Product Overview

UC3843B: High Performance Current Mode PWM Controller

For complete documentation, see the data sheet

Product Description

The UC3842B, UC3843B series are high performance fixed frequency current mode controllers. They are specifically designed for Off-Line and dc-to-dc converter applications offering the designer a cost-effective solution with minimal external components. These integrated circuits feature a trimmed oscillator for precise duty cycle control, a temperature compensated reference, high gain error amplifier, current sensing comparator, and a high current totem pole output ideally suited for driving a power MOSFET.

Also included are protective features consisting of input and reference undervoltage lockouts each with hysteresis, cycle-by-cycle current limiting, programmable output deadtime, and a latch for single pulse metering.

These devices are available in an 8-pin dual-in-line and surface mount (SO-8) plastic package as well as the 14-pin plastic surface mount (SO-14). The SO-14 package has separate power and ground pins for the totem pole output stage.

The UCX842B has UVLO thresholds of 16 V (on) and 10 V (off), ideally suited for off-line converters. The UCX843B is tailored for lower voltage applications having UVLO thresholds of 8.5 V (on) and 7.6 V (off).

Features

- Trimmed Oscillator for Precise Frequency Control
- Oscillator Frequency Guaranteed at 250 kHz
- Current Mode Operation to 500 kHz
- Automatic Feed Forward Compensation
- Latching PWM for Cycle-By-Cycle Current Limiting
- Internally Trimmed Reference with Undervoltage Lockout
- High Current Totem Pole Output
- Undervoltage Lockout with Hysteresis
- Low Startup and Operating Current
- Pb-Free Packages are Available

Part Electrical Specifications

Product	Compliance	Status	Topology	Control Mode	f_{sw} Typ (kHz)	Stand-by Mode	UVLO (V)	Short Circuit Protection	Latch	Soft Start	V_{CC} Max (V)	Drive Cap. (mA)	Package Type
UC3843BD1G	Pb-free Halide free	Active	Flyback	Current Mode	52	No	Yes	Yes	No	No	30	200 / 200	SOIC-8
UC3843BD1R2G	Pb-free Halide free	Active	Flyback	Current Mode	52	No	Yes	Yes	No	No	30	200 / 200	SOIC-8
UC3843BDG	Pb-free Halide free	Active	Flyback	Current Mode	52	No	Yes	Yes	No	No	30	200 / 200	SOIC-14
UC3843BDR2G	Pb-free Halide free	Active	Flyback	Current Mode	52	No	Yes	Yes	No	No	30	200 / 200	SOIC-14
UC3843BNG	Pb-free Halide free	Active	Flyback	Current Mode	52	No	Yes	Yes	No	No	30	200 / 200	PDIP-8
UC3843BVD1G	Pb-free Halide free	Active	Flyback	Current Mode	52	No	Yes	Yes	No	Yes	30	200 / 200	SOIC-8
UC3843BVD1R2G	Pb-free Halide free	Active	Flyback	Current Mode	52	No	Yes	Yes	No	Yes	30	200 / 200	SOIC-8
UC3843BVDG	Pb-free Halide free	Active	Flyback	Current Mode	52	No	Yes	Yes	No	Yes	30	200 / 200	SOIC-14
UC3843BVDR2G	Pb-free Halide free	Active	Flyback	Current Mode	52	No	Yes	Yes	No	Yes	30	200 / 200	SOIC-14
UC3843BVNG	Pb-free Halide free	Active	Flyback	Current Mode	52	No	Yes	Yes	No	Yes	30	200 / 200	PDIP-8

For more information please contact your local sales support at www.onsemi.com

Created on: 5/1/2013