

# FCC TEST REPORT

**Product** : LED WIRELESS TOW LIGHT  
**Trade mark** : BLAZER international  
**Model/Type reference** : C6304NF  
**Serial Number** : N/A  
**Report Number** : EED32J00258901  
**FCC ID** : PZTC6304NF  
**Date of Issue** : Jun. 27, 2018  
**Test Standards** : 47 CFR Part 15 Subpart C  
**Test result** : PASS

Prepared for:

**Tiger Accessory Group LLC**  
**6700 Wildlife Way, Long Grove, Illinois 60047, United States**

Prepared by:

**Centre Testing International Group Co., Ltd.**  
**Hongwei Industrial Zone, Bao'an 70 District,**  
**Shenzhen, Guangdong, China**  
**TEL: +86-755-3368 3668**  
**FAX: +86-755-3368 3385**

Tested By:

Tom chen  
Tom chen (Test Project)

Compiled by:

Kevin Yang  
Kevin yang (Project Engineer)

Reviewed by:

Ware Xin  
Ware Xin (Reviewer)

Approved by:

Sheek Luo  
Sheek Luo (Lab supervisor)

Date:

Jun. 27, 2018

Check No.:2448721943



## 2Version

| Version No. | Date          | Description |
|-------------|---------------|-------------|
| 00          | Jun. 27, 2018 | Original    |
|             |               |             |
|             |               |             |

### 3 Test Summary

| Test Item  | Test Requirement                                   | Test method      | Result |
|--|--|------------------|--------|
| <b>Antenna Requirement</b>   | 47 CFR Part 15 Subpart C Section 15.203            | ANSI C63.10-2013 | PASS   |
| <b>AC Power Line Conducted Emission</b>                                  | 47 CFR Part 15 Subpart C Section 15.207            | ANSI C63.10-2013 | N/A    |
| <b>Field Strength of the Fundamental Signal</b>                          | 47 CFR Part 15 Subpart C Section 15.249 (a)        | ANSI C63.10-2013 | PASS   |
| <b>Spurious Emissions</b>  | 47 CFR Part 15 Subpart C Section 15.249 (a)/15.209 | ANSI C63.10-2013 | PASS   |
| <b>Restricted bands around fundamental frequency (Radiated Emission)</b> | 47 CFR Part 15 Subpart C Section 15.249(a)/15.205  | ANSI C63.10-2013 | PASS   |
| <b>20dB Occupied Bandwidth</b>   | 47 CFR Part 15 Subpart C Section 15.215 (c)        | ANSI C63.10-2013 | PASS   |

Remark:

The tested samples and the sample information are provided by the client.

N/A: In this whole report not application.

## 4 Contents

|  | Page |
|--|------|
| 1 COVER PAGE.....  | 1    |
| 2 Version.....   | 2    |
| 3 Test Summary.....  | 3    |
| 4 Contents.....  | 4    |
| 5 General Information.....                                     | 5    |
| 5.1 Client Information.....                                    | 5    |
| 5.2 General Description of EUT.....                            | 5    |
| 5.3 Product Specification subjective to this standard.....     | 5    |
| 5.4 Test Environment and Mode.....                             | 5    |
| 5.5 Description of Support Units.....                          | 6    |
| 5.6 Test Location.....   | 6    |
| 5.7 Deviation from Standards.....                              | 6    |
| 5.8 Abnormalities from Standard Conditions.....                | 6    |
| 5.9 Other Information Requested by the Customer.....           | 6    |
| 5.10 Measurement Uncertainty (95% confidence levels, k=2)..... | 6    |
| 6 Equipment List.....  | 7    |
| 7 Test results and Measurement Data.....                       | 8    |
| 7.1 Antenna Requirement.....                                   | 8    |
| 7.2 Radiated Spurious Emission.....                            | 9    |
| 7.3 Restricted bands around fundamental frequency.....         | 16   |
| 7.4 20dB Bandwidth.....  | 18   |
| APPENDIX PHOTOGRAPHS OF TEST SETUP.....                        | 21   |
| APPENDIX PHOTOGRAPHS OF EUT.....                               | 23   |

## 5 General Information

### 5.1 Client Information

|                          |  |
|--------------------------|--|
| Applicant:               | Tiger Accessory Group LLC  |
| Address of Applicant:    | 6700 Wildlife Way, Long Grove, Illinois 60047, United States                   |
| Manufacturer:            | TOKING AUTO INDUSTRIAL INT' L CO., LTD.  |
| Address of Manufacturer: | A-202, ZHONGTIAN MCC, TONGPU ROAD ACROSS XIDOU MEN ROAD, HANGZHOU 310012 CHINA |
| Factory:                 | ZHEJIANG LEIYA ELECTRONICS CO., LTD.   |
| Address of Factory:      | NO. 519, ROAD 15, BINHAI INDUSTRIAL PARK, WENZHOU, ZHEJIANG 325025, CHINA.     |

### 5.2 General Description of EUT

|                                  |                        |
|----------------------------------|------------------------|
| Product Name:                    | LED WIRELESS TOW LIGHT |
| Model No.:                       | C6304NF                |
| Trade Mark:                      | BLAZER international   |
| EUT Supports Radios application: | 2401MHz-2479MHz        |
| Power Supply:                    | DC12V                  |

### 5.3 Product Specification subjective to this standard

|                       |                                |
|-----------------------|--------------------------------|
| Frequency Range:      | 2401MHz-2479MHz                |
| Modulation Type:      | GFSK                           |
| Number of Channels:   | 28 (declared by the client)    |
| Sample Type:          | fixed production               |
| Antenna Type:         | Integral                       |
| Antenna Gain:         | 2.5dBi                         |
| Test voltage:         | DC 12V                         |
| Sample Received Date: | Nov. 16, 2017                  |
| Sample tested Date:   | Nov. 16, 2017 to Jun. 27, 2018 |

### 5.4 Test Environment and Mode

|                               |   |
|-------------------------------|---|
| <b>Operating Environment:</b> |   |
| Temperature:                  | 24°C  |
| Humidity:                     | 55% RH  |
| Atmospheric Pressure:         | 1010 mbar   |
| <b>Test mode:</b>             |   |
| Tx Mode:                      | Keep the EUT transmitting continuous modulation signal at lowest middle and highest channel . |
| Normal Mode:                  | The EUT transmitting and receiving the signal between the telecontroller and LED Light.       |



## 5.5 Description of Support Units

The EUT has been tested independently.

## 5.6 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd.

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, Guangdong, China 518101

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

## 5.7 Deviation from Standards

None.

## 5.8 Abnormalities from Standard Conditions

None.

## 5.9 Other Information Requested by the Customer

None.

## 5.10 Measurement Uncertainty (95% confidence levels, k=2)

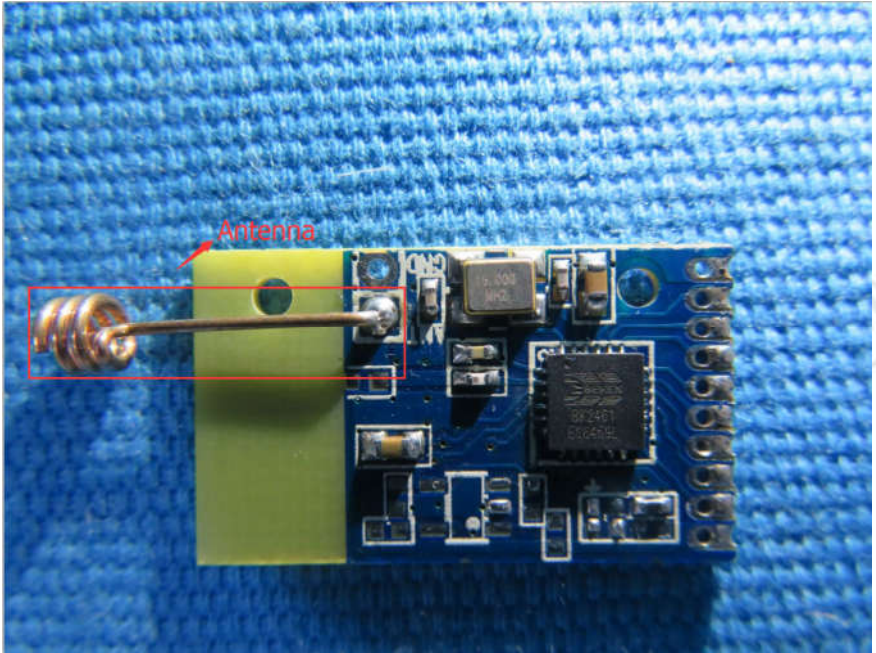
| No. | Item                            | Measurement Uncertainty |
|-----|---------------------------------|-------------------------|
| 1   | Radio Frequency                 | $7.9 \times 10^{-8}$    |
| 2   | RF power, conducted             | 0.31dB (30MHz-1GHz)     |
|     |                                 | 0.57dB (1GHz-18GHz)     |
| 3   | Radiated Spurious emission test | 4.5dB (30MHz-1GHz)      |
|     |                                 | 4.8dB (1GHz-12.75GHz)   |
| 4   | Conduction emission             | 3.6dB (9kHz to 150kHz)  |
|     |                                 | 3.2dB (150kHz to 30MHz) |
| 5   | Temperature test                | 0.64°C                  |
| 6   | Humidity test                   | 2.8%                    |
| 7   | DC power voltages               | 0.025%                  |

## 6 Equipment List

| 3M Semi/full-anechoic Chamber    |              |                              |               |                          |                            |
|----------------------------------|--------------|------------------------------|---------------|--------------------------|----------------------------|
| Equipment                        | Manufacturer | Model No.                    | Serial Number | Cal. date (mm-dd-yyyy)   | Cal. Due date (mm-dd-yyyy) |
| 3M Chamber & Accessory Equipment | TDK          | SAC-3                        | ---           | 06-04-2016               | 06-03-2019                 |
| TRILOG Broadband Antenna         | SCHWARZBEC K | VULB9163                     | 9163-484      | 06-09-2017<br>06-08-2018 | 06-08-2018<br>06-07-2019   |
| Microwave Preamplifier           | Agilent      | 8449B                        | 3008A02425    | 02-16-2017<br>02-15-2018 | 02-15-2018<br>02-14-2019   |
| Horn Antenna                     | ETS-LINDGREN | 3117                         | 00057407      | 02-16-2017<br>02-15-2018 | 02-15-2018<br>02-14-2019   |
| Loop Antenna                     | ETS          | 6502                         | 00071730      | 06-22-2017               | 06-21-2019                 |
| Spectrum Analyzer                | R&S          | FSP40                        | 100416        | 06-13-2017<br>06-12-2018 | 06-12-2018<br>06-11-2019   |
| Receiver                         | R&S          | ESCI                         | 100435        | 06-14-2017<br>06-13-2018 | 06-13-2018<br>06-12-2019   |
| LISN                             | schwarzbeck  | NNBM8125                     | 81251547      | 06-13-2017<br>06-12-2018 | 06-12-2018<br>06-11-2019   |
| LISN                             | schwarzbeck  | NNBM8125                     | 81251548      | 06-13-2017<br>06-12-2018 | 06-12-2018<br>06-11-2019   |
| Signal Generator                 | Agilent      | E4438C                       | MY45095744    | 03-14-2017<br>03-13-2018 | 03-13-2018<br>03-12-2019   |
| Signal Generator                 | Keysight     | E8257D                       | MY53401106    | 03-14-2017<br>03-13-2018 | 03-13-2018<br>03-12-2019   |
| Temperature/ Humidity Indicator  | TAYLOR       | 1451                         | 1905          | 05-08-2017<br>05-07-2018 | 05-07-2018<br>05-06-2019   |
| Cable line                       | Fulai(7M)    | SF106                        | 5219/6A       | 01-11-2017<br>01-10-2018 | 01-10-2018<br>01-09-2019   |
| Cable line                       | Fulai(6M)    | SF106                        | 5220/6A       | 01-11-2017<br>01-10-2018 | 01-10-2018<br>01-09-2019   |
| Cable line                       | Fulai(3M)    | SF106                        | 5216/6A       | 01-11-2017<br>01-10-2018 | 01-10-2018<br>01-09-2019   |
| Cable line                       | Fulai(3M)    | SF106                        | 5217/6A       | 01-11-2017<br>01-10-2018 | 01-10-2018<br>01-09-2019   |
| High-pass filter                 | Sinoscite    | FL3CX03WG18<br>NM12-0398-002 | ---           | 01-11-2017<br>01-10-2018 | 01-10-2018<br>01-09-2019   |
| band rejection filter            | Sinoscite    | FL5CX01CA09<br>CL12-0395-001 | ---           | 01-11-2017<br>01-10-2018 | 01-10-2018<br>01-09-2019   |
| band rejection filter            | Sinoscite    | FL5CX01CA08<br>CL12-0393-001 | ---           | 01-11-2017<br>01-10-2018 | 01-10-2018<br>01-09-2019   |
| band rejection filter            | Sinoscite    | FL5CX02CA04<br>CL12-0396-002 | ---           | 01-11-2017<br>01-10-2018 | 01-10-2018<br>01-09-2019   |
| band rejection filter            | Sinoscite    | FL5CX02CA03<br>CL12-0394-001 | ---           | 01-11-2017<br>01-10-2018 | 01-10-2018<br>01-09-2019   |

## 7 Test results and Measurement Data

### 7.1 Antenna Requirement

|  |   |
|--|---|
| <b>Standard requirement:</b>   | 47 CFR Part 15C Section 15.203  |
| <p>15.203 requirement:<br/>         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> |   |
| <b>EUT Antenna:</b>  |  |
| <p>The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 2.5dBi.</p>   |   |



## 7.2 Radiated Spurious Emission

**Test Requirement:** 47 CFR Part 15C Section 15.249 and 15.209

**Test Method:** ANSI C63.10

**Test Site:** Measurement Distance: 3m (Semi-Anechoic Chamber)

**Receiver Setup:**

| Frequency         | Detector   | RBW    | VBW    | Remark     |
|-------------------|------------|--------|--------|------------|
| 0.009MHz-0.090MHz | Peak       | 10kHz  | 30KHz  | Peak       |
| 0.009MHz-0.090MHz | Average    | 10kHz  | 30KHz  | Average    |
| 0.090MHz-0.110MHz | Quasi-peak | 10kHz  | 30KHz  | Quasi-peak |
| 0.110MHz-0.490MHz | Peak       | 10kHz  | 30KHz  | Peak       |
| 0.110MHz-0.490MHz | Average    | 10kHz  | 30KHz  | Average    |
| 0.490MHz -30MHz   | Quasi-peak | 10kHz  | 30kHz  | Quasi-peak |
| 30MHz-1GHz        | Quasi-peak | 120kHz | 300KHz | Quasi-peak |
| Above 1GHz        | Peak       | 1MHz   | 3MHz   | Peak       |
|                   | Peak       | 1MHz   | 10Hz   | Average    |

**Test Setup:**

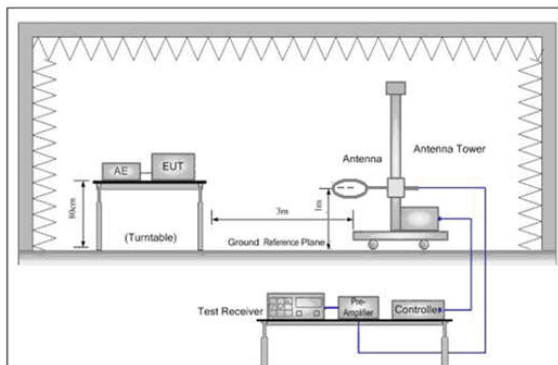


Figure 1. Below 30MHz

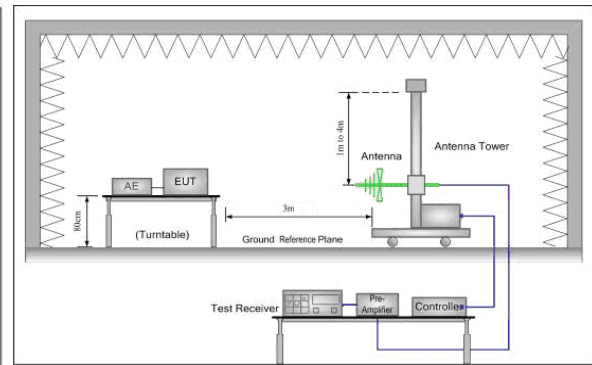


Figure 2. 30MHz to 1GHz

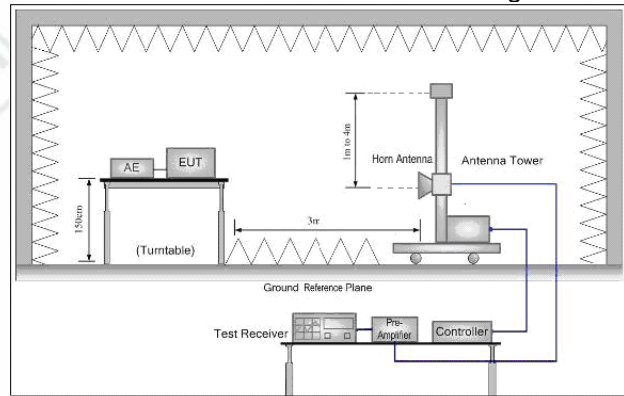


Figure 3. Above 1GHz

**Test Procedure:**

**Below 1GHz test procedure as below:**

The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. 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.

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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotating 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.

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.

**Above 1GHz test procedure as below:**

Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter( Above 18GHz the distance is 1 meter and table is 1.5 meter).

Test the EUT in the lowest channel ,middle channel, the Highest channel

The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.

Repeat above procedures until all frequencies measured was complete.

**Limit:**  
(Spurious Emissions)

| Frequency         | Field strength (microvolt/meter) | Limit (dBµV/m) | Remark     | Measurement distance (m) |
|-------------------|----------------------------------|----------------|------------|--------------------------|
| 0.009MHz-0.490MHz | 2400/F(kHz)                      | -              | -          | 300                      |
| 0.490MHz-1.705MHz | 24000/F(kHz)                     | -              | -          | 30                       |
| 1.705MHz-30MHz    | 30                               | -              | -          | 30                       |
| 30MHz-88MHz       | 100                              | 40.0           | Quasi-peak | 3                        |
| 88MHz-216MHz      | 150                              | 43.5           | Quasi-peak | 3                        |
| 216MHz-960MHz     | 200                              | 46.0           | Quasi-peak | 3                        |
| 960MHz-1GHz       | 500                              | 54.0           | Quasi-peak | 3                        |
| Above 1GHz        | 500                              | 54.0           | Average    | 3                        |

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

**Limit:**  
(Field strength of the fundamental signal)

| Frequency         | Limit (dBµV/m @3m) | Remark        |
|-------------------|--------------------|---------------|
| 2400MHz-2483.5MHz | 94.0               | Average Value |
|                   | 114.0              | Peak Value    |

**Test Mode:** Transmitting mode

**Instruments Used:** Refer to section 6 for details

**Test Results:** Pass

**Measurement Data**

**Field Strength Of The Fundamental Signal**

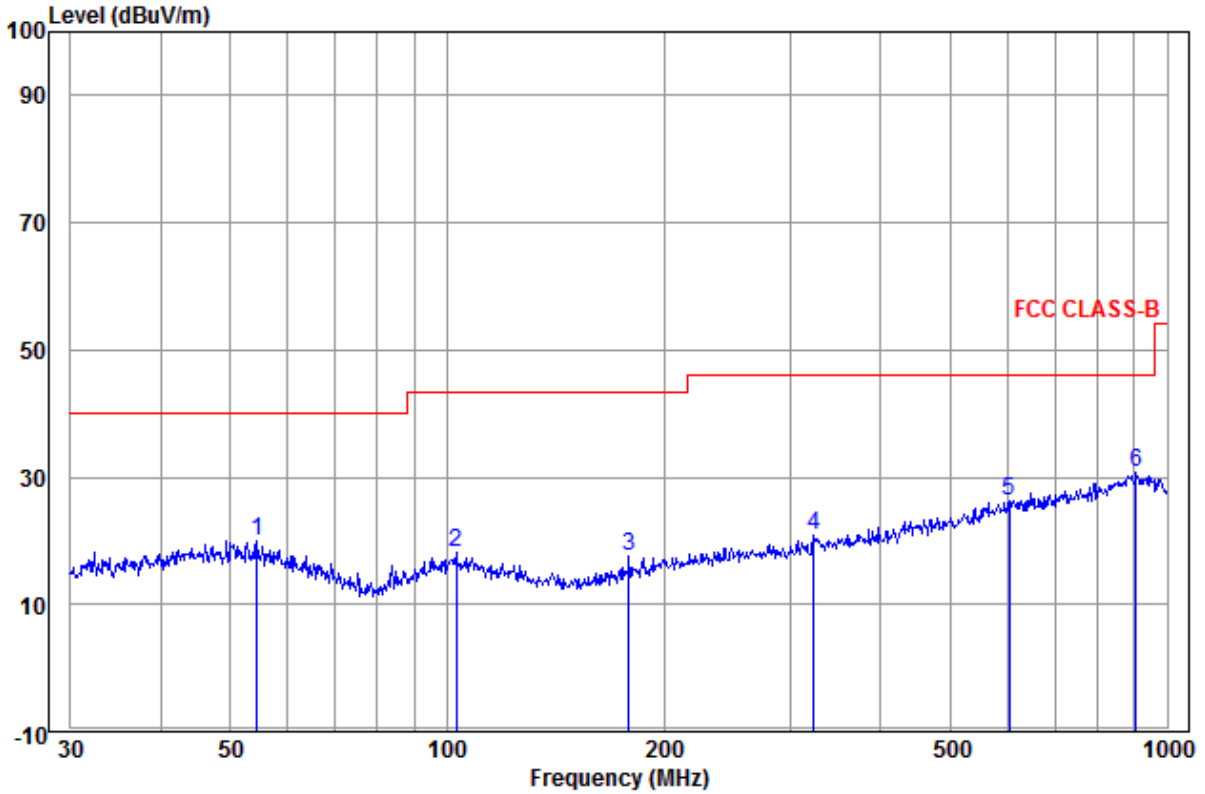
Peak value:

| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Gain (dB) | Read Level (dBuV) | Level (dBuV/m) | Limit (dBuV/m) | Over Limit (dB) | Result | Antenna Polaxis |
|-----------------|-----------------------|-----------------|------------------|-------------------|----------------|----------------|-----------------|--------|-----------------|
| 2401            | 32.56                 | 3.07            | 44.04            | 92.61             | 84.20          | 94.0           | -9.80           | Pass   | H               |
| 2401            | 32.56                 | 3.07            | 44.04            | 92.02             | 83.61          | 94.0           | -10.39          | Pass   | V               |
| 2440            | 32.64                 | 4.41            | 44.07            | 92.32             | 85.30          | 94.0           | -8.70           | Pass   | H               |
| 2440            | 32.64                 | 4.41            | 44.07            | 92.04             | 85.02          | 94.0           | -8.98           | Pass   | V               |
| 2479            | 32.71                 | 3.12            | 44.14            | 92.71             | 84.40          | 94.0           | -9.60           | Pass   | H               |
| 2479            | 32.71                 | 3.12            | 44.14            | 92.27             | 83.96          | 94.0           | -10.04          | Pass   | V               |

**Remark:** As shown in this section, for field strength of the fundamental signal measurements, RBW and VBW set 10MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above. So, only the peak measurements were shown in the report.

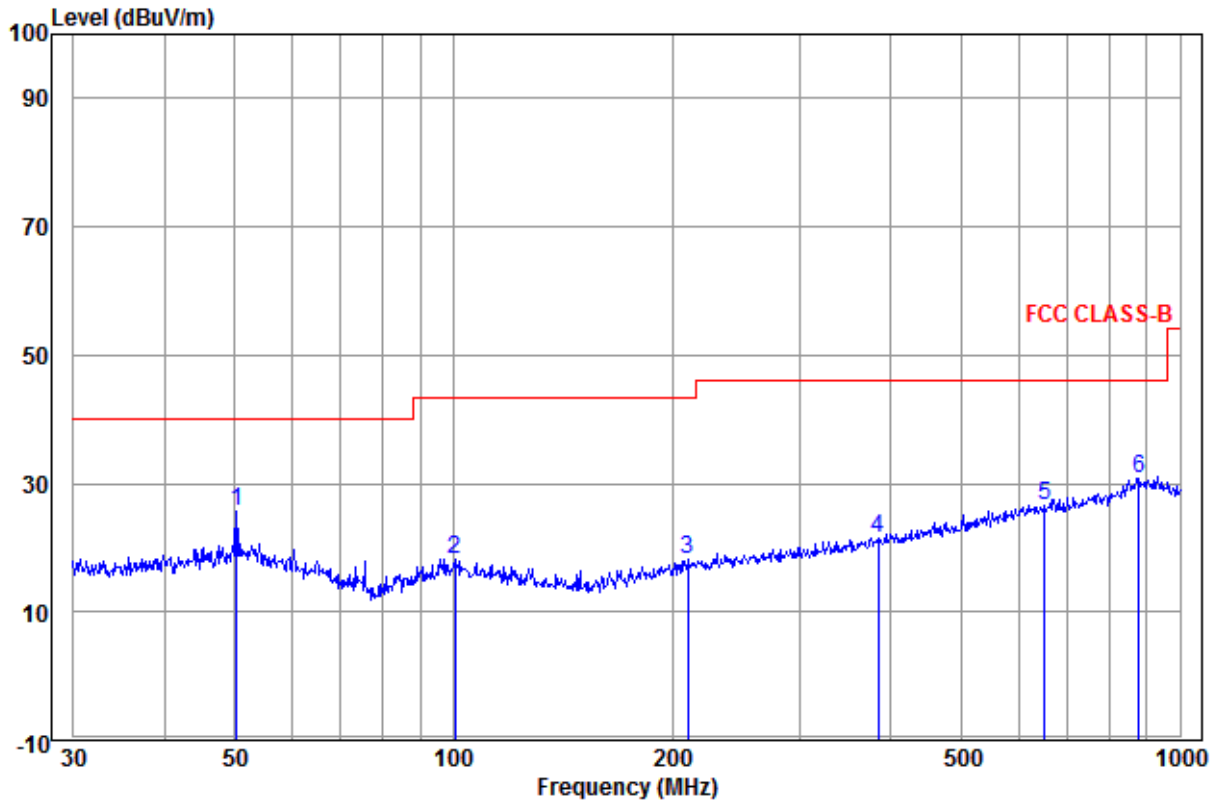
**Spurious Emissions**  
**30MHz~1GHz**

**Horizontal**



|      | Ant Freq | Ant Factor | Cable Loss | Read Level | Limit Line | Over Limit | Pol/Phase | Remark     |
|------|----------|------------|------------|------------|------------|------------|-----------|------------|
|      | MHz      | dB/m       | dB         | dBuV       | dBuV/m     | dB         |           |            |
| 1    | 54.452   | 13.90      | 0.16       | 5.89       | 19.95      | 40.00      | -20.05    | Horizontal |
| 2    | 103.080  | 12.22      | 0.59       | 5.47       | 18.28      | 43.50      | -25.22    | Horizontal |
| 3    | 178.758  | 10.45      | 0.91       | 6.18       | 17.54      | 43.50      | -25.96    | Horizontal |
| 4    | 323.320  | 13.89      | 1.19       | 5.73       | 20.81      | 46.00      | -25.19    | Horizontal |
| 5    | 603.539  | 18.71      | 1.83       | 5.68       | 26.22      | 46.00      | -19.78    | Horizontal |
| 6 pp | 906.482  | 22.09      | 2.47       | 6.33       | 30.89      | 46.00      | -15.11    | Horizontal |

Vertical



|   | Ant Freq  | Ant Factor | Cable Loss | Read Level | Level  | Limit Line | Over Limit | Pol/Phase | Remark |
|---|-----------|------------|------------|------------|--------|------------|------------|-----------|--------|
|   | MHz       | dB/m       | dB         | dBuV       | dBuV/m | dBuV/m     | dB         |           |        |
| 1 | pp 50.232 | 14.56      | 0.11       | 10.87      | 25.54  | 40.00      | -14.46     | Vertical  |        |
| 2 | 100.581   | 12.45      | 0.59       | 5.18       | 18.22  | 43.50      | -25.28     | Vertical  |        |
| 3 | 210.048   | 11.74      | 1.15       | 5.40       | 18.29  | 43.50      | -25.21     | Vertical  |        |
| 4 | 383.932   | 14.95      | 1.32       | 5.28       | 21.55  | 46.00      | -24.45     | Vertical  |        |
| 5 | 651.942   | 18.91      | 1.84       | 5.95       | 26.70  | 46.00      | -19.30     | Vertical  |        |
| 6 | 878.322   | 21.76      | 2.47       | 6.67       | 30.90  | 46.00      | -15.10     | Vertical  |        |



**Above 1GHz**

| Test mode:      |                       | Transmitting    |                  | Test channel:           |                      | Lowest(2401MHz)           |                 |        |                 |        |
|-----------------|-----------------------|-----------------|------------------|-------------------------|----------------------|---------------------------|-----------------|--------|-----------------|--------|
| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Gain (dB) | Read Level (dB $\mu$ V) | Level (dB $\mu$ V/m) | Limit Line (dB $\mu$ V/m) | Over Limit (dB) | Result | Antenna Polaxis | Remark |
| 2102.853        | 31.93                 | 2.90            | 43.65            | 46.32                   | 37.50                | 74.00                     | -36.50          | Pass   | H               | PK     |
| 3026.195        | 33.58                 | 3.39            | 44.70            | 46.75                   | 39.02                | 74.00                     | -34.98          | Pass   | H               | PK     |
| 3598.087        | 33.09                 | 3.88            | 44.64            | 44.44                   | 36.77                | 74.00                     | -37.23          | Pass   | H               | PK     |
| 4802.000        | 34.68                 | 5.98            | 44.60            | 65.63                   | 61.69                | 74.00                     | -12.31          | Pass   | H               | PK     |
| 4802.000        | 34.68                 | 5.98            | 44.60            | 48.33                   | 44.39                | 54.00                     | -9.61           | Pass   | H               | AV     |
| 7203.000        | 36.42                 | 6.97            | 44.77            | 54.86                   | 53.48                | 74.00                     | -20.52          | Pass   | H               | PK     |
| 7203.000        | 36.42                 | 6.97            | 44.77            | 25.71                   | 24.33                | 54.00                     | -29.67          | Pass   | H               | AV     |
| 9604.000        | 37.88                 | 6.97            | 45.58            | 42.91                   | 42.18                | 74.00                     | -31.82          | Pass   | H               | PK     |
| 1442.758        | 30.76                 | 2.21            | 44.07            | 46.37                   | 35.27                | 74.00                     | -38.73          | Pass   | V               | PK     |
| 2129.789        | 31.99                 | 2.92            | 43.69            | 47.21                   | 38.43                | 74.00                     | -35.57          | Pass   | V               | PK     |
| 3525.555        | 33.15                 | 3.83            | 44.64            | 46.99                   | 39.33                | 74.00                     | -34.67          | Pass   | V               | PK     |
| 4802.000        | 34.68                 | 5.98            | 44.60            | 61.87                   | 57.93                | 74.00                     | -16.07          | Pass   | V               | PK     |
| 4802.000        | 34.68                 | 5.98            | 44.60            | 46.79                   | 42.85                | 54.00                     | -11.15          | Pass   | V               | AV     |
| 7203.000        | 36.42                 | 6.97            | 44.77            | 53.92                   | 52.54                | 74.00                     | -21.46          | Pass   | V               | PK     |
| 7203.000        | 36.42                 | 6.97            | 44.77            | 35.26                   | 33.88                | 54.00                     | -20.12          | Pass   | V               | AV     |
| 9604.000        | 37.88                 | 6.97            | 45.58            | 42.31                   | 41.58                | 74.00                     | -32.42          | Pass   | V               | PK     |

| Test mode:      |                       | Transmitting    |                  | Test channel:           |                      | Middle(2440MHz)           |                 |        |                 |        |
|-----------------|-----------------------|-----------------|------------------|-------------------------|----------------------|---------------------------|-----------------|--------|-----------------|--------|
| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Gain (dB) | Read Level (dB $\mu$ V) | Level (dB $\mu$ V/m) | Limit Line (dB $\mu$ V/m) | Over Limit (dB) | Result | Antenna Polaxis | Remark |
| 1750.702        | 31.32                 | 2.58            | 43.73            | 45.20                   | 35.37                | 74.00                     | -38.63          | Pass   | H               | PK     |
| 3033.908        | 33.57                 | 3.39            | 44.70            | 46.45                   | 38.71                | 74.00                     | -35.29          | Pass   | H               | PK     |
| 3776.385        | 32.96                 | 4.02            | 44.62            | 47.34                   | 39.70                | 74.00                     | -34.30          | Pass   | H               | PK     |
| 4880.000        | 34.85                 | 6.13            | 44.60            | 69.17                   | 65.55                | 74.00                     | -8.45           | Pass   | H               | PK     |
| 4880.000        | 34.85                 | 6.13            | 44.60            | 51.37                   | 47.75                | 54.00                     | -6.25           | Pass   | H               | AV     |
| 7320.000        | 36.43                 | 6.85            | 44.87            | 60.68                   | 59.09                | 74.00                     | -14.91          | Pass   | H               | PK     |
| 7320.000        | 36.43                 | 6.85            | 44.87            | 43.96                   | 42.37                | 54.00                     | -11.63          | Pass   | H               | AV     |
| 9760.000        | 38.05                 | 7.12            | 45.55            | 42.56                   | 42.18                | 74.00                     | -31.82          | Pass   | H               | PK     |
| 1860.992        | 31.49                 | 2.70            | 43.62            | 45.74                   | 36.31                | 74.00                     | -37.69          | Pass   | V               | PK     |
| 3200.502        | 33.42                 | 3.55            | 44.68            | 47.83                   | 40.12                | 74.00                     | -33.88          | Pass   | V               | PK     |
| 3672.110        | 33.04                 | 3.94            | 44.63            | 46.81                   | 39.16                | 74.00                     | -34.84          | Pass   | V               | PK     |
| 4880.000        | 34.85                 | 6.13            | 44.60            | 60.66                   | 57.04                | 74.00                     | -16.96          | Pass   | V               | PK     |
| 4880.000        | 34.85                 | 6.13            | 44.60            | 44.16                   | 40.54                | 54.00                     | -13.46          | Pass   | V               | AV     |
| 7320.000        | 36.43                 | 6.85            | 44.87            | 54.41                   | 52.82                | 74.00                     | -21.18          | Pass   | V               | PK     |
| 7320.000        | 36.43                 | 6.85            | 44.87            | 38.66                   | 37.07                | 54.00                     | -16.93          | Pass   | V               | AV     |
| 9760.000        | 38.05                 | 7.12            | 45.55            | 41.82                   | 41.44                | 74.00                     | -32.56          | Pass   | V               | PK     |

| Test mode:      |                       | Transmitting    |                  | Test channel:           |                      | Highest(2479MHz)          |                 |        |                 |        |
|-----------------|-----------------------|-----------------|------------------|-------------------------|----------------------|---------------------------|-----------------|--------|-----------------|--------|
| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Gain (dB) | Read Level (dB $\mu$ V) | Level (dB $\mu$ V/m) | Limit Line (dB $\mu$ V/m) | Over Limit (dB) | Result | Antenna Polaxis | Remark |
| 1856.261        | 31.48                 | 2.70            | 43.63            | 46.52                   | 37.07                | 74.00                     | -36.93          | Pass   | H               | PK     |
| 2905.419        | 33.45                 | 3.32            | 44.61            | 45.98                   | 38.14                | 74.00                     | -35.86          | Pass   | H               | PK     |
| 3738.129        | 32.99                 | 3.99            | 44.62            | 46.88                   | 39.24                | 74.00                     | -34.76          | Pass   | H               | PK     |
| 4958.000        | 35.02                 | 6.29            | 44.60            | 60.54                   | 57.25                | 74.00                     | -16.75          | Pass   | H               | PK     |
| 4958.000        | 35.02                 | 6.29            | 44.60            | 43.27                   | 39.98                | 54.00                     | -14.02          | Pass   | H               | AV     |
| 7437.000        | 36.45                 | 6.73            | 44.97            | 52.93                   | 51.14                | 74.00                     | -22.86          | Pass   | H               | PK     |
| 7437.000        | 36.45                 | 6.73            | 44.97            | 37.71                   | 35.92                | 54.00                     | -18.08          | Pass   | H               | AV     |
| 9916.000        | 38.22                 | 7.26            | 45.52            | 42.90                   | 42.86                | 74.00                     | -31.14          | Pass   | H               | PK     |
| 2086.856        | 31.90                 | 2.89            | 43.63            | 46.64                   | 37.80                | 74.00                     | -36.20          | Pass   | V               | PK     |
| 3080.601        | 33.53                 | 3.44            | 44.69            | 46.32                   | 38.60                | 74.00                     | -35.40          | Pass   | V               | PK     |
| 3786.010        | 32.95                 | 4.03            | 44.62            | 46.50                   | 38.86                | 74.00                     | -35.14          | Pass   | V               | PK     |
| 4958.000        | 35.02                 | 6.29            | 44.60            | 61.08                   | 57.79                | 74.00                     | -16.21          | Pass   | V               | PK     |
| 4958.000        | 35.02                 | 6.29            | 44.60            | 45.57                   | 42.28                | 54.00                     | -11.72          | Pass   | V               | AV     |
| 7437.000        | 36.45                 | 6.73            | 44.97            | 52.92                   | 51.13                | 74.00                     | -22.87          | Pass   | V               | PK     |
| 7437.000        | 36.45                 | 6.73            | 44.97            | 39.36                   | 37.57                | 54.00                     | -16.43          | Pass   | V               | AV     |
| 9916.000        | 38.22                 | 7.26            | 45.52            | 40.80                   | 40.76                | 74.00                     | -33.24          | Pass   | V               | PK     |

## Remark:

- 1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Pre-amplifier. The basic equation with a sample calculation is as follows:  
 Final Test Level = Receiver Reading - Correct Factor  
 Correct Factor = Pre-amplifier Factor - Antenna Factor - Cable Factor
- 2) Scan from the test data, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

3)

### 7.3 Restricted bands around fundamental frequency

**Test Requirement:** 47 CFR Part 15C Section 15.209 and 15.205  
**Test Method:** ANSI C63.10  
**Test Site:** Measurement Distance: 3m (Semi-Anechoic Chamber)  
**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.

| Frequency     | Limit (dB $\mu$ V/m @3m) | Remark           |
|---------------|--------------------------|------------------|
| 30MHz-88MHz   | 40.0                     | Quasi-peak Value |
| 88MHz-216MHz  | 43.5                     | Quasi-peak Value |
| 216MHz-960MHz | 46.0                     | Quasi-peak Value |
| 960MHz-1GHz   | 54.0                     | Quasi-peak Value |
| Above 1GHz    | 54.0                     | Average Value    |
|               | 74.0                     | Peak Value       |

**Test Setup:**

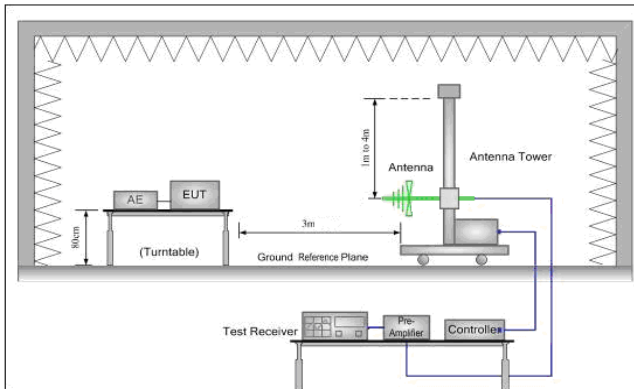


Figure 1. 30MHz to 1GHz

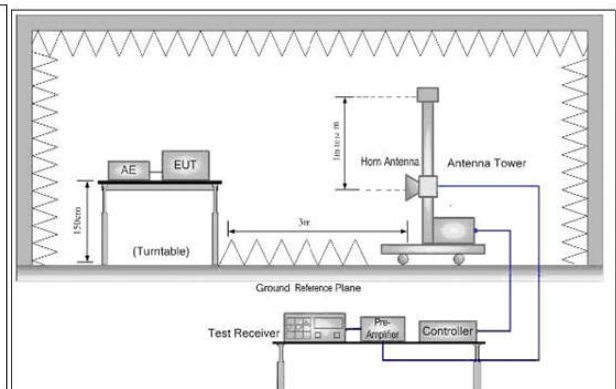


Figure 2. Above 1 GHz

**Test Procedure:**

**Below 1GHz test procedure as below:**

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. 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.
- 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable 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.
- 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.

**Above 1GHz test procedure as below:**

- Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre( Above 18GHz the distance is 1 meter and table is 1.5 metre).
- Test the EUT in the lowest channel , the Highest channel
- The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.

j. Repeat above procedures until all frequencies measured was complete.

**Instruments Used:** Refer to section 6 for details

**Test Mode:** Transmitting mode

**Test Results:** Pass

**Test plot as follows:**

| Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Read Level (dB $\mu$ V) | Level (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Over Limit (dB) | Antenna Polaxis | Remark | Test channel |
|-----------------|-----------------------|-----------------|--------------------|-------------------------|----------------------|----------------------|-----------------|-----------------|--------|--------------|
| 2390            | 32.53                 | 3.07            | 44.03              | 47.29                   | 38.86                | 74                   | -35.14          | H               | PK     | Lowest       |
| 2390            | 32.53                 | 3.07            | 44.03              | 47.25                   | 38.82                | 74                   | -35.18          | V               | PK     | Lowest       |
| 2400            | 32.55                 | 3.07            | 44.04              | 78.46                   | 70.04                | 74                   | -3.96           | H               | PK     | Lowest       |
| 2400            | 32.55                 | 3.07            | 44.04              | 77.69                   | 69.27                | 74                   | -4.73           | V               | PK     | Lowest       |
| 2483.5          | 32.71                 | 3.12            | 44.14              | 50.03                   | 41.72                | 74                   | -32.28          | H               | PK     | Highest      |
| 2483.5          | 32.71                 | 3.12            | 44.14              | 47.6                    | 39.29                | 74                   | -34.71          | V               | PK     | Highest      |

**Note:**

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

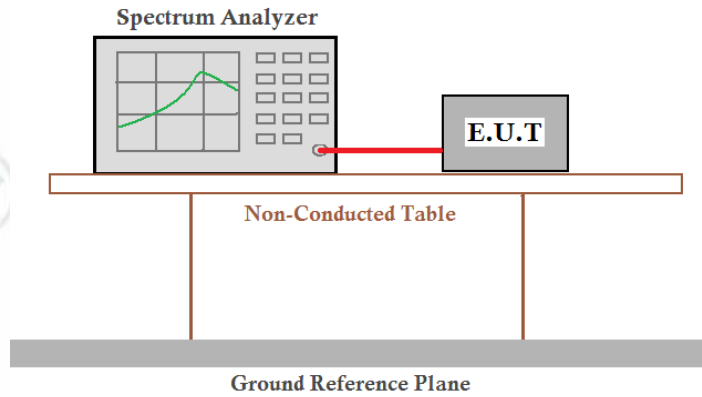
Final Test Level = Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor



### 7.4 20dB Bandwidth

**Test Requirement:** 47 CFR Part 15C Section 15.215  
**Test Method:** ANSI C63.10  
**Test Setup:**



**Test Mode:** Transmitter mode  
**Limit:** N/A  
**Instruments Used:** Refer to section 6 for details  
**Test Results:** Pass

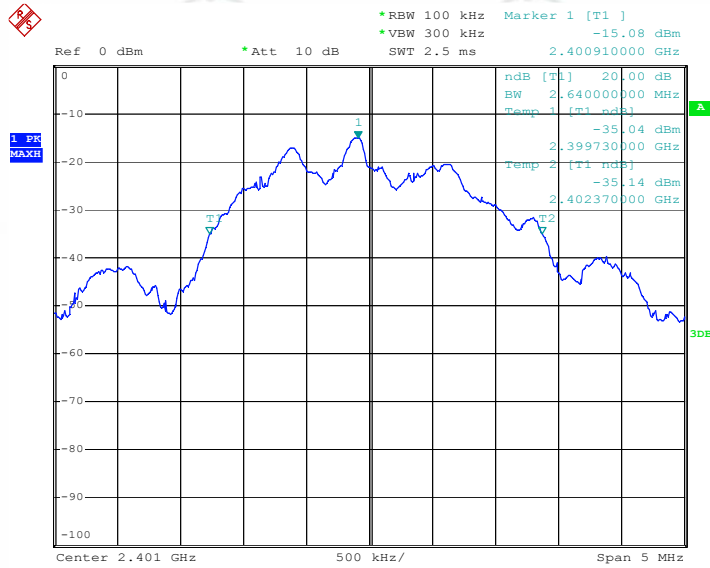
**Measurement Data**

| Test Channel | 20dB bandwidth (MHz) | Results |
|--------------|----------------------|---------|
| Lowest       | 2.64                 | Pass    |
| Middle       | 2.38                 | Pass    |
| Highest      | 2.41                 | Pass    |



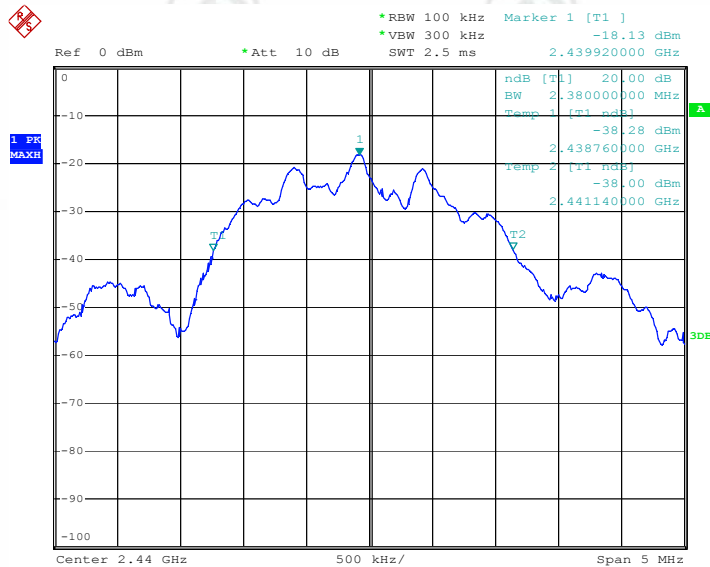
**Test plot as follows:**

2401Mz



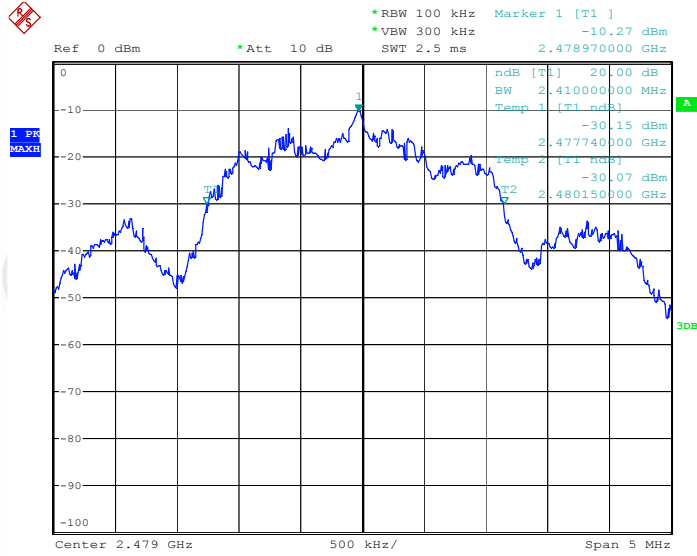
Date: 23.NOV.2017 16:56:34

2440MHz



Date: 23.NOV.2017 16:47:54

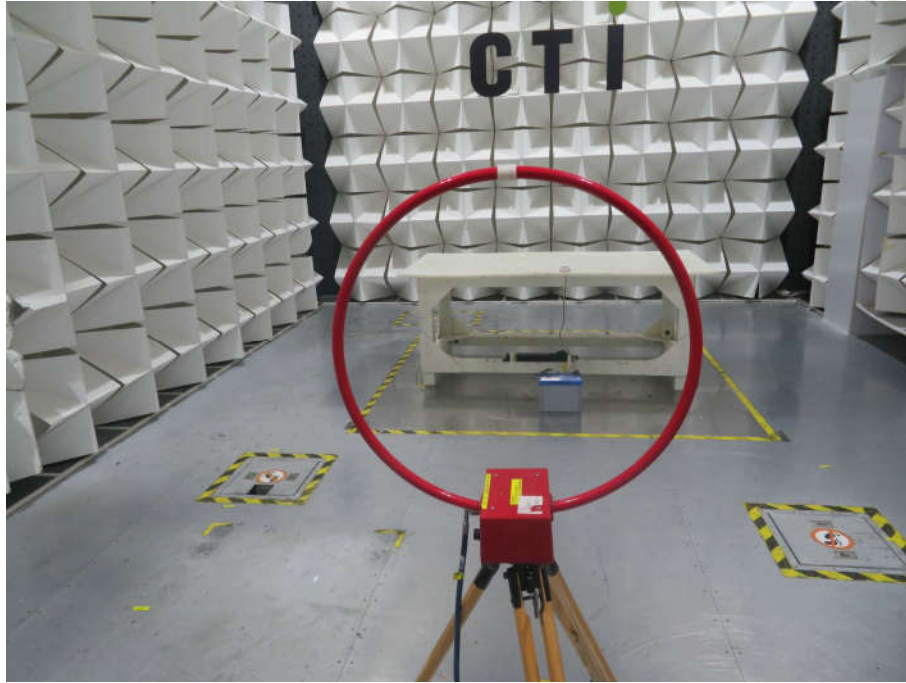
2479MHz



Date: 23.NOV.2017 16:52:34

## APPENDIX PHOTOGRAPHS OF TEST SETUP

Test Model No.: C6304NF



**Radiated emission Test Setup-1(9KHz-30MHz)**



**Radiated emission Test Setup-2(30MHz~1GHz)**



**Radiated spurious emission Test Setup-3(Above 1GHz)**



## APPENDIX PHOTOGRAPHS OF EUT

Test mode No.: C6304NF

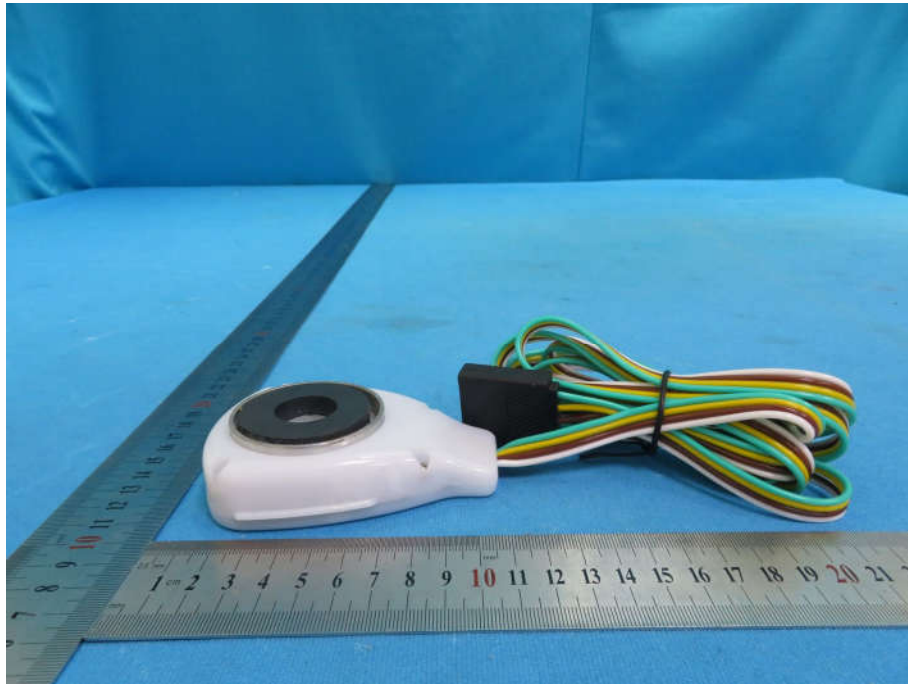


View of Product-1

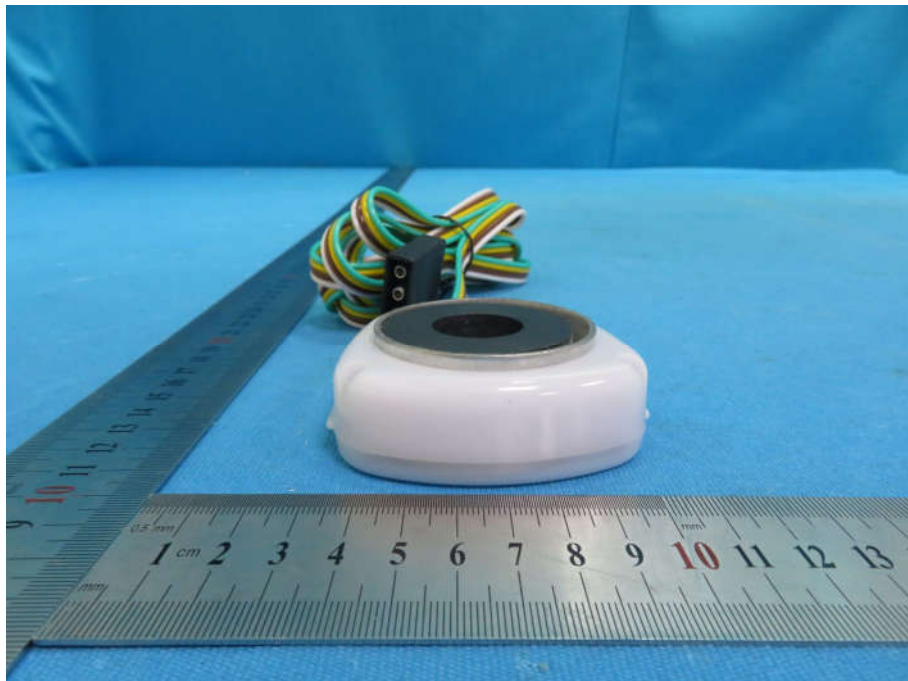


View of Product-2





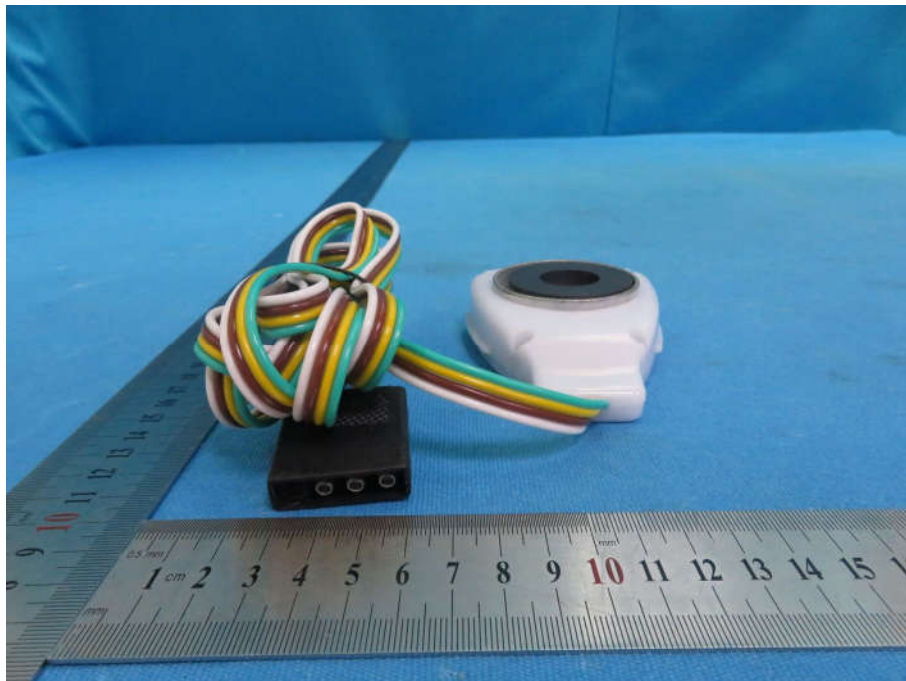
View of Product-3



View of Product-4



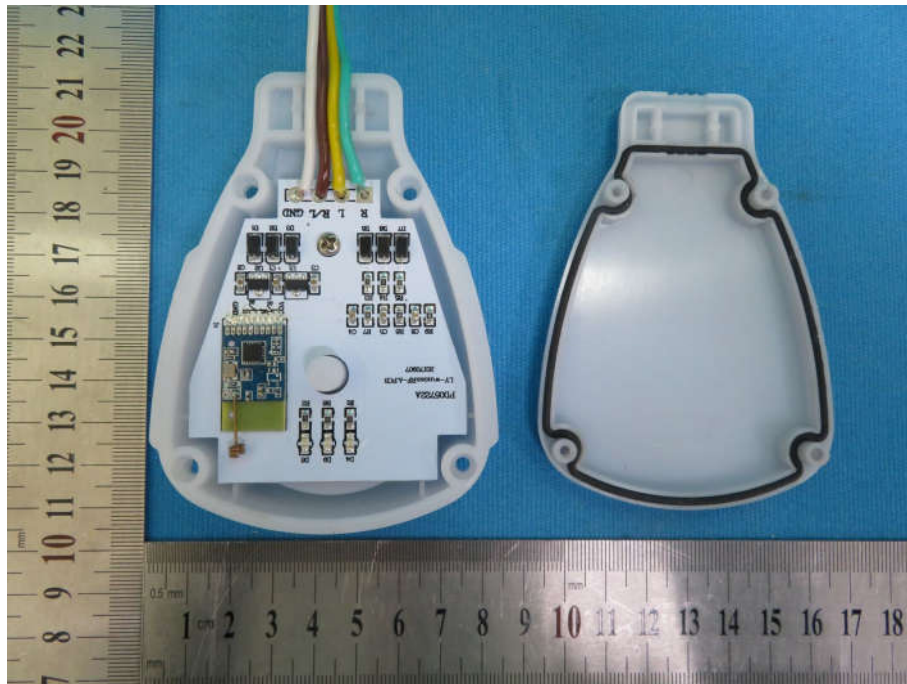
View of Product-5



View of Product-6

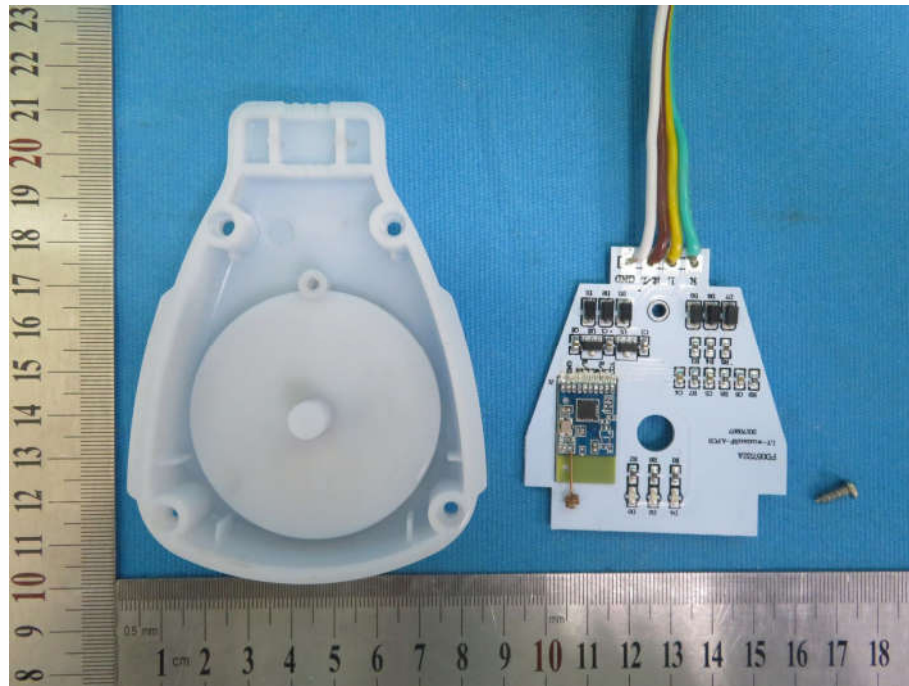


View of Product-7

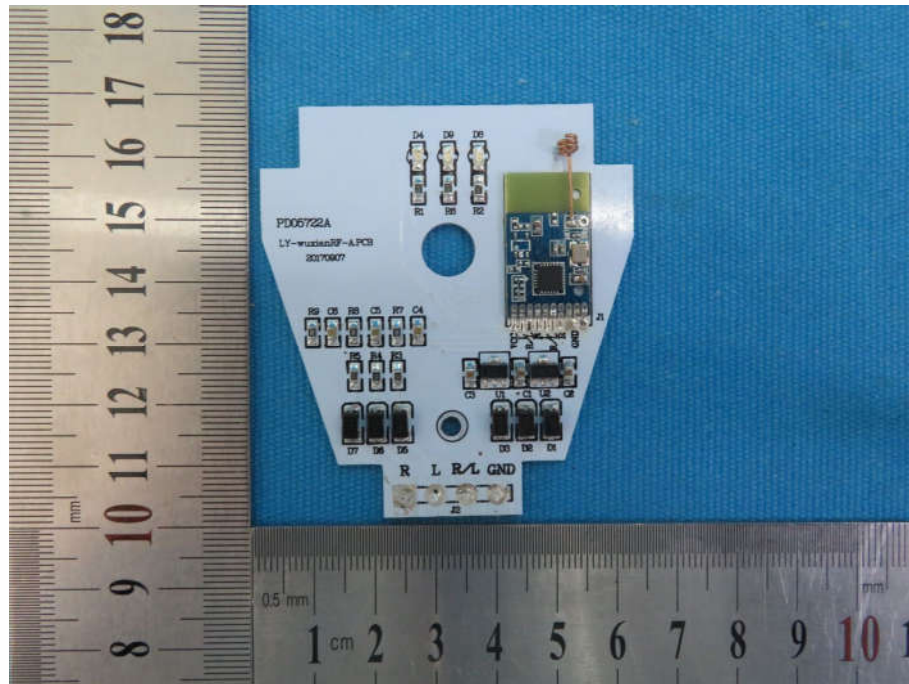


View of Product-8

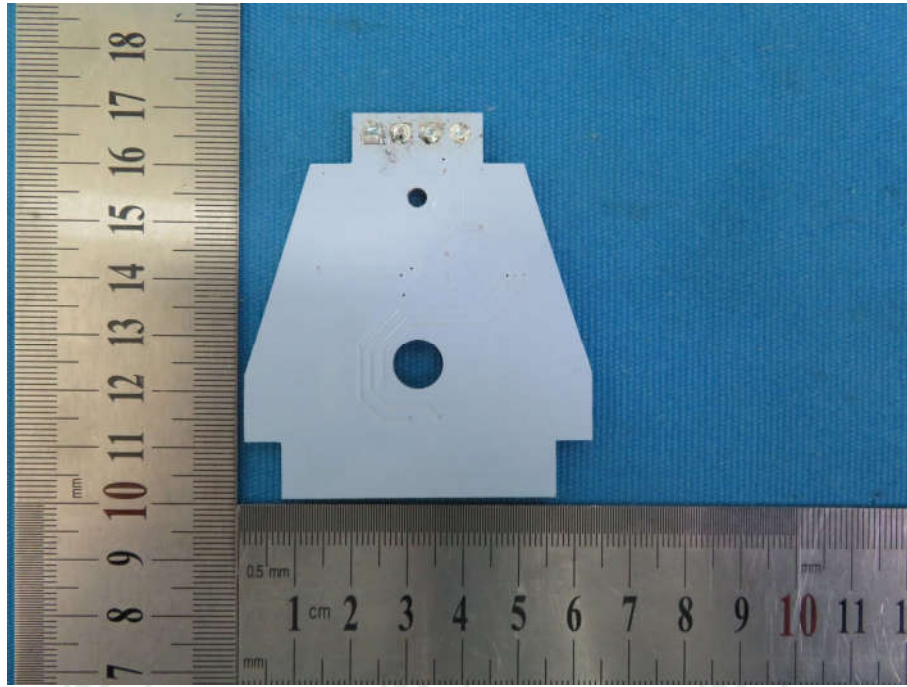




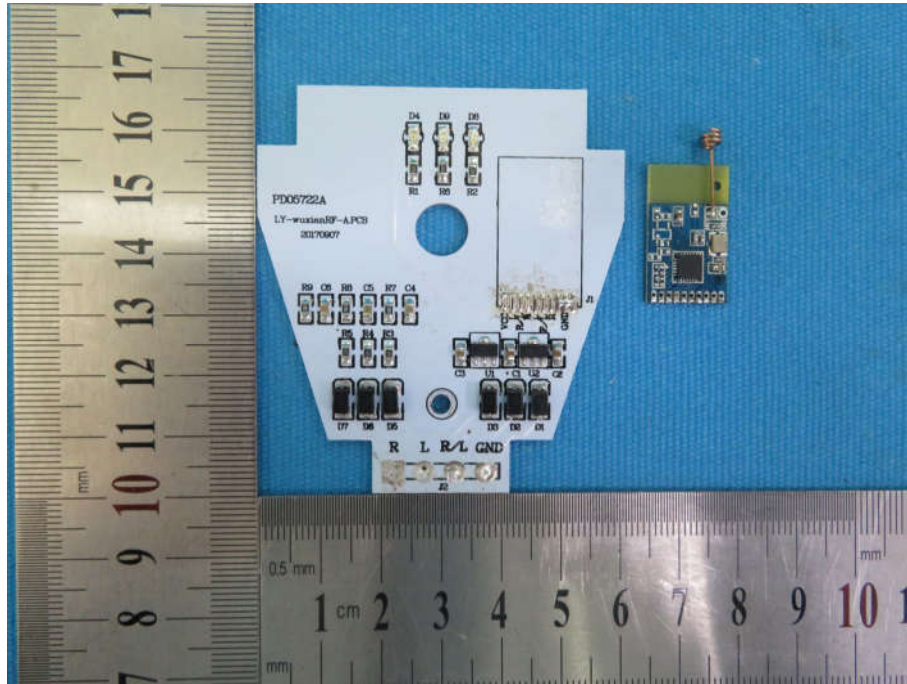
View of Product-9



View of Product-10

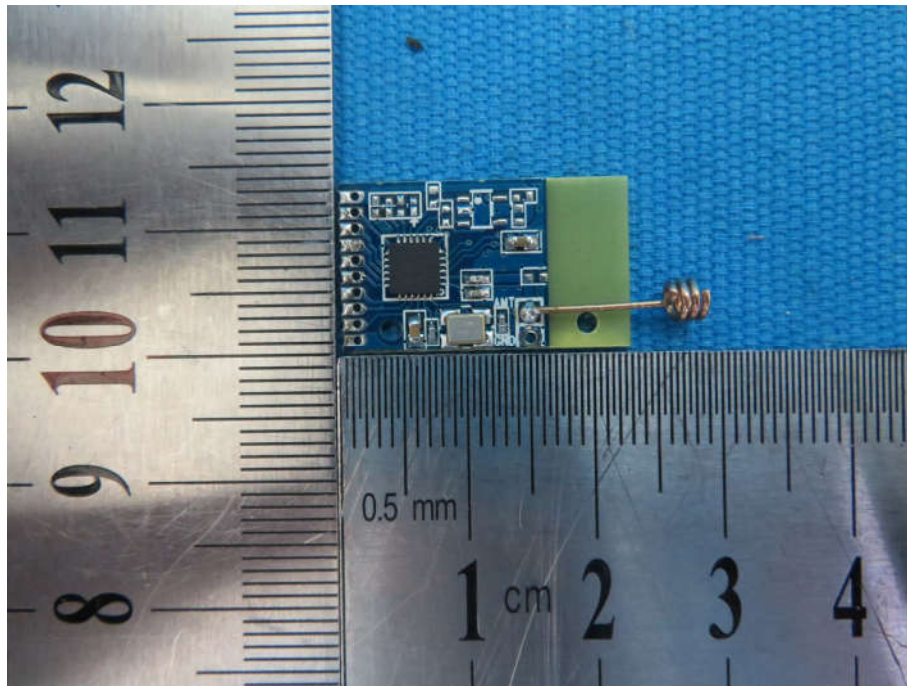


View of Product-11

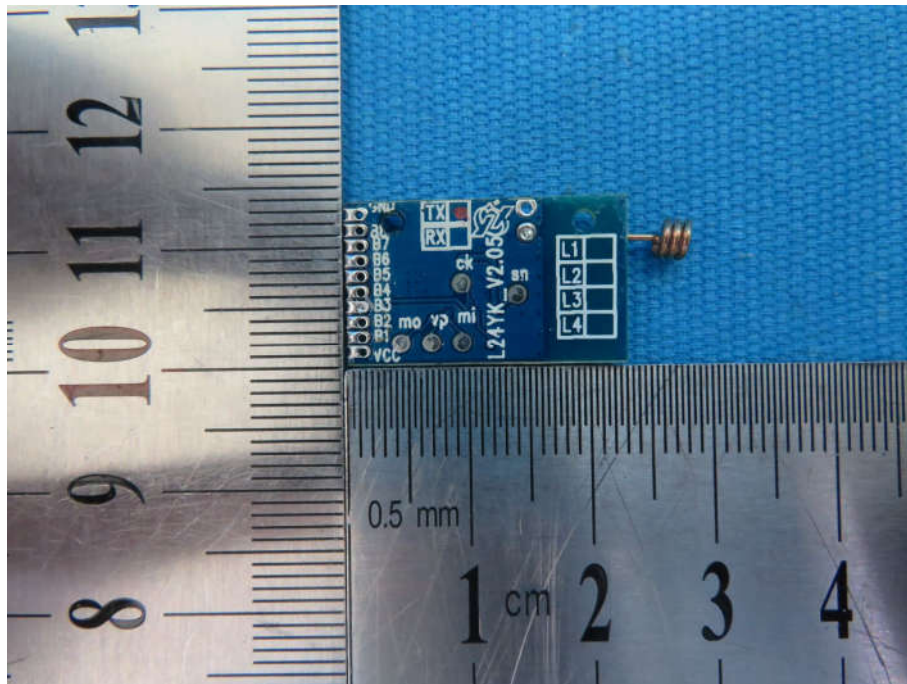


View of Product-12

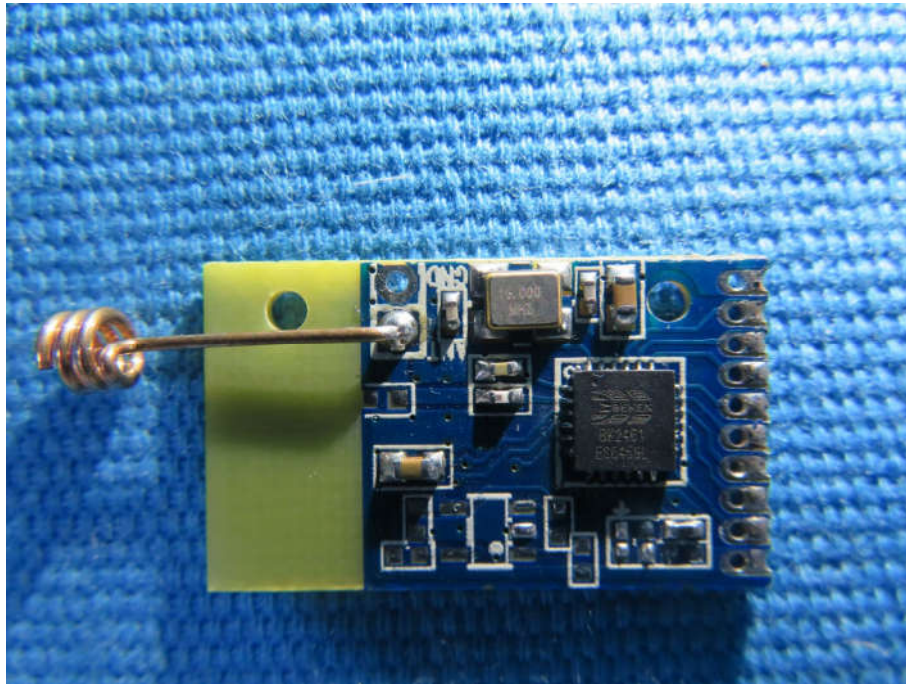




View of Product-13



View of Product-14



View of Product-15

\*\*\* End of Report \*\*\*

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.