

Report No.: TW2308114E

Applicant: Shenzhen Yixi Technology Co., LTD

Product: HELMET WIRELESS EARPHONE

Model No.: Q08 2X, A14S, A15S, A16S

Trademark: N/A

Test Standards: FCC Part 15.249

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.10 & FCC Part 15 Subpart C,

Paragraph 15.249 regulations for the evaluation of

electromagnetic compatibility

Approved By

Terry Tang

Manager

Dated: August 18, 2023

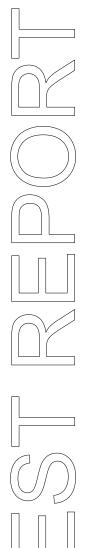
Results appearing herein relate only to the sample tested

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



Report No.: TW2308114E Page 2 of 54

Date: 2023-08-18



Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAS-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of testing Laboratories.

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

40

Report No.: TW2308114E

Date: 2023-08-18



Test Report Conclusion

Content 1.0 General Details..... 1.1 Test Lab Details. 1.2 Applicant Details. 4 1.3 Description of EUT 4 1.4 Submitted Sample.... 4 1.5 Test Duration. 5 1.6 Test Uncertainty. 5 1.7 Test By..... 5 List of Measurement Equipment..... 2.0 7 3.0 Technical Details..... 3.1 Summary of Test Results.... 7 3.2 7 Test Standards.... 4.0 EUT Modification.... 7 Power Line Conducted Emission Test.... 5.0 8 5.1 Schematics of the Test. 8 5.2 Test Method and Test Procedure. 5.3 Configuration of the EUT..... 5.4 EUT Operating Condition. 5.5 Conducted Emission Limit. 9 5.6 Test Result. 6.0 Radiated Emission test..... 12 Test Method and Test Procedure. 6.1 12 6.2 Configuration of the EUT..... 13 6.3 EUT Operation Condition. 13 6.4 Radiated Emission Limit. 13 6.5 Test Result. 15 7.0 Band Edge.... 23 7.1 Test Method and Test Procedure. 23 7.2 Radiated Test Setup. 23 7.3 Configuration of the EUT.... 23 7.4 EUT Operating Condition. 23 7.5 Band Edge Limit.... 23 7.6 Band Edge Test Result. 24 8.0 Antenna Requirement. 28 20dB bandwidth measurement.... 9.0 29 10.0 39 FCC ID Label.... Photo of Test Setup and EUT View....

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

11.0

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

Report No.: TW2308114E Page 4 of 54

Date: 2023-08-18



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: Shenzhen Yixi Technology Co., LTD

Address: Second Floor, Building B, Area A, Longquan Science Park, Dalang Huaxing Road, Longhua

District, Shenzhen City, China

Telephone: -Fax: --

1.3 Description of EUT

Product: HELMET WIRELESS EARPHONE
Manufacturer: Shenzhen Yixi Technology Co., LTD

Address: Second Floor, Building B, Area A, Longquan Science Park, Dalang Huaxing

Road, Longhua District, Shenzhen City, China

Trademark: N/A Model Number: Q08 2X

Additional Model Name A14S, A15S, A16S

Rating: DC5V, 1A

Battery: DC3.7V, 1000mAh Li-ion battery

Modulation Type: GFSK, Л/4DQPSK, 8DPSK for Bluetooth

Operation Frequency: 2402-2480MHz

Channel Number: 79
Channel Separation: 1MHz
Hardware Version: V1.0
Software Version: V1.2
Serial No.: N/A

Antenna Designation Chip antenna with gain 0.08dBi Max (Get from the antenna specification)

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

Report No.: TW2308114E Page 5 of 54

Date: 2023-08-18



1.4 Submitted Sample: 2 Samples

1.5 Test Duration

2023-08-05 to 2023-08-18

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

Page 6 of 54

Report No.: TW2308114E

Date: 2023-08-18



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		1	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	1	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

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

Page 7 of 54

Report No.: TW2308114E

Date: 2023-08-18



3.0 Technical Details

3.1 Summary of test results

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

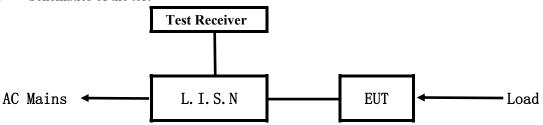
Report No.: TW2308114E

Date: 2023-08-18



5.0 Power Line Conducted Emission Test

5.1 Schematics of the test

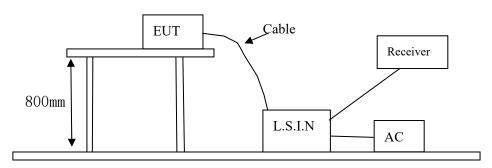


EUT: Equipment Under Test

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
HELMET WIRELESS	Shenzhen Yixi Technology	000 2V A 14C A 15C A 16C	240ML 0002V
EARPHONE	Co., LTD	Q08 2X, A14S, A15S, A16S	2A9MI-Q082X

Report No.: TW2308114E Page 9 of 54

Date: 2023-08-18



B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

C. Peripherals

Device	Manufacturer	Model	Rating
Power Supply	Infinix	XC1165EU	Input: 100-240V~, 50/60Hz, 1.5A;
			Output: DC5V/3.0A; DC9V/3.0A;
			DC12.0V/3.0A; DC15V/3.0A;
			DC20.0V/3.25A

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: 2023-08-18



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

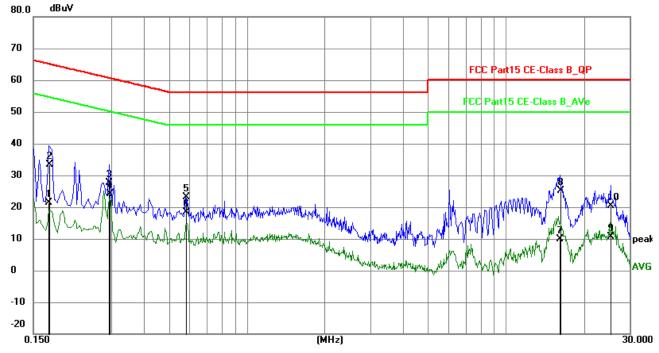
EUT Operating Environment

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	0.1720	11.73	9.77	21.50	54.86	-33.36	AVG	Р
2	0.1730	23.64	9.77	33.41	64.82	-31.41	QP	Р
3	0.2930	17.97	9.76	27.73	60.44	-32.71	QP	Р
4	0.2940	14.44	9.76	24.20	50.41	-26.21	AVG	Р
5	0.5810	13.25	9.77	23.02	56.00	-32.98	QP	Р
6	0.5830	8.73	9.77	18.50	46.00	-27.50	AVG	Р
7	16.1380	-0.48	10.45	9.97	50.00	-40.03	AVG	Р
8	16.1530	14.64	10.45	25.09	60.00	-34.91	QP	Р
9	25.4240	-0.49	11.02	10.53	50.00	-39.47	AVG	Р
10	25.4390	9.36	11.02	20.38	60.00	-39.62	QP	Р

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

Date: 2023-08-18



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

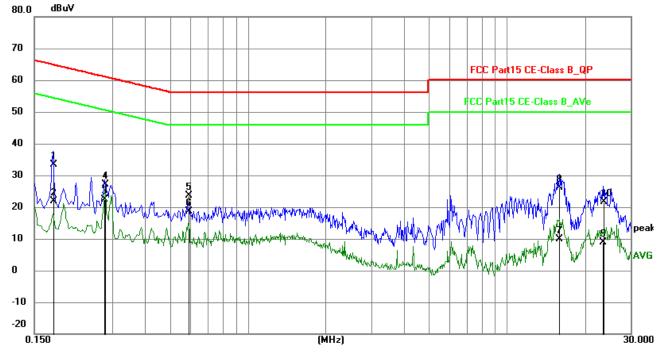
EUT Operating Environment

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	0.1770	23.64	9.77	33.41	64.63	-31.22	QP	Р
2	0.1770	12.10	9.77	21.87	54.63	-32.76	AVG	Р
3	0.2800	12.73	9.76	22.49	50.82	-28.33	AVG	Р
4	0.2810	17.41	9.76	27.17	60.79	-33.62	QP	Р
5	0.5910	13.83	9.77	23.60	56.00	-32.40	QP	Р
6	0.5910	8.90	9.77	18.67	46.00	-27.33	AVG	Р
7	15.9610	-0.64	10.44	9.80	50.00	-40.20	AVG	Р
8	15.9630	15.68	10.44	26.12	60.00	-33.88	QP	Р
9	23.5090	-2.05	10.90	8.85	50.00	-41.15	AVG	Р
10	23.5990	10.74	10.90	21.64	60.00	-38.36	QP	Р

Page 12 of 54

Report No.: TW2308114E

Date: 2023-08-18



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:

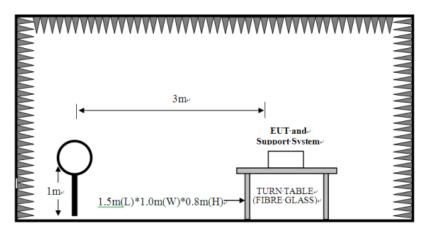
Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
ADOVE IGHZ	Peak	1MHz	10Hz	Average

(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

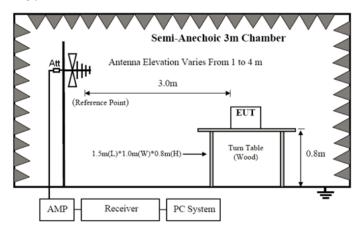


Report No.: TW2308114E

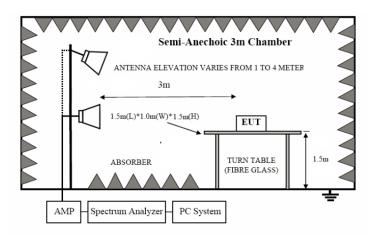
Date: 2023-08-18



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		

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

Report No.: TW2308114E Page 14 of 54

Date: 2023-08-18



2400-2483.5	50	94 (Average)	114 (Peak)	500	54 (Average)	74 (Peak)
Z 4 00-Z 4 03.3	30	74 (Average)	11 4 (1 cak)	500	J+ (Avclage)	/4 (F 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.
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 portable 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.

Report No.: TW2308114E Page 15 of 54

Date: 2023-08-18

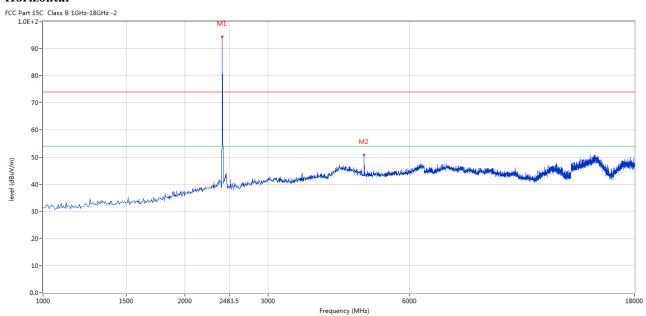


6.5 Test result

A Fundamental & Harmonics Radiated Emission Data

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

Horizontal



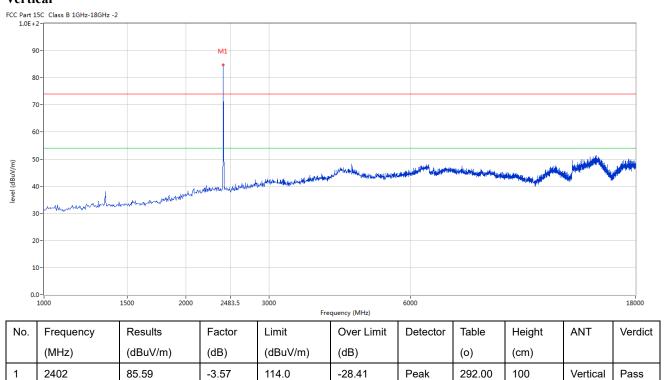
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2402	94.22	-3.57	114.0	-19.78	Peak	227.00	100	Horizontal	Pass
1*	2402	84.35	-3.57	94.0	-9.65	AV	227.00	100	Horizontal	Pass
2	4802.799	56.83	3.12	74.0	-17.17	Peak	196.00	100	Horizontal	Pass

Report No.: TW2308114E Page 16 of 54

Date: 2023-08-18



Vertical



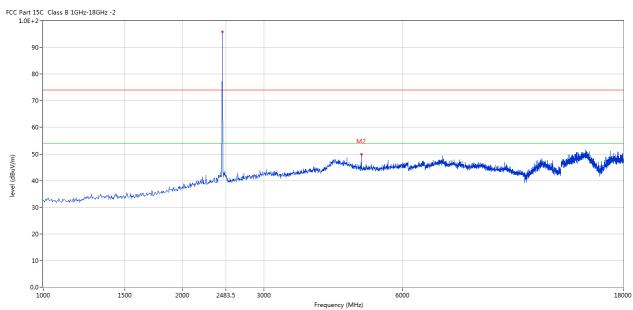
Report No.: TW2308114E Page 17 of 54

Date: 2023-08-18



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

Horizontal



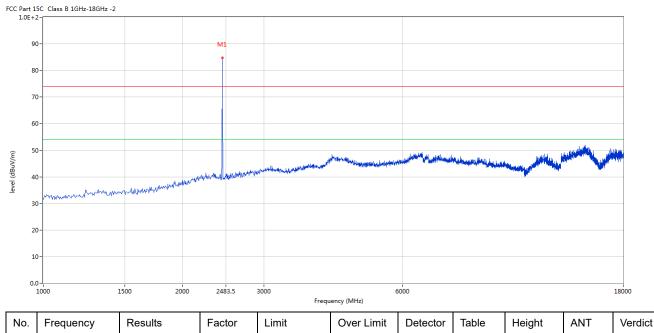
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2440	95.91	-3.57	114.0	-18.09	Peak	269.00	100	Horizontal	Pass
1*	2440	86.23	-3.57	94.0	-7.77	AV	269.00	100	Horizontal	Pass
2	4879.280	49.93	3.20	74.0	-24.07	Peak	264.00	100	Horizontal	Pass

Report No.: TW2308114E Page 18 of 54

Date: 2023-08-18



Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	2440	84.76	-3.57	114.0	-29.24	Peak	100.00	100	Vertical	Pass

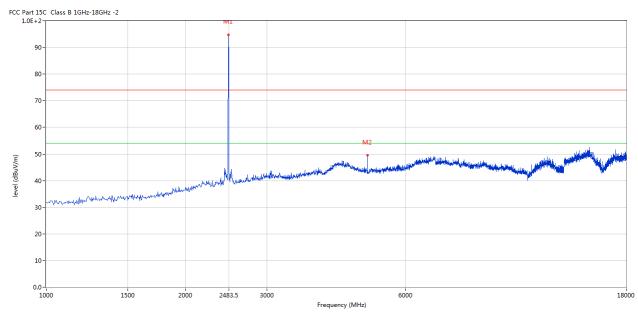
Report No.: TW2308114E Page 19 of 54

Date: 2023-08-18



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

Horizontal



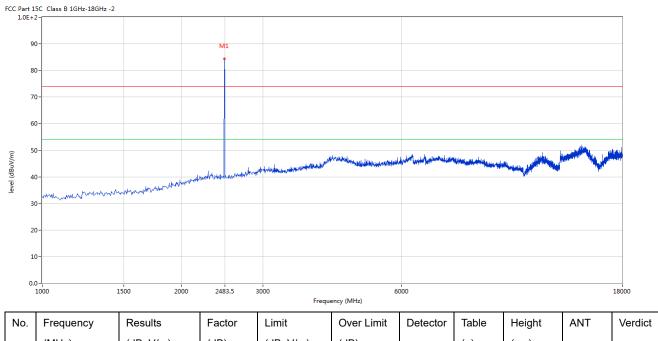
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	95.08	-3.57	114.0	-18.92	Peak	223.00	100	Horizontal	Pass
1*	2480	85.28	-3.57	94.0	-8.72	AV	223.00	100	Horizontal	Pass
2	4960.010	49.50	3.36	74.0	-24.50	Peak	234.00	100	Horizontal	Pass

Report No.: TW2308114E Page 20 of 54

Date: 2023-08-18



Vertical



No	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	84.36	-3.57	114.0	-29.64	Peak	96.00	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.

Report No.: TW2308114E Page 21 of 54

Date: 2023-08-18

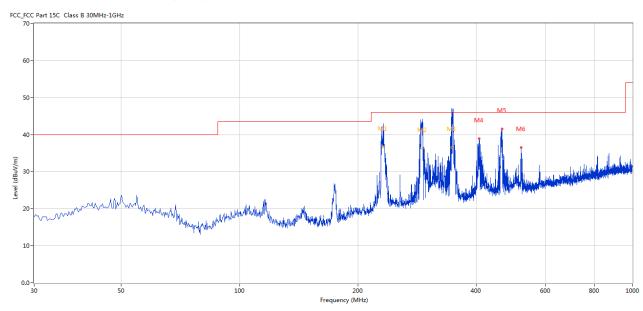


B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

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	231.840	44.52	-12.56	46.0	1.48	Peak	126.00	140	Horizontal	Pass
1*	231.840	36.59	-12.56	46.0	9.41	QP	126.00	140	Horizontal	Pass
2	292.048	44.52	-11.26	46.0	1.48	Peak	281.00	119	Horizontal	Pass
2*	292.048	36.28	-11.26	46.0	9.72	QP	281.00	119	Horizontal	Pass
3	346.411	45.27	-9.45	46.0	0.73	Peak	135.00	101	Horizontal	Pass
3*	346.411	36.46	-9.45	46.0	9.54	QP	135.00	101	Horizontal	Pass
4	406.993	38.84	-8.61	46.0	7.16	Peak	72.00	100	Horizontal	Pass
5	465.664	41.47	-7.73	46.0	4.53	Peak	24.00	100	Horizontal	Pass
6	520.212	36.49	-6.76	46.0	9.51	Peak	354.00	100	Horizontal	Pass

Report No.: TW2308114E Page 22 of 54

Date: 2023-08-18

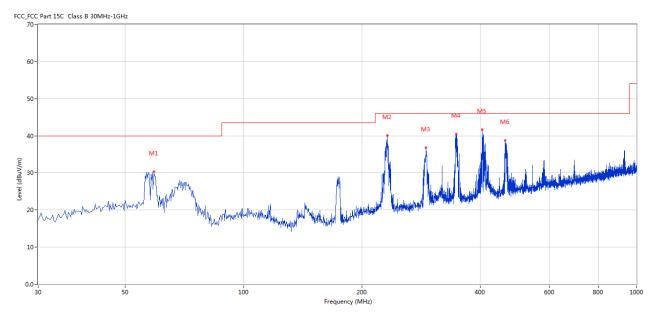


Radiated Emission In Vertical (30MHz----1000MHz)

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	59.093	30.31	-12.87	40.0	9.69	Peak	309.00	100	Vertical	Pass
2	231.952	40.03	-12.56	46.0	5.97	Peak	75.00	100	Vertical	Pass
3	291.350	36.73	-11.24	46.0	9.27	Peak	309.00	100	Vertical	Pass
4	347.353	40.47	-9.42	46.0	5.53	Peak	223.00	100	Vertical	Pass
5	405.296	41.64	-8.68	46.0	4.36	Peak	334.00	100	Vertical	Pass
6	463.482	38.72	-7.78	46.0	7.28	Peak	287.00	100	Vertical	Pass

Report No.: TW2308114E Page 23 of 54

Date: 2023-08-18

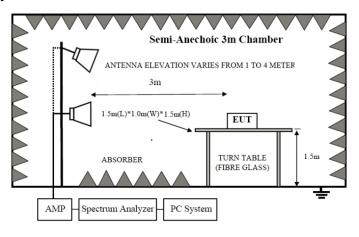


7. Band Edge

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.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

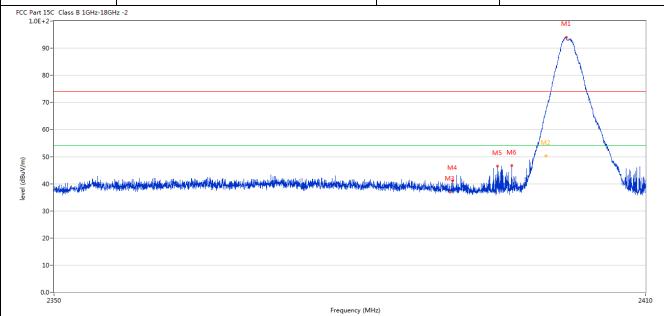
Report No.: TW2308114E Page 24 of 54

Date: 2023-08-18



7.6 Test Result

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



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2401.872	94.00	-3.57	74.0	20.00	Peak	10.00	100	Horizontal	N/A
2	2400.003	65.28	-3.57	74.0	-8.72	Peak	61.00	100	Horizontal	Pass
2**	2400.003	50.25	-3.57	54.0	-3.75	AV	61.00	100	Horizontal	Pass
3	2390.010	36.89	-3.53	74.0	-37.11	Peak	20.00	100	Horizontal	Pass
4	2390.280	41.11	-3.53	74.0	-32.89	Peak	5.00	100	Horizontal	Pass
5	2394.869	46.50	-3.55	74.0	-27.50	Peak	61.00	100	Horizontal	Pass
6	2396.278	46.68	-3.55	74.0	-27.32	Peak	10.00	100	Horizontal	Pass

Report No.: TW2308114E Page 25 of 54



1	Product:	HELME	T WIREL	ESS EARPH	ONE	Detect	or		Vertical	
	Mode	F	Keeping Tr	ansmitting		Test Vol	tage		DC3.7V	
Ter	mperature		24 de	g. C,		Humid	ity	,	56% RH	
Tes	st Result:		Pa	SS						
Part 15	5C Class B 1GHz-18GHz	-2			<u> </u>					
90									141	
90)-								M1	
80)-							1		
70)-									
60)-								$\longrightarrow ackslash$	
-	.									
50)-							M2	1	
50 40		ويرون والمراجع والمرا	d difference de description de la description description de la de	and the second s	ورود المتعادد والمتعادد والمتعاد والمتعادد والمتعادد والمتعادد والمتعادد والمتعادد والمتعادد وال	M: Milalia de Malalia de Milalia		M2 •	/	A Secretary
	- c	ويرون والموافق فيضاورون والانتجاب والمساول والموافق والمساول والموافق والمساول والموافق والمو	ikidadi da maraki da ilika ka iliya ka	and the second second and the second	ومودوا والمتعادمة والمتعادم والمتعادم والمتعادم والمتعادم والمتعادم والمتعادم والمتعادم			M2 •	\	- Selvengerpiller
40 30)- 	, and the state of the state o	ni initalija kala merujuki simulu di manija ke	nd at deficiency or passage which define	ڔڔڽؠۄڸڹؿ ٷڝ ؞ٷ؞ڵۺڵڡڹۻؿڽڔۑۻ			M2 o	\	- Americanica
40)- 	nastak velte side til ett sin a grande hajd a kalla nastan e	n ideal dae om og de deutste om og de	त्त्रोत्तर्भावकारी स्थापना क्षेत्र कार्यक्ष कर्म क्षेत्र कार्यक्ष कर्म क्षेत्र कार्यक्ष कर्म क्षेत्र कार्यक्ष	rengadional and althoughthis pages			M2 •		A manufacture of
40 30) - 	ng salah	in ideal also are consistent and an incident	nd de dettina e red ar recent de construit de	ireigadureid durk de audt bird engre			M2 o	\	A markety super
40 30 20 10		nastak vede ploties i negen _{al} keja keja keja keja keja keja keja keja	nt side all allers over a color district distric	nit de al triple and an est and an est and an est and an est and as est and as est and as est and as est and a	sanjaakuuntanhakkoasiittiidanys			M2 o		1
40 30 20 10		washing the fibrate site of the fibrate site o	it vilk ilje eller en regels interes en enige he		Frequency (MHz)			M2 o		1
40 30 20 10		Results	Factor					Height	ANT	ı
40 30 20 10	2350				Frequency (MHz)	is is a political for a play of the same is the	or Level and the second second	Height (cm)	ANT	2
40 30 20 10 0.0.0	Frequency	Results	Factor	Limit	Frequency (MHz) Over Limit	is is a political for a play of the same is the	Table	_	ANT Vertical	24
40 30 20 10 0.0.0	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Frequency (MHz) Over Limit (dB)	Detector	Table	(cm)		² · Verdi
30 20 10	Frequency (MHz)	Results (dBuV/m) 85.17	Factor (dB) -3.57	Limit (dBuV/m) 74.0	Frequency (MHz) Over Limit (dB) 11.17	Detector Peak	Table (o) 296.00	(cm)	Vertical	Verdid

Page 26 of 54 Report No.: TW2308114E

	Product:	HELM	ET WIRE	LESS EARP	HONE	P	olarity		Horizo	ntal
	Mode		Keeping 7	Fransmitting		Tes	t Voltage	;	DC3.7	7V
Т	emperature		24 d	leg. C,		Hı	umidity		56% F	RH
T	est Result:		P	ass						
C Part 1.0E	t 15C Class B 1GHz-18GHz	-2	,	VII.		•		1		
	90-									
										
	70-									
	60-	/								
	50-	المعالم المالم		M	_ \	Vidio				
	60-	Haraban and American		M	_ \	MANUTALANIA	on harden Walter from	employeeter the tenton to the	ykiki javahno-dishnoid/yen	n, Afrikan, entre en
	50-	Harabana and Abbreve		M	_ \	.ll/4/th/h.y.d.dam.r.	nya haqehal didi gerajera	amppar/stylederest.	alaka jandara Asaba yang dalah jandara kang dalah jandara kang dalah jandara kang dalah jandara kang dalah jan	_{op} Aphleson Who wight
	60- 50- 40	Harabanan de de de la companya de de la companya de de la companya de de la companya del la companya de la comp		M	_ \	M/MM/planer	nga kangkal di di gérapara	omployet to Various.	adida hasabarradharaadharaa	_{re} Aphleon, Rollyn 11944
	60- 50- 40	Makaya karana and da		M	_ \	MANUN JAAnn	nga kangdallad di afanjara	angglarysis fire Various La	ghtda Jasushu e-dhishunah Agua	_{to, A} phico _{s,} Al _e corphi
(III/Apap) laka	60 - 50 - 40	Harrie Barren and harrier		M	MANA MANA	M/Maybalanaya	ngantraghtall deltydragheri	employed to Various.	ahda hasabar Asabar wa Afran	
(up/ang) level	60- 50- 40- 30- 20- 10-	Results	Factor	•	3.5	Detector	Table	Height	ANT	y Verdi

No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
1	2480.205	95.03	-3.57	74.0	21.03	Peak	231.00	100	Horizontal	N/A
2	2483.500	59.99	-3.57	74.0	-14.01	Peak	226.80	100	Horizontal	Pass
2*	2483.500	46.32	-3.57	54.0	-7.68	AV	226.80	100	Horizontal	Pass

Report No.: TW2308114E Page 27 of 54

Date: 2023-08-18



]	Pro	oduct:	HELME	I WIKELI	ESS EARPH	ONE	Detec	tor		Vertical	
	M	Iode	F	Keeping Tra	ansmitting		Test Vo	ltage		DC3.7V	
Te	mp	perature		24 de	g. C,		Humidity 5				
Te	est :	Result:		Pas	ss						
	rt 15C E+2-r	C Class B 1GHz-18GH	Iz -2			•					
	90-			M1							
	80-										
	70-				M						
	60-			/							
	00										
					M2						
n//m)	50-				M2						
vel (dBuV/m)		hurapamantahadan	maninga sa manah Mil		M2	John Marie M	M. m. had prochessing a design of the second	ago tay a mangalan kalan sa mangalan sa mangalan sa mangalan kalan sa mangalan sa mangalan sa mangalan sa manga	phonos shappy and shappy and a	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Maria
level (dBuV/m)	50-	barren de santo de la como de la	wine recognision of the second se		M2	Marie Marie Marie Land	M. madadh V a deannaige de de	godge magasil kan saabid	steven, physique and help we were si	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Maria
level (dBuV/m)	50-	been and resolved by the second	who there was a second of the		M2	Mary on the second property and the second	48 market on American de la constante de la co	garbonaraphal februaraba	illern Mallemark Monnerer		and properties.
level (dBuV/m)	50- 40- 30- 20-	hannar war and a delegra	months of the second of the se		M2	Mark appropriate from the second	ell a see karp to a decapaque de	garten mengendik kanasaksa	jben physposib homonia	**************************************	nd Manadar
level (dBuV/m)	50 - 40 - 30 -	fare a constitutive constitutive constitutive cons	when the region is a consisted of the		M2	Marie Ma	eth contagness to	handa karanda k	ilma Mattywerth America	-v-dynasia Andronedika	and hat Maria Maria
level (dBuV/m)	50- 40- 30- 20- 10-	gavorage var aventurija, aggyrii	manager and the second of the		M2 2483.	5	stlerendady viraleringende de	gartyn-magensilly (the seasons)	stans, physique at the second		2500
	50- 40- 30- 20- 10- 0.0- 24	470			<u> </u>	5 Frequency (MHz)					2500
	50- 40- 30- 20- 10- 0.0- 24	gavorage var variable, aggerni	Results	Factor	2483.	5	Detector	Table	Height	ANT	2500
	50- 40- 30- 20- 10- 0.0- 24	470		Factor (dB)	<u> </u>	5 Frequency (MHz)					2500
(m//ngp) java	50 40 30 20 10 24	i ₇₀ -requency	Results		Limit	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.

Report No.: TW2308114E Page 28 of 54

Date: 2023-08-18



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 Chip antenna. The antenna gain is 0.08dBi Max. It fulfills the requirement of this section. Test Result: Pass

Report No.: TW2308114E

Date: 2023-08-18



Page 29 of 54

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

Page 30 of 54

Report No.: TW2308114E

Date: 2023-08-18



Test Result

Product:	HE	LMET WI	RELESS	EARPHO	NE	T	est Mode:		Keep tra	nsmitting		
Mode		Keepi	ng Transm	nitting		Te	est Voltage		DC3	3.7V		
Геmperature		,	24 deg. C,			I	Humidity		56%	RH		
Test Result:			Pass			Detector			P	K		
dB Bandwidth	895.79kHz								-	-		
		Marker	1 [T1 r	ndB]	RI	BW 30 ki		Hz RF Att		20 dB		
Ref Lvl	ndB 20.00 dB					BW 100 ki		Hz				
10 dBm		BW 895	.791583	317 kHz	SI	VТ	8.5 m	s U	nit	dB	m	
10							v ₁	[T1]	-	0.66 dBı	m	
				_					2.4020	301 GH:		
0				$\sim\sim$			ndF	3	20	0.00 dB		
					V		BW ▼ _{T1}	8! L [T1]	95.79158 -2			
10			^	\mathcal{N}		\forall	V . T.1			0.85 dBi 4609 GH:	1	
			TA		V	$\bigvee_{\mathrm{T2}} \nabla_{\mathrm{T2}}$	2 [T1]	-2				
20							V V		2.4024		z	
30 1MAX			و مرکز				V	^			1	
40												
	مرسرير	Nound										
50											~	
60												
70					_	$\frac{1}{2}$						
80												
90 Center 2.	406			2.2.5	kHz/				_	an 3 MH:	_	

Page 31 of 54

Report No.: TW2308114E



GFSK								Keep transmitting		
Product:	HEL	MET WIF	RELESS E	ARPHON	Е	Test Mode:		Keep tra	ansmitting	
Mode		Keepin	g Transmi	tting		Test Voltage	e	DC	C3.7V	
Temperature		2	4 deg. C,			Humidity		569	% RH	
Test Result:			Pass			Detector]	PK	
20dB Bandwidth		89	95.79kHz							
RANGE CONTRACTOR OF THE PARTY O		Marker	1 [T1 r	ndB]	RB	W 30 k	Hz R	RF Att 20 dB		
Ref Lvl		ndB	20.	.00 dB	VB		100 kHz			
10 dBm	BW 895.79158317				SW'	Γ 8.5 π	ns Ui	nit	dBm	
10						v ₁	[T1]	- (0.75 dBm	A
								2.44100	301 GHz	A
0				~ √√	lπ	ndI	8	20	0.00 dB	
					$\bigvee \bigvee$	BW VT	89 [[T1]	895.79158317 kH		
-10			^	\mathcal{N}	\ \	٧,		2.44054	0.91 dBm 1609 GHz	
						$\bigvee_{\mathbf{T}^2} \nabla_{\mathbf{T}^2}$	2 [T1]	-21		
-20						M		2.44144	188 GHz	
-30						V				1MA
-40	~~~ <u>~</u>							M		
-50								\	··- ·· · ·	
-60										
-70										
-80										
-90 Center 2	441 0	u c		300	kue/			Cr	n 2 MII-	
				300	kHz/			Spa	an 3 MHz	
Date: 17	7.AUG.2	023 16	:36:46							

Report No.: TW2308114E Page 32 of 54



FSK	HELMET WIRELESS EARPHONE					Test Mode:		Keep transmitting			
Product:	HELM										
Mode			g Transmi	tting	7	Test Voltage	;		23.7V		
Temperature		24	4 deg. C,			Humidity			% RH		
Test Result:			Pass			Detector		PK			
0dB Bandwidth		89	5.79kHz								
Ŕ	М	arker	1 [T1 r	idB]	RBW	30 k	Hz R	z RF Att 20 dB			
Ref Lvl	ndB 20.00 dB					100 k					
10 dBm	В	W 895	.791583	17 kHz	SWT	8.5 m	s U	nit	dBm	ı	
10						v ₁	[T1]	-5	1.91 dBm		
				-				2.48000	301 GHz	A	
0				~~ >		ndE	В	20	0.00 dB		
					$\mathcal{N}_{\mathcal{A}}$	BW		95.79158			
-10				^/	\	∇_{T}	[T1]	-22	.06 dBm	1	
			\int_{0}^{∞}	7 0	√		[T1]	2.47954	609 GHz		
-20						T2	. [+ +]	2.48044	188 GHz	Ī	
1MAX			ل مم			\ \ \				1M2	
-30						\ \	- ^				
-40		كر						M			
-50	√							han-	mondan		
-60											
-70											
-80											
-90											
Center 2	2.48 GHz 300 k				kHz/			Spa	an 3 MHz	•	
Date: 17	7.AUG.2023 16:40:31										

Report No.: TW2308114E Page 33 of 54



Л/4DQPSK Product:	HELMET WIRELESS EARPHONE					т	ast M - 1 -		Vaar t		—
	HE				NE		est Mode:		Keep tran		
Mode			ng Transm			_	est Voltage		DC3		
Temperature			24 deg. C,			_	Humidity	56% RH			
Test Result:			Pass			-	Detector		Pk	<u> </u>	
20dB Bandwidth	1.269MHz										
r _k	Marker 1 [T1 ndB]					ЗW	30 k	Hz RI	F Att	20 dB	
Ref Lvl	ndB 20.00 dB					ЗW	100 k				
10 dBm		BW 1	268537	07 MHz	SI	VТ	8.5 m	s Uı	nit	dBm	L
10							v ₁	[T1]	- C	.58 dBm	A
				_					2.40200	301 GHz	
0				$\wedge \wedge /$	\wedge		ndB		20	.00 dB	
			^	/ / /	NJ	~~	BW		1.26853	707 MHz	
-10			-\^\\\	\mathcal{N}_{-}	V (~ / `	V V V T	[T1]	-20	.39 dBm	
	TZ										
-20		v .T/	7 2.40263427 GF								
1MAX									2.40203	427 GHZ	1M
-30		^									
-40	~~							\\\	\		
-50	/								المرابعة الم	**************************************	
-60											
-70											
-80											
-90											
Center 2.	.402 GHz 300 kHz				kHz/	•	'		Spa	n 3 MHz	1

Page 34 of 54

Report No.: TW2308114E



I/4DQPSK	HELMET WIRELESS EARPHONE										
Product:	HELN	MET WIF	RELESS E	ARPHON	Ε	Τ	est Mode:		Keep tra	nsmitting	
Mode		Keepin	g Transmi	tting		T	est Voltage	;	DC	3.7V	
Temperature		2	4 deg. C,				Humidity		56%	% RH	
Test Result:			Pass				Detector		PK		
0dB Bandwidth		1.	.281MHz								
r)	Marker 1 [T1 ndB]					RBW 30 kHz		Hz Rl	F Att	20 dB	
Ref Lvl	ndB 20.00 dB					VBW 100 k					
10 dBm	1	BW 1	L.280561	12 MHz	S	WT	8.5 m	s Ui	nit	dBm	l
10							\mathbf{v}_1	[T1]	- C	.79 dBm	A
									2.44100	301 GHz	
0				$\wedge \wedge \wedge$	\wedge		ndE	3	20	.00 dB	
					V	\~	$\bigwedge_{\mathbf{W}} \mathbf{BW}$	[T1]	1.28056	112 MHz	
-10			/ V V -	V		•	\	. []	2.44035	972 GHz	
	T.					V _T (2			2.44035972 G -21.09 d		
-20		7						<u> </u>	2.44164	028 GHz	1M
											IM
-30											
-40	\sim	W						by	\\ \		
-50	~~								~\shall	A	
-60											
-70											
-80											
-90											
Center 2	2.441 GHz 300 F				kHz/				Spa	n 3 MHz	
Date: 15	7.AUG.20	023 16	:50:15								

Page 35 of 54

Report No.: TW2308114E



Л/4DQPSK										
Product:	HELI	MET WIF	ELESS E	ARPHON	Е	Test Mode:		Keep tra	ansmitting	
Mode		Keepin	g Transmi	tting		Test Voltage	e	DC	C3.7V	
Temperature		2	4 deg. C,			Humidity		569	% RH	
Test Result:			Pass			Detector]	PK	
20dB Bandwidth		1.	275MHz							
RANGE CONTRACTOR OF THE PARTY O		Marker	1 [T1 r	ndB]	RBW	BW 30 kHz		RF Att 20 dB		
Ref Lvl	ndB 20.00 dB BW 1.27454910 MHz					7 100 k				
10 dBm		BW 1	.274549	10 MHz	SWI	3 8.5 m	ns U	nit	dBm	
10						\mathbf{v}_1	[T1]	-3	1.97 dBm	2
								2.48000	301 GHz	A
0				ΛΛ/	Λ	ndI	3	20	0.00 dB	
				/ \/ \/	1/4	BW ▼ _T	1 [T1]	1.27454	1910 MHz	
-10				\ \'	\ <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>	- V - V - T		2.47935	2.10 dBm 5972 GHz	
			\checkmark			∇_{T}	2 [T1]	-21	1.75 dBm	
-20						\	T2 7	2.48063427		
-30										1MA
-40	\sim	\bigvee					m	<u></u>		
-50	V							- Lun	Manager	
-60										
-70										
-80										
-90 Center 2	.48 GHz			300	kHz/			Spa	an 3 MHz	
		023 16	:43:42		,			220		

Report No.: TW2308114E Page 36 of 54



8DPSK	HELMET WIRELESS EARPHONE										
Product:	HEI	LMET WI	RELESS	EARPHO	NE	To	est Mode:		Keep tran	smitting	
Mode		Keepi	ng Transm	itting		Te	est Voltage		DC3	.7V	
Temperature			24 deg. C,			F	Humidity		56%	RH	
Test Result:			Pass]	Detector		PK		
20dB Bandwidth	1.244MHz									=	
R	Marker 1 [T1 ndB]					ВW	30 k	Hz RI	F Att	20 dB	
Ref Lvl	ndB 20.00 dB					BW 100 k					
10 dBm		BW 1	L.244488	898 MHz	Sī	ИT	8.5 m	s Uı	nit	dBn	1
							v ₁	[T1]	-0	.60 dBm	A
0					1.				2.40200	301 GHz	
				$\wedge \wedge /$	\ <u>.</u> \		ndE BW		20 1.24448	.00 dB 898 MHz	
1.0			~ ~~	\sim \sim \sim	wul	٦/	$\bigvee_{\nabla_{\mathrm{T1}}}$	[T1]	-20	898 MHz	
-10						*			2.40138		
					∇_{T}				.35 dBm	l.	
-20 1MAX									2.40263	427 GHz	1MA
-30											
-40	\mathcal{N}							V	\mathcal{N}		
-50	·								المحطي	M	
-60											
-70											
-80											
-90 Center 2.	.402 GHz 300 k				kHz/				Spa	ın 3 MHz	
Date: 17	.AUG.2	023 16	:53:35								

Report No.: TW2308114E Page 37 of 54

Date: 2023-08-18



8DPSK												
Product:	HELMET WIRELESS EARPHONE				Т	est Mode:		Keep transmitting				
Mode Keeping Transmit Temperature 24 deg. C,				tting		Test Voltage Humidity		e	DC3.7V 56% RH			
Temperature												
Test Result: Pas 20dB Bandwidth 1 244M				ass			Detector		PK			
20dB Bandwidth		1.	244MHz									
R		Marker	1 [T1 r	ndB]	R	BW	30 k	Hz R	F Att	20 dB		
Ref Lvl		ndB		00 dB		BW	100 k					
10 dBm		BW 1	.244488	398 MHz	S'	TW	8.5 m	ıs U	nit	dBm		
							v ₁	[T1]	-0	.81 dBm	A	
0									2.44100	301 GHz		
				$\wedge \wedge /$	\		ndI BW	8	20 1.24448	.00 dB		
1.0			~ ~~	V V V	\sim	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	[[T1]	-20	898 MHz		
-10			<i>J</i> •			×			2.44038	978 GHz		
		T					∇^{T}	_{T2} [T1]	-20	.70 dBm		
-20 1MAX									2.44163	427 GHz	1MA	
-30												
-40	\mathcal{N}	M						V	\mathcal{N}			
-50										· · · · · · · · · · · · · · · · · · ·		
-60												
-70												
-80												
-90 Center 2	.441 GI	Hz		300	kHz/				Spa	ın 3 MHz		
Date: 17	7.AUG.2	023 16	:56:20									

Page 38 of 54

Report No.: TW2308114E

Date: 2023-08-18



DPSK												
Product: HELMET WIRELESS EARPHON					Е	E Test Mode:			Keep transmitting			
Mode		Keeping Transmitting				Test Voltage		:	DC3.7V			
Temperature		24 deg. C,					Humidity		56% RH			
Test Result:	Pass 1.238MHz						Detector		PK			
20dB Bandwidth												
Ŕ		Marker	1 [T1 r	ndB]	R	BW	30 k	Hz R	F Att	20 dB		
Ref Lvl		ndB		00 dB	V	BW	100 k					
10 dBm		BW 1	L.238476	95 MHz	S	WT	8.5 m	s Ui	nit	dBm	1	
10							v ₁	[T1]	-2	.04 dBm	A	
									2.48000	902 GHz		
0				ΔΛ/	M A		ndi	3	20	.00 dB		
				$[\ \]\setminus \cup$	W	ζ,	BW VT:	[T1]	1.23847	695 MHz		
-10			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<u> </u>		V	W		2.47938		İ	
			/				√ 1/2	[T1]	-21	.84 dBm		
-20			7					Y	2.48062	826 GHz	1 M.A	
IMAX											IMA	
-30												
								\				
-40		M						\bigvee	M			
-50 M	~\ <u>\</u>								~~~	myra		
-60												
-70												
-80												
-90												
Center 2	.48 GH	z		300	kHz/				Spa	an 3 MHz		
Date: 17	7.AUG.2	023 16	:56:49									

Report No.: TW2308114E Page 39 of 54

Date: 2023-08-18



10.0 FCC ID Label

FCC ID: 2A9MI-Q082X

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:



FCC Label Location

Page 40 of 54

Report No.: TW2308114E

Date: 2023-08-18



11.0 Photo of testing 11.1 Conducted test View



Page 41 of 54

Report No.: TW2308114E

Date: 2023-08-18



Radiated emission test view



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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Report No.: TW2308114E

Date: 2023-08-18



11.2 Photographs – EUT

Outside View



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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Page 43 of 54

Report No.: TW2308114E

Date: 2023-08-18



Outside View



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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Page 44 of 54

Report No.: TW2308114E

Date: 2023-08-18



Outside View



The report refers only to the sample tested and does not apply to the bulk. This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Page 45 of 54

Report No.: TW2308114E

Date: 2023-08-18



Outside View





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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Report No.: TW2308114E Page 46 of 54

Date: 2023-08-18



Outside View



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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Page 47 of 54

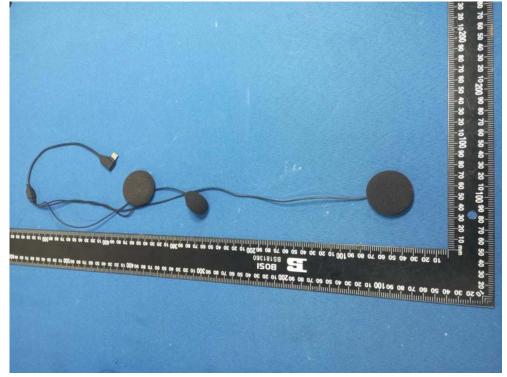
Report No.: TW2308114E

Date: 2023-08-18



Outside View





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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES.

will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Page 48 of 54

Report No.: TW2308114E

Date: 2023-08-18



Inside View





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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES.

will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

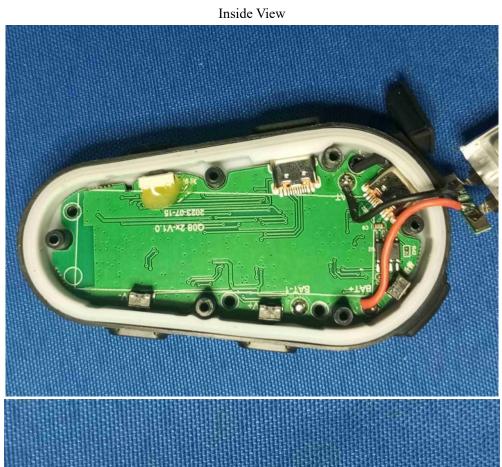
In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to

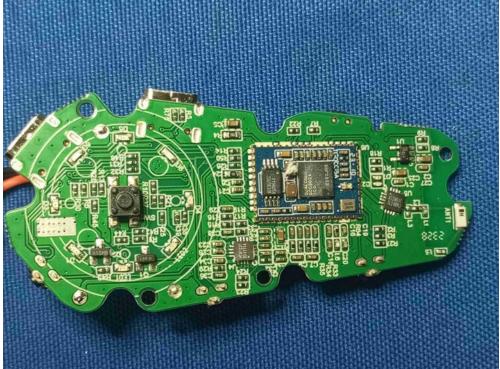
Page 49 of 54

Report No.: TW2308114E

Date: 2023-08-18







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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to

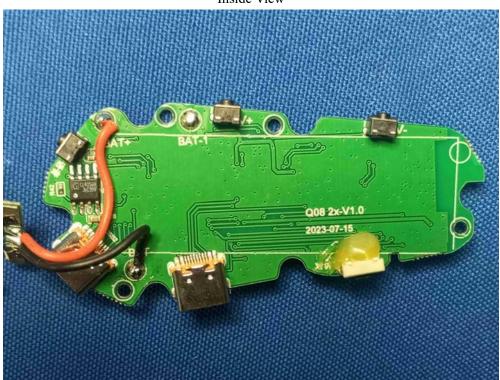
Page 50 of 54

Report No.: TW2308114E

Date: 2023-08-18



Inside View





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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES.

will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to

Page 51 of 54

Report No.: TW2308114E

Date: 2023-08-18





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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any

discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

Page 52 of 54

Report No.: TW2308114E

Date: 2023-08-18





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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any

discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

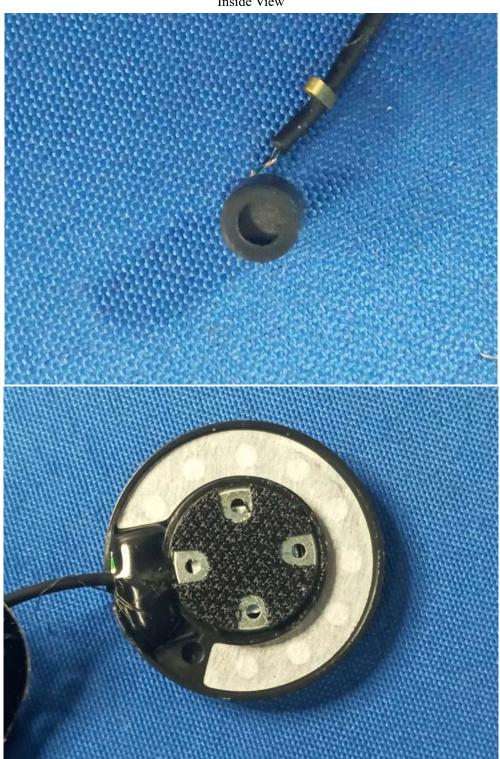
Page 53 of 54

Report No.: TW2308114E

Date: 2023-08-18



Inside View



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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to

Report No.: TW2308114E Page 54 of 54

Date: 2023-08-18



Inside View



-- End of the report--