

§2.1091- RF EXPOSURE

Applicable Standard

According to subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

According to KDB 447498 D04 Interim General RF Exposure Guidance

MPE-Based Exemption:

General frequency and separation-distance dependent MPE-based effective radiated power(ERP) thresholds are in Table B.1 [Table 1 of § 1.1307(b)(1)(i)(C)] to support an exemption from further evaluation from 300 kHz through 100 GHz.

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	$1,920 R^2$.
1.34-30	$3,450 R^2/f^2$.
30-300	$3.83 R^2$.
300-1,500	$0.0128 R^2f$.
1,500-100,000	$19.2R^2$.

R is the minimum separation distance in meters

f = frequency in MHz

Result

Frequency (MHz)	Antenna Gain		Tune up conducted power		ERP		Evaluation Distance (m)	ERP Limit (W)
	(dBi)	(dBd)	(dBm)	(W)	(dBm)	(W)		
1850-1910	2.2	0.05	24.0	0.251	24.05	0.254	0.2	0.768
1710-1755	2.6	0.45	24.0	0.251	24.45	0.279	0.2	0.768
824-849	1.5	-0.65	24.0	0.251	23.35	0.216	0.2	0.422
699-716	-0.5	-2.65	24.0	0.251	21.35	0.136	0.2	0.358
777-787	0.6	-1.55	24.0	0.251	22.45	0.176	0.2	0.398
788-798	1.0	-1.15	24.0	0.251	22.85	0.193	0.2	0.403
1710-1780	2.6	0.45	24.0	0.251	24.45	0.279	0.2	0.768
663-698	-1.4	-3.55	24.0	0.251	20.45	0.111	0.2	0.339

Note: The tune up conducted power and antenna gain was declared by the applicant.

Note: To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

Result: Compliance