FCC ID: 2AIZY18IDF13-01

RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

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 Exposure				
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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

MPE Calculation Method

E (V/m) = $\frac{\sqrt{30 * P * G}}{d}$ Power Density: *Pd* (W/m²) = $\frac{E^2}{377}$

E = Electric field (V/m)

P = Average RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

Pd = $\frac{30 * P * G}{377 * D^2}$

From the EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

MAX OUTPUT POWER

WIFI:

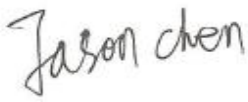
Test Channel	Frequency (MHz)	Power Setting	Average Output Power (dBm)	Maximum Output Power (dBm)	LIMIT (dBm)	Verdict
802.11b						
1	2412	Default	16.7	16.7	30	PASS
6	2437	Default	16.2	16.2	30	PASS
11	2462	Default	15.5	15.5	30	PASS
802.11g						
1	2412	Default	15.3	15.3	30	PASS
6	2437	Default	15.0	15.0	30	PASS
11	2462	Default	14.8	14.8	30	PASS
802.11n HT20						
1	2412	Default	16.2	16.2	30	PASS
6	2437	Default	15.5	15.5	30	PASS
11	2462	Default	15.3	15.3	30	PASS

Measurement Result

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz,
Power density limited: 1mW/ cm^2
Antenna Type: FPCB Antenna
Antenna gain: 2.3dBi,
R=20cm
802.11b/g/n:

2412	802.11b	16.7	16±1	17	50.119	2.30	1.70	0.0169	1
2437		16.2	16±1	17	50.119	2.30	1.70	0.0169	1
2462		15.5	16±1	17	50.119	2.30	1.70	0.0169	1
2412	802.11g	15.3	15±1	16	39.811	2.30	1.70	0.0134	1
2437		15	15±1	16	39.811	2.30	1.70	0.0134	1
2462		14.8	15±1	16	39.811	2.30	1.70	0.0134	1
2412	802.11n H20	16.2	15.5±1	16.5	44.668	2.30	1.70	0.0151	1
2437		15.5	15.5±1	16.5	44.668	2.30	1.70	0.0151	1
2462		15.3	15.5±1	16.5	44.668	2.30	1.70	0.0151	1

Conclusion:
For the max result : 0.0169≤ 1.0 for 1g SAR, No SAR is required.



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