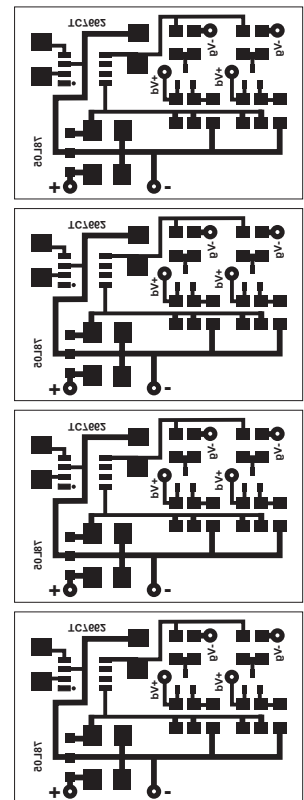
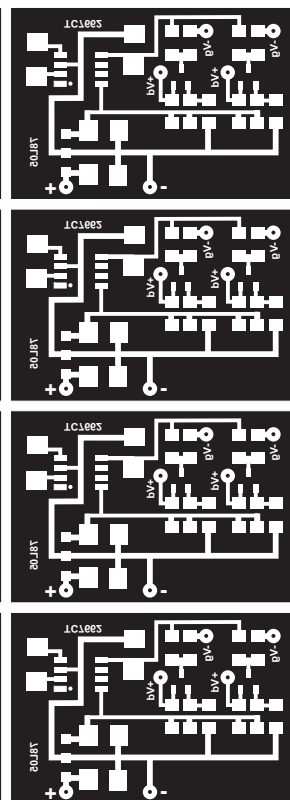
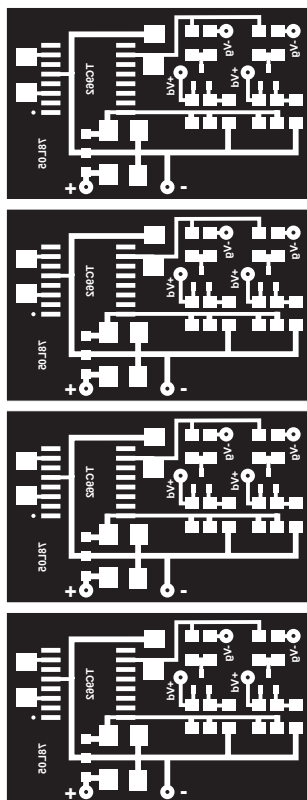
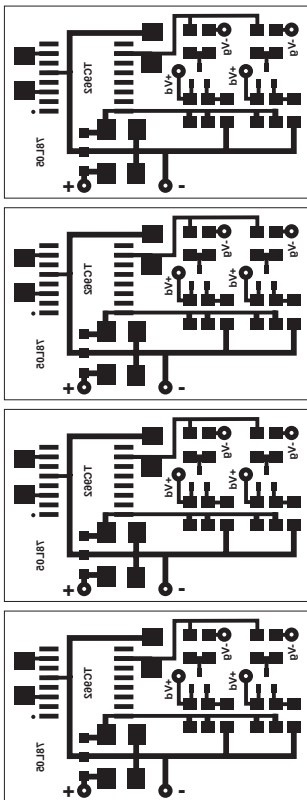


FOIL SIDE VIEWS

There are two versions of this circuit below - one with a TC7662 and one with a TC962 for the negative voltage supply.

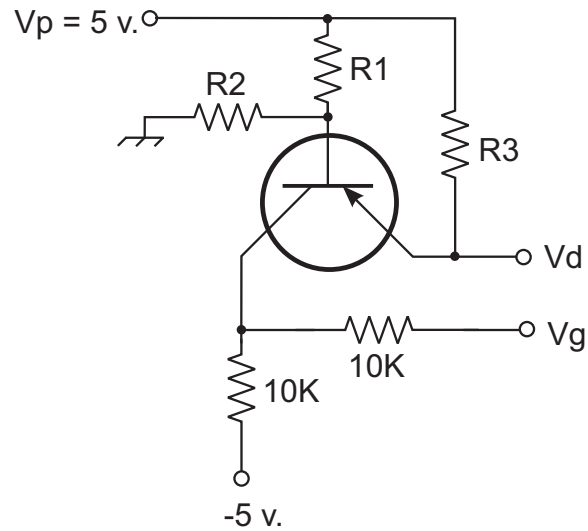
Note these are inverted images for contact printing with transparency printed side in direct contact with pc board.



1.0 inch

1.0 inch

GaAsFET Preamp Biasing Circuit



$$R3 = (Vp - Vd)/Id$$

$$R1 = R2 (Vbe + Vp - Vd)/(Vd - Vbe)$$

Vd = FET drain voltage

Vp = Supply voltage = 5 v.

Vbe = base-emitter voltage (0.65 - 0.7 v.)

Id = drain current

NOTES:

R2 is chosen to start, and the values of R1 and R3 are calculated.
A good starting value for most GaAs preamps is 1500 - 2700 ohms.

Make sure to consider any resistors placed in series with the GaAsFET drain when calculating Vd. For instance, if a 50 ohm resistor is used in series with the drain on the circuit board and Id = 10 mA, then with a drain voltage of 3.0 volts, Vd = 3.0 volts + (50 ohms * 10 mA) = 3.5 volts.

Any PNP SMD transistor should work in the circuit for GaAsFET LNA's. I use MMBT2907's.

Zack W9SZ