

## GENERAL DESCRIPTION

OB2338 combines a dedicated current mode PWM controller with a high voltage power MOSFET. It is optimized for high performance, low standby power, and cost effective off-line flyback converter applications in sub 27W range.

OB2338 offers complete protection coverage with automatic self-recovery feature including Cycle-by-Cycle current limiting (OCP), over load protection (OLP), over temperature protection (OTP), over voltage protection and VDD under voltage lockout (UVLO). Excellent EMI performance is achieved with On-Bright proprietary frequency shuffling technique together with soft switching control at the totem pole gate drive output.

The tone energy at below 20KHZ is minimized in the design and audio noise is eliminated during operation.

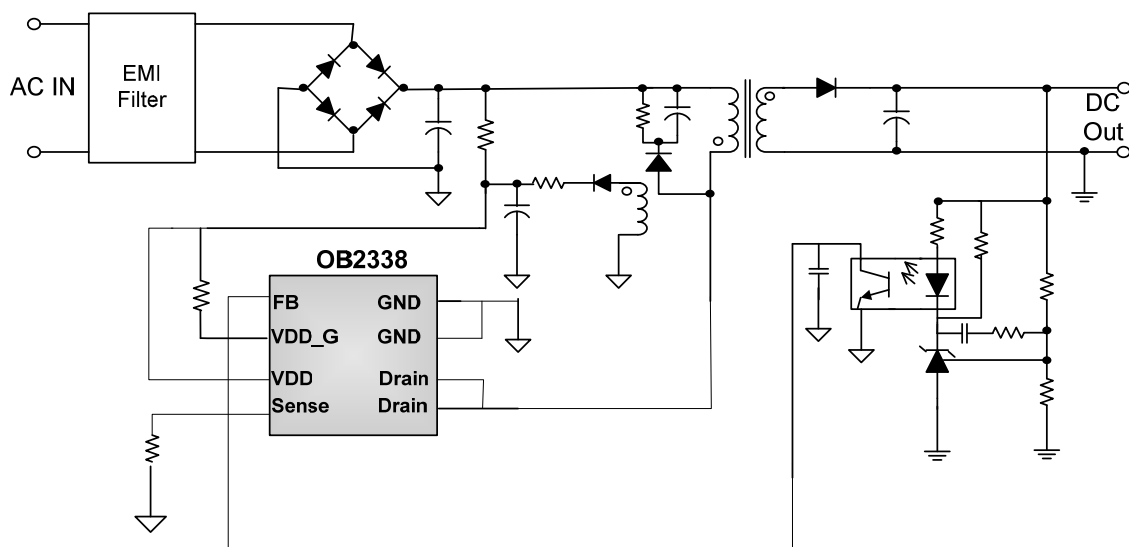
OB2338 is offered in DIP8 package.

## APPLICATIONS

Offline AC/DC flyback converter for

- AC/DC adapter
- PDA power supplies
- Digital Cameras and Camcorder Adapter
- VCR, SVR, STB, DVD&DVCD Player SMPS
- Set-Top Box Power
- Auxiliary Power Supply for PC and Server
- Open-frame SMPS

## TYPICAL APPLICATION



**Output Power Table**

Product	230VAC±15%	85-265VAC
	Open Frame <sup>1</sup>	Open Frame <sup>1</sup>
OB2338	27W	16W

**Notes:** 1. Maximum practical continuous power in an open frame design with sufficient drain pattern as a heat sink, at 50°C ambient. Higher output power is possible with extra added heat sink or air circulation to reduce thermal resistance.

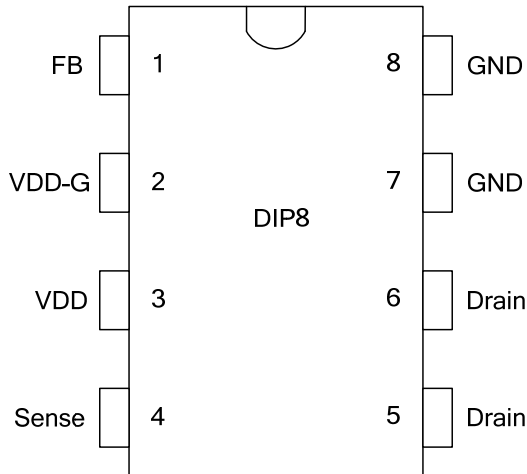
## FEATURES

- Level 5 compliance with < 100mW standby power at universal AC input
- Power on soft start reducing MOSFET Vds stress
- Frequency shuffling for EMI
- Extended burst mode control for improved efficiency and minimum standby power design
- Audio noise free operation
- Fixed 55KHZ (typical) switching frequency
- Internal synchronized slope compensation
- Low VDD startup current and low operating current
- Leading edge blanking on current sense input
- Comprehensive protection coverage
  - VDD under voltage lockout with hysteresis (UVLO)
  - Over temperature protection (OTP) with auto-recovery
  - On-Bright proprietary line input compensated
  - Cycle-by-Cycle over-current threshold setting for constant output power limiting over universal input voltage range.
  - Accurate Overload protection (OLP).
  - Over voltage protection(OVP)
  - Secondary Rectifier Short Protection

### GENERAL INFORMATION

#### Pin Configuration

The OB2338 is offered in DIP8 package as shown below.



#### Package Dissipation Rating

Package	R $\theta$ JA (°C/W)
DIP8	75

**Note:** Drain Pin Connected to 100mm<sup>2</sup> PCB copper clad.

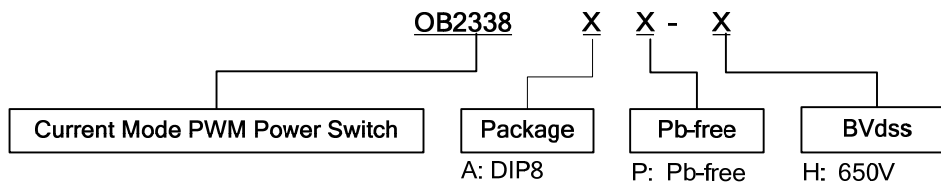
#### Absolute Maximum Ratings

Parameter	Value
Drain Voltage (off state)	-0.3V to BVdss
VDD Voltage	-0.3V to 30 V
VDD-G Input Voltage	-0.3V to 30 V
FB Input Voltage	-0.3 to 7V
Sense Input Voltage	-0.3 to 7V
Min/Max Operating Junction Temperature T <sub>J</sub>	-40 to 150°C
Min/Max Storage Temperature T <sub>stg</sub>	-55 to 150°C
Lead Temperature (Soldering, 10secs)	260°C

**Note:** Stresses beyond those listed under “absolute maximum ratings” may cause permanent damage to the device. These are stress ratings only, functional operation of the device at these or any other conditions beyond those indicated under “recommended operating conditions” is not implied. Exposure to absolute maximum-rated conditions for extended periods may affect device reliability.

#### Ordering Information

Part Number	Description
OB2338AP-H	DIP8, Pb-free



### Marking Information



Y: Year Code  
 WW: Week Code(01-52)  
 ZZZ: Lot Code  
 A: DIP8 Package  
 P: Pb-free Package  
 S: Internal Code(Optional)

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