



FCC REPORT

Applicant: ROA HOBBY (HK)LIMITED

Address of Applicant: No.2,Xinhe Road,Xincheng Industrial Park,Renhe Town,
Baiyun, Guangzhou, China

Equipment Under Test (EUT)

Product Name: Alien X6

Model No.: SYN130

FCC ID: 2ADFDSYN130

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.249:2013

Date of sample receipt: November 20, 2014

Date of Test: November 20-29, 2014

Date of report issued: December 04, 2014

Test Result : PASS *

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

Authorized Signature:

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	December 04, 2014	Original

Prepared By:

Edward Pan

Date:

December 04, 2014

Project Engineer

Check By:

Hank Yan

Date:

December 04, 2014

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.

5 General Information

5.1 Client Information

Applicant:	ROA HOBBY (HK)LIMITED
Address of Applicant:	No.2,Xinhe Road,Xincheng Industrial Park,Renhe Town, Baiyun, Guangzhou, China
Manufacturer/Factory:	GUANGZHOU LEIKE LIMITED
Address of Manufacturer/Factory:	NO.2 XINHE ROAD XICHENG INDUSTRIAL PARK RENHE TOWN BAIYUN DISTRICT GUANGZHOU CITY GUANGDONG PROVINCE CHINA

5.2 General Description of EUT

Product Name:	Alien X6
Model No.:	SYN130
Operation Frequency:	2402.0MHz~2475.0MHz
Modulation type:	GFSK
Antenna Type:	Integral
Antenna gain:	0dBi
Power supply:	DC 6.0V (4*1.5V AA Size Battery)

Frequency List:							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2402.00	2	2411.00	3	2433.00	4	2460.00
5	2465.00	6	2475.00				

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	2402MHz
The middle channel	2433MHz
The Highest channel	2475MHz

5.3 Test mode

Transmitting mode	Keep the EUT in continuously 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)	91.59	94.12	91.64

Final Test Mode:

The EUT was tested in all axis, and found the Y axis is the worst case.

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

5.4 Description of Support Units

N/A

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, June 28, 2013.

• Industry Canada (IC) —Registration No.: 9079A-2

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-2, June 26, 2013.

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

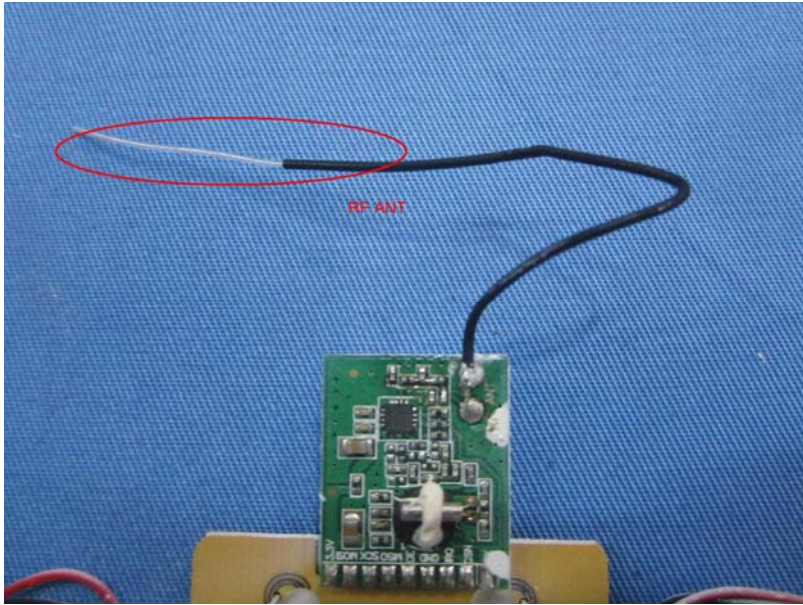
Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	Mar. 28 2014	Mar. 27 2015
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	Spectrum Analyzer	Agilent	E4440A	GTS533	July 01 2014	June 30 2015
4	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Jul. 01 2014	Jul. 01 2015
5	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Feb. 23 2014	Feb. 22 2015
6	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	June 27 2014	June 27 2015
7	Horn Antenna	ETS-LINDGREN	3160	GTS217	Mar. 28 2014	Mar. 27 2015
8	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
9	Coaxial Cable	GTS	N/A	GTS213	Mar. 29 2014	Mar. 28 2015
10	Coaxial Cable	GTS	N/A	GTS211	Mar. 29 2014	Mar. 28 2015
11	Coaxial cable	GTS	N/A	GTS210	Mar. 29 2014	Mar. 28 2015
12	Coaxial Cable	GTS	N/A	GTS212	Mar. 29 2014	Mar. 28 2015
13	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Jul. 01 2014	Jul. 01 2015
14	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	Jul. 01 2014	Jul. 01 2015
15	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June 27 2014	June 27 2015
16	Band filter	Amindeon	82346	GTS219	Mar. 29 2014	Mar. 28 2015

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. 07 2013	Sep. 06 2015
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	Jul. 01 2014	Jul. 01 2015
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS224	Jul. 01 2014	Jul. 01 2015
4	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	Jul. 01 2014	Jul. 01 2015
5	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS226	Jul. 01 2014	Jul. 01 2015
6	Coaxial Cable	GTS	N/A	GTS227	Jul. 01 2014	Jul. 01 2015
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A

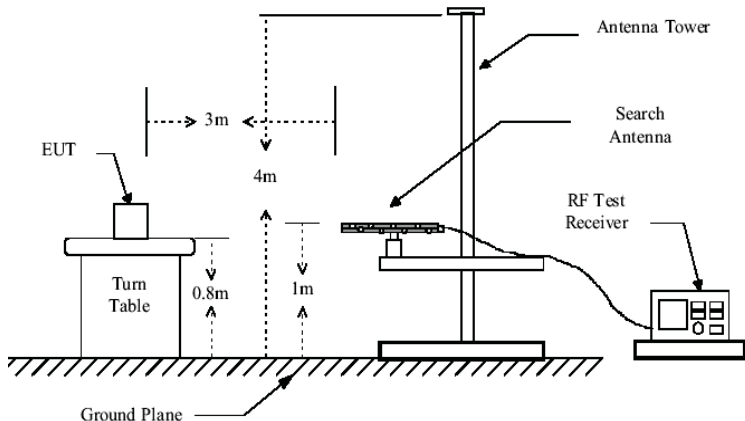
General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
1	Barometer	ChangChun	DYM3	GTS257	July 08 2014	July 08 2015

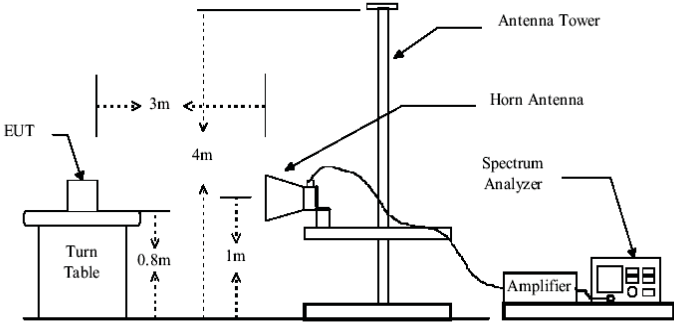
7 Test results and Measurement Data

7.1 Antenna requirement:

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: <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>	
E.U.T Antenna: <p><i>The antenna is Integral Antenna, the best case gain of the antenna is 0dBi</i></p>	
	

7.2 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	120KH z	300KH z	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		Peak	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
	For fundamental frequency test, the RBW and VBW were set to 3MHz and 10MHz, and peak detector for peak value, AV detector for AV 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:	Below 1GHz				
					
	Above 1GHz				

	 <p>The diagram illustrates the test setup. An EUT (Equipment Under Test) is placed on a Turn Table at a height of 0.8m. The Turn Table is 3m away from the Antenna Tower. The Antenna Tower has a Horn Antenna at a height of 4m. A Spectrum Analyzer is connected to the Antenna Tower via an Amplifier. The Spectrum Analyzer is also connected to the Antenna Tower. The distance between the Turn Table and the Antenna Tower is 3m. The height of the Antenna Tower is 4m. The height of the Turn Table is 0.8m. The height of the Antenna is 1m.</p>
Test Procedure:	<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.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement data:

7.2.1 Field Strength of The Fundamental Signal

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2402.00	90.24	27.58	5.39	34.01	89.20	114.00	-24.80	Vertical
2402.00	89.69	27.58	5.39	34.01	88.65	114.00	-25.35	Horizontal
2433.00	92.72	27.50	5.43	33.97	91.68	114.00	-22.32	Vertical
2433.00	91.39	27.50	5.43	33.97	90.35	114.00	-23.65	Horizontal
2475.00	95.05	27.52	5.47	33.92	94.12	114.00	-19.88	Vertical
2475.00	93.36	27.52	5.47	33.92	92.43	114.00	-21.57	Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2402.00	80.85	27.58	5.39	34.01	79.81	94.00	-14.19	Vertical
2402.00	79.13	27.58	5.39	34.01	78.09	94.00	-15.91	Horizontal
2433.00	82.73	27.50	5.43	33.97	81.69	94.00	-12.31	Vertical
2433.00	81.81	27.50	5.43	33.97	80.77	94.00	-13.23	Horizontal
2475.00	85.49	27.52	5.47	33.92	84.56	94.00	-9.44	Vertical
2475.00	83.32	27.52	5.47	33.92	82.39	94.00	-11.61	Horizontal

7.2.2 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
35.75	37.66	14.49	0.62	32.06	20.71	40.00	-19.29	Vertical
60.28	39.19	14.69	0.86	31.94	22.80	40.00	-17.20	Vertical
83.52	43.84	11.87	1.06	31.75	25.02	40.00	-14.98	Vertical
216.02	43.59	13.07	1.93	32.15	26.44	46.00	-19.56	Vertical
499.43	38.34	18.58	3.30	31.56	28.66	46.00	-17.34	Vertical
887.61	36.50	22.96	4.80	31.20	33.06	46.00	-12.94	Vertical
40.28	37.01	15.58	0.66	32.06	21.19	40.00	-18.81	Horizontal
54.84	37.81	15.02	0.82	31.95	21.70	40.00	-18.30	Horizontal
82.65	46.39	11.57	1.05	31.75	27.26	40.00	-12.74	Horizontal
210.79	45.75	12.90	1.90	32.15	28.40	43.50	-15.10	Horizontal
413.27	38.41	17.35	2.92	31.85	26.83	46.00	-19.17	Horizontal
807.43	37.08	22.15	4.49	31.31	32.41	46.00	-13.59	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)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4804.00	33.78	31.78	8.60	32.09	42.07	74.00	-31.93	Vertical
7206.00	30.85	36.15	11.65	32.00	46.65	74.00	-27.35	Vertical
9608.00	29.41	37.95	14.14	31.62	49.88	74.00	-24.12	Vertical
12010.00	*					74.00		Vertical
14412.00	*					74.00		Vertical
4804.00	35.66	31.78	8.60	32.09	43.95	74.00	-30.05	Horizontal
7206.00	32.69	36.15	11.65	32.00	48.49	74.00	-25.51	Horizontal
9608.00	31.03	37.95	14.14	31.62	51.50	74.00	-22.50	Horizontal
12010.00	*					74.00		Horizontal
14412.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4804.00	23.00	31.78	8.60	32.09	31.29	54.00	-22.71	Vertical
7206.00	20.53	36.15	11.65	32.00	36.33	54.00	-17.67	Vertical
9608.00	22.44	37.95	14.14	31.62	42.91	54.00	-11.09	Vertical
12010.00	*					54.00		Vertical
14412.00	*					54.00		Vertical
4804.00	25.19	31.78	8.60	32.09	33.48	54.00	-20.52	Horizontal
7206.00	22.07	36.15	11.65	32.00	37.87	54.00	-16.13	Horizontal
9608.00	21.31	37.95	14.14	31.62	41.78	54.00	-12.22	Horizontal
12010.00	*					54.00		Horizontal
14412.00	*					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)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4866.00	32.33	31.83	8.64	32.11	40.69	74.00	-33.31	Vertical
7299.00	29.72	36.33	11.71	31.91	45.85	74.00	-28.15	Vertical
9732.00	29.42	38.27	14.23	31.56	50.36	74.00	-23.64	Vertical
12165.00	*					74.00		Vertical
14598.00	*					74.00		Vertical
4866.00	35.36	31.83	8.64	32.11	43.72	74.00	-30.28	Horizontal
7299.00	32.30	36.33	11.71	31.91	48.43	74.00	-25.57	Horizontal
9732.00	31.70	38.27	14.23	31.56	52.64	74.00	-21.36	Horizontal
12165.00	*					74.00		Horizontal
14598.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4866.00	22.34	31.83	8.64	32.11	30.70	54.00	-23.30	Vertical
7299.00	25.75	36.33	11.71	31.91	41.88	54.00	-12.12	Vertical
9732.00	23.45	38.27	14.23	31.56	44.39	54.00	-9.61	Vertical
12165.00	*					54.00		Vertical
14598.00	*					54.00		Vertical
4866.00	25.38	31.83	8.64	32.11	33.74	54.00	-20.26	Horizontal
7299.00	22.27	36.33	11.71	31.91	38.40	54.00	-15.60	Horizontal
9732.00	21.76	38.27	14.23	31.56	42.70	54.00	-11.30	Horizontal
12165.00	*					54.00		Horizontal
14598.00	*					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)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4950.00	33.14	31.91	8.71	32.16	41.60	74.00	-32.40	Vertical
7425.00	30.67	36.56	11.79	31.80	47.22	74.00	-26.78	Vertical
9900.00	29.87	38.81	14.35	31.85	51.18	74.00	-22.82	Vertical
12375.00	*					74.00		Vertical
14850.00	*					74.00		Vertical
4950.00	34.02	31.91	8.71	32.16	42.48	74.00	-31.52	Horizontal
7425.00	31.50	36.56	11.79	31.80	48.05	74.00	-25.95	Horizontal
9900.00	30.33	38.81	14.35	31.85	51.64	74.00	-22.36	Horizontal
12375.00	*					74.00		Horizontal
14850.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4950.00	23.55	31.91	8.71	32.16	32.01	54.00	-21.99	Vertical
7425.00	20.77	36.56	11.79	31.80	37.32	54.00	-16.68	Vertical
9900.00	19.82	38.81	14.35	31.85	41.13	54.00	-12.87	Vertical
12375.00	*					54.00		Vertical
14850.00	*					54.00		Vertical
4950.00	24.57	31.91	8.71	32.16	33.03	54.00	-20.97	Horizontal
7425.00	21.44	36.56	11.79	31.80	37.99	54.00	-16.01	Horizontal
9900.00	20.23	38.81	14.35	31.85	41.54	54.00	-12.46	Horizontal
12375.00	*					54.00		Horizontal
14850.00	*					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.

7.2.3 Bandedge emissions

All of the restriction bands were tested, and only the data of worst case was exhibited.

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
2390.00	40.87	27.59	5.38	30.18	43.66	74.00	-30.34	Horizontal
2400.00	57.38	27.58	5.39	30.18	60.17	74.00	-13.83	Horizontal
2390.00	41.23	27.59	5.38	30.18	44.02	74.00	-29.98	Vertical
2400.00	59.20	27.58	5.39	30.18	61.99	74.00	-12.01	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
2390.00	31.88	27.59	5.38	30.18	34.67	54.00	-19.33	Horizontal
2400.00	43.00	27.58	5.39	30.18	45.79	54.00	-8.22	Horizontal
2390.00	31.68	27.59	5.38	30.18	34.47	54.00	-19.53	Vertical
2400.00	44.45	27.58	5.39	30.18	47.24	54.00	-6.76	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	42.74	27.53	5.47	29.93	45.81	74.00	-28.19	Horizontal
2500.00	42.29	27.55	5.49	29.93	45.40	74.00	-28.60	Horizontal
2483.50	43.25	27.53	5.47	29.93	46.32	74.00	-27.68	Vertical
2500.00	43.10	27.55	5.49	29.93	46.21	74.00	-27.79	Vertical

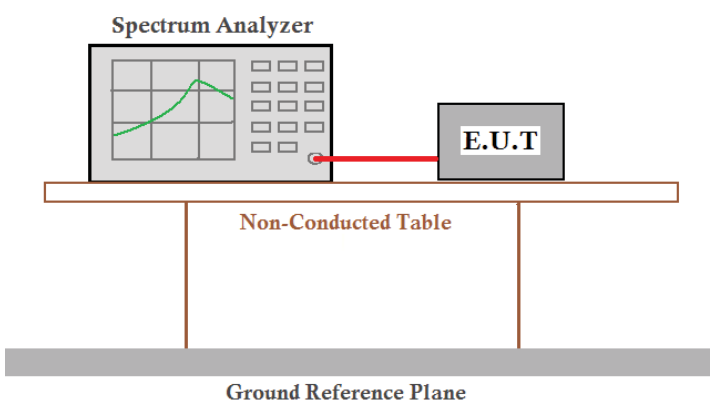
Average value:

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	34.68	27.53	5.47	29.93	37.75	54.00	-16.25	Horizontal
2500.00	32.97	27.55	5.49	29.93	36.08	54.00	-17.92	Horizontal
2483.50	35.73	27.53	5.47	29.93	38.80	54.00	-15.20	Vertical
2500.00	32.72	27.55	5.49	29.93	35.83	54.00	-18.17	Vertical

Remark:

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

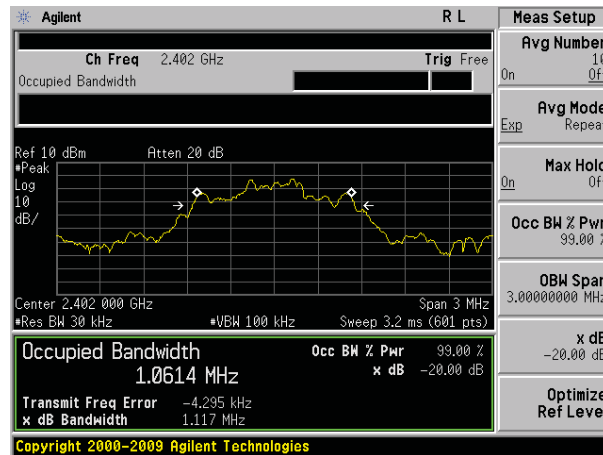
7.3 20dB Occupy Bandwidth

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 the Spectrum Analyzer and the E.U.T are placed on a Non-Conducted Table. The table 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

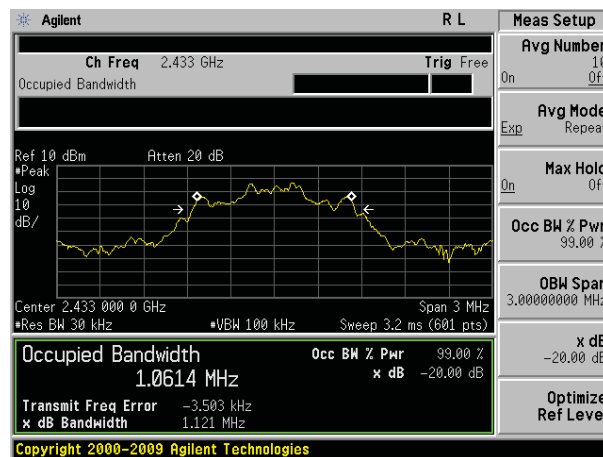
Measurement Data

Test channel	20dB bandwidth(KHz)	Result
Lowest	1117.00	Pass
Middle	1121.00	Pass
Highest	1119.00	Pass

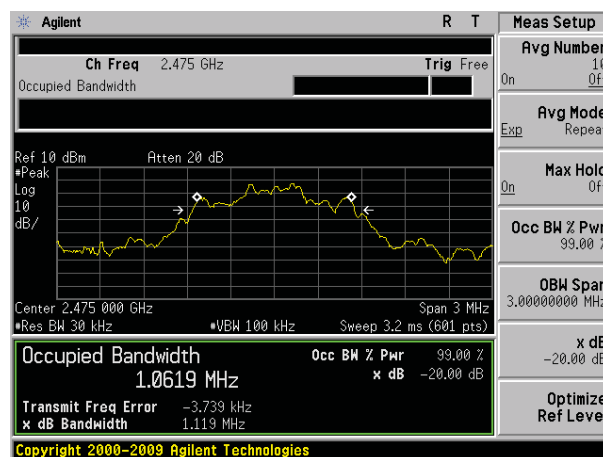
Test plot as follows:



Lowest channel



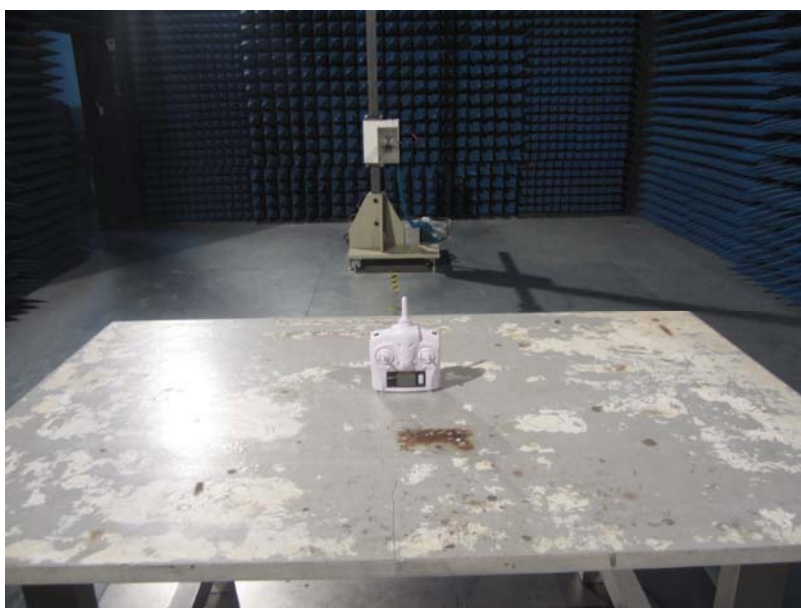
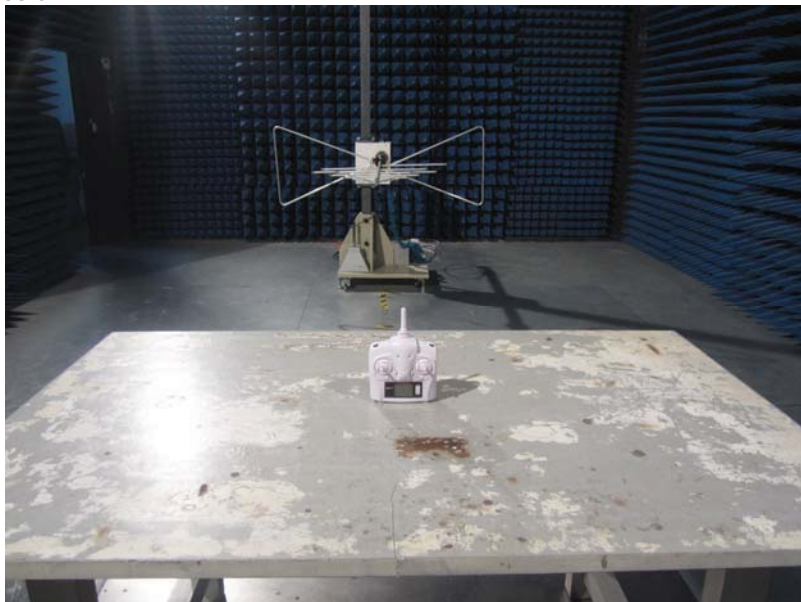
Middle channel



Highest channel

8 Test Setup Photo

Radiated Emission

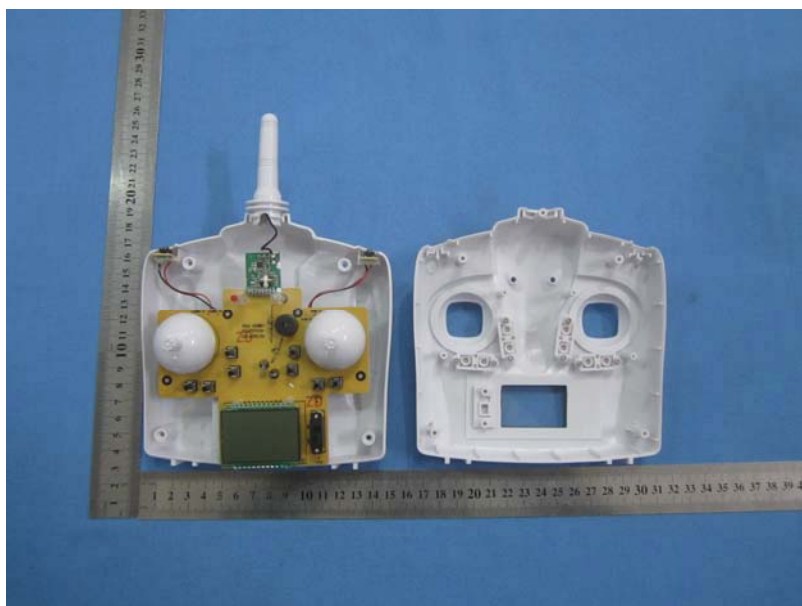


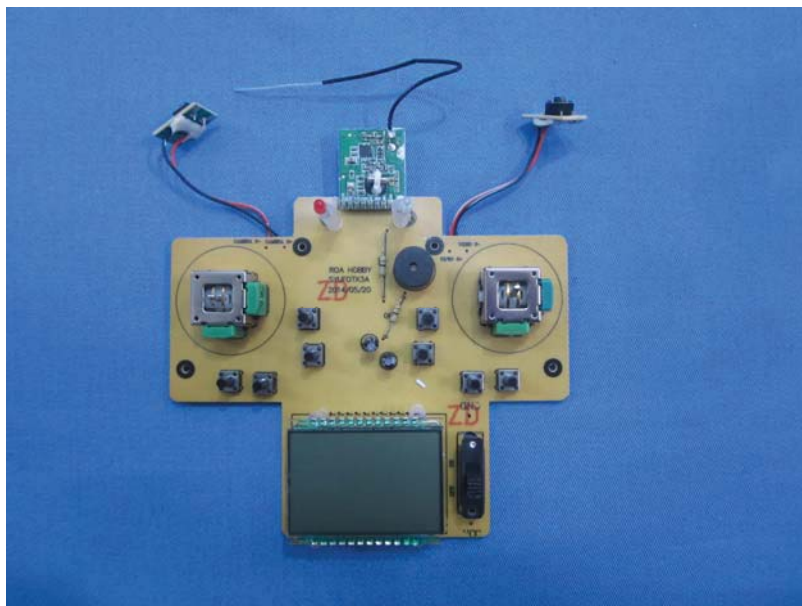
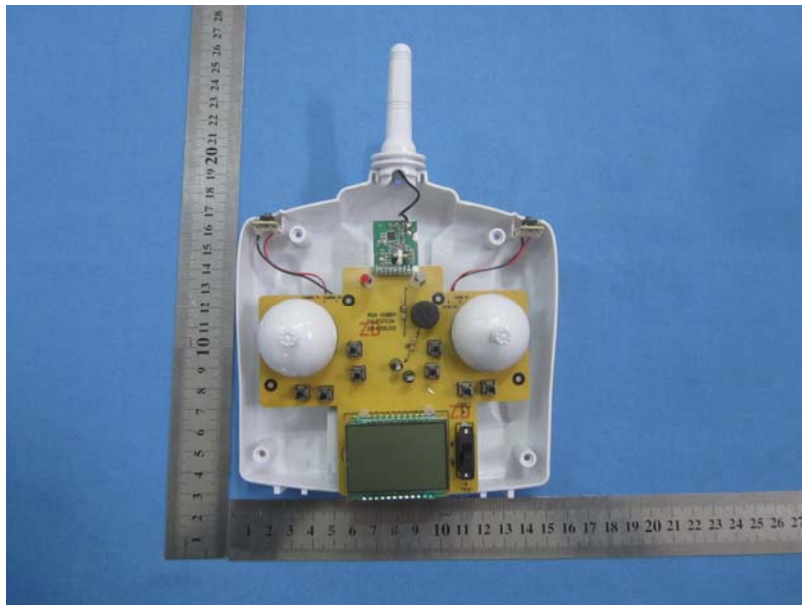
9 EUT Constructional Details

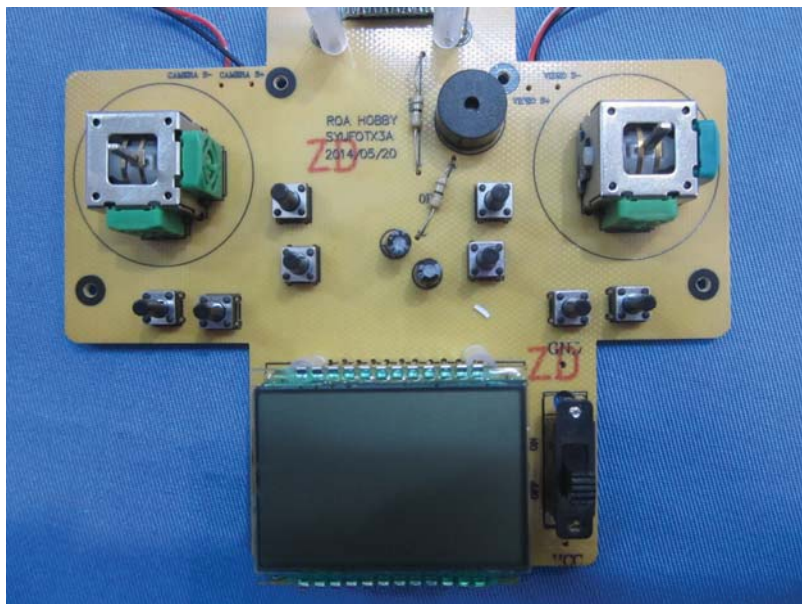
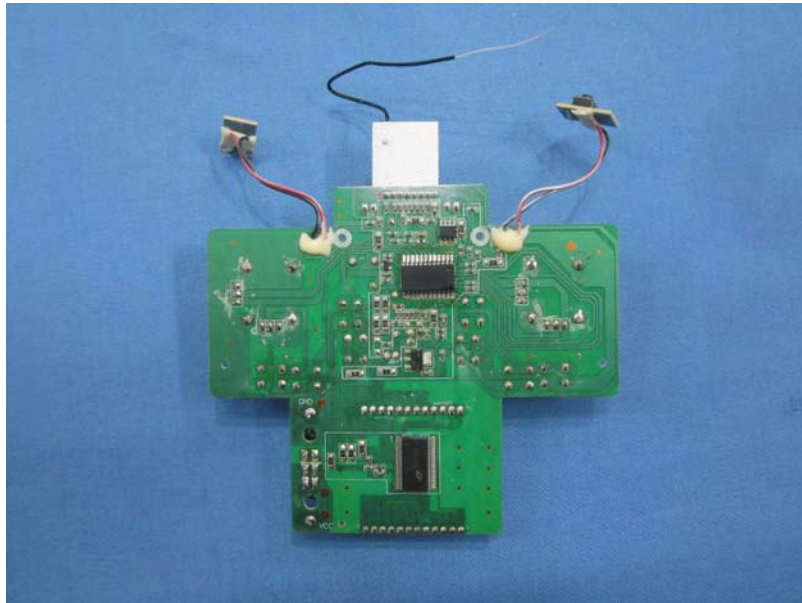


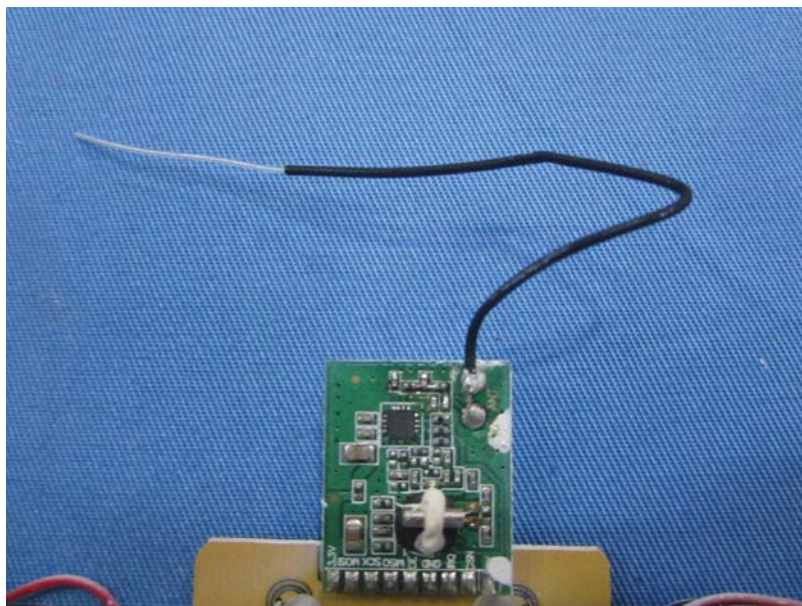
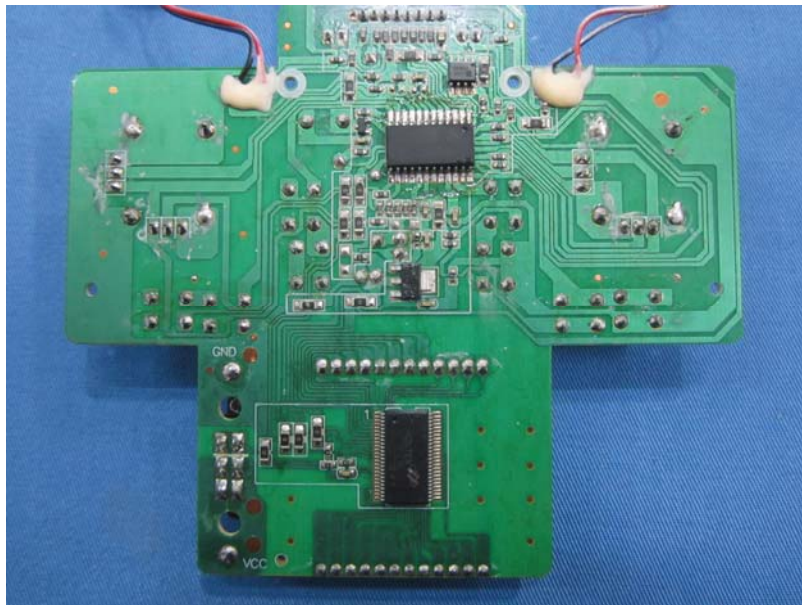


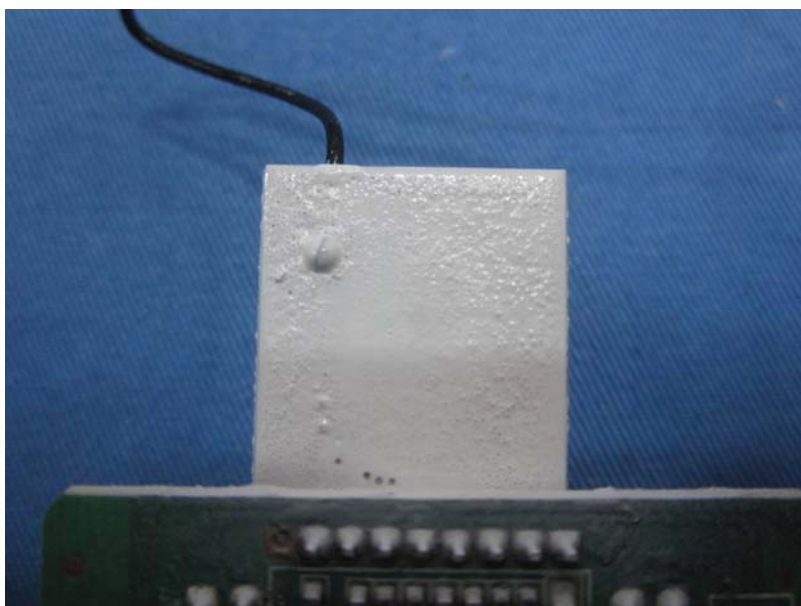
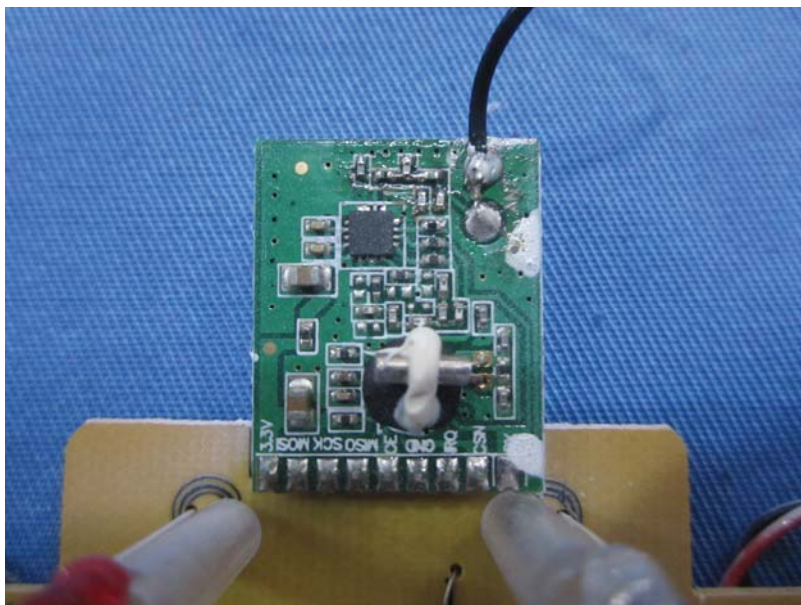












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