

MPE CALCULATION

FCC ID: I28MD-FXLAN11AC / IC ID: 3798B-FXLAN11AC

RF Exposure Requirements:	47 CFR §1. 1307(b)
RF Radiation Exposure Limits:	47 CFR §1. 1310
RF Radiation Exposure Guidelines:	FCC OST/OET Bulletin Number 65
EUT Frequency Band:	2402-2480MHz, 2412-2462 MHz, 5180-5825MHz
Limits for General Population/Uncontrolled Exposure in the band of:	1500 - 100,000 MHz
Power Density Limit:	1 mW / cm ²

Equation: $S = PG / 4\pi R^2$ or $R = \sqrt{PG / 4\pi S}$
Where, S = Power Density
P = Power Input to Antenna
G = Antenna Gain
R = distance to the center of radiated antenna

Omnidirectional Antenna

Prediction distance 20cm

(Bluetooth BDR/EDR): Power = 10.27 dBm, Antenna Gain = 3 dBi, Power density = 0.00422 mW/cm²

(Bluetooth LE): Power = 8.17 dBm, Antenna Gain = 3 dBi, Power density = 0.00260 mW/cm²

(WLAN 2.4GHz): Power = 16.77 dBm, Antenna Gain = 3 dBi, Power density = 0.01887 mW/cm²

(WLAN 5GHz): Power = 14.76 dBm, Antenna Gain = 5 dBi, Power density = 0.01882 mW/cm²

Mode	Prediction Distance (cm)	Target power (dBm)	Tune up power tolerance (dB)	Max Tune up Power (dBm)	Max. Antenna Gain (dBi)	Power Density (mW/ cm ²)
Bluetooth BDR/EDR	20	10.27	-6,4	4.27, 14.27	3	0.00422
Bluetooth LE	20	8.17	-6,4	2,12.17	3	0.00260
WLAN 2.4GHz	20	16.77	-2,2	14.77, 16.77	3	0.01887
WLAN 5GHz	20	14.76	-2.2	12.76,16.76	5	0.01882

Patch Antenna

Prediction distance 20cm

(Bluetooth BDR/EDR): Power = 10.27 dBm, Antenna Gain = 3.66 dBi, Power density = 0.00492 mW/cm²

(Bluetooth LE): Power = 8.175 dBm, Antenna Gain = 3.66 dBi, Power density = 0.00303 mW/cm²

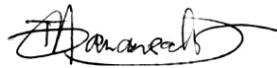
(WLAN 2.4GHz): Power = 16.77 dBm, Antenna Gain = 3.66 dBi, Power density = 0.02196 mW/cm²

(WLAN 5GHz): Power = 14.76 dBm, Antenna Gain = 3.19 dBi, Power density = 0.01241 mW/cm²

Mode	Prediction Distance (cm)	Target power (dBm)	Tune up power tolerance (dB)	Max Tune up Power (dBm)	Max. Antenna Gain (dBi)	Power Density (mW/ cm ²)
Bluetooth BDR/EDR	20	10.27	-6,4	4.27, 14.27	3.66	0.00492
Bluetooth LE	20	8.17	-6,4	2,12.17	3.66	0.00303
WLAN 2.4GHz	20	16.77	-2,2	14.77, 16.77	3.66	0.02196
WLAN 5GHz	20	14.76	-2.2	12.76,16.76	3.19	0.01241

The Above Result had shown that the Device complied with MPE requirement.

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