

APPENDIX C - RF EXPOSURE EVALUATION

Maximum Permissible Exposure (MPE)

Applicable Standard

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
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
300–1500	/	/	f/1500	30
1500–100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

Procedure

Prediction of power density at the distance of the applicable MPE limit

$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm²);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

Measurement Result

Frequency (GHz)	Peak EIRP including Tune-up Tolerance		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
	(dBm)	(mW)			
24.055	12	15.85	20	0.003	1.0
Fundamental field strength is 106.6BμV/m @ 3m = 11.4 dBm(13.8mW) EIRP. EIRP(dBm)=Field Strength of Fundamental(dBuV/m)-95.2 (dB)					

Note:

The Peak EIRP including Tune-up Tolerance provide by manufacturer.

Result: The device meet FCC MPE at 20 cm distance.

***** END OF REPORT *****