


PRIMARY SIDE CONTROL IC FOR OFF-LINE BATTERY CHARGERS
AP3706
Description

The AP3706 is a high performance AC/DC power supply controller for battery charger and adapter applications. The device uses Pulse Frequency Modulation (PFM) method to build discontinuous conduction mode (DCM) flyback power supplies.

The AP3706 provides constant voltage, constant current (CV/CC) regulation without requiring an opto-coupler and secondary control circuitry. It also eliminates the need of loop compensation circuitry while maintaining stability.

The AP3706 achieves excellent regulation and high power efficiency, the no-load power consumption is less than 200mW at 265VAC input.

Parametric Table

Startup Current (μ A)(Typ)	70
UVLO Threshold on/off (V) (Typ)	18.5/7.4
Operating Current (μ A) (Typ)	680
Standby Power (W)	<0.3
Package	SOIC-8

Applications

- Adapters/Chargers for Cell/Cordless Phones, PDAs, MP3 and Other Portable Apparatus
- Standby and Auxiliary Power Supplies

Features

- Primary Side Control for Rectangular Constant Current and Constant Voltage Output
- Eliminates Opto-Coupler and Secondary CV/CC Control Circuitry
- Eliminates Control Loop Compensation Circuitry
- Flyback Topology in DCM Operation
- Random Frequency Modulation to Reduce System EMI
- Valley Turn on of External Power NPN Transistor
- Built-in Soft Start
- Open Circuit Protection
- Over Voltage Protection
- Short Circuit Protection

Benefits

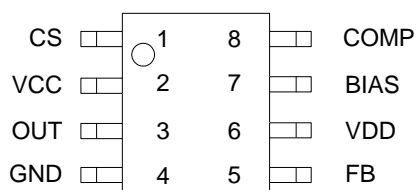
- High Power Efficiency for Battery Chargers
- Low Total Cost

Additional Available Materials

- Samples
- Preliminary Datasheet
- ESD Report
- Demo Board
- Application Note

**PRIMARY SIDE CONTROL IC FOR OFF-LINE BATTERY CHARGERS****AP3706****Pin Configuration**

M Package

**Ordering Information Example**

Package	Temperature Range	Part Number	Marking ID	Packing Type
SOIC-8	-40 to 85°C	AP3706M-E1	3706M-E1	Tube
		AP3706MTR-E1	3706M-E1	Tape & Reel

Detailed information please refer to the relevant datasheet.

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