MPE Calculation

FCC ID: XOMIPD40P619

Remark: Average ≤ 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.

For WiFi 11b/g/n(HT20):

Frequency range: **2412-2462** MHz   Typical use distance: d ≥ 20 cm

Power density limit for mobile devices at 2.4 GHz: S ≤ 1 mW/cm^2

Maximum measured conducted power (Peak): $_{Pconducted}$ = **20.45** dBm = 110.92 mW

Antenna Gain: G = **2.55** dBi = 1.8 on the linear scale

Calculation: $P_{radiated}$ = $P_{conducted}$ + G_{linear} = 20.45 dBm + 2.55 dBi = 23 dBm = 199.53 mW

Power density S = ($P_{radiated}$) / (4π x d^2) = 199.53 / 5026 = 0.0397 mW/cm^2 < 1 => <u>below limit</u>

For WiFi 11n(HT40):

Frequency range: **2452-2452** MHz   Typical use distance: d ≥ 20 cm

Power density limit for mobile devices at 2.4 GHz: S ≤ 1 mW/cm^2

Maximum measured conducted power (Peak): $_{Pconducted}$ = **19.61** dBm = 91.41 mW

Antenna Gain: G = **2.55** dBi = 1.8 on the linear scale

Calculation: $P_{radiated}$ = $P_{conducted}$ + G_{linear} = 19.61 dBm + 2.55 dBi = 22.16 dBm = 164.44 mW

Power density S = ($P_{radiated}$) / (4π x d^2) = 164.44 / 5026 = 0.0327 mW/cm^2 < 1 => <u>below limit</u>