High Efficiency 36-60V Input Isolated Synchronous Flyback Reference Design with Dual Outputs

(ACTIVE) PMP11065.1

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Key Document

- PMP11065 Test Results (PDF 474 KB)
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PMP11065.1 High Efficiency 36-60V Input Isolated Synchronous Flyback Reference Design with Dual Outputs Top of Board Image

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

Description

PMP11065 is an isolated synchronous flyback converter with dual outputs of 3.3V/2.5A and 5V/2.8A. The 36-60V input is suitable for use in most telecom and PoE applications that require high efficiency.

Features

- Efficiency of 90% with 48V input and maximum loads
- Good line/load regulation with optocoupler feedback
- Dual outputs save space and cost
- 1500Vrms isolation for telecom or PoE

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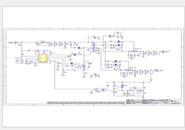
Schematic/Block Diagram

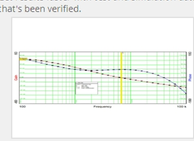
Quickly understand overall system functionality.



Download Schematic

Design Guide

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



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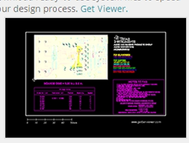
Design Files

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



Download Design Files

Bill of Materials (BOM)

Find the complete list of components in this reference design.

Download BOM

Parametrics

	PMP11065.1
Vin (Min) (V)	36
Vin (Max) (V)	60
Vout (Nom) (V)	3.3
Iout (Max) (A)	2.5
Output Power (W)	8.25
Isolated/Non-Isolated	Isolated
Input Type	DC
Topology	Flyback- Synchronous

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
CSD17577Q3A	CSD17577Q3A	Power MOSFET	Sample & Buy	Not Available
LM5020	13-100V Wide Vin, Current Mode PWM Boost Controller	Controller (External Switch)	Sample & Buy	View Design Kits & Evaluation Modules
TLV431A	Low Voltage Adjustable Precision Shunt Regulator	Voltage Reference	Sample & Buy	Not Available

CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
LM5020	VSSOP (DGS) | 10	Download	Download
	WSON (DPR) | 10	Download	Download
TLV431A	SOT (DBZ) | 3	Download	Download
	TO-92 (LP) | 3	Download	Download
	SIP (PK) | 3	Download	-
	SOT (DBV) | 5	Download	Download
	SOT (DCK) | 6	Download	-
	SOIC (D) | 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 (1)

Title	Abstract	Type	Size (KB)	Date	Views	TI Recommends
PMP11065 Test Results		PDF	474	30 Nov 2015	17	✓

Design files (3)

Title	Abstract	Type	Size (KB)	Date	Views
PMP11065 Gerber		ZIP	277	30 Nov 2015	9
PMP11065 BOM		PDF	111	30 Nov 2015	17
PMP11065 Schematic		PDF	338	30 Nov 2015	37

Applications

- Power Over Ethernet (PoE)

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