

1. Description of Equipment under Test

EUT Model	PFAY0H
Wireless technology and frequency range	WLAN 2.4GHz 802.11b/g/n WLAN 5GHz 802.11a/n/ac Bluetooth: 2402 MHz ~ 2480 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz

2. RF Exposure Limits

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4 * \pi * R^2}$$

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (numerical gain)

R = Distance from Transmitting Antenna

3. Power Density Calculations

Band	Frequency (MHz)	Antenna gain (dBi)	Maximum power (dBm)	EIRP (dBm)	Total power (mW)	Power Density @ 20cm (mW/cm ²)	Limit (mW/cm ²)
Bluetooth (LE and FHSS)	2402	3.7	10	13.7	23.44	0.004	1
2.4 GHz WLAN	2437	3.7, 3.6	15.66, 13.84	19.36, 17.44	86.297+55.46= 141.757	0.0282	1
5.2 GHz WLAN	5190	5.9, 5.3	12.4, 12.3	18.3, 17.6	67.60+57.543= 125.143	0.0248	1
5.8 GHz WLAN	5755	5.9, 5.3	12.5, 12.3	18.4, 17.6	69.18+57.543= 126.723	0.0252	1

Note: Conservatively MIMO power is used for calculations.

WLAN and Bluetooth share the same antenna, and cannot transmit simultaneously.

EUT will choose either WLAN 2.4GHz or WLAN 5GHz according to the network signal condition; therefore, 2.4GHz WLAN and 5GHz WLAN will not operate simultaneously at any moment.