



May 02, 2021

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

Attention: Director of Certification

**RE: Analysis of RF Exposure for Portable and Mobile use per KDB 447498 D01 Mobile Portable RF Exposure v06.**

FCC ID: 2ATMB-T79BSD

**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 Summary using a 20cm separation distance:**

Mode	Output Power	Power Density (mW/cm <sup>2</sup> )
76-81 GHz Band Radar Service	28.32 dBm EIRP	0.13512

**3. Mobile MPE Calculation using a 20cm 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 peak output power at antenna input terminal:	<b>12.32</b>	(dBm)
Maximum peak output power at antenna input terminal:	<b>17.06</b>	(mW)
Antenna gain(typical):	<b>16</b>	(dBi)
Maximum antenna gain:	<b>39.811</b>	(numeric)
Prediction distance:	<b>20</b>	(cm)
Source Based Time Average Duty Cycle:	<b>100</b>	(%)
Prediction frequency:	<b>76</b>	(GHz)
FCC MPE limit for uncontrolled exposure at prediction frequency:	<b>1.000</b>	(mW/cm <sup>2</sup> )
Power density at prediction frequency:	<b>0.13512</b>	(mW/cm <sup>2</sup> )
Power density at prediction frequency:	<b>1.351</b>	(W/m <sup>2</sup> )
FCC Margin of Compliance:	<b>-8.69</b>	(dB)

Sincerely,

A handwritten signature in black ink, appearing to read 'Ferdie S. Custodio', written over a horizontal line.

Ferdie S. Custodio

Name

Authorized Signatory

Title: Senior EMC Test Engineer /Wireless Team Lead