

## FCC Test Report

**Report No.:** RF190109C01-2

**FCC ID:** S6J2173

**Test Model:** 2173

**Received Date:** Jan. 30, 2019

**Test Date:** Feb. 14 ~ Mar. 20, 2019

**Issued Date:** Mar. 27, 2019

**Applicant:** Technology Solutions (UK) Ltd

**Address:** Suite A, Loughborough Technology Centre, Epinal Way, Loughborough,  
Leicestershire, LE11 3GE, United Kingdom

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan,  
R.O.C.

**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City  
33383, TAIWAN (R.O.C.)

**FCC Registration /** 788550 / TW0003  
**Designation Number:**



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### Release Control Record

| Issue No.     | Description      | Date Issued   |
|---------------|------------------|---------------|
| RF190109C01-2 | Original release | Mar. 27, 2019 |

## 1 Certificate of Conformity

**Product:** 2173 BLUETOOTH LF, HF & NFC RFID READER

**Brand:** TECHNOLOGY SOLUTIONS (UK) LTD

**Test Model:** 2173

**Sample Status:** Engineering sample

**Applicant:** Technology Solutions (UK) Ltd

**Test Date:** Feb. 14 ~ Mar. 20, 2019

**Standards:** 47 CFR FCC Part 15, Subpart C (Section 15.225)  
47 CFR FCC Part 15, Subpart C (Section 15.215)  
ANSI C63.10:2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

**Prepared by :** Pettie Chen, **Date:** Mar. 27, 2019  
Pettie Chen / Senior Specialist

**Approved by :** Bruce Chen, **Date:** Mar. 27, 2019  
Bruce Chen / Project Engineer

## 2 Summary of Test Results

| 47 CFR FCC Part 15, Subpart C (Section 15.225, 15.215) |                                                                                              |        |                                                                                    |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------|--------|------------------------------------------------------------------------------------|
| FCC Clause                                             | Test Item                                                                                    | Result | Remarks                                                                            |
| 15.207                                                 | Conducted emission test                                                                      | Pass   | Meet the requirement of limit.<br>Minimum passing margin is -2.89dB at 13.56250MHz |
| 15.225 (a)                                             | The field strength of any emissions within the band 13.553-13.567 MHz                        | Pass   | Meet the requirement of limit.<br>Minimum passing margin is -58.72dB at 13.56MHz.  |
| 15.225 (b)                                             | The field strength of any emissions within the bands 13.410-13.553 MHz and 13.567-13.710 MHz | Pass   | Meet the requirement of limit.                                                     |
| 15.225 (c)                                             | The field strength of any emissions within the bands 13.110-13.410 MHz and 13.710-14.010 MHz | Pass   | Meet the requirement of limit.                                                     |
| 15.225 (d)                                             | The field strength of any emissions appearing outside of the 13.110-14.010 MHz band          | Pass   | Meet the requirement of limit.<br>Minimum passing margin is -6.20dB at 187.07MHz.  |
| 15.225 (e)                                             | The frequency tolerance                                                                      | Pass   | Meet the requirement of limit.                                                     |
| 15.215 (c)                                             | 20dB Bandwidth                                                                               | Pass   | Meet the requirement of limit.                                                     |

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

### 2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| Measurement                        | Frequency       | Expanded Uncertainty (k=2) ( $\pm$ ) |
|------------------------------------|-----------------|--------------------------------------|
| Conducted Emissions at mains ports | 150kHz ~ 30MHz  | 2.94 dB                              |
| Radiated Emissions up to 1 GHz     | 9kHz ~ 30MHz    | 3.04 dB                              |
|                                    | 30MHz ~ 200MHz  | 3.63 dB                              |
|                                    | 200MHz ~1000MHz | 3.64 dB                              |

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

|                     |                                               |
|---------------------|-----------------------------------------------|
| Product             | 2173 BLUETOOTH LF, HF & NFC RFID READER       |
| Brand               | TECHNOLOGY SOLUTIONS (UK) LTD                 |
| Test Model          | 2173                                          |
| Sample Status       | Engineering sample                            |
| Nominal Voltage     | 5Vdc (adapter)<br>3.7Vdc (battery)            |
| Modulation Type     | ASK                                           |
| Operating Frequency | 13.56MHz                                      |
| Data Rate           | Up to 848 kbit/s                              |
| Field Strength      | NFC: 65.28dBuV/m<br>RFID: 62.47dBuV/m         |
| Antenna Type        | PCB Trace Antenna                             |
| Antenna Connector   | NA                                            |
| Accessory Device    | Refer to Note                                 |
| Cable Supplied      | 1.45m non-shielded snapon cable with one core |

Note:

1. All models are listed as below. PN: 2173-BT-LF-HF-IMG was chosen for final test.

| Model | PN                | Description                                                                                   |
|-------|-------------------|-----------------------------------------------------------------------------------------------|
| 2173  | 2173-BT-IMG       | 2D Barcode Imager Only (Without HF/LF RFID)<br>The RFID function will be disabled by software |
|       | 2173-BT-LF-HF-A1  | HF/LF RFID Only (Without 2D Barcode Scanner)                                                  |
|       | 2173-BT-LF-HF-IMG | HF/LF RFID with 2D Barcode Imager                                                             |

2. The EUT consumes power from the following adapter and battery.

|              |                            |
|--------------|----------------------------|
| Adapter      |                            |
| Brand        | STONTRONICS                |
| Model        | DSA-10PFP-05               |
| Input Power  | 100-240Vac, ~50/60Hz, 0.3A |
| Output Power | 5Vdc, 2A                   |

|         |                             |
|---------|-----------------------------|
| Battery |                             |
| Brand   | VARTA                       |
| Model   | 56456 701 099 - 1ICP5/35/62 |
| Rating  | 3.7Vdc, 1200mAh, 4.5Wh      |

#### 3.2 Description of Test Modes

1 channel is provided to this EUT

| Channel | Freq. (MHz) |
|---------|-------------|
| 1       | 13.56       |

### 3.2.1 Test Mode Applicability and Tested Channel Data

| EUT Configure Mode | Applicable to |     |    |    | Description     |
|--------------------|---------------|-----|----|----|-----------------|
|                    | RE            | PLC | FS | EB |                 |
| A                  | √             | √   | √  | √  | NFC: Tag Type A |
| B                  | √             | √   | √  | √  | NFC: Tag Type B |
| C                  | √             | √   | √  | √  | NFC: Tag Type F |
| D                  | √             | √   | √  | √  | NFC: Tag Type V |
| E                  | √             | √   | √  | √  | RFID            |

Where RE: Radiated Emission  
FS: Frequency Stability

PLC: Power Line Conducted Emission  
EB: 20dB Bandwidth measurement

Note: The antenna had been pre-tested on the positioned of each 3 axis. The worst cases were found when positioned on Y-plane.

#### Radiated Emission Test:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Available Channel | Tested Channel | Modulation Type |
|--------------------|-------------------|----------------|-----------------|
| A, B, C, D, E      | 1                 | 1              | ASK             |

#### Power Line Conducted Emission Test:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Available Channel | Tested Channel | Modulation Type |
|--------------------|-------------------|----------------|-----------------|
| A, B, C, D, E      | 1                 | 1              | ASK             |

#### Frequency Stability:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Available Channel | Tested Channel | Modulation Type |
|--------------------|-------------------|----------------|-----------------|
| A, B, C, D, E      | 1                 | 1              | ASK             |

#### 20dB Bandwidth:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT Configure Mode | Available Channel | Tested Channel | Modulation Type |
|--------------------|-------------------|----------------|-----------------|
| A, B, C, D, E      | 1                 | 1              | ASK             |

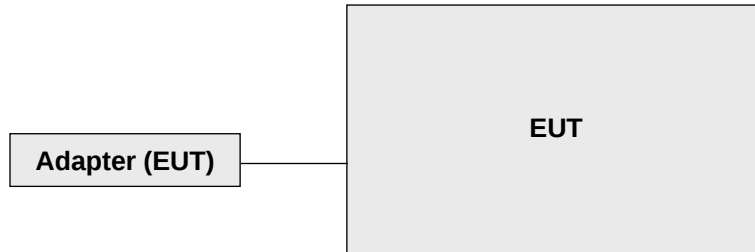
#### Test Condition:

| Applicable to | Environmental Conditions | Input Power  | Tested by  |
|---------------|--------------------------|--------------|------------|
| RE            | 25 deg. C, 70% RH        | 120Vac, 60Hz | Noah Chang |
| PLC           | 25 deg. C, 70% RH        | 120Vac, 60Hz | Noah Chang |
| FS            | 25 deg. C, 66% RH        | 3.7Vdc       | Noah Chang |
| BW            | 25 deg. C, 70% RH        | 120Vac, 60Hz | Gavin Wu   |

### 3.3 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units.

#### 3.3.1 Configuration of System under Test



### 3.4 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC Part 15, Subpart C (15.225)**

**FCC Part 15, Subpart C (15.215)**

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

## 4 Test Types and Results

### 4.1 Radiated Emission Measurement

#### 4.1.1 Limits of Radiated Emission Measurement

The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in § 15.209.

| Frequencies (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|-------------------|-----------------------------------|-------------------------------|
| 0.009 ~ 0.490     | 2400/F(kHz)                       | 300                           |
| 0.490 ~ 1.705     | 24000/F(kHz)                      | 30                            |
| 1.705 ~ 30.0      | 30                                | 30                            |
| 30 ~ 88           | 100                               | 3                             |
| 88 ~ 216          | 150                               | 3                             |
| 216 ~ 960         | 200                               | 3                             |
| Above 960         | 500                               | 3                             |

**Note:**

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

#### 4.1.2 Test Instruments

| Description & Manufacturer               | Model No.                    | Serial No.            | Cal. Date     | Cal. Due      |
|------------------------------------------|------------------------------|-----------------------|---------------|---------------|
| Test Receiver<br>ROHDE & SCHWARZ         | ESCI                         | 100424                | Jan. 03, 2019 | Jan. 02, 2020 |
| Spectrum Analyzer<br>ROHDE & SCHWARZ     | FSP40                        | 100040                | Sep. 25, 2018 | Sep. 24, 2019 |
| BILOG Antenna<br>SCHWARZBECK             | VULB9168                     | 9168-155              | Nov. 21, 2018 | Nov. 20, 2019 |
| HORN Antenna<br>SCHWARZBECK              | BBHA 9120D                   | 9120D-1170            | Nov. 25, 2018 | Nov. 24, 2019 |
| HORN Antenna<br>SCHWARZBECK              | BBHA 9170                    | BBHA9170241           | Nov. 25, 2018 | Nov. 24, 2019 |
| Loop Antenna<br>TESEQ                    | HLA 6121                     | 45745                 | Jun. 14, 2018 | Jun. 13, 2019 |
| Preamplifier<br>Agilent<br>(Below 1GHz)  | 8447D                        | 2944A10631            | Aug. 08, 2018 | Aug. 07, 2019 |
| Preamplifier<br>KEYSIGHT<br>(Above 1GHz) | 83017A                       | MY53270295            | Jul. 02, 2018 | Jul. 01, 2019 |
| RF signal cable<br>HUBER+SUHNER          | SUCOFLEX 104                 | MY 13380+295012/04    | Aug. 08, 2018 | Aug. 07, 2019 |
| RF signal cable<br>HUBER+SUHNER          | SUCOFLEX 104                 | Cable-CH4-03 (250724) | Aug. 08, 2018 | Aug. 07, 2019 |
| Software<br>BV ADT                       | ADT_Radiated_<br>V7.6.15.9.5 | NA                    | NA            | NA            |
| Antenna Tower<br>inn-co GmbH             | MA 4000                      | 010303                | NA            | NA            |
| Antenna Tower Controller<br>BV ADT       | AT100                        | AT93021703            | NA            | NA            |
| Turn Table<br>BV ADT                     | TT100                        | TT93021703            | NA            | NA            |
| Turn Table Controller<br>BV ADT          | SC100                        | SC93021703            | NA            | NA            |
| Boresight Antenna Fixture                | FBA-01                       | FBA-SIP01             | NA            | NA            |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.  
 2. The test was performed in HwaYa Chamber 4.  
 3. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.  
 4. The IC Site Registration No. is 7450F-4.

#### 4.1.3 Test Procedures

##### For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

##### Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

##### For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna 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.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

##### Note:

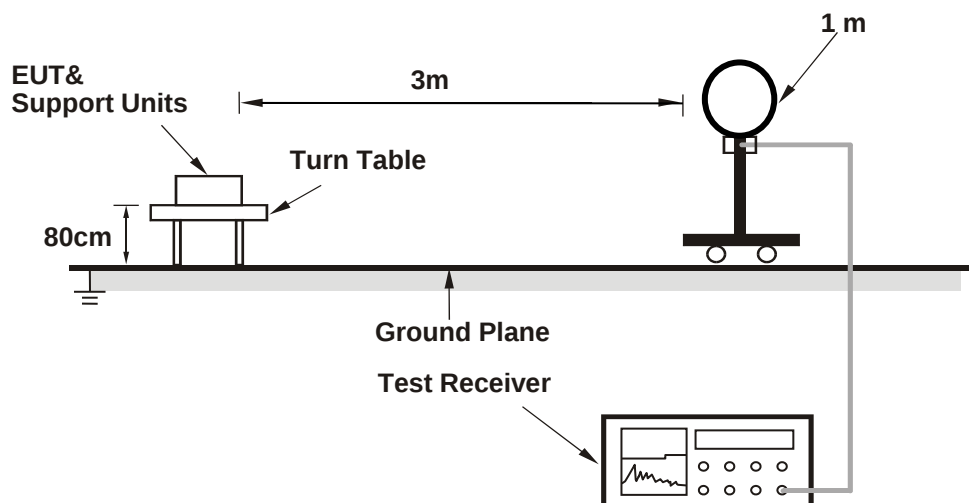
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle  $< 98\%$ ) or 10Hz (Duty cycle  $\geq 98\%$ ) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

#### 4.1.4 Deviation from Test Standard

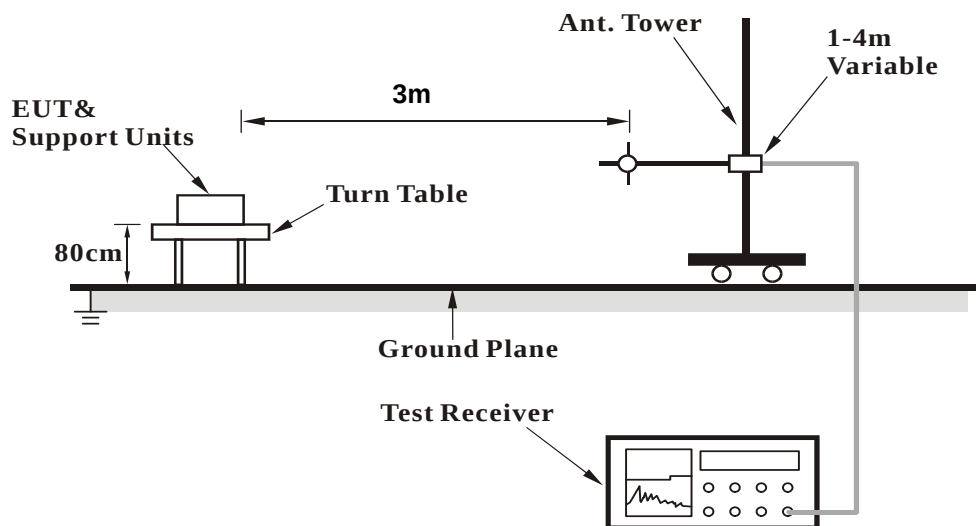
No deviation.

#### 4.1.5 Test Set Up

##### For Radiated emission below 30MHz



##### For Radiated emission 30MHz to 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.1.6 EUT Operating Conditions

- Set the EUT under transmission condition continuously at specific channel frequency.

#### 4.1.7 Test Results

| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | A                 |                    |                    |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | *13.56      | 64.03 QP                | 124.00 QP      | -59.97      | 1.00               | 172                  | 42.22            | 21.81                    |

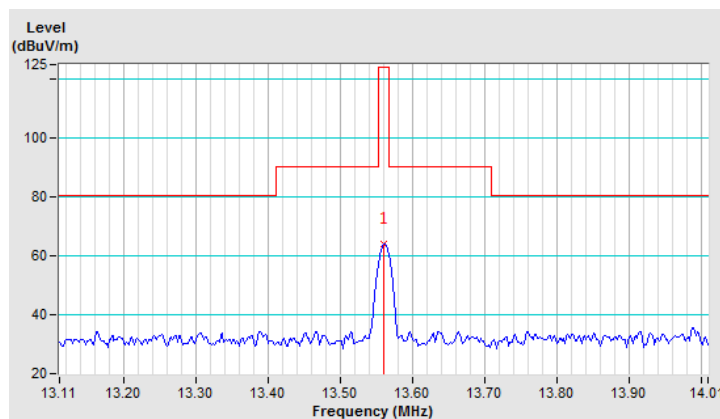
Remarks:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

13.56MHz = 15848uV/m                      30m  
               = 84dBuV/m                        30m  
               =  $84+20\log(30/3)^2$             3m  
               = 124dBuV/m



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | A                 |                    |                    |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | *13.56      | 61.10 QP                | 124.00 QP      | -62.90      | 1.00               | 90                   | 39.29            | 21.81                    |

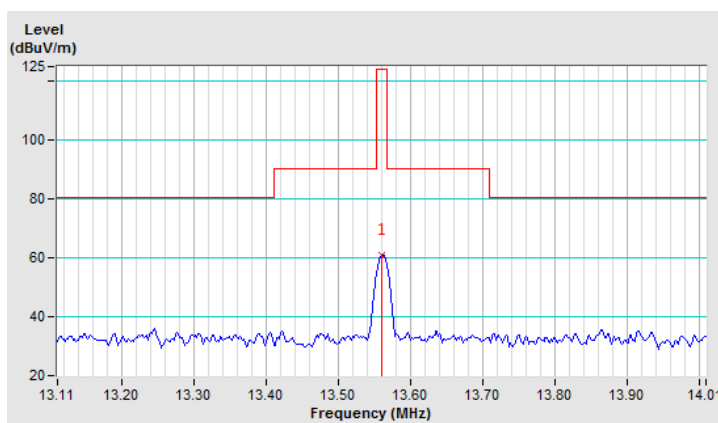
Remarks:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

13.56MHz = 15848uV/m                      30m  
               = 84dBuV/m                        30m  
               =  $84 + 20\log(30/3)^2$             3m  
               = 124dBuV/m



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | A                 |                    |                    |

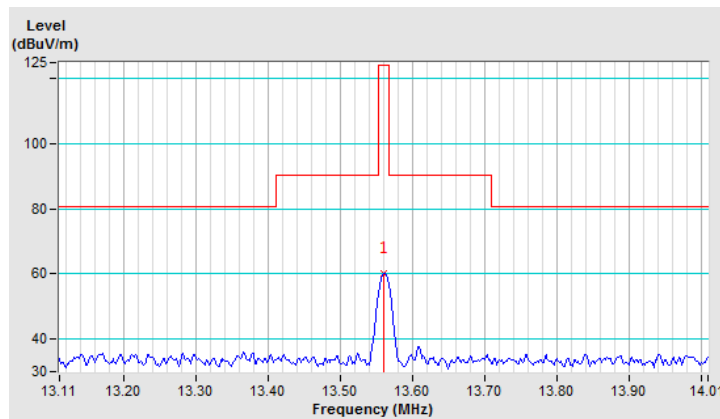
| Antenna Polarity & Test Distance: Loop Antenna Ground Parallel At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                    | *13.56      | 60.23 QP                | 124.00 QP      | -63.77      | 1.00               | 179                  | 38.42            | 21.81                    |

- Remarks:
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.
  5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

$$\begin{aligned}
 13.56\text{MHz} &= 15848\text{uV/m} & 30\text{m} \\
 &= 84\text{dBuV/m} & 30\text{m} \\
 &= 84+20\log(30/3)^2 & 3\text{m} \\
 &= 124\text{dBuV/m}
 \end{aligned}$$

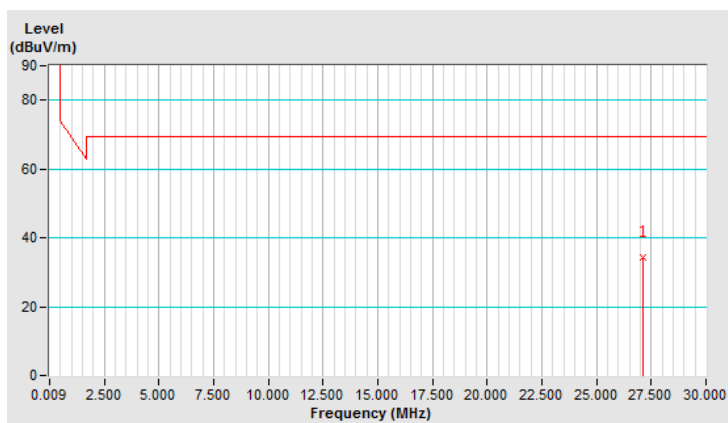


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | A                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | 27.12       | 34.25 QP                | 69.54 QP       | -35.29      | 1.00               | 154                  | 12.15            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

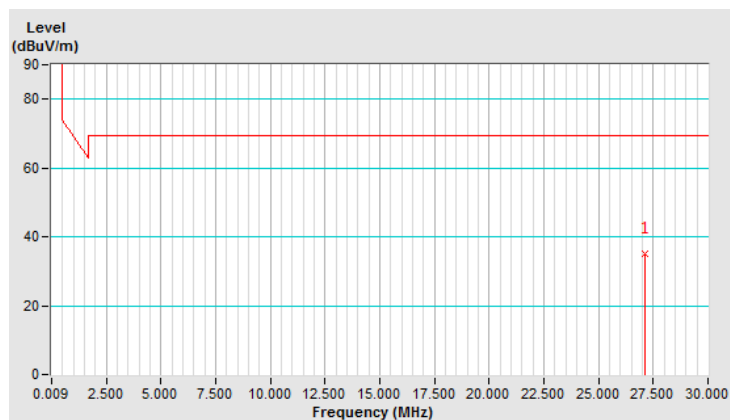


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | A                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | 27.12       | 34.96 QP                | 69.54 QP       | -34.58      | 1.00               | 117                  | 12.86            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

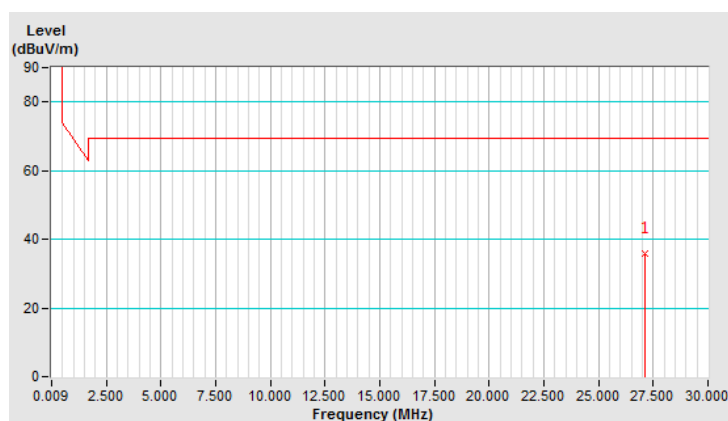


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | A                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                    | 27.12       | 35.81 QP                | 69.54 QP       | -33.73      | 1.00               | 57                   | 13.71            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

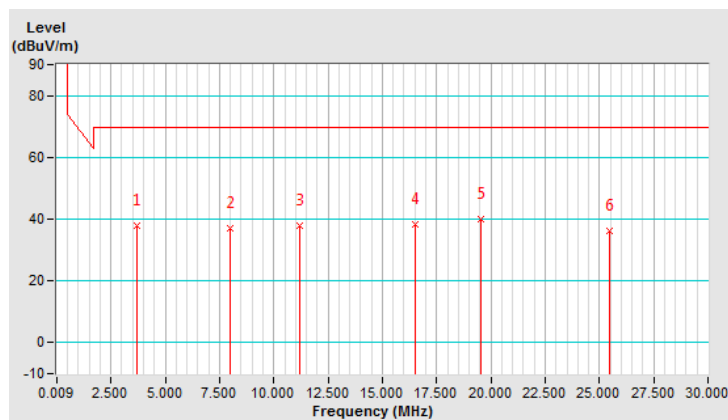


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | A                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | 3.67        | 37.68 QP                | 69.54 QP       | -31.86      | 1.00               | 253                  | 17.83            | 19.85                    |
| 2                                                         | 7.99        | 37.12 QP                | 69.54 QP       | -32.42      | 1.00               | 234                  | 15.83            | 21.29                    |
| 3                                                         | 11.17       | 37.71 QP                | 69.54 QP       | -31.83      | 1.00               | 81                   | 15.91            | 21.80                    |
| 4                                                         | 16.50       | 38.36 QP                | 69.54 QP       | -31.18      | 1.00               | 10                   | 16.53            | 21.83                    |
| 5                                                         | 19.56       | 40.00 QP                | 69.54 QP       | -29.54      | 1.00               | 226                  | 18.15            | 21.85                    |
| 6                                                         | 25.44       | 36.37 QP                | 69.54 QP       | -33.17      | 1.00               | 204                  | 14.33            | 22.04                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

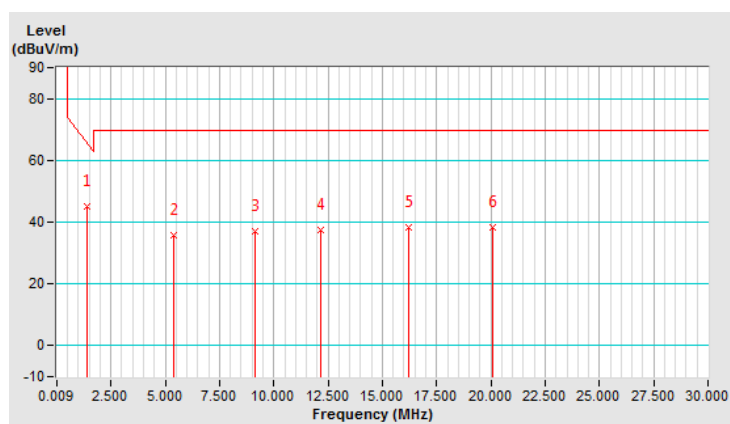


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | A                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | 1.39        | 45.10 QP                | 64.75 QP       | -19.65      | 1.00               | 322                  | 25.15            | 19.95                    |
| 2                                                          | 5.41        | 35.85 QP                | 69.54 QP       | -33.69      | 1.00               | 242                  | 15.21            | 20.64                    |
| 3                                                          | 9.13        | 37.04 QP                | 69.54 QP       | -32.50      | 1.00               | 54                   | 15.47            | 21.57                    |
| 4                                                          | 12.19       | 37.51 QP                | 69.54 QP       | -32.03      | 1.00               | 193                  | 15.71            | 21.80                    |
| 5                                                          | 16.20       | 38.14 QP                | 69.54 QP       | -31.40      | 1.00               | 16                   | 16.31            | 21.83                    |
| 6                                                          | 20.10       | 38.17 QP                | 69.54 QP       | -31.37      | 1.00               | 290                  | 16.32            | 21.85                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

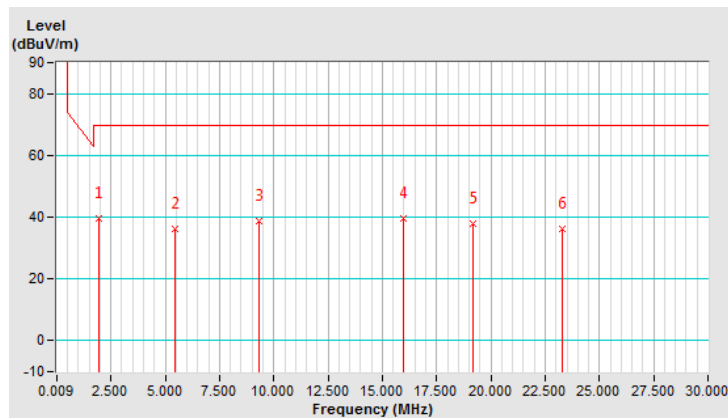


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | A                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Ground Paralle At 3m |             |                         |                |             |                    |                      |                  |                          |
|---------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                 | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                   | 1.93        | 39.60 QP                | 69.54 QP       | -29.94      | 1.00               | 10                   | 19.80            | 19.80                    |
| 2                                                                   | 5.47        | 36.18 QP                | 69.54 QP       | -33.36      | 1.00               | 65                   | 15.52            | 20.66                    |
| 3                                                                   | 9.31        | 38.92 QP                | 69.54 QP       | -30.62      | 1.00               | 187                  | 17.30            | 21.62                    |
| 4                                                                   | 15.96       | 39.43 QP                | 69.54 QP       | -30.11      | 1.00               | 205                  | 17.60            | 21.83                    |
| 5                                                                   | 19.20       | 37.93 QP                | 69.54 QP       | -31.61      | 1.00               | 282                  | 16.08            | 21.85                    |
| 6                                                                   | 23.28       | 36.35 QP                | 69.54 QP       | -33.19      | 1.00               | 117                  | 14.39            | 21.96                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

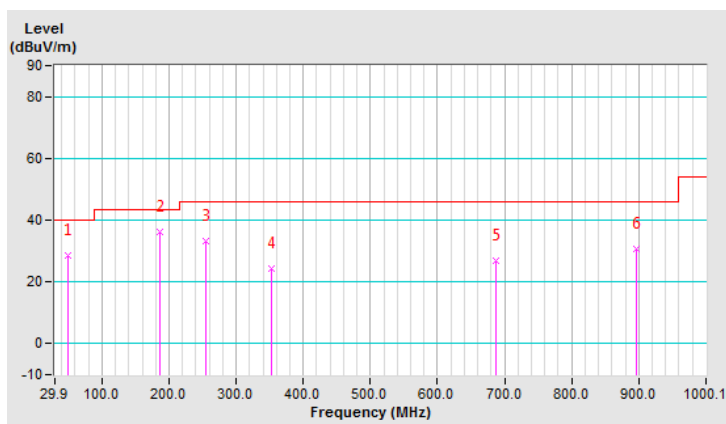


| EUT Test Condition       |                   | Measurement Detail |               |
|--------------------------|-------------------|--------------------|---------------|
| Channel                  | Channel 1         | Frequency Range    | Below 1000MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak    |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang    |
| Test Mode                | A                 |                    |               |

| Antenna Polarity & Test Distance: Horizontal At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                  | 49.30       | 28.50 QP                | 40.00          | -11.50      | 1.50 H             | 339                  | 37.40            | -8.90                    |
| 2                                                  | 187.07      | 36.00 QP                | 43.50          | -7.50       | 1.00 H             | 269                  | 46.90            | -10.90                   |
| 3                                                  | 254.99      | 33.10 QP                | 46.00          | -12.90      | 1.00 H             | 267                  | 42.40            | -9.30                    |
| 4                                                  | 352.01      | 24.20 QP                | 46.00          | -21.80      | 1.50 H             | 156                  | 31.50            | -7.30                    |
| 5                                                  | 687.70      | 27.00 QP                | 46.00          | -19.00      | 1.00 H             | 9                    | 27.90            | -0.90                    |
| 6                                                  | 897.26      | 30.60 QP                | 46.00          | -15.40      | 1.00 H             | 9                    | 27.30            | 3.30                     |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

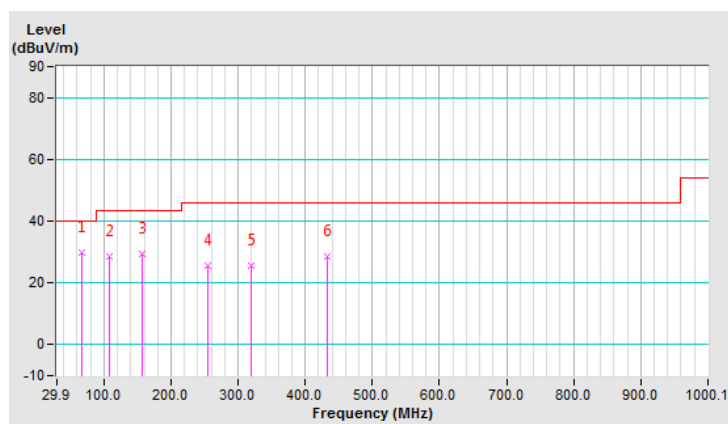


| EUT Test Condition       |                   | Measurement Detail |               |
|--------------------------|-------------------|--------------------|---------------|
| Channel                  | Channel 1         | Frequency Range    | Below 1000MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak    |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang    |
| Test Mode                | A                 |                    |               |

| Antenna Polarity & Test Distance: Vertical At 3m |             |                         |                |             |                    |                      |                  |                          |
|--------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                              | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                | 66.77       | 29.80 QP                | 40.00          | -10.20      | 1.00 V             | 318                  | 40.40            | -10.60                   |
| 2                                                | 107.52      | 28.60 QP                | 43.50          | -14.90      | 1.50 V             | 205                  | 40.80            | -12.20                   |
| 3                                                | 157.97      | 29.20 QP                | 43.50          | -14.30      | 1.50 V             | 13                   | 37.90            | -8.70                    |
| 4                                                | 254.99      | 25.70 QP                | 46.00          | -20.30      | 1.50 V             | 196                  | 35.00            | -9.30                    |
| 5                                                | 319.02      | 25.40 QP                | 46.00          | -20.60      | 1.50 V             | 298                  | 32.90            | -7.50                    |
| 6                                                | 433.50      | 28.70 QP                | 46.00          | -17.30      | 1.00 V             | 309                  | 34.60            | -5.90                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | B                 |                    |                    |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | *13.56      | 63.83 QP                | 124.00 QP      | -60.17      | 1.00 V             | 25                   | 42.02            | 21.81                    |

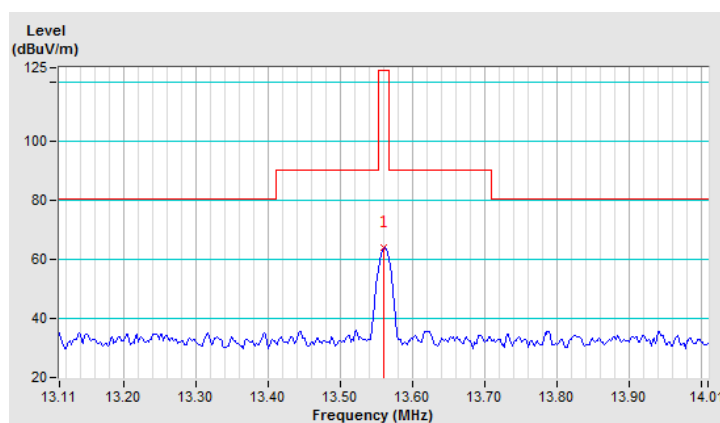
Remarks:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

13.56MHz = 15848uV/m                      30m  
               = 84dBuV/m                        30m  
               =  $84+20\log(30/3)^2$             3m  
               = 124dBuV/m



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | B                 |                    |                    |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | *13.56      | 60.38 QP                | 124.00 QP      | -63.62      | 1.00               | 282                  | 38.57            | 21.81                    |

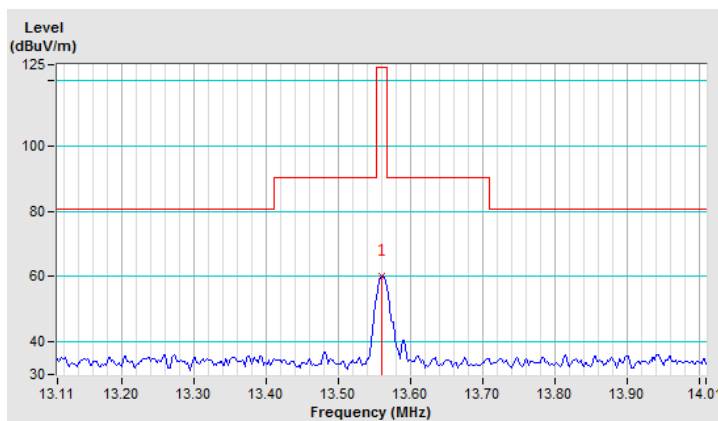
Remarks:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

$$\begin{aligned}
 13.56\text{MHz} &= 15848\text{uV/m} && 30\text{m} \\
 &= 84\text{dBuV/m} && 30\text{m} \\
 &= 84+20\log(30/3)^2 && 3\text{m} \\
 &= 124\text{dBuV/m}
 \end{aligned}$$



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | B                 |                    |                    |

| Antenna Polarity & Test Distance: Loop Antenna Ground Parallel At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                    | *13.56      | 58.89 QP                | 124.00 QP      | -65.11      | 1.00               | 19                   | 37.08            | 21.81                    |

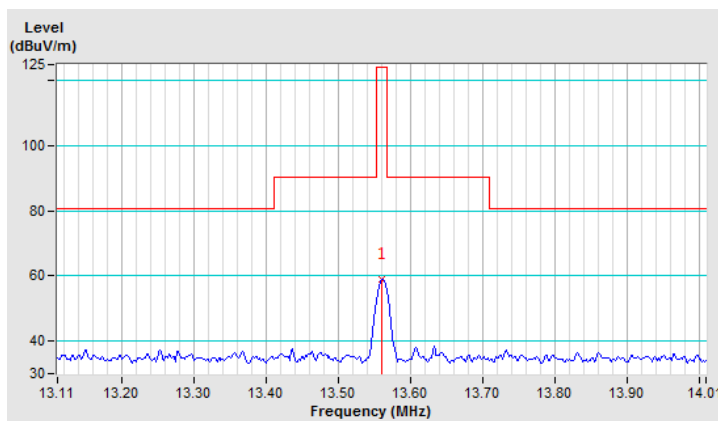
Remarks:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

13.56MHz = 15848uV/m                      30m  
               = 84dBuV/m                        30m  
               =  $84 + 20\log(30/3)^2$             3m  
               = 124dBuV/m

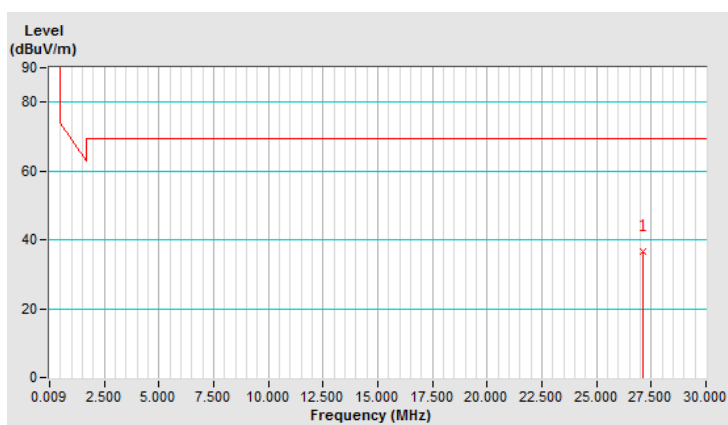


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | B                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | 27.12       | 36.72 QP                | 69.54 QP       | -32.82      | 1.00               | 186                  | 14.62            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

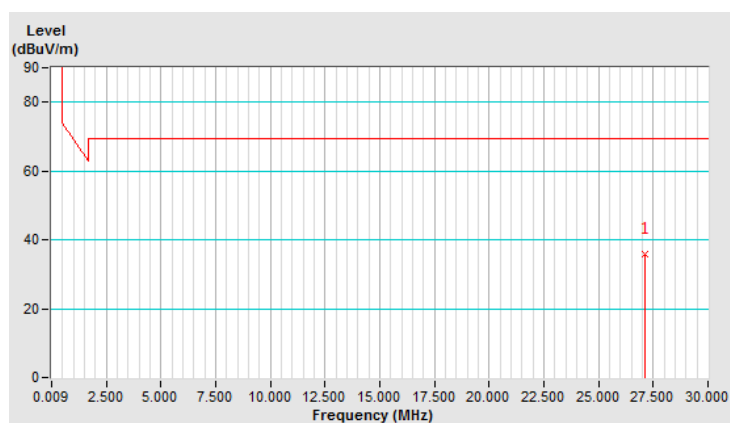


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | B                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | 27.12       | 35.92 QP                | 69.54 QP       | -33.62      | 1.00               | 86                   | 13.82            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

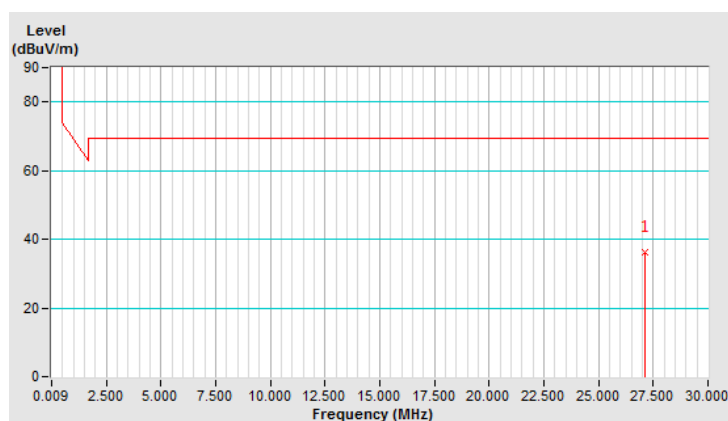


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | B                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                    | 27.12       | 36.20 QP                | 69.54 QP       | -33.34      | 1.00               | 267                  | 14.10            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

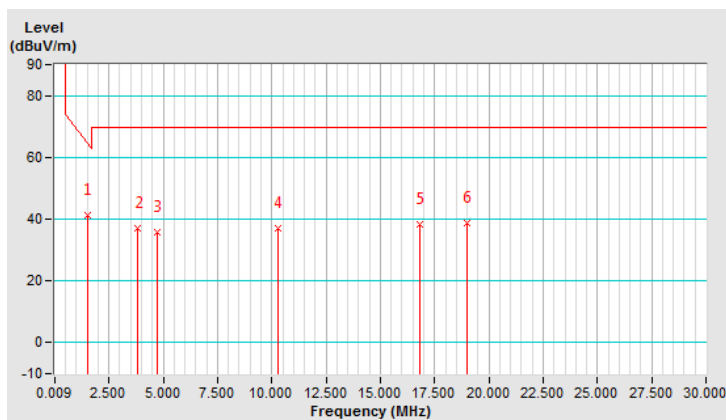


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | B                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | 1.51        | 41.39 QP                | 64.03 QP       | -22.64      | 1.00               | 166                  | 21.48            | 19.91                    |
| 2                                                         | 3.85        | 36.88 QP                | 69.54 QP       | -32.66      | 1.00               | 313                  | 16.93            | 19.95                    |
| 3                                                         | 4.75        | 35.92 QP                | 69.54 QP       | -33.62      | 1.00               | 58                   | 15.51            | 20.41                    |
| 4                                                         | 10.27       | 37.11 QP                | 69.54 QP       | -32.43      | 1.00               | 9                    | 15.32            | 21.79                    |
| 5                                                         | 16.80       | 38.42 QP                | 69.54 QP       | -31.12      | 1.00               | 31                   | 16.59            | 21.83                    |
| 6                                                         | 19.02       | 38.61 QP                | 69.54 QP       | -30.93      | 1.00               | 140                  | 16.77            | 21.84                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

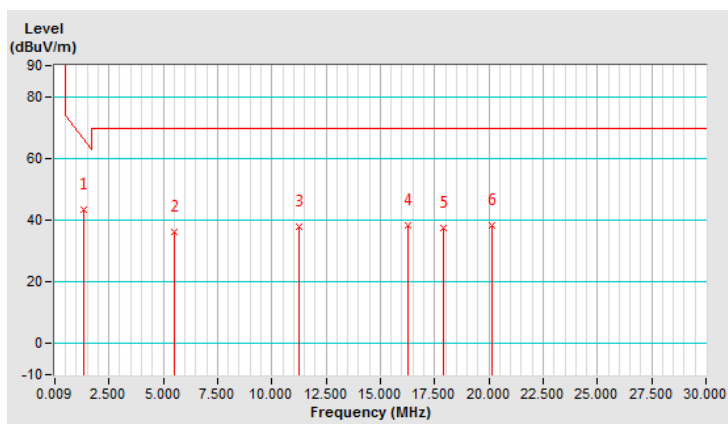


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | B                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | 1.33        | 43.52 QP                | 65.14 QP       | -21.62      | 1.00               | 228                  | 23.56            | 19.96                    |
| 2                                                          | 5.53        | 36.15 QP                | 69.54 QP       | -33.39      | 1.00               | 322                  | 15.48            | 20.67                    |
| 3                                                          | 11.23       | 37.95 QP                | 69.54 QP       | -31.59      | 1.00               | 63                   | 16.15            | 21.80                    |
| 4                                                          | 16.26       | 38.42 QP                | 69.54 QP       | -31.12      | 1.00               | 181                  | 16.59            | 21.83                    |
| 5                                                          | 17.88       | 37.48 QP                | 69.54 QP       | -32.06      | 1.00               | 242                  | 15.64            | 21.84                    |
| 6                                                          | 20.16       | 38.18 QP                | 69.54 QP       | -31.36      | 1.00               | 282                  | 16.32            | 21.86                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

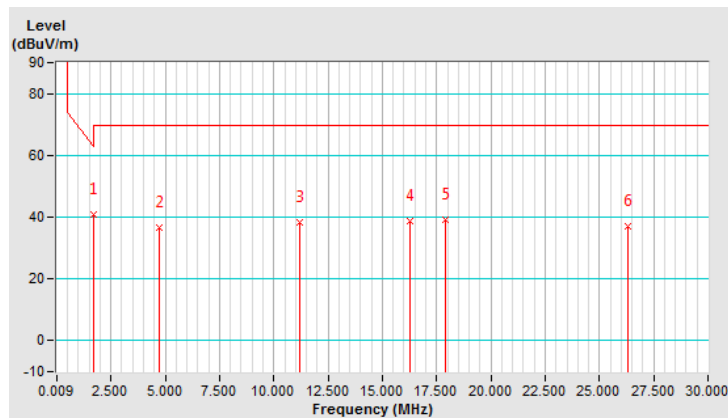


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | B                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Ground Paralle At 3m |             |                         |                |             |                    |                      |                  |                          |
|---------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                 | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                   | 1.69        | 40.87 QP                | 63.05 QP       | -22.18      | 1.00               | 228                  | 21.01            | 19.86                    |
| 2                                                                   | 4.75        | 36.80 QP                | 69.54 QP       | -32.74      | 1.00               | 16                   | 16.39            | 20.41                    |
| 3                                                                   | 11.17       | 38.13 QP                | 69.54 QP       | -31.41      | 1.00               | 30                   | 16.33            | 21.80                    |
| 4                                                                   | 16.26       | 38.76 QP                | 69.54 QP       | -30.78      | 1.00               | 82                   | 16.93            | 21.83                    |
| 5                                                                   | 17.88       | 39.31 QP                | 69.54 QP       | -30.23      | 1.00               | 9                    | 17.47            | 21.84                    |
| 6                                                                   | 26.34       | 36.91 QP                | 69.54 QP       | -32.63      | 1.00               | 32                   | 14.84            | 22.07                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

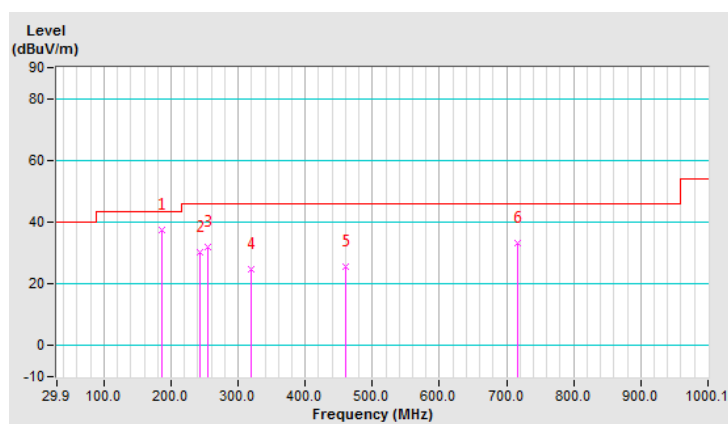


| EUT Test Condition       |                   | Measurement Detail |               |
|--------------------------|-------------------|--------------------|---------------|
| Channel                  | Channel 1         | Frequency Range    | Below 1000MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak    |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang    |
| Test Mode                | B                 |                    |               |

| Antenna Polarity & Test Distance: Horizontal At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                  | 187.07      | 37.30 QP                | 43.50          | -6.20       | 1.00 H             | 288                  | 48.20            | -10.90                   |
| 2                                                  | 243.34      | 30.40 QP                | 46.00          | -15.60      | 1.00 H             | 251                  | 40.00            | -9.60                    |
| 3                                                  | 254.99      | 32.00 QP                | 46.00          | -14.00      | 1.00 H             | 274                  | 41.30            | -9.30                    |
| 4                                                  | 319.02      | 24.60 QP                | 46.00          | -21.40      | 1.00 H             | 259                  | 32.10            | -7.50                    |
| 5                                                  | 460.67      | 25.70 QP                | 46.00          | -20.30      | 1.00 H             | 353                  | 31.30            | -5.60                    |
| 6                                                  | 716.80      | 33.20 QP                | 46.00          | -12.80      | 1.00 H             | 62                   | 33.30            | -0.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

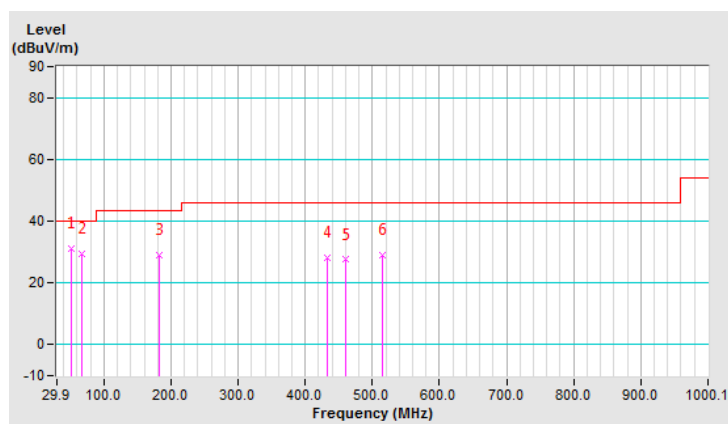


| EUT Test Condition       |                   | Measurement Detail |               |
|--------------------------|-------------------|--------------------|---------------|
| Channel                  | Channel 1         | Frequency Range    | Below 1000MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak    |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang    |
| Test Mode                | B                 |                    |               |

| Antenna Polarity & Test Distance: Vertical At 3m |             |                         |                |             |                    |                      |                  |                          |
|--------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                              | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                | 51.24       | 31.20 QP                | 40.00          | -8.80       | 1.00 V             | 175                  | 40.20            | -9.00                    |
| 2                                                | 66.77       | 29.60 QP                | 40.00          | -10.40      | 1.00 V             | 311                  | 40.20            | -10.60                   |
| 3                                                | 183.19      | 29.10 QP                | 43.50          | -14.40      | 1.00 V             | 201                  | 39.70            | -10.60                   |
| 4                                                | 433.50      | 28.30 QP                | 46.00          | -17.70      | 1.00 V             | 280                  | 34.20            | -5.90                    |
| 5                                                | 460.67      | 27.50 QP                | 46.00          | -18.50      | 1.00 V             | 228                  | 33.10            | -5.60                    |
| 6                                                | 515.00      | 28.90 QP                | 46.00          | -17.10      | 1.00 V             | 274                  | 33.60            | -4.70                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | C                 |                    |                    |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | *13.56      | 65.28 QP                | 124.00 QP      | -58.72      | 1.00               | 170                  | 43.47            | 21.81                    |

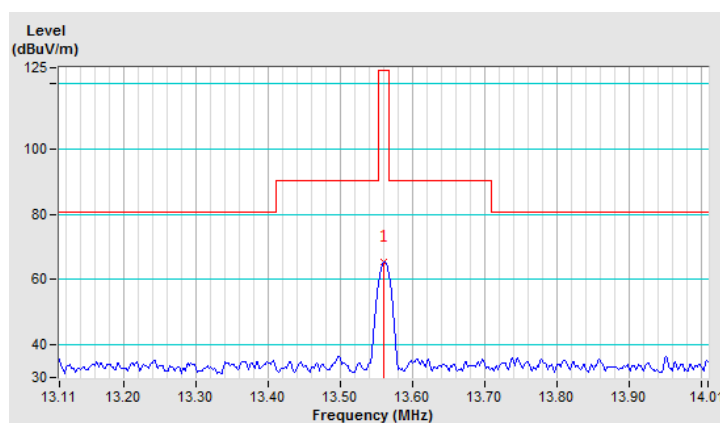
Remarks:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

13.56MHz = 15848uV/m                      30m  
               = 84dBuV/m                        30m  
               =  $84+20\log(30/3)^2$             3m  
               = 124dBuV/m



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | C                 |                    |                    |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | *13.56      | 61.86 QP                | 124.00 QP      | -62.14      | 1.00               | 89                   | 40.05            | 21.81                    |

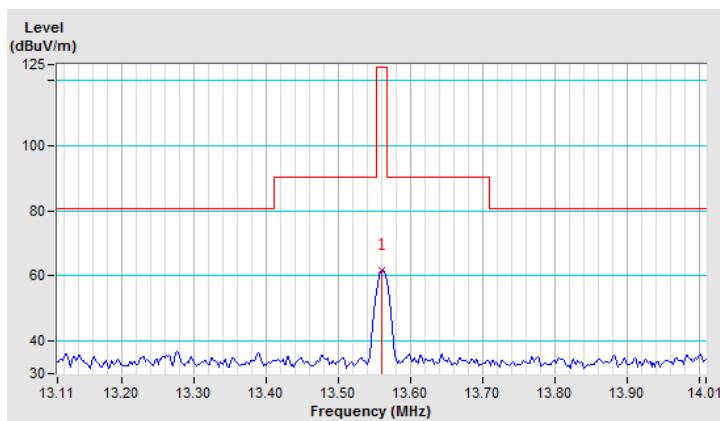
Remarks:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

$$\begin{aligned}
 13.56\text{MHz} &= 15848\text{uV/m} && 30\text{m} \\
 &= 84\text{dBuV/m} && 30\text{m} \\
 &= 84+20\log(30/3)^2 && 3\text{m} \\
 &= 124\text{dBuV/m}
 \end{aligned}$$



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | C                 |                    |                    |

| Antenna Polarity & Test Distance: Loop Antenna Ground Parallel At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                    | *13.56      | 60.11 QP                | 124.00 QP      | -63.89      | 1.00               | 10                   | 38.30            | 21.81                    |

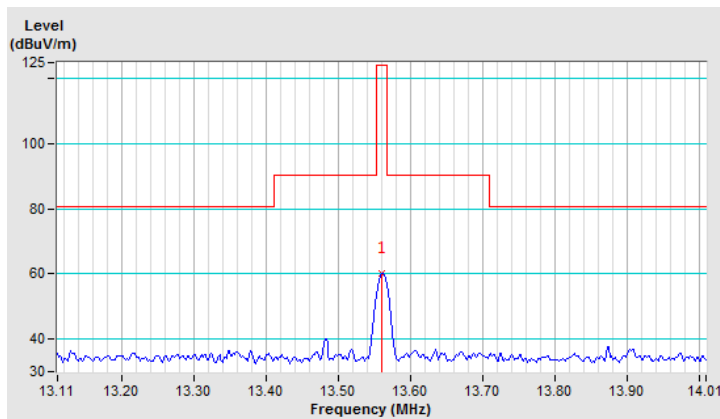
Remarks:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

13.56MHz = 15848uV/m                      30m  
               = 84dBuV/m                        30m  
               =  $84 + 20\log(30/3)^2$             3m  
               = 124dBuV/m

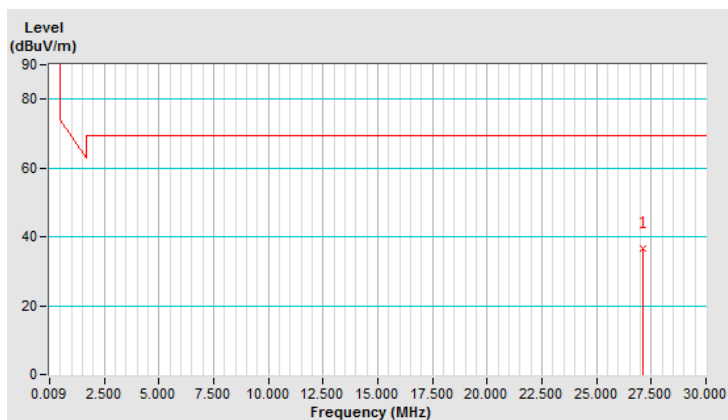


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | C                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | 27.12       | 36.75 QP                | 69.54 QP       | -32.79      | 1.00               | 211                  | 14.65            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

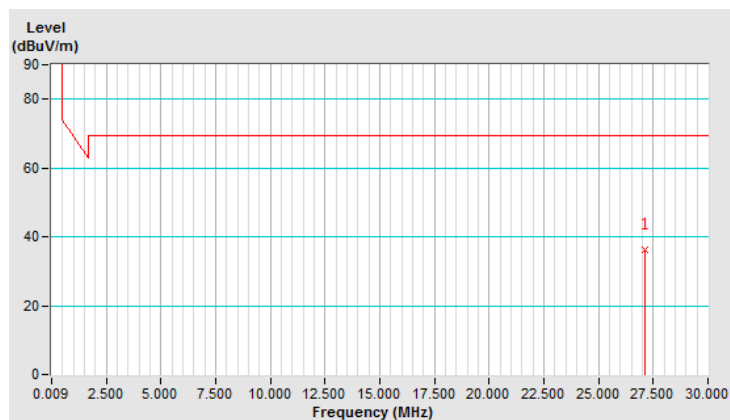


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | C                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | 27.12       | 36.10 QP                | 69.54 QP       | -33.44      | 1.00               | 177                  | 14.00            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

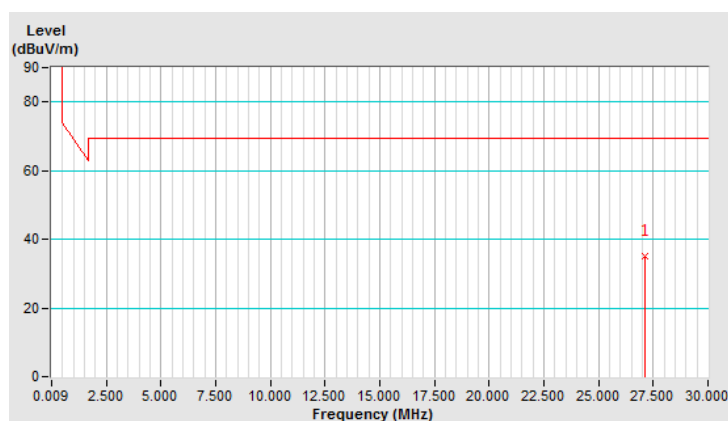


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | C                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                    | 27.12       | 35.10 QP                | 69.54 QP       | -34.44      | 1.00               | 254                  | 13.00            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

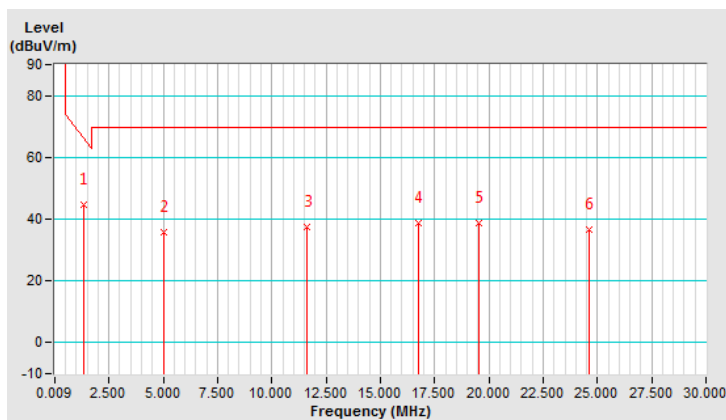


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | C                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | 1.33        | 44.52 QP                | 65.14 QP       | -20.62      | 1.00               | 102                  | 24.56            | 19.96                    |
| 2                                                         | 5.05        | 35.70 QP                | 69.54 QP       | -33.84      | 1.00               | 238                  | 15.15            | 20.55                    |
| 3                                                         | 11.65       | 37.31 QP                | 69.54 QP       | -32.23      | 1.00               | 297                  | 15.51            | 21.80                    |
| 4                                                         | 16.74       | 38.85 QP                | 69.54 QP       | -30.69      | 1.00               | 216                  | 17.02            | 21.83                    |
| 5                                                         | 19.56       | 38.67 QP                | 69.54 QP       | -30.87      | 1.00               | 315                  | 16.82            | 21.85                    |
| 6                                                         | 24.60       | 36.57 QP                | 69.54 QP       | -32.97      | 1.00               | 205                  | 14.56            | 22.01                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

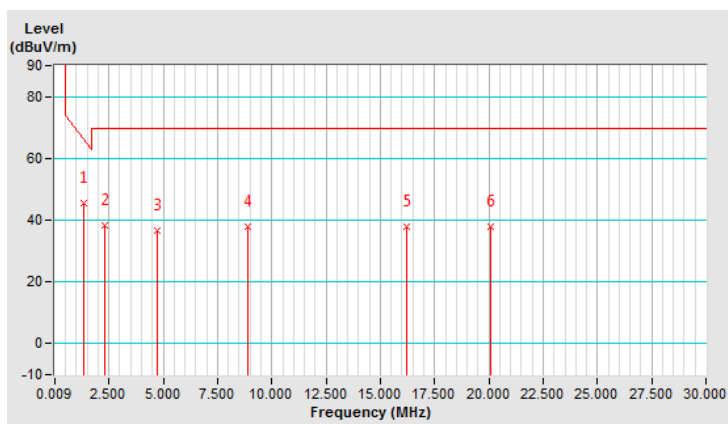


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | C                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | 1.33        | 45.57 QP                | 69.54 QP       | -19.57      | 1.00               | 345                  | 25.61            | 19.96                    |
| 2                                                          | 2.29        | 38.39 QP                | 69.54 QP       | -31.15      | 1.00               | 218                  | 18.69            | 19.70                    |
| 3                                                          | 4.75        | 36.57 QP                | 69.54 QP       | -32.97      | 1.00               | 9                    | 16.16            | 20.41                    |
| 4                                                          | 8.89        | 37.78 QP                | 69.54 QP       | -31.76      | 1.00               | 46                   | 16.27            | 21.51                    |
| 5                                                          | 16.20       | 37.91 QP                | 69.54 QP       | -31.63      | 1.00               | 199                  | 16.08            | 21.83                    |
| 6                                                          | 20.10       | 38.08 QP                | 69.54 QP       | -31.46      | 1.00               | 117                  | 16.23            | 21.85                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

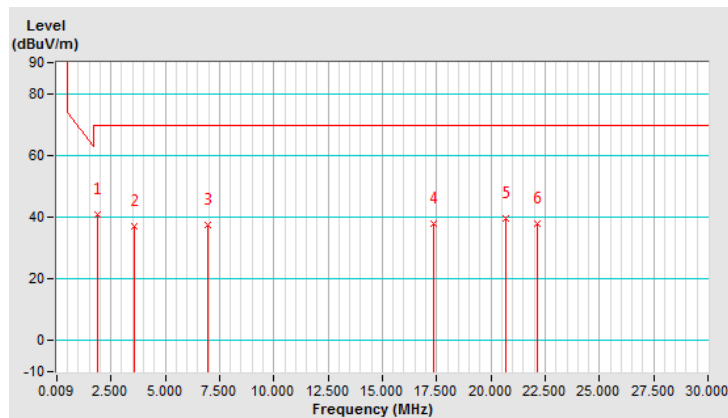


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | C                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Ground Paralle At 3m |             |                         |                |             |                    |                      |                  |                          |
|---------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                 | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                   | 1.87        | 40.68 QP                | 69.54 QP       | -28.86      | 1.00               | 334                  | 20.86            | 19.82                    |
| 2                                                                   | 3.55        | 37.21 QP                | 69.54 QP       | -32.33      | 1.00               | 10                   | 17.42            | 19.79                    |
| 3                                                                   | 6.97        | 37.56 QP                | 69.54 QP       | -31.98      | 1.00               | 10                   | 16.53            | 21.03                    |
| 4                                                                   | 17.34       | 38.00 QP                | 69.54 QP       | -31.54      | 1.00               | 69                   | 16.17            | 21.83                    |
| 5                                                                   | 20.70       | 39.67 QP                | 69.54 QP       | -29.87      | 1.00               | 264                  | 17.80            | 21.87                    |
| 6                                                                   | 22.14       | 37.85 QP                | 69.54 QP       | -31.69      | 1.00               | 299                  | 15.93            | 21.92                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

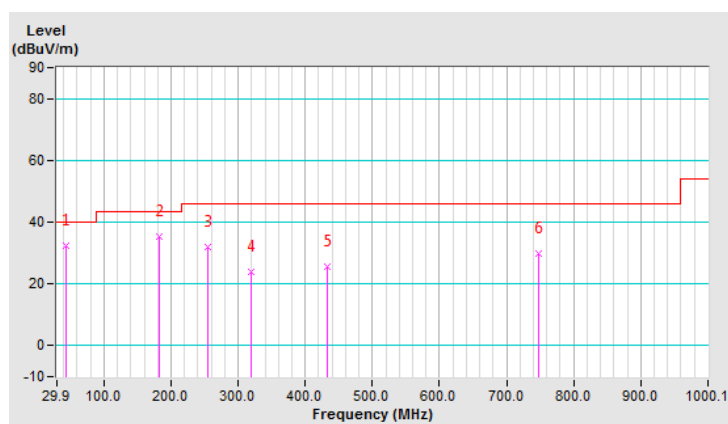


| EUT Test Condition       |                   | Measurement Detail |               |
|--------------------------|-------------------|--------------------|---------------|
| Channel                  | Channel 1         | Frequency Range    | Below 1000MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak    |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang    |
| Test Mode                | C                 |                    |               |

| Antenna Polarity & Test Distance: Horizontal At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                  | 43.48       | 32.30 QP                | 40.00          | -7.70       | 1.00 H             | 117                  | 41.40            | -9.10                    |
| 2                                                  | 183.19      | 35.50 QP                | 43.50          | -8.00       | 1.00 H             | 291                  | 46.10            | -10.60                   |
| 3                                                  | 254.99      | 32.00 QP                | 46.00          | -14.00      | 1.00 H             | 259                  | 41.30            | -9.30                    |
| 4                                                  | 319.02      | 24.00 QP                | 46.00          | -22.00      | 1.00 H             | 256                  | 31.50            | -7.50                    |
| 5                                                  | 433.50      | 25.40 QP                | 46.00          | -20.60      | 1.00 H             | 295                  | 31.30            | -5.90                    |
| 6                                                  | 747.85      | 30.00 QP                | 46.00          | -16.00      | 1.00 H             | 10                   | 29.10            | 0.90                     |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

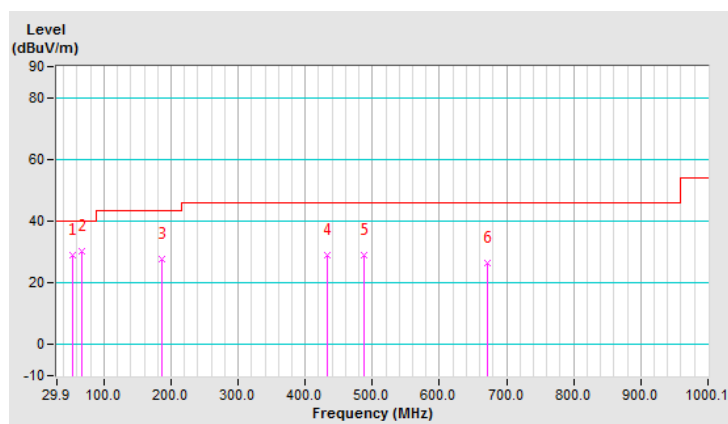


| EUT Test Condition       |                   | Measurement Detail |               |
|--------------------------|-------------------|--------------------|---------------|
| Channel                  | Channel 1         | Frequency Range    | Below 1000MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak    |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang    |
| Test Mode                | C                 |                    |               |

| Antenna Polarity & Test Distance: Vertical At 3m |             |                         |                |             |                    |                      |                  |                          |
|--------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                              | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                | 53.18       | 28.80 QP                | 40.00          | -11.20      | 1.50 V             | 292                  | 37.90            | -9.10                    |
| 2                                                | 66.77       | 30.10 QP                | 40.00          | -9.90       | 1.00 V             | 312                  | 40.70            | -10.60                   |
| 3                                                | 187.07      | 27.60 QP                | 43.50          | -15.90      | 1.00 V             | 177                  | 38.50            | -10.90                   |
| 4                                                | 433.50      | 28.90 QP                | 46.00          | -17.10      | 1.50 V             | 277                  | 34.80            | -5.90                    |
| 5                                                | 487.83      | 29.10 QP                | 46.00          | -16.90      | 1.00 V             | 112                  | 34.30            | -5.20                    |
| 6                                                | 672.17      | 26.50 QP                | 46.00          | -19.50      | 1.00 V             | 217                  | 27.60            | -1.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | D                 |                    |                    |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | *13.56      | 61.74 QP                | 124.00 QP      | -62.26      | 1.00               | 180                  | 39.93            | 21.81                    |

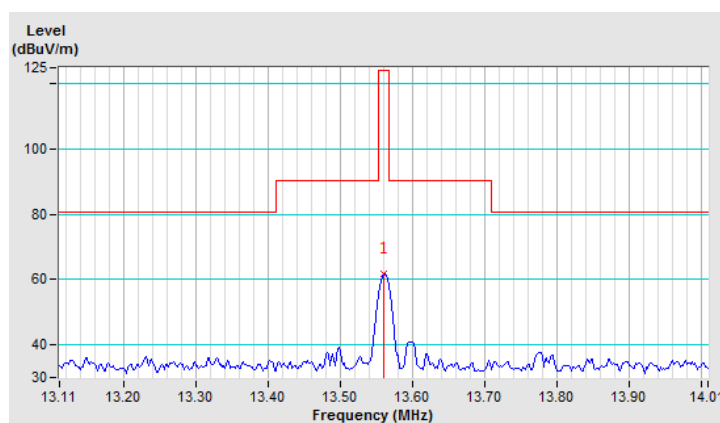
Remarks:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

13.56MHz = 15848uV/m                      30m  
               = 84dBuV/m                        30m  
               =  $84+20\log(30/3)^2$             3m  
               = 124dBuV/m



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | D                 |                    |                    |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | *13.56      | 58.24 QP                | 124.00 QP      | -65.76      | 1.00               | 86                   | 36.43            | 21.81                    |

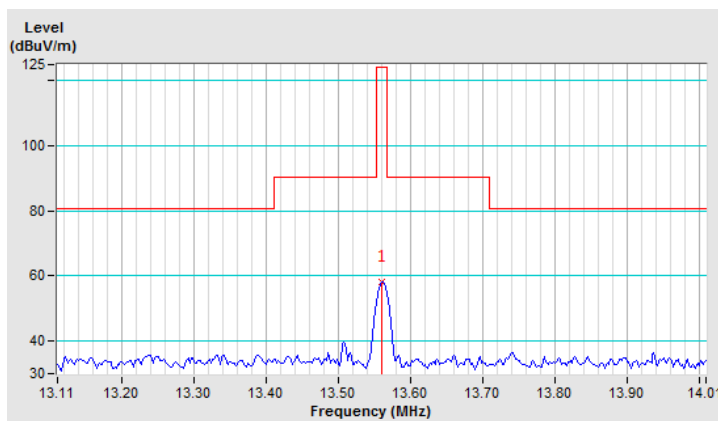
Remarks:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

13.56MHz = 15848uV/m                      30m  
= 84dBuV/m                                30m  
=  $84 + 20\log(30/3)^2$                       3m  
= 124dBuV/m



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | D                 |                    |                    |

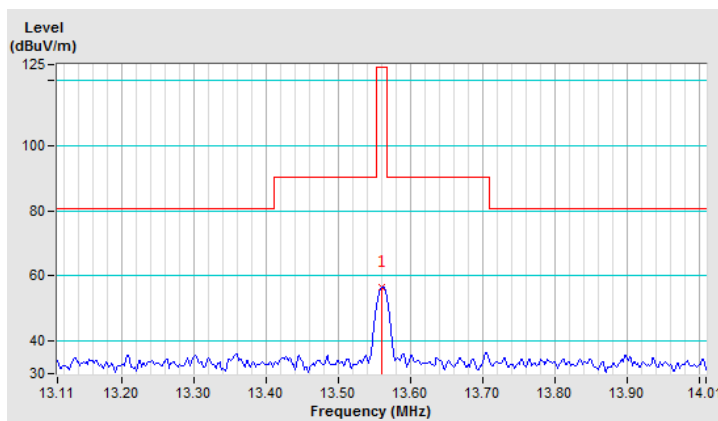
| Antenna Polarity & Test Distance: Loop Antenna Ground Parallel At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                    | *13.56      | 56.72 QP                | 124.00 QP      | -67.28      | 1.00               | 4                    | 34.91            | 21.81                    |

- Remarks:
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.
  5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

$$\begin{aligned}
 13.56\text{MHz} &= 15848\text{uV/m} && 30\text{m} \\
 &= 84\text{dBuV/m} && 30\text{m} \\
 &= 84+20\log(30/3)^2 && 3\text{m} \\
 &= 124\text{dBuV/m}
 \end{aligned}$$

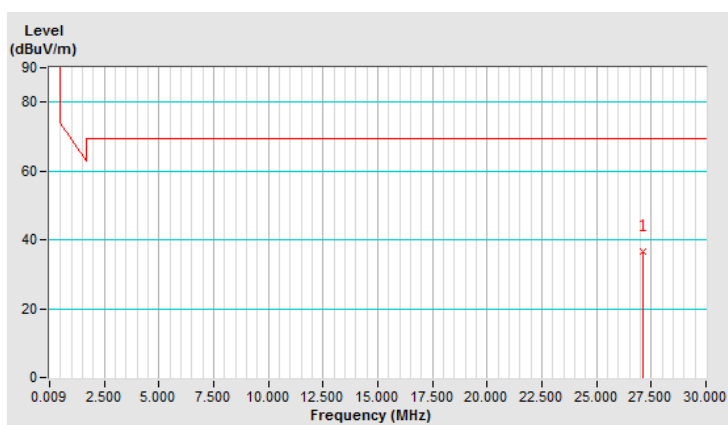


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | D                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | 27.12       | 36.75 QP                | 69.54 QP       | -32.79      | 1.00               | 229                  | 14.65            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

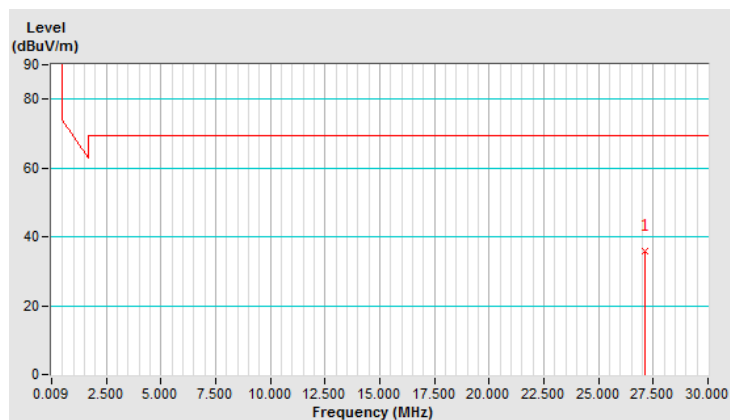


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | D                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | 27.12       | 35.86 QP                | 69.54 QP       | -33.68      | 1.00               | 155                  | 13.76            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

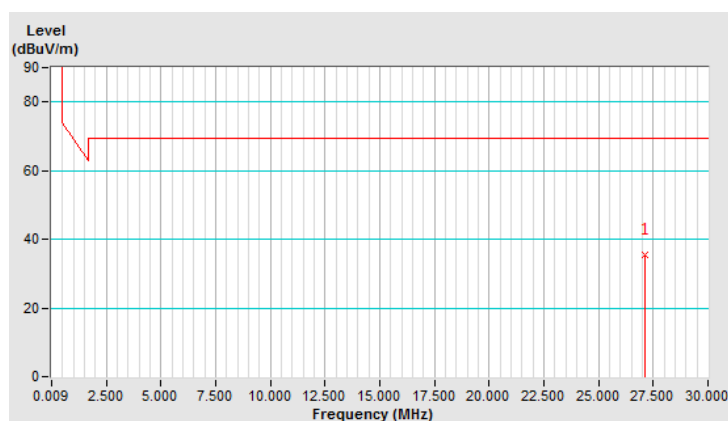


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | D                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                    | 27.12       | 35.30 QP                | 69.54 QP       | -34.24      | 1.00               | 85                   | 13.20            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

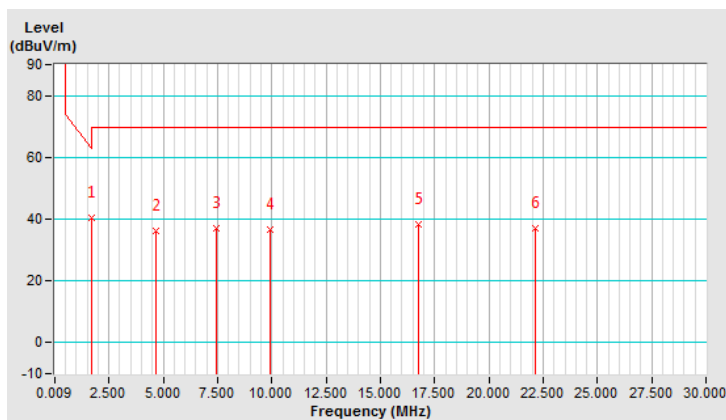


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | D                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | 1.69        | 40.47 QP                | 63.05 QP       | -22.58      | 1.00               | 9                    | 20.61            | 19.86                    |
| 2                                                         | 4.69        | 36.25 QP                | 69.54 QP       | -33.29      | 1.00               | 149                  | 15.87            | 20.38                    |
| 3                                                         | 7.45        | 37.15 QP                | 69.54 QP       | -32.39      | 1.00               | 137                  | 16.00            | 21.15                    |
| 4                                                         | 9.91        | 36.75 QP                | 69.54 QP       | -32.79      | 1.00               | 246                  | 14.98            | 21.77                    |
| 5                                                         | 16.74       | 38.28 QP                | 69.54 QP       | -31.26      | 1.00               | 103                  | 16.45            | 21.83                    |
| 6                                                         | 22.14       | 36.94 QP                | 69.54 QP       | -32.60      | 1.00               | 189                  | 15.02            | 21.92                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

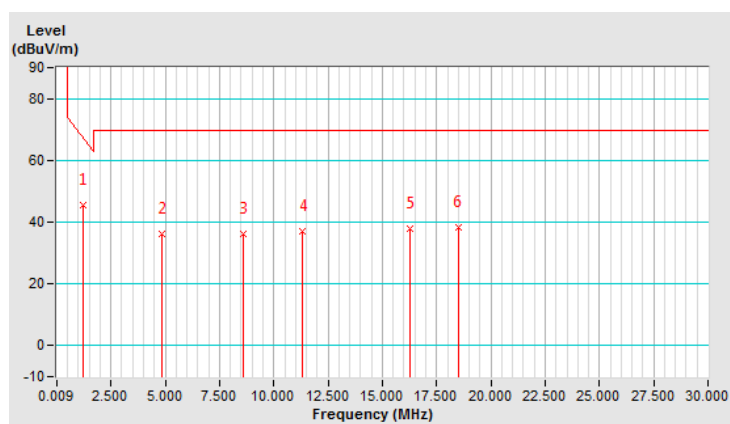


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | D                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | 1.21        | 45.40 QP                | 65.96 QP       | -20.56      | 1.00               | 180                  | 25.41            | 19.99                    |
| 2                                                          | 4.87        | 36.18 QP                | 69.54 QP       | -33.36      | 1.00               | 8                    | 15.71            | 20.47                    |
| 3                                                          | 8.59        | 36.30 QP                | 69.54 QP       | -33.24      | 1.00               | 265                  | 14.86            | 21.44                    |
| 4                                                          | 11.35       | 37.00 QP                | 69.54 QP       | -32.54      | 1.00               | 286                  | 15.20            | 21.80                    |
| 5                                                          | 16.26       | 37.81 QP                | 69.54 QP       | -31.73      | 1.00               | 140                  | 15.98            | 21.83                    |
| 6                                                          | 18.48       | 38.33 QP                | 69.54 QP       | -31.21      | 1.00               | 357                  | 16.49            | 21.84                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

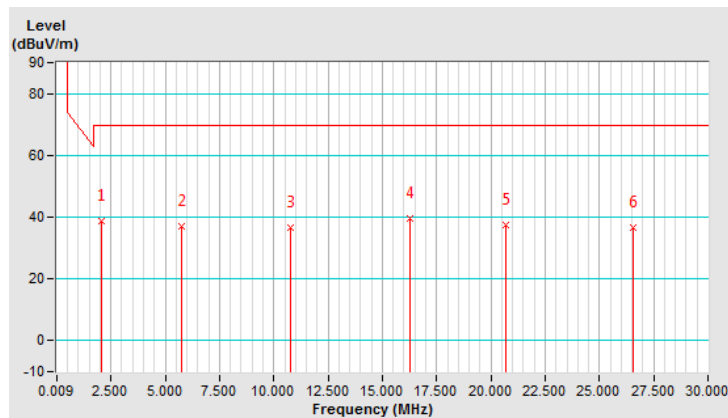


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | D                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Ground Paralle At 3m |             |                         |                |             |                    |                      |                  |                          |
|---------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                 | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                   | 2.05        | 38.74 QP                | 69.54 QP       | -30.80      | 1.00               | 53                   | 18.97            | 19.77                    |
| 2                                                                   | 5.77        | 36.93 QP                | 69.54 QP       | -32.61      | 1.00               | 11                   | 16.20            | 20.73                    |
| 3                                                                   | 10.75       | 36.50 QP                | 69.54 QP       | -33.04      | 1.00               | 10                   | 14.71            | 21.79                    |
| 4                                                                   | 16.26       | 39.62 QP                | 69.54 QP       | -29.92      | 1.00               | 303                  | 17.79            | 21.83                    |
| 5                                                                   | 20.70       | 37.62 QP                | 69.54 QP       | -31.92      | 1.00               | 120                  | 15.75            | 21.87                    |
| 6                                                                   | 26.58       | 36.64 QP                | 69.54 QP       | -32.90      | 1.00               | 245                  | 14.56            | 22.08                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

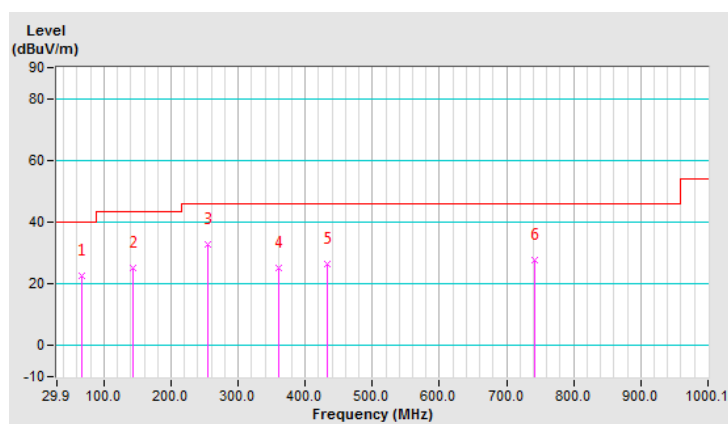


| EUT Test Condition       |                   | Measurement Detail |               |
|--------------------------|-------------------|--------------------|---------------|
| Channel                  | Channel 1         | Frequency Range    | Below 1000MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak    |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang    |
| Test Mode                | D                 |                    |               |

| Antenna Polarity & Test Distance: Horizontal At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                  | 66.77       | 22.50 QP                | 40.00          | -17.50      | 1.00 H             | 253                  | 33.10            | -10.60                   |
| 2                                                  | 142.44      | 25.10 QP                | 43.50          | -18.40      | 1.50 H             | 104                  | 34.20            | -9.10                    |
| 3                                                  | 254.99      | 32.90 QP                | 46.00          | -13.10      | 1.00 H             | 266                  | 42.20            | -9.30                    |
| 4                                                  | 359.77      | 25.00 QP                | 46.00          | -21.00      | 1.50 H             | 320                  | 32.20            | -7.20                    |
| 5                                                  | 433.50      | 26.60 QP                | 46.00          | -19.40      | 1.00 H             | 74                   | 32.50            | -5.90                    |
| 6                                                  | 742.03      | 27.80 QP                | 46.00          | -18.20      | 1.00 H             | 293                  | 27.00            | 0.80                     |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

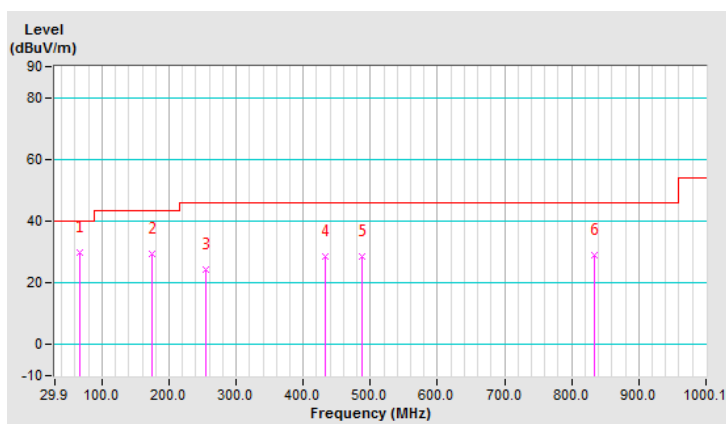


| EUT Test Condition       |                   | Measurement Detail |               |
|--------------------------|-------------------|--------------------|---------------|
| Channel                  | Channel 1         | Frequency Range    | Below 1000MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak    |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang    |
| Test Mode                | D                 |                    |               |

| Antenna Polarity & Test Distance: Vertical At 3m |             |                         |                |             |                    |                      |                  |                          |
|--------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                              | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                | 66.77       | 29.70 QP                | 40.00          | -10.30      | 1.00 V             | 330                  | 40.30            | -10.60                   |
| 2                                                | 175.43      | 29.20 QP                | 43.50          | -14.30      | 1.50 V             | 63                   | 38.90            | -9.70                    |
| 3                                                | 254.99      | 24.40 QP                | 46.00          | -21.60      | 1.00 V             | 245                  | 33.70            | -9.30                    |
| 4                                                | 433.50      | 28.70 QP                | 46.00          | -17.30      | 1.00 V             | 289                  | 34.60            | -5.90                    |
| 5                                                | 487.83      | 28.60 QP                | 46.00          | -17.40      | 1.50 V             | 114                  | 33.80            | -5.20                    |
| 6                                                | 833.23      | 28.90 QP                | 46.00          | -17.10      | 1.00 V             | 283                  | 26.60            | 2.30                     |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | E                 |                    |                    |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | *13.56      | 62.47 QP                | 124.00 QP      | -61.53      | 1.00               | 211                  | 40.66            | 21.81                    |

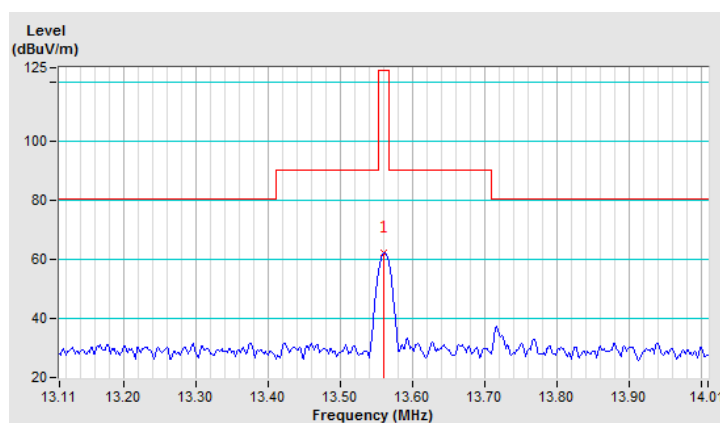
Remarks:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

13.56MHz = 15848uV/m                      30m  
               = 84dBuV/m                        30m  
               =  $84 + 20\log(30/3)^2$             3m  
               = 124dBuV/m



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | E                 |                    |                    |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | *13.56      | 61.48 QP                | 124.00 QP      | -62.52      | 1.00               | 244                  | 39.67            | 21.81                    |

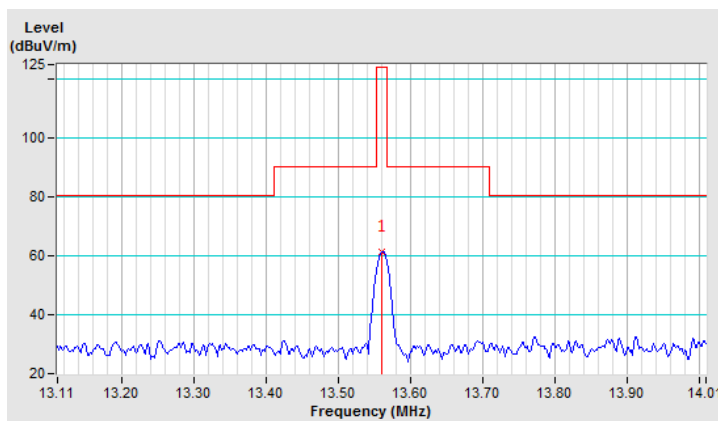
Remarks:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

13.56MHz = 15848uV/m                      30m  
               = 84dBuV/m                        30m  
               =  $84+20\log(30/3)^2$             3m  
               = 124dBuV/m



| EUT Test Condition       |                   | Measurement Detail |                    |
|--------------------------|-------------------|--------------------|--------------------|
| Channel                  | Channel 1         | Frequency Range    | 13.553 ~ 13.567MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak         |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang         |
| Test Mode                | E                 |                    |                    |

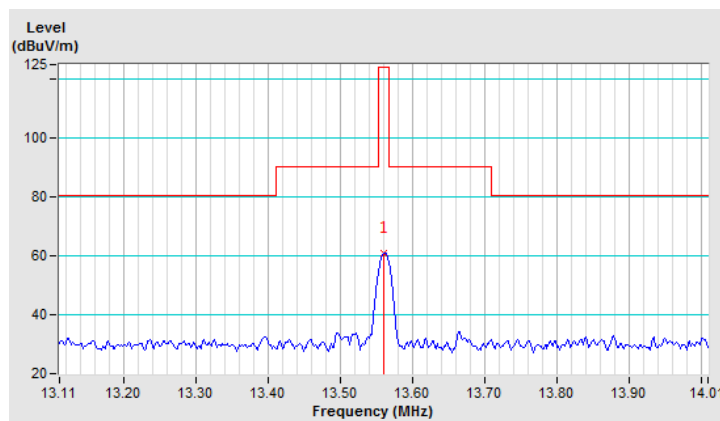
| Antenna Polarity & Test Distance: Loop Antenna Ground Parallel At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                    | *13.56      | 61.05 QP                | 124.00 QP      | -62.95      | 1.00               | 354                  | 39.24            | 21.81                    |

- Remarks:
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.
  5. Above limits have been translated by the formula

The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

$$\begin{aligned}
 13.56\text{MHz} &= 15848\text{uV/m} & 30\text{m} \\
 &= 84\text{dBuV/m} & 30\text{m} \\
 &= 84+20\log(30/3)^2 & 3\text{m} \\
 &= 124\text{dBuV/m}
 \end{aligned}$$

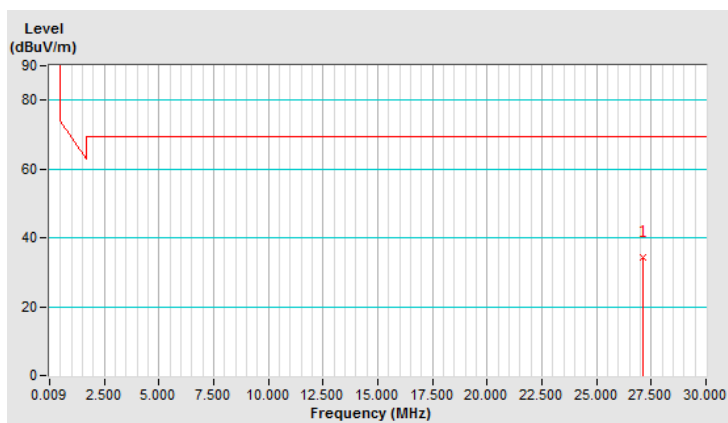


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | E                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | 27.12       | 34.30 QP                | 69.54 QP       | -35.24      | 1.00               | 15                   | 12.20            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

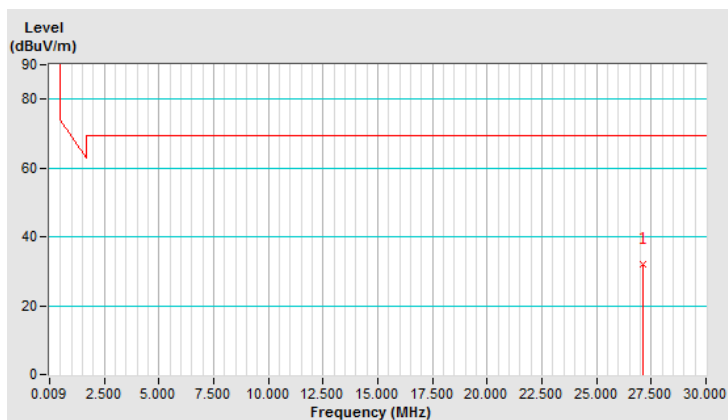


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | E                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | 27.12       | 32.12 QP                | 69.54 QP       | -37.42      | 1.00               | 342                  | 10.02            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

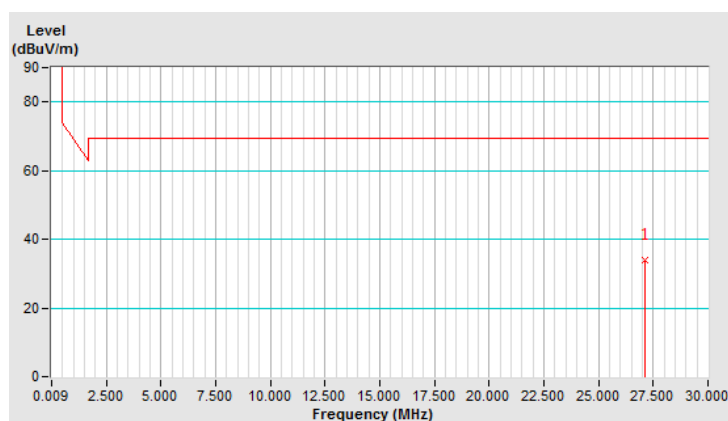


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | E                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                  | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                    | 27.12       | 33.89 QP                | 69.54 QP       | -35.65      | 1.00               | 26                   | 11.79            | 22.10                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

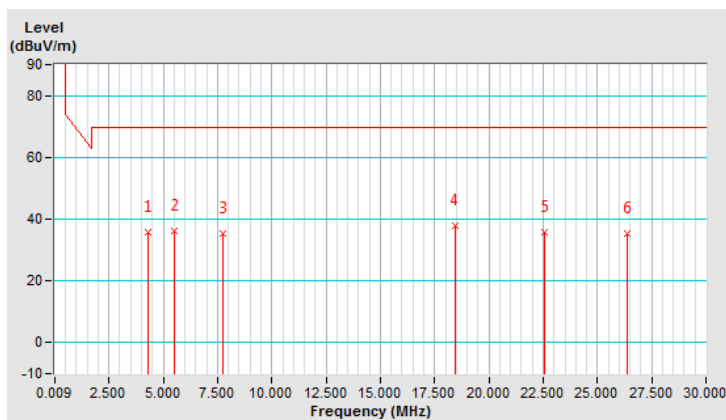


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | E                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Open At 3m |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                       | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                         | 4.33        | 35.96 QP                | 69.54 QP       | -33.58      | 1.00               | 69                   | 15.77            | 20.19                    |
| 2                                                         | 5.53        | 36.15 QP                | 69.54 QP       | -33.39      | 1.00               | 322                  | 15.48            | 20.67                    |
| 3                                                         | 7.75        | 35.25 QP                | 69.54 QP       | -34.29      | 1.00               | 318                  | 14.02            | 21.23                    |
| 4                                                         | 18.42       | 37.82 QP                | 69.54 QP       | -31.72      | 1.00               | 280                  | 15.98            | 21.84                    |
| 5                                                         | 22.56       | 35.61 QP                | 69.54 QP       | -33.93      | 1.00               | 133                  | 13.67            | 21.94                    |
| 6                                                         | 26.40       | 35.23 QP                | 69.54 QP       | -34.31      | 1.00               | 282                  | 13.16            | 22.07                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

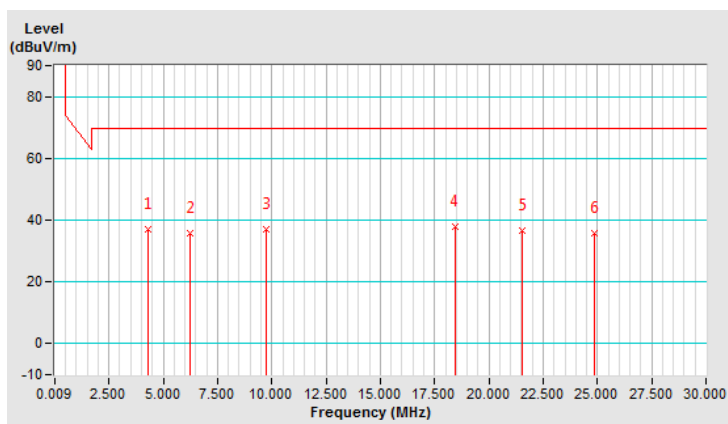


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | E                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Close At 3m |             |                         |                |             |                    |                      |                  |                          |
|------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                        | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                          | 4.33        | 36.96 QP                | 69.54 QP       | -32.58      | 1.00               | 69                   | 16.77            | 20.19                    |
| 2                                                          | 6.25        | 35.58 QP                | 69.54 QP       | -33.96      | 1.00               | 166                  | 14.73            | 20.85                    |
| 3                                                          | 9.73        | 36.99 QP                | 69.54 QP       | -32.55      | 1.00               | 284                  | 15.27            | 21.72                    |
| 4                                                          | 18.42       | 37.82 QP                | 69.54 QP       | -31.72      | 1.00               | 280                  | 15.98            | 21.84                    |
| 5                                                          | 21.54       | 36.55 QP                | 69.54 QP       | -32.99      | 1.00               | 339                  | 14.65            | 21.90                    |
| 6                                                          | 24.84       | 35.74 QP                | 69.54 QP       | -33.80      | 1.00               | 112                  | 13.72            | 22.02                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

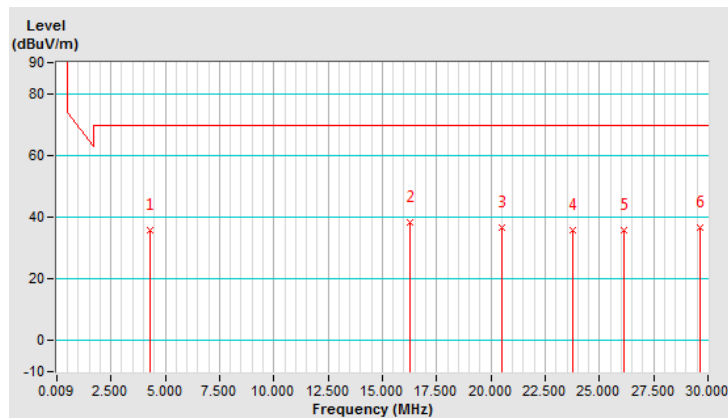


| EUT Test Condition       |                   | Measurement Detail |             |
|--------------------------|-------------------|--------------------|-------------|
| Channel                  | Channel 1         | Frequency Range    | Below 30MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak  |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang  |
| Test Mode                | E                 |                    |             |

| Antenna Polarity & Test Distance: Loop Antenna Ground Paralle At 3m |             |                         |                |             |                    |                      |                  |                          |
|---------------------------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                                 | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                                   | 4.33        | 35.96 QP                | 69.54 QP       | -33.58      | 1.00               | 69                   | 15.77            | 20.19                    |
| 2                                                                   | 16.26       | 38.42 QP                | 69.54 QP       | -31.12      | 1.00               | 181                  | 16.59            | 21.83                    |
| 3                                                                   | 20.52       | 36.68 QP                | 69.54 QP       | -32.86      | 1.00               | 282                  | 14.81            | 21.87                    |
| 4                                                                   | 23.76       | 35.77 QP                | 69.54 QP       | -33.77      | 1.00               | 56                   | 13.79            | 21.98                    |
| 5                                                                   | 26.10       | 35.85 QP                | 69.54 QP       | -33.69      | 1.00               | 299                  | 13.79            | 22.06                    |
| 6                                                                   | 29.64       | 36.60 QP                | 69.54 QP       | -32.94      | 1.00               | 353                  | 14.41            | 22.19                    |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

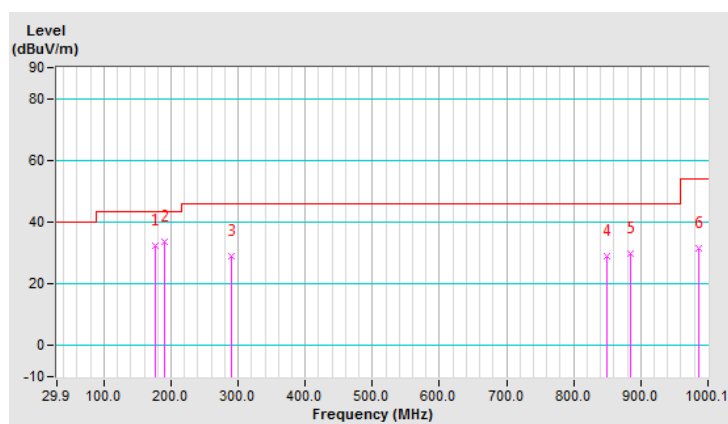


| EUT Test Condition       |                   | Measurement Detail |               |
|--------------------------|-------------------|--------------------|---------------|
| Channel                  | Channel 1         | Frequency Range    | Below 1000MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak    |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang    |
| Test Mode                | E                 |                    |               |

| Antenna Polarity & Test Distance: Horizontal At 3m |             |                         |                |             |                    |                      |                  |                          |
|----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                                | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                  | 177.37      | 32.20 QP                | 43.50          | -11.30      | 1.01 H             | 114                  | 42.20            | -10.00                   |
| 2                                                  | 190.95      | 33.60 QP                | 43.50          | -9.90       | 1.50 H             | 128                  | 44.80            | -11.20                   |
| 3                                                  | 289.91      | 28.90 QP                | 46.00          | -17.10      | 1.01 H             | 11                   | 37.10            | -8.20                    |
| 4                                                  | 848.75      | 29.10 QP                | 46.00          | -16.90      | 1.50 H             | 263                  | 26.60            | 2.50                     |
| 5                                                  | 885.62      | 30.00 QP                | 46.00          | -16.00      | 1.01 H             | 136                  | 27.00            | 3.00                     |
| 6                                                  | 986.52      | 31.40 QP                | 54.00          | -22.60      | 1.50 H             | 263                  | 27.00            | 4.40                     |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

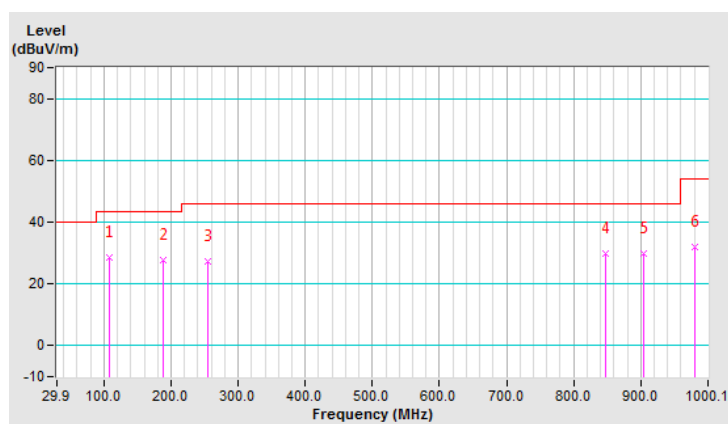


| EUT Test Condition       |                   | Measurement Detail |               |
|--------------------------|-------------------|--------------------|---------------|
| Channel                  | Channel 1         | Frequency Range    | Below 1000MHz |
| Input Power              | 120Vac, 60Hz      | Detector Function  | Quasi-Peak    |
| Environmental Conditions | 25 deg. C, 70% RH | Tested By          | Noah Chang    |
| Test Mode                | E                 |                    |               |

| Antenna Polarity & Test Distance: Vertical At 3m |             |                         |                |             |                    |                      |                  |                          |
|--------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No.                                              | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                | 107.52      | 28.40 QP                | 43.50          | -15.10      | 1.50 V             | 214                  | 40.60            | -12.20                   |
| 2                                                | 189.01      | 27.60 QP                | 43.50          | -15.90      | 1.00 V             | 226                  | 38.70            | -11.10                   |
| 3                                                | 254.99      | 27.10 QP                | 46.00          | -18.90      | 1.50 V             | 325                  | 36.40            | -9.30                    |
| 4                                                | 846.81      | 30.00 QP                | 46.00          | -16.00      | 1.00 V             | 263                  | 27.50            | 2.50                     |
| 5                                                | 905.02      | 29.80 QP                | 46.00          | -16.20      | 1.00 V             | 18                   | 26.10            | 3.70                     |
| 6                                                | 980.70      | 31.80 QP                | 54.00          | -22.20      | 1.50 V             | 275                  | 27.40            | 4.40                     |

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



## 4.2 Conducted Emission Measurement

### 4.2.1 Limits of Conducted Emission Measurement

| Frequency (MHz) | Conducted Limit (dBuV) |         |
|-----------------|------------------------|---------|
|                 | Quasi-peak             | Average |
| 0.15 - 0.5      | 66 - 56                | 56 - 46 |
| 0.50 - 5.0      | 56                     | 46      |
| 5.0 - 30.0      | 60                     | 50      |

**Note:** 1. The lower limit shall apply at the transition frequencies.  
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

### 4.2.2 Test Instruments

| Description & Manufacturer              | Model No.                | Serial No.     | Cal. Date     | Cal. Due      |
|-----------------------------------------|--------------------------|----------------|---------------|---------------|
| Test Receiver<br>ROHDE & SCHWARZ        | ESCS 30                  | 100288         | Jan. 03, 2019 | Jan. 02, 2020 |
| RF signal cable<br>Woken                | 5D-FB                    | Cable-cond1-01 | Sep. 05, 2018 | Sep. 04, 2019 |
| LISN<br>ROHDE & SCHWARZ<br>(EUT)        | ENV216                   | 101826         | Feb. 21, 2019 | Feb. 20, 2020 |
| LISN<br>ROHDE & SCHWARZ<br>(Peripheral) | ESH3-Z5                  | 100311         | Aug. 19, 2018 | Aug. 18, 2019 |
| Software<br>ADT                         | BV ADT_Cond_<br>V7.3.7.4 | NA             | NA            | NA            |

**Note:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.  
2. The test was performed in HwaYa Shielded Room 1.  
3. The VCCI Site Registration No. is C-12040.  
4. Test date: Feb. 23, 2019

### 4.2.3 Test Procedures

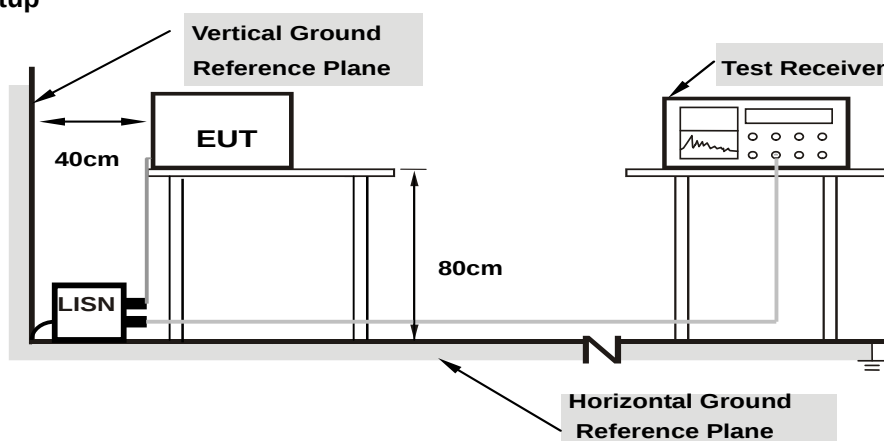
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

**Note:** The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

### 4.2.4 Deviation from Test Standard

No deviation.

### 4.2.5 Test Setup



**Note:** 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

### 4.2.6 EUT Operating Conditions

Same as 4.1.6.

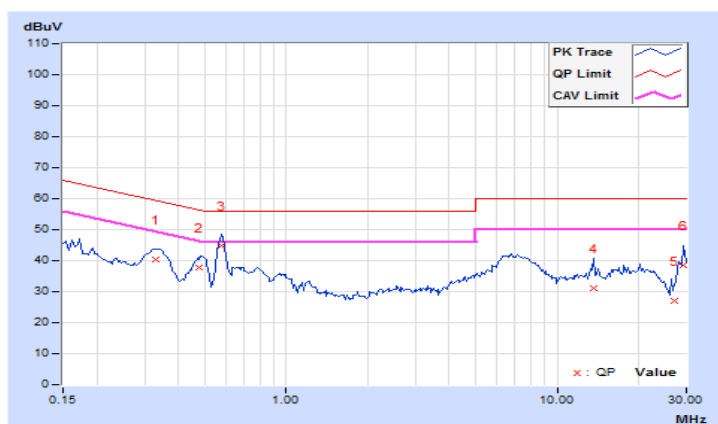
#### 4.2.7 Test Results

|           |          |                   |                                |
|-----------|----------|-------------------|--------------------------------|
| Phase     | Line (L) | Detector Function | Quasi-Peak (QP) / Average (AV) |
| Test Mode | A        |                   |                                |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value<br>[dB (uV)] |       | Emission Level<br>[dB (uV)] |       | Limit<br>[dB (uV)] |       | Margin<br>(dB) |        |
|----|----------------|-------------------------|----------------------------|-------|-----------------------------|-------|--------------------|-------|----------------|--------|
|    |                |                         |                            |       |                             |       |                    |       |                |        |
|    |                |                         | Q.P.                       | AV.   | Q.P.                        | AV.   | Q.P.               | AV.   | Q.P.           | AV.    |
| 1  | 0.32969        | 10.18                   | 30.26                      | 18.72 | 40.44                       | 28.90 | 59.46              | 49.46 | -19.02         | -20.56 |
| 2  | 0.47422        | 10.18                   | 27.50                      | 15.60 | 37.68                       | 25.78 | 56.44              | 46.44 | -18.76         | -20.66 |
| 3  | 0.57969        | 10.19                   | 34.76                      | 26.24 | 44.95                       | 36.43 | 56.00              | 46.00 | -11.05         | -9.57  |
| 4  | 13.62500       | 15.09                   | 15.84                      | 10.03 | 30.93                       | 25.12 | 60.00              | 50.00 | -29.07         | -24.88 |
| 5  | 27.24219       | 16.76                   | 10.14                      | 5.36  | 26.90                       | 22.12 | 60.00              | 50.00 | -33.10         | -27.88 |
| 6  | 29.23828       | 16.62                   | 21.83                      | 15.23 | 38.45                       | 31.85 | 60.00              | 50.00 | -21.55         | -18.15 |

#### Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

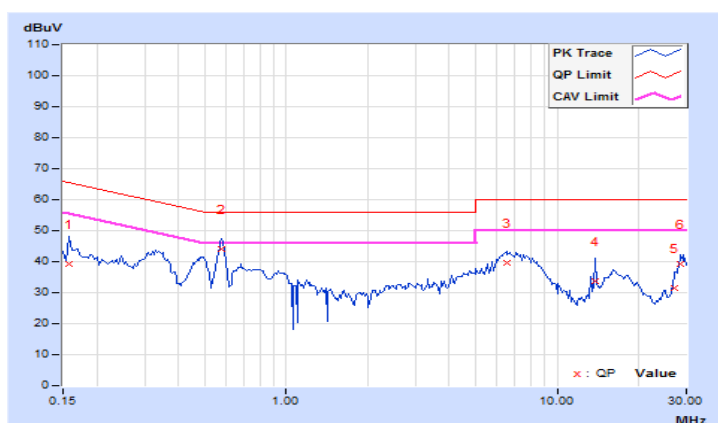


|           |             |                   |                                |
|-----------|-------------|-------------------|--------------------------------|
| Phase     | Neutral (N) | Detector Function | Quasi-Peak (QP) / Average (AV) |
| Test Mode | A           |                   |                                |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value<br>[dB (uV)] |       | Emission Level<br>[dB (uV)] |       | Limit<br>[dB (uV)] |       | Margin<br>(dB) |        |
|----|----------------|-------------------------|----------------------------|-------|-----------------------------|-------|--------------------|-------|----------------|--------|
|    |                |                         |                            |       |                             |       |                    |       |                |        |
|    |                |                         | Q.P.                       | AV.   | Q.P.                        | AV.   | Q.P.               | AV.   | Q.P.           | AV.    |
| 1  | 0.15781        | 10.22                   | 28.91                      | 15.78 | 39.13                       | 26.00 | 65.58              | 55.58 | -26.45         | -29.58 |
| 2  | 0.57969        | 10.19                   | 34.06                      | 22.73 | 44.25                       | 32.92 | 56.00              | 46.00 | -11.75         | -13.08 |
| 3  | 6.52344        | 11.92                   | 27.58                      | 14.05 | 39.50                       | 25.97 | 60.00              | 50.00 | -20.50         | -24.03 |
| 4  | 13.77344       | 14.22                   | 19.55                      | 12.91 | 33.77                       | 27.13 | 60.00              | 50.00 | -26.23         | -22.87 |
| 5  | 27.15625       | 15.65                   | 15.71                      | 8.25  | 31.36                       | 23.90 | 60.00              | 50.00 | -28.64         | -26.10 |
| 6  | 28.56250       | 16.01                   | 23.38                      | 16.33 | 39.39                       | 32.34 | 60.00              | 50.00 | -20.61         | -17.66 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

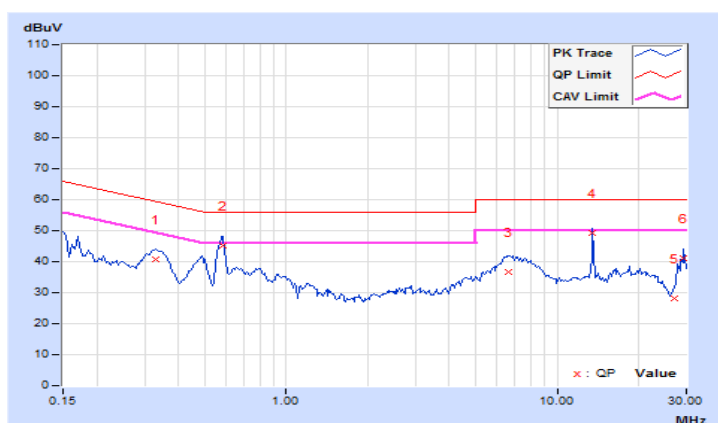


|           |          |                   |                                |
|-----------|----------|-------------------|--------------------------------|
| Phase     | Line (L) | Detector Function | Quasi-Peak (QP) / Average (AV) |
| Test Mode | B        |                   |                                |

| No | Freq.    | Corr. Factor | Reading Value |       | Emission Level |       | Limit     |       | Margin |        |
|----|----------|--------------|---------------|-------|----------------|-------|-----------|-------|--------|--------|
|    | [MHz]    | (dB)         | [dB (uV)]     |       | [dB (uV)]      |       | [dB (uV)] |       | (dB)   |        |
|    |          |              | Q.P.          | AV.   | Q.P.           | AV.   | Q.P.      | AV.   | Q.P.   | AV.    |
| 1  | 0.32969  | 10.18        | 30.59         | 18.55 | 40.77          | 28.73 | 59.46     | 49.46 | -18.69 | -20.73 |
| 2  | 0.58359  | 10.19        | 34.88         | 25.76 | 45.07          | 35.95 | 56.00     | 46.00 | -10.93 | -10.05 |
| 3  | 6.63672  | 12.28        | 24.48         | 14.16 | 36.76          | 26.44 | 60.00     | 50.00 | -23.24 | -23.56 |
| 4  | 13.55859 | 15.06        | 34.27         | 28.94 | 49.33          | 44.00 | 60.00     | 50.00 | -10.67 | -6.00  |
| 5  | 27.25781 | 16.76        | 11.27         | 6.88  | 28.03          | 23.64 | 60.00     | 50.00 | -31.97 | -26.36 |
| 6  | 29.23438 | 16.62        | 24.56         | 19.06 | 41.18          | 35.68 | 60.00     | 50.00 | -18.82 | -14.32 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

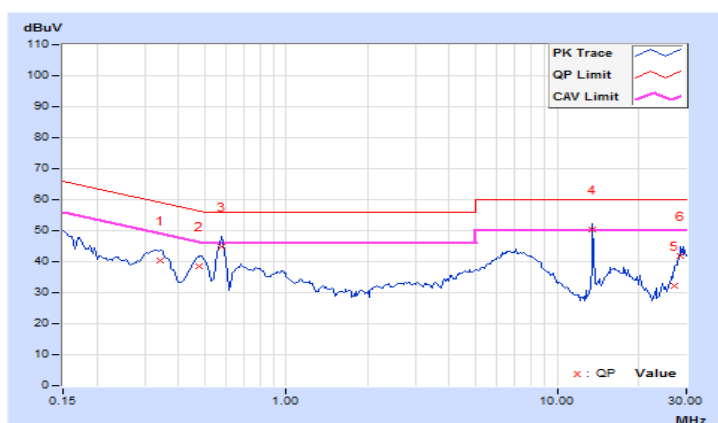


|           |             |                   |                                |
|-----------|-------------|-------------------|--------------------------------|
| Phase     | Neutral (N) | Detector Function | Quasi-Peak (QP) / Average (AV) |
| Test Mode | B           |                   |                                |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value<br>[dB (uV)] |       | Emission Level<br>[dB (uV)] |       | Limit<br>[dB (uV)] |       | Margin<br>(dB) |        |
|----|----------------|-------------------------|----------------------------|-------|-----------------------------|-------|--------------------|-------|----------------|--------|
|    |                |                         |                            |       |                             |       |                    |       |                |        |
|    |                |                         | Q.P.                       | AV.   | Q.P.                        | AV.   | Q.P.               | AV.   | Q.P.           | AV.    |
| 1  | 0.34141        | 10.19                   | 30.13                      | 17.25 | 40.32                       | 27.44 | 59.17              | 49.17 | -18.85         | -21.73 |
| 2  | 0.47422        | 10.19                   | 28.32                      | 15.23 | 38.51                       | 25.42 | 56.44              | 46.44 | -17.93         | -21.02 |
| 3  | 0.57969        | 10.19                   | 34.78                      | 23.37 | 44.97                       | 33.56 | 56.00              | 46.00 | -11.03         | -12.44 |
| 4  | 13.55469       | 14.16                   | 36.10                      | 30.52 | 50.26                       | 44.68 | 60.00              | 50.00 | -9.74          | -5.32  |
| 5  | 27.12109       | 15.64                   | 16.40                      | 8.25  | 32.04                       | 23.89 | 60.00              | 50.00 | -27.96         | -26.11 |
| 6  | 28.68359       | 16.04                   | 25.74                      | 18.96 | 41.78                       | 35.00 | 60.00              | 50.00 | -18.22         | -15.00 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

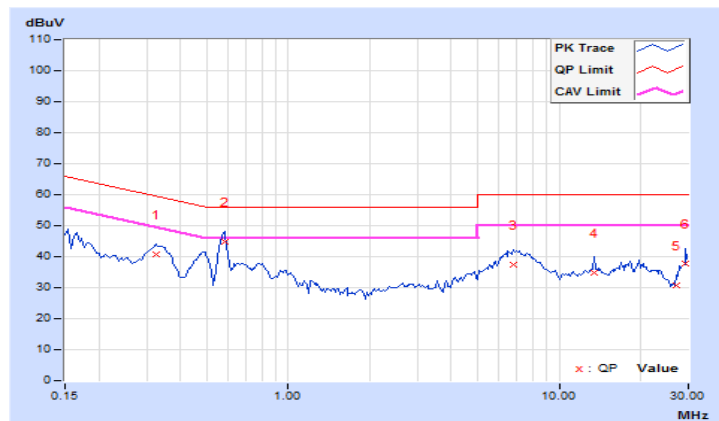


|           |          |                   |                                |
|-----------|----------|-------------------|--------------------------------|
| Phase     | Line (L) | Detector Function | Quasi-Peak (QP) / Average (AV) |
| Test Mode | C        |                   |                                |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value<br>[dB (uV)] |       | Emission Level<br>[dB (uV)] |       | Limit<br>[dB (uV)] |       | Margin<br>(dB) |        |
|----|----------------|-------------------------|----------------------------|-------|-----------------------------|-------|--------------------|-------|----------------|--------|
|    |                |                         |                            |       |                             |       |                    |       |                |        |
|    |                |                         | Q.P.                       | AV.   | Q.P.                        | AV.   | Q.P.               | AV.   | Q.P.           | AV.    |
| 1  | 0.32578        | 10.18                   | 30.45                      | 19.13 | 40.63                       | 29.31 | 59.56              | 49.56 | -18.93         | -20.25 |
| 2  | 0.58359        | 10.19                   | 34.48                      | 25.90 | 44.67                       | 36.09 | 56.00              | 46.00 | -11.33         | -9.91  |
| 3  | 6.78125        | 12.35                   | 25.17                      | 15.90 | 37.52                       | 28.25 | 60.00              | 50.00 | -22.48         | -21.75 |
| 4  | 13.48047       | 15.03                   | 19.89                      | 14.69 | 34.92                       | 29.72 | 60.00              | 50.00 | -25.08         | -20.28 |
| 5  | 27.16016       | 16.77                   | 13.85                      | 8.03  | 30.62                       | 24.80 | 60.00              | 50.00 | -29.38         | -25.20 |
| 6  | 29.23828       | 16.62                   | 21.25                      | 16.19 | 37.87                       | 32.81 | 60.00              | 50.00 | -22.13         | -17.19 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

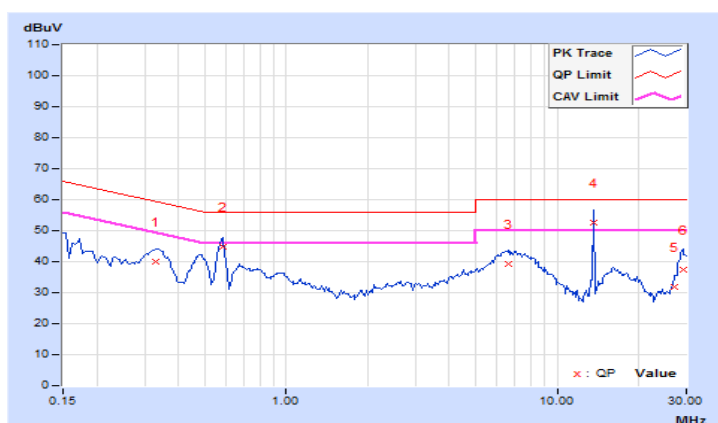


|           |             |                   |                                |
|-----------|-------------|-------------------|--------------------------------|
| Phase     | Neutral (N) | Detector Function | Quasi-Peak (QP) / Average (AV) |
| Test Mode | C           |                   |                                |

| No       | Freq.<br>[MHz]  | Corr.<br>Factor<br>(dB) | Reading Value<br>[dB (uV)] |              | Emission Level<br>[dB (uV)] |              | Limit<br>[dB (uV)] |              | Margin<br>(dB) |              |
|----------|-----------------|-------------------------|----------------------------|--------------|-----------------------------|--------------|--------------------|--------------|----------------|--------------|
|          |                 |                         |                            |              |                             |              |                    |              |                |              |
|          |                 |                         | Q.P.                       | AV.          | Q.P.                        | AV.          | Q.P.               | AV.          | Q.P.           | AV.          |
| 1        | 0.32969         | 10.19                   | 29.72                      | 16.41        | 39.91                       | 26.60        | 59.46              | 49.46        | -19.55         | -22.86       |
| 2        | 0.58359         | 10.19                   | 34.48                      | 22.89        | 44.67                       | 33.08        | 56.00              | 46.00        | -11.33         | -12.92       |
| 3        | 6.57813         | 11.94                   | 27.20                      | 13.70        | 39.14                       | 25.64        | 60.00              | 50.00        | -20.86         | -24.36       |
| <b>4</b> | <b>13.56250</b> | <b>14.16</b>            | <b>38.32</b>               | <b>32.95</b> | <b>52.48</b>                | <b>47.11</b> | <b>60.00</b>       | <b>50.00</b> | <b>-7.52</b>   | <b>-2.89</b> |
| 5        | 27.15625        | 15.65                   | 16.34                      | 9.69         | 31.99                       | 25.34        | 60.00              | 50.00        | -28.01         | -24.66       |
| 6        | 29.10938        | 16.15                   | 21.41                      | 17.12        | 37.56                       | 33.27        | 60.00              | 50.00        | -22.44         | -16.73       |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

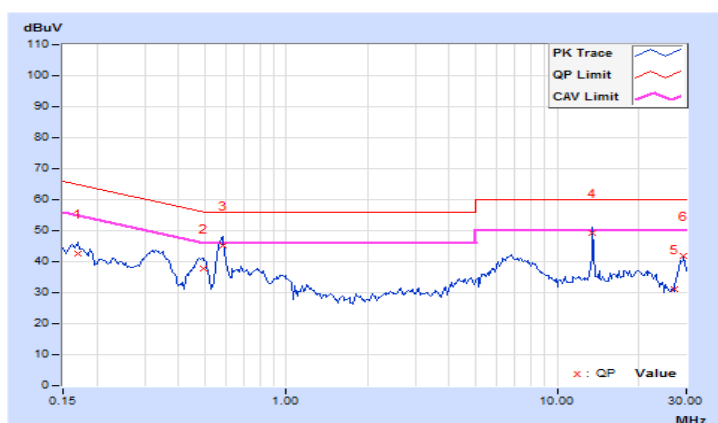


|           |          |                   |                                   |
|-----------|----------|-------------------|-----------------------------------|
| Phase     | Line (L) | Detector Function | Quasi-Peak (QP) /<br>Average (AV) |
| Test Mode | D        |                   |                                   |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value<br>[dB (uV)] |       | Emission Level<br>[dB (uV)] |       | Limit<br>[dB (uV)] |       | Margin<br>(dB) |        |
|----|----------------|-------------------------|----------------------------|-------|-----------------------------|-------|--------------------|-------|----------------|--------|
|    |                |                         |                            |       |                             |       |                    |       |                |        |
|    |                |                         | Q.P.                       | AV.   | Q.P.                        | AV.   | Q.P.               | AV.   | Q.P.           | AV.    |
| 1  | 0.16953        | 10.21                   | 32.56                      | 22.15 | 42.77                       | 32.36 | 64.98              | 54.98 | -22.21         | -22.62 |
| 2  | 0.49375        | 10.18                   | 27.75                      | 16.05 | 37.93                       | 26.23 | 56.10              | 46.10 | -18.17         | -19.87 |
| 3  | 0.58359        | 10.19                   | 34.96                      | 25.80 | 45.15                       | 35.99 | 56.00              | 46.00 | -10.85         | -10.01 |
| 4  | 13.55859       | 15.06                   | 34.17                      | 28.86 | 49.23                       | 43.92 | 60.00              | 50.00 | -10.77         | -6.08  |
| 5  | 27.15625       | 16.77                   | 14.27                      | 8.25  | 31.04                       | 25.02 | 60.00              | 50.00 | -28.96         | -24.98 |
| 6  | 29.23438       | 16.62                   | 25.13                      | 18.90 | 41.75                       | 35.52 | 60.00              | 50.00 | -18.25         | -14.48 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

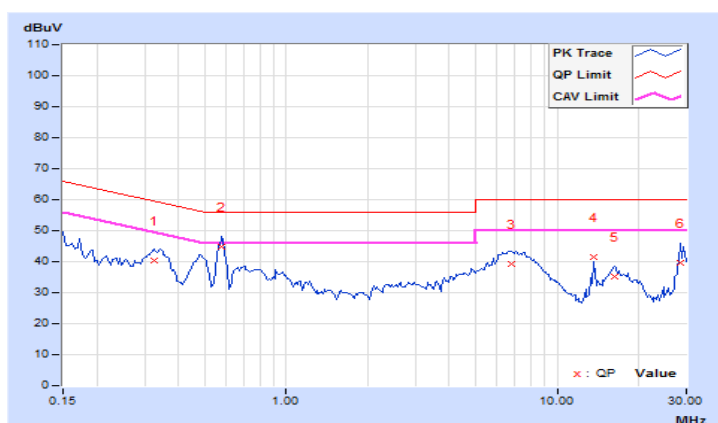


|           |             |                   |                                |
|-----------|-------------|-------------------|--------------------------------|
| Phase     | Neutral (N) | Detector Function | Quasi-Peak (QP) / Average (AV) |
| Test Mode | D           |                   |                                |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value<br>[dB (uV)] |       | Emission Level<br>[dB (uV)] |       | Limit<br>[dB (uV)] |       | Margin<br>(dB) |        |
|----|----------------|-------------------------|----------------------------|-------|-----------------------------|-------|--------------------|-------|----------------|--------|
|    |                |                         |                            |       |                             |       |                    |       |                |        |
|    |                |                         | Q.P.                       | AV.   | Q.P.                        | AV.   | Q.P.               | AV.   | Q.P.           | AV.    |
| 1  | 0.32578        | 10.19                   | 30.31                      | 17.57 | 40.50                       | 27.76 | 59.56              | 49.56 | -19.06         | -21.80 |
| 2  | 0.57969        | 10.19                   | 34.58                      | 23.42 | 44.77                       | 33.61 | 56.00              | 46.00 | -11.23         | -12.39 |
| 3  | 6.80078        | 12.02                   | 27.26                      | 14.10 | 39.28                       | 26.12 | 60.00              | 50.00 | -20.72         | -23.88 |
| 4  | 13.56641       | 14.16                   | 27.29                      | 21.57 | 41.45                       | 35.73 | 60.00              | 50.00 | -18.55         | -14.27 |
| 5  | 16.22656       | 14.60                   | 20.51                      | 13.82 | 35.11                       | 28.42 | 60.00              | 50.00 | -24.89         | -21.58 |
| 6  | 28.68750       | 16.04                   | 23.72                      | 18.47 | 39.76                       | 34.51 | 60.00              | 50.00 | -20.24         | -15.49 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

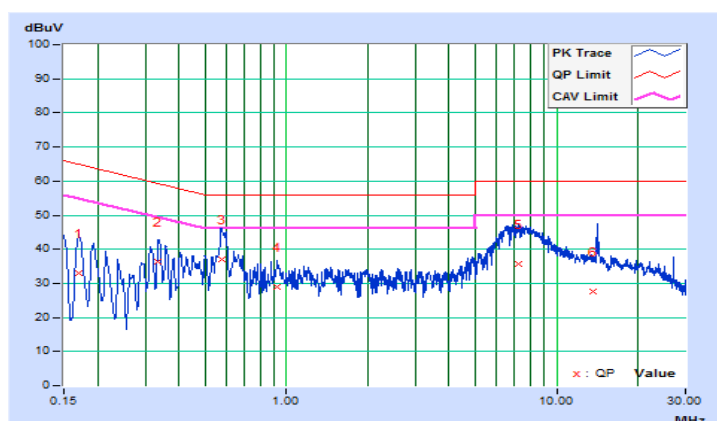


|           |          |                   |                                |
|-----------|----------|-------------------|--------------------------------|
| Phase     | Line (L) | Detector Function | Quasi-Peak (QP) / Average (AV) |
| Test Mode | E        |                   |                                |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value<br>[dB (uV)] |       | Emission Level<br>[dB (uV)] |       | Limit<br>[dB (uV)] |       | Margin<br>(dB) |        |
|----|----------------|-------------------------|----------------------------|-------|-----------------------------|-------|--------------------|-------|----------------|--------|
|    |                |                         |                            |       |                             |       |                    |       |                |        |
|    |                |                         | Q.P.                       | AV.   | Q.P.                        | AV.   | Q.P.               | AV.   | Q.P.           | AV.    |
| 1  | 0.17000        | 10.21                   | 22.71                      | 9.70  | 32.92                       | 19.91 | 64.96              | 54.96 | -32.04         | -35.05 |
| 2  | 0.33413        | 10.18                   | 26.26                      | 14.84 | 36.44                       | 25.02 | 59.35              | 49.35 | -22.91         | -24.33 |
| 3  | 0.57342        | 10.19                   | 26.69                      | 22.19 | 36.88                       | 32.38 | 56.00              | 46.00 | -19.12         | -13.62 |
| 4  | 0.92200        | 10.21                   | 18.79                      | 10.63 | 29.00                       | 20.84 | 56.00              | 46.00 | -27.00         | -25.16 |
| 5  | 7.20600        | 12.53                   | 23.10                      | 13.56 | 35.63                       | 26.09 | 60.00              | 50.00 | -24.37         | -23.91 |
| 6  | 13.56000       | 15.06                   | 12.69                      | 6.75  | 27.75                       | 21.81 | 60.00              | 50.00 | -32.25         | -28.19 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

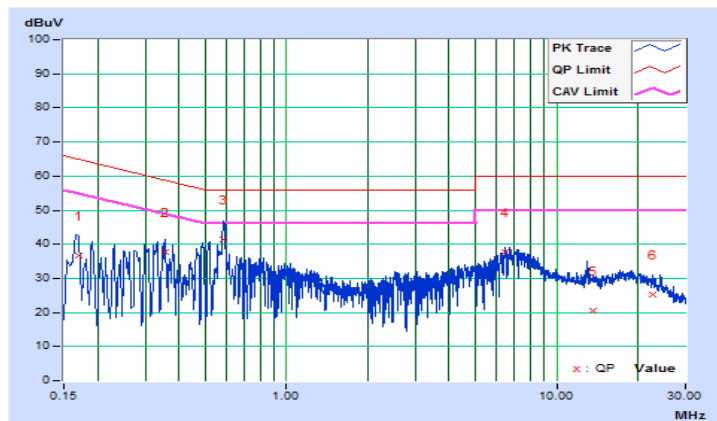


|           |             |                   |                                |
|-----------|-------------|-------------------|--------------------------------|
| Phase     | Neutral (N) | Detector Function | Quasi-Peak (QP) / Average (AV) |
| Test Mode | E           |                   |                                |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value<br>[dB (uV)] |       | Emission Level<br>[dB (uV)] |       | Limit<br>[dB (uV)] |       | Margin<br>(dB) |        |
|----|----------------|-------------------------|----------------------------|-------|-----------------------------|-------|--------------------|-------|----------------|--------|
|    |                |                         |                            |       |                             |       |                    |       |                |        |
|    |                |                         | Q.P.                       | AV.   | Q.P.                        | AV.   | Q.P.               | AV.   | Q.P.           | AV.    |
| 1  | 0.17000        | 10.21                   | 26.40                      | 10.97 | 36.61                       | 21.18 | 64.96              | 54.96 | -28.35         | -33.78 |
| 2  | 0.35407        | 10.19                   | 27.48                      | 13.10 | 37.67                       | 23.29 | 58.87              | 48.87 | -21.20         | -25.58 |
| 3  | 0.58200        | 10.19                   | 31.13                      | 21.62 | 41.32                       | 31.81 | 56.00              | 46.00 | -14.68         | -14.19 |
| 4  | 6.46600        | 11.90                   | 25.65                      | 11.50 | 37.55                       | 23.40 | 60.00              | 50.00 | -22.45         | -26.60 |
| 5  | 13.56000       | 14.16                   | 6.33                       | 0.13  | 20.49                       | 14.29 | 60.00              | 50.00 | -39.51         | -35.71 |
| 6  | 22.58200       | 14.93                   | 10.43                      | 1.13  | 25.36                       | 16.06 | 60.00              | 50.00 | -34.64         | -33.94 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

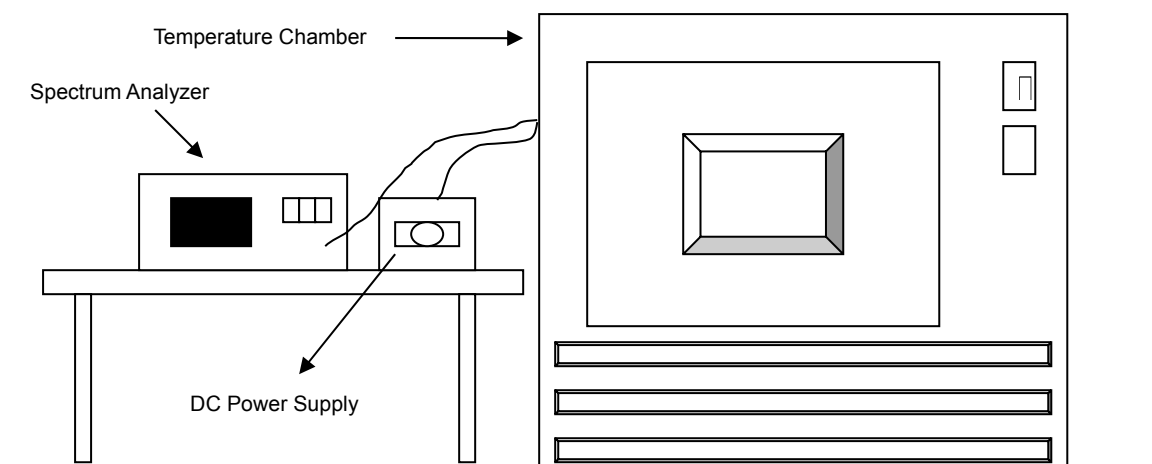


### 4.3 Frequency Stability

#### 4.3.1 Limits of Frequency Stability Measurement

The frequency tolerance of the carrier signal shall be maintained within  $\pm 0.01\%$  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.

#### 4.3.2 Test Setup



#### 4.3.3 Test Instruments

| Description & Manufacturer                          | Model No. | Serial No. | Cal. Date     | Cal. Due      |
|-----------------------------------------------------|-----------|------------|---------------|---------------|
| Spectrum Analyzer<br>ROHDE & SCHWARZ                | FSP40     | 100039     | Jun. 11, 2018 | Jun. 10, 2019 |
| WIT Standard<br>Temperature And Humidity<br>Chamber | TH-4S-C   | W981030    | Jun. 04, 2018 | Jun. 03, 2019 |
| Digital Multimeter<br>Fluke                         | 87-III    | 70360742   | Jun. 29, 2018 | Jun. 28, 2019 |
| DC Power Supply<br>Topward                          | 6306A     | 727263     | NA            | NA            |

#### 4.3.4 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
- Turned the EUT on and coupled its output to a spectrum analyzer.
- Turned the EUT off and set the chamber to the highest temperature specified.
- Allowed sufficient time (approximately 30 min) for the temperature of the chamber to stabilize then turned the EUT on and measured the operating frequency after 2, 5, and 10 minutes.
- Repeated step d with the temperature chamber sets to each desired temperature.
- The test chamber was allowed to stabilize at  $+20$  degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from  $85\%$  to  $115\%$  and the frequency record.

#### 4.3.5 Deviation from Test Standard

No deviation.

#### 4.3.6 EUT Operating Conditions

Same as Item 4.1.6.

#### 4.3.7 Test Result

##### Test Mode A

| Frequency Stability Versus Temp. |                          |                       |                    |                       |                    |                       |                    |                       |                    |
|----------------------------------|--------------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| TEMP.<br>(°C)                    | Power<br>Supply<br>(Vdc) | 0 Minute              |                    | 2 Minute              |                    | 5 Minute              |                    | 10 Minute             |                    |
|                                  |                          | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift |
|                                  |                          | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  |
| 50                               | 3.7                      | 13.56000              | 0.00000            | 13.56001              | 0.00007            | 13.56000              | 0.00000            | 13.56000              | 0.00000            |
| 40                               | 3.7                      | 13.55996              | -0.00029           | 13.55997              | -0.00022           | 13.55996              | -0.00029           | 13.55996              | -0.00029           |
| 30                               | 3.7                      | 13.55999              | -0.00007           | 13.55999              | -0.00007           | 13.55999              | -0.00007           | 13.55998              | -0.00015           |
| 20                               | 3.7                      | 13.56004              | 0.00029            | 13.56003              | 0.00022            | 13.56004              | 0.00029            | 13.56004              | 0.00029            |
| 10                               | 3.7                      | 13.55994              | -0.00044           | 13.55996              | -0.00029           | 13.55994              | -0.00044           | 13.55995              | -0.00037           |
| 0                                | 3.7                      | 13.55999              | -0.00007           | 13.55999              | -0.00007           | 13.55999              | -0.00007           | 13.55999              | -0.00007           |
| -10                              | 3.7                      | 13.56002              | 0.00015            | 13.56003              | 0.00022            | 13.56001              | 0.00007            | 13.56002              | 0.00015            |
| -20                              | 3.7                      | 13.56006              | 0.00044            | 13.56007              | 0.00052            | 13.56006              | 0.00044            | 13.56006              | 0.00044            |

| Frequency Stability Versus Voltage |                          |                       |                    |                       |                    |                       |                    |                       |                    |
|------------------------------------|--------------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| TEMP.<br>(°C)                      | Power<br>Supply<br>(Vdc) | 0 Minute              |                    | 2 Minute              |                    | 5 Minute              |                    | 10 Minute             |                    |
|                                    |                          | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift |
|                                    |                          | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  |
| 20                                 | 4.255                    | 13.56004              | 0.00029            | 13.56003              | 0.00022            | 13.56004              | 0.00029            | 13.56004              | 0.00029            |
|                                    | 3.7                      | 13.56004              | 0.00029            | 13.56003              | 0.00022            | 13.56004              | 0.00029            | 13.56004              | 0.00029            |
|                                    | 3.145                    | 13.56004              | 0.00029            | 13.56003              | 0.00022            | 13.56004              | 0.00029            | 13.56004              | 0.00029            |

# Test Mode B

| Frequency Stability Versus Temp. |                          |                       |                    |                       |                    |                       |                    |                       |                    |
|----------------------------------|--------------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| TEMP.<br>(°C)                    | Power<br>Supply<br>(Vdc) | 0 Minute              |                    | 2 Minute              |                    | 5 Minute              |                    | 10 Minute             |                    |
|                                  |                          | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift |
|                                  |                          | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  |
| 50                               | 3.7                      | 13.55994              | -0.00044           | 13.55994              | -0.00044           | 13.55994              | -0.00044           | 13.55994              | -0.00044           |
| 40                               | 3.7                      | 13.56001              | 0.00007            | 13.56002              | 0.00015            | 13.56001              | 0.00007            | 13.56000              | 0.00000            |
| 30                               | 3.7                      | 13.55996              | -0.00029           | 13.55996              | -0.00029           | 13.55996              | -0.00029           | 13.55996              | -0.00029           |
| 20                               | 3.7                      | 13.55999              | -0.00007           | 13.55997              | -0.00022           | 13.55997              | -0.00022           | 13.55998              | -0.00015           |
| 10                               | 3.7                      | 13.55994              | -0.00044           | 13.55994              | -0.00044           | 13.55994              | -0.00044           | 13.55995              | -0.00037           |
| 0                                | 3.7                      | 13.56004              | 0.00029            | 13.56004              | 0.00029            | 13.56004              | 0.00029            | 13.56004              | 0.00029            |
| -10                              | 3.7                      | 13.55998              | -0.00015           | 13.55998              | -0.00015           | 13.55998              | -0.00015           | 13.55999              | -0.00007           |
| -20                              | 3.7                      | 13.56004              | 0.00029            | 13.56002              | 0.00015            | 13.56003              | 0.00022            | 13.56003              | 0.00022            |

| Frequency Stability Versus Voltage |                          |                       |                    |                       |                    |                       |                    |                       |                    |
|------------------------------------|--------------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| TEMP.<br>(°C)                      | Power<br>Supply<br>(Vdc) | 0 Minute              |                    | 2 Minute              |                    | 5 Minute              |                    | 10 Minute             |                    |
|                                    |                          | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift |
|                                    |                          | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  |
| 20                                 | 4.255                    | 13.55999              | -0.00007           | 13.55997              | -0.00022           | 13.55997              | -0.00022           | 13.55998              | -0.00015           |
|                                    | 3.7                      | 13.55999              | -0.00007           | 13.55997              | -0.00022           | 13.55997              | -0.00022           | 13.55998              | -0.00015           |
|                                    | 3.145                    | 13.55999              | -0.00007           | 13.55997              | -0.00022           | 13.55997              | -0.00022           | 13.55998              | -0.00015           |

### Test Mode C

| Frequency Stability Versus Temp. |                          |                       |                    |                       |                    |                       |                    |                       |                    |
|----------------------------------|--------------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| TEMP.<br>(°C)                    | Power<br>Supply<br>(Vdc) | 0 Minute              |                    | 2 Minute              |                    | 5 Minute              |                    | 10 Minute             |                    |
|                                  |                          | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift |
|                                  |                          | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  |
| 50                               | 3.7                      | 13.56003              | 0.00022            | 13.56003              | 0.00022            | 13.56003              | 0.00022            | 13.56003              | 0.00022            |
| 40                               | 3.7                      | 13.55999              | -0.00007           | 13.55998              | -0.00015           | 13.55998              | -0.00015           | 13.55999              | -0.00007           |
| 30                               | 3.7                      | 13.56004              | 0.00029            | 13.56004              | 0.00029            | 13.56004              | 0.00029            | 13.56003              | 0.00022            |
| 20                               | 3.7                      | 13.56005              | 0.00037            | 13.56005              | 0.00037            | 13.56004              | 0.00029            | 13.56005              | 0.00037            |
| 10                               | 3.7                      | 13.56001              | 0.00007            | 13.56000              | 0.00000            | 13.56001              | 0.00007            | 13.56001              | 0.00007            |
| 0                                | 3.7                      | 13.56005              | 0.00037            | 13.56005              | 0.00037            | 13.56005              | 0.00037            | 13.56004              | 0.00029            |
| -10                              | 3.7                      | 13.56000              | 0.00000            | 13.56001              | 0.00007            | 13.56001              | 0.00007            | 13.56001              | 0.00007            |
| -20                              | 3.7                      | 13.55999              | -0.00007           | 13.55999              | -0.00007           | 13.55999              | -0.00007           | 13.56000              | 0.00000            |

| Frequency Stability Versus Voltage |                          |                       |                    |                       |                    |                       |                    |                       |                    |
|------------------------------------|--------------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| TEMP.<br>(°C)                      | Power<br>Supply<br>(Vdc) | 0 Minute              |                    | 2 Minute              |                    | 5 Minute              |                    | 10 Minute             |                    |
|                                    |                          | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift |
|                                    |                          | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  |
| 20                                 | 4.255                    | 13.56005              | 0.00037            | 13.56005              | 0.00037            | 13.56004              | 0.00029            | 13.56005              | 0.00037            |
|                                    | 3.7                      | 13.56005              | 0.00037            | 13.56005              | 0.00037            | 13.56004              | 0.00029            | 13.56005              | 0.00037            |
|                                    | 3.145                    | 13.56005              | 0.00037            | 13.56005              | 0.00037            | 13.56004              | 0.00029            | 13.56005              | 0.00037            |

# Test Mode D

| Frequency Stability Versus Temp. |                          |                       |                    |                       |                    |                       |                    |                       |                    |
|----------------------------------|--------------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| TEMP.<br>(°C)                    | Power<br>Supply<br>(Vdc) | 0 Minute              |                    | 2 Minute              |                    | 5 Minute              |                    | 10 Minute             |                    |
|                                  |                          | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift |
|                                  |                          | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  |
| 50                               | 3.7                      | 13.55997              | -0.00022           | 13.55997              | -0.00022           | 13.55998              | -0.00015           | 13.55997              | -0.00022           |
| 40                               | 3.7                      | 13.56001              | 0.00007            | 13.56001              | 0.00007            | 13.56001              | 0.00007            | 13.56002              | 0.00015            |
| 30                               | 3.7                      | 13.56001              | 0.00007            | 13.56001              | 0.00007            | 13.56001              | 0.00007            | 13.56002              | 0.00015            |
| 20                               | 3.7                      | 13.56005              | 0.00037            | 13.56004              | 0.00029            | 13.56005              | 0.00037            | 13.56005              | 0.00037            |
| 10                               | 3.7                      | 13.55999              | -0.00007           | 13.55999              | -0.00007           | 13.55999              | -0.00007           | 13.55999              | -0.00007           |
| 0                                | 3.7                      | 13.55994              | -0.00044           | 13.55994              | -0.00044           | 13.55994              | -0.00044           | 13.55993              | -0.00052           |
| -10                              | 3.7                      | 13.55995              | -0.00037           | 13.55995              | -0.00037           | 13.55995              | -0.00037           | 13.55995              | -0.00037           |
| -20                              | 3.7                      | 13.56000              | 0.00000            | 13.56001              | 0.00007            | 13.56001              | 0.00007            | 13.56001              | 0.00007            |

| Frequency Stability Versus Voltage |                          |                       |                    |                       |                    |                       |                    |                       |                    |
|------------------------------------|--------------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| TEMP.<br>(°C)                      | Power<br>Supply<br>(Vdc) | 0 Minute              |                    | 2 Minute              |                    | 5 Minute              |                    | 10 Minute             |                    |
|                                    |                          | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift |
|                                    |                          | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  |
| 20                                 | 4.255                    | 13.56005              | 0.00037            | 13.56004              | 0.00029            | 13.56005              | 0.00037            | 13.56005              | 0.00037            |
|                                    | 3.7                      | 13.56005              | 0.00037            | 13.56004              | 0.00029            | 13.56005              | 0.00037            | 13.56005              | 0.00037            |
|                                    | 3.145                    | 13.56005              | 0.00037            | 13.56004              | 0.00029            | 13.56005              | 0.00037            | 13.56005              | 0.00037            |

# Test Mode E

| Frequency Stability Versus Temp. |                          |                       |                    |                       |                    |                       |                    |                       |                    |
|----------------------------------|--------------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| TEMP.<br>(°C)                    | Power<br>Supply<br>(Vdc) | 0 Minute              |                    | 2 Minute              |                    | 5 Minute              |                    | 10 Minute             |                    |
|                                  |                          | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift |
|                                  |                          | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  |
| 50                               | 3.7                      | 13.55999              | -0.00007           | 13.55999              | -0.00007           | 13.55998              | -0.00015           | 13.55999              | -0.00007           |
| 40                               | 3.7                      | 13.56002              | 0.00015            | 13.56003              | 0.00022            | 13.56003              | 0.00022            | 13.56004              | 0.00029            |
| 30                               | 3.7                      | 13.55997              | -0.00022           | 13.55997              | -0.00022           | 13.55997              | -0.00022           | 13.55996              | -0.00029           |
| 20                               | 3.7                      | 13.56004              | 0.00029            | 13.56003              | 0.00022            | 13.56003              | 0.00022            | 13.56003              | 0.00022            |
| 10                               | 3.7                      | 13.55997              | -0.00022           | 13.55997              | -0.00022           | 13.55997              | -0.00022           | 13.55997              | -0.00022           |
| 0                                | 3.7                      | 13.56006              | 0.00044            | 13.56006              | 0.00044            | 13.56006              | 0.00044            | 13.56006              | 0.00044            |
| -10                              | 3.7                      | 13.56002              | 0.00015            | 13.56003              | 0.00022            | 13.56003              | 0.00022            | 13.56003              | 0.00022            |
| -20                              | 3.7                      | 13.55993              | -0.00052           | 13.55994              | -0.00044           | 13.55993              | -0.00052           | 13.55993              | -0.00052           |

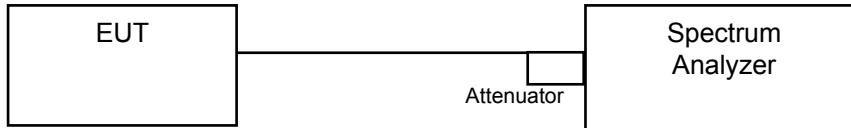
| Frequency Stability Versus Voltage |                          |                       |                    |                       |                    |                       |                    |                       |                    |
|------------------------------------|--------------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| TEMP.<br>(°C)                      | Power<br>Supply<br>(Vdc) | 0 Minute              |                    | 2 Minute              |                    | 5 Minute              |                    | 10 Minute             |                    |
|                                    |                          | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift | Measured<br>Frequency | Frequency<br>Drift |
|                                    |                          | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  | (MHz)                 | %                  |
| 20                                 | 4.255                    | 13.56004              | 0.00029            | 13.56003              | 0.00022            | 13.56003              | 0.00022            | 13.56003              | 0.00022            |
|                                    | 3.7                      | 13.56004              | 0.00029            | 13.56003              | 0.00022            | 13.56003              | 0.00022            | 13.56003              | 0.00022            |
|                                    | 3.145                    | 13.56004              | 0.00029            | 13.56003              | 0.00022            | 13.56003              | 0.00022            | 13.56003              | 0.00022            |

#### **4.4 20dB Bandwidth**

##### **4.4.1 Limits of 20dB Bandwidth Measurement**

The 20dB bandwidth shall be specified in operating frequency band.

##### **4.4.2 Test Setup**



##### **4.4.3 Test Instruments**

Refer to section 4.1.2 to get information of above instrument.

##### **4.4.4 Test Procedures**

The bandwidth of the fundamental frequency was measured by spectrum analyzer with 1kHz RBW and 3kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

##### **4.4.5 Deviation from Test Standard**

No deviation.

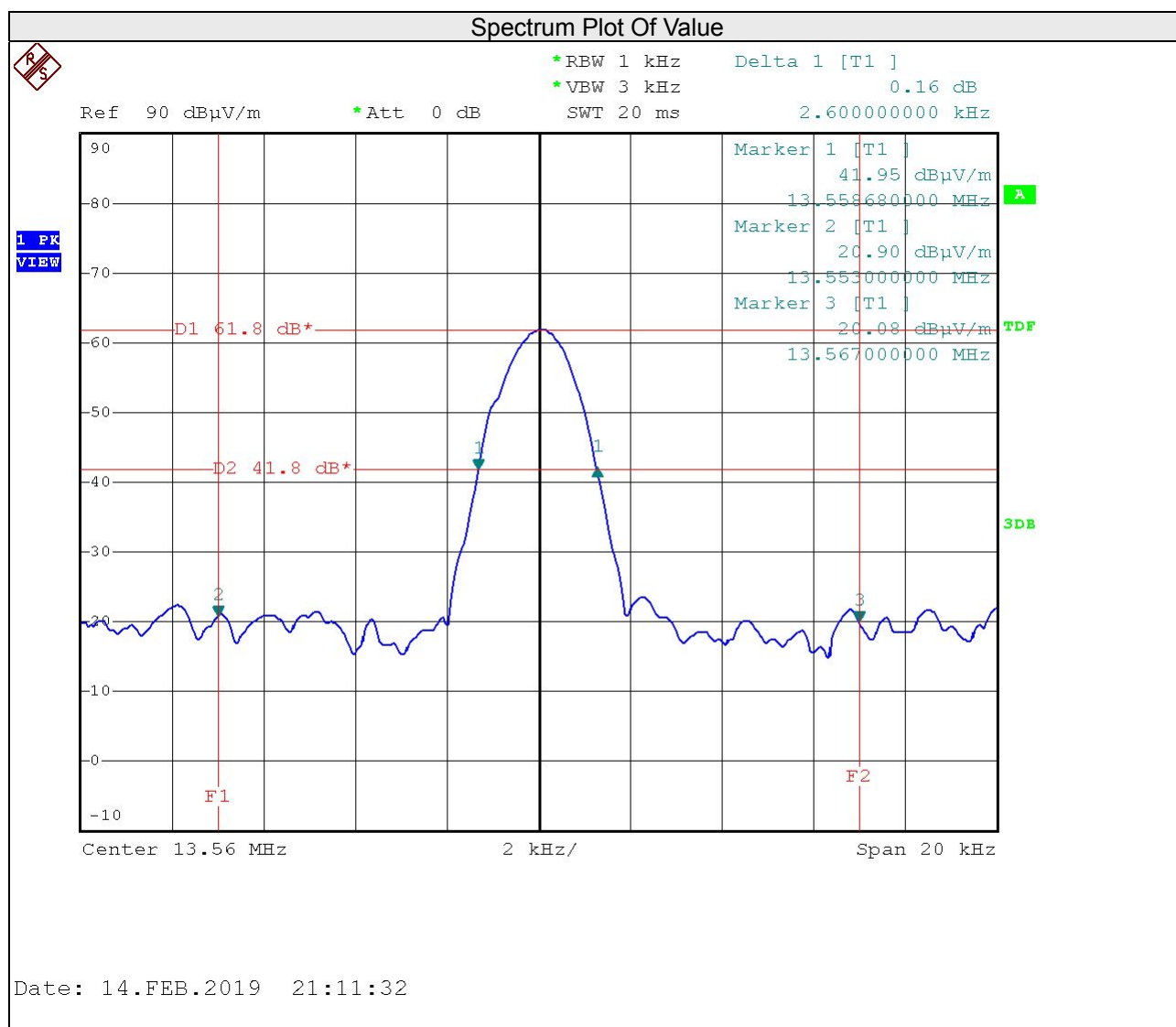
##### **4.4.6 EUT Operating Conditions**

Same as Item 4.1.6.

#### 4.4.7 Test Results

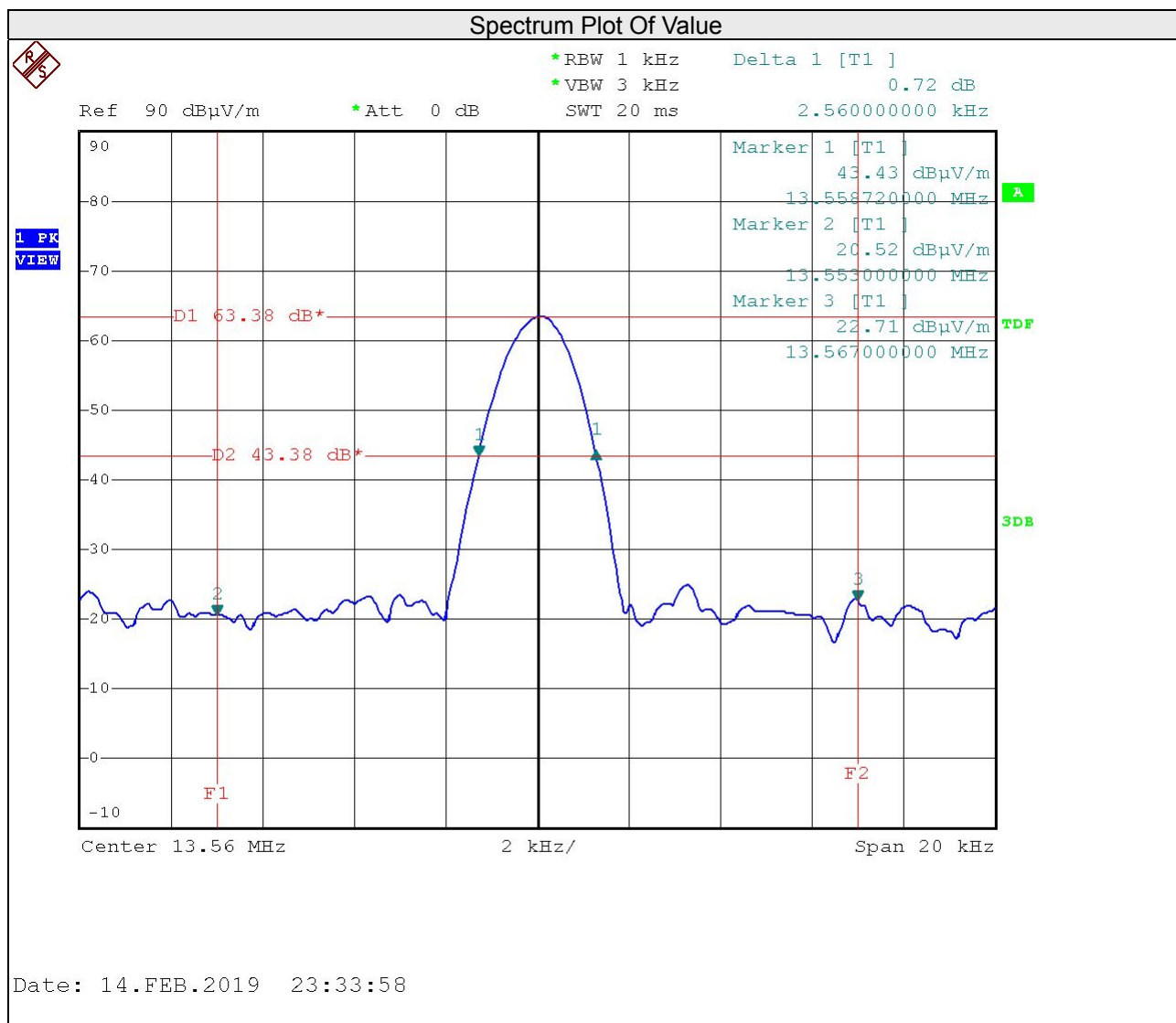
##### Test Mode A

| 20dBc point (Low) | 20dBc point (High) | Operating frequency band (MHz) | Pass / Fail |
|-------------------|--------------------|--------------------------------|-------------|
| 13.555868         | 13.558468          | 13.553~13.567                  | Pass        |



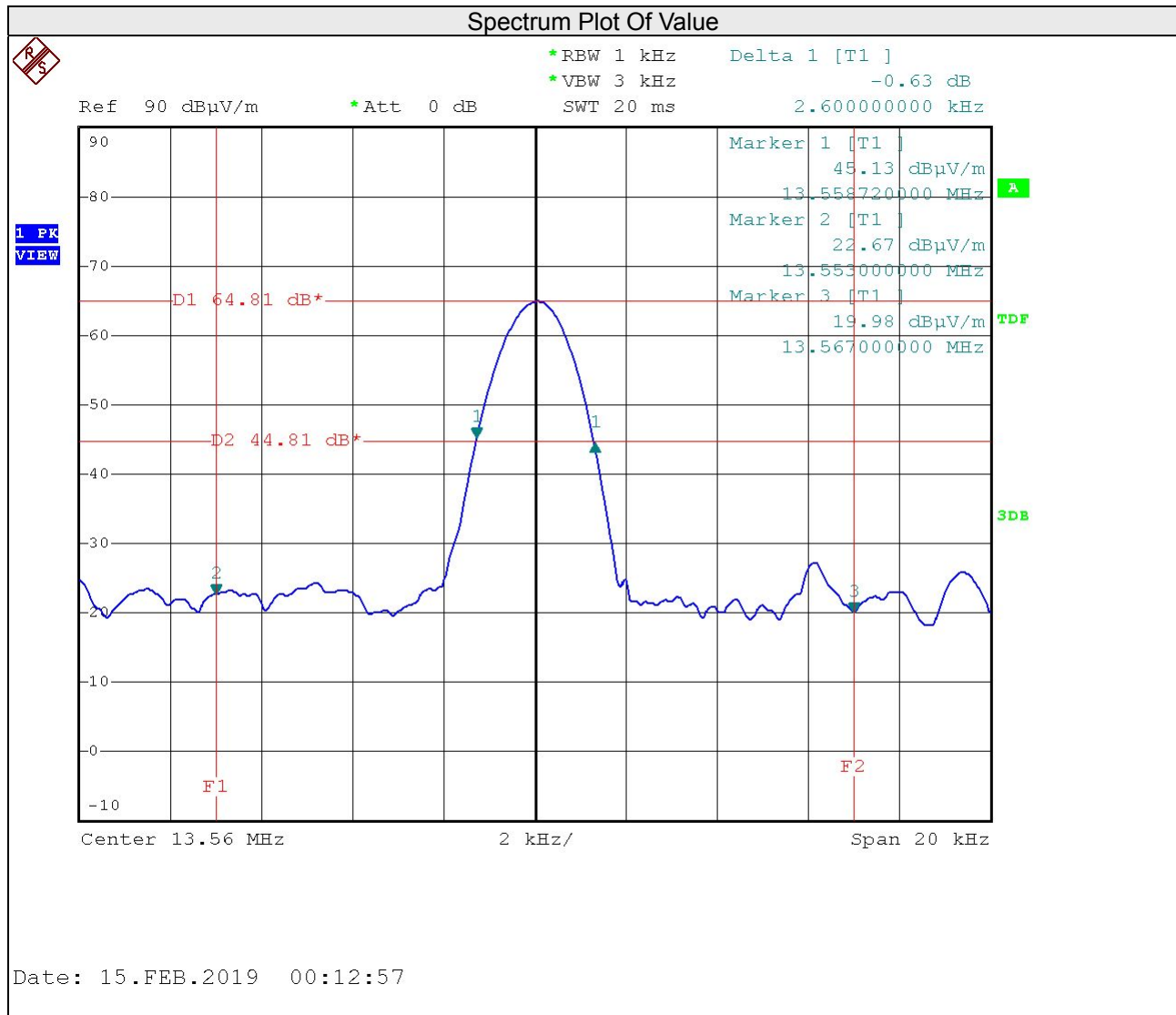
# Test Mode B

| 20dBc point (Low) | 20dBc point (High) | Operating frequency band (MHz) | Pass / Fail |
|-------------------|--------------------|--------------------------------|-------------|
| 13.55872          | 13.56128           | 13.553~13.567                  | Pass        |



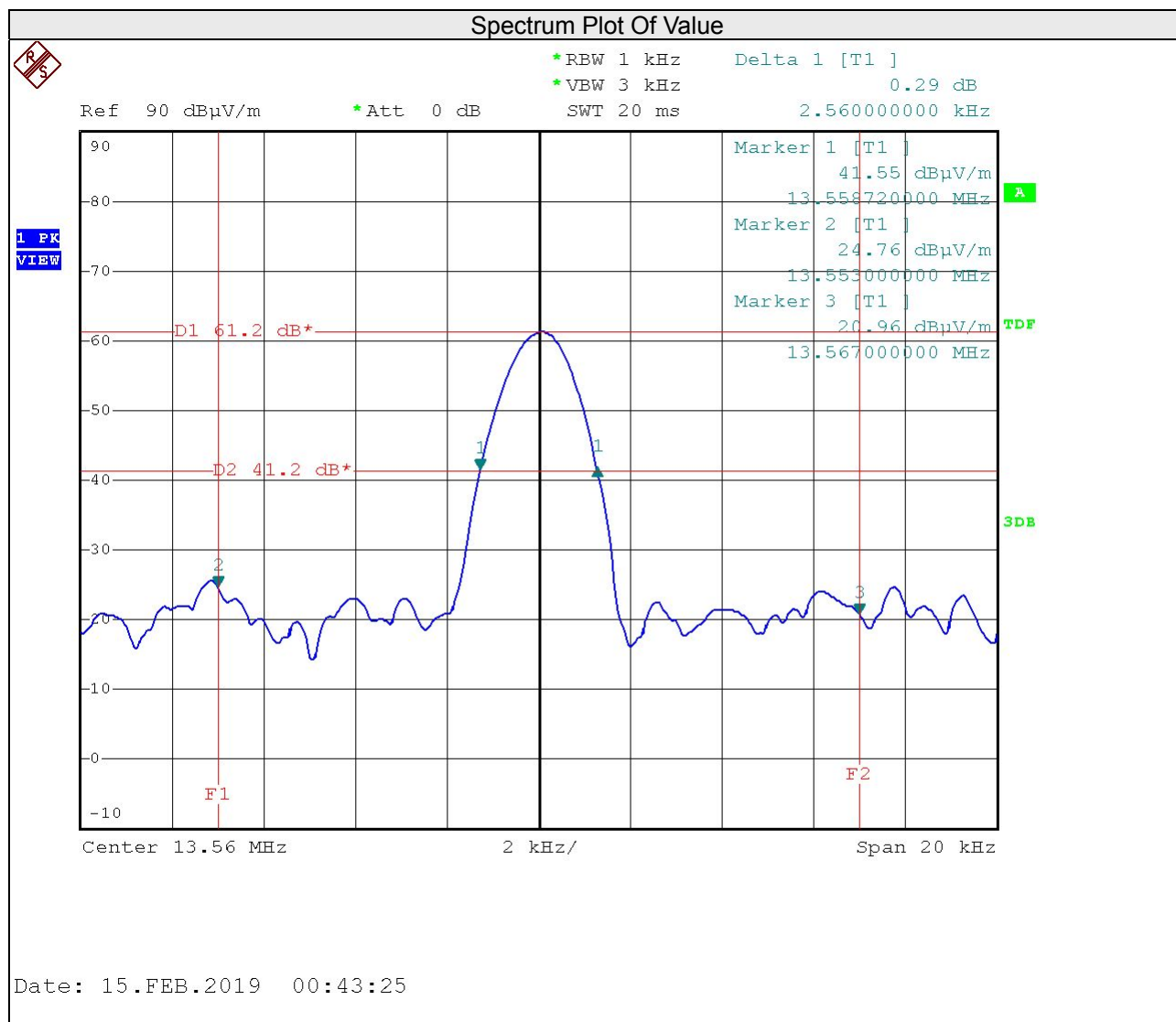
### Test Mode C

| 20dBc point (Low) | 20dBc point (High) | Operating frequency band (MHz) | Pass / Fail |
|-------------------|--------------------|--------------------------------|-------------|
| 13.55872          | 13.56132           | 13.553~13.567                  | Pass        |



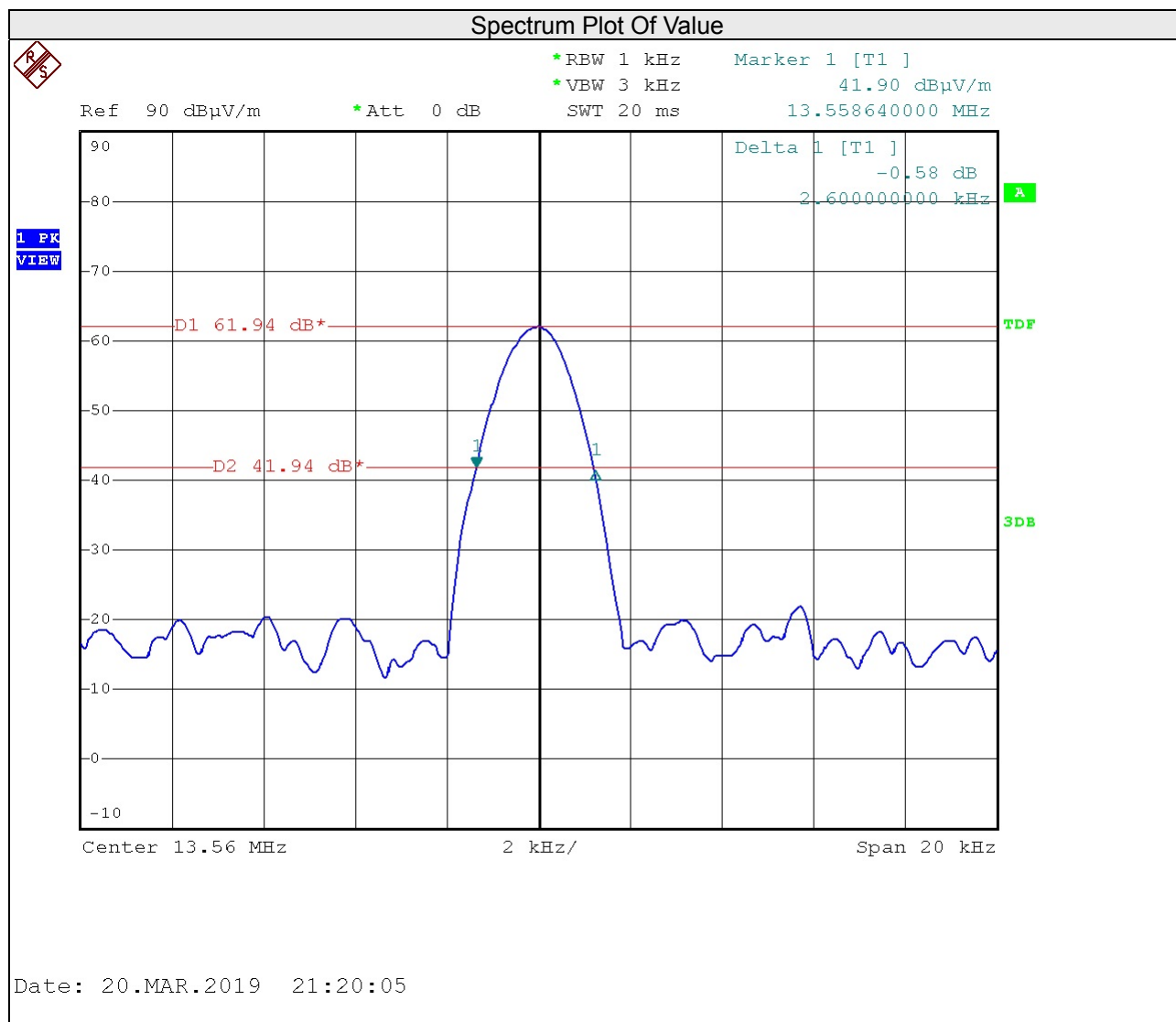
### Test Mode D

| 20dBc point (Low) | 20dBc point (High) | Operating frequency band (MHz) | Pass / Fail |
|-------------------|--------------------|--------------------------------|-------------|
| 13.55872          | 13.56038           | 13.553~13.567                  | Pass        |



# Test Mode E

| 20dBc point (Low) | 20dBc point (High) | Operating frequency band (MHz) | Pass / Fail |
|-------------------|--------------------|--------------------------------|-------------|
| 13.555864         | 13.56124           | 13.553~13.567                  | Pass        |



## 5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

## Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The address and road map of all our labs can be found in our web site also.

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