

192W Dual-Phase Synchronous Boost Converter Reference Design

TI Designs

(ACTIVE) PMP9403

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Description

PMP9403 is a high-efficiency dual-phase synchronous boost converter using the LM5122 controller ICs. The design accepts an input voltage of 9Vin to 15Vin (12Vin Nominal) and provides an output of 48Vout capable of supplying 4A of continuous current to the load.

Features

- Synchronous rectification for high efficiency
- High power density
- Interleaved multi-phase with current sharing
- Low temperature rise
- Hiccup-mode overload protection
- Precision voltage reference accuracy of +/-1%

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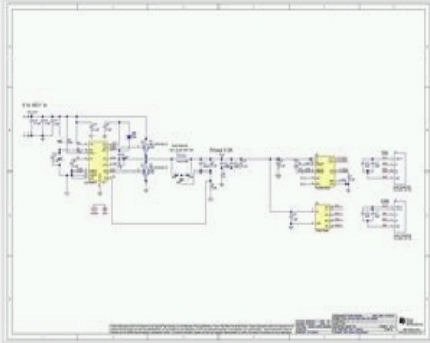


PMP9403 Top of Board

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

Schematic/Block Diagram

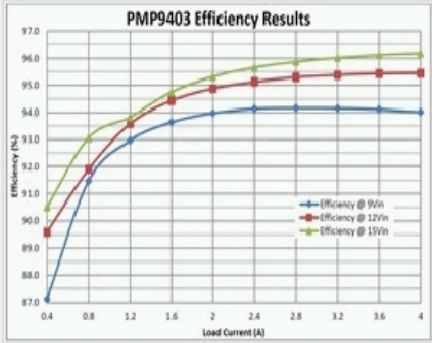
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Download Schematic

Test Data

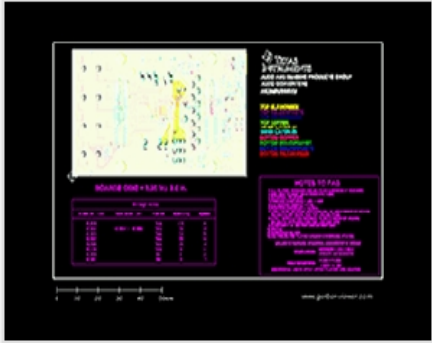
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Design Files

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Bill of Materials (BOM)

Find the complete list of components in this reference design.

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TI Devices (1)

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Part Number	Name	Product Family	Sample & Buy	Design Kits & Evaluation Modules
LM5122-Q1	Automotive Grade, 3-65V Wide Vin, Current Mode Synchronous Boost Controller with Multiphase Capabili	Controller (External Switch)	Sample & Buy	View Design Kits & Evaluation Modules

Technical Documents

User guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
PMP9403 Test Results		PDF	1109	14 Apr 2015	0

Design files (7)

Title	Abstract	Type	Size (KB)	Date	Views
PMP9403 Gerber (from PMP7850)		ZIP	249	14 Apr 2015	0
PMP9403 CAD Files		ZIP	672	14 Apr 2015	0
PMP9403 PCB (from PMP7850)		PDF	611	14 Apr 2015	0
PMP9403 Component Views (from PMP7850)		PDF	244	14 Apr 2015	0
PMP9403 Assembly Drawing (from PMP7850)		PDF	144	14 Apr 2015	0
PMP9403 BOM		PDF	66	14 Apr 2015	0
PMP9403 Schematic		PDF	204	14 Apr 2015	0

Applications

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