

Battery monitor with alarm output for gas gauge applications based on the GG25L

Data brief



Description

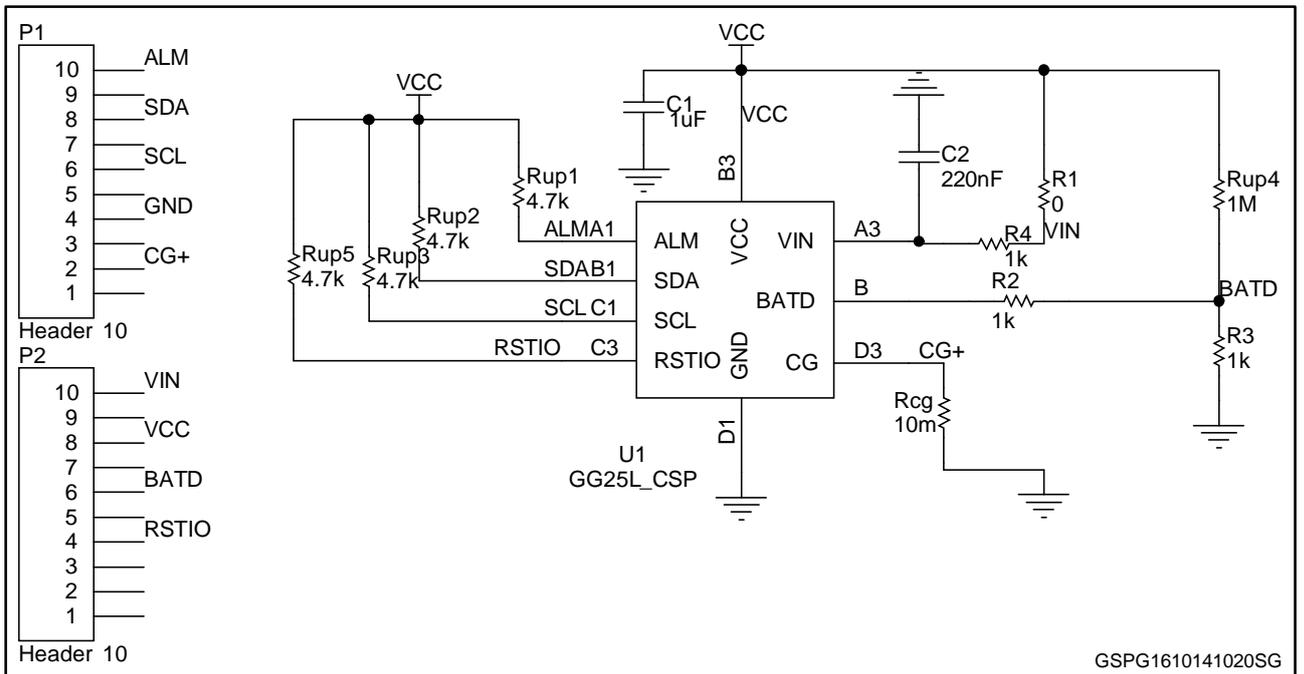
The STEVAL-ISB014V3 product evaluation board is based on the GG25L. This device includes the hardware functions required to implement a low-cost gas gauge for battery monitoring. It uses current sensing, Coulomb counting and accurate battery voltage measurements to estimate the state-of-charge (SOC) of the battery. An internal temperature sensor simplifies implementation of temperature compensation. An alarm output signals a low SOC condition and can also indicate low battery voltage. The alarm threshold levels are programmable. The GG25L offers advanced features to ensure high performance gas measurement in all application conditions. The STEVAL-ISB014V3 evaluation board is suitable for all wearable fitness and healthcare applications as well as for portable medical equipment.

Features

- 0.25% accuracy battery voltage monitoring
- Coulomb counter and voltage-mode gas gauge operations
- Robust initial open-circuit-voltage (OCV) measurement at power-up with debounce delay
- Low battery level alarm output with programmable thresholds
- Internal temperature sensor
- Battery swap detection
- Low power:
 - 45 μ A in power-saving mode
 - 2 μ A max in standby mode
- 1.4 x 2.0 mm 10-bump CSP package
- RoHS compliant

1 Schematic diagram

Figure 1: STEVAL-ISB014V3 circuit schematic



2 Revision history

Table 1: Document revision history

Date	Rev	Changes
20-Oct-2014	1	First release.

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers' products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2014 STMicroelectronics – All rights reserved