



New Product Announcement

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AP3776/AP3776B

Low-Power Offline Primary Side Regulation Controller

The AP3776/AP3776B is a high performance AC-DC power supply controller for battery charger and adapter applications.

It can meet less than 10mW standby power for “Super Star” charger criteria. The device uses Pulse Frequency Modulation (PFM) method to build discontinuous conduction mode (DCM) flyback power supplies.

The AP3776/AP3776B provides accurate constant voltage (CV), constant current (CC) and outstanding dynamic performance, eliminating the need for an optocoupler. It also eliminates the need of loop compensation circuitry while maintaining stability.

The AP3776/AP3776B achieves excellent regulation and high average efficiency, less than 10mW no-load power consumption and less than 1s startup time.

When the AP3776/AP3776B is used with AP4341, APR343 or APR3415, improved under-shoot performance and higher conversion efficiency can be achieved.



The Diodes' Advantage

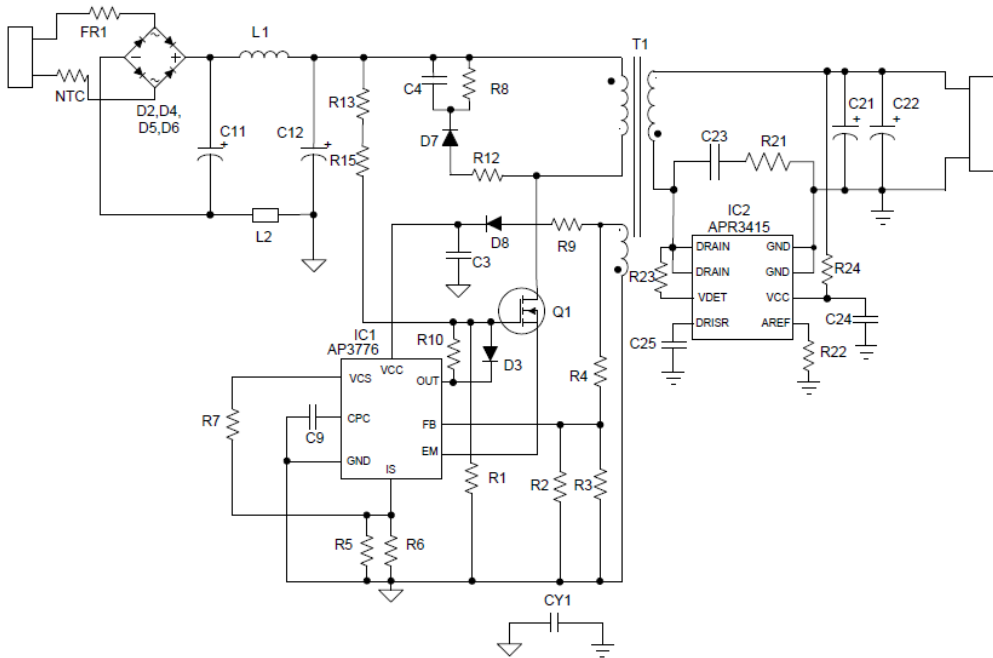
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- **Primary Side Control**
Eliminates the need for an optocoupler
- **10mW No-load Input Power**
Ultra low standby power
- **Random Frequency Adjustment**
Reduced System EMI
- **Semi-valley Turn on**
For higher efficiency
- **Multi Protections: OVP & OTP & SCP**
For system safety
- **Internal Cable Compensation**
To compensate for voltage drop on cable

Applications

- Charger/adaptor for portable applications

Typical Application Schematic



Product Portfolio

Part Number	Vcc Max (V)	Startup Current (μA)	Operating Current (μA)	UVLO Threshold on/off (V)	Power Rating (W)	Standby Power (mW)	Cable Compensation	Package Outlines
AP3776	28	0.2	280	13/6.1	15W	10	7%	SO-8
AP3776B	28	0.2	280	13/6.1	15W	10	3%	SO-8

Ordering Information

Part Number	Package	Temperature Range	Cable Compensation Voltage	Marking ID	Packing
AP3776MTR-G1	SO-8	-40 to +150°C	7%	3776M-G1	4,000/Tape & Reel
AP3776BMTR-G1	SO-8	-40 to +150°C	3%	3776BM-G1	4,000/Tape & Reel