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RF EXPOSURE EVALUATION

Applicant	**: Haier US Appliance Solutions, Inc.**
Applicant Address	**: Appliance Park, AP2-226, Louisville, KY 40225, United States**
Kind of Product	**: Wi-Fi Module**
Equipment model name	**: WCATA005**
FCC ID	**: ZKJ-WCATA005**
Certification Number IC	**: 10229A-WCATA005**
Antenna type	**: Chip Antenna**
Antenna Gain	**: 1.47 dBi**

** 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	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)

Power density at the specific separation:

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

$R = \sqrt{(PG / 4\pi)}$	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)

Mode	P (dBm)	P (mW)	G (dBi)	S (mW/cm^2)	R (cm)
802.11b	16.76	47.42	1.47	**0.0132**	**20**
802.11g	15.31	33.96		**0.0095**	
802.11n HT20	14.03	25.29		**0.0071**	