

- a) The transistor can be soldered. This technique is preferred to obtain a very low thermal resistance. Disadvantage is, when the transistor is destroyed for any reason it will be difficult to replace.
- b) Use silicon grease (the white one for a lower thermal resistance)

Before doing anything, the transistor has to be prepared.

As delivered, the flange of the transistor is not very "flat". To improve the flatness, the best way is to use abrasive paper type 3 M 734 "P1200".

The abrasive paper has to be put on a very flat surface, like glass.

Hold the transistor and make a shape of the number "8" with your hand until the flange is very flat.



Mount the transistor.

10) Bias adjustment

Connect the output to a 50Ω load.

Use two power supplies:
One for the bias 0 to 12 V

Set to 5 V (check if the bias potentiometer is set to ground!!)

Set the drain power supply to 50 V and limit the current consumption to 2A.

Adjust the drain current (I_{dq}) up to 2A, i.e. each part of the LDMOS device draws 1A.

11) Small signal test:

If you have a network analyzer or similar, test the amplifier in small signal mode, otherwise with very low input power. Connect the output of the amplifier to an appropriate dummy load.

Tune the input VSWR by trimming L1 and C6.
The input return loss should be better than 15 dB.
The small signal gain is around 28 dB.

If you do not get this values **DO NOT** drive the amplifier to full power, you may have a wrong output wiring. Double check the input and/or output circuits thoroughly.