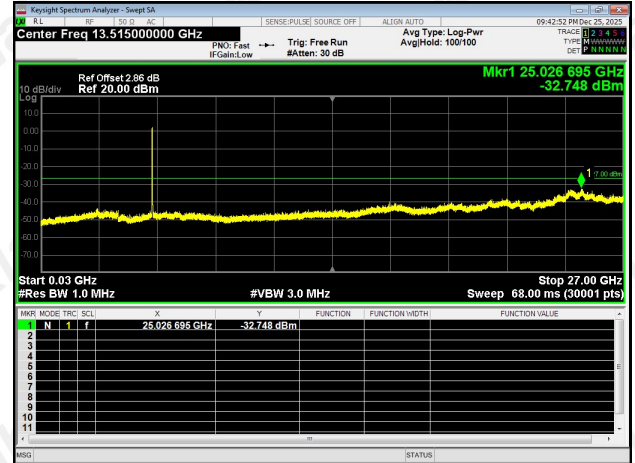
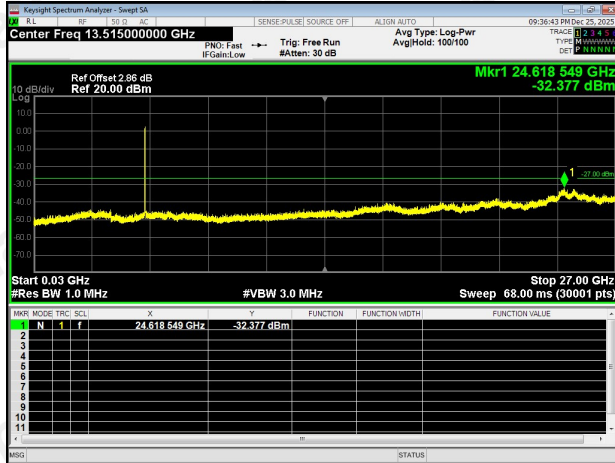


## 5.2G

### Test Plot

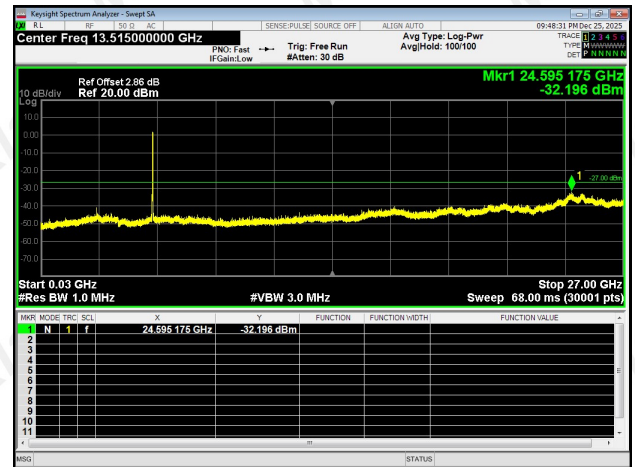
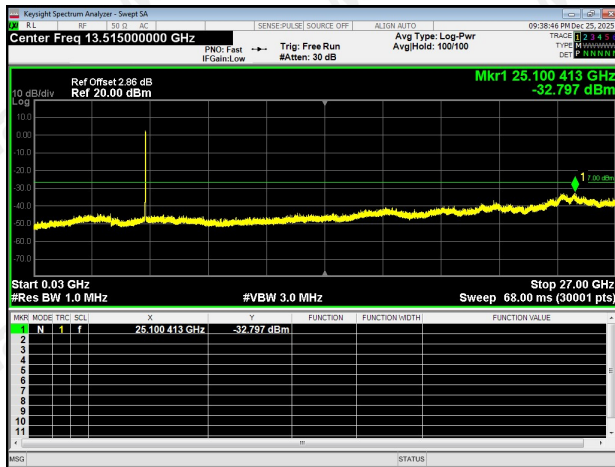
ANT1 SISO Mode\_Worst Case  
802.11a on channel 36

ANT1+ANT2 MIMO Mode\_Worst Case  
802.11n20 on channel 36



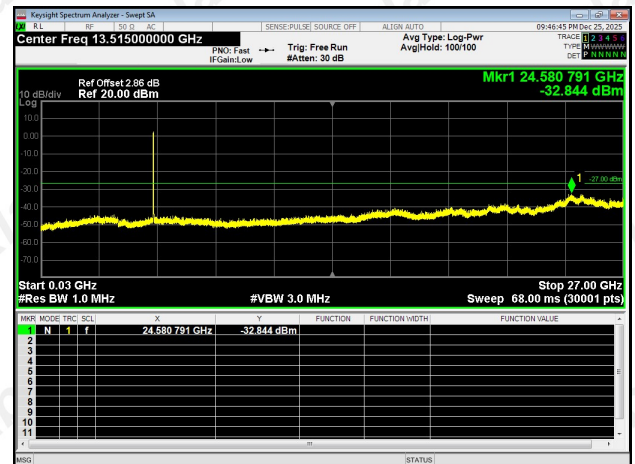
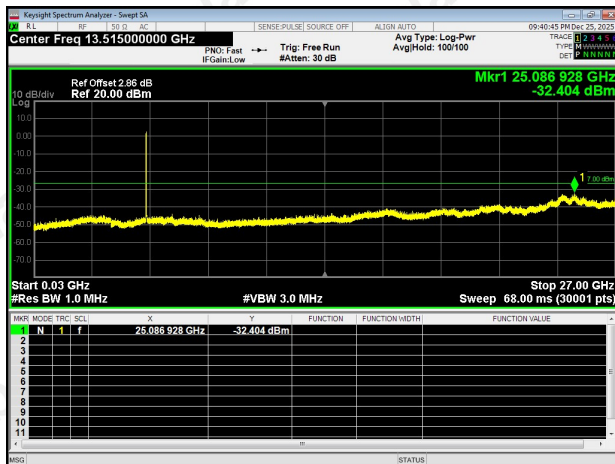
802.11a on channel 40

802.11n20 on channel 40



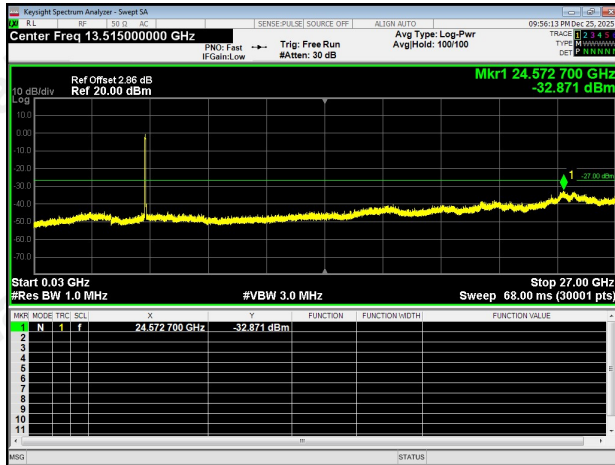
802.11a on channel 48

802.11n20 on channel 48

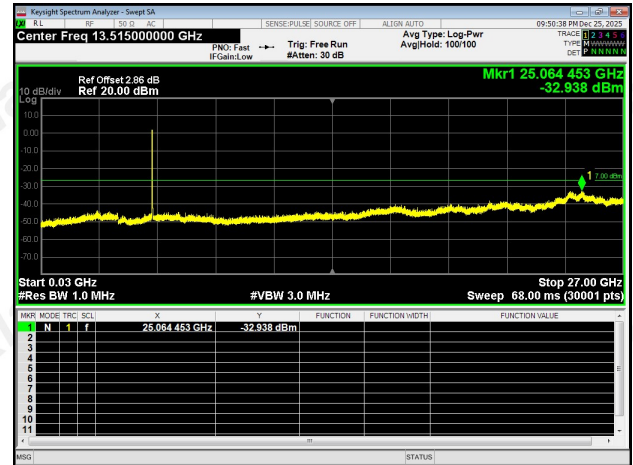


Test Plot

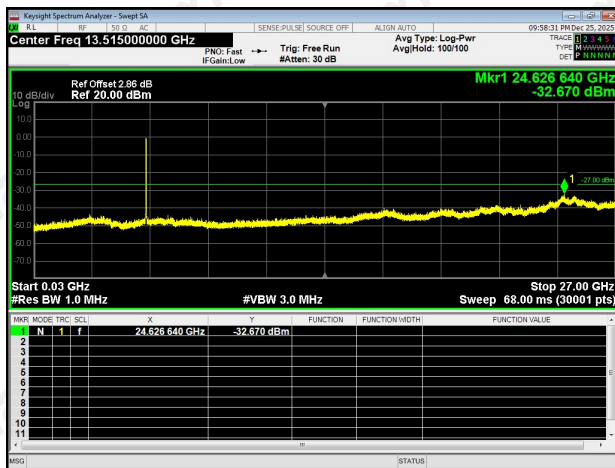
ANT1+ANT2 MIMO Mode\_Worst Case  
802.11n40 on channel 38



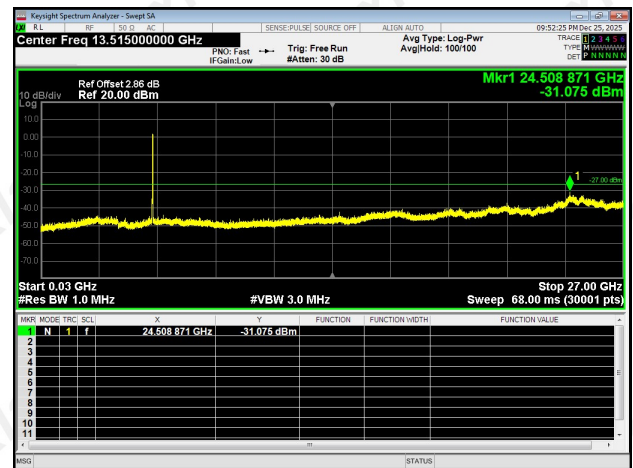
ANT1+ANT2 MIMO Mode\_Worst Case  
802.11ac20 on channel 36



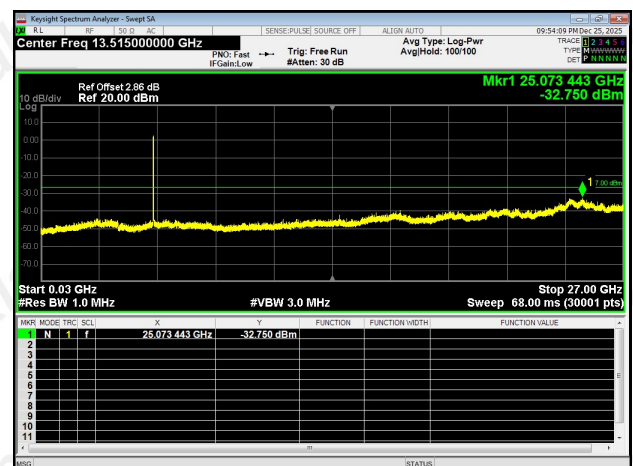
802.11n40 on channel 46



802.11ac20 on channel 40

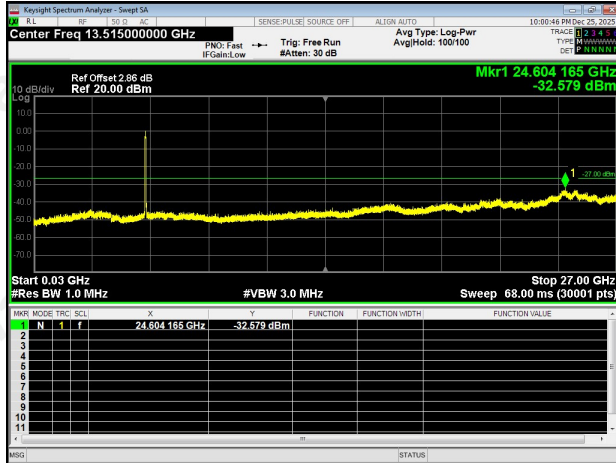


802.11ac20 on channel 48

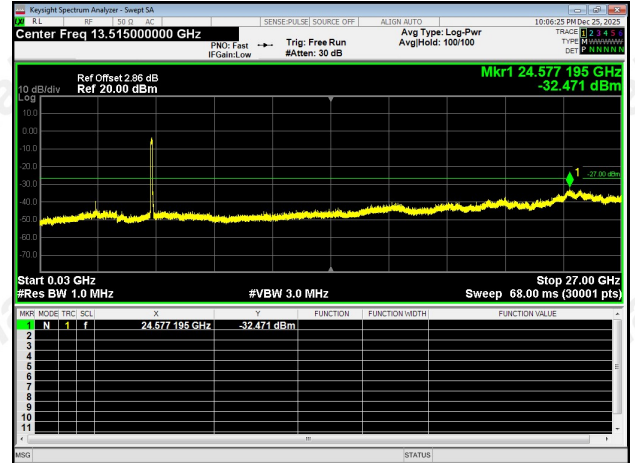


Test Plot

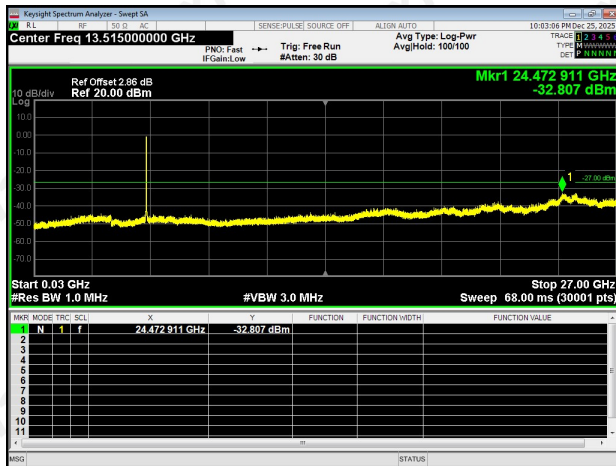
ANT1+ANT2 MIMO Mode\_Worst Case  
802.11ac40 on channel 38



ANT1+ANT2 MIMO Mode\_Worst Case  
802.11ac80 on channel 42



802.11ac40 on channel 46

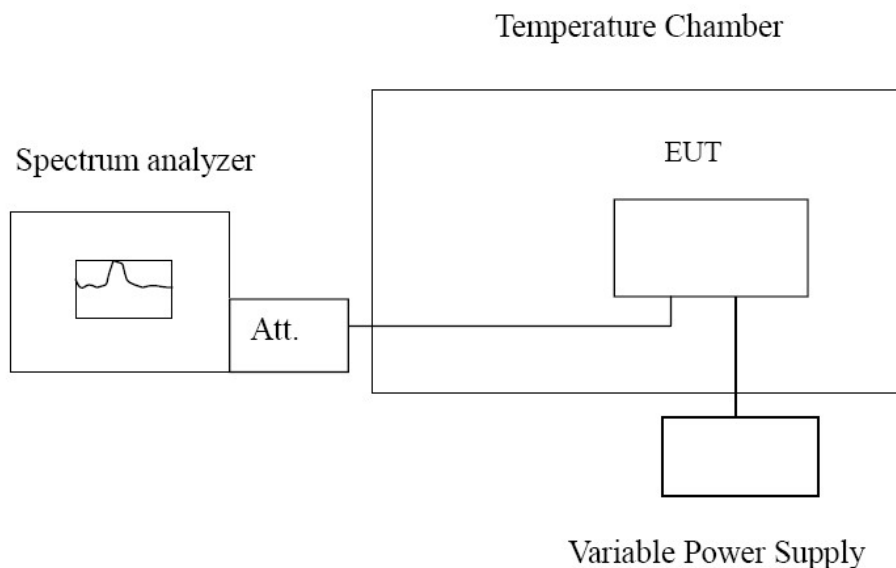


## 4.9 Frequency Stability

### Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

### TEST CONFIGURATION



### TEST PROCEDURE

#### **Frequency Stability under Temperature Variations:**

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

#### **Frequency Stability under Voltage Variations:**

Set chamber temperature to 25°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ( $\pm 15\%$ ) and endpoint, record the maximum frequency change.

| Reference Frequency: 802.11ac channel=36 frequency=5180MHz |                    |                 |       |                                    |        |
|------------------------------------------------------------|--------------------|-----------------|-------|------------------------------------|--------|
| Voltage ( V )                                              | Temperature ( °C ) | Frequency error |       | Limit (ppm)                        | Result |
|                                                            |                    | Hz              | ppm   |                                    |        |
| 120.0                                                      | -30                | 72.61           | 0.014 | Within the<br>band of<br>operation | Pass   |
|                                                            | -20                | 55.72           | 0.011 |                                    |        |
|                                                            | -10                | 88.79           | 0.017 |                                    |        |
|                                                            | 0                  | 61.48           | 0.012 |                                    |        |
|                                                            | 10                 | 78.84           | 0.015 |                                    |        |
|                                                            | 20                 | 57.37           | 0.011 |                                    |        |
|                                                            | 30                 | 59.69           | 0.012 |                                    |        |
|                                                            | 40                 | 76.61           | 0.015 |                                    |        |
|                                                            | 50                 | 64.83           | 0.013 |                                    |        |
| 138.0                                                      | 25                 | 52.01           | 0.010 |                                    |        |
| 102.0                                                      | 25                 | 79.26           | 0.015 |                                    |        |

#### **4.10 Antenna Requirement**

##### **Standard Applicable**

**For intentional device, according to FCC 47 CFR Section 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, 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

##### **Test Result:**

The maximum gain of antenna is 5.47 dBi.

Remark: The antenna gain is provided by the customer, if the data provided by the customer is not accurate, MAXLAB Testing Co.,Ltd. does not assume any responsibility.

## **5 Test Setup Photos of the EUT**

Reference to the appendix I for details.

## **6 Photos of the EUT**

Reference to the appendix II for details.

\*\*\*\*\* End of Report \*\*\*\*\*