T055S Circuit Description

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The whole system consists of five main parts:the Power Supply part; the RF Receive/Transmit part; the TEL.Communication part; the MCU& periphery part and the PIR part.

- The Power supply part

  The system needs twotypes of DC power: “＋9V” “＋3.6V”. The “＋9V”circuit consists of J2 6LR61 D15 D16 C20 C21 that supplies “Buzzer& Driver” “RF Transmit” “＋3.6V etc. circuits; the“+3.6V”circuit consists of U2 C22 C23 that supplies U2(MCU) U1(24C02) U3(LM324)etc.components and “RF Receive” module.

- The RF Receive/Transmit part

  The central component of receiver module is IC LM358,Q1,Q2 etc.component that receiving RF signal of 433.92MHZ and demodulating in ASK mode. The demodulated code will send to MCU decoding. The Transmitter module is an oscillatory at 433.92MHz. It sends the code from MCU out by radio frequency in ASK mode.

- The TEL. Communication part

  The system only uses DTMF to dial. The DTMF signal is sent by MCU, first is adjusted by RC net (R26,C15,R25,C14,R23), then is sent to the amplify circuit that consists of Q7,Q8,R15-21,D7-10,C12, the signal amplified is sent to TEL. Line through the“TEL. line control” circuit (Q2-3 R5-6) and the “polarity-protect”circuit (D1-4). This part is including other circuits: NO1. the line connected circuit (Q1,U1,R2-4,C3-4) that can detect the system isn’t at the free line state before dialing; NO2. the DTMF signal detect circuit (C16-17,R27-28) that sends DTMF signal to MCU for decoding.

- The MCU & periphery part

  The MCU(U2 EM78P808) is a core of the system, that it processes all signals and executes all control functions. This part is including the LCD display, the keyboard, the EPPROM etc circuits. The RESET circuit consists of Q1 R7-9 C6 and the crystal oscillator Y1 C2-3.