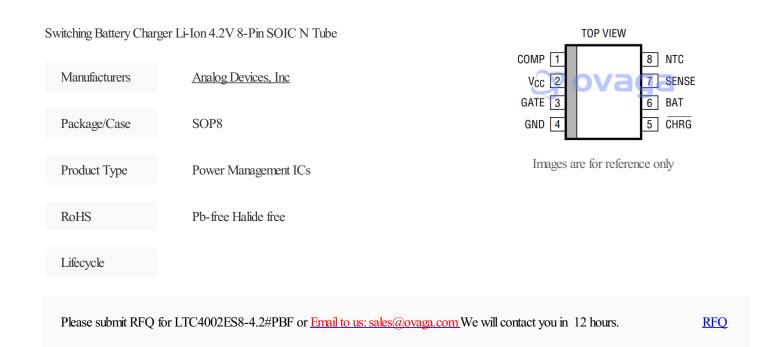


LTC4002ES8-4.2#PBF

Data Sheet



General Description

The LTC4002 is a complete battery charger controller for one (4.2V) or two (8.4V) cell lithium-ion batteries. With a 500kHz switching frequency, the LTC4002 provides a small, simple and efficient solution to fast charge Li-Ion batteries from a wide range of supply voltages. An external sense resistor sets the charge current with $\pm 5\%$ accuracy. An internal resistor divider and precision reference set the final float voltage to 4.2V per cell with $\pm 1\%$ accuracy.

When the input supply is removed, the LTC4002 automatically enters a low current sleep mode, dropping the battery drain current to 10μ A. An internal comparator detects the near end-of-charge condition while an internal timer sets the total charge time and terminates the charge cycle. After the charge cycle ends, if the battery voltage drops below 4.05V per cell, a new charge cycle will automatically begin.

The LTC4002 is available in the 8-lead SO and 10-lead DFN packages.

Applications

Features

Wide Input Supply Range:

4.7V to 22V - 4.2 Version

8.9V to 22V - 8.4 Version

High Efficiency Current Mode PWM Controller with

500kHz Switching Frequency

End-of-Charge Current Detection Output

3 Hour Charge Termination Timer

Constant Switching Frequency for Minimum Noise

Low 10µA Reverse Battery Drain Current

Automatic Battery Recharge

Automatic Shutdown When Input Supply is Removed

Automatic Trickle Charging of Low Voltage Batteries

Battery Temperature Sensing and Charge

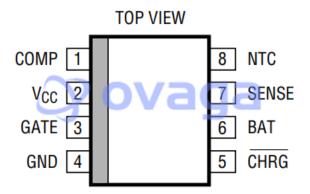
Qualification

Stable with Ceramic Output Capacitor

8-Lead SO and 10-Lead DFN Packages

4.7V to 22V - 4.2 Version

8.9V to 22V - 8.4 Version

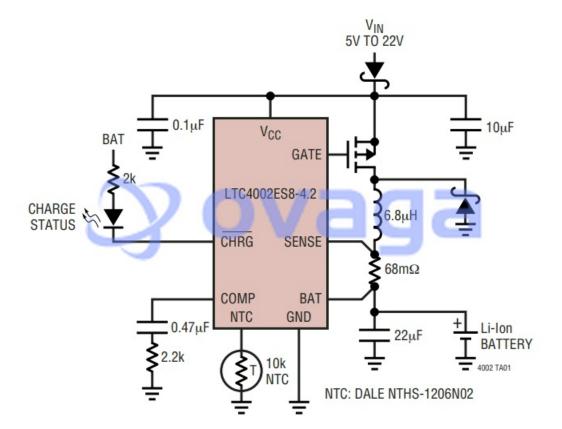


Application

Portable Computers

Charging Docks

Handheld Instruments



Related Products



LT3763EFE

Analog Devices, Inc TSSOP28



LTC4417IUF

Analog Devices, Inc QFN-24



LTC1966CMS8#PBF

Analog Devices, Inc MSOP-8P



LTM8045EY#PBF

Analog Devices, Inc BGA40



LT1038CK

Analog Devices, Inc TO-3



LTC3440EMS

Analog Devices, Inc MSOP10



LTC2990IMS#PBF

Analog Devices, Inc 10MSOP



LT4295IUFD#PBF

Analog Devices, Inc 28-WFQFN