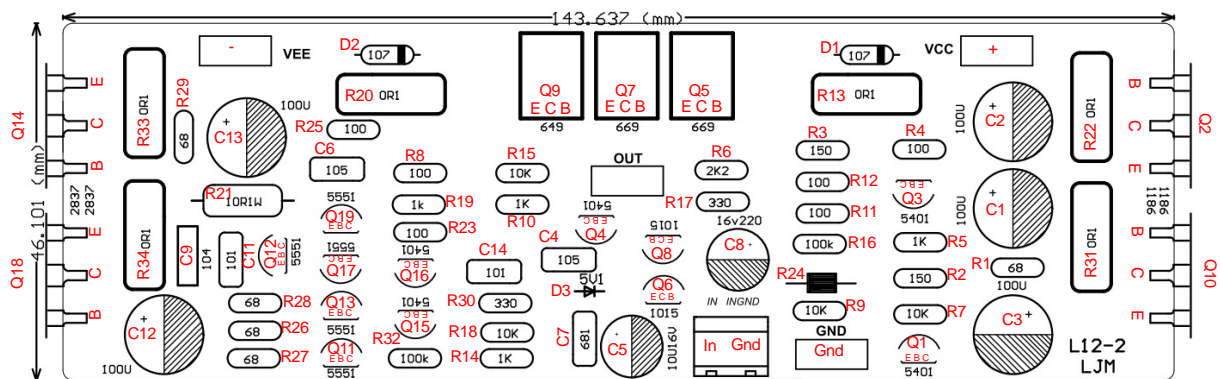
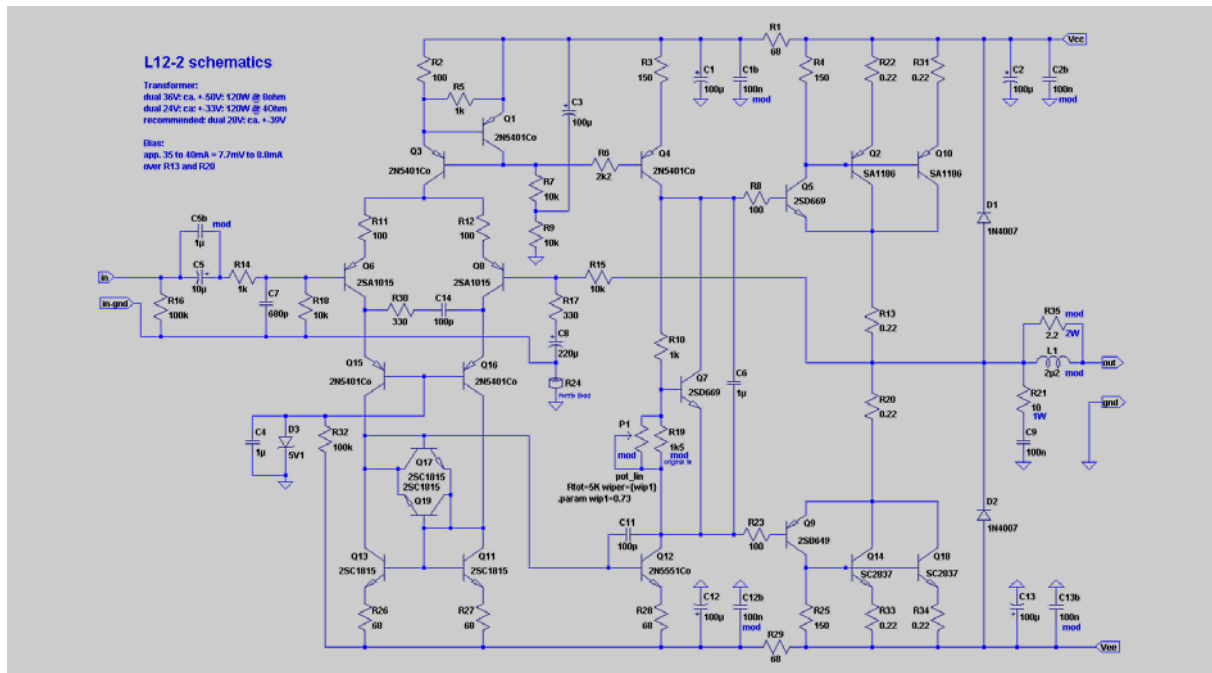


L12-2 Schematics, Modifications, Trimming, Probs



Schematics and Layout nomenclatura as from original Schematics and PCB.

Modifications:

All parts marked **mod** in the Schematics:

- Film-Caps in parallel to Input-Cap C5
0.47 μ F MKS2 RM2.5-RM5 on PCB Solder-Side
- Film-Caps in parallel to Supply-Caps C1, 2, 12, 13
100nF MKT SMD1812, or MKS2 RM5 on PCB-Solder-Side
- Bias-R19 replaced by paralleled R19mod and P1
- opt. Film-Cap in parallel to Feedback-Cap C8
0.47 μ F RM2.5 or SMD on PCB-Solder-Side
- opt. increase Highcurrent-traces on PCB-Solder-Side with solder/copper-wire

remark: R4 and R25, the Emitter-resistors of the drivers Q5, Q9, are of 100Ohm, not 150Ohm!

Trimming:

The amp requires only a trimming of the idle currents.

Due to the Feedback-DC-blocking Cap C8 the Output Offset remains very small. Being a complementary follower the idle-current requirement is lower than for a emitter-follower output stage.

35-40mA for a pair of output transistors suffices.

This will result in a voltage drop of 7.7mV – 8.8mV over R13 and R20.

At 40mA each of the power transistors takes over 16-18mA, leaving app. 5mA to the drivers.

With sufficient cooling the idle current may be raised after a fashion.

The amount of heat developed at idle with 40mA stays so low, that the module wouldn't need cooling at all.

Procedure:

Shortcut the input connector.

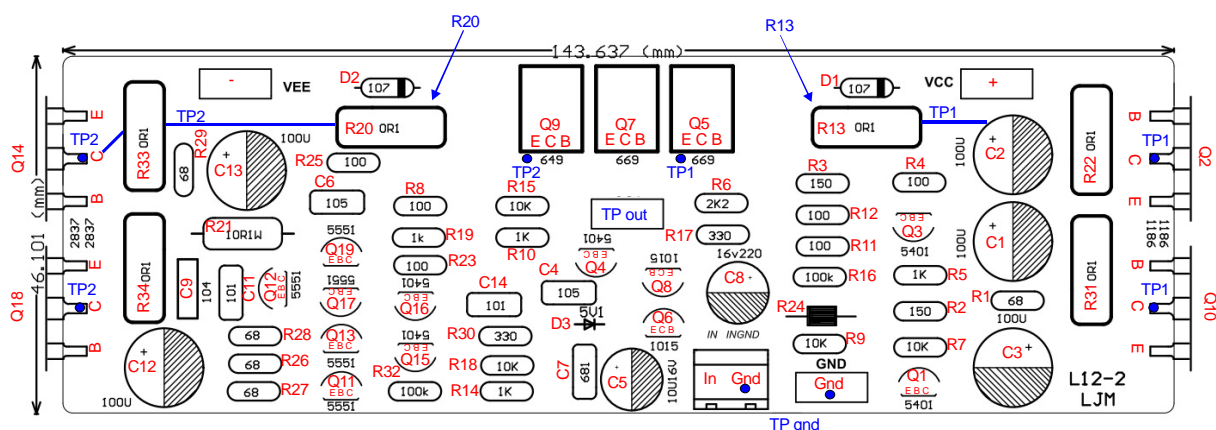
- Jumper from „In“ to „gnd“

Testpoints R13:

- TP1 to TP out → 7.7mV – 8.8mV

or Testpoints R20:

- TP2 to TP out → 7.7mV – 8.8mV



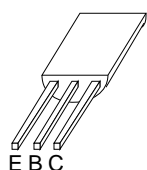
Probs:

There exist schematics of an earlier version of the L12 with a couple of flaws.

- Output transistors drawn as Darlington.
- R27/R28/R32 and a shortcut connection to the negative supply is wrong.
- Miller Cap C11 missing.

Also care should be taken, if 2N5551 are used instead of the 2SC1815, as there exist different Pin-layouts for the 2N5551. The chinese KEC differs from all others like Fairchild, OnSemi, et al.

Standard



KEC

