

MPE Calculation

Regulation(s): Part 1.1310, Part 2.1091

Method: KDB447498 D01v06

RF feature(Mode)	Frequency range (MHz)			Max Target Power (dBm)	ANT Gain (dBi)	Maximum EIRP (dBm)	Maximum EIRP (mW)	Maximum power density (mW/cm ²)	Requirement (mW/cm ²)
LTE B71, NR n71	663.0	~	698.0	25.0	1.7	26.70	467.736	0.093	0.442
LTE B12(17), NR n12	699.0	~	716.0	25.0	1.7	26.70	467.736	0.093	0.466
LTE B13, NR n13	777.0	~	787.0	25.0	1.5	26.50	446.684	0.089	0.518
LTE B14, NR n14	788.0	~	798.0	25.0	1.5	26.50	446.684	0.089	0.525
LTE B26, NR n26	814.0	~	824.0	25.0	1.4	26.40	436.516	0.087	0.542
LTE B26(5), NR n26(5)	824.0	~	849.0	25.0	1.4	26.40	436.516	0.087	0.549
LTE B66(4), NR n66	1710.0	~	1780.0	25.0	2.5	27.50	562.342	0.112	1.000
LTE B25(2), NR n2	1850.0	~	1915.0	25.0	2.3	27.30	537.032	0.107	1.000
LTE B41	2496.0	~	2690.0	25.7	-1.5	24.20	263.027	0.052	1.000
NR n41(38)	2496.0	~	2690.0	25.0	-1.5	23.50	223.873	0.045	1.000
LTE B7, NR n7	2500.0	~	2570.0	25.0	-1.5	23.50	223.873	0.045	1.000
NR n77(78)	3450.0	~	3550.0	27.0	-1.6	25.40	346.737	0.069	1.000
NR n77(78)	3700.0	~	3980.0	27.0	-1.6	25.40	346.737	0.069	1.000
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Note1: Please refer to the tune-up procedure for Max tune-up power.

Note2: The antenna gain was corrected for the cable loss from the conducted feed point to the antenna terminal.

Note3: The tune-up power during LTE UL CA operation does not exceed the tune-up power in LTE single-carrier operation.

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user.

The MPE sample calculation for this exposure is shown below.

$$\begin{aligned}
 S &= \text{EIRP} / (4 R^2 \pi) \\
 &= 467.736 / (4 \times 20^2 \times \pi) \\
 &= 0.093 \text{ mW/cm}^2
 \end{aligned}$$

- Note

S= Maximum power density(mW/cm²)

EIRP= Equivalent Isotropic Radiated Power(mW)

R= Distance to the center of the radiation of the antenna(20cm)

Part 1.1310

▪ 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)
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

Conclusion : The exposure condition of this device is compliant with FCC