

FCC §15.247 (i), §2.1091 – RF Exposure

FCC ID:HBOFLOAT

Applied procedures / limit

According to FCC §15.247(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

Note: f is frequency in MHz

* = Power density limit is applicable at frequencies greater than 100 MHz

Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz

* = Plane-wave equivalent power density

MPE PREDICTION

Predication of MPE limit at a given distance, Equation from OET Bulletin 65, Edition 97-01

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

Where: S = power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

TEST RESULTS

BT

1Mbps			
Test Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)
CH00	2402	3.33	2.153
CH39	2441	3.10	2.042
CH78	2480	2.96	1.977
2Mbps			
CH00	2402	2.21	1.663
CH39	2441	2.01	1.589
CH78	2480	1.83	1.524
3Mbps			
CH00	2402	2.24	1.675
CH39	2441	2.03	1.596
CH78	2480	1.92	1.556

Mode	Range	Maximum peak output power (dBm)	Output power (mW)	Antenna Gain (numeric)	Power Density (S) (mW/ cm ²)	Limit of Power Density (S) (mW/ cm ²)	Result
1Mbps	2~4	4	2.51	1(1.26)	0.0006	1	Pass
2Mbps	1~3	3	2.00	1(1.26)	0.0005	1	Pass
3Mbps	1~3	3	2.00	1(1.26)	0.0005	1	Pass