120VAC Input, High Efficiency 12V/50W Power Supply Reference Design

(ACTIVE) PMP11368

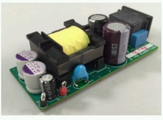
Description & Features | Technical Documents | Support & Community | Order Now

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

Key Document

- PMP11368 Test Results (PDF 1894 KB)
  26 Jan 2016 43 views

» View All Technical Documents (4)



PMP11368 120VAC Input, High Efficiency 12V/50W Power Supply Reference Design Board Image

Description

The PMP11368 power reference design provides 50W of load power from a standard 120VAC input with greater than 90% efficiency. The UCC27714 integrates the drive for the high-side MOSFET, while the UCC24636 drives the synchronous rectifier.

Features

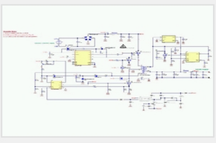
- Greater than 90% average efficiency
- No optocoupler or TL431
- Passes Class B conducted emissions without a common-mode choke
- Driver IC's eliminate gate drive transformers

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

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

Schematic/Block Diagram

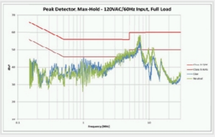
Quickly understand overall system functionality.



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

	PMP11368
Vin (Min) (V)	100
Vin (Max) (V)	130
Vout (Nom) (V)	12
Iout (Max) (A)	4
Output Power (W)	48
Isolated/Non-Isolated	Isolated
Input Type	AC
Topology	Flyback- Quasi Resonant

TI Devices (5)

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
CSD18540Q5B	60V, N-Channel NexFET(TM) Power MOSFET	Power MOSFET	Sample & Buy	View Design Kits & Evaluation Modules
UCC24636	Synchronous Rectifier Controller With Ultra-Low-Power Standby Current	Offline and Isolated DC/DC Controllers and Converters	Sample & Buy	Not Available
UCC24650	200-V Wake-up Monitor for Fast Transient Primary-side Regulation	Offline and Isolated DC/DC Controllers and Converters	Sample & Buy	View Design Kits & Evaluation Modules

Show More

CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
UCC24650	SOT (DBV) | 5	Download	Download
UCC27714	SOIC (D) | 14	Download	-
UCC28730	SOIC (D) | 7	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
PMP11368 Test Results		PDF	1894	26 Jan 2016	43	✓

Design files (3)

Title	Abstract	Type	Size (KB)	Date	Views
PMP11368 Assembly Drawing		PDF	113	26 Jan 2016	29
PMP11368 BOM		PDF	113	26 Jan 2016	23
PMP11368 Schematic		PDF	162	26 Jan 2016	82

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

- PMP20025
- TMDXSK437x

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