

MPE Evaluation
FCC ID: CCKPC0241

FCC

Maximum exposure limits from CFR 47, FCC Part 1.1310:

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 ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

Occupational/Controlled						
General Population/uncontrolled		YES				
1132						
Frequency	Power EIRP	Power EIRP +10% for tolerance	Power Density	Limit at specified distance	% of limit	Result
MHz	mW	mW	mW/cm ²	mW/cm ²		
903.3	14.03	15.43	0.003072	0.602200	0.51%	PASS
915	18.84	20.72	0.004125	0.610000	0.68%	PASS
926.6	16.71	18.38	0.003659	0.617733	0.59%	PASS

Distance	20	cm
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Note: The user's manual will stipulate that a 20cm distance from the user is to be maintained.

EIRP values in mW were multiplied by 1.1 to account for a 10% tolerance

Antenna gain > 1, so EIRP was used since it would be higher than the conducted values

The power density is calculated as shown below:

$$S = (P \times G) / (4 \times \pi \times d^2) - \text{used to calculate exposure at 20 cm}$$

$$EIRP = P \times G, \text{ measured as field strength}$$

$$d = \sqrt{(S / (P \times G) \times 4 \times \pi)} - \text{used to calculate minimum distance to meet limits}$$

S= power density

P = transmitter conducted power (in mW)

G = antenna numeric gain

D = distance to radiation center (20 cm)