

## RF Exposure Report (FCC)

**Report No.:** FCC\_RF\_SL21022601-HAR-284\_MPE

**FCC ID:** 2AHPN-BE2860

**Model:** R1 EXT NA 2B MY22

**Received Date:** 3/15/2021

**Test Date:** 4/15/2021-5/23/2021

**Issued Date:** 6/14/2021

**Applicant:** HARMAN INTERNATIONAL

**Address:** 30001 Cabot Drive, Novi, MI 48377, USA

**Manufacturer:** HARMAN INTERNATIONAL

**Address:** 30001 Cabot Drive, Novi, MI 48377, USA

**Issued By:** Bureau Veritas Consumer Products Services, Inc.

**Lab Address:** 775 Montague Expressway, Milpitas, CA 95035

**FCC Registration /  
Designation Number:** 540430 / 4842D



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### Release Control Record

Issue No.	Description	Date Issued
FCC_RF_SL21022601-HAR-284_MPE	Original Release	6/14/2021

## 1 Certificate of Conformity

**Product:** Automotive Infotainment Unit

**Brand:** HARMAN

**Model:** R1 EXT NA 2B MY22

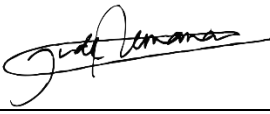
**Sample Status:** Final Product

**Applicant:** HARMAN INTERNATIONAL

**Test Date:** 4/15/2021-5/23/2021

**Standard:** 47 CFR FCC Part 2.1093

The above equipment has been tested by **Bureau Veritas Consumer Products Services, Inc., Milpitas Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**Prepared by :** , **Date:** 6/14/2021  
Jude Semana / Test Engineer

**Approved by :** Gary Chou, **Date:** 6/14/2021  
Gary Chou/ Engineer Reviewer

## 2 RF Exposure

### 2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
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

### 2.2 MPE Calculation Formula

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

Where

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

### 2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as Mobile Device.

## 2.4 Calculation Result of Maximum Conducted Power

Type	Frequency Band (MHz)	Max Power (dBm)	Max Power (mW)	Turn-Up Tolerance	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
BT-BDR	2441	5.29	3.38	± 1dB	1.43	20	0.001177	1
2.4GHz WLAN	2462	20.05	101.157	± 1dB	1.43	20	0.035233	1
5GHz WLAN	5180	7	5.01	± 1dB	2.60	20	0.002285	1
5GHz WLAN	5775	11.92	15.559	± 1dB	1.49	20	0.007095	1

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. The External antenna type is PCB antenna with 1.43 dBi gain for BT-BDR/2.4GHz WLAN and 2.6 dBi gain for 5GHz WLAN.

### 3 Conclusion

**Therefore the maximum calculations of above situations are less than the “1” limit.**

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