

RF EXPOSURE EVALUATION

MPE-BASED EXEMPTION

Applicable Standard

According to subpart 15.247 (i) and subpart 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.

According to KDB 447498 D04 v01 Interim General RF Exposure Guidance

MPE-Based Exemption:

General frequency and separation-distance dependent MPE-based effective radiated power(ERP) thresholds are in Table B.1 [Table 1 of § 1.1307(b)(3)(i)(C)] to support an exemption from further evaluation from 300 kHz through 100 GHz.

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

| RF Source frequency (MHz) | Threshold ERP (watts) |
|---------------------------|-----------------------|
| 0.3-1.34 | $1,920 R^2$. |
| 1.34-30 | $3,450 R^2/f^2$. |
| 30-300 | $3.83 R^2$. |
| 300-1,500 | $0.0128 R^2 f$. |
| 1,500-100,000 | $19.2 R^2$. |

R is the minimum separation distance in meters

f = frequency in MHz

Result

| Mode | Frequency (MHz) | Tune up conducted power [#] (dBm) | Antenna Gain [#] | | ERP | | Evaluation Distance (m) | ERP Limit (mW) |
|------------|-----------------|--|---------------------------|-------|-------|--------|-------------------------|----------------|
| | | | (dBi) | (dBd) | (dBm) | (mW) | | |
| BLE | 2402-2480 | 4.5 | 2.5 | 0.35 | 4.85 | 3.05 | 0.2 | 768 |
| 2.4G Wi-Fi | 2412-2462 | 23.5 | 2.5 | 0.35 | 23.85 | 242.66 | 0.2 | 768 |

Note: 1. The tune up conducted power[#] and antenna gain[#] was declared by the applicant.
 2. The BLE, 2.4G Wi-Fi and SRD cannot transmit at same time.
 3. 0dBd=2.15dBi

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

Result: Compliant