GENERAL DESCRIPTION

The PT4227 is primary side constant current regulator, which is designed for high performance and cost-effective LED lighting applications. With Powtech's proprietary constant current compensation technique accurate output current regulation is achieved without the need of a secondary feedback circuitry. Integrated primary inductance compensation circuitry provides accurate constant current operation despite variations in primary inductance. Excellent EMI performance is achieved with frequency jittering function together with soft driving control at totem pole gate drive output.

The device integrates a high voltage power switch, an oscillator, a current sense circuit, CC control circuit. It also features a complete set of integrated protection functions to protect against all fault conditions including output open/short circuit, line under-voltage, and over temperature shut down.

The PT4227 is available in an DIP-8L package.

FEATURES

● CC Without Secondary Feedback
● Integrates 600V Power Switch
● Inductance Compensation
● Low Startup Current (<10uA)
● Adjustable Primary Side Current limit
● VCC/FB Over Voltage Protection
● VCC/FB UVLO
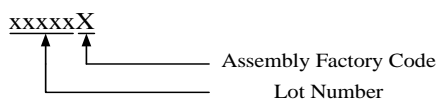● Feedback Loop Open Circuit Protection
● Over Temperature Protection

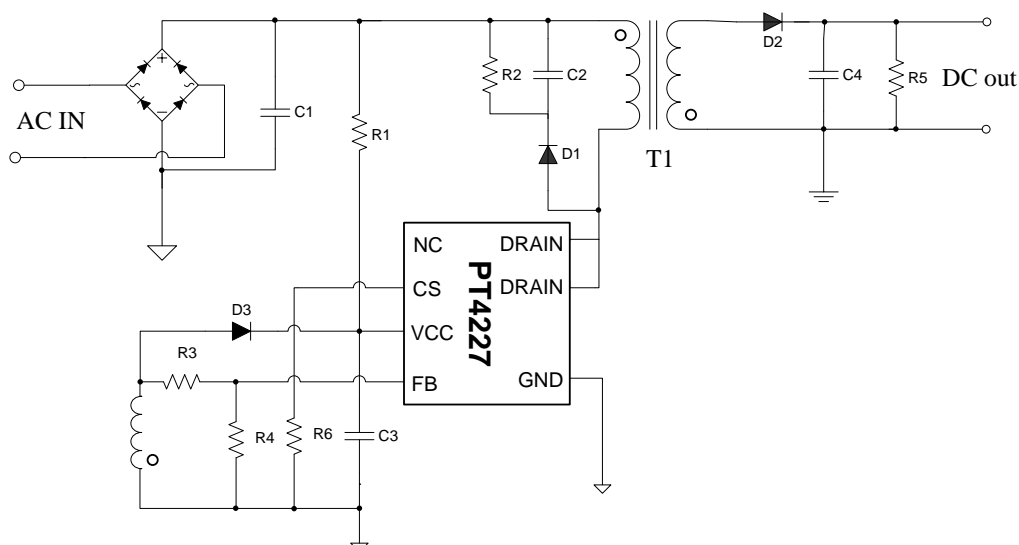## APPLICATIONS

● Sub 10W LED lighting applications

ORDERING INFORMATION

PACKAGE	TEMPERATURE RANGE	ORDERING PART NUMBER	TRANSPORT MEDIA	MARKING
DIP-8L，Pb free	-40℃ to 85℃	PT4227EDIH	Tube/50 units	PT4227 xxxxxX

Note:

xxxxxX
└── Assembly Factory Code
└── Lot Number

TYPICAL APPLICATION CIRCUIT

PIN ASSIGNMENT

```
        CS ┌1      ○      8┐ DRAIN
        CS ┌2             7┐ DRAIN
       GND ┌3   PT4227    6┐ NC
        FB ┌4             5┐ VCC
               DIP-8L
```
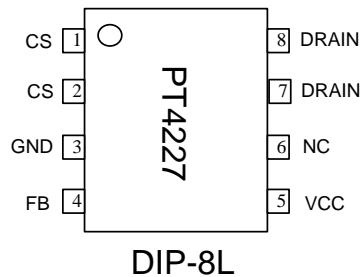
PIN DESCRIPTIONS

PIN No. DIP-8L	PIN NAMES	DESCRIPTION
1,2	CS	Primary Side Current Sense Input
3	GND	Ground
4	FB	Feedback Winding Voltage Sense Input
5	VCC	Power supply, the device is supplied by an auxiliary winding.
6	NC	Not connected
7,8	DRAIN	Internal power switch output, drive primary winding

ABSOLUTE MAXIMUM RATINGS (note1)

SYM	PARAMETER	VALUE	UNIT
VCC	VCC pin Voltage	-0.3~35	V
V_{FB}，V_{CS}	FB，CS pin Input Voltage	-0.3~5	V
V_{DRAIN}	DRAIN pin Voltage	-0.3~600	V
Topt	Operating Junction Temp. Range	-40 to 150	℃
Tstg	Storage Temp. Range	-55 to 150	℃
ESD	HBM	2000	V
$R_{\Theta JA}$	DIP_8L	107	℃/W

Note 1: Absolute Maximum Ratings indicate limits beyond which damage to the device may occur. Recommended Operating Range indicates conditions for which the device is functional, but do not guarantee specific performance limits. Electrical Characteristics state DC and AC electrical specifications under particular test conditions which guarantee specific performance limits. This assumes that the device is within the Operating Range. Specifications are not guaranteed for parameters where no limit is given, however, the typical value is a good indication of device performance.

RECOMMENDED OPERATING RANGE

SYM	PARAMETER	VALUE	UNIT
VCC	VCC pin Operating Voltage	9.5~26	V
T_A	Operating Ambient Temperature	-20~85	℃