EL190 F22, 27.045 ~ 27.225MHz Transmitter Operation Description

The Microprocessor (U1, Figure 1) reads input commands (SW2/SW3/W2/W3, Figure 1), and then encodes them to digital codes. The codes are sent to RF oscillator via pin 6 of U1, Q6, Q7 and then modulates 27.045~27.225MHz carry frequency signal via Q1 (Figure 2) to achieve AM signal.

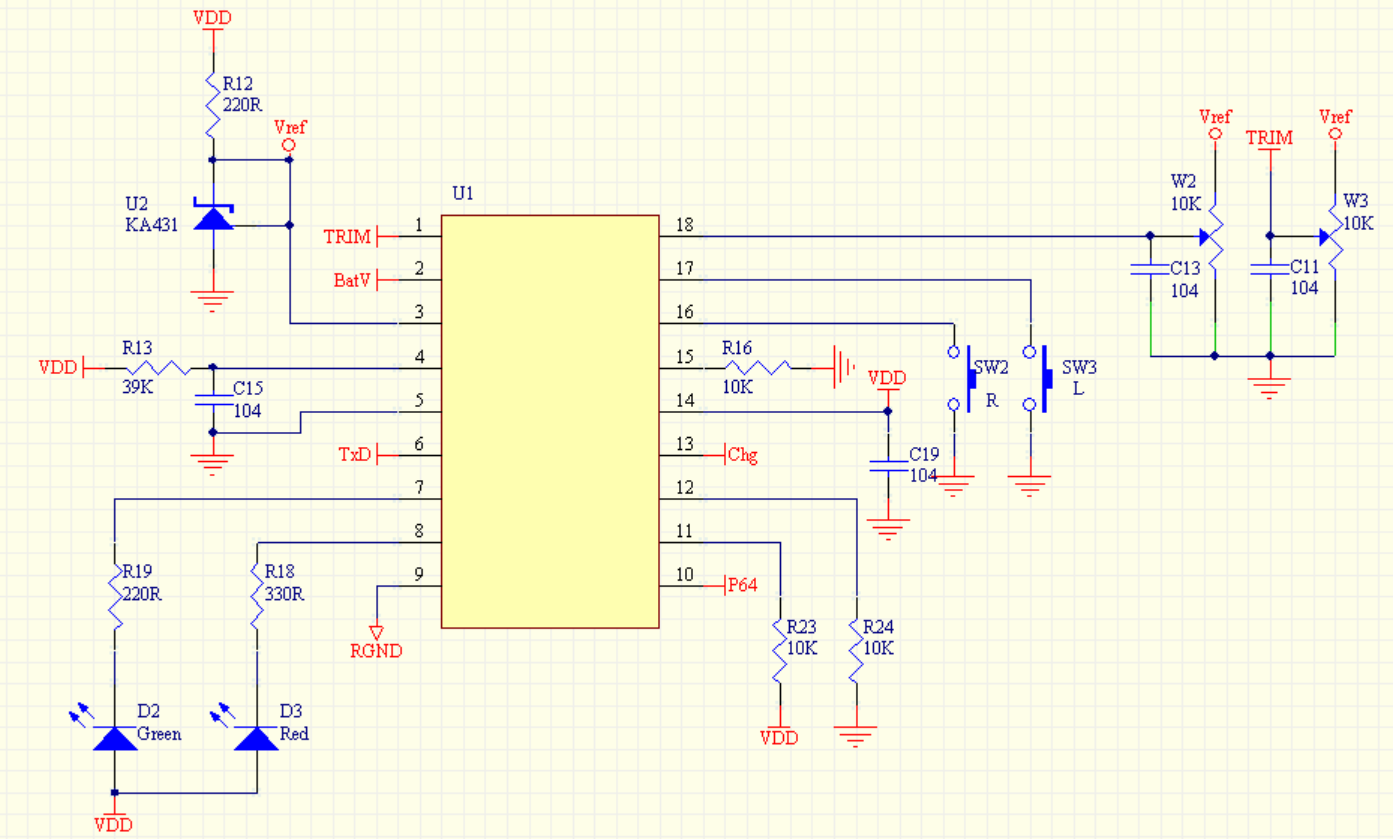

Figure 1

EL190 F22, 27.045 ~ 27.225MHz Transmitter Operation Description

The Radio Frequency of the transmitter is based on standard 27MHz AM citizen's band. It generates low power 27.045~27.225MHz AM carrier frequency via major components of Q1, Y1, L1, C5, C21, R4, R3 and R28 etc. (***Figure 2***). Please see the attached schematics for more detail.

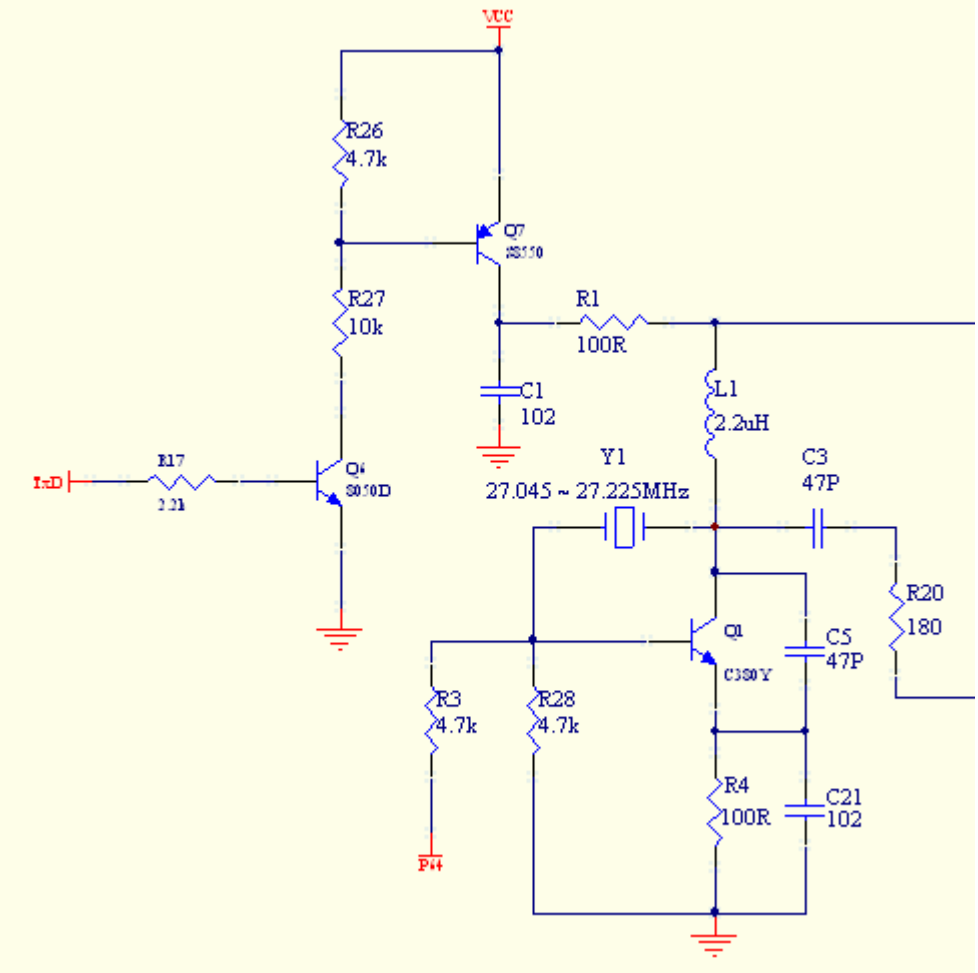

Figure 2

The AM signal (via capacitor C3) is passed to RF amplifier ***(Figure 3***, Q2, C8, R9, C9 and L2), which amplifies the signal and then couples the signal into the antenna (ANT1) via components C4, C6, L4, C7 and L3.

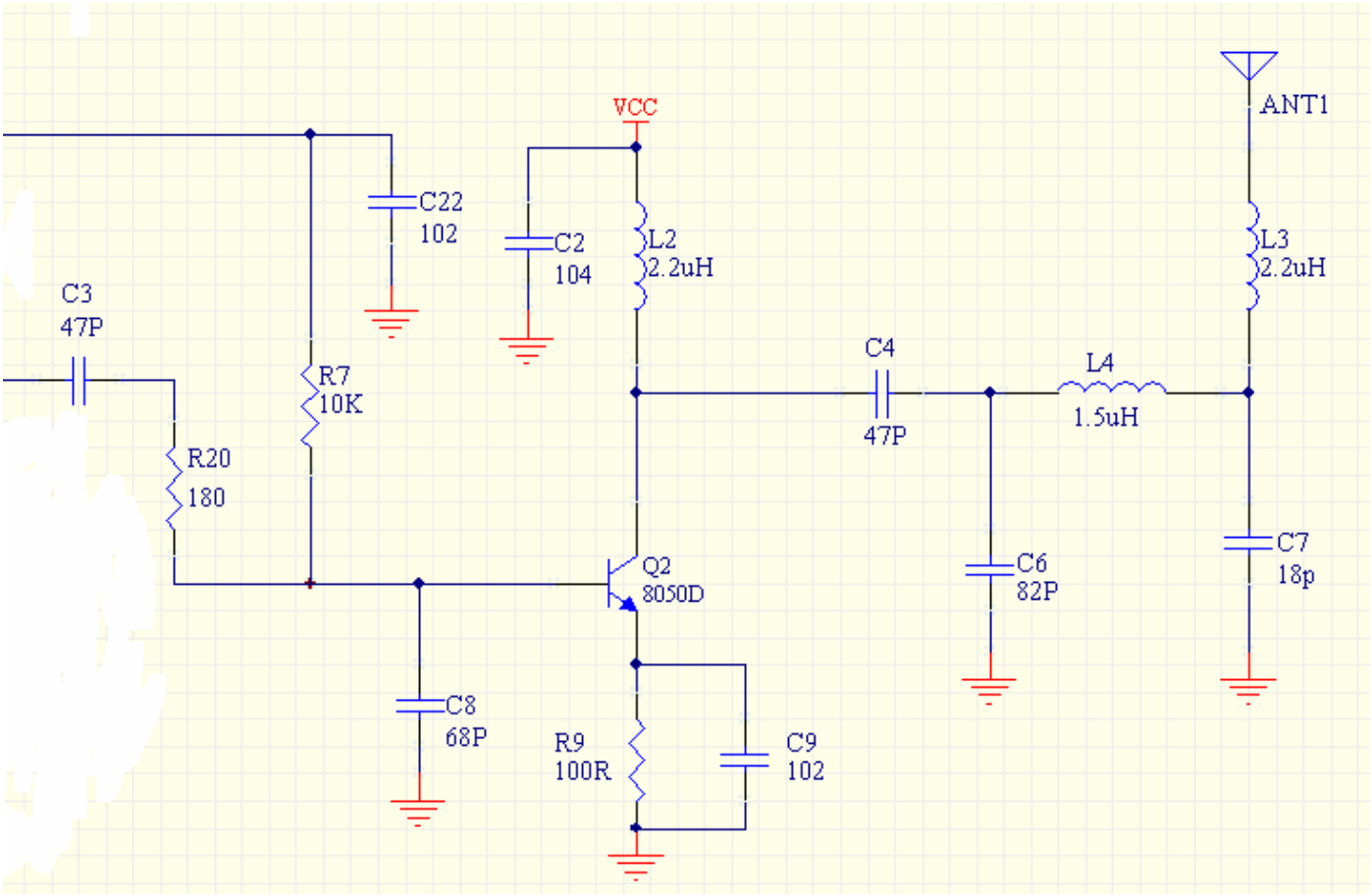

Figure 3