



February 14, 2025

TUV SUD America CB  
10 Centennial Drive FL2  
Peabody, MA 01960

Attention: Director of Certification

**RE: Analysis of RF Exposure for Mobile and Portable Device per KDB 447498 D01 General RF Exposure Guidance v06**

FCC ID: ROJ-8064A

**1. Limits**

Limits for General Population/Uncontrolled Exposure (Title 47 Subpart J §2.1091 and KDB 447498 D01 referring to limits under §1.1310)

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Electric Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Time (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|-----------------------------------------|--------------------------|
| 0.3 - 1.34            | 614                               | 1.63                              | *(100)                                  | 30                       |
| 1.34 - 30             | 824/f                             | 2.19/f                            | *(180/f <sup>2</sup> )                  | 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



## 2. Mobile MPE Calculation using a 22.41cm separation distance:

Using Power Density formula:

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

where: S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to isotropic

R = distance to the center of radiation of the antenna

### Max Output Power Channel (Mid Channel) at 22.41 cm Separation Distance:

|                                                              |                |                       |
|--------------------------------------------------------------|----------------|-----------------------|
| Maximum peak output power at antenna input terminal:         | <b>37.00</b>   | (dBm)                 |
| Maximum peak output power at antenna input terminal:         | <b>5011.87</b> | (mW)                  |
| Antenna gain(max):                                           | <b>1</b>       | (dBi)                 |
| Maximum antenna gain:                                        | <b>1.259</b>   | (numeric)             |
| Prediction distance:                                         | <b>22.41</b>   | (cm)                  |
| Source Based Time Average Duty Cycle:                        | <b>100</b>     | (%)                   |
| Prediction frequency:                                        | <b>1643.5</b>  | (MHz)                 |
| MPE limit for uncontrolled exposure at prediction frequency: | <b>1.000</b>   | (mW/cm <sup>2</sup> ) |
| Power density at prediction frequency:                       | <b>0.99978</b> | (mW/cm <sup>2</sup> ) |
| Power density at prediction frequency:                       | <b>9.998</b>   | (W/m <sup>2</sup> )   |
| Margin of Compliance:                                        | <b>0.00</b>    | (dB)                  |

Sincerely,

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Authorized Signatory  
Title: Wireless Test Engineer