GENERAL DESCRIPTION

OB3636 is a flyback controller with high power factor, low THD and high constant voltage(CV) precision. It can achieve low system cost for an isolated application by primary side control in a single stage converter. It significantly simplifies the CV system design by eliminating the secondary side feedback components and the opto-coupler.

The proprietary CV control scheme is used and the system can achieve high power factor with constant on-time control scheme. Quasi-resonant (QR) operation and clamping frequency greatly improves the system efficiency. The advanced start-up technology is used to meet the start-up time requirement (<0.5s).
OB3636 offers comprehensive protection including open loop protection, short circuit protection, cycle-by-cycle current limiting, built-in leading edge blanking, VDD under voltage lockout (UVLO), etc.

OB3636 is offered in SOT23-6 package.

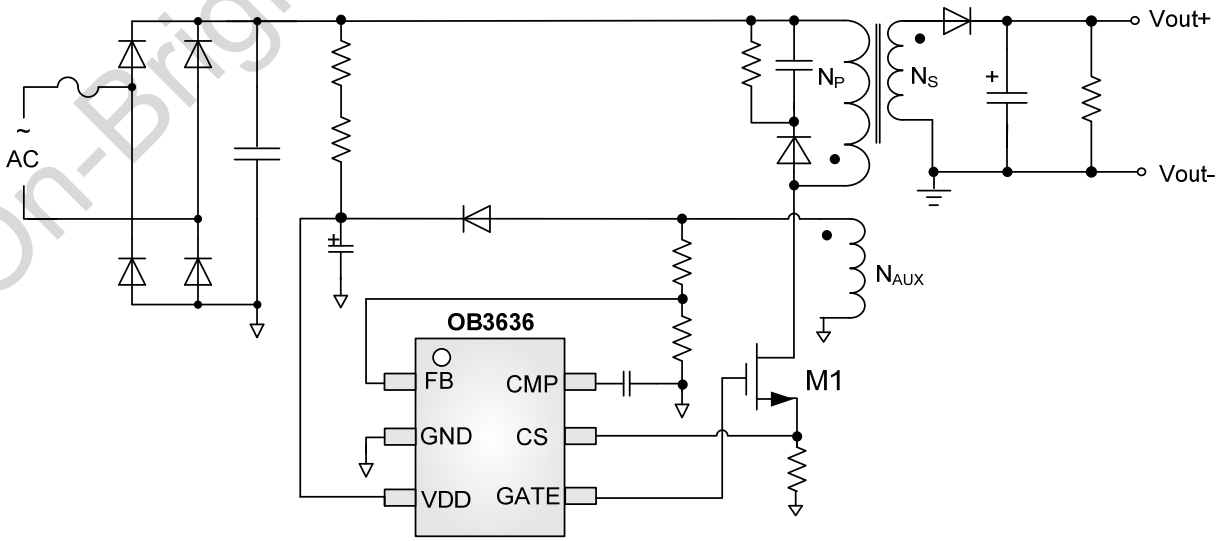
FEATURES

- High PF (>0.9)
- Low THD (<10%)
- High precision constant voltage regulation
- Fast start-up (<0.5s)
- Primary-side sensing and regulation without TL431 and opto-coupler
- Low system cost and high efficiency
- Quasi-resonant operation
- Short circuit protection
- Open loop protection
- Cycle-by-cycle current limiting
- Built-in leading edge blanking (LEB)
- VDD under voltage lockout with hysteresis
- VDD over voltage protection
- Over temperature protection (OTP)
- Audio Noise Free

APPLICATIONS

- LED lighting
- AC/DC adapters

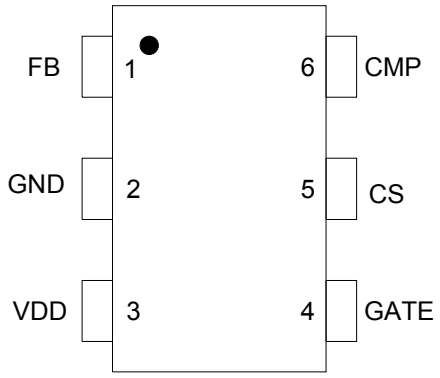
TYPICAL APPLICATION



GENERAL INFORMATION

Pin Configuration

The pin map is shown as below for SOT23-6.



Ordering Information

Part Number	Description
OB3636MP	SOT23-6, Halogen-free in T&R

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

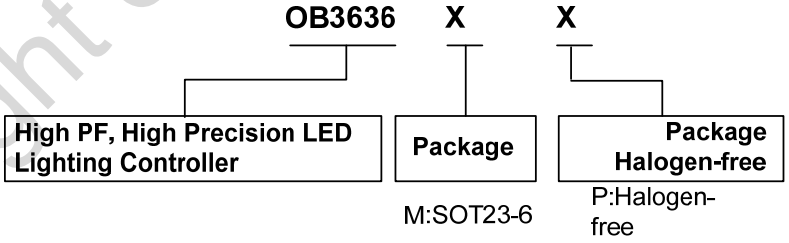
Package Dissipation Rating

Package	RθJA (℃/W)
SOT23-6	200

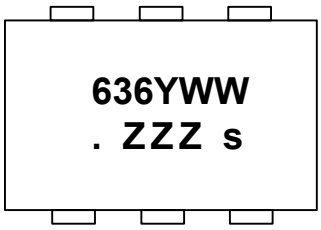
Absolute Maximum Ratings

Parameter	Value
VDD Voltage	-0.3 to 40V
GATE Voltage	-0.3 to 40V
CS Input Voltage	-0.3 to 7V
FB Input Voltage	-0.3 to 7V
CMP Voltage	-0.3 to 7V
Min/Max Operating Junction Temperature T_J	-40 to 150 ℃
Operating Ambient Temperature T_A	-20 to 85 ℃
Min/Max Storage Temperature T_{stg}	-55 to 150 ℃
Lead Temperature (Soldering, 10secs)	260 ℃

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.



Marking Information



Y:Year Code
WW:Week Code(01-52)
ZZZ: Lot code
s: Internal code

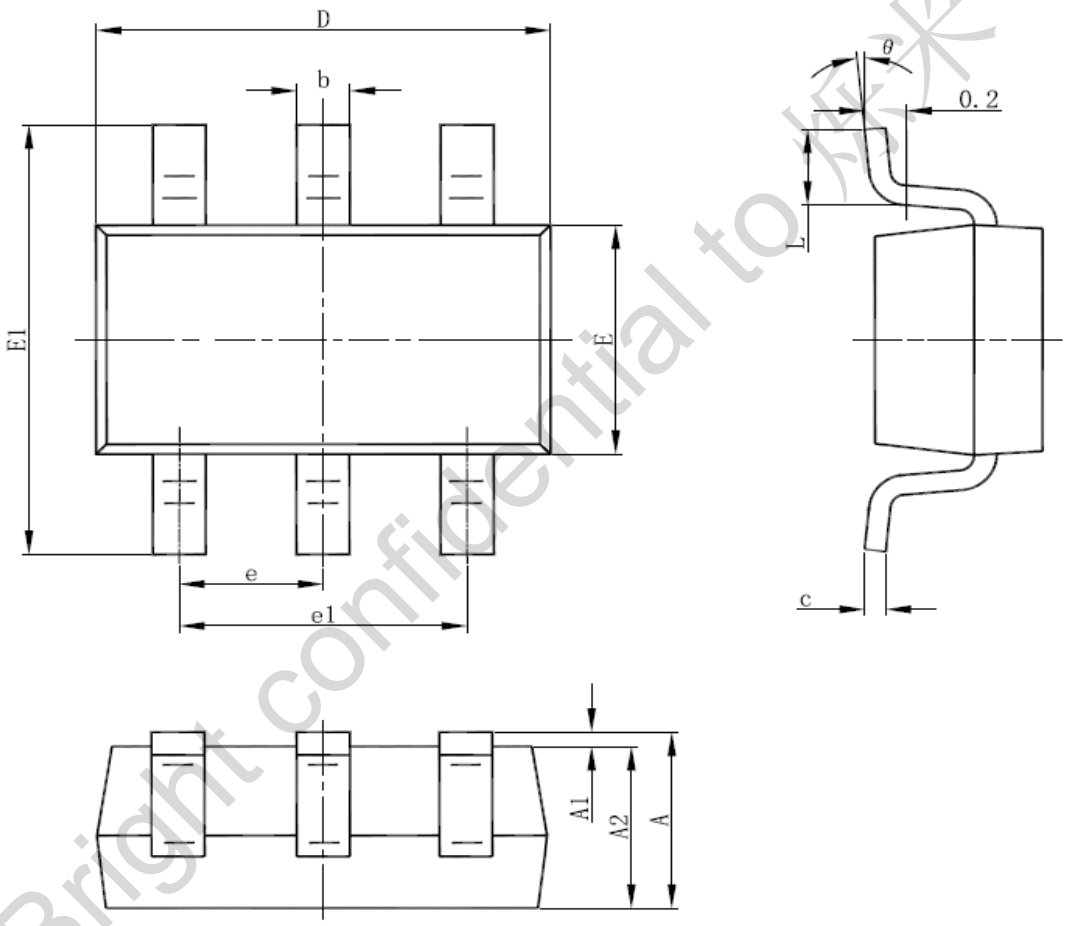
TERMINAL ASSIGNMENTS

Pin Num	Pin Name	I/O	Description
1	FB	I	Voltage feedback from auxiliary winding. Connected to resistor divider from auxiliary winding reflecting output voltage.
2	GND	P	Power ground.
3	VDD	P	Power supply.
4	GATE	O	Gate driver output for power MOSFET.
5	CS	I	Current sense input pin.
6	CMP	O	Loop compensation pin. A capacitor is connected between CMP and GND.

PACKAGE MECHANICAL DATA

6-Pin Plastic SOT (SOT23-6)

SOT-23-6L PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.000	1.450	0.039	0.057
A1	0.000	0.150	0.000	0.006
A2	0.900	1.300	0.035	0.051
b	0.300	0.500	0.012	0.020
c	0.080	0.220	0.003	0.009
D	2.800	3.020	0.110	0.119
E	1.500	1.726	0.059	0.068
E1	2.600	3.000	0.102	0.118
e	0.950 (BSC)		0.037 (BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

IMPORTANT NOTICE

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On-Bright Electronics Corp. reserves the right to make corrections, modifications, enhancements, improvements and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete.

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