

Global United Technology Services Co., Ltd.

Report No.: GTSE15060111901

FCC REPORT

Applicant: Shenzhen Zhonghenghua Technology CO., Ltd

Address of Applicant: 4/F, Fan'en Building, Nankeng Village, Bantian, Longgang

District, Shenzhen, China

Equipment Under Test (EUT)

Product Name: Selfie Remote / Selfie stick

Model No.: PP#5236775, BT-008, BT-008C

FCC ID: 2ACZWBT008

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.249:2014

Date of sample receipt: June 17, 2015

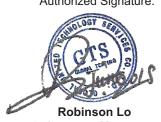
Date of Test: June 17-25, 2015

Date of report issued: June 25, 2015

Test Result: PASS *

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

Authorized Signature:



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 | June 25, 2015 | Original |
| | | |
| | | |
| | | |
| | | |

| Prepared By: | Zdward.Pan | Date: | June 25, 2015 |
|--------------|------------------|-------|---------------|
| | Project Engineer | | |
| Check By: | hank. yan | Date: | June 25, 2015 |
| | Reviewer | | |



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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

Remark: Test according to ANSI C63.4:2009 and ANSI C63.10:2009.

4.1 Measurement Uncertainty

| Test Item | Frequency Range | Measurement Uncertainty | Notes |
|-------------------------------------|--------------------------------------|-----------------------------------|-------|
| Radiated Emission | 9kHz ~ 30MHz | ± 4.34dB | (1) |
| Radiated Emission | 30MHz ~ 1000MHz | ± 4.24dB | (1) |
| Radiated Emission | 1GHz ~ 26.5GHz | ± 4.68dB | (1) |
| AC Power Line Conducted Emission | 0.15MHz ~ 30MHz | ± 3.45dB | (1) |
| Note (1): The measurement unce | ertainty is for coverage factor of k | =2 and a level of confidence of 9 | 95%. |



5 General Information

5.1 Client Information

| Applicant: | Shenzhen Zhonghenghua Technology CO., Ltd |
|-----------------------|--|
| Address of Applicant: | 4/F, Fan'en Building, Nankeng Village, Bantian, Longgang District, Shenzhen, China |

5.2 General Description of EUT

| Product Name: | Selfie Remote / Selfie stick |
|--|-------------------------------|
| Model No.: | PP#5236775, BT-008, BT-008C |
| Test Model No.: | PP#5236775 |
| Remark: All above models are identical in the same PCB layout, interior structure and electrical the only difference is the model name for commercial purpose. | |
| Operation Frequency: | 2402MHz~2480MHz |
| Channel numbers: | 79 |
| Channel separation: | 1MHz |
| Modulation type: | GFSK, Pi/4QPSK, 8DPSK |
| Antenna Type: | PCB antenna |
| Antenna gain: | 1.3dBi (declare by Applicant) |
| Power supply: | DC 3V Lithium Battery |
| | |



| Operation Frequency each of channel | | | | | | | |
|-------------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 1 | 2402MHz | 21 | 2422MHz | 41 | 2442MHz | 61 | 2462MHz |
| 2 | 2403MHz | 22 | 2423MHz | 42 | 2443MHz | 62 | 2463MHz |
| | | | | i | | i | |
| 19 | 2420MHz | 39 | 2440MHz | 59 | 2460MHz | 79 | 2480MHz |
| 20 | 2421MHz | 40 | 2441MHz | 60 | 2461MHz | | |

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 | 2441MHz |
| The Highest channel | 2480MHz |

Remark: NEW BATTERY IS USED DURING ALL TEST



5.3 Test mode

| Transmitting mode h | Keep the EUT in continuously transmitting mode |
|-----------------------|--|
|-----------------------|--|

Remark: 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 | Υ | Z |
|------------------------|-------|-------|-------|
| Field Strength(dBuV/m) | 94.11 | 95.92 | 93.22 |

Final Test Mode:

The EUT was tested in GFSK, π /4QPSK, 8DPSK modulation, and found the GFSK modulation 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)

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.

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 Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960

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6 Test Instruments list

| Rad | 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 2015 | Mar. 27 2016 | |
| 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 | BiConiLog Antenna | SCHWARZBECK MESS-ELEKTRONIK | VULB9163 | GTS214 | Jul. 01 2014 | Jun 30 2015 | |
| 6 | Double -ridged waveguide horn | SCHWARZBECK MESS-ELEKTRONIK | 9120D-829 | GTS208 | June 27 2014 | June 26 2015 | |
| 7 | Horn Antenna | ETS-LINDGREN | 3160 | GTS217 | Mar. 27 2015 | Mar. 26 2016 | |
| 8 | EMI Test Software | AUDIX | E3 | N/A | N/A | N/A | |
| 9 | Coaxial Cable | GTS | N/A | GTS213 | Mar. 28 2015 | Mar. 27 2016 | |
| 10 | Coaxial Cable | GTS | N/A | GTS211 | Mar. 28 2015 | Mar. 27 2016 | |
| 11 | Coaxial cable | GTS | N/A | GTS210 | Mar. 28 2015 | Mar. 27 2016 | |
| 12 | Coaxial Cable | GTS | N/A | GTS212 | Mar. 28 2015 | Mar. 27 2016 | |
| 13 | Amplifier(100kHz-3GHz) | HP | 8347A | GTS204 | Jul. 01 2014 | Jun. 30, 2015 | |
| 14 | Amplifier(2GHz-20GHz) | HP | 8349B | GTS206 | Jul. 01 2014 | Jun. 30, 2015 | |
| 15 | Amplifier (18-26GHz) | Rohde & Schwarz | AFS33-18002 650-30-8P-44 | GTS218 | June 27 2014 | June 26 2015 | |
| 16 | Band filter | Amindeon | 82346 | GTS219 | Mar. 28 2015 | Mar. 27 2016 | |

| Gen | General used equipment: | | | | | | | | | | | |
|------|-------------------------|--------------|-----------|------------------|------------------------|----------------------------|--|--|--|--|--|--|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) | | | | | | |
| 1 | Barometer | ChangChun | DYM3 | GTS257 | July 08 2014 | July 07 2015 | | | | | | |

No. 300 Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, China Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960



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.

EUT Antenna:

The antenna is PCB antenna, the best case gain of the antenna is 1.3dBi





7.2 Radiated Emission Method

| 1.2 Radiated Ellission Me | | | | | | |
|---------------------------|---|---------------------------------|--------------------------------|--------------|---|--|
| Test Requirement: | FCC Part15 C S | Section 15.20 | 9 | | | |
| Test Method: | ANSI C63.4:200 | 09 | | | | |
| Test Frequency Range: | 30MHz to 25GH | łz | | | | |
| Test site: | Measurement D | Distance: 3m | | | | |
| Receiver setup: | Frequency | Detector | RBW | VBW | Remark | |
| | 30MHz- 1GHz | Quasi-peal | k 120KHz | 300KHz | Quasi-peak Value | |
| | Above 1GHz | Peak | 1MHz | 3MHz | Peak Value | |
| | Above IGHZ | Peak | 1MHz | 10Hz | Average Value | |
| Limit: | Freque | ency | Limit (dBu | V/m @3m) | Remark | |
| (Field strength of the | 2400MHz-24 | 183.5MHz | | .00 | Average Value | |
| fundamental signal) | | | 1.00 | Peak Value | | |
| Limit: | Freque | | | V/m @3m) | Remark | |
| (Spurious Emissions) | 30MHz-8 | | | .00 | Quasi-peak Value | |
| | 88MHz-2 | | | .50 | Quasi-peak Value | |
| | 216MHz-9 960MHz- | | | .00 | Quasi-peak Value Quasi-peak Value | |
| | | | | .00 | Average Value | |
| | Above 1 | IGHz | | .00 | Peak Value | |
| Limit: (band edge) | harmonics, sha fundamental or | ll be attenuat to the genera | ed by at leas al radiated e | t 50 dB belo | w bands, except for w the level of the s in Section 15.209, | |
| Test setup: | whichever is the lesser attenuation. Below 1GHz Antenna Tower Antenna Tower Antenna RF Test Receiver Ground Plane Above 1GHz | | | | | |



| | Report No.: GTSE15060111901 |
|-------------------|--|
| | Antenna Tower Horn Antenna Spectrum Analyzer Turn Table Amplifier |
| Test Procedure: | 1. The EUT was placed on the top of a rotating table 0.8m meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. |
| | The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. |
| | 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. |
| | 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 |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|-------------------|------------------------|-----------------------|--------------|
| 2402.00 | 96.95 | 27.58 | 5.39 | 34.01 | 95.91 | 114.00 | -18.09 | Vertical |
| 2402.00 | 94.50 | 27.58 | 5.39 | 34.01 | 93.46 | 114.00 | -20.54 | Horizontal |
| 2441.00 | 96.97 | 27.48 | 5.43 | 33.96 | 95.92 | 114.00 | -18.08 | Vertical |
| 2441.00 | 94.74 | 27.48 | 5.43 | 33.96 | 93.69 | 114.00 | -20.31 | Horizontal |
| 2480.00 | 96.24 | 27.52 | 5.47 | 33.92 | 95.31 | 114.00 | -18.69 | Vertical |
| 2480.00 | 94.08 | 27.52 | 5.47 | 33.92 | 93.15 | 114.00 | -20.85 | 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 |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|-------------------|------------------------|-----------------------|--------------|
| 2402.00 | 86.72 | 27.58 | 5.39 | 34.01 | 85.68 | 94.00 | -8.32 | Vertical |
| 2402.00 | 84.65 | 27.58 | 5.39 | 34.01 | 83.61 | 94.00 | -10.39 | Horizontal |
| 2441.00 | 87.04 | 27.48 | 5.43 | 33.96 | 85.99 | 94.00 | -8.01 | Vertical |
| 2441.00 | 84.61 | 27.48 | 5.43 | 33.96 | 83.56 | 94.00 | -10.44 | Horizontal |
| 2480.00 | 86.70 | 27.52 | 5.47 | 33.92 | 85.77 | 94.00 | -8.23 | Vertical |
| 2480.00 | 84.07 | 27.52 | 5.47 | 33.92 | 83.14 | 94.00 | -10.86 | Horizontal |

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



7.2.2 Spurious emissions

■ Below 1GHz

| Below 16112 | | | | | | | | | | |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|-------------------|------------------------|-----------------------|--------------|--|--|
| 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 | | |
| 36.38 | 29.04 | 14.68 | 0.62 | 30.06 | 14.28 | 40.00 | -25.72 | Vertical | | |
| 51.12 | 31.08 | 15.20 | 0.78 | 29.99 | 17.07 | 40.00 | -22.93 | Vertical | | |
| 73.62 | 32.11 | 10.00 | 0.97 | 29.83 | 13.25 | 40.00 | -26.75 | Vertical | | |
| 134.09 | 27.67 | 10.61 | 1.47 | 29.49 | 10.26 | 43.50 | -33.24 | Vertical | | |
| 235.82 | 31.69 | 13.88 | 2.05 | 29.53 | 18.09 | 46.00 | -27.91 | Vertical | | |
| 397.63 | 29.33 | 17.01 | 2.84 | 29.51 | 19.67 | 46.00 | -26.33 | Vertical | | |
| 57.59 | 27.50 | 14.85 | 0.84 | 29.94 | 13.25 | 40.00 | -26.75 | Horizontal | | |
| 98.14 | 29.98 | 15.03 | 1.18 | 29.71 | 16.48 | 43.50 | -27.02 | Horizontal | | |
| 266.61 | 27.28 | 14.26 | 2.21 | 29.77 | 13.98 | 46.00 | -32.02 | Horizontal | | |
| 410.38 | 30.30 | 17.26 | 2.91 | 29.48 | 20.99 | 46.00 | -25.01 | Horizontal | | |
| 549.02 | 25.18 | 19.57 | 3.52 | 29.30 | 18.97 | 46.00 | -27.03 | Horizontal | | |
| 771.45 | 24.05 | 21.72 | 4.36 | 29.20 | 20.93 | 46.00 | -25.07 | 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 |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|-------------------|------------------------|-----------------------|--------------|
| 4804.00 | 38.58 | 31.78 | 8.60 | 32.09 | 46.87 | 74.00 | -27.13 | Vertical |
| 7206.00 | 32.67 | 36.15 | 11.65 | 32.00 | 48.47 | 74.00 | -25.53 | Vertical |
| 9608.00 | 32.22 | 37.95 | 14.14 | 31.62 | 52.69 | 74.00 | -21.31 | Vertical |
| 12010.00 | * | | | | | 74.00 | | Vertical |
| 14412.00 | * | | | | | 74.00 | | Vertical |
| 4804.00 | 43.12 | 31.78 | 8.60 | 32.09 | 51.41 | 74.00 | -22.59 | Horizontal |
| 7206.00 | 34.54 | 36.15 | 11.65 | 32.00 | 50.34 | 74.00 | -23.66 | Horizontal |
| 9608.00 | 31.76 | 37.95 | 14.14 | 31.62 | 52.23 | 74.00 | -21.77 | 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) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|-------------------|------------------------|-----------------------|--------------|
| 4804.00 | 27.15 | 31.78 | 8.60 | 32.09 | 35.44 | 54.00 | -18.56 | Vertical |
| 7206.00 | 21.22 | 36.15 | 11.65 | 32.00 | 37.02 | 54.00 | -16.98 | Vertical |
| 9608.00 | 20.21 | 37.95 | 14.14 | 31.62 | 40.68 | 54.00 | -13.32 | Vertical |
| 12010.00 | * | | | | | 54.00 | | Vertical |
| 14412.00 | * | | | | | 54.00 | | Vertical |
| 4804.00 | 31.52 | 31.78 | 8.60 | 32.09 | 39.81 | 54.00 | -14.19 | Horizontal |
| 7206.00 | 23.47 | 36.15 | 11.65 | 32.00 | 39.27 | 54.00 | -14.73 | Horizontal |
| 9608.00 | 20.05 | 37.95 | 14.14 | 31.62 | 40.52 | 54.00 | -13.48 | 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

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 | 37.73 | 31.85 | 8.67 | 32.12 | 46.13 | 74.00 | -27.87 | Vertical |
| 7323.00 | 32.11 | 36.37 | 11.72 | 31.89 | 48.31 | 74.00 | -25.69 | Vertical |
| 9764.00 | 31.72 | 38.35 | 14.25 | 31.62 | 52.70 | 74.00 | -21.30 | Vertical |
| 12205.00 | * | | | | | 74.00 | | Vertical |
| 14646.00 | * | | | | | 74.00 | | Vertical |
| 4882.00 | 42.10 | 31.85 | 8.67 | 32.12 | 50.50 | 74.00 | -23.50 | Horizontal |
| 7323.00 | 33.90 | 36.37 | 11.72 | 31.89 | 50.10 | 74.00 | -23.90 | Horizontal |
| 9764.00 | 31.18 | 38.35 | 14.25 | 31.62 | 52.16 | 74.00 | -21.84 | 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 | 26.48 | 31.85 | 8.67 | 32.12 | 34.88 | 54.00 | -19.12 | Vertical |
| 7323.00 | 20.76 | 36.37 | 11.72 | 31.89 | 36.96 | 54.00 | -17.04 | Vertical |
| 9764.00 | 19.81 | 38.35 | 14.25 | 31.62 | 40.79 | 54.00 | -13.21 | Vertical |
| 12205.00 | * | | | | | 54.00 | | Vertical |
| 14646.00 | * | | | | | 54.00 | | Vertical |
| 4882.00 | 30.76 | 31.85 | 8.67 | 32.12 | 39.16 | 54.00 | -14.84 | Horizontal |
| 7323.00 | 22.96 | 36.37 | 11.72 | 31.89 | 39.16 | 54.00 | -14.84 | Horizontal |
| 9764.00 | 19.58 | 38.35 | 14.25 | 31.62 | 40.56 | 54.00 | -13.44 | 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 | 36.54 | 31.93 | 8.73 | 32.16 | 45.04 | 74.00 | -28.96 | Vertical |
| 7440.00 | 31.32 | 36.59 | 11.79 | 31.78 | 47.92 | 74.00 | -26.08 | Vertical |
| 9920.00 | 31.02 | 38.81 | 14.38 | 31.88 | 52.33 | 74.00 | -21.67 | Vertical |
| 12400.00 | * | | | | | 74.00 | | Vertical |
| 14880.00 | * | | | | | 74.00 | | Vertical |
| 4960.00 | 40.67 | 31.93 | 8.73 | 32.16 | 49.17 | 74.00 | -24.83 | Horizontal |
| 7440.00 | 33.01 | 36.59 | 11.79 | 31.78 | 49.61 | 74.00 | -24.39 | Horizontal |
| 9920.00 | 30.37 | 38.81 | 14.38 | 31.88 | 51.68 | 74.00 | -22.32 | 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 | 25.56 | 31.93 | 8.73 | 32.16 | 34.06 | 54.00 | -19.94 | Vertical |
| 7440.00 | 20.14 | 36.59 | 11.79 | 31.78 | 36.74 | 54.00 | -17.26 | Vertical |
| 9920.00 | 19.26 | 38.81 | 14.38 | 31.88 | 40.57 | 54.00 | -13.43 | Vertical |
| 12400.00 | * | | | | | 54.00 | | Vertical |
| 14880.00 | * | | | | | 54.00 | | Vertical |
| 4960.00 | 29.72 | 31.93 | 8.73 | 32.16 | 38.22 | 54.00 | -15.78 | Horizontal |
| 7440.00 | 22.27 | 36.59 | 11.79 | 31.78 | 38.87 | 54.00 | -15.13 | Horizontal |
| 9920.00 | 18.93 | 38.81 | 14.38 | 31.88 | 40.24 | 54.00 | -13.76 | 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.



7.2.3 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 |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|-------------------|------------------------|-----------------------|--------------|
| 2390.00 | 44.44 | 27.59 | 5.38 | 30.18 | 47.23 | 74.00 | -26.77 | Horizontal |
| 2400.00 | 61.45 | 27.58 | 5.39 | 30.18 | 64.24 | 74.00 | -9.76 | Horizontal |
| 2390.00 | 45.13 | 27.59 | 5.38 | 30.18 | 47.92 | 74.00 | -26.08 | Vertical |
| 2400.00 | 63.65 | 27.58 | 5.39 | 30.18 | 66.44 | 74.00 | -7.56 | 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 | 34.63 | 27.59 | 5.38 | 30.18 | 37.42 | 54.00 | -16.58 | Horizontal |
| 2400.00 | 45.96 | 27.58 | 5.39 | 30.18 | 48.75 | 54.00 | -5.25 | Horizontal |
| 2390.00 | 34.69 | 27.59 | 5.38 | 30.18 | 37.48 | 54.00 | -16.52 | Vertical |
| 2400.00 | 47.76 | 27.58 | 5.39 | 30.18 | 50.55 | 54.00 | -3.45 | Vertical |

| T | est channel: | Highest channel |
|---|-----------------|-----------------------|
| | 001 01101111011 | 1 11311001 0110111101 |

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 | 46.72 | 27.53 | 5.47 | 29.93 | 49.79 | 74.00 | -24.21 | Horizontal |
| 2500.00 | 45.60 | 27.55 | 5.49 | 29.93 | 48.71 | 74.00 | -25.29 | Horizontal |
| 2483.50 | 47.83 | 27.53 | 5.47 | 29.93 | 50.90 | 74.00 | -23.10 | Vertical |
| 2500.00 | 46.75 | 27.55 | 5.49 | 29.93 | 49.86 | 74.00 | -24.14 | 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 | 37.48 | 27.53 | 5.47 | 29.93 | 40.55 | 54.00 | -13.45 | Horizontal |
| 2500.00 | 35.26 | 27.55 | 5.49 | 29.93 | 38.37 | 54.00 | -15.63 | Horizontal |
| 2483.50 | 38.82 | 27.53 | 5.47 | 29.93 | 41.89 | 54.00 | -12.11 | Vertical |
| 2500.00 | 35.31 | 27.55 | 5.49 | 29.93 | 38.42 | 54.00 | -15.58 | Vertical |

Remark:

^{1.} Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor



7.3 20dB Occupy Bandwidth

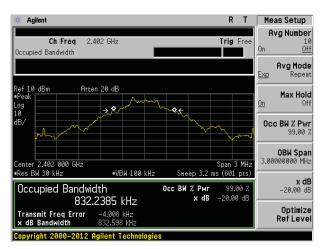
| Test Requirement: | FCC Part15 C Section 15.249/15.215 |
|-------------------|---|
| Test Method: | ANSI C63.4:2009 |
| Limit: | Operation Frequency range 2400MHz~2483.5MHz |
| Test setup: | Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane |
| Test Instruments: | Refer to section 6.0 for details |
| Test mode: | Refer to section 5.3 for details |
| Test results: | Pass |

Measurement Data

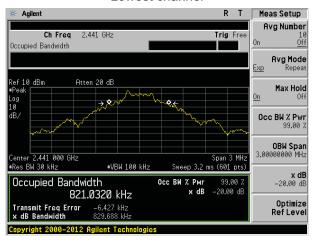
| Test channel | 20dB bandwidth(MHz) | Result |
|--------------|---------------------|--------|
| Lowest | 0.833 | Pass |
| Middle | 0.830 | Pass |
| Highest | 0.820 | Pass |

Test plot as follows:

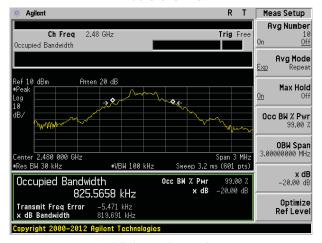




Lowest channel



Middle channel



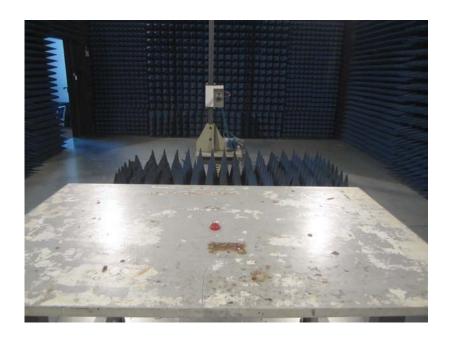
Highest channel



8 Test Setup Photo

Radiated Emission







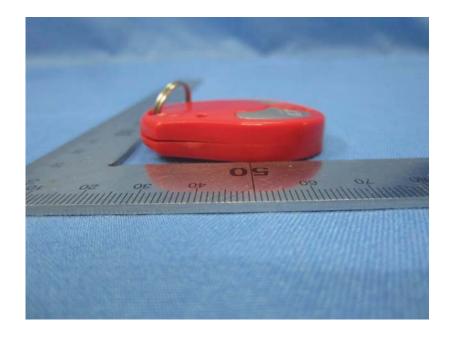
9 EUT Constructional Details



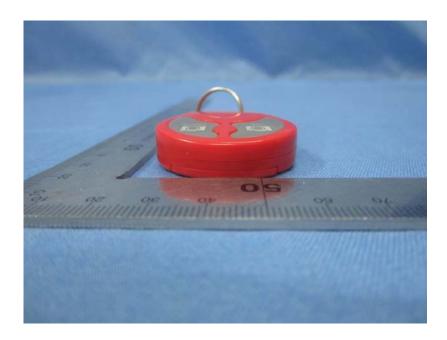








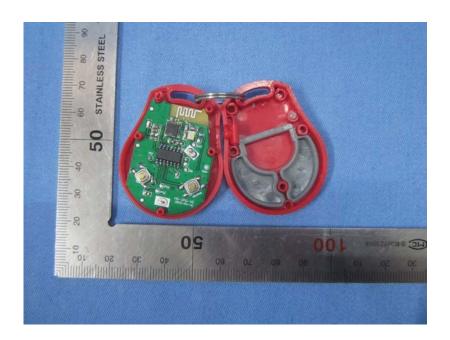






















-----End-----