Evaluation kit for EiceDRIVER™ 2EDN7534B dual-channel low-side gate driver

KIT_DRIVER_2EDN7534B

UG-2025-17

Scope and purpose

This evaluation kit provides a test platform for Infineon's dual-channel non-isolated gate driver IC EiceDRIVER™ 2EDN7534B in SOT23-6 pin package.

Target applications

- Switch-mode power-supplies
- DC-DC power converters
- Synchronous rectification stages
- Power factor correction system

Product family

EiceDRIVER™ 2EDN Gate Driver for MOSFETs and WBG switches

Base Part Number	*Package*	*OPN (Orderable Part Number)*
KIT-DRIVER-2EDN7534B	EVAL	
2EDN7534B	PG-SOT-23-6	2EDN7534BXTMA1

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1 Introduction

This evaluation kit provides a test platform for Infineon's dual-channel non-isolated gate driver IC EiceDRIVER™ 2EDN7534B in SOT23-6 pin package. The complete driving circuitry is integrated into the board to allow a simple and practical step-by-step discovery of the 2EDN7534B https://www.infineon.com/part/2EDN7534Fcharacteristic 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 2EDN7534B.

Figure 1 KIT_DRIVER_2EDN7534B

2 Quick start guide

The easiest and most immediate way to use the board is with zero-power applied to the MOSFETs. In that operating condition, the 2EDN7534B 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.

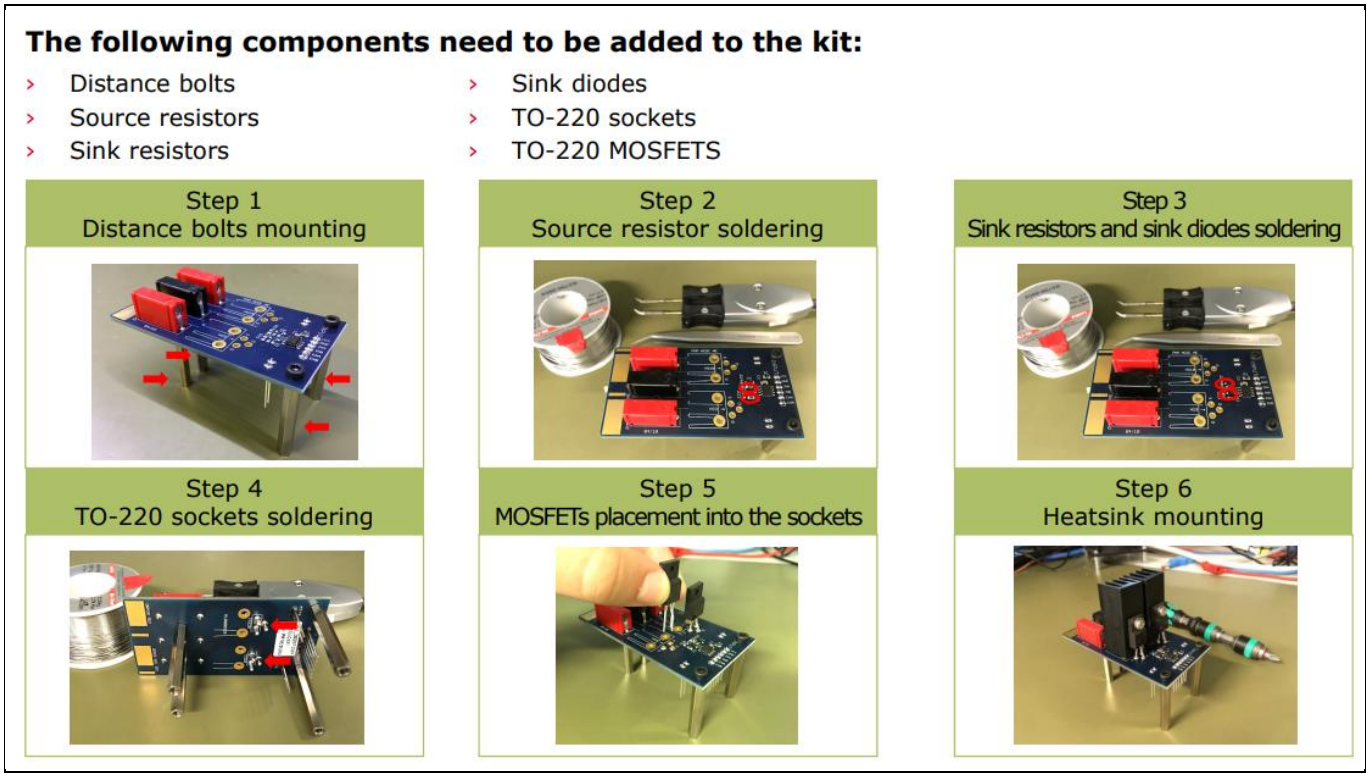

Figure 2 Assembly Instruction

3 Schematic and PCB layout

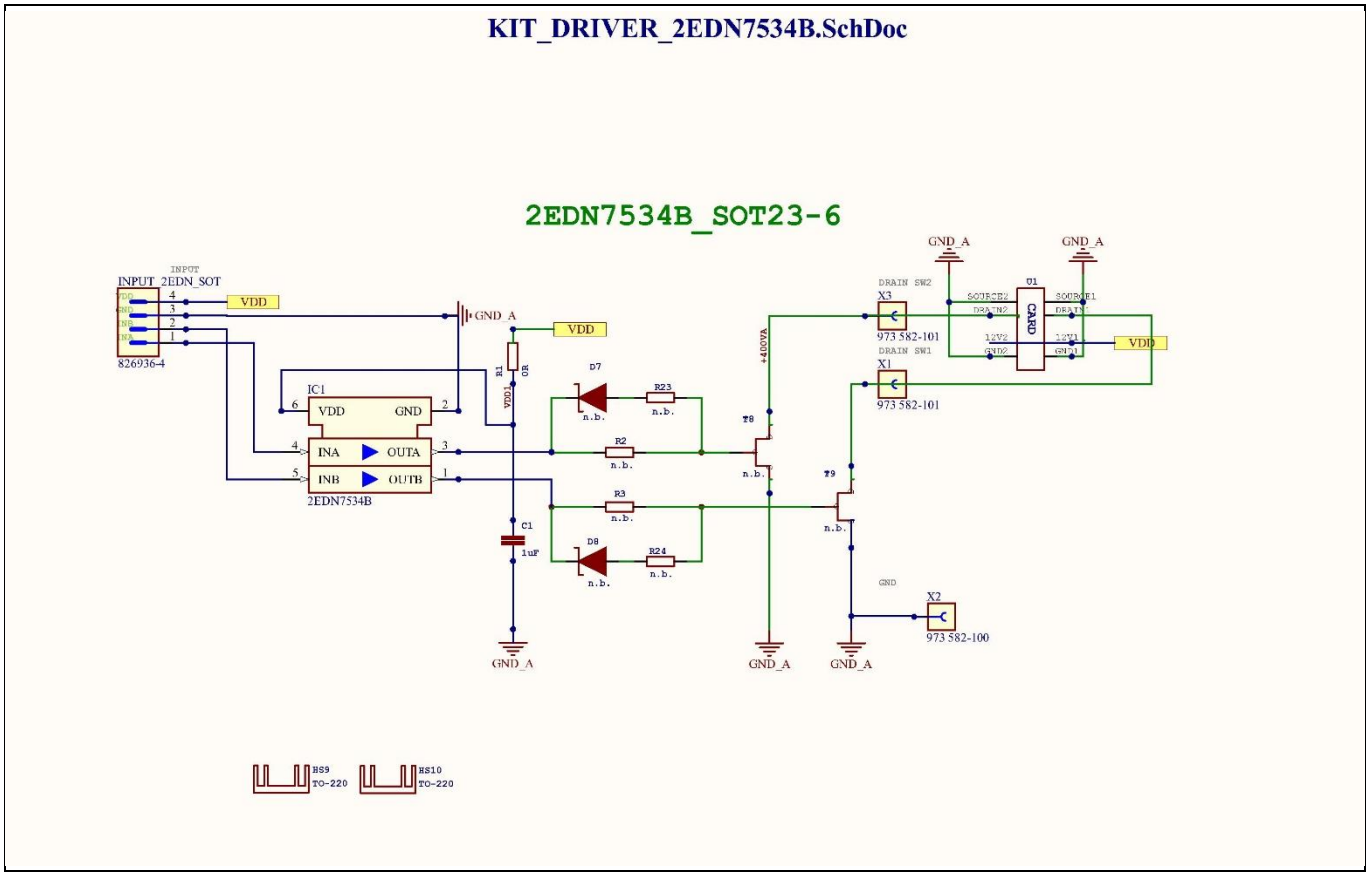

Figure 3 Schematic

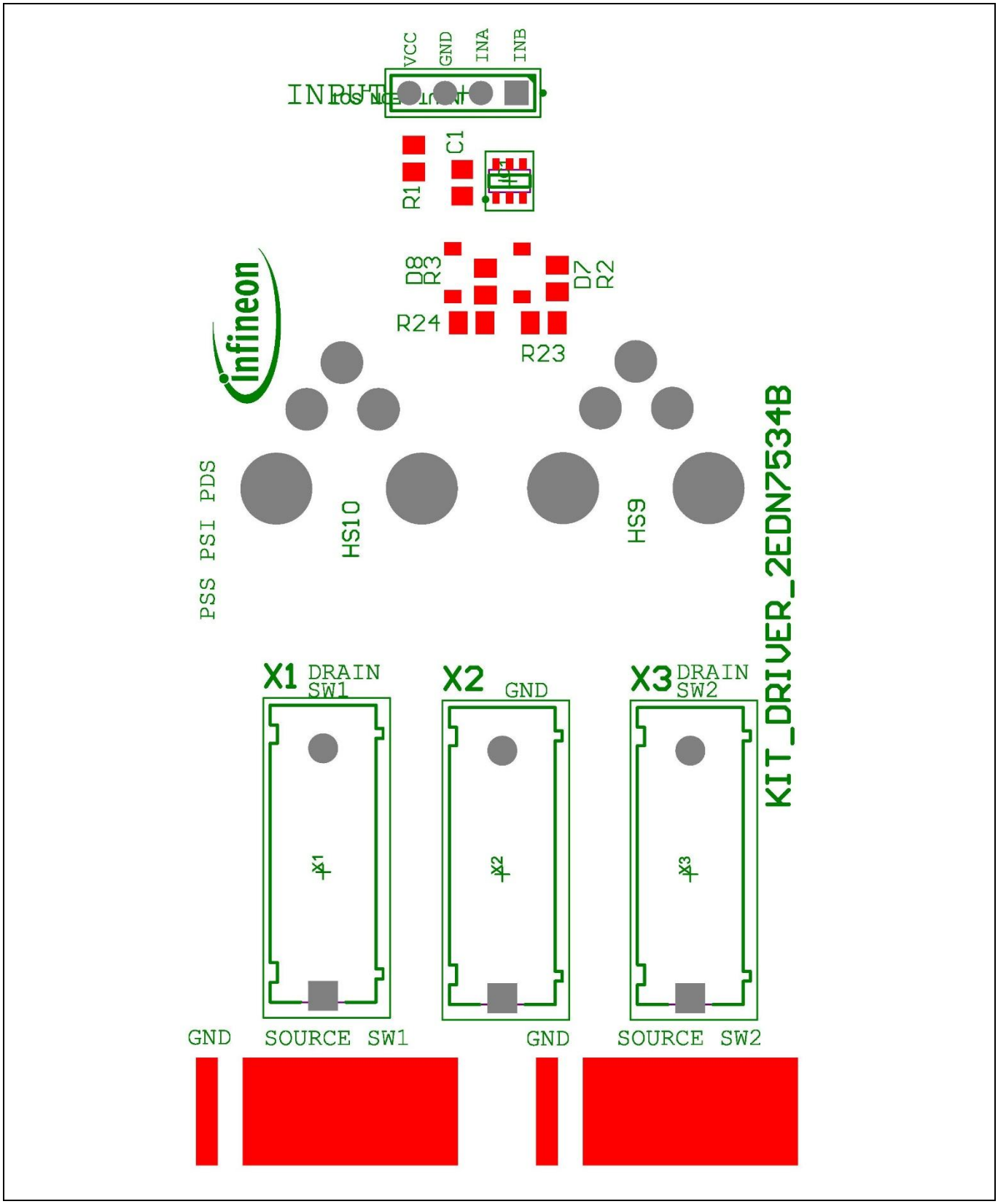

Figure 4 PCB top

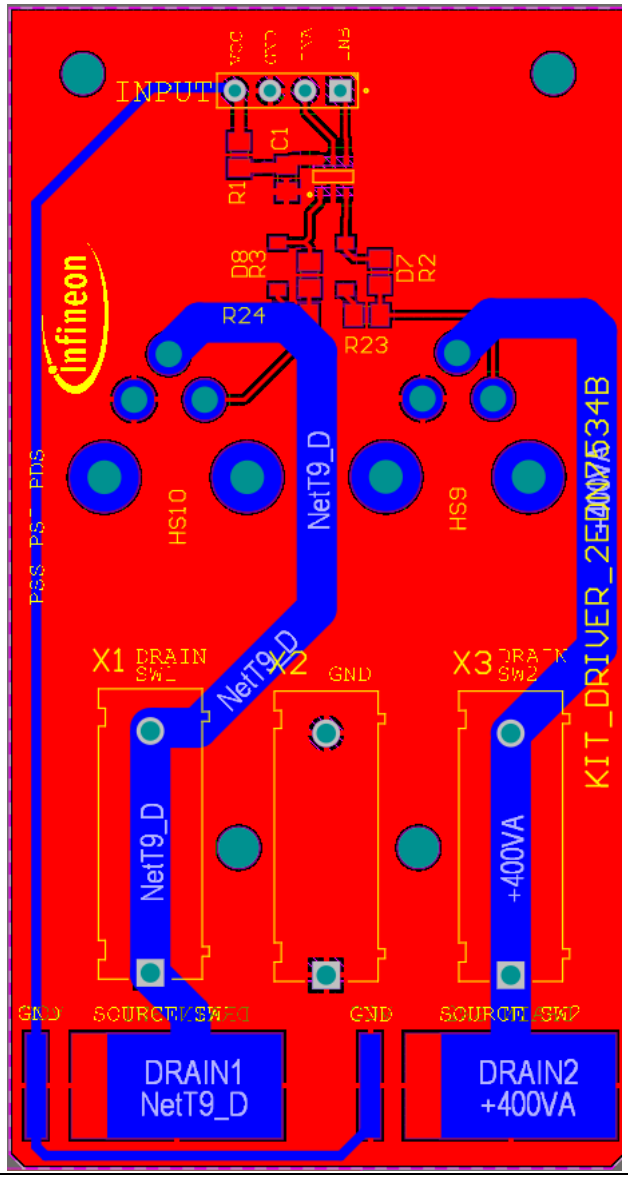

Figure 5 PCB traces

4 Bill of Material

Table 1 Bill of Material

Quantity	Designator	Value	Description	Manufacturer	Manufacturer Part Number
1	C1	1uF	Ceramic Capacitor	Samsung Electro-Mechanics	CL21B105KAFNNNE
4	R2, R3, R23, R24	Do not solder	SMD Resistor		/
2	D7, D8	Do not solder	SMD Diode		/
2	X1,X3	/	Test Jack, 16 A, Red, PB 4 Series	HIRSCHMANN TEST AND MEASUREMENT	973582100
1	X2	/	Test Jack, 16 A, BLACK, PB 4 Series	HIRSCHMANN TEST AND MEASUREMENT	973582101
2	T8, T9	Do not solder	MOSFET THT		/
1	IC1	2EDN7534B_PG_SOT23-6_DEVICE	dual low side gate driver	Infineon Technologies	2EDN7534BXTMA1
1	INPUT_2EDN_SOT	PINHD-1X6	Pin header	Fischer Elektronik	MK 08 6 Z
2	MT9, MT10	PINHD-1X2	Pin header	Fischer Elektronik	MK 08 2 Z
1	R1	0R	SMD Resistor	YAGEO	RC0805JR-070RL
2	HS9, HS10	HEATSINKS TO-220/218	HEATSINKS TO-220/218	Aavid	581102B00000G

5 Related resources

- Portfolio family Datasheet
- Kit Driver for Other packages
    - TSNP 6 KIT-DRIVER-2EDN7534U
    - DSO-8 KIT-DRIVER-2EDN7534F

Revision history

Document revision	Date	Description of changes
1.0	12-19-2025	Release

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