

FCC REPORT

Applicant: FLYSKY RC MODEL TECHNOLOGY CO., LTD

Address of Applicant: West building3, Huangjianyuan Ind, Park QIAOLI North Gate
Changping Town Dongguan CN.

Equipment Under Test (EUT)

Product Name: 4CH radio controll system

Model No.: FS-iT4

FCC ID: N4ZFLYSKYIT4

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.249:2011

Date of sample receipt: November 05, 2012

Date of Test: November 05-13, 2012

Date of report issued: November 14, 2012

Test Result : PASS *

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

Authorized Signature:

A circular blue stamp with the text "GTS" in the center, "GLOBAL TESTING" below it, and "GLOBAL TECHNOLOGY SERVICES CO., LTD." around the perimeter. A handwritten signature in black ink is written over the stamp.

Robinson Lo
Laboratory Manager

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

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2 Version

Version No.	Date	Description
00	November 14, 2012	Original

Prepared By: Sam. Gao **Date:** November 14, 2012
Project Engineer

Check By: Hans. Hu **Date:** November 14, 2012
Reviewer

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4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
AC Power Line Conducted Emission	15.207	Pass
Field strength of the fundamental signal	15.249 (a)	Pass
Spurious emissions	15.249 (a) (d)/15.209	Pass
Band edge	15.249 (d)/15.205	Pass
20dB Occupied Bandwidth	15.215 (c)	Pass

Pass: The EUT complies with the essential requirements in the standard.

N/A: not applicable.

5 General Information

5.1 Client Information

Applicant:	FLYSKY RC MODEL TECHNOLOGY CO., LTD
Address of Applicant:	West building3, Huangjianyuan Ind, Park QIAOLI North Gate Changping Town Dongguan CN.
Manufacturer:	FLYSKY RC MODEL TECHNOLOGY CO., LTD
Address of Manufacturer:	West building3, Huangjianyuan Ind, Park QIAOLI North Gate Changping Town Dongguan CN.
Factory:	FLYSKY RC MODEL TECHNOLOGY CO., LTD
Address of factory :	West building3, Huangjianyuan Ind, Park QIAOLI North Gate Changping Town Dongguan CN.

5.2 General Description of EUT

Product Name:	4CH radio controll system
Model No.:	FS-iT4
Operation Frequency:	2406MHz~2474MHz
Channel numbers:	16
Modulation technology:	GFSK
Antenna Type:	Integral
Antenna gain:	2dBi
Power supply:	DC 3.7V Li-ion Battery

5.3 Test mode

Transmitting mode	Keep transmitting mode.
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Per-test mode.

We have verified the construction and function in typical operation, The EUT was placed on three different polar directions; i.e. X axis, Y axis, Z axis. which was shown in this test report and defined as follows:

Axis	X	Y	Z
Field Strength(dBuV/m)	106.14	108.62	107.31

Final Test Mode:

According to ANSI C63.4 standards, the test results are both the “worst case” and “worst setup”:
Y axis (see the test setup photo)

5.4 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC approval
IBM	Notebook	T42	GTS209	DoC
IBM	AC Adapter	92P1024	N/A	VoC

5.5 Test Facility

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

- **CNAS —Registration No.: CNAS L5775**

CNAS has accredited Global United Technology Services Co., Ltd. To ISO/IEC 17025 General Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **FCC —Registration No.: 600491**

Global United Technology Services Co., Ltd., Shenzhen 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 files. Registration 600491, July 20, 2010.

- **Industry Canada (IC)**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. Has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-1.

5.6 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China

Tel: 0755-27798480

Fax: 0755-27798960

5.7 Other Information Requested by the Customer

None.


6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	Mar. 30 2011	Mar. 29 2013
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Jul. 03 2012	Jul. 02 2013
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Feb. 25 2012	Feb. 24 2013
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	June 29 2012	June 28 2013
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	Mar. 30 2011	Mar. 29 2013
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	Mar. 31 2012	Mar. 30 2013
9	Coaxial Cable	GTS	N/A	GTS211	Mar. 31 2012	Mar. 30 2013
10	Coaxial cable	GTS	N/A	GTS210	Mar. 31 2012	Mar. 30 2013
11	Coaxial Cable	GTS	N/A	GTS212	Mar. 31 2012	Mar. 30 2013
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Jul. 03 2012	Jul. 02 2013
13	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	Jul. 03 2012	Jul. 02 2013
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June 29 2012	June 28 2013
15	Band filter	Amindeon	82346	GTS219	Mar. 31 2012	Mar. 30 2013

Conducted Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.0(L)x3.0(W)x3.0(H)	GTS264	Sep. 08 2011	Sep. 07 2013
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	Jul. 03 2012	Jul. 02 2013
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS224	Jul. 03 2012	Jul. 02 2013
4	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	Jul. 03 2012	Jul. 02 2013
5	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS226	Jul. 03 2012	Jul. 02 2013
6	Coaxial Cable	GTS	N/A	GTS227	Jul. 03 2012	Jul. 02 2013
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A

7 Test results and Measurement Data

7.1 Antenna requirement:

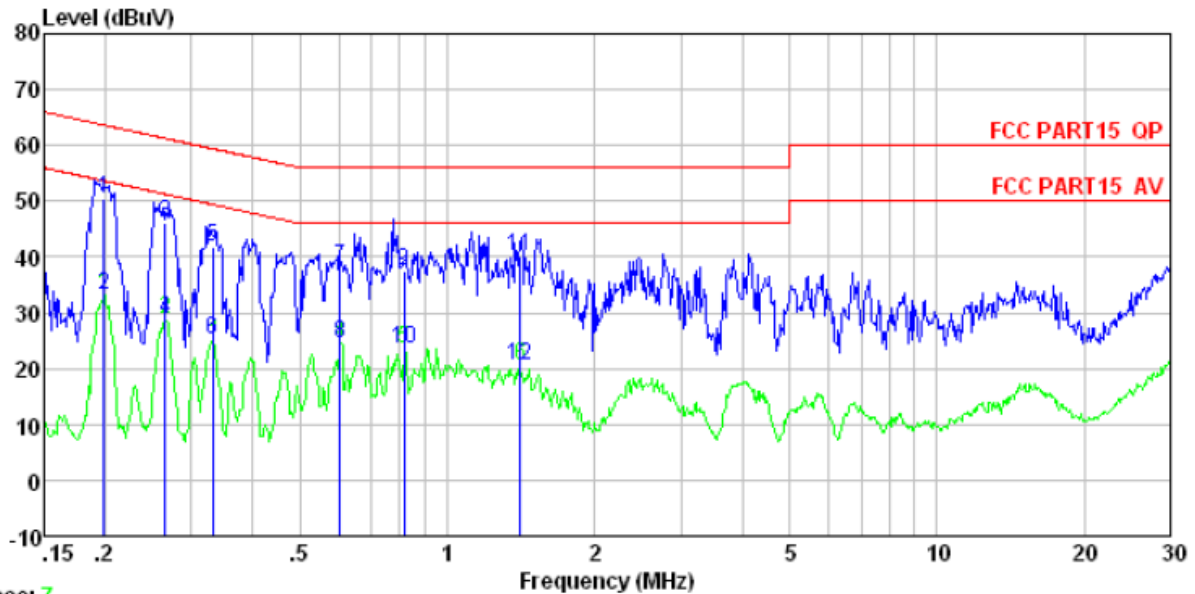
Standard requirement:	FCC Part15 C Section 15.203
<p>15.203 requirement:</p> <p>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a 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.</p>	
<p>E.U.T Antenna:</p>	
<p><i>The antenna is Integral antenna, the best case gain of the antenna is 2dBi</i></p> 	

7.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207														
Test Method:	ANSI C63.4:2003														
Test Frequency Range:	150KHz to 30MHz														
Class / Severity:	Class B														
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto														
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dBuV)</th> </tr> <tr> <th>Quasi-peak</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15-0.5</td> <td>66 to 56*</td> <td>56 to 46*</td> </tr> <tr> <td>0.5-5</td> <td>56</td> <td>46</td> </tr> <tr> <td>5-30</td> <td>60</td> <td>50</td> </tr> </tbody> </table> <p>* Decreases with the logarithm of the frequency.</p>	Frequency range (MHz)	Limit (dBuV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBuV)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													
Test setup:	<p><i>Remark</i> E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p>														
Test procedure:	<ol style="list-style-type: none"> 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement. 														
Test Instruments:	Refer to section 6.0 for details														
Test mode:	Refer to section 5.3 for details														
Test results:	Pass														

Measurement data:

Line:

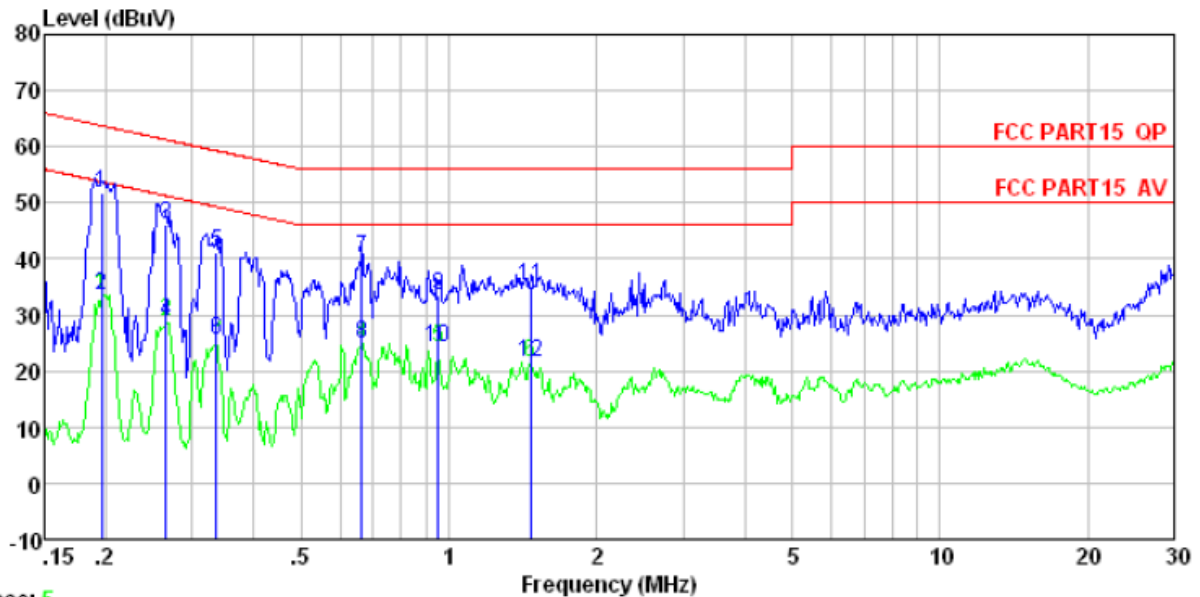


Trace: 7

Condition : FCC PART15 QP LISN(2011) LINE
 Job No. : 1331RF
 Test Mode : Charging mode
 Test Engineer: Sam

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.199	49.77	0.66	0.10	50.53	63.67	-13.14	QP
2	0.199	32.47	0.66	0.10	33.23	63.67	-30.44	Average
3	0.266	45.48	0.62	0.10	46.20	61.25	-15.05	QP
4	0.266	27.97	0.62	0.10	28.69	61.25	-32.56	Average
5	0.332	41.21	0.60	0.10	41.91	59.40	-17.49	QP
6	0.332	24.39	0.60	0.10	25.09	59.40	-34.31	Average
7	0.604	37.44	0.53	0.10	38.07	56.00	-17.93	QP
8	0.604	24.06	0.53	0.10	24.69	56.00	-31.31	Average
9	0.817	36.83	0.50	0.10	37.43	56.00	-18.57	QP
10	0.817	23.10	0.50	0.10	23.70	56.00	-32.30	Average
11	1.411	39.54	0.44	0.10	40.08	56.00	-15.92	QP
12	1.411	20.04	0.44	0.10	20.58	56.00	-35.42	Average

Neutral:



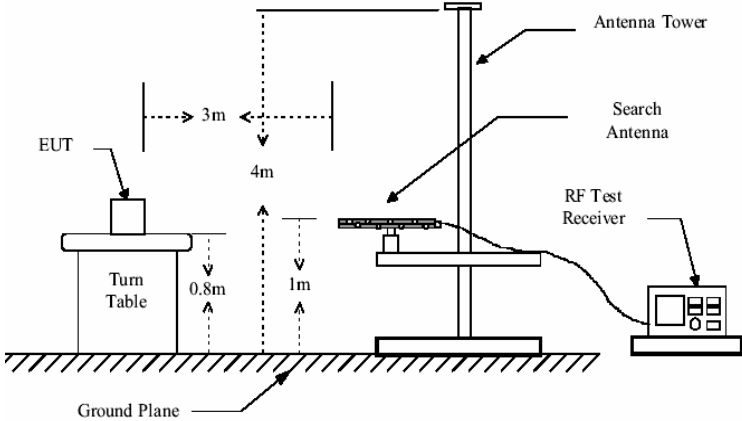
Trace: 5
 Condition : FCC PART15 QP LISN(2011) NEUTRAL
 Job No. : 1331RF
 Test Mode : Charging mode
 Test Engineer: Sam

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.197	51.01	0.66	0.10	51.77	63.76	-11.99	QP
2	0.197	32.84	0.66	0.10	33.60	63.76	-30.16	Average
3	0.266	45.30	0.62	0.10	46.02	61.25	-15.23	QP
4	0.266	28.19	0.62	0.10	28.91	61.25	-32.34	Average
5	0.336	40.51	0.60	0.10	41.21	59.31	-18.10	QP
6	0.336	24.83	0.60	0.10	25.53	59.31	-33.78	Average
7	0.665	39.45	0.52	0.10	40.07	56.00	-15.93	QP
8	0.665	24.37	0.52	0.10	24.99	56.00	-31.01	Average
9	0.953	33.01	0.48	0.10	33.59	56.00	-22.41	QP
10	0.953	23.51	0.48	0.10	24.09	56.00	-31.91	Average
11	1.464	34.74	0.43	0.10	35.27	56.00	-20.73	QP
12	1.464	21.02	0.43	0.10	21.55	56.00	-34.45	Average

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss

7.3 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.4:2003				
Test Frequency Range:	30MHz to 25GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
AV		1MHz	10Hz	Average Value	
Limit: (Field strength of the fundamental signal)	Frequency	Limit (dBuV/m @3m)		Remark	
	2400MHz-2483.5MHz	94.00		Average Value	
		114.00	Peak Value		
Limit: (Spurious Emissions)	Frequency	Limit (dBuV/m @3m)		Remark	
	30MHz-88MHz	40.00		Quasi-peak Value	
	88MHz-216MHz	43.50		Quasi-peak Value	
	216MHz-960MHz	46.00		Quasi-peak Value	
	960MHz-1GHz	54.00		Quasi-peak Value	
	Above 1GHz	54.00		Average Value	
74.00		Peak Value			
Limit: (band edge)	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 Section 15.209, whichever is the lesser attenuation.				
Test setup:	<p>Below 1GHz</p>  <p>Above 1GHz</p>				

	<p>The diagram illustrates the test setup. An EUT (Equipment Under Test) is placed on a turn table that is 0.8 meters above the ground. The turn table is rotated 360 degrees. The EUT is positioned 3 meters away from the antenna tower. The antenna tower is a variable-height structure with a horn antenna mounted on top. The antenna height is varied from 1 meter to 4 meters above the ground. The antenna is connected to a spectrum analyzer via an amplifier. The spectrum analyzer is used to measure the field strength of the EUT.</p>
<p>Test Procedure:</p>	<ol style="list-style-type: none"> 1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. 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. 4. 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. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. 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.
<p>Test Instruments:</p>	<p>Refer to section 6.0 for details</p>
<p>Test mode:</p>	<p>Refer to section 5.3 for details</p>
<p>Test results:</p>	<p>Pass</p>

Measurement data:

7.3.1 Field Strength of The Fundamental Signal

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2406.00	103.63	27.57	5.40	30.12	106.48	114.00	-7.52	Horizontal
2406.00	105.26	27.57	5.40	30.12	108.11	114.00	-5.89	Vertical
2440.00	102.16	27.48	5.43	30.06	105.01	114.00	-8.99	Horizontal
2440.00	103.42	27.48	5.43	30.06	106.27	114.00	-7.73	Vertical
2474.00	102.65	27.52	5.47	29.99	105.65	114.00	-8.35	Horizontal
2474.00	103.62	27.52	5.47	29.99	108.62	114.00	-5.38	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2406.00	86.35	27.57	5.40	30.12	89.20	94.00	-4.80	Horizontal
2406.00	88.45	27.57	5.40	30.12	91.30	94.00	-2.70	Vertical
2440.00	84.32	27.48	5.43	30.06	87.17	94.00	-6.83	Horizontal
2440.00	86.62	27.48	5.43	30.06	89.47	94.00	-4.53	Vertical
2474.00	84.46	27.52	5.47	29.99	87.46	94.00	-6.54	Horizontal
2474.00	87.45	27.52	5.47	29.99	90.45	94.00	-3.55	Vertical

According to the follow transmitter output power (P_t) formula:

$$P_t = (E \times d)^2 / (30 \times g_t)$$

P_t =transmitter output power in watts

g_t =numeric gain of the transmitting antenna (unitless)

E=electric field strength in V/m

d= measurement distance in meters (m).

According to the above test data, $E_{max} = 108.62 \text{ dBuV/m} = 0.2698 \text{ V/m}$, $d = 3 \text{ m}$, $g_t = 1.58$

$$P_t = (E \times d)^2 / (30 \times g_t) = (0.2698 \times 3)^2 / (30 \times 1.58) = 0.0138 \text{ W}$$

7.3.2 Spurious emissions

■ Below 1GHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
47.99	49.81	16.47	0.75	31.98	35.05	40.00	-4.95	Vertical
59.86	47.61	15.74	0.86	31.94	32.27	40.00	-7.73	Vertical
202.10	53.91	13.70	1.85	32.14	37.32	43.50	-6.18	Vertical
396.24	52.16	17.01	2.83	31.90	40.10	46.00	-5.90	Vertical
465.80	53.00	17.71	3.16	31.67	42.20	46.00	-3.80	Vertical
528.05	51.00	19.20	3.43	31.41	42.22	46.00	-3.78	Vertical
47.99	43.21	16.47	0.75	31.98	28.45	40.00	-11.55	Horizontal
59.86	49.00	15.74	0.86	31.94	33.66	40.00	-6.34	Horizontal
72.08	53.38	12.59	0.96	31.85	35.08	40.00	-4.92	Horizontal
131.76	52.54	12.06	1.45	31.91	34.14	43.50	-9.36	Horizontal
196.51	51.27	13.57	1.82	32.13	34.53	43.50	-8.97	Horizontal
263.82	54.49	15.22	2.19	32.17	39.73	46.00	-6.27	Horizontal

■ Above 1GHz

Test channel:	Lowest channel
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4812.00	24.21	31.78	8.61	24.17	40.43	74.00	-33.57	Vertical
7218.00	23.43	36.15	11.66	26.46	44.78	74.00	-29.22	Vertical
9624.00	21.60	38.01	14.14	25.45	48.30	74.00	-25.70	Vertical
12030.00	*					74.00		Vertical
14436.00	*					74.00		Vertical
4812.00	28.77	31.78	8.61	24.17	44.99	74.00	-29.01	Horizontal
7218.00	23.91	36.15	11.66	26.46	45.26	74.00	-28.74	Horizontal
9624.00	21.96	38.01	14.14	25.45	48.66	74.00	-25.34	Horizontal
12030.00	*					74.00		Horizontal
14436.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4812.00	10.94	31.78	8.61	24.17	27.16	54.00	-26.84	Vertical
7218.00	10.46	36.15	11.66	26.46	31.81	54.00	-22.19	Vertical
9624.00	7.16	38.01	14.14	25.45	33.86	54.00	-20.14	Vertical
12030.00	*					54.00		Vertical
14436.00	*					54.00		Vertical
4812.00	15.13	31.78	8.61	24.17	31.35	54.00	-22.65	Horizontal
7218.00	10.46	36.15	11.66	26.46	31.81	54.00	-22.19	Horizontal
9624.00	9.46	38.01	14.14	25.45	36.16	54.00	-17.84	Horizontal
12030.00	*					54.00		Horizontal
14436.00	*					54.00		Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. “*”, means this data is the too weak instrument of signal is unable to test.

Test channel:	Middle channel
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4880.00	24.41	31.85	8.66	24.10	40.82	74.00	-33.18	Vertical
7320.00	24.29	36.37	11.72	26.71	45.67	74.00	-28.33	Vertical
9760.00	19.24	38.35	14.25	25.36	46.48	74.00	-27.52	Vertical
12200.00	*					74.00		Vertical
14640.00	*					74.00		Vertical
4880.00	28.73	31.85	8.66	24.10	45.14	74.00	-28.86	Horizontal
7320.00	23.37	36.37	11.72	26.71	44.75	74.00	-29.25	Horizontal
9760.00	19.33	38.35	14.25	25.36	46.57	74.00	-27.43	Horizontal
12200.00	*					74.00		Horizontal
14640.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4880.00	9.45	31.85	8.66	24.10	25.86	54.00	-28.14	Vertical
7320.00	9.66	36.37	11.72	26.71	31.04	54.00	-22.96	Vertical
9760.00	7.46	38.35	14.25	25.36	34.70	54.00	-19.30	Vertical
12200.00	*					54.00		Vertical
14640.00	*					54.00		Vertical
4880.00	15.45	31.85	8.66	24.10	31.86	54.00	-22.14	Horizontal
7320.00	12.12	36.37	11.72	26.71	33.50	54.00	-20.50	Horizontal
9760.00	6.78	38.35	14.25	25.36	34.02	54.00	-19.98	Horizontal
12200.00	*					54.00		Horizontal
14640.00	*					54.00		Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. “*”, means this data is the too weak instrument of signal is unable to test.

Test channel:	Highest channel
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4948.00	25.65	31.91	8.71	24.05	42.22	74.00	-31.78	Vertical
7422.00	24.35	36.56	11.77	27.03	45.65	74.00	-28.35	Vertical
9896.00	18.48	38.81	14.35	25.27	46.37	74.00	-27.63	Vertical
12370.00	*					74.00		Vertical
14844.00	*					74.00		Vertical
4948.00	29.09	31.91	8.71	24.05	45.66	74.00	-28.34	Horizontal
7422.00	24.04	36.56	11.77	27.03	45.34	74.00	-28.66	Horizontal
9896.00	19.35	38.81	14.35	25.27	47.24	74.00	-26.76	Horizontal
12370.00	*					74.00		Horizontal
14844.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4948.00	13.65	31.91	8.71	24.05	30.22	54.00	-23.78	Vertical
7422.00	9.23	36.56	11.77	27.03	30.53	54.00	-23.47	Vertical
9896.00	6.95	38.81	14.35	25.27	34.84	54.00	-19.16	Vertical
12370.00	*					54.00		Vertical
14844.00	*					54.00		Vertical
4948.00	15.98	31.91	8.71	24.05	32.55	54.00	-21.45	Horizontal
7422.00	12.95	36.56	11.77	27.03	34.25	54.00	-19.75	Horizontal
9896.00	7.46	38.81	14.35	25.27	35.35	54.00	-18.65	Horizontal
12370.00	*					54.00		Horizontal
14844.00	*					54.00		Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. “*”, means this data is the too weak instrument of signal is unable to test.

7.3.3 Bandedge emissions

Test channel:	Lowest channel
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2310.00	57.08	27.59	5.38	30.18	59.87	74.00	-14.13	Horizontal
2390.00	60.60	27.58	5.39	30.18	63.39	74.00	-10.61	Horizontal
2310.00	59.10	27.59	5.38	30.18	61.89	74.00	-12.11	Vertical
2390.00	62.28	27.58	5.39	30.18	65.07	74.00	-8.93	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2310.00	42.12	27.59	5.38	30.18	44.91	54.00	-9.09	Horizontal
2390.00	45.64	27.58	5.39	30.18	48.43	54.00	-5.57	Horizontal
2310.00	45.61	27.59	5.38	30.18	48.40	54.00	-5.60	Vertical
2390.00	48.94	27.58	5.39	30.18	51.73	54.00	-2.27	Vertical

Test channel:	Highest channel
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	55.61	27.53	5.47	29.93	58.68	74.00	-15.32	Horizontal
2500.00	47.08	27.55	5.49	29.93	50.19	74.00	-23.81	Horizontal
2483.50	62.05	27.53	5.47	29.93	65.12	74.00	-8.88	Vertical
2500.00	47.22	27.55	5.49	29.93	50.33	74.00	-23.67	Vertical

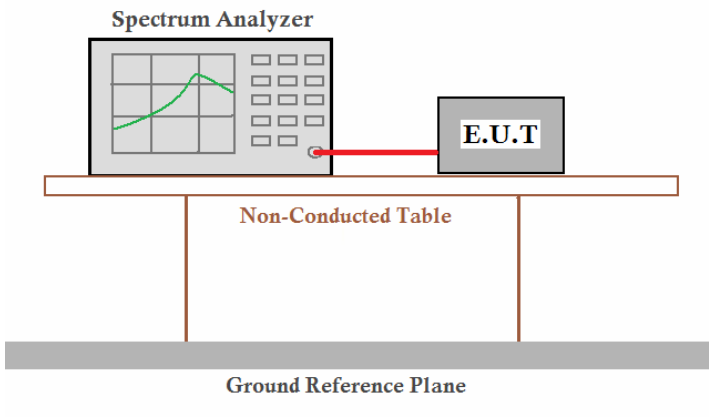
Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	43.12	27.53	5.47	29.93	46.19	54.00	-7.81	Horizontal
2500.00	34.65	27.55	5.49	29.93	37.76	54.00	-16.24	Horizontal
2483.50	45.95	27.53	5.47	29.93	49.02	54.00	-4.98	Vertical
2500.00	32.64	27.55	5.49	29.93	35.75	54.00	-18.25	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor

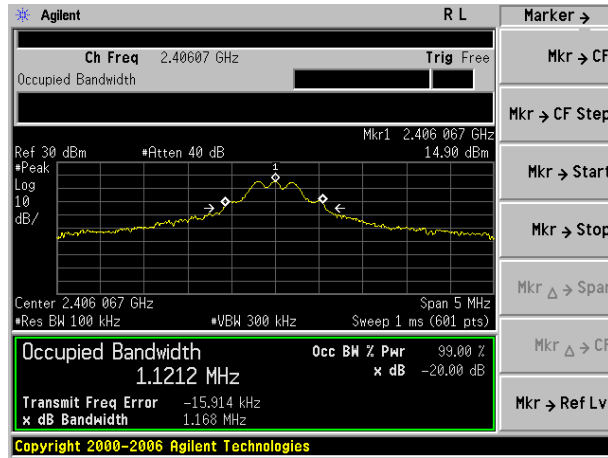
7.4 20dB Occupy Bandwidth

Test Requirement:	FCC Part15 C Section 15.249/15.215
Test Method:	ANSI C63.4:2003
Limit:	Operation Frequency range 2400MHz~2483.5MHz
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

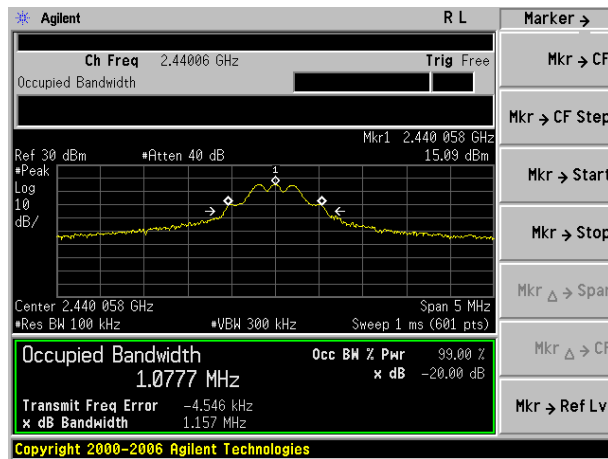
Measurement Data

Test channel	20dB bandwidth(MHz)	Result
Lowest	1.168	Pass
Middle	1.157	Pass
Highest	1.148	Pass

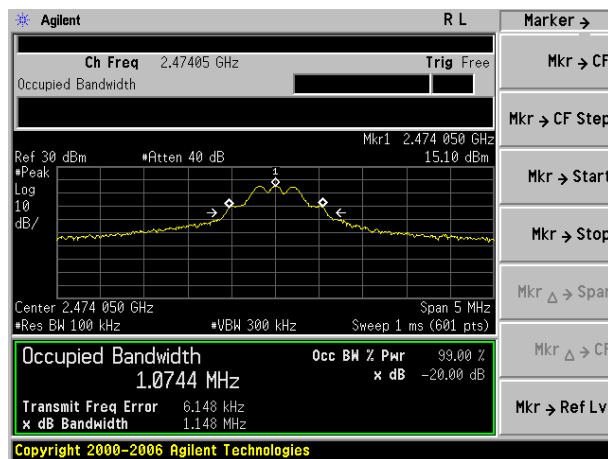
Test plot as follows:



Lowest channel



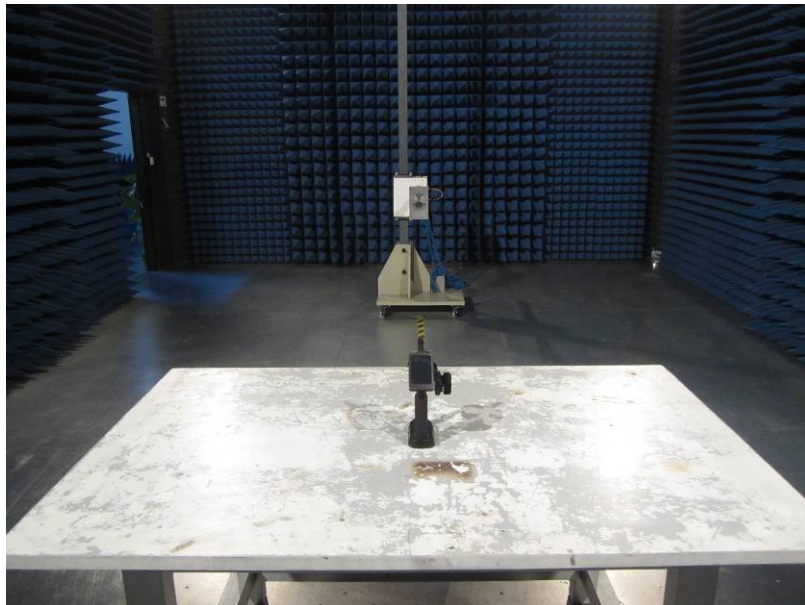
Middle channel



Highest channel

8 Test Setup Photo

Radiated Emission

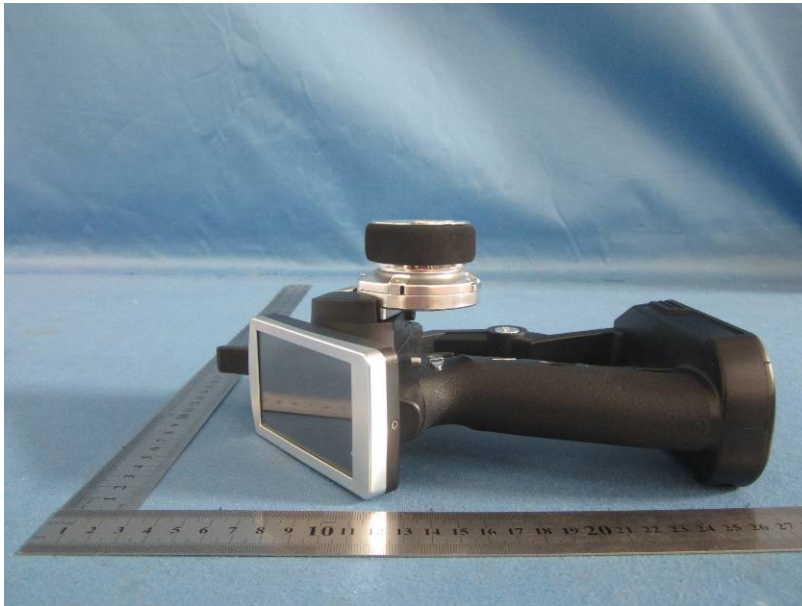
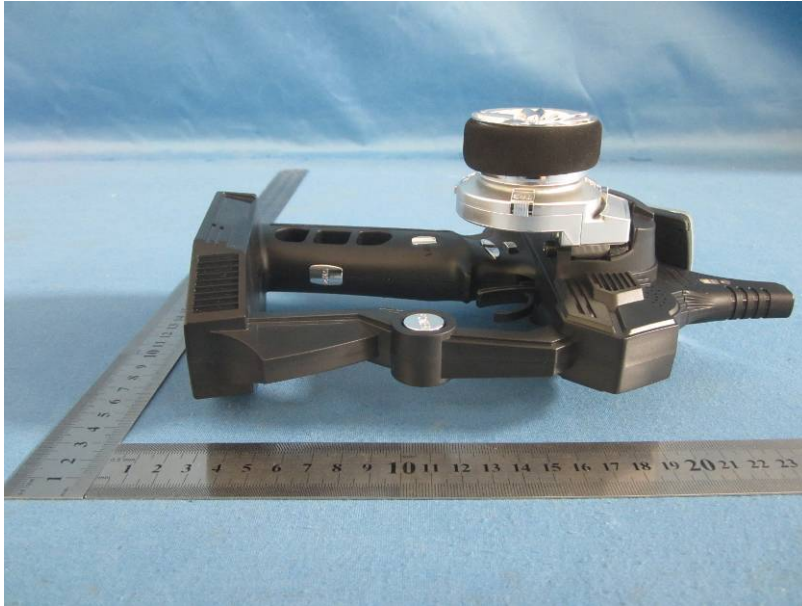


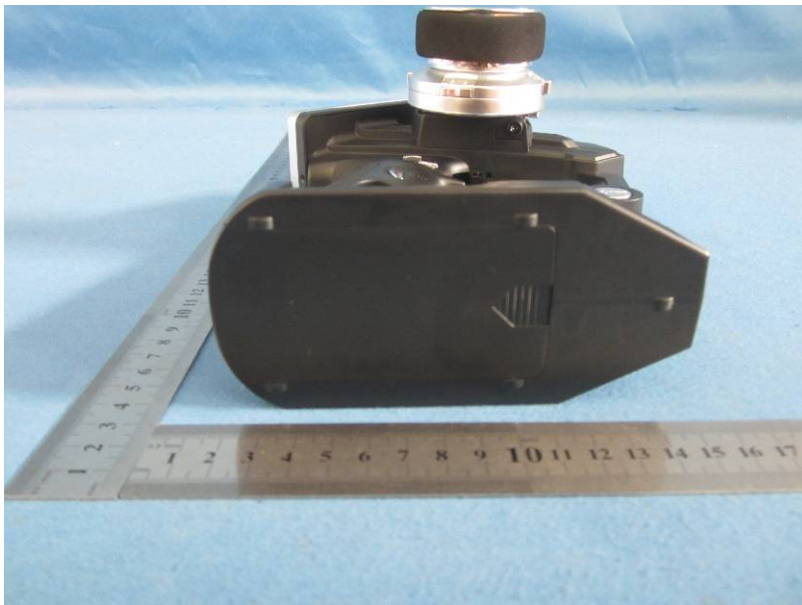
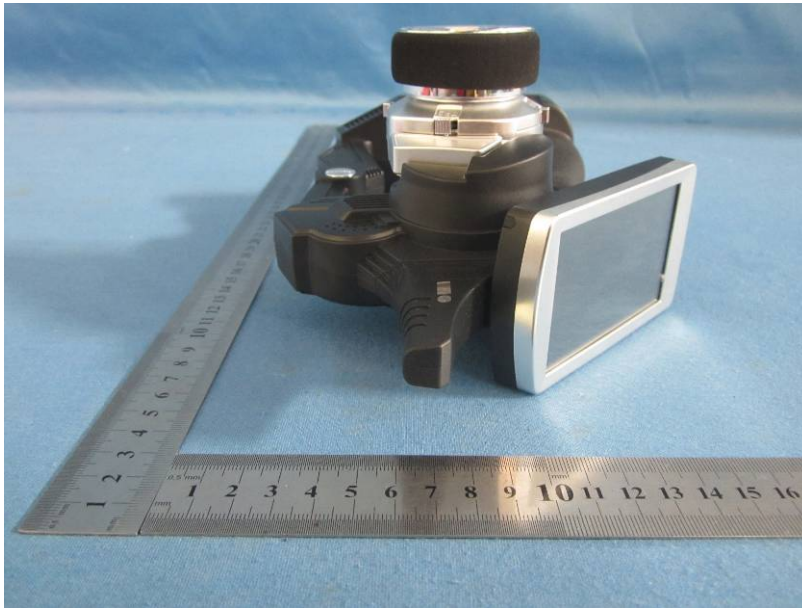
Conducted Emission

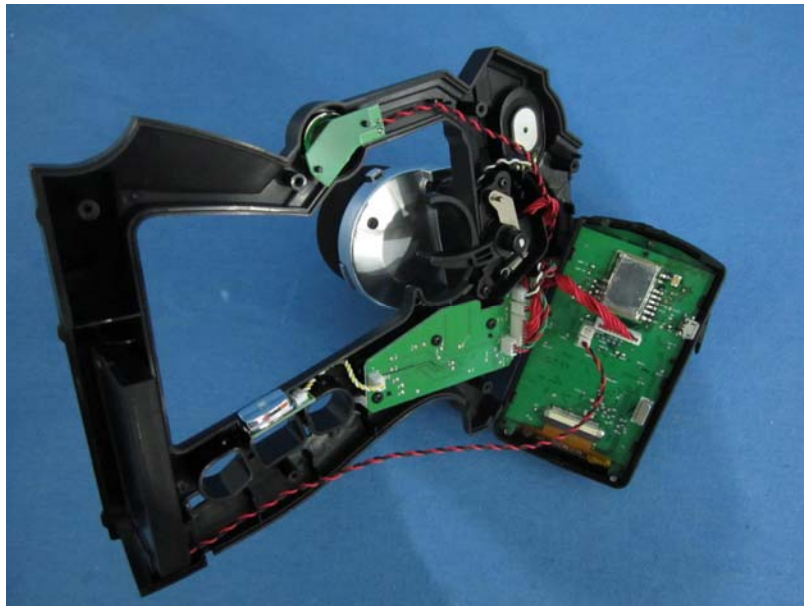


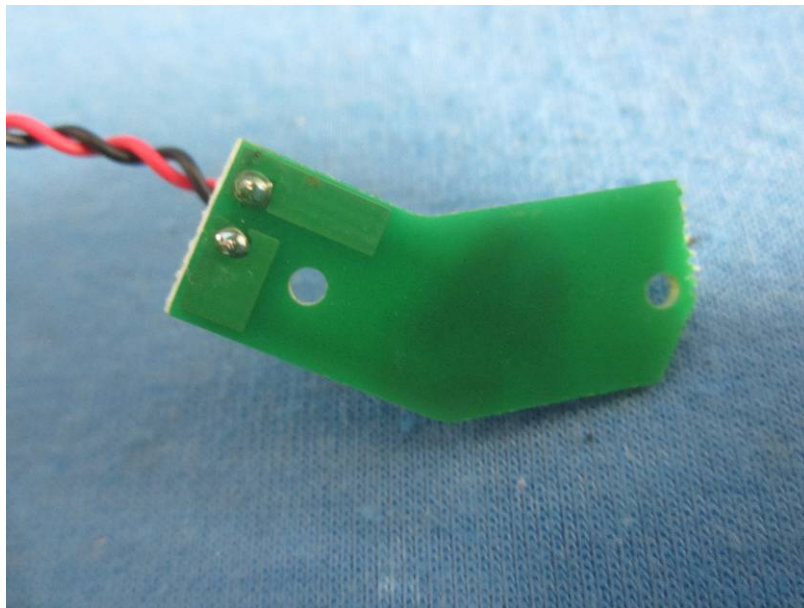
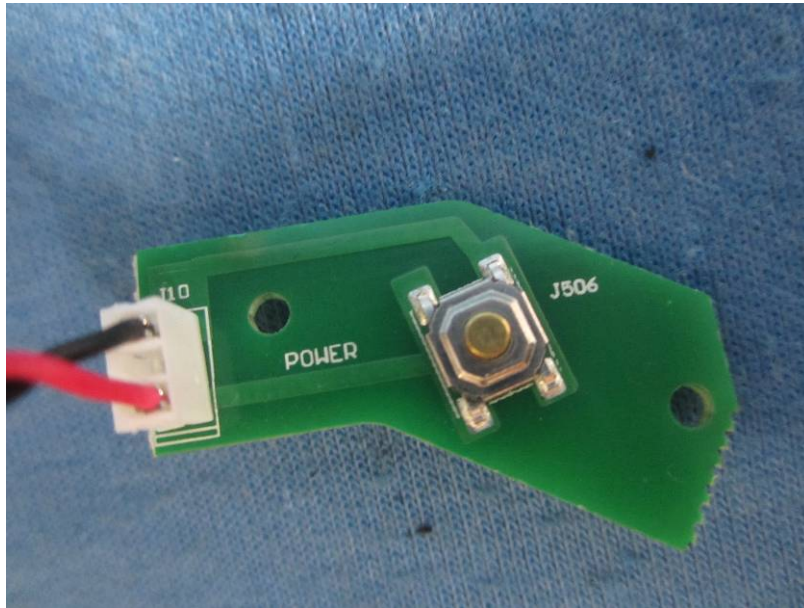
9 EUT Constructional Details

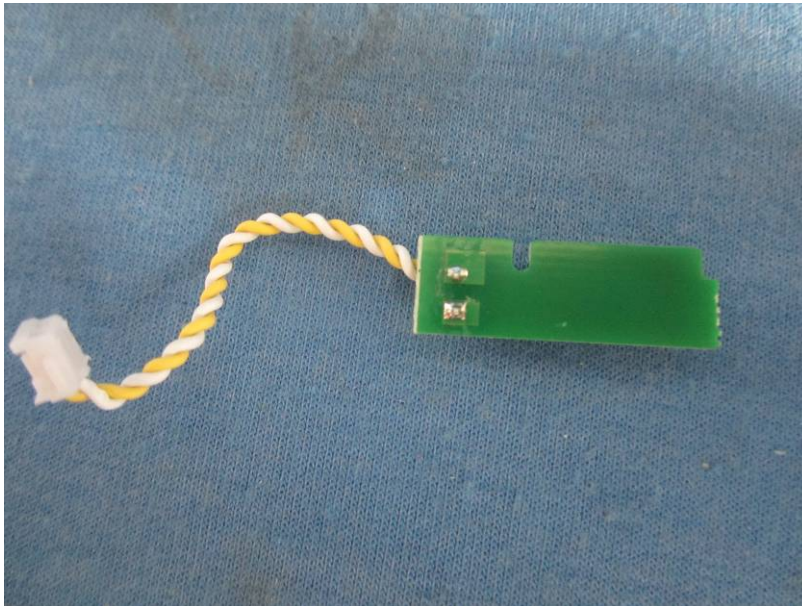
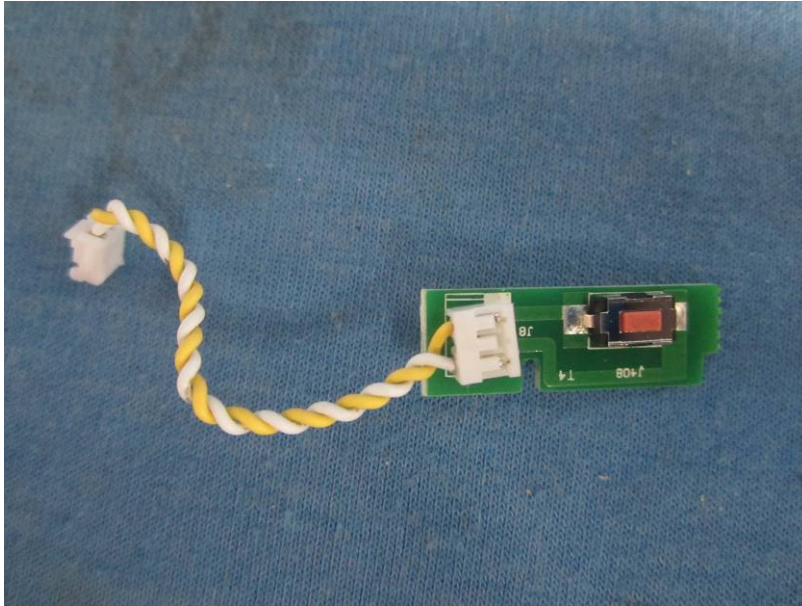


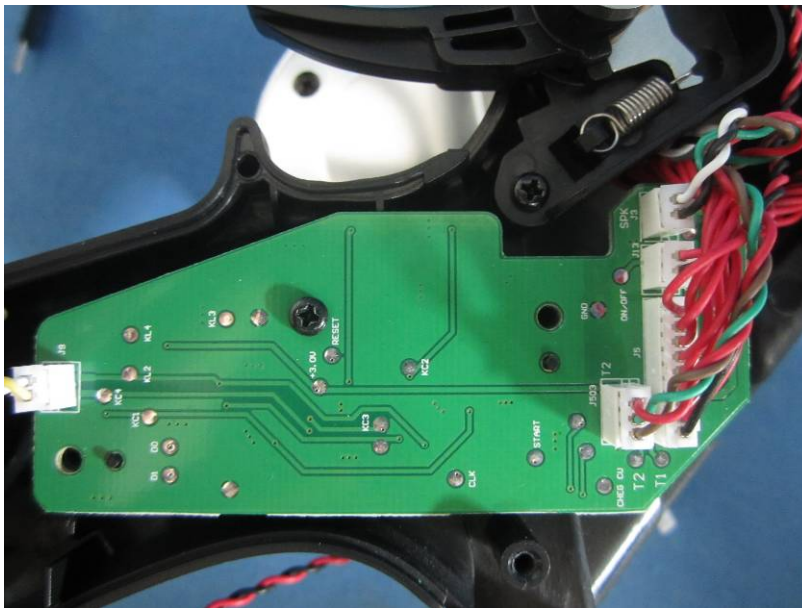
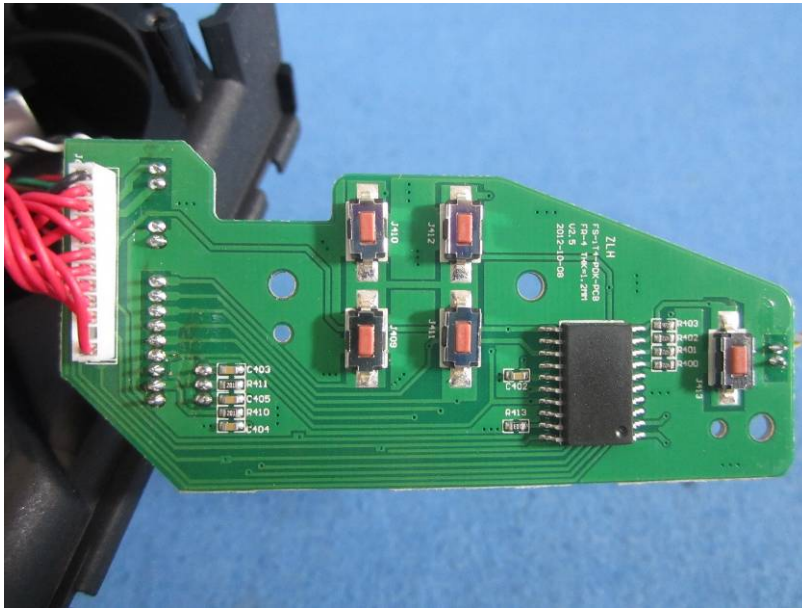


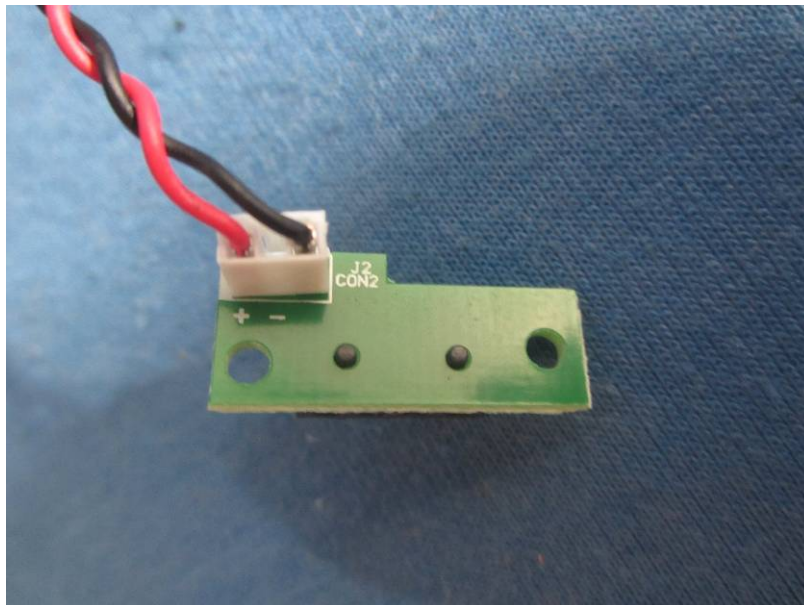
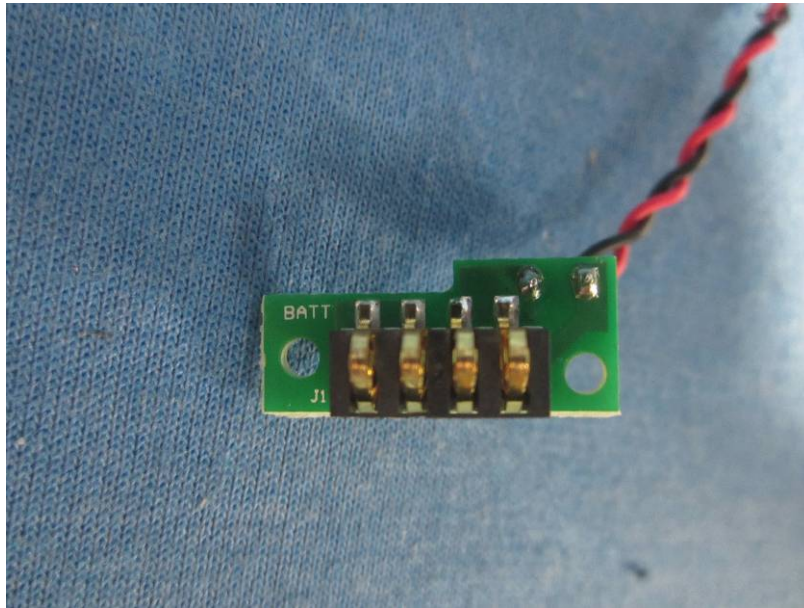


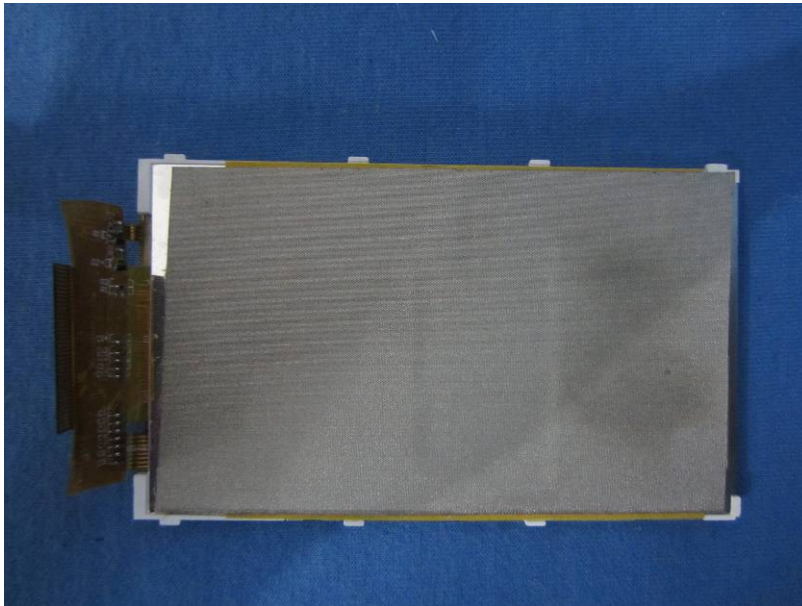


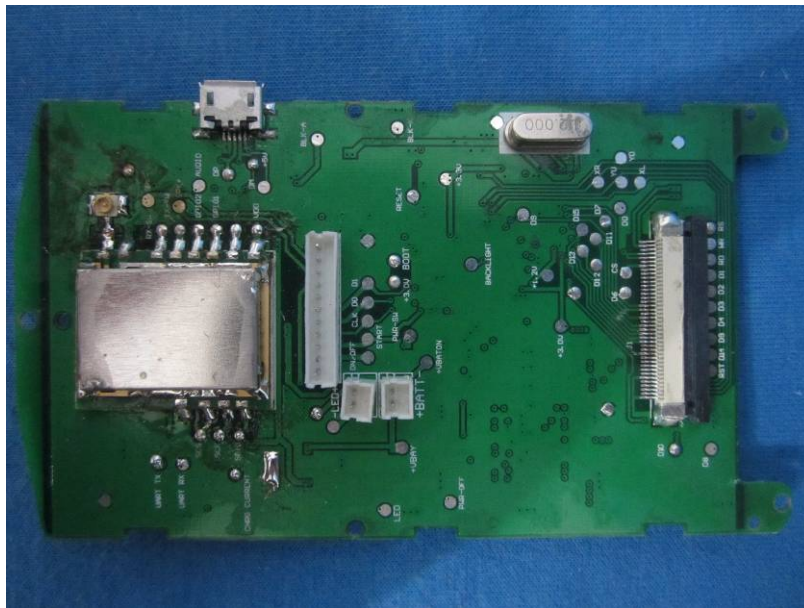
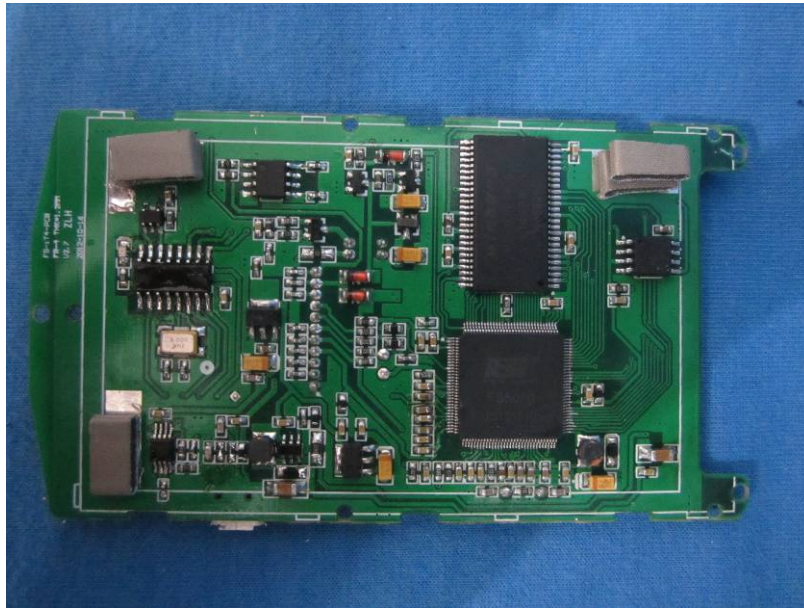


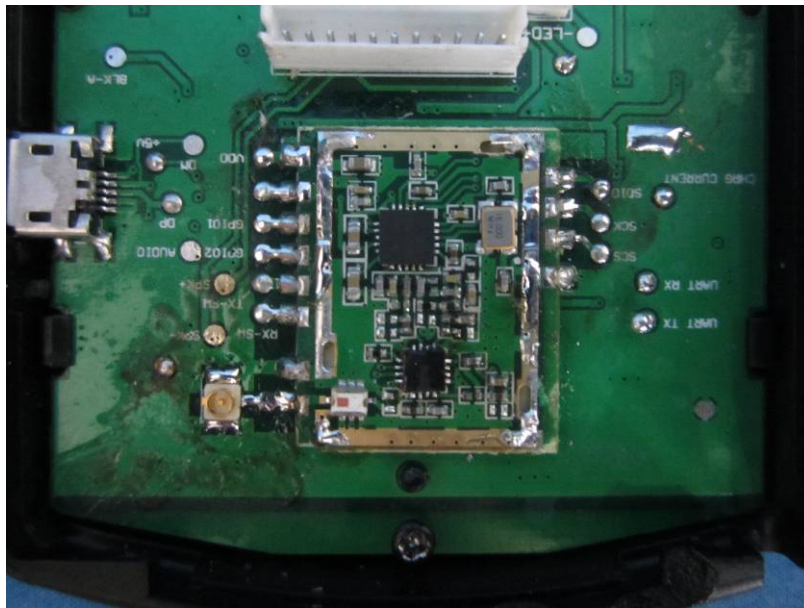


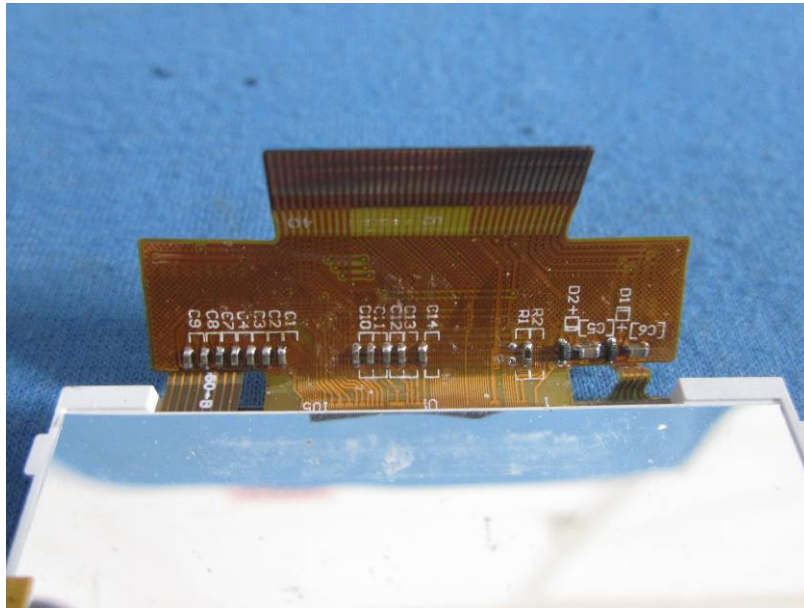


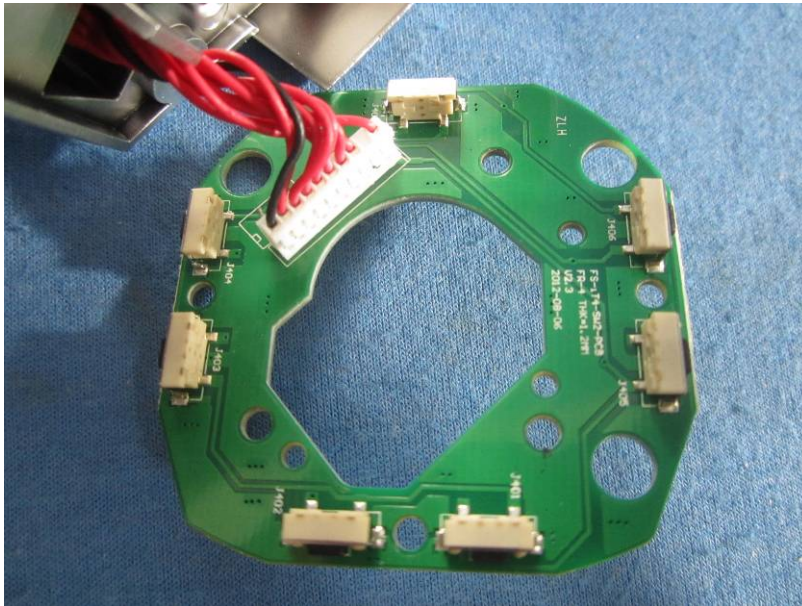
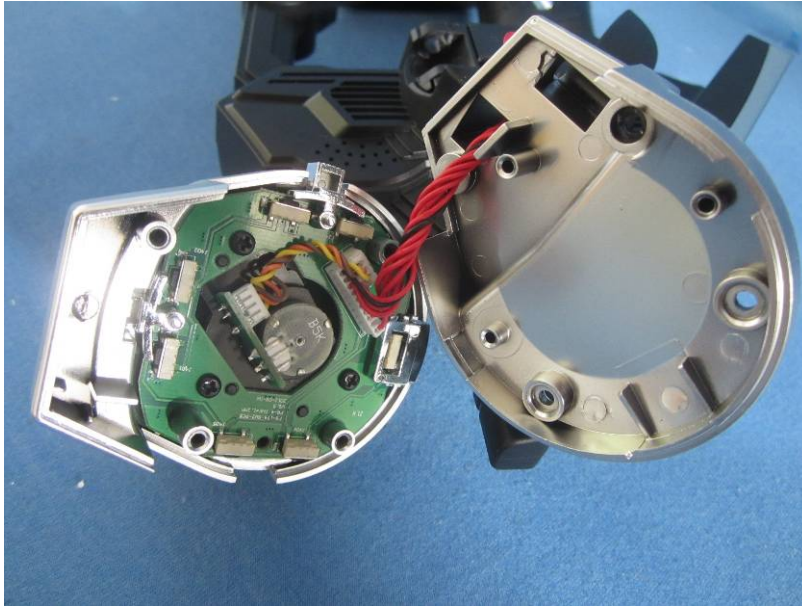


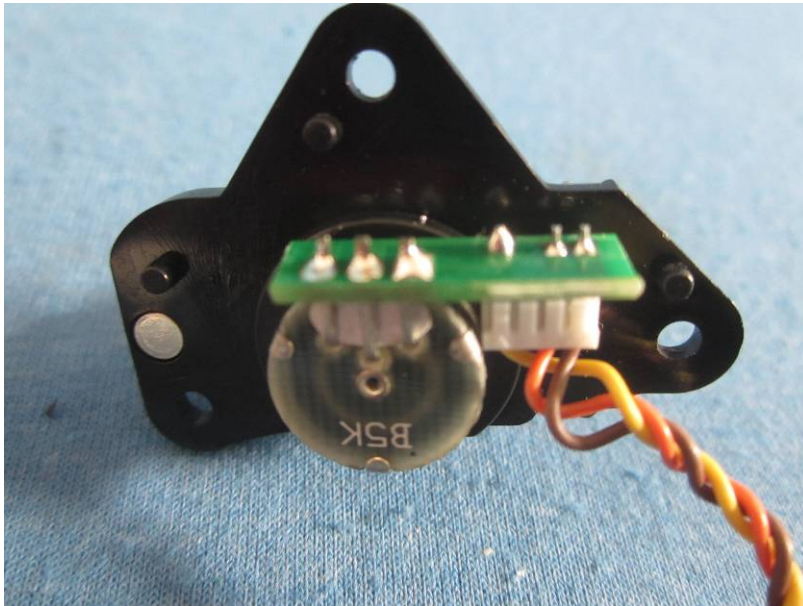
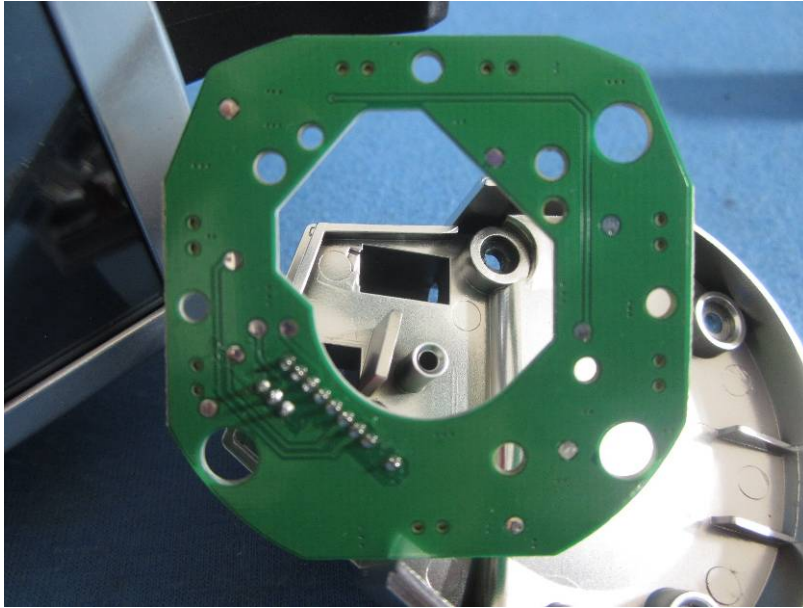












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