BP870XD/BP870XBD

Integrated Flyback Switcher IC

Description

The BP870X family is a series of highly integrated current mode PWM switcher ICs with high performance, low standby consumption suitable for designing flyback converters up to 25 W.

The BP870X integrates a 650 V power MOSFET and a high-voltage current source which eliminates the startup resistors. It supports CCM and DCM operations. At full load, the IC operates in 65 kHz fixed frequency. When the load goes down, it operates in Green Mode while the oscillator frequency is controlled by the feedback voltage on the FB pin. At no load condition, the IC operates in burst mode to minimize the standby power.

Frequency modulation and intelligent driving circuit are built in, which helps to achieve excellent EMI performance. Internal slope compensation improves the system stability.

The BP870X features comprehensive protections, including cycle-by-cycle current limit, VCC over voltage protection and under voltage lock out, over-load protection (BP870XD) or constant power output (BP870XBD), and over temperature protection.

The BP870X is available in SOP-8 package.

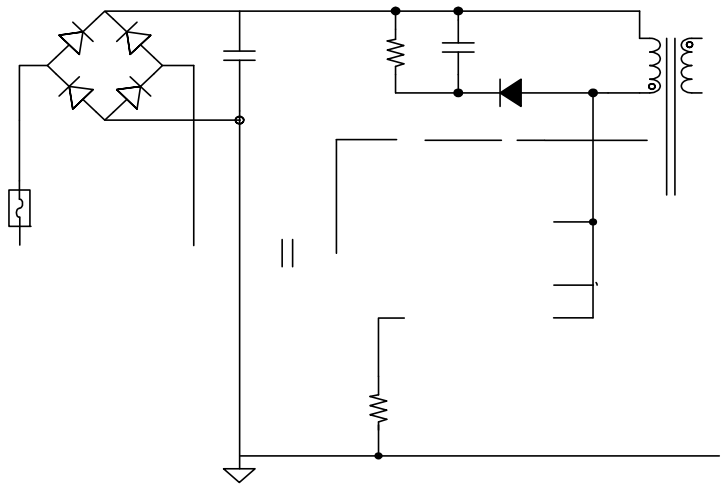
Features

- Less than 75 mW no-load consumption
- Integrated 650 V power MOSFET
- High-voltage current source eliminates startup resistors
- Internal 4 ms soft start
- Fixed 65 kHz frequency at heavy load
- Green mode at light load
- Frequency modulation and intelligent driving for excellent EMI
- Audible noise free operation
- Built-in slope compensation
- Built-in leading-edge blanking (LEB)
- >4mm creepage distance
- Comprehensive protections
  - Cycle-by-Cycle current limit
  - VCC over voltage protection (OVP)
  - VCC under voltage lock out (UVLO)
  - Over-load protection (for BP870XD)
  - Over temperature protection (OTP)

Applications

- QC / USB PD Chargers
- AC/DC Adapters
- Standby Power Supply

Typical Application



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