

TP3 smart Heart Rate Transmitter (ZT26B) RF IC was used TEXAS
INSTRUMENTS IC: CC2541

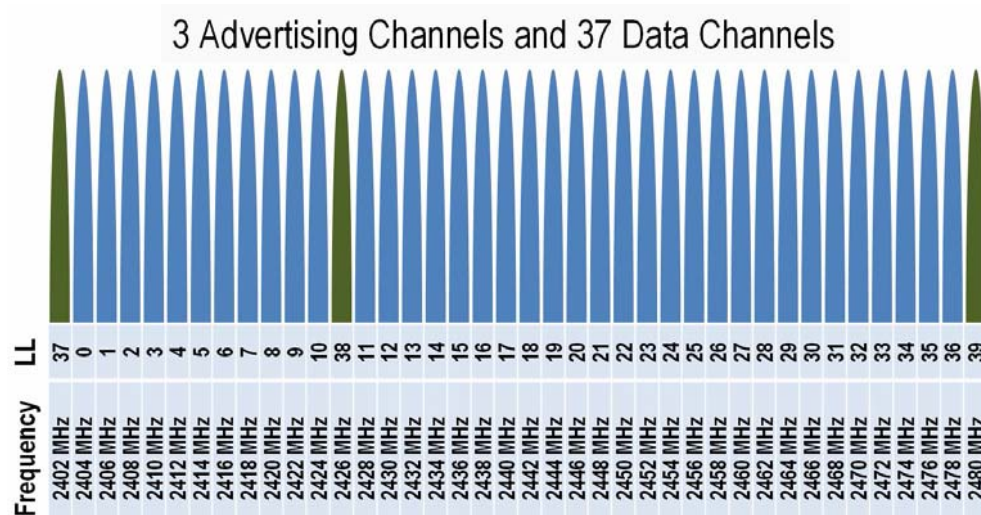
ICC2541: 2.4 GHz Bluetooth low energy Compliant and Proprietary RF
System-on-Chip

Bluetooth low energy

Robustness: Adaptive Frequency Hopping, 24 bit CRC

Splits the 2.4 GHz ISM band into 40 channels

1. 3 Advertising Channels
2. 37 Data Channels
3. $f_n = 2402 + 2n$ MHz



Separate Advertising & Data Channels

Data Channels

Used to transfer reliable data robustly

1. adaptive frequency hopping over 37 channels
2. fast acknowledgement scheme
3. if data doesn't get through, resent on next frequency

Advertising Channels

1. 2402, 2426, 2480 MHz. Avoids interference with Wi-Fi traffic
2. Used by peripherals to advertise presence
3. when first powered on
4. when they have data to send - central devices connect and get data
5. just to broadcast data to anybody scanning