

RF exposure

FCC ID: 2AAM2-QCC5144BM

According to FCC part 1.1310: 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 (썐)	Electric field strength(V/m)	Magnetic field strength (A/m)	Power density (ﷺ/ﷺ)	Average time			
(A) Limits for Occupational / Control Exposures							
300 – 1 500			f/300	6			
1 500 - 100000			5	6			
(B) Limits for General Population / Uncontrol Exposures							
300 – 1 500			f/1500	6			
1 500 – 100 000			<u>1</u>	<u>30</u>			

f= frequency in Mb

Friis transmission formula: $Pd = (Pout \times G)/(4 \times pi \times R^2)$

Where,

Pd = power density in mW/cm²

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

Pd the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

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Results

Operation mode	Frequency (船)	Tune up Average maximum output power (dBm)	Antenna gain (dBi)	Power density at 20 cm(mW/cm²)	Limit (/c㎡)
BDR	2 402 ~ 2 480	14.0	1.99	0.007 90	1
EDR	2 402 ~ 2 480	11.0		0.003 96	1

^{*}Tune up average power : BDR : $12 \sim 14~$ dBm // EDR : $9 \sim 11~$ dBm

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