

File reference No.: 2022-08-08

Applicant: Shenzhen JianYi KeJi Youxian Gongsi

Product: Wireless Music Receiver

Model No.: BE-RCA PRO

Trademark: BESIGN

Test Standards: FCC Part 15.249

Test result:

It is herewith confirmed and found to comply with the

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

Paragraph 15.249 regulations for the evaluation of

electromagnetic compatibility

Approved By

Terry Tang Manager

Dated: August 08, 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 17025:2017 General Requirements) for the Competence of testing Laboratories.

#### FCC-Registration No.: 744189

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

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

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

#### **A2LA (Certification Number:5013.01)**

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

Date: 2022-08-08



## Test Report Conclusion

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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 JianYi KeJi Youxian Gongsi

Address: Rm401, Unit 1, B1 Bulding, Bqu, Jinhuhuayuan, Jinhu Road, Qingshuihejiedao, Luohu

District, Shenzhen 518023, China

Telephone: 13715368860

Fax: --

#### 1.3 Description of EUT

Product: Wireless Music Receiver

Manufacturer: SHENZHEN SURE THING INDUSTRY AND COMMERCE DEVELOPMENT

CO., LTD.

Address: Building 6,1st Phase of Fu'an Industrial City, 99th Dayang Road,Fuhai

Town, Bao'an District, Shenzhen, China.

Trademark: BESIGN

Model Number: BE-RCA PRO

Additional Model Name N/A Rating: DC5V

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

Operation Frequency: 2402-2480MHz

Channel Number: 79
Channel Separation: 1MHz

Hardware Version: BTC31-A2X-V2 FR4

Software Version: BTC31-AB1524-(BE-RCA Pro)-20220616.airoflashZ

Serial No.: BERCAPRO000001

Antenna Designation Fixed dipole external antenna. The gain is 4.1dBi Max (Get from the antenna

specification)

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1.4 Submitted Sample: 1 Sample

1.5 Test Duration 2022-07-26 to 2022-08-08

#### 1.6 Test Uncertainty

Conducted Emissions Uncertainty = 3.6dB

Radiated Emissions below 1GHz Uncertainty =4.7dB

Radiated Emissions above 1GHz Uncertainty =6.0dB

Conducted Power Uncertainty = 6.0dB

Occupied Channel Bandwidth Uncertainty =5%

Conducted Emissions Uncertainty = 3.6dB

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

1.7 Test Engineer

The sample tested by

Print Name: Andy Xing

Date: 2022-08-08



2.0 Test Equipment								
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date			
ESPI Test Receiver	R&S	ESPI 3	100379	2022-06-17	2023-06-16			
LISN	R&S	EZH3-Z5	100294	2022-06-17	2023-06-16			
LISN	R&S	EZH3-Z5	100253	2022-06-17	2023-06-16			
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2022-06-17	2023-06-16			
Loop Antenna	EMCO	6507	00078608	2021-06-18	2024-06-17			
Spectrum	R&S	FSIQ26	100292	2022-06-17	2023-06-16			
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	2022-06-17	2023-06-16			
Power sensor	Anritsu	MA2491A	32263	2022-06-17	2023-06-16			
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2021-07-02	2024-07-01			
9*6*6 Anechoic			N/A	2022-06-17	2023-06-16			
EMI Test Receiver	RS	ESVB	826156/011	2022-06-17	2023-06-16			
EMI Test Receiver	RS	ESH3	860904/006	2022-06-17	2023-06-16			
Spectrum	HP/Agilent	ESA-L1500A	US37451154	2022-06-17	2023-06-16			
Spectrum	HP/Agilent	E4407B	MY50441392	2022-06-17	2023-06-16			
Spectrum	RS	FSP	1164.4391.38	2022-01-05	2023-01-04			
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA	-	2022-06-17	2023-06-16			
RF Cable	Zhengdi	7m	1	2022-06-17	2023-06-16			
RF Switch	EM	EMSW18	060391	2022-06-17	2023-06-16			
Pre-Amplifier	Schwarebeck	BBV9743	#218	2022-06-17	2023-06-16			
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2022-06-17	2023-06-16			
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	ı tested accordin	g to the following	specifications:
		A	, 50000

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 and RSS-210	Radiated Emission Test	Pass	Complies
FCC Part 15 Subpart C Paragraph 15.249(d) Limit	Band Edge Test	Pass	Complies

#### 3.2 Test Standards

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

#### 4.0 EUT Modification

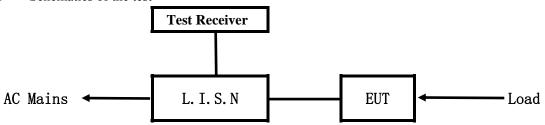
No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

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#### 5. Power Line Conducted Emission Test

#### 5.1 Schematics of the test

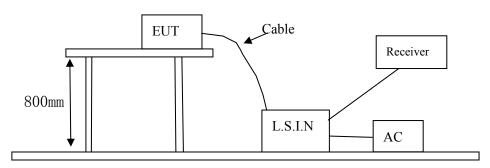


EUT: Equipment Under Test

#### 5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2014. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 500hm/50uH as specified by section 5.1 of ANSI C63.4 -2014.

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



#### 5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.4-2014. 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
Wireless Music Receiver	SHENZHEN SURE THING INDUSTRY AND COMMERCE DEVELOPMENT CO., LTD.	BE-RCA PRO	2A2IXBERCAPRO

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#### B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

#### C. Peripherals

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

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.4 -2014

- 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 $\mu$ 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:

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

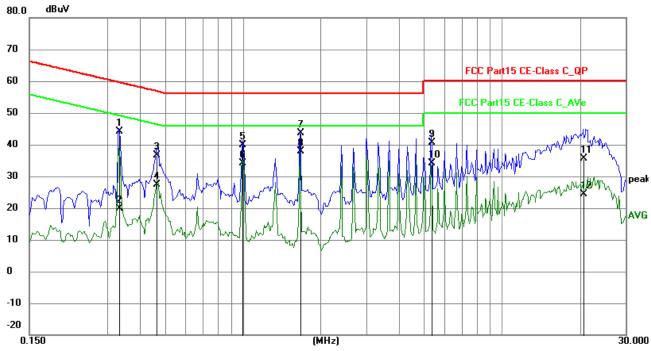
**EUT Operating Environment** 

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 (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.3333	34.27	9.76	44.03	59.37	-15.34	QP	Р
2	0.3333	10.17	9.76	19.93	49.37	-29.44	AVG	Р
3	0.4659	26.84	9.77	36.61	56.59	-19.98	QP	Р
4	0.4659	17.73	9.77	27.50	46.59	-19.09	AVG	Р
5	0.9963	30.11	9.79	39.90	56.00	-16.10	QP	Р
6	0.9963	24.22	9.79	34.01	46.00	-11.99	AVG	Р
7	1.6671	33.86	9.80	43.66	56.00	-12.34	QP Q	Р
8	1.6671	28.11	9.80	37.91	46.00	-8.09	AVG	Р
9	5.3361	30.68	9.94	40.62	60.00	-19.38	QP	Р
10	5.3361	24.16	9.94	34.10	50.00	-15.90	AVG	Р
11	20.6826	25.00	10.72	35.72	60.00	-24.28	QP	Р
12	20.6826	13.72	10.72	24.44	50.00	-25.56	AVG	Р

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

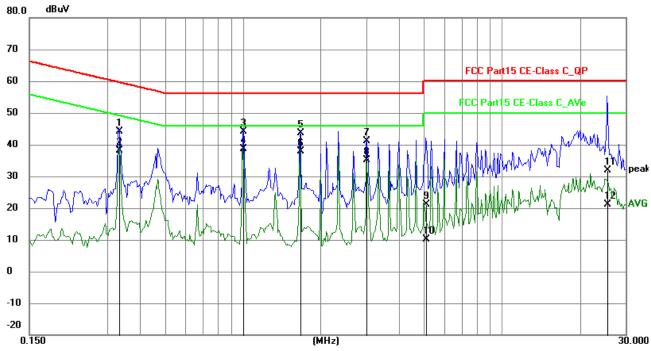
**EUT Operating Environment** 

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 (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.3333	34.25	9.76	44.01	59.37	-15.36	QP	Р
2	0.3333	28.45	9.76	38.21	49.37	-11.16	AVG	Р
3	1.0002	34.38	9.79	44.17	56.00	-11.83	QP	Р
4	1.0002	28.88	9.79	38.67	46.00	-7.33	AVG	Р
5	1.6671	33.82	9.80	43.62	56.00	-12.38	QP	Р
6	1.6671	28.15	9.80	37.95	46.00	-8.05	AVG	Р
7	3.0000	31.17	9.84	41.01	56.00	-14.99	QP	Р
8	3.0000	25.40	9.84	35.24	46.00	-10.76	AVG	Р
9	5.1020	11.25	9.93	21.18	60.00	-38.82	QP	Р
10	5.1020	0.24	9.93	10.17	50.00	-39.83	AVG	Р
11	25.4991	20.83	11.02	31.85	60.00	-28.15	QP	Р
12	25.4991	10.08	11.02	21.10	50.00	-28.90	AVG	Р

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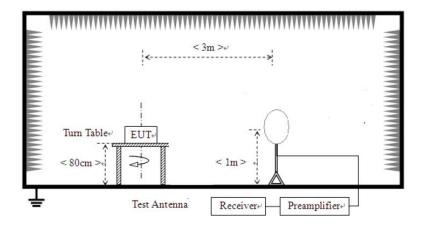


#### **6** Radiated Emission Test

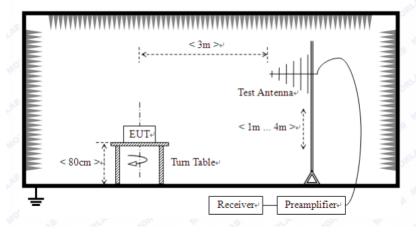
- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size 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



For radiated emissions from 30MHz to1GHz



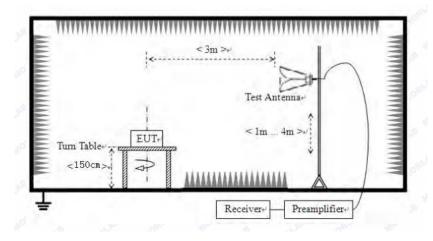
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For radiated emissions above 1GHz



- 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 Strength of Fundamental (3m)			Field Strength of Harmonics (3m)		
(MHz)	mV/m	dBuV/m		uV/m	dBuV/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.

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

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

Note:

- 1. RF Voltage (dBuV) = 20 log RF 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.

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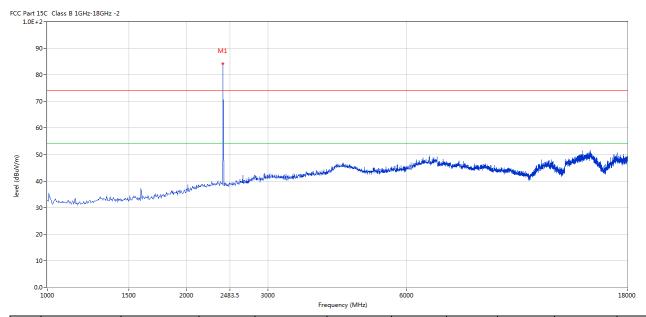


#### 6.5 Test result

### A Fundamental & Harmonics Radiated Emission Data

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

#### Horizontal



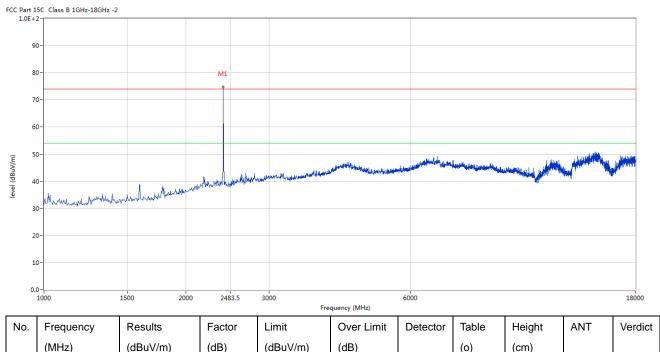
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402	84.15	-3.57	114.0	-29.85	Peak	211.00	100	Horizontal	Pass

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#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402	74.68	-3.57	114.0	-39.32	Peak	155.00	100	Vertical	Pass

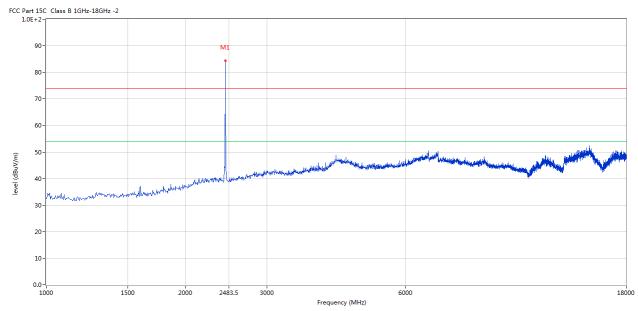
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Please refer to the following test plots for details: Middle Channel-2441MHz

#### **Horizontal**



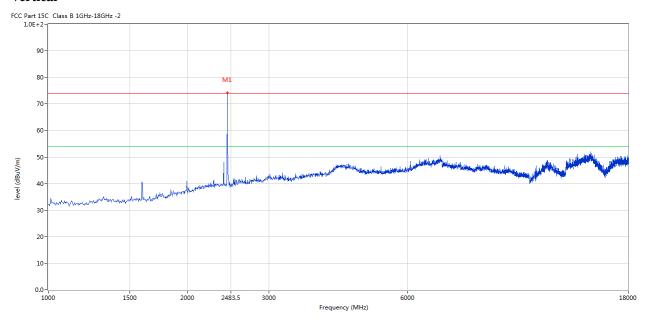
Ī	No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
Ī	1	2441	84.36	-3.57	114	-29.64	Peak	212.00	100	Horizontal	Pass

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#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2441	74.21	-3.57	114.0	-39.79	Peak	171.00	100	Vertical	Pass

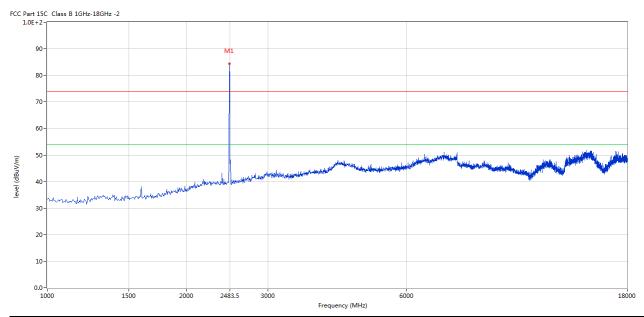
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Please refer to the following test plots for details: High Channel-2480MHz

#### Horizontal



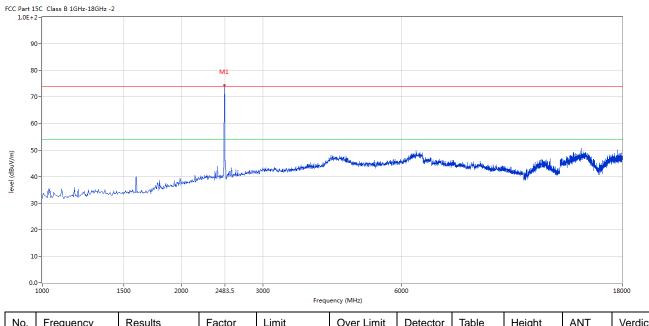
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	84.42	-3.57	114.0	-29.58	Peak	197.00	100	Horizontal	Pass

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#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	74.40	-3.57	114.0	-39.60	Peak	154.00	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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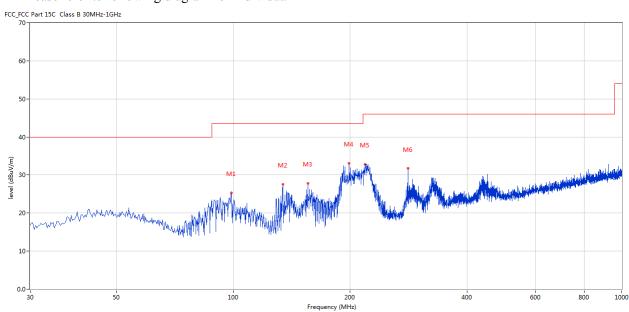


# B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	98.853	25.31	-13.68	43.5	-18.19	Peak	42.00	200	Horizontal	Pass
2	134.006	27.53	-17.02	43.5	-15.97	Peak	360.00	200	Horizontal	Pass
3	155.584	27.87	-16.68	43.5	-15.63	Peak	360.00	200	Horizontal	Pass
4	198.495	33.11	-13.50	43.5	-10.39	Peak	360.00	200	Horizontal	Pass
5	218.618	32.88	-13.35	46.0	-13.12	Peak	23.00	100	Horizontal	Pass
6	281.410	31.71	-11.50	46.0	-14.29	Peak	69.00	100	Horizontal	Pass

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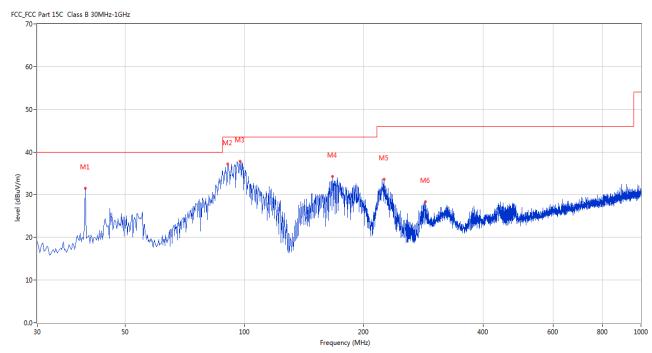


#### Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	39.698	31.49	-12.47	40.0	-8.51	Peak	188.00	100	Vertical	Pass
2	90.852	37.19	-14.95	43.5	-6.31	Peak	360.00	200	Vertical	Pass
3	97.398	37.89	-13.85	43.5	-5.61	Peak	52.00	100	Vertical	Pass
4	166.736	34.24	-16.06	43.5	-9.26	Peak	167.00	100	Vertical	Pass
5	225.164	33.68	-12.91	46.0	-12.32	Peak	68.00	100	Vertical	Pass
6	286.258	28.35	-11.31	46.0	-17.65	Peak	77.00	200	Vertical	Pass

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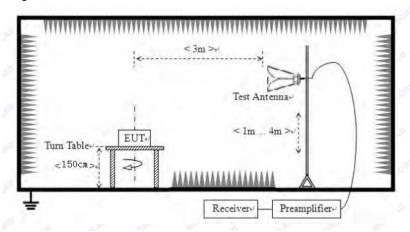


#### 7. Band Edge

#### 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.

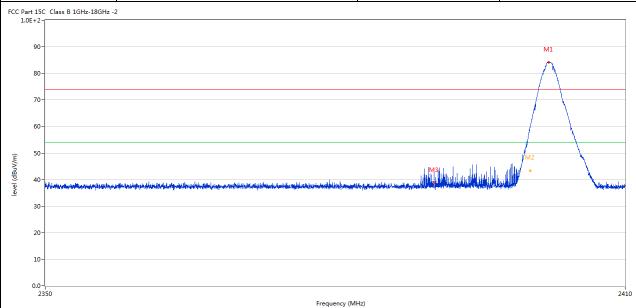
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#### 7.6 Test Result

Product:	Wireless Music Receiver	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC5.0V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2401.977	84.13	-3.57	74.0	10.13	Peak	208.00	100	Horizontal	N/A
2	2400.042	59.42	-3.57	74.0	-14.58	Peak	208.00	100	Horizontal	Pass
2**	2400.042	43.26	-3.57	54.0	-10.74	AV	208.00	100	Horizontal	Pass
3	2390.070	38.82	-3.53	74.0	-35.18	Peak	183.00	100	Horizontal	Pass

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]	Product:	Wi	ireless Mus	sic Receiver		Detect	or		Vertical	
	Mode	k	Keeping Tra	ansmitting		Test Vol	tage		DC5.0V	
Те	mperature		24 de	g. C,		Humid	ity		56% RH	
Те	est Result:		Pas	SS						
Part 1 1.0E+	15C Class B 1GHz-18GHz 2-	-2								
9	10-									
8	60-							Mi	L	
7	70-									
6	in -									
_								MZ		
	60-					. 140		M2		
_	0-	المستورة والمستورة والمستو						MZ	Linux	h. da simolden "li
5	0-	العلمية المستخصص المستخلف المستحدد		discount of the least of the le				MZ	Maria	h,dogwellipayi
5 4 3	10- Albert well well being	المجاورة والمستشرف المستراطية المستراطية	, tilatoria di Latala.	de en	determitie in bestelstensi			M	house	h, do similar na
5 4 3	10 - Alestado grado Hastado de Malera	المفرون والمستقدمة والمفرون وا	مراياط العينية بالمراد والفراء والمراد	dan sager da iki da	ditionally, some head of the post	Market		My	Model	h, ha (mail b) (a)
5 4 3 2		rodadiyah kister debendekan berselekti	n, hild besterieb in obtains a	disas no mariji (nda disas karib kadhig)	differential constraints and a port	N. James H.		M.	Mark	h,da(im)docadi
5 4 3 2 1	10 - Alestado grado Hastado de Malera	roducija digisek distante pokonski kanas (distante distante distante distante distante distante distante distante di	n, hild lesses it in old de a		equency (MHz)			M	Month	2410
5 4 3 2 1	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	Results	Factor			Detector	Table	Height	ANT	2410
5 4 3 2 1	0			Fre	equency (MHz)		Table (o)			2410
5 4 3 2 1 0.	0- 0- 0- 0- 0- 0- 2350	Results	Factor	Fre	equency (MHz)  Over Limit			Height		77.10.17.38
5 4 3 2 1	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit	Detector	(o)	Height (cm)	ANT	2410 Verdi

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]	Product:		Wireless	Music Rece	eiver		Polari	ty	Horizo	ntal
	Mode		Keepin	g Transmitti	ng		Test Vol	tage	DC5.0	)V
Те	mperature		2.	4 deg. C,			Humid	ity	56% F	RH
Те	est Result:			Pass						
CC Part 1 1.0E+	15C Class B 1GHz-18GHz	-2								
9	90-		M1							
8	80-									
7	70-									
6	50-		+-	M <sub>2</sub>						
_	50-	hadeadorada upundunyania alabe		M2	Marine and the state of the sta	Receivable of Figure Specific	and the state of the local state of the stat	derfleise fleist bestriebend	l steder heavilie de had med med med les	orken finiske over
_	50-	in his mire and a superior single state of the		M2	· · · · · · · · · · · · · · · · · · ·	Revendad of Figure 1 to America	<del>ndrad Alverydra (brita</del>	i or film of the contract of a country and in a co	العصاب الخصابة خطاع المتعادية المتعادية المتعادية المتعادية المتعادية المتعادية المتعادية المتعادية المتعادية	o kan hadi basa
(m/\ngp)   4	60-	in his hala and an arministrative distribution of the second section of the second second second second second		M2	المعادن والمستحدد والمستحد والمستحدد والمستحد والمستحدد	Marcus at the above of the state of the stat	والمعارض والمساورة والمعارض و	der giblioch fleische der von der auch	المعابل المسافس المفارسة والمعارضة و	viewinistrae
(m/\ngp)   5	50	thinken hen and a representation and a standard		M2	Marine de la companya	Parametria de <mark>Parametria de la compo</mark> nida de la composição de la composiç	ndistra di Professioni di Stato di Sta	ing the second seco	العصاب العساف المنابعة والمنابعة والمنابعة	rtenthicitere
5   6   6   6   7   7   8   7   8   9   9   9   9   9   9   9   9   9   9	50-	the him he and an energy was him and a hard		M2	Managarini, pingangan dan kalaba	Marcon add a Marfingla stal deposit, del	neditive of Physical Spirites and places	der führen flesskandere erde und	l. 1845. leavis de place de la colonidad de la	
(m/\u00e408p)  ava  3 2 2	10	tion his and an agranust his agricultural shake of		M2	**************************************	Percentage in Angligit in the Anglight	adiread Ash with the subjection	der flaten flat skiper se mild med	المعادة المعادة والمعادة والم	nd, militario e
(m/nngp) 4 4 3 2 2 1 1 0.	10-	tion he tande and an argument has a similar at labor of		M2		Percental property and deposits the seconds.	adiread Ash with the subjection	der flat verffe sold in er sonde me	l, and a security in the all made made made made made made made made	2500
(m/nngp) 4 4 3 2 2 1 1 0.	50	the standard and an annual consistency at the standard and an annual con	Factor		.5	Detector	Table	Height	ANT	Γ
(w//nngp) jawa) 4 2 2 1 0.	10		Factor (dB)	2483.	.5 Frequency (MHz)					Γ
(w//ngp)   ava  3 3 2 2 1	50	Results		2483.	.5 Frequency (MHz)		Table	Height		2500  Verdict

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I	Product:		Wireless	s Music Rece	iver		Detecto	or	Vertic	al
	Mode		Keepir	ng Transmitti	ng		Test Volt	age	DC5.0	V
Te	mperature		2	24 deg. C,			Humidi	ty 56% RH		
Te	est Result:			Pass						
CC Part 1 1.0E+	5C Class B 1GHz-18GHz 2-	-2								
91	0-									
80	0-		M1							
70	0-			1						
60	0-		f							
-			f	Ma Ma						
-	0-	delada ka dirinkle sa kinklik delamin samake		M <sub>2</sub>						de la companya de la
-	0-	likakakati milaki diperanjan		1.0		dilandinahili	de de la la la de la		ilde staller state of the state	
50	0- 0- 0- 0-	ti de a de ciente de la ciencia de la cienci		1.0	Maril Maril Maril Mary Mary Mary Mary Mary Mary Mary Mary	. Halanga Lington belia	dah adula ka dari da	leddaren a ddalleda	nte and the second desired	hadhar
30 30 30 30		delikakatusaki, ethilidlikasi zimolo		1.0		hartindik	dah marin dan berbasia		itasila saa alka	ha dhuk
30 20		de la la de central que la contraction de la con		1.0		didaga eti ganda k	debration and with a bra		ينه يعلي يسم خالب	hadhair
30 20		ti de a de		2483.5	equency (MHz)		delignative productive description and		بالمراد والمراد	2500
34 34 20 0.0		Results	Factor	2483.5		Detector	Table	Height	ANT	2500
30 30 30 20 10	0-0-0-0-0-2470	and	Factor (dB)	2483.5 Fr	equency (MHz)					2500
30 20	0	Results		2483.5 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. Three modulation Types were tested and only the worst case was recorded in the test report and GFSK modulation 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 Fixed dipole external antenna. The antenna gain is 4.1dBi Max. It fulfills the requirement of this section.

Test Result: Pass

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FSK Product:	Wimala	Music D	2021122		т	agt Mada:		Keep transmitting				
Product:		Music Ro				est Mode:				ng		
Mode		g Transm				est Voltage	1	DC5				
Temperature	2	4 deg. C,				Humidity		56% RH PK				
Test Result:		Pass			J	Detector						
OdB Bandwidth	8:	59.79kHz										
	Marker 1 [T1 ndB] ndB 20.00 dB				BW	30 k		F Att	20	dВ		
Ref Lvl 10 dBm	ndB BW 895	20. .791583			BW WT	100 ki		nit		dBm		
10 dBiii	BW 093	. /91503	OI / KHZ	اد	W T		5 0	111.0	1	аын	i A	
						<b>v</b> <sub>1</sub>	[T1]	-3	.22	dBm		
0								2.40187	675			
			Ž~	~ 1		ndH BW	0.1	20 35.79158	317	dB kHz		
-10				V	$\setminus$	$oldsymbol{ abla}_{ ext{T1}}$	o. . [T1]	-23 -23	.36	dBm		
-10					7			2.40157	615	GHz		
		~	<i>/</i>			$\bigvee$ $\triangledown_{\mathrm{T}}$	[T1]	-23	.49	dBm		
-20		ŦAV				T2		2.40247	194	GHz	1	
IFIAA		<b>/</b> /									-	
-30		/					<u></u>					
	~											
-40							<del>/</del>					
-50								$\sim$				
-50							V	1	~~	۷		
-60										VI.A		
-70												
-80												
-90												

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FSK									
Product:	Wireless N	Music Re	ceiver	]	Test Mode:		Keep tra	nsmitting	
Mode	Keeping	Transmi	tting	Т	est Voltage		DC	5.0V	
Temperature	24	deg. C,			Humidity		56%	6 RH	
Test Result:		Pass			Detector		F	PΚ	
20dB Bandwidth	913.83kHz								
<u></u>	Marker 1	l [T1 r	ndB]	RBW	30 kF	Iz Rl	F Att	20 dB	
Ref Lvl	ndB	20.	00 dB	VBW	100 kH	łz			
10 dBm	BW 913	.827655	31 kHz	SWT	8.5 ms	s Uı	nit	dBm	n
10					<b>v</b> <sub>1</sub>	[T1]	- 4	.03 dBm	I
							2.44087	675 GHz	A
0			<u>1</u>		ndB		20	.00 dB	
			M	m /h	BW	91	3.82765	531 kHz	
-10				V \	$\nabla_{\mathrm{T1}}$	[T1]	-23	.59 dBm	
			$\sim$	ζ,	$\bigvee$ $\nabla_{\mathrm{T2}}$	[mall	2.44058		
-20		T1 (	/		V T2	[T1]	-24 2.44149	.31 dBm	
1MAX					12		2.4114)	JJJ GIIZ	1M2
-30		<i>}</i> ~			4				
		)				5			
-40						4	M		
-50	/					V	The second	~~	
-60								- WWW	
-70									
-80									
-00									
-90 Center 2.441	GHz		300	kHz/			Spa	n 3 MHz	ļ
Date: 6.AUG			200	/			Span 3 MHZ		

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GFSK									
Product:		Music Re			Test Mode:			ansmitting	
Mode	Keepii	ng Transmi	tting	,	Test Voltage	:	DC	25.0V	
Temperature	2	24 deg. C,			Humidity		56%	% RH	
Test Result:		Pass			Detector		]	PK	
20dB Bandwidth	9	19.84kHz							
<b>R</b>	Marker	1 [T1 r	ndB]	RBW	30 k	Hz R	RF Att 20 d		
Ref Lvl	ndB	20.	00 dB	VBW					
10 dBm	BW 91	9.839679	36 kHz	SWT	8.5 m	s U	nit	dBm	ı
10					<b>v</b> <sub>1</sub>	[T1]	- 5	.11 dBm	A
							2.47987	675 GHz	
0			1		ndF		20	0.00 dB	
			$\sim$	~ M	BW ▼ <sub>T</sub> :	91 . [T1]	19.83967		
-10					, T.1		2.47957		
			$\sim$		$\nabla_{\mathbf{T}_{2}}$	[T1]		.05 dBm	
-20		Τ7Λ	V		T2		2.48049	9599 GHz	
1MAX					7				1M2
-30	~					<b>λ</b>			
-40	maran					Ä	~~		
-60	N					V	1	May .	
								30	
-70									
-80									
-90 Cont on 2	49 (11-		300	1-11 /			G-	2 3477	
Center 2.			300	kHz/			Spa	an 3 MHz	
Date: 6.2	AUG.2022 15	:51:38							

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Л/4DQPSK											
Product:		Wireless	s Music Ro	eceiver		Т	est Mode:		Keep tran	smitting	
Mode		Keepii	ng Transm	itting		Te	est Voltage		DC5	.0V	
Temperature		2	24 deg. C,			]	Humidity		56%	RH	
Test Result:			Pass				Detector		PK		
20dB Bandwidth		1.281MHz									
	Marker 1 [T1 ndB]				BW	30 k		F Att	20 dB		
Ref Lvl		ndB		00 dB		BW	100 ki			10	
10 dBm		BW 1	.280561	12 MHz	SI	WT	8.5 m	s Ur	nit	dBn	1
							<b>v</b> <sub>1</sub>	[T1]	-3	.33 dBm	A
0									2.40187	675 GHz	
				<del>\</del>	_ ^		ndB		1.28056	1.00 dB	
1.0			/	\\\\	, M	λ,	BW ✓ T1	[T1]	-23	112 MHz	
-10			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	W.		V			2.40139		
			N				$\nabla_{\mathrm{T}}$	[T1]	-23	.07 dBm	1
-20 1MAX		T						\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	2.40267	635 GHz	1MA
-30											
-40	$\sim$							4,1	wy		
-60 <b>M·L</b>	No.									mmy	
-70											
-80											
-90 Center 2				300	kHz/			Span 3 MHz		ĮĮ.	
Date: 6.	AUG.20	22 15:	48:49								

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Product:	Wireless	Music Re	ceiver		Test Mode:		Keep tra	nsmitting	
Mode	Keepin	g Transmi	tting	]	Test Voltage		DC:	5.0V	
Temperature	2	4 deg. C,			Humidity		56%	RH	
Test Result:		Pass			Detector		PK		
)dB Bandwidth	1.	.275MHz					_	-	
Ref Lvl	Marker ndB	1 [T1 r	ndB] .00 dB	RBW VBW	30 kH:		Att	20 dB	
10 dBm	BW 1	1.274549	910 MHz	SWT	8.5 ms	Un	it	dBm	ı
10					<b>V</b> 1 [	T1]	-4 2.44087	.06 dBm	A
0			1		ndB		20	.00 dB	
-10			$\bigwedge_{\alpha}$	$\sim$	BW $\nabla_{\mathrm{Tl}}$	[T1]	L.27454 -23	910 MHz .89 dBm	
-10				V	V V V	[T1]	2.44040 -24	180 GHz .18 dBm	
-20	Ţ	<u> </u>			\ \	[2 2	2.44167	635 GHz	
1MAX									1M
-40	M					hy	A -M		
-50 MM							wat	V	
-60									
-70									
-80									
-90									

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I/4DQPSK											
Product:		Wireless	Music Re	ceiver		Τ	est Mode:		Keep tra	nsmitting	
Mode		Keepir	ıg Transmi	tting		T	est Voltage	;	DC	5.0V	
Temperature		2	4 deg. C,				Humidity		56%	6 RH	
Test Result:			Pass				Detector		PK		
0dB Bandwidth		1.275MHz									
r)	Marker 1 [T1 ndB] ndB 20.00 dB				R	BW	30 k	Hz RI	RF Att 20 dB		
Ref Lvl		ndB				BW	100 k				
10 dBm		BW :	1.274549	010 MHz	S	WT	8.5 m	s Uı	nit	dBm	1 -
							<b>v</b> <sub>1</sub>	[T1]	- 5	.10 dBm	Α
									2.47987	675 GHz	
0				1			ndE	3	20	.00 dB	
				$\bigwedge_{a}$	$\sim$ $^{\sim}$	η	BW ▼ <sub>T</sub> 1	[11]	1.27454	910 MHz	
-10			MN	127		$\sqrt{\Gamma}$	Why ~		2.47940		
				0.5		•	$\bigvee_{i=1}^{T} \bigvee_{j=1}^{T}$	[T1]	-25	.25 dBm	ı
-20 1MAX		7						₹2 ₹	2.48067	635 GHz	1M2
-30											
-40		~~\\						W	٠, ,,,		
Manual Ma	~~~~									haman	
-60											
-70											
-80											
-90 Center 2	.48 GH:	z		300 kHz/ Span 3 MHz							
ate: 6.	AUG. 20	22 15:	50:36								

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	PSK							
Product:		s Music Receive		Test Mo			ransmitting	
Mode		ng Transmitting		Test Vol	tage	D	C5.0V	
Temperature		24 deg. C,		Humid		56	5% RH	
Test Result:		Pass			tor	PK		
20dB Bandwidth		1.238MHz						
<b>F</b>	Marker	1 [T1 ndB]	R	BW 3	0 kHz	RF Att	20 dB	
Ref Lvl	ndB	20.00 di			0 kHz			
10 dBm	BW	1.23847695 M	Iz S	SWT 8.	5 ms	Unit	dBm	
					<b>▼</b> 1 [T1	1]	-2.55 dBm	
0		1				2.401	87675 GHz	
		1	$\wedge$		ndB	1 000	20.00 dB	
			W V	7 /	BW ▼milio	1.238	347695 MHz -22.49 dBm	
-10		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		V \	$\sqrt{}$	2.401	.43186 GHz	
		/			VTV [7	г1] -	-22.69 dBm	
-20		<del>y</del>			Y	2.402	267034 GHz	
IIII					\			
-30						\		
-40	M. M					1.1		
-50	N I						Man. Ma	
W V							man M	
-60								
-70								
-80								
-90								

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QPSK	Product: Wireless Music Receiver						. 3.5.1		Keep transmitting		
							est Mode:	-			
Mode			g Transmi	ttıng	-		est Voltage	;		25.0V	
Temperature		2	4 deg. C,				Humidity		56% RH		
Test Result:		1	Pass			-	Detector		PK		
0dB Bandwidth	1.238MHz Marker 1 [T1 ndB]										
					RE		30 k		F Att	20 dB	
Ref Lvl 10 dBm		ndB BW 1	.20. .238476	00 dB	VE SW		100 k 8.5 m		nit	dBn	1
10	1			, , , , , , , , , , , , , , , , , , ,		, <u> </u>				T	1
							<b>v</b> <sub>1</sub>	[T1]	-3	.40 dBm	A
0				1			27.5	2	2.44087	675 GHz	
				,	$\wedge$		ndE BW		1.23847		
-10			^	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\\\		, ∇ <sub>T</sub>	[T1]	-23	.45 dBm	
			~~	0 V V		V	\\\		2.44043	186 GHz	
-20			/				Δ√.	[T1]	-23	.01 dBm	
1MAX			7					\tag{\frac{1}{2}}	2.44167	034 GHz	1M
-30											
-40											
n man	<b>~</b> √~								M	m	
-60											Ī
7.0											
-70											
-80											
-90 Center 2	111 CI	I.e.		300	kua/	<u> </u>			Cna	ın 3 MHz	8

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8QPSK									
Product:	W	rireless Music F	Receiver	7	Test Mode:		Keep tra	nsmitting	
Mode	]	Keeping Transn	nitting	Т	est Voltage		DC:	5.0V	
Temperature		24 deg. C	,		Humidity		56%	БRН	
Test Result:		Pass			Detector		P	K	
20dB Bandwidth		1.238MHz	Z						
A D	Ma	rker 1 [T1	ndB]	RBW	30 kH	Iz RF	Att	20 dB	
Ref Lvl	nd	В 20	0.00 dB	VBW	100 kH	Iz			
10 dBm	BW	1.2384	7695 MHz	SWT	8.5 ms	. Un	it	dBm	
10					<b>v</b> <sub>1</sub>	[T1]	-4	.50 dBm	
							2.47987	675 GHz	A
0			1		ndB		20	.00 dB	
			$\Lambda$	$\wedge$	BW		1.23847	695 MHz	
-10			W W	(~ <del>\</del>	$\nabla_{\mathrm{T}1}$	[T1]	-24	.39 dBm	
			~ * * *	\	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	[T1]	2.47943 -24	186 GHz .30 dBm	
-20		T			- 4	T2 2	2.48067	034 GHz	
1MAX									1MA
-30									
-50	$\bigwedge$	m				m	A		
and provide	\.\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\						h	my	
-60									
-70									
-80									
-90 Center 2	.48 GHz		300	kHz/			Spa	n 3 MHz	
Date: 6.	AUG.2022	15:45:23							

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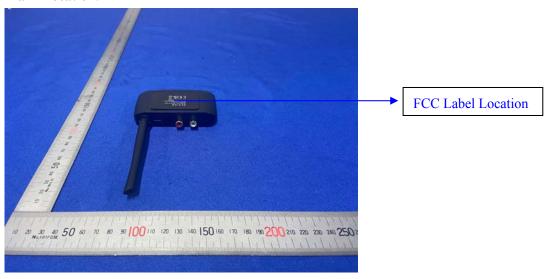


#### 10.0 FCC ID Label

#### FCC ID: 2A2IXBERCAPRO

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

#### **Mark Location:**



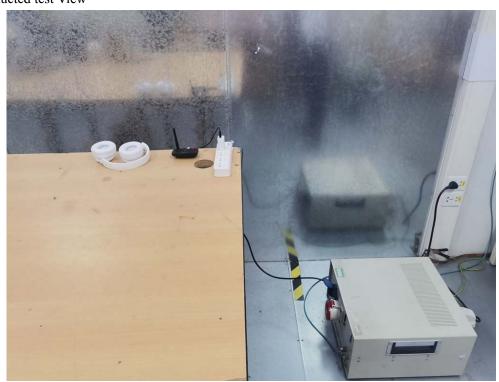
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#### 11.0 Photo of testing 11.1 Conducted test View



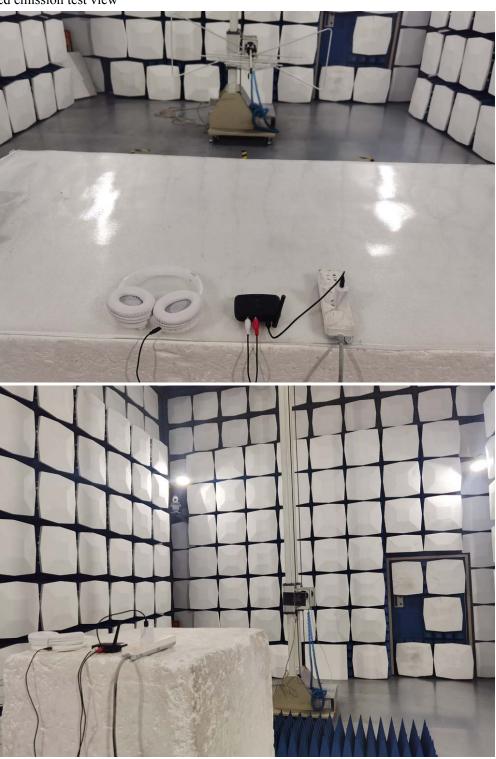
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#### Radiated emission test view



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#### 11.2 Photographs – EUT

#### Outside View



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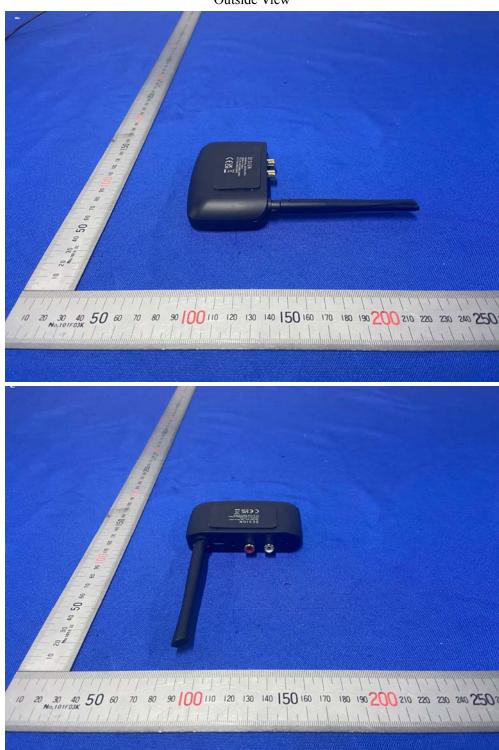
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Outside View



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Outside View



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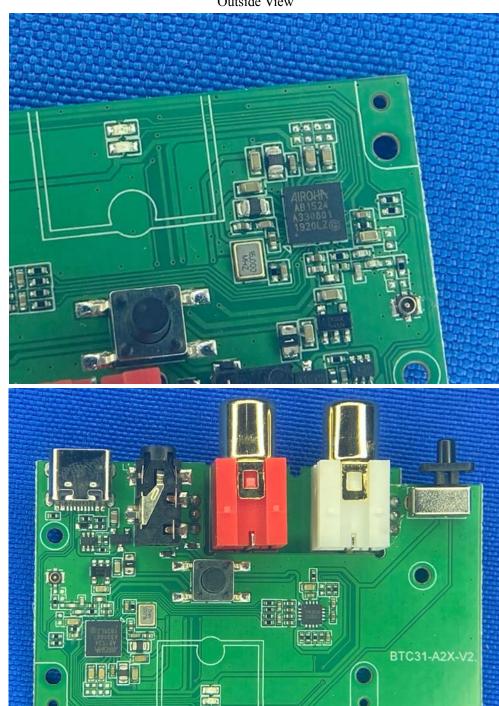
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adopt any other remedies which may be appropriate.

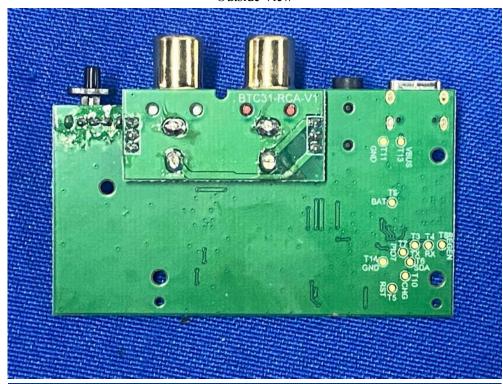
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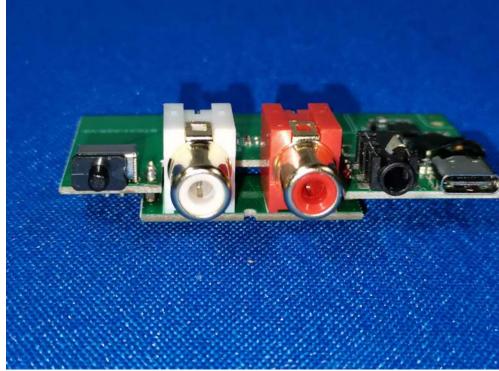
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Outside View





--End of the report--

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