ST-66 Stereo Headset Circuit Description

Power Supply:

For optimum efficiency, a switch mode power supply (U2 XC6219B182MR) provides the 1.8V for main chip (U4 BC358239A) core and RF front end. U1(XC6219B332MR), a LDO (3.3V) is used to supply chip PIO(programmable I/O), OLED logical power, and bias microphone. Microphone bias is enabled by PIO4 on the BC358239A. U3 (NCP1406SNT1G) generates a high voltage (about 8V) for OLED display. A Li-Polymer battery supplies the whole power.

RF :

For optimum RF performance, a ceramic antenna SLDA92-2R660G-S1 (X2) is used. The bluetooth frequency range is limited 2402~2480 MHz, the unwanted signal is filed by filter within BC358239A. The 16MHz crystal (X1) is used to form a reference clock for the RF baseband.

Audio Output:

The stereo audio part of this board uses the internal CODEC of BC358239A chip. The audio output is fully differential. It is capable of driving a 32 ohm headphone directly.

Microphone input:

Audio input is also differential**.** The negative MIC terminal is connected to analogue ground. Any AC signal on MIC positive terminal will be detected as a small voltage generated across R8 (2.2K ohm).