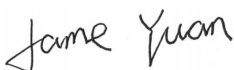




## RF MEASUREMENT REPORT

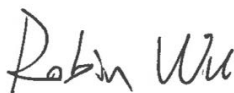
**FCC ID:** DD4ADTQG57  
**Applicant:** Shure Incorporated  
**Product:** Wireless Quad Transmitter  
**Model No.:** ADTQ G57, ADTQ DC G57  
**Trade Mark:**   
**FCC Classification:** Licensed LPAS Device (TLD)  
**FCC Rule Part(s):** Part 74 Subpart H (Section 74.861)  
**Application Type:** Class II Permissive Change  
**Result:** Complies  
**Received Date:** 2025-05-16  
**Test Date:** 2025-05-17 ~ 2025-06-16

**Reviewed By:**



Jame Yuan

**Approved By:**



Robin Wu



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.



**Revision History**

| Report No.       | Version | Description    | Issue Date | Note  |
|------------------|---------|----------------|------------|-------|
| R25S1018044-U201 | V01     | Initial Report | 2025-06-23 | Valid |
|                  |         |                |            |       |

Note: This product has obtained FCC approval (FCC ID: DD4ADTQG57), original RF report no. is 2406RSU021-U3. The product has been modified via software to include additional test modes.

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## 1. General Information

### 1.1. Applicant

Shure Incorporated

5800 West Touhy Avenue, Niles, IL 60714-4608, USA

## 1.2. Manufacturer

Shure Incorporated

5800 West Touhy Avenue, Niles, IL 60714-4608, USA

### 1.3. Testing Facility

|                                     |                                                                                                 |                                  |                                  |                                  |
|-------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <input checked="" type="checkbox"/> | <b>Test Site – MRT Suzhou Laboratory</b>                                                        |                                  |                                  |                                  |
|                                     | <b>Laboratory Location (Suzhou - Wuzhong)</b>                                                   |                                  |                                  |                                  |
|                                     | D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China              |                                  |                                  |                                  |
|                                     | <b>Laboratory Location (Suzhou - SIP)</b>                                                       |                                  |                                  |                                  |
|                                     | 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China    |                                  |                                  |                                  |
|                                     | <b>Laboratory Location (Suzhou - Wujiang)</b>                                                   |                                  |                                  |                                  |
|                                     | Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China            |                                  |                                  |                                  |
| <input type="checkbox"/>            | <b>Laboratory Accreditations</b>                                                                |                                  |                                  |                                  |
|                                     | A2LA: 3628.01                                                                                   |                                  | CNAS: L10551                     |                                  |
|                                     | FCC: CN1166                                                                                     |                                  | ISED: CN0001                     |                                  |
|                                     | <input type="checkbox"/> R-20025                                                                | <input type="checkbox"/> G-20034 | <input type="checkbox"/> C-20020 | <input type="checkbox"/> T-20020 |
|                                     | VCCI:                                                                                           | <input type="checkbox"/> R-20141 | <input type="checkbox"/> G-20134 | <input type="checkbox"/> C-20103 |
|                                     |                                                                                                 |                                  | <input type="checkbox"/> T-20104 |                                  |
|                                     |                                                                                                 |                                  |                                  |                                  |
| <input type="checkbox"/>            | <b>Test Site – MRT Shenzhen Laboratory</b>                                                      |                                  |                                  |                                  |
|                                     | <b>Laboratory Location (Shenzhen)</b>                                                           |                                  |                                  |                                  |
|                                     | 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China |                                  |                                  |                                  |
|                                     | <b>Laboratory Accreditations</b>                                                                |                                  |                                  |                                  |
|                                     | A2LA: 3628.02                                                                                   |                                  | CNAS: L10551                     |                                  |
| FCC: CN1284                         |                                                                                                 | ISED: CN0105                     |                                  |                                  |
| <input type="checkbox"/>            | <b>Test Site – MRT Taiwan Laboratory</b>                                                        |                                  |                                  |                                  |
|                                     | <b>Laboratory Location (Taiwan)</b>                                                             |                                  |                                  |                                  |
|                                     | No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)                        |                                  |                                  |                                  |
|                                     | <b>Laboratory Accreditations</b>                                                                |                                  |                                  |                                  |
|                                     | TAF: 3261                                                                                       |                                  | FCC: 291082, TW3261              |                                  |
|                                     |                                                                                                 | ISED: TW3261                     |                                  |                                  |

#### 1.4. Product Information

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Product Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Wireless Quad Transmitter                                                                                               |
| Model No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ADTQ G57, ADTQ DC G57                                                                                                   |
| Serial No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2DE31788237                                                                                                             |
| Radio Specification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | UHF Microphone Transmitter                                                                                              |
| Antenna Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Refer to section 1.7                                                                                                    |
| Operating Temperature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | -18 ~ 50 °C                                                                                                             |
| Network Interface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 10/100/1000 Mbps, Dante Digital Audio                                                                                   |
| Power Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | AC Power Input (100~240V AC) & DC Power Input (12~48V)<br>AC Power Output (100~240V AC)                                 |
| Accessory                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                         |
| 8 Port Antenna Combiner                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Model: AD8C, AD8C DC<br>AC Ver.: 100-240V~, 50/60Hz, 0.76A max (5.76A max outlet loaded),<br>DC Ver.: 12-48V DC, 4A max |
| <p>Note 1: The information of the EUT (Equipment Under Test) was provided by the manufacturer. The accuracy, completeness, and validity of the information are solely the responsibility of the manufacturer.</p> <p>Note 2: ADTQ G57 and ADTQ DC G57 are completely same except power supply difference, ADTQ G57 supports AC power supply, while ADTQ DC G57 supports both AC and DC power supply.</p> <p>Note 3: AD8C and AD8C DC are completely same except power supply difference, AD8C supports AC power supply, while AD8C DC supports both AC and DC power supply.</p> |                                                                                                                         |

#### 1.5. Radio Specification under Test

|                             |                                    |
|-----------------------------|------------------------------------|
| Transmission Mode           | 4-channel Wideband (WMAS)          |
| Frequency Range             | 470 ~ 608 MHz                      |
| Declared Power Level        | Low & Normal & High                |
| Type of Modulation          | 4-channel Wideband: OFDM           |
| Declared Occupied Bandwidth | 4-channel Wideband (WMAS): 850 kHz |
| Channel Spacing             | 25 kHz                             |
| RF Connector Type           | BNC                                |

**1.6. Working Frequencies**

| Bottom Channel (MHz) | Middle Channel (MHz) | Top Channel (MHz) |
|----------------------|----------------------|-------------------|
| 4-channel wideband   |                      |                   |
| 470.400              | 539.000              | 607.600           |

**1.7. Antenna Details**

| Antenna Type | Frequency Band (MHz) | Manufacturer | Peak Gain (dBi) |
|--------------|----------------------|--------------|-----------------|
| Dipole       | 470 ~ 608            | Shure        | 1.10            |

## 2. Test Configuration

### 2.1. Test Mode

|                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mode 1: Transmit at G57 Band by 4-Channel wideband, spatial diversity, 2 frequencies (Power Level = 40mW)                                                                  |
| Mode 2: Transmit at G57 Band by 4-Channel wideband, spatial diversity, 2 frequencies, combined                                                                             |
| Mode 3: Transmit at G57 Band by 4-Channel wideband, 2 frequencies                                                                                                          |
| Mode 4: Transmit at G57 Band by 4-Channel wideband, 2 frequencies, combined                                                                                                |
| Note: These newly added test modes 2 & 3 & 4 are the same type as modes 15 & 10 & 16 in the original report, respectively. Therefore, no additional testing was conducted. |

### 2.2. Test Software

Power level and transmit frequency can be selected using the front panel controls.

### 2.3. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 74.861
- KDB 206256 D01v03
- ANSI C63.26-2015
- ETSI EN 300 422 - 1 V 2.2.1

### 2.4. Test Environment Condition

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

### 3. Measuring Instrument

| Instrument        | Manufacturer | Model No.  | Asset No.   | Cali. Interval | Cali. Due Date | Test Site |
|-------------------|--------------|------------|-------------|----------------|----------------|-----------|
| Thermohygrometer  | testo        | 608-H1     | MRTSUE06402 | 1 year         | 2026-04-24     | WZ-SR5    |
| Shielding Room    | HUAMING      | WZ-SR5     | MRTSUE06442 | N/A            | N/A            | WZ-SR5    |
| Signal Analyzer   | Keysight     | N9010B     | MRTSUE06457 | 1 year         | 2026-04-26     | WZ-SR5    |
| Signal Analyzer   | Keysight     | N9010B     | MRTSUE06558 | 1 year         | 2026-05-17     | WZ-SR5    |
| USB Power Sensor  | Keysight     | U2021XA    | MRTSUE06446 | 1 year         | 2026-04-26     | WZ-SR5    |
| Attenuator        | MVE          | MVE2213    | MRTSUE11075 | 1 year         | 2025-06-03     | WZ-SR5    |
|                   |              |            |             | 1 year         | 2026-06-02     | WZ-SR5    |
| Attenuator        | MVE          | MVE2213    | MRTSUE11076 | 1 year         | 2025-06-03     | WZ-SR5    |
|                   |              |            |             | 1 year         | 2026-06-02     | WZ-SR5    |
| Attenuator        | MVE          | MVE2213    | MRTSUE11077 | 1 year         | 2025-06-03     | WZ-SR5    |
|                   |              |            |             | 1 year         | 2026-06-02     | WZ-SR5    |
| Attenuator        | MVE          | MVE2213    | MRTSUE11078 | 1 year         | 2025-06-03     | WZ-SR5    |
|                   |              |            |             | 1 year         | 2026-06-02     | WZ-SR5    |
| Cable             | UCwave       | UCE500     | 24060015    | Note           | Note           | WZ-SR5    |
| TRILOG Antenna    | Schwarzbeck  | VULB 9162  | MRTSUE06022 | 1 year         | 2026-03-22     | WZ-AC2    |
| EMI Test Receiver | Agilent      | N9038A     | MRTSUE06125 | 1 year         | 2026-04-26     | WZ-AC2    |
| Horn Antenna      | Schwarzbeck  | BBHA 9120D | MRTSUE06171 | 1 year         | 2025-09-23     | WZ-AC2    |
| Preamplifier      | Schwarzbeck  | BBV 9718   | MRTSUE06176 | 1 year         | 2026-03-18     | WZ-AC2    |
| Anechoic Chamber  | RIKEN        | WZ-AC2     | MRTSUE06213 | 1 year         | 2026-04-17     | WZ-AC2    |
| Thermohygrometer  | testo        | 608-H1     | MRTSUE11263 | 1 year         | 2025-10-16     | WZ-AC2    |

Note: The loss of the RF cable will be measured before testing.

| Software             | Version | Function               |
|----------------------|---------|------------------------|
| e3                   | 230711  | RE & CE                |
| Controller_MF 7802   | 1.02    | RE Antenna & Turntable |
| BenchVue Power Meter | 2018.1  | Power                  |

## 4. Decision Rules and Measurement Uncertainty

### 4.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2.

(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

### 4.2. 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                                          |                      |
|------------------------------------------------------------------------|----------------------|
| The maximum measurement uncertainty is evaluated as:                   |                      |
| Coaxial:                                                               | 9kHz~30MHz: 2.35dB   |
| Coplanar:                                                              | 9kHz~30MHz: 2.37dB   |
| Horizontal:                                                            | 30MHz~200MHz: 3.47dB |
|                                                                        | 200MHz~1GHz: 4.17dB  |
|                                                                        | 1GHz~40GHz: 4.97dB   |
| Vertical:                                                              | 30MHz~200MHz: 4.07dB |
|                                                                        | 200MHz~1GHz: 5.28dB  |
|                                                                        | 1GHz~40GHz: 4.84dB   |
| Spurious Emissions, Conducted                                          |                      |
| Measuring Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ): |                      |
| 2.5dB                                                                  |                      |
| Output Power                                                           |                      |
| Measuring Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ): |                      |
| 1.5dB                                                                  |                      |
| Occupied Bandwidth                                                     |                      |
| Measuring Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ): |                      |
| 3.2%                                                                   |                      |

## 5. Test Result

### 5.1. Summary

| FCC Part Section(s)     | Test Description           | Test Condition | Test Result |
|-------------------------|----------------------------|----------------|-------------|
| 74.861(e)(1)(ii)        | RF Output Power            | Conducted      | Pass        |
| 74.861(e)(5)            | 99% Occupied Bandwidth     |                | Pass        |
| 74.861(e)(6)            | Out of Band Emission       |                | Pass        |
| 74.861(e)(7) (i&ii&iii) | Emission Mask              |                | Pass        |
| 74.861(e)(7) (iv)       | Radiated Spurious Emission | Radiated       | Pass        |

Note: The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.

## 5.2. RF Output Power Measurement

### 5.2.1. Test Limit

470-608 MHz band: 250 mW conducted power

### 5.2.2. Test Procedure

ANSI C63.26-2015 - Section 5.2.4.2

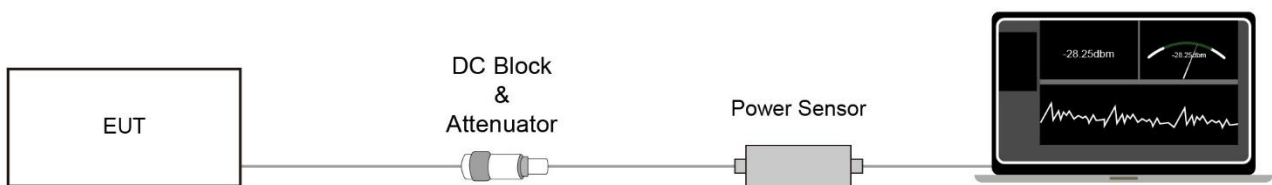
### 5.2.3. Test Setting

The output of the EUT was connected to an RF average power meter through fixed attenuation.

The EUT was set to transmit on the low, middle, and high frequencies in each power level.

Measure the average power of the transmitter.

### 5.2.4. Test Setup



### 5.2.5. Test Result

Refer to Appendix A.1.

### 5.3. 99% Occupied Bandwidth Measurement

#### 5.3.1. Test Limit

The operating bandwidth shall not exceed 200 kilohertz, except that a wireless multichannel audio system must have an operating bandwidth not exceeding 6 megahertz in the TV bands or 4 megahertz in the 653–657 MHz band.

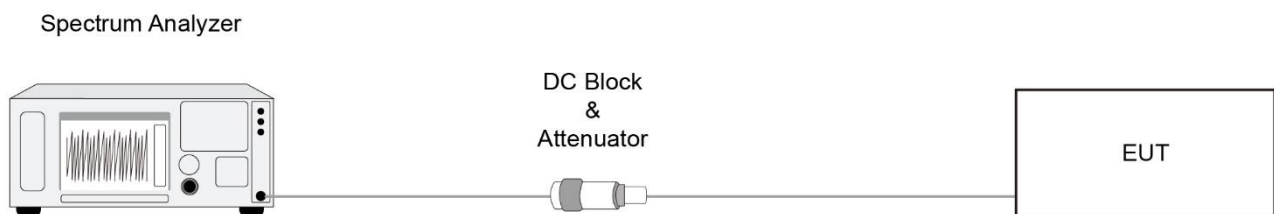
#### 5.3.2. Test Procedure

ANSI C63.26-2015 - Section 5.4.4

#### 5.3.3. Test Setting

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 - 5% of the expected OBW
3. VBW  $\geq 3 \times$  RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. Reported the measured 99% occupied bandwidth

#### 5.3.4. Test Setup



#### 5.3.5. Test Result

Refer to Appendix A.2.

## 5.4. Out-of-Band Emission Measurement

### 5.4.1. Test Limit

The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

- (i) On any frequency removed from the operating frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: at least 25 dB;
- (ii) On any frequency removed from the operating frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 dB;
- (iii) On any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth: at least  $43 + 10 \log_{10}$  (mean output power in watts) dB.

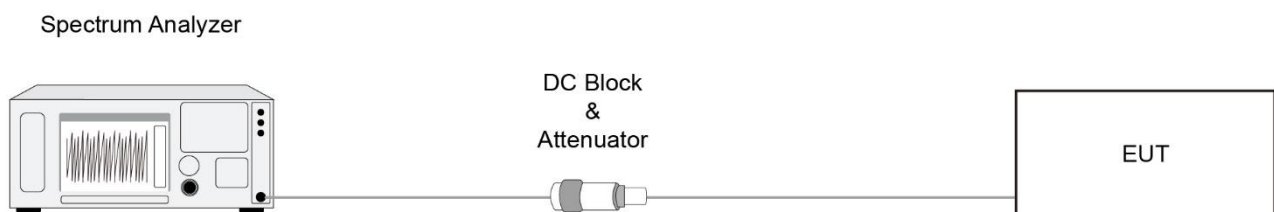
### 5.4.2. Test Procedure

ANSI C63.26 - Section 5.7

### 5.4.3. Test Setting

- a) The EUT was connected to a spectrum analyzer.
  - b) The EUT was modulated with typical digital modulation.
  - c) Set span to  $2 \times$  to  $3 \times$  the OBW
    - Set  $RBW \geq OBW$ ;
    - Set  $VBW \geq 3 \times RBW$ ;
    - sweep time set to Auto,
    - Detector = power averaging (rms)
    - Use the peak marker function to determine the maximum amplitude level
  - d) The RMS output power was recorded and used to set the reference level on the spectrum analyzer.
  - e) The spectrum analyzer span was then set to  $5 \times$  the OBW;
- RBW set to 1% of the OBW, VBW set to  $3 \times RBW$ , sweep time to Auto.

### 5.4.4. Test Setup



#### **5.4.5. Test Result**

Refer to Appendix A.3.

## 5.5. Emission Mask Measurement

### 5.5.1. Test Limit

(i) Analog systems. Emissions within the band from  $2.5 \times B$  below to  $2.5 \times B$  above the carrier frequency, where  $B$  is the channel bandwidth, shall comply with the emission mask in Figure 1 of section 4.2.4.2.2 of ETSI EN 300 422-1 V2.2.1 (2021-11) (incorporated by reference, see § 74.35).

(ii) Digital systems. Emissions within the band from  $2.5 \times B$  below to  $2.5 \times B$  above the carrier frequency, where  $B$  is the channel bandwidth, shall comply with the emission mask in Figure 2 of section 4.2.4.2.2 of ETSI EN 300 422-1 V2.2.1 (2021-11) (incorporated by reference, see § 74.35).

(iii) Wireless Multichannel Audio Systems. Emissions within the band from  $2.5 \times B$  below to  $2.5 \times B$  above the carrier frequency, where  $B$  is the channel bandwidth, shall comply with the emission mask in Figure 3 of section 4.2.4.2.2 of ETSI EN 300 422-1 V2.2.1 (2021-11), (incorporated by reference, see § 74.35).

The mean Power Density, measured with 1 kHz measurement bandwidth and RMS detector, of the transmitter unwanted emissions shall not exceed the limits of the masks provided in figure 1 for equipment employing analogue modulation and figure 2 for equipment employing digital modulation, but excluding WMAS.  $B$  is the Declared Channel Bandwidth.

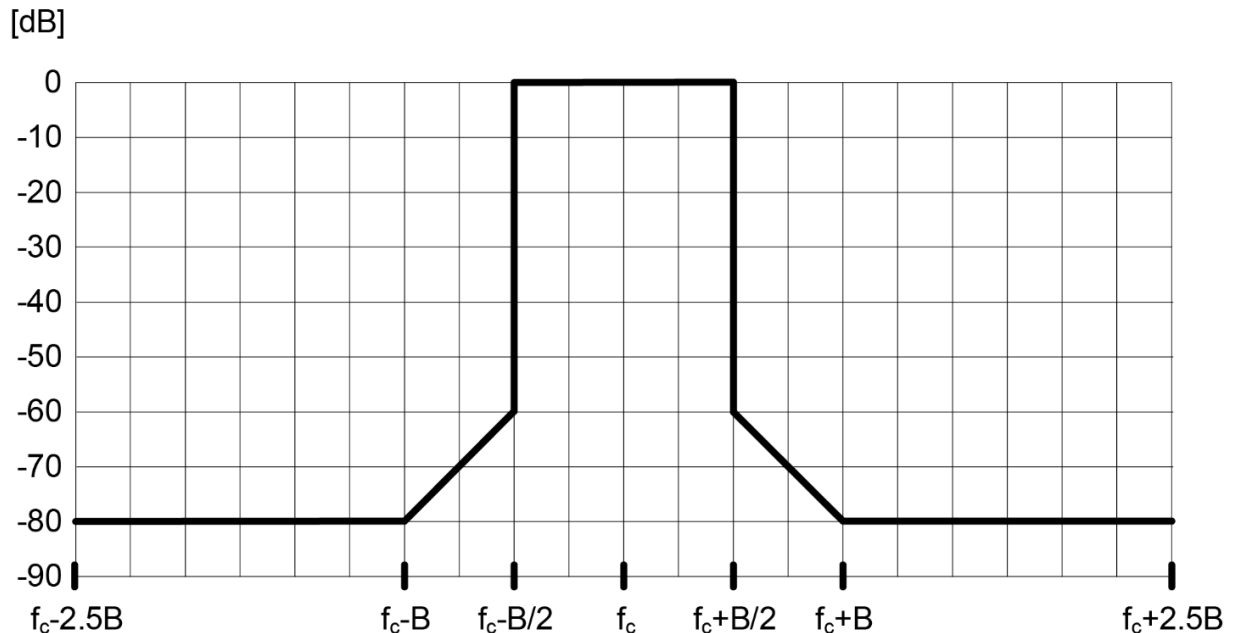


**Figure 1: Transmit spectral power mask for equipment employing analogue modulation, RBW = 1 kHz**



**Figure 2: Transmit spectral power mask for equipment employing digital modulation, except WMAS, RBW = 1 kHz**

The limits in figure 3 are applicable for WMAS, where B is the Declared Channel Bandwidth.

The mean Power Density, measured with 100 kHz measurement bandwidth and PEAK detector, of the transmitter unwanted emissions shall not exceed the limits of the mask provided in figure 3.



**Figure 3: Transmit spectral power mask for WMAS, RBW = 100 kHz**

The limits in figure 3 are provided with RBW = 100 kHz. The relevant measurements can also be performed with other RBW for certain ranges of B, accounting that the relevant limit given under RBW = 100 kHz needs to be converted appropriately by adding  $c = 10 \times \log_{10} (\text{RBW}/100 \text{ kHz})$  for correction.

**Correction Factor for different B and applicable RBW**

| B                                         | RBW, VBW | c = correction factor |
|-------------------------------------------|----------|-----------------------|
| $B < 2 \text{ MHz}$                       | 10 kHz   | -10dB                 |
| $2 \text{ MHz} \leq B < 5 \text{ MHz}$    | 25 kHz   | -7dB                  |
| $5 \text{ Hz} \leq B \leq 20 \text{ MHz}$ | 100 kHz  | 0dB                   |

### 5.5.2. Test Procedure

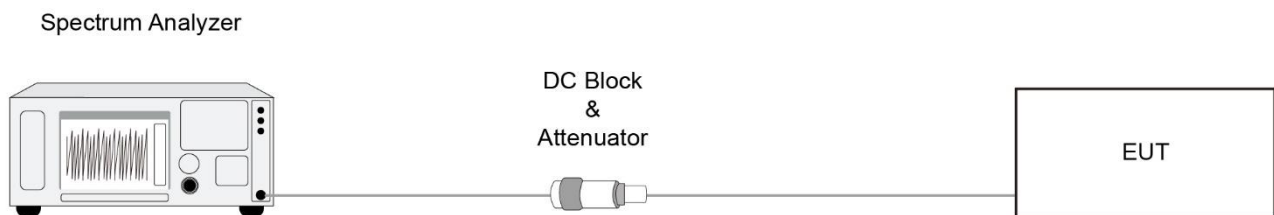
EN 300 422-1 V2.2.1 clause 5.4.3.2.

### 5.5.3. Test Setting

The EUT was powered up and the transmit frequency & power output of the EUT were selected.

The spectrum analyzer center frequency is set to the nominal EUT channel frequency.

### 5.5.4. Test Setup



### 5.5.5. Test Result

Refer to Appendix A.4.

## 5.6. Radiated Spurious Emissions Measurement

### 5.6.1. Test Limit

Spurious emission limits. Emissions outside of the emission masks listed in paragraphs (e)(7)(i) through (e)(7)(iii) shall comply with the limits specified in section 4.2.4.1.2 of ETSI EN 300 422-1 V2.2.1 (2021-11) (incorporated by reference, see § 74.35).

The level of transmitter unwanted emissions in the spurious domain shall not exceed the limits given in table Transmitter unwanted emission limits

| Frequency Range                                                                           | Maximum power | RBW                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9kHz – 150kHz                                                                             | -36dBm        | 1kHz                                                                                                                                                                                                                               |
| 150kHz – 30MHz                                                                            | -36dBm        | 10kHz                                                                                                                                                                                                                              |
| 30MHz – 1GHz                                                                              | -36dBm        | $F_c + 2.5B \leq f \leq F_c + 4B$ : 1kHz<br>$F_c + 4B < f \leq F_c + 10B$ : 10kHz<br>$f > F_c + 10B$ : 100kHz<br>$f < F_c - 10B$ : 100kHz<br>$F_c - 10B \leq f < F_c - 4B$ : 10kHz<br>$F_c - 4B \leq f \leq F_c - 2.5B$ : 1kHz     |
| Except:                                                                                   |               |                                                                                                                                                                                                                                    |
| 47MHz to 74MHz<br>87.5MHz to 118MHz                                                       | -54dBm        | 100kHz                                                                                                                                                                                                                             |
| 174MHz to 230MHz<br>470MHz to 862MHz                                                      | -36dBm        | $F_c + 2.5B \leq f \leq F_c + 4B$ : 1kHz<br>$F_c + 4B < f \leq F_c + 10B$ : 10kHz<br>$f > F_c + 10B$ : 100kHz<br>$f < F_c - 10B$ : 100kHz<br>$F_c - 10B \leq f < F_c - 4B$ : 10kHz<br>$F_c - 4B \leq f \leq F_c - 2.5B$ : 1kHz     |
| $1\text{GHz} < f \leq F_{\text{upper}}$                                                   | -30dBm        | $F_c + 2.5B \leq f \leq F_c + 10B$ : 30kHz<br>$F_c + 10B < f \leq F_c + 12B$ : 300kHz<br>$f > F_c + 12B$ : 1MHz<br>$f < F_c - 12B$ : 1MHz<br>$F_c - 12B \leq f < F_c - 10B$ : 300kHz<br>$F_c - 10B \leq f \leq F_c - 2.5B$ : 30kHz |
| With B being the Declared Channel Bandwidth.<br>$F_{\text{upper}}$ is defined in table 5. |               |                                                                                                                                                                                                                                    |

Table 5: Frequency range for measurement of unwanted emissions

| Applicable fundamental frequency range | Frequency range for measurements |                                          |
|----------------------------------------|----------------------------------|------------------------------------------|
|                                        | Lower frequency                  | Upper frequency                          |
| 9 kHz - 100 MHz                        | 9 kHz                            | 1GHz                                     |
| 100 MHz - 300 MHz                      | 9 kHz                            | 10th harmonic of the operating frequency |
| 300 MHz - 600 MHz                      | 30MHz                            | 3GHz                                     |
| 600 MHz - 3 GHz                        | 30MHz                            | 5th harmonic of the operating frequency  |

### 5.6.2. Test Procedure

ETSI EN 300 422-1 V2.2.1 clause 5.4.4

### 5.6.3. Test Setting

Table 1 - RBW as a function of frequency

| Frequency       | RBW     |
|-----------------|---------|
| 30 ~ 1000 MHz   | 100 kHz |
| 1000 ~ 7000 MHz | 1 MHz   |

Emissions shall be investigated up to the 10<sup>th</sup> harmonic of the fundamental.

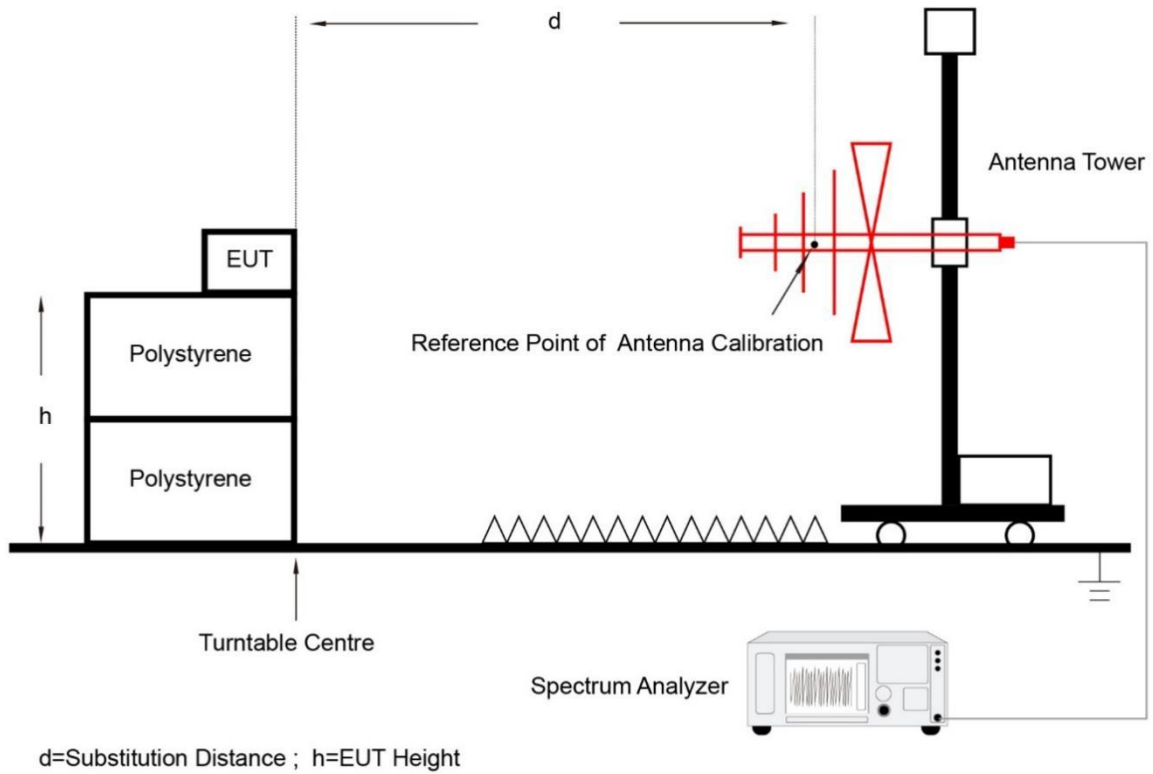
Compliance with the emission limits shall be demonstrated using an RMS Average detector.

All significant broadband and narrowband signals found in the preliminary sweeps were measured using a peak detector at a test distance of 3 meters.

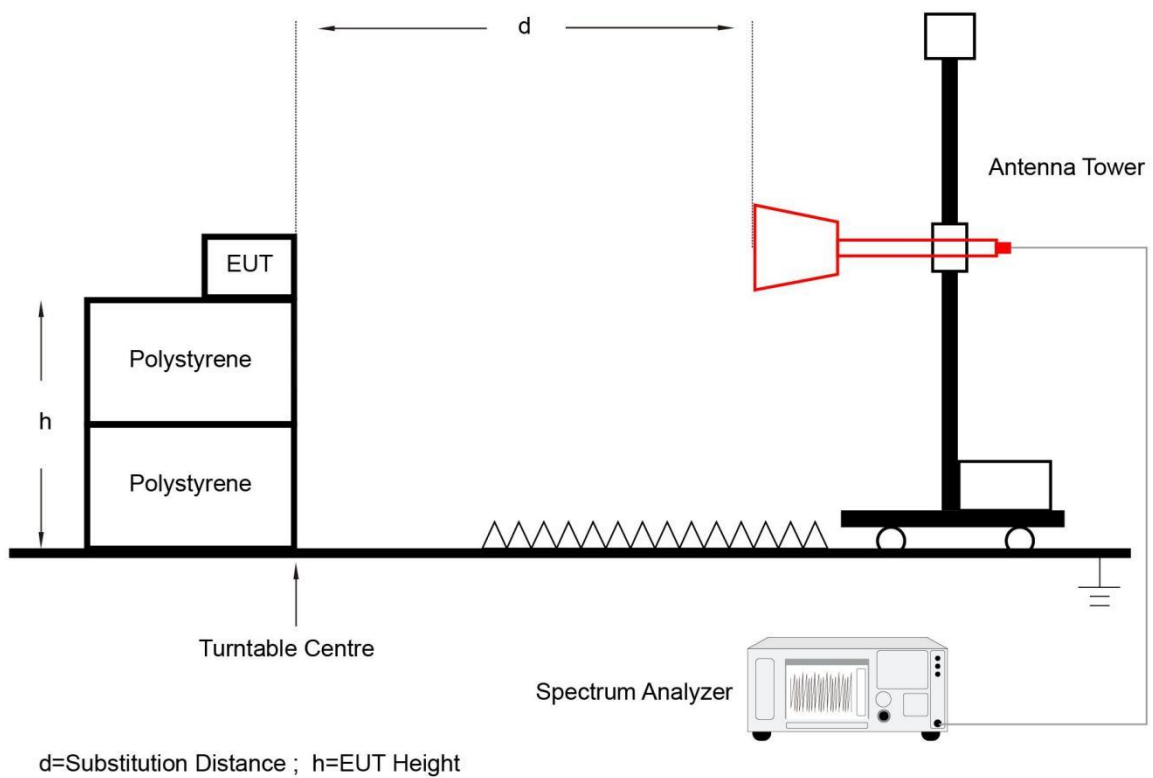
At each frequency at which a component is detected, the sample shall be rotated to obtain maximum response and the effective radiated power of that component determined by a substitution measurement.

#### 5.6.4. Test Setup

##### Below 1GHz Test Setup:



##### Above 1GHz Test Setup:



#### **5.6.5. Test Result**

Refer to Appendix A.5.

## Appendix A – Test Result

### A.1 RF Output Power Test Result

|           |                         |               |           |
|-----------|-------------------------|---------------|-----------|
| Test Site | WZ-SR5                  | Test Engineer | Lynn Yang |
| Test Date | 2025-06-09 ~ 2025-06-16 | Test Mode     | Mode 1    |

| Frequency<br>(MHz) | Conducted Output Power<br>(dBm) |        |        |        | Total Conducted<br>Output Power<br>(dBm) | Limit<br>(dBm) | Test<br>Result |
|--------------------|---------------------------------|--------|--------|--------|------------------------------------------|----------------|----------------|
|                    | Port A                          | Port B | Port C | Port D |                                          |                |                |
| 40mW Power Level   |                                 |        |        |        |                                          |                |                |
| 470.400            | 15.87                           | 15.12  | 15.43  | 15.86  | 21.60                                    | ≤ 23.98        | Pass           |
| 539.000            | 15.68                           | 14.76  | 15.28  | 15.05  | 21.23                                    | ≤ 23.98        | Pass           |
| 607.600            | 14.87                           | 14.82  | 15.19  | 15.54  | 21.14                                    | ≤ 23.98        | Pass           |

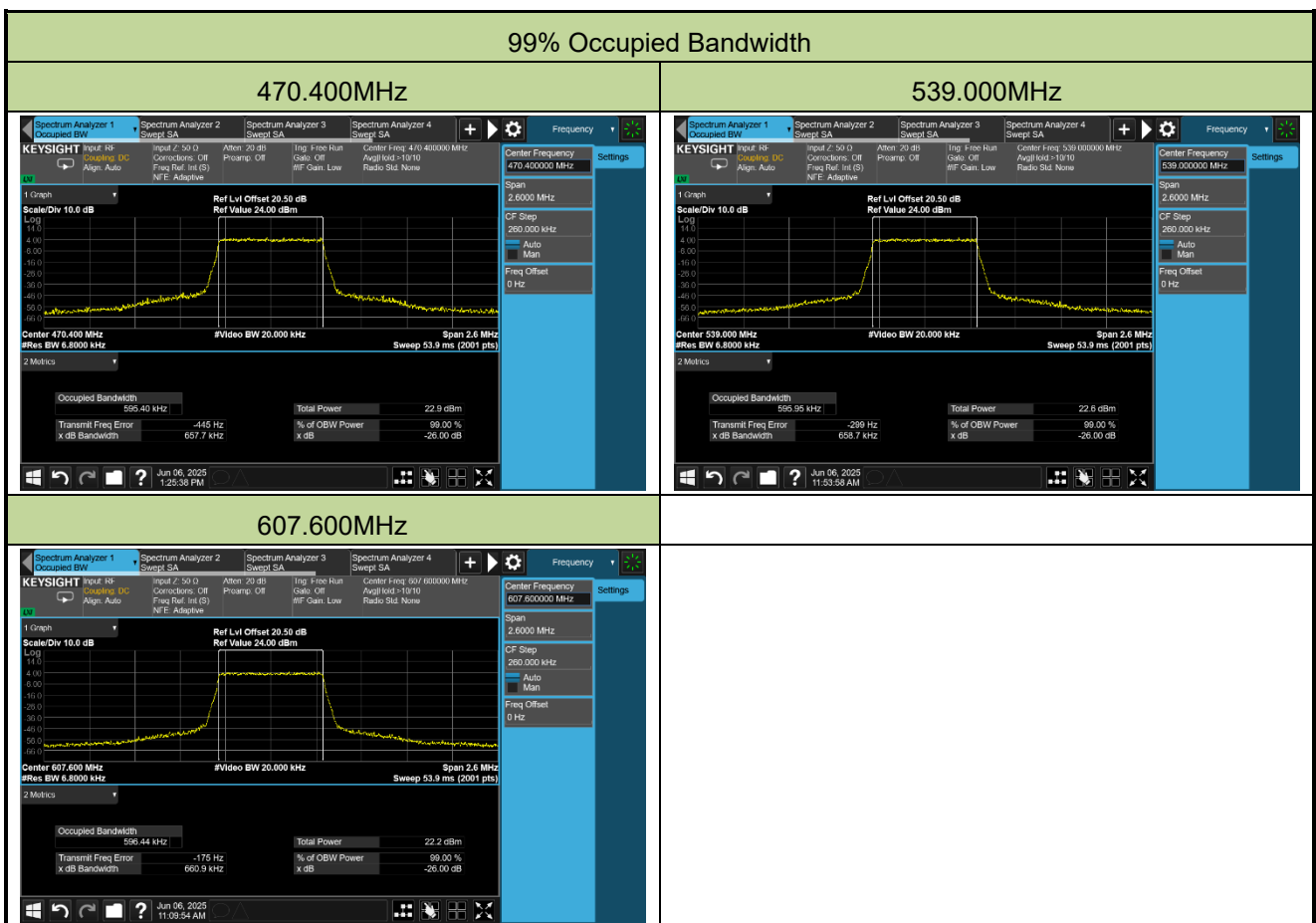
Note 1: Limit =  $10 \cdot \log(250\text{mW}) = 23.98 \text{ dBm}$ .

Note 2: Total Conducted Output Power (dBm) =  $10 \cdot \log(10^{(\text{Port A}/10)} + 10^{(\text{Port B}/10)} + 10^{(\text{Port C}/10)} + 10^{(\text{Port D}/10)})$  (dBm).

## A.2 99% Occupied Bandwidth Test Result

|           |            |               |           |
|-----------|------------|---------------|-----------|
| Test Site | WZ-SR5     | Test Engineer | Lynn Yang |
| Test Date | 2025-06-06 | Test Mode     | Mode 1    |

| Frequency<br>(MHz) | 99% Occupied Bandwidth<br>(kHz) | Limit<br>(kHz) | Result |
|--------------------|---------------------------------|----------------|--------|
| 470.400            | 595.40                          | < 6000         | Pass   |
| 539.000            | 595.95                          | < 6000         | Pass   |
| 607.600            | 596.44                          | < 6000         | Pass   |



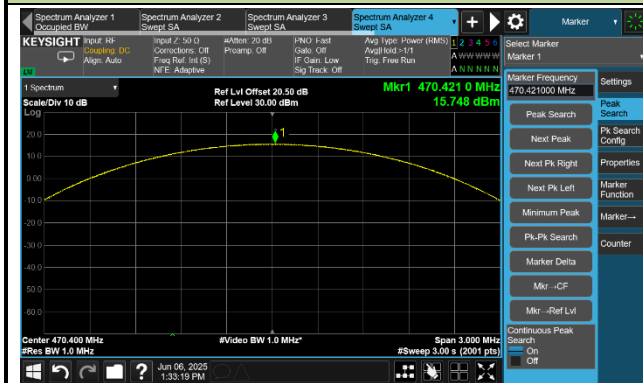
### A.3 Out-of-Band Emission Test Result

|           |                         |               |           |
|-----------|-------------------------|---------------|-----------|
| Test Site | WZ-SR5                  | Test Engineer | Lynn Yang |
| Test Date | 2025-06-05 ~ 2025-06-09 | Test Mode     | Mode 1    |

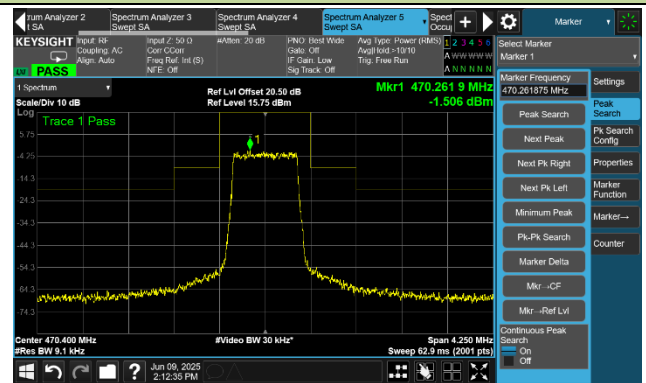
#### Port A

#### Channel 470.400MHz

##### Reference Level

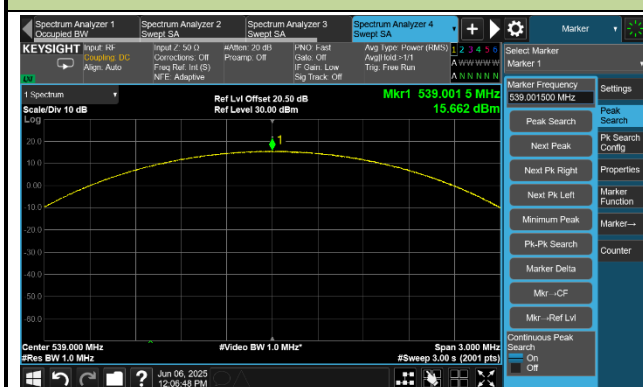


##### Out of Band Emission

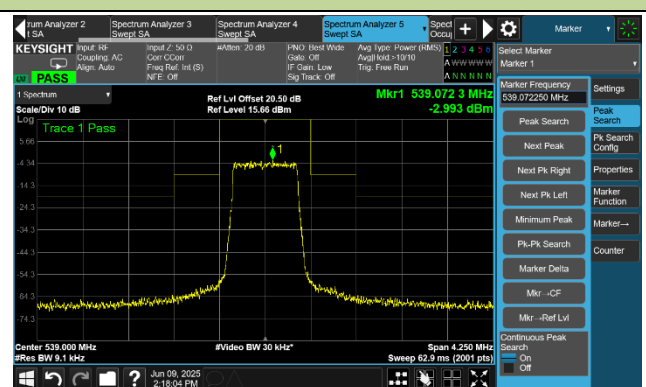


#### Channel 539.000MHz

##### Reference Level

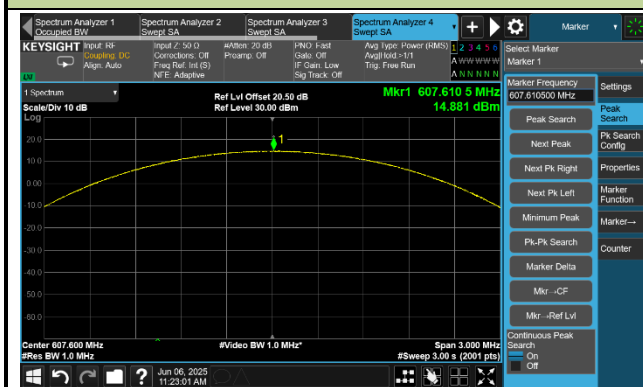


##### Out of Band Emission

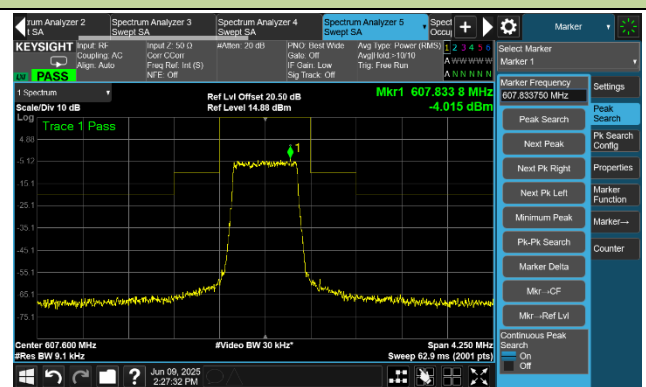


#### Channel 607.600MHz

##### Reference Level



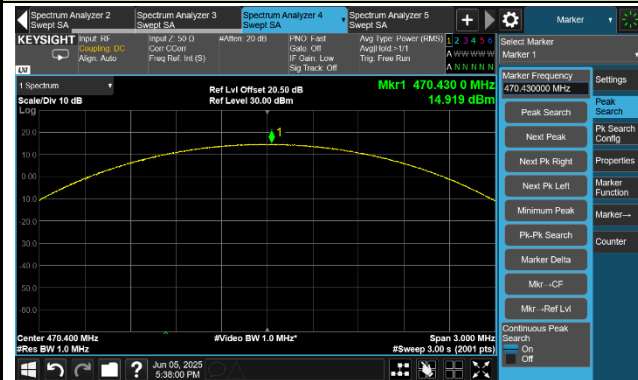
##### Out of Band Emission



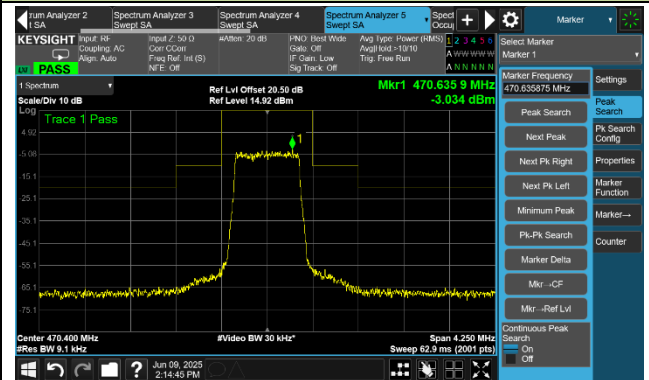
## Port B

## Channel 470.400MHz

## Reference Level



## Out of Band Emission

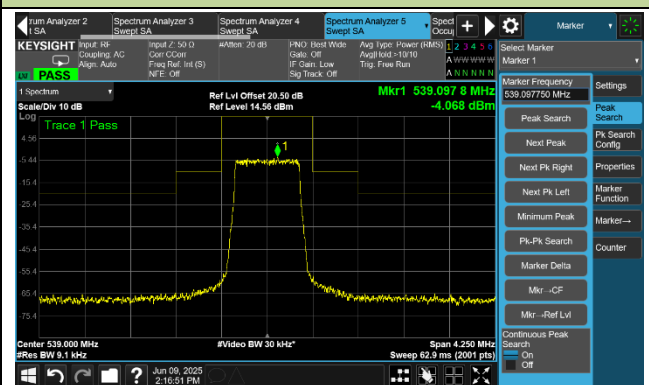


## Channel 539.000MHz

## Reference Level

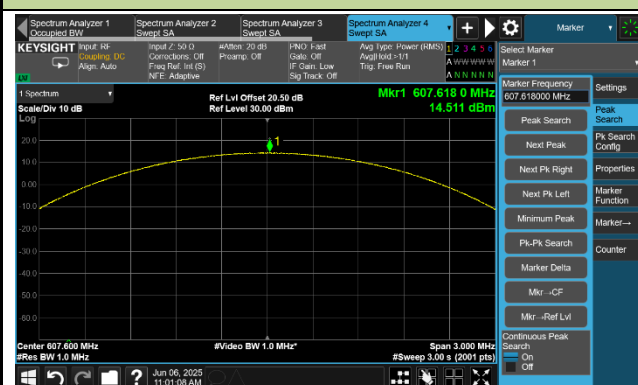


## Out of Band Emission

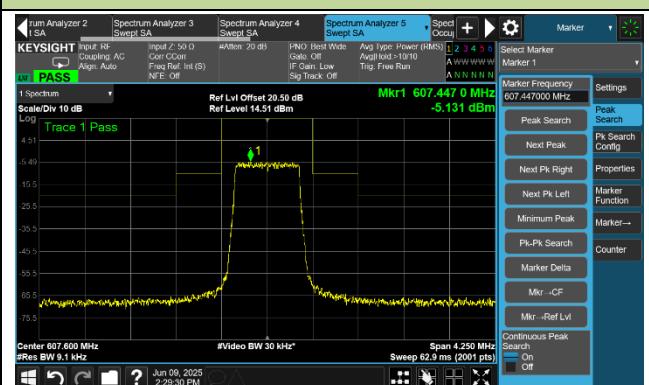


## Channel 607.600MHz

## Reference Level



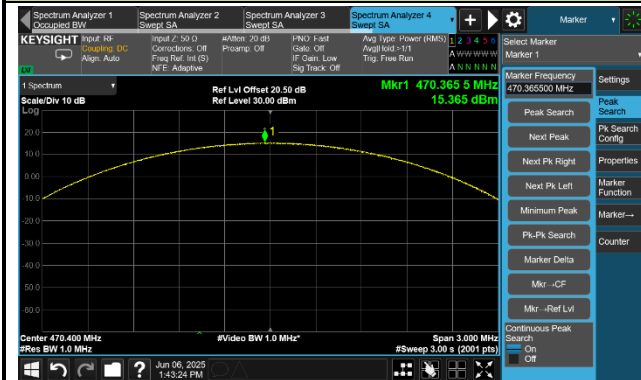
## Out of Band Emission



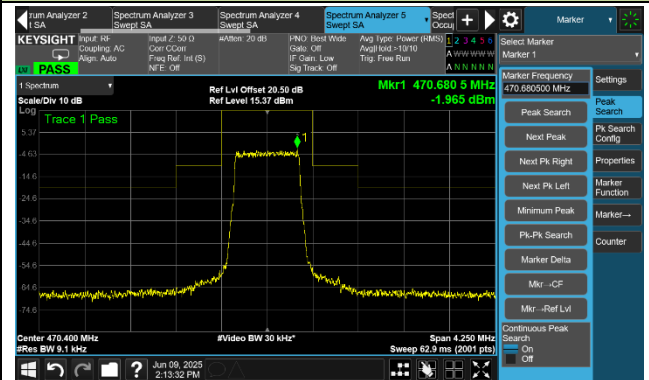
## Port C

## Channel 470.400MHz

## Reference Level

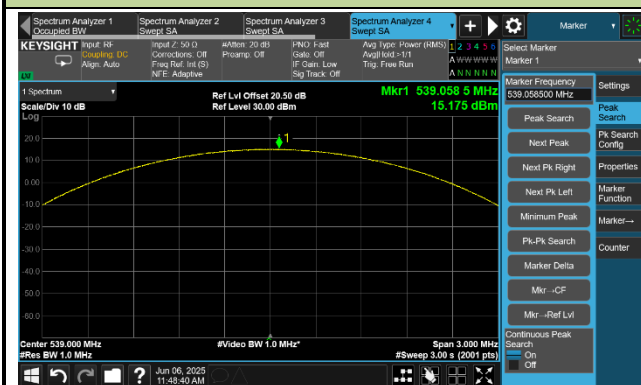


## Out of Band Emission

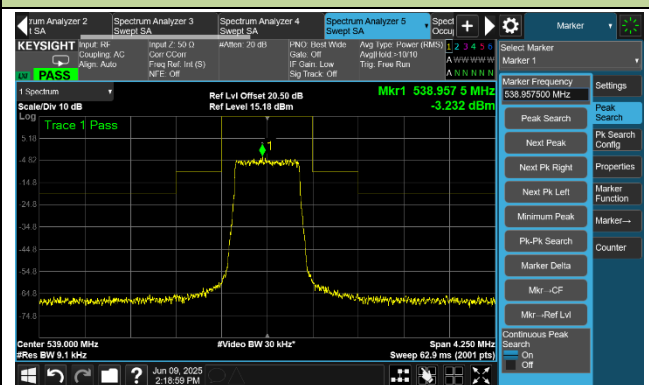


## Channel 539.000MHz

## Reference Level

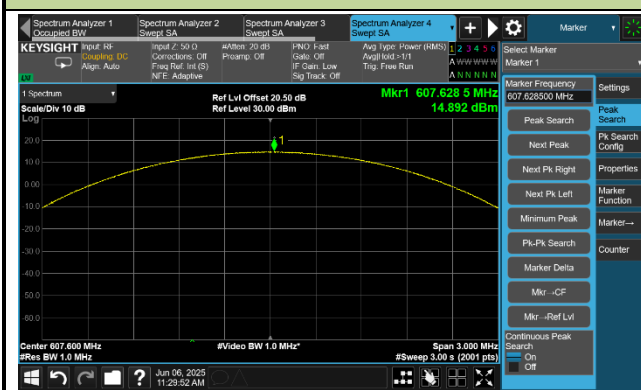


## Out of Band Emission

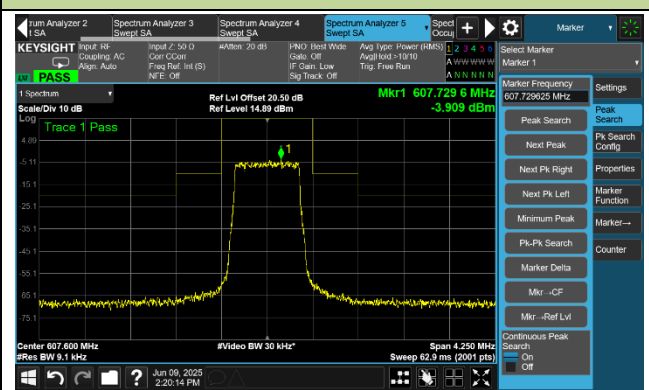


## Channel 607.600MHz

## Reference Level



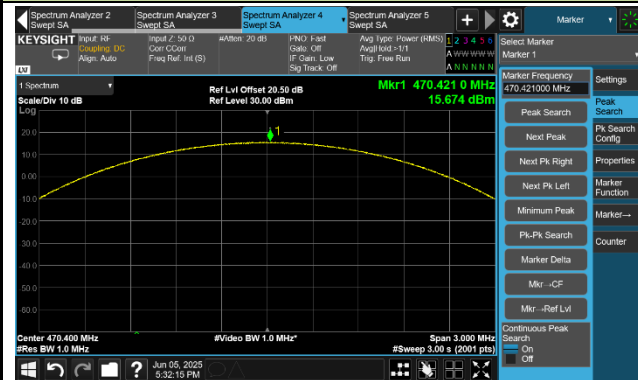
## Out of Band Emission



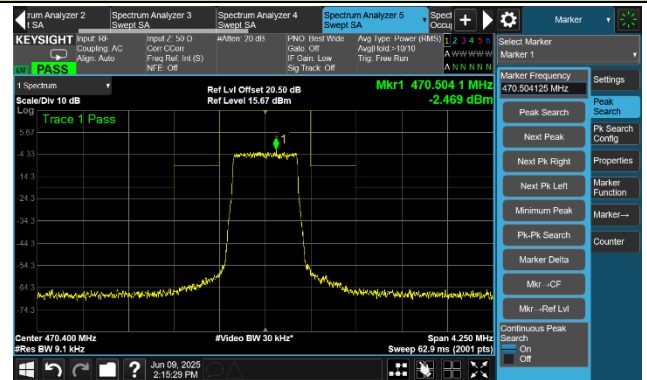
## Port D

## Channel 470.400MHz

## Reference Level



## Out of Band Emission

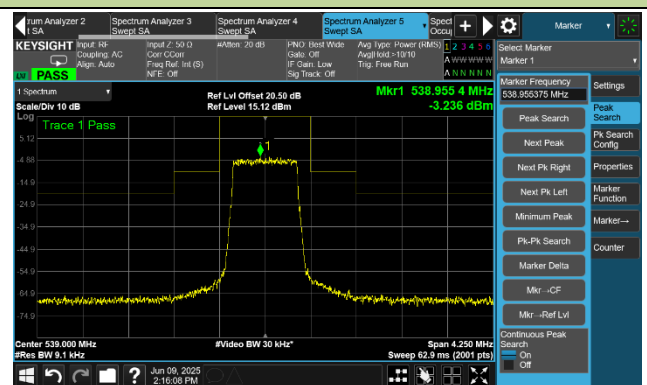


## Channel 539.000MHz

## Reference Level

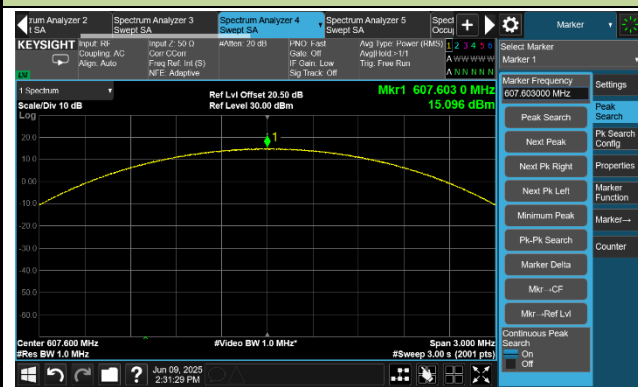


## Out of Band Emission

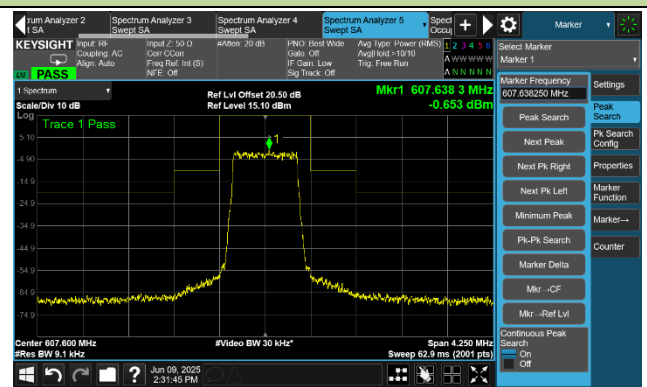


## Channel 607.600MHz

## Reference Level



## Out of Band Emission

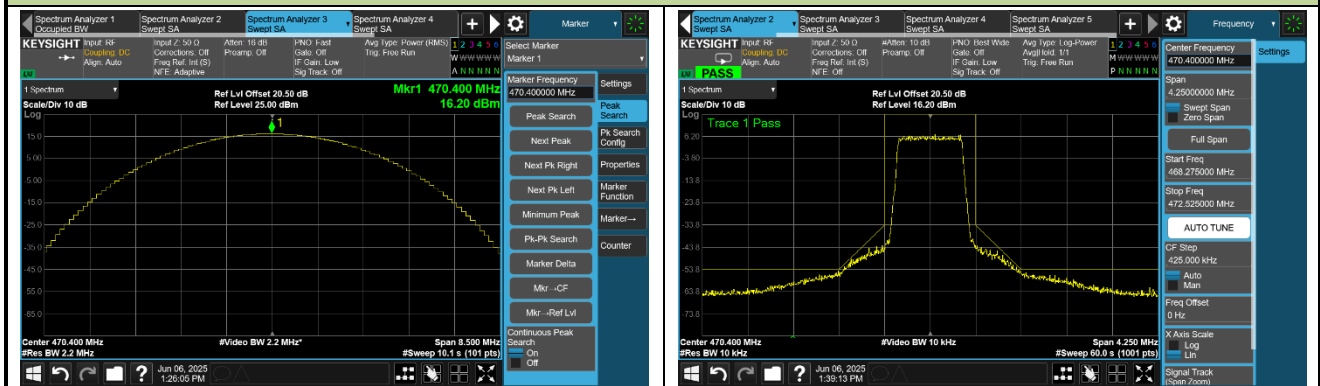


## A.4 Emission Mask Test Result

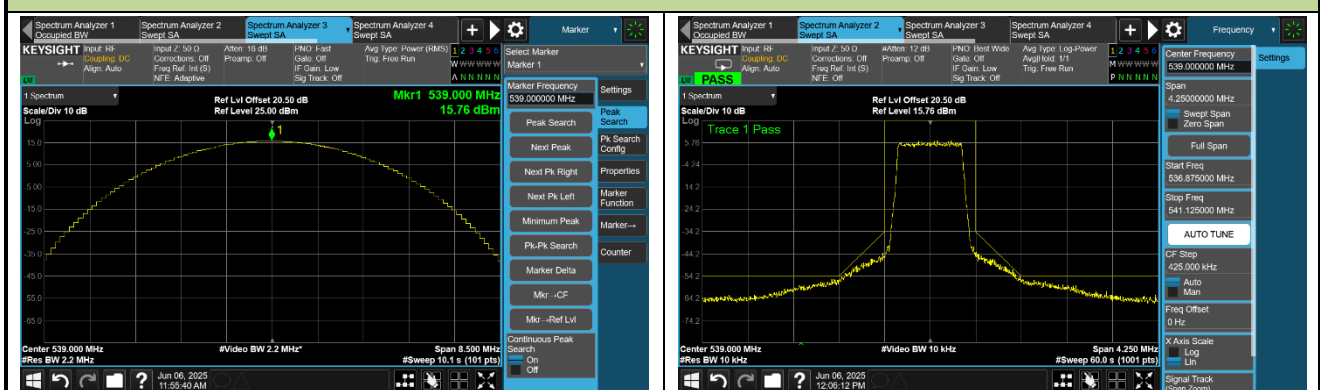
|           |                         |               |           |
|-----------|-------------------------|---------------|-----------|
| Test Site | WZ-SR5                  | Test Engineer | Lynn Yang |
| Test Date | 2025-06-05 ~ 2025-06-06 | Test Mode     | Mode 1    |

### Port A

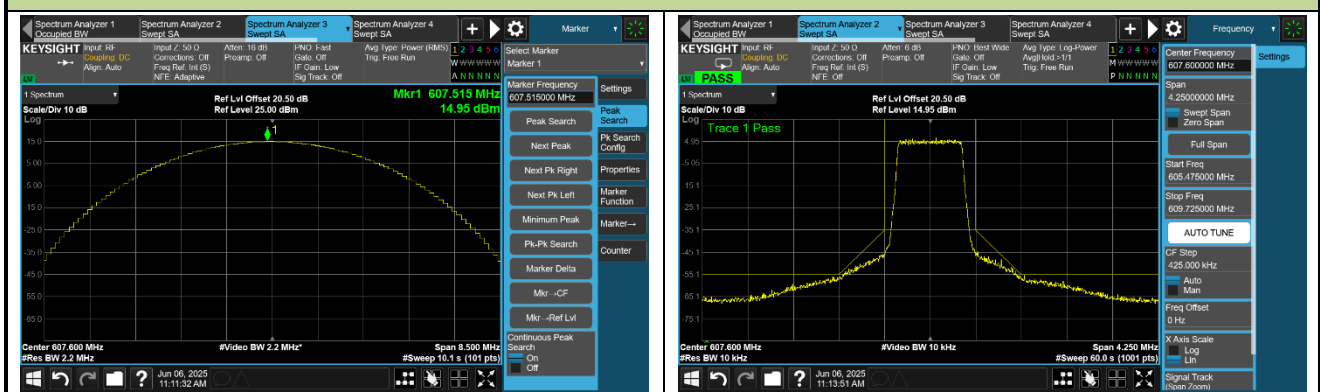
#### Channel 470.400MHz



#### Channel 539.000MHz

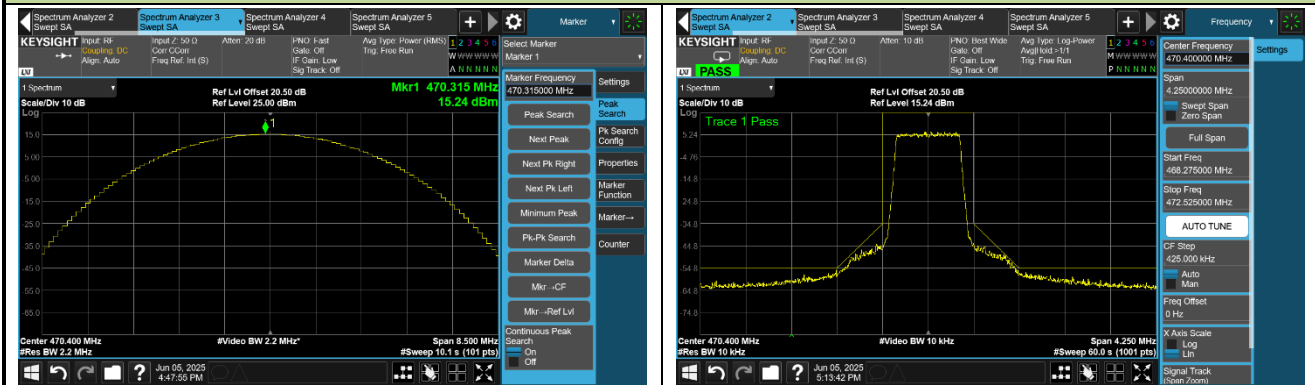


#### Channel 607.600MHz

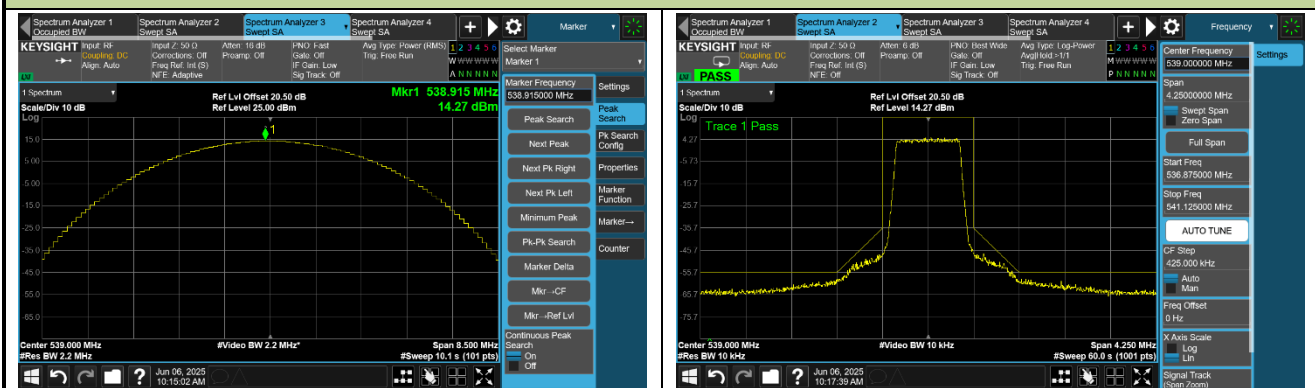


## Port B

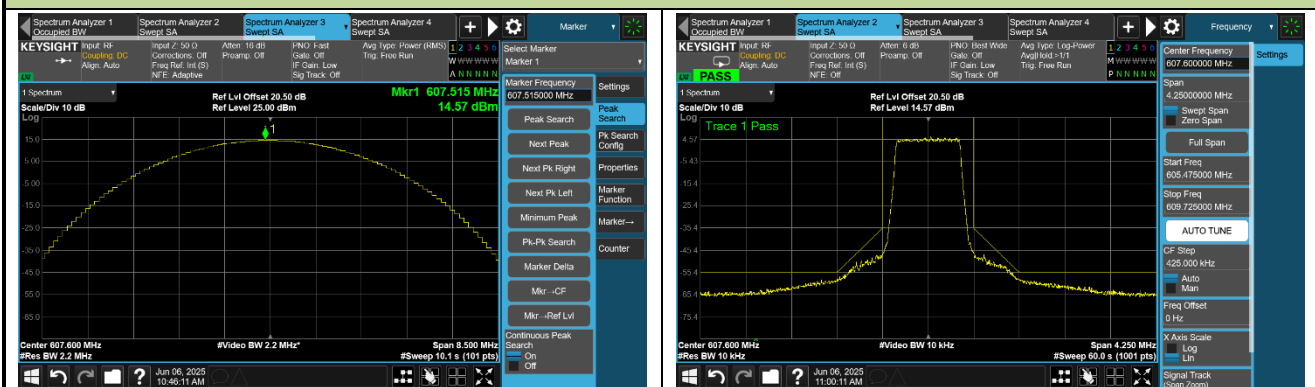
## Channel 470.400MHz



## Channel 539.000MHz

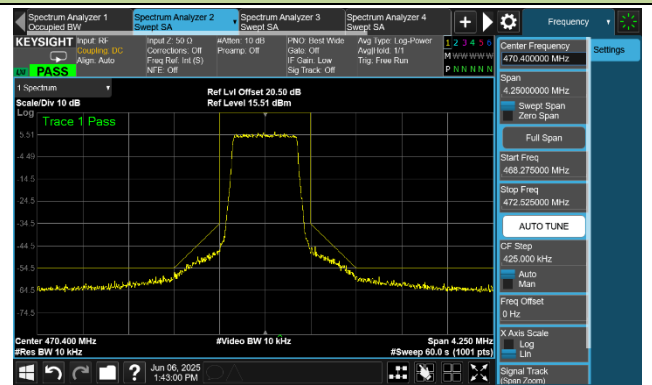


## Channel 607.600MHz

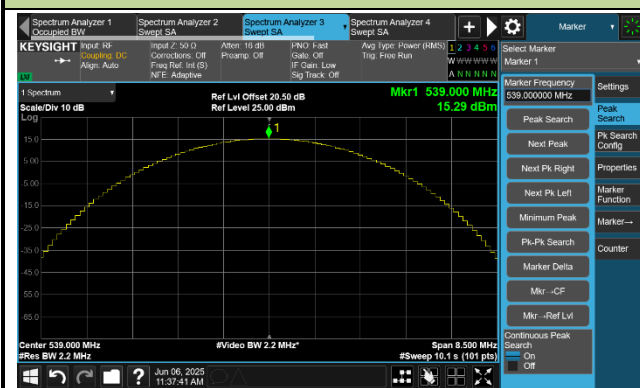
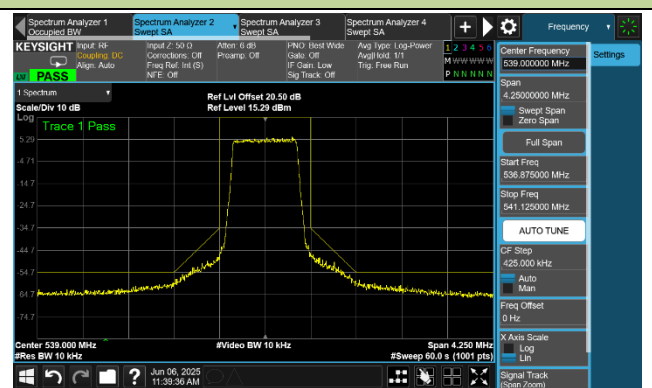


## Port C

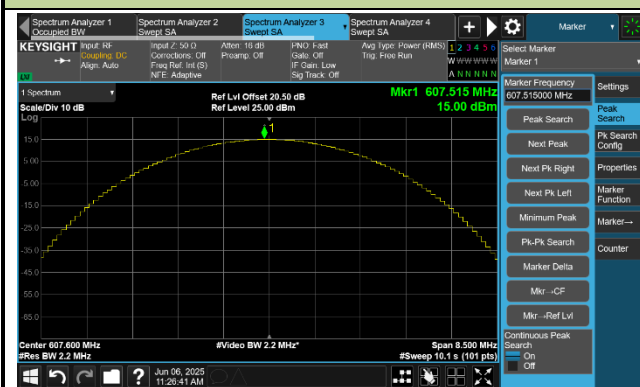
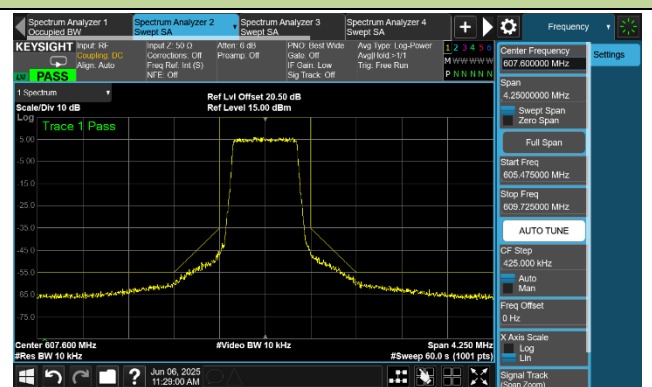
Channel 470.400MHz



## Channel 539.000MHz

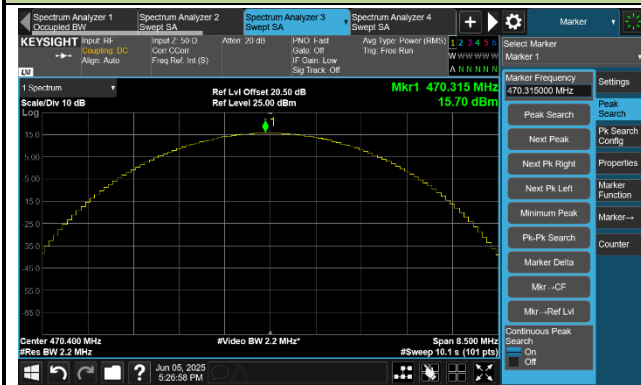
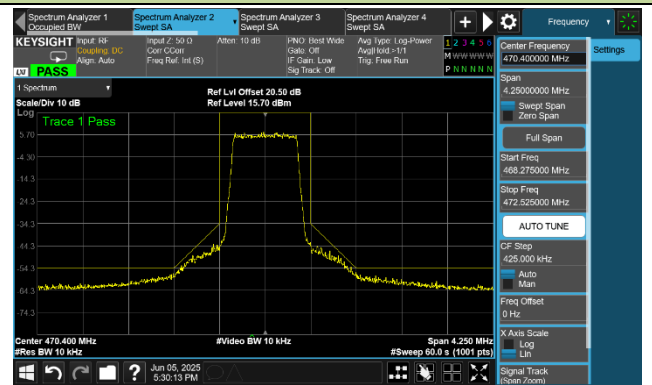


Channel 607.600MHz

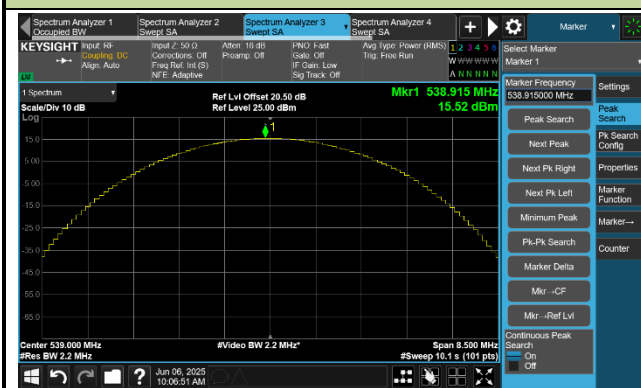
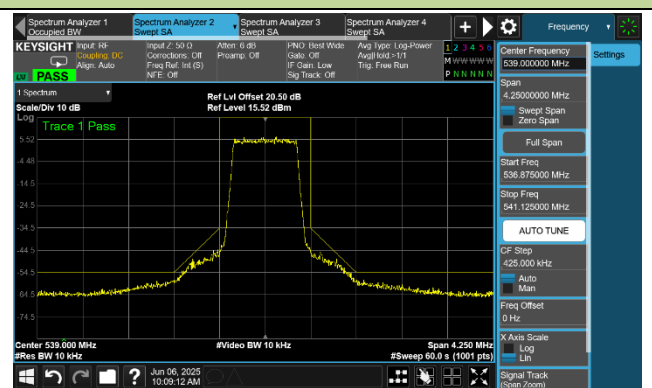


## Port D

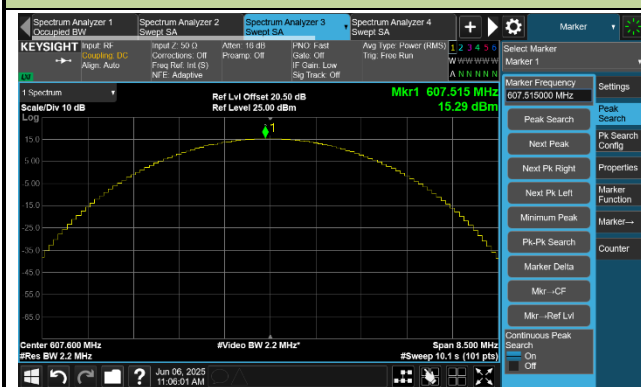
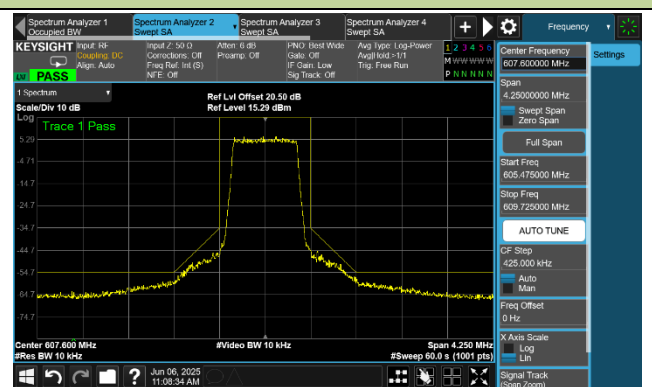
## Channel 470.400MHz



## Channel 539.000MHz



## Channel 607.600MHz



### A.5 Radiated Spurious Emissions Test Result

|           |                         |               |           |
|-----------|-------------------------|---------------|-----------|
| Test Site | WZ-AC2                  | Test Engineer | Dick Shen |
| Test Date | 2025-05-17 ~ 2025-05-24 | Test Mode     | Mode 1    |

| Test Channel<br>(MHz)   | Frequency<br>(MHz) | Reading<br>Level<br>(dBm) | Substitution<br>Factor<br>(dB) | Measure<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Detector | Polarization |
|-------------------------|--------------------|---------------------------|--------------------------------|---------------------------|----------------|----------------|----------|--------------|
| 470.400<br>+<br>471.400 | 496.380            | -90.0                     | 30.9                           | -59.1                     | -54.0          | -5.1           | Average  | Horizontal   |
|                         | 543.910            | -92.9                     | 31.4                           | -61.5                     | -54.0          | -7.5           | Average  | Horizontal   |
|                         | 479.980            | -89.8                     | 33.3                           | -56.5                     | -54.0          | -2.5           | Average  | Vertical     |
|                         | 534.500            | -93.1                     | 33.5                           | -59.6                     | -54.0          | -5.6           | Average  | Vertical     |
|                         | 1414.000           | -64.2                     | 8.0                            | -56.2                     | -30.0          | -26.2          | Peak     | Horizontal   |
|                         | 6904.000           | -71.8                     | 20.9                           | -50.9                     | -30.0          | -20.9          | Peak     | Horizontal   |
|                         | 1414.000           | -65.8                     | 7.9                            | -57.9                     | -30.0          | -27.9          | Peak     | Vertical     |
|                         | 6661.000           | -72.8                     | 20.1                           | -52.7                     | -30.0          | -22.7          | Peak     | Vertical     |
| 539.000<br>+<br>540.000 | 484.250            | -94.0                     | 33.6                           | -60.4                     | -54.0          | -6.4           | Average  | Horizontal   |
|                         | 517.430            | -92.7                     | 34.4                           | -58.3                     | -54.0          | -4.3           | Average  | Horizontal   |
|                         | 479.980            | -90.3                     | 33.0                           | -57.3                     | -54.0          | -3.3           | Average  | Vertical     |
|                         | 521.500            | -92.9                     | 33.7                           | -59.2                     | -54.0          | -5.2           | Average  | Vertical     |
|                         | 1080.400           | -63.5                     | 6.5                            | -57.0                     | -30.0          | -27.0          | Peak     | Horizontal   |
|                         | 5176.600           | -69.8                     | 15.5                           | -54.3                     | -30.0          | -24.3          | Peak     | Horizontal   |
|                         | 1633.000           | -67.1                     | 8.2                            | -58.9                     | -30.0          | -28.9          | Peak     | Vertical     |
|                         | 5119.600           | -70.2                     | 15.0                           | -55.2                     | -30.0          | -25.2          | Peak     | Vertical     |
| 607.600<br>+<br>606.600 | 488.810            | -93.0                     | 33.5                           | -59.5                     | -54.0          | -5.5           | Average  | Horizontal   |
|                         | 561.560            | -95.7                     | 34.3                           | -61.4                     | -54.0          | -7.4           | Average  | Horizontal   |
|                         | 480.080            | -90.8                     | 33.1                           | -57.7                     | -54.0          | -3.7           | Average  | Vertical     |
|                         | 527.420            | -94.3                     | 33.8                           | -60.5                     | -54.0          | -6.5           | Average  | Vertical     |
|                         | 1512.400           | -68.3                     | 8.8                            | -59.5                     | -30.0          | -29.5          | Peak     | Horizontal   |
|                         | 5935.600           | -70.3                     | 17.4                           | -52.9                     | -30.0          | -22.9          | Peak     | Horizontal   |
|                         | 1660.600           | -68.8                     | 8.9                            | -59.9                     | -30.0          | -29.9          | Peak     | Vertical     |
|                         | 6526.000           | -72.3                     | 19.1                           | -53.2                     | -30.0          | -23.2          | Peak     | Vertical     |

Note 1: Measure Level (dBm) = Reading Level (dBm) + Substitution Factor (dB)

Note 2: Substitution Factor (dB) = Cable Loss (dB) + Space Attenuation (dB) - Antenna Gain (dBi) - 2.15 (dB)

Note 3: RMS measurement was not performed when peak measure level was lower than the RMS limit.

## **Appendix B – Test Setup Photograph**

Refer to “R25S1018044-UT” file.

## **Appendix C – EUT Photograph**

Refer to “R25S1018044-UE” file.

\_\_\_\_\_ The End \_\_\_\_\_