

Circuit Description

The U1(Bluetooth Module) use CSR BC358239A as its core chip, BC358239A is mostly include RF Receiver、RF Transmitter、RF synthesiser、Clock Input and Generation、Base band and logic、Microcontroller、Kalimba DSP and Audio Interface. The external crystal that provide clock for the core chip is 26MHz .The chip's description refers to its data sheet.

The U3(ATTINY13) be control by the Bluetooth Module's PIO6,PIO7 ,PIO8, and sent control instruction to Ipod MP3, These are driven by the transistor, Q4 , Q6 and Q3.

The U2(XC92169) provides the 1.8V for the Module and the RF front end. This converter is powered from a Li-polymer battery, C7 is a 4.7uF ceramic capacitor and is on the input to U2 to stability. L1 is a 3.3uH output inductance and C8 is a 10uF output capacitor that smoothes the output from U2. U2 has an active low shutdown pin, CE.

The U4(XC6204B332M) provides the 3.3V for the U3. This converter is powered from a Li-polymer battery, C9 is a 0.1uF ceramic capacitor and is on the input to U4 to stability. C5 is a 2.2uF output capacitor that smoothes the output from U4. U4 also has an active low shutdown pin, CE.

The U5(XC6204B272M) provides the 2.7V for the MIC. This converter is powered from a Li-polymer battery, C6 is a 0.1uF ceramic capacitor and is on the input to U5 to stability. C3 is a 2.2uF output capacitor that smoothes the output from U5.

The on-off circuit comprises the PLAY switch, SW1.

To prevent the demodulation of the Bluetooth or GSM RF envelop, a

simple inductive/capacitive filter, L4/C1/C2.

The device hold three LED: red LED , D5(double LED) , charging status; green LED, D5, charging complete; blue LED, D3, working status. These are driven by the transistor, Q1 and Q2.