

RF EXPOSURE REPORT

FOR

Applicant	:	Harman International Industries, Incorporated
Address	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES
Equipment	:	In Vehicle Bluetooth Speaker
Model No	:	JBL SMARTBASEWL
Trade Mark	:	JBL
FCC ID	:	API-JBLSBWL
Manufacturer	:	Harman International Industries, Incorporated
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,
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REPORT

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TEST REPORT DECLARE

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Assess Standard Used: FCC CFR 47 part1, 1.1307(b), 1.1310

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-R16Q0726-9E2		
Date of Assess:	Aug. 19, 2016-Aug. 29, 2016	Date of Report:	Aug. 30, 2016



Prepared By:


 Leo Liu/Engineer



Kevin Feng/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.

1. General information

1.1. Description of Equipment

EUT* Name	: In Vehicle Bluetooth Speaker
Model Number	: JBL SMARTBASEWL
EUT function description	: Please reference user manual of this device
Power supply	: DC 12V
Wireless charging Operation frequency	: 129kHz
Antenna Type	: Inductive loop coil antenna
Date of Receipt	: Aug. 19, 2016
Sample Type	: Series production

1.2. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Serial No.	Other
iPhone	Apple Inc.	A1586	F78NN8QCG5MV	/
Wireless Charging Receiver	JIAKASHI	P655SC	/	/
Simulation load	/	/	/	/

1.3. Assess laboratory

Dongguan Dongdian Testing Service Co., Ltd

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2. Equipment used during test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
Electromagnetic Analyser	narda	ELT-400	N-0157	2015/09/17	1 Year
Magnetic field probe	narda	ELT probe 100cm ²	M0157	2015/09/17	1 Year

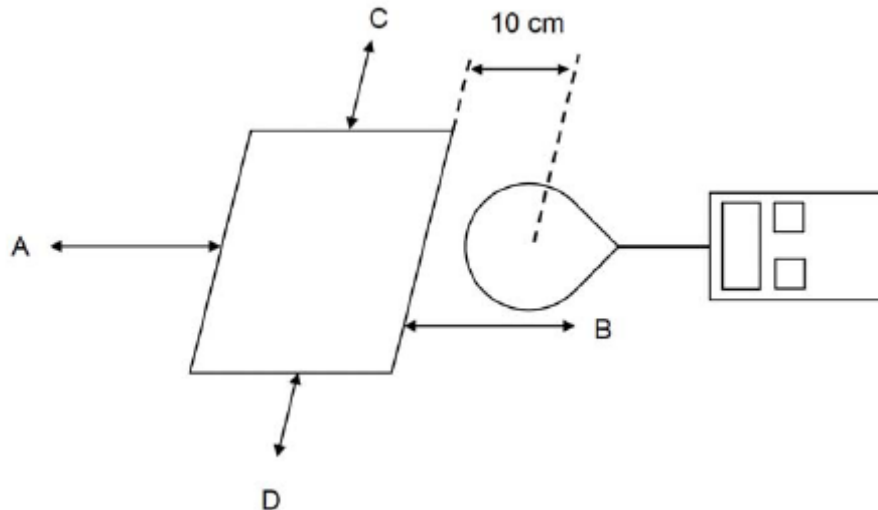
3. Method of measurement

3.1. Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this 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.

According to §1.1310 and §2.1093 RF exposure is calculated.
 According KDB680106 D01v02: RF Exposure Wireless Charging Apps v02.

3.2. Block diagram of test setup



3.3. Test Procedure

- The RF exposure test was performed on 360 degree turn table in anechoic chamber.
- The measurement probe was placed at test distance (10cm) which is between the edge of the charger and the geometric centre of probe.
- The turn table was rotated 360d degree to search of highest strength.
- The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- The EUT were measured according to the dictates of KDB 680106D01v02.

3.4. Equipment Approval Considerations:

The EUT does comply with item 5.2 of KDB 680106 D01v02

- Power transfer frequency is less than 1MHz.
 Yes; the device operate in the frequency range from 129 kHz
- Output power from each primary coil is less than 5 watts
 Yes; the maximum output power of the primary coil is 5W.
- The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that able to detect and allow coupling only between individual pair of coils.
 Yes; the transfer system includes only single primary and secondary coils.
- Client device is inserted in or placed directly in contact with the transmitter.
 Yes; Client device is placed directly in contact with the transmitter.
- The maximum coupling surface area of the transmit (charging) device:
 No; The EUT coupling surface area $15.2\text{cm}^2 < 60\text{cm}^2$

f) Aggregate leakage fields at 10cm surrounding the device from all simultaneous transmitting coils are demonstrated to be less than 30% of the MPE limit.

Yes; The EUT field strength levels are 30% x MPE limit.

TABLE 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)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) 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
300-1,500			f/1500	30
1,500-100,000			1.0	30

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

3.5. E and H field Strength

Test mode for wireless charger:

Dummy load: Full Load mode

Phone load: Zero charge, intermediate charge and full charge mode

E-Filed Strength at 10 cm from the edges surrounding the EUT (V/m)

Test Position	Probe Measure Result(V/m)				Limits Test (V/m)
	Full Load	Zero charge	intermediate charge	full charge	
A	1.16	1.14	0.54	0.25	614
B	2.41	2.35	2.21	0.85	614
C	0.54	0.49	0.36	0.12	614
D	1.95	1.45	1.41	1.01	614
Top	2.04	2.00	1.57	0.54	614
Bottom	1.86	1.41	1.24	0.54	614

H-Filed Strength at 10 cm from the edges surrounding the EUT (A/m)

Test Position	Probe Measure Result(A/m)				Limits Test (A/m)
	Full Load	Zero charge	intermediate charge	full charge	
A	0.0065	0.0063	0.0041	0.0002	1.63
B	0.0045	0.0045	0.0036	0.0024	1.63
C	0.0033	0.0032	0.0029	0.0012	1.63
D	0.0010	0.0010	0.0087	0.0056	1.63
Top	0.0010	0.0010	0.0089	0.0060	1.63
Bottom	0.0065	0.0063	0.0059	0.0042	1.63

END OF REPORT