

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	5.00	4.49	9.49	8.893	0.001 8	1.000 0
Bluetooth(2,3Mbps)	2 402.00	~	2 480.00	5.00	4.49	9.49	8.893	0.001 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.

$$\begin{aligned}
 S &= \text{EIRP} / (4 R^2 \pi) \\
 &= 8.893 / (4 \times 20^2 \times \pi) \\
 &= 0.002 \text{ mW/cm}^2
 \end{aligned}$$

- Note

S= Maximum power density(mW/cm²)

EIRP= Equivalent Isotropic Radiated Power(mW)

R= Distance to the center of the radiation of the antenna(2

▪ 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	5.00	4.84	9.84	9.639	0.002 0	1.000 0
WLAN(802.11a, Ant 1)	5 210.00	~	5 210.00	7.50	1.31	8.81	7.604	0.001 6	1.000 0
WLAN(802.11ac-VHT80, Ant 2)	5 210.00	~	5 210.00	9.50	2.48	11.98	15.777	0.003 2	1.000 0
WLAN(802.11ac-VHT80, 2TX)	5 210.00	~	5 210.00	11.50	4.92	16.42	43.854	0.008 8	1.000 0
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 &= 9.639 / (4 \times 20^2 \times \pi) \\
 &= 0.002 \text{ mW/cm}^2
 \end{aligned}$$

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