

The transmitter is an analog system that sweeps from 7.45MHz to 8.95MHz. The modulation signal is sinusoidal and the frequency is 324.375Hz.

The four restricted frequency bands that we sweep through are:

8.291MHz – 8.294MHz (3KHz wide)

8.362MHz – 8.366MHz (4KHz wide)

8.37625MHz – 8.38675MHz (10.5KHz wide)

8.41425MHz – 8.41475MHz (0.5KHz wide)

The transmitter will spend more time in the 8.37625MHz – 8.38675MHz band because it is the widest band (10.5KHz wide).

It takes 1.54143mS to sweep from 7.45MHz to 8.95MHz or to sweep from 8.95MHz to 7.45MHz (1/2 period of the modulation signal).

It takes 6.74uS to sweep through the 8.37625MHz – 8.38675MHz band.

Therefore, the transmitter spends $100 * (6.74\text{uS} / 1.54143\text{mS}) = 0.44\%$ of the total time in this band.

Section 15.205(d)(1) of your rules allow for 1%.