

## MPE Calculation

FCC ID: 2ACHX-BWA-A

Typical use distance:  $d \geq 20$  cm

Power density limit for mobile devices at 2.4GHz:  $S \leq 1$  mW/cm<sup>2</sup>

Remark: Average  $\leq$  Peak, which means that calculating the power density applying Peak power is worst case. The worst case operation mode generating the highest power in each frequency range is taken for calculation.

Frequency range: 2412-2462MHz, 2422-2452

Maximum measured conducted power (Peak):  $P_{\text{conducted}} = 18.01$  dBm = 63.24 mW

Antenna Gain:  $G = 12$  dBi

Calculation:  $P_{\text{radiated}} = P_{\text{conducted}} + G_{\text{linear}} = 18.01$  dBm + 12 dBi = 30.01 dBm = 1.002 W

Power density  $S = (P_{\text{radiated}}) / (4\pi \times d^2) = 1002 / 5026 = 0.2$  mW/cm<sup>2</sup> is below the limit, so pass.