

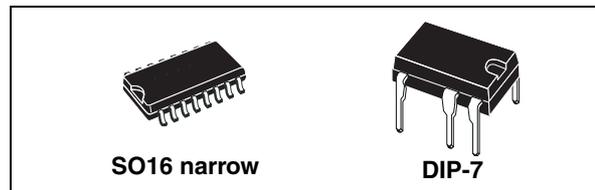
Fixed frequency VIPer™ plus family

Features

- 800 V avalanche rugged power section
- PWM operation with frequency jittering for low EMI
- Operating frequency:
 - 60 kHz for L type
 - 115 kHz for H type
- Standby power < 50 mW at 265 V_{AC}
- Limiting current with adjustable set point
- On-board soft-start
- Safe auto-restart after a fault condition
- Hysteretic thermal shutdown

Application

- Auxiliary power supply for appliances
- Power metering
- LED drivers
- SMPS for set-top boxes, DVD players and recorders



Description

The device is an off-line converter with an 800 V avalanche ruggedness power section, a PWM controller, user defined overcurrent limit, protection against feedback network disconnection, hysteretic thermal protection, soft start up and safe auto restart after any fault condition.

Advance frequency jittering reduces EMI filter cost. Burst mode operation and the devices very low consumption both help to meet the standard set by energy saving regulations.

Figure 1. Typical topology ($V_{OUT} \leq V_{DDCson}$)

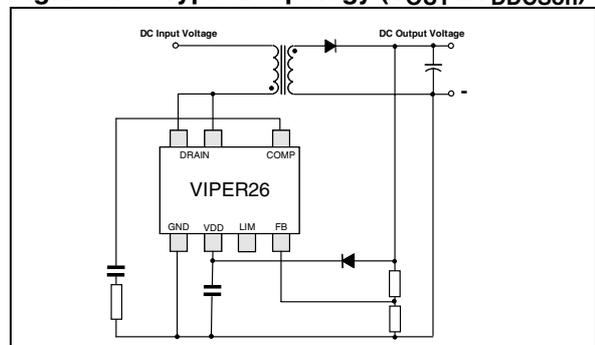
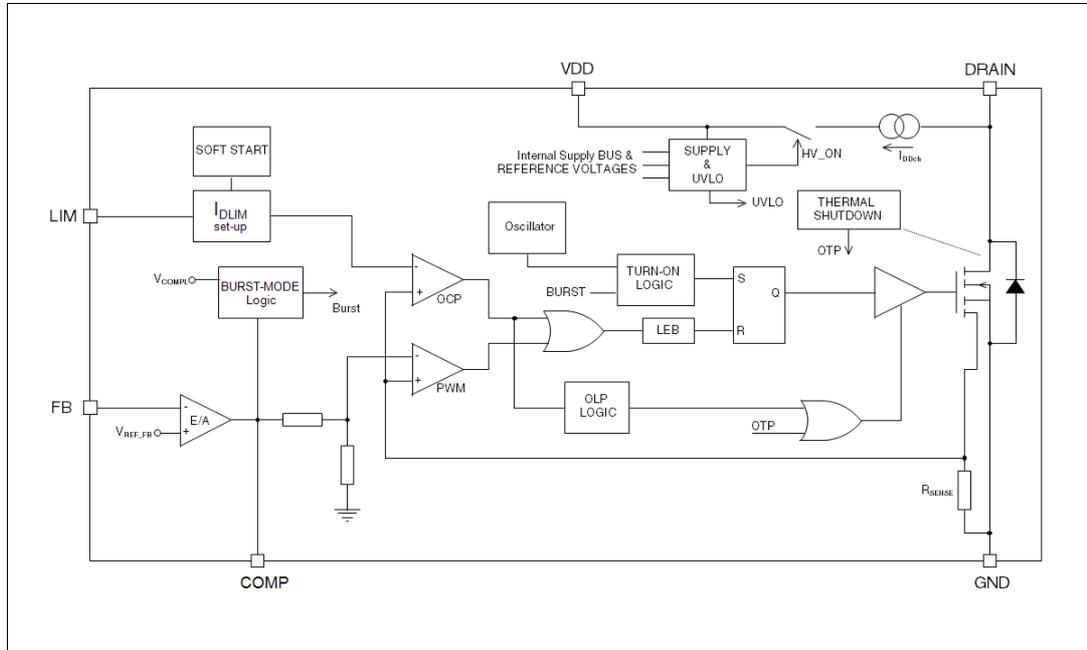


Table 1. Device summary

Order codes	Package	Packaging
VIPER26LN	DIP-7	Tube
VIPER26HN		
VIPER26HD	SO16 narrow	Tube
VIPER26HDTR		Tape and reel
VIPER26LD		Tube
VIPER26LDTR		Tape and reel

1 Block diagram

Figure 2. Block diagram



2 Typical power

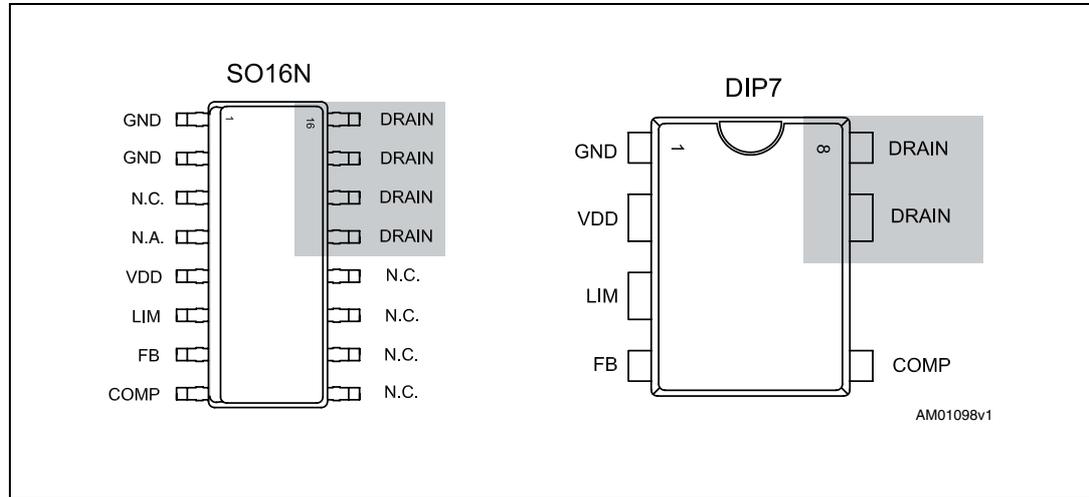
Table 2. Typical power

Part number	230 V _{AC}		85-265 V _{AC}	
	Adapter ⁽¹⁾	Open frame ⁽²⁾	Adapter ⁽¹⁾	Open frame ⁽²⁾
VIPER26	18 W	20 W	10 W	12 W

1. Typical continuous power in non ventilated enclosed adapter measured at 50 °C ambient.
2. Maximum practical continuous power in an open frame design at 50 °C ambient, with adequate heat sinking.

3 Pin settings

Figure 3. Connection diagram (top view)



Note: The copper area for heat dissipation has to be designed under the DRAIN pins.

Table 3. Pin description

Pin n.		Name	Function
DIP-7	SO16		
1	1-2	GND	Connected to the source of the internal power MOSFET and controller ground reference.
-	4	N.A.	Not available for user. It can be connected to GND (pins 1-2) or left not connected.
2	5	VDD	Supply voltage of the control section. This pin provides the charging current of the external capacitor.
3	6	LIM	This pin allows setting the drain current limitation. The limit can be reduced by connecting an external resistor between this pin and GND. Pin left open if default drain current limitation is used.
4	7	FB	Inverting input of the internal trans conductance error amplifier. Connecting the converter output to this pin through a single resistor results in an output voltage equal to the error amplifier reference voltage (See V_{FB_REF} on Table 7). An external resistors divider is required for higher output voltages.
5	8	COMP	Output of the internal trans conductance error amplifier. The compensation network have to be placed between this pin and GND to achieve stability and good dynamic performance of the voltage control loop. The pin is used also to directly control the PWM with an optocoupler. The linear voltage range extends from V_{COMPL} to V_{COMPH} (Table 7).
7,8	13-16	DRAIN	High voltage drain pin. The built-in high voltage switched start-up bias current is drawn from this pin too. Pins connected to the metal frame to facilitate heat dissipation.