# TEST REPORT

| | |
|---|---|
| Applicant Name : | Feit Electric Company |
| Address : | 4901 Gregg Road, Pico Rivera, California, United States 90660 |
| Report Number: | RA230522-28382E-RFA |
| FCC ID: | SYW-FM15LP6WYMMHD |

**Test Standard (s)**

FCC PART 15.249

**Sample Description**

| | |
|---|---|
| Product Type: | Luminaire |
| Model No.: | FM15LP6WYMMBKHD, FM15LP6WYMMBKHDDF<br>FM15LP6WYMMNKHD, FM15LP6WYMMNKHDDF |
| Trade Mark: | Commercial |
| Date Received: | 2023-05-22 |
| Date of Test: | 2023-06-05 to 2023-07-05 |
| Report Date: | 2023-07-05 |

| Test Result: | Pass* |
|---|---|

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

**Prepared and Checked By:**

Bob.Liao

EMC Engineer

**Approved By:**

Candy Li

EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★".

Shenzhen Accurate Technology Co., Ltd. is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '*'. Customer model name, addresses, names, trademarks etc. are not considered data.

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# TABLE OF CONTENTS

# DOCUMENT REVISION HISTORY

| Revision Number | Report Number | Description of Revision | Date of Revision |
|---|---|---|---|
| 0 | RA230522-28382E-RF | Original Report | 2023-06-19 |
| 1 | RA230522-28382E-RFA | Revised some notes in the report | 2023-07-05 |

# GENERAL INFORMATION

## Product Description for Equipment under Test (EUT)

| | |
|---|---|
| Product | Luminaire |
| Tested Model | FM15LP6WYMMBKHD |
| Multiple Model | FM15LP6WYMMBKHDDF, FM15LP6WYMMNKHD<br>FM15LP6WYMMNKHDDF |
| Model Difference | Please refer to DOS letter |
| Frequency Range | SRD: 5750MHz~5870MHz(121CH) |
| Maximum E-Field Strength (Peak) | 87.55dBuV/m@3m |
| Modulation Technique | CW |
| Antenna Specification* | Internal Antenna (It is provided by the applicant) |
| Voltage Range | AC 120V |
| Sample serial number | 2632-1 |
| Sample/EUT Status | Good condition |

## Objective

This type approval report is in accordance with Part 2-Subpart J, and Part 15-Subparts A and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.249 rules.

## Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliant Testing of Unlicensed Wireless Devices.

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

## Measurement Uncertainty

| Parameter | | Uncertainty |
|---|---|---|
| Occupied Channel Bandwidth | | 5% |
| RF output power, conducted | | 0.71dB |
| Unwanted Emission, conducted | | 1.6dB |
| AC Power Lines Conducted Emissions | | 2.74dB |
| Emissions, Radiated | 30MHz - 1GHz | 5.08dB |
| | 1GHz - 18GHz | 4.96dB |
| | 18GHz - 26.5GHz | 5.16dB |
| | 26.5GHz - 40GHz | 4.64dB |
| Temperature | | 1℃ |
| Humidity | | 6% |
| Supply voltages | | 0.4% |

*Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.*

## Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189.

Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0016. The Registration Number is 30241.

# SYSTEM TEST CONFIGURATION

## Justification

The system was configured for testing in an engineering mode and the power level setting was default*, which provided by manufacturer.

Frequency list:

| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---|---|---|---|---|---|---|---|
| 0 | 5750 | 31 | 5781 | 62 | 5812 | 93 | 5843 |
| 1 | 5751 | 32 | 5782 | 63 | 5813 | 94 | 5844 |
| 2 | 5752 | 33 | 5783 | 64 | 5814 | 95 | 5845 |
| 3 | 5753 | 34 | 5784 | 65 | 5815 | 96 | 5846 |
| 4 | 5754 | 35 | 5785 | 66 | 5816 | 97 | 5847 |
| 5 | 5755 | 36 | 5786 | 67 | 5817 | 98 | 5848 |
| 6 | 5756 | 37 | 5787 | 68 | 5818 | 99 | 5849 |
| 7 | 5757 | 38 | 5788 | 69 | 5819 | 100 | 5850 |
| 8 | 5758 | 39 | 5789 | 70 | 5820 | 101 | 5851 |
| 9 | 5759 | 40 | 5790 | 71 | 5821 | 102 | 5852 |
| 10 | 5760 | 41 | 5791 | 72 | 5822 | 103 | 5853 |
| 11 | 5761 | 42 | 5792 | 73 | 5823 | 104 | 5854 |
| 12 | 5762 | 43 | 5793 | 74 | 5824 | 105 | 5855 |
| 13 | 5763 | 44 | 5794 | 75 | 5825 | 106 | 5856 |
| 14 | 5764 | 45 | 5795 | 76 | 5826 | 107 | 5857 |
| 15 | 5765 | 46 | 5796 | 77 | 5827 | 108 | 5858 |
| 16 | 5766 | 47 | 5797 | 78 | 5828 | 109 | 5859 |
| 17 | 5767 | 48 | 5798 | 79 | 5829 | 110 | 5860 |
| 18 | 5768 | 49 | 5799 | 80 | 5830 | 111 | 5861 |
| 19 | 5769 | 50 | 5800 | 81 | 5831 | 112 | 5862 |
| 20 | 5770 | 51 | 5801 | 82 | 5832 | 113 | 5863 |
| 21 | 5771 | 52 | 5802 | 83 | 5833 | 114 | 5864 |
| 22 | 5772 | 53 | 5803 | 84 | 5834 | 115 | 5865 |
| 23 | 5773 | 54 | 5804 | 85 | 5835 | 116 | 5866 |
| 24 | 5774 | 55 | 5805 | 86 | 5836 | 117 | 5867 |
| 25 | 5775 | 56 | 5806 | 87 | 5837 | 118 | 5868 |
| 26 | 5776 | 57 | 5807 | 88 | 5838 | 119 | 5869 |
| 27 | 5777 | 58 | 5808 | 89 | 5839 | 120 | 5870 |
| 28 | 5778 | 59 | 5809 | 90 | 5840 | | |
| 29 | 5779 | 60 | 5810 | 91 | 5841 | | |
| 30 | 5780 | 61 | 5811 | 92 | 5842 | | |

Test Channel: Channel0, Channel50, Channel120

## EUT Exercise Software

No exercise software

## Special Accessories

No special accessory.

## Equipment Modifications

No modifications were made to the unit tested.

## Support Equipment List and Details

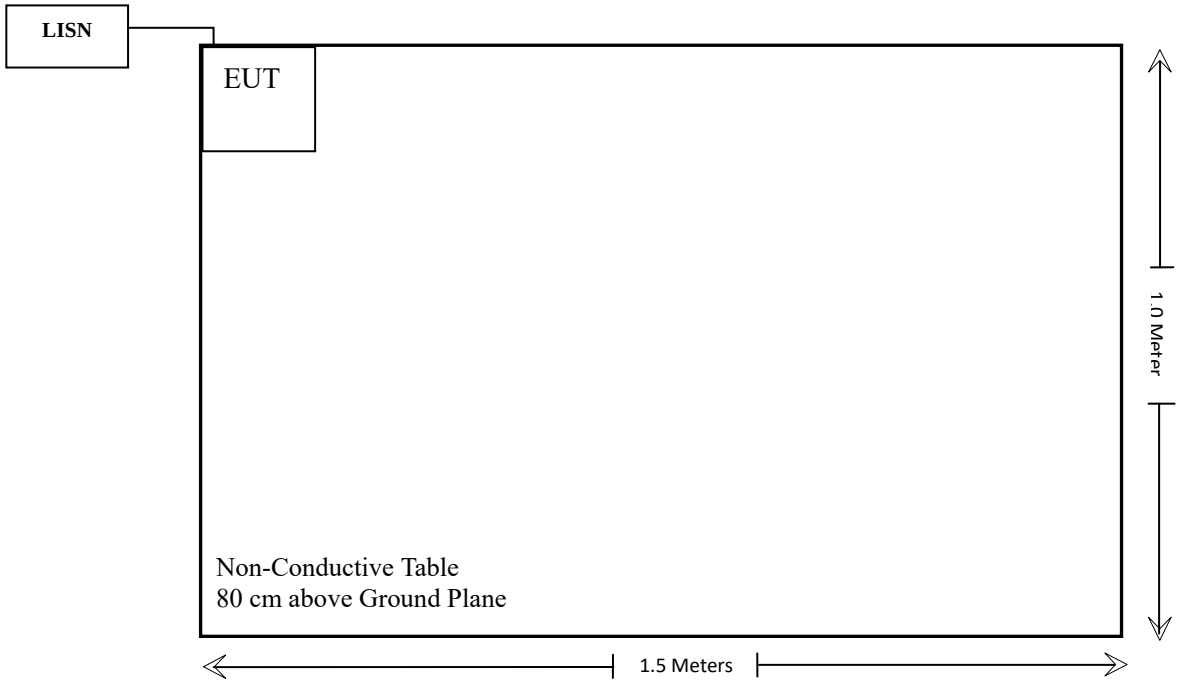
| Manufacturer | Description | Model | Serial Number |
|---|---|---|---|
| / | / | / | / |

## Support Cable Descriptions

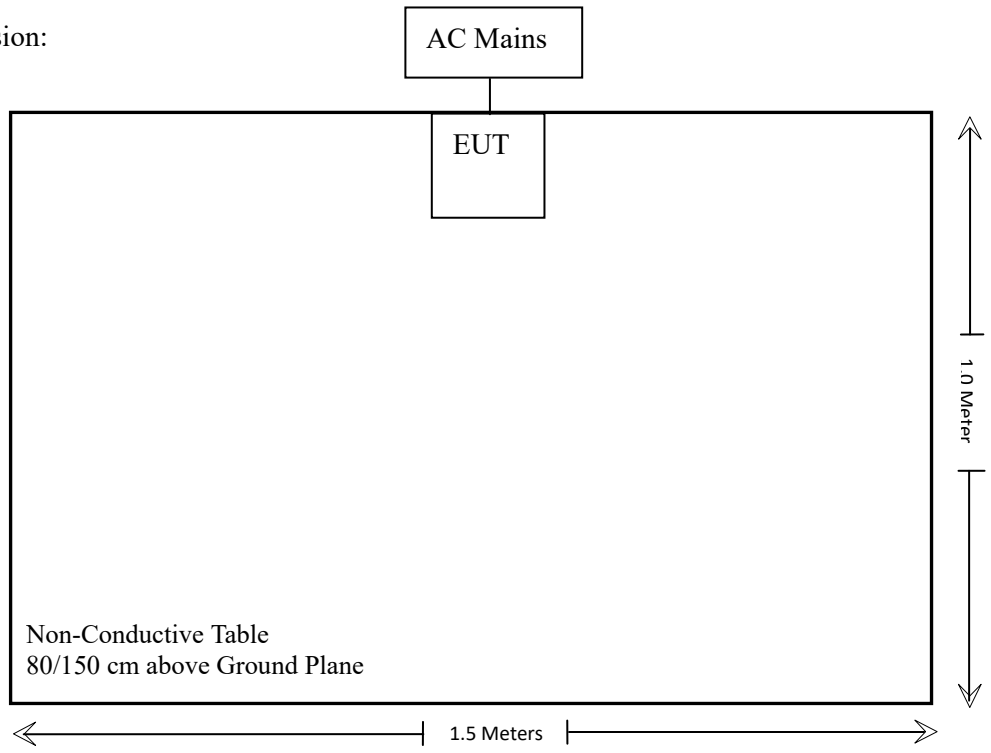
| Cable Description | Length (m) | From/Port | To |
|---|---|---|---|
| Un-shielding Detachable AC Cable | 1 | EUT | L.I.S.N |

## Block Diagram of Test Setup

For Conducted Emission:




For Radiated Emission:



# SUMMARY OF TEST RESULTS

| FCC Rules | Description of Test | Result |
|---|---|---|
| FCC §1.1307 (b) & §2.1093 | RF Exposure | Compliant |
| §15.203 | Antenna Requirement | Compliant |
| §15.207(a) | Conduction Emissions | Compliant |
| 15.205, §15.209, §15.249(d) | Radiated Emissions& Outside of Band Emission | Compliant |
| §15.215 (c) | 20dB Bandwidth | Compliant |

# TEST EQUIPMENT LIST

| Manufacturer | Description | Model | Serial Number | Calibration Date | Calibration Due Date |
|---|---|---|---|---|---|
| **Conducted Emissions Test** | | | | | |
| Rohde & Schwarz | EMI Test Receiver | ESCI | 100784 | 2022/11/25 | 2023/11/24 |
| R & S | L.I.S.N. | ENV216 | 101314 | 2022/11/25 | 2023/11/24 |
| Anritsu Corp | 50Ω Coaxial Switch | MP59B | 6100237248 | 2022/12/07 | 2023/12/06 |
| Unknown | RF Coaxial Cable | No.17 | N0350 | 2022/11/25 | 2023/11/24 |
| Conducted Emission Test Software: e3 191218 (V9) | | | | | |
| **Radiated Emissions Test** | | | | | |
| Rohde & Schwarz | Test Receiver | ESR | 102725 | 2022/11/25 | 2023/11/24 |
| Rohde & Schwarz | Spectrum Analyzer | FSV40 | 101949 | 2022/11/25 | 2023/11/24 |
| SONOMA INSTRUMENT | Amplifier | 310 N | 186131 | 2022/11/08 | 2023/11/07 |
| A.H. Systems, inc. | Preamplifier | PAM-0118P | 135 | 2022/11/08 | 2023/11/07 |
| Quinstar | Amplifier | QLW-184055 36-J0 | 15964001002 | 2022/11/08 | 2023/11/07 |
| Schwarzbeck | Bilog Antenna | VULB9163 | 9163-323 | 2021/07/06 | 2024/07/05 |
| Schwarzbeck | Horn Antenna | BBHA9120D | 837 | 2023/02/22 | 2026/02/21 |
| Schwarzbeck | HORN ANTENNA | BBHA9170 | 9170-359 | 2022/12/26 | 2025/12/25 |
| Unknown | RF Coaxial Cable | No.10 | N050 | 2022/11/25 | 2023/11/24 |
| Unknown | RF Coaxial Cable | No.11 | N1000 | 2022/11/25 | 2023/11/24 |
| Unknown | RF Coaxial Cable | No.12 | N040 | 2022/11/25 | 2023/11/24 |
| Unknown | RF Coaxial Cable | No.13 | N300 | 2022/11/25 | 2023/11/24 |
| Unknown | RF Coaxial Cable | No.14 | N800 | 2022/11/25 | 2023/11/24 |
| Unknown | RF Coaxial Cable | No.15 | N600 | 2022/11/25 | 2023/11/24 |
| Unknown | RF Coaxial Cable | No.16 | N650 | 2022/11/25 | 2023/11/24 |
| Radiated Emission Test Software:e3 191218 (V9) | | | | | |

*** Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

# FCC §1.1307 (b) & §2.1093 – RF EXPOSURE

## Applicable Standard

According to FCC §2.1093 and §1.1307(b), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB 447498 D04 Interim General RF Exposure Guidance v01, clause 2.1.2 – 1-mW test Exemption:

Per § 1.1307(b)(3)(i)(A), a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance.
This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption, and it cannot be applied in conjunction with any other test exemption.

## Test Result:

For worst case:

| Mode | Frequency | Maximum Power | | 1-mW test Exemption |
|---|---|---|---|---|
| | (MHz) | (dBm) | (mW) | |
| SRD | 5870 | -7.65 | 0.17 | Yes |

Note: Use the highest e-field strength(87.55dBuV/m@3m) for the evaluation
E(dBuV/m)=EIRP(dBm)-95.2 for distance 3m
so the EIRP=87.55dBuV/m-95.2=-7.65dBm

**Result:** Compliant.

# FCC§15.203 - ANTENNA REQUIREMENT

## Applicable Standard

According to FCC § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

## Antenna Connector Construction

The EUT has one internal antenna which was permanently attached, fulfill the requirement of this section. Please refer to the EUT photos.

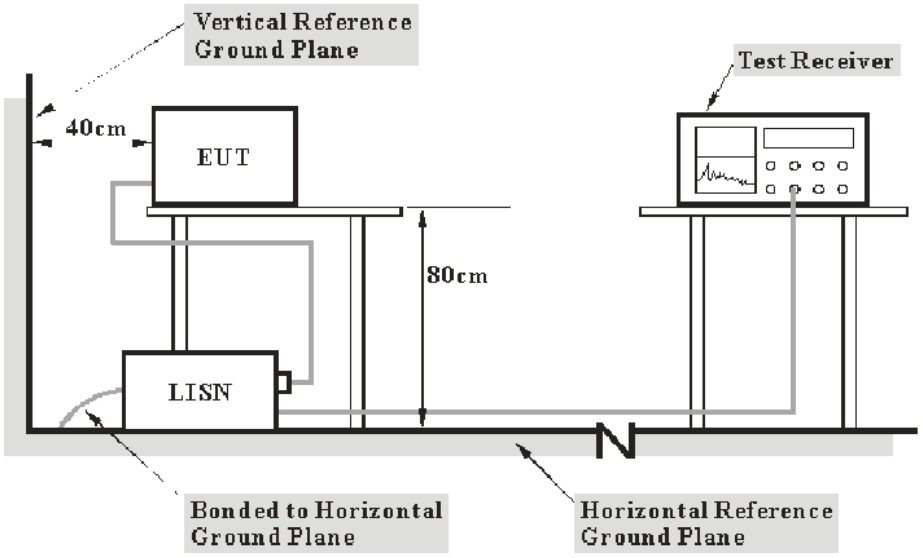
**Result:** Compliant.

# FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

## Applicable Standard

FCC §15.207(a)

## EUT Setup




Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The measurement procedure of EUT setup is according with ANSI C63.10-2013. The related limit was specified in FCC Part 15.207.

The spacing between the peripherals was 10 cm.

## EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

| Frequency Range | IF B/W |
|---|---|
| 150 kHz – 30 MHz | 9 kHz |

## Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak and average detection mode.

## Calculation

The factor is calculated by adding LISN VDF (Voltage Division Factor) and Cable Loss. The basic equation is as follows:

Factor = LISN VDF + Cable Loss

The "**Over Limit**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over limit of -7 dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

Over Limit = Level – Limit
Level = Read Level + Factor

## Test Data

### Environmental Conditions

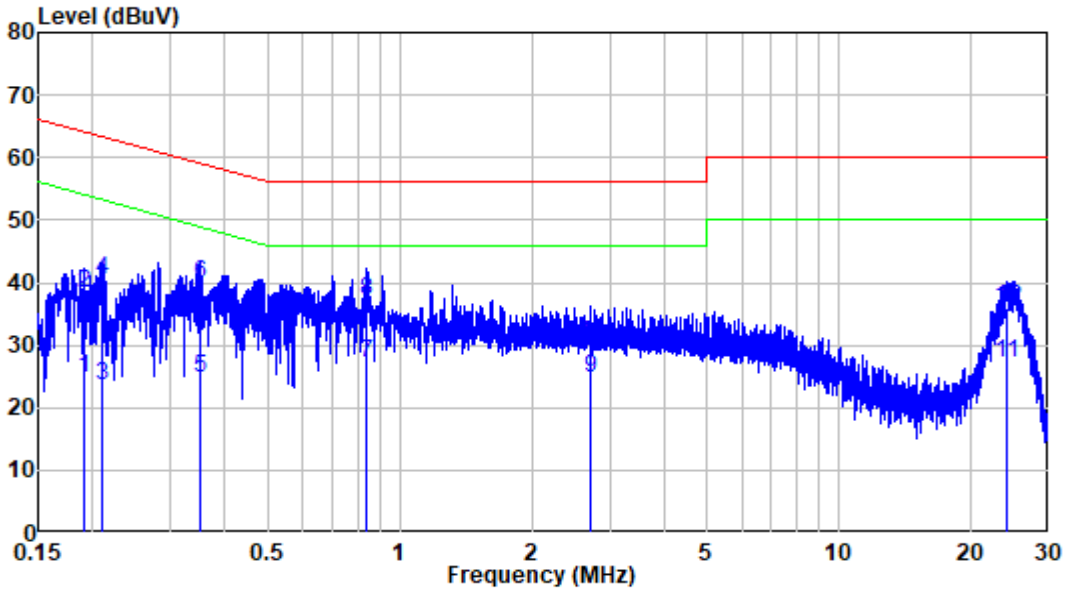
| | |
|---|---|
| **Temperature:** | 23℃ |
| **Relative Humidity:** | 49 % |
| **ATM Pressure:** | 101.0 kPa |

*The testing was performed by Jerry Wu on 2023-06-06.*

*EUT operation mode: Transmitting (worst case is high channel)*

**Test Result:** Please refer the below plots.

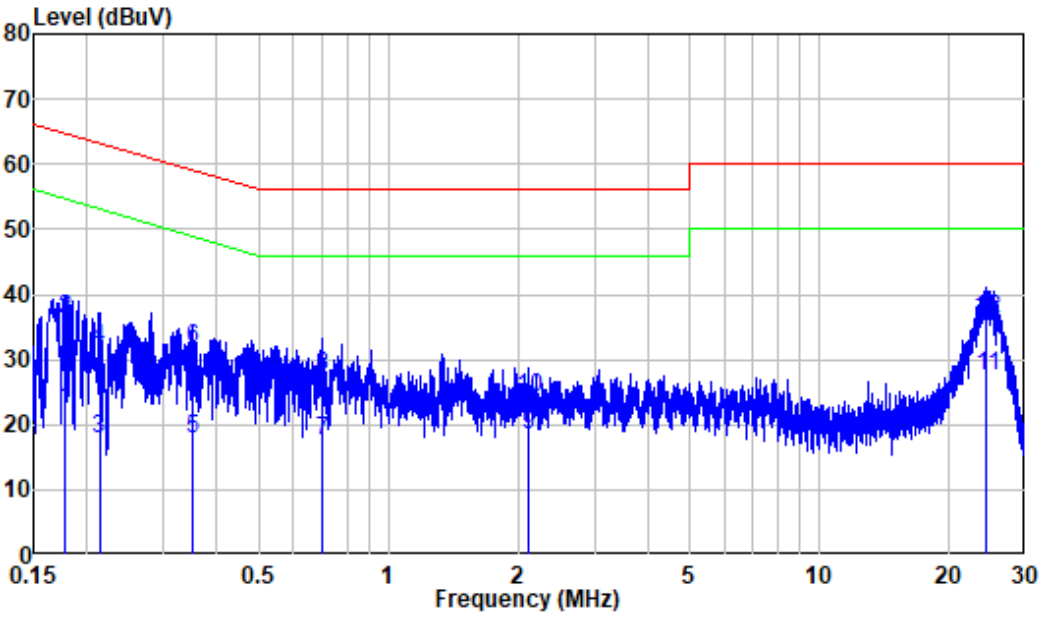
**AC 120V/60 Hz, Line**




Site : Shielding Room
Condition: Line
Job No. : RA230522-28382E-RF
Mode : Transmitting
Power : AC 120V 60Hz

| | Freq | Factor | Read Level | Level | Limit Line | Over Limit | Remark |
|---|---|---|---|---|---|---|---|
| | MHz | dB | dBuV | dBuV | dBuV | dB | |
| 1 | 0.191 | 10.28 | 14.34 | 24.62 | 54.01 | -29.39 | Average |
| 2 | 0.191 | 10.28 | 27.95 | 38.23 | 64.01 | -25.78 | QP |
| 3 | 0.210 | 10.29 | 13.29 | 23.58 | 53.19 | -29.61 | Average |
| 4 | 0.210 | 10.29 | 30.09 | 40.38 | 63.19 | -22.81 | QP |
| 5 | 0.351 | 10.33 | 14.52 | 24.85 | 48.94 | -24.09 | Average |
| 6 | 0.351 | 10.33 | 29.62 | 39.95 | 58.94 | -18.99 | QP |
| 7 | 0.842 | 10.46 | 16.59 | 27.05 | 46.00 | -18.95 | Average |
| 8 | 0.842 | 10.46 | 26.63 | 37.09 | 56.00 | -18.91 | QP |
| 9 | 2.705 | 10.46 | 14.36 | 24.82 | 46.00 | -21.18 | Average |
| 10 | 2.705 | 10.46 | 19.88 | 30.34 | 56.00 | -25.66 | QP |
| 11 | 24.063 | 10.12 | 16.97 | 27.09 | 50.00 | -22.91 | Average |
| 12 | 24.063 | 10.12 | 25.78 | 35.90 | 60.00 | -24.10 | QP |

**AC 120V/60 Hz, Neutral**




Site : Shielding Room
Condition: Neutral
Job No. : RA230522-28382E-RF
Mode : Transmitting
Power : AC 120V 60Hz

| | Freq | Factor | Read Level | Level | Limit Line | Over Limit | Remark |
|---|---|---|---|---|---|---|---|
| | MHz | dB | dBuV | dBuV | dBuV | dB | |
| 1 | 0.178 | 10.34 | 11.97 | 22.31 | 54.59 | -32.28 | Average |
| 2 | 0.178 | 10.34 | 25.96 | 36.30 | 64.59 | -28.29 | QP |
| 3 | 0.213 | 10.38 | 7.28 | 17.66 | 53.08 | -35.42 | Average |
| 4 | 0.213 | 10.38 | 21.39 | 31.77 | 63.08 | -31.31 | QP |
| 5 | 0.351 | 10.37 | 7.45 | 17.82 | 48.94 | -31.12 | Average |
| 6 | 0.351 | 10.37 | 21.48 | 31.85 | 58.94 | -27.09 | QP |
| 7 | 0.699 | 10.47 | 6.90 | 17.37 | 46.00 | -28.63 | Average |
| 8 | 0.699 | 10.47 | 16.90 | 27.37 | 56.00 | -28.63 | QP |
| 9 | 2.109 | 10.58 | 7.96 | 18.54 | 46.00 | -27.46 | Average |
| 10 | 2.109 | 10.58 | 13.48 | 24.06 | 56.00 | -31.94 | QP |
| 11 | 24.432 | 10.25 | 17.14 | 27.39 | 50.00 | -22.61 | Average |
| 12 | 24.432 | 10.25 | 26.08 | 36.33 | 60.00 | -23.67 | QP |

# FCC§15.205, §15.209 & §15.249(d) - RADIATED EMISSIONS

## Applicable Standard

As per FCC§15.249 (a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

| Fundamental frequency | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) |
|---|---|---|
| 902–928 MHz | 50 | 500 |
| 2400–2483.5 MHz | 50 | 500 |
| 5725–5875 MHz | 50 | 500 |
| 24.0–24.25 GHz | 250 | 2500 |

As per FCC§15.249 (c), Field strength limits are specified at a distance of 3 meters.
As per FCC§15.249 (d), Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

## Test Equipment Setup

The spectrum analyzer or receiver is set as:

Below 1000MHz:

RBW = 100 kHz / VBW = 300 kHz / Sweep = Auto

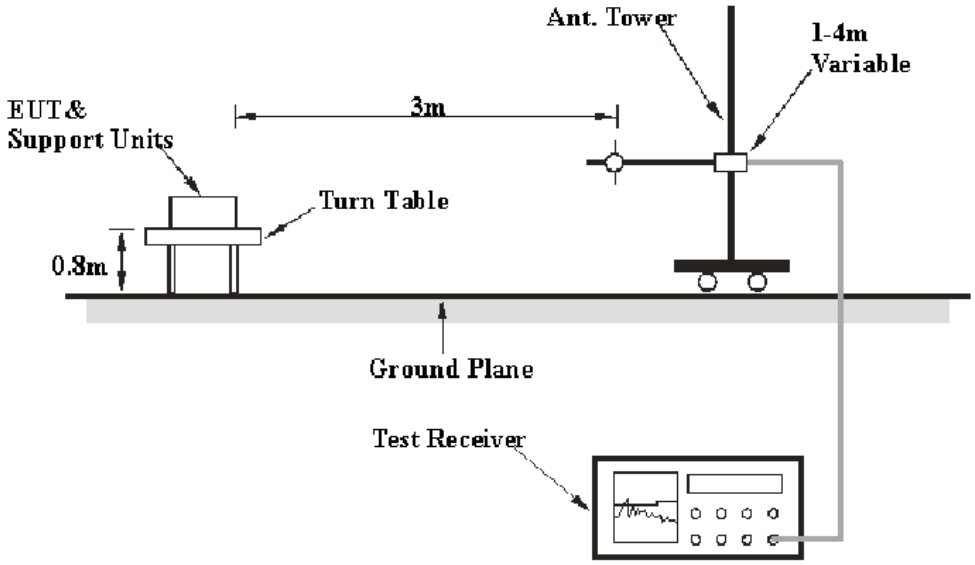
Above 1000MHz:

Peak: RBW = 1MHz / VBW = 1MHz / Sweep = Auto
Average: RBW = 1MHz / VBW = 10Hz / Sweep = Auto

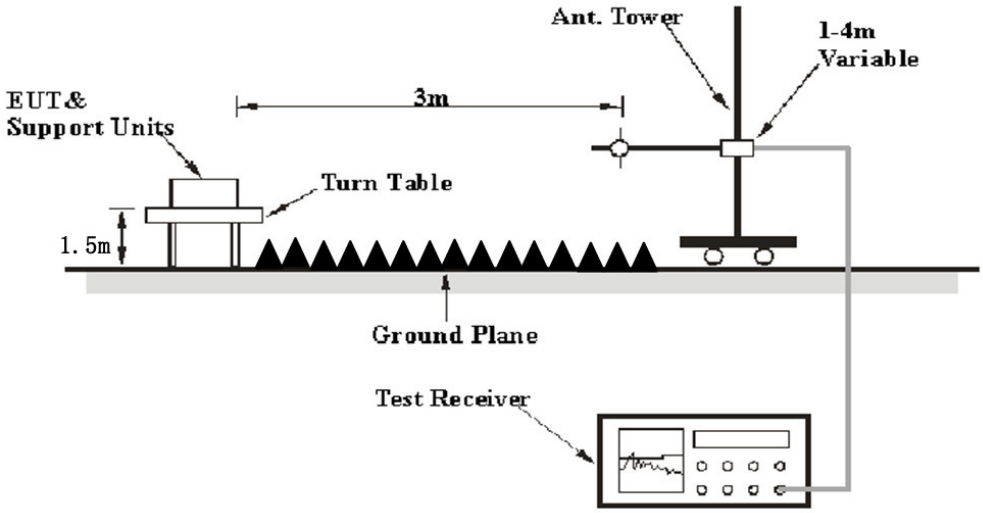
If the maximized peak measured value complies with the limit, then it is unnecessary to perform QP/Average measurement.

## EUT Setup

**Below 1GHz:**




**Above 1GHz:**




The radiated emission and out of band emission tests were performed in the 3meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209/15.205 and FCC 15.249 limits.

## Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The EUT is set 3 meter away from the testing antenna, which is varied from 1-4 meter, and the EUT is placed on a turntable, which is 0.8 meter above ground plane for below 1GHz or 1.5 meter for above 1GHz, the table shall be rotated for 360 degrees to find out the highest emission. The receiving antenna should be changed the polarization both of horizontal and vertical.

## Corrected Amplitude & Margin Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

Factor = Antenna Factor + Cable Loss - Amplifier Gain

The "**Over Limit/Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

Over Limit/Margin = Level / Corrected Amplitude – Limit
Level / Corrected Amplitude = Read Level + Factor

## Test Results Summary

According to the EUT complied with the FCC Part 15.205, 15.209 & §15.249

## Test Data

### Environmental Conditions

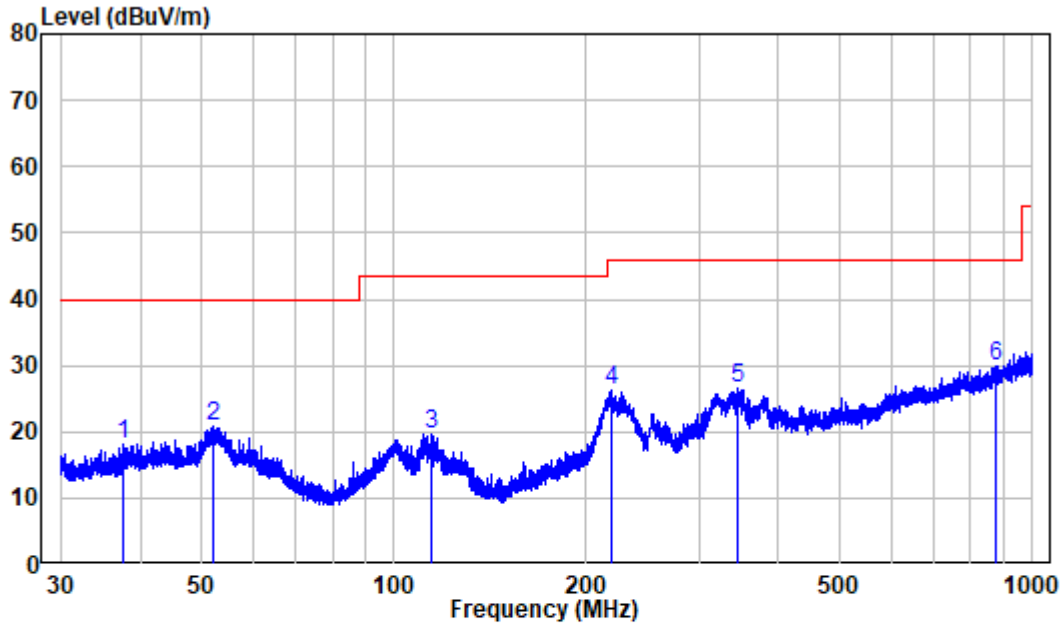
| | |
|---|---|
| **Temperature:** | 23-24 ℃ |
| **Relative Humidity:** | 53-56 % |
| **ATM Pressure:** | 101.0 kPa |

*The testing was performed by Jason Liu on 2023-06-05 for below 1GHz.*
*The testing was performed by Jeef Huang on 2023-06-06 for above 1GHz.*

*Test Mode: Transmitting*

**Below 1GHz:** (worst case is High channel)

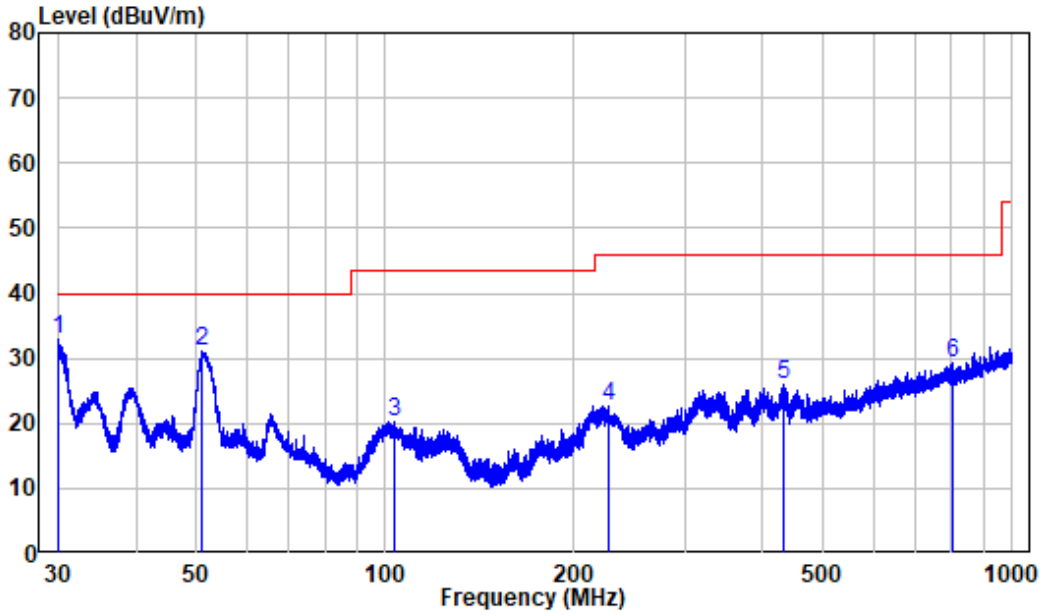
**Horizontal**




Site : chamber
Condition: 3m HORIZONTAL
Job No. : RA230522-28382E-RF
Test Mode: 5G Transmitting

| | Freq | Factor | Read Level | Level | Limit Line | Over Limit | Remark |
|---|---|---|---|---|---|---|---|
| | MHz | dB/m | dBuV | dBuV/m | dBuV/m | dB | |
| 1 | 37.729 | -10.87 | 28.99 | 18.12 | 40.00 | -21.88 | Peak |
| 2 | 52.094 | -9.99 | 30.91 | 20.92 | 40.00 | -19.08 | Peak |
| 3 | 114.464 | -12.65 | 32.32 | 19.67 | 43.50 | -23.83 | Peak |
| 4 | 219.749 | -11.42 | 37.67 | 26.25 | 46.00 | -19.75 | Peak |
| 5 | 346.202 | -7.23 | 33.82 | 26.59 | 46.00 | -19.41 | Peak |
| 6 | 876.015 | 1.18 | 28.65 | 29.83 | 46.00 | -16.17 | Peak |

**Vertical**




Site : chamber
Condition: 3m VERTICAL
Job No. : RA230522-28382E-RF
Test Mode: 5G Transmitting

| | Freq | Factor | Read Level | Level | Limit Line | Over Limit | Remark |
|---|---|---|---|---|---|---|---|
| | MHz | dB/m | dBuV | dBuV/m | dBuV/m | dB | |
| 1 | 30.053 | -12.39 | 45.27 | 32.88 | 40.00 | -7.12 | Peak |
| 2 | 51.054 | -9.94 | 41.00 | 31.06 | 40.00 | -8.94 | Peak |
| 3 | 103.125 | -11.66 | 31.79 | 20.13 | 43.50 | -23.37 | Peak |
| 4 | 226.596 | -11.22 | 33.97 | 22.75 | 46.00 | -23.25 | Peak |
| 5 | 432.167 | -5.75 | 31.64 | 25.89 | 46.00 | -20.11 | Peak |
| 6 | 801.435 | -0.38 | 29.59 | 29.21 | 46.00 | -16.79 | Peak |

**Above 1 GHz:**

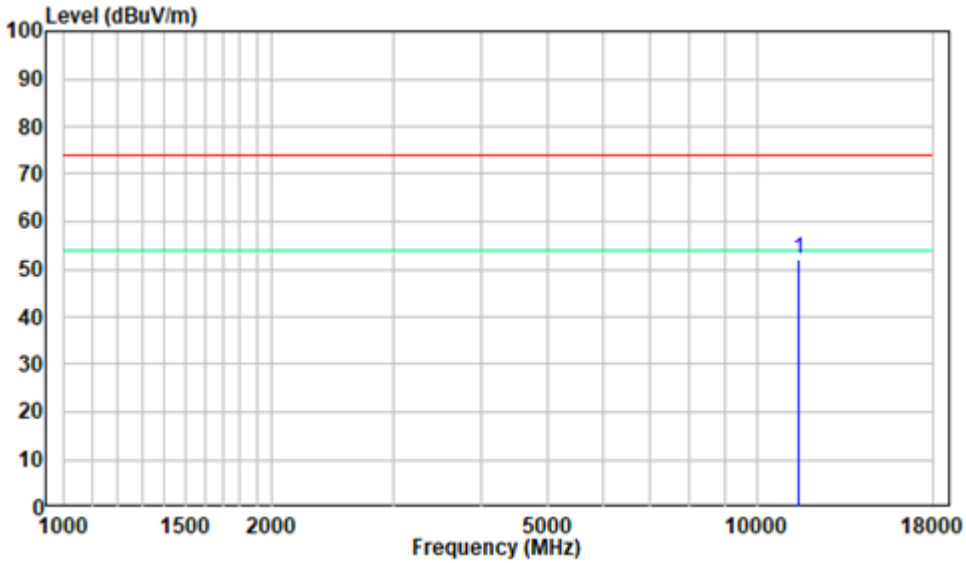
| Frequency (MHz) | Receiver | | Turntable Angle Degree | Rx Antenna | | Factor (dB/m) | Corrected Amplitude (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|---|
| | Reading (dBuV) | PK/Ave | | Height (m) | Polar (H/V) | | | | |
| Low Channel | | | | | | | | | |
| 5725 | 47.37 | PK | 90 | 1.3 | H | -2.73 | 44.64 | 74 | -29.36 |
| 5725 | 48.31 | PK | 154 | 1.4 | V | -2.73 | 45.58 | 74 | -28.42 |
| 5750 | 84.53 | PK | 104 | 1.9 | H | -3.15 | 81.38 | 114 | -32.62 |
| 5750 | 87.02 | PK | 173 | 2.0 | V | -3.15 | 83.87 | 114 | -30.13 |
| 11500 | 44.91 | PK | 104 | 1.9 | H | 7.13 | 52.04 | 74 | -21.96 |
| 11500 | 45.57 | PK | 173 | 2.0 | V | 7.13 | 52.70 | 74 | -21.3 |
| Middle Channel | | | | | | | | | |
| 5800 | 80.48 | PK | 173 | 2.0 | H | -1.7 | 78.78 | 114 | -35.22 |
| 5800 | 86.42 | PK | 317 | 1.1 | V | -1.7 | 84.72 | 114 | -29.28 |
| 11600 | 45.13 | PK | 173 | 2.0 | H | 7.56 | 52.69 | 74 | -21.31 |
| 11600 | 46.04 | PK | 317 | 1.1 | V | 7.56 | 53.60 | 74 | -20.4 |
| High Channel | | | | | | | | | |
| 5870 | 84.08 | PK | 146 | 1.5 | H | -0.19 | 83.89 | 114 | -30.11 |
| 5870 | 87.74 | PK | 88 | 1.5 | V | -0.19 | 87.55 | 114 | -26.45 |
| 5875 | 50.51 | PK | 353 | 1.1 | H | -0.1 | 50.41 | 74 | -23.59 |
| 5875 | 51.36 | PK | 188 | 1.8 | V | -0.1 | 51.26 | 74 | -22.74 |
| 5925 | 47.86 | PK | 69 | 1.4 | H | 0.11 | 47.97 | 74 | -26.03 |
| 5925 | 49.73 | PK | 136 | 1.7 | V | 0.11 | 49.84 | 74 | -24.16 |
| 11740 | 45.73 | PK | 74 | 1.4 | H | 7.47 | 53.20 | 74 | -20.8 |
| 11740 | 46.47 | PK | 346 | 1.3 | V | 7.47 | 53.94 | 74 | -20.06 |

**Note:**
Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
Corrected Amplitude = Factor + Reading
Margin = Corrected Amplitude – Limit
Another spurious emission at the noise base level was not recorded.
All background noises are not recorded in the table.
For above 1GHz, the test result of peak was 20dB below to the limit of peak, which can be compliant to the average limit, so just peak value was recorded.

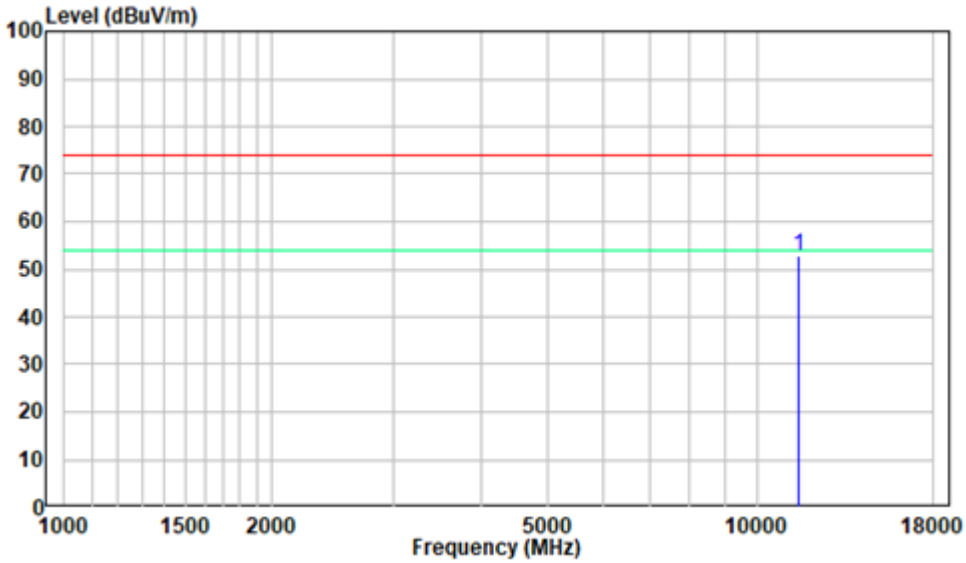
**Pre-scan plots:**

**1-18GHz:** (worst case is High channel)

**Horizontal**

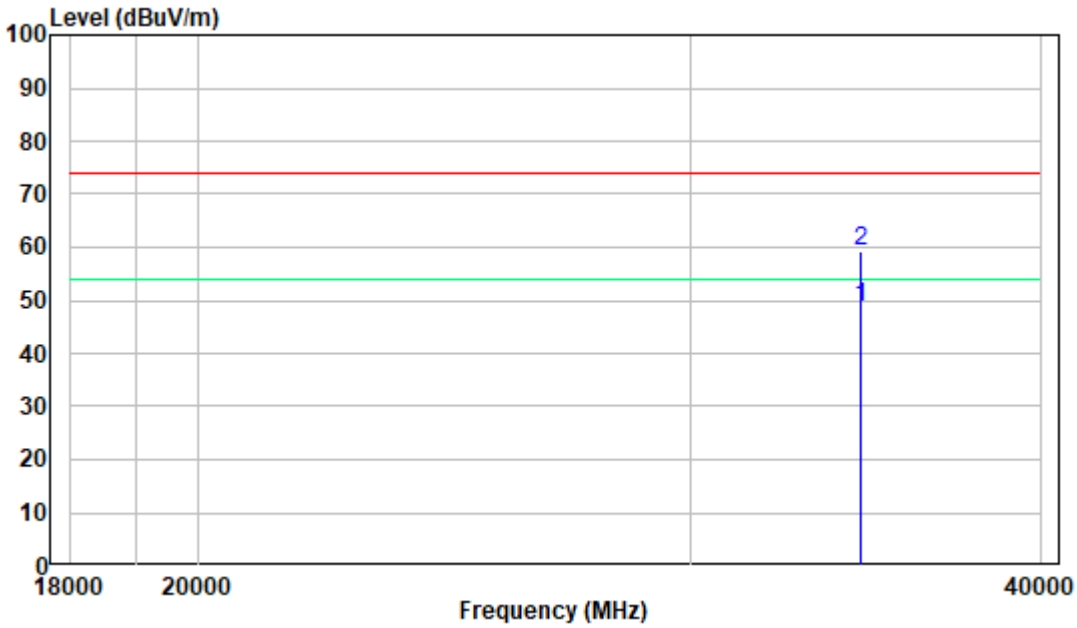



**Vertical**

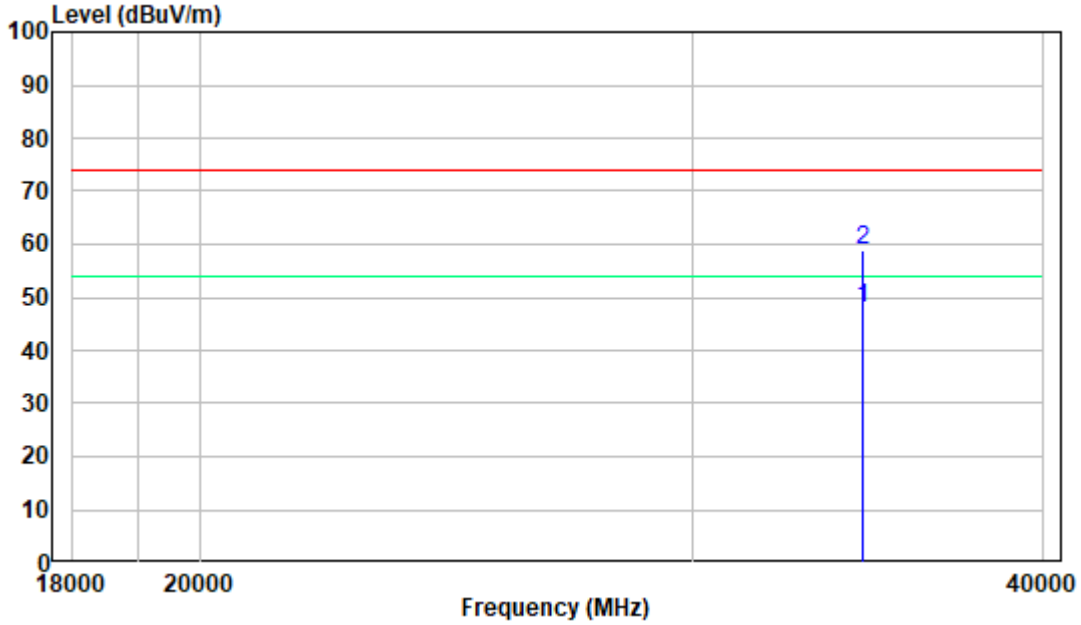


**18-40GHz:** (worst case is High channel)

**Horizontal**




**Vertical**



# FCC§15.215(c) - 20dB EMISSION BANDWIDTH

## Applicable Standard

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

## Test Procedure

## Test Procedure

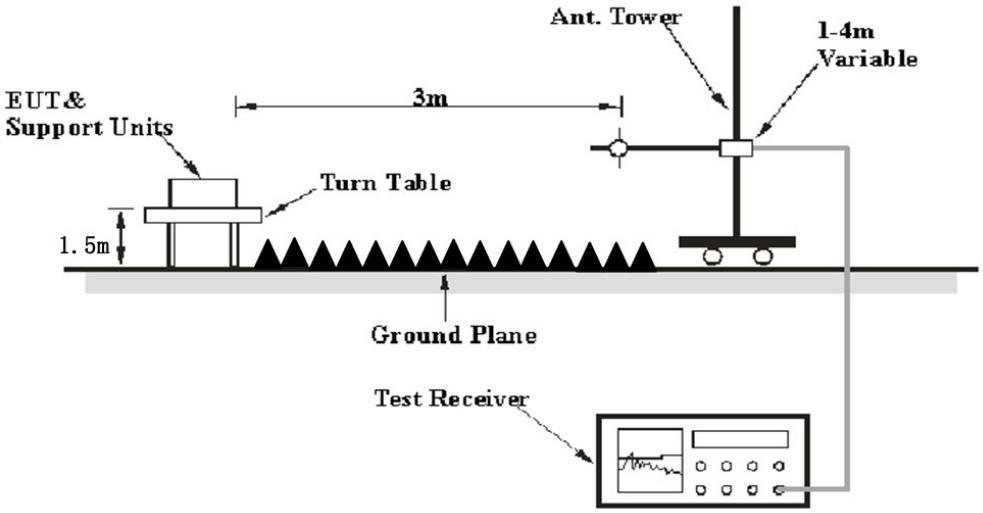
According to ANSI C63.10-2013, section 6.9.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.

2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.

3. Measure the frequency difference of two frequencies that indicated 20dBbandwidth.

4. Repeat above procedures until all frequencies measured were complete.



## Test Data

### Environmental Conditions

| | |
|---|---|
| **Temperature:** | 23℃ |
| **Relative Humidity:** | 48% |
| **ATM Pressure:** | 101.0 kPa |

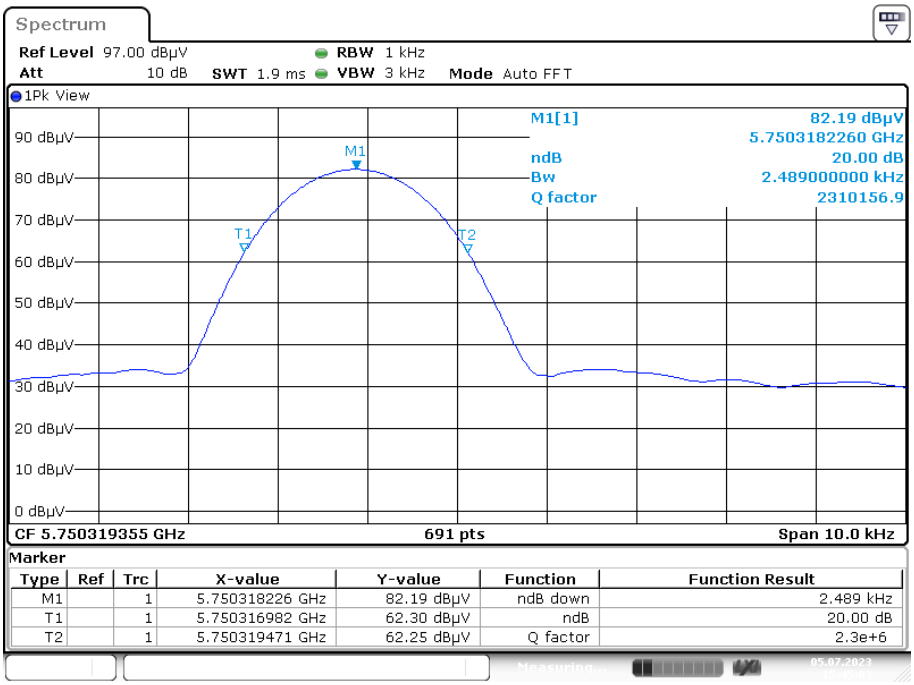
*The testing was performed by Matt Liang on 2023-07-05.*

*Test Mode: Transmitting*

**Test Result:** Please refer to the following table and plots.

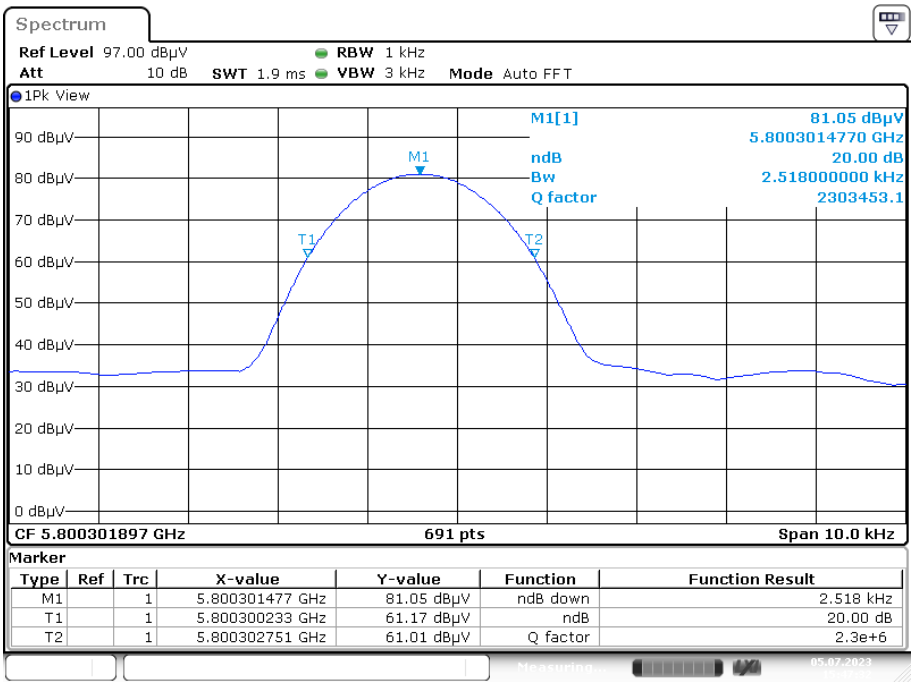
| Channel | Frequency (MHz) | 20dB Bandwidth (kHz) |
|---|---|---|
| Low | 5750 | 2.489 |
| Middle | 5800 | 2.518 |
| High | 5870 | 2.518 |

**Low Channel**




Date: 5.JUL.2023 15:45:03

## Middle Channel

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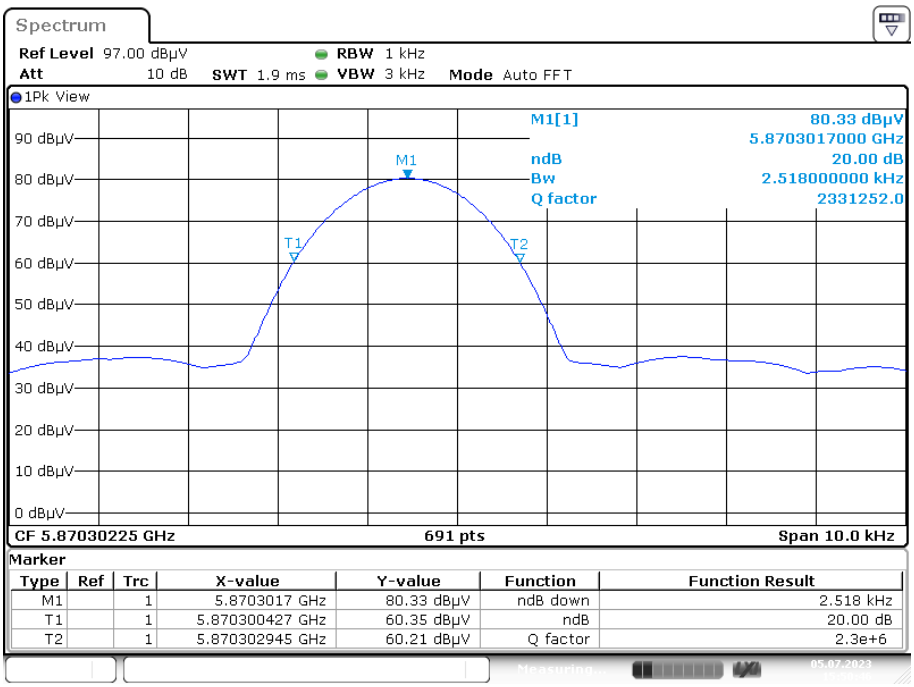
## High Channel

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******* END OF REPORT *******