

FCC TEST REPORT

FCC ID: 2AU7P-W35B

Product : Waist pack transmitter
Model Name : W35B, W35R8/BL, W35R8/BH,
W35R4/BL, W35R4/BH,
W35R2/BL, W35R2/BH,
W8U-RL8, W4U-RL4, W2U-RL2
Brand :  音王 
Report No. : NCT23048004E

Prepared for

Soundking Electronics& Sound Co., Ltd.

No.818 Integrity Road, Yinzhou District , Ningbo city, Zhejiang Province, China

Prepared by

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TEST RESULT CERTIFICATION

Applicant's name : Soundking Electronics& Sound Co., Ltd.

Address : No.818 Integrity Road, Yinzhou District , Ningbo city, Zhejiang Province, China

Manufacture's name : Soundking Electronics& Sound Co., Ltd.

Address : No.818 Integrity Road, Yinzhou District , Ningbo city, Zhejiang Province, China

Product name : Waist pack transmitter

Model name : W35B, W35R8/BL, W35R8/BH, W35R4/BL, W35R4/BH, W35R2/BL, W35R2/BH, W8U-RL8, W4U-RL4, W2U-RL2

Standards : FCC CFR47 Part 15 Section 15.247

Test procedure : ANSI C63.10-2020/Cor1-2023

Date of test : Mar. 07, 2025-Jan. 14, 2026

Date of Issue : Jan. 14, 2026

This device described above has been tested by NCT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Test Engineer:

Keven Wu
Keven Wu / Engineer

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The logo is a circular seal for NCT Testing Technology Co., Ltd. It features a central emblem with a stylized 'N' and 'T' and the year '2008' below it. The text 'NCT Testing Technology Co., Ltd.' is written around the perimeter of the seal.

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1. VERSION

Report No.	Version	Description	Approved
NCT23048004E	Rev.01	Initial issue of report	Jan. 14, 2026

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.236) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.203	Antenna Requirement	PASS	
15.207	Conducted Emission	N/A	
15.236(d)(1)	Maximum Radiated Power(EIRP)	PASS	
15.236(g)	Radiated Spurious Emission Measurement	PASS	
15.236(g)	Spurious Emission at Antenna Port	PASS	
15.236(f)(2)	Occupied Bandwidth Emission	PASS	
15.236(f)(3)	Frequency Stability	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

2.1 TEST FACILITY**Site Description**

EMC Lab. : Accredited by CNAS, 2022-09-27
The certificate is valid until 2028.01.07
The Laboratory has been assessed and proved to be in compliance with
CNAS-CL01:2006 (identical to ISO/IEC 17025:2017)
The Certificate Registration Number is L8251
Designation Number: CN1347
Test Firm Registration Number: 894804
Accredited by A2LA, June 14, 2023
The Certificate Registration Number is 6837.01

Accredited by Industry Canada, November 09, 2018
The Conformity Assessment Body Identifier is CN0150
Company Number: 30806
Name of Firm : Shenzhen NCT Testing Technology Co., Ltd.
Site Location : A101&2F B2, Fuqiao 6th Area, Xintian Community, Fuhai Street, Baoan
District, Shenzhen, People's Republic of China

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$ · where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$ · providing a level of confidence of approximately 95 %.

Parameter	Uncertainty
RF output power, conducted	$\pm 1.0\text{dB}$
Power Spectral Density, conducted	$\pm 2.2\text{dB}$
Radio Frequency	$\pm 1 \times 10^{-6}$
Bandwidth	$\pm 1.5 \times 10^{-6}$
Time	$\pm 2\%$
Duty Cycle	$\pm 2\%$
Temperature	$\pm 1^{\circ}\text{C}$
Humidity	$\pm 5\%$
DC and low frequency voltages	$\pm 3\%$
Conducted Emissions (150kHz~30MHz)	$\pm 3.64\text{dB}$
Radiated Emission(30MHz~1GHz)	$\pm 5.03\text{dB}$
Radiated Emission(1GHz~25GHz)	$\pm 4.74\text{dB}$
Remark: The coverage Factor ($k=2$), and measurement Uncertainty for a level of Confidence of 95%	

3.GENERAL INFORMATION**3.1 GENERAL DESCRIPTION OF EUT**

Equipment	Waist pack transmitter
Model Name	W35B
Serial Model	W35R8/BL, W35R8/BH, W35R4/BL, W35R4/BH, W35R2/BL, W35R2/BH, W8U-RL8, W4U-RL4, W2U-RL2
Model Difference	All models identical to PCB Layout, schematics and construction, The differences only are the model names.
Hardware version	1.0
Software version	1.0
Operation Frequency:	551.1-563.35MHz
Modulation Type:	DQPSK
Antenna Type:	External Antenna
Antenna Gain:	0.2dBi
Ratings	DC 3V from battery
Remark: the Antenna gain is provided by customer from Antenna spec. and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.	

The EUT has been tested under its typical operating condition. Pre-defined engineering program for regulatory testing used to control the EUT for staying in continuous transmitting. Only the worst case data were reported.

The EUT has been associated with peripherals pursuant to ANSI C63.10-2020/Cor1-2023 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation (9 KHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The details of test channels and bandwidth were for RF conductive measurement.

Operation Frequency each of channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	551.100	14	554.350	27	557.600	40	560.850
2	551.350	15	554.600	28	557.850	41	561.100
3	551.600	16	554.850	29	558.100	42	561.350
4	551.850	17	555.100	30	558.350	43	561.600
5	552.100	18	555.350	31	558.600	44	561.850
6	552.350	19	555.600	32	558.850	45	562.100
7	552.600	20	555.850	33	559.100	46	562.350
8	552.850	21	556.100	34	559.350	47	562.600
9	553.100	22	556.350	35	559.600	48	562.850
10	553.350	23	556.600	36	559.850	49	563.100
11	553.600	24	556.850	37	560.100	50	563.350
12	553.850	25	557.100	38	560.350		
13	554.100	26	557.350	39	560.600		

Note:

1. Test of channel was included the lowest, middle and highest frequency in highest data rate and to perform the test, then record on this report.

Channel	Frequency(MHz)
1	551.100
25	557.100
50	563.350

3.2 DESCRIPTION OF TEST MODES

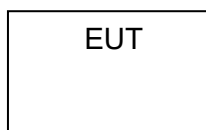
For All Emission	
Final Test Mode	Description
Transmitting mode	Keep the EUT in continuously transmitting mode

Note:

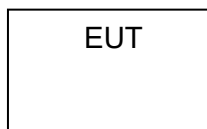
- (1) Fully-charged battery is used during the test

3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Emission Test



Spurious emissions

**3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)**

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Waist pack transmitter		W35B	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

3.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Name	Model No.	Serial No.	Manufacturer	Date of Cal.	Due Date
966 Shielded Room	966 Room	/	EMToni	2025/1/17	2028/1/16
EMI Test Receiver	ESCI	101178	Rohde & Schwarz	2025/6/10	2026/6/09
Amplifier (30MHz-1GHz)	BBV 9743 B	00374	SCHNWARZBECK	2025/6/10	2026/6/09
Bilog Antenna (30MHz-1GHz)	VULB9162	00473	SCHNWARZBECK	2025/3/08	2026/3/07
Horn antenna (1GHz-18GHz)	BBHA 9120 D	02622	SCHNWARZBECK	2025/3/10	2026/3/09
Preamplifier (1GHz-18GHz)	BBV 9718D	0024	SCHNWARZBECK	2025/6/10	2026/6/09
Spectrum Analyzer (10Hz-40GHz)	FSV 40	100952	Rohde & Schwarz	2025/6/10	2026/6/09
Preamplifier (18GHz-40GHz)	BBV 9721	0056	SCHNWARZBECK	2025/6/10	2026/6/09
Double Ridge Guide Horn Antenna (18GHz-40GHz)	SAS-574	588	A.H.System	2025/3/10	2026/3/09
Loop Antenna (9KHz-30MHz)	FMZB 1513-60	00115	SCHNWARZBECK	2025/6/10	2026/6/09
Amplifier (9KHz-30MHz)	BBV 9745	00109	CHNWARZBECK	2025/6/10	2026/6/09
MXG Signal Analyzer	N9020A	MY50510202	Agilent	2025/6/10	2026/6/09
MXG Vector Signal Generator	N5182A	MY50140020	Agilent	2025/6/10	2026/6/09
MXG Analog Signal Generator	N5181A	MY47420919	Agilent	2025/6/10	2026/6/09
Power Sensor	TR1029-2	512364	Techoy	2025/6/10	2026/6/09
RF Switch	TR1029-1	512364	Techoy	2025/6/10	2026/6/09
Cable	DA800- 4000MM	NA	DA	2025/6/10	2026/6/09
Cable	DA800- 11000MM	NA	DA	2025/6/10	2026/6/09
Noise Meter	SM-325	1-5817-01	AS ONE	2025/6/10	2026/6/09
High and low temperature constant temperature box	HW1025	L40H100	Hangzhou Metrology	2025/6/10	2026/6/09

Conduction Test equipment

Name	Model No.	Serial No.	Manufacturer	Date of Cal.	Due Date
944 Shielded Room	944 Room	/	EMToni	2025/1/17	2028/1/16
EMI Test Receiver	ESPI	101604	Rohde & Schwarz	2025/6/10	2026/6/09
LISN	ENV 216	102796	Rohde & Schwarz	2025/6/10	2026/6/09
LISN	VN1-13S	004023	CRANAGE	2025/6/10	2026/6/09
Cable	RG223-1500MM	NA	RG	2025/6/10	2026/6/09

Other

Item	Name	Manufacturer	Model	Software version
1	EMC Conduction Test System	FALA	EZ-EMC	Ver.EMC-CON 3A1.1+
2	EMC radiation test system	FALA	EZ-EMC	Ver.FA-03A2 RE+
3	RF test system	TACHOY	RFTest	V1.0.0
4	RF communication test system	TACHOY	RFTest	V1.0.0

4. EMC EMISSION TEST**4.1 CONDUCTED EMISSION MEASUREMENT**

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10-2020/Cor1-2023
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS

(Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Limit (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

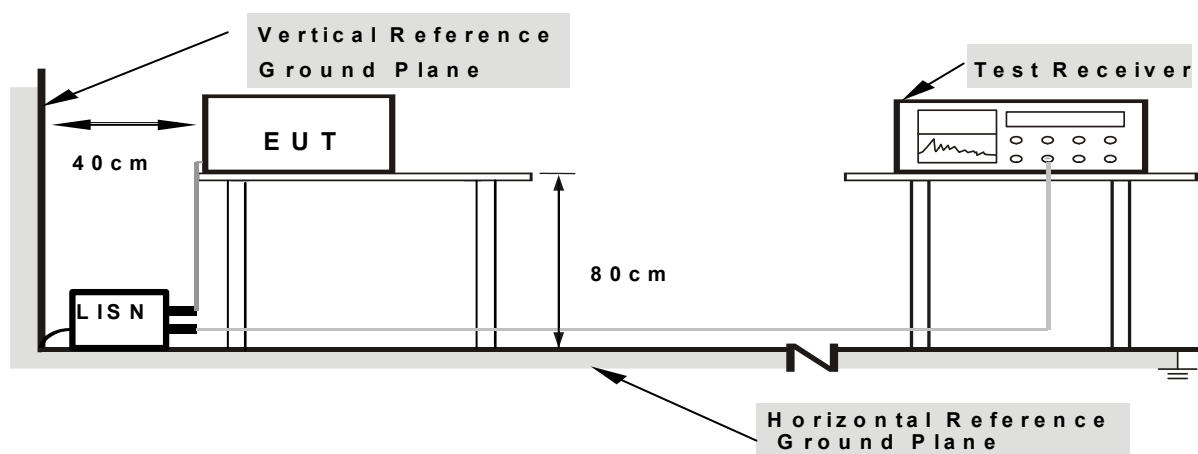
4.1.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TEST SETUP



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

4.1.6 TEST RESULTS

N/A

4.2 RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10-2020/Cor1-2023				
Test Frequency Range:	9kHz to 25GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	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	100KHz	300KHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average

4.2.1 RADIATED EMISSION LIMITS

According to 15.236(g)

Table 3: Limits for spurious emissions

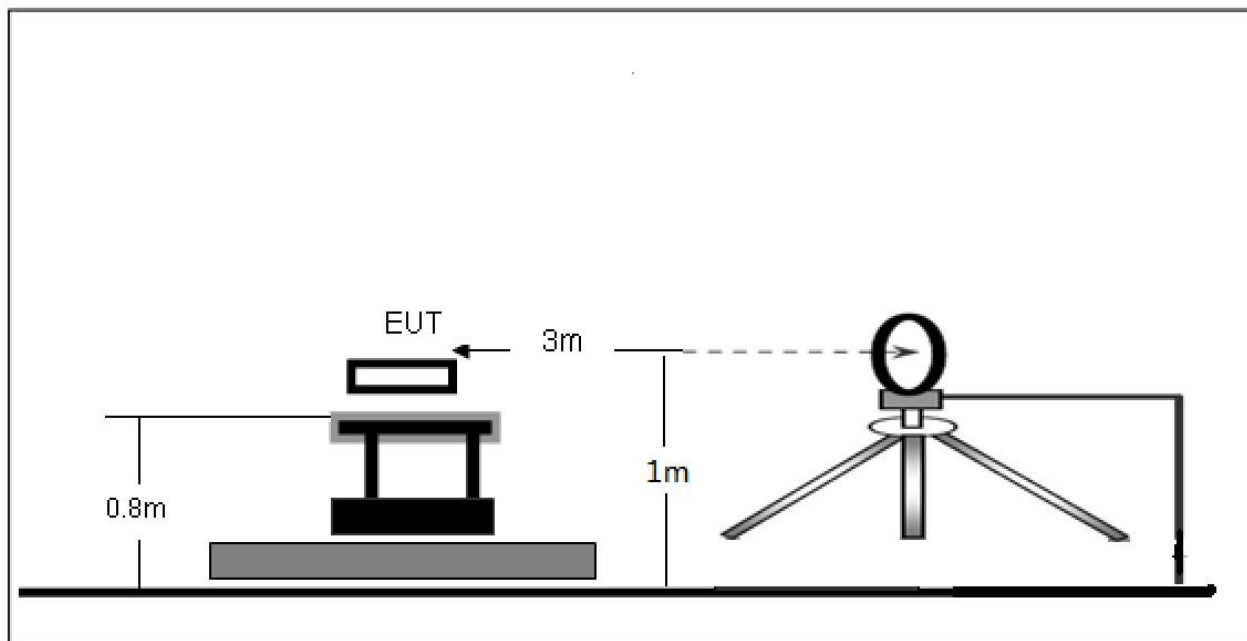
State	Frequency		
	47 MHz to 74 MHz 87,5 MHz to 137 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other Frequencies below 1 000 MHz	Frequencies above 1 000 MHz
Operation	4 nW	250 nW	1 µW
Standby	2 nW	2 nW	20 nW

4.2.2 DEVIATION FROM TEST STANDARD

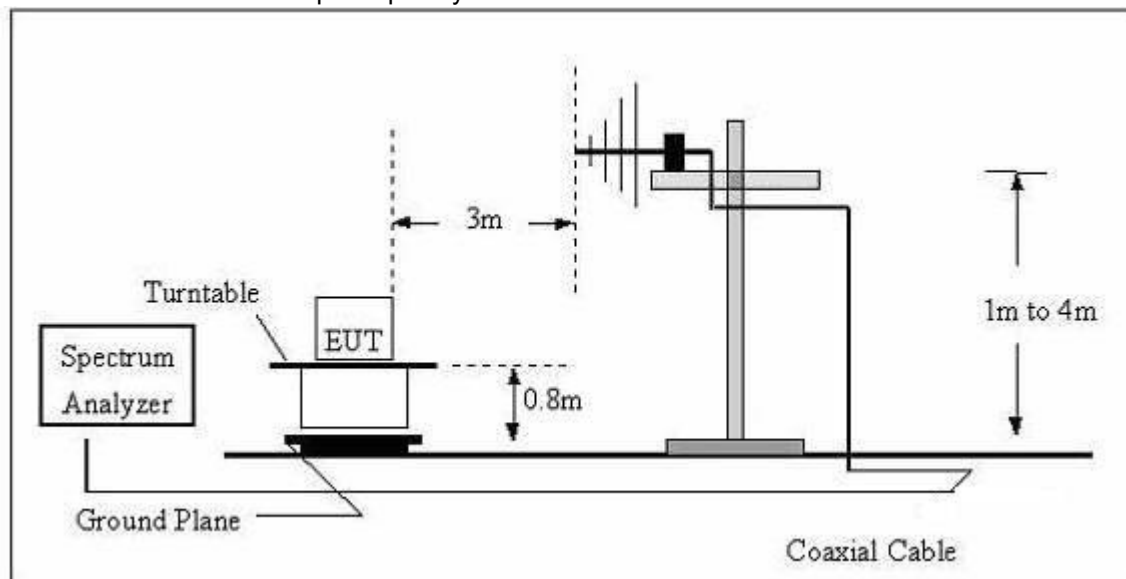
No deviation

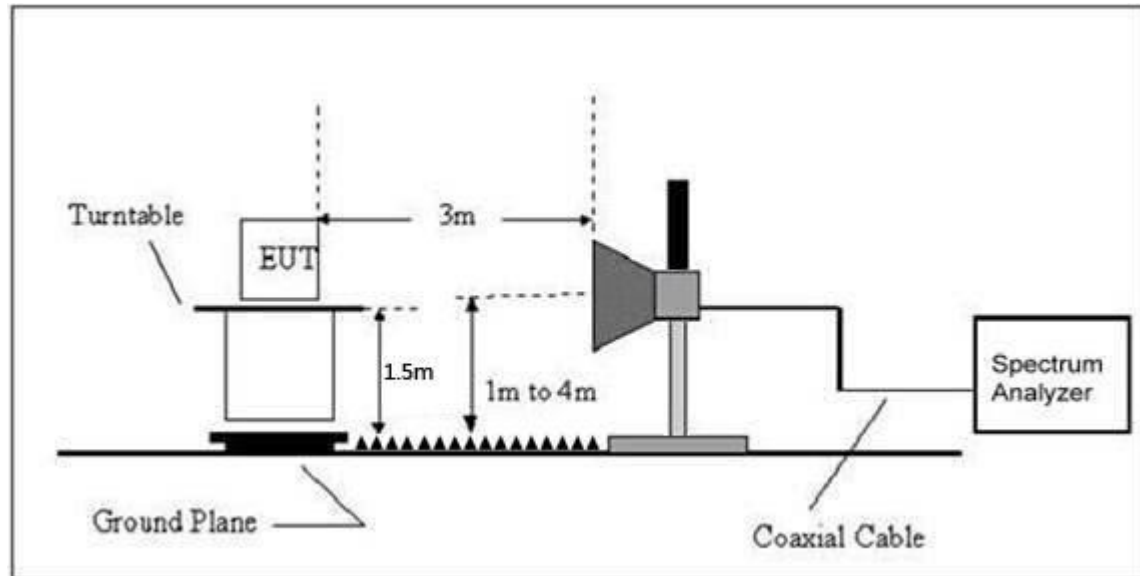
4.2.3 TEST SETUP

(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz

Frequency :9kHz-30MHz
RBW=10KHz,
VBW =30KHz
Sweep time= Auto
Trace = max hold
Detector function = peak

Frequency :30MHz-1GHz
RBW=120KHz,
VBW=300KHz
Sweep time= Auto
Trace = max hold
Detector function = peak

Frequency :Above 1GHz
RBW=1MHz,
VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto
Trace = max hold
QP Detector function = peak, AV

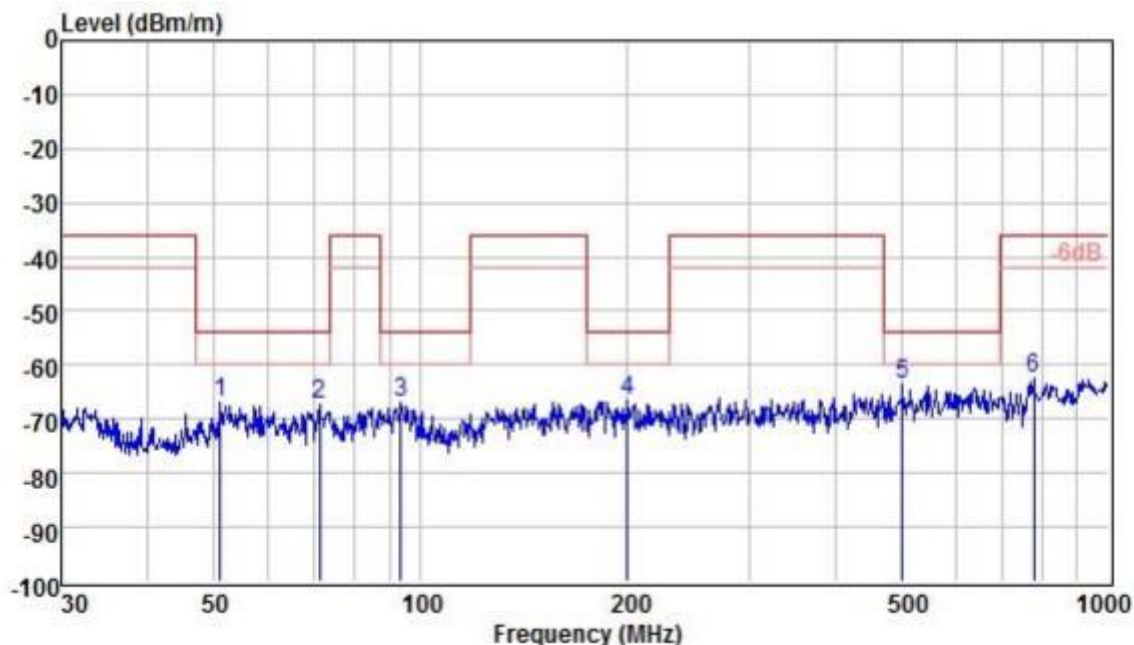
4.2.4 TEST PROCEDURE

1. The setup of EUT is according with per TIA/EIA Standard 603 and ANSI C63.4-2014 measurement procedure.
2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

4.2.5 TEST RESULTS

Radiated Spurious Emission (Between 30MHz – 1GHz)

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	Horizontal
Test Voltage :	DC 3V		
Test Mode :	TX Mode (Low Channel)		

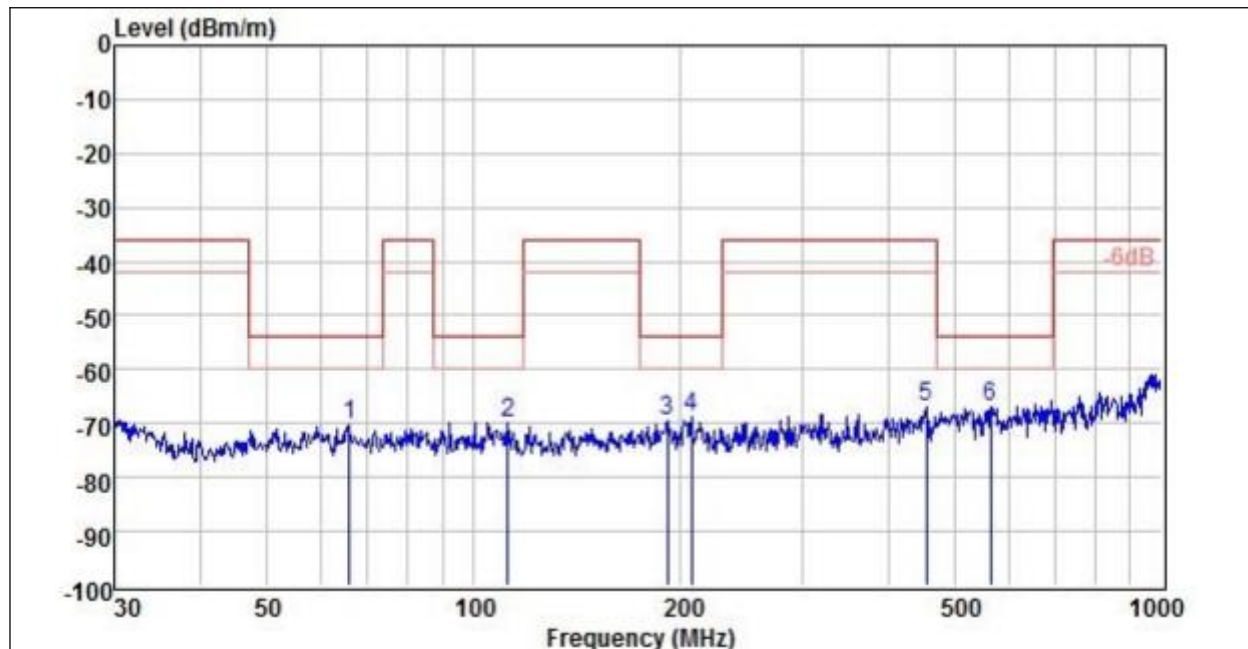


	Read	Antenna	Cable		Limit	Over	
Freq	Level	Factor	Loss	Level	Line	Limit	Remark
MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB	
1	51.12	-79.96	12.87	0.12	-66.97	-53.99	-12.98 Peak
2	71.33	-80.21	12.84	0.14	-67.23	-53.99	-13.24 Peak
3	93.44	-78.98	11.96	0.16	-66.86	-53.99	-12.87 Peak
4	199.99	-78.39	11.40	0.32	-66.67	-53.99	-12.68 Peak
5	501.18	-81.22	16.34	1.19	-63.69	-53.99	-9.70 Peak
6	779.61	-84.70	20.76	1.36	-62.58	-35.99	-26.59 Peak

Remarks:

- 1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplicator Factor
- 2.The emission levels of other frequencies are very lower than the limit and not show in test report.
- 3.All the modes have tested and record the worst mode(Low Channel) in the report.

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	Vertical
Test Voltage :	DC 3V		
Test Mode :	TX Mode (Low Channel)		



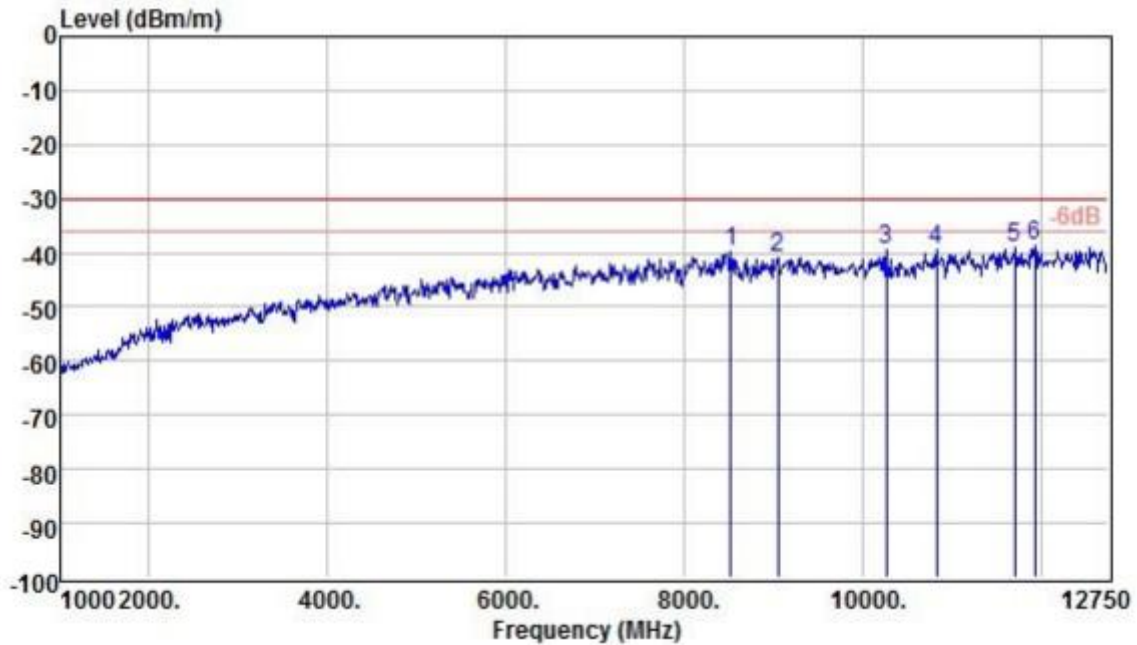
	Freq	Read	Antenna	Cable	Limit	Over	
	MHz	Level	Factor	Loss	Line	Limit	Remark
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB
1	66.03	-82.30	11.84	0.14	-70.32	-53.99	-16.33 Peak
2	112.13	-82.10	11.90	0.19	-70.01	-53.99	-16.02 Peak
3	191.07	-81.59	11.96	0.28	-69.35	-53.99	-15.36 Peak
4	207.12	-80.61	11.44	0.34	-68.83	-53.99	-14.84 Peak
5	454.31	-83.53	15.44	1.06	-67.03	-35.99	-31.04 Peak
6	564.64	-85.15	17.17	1.15	-66.83	-53.99	-12.84 Peak

Remarks:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. All the modes have tested and record the worst mode (Low Channel) in the report.

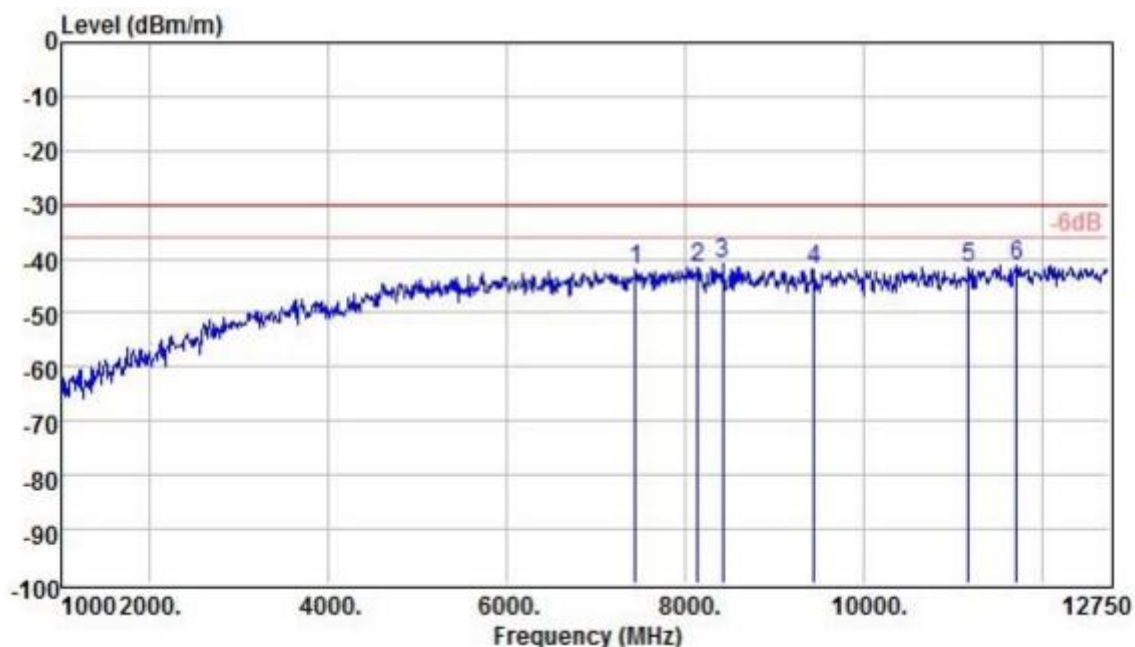
Radiated Spurious Emission (Above 1GHz)

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	Horizontal
Test Voltage :	DC 3V		
Test Mode :	TX Mode (Low Channel)		



		ReadAntenna		Cable		Limit	Over	
	Freq	Level	Factor	Loss	Level	Line	Limit	Remark
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB	
1	8520.00	-70.52	36.82	6.52	-39.64	-29.99	-9.65	Peak
2	9048.75	-72.79	37.44	6.95	-40.86	-29.99	-10.87	Peak
3	10270.75	-73.60	38.83	8.00	-39.43	-29.99	-9.44	Peak
4	10834.75	-74.59	39.41	8.21	-39.58	-29.99	-9.59	Peak
5	11704.25	-74.86	39.69	8.52	-39.19	-29.99	-9.20	Peak
6	11939.25	-74.17	39.47	8.59	-38.63	-29.99	-8.64	Peak

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	Vertical
Test Voltage :	DC 3V		
Test Mode :	TX Mode (Low Channel)		



	Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB	
1	7439.00	-72.67	37.38	5.68	-42.13	-29.99	-12.14	Peak
2	8144.00	-71.73	36.51	6.21	-41.47	-29.99	-11.48	Peak
3	8426.00	-71.60	36.74	6.43	-40.89	-29.99	-10.90	Peak
4	9448.25	-74.77	37.94	7.32	-42.07	-29.99	-12.08	Peak
5	11175.50	-76.95	39.65	8.35	-41.54	-29.99	-11.55	Peak
6	11716.00	-76.78	39.69	8.52	-41.11	-29.99	-11.12	Peak

5. MAXIMUM RADIATED POWER(EIRP)**5.1 APPLIED PROCEDURES / LIMIT**

ACCORDING TO FCC 15.236(D)(1), FOR LOW POWER AUXILIARY STATION OPERATING IN THE 470-608, AND 614-698 MHZ BANDS, IN THE BANDS ALLOCATED AND ASSIGNED FOR BROADCAST TELEVISION AND IN THE 600 MHZ SERVICE BAND: 50 MW EIRP

5.2 TEST PROCEDURE

1. THE MAXIMUM PEAK OUTPUT POWER WAS MEASURED WITH A SPECTRUM ANALYZER CONNECTED TO THE ANTENNA TERMINAL WHILE EUT WAS OPERATING IN UNMODULATED SITUATION.
2. POWER WAS SUPPLIED TO THE BATTERY INPUT CONNECTOR A POWER SUPPLY. THE POWER SUPPLY WAS SET FOR +3.0VDC. THE SPECTRUM ANALYZER WAS CONNECTED AT ANTENNA TERMINAL TO MEASURE RF POWER OF THE CARRIER.
3. A MULTIMETER WAS CONNECTED IN SERIES WITH FINAL RF STAGE TO MEASURE THE CURRENT; A MULTIMETER WAS USED TO MEASURE FINAL RF STAGE SUPPLY VOLTAGE. THEN THE VOLTAGE V.S. CURRENT OF THE FINAL RF STAGE CAN BE SHOWN.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP**5.5 EUT OPERATION CONDITIONS**

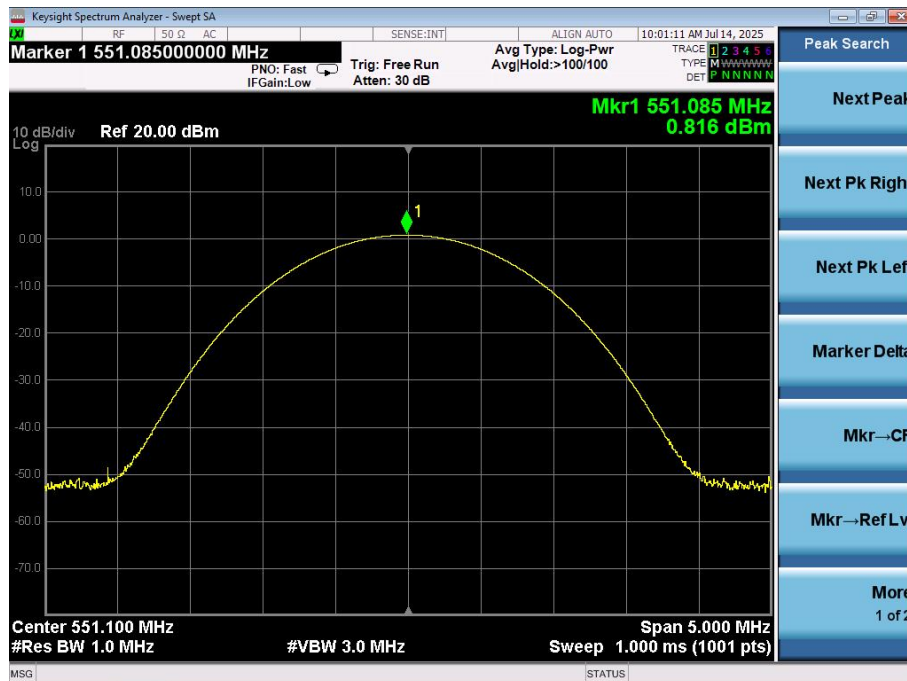
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.6 TEST RESULTS

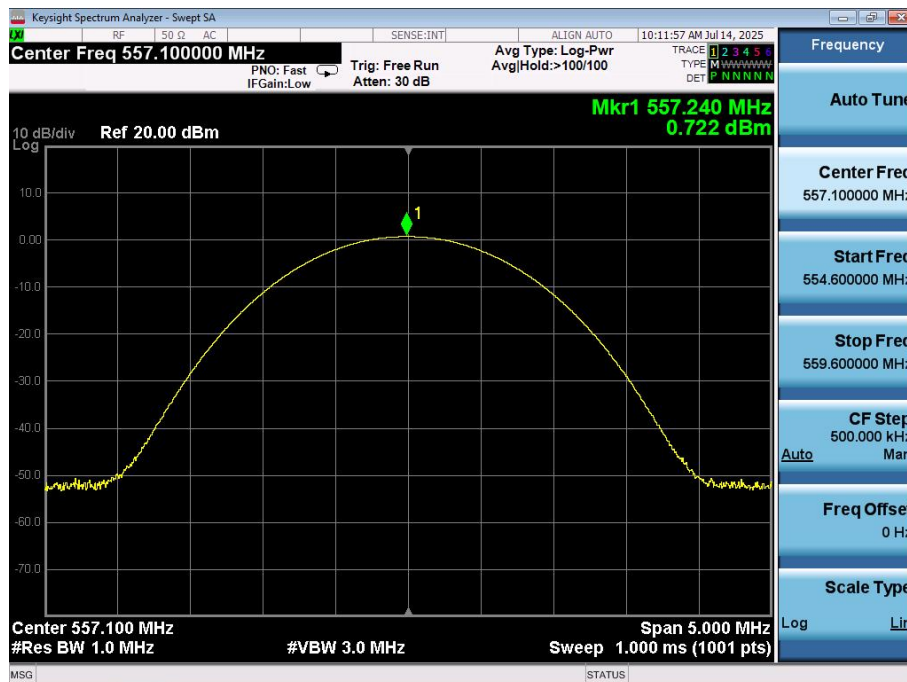
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 3V

Frequency	CONDUCTED OUTPUT POWER (dBm)	ANT GAIN (dBi)	EIRP (dBm)	Limit (dBm)	Result
551.100MHz	0.816	0.2	1.016	17	PASS
557.100MHz	0.722	0.2	0.922	17	PASS
563.350MHz	0.726	0.2	0.926	17	PASS

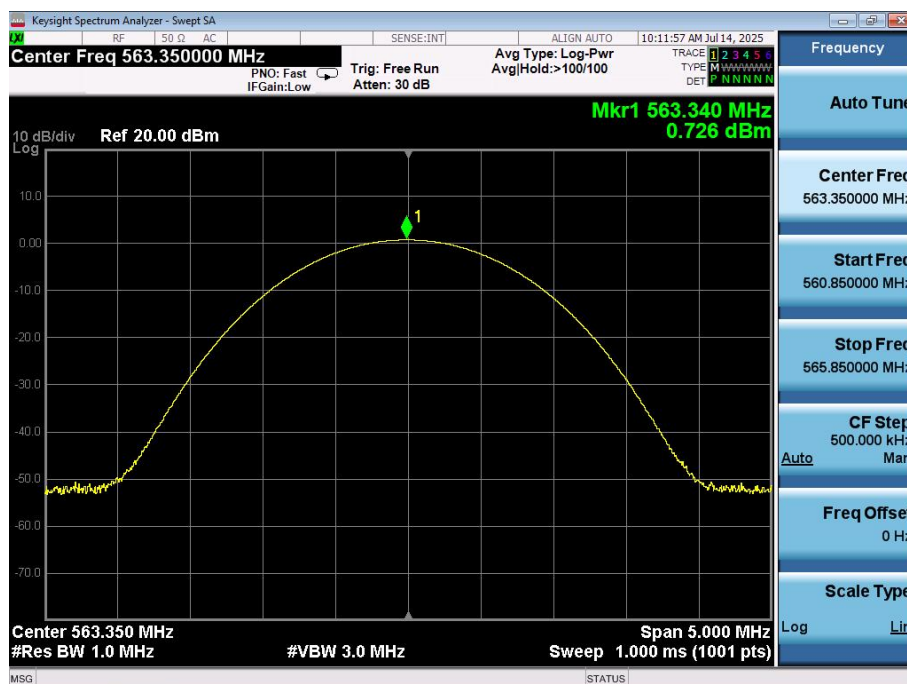
Low Channel



Middle Channel



High Channel



6. CHANNEL BANDWIDTH**6.1 APPLIED PROCEDURES / LIMIT**

According to FCC 15.236(f)(1), Wireless microphones. The operating frequency within a permissible band of operation defined in paragraph (c) of this section must comply with the following requirements.

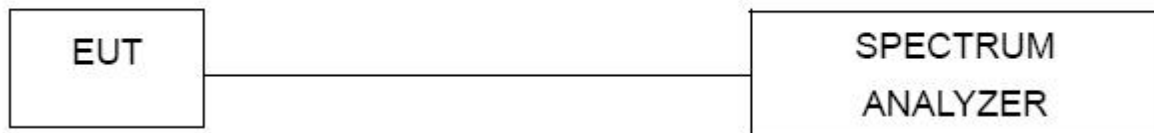
- (i) The frequency selection shall be offset from the upper or lower band limits by 25 kHz or an integral multiple thereof.
- (ii) One or more adjacent 25 kHz segments within the assignable frequencies may be combined to form a channel whose maximum bandwidth shall not exceed 200 kHz. The operating bandwidth shall not exceed 200 kHz.
- (iii) The frequency tolerance of the carrier signal shall be maintained within $\pm 0.005\%$ of the operating frequency over a temperature variation of -20 degrees to $+50$ degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. Battery operated equipment shall be tested using a new battery.

6.2 TEST PROCEDURE

For OBW measurement, please refer to KDB 971168 D01I v03r01 Section 4.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP**6.5 EUT OPERATION CONDITIONS**

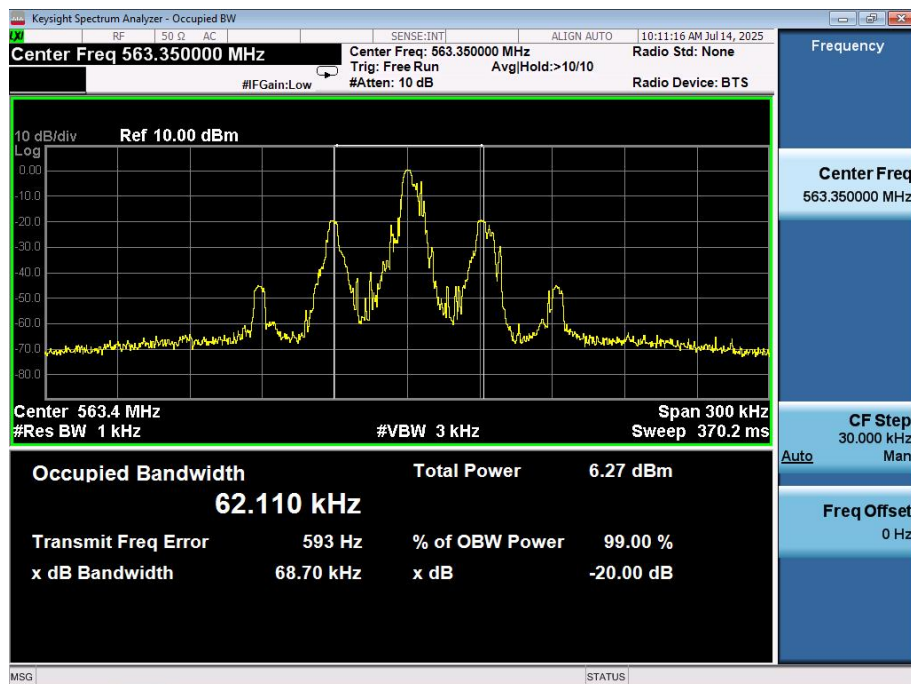
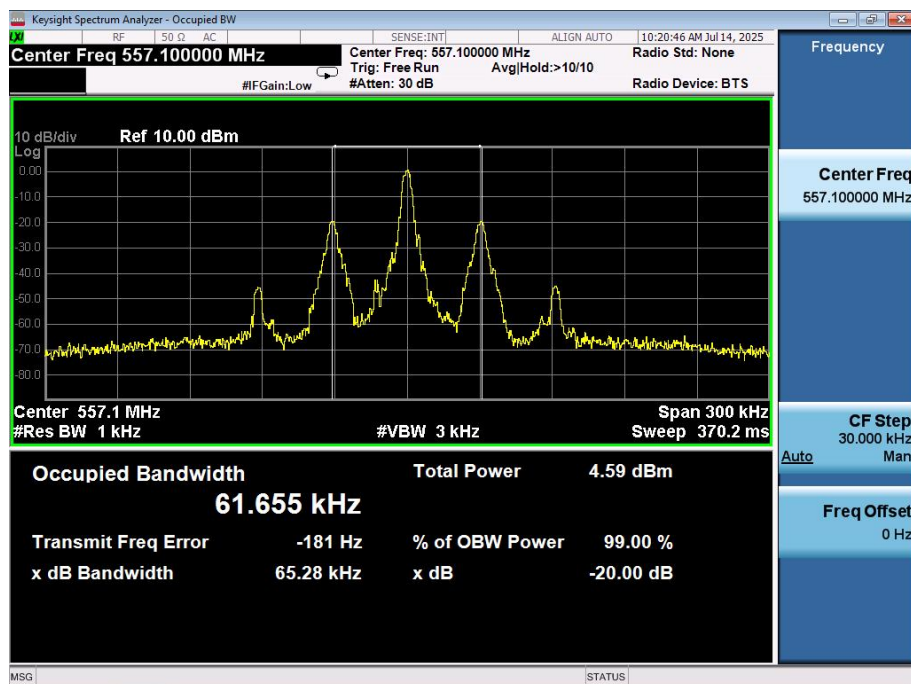
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULTS

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 3V

Frequency (MHz)	-20 bandwidth (KHz)	Limit (KHz)	Result
551.100MHz	66.14	200	Pass
557.100MHz	65.28	200	Pass
563.350MHz	68.70	200	Pass





7. NECESSARY BANDWIDTH

7.1 LIMIT

According to §15.236 (g), Emission masks —

- (1) Analog systems. Emissions within the band from $2.5 \times B$ below to $2.5 \times B$ above the carrier frequency, where B is the channel bandwidth, shall comply with the emission mask in Figure 1 of section 4.2.4.2.2 of ETSI EN 300 422-1 V2.2.1 (2021-11) (incorporated by reference, see § 15.38).
- (2) Digital systems. Emissions within the band from $2.5 \times B$ below to $2.5 \times B$ above the carrier frequency, where B is the channel bandwidth, shall comply with the emission mask in Figure 2 of section 4.2.4.2.2 of ETSI EN 300 422-1 V2.2.1 (2021-11) (incorporated by reference, see § 15.38).
- (3) Wireless Multichannel Audio Systems. Emissions within the band from $2.5 \times B$ below to $2.5 \times B$ above the carrier frequency, where B is the channel bandwidth, shall comply with the emission mask in Figure 3 of section 4.2.4.2.2 of ETSI EN 300 422-1 V2.2.1 (2021-11), (incorporated by reference, see § 15.38).
- (4) Spurious emission limits. Emissions outside of the emission masks listed in paragraphs (g)(1) through (g)(3) shall comply with the limits specified in section 4.2.4.1.2 of ETSI EN 300 422-1 V2.2.1 (2021-11), (incorporated by reference, see § 15.38).

7.2 TEST SETUP

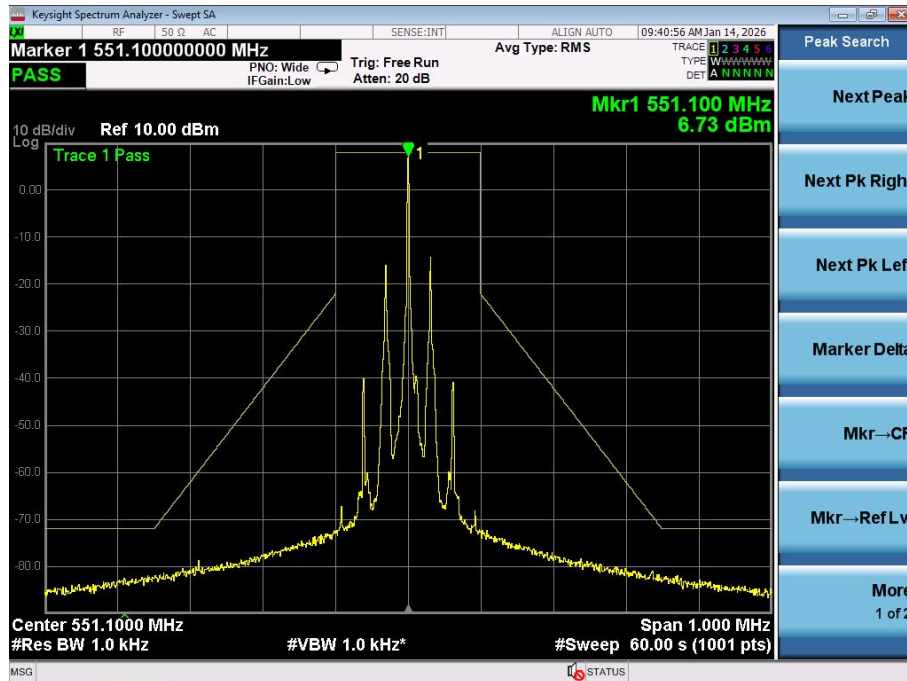


7.3 TEST PROCEDURE

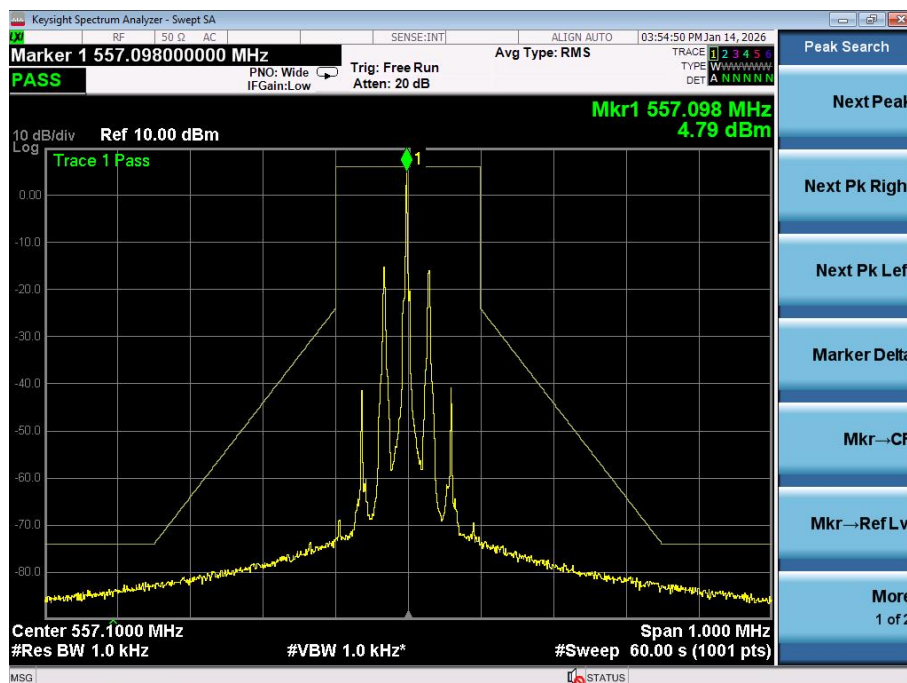
For Emission mask measurement, please refer to ETSI EN 300 422-1 V2.2.1 (2021-11) Section 5.4.3

7.4 TEST RESULTS

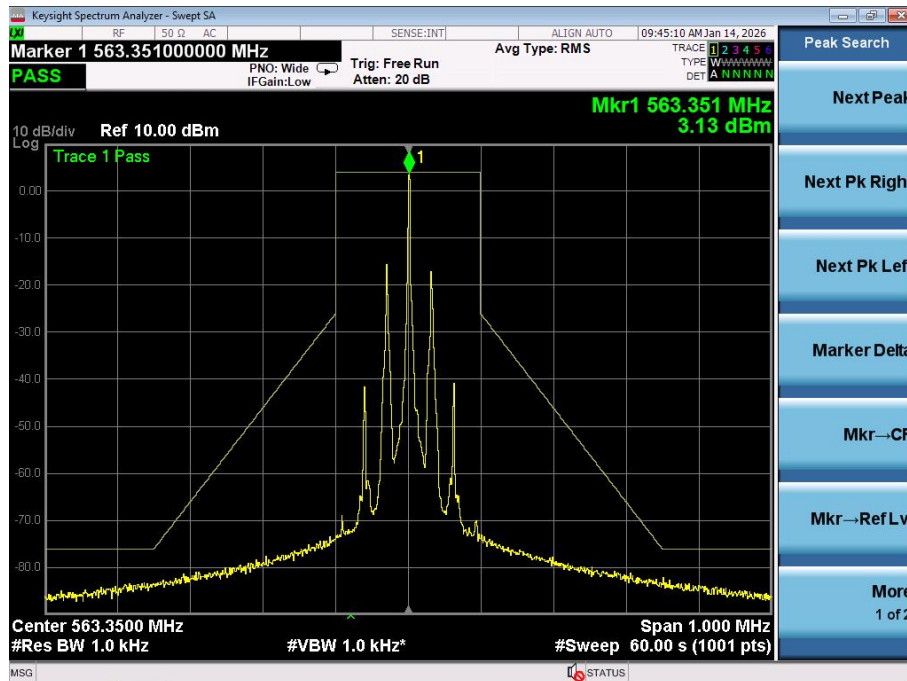
Low Channel



Middle Channel



High Channel



8. FREQUENCY STABILITY

8.1 Limit

$\pm 0.005\% \times 551.1\text{MHz} = 27.6\text{ KHz}$

$\pm 0.005\% \times 557.1\text{MHz} = 27.9\text{ KHz}$

$\pm 0.005\% \times 563.35\text{MHz} = 28.2\text{ KHz}$

8.2 Standard Applicable

According to FCC 15.236(f)(3), The frequency tolerance of the carrier signal shall be maintained within $\pm 0.005\%$ of the operating frequency over a temperature variation of -20 degrees to $+50$ degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. Battery operated equipment shall be tested using a new battery

8.3 TEST SETUP



8.4 Test Procedure

1. Setup the configuration of the ambient temperature from -20°C to 50°C with sufficient time. And measure the different power of the EUT with an artificial power from highest to end point voltage.
2. Set frequency counter center frequency to the right frequency needs to be measured band.

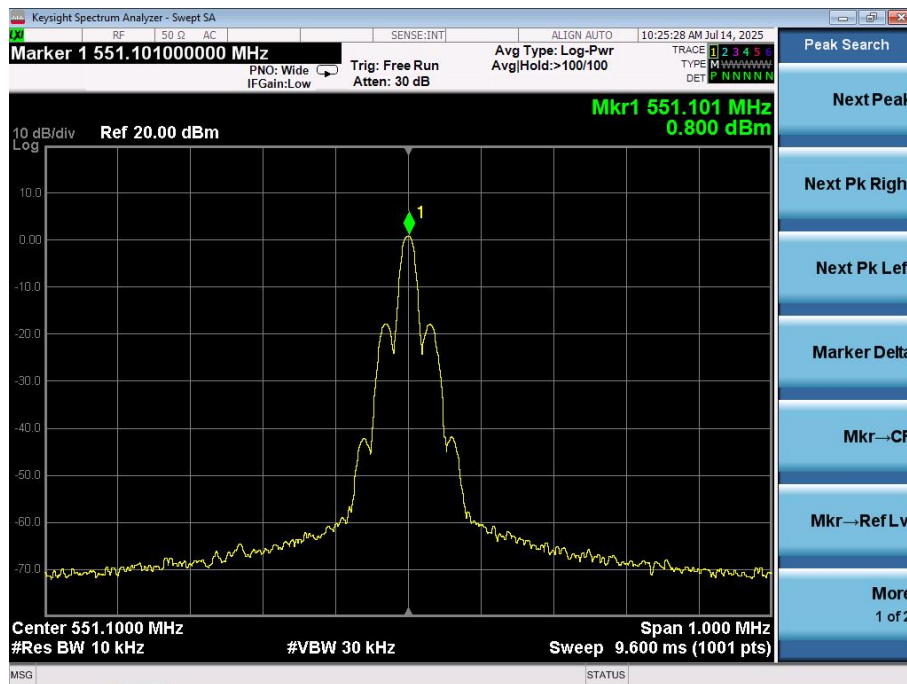
8.5 Test Result

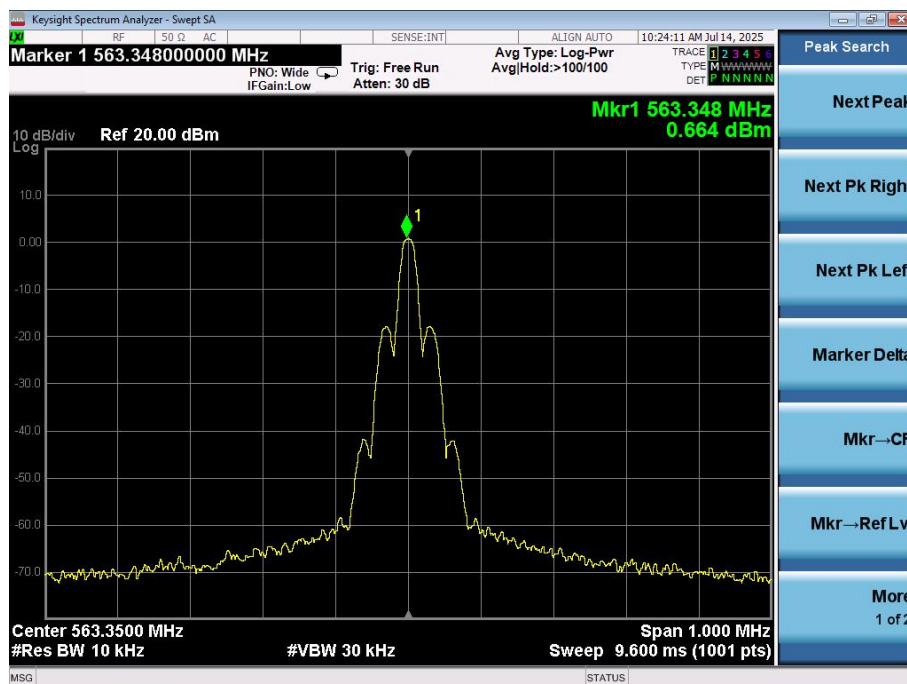
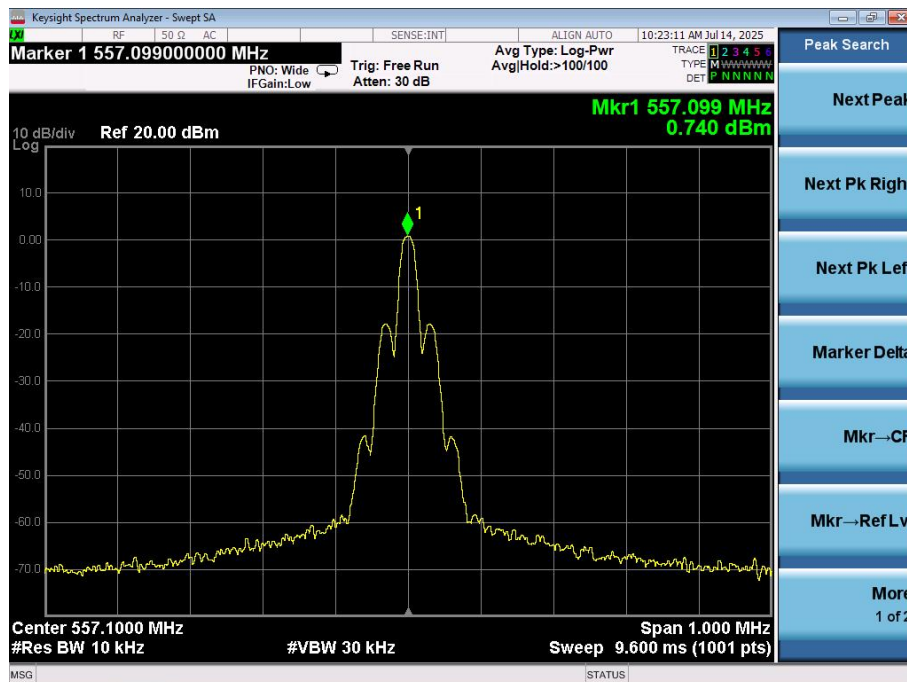
Note: All modes have been tested, and this report only records the NT/NV worst data.

Test frequency	Test Conditions		Measure Frequency	Frequency Error	Limit	Result
(MHz)	Voltage (V)	Temperature(°C)	(MHz)	(KHz)	(KHz)	
551.100	N	N	551.101	1	±27.6	Pass
		L	551.102	2		Pass
		H	551.099	-1		Pass
	L	N	551.101	1		Pass
		L	551.101	1		Pass
		H	551.102	2		Pass
	H	N	551.102	2		Pass
		L	551.103	3		Pass
		H	551.102	2		Pass

Test frequency	Test Conditions		Measure Frequency	Frequency Error	Limit	Result
(MHz)	Voltage (V)	Temperature(°C)	(MHz)	(KHz)	(KHz)	
557.100	N	N	557.099	-1	±27.9	Pass
		L	557.100	0		Pass
		H	557.101	1		Pass
	L	N	557.101	1		Pass
		L	557.102	2		Pass
		H	557.101	1		Pass
	H	N	557.100	0		Pass
		L	557.098	-2		Pass
		H	557.099	-1		Pass

Test frequency	Test Conditions		Measure Frequency	Frequency Error	Limit	Result
(MHz)	Voltage (V)	Temperature(°C)	(MHz)	(KHz)	(KHz)	
563.350	N	N	563.348	-2	±28.2	Pass
		L	563.349	-1		Pass
		H	563.351	1		Pass
	L	N	563.350	0		Pass
		L	563.351	1		Pass
		H	563.349	-1		Pass
	H	N	563.351	1		Pass
		L	563.350	0		Pass
		H	563.352	2		Pass





9. ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: 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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
EUT Antenna:	
The antennas is external antenna, the Max gain of the antennas is 0.2dBi, reference to the appendix II for details.	

9. TEST SETUP PHOTO

Reference to the appendix I for details.

10. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

******* END OF REPORT *******