



# FCC TEST REPORT

**Test report  
On Behalf of  
Ningbo Pelican Smart Fishing Tackle Co., Ltd.  
For  
MOBULA Remote Controller  
Model No.: MR-0000W1AP01, M**

**FCC ID: 2ASTR-MR**

**Prepared for :** Ningbo Pelican Smart Fishing Tackle Co., Ltd.  
No.16, Yongchang Road, Chengdong Industrial Park, Xiangshan County,  
Ningbo City, Zhejiang Province, China

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**Date of Test:** Feb. 23, 2019 ~ Mar. 13, 2019

**Date of Report:** Mar. 13, 2019

**Report Number:** HK1903050374-1ER



### TEST RESULT CERTIFICATION


**Applicant's name** ..... : Ningbo Pelican Smart Fishing Tackle Co., Ltd.  
Address ..... : No.16, Yongchang Road, Chengdong Industrial Park, Xiangshan  
County, Ningbo City, Zhejiang Province, China  
**Manufacture's Name**..... : Ningbo Pelican Smart Fishing Tackle Co., Ltd.  
Address ..... : No.16, Yongchang Road, Chengdong Industrial Park, Xiangshan  
County, Ningbo City, Zhejiang Province, China


**Product description**

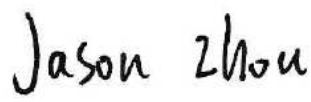
Trade Mark: RIPPTON, MOBULA  
Product name ..... : MOBULA Remote Controller  
Model and/or type reference : MR-0000W1AP01, M  
**Standards** ..... : FCC Rules and Regulations Part 15 Subpart C Section 15.249  
ANSI C63.10: 2013

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**Date of Test** ..... :  
Date (s) of performance of tests ..... : Feb. 23, 2019 ~ Mar. 13, 2019  
Date of Issue ..... : Mar. 13, 2019  
Test Result..... : **Pass**

Testing Engineer :   
\_\_\_\_\_  
(Gary Qian)

Technical Manager :   
\_\_\_\_\_  
(Eden Hu)

Authorized Signatory :   
\_\_\_\_\_  
(Jason Zhou)



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## 1. TEST SUMMARY

### 1.1 TEST PROCEDURES AND RESULTS

DESCRIPTION OF TEST	RESULT
CONDUCTED EMISSIONS TEST	COMPLIANT
RADIATED EMISSION TEST	COMPLIANT
BAND EDGE	COMPLIANT
OCCUPIED BANDWIDTH MEASUREMENT	COMPLIANT
ANTENNA REQUIREMENT	COMPLIANT

### 1.2 TEST FACILITY

Test Firm : Shenzhen HUAKE Testing Technology Co., Ltd.

Address 1F, B2 Building, Junfeng Zhongcheng Zhizao Innovation Park, Fuhai Street, Bao'an District, Shenzhen City, China

### 1.3 MEASUREMENT UNCERTAINTY

Measurement Uncertainty	
Conducted Emission Expanded Uncertainty	= 2.23dB, k=2
Radiated emission expanded uncertainty(9kHz-30MHz)	= 3.08dB, k=2
Radiated emission expanded uncertainty(30MHz-1000MHz)	= 4.42dB, k=2
Radiated emission expanded uncertainty(Above 1GHz)	= 4.06dB, k=2



## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

Equipment	MOBULA Remote Controller
Model Name	MR-0000W1AP01
Serial No.	M
Trade Mark	RIPPTON, MOBULA
Model Difference	All model's the function, software and electric circuit are the same, only with brand named and model named different. Test sample model: MR-0000W1AP01.
FCC ID	<b>2ASTR-MR</b>
Antenna Type	Internal Antenna
Antenna Gain	1 dBi
Operation frequency	2453.95-2468.9MHz
Number of Channels	47CH
Modulation Type	GFSK
Power Source	DC 5V From Adapter or DC 7.4V From Battery
Power Rating	DC 5V From Adapter or DC 7.4V From Battery



## 2.2 Carrier Frequency of Channels

Channel List							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
166	2453.95	178	2457.85	191	2462.075	203	2465.975
167	2454.275	179	2458.175	192	2462.4	204	2466.3
168	2454.6	180	2458.5	193	2462.725	205	2466.625
169	2454.925	181	2458.825	194	2463.05	206	2466.95
170	2455.25	182	2459.15	195	2463.375	207	2467.275
171	2455.575	183	2459.475	196	2463.7	208	2467.6
172	2455.9	184	2459.8	197	2464.025	209	2467.925
173	2456.225	185	2460.125	198	2464.35	210	2468.25
174	2456.55	186	2460.45	199	2464.675	211	2468.575
175	2456.875	187	2460.775	200	2465	212	2468.9
176	2457.2	188	2461.1	201	2465.325		
177	2457.525	190	2461.75	202	2465.65		

## 2.3 Operation of EUT during testing

### Operating Mode

The mode is used: **Transmitting mode**

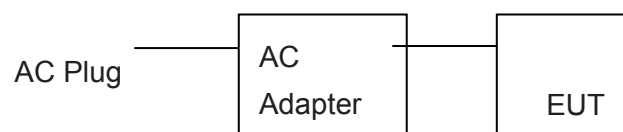
Low Channel: 2453.95MHz

Middle Channel: 2462.075MHz

High Channel: 2468.9MHz

## 2.4 DESCRIPTION OF TEST SETUP

Operation of EUT during Radiation testing and Above1GHz Radiation testing:



### ● Adapter information

Input: 100-240V, 50/60Hz

Output: DC 5V/1A



## 2.5 MEASUREMENT INSTRUMENTS LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N. Artificial Mains Network	R&S	ENV216	HKE-002	Dec. 28, 2018	1 Year
2.	Receiver	R&S	ESCI 7	HKE-010	Dec. 28, 2018	1 Year
3.	RF automatic control unit	Tonscend	JS0806-2	HKE-060	Dec. 28, 2018	1 Year
4.	Spectrum analyzer	R&S	FSP40	HKE-025	Dec. 28, 2018	1 Year
5.	Spectrum analyzer	Agilent	N9020A	HKE-048	Dec. 28, 2018	1 Year
6.	Preamplifier	Schwarzbeck	BBV 9743	HKE-006	Dec. 28, 2018	1 Year
7.	EMI Test Receiver	Rohde & Schwarz	ESCI 7	HKE-010	Dec. 28, 2018	1 Year
8.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	HKE-012	Dec. 28, 2018	1 Year
9.	Loop Antenna	Schwarzbeck	FMZB 1519 B	HKE-014	Dec. 28, 2018	1 Year
10.	Horn Antenna	Schwarzbeck	9120D	HKE-013	Dec. 28, 2018	1 Year
11.	Pre-amplifier	EMCI	EMC051845 SE	HKE-015	Dec. 28, 2018	1 Year
12.	Pre-amplifier	Agilent	83051A	HKE-016	Dec. 28, 2018	1 Year
13.	EMI Test Software EZ-EMC	Tonscend	JZOZtheBO T120-B Version	HKE-083	Dec. 28, 2018	N/A
14.	Power Sensor	Agilent	E9300A	HKE-086	Dec. 28, 2018	1 Year
15.	Spectrum analyzer	Agilent	N9020A	HKE-048	Dec. 28, 2018	1 Year
16.	Signal generator	Agilent	N5182A	HKE-029	Dec. 28, 2018	1 Year
17.	Signal Generator	Agilent	83630A	HKE-028	Dec. 28, 2018	1 Year
18.	Shielded room	Shiel Hong	4*3*3	HKE-039	Dec. 28, 2017	3 Year



### 3. CONDUCTED EMISSIONS TEST

#### 3.1 Conducted Power Line Emission Limit

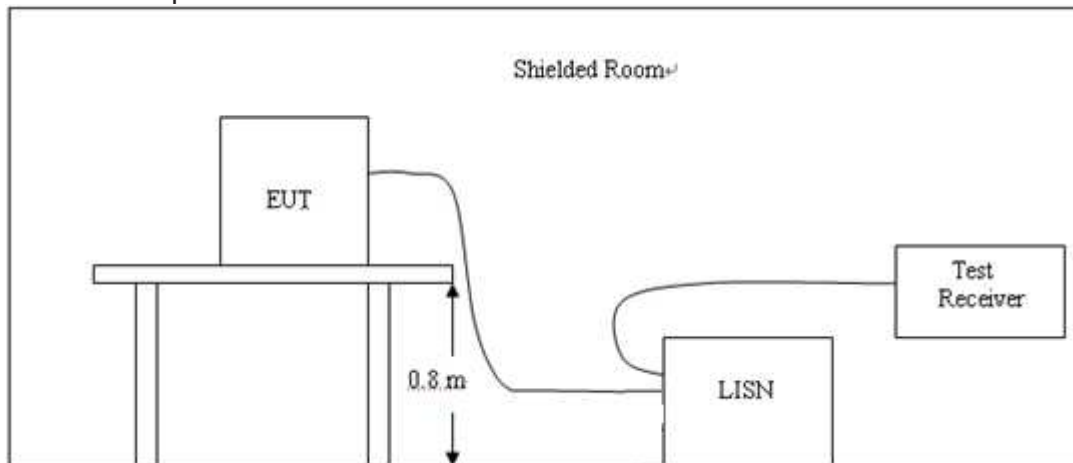
For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following

Frequency (MHz)	Maximum RF Line Voltage (dB $\mu$ V)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

\* Decreasing linearly with the logarithm of the frequency

For intentional device, according to §15.207(a) Line Conducted Emission Limit is same as above table.

#### 3.2 Test Setup



#### 3.3 Test Procedure

- 1, The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. 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.
- 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, If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5, All support equipments received AC power from a second LISN, if any.
- 6, The EUT 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.

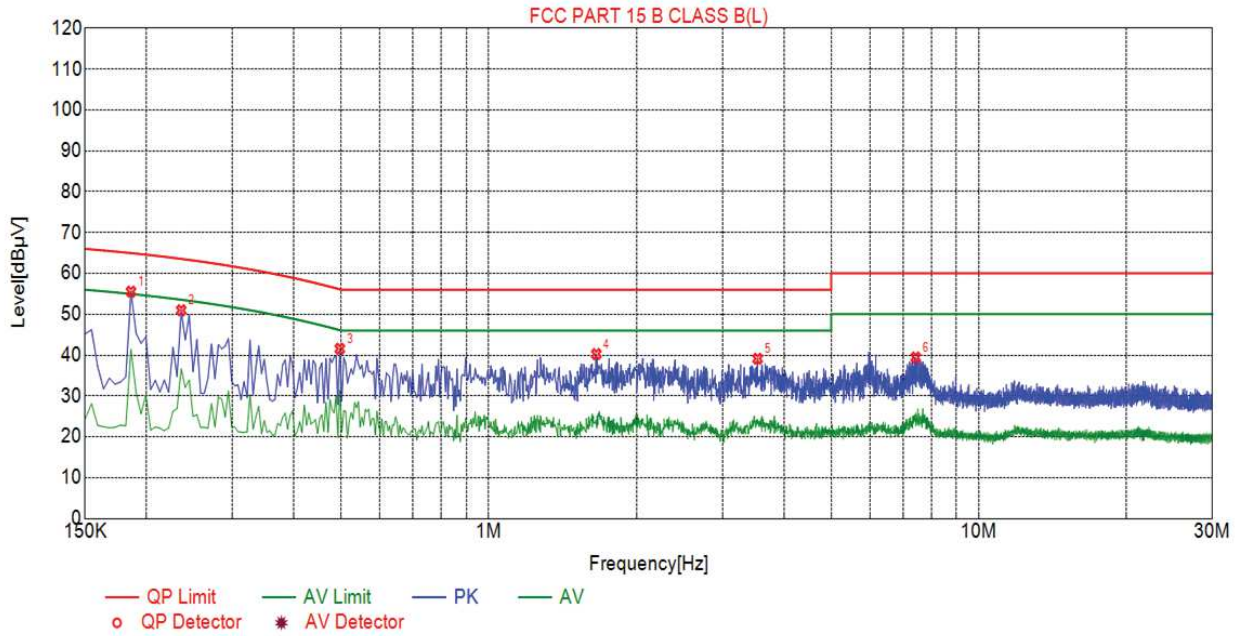




### 3.4 Test Result PASS

All the test modes completed for test. only the worst result of GFSK Low Channel was reported as below:

Phase: L

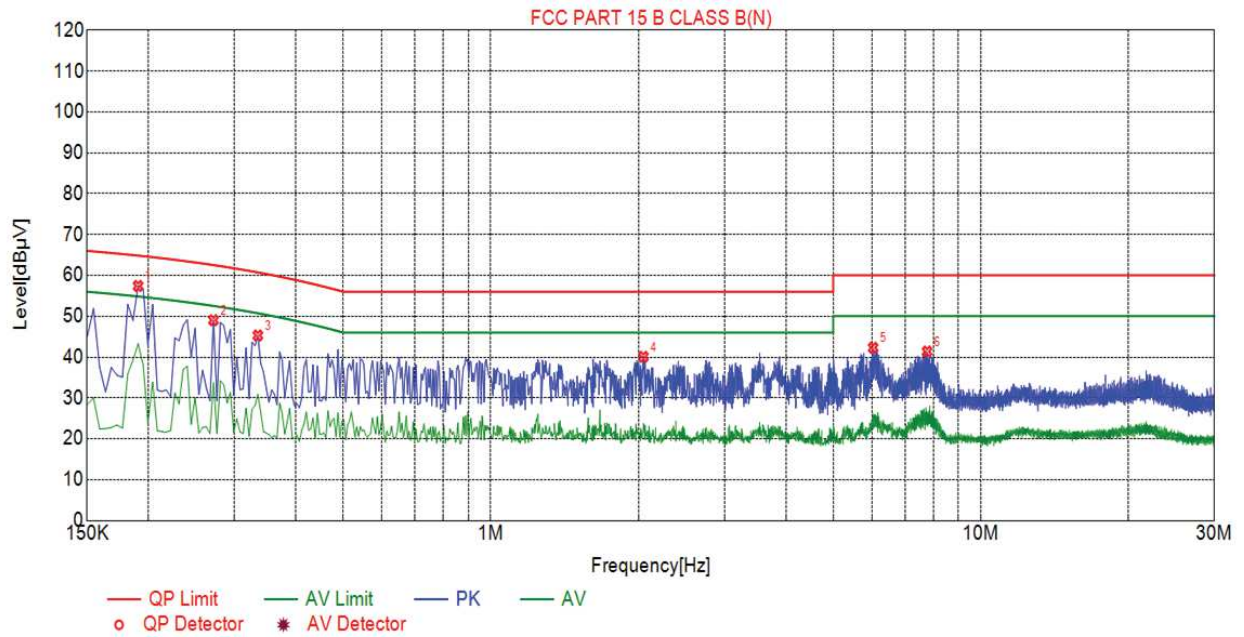


Suspected List						
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector
1	0.1860	55.55	10.05	64.26	8.71	PK
2	0.2355	50.98	10.03	62.31	11.33	PK
3	0.4965	41.57	10.04	56.12	14.55	PK
4	1.6575	40.26	10.12	56.00	15.74	PK
5	3.5385	39.12	10.25	56.00	16.88	PK
6	7.4355	39.42	10.18	60.00	20.58	PK

Remark:  $Transd = Cable\ lose + Antenna\ factor - Pre\text{-}amplifier$ ;  $Margin = Limit - Level$



Phase: N



Suspected List						
NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Detector
1	0.1905	57.41	10.04	64.10	6.69	PK
2	0.2715	49.04	10.03	61.15	12.11	PK
3	0.3345	45.30	10.04	59.40	14.10	PK
4	2.0490	40.08	10.15	56.00	15.92	PK
5	6.0315	42.29	10.23	60.00	17.71	PK
6	7.7730	41.37	10.16	60.00	18.63	PK

Remark: Transd = Cable lose + Antenna factor - Pre-amplifier; Margin = Limit – Level

## 4 RADIATED EMISSION TEST

### 4.1 Radiation Limit

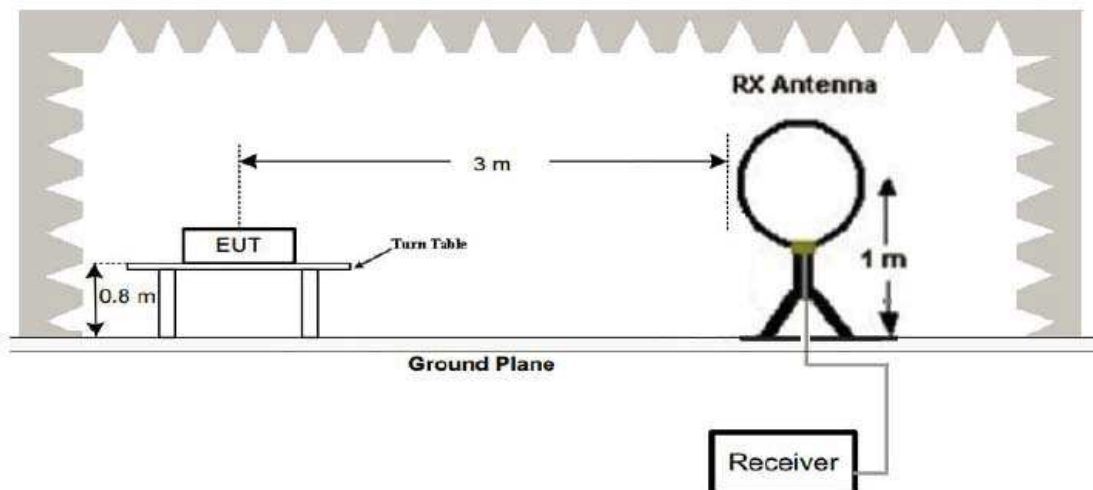
For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Distance (Meters)	Radiated (dB $\mu$ V/m)	Radiated ( $\mu$ V/m)
30-88	3	40	100
88-216	3	43.5	150
216-960	3	46	200
Above 960	3	54	500

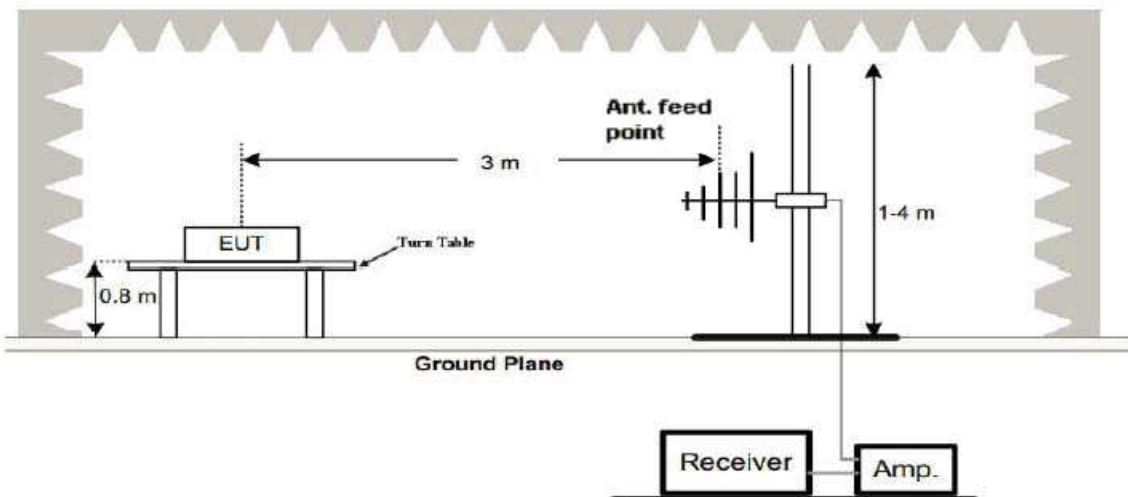
For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

### 4.2 Test Setup

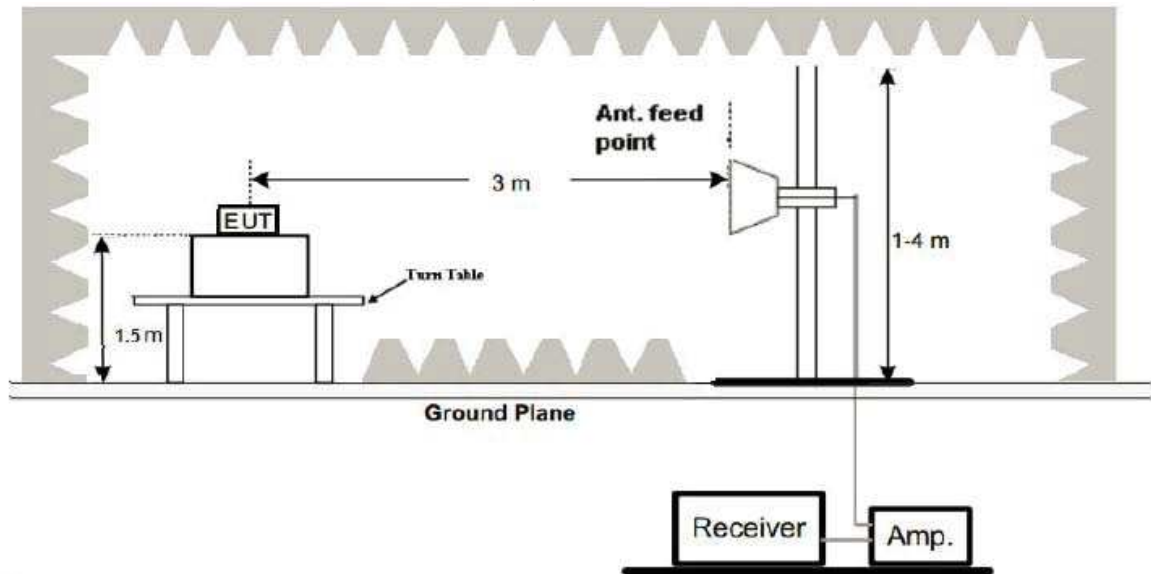
#### (1) Radiated Emission Test-Up Frequency Below 30MHz



#### (2) Radiated Emission Test-Up Frequency 30MHz~1GHz



### (3) Radiated Emission Test-Up Frequency Above 1GHz



#### 4.3 Test Procedure

1. Below 1GHz measurement the EUT is placed on turntable which is 0.8m above ground plane. And above 1GHz measurement EUT was placed on low permittivity and low tangent turn table which is 1.5m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The test frequency range from 9KHz to 25GHz per FCC PART 15.33(a).

#### Note:

For battery operated equipment, the equipment tests shall be performed using a new battery.

#### 4.4 Test Result

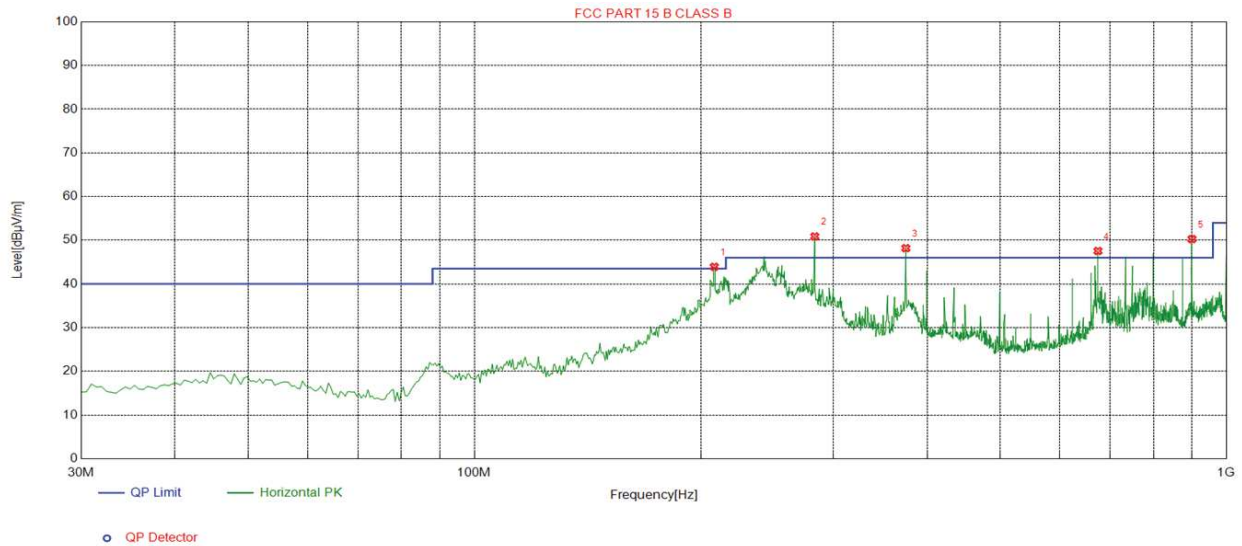
##### PASS

All the test modes completed for test. The worst case of Radiated Emission is CH 166; the test data of this mode was reported.



Below 1GHz Test Results:

Antenna polarity: H



Suspected List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	208.480	43.93	-14.84	43.50	-0.43	100	12	Horizontal
2	283.655	50.87	-13.10	46.00	-4.87	100	312	Horizontal
3	374.835	48.19	-10.92	46.00	-2.19	100	292	Horizontal
4	675.050	47.54	-4.72	46.00	-1.54	100	258	Horizontal
5	900.090	50.26	-1.78	46.00	-4.26	100	268	Horizontal

Remark: Transd = Cable lose + Antenna factor - Pre-amplifier; Margin = Limit – Level

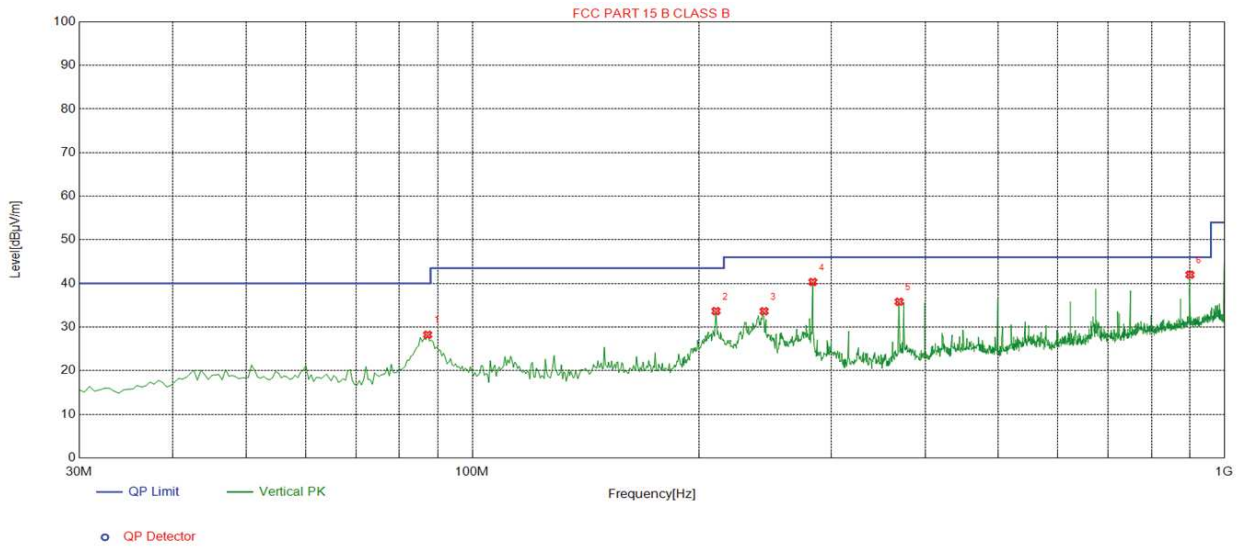
Remark: This equipment belongs to class A product, which meets the requirements of class A.

The measurements above the limit pertain to digital circuit (not intentional radiator part).

It was checked with the radio off.



Antenna polarity: V



Suspected List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	87.2300	28.24	-17.73	40.00	11.76	100	348	Vertical
2	210.905	33.66	-14.78	43.50	9.84	100	273	Vertical
3	244.370	33.63	-13.65	46.00	12.37	100	73	Vertical
4	283.655	40.34	-13.10	46.00	5.66	100	232	Vertical
5	369.500	35.80	-11.02	46.00	10.20	100	263	Vertical
6	900.090	42.01	-1.78	46.00	3.99	100	128	Vertical

Remark: Transd = Cable lose + Antenna factor - Pre-amplifier; Margin = Limit – Level

**Remark: This equipment belongs to class A product, which meets the requirements of class A.**

Remark:

- (1) Measuring frequencies from 9 KHz to the 1 GHz, Radiated emission test from 9KHz to 30MHz was verified, and no any emission was found except system noise floor.
- (2) \* denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (3) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.

### Harmonics and Spurious Emissions

#### Frequency Range (9 kHz-30MHz)

Frequency (MHz)	Level@3m (dBµV/m)	Limit@3m (dBµV/m)
--	--	--
--	--	--
--	--	--
--	--	--

**Note:** 1. Emission Level=Reading+ Cable loss-Antenna factor-Amp factor

2. The emission levels are 20 dB below the limit value, which are not reported. It is deemed to comply with the requirement



Above 1 GHz Test Results:  
CH Low (2453.95MHz)

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2453.95	109.53	-5.84	103.69	114	-10.31	peak
2453.95	89.42	-5.84	83.58	94	-10.42	AVG
4907.9	56.81	-3.64	53.17	74	-20.83	peak
4907.9	46.76	-3.64	43.12	54	-10.88	AVG
7361.85	56.52	-0.95	55.57	74	-18.43	peak
7361.85	44.29	-0.95	43.34	54	-10.66	AVG

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

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2453.95	114.85	-5.84	109.01	114	-4.99	peak
2453.95	88.16	-5.84	82.32	94	-11.68	AVG
4907.9	58.63	-3.64	54.99	74	-19.01	peak
4907.9	49.17	-3.64	45.53	54	-8.47	AVG
7361.85	58.32	-0.95	57.37	74	-16.63	peak
7361.85	44.59	-0.95	43.64	54	-10.36	AVG

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



## CH Middle (2462.075MHz)

## Horizontal:

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector Type
2462.075	114.59	-5.71	108.88	114	-5.12	peak
2462.075	86.18	-5.71	80.47	94	-13.53	AVG
4924.15	56.82	-3.51	53.31	74	-20.69	peak
4924.15	47.16	-3.51	43.65	54	-10.35	AVG
7386.225	56.87	-0.82	56.05	74	-17.95	peak
7386.225	44.29	-0.82	43.47	54	-10.53	AVG

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

## Vertical:

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector Type
2462.075	108.94	-5.71	103.23	114	-10.77	peak
2462.075	86.75	-5.71	81.04	94	-12.96	AVG
4924.15	56.93	-3.51	53.42	74	-20.58	peak
4924.15	48.14	-3.51	44.63	54	-9.37	AVG
7386.225	54.93	-0.82	54.11	74	-19.89	peak
7386.225	39.47	-0.82	38.65	54	-15.35	AVG

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





## CH High (2468.9MHz)

## Horizontal:

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector Type
2468.9	114.54	-5.65	108.89	114	-5.11	peak
2468.9	86.87	-5.65	81.22	94	-12.78	AVG
4937.8	56.38	-3.43	52.95	74	-21.05	peak
4937.8	42.83	-3.43	39.4	54	-14.6	AVG
7406.7	55.12	-0.75	54.37	74	-19.63	peak
7406.7	39.41	-0.75	38.66	54	-15.34	AVG

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

## Vertical:

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector Type
2468.9	112.36	-5.65	106.71	114	-7.29	peak
2468.9	87.94	-5.65	82.29	94	-11.71	AVG
4937.8	58.15	-3.43	54.72	74	-19.28	peak
4937.8	46.39	-3.43	42.96	54	-11.04	AVG
7406.7	56.71	-0.75	55.96	74	-18.04	peak
7406.7	40.26	-0.75	39.51	54	-14.49	AVG

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

## Remark :

- (1) Measuring frequencies from 1 GHz to the 25 GHz .
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) \* denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (4) Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
- (6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.
- (7) All modes of operation were investigated and the worst-case emissions are reported.



## 5 BAND EDGE

### 5.1 Limits

FCC PART 15.249(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

### 5.2 Test Procedure

The band edge compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW to 100KHz and VBM to 300KHz to measure the peak field strength and set RBW to 1MHz and VBW to 10Hz to measure the average radiated field strength. The conducted RF band edge was measured by using a spectrum analyzer. Set span wide enough to capture the highest in-band emission and the emission at the band edge. Set RBW to 100 KHz and VBW to 300 KHz, to measure the conducted peak band edge.

### 5.3 Test Result

**PASS**

Radiated Band Edge Test:

Operation Mode: TX CH Low (2453.95MHz)

Horizontal (Worst case)

Horizontal (Worst case):

Frequency (MHz)	Reading Result (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2310.00	55.19	-5.81	49.38	74	-24.62	peak
2310.00	/	-5.81	/	54	/	AVG
2390.00	57.04	-5.84	51.2	74	-22.8	peak
2390.00	/	-5.84	/	54	/	AVG
2400.00	55.16	-5.84	49.32	74	-24.68	peak
2400.00	/	-5.84	/	54	/	AVG

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



Vertical:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2310.00	58.29	-5.81	52.48	74	-21.52	peak
2310.00	/	-5.81	/	54	/	AVG
2390.00	55.34	-5.84	49.5	74	-24.5	peak
2390.00	/	-5.84	/	54	/	AVG
2400.00	56.19	-5.84	50.35	74	-23.65	peak
2400.00	/	-5.84	/	54	/	AVG

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

Operation Mode: TX CH High (2468.9MHz)

Horizontal (Worst case)

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2483.50	57.32	-5.65	51.67	74	-22.33	peak
2483.50	/	-5.65	/	54	/	AVG
2500.00	55.39	-5.65	49.74	74	-24.26	peak
2500.00	/	-5.65	/	54	/	AVG

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

Vertical:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2483.50	55.76	-5.65	50.11	74	-23.89	peak
2483.50	/	-5.65	/	54	/	AVG
2500.00	54.93	-5.65	49.28	74	-24.72	peak
2500.00	/	-5.65	/	54	/	AVG

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

Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.



## 6 OCCUPIED BANDWIDTH MEASUREMENT

### 6.1 Test Setup

Same as Radiated Emission Measurement

### 6.2 Test Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set EUT as normal operation.
3. Based on ANSI C63.10 section 6.9.2: RBW= 30KHz. VBW= 100 KHz, Span=4MHz.
4. The useful radiated emission from the EUT was detected by the spectrum analyser with peak detector.

### 6.3 Measurement Equipment Used

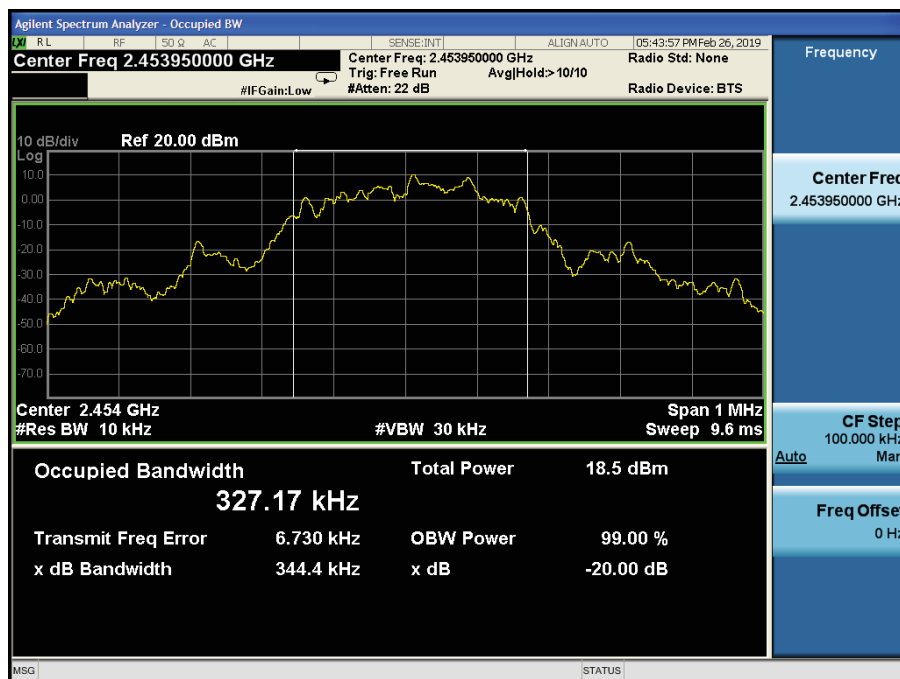
Same as Radiated Emission Measurement

### 6.4 Test Result

**PASS**

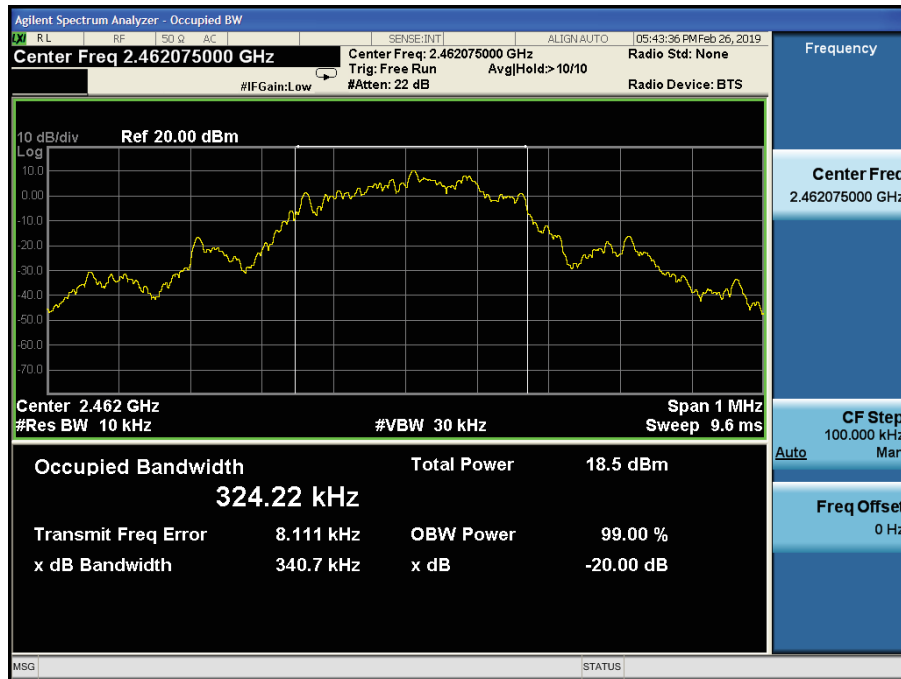
Frequency	20dB Bandwidth (MHz)	Result
2453.95 MHz	0.327	<b>PASS</b>
2462.075 MHz	0.324	<b>PASS</b>
2468.9 MHz	0.333	<b>PASS</b>

CH: 2453.95MHz

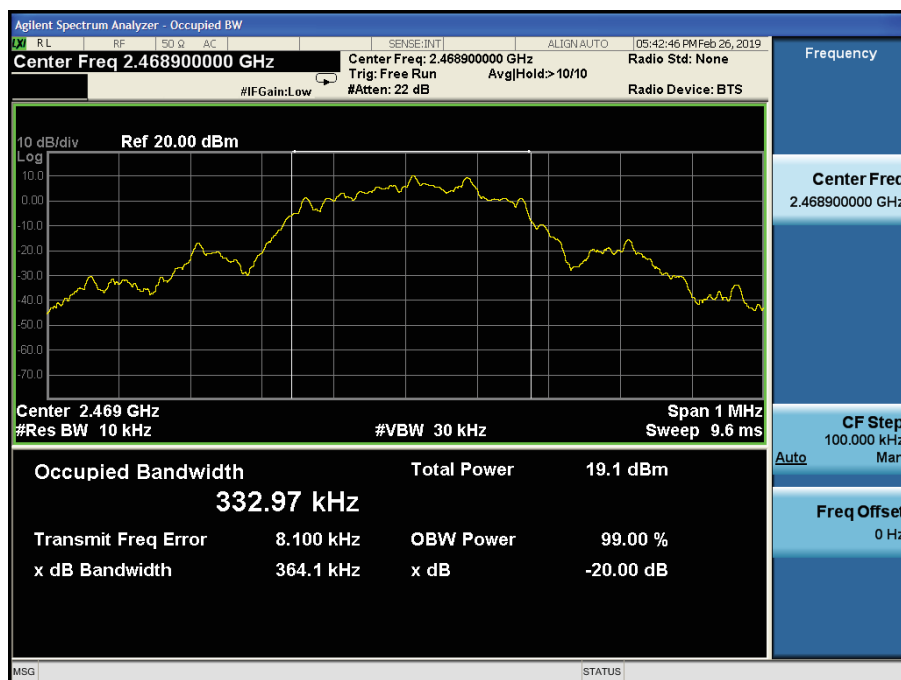




CH: 2462.075MHz



CH: 2468.9MHz





## 7 ANTENNA REQUIREMENT

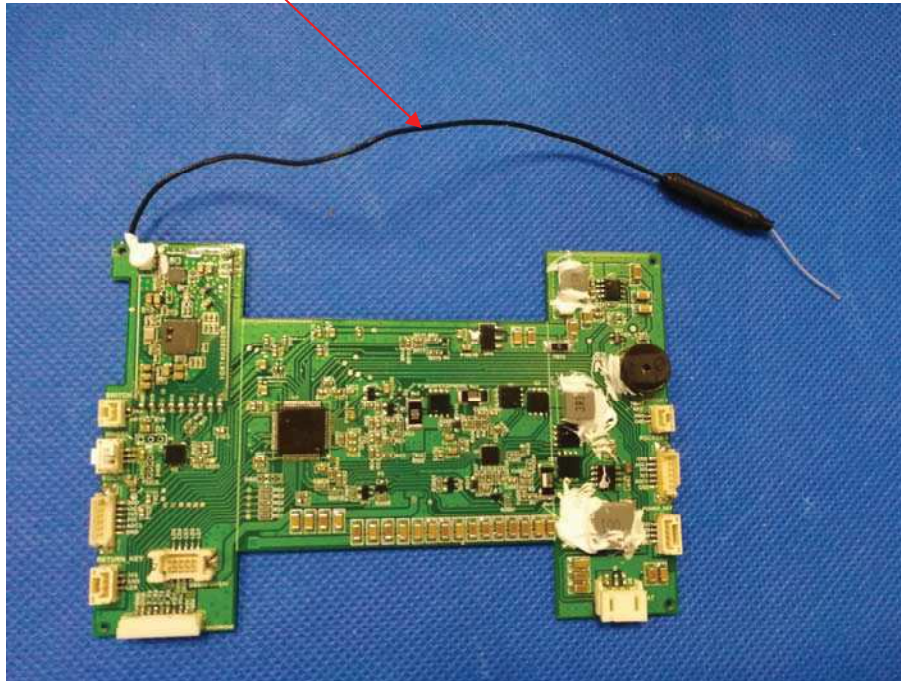
### **Standard Applicable**

For intentional device, according to FCC 47 CFR Section 15.203, 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.

### **Antenna Connected Construction**

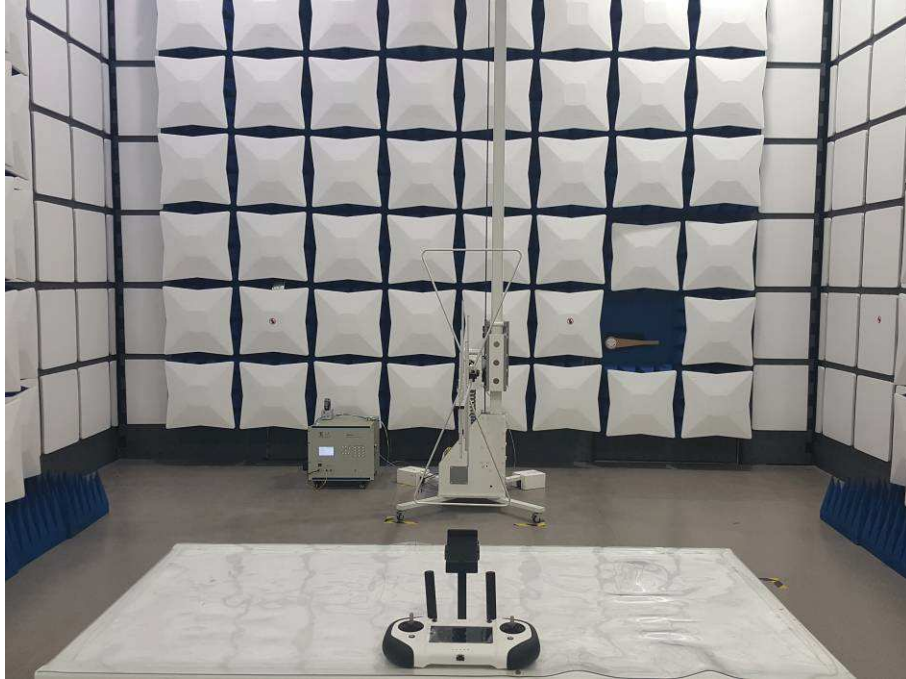
The antenna used in this product is a internal antenna, The directional gains of antenna used for transmitting is 1dBi.

### 2.4G ANTENNA



### 8 PHOTOGRAPH OF TEST

#### Radiated Emission





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