

# FCC Radio Test Report

## FCC ID: XHM-P255D31

This report concerns (check one): ☒Original Grant ☐Class II Change

**Project No.** : 1603011  
**Equipment** : Mobile PC  
**Test Model** : T635M  
**Series Model** : P255  
**Applicant** : FLYTECH Technology Co., Ltd.  
**Address** : 1F, No. 168, Sing-Ai Rd., NeiHu District 11494,  
Taipei, Taiwan

**Date of Receipt** : Apr. 06, 2016  
**Date of Test** : Apr. 06, 2016 ~ May 24, 2016  
**Issued Date** : May 26, 2016  
**Tested by** : BTL Inc.

**Testing Engineer**

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# **B T L I N C .**

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### **Limitation**

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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### REPORT ISSUED HISTORY

| Issue No.          | Description     | Issued Date  |
|--------------------|-----------------|--------------|
| BTL-FCCP-1-1603011 | Original Issue. | May 26, 2016 |

## 1 CERTIFICATION

Equipment : Mobile PC  
Brand Name : FLYTECH  
Test Model : T635M  
Series Model : P255  
Applicant : FLYTECH Technology Co., Ltd.  
Date of Test : Apr. 06, 2016 ~ May 24, 2016  
Test Sample : Engineering Sample  
Standard(s) : FCC Part 15, Subpart C (15.225)  
ANSI C63.10-2013

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-1-1603011) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

## 2 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

| Standard Section                 | Test Item           | Result |
|----------------------------------|---------------------|--------|
| 15.207                           | Conducted emission  | PASS   |
| 15.35 / 15.205 / 15.209 / 15.225 | Radiated emission   | PASS   |
| 15.225(e)                        | Frequency Stability | PASS   |
| 15.203                           | Antenna Requirement | PASS   |

NOTE:

(1) N/A denotes test is not applicable in this test report

## 2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

### Conducted emission Test:

**C05:** (VCCI RN: C-4742; FCC RN:949005; FCC DN:TW1082)

No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

### Radiated emission Test:

**CB11:** (VCCI RN: R-4260; FCC RN:949005; FCC DN:TW1082; IC Assigned Code:20088)

No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

## 2.2 MEASUREMENT UNCERTAINTY

**The measurement uncertainty is not specified by FCC rules and for reference only.**

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%.

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2.

The BTL measurement uncertainty is less than the CISPR 16-4-2  $U_{CISPR}$  requirement.

### A. Conducted emission test:

| Test Site | Method | Measurement Frequency Range | U, (dB) |
|-----------|--------|-----------------------------|---------|
| C05       | CISPR  | 150 kHz~30MHz               | 2.04    |

### B. Radiated emission test:

| Test Site    | Method | Measurement Frequency Range | U, (dB) |
|--------------|--------|-----------------------------|---------|
| CB11<br>(3m) | CISPR  | 9kHz ~ 150kHz               | 4.00    |
|              |        | 150kHz ~ 30MHz              | 4.00    |

| Test Site    | Method | Measurement Frequency Range | Ant.<br>H / V | U, (dB) |
|--------------|--------|-----------------------------|---------------|---------|
| CB11<br>(3m) | CISPR  | 30 MHz ~ 200 MHz            | V             | 3.06    |
|              |        | 30 MHz ~ 200 MHz            | H             | 2.58    |
|              |        | 200 MHz ~ 1, 000 MHz        | V             | 3.50    |
|              |        | 200 MHz ~ 1, 000 MHz        | H             | 3.10    |

Our calculated Measurement Instrumentation Uncertainty is shown in the tables above. These are our  $U_{lab}$  values in CISPR 16-4-2 terminology.

Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called  $U_{CISPR}$ , as follows:

Conducted Disturbance (mains port) - 150 kHz - 30 MHz: 3.6 dB

Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz - 1000 MHz: 5.2 dB

It can be seen that our  $U_{lab}$  values are smaller than  $U_{CISPR}$ .

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

### 3 GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

|                     |                                                                                                                                                                                                                                                                                                                                                                                                           |              |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Equipment           | Mobile PC                                                                                                                                                                                                                                                                                                                                                                                                 |              |
| Brand Name          | FLYTECH                                                                                                                                                                                                                                                                                                                                                                                                   |              |
| Test Model          | T635M                                                                                                                                                                                                                                                                                                                                                                                                     |              |
| Series Model        | P255                                                                                                                                                                                                                                                                                                                                                                                                      |              |
| Model Difference    | Model T635M is for system, model P255 is only for Mobile PC.                                                                                                                                                                                                                                                                                                                                              |              |
| Product Description | Operation Frequency                                                                                                                                                                                                                                                                                                                                                                                       | 13.56 MHz    |
|                     | Antenna Designation                                                                                                                                                                                                                                                                                                                                                                                       | LOOP Antenna |
| Power Source        | #1 DC Voltage supplied from AC/DC adapter.<br>Brand / Model: DELTA / ADP-90MD H<br>#2 Battery supplied.<br>Model: BA410000                                                                                                                                                                                                                                                                                |              |
| Power Rating        | #1 I/P: AC 100-240V 50-60Hz 1.5A O/P: DC 19V 4.74A<br>#2 I/P: DC 3.6V 3800 mAh 13.68 Wh                                                                                                                                                                                                                                                                                                                   |              |
| Products Covered    | 1 * Mother Board: D31L<br>1 * CPU: Intel(R) Atom(TM) CPU Z3735F @ 1.83GHz<br>1 * Panel: 10.1"<br>1 * AC/DC adapter: DELTA / ADP-90MD H<br>2 * HDD: eMMC (on_board)_16G, eMMC (on_board)_32G<br>1 * Battery: BA410000<br>1 * 802.11abgn 2X2 MIMO + BT/BLE RADIO MODULE: MITSUMI / DWM-W095A (FCC ID: EW4DWMW095A, IC: 4250A-DWMW095A)<br>1 * RFID Module: Smart-Approach / MSN09-C01<br>1 * Stand: P077020 |              |

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

### 3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| Pretest Mode | Description       |
|--------------|-------------------|
| Mode 1       | 13.56MHz Transmit |

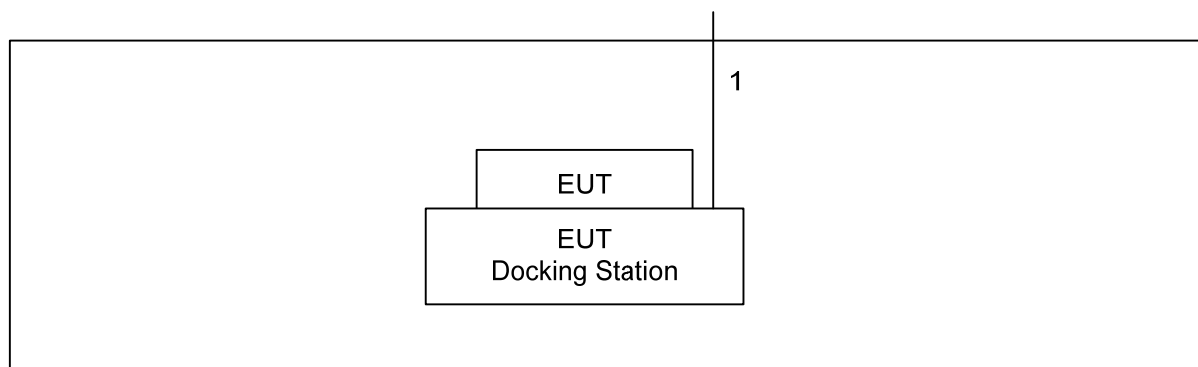
| Conducted emission test |                   |
|-------------------------|-------------------|
| Final Test Mode         | Description       |
| Mode 1                  | 13.56MHz Transmit |

| Radiated emission test |                   |
|------------------------|-------------------|
| Final Test Mode        | Description       |
| Mode 1                 | 13.56MHz Transmit |

| Frequency Stability test |                   |
|--------------------------|-------------------|
| Final Test Mode          | Description       |
| Mode 1                   | 13.56MHz Transmit |

| Antenna Requirement test |                   |
|--------------------------|-------------------|
| Final Test Mode          | Description       |
| Mode 1                   | 13.56MHz Transmit |

### 3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



### 3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment | Mfr/Brand | Model/Type No. | FCC ID | Series No. |
|------|-----------|-----------|----------------|--------|------------|
| -    | -         | -         | -              | -      | -          |

| Item | Shielded Type | Ferrite Core | Length | Note       |
|------|---------------|--------------|--------|------------|
| 1    | NO            | NO           | 1.2m   | Power Line |

Note:

(1) The support equipment was authorized by Declaration of Conformity (DOC).

## 4 CONDUCTED EMISSION

### 4.1 LIMITS

| FREQUENCY<br>(MHz) | (dBUV)     |           |
|--------------------|------------|-----------|
|                    | Quasi-peak | Average   |
| 0.15 - 0.5         | 66 - 56 *  | 56 - 46 * |
| 0.50 - 5.0         | 56.00      | 46.00     |
| 5.0 - 30.0         | 60.00      | 50.00     |

**NOTE:**

1. The tighter limit applies at the band edges.
2. The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
3. The test result calculated as following:  
 Measurement Value = Reading Level + Correct Factor  
 Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)  
 Margin Level = Measurement Value – Limit Value

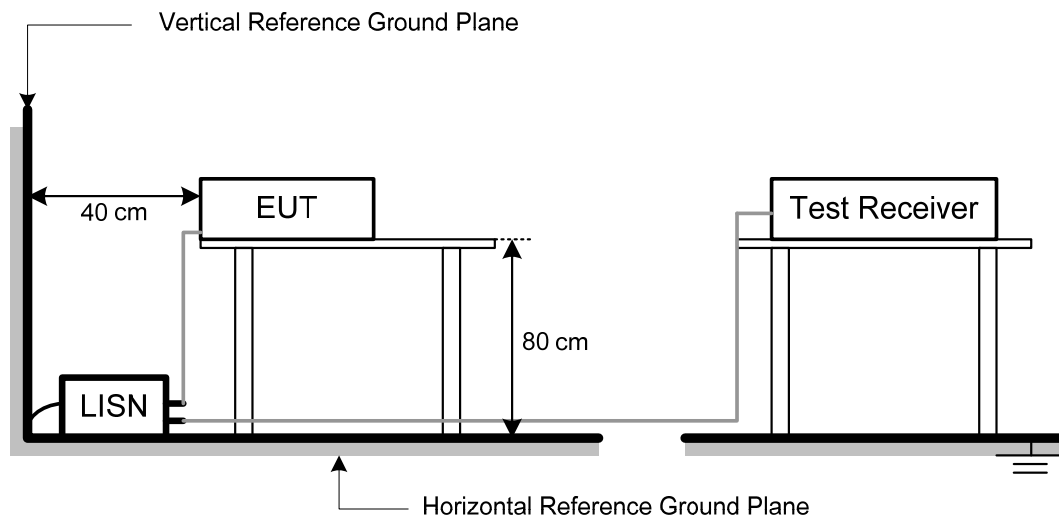
### 4.2 TEST PROCEDURES

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

**NOTE:**

- a. Reading in which marked as Peak, QP or AVG means measurements by using are Quasi-Peak or Average Mode with Detector BW=9 kHz (6 dB Bandwidth).
- b. All readings are Peak Mode value unless otherwise stated QP or AVG in column of Note. If the Peak or QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only Peak or QP Mode was measured, but AVG Mode didn't perform.

#### 4.3 TEST SETUP LAYOUT



#### 4.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.5 EUT OPERATING CONDITIONS

The EUT used during radiated and/or conducted emission measurement was designed to exercise in a manner similar to a typical use.

#### 4.6 EUT TEST CONDITIONS

Temperature: 25°C

Relative Humidity: 55%

Test Voltage: AC 120V/60Hz

#### 4.7 TEST RESULTS

Please refer to the Attachment A.

Remark:

- (1) All readings are QP Mode value unless otherwise stated AVG in column of 『Note』 . If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform in this case, a "\*" marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150KHz to 30MHz.

## 5 RADIATED EMISSION

### 5.1 LIMITS

| FCC Part 15.209            |                           |      |                                                  |                         |
|----------------------------|---------------------------|------|--------------------------------------------------|-------------------------|
| Frequency (MHz)            | Field Strength Limitation |      | Field Strength Limitation at 3m Measurement Dist |                         |
|                            | (uV/m)                    | Dist | (uV/m)                                           | (dBuV/m)                |
| 0.009 – 0.490              | 2400 / F(KHz)             | 300m | 10000 * 2400/F(KHz)                              | 20log 2400/F(KHz) + 80  |
| 0.490 – 1.705              | 24000 / F(KHz)            | 30m  | 100 * 24000/F(KHz)                               | 20log 24000/F(KHz) + 40 |
| 1.705 – 30.00              | 30                        | 30m  | 100* 30                                          | 20log 30 + 40           |
| 30.0 – 88.0                | 100                       | 3m   | 100                                              | 20log 100               |
| 88.0 – 216.0               | 150                       | 3m   | 150                                              | 20log 150               |
| 216.0 – 960.0              | 200                       | 3m   | 200                                              | 20log 200               |
| Above 960.0                | 500                       | 3m   | 500                                              | 20log 500               |
| FCC Part 15.225(a)/(b)/(c) |                           |      |                                                  |                         |
| Frequency (MHz)            | Field Strength Limitation |      | Field Strength Limitation at 3m Measurement Dist |                         |
|                            | (uV/m)                    | Dist | (uV/m)                                           | (dBuV/m)                |
| 13.553 – 13.567            | 15,848                    | 30 m | 15,848*100                                       | 124                     |
| 13.567 – 13.710            | 334                       | 30 m | 334*100                                          | 90.5                    |
| 13.110 – 13.410            | 106                       | 30 m | 106*100                                          | 80.5                    |
| 13.710 – 14.010            |                           |      |                                                  |                         |

**NOTE:**

- (1) The tighter limit shall apply at the boundary between two frequency range.
- (2) Limitation expressed in dBuV/m is calculated by 20log Emission Level (uV/m).
- (3) If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula of  $L_{d1} = L_{d2} * (d_2/d_1)^2$ .  
Example:  
F.S Limit at 30m distance is 30uV/m , then F.S Limitation at 3m distance is adjusted as  $L_{d1} = L_1 = 30uV/m * (10)^2 = 100 * 30 uV/m$
- (4) The test result calculated as following:  
Measurement Value = Reading Level + Correct Factor  
Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)  
Margin Level = Measurement Value – Limit Value

## 5.2 TEST PROCEDURE

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The height of the equipment or of the substitution antenna shall be 0.8 m or 1.5m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- d. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1GHz)
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

**NOTE: (FCC PART 15.209)**

- a. Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode with Detector BW=120 kHz.
- b. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.

**NOTE: (FCC PART 15.225)**

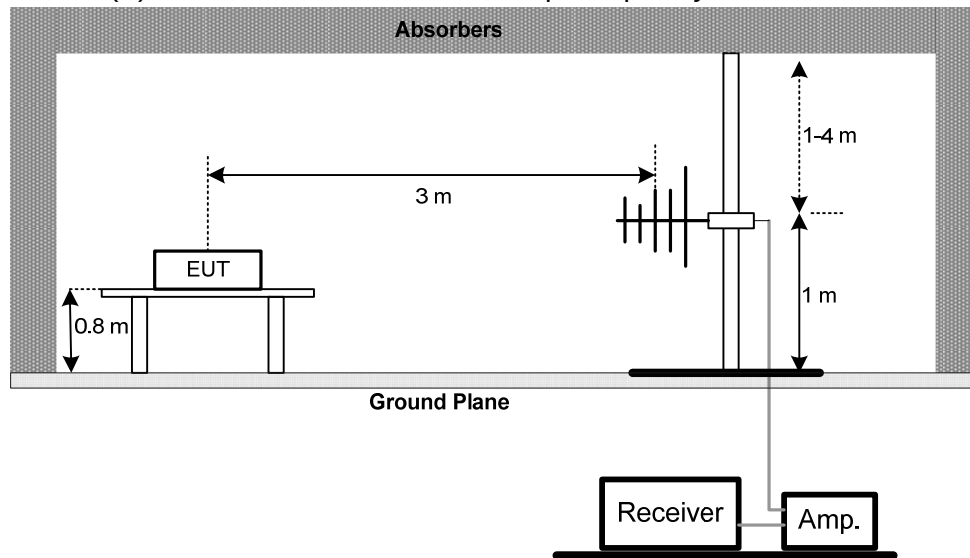
- a. Spectrum Setting:
  - 9 KHz – 150 KHz, RBW= 200Hz, VBW=200Hz, Sweep time = 200 ms.
  - 150 K Hz – 30 MHz, RBW= 10 KHz, VBW=10 KHz, Sweep time = 200 ms.
  - 30 MHz – 1000 MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.
- b. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- c. The Log-Bicon Antenna will use to test frequency range from 30MHz to 1000MHz and the Loop Antenna will use to test frequency below 30MHz.

### 5.3 DEVIATION FROM TEST STANDARD

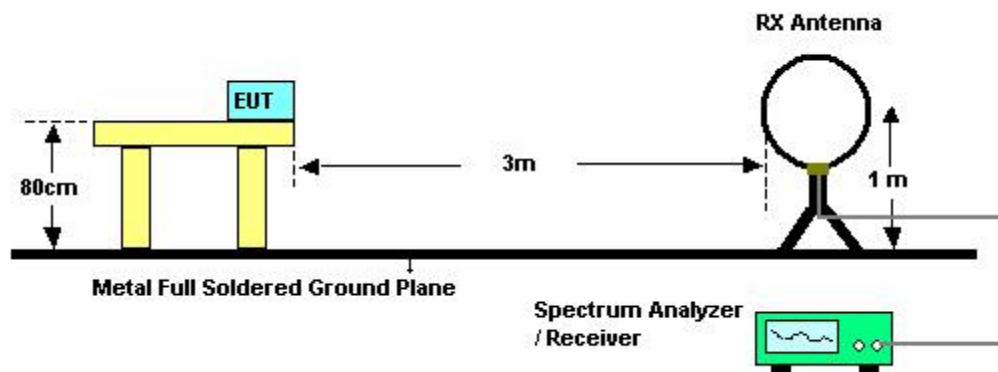
No deviation

### 5.4 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(B) For radiated emissions below 30MHz



### 5.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.5** unless otherwise a special operating condition is specified in the follows during the testing.

**5.6 EUT TEST CONDITIONS**

Temperature: 25°C

Relative Humidity: 45%

Test Voltage: AC 120V/60Hz

**5.7 TEST RESULTS (BELOW 30MHZ) - FCC PART 15.209**

Please refer to the Attachment B.

**5.8 TEST RESULTS - (30-1000MHZ) - FCC PART 15.209**

Please refer to the Attachment C.

**5.9 TEST RESULTS- FCC PART 15.225**

Please refer to the Attachment D.

## **6 FREQUENCY STABILITY**

### **6.1 LIMITS**

| <b>FCC Part 15.225(e)</b>                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The frequency tolerance of the carrier signal shall be maintained within +/-0.01% of the operating frequency over a temperature variation of - 20 degrees to + 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.<br>For battery operated equipment, the equipment tests shall be performed using a new battery. |

### **6.2 TEST PROCEDURE**

- a. The equipment under test was connected to an external AC power supply and the RF output was connected to a frequency counter via feed through attenuators. The EUT was placed inside the temperature chamber.  
After the temperature stabilized for approximately 20 minutes, the frequency of the output signal was recorded from the counter.
- b. At room temperature (25±5°C), an external variable AC power supply was connected to the EUT. The frequency of the transmitter was measured for 115%, 100% and 85% of the nominal operating input voltage.

### **6.3 DEVIATION FROM TEST STANDARD**

No deviation

### **6.4 EUT OPERATING CONDITIONS**

The EUT tested system was configured as the statements of **4.5.** unless otherwise a special operating condition is specified in the follows during the testing.

### **6.5 EUT TEST CONDITIONS**

Temperature: 22°C  
Relative Humidity: 66%  
Test Voltage: AC 120V/60Hz

### **6.6 TEST RESULTS**

Please refer to the Attachment E.

## 7. MEASUREMENT INSTRUMENTS LIST

| Conducted Emission Measurement |                      |              |                            |            |                  |
|--------------------------------|----------------------|--------------|----------------------------|------------|------------------|
| Item                           | Kind of Equipment    | Manufacturer | Type No.                   | Serial No. | Calibrated until |
| 1                              | TWO-LINE V-NETWORK   | R&S          | ENV216                     | 101050     | Jan. 25, 2017    |
| 2                              | Test Cable           | TIMES        | CFD300-NL                  | C02        | Jun. 14, 2016    |
| 3                              | EMI Test Receiver    | R&S          | ESR7                       | 101433     | Dec. 09, 2016    |
| 4                              | Measurement Software | EZ           | EZ_EMC<br>(Version NB-03A) | N/A        | N/A              |

| Radiated Emission Measurement |                      |              |                            |            |                  |
|-------------------------------|----------------------|--------------|----------------------------|------------|------------------|
| Item                          | Kind of Equipment    | Manufacturer | Type No.                   | Serial No. | Calibrated until |
| 1                             | Log-Bicon Antenna    | Schwarzbeck  | VULB9168-352               | 9168-352   | Jul. 30, 2016    |
| 2                             | Pre-Amplifier        | Anritsu      | MH648A                     | M92649     | Jun. 16, 2016    |
| 3                             | Test Cable           | EMCI         | EMC8D-NM-NM-8000           | 150301     | Mar. 08, 2017    |
| 4                             | Test Cable           | EMCI         | EMC8D-NM-NM-2500           | 150303     | Mar. 08, 2017    |
| 5                             | Test Cable           | EMCI         | EMC8D-NM-NM-1000           | 150304     | Mar. 08, 2017    |
| 6                             | Spectrum Analyzer    | Agilent      | N9038A                     | MY51210215 | Jun. 07, 2016    |
| 7                             | Measurement Software | Farad        | EZ_EMC<br>(Version NB-03A) | N/A        | N/A              |

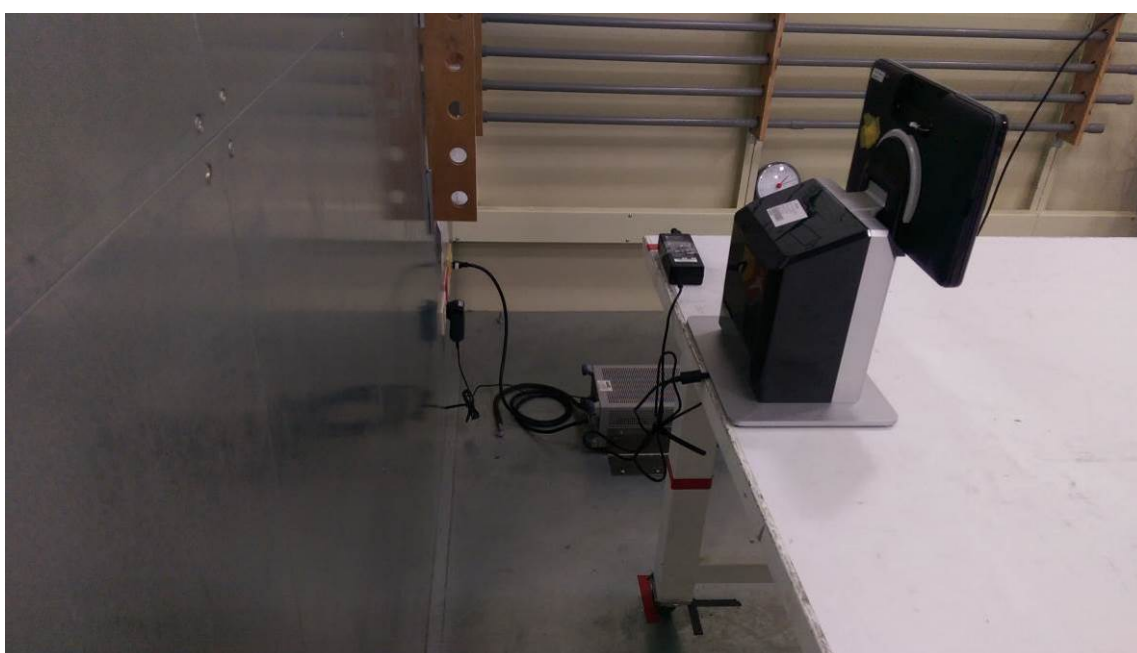
| Frequency Stability Measurement |                   |              |          |            |                  |
|---------------------------------|-------------------|--------------|----------|------------|------------------|
| Item                            | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1                               | Spectrum Analyzer | Agilent      | N9038A   | MY51210215 | Jun. 07, 2016    |

Remark: "N/A" denotes no model name, serial no. or calibration specified.

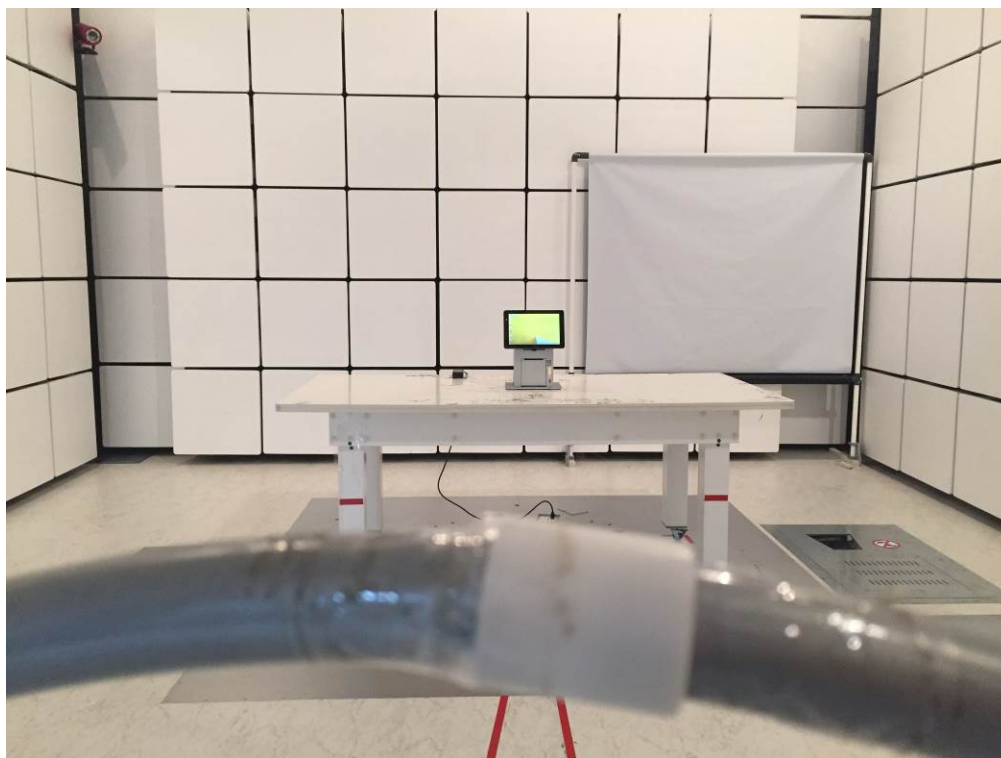
All calibration period of equipment list is one year.

## 8 EUT TEST PHOTO

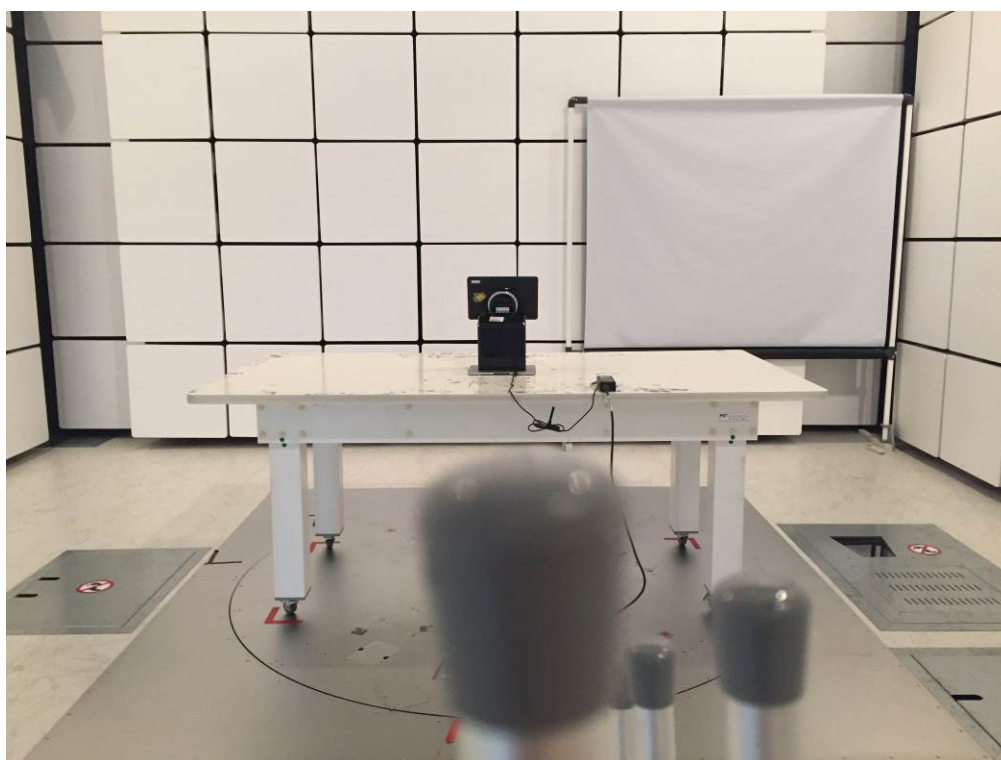
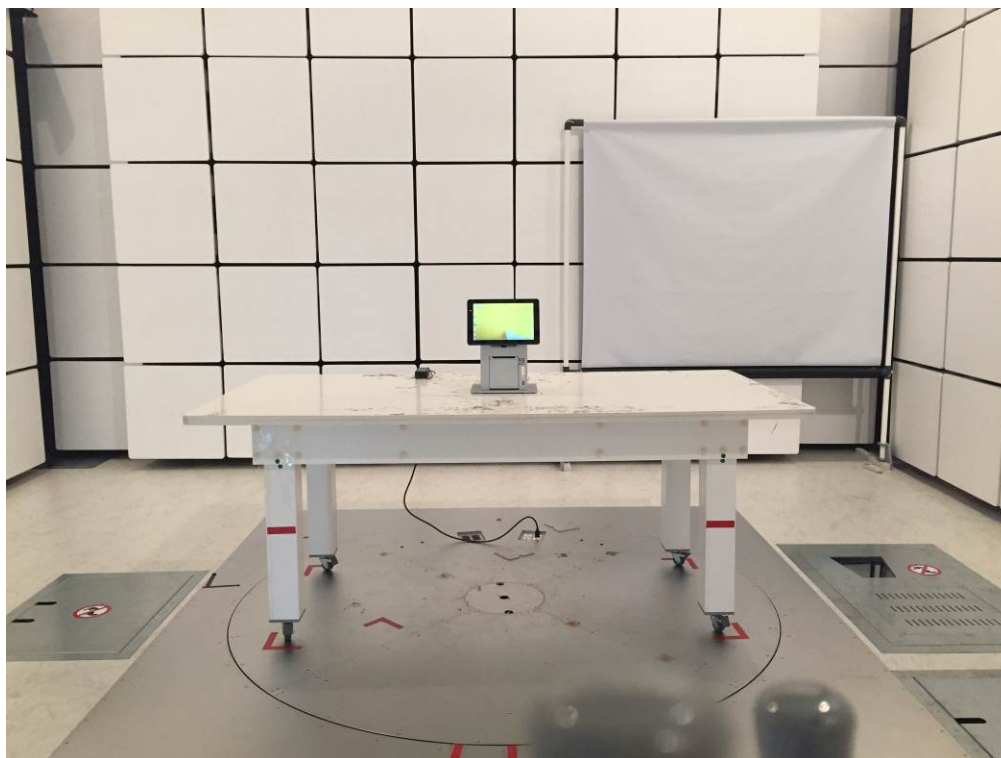
### Conducted emission test photos



**Radiated emission test photos  
9KHz to 30MHz**



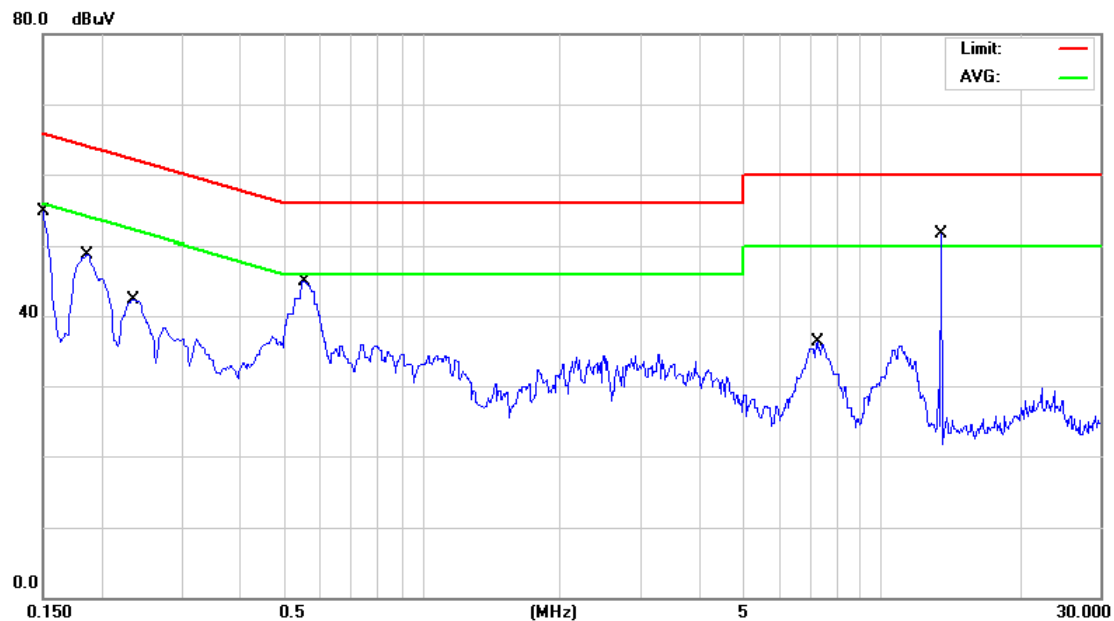
**Radiated emission test photos  
30MHz to 1000MHz**



## **ATTACHMENT A - CONDUCTED EMISSION**

Test Mode : 13.56MHz Transmit

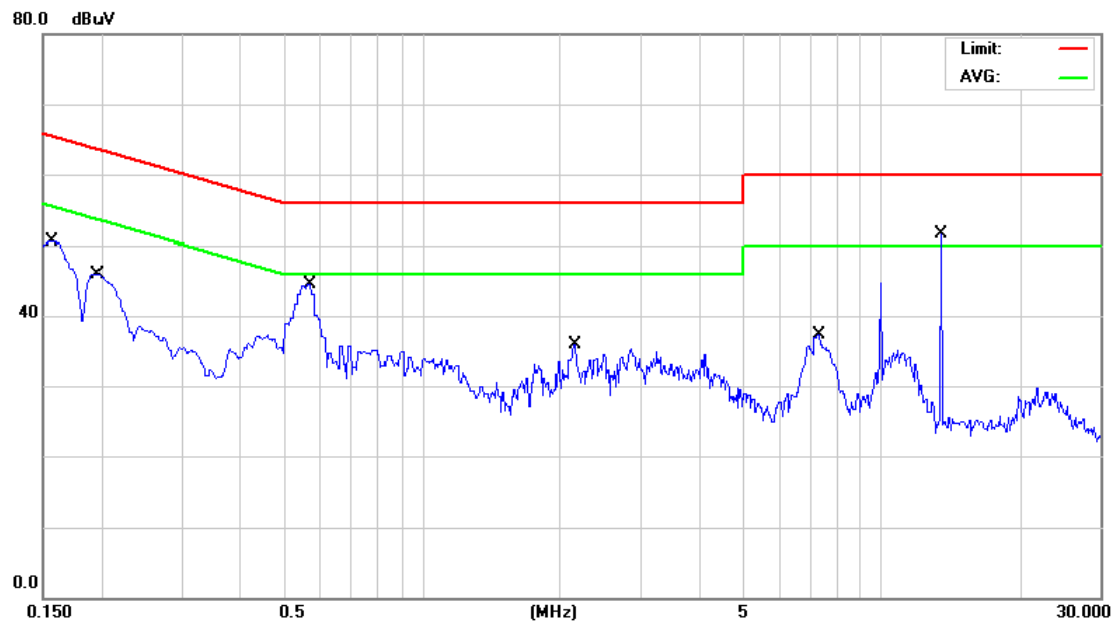
### Line



| No. | Mk. | Freq.   | Reading Level | Correct Factor | Measurement | Limit | Margin |          |         |
|-----|-----|---------|---------------|----------------|-------------|-------|--------|----------|---------|
|     |     | MHz     | dBuV          | dB             | dBuV        | dBuV  | dB     | Detector | Comment |
| 1   |     | 0.1500  | 31.20         | 9.68           | 40.88       | 65.99 | -25.11 | QP       |         |
| 2   |     | 0.1500  | 16.50         | 9.68           | 26.18       | 55.99 | -29.81 | AVG      |         |
| 3   |     | 0.1870  | 34.20         | 9.68           | 43.88       | 64.16 | -20.28 | QP       |         |
| 4   |     | 0.1870  | 17.90         | 9.68           | 27.58       | 54.16 | -26.58 | AVG      |         |
| 5   |     | 0.2340  | 30.70         | 9.68           | 40.38       | 62.30 | -21.92 | QP       |         |
| 6   |     | 0.2340  | 18.50         | 9.68           | 28.18       | 52.30 | -24.12 | AVG      |         |
| 7   |     | 0.5540  | 30.90         | 9.69           | 40.59       | 56.00 | -15.41 | QP       |         |
| 8   |     | 0.5540  | 19.00         | 9.69           | 28.69       | 46.00 | -17.31 | AVG      |         |
| 9   |     | 7.2500  | 19.60         | 9.92           | 29.52       | 60.00 | -30.48 | QP       |         |
| 10  |     | 7.2500  | 11.30         | 9.92           | 21.22       | 50.00 | -28.78 | AVG      |         |
| 11  | *   | 13.5500 | 35.90         | 9.89           | 45.79       | 60.00 | -14.21 | QP       |         |
| 12  |     | 13.5500 | 23.70         | 9.89           | 33.59       | 50.00 | -16.41 | AVG      |         |

Test Mode : 13.56MHz Transmit

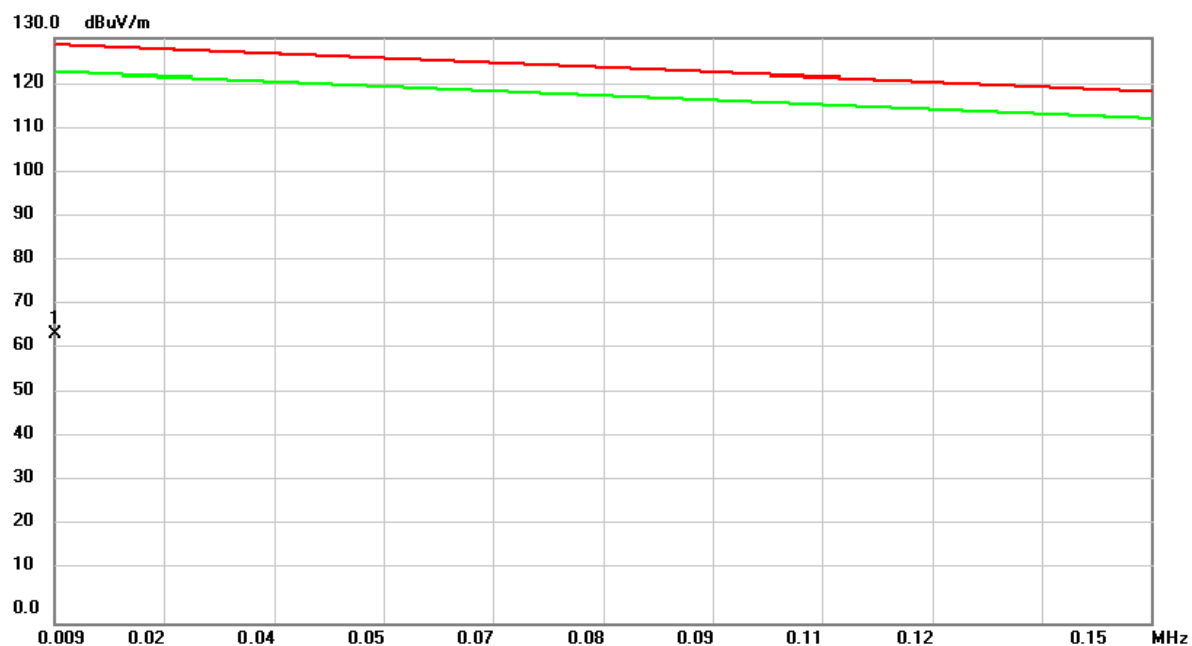
### Neutral



| No. | Mk. | Freq.   | Reading | Correct | Measure- | Limit | Margin |          |         |
|-----|-----|---------|---------|---------|----------|-------|--------|----------|---------|
|     |     | MHz     | Level   | Factor  | ment     |       |        | Detector | Comment |
|     |     |         | dBuV    | dB      | dBuV     | dBuV  | dB     |          |         |
| 1   |     | 0.1563  | 37.00   | 9.69    | 46.69    | 65.65 | -18.96 | QP       |         |
| 2   |     | 0.1563  | 25.50   | 9.69    | 35.19    | 55.65 | -20.46 | AVG      |         |
| 3   |     | 0.1962  | 29.70   | 9.68    | 39.38    | 63.77 | -24.39 | QP       |         |
| 4   |     | 0.1962  | 17.40   | 9.68    | 27.08    | 53.77 | -26.69 | AVG      |         |
| 5   |     | 0.5720  | 31.00   | 9.69    | 40.69    | 56.00 | -15.31 | QP       |         |
| 6   |     | 0.5720  | 20.50   | 9.69    | 30.19    | 46.00 | -15.81 | AVG      |         |
| 7   |     | 2.1470  | 18.50   | 9.78    | 28.28    | 56.00 | -27.72 | QP       |         |
| 8   |     | 2.1470  | 7.20    | 9.78    | 16.98    | 46.00 | -29.02 | AVG      |         |
| 9   |     | 7.3000  | 20.50   | 9.93    | 30.43    | 60.00 | -29.57 | QP       |         |
| 10  |     | 7.3000  | 11.70   | 9.93    | 21.63    | 50.00 | -28.37 | AVG      |         |
| 11  | *   | 13.5500 | 35.70   | 9.89    | 45.59    | 60.00 | -14.41 | QP       |         |
| 12  |     | 13.5500 | 23.20   | 9.89    | 33.09    | 50.00 | -16.91 | AVG      |         |

## **ATTACHMENT B - RADIATED EMISSION (9KHZ-30MHZ)**

Test Mode: 13.56MHz Transmit - Open



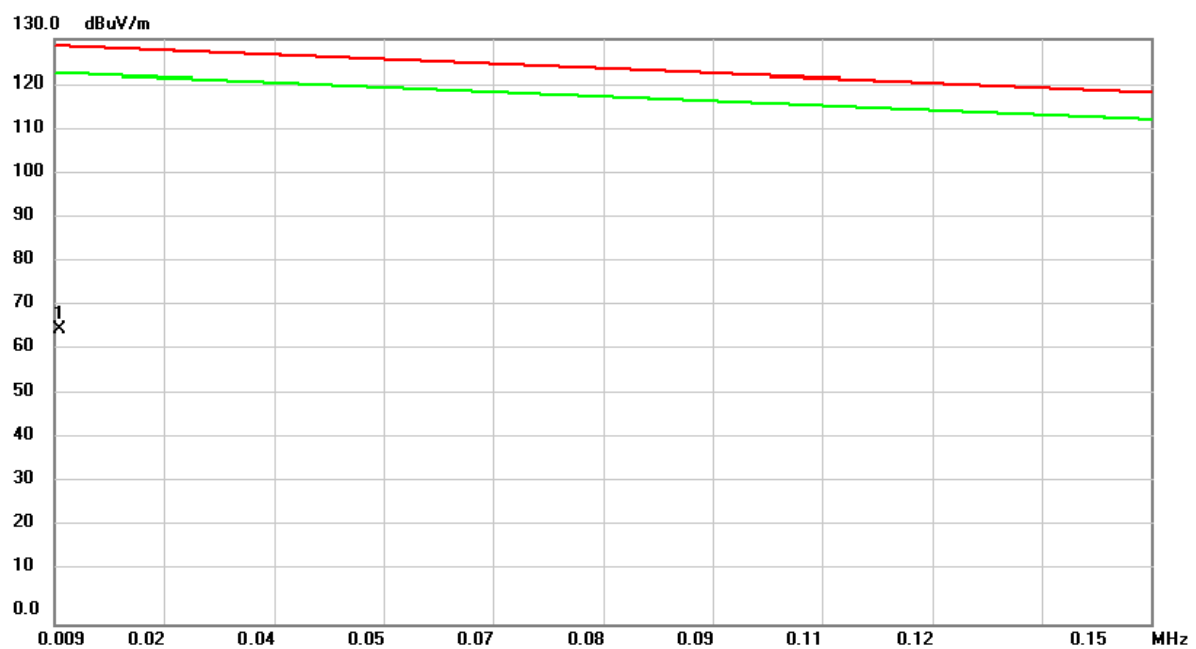
| No. | Mk. | Freq.  | Reading Level | Correct Factor | Measurement | Limit  | Over   |          |         |
|-----|-----|--------|---------------|----------------|-------------|--------|--------|----------|---------|
|     |     | MHz    | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector | Comment |
| 1   | *   | 0.0090 | 43.81         | 20.50          | 64.31       | 128.52 | -64.21 | peak     |         |

Test Mode: 13.56MHz Transmit - Open



| No. | Mk. | Freq.   | Reading Level | Correct Factor | Measure-ment | Limit  | Over   |          |         |
|-----|-----|---------|---------------|----------------|--------------|--------|--------|----------|---------|
|     |     | MHz     | dBuV          | dB             | dBuV/m       | dBuV/m | dB     | Detector | Comment |
| 1   | *   | 0.5680  | 34.13         | 11.83          | 45.96        | 73.10  | -27.14 | peak     |         |
| 2   |     | 1.3440  | 26.52         | 11.85          | 38.37        | 66.19  | -27.82 | peak     |         |
| 3   |     | 1.7620  | 22.33         | 11.66          | 33.99        | 69.54  | -35.55 | peak     |         |
| 4   |     | 2.0903  | 21.48         | 11.51          | 32.99        | 69.54  | -36.55 | peak     |         |
| 5   |     | 7.1150  | 11.09         | 11.36          | 22.45        | 69.54  | -47.09 | peak     |         |
| 6   |     | 23.3435 | 16.24         | 10.40          | 26.64        | 69.54  | -42.90 | peak     |         |

Test Mode: 13.56MHz Transmit - Close



| No. | Mk. | Freq.  | Reading Level | Correct Factor | Measure-ment | Limit  | Over   |          |         |
|-----|-----|--------|---------------|----------------|--------------|--------|--------|----------|---------|
|     |     | MHz    | dBuV          | dB             | dBuV/m       | dBuV/m | dB     | Detector | Comment |
| 1   | *   | 0.0096 | 44.98         | 20.50          | 65.48        | 128.48 | -63.00 | peak     |         |

Test Mode: 13.56MHz Transmit - Close

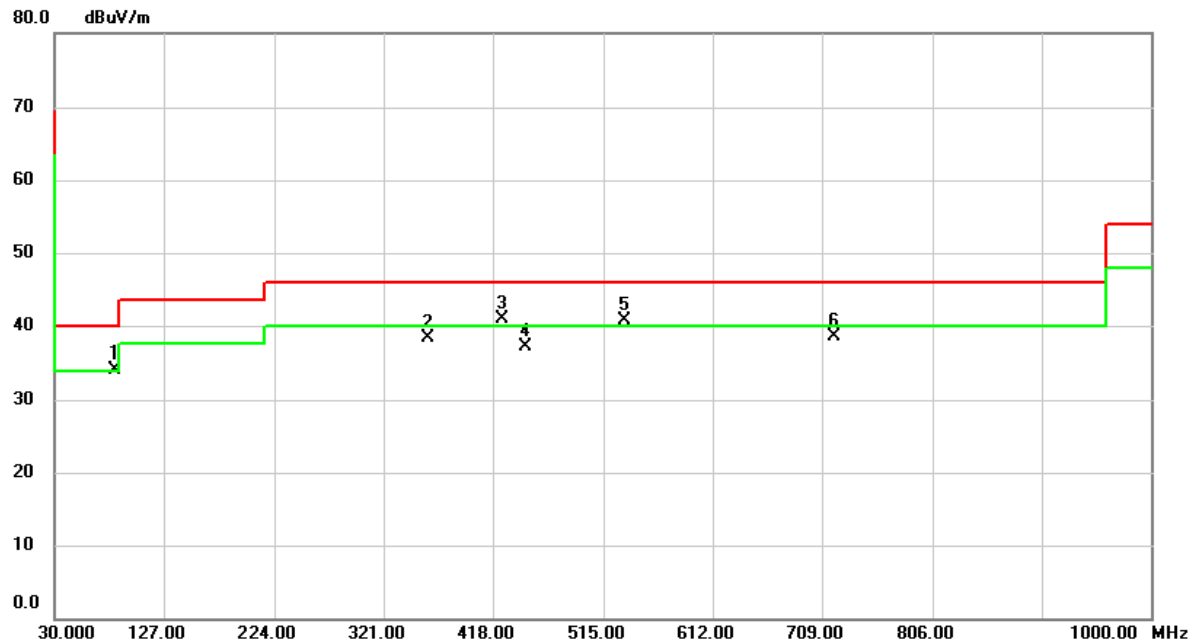


| No. | Mk. | Freq.   | Reading Level | Correct Factor | Measure-ment | Limit  | Over   |          |         |
|-----|-----|---------|---------------|----------------|--------------|--------|--------|----------|---------|
|     |     | MHz     | dBuV          | dB             | dBuV/m       | dBuV/m | dB     | Detector | Comment |
| 1   | *   | 0.6873  | 33.01         | 11.87          | 44.88        | 72.04  | -27.16 | peak     |         |
| 2   |     | 1.1650  | 27.88         | 11.93          | 39.81        | 67.78  | -27.97 | peak     |         |
| 3   |     | 1.4932  | 24.47         | 11.78          | 36.25        | 64.86  | -28.61 | peak     |         |
| 4   |     | 1.8216  | 22.17         | 11.63          | 33.80        | 69.54  | -35.74 | peak     |         |
| 5   |     | 23.1345 | 28.52         | 10.44          | 38.96        | 69.54  | -30.58 | peak     |         |
| 6   |     | 24.7463 | 23.27         | 10.15          | 33.42        | 69.54  | -36.12 | peak     |         |

## **ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)**

|            |                   |
|------------|-------------------|
| Test Mode: | 13.56MHz Transmit |
|------------|-------------------|

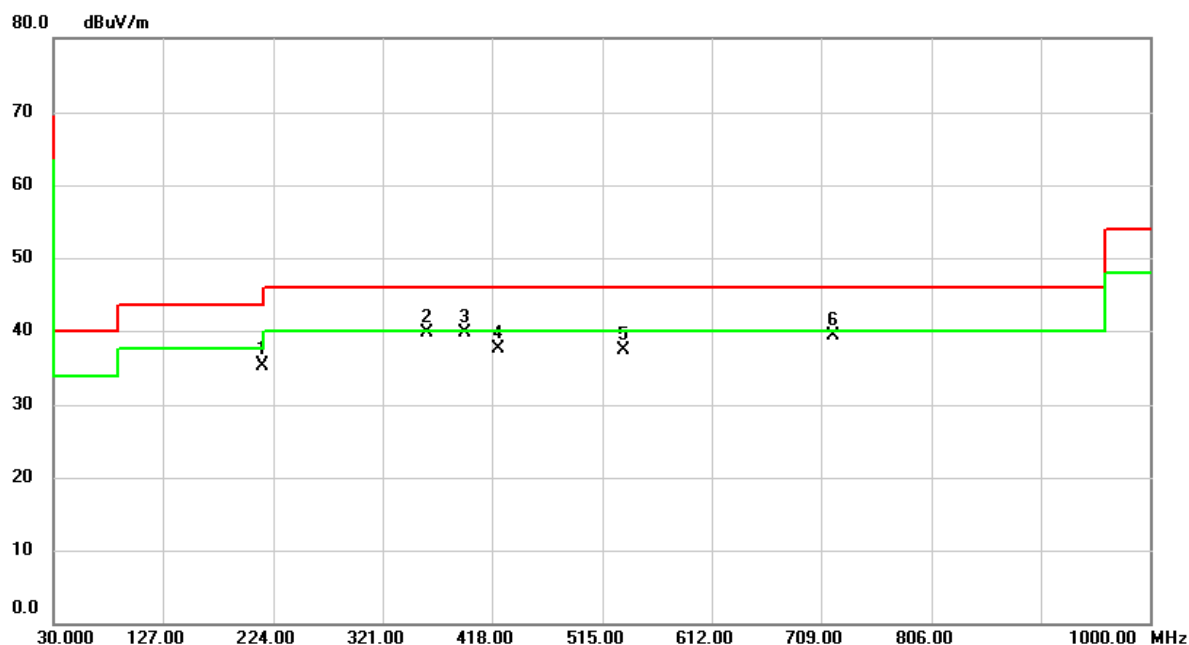
### Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|---------|
| 1   | !   | 83.3500      | 46.66                    | -12.64                  | 34.02                      | 40.00           | -5.98      | peak     |         |
| 2   |     | 359.8000     | 44.07                    | -5.77                   | 38.30                      | 46.00           | -7.70      | peak     |         |
| 3   | *   | 425.7600     | 45.07                    | -4.19                   | 40.88                      | 46.00           | -5.12      | peak     |         |
| 4   |     | 447.1000     | 40.70                    | -3.59                   | 37.11                      | 46.00           | -8.89      | peak     |         |
| 5   | !   | 533.4300     | 42.68                    | -1.91                   | 40.77                      | 46.00           | -5.23      | peak     |         |
| 6   |     | 719.6700     | 36.74                    | 1.70                    | 38.44                      | 46.00           | -7.56      | peak     |         |

Test Mode: 13.56MHz Transmit

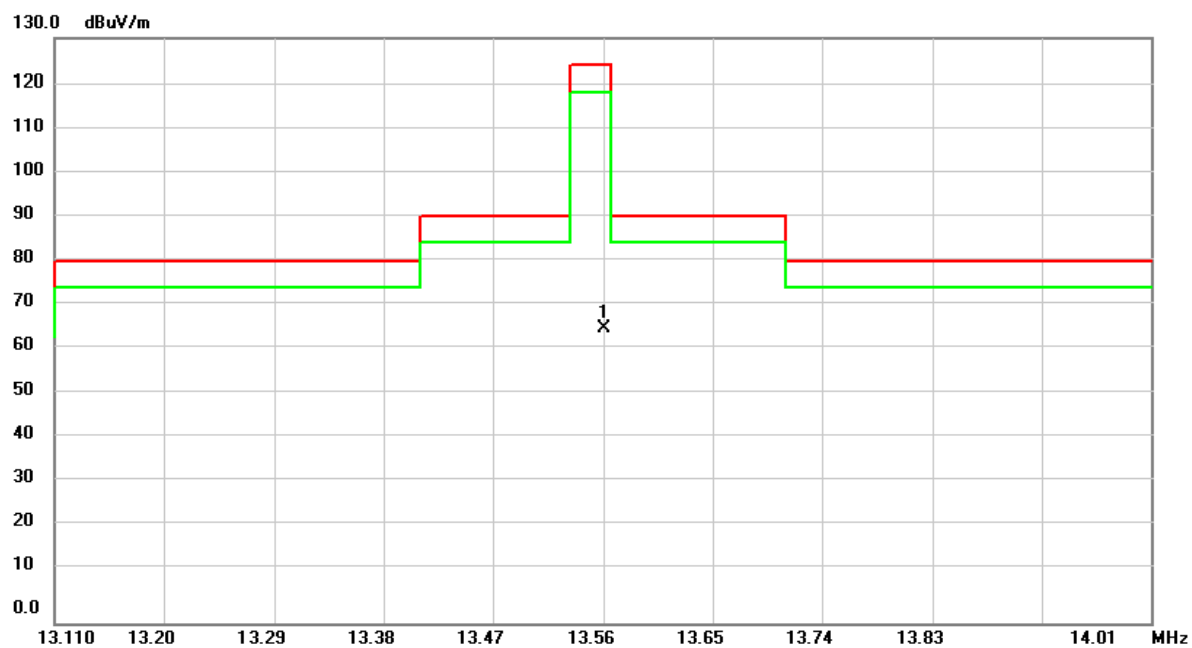
### Horizontal



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measure-ment | Limit  | Over  |          |         |
|-----|-----|----------|---------------|----------------|--------------|--------|-------|----------|---------|
|     |     | MHz      | dBuV          | dB             | dBuV/m       | dBuV/m | dB    | Detector | Comment |
| 1   |     | 214.3000 | 46.17         | -10.88         | 35.29        | 43.50  | -8.21 | peak     |         |
| 2   |     | 359.8000 | 45.38         | -5.77          | 39.61        | 46.00  | -6.39 | peak     |         |
| 3   | *   | 393.7500 | 44.78         | -5.05          | 39.73        | 46.00  | -6.27 | peak     |         |
| 4   |     | 423.8200 | 41.84         | -4.24          | 37.60        | 46.00  | -8.40 | peak     |         |
| 5   |     | 533.4300 | 39.16         | -1.91          | 37.25        | 46.00  | -8.75 | peak     |         |
| 6   |     | 719.6700 | 37.60         | 1.70           | 39.30        | 46.00  | -6.70 | peak     |         |

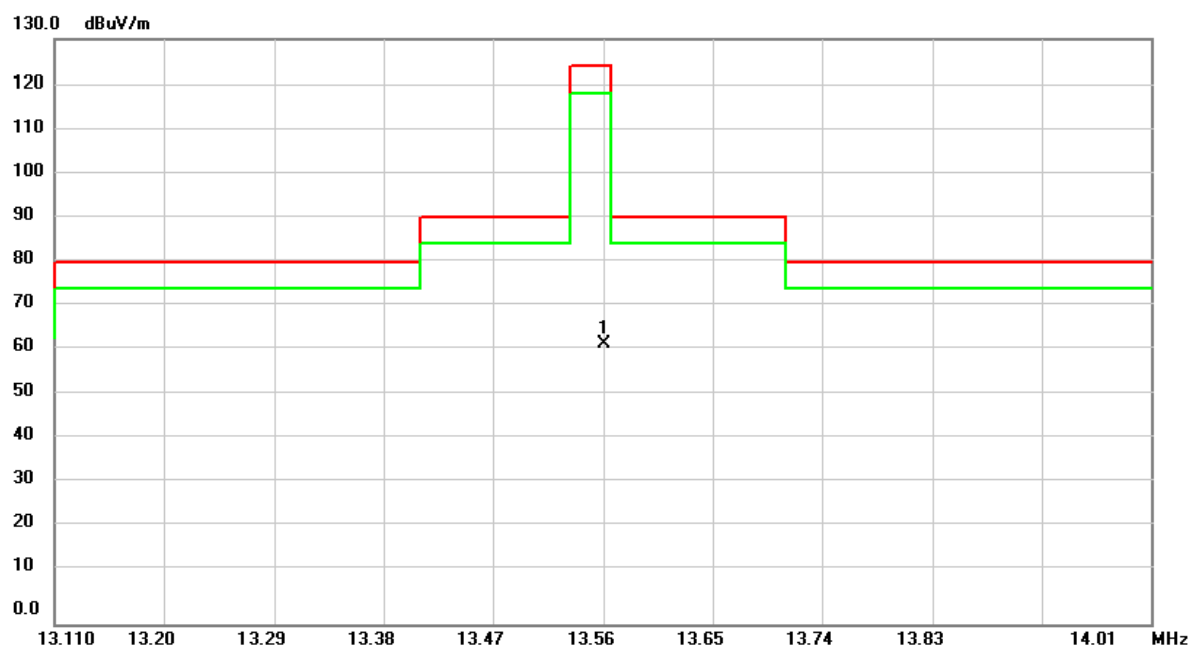
## **ATTACHMENT D - RADIATED EMISSION (FCC PART 15.225)**

Test Mode: 13.56MHz Transmit - Open



| No. | Mk. | Freq.   | Reading Level | Correct Factor | Measurement | Limit  | Over   |          |         |
|-----|-----|---------|---------------|----------------|-------------|--------|--------|----------|---------|
|     |     | MHz     | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector | Comment |
| 1   | *   | 13.5600 | 54.15         | 11.19          | 65.34       | 124.00 | -58.66 | peak     |         |

Test Mode: 13.56MHz Transmit - Close



| No. | Mk. | Freq.   | Reading Level | Correct Factor | Measurement | Limit  | Over   |          |         |
|-----|-----|---------|---------------|----------------|-------------|--------|--------|----------|---------|
|     |     | MHz     | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector | Comment |
| 1   | *   | 13.5600 | 50.97         | 11.19          | 62.16       | 124.00 | -61.84 | peak     |         |

## **ATTACHMENT E - FREQUENCY STABILITY MEASUREMENT**

|            |                   |
|------------|-------------------|
| Test Mode: | 13.56MHz Transmit |
|------------|-------------------|

| Frequency Stability Versus Environmental Temperature |                  |              |                 |                       |             |        |
|------------------------------------------------------|------------------|--------------|-----------------|-----------------------|-------------|--------|
|                                                      | Temperature (°C) | Voltage (AC) | Frequency (MHz) | Frequency Error (kHz) | Limit (kHz) | Result |
|                                                      | 20               | 120V         | 13.56002        | -                     | -           | -      |
| 0 min                                                | 55               | 120V         | 13.56008        | 0.0001                | +/- 1.356   | PASS   |
|                                                      | -20              | 120V         | 13.56011        | 0.0001                | +/- 1.356   | PASS   |
| 2 min                                                | 55               | 120V         | 13.56009        | 0.0001                | +/- 1.356   | PASS   |
|                                                      | -20              | 120V         | 13.56013        | 0.0001                | +/- 1.356   | PASS   |
| 5 min                                                | 55               | 120V         | 13.56010        | 0.0001                | +/- 1.356   | PASS   |
|                                                      | -20              | 120V         | 13.56018        | 0.0002                | +/- 1.356   | PASS   |
| 10 min                                               | 55               | 120V         | 13.56014        | 0.0001                | +/- 1.356   | PASS   |
|                                                      | -20              | 120V         | 13.56022        | 0.0002                | +/- 1.356   | PASS   |

| Frequency Stability Versus Input Voltage |              |     |                 |                       |             |        |
|------------------------------------------|--------------|-----|-----------------|-----------------------|-------------|--------|
| Temperature (°C)                         | Voltage (AC) |     | Frequency (MHz) | Frequency Error (kHz) | Limit (kHz) | Result |
| 20                                       | V-nom        | 120 | 13.560018       | 0.0000                | +/- 1.356   | PASS   |
| 20                                       | V-min        | 102 | 13.560020       | 0.0000                | +/- 1.356   | PASS   |
| 20                                       | V-max        | 138 | 13.560022       | 0.0000                | +/- 1.356   | PASS   |