TEST REPORT

Application No.:	FYCR2204000056AT
Applicant:	Voxx Accessories Corp.
Address of Applicant:	3502 Woodview Trace Suite 220 Indianapolis 46268 United States
Manufacturer:	Voxx Accessories Corp.
Address of Manufacturer:	3502 Woodview Trace Suite 220 Indianapolis 46268 United States
Factory:	JingWah Ballet Digital Technology Co., Ltd.
Address of Factory:	3rd Floor, Building A1, Iron Tower Industrial Park, Hedi Road, Shang Village, Gongming Town, Guangming New District, Shenzhen, China
Equipment Under Test (EUT):	
EUT Name:	Freestyle Wireless Karaoke System
Model No.:	SPKAW10M2
Trade Mark:	Singsation
FCC ID:	VIXSPKAW10M2
Standard(s) :	47 CFR Part 15, Subpart C 15. 236
Date of Receipt:	2022-04-06
Date of Test:	2022-04-15 to 2022-04-30
Date of Issue:	2022-05-06
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Kidd Yang
EMC Laboratory Manager

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		2022-05-06		Original

Authorized for issue by:				
		Tree Zhan **Tree Zhan/Project Engineer**		
		Winkey Wang **Winkey Wang/Reviewer**		

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2 Test Summary

Radio Spectrum Technical Requirement				
Item	**Standard**	**Method**	**Requirement**	**Result**
Antenna Requirement	47 CFR Part 15, Subpart C 15. 236	N/A	47 CFR Part 15, Subpart C 15.203	Pass

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.236	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
RF Output Power		ANSI C63.10 (2013) Section 11.9.2	47 CFR Part 15, Subpart C 15.236(d)(1)	Pass
Occupied Bandwidth		ANSI C63.10 (2013) Section 6.9	47 CFR Part 15, Subpart C 15.236f(2)	Pass
Frequency Tolerance		ANSI C63.10 (2013) Section 6.8	47 CFR Part 15, Subpart C 15.236f(3)	Pass
Necessary Bandwidth		EN 300 422-1 V1.4.2 8.3.2	47 CFR Part 15, Subpart C 15.236(g)	Pass
Radiated Spurious Emissions Below 1GHz		EN 300 422-1 V1.4.2 8.4.2	47 CFR Part 15, Subpart C 15.247(d)	Pass
Radiated Spurious Emissions Above 1GHz		EN 300 422-1 V1.4.2 8.4.2	47 CFR Part 15, Subpart C 15.236(g)	Pass

3 Contents

4 General Information

4.1 Details of E.U.T.

Power Supply:	DC 3.7V/1200mAh Lithium-ion rechargeable battery which can be charged from USB port.
Cable(s):	Micphone USB charging cable 36cm unshielded
Operation Frequency:	658.00MHz
Modulation Type:	FM Modulation
Number of Channels:	1
Antenna Type:	Integral Antenna
Antenna Gain:	0dBi

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Adapter	Apple	A2167	REF. No.SEA01A02

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions at AC Power Line (150kHz-30MHz)	± 2.1 dB (9kHz to 30MHz)
RF Output Power	± 0.8dB
Occupied Bandwidth	± 0.3%
Frequency Tolerance	± 0.4dB
Necessary Bandwidth	± 2.7dB
Radiated Spurious Emissions Below 1GHz	± 2.7dB
Radiated Spurious Emissions Above 1GHz	± 4.4dB (Above 1GHz)

4.4 Test Location

All tests were performed at:

Compliance Certification Services（Kunshan）Inc. Shenzhen branch.

Fuyong lab. Xinlong TechnoPark,Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China

Tel: +86 755 8866 3988 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA (Certificate No. 6606.01)

Compliance Certification Services（Kunshan）Inc. Shenzhen branch is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6606.01.

• FCC –Designation Number: CN1322

Compliance Certification Services（Kunshan）Inc. Shenzhen branch has been recognized as an accredited testing laboratory.

Designation Number: CN1322. Test Firm Registration Number: 718073

• Innovation, Science and Economic Development Canada

Compliance Certification Services（Kunshan）Inc. Shenzhen branch has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0129.

IC#: 28189.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

Conducted Emissions at AC Power Line (150kHz-30MHz)					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Shielding Room	CRT	N/A	SEM001-14	2021/7/13	2024/7/12
EMI Test Receiver(9kHz-3GHz)	Rohde & Schwarz	ESCI	SEM004-01	2021/7/13	2022/7/12
Two-Line V-Network(9kHz-30MHz)	Rohde & Schwarz	ENV216	SEM007-16	2021/7/13	2022/7/12
Two-Line V-Network(9kHz-30MHz)	Rohde & Schwarz	ESH3-Z5	SEM007-22	2021/7/13	2022/7/12

RF Output Power					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2021/7/13	2022/7/12
MXA Signal Analyzer(10Hz-26.5GHz)	Agilent	N9020A	SEM004-20	2021/7/13	2022/7/12
Programmable DC Source	Chroma	62024P-80-60	SEM011-09	2021/7/13	2022/7/12
Attenuator(18GHz, 20dB, 2W)	Huber+Suhner	6620_SMA-50-1	SEM021-09	2021/7/13	2022/7/12

Occupied Bandwidth					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2021/7/13	2022/7/12
MXA Signal Analyzer(10Hz-26.5GHz)	Agilent	N9020A	SEM004-20	2021/7/13	2022/7/12
Programmable DC Source	Chroma	62024P-80-60	SEM011-09	2021/7/13	2022/7/12
Attenuator(18GHz, 20dB, 2W)	Huber+Suhner	6620_SMA-50-1	SEM021-09	2021/7/13	2022/7/12

Frequency Tolerance					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2021/7/13	2022/7/12
MXA Signal	Agilent	N9020A	SEM004-20	2021/7/13	2022/7/12

Analyzer(10Hz-26.5GHz)					
Programmable DC Source	Chroma	62024P-80-60	SEM011-09	2021/7/13	2022/7/12
Attenuator(18GHz, 20dB, 2W)	Huber+Suhner	6620_SMA-50-1	SEM021-09	2021/7/13	2022/7/12

Necessary Bandwidth					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2021/7/13	2022/7/12
MXA Signal Analyzer(10Hz-26.5GHz)	Agilent	N9020A	SEM004-20	2021/7/13	2022/7/12
Programmable DC Source	Chroma	62024P-80-60	SEM011-09	2021/7/13	2022/7/12
Attenuator(18GHz, 20dB, 2W)	Huber+Suhner	6620_SMA-50-1	SEM021-09	2021/7/13	2022/7/12

Radiated Spurious Emissions Below 1GHz					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Trilog-Broadband Antenna(25MHz-2GHz)	Schwarzbeck	VULB9168	SEM003-33	2021/9/25	2024/9/24
Biconical Antenna(150MHz-1GHz)	Schwarzbeck	VUBA9117	SEM003-35	2021/12/26	2024/12/25
Loop Antenna(9kHz-30MHz)	ETS-LINDGREN	6502	SEM003-36	2021/9/26	2024/9/25
MXE EMI receiver(20Hz-8.4GHz)	Agilent	N9038A	SEM004-05	2021/7/13	2022/7/12
Pre-amplifier (0.1-1.3GHz)	HP	8447D	SEM005-02	2021/7/13	2022/7/12
Broad-Band Horn Antenna (15-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2021/7/11	2024/7/10
Broad-Band Horn Antenna (1-18GHz)	Schwarzbeck	BBHA 9120D	SEM003-32	2021/9/26	2024/9/25
Double-ridged waveguide horn (1-18GHz)	ETS-LINDGREN	3117	SEM003-34	2021/9/25	2024/9/24
Spectrum Analyzer(20Hz-43GHz)	Rohde & Schwarz	101288	SEM004-08	2021/7/13	2022/7/12
Low Noise Amplifier(100MHz-18GHz)	CLAVIIO	BDLNA-0118-352810	SEM005-05	2021/7/13	2022/7/12
Pre-amplifier(26GHz-	Compliance	PAP-2640-50	SEM005-08	2021/7/13	2022/7/12

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40GHz)	Directions Systems Inc.				
Pre-amplifier(18GHz-26GHz)	Rohde & Schwarz	CH14-H052	SEM005-17	2021/7/13	2022/7/12

Radiated Spurious Emissions Above 1GHz					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Trilog-Broadband Antenna(25MHz-2GHz)	Schwarzbeck	VULB9168	SEM003-33	2021/9/25	2024/9/24
MXE EMI receiver(20Hz-8.4GHz)	Agilent	N9038A	SEM004-05	2021/7/13	2022/7/12
Pre-amplifier (0.1-1.3GHz)	HP	8447D	SEM005-02	2021/7/13	2022/7/12
Broad-Band Horn Antenna (15-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2021/7/11	2024/7/10
Broad-Band Horn Antenna (1-18GHz)	Schwarzbeck	BBHA 9120D	SEM003-32	2021/9/26	2024/9/25
Double-ridged waveguide horn (1-18GHz)	ETS-LINDGREN	3117	SEM003-34	2021/9/25	2024/9/24
Spectrum Analyzer(20Hz-43GHz)	Rohde & Schwarz	101288	SEM004-08	2021/7/13	2022/7/12
Low Noise Amplifier(100MHz-18GHz)	CLAVIIO	BDLNA-0118-352810	SEM005-05	2021/7/13	2022/7/12
Pre-amplifier(26GHz-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2021/7/13	2022/7/12
Pre-amplifier(18GHz-26GHz)	Rohde & Schwarz	CH14-H052	SEM005-17	2021/7/13	2022/7/12

General used equipment					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Humidity/ Temperature Indicator	Mingle	TH607	SEM002-22	2021-07-13	2022-07-12
Humidity/ Temperature Indicator	Mingle	TH607	SEM002-23	2021-07-13	2022-07-12
Barometer	DUMAI	DYM3	SEM002-24	2021-07-13	2022-07-12

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6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

6.1.2 Conclusion

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 antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 0dBi.

Antenna location: Refer to Internal photos

7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207
Test Method: ANSI C63.10 (2013) Section 6.2

Limit:

Frequency of emission(MHz)	Conducted limit(dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency.		
Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz		

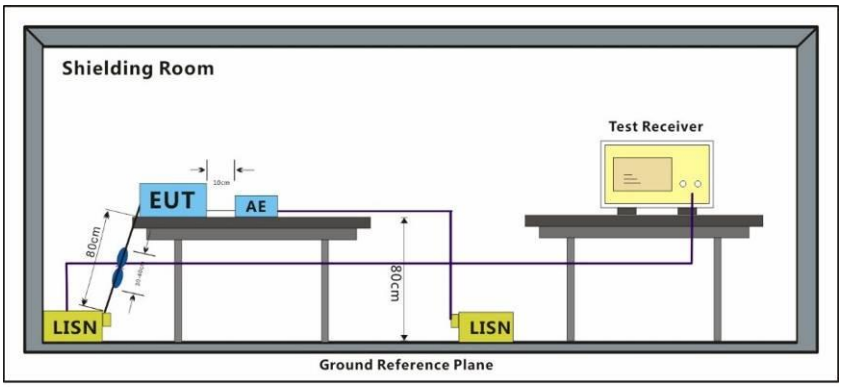
7.1.1 E.U.T. Operation

Operating Environment:
Temperature: 22.5 °C Humidity: 49.2 % RH Atmospheric Pressure: 1015 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	06	Charge +TX mode_Keep the EUT charging and in continuously transmitting mode.

7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

1) The mains terminal disturbance voltage test was conducted in a shielded room.

2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.

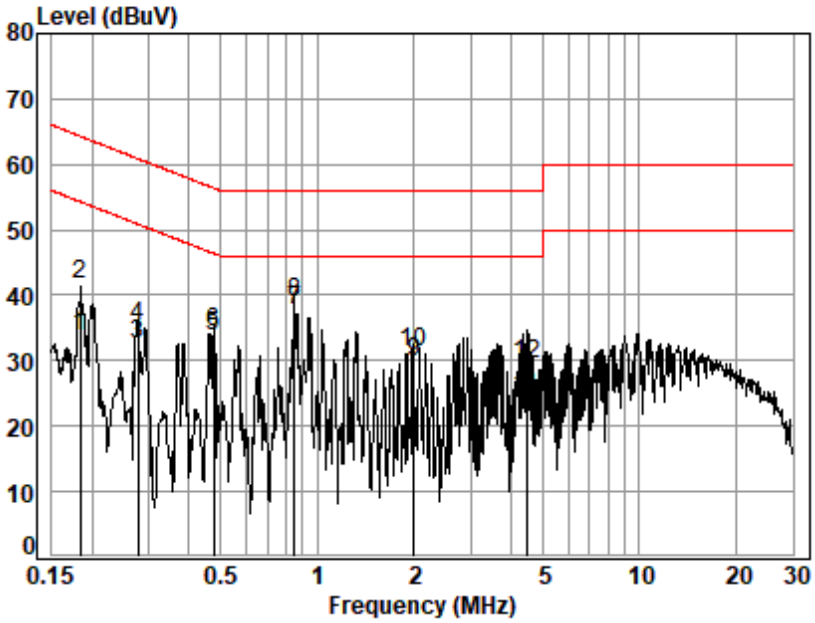
3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.

4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.

5) 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.

Remark: Level=Read Level+ Cable Loss+ LISN Factor

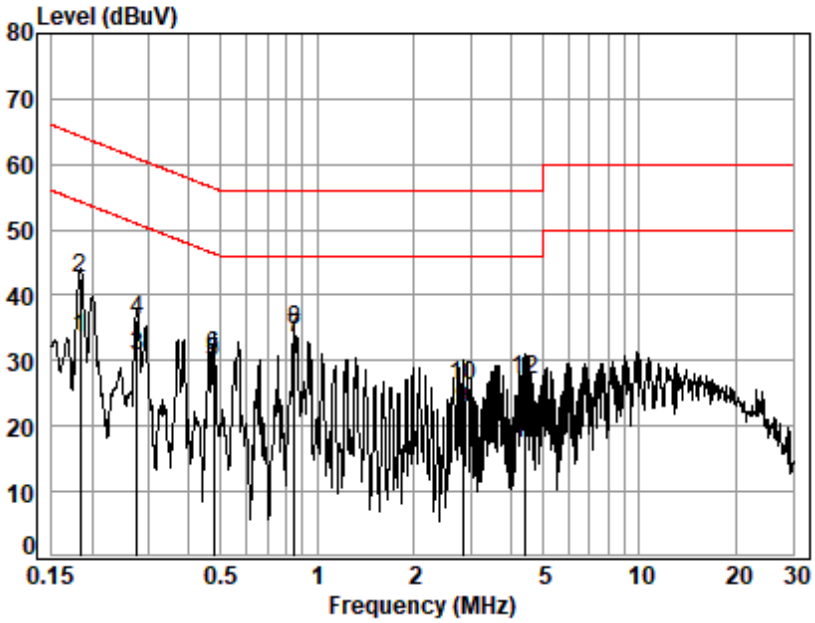
Test Mode: 06; Line: Live line



Site : Shielding Room
Condition: Line
Job No. : 00056AT
Test mode: 06

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.18	0.10	0.16	33.52	33.78	54.28	-20.50	Average
2	0.18	0.10	0.16	41.53	41.79	64.28	-22.49	QP
3	0.28	0.08	0.15	32.17	32.40	50.90	-18.50	Average
4	0.28	0.08	0.15	35.19	35.42	60.90	-25.48	QP
5	0.48	0.09	0.16	33.59	33.84	46.36	-12.52	Average
6	0.48	0.09	0.16	34.11	34.36	56.36	-22.00	QP
7	0.85	0.07	0.18	37.40	37.65	46.00	-8.35	Average
8	0.85	0.07	0.18	38.58	38.83	56.00	-17.17	QP
9	1.99	0.02	0.18	29.74	29.94	46.00	-16.06	Average
10	1.99	0.02	0.18	31.06	31.26	56.00	-24.74	QP
11	4.45	0.07	0.16	24.06	24.29	46.00	-21.71	Average
12	4.45	0.07	0.16	29.27	29.50	56.00	-26.50	QP

Test Mode: 06; Line: Neutral Line



Site : Shielding Room
Condition: Neutral
Job No. : 00056AT
Test mode: 06

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.18	0.10	0.18	33.20	33.48	54.28	-20.80	Average
2	0.18	0.10	0.18	42.35	42.63	64.28	-21.65	QP
3	0.28	0.08	0.18	30.61	30.87	50.94	-20.07	Average
4	0.28	0.08	0.18	35.83	36.09	60.94	-24.85	QP
5	0.48	0.09	0.19	29.40	29.68	46.41	-16.73	Average
6	0.48	0.09	0.19	30.31	30.59	56.41	-25.82	QP
7	0.85	0.07	0.06	33.44	33.57	46.00	-12.43	Average
8	0.85	0.07	0.06	34.49	34.62	56.00	-21.38	QP
9	2.84	0.05	0.08	22.47	22.60	46.00	-23.40	Average
10	2.84	0.05	0.08	25.88	26.01	56.00	-29.99	QP
11	4.43	0.07	0.10	17.06	17.23	46.00	-28.77	Average
12	4.43	0.07	0.10	26.92	27.09	56.00	-28.91	QP

7.2 RF Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.236(d)(1)
Test Method: ANSI C63.10 (2013) Section 11.9.2

Limit: 20mW EIRP

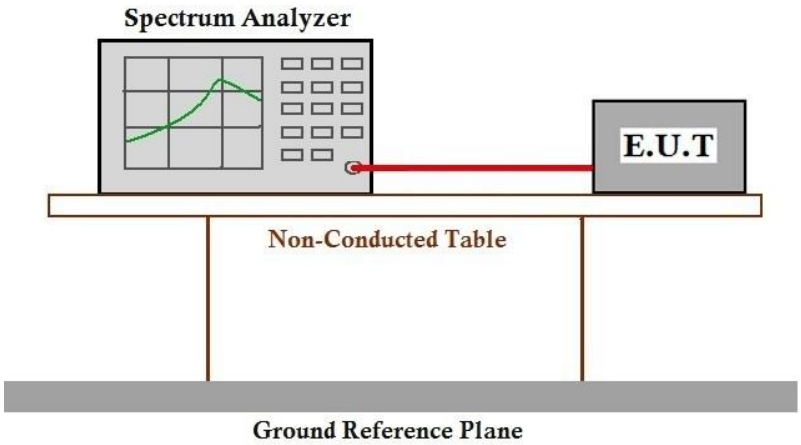
7.2.1 E.U.T. Operation

Operating Environment:
Temperature: 25.9 °C Humidity: 48.6 % RH Atmospheric Pressure: 1015 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_Keep the EUT in continuously transmitting mode.

7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.3 Occupied Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.236f(2)
Test Method: ANSI C63.10 (2013) Section 6.9

Limit: <200 kHz

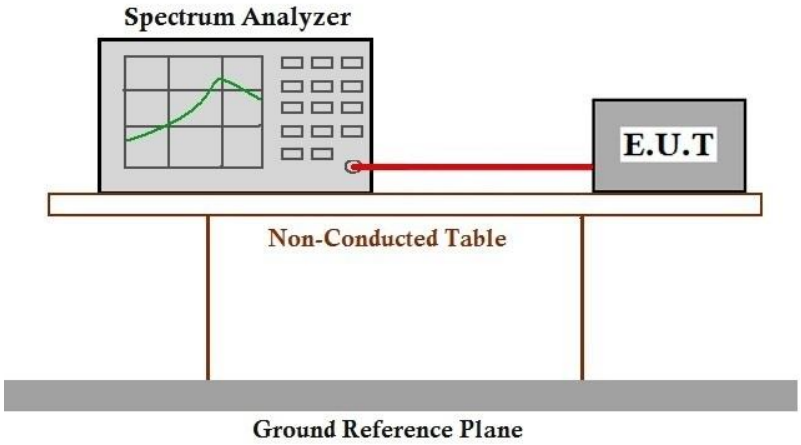
7.3.1 E.U.T. Operation

Operating Environment:
Temperature: 25.9 °C Humidity: 48.6 % RH Atmospheric Pressure: 1015 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_Keep the EUT in continuously transmitting mode.

7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.4 Frequency Tolerance

Test Requirement 47 CFR Part 15, Subpart C 15.236f(3)

Test Method: ANSI C63.10 (2013) Section 6.8

Limit:

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.

7.4.1 E.U.T. Operation

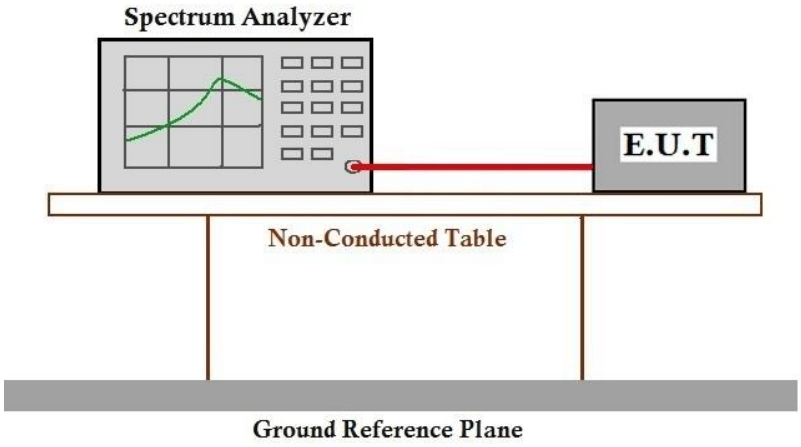
Operating Environment:

Temperature: 25.9 °C Humidity: 48.6 % RH Atmospheric Pressure: 1015 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_Keep the EUT in continuously transmitting mode.

7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

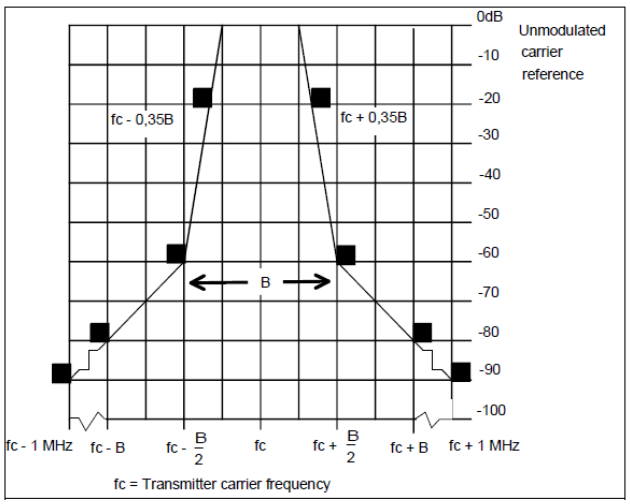
Please Refer to Appendix for Details

7.5 Necessary Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.236(g)

Test Method: EN 300 422-1 V1.4.2 8.3.2

Limit:



7.5.1 E.U.T. Operation

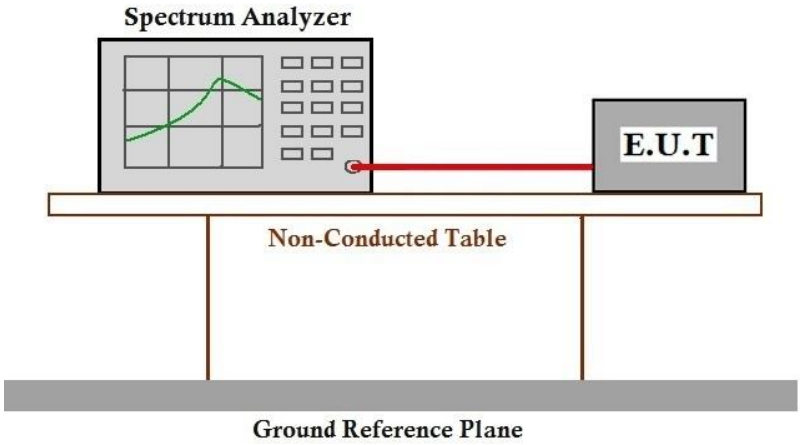
Operating Environment:

Temperature: 25.9 °C Humidity: 48.6 % RH Atmospheric Pressure: 1015 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_Keep the EUT in continuously transmitting mode.

7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.6 Radiated Spurious Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)

Test Method: EN 300 422-1 V1.4.2 8.4.2

Limit:

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

7.6.1 E.U.T. Operation

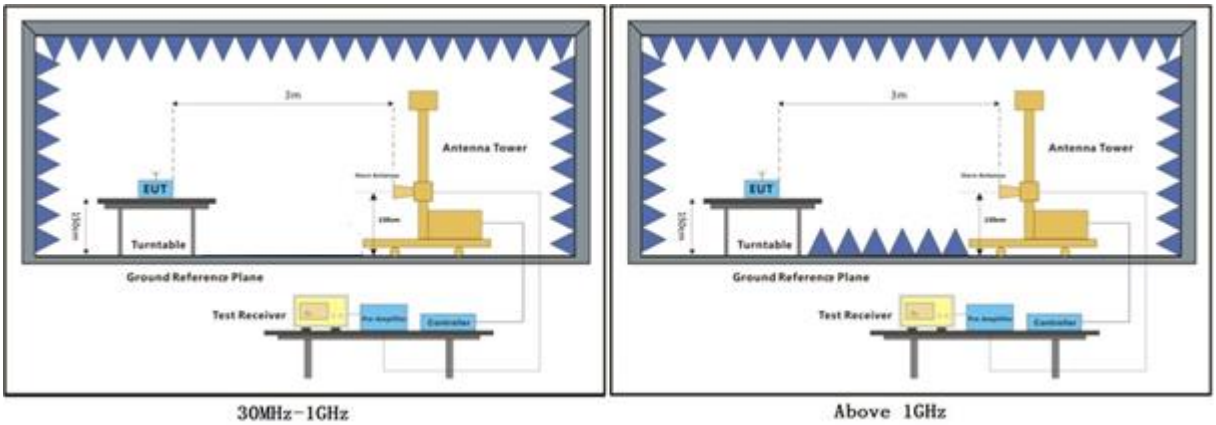
Operating Environment:

Temperature: 25.9 °C Humidity: 48.6 % RH Atmospheric Pressure: 1015 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Pre-scan	04	TX mode_Keep the EUT in continuously transmitting mode.
Final test	06	Charge +TX mode_Keep the EUT charging and in continuously transmitting mode.

7.6.3 Test Setup Diagram



30MHz-1GHz Above 1GHz

7.6.4 Measurement Procedure and Data

a.The technique used to find the Spurious Emissions of the transmitter was a pre-calibration method which is measure the path loss from the measurement antenna to the substitution antenna and subtract this from the signal generator level to reach the measurement result. The method was performed to determine the actual ERP/EIRP emission levels of the EUT.

b. For below 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

d. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

e. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

f. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

g. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

h. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or RMS average method as specified and then reported in a data sheet.

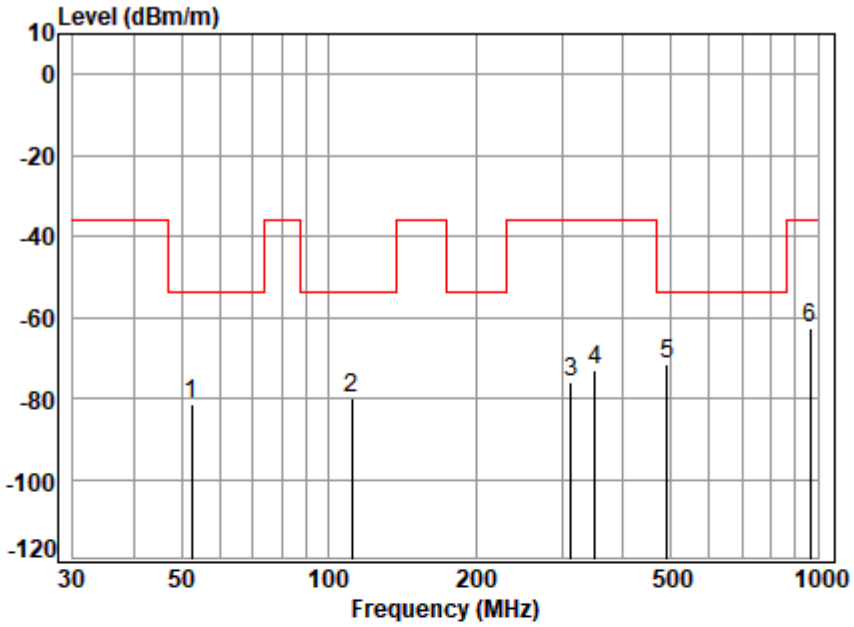
i. Test the EUT in the lowest channel, the middle channel, the Highest channel.

j. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

k. Repeat above procedures until all frequencies measured was complete.

Below 1GHz

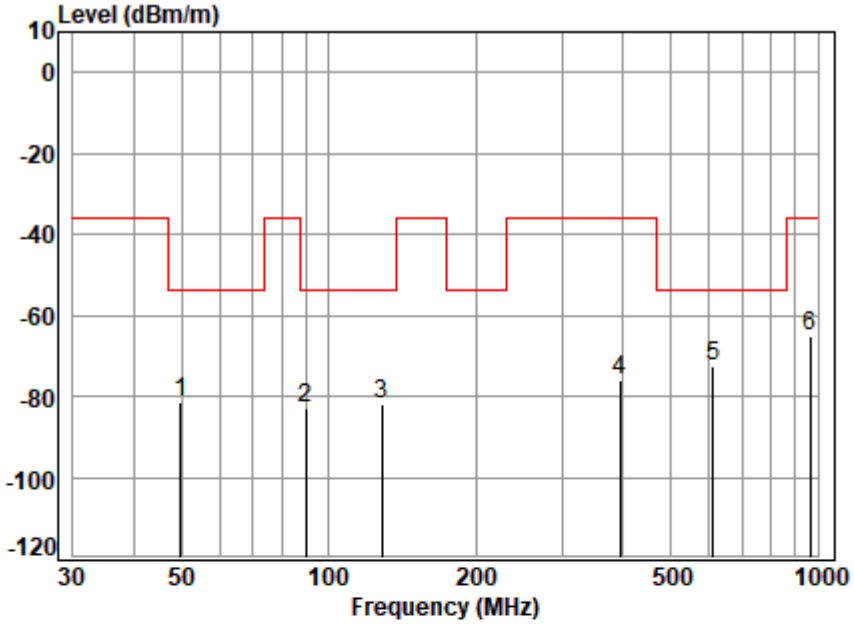
Test Mode: 06; Polarity: Horizontal



Site : chamber
Condition: 3m HORIZONTAL
Job No : 00055AT/00056AT
Mode : 06

		Freq	Read Level	Level	Limit Line	Over Limit	Pol/Phase
		MHz	dBm	dBm/m	dBm/m	dB	
1		52.3913	-74.25	-81.64	-54.00	-27.64	HORIZONTAL
2		111.7380	-70.64	-79.97	-54.00	-25.97	HORIZONTAL
3		312.1794	-70.31	-75.91	-36.00	-39.91	HORIZONTAL
4		350.4768	-68.51	-72.84	-36.00	-36.84	HORIZONTAL
5	P	490.7447	-69.65	-71.60	-54.00	-17.60	HORIZONTAL
6		965.5421	-68.47	-62.47	-36.00	-26.47	HORIZONTAL

Test Mode: 06; Polarity: Vertical

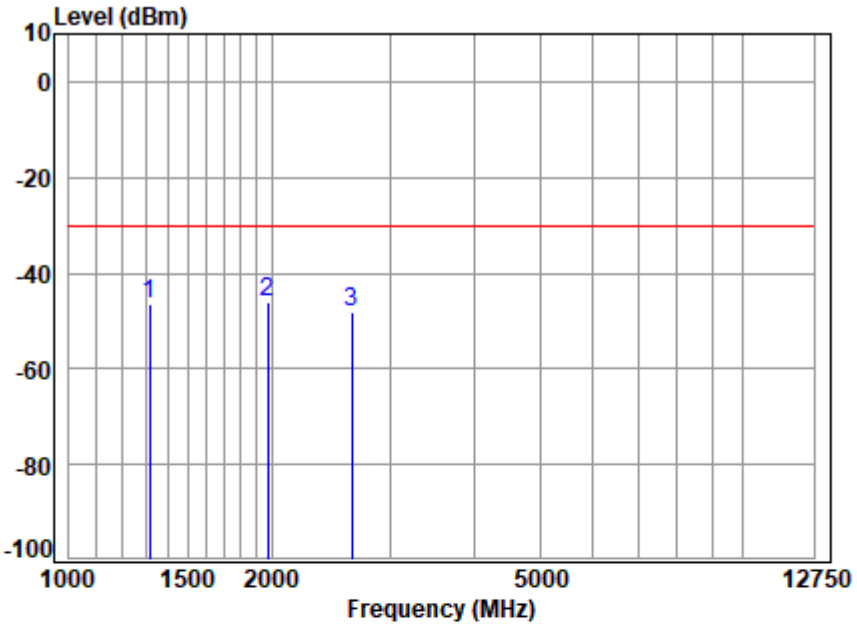


Site : chamber
Condition: 3m VERTICAL
Job No : 00055AT/00056AT
Mode : 06

	Freq	Read Level	Level	Limit Line	Over Limit	Pol/Phase
	MHz	dBm	dBm/m	dBm/m	dB	
1	49.7068	-74.26	-81.58	-54.00	-27.58	VERTICAL
2	89.9047	-72.05	-82.94	-54.00	-28.94	VERTICAL
3	128.5630	-73.98	-82.09	-54.00	-28.09	VERTICAL
4	394.8545	-72.57	-75.90	-36.00	-39.90	VERTICAL
5 P	609.9217	-73.70	-72.78	-54.00	-18.78	VERTICAL
6	965.5421	-71.25	-65.25	-36.00	-29.25	VERTICAL

Above 1GHz

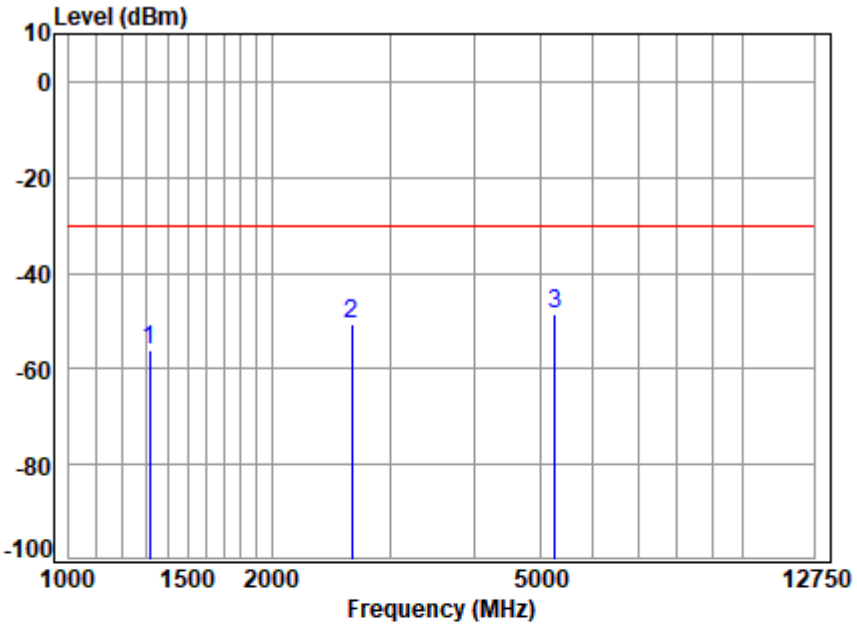
Test Mode: 06; Polarity: Horizontal



Condition: 3m HORIZONTAL
Job No: 00055AT/00056AT
Test mode: 06
Note: 658M

Marker	Freq. MHz	Level dBm	Limit dBm	Over Limit dB
1	1316.42	-46.56	-30.00	-16.56
2	1973.20	-46.18	-30.00	-16.18
3	2630.84	-48.19	-30.00	-18.19

Test Mode: 06; Polarity: Vertical



Condition: 3m VERTICAL
Job No: 00055AT/00056AT
Test mode: 06
Note: 658M

Marker	Freq. MHz	Level dBm	Limit dBm	Over Limit dB
1	1316.42	-56.08	-30.00	-26.08
2	2630.84	-50.78	-30.00	-20.78
3	5257.66	-48.44	-30.00	-18.44

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for FYCR220400056AT-M2

9 EUT Constructional Details (EUT Photos)

Refer to Appendix – External and Internal Photos for FYCR220400056AT-M2

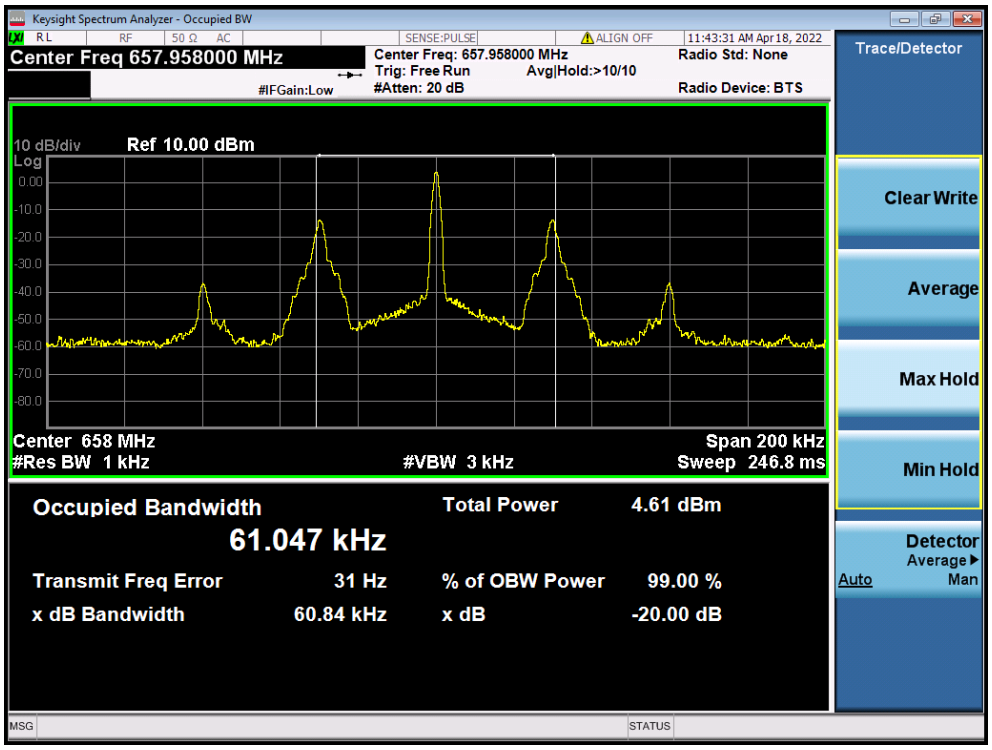
10 Appendix

1. Occupied Bandwidth

1.1 Test Result

Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Bandwidth		Verdict
				Test Result (KHz)	Limits (KHz)	
Tx	658.000	SISO	1	61.047	<200	PASS

2.2 Test Graph – 99% Bandwidth

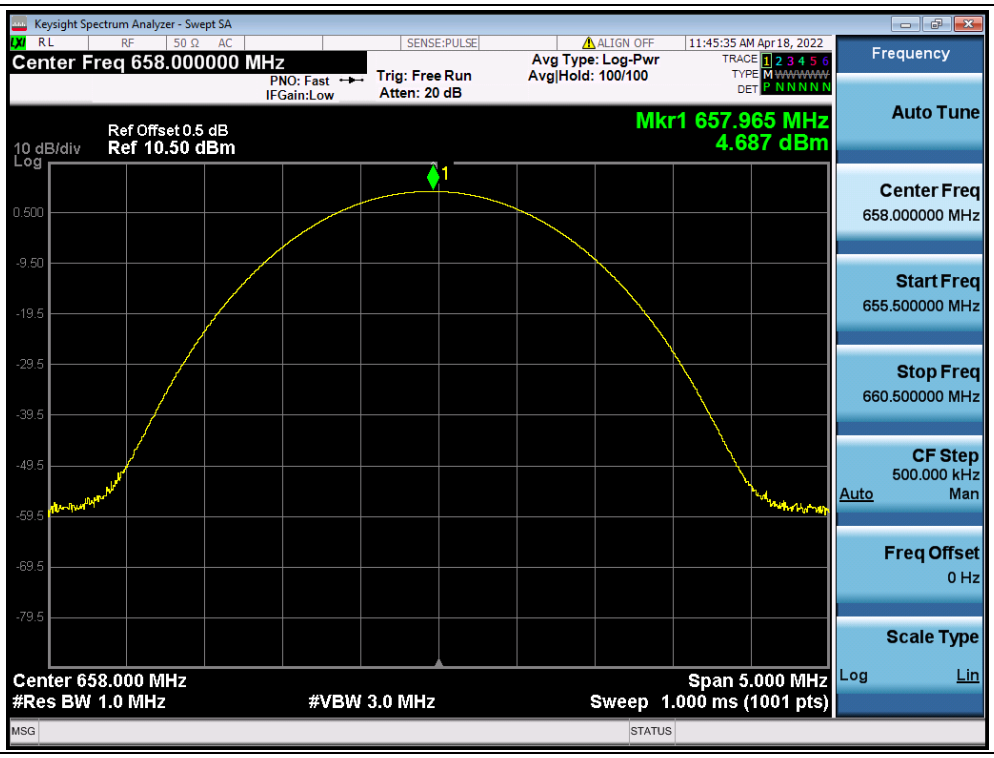


2. RF Output Power

2.1 Test Result

Test Mode	Frequency (MHz)	Tx Type	Measured Peak Output Power (dBm)	Measured Peak Output Power (mW)	Limits (mW)	Verdict
			Ant 1			
Tx	658.000	SISO	4.687	2.94	20.0	PASS

2.2 Test Graph



3. Frequency Tolerance

3.1 Test Result

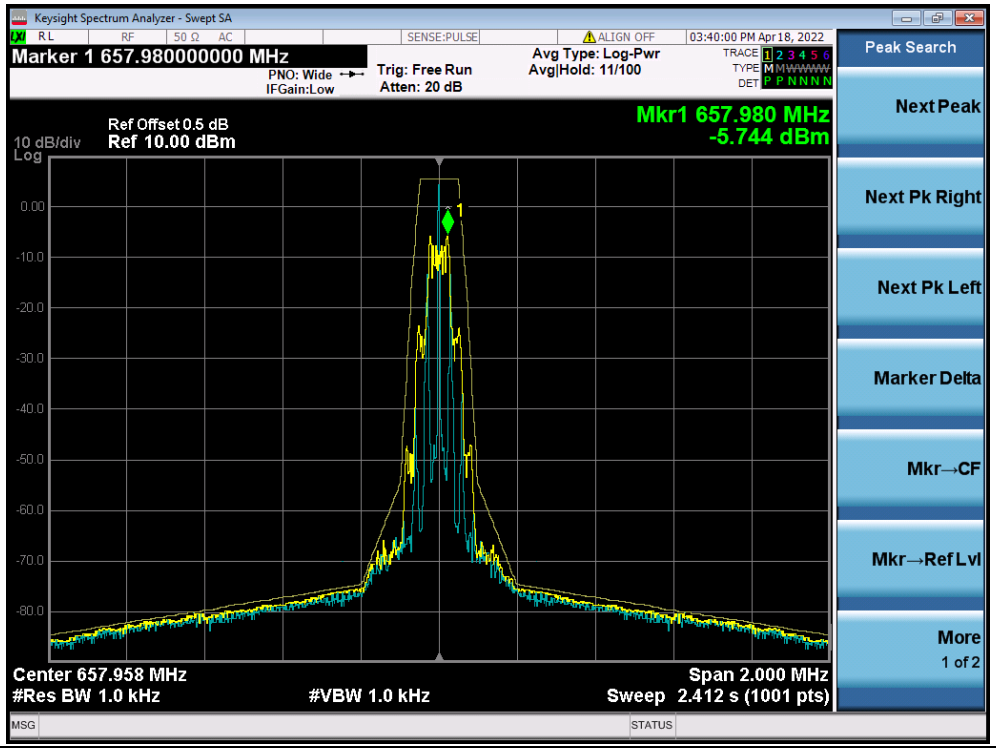
Voltage (%)	Power (VDC)	Temp (℃)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Deviation (%)	Limit (%)	Result
115%	4.255	20	658.000	657.988	-0.002	±0.005	PASS
85%	3.145	20	658.000	657.986	-0.002	±0.005	PASS
100%	3.7	-20	658.000	657.982	-0.003	±0.005	PASS
		-10	658.000	657.981	-0.003	±0.005	PASS
		-0	658.000	657.990	-0.002	±0.005	PASS
		10	658.000	658.014	0.002	±0.005	PASS
		20	658.000	658.018	0.003	±0.005	PASS
		30	658.000	658.016	0.002	±0.005	PASS
		40	658.000	658.024	0.004	±0.005	PASS
		50	658.000	658.026	0.004	±0.005	PASS

4. Necessary Bandwidth

4.1 Test Result

Test Mode	Frequency (MHz)	TX Type	ANT No.	Test Result	Verdict
Tx	658.000	SISO	1	Refer to test graph	PASS

4.2 Test Graph



- End of the Report -