

FCC MPE Calculation

FCC ID: N26-PPVPPD2

Frequency: 2402-2480 MHz (79 channels)

Modulation: FHSS (GFSK, $\pi/4$ -DQPSK, 8DPSK)

Mid-Channel: 2.441 GHz (channel 39)

Mid-Channel or highest measured Peak Power, Conducted: 12.33 dBm == 17.1 mW

Antenna Gain: G = 2.5 dBi

Evaluation:

Applying KDB 447498 Appendix A for SAR Test Exclusion Thresholds, a device operating at 2450 MHz and used at minimum 20 mm from the body, shall emit less or no more than 38 mW. The worst case power emission is the radiated Peak Power, which for this device is $12.33 \text{ dBm} + 2.5 \text{ dBi} = 14.83 \text{ dBm} = 30.41 \text{ mW}$, so below 38 mW and therefore safe to use at 20 mm.

Conclusion:

At 20 mm distance, this 2.4 GHz device already emits below the required Threshold of 38mW, so is excluded from SAR testing.

This device is intended to be installed at the outside of a helmet. The thickness of any helmet on the market is at least 20mm, so the transmitter will always be more than 20 mm away from the user.