

## **Circuit Description(2.401GHz~2.478GHz)**

The Headset consists of the Charger Circuit, 1.8V Switched mode Regulator, Bluetooth Headset Module BCM-04H, Audio Speaker Circuit, Microphone Bias, Status indicating LED and Three Multifunction Buttons for power on/off, pairing, call control, Volume Control etc.

### **Charger Circuit**

The Headset are often powered internally using a 3.7 volt Lithium-Ion Polymer with short circuit protection and a capacity of 120mAh, The battery charger is based on the U2, U2 has a VCC input for the power source from an external 6 volt DC supply. An output to the battery, Battery volt is for Microphone Bias circuit and Bluetooth Module power 1.8V DC/DC circuit.

### **Bluetooth module BCM-04H**

The BCM-04H is a Class 2 Bluetooth sub-system using BlueCore2-Headset ROM chipset from leading Bluetooth chipset supplier Cambridge Silicon Radio with a maximal output power of less than 4dBm. The module block includes CSR Bluecore02 IC, EEPROM, Band pass Filter and Crystal for clock. When used with the CSR Bluetooth software stack, it provides a fully compliant Bluetooth system to v1.2 specification for data and voice communications.

The RF circuit includes the antenna matching components and a ceramic antenna welded in the circuit board .

The crystal provides the whole circuit the standard reference frequency of 16MHz. There is no external ground connection. the ground is only that of the printed circuit board.

### **Switched mode 1.8 Volt regulator**

For optimum efficiency, a switch mode power supply provides the 1.8V for digital, analogue and RF portions of the device. This converter is powered from a Li-polymer battery.