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RF EXPOSURE EVALUATION

Applicant	: GE Appliance & Lighting
Applicant Address	: AP35-1403-02 Appliance Park, Louisville, KY 40225
FCC ID	: ZKJ-WCATA001
IC ID	: 10229A-WCATA001
Kind of Product	: Wi-Fi module
Equipment model name	: Wi-Fi CAT
RF power	: 19.38 dBm(86.70 mW) Peak Conducted
Antenna type	: Chip antenna Gain 3.59 dBi
Frequency Range	: 2412 - 2462 MHz
Number of channels	: 11 CH

** MPE Calculations **

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user. The MPE calculation for this exposure is shown below.

The peak radiated output power (EIRP) is calculated as follows:

EIRP = P + G EIRP = 19.38 + 3.59 = 22.97 dBm	Where, P = Power input to the antenna (mW) G = Power gain of the antenna (dBi)

The numeric gain(G) of the antenna with a gain specified in dB is determined by:

$G = Log^{-1}$ (dB antenna gain / 10)

$G = Log^{-1}$ (3.59 / 10)

G = 2.29

Power density at the specific separation:

$S = PG/(4R^2\pi)$ $S = (86.70 * 2.29)/(4 * 20^2 * \pi)$ $S = 0.04 \quad mW/cm^2$	Where, S = Maximum power density (mW/cm^2) P = Power input to the antenna (mW) G = Numeric power gain of the antenna R = Distance to the center of the radiation of the antenna (20cm = limit for MPE)

The Maximum permissible exposure (MPE) for the general population is 1 mW/cm^2 .
The power density at 20cm does not exceed the 1 mW/cm^2 limit.

Estimated safe separation:

$R = \sqrt{(PG / 4\pi)}$ $R = \sqrt{(86.70 * 2.29 / 4\pi)}$ R = 3.97 cm	Where, P = Power input to the antenna (mW) G = Numeric power gain of the antenna R = Distance to the center of the radiation of the antenna (20cm = limit for MPE)