



Test Report

Prepared for Harman International

This report presents Maximum Permissible Exposure for
FPDM MY22

Prepared by

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Approved by

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Issue date: 06/08/2021

Report No: AH20090801-HAR-243 FCC MPE v2

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The test is traceable to national standard or related international standard

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- **Test Request Information**

Test Request #: 7700028922

Test Requested By: Anthony Yousif
Harman International Industries, Inc.
30001 Cabot Drive, Novi, MI 48377

Test item Description: FPDM MY22

Part Number: WL LHD, WS

DUT Sample Number: AH20090801-HAR-243 #1, AH20090801-HAR-243 #4(WS Spot check)

Hardware Version of DUT: WL LHD, WS

Software Version of DUT: N/A

Component Category of DUT: N/A

FCC ID: 2AHPN-BE2853

IC: 6434C-BE2853

Type of Test: FCC Certification

Test Method: FCC Part 2 (Section 2.1093)
KDB 447498 D01 General RF Exposure Guidance v06
IEEE C95.1-1992

Deviations from standard: None

Approved Test Plan Number: N/A

Test Plan Revision: N/A

Date test sample received: 04/28/2021

Date test started: 05/04/2021

Date test finished: 06/08/2021

- **Test Laboratory Information**

Location of Test Lab: The radiated and conducted emissions test sites are located at
Bureau Veritas
815 N. Opdyke Rd #100,
Auburn Hills, MI 48326,
Phone: +1-248-836-4700

Key Contact: Jason Kanakry (General Manager)
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Laboratory Accreditations: BUREAU VERITAS CONSUMER PRODUCTS SERVICES, INC is
accredited in accordance with the recognized International Standard
ISO/IEC 17025:2017 General requirements for the competence of testing
and calibration laboratories.

ISO/IEC 17025:2017: 5678.01

FCC Test Site Number: US1278 (242530)

IC Test Site Number: US0229 (26240)

- **RF Exposure**

1.1 Limits for Maximum Permissible Exposure (MPE)

| Frequency Range (MHz) | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm ²) | 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 ²)* | 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

1.2 MPE Calculation Formula

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

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

1.3 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.

1.4 Antenna information

| Band | Antenna Type | Antenna Gain (dBi) |
|------------|----------------------------------|--------------------|
| BT Classic | Non-detachable PCB trace antenna | -2.55 |

1.5 Calculation Result of Maximum Conducted Power

AH20090801-HAR-243 #1

| Band | Frequency (MHz) | Max Power (dBm) | Max Power (mW) | Turn-Up Tolerance | Antenna Gain (dBi) | Distance (cm) | Power Density (mW/cm ²) | Limit (mW/cm ²) |
|------------|-----------------|-----------------|----------------|-------------------|--------------------|---------------|-------------------------------------|-----------------------------|
| BT_Classic | 2480 | 8.013 | 6.328 | ±1dB | -2.55 | 20 | 0.00088 | 1 |

AH20090801-HAR-243 #4 (WS Spot Check)

| Band | Frequency (MHz) | Max Power (dBm) | Max Power (mW) | Turn-Up Tolerance | Antenna Gain (dBi) | Distance (cm) | Power Density (mW/cm ²) | Limit (mW/cm ²) |
|------------|-----------------|-----------------|----------------|-------------------|--------------------|---------------|-------------------------------------|-----------------------------|
| BT_Classic | 2480 | 8.459 | 7.012 | ±1dB | -2.55 | 20 | 0.00097 | 1 |

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. Calculate SAR test exclusion thresholds from condition “1” formulas.

1.6 Conclusion

The formula of calculated the MPE is:

CPD1 / LPD1etc. < 1

CPD = Calculation power density

LPD = Limit of power density

BT = 0.00088 < 1 (AH20090801-HAR-243 #1)

BT = 0.00097 < 1 (AH20090801-HAR-243 #4 WS Spot Check)

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

Document Revisions

| Version | Date | Modifier | Changes |
|---------|------------|-----------------|--|
| 1.0 | 05-12-2021 | Aravind Buddana | <ul style="list-style-type: none">Initial release |
| 1.1 | 05-17-2021 | Aravind Buddana | <ul style="list-style-type: none">Updated Product Name |
| 2.0 | 06-08-2021 | Aravind Buddana | <ul style="list-style-type: none">Updated WS peak power calculations |

End of Report