6.2 RF Operation Principle

6.2.1 Carrier Frequency Separation

According the FCC rules part 15 subpart C15.247 frequency hopping system shall have hopping channel carrier frequency separated by a minimum of 25 KHz or 20dB bandwidth of the hopping channel. Channel separation 2 MHz @ per channel

6.2.2 Number of Hopping Frequencies

According the FCC rules part 15 subpart C15.247 frequency hopping systems operating in 2400~2483.5 KHz band that meet 15 hopping frequencies.

6.2.2.1 Pseudorandom Frequency Hopping Sequence

This module is controlled by microchip (IA2 embedded uP) to generate Pseudorandom Frequency Hopping Sequence. IA2 module RF normal operation mode support 15 hopping channel/Per Sequence.
There are four hopping sequences list as below:

Sequence 1: 2406, 2420, 2422, 2424, 2426, 2428, 2444, 2446, 2448, 2450, 2452, 2456, 2468, 2470, 2472 MHz
Sequence 2: 2406, 2408, 2410, 2412, 2414, 2416, 2418, 2420, 2422, 2424, 2426, 2428, 2430, 2438, 2446 MHz
Sequence 3: 2432, 2440, 2448, 2450, 2452, 2454, 2458, 2460, 2462, 2464, 2466, 2462, 2468, 2470, 2472 MHz
Sequence 4: 2406, 2408, 2410, 2412, 2414, 2416, 2418, 2426, 2454, 2462, 2464, 2466, 2468, 2470, 2472 MHz

The reference diagram drawing as below :
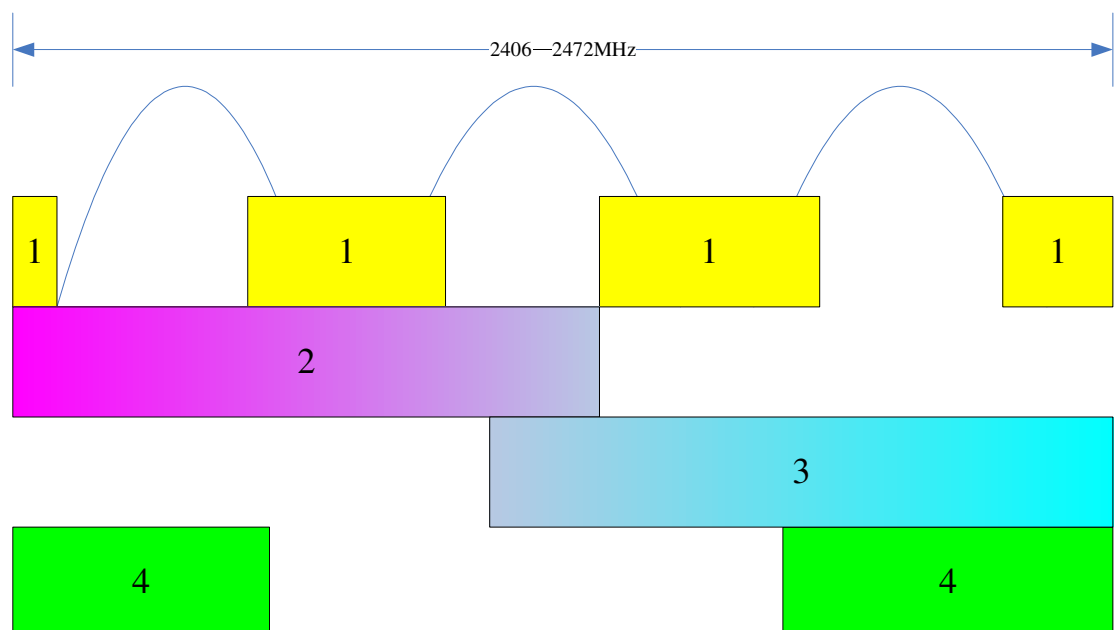
6.2.3 Time of Occupancy (Dwell Time)

IA2 module operation frequency that in 2400 MHz ~ 2484.5 MHz. In this band the average time of occupancy on any channel that required 0.4ms specification by multiplied by number of hopping channel employed. The IA2 module on normal transmitting operation mode that time of occupancy is 3.84ms/per channel that according the 0.4ms specification. (3.84ms/per channel)