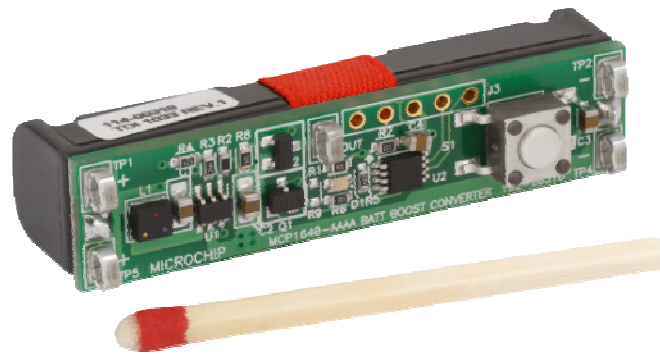




Part Number : MCP1640RD-4ABC

MCP1640 Single Quad-A Battery Boost Converter Reference Design



Devices Supported: MCP1640, PIC12F617

Summary Description: The MCP1640 Single Quadruple-A Battery Boost Converter Reference Design demonstrates how the MCP1640 device, with the True Output Disconnect Shutdown option, works attached to a microcontroller application. This board demonstrates how to optimize battery life using the MCP1640, and an 8-bit low cost PIC microcontroller, to reduce the No Load Input Current for applications that operate in Standby mode for a long period of time. During Standby, the enable signal for the MCP1640 has a low frequency, with less than 1% positive duty cycle. This maintains the output of the MCP1640 device up to 2.3V, which is sufficient to keep the PIC microcontroller live. This solution reduces up to 80% of the No Load Input Current the MCP1640 consumes in PFM Mode.

This Kit Contains:

- One MCP1640 Single Quadruple-A Battery Boost Converter Evaluation Board
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Features:

- Input voltage: one AAAA Alkaline battery
- Output voltage: 3.3V
- Output current: < 130 mA
- Up to 75% efficiency
- Standby battery current: 14.5 μ A @ 1.5V input
- Start-up voltage: 0.65V at $V_{IN} = 1.2V$, $V_{OUT} = 3.3V$ and $I_{OUT} = 1$ mA, resistive load
- Automatic PFM/PWM operation
- PWM Switching Frequency = 500 kHz
- ON/OFF switch button, with 25 seconds ON
- LED status indication (Output ON and Low Battery)
- Energizer® Battery Holder with reverse battery protection