

■ Report No.: DDT-R18112313-1E16

■Issued Date: Apr. 04, 2019

RF EXPOSURE REPORT

FOR

Applicant		Harman International Industries, Inc.		
Address	•	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES		
Equipment under Test	•	SOUNDBAR		
Model No. ONG		Bar 2.1 Deep Bass CNTR		
Trade Mark	••	JBL		
FCC ID	•	APIBAR300CNTR		
IC	/ -	6132A-BAR300CNTR		
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

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TEST REPORT DECLARE

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Model No.	:	Bar 2.1 Deep Bass CNTR		
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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-R18112313-1E16	21000	TESTING	DOME DAM TESTING
Date of Receipt:	Feb. 19, 2019	Date of Test:	Feb. 19, 2019 ~ A	Apr. 04, 2019

Prepared By:

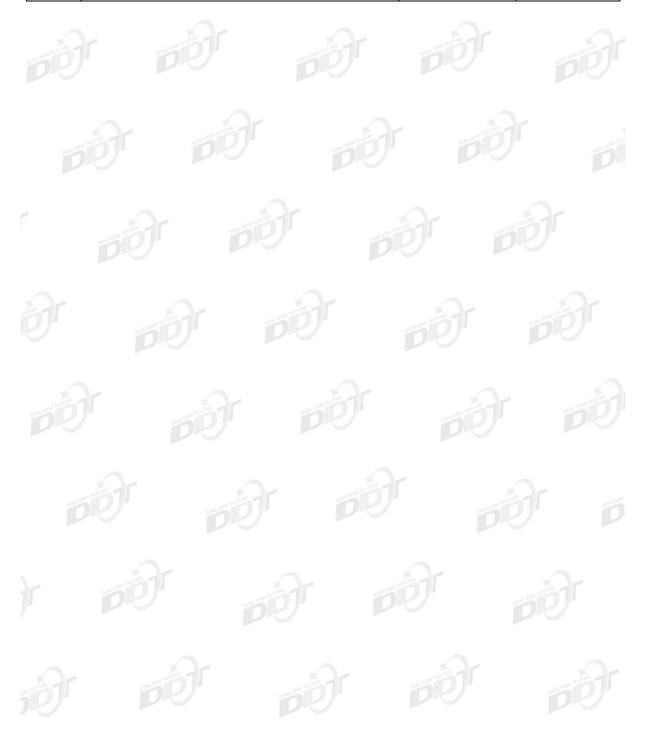
Ella Gong/Engineer

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

		Revision history	2000 2000	
Rev.	Revisions		Issue Date	Revised By
ar	Initial issue		Apr. 04, 2019	9
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1. General information

1.1. Description of Equipment

EUT* Name	: SOUNDBAR		
Model Number	Bar 2.1 Deep Bass CNTR		
EUT function description	: Please reference user manual of this device		
Power supply	: AC 100-240V, 50/60Hz		
Radio Specification : Bluetooth V4.2, IEEE802.11b/g/n, IEEE802.11n/a/ac			
Operation frequency	: Bluetooth: 2402MHz-2480MHz, SRD: 5736.35 MHz-5820.35 MHz		
Modulation : GFSK, π/4-DQPSK, 8DPSK			
Antenna Type	Bluetooth: FPC antenna, maximum PK gain: 2.7 dBi : SRD Antenna 1: Printed antenna, maximum PK gain 3.39 dBi SRD Antenna 2: Printed antenna, maximum PK gain 3.50 dBi		
Sample Type	: Series production		

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

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.

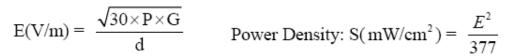
Limits for General Population/Uncontrolled Exposure

(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 = 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:

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

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

	PK Output	Output	Antenna	Antenna	MPE	MPE
Mode	power	power	Gain	Gain	Values	Limit
	(dBm)	(mW)	(dBi)	(linear)	(mW/cm ²)	(mW/cm ²)
Bluetooth Max power	9.28	8.47	2.7	1.86	0.0031	1
5G Max power	4.93	3.11	3.5	2.24	0.0014	1

Maximum Simultaneous transmission MPE Ratio for Bluetooth and 5G

Maximum MPE ratio Bluetooth	Maximum MPE ratio 5G	∑MPE ratios	Limit	Results
0.0031	0.0014	0.0045	1.000	Pass

6

Note: The estimation distance is 20cm

Conclusion: No SAR evaluation required since transmitter power is below FCC threshold

END OF REPORT

