

8.17 Output Mosfet VGS determination

BOARD _____

8.17.1 Adjust output mosfet current close to intended final bias

- Connect V+ , V- , PGND and GND pins to power supply (intended power supply for amp).
- Adjust P1 for about 50 mV DC between TP4 and V- (TP4 and TP3, ensure stabilized measurement).
- Adjust P2 for about 50 mV DC between TP2 and V+ (TP2 and TP1, ensure stabilized measurement).
- Re-adjust (fine tune) P1 and/or P2 to obtain < 5 mV DC offset at output of amp.
- Measure voltage between TP6 and V- (VGSN = _____ V)
- Measure voltage between TP5 and V+ (VGSP = _____ V)
- Note: ensure to put probes close to pcb to avoid picking ac noise.

8.18 Driver transistors bias adjustment

8.18.1 Positive side:

- $IM3pre = VGSP / 147 \text{ Ohms} = \text{_____ A}$
- We need to increase current to about 20 mA for IM3, thus:
 - $RM3 = VGSP / 0.020 = \text{_____ Ohms}$
- $RV1 = RV1A // RV1B = RM3 - 47 = \text{_____ Ohms}$
- $1/RV1 = 1/RV1A + 1/RV1B$ $RV1B = 100 \text{ Ohms}$ (Solve equation for RV1A)
- $RV1A = \text{_____ Ohms}$ Closest standard value = _____ Ohms
- Note: In case RV1 is a negative value, R13 must be reduced and above equations must be re-applied accordingly.

8.18.2 Negative side:

- $IM4pre = VGSN / 94 \text{ Ohms} = \text{_____ A}$
- We need to increase current to about 20 mA for IM4, thus:
 - $RM4 = VGSN / 0.020 = \text{_____ Ohms}$
- $RV2 = RV2A // RV2B = RM4 - 47 = \text{_____ Ohms}$
- $1/RV2 = 1/RV2A + 1/RV2B$ $RV2B = 47 \text{ Ohms}$ (Solve equation for RV2A)
- $RV2A = \text{_____ Ohms}$ Closest standard value = _____ Ohms
- Note: In case RV2 is a negative value, R14 must be reduced and above equations must be re-applied accordingly.

8.18.3 Tolerance between negative and positive side drive current

- The acceptable tolerance is $\leq 12\%$.

8.18.4 Installation of RV1A and RV2A

- Measure again VGSN and VGSP as per section 8.17.1 as a sanity check.