

## 1. Requester

### 1). Working principle of the requester:

The wireless part of the requester is a direct FM frequency crystal oscillator. When the power on, the single chip is in a sleep state, the transmitter of the requester does not work. When press the switch, the single-chip is waked-up and its one-way gives control power to FM frequency crystal oscillator and the output power circuit, then the requester works. The other way of the single-chip modulates and gives power to the varactor of the FM frequency crystal oscillator, it generates  $\pm 3\text{Kc}$  baud rate of about FM 600HZ modulation signal(FSK), six harmonic( $72.25\text{MHz} \times 6$ ) of the FM oscillator, after a surface acoustic wave filter(SAW), filter out other harmonic signal, and after the amplification of the output pole of the triode and filtered by the low-pass filter, then the signal transmit through the ring antenna and finish a call. Then the single chip is back to sleep state and transmit part of the requester stop working, waiting for the next press of switch. It needs about 600mS to finish one call.

2). This equipment is not a pulse-width modulation. It is a frequency shift keying (FSK) .

3). This equipment is not cyclical transmit, it is transmitted by triggering the button. The minimum time interval between two transmit is 5 seconds.