RF EXPOSURE EVALUATION

FCC ID : U5MXQ840

Standard Requirement

The following FCC Rule Parts and procedures are applicable :

Part 1.1310 Radiofrequency radiation exposure limits
Part 2.1091 Radiofrequency radiation exposure evaluation : Mobile device

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*

MPE calculation

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

Where S : Power density
EIRP : P x G
P : Maximum transmitter power
G : Antenna gain
R : distance to the centre of radiation of the antenna

Safety distance(R) : 20 cm

Mode	Conducted Output power [dBm]	Antenna Gain [dBi]	Power tolerance [dB]	Power density [mW/cm²]	Limit [mW/cm²]
Bluetooth	11.50	1.59	+ 1.5	0.002	1
Bluetooth LE	4.36	1.59	+ 1.5	0.001	
802.11b	11.50	1.59	+ 1.5	0.006	
802.11g	11.49	1.59	+ 1.5	0.006	
802.11n(HT20)_2.4 GHz	11.15	1.59	+ 1.5	0.005	
802.11a_UNII 1	9.22	3.41	+ 1.5	0.005	
802.11a_UNII 2A	8.44	3.41	+ 1.5	0.004	
802.11a_UNII 2C	9.77	3.41	+ 1.5	0.006	
802.11a_UNII 3	9.90	3.41	+ 1.5	0.006	
802.11n(HT20)_UNII 1	8.90	3.41	+ 1.5	0.005	
802.11n(HT20)_UNII 2A	8.13	3.41	+ 1.5	0.004	
802.11n(HT20)_UNII 2C	9.17	3.41	+ 1.5	0.005	
802.11n(HT20)_UNII 3	9.57	3.41	+ 1.5	0.006	
802.11n(HT40)_UNII 1	8.39	3.41	+ 1.5	0.004	
802.11n(HT40)_UNII 2A	7.65	3.41	+ 1.5	0.004	
802.11n(HT40)_UNII 2C	8.64	3.41	+ 1.5	0.005	
802.11n(HT40)_UNII 3	9.15	3.41	+ 1.5	0.005	
802.11ac(VHT20)_UNII 1	8.77	3.41	+ 1.5	0.005	
802.11ac(VHT20)_UNII 2A	8.10	3.41	+ 1.5	0.004	
802.11ac(VHT20)_UNII 2C	9.21	3.41	+ 1.5	0.005	
802.11ac(VHT20)_UNII 3	9.44	3.41	+ 1.5	0.005	
802.11ac(VHT40)_UNII 1	8.38	3.41	+ 1.5	0.004	
802.11ac(VHT40)_UNII 2A	7.49	3.41	+ 1.5	0.003	
802.11ac(VHT40)_UNII 2C	8.71	3.41	+ 1.5	0.005	
802.11ac(VHT40)_UNII 3	9.17	3.41	+ 1.5	0.005	
802.11ac(VHT80)_UNII 1	4.95	3.41	+ 1.5	0.002	
802.11ac(VHT80)_UNII 2A	3.62	3.41	+ 1.5	0.001	
802.11ac(VHT80)_UNII 2C	4.71	3.41	+ 1.5	0.002	
802.11ac(VHT80)_UNII 3	5.82	3.41	+ 1.5	0.002	

Conclusion

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