

# 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 <sup>2</sup> )	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 <sup>2</sup> )	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 <sup>2</sup> )	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, \* = Plane-wave equivalent power density

## EVALUATION METHOD

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

Where

**Pd** = power density in mW/cm<sup>2</sup>, **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 range (MHz)	Maximum conducted output power(W)	Antenna gain (dBi)	Power Density limit (mW/cm <sup>2</sup> )	Minimum safety distance (cm)	Result
26.965 ~ 27.405	4	-2	0.24	28.95	Pass
26.965 ~ 27.405	4	0	0.24	36.44	Pass
26.965 ~ 27.405	4	1	0.24	40.89	Pass
26.965 ~ 27.405	4	2	0.24	45.88	Pass
26.965 ~ 27.405	4	5	0.24	64.81	Pass
26.965 ~ 27.405	4	10	0.24	115.24	Pass

Note:

The manufacturer does not provide the product's antenna, so the minimum safety distance needs to meet the above green value requirement for different antenna gain.