



Report No.: TW2201303E File reference No.: 2022-02-16

Applicant: Shenzhen Sounder Digital Technology Co., Ltd

Product: Bone conduction headphones

Model No.: B1 (see the page 4 for additional models)

Trademark: Sounder

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

# Jack Chung

Jack Chung

Manager

Dated: February 16, 2022

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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# **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 17025:2005 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

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

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#### 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 Sounder Digital Technology Co., Ltd

Address: 5th Floor, Area A, Building 1, Meijiamei Industrial Zone, Guanlan, Longhua, Shenzhen

Telephone: 0755-83242279 Fax: 0755-83950907

## 1.3 Description of EUT

Product: Bone conduction headphones

Manufacturer: Shenzhen Sounder Digital Technology Co., Ltd

Address: 5th Floor, Area A, Building 1, Meijiamei Industrial Zone, Guanlan, Longhua,

Shenzhen

Trademark: Sounder
Additional Trademark: N/A
Model Number: B1

Additional Model Name B2, B3, B4, B5, B6, B7, B8, B9, B10, B11, B12, B13, B14, B15, B16, B17, B18,

B19, B20, X1, X2, X3, X4, X5, X6, X7, X8, X9, X10, X11, X12, X13, X14, X15,

X16, X17, X18, X19, X20, XSLEEP1, XSLEEP2, XSLEEP3, XSLEEP4, XSLEEP5, XSLEEP6, XSLEEP7, XSLEEP8, XSLEEP9, XSLEEP10, XSLEEP11, XSLEEP12, XSLEEP13, XSLEEP14, XSLEEP15, XSLEEP16, XSLEEP17, XSLEEP18, XSLEEP19, XSLEEP20, airhive1, airhive2, airhive3,

airhive4, airhive5, airhive6, airhive7, airhive8, airhive9, airhive10

Hardware Version: X4-0907 -cs8573 BOM 20210607PCB

Software Version: 7006V1.1.3
Serial No.: 2002202221510
Rating: Input: DC5V, 0.1A

Battery: DC3.7V, 150mAh Li-ion battery

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Modulation Type: GFSK,  $\pi$  /4D-QPSK

Operation Frequency: 2402-2480MHz

Channel Separate: 1MHz
Channel Number: 79

Antenna Designation PCB Antenna with gain 2.0dBi maximum (Declared by the Manufacturer)

1.4 Submitted Sample: 2 pcs

1.5 Test Duration

2022-01-25 to 2022-02-16

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

Terry Tang

The sample tested by

Print Name: Terry Tang

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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       | 2021-06-18   | 2022-06-17 |  |  |  |
| LISN               | R&S          | EZH3-Z5          | 100294       | 2021-06-18   | 2022-06-17 |  |  |  |
| LISN               | R&S          | EZH3-Z5          | 100253       | 2021-06-18   | 2022-06-17 |  |  |  |
| Impuls-Begrenzer   | R&S          | ESH3-Z2          | 100281       | 2021-06-18   | 2022-06-17 |  |  |  |
| Loop Antenna       | EMCO         | 6507             | 00078608     | 2021-06-18   | 2024-06-17 |  |  |  |
| Spectrum           | R&S          | FSIQ26           | 100292       | 2021-06-18   | 2022-06-17 |  |  |  |
| Horn Antenna       | A-INFO       | LB-180400-KF     | J211060660   | 2021-07-02   | 2024-07-01 |  |  |  |
| Horn Antenna       | R&S          | BBHA 9120D       | 9120D-631    | 2021-07-02   | 2024-07-01 |  |  |  |
| Power meter        | Anritsu      | ML2487A          | 6K00003613   | 2021-06-18   | 2022-06-17 |  |  |  |
| Power sensor       | Anritsu      | MA2491A          | 32263        | 2021-06-18   | 2022-06-17 |  |  |  |
| Bilog Antenna      | Schwarebeck  | VULB9163         | 9163/340     | 2021-07-02   | 2024-07-01 |  |  |  |
| 9*6*6 Anechoic     |              |                  | N/A          | 2021-07-02   | 2022-07-01 |  |  |  |
| EMI Test Receiver  | RS           | ESVB             | 826156/011   | 2021-06-18   | 2022-06-17 |  |  |  |
| EMI Test Receiver  | RS           | ESH3             | 860904/006   | 2021-06-18   | 2022-06-17 |  |  |  |
| Spectrum           | HP/Agilent   | ESA-L1500A       | US37451154   | 2021-06-18   | 2022-06-17 |  |  |  |
| Spectrum           | HP/Agilent   | E4407B           | MY50441392   | 2021-06-18   | 2022-06-17 |  |  |  |
| Spectrum           | RS           | FSP              | 1164.4391.38 | 2022-01-14   | 2023-01-13 |  |  |  |
| RF Cable           | Zhengdi      | ZT26-NJ-NJ-8M/FA |              | 2021-06-18   | 2022-06-17 |  |  |  |
| RF Cable           | Zhengdi      | 7m               |              | 2021-06-18   | 2022-06-17 |  |  |  |
| RF Switch          | EM           | EMSW18           | 060391       | 2021-06-18   | 2022-06-17 |  |  |  |
| Pre-Amplifier      | Schwarebeck  | BBV9743          | #218         | 2021-06-18   | 2022-06-17 |  |  |  |
| Pre-Amplifier      | HP/Agilent   | 8449B            | 3008A00160   | 2021-06-18   | 2022-06-17 |  |  |  |
| LISN               | SCHAFFNER    | NNB42            | 00012        | 2022-01-05   | 2023-01-04 |  |  |  |

#### 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<br>Requirement              | Pass   | Complies |
| FCC Part 15, Paragraph 15.207                                  | Conducted<br>Emission Test          | Pass   | Complies |
| FCC Part 15 Subpart C Paragraph 15.249(a)<br>& 15.249(b) Limit | Field Strength<br>of<br>Fundamental | Pass   | Complies |
| FCC Part 15, Paragraph 15.209                                  | Radiated<br>Emission Test           | Pass   | Complies |
| FCC Part 15 Subpart C Paragraph 15.249(d) Limit                | Band Edge<br>Test                   | Pass   | Complies |

#### 3.2 **Test Standards**

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

#### **EUT Modification** 4.0

No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

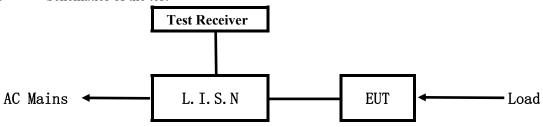
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#### 5. Power Line Conducted Emission Test

#### 5.1 Schematics of the test

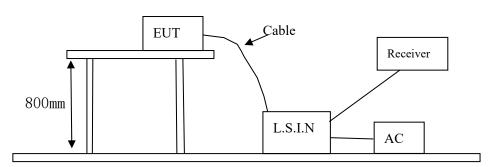


**EUT: Equipment Under Test** 

#### 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  |
|-----------------|--------------------------|------------------------|---------|
| Bone conduction | Shenzhen Sounder Digital | B1 (see the page 4 for | 2A4SF-X |
| headphones      | Technology Co., Ltd      | additional models)     | 2A45F-A |

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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, 1A                  |

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:

Pass

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

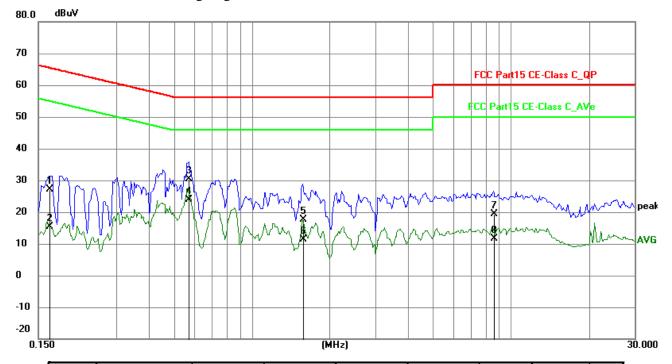
**EUT Operating Environment** 

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

**EUT set Condition: Communication by BT** 

**Results: Pass** 

Please refer to following diagram for individual



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Factor<br>(dB) | Level<br>(dBuV) | Limit<br>(dBuV) | Margin<br>(dB) | Detector | P/F |
|-----|--------------------|-------------------|----------------|-----------------|-----------------|----------------|----------|-----|
| 1   | 0.1655             | 17.25             | 9.77           | 27.02           | 65.18           | -38.16         | QP       | Р   |
| 2   | 0.1655             | 5.60              | 9.77           | 15.37           | 55.18           | -39.81         | AVG      | Р   |
| 3   | 0.5712             | 20.60             | 9.77           | 30.37           | 56.00           | -25.63         | QP       | Р   |
| 4   | 0.5712             | 14.05             | 9.77           | 23.82           | 46.00           | -22.18         | AVG      | Р   |
| 5   | 1.5696             | 7.80              | 9.80           | 17.60           | 56.00           | -38.40         | QP       | Р   |
| 6   | 1.5696             | 1.46              | 9.80           | 11.26           | 46.00           | -34.74         | AVG      | Р   |
| 7   | 8.5614             | 9.25              | 10.09          | 19.34           | 60.00           | -40.66         | QP       | Р   |
| 8   | 8.5614             | 1.57              | 10.09          | 11.66           | 50.00           | -38.34         | AVG      | Р   |

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

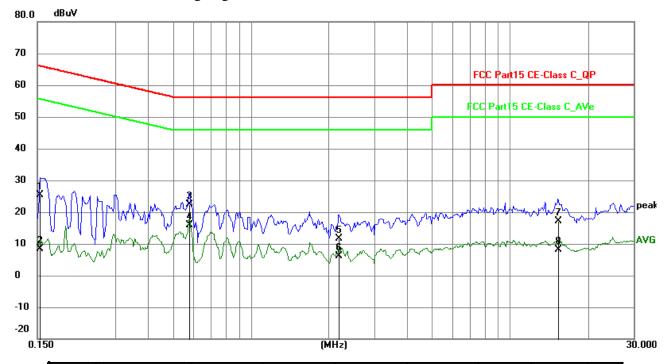
**EUT Operating Environment** 

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

**EUT set Condition: Communication by BT** 

**Results: Pass** 

Please refer to following diagram for individual



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Factor<br>(dB) | Level<br>(dBuV) | Limit<br>(dBuV) | Margin<br>(dB) | Detector | P/F |
|-----|--------------------|-------------------|----------------|-----------------|-----------------|----------------|----------|-----|
| 1   | 0.1539             | 15.61             | 9.78           | 25.39           | 65.79           | -40.40         | QP       | Р   |
| 2   | 0.1539             | -1.43             | 9.78           | 8.35            | 55.79           | -47.44         | AVG      | Р   |
| 3   | 0.5790             | 12.49             | 9.77           | 22.26           | 56.00           | -33.74         | QP       | Р   |
| 4   | 0.5790             | 6.21              | 9.77           | 15.98           | 46.00           | -30.02         | AVG      | Р   |
| 5   | 2.1858             | 1.79              | 9.81           | 11.60           | 56.00           | -44.40         | QP       | Р   |
| 6   | 2.1858             | -3.62             | 9.81           | 6.19            | 46.00           | -39.81         | AVG      | П   |
| 7   | 15.3630            | 6.70              | 10.40          | 17.10           | 60.00           | -42.90         | QP       | Р   |
| 8   | 15.3630            | -2.36             | 10.40          | 8.04            | 50.00           | -41.96         | AVG      | Р   |

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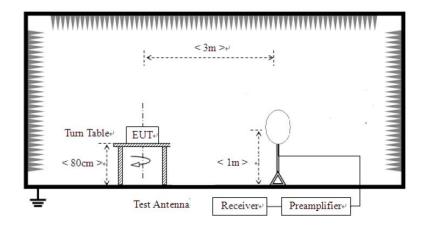


#### **6** Radiated Emission Test

- 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 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 kHz. All readings are above 1 GHz, peak values with a resolution bandwidth of 1 MHz (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

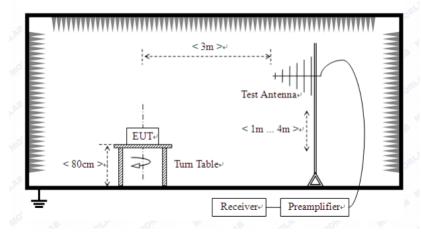


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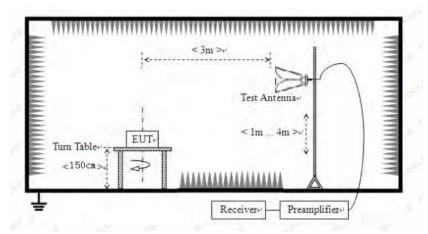
Date: 2022-02-16



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.

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#### 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 | Fundamental Frequency Field Street |              | ental (3m) | Field S | trength of Harmo | onics (3m) |
|-----------------------|------------------------------------|--------------|------------|---------|------------------|------------|
| (MHz)                 | mV/m                               | dBuV/m       |            | uV/m    | dBu              | V/m        |
| 2400-2483.5           | 50                                 | 94 (Average) | 114 (Peak) | 500     | 54 (Average)     | 74 (Peak)  |

Note:

- 1. RF Field Strength (dBuV) = 20 log RF 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)         |
|-----------------------|--------------|-----------------------------------|
| 0.009-0.049           | 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                              |
| 30-88                 | 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 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 and  $\pi$  /4D-QPSKwere tested. And only the worst case was recorded in the test report. GFSK was the worst case.
- 6. Battery fully charged during the test.
- 7. 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.

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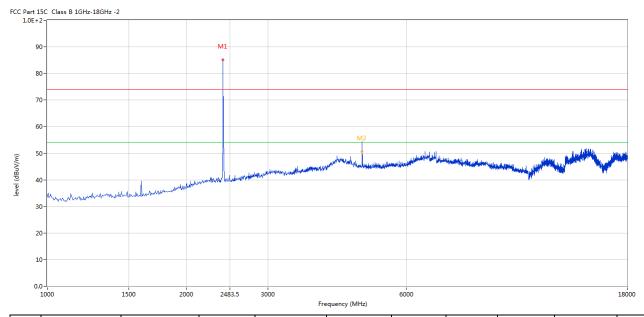


## 6.5 Test result

# A Fundamental & Harmonics Radiated Emission Data

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

#### Horizontal



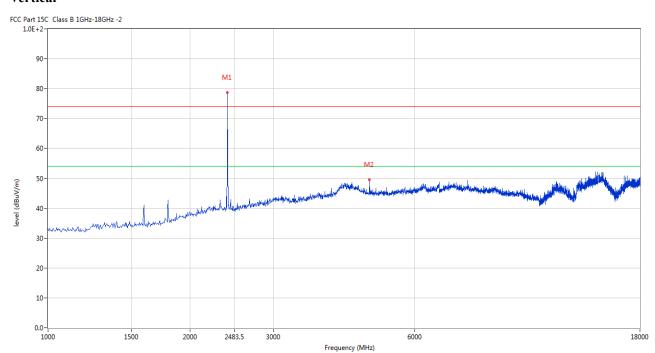
| N | 0. | Frequency | Results  | Factor | Limit    | Over Limit | Detector | Table  | Height | ANT        | Verdict |
|---|----|-----------|----------|--------|----------|------------|----------|--------|--------|------------|---------|
|   |    | (MHz)     | (dBuV/m) | (dB)   | (dBuV/m) | (dB)       |          | (o)    | (cm)   |            |         |
| 1 |    | 2402.149  | 85.17    | -3.57  | 114.0    | -28.83     | Peak     | 151.00 | 100    | Horizontal | Pass    |
| 2 |    | 4802.799  | 54.48    | 3.12   | 74.0     | -19.52     | Peak     | 229.00 | 100    | Horizontal | Pass    |
| 2 | ** | 4802.799  | 50.67    | 3.12   | 54.0     | -3.33      | AV       | 229.00 | 100    | Horizontal | Pass    |

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#### Vertical



| No. | Frequency | Results  | Factor | Limit    | Over Limit | Detector | Table (o) | Height | ANT      | Verdict |
|-----|-----------|----------|--------|----------|------------|----------|-----------|--------|----------|---------|
|     | (MHz)     | (dBuV/m) | (dB)   | (dBuV/m) | (dB)       |          |           | (cm)   |          |         |
| 1   | 2402.149  | 78.79    | -3.57  | 114.0    | -35.21     | Peak     | 190.00    | 100    | Vertical | Pass    |
| 2   | 4802.799  | 49.55    | 3.12   | 74.0     | -24.45     | Peak     | 213.00    | 100    | Vertical | Pass    |

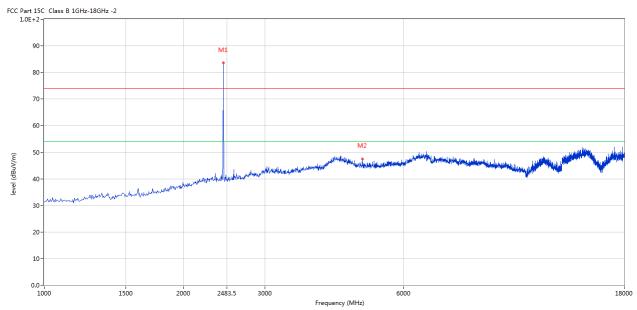
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Please refer to the following test plots for details: Middle Channel-2441MHz

#### Horizontal



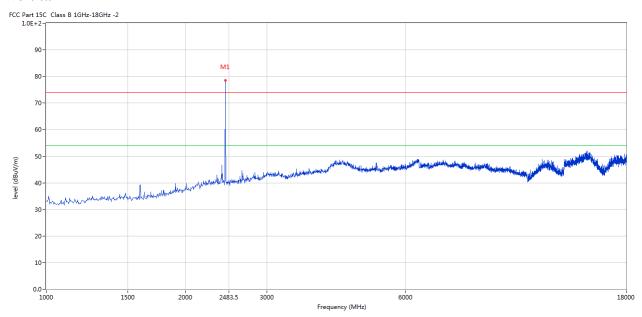
| No. | Frequency | Results  | Factor | Limit    | Over       | Detector | Table  | Height | ANT        | Verdict |
|-----|-----------|----------|--------|----------|------------|----------|--------|--------|------------|---------|
|     | (MHz)     | (dBuV/m) | (dB)   | (dBuV/m) | Limit (dB) |          | (o)    | (cm)   |            |         |
| 1   | 2440.390  | 83.54    | -3.57  | 114.0    | -30.46     | Peak     | 259.00 | 100    | Horizontal | Pass    |
| 2   | 4879.280  | 47.52    | 3.20   | 74.0     | -26.48     | Peak     | 179.00 | 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   | 2440.390  | 78.54    | -3.57  | 114.0    | -35.46     | Peak     | 174.00 | 100    | Vertical | Pass    |

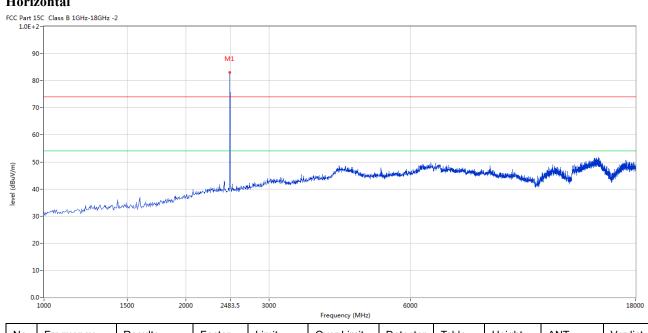
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Please refer to the following test plots for details: High Channel-2480MHz

#### Horizontal



| No. | Frequency | Results  | Factor | Limit    | Over Limit | Detector | Table  | Height | ANT        | Verdict |
|-----|-----------|----------|--------|----------|------------|----------|--------|--------|------------|---------|
|     | (MHz)     | (dBuV/m) | (dB)   | (dBuV/m) | (dB)       |          | (o)    | (cm)   |            |         |
| 1   | 2479.630  | 83.87    | -3.57  | 114.0    | -30.13     | Peak     | 245.00 | 100    | Horizontal | Pass    |

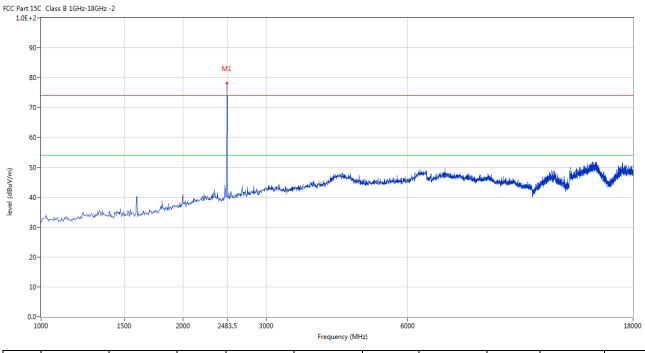
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#### Vertical



| No. | Frequency | Results  | Factor | Limit    | Over Limit | Detector | Table (o) | Height | ANT      | Verdict |
|-----|-----------|----------|--------|----------|------------|----------|-----------|--------|----------|---------|
|     | (MHz)     | (dBuV/m) | (dB)   | (dBuV/m) | (dB)       |          |           | (cm)   |          |         |
| 1   | 2479.630  | 78.07    | -3.57  | 114.0    | -35.93     | Peak     | 43.00     | 100    | Vertical | Pass    |

Note: (2) Emission Level = Reading Level + Antenna Factor + Cable Loss-Amplifier

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

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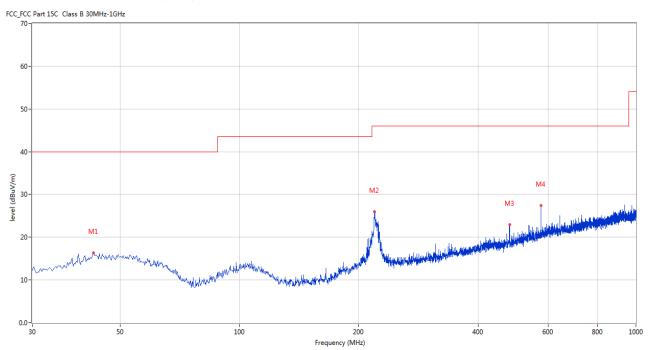


# B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual



| No. | Frequency | Results  | Factor | Limit    | Over Limit | Detector | Table (o) | Height | ANT        | Verdict |
|-----|-----------|----------|--------|----------|------------|----------|-----------|--------|------------|---------|
|     | (MHz)     | (dBuV/m) | (dB)   | (dBuV/m) | (dB)       |          |           | (cm)   |            |         |
| 1   | 42.849    | 16.36    | -11.52 | 40.0     | -23.64     | Peak     | 157.00    | 200    | Horizontal | Pass    |
| 2   | 218.860   | 25.92    | -13.33 | 46.0     | -20.08     | Peak     | 0.00      | 200    | Horizontal | Pass    |
| 3   | 480.210   | 22.99    | -7.38  | 46.0     | -23.01     | Peak     | 305.00    | 100    | Horizontal | Pass    |
| 4   | 575.974   | 27.39    | -5.83  | 46.0     | -18.61     | Peak     | 253.00    | 200    | Horizontal | Pass    |

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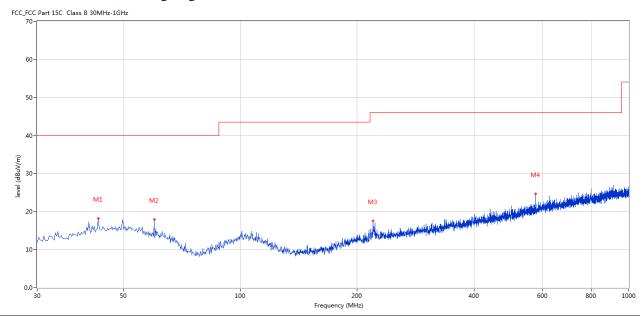


# Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



| No. | Frequency | Results  | Factor | Limit    | Over Limit | Detector | Table  | Height | ANT      | Verdict |
|-----|-----------|----------|--------|----------|------------|----------|--------|--------|----------|---------|
|     | (MHz)     | (dBuV/m) | (dB)   | (dBuV/m) | (dB)       |          | (o)    | (cm)   |          |         |
| 1   | 43.092    | 18.22    | -11.50 | 40.0     | -21.78     | Peak     | 299.00 | 100    | Vertical | Pass    |
| 2   | 60.062    | 17.90    | -12.97 | 40.0     | -22.10     | Peak     | 48.00  | 200    | Vertical | Pass    |
| 3   | 219.830   | 17.57    | -13.32 | 46.0     | -28.43     | Peak     | 251.00 | 200    | Vertical | Pass    |
| 4   | 575.974   | 24.60    | -5.83  | 46.0     | -21.40     | Peak     | 0.00   | 200    | Vertical | Pass    |

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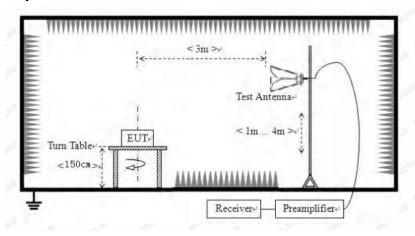


## 7. Band Edge

## 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.

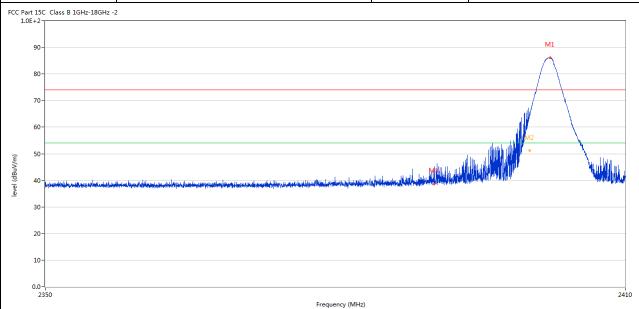
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#### 7.6 Test Result

| Product:     | Bone conduction headphones | Polarity     | Horizontal |
|--------------|----------------------------|--------------|------------|
| Mode         | Keeping Transmitting       | Test Voltage | DC3.7V     |
| Temperature  | 24 deg. C,                 | Humidity     | 56% RH     |
| Test Result: | Pass                       |              |            |

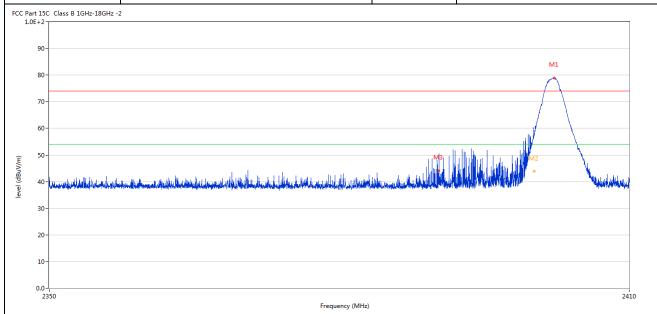


| No. | Frequency | Results  | Factor | Limit    | Over Limit | Detector | Table  | Height | ANT        | Verdict |
|-----|-----------|----------|--------|----------|------------|----------|--------|--------|------------|---------|
|     | (MHz)     | (dBuV/m) | (dB)   | (dBuV/m) | (dB)       |          | (o)    | (cm)   |            |         |
| 2   | 2400.027  | 64.60    | -3.57  | 74.0     | -9.40      | Peak     | 146.00 | 100    | Horizontal | Pass    |
| 2** | 2400.027  | 51.19    | -3.57  | 54.0     | -2.81      | AV       | 146.00 | 100    | Horizontal | Pass    |
| 3   | 2390.040  | 38.66    | -3.53  | 74.0     | -35.34     | Peak     | 264.00 | 100    | Horizontal | Pass    |

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| Product:     | Bone conduction headphones | Detector     | Vertical |
|--------------|----------------------------|--------------|----------|
| Mode         | Keeping Transmitting       | Test Voltage | DC3.7V   |
| Temperature  | 24 deg. C,                 | Humidity     | 56% RH   |
| Test Result: | Pass                       |              |          |

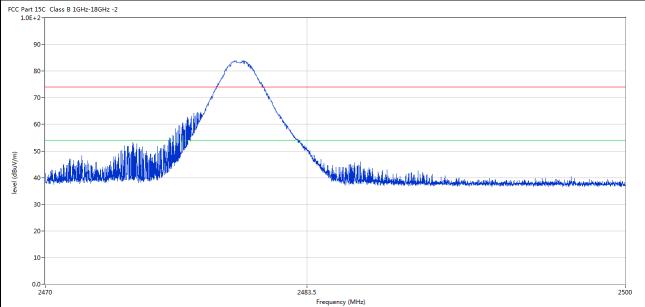


| No. | Frequency | Results  | Factor | Limit    | Over Limit | Detector | Table  | Height | ANT      | Verdict |
|-----|-----------|----------|--------|----------|------------|----------|--------|--------|----------|---------|
|     | (MHz)     | (dBuV/m) | (dB)   | (dBuV/m) | (dB)       |          | (o)    | (cm)   |          |         |
| 1   | 2402.172  | 78.90    | -3.57  | 74.0     | 4.90       | Peak     | 186.00 | 100    | Vertical | N/A     |
| 2   | 2400.042  | 57.05    | -3.57  | 74.0     | -16.95     | Peak     | 178.00 | 100    | Vertical | Pass    |
| 2** | 2400.042  | 43.87    | -3.57  | 54.0     | -10.13     | AV       | 178.00 | 100    | Vertical | Pass    |
| 3   | 2390.085  | 44.08    | -3.53  | 74.0     | -29.92     | Peak     | 191.00 | 100    | Vertical | Pass    |

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| Product:                           | Bone conduction headphones | Polarity     | Horizontal |
|------------------------------------|----------------------------|--------------|------------|
| Mode                               | Keeping Transmitting       | Test Voltage | DC3.7V     |
| Temperature                        | 24 deg. C,                 | Humidity     | 56% RH     |
| Test Result:                       | Pass                       |              |            |
| FCC Part 15C Class B 1GHz-18GHz -2 |                            |              |            |



| No. | Frequency | Results  | Factor | Limit    | Over       | Detector | Table  | Height | ANT        | Verdict |
|-----|-----------|----------|--------|----------|------------|----------|--------|--------|------------|---------|
|     | (MHz)     | (dBuV/m) | (dB)   | (dBuV/m) | Limit (dB) |          | (o)    | (cm)   |            |         |
| 1   | 2480.175  | 83.86    | -3.57  | 74.0     | 9.86       | Peak     | 128.00 | 100    | Horizontal | N/A     |
| 2   | 2483.377  | 51.97    | -3.57  | 74.0     | -22.03     | Peak     | 128.00 | 100    | Horizontal | Pass    |

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| ]                                | Product:   | Bone    | conduction                                 | n headphones                            | s E                       | Detector                 |  | Ve   | rtical                      |                 |
|----------------------------------|--|---------|--|---|---------------------------|--------------------------|--|--|-----------------------------|-----------------|
|                                  | Mode   | K       | eeping Tra                                 | nsmitting                               | Tes                       | st Voltage               |  | DC   | 3.7V                        |                 |
| Те                               | mperature  |         | 24 deg                                     | g. C,                                   | Н                         | lumidity                 |  | 56%  | % RH                        |                 |
| Te                               | est Result:  |         | Pas  | s                                       |                           |                          |  |  |                             |                 |
| C Part 1                         | 15C Class B 1GHz-18GHz   | -2      |  |   |                           |                          |  |  |                             |                 |
| 9                                | 10-  |         |  |   |                           |                          |  |  |                             |                 |
| 8                                | io-  |         | a CTDs                                     |   |                           |                          |  |  |                             |                 |
| 7                                | 70-  |         | - A  |   |                           |                          |  |  |                             |                 |
|                                  |  |         | <i>- F</i>                                 | h.                                      |                           |                          |  |  |                             |                 |
| 6                                | 60-  | . ili   | الما                                       | 1                                       |                           |                          |  |  |                             |                 |
| _                                | in-  |         |  |   |                           |                          |  |  |                             |                 |
| _                                |  |         | had a second                               | Mark Mark                               | olli dahah semajadah      |                          |  |  |                             |                 |
| 5                                | in-  |         | h <sup>ul</sup>                            | A A A A A A A A A A A A A A A A A A A   |                           | agilla si si dali sa ag  |  | wissahidh un hiddesishi  | had blander the bland       |                 |
| 5                                | 10-1411-1414-1414-1414-1414-1414-1414-1                            |         | huh <sup>r</sup>                           | A A A A A A A A A A A A A A A A A A A   | odki dodkili dodki izdik  | aattin tiinit laktiinia. | handalah da katalah                              | يونيونه المطالب الطالم مغذات   | Lind khawipadhikhi          | atal atach      |
| 3                                | :0-<br>:0-<br>:0-  |         | had a second                               | And | wiki dahalka sampulisi    | affichend bellenn        | a melalahka kalaba                               | adamentah Lich dikasiki  | hitalday isalbulita         | obel principal. |
| 5<br>4<br>3<br>2                 |  |         | huh da |   |                           | erithin to the least of  |  | واعتدا فالمارك والمارك | . Lands day rip sulfest dis | and the second  |
| 3<br>2                           | 10-<br>10-<br>10-  |         | had a second                               | 2483.5                                  | equency (MHz)             | addinksiid likkinsaa     | h, yezholdheldheldheldheldheldheldheldheldheldhe | oglasion Add Lock delegants.   | lusud khayebadhukti         | 2500            |
| (iu/ango) isaasi 3               |  | Results | Factor                                     | 2483.5                                  |                           | Detector                 | Table  | Height   | ANT                         | 2500            |
| 3 2 1 0.                         | 0-10-10-10-10-10-10-10-10-10-10-10-10-10                           |         | Factor (dB)                                | 2483.5<br>Fn                            | equency (MHz)             |                          |  |  |                             | 2500            |
| (iu/Anggo) 4<br>3<br>3<br>2<br>1 | 00-<br>00-<br>00-<br>00-<br>00-<br>00-<br>00-<br>00-<br>00-<br>00- | Results |  | 2483.5<br>Fr                            | equency (MHz)  Over Limit |                          | Table  | Height   |                             |                 |

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

2. The three modulation modes of GFSK and  $\pi$  /4D-QPSK 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 2.0dBi maximum. It fulfills the requirement of this section.

Test Result: Pass

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| FSK Modulation |           |               |               |             |  |              |                      |                              |                   |
|----------------|-----------|---------------|---------------|-------------|--|--------------|----------------------|------------------------------|-------------------|
| Product:       | Bone cone | duction head  | lphones       |             | Test Mode:   |              | Keep tran            | smitting                     |                   |
| Mode           |           | ng Transmit   |               |             | Test Voltage   | ;            | DC3                  |                              |                   |
| Temperature    |           | 24 deg. C,    |               |             | Humidity   |              | 56%                  | RH                           |                   |
| Test Result:   |           | Pass          |               |             | Detector   |              | PF                   | ζ.                           |                   |
| 0dB Bandwidth  | }         | 883.77kHz     |               |             |  |              |                      |                              |                   |
| Ref Lvl        | ndB       | 1 [T1 nd 20.0 | 0 dB          | RB<br>VB    | W 100 k  | Hz           | F Att                | 20 dB                        |                   |
| 10 dBm         | BW 883    | 3.7675350     | 7 kHz         | SW          | T 8.5 m  | ıs Uı        | nit                  | dBn                          | n<br><del>a</del> |
| 0              |           |               |               |             | <b>▼</b> 1   | [T1]         | -2<br>2.40200        | .66 dBm<br>301 GHz           | A                 |
|                |           |               | $\mathcal{M}$ | $\bigwedge$ | ndF<br>BW<br>∇ <sub>T1</sub>   | 88<br>L [T1] | 20<br>3.76753<br>22- | .00 dB<br>507 kHz<br>.25 dBm |                   |
| -10            |           | m1 ~          |               |             | V VT   | ? [T1]       | 2.40155              | 210 GHz                      |                   |
| -20<br>1MAX    |           | ~~~           |               |             | The same of the sa |              | 2.40243              | 587 GHz                      | 1MA               |
| -30            | <i></i>   | 1             |               |             |  | ٧            |                      |                              |                   |
| -50            |           |               |               |             |  |              | ~_                   |                              |                   |
|                | V         |               |               |             |  | 9            | 7                    | hamaly,                      |                   |
| -60            |           |               |               |             |  |              |                      |                              |                   |
| -70            |           |               |               |             |  |              |                      |                              | -                 |
| -80            |           |               |               |             |  |              |                      |                              |                   |
| -90 Center 2.4 | 02 GHz    |               | 300 kH        | Hz/         |  |              | Spa                  | n 3 MHz                      | <u>]</u><br>:     |

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| Product:      | Bone o   | onduction he | adphones  | П                                      | Test Mode:                 | Keep to             | ransmitting          |  |
|---------------|----------|--------------|-----------|--|----------------------------|---------------------|----------------------|--|
| Mode          |          | eping Transm |           | Т                                      | est Voltage                | DC3.7V              |                      |  |
| Temperature   |          | 24 deg. C,   |           |  | Humidity                   | 56% RH              |                      |  |
| Test Result:  |          | Pass         |           |  | Detector                   |                     | PK                   |  |
| 0dB Bandwidth |          | 883.77kHz    |           |  |                            |                     |                      |  |
| <u> </u>      | Mar      | er 1 [T1     | ndB]      | RBW                                    | 30 kHz                     | RF Att              | 20 dB                |  |
| Ref Lvl       | ndB      | 20           | .00 dB    | VBW                                    | 100 kHz                    |                     |                      |  |
| 10 dBm        | BW       | 883.76753    | 507 kHz   | SWT                                    | 8.5 ms                     | Unit                | dBm                  |  |
| 10            |          |              |           |  | <b>V</b> 1 [5              | 71] -               | 3.33 dBm             |  |
|               |          |              |           |  |                            | 2.4410              |                      |  |
| 0             |          |              |           | ,                                      | ndB                        | 2                   | 0.00 dB              |  |
|               |          |              |           | \                                      | BW<br>▼ <sub>T</sub> 1     | 883.7675<br>[T1] -2 | 3507 kHz<br>2.80 dBm |  |
| -10           |          |              |           | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |                            | 2.4405              |                      |  |
|               |          |              | $^{\sim}$ | /                                      | <b>↑</b> ▼ <sub>T2  </sub> | [T1] -2             | 3.24 dBm             |  |
| -20<br>1MAX   |          |              |           |  | V 2                        | 2.4414              | 3587 GHz             |  |
| -30           |          |              |           |  | 1                          | 1                   |                      |  |
| -40           |          | ĺ            |           |  |                            | \/\                 |                      |  |
|               |          |              |           |  |                            | V                   | Www.                 |  |
| -60           |          |              |           |  |                            |                     |                      |  |
| -70           |          |              |           |  |                            |                     |                      |  |
| -80           |          |              |           |  |                            |                     |                      |  |
| -90 <u> </u>  | .441 GHz |              | 300       | I-II /                                 |                            | Cro                 | an 3 MHz             |  |

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| Product:        | Bon     | e condu | iction hea | dphones | Bone conduction headphones |     |                        |            |                | Keep transmitting |     |  |
|-----------------|---------|---------|------------|---------|----------------------------|-----|------------------------|------------|----------------|-------------------|-----|--|
| Mode            | ]       | Keeping | g Transmi  | tting   |                            | T   | est Voltage            |            | DC             | 23.7V             |     |  |
| Temperature     |         |         | deg. C,    |         |                            | _   | Humidity               |            | 56% RH         |                   |     |  |
| Test Result:    | Pass    |         |            |         |                            | _   | Detector               |            | ]              | PK                |     |  |
| OdB Bandwidth   |         | 88      | 3.77kHz    |         |                            |     |                        |            |                |                   |     |  |
| <u> </u>        | Ма      | ırker   | 1 [T1 n    | ıdB]    | ]                          | RBW | 30 kF                  | Iz Ri      | F Att          | 20 dB             |     |  |
| Ref Lvl         | nd      | lB      | 20.        | 00 dB   | 7                          | VBW | 100 kF                 | Iz         |                |                   |     |  |
| 10 dBm          | BW      | 883     | .767535    | 07 kHz  | :                          | SWT | 8.5 ms                 | . Ui       | nit            | dBm               | 1   |  |
| 10              |         |         |            |         |                            |     | $\mathbf{v}_1$         | [T1]       | - 4            | 1.34 dBm          | A   |  |
|                 |         |         |            |         |                            |     |                        |            | 2.48000        | 301 GHz           |     |  |
| 0               |         |         |            |         |                            |     | ndB                    |            | 20             | 0.00 dB           |     |  |
|                 |         |         |            | $\sim$  | \ ^                        |     | BW<br>▼ <sub>T1</sub>  | 88<br>[T1] | 3.76753<br>-23 | 3.74  dBm         |     |  |
| -10             |         |         |            |         | V                          | 4   |                        |            | 2.47955        |                   |     |  |
|                 |         |         | 1          | $\sim$  |                            |     | <b>▽</b> <sub>Т2</sub> | [T1]       | -24            | 1.35 dBm          |     |  |
| -20<br>1MAX     |         |         | Tiv        |         |                            |     | V <sub>T2</sub>        |            | 2.48043        | 587 GHz           | 1M2 |  |
| -30             |         | <i></i> | }          |         |                            |     | 7                      | ζ          |                |                   |     |  |
| -50             |         |         |            |         |                            |     |                        |            | N              |                   |     |  |
| -60             |         |         |            |         |                            |     |                        | V          | W.             | Lanna Maria M     |     |  |
|                 |         |         |            |         |                            |     |                        |            |                |                   |     |  |
| -70             |         |         |            |         |                            |     |                        |            |                |                   |     |  |
| -80             |         |         |            |         |                            |     |                        |            |                |                   |     |  |
| -90<br>Center 2 | .48 GHz |         |            | 300     | kHz,                       | /   |                        |            | Spa            | an 3 MHz          |     |  |

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| π /4D-QPSK M    | odulatio | n           |            |         |        |     |                        |                          |              |                    |     |
|-----------------|----------|-------------|------------|---------|--------|-----|------------------------|--------------------------|--------------|--------------------|-----|
| Product:        | Е        | Bone cond   | uction hea | dphones |        | 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                 |     |
| 20dB Bandwidth  | 1.220MHz |             |            |         |        |     |                        |                          |              |                    |     |
|                 |          | Marker      | 1 [T1 n    | ıdB]    | R      | BW  | 30 k                   | Hz Rl                    | F Att        | 20 dB              |     |
| Ref Lvl         |          | ndB         |            | 00 dB   |        | BW  | 100 k                  |                          |              |                    |     |
| 10 dBm          |          | BW 1        | L.220440   | 88 MHz  | S      | WT  | 8.5 m                  | ıs Uı                    | nit          | dBm                |     |
|                 |          |             |            |         |        |     | <b>v</b> <sub>1</sub>  | [T1]                     | -2           | .74 dBm            | A   |
| 0               |          |             |            |         |        |     |                        |                          | 2.40200      | 301 GHz            |     |
|                 |          |             |            | ^       |        |     | ndE                    | 8                        | 20           | .00 dB             |     |
|                 |          |             |            | /\ /    | \      |     | BW<br>▽ <sub>T</sub> 1 | [T1]                     | 1.22044      | 088 MHz<br>.91 dBm |     |
| -10             |          |             | ~~~        | JW      | $\sim$ | ~~~ | My                     | _ [                      | 2.40137      | 776 GHz            |     |
|                 |          |             |            |         |        |     |                        | 2 [T1]                   | -22          |                    |     |
| -20             |          | Ÿ           | <u> </u>   |         |        |     | †                      | <del>2</del><br><b>1</b> | 2.40259      | 820 GHz            | 1MA |
| -30             |          |             |            |         |        |     |                        | 4                        |              |                    | IMA |
|                 |          |             |            |         |        |     |                        |                          |              |                    |     |
| -40             | ~~~      | $\bigwedge$ |            |         |        |     |                        | $\bigvee$                | $\checkmark$ |                    |     |
| -50             | ·        |             |            |         |        |     |                        |                          | To M         | My                 |     |
| -60             |          |             |            |         |        |     |                        |                          |              |                    |     |
| -70             |          |             |            |         |        |     |                        |                          |              |                    |     |
| -80             |          |             |            |         |        |     |                        |                          |              |                    |     |
| -90<br>Center 2 | .402 ਵਾ  | Hz          |            | 300     | kHz/   |     |                        |                          | Spa          | n 3 MHz            |     |
|                 | l.FEB.2  |             | :56:12     |         |        |     |                        |                          |              |                    |     |

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| Product:       | Bone cond | luction headphones                               | Test M  | Iode:                  | Keep tr | ansmitting |
|----------------|-----------|--|---------|------------------------|---------|------------|
| Mode           | Keepir    | ng Transmitting                                  | Test Vo | oltage                 | DO      | C3.7V      |
| Temperature    | 2         | 24 deg. C,                                       | Humi    | dity                   | 569     | % RH       |
| Test Result:   |           | Pass   | Dete    | ctor                   |         | PK         |
| 20dB Bandwidth | 1         | .214MHz  |         |                        |         |            |
|                | Marker    | 1 [T1 ndB]                                       | RBW :   | 30 kHz                 | RF Att  | 20 dB      |
| Ref Lvl        | ndB       | 20.00 dB   |         | 00 kHz                 |         |            |
| 10 dBm         | BW        | 1.21442886 MHz                                   | SWT 8   | .5 ms                  | Unit    | dBm        |
| 10             |           |  |         | ▼ <sub>1</sub> [T1     | ] -:    | 3.36 dBm   |
|                |           |  |         |                        | 2.44100 | 301 GHz    |
| 0              |           |  |         | ndB                    | 20      | 0.00 dB    |
|                |           | / /  | \       | BW V <sub>T1 [T]</sub> | 1.21442 |            |
| -10            |           |  | my my   | VII II.                | 2.44038 |            |
|                |           |  |         | AT2 [T]                |         | 3.65 dBm   |
| -20            | 7         | <del>                                     </del> |         | 112                    | 2.44159 | 9820 GHz   |
| -30            | //        |  |         | \                      |         | 1M         |
|                |           |  |         |                        |         |            |
| -40            |           |  |         |                        | ~       |            |
| -50            | · V       |  |         |                        | m       | My         |
| -60            |           |  |         |                        |         |            |
| -70            |           |  |         |                        |         |            |
| -80            |           |  |         |                        |         |            |
| -90            |           |  |         |                        |         |            |
| Center 2.      | 441 GHz   | 300  | kHz/    |                        | Spa     | an 3 MHz   |

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| Product:      | Bone o            | conduct                               | ion hea | dphones |                                       | Т        | est Mode:                     |              | Keep tra      | nsmitting |     |
|---------------|-------------------|---------------------------------------|---------|---------|---------------------------------------|----------|-------------------------------|--------------|---------------|-----------|-----|
| Mode          | Ke                | eping T                               | ransmi  | tting   |                                       | To       | est Voltage                   |              | DC3.7V        |           |     |
| Temperature   |                   | 24 d                                  | leg. C, |         |                                       | ]        | Humidity                      |              | 56% RH        |           |     |
| Test Result:  |                   | P                                     | ass     |         |                                       | Detector |                               |              | I             | PK        |     |
| 0dB Bandwidth |                   | 1.21                                  | 4MHz    |         |                                       |          |                               |              |               |           |     |
| <b>F</b>      | Marker 1 [T1 ndB] |                                       |         |         |                                       | BW       | 30 kF                         | Iz Rl        | 7 Att         | 20 dB     |     |
| Ref Lvl       | ndB 20.00 dB      |                                       |         |         |                                       | BW       | 100 kF                        |              |               |           |     |
| 10 dBm        | BW                | 1.2                                   | 214428  | 886 MHz | S                                     | WT       | 8.5 ms                        | s Ui         | nit           | dBm       | n   |
| 10            |                   |                                       |         |         |                                       |          | $\mathbf{v}_1$                | [T1]         | - 4           | .34 dBm   | A   |
|               |                   |                                       |         |         |                                       |          |                               |              | 2.48000       | 301 GHz   |     |
| 0             |                   |                                       |         |         |                                       |          | ndB                           |              | 20            | .00 dB    |     |
|               |                   |                                       |         |         | $\setminus$                           |          | $oldsymbol{ abla}_{	ext{T1}}$ | [T1]         | 1.21442       | 886 MHz   |     |
| -10           |                   | ~                                     |         |         | lun                                   |          |                               | 2.47938377 G |               | ,         |     |
|               |                   | ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ | \       | ٠ ٠,    | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |          |                               |              |               |           |     |
| - 20          |                   | T                                     |         |         |                                       |          |                               | 2            | 2.48059       | 820 GHz   | 1M2 |
| -30           |                   |                                       |         |         |                                       |          |                               |              |               |           |     |
| -40           |                   |                                       |         |         |                                       |          |                               | W.           | $\mathcal{N}$ |           |     |
|               |                   |                                       |         |         |                                       |          |                               |              | lun           | Mywy      |     |
| - 60          |                   |                                       |         |         |                                       |          |                               |              |               |           |     |
| -70           |                   |                                       |         |         |                                       |          |                               |              |               |           |     |
| -80           |                   |                                       |         |         |                                       |          |                               |              |               |           |     |
| -90 Center 2. | 48 GHz            |                                       |         | 300     | kHz/                                  |          |                               |              | Spa           | n 3 MHz   | ]   |
|               | FEB.2022          |                                       |         | 200     | /                                     |          |                               |              | S.P.G         | 2         |     |

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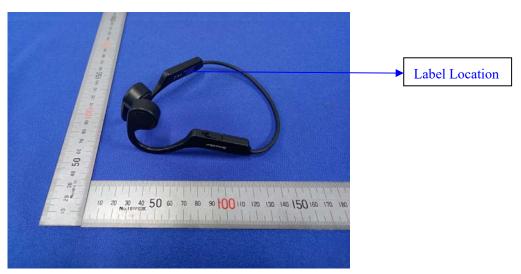


#### 10.0 FCC ID Label

FCC ID: 2A4SF-X

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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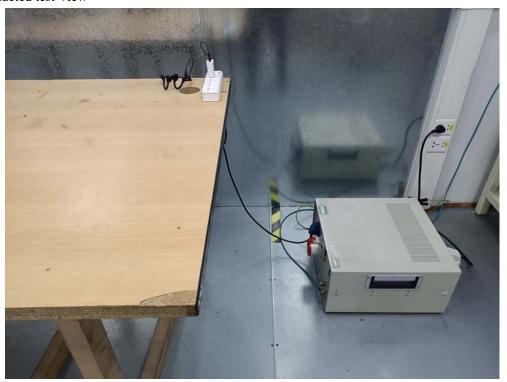
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#### 11.0 Photo of testing

#### 11.1 Conducted test View--



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## Radiated emission test view



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

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#### 11.2 Photographs-EUT





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Outside View



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Outside View

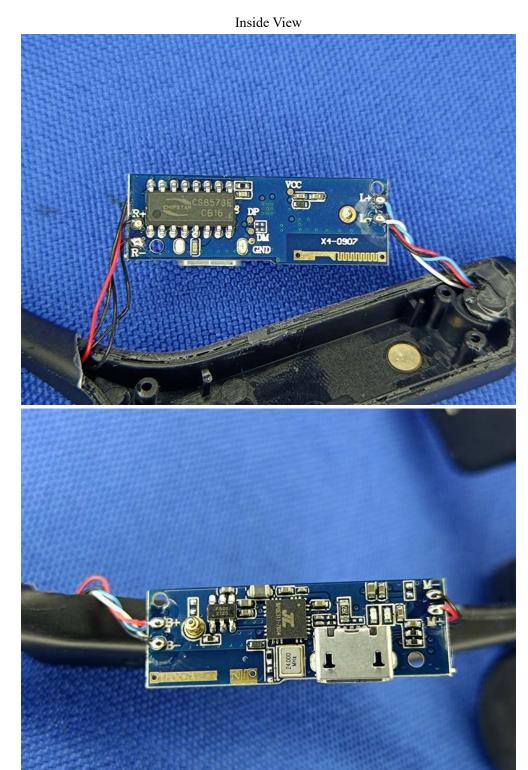


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Inside View



-- End of the report--

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