

Applicant: TECHNOFASHION INC.

Product: Wireless Speaker

Model No.: UCCSP08, UCCSP08-X01, UCCSP08-X02, UCCSP08-06,

UCCSP08-X06

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

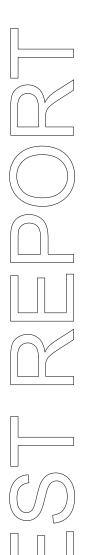
Dated: January 17, 2024

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.: TW2401070-01E Page 2 of 48

Date: 2024-01-17



# **Special Statement:**

#### FCC-Registration No.: 744189

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

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

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

## A2LA (Certification Number:5013.01)

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

CAB identifier: CN0033

Date: 2024-01-17



# Test Report Conclusion

#### Content

1.0	General Details	4
1.1	Test Lab Details	4
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
2.0	List of Measurement Equipment	6
3.0	Technical Details	7
3.1	Summary of Test Results	7
3.2	Test Standards	7
4.0	EUT Modification	7
5.0	Power Line Conducted Emission Test	8
5.1	Schematics of the Test.	8
5.2	Test Method and Test Procedure	8
5.3	Configuration of the EUT	8
5.4	EUT Operating Condition	9
5.5	Conducted Emission Limit.	9
5.6	Test Result	9
6.0	Radiated Emission test	12
6.1	Test Method and Test Procedure	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
9.0	20dB bandwidth measurement	29
10.0	FCC ID Label	39
11.0	Photo of Test Setup and EUT View	40

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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: TECHNOFASHION INC.

Address: 127, Kingsland Ave, Clifton, NJ, USA, 07014

Telephone: +1 (973) 866 7373

Fax: --

## 1.3 Description of EUT

Product: Wireless Speaker

Manufacturer: TECHNOFASHION INC.

Address: 127, Kingsland Ave, Clifton, NJ, USA, 07014

Factory: TECHNOFASHION INC.

Address: 127, Kingsland Ave, Clifton, NJ, USA, 07014

Trademark: N/A

Model Number: UCCSP08

Additional Model Name UCCSP08-X01, UCCSP08-X02, UCCSP08-06, UCCSP08-X06

Rating: DC5V, 1A

Battery: DC3.7V, 1200mAh 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: V035

Serial No.: SP0820231205115B

Antenna Designation PCB antenna with gain 1.7dBi Max (Get from the antenna specification)

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Report No.: TW2401070-01E Page 5 of 48

Date: 2024-01-17



1.4 Submitted Sample: 2 Samples

1.5 Test Duration 2024-01-06 to 2024-01-17

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 48

Report No.: TW2401070-01E

Date: 2024-01-17



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

## 2.2 Automation Test Software

## For Conducted Emission Test

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

#### For Radiated Emissions

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

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Page 7 of 48

Report No.: TW2401070-01E

Date: 2024-01-17



#### 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

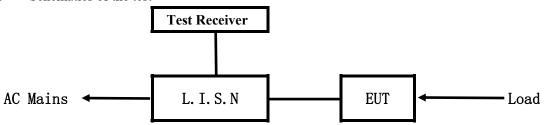
No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

Date: 2024-01-17



#### 5.0 Power Line Conducted Emission Test

#### 5.1 Schematics of the test

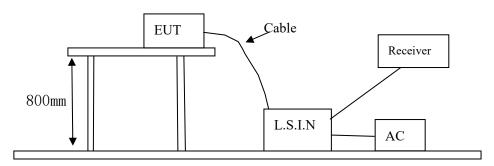


**EUT: Equipment Under Test** 

#### 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
		UCCSP08, UCCSP08-X01,	
Wireless Speaker	TECHNOFASHION INC.	UCCSP08-X02, UCCSP08-06,	2AZBO-N00030
		UCCSP08-X06	

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Report No.: TW2401070-01E Page 9 of 48

Date: 2024-01-17



#### B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

#### C. Peripherals

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

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.10-2013

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

5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency	Limits (c	lB 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: 2024-01-17



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

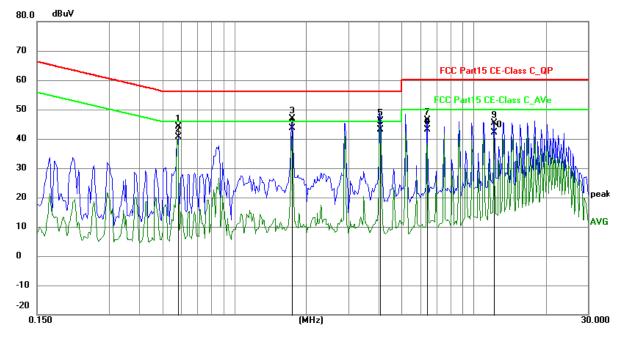
**EUT Operating Environment** 

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	0.5829	34.43	9.77	44.20	56.00	-11.80	QP	Р
2	0.5829	30.83	9.77	40.60	46.00	-5.40	AVG	Р
3	1.7412	37.13	9.80	46.93	56.00	-9.07	QP	Р
4	1.7412	33.83	9.80	43.63	46.00	-2.37	AVG	Р
5	4.0608	36.13	9.89	46.02	56.00	-9.98	QP	Р
6	4.0608	33.34	9.89	43.23	46.00	-2.77	AVG	Р
7	6.3773	36.52	9.98	46.50	60.00	-13.50	QP	Р
8	6.3773	33.05	9.98	43.03	50.00	-6.97	AVG	Р
9	12.1767	35.17	10.26	45.43	60.00	-14.57	QP	Р
10	12.1767	31.87	10.26	42.13	50.00	-7.87	AVG	Р

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

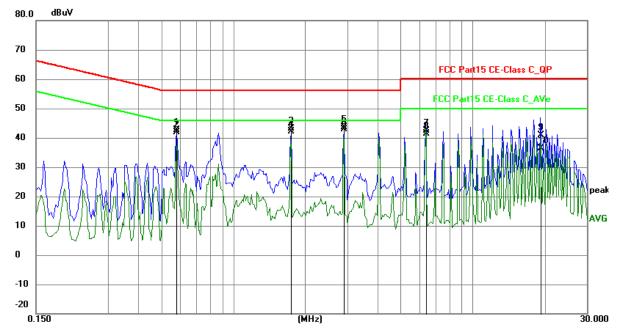
**EUT Operating Environment** 

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

**EUT set Condition: Charging + Communication by BT** 

**Results: Pass** 

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.5790	32.87	9.77	42.64	56.00	-13.36	QP	Р
2	0.5790	32.04	9.77	41.81	46.00	-4.19	AVG	Р
3	1.7412	33.39	9.80	43.19	56.00	-12.81	QP	Ч
4	1.7412	32.21	9.80	42.01	46.00	-3.99	AVG	Р
5	2.8995	33.82	9.84	43.66	56.00	-12.34	QP	Р
6	2.8995	32.94	9.84	42.78	46.00	-3.22	AVG	Р
7	6.3773	32.52	9.98	42.50	60.00	-17.50	QP	Р
8	6.3773	31.34	9.98	41.32	50.00	-8.68	AVG	Р
9	19.1342	30.35	10.63	40.98	60.00	-19.02	QP	Р
10	19.1342	25.85	10.63	36.48	50.00	-13.52	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 9kHz to 25 GHz was investigated. The frequency spectrum is set as follows:

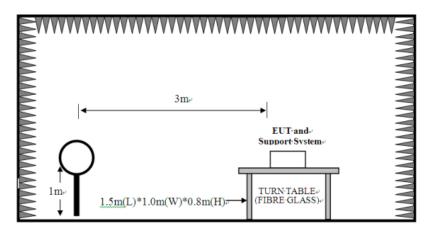
Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
ADOVE IGHZ	Peak	1MHz	10Hz	Average

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

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

#### **Block diagram of Test setup**

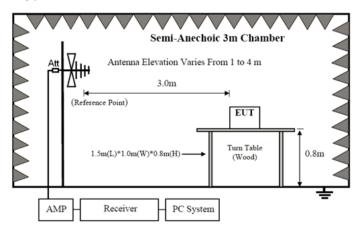
For radiated emissions from 9kHz to 30MHz



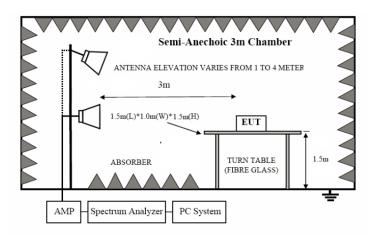
Date: 2024-01-17



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 S	trength of Harmonics (3m)
(MHz)	mV/m	dBuV/m	uV/m	dBuV/m

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Report No.: TW2401070-01E Page 14 of 48

Date: 2024-01-17



2400-2483.5 50	94 (Average)	114 (Peak)	500	54 (Average)	74 (Peak)
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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 $\mu$ V/m)
0.009-0.490	3	20log(2400/F(kHz)) +40log (300/3)
0.490-1.705	3	20log(24000/F(kHz)) +40log (30/3)
1.705-30	3	69.5
30-80	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage  $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. All scanning using PK detector. And the final emission level was get using QP detector for frequency range from 30-1000MHz.As to 1G-25G, the final emission level got using PK. For fundamental measurement, PK detector used.
- 5. The three modulation modes of GFSK, Pi/4D-QPSK and 8DPSK were tested. And only the worst case was recorded in the test report. GFSK was the worst case.
- 6. This is a 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.: TW2401070-01E Page 15 of 48

Date: 2024-01-17

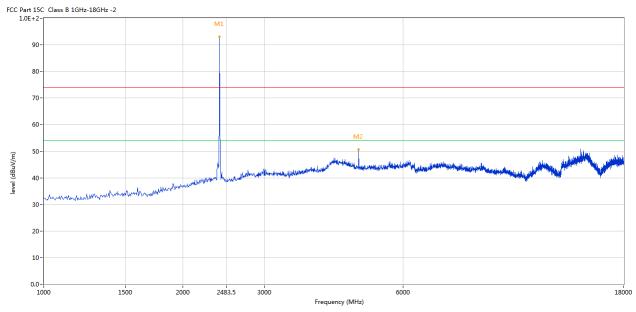


## 6.5 Test result

## A Fundamental & Harmonics Radiated Emission Data

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

#### Horizontal



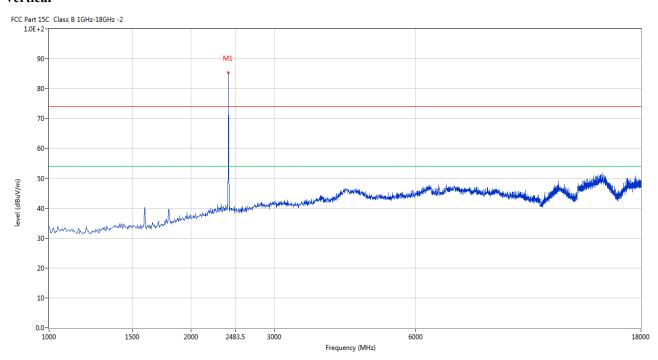
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402	93.02	-3.57	114.0	-20.98	Peak	259.00	100	Horizontal	Pass
2	4802.799	50.74	3.12	74.0	-23.26	Peak	270.00	100	Horizontal	Pass

Report No.: TW2401070-01E Page 16 of 48

Date: 2024-01-17



#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402	85.27	-3.57	114.0	-28.73	Peak	177.00	100	Vertical	Pass

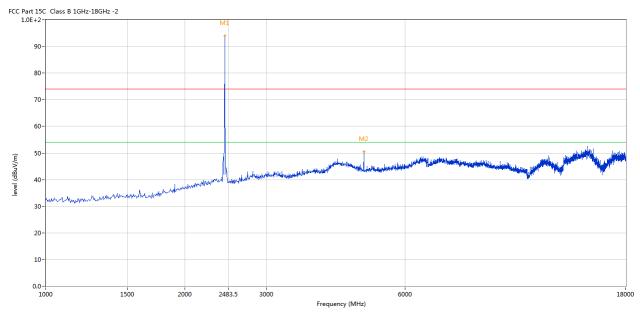
Report No.: TW2401070-01E Page 17 of 48

Date: 2024-01-17



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

#### Horizontal



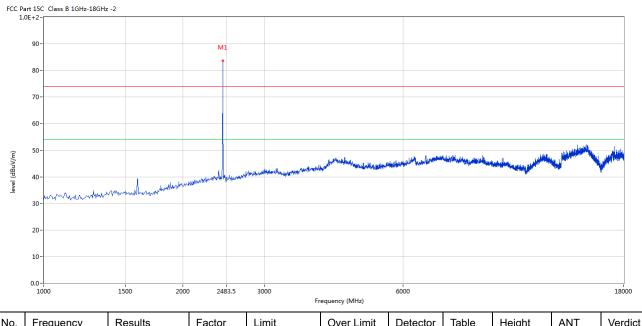
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2441	93.97	-3.57	114.0	-20.03	Peak	264.00	100	Horizontal	Pass
1**	2441	85.11	-3.57	94.0	-8.89	AV	264.00	100	Horizontal	Pass
2	4883.529	50.43	3.20	74.0	-23.57	Peak	248.00	100	Horizontal	Pass

Report No.: TW2401070-01E Page 18 of 48

Date: 2024-01-17



#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	2441	83.68	-3.57	114.0	-30.32	Peak	21.00	100	Vertical	Pass

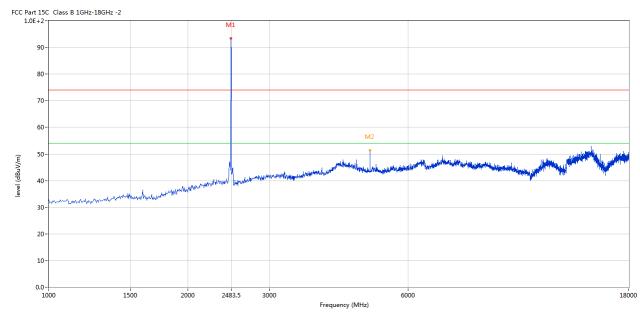
Report No.: TW2401070-01E Page 19 of 48

Date: 2024-01-17



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

#### Horizontal



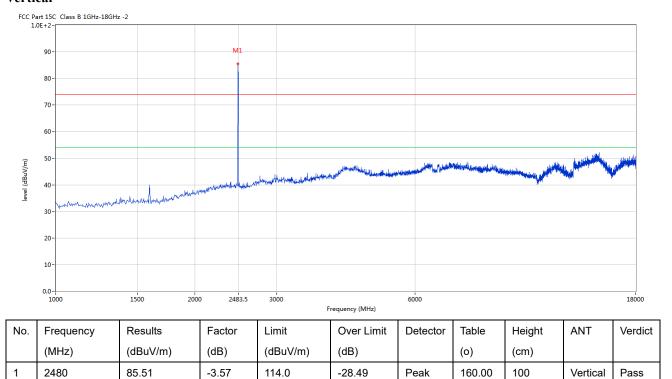
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	2480	93.45	-3.57	114.0	-20.55	Peak	247.00	100	Horizontal	Pass
1**	2480	84.68	-3.57	94.0	-9.32	AV	247.00	100	Horizontal	Pass
2	4960.010	51.49	3.36	74.0	-22.51	Peak	252.00	100	Horizontal	Pass

Report No.: TW2401070-01E Page 20 of 48

Date: 2024-01-17



#### Vertical



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.: TW2401070-01E Page 21 of 48

Date: 2024-01-17

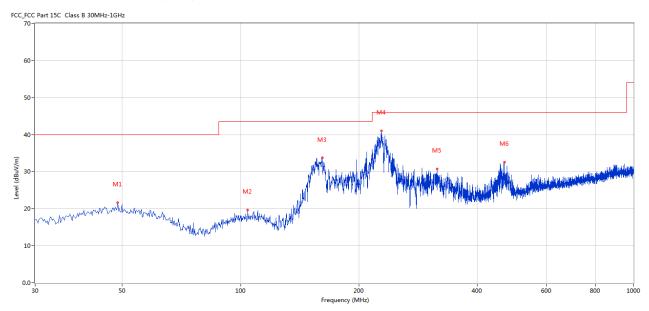


# B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

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	48.668	21.66	-11.22	40.0	18.34	Peak	128.00	100	Horizontal	Pass
2	104.186	19.70	-13.30	43.5	23.80	Peak	67.00	100	Horizontal	Pass
3	161.402	33.69	-16.37	43.5	9.81	Peak	357.00	100	Horizontal	Pass
4	228.073	41.01	-12.77	46.0	4.99	Peak	287.00	100	Horizontal	Pass
5	316.078	30.76	-10.79	46.0	15.24	Peak	153.00	100	Horizontal	Pass
6	470.027	32.60	-7.58	46.0	13.40	Peak	276.00	100	Horizontal	Pass

Report No.: TW2401070-01E Page 22 of 48

Date: 2024-01-17

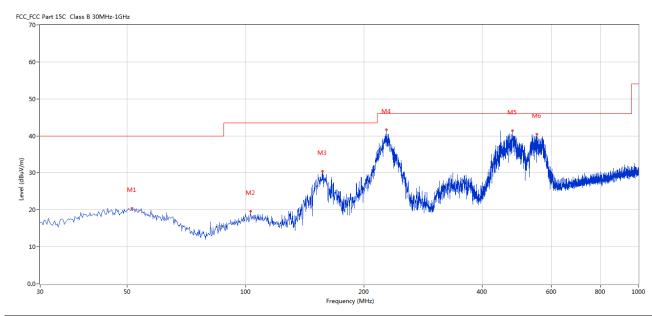


## Radiated Emission In Vertical (30MHz----1000MHz)

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	51.335	20.47	-11.41	40.0	19.53	Peak	167.00	100	Vertical	Pass
2	102.974	19.61	-13.38	43.5	23.89	Peak	126.00	100	Vertical	Pass
3	156.796	30.49	-16.59	43.5	13.01	Peak	74.00	100	Vertical	Pass
4	228.073	41.67	-12.77	46.0	4.33	Peak	247.00	100	Vertical	Pass
5	478.270	41.41	-7.45	46.0	4.59	Peak	236.00	100	Vertical	Pass
6	551.972	40.45	-6.37	46.0	5.55	Peak	306.00	100	Vertical	Pass

Date: 2024-01-17

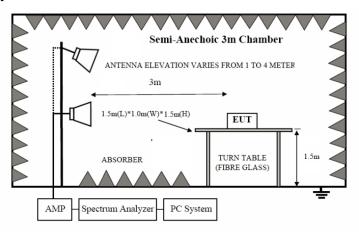


#### 7. Band Edge

#### 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.

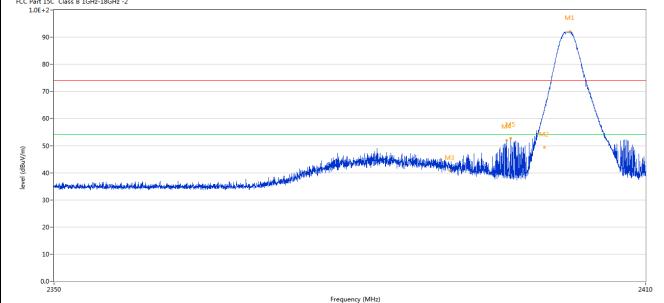
Report No.: TW2401070-01E Page 24 of 48

Date: 2024-01-17



#### 7.6 Test Result

7.0 Test Result			
Product:	Wireless Speaker	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-18GH 1.0E+2-	iz -2		M1



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402.247	92.10	-3.57	74.0	18.10	Peak	288.00	100	Horizontal	N/A
2	2400.000	63.29	-3.57	74.0	-10.71	Peak	282.00	100	Horizontal	Pass
2**	2400.000	49.26	-3.57	54.0	-4.74	AV	282.00	100	Horizontal	Pass
3	2390.010	40.61	-3.53	74.0	-33.39	Peak	239.00	100	Horizontal	Pass
4	2395.799	52.01	-3.55	74.0	-21.99	Peak	267.00	100	Horizontal	Pass
5	2396.188	52.80	-3.55	74.0	-21.20	Peak	282.00	100	Horizontal	Pass

Report No.: TW2401070-01E Page 25 of 48



	Product:		Wireless	Speaker		Detect	tor		Vertical	
	Mode	I	Keeping Tr	ansmitting		Test Vol	tage	-	DC3.7V	
Te	emperature		24 de	g. C,		Humid	lity		56% RH	
Te	est Result:		Pa	ss						
CC Part 1.0E	15C Class B 1GHz-18GHz	-2								
,	90-								M1	
	80-							1	<u></u>	
	70-							/	_	
•	60-									
. !	50-						M4 M	M <sub>2</sub>	1	
	40 - 40 - 40 - 40 - 40 - 40 - 40 - 40 -	والماللة والمالية أأمام والمالية	أرادة المستراق فقالها المستراق فألما	and the second of the second	الهاما الالطامان فالموارس فارسا	: ۱۸: براز هارسان براز برافر و (سرافار		,	*	West Land
	The state of the s	tions of the sections of the state of the section land of the	And the second second second second	the principle of the spillers belongs to the contract of		and the same of the same	or and a testion is side.	ale at the Holes		atana ilani
	20									
;	30-									
	20-									
:										
:	10-									
:	10-				Frequency (MHz)					2
:	10-	Results	Factor	Limit	Frequency (MHz)  Over Limit	Detector	Table	Height	ANT	1
:	20-	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)		Detector	Table (o)	Height (cm)	ANT	1
vo.	20- 10- 2350 Frequency				Over Limit	Detector Peak		_	ANT Vertical	1
:: :: :: :: :: :: :: :: :: :: :: :: ::	Frequency (MHz)	(dBuV/m)	(dB)	(dBuV/m)	Over Limit (dB)		(0)	(cm)		Verd
: : : : : : : : : : : : : : : : : : :	20- 10- 2350 Frequency (MHz) 2401.602	(dBuV/m) 85.03	(dB) -3.57	(dBuV/m) 74.0	Over Limit (dB) 11.03	Peak	(o) 174.00	(cm)	Vertical	Verdi N/A Pass
No.	Frequency (MHz) 2401.602 2400.012	(dBuV/m) 85.03 55.32	(dB) -3.57 -3.57	(dBuV/m) 74.0 74.0	Over Limit (dB) 11.03 -18.68	Peak Peak	(o) 174.00 163.00	(cm) 100 100	Vertical Vertical	Verdi N/A Pass Pass Pass
:	Frequency (MHz) 2401.602 2400.012	(dBuV/m) 85.03 55.32 41.88	(dB) -3.57 -3.57 -3.57	(dBuV/m) 74.0 74.0 54.0	Over Limit (dB) 11.03 -18.68 -12.12	Peak Peak AV	(o) 174.00 163.00 163.00	(cm) 100 100 100	Vertical Vertical Vertical	Verd N/A Pass

Report No.: TW2401070-01E Page 26 of 48



	23.7V % RH
Test Result:  Pass   C Part 15C Class B 1GHz-18GHz -2  1.0E+2-  90- 80- 70-	% RH
C Part 15C Class B 1GHz-18GHz -2  1.0E+2	
1.0E+2	
50- 40- 40- 30-	ing, natural legal design of party and
10-	
0.0- 2470 2483.5	
No. Frequency Results Factor Limit Over Detector Table Height ANT	:
No. Frequency Results Factor Limit Over Detector Table Height ANT	Verd

No	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(0)	(cm)		
1	2479.808	92.83	-3.57	74.0	18.83	Peak	257.00	100	Horizontal	N/A
2	2483.500	57.81	-3.57	74.0	-16.19	Peak	257.00	100	Horizontal	Pass
2**	2483.500	43.78	-3.57	54.0	-10.22	AV	257.00	100	Horizontal	Pass

Page 27 of 48

Report No.: TW2401070-01E

Date: 2024-01-17



]	Product:		Wireless	Speaker		Detec	tor		Vertical	
	Mode	K	Leeping Tra	ansmitting		Test Vo	ltage		DC3.7V	
Te	mperature		24 de	g. C,		Humio	dity		56% RH	
Те	est Result:		Pas	ss						
FCC Part 1	L5C Class B 1GHz-18GHz -:	2								
9	10-		M1							
8	00-		pro-	<b>M</b>						
7	0-									
	60-									
6			/	**						
	00-	/	/	M2	<u> </u>					
		Mildell And a like to the late of the late	/	M2	A STATE OF THE STA	ان يوا ما ما يوان ما والموان الما الموان الما الموان الما الموان الموان الموان الموان الموان الموان الموان الم	Muhdindpohindpohidd	adi kadilan garan nalimidadika	himogen tanning till the Both foot of	<u>Lynchel</u> l
(m//\mgp)   4	60-	A LEAN AND MAINTAIN AND A STATE OF THE STATE	/	W 200		الموافق المساورة والمالية	Manager and post and an activity and	alif halit ya ee ee ee ee hali ka k	a paragenta anna faith ann de impraige	<del>Leprochiel</del> L
5   5   6   6   6   6   6   6   6   6	0 - Inne de la	A LANGULAN MENTAL MENTAL PROPERTY OF THE PROPE	/	M2			dina distributi poli della distributi	<u>ڔٷڹڣؽڶڟ؞ڟۣڔ؞؞؞؞ؠۅڰؾڵڡ؋ؙڹڮؖ؞</u>	n jaragan jaran filikin di infrança	hoperature b
(m/VuBb) level (aBu/Vim) 3	10 - Ingalagiana Jang Jaribi	A HAIR BANKA NA KIBALA PARA	/	M2	And the state of t	क्ष्मानी करणे के स्वति होते हैं कि स्व	Market med political reads reply	di hair gayaran di adalah A	glander for the state of the st	boponder l
(m/Nng)   4   3   3   2   1   1   1   1   1   1   1   1   1		A LEAN AND ME AND A SECOND PORTER OF THE PARTY OF THE PAR	/	M2		الروافة والمراجع والمراجع والمراجع	Markel and pri Androde State (Sph)	. તેનું મુખ્યાં જ ૧૯૬૦ માં મુખ્યાં અને કર્યો છે.	alumente para palas di Africa	
(m/Nngp)   4   3   3   2   1   1   1   1   1   1   1   1   1		A LEAN AND HER ALL HER AND		M2		العباد العباد والعباد والمارة	Hartsond prison and right	و المنافق المن	n in security of the section of the	2500
(m/Nngp)   4   3   3   2   1   1   1   1   1   1   1   1   1		Results	Factor	2483.: Limit	5	Detector	Table	Height	ANT	
(w/NRP)   4   3   2   1   0.	0-2470	Results (dBuV/m)	Factor (dB)	1	; Frequency (MHz)					2500
(w/\mu/\mu)   Section (\mu/\mu)   Section (\mu)   Section (\m)   Section (\mu)   Section (\mu)   Section (\mu)   Section (\mu)	00- 00- 00- 00- 00- 00- 00- 00- 00- 00-			Limit	Frequency (MHz)  Over Limit		Table	Height		2500

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.

Date: 2024-01-17



Page 28 of 48

## 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. The antenna gain is 1.7dBi Max. It fulfills the requirement of this section. Test Result: Pass

Date: 2024-01-17



Page 29 of 48

#### 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 48

Report No.: TW2401070-01E

Date: 2024-01-17



## **Test Result**

Product:		Wir	eless Spea	ker		Te	est Mode:		Keep trai	nsmitting	
Mode		Keepii	ng Transm	itting		Te	st Voltage		DC3	3.7V	
Temperature		2	24 deg. C,			I	Humidity		56%	RH	
Test Result:			Pass			]	Detector		P	K	
dB Bandwidth			938kHz						_	-	
		Delta 1	[T1]		R	BW	30 k	Hz	RF Att	20 dB	
Ref Lvl				22 dB	V	BW	100 k				
10 dBm		937	7.875751	50 kHz	S	TW	8.5 m	ıs	Unit	dB	m
							<b>v</b> <sub>1</sub>	[T1]	-1	8.88 dB	m
				2	Λ				2.4016	4228 GH	
0				1	<b>~</b>	$^{\wedge}$	<u></u> 1	[T1]		0.22 dB	
					V	\	<b>\</b> ∇ <sub>2</sub>	(T1)	937.8757	1.20 dB	
-10				\frac{1}{2}			M		2.4019	3086 GH	
_D1 -18.8	dBm_		1	~~			1				
1MAX	abiii		Jr.J.				7	\			1:
-30								5			
-30			$\sqrt{}$					/			
-40		/						١			
									W		
-50	<del>/War</del> /									dan y	~
-60											
-70											
-80											
-90											
Center 2.	402 G	Hz		300	kHz/				gg	an 3 MH	z

Page 31 of 48

Report No.: TW2401070-01E



Product:		Wire	less Speak	ter		Т	est Mode:			Keep tra	nsmittin	
Mode			g Transmi			Te	est Voltage	;			3.7V	
Temperature			4 deg. C,				Humidity			56%	6 RH	
Test Result:			Pass				Detector			P	PΚ	
0dB Bandwidth			938kHz									
(A)		Delta 1	[T1]		R	BW	30 k	Hz	RF	Att	20 di	3
Ref Lvl			-0.	34 dB	V	BW	100 k					
10 dBm		937	7.875751	50 kHz	S	WT	8.5 m	s	Uni	t	dI	3m
10							<b>v</b> <sub>1</sub>	[T1]		-18	.73 dE	3m A
				2					2	.44064	228 GH	z
0				/h	$\sqrt{\ }$	$\wedge$	<u>^</u> 1	[T1]		- C	.34 dE	
				<i>J</i>		'\	$\nabla_2$	[TT]	937	.87575	150 kH .74 dE	
-10			_	\( \sqrt{\sq}\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}\sqrt{\sqrt{\sqrt{\sq}}}}}}\sqrt{\sqrt{\sqrt{\sq}}}}}}}\sqrt{\sqrt{\sqrt{\sq}}}}}}\sqrt{\sqrt{\sqrt{\sq}}}}}}\sqrt{\sqrt{\sqrt{\sq}}}}}}\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}\sqrt{\sqrt{\sqrt{\sq}\eqs}}}}}\sqit{\sqrt{\sq}}}}}\sqrt{\sqrt{\sq}}}}}}\sqrt{\s				<u>,</u>	2	.44093	- /	
-20 <del>-D1 -19</del> .	26 dBm		1									
1MAX												1M
-30								7				
-40		1,,/							V	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
-50	<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>										~~~~	~
-60												
-70												
-80												
-90 Center 2	441 0	T-		200	kHz/					Cmo	n 3 MH	

Page 32 of 48

Report No.: TW2401070-01E



FSK Droducti		117:.	laga C 1			т	Seat Mr. J		IZ 4		
Product:			less Speak				est Mode:	_		ansmitting	
Mode			g Transmi	ttıng		1	est Voltage	;		C3.7V	
Temperature		2.	4 deg. C,			1	Humidity			% RH	
Test Result:			Pass				Detector			PK	
20dB Bandwidth		1.	004MHz								
Ŕ		Delta 1	[T1]		F	RBW	30 k	Hz	RF Att	20 dB	
Ref Lvl				16 dB	7	/BW	100 k				
10 dBm		1	.004008	02 MHz	5	SWT	8.5 m	ıs	Unit	dBm	n
10							<b>v</b> <sub>1</sub>	[T1]	-1	9.75 dBm	
				2					2.4795	3216 GHz	A
0				M			<u>1</u>	[T1]		0.16 dB	1
					ľ	$/ \setminus$	_		1.0040		
-10				$\sim$			$\nabla_2$	[T1]	0 4500	0.40 dBm	
			1	$ \sqrt{}$			\ \ <sub>1</sub>		2.4799	3086 GHz	
-20 <del>-D1 -19</del>	6 dBm—		<u> </u>				7				ł
1MAX							<u> </u>	lγ .			1M2
-30								- hour			
-50	المسمر ٨	" m							han		
munda										Marine Marine	*
-60											
-70											
-80											
-90 Center 2	.48 GH:	z		300	kHz/	,			Spa	an 3 MHz	
				200	/				250	2	

Page 33 of 48

Report No.: TW2401070-01E



//4DQPSK Product:	Wi	reless Speaker	•	Т	est Mode:		Keep tran	smitting	
Mode		ing Transmitti		-	est Voltage		DC3		
Temperature	Ксер	24 deg. C,	115	+	Humidity		56%		
Test Result:		Pass			Detector		Pk		
0dB Bandwidth		1.269MHz		•					
^			. 1	DEL	30 ki	<u> </u>			
Ref Lvl	ndB	1 [T1 ndE		RBW /BW	100 ki		F Att	20 dB	
10 dBm		1.26853707		SWT	8.5 ms		nit	dBm	a
10									1
			1		<b>V</b> 1	[T1]	2 40103	.20 dBm	2
0			A A	^	ndB		2.40193	000 GHZ	
				$/ \setminus$	o ∩ BW		1.26853		
-10		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	~ ·	\	V V V V V V V V V V V V V V V V V V V	[T1]	-19	.21 dBm	1
		\ \darksigma \ \da				)	2.40145	591 GHz	
-20		T1 Y			$\nabla_{\mathrm{T}2}$	1 1	-18	.52 dBm	
1MAX						1	2.40272	445 GHz	11
		1				4			
-30	/\J						la .		
	~~\\\\\						My M		
-40							- W		
may n	<b>└</b> ✓✓						\	<u></u>	
-50									İ
<b>'</b>									
-60									
-70									
-80									
-90 Center 2.4	02 CH2		300 kHz/	,			Sna	ın 3 MHz	Ш

Page 34 of 48

Report No.: TW2401070-01E



Product:		Wireless Spe	aker	7	Test Mode:	K	eep transmitting	
Mode		eeping Transr		Т	est Voltage		DC3.7V	
Temperature		24 deg. C	,		Humidity		56% RH	
Test Result:		Pass			Detector		PK	
0dB Bandwidth		1.269MH	Z					
r)	Mar	ker 1 [T1	ndB]	RBW	30 ki	Iz RF A	tt 20 dB	
Ref Lvl	ndB		0.00 dB	VBW	100 kF			
10 dBm	BW	1.2685	3707 MHz	SWT	8.5 ms	s Unit	dBm	l
10					<b>v</b> <sub>1</sub>	[T1]	0.76 dBm	A
			1			2.4	14093 <mark>086 GHz</mark>	
0			$\Lambda$	<i></i> Λ Λ	ndB		20.00 dB	
		~	W ~~ W	'	M BW	[T1]	26853707 MHz -19.45 dBm	
-10					1		14045591 GHz	
		T.J.			$\nabla_{\mathrm{T2}}$	भूभ ।	-19.25 dBm	
-20						2.4	14172445 GHz	1M.
-30		\_\						
		•				1		
-40						·		
my	~~						\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
-50							4 11000	
-60								
-70								
-80								
-90	4.4.1 ====							j
Center 2	.441 GHz		300 ]	KHZ/			Span 3 MHz	

Page 35 of 48

Report No.: TW2401070-01E



I/4DQPSK		Winologa Cm1	ran	-	Foot Mode		Vaca to	mamitti	
Product:		Wireless Speal			Test Mode:			ansmitting	
Mode	Ke	eeping Transm	ıttıng		est Voltage			23.7V	
Temperature		24 deg. C,			Humidity			% RH	
Test Result:		Pass			Detector		]	PK	
20dB Bandwidth		1.269MHz							
	Mar	ker 1 [T1 :	ndB]	RBW	30 k	Hz RF	Att	20 dB	
Ref Lvl	ndB		.00 dB	VBW	100 k				
10 dBm	BW	1.26853	707 MHz	SWT	8.5 m	s Ur	nit	dBm	1 -
					<b>v</b> <sub>1</sub>	[T1]	(	0.40 dBm	A
			1				2.47992	485 GHz	
0			Â	$\bigwedge$	ndF	3	20	0.00 dB	
		- A		$r \vee \langle$	₩ BW	[ m 1 ]	1.26853		
-10			\ \\\		1,0	[T1]	2.47945	3.09 dBm 5591 GHz	
		<b>T</b> ∫			$ abla_{\mathrm{T2}}$	2 (212)	-19		
-20		y					2.48072	2445 GHz	
1MAX									1M
-30		. /				<del>\</del>			
							1		
-40	mad							V. 1	
-50									
-60									
-70									
-80									
-90 Center 2	.48 GHz		300	kHz/			Spa	an 3 MHz	
<b>-</b>				,			-1-0	<b>-</b>	

Page 36 of 48

Report No.: TW2401070-01E



DPSK										
Product:	Wir	eless Speake	r		Te	est Mode:		Keep tran	smitting	
Mode	Keepi	ng Transmitt	ing		Te	st Voltage		DC3	.7V	
Temperature	-	24 deg. C,			F	Humidity		56%	RH	
Test Result:		Pass			]	Detector		Pk	ζ.	
20dB Bandwidth	1	1.244MHz								
r e	Marker	1 [T1 nd	в]	RI	BW	30 k	Hz RI	F Att	20 dB	
Ref Lvl	ndB	20.0		VE	BW	100 k	Hz			
10 dBm	BW 3	L.2444889	8 MHz	SV	TW	8.5 m	s Ur	nit	dBm	n
10						<b>v</b> <sub>1</sub>	[T1]	C	.96 dBm	Z
				1				2.40208	717 GHz	
0			\ \ \	7		ndB	3	20	.00 dB	
		, ~	~VV	V	$\sim$	BW V	[ 17 ]	1.24448	898 MHz	
-10						<u> </u>		2.40147	996 GHz	
		T.				$oldsymbol{ abla}_{\mathrm{T2}}$	2 [[2]]	-19		1)
-20		/					<del>- \</del>	2.40272	445 GHz	١
1MAX	J						\			1M
-30	W						Yn.	n		
	$\bigwedge \bigwedge$						• •	MM		
-40	AND C							<del>-                                    </del>	~~~	
								V		
-50										
-60										
-70										
-80										
-90										
Center 2.4	102 GHz		300 kH	Iz/				Spa	n 3 MHz	
ate: 12.	JAN.2024 14	:29:33								

Page 37 of 48

Report No.: TW2401070-01E

Date: 2024-01-17



8DPSK										
Product: Wireless Speaker  Mode Keeping Transmitting			7	Test Mode:		Keep transmitting				
			ing	Т	est Voltage		DC3.7V 56% RH			
		24 deg. C,	l deg. C,		Humidity					
Test Result:		Pass 1.238MHz			Detector		PK			
20dB Bandwidth	1									
Ŕ	Marker	1 [T1 nd	.B]	RBW	30 k	Hz RI	7 Att	20 dB		
Ref Lvl	ndB		0 dB	VBW	100 k					
10 dBm	BW 1	1.2384769	5 MHz	SWT	8.5 m	s Ur	nit	dBm	1	
					<b>v</b> <sub>1</sub>	[T1]	C	.53 dBm	A	
				1.			2.44108	717 GHz		
0			$\wedge$ $\lambda$		ndE		20	.00 dB		
1.0		~^	W Vm	~~	BW V	[T1]	1.23847 -19	695 MHz		
-10						<u> </u>	2.44047	996 GHz	1	
		T/			$ abla_{\mathrm{T}2}$	( <del>[]2</del> 1]	-19	.05 dBm		
-20						Ŋ	2.44171	844 GHz	1MA	
-30							\ <			
-40							<b>V</b>	m		
-30										
-60										
-70										
-80										
-90 Center 2	441 GHZ		300 kH	[7 /			Cn.	n 3 MHz		
		1:27:40	200 KE	. <b>.</b> .,			ъра	.11 5 1.1112		

Page 38 of 48

Report No.: TW2401070-01E

Date: 2024-01-17



DPSK										
Product: Wireless Speaker  Mode Keeping Transmitting  Temperature 24 deg. C,				Test Mode: Test Voltage Humidity			Keep transmitting			
						DC3.7V				
							56% RH			
Test Result:		Pass 1.238MHz			Detector			PK		
0dB Bandwidth	1									
r)	Marker	1 [T1 n	dB]	RE	ЗW	30 k	Hz RI	7 Att	20 dB	
Ref Lvl	ndB		00 dB	VE	ВW	100 k				
10 dBm	BW 3	1.238476	95 MHz	SV	T	8.5 m	s Ur	nit	dBm	ı
10						<b>v</b> <sub>1</sub>	[T1]	C	.26 dBm	A
				1				2.48008	717 GHz	
0			$\Lambda$	$\Lambda$		ndB		20	.00 dB	
		$\sim$	$\sim \sim \sim \sim$	γ \ <u>\</u>	$\searrow$	BW VATA	[ 17 ]	1.23847	695 MHz	
-10					,	$\sim \sim \sim$	<u> </u>	2.47947	· · · · · · · · · · · · · · · · · · ·	
		T/				$ abla_{\mathrm{T2}}$	: ř <u>†</u> 121 ]	-20	.04 dBm	
-20		/					_	2.48071	844 GHz	1M2
-30	ma W						\range \( \sqrt{\range} \)	<u>\</u>		
								\ \ \		
-40	war and							<u> </u>	M	
-50										
-60										
-70										
-80										
-90										
Center 2.48 GHz 300 kHz/								Spa	n 3 MHz	
Date: 12.	JAN.2024 14	:26:26								

Report No.: TW2401070-01E Page 39 of 48

Date: 2024-01-17

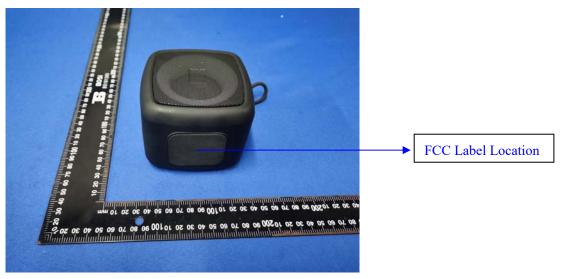


# 10.0 FCC ID Label

### FCC ID: 2AZBO-N00030

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:



Page 40 of 48

Report No.: TW2401070-01E

Date: 2024-01-17



### 11.0 Photo of testing

#### 11.1 Conducted test View



Page 41 of 48

Report No.: TW2401070-01E

Date: 2024-01-17



# Radiated emission test view



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Report No.: TW2401070-01E

Date: 2024-01-17



#### 11.2 Photographs – EUT

### Outside View





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Page 43 of 48

Report No.: TW2401070-01E

Date: 2024-01-17



Outside View





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Report No.: TW2401070-01E Page 44 of 48

Date: 2024-01-17



Outside View



Page 45 of 48

Report No.: TW2401070-01E

Date: 2024-01-17



Inside View





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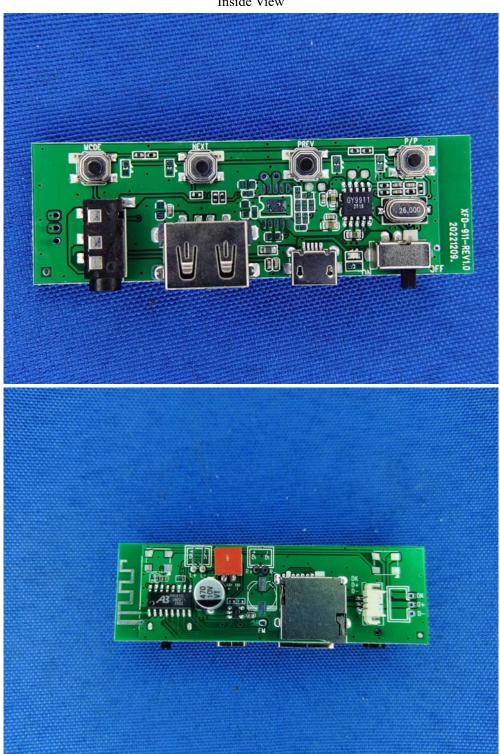
Page 46 of 48

Report No.: TW2401070-01E

Date: 2024-01-17



Inside View



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Page 47 of 48

Report No.: TW2401070-01E

Date: 2024-01-17



Inside View



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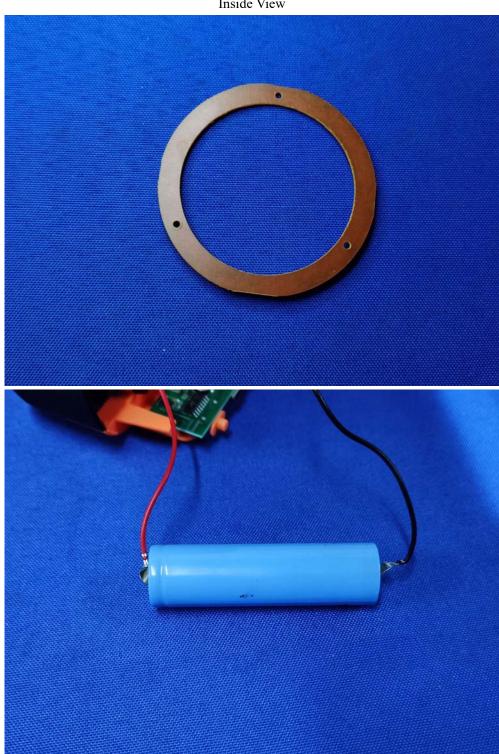
Page 48 of 48

Report No.: TW2401070-01E

Date: 2024-01-17



Inside View



-- End of the report--

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