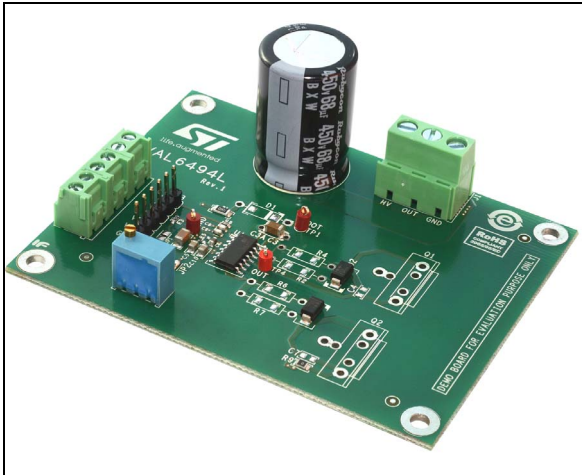


Demonstration board for L6494L gate driver

Data brief

**Features**

- Driver current capability: 2 A source, 2.5 A sink
- Integrated bootstrap diode
- Single input and shutdown pin
- Adjustable deadtime
- 3.3 V, 5 V TTL/CMOS inputs with hysteresis
- UVLO on both high-side and low-side sections
- dV/dt immunity: 50 V/ns in full temperature range
- Compact and simplified layout
- Bill of material reduction
- Flexible, easy and fast design

Description

The L6494L is a high voltage device manufactured with the BCD6 “OFF-LINE” technology. It is a single-chip half-bridge gate driver for N-channel power MOSFETs or IGBTs.

Both device outputs can sink 2.5 A and source 2 A, making the L6494L particularly suited for medium and high capacity power MOSFETs\IGBTs.

The integrated bootstrap diode as well as all of the integrated features of this driver make the application's PCB design simpler and more compact, and help reducing the overall bill of material.

The EVAL6494L board allows evaluating all of the L6494L features while driving a power switch in the TO-220 or TO-247 package.

The board allows easily to select and modify the values of relevant external components in order to ease driver performance evaluation under different applicative conditions and fine pre-tuning of final application components.

2 Bill of material

Table 1. EVAL6494L - bill of material

Part reference	Part value	Part description
C1	10 μ F / 50 V	Ceramic capacitor, SMT 1206
C2	68 μ F / 450 V	Electrolytic capacitor, 68 μ F, 450 V, 20% radial P7.5 mm 18 x 25
C3	2.2 μ F / 50 V	Ceramic capacitor, SMT 1206 or T.H.
C4, C7	N. M.	Ceramic capacitor, SMT 0805
C5, C10	220 nF / 50 V	Ceramic capacitor, SMT 0805
C6	220 nF / 50 V	Ceramic capacitor, SMT 0603
C8, C9	33 pF / 25 V	Ceramic capacitor, SMT 0603
D1	N. M.	Diode DO-41 or SMA
D2, D3	STPS2L30A	Schottky diode 30 V, 2 A, SMA
JP1	Jumper - OPEN	SMT jumper
JP2	Jumper - CLOSED	SMT jumper
J1	Phoenix Contact 1985991 or similar	Conn. term. block. T.H. 3 POS 5.08 mm
J2	2 x Phoenix Contact 1984950 or similar	Conn. term. block. T.H. 6 POS 3.5 mm
J3	FCI 68000-406HLF or similar	Conn. header 6 POS 2.54 mm STR TIN
Q1, Q2	To be selected by customer	IGBT/MOSFET, TO-220 or TO-247
R1	10 Ω	Resistor, SMT 1206
R2, R4, R6, R7	To be selected by customer	Resistor, SMT 1206 or T.H.
R3	43 k Ω	Resistor, SMT 0603
R5	N. M.	Resistor, SMT 0603
R8	1 k Ω	Resistor, SMT 0603
R9	0 Ω	Resistor, SMT 0805
TP1, TP4, TP5	RS 200-207 or similar	PCB test terminal 1 mm
TR1	Murata PV36W204C01B00 or similar	Trimmer 200 k Ω , 0.5 W, T. H.
U1	L6494LD	High voltage high and low-side gate driver, SO-14

3 Layout

Figure 2. EVAL6494L - layout (top layer)

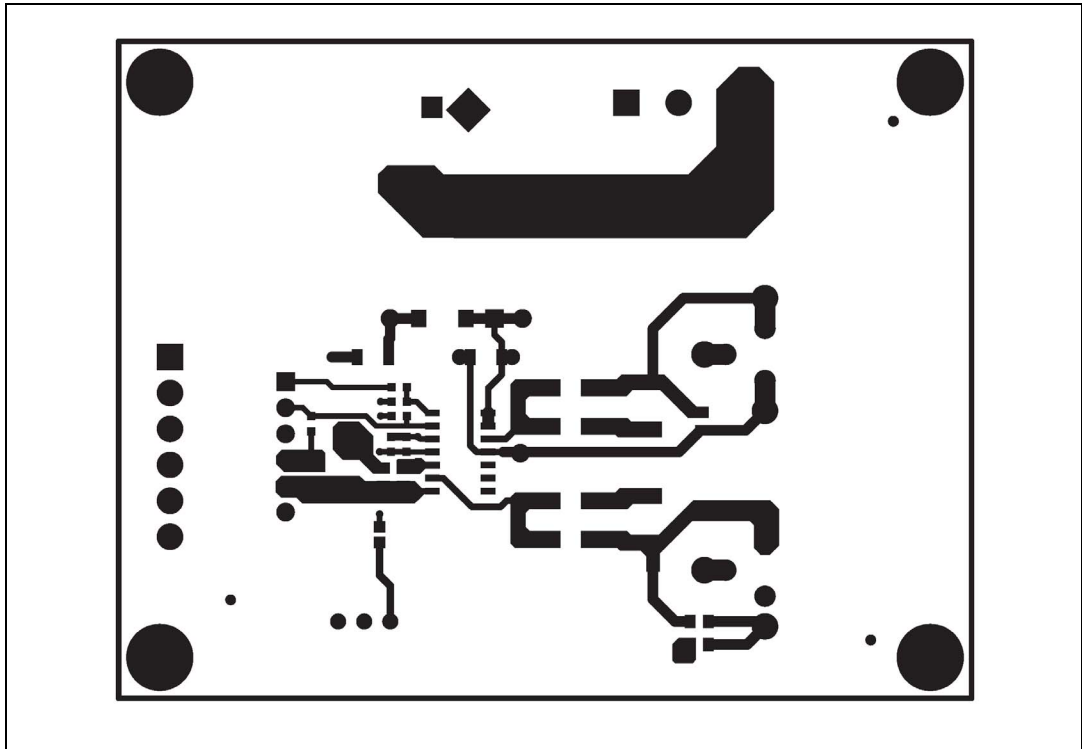
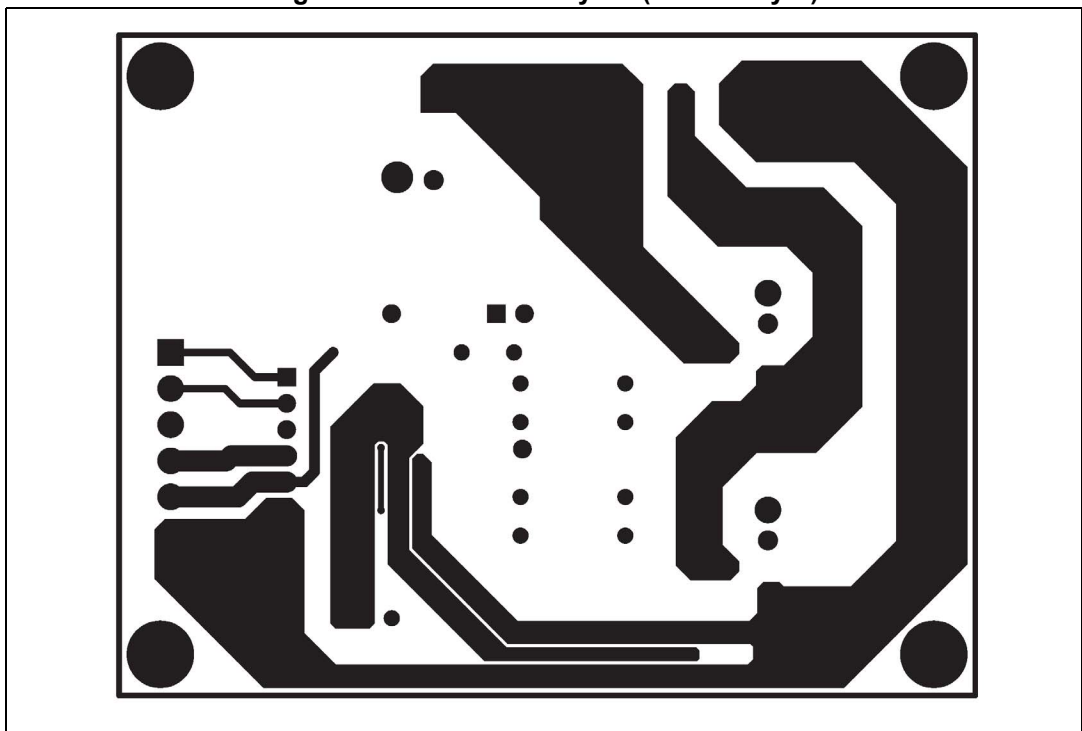


Figure 3. EVAL6494L - layout (bottom layer)



4 Revision history

Table 2. Document revision history

Date	Revision	Changes
14-Nov-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





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.