

# MPE CALCULATION

FCC ID: F5318LE7090

RF Exposure Requirements: 47 CFR §1.1307(b)  
RF Radiation Exposure Limits: 47 CFR §1.1310  
RF Radiation Exposure Guidelines: FCC OST/OET Bulletin Number 65

Limits for General Population/Uncontrolled Exposure in the band of:

Frequency Range (MHz)	Power Density (mW/cm <sup>2</sup> )
1,500-100,000	1.0
300-1,500	f/1500

Equation:  $S = PG / 4\pi R^2$  or  $R = \sqrt{PG / 4\pi S}$   
Where, S = Power Density  
P = Power Input to Antenna  
G = Antenna Gain  
R = distance to the center of radiated antenna

## MPE Calculations:

Prediction distance 20cm

Radio Mode	Frequency Range (MHz)	Reference Freq. (MHz)	Average Output Power (dBm)	Tune-Up Tolerance	Tolerance Max Power (dBm)	Antenna Gain (dBi)	Measurement Distance (cm)	Power Density (mw/cm <sup>2</sup> )	MPE Limit (mw/cm <sup>2</sup> )
LTE Band 2	1850-1910	1880.0	23.43	±1dB	24.43	3.1	20	0.710	1
LTE Band 4	1710-1755	1710.7	23.12	±1dB	24.12	3.0	20	0.154	1
LTE Band 5	824-849	847.5	22.90	±1dB	23.90	-1.2	20	0.0586	0.564
LTE Band 12	699-716	714.5	22.86	±1dB	23.86	1.5	20	0.0726	0.476
LTE Band 13	777-787	784.5	22.88	±1dB	23.88	0	20	0.0486	0.523

The different radios from different bands are not transmitting simultaneously.  
The Above Result had shown that the Device complied with MPE requirement.

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