

## Evaluation board for IPS4260L high speed quad low side driver

Data brief



### Features

- $V_{CC}$  operating voltage from 8 V to 36 V
- $V_{DD}$  operating voltage range 3.3 V to 5 V
- Programmable load limitation current
- Programmable cut-off delay time
- Up to 100 kHz switching frequency
- High speed opto-isolation for driving and feedback diagnostic
- Diagnostic LED for thermal and cut-off channel status
- Diagnostic LED for open load detection in OFF state
- Thermal shut down
- Reverse polarity protection
- Designed to meet EMC standard requirements: IEC61000-4-2, IEC61000-4-4 and IEC61000-4-5
- RoHS compliant

### Description

The STEVAL-IFP029V1 evaluation board is designed to let you analyze the functions of the

fast quad low side intelligent power switch IPS4260L.

The design meets industrial standards requirements like galvanic isolation between logic and power stages, reverse polarity protection and EMC requirements, compliant with IEC61000-4-2, IEC61000-4-4 and IEC61000-4-5.

The on-board high speed dual channel opto couplers (used both for signals forwarded to the device and for feedback signals) allow a work frequency up to  $F_{SW} = 100$  kHz.

The two Schottky diodes D1 and D8 guarantee the reverse polarity protection for  $V_{CC}$  (power stage supply rail) and  $V_{DD}$  (logic stage supply rail), respectively.

The 3 kW TVS devices on  $V_{CC}$  and  $V_Z$  (U8 and U2, respectively) protect the application from surge test. The U9 TVS protect the application from  $V_{CC}$  surge test.

The two-layer design (2s), addresses the thermal requirements of the application due to the very high load currents.

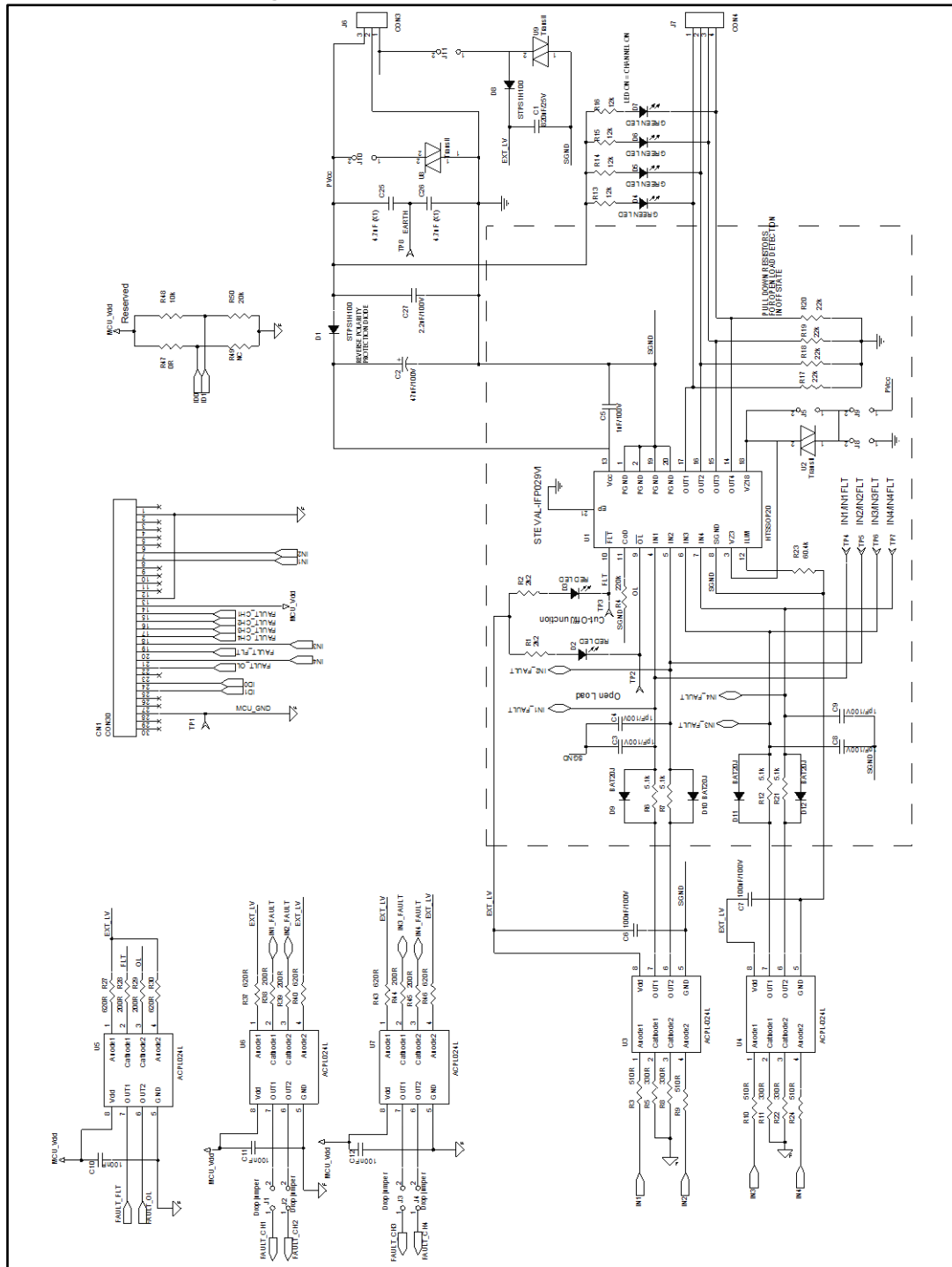
The channel independent integrated thermal protection of the IPS4260L is signaled through the red LED D3. The resistors R17, R18, R19 and R20 activate the open load detection feature integrated in the IPS4260L: the red LED; D2 is turned ON if on one or more of the four outputs is left open.

The default 1 A limitation current threshold can be modified through R23. The default 2 ms CUT-OFF duration time can be modified through R4.

The IPS4260L can be driven by a user friendly GUI by connecting the STEVAL-IFP029V1 through the STEVAL-PCC009V2 to a Windows system.

# 1 Schematic diagram

Figure 1: STEVAL-IFP029V1 circuit schematic



## 2 Revision history

Table 1: Document revision history

Date	Version	Changes
28-Aug-2017	1	Initial 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.

© 2017 STMicroelectronics – All rights reserved

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Power Management IC Development Tools](#) category:*

*Click to view products by [STMicroelectronics](#) manufacturer:*

Other Similar products are found below :

[EVAL-ADM1168LQEBZ](#) [EVB-EP5348UI](#) [MIC23451-AAAYFL EV](#) [MIC5281YMME EV](#) [DA9063-EVAL](#) [ADP122-3.3-EVALZ](#) [ADP130-0.8-EVALZ](#) [ADP130-1.2-EVALZ](#) [ADP130-1.5-EVALZ](#) [ADP130-1.8-EVALZ](#) [ADP1714-3.3-EVALZ](#) [ADP1715-3.3-EVALZ](#) [ADP1716-2.5-EVALZ](#) [ADP1740-1.5-EVALZ](#) [ADP1752-1.5-EVALZ](#) [ADP1828LC-EVALZ](#) [ADP1870-0.3-EVALZ](#) [ADP1871-0.6-EVALZ](#) [ADP1873-0.6-EVALZ](#) [ADP1874-0.3-EVALZ](#) [ADP1882-1.0-EVALZ](#) [ADP199CB-EVALZ](#) [ADP2102-1.25-EVALZ](#) [ADP2102-1.875EVALZ](#) [ADP2102-1.8-EVALZ](#) [ADP2102-2-EVALZ](#) [ADP2102-3-EVALZ](#) [ADP2102-4-EVALZ](#) [ADP2106-1.8-EVALZ](#) [ADP2147CB-110EVALZ](#) [AS3606-DB](#) [BQ24010EVM](#) [BQ24075TEVM](#) [BQ24155EVM](#) [BQ24157EVM-697](#) [BQ24160EVM-742](#) [BQ24296MEVM-655](#) [BQ25010EVM](#) [BQ3055EVM](#) [NCV891330PD50GEVB](#) [ISLUSBI2CKIT1Z](#) [LM2744EVAL](#) [LM2854EVAL](#) [LM3658SD-AEV/NOPB](#) [LM3658SDEV/NOPB](#) [LM3691TL-1.8EV/NOPB](#) [LM4510SDEV/NOPB](#) [LM5033SD-EVAL](#) [LP38512TS-1.8EV](#) [EVAL-ADM1186-1MBZ](#)