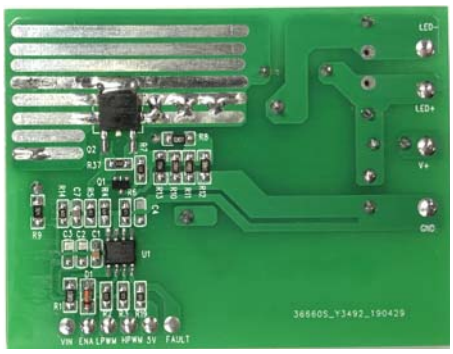


Subject	
OB3375 Demo Board Manual	Board Model: LD240V0.55A3375.00 Doc. No.: OB_DOC_DBM_337502

Description:

The performance of LED backlight power supply for LCD backlight application is presented. It is designed with OB3375 which integrates a buck converter. The detailed, schematic, BOM, PCB layout and test data are also described.

The test data in this report is by White LED array.

Revision History

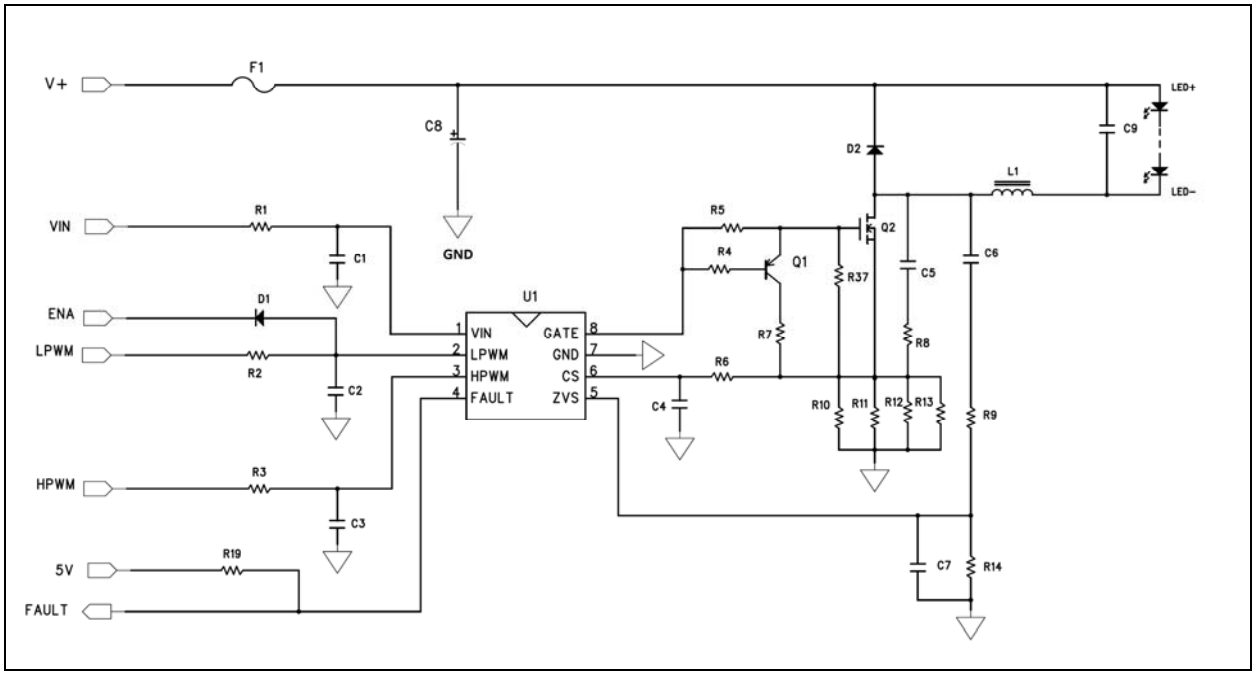
Revise Date	Version	Reason/Issue
2019-05-6	00	First Issue
2019-06-19	01	Update BOM
2020-09-5	02	Update Dimming Data and Protection Waveform

1. Board Information

1.1. Features

- Low system cost and high efficiency
- PWM and PWM to Analog combination dimming
- Comprehensive protections coverage covers LED open, LED+ to LED- short, LED- to GND short, Diode/Inductor short, MOSFET drain to source short，OTP etc.
- No visible flicker and audio noise free

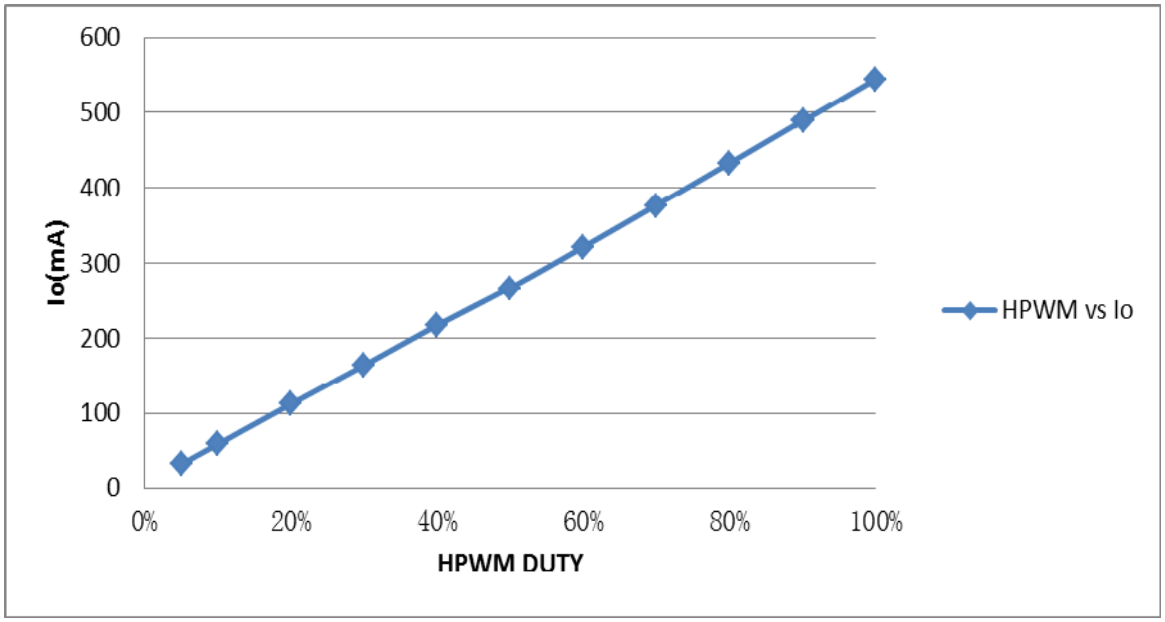
1.2. Electrical Schematic



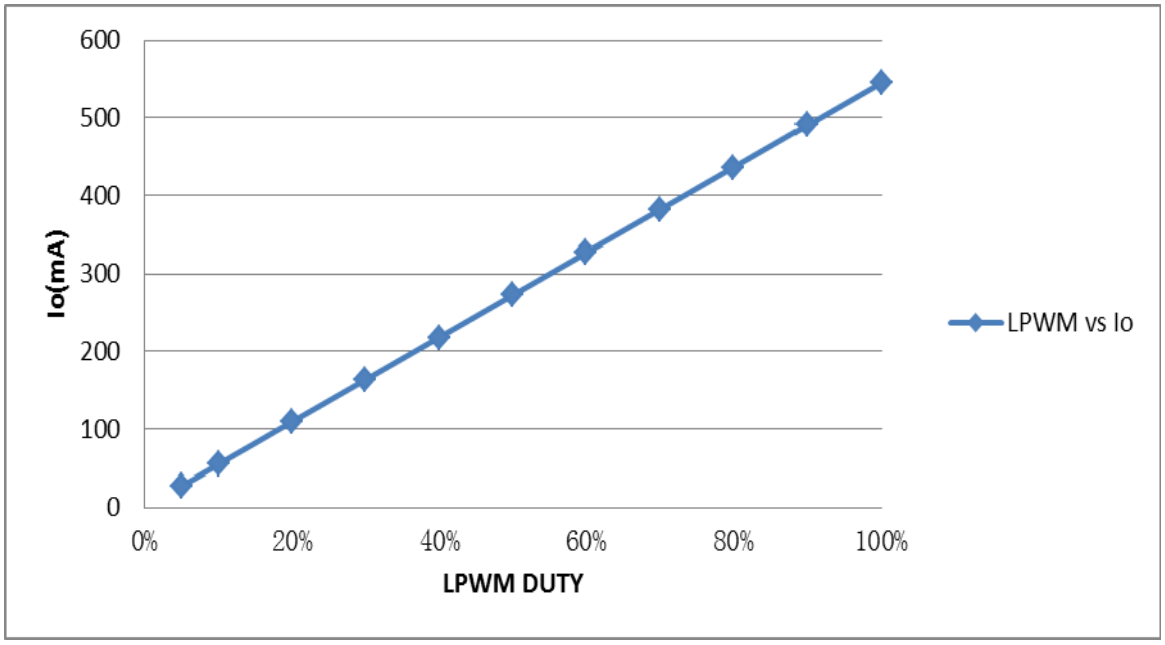
2. Test Data & Waveform

3.1 LED Current regulation

3.1.1 HPWM 15khz dimming @ LPWM 100%



3.1.2 LPWM 200Hz dimming @ HPWM 100%



3.1.3 Steady state

Io(A)	VIN=270V	VIN=280V	VIN=290V	Precision VS VIN
Vout=100V	0.551	0.550	0.549	0.90%
Vout=240V	0.556	0.555	0.551	0.36%
Precision VS Vo	0.90%	0.87%	0.36%	

3.1.4 Efficiency Test

	VIN=270V	VIN=280V	VIN=290V
Vout=100V	94.87%	94.85%	94.65%
Vout=240V	97.90%	97.80%	97.70%

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