AC Input, 6 Channel LED Strings with 30W Output Reference Design

(ACTIVE) PMP4484.2

Description & Features | Technical Documents | Support & Community | Order Now

View the Important Notice for TI Designs covering authorized use, intellectual property matters and disclaimers.

Key Document

- PMP4484 Test Results (PDF 869 KB)
  12 Oct 2015 9 views

» View All Technical Documents (4)

PMP4484.2 AC Input, 6 Channel LED Strings with 30W Output Reference Design Board image

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

Description

The PMP4484 is a power reference design with AC input. It is a isolated LED driver, provides 6 channel LED outputs with PWM dimming. It implements a high PF flyback controller UCC28810 to output DC 40V. the Constant Current Buck LED Driver LM3414HV downs the voltage to 30V to drive LED. The degisn also provides 3.3Vo to MCU by the buck conller LMR16006, and a 10Vo to RS485. The system achieves high efficiency and high PF.

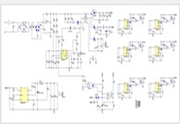
Features

- Isolated single stage Flyback and Buck togology
- 6 channel LED outputs with PWM dimming
- include 3.3Vo for MCU and 10Vo for RS485 power supply
- High efficiency, 86.4% at 230Vac input
- High PF, 0.939 at 230Vac input
- Size: 300mmX22mmx22mm

TI's Standard Terms and Conditions for Evaluation Modules apply.

Schematic/Block Diagram

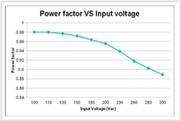
Quickly understand overall system functionality.



Download Schematic

Design Guide

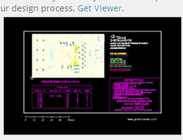
Get results faster with test and simulation data that's been verified.



Download Design Guide

Design Files

Download ready-to-use system files to speed your design process. Get Viewer.



Download Design Files

Bill of Materials (BOM)

Find the complete list of components in this reference design.

Download BOM

Parametrics

	PMP4484.2
Vin (Min) (V)	100
Vin (Max) (V)	300
Vout (Nom) (V)	10
Iout (Max) (A)	.1
Output Power (W)	1
Isolated/Non-Isolated	Isolated
Input Type	AC
Topology	Flyback- PFC

TI Devices (4)

Order samples, get tools and find more information on the TI products in this reference design.

Part Number	Name	Product Family	Sample & Buy	Design Kits & Evaluation Modules
LM3414HV	60W Common Anode Capable Constant Current Buck LED Driver Requires No Ext. Current Sensing Res	LED Driver	Sample & Buy	View Design Kits & Evaluation Modules
LMR16006	SIMPLE SWITCHER® 4V to 60V, 600mA Step-Down Regulator with Low Iq	Converter (Integrated Switch)	Sample & Buy	View Design Kits & Evaluation Modules
TL431A	Adjustable Precision Shunt Regulator	Voltage Reference	Sample & Buy	Not Available

Show More

CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
LM3414HV	HSOP (DDA) | 8	Download	Download
	WSON (NGQ) | 8	Download	Download
TL431A	SOT (DBZ) | 3	Download	Download
	TO-92 (LP) | 3	Download	Download
	SIP (PK) | 3	Download	-
	SOT (DBV) | 5	Download	Download
	SOT (DCK) | 6	Download	Download
	SOIC (D) | 8	Download	Download
	PDIP (P) | 8	Download	Download
	SOP (PS) | 8	Download	-
	TSSOP (PW) | 8	Download	Download
UCC28810	SOIC (D) | 8	Download	Download

Texas Instruments and Accelerated Designs Inc. have collaborated together to provide TI customers with schematic symbols and PCB layout footprints for TI products.

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

Step 2: Download the Symbol and Footprint .bxl file.

- read more -

Technical Documents

User guides (1)

Title	Abstract	Type	Size (KB)	Date	Views	TI Recommends
PMP4484 Test Results		PDF	869	12 Oct 2015	9	✓

Design files (3)

Title	Abstract	Type	Size (KB)	Date	Views
PMP4484 Altium		ZIP	588	12 Oct 2015	4
PMP4484 BOM		PDF	278	12 Oct 2015	10
PMP4484 Schematic		PDF	738	12 Oct 2015	28

Support & Community

TI E2E™ community

TI E2E™ Community

As a member of my.TI you can join the TI E2E™ Community where you can ask questions, share ideas and collaborate with fellow engineers and TI experts

Contents are provided "AS IS" by the respective TI and Community contributors and do not constitute TI specifications. See Terms of use.

Engage in the Community

- Amplifiers
- Broadband RF/IF & Digital Radio
- Clocks & Timers
- Data Converters
- DLP® & MEMS
- Interface
- Logic
- Power Management
- Wireless Connectivity

Wikis

Visit the TI Wiki

Other Support

- TI E2E Community
- Contact Technical Support

Your History

Products You Recently Viewed

There are no items in your history.

TI is a global semiconductor design and manufacturing company. Innovate with 100,000+ analog ICs and embedded processors, along with software, tools and the industry's largest sales/support staff.

© Copyright 1995-2015 Texas Instruments Incorporated. All rights reserved.
Trademarks | Privacy policy | Cookie policy | Terms of use | Terms of sale