

TEST REPORT

Reference No. : WTD25D09241565W001
FCC ID..... : 2BAA5-PSWMIC01
Applicant : AcoustMax International Corporation
Address : Room 501, Lingyun Building, HongLang North 2 Road, ShenZhen, China
Manufacturer : Shenzhen Sky Dragon Audio-Video Technology Co., Ltd
Address : 3F-left side, 4F-right side, Building 1, District 71, Xin'an Street, Baoan District, ShenZhen City, Guangdong 518101, CHINA
Product..... : UHF Wireless Microphone-01
Model(s)..... : PSWMIC01
Standards..... : FCC CFR47 Part 15 Section 15.249
Date of Receipt Sample ... : 2025-09-05
Date of Test..... : 2025-09-12 to 2025-09-30
Date of Issue..... : 2025-10-09
Test Result : Pass

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:

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3 Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD25D09241565W001	2025-09-05	2025-09-12 to 2025-09-30	2025-10-09	Original	-	Valid

4 General Information

4.1 General Description of E.U.T.

Product: UHF Wireless Microphone-01
Model(s): PSWMIC01
Model Description: N/A
Test Sample No.: 1-1/1
Hardware Version: V1.1
Software Version: V2

4.2 Details of E.U.T.

Frequency Range: 915.2MHz
Type of Modulation: FM
Antenna installation: Monopole Antenna
Antenna Gain: 2dBi

Note:

#: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, WALTEK lab has not verified the authenticity of its information.

Battery: 3V 2*AA Batteries

4.3 Channel List

Channel No.	Frequency (MHz)
1	915.2

4.4 Standards Applicable for Testing

The tests were performed according to following standards:

FCC CFR47 Part 15 Section 15.249: 2019 Telecommunication-RADIO FREQUENCY DEVICES-Intentional Radiators-Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz.

4.5 Test Mode

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests.

And according to FCC 47 CFR Section 15.203(m):

Measurements on intentional radiators or receivers, other than TV broadcast receivers, shall be performed and, if required, reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in the following table:

Only the one channel was recorded and reported.

Test mode	channel
Transmitting	915.2MHz

5 Equipment Used during Test

5.1 Equipments List

3m Semi-anechoic Chamber for Radiation Emissions						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1	Spectrum Analyzer	R&S	FSP30	100091	2025-04-19	2026-04-18
2	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1314	2025-08-09	2026-08-08
3	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	2025-07-04	2026-07-03
4	Coaxial Cable (above 1GHz)	Top	1GHz-18GHz	N/A	2025-04-19	2026-04-18
3m Semi-anechoic Chamber for Radiation Emissions						
Item	Equipment	Manufacturer	Model No.	Serial No	Last Calibration Date	Calibration Due Date
1	Test Receiver	R&S	ESCI	101296	2025-04-19	2026-04-18
2	Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3325	2025-07-05	2026-07-04
3	Active Loop Antenna	Com-Power Corp.	AL-130R	10160007	2025-04-21	2026-04-20
4	Amplifier	ANRITSU	MH648A	M43381	2025-04-19	2026-04-18
5	Cable	HUBER+SUHNER	CBL2	525178	2025-04-19	2026-04-18
RF Conducted Testing						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	Spectrum Analyzer	R&S	FSP30	100091	2025-04-19	2026-04-18
2	Coaxial Cable	Top	TYPE16(13M)	-	2025-04-19	2026-04-18

Test Software:

Test Item	Software name	Software version
Radiated Emission(3m)	EZ-EMC	EZ-EMC(RA-03A1-1)

5.2 Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-6}$
RF Power	± 1.0 dB
RF Power Density	± 2.2 dB
Radiated Spurious Emissions test	± 5.03 dB (Bilog antenna 30M~1000MHz)
	± 5.47 dB (Horn antenna 1000M~25000MHz)

5.3 Test Equipment Calibration

All the test equipments used are valid and calibrated by GUANG ZHOU GRG METROLOGY & TEST CO., LTD. address is No.163, Pingyun Rd. West of Huangpu Ave, Tianhe District, Guangzhou, Guangdong, China.

5.4 Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files.

Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. 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 number 523476, September 10, 2019.

5.5 Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

6 Test Summary

Test Items	Test Requirement	Result
Conducted Emissions	15.207	N/A*
Radiated Emission	15.249(a) 15.209 15.205(a)	Pass
Band Edge	15.249 15.205 15.209	Pass
20dB Bandwidth	15:215(c)	Pass
Antenna Requirement	15.203	Pass
Note: Pass=Compliance; NC=Not Compliance; NT=Not Tested; N/A=Not Applicable. *: This requirement does not apply for device powered by battery.		

7 Radiation Emission Test

Test Requirement: FCC Part15 Paragraph 15.249&15.209&15.205

Test Method: ANSI C63.10-2020+A1-2024

Measurement Distance: 3m

Test Result: ☒ Pass ☐ Fail

15.249(a)Limit:

Fundamental frequency	Field strength of fundamental		Field strength of harmonics	
	mV/m	dBuV/m	uV/m	dBuV/m
902-928 MHz	50	94	500	54
2400-2483.5 MHz	50	94	500	54
5725-5875 MHz	50	94	500	54
24.0-24.25 GHz	250	108	2500	68

15.209 Limit:

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Dist	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	$2400/F(\text{kHz})$	300	$10000 * 2400/F(\text{kHz})$	$20\log^{(2400/F(\text{kHz}))} + 80$
0.490 ~ 1.705	$24000/F(\text{kHz})$	30	$100 * 24000/F(\text{kHz})$	$20\log^{(24000/F(\text{kHz}))} + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log^{(30)} + 40(29.54+40)$
30 ~ 88	100	3	100	$20\log^{(100)} =(40)$
88 ~ 216	150	3	150	$20\log^{(150)} =(43.5)$
216 ~ 960	200	3	200	$20\log^{(200)} =(46)$
Above 960	500	3	500	$20\log^{(500)} =(54)$

Note: RF Voltage(dBuV)=20 log₁₀ RF Voltage(uV)

7.1 EUT Operation

Operating Environment :

Temperature: 23.5 °C

Humidity: 51.1 % RH

Atmospheric Pressure: 101.2kPa

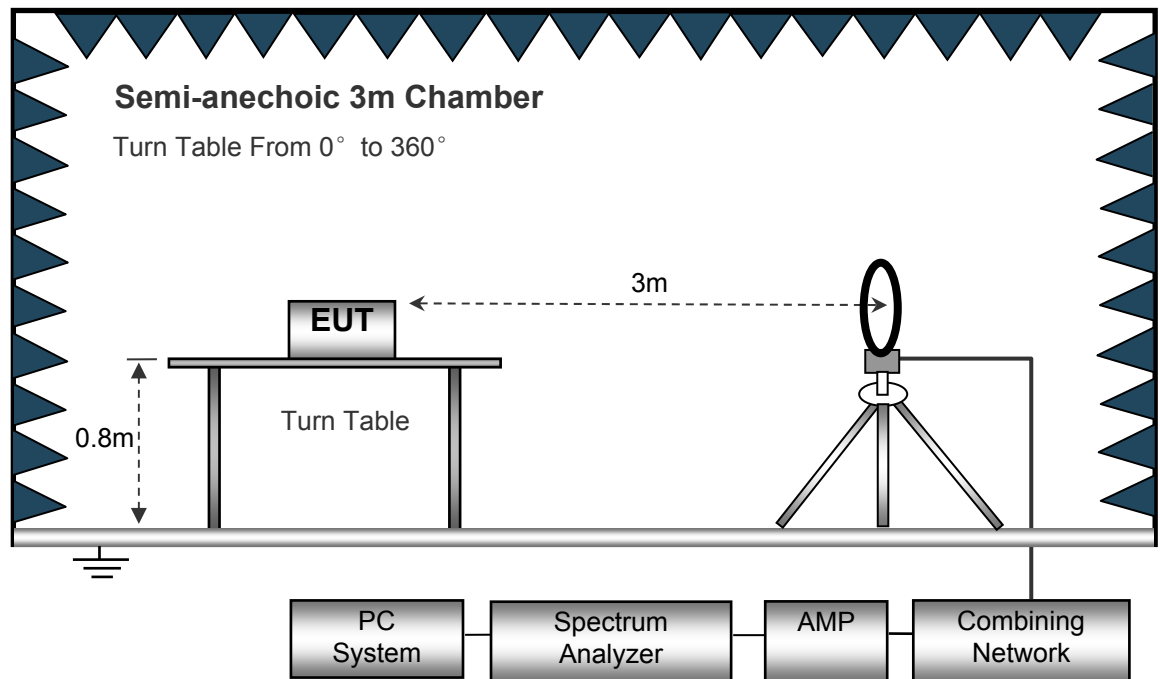
EUT Operation :

The test was performed in transmitting mode, the test data were shown in the report.

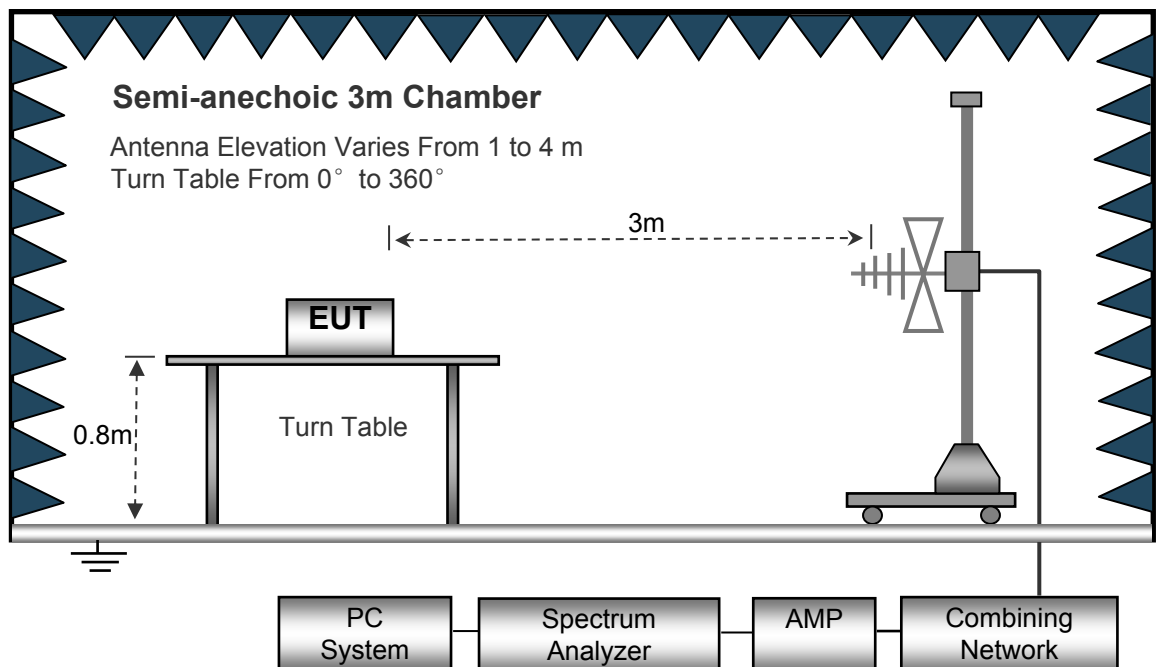
7.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.10: 2013.

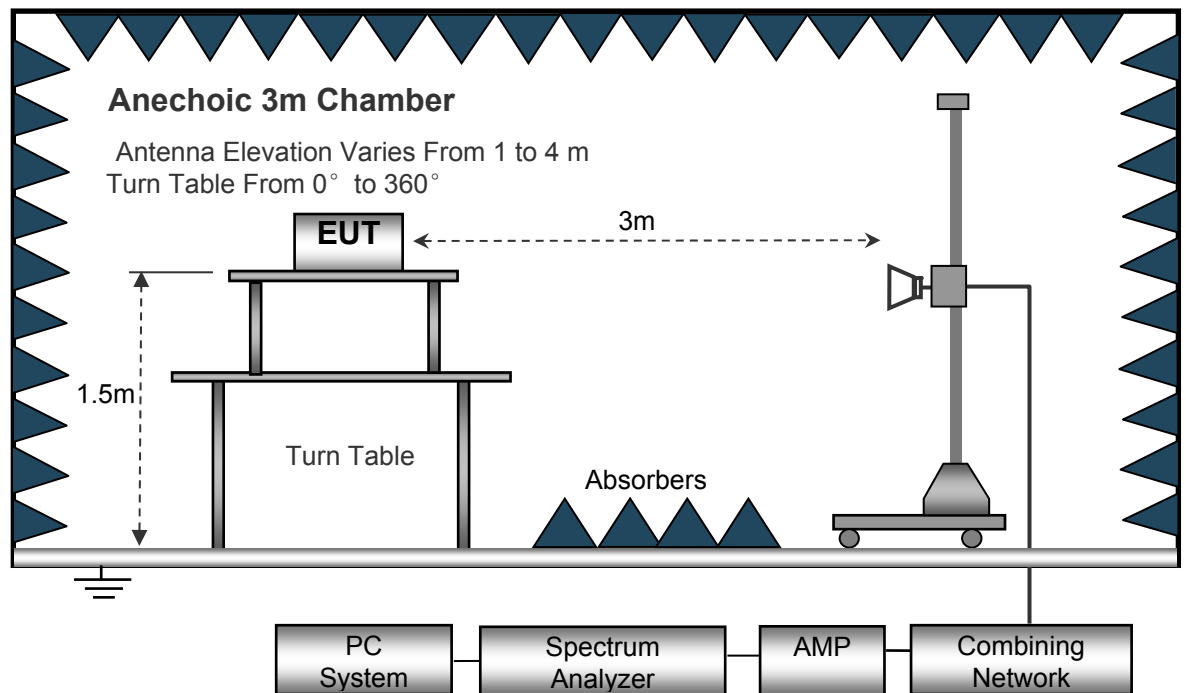
The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30MHz to 1GHz.



The test setup for emission measurement above 1 GHz.



7.3 Spectrum Analyzer Setup

Below 30MHz

Sweep SpeedAuto
 IF Bandwidth.....10kHz
 Video Bandwidth10kHz
 Resolution Bandwidth10kHz

30MHz ~ 1GHz

Sweep SpeedAuto
 Detector.....PK
 Resolution Bandwidth.....100kHz
 Video Bandwidth300kHz

Above 1GHz

Sweep SpeedAuto
 DetectorPK
 Resolution Bandwidth.....1MHz
 Video Bandwidth3MHz
 DetectorAve.
 Resolution Bandwidth.....1MHz
 Video Bandwidth10Hz

7.4 Test Procedure

1. The EUT is placed on a turntable. For below 1GHz, the EUT is 0.8m above ground plane; For above 1GHz, the EUT is 1.5m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions. The spectrum was investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The radiation measurements are tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only.

7.5 Frequency range of radiated measurements.

According to FCC 47 CFR Section 15.33:

(a) For an intentional radiator, the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to at least the frequency shown in this paragraph:

(1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

(2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.

(3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.

(4) If the intentional radiator contains a digital device, regardless of whether this digital device controls the functions of the intentional radiator or the digital device is used for additional control or function purposes other than to enable the operation of the intentional radiator, the frequency range shall be investigated up to the range specified in paragraphs (a)(1) through (a)(3) of this section or the range applicable to the digital device, as shown in paragraph (b)(1) of this section, whichever is the higher frequency range of investigation.

7.6 Test Result

Test Frequency: 9 kHz ~ 30 MHz

The measurements were more than 20 dB below the limit and not reported.

Test Frequency: 30MHz ~ 10GHz

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.249/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP)	Degree	(m)	(H/V)	(dB/m)	(dBμV/m)	(dBμV/m)	(dB)
915.20	54.39	QP	285	1.5	H	14.01	68.40	94.00	-25.60
915.20	51.64	QP	203	1.6	V	14.01	65.65	94.00	-28.35
1830.40	58.63	PK	115	1.8	H	-13.08	45.55	74.00	-28.45
1830.40	56.11	PK	84	1.3	V	-13.08	43.03	74.00	-30.97
5491.20	52.74	PK	44	1.7	H	-4.36	48.38	74.00	-25.62
5491.20	51.03	PK	221	1.9	V	-4.83	46.20	74.00	-27.80

Note: The peak value is less than the average value limit, so the average value is not necessary.

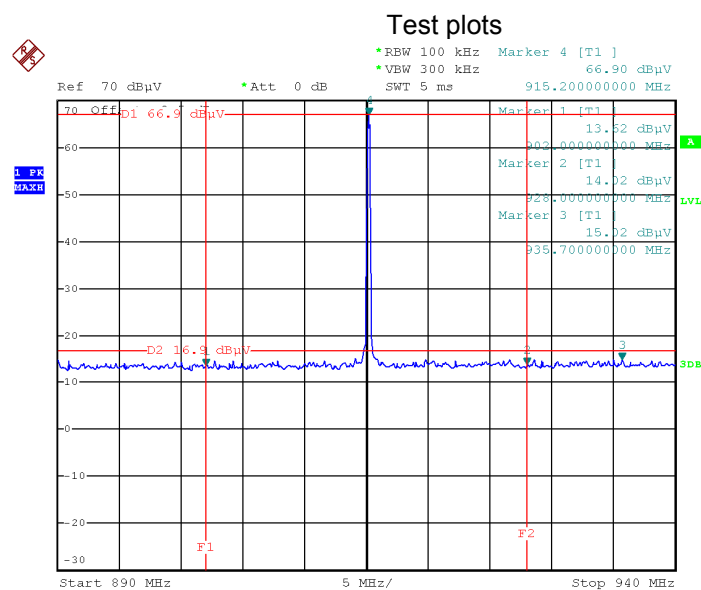
8 Band Edge

Test Requirement:	15.249(d):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 §15.209, whichever is the lesser attenuation.
Test Method:	ANSI C63.10-2020+A1-2024
Test Mode:	Transmitting

8.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz, Sweep = auto
Detector function = peak, Trace = max hold

8.2 Test Result



Date: 29.SEP.2025 16:58:27

9 20 dB Bandwidth Measurement

Test Requirement: FCC CFR47 Part 15 Section 15.215(c)
 Test Method: ANSI C63.10-2020+A1-2024
 Test Mode: Transmitting

9.1 Test Procedure

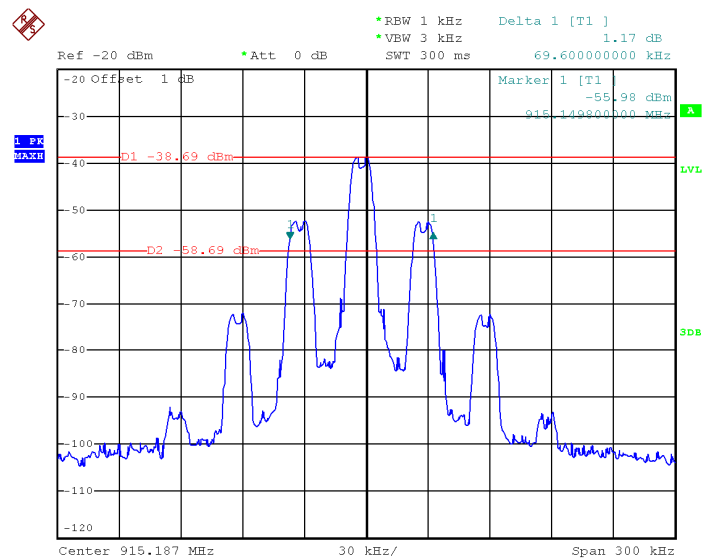
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 1kHz, VBW = 3kHz

9.2 Test Result

Test channel	Frequency (MHz)	20dB Bandwidth Emission(kHz)
1	915.2MHz	69.6

Test plots

915.19MHz



Date: 30.SEP.2025 15:41:31

10 Antenna Requirement

According to the FCC Part 15 Paragraph 15.203, 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. This product has a monopole antenna fulfil the requirement of this section.

Note: Please refer to EUT photos for more details.

11 RF Exposure

Remark: Please refer to MPE test report: WTD25D09241565W002.

12 Photographs - Constructional Details

Note: Please refer to appendix: Appendix-PSWMIC01-Photos.

=====End of Report=====