

Evaluation kit for EiceDRIVER™ 1EDN7550B single-channel low- side non-isolated gate driver IC with truly differential inputs

KIT_DRIVER_1EDN7550B

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General description

Introduction

This evaluation kit provides a test platform for Infineon's single-channel non-isolated gate driver IC with truly differential inputs EiceDRIVER™ 1EDN7550B in SOT-23 6pin package.

The complete driving circuitry is integrated into the board allowing a simple and practical step-by-step discovery of the 1EDN7550B characteristics and the evaluation of the influence of the surrounding driving circuitry on the signal delivered to the load. The driver is intended to feed a low-side MOSFET in TO-220 package. For this purpose an Infineon CoolMOS™ or OptiMOS™ power MOSFET solutions can be selected.

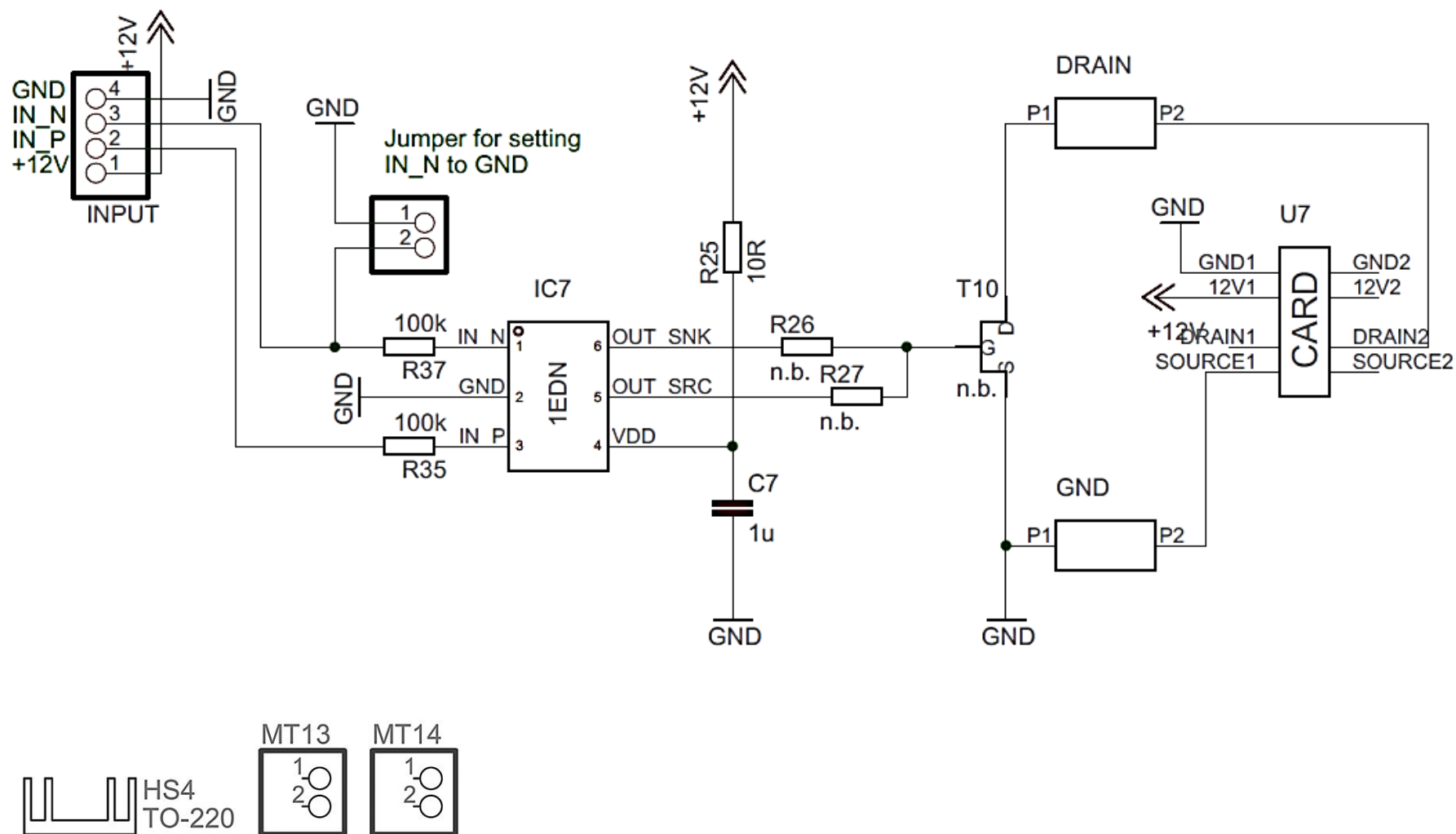
As shown in the quick start guide, the easiest and immediate way-to-use the board is with zero-power applied to the MOSFETs. In that operating condition, the 1EDN7550B load is equivalent to a pure RC filter. Testing with different MOSFETs is a suggested option to evaluate and understand the impact of the MOSFETs input capacitance on the driving timing behavior.

Moreover, the evaluation kit allows to evaluate the robustness of the 1EDN7550B to DC ground shifts, which is the key strength of the arising driving concept with truly differential inputs. The board provides, in fact, the possibility to differentiate the ground voltage of the driver and its input stage reference voltage (ground of the function generator).

Summary of features and benefits:

- › Complete and easy-to-use solution platform integrating Infineon's 1EDN7550B EiceDRIVER™ gate driver IC and CoolMOS™ or OptiMOS™ power MOSFET
- › Possible to evaluate the influence of the gate load (R_g or C_{gs}) on the driving behavior of the 1EDN7550B
- › Possible to evaluate the robustness of the 1EDN7550B to DC offsets between the driver ground and the function generator ground
- › Easy to replace and test different power MOSFETs in TO-220 package

Kit schematic



Steps for mounting the heatsink

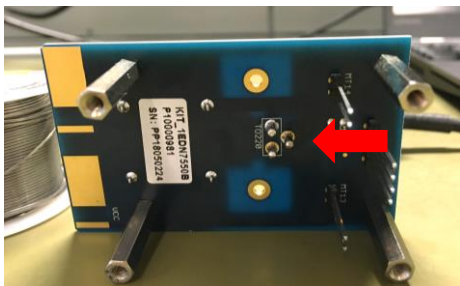
The following components need to be added to the kit:

- > Distance bolts
- > Source resistor
- > Sink resistor
- > TO-220 socket
- > TO-220 MOSFET

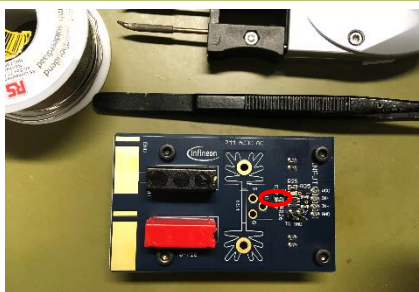
Step 1
Distance bolts mounting



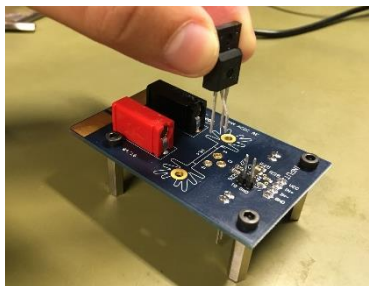
Step 4
TO-220 socket soldering



Step 2
Source resistor soldering



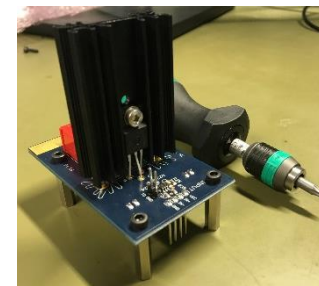
Step 5
MOSFETs placement into the socket



Step 3
Sink resistor soldering



Step 6
Heatsink mounting



- > For detailed information on how to fully assemble the kit, download the [Quick Start Guide here](#)

Cross reference

| Sales_product_name | Gate Driver | Channel | Isolation | Package |
|----------------------|-------------------------|---------|----------------------|---------------------|
| KIT_DRIVER_1EDN7511B | 1EDN7511B | 1 | Non-isolated | SOT-23 6pin |
| KIT_DRIVER_1EDN7512B | 1EDN7512B | 1 | Non-isolated | SOT-23 5pin |
| KIT_DRIVER_1EDN7512G | 1EDN7512G | 1 | Non-isolated | WSO6 6pin |
| KIT_DRIVER_1EDN7550B | 1EDN7550B /1EDN8550B | 1 | Non-isolated | SOT-23 6pin |
| KIT_DRIVER_2EDN7524F | 2EDN7524F | 2 | Non-isolated | DSO 8pin |
| KIT_DRIVER_2EDN7524R | 2EDN7524R | 2 | Non-isolated | TSSOP 8pin |
| KIT_DRIVER_2EDN7524G | 2EDN7524G | 2 | Non-isolated | WSO6 8pin |
| KIT_DRIVER_2EDF7275F | 2EDF7275F | 2 | Functional isolation | NB-DSO-16 150mil |
| KIT_DRIVER_2EDS8265H | 2EDS8265H | 2 | Reinforced isolation | WB-DSO-16 300mil |



Technical Material

- > Application Notes
- > Simulation Models
- > Datasheets
- > PCB Design Data

> www.infineon.com/kit-driver-1edn7550b

Evaluation Boards

- > Evaluation Boards
- > Demoboards
- > Reference Designs

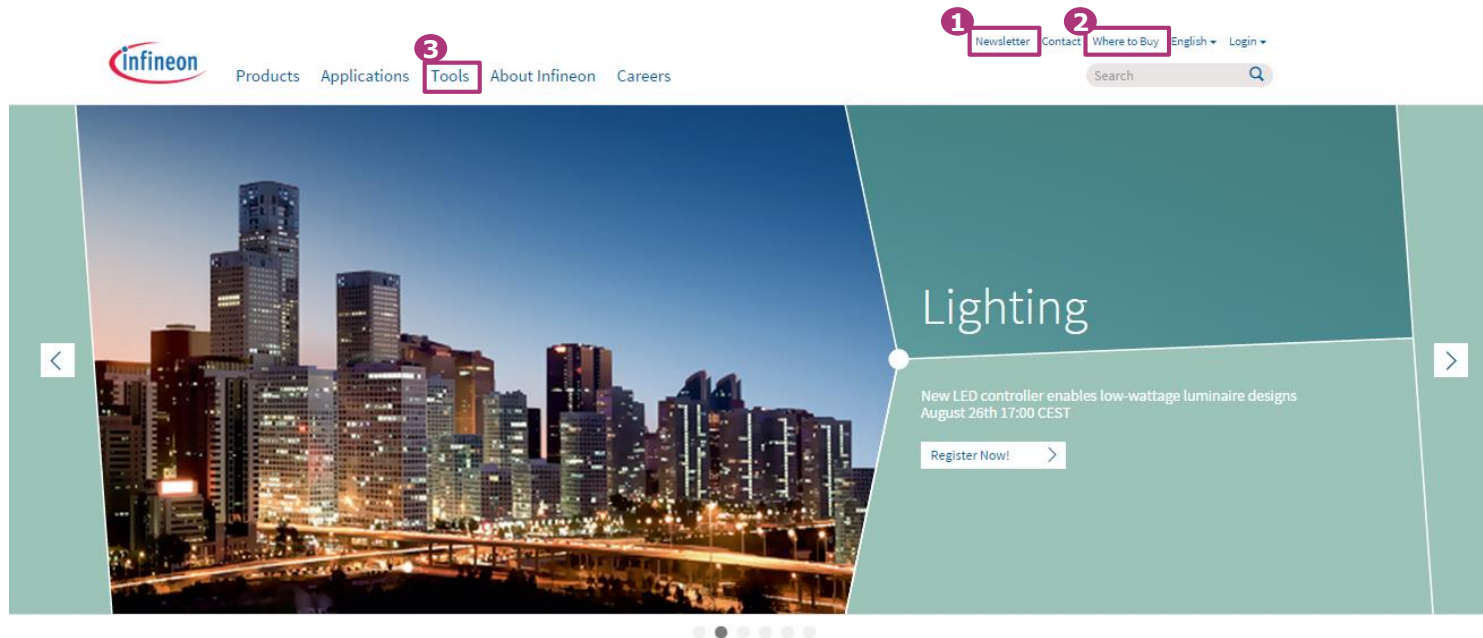
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[KITDRIVER2EDF7275FTOBO1](#) [KITDRIVER1EDN7512GTOBO1](#)