DESCRIPTION

MT7200B is a Buck, constant current IC for LED driver, and works in continuous conduction mode (CCM). When the input voltage is higher than the LED voltage, the chip can be used to efficiently drive one or series-connected LEDs. The chip supports up to 80V input voltage, and the output current can be adjusted externally.

MT7200B supports driving external power MOS, and the chip integrates the high-end output current sense circuit to set LED average current. The analog dimming and PWM dimming can be realized through the ADJ pin, wherein the PWM signal can support up to 20kHz frequency. The soft-start time is extended by adjusting an external capacitor between the ADJ pin and ground. When the ADJ pin voltage is below 0.2V, the power MOS will be turned off and then the system enters the standby state with ultra-low power dissipation.

MT7200B provides over-temperature regulation (OTR) feature. When the chip temperature reaches OTR threshold, the output current reduces gradually to improve the system reliability.

FEATURES

- Simple peripheral circuit, low BOM cost
- Single pin for ON/OFF, analog dimming and PWM dimming
- Integrates input line voltage compensation with excellent line regulation
- High efficiency: up to 97%
- Wide input voltage range, the maximum rating of the VIN pin is up to 100V
- Adjustable constant output current
- Up to 1MHz switching frequency
- Over-temperature regulation (OTR)
- Inherent open/short-circuit protection
- High accuracy output current: ±3%
- Available in SOT23-6 package

APPLICATION

- Low voltage halogen replacement LEDs
- Automotive lighting
- Low voltage industrial lighting
- LED back-up lighting
- Illuminated signs
- Stage lights
- LCD TV backlighting

TYPICAL APPLICATION CIRCUIT