



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

# FCC ID:2AOHL-RB00015

**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 <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> 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 <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> 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, R=0.2m

**TEST RESULTS**

Modulation	Test Channel	Output Power (dBuV/m)	Output Power (dBm)
ASK	13.56	53.33	-46.57
GFSK	5800	88.48	-6.72

Below 1GHz: dBm=dBuV/m-95.2-4.7

Above 1GHz: dBm=dBuV/m-95.2

	Tune up Produce power	Maximum peak output power (dBm)	Output power to antenna (mW)	Antenna Gain (numeric)	Power Density (S)	Limit (mW/cm <sup>2</sup> )	Result
BT	1±1	2	1.585	2.080(3.18dBi)	0.00066	1	Pass
WIFI	15±1	16	39.81	2.080(3.18dBi)	0.01647	1	Pass
NFC	-46±1	-45	0.0000316	1(0dBi)	0.00000006	1	Pass
5.8G	-6±1	-5	0.32	1(0dBi)	0.0006	1	Pass

**For the Max simultaneous transmission:**

	Power Density (S) (mW/cm <sup>2</sup> )	Total Power Density (S)	Limit	Result
WIFI	0.01647	0.017070006	1	Pass
NFC	0.000000006			
5.8G	0.0006			

For the max result : 0.17070006 ≤ 1.0, compliance with FCC's RF Exposure