

GENERAL DESCRIPTION

OB3332Bx is a TRIAC dimmable high power factor, highly integrated buck/buck-boost regulator with advanced features to provide high efficiency control and high precision constant current output for dimmable LED lighting applications.

The proprietary CC control scheme is used to provide features of insensitivity to inductance and line voltage. Without external large compensation capacitor, the system can achieve high power factor with proprietary PFC control scheme.

OB3332Bx offers comprehensive protection coverage with auto-recovery features including LED open loop protection, LED short circuit protection, cycle-by-cycle current limiting, built-in leading edge blanking, VDD under voltage lockout (UVLO), thermal foldback etc.

OB3332Bx is offered in SOP-8 package.

FEATURES

- Excellent TRIAC dimming performance
- Low system cost and high efficiency
- High PF (PF>0.9) @175~264Vac input
- Support buck/buck-boost topology
- High precision constant current regulation at universal AC input
- Quasi-Resonant operation
- Thermal foldback function for LED output current control
- Insensitivity to inductance and line voltage variation
- LED short circuit protection
- LED open loop protection
- Cycle-by-cycle current limiting
- Built-in leading edge blanking (LEB)
- VDD under voltage lockout with hysteresis
- Over temperature protection (OTP)

APPLICATIONS

- Dimmable LED lighting

TYPICAL APPLICATION

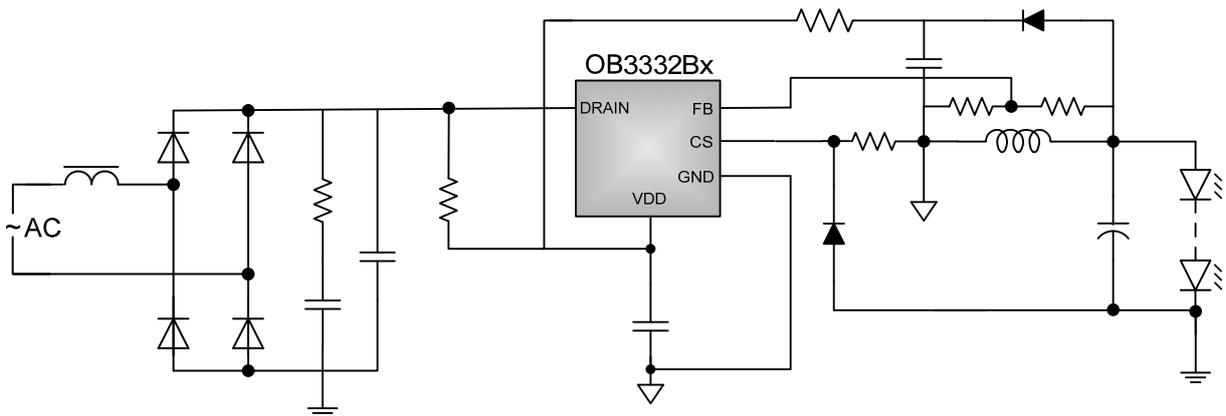


Figure 1 Buck Application circuit

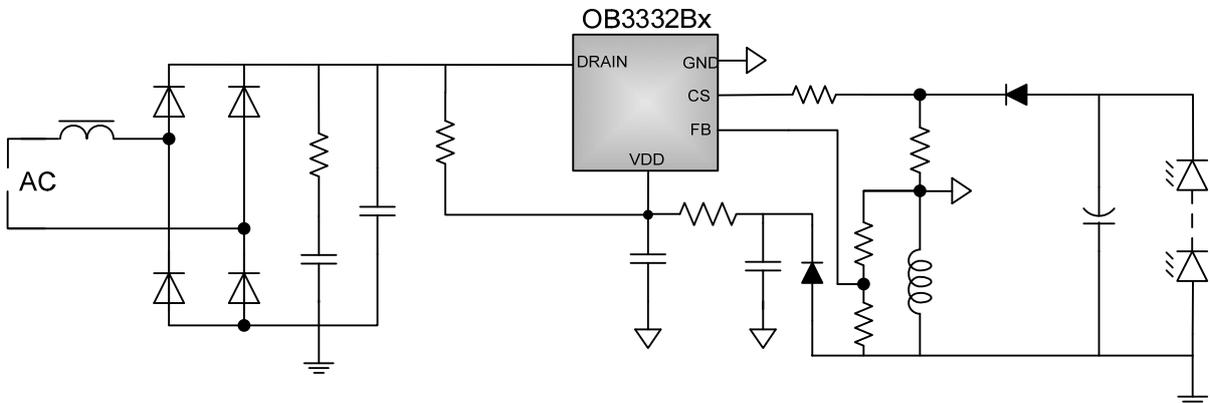
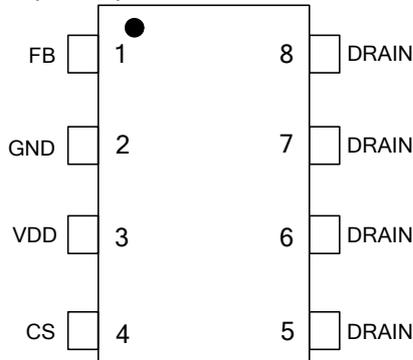


Figure 2 Buck-Boost Application circuit

GENERAL INFORMATION

Pin Configuration

The pin map is shown as below.



Ordering Information

Part Number	Description
OB3332BMCP-H	8 Pin SOP, Halogen-free in Tube
OB3332BMCPA-H	8 Pin SOP, Halogen-free in T&R
OB3332BNCP-H	8 Pin SOP, Halogen-free in Tube
OB3332BNCPA-H	8 Pin SOP, Halogen-free in T&R
OB3332BPCP-J	8 Pin SOP, Halogen-free in Tube
OB3332BPCPA-J	8 Pin SOP, Halogen-free in T&R
OB3332BRCP-H	8 Pin SOP, Halogen-free in Tube
OB3332BRCPA-H	8 Pin SOP, Halogen-free in T&R

Note: All Devices are offered in Halogen-free Package if not otherwise noted.

Recommended Operating Condition

Symbol	Parameter	Range
VDD	VDD Supply Voltage	8 to 16V

Package Dissipation Rating

Package	R θ JA (°C/W)
SOP8	90

Absolute Maximum Ratings

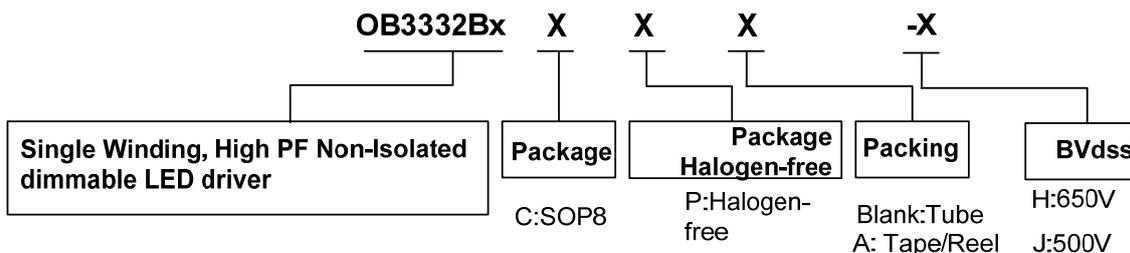
Parameter	Value	
VDD Voltage	-0.3 to 20V	
CS Input Voltage	-0.3 to 7V	
FB Input Voltage	-0.3 to 7V	
DRAIN Voltage	OB3332BPCP-J	-0.3 to 500V
	OB3332BMCP-H	-0.3 to 650V
	OB3332BNCP-H	
	OB3332BRCP-H	
Min/Max Operating Junction Temperature T _J	-40 to 150 °C	
Operating Temperature T _A Ambient	-40 to 85 °C	
Min/Max Storage Temperature T _{stg}	-55 to 150 °C	
Lead Temperature (Soldering, 10secs)	260 °C	

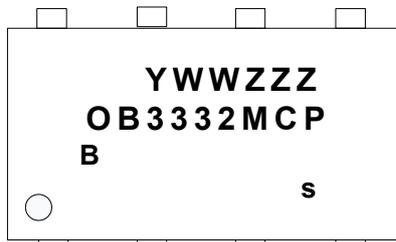
Note: Stresses beyond those listed under "absolute maximum ratings" may cause permanent damage to the device. These are stress ratings only, functional operation of the device at these or any other conditions beyond those indicated under "recommended operating conditions" is not implied. Exposure to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

Output Power Table

Product	Condition	175Vac~264Vac Input
OB3332BMCP-H	I _o ≤ 80mA	10W
OB3332BNCP-H	I _o ≤ 105mA	12W
OB3332BPCP-J	I _o ≤ 180mA	17.6W
OB3332BRCP-H	I _o ≤ 220mA	18.5W

Note: Maximum practical continuous power in an open frame design with sufficient drain pattern as a heat sink, at 50°C ambient and 60°C temperature rise. Higher output power is possible with extra added heat sink, air circulation and decrease output current to reduce thermal resistance.



Marking Information


Y: Year Code

WW: Week Code (01-52)

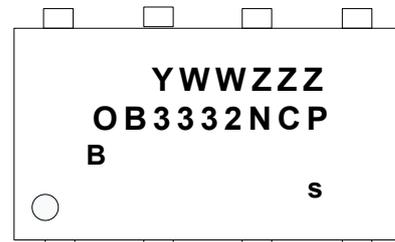
ZZZ:Lot Code

C: SOP8

P:Halogen-free Package

B:Character Code

S: Internal Code(Optional)



Y: Year Code

WW: Week Code (01-52)

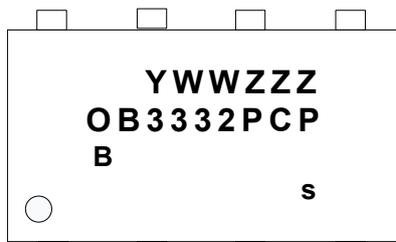
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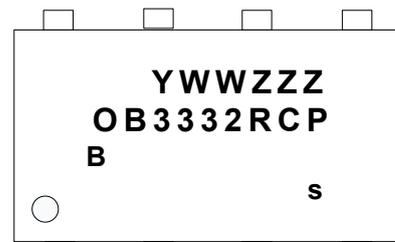
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TERMINAL ASSIGNMENTS

Pin Num	Pin Name	I/O	Description
1	FB	I/O	The voltage feedback from output. Connected to resistor divider from output voltage.
2	GND	P	Power Ground.
3	VDD	P	Power supply input.
4	CS	I/O	Current sensing terminal.
5,6,7,8	DRAIN	I/O	Drain of power MOSFET.