Inverting Buck Boost Converter Using TPS40200 (12V to -8V@1.3A) Reference Design

(ACTIVE) PMP5026

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Description

PMP5026 uses the TPS40200 in an inverting buck boost configuration to generate a negative output from a positive input. This type of circuit is useful in a number of applications including Audio, Communications, Military/Space etc. This design uses a nominal 12V input to generate an output of -8V@1.3A. The circuit also provides a way to synchronize and sequence this particular design with other power rails in the system.

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Bill of Materials (BOM)

Find the complete list of components in this reference design.

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Parametrics

	PMP5026
Vin (Max) (V)	13.2
Vin (Min) (V)	10.8
Vout (Nom) (V)	-8
Iout (Max) (A)	1.3
Output Power	10.4
Isolated/Non-Isolated	Non-Isolated
Input Type	DC
Topology	Buck Boost- Non Sync

TI Devices (1)

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Part Number	Name	Product Family	Sample & Buy	Design Kits & Evaluation Modules
TPS40200	Wide Input Non-Synchronous Buck DC/DC Controller	Controller (External Switch)	Sample & Buy	View Design Kits & Evaluation Modules

CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
TPS40200	SOIC (D) | 8	Download	Download
	VSON (DRB) | 8	Download	-

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Technical Documents

User Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
PMP5026 Test Results		PDF	324	12 Nov 2010	13

Design Files (2)

Title	Abstract	Type	Size (KB)	Date	Views
PMP5026 Schematic		PDF	49	12 Nov 2010	26
PMP5026 REVA BOM		PDF	20	12 Nov 2010	15

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