

TI Home > TI Designs > Power Management > Universal AC Input, 200kHz 380V/1kW CCM Boost Power Factor Regulator Reference Design

## ₩ Worldwide (In English)

## Universal AC Input, 200kHz 380V/1kW CCM Boost Power Factor Regulator Reference Design

**Technical Documents** 

Support & Community

(ACTIVE) PMP11211



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

#### Key Document

PMP11211 Test Results (PDF 2388 KB) 09 May 2016 44 views

>> View All Technical Documents (7)

#### Description

The PMP11211 reference design uses the UCC28180 CCM PFC controller to generate a 380V/1kW output from a universal AC input. In addition to that, the UCC28722 PSR controller is used as bias supply in this design. Over 94% peak efficiency is achieved at 120VAC/60Hz input and over 97% efficiency is achieved at 230VAC/50Hz input with fixed 200kHz switching frequency.

Order Now

### PMP11211 Universal AC input, 200kHz 380V/1kW CCM Boost Power Factor Regulator Reference

Design Top of Board Image

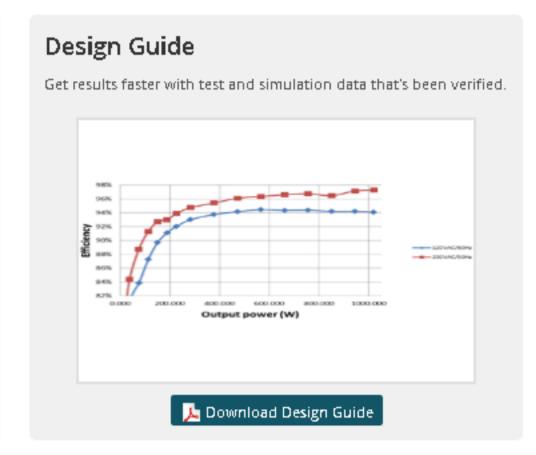
fully assembled board (shown above) developed for testing and performance validation only, not available for sale.

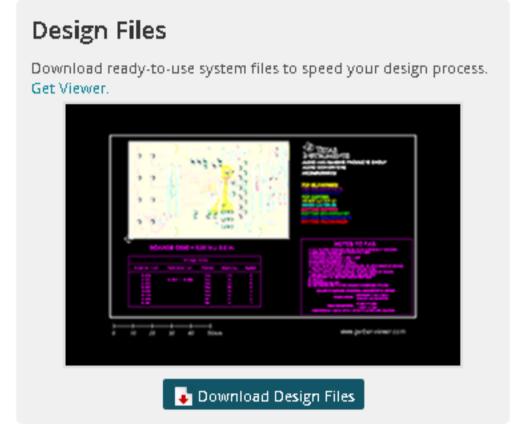
## **Features**

Description & Features

- Continuous conduction mode Boost power factor regulator
- 200kHz switching frequency
- 94% peak efficiency @ 120VAC/60Hz
- 97% peak efficiency @230VAC/50Hz . Conduction EMI test result included
- TI's Standard Terms and Conditions for Evaluation Modules apply.

# Schematic/Block Diagram Quickly understand overall system functionality. 🟃 Download Schematic





#### Bill of Materials (BOM)

Find the complete list of components in this reference design.

#### 🝌 Download BOM

#### **Parametrics**

	PMP11211.1 (Output Voltage 1)	PMP11211.2 (Output Voltage 2)
Vin (Min) (V)	90	90
Vin (Max) (V)	264	264
Vout (Nom) (V)	380	15
lout (Max) (A)	2.63	.2
Output Power (W)	999.4	3
Isolated/Non-Isolated	Non-Isolated	Non-Isolated
Input Type	AC	AC
Topology	Boost- PFC	Buck- Non Sync

## TI Devices (3)

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
UCC27511	4A/8A Single Channel High-speed Low-side Gate Driver	MOSFET and IGBT Gate Drivers	Sample & Buy	View Design Kits & Evaluation Modules
UCC28180	8-Pin Continuous Conduction Mode (CCM) PFC Controller	Offline and Isolated DC/DC Controllers and Converters	Sample & Buy	View Design Kits & Evaluation Modules
UCC28722	Low-Cost CVCC Flyback Controller With Primary-Side Regulation for Bipolar Power Device	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)	Texas Instruments and Accelerated Designs, Inc. have collaborated together to provide TI customers with schematic symbols and PCB layout footprints for TI products.
UCC27511	SOT (DBV)   6	Download	Download	Step 1: Download and install the free download.
				Step 2: Download the Symbol and Footprint from the CAD.bxl file table.
				- read more -

## **Technical Documents**

## User guides (1)

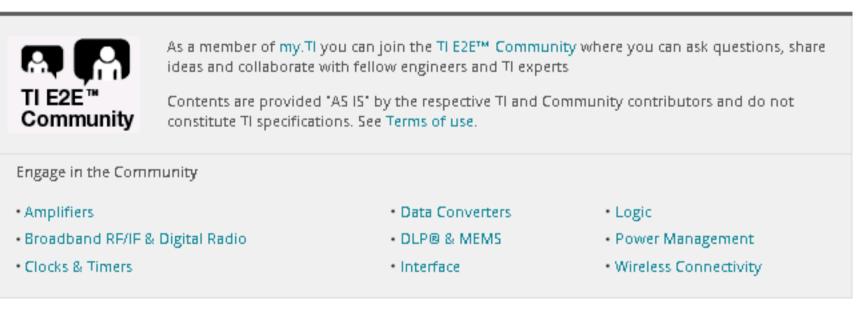
Title	Abstract	Туре	Size (KB)	Date	Views	TI Recommends
PMP11211 Test Results		PDF	2388	09 May 2016	44	<b>~</b>

## Design files (6)

Title \$	Abstract ♦	Туре 💠	Size (KB) ♦	Date ▼	Views <b>♦</b>
PMP11211 Gerber (from PMP11062)		ZIP	618	09 May 2016	18
PMP11211 Altium (from PMP11062)		ZIP	1155	09 May 2016	33
PMP11211 PCB (from PMP11062)		PDF	793	09 May 2016	21
PMP11211 Assembly Drawing (from PMP11062)		PDF	92	09 May 2016	21
№ PMP11211 BOM		PDF	148	09 May 2016	29
PMP11211 Schematic		PDF	179	09 May 2016	63

## **Support & Community**

## TI E2E™ community



## 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.

Mobile apps | 🔲 Mobile site

© Copyright 1995-2016 Texas Instruments Incorporated. All rights reserved. Trademarks | Privacy policy | Cookie policy | Terms of use | Terms of sale