SE833 Theory of Operation

The SZ909 chest belt is a two ways wireless watch that operates in conjunction with SZ909 or other compatible chest belts. The SZ909 chest belt detects the user's heart rate and the distance the user walk or run and transmits these information to the SE833 watch.

There is an 2.4GHz transceiver IC (nRF24AP1) in the watch that is used to communicated with the chest belt and/or other devices, such as an USB dongle (e.g. AD112). The microcontroller (SIC88360) in the watch calculates the heart rate of the user as well as the distance the user walk or run and display these information on the LCD and store these information in its internal memory (24C512). The user can use 2.4GHz USB dongle to download these information to a PC. The RF output of the nRF24AP1 2.4GHz transceiver IC is connected to the antenna via an Antenna matching network. This network is used to match the impedance of the antenna to the nRF240AP1 2.4GHz transmitter IC and suppress unwanted spurious transmission. The data signal is transferred through matching network (L1, L2, L4, L5, C16, C17, C19, C20 and C40) fed to the antenna.