

Compliance with 47 CFR 2.1091 and 15.247

The EUT is a module containing a combination 802.11a/b/g and Bluetooth radio operating under Parts 15.247 and 15.407 in the 2.4, 5 GHz bands. The EUT will only be used with a separation distance of 20 centimeters or greater between the antenna and the body of the user or nearby persons and can therefore be considered a mobile transmitter per 47 CFR 2.1091(b).

Since the output power is less than 3 W ERP, the EUT is categorically excluded from routine environmental evaluation per 47 CFR 2.1091(c).

The MPE estimates are as follows:

Table 1 in 47 CFR 1.1310 defines the maximum permissible exposure (MPE) for the general population as 1 mW/cm^2 . The exposure level at a 20 cm distance from the EUT's transmitting antenna is calculated using the general equation:

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

Where: S = power density (mW/cm^2)

P = power input to the antenna (mW)

G = numeric power gain relative to an isotropic radiator

R = distance to the center of the radiation of the antenna (20 cm = limit for MPE estimates)

PG = EIRP

Solving for S, the maximum power density 20 cm from the transmitting antenna is summarized in the following table:

MPE Estimate

FCC ID: EHA-DDIB

Combination 802.11 a/b/g - Bluetooth Radio

Bluetooth Portion

Antenna Type	Antenna Manufacturer	Antenna Part No.	Transmit Frequency (MHz)	Max Peak Conducted Output Power (mW)	Antenna Gain (dBi)	Minimum Antenna Cable Loss (dB)	Power Density @ 20 cm (mW/cm^2)	General Population Exposure Limit from 1.1310 (mW/cm^2)
Chip	Laird	WIC2450-A	2400	3.11	2	0	0.001	1

802.11 a/b/g Portion

Antenna Type	Antenna Manufacturer	Antenna Part No.	Transmit Frequency (MHz)	Max Peak Conducted Output Power (mW)	Antenna Gain (dBi)	Minimum Antenna Cable Loss (dB)	Power Density @ 20 cm (mW/cm^2)	General Population Exposure Limit from 1.1310 (mW/cm^2)
Omni	Laird	WTS2450-RPSMA	2400	92.8	2.1	0	0.030	1
			5250	27.54	2.6	0	0.010	1
			5825	50.8	3.4	0	0.022	1

The power density does not exceed 0.030 mW/cm^2 at 20 cm; therefore, the exposure condition is compliant with FCC rules.