



AP3108L High-Voltage PWM Controller

The AP3108L is a Current Mode PWM controller with HV-start up, optimized for off-line power supplies that require ultra-low standby power, high-power density and comprehensive protection. Operating with secondary-side USB- PD/Rapid charge controllers, it provides versatile solution applications which require a wide dynamic output power range.

The AP3108L integrates the high-voltage start-up function through its HV pin which removes the external start-up resistor and reduces standby loss. Its HV pin also realizes X-CAP discharge function, saving power when an X-CAP is connected to a system by automatically discharging it when the AC line voltage is off.

The AP3108L integrates a Vcc LDO, improving the AP3108L accuracy in applications that have wide output voltage ranges.

The AP3108L provides versatile system protections function such as secondary side OVP, secondary side UVP, constant output current limit, cycle-by-cycle primary current limit, brown-out protection, programmable external OTP, etc.

It is available in the small footprint SSOP-9 package.



The Diodes Advantage

The AP3108L is a high-performance, high-integration part optimized for portable and consumer applications which need ultra-low standby power and wide output voltage range.

- **Multiple modes of operation:**
65kHz CCM PWM Mode, Green-Mode and Burst Mode
Optimizing efficiency across all load levels

- **High voltage startup/ X-cap discharge function**
Achieves ultra -low standby power loss

- **Internal 100V LDO regulates Vcc**
Improves performance, reduces BOM count and simplifies system design

- **Constant output current limitation**
Maintains same overcurrent limit over a wide output voltage range

- **Precise Output overvoltage/undervoltage protection (SOVP/SUVP)**
Improves the OVP/UVP performance

- **AC input brown-out protection(BNO) Prevents BNO system damage due to ultra-low line condition**

Applications

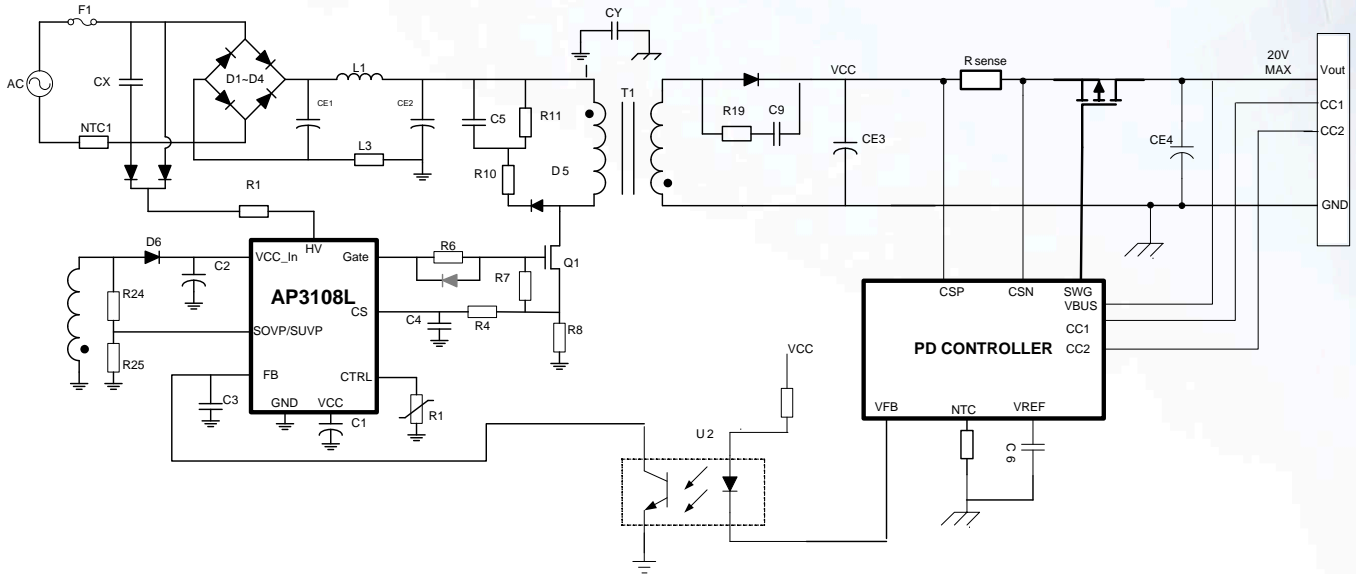
- USB PD
- Rapid Charger
- Notebook Adaptor
- General AC/DC Adaptor



New Product Announcement

AP3108L

Typical Application Schematic



Diodes' HV PWM Controllers for Wide Range Output Application

Part Number	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					
AP3108L	Yes	1.5	15.8/7.5	500	65	Auto-recover	Auto-recover	Auto-recover	Auto-recover	Auto-recover	Auto-recover	SSOP-9

All variants are in packages that are "Green" Molding Compound (No Br, Sb) with Lead Free Finish/RoHS Compliant (Note 1)
Notes:1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes

To find out more information:

Datasheet: <https://www.diodes.com/assets/Datasheets/AP3108L.pdf>