

OPERATIONAL DESCRIPTION

FCC ID 2AUV5IMM1-3

Operation of the Bluetooth Low Energy radio is the basic operation of the Nordic nrf52832 IC. The radio advertises and connects on three channels between 2400 and 2483.5 MHz. Output power can be varied by firmware changes, but in our operation, it does not vary from the Nordic chip's maximum power, +4dBm.

BLE advertising is 10% duty cycle (0.5s every 5s), with 0.1s advertising intervals within the 'on' time. When connected, duty cycle is 100%.

Default data rate is 1Mbps. A master can request 2Mbps, and the radio will comply for the duration of the connection.

The nRF52832 uses Frequency-Shift Keying(FSK) modulation.

A 32MHz external crystal provides timing for the radio.

The matching circuit is the same as from Nordic's reference design – 3 capacitors and an inductor.

The antenna is a PCB trace on a flex PCB, of an inverted-F type. It is approximately 20mm long x 3.5mm at its widest.

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