

**47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091
Maximum Permissible Exposure Calculations**

For FCC ID: YQN-B2-0014M

EUT Device Category = General Population/Uncontrolled Exposure

EUT consists of ISM band transceiver operating in the 2400 MHz – 2483.5 MHz band.

MPE Summary:

According subpart 1.1307 (b)(1) and 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Strength (V/m)	Field Magnetic Strength (A/m)	Field 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
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density

Calculated Formulary:

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm²)

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

PG = EIRP

MPE and Limit are calculated for this device as follows:

The maximum peak RF power measured using radiated methods as an integral antenna with no provision for doing a direct connection at the antenna port provided. The field strength measurements were converted to EIRP using the equation 1.1 of FCC KDB 412172.

Freq	Measured Field Strength (dB μ V/m)	Max EIRP (mW)	Power Density at 20 cm (mW/cm ²)	Limit (mW/cm ²)	Margin (mW/cm ²)
2405	100.59	3.44	0.0007	1.000	0.9993
2437	100.76	3.57	0.0007	1.000	0.9993
2475	101.35	4.09	0.0008	1.000	0.9992

Result: The device meets FCC MPE limit at 20 cm for General Population/Uncontrolled Exposure as specified in 47 CFR §1.1310 and §2.1091.