

RF Exposure assessment

The NRF24L01p module has been tested with 93.2 dB μ V/m at 3m (peak).

If we calculate the average using the duty cycle:

$$\mathbf{-26.6\ dB = 20\ \log\ (4.69 / 100)}$$

we see that the NRF24L01p module has an average transmitter value of:

$$\mathbf{93.2 - 26.6 = 66.6\ dB\mu V/m\ at\ 3m.}$$

That could be considered equivalent to an e.i.r.p. of -28.6 dBm, or 0.001 mWatts.

By adding the NRF24L01p module power to the power of the BLE, we have a total power of

your product of:

$$\mathbf{0.801\ mWatts.}$$

Using the applicable equation in the FCC KDB 447498, we can calculate that:

$$\mathbf{(0.801 / 5) \times \sqrt{2.48} = 0.25.}$$

Since $\mathbf{0.25 \leq 3.0}$, no further action is necessary.