

# Circuit Description

The Bluetooth speaker circuit consists of: USB 5V power supply, Bluetooth master control, audio power amplification, and motor driver LED.

1. Power supply: powered by TYPE-C 5V
2. Bluetooth wireless music playback: DC5V provides power for Bluetooth, and the crystal oscillator (26MHz) provides clock signals for Bluetooth. When the speaker is powered on, Bluetooth will broadcast Bluetooth signals to the surroundings through the antenna (2402MHz-2480MHz). When a Bluetooth device (such as a mobile phone, laptop, or PAD) searches for the Bluetooth speaker device name through Bluetooth, it connects to the speaker through matching.
3. Audio power amplifier: HAA2018 amplifies the power of the music signal output from Bluetooth to drive the speaker to produce sound. The power amplifier IC has built-in self-adaptation to ensure sufficient output power and prevent top-cut distortion.
4. The Bluetooth chip AB5607E drives the motor to rotate according to the rhythm of the music, and the magnet drives the wheel to rotate, driving the oil inside the product water tank to beat and the LED light to light up synchronously.

Modulation Technique: Bluetooth: GFSK,  $\pi/4$ -DQPSK, 8DPSK