Xilinx® Zynq®7000 series (XC7Z015) Power Solution, 5W - Reference Design

TIDesigns

(ACTIVE) PMP10600.1

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Description

The PMP10600.1 reference design provides all the power supply rails necessary to power Xilinx® Zynq® 7000 series (XC7Z015) FPGA. This design uses several LMZ3 series modules, LDOs, and a DDR termination regulator. It also features one LM3880 for power up and power down sequencing. This design uses a 12V input.

Features

- Provides all the power supply rails needed for a Xilinx® Zynq® 7000 series (XC7Z015)
- Design optimized to support a 12V input
- On board power up and power down sequencing
- Supports DDR3 memory device
- Module design for ease of use

Xilinx® Zynq®7000 series (XC7Z015) Power Solution, 5W - Top

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

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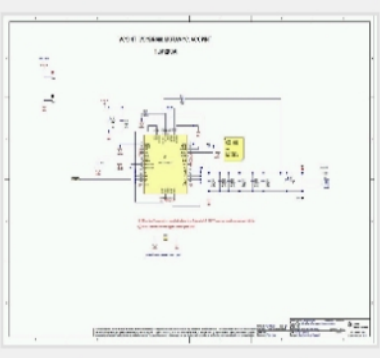
Schematic/Block Diagram

Quickly understand overall system functionality.



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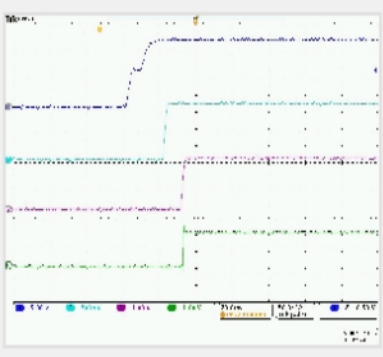

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Design Files

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Bill of Materials (BOM)

Find the complete list of components in this reference design.

Download BOM

Parametrics

	PMP10600.1
Vin (Max) (V)	13.2
Vin (Min) (V)	10.8
Vout (Nom) (V)	1
Iout (Max) (A)	3
Output Power	3
Isolated/Non-Isolated	Non-Isolated
Input Type	DC
Topology	Buck- Integrated Switch

TI Devices (6)

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
LM3880	Power Supply Sequencer	Power Management	Sample & Buy	View Design Kits & Evaluation Modules
LMZ31503	3A SIMPLE SWITCHER® Power Module with 4.5V-14.5V Input in QFN package	Non-Isolated Module	Sample & Buy	View Design Kits & Evaluation Modules
LP2998	DDR Termination Regulator	Power Management	Sample & Buy	View Design Kits & Evaluation Modules
LP3991	300mA Linear Voltage Regulator for Digital Applications	Linear Regulator (LDO)	Sample & Buy	View Design Kits & Evaluation Modules
TPS560200	17V Input, 500mA Synchronous Step-Down SWIFT™ Regulator in SOT-23 with Advanced Eco-mode™	Converter (Integrated Switch)	Sample & Buy	View Design Kits & Evaluation Modules
TPS7A3501	Low Noise, High PSRR 1A Active Filter	Linear Regulator (LDO)	Sample & Buy	View Design Kits & Evaluation Modules

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CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
LM3880	SOT (DBV) | 6	Download	Download
LMZ31503	B1QFN (RUQ) | 47	Download	-
LP2998	SOIC (D) | 8	Download	Download
	HSOP (DDA) | 8	Download	Download
LP3991	DSBGA (YZR) | 4	Download	-
TPS560200	SOT (DBV) | 5	Download	Download
TPS7A3501	WSON (DRV) | 6	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.

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Technical Documents

User Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
PMP10600 Test Results		PDF	625	14 Jan 2015	0

Design Files (3)

Title	Abstract	Type	Size (KB)	Date	Views
PMP10600 Gerber		ZIP	9189	14 Jan 2015	0
PMP10600 BOM		PDF	123	14 Jan 2015	0
PMP10600 Schematic		PDF	325	14 Jan 2015	1 1

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