MCP1631HV Digitally Controlled Programmable Current Source Reference Design

Part Number: MCP1631RD-DCPC1

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The MCP1631HV Digitally Controlled Programmable Current Source Reference Design is used to drive and dim one or more power LEDs in a series or parallel topology (depending on the LED's capability). The reference design may also be used to charge one to four cell NiMH/NiCd or one to two cell Li-Ion battery packs. The board uses the MCP1631HV high-speed analog PWM controller and PIC16F616 microcontroller to generate the proper dimming ratio for LEDs or charge algorithm for NiMH, NiCd and Li-Ion batteries. The boards is used to evaluate Microchip's MCP1631HV in a SEPIC power converter application.

Features | Package Contents

- Input Operating Voltage Range: +3.5V to +16V
- Firmware default output current of 700 mA with dimming ratio 10:1 (70 mA/step)
- Maximum output current of 1000 mA
- Maximum output power of 8.5W
- Drive one or more LEDs
- Firmware for charging Li-Ion, NiMH, and NiCd batteries
- Single ON/OFF/Dimming switch
- Status and fault indication
- Hardware and software overvoltage protection (OVP) set to 9.0V. The software value can be modified in the source code to be less than 9.0V

Documentation & Software

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AppNotes	Last Updated	Size
AN960 - New Components and Design Methods Bring Intelligence to Battery Charger Applications	11/19/2004 3:24:56 PM	293KB
Documents	**Last Updated**	**Size**
PIC16F610/16HV610/PIC16F616/16HV616 14-Pin Flash-Based, 8-Bit CMOS MCU	11/11/2009 8:23:21 AM	3MB
MCP1631RD-DCPC1 Firmware	7/22/2009 8:48:04 AM	70KB
MCP1631HV Digitally Controlled Programmable Current Source Reference Design	7/21/2009 1:55:09 PM	367KB
MCP1631RD-DCPC1 Gerbers	7/21/2009 1:45:33 PM	561KB

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MCP1631/HV/MCP1631V/VHV High-Speed, Pulse Width Modulator	12/2/2008 3:16:56 PM	565KB

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