

MPE CALCULATION

FCC ID: F5318LE4020

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 ²)
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/cm2)	MPE Limit (mw/cm2)
LTE Band 2	1850-1910	1880.0	23.43	±1dB	24.43	6.8	20	0.264	1
LTE Band 4	1710-1755	1710.7	23.12	±1dB	24.12	4.6	20	0.148	1
LTE Band 5	824-849	847.5	22.90	±1dB	23.90	1.3	20	0.0659	0.564
LTE Band 12	699-716	714.5	22.89	±1dB	23.89	1.2	20	0.0642	0.476
LTE Band 13	777-787	784.5	22.88	±1dB	23.88	2.2	20	0.0807	0.523

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/cm2)	MPE Limit (mw/cm2)
UMTS Band 2	1850-1910	1852.4	23.66	±1dB	24.66	6.8	20	0.278	1
UMTS Band 5	824-849	836.6	23.59	±1dB	24.59	1.3	20	0.0772	0.557

The different radios from different bands are not transmitting simultaneously.

The Above Result had shown that the Device complied with MPE requirement.



Completed By: George Hsu

SIEMIC, Inc

775 Montague Expressway, Milpitas, CA 95035

Phone: (408) 526-1188

Date: 07/29/2018