

Transition-Mode PFC Controller ME8401

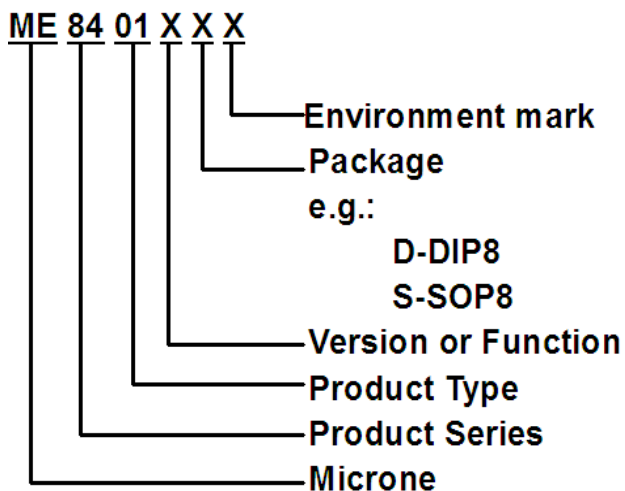
General Description

The ME8401 is a current-mode PFC controller operating in Transition Mode (TM). Pin-to-pin compatible with the predecessor ME8401, it offers improved performance. The highly linear multiplier includes a special circuit, able to reduce AC input current distortion, that allows wide-range-mains operation with an extremely low THD, even over a large load range. The output voltage is controlled by means of a voltage-mode error amplifier and a precise (1% @Tj =25°C) internal voltage reference. The device features extremely low consumption ($\leq 120 \mu\text{A}$ before start-up and $< 2\text{mA}$ running) and includes a disable function suitable for IC remote ON/OFF, which makes it easier to comply with energy saving norms (Blue Angel, EnergyStar, Energy2000, etc.). An effective two-step OVP enables to safely handle overvoltage either occurring at start-up or resulting from load disconnection. The totem-pole output stage, capable of 600mA source and 800mA sink current, is suitable for big MOS-FET or IGBT drive which, combined with the other features, makes the device an excellent low-cost solution for EN61000-3-2 compliant SMPS's up to 300W.

Features

- Transition-Mode control of PFC pre-regulators
- Proprietary multiplier design for minimum THD of AC input current
- Very precise adjustable output overvoltage protection
- Ultra-low($\leq 120\mu\text{A}$) start-up current
- Extended IC supply voltage range
- On-chip filter on current sense
- Disable function
- 1%(@ Tj = 25 °C) internal reference voltage
- -600/+800mA totempole gate driver with UVLO pull-down and voltage clamp
- DIP-8/SOP-8 packages

Selection Guide



Applications

PFC pre-regulators for:

- IEC61000-3-2 compliant SMPS(TV, Desktop PC, Monitor) up to 300W
- Hi-end AC-DC adapter/charger
- Entry level server & web server