FCC ID: 2AA3X-OHS2

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

BR+EDR

Test Channel	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	LIMIT (dBm)	Verdict
1Mbps					
0	2402	Default	-6.494	30	PASS
39	2441	Default	-5.892	30	PASS
78	2480	Default	-5.771	30	PASS
2Mbps					
0	2402	Default	-5.543	20.97	PASS
39	2441	Default	-4.884	20.97	PASS
78	2480	Default	-4.669	20.97	PASS
3Mbps					
0	2402	Default	-5.434	20.97	PASS
39	2441	Default	-4.771	20.97	PASS
78	2480	Default	-4.497	20.97	PASS

BLE

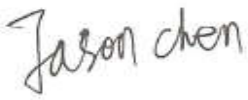
Test Channel	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	LIMIT (dBm)	Verdict
1Mbps					
00	2402	Default	-3.412	30	PASS
19	2440	Default	-3.268	30	PASS
39	2480	Default	-2.986	30	PASS

Measurement Result

Operation Frequency: BT: 2402-2480MHz
Power density limited: 1mW/ cm^2
Antenna Type: Metal Antenna
Antenna gain: 2.5 dBi,
R=20cm
WIFI:

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm2)	Power density (mW/cm2)
				tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric		
2402	GFSK	-6.494	-5±1	-4	0.398	2.50	1.78	0.0001	1
2441		-5.892	-5±1	-4	0.398	2.50	1.78	0.0001	1
2480		-5.771	-5±1	-4	0.398	2.50	1.78	0.0001	1
2402	π/4-DQPSK	-5.543	-5±1	-4	0.398	2.50	1.78	0.0001	1
2441		-4.884	-5±1	-4	0.398	2.50	1.78	0.0001	1
2480		-4.669	-5±1	-4	0.398	2.50	1.78	0.0001	1
2402	8-DPSK	-5.434	-5±1	-4	0.398	2.50	1.78	0.0001	1
2441		-4.771	-5±1	-4	0.398	2.50	1.78	0.0001	1
2480		-4.497	-5±1	-4	0.398	2.50	1.78	0.0001	1
2402	BLE	-3.412	-3±1	-2	0.631	2.50	1.78	0.0002	1
2440		-3.268	-3±1	-2	0.631	2.50	1.78	0.0002	1
2480		-2.986	-3±1	-2	0.631	2.50	1.78	0.0002	1

Conclusion:
For the max result : 0.0002≤ 1.0 for Max Power Density, compliance RF exposure.



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