

FCC Test Report

Report No.: AGC11473240201FR01

FCC ID : 2BDXD-AW61

APPLICATION PURPOSE: Original Equipment

PRODUCT DESIGNATION: BirdEye Remote Control Drone with Camera

BRAND NAME : N/A

MODEL NAME : AW-61

APPLICANT: Shenzhen Aiwei Electronics Co., LTD

DATE OF ISSUE : Apr. 24, 2024

STANDARD(S) : FCC Part 15 Subpart C §15.249

REPORT VERSION: V1.0

Attestation Of Global Conclude (Shenzhen) Co., Ltd



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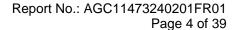
Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes	
V1.0	/	Apr. 24, 2024	Valid	Initial Release	



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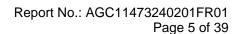


1. General Information

Shenzhen Aiwei Electronics Co., LTD
6th floor, Jinxing Building, Heping Industrial Park, Heping Road, Yucui Community, Longhua Street, Longhua District, Shenzhen, China
Shenzhen Aiwei Electronics Co., LTD
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Shenzhen Aiwei Electronics Co., LTD
6th floor, Jinxing Building, Heping Industrial Park, Heping Road, Yucui Community, Longhua Street, Longhua District, Shenzhen, China
BirdEye Remote Control Drone with Camera
N/A
AW-61
N/A
N/A
Feb. 29, 2024
Feb. 29, 2024 to Apr. 24, 2024
No any deviation from the test method
Normal
Pass
AGCER-FCC-NTX-V1

Note: The test results of this report relate only to the tested sample identified in this report.

Prepared By	Thea Huang	
	Thea Huang (Project Engineer)	Apr. 24, 2024
Reviewed By	Calin Liu	
	Calvin Liu (Reviewer)	Apr. 24, 2024
Approved By	Max Zhang	
	Max Zhang (Authorized Officer)	Apr. 24, 2024





2. Product Information

2.1 Product Technical Description

Equipment Specification	Low Power Short Range Equipment
Frequency Band	2400MHz-2483.5MHz
Operation Frequency Range	2458MHz-2473MHz
Modulation Type	GFSK
Number of channels	16 channels
Field Strength of Fundamental	92.78dBμV/m (Peak) @3m
Hardware Version	WD-LHX41TX
Software Version	WD-LHX41TX-V1.0
Antenna Designation	Wire antenna
Antenna Gain	0.17dBi
Power Supply	DC 4.5V by battery
Adapter Information	N/A

2.2 Test Frequency List

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
01	2458	11	2468
02	2459	12	2469
03	2460	13	2470
04	2461	14	2471
05	2462	15	2472
06	2463	16	2473
07	2464		
08	2465		
09	2466		
10	2467		



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2.3 Related Submittal(S) / Grant (S)

This submittal(s) (test report) is intended for FCC ID: **2BDXD-AW61**, filing to comply with Part 2, Part 15 of the Federal Communication Commission rules.

2.4 Test Methodology

The tests were performed according to following standards:

No.	Identity	Document Title
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations
2	FCC 47 CFR Part 15	Radio Frequency Devices
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

2.5 Antenna Requirement

Standard Requirement

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The non-detachable antenna inside the device cannot be replaced by the user at will. The gain of the antenna is 0.17dBi.



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3. Test Environment

3.1 Address of the Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

3.2 Test Facility

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

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories).

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. 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 our files with Registration 975832.

IC-Registration No.: 24842 (CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.



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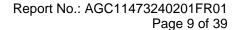
3.3 Environmental Conditions

	Normal Conditions
Temperature range (°C)	15 - 35
Relative humidity range	20 % - 75 %
Pressure range (kPa)	86 - 106
Power supply	DC 4.5V

3.4 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%.

Item	Measurement Uncertainty
Uncertainty of Conducted Emission for AC Port	$U_c = \pm 2.9 \text{ dB}$
Uncertainty of Radiated Emission below 1GHz	$U_c = \pm 3.9 \text{ dB}$
Uncertainty of Radiated Emission above 1GHz	$U_c = \pm 4.9 \text{ dB}$
Uncertainty of total RF power, conducted	$U_c = \pm 0.8 \text{ dB}$
Uncertainty of RF power density, conducted	$U_c = \pm 2.6 \text{ dB}$
Uncertainty of spurious emissions, conducted	$U_c = \pm 2 \%$
Uncertainty of Occupied Channel Bandwidth	U _c = ±2 %



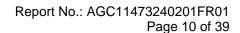


3.5 List of Equipment Use

• R	RF Conducted Test System							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)	
	AGC-ER-E036	Spectrum Analyzer	Agilent	N9020A	MY49100060	2023-06-01	2024-05-31	
	AGC-ER-E062	Power Sensor	Agilent	U2021XA	MY54110007	2024-02-01	2025-01-31	
	AGC-ER-E063	Power Sensor	Agilent	U2021XA	MY54110009	2024-02-01	2025-01-31	
	AGC-EM-A152	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2024-06-08	
	AGC-ER-E083	Signal Generator	Agilent	E4421B	US39340815	2023-06-01	2024-05-31	
	N/A	RF Connection Cable	N/A	1#	N/A	Each time	N/A	
	N/A	RF Connection Cable	N/A	2#	N/A	Each time	N/A	

• F	Radiated Spurious Emission							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)	
\boxtimes	AGC-EM-E046	EMI Test Receiver	R&S	ESCI	10096	2024-02-01	2025-01-31	
	AGC-EM-E116	EMI Test Receiver	R&S	ESCI	100034	2023-06-03	2024-06-02	
\boxtimes	AGC-EM-E061	Spectrum Analyzer	Agilent	N9010A	MY53470504	2023-06-01	2024-05-31	
\boxtimes	AGC-EM-E086	Loop Antenna	ZHINAN	ZN30900C	18051	2022-03-12	2024-03-11	
\boxtimes	AGC-EM-E086	Loop Antenna	ZHINAN	ZN30900C	18051	2024-03-05	2026-03-04	
\boxtimes	AGC-EM-E001	Wideband Antenna	SCHWARZBECK	VULB9168	D69250	2023-05-11	2025-05-10	
	AGC-EM-E029	Broadband Ridged Horn Antenna	ETS	3117	00034609	2023-03-23	2025-03-22	
\boxtimes	AGC-EM-E082	Horn Antenna	SCHWARZBECK	BBHA 9170	#768	2023-09-24	2025-09-23	
\boxtimes	AGC-EM-E146	Pre-amplifier	ETS	3117-PA	00246148	2022-08-04	2024-08-03	
\boxtimes	AGC-EM-A119	2.4G Filter	SongYi	N/A	N/A	2023-06-01	2024-05-31	
\boxtimes	AGC-EM-A138	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2024-06-08	
	AGC-EM-A139	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2024-06-08	

• A	AC Power Line Conducted Emission							
I lead I Equipment No. I last Equipment Manufacturer Model No. Serial No.							Next Cal. Date (YY-MM-DD)	
	AGC-EM-E045	EMI Test Receiver	R&S	ESPI	101206	2023-06-03	2024-06-02	
	AGC-EM-E023	AMN	R&S	100086	ESH2-Z5	2023-06-03	2024/06/02	





• Te	● Test Software					
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Version Information	
	AGC-EM-S001	CE Test System	R&S	ES-K1	V1.71	
\boxtimes	AGC-EM-S003	RE-Test System	FARA	EZ-EMC	VRA-03A	
	AGC-ER-S012	BT/WIFI-Test System	Tonscend	JS1120-2	2.6	
\boxtimes	AGC-EM-S011	RSE Test System	Tonscend	TS+-Ver2.1(JS36-RSE)	4.0.0.0	



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4.System Test Configuration

4.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

4.2 EUT Exercise

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

4.3 Configuration of Tested System

Radiate	d Emission Configu	re:
	EUT	

44	Equipment	Used I	n Tested	System
4.4	Luuipillelli	USEU I	II IESIEU	3 y 3teiii

The following peripheral devices and interface cables were connected during the measurement:

☐ Test Accessories Come From The Laboratory

No.	Equipment	Model No.	Manufacturer	Specification Information	Cable
1		-		1	

No.	Equipment	Model No.	Manufacturer	Specification Information	Cable
1	BirdEye Remote Control Drone with Camera	Δ\/\/-61	Shenzhen Aiwei Electronics Co., LTD		



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4.5 Summary of Test Results

Item	FCC Rules	Description of Test	Result
1	§15.203	Antenna Equipment	Pass
2	§15.249(a)	Field Strength of Fundamental	Pass
3	§15.209&§15.249(d)	Radiated Emission& Band Edge	Pass
4	§15.205	Restricted Bands of Operation	Pass
5	§15.215	20dB Bandwidth	Pass
6	§15.207	AC Power Line Conducted Emission	Not applicable (See Note)

Note: The device under test is battery-powered and does not require evaluation of AC Power Line Conducted Emission.



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5. Description of Test Modes

	Summary Table of Test Cases				
Test Item	Equipment type / Modulation				
rest item	Short Distance and Low Power Consumption/ GFSK				
Radiated & Conducted Test Cases	Mode 1: Low channel TX_2458MHz_GFSK (Battery powered) Mode 2: Middle channel TX_2465MHz_GFSK (Battery powered) Mode 3: High channel TX_2473MHz_GFSK (Battery powered)				
AC Conducted Emission	Not applicable				

Note:

- 1. Only the result of the worst case was recorded in the report, if no other cases.
- 2. The battery is full-charged during the test.
- 3. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
- 4. For Conducted Test method, a temporary antenna connector is provided by the manufacture.
- The fixed-frequency transmission of the prototype is debugged through the buttons or software declared by the manufacturer.



6. Duty Cycle Measurement

The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz, and detector = Peak. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

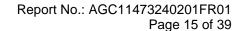
Operating mode	T(µs)	Duty Cycle (%)	Duty Cycle Factor (dB)	1/ T Minimum VBW (kHz)
GFSK_2458MHz	680	10.37	9.84	1.47
GFSK_2465MHz	640	10.60	9.75	1.56
GFSK_2473MHz	640	10.67	9.72	1.56

Remark:

1. Duty Cycle factor = 10 * log (1/ Duty cycle)

The test plots as follows:







7. 20dB Bandwidth Measurement

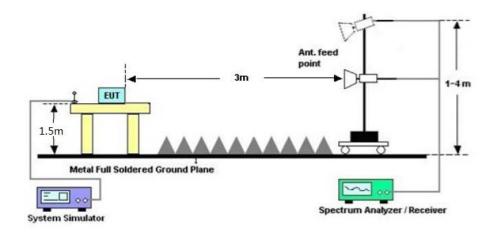
7.1 Provisions Applicable

N/A

7.2 Measurement Procedure

- 1. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 2. Set SPA Centre Frequency = Operation Frequency, RBW= 51 KHz, VBW ≥1 × RBW.
- 3. Set SPA Trace 1 Max hold, then View.

7.3 Measurement Setup (Block Diagram of Configuration)

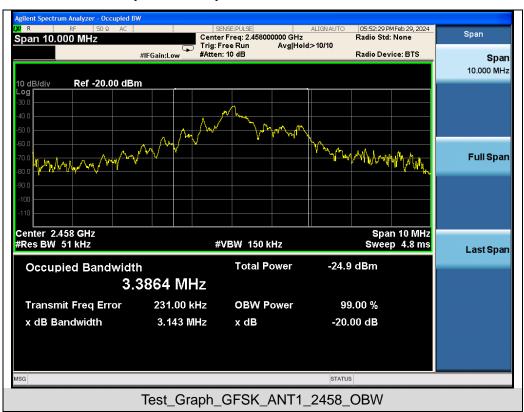


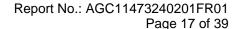


7.4 Measurement Results

Test Data of Occupied Bandwidth and -20dB Bandwidth						
Test Mode	Test Frequency (MHz)	Occupied Bandwidth (MHz)	-20dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail	
	2458	3.3864	3.143	N/A	Pass	
GFSK	2465	3.2571	3.169	N/A	Pass	
	2473	2.9479	2.914	N/A	Pass	

Test Graphs of Occupied Bandwidth and -20 Bandwidth









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8. Field Strength of Fundamental and Radiated Spurious Emission

8.1 Measurement Limit

15.249 Limit in the below table has to be followed:

Frequency Range	Field Strength of Fundamental	Field Strength of Harmonics				
r requericy rearige	(millivolts/meter)	(microvolts/meter)				
900-928MHz	50	500				
2400-2483.5MHz	50	500				
5725-5875MHz	50	500				
24.0-24.25GHz	250	2500				

15.209 Limit in the below table has to be followed:

Frequency Range	Distance	Field Strengths Limit		
(MHz)	Meters	μV/m	dB(μV)/m	
0.009 ~ 0.490	300	2400/F(kHz)		
0.490 ~ 1.705	30	24000/F(kHz)		
1.705 ~ 30	30	30		
30 ~ 88	3	100	40.0	
88 ~ 216	3	150	43.5	
216 ~ 960	3	200	46.0	
960 ~ 1000	3	500	54.0	
Above 1000	3	Other:74.0 dB(µV)/m (Peak)) 54.0 dB(μV)/m (Average)	

Remark:

- 1) Emission level dB μ V = 20 log Emission level μ V/m.
- 2) The smaller limit shall apply at the cross point between two frequency bands.
- Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

Note: All modes were tested for restricted band radiated emission, the test records reported below are the worst result compared to other modes.



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8.2 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 emission, 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. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.



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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	1GHz~26.5GHz
Start - Stop i requeriey	1MHz/3MHz for Peak, 1MHz/3MHz for Average

For measurement of field strength of fundamental: 4MHz/50MHz for Peak, 4MHz/50MHz for Average.

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

■ The following is the test setup of Band Edge:

The EUT operates at transmitting mode. The operate channel is tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.

- Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
- Peak detection: RBW=1MHz, VBW=3MHz / Sweep=AUTO
- Average detection: RBW=1MHz; VBW=1/T / Sweep=AUTO (Duty cycle is less than 98%)
- Average detection: RBW=1MHz; VBW=3M / Sweep=AUTO
- Other procedures refer to clause 7.2.



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Quasi-Peak Measurements below 1GHz

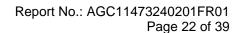
- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. Span was set greater than 1MHz
- 3. RBW = as shown in the table above
- 4. Detector = CISPR quasi-peak
- 5. Sweep time = auto couple
- 6. Trace was allowed to stabilize

Peak Measurements above 1GHz

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW = 3MHz
- 4. Detector = peak
- 5. Sweep time = auto couple
- 6. Trace mode = max hold
- 7. Trace was allowed to stabilize
- 8. For measurement of field strength of fundamental: RBW = 4MHz / VBW = 50MHz for Peak

Average Measurements above 1GHz (Method VB)

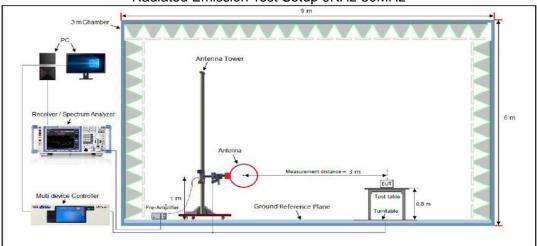
- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW setting requirements are as follows:
- 4. If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz.
- 5. If the EUT duty cycle is < 98%, set VBW $\ge 1/T$. T is the minimum transmission duration.
- 6. Detector = Peak
- 7. Sweep time = auto
- 8. Trace mode = max hold
- 9. Trace was allowed to stabilize
- 10. For measurement of field strength of fundamental: RBW = 4MHz for Average.



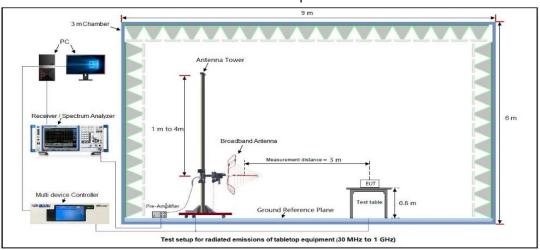


8.3 Measurement Setup (Block Diagram of Configuration)

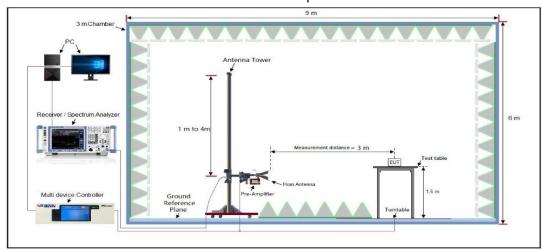
Radiated Emission Test Setup 9KHz-30MHz



Radiated Emission Test Setup 30MHz-1000MHz



Radiated Emission Test Setup Above 1000MHz



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8.4 Measurement Result

FIELD STRENGTH OF FUNDAMENTAL

EUT	BirdEye Remote Control Drone with Camera	Model Name	AW-61
Temperature	22.3℃	Relative Humidity	57.9%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Modulation	GFSK	Polarization	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
2458	43.53	49.05	92.58	114.00	-21.42	peak
2458	39.40	49.05	88.45	94.00	-5.55	AVG
2465	43.59	49.05	92.64	114.00	-21.36	peak
2465	39.54	49.05	88.59	94.00	-5.41	AVG
2473	43.73	49.05	92.78	114.00	-21.22	peak
2473	40.07	49.05	89.12	94.00	-4.88	AVG
emark:						
actor = Anter	nna Factor + Cable	Loss – Pre-	amplifier.			

EUT	BirdEye Remote Control Drone with Camera	Model Name	AW-61
Temperature	22.3℃	Relative Humidity	57.9%
Pressure	985hPa	Test Voltage	Normal Voltage
Test Modulation	GFSK	Polarization	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type	
2458	40.18	49.05	89.23	114.00	-24.77	peak	
2458	35.70	49.05	84.75	94.00	-9.25	AVG	
2465	40.11	49.05	89.16	114.00	-24.84	peak	
2465	35.76	49.05	84.81	94.00	-9.19	AVG	
2473	40.70	49.05	89.75	114.00	-24.25	peak	
2473	35.58	49.05	84.63	94.00	-9.37	AVG	
Remark:							
Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

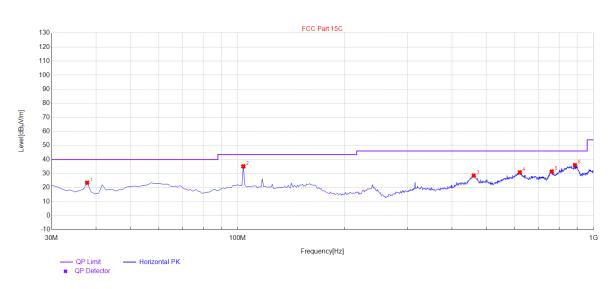


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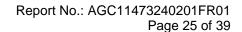
Radiated Emission Below 30MHz

The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20dB below the permissible value need not be reported.

Radiated Emission Test Results at 30MHz-1GHz						
EUT Name	BirdEye Remote Control Drone with Camera	Model Name	AW-61			
Temperature	21.9℃	Relative Humidity	56.8%			
Pressure	960hPa	Test Voltage	Normal Voltage			
Test Mode	Mode 1	Antenna Polarity	Horizontal			

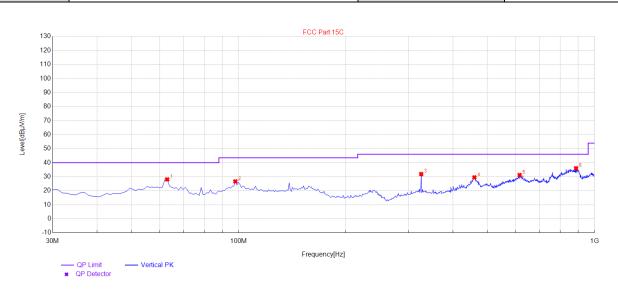


Final I	Final Data List							
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	37.76	23.44	10.93	40.00	16.56	100	106	Horizontal
2	103.72	35.12	16.88	43.50	8.38	100	208	Horizontal
3	460.68	28.54	24.60	46.00	17.46	100	2	Horizontal
4	620.73	30.82	25.82	46.00	15.18	100	212	Horizontal
5	763.32	31.46	26.27	46.00	14.54	100	175	Horizontal
6	886.51	36.00	29.65	46.00	10.00	100	102	Horizontal





Radiated Emission Test Results at 30MHz-1GHz						
EUT Name	BirdEye Remote Control Drone with Camera	Model Name	AW-61			
Temperature	21.9℃	Relative Humidity	56.8%			
Pressure	960hPa	Test Voltage	Normal Voltage			
Test Mode	Mode 1	Antenna Polarity	Vertical			



Final I	Final Data List							
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	62.98	28.07	16.92	40.00	11.93	100	50	Vertical
2	97.9	26.66	16.44	43.50	16.84	100	258	Vertical
3	325.85	31.91	15.80	46.00	14.09	100	357	Vertical
4	459.71	29.55	24.69	46.00	16.45	100	58	Vertical
5	615.88	31.21	25.47	46.00	14.79	100	258	Vertical
6	887.48	36.04	29.70	46.00	9.96	100	315	Vertical

RESULT: Pass

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

2. All test modes had been pre-tested. The mode 1 is the worst case and recorded in the report.



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Radiated Emissions Test Results for Above 1GHz

EUT Name	BirdEye Remote Control Drone with Camera	Model Name	AW-61
Temperature	21.9℃	Relative Humidity	56.8%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna Polarity	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4916.000	55.26	0.08	55.34	74	-18.66	peak
4916.000	47.05	0.08	47.13	54	-6.87	AVG
7374.000	55.13	2.21	57.34	74	-16.66	peak
7374.000	46.04	2.21	48.25	54	-5.75	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT Name	BirdEye Remote Control Drone with Camera	Model Name	AW-61
Temperature	21.9℃	Relative Humidity	56.8%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna Polarity	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	T value Type
4916.000	53.58	0.08	53.66	74	-20.34	peak
4916.000	48.23	0.08	48.31	54	-5.69	AVG
7374.000	55.41	2.21	57.62	74	-16.38	peak
7374.000	45.25	2.21	47.46	54	-6.54	AVG

Remark:

Factor = Antenna Factor + Cable Loss - Pre-amplifier.

RESULT: Pass



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Radiated Emissions Test Results for Above 1GHz

EUT Name	BirdEye Remote Control Drone with Camera	Model Name	AW-61
Temperature	21.9℃	Relative Humidity	56.8%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 2	Antenna Polarity	Horizontal

(MHz) 4930.000	(dBµV) 55.12	(dB) 0.14	(dBµV/m)	(dBµV/m)	(dB)	- Value Type
4930.000	55.12	0.14				
		0.14	55.26	74	-18.74	peak
4930.000	47.26	0.14	47.4	54	-6.6	AVG
7395.000	55.03	2.36	57.39	74	-16.61	peak
7395.000	46.17	2.36	48.53	54	-5.47	AVG

Remark:

Factor = Antenna Factor + Cable Loss - Pre-amplifier.

EUT Name	BirdEye Remote Control Drone with Camera	Model Name	AW-61
Temperature	21.9℃	Relative Humidity	56.8%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 2	Antenna Polarity	Vertical

Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
53.14	0.14	53.28	74	-20.72	peak
48.47	0.14	48.61	54	-5.39	AVG
55.53	2.36	57.89	74	-16.11	peak
45.29	2.36	47.65	54	-6.35	AVG
	(dBµV) 53.14 48.47 55.53	(dBµV) (dB) 53.14 0.14 48.47 0.14 55.53 2.36	(dBμV) (dB) (dBμV/m) 53.14 0.14 53.28 48.47 0.14 48.61 55.53 2.36 57.89	(dBμV) (dB) (dBμV/m) (dBμV/m) 53.14 0.14 53.28 74 48.47 0.14 48.61 54 55.53 2.36 57.89 74	(dBμV) (dB) (dBμV/m) (dBμV/m) (dBμV/m) 53.14 0.14 53.28 74 -20.72 48.47 0.14 48.61 54 -5.39 55.53 2.36 57.89 74 -16.11

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

RESULT: Pass



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Radiated Emissions Test Results for Above 1GHz

EUT Name	BirdEye Remote Control Drone with Camera	Model Name	AW-61
Temperature	21.9℃	Relative Humidity	56.8%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna Polarity	Horizontal

(MHz) (dBμV) (dB) (dBμV/m) (dBμV/m) (dBμV/m) 4946.000 55.38 0.22 55.6 74 -18.4 4946.000 47.51 0.22 47.73 54 -6.27 7419.000 55.2 2.64 57.84 74 -16.16	55.38 0.22 55.6 74 -18.4 peak 47.51 0.22 47.73 54 -6.27 AVG	Meter Reading	Factor	Emission Level	Limits	Margin	\/alua Tima
4946.000 47.51 0.22 47.73 54 -6.27	47.51 0.22 47.73 54 -6.27 AVG 55.2 2.64 57.84 74 -16.16 peak	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
	55.2 2.64 57.84 74 -16.16 peak	55.38	0.22	55.6	74	-18.4	peak
7419.000 55.2 2.64 57.84 74 -16.16		47.51	0.22	47.73	54	-6.27	AVG
	46.32 2.64 48.96 54 -5.04 AVG	55.2	2.64	57.84	74	-16.16	peak
7419.000 46.32 2.64 48.96 54 -5.04		46.32	2.64	48.96	54	-5.04	AVG
7419.000			(dBµV) 55.38 47.51 55.2	(dBµV) (dB) 55.38 0.22 47.51 0.22 55.2 2.64	(dBμV) (dB) (dBμV/m) 55.38 0.22 55.6 47.51 0.22 47.73 55.2 2.64 57.84	(dBμV) (dB) (dBμV/m) (dBμV/m) 55.38 0.22 55.6 74 47.51 0.22 47.73 54 55.2 2.64 57.84 74	(dBμV) (dB) (dBμV/m) (dBμV/m) (dB) 55.38 0.22 55.6 74 -18.4 47.51 0.22 47.73 54 -6.27 55.2 2.64 57.84 74 -16.16

Remark:

Factor = Antenna Factor + Cable Loss - Pre-amplifier.

EUT Name	BirdEye Remote Control Drone with Camera	Model Name	AW-61
Temperature	21.9℃	Relative Humidity	56.8%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna Polarity	Vertical

(MHz) (dBμV) (dB) (dBμV/m) (dBμV/m) (dB) 4946.000 53.54 0.22 53.76 74 -20.24 pe 4946.000 48.71 0.22 48.93 54 -5.07 A 7419.000 55.7 2.64 58.34 74 -15.66 pe	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
4946.000 48.71 0.22 48.93 54 -5.07 A 7419.000 55.7 2.64 58.34 74 -15.66 pe	(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
7419.000 55.7 2.64 58.34 74 -15.66 pe	4946.000	53.54	0.22	53.76	74	-20.24	peak
	4946.000	48.71	0.22	48.93	54	-5.07	AVG
7419 000 45 42 2 64 48 06 54 -5 94 Å	7419.000	55.7	2.64	58.34	74	-15.66	peak
7+10.000 40.42 2.04 40.00 04 50.04 7	7419.000	45.42	2.64	48.06	54	-5.94	AVG

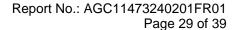
Remark:

Factor = Antenna Factor + Cable Loss - Pre-amplifier.

RESULT: Pass

Note:

- 1. The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.
- 2. Factor = Antenna Factor + Cable loss Pre-amplifier gain, Margin = Emission Level-Limit.
- 3. The "Factor" value can be calculated automatically by software of measurement system.

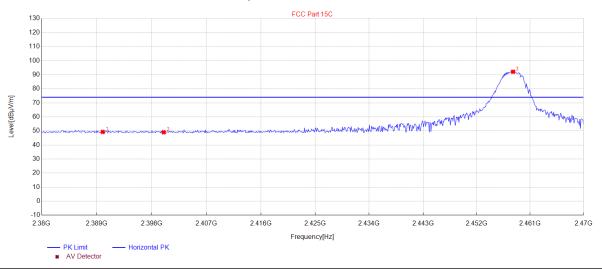




Band Edge Emission Test Results for Restricted Bands

EUT Name	BirdEye Remote Control Drone with Camera	Model Name	AW-61
Temperature	21.9℃	Relative Humidity	56.8%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna Polarity	Horizontal

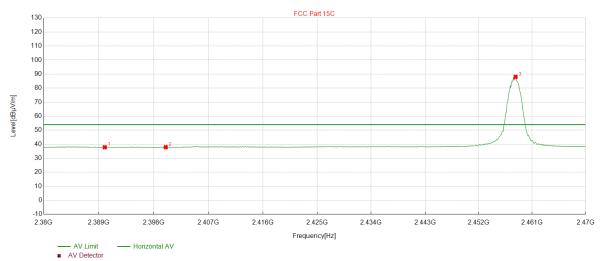
Test Graph for Peak Measurement



PK D	Data List							
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2390	49.31	34.40	74.00	24.69	150	360	Horizontal
2	2400	49.06	34.43	74.00	24.94	150	92	Horizontal
3	2458.1081	92.12	34.59			150	298	Horizontal

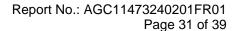


Test Graph for Average Measurement



PK D	Data List							
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2390	37.86	34.40	54.00	16.14	150	4	Horizontal
2	2400	37.88	34.43	54.00	16.12	150	265	Horizontal
3	2458.1982	88.01	34.59			150	355	Horizontal

RESULT: Pass

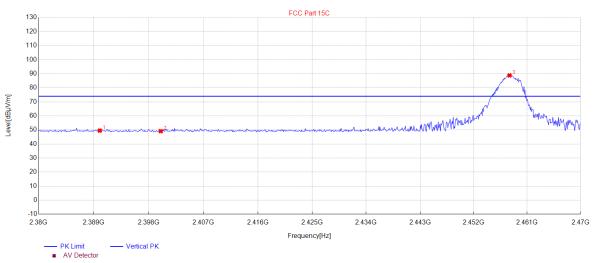




Band Edge Emission Test Results for Restricted Bands

EUT Name	BirdEye Remote Control Drone with Camera	Model Name	AW-61
Temperature	21.9℃	Relative Humidity	56.8%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna Polarity	Vertical

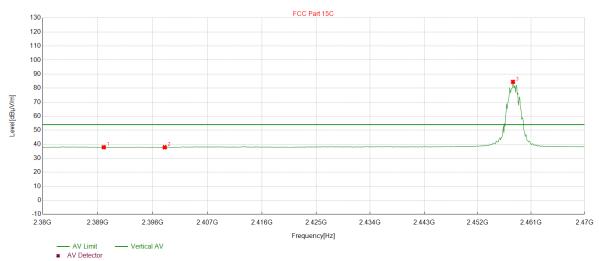
Test Graph for Peak Measurement



PK D	PK Data List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	2390	49.51	34.40	74.00	24.49	150	357	Vertical	
2	2400	49.13	34.43	74.00	24.87	150	96	Vertical	
3	2458.018	88.81	34.59			150	314	Vertical	

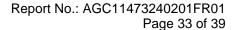


Test Graph for Average Measurement



PK D	PK Data List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	2390	37.83	34.40	54.00	16.17	150	30	Vertical	
2	2400	37.80	34.43	54.00	16.20	150	7	Vertical	
3	2457.9279	84.45	34.59	-		150	309	Vertical	

RESULT: Pass

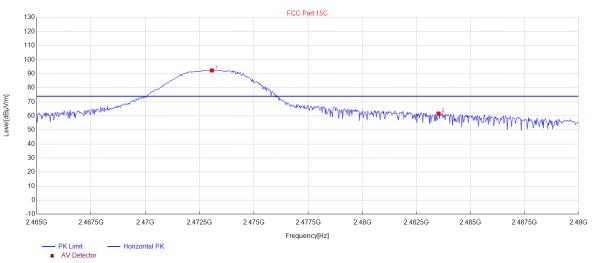




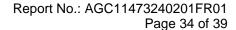
Band Edge Emission Test Results for Restricted Bands

EUT Name	BirdEye Remote Control Drone with Camera	Model Name	AW-61
Temperature	21.9℃	Relative Humidity	56.8%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna Polarity	Horizontal

Test Graph for Peak Measurement

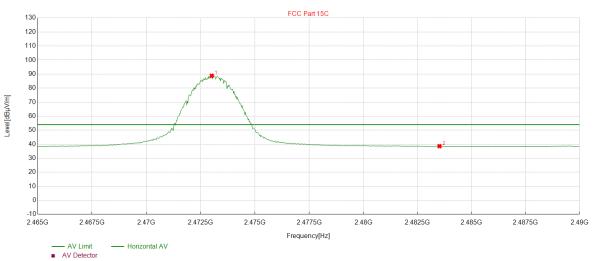


PK D	PK Data List							
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2473.0581	92.35	34.63			150	344	Horizontal
2	2483.5185	61.62	34.66	74.00	12.38	150	344	Horizontal



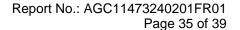


Test Graph for Average Measurement



PK D	PK Data List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	2473.008	88.80	34.63			150	347	Horizontal	
2	2483.5185	38.59	34.66	54.00	15.41	150	350	Horizontal	

RESULT: Pass

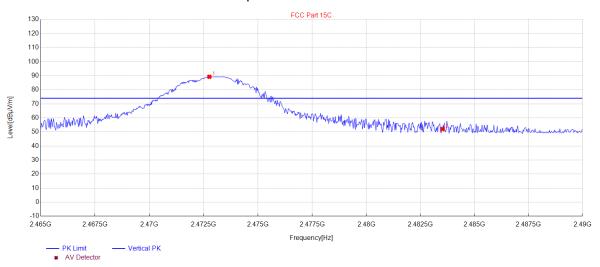




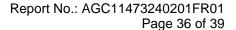
Band Edge Emission Test Results for Restricted Bands

EUT Name	BirdEye Remote Control Drone with Camera	Model Name	AW-61
Temperature	21.9℃	Relative Humidity	56.8%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna Polarity	Vertical

Test Graph for Peak Measurement

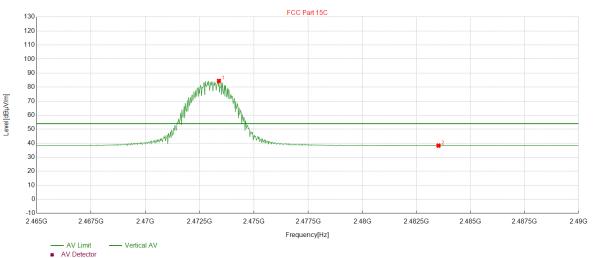


PK D	PK Data List							
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2472.7578	89.26	34.63			150	314	Vertical
2	2483.5185	52.07	34.66	74.00	21.93	150	128	Vertical









PK [PK Data List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	2473.3834	84.44	34.64			150	314	Vertical	
2	2483.5185	38.28	34.66	54.00	15.72	150	326	Vertical	

RESULT: Pass

Note:

- 1) Factor=Antenna Factor + Cable loss Amplifier gain. Field Strength=Factor + Reading level
- 2) The factor had been edited in the "Input Correction" of the Spectrum Analyzer. So the Amplitude of test plots is equal to Reading level plus the Factor in dB. Use the A dB(μV) to represent the Amplitude. Use the F dB(μV/m) to represent the Field Strength. So A=F.



9. AC Power Line Conducted Emission

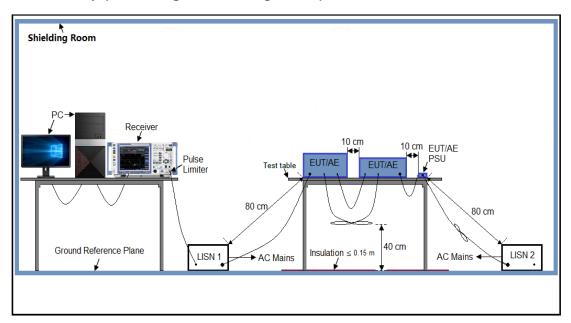
9.1 Measurement Limit

Fraguenay	Maximum RF Line Voltage				
Frequency	Q.P. (dBµV)	Average (dBµV)			
150kHz~500kHz	66-56	56-46			
500kHz~5MHz	56	46			
5MHz~30MHz	60	50			

Note:

- 1. The lower limit shall apply at the transition frequency.
- 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

9.2 Measurement Setup (Block Diagram of Configuration)





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9.3 Preliminary Procedure of Line Conducted Emission Test

- 1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipment received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received DC 5V power from adapter which received AC120V/60Hz power from a LISN.
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

9.4 Final Procedure of Line Conducted Emission Test

- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- 2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less 2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case condition(s) was reported on the Summary Data page.

9.5 Measurement Resul

N/A

Note: The device under test is battery-powered and does not require evaluation of AC Power Line Conducted Emission.



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Appendix I: Photographs of Test Setup

Refer to the Report No.: AGC11473240201AP01

Appendix II: Photographs of Test EUT

Refer to the Report No.: AGC11473240201AP02

----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.