

GENERAL DESCRIPTION

OB3671A is a high performance controller with advanced features to provide high efficiency control for driving external NMOSFET to remove/suppress the 100/120 Hz current ripple for LED lighting application. It controls the NMOSFET drain voltage to minimize power dissipation on the NMOSFET while suppressing current ripple.

OB3671A allows user to set up maximum LED current by the sensing resistor between the source of the NMOSFET and ground.

It also allows user to set up the maximum cathode voltage of LED string via a resistor between the drain of the NMOSFET and LEDN pin.

OB3671A offers comprehensive protection coverage with features including LED open loop protection, LED short circuit protection, current limiting, VCC under voltage lockout (UVLO), comp floating protection, over temperature protection etc.

OB3671A supports current dimming from 100% to 5%.

OB3671A is offered in SOT23-6 package.

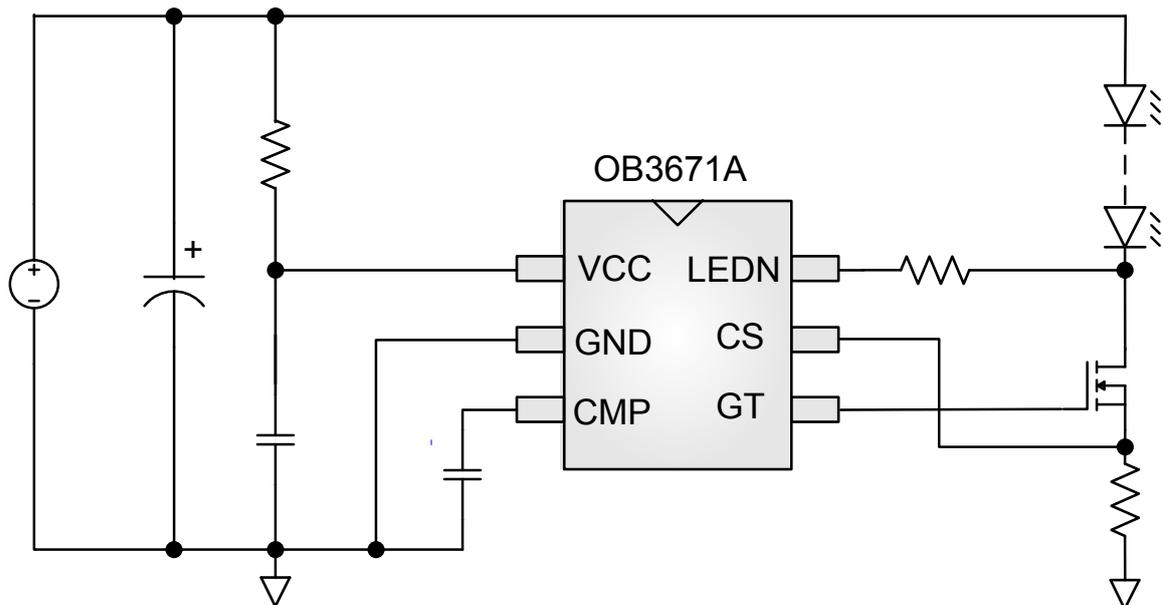
FEATURES

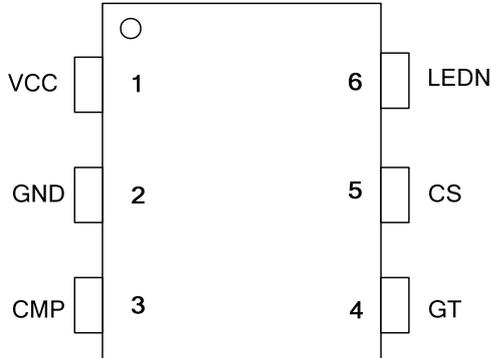
- Controller for 100/120Hz current ripple removal/suppress
- Programmable maximum LED current
- Built in VCC voltage clamping
- Supports wide dimming range: 5%-100%
- Supports hot-plug
- LED short protection with programmable threshold
- VCC under voltage lockout (UVLO)
- Comp floating protection
- Over temperature protection
- SOT23-6 Package

APPLICATIONS

- LED lighting

TYPICAL APPLICATION



GENERAL INFORMATION
Pin Configuration Pin Configuration

Recommended Operating Condition

Symbol	Parameter	Range
VCC	VCC Supply Voltage	7V to 14V

Absolute Maximum Ratings

Parameter	Value
VCC Voltage	-0.3 V to 20V
GT Voltage	-0.3 V to 20V
CS Input Voltage	-0.3 V to 7V
COMP Input Voltage	-0.3 V to 7V
LEDN Input Voltage	-0.3 V to 80V
Min/Max Operating Junction Temperature T_J	-40 to 150 °C
Operating Ambient Temperature T_A	-40 to 85 °C
Min/Max Storage Temperature T_{stg}	-55 to 150 °C
Lead Temperature (Soldering, 10secs)	260 °C

Ordering Information

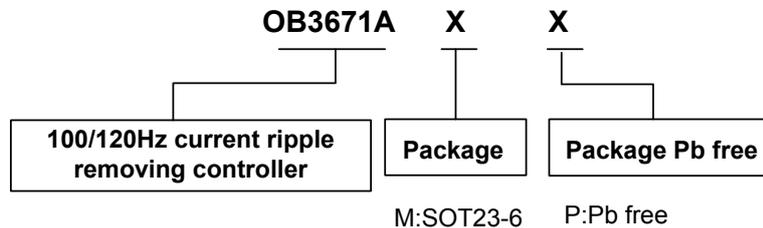
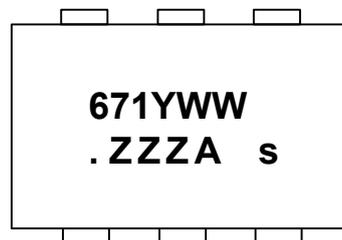
Part Number	Description
OB3671AMP	SOT23-6, Pb-free in T&R

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

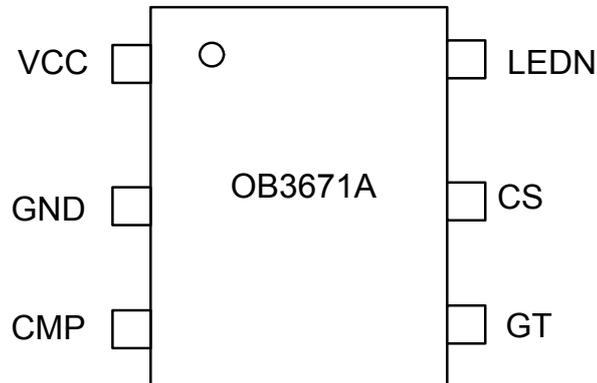
Package Dissipation Rating

Package	R θ JA (°C/W)
SOT23-6	200

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


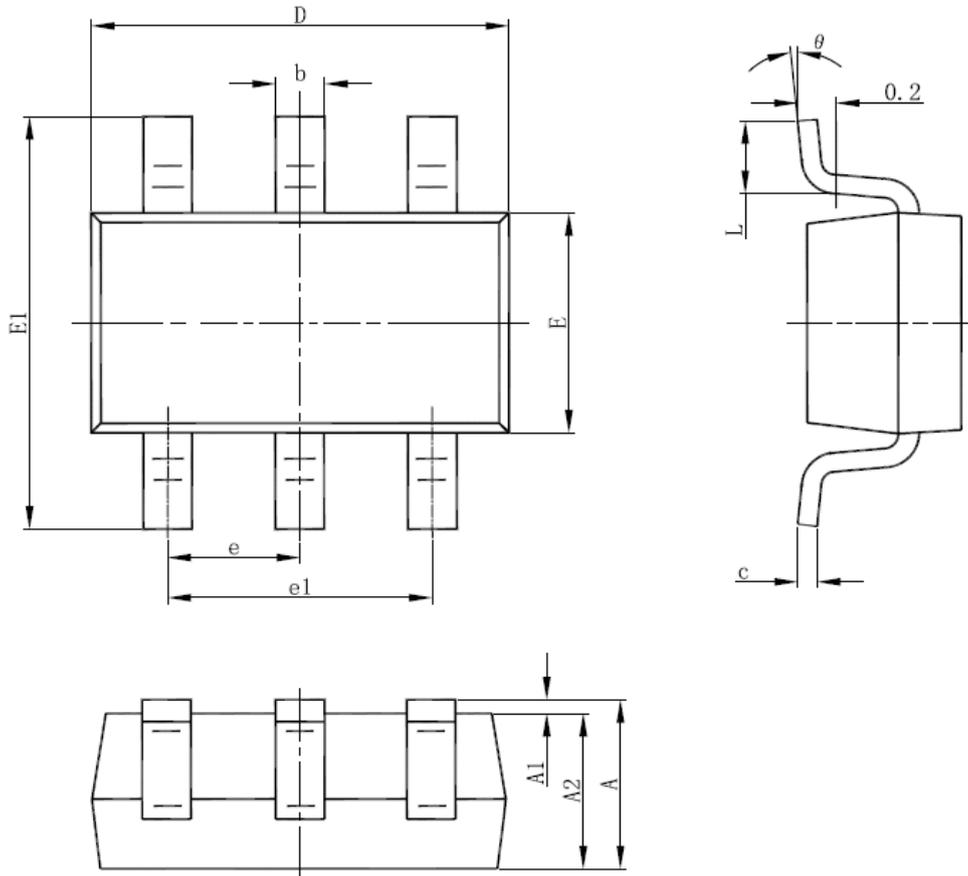
Y:Year Code
 WW:Week Code(01-52)
 ZZZ: Lot code
 A:Character code
 s: Internal code

Marking Information

TERMINAL ASSIGNMENTS

Pin Num	Pin Name	I/O	Description
1	VCC	P	Power Supply Input
2	GND	P	Ground
3	CMP	I/O	Loop Compensation Terminal
4	GT	O	MOSFET Gate Terminal
5	CS	I	Current Sensing Terminal
6	LEDN	I	MOSFET Drain Terminal/LED Negative Terminal

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°

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