

FCC ID: SOZPTAG13-C43G

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 (MHz)	Electric field strength(V/m)	Magnetic field strength(A/m)	Power density (mW/cm ²)	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
500 – 100 000	--	--	1	30

f= frequency in MHz

Friis transmission formula: $P_d = (P_{out} \times G) / (4 \times \pi \times R^2)$

Where,

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d 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.

Result

<zigbee>

Operation mode	Frequency (MHz)	Antenna gain (dBi)	Power density at 0.1 cm(mW/cm ²)	Limit (mW/cm ²)
DSSS	2405	2.5	0.00053	1

<CDMA>

Operation mode	Frequency (MHz)	Antenna gain (dBi)	Power density at 0.1 cm(mW/cm ²)	Limit (mW/cm ²)
Cellular	824.70	1.8	0.037	0.566
PCS	1851.25	1.8	0.028	1

2. Conclusion : No SAR is required.