

# Monolithic AC-DC PWM Controller

#### **GENERAL DESCRIPTION**

The PT2210 is a monolithic current mode PWM controller for AC-DC applications. The device integrates a power switch and controlling circuits providing low standby power and cost effective solution for the AC-DC converter applications.

The PT2210 operates at fixed 65KHz. Under no load or light load conditions, switching frequency is reduced to minimize switching loss. Low standby power and high efficiency is thus achieved. The built in LEB on the current sense input removes the signal glitches due to snubber circuit diode reverse recovery and thus reduces the external component count and thus the system cost in the design.

A complete set protection is implemented in the PT2210 including cycle-by-cycle current limiting (OCP), over load protection (OLP), VDD over voltage and under voltage lockout (UVLO). The PT2210 also features latched shut down including programmable OTP and programmable OVP protection. By limiting the minimum frequency above 22 kHz, the PT2210 based system eliminates the potential audible noise when the system works under light or no load conditions.

Excellent EMI performance is achieved with PowTech proprietary frequency Jittering technique

The PT2210 is available in a DIP-8 package.

#### **FEATURES**

- Integrates 2A/600V power switch
- Frequency jittering for improved EMI
- Green-Mode PWM for improved efficiency and minimum standby power design
- Fixed 65KHz PWM frequency
- Built in 4mS soft start
- Low start up current 20uA (Typ. 3uA) and low operation current (Typ. 1.0mA)
- Current mode operation
- Leading-edge blanking on current sense input
- Constant output power limit for universal AC input
- Built-in power limit control (OLP)
- Cycle-by-cycle current limiting (OCP)
- Under voltage lockout (UVLO)
- Latched programmable OTP
- Latched programmable OVP

### **APPLICATIONS**

Offline AC/DC flyback converters for

- Power Adapter
- Open-frame SMPS
- Battery Charger Adapter

#### ORDERING INFORMATION

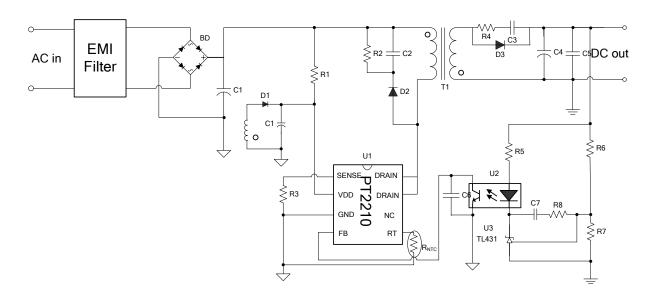
PACKAGE	TEMPERATURE RANGE	ORDERING PART NUMBER	TRANSPORT MEDIA	MARKING
DIP-8, Pb free	-40°C to 85°C	PT2210EDIH	50/Tube	PT2210

Note:

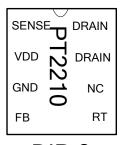




## **TYPICAL APPLICATIONS**



## **PIN ASSIGNMENT**



DIP-8

## **PIN DESCRIPTIONS**

NAMES	PIN No.	DESCRIPTION	
SENSE	1	Current sense input pin. Connected to MOSFET current sensing resistor node.	
VDD	2	DC power supply pin.	
GND	3	Ground	
FB	4	Feedback input pin. PWM duty cycle is determined by voltage level into this	
		pin and SENSE pin voltage level.	
RT	5	Multi-function pin. Connects a NTC resistor between RT and GND for	
		ambient temperature OTP or connect a Zener diode to VDD for over voltage	
		protection.	
NC	6	Not connection	
DRAIN	7,8	Internal power switch drain	