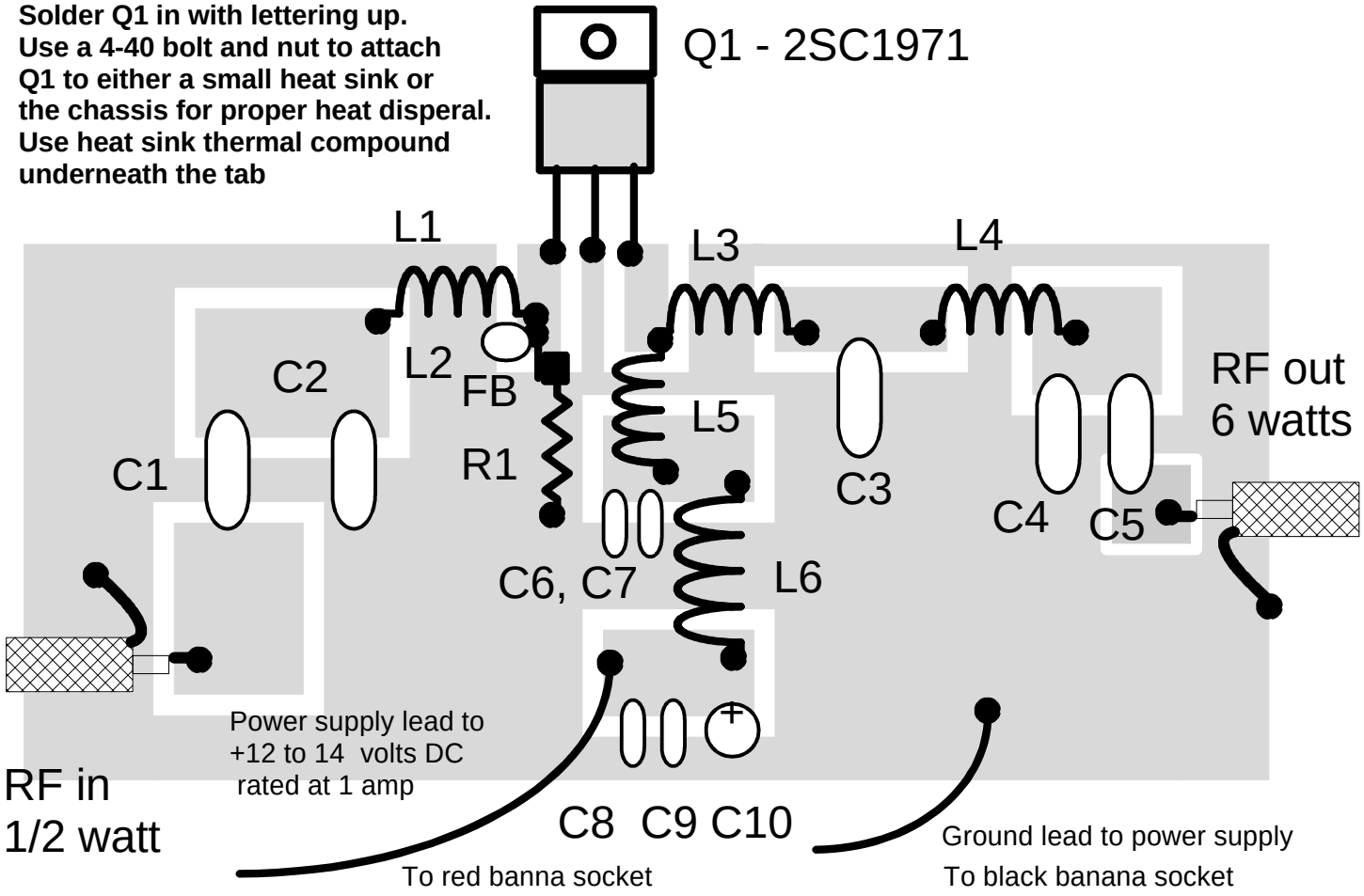

6 Watt RF Amplifier

Parts List

C1, C5 - 470 pf mica capacitor C2 - 75 pf mica capacitor
C3 - 39 pf mica capacitor C4 - 15 pf mica capacitor
C6, C8 - .001 uf disc or monolythic capacitor, marked eitther 102, .001 or 1n
C7, C9 - .1 uf disc capacitor or monolythic capacitor, marked either 104, .1 or 100n
C10 - 10 to 22 uf electrolytic (observe correct polarity)
L1 - 1 turns #18 tinned copper, 1/4 " diameter
L2 - 1 uh inductor, blue lumpy item
L3 - 2 turns #18, 1/4" diameter
L4 - 7/10" # 14, hairpin
L5. L6 - 5 turns # 20, 1/4 diameter
R1 - 56 ohm resistor with ferrite bead over lead at the base end of Q1
Q1 - 2SC1971 RF transistor
Misc - RG174 coax, hookup wire, SO239 sockets (2), 4-40 nuts and bolts (4 each) ferrite bead, banana sockets & plugs (red/black 2 ea.) and solder lugs

Assemble by soldering the components to the pads indicated. Keep coil, resistor and capacitor leads as short as possible. The coils should be 3/16"-1/4" above the board and separate turns by one wire diamter, bend lead to form a little mounting foot for soldering to the circuit boar. Tuning & power output are affected by the distance between the coil turns, you can make fine adjustments by either spreading or compressing the coil slightly. The area surrounding the pads is ground, C2, C3,C4 & C6-C10, L2 and R1 are soldered at one end to ground as well as the shield braid on the coax cables. Bolt Q1 to a small heat sink or the chassis with heat sink thermal compound or gray thermal pad underneath the tab. With an input level of 200-500 mw you should see an ouput of 5-6 watts. Be sure to have a proper dummy load (50 ohms) or tuned antenna connected to the output, doing otherwise will likely destroy the transistor.