Report No.: DDT-R21110216-2E08

Issued Date: Nov. 19, 2021

RF EXPOSURE REPORT

FOR

Applicant	:	Harman International Industries, Inc.
Address	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES
Equipment under Test	:	Bluetooth Speaker
Model No.	:	PARTYBOX ENCORE ESSENTIAL
Trade Mark	:	JBL
FCC ID	:	APIPBENCOREESL
Manufacturer	:	Harman International Industries, Inc.
Address	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

Add: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808

Tel: +86-0769-38826678, **E-mail:** ddt@dgddt.com, http://www.dgddt.com

REPORT

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Test Report Declare

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Standard Used: KDB447498 D01 General RF Exposure Guidance v06

We Declare:

The equipment described above is assessed by Dongguan Dongdian Testing Service Co., Ltd and in the configuration assessed the equipment complied with the standards specified above. The assessed results are contained in this report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these assess.

After evaluation, our opinion is that the equipment In Accordance with above standard.

Report No.:	DDT-R21110216-2E08		
Date of Receipt:	Nov. 12, 2021	**Date of Test:**	Nov. 12, 2021 ~ Nov. 19, 2021

Prepared By:

Ben Jin

Ben Jin/Engineer

Approved By:

DONGGUAN DONGDIAN TESTING SERVICE CO., LTD. APPROVED

Damon Hu

Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Nov. 19, 2021	

1. General information

1.1. Description of Equipment

EUT* Name	:	Bluetooth Speaker
Model Number	:	PARTYBOX ENCORE ESSENTIAL
EUT Function Description	:	Please reference user manual of this device
Power Supply	:	100-240V~, 50/60Hz, 60W built-in battery 3.6V, 4800mAh
Radio Specification	:	Bluetooth V5.1
Operation Frequency	:	2402 MHz - 2480 MHz
Modulation	:	GFSK, π/4-DQPSK, 8DPSK
Data Rate	:	1 Mbps, 2 Mbps, 3 Mbps
Antenna Gain	:	Maximum PK gain: 2.73 dBi
Sample Type	:	Series production
Series Number	:	S21110216-14 for conductive

1.2. Assess laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808.

Tel.: +86-0769-38826678, http://www.dgddt.com, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, G-20118

2. RF Exposure evaluation

2.1. Requirement

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

2.2. Calculation Method

$$E(V/m) = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power Density: } S(mW/cm^2) = \frac{E^2}{377}$$

E = Electric field (V/m)
P = Peak RF output power (mW)
G = EUT Antenna numeric gain (numeric)=
d = Separation distance between radiator and human body (m)
The formula can be changed to

We can change the formula to:

$$S = \frac{30 \times P \times G}{377 \times d^2} \quad \text{or, } d = \sqrt{\frac{30 \times P \times G}{377 \times S}}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

2.3. Estimation Result

Manufacturing Tolerance

GFSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	9	9	9
Tolerance ±(dB)	1	1	1
π/4DQPSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	11	11	11
Tolerance ±(dB)	1	1	1
8DPSK (Peak)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	12	12	12
Tolerance ±(dB)	1	1	1
BLE (Peak)			
Channel	Channel 0	Channel 19	Channel 39
Target (dBm)	7	8	7
Tolerance ±(dB)	1	1	1

Estimation Result

Mode	F (GHz)	Distance (cm)	RF output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE Values (mW /cm^2)	MPE limits (mW/cm^2)	MPE Test Exclusion
			dBm	mW					
BDR	2.441	20	10	10.00	2.73	1.87	0.0037	1	Yes
EDR	2.441	20	13	19.95	2.73	1.87	0.0074	1	Yes
BLE	2440	20	9	7.94	2.73	1.87	0.0030	1	Yes

Note: The estimation distance is 20cm

END OF REPORT