

## (ACTIVE) PMP12074

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## Key Document

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### Description

The PMP12074 reference design uses the UCC28180 CCM PFC controller to generate a 380V/1kW output from a 230VAC input. In addition to that, the UCC28722 PSR controller is used as bias supply in this design. Over 97% efficiency is achieved at 230VAC/50Hz input with fixed 200kHz switching frequency.

## Features

- Continuous conduction mode boost power factor regulator
- 200kHz switching frequency
- Utilize PFC inductor with ER48 core
- 97% peak efficiency @ 230VAC/50Hz
- Conduction EMI test result included

## Design Files

Download ready-to-use system files to speed your design process. [Get Viewer.](#)



The screenshot displays the Design Files viewer interface. It features a central circuit diagram with a yellow arrow pointing to a component. Below the diagram is a table of components with columns for Name, Value, and Units. To the right of the diagram is a list of files with columns for Name, Size, and Date. The interface is dark-themed with yellow and red text.

Source: [Download Design Files](#)

File Name | Size | Date

File Name	Size	Date
File 1	100 KB	2023-01-01
File 2	200 KB	2023-01-02
File 3	300 KB	2023-01-03
File 4	400 KB	2023-01-04
File 5	500 KB	2023-01-05
File 6	600 KB	2023-01-06
File 7	700 KB	2023-01-07
File 8	800 KB	2023-01-08
File 9	900 KB	2023-01-09
File 10	1 MB	2023-01-10

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### Bill of Materials (BOM)

Find the complete list of components in this reference design.

[Download BOM](#)

## Parametrics


	PMP12074.1 {Output Voltage 1}	PMP12074.2 {Output Voltage 2}
Vin {Min} {V}	176	176
Vin {Max} {V}	264	264
Vout {Nom} {V}	380	15
Iout {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	<a href="#">Sample &amp; Buy</a>	<a href="#">View Design Kits &amp; Evaluation Modules</a>
UCC28180	8-Pin Continuous Conduction Mode (CCM) PFC Controller	Offline and Isolated DC/DC Controllers and Converters	<a href="#">Sample &amp; Buy</a>	<a href="#">View Design Kits &amp; Evaluation Modules</a>
UCC28722	Low-Cost CVCC Flyback Controller With Primary-Side Regulation for Bipolar Power Device	Offline and Isolated DC/DC Controllers and Converters	<a href="#">Sample &amp; Buy</a>	<a href="#">View Design Kits &amp; Evaluation Modules</a>

## CAD/CAE symbols

Part #	Package   Pins	CAD File (.bzl)	STEP Model (.stp)
UCC27511	 SOT{DBV}   6	<a href="#">Download</a>	<a href="#">Download</a>

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 [free download](#).

Step 2: Download the Symbol and Footprint from the CAD.bxl file table.





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## Technical Documents

## User guides (1)


Title	Abstract	Type	Size (KB)	Date	Views	Ti Recommends
<a href="#">PMP12074 Test Results</a>		PDF	1472	09 May 2016	50	✓

### Design files (6)

Title	Abstract	Type	Size (KB)	Date	Views
<a href="#">PMP12074 Gerber (from PMP11062)</a>		ZIP	618	09 May 2016	17
<a href="#">PMP12074 Altium (from PMP11062)</a>		ZIP	1155	09 May 2016	26
 <a href="#">PMP12074 PCB (from PMP11062)</a>		PDF	793	09 May 2016	25
 <a href="#">PMP12074 Assembly Drawing (from PMP11062)</a>		PDF	92	09 May 2016	22
 <a href="#">PMP12074 BOM</a>		PDF	151	09 May 2016	42
 <a href="#">PMP12074 Schematic</a>		PDF	177	09 May 2016	77

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