

MPE ESTIMATION

FCC ID: 2BUDT-V51

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

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

Note: F= Frequency in MHz

2, Estimation Result

	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
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Chip 1:

5.2GWiFi	7.69	7±1(8)	6.310	1.8	1.51	0.00190	1.0	0.00190
5.8GWiFi	7.00	7±1(8)	6.310	2.7	1.86	0.00234	1.0	0.00234

Chip 2:

5.2GWiFi ANT1	7.13	7±1(8)	6.310	4.8	3.02	0.00379	1.0	0.00379
5.2GWiFi ANT2	7.23	7±1(8)	6.310	4.8	3.02	0.00379	1.0	0.00379
MIMO	/	/	/	/	/	0.00758	1.0	0.00758
5.8GWiFi ANT1	6.93	6±1(7)	5.012	5.4	3.47	0.00346	1.0	0.00346
5.8GWiFi ANT2	7.66	7±1(8)	6.310	5.4	3.47	0.00435	1.0	0.00435
MIMO	/	/	/	/	/	0.00781	1.0	0.00781

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

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 **DLE-260228003R/ DLE-260228004R/ DLE-260228005R/ DLE-260228006R.**

Chip 1:

5.2G antenna gain=1.8dBi, 5.8G antenna gain=2.7dBi;

Chip 2:

5.2G antenna 1 gain=4.8dBi, 5.2G antenna 2 gain=4.8dBi;

5.8G antenna 1 gain=5.4dBi, 5.8G antenna 2 gain=5.4dBi.

5.2GWIFI + 5.8GWIFI MPE (max)= 0.00758+0.00781=0.01539

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 0.01539 which is < 1.0, RF Exposure testing is not required.

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