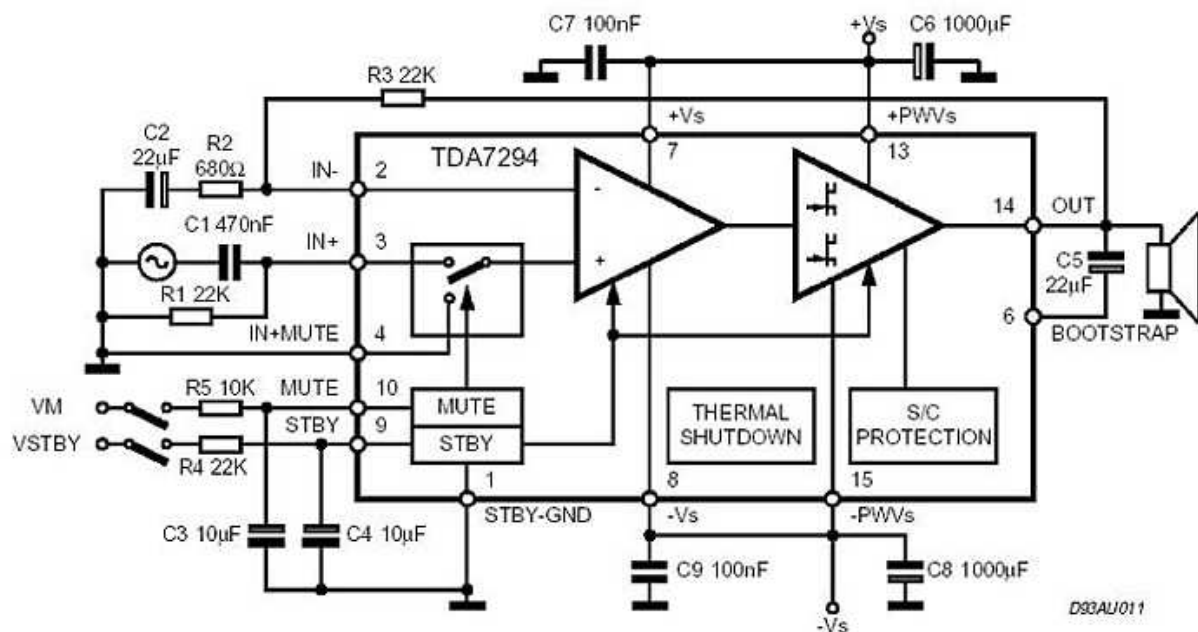


## DMOS mono amplifier 100W with TDA7294

*You have purchased construction quality Hi-Fi amplifier operating in class AB. Thanks to its small size, protected against short circuit on the output, overheating and the possibility of attachment directly to the metal box will find its use in many places. Whether it is ozvučování concerts or fitting into the estate, such as the guitar. Jet shocks to the speaker when you turn on and off the amplifiers in this circuit is minimal. Watch out, the device operates with a relatively large currents and tensions. Do not construction in both hands, it is under stress.*

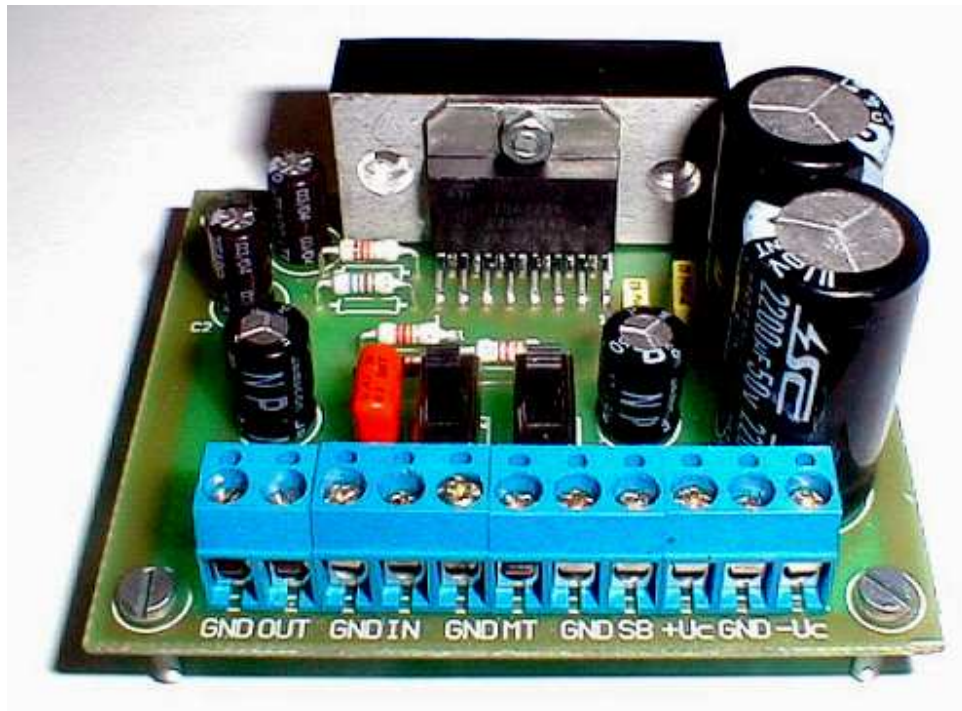
### Wiring diagram

This is the recommended involvement of the circuit TDA7294 company SGS Thomson. All material lies in the ICs. How preamplifier, as well as end-stage DMOS, MUTE function, STBY, protection against overheating, short circuit on the output. Capacitors C6 and C8 are the filter and cover the tip of sampling, it is not necessary dimension to the exercise of the power supply, which will benefit permanently. For example, the sound of drums in the strike will cause many times higher collection of resources than the median value. These capacitors in particular avoiding the emergence of bias, resulting in the strong signals as a result of excessive voltage decreases in resources.



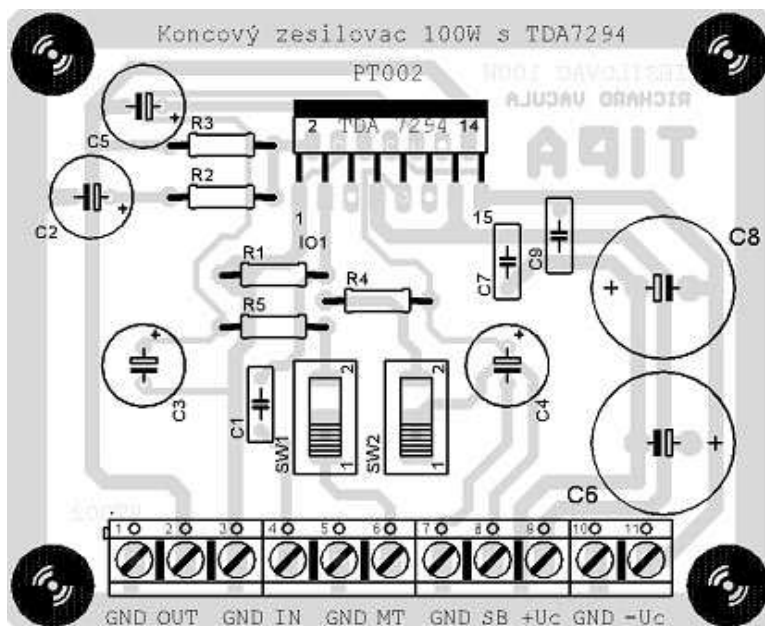
Capacitors C7 and C9 improve the stability of the RF amplifiers. Resistor R3 between 2 and 14 outlets providing negative feedback as DC (stabilizes the working point, respectively. DC voltage at the output), and together with R2 alternating link. It determines the overall gain, reduces distortion and balances characteristic frequency amplifiers. Here listed are recommended by the manufacturer, to achieve the best parameters, but if necessary, within certain limits vary. For example, if you need to limit the performance of amplifiers because of a smaller cooler or have loudspeaker systems for smaller performances and to prevent their destruction, just increase R2 value, or reducing the value of R3 reduce gain. DC capacitor C1 separates from the amplifier input signal sources that had no direct

working point amplifiers. Through switches and resistors R4 and R5 will bring tension to STBY (Stand By) and MUTE. C3 and C4 allow continuous activation and deactivation of these functions.

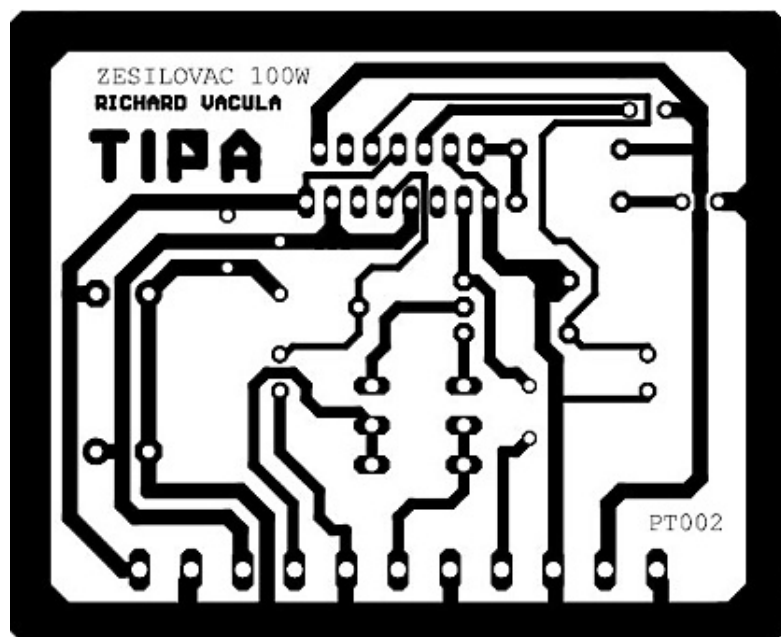


#### Construction

Place PCB PT002 (supplied with green nepájivou mask, printing components and drilling machine CNC), which is designed to be received from the external environment as far as possible to interference and match proudovému load. Therefore, the power and output connections as broad as possible. It is used cuprex FR4 with 35µm strong copper foil.



Order mounting: 1st capacitors, resistors 2nd MKT 5 mm 3rd terminals 4th switches 5th other capacitors 6th TDA7294

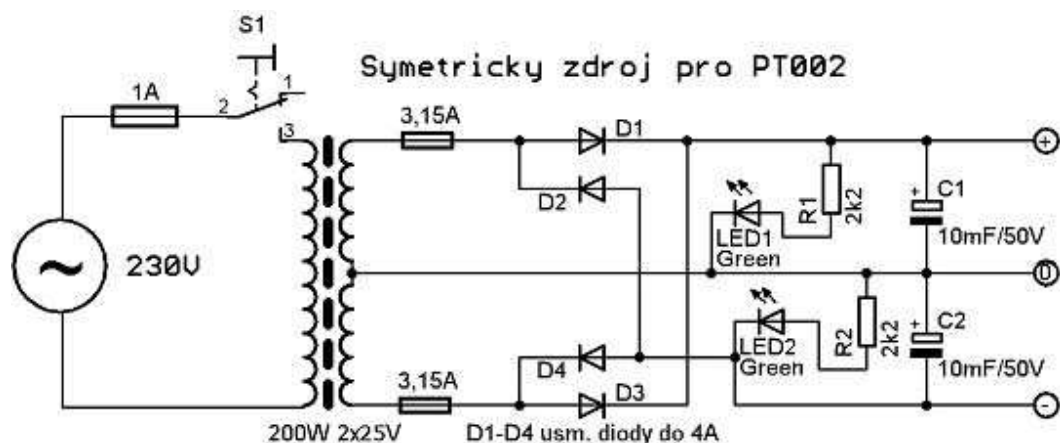


DA7294 pájejte last try, and the shortest possible time. Pájejte conscientiously so as to avoid cold couplings. Across-the-board connection through the large currents, only high-quality construction makes the minimum risk. Connection output signal is limited in one place. There is no pattern nanesena nepájivá. At this point apply a drop of tin to improve the conductivity and the possibility of a larger load without the risk of burning the journey. You have two ways to complete construction:

A: not intend to use the features STBY and MUTE. Then switch SW1 and 2 zapájíte directly into the joints and their situation will be running for the top amplifiers. In this connection, which is based directly from the diagram, you can only disable the function, rather than immediately turn on. Can be activated only by switching radio before switching on the amplifier and the spent condensers. Use: for animation, when we want to measure sleep donation but later exploit these features.

B: Do you intend to use the features. In this case, the switch will not be soldered into the joints (logically, not because of any change to open the box or combo), but lead out through the wires (included). In this engagement - see the picture, are optional features, the possibility of activation and deactivation at any time during the operation. SW2 se zapojuje stejně jako SW1. SW2 is involved as well as SW1. When the two structures is necessary in the terminals MT and SB bring positive supply voltage.

The last thing it should be in construction to make, is attached aluminum profile, which allows direct attachment to the metal skříním and easier attachment coolers. The body must be first navrtat - in the middle of a hole for attaching IO,  $d = 3\text{mm}$ , with navrtáním  $d = 6\text{mm}$  in the rear of one quarter of units for flush screw head to the back wall to enclose the entire area to chladícímu element. Then, just as necessary drill holes on the edges of the profile. And again, for example,  $d = 3\text{mm}$ , the zavrtáním  $d = 6\text{mm}$  in one quarter (2.5 mm) of its thickness. See the real picture above. Adequate evacuation of heat from ICs provide aluminum plate on the surface  $0,75\text{ dm}^2$  and a thickness of 5 mm. There are screws and nuts to facilitate the handling of the plate mounted amplifier in the animation. Thermal resistance of external cooler:  $0.8\text{ K} / \text{W}$ .



It's not required but is symmetrical source of tension, there is attached recommended tested and well-functioning wiring diagram. Toroidal transformer best, at least 150W, optimally 2x25V/200W. Policies to protect the source and amplifier from destruction. LEDs indicate the tension on both branches. Once unlit, for example, LED1, you know, it is burned fuse, or other problem in a positive power. Capacitors C1 and C5 are the filter. The minimum recommended amount 5mF, but higher values can only benefit - less badboy. Then it depends on how much you're willing to finance investment in resources and its quality, because comparatively, with a capacity of capacitors is growing, as well as their price. In the greater interest we are willing to source with the PCB and all parts sold as a kit.

#### Revival

Equipment is not necessary to recover. When good design, sufficient resources sized works on the first engagement. In any case, do not amplifier without the cooler. Threatened with destruction or degradation of the quality of reproduction.

<b>R1, R3, R4 R1, R3, R4</b>	22k	<b>C1 C1</b>	MKT 220 - 470nMKT 220 - 470n	<b>C6, C8 C6, C8</b>	1000m/50V
<b>R2 R2</b>	680	<b>C2, C5 C2, C5</b>	22m/50V	<b>C7, C9 C7, C9</b>	MKT 100n/63 VMKT 100n/63 V
<b>R5 R5</b>	10k	<b>C3, C4 C3, C4</b>	10m/50V	<b>IO1 IO1</b>	TDA7294

