

FCC Part 15C Test Report

Report No.: BCTC-LH160910744E

FCC ID: 2AH8YF806

Product Name:	RC DRONE		
Trademark:	N/A		
Model Name :	F806 F801, F802, F803, F804, F805, F807, F808, F809, F810, F811,F812, F813, F814, F815, F816, F817, F818, F819, F820, ODY-7501		
Prepared For :	Shantou Hontai Technology Co., Ltd.		
Address :	Hongtai Science Park, Songshan Road and Shanfen Road Border, LongHu District, Shantou, Guangdong, China		
Prepared By :	Shenzhen BCTC Technology Co., Ltd.		
Address :	No.101, Yousong Road, Longhua New District, Shenzhen, China		
Test Date:	Aug. 29 - Sep. 06, 2016		
Date of Report :	Sep. 06, 2016		
Report No.:	BCTC-LH160910744E		

TEST RESULT CERTIFICATION

Report No.: BCTC-LH160910744E

Applicant's name:	Shantou Hontai Technology Co., Ltd.
Address:	Hongtai Science Park, Songshan Road and Shanfen Road
	Border, LongHu District, Shantou, Guangdong, China
Manufacture's Name:	Shantou Hontai Technology Co., Ltd.
Address:	Hongtai Science Park, Songshan Road and Shanfen Road
	Border, LongHu District, Shantou, Guangdong, China
Product description	
Product name:	RC DRONE
Trademark:	N/A
Model and/or type reference:	F806
	F801, F802, F803, F804, F805, F807, F808, F809,
	F810, F811,F812, F813, F814, F815, F816, F817,
	F818, F819, F820, ODY-7501
Standards:	FCC Part15.249
	ANSI C63.10-2013

This device described above has been tested by BCTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of BCTC, this document may be altered or revised by BCTC, personal only, and shall be noted in the revision of the document.

Testing Engineer	:	Evic Tany
		Eric Yang
Reviewer Supervisor	:	Jade Yang
		Jade Yang
Approved & Authorized Manager:	:	Ears BC 5 hang
		Carson Zhang

Report No.: BCTC-LH160910744E



Table of Contents

	Page
1 . SUMMARY OF TEST RESULTS	5
1.1 TEST FACILITY	5
1.2 MEASUREMENT UNCERTAINTY	5
2 . GENERAL INFORMATION	6
	-
2.1 GENERAL DESCRIPTION OF EUT	6
2.2 DESCRIPTION OF TEST MODES	7
2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTER	
2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)	8
2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS	9
3 . EMC EMISSION TEST	10
3.1 CONDUCTED EMISSION MEASUREMENT	10
3.1.1 POWER LINE CONDUCTED EMISSION LIMITS	10
3.1.2 TEST PROCEDURE	10
3.1.3 DEVIATION FROM TEST STANDARD	10
3.1.4 TEST SETUP	11
3.1.5 EUT OPERATING CONDITIONS	11
3.1.6 TEST RESULTS	11
3.2 RADIATED EMISSION MEASUREMENT	12
3.2.1 RADIATED EMISSION LIMITS	12
3.2.2 TEST PROCEDURE 3.2.3 DEVIATION FROM TEST STANDARD	13 13
3.2.4 TEST SETUP	13
3.2.5 EUT OPERATING CONDITIONS	14
3.2.6 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)	15
3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)	16
3.2.8 TEST RESULTS (1GHZ~25GHZ)	18
3.3 RADIATED BAND EMISSION MEASUREMENT	19
3.3.1 TEST REQUIREMENT:	19
3.3.2 TEST PROCEDURE	19
3.3.3 DEVIATION FROM TEST STANDARD	20
3.3.4 TEST SETUP	20
3.3.5 EUT OPERATING CONDITIONS	20
4 . BANDWIDTH TEST	23
4.1 APPLIED PROCEDURES / LIMIT	23



Report No.: BCTC-LH160910744E

Table of Contents

Tuble of Contents	
	Page
4.1.1 TEST PROCEDURE	23
4.1.2 DEVIATION FROM STANDARD	23
4.1.3 TEST SETUP	23
4.1.4 EUT OPERATION CONDITIONS	23
4.1.5 TEST RESULTS	24
5 . ANTENNA REQUIREMENT	26
5.1 STANDARD REQUIREMENT	26
5.2 EUT ANTENNA	26
6 . TEST SEUUP PHOTO	27
7 . EUT PHOTO	28

Report No.: BCTC-LH160910744E



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.249) , Subpart C				
Standard Section	Test Item	Judgment	Remark	
15.207	Conducted Emission	N/A		
15.249	Radiated Spurious Emission	PASS		
15.249	Bandwidth	PASS		
15.205	Band Edge Emission	PASS		
15.203	Antenna Requirement	PASS		

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

1.1 TEST FACILITY

Shenzhen BCTC Technology Co., Ltd.

Add.: No.101, Yousong Road, Longhua New District, Shenzhen, China

FCC Registered No.: 187086

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $\mathbf{y} \pm \mathbf{U}$, where expended uncertainty \mathbf{U} is based on a standard uncertainty multiplied by a coverage factor of $\mathbf{k=2}$, providing a level of confidence of approximately $\mathbf{95}$ %.

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

Report No.: BCTC-LH160910744E



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	RC DRONE				
Trade Name	N/A				
Model Name	F806 F801, F802, F803, F804, F805, F807, F808, F809, F810, F811,F812, F813, F814, F815, F816, F817, F818, F819, F820, ODY-7501				
Model Difference	The product's different for	or model name and outlook color.			
	The EUT is a RC DRON	E			
	Operation Frequency:	2402~2472 MHz			
	Modulation Type:	GFSK			
	Number Of Channel	16 CH			
Product Description	Antenna type:	Internar Antenna			
	Antenna Gain (dBi)	2.0dBi			
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.				
Channel List	Please refer to the Note 2.				
Power	DC 6V (1.5V AA battery*4)				
hardware version					
Software version					
Serial number					
Connecting I/O Port(s)	Please refer to the User's Manual				

Note

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



2

Shenzhen BCTC Technology Co., Ltd.

		Channel List				
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
	00	2402	12	2457		
	01	2405	13	2462		
	02	2410	14	2467		
	03	2414	15	2472		
Ī	04	2418				
Ī	05	2423				
Ī	06	2428				
Ī	07	2432				
Ī	08	2437				
Ī	09	2440				
Ī	10	2447				
	11	2452				
Ī						
						

2.2 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	CH00			
Mode 2	CH09			
Mode 3	CH15			
Mode 4	Link Mode			
For Conducted & Radiated Emission				
Final Test Mode	Final Test Mode Description			
Mode 1	CH00			
Mode 2	CH09			
Mode 3	CH15			
Mode 4	Link Mode			

Note:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported



2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test

E-1 EUT

2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	RC DRONE		F806	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in <code>"Length_"</code> column.



2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer	Agilent	E4407B	MY45109572	2016.08.24	2017.08.23
2	Test Receiver	R&S	ESPI	101396	2016.08.24	2017.08.23
3	Bilog Antenna	SCHWARZBE CK	VULB9160	VULB9160-3 369	2016.08.24	2017.08.23
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2016.07.06	2017.07.05
5	Spectrum Analyzer	Agilent	N9020A	MY5051041	2016.07.06	2017.07.05
6	Horn Antenna	SCHWARZBE CK	9120D	9120D-1275	2016.08.24	2017.08.23
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2016.07.06	2017.07.05
8	Amplifier	SCHWARZBE CK	BBV9718	9718-270	2016.08.24	2017.08.23
9	Amplifier	SCHWARZBE CK	BBV9743	9743-119	2016.08.24	2017.08.23
10	Loop Antenna	ARA	PLD4030/B	1029	2016.07.06	2017.07.05
11	Power Meter	R&S	NRVS	100696	2016.07.06	2017.07.05
12	Power Sensor	R&S	URV5-Z4	0395.1619.0 5	2016.07.06	2017.07.05
13	RF cables	R&S	N/A	N/A	2016.07.06	2017.07.05
14	966 Chamber	ChengYu	966 Room	966	2016.07.06	2017.07.05
15	Antenna connector	Florida RFLab s	Lab-Fle	RF 01#	2016.07.06	2017.07.05

Note: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Test Receiver	R&S	ESCI	1166.5950K03- 101165-ha	2016.08.24	2017.08.23
2	LISN	R&S	NSLK81 26	8126466	2016.08.24	2017.08.23
3	LISN	R&S	NSLK81 26	8126487	2016.08.24	2017.08.23
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2016.08.24	2017.08.23
5	RF cables	R&S	R204	R20X	2016.08.24	2017.08.23

Report No.: BCTC-LH160910744E



3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

	Limit (dBuV)	Ctandard
FREQUENCY (MHz)	Quasi-peak	Average	Standard
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.1.2 TEST PROCEDURE

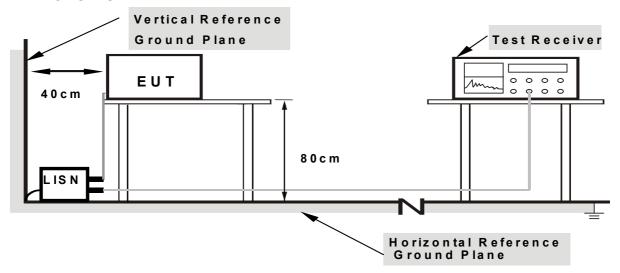
- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation



3.1.4 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80

from other units and other metal planes

3.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.6 TEST RESULTS

N/A:The EUT's power provide by battery, no requriments for this item.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies	Field Strength	Measurement Distance
(MHz)	(micorvolts/meter)	(meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

	Limit (dBuV/m) (at 3M)			
FREQUENCY (MHz)	PEAK	AVERAGE		
Above 1000	74	54		

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting			
Attenuation	Auto			
Start Frequency	1000 MHz			
Stop Frequency	25GHz			
RB / VB (emission in restricted	4 Mile / 4 Mile for Dools 4 Mile / 40He for Asserta			
band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average			

Receiver Parameter	Setting
Attenuation	Auto
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



3.2.2 TEST PROCEDURE

Below 1GHz test procedure as below:

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

- g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).
- h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel Note:

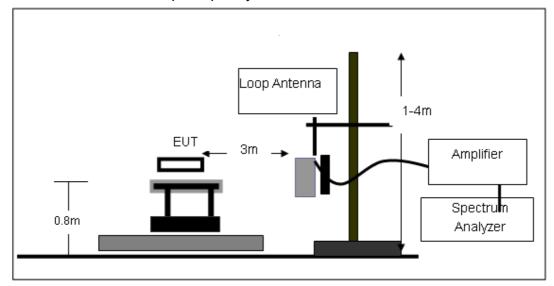
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

No deviation

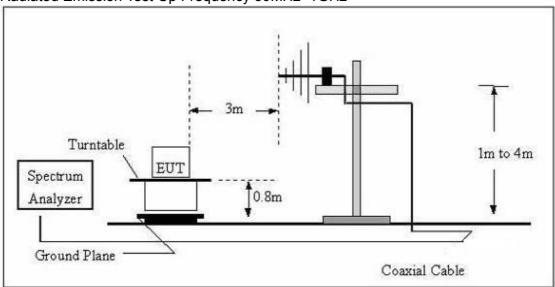
3.2.4 TEST SETUP

(A) Radiated Emission Test-Up Frequency Below 30MHz

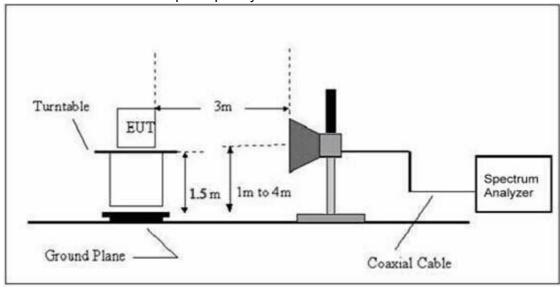




(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.



3.2.6 TEST RESULTS (BETWEEN 9KHZ - 30 MHZ)

Temperature:	20℃	Relative Humidtity:	48%
Pressure:	1010 hPa	Test Voltage:	DC 6V
Test Mode:	Mode 4	Polarization :	

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
				PASS
				PASS

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

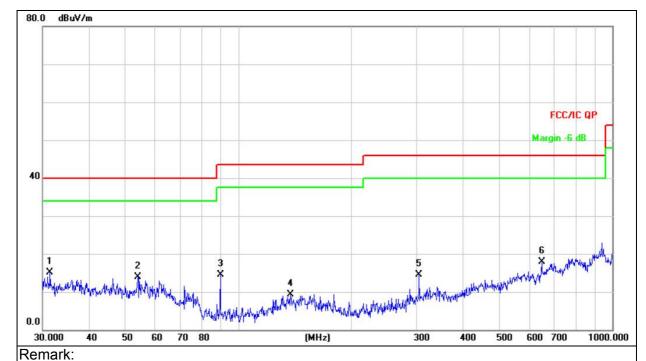
Distance extrapolation factor =40 log (specific distance/test distance)(dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.



3.2.7 TEST RESULTS (BETWEEN 30MHZ - 1GHZ)

Temperature :	26℃	Relative Humidity:	54%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Voltage :	DC 6V		
Test Mode :	Mode 4		



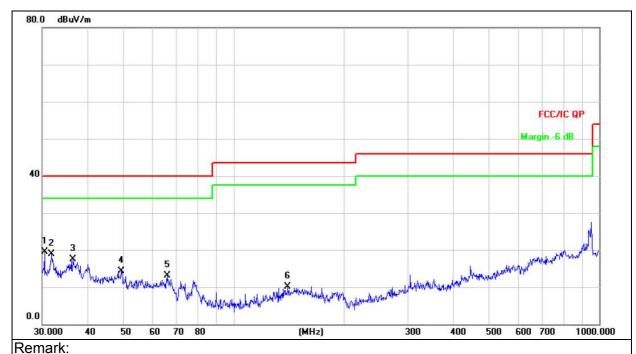
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All interfaces was connected, and BT TX mode was link.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	31.3992	23.33	-8.22	15.11	40.00	-24.89	QP			
2		53.8818	24.88	-10.93	13.95	40.00	-26.05	QP			
3		89.5899	32.08	-17.55	14.53	43.50	-28.97	QP			
4		137.9028	22.82	-13.53	9.29	43.50	-34.21	QP			
5	į	304.6099	27.06	-12.47	14.59	46.00	-31.41	QP			
6	- 1	647.3856	23.12	-5.12	18.00	46.00	-28.00	QP			



Temperature :	26℃	Relative Humidity:	54%
Pressure :	1010 hPa	Polarization :	Vertical
Test Voltage :	DC 6V		
Test Mode :	Mode 4		

Report No.: BCTC-LH160910744E



Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All interfaces was connected, and BT TX mode was link.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	30.4238	27.54	-8.08	19.46	40.00	-20.54	QP			
2		31.8427	27.18	-8.27	18.91	40.00	-21.09	QP			
3		36.3814	26.15	-8.62	17.53	40.00	-22.47	QP			
4		49.3594	24.57	-10.19	14.38	40.00	-25.62	QP			
5		66.0342	26.12	-12.93	13.19	40.00	-26.81	QP			
6		140.8351	23.43	-13.34	10.09	43.50	-33.41	QP			



3.2.8 TEST RESULTS (1GHZ~25GHZ)

GFSK

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
		0	peration fre	quency:2402			
V	2402.00	87.64	13.85	101.49	114.00	-12.51	PK
V	2402.00	72.43	13.85	86.28	94.00	-7.72	AV
V	4804.00	39.17	19.34	58.51	74.00	-15.49	PK
V	4804.00	25.61	19.34	44.95	54.00	-9.05	AV
V	16128.00	29.77	21.89	51.66	74.00	-22.34	PK
Н	2402.00	87.61	13.85	101.46	114.00	-12.54	PK
Н	2402.00	73.04	13.85	86.89	94.00	-7.11	AV
Н	4804.00	39.99	19.34	59.33	74.00	-14.67	PK
Н	4804.00	25.50	19.34	44.84	54.00	-9.16	AV
Н	16128.00	29.52	21.89	51.41	74.00	-22.59	PK
		0	peration fre	quency:2440			
V	2440.00	88.14	13.94	102.08	114.00	-11.92	PK
V	2440.00	72.57	13.94	86.51	94.00	-7.49	AV
V	4880.00	40.09	19.42	59.51	74.00	-14.49	PK
V	4880.00	25.65	19.42	45.07	54.00	-8.93	AV
V	16128.00	28.04	21.89	49.93	74.00	-24.07	PK
Н	2440.00	88.16	13.94	102.10	114.00	-11.90	PK
Н	2440.00	73.44	13.94	87.38	94.00	-6.62	AV
Н	4880.00	41.14	19.42	60.56	74.00	-13.44	PK
Н	4880.00	26.36	19.42	45.78	54.00	-8.22	AV
Н	16128.00	29.69	21.89	51.58	74.00	-22.42	PK
		0	peration fre	quency:2472	•		
V	2472.00	88.19	14.02	102.21	114.00	-11.79	PK
V	2472.00	72.67	14.02	86.69	94.00	-7.31	AV
V	4944.00	40.88	19.51	60.39	74.00	-13.61	PK
V	4944.00	25.92	19.51	45.43	54.00	-8.57	AV
V	16128.00	29.90	21.89	51.79	74.00	-22.21	PK
Н	2472.00	88.22	14.02	102.24	114.00	-11.76	PK
Н	2472.00	72.52	14.02	86.54	94.00	-7.46	AV
Н	4944.00	41.10	19.51	60.61	74.00	-13.39	PK
Н	4944.00	25.95	19.51	45.46	54.00	-8.54	AV
Н	16128.00	30.22	21.89	52.11	74.00	-21.89	PK

Remark:

- 1. Emission Level = Meter Reading + Factor, Margin= Emission Level Limit
- If peak below the average limit, the average emission was no test.
 The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



3.3 RADIATED BAND EMISSION MEASUREMENT

3.3.1 TEST REQUIREMENT:

FCC Part15 C Section 15.209 and 15.205

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

	Limit (dBuV/m) (at 3M)			
FREQUENCY (MHz)	PEAK	AVERAGE		
Above 1000	74	54		

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting		
Attenuation	Auto		
Start Frequency	2300MHz		
Stop Frequency	2520		
RB / VB (emission in restricted	1 MHz / 1 MHz for Dook 1 MHz / 10Hz for Average		
band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average		

3.3.2 TEST PROCEDURE

Above 1GHz test procedure as below:

- a. 1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel,the Highest channel

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

Report No.: BCTC-LH160910744E

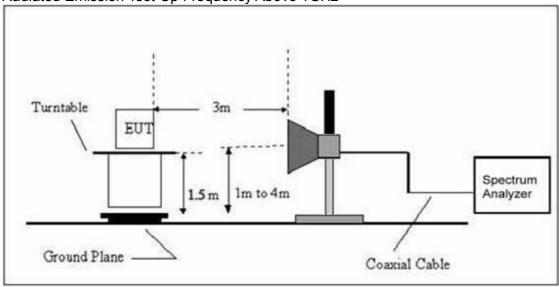


3.3.3 DEVIATION FROM TEST STANDARD

No deviation

3.3.4 TEST SETUP

Radiated Emission Test-Up Frequency Above 1GHz



3.3.5 EUT OPERATING CONDITIONS

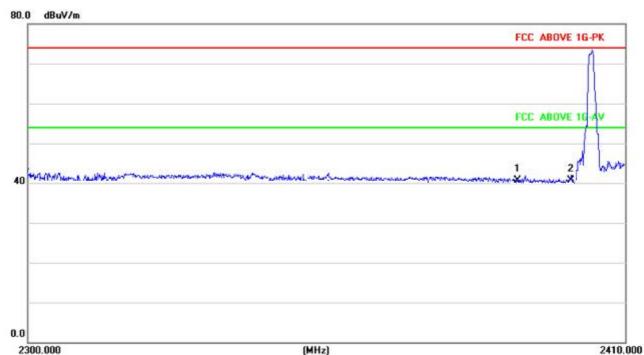
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

The plot only show the Horizontal's average data.



3.3.6 TEST RESULT

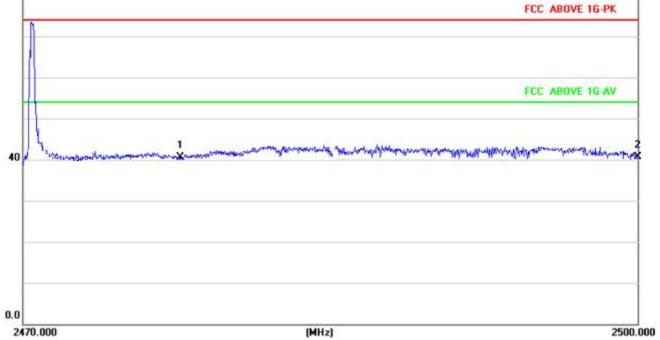
GFSK



2000.000			f	,			2110.00
Polar (H/V)	Frequency	Meter Rea ing	Factor	Emission Level	Limits	Margin	Detector
(m/v)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
		op	eration fre	equency:2402			
V	2390.00	37.32	13.83	51.15	74.00	-22.85	PK
V	2390.00	25.95	13.83	39.78	54.00	-14.22	AV
V	2400.00	37.53	13.85	51.38	74.00	-22.62	PK
V	2400.00	25.52	13.85	39.37	54.00	-14.63	AV
Н	2390.00	37.62	13.83	51.45	74.00	-22.55	PK
Н	2390.00	25.98	13.83	39.81	54.00	-14.19	AV
Н	2400.00	37.48	13.85	51.33	74.00	-22.67	PK
Н	2400.00	25.92	13.85	39.77	54.00	-14.23	AV



80.0 dBuV/m



Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Type
		op	eration fre	equency:2472			
V	2483.50	37.53	14.02	51.55	74.00	-22.45	PK
V	2483.50	26.19	14.02	40.21	54.00	-13.79	AV
V	2500.00	37.47	14.06	51.53	74.00	-22.47	PK
V	2500.00	25.62	14.06	39.68	54.00	-14.32	AV
Н	2483.50	37.66	14.02	51.68	74.00	-22.32	PK
Н	2483.50	26.23	14.02	40.25	54.00	-13.75	AV
Н	2500.00	37.28	14.06	51.34	74.00	-22.66	PK
Н	2500.00	26.47	14.06	40.53	54.00	-13.47	AV

Remark:

- Emission Level = Meter Reading + Factor, Margin= Emission Level Limit
 If peak below the average limit, the average emission was no test.
 The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



4. BANDWIDTH TEST

4.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.249) , Subpart C				
Section	Test Item			
15.249	Bandwidth			

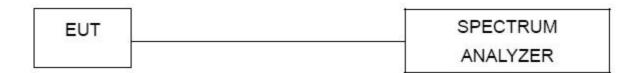
4.1.1 TEST PROCEDURE

- 1. Set RBW = 30 kHz.
- 2. Set the video bandwidth (VBW) ≥RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.
- 7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



4.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.



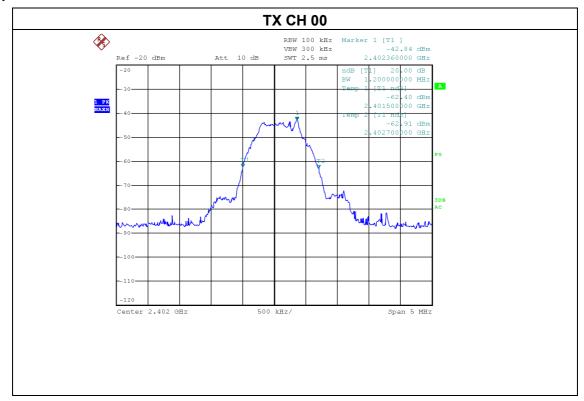
4.1.5 TEST RESULTS

Temperature :	25℃	Relative Humidity:	60%
Pressure :	1012 hPa	Test Voltage :	DC 6V
Test Mode :	TX Mode /CH00, CH09, CH15		

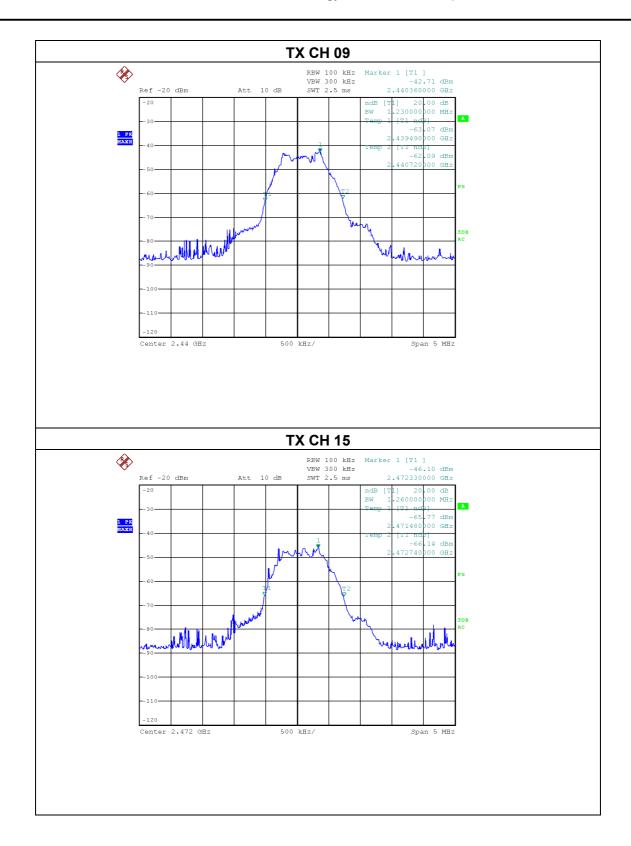
Shenzhen BCTC Technology Co., Ltd.

	Frequency (MHz)	20dB bandwidth (MHz)	Result
	2402	1.20	Pass
GFSK	2440	1.23	Pass
	2472	1.26	Pass

GFSK









5. ANTENNA REQUIREMENT

5.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 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.

Report No.: BCTC-LH160910744E

5.2 EUT ANTENNA

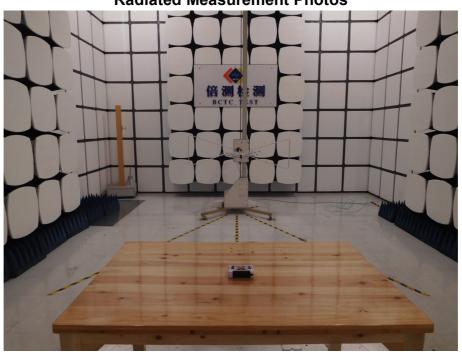
The EUT antenna is internal antenna,. It comply with the standard requirement.

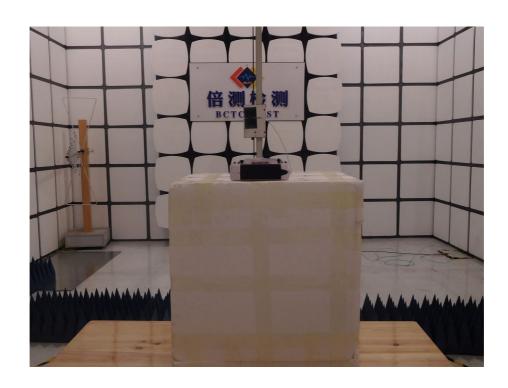


6. TEST SEUUP PHOTO



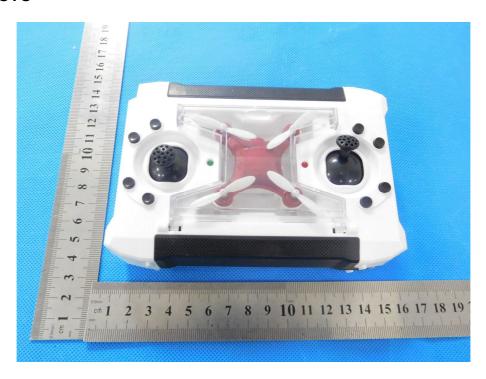
Report No.: BCTC-LH160910744E

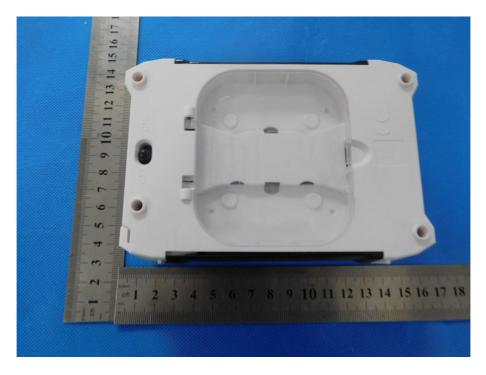






7. EUT PHOTO









3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 2

Shenzhen BCTC Technology Co., Ltd.

**** END OF REPORT ****

8 9 10 11 12 13 14 15 16 17 18 19 20