

RF EXPOSURE EVALUATION

FCC ID : A3LMT6419-41A

Standard Requirement

The following FCC Rule Parts and procedures are applicable :

Part 1.1310 Radiofrequency radiation exposure limits

Table 1 below sets forth limits for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields.

Table 1—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 Exposure				
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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

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

Frequency range : 2 496 MHz – 2 690 MHz

Limit : 1 mW/cm²



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MPE calculation

$$S = \text{EIRP} / (4\pi R^2)$$

Where

S : Power density

EIRP : P + G + T (dBm)

P : Maximum transmitter power (dBm)

G : Antenna gain (dBi)

R : distance to the centre of radiation of the antenna (cm)

T: Power tolerance (dB)

MPE calculation

P : 53.522 dBm (Rated power : 225 W, tolerance: ± 1 dB)

G : 26 dBi (25 dBi ± 1 dB rated)

R : 3100 cm

$$S = 10^{((53.522+26+1) / 10)} / 4\pi / 3100^2$$

$$S = 0.933 \text{ mW/cm}^2$$

Conclusion

This confirms compliance to the required Radio frequency radiation exposure limit.