

MPE Calculation

FCC ID: ZCBHYIPC-620

RF Exposure Requirements:	47CFR§1.1307(b)
RF Radiation Exposure Limits:	47CFR§1.1310
RF Radiation Exposure Guidelines:	47CFR§2.1091
EUT Frequency Band:	2412 – 2462MHz
Limits for General Population/Uncontrolled Exposure in the band of:	1500 – 100000MHz
Power Density Limit:	1.0mW/cm ² ;

Equation: $S = PG/4\pi R^2$

Where, S=Power Density

P=Power Input to Antenna

G=Antenna Gain

R=distance to the center of radiated antenna

For 802.11b-MidHigh Channel (2437MHz):

Power=8.74dBm, Antenna Gain=1dBi, Prediction distance 20cm

$S = (74.8 * 1.2589) / (4 * 3.14 * 20 * 20) = 0.01874 \text{ W/cm}^2$

For 802.11g-Mid Channel (2437MHz):

Power=8.01dBm, Antenna Gain=1dBi, Prediction distance 20cm

$S = (63.2 * 1.2589) / (4 * 3.14 * 20 * 20) = 0.01583 \text{ W/cm}^2$

For 802.11n/HT20- Mid Channel (2412MHz):

Power=8.39dBm, Antenna Gain=1dBi, Prediction distance 20cm

$S = (69.0 * 1.2589) / (4 * 3.14 * 20 * 20) = 0.01729 \text{ W/cm}^2$

For 802.11n/HT40- Mid Channel (2422MHz):

Power=8.78dBm, Antenna Gain=1dBi, Prediction distance 20cm

$S = (75.5 * 1.2589) / (4 * 3.14 * 20 * 20) = 0.01892 \text{ W/cm}^2$

Result

The above result had shown that device complied with 1.0mW/cm² Power density requirement for distance of 20 cm.

Completed By:



Date: 2013-04-09