

(ACTIVE) PMP9765

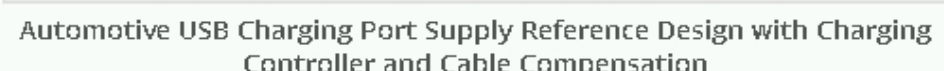
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This reference design includes a power management circuit which is capable of controlling a remote USB charging port in an automotive application environment. The circuit can be supplied directly from the car battery rail. It uses a small and highly efficient step down converter, the TP562130A-Q1, to regulate the required USB bus voltage for charging with charge currents up to 2.5A.

The USB charging port is controlled and protected by using a USB charging controller, the TPS2549-Q1, this charging controller is also used to monitor the charge current for adjusting the output voltage of the TP562130A-Q1. This way the voltage drop across the cable connection to the USB port is compensated. In addition, the TPS2549-Q1 generates all required signals to indicate a USB charging port to the equipment connected to the port.

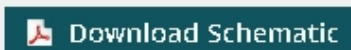
- Complete power solution for a remote USB charging port
- Input overvoltage protection for surge voltages up to 40V
- Supports charge currents up to 2.5A
- Integrated cable voltage drop compensation for 1% accurate load regulation
- Up to 92% efficiency at full output power
- Less than 450-mm² PCB area required for the complete solution

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i Fully assembled board (shown above) developed for testing and performance validation only, not available for sale.

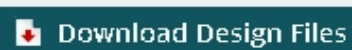
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Find the complete list of components in this reference design.

	PMP9765
Vin (Min) [V]	5
Vin (Max) [V]	40
Vout (Nom) [V]	5
Iout (Max) [A]	2.5
Output Power [W]	12.5
Isolated/Non-Isolated	Non-Isolated
Input Type	DC
Topology	Buck- Synchronous

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Title	Abstract	Type	Size (KB)	Date	Views
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PMP9765 PCB		PDF	297	19 Jan 2016	9
PMP9765 BOM		PDF	13	19 Jan 2016	14
PMP9765 Schematic		PDF	40	19 Jan 2016	33

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