

MPE Calculation

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)
Bluetooth(1Mbps)	2 402.00 ~ 2 480.00	4.00	4.49	8.49	7.064	0.001 5	1.000 0
Bluetooth(2,3Mbps)	2 402.00 ~ 2 480.00	4.50	4.49	8.99	7.926	0.001 6	1.000 0
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Note: Please refer to the operation description for Max tune-up power.

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.

$$\begin{aligned}
 S &= \text{EIRP} / (4 R^2 \pi) \\
 &= 7.064 / (4 \times 20^2 \times \pi) \\
 &= 0.002 \text{ mW/cm}^2
 \end{aligned}$$

- Note

S= Maximum power density(mW/cm²)

EIRP= Equivalent Isotropic Radiated Power(mW)

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

▪ 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

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WLAN(802.11b, Ant 2)	2 412.00 ~ 2 462.00	4.50	4.84	9.34	8.591	0.001 8	1.000 0
WLAN(802.11ac-VHT8, Ant 1)	5 210.00 ~ 5 210.00	8.00	1.31	9.31	8.532	0.001 7	1.000 0
WLAN(802.11ac-VHT8, Ant 2)	5 210.00 ~ 5 210.00	10.00	2.48	12.48	17.702	0.003 6	1.000 0
WLAN(802.11ac-VHT80, 2TX)	5 210.00 ~ 5 210.00	12.00	4.92	16.92	49.204	0.009 8	1.000 0
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Note: Please refer to the operation description for Max tune-up power.

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.

$$\begin{aligned}
 S &= \text{EIRP} / (4 R^2 \pi) \\
 &= 8.591 / (4 \times 20^2 \times \pi) \\
 &= 0.002 \text{ mW/cm}^2
 \end{aligned}$$

- Note

S= Maximum power density(mW/cm²)

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