

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

R is the minimum separation distance in meters

f = frequency in MHz

**Result**

| Mode    | Frequency<br>(MHz) | Tune up<br>conducted<br>power <sup>#</sup> | Antenna<br>Gain <sup>#</sup> |       | ERP   |        | Evaluation<br>Distance<br>(m) | ERP Limit<br>(W) |
|---------|--------------------|--------------------------------------------|------------------------------|-------|-------|--------|-------------------------------|------------------|
|         |                    | (dBm)                                      | (dBi)                        | (dBd) | (dBm) | (W)    |                               |                  |
| BLE     | 2402-2480          | 0.5                                        | 0.37                         | -1.78 | -1.28 | 0.0007 | 0.2                           | 0.768            |
| LTE B2  | 1850-1910          | 25.0                                       | 0.45                         | -1.70 | 23.30 | 0.214  | 0.2                           | 0.768            |
| LTE B4  | 1710-1755          | 25.0                                       | 0.45                         | -1.70 | 23.30 | 0.214  | 0.2                           | 0.768            |
| LTE B5  | 824-849            | 25.0                                       | 0.18                         | -1.97 | 23.03 | 0.201  | 0.2                           | 0.422            |
| LTE B12 | 699-716            | 25.0                                       | 0.23                         | -1.92 | 23.08 | 0.203  | 0.2                           | 0.358            |
| LTE B13 | 777-787            | 25.0                                       | 0.18                         | -1.97 | 23.03 | 0.201  | 0.2                           | 0.398            |
| LTE B17 | 704-716            | 25.0                                       | 0.23                         | -1.92 | 23.08 | 0.203  | 0.2                           | 0.360            |
| LTE B25 | 1850-1915          | 25.0                                       | 0.45                         | -1.70 | 23.30 | 0.214  | 0.2                           | 0.768            |
| LTE B66 | 1710-1780          | 25.0                                       | 0.45                         | -1.70 | 23.30 | 0.214  | 0.2                           | 0.768            |
| LTE B85 | 698-716            | 25.0                                       | 0.23                         | -1.92 | 23.08 | 0.203  | 0.2                           | 0.357            |

Note:

The tune up conducted power and antenna gain was declared by the applicant.

The device contains a certified WWAN model (model: BC660K-GL, FCC ID: XMR2021BC660KGL)

Simultaneously transmitting condition:

The worst case ratio= $0.0007/0.768+0.203/0.357=0.57<1$

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

**Result: Compliant.**