Notes: To optimize for 9v DC power, experiment with smaller values of emitter resistor on Q2, an extra turn on the secondary of T1, and use the Smith Chart to optimize the values of L1 and C1 for a lower impedance load presented to the collector of Q3. For more power output, Q3 may be paralleled 2N3904 devices or a different transistor type. Increasing the power output will require more drive from Q2.
50 MHz Class C frequency multiplier and bandpass amplifier
20.6 MHz precision crystal oscillator and x7 multiplier
note “Class E” output stage on crystal oscillator output

narrow band amplifier on 7th harmonic
0.5 pF chip coupling capacitors on back of board
other harmonics -70 dBc
1 watt 50 MHz transmitter

Note Low Pass Filter on Output

2 stage saturated PA
100 mW 144 MHz AM Transmitter

Modulated Waveform

Inside PA Compartment
Construction Details