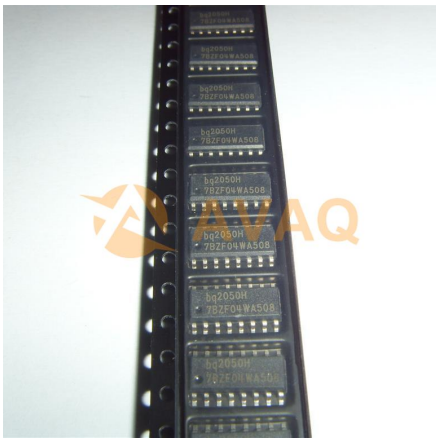
BQ2050HSN-A508

Fuel Gauge Li-Ion/Li-Pol 4.2V 16-Pin SOIC Tube

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 bq2050 Lithium Ion Power Gauge IC is intended for battery-pack or in-system installation to maintain an accurate record of available battery capacity. The IC monitors a voltage drop across a sense resistor connected in series between the negative battery terminal and ground to determine charge and discharge activity of the battery. Compensations for battery temperature and rate of charge or discharge are applied to the charge, discharge, and self-discharge calculations to provide available capacity information across a wide range of operating conditions. Battery capacity is automatically recalibrated, or "learned," in the course of a discharge cycle from full to empty.

Nominal available capacity may be directly indicated using a five-segment LED display. These segments are used to graphically indicate available capacity. The bq2050 supports a simple single-line bidirectional serial link to an external processor (common ground). The bq2050 outputs battery information in response to external commands over the serial link.

The bq2050 may operate directly from one cell (VBAT > 3V). With the REF output and an external transistor, a simple, inexpensive regulator can be built for systems with more than one series cell.

Internal registers include available capacity, temperature, scaled available energy, battery ID, battery status, and programming pin settings. To support subassembly testing, the outputs may also be controlled. The external processor may also overwrite some of the bq2050 power gauge data registers.

Key Features

Conservative and repeatable measurement of available capacity in Lithium Ion rechargeable batteries

Designed for battery pack integration

120µA typical operating current

Small size enables implementations in as little as square inch of PCB

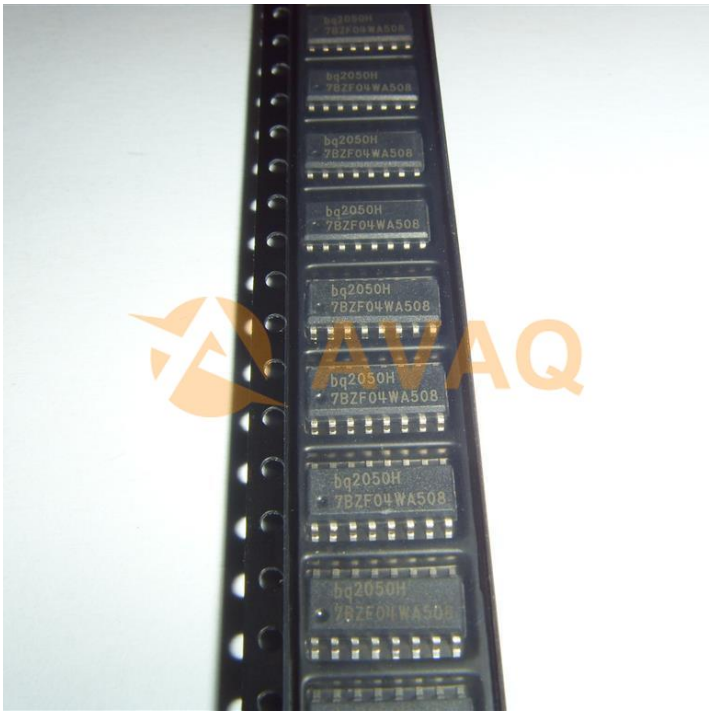
Integrate within a system or as a stand-alone device

Display capacity via single-wire serial communication port or direct drive of LEDs

Measurements compensated for current and temperature

Self-discharge compensation using internal temperature sensor

16-pin narrow SOIC



Recommended For You

BQ51013BRHLR

Texas Instruments, Inc

VQFN20

BQ51050BRHLT

Texas Instruments, Inc

QFN

BQ51050BRHLR

Texas Instruments, Inc

VQFN-20

BQ24045DSQR

Texas Instruments, Inc

WSON10

BQ24725ARGRT

Texas Instruments, Inc

QFN

BQ7693000DBT

Texas Instruments, Inc

TSSOP30

BQ25896RTWT

Texas Instruments, Inc

QFN24

TL432BQDBZR

Texas Instruments, Inc

SOT23-3

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

SOP-8

TLV431BQDBZRQ1

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SOT23