Synchronous Buck for Intel Core i3, i5, i7 Arrandale SV (1.5V @ 12A)

(ACTIVE) PMP5783.5

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Description

PMP5783 is a complete Intel IMVP6.5 Arrandale SV/Clarksfield SV Power Reference Design. Vin is 8-15V. Main CPU is powered by two phase TPS59621. TPS59611 powers graphics processor. DDR3 memory powered by TPS5126. Both 1.05V's are each powered by TPS51218. Dual TPS51125A powers 5V and 3.3V. Each of above power trains uses dual NexFET CSD86350. TPS62290 powers 1.8VS.

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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.

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Parametrics

	PMP5783.5
Vin (Min) (V)	8
Vin (Max) (V)	15
Vout (Nom) (V)	1.5
Iout (Max) (A)	12
Output Power	18
Isolated/Non-Isolated	Non-Isolated
Input Type	DC
Topology	Buck- Synchronous

TI Devices (7)

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Part Number	Name	Product Family	Sample & Buy	Design Kits & Evaluation Modules
CSD86330Q3D	Synchronous Buck NexFET™ Power Block MOSFET Pair	Power MOSFET	Sample & Buy	View Design Kits & Evaluation Modules
CSD86350Q5D	Synchronous Buck NexFET™ Power Block MOSFET Pair	Power MOSFET	Sample & Buy	View Design Kits & Evaluation

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CAD/CAE symbols

Part #	Package | Pins	CAD File (.bxl)	STEP Model (.stp)
CSD86330Q3D	LSON-CLIP (DQZ)| 8	Download	-
CSD86350Q5D	LSON-CLIP (DQY)| 8	Download	-
TPS51116	HTSSOP (PWP) | 20	Download	Download
	VQFN (RGE) | 24	Download	-
TPS51124	VQFN (RGE) | 24	Download	-
TPS51125A	VQFN (RGE) | 24	Download	-

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Technical Documents

User Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
PMP5783 Test Results		PDF	135	18 May 2011	33

Design Files (4)

Title	Abstract	Type	Size (KB)	Date	Views
PMP5783 PCB		PDF	1211	18 May 2011	18
PMP5783 Gerber		ZIP	676	18 May 2011	14
PMP5783 BOM		PDF	34	18 May 2011	46
PMP5783 Schematic		PDF	672	18 May 2011	54

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