18V-36V Input 5V/15A; 94% Efficient Active Clamp

(ACTIVE) PMP5117

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Description

The PMP5117 reference design provides an isolated 5V at 15A from a 18V to 36V input range. This design uses the UCC2897A active clamp controller along with Texas Instruments' NexFET technology, CSD16321Q5, synchronous rectifiers to achieve up to 94% efficiency.

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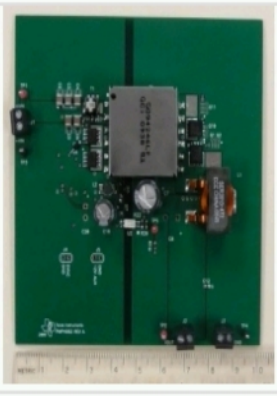

Top view

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

	PMP5117
Vin (Max) (V)	36
Vin (Min) (V)	18
Vout (Nom) (V)	5
Iout (Max) (A)	15
Output Power	75
Isolated/Non-Isolated	Isolated
Input Type	DC
Topology	Forward- Active Clamp Forward- Synchronous

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
CSD16321Q5	N-Channel NexFET™ Power MOSFET	Power MOSFET	Sample & Buy	View Design Kits & Evaluation Modules
UCC2897A	Advanced Current-Mode Active Clamp PWM 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)
CSD16321Q5	VSON-CLIP (DQH) | 8	Download	-
UCC2897A	TSSOP (PW) | 20	Download	Download
	VQFN (RGP) | 20	Download	-

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Technical Documents

User Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
PMP5117 Test Results		PDF	1358	07 Dec 2011	32

Design Files (2)

Title	Abstract	Type	Size (KB)	Date	Views
PMP5117 BOM		PDF	31	07 Dec 2011	29
PMP5117 Schematic		PDF	91	07 Dec 2011	50

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- PMP5063
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- BQ76930EVM
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