

FCC MPE Calculation

FCC ID: AJZDWO-3

Frequency: 2402-2480 MHz (79 channels)

Modulation: FHSS (GFSK, 8DPSK)

Mid-Channel: 2.441 GHz (channel 39)

Mid-Channel or highest measured Peak Power, Conducted: 12.4 dBm == 17.38 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 $12.4 \text{ dBm} + 2.5 \text{ dBi} = 14.9 \text{ dBm} = 30.9 \text{ mW}$, 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 in fact installed at even a larger distance than 20 cm from the user. The minimum possible practical distance is $(50 \pm 5 \text{ mm}) = 45 \text{ mm}$ from the user.