



FCC REPORT

Applicant: ShenZhen AFU Intelligent Internet Technology Co., Ltd.

Address of Applicant: 808A, No. 3101, Qianhai Road, Xinghai Mingcheng Community, Nantou Street, Nanshan District, ShenZhen

Equipment Under Test (EUT)

Product Name: Pet training system collar unit

Model No.: AFU-WOH-0002B

FCC ID: 2AWT J-AFU-WOH-0002B

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.231 (e)

Date of sample receipt: 04 Jan., 2021

Date of Test: 04 Jan., 2021- 15 Jan., 2021

Date of report issue: 28 Jan., 2021

Test Result: PASS*

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

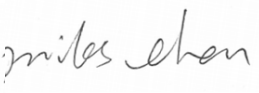
This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the JYT product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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2 Version

Version No.	Date	Description
00	01 Dec., 2020	Original

Prepared By: 
Test Engineer

Date: 28 Jan., 2021

Reviewed by: 
Project Engineer

Date: 28 Jan., 2021

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4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
Field strength of the fundamental signal	15.231 (e)	Pass
Spurious emissions	15.231 (b)/15.209	Pass
20dB Bandwidth	15.231(c)	Pass
Duration Time	15.231 (e)	Pass
Conducted Emission	15.207	Pass
Remarks: <i>1. Pass: The EUT complies with the essential requirements in the standard.</i> <i>2. N/A: The EUT not applicable of the test item.</i> <i>3. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).</i>		
Test Method:	ANSI C63.4-2014 ANSI C63.10-2013	

5 General Information

5.1 Client Information

Applicant:	ShenZhen AFU Intelligent Internet Technology Co., Ltd.
Address:	808A, No. 3101, Qianhai Road, Xinghai Mingcheng Community, Nantou Street, Nanshan District, ShenZhen
Manufacturer:	The same as applicant
Address:	The same as applicant

5.2 General Description of E.U.T.

Product Name:	Pet training system collar unit
Model No.:	AFU-WOH-0002B
Hardware version:	AFU-WOH_0002-J_VER4.0
Software version:	V1.0
Mode:	Transmitting and Receiving
Operation Frequency:	433.59MHz
Channel numbers:	1
Modulation type:	FSK
Antenna Type:	External FPC antenna
Antenna gain:	0dBi
Power supply:	DC 3.7V
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

5.3 Test mode

Test mode:	TM1: Keep the EUT in transmitting mode with modulation, TM2: Charging.		
Pre-Test Mode:			
JTY has verified the construction and function in typical operation, The EUT was placed on three different polar directions;i.e. X axis, Y axis, Z axis. which was shown in this test report and defined as follows:			
Axis	X	Y	Z
Field Strength(dBuV/m)	65.69	65.38	65.47
Final Test Mode:			
According to ANSI C63.4 standards, the test results are both the “worst case” and “worst setup”: X axis (see the test setup photo)			

5.4 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
Yada	Adapter	A1443	—	—

5.5 Measurement Uncertainty

Parameters	Expanded Uncertainty
Radiated Emission (150kHz ~ 30MHz)	±2.20 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.40 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.20 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±4.80 dB (k=2)

5.6 Additions to, deviations, or exclusions from the method

No

5.7 Laboratory Facility

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

● **FCC - Designation No.: CN1279**

Jianyan Testing Group Co., Ltd., has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 892155.

● **ISED – CAB identifier.: CN0102**

Jianyan Testing Group Co., Ltd. has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements with ISED#:26114.

● **A2LA - Registration No.: 5568.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/5568-01.pdf>

5.8 Laboratory Location

JianYan Testing Group Co., Ltd.

Address: No.760, Fengling Road, Tong'an District, Xiamen, Fujian, China

Tel: +86-592-2273071, Fax: +86-592-2273700

Email: quality@xmabr.com, Website: <http://www.lets.com/>

5.9 Test Instruments list

Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESR 3	102330	2020-08-05	2021-08-04
EMI Test Receiver	Rohde & Schwarz	ESR 3	102329	2020-08-06	2021-08-05
EMI Test Receiver	Rohde & Schwarz	ESR 7	102259	2020-04-12	2021-04-11
LISN	Rohde & Schwarz	ENV 216	102240	2020-08-05	2021-08-04
ISN	Schwarzbeck	CAT3 8158	95	2020-08-05	2021-08-04
EMI Test Software	Farad	EZ-EMC	Version: V.EMCE-3A1		

Radiated Disturbances:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	BOST	CHC-966	966-1#	2019-12-27	2022-12-26
3m SAC	BOST	CHC-966	966-2#	2019-12-27	2022-12-26
EMI Test Receiver	Rohde & Schwarz	ESR 3	102330	2020-08-05	2021-08-04
EMI Test Receiver	Rohde & Schwarz	ESR 3	102329	2020-08-06	2021-08-05
EMI Test Receiver	Rohde & Schwarz	ESR 7	102259	2020-04-12	2021-04-11
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102175	2020-04-15	2021-04-14
BiConiLog Antenna	SCHWARZBECK	VULB 9163	1105	2020-12-20	2021-12-19
BiConiLog Antenna	SCHWARZBECK	VULB 9168	1066	2020-04-11	2021-04-10
Horn Antenna	SCHWARZBECK	BBHA 9120 D	911	2020-04-01	2021-03-31
Pre-amplifier	SCHWARZBECK	BBV9743	9	2020-08-06	2021-08-05
Pre-amplifier	SCHWARZBECK	BBV9718C	00014	2020-04-08	2021-04-07
EMI Test Software	Farad	EZ-EMC	Version: V.EMCE-3A1		

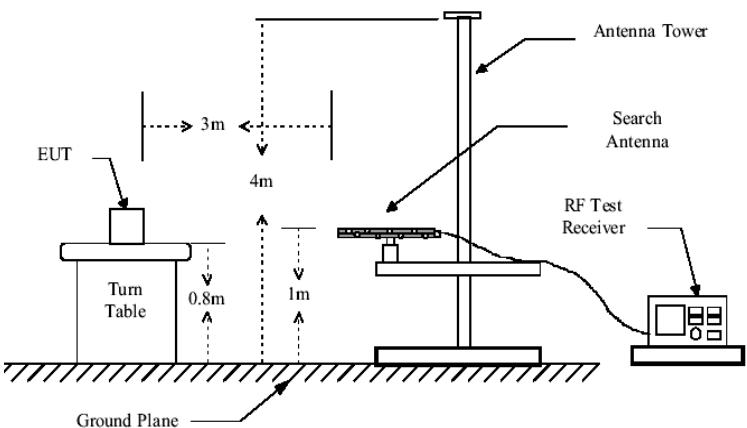
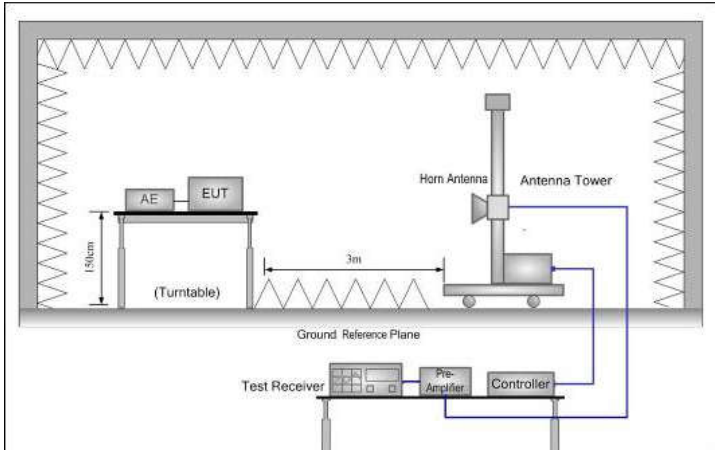
6 Test results and Measurement Data

6.1 Antenna requirement

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
E.U.T Antenna:	
The EUT make use of an External FPC antenna, The typical gain of the antenna is 0dBi.	

6.2 Radiated Emission

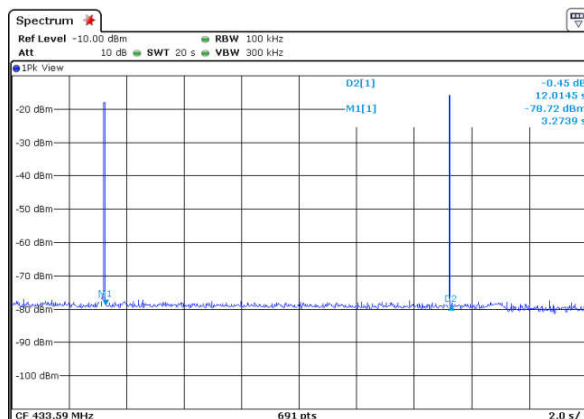
Test Requirement:	FCC Part15 C Section 15.231(e) and 15.209				
Test Frequency Range:	30MHz to 5000MHz				
Test site:	Measurement Distance: 3m(Semi-Anechoic Chamber)				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
Limit: (Field strength of the fundamental signal)	Frequency		Limit (dBuV/m @3m)		Remark
	433.59MHz		92.86		Peak Value
			72.86		Average Value
Limit: (Spurious Emissions)	Frequency		Limit (dBuV/m @3m)		Remark
	30MHz-88MHz		40.0		Quasi-peak Value
	88MHz-216MHz		43.5		Quasi-peak Value
	216MHz-960MHz		46.0		Quasi-peak Value
	960MHz-1GHz		54.0		Quasi-peak Value
	Above 1GHz		54.0		Average Value
			74.0		Peak Value
	Or The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level whichever limit permits higher field strength.				
Test Procedure:	a. The EUT was placed on the top of a rotating table 0.8m(below 1GHz) /1.5m(above 1GHz) above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. 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. d. 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. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. 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.				

Test setup:	Below 1GHz  Above 1GHz 
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

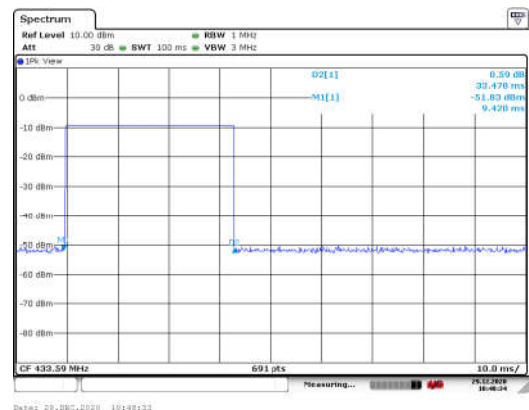
6.2.1 Field Strength Of The Fundamental Signal

Product Name:		Pet training system collar unit		Model No.:		AFU-WOH-0002B	
Peak value							
Frequency (MHz)	Read Level (dBuV)	Correct Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
433.59	64.66	-8.02	56.64	92.86	-36.22	Vertical	
433.59	73.71	-8.02	65.69	92.86	-27.17	Horizontal	
Average value							
Frequency (MHz)	Level (dBuV/m)	Duty Cycle factor	Average value (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
433.59	56.64	-9.51	47.13	72.86	-25.73	Vertical	
433.59	65.69	-9.51	57.18	72.86	-15.50	Horizontal	
Calculate Formula:		Average value=Peak value + Duty Cycle Factor					
		Duty cycle factor = 20log(Duty cycle)					
		Duty cycle = on time/100 milliseconds or period, whichever is less					
Test data:		T on time =33.478(ms)					
		T period =12014.5(ms)> 100ms					
		Duty cycle = T on time / T period =0.33478					
		Duty cycle factor = 20log(Duty cycle) = -9.51					

T on time slot-1:

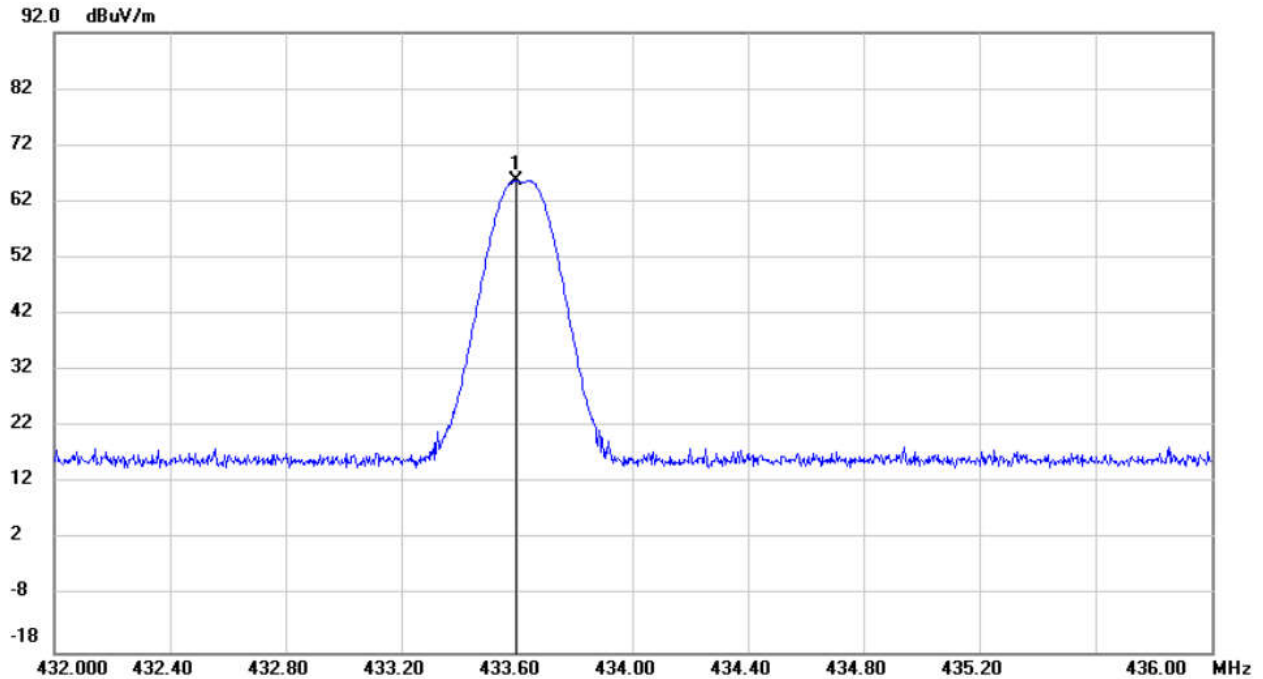


T on time slot-2



Test Plots:

Product model:	AFU-WOH-0002B	Test result:	Pass
Test mode:	TM1	Test voltage:	DC 5V
Test frequency:	433.59MHz	Ant. polarity:	Horizontal
Environment:	Temp: 22.8°C Humi: 44%	Test by:	Miles Chen

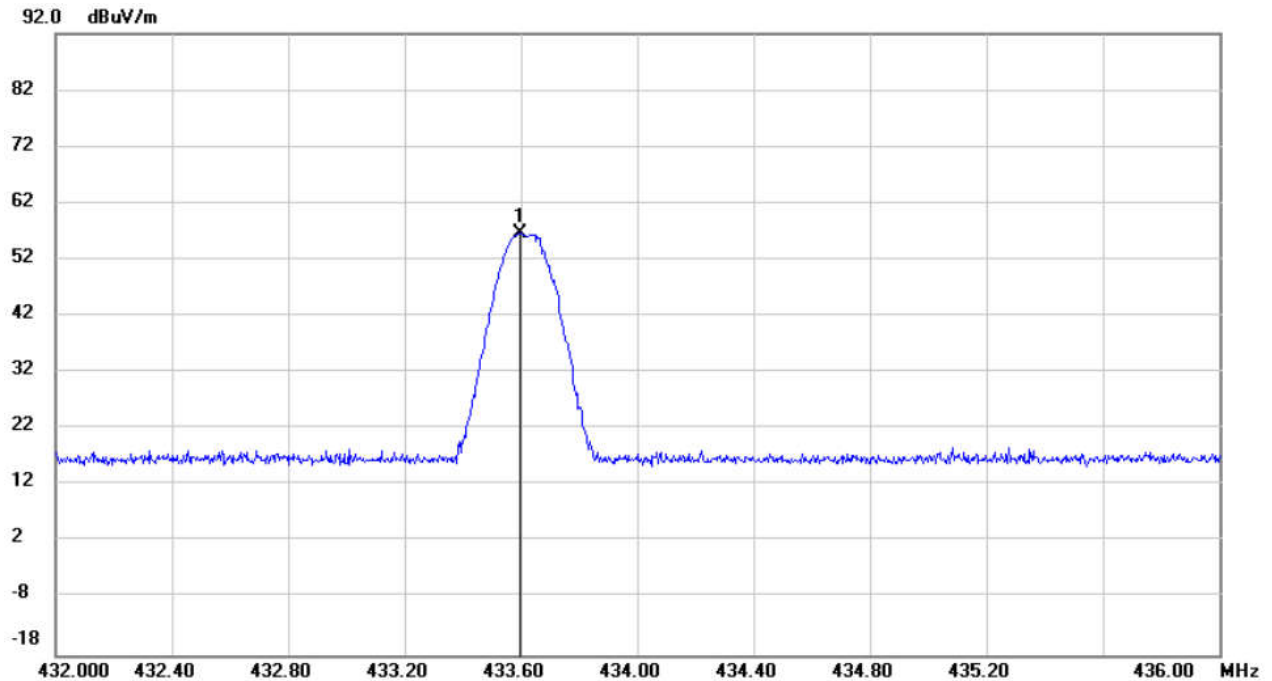


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB Detector
1	*	433.5960	73.71	-8.02	65.69		peak

Notes:

1. Over value = Emission level - Limit value.
2. Emission Level = Correction Factor + Reading Value.
3. Correction Factor = Antenna Factor + Cable Factor - Amplifier Gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product model:	AFU-WOH-0002B	Test result:	Pass
Test mode:	TM1	Test voltage:	DC 5V
Test frequency:	433.59MHz	Ant. polarity:	Vertical
Environment:	Temp: 22.8℃ Humi: 44%	Test by:	Miles Chen



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB Detector
1	*	433.5960	64.66	-8.02	56.64		peak

Notes:

1. Over value = Emission level - Limit value.
2. Emission Level = Correction Factor + Reading Value.
3. Correction Factor = Antenna Factor + Cable Factor - Amplifier Gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

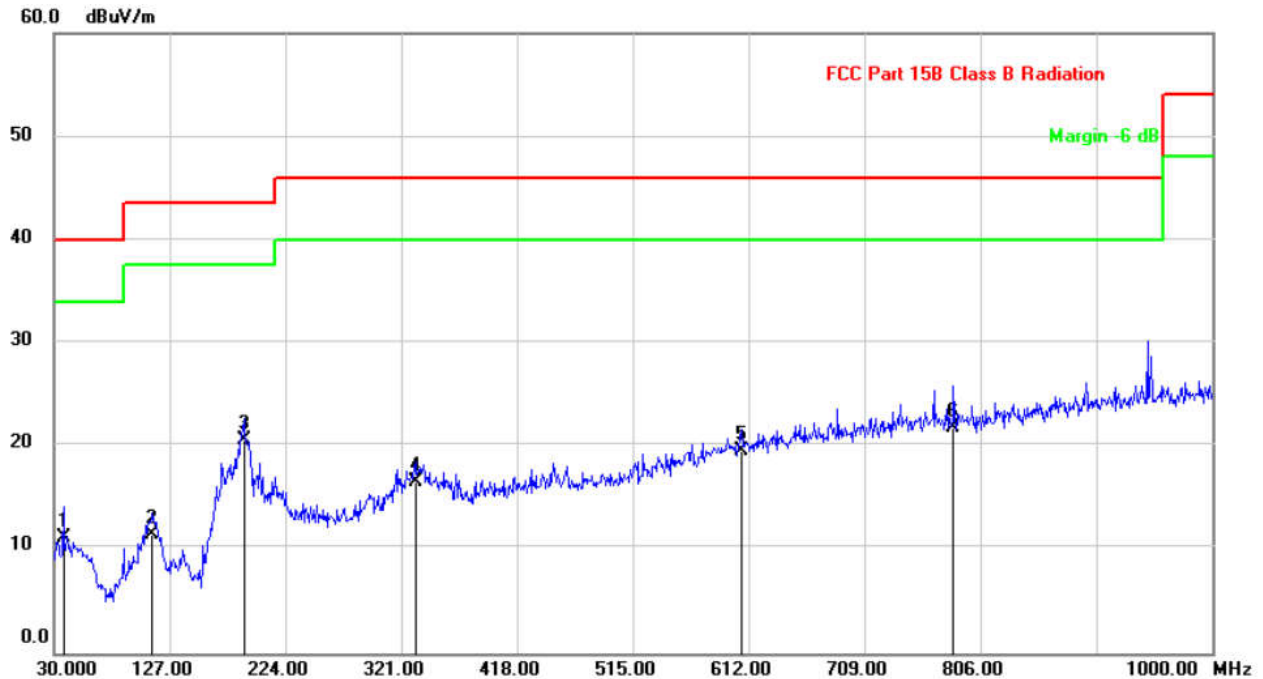
6.2.2 Spurious Emissions

Product Name:		Pet training system collar unit		Model No.:	AFU-WOH-0002B		
Below 1GHz (30MHz-1000MHz)							
Frequency (MHz)	Read Level (dBuV/m)	Correct Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	polarization
867.18	44.54	-0.30	44.24	72.86	-28.62	QP	Vertical
867.18	39.50	-0.27	39.23	72.86	-41.58	QP	Horizontal
Average value							
Frequency (MHz)	Level (dBuV/m)	Duty cycle factor	Average value (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
867.18	44.24	-9.51	8.36	52.86	-44.50	Vertical	
867.18	39.23	-9.51	3.35	52.86	-49.51	Horizontal	

Above 1GHz						
Peak value						
Frequency (MHz)	Read Level (dBuV/m)	Correct Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
1300.77	59.97	-6.39	53.58	74.00	-20.42	Vertical
1734.36	51.11	-4.14	46.97	72.86	-25.89	Vertical
2167.95	53.00	-2.67	50.33	72.86	-22.53	Vertical
2601.54	44.01	-1.73	42.28	72.86	-30.58	Vertical
3035.13	50.32	-0.31	50.01	72.86	-22.85	Vertical
3468.72	52.38	0.22	52.60	72.86	-20.26	Vertical
3902.31	54.43	1.66	56.09	74.00	-17.91	Vertical
4335.90	47.59	2.98	50.57	74.00	-23.43	Vertical
1300.77	65.56	-6.39	59.17	74.00	-14.83	Horizontal
1734.36	53.78	-4.14	49.64	72.86	-23.22	Horizontal
2167.95	53.71	-2.67	51.04	72.86	-21.82	Horizontal
2601.54	47.40	-1.73	45.67	72.86	-27.19	Horizontal
3035.13	52.79	-0.31	52.48	72.86	-20.38	Horizontal
3468.72	53.41	0.22	53.63	72.86	-19.23	Horizontal
3902.31	57.24	1.66	58.90	74.00	-15.10	Horizontal
4335.90	51.08	2.98	54.06	74.00	-19.94	Horizontal
Average value						
Frequency (MHz)	Read Level (dBuV/m)	Duty cycle factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
1300.77	53.58	-9.51	44.07	54.00	-9.93	Vertical
1734.36	46.97	-9.51	37.46	52.86	-15.40	Vertical
2167.95	50.33	-9.51	40.82	52.86	-12.04	Vertical
2601.54	42.28	-9.51	32.77	52.86	-20.09	Vertical
3035.13	50.01	-9.51	40.50	52.86	-12.36	Vertical
3468.72	52.6	-9.51	43.09	52.86	-9.77	Vertical
3902.31	56.09	-9.51	46.58	54.00	-7.42	Vertical
4335.90	50.57	-9.51	41.06	54.00	-12.94	Vertical
1300.77	59.17	-9.51	49.66	54.00	-4.34	Horizontal
1734.36	49.64	-9.51	40.13	52.86	-12.73	Horizontal
2167.95	51.04	-9.51	41.53	52.86	-11.33	Horizontal
2601.54	45.67	-9.51	36.16	52.86	-16.70	Horizontal
3035.13	52.48	-9.51	42.97	52.86	-9.89	Horizontal
3468.72	53.63	-9.51	44.12	52.86	-8.74	Horizontal
3902.31	58.9	-9.51	49.39	54.00	-4.61	Horizontal
4335.90	54.06	-9.51	44.55	54.00	-9.45	Horizontal

Test Plots:

Product model:	AFU-WOH-0002B	Test result:	Pass
Test mode:	TM 2	Test voltage:	AC 120V, 60 Hz
Test frequency:	30MHz-1000MHz	Ant. polarity:	Horizontal
Environment:	Temp: 22.8℃ Humi: 42%	Test by:	Miles Chen

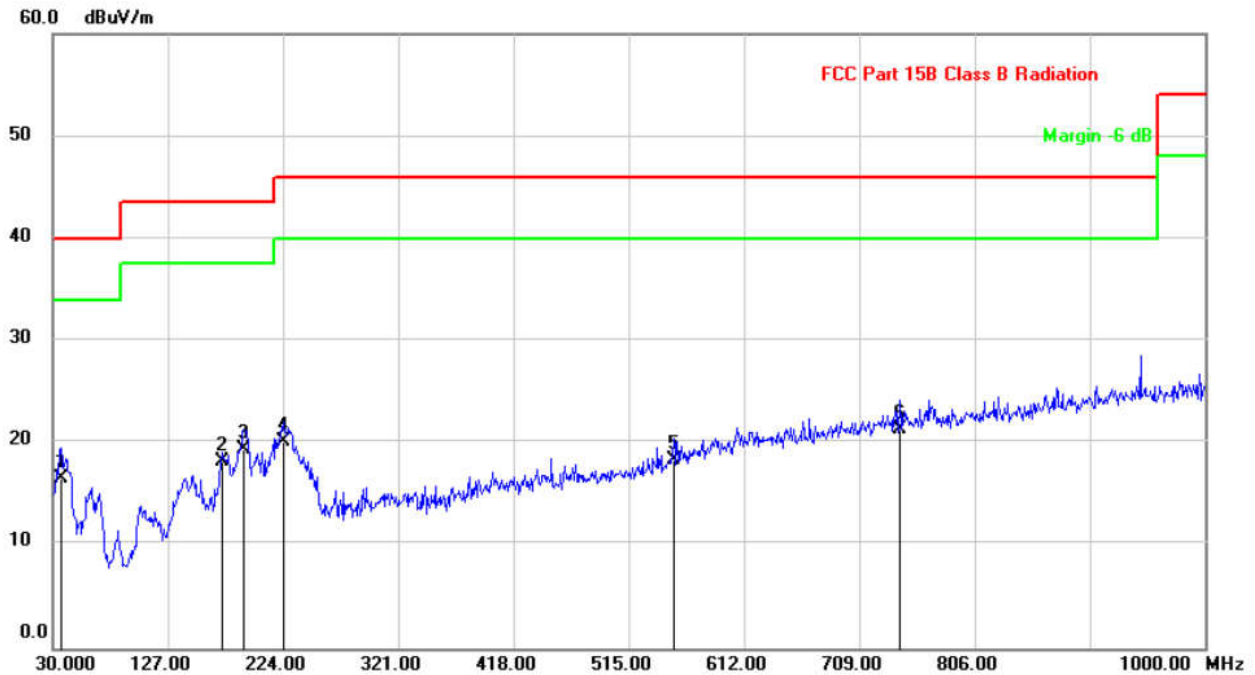


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		37.7599	24.86	-13.63	11.23	40.00	-28.77	QP
2		112.4500	26.06	-14.53	11.53	43.50	-31.97	QP
3	*	189.0800	35.58	-14.89	20.69	43.50	-22.81	QP
4		332.6400	27.00	-10.48	16.52	46.00	-29.48	QP
5		606.1800	23.65	-4.02	19.63	46.00	-26.37	QP
6		783.6900	23.31	-1.42	21.89	46.00	-24.11	QP

Notes:

1. Over value = Emission level - Limit value.
2. Emission Level = Correction Factor + Reading Value.
3. Correction Factor = Antenna Factor + Cable Factor - Amplifier Gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product model:	AFU-WOH-0002B	Test result:	Pass
Test mode:	TM 2	Test voltage:	AC 120V, 60 Hz
Test frequency:	30MHz-1000MHz	Ant. polarity:	Vertical
Environment:	Temp: 22.8℃ Humi: 42%	Test by:	Miles Chen

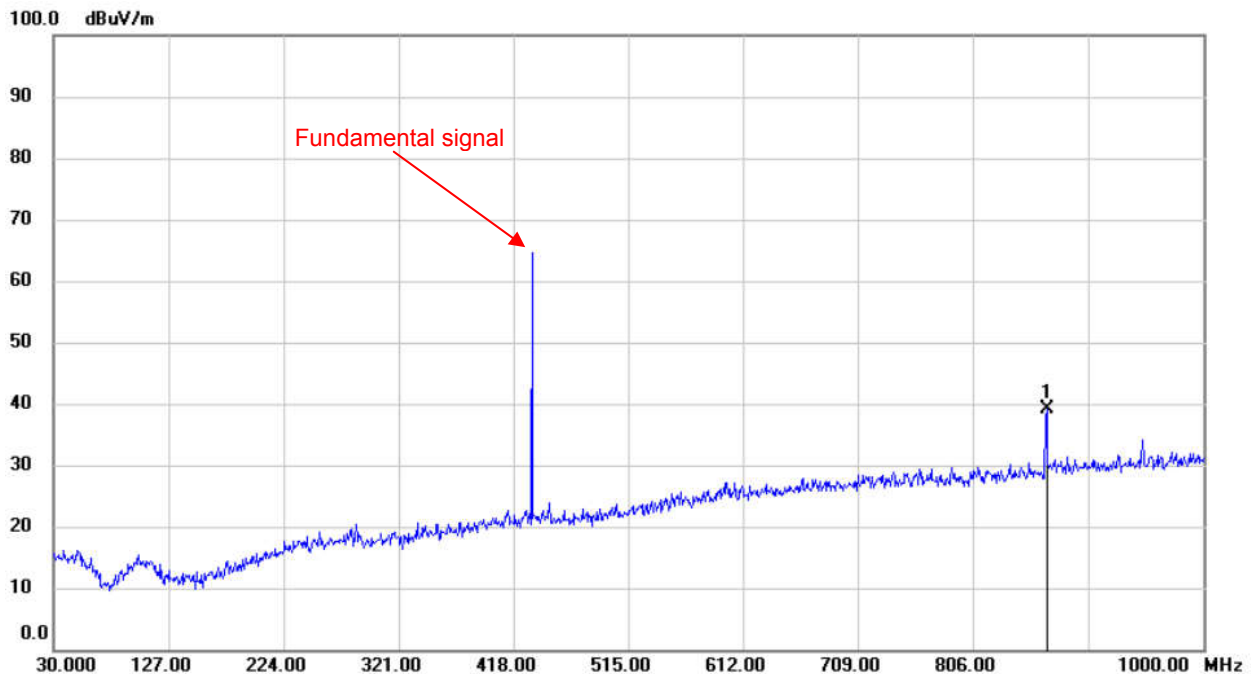


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	36.7900	30.22	-13.71	16.51	40.00	-23.49	QP
2		172.5900	34.47	-16.31	18.16	43.50	-25.34	QP
3		191.0200	34.11	-14.73	19.38	43.50	-24.12	QP
4		224.0000	33.09	-12.97	20.12	46.00	-25.88	QP
5		552.8300	24.10	-5.69	18.41	46.00	-27.59	QP
6		742.9500	23.16	-1.78	21.38	46.00	-24.62	QP

Notes:

1. Over value = Emission level - Limit value.
2. Emission Level = Correction Factor + Reading Value.
3. Correction Factor = Antenna Factor + Cable Factor - Amplifier Gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product model:	AFU-WOH-0002B	Test result:	Pass
Test mode:	TM 1	Test voltage:	DC 5V
Test frequency:	30MHz-1000MHz	Ant. polarity:	Horizontal
Environment:	Temp: 22.8℃ Humi: 42%	Test by:	Miles Chen

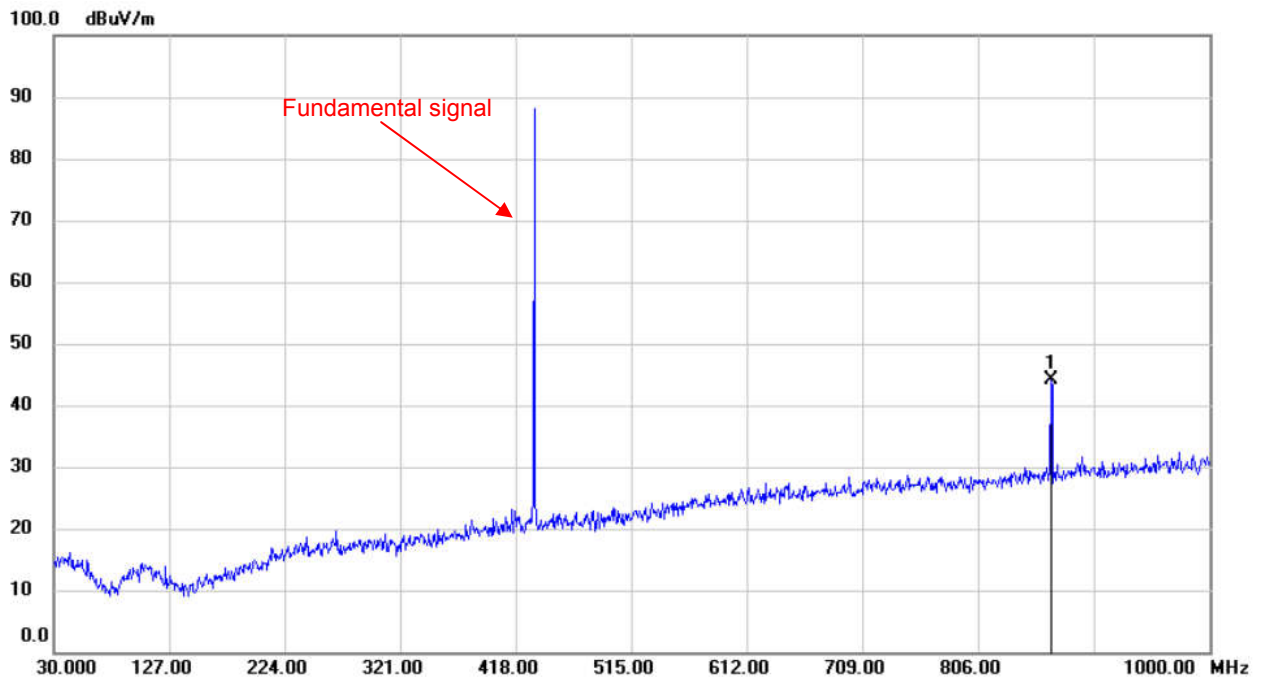


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB
1	*	868.0800	39.50	-0.27	39.23		peak

Notes:

1. Over value = Emission level - Limit value.
2. Emission Level = Correction Factor + Reading Value.
3. Correction Factor = Antenna Factor + Cable Factor - Amplifier Gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product model:	AFU-WOH-0002B	Test result:	Pass
Test mode:	TM 1	Test voltage:	DC 5V
Test frequency:	30MHz-1000MHz	Ant. polarity:	Vertical
Environment:	Temp: 22.8℃ Humi: 42%	Test by:	Miles Chen

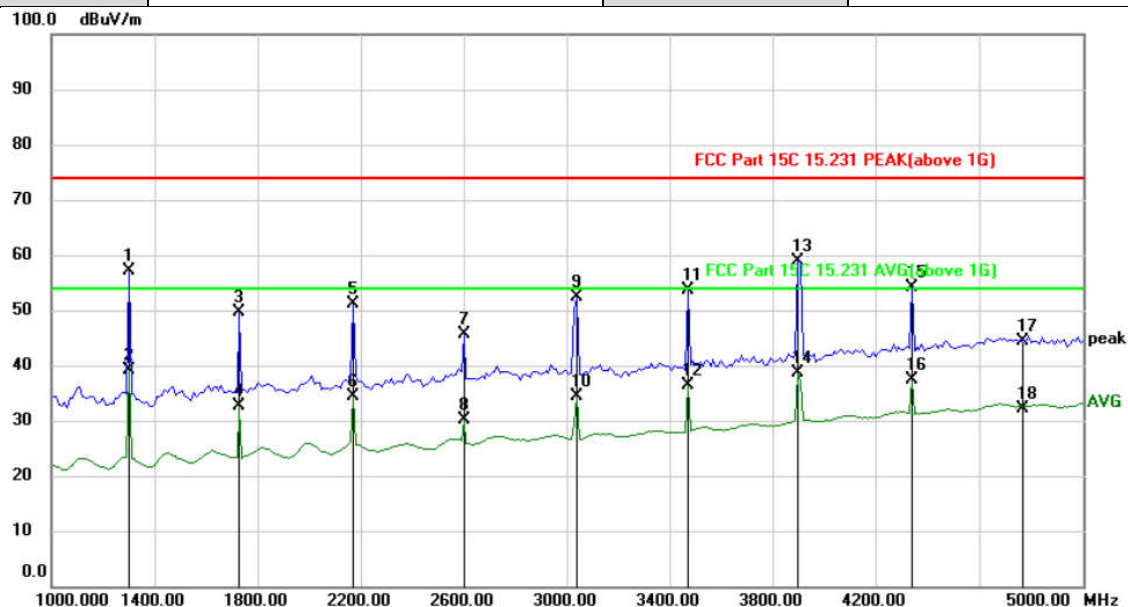


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB Detector
1	*	867.1100	44.54	-0.30	44.24		peak

Notes:

1. Over value = Emission level - Limit value.
2. Emission Level = Correction Factor + Reading Value.
3. Correction Factor = Antenna Factor + Cable Factor - Amplifier Gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product model:	AFU-WOH-0002B	Test result:	Pass
Test mode:	TM 1	Test voltage:	DC 5V
Test frequency:	1000MHz-5000MHz	Ant. polarity:	Horizontal
Environment:	Temp: 22.8℃ Humi: 42%	Test by:	Miles Chen

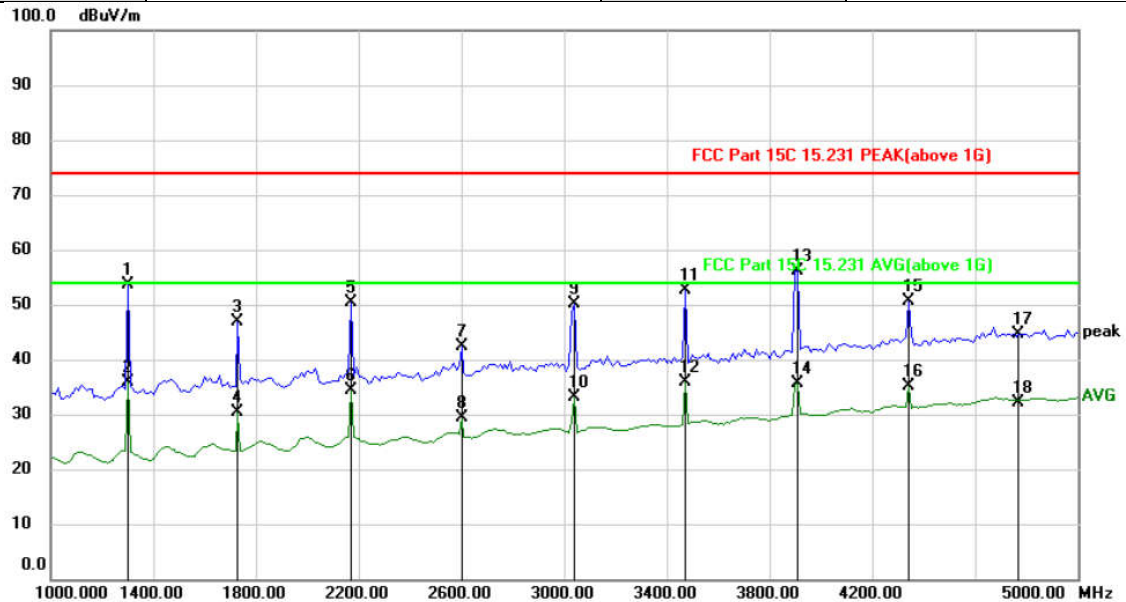


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		1300.770	63.56	-6.39	57.17	74.00	-16.83	peak
2	*	1300.770	45.51	-6.39	39.12	54.00	-14.88	AVG
3		1734.360	53.78	-4.14	49.64	74.00	-24.36	peak
4		1734.360	36.76	-4.14	32.62	54.00	-21.38	AVG
5		2167.950	53.71	-2.67	51.04	74.00	-22.96	peak
6		2167.950	37.01	-2.67	34.34	54.00	-19.66	AVG
7		2601.540	47.40	-1.73	45.67	74.00	-28.33	peak
8		2601.540	31.89	-1.73	30.16	54.00	-23.84	AVG
9		3035.1300	52.79	-0.31	52.48	74.00	-21.52	peak
10		3035.1300	34.80	-0.31	34.49	54.00	-19.51	AVG
11		3468.720	53.41	0.22	53.63	74.00	-20.37	peak
12		3468.720	36.24	0.22	36.46	54.00	-17.54	AVG
13		3902.310	57.24	1.62	58.86	74.00	-15.14	peak
14		3902.310	37.00	1.62	38.62	54.00	-15.38	AVG
15		4335.900	51.08	2.98	54.06	74.00	-19.94	peak
16		4335.900	34.34	2.98	37.32	54.00	-16.68	AVG
17		4769.490	40.55	3.89	44.44	74.00	-29.56	peak
18		4769.490	28.17	3.89	32.06	54.00	-21.94	AVG

Notes:

1. Over value = Emission level - Limit value.
2. Emission Level = Correction Factor + Reading Value.
3. Correction Factor = Antenna Factor + Cable Factor - Amplifier Gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product model:	AFU-WOH-0002B	Test result:	Pass
Test mode:	TM 1	Test voltage:	DC 5V
Test frequency:	1000MHz-5000MHz	Ant. polarity:	Vertical
Environment:	Temp: 22.8℃ Humi: 42%	Test by:	Miles Chen

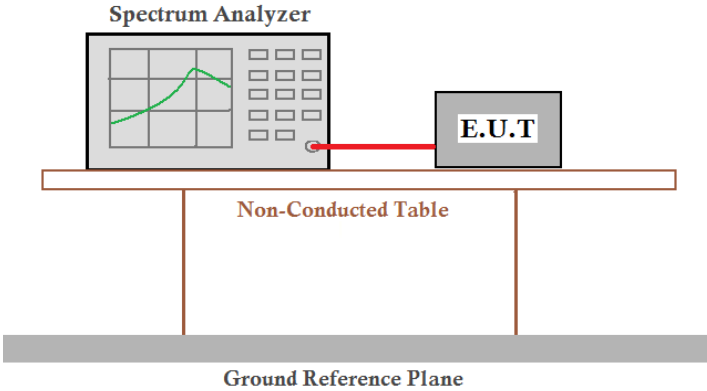


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		1300.770	59.97	-6.39	53.58	74.00	-20.42	peak
2		1300.770	42.15	-6.39	35.76	54.00	-18.24	AVG
3		1734.360	51.11	-4.14	46.97	74.00	-27.03	peak
4		1734.360	34.51	-4.14	30.37	54.00	-23.63	AVG
5		2167.950	53.00	-2.67	50.33	74.00	-23.67	peak
6		2167.950	37.03	-2.67	34.36	54.00	-19.64	AVG
7		2601.540	44.01	-1.73	42.28	74.00	-31.72	peak
8		2601.540	31.06	-1.73	29.33	54.00	-24.67	AVG
9		3035.130	50.32	-0.31	50.01	74.00	-23.99	peak
10		3035.130	33.53	-0.31	33.22	54.00	-20.78	AVG
11		3468.720	52.38	0.22	52.60	74.00	-21.40	peak
12		3468.720	35.60	0.22	35.82	54.00	-18.18	AVG
13	*	3902.310	54.43	1.66	56.09	74.00	-17.91	peak
14		3902.310	33.86	1.66	35.52	54.00	-18.48	AVG
15		4335.900	47.59	2.98	50.57	74.00	-23.43	peak
16		4335.900	32.22	2.98	35.20	54.00	-18.80	AVG
17		4769.490	40.79	3.89	44.68	74.00	-29.32	peak
18		4769.490	28.12	3.89	32.01	54.00	-21.99	AVG

Notes:

1. Over value = Emission level - Limit value.
2. Emission Level = Correction Factor + Reading Value.
3. Correction Factor = Antenna Factor + Cable Factor - Amplifier Gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

6.3 20dB Bandwidth

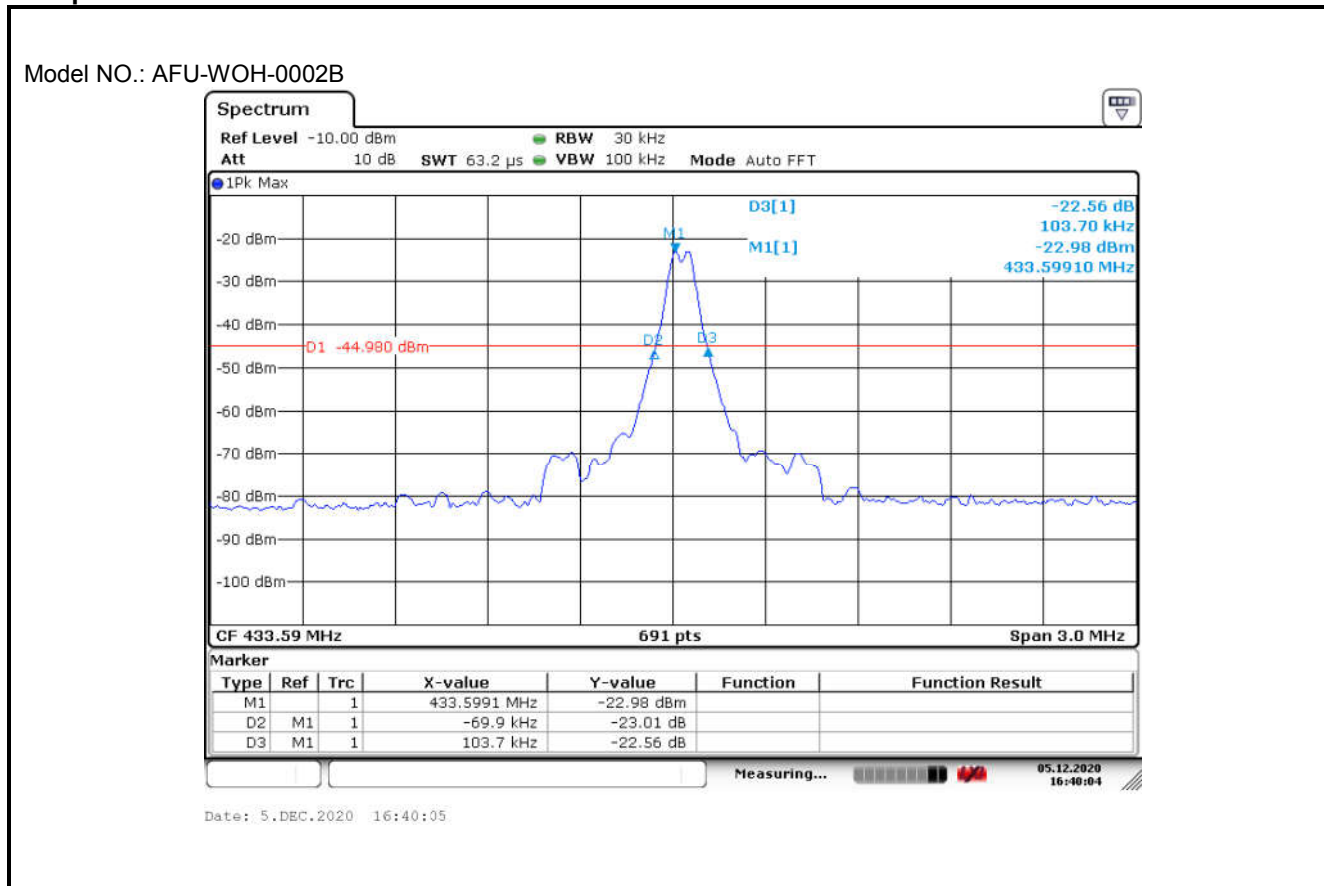
Test Requirement:	FCC Part15 C Section 15.231 (c)
Receiver setup:	RBW=1kHz, VBW=3kHz, detector: Peak
Limit:	The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.
Test Procedure:	1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. 2. Set the EUT to proper test channel. 3. Max hold the radiated emissions, mark the peak power frequency point and the -20dB upper and lower frequency points. 4. Read 20dB bandwidth.
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

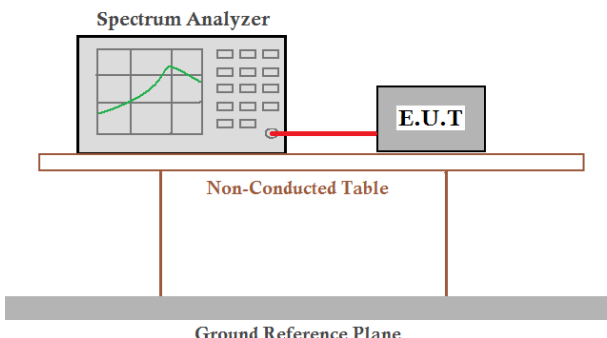
Product Name:	Pet training system collar unit	Model No.:	AFU-WOH-0002B
20dB bandwidth (MHz)	Limit (MHz)	Results	
0.174	1.0839	Pass	

Note: Limit= Fundamental frequency×0.25%=433.59×0.25%=1.0839MHz

Test plot as follows:



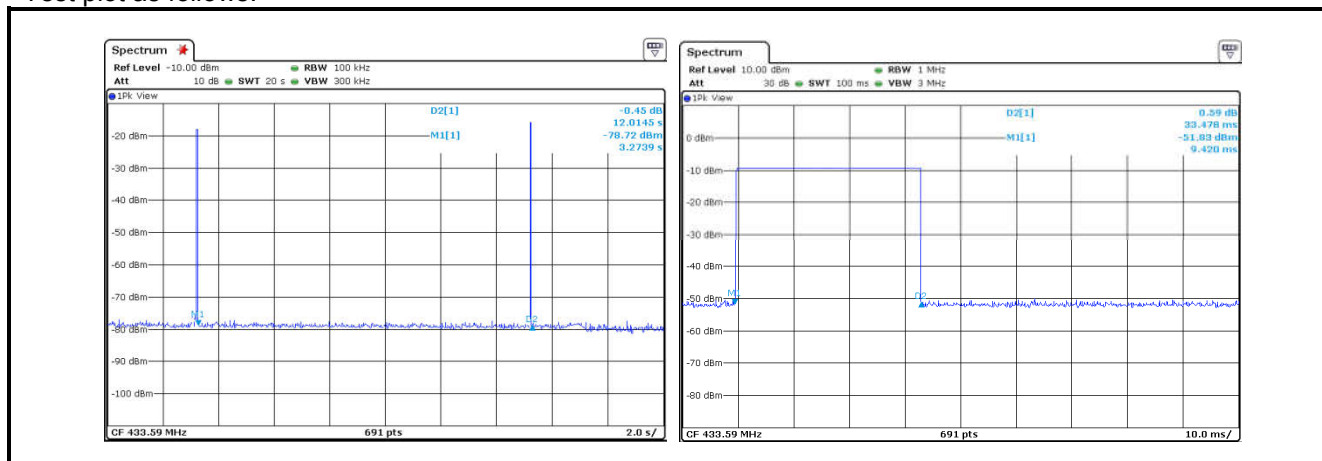
6.4 Duration Time

Test Requirement:	FCC Part15 C Section 15.231 (e)
Receiver setup:	RBW=1MHz, VBW=3MHz, span=0Hz, detector: Peak
Limit:	The devices operated under the provisions of this paragraph shall be provided with a means for automatically limiting operation so that the duration of each transmission shall not be greater than one second and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds.
Test mode:	Transmitting mode
Test Procedure:	1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. 2. Set the EUT to proper test channel. 3. Single scan the transmission, and read the transmission time.
Test setup:	
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

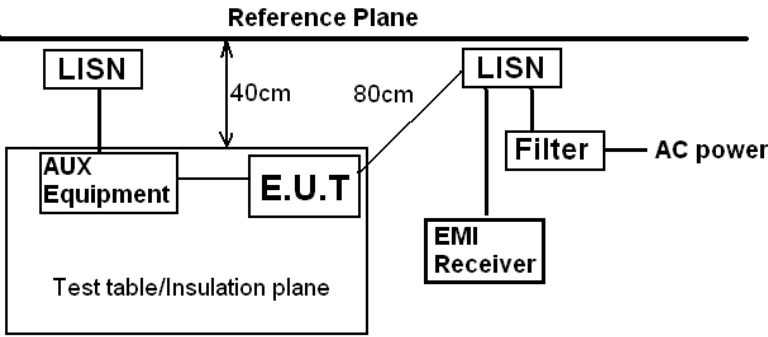
Measurement Data:

Product Name:	Pet training system collar unit	Model No.:	AFU-WOH-0002B
Test item	Test data(second)	Limit (second)	Result
Transmitting time	0.033478	<1(second)	Pass
Silent Period	12.0145	>30 times the transmit time and >=10 seconds.	Pass
Notes: The smallest pulse width(PW)= 33.478ms $2/PW=2/33.478=0.0597 < RBW\ 100KHz$, then PDCF is not needed.			

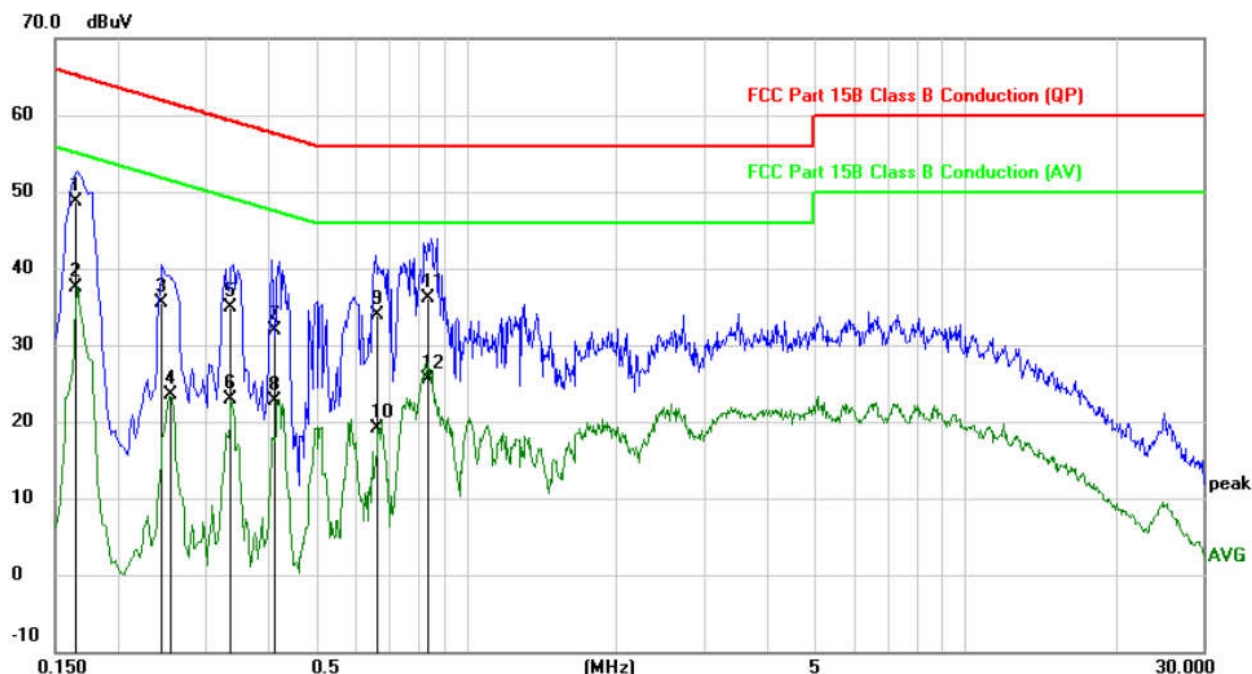
Test plot as follows:



6.5 Conducted Emission

Test Requirement:	FCC Part15 C Section 15.207		
Test Frequency Range:	150kHz to 30MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9kHz, VBW=30kHz		
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:	 Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m		
Test procedure	The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). Which provide a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). 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 EN55032 Class B on conducted measurement.		
Test Instruments:	Refer to section 5.10 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Passed		

Product model:	AFU-WOH-0002B	Test result:	Pass
Test mode:	TM 2	Test voltage:	AC 120V, 60 Hz
Phase:	Line (L)	Test by:	Miles Chen
Environment:	Temp: 24.1℃ Humi: 49%		

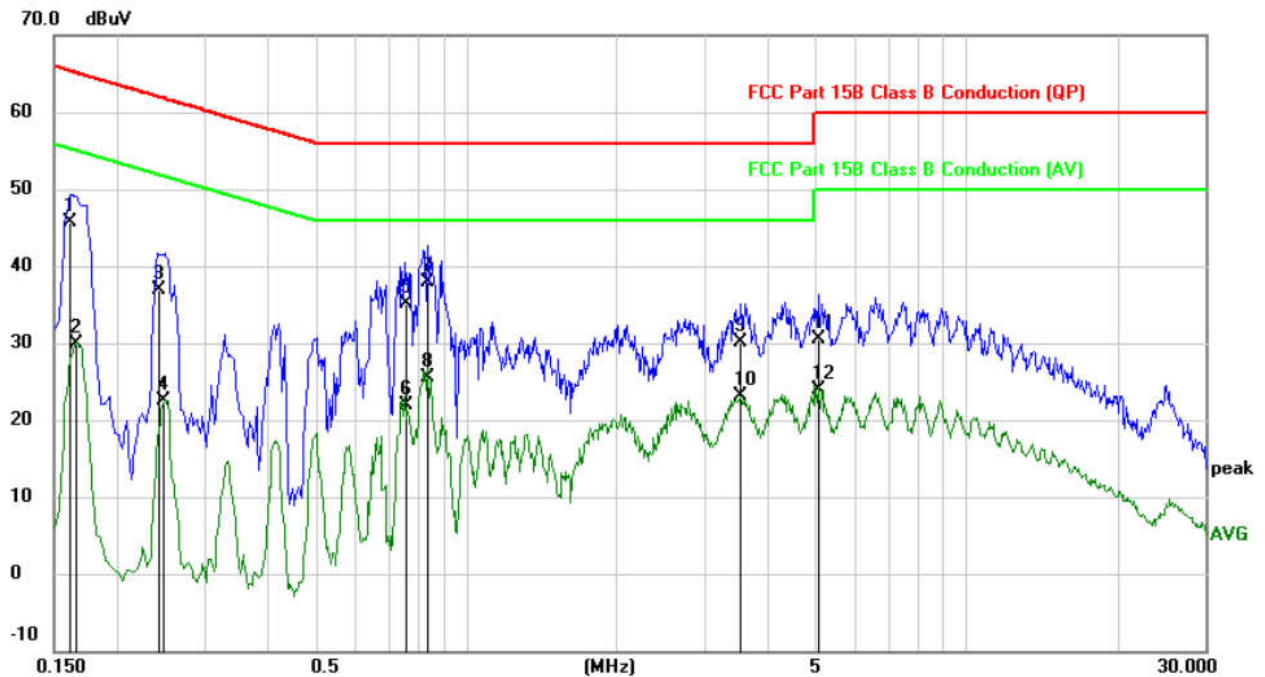


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	*	0.1647	39.03	9.64	48.67	65.22	-16.55	QP
2		0.1647	27.81	9.64	37.45	55.22	-17.77	AVG
3		0.2446	25.87	9.64	35.51	61.94	-26.43	QP
4		0.2553	13.88	9.64	23.52	51.58	-28.06	AVG
5		0.3360	25.35	9.64	34.99	59.30	-24.31	QP
6		0.3360	13.34	9.64	22.98	49.30	-26.32	AVG
7		0.4107	22.33	9.65	31.98	57.63	-25.65	QP
8		0.4107	13.13	9.65	22.78	47.63	-24.85	AVG
9		0.6580	24.14	9.67	33.81	56.00	-22.19	QP
10		0.6580	9.39	9.67	19.06	46.00	-26.94	AVG
11		0.8381	26.36	9.68	36.04	56.00	-19.96	QP
12		0.8381	15.88	9.68	25.56	46.00	-20.44	AVG

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak and AV detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Over value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

Product model:	AFU-WOH-0002B	Test result:	Pass
Test mode:	TM 2	Test voltage:	AC 120V, 60 Hz
Phase:	Line (N)	Test by:	Miles Chen
Environment:	Temp: 24.1℃ Humi: 49%		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1611	36.03	9.64	45.67	65.41	-19.74	QP
2		0.1658	20.23	9.64	29.87	55.17	-25.30	AVG
3		0.2421	27.17	9.64	36.81	62.02	-25.21	QP
4		0.2476	12.95	9.64	22.59	51.84	-29.25	AVG
5		0.7581	25.52	9.68	35.20	56.00	-20.80	QP
6		0.7581	12.22	9.68	21.90	46.00	-24.10	AVG
7	*	0.8344	28.20	9.68	37.88	56.00	-18.12	QP
8		0.8344	15.78	9.68	25.46	46.00	-20.54	AVG
9		3.5433	20.31	9.73	30.04	56.00	-25.96	QP
10		3.5433	13.29	9.73	23.02	46.00	-22.98	AVG
11		5.0727	20.82	9.77	30.59	60.00	-29.41	QP
12		5.0727	14.12	9.77	23.89	50.00	-26.11	AVG

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak and AV detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Over value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

-----End of report-----