BQ2004HSNTR

Switching Battery Charger NiCd/NiMH 2000mA 0V to 5.5V 16-Pin SOIC T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	SOP16
Product Type:	Power Management ICs
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active

Images are for reference only

Inquiry

General Description

The bq2004E and bq2004H Fast Charge ICs provide comprehensive fast charge control functions together with high-speed switching power control circuitry on a monolithic CMOS device.

Integration of closed-loop current control circuitry allows the bq2004 to be the basis of a cost-effective solution for stand-alone and system-integrated chargers for batteries of one or more cells.

Switch-activated discharge-before-charge allows bq2004E/H-based chargers to support battery conditioning and capacity determination.

High-efficiency power conversion is accomplished using the bq2004E/H as a hysteretic PWM controller for switch-mode regulation of the charging current.

The bq2004E/H may alternatively be used to gate an externally regulated charging current.

Fast charge may begin on application of the charging supply, replacement of the battery, or switch depression. For safety, fast charge is inhibited unless/until the battery temperature and voltage are within configured limits.

Temperature, voltage, and time are monitored throughout fast charge. Fast charge is terminated by any of the following:

Rate of temperature rise (t)
Peak voltage detection (PVD)
Negative delta voltage (-V)
Maximum voltage
Maximum temperature
Maximum time

After fast charge, optional top-off and pulsed current maintenance phases with appropriate display mode selections are available.

The bq2004H differs from the bq2004E only in that fast charge, hold-off, and top-off time units have been scaled up by a factor of two, and the bq2004H provides different display selections.

Key Features

Fast charge and conditioning of nickel cadmium or nickel-metal hydride batteries

Hysteretic PWM switch-mode current regulation or gated control of an external regulator

Easily integrated into systems or used as a stand-alone charger

Pre-charge qualification of temperature and voltage

Configurable, direct LED outputs display battery and charge status

Fast-charge termination by V, maximum voltage, maximum temperature, and maximum time

Optional top-off charge and pulsed current maintenance charging

Logic-level controlled low-power mode (< 5uA standby current)

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Recommended For You

BQ51013BRHLR	**BQ51050BRHLT**	**BQ51050BRHLR**
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
VQFN20	QFN	VQFN-20
BQ24045DSQR	**BQ24725ARGRT**	**BQ7693000DBT**
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
WSON10	QFN	TSSOP30

BQ25896RTWT

Texas Instruments, Inc

QFN24

TL432BQDBZR

Texas Instruments, Inc

SOT23-3

BQ2050HSN-A508

Texas Instruments, Inc

SOP16

BQ24192RGER

Texas Instruments, Inc

VQFN24

BQ2000SN-B5

Texas Instruments, Inc

SOP8

BQ24105RHLR

Texas Instruments, Inc

VQFN20

BQ24190RGER

Texas Instruments, Inc

VQFN24

BQ24010DRCR

Texas Instruments, Inc

QFN

TPS54360BQDDAQ1

Texas Instruments, Inc

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