

**FCC §15.247 (I), §2.1091 – RF EXPOSURE****FCC ID: 2A4LBKS-H908Q****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

**TEST RESULTS****BLE**

Mode	Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
GFSK	Lowest	7.200	30.00	Pass
	Middle	6.594		
	Highest	6.122		

**BT**

Mode	Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
GFSK	Lowest	9.143	30.00	Pass
	Middle	9.783		
	Highest	9.044		
$\pi/4$ -DQPSK	Lowest	7.079	20.97	Pass
	Middle	7.690		
	Highest	6.977		
8QPSK	Lowest	6.658	20.97	Pass
	Middle	6.502		
	Highest	6.319		

**WIFI**

Test CH	Peak Output Power (dBm)				Limit (dBm)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		
Lowest	15.87	15.24	14.77	13.02	30.00	Pass
Middle	15.64	15.02	14.25	13.01		
Highest	15.43	15.16	14.16	12.88		

Mode	Frequency MHz	Peak Output Power (dBm)	Output power (mW)	Antenna Gain (numeric)	Power Density (S) (mW/ cm <sup>2</sup> )	Limit of Power Density (S) (mW/ cm <sup>2</sup> )	Result
BLE	2402	7.200	5.248	1.0(1.26)	0.0013	1	Pass
BT	2441	9.783	9.513	1.0(1.26)	0.0024	1	Pass
WIFI	2412	15.87	38.637	1.0(1.26)	0.0097	1	Pass

NOTE: R =20cm

**Conclusion:** No SAR is required.