FCC Test Report

Report No.:	RWAQ202400250A
Applicant:	Shenzhen Shenyao Technology Co., Ltd
Address:	Floor 3, 1st Building, No17 Leyuan Street, Baolong Road, Longgang District, Shenzhen, Guangdong, China
Product Name:	Microphone
Product Model:	Vocal M V1
Multiple Models:	Vocal M V2, Vocal M V3, Vocal M V4, Vocal M V5, Vocal M V6, Vocal M TX, Vocal M RX, Vocal M TLX
Trade Mark:	CKMOVA
FCC ID:	2BFKQVOCALM
Standards:	FCC CFR Title 47 Part 15C (§15.236)
Test Date:	2024-03-21 to 2024-04-24
Test Result:	Complied
Report Date:	2024-04-30

Reviewed by:	**Approved by:**
Abel Chen	Jacob Kong
Abel Chen	Jacob Kong
Project Engineer	Manager

Prepared by:

World Alliance Testing & Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China

NVLAP TESTING NVLAP LAB CODE 600335-0

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Revision History

Version No.	Issued Date	Description
00	*2024-04-30*	*Original*

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1 General Information

1.1 Client Information

Applicant:	Shenzhen Shenyao Technology Co., Ltd
Address:	Floor 3, 1st Building, No17 Leyuan Street, Baolong Road, Longgang District, Shenzhen, Guangdong, China
Manufacturer:	Shenzhen Shenyao Technology Co., Ltd
Address:	Floor 3, 1st Building, No17 Leyuan Street, Baolong Road, Longgang District, Shenzhen, Guangdong, China

1.2 Product Description of EUT

The EUT is Microphone that contains a UHF wireless microphone radio, this report covers the full testing of the UHF wireless microphone radio.

Sample Serial Number	6W-4 for CE test; 6W-6 for RE test; 6W-5 for RF test (assigned by WATC)
Sample Received Date	2024-03-21
Sample Status	Good Condition
Operational Frequency Range	535.3-582.35 MHz
Maximum EIRP:	-1.04dBm
Modulation Technology	FM
Antenna Gain#	3.0 dBi
Spatial Streams#	SI (1TX)
Power Supply	DC 3.7V from Battery or DC 5V from Type C
Operating temperature#	0 deg.C to +50 deg.C
Adapter Information	N/A
Modification	Sample No Modification by the test lab

1.3 Related Submittal(s)/Grant(s)

No Related Submittal(s)/Grant(s)

1.4 Measurement Uncertainty

Parameter		Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
AC Power Lines Conducted Emissions		±3.14dB
Emissions, Radiated	Below 30MHz	±2.78dB
	Below 1GHz	±4.84dB
	Above 1GHz	±5.44dB
Conducted Power		0.74dB
Frequency Error		150Hz
Bandwidth		0.34%

Note 1: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Note 2: The Decision Rule is based on simple acceptance with ISO Guide 98-4:2012 Clause 8.2 (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

1.5 Laboratory Location

World Alliance Testing & Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China

Tel: +86-755-29691511, Email: qa@watc.com.cn

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 463912, the FCC Designation No. : CN5040.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0160.

1.6 Test Methodology

FCC CFR 47 Part 2

FCC CFR 47 Part 15

ANSI C63.10-2020

ETSI EN 300 422-1 V1.4.2 (2011-08)

KDB 206256 D01 Wireless Microphone Certification v02r01

2 Description of Measurement

2.1 Test Configuration

Frequency bands:	470-608 MHz (UHF)(TV Band Ch 14-36)				
Operating channels:					
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	535.3	27	550.9	53	568.55
2	535.9	28	551.5	54	569.15
3	536.5	29	552.1	55	569.75
4	537.1	30	552.7	56	570.35
5	537.7	31	553.3	57	570.95
6	538.3	32	553.9	58	571.55
7	538.9	33	554.5	59	572.15
8	539.5	34	555.1	60	572.75
9	540.1	35	555.7	61	573.35
10	540.7	36	556.3	62	573.95
11	541.3	37	556.9	63	574.55
12	541.9	38	557.5	64	575.15
13	542.5	39	560.15	65	575.75
14	543.1	40	560.75	66	576.35
15	543.7	41	561.35	67	576.95
16	544.3	42	561.95	68	577.55
17	544.9	43	562.55	69	578.15
18	545.5	44	563.15	70	578.75
19	546.1	45	563.75	71	579.35
20	546.7	46	564.35	72	579.95
21	547.3	47	564.95	73	580.55
22	547.9	48	565.55	74	581.15
23	548.5	49	566.15	75	581.75
24	549.1	50	566.75	76	582.35
25	549.7	51	567.35	/	/
26	550.3	52	567.95	/	/

FCC §15.215(f)(1) required, The frequency selection shall be offset from the upper or lower band limits by 25 kHz or an integral multiple thereof.

Judgment:

The lower band frequency is 470MHz, the lowest channel frequency is 535.3MHz

(535.3MHz-470MHz)/25kHz=2612

The Upper band frequency is 608MHz, the highest channel frequency is 582.35MHz

(608MHz-582.35MHz)/25kHz=1026

The channel step is 0.6MHz or 2.65MHz

0.6MHz/25kHz=24, 2.65MHz/25kHz=106

So all the Operating frequencies used by the device is compliance with the requirement.

According to ANSI C63.10-2020 chapter 5.6.1 Table 11 requirement, select lowest/middle/highest frequency in the frequency range in which device operates for testing. The detailed frequency points are as follows:

Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	535.3	38	557.5	76	582.35

Test Mode:			
Transmitting mode:	Keep the EUT in continuous transmitting with modulation		
Exercise software#:	N/A		
Mode	**Power Level Setting#**		
	Low Channel	**Middle Channel**	**High Channel**
SRD	default	default	default
The exercise software and the maximum power setting that provided by manufacturer.			

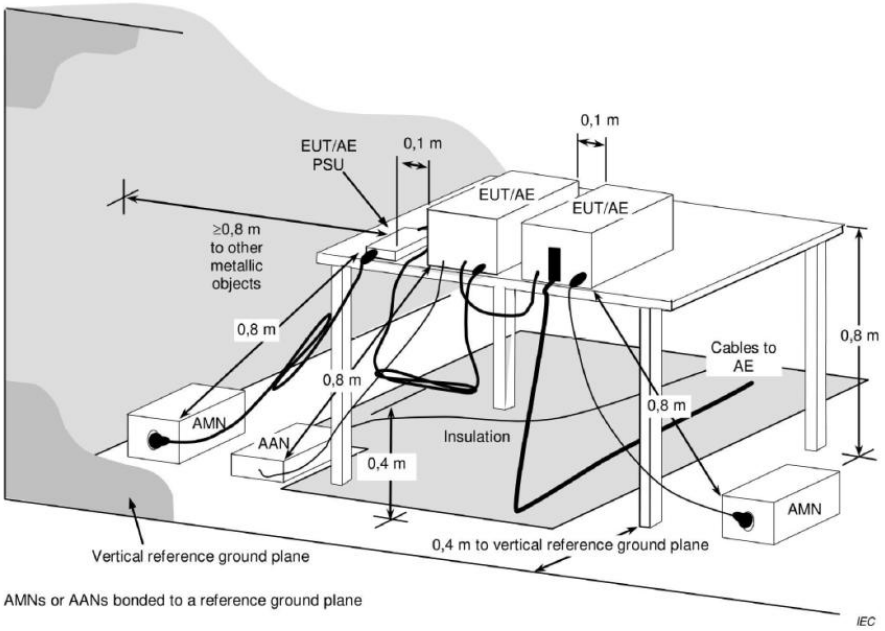
Worst-Case Configuration:
For radiated emissions, EUT was investigated in three orthogonal orientation, the worst-case orientation was recorded in report For radiated emission was investigated from 30MHz to 10 times of fundamental with the EUT transmits at the highest output power as worst-case scenario. For AC power line conducted emission was performed with the EUT transmits at the channel with highest output power as worst-case scenario. For Bandwidth and emission mask test, a 500Hz audio signal at the level declared by manufacturer was apply to the EUT.

2.2 Test Auxiliary Equipment

Manufacturer	Description	Model	Serial Number
unknown	adapter	unknown	unknown
unknown	Earphone	unknown	unknown

2.3 Test Setup

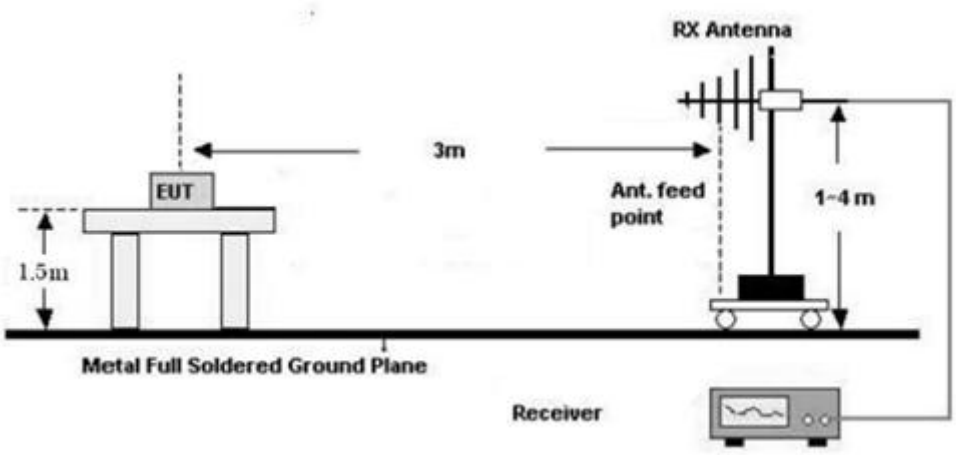
1) Conducted emission measurement:



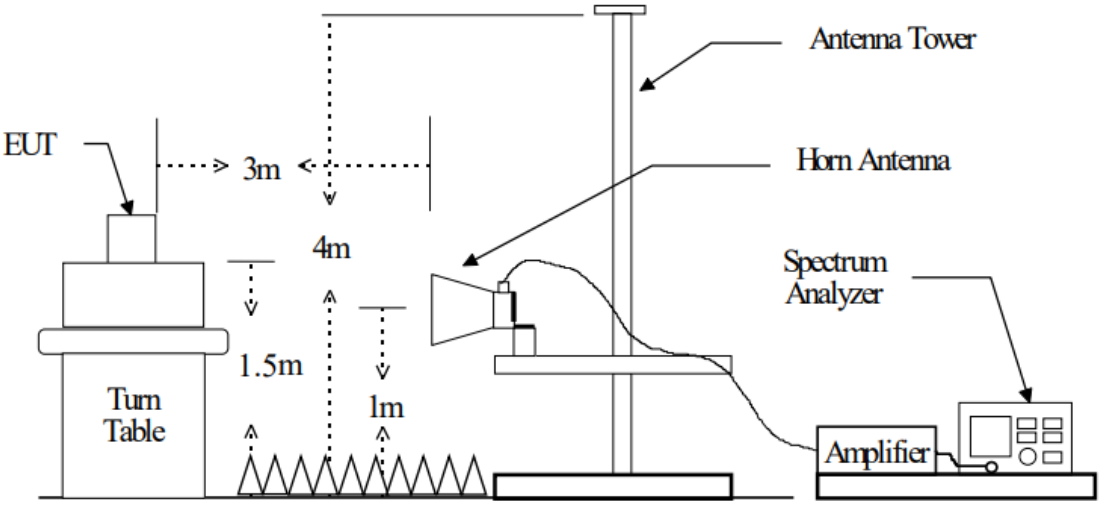
Note: The 0.8 m distance specified between EUT/AE/PSU and AMN/AAN, is applicable only to the EUT being measured. If the device is AE then it shall be >0.8 m.

2) Radiated emission measurement:

Below 1GHz (3m SAC)

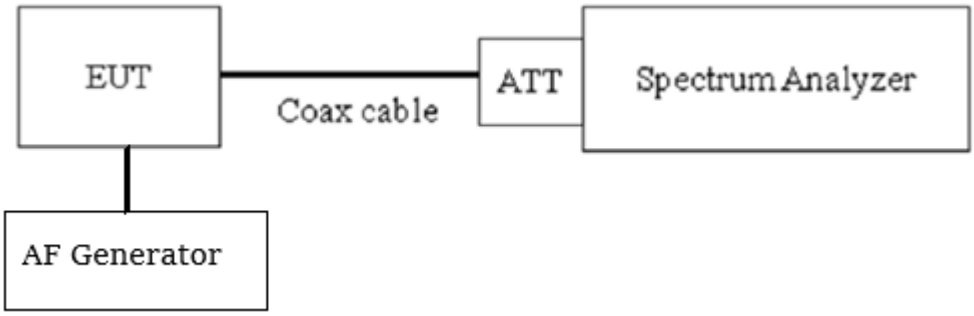


Above 1GHz (3m FAC)

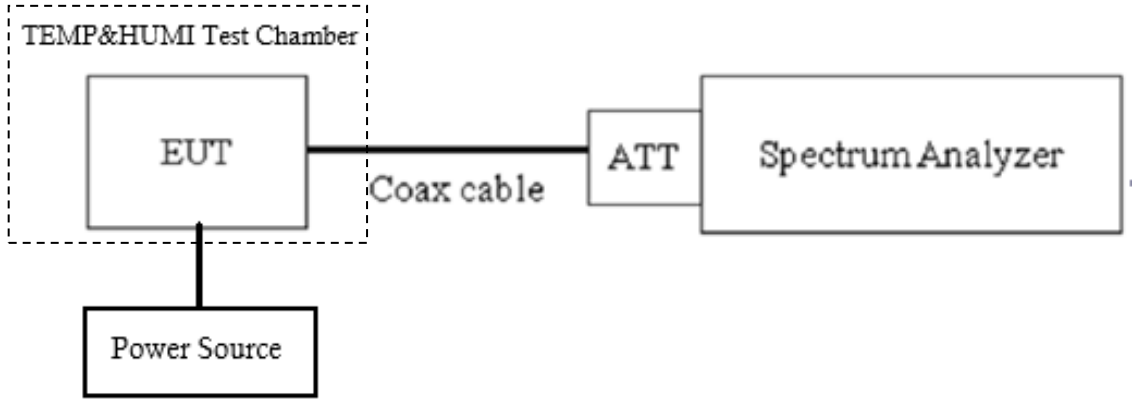


3) RF Conducted Test

Output Power/Bandwidth/Emission Mask



Frequency Stability



2.4 Test Procedure

Conducted emission:

1. The E.U.T is placed on a non-conducting table 40cm from the vertical ground plane and 80cm above the horizontal ground plane (Please refer to the block diagram of the test setup and photographs).
2. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.
3. Line conducted data is recorded for both Line and Neutral

Radiated Emission Procedure:

a) For below 1GHz:

1. The EUT was placed on the tabletop of a rotating table 1.5m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m.
2. EUT works in each mode of operation that needs to be tested. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations.

b) For above 1GHz:

1. The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m (1-18GHz) and 1.5 m (above 18GHz).
2. EUT works in each mode of operation that needs to be tested， and having the EUT continuously working. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations.
3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.

RF Conducted Test:

1. The antenna port of EUT was connected to the RF port of the test equipment (Spectrum analyzer) through Attenuator (if used) and RF cable (if used).
2. The cable assembly insertion loss of 1.0dB was entered as an offset in the power meter. Note: Actual cable loss was unavailable at the time of testing, therefore a loss of 1.0dB was assumed as worst case. This was later verified to be true by laboratory. (if the RF cable provided by client, the cable loss declared by client)
3. The EUT is keeping in continuous transmission mode and tested in all modulation modes.

2.5 Measurement Method

Description of Test	Measurement Method
AC Line Conducted Emissions	ANSI C63.10-2020 Section 6.2
Maximum Output Power	ANSI C63.10-2020 Annex G.5.1
Occupied Bandwidth	ETSI EN 300 422-1 V1.4.2 (2011-08) Section 8.3 ANSI C63.10-2020 Section 6.9.3
Frequency Stability	ANSI C63.10-2020 Section 6.8
Emission Mask	ETSI EN 300 422-1 V1.4.2 (2011-08) Section 8.3
Radiated Spurious emission	ETSI EN 300 422-1 V1.4.2 (2011-08) Section 8.4

2.6 Measurement Equipment

Manufacturer	Description	Model	Management No.	Calibration Date	Calibration Due Date
AC Conducted Emission Test					
ROHDE& SCHWARZ	EMI TEST RECEIVER	ESR	101817	2023/7/3	2024/7/2
R&S	LISN	ENV216	101748	2023/8/1	2024/7/31
N/A	Coaxial Cable	NO.12	N/A	2023/7/3	2024/7/2
Farad	Test Software	EZ-EMC	Ver. EMEC-3A1	/	/
Radiated Emission Test					
R&S	EMI test receiver	ESR3	102758	2023/7/3	2024/7/2
ROHDE& SCHWARZ	SPECTRUM ANALYZER	FSV40-N	101608	2023/7/3	2024/7/2
SONOMA INSTRUMENT	Low frequency amplifier	310	186014	2023/7/12	2024/7/11
COM-POWER	preamplifier	PAM-118A	18040152	2023/8/21	2024/8/20

BACL	Loop Antenna	1313-1A	4010611	2024/2/7	2027/2/6
SCHWARZBECK	Log - periodic wideband antenna	VULB 9163	9163-872	2023/7/7	2024/7/6
Astro Antenna Ltd	Horn antenna	AHA-118S	3015	2023/7/6	2024/7/5
N/A	Coaxial Cable	N/A	NO.9	2023/8/8	2024/8/7
N/A	Coaxial Cable	N/A	NO.10	2023/8/8	2024/8/7
N/A	Coaxial Cable	N/A	NO.11	2023/8/8	2024/8/7
Audix	Test Software	E3	191218 V9	/	/
RF Conducted Test					
ROHDE& SCHWARZ	SPECTRUM ANALYZER	FSV40	101419	2023/9/12	2024/9/11
BACL	TEMP&HUMI Test Chamber	BTH-150	30022	2023/7/12	2024/7/11
HP	RF Communication test set	HP8920A	N/A	2023/7/12	2024/7/11
FLUKE	Digital Multimeter	15B+	N/A	2023/7/12	2024/7/11

Note: All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or International standards.

3 Test Results

3.1 Test Summary

FCC Rules	Description of Test	Result
FCC §15.207(a)	AC Line Conducted Emissions	Compliance
FCC §15.236(d)	Maximum Output Power	Compliance
FCC §15.215(f)(1)	Frequency Selection	Compliance
FCC §15.215(f)(2)	Occupied Bandwidth	Compliance
FCC §15.215(f)(3)	Frequency Stability	Compliance
FCC §15.215(g)	Emission Mask	Compliance
FCC §15.215(g)	Radiated Spurious emission	Compliance

3.2 Limit

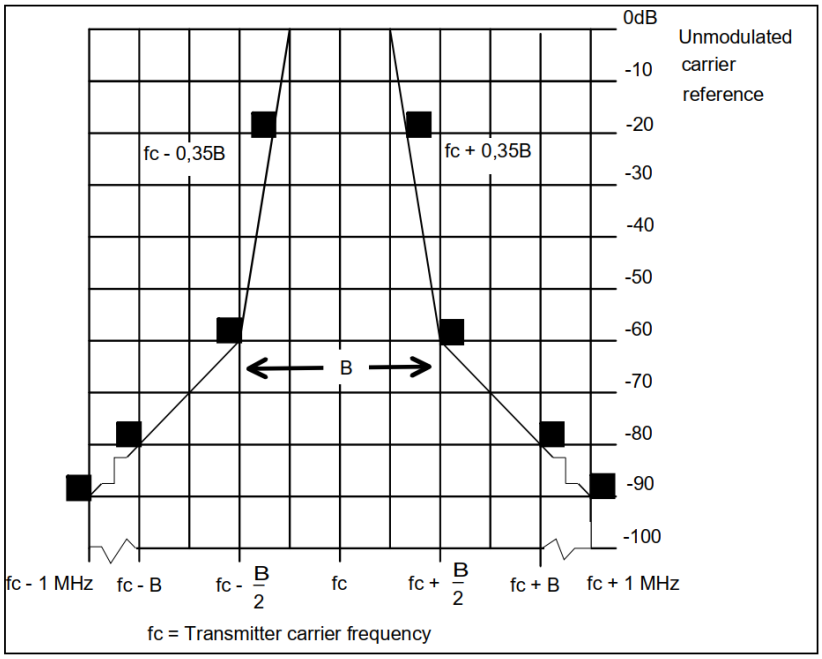
<table>
<tr><th>Test items</th><th>Limit</th></tr>
<tr><td>AC Line Conducted Emissions</td><td>See details §15.207 (a)</td></tr>
<tr><td>Maximum Output Power</td><td>In the bands allocated and assigned for broadcast television and in the 600 MHz service band: 50 mW EIRP
In the 600 MHz guard band and the 600 MHz duplex gap: 20 mW EIRP.</td></tr>
<tr><td>Occupied Bandwidth</td><td>The operating bandwidth shall not exceed 200 kHz.</td></tr>
<tr><td>Frequency Stability</td><td>The frequency tolerance of the carrier signal shall be maintained within ±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.</td></tr>
<tr><td>Emission Mask</td><td>Emissions within the band from one megahertz below to one megahertz above the carrier frequency shall comply with the emission mask in § 8.3 of ETSI EN 300 422-1 V1.4.2 (2011-08)
 

Figure 3: Spectrum mask for analogue systems in all bands</td></tr>
<tr><td>Radiated Spurious emission</td><td>Emissions outside of this band shall comply with the limits specified in section 8.4 of ETSI EN 300 422-1 V1.4.2 (2011-08)
Table 3: Limits for spurious emissions
<table>
<tr><th>State</th><th colspan="3">Frequency</th></tr>
<tr><td></td><td>47 MHz to 74 MHz
87,5 MHz to 137 MHz
174 MHz to 230 MHz
470 MHz to 862 MHz</td><td>Other Frequencies below 1 000 MHz</td><td>Frequencies above 1 000 MHz</td></tr>
<tr><td>Operation</td><td>4 nW</td><td>250 nW</td><td>1 µW</td></tr>
<tr><td>Standby</td><td>2 nW</td><td>2 nW</td><td>20 nW</td></tr>
</table></td></tr>
</table>

3.3 AC Line Conducted Emissions Test Data

Test Date:	2024-03-22	Test By:	Lirou Li
Environment condition:	Temperature: 26.3°C; Relative Humidity:60%; ATM Pressure: 101.2kPa		

Conducted Emission Measurement

File :RWAQ202400250 Data :#1 Date: 2024/3/22 Time: 17:19:18

Limit: QP Phase: L1 Temperature: 26.3

Mode:transmittng Power: DC 5V Humidity: 60 %

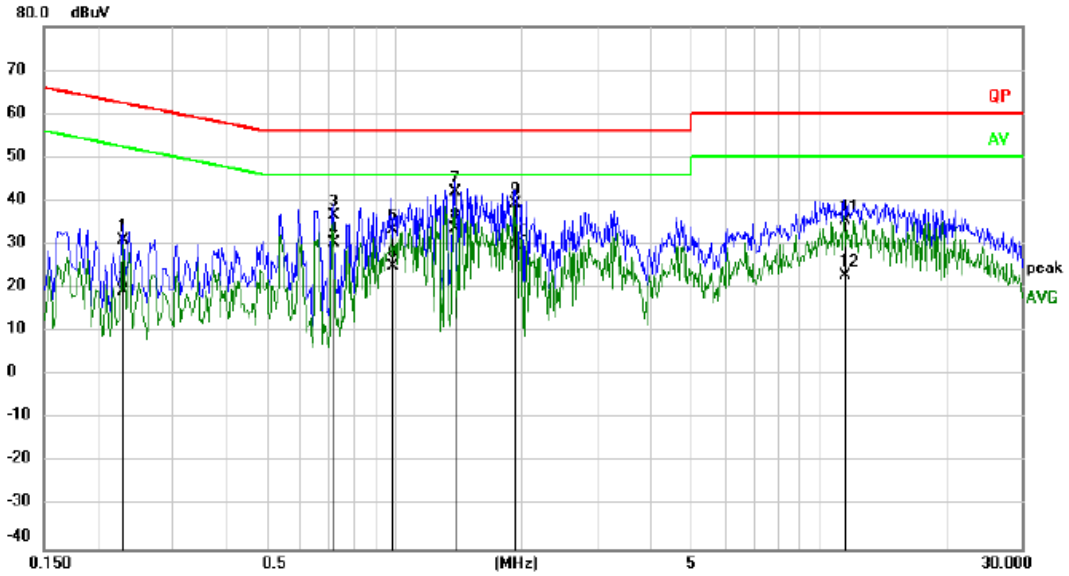
Note: Air Pressure: 1012 hpa

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over Limit		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1740	27.72	10.71	38.43	64.77	-26.34	QP	
2		0.1740	15.52	10.71	26.23	54.77	-28.54	AVG	
3		0.6700	24.25	10.85	35.10	56.00	-20.90	QP	
4		0.6700	15.01	10.85	25.86	46.00	-20.14	AVG	
5		1.5100	25.00	10.77	35.77	56.00	-20.23	QP	
6	*	1.5100	18.16	10.77	28.93	46.00	-17.07	AVG	
7		2.8860	20.72	10.77	31.49	56.00	-24.51	QP	
8		2.8860	14.76	10.77	25.53	46.00	-20.47	AVG	
9		11.5580	25.31	10.47	35.78	60.00	-24.22	QP	
10		11.5580	15.24	10.47	25.71	50.00	-24.29	AVG	
11		0.2300	22.67	10.64	33.31	62.45	-29.14	QP	
12		0.2300	10.07	10.64	20.71	52.45	-31.74	AVG	

*:Maximum data x:Over limit !:over margin Engineer Signature: Lirou

Conducted Emission Measurement

File :RWAQ202400250 Data :#2 Date: 2024/3/22 Time: 17:23:00



Limit: QP Phase: N Temperature: 26.3

Mode:transmitting Power: DC 5V Humidity: 60 %

Note: Air Pressure: 1012 hpa

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over Limit		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2300	20.36	10.45	30.81	62.45	-31.64	QP	
2		0.2300	8.66	10.45	19.11	52.45	-33.34	AVG	
3		0.7220	26.03	10.57	36.60	56.00	-19.40	QP	
4		0.7220	19.74	10.57	30.31	46.00	-15.69	AVG	
5		0.9860	22.70	10.66	33.36	56.00	-22.64	QP	
6		0.9860	14.33	10.66	24.99	46.00	-21.01	AVG	
7		1.3820	31.50	10.67	42.17	56.00	-13.83	QP	
8	*	1.3820	23.02	10.67	33.69	46.00	-12.31	AVG	
9		1.9220	28.60	10.69	39.29	56.00	-16.71	QP	
10		1.9220	18.97	10.69	29.66	46.00	-16.34	AVG	
11		11.4700	24.61	10.76	35.37	60.00	-24.63	QP	
12		11.4700	12.07	10.76	22.83	50.00	-27.17	AVG	

*:Maximum data x:Over limit !:over margin Engineer Signature: Lirou

Remark:

Measurement (dBuV)= Reading Level (dBuV) + Correct Factor(dB)

Correct Factor (dB)= LISN Voltage Division Factor (dB)+ Cable loss(dB)

Over Limit= Measurement – Limit

3.4 Radiated emission Test Data

Test Date:	2024-04-19~2024-04-24	Test By:	Luke Li
Environment condition:	Temperature: 22.4~24.9°C; Relative Humidity: 69~73%; ATM Pressure: 100.1~100.1kPa		

Frequency (MHz)	Receiver Reading (dBm)	Polar (H/V)	Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
535.3MHz						
119.352	-68.04	horizontal	-5.37	-73.41	-36.00	-37.41
181.086	-69.48	horizontal	-5.75	-75.23	-54.00	-21.23
220.093	-63.97	horizontal	-5.85	-69.82	-54.00	-15.82
255.356	-67.18	horizontal	-5.54	-72.72	-36.00	-36.72
439.380	-73.44	horizontal	-2.15	-75.59	-36.00	-39.59
583.470	-75.33	horizontal	0.68	-74.65	-54.00	-20.65
118.674	-70.95	vertical	0.81	-70.14	-36.00	-34.14
487.271	-73.39	vertical	2.69	-70.70	-54.00	-16.70
583.470	-74.77	vertical	3.16	-71.61	-54.00	-17.61
631.375	-76.20	vertical	3.86	-72.34	-54.00	-18.34
703.578	-76.05	vertical	5.02	-71.03	-36.00	-35.03
751.398	-76.77	vertical	6.56	-70.21	-36.00	-34.21
1070.600	-75.21	horizontal	29.60	-45.61	-30.00	-15.61
1605.900	-71.65	horizontal	31.96	-39.69	-30.00	-9.69
1070.600	-70.98	vertical	29.67	-41.31	-30.00	-11.31
1605.900	-67.70	vertical	32.58	-35.12	-30.00	-5.12
557.5MHz						
117.999	-70.15	horizontal	-5.43	-75.58	-54.00	-21.58
219.034	-66.90	horizontal	-5.87	-72.77	-54.00	-18.77
245.585	-67.24	horizontal	-5.70	-72.94	-36.00	-36.94
315.159	-75.31	horizontal	-4.18	-79.49	-36.00	-43.49
509.554	-76.44	horizontal	-0.88	-77.32	-54.00	-23.32
684.113	-78.21	horizontal	1.49	-76.72	-54.00	-22.72
118.207	-70.53	vertical	0.78	-69.75	-36.00	-33.75
226.951	-73.89	vertical	-3.81	-77.70	-54.00	-23.70
461.491	-74.52	vertical	1.69	-72.83	-36.00	-36.83
509.554	-72.69	vertical	3.17	-69.52	-54.00	-15.52
725.503	-75.32	vertical	5.74	-69.58	-36.00	-33.58
902.111	-77.43	vertical	9.15	-68.28	-36.00	-32.28

1115.000	-70.97	horizontal	30.54	-40.43	-30.00	-10.43
1672.500	-75.46	horizontal	32.41	-43.05	-30.00	-13.05
1115.000	-65.91	vertical	30.62	-35.29	-30.00	-5.29
1672.500	-71.95	vertical	32.76	-39.19	-30.00	-9.19
582.35MHz						
50.501	-77.38	horizontal	-3.20	-80.58	-54.00	-26.58
59.341	-77.23	horizontal	-3.34	-80.57	-54.00	-26.57
112.395	-74.77	horizontal	-5.66	-80.43	-54.00	-26.43
198.287	-68.84	horizontal	-5.95	-74.79	-54.00	-20.79
210.468	-66.48	horizontal	-5.91	-72.39	-54.00	-18.39
534.493	-76.93	horizontal	-0.41	-77.34	-54.00	-23.34
59.524	-70.62	vertical	-2.09	-72.71	-54.00	-18.71
98.847	-72.31	vertical	-0.88	-73.19	-54.00	-19.19
111.121	-71.50	vertical	0.22	-71.28	-54.00	-17.28
486.418	-74.59	vertical	2.66	-71.93	-54.00	-17.93
534.493	-75.01	vertical	3.11	-71.90	-54.00	-17.90
678.439	-75.01	vertical	4.61	-70.40	-54.00	-16.40
1164.700	-68.74	horizontal	30.02	-38.72	-30.00	-8.72
1747.050	-70.21	horizontal	32.80	-37.41	-30.00	-7.41
1164.700	-62.48	vertical	29.90	-32.58	-30.00	-2.58
1747.050	-67.18	vertical	32.91	-34.27	-30.00	-4.27

Note: Absolute Level =Reading + Factor

Factor contains substituted level, substituted cable loss, substituted antenna gain

Margin = Absolute Level - Limit

3.5 RF Conducted Test Data

Test Date:	2024-03-21	Test By:	Ryan Zhang
Environment condition:	Temperature: 25.6°C;RelativeHumidity:56%; ATM Pressure: 101.4kPa		

3.5.1 Maximum Output Power

Channel	Frequency [MHz]	Conducted Power [dBm]	Antenna Gain [dBi]	EIRP [dBm]	Limit [dBm]	Verdict
Low	535.3	-4.19	3	-1.19	17	Pass
Middle	557.5	-4.04	3	-1.04	17	Pass
High	582.35	-4.76	3	-1.76	17	Pass

3.5.2 Occupied Bandwidth& Emission Mask

Channel	Frequency [MHz]	OBW [kHz]	OBW Limit [kHz]	Emission Mask Result	Emission Mask Limit	Verdict
Low	535.3	90.449	200	Refer test plot	Refer test plot	Pass
Middle	557.5	90.449	200	Refer test plot	Refer test plot	Pass
High	582.35	90.449	200	Refer test plot	Refer test plot	Pass

3.5.3 Frequency Stability

Center Frequency: 535.3MHz					
Temperature (℃)	Power Supplied (V_{DC})	Measured frequency (MHz)	Frequency Error(%)	Limit (%)	Verdict
-20	3.7	535.3002415	0.000045	±0.005	Pass
-10		535.3006635	0.000124	±0.005	Pass
0		535.3003625	0.000068	±0.005	Pass
10		535.3004563	0.000085	±0.005	Pass
20		535.3005520	0.000103	±0.005	Pass
30		535.3006636	0.000124	±0.005	Pass
40		535.3004125	0.000077	±0.005	Pass
50		535.3002587	0.000048	±0.005	Pass
20	3.15	535.3004635	0.000087	±0.005	Pass
20	4.25	535.3001478	0.000028	±0.005	Pass

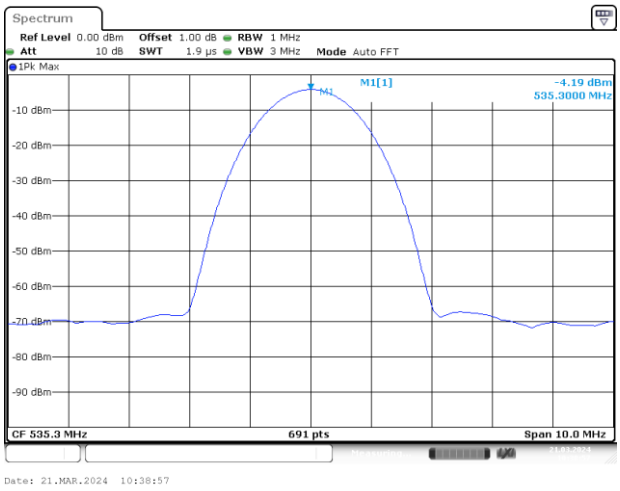
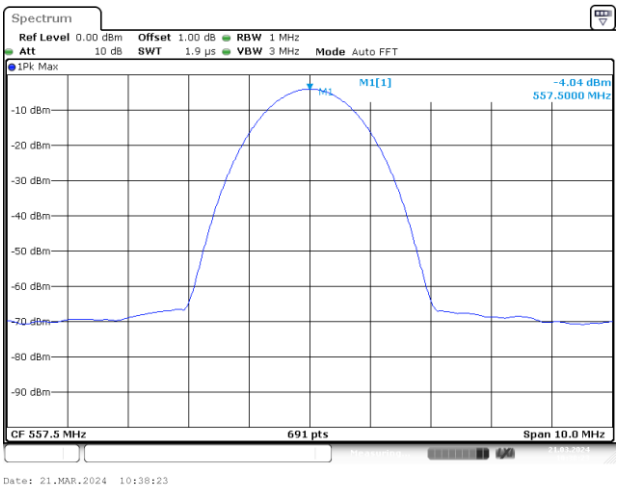
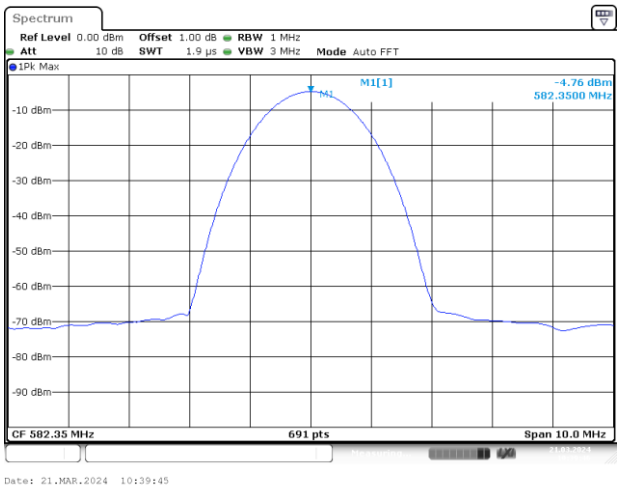
Center Frequency: 557.5MHz					
Temperature (℃)	**Power Supplied (V_{DC})**	**Measured frequency (MHz)**	**Frequency Error(%)**	**Limit (%)**	**Verdict**
-20	3.7	557.5005632	0.000101	±0.005	Pass
-10		557.5007456	0.000134	±0.005	Pass
0		557.5003625	0.000065	±0.005	Pass
10		557.5004561	0.000082	±0.005	Pass
20		557.5006524	0.000117	±0.005	Pass
30		557.5005516	0.000099	±0.005	Pass
40		557.5006312	0.000113	±0.005	Pass
50		557.5007413	0.000133	±0.005	Pass
20	3.15	557.5008805	0.000158	±0.005	Pass
20	4.25	557.5006645	0.000119	±0.005	Pass

Center Frequency: 582.35MHz					
Temperature (℃)	**Power Supplied (V_{DC})**	**Measured frequency (MHz)**	**Frequency Error(%)**	**Limit (%)**	**Verdict**
-20	3.7	582.3504461	0.0000.77	±0.005	Pass
-10		582.3505536	0.000095	±0.005	Pass
0		582.3504735	0.000081	±0.005	Pass
10		582.3503658	0.000063	±0.005	Pass
20		582.3501425	0.000024	±0.005	Pass
30		582.3507756	0.000133	±0.005	Pass
40		582.3508364	0.000144	±0.005	Pass
50		582.3502759	0.000047	±0.005	Pass
20	3.15	582.3509521	0.000163	±0.005	Pass
20	4.25	582.3506358	0.000109	±0.005	Pass

Note: Frequency Error = (Measured frequency - Center Frequency)/ Center Frequency*100%

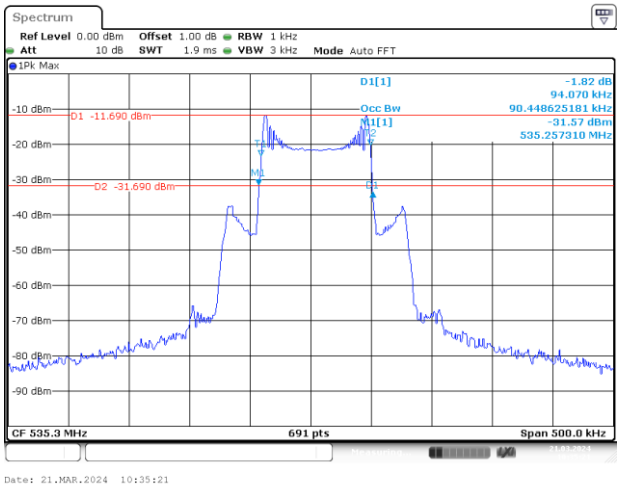
Test Plots:

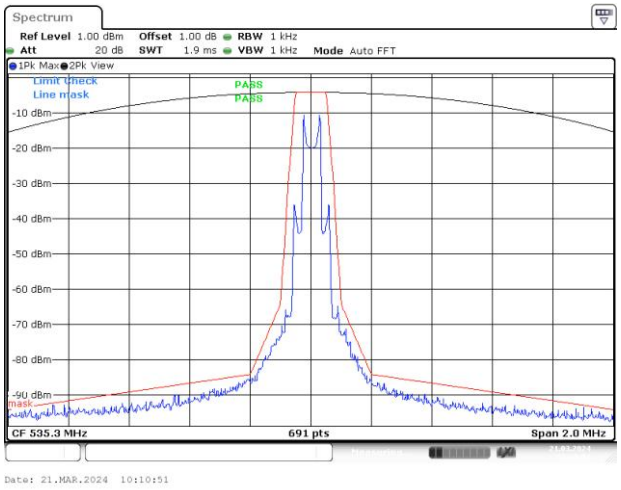
Maximum Output Power

Lowest channel	Middle channel
	
High channel	**/**
	/

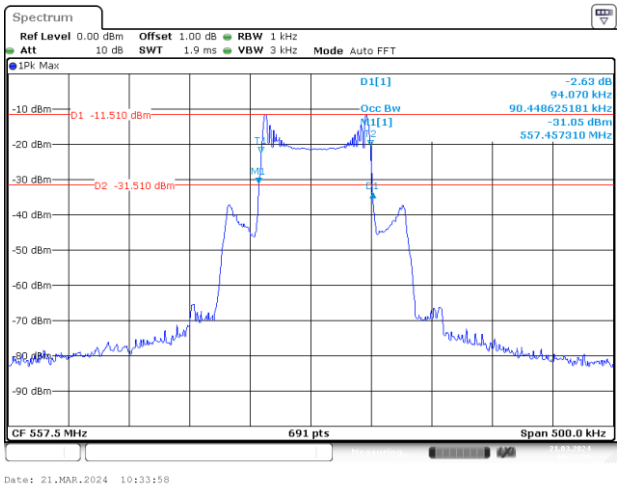
Occupied Bandwidth& Emission Mask

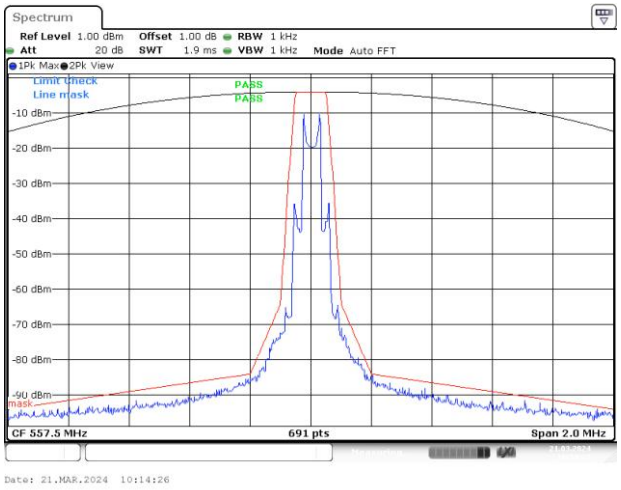
Lowest channel



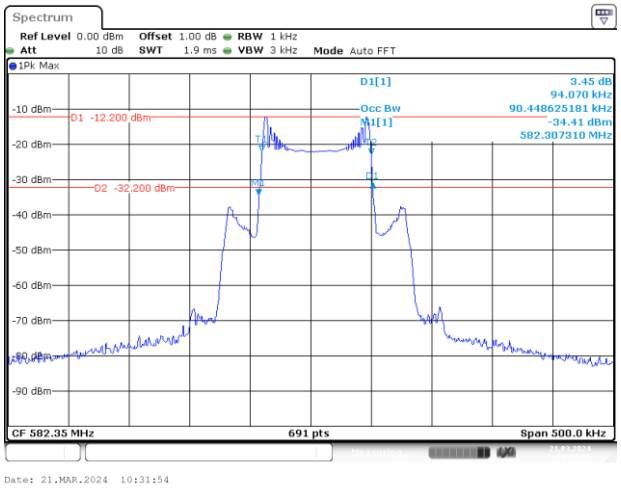


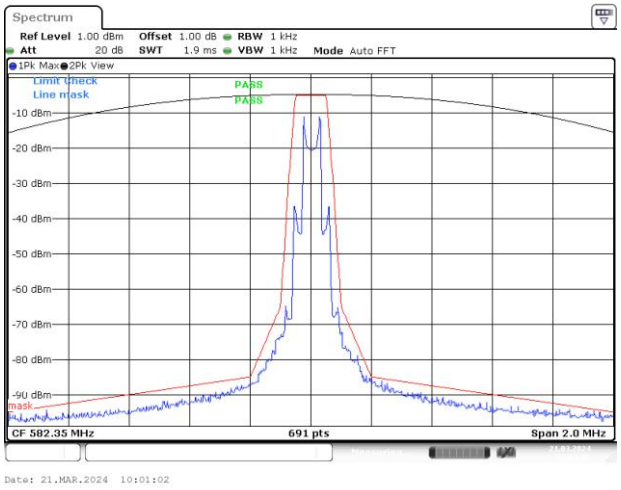
Middle channel





High channel





4 Test Setup Photo

Please refer to the attachment RWAQ202400250 Test Setup photo.

5 E.U.T Photo

Please refer to the attachment RWAQ202400250 External photo and RWAQ202400250 Internal photo.

---End of Report---