



June 11, 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 and RSS-102 Issue 6 December 2023.**

FCC ID: LRUSVR-P250MB  
IC Number: 2390A-SVRP250MB

## 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. ISED Limits:

Limits for Devices Used by the General Public (Uncontrolled Environment (RSS-102 Issue 6 December 2023)

Frequency Range (MHz)	Electric Field Strength (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m <sup>2</sup> )	Reference Period (minutes)
10 - 20	27.46	0.0728	2	6
20 - 48	-58.07/f <sup>0.25</sup>	0.1540/f <sup>0.25</sup>	8.944/f <sup>0.5</sup>	6
48 - 300	22.06	0.05852	1.291	6
300 - 6000	3.142 f <sup>0.3417</sup>	0.008335 f <sup>0.3417</sup>	0.02619 f <sup>0.6834</sup>	6
6000 - 15000	61.4	0.163	10	6
15000 - 150000	61.4	0.163	10	616000/f <sup>1.2</sup>



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150000 - 300000	0.158f <sup>0.5</sup>	4.21 x 10 <sup>-4</sup> f <sup>0.5</sup>	6.67 x 10 <sup>-5</sup> f	616000/f <sup>1.2</sup>
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f is frequency in MHz

### 3. Mobile MPE Calculation using a 90cm 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

Maximum output power at antenna input terminal:	40.79	(dBm)
Maximum output power at antenna input terminal:	11994.99	(mW)
Antenna gain(typical):	6	(dBi)
Maximum antenna gain:	3.981	(numeric)
Prediction distance:	90	(cm)
Source Based Time Average Duty Cycle:	50	(%)
Prediction frequency:	764	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	0.245	(mW/cm <sup>2</sup> )
Power density at prediction frequency:	0.23457	(mW/cm <sup>2</sup> )
Power density at prediction frequency:	2.346	(W/m <sup>2</sup> )
Margin of Compliance:	-0.18	(dB)

**Calculation Note:** ISED calculation only presented as FCC limit at this frequency is less stringent (0.50933 mW/cm<sup>2</sup>). Margin of compliance is -3.37dB for FCC and -0.18dB for ISED. All other parameters except Power are based on the original radio module filing (FCC ID CASTMBK5B).

Sincerely,

Ferdie S. Custodio

Name

Authorized Signatory

Title: Senior EMC Test Engineer /Wireless Team Lead