9.5V @ 1.5A Automotive Boost Converter

(ACTIVE) PMP8536

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Description

This design is a boost converter for automotive applications to boost the battery voltage to 9.5V @ 1.5A during cranking. It can withstand input peaks up to 40V.

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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

	PMP8536
Vin (Min) (V)	4
Vin (Max) (V)	10
Vout (Nom) (V)	9.5
Iout (Max) (A)	1.5
Output Power	14.25
Isolated/Non-Isolated	Non-Isolated
Input Type	DC
Topology	Boost- Non Sync

TI Devices (2)

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
LM3481	48V Wide Vin Low-Side N-Channel Controller for Switching Regulators	Controller (External Switch)	Sample & Buy	View Design Kits & Evaluation Modules
TPS7A1633	60V, 5µA IQ Low-Dropout 100mA Linear Regulator with Enable and Power Good	Linear Regulator (LDO)	Sample & Buy	View Design Kits & Evaluation Modules

CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
LM3481	VSSOP (DGS) | 10	Download	Download
TPS7A1633	HVSSOP (DGN) | 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.

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Technical Documents

User Guides (2)

Title	Abstract	Type	Size (KB)	Date	Views
PMP8536 Test Results Rev A		PDF	815	27 Feb 2013	16
PMP8536 Test Results Rev B		PDF	849	27 Feb 2013	12

Design Files (4)

Title	Abstract	Type	Size (KB)	Date	Views
PMP8536 BOM Rev A		PDF	16	27 Feb 2013	20
PMP8536 Schematic Rev A		PDF	82	27 Feb 2013	25
PMP8536 BOM Rev B		PDF	16	27 Feb 2013	17
PMP8536 Schematic Rev B		PDF	82	27 Feb 2013	15

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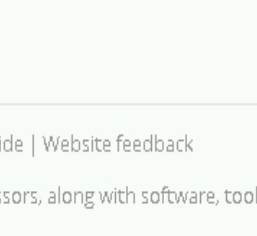

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Power Tip 58: Power supply grounding; which camp are you in?

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- lm5006eval
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