

## Miniphone Line Description

the small speaker operates at 2402 - 2480 MHz using a stereo bluetooth soc wafer with ab5325a-tssop24, antenna using a board-mounted antenna, antenna gain 0.5 dBi, rf receiving sensitivity <-90 dB. clock frequency 26 MHz.

### 1. Circuit description

AB5325A-TSSOP24 is an audio processing chip running the the wire part of the bluetooth wafer adopts a board-mounted antenna, using an antenna matching circuit adjustment of the linewidth of the layout to ensure that the antenna impedance is equal to 50 ohms. Bluetooth A2DP processing demodulated voice signal, through the wafer built-in DAC and external amplifier, driving the horn. The external MICROPHONE can realize the call of HSP/HFP protocol. 10 button Line "switch machine", " play pause ", " up and down ", " pick up and hang up the phone" and other functions. U2 is an external amplifier chip that amplifies the DAC output audio. U1 is a lithium battery charging IC, taking 5V power from a USB socket to safely charge the battery. C3, C10 and Mi Head make up the microphone circuit to achieve the call function. LED1 and LED2 are Bluetooth status and charging status indicator lights, respectively. In addition, the PB3 circuit supports UART serial communication for use in Debug.

### 2. Functional description

small sound box is a Bluetooth stereo box, can be connected to the main equipment such as mobile phone or computer, play the main equipment music play, can also connect with the mobile phone for voice calls. the speaker has 5 touch keys, multi-function multiplexing to complete the play control of the previous song/the next song; the state switch of play /pause; the call control of

picking up / hanging up etc. Two LED lights can indicate various working states