

TEST REPORT

Applicant: Nuvvyo Inc.

Address of Applicant: 555 Legget Drive Tower B Suite 836 Kanata, ON K2K2X3, Canada

Manufacturer: Nuvvyo Inc.

Address of Manufacturer: 555 Legget Drive Tower B Suite 836 Kanata, ON K2K2X3, Canada

Factory: Shenzhen Giec Digital Co., Ltd

Address of Factory: 1st&3rd Building, No.26 Puzai Road, Pingdi, Longgang District, Shenzhen, China

Equipment Under Test (EUT)

Product Name: OTA streamer

Model No.: TF1282B-02-CN,TF1282B-AN-02-CN

FCC ID: 2AOR7-TABLO040

Applicable standards: FCC CFR Title 47 Part 15 Subpart E Section 15.407

Date of sample receipt: December 06, 2023

Date of Test: December 06-08, 2023

Date of report issued: December 11, 2023

Test Result : PASS *

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

Authorized Signature:

A red circular stamp with a star in the center. The text around the star reads "Global United Technology Services Co., Ltd." and "检验检测专用章" (Inspection and Testing Special Seal). Below the star, it says "Inspection/Testing Services".

Robinson Luo

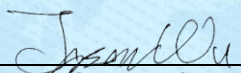
Laboratory Manager

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

2 Version

Report No.	Version No.	Date	Description
GTS2023090109F04	00	September 22, 2023	Original
GTS2023120033F04	01	December 11, 2023	Class II permissive change

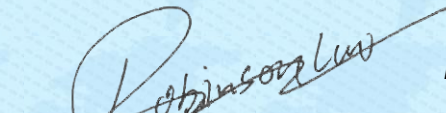
Prepared By:


Project Engineer

Date:

December 11, 2023

Check By:


Reviewer

Date:

December 11, 2023

3 Contents

	Page
1 COVER PAGE	1
2 VERSION	2
3 CONTENTS	3
4 TEST SUMMARY	4
4.1 MEASUREMENT UNCERTAINTY	4
5 GENERAL INFORMATION	5
5.1 GENERAL DESCRIPTION OF EUT	5
5.2 TEST MODE	7
5.3 DESCRIPTION OF SUPPORT UNITS	7
5.4 TEST FACILITY	7
5.5 TEST LOCATION	7
5.6 ADDITIONAL INSTRUCTIONS	7
6 TEST INSTRUMENTS LIST	8
7 TEST RESULTS AND MEASUREMENT DATA	10
7.1 ANTENNA REQUIREMENT	10
7.2 AUTOMATICALLY DISCONTINUE TRANSMISSION:	10
7.3 CONDUCTED EMISSIONS	11
7.4 SPURIOUS EMISSION	14
7.4.1 Radiated Emission Method	14
8 TEST SETUP PHOTO	23
9 EUT CONSTRUCTIONAL DETAILS	23

4 Test Summary

Test Item	Section	Result
Antenna requirement	FCC part 15.203	Pass
AC Power Line Conducted Emission	FCC part 15.207	Pass
Maximum Conducted Output Power	FCC part 15.407(a)(3)	N/A
Channel Bandwidth and 99% Occupied Bandwidth	FCC part 15.407(e)	N/A
Power Spectral Density	FCC part 15.407(a)(3)	N/A
Band Edge	FCC part 15.407(b)(4)	N/A
Spurious Emission	FCC part 15.205/15.209/15.407(b)(4)	Pass
Frequency Stability	FCC part 15.407(g)	N/A
Non-Transmit & Software Protection	FCC part 15.407(c)	PASS

Remarks:

1. Pass: The EUT complies with the essential requirements in the standard.
2. N/A: Not applicable. This's a Class II permissive change report, all of the changes are not effect to the RF performance, function and power. So the RF conducted test data directly reference the original report number GTS2023090109F04.
3. Test according to ANSI C63.10:2013.

4.1 Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	9kHz-30MHz	3.1dB	(1)
Radiated Emission	30MHz-200MHz	3.8039dB	(1)
Radiated Emission	200MHz-1GHz	3.9679dB	(1)
Radiated Emission	1GHz-18GHz	4.29dB	(1)
Radiated Emission	18GHz-40GHz	3.30dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	3.44dB	(1)

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

5 General Information

5.1 General Description of EUT

Product Name:	OTA streamer
Model No.:	TF1282B-02-CN,TF1282B-AN-02-CN
Test Model No.:	TF1282B-AN-02-CN
Remark:All above models are identical in the same PCB layout, interior structure and electrical circuits. The difference is the accessories.	
Test sample(s) ID:	GTS2023120033-1
Sample(s) Status:	Engineer sample
S/N:	5087B8529BC6
Operation Frequency:	802.11a/802.11n(HT20)/802.11ac(HT20): 5745MHz ~ 5825MHz 802.11n(HT40)/ 802.11ac(HT40): 5755MHz ~ 5795MHz 802.11ac(HT80): 5775MHz
Channel numbers:	802.11a/802.11n(HT20)/802.11ac(HT20): 5 802.11n(HT40)/ 802.11ac(HT40): 2 802.11ac(HT80): 1
Channel bandwidth:	802.11a/802.11n(HT20)/802.11ac(HT20): 20MHz 802.11n(HT40)/802.11ac(HT40): 40MHz 802.11ac(HT80): 80MHz
Modulation technology:	Orthogonal Frequency Division Multiplexing (OFDM)
Antenna Type:	Integral Antenna
Antenna gain:	ANT 1: 1.58dBi ANT 2: 2.18dBi
Power supply:	AC ADAPTER 1 MODEL: TEKA-TC120150US INPUT: AC 100-240V, 50/60Hz, 0.5A MAX OUTPUT: DC 12.0V, 1.5A AC ADAPTER 2 MODEL: JYSY1588-1201500U INPUT: AC 100-240V, 50/60Hz, 0.5A MAX OUTPUT: DC 12.0V, 1.5A

Remark:

1. Antenna gain information provided by the customer
2. The relevant information of the sample is provided by the entrusting company, and the laboratory is not responsible for its authenticity.
3. All 2 adapters were tested and passed, only report the worst case adapter 1.

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745MHz	151	5755MHz	153	5765MHz	155	5775MHz
157	5785MHz	159	5795MHz	161	5805MHz	163	5815MHz
165	5825MHz						

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Test channel	Frequency (MHz)		
	802.11 a/n/ac(HT20)	802.11 n/ac(HT40)	802.11ac(HT80)
Lowest channel	5745	5755	
Middle channel	5785		5775
Highest channel	5825	5795	

5.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode
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We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

Mode	Data rate	Mode	Data rate
802.11a	6Mbps	802.11n/ac(HT40)	13Mbps
802.11n/ac(HT20)	6.5Mbps	802.11ac(HT80)	29.3Mbps

5.3 Description of Support Units

None.

5.4 Test Facility

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

- **FCC —Registration No.: 381383**

Designation Number: CN5029

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files.

- **ISED —Registration No.: 9079A**

CAB identifier: CN0091

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of ISED for radio equipment testing.

- **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Tel: 0755-27798480

Fax: 0755-27798960

5.6 Additional Instructions

Test Software	test command provided by manufacturer
Power level setup	Default

6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	June 23, 2021	June 22, 2024
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	April 14, 2023	April 13, 2024
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	GTS640	March 19, 2023	March 18, 2025
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	April 17, 2023	April 16, 2025
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
7	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	April 14, 2023	April 13, 2024
8	Loop Antenna	ZHINAN	ZN30900A	GTS534	Nov. 13, 2023	Nov.12, 2024
9	Broadband Preamplifier	SCHWARZBECK	BBV9718	GTS535	April 14, 2023	April 13, 2024
10	Amplifier(1GHz-26.5GHz)	HP	8449B	GTS601	April 14, 2023	April 13, 2024
11	Horn Antenna (18-26.5GHz)	/	UG-598A/U	GTS664	Oct. 29, 2023	Oct. 28, 2024
12	Horn Antenna (26.5-40GHz)	A.H Systems	SAS-573	GTS665	Oct. 29, 2023	Oct. 28, 2024
13	FSV·Signal Analyzer (10Hz-40GHz)	Keysight	FSV-40-N	GTS666	March 13, 2023	March 12, 2024
14	Amplifier	/	LNA-1000-30S	GTS650	April 14, 2023	April 13, 2024
15	CDNE M2+M3-16A	HCT	30MHz-300MHz	GTS692	Nov. 08, 2023	Nov.07, 2024
16	Wideband Amplifier	/	WDA-01004000-15P35	GTS602	April 14, 2023	April 13, 2024
17	Thermo meter	JINCHUANG	GSP-8A	GTS643	April 19, 2023	April 18, 2024
18	RE cable 1	GTS	N/A	GTS675	July 31. 2023	July 30, 2024
19	RE cable 2	GTS	N/A	GTS676	July 31. 2023	July 30, 2024
20	RE cable 3	GTS	N/A	GTS677	July 31. 2023	July 30, 2024
21	RE cable 4	GTS	N/A	GTS678	July 31. 2023	July 30, 2024
22	RE cable 5	GTS	N/A	GTS679	July 31. 2023	July 30, 2024
23	RE cable 6	GTS	N/A	GTS680	July 31. 2023	July 30, 2024
24	RE cable 7	GTS	N/A	GTS681	July 31. 2023	July 30, 2024
25	RE cable 8	GTS	N/A	GTS682	July 31. 2023	July 30, 2024

Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	July 12, 2022	July 11, 2027
2	EMI Test Receiver	R&S	ESCI 7	GTS552	April 14, 2023	April 13, 2024
3	LISN	ROHDE & SCHWARZ	ENV216	GTS226	April 14, 2023	April 13, 2024
4	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A
5	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
6	Thermo meter	JINCHUANG	GSP-8A	GTS642	April 19, 2023	April 18, 2024
7	Absorbing clamp	Elektronik-Feinmechanik	MDS21	GTS229	April 14, 2023	April 13, 2024
8	ISN	SCHWARZBECK	NTFM 8158	GTS565	April 14, 2023	April 13, 2024
9	High voltage probe	SCHWARZBECK	TK9420	GTS537	April 14, 2023	April 13, 2024
10	Antenna end assembly	Weinschel	1870A	GTS560	April 14, 2023	April 13, 2024

General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Barometer	KUMAO	SF132	GTS647	April 19, 2023	April 18, 2024

7 Test results and Measurement Data

7.1 Antenna requirement

Standard requirement:	FCC Part15 C Section 15.203
<i>15.203 requirement:</i> 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.	
E.U.T Antenna:	
The antenna is integral antenna, reference to the appendix II for details	

7.2 Automatically discontinue transmission:

Standard requirement:	FCC Part 15 Subpart E Section 15.407(c)
The applicant declare that the device (FCC Part 15 Subpart E Section 15.407) shall automatically discontinue transmission in cases of absence of information to transmit, or operational failure.	

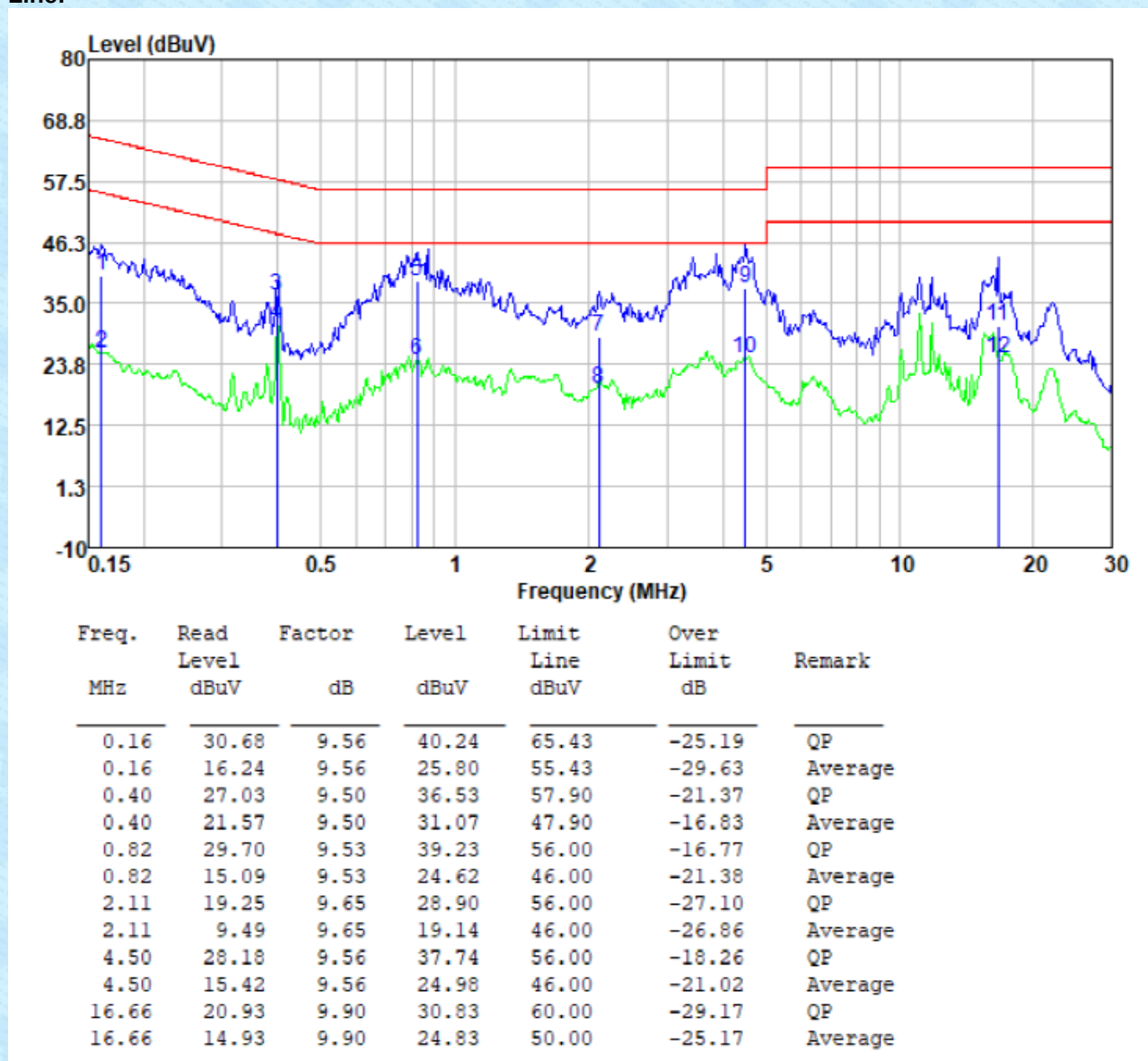
7.3 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207					
Test Method:	ANSI C63.10					
Test Frequency Range:	150KHz to 30MHz					
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto					
Limit:	Frequency range (MHz)		Limit (dBuV)			
			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.						
Test setup:	Reference Plane <i>Remark</i> E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m					
Test procedure:	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. 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.					
Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar
Test voltage:	AC 120V, 60Hz					
Test results:	Pass					

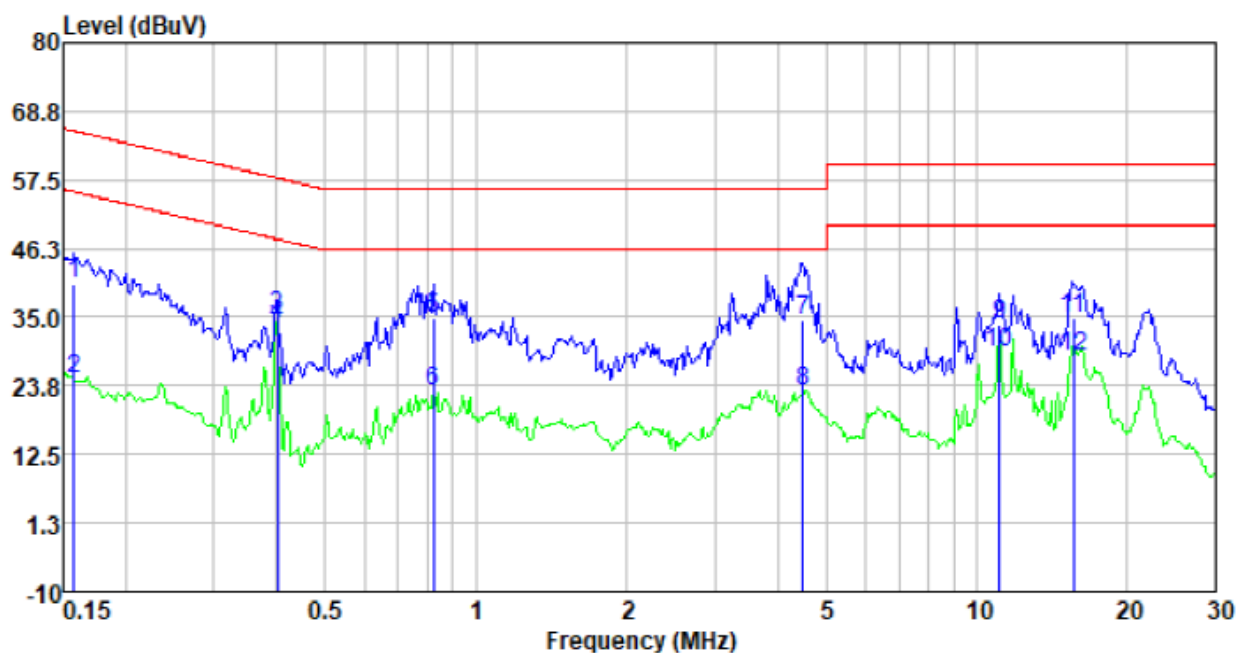
Measurement data

Pre-scan all test modes, found worst case at ANT 1 802.11a 5745MHz, and so only show the test result of it.

Line:



Neutral:

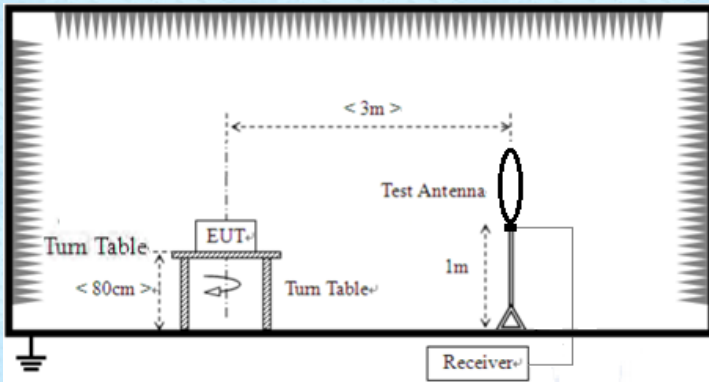


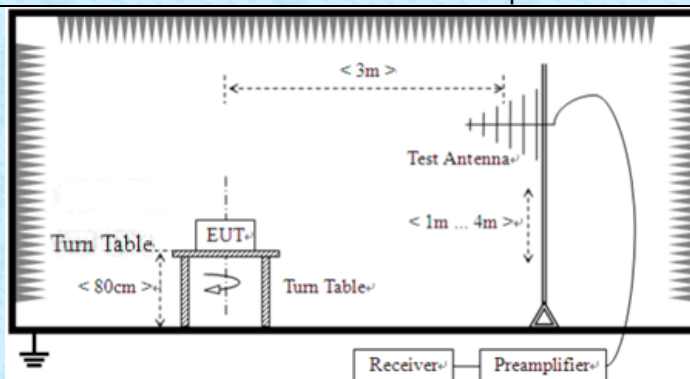
Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss
4. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.

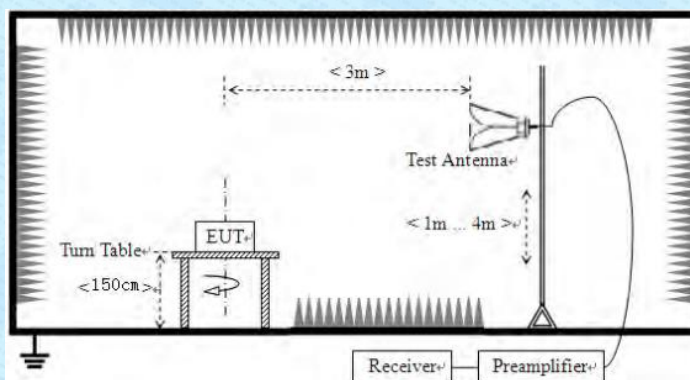
7.4 Spurious Emission

7.4.1 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209, Part 15E Section 15.407(b)(4)																												
Test Method:	ANSI C63.10:2013																												
Test Frequency Range:	9kHz to 40GHz																												
Test site:	Measurement Distance: 3m																												
Receiver setup:	Frequency	Detector	RBW	VBW	Value																								
	9kHz-150KHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value																								
	150kHz-30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value																								
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value																								
	Above 1GHz	Peak	1MHz	3MHz	Peak Value																								
AV		1MHz	3MHz	Average Value																									
Limit:	<table><tr><th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr><tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr><tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr><tr><td>1.705-30.0</td><td>30</td><td>30</td></tr><tr><td>30-88</td><td>100**</td><td>3</td></tr><tr><td>88-216</td><td>150**</td><td>3</td></tr><tr><td>216-960</td><td>200**</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>3</td></tr></table>					Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)	0.009-0.490	2400/F(kHz)	300	0.490-1.705	24000/F(kHz)	30	1.705-30.0	30	30	30-88	100**	3	88-216	150**	3	216-960	200**	3	Above 960	500	3
	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)																										
0.009-0.490	2400/F(kHz)	300																											
0.490-1.705	24000/F(kHz)	30																											
1.705-30.0	30	30																											
30-88	100**	3																											
88-216	150**	3																											
216-960	200**	3																											
Above 960	500	3																											
	The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.																												
Test setup:	For radiated emissions from 9kHz to 30MHz  For radiated emissions from 30MHz to 1GHz																												



For radiated emissions above 1GHz



Test Procedure:

1. The EUT was placed on the top of a rotating table (0.8m for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. 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.
4. 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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. 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 average method as specified and then reported in a data sheet.
7. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.

Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar
Test voltage:	AC 120V, 60Hz					
Test results:	Pass					

Remarks:

1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.
2. Both 2 antennas were tested and compliance, only worst condition(ANT 1) report.

Measurement Data:

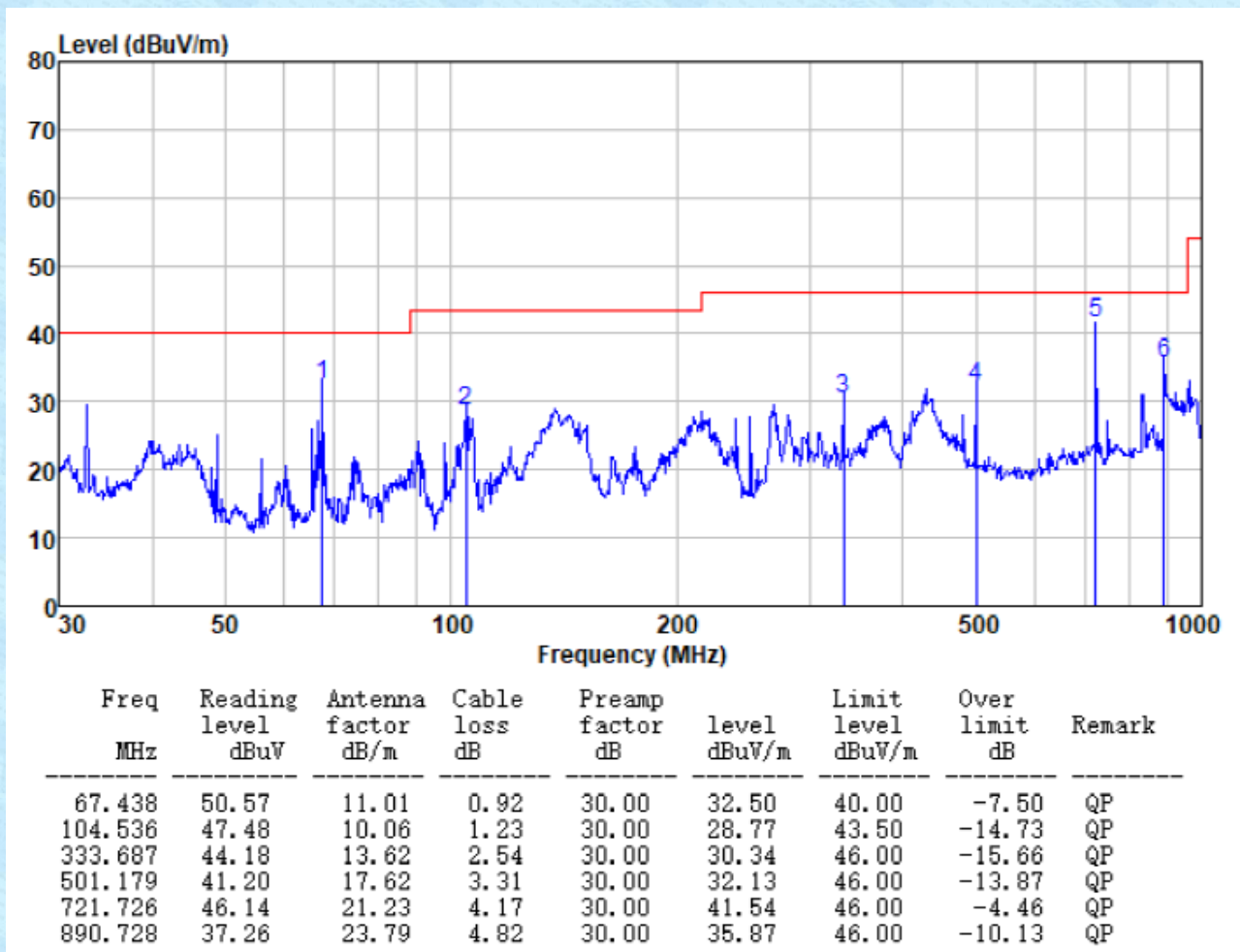
9 kHz ~ 30 MHz

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

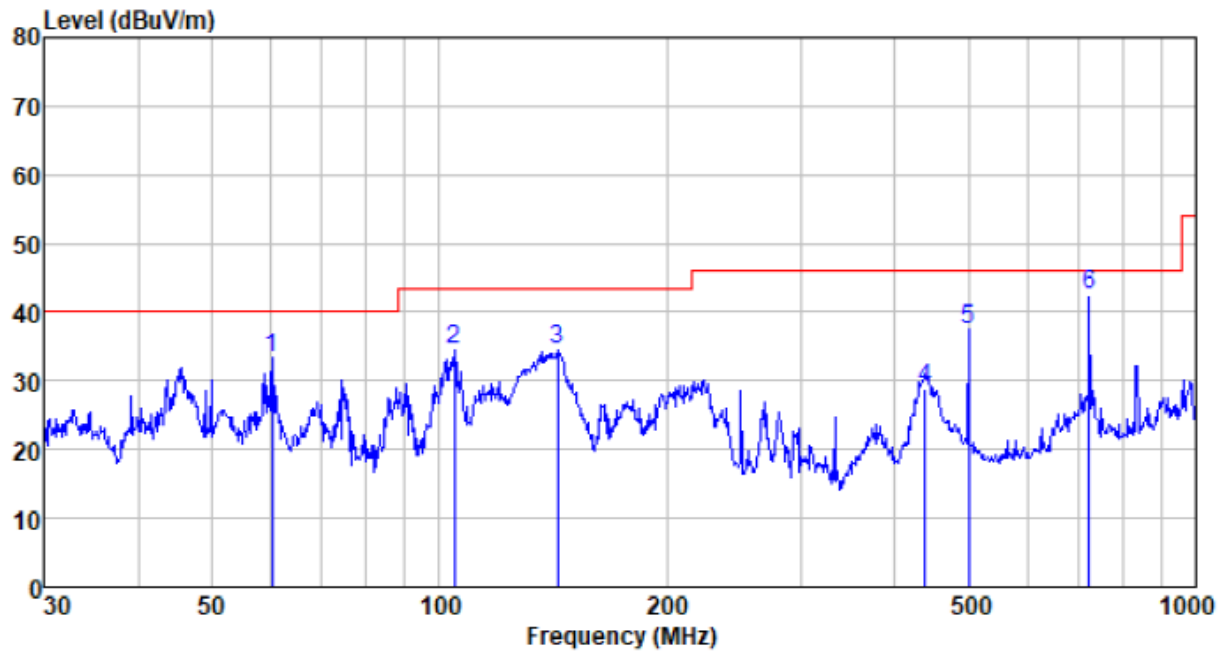
Below 1GHz

Pre-scan all test modes, found worst case at 802.11a 5745MHz(ANT 1), and so only show the test result of it.

Horizontal:



Vertical:



Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
60.069	49.97	12.58	0.86	30.00	33.41	40.00	-6.59	QP
104.536	53.18	10.06	1.23	30.00	34.47	43.50	-9.03	QP
143.326	50.51	12.44	1.53	30.00	34.48	43.50	-9.02	QP
438.655	39.38	16.49	3.04	30.00	28.91	46.00	-17.09	QP
501.179	46.67	17.62	3.31	30.00	37.60	46.00	-8.40	QP
721.726	47.16	21.23	4.17	30.00	42.56	46.00	-3.44	QP

Above 1GHz:

802.11a					Test Frequency: 5745MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11490	29.18	39.40	8.73	36.30	41.01	68.20	-27.19	Horizontal
17235	29.52	41.00	11.37	36.28	45.61	68.20	-22.59	Horizontal
11490	30.31	39.40	8.73	36.30	42.14	68.20	-26.06	Vertical
17235	28.56	41.00	11.37	36.28	44.65	68.20	-23.55	Vertical

802.11a					Test Frequency: 5785MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11570	27.38	39.28	8.77	36.29	39.14	68.20	-29.06	Horizontal
17355	31.04	41.52	11.48	36.26	47.78	68.20	-20.42	Horizontal
11570	31.59	39.28	8.77	36.29	43.35	68.20	-24.85	Vertical
17355	26.04	41.52	11.48	36.26	42.78	68.20	-25.42	Vertical

802.11a					Test Frequency: 5825MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11650	31.07	39.16	8.79	36.27	42.67	68.20	-25.53	Horizontal
17475	26.71	42.30	11.58	36.25	44.20	68.20	-24	Horizontal
11650	29.87	39.16	8.79	36.27	41.46	68.20	-26.74	Vertical
17475	26.48	42.30	11.58	36.25	44.04	68.20	-24.16	Vertical

802.11n(HT20)					Test Frequency: 5745MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11490	32.63	39.40	8.73	36.30	44.32	68.20	-23.88	Horizontal
17235	29.82	41.00	11.37	36.28	45.82	68.20	-22.38	Horizontal
11490	27.45	39.40	8.73	36.30	39.21	68.20	-28.99	Vertical
17235	31.02	41.00	11.37	36.28	46.99	68.20	-21.21	Vertical

802.11n(HT20)					Test Frequency: 5785MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11570	32.65	39.28	8.77	36.29	45.33	68.20	-22.87	Horizontal
17355	30.10	41.52	11.48	36.26	46.78	68.20	-21.42	Horizontal
11570	32.50	39.28	8.77	36.29	45.13	68.20	-23.07	Vertical
17355	26.09	41.52	11.48	36.26	42.74	68.20	-25.46	Vertical

802.11n(HT20)					Test Frequency: 5825MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11650	32.94	39.16	8.79	36.27	44.56	68.20	-23.64	Horizontal
17475	30.42	42.30	11.58	36.25	47.94	68.20	-20.26	Horizontal
11650	30.39	39.16	8.79	36.27	41.99	68.20	-26.21	Vertical
17475	29.93	42.30	11.58	36.25	47.50	68.20	-20.7	Vertical

802.11n(HT40)					Test Frequency: 5755MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11510	28.34	39.40	8.74	36.30	39.93	68.20	-28.27	Horizontal
17265	27.90	41.26	11.40	36.27	44.13	68.20	-24.07	Horizontal
11510	31.14	39.40	8.74	36.30	42.87	68.20	-25.33	Vertical
17265	25.80	41.26	11.40	36.27	41.98	68.20	-26.22	Vertical

802.11n(HT40)					Test Frequency: 5795MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11590	31.02	39.22	8.77	36.28	42.59	68.20	-25.61	Horizontal
17385	27.79	41.78	11.51	36.26	44.72	68.20	-23.48	Horizontal
11590	30.50	39.22	8.77	36.28	41.98	68.20	-26.22	Vertical
17385	29.28	41.78	11.51	36.26	46.16	68.20	-22.04	Vertical

802.11ac(HT20)					Test Frequency: 5745MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11490	30.63	39.40	8.73	36.30	42.35	68.20	-25.85	Horizontal
17235	27.78	41.00	11.37	36.28	43.67	68.20	-24.53	Horizontal
11490	29.95	39.40	8.73	36.30	41.65	68.20	-26.55	Vertical
17235	30.71	41.00	11.37	36.28	46.70	68.20	-21.5	Vertical

802.11ac(HT20)					Test Frequency: 5785MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11570	30.24	39.28	8.77	36.29	41.90	68.20	-26.3	Horizontal
17355	27.74	41.52	11.48	36.26	44.45	68.20	-23.75	Horizontal
11570	27.62	39.28	8.77	36.29	39.36	68.20	-28.84	Vertical
17355	30.88	41.52	11.48	36.26	47.52	68.20	-20.68	Vertical

802.11ac(HT20)					Test Frequency: 5825MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11650	31.08	39.16	8.79	36.27	42.74	68.20	-25.46	Horizontal
17475	28.96	42.30	11.58	36.25	46.57	68.20	-21.63	Horizontal
11650	27.74	39.16	8.79	36.27	39.41	68.20	-28.79	Vertical
17475	25.87	42.30	11.58	36.25	43.48	68.20	-24.72	Vertical

802.11ac(HT40)					Test Frequency: 5755MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11510	27.46	39.40	8.74	36.30	39.05	68.20	-29.15	Horizontal
17265	30.03	41.26	11.40	36.27	46.26	68.20	-21.94	Horizontal
11510	33.13	39.40	8.74	36.30	44.86	68.20	-23.34	Vertical
17265	30.75	41.26	11.40	36.27	46.93	68.20	-21.27	Vertical

802.11ac(HT40)					Test Frequency: 5795MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11590	33.68	39.22	8.77	36.28	45.29	68.20	-22.91	Horizontal
17385	25.55	41.78	11.51	36.26	42.56	68.20	-25.64	Horizontal
11590	30.65	39.22	8.77	36.28	42.35	68.20	-25.85	Vertical
17385	26.68	41.78	11.51	36.26	43.70	68.20	-24.5	Vertical

802.11ac(HT80)					Test Frequency: 5775MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11550	28.40	39.34	8.76	36.29	40.17	68.20	-28.03	Horizontal
17325	27.77	41.52	11.45	36.26	44.45	68.20	-23.75	Horizontal
11550	27.73	39.34	8.76	36.29	39.52	68.20	-28.68	Vertical
17325	25.74	41.52	11.45	36.26	42.41	68.20	-25.79	Vertical

Notes:

1. Measure Level = Reading Level + Factor.
2. The test trace is same as the ambient noise (the test frequency range: 18GHz~40GHz), therefore no data appear in the report.
3. The test result on peak is lower than average limit, then average measurement needn't be performed.

8 Test Setup Photo

Reference to the **appendix I** for details.

9 EUT Constructional Details

Reference to the **appendix II** for details.

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