Section 15.247(i) – Radio Frequency Hazard Information

As per Section 15.247 (i) spread spectrum transmitters operating in the 902-928 MHz band are required to be operated in a manner that ensures that the public is not exposed to RF energy levels in accordance with CFR 47, Section 1.1307(b)(1).

In accordance with Section 1.1310 this device would be classed as a portable device and therefore Section 2.1093 will apply.

Section 2.1093 requires SAR measurements to be carried out.

However the transmitter may come into close contact with humans so a SAR evaluation has been carried out in accordance with KDB Publication 447498 D01 General RF Exposure Guidance v05 dated October 24, 2012.

Clause 4.3.1 1 has been applied to this device as the power output is very low.

At 921 MHz the transmitter continuous peak output power was determined to be 38.0 mW

The highest frequency in use is 926.9 MHz.

This device is a frequency hopping spread spectrum device where a the transmitter operates for 14 ms on a channel and then moves to the next channel 1 second latter.

The device has 60 channels and it takes 60 seconds to operate on all channels.

Therefore a time averaging factor of (14 ms / 1000 ms) 0.014 has been applied to the continuous peak power of 38 mW which gives 0.532 mW

A 5 mm safe distance has been applied

The 1-g SAR safe distance was calculated as follows:

1-g SAR = (P (mW) / x (mm)) * (√ f (GHz))

1-g SAR = (0.532 mW / 5 mm) * √0.9269 GHz) = 0.102

The 1-g SAR threshold level, for distances < 50 mm, is ≤ 3.0.

The device will therefore meet the requirements of Section 2.1093 without any further testing by falling below the 1-g SAR threshold level.

Result: Complies