Limits for Maximum Permissible Exposure (MPE)

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)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
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
300–1500			f/300	6
1500–100,000			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
300–1500			f/1500	30
1500–100,000			1.0	30

Friis transmission formula: $Pd=(P_{out}*G)\backslash(4*pi*R^2)$

Where
Pd= Power density in mW/cm^2
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, 1mW/cm2. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is Reached.

Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

Measurement Result

Test mode	Antenna Gain(dBi)	Max Tune-UP Conducted power (dBm)	Max Tune-UP Conducted power(mW)	Power density at 20cm (mW/cm^2)	Power density Limits (mW/cm^2)
WIFI 2.4G (2412-2462MHz)	2.85	22.96	199.5262	0.076512	1
BLE (2402-2480MHz)	2.85	3.01	2.5119	0.000963	1
Remark: The Max Conducted Peak Output Power data refer to report Report No.: LP24040149C01-17; LP24040149C01-05					

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