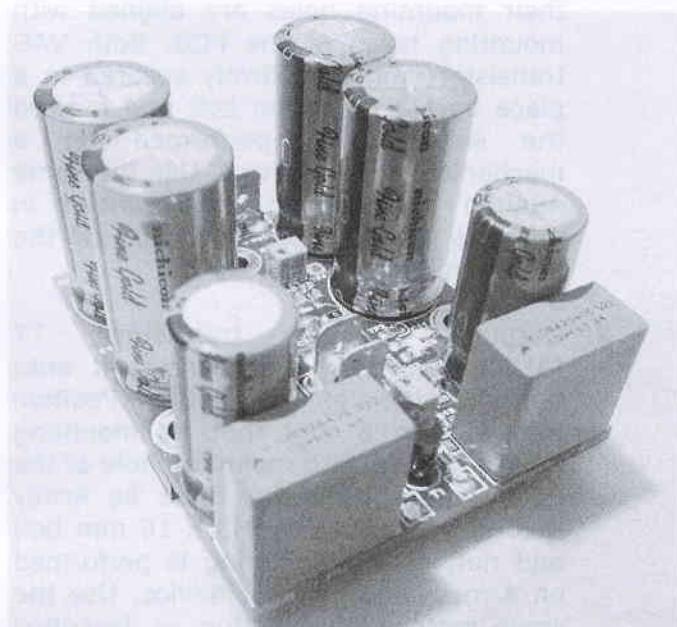


VSSA mosfet amplifier module V 1.4

Installation manual



Description

The VSSA mosfet amplifier module is all in-one very compact single channel power amplifier, intended for DIY implementations of the most demanding audio applications.

VSSA PCB set contents

Following materials are present in the PCB set package:

- VSSA dual layer PCB with pre assembled FastOn tab terminals and SMD electronic parts (1 pcs.)
- ALF08NP16V5 mosfet transistor (1 pcs.)
- KSA1381 transistor (1 pcs.)
- KSC3503 transistor (1 pcs.)
- BC550C transistor (1 pcs.)
- BC560C transistor (1 pcs.)
- kapton insulator washer (1 pcs.)
- polyamide spacer (2 pcs.)

Assembly instructions section describes in detail how to prepare and solder all through hole electronic parts to the PCB, prior releasing VSSA amplifier module into normal operation.

Absolute maximum ratings

Operation beyond these limits may result in irreversible damage. Table 1:

Item	Symbol	Rating	Unit
Supply Voltage	+VDC, -VDC	45	Vdc
Output Current	I out	8	Adc
Air Temperature	T amb	50	°C
Heat-sink Temperature	T sink	75	°C

Recommended operating conditions

Correct operation within these limits is guaranteed. Table 2:

Item	Symbol	Rating	Unit
Supply Voltage	+VDC, -VDC	20 – 45	Vdc
Load Impedance	Z load	4 – 8	Ω
Air Temperature	T amb	20 – 30	°C
Heat-sink Temperature	T sink	40 – 60	°C

Warning: ALF08NP16V5 dual mosfet transistor is a static electricity sensitive device and does not include internal Gate-Source protection network, so great care must therefore be taken with static electricity handling precautions.

Assembly instructions

Before starting soldering through hole parts to the VSSA PCB, three preparation steps have to be taken as follows:

1. Mark BC560C transistor with a small dot on the top, just to know later that this one is T1. Flat sides of the input transistors T1 (BC560C) and T2 (BC550C) cases have to be glued together by a small drop of a Cyanoacrylate liquid adhesive, like Loctite or similar. In this way both input transistors will share the same operating temperature at all times, ensuring proper DC offset tracking.
2. VAS transistors T5 (KSA1381) and T6 (KSC3503) pin leads should be bent 90° upwards (in direction to the labeled text print side) by the support of a 2,5 mm