

FCC TEST REPORT

For

SHENZHEN BAORUIXING PRECISION MOULD INDUSTRIAL CO., LTD

Bionic style Ornithopter

Model No.: ROC1215003-A, ROC1215003-B, ROC1215003-C

Prepared For : SHENZHEN BAORUIXING PRECISION MOULD INDUSTRIAL CO.,

LTD

Address : 1-2/F., BUILDING#1, TONG FU YU INDUSTRIAL AREA, NO.2 PING

SHAN, LONG GANG DISTRICT, SHENZHEN, China

Prepared By : Shenzhen Anbotek Compliance Laboratory Limited

Address : 1/F, Building D, Sogood Science and Technology Park, Sanwei

community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong,

China.518102

Tel: (86) 755-26066440 Fax: (86) 755-26014772

Report Number : R0217090016W

Date of Receipt : Sept. 07, 2017

Date of Test : Sept. 07, 2017~Nov. 06, 2018

Date of Report : Apr. 22, 2019



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TEST REPORT

Applicant : SHENZHEN BAORUIXING PRECISION MOULD INDUSTRIAL CO., LTD

Manufacturer : SHENZHEN BAORUIXING PRECISION MOULD INDUSTRIAL CO., LTD

Product Name : Bionic style Ornithopter

Model No. : ROC1215003-A, ROC1215003-B, ROC1215003-C

Trade Mark : ROCSKY

Rating(s) : Input: DC 4.5V by "AA" Battery*3

Test Standard(s) : FCC Part15 Subpart C, Paragraph 15.249

Test Method(s) : **ANSI C63.10: 2013**

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 15 Subpart C requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Test	PH.		ept. 07, 2017~I	Nov. 06, 2018	
Anbotek Anbote	Compliance Laboration	Anbotek Anbote	olivay	arg	
Prepared By	Anbotek Product Safety	anbotek A	upo ek	notek Ar	abotek Anbo
tek All abotek	1 2 2 1	k Anbotek	(Engineer / O	Oliay Yang)	Anbotek Anb
	* Approved *		Anbore		
	Anbores Ant		Snavy	Meng	
Reviewer		hotek Anb	O.C.	tek abol	tek Aupor
And	nbotek Anbote	WILL WORK	Supervisor / S	nowy Meng)	
				Anbors An	
			Sally	Zhoung	
Approved & Authorize	ed Signer	or All	No.	Noo	hotek .
			(Manager / Sa	ally Zhang)	



1. General Information

1.1. Client Information

Applicant	:	SHENZHEN BAORUIXING PRECISION MOULD INDUSTRIAL CO., LTD					
Address	:	-2/F., BUILDING#1, TONG FU YU INDUSTRIAL AREA, NO.2 PING SHAN, LONG GANG DISTRICT, SHENZHEN, China					
Manufacturer	:	SHENZHEN BAORUIXING PRECISION MOULD INDUSTRIAL CO., LTD					
Address	1-2/F., BUILDING#1, TONG FU YU INDUSTRIAL AREA, NO.2 PING SHAN, LONG GANG DISTRICT, SHENZHEN, China						
Factory	:	SHENZHEN BAORUIXING PRECISION MOULD INDUSTRIAL CO., LTD					
Address	:	1-2/F., BUILDING#1, TONG FU YU INDUSTRIAL AREA, NO.2 PING SHAN, LONG GANG DISTRICT, SHENZHEN, China					

1.2. Description of Device (EUT)

-		100	0, 0,	A COLOMBIA
0	Product Name	:	Bionic style Ornithopter	k Anbotek Anbote Anbotek Ar
1	Model No.	:	ROC1215003-A, ROC1215003-E (Note: All samples are the same e "ROC1215003-A" for test only.)	3, ROC1215003-C except the appearance and colour, so we prepare
K	Trade Mark	:	ROCSKY	Anbotek Anbotek Anbotek Anbote
0.00	Test Power Supply	:	DC 4.5V by battery	Anbore Ann Anbotek Anbotek Anbo
			Operation Frequency:	2408-2475MHz
			Number of Channel:	135 Channels
	Product Description	:	Modulation Type:	GFSK
2	Description	Antenna Type:	Antenna Type:	Copper bar Antenna
o'i'c			Antenna Gain(Peak):	2 dBi Anbotek Anbotek An
	16,	1.7	V VIV	No.

Remark: 1)For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

1.3. Auxiliary Equipment Used During Test

200	N/A		4014	-	botek	Anbore	V VU	· otek	Ank	otek	Anbor	Yo.	br.	Ċ



1.4. Description of Test Modes

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode		Description					
Mode 1	botek	Anbotek	Aupo	CH01	hotek	Anbore	Ans
Mode 2	- abotek	Anboten	Aupo	CH69	Anbotek	Anboro	K PUL
Mode 3	A. abotel	k Anbore	K MU	CH135	Anbotek	Anbott	Lok Air

	- No NO.	·	For R	adiated Emissi	on	0.55		~	
	Final Test M	ode			Description	on			
	Mode 1	nbotek	Anbore A	notek	CH01	Aupor Tek	p.	potek	Anbo
of en	Mode 2	Anbotek	Anbolo	Ann	CH69	Anbo	ek k	Anbotek	M
hote	Mode 3	Anbotek	Anbor	Anabotek	CH135	Anbo	otek	Anbotek	

- 1. The engineering test program was provided and the EUT was programmed to be in continuously transmitting mode.
- 2. EUT built-in battery-powered, fully-charged battery use of the test battery.

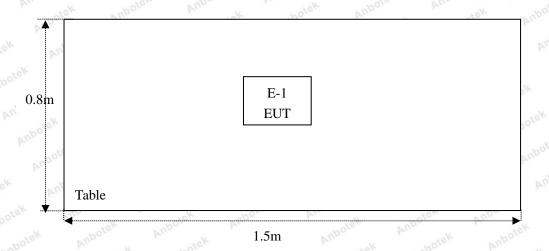


1.5. List of Channels

Anbote	And And	hotek	Anbotek	Anbore	2408	2408.5	2409	2409.5	2410
2410.5	2411	2411.5	2412	2412.5	2413	2413.5	2414	2414.5	2415
2415.5	2416	2416.5	2417	2417.5	2418	2418.5	2419	2419.5	2420
2420.5	2421	2421.5	2422	2422.5	2423	2423.5	2424	2424.5	2425
2425.5	2426	2426.5	2427	2427.5	2428	2428.5	2429	2429.5	2430
2430.5	2431	2431.5	2432	2432.5	2433	2433.5	2434	2434.5	2435
2435.5	2436	2436.5	2437	2437.5	2438	2438.5	2439	2439.5	2440
2440.5	2441	2441.5	2442	2442.5	2443	2443.5	2444	2444.5	2445
2445.5	2446	2446.5	2447	2447.5	2448	2448.5	2449	2449.5	2450
2450.5	2451	2451.5	2452	2452.5	2453	2453.5	2454	2454.5	2455
2455.5	2456	2456.5	2457	2457.5	2458	2458.5	2459	2459.5	2460
2460.5	2461	2461.5	2462	2462.5	2463	2463.5	2464	2464.5	2465
2465.5	2466	2466.5	2467	2467.5	2468	2468.5	2469	2469.5	2470
2470.5	2471	2471.5	2472	2472.5	2473	2473.5	2474	2474.5	2475

1.6. Description of Test Setup

RF





1.7. Test Equipment List

P	2000	VU	-00°	Po.	168.	Cal.
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Interval
otek 1.	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	Nov. 17, 2017	1 Year
2.00	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Nov. 17, 2017	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Nov. 17, 2017	1 Year
4.	Spectrum Analysis	Agilent	E4407B	US39390582	Nov. 17, 2017	1 Year
5te ^K	MAX Spectrum Analysis	Agilent	N9020A	MY51170037	Nov. 18, 2017	1 Year
6.	Preamplifier	SKET Electronic	BK1G18G30D	KD17503	Nov. 17, 2017	1 Year
Anbor 7.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Nov. 20, 2017	1 Year
8.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Nov. 20, 2017	1 Year
9.	Loop Antenna	Schwarzbeck	HFH2-Z2	100047	Nov. 17, 2017	1 Year
10.	Horn Antenna	Schewarzbeck	BBHA9170	9170-375	Nov. 17, 2017	1 Year
MI.	Pre-amplifier	SONOMA	310N	186860	Nov. 17, 2017	1 Year
12.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A
13.	RF Test Control System	YIHENG	YH3000	2017430	Nov. 18, 2017	1 Year
14.	Power Sensor	DAER	RPR3006W	15I00041SN045	Nov. 17, 2017	1 Year
15.	Power Sensor	DAER	RPR3006W	15I00041SN046	Nov. 17, 2017	1 Year
16.	MXA Spectrum Analysis	Agilent	N9020A	MY51170037	Nov. 18, 2017	1 Year
17.	MXG RF Vector Signal Generator	Agilent	N5182A	MY48180656	Nov. 18, 2017	1 Year
18.	Signal Generator	Agilent	E4421B	MY41000743	Nov. 18, 2017	1 Year
19.	DC Power Supply	IVYTECH	IV3605	1804D360510	Apr. 02, 2018	1 Year
20.	Constant Temperature Humidity Chamber	ZHONGJIAN	ZJ-KHWS80B	N/A	Nov. 01, 2018	1 Year
		10.33	1 1000	Day 126.7	461	1 100



1.8. Description of Test Facility

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

FCC-Registration No.: 184111

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registed and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 184111, July 31, 2017.

ISED-Registration No.: 8058A-1

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A-1, June 13, 2016.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.518102



2. Summary of Test Results

Standard Section	Test Item	Result
15.203	Antenna Requirement	PASS
15.207	Conducted Emission	N/A
15.249	Radiated Emission	PASS
15.215(c)	20dB Bandwidth	PASS
15.249(c)	Band Edge	PASS
Remark: "N/A" is an abbre	eviation for Not Applicable.	k Anboter



3. Conducted Emission Test

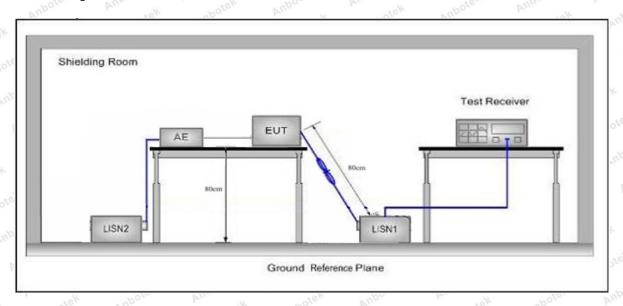
3.1. Test Standard and Limit

Test Standard	FCC Part15 Section 15.20	7 Anbote And botek	Anbotek Anbo tek					
	F.,,	Maximum RF Line Voltage (dBuV)						
	Frequency	Quasi-peak Level	Average Level					
Test Limit	150kHz~500kHz	66 ~ 56 *	56 ~ 46 *					
	500kHz~5MHz	56 56	46					
	5MHz~30MHz	60	50					

Remark: (1) *Decreasing linearly with logarithm of the frequency.

(2) The lower limit shall apply at the transition frequency.

3.2. Test Setup



3.3. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.10-2013 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

3.4. Test Data

The EUT is powered by DC 4.5V battery inside, so there is no need to conduct this test.



4. Radiated Emission and Band Edge

4.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.20	09 and 15.205	Ann	Anbotek	Tupo, Vek
	Frequency (MHz)	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz~0.490MHz	2400/F(kHz)	obotek - Anbo	e Pun	300
	0.490MHz-1.705MHz	24000/F(kHz)	Anbotek A	Pose Vin	30
	1.705MHz-30MHz	30	Anbatek	Anbore A	30
Test Limit	30MHz~88MHz	100	40.0	Quasi-peak	3.04
	88MHz~216MHz	150	43.5	Quasi-peak	3 _{botek}
	216MHz~960MHz	200	46.0	Quasi-peak	cek 3 photek
	960MHz~1000MHz	500	54.0	Quasi-peak	atek 3
	Above 1000MHz	500	54.0	Average	3
	Above 1000MHz	lpotek - Anbor	74.0	Peak	And 3

Remark:

- (1) The lower limit shall apply at the transition frequency.
- (2) 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Test Standard	FCC Part15 C	Section 15.249	Al abotek A	'upote.' k	nb	Anbotek	
	Frequency (MHz)	Field Strength of fundamental ((millivolts /meter)	Field Strength of Harmonics (microvolts/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)	
Test Limit	2400~2483.5	50	Anbotek - Anbo	114.0	Peak	3 And	
	2400~2483.5	50	Anbotek Anbo	94.0	Average	3	
	2400~2483.5	ore Am	500	74.0	Peak	Anbox 3	
	2400~2483.5	upote. Aup	500	54.0	Average	3	

Remark:

(1) 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

4.2. Test Setup

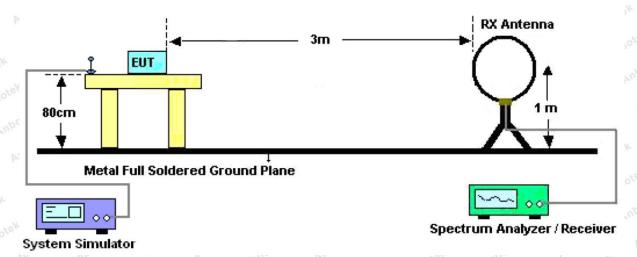


Figure 1. Below 30MHz

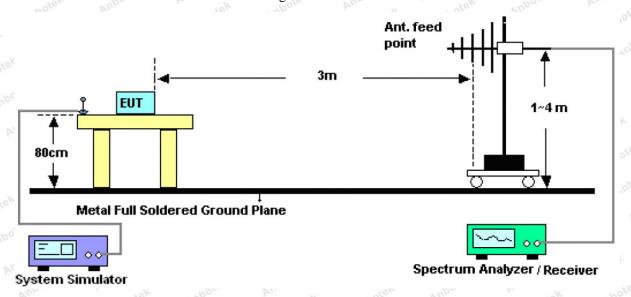


Figure 2. 30MHz to 1GHz

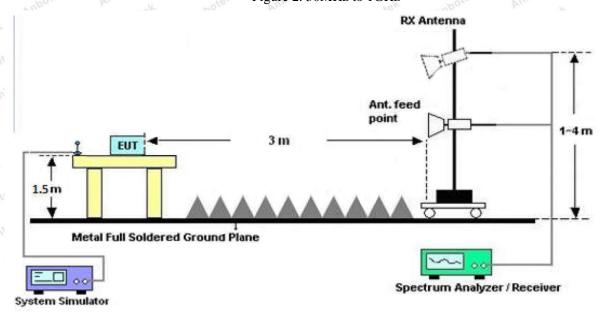


Figure 3. Above 1 GHz



4.3. Test Procedure

For below 1GHz: The EUT is placed on a turntable, which is 0.8m above the ground plane. For above 1GHz: The EUT is placed on a turntable, which is 1.5m above the ground plane.

The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Rotated the EUT through three orthogonal axes to determine the maximum emissions, both horizontal and vertical polarization of the antenna are set on test. The EUT is tested in 9*6*6 Chamber. The device is evaluated in xyz orientation.

For the radiated emission test above 1GHz:

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.

For 9kHz to 150kHz, Set the spectrum analyzer as:

RBW = 200Hz, VBW =1kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 150kHz to 30MHz, Set the spectrum analyzer as:

RBW = 9KHz, VBW = 30kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 30MHz to 1000MHz, Set the spectrum analyzer as:

RBW = 100kHz, VBW = 300kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For above 1GHz,Set the spectrum analyzer as:

RBW =1MHz, VBW =1MHz, Detector= Peak, Trace mode= Max hold, Sweep- auto couple.

RBW =1MHz, VBW =10Hz, Detector= Average, Trace mode= Max hold, Sweep- auto couple.

4.4. Test Data

PASS

During the test, Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the X-axis is the worst case.

The test results of 9kHz-30MHz was attenuated more than 20dB below the permissible limits, so the results don't record in the report.

During the test, pre-scan all the modes, and found the Middle channel which is the worst case, only the worst case is recorded in the report.

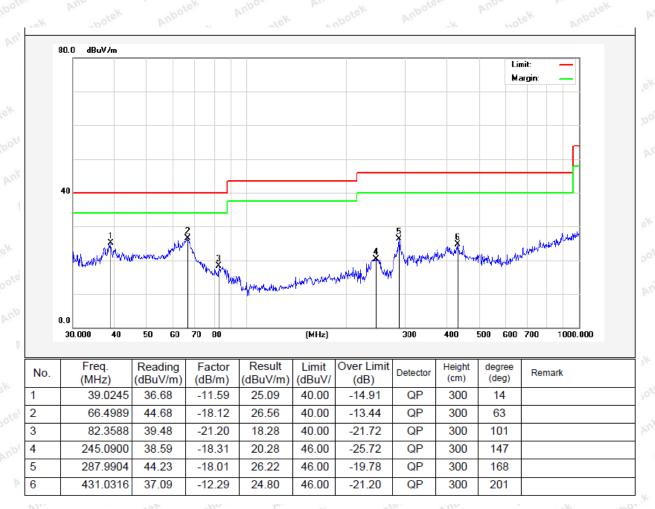


Test Results (30~1000MHz)

Job No.: R0217090016W Temp.(°C)/Hum.(%RH): 23.4°C/61%RH

Standard: FCC PART 15C Power Source: DC 4.5V by battery

Test Mode: CH69 Polarization: Horizontal



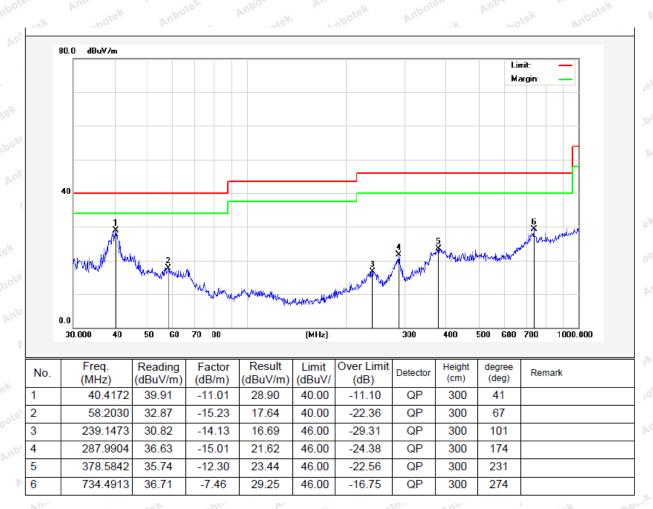


Test Results (30~1000MHz)

Job No.: R0217090016W Temp.(°C)/Hum.(%RH): 23.4°C/61%RH

Standard: FCC PART 15C Power Source: DC 4.5V by battery

Test Mode: CH69 Polarization: Vertical





Test Results (1GHz-25GHz)

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Detector
2408.0000	93.26	31.12	2.18	35.33	91.23	114.00	-22.77	V	Peak
2408.0000	83.12	31.12	2.18	35.33	81.09	94.00	-12.91	V	AVG
4816.0000	48.97	34.01	2.58	34.65	50.91	74.00	-23.09	V	Peak
4816.0000	38.80	34.01	2.58	34.65	40.74	54.00	-13.26	V	AVG
7224.0000	45.51	36.16	2.97	35.07	49.57	74.00	-24.43	V	Peak
7224.0000	36.39	36.16	2.97	35.07	40.45	54.00	-13.55	V	AVG
9632.0000	nbote*	Yupo - otek	anbotek	Anbo	e An	notek	Anbotek	Aup,	*ek
12040.0000	Anboken	And	k nbot	ek br	pole.	Yun Yun	Anbotek	P	Upor
14448.0000	A.* otel	Aupa	rek n	potek	Anboto.	Ann	Anbo	EK	Anbore
16856.0000	*Anbote	Ant	rek b	- nbotek	Vupore,	K WUR	rek as	potek	Anbor
2408.0000	94.99	31.12	2.18	35.33	92.96	114.00	-21.04	Hick	Peak
2408.0000	82.96	31.12	2.18	35.33	80.93	94.00	-13.07	Habo	AVG
4816.0000	47.11	34.01	2.58	34.65	49.05	74.00	-24.95	Н	Peak
4816.0000	38.92	34.01	2.58	34.65	40.86	54.00	-13.14	ĕ H	AVG
7224.0000	46.20	36.16	2.97	35.07	50.26	74.00	-23.74	Н	Peak
7224.0000	36.64	36.16	2.97	35.07	40.70	54.00	-13.30	H	AVG
9632.0000	*	-otek	Anbotek	Aupore.	K Pur	otek A	ipotel.	Aupo	ek Air
12040.0000	*	hotek hotek	Anbotek	Anbot	VOK BUD	botek	Anbotek	Anbo	*ek
14448.0000	Anbote*	Anbo	Anbote	K An'	or b	ino abotek	Anbotek	PL	be,
16856.0000	An*	Aupor	ok w	otek	Aupole	Vun.	Toda	N. Carlotte	Aupor

- 1. Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. "*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.



200	V.	-010	VU		Yan	100	50		46,
Test Mode: 0	CH69 (Middle	channel)							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Detector
2442.0000	95.21	31.12	2.20	34.51	94.02	114.00	-19.98	Vote	Peak
2442.0000	82.54	31.22	2.20	34.51	81.45	94.00	-12.55	V	AVG
4884.0000	50.53	34.98	2.49	34.14	53.86	74.00	-20.14	V	Peak
4884.0000	40.87	34.98	2.49	34.14	44.20	54.00	-9.80	V	AVG
7326.0000	45.65	36.01	3.01	34.56	50.11	74.00	-23.89	V	Peak
7326.0000	36.52	36.01	3.01	34.56	40.98	54.00	-13.02	V	AVG
9768.0000	ster * Ani	, tek	botek	Aupoter.	N VUD	otek .	hotek	Aupor	Pr.
12210.0000	nbote*	Yupor Pek	Al. abotek	Anbo	er Au	notek	Anbotek	Anb	ak.
14652.0000	Aup &	Aupor	K Not	ek Ar	hotek	Yupo ofek	anbotek	P	upose
17094.0000	*******	Anbor	rek W	ootek	Anbotek	Aupo	L Anbo	.ek	Anbote
2442.0000	93.04	31.12	2.20	34.51	91.85	114.00	-22.15	hoo'A	Peak
2442.0000	82.88	31.12	2.20	34.51	81.69	94.00	-12.31	Hrel	AVG
4884.0000	47.10	34.98	2.49	34.14	50.43	74.00	-23.57	H	Peak
4884.0000	40.10	34.98	2.49	34.14	43.43	54.00	-10.57	Н	AVG
7326.0000	47.97	36.01	3.01	34.56	52.43	74.00	-21.57	ж H	Peak
7326.0000	35.08	36.01	3.01	34.56	39.54	54.00	-14.46	Н	AVG
9768.0000	***************************************	*8K	botek	Tupote.	And te	K Anbr	Step. Pu	polic	V
12210.0000	* Anb	Je P	abotek	Anboten	Pupo	stek h	hotek	Aupore	ok Pur
14652.0000	botek * P	nbore	abotek .	Anbot	V. Vila	-botek	Anbotek	Anbo	to.
17094.0000	nbotek	VUPOLO	Pili	VC	Ofek D	Upo	101		pole.

- 1. Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. "*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

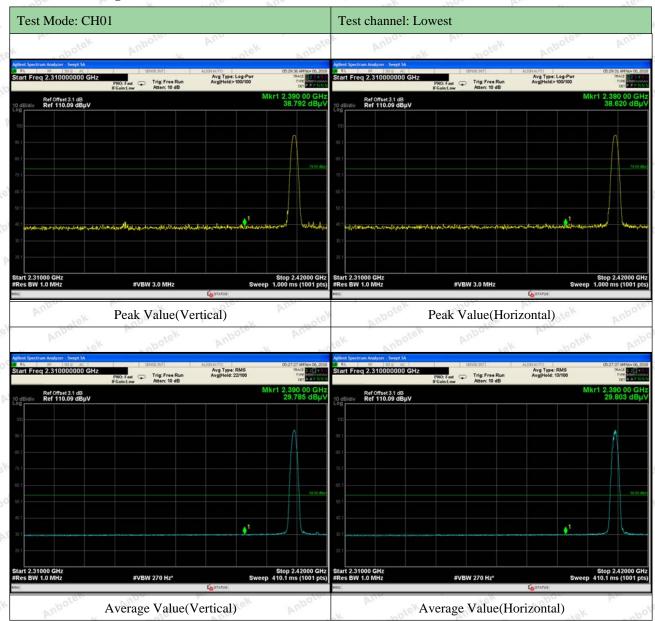


N. V.	-010	200		Hay	1000	NI.		400
CH135 (High	channel)							
Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Pol.	Detector
96.51	31.65	2.23	36.07	94.32	114.00	-19.68	Vote	Peak
85.53	31.65	2.23	36.07	83.34	94.00	-10.66	V	AVG
50.85	35.06	2.60	34.93	53.58	74.00	-20.42	V	Peak
38.87	35.06	2.60	34.93	41.60	54.00	-12.40	V	AVG
48.30	36.19	3.12	35.11	52.50	74.00	-21.50	V	Peak
38.93	36.19	3.12	35.11	43.13	54.00	-10.87	V	AVG
tek * Ani	No.	abotek	Aupote.	N Mun	otek .	nbotek	Aupor	rok by
nbotek	rupo,	Abotek	Anbo	ion Mu		Anbotek	Anb	, ale
Aup of lest	Aupor	k hot	ek Ar	botek	Aupo otek	hotek	P	upose
*******	Anbor	LOK ANT	otek	Anbotek	Aupo	, anbo	ek	Aupore.
96.70	31.65	2.23	36.07	94.51	114.00	-19.49	hoo'A	Peak
82.20	31.65	2.23	36.07	80.01	94.00	-13.99	Hrel	AVG
47.57	35.06	2.60	34.93	50.30	74.00	-23.70	H	Peak
39.01	35.06	2.60	34.93	41.74	54.00	-12.26	Н	AVG
45.62	36.19	3.12	35.11	49.82	74.00	-24.18	ж H	Peak
37.66	36.19	3.12	35.11	41.86	54.00	-12.14	Н	AVG
**	rek by	botek	Yupoter.	And	k nab	ich Vu	porc.	V1.
* Aup	rek b	abotek	Anboten	N. Vingo	stek v	botek	Vupore	ok An
botek * b	Up	photek	Anbot	N. Bup	otek	anbotek	Anbo	lo.
nbotek	Anbore	All ote	K 10	ooter p	Up.	hotek	A	pole
	Read Level (dBuV) 96.51 85.53 50.85 38.87 48.30 38.93 * * * 96.70 82.20 47.57 39.01 45.62 37.66 * *	Read Level (dBuV) Factor (dB/m) 96.51 31.65 85.53 31.65 50.85 35.06 38.87 35.06 48.30 36.19 38.93 36.19 * * 96.70 31.65 82.20 31.65 47.57 35.06 39.01 35.06 45.62 36.19 * * * * * * * *	Read Level (dBuV) Antenna Factor (dB/m) Cable Loss (dB) 96.51 31.65 2.23 85.53 31.65 2.23 50.85 35.06 2.60 38.87 35.06 2.60 48.30 36.19 3.12 * * * \$ * * 96.70 31.65 2.23 82.20 31.65 2.23 47.57 35.06 2.60 39.01 35.06 2.60 45.62 36.19 3.12 * * * * * * *	Read Level (dBuV) Antenna Factor (dB/m) Cable Loss (dB) Preamp Factor (dB) 96.51 31.65 2.23 36.07 85.53 31.65 2.23 36.07 50.85 35.06 2.60 34.93 38.87 35.06 2.60 34.93 48.30 36.19 3.12 35.11 * * * 96.70 31.65 2.23 36.07 82.20 31.65 2.23 36.07 47.57 35.06 2.60 34.93 39.01 35.06 2.60 34.93 45.62 36.19 3.12 35.11 * * * * * * * * * * * * * * * * * * * * * * * * * * * *	Read Level (dBuV) Antenna Factor (dB/m) Cable Loss (dB) Preamp Factor (dB) Level (dBuV/m) 96.51 31.65 2.23 36.07 94.32 85.53 31.65 2.23 36.07 83.34 50.85 35.06 2.60 34.93 53.58 38.87 35.06 2.60 34.93 41.60 48.30 36.19 3.12 35.11 52.50 38.93 36.19 3.12 35.11 43.13 * * * * 96.70 31.65 2.23 36.07 94.51 82.20 31.65 2.23 36.07 80.01 47.57 35.06 2.60 34.93 50.30 39.01 35.06 2.60 34.93 41.74 45.62 36.19 3.12 35.11 49.82 37.66 36.19 3.12 35.11 41.86 * * * * * * * <td>Read Level (dBuV) Antenna Factor (dB/m) Cable Loss (dB) Preamp Factor (dBuV/m) Level (dBuV/m) Limit (dBuV/m) 96.51 31.65 2.23 36.07 94.32 114.00 85.53 31.65 2.23 36.07 83.34 94.00 50.85 35.06 2.60 34.93 53.58 74.00 38.87 35.06 2.60 34.93 41.60 54.00 48.30 36.19 3.12 35.11 52.50 74.00 38.93 36.19 3.12 35.11 43.13 54.00 * * * * * * 96.70 31.65 2.23 36.07 94.51 114.00 82.20 31.65 2.23 36.07 94.51 114.00 47.57 35.06 2.60 34.93 50.30 74.00 39.01 35.06 2.60 34.93 41.74 54.00 45.62 36.19 3.12 35.11 49.82<</td> <td>Read Level (dBuV) Antenna Factor (dB/m) Cable Loss (dB) Preamp Factor (dB) Level (dBuV/m) Limit (dBuV/m) Over Limit (dB) 96.51 31.65 2.23 36.07 94.32 114.00 -19.68 85.53 31.65 2.23 36.07 83.34 94.00 -10.66 50.85 35.06 2.60 34.93 53.58 74.00 -20.42 38.87 35.06 2.60 34.93 41.60 54.00 -12.40 48.30 36.19 3.12 35.11 52.50 74.00 -21.50 38.93 36.19 3.12 35.11 43.13 54.00 -10.87 * * * * * * * * 96.70 31.65 2.23 36.07 94.51 114.00 -19.49 82.20 31.65 2.23 36.07 80.01 94.00 -13.99 47.57 35.06 2.60 34.93 50.30 74.00 -23.70</td> <td>Read Level (dBuV) Antenna Factor (dB/m) Cable Loss (dB) Preamp Factor (dB) Level (dBuV/m) Limit (dBuV/m) Over Limit (dBuV/m) Pol. 96.51 31.65 2.23 36.07 94.32 114.00 -19.68 V 85.53 31.65 2.23 36.07 83.34 94.00 -10.66 V 50.85 35.06 2.60 34.93 53.58 74.00 -20.42 V 38.87 35.06 2.60 34.93 41.60 54.00 -12.40 V 48.30 36.19 3.12 35.11 52.50 74.00 -21.50 V 38.93 36.19 3.12 35.11 43.13 54.00 -10.87 V * * * * * * * * 96.70 31.65 2.23 36.07 94.51 114.00 -19.49 H 82.20 31.65 2.23 36.07 80.01 94.00 -13.99 H</td>	Read Level (dBuV) Antenna Factor (dB/m) Cable Loss (dB) Preamp Factor (dBuV/m) Level (dBuV/m) Limit (dBuV/m) 96.51 31.65 2.23 36.07 94.32 114.00 85.53 31.65 2.23 36.07 83.34 94.00 50.85 35.06 2.60 34.93 53.58 74.00 38.87 35.06 2.60 34.93 41.60 54.00 48.30 36.19 3.12 35.11 52.50 74.00 38.93 36.19 3.12 35.11 43.13 54.00 * * * * * * 96.70 31.65 2.23 36.07 94.51 114.00 82.20 31.65 2.23 36.07 94.51 114.00 47.57 35.06 2.60 34.93 50.30 74.00 39.01 35.06 2.60 34.93 41.74 54.00 45.62 36.19 3.12 35.11 49.82<	Read Level (dBuV) Antenna Factor (dB/m) Cable Loss (dB) Preamp Factor (dB) Level (dBuV/m) Limit (dBuV/m) Over Limit (dB) 96.51 31.65 2.23 36.07 94.32 114.00 -19.68 85.53 31.65 2.23 36.07 83.34 94.00 -10.66 50.85 35.06 2.60 34.93 53.58 74.00 -20.42 38.87 35.06 2.60 34.93 41.60 54.00 -12.40 48.30 36.19 3.12 35.11 52.50 74.00 -21.50 38.93 36.19 3.12 35.11 43.13 54.00 -10.87 * * * * * * * * 96.70 31.65 2.23 36.07 94.51 114.00 -19.49 82.20 31.65 2.23 36.07 80.01 94.00 -13.99 47.57 35.06 2.60 34.93 50.30 74.00 -23.70	Read Level (dBuV) Antenna Factor (dB/m) Cable Loss (dB) Preamp Factor (dB) Level (dBuV/m) Limit (dBuV/m) Over Limit (dBuV/m) Pol. 96.51 31.65 2.23 36.07 94.32 114.00 -19.68 V 85.53 31.65 2.23 36.07 83.34 94.00 -10.66 V 50.85 35.06 2.60 34.93 53.58 74.00 -20.42 V 38.87 35.06 2.60 34.93 41.60 54.00 -12.40 V 48.30 36.19 3.12 35.11 52.50 74.00 -21.50 V 38.93 36.19 3.12 35.11 43.13 54.00 -10.87 V * * * * * * * * 96.70 31.65 2.23 36.07 94.51 114.00 -19.49 H 82.20 31.65 2.23 36.07 80.01 94.00 -13.99 H

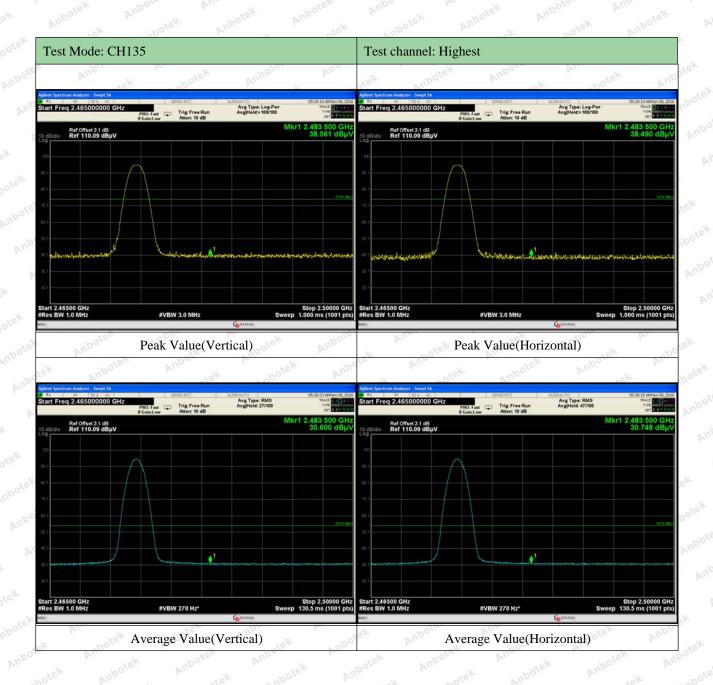
- 1. Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. "*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.



Radiated Band Edge:







Remark:

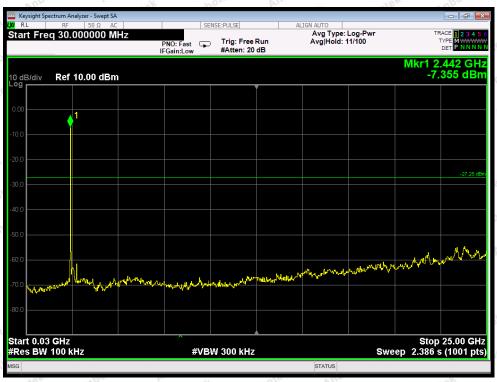
1. Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor



Conducted Emission Method



CH: Low



CH: Middle



CH: High



5. 20dB Bandwidth Test

5.1. Test Standard and Limit

TD (C) 1 1	ECC D 415 C C 41 15 040	Ans	18h	
Test Standard	FCC Part15 C Section 15.249			
V.				

5.2. Test Setup



5.3. Test Procedure

- 1. Place the EUT on the table and set it in the transmitting mode.
- 2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 3. Set the spectrum analyzer as:

RBW = 100kHz, VBW $\geqslant 3*RBW = 300kHz$,

Detector= Average

Trace mode= Max hold.

Sweep- auto couple.

- 4. Mark the peak frequency and -20dB (upper and lower) frequency.
- 5. Repeat until all the rest channels are investigated.

5.4. Test Data

Test Item	:	20dB Bandwidth	Test Mode :	Mode 1
Test Voltage	:	DC 4.5V by battery	Temperature :	24℃
Test Result	:	PASS	Humidity :	55%RH

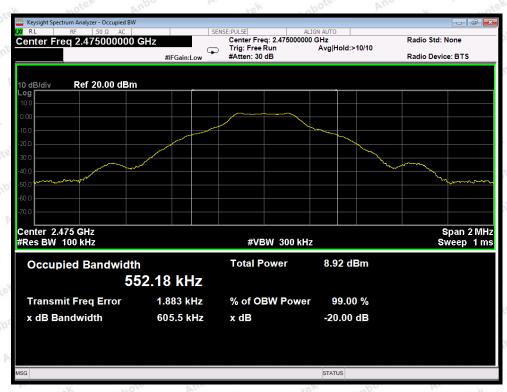
0	Frequency (MHz)	X	Ва	andwidth (kHz)	100	202	Result	V
br.	2408MHZ	Aup	Anbotek	604.8	And	K Anbo	PASS	Anbo
	2442MHZ	Anbo Lotek	Anbotek	605.0	K 70	otek Ar	PASS	Anbe
18 K	2475MHZ	Ans	tek Anbotek	605.5	N. A.	notek	PASS	Aupo



Test Mode: Low



Test Mode: Middle



Test Mode: High



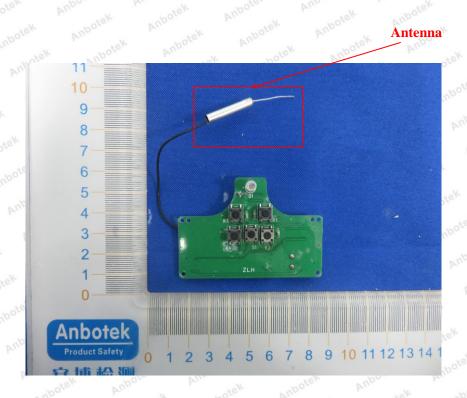
6. Antenna Requirement

6.1. Test Standard and Requirement

Test Standard	FCC Part15 Section 15.203
Requirement	1) 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.

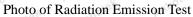
6.2. Antenna Connected Construction

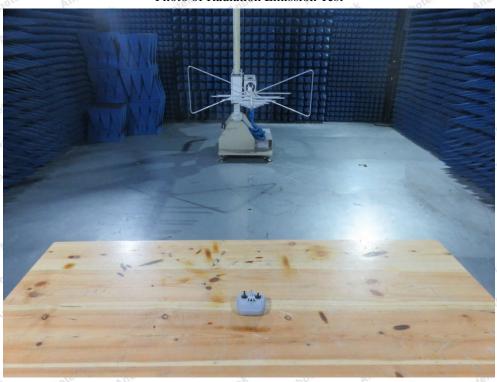
The antenna is a Copper bar Antenna which permanently attached, and the best case gain of the antenna is 2 dBi. It complies with the standard requirement.





APPENDIX I -- TEST SETUP PHOTOGRAPH



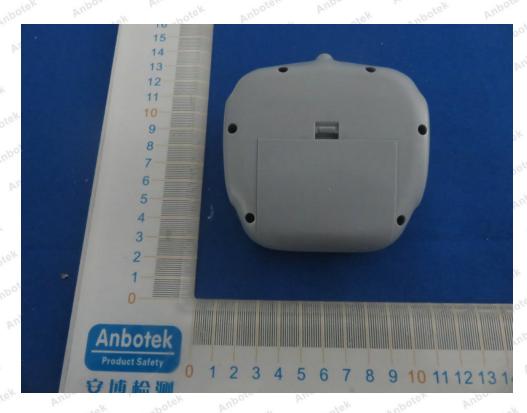






APPENDIX II -- EXTERNAL PHOTOGRAPH





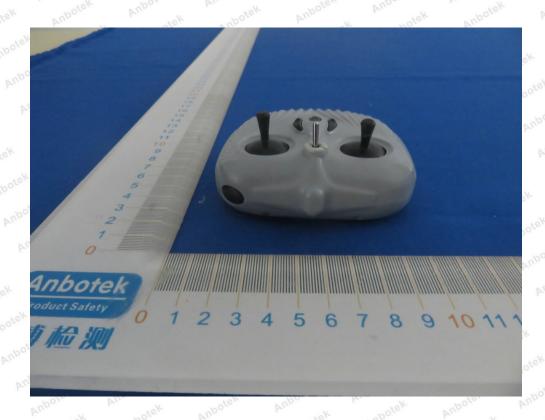


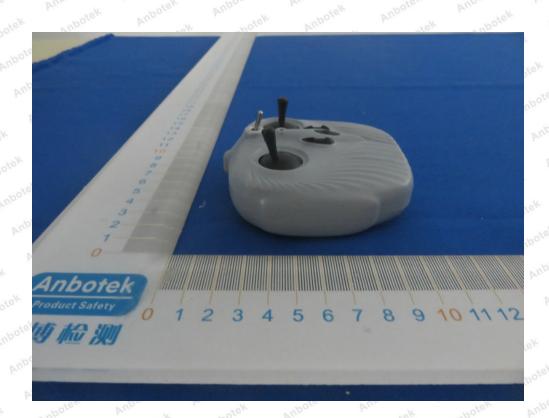






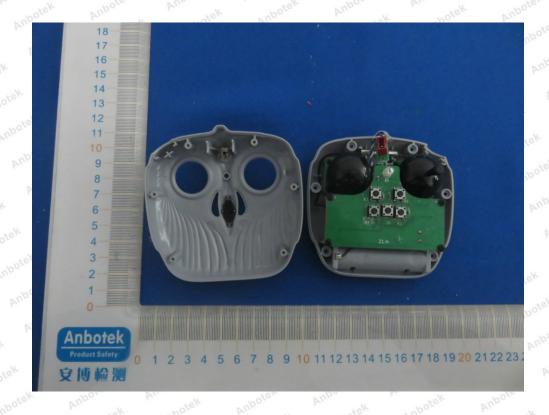


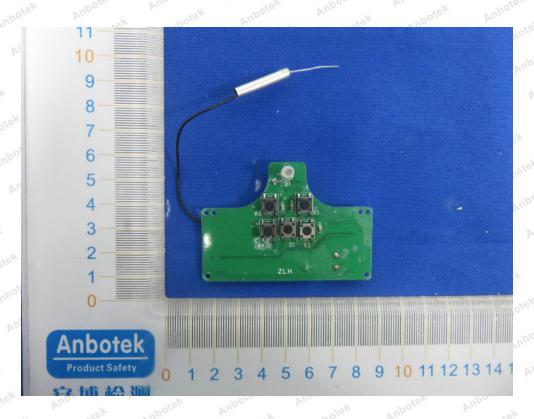




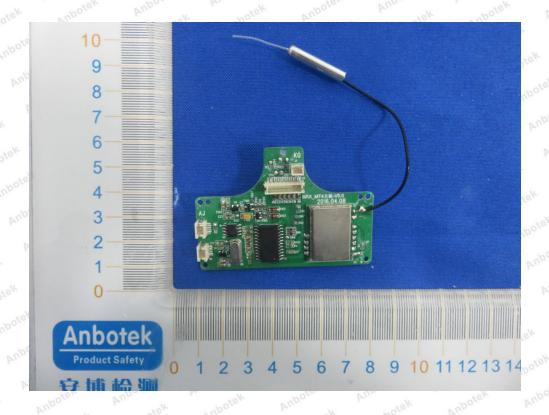


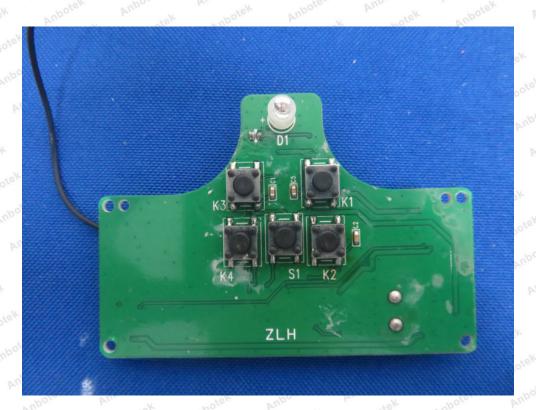
APPENDIX III -- INTERNAL PHOTOGRAPH



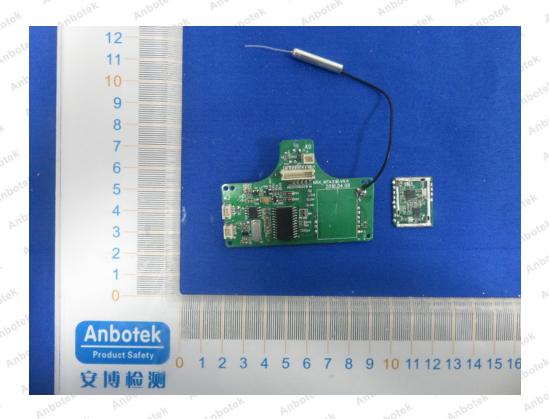


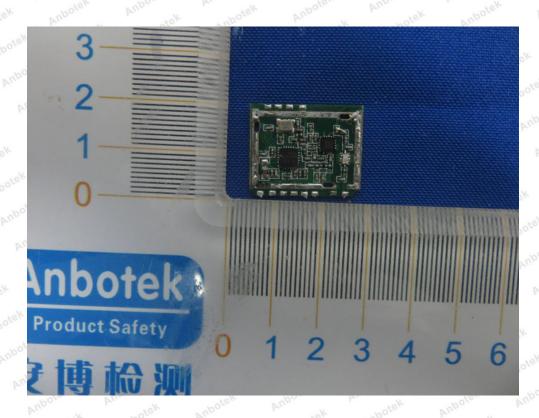




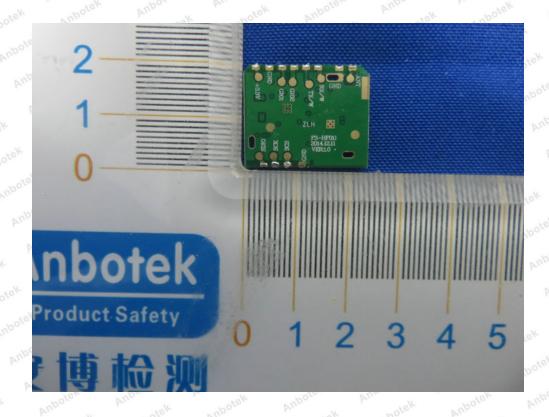


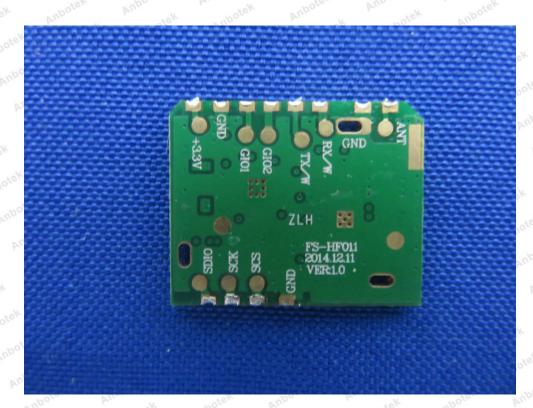






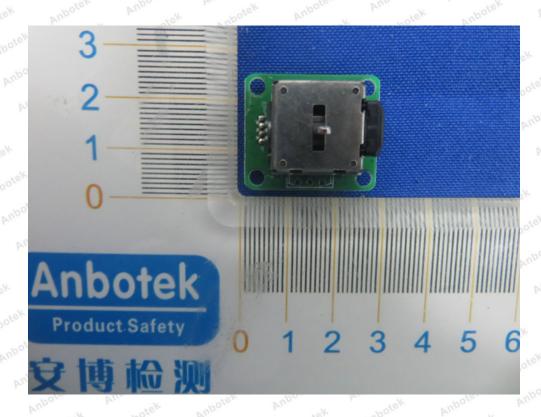




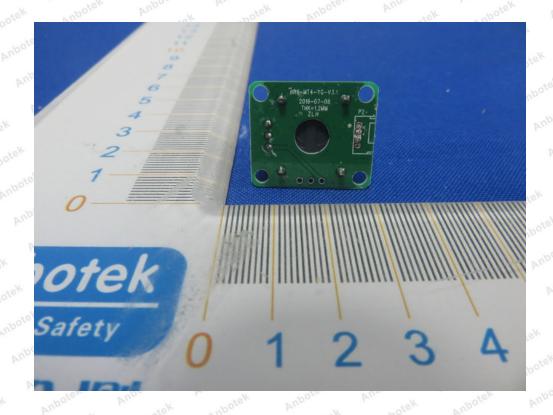


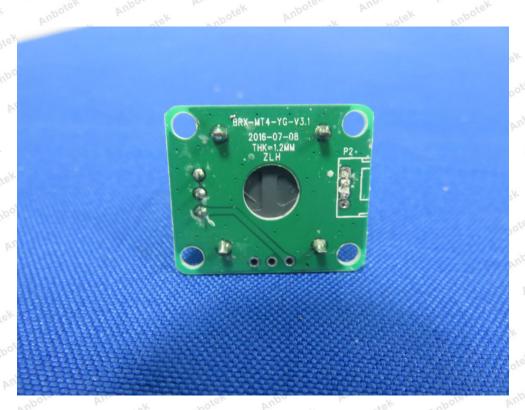












---- End of Report -----