Report No.: GTSE13100166501

FCC REPORT

Applicant:	Hearth & Home Technologies
Address of Applicant:	800 W. Jefferson Street Lake City, MN 55041 United States

Equipment Under Test (EUT)

Product Name:	Fireplace system controller (Remote)
Model No.:	2326-110
FCC ID:	ULE2326-110
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.249:2012
Date of sample receipt:	October 29, 2013
Date of Test:	October 29-November 29, 2013
Date of report issued:	November 29, 2013
Test Result :	PASS *

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

Authorized Signature:

Robinson Lo
Laboratory Manager

2 Version

Version No.	Date	Description
00	*November 29, 2013*	*Original*

Prepared By:  ***Date:*** *November 29, 2013*

Project Engineer

Check By:  ***Date:*** *November 29, 2013*

Reviewer

3 Contents

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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	N/A
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:	Hearth & Home Technologies
Address of Applicant:	800 W. Jefferson Street Lake City, MN 55041 United States
Manufacturer:	COMPUTIME LTD.
Address of Manufacturer:	9/F, Tower One, Lippo Centre, 89 Queensway, Hong Kong, China
Factory:	Computime Electronics (shenzhen) Company Limited
Address of Factory:	YueKenguanyu Industrial Park, Kangqiao Road 88#, Danzhutou Community, Nanwan Street Office Longgang District, Shenzhen, China

5.2 General Description of EUT

Product Name:	Fireplace system controller (Remote)
Model No.:	2326-110
Operation Frequency:	912.40MHz ~ 918.00MHz
Channel numbers:	29
Channel separation:	200KHz
Modulation type:	FSK
Antenna Type:	PCB antenna
Antenna gain:	0dBi
Power supply:	DC 6.0V(4*1.5V(”AAA” Size battery))

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	912.40	9	914.00	17	915.60	25	917.20
2	912.60	10	914.20	18	915.80	26	917.40
3	912.80	11	914.40	19	916.00	27	917.60
4	913.00	12	914.60	20	916.20	28	917.80
5	913.20	13	914.80	21	916.40	29	918.00
6	913.40	14	915.00	22	916.60		
7	913.60	15	915.20	23	916.80		
8	913.80	16	915.40	24	917.00		

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	912.40MHz
The middle channel	915.20MHz
The Highest channel	918.00MHz

5.3 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode with FSK modulation.
Remark: During the test, the new battery was used.	

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)	95.09	99.97	92.32

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

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 fuly 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. 29 2013	Mar. 28 2014
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	Dec. 6, 2012	Dec. 5 2013
4	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Jul. 02 2013	Jul. 01 2014
5	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Feb. 24 2013	Feb. 23 2014
6	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	June 28 2013	June 27 2014
7	Horn Antenna	ETS-LINDGREN	3160	GTS217	Mar. 29 2013	Mar. 28 2014
8	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
9	Coaxial Cable	GTS	N/A	GTS213	Mar. 30 2013	Mar. 29 2014
10	Coaxial Cable	GTS	N/A	GTS211	Mar. 30 2013	Mar. 29 2014
11	Coaxial cable	GTS	N/A	GTS210	Mar. 30 2013	Mar. 29 2014
12	Coaxial Cable	GTS	N/A	GTS212	Mar. 30 2013	Mar. 29 2014
13	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Jul. 02 2013	Jul. 01 2014
14	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	Jul. 02 2013	Jul. 01 2014
15	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June 28 2013	June 27 2014
16	Band filter	Amindeon	82346	GTS219	Mar. 30 2013	Mar. 29 2014

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	Jul. 27 2013	Jul. 27 2014

7 Test results and Measurement Data

7.1 Antenna requirement:

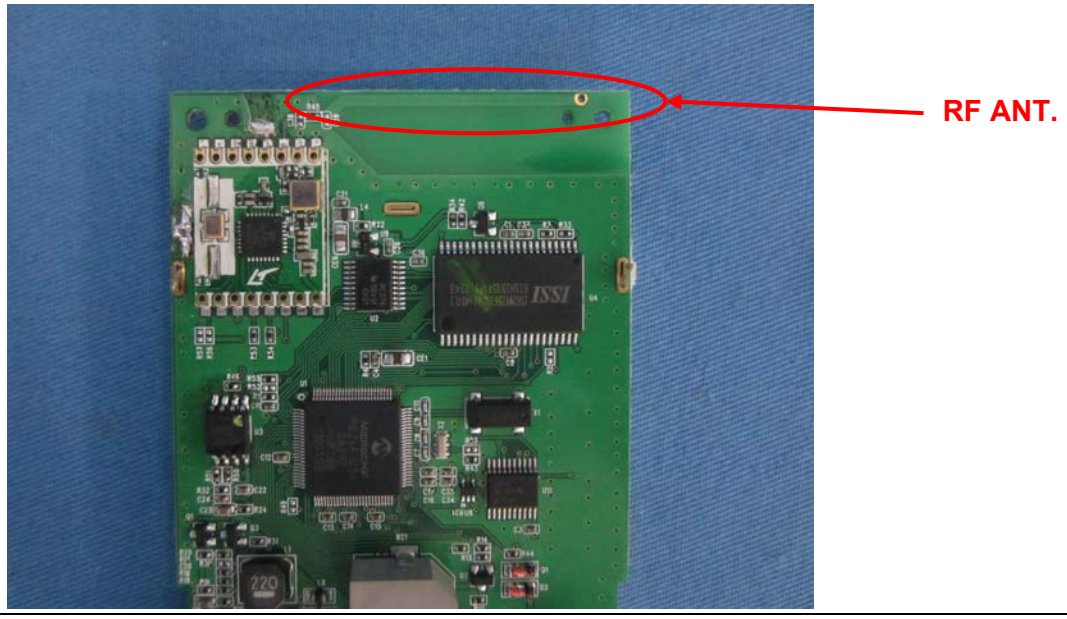
Standard requirement:	FCC Part15 C Section 15.203

15.203 requirement:

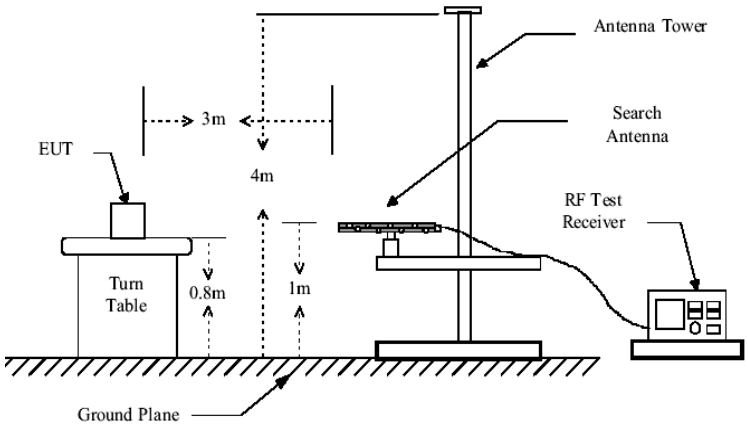
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

E.U.T Antenna:

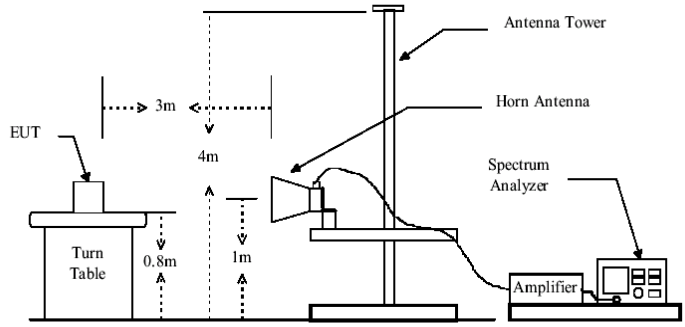
The antenna is Internal PCB antenna, the best case gain of the antenna is 0dBi



7.2 Radiated Emission Method

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.209</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.4:2003</td></tr>
<tr><td>Test Frequency Range:</td><td>30MHz to 10GHz</td></tr>
<tr><td>Test site:</td><td>Measurement Distance: 3m</td></tr>
<tr><td>Receiver setup:</td><td>
<table>
<tr><th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Remark</th></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr>
</table>
For the field strength test, the RBW and VBW were set to 300kHz and 1MHz. PK detector for PK value， AV detector for AV value.
</td></tr>
<tr><td>Limit:
(Field strength of the fundamental signal)</td><td>
<table>
<tr><th>Frequency</th><th>Limit (dBuV/m @3m)</th><th>Remark</th></tr>
<tr><td rowspan="2">2400MHz-2483.5MHz</td><td>94.00</td><td>Average Value</td></tr>
<tr><td>114.00</td><td>Peak Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:
(Spurious Emissions)</td><td>
<table>
<tr><th>Frequency</th><th>Limit (dBuV/m @3m)</th><th>Remark</th></tr>
<tr><td>30MHz-88MHz</td><td>40.00</td><td>Quasi-peak Value</td></tr>
<tr><td>88MHz-216MHz</td><td>43.50</td><td>Quasi-peak Value</td></tr>
<tr><td>216MHz-960MHz</td><td>46.00</td><td>Quasi-peak Value</td></tr>
<tr><td>960MHz-1GHz</td><td>54.00</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>54.00</td><td>Average Value</td></tr>
<tr><td>74.00</td><td>Peak Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:
(band edge)</td><td>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.</td></tr>
<tr><td>Test setup:</td><td>Below 1GHz
 

Above 1GHz</td></tr>
</table>

	
Test Procedure:	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)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
912.40	102.15	23.18	4.90	31.19	99.04	114.00	-14.96	Horizontal
912.40	88.40	23.18	4.90	31.19	85.29	114.00	-28.71	Vertical
915.20	103.07	23.18	4.91	31.19	99.97	114.00	-14.03	Horizontal
915.20	88.06	23.18	4.91	31.19	84.96	114.00	-29.04	Vertical
918.00	102.97	23.21	4.91	31.19	99.90	114.00	-14.10	Horizontal
918.00	89.26	23.21	4.91	31.19	86.19	114.00	-27.81	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
912.40	92.57	23.18	4.90	31.19	89.46	94.00	-4.54	Horizontal
912.40	78.29	23.18	4.90	31.19	75.18	94.00	-18.82	Vertical
915.20	93.70	23.18	4.91	31.19	90.60	94.00	-3.40	Horizontal
915.20	78.27	23.18	4.91	31.19	75.17	94.00	-18.83	Vertical
918.00	93.49	23.21	4.91	31.19	90.42	94.00	-3.58	Horizontal
918.00	79.36	23.21	4.91	31.19	76.29	94.00	-17.71	Vertical

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
47.33	40.06	15.41	0.74	31.98	24.23	40.00	-15.77	Vertical
96.10	39.42	14.90	1.16	31.75	23.73	43.50	-19.77	Vertical
167.82	42.23	10.90	1.67	32.04	22.76	43.50	-20.74	Vertical
815.97	43.48	22.24	4.52	31.29	38.95	46.00	-7.05	Vertical
43.66	38.32	15.56	0.70	32.02	22.56	40.00	-17.44	Horizontal
98.83	37.43	15.10	1.18	31.76	21.95	43.50	-21.55	Horizontal
289.00	38.68	14.84	2.31	32.18	23.65	46.00	-22.35	Horizontal
359.19	40.01	16.40	2.67	32.00	27.08	46.00	-18.92	Horizontal

■ Above 1GHz

Test channel:	Lowest channel

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
1824.80	60.33	25.37	4.87	34.14	56.43	74.00	-17.57	Vertical
2737.20	40.53	28.23	5.70	33.63	40.83	74.00	-33.17	Vertical
3649.60	38.53	29.18	7.25	32.58	42.38	74.00	-31.62	Vertical
4562.00	33.13	31.44	8.39	31.97	40.99	74.00	-33.01	Vertical
5474.40	31.27	31.95	9.47	32.41	40.28	74.00	-33.72	Vertical
6386.80	29.70	33.46	10.75	32.10	41.81	74.00	-32.19	Vertical
7299.20	27.97	36.33	11.71	31.91	44.10	74.00	-29.90	Vertical
8211.60	27.96	36.84	12.43	31.66	45.57	74.00	-28.43	Vertical
9124.00	28.08	37.28	13.76	32.17	46.95	74.00	-27.05	Vertical
1824.80	57.30	25.37	4.87	34.14	53.40	74.00	-20.60	Horizontal
2737.20	43.27	28.23	5.70	33.63	43.57	74.00	-30.43	Horizontal
3649.60	40.41	29.18	7.25	32.58	44.26	74.00	-29.74	Horizontal
4562.00	33.87	31.44	8.39	31.97	41.73	74.00	-32.27	Horizontal
5474.40	33.80	31.95	9.47	32.41	42.81	74.00	-31.19	Horizontal
6386.80	29.25	33.46	10.75	32.10	41.36	74.00	-32.64	Horizontal
7299.20	28.35	36.33	11.71	31.91	44.48	74.00	-29.52	Horizontal
8211.60	28.27	36.84	12.43	31.66	45.88	74.00	-28.12	Horizontal
9124.00	28.45	37.28	13.76	32.17	47.32	74.00	-26.68	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
1824.80	51.16	25.37	4.87	34.14	47.26	54.00	-6.74	Vertical
2737.20	31.72	28.23	5.70	33.63	32.02	54.00	-21.98	Vertical
3649.60	29.54	29.18	7.25	32.58	33.39	54.00	-20.61	Vertical
4562.00	24.05	31.44	8.39	31.97	31.91	54.00	-22.09	Vertical
5474.40	22.37	31.95	9.47	32.41	31.38	54.00	-22.62	Vertical
6386.80	21.16	33.46	10.75	32.10	33.27	54.00	-20.73	Vertical
7299.20	19.25	36.33	11.71	31.91	35.38	54.00	-18.62	Vertical
8211.60	18.70	36.84	12.43	31.66	36.31	54.00	-17.69	Vertical
9124.00	19.54	37.28	13.76	32.17	38.41	54.00	-15.59	Vertical
1824.80	47.78	25.37	4.87	34.14	43.88	54.00	-10.12	Horizontal
2737.20	34.10	28.23	5.70	33.63	34.40	54.00	-19.60	Horizontal
3649.60	31.07	29.18	7.25	32.58	34.92	54.00	-19.08	Horizontal
4562.00	24.88	31.44	8.39	31.97	32.74	54.00	-21.26	Horizontal
5474.40	24.63	31.95	9.47	32.41	33.64	54.00	-20.36	Horizontal
6386.80	20.44	33.46	10.75	32.10	32.55	54.00	-21.45	Horizontal
7299.20	19.36	36.33	11.71	31.91	35.49	54.00	-18.51	Horizontal
8211.60	19.55	36.84	12.43	31.66	37.16	54.00	-16.84	Horizontal
9124.00	19.55	37.28	13.76	32.17	38.42	54.00	-15.58	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.*

Test channel:	Middle channel

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
1830.40	59.88	25.42	4.87	34.17	56.00	74.00	-18.00	Vertical
2745.60	44.09	28.24	5.71	33.61	44.43	74.00	-29.57	Vertical
3660.80	41.73	29.20	7.27	32.56	45.64	74.00	-28.36	Vertical
4576.00	34.30	31.47	8.40	31.97	42.20	74.00	-31.80	Vertical
5491.20	31.94	31.98	9.49	32.42	40.99	74.00	-33.01	Vertical
6406.40	29.77	33.49	10.78	32.11	41.93	74.00	-32.07	Vertical
7321.60	27.82	36.37	11.72	31.89	44.02	74.00	-29.98	Vertical
8236.80	28.55	36.76	12.47	31.73	46.05	74.00	-27.95	Vertical
9152.00	28.92	37.31	13.78	32.13	47.88	74.00	-26.12	Vertical
1830.40	51.04	25.42	4.87	34.17	47.16	74.00	-26.84	Horizontal
2745.60	48.09	28.24	5.71	33.61	48.43	74.00	-25.57	Horizontal
3660.80	41.95	29.19	7.25	32.58	45.81	74.00	-28.19	Horizontal
4576.00	33.30	31.47	8.40	31.97	41.20	74.00	-32.80	Horizontal
5491.20	40.23	31.98	9.49	32.42	49.28	74.00	-24.72	Horizontal
6406.40	33.44	33.49	10.78	32.11	45.60	74.00	-28.40	Horizontal
7321.60	28.47	36.37	11.72	31.89	44.67	74.00	-29.33	Horizontal
8236.80	28.03	36.76	12.47	31.73	45.53	74.00	-28.47	Horizontal
9152.00	28.89	37.31	13.78	32.13	47.85	74.00	-26.15	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
1830.40	50.08	25.42	4.87	34.17	46.20	54.00	-7.80	Vertical
2745.60	34.67	28.24	5.71	33.61	35.01	54.00	-18.99	Vertical
3660.80	32.12	29.20	7.27	32.56	36.03	54.00	-17.97	Vertical
4576.00	24.59	31.47	8.40	31.97	32.49	54.00	-21.51	Vertical
5491.20	22.42	31.98	9.49	32.42	31.47	54.00	-22.53	Vertical
6406.40	20.63	33.49	10.78	32.11	32.79	54.00	-21.21	Vertical
7321.60	18.49	36.37	11.72	31.89	34.69	54.00	-19.31	Vertical
8236.80	18.65	36.76	12.47	31.73	36.15	54.00	-17.85	Vertical
9152.00	19.78	37.31	13.78	32.13	38.74	54.00	-15.26	Vertical
1830.40	40.86	25.42	4.87	34.17	36.98	54.00	-17.02	Horizontal
2745.60	38.29	28.24	5.71	33.61	38.63	54.00	-15.37	Horizontal
3660.80	31.96	29.19	7.25	32.58	35.82	54.00	-18.18	Horizontal
4576.00	23.69	31.47	8.40	31.97	31.59	54.00	-22.41	Horizontal
5491.20	30.43	31.98	9.49	32.42	39.48	54.00	-14.52	Horizontal
6406.40	24.02	33.49	10.78	32.11	36.18	54.00	-17.82	Horizontal
7321.60	18.86	36.37	11.72	31.89	35.06	54.00	-18.94	Horizontal
8236.80	18.70	36.76	12.47	31.73	36.20	54.00	-17.80	Horizontal
9152.00	19.37	37.31	13.78	32.13	38.33	54.00	-15.67	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.*

Test channel:	Highest channel

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
1836.00	58.18	25.42	4.87	34.17	54.30	74.00	-19.70	Vertical
2754.00	46.94	28.26	5.72	33.61	47.31	74.00	-26.69	Vertical
3672.00	38.08	29.21	7.28	32.56	42.01	74.00	-31.99	Vertical
4590.00	33.74	31.49	8.41	31.98	41.66	74.00	-32.34	Vertical
5508.00	30.47	32.01	9.51	32.43	39.56	74.00	-34.44	Vertical
6426.00	30.53	33.53	10.80	32.12	42.74	74.00	-31.26	Vertical
7344.00	27.79	36.41	11.74	31.88	44.06	74.00	-29.94	Vertical
8262.00	28.05	36.69	12.55	31.77	45.52	74.00	-28.48	Vertical
9180.00	28.89	37.34	13.80	32.11	47.92	74.00	-26.08	Vertical
1836.00	49.56	25.45	4.88	34.17	45.72	74.00	-28.28	Horizontal
2754.00	51.47	28.26	5.72	33.61	51.84	74.00	-22.16	Horizontal
3672.00	40.47	29.21	7.28	32.56	44.40	74.00	-29.60	Horizontal
4590.00	34.66	31.49	8.41	31.98	42.58	74.00	-31.42	Horizontal
5508.00	35.28	32.01	9.51	32.43	44.37	74.00	-29.63	Horizontal
6426.00	34.03	33.53	10.80	32.12	46.24	74.00	-27.76	Horizontal
7344.00	28.79	36.41	11.74	31.88	45.06	74.00	-28.94	Horizontal
8262.00	28.66	36.69	12.55	31.77	46.13	74.00	-27.87	Horizontal
9180.00	28.30	37.34	13.80	32.11	47.33	74.00	-26.67	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
1836.00	48.59	25.42	4.87	34.17	44.71	54.00	-9.29	Vertical
2754.00	37.72	28.26	5.72	33.61	38.09	54.00	-15.91	Vertical
3672.00	28.67	29.21	7.28	32.56	32.60	54.00	-21.40	Vertical
4590.00	24.24	31.49	8.41	31.98	32.16	54.00	-21.84	Vertical
5508.00	21.16	32.01	9.51	32.43	30.25	54.00	-23.75	Vertical
6426.00	21.59	33.53	10.80	32.12	33.80	54.00	-20.20	Vertical
7344.00	18.66	36.41	11.74	31.88	34.93	54.00	-19.07	Vertical
8262.00	18.36	36.69	12.55	31.77	35.83	54.00	-18.17	Vertical
9180.00	19.95	37.34	13.80	32.11	38.98	54.00	-15.02	Vertical
1836.00	39.59	25.45	4.88	34.17	35.75	54.00	-18.25	Horizontal
2754.00	41.88	28.26	5.72	33.61	42.25	54.00	-11.75	Horizontal
3672.00	30.69	29.21	7.28	32.56	34.62	54.00	-19.38	Horizontal
4590.00	25.25	31.49	8.41	31.98	33.17	54.00	-20.83	Horizontal
5508.00	25.69	32.01	9.51	32.43	34.78	54.00	-19.22	Horizontal
6426.00	24.81	33.53	10.80	32.12	37.02	54.00	-16.98	Horizontal
7344.00	19.38	36.41	11.74	31.88	35.65	54.00	-18.35	Horizontal
8262.00	19.53	36.69	12.55	31.77	37.00	54.00	-17.00	Horizontal
9180.00	18.99	37.34	13.80	32.11	38.02	54.00	-15.98	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.*

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

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
902.00	37.87	23.12	4.87	31.18	34.68	46.00	-11.32	Horizontal
902.00	38.75	23.12	4.87	31.18	35.56	46.00	-10.44	Vertical

Test channel:	Highest channel

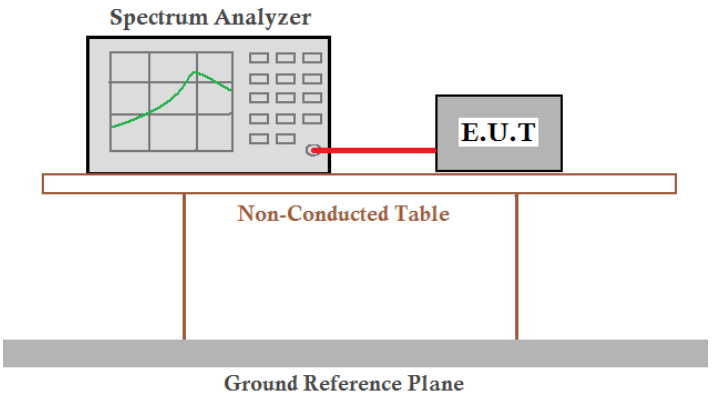
Peak value:

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
928.00	37.99	23.28	4.96	31.20	35.03	46.00	-10.97	Horizontal
960.00	37.34	23.49	5.08	31.22	34.69	46.00	-11.31	Horizontal
928.00	39.23	23.28	4.96	31.20	36.27	46.00	-9.73	Vertical
960.00	37.58	23.49	5.08	31.22	34.93	46.00	-11.07	Vertical

Remark:

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

7.3 20dB Occupy Bandwidth

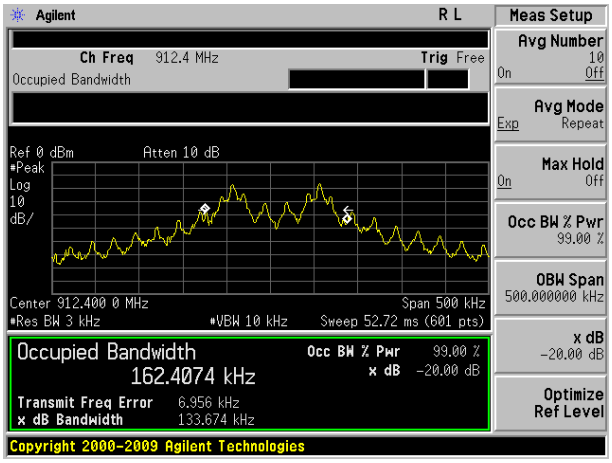
Test Requirement:	FCC Part15 C Section 15.249/15.215
Test Method:	ANSI C63.4:2003
Limit:	Operation Frequency range 902MHz-928MHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement Data

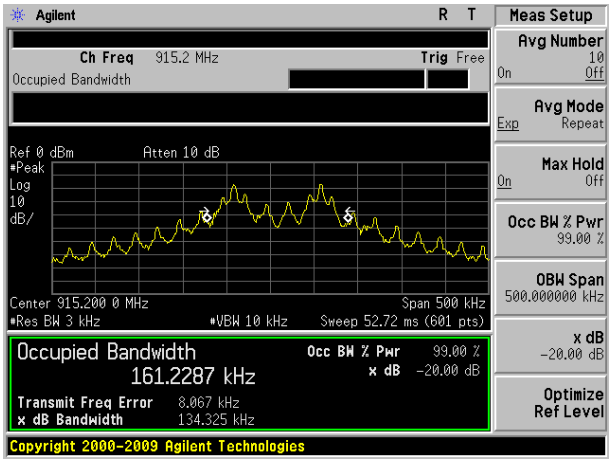
Worst case FSK modulation

Test channel	20dB bandwidth(MHz)	Result
Lowest	0.134	Pass
Middle	0.134	Pass
Highest	0.135	Pass

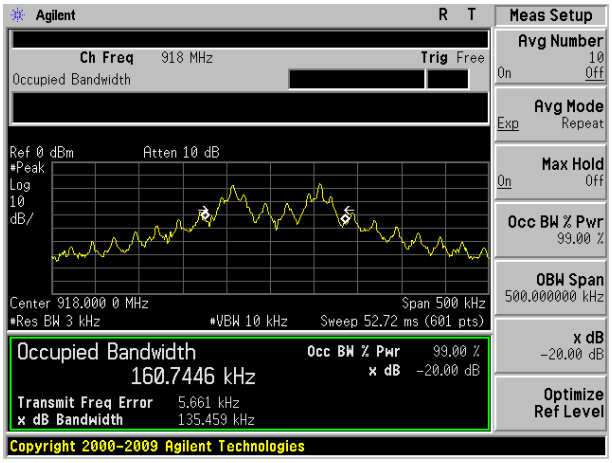
Test plot as follows:



Lowest channel



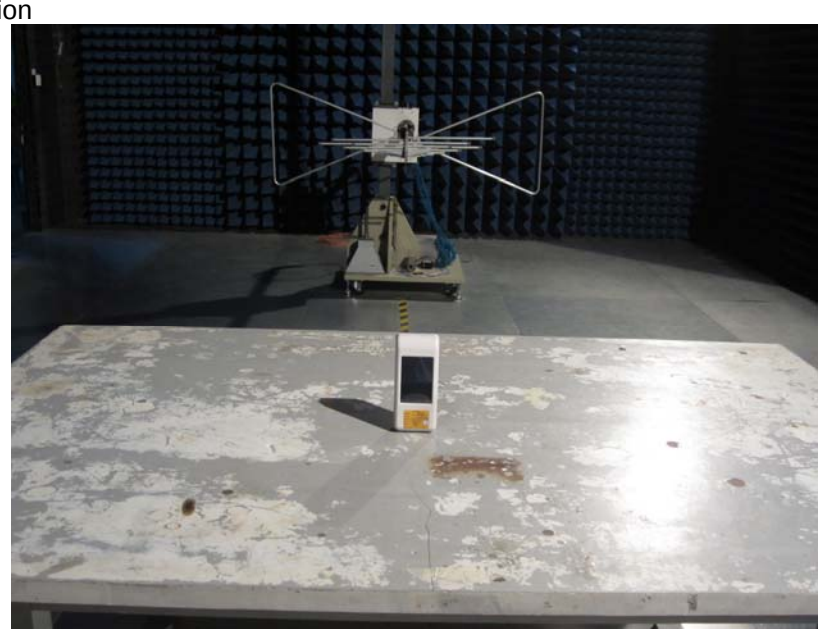
Middle channel

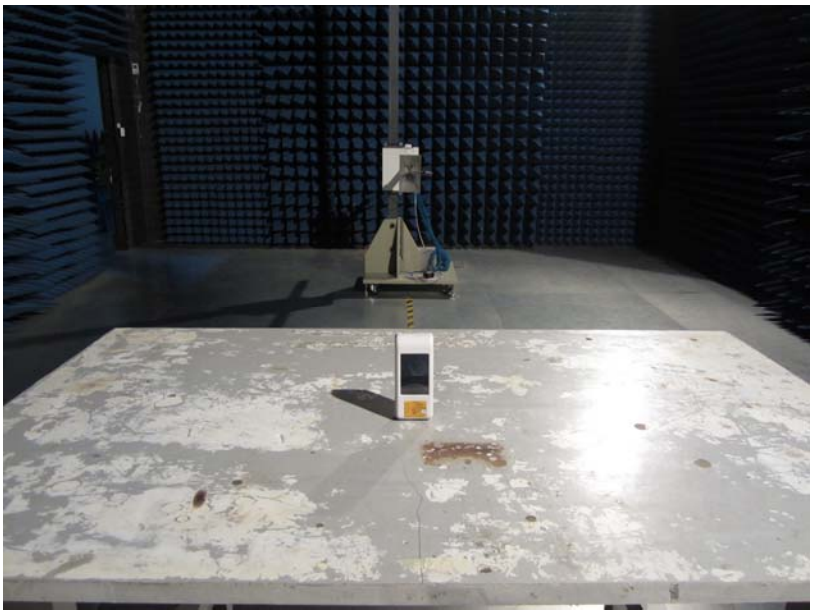


Highest channel

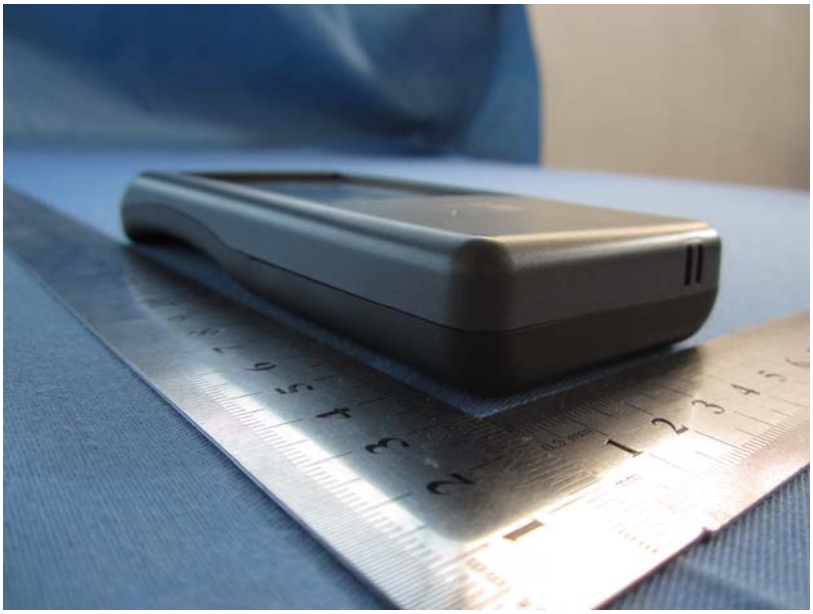
8 Test Setup Photo

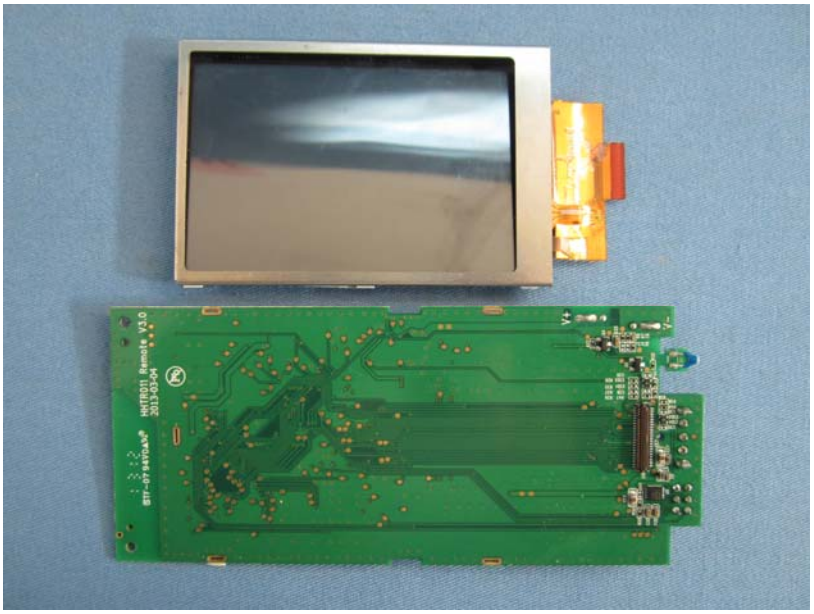
Radiated Emission

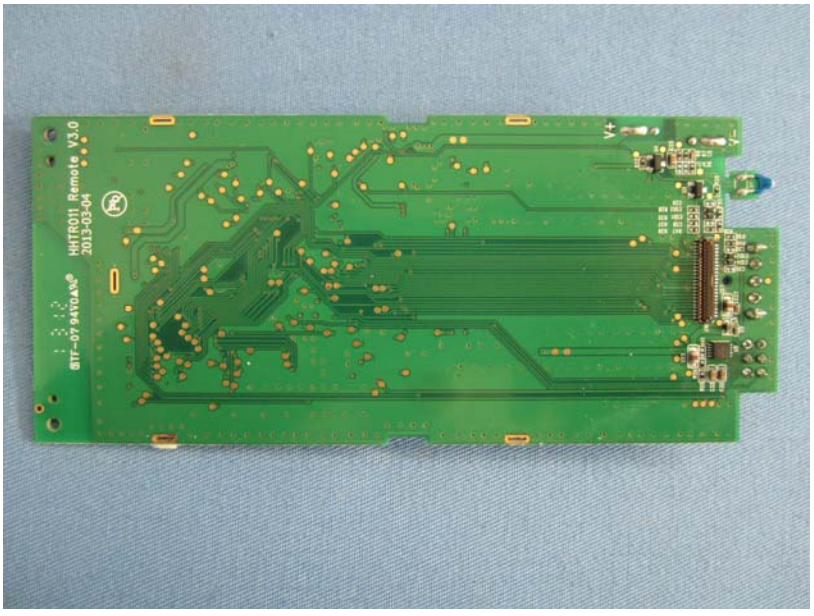


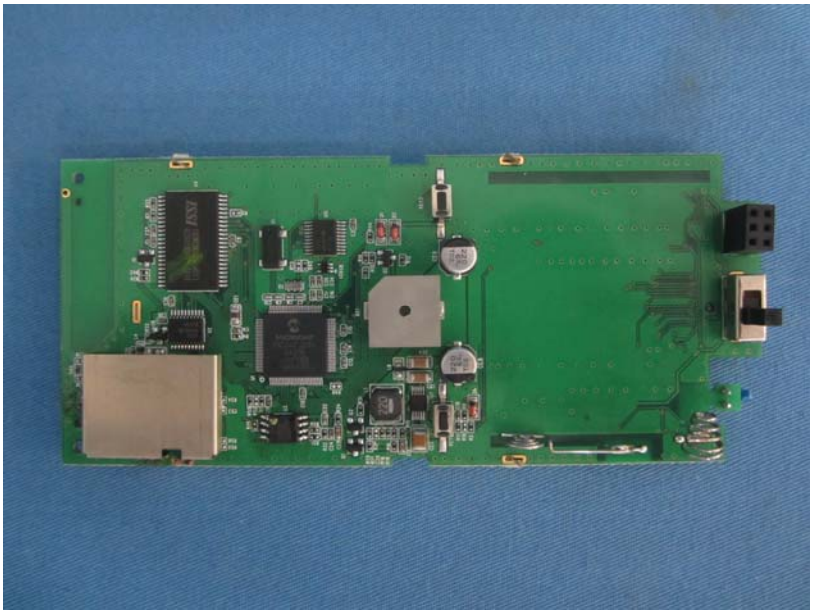


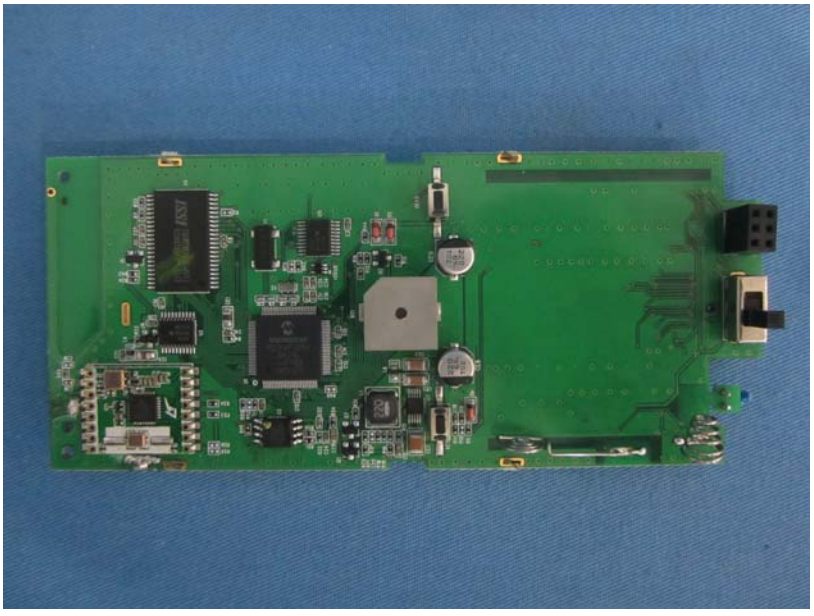
9 EUT Constructional Details

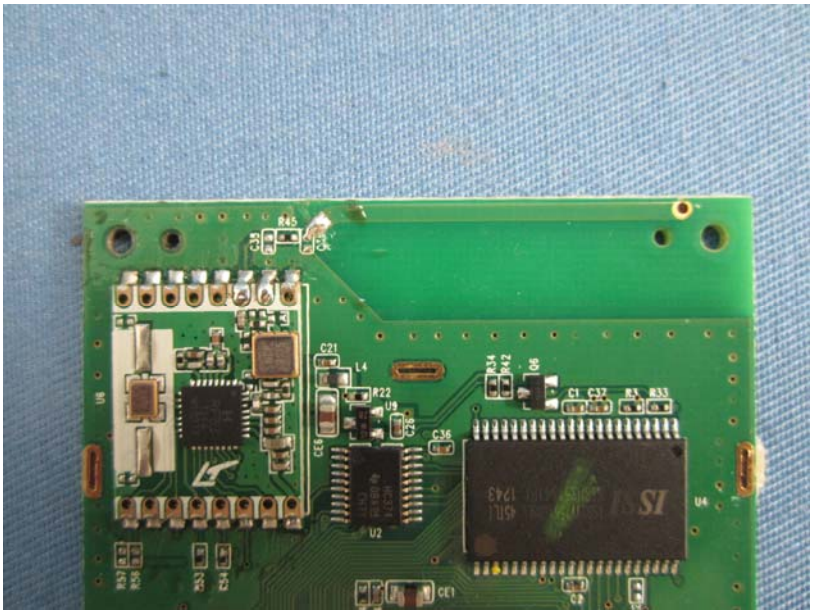



HHTR011 Remote V3.0
2013-03-04
V+
V-


HHTR011 Remote V3.0
2013-03-04
V+
V-







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