105VAC to 440VAC Iinput, 5V & 24V Dual-output Auxiliary Supply Reference Design Using UCC28881

(ACTIVE) PMP11236.1

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Key Document

- PMP11236 Test Results (PDF 1707 KB)
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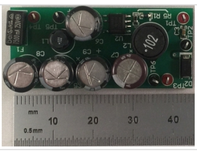

PMP11236.1 105VAC to 440VAC Iinput, 5V & 24V Dual-output Auxiliary Supply Reference Design Using UCC28881 Top of Board Image

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

Description

PMP11236 is a high voltage (105VAC to 440VAC) Buck converter reference design using MOSFET integrated controller UCC28881. 24V/100mA is provided by the UCC28881 Buck converter and followed by a TLV70450 LDO to provide 5V/20mA output. This design is compatible with Class B conduction EMI regulation.

Features

- 105VAC to 440VAC high voltage input
- Buck converter with MOSFET integrated controller
- 24V/100mA and 5V/20mA outputs
- Conduction EMI verified and test data included
- Board dimension: W x L = 20mm x 45mm
- No custom magnetic applied

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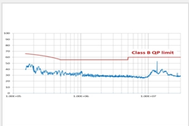
Schematic/Block Diagram

Quickly understand overall system functionality.

Download Schematic

Design Guide

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



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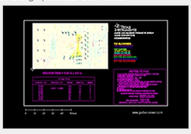
Design Files

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



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Bill of Materials (BOM)

Find the complete list of components in this reference design.

Download BOM

Parametrics

	PMP11236.1
Vin (Min) (V)	105
Vin (Max) (V)	440
Vout (Nom) (V)	24
Iout (Max) (A)	100
Output Power (W)	2400
Isolated/Non-Isolated	Non-Isolated
Input Type	AC
Topology	Buck- Non Sync

TI Devices (2)

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
TLV704	24-V Input Voltage, 150-mA, Ultralow IQ Low-Dropout Regulators	Linear Regulator (LDO)	Sample & Buy	View Design Kits & Evaluation Modules
UCC28881	700-V Lowest Quiescent Current Off-Line Switcher	Offline and Isolated DC/DC Controllers and Converters	Sample & Buy	View Design Kits & Evaluation Modules

CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
TLV704	SOT (DBV) | 5	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

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Technical Documents

User guides (1)

Title	Abstract	Type	Size (KB)	Date	Views	TI Recommends
PMP11236 Test Results		PDF	1707	24 Nov 2015	63	✓

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PMP11236 Gerber		ZIP	307	24 Nov 2015	10
PMP11236 Altium		ZIP	535	24 Nov 2015	13
PMP11236 PCB		PDF	229	24 Nov 2015	12
PMP11236 Assembly Drawing		PDF	48	24 Nov 2015	21
PMP11236 BOM		PDF	116	24 Nov 2015	52
PMP11236 Schematic		PDF	122	24 Nov 2015	108

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