



## Radio Frequency Exposure

### Limit

Table 1 to [§CFR Title 47 FCC Part 1.1310\(e\)\(1\)](#) sets forth limits for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields.

Table 1 to <a href="#">§ 1.1310(e)(1)</a> —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>(i) 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>(ii) 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
f = frequency in MHz. * = Plane-wave equivalent power density.				

(2) Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. The phrase *fully aware* in the context of applying these exposure limits means that an exposed person has received written and/or verbal information fully explaining the potential for RF exposure resulting from his or her employment. With the exception of *transient* persons, this phrase also means that an exposed person has received appropriate training regarding work practices relating to controlling or mitigating his or her exposure. In situations when an untrained person is transient through a location where occupational/controlled limits apply, he or she must be made aware of the potential for exposure and be supervised by trained personnel pursuant to [§ 1.1307\(b\)\(2\) of this part](#) where use of time averaging is required to ensure compliance with the general population exposure limit. The phrase *exercise control* means that an exposed person is allowed and also knows how to reduce or avoid exposure by administrative or engineering work practices, such as use of personal protective equipment or time averaging of exposure.

(3) General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure. For example, RF sources intended for consumer use shall be subject to the limits for general population/uncontrolled exposure in this section.





## Results

Test Mode	Power Level	Channel Separation [Hz]	Test Frequency [MHz]	Max Target Power	MPE Limit (mW/cm <sup>2</sup> )	Min MPE evaluate distance (m)
FM	50W	12.5k	136.025	56	1.00	1.78
FM	50W	12.5k	173.975	56	1.00	1.78
4FSK	50W	12.5k	136.025	56	1.00	1.78
4FSK	50W	12.5k	173.975	56	1.00	1.78
FM	5W	12.5k	136.025	46	1.00	0.56
FM	5W	12.5k	173.975	46	1.00	0.56
4FSK	5W	12.5k	136.025	46	1.00	0.56
4FSK	5W	12.5k	173.975	46	1.00	0.56

### Remark:

1. Output power including tune-up tolerance; 47dBm  $\pm$  1dB for 50W, 37dBm  $\pm$  1dB for 5W;
2. The max antenna gain is 8 dBi provided by manufacture;
3. MPE evaluate distance is at least 1.78m from user manual provide by manufacturer;

.....**End of Report**.....

