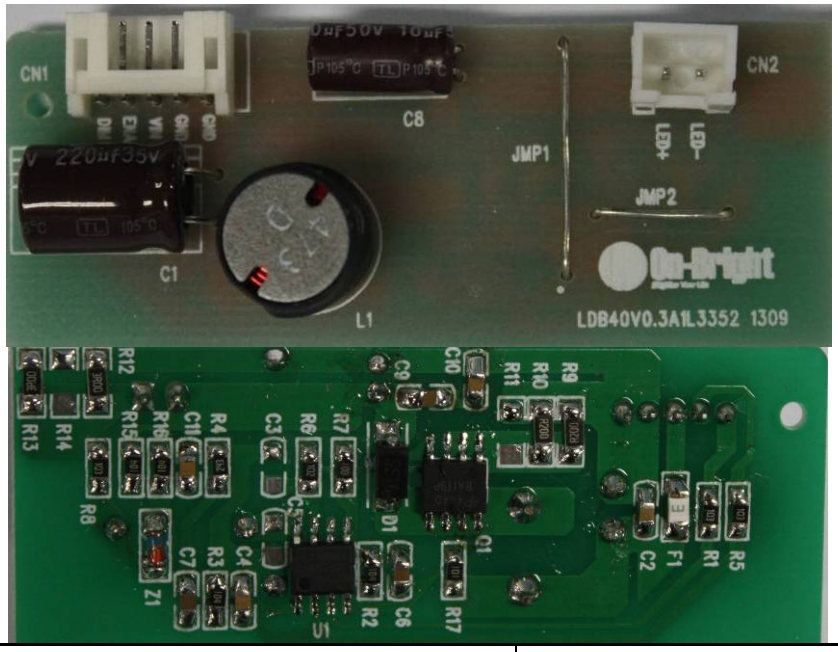

Subject

1-String LED Demo Board Manual

Board Model: LDB40V0.2A1L_3352.01

Doc. No.: OB_DOC_DBM_335201

Description:

The performance of LED backlight power supply for LCD monitor backlight application is presented. It is designed with OB3352, a boost LED driver. The detailed block diagram, schematic, BOM, PCB layout and test data are also described.

The test data in this report is by 12Series 1Parallel White LED array.

Revision History

Revise Date	Version	Reason/Issue
2013-3-13	00	First Issue
2013-10-11	01	Added Protection function

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1. Board Information

1.1. Features

- 9V to 30V input Voltage Range
- Current mode PWM Controller with good dynamic response
- Cost effective LED solution
- Output over voltage protection, cycle by cycle Over Current Protection, VDD under voltage lockout
- LED Open & Short Protection
- Diode short Protection, inductor short Protection, LED Cathode short GND Protection
- Support External burst dimming mode
- Wide dimming range

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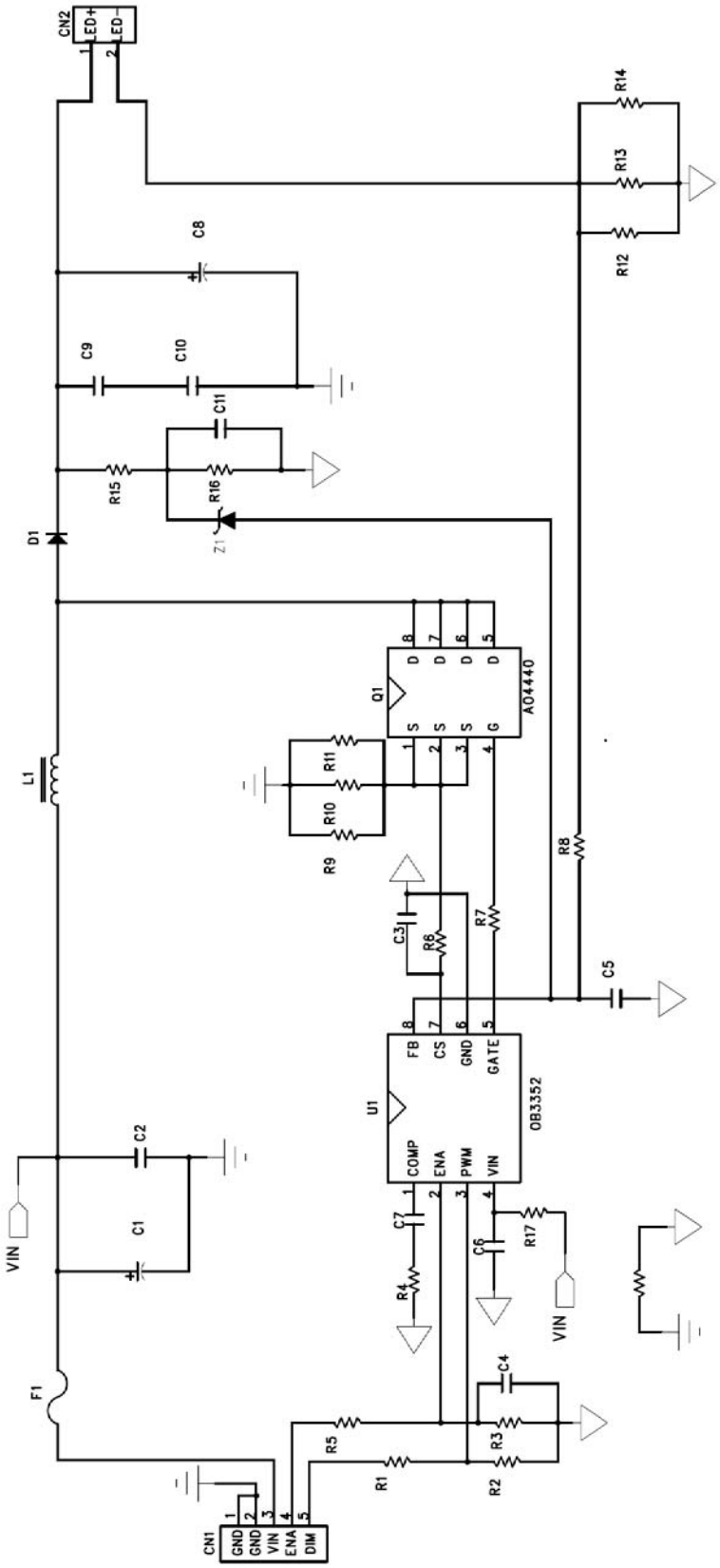
1.2. Electrical Schematic



VIN:10.8-13.2V Vo: 40V, Io: 200mA;
PWM: 0%, Min. Brightness; 100%, Max. Brightness
ENA: Disable, 0-0.8V; Enable, 2-5V

2. Test Data & Waveform

2.1. Test Data Summary

2.1.1. Key Item Overview

Item	Symbol	Test result			Spec	Unit	Remark
		LED					
LED Current	I_{OUT}	201.70			180~220	mA	**Pass**
LED Array voltage	V_P	38.52			38.4	V	--
	L1 (Core)	**Q1**		**D1**	**Spec**	**Remark**	
Thermal	41.2	45.3		47.2	<65℃	**Pass**	
	V_{IN}（V）	**I_{IN}(A)**	**P_{IN}(W)**	**P_{OUT}(W)**	**Efficiency**	**Spec**	**Remark**
Efficiency	11.99	0.71	8.51	7.77	91.30	>85%	**Pass**

Note: VIN=12V, under 25℃ ambient with 12S1P white LED array.

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