

GENERAL DESCRIPTION

OB3619A is a high power factor, low THD, and highly integrated buck regulator with advanced features to provide high efficiency control and high precision constant current output for LED lighting applications.

The proprietary CC 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). The constant output current is compensated for tolerance of transformer inductance variation.

OB3619A 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), etc.

OB3619A is offered in SOT23-6 package.

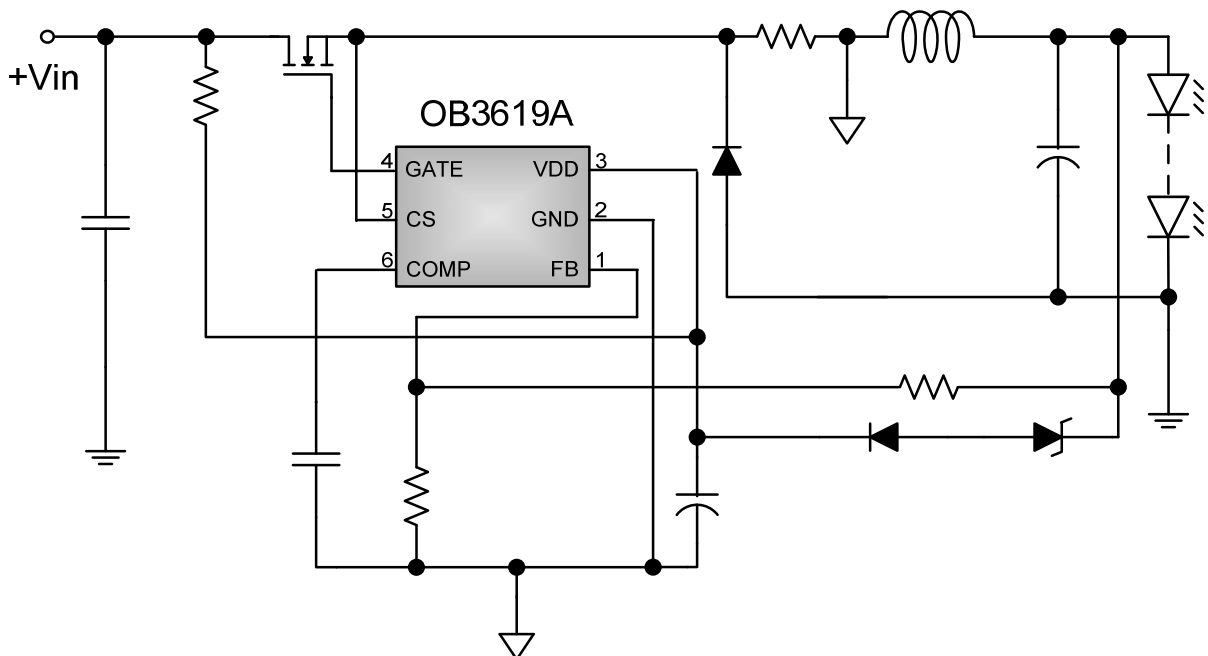
FEATURES

- High PF (>0.9)
- Low THD (<15%)
- High precision constant current regulation at universal AC input
- Fast start-up (<0.5s)
- Low system cost and high efficiency
- Quasi-resonant operation
- Programmable CC regulation
- 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
- VDD over voltage protection
- Over temperature protection (OTP)
- Thermal fold-back control

APPLICATIONS

- LED lighting

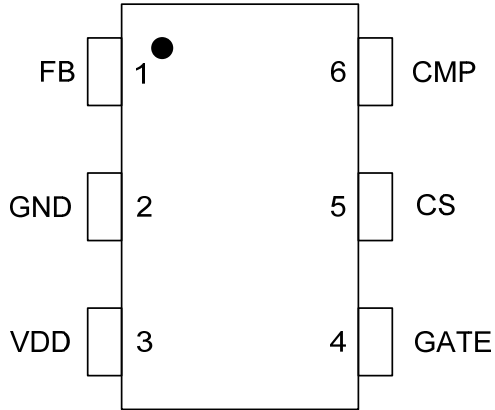
TYPICAL APPLICATION



GENERAL INFORMATION

Pin Configuration

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



Ordering Information

Part Number	Description
OB3619AMP	SOT23-6, Pb-free, T&R

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

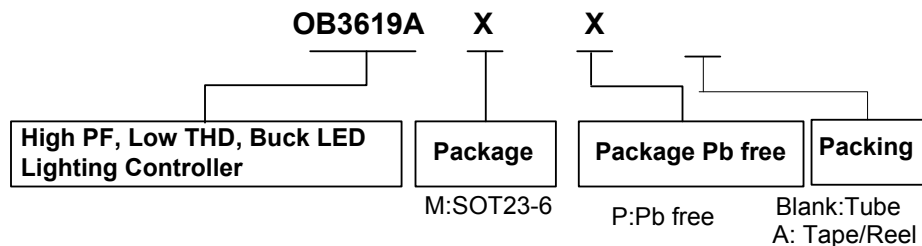
Package Dissipation Rating

Package	R θ JA (°C/W)
SOT23-6	200

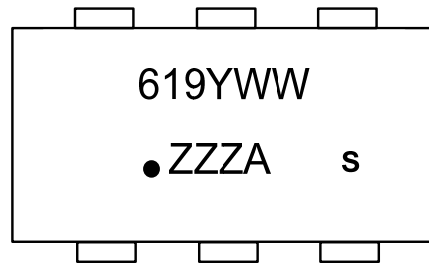
Absolute Maximum Ratings

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
COMP Voltage	-0.3 to 7V
Min/Max Operating Junction Temperature T _J	-40 to 150 °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.



Marking Information



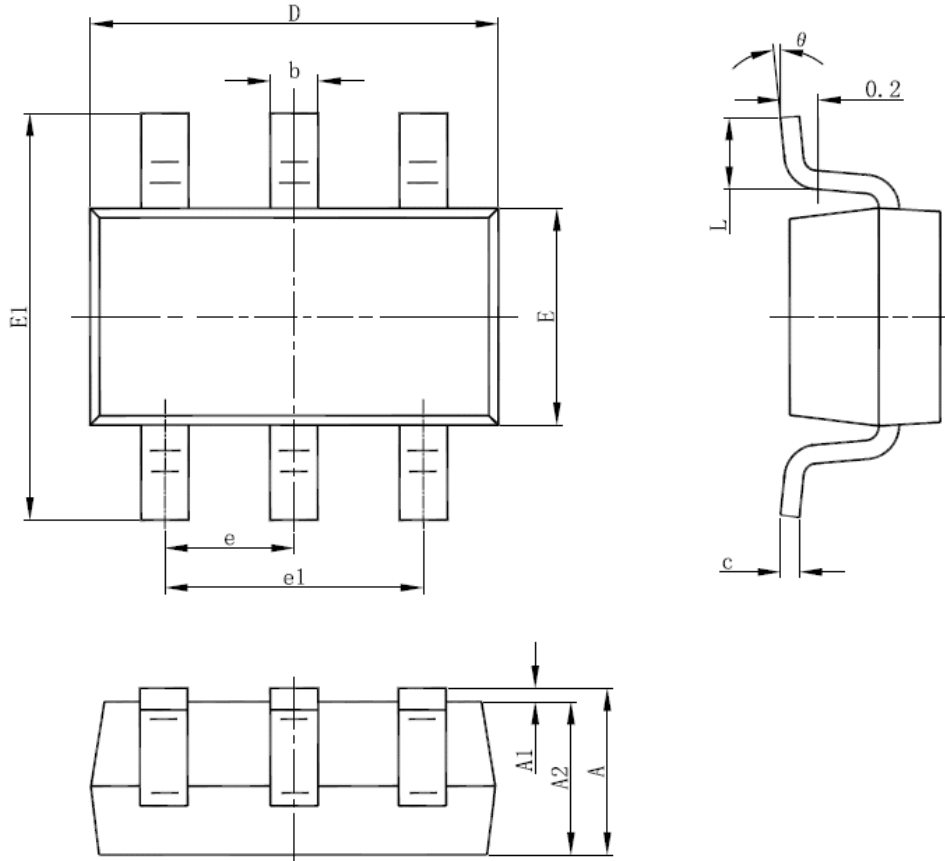
Y: Year Code
 WW: Week Code(01-52)
 ZZZ: Lot Code
 A: Character Code
 s: Internal Code(Optional)

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 Input.
4	GATE	O	Gate driver output for power MOSFET.
5	CS	I	Current sensing terminal.
6	CMP	O	Loop compensation pin. A capacitor is connected between CMP and GND.

PACKAGE MECHANICAL DATA

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°

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