



■ Report No.: DDT-R20120228-1E14

■ Issued Date: Apr. 10, 2021

RF EXPOSURE REPORT

FOR

Applicant	:	Harman International Industries, Inc.
Address	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES
Equipment under Test	:	Gaming Wireless Headphone
Model No.	:	QUANTUM350WIRELESS
Trade Mark	:	JBL
FCC ID	:	APIJBLQ350WL
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

Applicant	:	Harman International Industries, Inc.
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Manufacturer	:	Harman International Industries, Inc.
Address	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES

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-R20120228-1E14		
Date of Receipt:	Feb. 09, 2021	Date of Test:	Feb. 09, 2021 ~ Apr. 10, 2021

Prepared By:

Ella Gong

Ella Gong/Engineer

Approved By:



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	Apr. 10, 2021	

1. General information

1.1. Description of Equipment

EUT* Name	: Gaming Wireless Headphone
Model Number	: QUANTUM350WIRELESS
EUT Function Description	: Please reference user manual of this device
Power Supply	: DC 5V from external AC Adapter : DC 3.7V Polymer Li-ion built-in battery
Radio Specification	: 2.4G Wireless transmitter
Operation Frequency	: 2402 MHz - 2480 MHz
Modulation	: GFSK
Data Rate	: 1Mbps, 2Mbps
Antenna Type	: FPC antenna, maximum PK gain: 4.99 dBi
Serial Number	: 0000099 for conductive : 0000039 for radiation

Note: EUT is the ab. of equipment under test.

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 for FCC

According to 447498 D01 General RF Exposure Guidance v06

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where:

f(GHz) is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

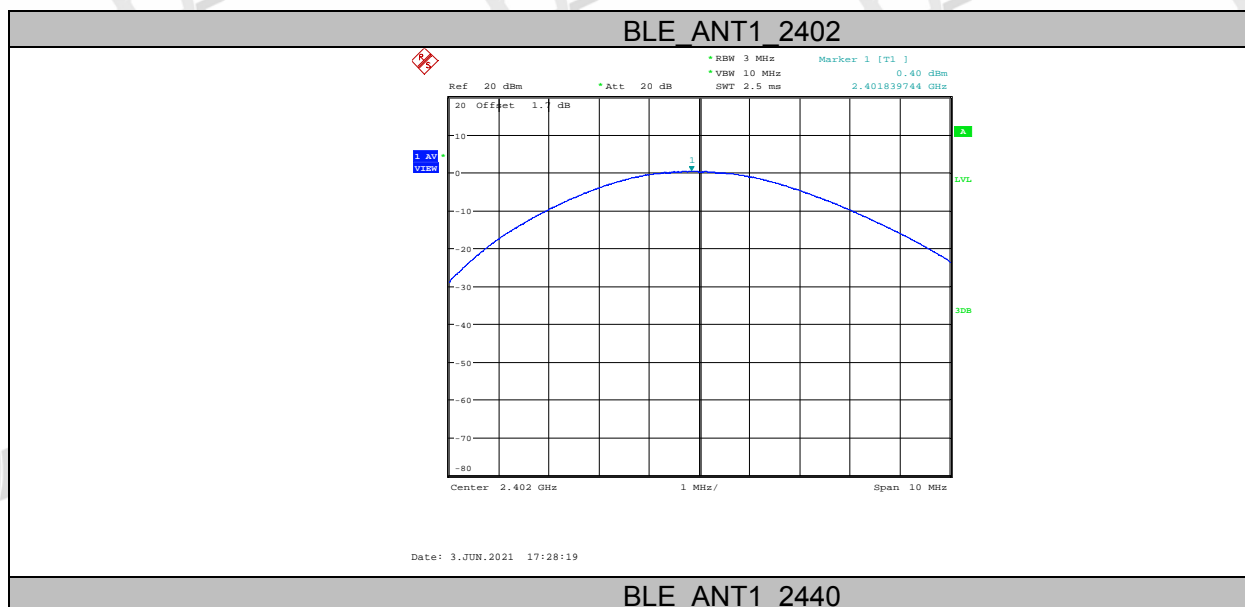
The result is rounded to one decimal place for comparison

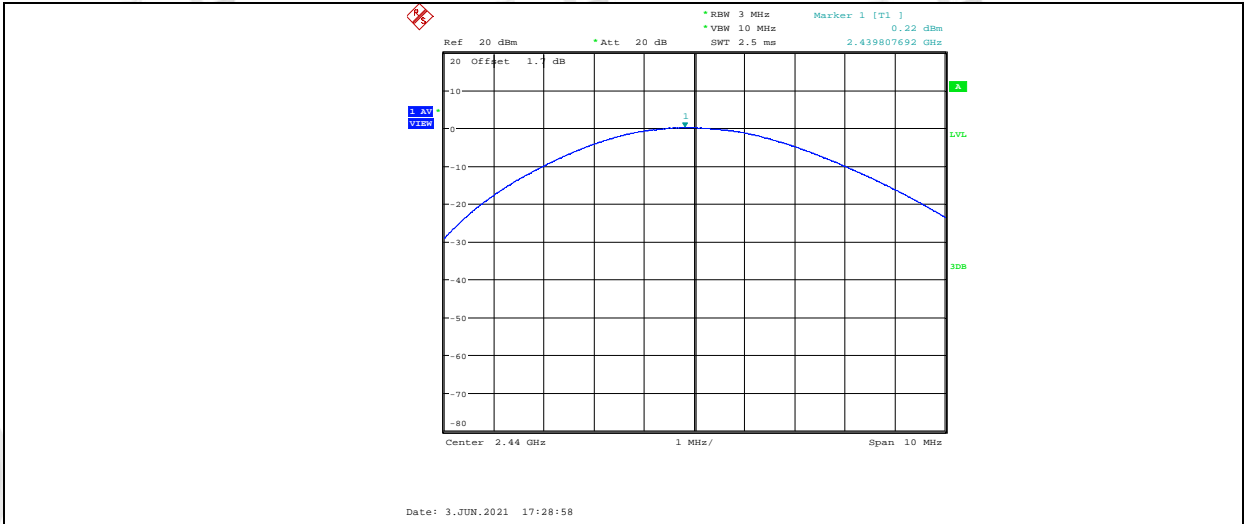
2.1. Test result

Mode	Freq. (MHz)	Average Output Power (dBm)	Limit (dBm)	Verdict
1M	2402	0.4	30	Pass
	2440	0.22	30	Pass
	2480	0.67	30	Pass
2M	2404	0.29	30	Pass
	2440	0.21	30	Pass
	2478	0.51	30	Pass

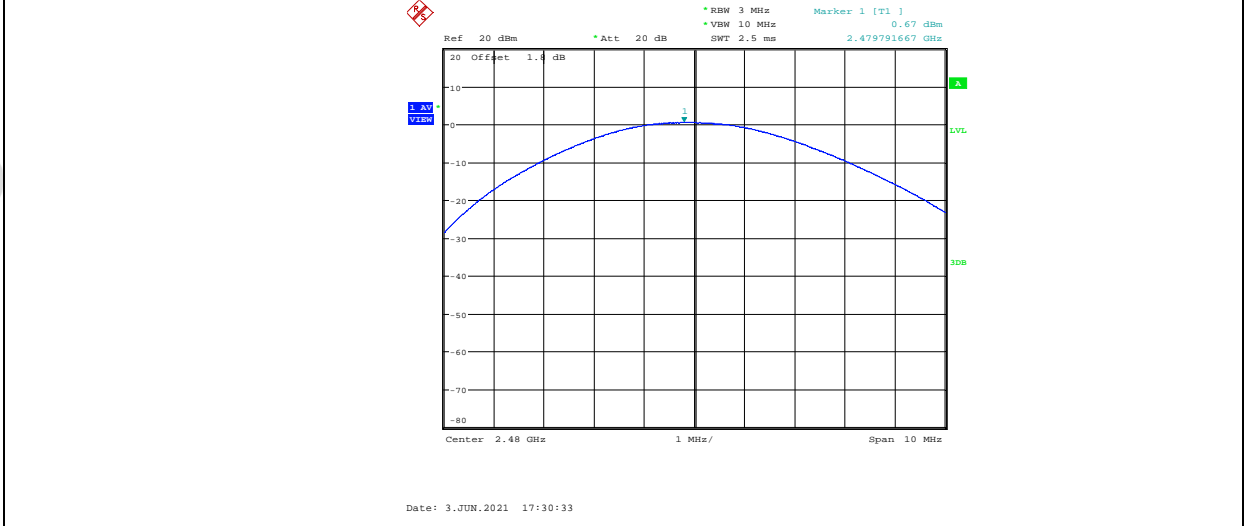
Manufacturing Tolerance

1M (Average)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	0	0	0
Tolerance ±(dB)	1	1	1
2M (Average)			
Channel	Channel 0	Channel 39	Channel 78
Target (dBm)	0	0	0
Tolerance ±(dB)	1	1	1

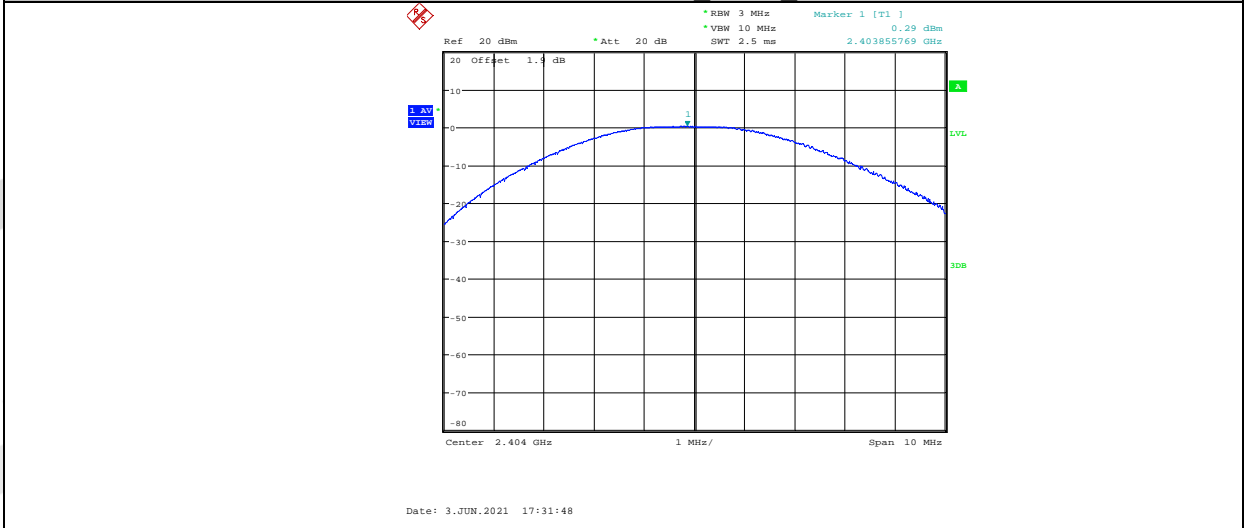




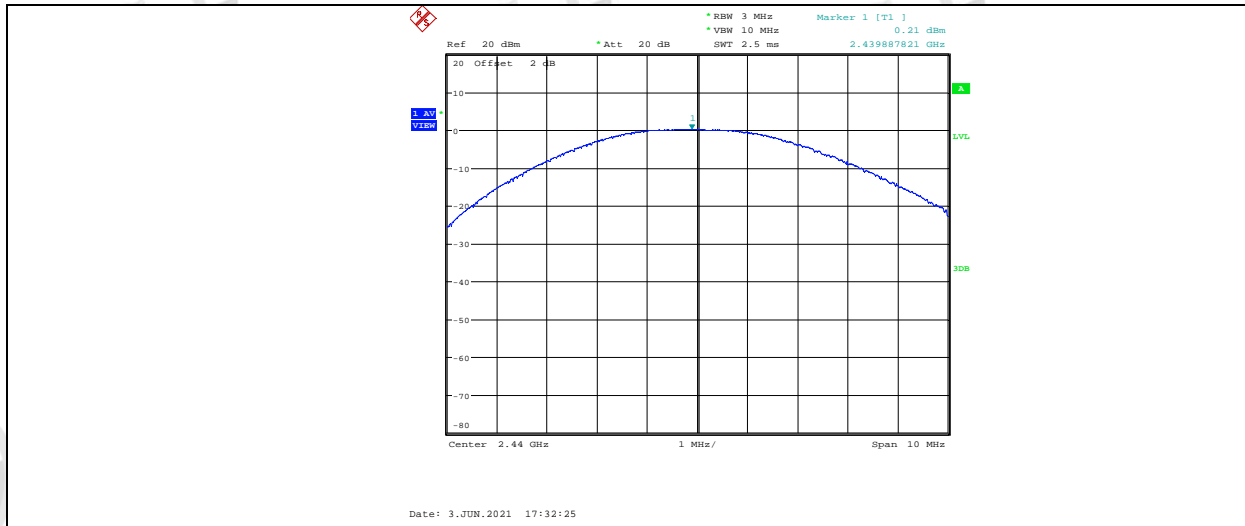
BLE ANT1 2480



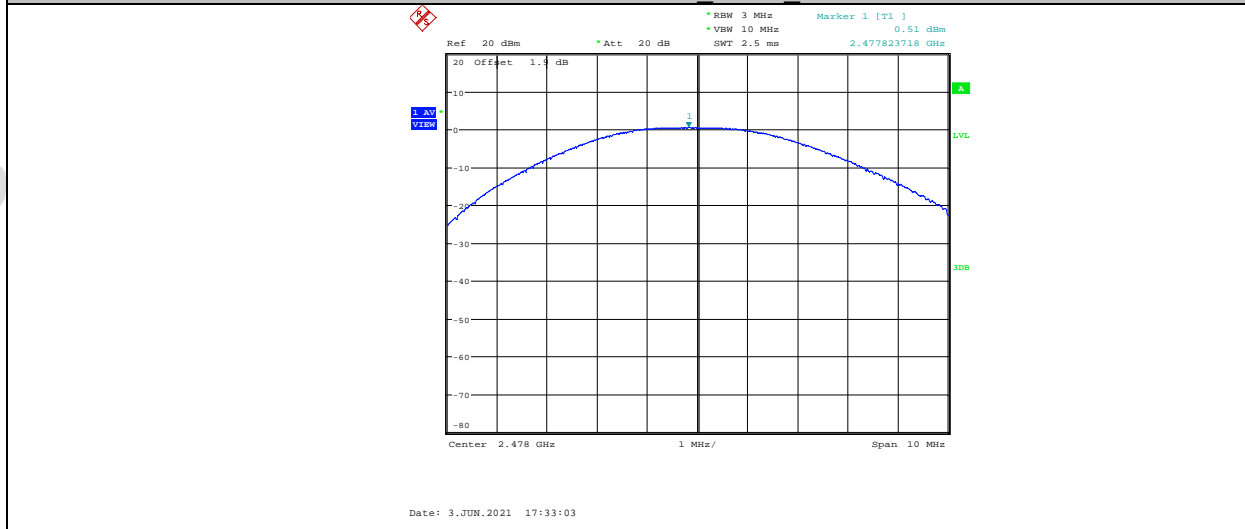
BLE 2M ANT1 2404



BLE 2M ANT1 2440



BLE 2M ANT1 2478



3. Estimation Result

Worse case is as below: [2480MHz, 1 dBm, 1.259 mW) output power]

$$(1.259/5) \cdot [\sqrt{2.480(\text{GHz})}] = 0.40 < 3.0 \text{ for 1-g SAR}$$

Then SAR evaluation is not required

END OF REPORT