TEST REPORT

Report Reference No......:	**TZ0022240901FEM01**
Prepared by (+signature).....:	Nancy Li
Reviewed by (+signature).....:	Allen Lai
Approved by (+signature).....:	Max Zhang (Authorized Officer)
Date of issue.....:	2024-9-21
Testing Laboratory Name.....:	Shenzhen Tongzhou Testing Co.,Ltd.
Address.....:	1st Floor, Building 1, Haomai High-tech Park, Huating Road 387, Dalang Street, Longhua, Shenzhen, China
Applicant's name.....:	**Adventure Brand, LLC**
Address.....:	696 San Ramon Valley Blvd., #210 Danville, California 94526, United States
Manufacturer's name.....:	**SHENZHEN AKAUDIO CO., LIMITED**
Address.....:	7F, Bldg A(#2), 1st Shuichanjingwan Industrial Area, Nanchang Village, Gushu, Bao'an Dist., Shenzhen, China
Test specification..... **:**	
Standard.....:	**CFR Title 47 FCC Part 15 Subpart B**
TRF Originator.....:	SZTZ
Master TRF.....:	Dated 2024-09

Test item description.....:	**Headphone**
FCC ID.....:	2BMPR-IR2010D
Trade Mark.....:	N/A
Model/Type reference.....:	IR2010D, IR205D, IR206D, IR207D, IR208D, IR209D, IR2010S, IRBT01, IRBT02
Ratings.....:	DC 3V by 1.5V*2 batteries
Result.....:	**PASS**

** Report Revise Record **

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	2024-9-21	Valid	Initial release

Contents

1. TEST STANDARDS

The tests were performed according to following standards:

CFR Title 47 FCC Part 15 Subpart B
Unintentional Radiators

ANSI C63.4-2014
American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

2. SUMMARY

2.1. General Remarks

Date of receipt of test sample : 2024-9-16

Testing commenced on : 2024-9-16

Testing concluded on : 2024-9-20

2.2. Product Description

The Model: IR2010D or the "EUT" as referred to in this report; more general information as follows, for more details, refer to the user's manual of the EUT.

Name of EUT	:	Headphone
Model/Type reference	:	IR2010D, IR205D, IR206D, IR207D, IR208D, IR209D, IR2010S, IRBT01, IRBT02
Test Model	:	IR2010D
Difference description	:	All the same except for the model name
Highest internal frequency	:	☒≤108MHz ☐＞108MHz
Classfication	:	☐Class A ☒Class B

2.3. EUT operation mode

The EUT has been tested under typical operating condition.

Test Item	
EMI	
Mode 1	Audio Play on Infrared Reception
Mode 2	Audio Play with 3.5mm audio input

2.4. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

● - supplied by the manufacturer

○ - Supplied by the lab

●	Infrared emitter	Model :	VYDVD7
		Input:	9-12Vdc, 1A
		Manufacturer:	VOYAGER
○	Mobile Phone	Model :	H3 Pro

2.5. Related Submittal(s) / Grant (s)

This test report is intended for Headphone filing to comply with the FCC Part 15, Subpart B Rules.

2.6. Internal Identification of EUT used during the test

EUT ID : TZ0022240901-1#

2.7. Modifications

No modifications were implemented to meet testing criteria.

2.8. Test Result Summary

Test Item	Test Requirement	Standard Paragrph	Result
Radiated Emission	FCC PART 15	Section 15.109	PASS

Remark: The measurement uncertainty is not included in the test result.

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen Tongzhou Testing Co.,Ltd.
1st Floor, Building 1, Haomai High-tech Park, Huating Road 387, Dalang Street, Longhua, Shenzhen, China

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 (2014) and CISPR Publication 22.

3.2. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

3.3. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Tongzhou Testing Co.,Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Tongzhou Testing Co.,Ltd. is reported:

Test Item		Frequency Range	Uncertainty	Note
Radiation Uncertainty		30MHz~1000MHz	±3.92dB	(1)
		1GHz~40GHz	±4.28dB	(1)
Conduction Uncertainty	:	150kHz~30MHz	±2.71dB	(1)

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.4. Equipments Used during the Test

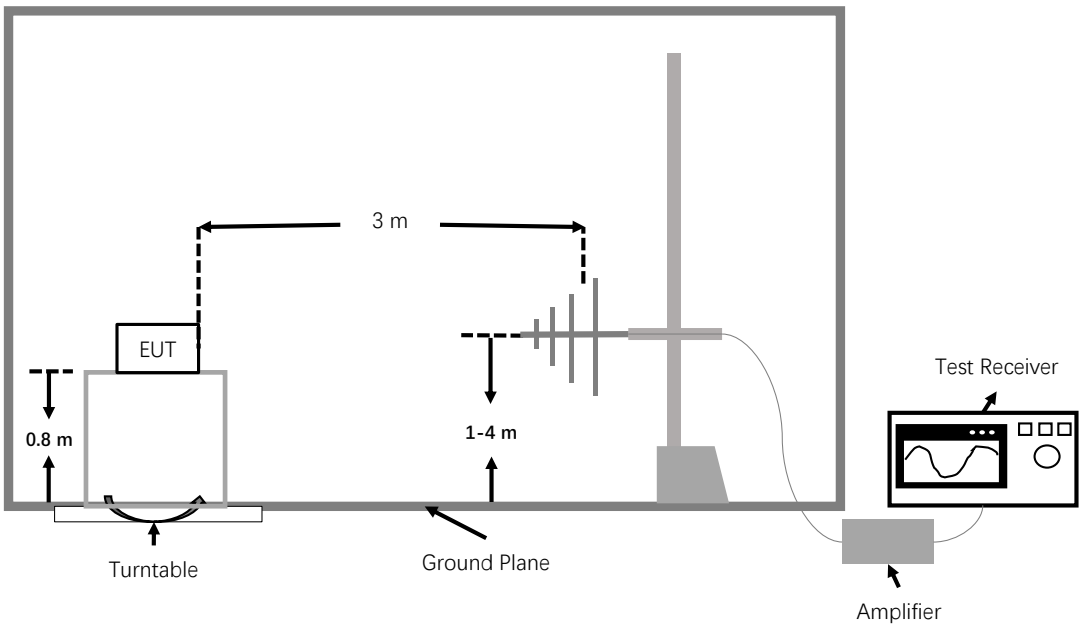
Radiated emission						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due
1	Test Receiver	R&S	ESCI-7	100849/003	2024/1/4	2025/1/3
2	wideband Antenna	Schwarzbeck	VULB 9163	958	2022/11/13	2025/11/12
3	Horn Antenna	Schwarzbeck	BBHA 9120D	01989	2022/11/13	2025/11/12
4	Amplifier	Schwarzbeck	BBV 9743	209	2024/1/4	2025/1/3
5	Amplifier	Tonscend	TSAMP-0518SE	--	2024/1/4	2025/1/3
6	Postional Controller	MF	MF7802	--	--	--
7	RE test software	Tonscend	JS32-RE	V5.0.0.0	--	--

4. TEST CONDITIONS AND RESULTS

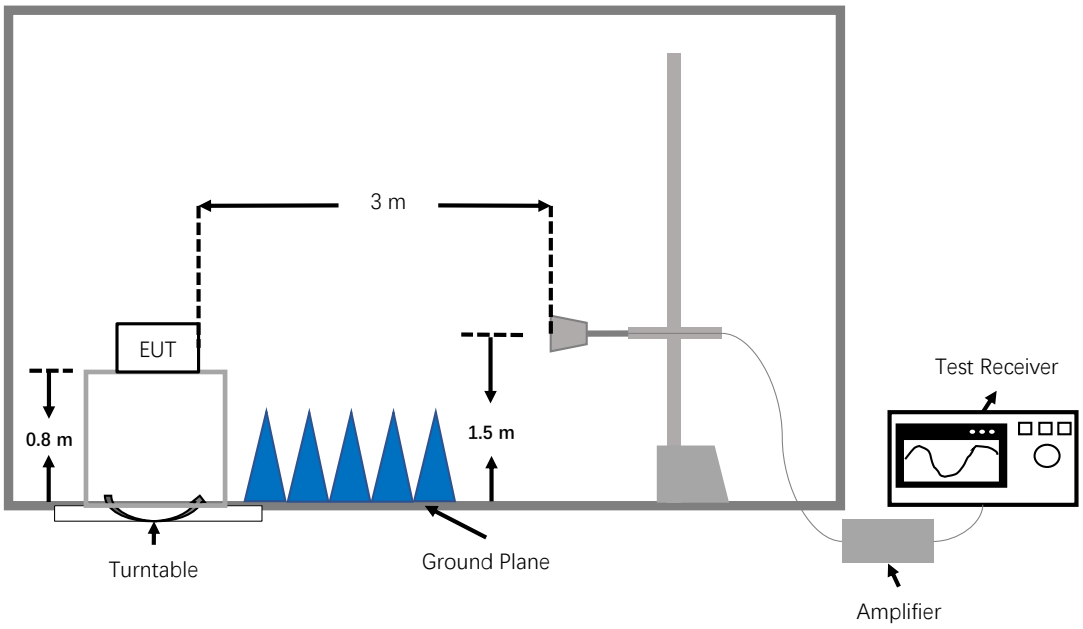
4.1. Radiated Emission Test

TEST CONFIGURATION

(a) Radiated Emission Test Set-Up, Frequency below 1000MHz



(b) Radiated Emission Test Set-Up, Frequency above 1000MHz



Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

RADIATION LIMIT

For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.

Test Results

Pass

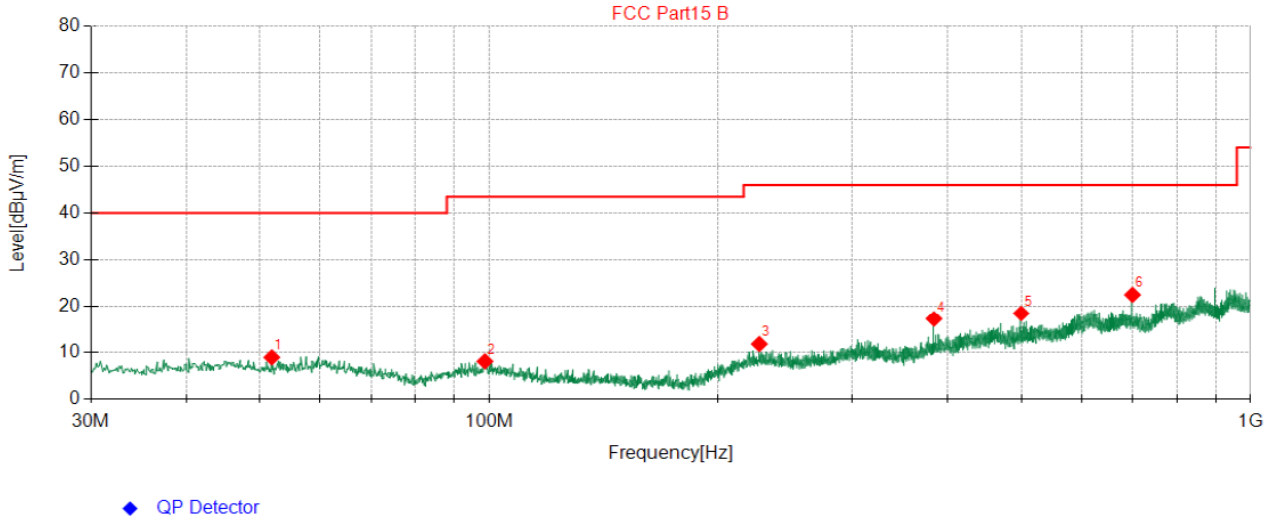
Pre-scan all modes and recorded the worst case results in this report.

Below 1000MHz

Results of Radiated Emissions (30MHz ~1GHz)

Temperature	22.5℃	Humidity	56%
Test Engineer	Tony Luo	Configurations	Mode 1

Vertical

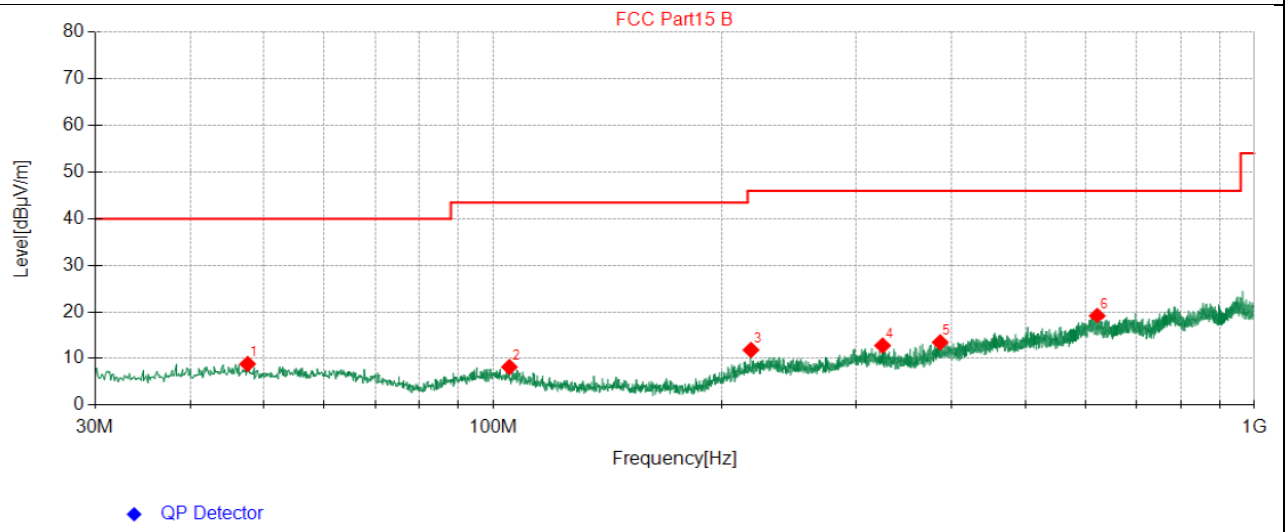


Suspected Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	51.82	23.42	-14.44	8.98	40.00	31.02	100	6	Vertical
2	98.74	24.33	-16.19	8.14	43.50	35.36	100	347	Vertical
3	226.4	26.44	-14.61	11.83	46.00	34.17	100	261	Vertical
4	384.0	27.75	-10.47	17.28	46.00	28.72	100	22	Vertical
5	499.9	26.55	-8.06	18.49	46.00	27.51	100	6	Vertical
6	700.0	26.91	-4.35	22.56	46.00	23.44	100	6	Vertical

***Note:
1. Level [dBµV/m] = Reading [dBµV] + Factor [dB/m]
2. Margin [dB] = Limit [dBµV/m] - Level [dBµV/m]

Horizontal



Suspected Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	47.58	22.85	-14.05	8.80	40.00	31.20	100	280	Horizontal
2	105.0	24.14	-15.99	8.15	43.50	35.35	100	344	Horizontal
3	218.1	26.66	-14.87	11.79	46.00	34.21	100	2	Horizontal
4	324.8	24.85	-12.12	12.73	46.00	33.27	100	50	Horizontal
5	386.7	23.81	-10.40	13.41	46.00	32.59	100	125	Horizontal
6	621.8	24.62	-5.32	19.30	46.00	26.70	100	122	Horizontal

***Note:
1. Level [dBµV/m] = Reading [dBµV] + Factor [dB/m]
2. Margin [dB] = Limit [dBµV/m] - Level [dBµV/m]

Note: the Max woking frequency is below 108MHz as decleard by the applicant,no need for radiated Emission above 1GHz.

5. TEST SETUP PHOTOGRAPHS OF EUT

Please refer to separated files for Test Setup Photos of the EUT.

6. EXTERIOR PHOTOGRAPHS OF EUT

Please refer to separated files for External Photos of the EUT.

7. INTERIOR PHOTOGRAPHS OF EUT

Please refer to separated files for Internal Photos of the EUT.

----------THE END OF REPORT----------