1. Maximum Permissible Exposure (MPE)

Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Maximum Permissive Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
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
1500-15000	/	/	1.0	30

F = frequency in MHz

* = Plane-wave equipment power density

The MPE was calculated at 20 cm to show compliance with the power density limit
The following formula was used to calculate the Power Density.

$$S=PG/4\pi R^2$$

Where: S = Power density
P = Power input to antenna
G = Power gain of the antenna in the direction of interest relative to an isotropic radiator
R = Distance to the center of radiation of the antenna

Maximum Permissible Exposure (MPE) Evaluation

20	cm

Frequency band	Conducted power (dBm)	Antenna gain (dBi)	Tune-Up Tolerance (dB)	EIRP (dBm)	MPE (W/m^2)	LIMIT (W/m^2)
CDD Mode						
2412-2462	26.42	4.16	1	31.580	0.286	1
5180-5240	24.06	3.06	1	28.120	0.129	1
5745-5825	26.39	3.58	1	30.970	0.249	1
BF Mode						
2412-2462	19.42	8.93	1	29.350	0.171	1
5180-5240	22.8	7.83	1	31.630	0.290	1
5745-5825	24.61	8.35	1	33.960	0.495	1

Note:

1. For conservativeness, the lowest uplink frequency of each band is used to determine the MPE limit of that band.
2. This device supports Beamforming for WLAN 2.4GHz HT20/HT40 and WLAN 5GHz HT20 / HT40 / VHT20 / VHT40 / VHT80 only; therefore, in the table above which consider maximum directional Gain 4.16dBi for WLAN 2.4GHz Beamforming mode and 8.35 dBi for WLAN 5GHz Beamforming mode.

~ End of Report ~