MT7285

Boost/Buck-Boost/Buck White LED Driver IC with High Frequency PWM Dimming

DESCRIPTION

MT7285 is a constant current white LED driver IC designed for wide input voltage range from 4.2V to 40V system rail. The chip can be configured as Buck, Boost and Buck-Boost topology. The chip can drive up to 20W with AC12V/DC12V input voltage. Current mode and fixed frequency operation provides fast transient response and eases loop stabilization. With a current sense amplifier threshold of 200mV, the LED current is programmable with one external current sense resistor and the power loss is minimized. The 450kHz operating frequency minimizes external inductor, input and output capacitor.

MT7285 supports both PWM and analog dimming by a single control pin. The chip is integrated with fault condition protection includes over-voltage protection (OVP), cycle-by-cycle peak current limiting and thermal shutdown.

MT7285 is available in ESOP8 packages.

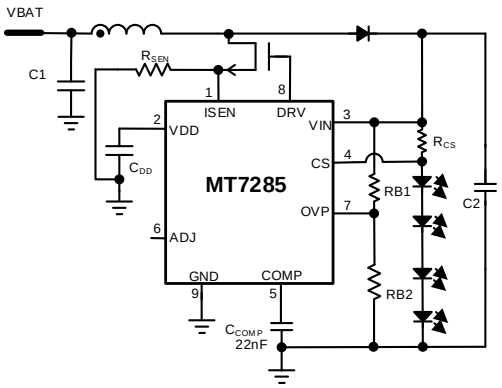
FEATURES

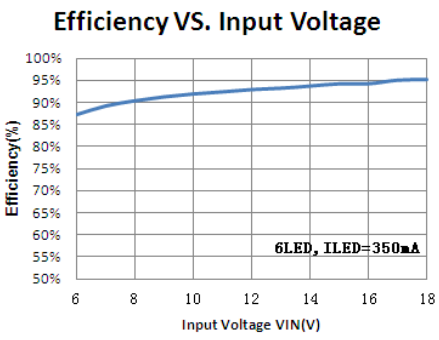
- Input/output voltage range: 4.2V to 40V
- High efficiency up to 95%
- Cycle-by-cycle over current protection
- External MOSFET driver
- Supports Boost, Buck-Boost and Buck topology
- LED temperature protection
- Stable with Low ESR Ceramic Capacitor
- OTP and OVP protection
- External setting over-voltage protection
- Fixed switching frequency: 450kHz
- Frequency jittering for reduced EMI
- Low feedback voltage: 200mV
- Adjustable soft-start
- Support one pin analog dimming and up to 10kHz PWM dimming
- Available in ESOP8 package

APPLICATION

- Automotive and Marine Lighting
- High Power LED Driver
- Torch Driver
- Low Voltage LED Lighting (Landscape, Desk, Room, MR16 lighting)
- LED backlighting

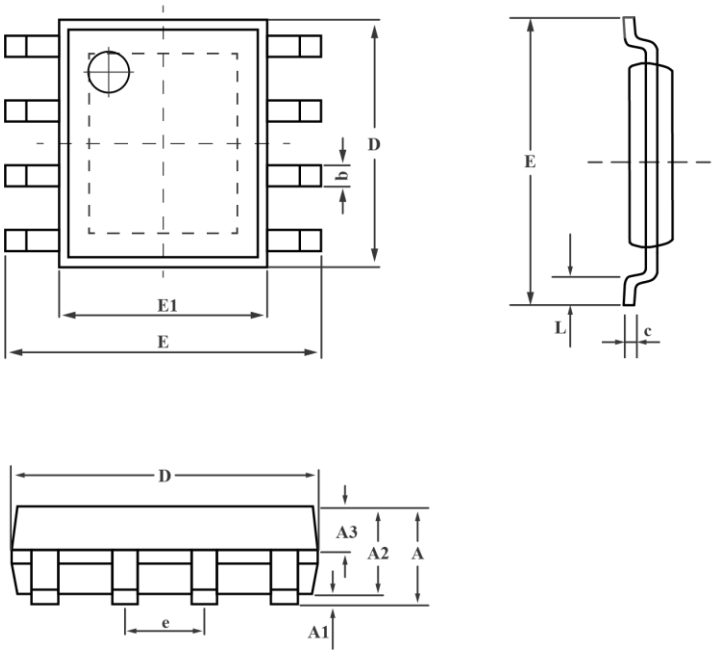
TYPICAL APPLICATION (STEP-UP/BOOST APPLICATION)





PACKAGE INFORMATION

ES/SOP8 PACKAGE OUTLINE AND DIMENSIONS



SYMBOL	MILIMETER		
	MIN	NOM	MAX
A	1.35	-	1.75
A1	0.10	-	0.25
A2	1.30	1.40	1.50
A3	0.55	0.65	0.70
b	0.33	-	0.51
c	0.17	-	0.25
D	4.70	4.90	5.10
E	5.80	6.00	6.20
E1	3.80	3.90	4.00
e	1.27BSC		
L	0.40	0.60	0.80

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