# OBW FOR Z-WAVE RADIO

## *Applicable Rules:*

**CFR47 §15.215(c)**: (c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

**RSS-210 A2.9(b)** Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general field strength limits listed in RSS-Gen, whichever is less stringent.

The Z-WAVE radio transmits on the unlicensed short-range-device frequency of 908.42MHz carrier using GFSK. The measured OBW is given below. Note: upper and lower frequency points chosen at distinct frequencies outside the markers were used to calculate the -20dB BW. This allows for a margin of error and accommodates the fact that the upper frequency marker cannot be placed at the -20dB intersection because there is no data point there.

RBW = 30KHz
VBW = 100KHz
SWT = 50mS
OBW = (908.525-908.30) kHz = 195.0 **KHz** (Measured)