Global United Technology Services Co., Ltd.

Report No.: GTSE15020013101

FCC REPORT

Applicant: HSH Management Services Ltd.

Address of Applicant: 1/F, United Factory Building ,50 Heung Yip Street, Aberdeen, Hong Kong

Equipment Under Test (EUT)

Product Name: Remote Controller

Model No.: RC02

FCC ID: 2AA57RC02150320

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

Date of sample receipt: February 26, 2015

Date of Test: March 15-17, 2015

Date of report issued: March 17, 2015

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	*March 17, 2015*	*Original*

Prepared By: Edward.Pan ***Date:*** *March 17, 2015*

Project Engineer

Check By: hank.yan ***Date:*** *March 17, 2015*

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:	HSH Management Services Ltd.
Address of Applicant:	1/F, United Factory Building ,50 Heung Yip Street, Aberdeen, Hong Kong
Manufacturer:	HSH Management Services Ltd.
Address of Manufacturer:	1/F, United Factory Building ,50 Heung Yip Street, Aberdeen, Hong Kong

5.2 General Description of EUT

Product Name:	Remote Controller
Model No.:	RC02
Operation Frequency:	2401MHz~2480MHz
Channel numbers:	80
Channel separation:	1MHz
Modulation type:	GFSK
Antenna Type:	PCB Antenna
Antenna gain:	0dBi
Hardware Version:	REV. C
Software Version:	V01
Serial Number:	N/A
Power supply:	Model No.: GFP151DA-0525 Input: AC 100-240V 50/60Hz 0.3A Output: DC 5 V 2.5A Or DC 3.7V Li-ion battery

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2401MHz	23	2423MHz	43	2443MHz	63	2463MHz
2	2402MHz	24	2424MHz	44	2444MHz	64	2464MHz
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
21	2421MHz	41	2441MHz	61	2461MHz	79	2479MHz
22	2422MHz	42	2442MHz	62	2462MHz	80	2480MHz

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	2401MHz
The middle channel	2441MHz
The Highest channel	2480MHz

5.3 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode

Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.

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)	96.24	97.11	95.06

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

None

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.

Room 301-309, 3th Floor, Block A, Huafeng Jinyuan Business Building, No. 300 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 & & occupied bandwidth						
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 2014	Mar. 28 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	Jul. 01 2014	Jun 30 2015
4	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Jul. 01 2014	Jun 30 2015
5	Loop Antenna	ZHINAN	ZN30900A	GTS534	Feb. 22 2015	Feb. 21 2016
6	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Jul. 01 2014	Jun 30 2015
7	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	June 27 2014	June 26 2015
8	Horn Antenna	ETS-LINDGREN	3160-09	GTS217	Mar. 28 2014	Mar. 27 2015
9	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
10	Coaxial Cable	GTS	N/A	GTS213	Mar. 29 2014	Mar. 28 2015
11	Coaxial Cable	GTS	N/A	GTS211	Mar. 29 2014	Mar. 28 2015
12	Coaxial cable	GTS	N/A	GTS210	Mar. 29 2014	Mar. 28 2015
13	Coaxial Cable	GTS	N/A	GTS212	Mar. 29 2014	Mar. 28 2015
14	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Jul. 01 2014	Jun. 30, 2015
15	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	Jul. 01 2014	Jun. 30, 2015
16	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June 27 2014	June 26 2015
17	Band filter	Amindeon	82346	GTS219	Mar. 29 2014	Mar. 28 2015
18	Coaxial Cable (SMA Connect)	GTS	N/A	GTS674	Jul. 01 2014	Jun. 30, 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	July 01 2014	June 30 2015
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	July 01 2014	June 30 2015
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS224	July 01 2014	June 30 2015
4	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	July 01 2014	June 30 2015
5	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS226	July 01 2014	June 30 2015
6	Coaxial Cable	GTS	N/A	GTS227	July 01 2014	June 30 2015
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A

7 Test results and Measurement Data

7.1 Antenna requirement

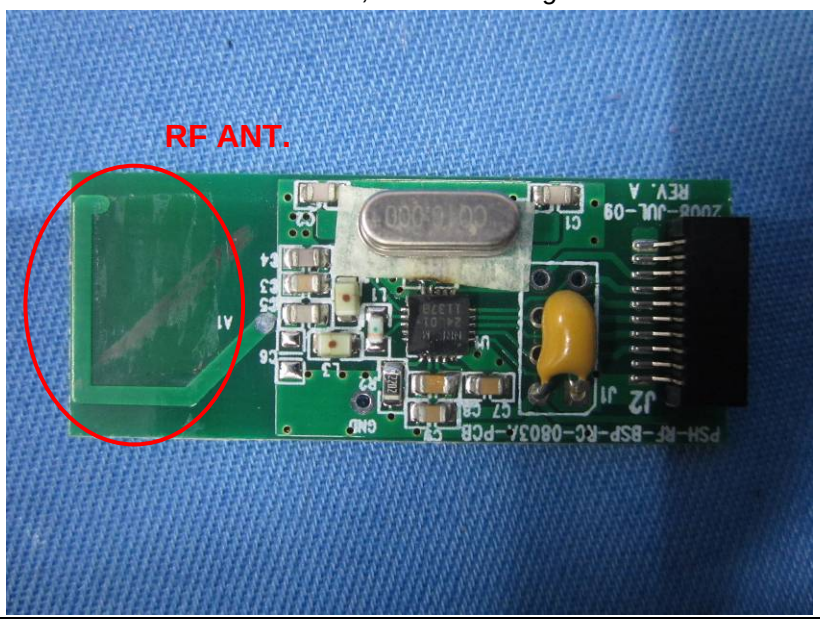
Standard requirement:	FCC Part15 C Section 15.203

15.203 requirement:

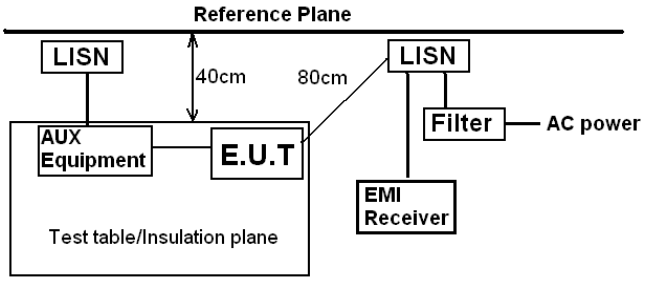
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit 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 PCB Antenna, the best case gain of the antenna is 0dBi



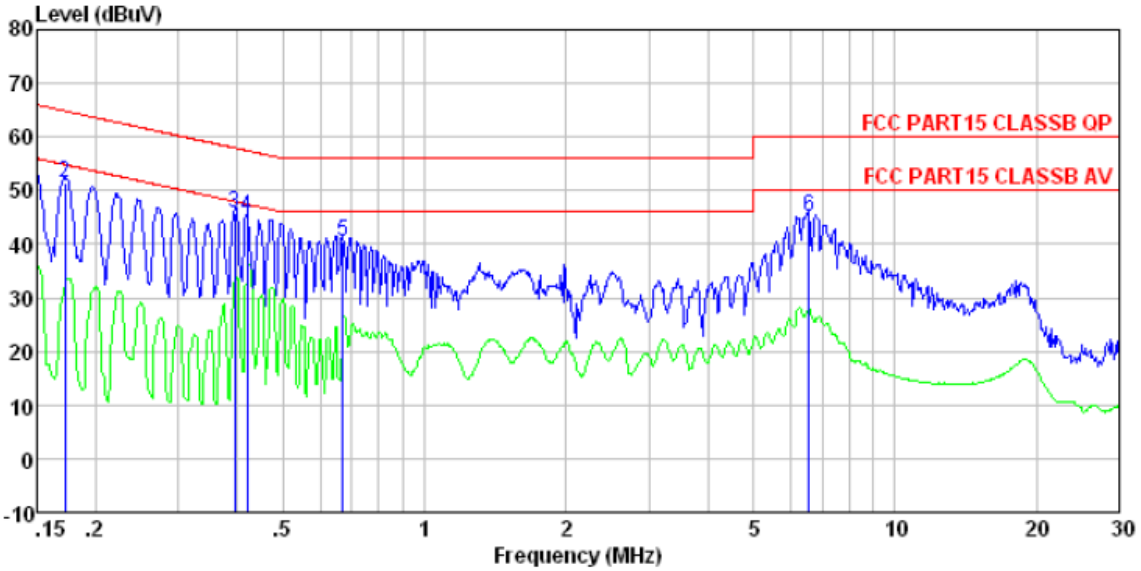
7.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.4:2009
Test Frequency Range:	150KHz to 30MHz
Class / Severity:	Class B
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto
Limit:	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 * Decreases with the logarithm of the frequency.
Test setup:	 *Remark:* *E.U.T: Equipment Under Test* *LISN: Line Impedence Stabilization Network* *Test table height=0.8m*
Test procedure:	1. The E.U.T is 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:

Remark: The test was performed at the lowest, middle and highest channel. The data of lowest channel was found as the worst, so only the data of that channel is reported.

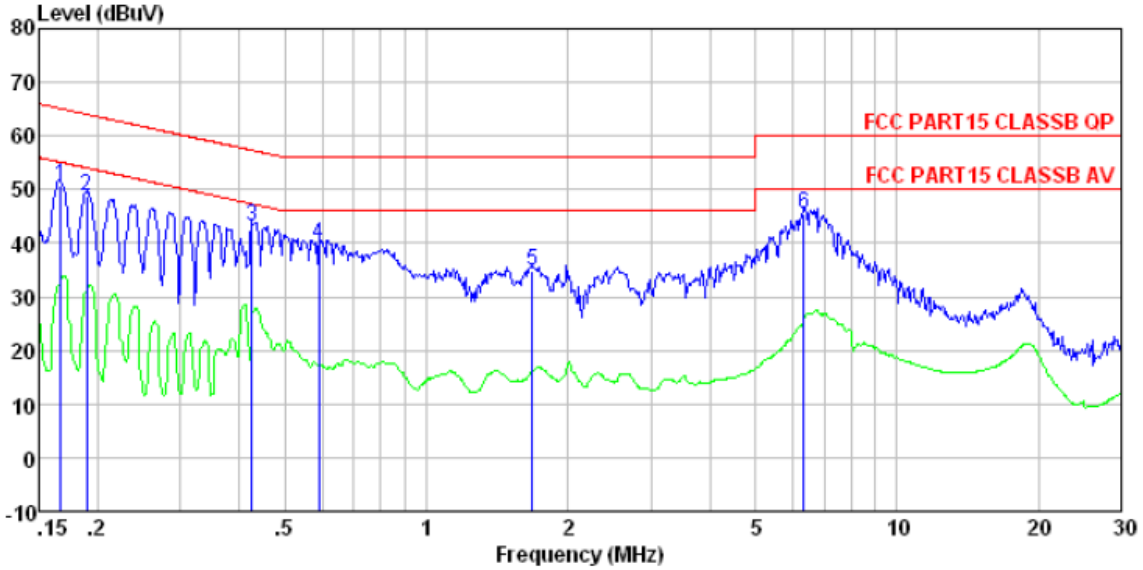
Line:



Condition : FCC PART15 CLASSB QP LISN-2013 LINE
Job No. : 0131TX
Test mode : Transmitting mode (Lowest Channel)
Test Engineer: frank
Power : AC 120V/60Hz

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.150	52.25	0.15	0.12	52.52	66.00	-13.48	QP
2	0.172	51.20	0.15	0.12	51.47	64.86	-13.39	QP
3	0.396	45.60	0.11	0.11	45.82	57.95	-12.13	QP
4	0.419	44.75	0.12	0.11	44.98	57.46	-12.48	QP
5	0.672	40.26	0.14	0.13	40.53	56.00	-15.47	QP
6	6.557	44.64	0.23	0.16	45.03	60.00	-14.97	QP

Neutral:



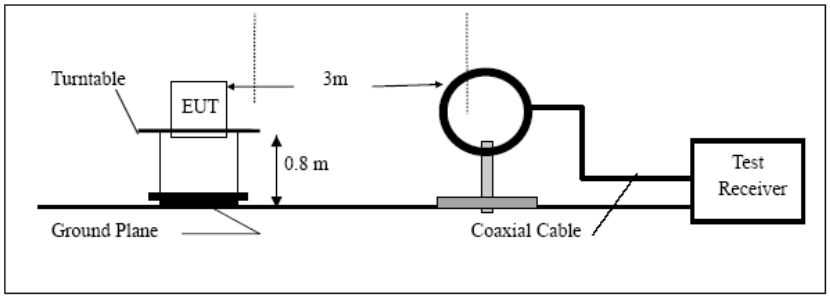
Condition : FCC PART15 CLASSB QP LISN-2013 NEUTRAL
Job No. : 0131TX
Test mode : Transmitting mode (Lowest Channel)
Test Engineer: frank
Power : AC 120V/60Hz

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.167	50.62	0.07	0.12	50.81	65.12	-14.31	QP
2	0.189	48.48	0.07	0.13	48.68	64.06	-15.38	QP
3	0.426	42.96	0.06	0.11	43.13	57.33	-14.20	QP
4	0.592	39.49	0.07	0.12	39.68	56.00	-16.32	QP
5	1.680	34.54	0.09	0.14	34.77	56.00	-21.23	QP
6	6.352	45.16	0.17	0.16	45.49	60.00	-14.51	QP

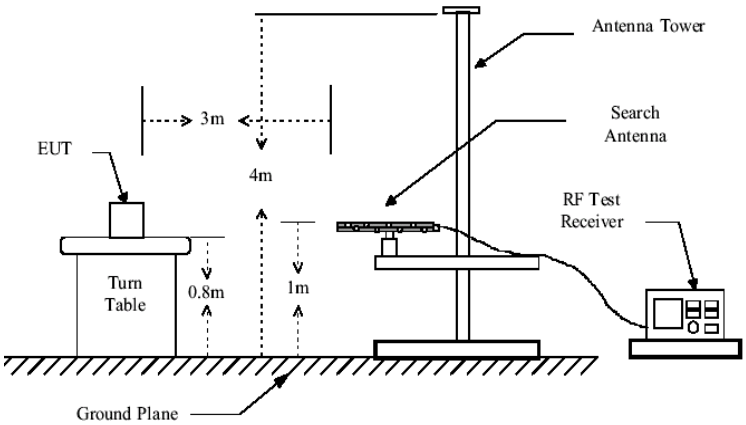
Notes:

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
4. *If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.*

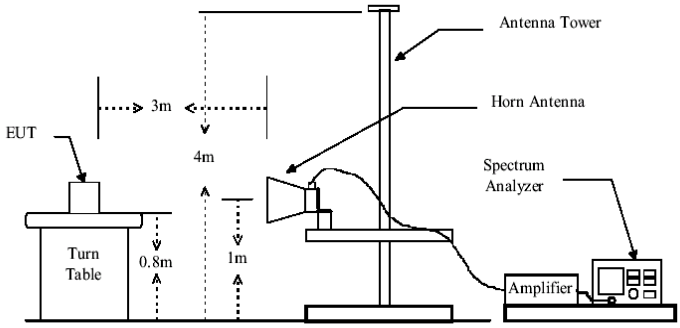
7.3 Radiated Emission Method

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.209</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.4:2009</td></tr>
<tr><td>Test Frequency Range:</td><td>9kHz to 25GHz</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>Value</th></tr>
<tr><td>9KHz-150KHz</td><td>Quasi-peak</td><td>200Hz</td><td>600Hz</td><td>Quasi-peak</td></tr>
<tr><td>150KHz-30MHz</td><td>Quasi-peak</td><td>9KHz</td><td>30KHz</td><td>Quasi-peak</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak</td></tr>
<tr><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average</td></tr>
</table>
</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 (uV/m)</th><th>Value</th><th>Measurement Distance</th></tr>
<tr><td>0.009MHz-1.705MHz</td><td>2400/F(KHz)</td><td>QP</td><td>300m</td></tr>
<tr><td>0.490MHz-1.705MHz</td><td>24000/F(KHz)</td><td>QP</td><td>300m</td></tr>
<tr><td>1.705MHz-30MHz</td><td>30</td><td>QP</td><td>30m</td></tr>
<tr><td>30MHz-88MHz</td><td>100</td><td>QP</td><td rowspan="6">3m</td></tr>
<tr><td>88MHz-216MHz</td><td>150</td><td>QP</td></tr>
<tr><td>216MHz-960MHz</td><td>200</td><td>QP</td></tr>
<tr><td>960MHz-1GHz</td><td>500</td><td>QP</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>500</td><td>Average</td></tr>
<tr><td>5000</td><td>Peak</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 30MHz
 

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



Above 1GHz



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:

7.3.1 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
2401.00	89.92	27.58	5.39	30.18	92.71	114.00	-21.29	Vertical
2401.00	92.80	27.58	5.39	30.18	95.59	114.00	-18.41	Horizontal
2441.00	90.28	27.55	5.43	30.06	93.20	114.00	-20.80	Vertical
2441.00	93.40	27.55	5.43	30.06	96.32	114.00	-17.68	Horizontal
2480.00	90.73	27.52	5.47	29.93	93.79	114.00	-20.21	Vertical
2480.00	94.05	27.52	5.47	29.93	97.11	114.00	-16.89	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
2401.00	47.96	27.58	5.39	30.18	50.75	94.00	-43.25	Vertical
2401.00	51.28	27.58	5.39	30.18	54.07	94.00	-39.93	Horizontal
2441.00	48.30	27.55	5.43	30.06	51.22	94.00	-42.78	Vertical
2441.00	51.92	27.55	5.43	30.06	54.84	94.00	-39.16	Horizontal
2480.00	48.76	27.52	5.47	29.93	51.82	94.00	-42.18	Vertical
2480.00	52.28	27.52	5.47	29.93	55.34	94.00	-38.66	Horizontal

Remark: RBW 3MHz, VBW 10MHz , peak detector for PK value, RBW 3MHz, VBW 10MHz AV detector for AV value

7.3.2 Spurious emissions

Note:

1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.

2. The measured filed strength at frequencies below 30MHz are lower than the limit over 30dB. So the data isn't reported.

■ Below 1GHz

Remark: The test was performed at the lowest, middle and highest channel. The data of lowest channel was found as the worst, so only the data of that channel is reported.

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
31.73	43.05	14.32	0.57	30.09	27.85	40.00	-12.15	Vertical
52.03	43.07	15.16	0.79	29.98	29.04	40.00	-10.96	Vertical
80.08	44.49	10.54	1.03	29.80	26.26	40.00	-13.74	Vertical
93.44	45.00	14.58	1.14	29.73	30.99	43.50	-12.51	Vertical
133.15	42.15	10.67	1.46	29.49	24.79	43.50	-18.71	Vertical
300.37	48.23	15.06	2.36	29.99	35.66	46.00	-10.34	Vertical
63.54	37.66	13.24	0.89	29.90	21.89	40.00	-18.11	Horizontal
78.41	40.65	10.31	1.01	29.81	22.16	40.00	-17.84	Horizontal
98.49	40.60	15.06	1.18	29.71	27.13	43.50	-16.37	Horizontal
204.96	30.97	12.74	1.87	29.26	16.32	43.50	-27.18	Horizontal
303.54	33.04	15.11	2.38	29.98	20.55	46.00	-25.45	Horizontal
360.45	30.75	16.43	2.67	29.69	20.16	46.00	-25.84	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
4802.00	52.47	31.78	8.60	32.09	60.76	74.00	-13.24	Vertical
7203.00	49.36	36.15	11.65	32.00	65.16	74.00	-8.84	Vertical
9604.00	29.83	37.95	14.14	31.62	50.30	74.00	-23.70	Vertical
12005.00	*					74.00		Vertical
14406.00	*					74.00		Vertical
4802.00	57.82	31.78	8.60	32.09	66.11	74.00	-7.89	Horizontal
7203.00	54.66	36.15	11.65	32.00	70.46	74.00	-3.54	Horizontal
9604.00	42.21	37.95	14.14	31.62	62.68	74.00	-11.32	Horizontal
12005.00	*					74.00		Horizontal
14406.00	*					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
4802.00	23.87	31.78	8.60	32.09	32.16	54.00	-21.84	Vertical
7203.00	18.99	36.15	11.65	32.00	34.79	54.00	-19.21	Vertical
9604.00	18.24	37.95	14.14	31.62	38.71	54.00	-15.29	Vertical
12005.00	*					54.00		Vertical
14406.00	*					54.00		Vertical
4802.00	27.79	31.78	8.60	32.09	36.08	54.00	-17.92	Horizontal
7203.00	20.98	36.15	11.65	32.00	36.78	54.00	-17.22	Horizontal
9604.00	19.05	37.95	14.14	31.62	39.52	54.00	-14.48	Horizontal
12005.00	*					54.00		Horizontal
14406.00	*					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

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
4882.00	53.04	31.85	8.67	32.12	61.44	74.00	-12.56	Vertical
7323.00	49.74	36.37	11.72	31.89	65.94	74.00	-8.06	Vertical
9764.00	30.17	38.35	14.25	31.62	51.15	74.00	-22.85	Vertical
12205.00	*					74.00		Vertical
14646.00	*					74.00		Vertical
4882.00	58.50	31.85	8.67	32.12	66.90	74.00	-7.10	Horizontal
7323.00	55.09	36.37	11.72	31.89	71.29	74.00	-2.71	Horizontal
9764.00	42.60	38.35	14.25	31.62	63.58	74.00	-10.42	Horizontal
12205.00	*					74.00		Horizontal
14646.00	*					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
4882.00	24.33	31.85	8.67	32.12	32.73	54.00	-21.27	Vertical
7323.00	19.30	36.37	11.72	31.89	35.50	54.00	-18.50	Vertical
9764.00	18.52	38.35	14.25	31.62	39.50	54.00	-14.50	Vertical
12205.00	*					54.00		Vertical
14646.00	*					54.00		Vertical
4882.00	28.32	31.85	8.67	32.12	36.72	54.00	-17.28	Horizontal
7323.00	21.33	36.37	11.72	31.89	37.53	54.00	-16.47	Horizontal
9764.00	19.38	38.35	14.25	31.62	40.36	54.00	-13.64	Horizontal
12205.00	*					54.00		Horizontal
14646.00	*					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

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
4960.00	53.92	31.93	8.73	32.16	62.42	74.00	-11.58	Vertical
7440.00	50.32	36.59	11.79	31.78	66.92	74.00	-7.08	Vertical
9920.00	30.69	38.81	14.38	31.88	52.00	74.00	-22.00	Vertical
12400.00	*					74.00		Vertical
14880.00	*					74.00		Vertical
4960.00	59.57	31.93	8.73	32.16	68.07	74.00	-5.93	Horizontal
7440.00	55.75	36.59	11.79	31.78	72.35	74.00	-1.65	Horizontal
9920.00	43.21	38.81	14.38	31.88	64.52	74.00	-9.48	Horizontal
12400.00	*					74.00		Horizontal
14880.00	*					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
4960.00	25.09	31.93	8.73	32.16	33.59	54.00	-20.41	Vertical
7440.00	19.82	36.59	11.79	31.78	36.42	54.00	-17.58	Vertical
9920.00	18.98	38.81	14.38	31.88	40.29	54.00	-13.71	Vertical
12400.00	*					54.00		Vertical
14880.00	*					54.00		Vertical
4960.00	29.18	31.93	8.73	32.16	37.68	54.00	-16.32	Horizontal
7440.00	21.91	36.59	11.79	31.78	38.51	54.00	-15.49	Horizontal
9920.00	19.91	38.81	14.38	31.88	41.22	54.00	-12.78	Horizontal
12400.00	*					54.00		Horizontal
14880.00	*					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.*

7.3.3 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
2390.00	58.17	27.59	5.38	30.18	60.96	74.00	-13.04	Horizontal
2400.00	68.26	27.58	5.39	30.18	71.05	74.00	-2.95	Horizontal
2390.00	55.74	27.59	5.38	30.18	58.53	74.00	-15.47	Vertical
2400.00	67.57	27.58	5.39	30.18	70.36	74.00	-3.64	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	27.34	27.59	5.38	30.18	30.13	54.00	-23.87	Horizontal
2400.00	32.26	27.58	5.39	30.18	35.05	54.00	-18.95	Horizontal
2390.00	26.96	27.59	5.38	30.18	29.75	54.00	-24.25	Vertical
2400.00	30.32	27.58	5.39	30.18	33.11	54.00	-20.89	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
2483.50	65.24	27.53	5.47	29.93	68.31	74.00	-5.69	Horizontal
2500.00	51.57	27.55	5.49	29.93	54.68	74.00	-19.32	Horizontal
2483.50	63.83	27.53	5.47	29.93	66.90	74.00	-7.10	Vertical
2500.00	49.53	27.55	5.49	29.93	52.64	74.00	-21.36	Vertical

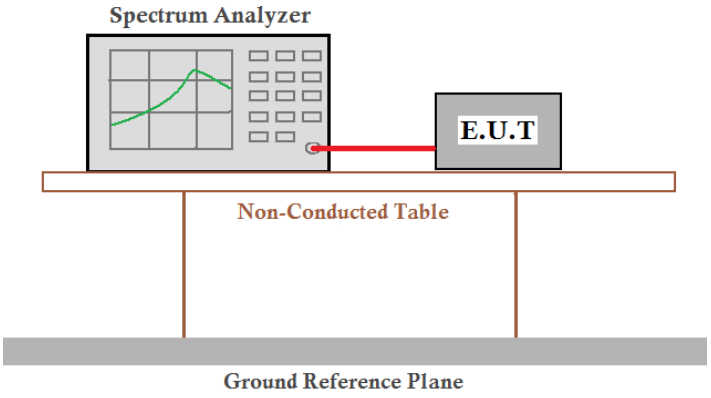
Average value:

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	28.17	27.53	5.47	29.93	31.24	54.00	-22.76	Horizontal
2500.00	26.75	27.55	5.49	29.93	29.86	54.00	-24.14	Horizontal
2483.50	27.51	27.53	5.47	29.93	30.58	54.00	-23.42	Vertical
2500.00	26.49	27.55	5.49	29.93	29.60	54.00	-24.40	Vertical

Remark:

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

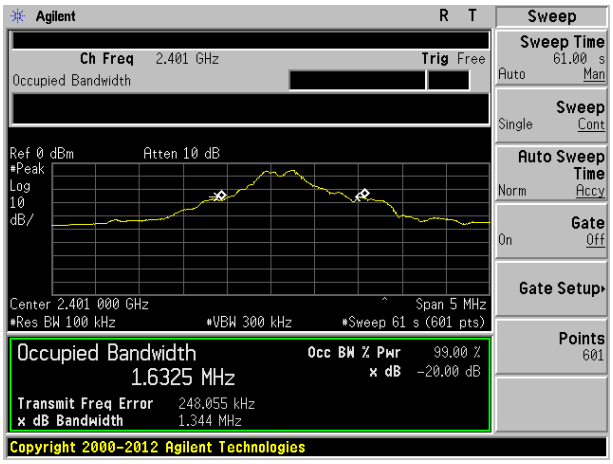
7.4 20dB Occupy Bandwidth

Test Requirement:	FCC Part15 C Section 15.249/15.215
Test Method:	ANSI C63.4:2009
Limit:	Operation Frequency range 2400MHz~2483.5MHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

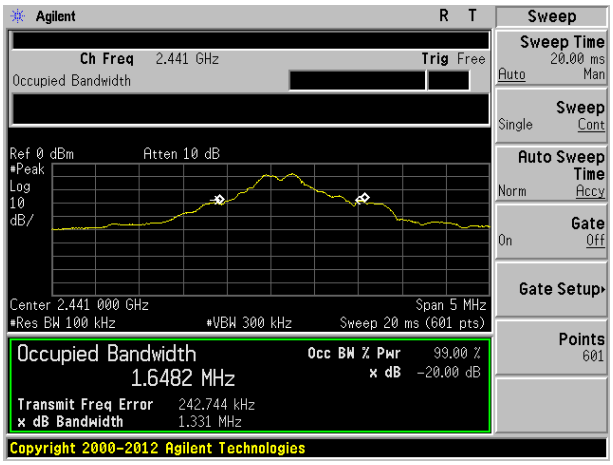
Measurement Data

Test channel	20dB bandwidth(MHz)	Result
Lowest	1.344	Pass
Middle	1.331	Pass
Highest	1.523	Pass

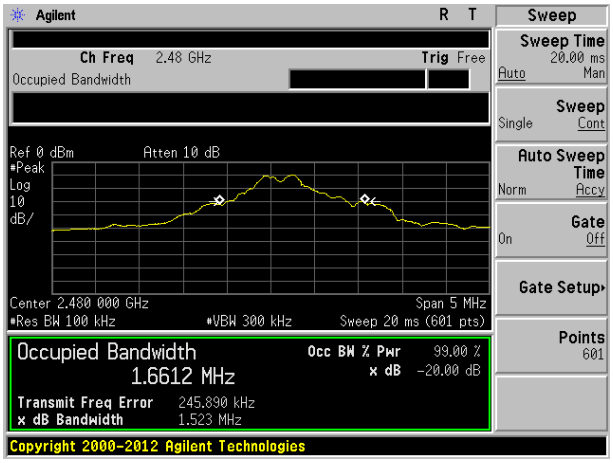
Test plot as follows:



Lowest channel



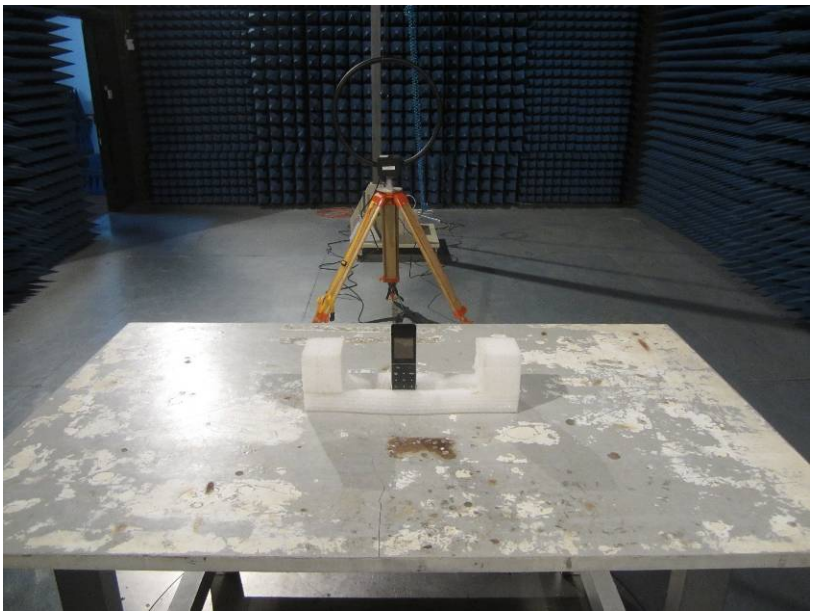
Middle channel

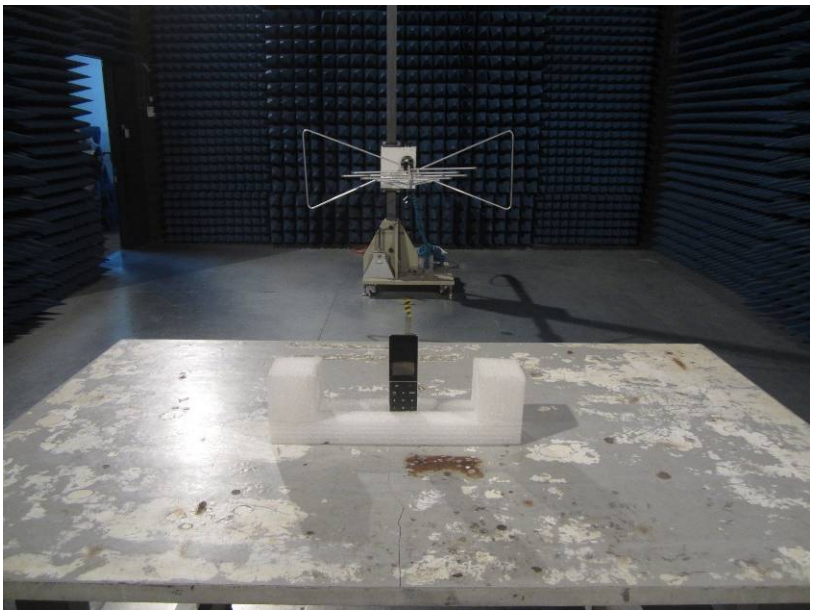


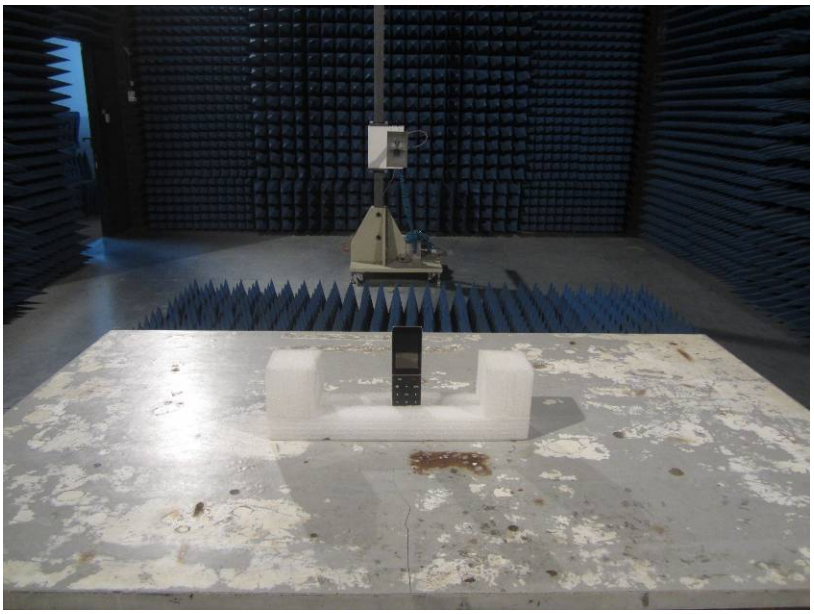
Highest channel

8 Test Setup Photo

Radiated Emission







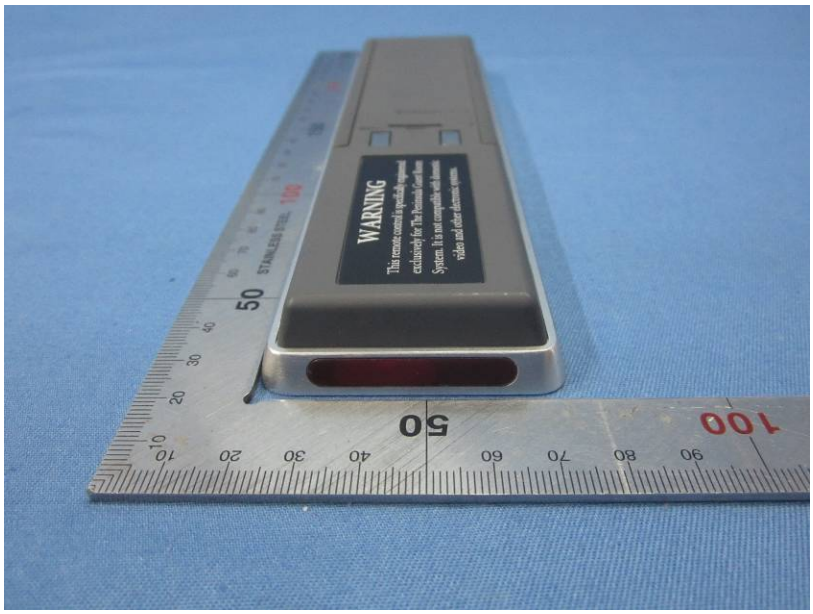
Conducted Emissions

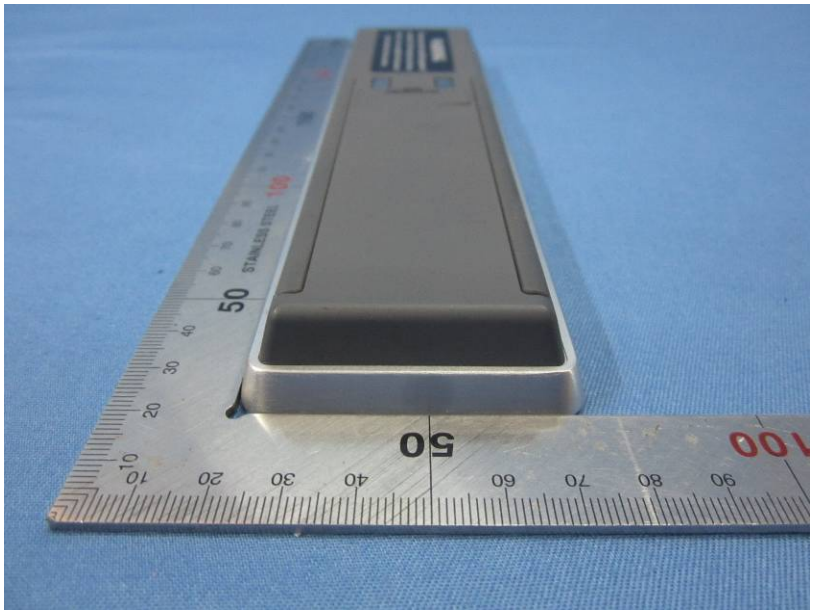
9 EUT Constructional Details

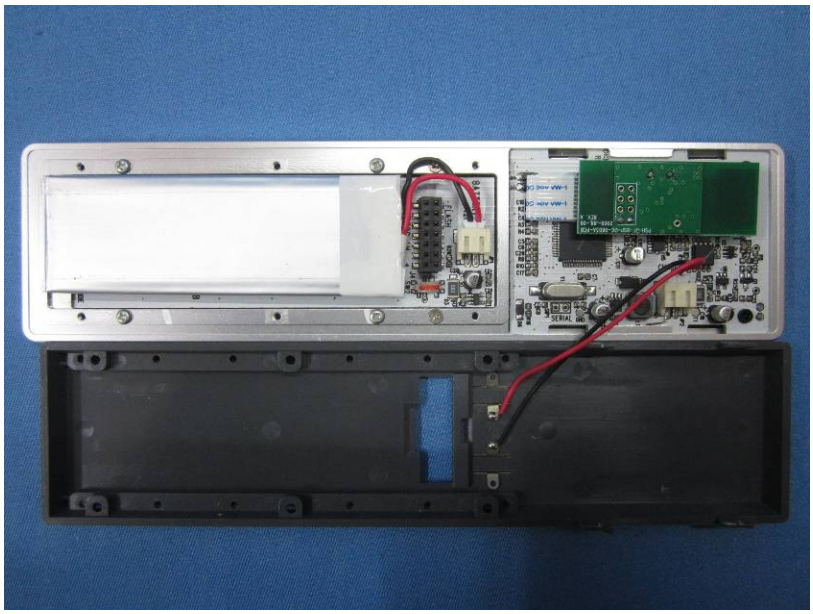
Remote Controller

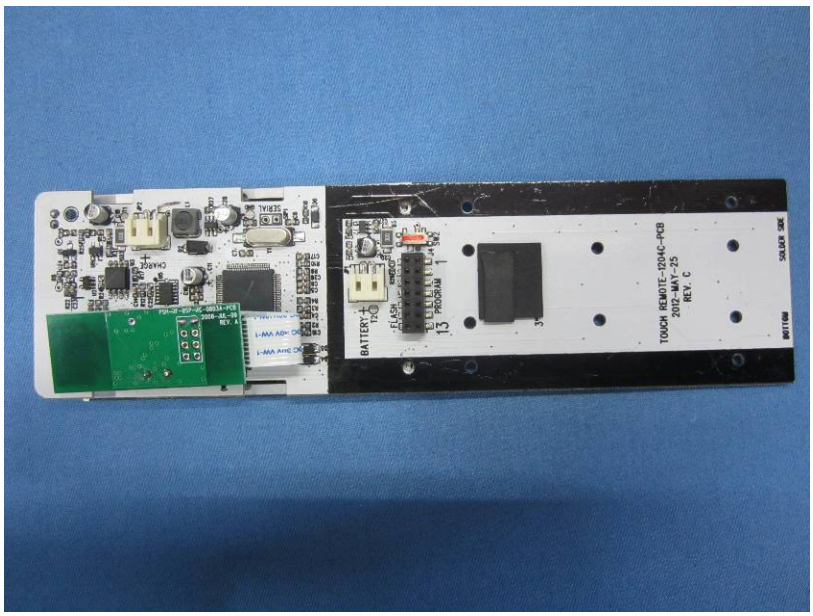

WARNING
This remote control is specifically engineered exclusively for The Peninsula Guest Room System. It is not compatible with domestic video and other electronic systems.

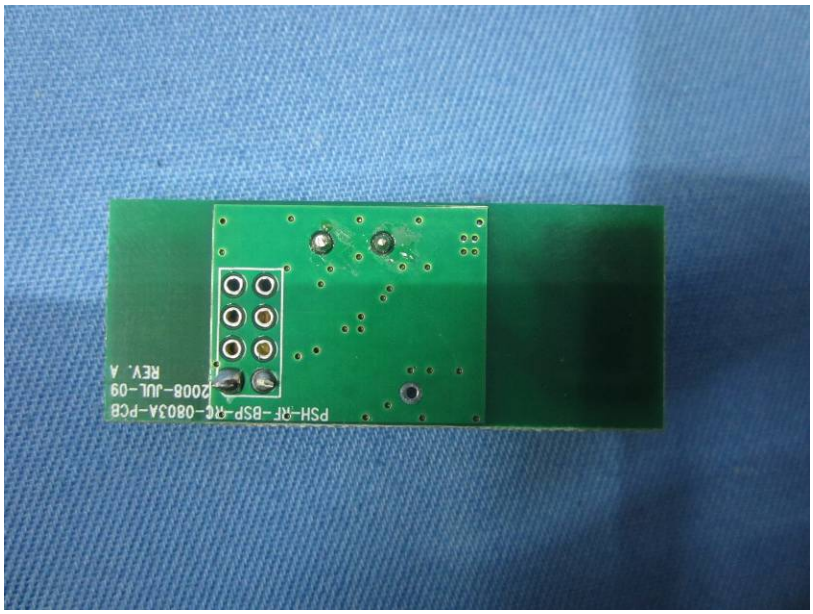

WARNING
This remote control is specifically engineered exclusively for The Peninsula Guest Room System. It is not compatible with domestic video and other electronic systems.

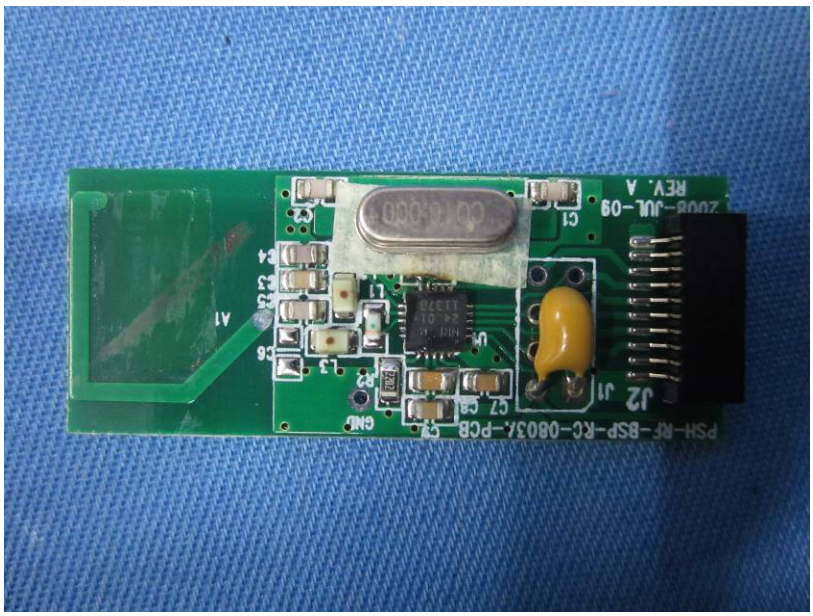

WARNING
50
100

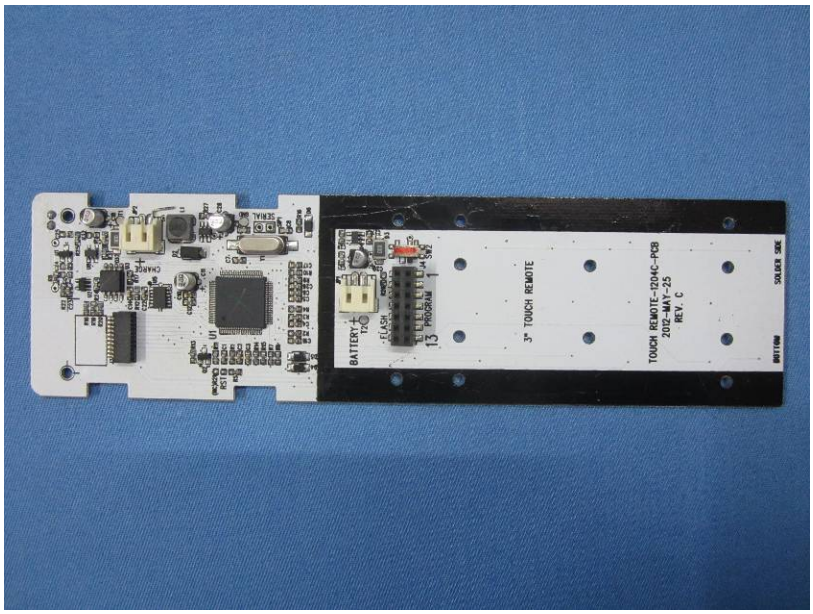

50
100

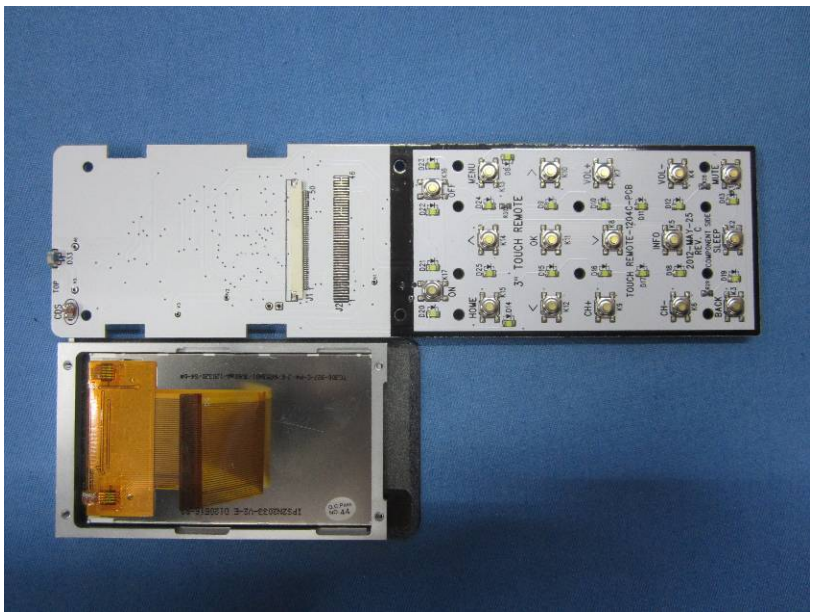


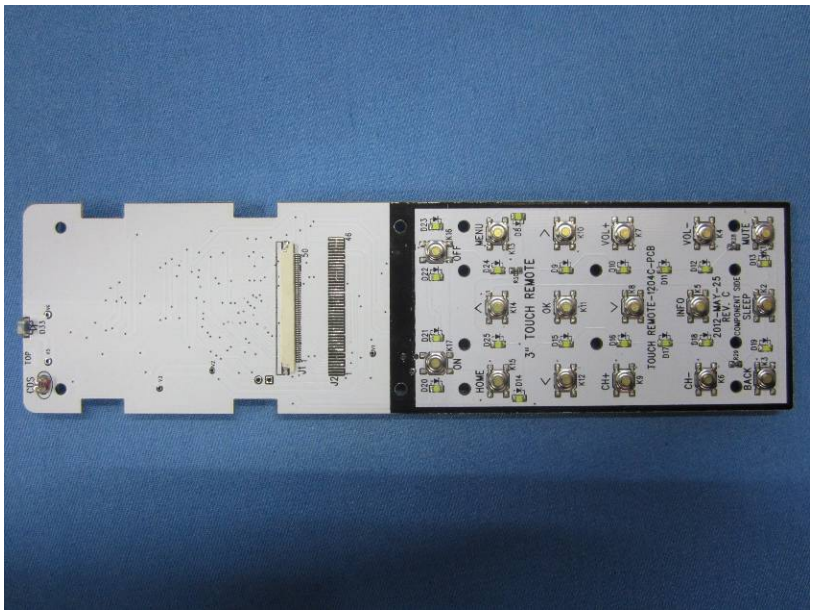


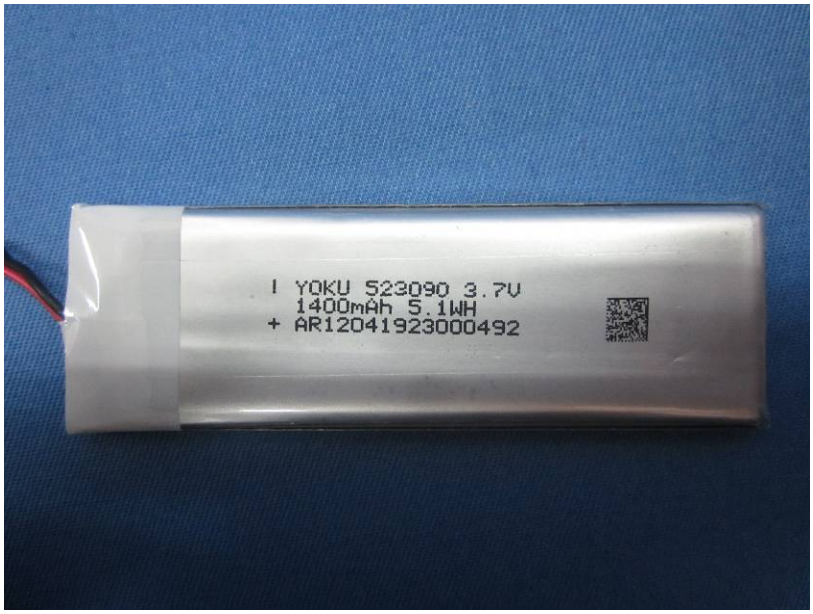

REV. A
2008-JUL-09
PSH-RF-BSP-RC-0803A-PCB


REV. A
2008-JUL-09
J1
J2
PSH-RF-BSP-RC-0803A-PCB

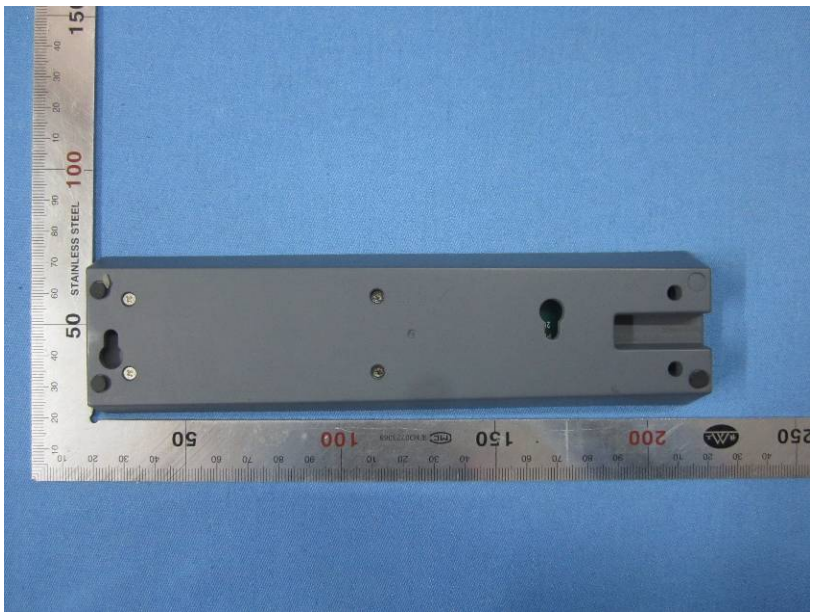

3" TOUCH REMOTE
TOUCH REMOTE-1204C-PCB
2012-MAY-25
REV. C
SOLDER SIDE
BATTERY
FLASH
PROGRAM

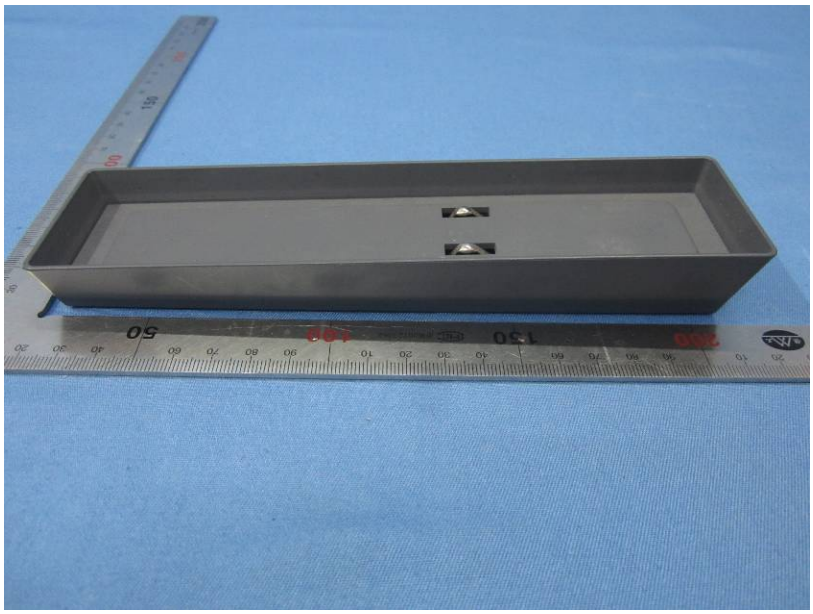

3" TOUCH REMOTE
TOUCH REMOTE-1204C-PCB
2012-MAY-25
REV. C
MENU
HOME
OK
INFO

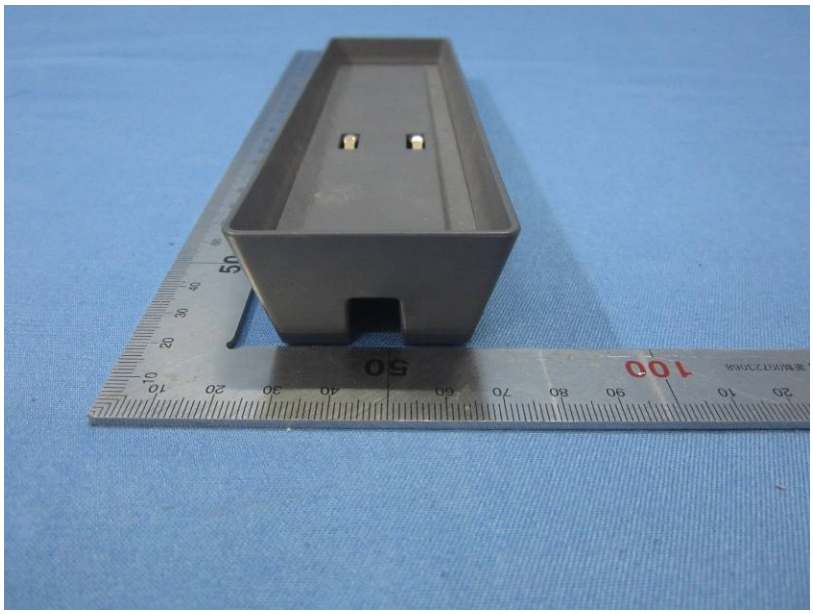

3" TOUCH REMOTE
TOUCH_REMOTE-T204C-PCB

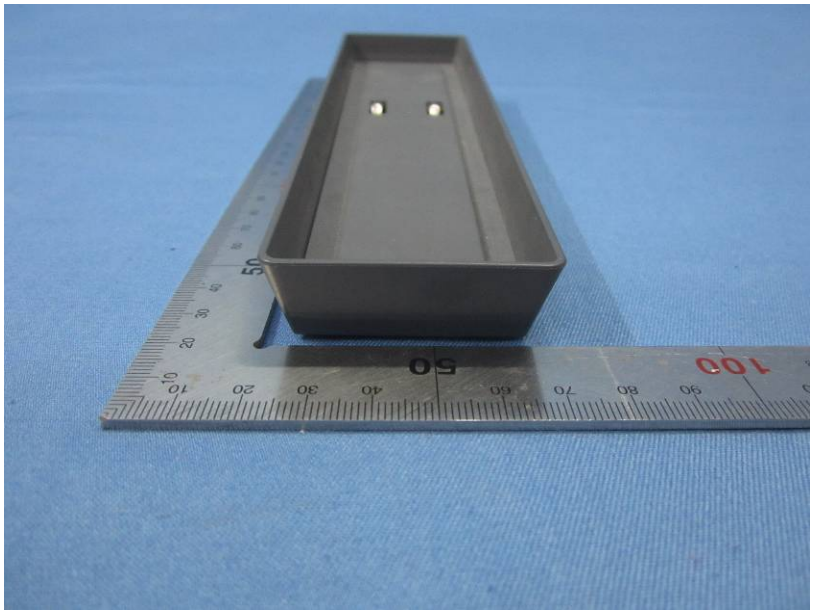

YOKU 523090 3.7V
1400mAh 5.1WH
AR12041923000492

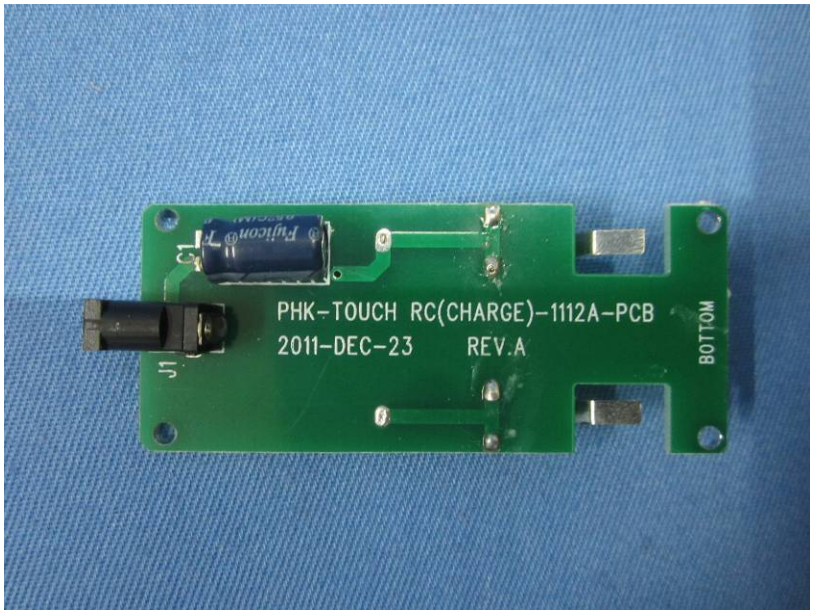
Charge Base

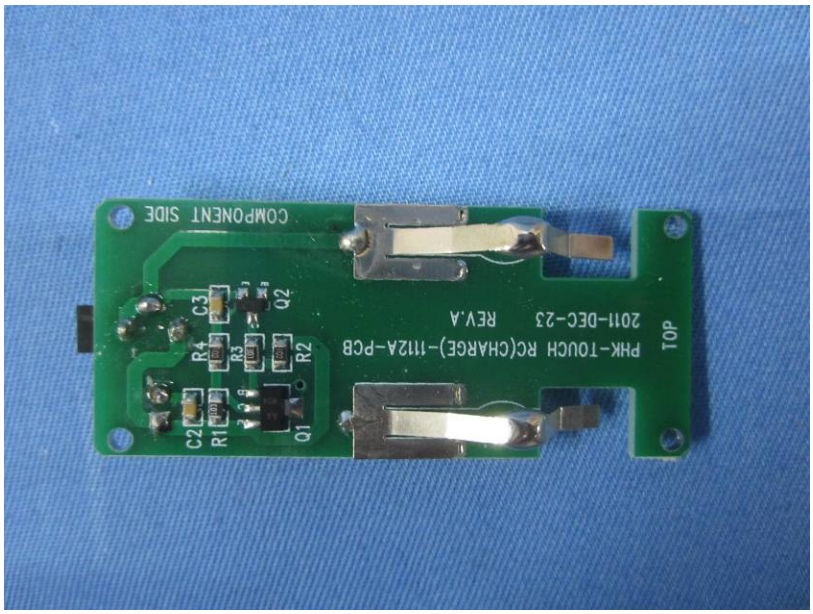









PHK-TOUCH RC(CHARGE)-1112A-PCB
2011-DEC-23 REV.A
BOTTOM
J1
C1


COMPONENT SIDE
PHK-TOUCH RC(CHARGE)-1112A-PCB
2011-DEC-23 REV.A
TOP
C3
Q2
R4
R3
R2
C2
R1
Q1


TEKA
Switching Power Adapter (开关电源适配器)
MODEL(型号):GFP151DA-0525
CAUTION:(警告)只限室内产品类及室内使用)
SHOCK HAZARD,RISK OF ELECTRIC SHOCK,DRY LOCATION USE ONLY.
NON-SERVICEABLE PARTS INSIDE. FOR USE WITH ITE ONLY.
I/P(输入): AC 100-240V 50/60Hz 0.3A
O/P(输出):DC 5V, 2.5A
LISTED
E241618
L.P.S.
MADE IN CHINA(中国制造)
0812-0000265

------End------