

Linear Battery Charger Li-Ion/Li-Pol 450mA 4.2V 30-Pin Flip-Chip T/R



Images are for reference only

[Inquiry](#)

Manufacturer: [STMicroelectronics, Inc](#)

Package/Case: BGA

Product Type: Power Management ICs

RoHS: RoHS Compliant/Lead free 

Lifecycle: Active

General Description

The STBC02 is a highly integrated power management, embedding a linear battery charger, a 150 mA LDO, 2 SPDT load switches, a smart reset/watchdog block and a protection circuit module (PCM) to prevent the battery from being damaged under fault conditions.

The STBC02 uses a CC/CV algorithm to charge the battery; the fast charge and the pre-charge current can be both independently programmed using dedicated resistors. The termination current is set by default, being 5% of the programmed fast charge current, but it can also be fixed to different values. Likewise, the battery floating voltage value is programmable and can be set to a value up to 4.45 V. The STBC02 also features a charger enable input to stop the charging process anytime. The STBC02 is automatically powered off from the connected battery when the IN pin is not connected to a valid power source (battery mode). A battery under/overtemperature condition can be detected by using an external circuitry (NTC thermistor). The STBC02 draws less than 10 nA from the connected battery in shipping mode conditions, so to maximize the battery life during end product shelf life. The device is available in the Flip Chip 30 package.

Key Features

Charge single-cell Li-Ion batteries with CC/CV algorithm and charge termination

Fast charge current up to 450mA

Pre-charge current from 1mA to 450mA

Adjustable floating voltage up to 4.45V

Integrated low quiescent LDO regulator

Automatic power path management

Auto-recharge function

Embedded protection circuit module (PCM) featuring battery overcharge, battery over-discharge and battery overcurrent protections

Charging time out to terminate the charging process for safety reasons

Recommended For You

STIS14PHR

STMicroelectronics, Inc
HSOP-8

ST890CDR

STMicroelectronics, Inc
SOP-8

STWD100YNYWY3F

STMicroelectronics, Inc
SOT23-5

STC3100IQT

STMicroelectronics, Inc
QFN

STM706TM6F

STMicroelectronics, Inc
SOP-8

STWD100NYWY3F

STMicroelectronics, Inc
SOT23-5

STPD01PUR

STMicroelectronics, Inc
24-QFN

STGAP2SICSNIR

STMicroelectronics, Inc
SOIC-8

STSPIN230

STMicroelectronics, Inc
VFQFPN16

STNS01PUR

STMicroelectronics, Inc
DFN-12

STWBC

STMicroelectronics, Inc
QFN32

STWBC2

STMicroelectronics, Inc
SOP

STMPS2171MIR

STMicroelectronics, Inc
SO-8

STSPIN240

STMicroelectronics, Inc
QFN16

STMPS2151MIR

STMicroelectronics, Inc
SOP8