




TEST REPORT

For RF

Report No. : **CHEW23040084** Report Verification: 

Project No...... : **SHT2304014107EW**

FCC ID..... : **YAHTFX-3TX**

Applicant's name..... : **Venture Global Limited**

Address..... : Room 808, 8/F., Hilder Centre, 2 Sung Ping Street, Kowloon

Test item description : **Wireless Telephone Signaler**

Trade Mark : -

Model/Type reference..... : TFX-303

Listed Model(s) : -




Standard : **FCC CFR Title 47 Part 15 Subpart C § 15.249**

Date of receipt of test sample..... : Apr.12, 2023

Date of testing..... : Apr.12, 2023- Apr.23, 2023

Date of issue..... : Apr.24, 2023

Result..... : **PASS**

| | | |
|--|---------------------------------|---|
| Compiled by (position+printedname+signature).... | File administrators Fanghui Zhu |  |
| Supervised by (position+printedname+signature)..... | Project Engineer Xiaodong Zhao |  |
| Approved by (Position+Printed name+Signature): | RF Manager Hans Hu |  |

Testing Laboratory Name : **Shenzhen Huatongwei International Inspection Co., Ltd.**

Address..... : 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

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The test report merely correspond to the test sample.

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1. TEST STANDARDS AND REPORT VERSION

1.1. Test Standards

The tests were performed according to following standards:

- [FCC CFR Title 47 Part 15 Subpart C § 15.249](#): Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz
- [ANSI C63.10:2013](#): American National Standard for Testing Unlicensed Wireless Devices

1.2. Report version

| Revision No. | Date of issue | Description |
|--------------|---------------|-------------|
| N/A | 2023-04-24 | Original |
| | | |
| | | |
| | | |
| | | |

2. TEST DESCRIPTION

| Report clause | Test Items | Standard Requirement | Result | Test Engineer |
|---------------|--|------------------------|--------------------|---------------|
| 5.1 | Antenna Requirement | 15.203 | PASS | Xiaoqin Li |
| 5.2 | AC Conducted Emission | 15.207 | N/A | - |
| 5.3 | 20dB Bandwidth | 15.215/15.249 | PASS | Xiaoqin Li |
| 5.4 | 99% Occupied Bandwidth | - | PASS ^{*1} | Xiaoqin Li |
| 5.5 | Duty cycle | - | PASS ^{*1} | Xiaoqin Li |
| 5.6 | Field strength of the Fundamental signal | 15.249(a) | PASS | Haoxin Luo |
| 5.7 | Radiated Band Edge Emission | 15.249(a)15.205/15.209 | PASS | Haoxin Luo |
| 5.8 | Radiated Spurious Emission | 15.249(d)15.205/15.209 | PASS | Yifan Wang |

Note:

- The measurement uncertainty is not included in the test result.
- *1: No requirement on standard, only report the test data.

3. SUMMARY

3.1. Client Information

| | |
|---------------|--|
| Applicant: | Venture Global Limited |
| Address: | Room 808, 8/F., Hilder Centre, 2 Sung Ping Street, Kowloon |
| Manufacturer: | Venture Global Limited |
| Address: | Room 808, 8/F., Hilder Centre, 2 Sung Ping Street, Kowloon |

3.2. Product Description

| Main unit information: | |
|------------------------|-----------------------------|
| Product Name: | Wireless Telephone Signaler |
| Trade Mark: | - |
| Model No.: | TFX-303 |
| Listed Model(s): | - |
| Power supply: | DV 3.0 from lithium battery |
| Hardware version: | 1.0 |
| Software version: | 1.0 |

3.3. Radio Specification Description

| | |
|----------------------|-----------------|
| Modulation: | FSK |
| Operation frequency: | 914.8MHz |
| Channel number: | 1 |
| Antenna type: | Internal spring |
| Antenna gain: | 0dBi |

3.4. Testing Laboratory Information

| | | |
|----------------------|---|----------------------|
| Laboratory Name | Shenzhen Huatongwei International Inspection Co., Ltd. | |
| Laboratory Location | 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China | |
| Contact information: | Phone: 86-755-26715499 E-mail: cs@szhtw.com.cn http://www.szhtw.com.cn | |
| Qualifications | Type | Accreditation Number |
| | FCC | 762235 |

4. TEST CONFIGURATION

4.1. Test frequency list

According to section 15.31(m), regards to the operating frequency range over 10 MHz, must select three channels which were tested. The Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, please see the below blue front.

| Channel | Frequency (MHz) |
|---------|-----------------|
| CH-M | 914.8 |

4.2. Test mode

| |
|---|
| For RF test items |
| The engineering test program was provided and enabled to make EUT continuous transmit. |
| For Radiated spurious emissions test item: |
| The engineering test program was provided and enabled to make EUT continuous transmit. The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data Recorded in the report. |

4.3. Descriptions of Test mode

| |
|---|
| For RF test items |
| The engineering test program was provided and enabled to make EUT continuous transmit. |
| For Radiated spurious emissions test item: |
| The engineering test program was provided and enabled to make EUT continuous transmit. The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data Recorded in the report. |

4.4. Test sample information

| Test item | HTW sample no. |
|-------------------------|-----------------|
| RF Conducted test items | YPHT23040141003 |
| RF Radiated test items | YPHT23040141002 |
| EMI sample test items | - |

Note:

RF Conducted test items: 20dB Bandwidth ,99% Occupied Bandwidth, Duty cycle

RF Radiated test items: Radiated Band Edge Emission, Radiated Spurious Emission, Radiated field strength of the fundamental signal

EMI test items : AC Conducted Emission

4.5. Support unit used in test configuration and system

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The following peripheral devices and interface cables were connected during the measurement:

| Whether support unit is used? | | | | | |
|-------------------------------|------------|------------|-----------|--------|------------|
| ✓ No | | | | | |
| Item | Equipement | Trade Name | Model No. | FCC ID | Power cord |
| 1 | | | | | |
| 2 | | | | | |

4.6. Testing environmental condition

| Type | Requirement | Actual |
|--------------------|--------------|----------|
| Temperature: | 15~35°C | 25°C |
| Relative Humidity: | 25~75% | 50% |
| Air Pressure: | 860~1060mbar | 1000mbar |

4.7. Statement of the measurement uncertainty

| No. | Test Items | Measurement Uncertainty |
|-----|---|--|
| 1 | AC Conducted Emission | 3.21dB |
| 2 | 20dB Bandwidth | 0.002% |
| 3 | 99% Occupied Bandwidth | 0.002% |
| 4 | Duty cycle | - |
| 5 | Radiated field strength of the fundamental signal | 4.54dB for 30MHz-1GHz 5.10dB for above 1GHz |
| 6 | Radiated Band Edge Emission | 4.54dB for 30MHz-1GHz 5.10dB for above 1GHz |
| 7 | Radiated Spurious Emission | 4.54dB for 30MHz-1GHz 5.10dB for above 1GHz |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=1.96$.

4.8. Equipment Used during the Test

| ● RF Conducted test item | | | | | | | |
|--------------------------|------------------------------|--------------|---------------|-----------|------------|---------------------------|---------------------------|
| Used | Test Equipment | Manufacturer | Equipment No. | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| ● | Signal and spectrum Analyzer | R&S | HTWE0242 | FSV40 | 100048 | 2022/08/25 | 2023/08/24 |
| ● | Signal & Spectrum Analyzer | R&S | HTWE0262 | FSW26 | 103440 | 2022/08/25 | 2023/08/24 |
| ● | Vector signal generator | R&S | HTWE0244 | SMBV100A | 260790 | 2022/05/25 | 2023/05/24 |
| ● | Test software | Tonscend | N/A | JS1120 | N/A | N/A | N/A |

| ● Radiated emission- Below 1GHz | | | | | | | |
|---------------------------------|-------------------------|--------------------|---------------|-------------|------------|---------------------------|---------------------------|
| Used | Test Equipment | Manufacturer | Equipment No. | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| ● | Semi-Anechoic Chamber | Albatross projects | HTWE0127 | SAC-3m-02 | C11121 | 2018/09/30 | 2023/09/29 |
| ● | EMI Test Receiver | R&S | HTWE0099 | ESCI | 100900 | 2022/08/30 | 2023/08/29 |
| ● | Loop Antenna | R&S | HTWE0546 | HFH2-Z2E | 101073 | 2021/05/25 | 2024/05/24 |
| ● | Ultra-Broadband Antenna | SCHWARZBECK | HTWE0547 | VULB9163 | 945 | 2022/05/23 | 2025/05/22 |
| ● | Pre-Amplifier | SCHWARZBECK | HTWE0295 | BBV 9742 | N/A | 2022/11/04 | 2023/11/03 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0062-01 | N/A | N/A | 2023/02/24 | 2024/02/23 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0062-02 | SUCOFLEX104 | 501184/4 | 2023/02/24 | 2024/02/23 |
| ● | Test Software | R&S | N/A | ES-K1 | N/A | N/A | N/A |

| ● Radiated emission- Above 1GHz | | | | | | | |
|---------------------------------|-------------------------|--------------------|---------------|-------------------|------------|---------------------------|---------------------------|
| Used | Test Equipment | Manufacturer | Equipment No. | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| ● | Semi-Anechoic Chamber | Albatross projects | HTWE0122 | SAC-3m-01 | C11121 | 2018/09/27 | 2023/09/26 |
| ● | Spectrum Analyzer | R&S | HTWE0098 | FSP40 | 100597 | 2022/08/25 | 2023/08/24 |
| ● | Horn Antenna | ETS | HTWE0548 | 3117 | 240120 | 2022/05/20 | 2025/05/19 |
| ● | Horn Antenna | STEATITE | HTWE0549 | QMS-00880 | 25661 | 2022/05/20 | 2025/05/19 |
| ● | Pre-amplifier | CD | HTWE0071 | PAP-0102 | 12004 | 2022/11/04 | 2023/11/03 |
| ● | Broadband Pre-amplifier | SCHWARZBECK | HTWE0201 | BBV 9718 | 9718-248 | 2023/02/27 | 2024/02/26 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0120-01 | 6m 18GHz S Serisa | N/A | 2023/02/24 | 2024/02/23 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0120-02 | 6m 3GHz RG Serisa | N/A | 2023/02/24 | 2024/02/23 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0119-05 | 6m 3GHz RG Serisa | N/A | 2023/02/24 | 2024/02/23 |
| ● | RF Connection Cable | HUBER+SUHNER | HTWE0120-04 | 6m 3GHz RG Serisa | N/A | 2023/02/24 | 2024/02/23 |
| ● | Test Software | Audix | N/A | E3 | N/A | N/A | N/A |

| ● Auxiliary Equipment | | | | | | | |
|-----------------------|------------------|--------------|---------------|------------------|------------|---------------------------|---------------------------|
| Used | Test Equipment | Manufacturer | Equipment No. | Model No. | Serial No. | Last Cal. Date (YY-MM-DD) | Next Cal. Date (YY-MM-DD) |
| ● | High pass filter | Wainwright | HTWE0297 | WHKX3.0/18G-10SS | 38 | 2022/05/16 | 2023/05/15 |
| ● | Band Stop filter | - | HTWE0039 | N/A | N/A | 2023/01/26 | 2024/01/25 |

5. TEST CONDITIONS AND RESULTS

5.1. Antenna Requirement

Requirement

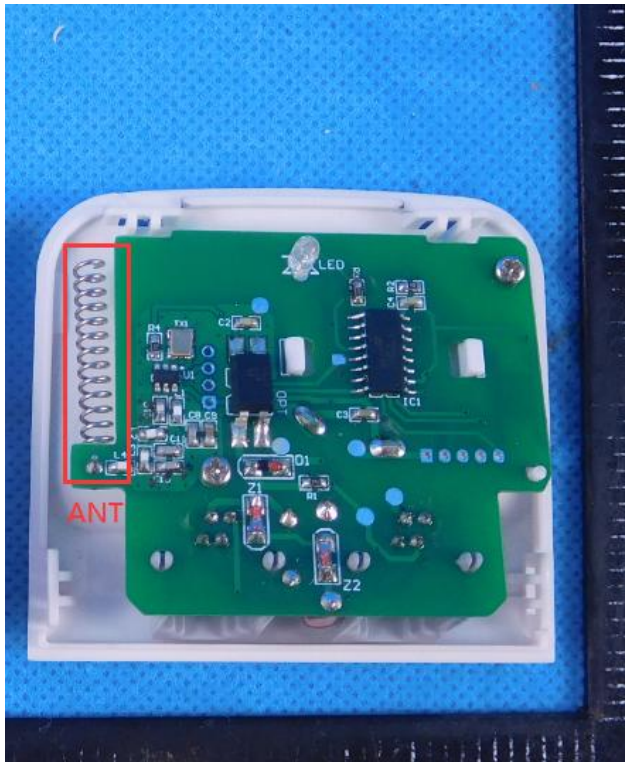
FCC CFR Title 47 Part 15 Subpart C Section 15.203:

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.

TEST RESULT

Passed **Not Applicable**

The antenna type is a Internal spring antenna, the directional gain of the antenna less than 6 dBi, please refer to the below antenna photo.



5.2. AC Conducted Emission

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.207

| 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 CONFIGURATION



TEST PROCEDURE

1. The EUT was setup according to ANSI C63.10 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment.
4. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
8. During the above scans, the emissions were maximized by cable manipulation.

TEST MODE:

Please refer to the clause 4.2

TEST RESULT

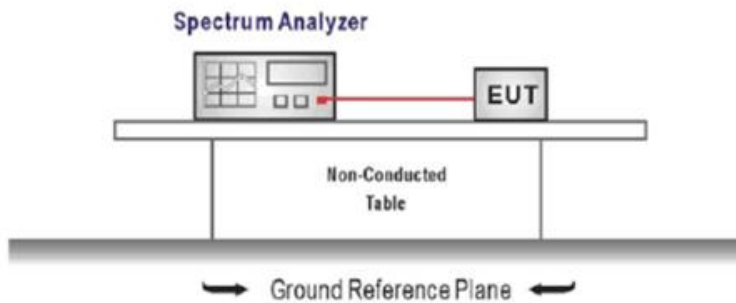
Passed Not Applicable

5.3. 20dB bandwidth

LIMIT

N/A

TEST CONFIGURATION



TEST PROCEDURE

1. Connect the antenna port(s) to the spectrum analyzer input.
2. Configure the spectrum analyzer as shown below (enter all losses between the transmitter output and the spectrum analyzer).
Center Frequency = channel center frequency
Span= approximately 2 to 3 times the 20 dB bandwidth
RBW = 100 kHz, VBW $\geq 3 \times$ RBW
Sweep time= auto couple
Detector = Peak
Trace mode = max hold
3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter waveform on the spectrum analyzer.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission, and record the pertinent measurements.

TEST MODE:

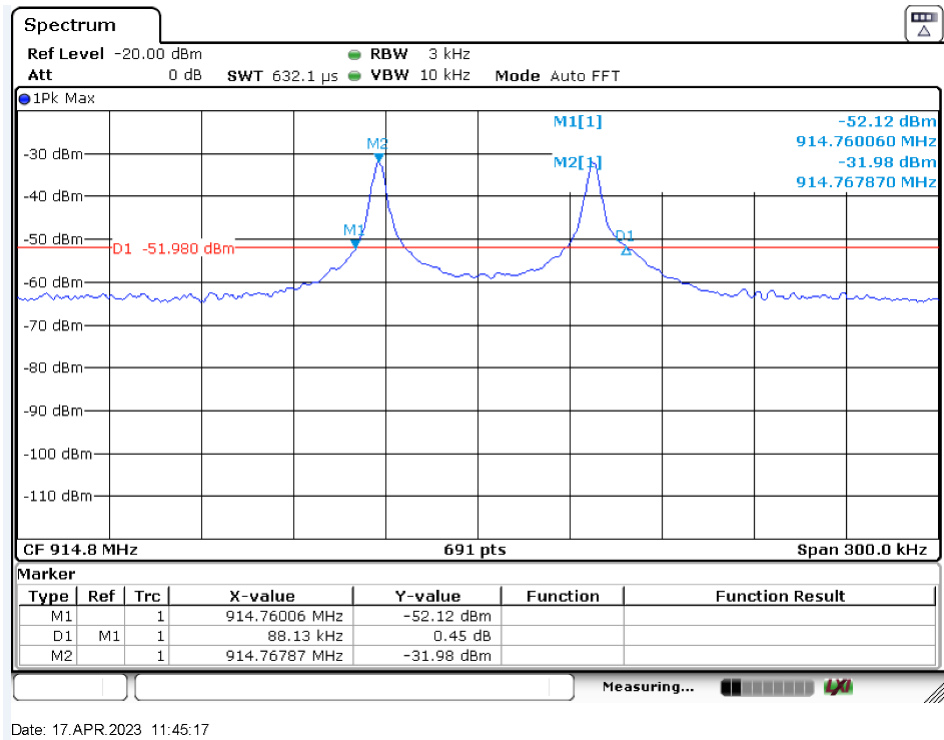
Please refer to the clause 4.2

TEST RESULT

Passed Not Applicable

TEST DATA

| Modulation type | Frequency (MHz) | 20 dB Bandwidth (kHz) | Limit (kHz) | Result |
|-----------------|-----------------|-----------------------|-------------|--------|
| FSK | 914.8 | 88.13 | - | Pass |

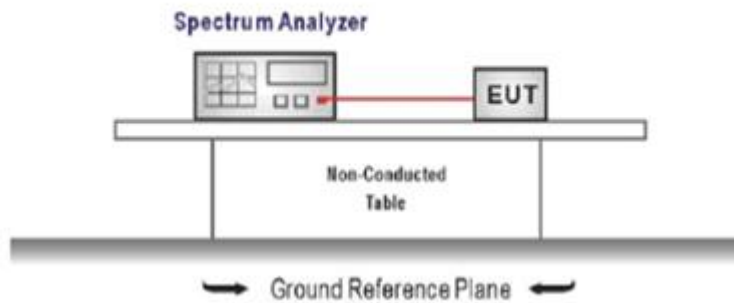


5.4. 99% Occupied Bandwidth

LIMIT

N/A

TEST CONFIGURATION



TEST PROCEDURE

1. Connect the antenna port(s) to the spectrum analyzer input.
2. Configure the spectrum analyzer as shown below (enter all losses between the transmitter output and the spectrum analyzer).
Center Frequency = channel center frequency
Span $\geq 1.5 \times$ OBW
RBW = 1%~5%OBW
VBW $\geq 3 \times$ RBW
Sweep time = auto couple
Detector = Peak
Trace mode = max hold
3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter waveform on the spectrum analyzer.

TEST MODE:

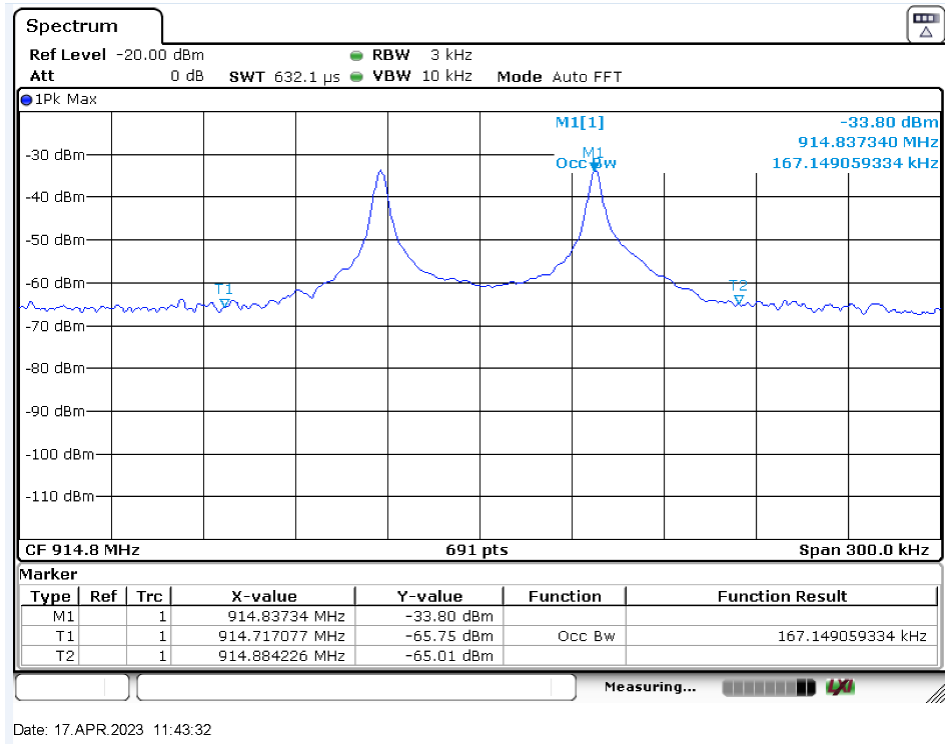
Please refer to the clause 4.2

TEST RESULT

Passed Not Applicable

TEST DATA

| Modulation type | Frequency (MHz) | 99% Bandwidth (kHz) | Limit (kHz) | Result |
|-----------------|-----------------|---------------------|-------------|--------|
| FSK | 914.8 | 167.15 | - | Pass |

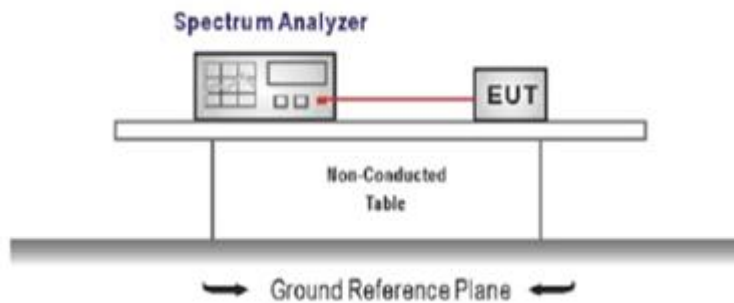


5.5. Duty Cycle

LIMIT

N/A

TEST CONFIGURATION



TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. Use the following spectrum analyzer settings:
Span=zero span, Frequency=centered channel, RBW= 1 MHz, VBW \geq RBW
Sweep=as necessary to capture the entire dwell time,
Detector function = peak, Trigger mode
4. Measure and record the duty cycle data

TEST MODE:

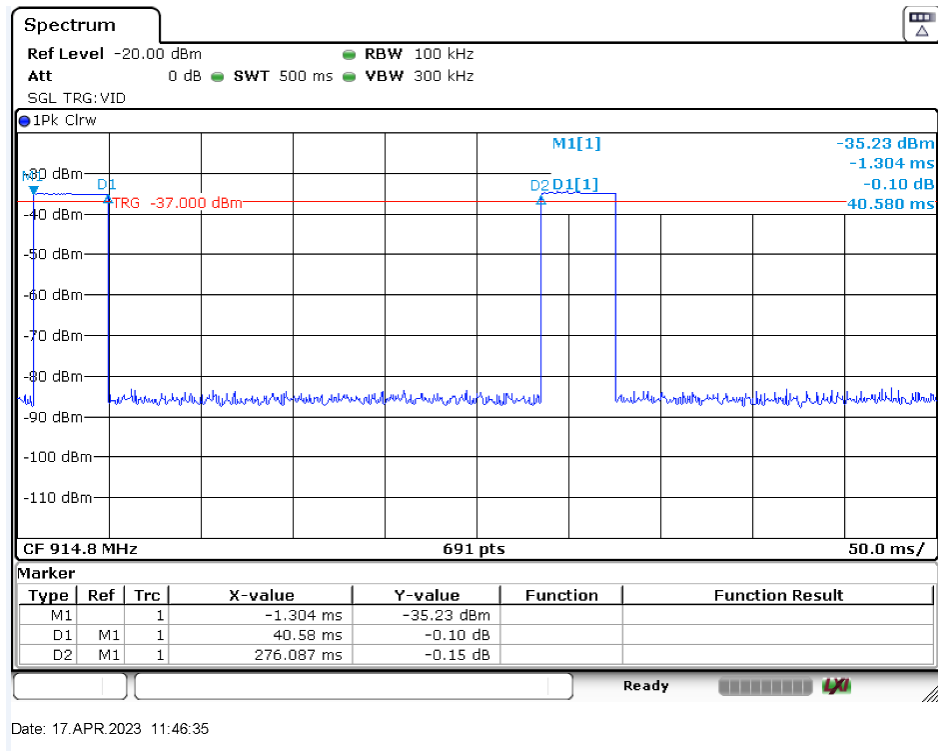
Please refer to the clause 4.2

TEST RESULT

Passed Not Applicable

TEST DATA

| Test Frequency (MHz) | Ton time for single burst (ms) | Tperiod (ms) | Duty cycle | 1/Ton time (kHz) |
|----------------------|--------------------------------|--------------|------------|------------------|
| 914.8 | 40.28 | 276.09 | 14.59% | 0.025 |



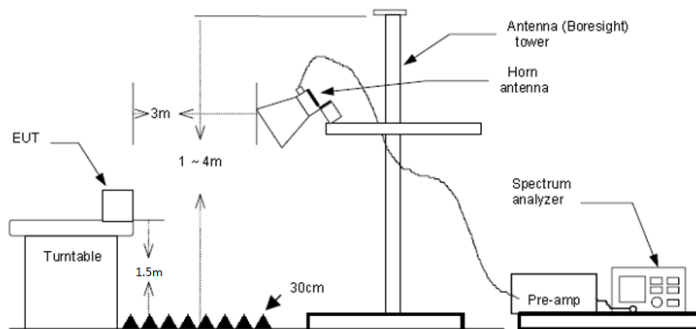
5.6. Radiated field strength of the fundamental signal

LIMIT

| Fundamental frequency | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) |
|-----------------------|--|--|
| 902-928 MHz | 50 (94dBuV/m @3m) | 500 (54dBuV/m @3m) |
| 2400-2483.5 MHz | 50 (94dBuV/m @3m) | 500 (54dBuV/m @3m) |
| 5725-5875 MHz | 50 (94dBuV/m @3m) | 500 (54dBuV/m @3m) |
| 24.0-24.25 GHz | 250 (108dBuV/m @3m) | 2500 (68dBuV/m @3m) |

Frequencies above 1000 MHz, the field strength limits are based on average limits

TEST CONFIGURATION



TEST PROCEDURE

- The EUT was setup and tested according to ANSI C63.10:2013 requirements.
- The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
- The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
- The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
- Use the following spectrum analyzer settings:
 - Span shall wide enough to fully capture the emission being measured
 - Set RBW=100kHz for <1GHz, VBW=3*RBW, Sweep time=auto, Detector=peak, Trace=max hold
 - Set RBW=1MHz, VBW=3MHz for >1GHz, Sweep time=auto, Detector=peak, Trace=max hold for Peak measurement

For average measurement:

 - VBW=10Hz, When duty cycle is no less than 98 percent
 - VBW≥1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation, so refer to this clause 5.5 duty cycle.

TEST MODE:

Please refer to the clause 4.2

TEST RESULTS

Passed Not Applicable

| Frequency (MHz) | Reading (dB μ V/m) | Antenna (dB) | Cable (dB) | Preamp (dB) | Level (dB μ V/m) | Limit (dB μ V/m) | Over Limit (dB) | Detector | Polarity |
|-----------------|------------------------|--------------|------------|-------------|----------------------|----------------------|-----------------|----------|------------|
| 914.8 | 86.79 | 22.93 | 5.03 | 29.89 | 84.86 | 94.00 | -9.14 | Peak | Horizontal |
| 914.8 | 75.55 | 22.93 | 5.03 | 29.89 | 73.62 | 94.00 | -20.38 | Peak | Vertical |

Note:

- 1) Level= Reading + Factor; Factor =Antenna Factor+ Cable Loss- Preamp Factor
- 2) Over Limit = Level- Limit

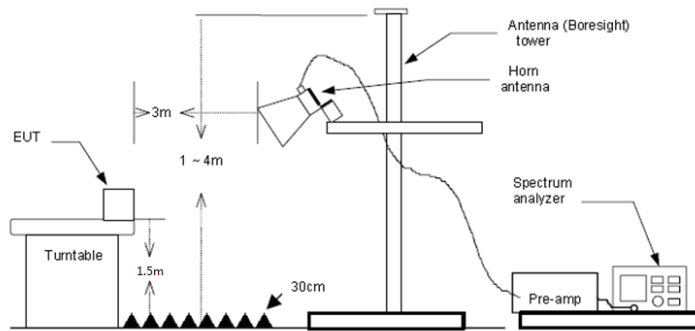
5.7. Radiated Band edge Emission

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.249 (d):

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was setup and tested according to ANSI C63.10 .
2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10 on radiated measurement.
5. Use the following spectrum analyzer settings:
 - a) Span shall wide enough to fully capture the emission being measured
 - b) Set RBW=100kHz for <1GHz, VBW=3*RBW, Sweep time=auto, Detector=peak, Trace=max hold
 - c) Set RBW=1MHz, VBW=3MHz for >1GHz, Sweep time=auto, Detector=peak, Trace=max hold for Peak measurement

For average measurement:

 - VBW=10Hz, When duty cycle is no less than 98 percent
 - VBW \geq 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation, so refer to this clause 5.6 duty cycle.

TEST MODE:

Please refer to the clause 4.2

TEST RESULT

Passed Not Applicable

Note:

- 3) Level= Reading + Factor; Factor =Antenna Factor+ Cable Loss- Preamp Factor
- 4) Over Limit = Level- Limit

| Test channel | | CH _M | | | Polarity | | | Horizontal | | |
|--------------|------------------|-------------------|---------------|-------------|--------------|-----------------|-----------------|---------------|--------|--|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark | |
| 1 | 902.00 | 33.38 | 22.90 | 5.00 | 29.95 | 31.33 | 64.83 | -33.50 | Peak | |
| 2 | 914.81 | 86.76 | 22.93 | 5.03 | 29.89 | 84.83 | 64.83 | 20.00 | Peak | |
| 3 | 928.00 | 34.38 | 22.96 | 5.06 | 29.83 | 32.57 | 64.83 | -32.26 | Peak | |

| Test channel | | CH _M | | | Polarity | | | Vertical | | |
|--------------|------------------|-------------------|---------------|-------------|--------------|-----------------|-----------------|---------------|--------|--|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark | |
| 1 | 902.00 | 34.21 | 22.90 | 5.00 | 29.95 | 32.16 | 53.58 | -21.42 | Peak | |
| 2 | 914.76 | 75.51 | 22.93 | 5.03 | 29.89 | 73.58 | 53.58 | 20.00 | Peak | |
| 3 | 928.00 | 33.74 | 22.96 | 5.06 | 29.83 | 31.93 | 53.58 | -21.65 | Peak | |

5.8. Radiated Spurious Emission

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.209

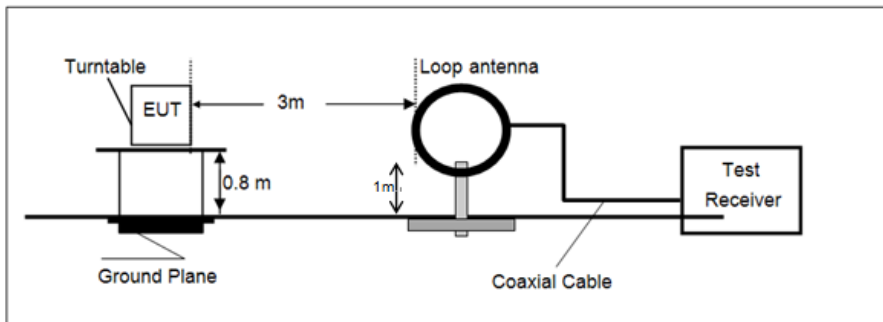
| Frequency | Limit (dBuV/m) | Value |
|----------------------|-------------------|------------|
| 0.009 MHz ~0.49 MHz | 2400/F(kHz) @300m | Quasi-peak |
| 0.49 MHz ~ 1.705 MHz | 24000/F(kHz) @30m | Quasi-peak |
| 1.705 MHz ~30 MHz | 30 @30m | Quasi-peak |

Note: Limit dBuV/m @3m = Limit dBuV/m @300m + 40*log(300/3)= Limit dBuV/m @300m +80,
 Limit dBuV/m @3m = Limit dBuV/m @30m +40*log(30/3)= Limit dBuV/m @30m + 40.

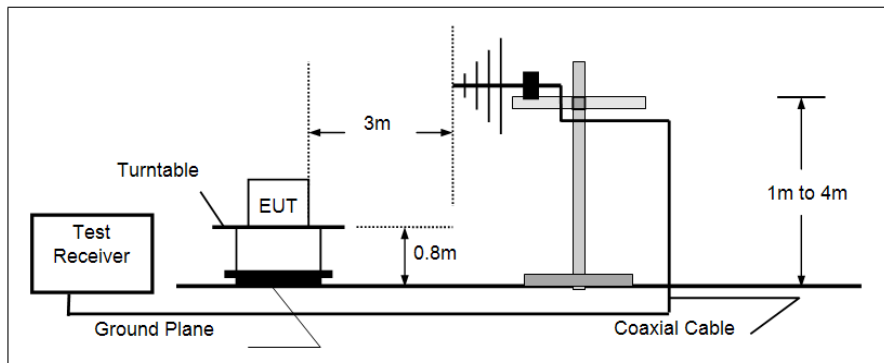
| Frequency | Limit (dBuV/m @3m) | Value |
|---------------|--------------------|------------|
| 30MHz~88MHz | 40.00 | Quasi-peak |
| 88MHz~216MHz | 43.50 | Quasi-peak |
| 216MHz~960MHz | 46.00 | Quasi-peak |
| 960MHz~1GHz | 54.00 | Quasi-peak |
| Above 1GHz | 54.00 | Average |
| | 74.00 | Peak |

TEST CONFIGURATION

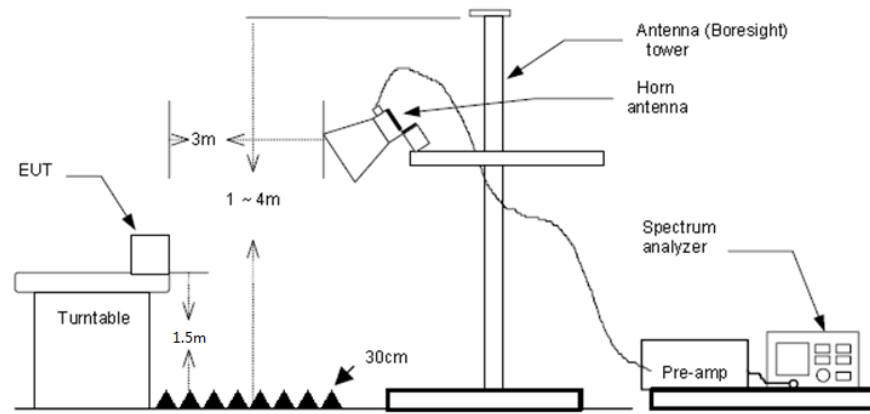
- 9 kHz ~ 30 MHz



- 30 MHz ~ 1 GHz



- Above 1 GHz



TEST PROCEDURE

1. The EUT was setup and tested according to ANSI C63.10 .
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
 - a) Span shall wide enough to fully capture the emission being measured;
 - b) Below 1 GHz:
 - RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;
 - If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
 - c) Set RBW=1MHz, VBW=3MHz for >1GHz, Sweep time=auto, Detector=peak, Trace=max hold for Peak measurement
 - For average measurement:
 - VBW=10Hz, When duty cycle is no less than 98 percent
 - $VBW \geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation, so refer to this clause 5.6 duty cycle.

TEST MODE:

Please refer to the clause 4.2

TEST RESULT

Passed **Not Applicable**

Note:

- 1) Level= Reading + Factor/Transd; Factor/Transd =Antenna Factor+ Cable Loss- Preamp Factor
- 2) Over Limit = Level– Limit
- 3) Average measurement was not performed if peak level is lower than average limit(54 dBuV/m) for above 1GHz.

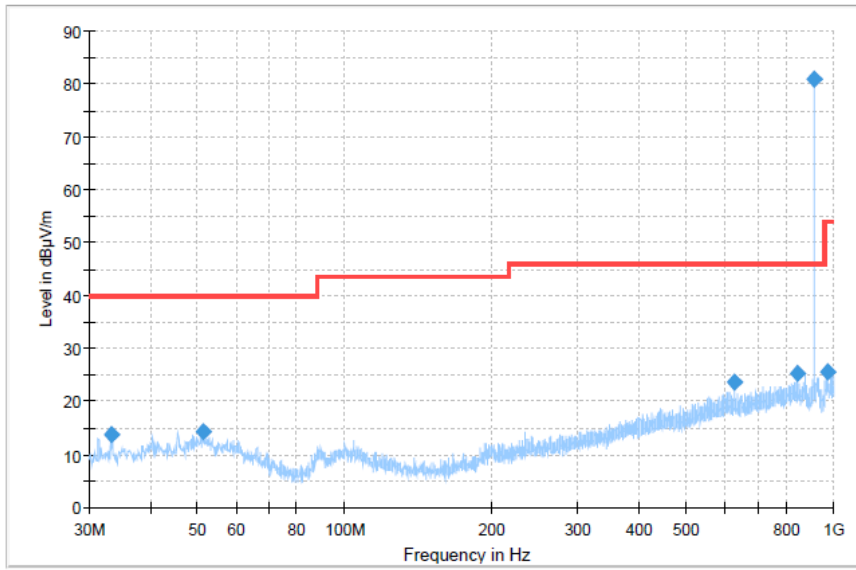
TEST DATA FOR 9 kHz ~ 30 MHz

The EUT was pre-scanned this frequency band, found the radiated level 20dB lower than the limit, so don't show data on this report.

TEST DATA FOR 30 MHz ~ 1000 MHz

Polarization:

Horizontal

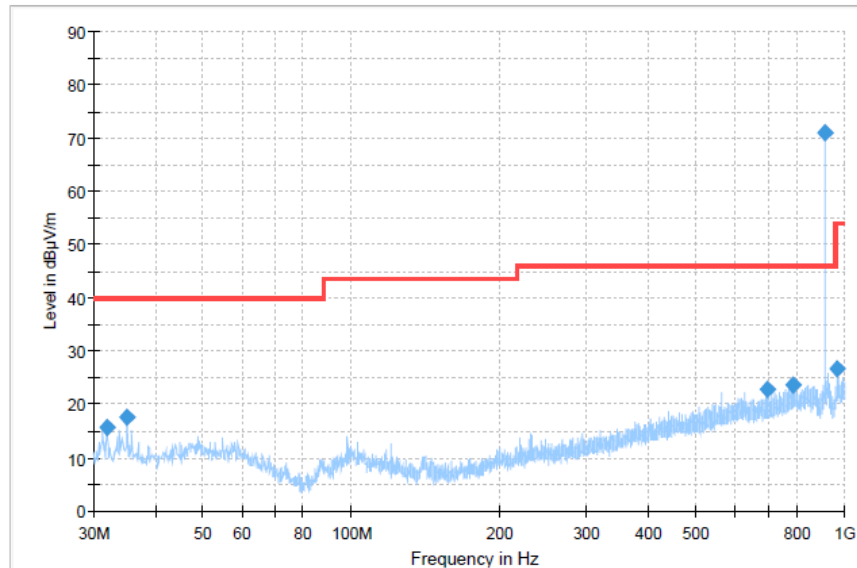


Final Result

| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 33.273750 | 13.63 | 40.00 | 26.37 | 300.0 | H | 210.0 | -10.7 |
| 51.340000 | 14.18 | 40.00 | 25.82 | 100.0 | H | 326.0 | -8.2 |
| 625.095000 | 23.55 | 46.00 | 22.45 | 300.0 | H | 138.0 | 1.0 |
| 840.920000 | 25.20 | 46.00 | 20.80 | 300.0 | H | 258.0 | 3.6 |
| 914.640000 | 81.00 | 46.00 | -35.00 | 100.0 | H | 6.0 | 4.3 |
| 971.385000 | 25.49 | 54.00 | 28.51 | 300.0 | H | 270.0 | 4.7 |

Polarization:

Vertical



Final Result

| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|--------------|
| 31.940000 | 15.61 | 40.00 | 24.39 | 100.0 | V | 160.0 | -11.0 |
| 35.092500 | 17.50 | 40.00 | 22.50 | 100.0 | V | 160.0 | -10.3 |
| 696.390000 | 22.71 | 46.00 | 23.29 | 100.0 | V | 356.0 | 1.3 |
| 787.570000 | 23.77 | 46.00 | 22.23 | 100.0 | V | 346.0 | 2.9 |
| 914.640000 | 71.00 | 46.00 | -25.00 | 100.0 | V | 60.0 | 4.3 |
| 965.080000 | 26.59 | 54.00 | 27.41 | 100.0 | V | 100.0 | 4.7 |

TEST DATA FOR 1 GHz ~ 10 GHz

| Test channel | | CH _M | | | Polarity | | Horizontal | | |
|--------------|------------------|-------------------|---------------|-------------|--------------|-----------------|-----------------|---------------|---------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 1273.57 | 45.07 | 28.40 | 2.91 | 42.70 | 33.68 | 74.00 | -40.32 | Peak |
| 2 | 2747.18 | 55.48 | 32.51 | 4.31 | 42.04 | 50.26 | 54.00 | -3.74 | Average |
| 3 | 2747.18 | 58.73 | 32.51 | 4.31 | 42.04 | 53.51 | 74.00 | -20.49 | Peak |
| 4 | 4570.77 | 43.71 | 34.10 | 5.47 | 41.17 | 42.11 | 74.00 | -31.89 | Peak |
| 5 | 8022.46 | 39.47 | 35.82 | 7.54 | 40.16 | 42.67 | 74.00 | -31.33 | Peak |

| Test channel | | CH _M | | | Polarity | | Vertical | | |
|--------------|------------------|-------------------|---------------|-------------|--------------|-----------------|-----------------|---------------|---------|
| Mark | Frequency MHz | Reading dBuV/m | Antenna dB | Cable dB | Preamp dB | Level dBuV/m | Limit dBuV/m | Over limit | Remark |
| 1 | 1413.67 | 45.30 | 28.57 | 3.09 | 42.60 | 34.36 | 74.00 | -39.64 | Peak |
| 2 | 2747.18 | 55.98 | 32.51 | 4.31 | 42.04 | 50.76 | 54.00 | -3.24 | Average |
| 3 | 2747.18 | 60.41 | 32.51 | 4.31 | 42.04 | 55.19 | 74.00 | -18.81 | Peak |
| 4 | 4570.77 | 43.79 | 34.10 | 5.47 | 41.17 | 42.19 | 74.00 | -31.81 | Peak |
| 5 | 10507.31 | 37.44 | 37.50 | 8.53 | 39.85 | 43.62 | 74.00 | -30.38 | Peak |

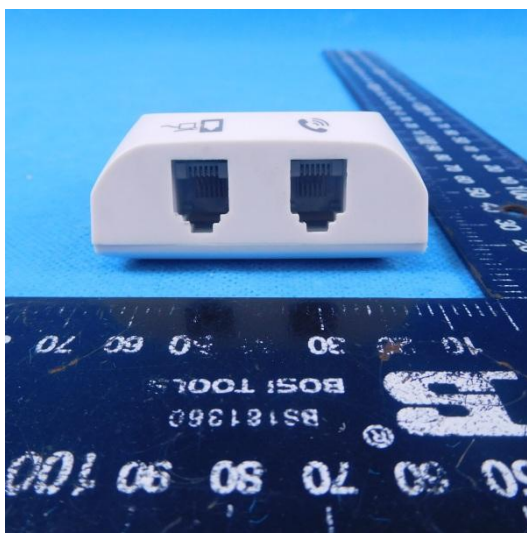
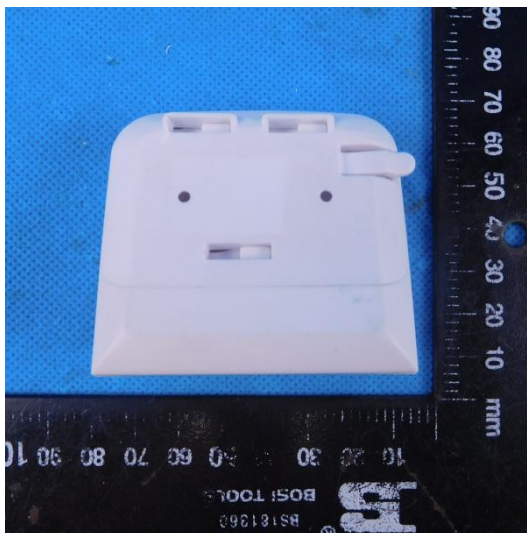
6. TEST SETUP PHOTOS

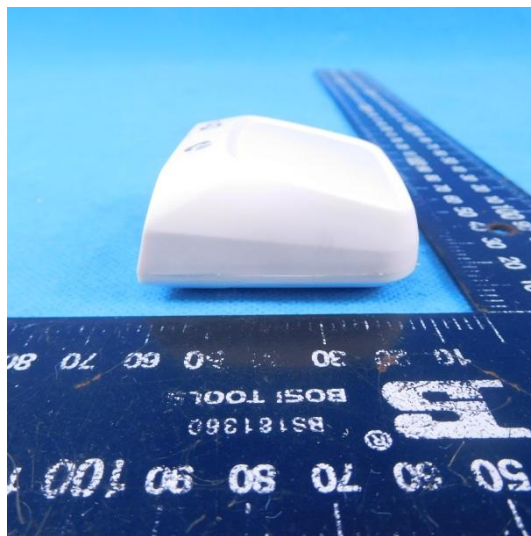
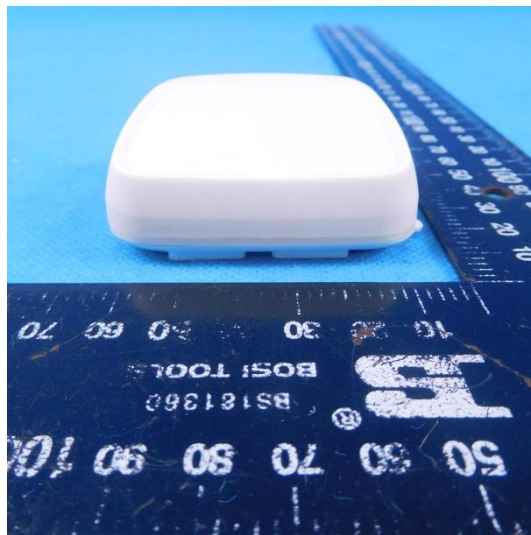
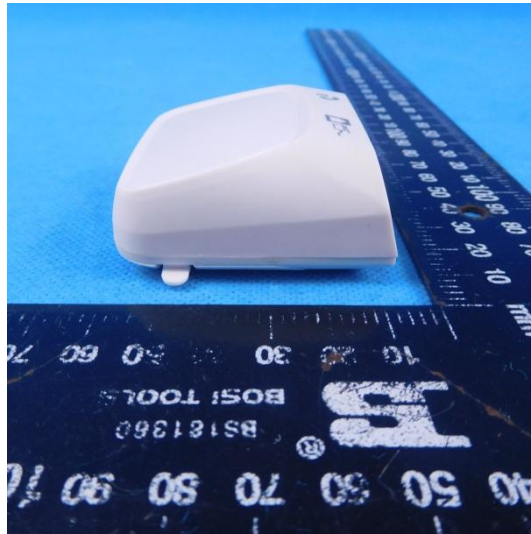
Radiated Emission



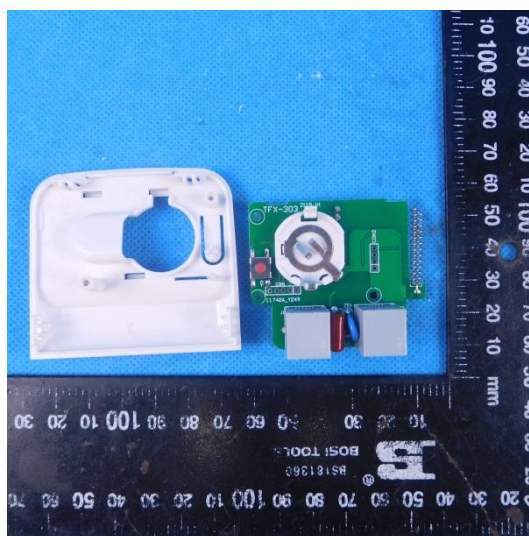
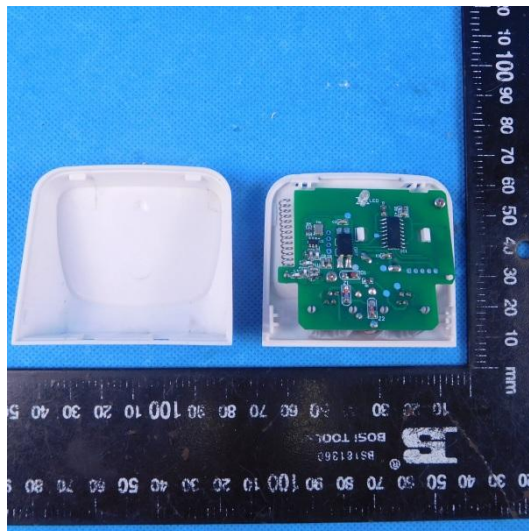
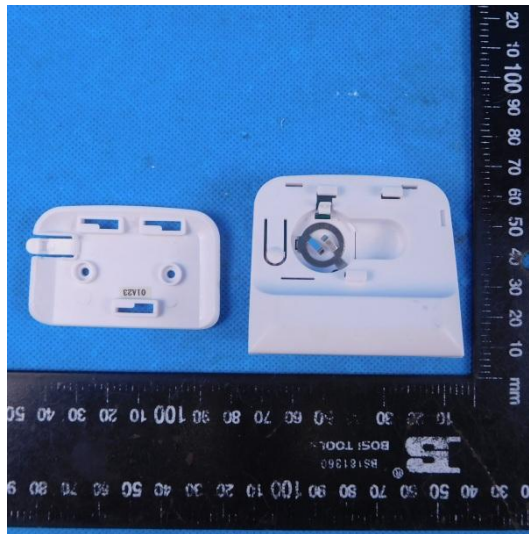
7. EXTERNAL AND INTERNAL PHOTOS

7.1. External Photos





7.2. Internal Photos



-----End of Report-----