

§1.1307 (b) (3) & §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	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.

R is the minimum separation distance in meters
f = frequency in MHz

Result

Mode	Frequency Range (MHz)	★Tune up EIRP (dBm)	ERP		Evaluation Distance (m)	ERP Limit (W)
			(dBm)	(W)		
SRD	10503.5 – 10541.3	7.5	5.35	0.00343	0.2	0.768

Note:

1. For the above tune up power were declared by the manufacturer.
2. Chose the maximum power to do RF exposure analysis.
3. This device maximum E-Field level is 102.32 dBμV/m at 3m, so the EIRP power is 7.12 dBm.
4. EIRP (dBm) = Field Strength of Fundamental (dBuV/m) - 95.2 (dB)
5. ERP (dBm) = EIRP (dBm) - 2.15 (dB)

Result: Compliance