

FCC Part 2 section 2.1091

(ii) Limits for General Population/Uncontrolled Exposure				
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
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	<30

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

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user.

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

- Note

S= Maximum power density(mW/cm²)

EIRP= Equivalent Isotropic Radiated Power(mW)

R= Distance to the center of the radiation of the antenna(Over 20cm)

Maximum Permissible Exposure Calculation

Operation Mode	Evaluation Frequency (MHz)	MAX Output Power (dBm)	Antenna Gain (dBi)	MAX. EIRP (dBm)	MAX. EIRP (mW)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
802.11n(HT20)	2412~2462	21.00	5.17	26.17	414.00	20	0.082 4	1	Pass
802.11n(HT40)	2422~2452	21.00	5.17	26.17	414.00	20	0.082 4	1	Pass
EVK Antenna (SJANT-PCB-900-01)	902.0~928.0	29.60	3.03	32.63	1830.63	20	0.364 2	1	Pass
External dipole antenna (STDPA201354SMB900)	902.0~928.0	29.60	3.00	32.60	1819.70	20	0.362 0	1	Pass
External dipole antenna (STDPA131909IBS900)	902.0~928.0	29.60	2.50	32.10	1621.81	20	0.322 6	1	Pass

Conclusion of Simultaneous Transmitter

WIFI + Hallow

The formula of calculated the MPE is $\text{CPD1} / \text{LPD 1} + \text{CPD2} / \text{LPD 2} + \dots < 1$

CPD = Calculation power density / LPD = Limit of power density

Result : 0.082 + 0.364 = 0.447 < 1

Conclusion

maximum calculations of above situations are less than the “1” limit.