

RF Exposure

Reference: CFR 47 FCC Part 2.1093  
CFR 47 FCC Part 15.245

**TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)**

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposure</b>				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f <sup>2</sup>	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

The limit for a transmitter operating at 24,110 MHz for general population/uncontrolled exposure is 1 mW/cm<sup>2</sup>

RF Exposure

Total for *mobile* (> 20cm) use:

Occupational/Controlled	0
General Population/uncontrolled	1

Transmitter	Frequency	Antenna Gain	Power	Power +05% for tolerance	Power Density	Limit	% of limit	Type
	MHz	numerical	mW		mW/cm <sup>2</sup>	mW/cm <sup>2</sup>	Percent of limit	
1	2402 - 2480	1	4	4.2	0.0008	1.0000	0.02	PK/conducted
2	24200	1	129	135.4	0.0270	1.0000	2.70	radiated
<b>TOTAL</b>							<b>2.72</b>	

Distance	20	cm
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PASS?	YES
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Occupational/Controlled	0
General Population/uncontrolled	1

### RF Exposure

*Although the Field Disturbance Sensor (FDS) is intended to only operate while on the ground and the user is instructed to maintain 20cm of separation from the device while the FDS is operating, the Bluetooth radio may operate while the device is hand held or in the pocket, and for Bluetooth operation, the device could be considered as Portable.*

*Evaluation for portable use with 5mm separation from KDB 447498 D01, 4.3 a):*

f(GHz) = 2.402

Power = 4 mW EIRP

EIRP + 5% tolerance = 4.2 mW, round to nearest mW = 4 mW

$[4 \text{ mW}] / [5.00 \text{ mm}] \cdot [\sqrt{2.480}] = 1.25$  Limit = 3.0 **EXEMPT**

*The frequency of 2.480 GHz was chosen to provide the highest value of the frequency range.*