Isolated Flyback, Bucks (9.6V@0.4A) for Consumer Applications

(ACTIVE) PMP5539.1

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Description

This reference design is a multi-output isolated flyback, working from universal line. The main regulated output is 9.6V; it supplies the main load @ 400mA and two further outputs by means of low power buck converters. The converter takes advantage of the cascode-flyback topology and quasi-resonant working mode to deliver low EMI and good efficiency at light load. A small capacitive coupling circuit sends to the secondary side the information of the mains frequency.

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Bill of Materials (BOM)

Find the complete list of components in this reference design.

Download BOM

Parametrics

	PMP5539.1
Vin (Min) (V)	85
Vin (Max) (V)	265
Vout (Nom) (V)	9.6
Iout (Max) (A)	.4
Output Power	3.84
Isolated/Non-Isolated	Isolated
Input Type	AC
Topology	Flyback- Quasi Resonant

TI Devices (3)

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Part Number	Name	Product Family	Sample & Buy	Design Kits & Evaluation Modules
TPS62120	15V, 75mA, 96% efficiency Step-Down Converter with DCS-Control	Converter (Integrated Switch)	Sample & Buy	View Design Kits & Evaluation Modules
TPS62130	3-17V 3A Step-Down Converter with DCS-Control in 3x3 QFN Package	Converter (Integrated Switch)	Sample & Buy	View Design Kits & Evaluation Modules
UCC28610	12-65W Green-mode Flyback Power Supply Controller	AC/DC and Isolated DC/DC Power Supply	Sample & Buy	View Design Kits & Evaluation Modules

CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
TPS62120	SOT (DCN) | 8	Download	-
TPS62130	VQFN (RGT) | 16	Download	-
UCC28610	SOIC (D) | 8	Download	Download
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Technical Documents

User Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
PMP5539 Test Results		PDF	238	10 Nov 2010	44

Design Files (3)

Title	Abstract	Type	Size (KB)	Date	Views
PMP5539 PCB		PDF	91	10 Nov 2010	31
PMP5539 Schematic		PDF	81	10 Nov 2010	91
PMP5539 BOM		PDF	22	10 Nov 2010	40

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