# CURRENT MODE PWM CONTROLLER

For complete specification refer to " Linear & Switching Voltage Regulators Appl. Manual ". (Order Code AMLISVOREST/1)

- OPTIMIZED FOR OFF-LINE AND DC TO DC CONVERTERS
- LOW START-UP CURRENT (< 1 mA)
- AUTOMATIC FEED FORWARD COMPENSATION
- PULSE-BY-PULSE CURRENT LIMITING
- ENHANCED LOAD RESPONSE CHARACTERISTICS
- UNDER-VOLTAGE LOCKOUT WITH HYSTERESIS
- DOUBLE PULSE SUPPRESSION
- HIGH CURRENT TOTEM POLE OUTPUT
- INTERNALLY TRIMMED BANDGAP REFERENCE
- 500 KHz OPERATION
- LOW R_O ERROR AMP

DESCRIPTION

The UC3842/3/4/5 family of control ICs provides the necessary features to implement off-line or DC to DC fixed frequency current mode control schemes with a minimal external parts count. Internally implemented circuits include under voltage lockout featuring start-up current less than 1 mA, a precision reference trimmed for accuracy at the error amp

Minidip   SO-14
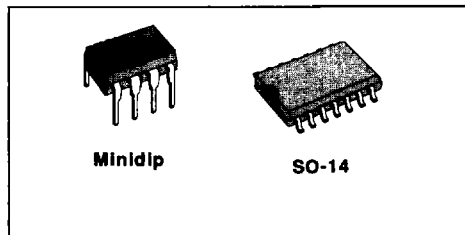
input, logic to insure latched operation, a PWM comparator which also provides current limit control, and a totem pole output stage designed to source or sink high peak current. The output stage, suitable for driving N-Channel MOSFETs, is low in the off-state.

Differences between members of this family are the under-voltage lockout thresholds and maximum duty cycle ranges. The UC3842 and UC3844 have UVLO thresholds of 16V (on) and 10V (off), ideally suited off-line applications The corresponding thresholds for the UC3843 and UC3845 are 8.5 V and 7.9 V. The UC3842 and UC3843 can operate to duty cycles approaching 100%. A range of the zero to < 50 % is obtained by the UC3844 and UC3845 by the addition of an internal toggle flip flop which blanks the output off every other clock cycle.

BLOCK DIAGRAM (toggle flip flop used only in U3844 and UC3845)