

Applicant: **Metadot Corporation**

Product: Triple Mode Gaming Headset

Model No.: Holosonic T1w

Trademark: Daskeyboard

Test Standards: FCC Part 15.249

It is herewith confirmed and found to comply with the Test result:

requirements set up by ANSI C63.10 & FCC Part 15 Subpart C, 15.249 regulations for the evaluation

electromagnetic compatibility

Approved By

Terry Tang

Manager

Dated: November 08, 2023

Results appearing herein relate only to the sample tested The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TESTING LABORATORIES

Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China

Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timeway-lab.com

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Date: 2023-11-08



Special Statement:

FCC-Registration No.: 744189

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 744189.

Industry Canada (IC) —Registration No.:5205A

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

A2LA (Certification Number:5013.01)

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

CAB identifier: CN0033

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Report No.: TW2309401-02E

Date: 2023-11-08



Test Report Conclusion

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The report refers only to the sample tested and does not apply to the bulk.

11.0

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Photo of Test Setup and EUT View....

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Date: 2023-11-08



1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le

Village, Nanshan District, Shenzhen, China

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 744189 For 3m Anechoic Chamber

1.2 Applicant Details

Applicant: Metadot Corporation

Address: 9600 Great Hills Trail Suite 150W Austin, TX 78759

Telephone: +1512 637 9983

Fax: --

1.3 Description of EUT

Product: Triple Mode Gaming Headset

Manufacturer: Metadot Corporation

Address: 9600 Great Hills Trail Suite 150W Austin, TX 78759

Trademark: Daskeyboard
Model Number: Holosonic T1w

Additional Model Name N/A

Rating: Input: DC5V, 400mA

Battery: DC3.7V, 800mAh Li-ion battery

Hardware Version: X6-2.4G V1.0

Software Version: CX6821-5ms-V21e1-X6-20230912 crc (C2EEDEBF)

Serial No.: DKHOLOT1W23110001

Operation Frequency: 2402-2480MHz

Modulation Type: GFSK, Pi/4D-QPSK, 8DPSK

Number of Channels: 79 Channel Separation: 1MHz

Antenna Designation PCB antenna with gain -0.68dB maximum (Get from the antenna

specification)

1.4 Submitted Sample: 2 Samples

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1.5 Test Duration

2023-09-27 to 2023-11-08

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB

Radiated Emissions below 1GHz Uncertainty =4.7dB

Radiated Emissions above 1GHz Uncertainty =6.0dB

Conducted Power Uncertainty =6.0dB

Occupied Channel Bandwidth Uncertainty = 5%

Conducted Emissions Uncertainty = 3.6dB

Note: The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

1.7 Test Engineer

The sample tested by

Print Name: Andy Xing

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2.0 Test Equipment							
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date		
ESPI Test Receiver	R&S	ESPI 3	100379	2023-07-14	2024-07-13		
LISN	R&S	EZH3-Z5	100294	2023-07-14	2024-07-13		
LISN	R&S	EZH3-Z5	100253	2023-07-14	2024-07-13		
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2023-07-14	2024-07-13		
Loop Antenna	EMCO	6507	00078608	2022-07-18	2025-07-17		
Spectrum	R&S	FSIQ26	100292	2023-07-14	2024-07-13		
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2022-07-18	2025-07-17		
Horn Antenna	R&S	BBHA 9120D	9120D-631	2022-07-18	2024-07-17		
Power meter	Anritsu	ML2487A	6K00003613	2023-07-14	2024-07-13		
Power sensor	Anritsu	MA2491A	32263	2023-07-14	2024-07-13		
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2022-07-18	2025-07-17		
9*6*6 Anechoic			N/A	2022-07-26	2025-07-25		
EMI Test Receiver	RS	ESVB	826156/011	2023-07-14	2024-07-13		
EMI Test Receiver	RS	ESCS 30	834115/006	2023-07-14	2024-07-13		
Spectrum	HP/Agilent	E4407B	MY50441392	2023-07-14	2024-07-13		
Spectrum	RS	FSP	1164.4391.38	2023-07-14	2024-07-13		
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA		2023-07-14	2024-07-13		
RF Cable	Zhengdi	7m		2023-07-14	2024-07-13		
Pre-Amplifier	Schwarebeck	BBV9743	#218	2023-07-14	2024-07-13		
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2023-07-14	2024-07-13		
LISN	SCHAFFNER	NNB42	00012	2023-07-14	2024-07-13		
ESPI Test Receiver	R&S	ESPI 3	100379	2023-07-14	2024-07-13		
LISN	R&S	EZH3-Z5	100294	2023-07-14	2024-07-13		

2.2 Automation Test Software

For Conducted Emission Test

Name	Version		
EZ-EMC	Ver.EMC-CON 3A1.1		

For Radiated Emissions

Name	Version
EMI Test Software BL410-EV18.91	V18.905
EMI Test Software BL410-EV18.806 High Frequency	V18.06

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3.0 Technical Details

3.1 Summary of test results

	The EUT has	been tested	according to	the following	specifications:
--	-------------	-------------	--------------	---------------	-----------------

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.203	Antenna Requirement	Pass	Complies
FCC Part 15, Paragraph 15.207	Conducted Emission Test	Pass	Complies
FCC Part 15 Subpart C Paragraph 15.249(a) & 15.249(b) Limit	Field Strength of Fundamental	Pass	Complies
FCC Part 15, Paragraph 15.209	Radiated Emission Test	Pass	Complies
FCC Part 15 Subpart C Paragraph 15.249(d) Limit	Band Edge Test	Pass	Complies
FCC Part 15.215(c)	20dB bandwidth	Pass	Complies

3.2 Test Standards

FCC Part 15 Subpart C, Paragraph 15.249, ANSI C63.4:2014 and ANSI C63.10:2013

4.0 EUT Modification

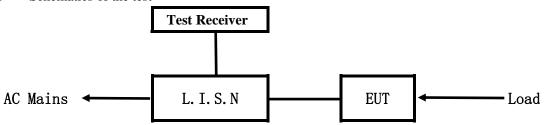
No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

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5.0 Power Line Conducted Emission Test

5.1 Schematics of the test

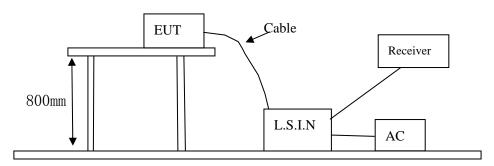


EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.10-2013. The Frequency spectrum from 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.10-2013.

Test Voltage: 120V~, 60Hz Block diagram of Test setup



5.3 Configuration of the EUT

The EUT was configured according to ANSI C63.10-2013. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

79 channels are provided to the EUT

A. EUT

Device	Manufacturer	Model	FCC ID
Triple Mode Gaming	Metadot Corporation	Holosonic T1w	2A9SZHOLOSONIC
Headset	iviciauoi Corporation	HOIOSOIIIC I I W	ZASSZHOŁOSONIC

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B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

C. Peripherals

Device	Manufacturer	Model	Rating
Power Supply	KEYU	KA23-0502000DEU	Input: 100-240V~, 50/60Hz, 0.35A;
			Output: DC5V, 2A

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.10-2013

- A Setup the EUT and simulators as shown on follow
- B Enable AF signal and confirm EUT active to normal condition

5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency	Limits (dB μ V)				
(MHz)	Quasi-peak Level	Average Level			
$0.15 \sim 0.50$	66.0~56.0*	56.0~46.0*			
$0.50 \sim 5.00$	56.0	46.0			
5.00 ~ 30.00	60.0	50.0			

Notes:

- 1. *Decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

5.6 Test Results:

Date: 2023-11-08



A: Conducted Emission on Live Terminal (150kHz to 30MHz)

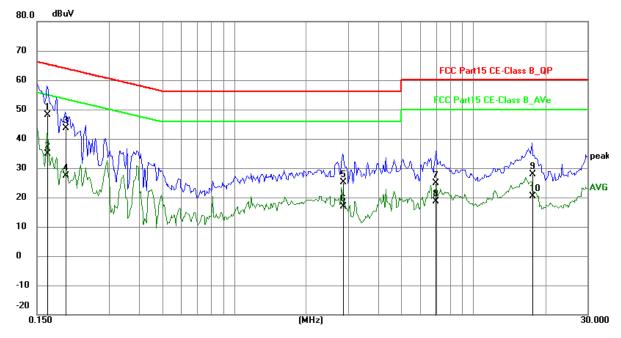
EUT Operating Environment

Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

EUT set Condition: Charging + Communication by BT

Results: Pass

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1655	38.46	9.77	48.23	65.18	-16.95	QP	Р
2	0.1655	25.01	9.77	34.78	55.18	-20.40	AVG	Р
3	0.1968	33.94	9.75	43.69	63.74	-20.05	QP	Р
4	0.1968	17.74	9.75	27.49	53.74	-26.25	AVG	Р
5	2.8449	15.21	9.84	25.05	56.00	-30.95	QP	Р
6	2.8449	7.08	9.84	16.92	46.00	-29.08	AVG	Р
7	6.9741	14.90	10.01	24.91	60.00	-35.09	Q Q	Р
8	6.9741	8.63	10.01	18.64	50.00	-31.36	AVG	Р
9	17.6562	17.27	10.54	27.81	60.00	-32.19	QP Q	Р
10	17.6562	9.92	10.54	20.46	50.00	-29.54	AVG	Р

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B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

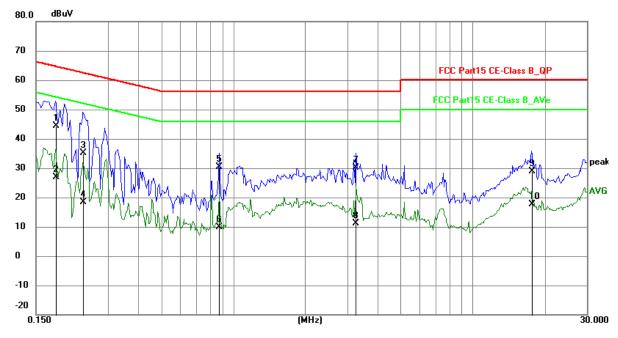
EUT Operating Environment

Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

EUT set Condition: Charging + Communication by BT

Results: Pass

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1812	34.66	9.76	44.42	64.43	-20.01	QP	Р
2	0.1812	17.19	9.76	26.95	54.43	-27.48	AVG	Р
3	0.2358	25.31	9.75	35.06	62.24	-27.18	QP	Р
4	0.2358	8.54	9.75	18.29	52.24	-33.95	AVG	Р
5	0.8754	20.61	9.79	30.40	56.00	-25.60	QP	Р
6	0.8754	0.19	9.79	9.98	46.00	-36.02	AVG	Р
7	3.2573	20.35	9.85	30.20	56.00	-25.80	QP	Р
8	3.2573	1.35	9.85	11.20	46.00	-34.80	AVG	Р
9	17.6172	18.34	10.54	28.88	60.00	-31.12	QP	Р
10	17.6172	7.20	10.54	17.74	50.00	-32.26	AVG	Р

Date: 2023-11-08



6 Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.
- (3) The frequency spectrum from 9kHz to 25 GHz was investigated. The frequency spectrum is set as follows:

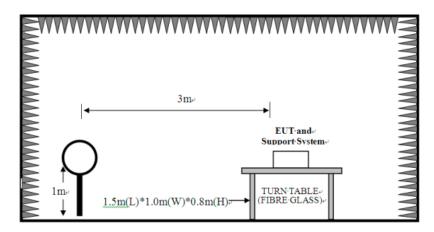
Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
ADOVE IGHZ	Peak	1MHz	10Hz	Average

(Note: for Fundamental frequency radiated emission measurement, RBW=3MHz, VBW=10MHz). Measurements were made at 3 meters.

- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) The antenna polarization: Vertical polarization and Horizontal polarization.

Block diagram of Test setup

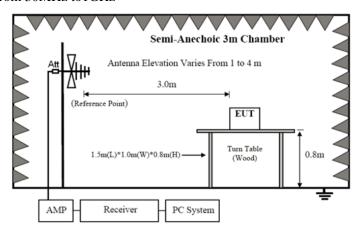
For radiated emissions from 9kHz to 30MHz



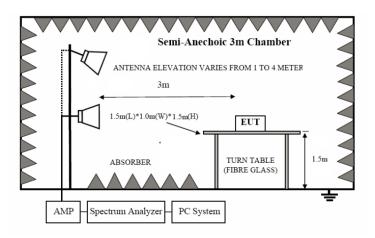
Date: 2023-11-08



For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



- 6.2 Configuration of the EUT
 Same as section 5.3 of this report
- 6.3 EUT Operating Condition

 Same as section 5.4 of this report.
- 6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

A FCC Part 15 Subpart C Paragraph 15.249(a) Limit

Fundamental Frequency	Field Stre	ength of Fundamental (3m)	Field Strength of Harmonics (3m)			
(MHz)	mV/m	dBuV/m	uV/m	dBuV/m		

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_							
	2400-2483.5	50	94 (Average)	114 (Peak)	500	54 (Average)	74 (Peak)
	2400-2403.3	50	94 (Average)	114 (1 cak)	500	J4 (Average)	/4 (1 cak)

Note: 1. RF Field Strength $(dBuV) = 20 \log RF \text{ Voltage } (uV)$

- 2.Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- 3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

B. Frequencies in restricted band are complied to limit on Paragraph 15.209.

Frequency Range (MHz)	Distance (m)	Field strength (dB μ V/m)
0.009-0.490	3	20log(2400/F(kHz)) +40log (300/3)
0.490-1.705	3	20log(24000/F(kHz)) +40log (30/3)
1.705-30	3	69.5
30-80	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. All scanning using PK detector. And the final emission level was get using QP detector for frequency range from 30-1000MHz.As to 1G-25G, the final emission level got using PK. For fundamental measurement, PK detector used.
- 5. The three modulation modes of GFSK, Pi/4D-QPSK and 8DPSK were tested. And only the worst case was recorded in the test report. GFSK was the worst case.
- 6. This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.
- 7. Battery fully charged was used during the test.

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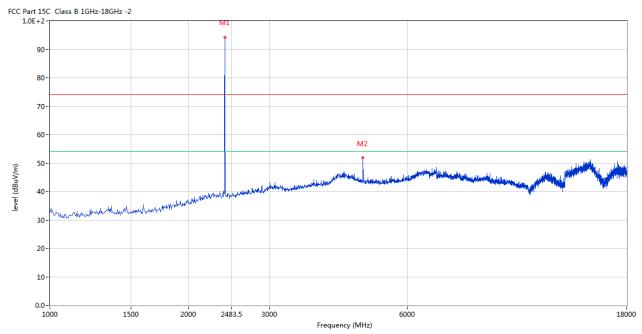


6.5 Test result

A Fundamental & Harmonics Radiated Emission Data

Please refer to the following test plots for details: Low Channel-2402MHz

Horizontal



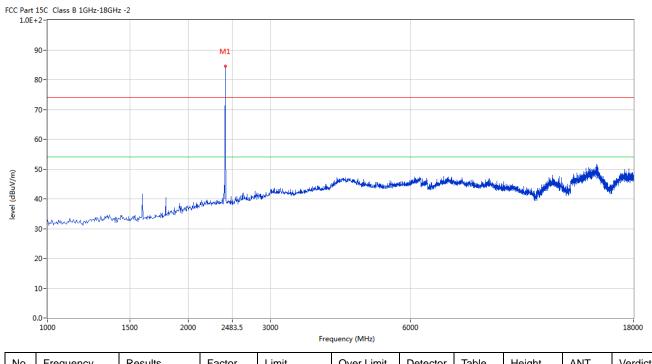
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	2402	94.32	-3.57	114.0	-19.68	Peak	273.00	100	Horizontal	Pass
1**	2402	84.77	-3.57	94.0	-9.23	AV	273.00	100	Horizontal	Pass
2	4802.799	51.89	3.12	74.0	-22.11	Peak	79.00	100	Horizontal	Pass

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Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402	84.93	-3.57	114.0	-29.07	Peak	15.00	100	Vertical	Pass

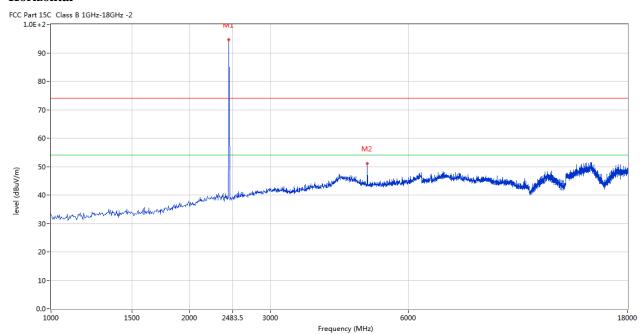
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Please refer to the following test plots for details: Middle Channel-2441MHz

Horizontal



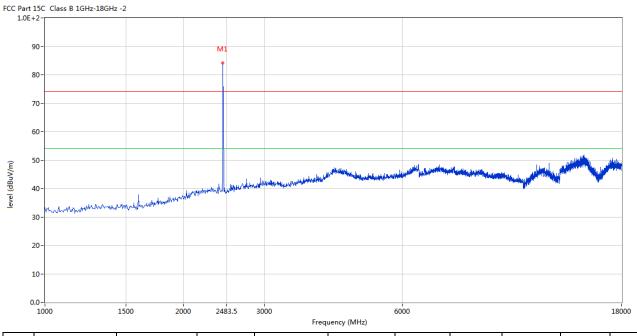
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2441	94.74	-3.57	114.0	-19.26	Peak	91.00	100	Horizontal	Pass
1**	2441	85.38	-3.57	94.0	-8.62	AV	91.00	100	Horizontal	Pass
2	4879.280	51.13	3.20	74.0	-22.87	Peak	258.00	100	Horizontal	Pass

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Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2441	84.13	-3.57	114.0	-29.87	Peak	194.00	100	Vertical	Pass

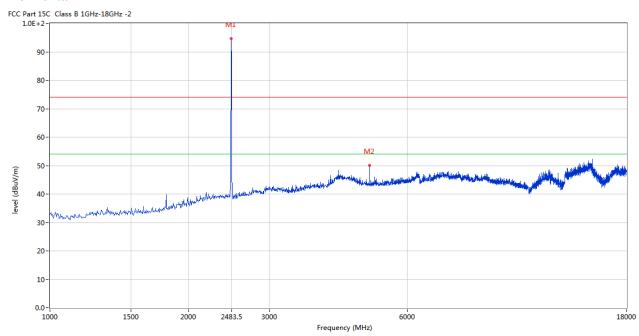
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Please refer to the following test plots for details: High Channel-2480MHz

Horizontal



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	94.61	-3.57	114.0	-19.39	Peak	114.00	100	Horizontal	Pass
1**	2480	85.07	-3.57	94.0	-8.93	AV	114.00	100	Horizontal	Pass
2	4960.010	50.20	3.36	74.0	-23.80	Peak	88.00	100	Horizontal	Pass

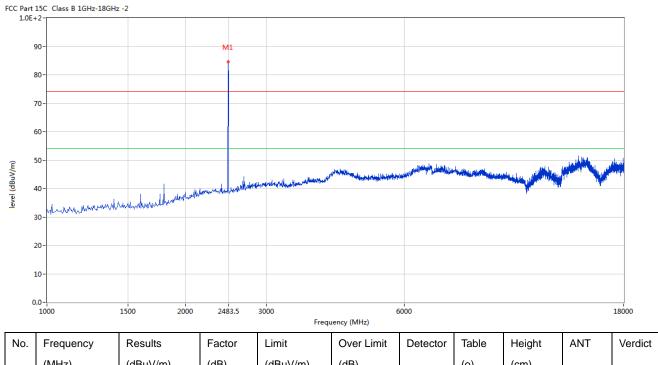
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Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	84.61	-3.57	114.0	-29.39	Peak	29.00	100	Vertical	Pass

Note: (1) Emission Level = Reading Level + Antenna Factor + Cable Loss-Amplifier

- (2) Margin=Emission-Limits
- (3) According to section 15.35(b), the peak limit is 20dB higher than the average limit
- (4) For test purpose, keep EUT continuous transmitting
- (5) For emission above 18GHz and Below 30MHz, It is only the floor noise and less than the limit for more than 20dB. No necessary to take down.
- (6) the measured PK value less than the AV limit.

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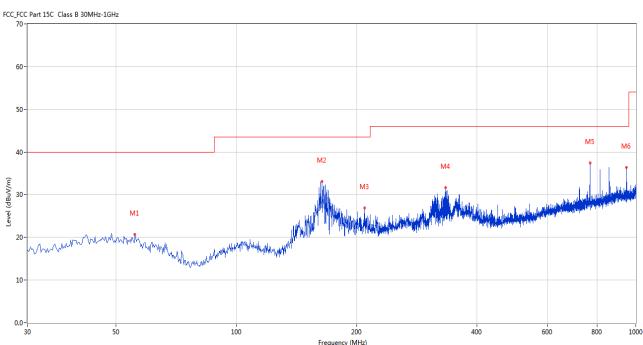


B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	55.699	20.66	-11.94	40.0	19.34	Peak	65.00	100	Horizontal	Pass
2	163.827	33.07	-16.31	43.5	10.43	Peak	360.00	100	Horizontal	Pass
3	209.405	26.94	-13.60	43.5	16.56	Peak	125.00	100	Horizontal	Pass
4	334.504	31.64	-10.00	46.0	14.36	Peak	272.00	100	Horizontal	Pass
5	767.743	37.40	-3.20	46.0	8.60	Peak	38.00	100	Horizontal	Pass
6	948.360	36.35	-1.51	46.0	9.65	Peak	256.00	100	Horizontal	Pass

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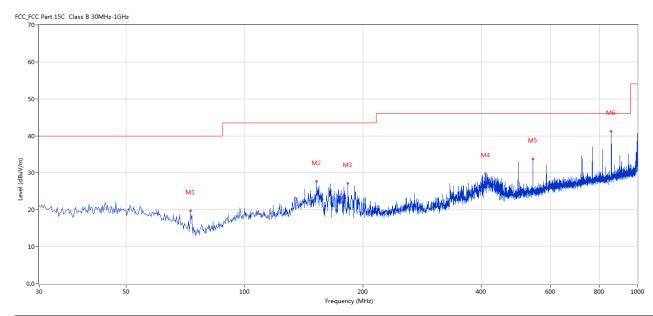


Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	72.912	19.79	-16.82	40.0	20.21	Peak	66.00	100	Vertical	Pass
2	152.674	27.70	-16.88	43.5	15.80	Peak	230.00	100	Vertical	Pass
3	183.222	27.19	-14.95	43.5	16.31	Peak	166.00	100	Vertical	Pass
4	410.145	29.84	-8.52	46.0	16.16	Peak	2.00	100	Vertical	Pass
5	541.790	33.76	-6.36	46.0	12.24	Peak	40.00	100	Vertical	Pass
6	857.931	41.26	-2.37	46.0	4.74	Peak	5.00	100	Vertical	Pass

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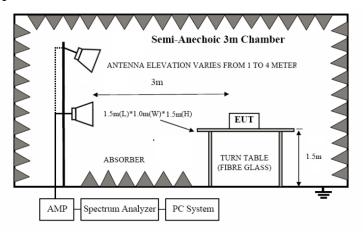


7. Band Edge

7.1 Test Method and test Procedure:

- (1) The EUT was tested according to ANSI C63.10–2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) Set Spectrum as RBW=1MHz, VBW=3MHz and Peak detector used for PK value. RBW=1MHz, VBW=10Hz and Peak detector used for AV value.
- (3) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (4) The antenna polarization: Vertical polarization and Horizontal polarization.

7. 2 Radiated Test Setup



For the actual test configuration, please refer to the related items – Photos of Testing

7.3 Configuration of the EUT

Same as section 5.3 of this report

7.4 EUT Operating Condition

Same as section 5.4 of this report.

7.5 Band Edge Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

The report refers only to the sample tested and does not apply to the bulk.

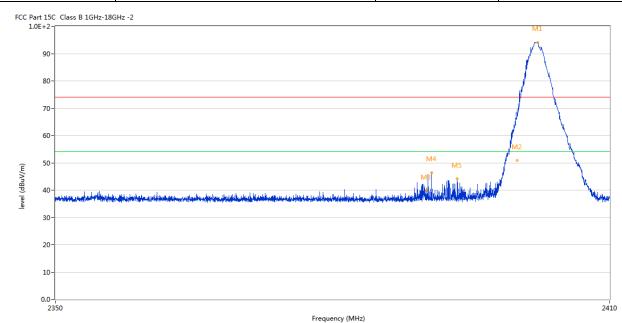
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7.6 Test Result

Product:	Triple Mode Gaming Headset	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



Frequency Results Factor Limit Over Limit Detector Table Height ANT Verdict (dB) (dBuV/m) (dBuV/m) (dB) (MHz) (o) (cm) 2402.157 -3.57 74.0 Peak 95.00 100 N/A 1 94.13 20.13 Horizontal 2400.000 -3.57 -8.18 2 65.82 74.0 Peak 92.29 100 Horizontal **Pass** 2** 2400.000 50.79 -3.53 54.0 -3.21 ΑV 140.00 100 Horizontal Pass -37.21 3 2390.000 36.79 -3.53 74.0 Peak 140.00 100 Horizontal Pass 4 2390.565 46.42 -3.53 74.0 -27.58 Peak 175.00 100 Horizontal Pass 5 2393.369 44.14 -3.54 74.0 -29.86 Peak 190.00 100 Horizontal **Pass**

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	Product:	Tripl	e Mode Ga	aming Heads	et	Detect	tor		Vertical	
	Mode	J	Keeping Tr	ansmitting		Test Vol	tage		DC3.7V	
Тє	emperature		24 de	g. C,		Humid	lity	:	56% RH	
T	est Result:		Pa	SS						
CC Part 1.0E	15C Class B 1GHz-18G	Hz -2								
	90-							M1		
	80-							$-\Lambda$		
	70-									
	60-									
						M4			\	
(m//	50-					1	M5	M2 •		
level (dBuV/m)	40 - Windowski Disc	المتنامات لغفم للقرحان الغاط المتاملات	والمتعدد ألفان ويراجعان	والمساور والمساورة والمساورة	والمائم والمراب أفرون أونوساه رابانا		والمانية المانية الماني	/	Materialist	
<u>e</u>	30-					1				
	20-									
	20-									
	10-									
	0.0-								24	10
	0.0- 2350			Frequ	uency (MHz)				24	10
No.		Results	Factor	Frequ Limit	Over Limit	Detector	Table	Height	ANT	verdic
	2350	Results (dBuV/m)	Factor (dB)			Detector	Table (o)	Height (cm)		
	Frequency			Limit	Over Limit	Detector Peak		_		
No.	Frequency (MHz)	(dBuV/m)	(dB)	Limit (dBuV/m)	Over Limit (dB)		(o)	(cm)	ANT	Verdic
No.	Frequency (MHz) 2401.827	(dBuV/m) 84.88	(dB) -3.57	Limit (dBuV/m) 74.0	Over Limit (dB)	Peak	(o) 335.00	(cm)	ANT Vertical	Verdic N/A
No. 1 2	Frequency (MHz) 2401.827 2400.000	(dBuV/m) 84.88 62.81	(dB) -3.57 -3.57	Limit (dBuV/m) 74.0 74.0	Over Limit (dB) 10.88 -11.19	Peak Peak	(o) 335.00 324.00	(cm) 100 100	ANT Vertical Vertical	Verdice N/A Pass
No. 1 2 2**	Frequency (MHz) 2401.827 2400.000 2400.000	(dBuV/m) 84.88 62.81 46.32	(dB) -3.57 -3.57 -3.57	Limit (dBuV/m) 74.0 74.0 54.0	Over Limit (dB) 10.88 -11.19 -7.68	Peak Peak AV	(o) 335.00 324.00 324.00	(cm) 100 100 100	ANT Vertical Vertical Vertical	Verdice N/A Pass Pass

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I	Product:	Trip	le Mode (Gaming He	adset	P	olarity		Horizont	al
	Mode		Keeping 7	Γransmittin	g	Test	t Voltage		DC3.7V	I
Te	mperature		24 d	leg. C,		Н	ımidity		56% RI	-I
Te	est Result:		F	Pass						
C Part 1	15C Class B 1GHz-18GF	l z -2	M1							7
	90-		A CONTRACTOR OF THE PROPERTY O							-
8	30-		1							
7	70-		y d	1/4						
6	50-		•	, A	<u> </u>					
. 5	50-			M2						
4	10 - Bayliffrence (beld, mail, fathered)	and the spirit of the later		*	W. Markette	and the state of the state of	Hendrich Landel in Lande	Helicon and the second	kathata da palastitutakan	
	30-									
2	20-									
1	10-									-
0	.0-									
	2470			2483.	5 Frequency (MHz)				25	500
No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdi
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
1	2479.823	94.00	-3.57	74.0	20.00	Peak	95.00	100	Horizontal	N/A
2	2483.500	58.98	-3.57	74.0	-15.02	Peak	105.00	100	Horizontal	Pass
2**	2483.500	43.27	-3.57	54.0	-10.73	AV	105.00	100	Horizontal	Pass

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]	Product:	Tripl	le Mode Ga	aming Heads	et	Detec	tor		Vertical	
	Mode	I	Keeping Tr	ansmitting		Test Vo	ltage		DC3.7V	
Te	mperature		24 de	g. C,		Humio	lity		56% RH	
Te	est Result:		Pa	SS						
	rt 15C Class B 1GHz-1 DE+2-	8GHz -2			·					
	90-			M1						
	80-		J.	100						
	70-									
	1		1	\\						
	60-		/	M ₂						
/m)	50-		1	M2						
level (dBuV/m)	50-	iiikiaisekkekideskeesse		M2	And the second second second second	ay shekara kura kika aykii askal	negating discourse he had been separately		had had been a second a second	
level (dBuV/m)	50-	المنطوعة والمتعادلة وا		M2	No de promisión de la designada de la decida decida de la decida decida de la decida decida decida de la decida de la decida de la decida decida decida de la decida decida de la decida de la decida dec	and the still while	and the second second		the state of the s	e de la descripción de la desc
level (dBuV/m)	30-	i i de la cia de la		M2	And the survey of the survey o	Marken kurk kiran ki	and the second second	الويانية مرا كالم خوادان إلى ا	المالية	Later Later
	30- 20-	i i i ka		2483		Markinsky disease in a see	and the second second			2500
level (dBuV/m)	50- 40- 30- 20-	Results	Factor	2483	.5	Detector	Table	Height	ANT	2500
	30- 20- 10- 2470		Factor (dB)	2483	.5 Frequency (MHz)					2500
	30- 20- 10- 2470	Results		2483	.5 Frequency (MHz)		Table	Height		

Note: 1. The PK emission level less than the AV limit. No necessary to record the AV emission level.

2. For Restricted band test, the three modulation modes of GFSK, Pi/4D-QPSK and 8DPSK were tested. And only the worst case was recorded in the test report. GFSK was the worst case.

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8.0 Antenna Requirement

Applicable Standard

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

This product has a PCB antenna with gain -0.68dBi maximum. It fulfills the requirement of this section.

Test Result: Pass

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9.0 20dB Bandwidth Measurement

Test Configuration



Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW.

The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

Limit

N/A

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Test Result

Product:	Triple N	Mode Gaming H	eadset	Test Mo	ode:	Ke	eep transmi	tting
Mode	Kee	ping Transmitti	ng	Test Vol	tage		DC3.7V	
Temperature		24 deg. C,		Humid	lity	56% RH		
Test Result:		Pass		Detect	tor		PK	
OdB Bandwidth		888KHz						
Ref 10 d	Bm	*Att 20 dB	*RBW 30 *VBW 10 *SWT 10	00 kHz		1 [T1 1 2.401862	.47 dBm	
10		1		I	ndB [7 BW 888	[1] 20 3.000000 [T1 nd		A
PK (AXH)10			\sim		Temp 2	2.401574	1 _	
20		T1/		V _{T2}			.66 dBm	
30	7	<i>M</i>		Υ,	<u>\</u>			
40					$\overline{}$	my		
-50	<i>y</i> <i>y</i>				<u>``</u>	\ \ \\\		BDB
-60							man	
70								
80								
-90								
Center 2.	402 GHz	3(00 kHz/	<u> </u>		Spa	an 3 MHz	

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Span 3 MHz

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Product:	Triple Mode Gaming Head	set Te	est Mode:	Keep tran	smitting
Mode	Keeping Transmitting		st Voltage	DC3	.7V
Temperature	24 deg. C,	Н	lumidity	56%	RH
Test Result:	Pass	I	Detector	Pk	(
20dB Bandwidth	864KHz				
Ref 10 dBm 10 -0 -10 -20	*Att 20 dB	*RBW 30 kHz *VBW 100 kH: *SWT 10 ms	ndB [TBW 864 Temp 1 2 Temp 2	.000000 000 kHz [T1 nd8] -19.09 dBm .440574 000 GHz	A
30 40 50 60 70					3DB

Center 2.441 GHz

300 kHz/

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Product:		Triple M	Iode Gar	ning Head	iset	Test	Mode:		Keep trai	nsmitting
Mode				nsmitting		Test `	Voltage		DC3	5.7V
Temperature			24 deg	. C,		Hur	nidity		56%	RH
Test Result:		Pass				Detector		PK		
20dB Bandwidth			858KI	Hz					_	-
Ref 10 d	lBm	*	*Att 2	0 dB	*RBW 30 *VBW 10 *SWT 10	00 kHz] .51 dBm 000 GHz	
10 -0				1			Temp 1	.000000 T1 nd -18	.88 dBm	A
10			T1 √	<i>,</i>		√ _{T2}	Temp 2	[T1 nd -19	000 GHz Bj .49 dBm 000 GHz	
30		<i>ل</i> ہ	~			***	Y			
40		\ <u></u>						~√√.		3DB
-50 -60	V							\	mayam	
70										
-80										
-90 Center 2.	48 GHz			300	kHz/			Spa	an 3 MHz	

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Product:	Triple Mode Gaming He	eadset	Test Mode:	Keep transmitting	
Mode	Keeping Transmittin	g	Test Voltage	DC3.7V	
Temperature	24 deg. C,		Humidity	56% RH	
Test Result:	Pass		Detector	PK	
20dB Bandwidth	1.254MHz				
Ref 10 di	Bm *Att 20 dB	*RBW 30 *VBW 10 *SWT 10	0 kHz ms	r 1 [T1] 0.39 dBm 2.401862000 GHz	
-0	1		ndB [BW Temp	T1] 20.00 dB 1.254000000 MHz 1 [T1 nds] A	
1 PK MAXH 10		1 hr	M Temp	2.401400000 GHz 2 [TI nd8] -19.77 dBm	
-20			\T2 ▼	2.402654000 GHz	
30					
A50 - M				3DB	
60					
-70					
80					
-90 Center 2.		0 kHz/		Span 3 MHz	

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Product:	Triple Mode	Gaming Heads	et	Test	Mode:		Keep tran	smitting
Mode	Keeping	Transmitting		Test '	Voltage		DC3	.7V
Temperature	24	deg. C,		Hur	nidity		56%	RH
Test Result:		Pass		Det	ector		Pl	Κ
20dB Bandwidth	1.2	54MHz						-
Ref 10 di	3m * Att		*RBW 30 *VBW 100 *SWT 10) kHz		1 [T1 0	.45 dBm	
10		1			ndB [T BW 1 Temp 1		.00 dB 000 MHz	A
L PK MAXH			home	<i>ک</i> ے ۔		.440400		
				ν,	Temp 2	TI nd. -19 .441654	.91 dBm	
20					7			
30					7			
-40						W V	_س_	3DB
\\$0 							\m_/	
60								
-70								
-80								
-90								

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Product:	Triple I	Mode Gam	ing Head	lset	Test	Mode:		Keep tran	smitting
Mode	Kee	eping Tran	smitting		Test	Voltage		DC3	.7V
mperature		24 deg.	C,		Hur	midity		56%	RH
est Result:		Pass			De	tector	PK		K
B Bandwidth	1.254MHz								-
Ref 10 d	Bm	* Att 20) dB	*RBW 30 *VBW 10 *SWT 10	0 kHz	2	.479862	.19 dBm 000 GHz	•
10			1			ndB [T BW 1	1] 20 .254000		A
		-0.5A	$\left\langle \begin{array}{c} 1 \\ 1 \\ 1 \end{array} \right\rangle$	\	Λ_{n}		.479394	_	
-10			\(\)		, V	Temp 2	-19 .480648	.67 dBm	
-20						4			
-30						\			
-40						V)	W/~	~~~	3DB
- Harry								\	
60									
-70									
-80									
-90	40 CH=		300	l-II- /			Cons	n 2 Mile	
Center 2.	40 GHZ		300	kHz/			Spa	ın 3 MHz	

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Product:	Triple Mode Gaming He	adset	Test Mode:	Keep transmitting	
Mode	Keeping Transmitting	g T	est Voltage	DC3.7V	
Temperature	24 deg. C,		Humidity	56% RH	
Test Result:	Pass		Detector	PK	
20dB Bandwidth	1.254MHz				
Ref 10 di	Bm *Att 20 dB	*RBW 30 k *VBW 100 *SWT 10 m	kHz	r 1 [T1]	
-0	1		BW	1.254000000 MHz 1 [T1 nd8] A -19.70 dBm 2.401400000 GHz	
10 20		V ~~ (\v \cdot)	Temp	2 [T1 nds] -19.73 dBm 2.402654000 GHz	
-30					
40 50				3DB	
60					
70					
-80					
-90 Center 2.	402 GHz 300		L	Span 3 MHz	

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Span 3 MHz

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-90

Center 2.441 GHz



8DPSK			
Product:	Triple Mode Gaming Headset	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	1.248MHz		
Ref 10 dBm 10 -0 -20 -30	*RBW 30 *VBW 10 *Att 20 dB *SWT 10	0 kHz ms 2 ndB [T BW 1 Temp 1	1 [T1]
AR. M. M.			3DB
60			
80			

300 kHz/

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Product:	Triple M	ode Gaming He	adset	Test N	Iode:		Keep tran	smitting
Mode	Keep	oing Transmittin	g	Test Ve	oltage		DC3	.7V
Temperature		24 deg. C,		Hum	idity		56%	RH
Test Result:		Pass		Dete	ctor		Pl	K
20dB Bandwidth		1.254MHz			-			
Ref 10 di	3m *	Att 20 dB	*RBW 30 *VBW 10 *SWT 10	0 kHz ms	2	.4798680	26 dBm	
-0		1		:	ndB [T BW 1 Temp 1	.254000 [Tl nd	3_]	A
PK10			My M	m	2 Temp 2		_	
20				7	Γ2 7 2	-19. .480648	77 dBm	
30					$\sqrt{}$			
40					<u></u>	. ^()		
1,500000						7° W		3DB
60								
70								
80								
-90								

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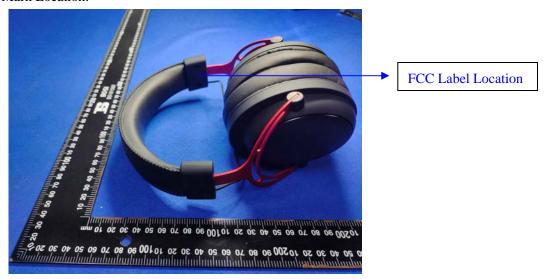


10.0 FCC ID Label

FCC ID: 2A9SZHOLOSONIC

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:



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11.0 Photo of testing

11.1 Conducted test View



Date: 2023-11-08



Radiated emission test view



11.2 Photographs – EUT

Please refer test report TW2309401-01E

--End of the report--

The report refers only to the sample tested and does not apply to the bulk.

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