

# Datasheet - MAP3202

## High Efficiency Switch Mode LED Driver

### General Description

MAP3202 is a single channel high efficiency boost type PWM driver with current mode control. It is designed for high brightness LED driver optimized for backlighting system for LCD module.

MAP3202 offers the function of accurate and fast LED dimming control using PWM interface and external dimming MOSFET.

MAP3202 has the over-voltage protection, the short-current protection and UVLO, providing auto-restart function.

MAP3202 is available in SOIC-14 Pin package with Halogen-free (fully RoHS compliant).

For more information, please contact local MagnaChip sales office in world-wide or visit MagnaChip's website at [www.magnachip.com](http://www.magnachip.com).

### Features

- Wide input voltage range up to 18V
- PWM Dimming
- Current Mode Control Type
- Synchronization to peer to peer
- Internal Auto Restart Mode Protection
- Programmable Output Over Voltage Protection
- LED Short Current Protection
- Boost switch current limit Protection
- Package : SOIC-14 Pin

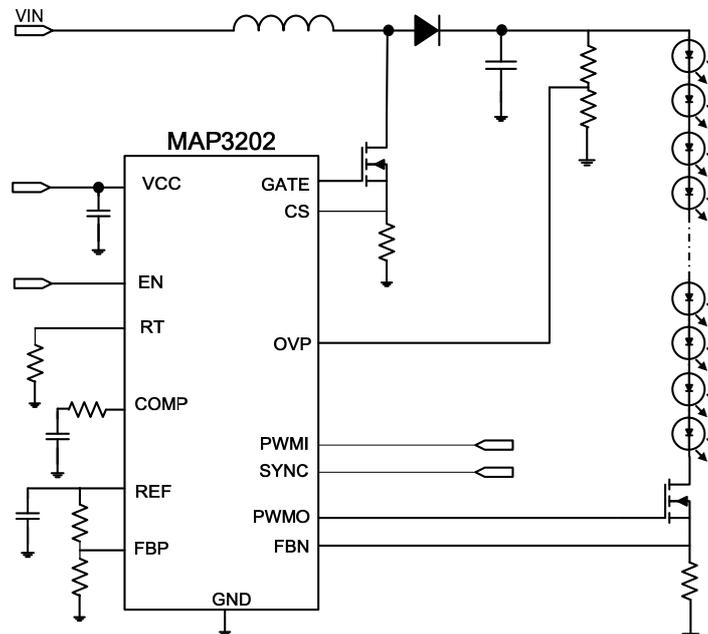
### Applications

- High Brightness white LED backlighting for LCD TVs and monitors
- General LED lighting applications

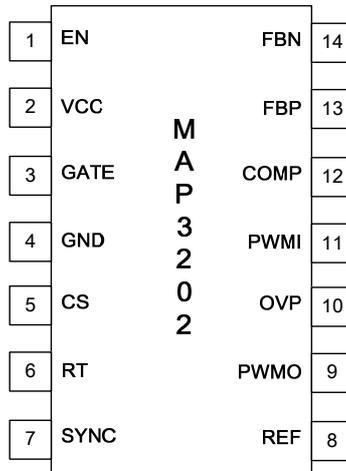
### Ordering Information

Part Number	Top Marking	Ambient Temperature Range	Package	RoHS Status
MAP3202SIRH	MAP3202	-40°C to +85°C	SOIC-14 Pin	Halogen Free

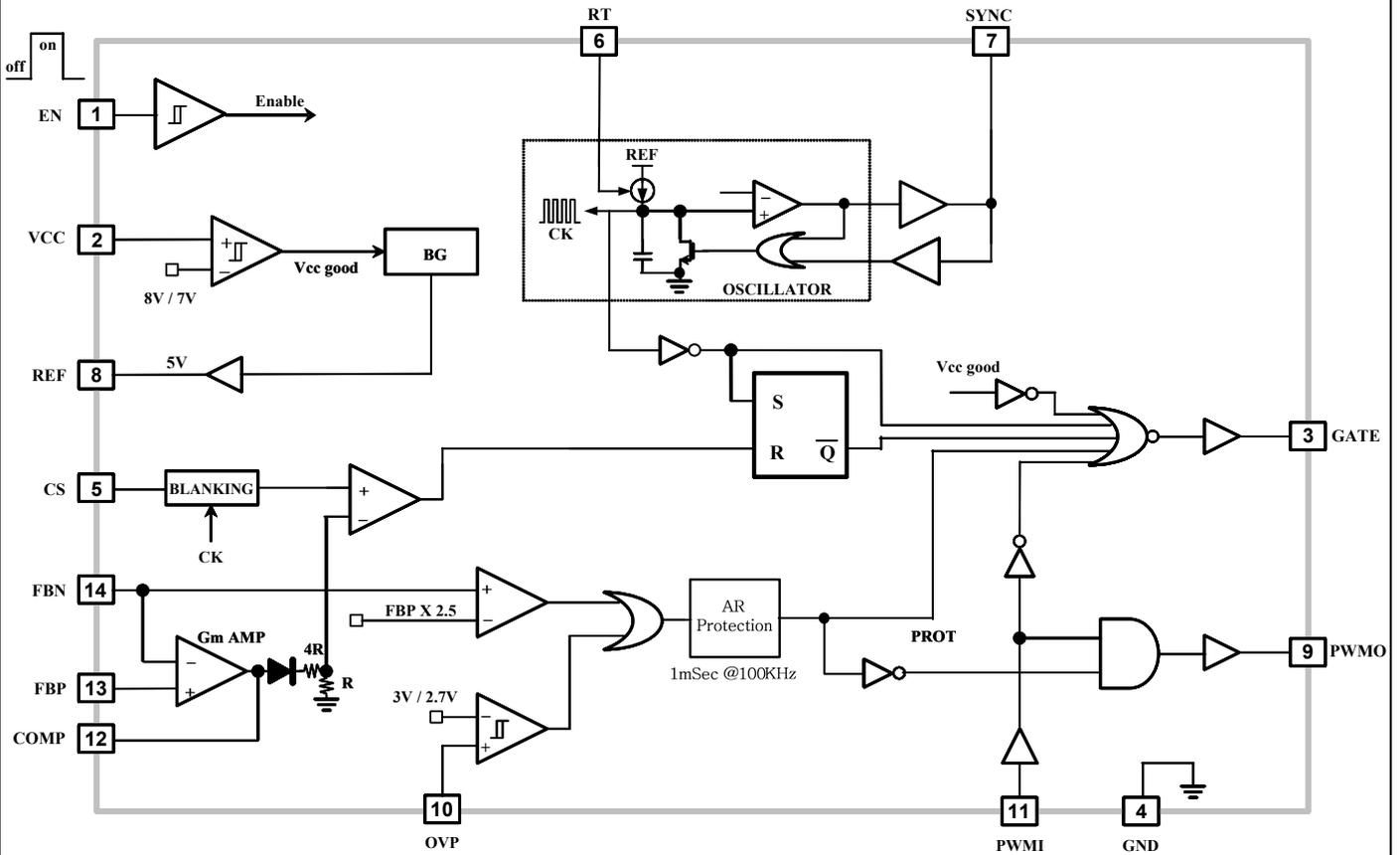
### Typical Application



Pin Configuration



Functional Block Diagram



## Pin Description

PIN NO		Description
1	EN	Enable
2	VCC	Power Supply Input
3	GATE	Gate Drive Output for Boost Converter
4	GND	GND
5	CS	Current Sense of Boost Converter
6	RT	Oscillators Frequency Set
7	SYNC	Oscillators Synchronizing Input
8	REF	Reference Voltage
9	PWMO	PWM Gate Driver Output
10	OVP	Over Voltage Protection
11	PWMI	PWM Gate Driver Input
12	COMP	Error AMP. Compensation
13	FBP	Error AMP. Non-inverting Input/Positive Current Sense
14	FBN	Error AMP. Inverting Input/Negative Current Sense

## Absolute Maximum Ratings (1)

PARAMETER	VALUE	UNIT
VCC	-0.3 ~ 20	V
GATE, PWMO	-0.3 ~ 20	V
EN, CS, RT, SYNC, REF, OVP, PWMI, COMP, FBP, FBN	-0.3 ~ 6.0	V
Operating Junction Temperature Range	-40 ~ 150	°C
Storage Temperature Range	-65 ~ 150	°C
Lead temperature(soldering, 10sec )	260	°C
Thermal Resistance ( $\theta_{JA}$ )	110	°C/W

**Note1:** Stresses beyond those listed under “Absolute Maximum Ratings” may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.