Slim 150 Watt LED TV Power Reference Design

(ACTIVE) PMP6251

Description & Features | Technical Documents | Support & Community

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

Description

PMP6251 is a reference design for 150W LCD TV power by using the UCC28051 to construct PFC, UCC25600 to construct LED driver LLC converter, UCC24610 to construct SR circuit and UCC28610 to construct standby flyback converter. This driver provides 4 outputs including LED driver, 12V 3A, 5V 4A and 5V standby 1A; and has the capability to operate at 90~264Vac.The LED driver is done using multi-transformer topology which can improve efficiency and decrease component count. A thorough analysis of PFC, LLC, cascade QR flyback operation and performance along with design optimization guidelines are presented. Experimental results obtained on every general condition load are provided.

TI Devices (4)

Get more information on the TI products in this reference design.

Part Number	Name	Product Family
UCC24610	Secondary Side Synchronous Rectifier Controller	AC/DC and Isolated DC/DC Power Supply
UCC25600	8-Pin High-Performance Resonant Mode Controller	AC/DC and Isolated DC/DC Power Supply
UCC28051	PFC Controller for low to medium power applications requiring compliance with IEC 1000-3-2	AC/DC and Isolated DC/DC Power Supply

Show More

Bill of Materials

Find the complete list of components in this reference design.

Download BOM

CAD/CAE Symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
UCC24610	SOIC (D) | 8	Download	Download
	VSON (DRB) | 8	Download	-
UCC25600	SOIC (D) | 8	Download	Download
UCC28051	SOIC (D) | 8	Download	Download
	PDIP (P) | 8	Download	Download
UCC28610	SOIC (D) | 8	Download	Download
	PDIP (P) | 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 (3)

Title	Abstract	Type	Size (KB)	Date	Views
LIPS Solution for LED TV Backlighting		PDF	865	05 Jan 2012	269
Multi-Transformer LED TV Power User's Guide		PDF	112	05 Jan 2012	239
PMP6251 Test Results		PDF	195	15 Aug 2011	228

More Literature (2)

Title	Abstract	Type	Size (KB)	Date	Views
PMP6251 BOM		PDF	96	16 Aug 2011	225
PMP6251 Schematic		PDF	89	16 Aug 2011	278

Related Tools & Software

Software (1)

PMP6251 Gerber
(ZIP, 307 KB) 141 views, 16 Aug 2011

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

Videos

Power Tip 58: Power supply grounding; which camp are you in?

In this power tip video senior applications engineer, Robert Kollman, discusses different methods for grounding power supply.

Posted: 27-Oct-2013
Duration: 3:30
Views: 323
Tags: power tip, power management, power reference designs, powerlab, power management solutions

Search over 1,000 Power Management Reference Designs

Related Videos

Power Tip 58: Power supply grounding; which camp are you in?

Power Tip 56: Estimate PWB interconnect inductance

Other Support

- TI E2E Community
- Contact Technical Support

Your History

Products You Recently Viewed

- PMP4692
- PMP2718
- PMP7953.2
- PMP6717
- PMP8877

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 1995-2013 Texas Instruments Incorporated. All rights reserved.
Trademarks | Privacy Policy | Terms of Use