

## **PB01 Circuit Operation**

### **1. PB01 Transmitter**

- a. Transistor 1 & 2 makes the modulation frequency.
- b. Transistor 3 is the oscillator part and output signal through the antenna.
- c. Transistor 4, 5 and 6 is the on/off timer control

In short, the oscillation signal is modulate at 315MHz at a pre-define on/off time period controlled by item c.

### **2. Receiver**

- a. Antenna, transistor 1 & IC3 (LM358) is the receiver part and de-modulate the received signal.
- b. Diode 3, 4, transistor 6, 7, 3 and IC2 (AC4538) measured the on/off time period to confirm signal received is corrected.
- c. After confirm received signal is corrected, IC1 (4060) will generate an ultrasonic frequency (SK2 key to select between frequency 23KHz or 28KHz).
- d. The Ultrasonic signal is amplified by transistor 4, 5 and transformer L4. to push the Ultrasonic transducer to generated Ultrasonic sound to warn the pet.
- e. Additional a test button is provided and used Transistor 8, switch SK1 and buzzer to generate (optional) audible sound.