Circuit Description(2.401GHz~2.480GHz)

Bluetooth is a short-range wireless communication technology. The design applied is in international identification ISM (Industrial Scientific and Medical) frequency bandwidth environment that is 2.4GHz~2.48GHz bandwidth.

The BTH820 Bluetooth Headset is a wireless mono headset manufactured with the Latest Bluetooth technology, complied Bluetooth specification v2.0. Within a range of 10 meters, BTH820 Bluetooth headset can connect to other Bluetooth devices which have built-in audio gateway, such as Mobile Phone, Desktop, Notebook Computer or PDA etc..

The Headset consists of the Changer Circuit, 1.8V Switched mode Regulator, Bluetooth Headset Module IS1601G, 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-lon 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 IS1601G

The IC/CPU is a Class 2 Bluetooth sub-system using BlueCore2-Headset ROM chipset from leading Bluetooth chipset supplier ISSC with a maximal output power of less than 4dBm. The module block includes Bluecore02 IC, EEPROM, Band pass Filter and Crystal for clock.

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.