# MEASUREMENT REPORT

## FCC Part 15.231

| | |
|---|---|
| **FCC ID:** | 2AEZB-FZJ202109-315 |
| **APPLICANT:** | Forcome(Shanghai) Co., Ltd. |
| **Application Type:** | Certification |
| **Product:** | Wireless remote control module |
| **Model No.:** | FZJ-10801046(wm)-3000 |
| **Brand Name:** | X-POWER |
| **FCC Classification:** | FCC Part 15 Security/remote control Transmitter (DSC) |
| **FCC Rule Part(s):** | Part15 Subpart C (Section 15.231) |
| **Test Procedure(s):** | ANSI C63.10-2013 |
| **Test Date:** | September 14 ~ 27, 2021 |

**Reviewed By:** Sunny Sun 2021.09.28 18:02:52 +08'00'

Sunny Sun

**Approved By:** Robin Wu 2021.09.28 18:05:04 +08'00'

Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

## Revision History

| Report No. | Version | Description | Issue Date | Note |
|---|---|---|---|---|
| 2109RSU019-U1 | Rev. 01 | Initial Report | 09-28-2021 | Valid |
| | | | | |

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Description Page

# 1. GENERAL INFORMATION

## 1.1. Applicant

Forcome(Shanghai) Co., Ltd.

Building 109, No. 255, South Sizhuan Road, Shanghai, 201612, China

## 1.2. Manufacturer

Forcome(Shanghai) Co., Ltd.

Building 109, No. 255, South Sizhuan Road, Shanghai, 201612, China

## 1.3. Testing Facility

| | | | | | |
|---|---|---|---|---|---|
| ☒ | **Test Site - MRT Suzhou Laboratory** | | | | |
| | **Laboratory Location (Suzhou - Wuzhong)** | | | | |
| | D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China | | | | |
| | **Laboratory Location (Suzhou - SIP)** | | | | |
| | 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China | | | | |
| | **Laboratory Accreditations** | | | | |
| | A2LA: 3628.01 | | CNAS: L10551 | | |
| | FCC: CN1166 | | ISED: CN0001 | | |
| | VCCI: | ☐R-20025 | ☐G-20034 | ☐C-20020 | ☐T-20020 |
| | | ☐R-20141 | ☐G-20134 | ☐C-20103 | ☐T-20104 |
| ☐ | **Test Site - MRT Shenzhen Laboratory** | | | | |
| | **Laboratory Location (Shenzhen)** | | | | |
| | 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China | | | | |
| | **Laboratory Accreditations** | | | | |
| | A2LA: 3628.02 | | CNAS: L10551 | | |
| | FCC: CN1284 | | ISED: CN0105 | | |
| ☐ | **Test Site - MRT Taiwan Laboratory** | | | | |
| | **Laboratory Location (Taiwan)** | | | | |
| | No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) | | | | |
| | **Laboratory Accreditations** | | | | |
| | TAF: L3261-190725 | | | | |
| | FCC: 291082, TW3261 | | ISED: TW3261 | | |

## 1.4. Product Information

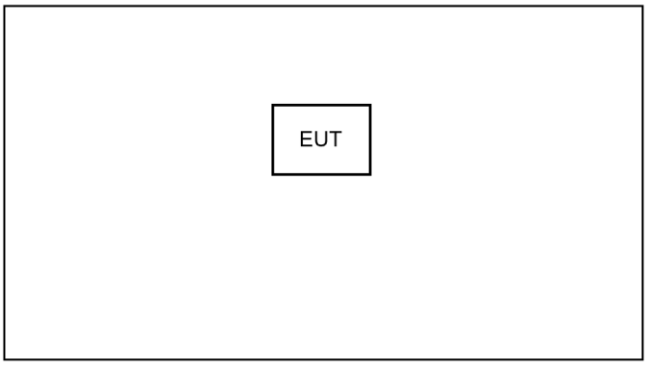
| | |
|---|---|
| Product Name | Wireless remote control module |
| Model No. | FZJ-10801046(wm)-3000 |
| Brand Name | X-POWER |
| Operating Frequency | 315MHz |
| Type of Modulation | ASK |
| Antenna Type | Integrated Antenna |
| Antenna Gain | -1dBi |
| Power Type | Dry Battery |
| Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer. | |

## 1.5. Test Mode

| | |
|---|---|
| Test Mode | Mode 1: Transmit at Channel 315MHz |

## 1.6. Test Configuration

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing.

| Mode 1 |
|---|
|  |



## 1.7. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

## 1.8. Test Environment Condition

| | |
|---|---|
| Ambient Temperature | 15°C ~ 35°C |
| Relative Humidity | 20%RH ~ 75%RH |

## 2. ANTENNA REQUIREMENTS

**Excerpt from §15.203 of the FCC Rules/Regulations:**

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 antenna of the unit is permanently attached.
- There are no provisions for connection to an external antenna.

**Conclusion:**

The unit complies with the requirement of §15.203.

## 3. TEST EQUIPMENT CALIBRATION DATE

Radiated Emission (WZ-AC1)

| Instrument | Manufacturer | Type No. | Asset No. | Cali. Interval | Cali. Due Date |
|---|---|---|---|---|---|
| EMI Test Receiver | R&S | ESR7 | MRTSUE06001 | 1 year | 2022/01/04 |
| Horn Antenna | Schwarzbeck | BBHA 9120D | MRTSUE06023 | 1 year | 2021/09/27 |
| Preamplifier | Agilent | 83017A | MRTSUE06076 | 1 year | 2021/11/14 |
| TRILOG Antenna | Schwarzbeck | VULB 9168 | MRTSUE06172 | 1 year | 2022/08/05 |
| Thermohygrometer | Yuhuaze | HTC-2 | MRTSUE06184 | 1 year | 2022/08/10 |
| Anechoic Chamber | TDK | WZ-AC1 | MRTSUE06212 | 1 year | 2022/04/29 |
| Horn Antenna | ETS | 3117 | MRTSUE06257 | 1 year | 2021/09/27 |
| Thermohygrometer | testo | 608-H1 | MRTSUE06403 | 1 year | 2022/06/28 |
| Horn Antenna | Schwarzbeck | BBHA 9170 | MRTSUE06597 | 1 year | 2021/12/14 |
| Preamplifier | EMCI | EMC051845SE | MRTSUE06601 | 1 year | 2021/09/21 |
| Signal Analyzer | Keysight | N9010B | MRTSUE06607 | 1 year | 2022/01/06 |
| Preamplifier | EMCI | EMC184045SE | MRTSUE06640 | 1 year | 2022/01/14 |

Radiated Emission (WZ-AC2)

| Instrument | Manufacturer | Type No. | Asset No. | Cali. Interval | Cali. Due Date |
|---|---|---|---|---|---|
| TRILOG Antenna | Schwarzbeck | VULB 9162 | MRTSUE06022 | 1 year | 2022/05/24 |
| Loop Antenna | Schwarzbeck | FMZB 1519 | MRTSUE06025 | 1 year | 2021/11/8 |
| EMI Test Receiver | Agilent | N9038A | MRTSUE06125 | 1 year | 2022/06/24 |
| Thermohygrometer | Mingle | ETH529 | MRTSUE06170 | 1 year | 2021/12/8 |
| Horn Antenna | Schwarzbeck | BBHA 9120D | MRTSUE06171 | 1 year | 2021/10/25 |
| Preamplifier | Schwarzbeck | BBV 9718 | MRTSUE06176 | 1 year | 2021/11/14 |
| Thermohygrometer | Yuhuaze | HTC-2 | MRTSUE06178 | 1 year | 2022/08/10 |
| Anechoic Chamber | RIKEN | WZ-AC2 | MRTSUE06213 | 1 year | 2022/04/29 |
| Horn Antenna | ETS | 3117 | MRTSUE06257 | 1 year | 2021/09/27 |
| Horn Antenna | Schwarzbeck | BBHA 9170 | MRTSUE06597 | 1 year | 2021/12/14 |
| Preamplifier | EMCI | EMC051845SE | MRTSUE06601 | 1 year | 2021/09/21 |
| Preamplifier | EMCI | EMC184045SE | MRTSUE06640 | 1 year | 2022/01/14 |

Occupied Bandwidth (WZ-SR4)

| Instrument | Manufacturer | Type No. | Asset No. | Cali. Interval | Cali. Due Date |
|---|---|---|---|---|---|
| Modulation Analyzer | HP | HP8901A | MRTSUE06098 | 1 year | 2021/09/26 |
| Thermohygrometer | testo | 608-H1 | MRTSUE06222 | 1 year | 2021/10/25 |
| DECT Tester | RTX | RTX2012 | MRTSUE06408 | 1 year | 2022/02/23 |
| Signal Analyzer | Keysight | N9010B | MRTSUE06558 | 1 year | 2022/06/24 |
| Frequency extender for EXG or MXG | Keysight | N5182BX07 | MRTSUE06984 | 1 year | 2022/03/07 |

| Software | Version | Function |
|---|---|---|
| EMI Software | V3 | EMI Test Software |

## 4. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

| Radiated Emission Measurement |
| --- |
| Measurement Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):<br>Horizontal: 30MHz~300MHz: 5.04dB<br>300MHz~1GHz: 4.95dB<br>1GHz~40GHz: 6.40dB<br>Vertical: 30MHz~300MHz: 5.24dB<br>300MHz~1GHz: 6.03dB<br>1GHz~40GHz: 6.40dB |
| Occupied Bandwidth |
| Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):<br>0.28% |

# 5. TEST RESULT

## 5.1. Summary

| FCC Part Section(s) | Test Description | Test Condition | Test Result | Reference |
|---|---|---|---|---|
| 15.207 | AC Conducted Emissions 150kHz - 30MHz | Line Conducted | N/A | Section 5.2 |
| 15.231(b) | Duty Cycle | Radiated | N/A | Section 5.3 |
| 15.205, 15.231(b) | Radiated Spurious Emissions | | Pass | Section 5.4 |
| 15.231(c) | 20dB Bandwidth | | Pass | Section 5.5 |
| 15.231(a)(1) | Release Time | | Pass | Section 5.6 |

Notes:

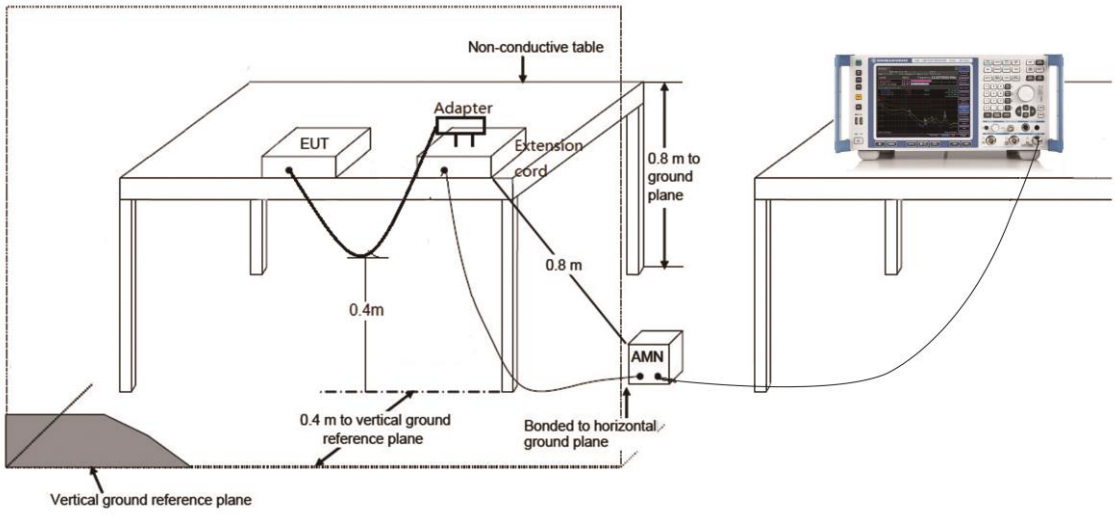
1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst-case emissions.
2) For radiated emission tests, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.
3) “N/A” means that the test item is not applicable, and the details refer to relevant section.

## 5.2. Conducted Emission

### 5.2.1.Test Limit

| FCC Part 15.207 Limits | | |
|---|---|---|
| Frequency (MHz) | QP (dBμV) | AV (dBμV) |
| 0.15 ~ 0.50 | 66 ~ 56 | 56 ~ 46 |
| 0.50 ~ 5.0 | 56 | 46 |
| 5.0 ~ 30 | 60 | 50 |
| Note 1: The lower limit shall apply at the transition frequencies.<br>Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz. | | |

### 5.2.2.Test Setup




### 5.2.3.Test Result

The EUT is powered by dry battery, so this item is not applicable.

## 5.3. Duty Cycle

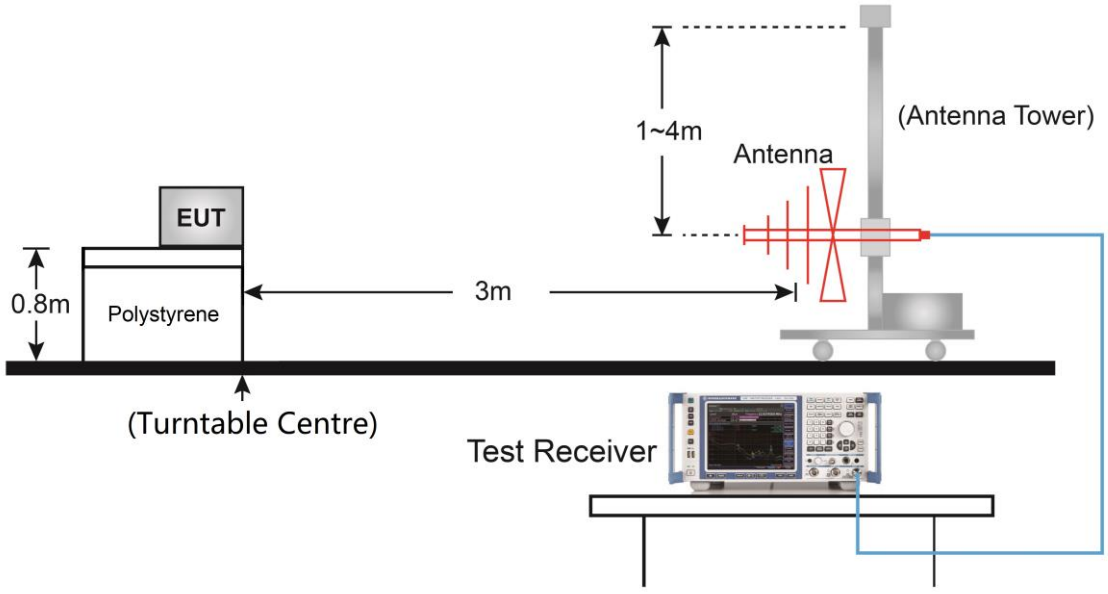
### 5.3.1. Test Limit

According to FCC Part 15.231(b) and 15.35(b), for pulse operation transmitter, the averaging pulsed emissions are calculated by peak value of measured emission plus duty cycle factor.

### 5.3.2. Test Procedure Used

With the EUT's antenna attached, the EUT's output signal was received by the test antenna, which was connected to the spectrum analyzer. Set the center frequency to 315MHz, then set the spectrum analyzer to Zero Span for the release time reading. During the testing, the switch was released then the EUT automatically deactivated.

### 5.3.3. Test Setup



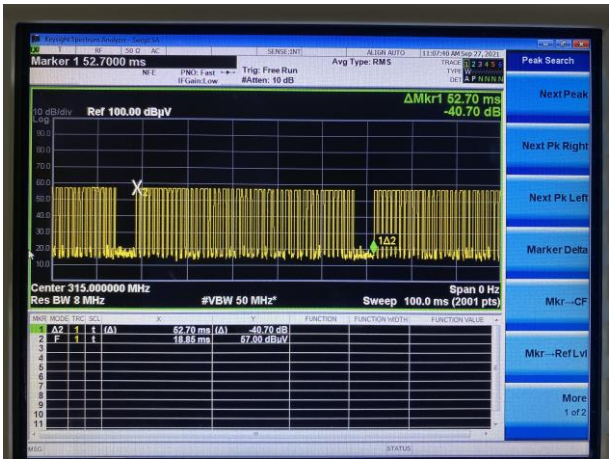
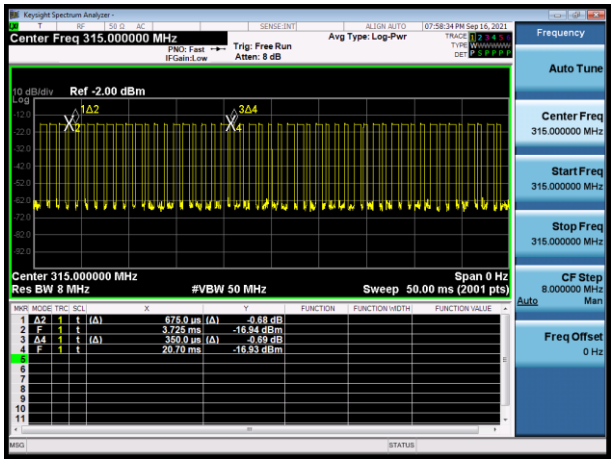
### 5.3.4.Test Result

| Test Site | WZ-AC1 | Test Engineer | Tommy Tang |
|---|---|---|---|
| Test Date | 2021/09/16 & 2021/09/27 | | |

| Time On (ms) | One Period (ms) | Duty Cycle (%) | Duty Cycle Factor (dB) |
|---|---|---|---|
| 25.925 | 52.70 | 49.19 | -6.162 |

Note: Duty Cycle Factor = 20*Log (Duty Cycle)

Time On = 0.675ms * 27 + 0.350ms * 22 = 25.925ms

| Duty Cycle | |
|---|---|
|  |  |

## 5.4. Radiated Emissions

### 5.4.1.Test Limit

According to §15.231(b), the field strength of emissions from intentional radiators operated under this section shall not exceed the following:

| FCC Part 15.231(b) Limits | | |
|---|---|---|
| Fundamental Frequency (MHz) | Field strength of fundamental (microvolts/meter) | Field strength of spurious emission (microvolts/meter) |
| 40.66 - 40.70 | 2250 | 225 |
| 70 - 130 | 1250 | 125 |
| 130 - 174 | 1250 to 3750 | 125 to 375 |
| 174 - 260 | 3750 | 375 |
| 260 - 470 | 3750 to 12500 | 375 to 1250 |
| Above 470 | 12500 | 1250 |

The limits on the field strength of the spurious emissions in the above table are based on the fundamental frequency of the intentional radiator. Spurious emissions shall be attenuated to the average (or, alternatively, CISPR quasi-peak) limits shown in this table or to the general limits shown in §15.209, whichever limit permits a higher field strength.

The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements start below or at the lowest crystal frequency.

Compliance with the provisions of §15.205 shall be demonstrated using the measurement instrumentation specified in that section.

For 315 MHz fundamental Limit:

Average Limit (dBμV/m) = 20*log {(41.67 x 315 - 7083) / 10^6} +120 = 75.623 (dBμV/m).

Peak Limit (dBμV/m) = Average Limit (dBμV/m) + 20 = 95.623 (dBμV/m).

**For 15.205 requirement:**

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

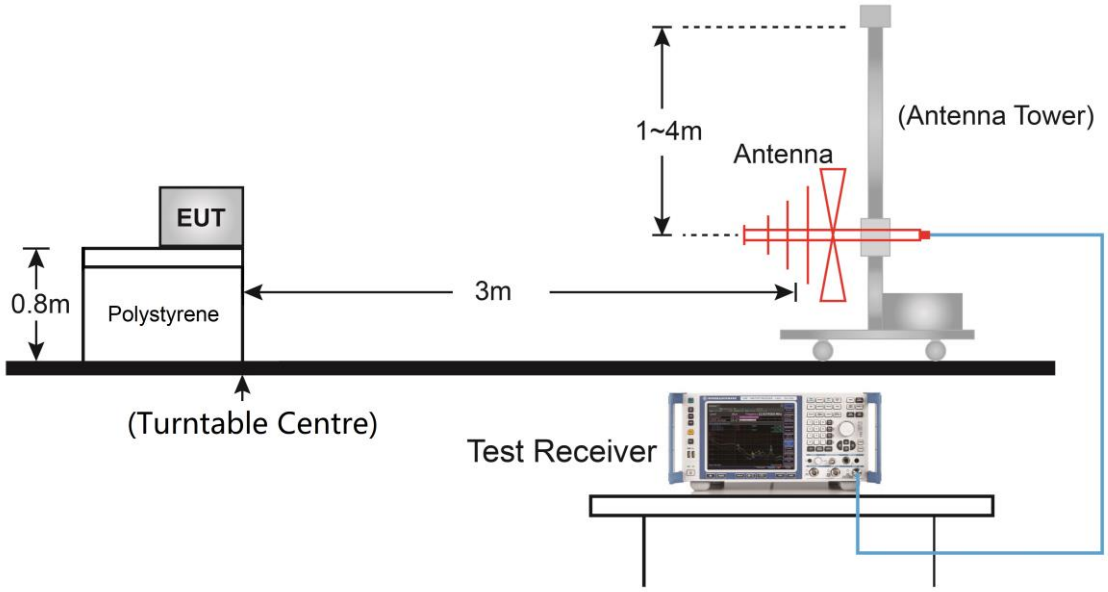
| Frequency (MHz) | Frequency (MHz) | Frequency (MHz) | Frequency (GHz) |
|---|---|---|---|
| 0.090 - 0.110 | 16.42 - 16.423 | 399.9 - 410 | 4.5 - 5.15 |
| [1]0.495 - 0.505 | 16.69475 - 16.69525 | 608 - 614 | 5.35 - 5.46 |
| 2.1735 - 2.1905 | 16.80425 - 16.80475 | 960 - 1240 | 7.25 - 7.75 |
| 4.125 - 4.128 | 25.5 - 25.67 | 1300 - 1427 | 8.025 - 8.5 |
| 4.17725 - 4.17775 | 37.5 - 38.25 | 1435 - 1626.5 | 9.0 - 9.2 |
| 4.20725 - 4.20775 | 73 - 74.6 | 1645.5 - 1646.5 | 9.3 - 9.5 |
| 6.215 - 6.218 | 74.8 - 75.2 | 1660 - 1710 | 10.6 - 12.7 |
| 6.26775 - 6.26825 | 108 - 121.94 | 1718.8 - 1722.2 | 13.25 - 13.4 |
| 6.31175 - 6.31225 | 123 - 138 | 2200 - 2300 | 14.47 - 14.5 |
| 8.291 - 8.294 | 149.9 - 150.05 | 2310 - 2390 | 15.35 - 16.2 |
| 8.362 - 8.366 | 156.52475 - 156.52525 | 2483.5 - 2500 | 17.7 - 21.4 |
| 8.37625 - 8.38675 | 156.7 - 156.9 | 2690 - 2900 | 22.01 - 23.12 |
| 8.41425 - 8.41475 | 162.0125 - 167.17 | 3260 - 3267 | 23.6 - 24.0 |
| 12.29 - 12.293 | 167.72 - 173.2 | 3332 - 3339 | 31.2 - 31.8 |
| 12.51975 - 12.52025 | 240 - 285 | 3345.8 - 3358 | 36.43 - 36.5 |
| 12.57675 - 12.57725 | 322 - 335.4 | 3600 - 4400 | ([2]) |
| 13.36 - 13.41 | -- | -- | -- |

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

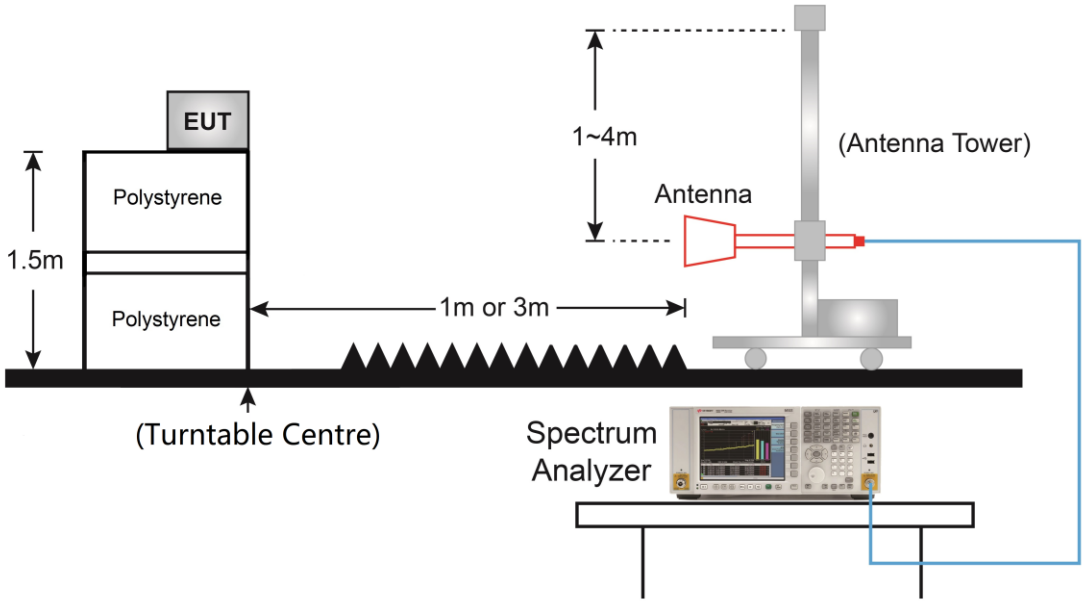
| **FCC Part 15.209 Limits** | | |
|---|---|---|
| Frequency (MHz) | Field Strength (μV/m) | Measured Distance (m) |
| 0.009 - 0.490 | 2400/F (kHz) | 300 |
| 0.490 - 1.705 | 24000/F (kHz) | 30 |
| 1.705 – 30.0 | 30 | 30 |
| 30 - 88 | 100 | 3 |
| 88 - 216 | 150 | 3 |
| 216 - 960 | 200 | 3 |
| Above 960 | 500 | 3 |

### 5.4.2.Test Setup

Below 1GHz Test Setup:

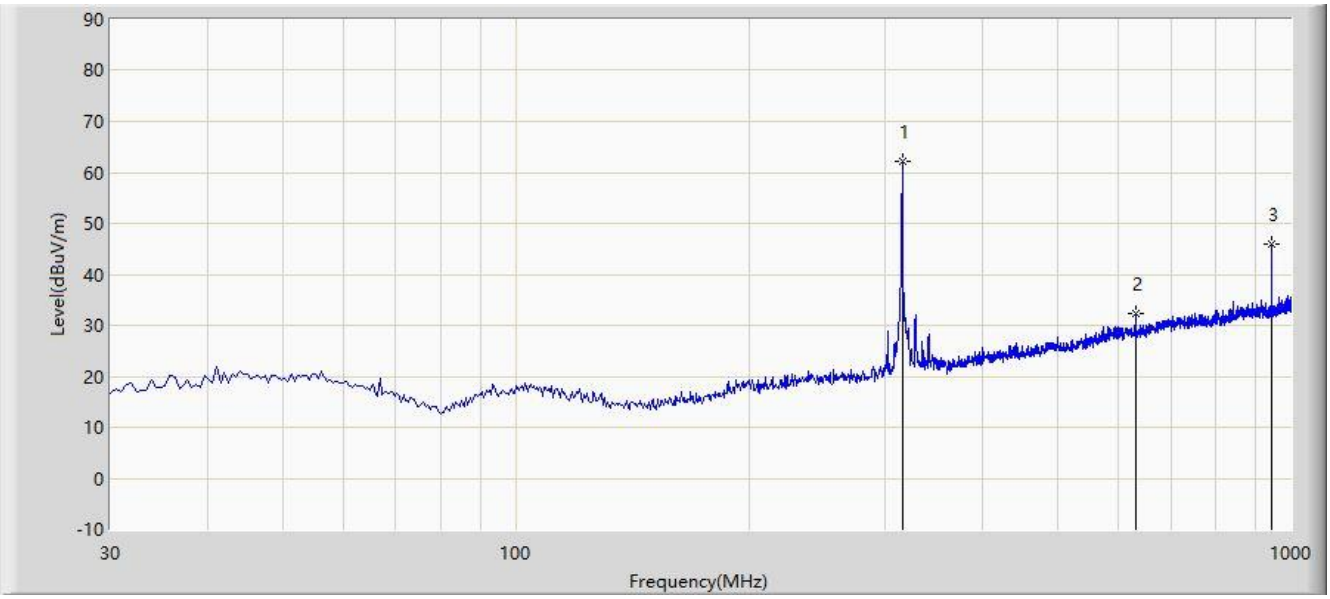



Above 1GHz Test Setup:



### 5.4.3.Test Result

| | |
|---|---|
| Site: WZ-AC2 | Time: 2021/09/14 |
| Limit: FCC_Part15.231(b)_RE(3m) | Engineer: Messiah Li |
| Probe: WZ-AC2_VULB9162_0.03-7GHz | Polarity: Horizontal |
| EUT: Wireless remote control module | Power: By Dry Battery |
| Test Mode 1 | |




| No. | Frequency (MHz) | Reading Level (dBμV) | Factor (dB/m) | Duty Cycle Factor (dB) | Measure Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | 315.180 | 40.861 | 21.174 | N/A | 62.035 | 95.623 | -33.588 | PK |
| | 315.180 | 40.861 | 21.174 | -6.162 | 55.873 | 75.623 | -19.750 | AV |
| 2 | 629.945 | 5.019 | 27.298 | N/A | 32.317 | 75.623 | -43.306 | PK |
| | 629.945 | 5.019 | 27.298 | -6.162 | 26.155 | 55.623 | -29.468 | AV |
| 3 | 945.195 | 14.692 | 31.393 | N/A | 46.085 | 75.623 | -29.538 | PK |
| | 945.195 | 14.692 | 31.393 | -6.162 | 39.923 | 55.623 | -15.700 | AV |

Note 1: Testing is carried out with frequency rang 9 kHz to the tenth harmonics. There is the ambient noise within frequency range 9 kHz ~ 30 MHz, the permissible value is not show in the report.

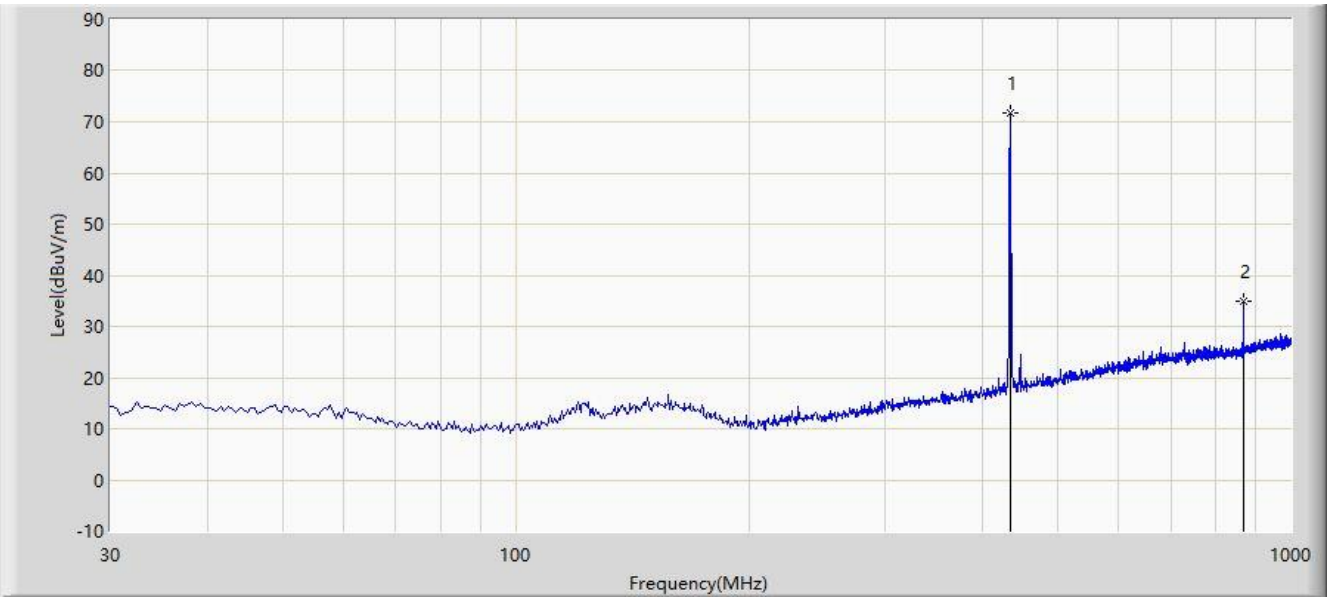
Note 2: The fundamental frequency is 315MHz, so the fundamental and spurious emissions radiated limit base on the operating frequency 315MHz.

Note 3: Peak Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

AV Measure Level = Peak Measure Level + Duty Cycle Factor.

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

| | |
|---|---|
| Site: WZ-AC2 | Time: 2021/09/14 |
| Limit: FCC_Part15.231(b)_RE(3m) | Engineer: Messiah Li |
| Probe: WZ-AC2_VULB9162_0.03-7GHz | Polarity: Vertical |
| EUT: Wireless remote control module | Power: By Dry Battery |
| Test Mode 1 | |




| No. | Frequency (MHz) | Reading Level (dBμV) | Factor (dB/m) | Duty Cycle Factor (dB) | Measure Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | 315.180 | 37.526 | 21.174 | N/A | 58.700 | 95.623 | -36.923 | PK |
| | 315.180 | 37.526 | 21.174 | -6.162 | 52.538 | 75.623 | -23.085 | AV |
| 2 | 629.945 | 2.324 | 27.298 | N/A | 29.622 | 75.623 | -46.001 | PK |
| | 629.945 | 2.324 | 27.298 | -6.162 | 23.460 | 55.623 | -32.163 | AV |
| 3 | 945.195 | 5.065 | 31.393 | N/A | 36.458 | 75.623 | -39.165 | PK |
| | 945.195 | 5.065 | 31.393 | -6.162 | 30.296 | 55.623 | -25.327 | AV |

Note 1: Testing is carried out with frequency rang 9 kHz to the tenth harmonics. There is the ambient noise within frequency range 9 kHz ~ 30 MHz, the permissible value is not show in the report.

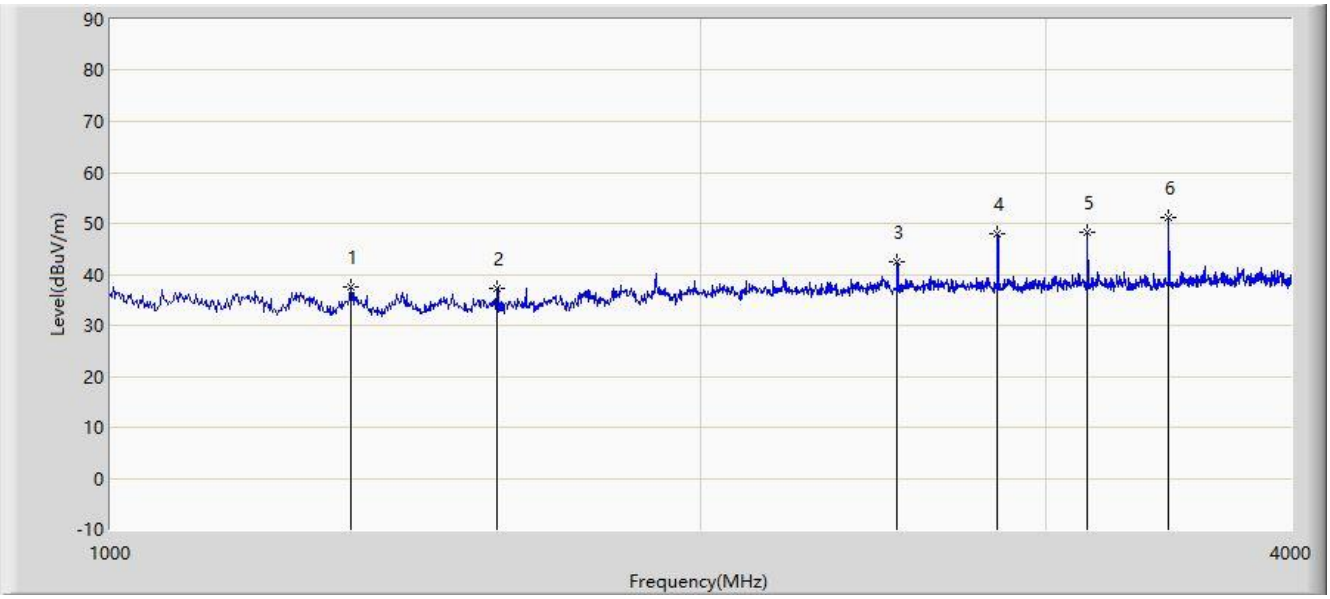
Note 2: The fundamental frequency is 315MHz, so the fundamental and spurious emissions radiated limit base on the operating frequency 315MHz.

Note 3: Peak Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

AV Measure Level = Peak Measure Level + Duty Cycle Factor.

| | |
|---|---|
| Site: WZ-AC2 | Time: 2021/09/13 |
| Limit: FCC_Part15.231(b)_RE(3m) | Engineer: Messiah Li |
| Probe: WZ_Horn 3117_1-18GHz | Polarity: Horizontal |
| EUT: Wireless remote control module | Power: By Dry Battery |
| Test Mode 1 | |



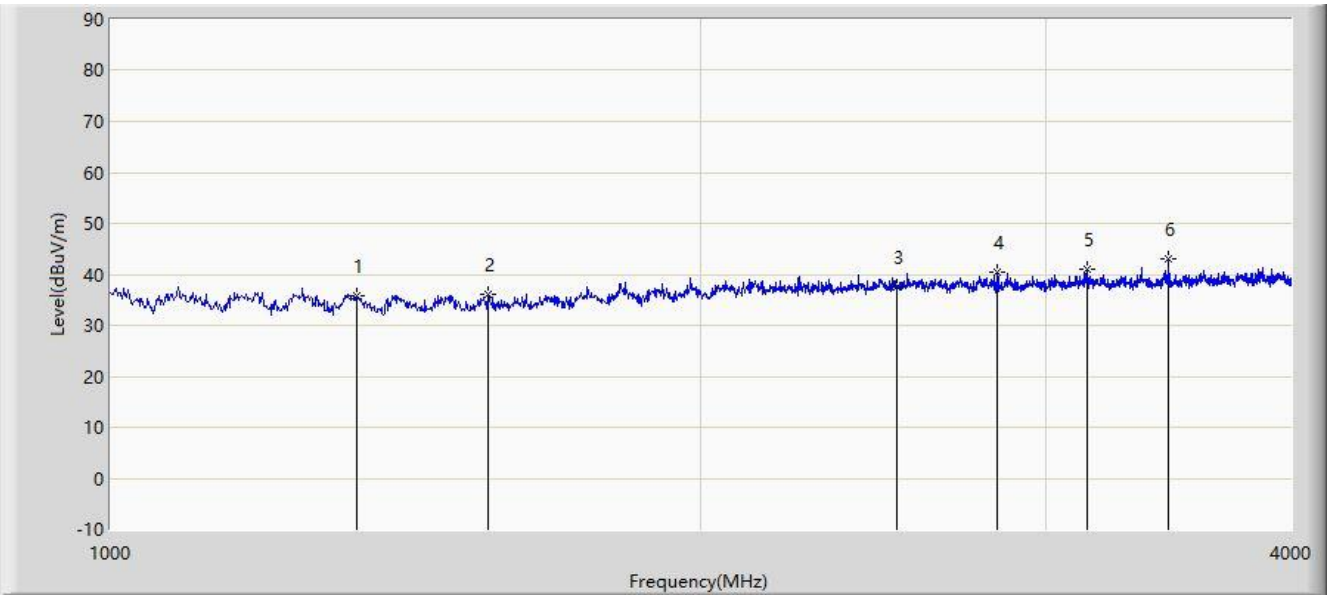

| No. | Frequency (MHz) | Reading Level (dBμV) | Factor (dB/m) | Measure Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Type |
|---|---|---|---|---|---|---|---|
| 1 | 1325.500 | 39.345 | -1.850 | 37.495 | 74.000 | -36.505 | PK |
| 2 | 1574.500 | 38.889 | -1.703 | 37.186 | 74.000 | -36.814 | PK |
| 3 | 2519.500 | 40.011 | 2.505 | 42.516 | 75.623 | -33.107 | PK |
| 4 | 2834.500 | 45.587 | 2.364 | 47.951 | 74.000 | -26.049 | PK |
| 5 | 3149.500 | 45.417 | 2.839 | 48.256 | 75.623 | -27.367 | PK |
| 6 | 3464.500 | 47.214 | 3.872 | 51.086 | 75.623 | -24.537 | PK |

Note 1: Peak Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Note 2: Average measurement was not performed when the peak level lower than average limit.

| | |
|---|---|
| Site: WZ-AC2 | Time: 2021/09/13 |
| Limit: FCC_Part15.231(b)_RE(3m) | Engineer: Messiah Li |
| Probe: WZ_Horn 3117_1-18GHz | Polarity: Vertical |
| EUT: Wireless remote control module | Power: By Dry Battery |
| Test Mode 1 | |




| No. | Frequency (MHz) | Reading Level (dBμV) | Factor (dB/m) | Measure Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Type |
|---|---|---|---|---|---|---|---|
| 1 | 1334.500 | 37.700 | -1.816 | 35.884 | 74.000 | -38.116 | PK |
| 2 | 1559.500 | 37.648 | -1.695 | 35.953 | 74.000 | -38.047 | PK |
| 3 | 2519.500 | 34.995 | 2.505 | 37.500 | 75.623 | -38.123 | PK |
| 4 | 2834.500 | 37.942 | 2.364 | 40.306 | 74.000 | -33.694 | PK |
| 5 | 3149.500 | 38.089 | 2.839 | 40.928 | 75.623 | -34.695 | PK |
| 6 | 3466.000 | 39.069 | 3.885 | 42.954 | 75.623 | -32.669 | PK |

Note 1: Peak Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

Note 2: Average measurement was not performed when the peak level lower than average limit.

## 5.5. 20dB Bandwidth

### 5.5.1. Test Limit

According to FCC Part 15.231(c), the bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70MHz and below 900MHz. Bandwidth is determined at the points 20 dB down from the modulated carrier.

### 5.5.2.Test Procedure Used

ANSI C63.10-2013 - Section 6.9.2 (20dB Bandwidth)

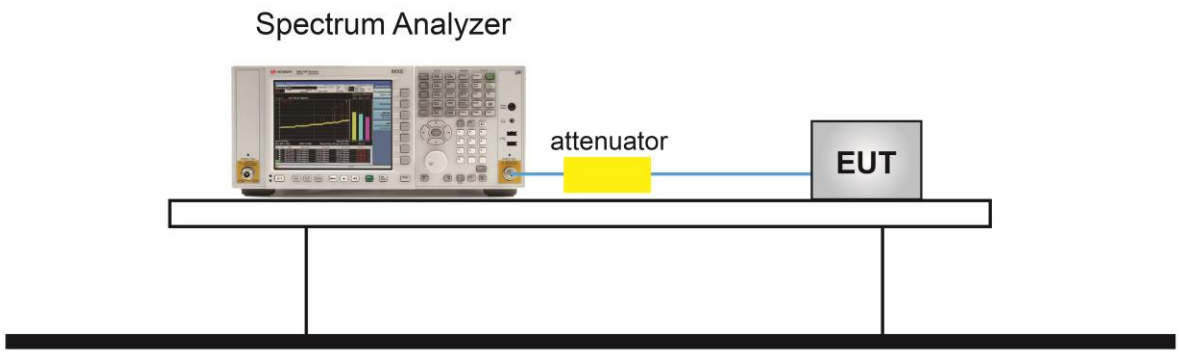
ANSI C63.10-2013 - Section 6.9.3 (99% Bandwidth)

### 5.5.3.Test Setting

**20dB Bandwidth Measurements**

1. Set center frequency to the nominal EUT channel center frequency.
2. RBW = 1% to 5% of the OBW.
3. VBW =3 * RBW.
4. Span = 2 times to 5 times the OBW.
5. Detector = Peak.
6. Trace mode = Max hold.
7. Allow the trace to stabilize.

### 5.5.4. Test Setup



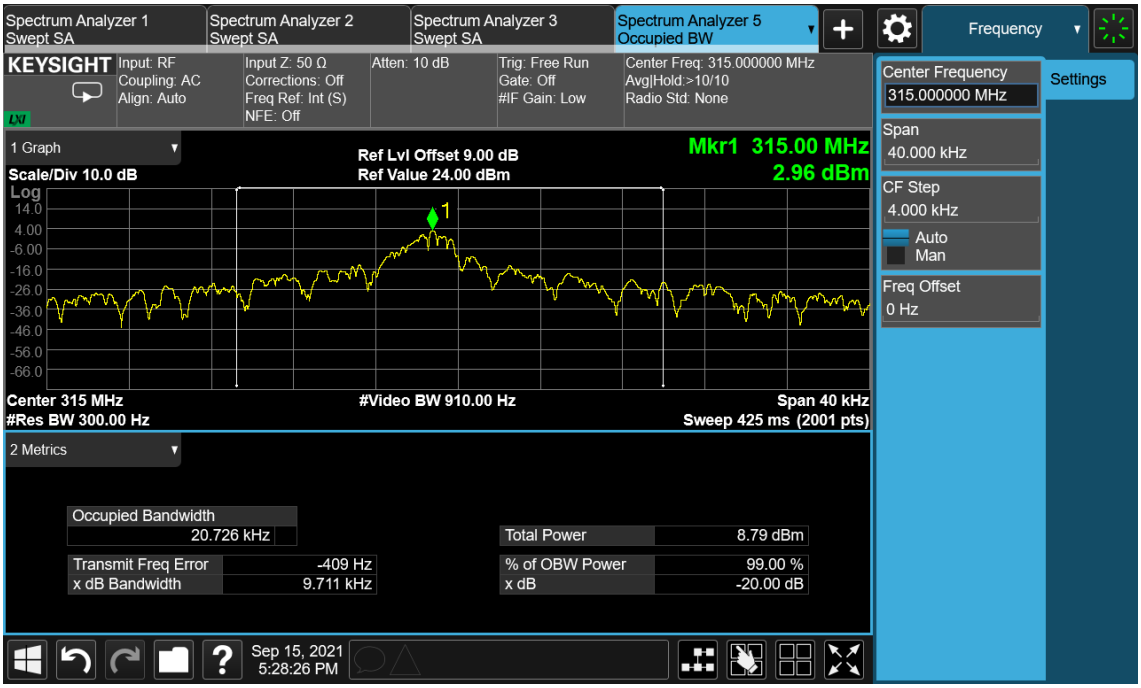
### 5.5.5. Test Result

| Test Site | WZ-SR4 | Test Engineer | Yuri Li |
|---|---|---|---|
| Test Date | 2021/09/15 | | |

| 20dB Bandwidth (kHz) | Limit (kHz) | Result |
|---|---|---|
| 9.711 | ≤ 787.5 | Pass |

Note: For 315MHz: Limit = Fundamental Frequency * 0.25% = 315 MHz * 0.25% = 787.5 kHz

20dB Bandwidth



## 5.6. Release Time

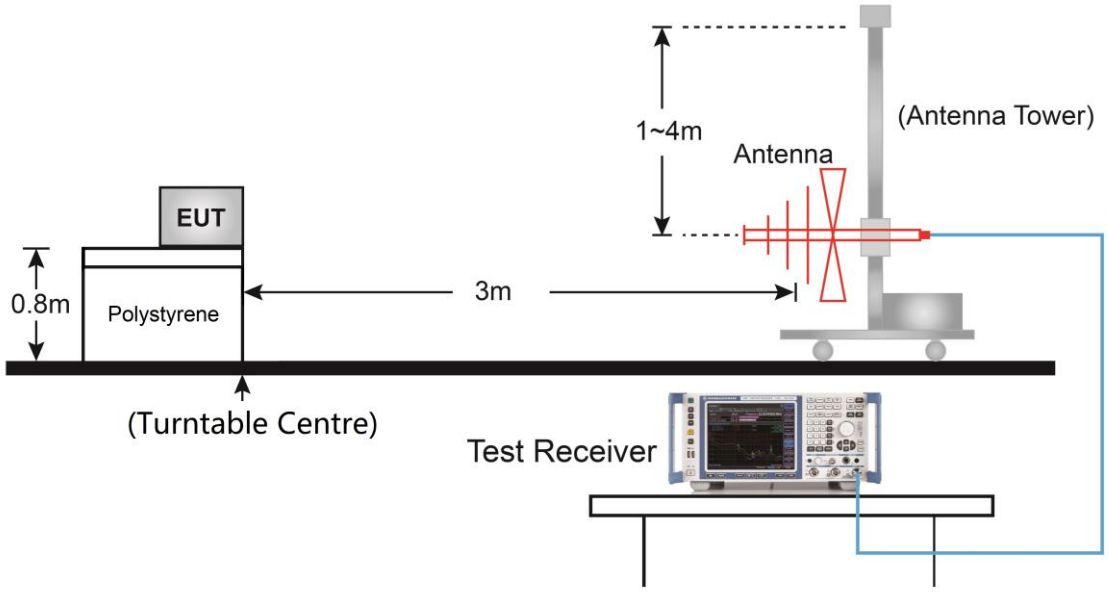
### 5.6.1. Test Limit

A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

### 5.6.2. Test Procedure Used

With the EUT's antenna attached, the EUT's output signal was received by the test antenna, which was connected to the spectrum analyzer. Set the center frequency to 315MHz, then set the spectrum analyzer to Zero Span for the release time reading. During the testing, the switch was released then the EUT automatically deactivated.

### 5.6.3. Test Setup

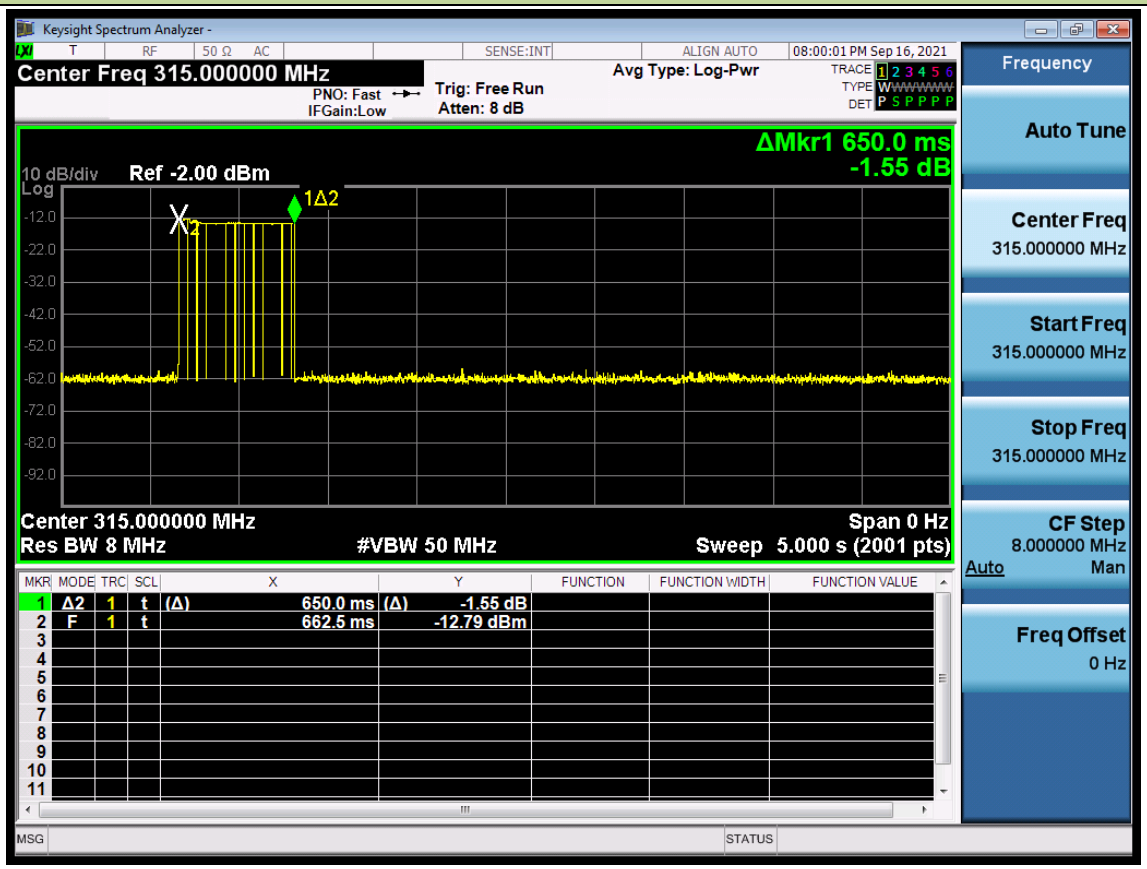


### 5.6.4. Test Result

| Test Site | WZ-AC1 | Test Engineer | Tommy Tang |
|---|---|---|---|
| Test Date | 2021/09/16 | | |

| Item | Measured Value | Limit | Result |
|---|---|---|---|
| Release Time | 650 ms | ≤ 5 s | Pass |

Release Time



## 6. CONCLUSION

The data collected relate only the item(s) tested and show that the device is compliance with FCC Rules.

The End

## Appendix A - Test Setup Photograph

Refer to “2109RSU019-UT” file.

## Appendix B - EUT Photograph

Refer to “2109RSU019-UE” file.