Evaluation kit for EiceDRIVER™ 2EDN7524R dual-channel low-side non-isolated gate driver IC

KIT_DRIVER_2EDN7524R

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General description

Introduction

This evaluation kit provides a test platform for Infineon's dual-channel non-isolated gate driver IC EiceDRIVER™ 2EDN7524R in TSSOP 8pin package.

The complete driving circuitry is integrated into the board to allow a simple and practical step-by-step discovery of the 2EDN7524R characteristic and to evaluate the influence of the surrounding driving circuitry on the signal delivered to the load. The dual-channel driver is intended to feed two low-side MOSFETs in TO-220 package, which can be allocated on the board. For this purpose a CoolMOS™ or OptiMOS™ power MOSFET solution from Infineon can be selected.

The evaluation kit requires an external function generator and a DC power supply to provide the input signals to the 2EDN7524R. 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 2EDN7524R 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.

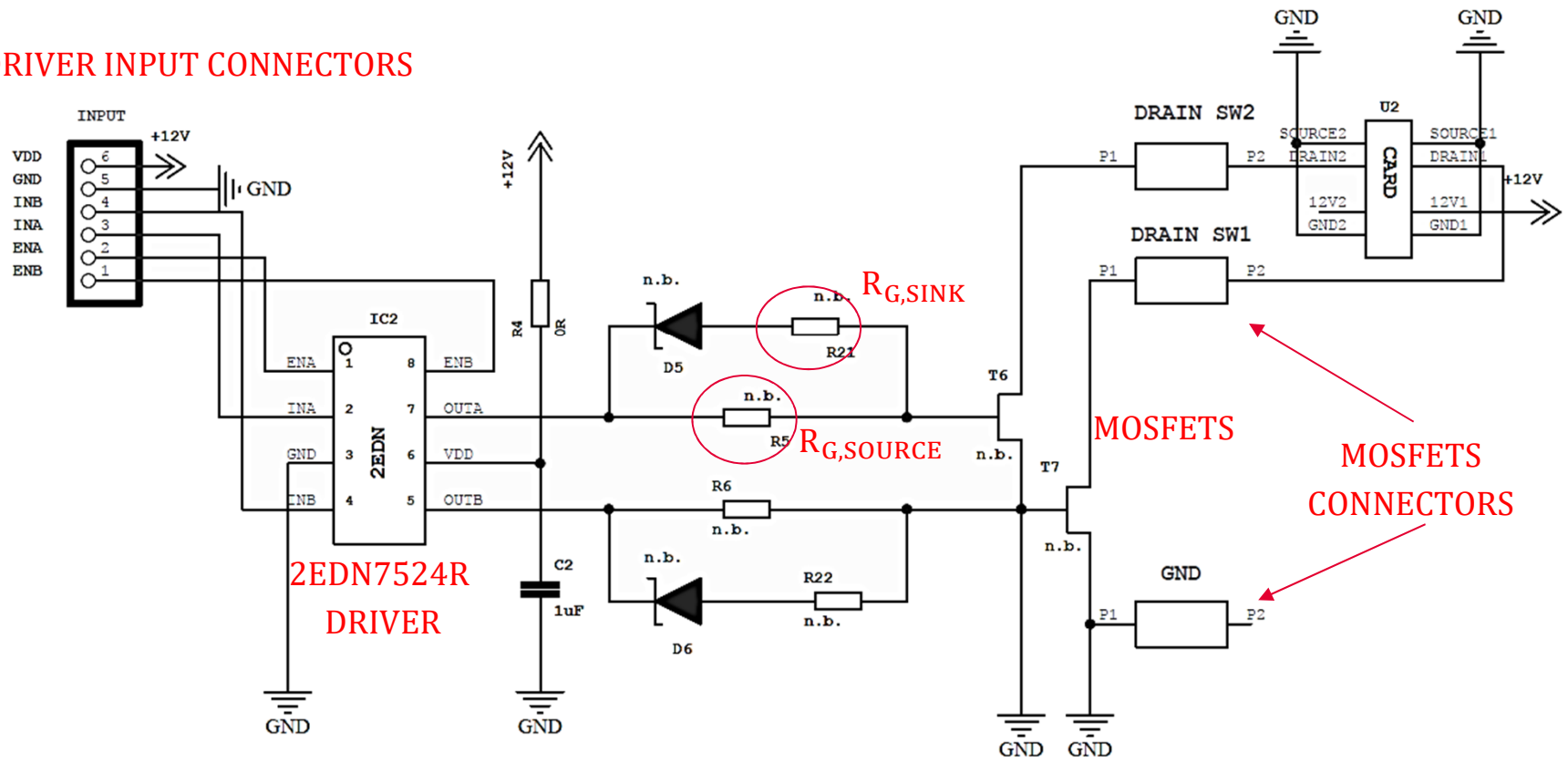
Additionally, the possibility to power-up the MOSFETs and then, trigger the switch of the devices, is purposely provided through banana connectors. An external circuitry must be properly built in that case to provide the bulk voltage and limit the current. Furthermore, pads for a possible connection to a daughter card are included.

Summary of features:

- Complete and easy-to-use solution platform integrating Infineon’s 2EDN7524R EiceDRIVER™ gate driver IC and CoolMOS™ or OptiMOS™ power MOSFETs
- Possible to evaluate the influence of the gate load (Rg or Cgs) on the driving behavior of the 2EDN7524R
- Easy to replace and test different power MOSFETs in TO-220 package

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Schematic



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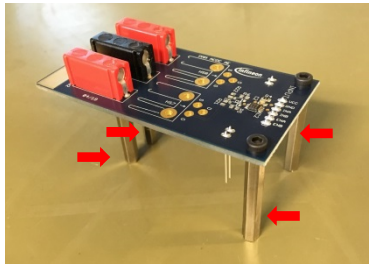
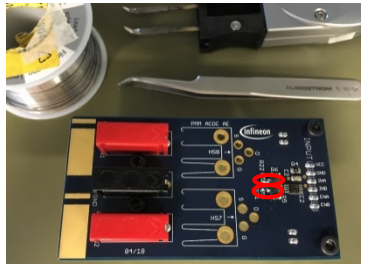
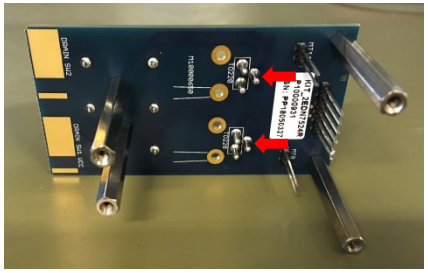
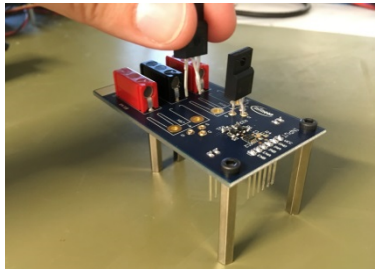
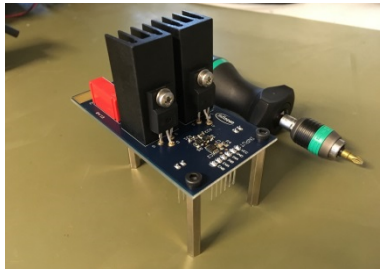
n.d. = value **not defined**, component not populated on the PCB

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Steps for kit assembly

The following components need to be added to the kit:

- Distance bolts
- Source resistors
- Sink resistors
- Sink diodes
- TO-220 sockets
- TO-220 MOSFETS

Step 1 Distance bolts mounting	Step 2 Source resistor soldering	Step 3 Sink resistors and sink diodes soldering
		
Step 4 **TO-220 sockets soldering**	**Step 5** **MOSFETs placement into the sockets**	**Step 6** **Heatsink mounting**
		

- For detailed information on how to fully assemble the kit, download the Quick Start Guide here

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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	WSON 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	WSON 8pin
KIT_DRIVER_2EDF7275F	2EDF7275F	2	Functional isolation	NB-DSO-16 150mil
KIT_DRIVER_2EDS8265H	2EDS8265H	2	Reinforced isolaton	WB-DSO-16 300mil

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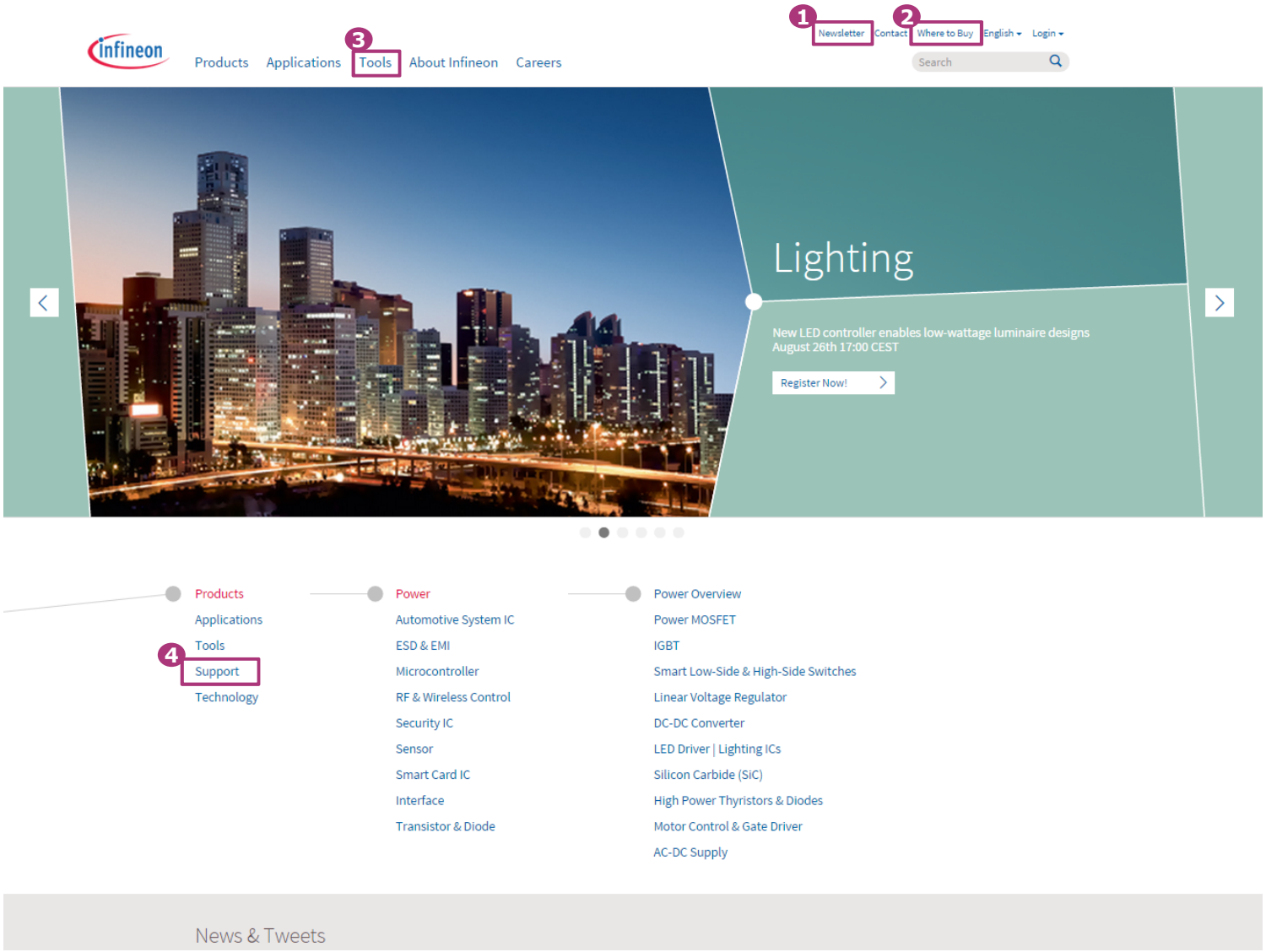
Support



Technical Material	› Application Notes › Simulation Models › Datasheets › PCB Design Data	› www.infineon.com/kit-driver-2edn7524r
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