Operation Theory

FCC ID: RAC9452A01

Introduction:

The product is a wireless keyboard using a 2.4GHz Bluetooth technology to transmit key code within 10 meter. This keyboard provides a silent, comfort and omni-directional typing environment.

Principle of operation:

The product is controlled by a micro-controller, 8-bit RISC processor core. It scans the columns and rows of key matrix of the keyboard to determine which key has been pressed and/or released. The corresponding key code (for pressing and releasing) is generating.

The product uses a GFSK modulation and frequency hopping technology in combined with some coding schemes to ensure its low bit of error rate within designated distance. The keyboard hops 79 RF channels to transmit key code to its receiver which has been matched in channel and security bytes. When key code is ready in micro-controller, it encodes and sends to the RF IC inside the keyboard. Once RF IC receives the encoded data packet, it will transmit data to receiver. The 79 RF channels are ranged from 2402MHz to 2480MHz. Each channel is separated by one mega hertz.