

TPS51611

TPS51611

(ACTIVE)

★★★★☆

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Single Phase, D-CAP+™ Mode Step-Down Controller for IMVP6.5™ CPU/GPU Vcore

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Single Phase, D-CAP+ Synchronous Buck Controller

Description & parametrics

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Description

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Special note

This device is designed specifically to power IMVP Mobile Processors under a strict disclosure agreement with Intel. The end user must have a current CNDA Agreement in place with Intel. For more information please contact IMVP@list.ti.com.

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Description

The TPS51611 is a fully IMVP-6.5 compliant single-phase synchronous buck controller with integrated gate drivers. Advanced control features such as D-CAP+™ architecture and OSR overshoot reduction provide fast transient response, lowest output capacitance and high efficiency. The TPS51611 supports both the Intel mobile CPU and integrated graphics modes with the integrated 7-bit DAC in Calpella platform. The

Features

- 3-V to 28-V Conversion Voltage Range
- Minimal External Parts Count
- Full IMVP-6.5 Compliance, Including $\overline{VR_TT}$ and Output Current Monitor
- Supports 7-Bit VID Code for CPU and GPU
- 0.3 V to 1.5 V Output Voltage Range

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Parametrics

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	TPS51611	TPS51610	TPS51620	TPS51621
Vin (Min) (V)	3	3	3	3
Vin (Max) (V)	28	28	28	28
Vout (Min) (V)	0.3	0.3	0.3	0.3
Vout (Max) (V)	1.5	1.5	1.5	1.5
Iout (Max) (A)	60	60	60	60
Switching Frequency (Max) (kHz)	500	500	500	500
Soft Start	Adjustable	Adjustable	Adjustable	Adjustable
Control Mode	D-CAP+	D-CAP+	D-CAP+	D-CAP+
Regulated Outputs (#)	1	1	1	1
Topology	Buck	Buck	Buck	Buck
Platform	IMVP6.5	IMVP6+	IMVP6+	IMVP6.5
Special Features	Power Good	Power Good	Power Good	Power Good
Operating Temperature Range (C)	-10 to 105	-10 to 105 -40 to 105	-10 to 100	-10 to 105
Pin/Package	32VQFN	32VQFN	40VQFN	40VQFN
Approx. Price (US\$)	2.31 100u	1.25 1ku	2.00 1ku	1.65 1ku
	Sample & Buy	Sample & Buy	Sample & Buy	Sample & Buy

Related end equipment

- [Power Solutions for Intel® IMVP6.5 Platform](#)

Companion parts

Part #	Name	Product Family	Comments
CSD16321Q5	N-Channel NexFET™ Power MOSFET	POWER MOSFET - N-CHANNEL MOSFET TRANSISTOR	
CSD16406Q3	N-Channel NexFET™ Power MOSFET	POWER MOSFET - N-CHANNEL MOSFET TRANSISTOR	

Customer Reviews ^{BETA}

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