RF Exposure Evaluation

LIMIT

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

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 Exposures				
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
300–1500	-	-	f/300	6
1500–100,000	-	-	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
300–1500	-	-	f/1500	30
1500–100,000	-	-	1.0	30

Note: f = frequency in MHz

EVALUATION METHOD

Transmission formula: **Pd = (Pout*G)/(4*pi*r^2)**

Where

Pd = power density in mW/cm^2, **Pout** = output power to antenna in mW, **G** = gain of antenna in linear scale;

Pi = 3.1416, **R** = distance between observation point and center of the radiator in cm

TEST RESULT

☒ **Passed**   ☐ **Not Applicable**

Frequency (MHz)	Field strength[#1] (dBµV/m)	Maximum Output Power(dBm)	Antenna Gain[#2] (dBi)	Minimum use distance[#3] (cm)	Power density (mW/cm^2)	Power density limit (mW/cm^2)	Result
914.8	88.22	-6.98	0	20	0.00004	0.610	PASS

Note:

#1: refer to the RF report

E [dBµV/m] = EIRP [dBm] + 95.2, for d = 3 m. Maximum Output Power(dBm)= EIRP [dBm]- Antenna Gain.

#2: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, HTW lab has not verified the authenticity of its information.

#3 is the distance from observation point to the antenna which is declared by the applicant.