# Pre-Regulator for Air Conditioner 80Vdc Output with 3kW

(ACTIVE) PMP4259

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## Description

PMP4259 is a universal AC input, 400V output 3000W interleave PFC controlled by UCC28070.

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

## Bill of Materials (BOM)

Find the complete list of components in this reference design.

Download BOM

## Parametrics

| | PMP4259 |
|---|---|
| Vin (Min) (V) | 90 |
| Vin (Max) (V) | 264 |
| Vout (Nom) (V) | 390 |
| Iout (Max) (A) | 7.7 |
| Output Power | 3003 |
| Isolated/Non-Isolated | Non-Isolated |
| Input Type | AC |
| Topology | Boost- PFC |

## 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 |
|---|---|---|---|---|
| TL431 | Adjustable Precision Shunt Regulator | Voltage Reference | Sample & Buy | Not Available |
| UCC27324 | Dual 4 A Peak High Speed Low-Side Power MOSFET Drivers | AC/DC and Isolated DC/DC Power Supply | Sample & Buy | View Design Kits & Evaluation Modules |
| UCC28070 | Two-Phase Interleaved CCM PFC Controller | AC/DC and Isolated DC/DC Power Supply | Sample & Buy | View Design Kits & Evaluation Modules |

## CAD/CAE symbols

| Part # | Package \| Pins | CAD File (.bxl) | STEP Model (.stp) |
|---|---|---|---|
| TL431 | SOT (DBZ) \| 3 | Download | Download |
| | TO-92 (LP) \| 3 | Download | Download |
| | SIP (PK) \| 3 | Download | - |
| | SOT (DBV) \| 5 | Download | Download |
| | SOT (DCK) \| 6 | Download | Download |
| | SOIC (D) \| 8 | Download | Download |
| | PDIP (P) \| 8 | Download | Download |
| | SOP (PS) \| 8 | Download | - |
| | TSSOP (PW) \| 8 | Download | - |
| UCC27324 | SOIC (D) \| 8 | Download | Download |
| | HVSSOP (DGN) \| 8 | Download | Download |
| | WSON (DSD) \| 8 | Download | - |
| | PDIP (P) \| 8 | Download | Download |
| UCC28070 | SOIC (DW) \| 20 | Download | Download |
| | TSSOP (PW) \| 20 | 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 (1)

| Title | Abstract | Type | Size (KB) | Date | Views |
|---|---|---|---|---|---|
| PMP4259 Test Results | | PDF | 60 | 24 Nov 2010 | 87 |

### Design Files (6)

| Title | Abstract | Type | Size (KB) | Date | Views |
|---|---|---|---|---|---|
| PMP4259 PCB (Controller) | | PDF | 48 | 08 Aug 2011 | 63 |
| PMP4259 PCB (Power) | | PDF | 116 | 08 Aug 2011 | 69 |
| PMP4259 Controller BOM | | PDF | 19 | 31 May 2011 | 76 |
| PMP4259 Controller Schematic | | PDF | 47 | 31 May 2011 | 112 |
| PMP4259 Power Schematic | | PDF | 94 | 15 Feb 2011 | 153 |
| PMP4259 Power BOM | | PDF | 30 | 24 Nov 2010 | 95 |

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