Circuit Description

This is a speaker product that can connect to a mobile phone via Bluetooth and play audio signals from the mobile phone. It includes Bluetooth chip, crystal oscillator, button, AUX, charging management, atmosphere light, motor drive, Bluetooth indicator light and other parts.

1. The lithium battery (3.7V) powers the 15th pin of the Bluetooth chip (U1 AB5607E).

2. The crystal oscillator (Y1 26MHz) provides an oscillation source for the Bluetooth chip through pins 2 and 3 of the Bluetooth chip.

3. The Bluetooth signal is input and output to the onboard antenna through pin 1 of the Bluetooth chip.

4. The button function of the product is realized through pin 16 of the Bluetooth IC.

5. The external audio signal is input to pin 12 of the Bluetooth IC through the AUX audio line, and then output to the power amplifier (U3 HAA9809) through pin 10 of the Bluetooth IC to make a sound.

6. The TYPEC port 5V input charges the lithium battery through the charging management chip (U2 4054).

7. Drive the ambient light through the Bluetooth IC pin 8.

8. Drive the motor through the Bluetooth IC pin 6.

9. Drive the Bluetooth indicator light through the Bluetooth IC pin 9 to indicate the Bluetooth working status.

10. Bluetooth mode, connect the mobile phone through the Bluetooth protocol, the Bluetooth IC pin 10 outputs to the power amplifier (U3 HAA9809), and plays the mobile phone audio signal through the speaker.

Frequency Range: Bluetooth: 2402~2480MHz

Modulation Technique: Bluetooth: GFSK, π/4-DQPSK, 8DPSK