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Technical description of the VMail

A) Transmitter section

- ⊙ Frequency determinant and stability circuit

Q5 as the main component of the oscillator and the ceramic resonator DR1 determine the stability

- ⊙ RF Amplification

Q2 as the buffer of the oscillator, Q3 as the power amplification

- ⊙ Modulation

The 20kbps data rate via L1 and R15 to the Q3 then ON-OFF the power output. i.e. ON-OFF keying modulation

- ⊙ Radiation limiting

C38 C39 C34 C50 C9 C15 and the microstrip lines made up the two lowpass filters in order to filter and limit the harmonics

B) Receiver section

Q4 as the LNA

Q6 as the mixer

The local oscillator is form by Q1.DR2.C18 and the bias components

RTX9001 as the IF signal detection, and the data is output from pin10 of the RTX9001.