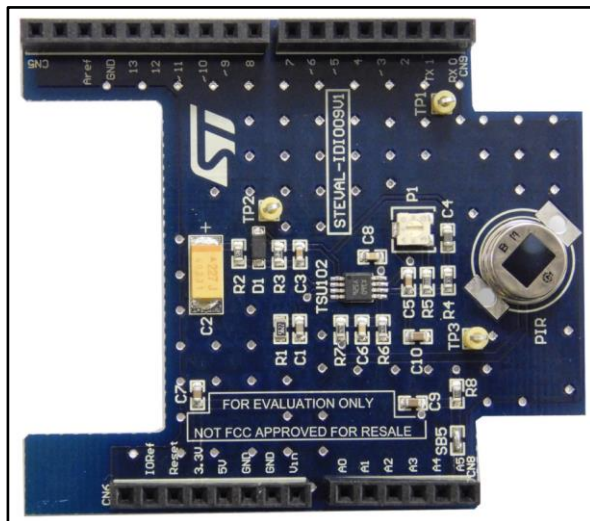


Evaluation board for passive infrared sensor signal conditioning based on TSU102



Description

The STEVAL-IDI009V1 evaluation board conditions the signal generated by a passive infrared (PIR) sensor, for common applications like human detection. A person in range of the sensor triggers a detection event, which can in turn be used to trip an alarm or command room lighting to be turned on, for example.

The board embeds the TSU102 operational amplifier which consumes only 1 μA . It is highly suitable for battery powered applications such as LED lighting with embedded motion detection to enhance daily comfort.

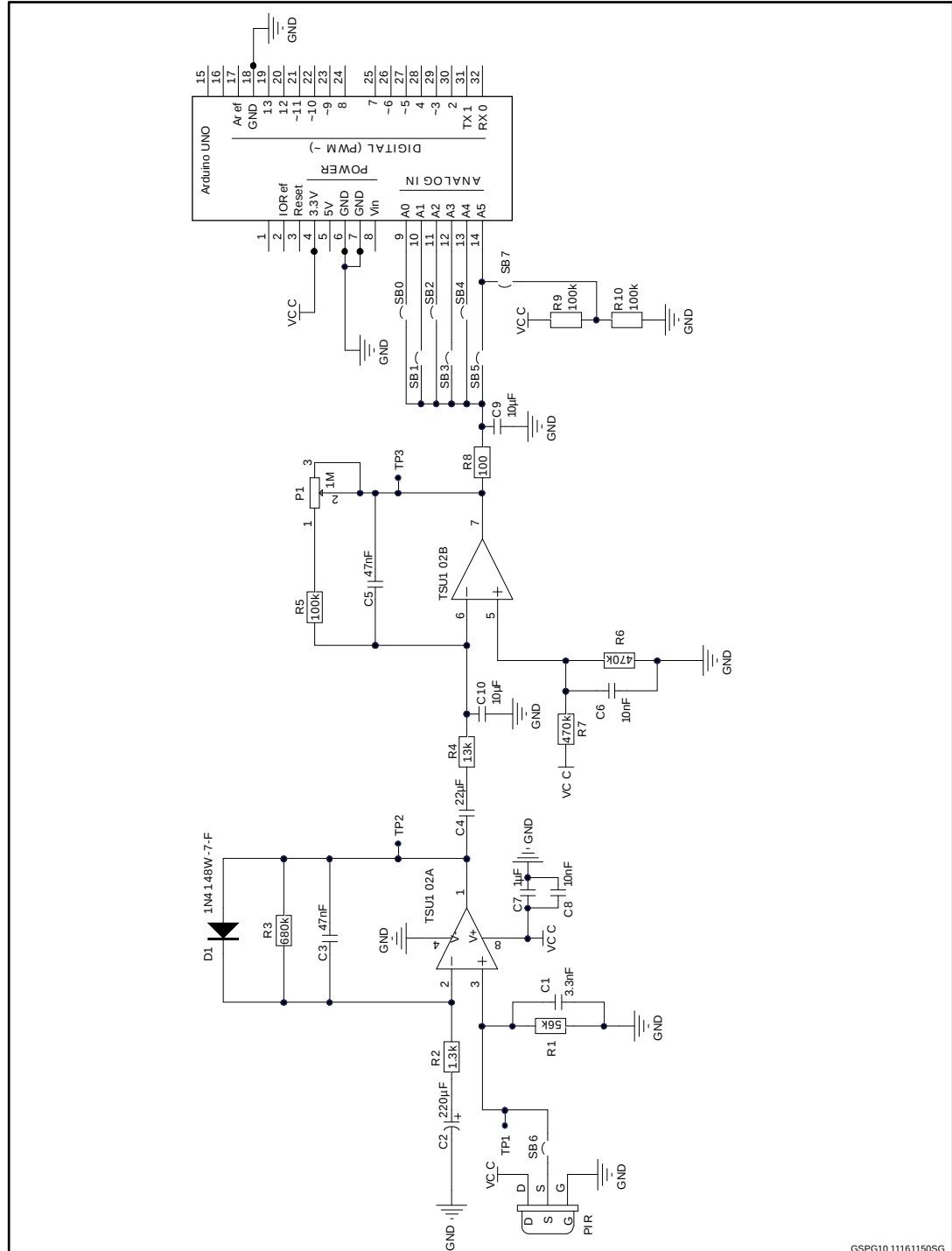
The global application consumes only 24 μA when there is no detection.

Features

- Allows motion detection with PIR sensor
- Suitable for home automation applications
- Based on TSU102 operational amplifier
- Band pass filter bandwidth from 0.7 Hz to 5 Hz
- Only 24 μA current consumption
- Detection area can be widened with Fresnel lens(not included)
- Compatible with NUCLEO boards
- Compatible with Arduino UNO R3
- RoHS compliant

1 Schematic diagram

Figure 1: STEVAL-IDI009V1 circuit schematic



2 Revision history

Table 1: Document revision history

Date	Version	Changes
15-Nov-2016	1	Initial release.
10-May-2017	2	Updated Section "Features" . Minor text changes.

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.

© 2017 STMicroelectronics – All rights reserved