Inverting Buck Boost Converter, 12V to -150V at 5mA using the TPS40200

(ACTIVE) PMP3034

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Description

PMP3034 uses the TPS40200 buck controller in an inverting buck boost configuration. This topology takes a positive input and generate a negative output. In this case 12V is converted to -150V at 5mA. Because of the high voltage an external amplifier, TLV271 is needed to translate the feedback signal.

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Bill of Materials (BOM)

Find the complete list of components in this reference design.

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Parametrics

	PMP3034
Vin (Max) (V)	13.2
Vin (Min) (V)	10.8
Vout (Nom) (V)	-150
Iout (Max) (A)	.01
Output Power	.75
Isolated/Non-Isolated	Non-Isolated
Input Type	DC
Topology	Buck Boost- Inverting 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
PMP3034 Test Results		PDF	879	09 Nov 2010	29

Design Files (2)

Title	Abstract	Type	Size (KB)	Date	Views
PMP3034 REVB BOM		PDF	18	09 Nov 2010	35
PMP3034 Schematic		PDF	58	09 Nov 2010	44

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