

MPE ESTIMATION

FCC ID: 2BPI7-FCS525

1, According to §1.1310, Limit for General Population/ Uncontrolled

Exposures

Frequency	Power density (mW/ cm ²)	Averaging time(minutes)
1.34MHz----30MHz	*(180/f ²)	30
300MHz----1.5GHz	F/1500	30
1.5GHz---100GHz	1.0	30

Note: F= Frequency in MHz. *=Plane-wave equivalent power density.

NFC:

EIRP(dBm)=90.06(dBuV/m)-95.2=-5.14(dBm)

2, Estimation Result

	Frequency (MHz)	Max PK Output power(dBm)	Tune Up Power(dBm)	Max Tune Up power(mW)	Antenna Gain(dBi)	Antenna Gain (numerical)	MPE (mW/cm ²)	Limit (mW/cm ²)	Ratios
BLE	2480	-0.20	-1±1(0)	1.00	-1.59	0.69	0.00014	1.0	0.00014
2.4G WiFi	2412	13.84	13±1(14)	25.12	3.65	2.32	0.01159	1.0	0.01159
NFC	13.56	-5.14	-6±1(-5)	0.32	0	1.00	0.00006	0.98	0.00006

$$Pd = \frac{P_{out} * G}{4\pi r^2};$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power in mW.

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 in cm

Conducted power see the test report HK2511106107-1E/2E/3E, BLE antenna gain=-1.59dBi, 2.4GWiFi antenna gain=3.65dBi, NFC antenna gain=0dBi.

Simultaneously MPE Ratios: 2.4GWiFi + BLE + NFC = 0.01159 + 0.00014+ 0.00006 = 0.01179

2.4GWiFi and BT can be transmitted at the same time

When the minimum test separation distance is >20 cm, a distance of 20 cm is applied to determine RF Exposure test exclusion. The test exclusion threshold is 0.01689 which is< 1.0, RF Exposure testing is not required.

-----The End-----