FCC Test Report

Report No.: AGC13459220401FE04

FCC ID	:	2A3NOTR510
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	FM Transmitter
BRAND NAME	:	RETEKESS
MODEL NAME	:	TR510
APPLICANT	:	ZHENGZHOU YSAIR TECHNOLOGY CO.,LTD
DATE OF ISSUE	:	Jun. 15, 2022
STANDARD(S)	:	FCC Part 73 Subpart D
REPORT VERSION	:	V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jun. 15, 2022	Valid	Initial Release

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1. VERIFICATION OF CONFORMITY

Applicant	ZHENGZHOU YSAIR TECHNOLOGY CO.,LTD
Address	ROOM 709,SANJIANG BUILDING,NO.170 NANYANG ROAD,HUIJI DISTRICT,ZHENGZHOU, HENAN PROVINCE,China
Manufacturer	ZHENGZHOU YSAIR TECHNOLOGY CO.,LTD
Address	ROOM 709,SANJIANG BUILDING,NO.170 NANYANG ROAD,HUIJI DISTRICT,ZHENGZHOU, HENAN PROVINCE,China
Product Designation	FM Transmitter
Brand Name	RETEKESS
Test Model	TR510
Date of test	Apr. 19, 2022~Jun. 08, 2022
Deviation	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Report Template	AGCRT-US-NCE-FM/RF

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.26 (2015) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC Part 73 Sub part D.

Prepared By	Bibo Zhang (Project Engineer)	Jun. 08, 2022
Reviewed By	Calvin Liu (Reviewer)	Jun. 15, 2022
Approved By	Max Zhang Authorized Officer	Jun. 15, 2022

2. GENERAL INFORMATION

2.1 PRODUCT DESCRIPTION

Communication Type:	Voice / Tone only
Classes of NCE-FM:	Class D educational station
Hardware Version:	V4.0
Software Version:	V3.0
Operation Frequency:	87.9MHz-91.9MHz
Number of channels:	21
Modulation Type:	FM
Channel Separation:	200 KHz
Maximum Transmitter Power:	37.974dBm
Antenna Designation:	Detachable Antenna
Antenna Gain:	2.5dBi
Power Supply:	INPUT: 100-240V~ 50-60Hz 0.4A OUTPUT: 12V 1.0A

Note: Please refer to the user manual for specific technical parameters

2.2 TEST FREQUENCY LIST

Frequency Band	Channel Number	Test Frequency
87.9~91.9 MHz	200	87.9 MHz
	201	88.1 MHz
	202	88.3 MHz
	203	88.5 MHz
	~	~
	~	~
	210	89.9 MHz
	211	90.1 MHz
	212	90.3 MHz
	~	~
	~	~
	217	91.3 MHz
	218	91.5 MHz
	219	91.7 MHz
	220	91.9 MHz

Note:

1. The frequency 87.9 MHz, Channel 200, is available only for use of existing Class D stations required to change frequency. It is available only on a noninterference basis with respect to TV Channel 6 stations and adjacent channel noncommercial educational FM stations. It is not available at all within 402 kilometers (250 miles) of Canada and 320 kilometers (199 miles) of Mexico. The specific standards governing its use are contained in § 73.512.

2. The frequency 89.1 MHz, Channel 206, in the New York City metropolitan area, is reserved for the use of the United Nations with the equivalent of an antenna height of 150 meters (492 feet) above average terrain and effective radiated power of 20 kW and the Commission will make no assignments which would cause objectionable interference with such use.

2.3 DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION
1	Transmitting Low Channel (87.9MHz) mode
2	Transmitting Middle Channel (89.9MHz) mode
3	Transmitting High Channel (91.9MHz) mode

Note:

1. For Radiated Emission, 3axis were chosen for testing for each applicable mode.

2. For Conducted Test method, a temporary antenna connector is provided by the manufacture.

3. MEASUREMENT UNCERTAINTY

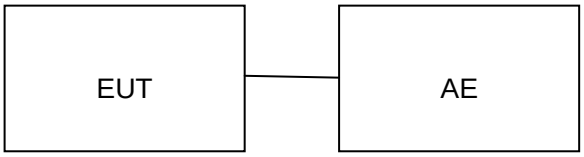
The reported uncertainty of measurement y ±U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Test Items	Measurement Uncertainty
Frequency stability	±0.5%
Transmitter power conducted	±0.8dB
Transmitter power Radiated	±1.3dB
Conducted spurious emission 9kHz-40 GHz	±2.7dB
Conducted Emission	±3.2 dB
Radiated Emission below 1GHz	±3.9 dB
Radiated Emission above 1GHz	±4.8 dB
Occupied Channel Bandwidth	±2 %
FM deviation	±2 %
Audio level	±0.98dB
Modulation Limiting	0.42 %

4. SYSTEM TEST CONFIGURATION

4.1. CONFIGURATION OF EUT SYSTEM

Configure :



4.2 EQUIPMENT USED IN TESTED SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	FM Transmitter	TR510	2A3NOTR510	EUT
2	Adapter	CQ12-120100-HU	INPUT: 100-240V 50/60Hz 0.4A	Accessory

4.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§73.506 §73.210 §2.1046	RF Output power	Compliant
§2.1047	Modulation characteristics	Compliant
§73.310 §2.1055 §73.1545	Frequency stability	Compliant
§73.508 §73.310 §2.1049	Occupied bandwidth	Compliant
§73.508 §73.317 §2.1051	Spurious emissions	Compliant
§73.508 §73.317 §2.1051	Emission mask	Compliant

5. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Designation Number	CN1259
FCC Test Firm Registration Number	975832
A2LA Cert. No.	5054.02
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA

TEST EQUIPMENT OF RADIATED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	Mar. 28, 2022	Mar. 27, 2023
EXA Signal Analyzer	Aglient	N9020A	MY52090123	Sep. 06, 2021	Sep. 05, 2022
Attenuator	Wariors	W13	11324	Sep. 06, 2021	Sep. 05, 2022
Horn antenna	ZHINAN	E-002	N/A	Sep. 06, 2021	Sep. 05, 2022
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	Mar. 12, 2022	Mar. 11, 2024
Double-Ridged Waveguide Horn	ETS-LINDGREN	3117	00034609	Apr. 23, 2021	Apr. 22, 2023
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Sep. 03, 2020	Sep. 02, 2022
ANTENNA	SCHWARZBECK	VULB9168	494	Jan. 08, 2021	Jan. 07, 2023
Wireless communication tester	HP	8920B	US35010161	Sep. 06, 2021	Sep. 05, 2022
Test software	Tonscend	JS32-RE (Ver. 2.5)	N/A	N/A	N/A

6. RF OUPUT POWER

6.1. TEST LIMIT

A Class D educational station is one operating with no more than 10 watts transmitter power output.

6.2. MEASUREMENT PROCEDURE

☒EIRP Test Method(ANSI C63.26 Section 5.2.7)

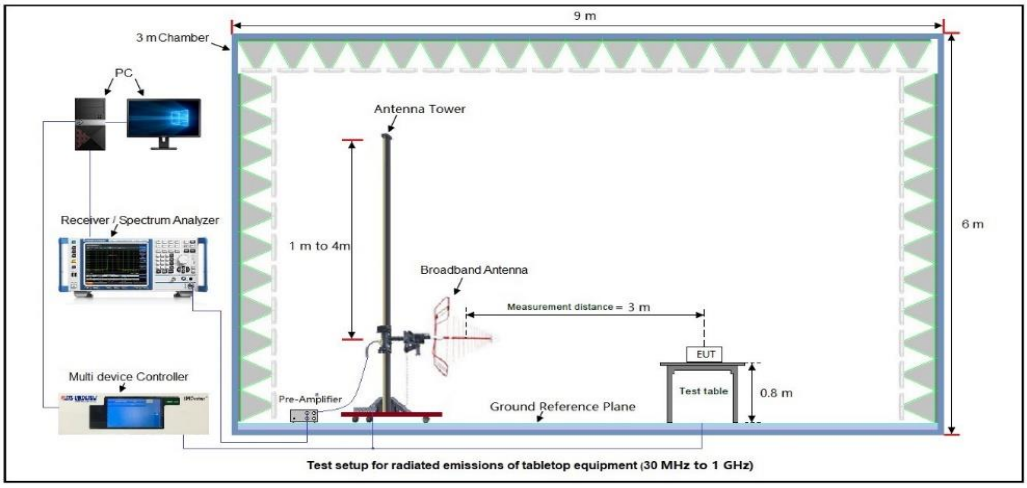
1. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. EIRP[dBm] = E[dB(μV)/m]− 95.2

☒Conducted Power Test Method(ANSI C63.26 Section 5.2.3.3)

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. RBW ⩾ OBW.
3. VBW ⩾3 x RBW.
4. Span ⩾2 x OBW.
5. Sweep time ⩾ 10 x (number of points in sweep) x (transmission symbol period)
6. Detector function: Peak.
7. Trace: Max hold.
8. Allow trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power, after any corrections for external attenuators and cables.

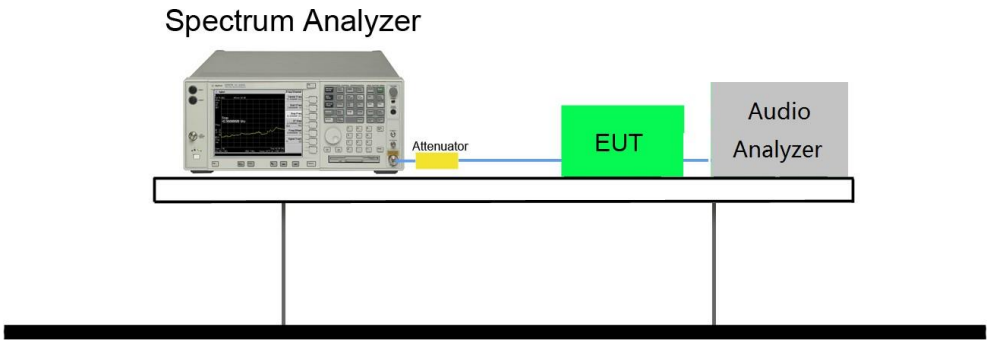
6.3. TEST SETUP

☒EIRP Test Method



Test setup for radiated emissions of tabletop equipment (30 MHz to 1 GHz)

☒Conducted Power Test Method



6.4. TEST RESULT

EIRP Power：

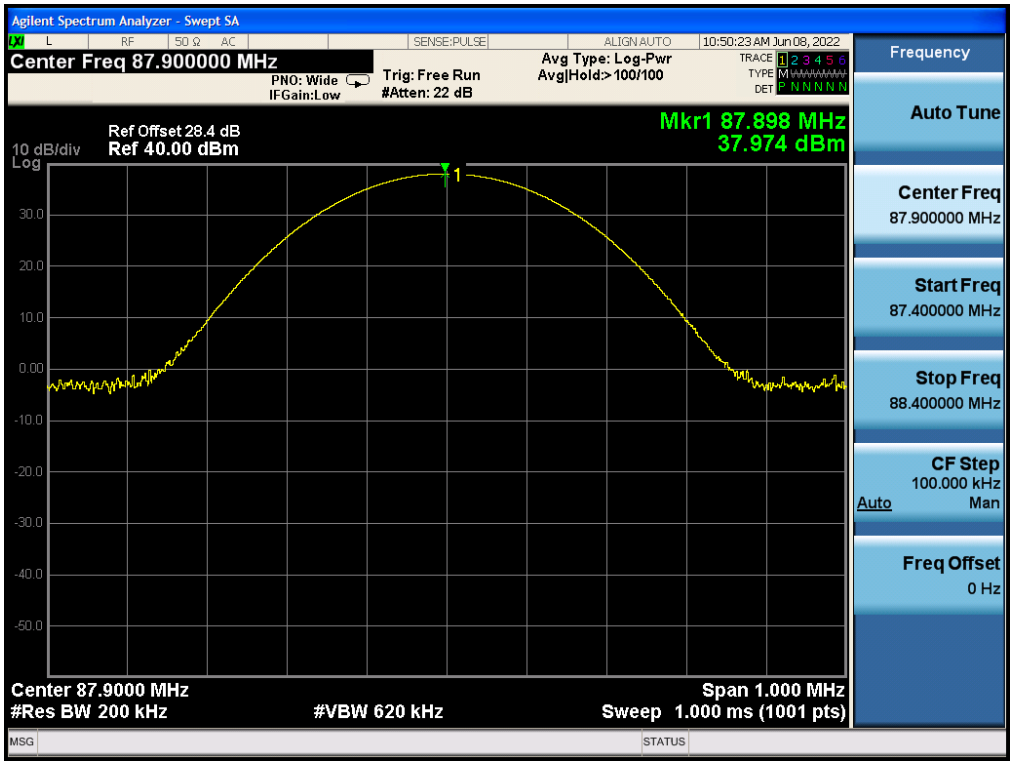
Frequency MHz	Polarization	Reading dBm	Factor dB	Level dBm Peak	Limit dBm Average	Margin dB	Pass/Fail
87.9	Horizontal	15.50	22.41	37.91	40	-2.09	Pass
87.9	Vertical	12.64	25.29	37.93	40	-2.07	Pass
89.9	Horizontal	15.15	22.65	37.80	40	-2.20	Pass
89.9	Vertical	12.29	25.53	37.82	40	-2.18	Pass
91.9	Horizontal	14.68	22.86	37.54	40	-2.46	Pass
91.9	Vertical	11.81	25.78	37.59	40	-2.41	Pass

Level (dBm)=Reading (dBm)+ Factor(dBm)

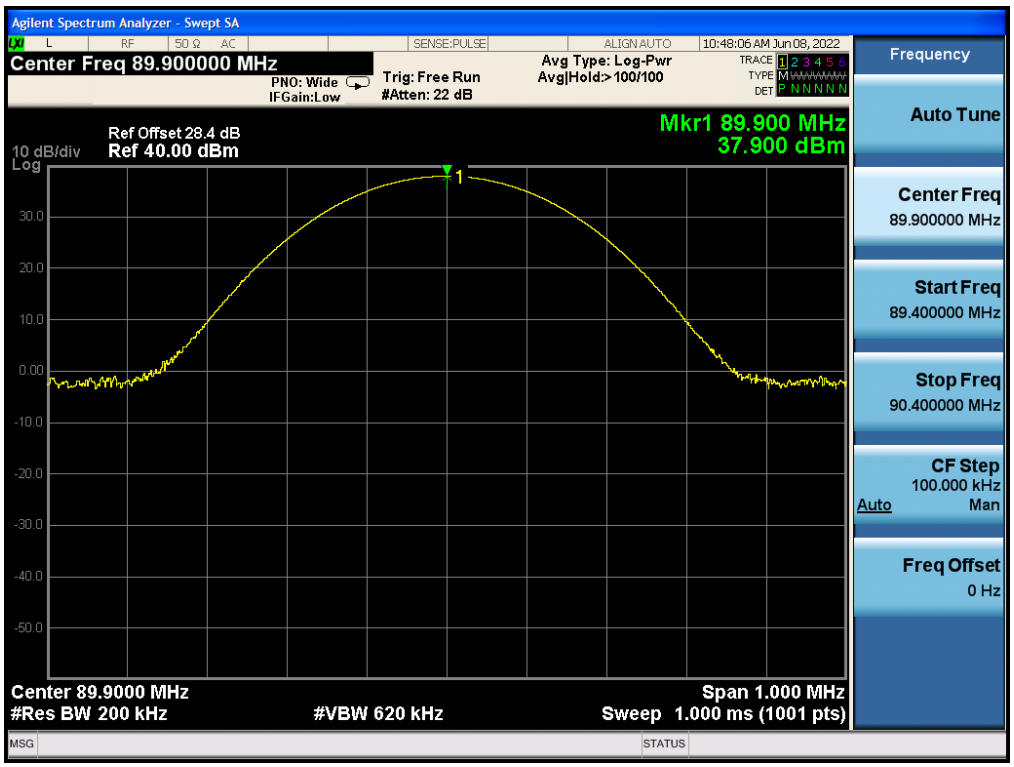
Conducted Power：

Test Channel	Peak Power (dBm)	Limit dBm)
87.9 MHz	37.974	40
89.9 MHz	37.900	40
91.9 MHz	37.660	40

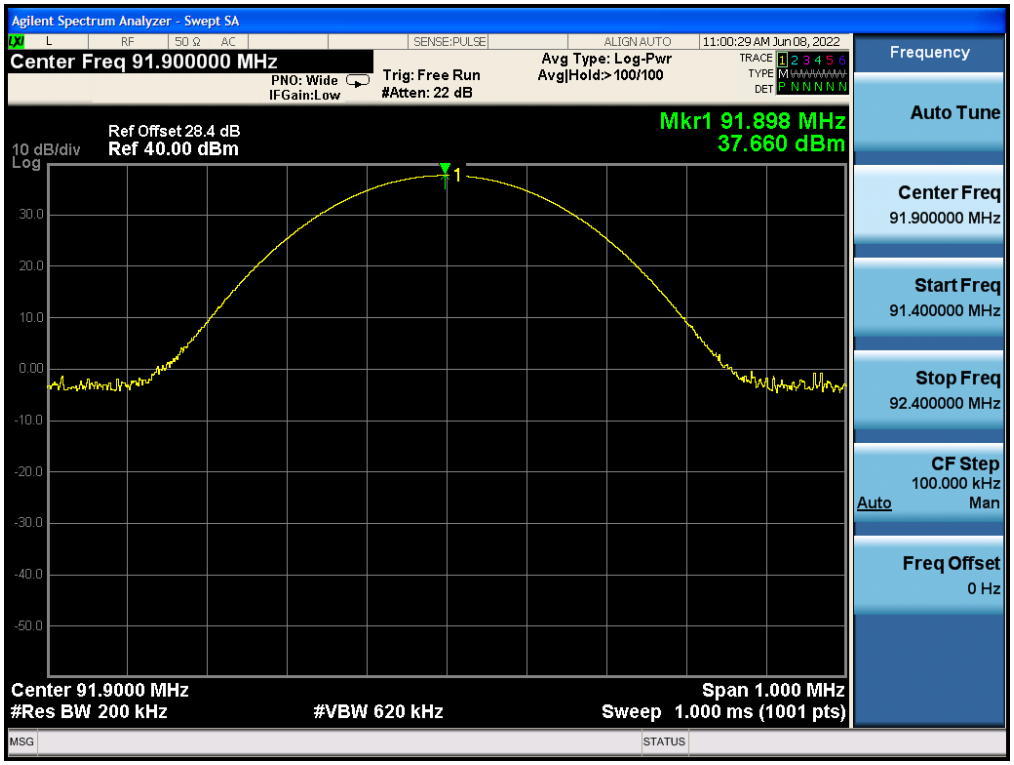
Low channel-87.9MHz



Middle channel-89.9MHz



High channel-91.9MHz



7. OCCUPIED BANDWIDTH

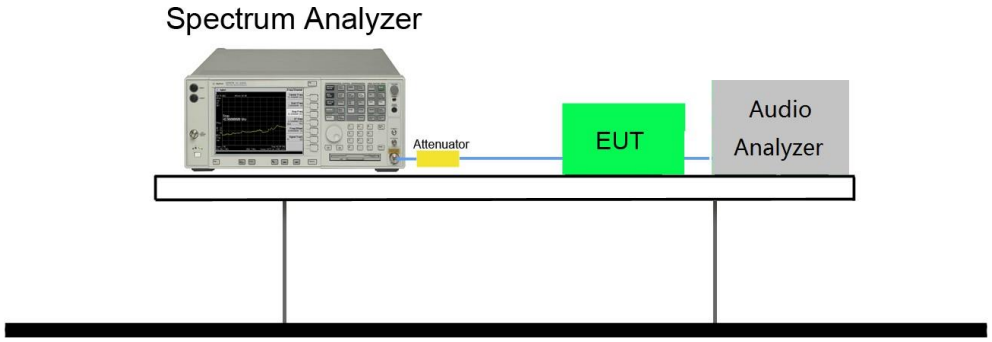
7.1. TEST LIMIT

The operating bandwidth shall not exceed 200 kHz.

7.2. MEASUREMENT PROCEDURE

1. For the occupied bandwidth measurements, the input signal shall be a 400Hz, 1 kHz and 15KHz tone. The level of the tone shall be set to the manufacturer's maximum rated input to the modulator.
2. Set the EUT Work on operation frequency.
3. Set Span = approximately 1.5 times the occupied bandwidth, centered on a channel
   The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW; Sweep = auto; Detector function = peak
4. Set SPA Trace 1 Max hold, then View.

7.3. TEST SET-UP



7.4. MEASUREMENT RESULTS

Input 400Hz signal:

Test Channel	-26dBc EBW (kHz)	99% OBW (kHz)	Limit (kHz)
87.9 MHz	107.5	101.88	200
89.9 MHz	107.5	101.83	200
91.9 MHz	107.6	102.01	200

Input 1KHz signal:

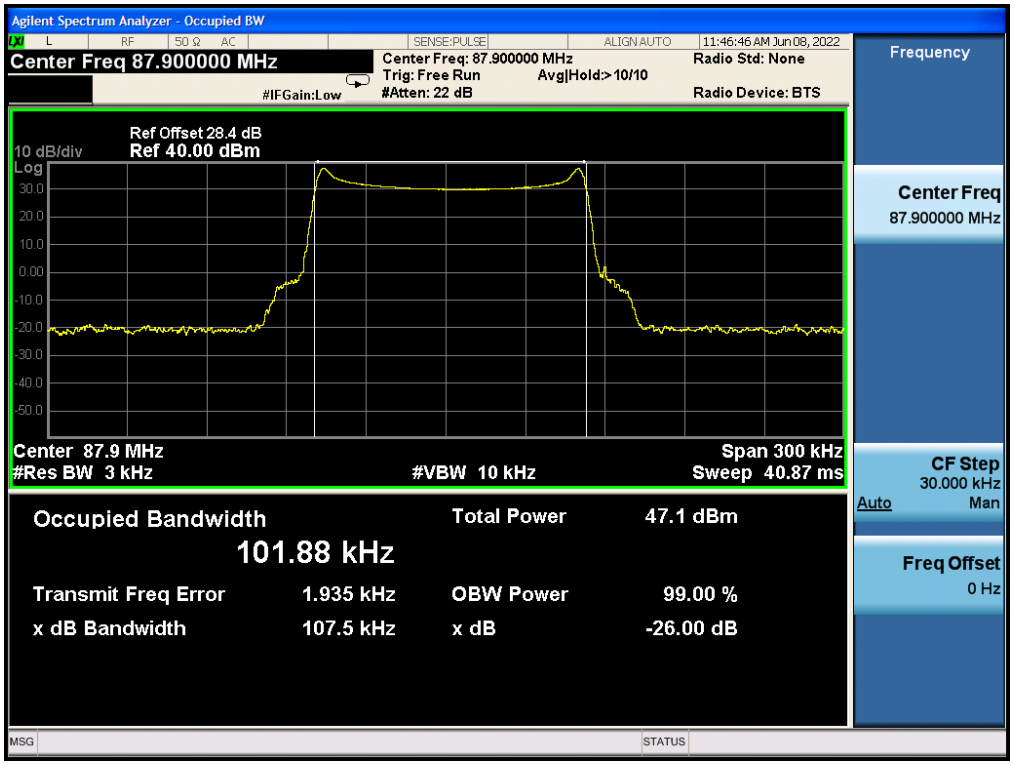
Test Channel	-26dBc EBW (kHz)	99% OBW (kHz)	Limit (kHz)
87.9 MHz	135.9	128.73	200
89.9 MHz	135.9	128.93	200
91.9 MHz	135.9	129.01	200

Input 15KHz signal:

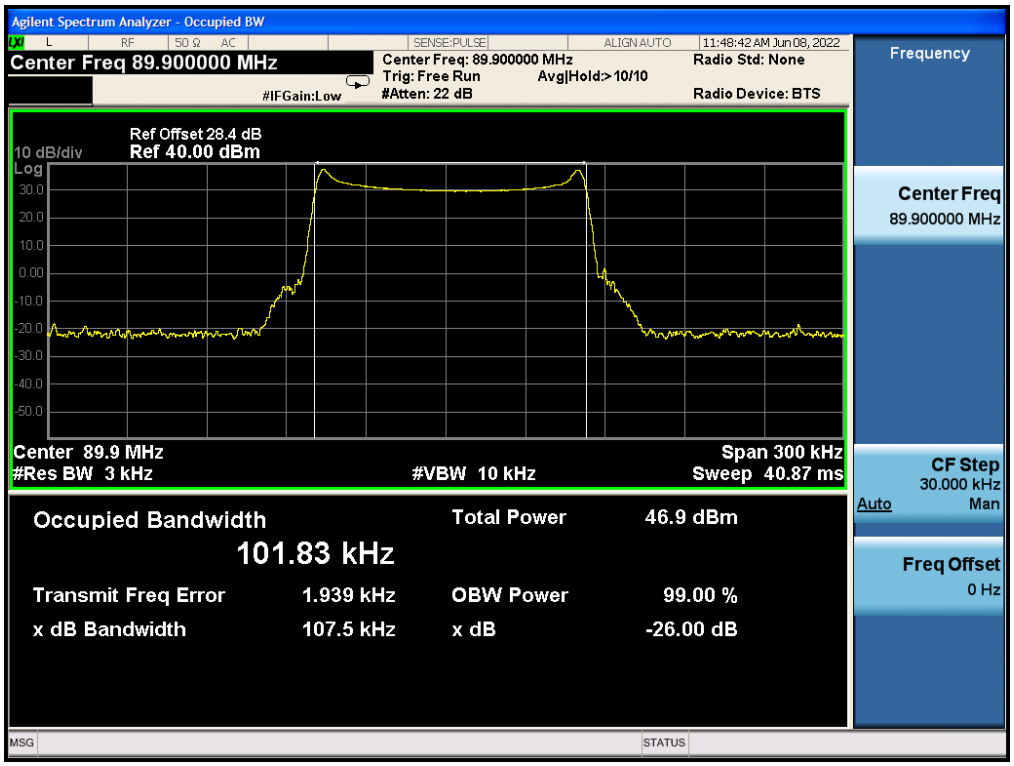
Test Channel	-26dBc EBW (kHz)	99% OBW (kHz)	Limit (kHz)
87.9 MHz	195.8	169.04	200
89.9 MHz	195.8	169.16	200
91.9 MHz	195.9	169.23	200

TEST PLOT OF BANDWIDTH

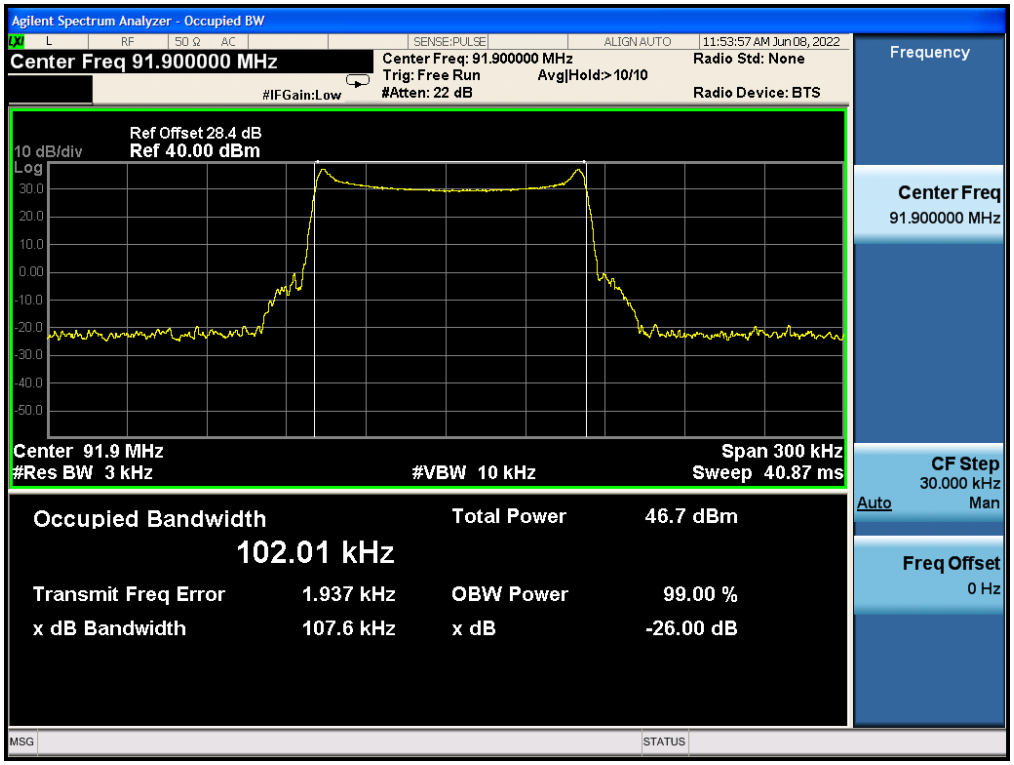
Input 400Hz signal Low channel



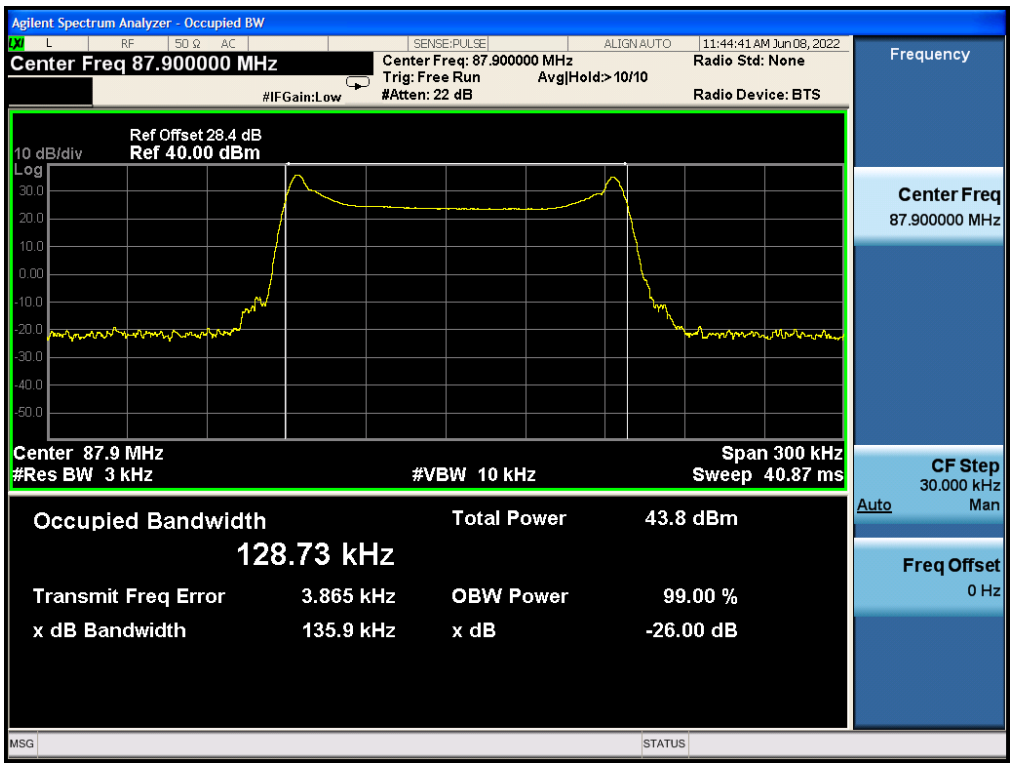
Input 400Hz signal Middle channel



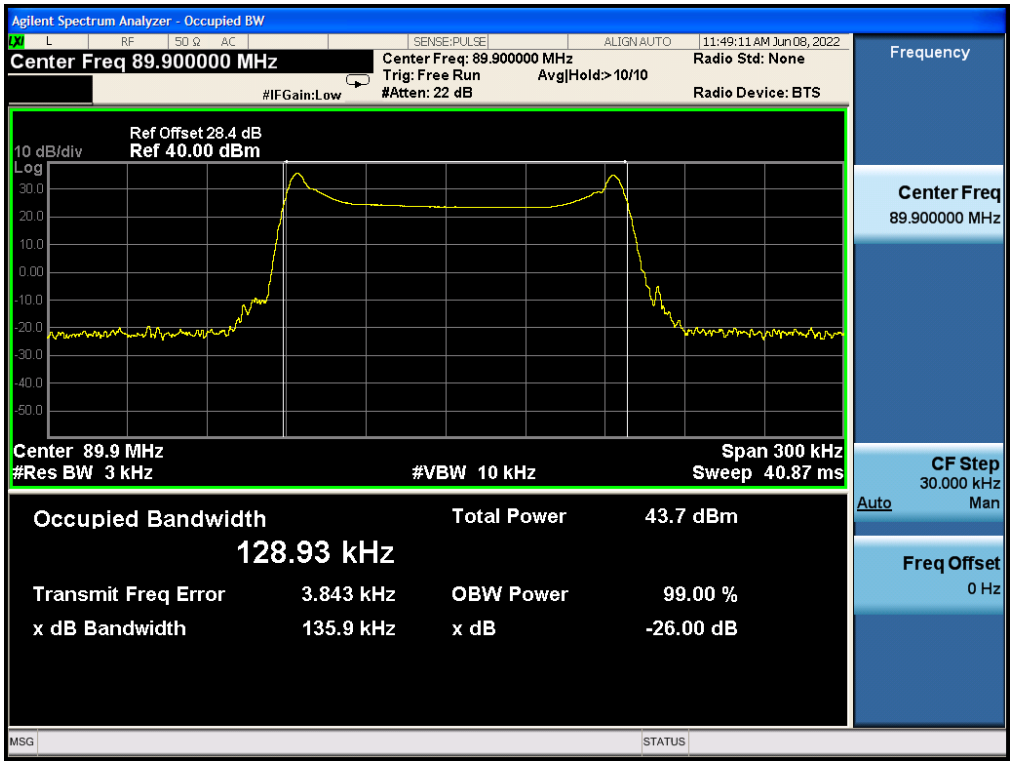
Input 400Hz signal High channel



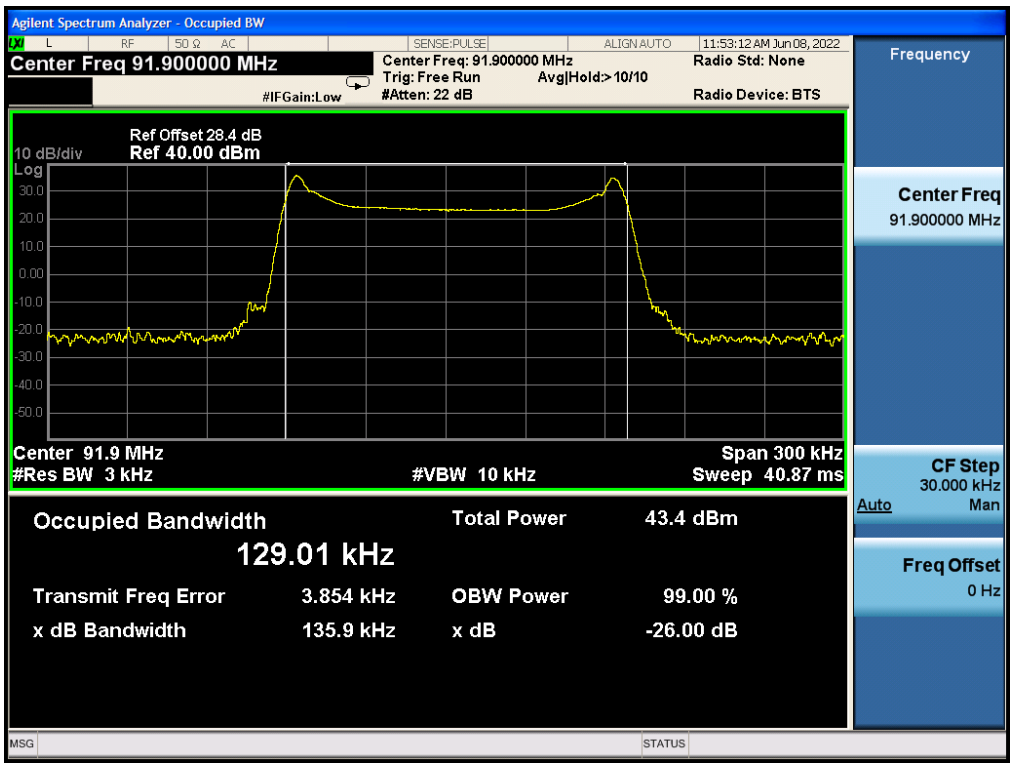
Input 1KHz signal Low channel



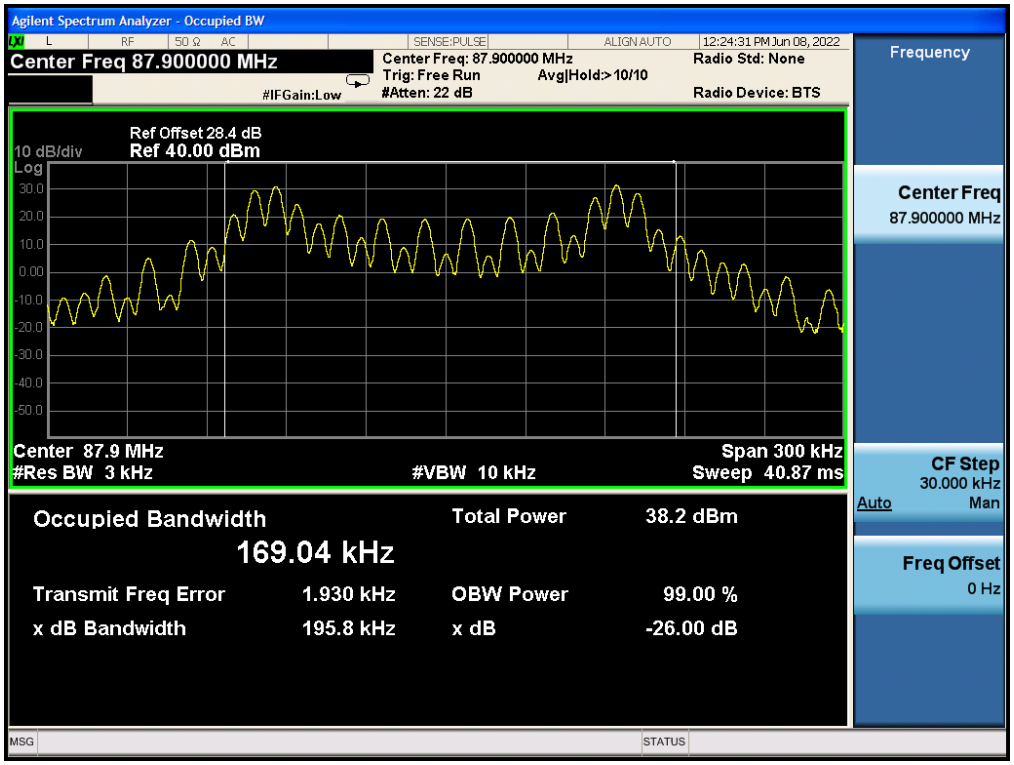
Input 1KHz signal Middle channel



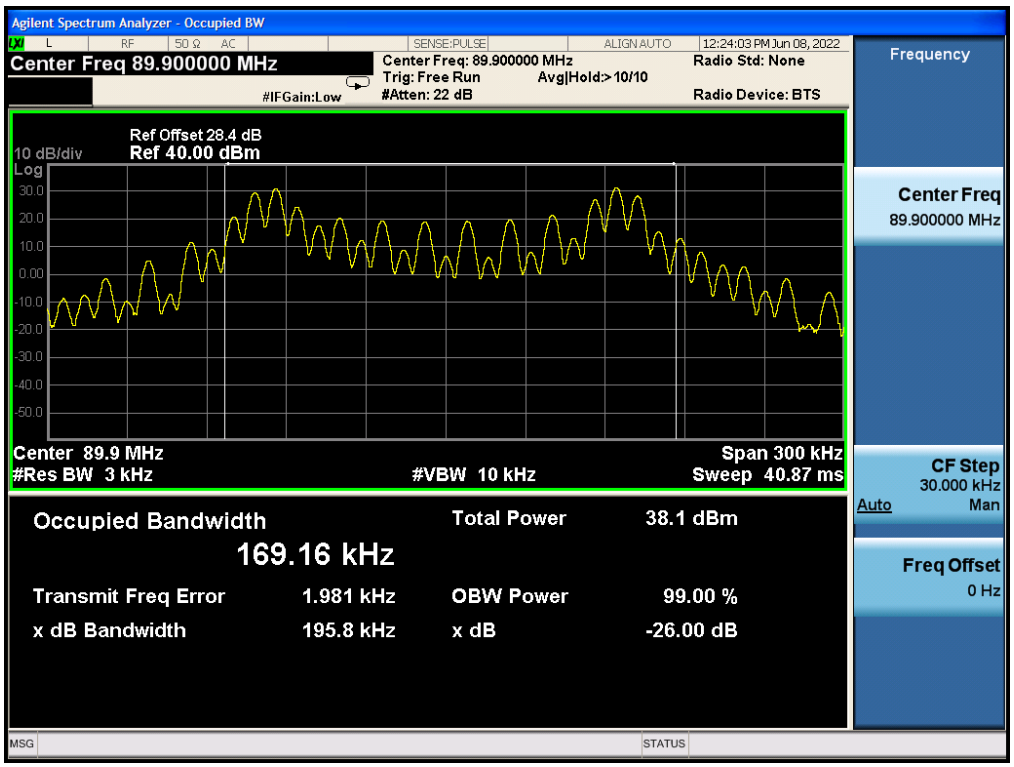
Input 1KHz signal High channel



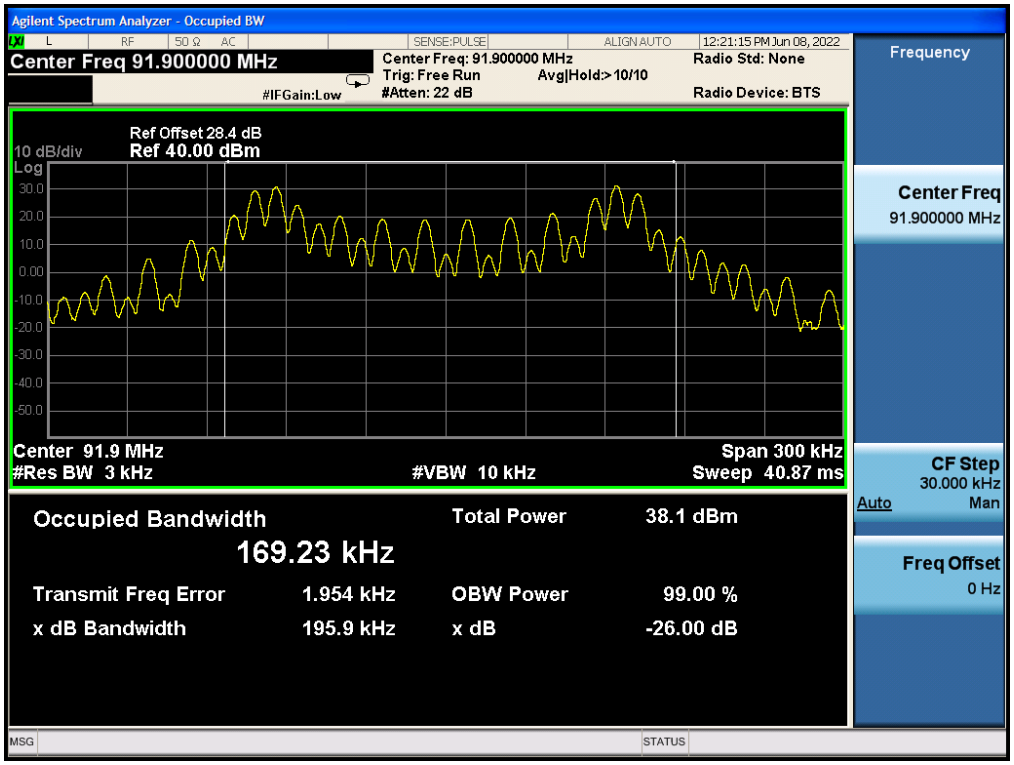
Input 15KHz signal Low channel



Input 15KHz signal Middle channel



Input 15KHz signal High channel



8. MODULATION CHARACTERISTICS

8.1 TEST LIMIT

a). According to CFR 47 section 2.1047(a), for Voice Modulation Communication Equipment, the frequency response of the audio modulation circuit over a range of 100 to 5000Hz shall be measured.

b). According to CFR 47 section 73.310, For FM broadcast stations, a frequency deviation of ±75kHz is defined as 100% modulation.

8.2 MEASUREMENT METHOD

MODULATION LIMIT

1). Configure the EUT as shown in the set-up, adjust the audio input for 60% of rated system deviation at 1KHz using this level as a reference (0dB) and vary the input level from 0 to +20dB in 5 dB increments. Record the frequency deviation obtained as a function of the input level.

2). Repeat step 1 with input frequency changing to 300, 2500, and 3000 Hz in sequence.

AUDIO FREQUENCY RESPONSE

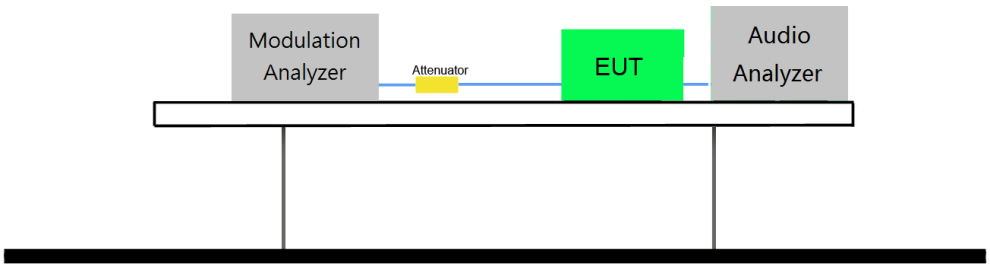
1). Configure the EUT as shown in Set-up.

2). Adjust the audio input for 20% of rated system deviation at 1 KHz using this level as a reference (0 dB).

3). Vary the Audio frequency from 300 Hz to 3000 Hz and record the frequency deviation.

4). Audio Frequency Response = 20log10 (Deviation of test frequency/Deviation of 1 KHz reference).

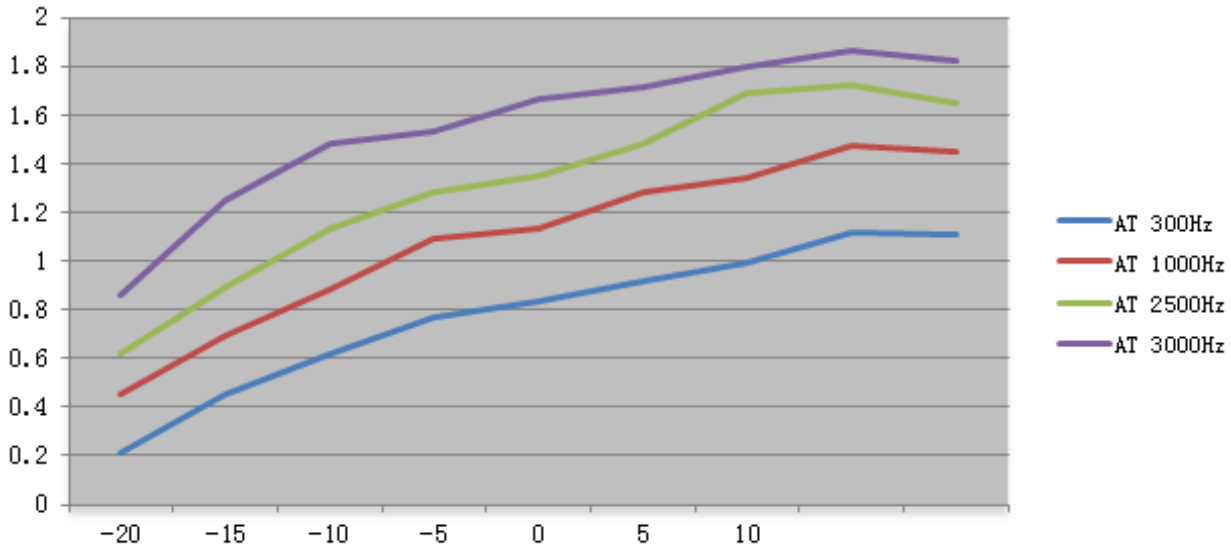
8.3. TEST SETUP



8.4 TEST RESULT

a). Modulation Limit:

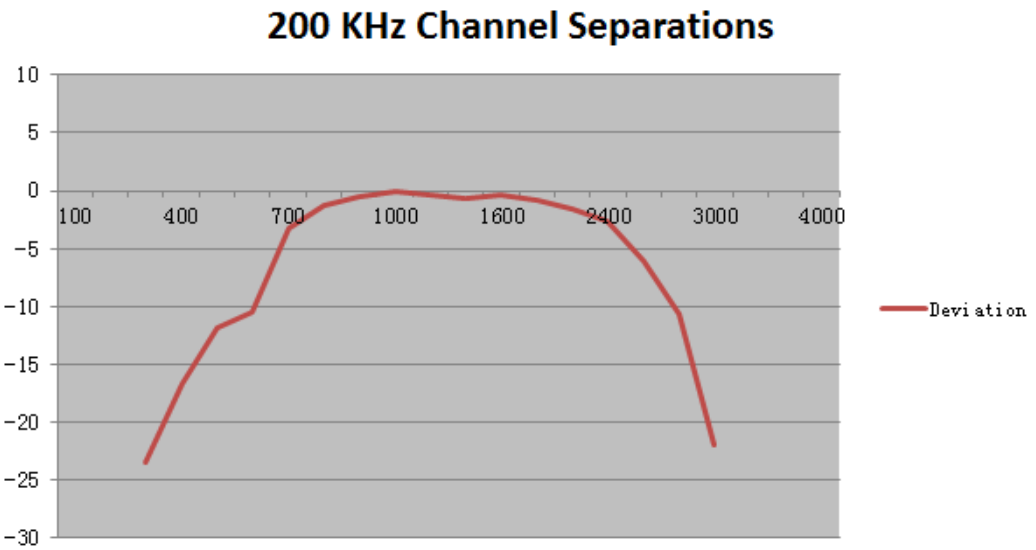
200kHz, FM modulation, Assigned Frequency:87.9MHz				
Modulation Level (dB)	Peak Freq. Deviation At 300 Hz (kHz)	Peak Freq. Deviation At 1000 Hz (kHz)	Peak Freq. Deviation At 2500 Hz (kHz)	Peak Freq. Deviation At 3000 Hz (kHz)
-20	0.21	0.45	0.62	0.86
-15	0.45	0.69	0.89	1.25
-10	0.62	0.88	1.13	1.48
-5	0.77	1.09	1.28	1.53
0	0.83	1.13	1.35	1.66
+5	0.92	1.28	1.48	1.71
+10	0.99	1.34	1.69	1.8
+15	1.12	1.47	1.72	1.86
+20	1.11	1.45	1.65	1.82



b). Audio Frequency Response:

Test Result @ Low Channel

Frequency (Hz)	Deviation (KHz)	Audio Frequency Response (dB)
100		
200	--	
300	0.15	-23.56
400	0.33	-16.71
500	0.58	-11.81
600	0.67	-10.56
700	1.56	-3.22
800	1.96	-1.24
900	2.12	-0.56
1000	2.26	0.00
1200	2.18	-0.31
1400	2.09	-0.68
1600	2.18	-0.31
1800	2.06	-0.80
2000	1.87	-1.65
2400	1.67	-2.63
2500	1.11	-6.18
2800	0.66	-10.69
3000	0.18	-21.98



9. FREQUENCY STABILITY

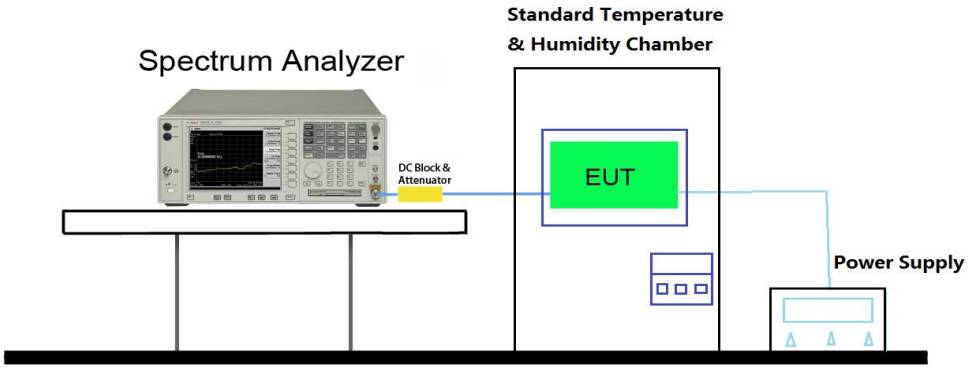
9.1. TEST LIMIT

The frequency tolerance of the carrier signal shall be maintained within ±3000Hz of the operating frequency over a temperature variation of 0 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.

9.2. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the operation frequency.
3. Set SPA Centre Frequency = Operation Frequency, RBW= 1 KHz, VBW≥3×RBW.
4. Set SPA Trace 1 Max hold, then View.
5. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
6. Extreme temperature rule is 0°C~50°C.

9.3. TEST SET-UP



9.4. TEST RESULT

Test frequency: 87.9 MHz

Voltage vs. Frequency Stability (Test Temperature: 20℃)

Voltage(V)	Measurement Frequency (MHz)	Max. Deviation (Hz)	Limit(Hz)	Conclusion
12.0	87.899745	635	±3000Hz	PASS
10.8	87.899891			
13.8	87.899365			

Temperature vs. Frequency Stability (Test Voltage: 12.00V)

Temperature	Measurement Frequency (MHz)	Max. Deviation (Hz)	Limit(Hz)	Conclusion
0℃	87.899884	205	±3000Hz	PASS
10℃	87.899795			
20℃	87.899858			
30℃	87.899889			
40℃	87.899797			
50℃	87.899801			

10. EMISSION MASK AND SPURIOUS EMISSIONS

10.1. TEST LIMIT

Frequency range	Limit
Fc-600kHz< f	-13dBm
Fc-600kHz≤f <Fc-240kHz	35dB below the level of the un-modulated carrier
Fc-240kHz≤f ≤Fc-120kHz	25dB below the level of the un-modulated carrier
Fc+120kHz≤f ≤Fc+240kHz	25dB below the level of the un-modulated carrier
Fc+240kHz< f ≤Fc+600kHz	35dB below the level of the un-modulated carrier
Fc+600kHz< f	-13dBm

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10.2. MEASUREMENT PROCEDURE

1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. EIRP[dBm] = E[dB(μV)/m]− 95.2

The following table is the setting of spectrum analyzer and receiver.

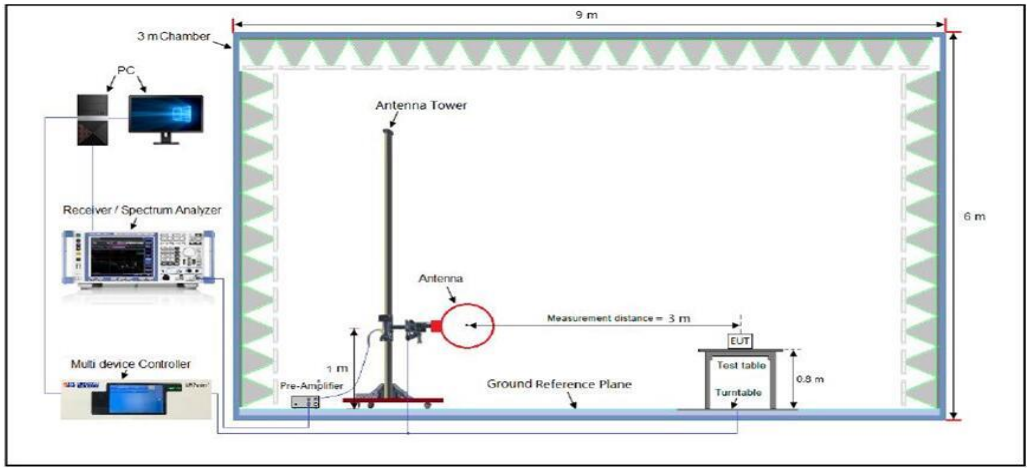
Spectrum Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP
Start ~Stop Frequency	1000MHz~6000MHz/RB 1MHz for QP

Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP
Start ~Stop Frequency	1000MHz~6000MHz/RB 1MHz for QP

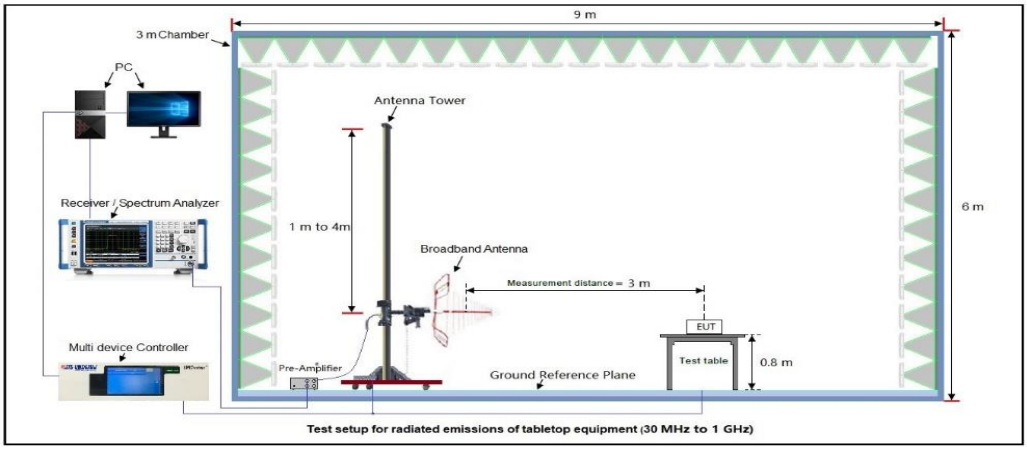
10.3. TEST SETUP

☒ Radiated Test Setup

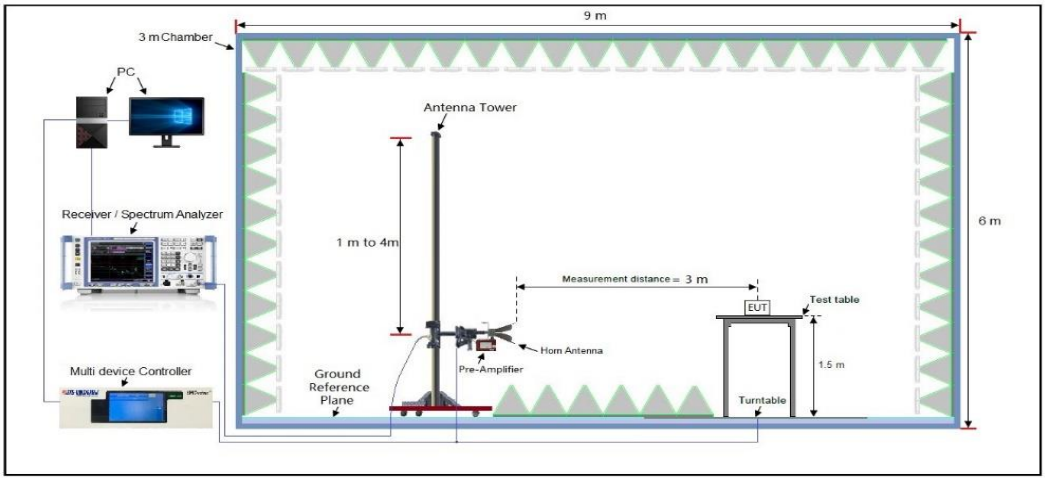
Radiated Emissions Below 30MHz Test Setup



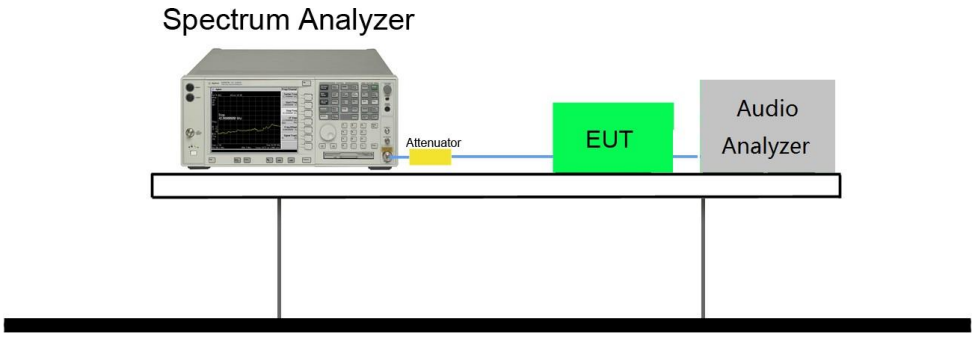
Radiated Emissions Below 30MHz-1GHz Test Setup



Radiated Emissions Above 1GHz Test Setup



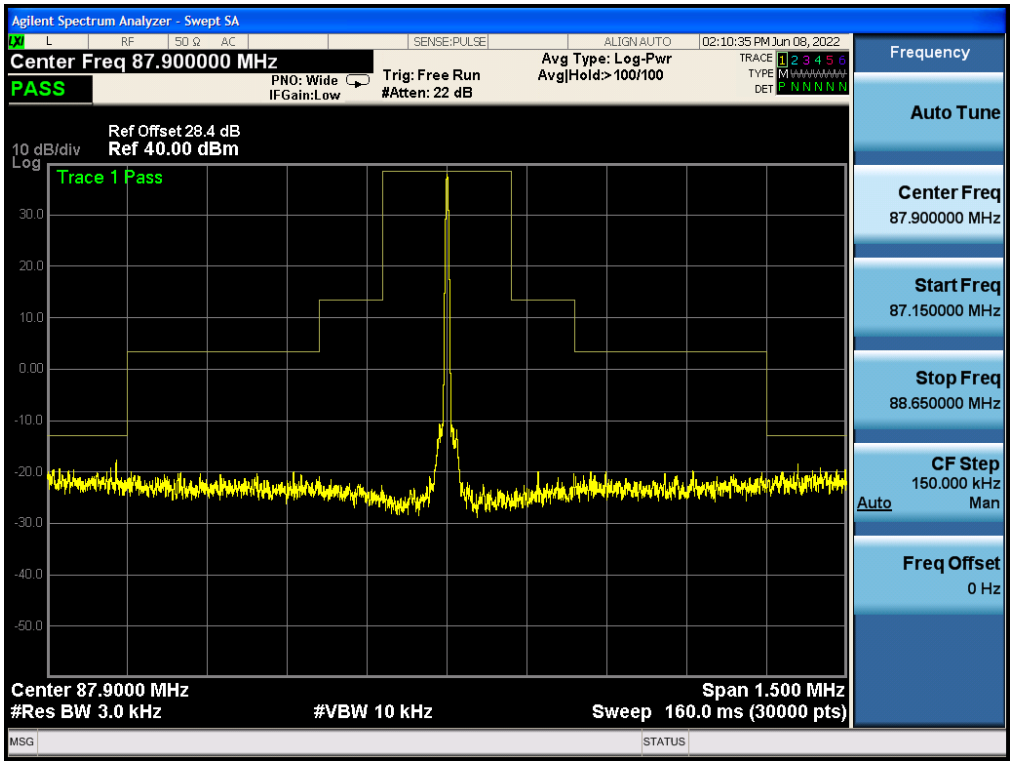
☒Conducted Test Setup



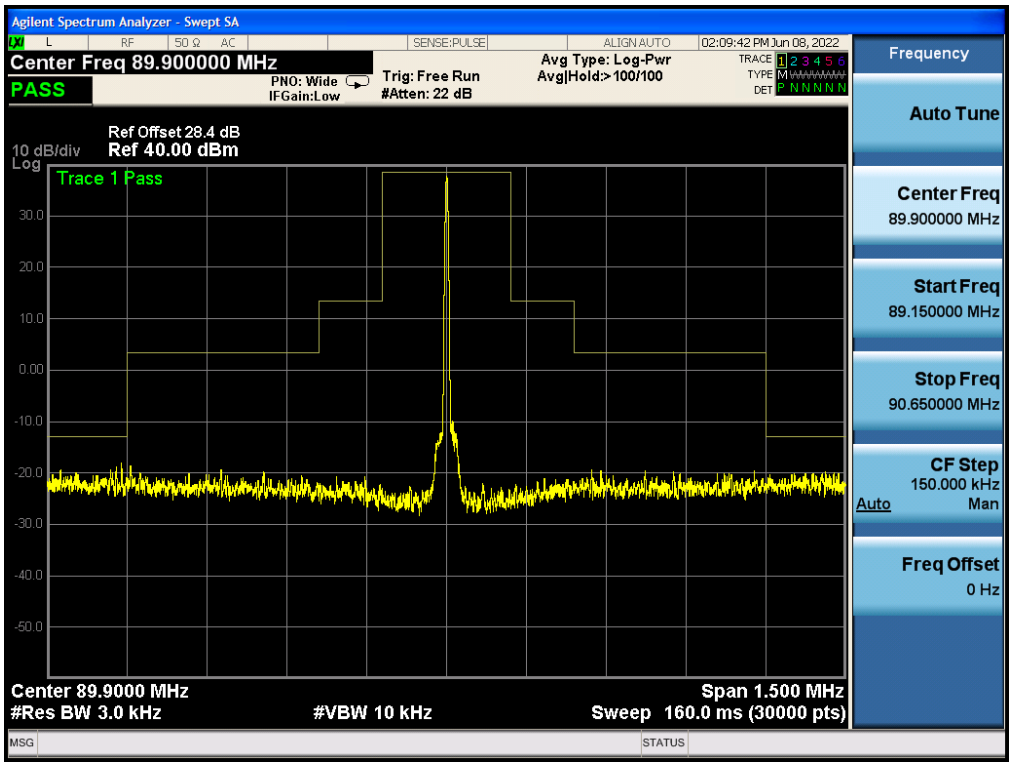
10.4. TEST RESULT

EMISSION MASK (Emissions within the band)

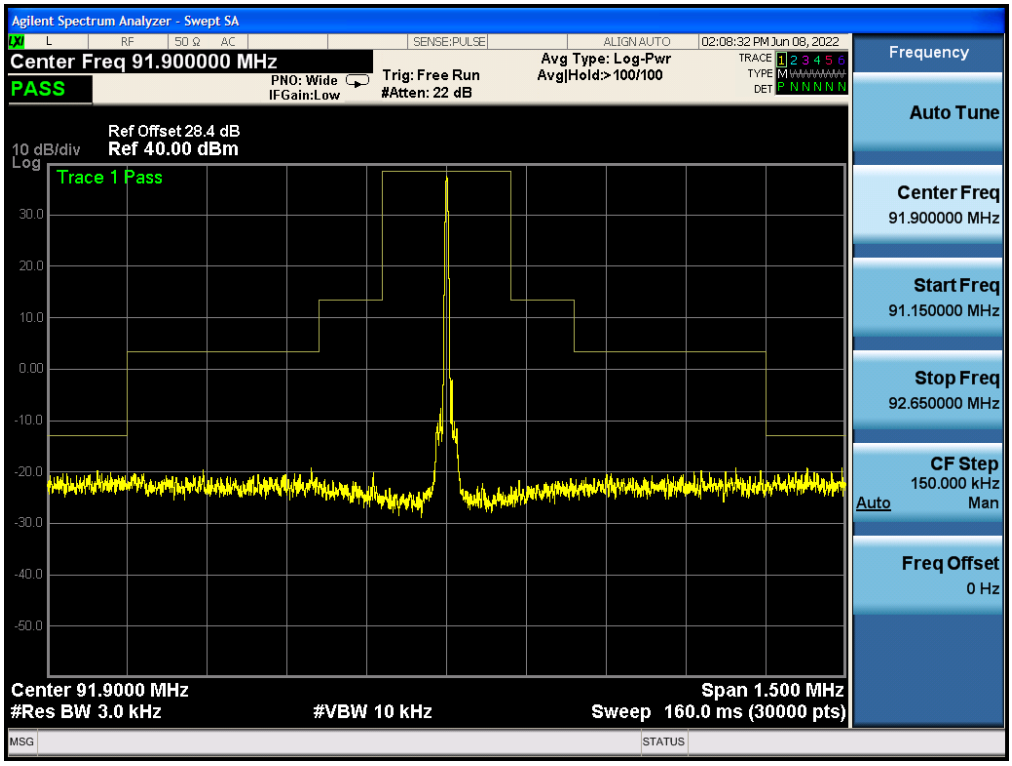
Unmodulated Carrier-Low channel



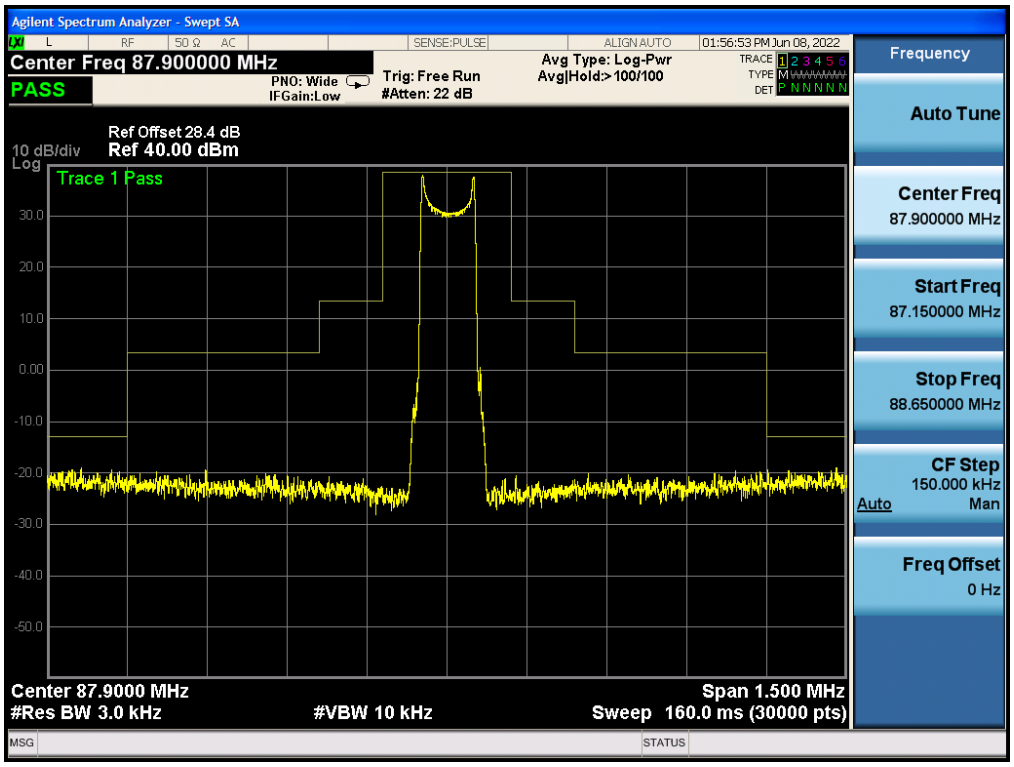
Unmodulated Carrier-Middle channel



Unmodulated Carrier-High channel

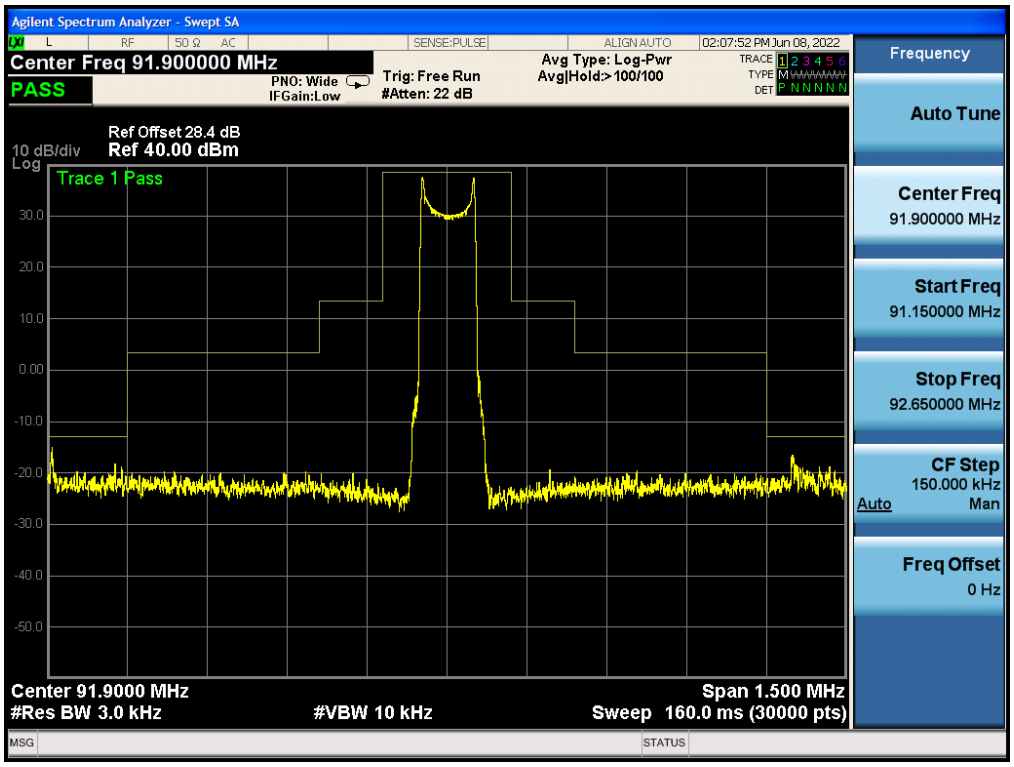


Input 400Hz signal Low channel

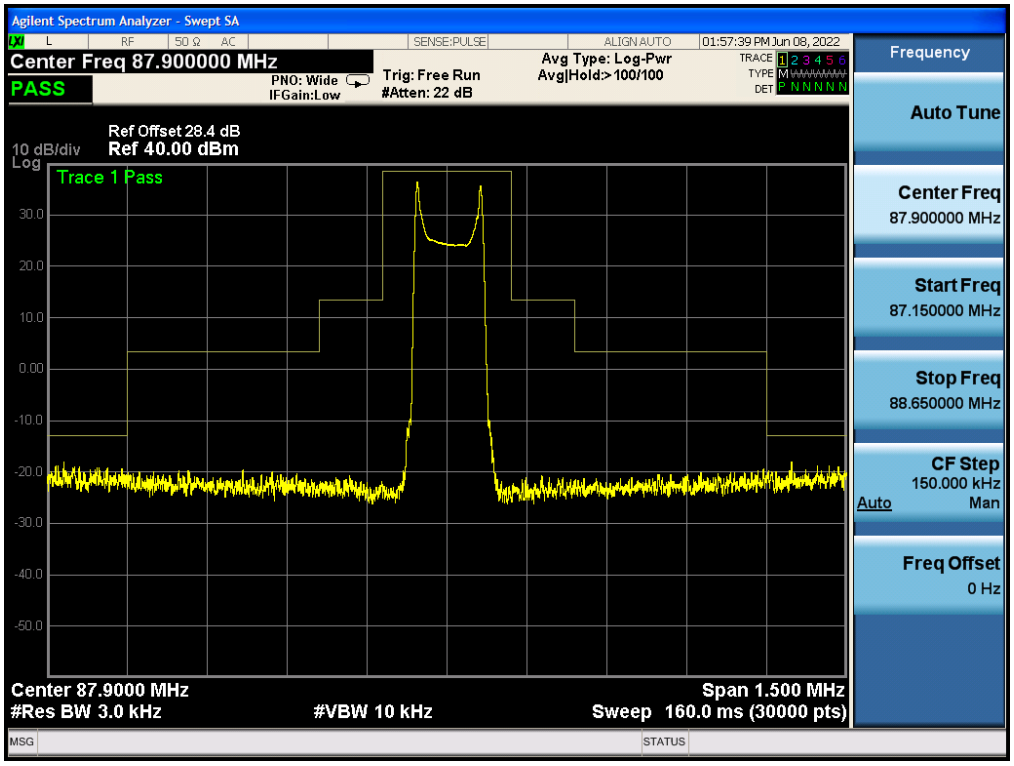


Input 400Hz signal Middle channel

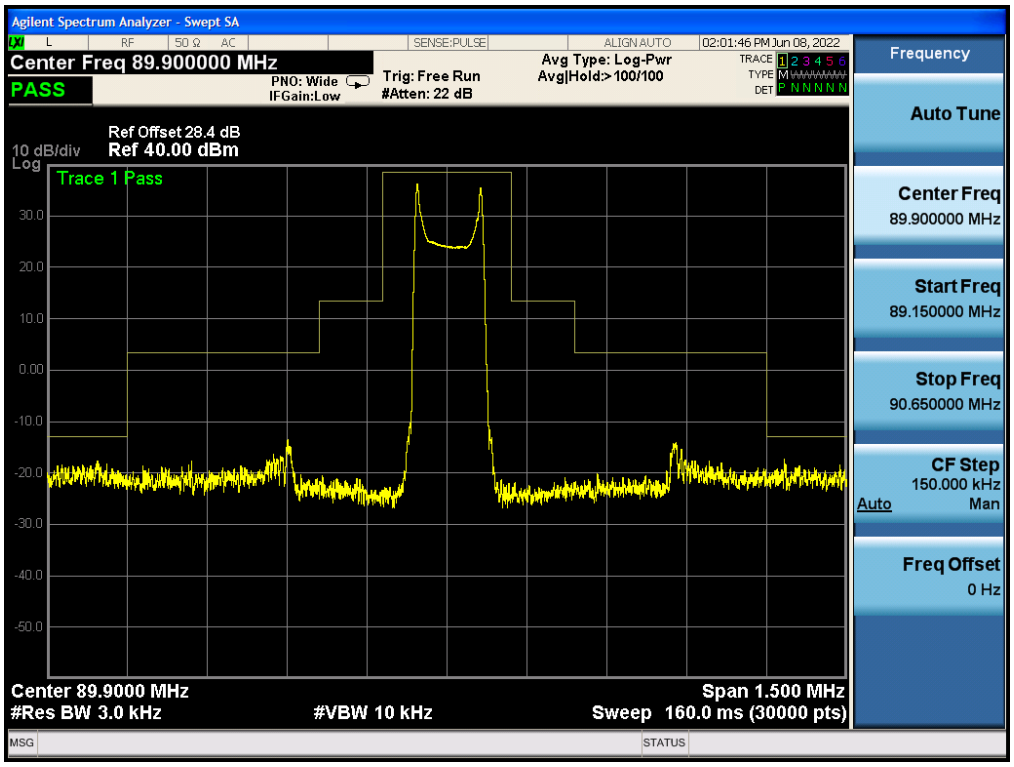
Input 400Hz signal High channel



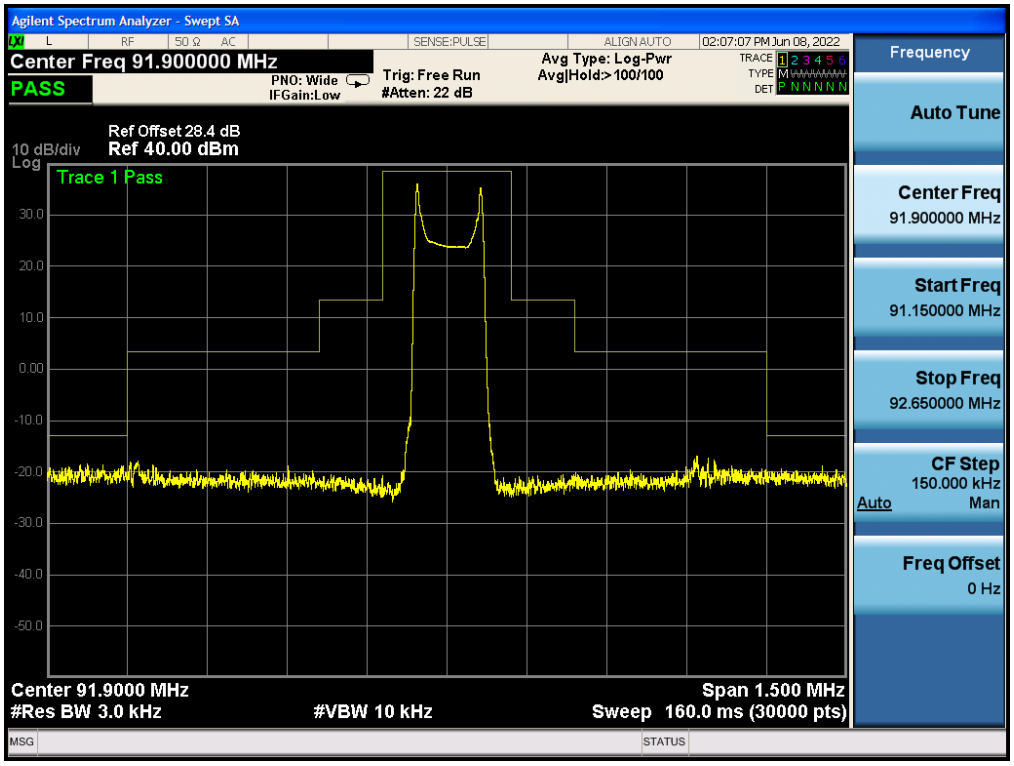
Input 1KHz signal Low channel



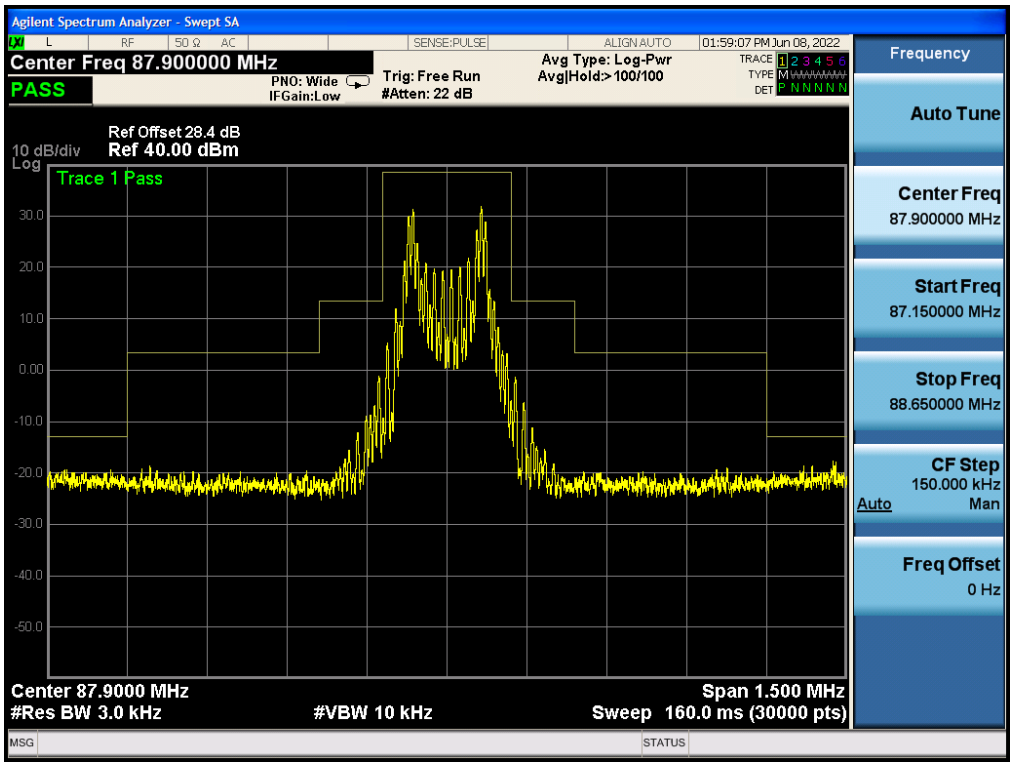
Input 1KHz signal Middle channel



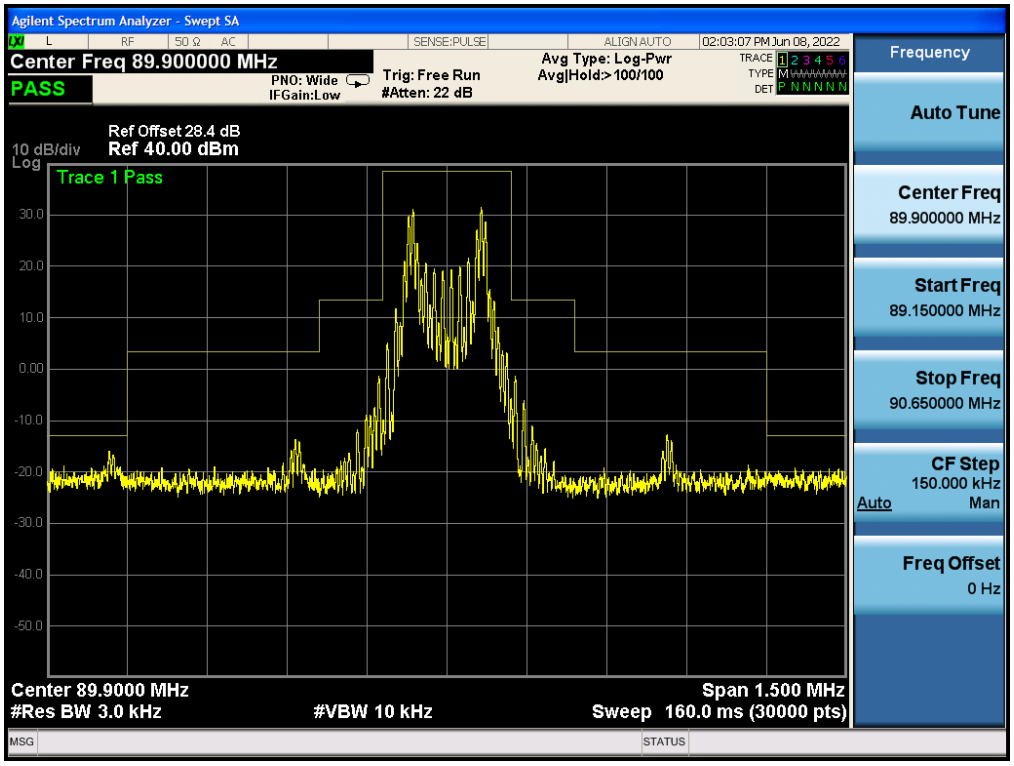
Input 1KHz signal High channel



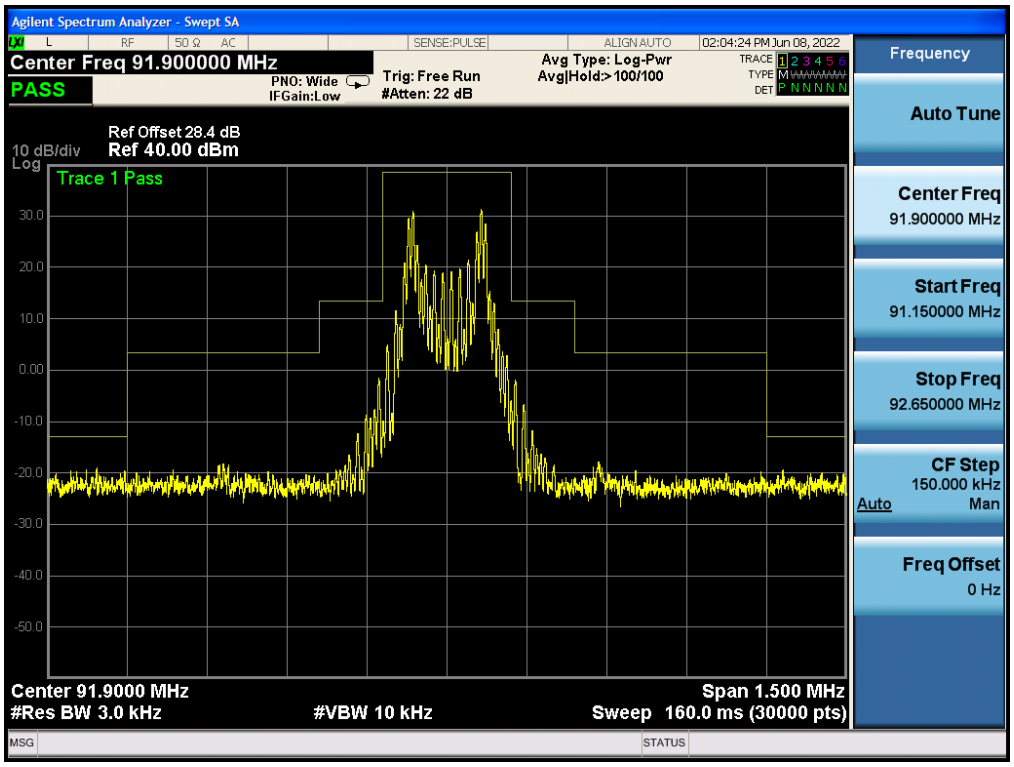
Input 15KHz signal Low channel



Input 15KHz signal Middle channel



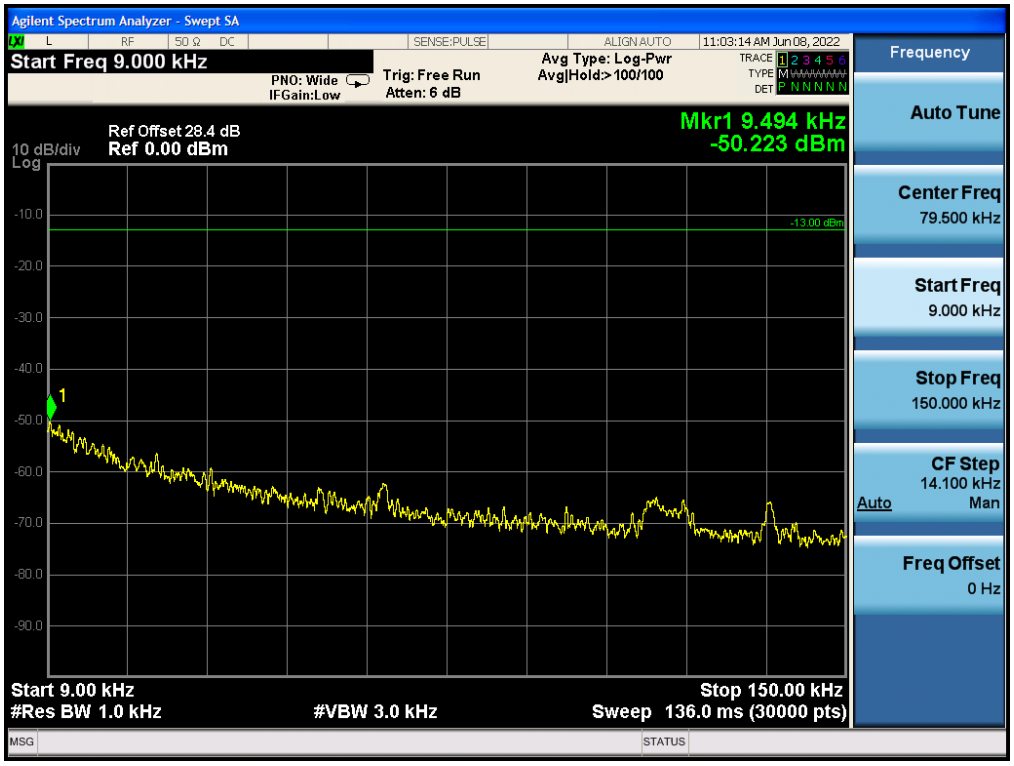
Input 15KHz signal High channel



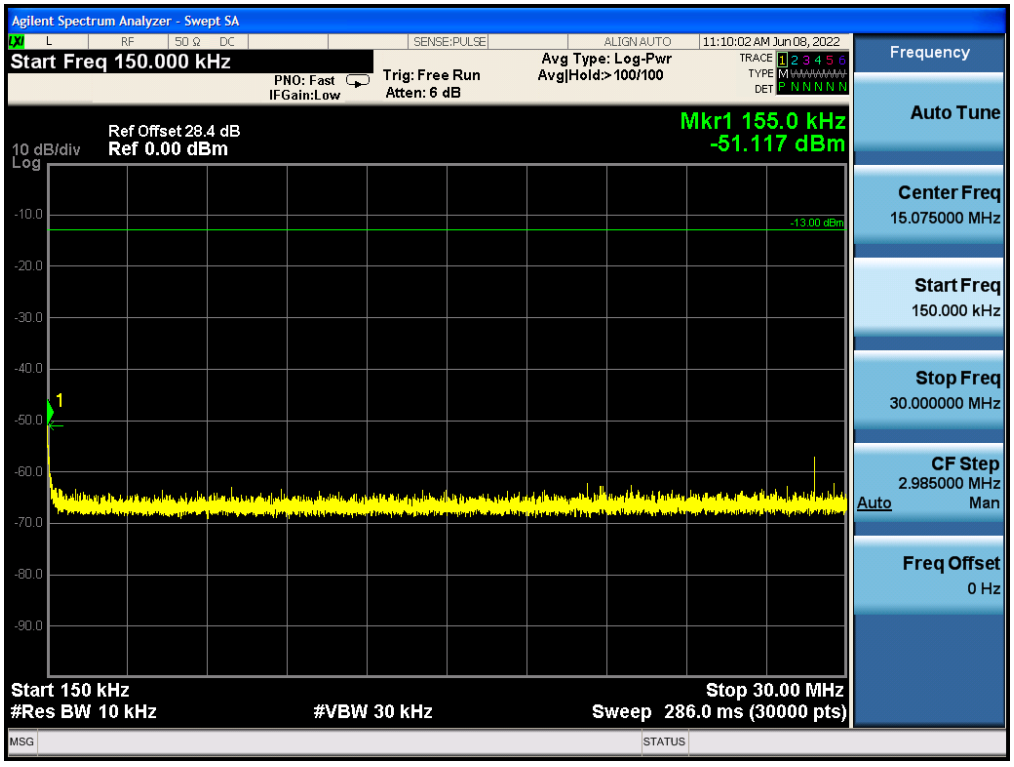
Note: The carrier power is the ref level, and The factor had been edited in the “Input Correction” of the Spectrum Analyzer.

Spurs Low channel

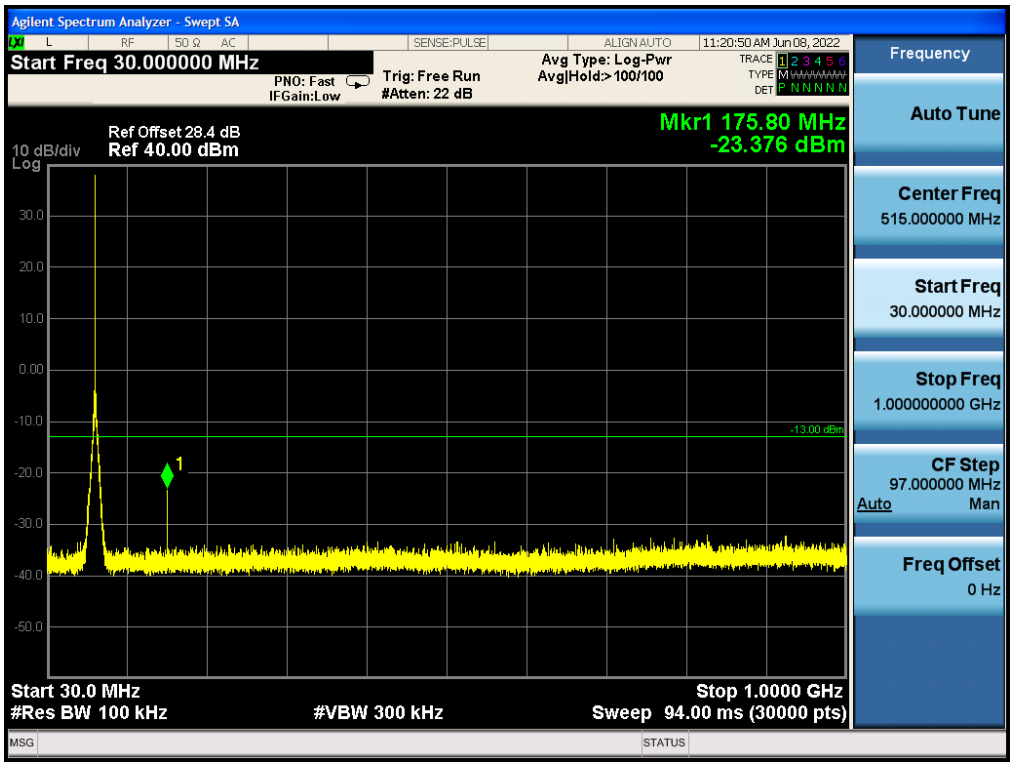
9KHz-150KHz



150KHz-30MHz



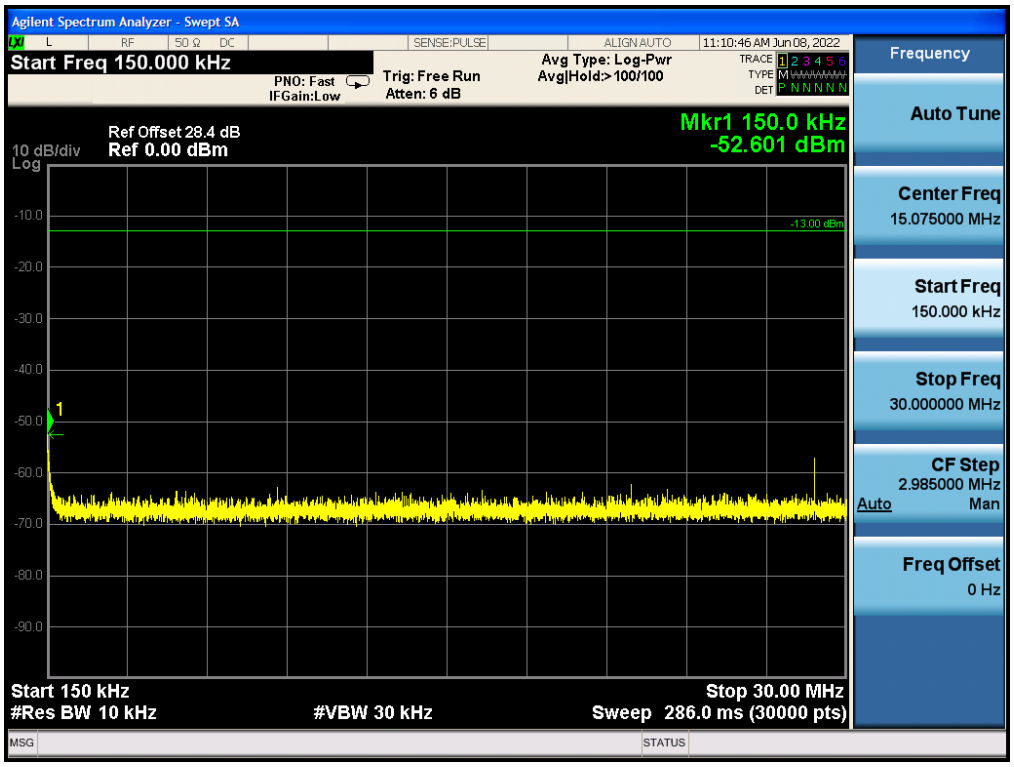
30MHz-1GHz



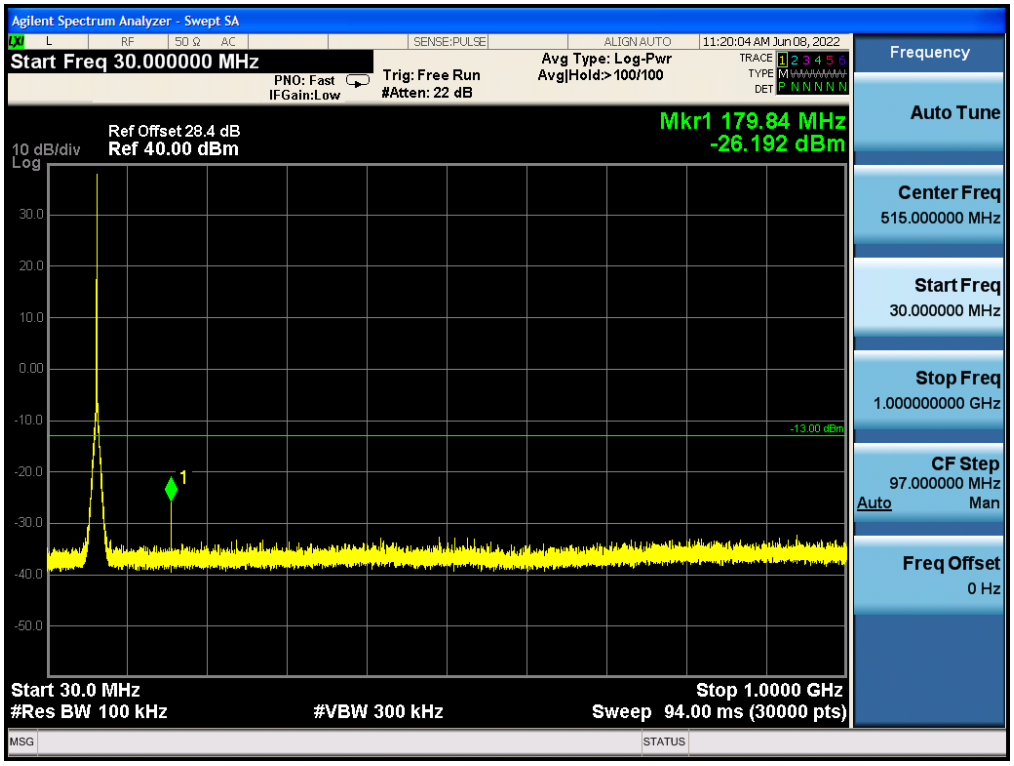
Spurs Middle channel

9KHz-150KHz

150KHz-30MHz

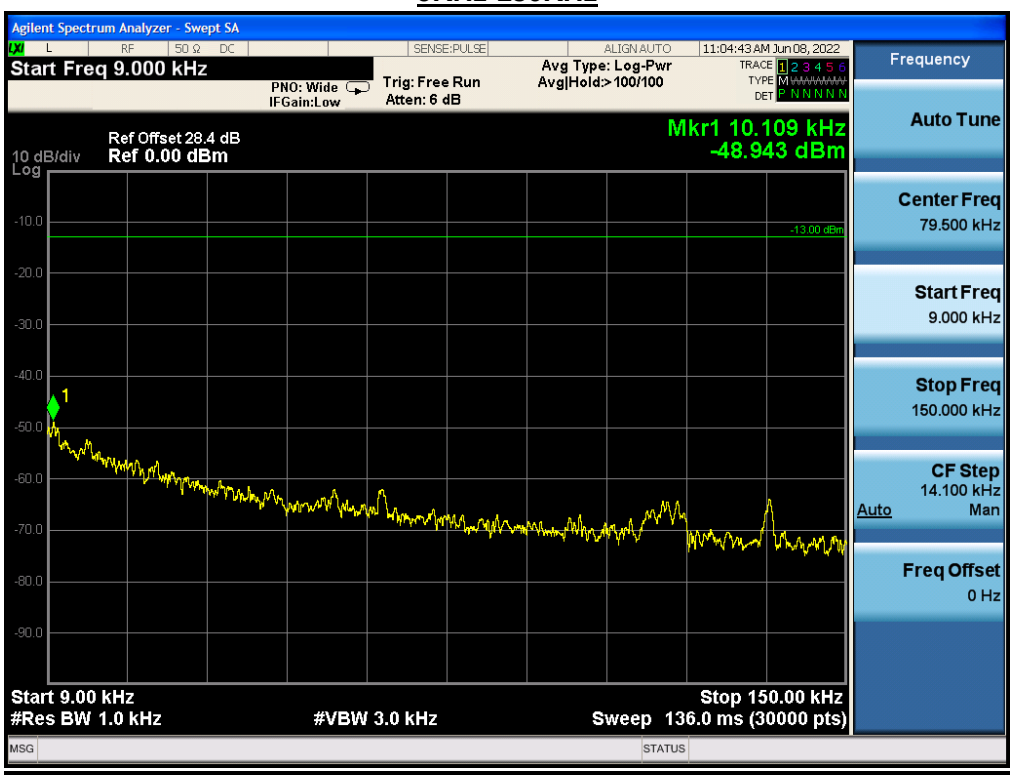


30MHz-1GHz

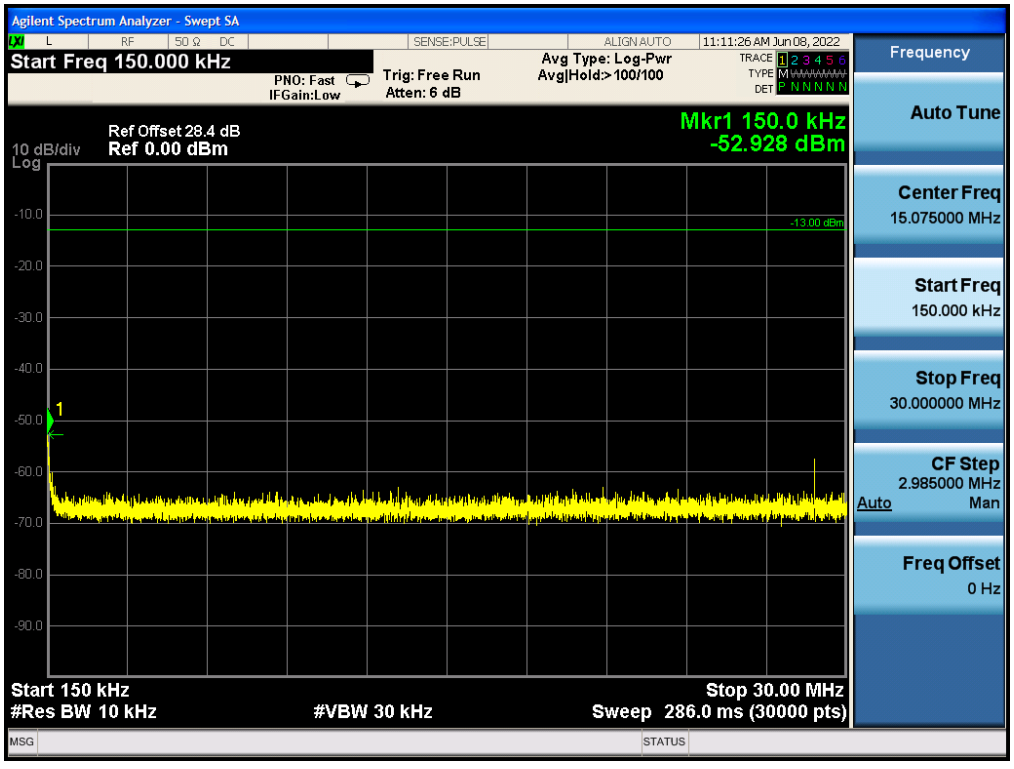


Spurs High channel

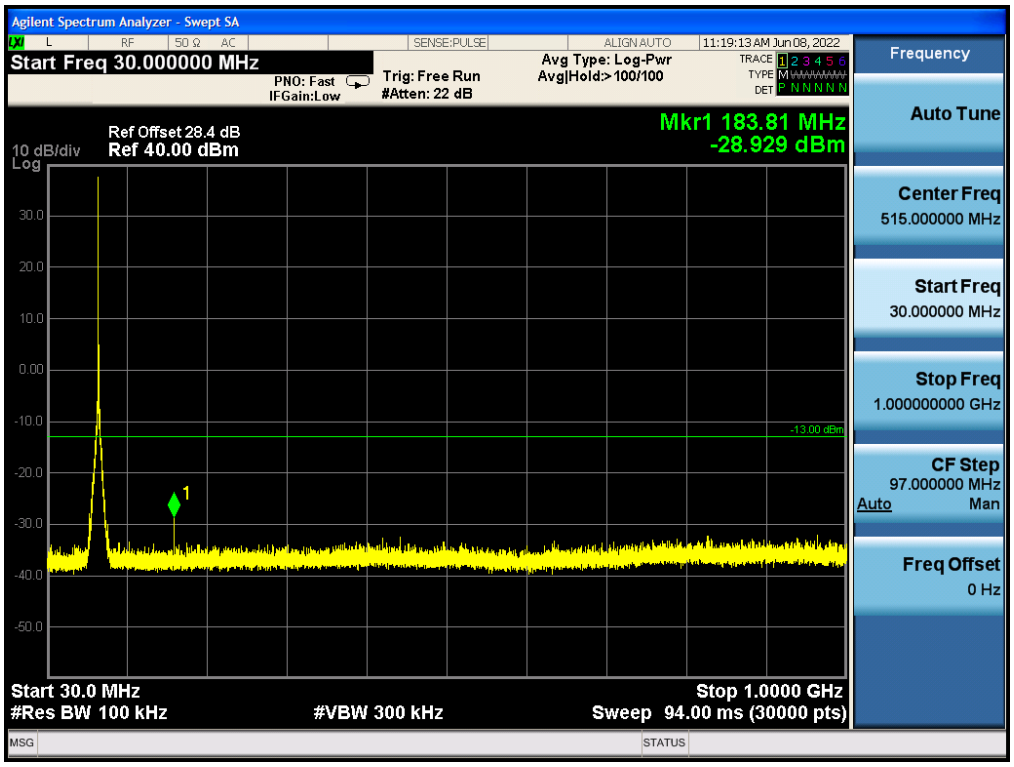
9KHz-150KHz



150KHz-30MHz



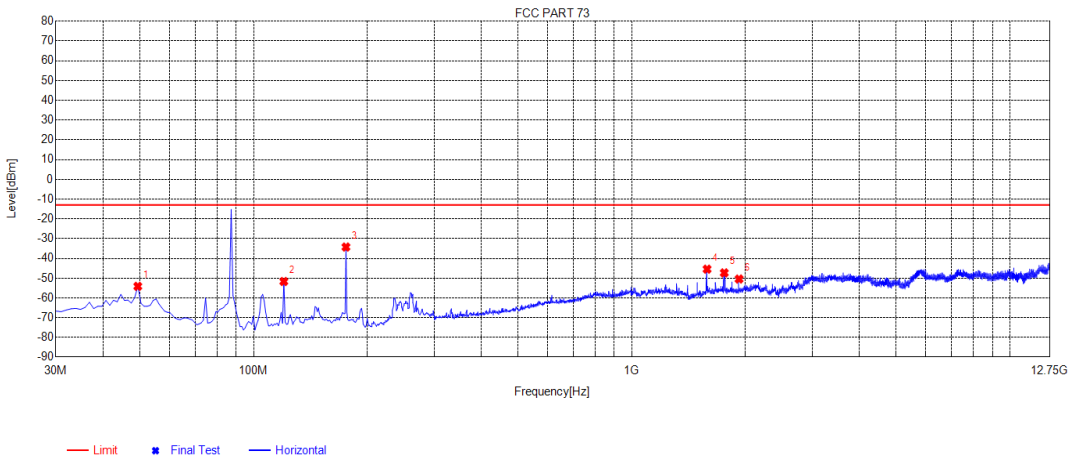
30MHz-1GHz



Note: The peak emissions without marker on the above plots are fundamental wave and need not to compare with the limit.

Radiated Spurious Emission Below 30MHz			
Test Mode	Mode 1&Mode 2&Mode 3	**Antenna**	Face&Side
The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.			

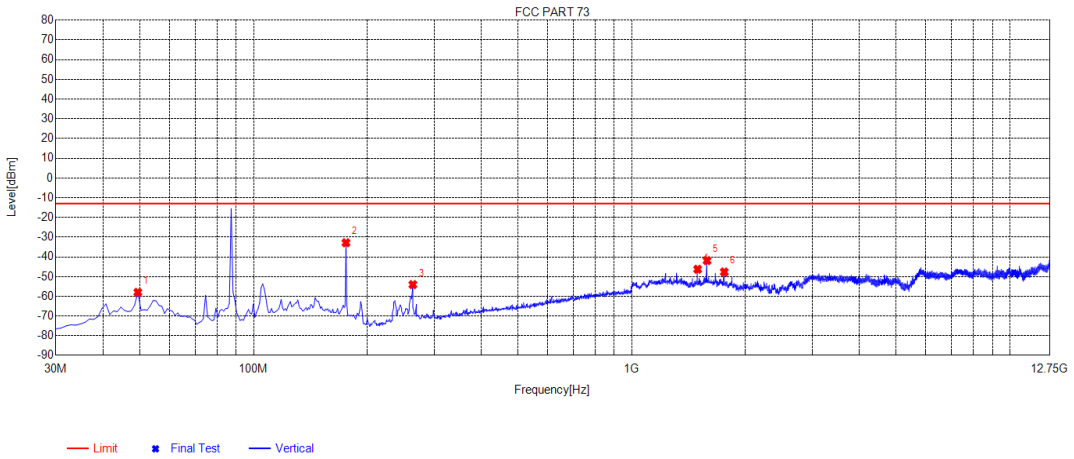
Radiated Spurious Emission from 30MHz to 12.75GHz			
Test Mode	Mode 1	**Antenna**	Horizontal



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	49.4	-87.88	-54.14	-13.00	41.14	33.74	1	Horizontal
2	120.21	-77.25	-51.69	-13.00	38.69	25.56	205	Horizontal
3	175.5	-63.76	-34.27	-13.00	21.27	29.49	136	Horizontal
4	1582.8583	-42.87	-45.46	-13.00	32.46	-2.59	283	Horizontal
5	1757.9508	-46.06	-47.34	-13.00	34.34	-1.28	60	Horizontal
6	1923.6424	-50.41	-50.45	-13.00	37.45	-0.04	188	Horizontal

RESULT: PASS

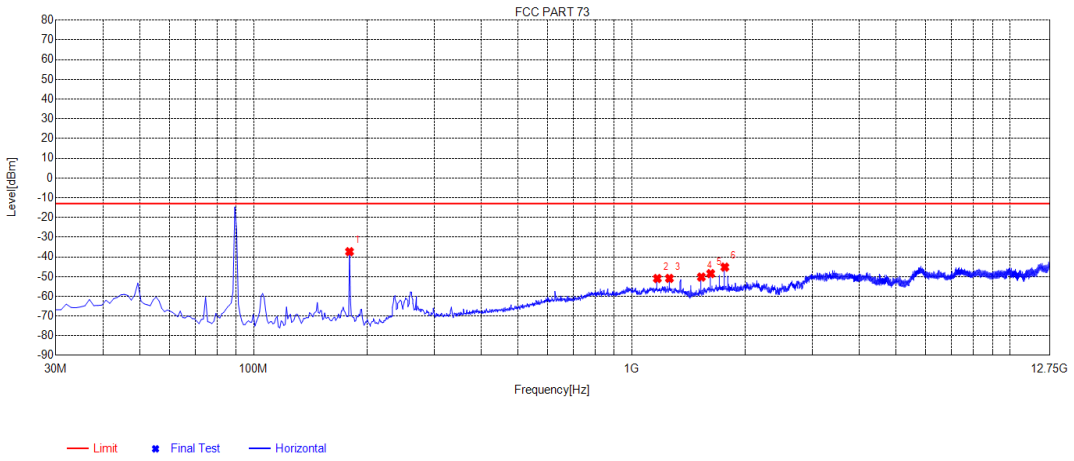
Radiated Spurious Emission from 30MHz to 12.75GHz			
Test Mode	Mode 1	**Antenna**	Vertical



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	49.4	-87.69	-57.98	-13.00	44.98	29.71	9	Vertical
2	175.5	-63.96	-32.86	-13.00	19.86	31.10	271	Vertical
3	263.77	-83.74	-54.07	-13.00	41.07	29.67	76	Vertical
4	1494.7245	-48.40	-46.28	-13.00	33.28	2.12	26	Vertical
5	1582.8583	-43.77	-41.90	-13.00	28.90	1.87	360	Vertical
6	1757.9508	-48.92	-47.66	-13.00	34.66	1.26	323	Vertical

RESULT: PASS

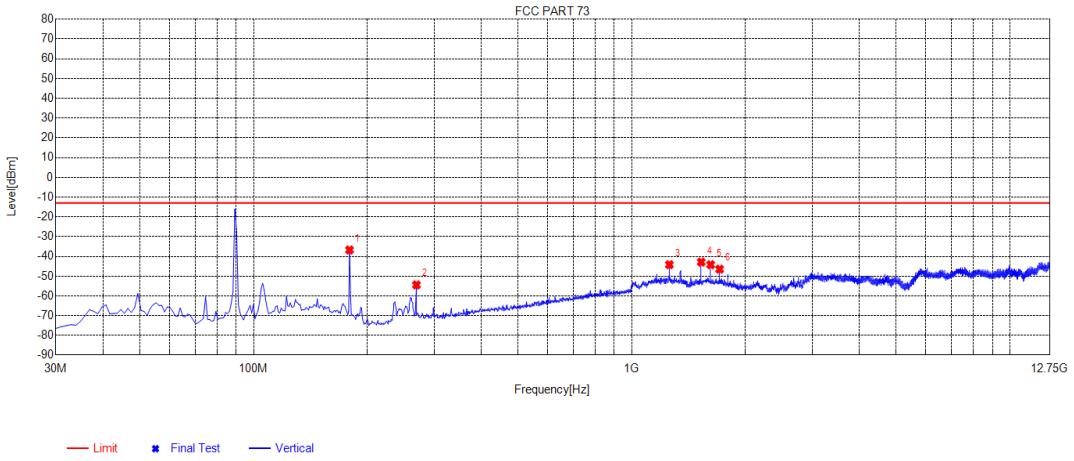
Radiated Spurious Emission from 30MHz to 12.75GHz			
Test Mode	Mode 2	**Antenna**	Horizontal



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	179.38	-66.90	-37.37	-13.00	24.37	29.53	145	Horizontal
2	1169.2169	-47.08	-50.98	-13.00	37.98	-3.90	111	Horizontal
3	1258.5259	-47.20	-50.92	-13.00	37.92	-3.72	2	Horizontal
4	1528.8029	-47.25	-50.24	-13.00	37.24	-2.99	248	Horizontal
5	1618.1118	-46.16	-48.49	-13.00	35.49	-2.33	60	Horizontal
6	1763.8264	-43.98	-45.22	-13.00	32.22	-1.24	351	Horizontal

RESULT: PASS

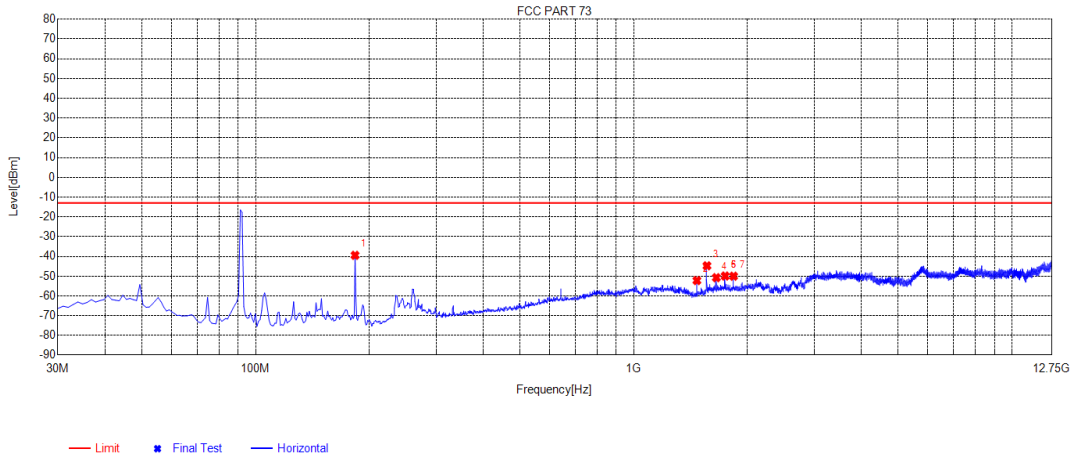
Radiated Spurious Emission from 30MHz to 12.75GHz			
Test Mode	Mode 2	**Antenna**	Vertical



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	179.38	-67.37	-36.75	-13.00	23.75	30.62	77	Vertical
2	269.59	-84.48	-54.43	-13.00	41.43	30.05	77	Vertical
3	1258.5259	-44.77	-44.21	-13.00	31.21	0.56	357	Vertical
4	1527.6278	-44.96	-42.90	-13.00	29.90	2.06	34	Vertical
5	1618.1118	-45.94	-44.19	-13.00	31.19	1.75	179	Vertical
6	1708.5959	-47.90	-46.47	-13.00	33.47	1.43	9	Vertical

RESULT: PASS

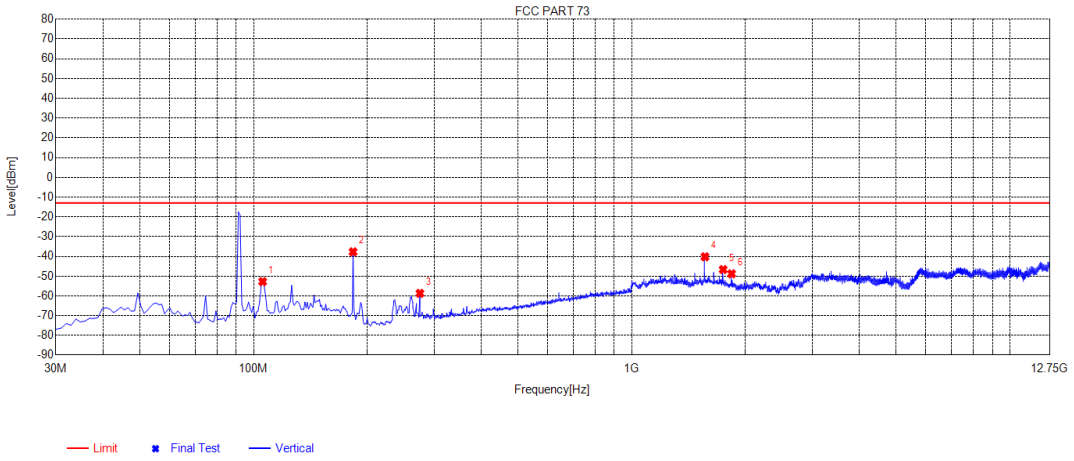
Radiated Spurious Emission from 30MHz to 12.75GHz			
Test Mode	Mode 3	**Antenna**	Horizontal



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	183.26	-68.57	-39.46	-13.00	26.46	29.11	130	Horizontal
2	1470.047	-48.96	-52.23	-13.00	39.23	-3.27	20	Horizontal
3	1562.8813	-42.03	-44.77	-13.00	31.77	-2.74	274	Horizontal
4	1654.5405	-48.72	-50.77	-13.00	37.77	-2.05	54	Horizontal
5	1746.1996	-48.57	-49.94	-13.00	36.94	-1.37	62	Horizontal
6	1746.1996	-48.57	-49.94	-13.00	36.94	-1.37	62	Horizontal
7	1837.8588	-49.35	-50.03	-13.00	37.03	-0.68	11	Horizontal

RESULT: PASS

Radiated Spurious Emission from 30MHz to 12.75GHz			
Test Mode	Mode 3	**Antenna**	Vertical



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	105.66	-83.12	-52.78	-13.00	39.78	30.34	204	Vertical
2	183.26	-67.66	-37.70	-13.00	24.70	29.96	85	Vertical
3	275.41	-89.15	-58.72	-13.00	45.72	30.43	85	Vertical
4	1562.8813	-42.14	-40.20	-13.00	27.20	1.94	26	Vertical
5	1746.1996	-47.97	-46.67	-13.00	33.67	1.30	324	Vertical
6	1837.8588	-49.80	-48.82	-13.00	35.82	0.98	290	Vertical

RESULT: PASS

Note：1.Factor=Antenna Factor + Cable loss, Margin=Limit-Level.

2.The “Factor” value can be calculated automatically by software of measurement system.

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

Refer to the Report No.: AGC13459220401AP01

APPENDIX B: PHOTOGRAPHS OF EUT

Refer to the Report No.: AGC13459220401AP02

----END OF REPORT----

Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd. (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").
2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3.The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.