** At lighter loads AP3127/H 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.

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

AP3127/H has additional output Overvoltage (SOVP) and output Undervoltage Protection (SUVP) which provides protection when charger's output cable is shorted.

AP3127/H coupled with a CC/CV controller and a protocol decoder provides a cost-effective Quick Charge system.



### The Diodes Advantage

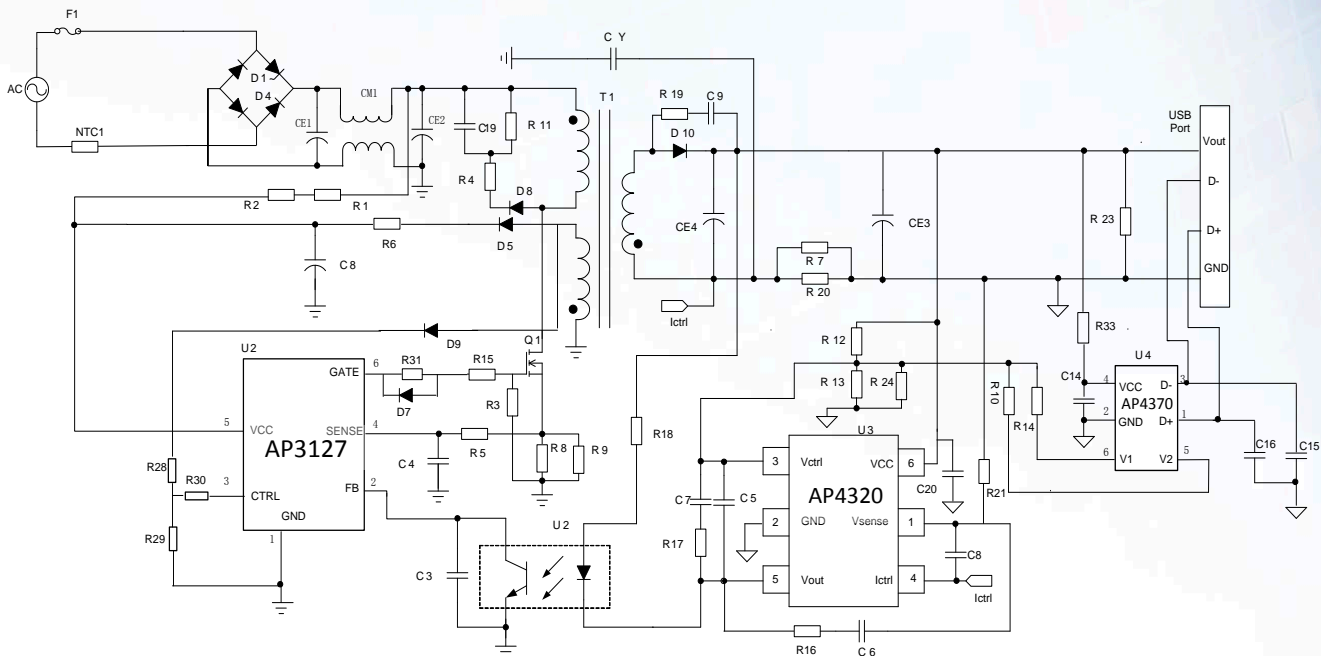
AP3127/H delivers high-performance, cost-effective Quick Charge solutions for portable and consumer applications.

- **Three Modes of Operations: Fixed-frequency PWM Mode, Green Mode and Burst Mode**  
Improves efficiency across all load levels
- **Frequency Dithering in Fixed-Frequency PWM and Green Modes**  
Reduces EMI emission
- **Internal Slope and Line Compensation**  
Simplifies the feedback loop design making a more robust design
- **Overcurrent Protection,  $V_{CC}$  Overvoltage Protection, Internal OTP, Overload Protection**  
Increases system reliability and robustness
- **Output Undervoltage Protection (SUVP)**  
Provides protection when charger's output cable is shorted

### Applications

- Quick Charger for intelligent Smartphone
- Switching AC-DC Adapters

## Typical Quick Charge Solution



## Diodes' Cost Effective PWM Controllers for Quick Charge Applications

Part Number	HV Start-Up Circuit	Startup Current (µA)	UVLO Threshold on/off (V)	Gate Output Current (mA)	PWM Oscillation Frequency (kHz)	SOVP/SUVP PIN		VOVP	OLP & SOCP	BNO	LOVP	Package (Note 1)
						SOVP	SUVP					
AP3127	No	1	15.8/7.6	350	65	Auto-recover	Auto-recover	Auto-recover	Auto-recover	NA	NA	SOT26
AP3127H					100							

## Ordering Information

Device	Operating Junction Temperature	Packaging	Part Mark	Reel Size	Quantity
AP3127	-40 to +150°C	SOT26	GPH	7"	3,000
AP3127H	-40 to +150°C	SOT26	GSH	7"	3,000

To find out more information:

Family web page [http://www.diodes.com/catalog/Offline\\_PWM\\_Controllers\\_146](http://www.diodes.com/catalog/Offline_PWM_Controllers_146)

Datasheet: [http://diodes.com/files/datasheets/AP3127\\_H.pdf](http://diodes.com/files/datasheets/AP3127_H.pdf)