

FCC MPE Evaluation (FCC ID: BYM1408)

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
Limits for General Population/Uncontrolled Exposure in the band of:	300 - 1500 MHz,
Power Density Limit:	f/1500 mW/cm ²
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

Prediction distance 20 cm

EUT: Base Transceiver

Radio	Frequency (MHz)	Max Conducted Output Power (dBm)	Antenna Gain (dBi)	Separation distance (cm)	Power Density (mW/ cm ²)	MPE Limit (mW/ cm ²)
BLE	2402-2480	7.074	2.5	20	0.0018	1
5GHz	5180-5240	24.04	4	20	0.1267	1
5GHz	5260-5320	22.35	4	20	0.0858	1
5GHz	5500-5720	21.98	4	20	0.0788	1
5GHz	5745-5825	24.00	4	20	0.1255	1

The BLE is able to transmit simultaneously with WLAN.

The ratio = $0.0018/1 + 0.1267/1 = 0.1285 < 1.0$

The above results show that the device complies with the MPE requirement.

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