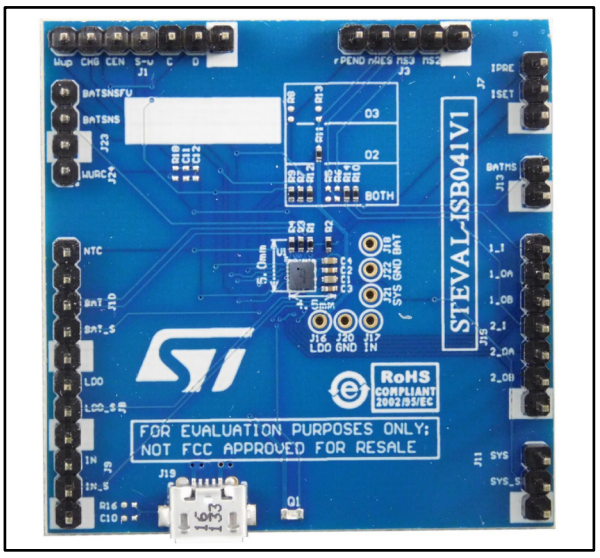
STEVAL-ISB041V1

Li-Ion/Li-Po battery power management evaluation board based on STBC02

Data brief



Features

- Charges single-cell Li-Ion/Li-Po batteries with CC-CV algorithm and charge termination
- Fast charge current programmable from 1 mA to 450 mA
- Pre-charge current programmable from 1 mA to 450 mA
- Adjustable floating voltage up to 4.45 V
- Integrated always-on low quiescent LDO regulator
- Battery over-charge and over-discharge protections
- Overcurrent protection
- Shipping mode exit input
- Integrated dual 3 Ω SPDT load switches
- Integrated smart reset / watchdog logic
- Single wire control interface
- RoHS compliant

Description

The STEVAL-ISB041V1 product evaluation board is based on STBC02 battery power management, integrating a linear charger for single-cell Li-Ion batteries with battery protection functions, an LDO regulator, two SPDT load switches and intelligent reset logic.

The device uses a CC / CV algorithm to charge the battery; the fast-charge and pre-charge current can be programmed using an external resistor.

The input supply voltage is used to charge the battery and provide power to the LDO regulator. When an appropriate input voltage is not present and the battery is not empty, the device automatically switches to battery power.

When shutdown mode is activated, the battery power consumption is reduced to less than 100 nA: two embedded 3 Ω SPDT load switches intelligently manage the overall system power consumption. An advanced reset circuit with trigger signal is integrated.

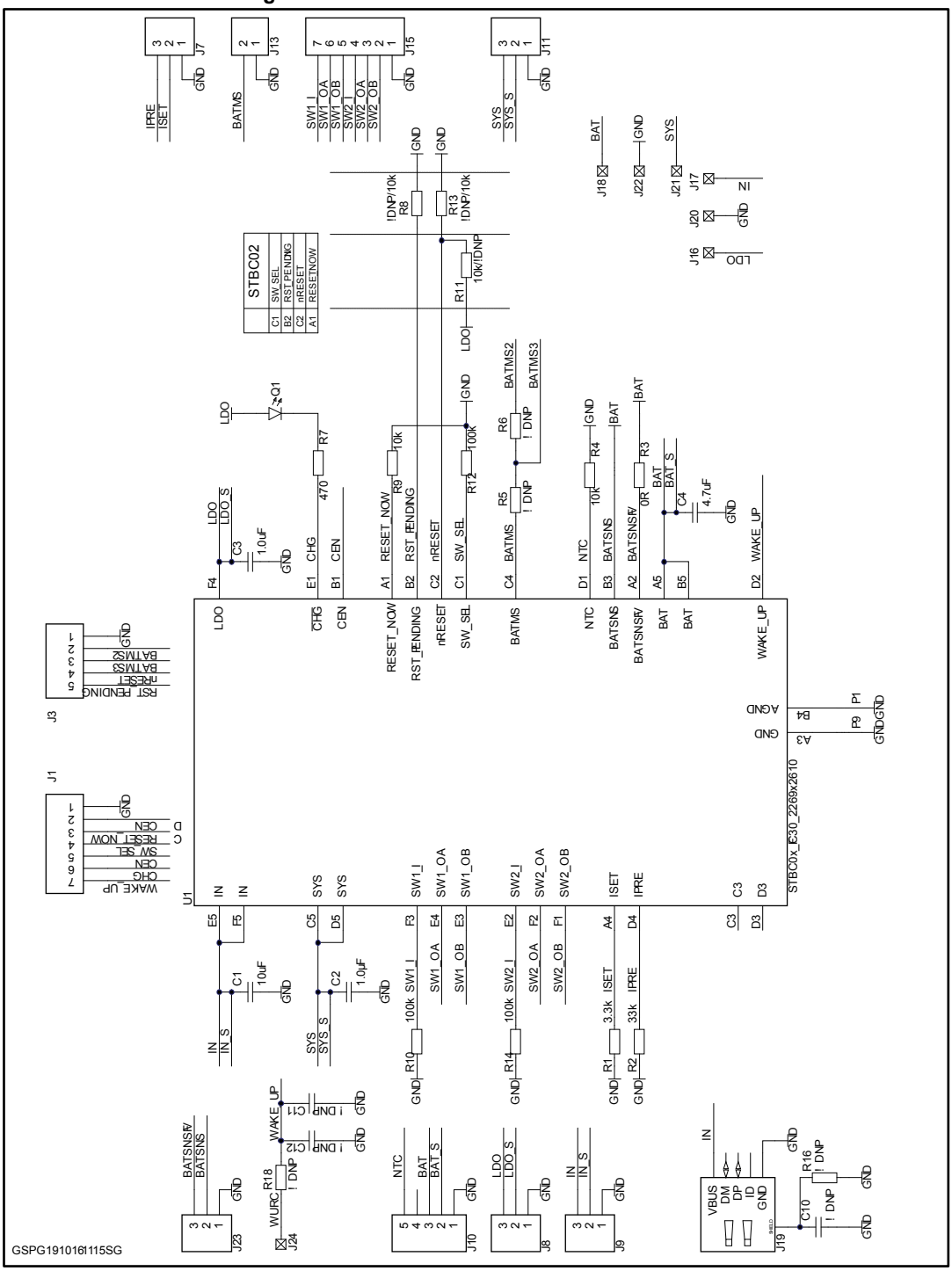
The STEVAL-ISB041V1 can work in standalone mode and a single wire interface can be used to control the STBC02 for full operation. The STEVAL-ISB041V1 evaluation board provides full access to the STBC02 functions through header connectors and can be supplied via a micro-AB USB connector.

For further information contact your local STMicroelectronics sales office

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1 Schematic diagram

Figure 1: STEVAL-ISB041V1 circuit schematic



2 Revision history

Table 1: Document revision history

Date	Version	Changes
20-Oct-2016	1	Initial release.
13-Mar-2017	2	Updated board photo on the cover page.

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