

CIRCUIT DESCRIPTION

TRANSMITTER SECTION

Frequency Determining and Stabilizing Circuit

MCU(U1) output a data signal to R8, the Primary resonant network consists of Q2, R12, C15, C16, L1 and X2. Thereinto, X2 is a SAW resonator (Surface-Acoustic-Wave), to stabilize surging frequency; Q2, R12, C15, C16 and L1 supply surging condition.

RF Amplification:

The power of the primary output is low, the second level amplify RF signal and output. The RF amplification network consists of Q3, R14, C20, L3, C22, C23, C11 and L4. The C19 is a coupling capacitance. Thereinto, L4 is a transmitter antenna, C11 is a tuning capacitance.

Modulation:

The MCU export data signal, the circuit adopt OOK modulating mode.

RECEIVER CIRCUIT

The receiver circuit is a super regenerative receiver mode. The oscillator is composed of Q11 and surrounding component, D5 reacts to reduce temperature excursion. Q7, Q8, Q9 and Q10 work for signal amplification, Q6 and Q5 work for signal face lifting and input.