8VDC-16VDC 7.6V/700mA LED Driver

(ACTIVE) PMP4937

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Description

This reference design drives two series connected white LEDs at 700mA. The steady-state input range is 8VDC to 16VDC, but the circuit is designed to survive a 52VDC input transient condition. The TPS40211 boost controller is used in an "upside-down" buck topology for a simple, low-cost solution. This circuit includes enable, PWM dimming, current trimming, and a current sense functions for interfacing with an external microprocessor.

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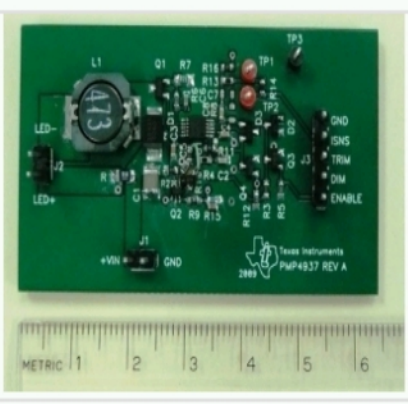

Top view

Fully assembled board (shown above) developed for testing and performance validation only, not available for sale.

Bill of Materials (BOM)

Find the complete list of components in this reference design.

Download BOM

Parametrics

	PMP4937
Vin (Min) (V)	8
Vin (Max) (V)	16
Vout (Nom) (V)	7.6
Iout (Max) (A)	.7
Output Power	5.32
Isolated/Non-Isolated	Non-Isolated
Input Type	DC
Topology	Buck- Upside Down Buck- Non Sync

TI Devices (1)

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Part Number	Name	Product Family	Sample & Buy	Design Kits & Evaluation Modules
TPS40211	Wide Input Range Current Mode Boost Controller	LED Driver	Sample & Buy	View Design Kits & Evaluation Modules

CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
TPS40211	HVSSOP (DGQ) | 10	Download	Download
	VSON (DRC) | 10	Download	-

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Step 1: Download and install the Ultra Librarian software ZIP: 62MB

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Technical Documents

User Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
PMP4937 Test Results		PDF	906	01 Feb 2012	27

Design Files (4)

Title	Abstract	Type	Size (KB)	Date	Views
PMP4937 Gerber		ZIP	103	01 Feb 2012	17
PMP4937 Schematic		PDF	59	01 Feb 2012	55
PMP4937 BOM		PDF	27	01 Feb 2012	25
PMP4937 PCB		PDF	59	01 Feb 2012	24

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