



STEVAL-IHM020V1

Demonstration board based on the
STCC08 AC switch failure mode detector

Data Brief

Features

- ST7LITE39F2 MCU to:
 - drive the AC switch through the STCC08
 - analyze the AVF signals and detect an AC switch failure
- Mechanical switches to simulate AC switch failures (diode mode, short and open circuit)
- Mechanical control switch to turn ON or OFF the AC switch through the MCU
- LEDs used to indicate AC switch states
- STCC08 used to control ACS™, ACST and TRIAC up to 10 mA IGT and to monitor AC switch states
- Measure points for connecting voltage probes
- Capacitive power supply (5 V DC)
- 15 W (under 230 V) light bulb (load)

Description

The STEVAL-IHM020V demonstration board allows users to:

- evaluate the full ST solution (microcontroller + STCC08)
- test and analyze the AC switch failure detection features of the STCC08 device

This demonstration board provides a means to evaluate the performance of the STCC08, an AC switch failure mode detector and AC power switch driver. The device is dedicated to driving up to 10 mA IGT AC switches (ACS, ACST and TRIACs), and detecting any switch failures. This solution embeds a switch driver and an AC switch state detector. It contributes to system safety by monitoring AC switches driving sensitive loads

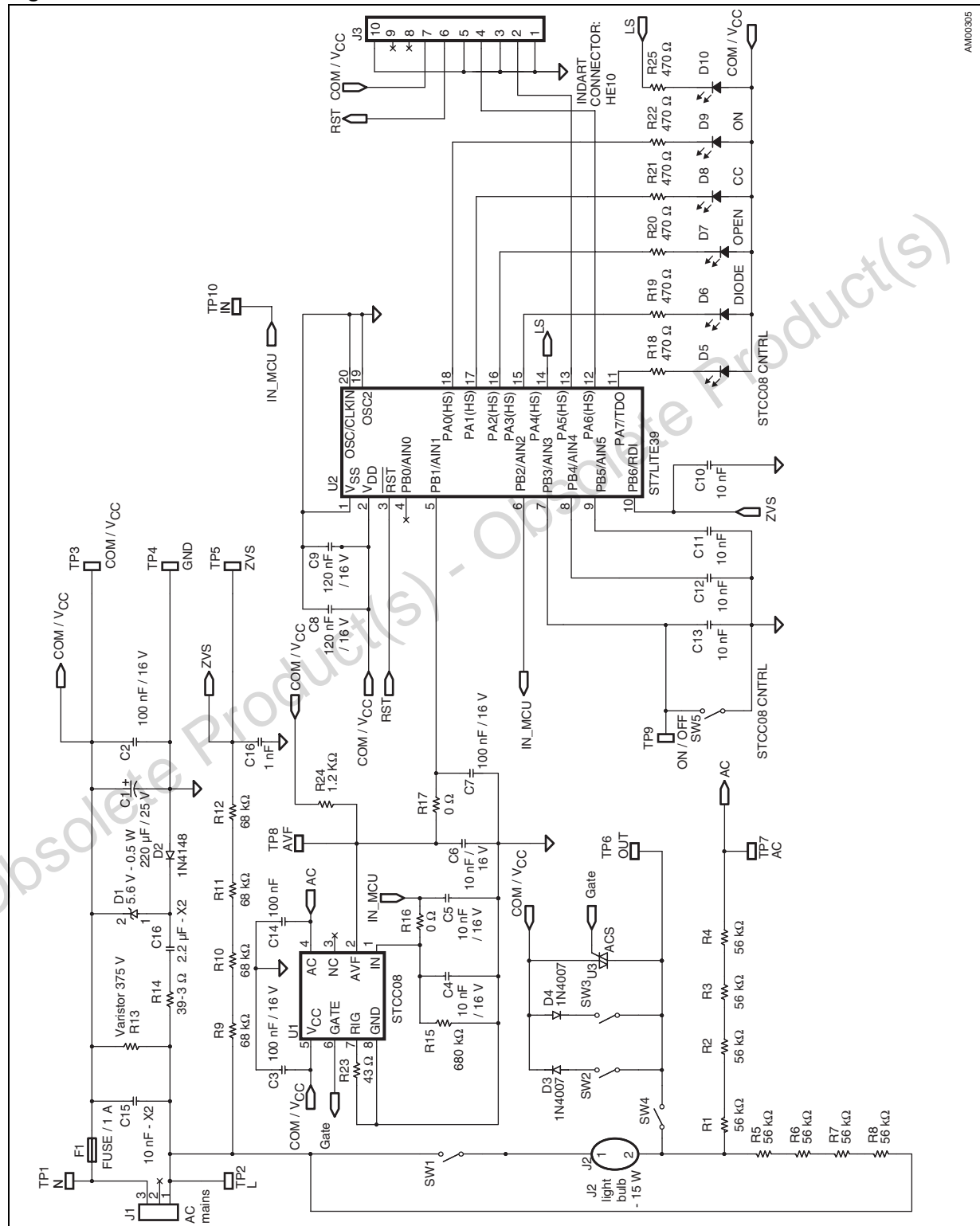


such as drain pumps, door locks, heaters, cooling fans and compressors.

For information regarding the setup and operation of the STEVAL-IHM020V demonstration board, refer to user manual UM0583.

1 Schematic diagram

Figure 1. Circuit schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
03-Nov-2008	1	Initial release.

Please Read Carefully:

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST's terms and conditions of sale.

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

UNLESS OTHERWISE SET FORTH IN ST'S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

UNLESS EXPRESSLY APPROVED IN WRITING BY AN AUTHORIZED ST REPRESENTATIVE, ST PRODUCTS ARE NOT RECOMMENDED, AUTHORIZED OR WARRANTED FOR USE IN MILITARY, AIR CRAFT, SPACE, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS, NOR IN PRODUCTS OR SYSTEMS WHERE FAILURE OR MALFUNCTION MAY RESULT IN PERSONAL INJURY, DEATH, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. ST PRODUCTS WHICH ARE NOT SPECIFIED AS "AUTOMOTIVE GRADE" MAY ONLY BE USED IN AUTOMOTIVE APPLICATIONS AT USER'S OWN RISK.

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners.

© 2008 STMicroelectronics - All rights reserved

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

www.st.com