



FCC RF EXPOSURE REPORT

Applicant	:	Harman International Industries, Inc.
Address of Applicant	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES
Manufacturer	:	Harman International Industries, Inc.
Address of Manufacturer	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES
Equipment under Test	:	JBL JAM 3000 Head Unit
Model No.	:	JBLJAM3000
FCC ID	:	APIMARINECJ
Test Standard(s)	:	KDB447498 D01 General RF Exposure Guidance v06
Report No.	:	DDT-RE23031703-2E05
Issue Date	:	2024/01/12
Issue By	:	Guangdong Dongdian Testing Service Co., Ltd.
Address of Laboratory	:	Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

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 Guangdong 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 Guangdong 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-RE23031703-2E05		
Date of Receipt:	2023/10/31	Date of Test:	2023/10/31 ~ 2024/01/12

Prepared By:

Approved By:

Ziqin Chen

Ziqin Chen/Engineer

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 Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	2024/01/12	

1. General Information

1.1. Description of equipment

EUT Name	: JBL JAM 3000 Head Unit
Model Number	: JBLJAM3000
EUT Function Description	: Please reference user manual of this device
Power Supply	: DC 12V  10A
Radio Specification	: Bluetooth V5.3
Operation Frequency	: 2402 MHz - 2480 MHz
Modulation	: GFSK, $\pi/4$ -DQPSK, 8DPSK
Data Rate	: 1 Mbps, 2 Mbps, 3 Mbps
Antenna	: PCB antenna, maximum PK gain: 3.38 dBi
Sample Number	: S23031703-06 for conductive, S23031703-05 for radiation

1.2. Assess laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Unit 2,Building 1,No.17,Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, 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, R-20155, 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:

$f(\text{GHz})$ 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

Manufacturing Tolerance

BT

Mode	Antenna	Frequency [MHz]	Target (dBm)	Tolerance \pm (dB)
GFSK (Peak)	Ant1	2402	2.5	1
		2441	1.5	1
		2480	0	1
$\pi/4$ DQPSK (Peak)	Ant1	2402	2.5	1
		2441	1.5	1
		2480	0	1
8DPSK (Peak)	Ant1	2402	2.5	1
		2441	1.5	1
		2480	0	1

Estimtion Result

Worse case is as below: [2402 MHz, 3.5 dBm, (2.24 mW) output power]

$(2.24/5) \cdot [\sqrt{2.402(\text{GHz})}] = 0.694 < 3.0$ for 1-g SAR

Then SAR evaluation is not required.

END OF REPORT