

FCC §15.247 (i) & §1.1307 (b) (3) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

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 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 | $0.0128 R^2f$. |
| 1,500-100,000 | $19.2R^2$. |

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 (W) |
|-------------|-----------------|--|---------------------------|-------|-------|--------|-------------------------|---------------|
| | | | (dBi) | (dBd) | (dBm) | (W) | | |
| Lora-Hybrid | 902.3-914.9 | 5.00 | -6.55 | -8.70 | -3.70 | 0.0004 | 0.2 | 0.462 |
| Lora-DTS | 903-914.2 | 14.50 | -6.55 | -8.70 | 5.8 | 0.0038 | 0.2 | 0.462 |
| BLE | 2402-2480 | 1.50 | 2 | -0.15 | 1.35 | 0.0014 | 0.2 | 0.768 |

Note: The tune up conducted power and antenna gain was declared by the applicant.
 BLE, Lora- Hybrid and Lora-DTS can't transmit simultaneously.

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

Result: Compliant.