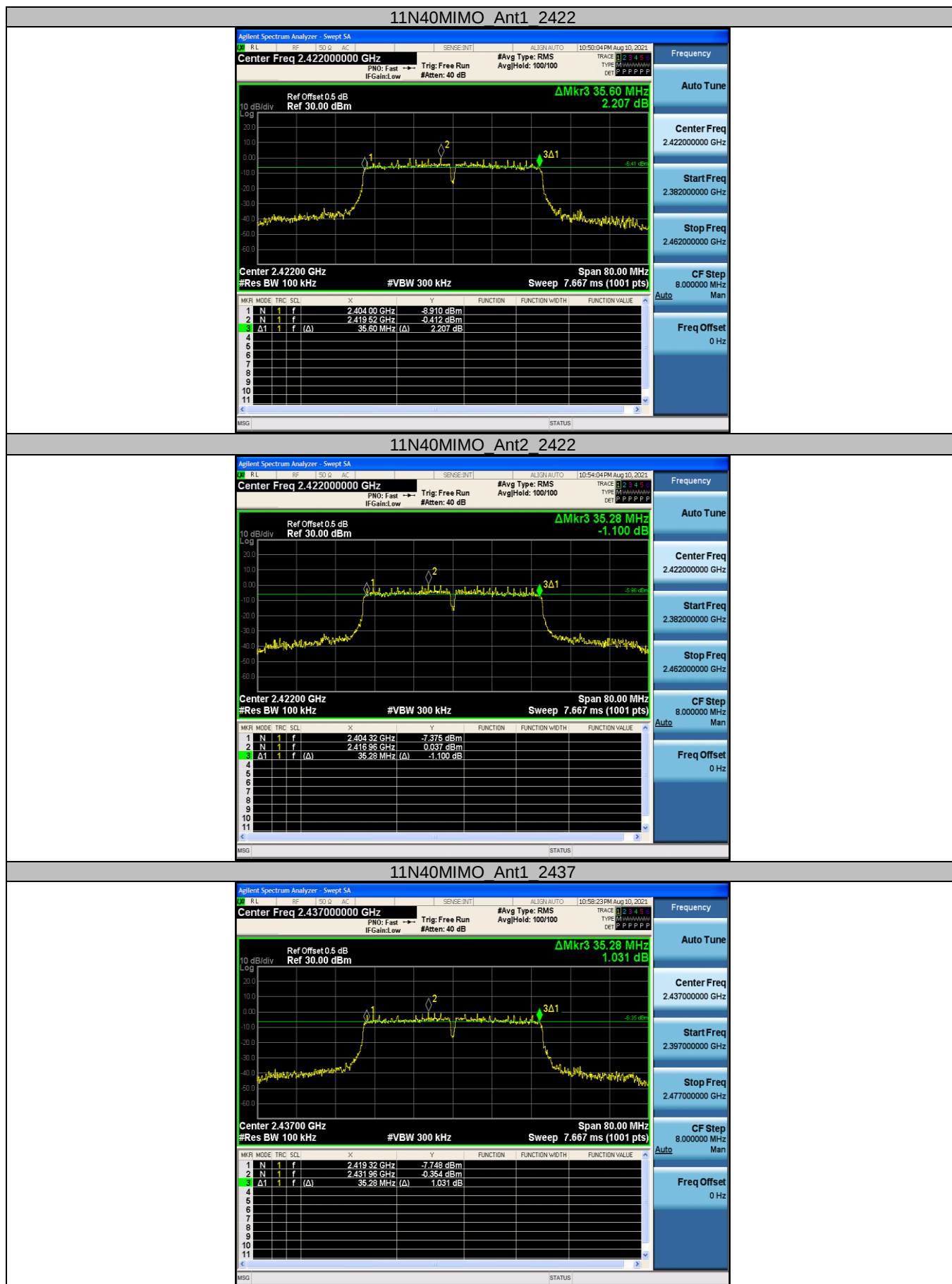




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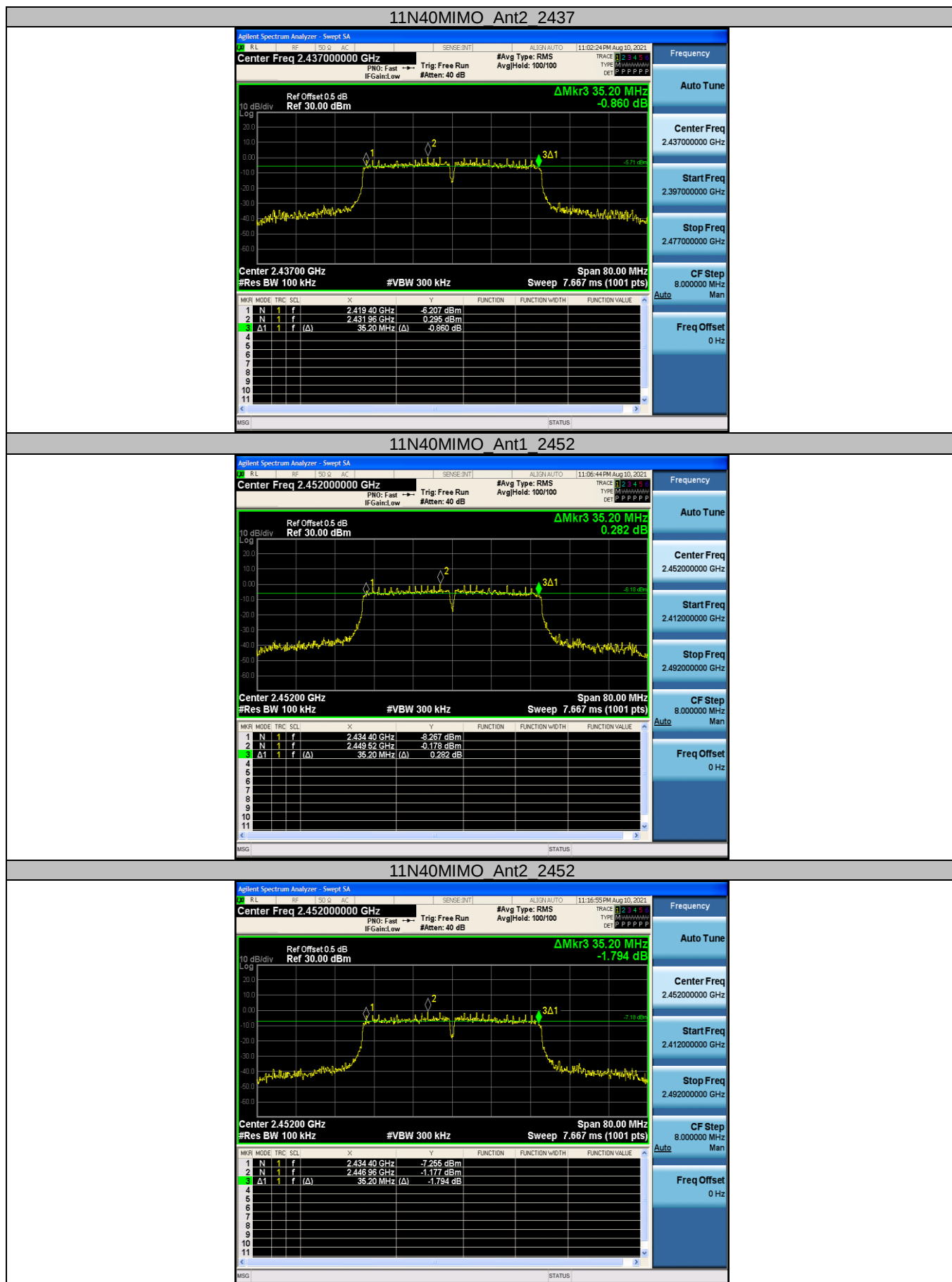
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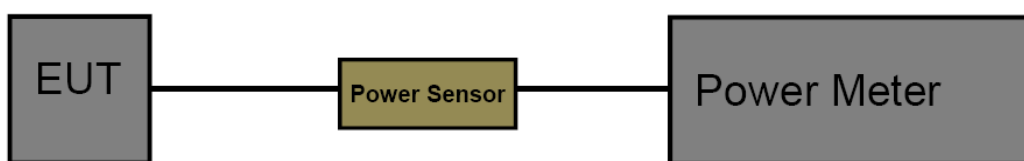
### 3.6. Peak Output Power

#### Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(3)/ RSS-247 5.4:

| Section                 | Test Item                      | Limit           | Frequency Range(MHz) |
|-------------------------|--------------------------------|-----------------|----------------------|
| CFR 47 FCC 15.247(b)(3) | Maximum conducted output power | 1 Watt or 30dBm | 2400~2483.5          |
| ISED RSS-247 5.4 d      | EIRP                           | 4 Watt or 36dBm | 2400~2483.5          |

#### Test Configuration



#### Test Procedure

1. The maximum conducted output power may be measured using a broadband Peak RF power meter.
2. Peak power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor.
3. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.
4. Record the measurement data.

#### Test Mode

Please refer to the clause 2.4.

**Test Result**

| TestMode  | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|-----------|---------|---------|-------------|------------|---------|
| 11B       | Ant1    | 2412    | 20.28       | <=30       | PASS    |
|           | Ant2    | 2412    | 20.93       | <=30       | PASS    |
|           | Ant1    | 2437    | 19.95       | <=30       | PASS    |
|           | Ant2    | 2437    | 20.92       | <=30       | PASS    |
|           | Ant1    | 2462    | 20.16       | <=30       | PASS    |
|           | Ant2    | 2462    | 20.54       | <=30       | PASS    |
| 11G       | Ant1    | 2412    | 24.52       | <=30       | PASS    |
|           | Ant2    | 2412    | 21.22       | <=30       | PASS    |
|           | Ant1    | 2437    | 24.32       | <=30       | PASS    |
|           | Ant2    | 2437    | 21.39       | <=30       | PASS    |
|           | Ant1    | 2462    | 24.42       | <=30       | PASS    |
|           | Ant2    | 2462    | 21.11       | <=30       | PASS    |
| 11N20MIMO | Ant1    | 2412    | 20.21       | <=30       | PASS    |
|           | Ant2    | 2412    | 20.72       | <=30       | PASS    |
|           | total   | 2412    | 23.5        | <=30       | PASS    |
|           | Ant1    | 2437    | 19.88       | <=30       | PASS    |
|           | Ant2    | 2437    | 20.87       | <=30       | PASS    |
|           | total   | 2437    | 23.4        | <=30       | PASS    |
|           | Ant1    | 2462    | 20.03       | <=30       | PASS    |
|           | Ant2    | 2462    | 20.79       | <=30       | PASS    |
|           | total   | 2462    | 23.4        | <=30       | PASS    |
| 11N40MIMO | Ant1    | 2422    | 20.41       | <=30       | PASS    |
|           | Ant2    | 2422    | 20.64       | <=30       | PASS    |
|           | total   | 2422    | 23.5        | <=30       | PASS    |
|           | Ant1    | 2437    | 20.58       | <=30       | PASS    |
|           | Ant2    | 2437    | 20.75       | <=30       | PASS    |
|           | total   | 2437    | 23.7        | <=30       | PASS    |
|           | Ant1    | 2452    | 20.33       | <=30       | PASS    |
|           | Ant2    | 2452    | 19.44       | <=30       | PASS    |
|           | total   | 2452    | 22.9        | <=30       | PASS    |

Note: Test results increased RF cable loss by 0.5dB.



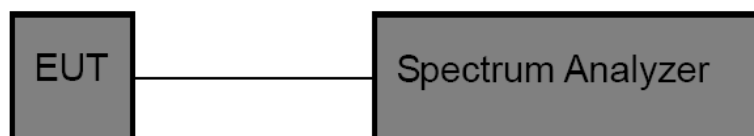
### 3.7. Power Spectral Density

#### Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (e)/ RSS-247 5.2 b:

| Test Item              | Limit              | Frequency Range(MHz) |
|------------------------|--------------------|----------------------|
| Power Spectral Density | 8dBm(in any 3 kHz) | 2400~2483.5          |

#### Test Configuration



#### Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.
3. Spectrum Setting:  
Set analyzer center frequency to DTS channel center frequency.  
Set the span to 1.5 times the DTS bandwidth.  
Set the RBW to: 3 kHz  
Set the VBW to: 10 kHz  
Detector: PK  
Sweep time: Auto  
Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

#### Test Mode

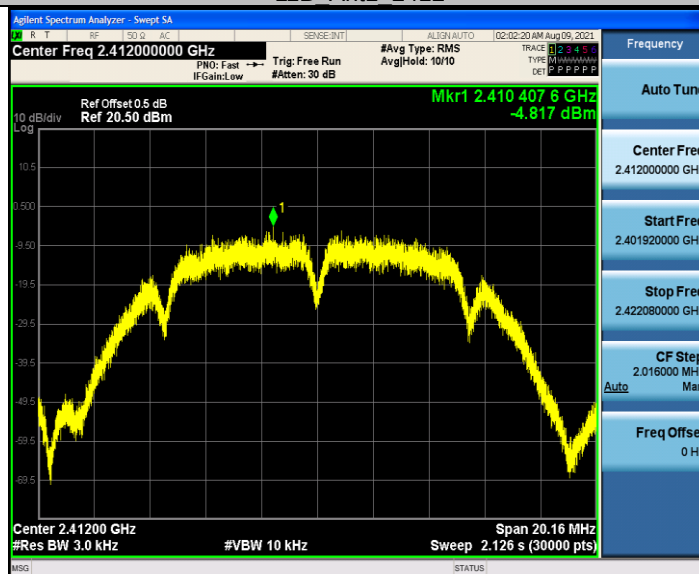
Please refer to the clause 2.4.

**Test Result**

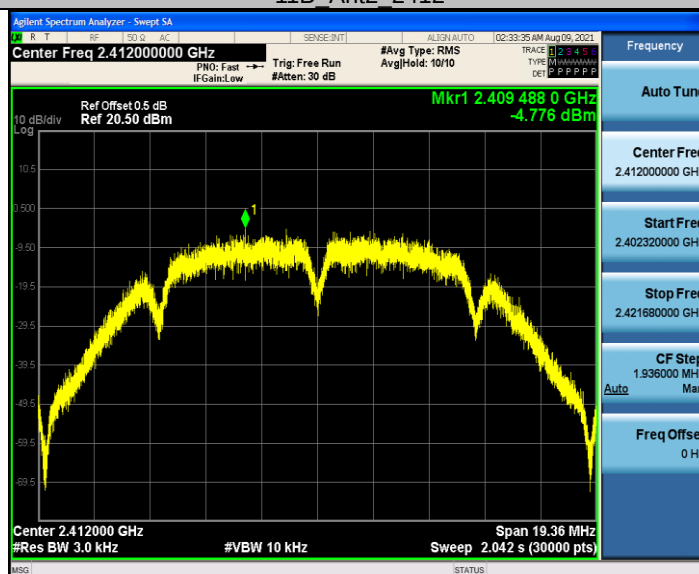
| TestMode  | Antenna | Channel | Result[dBm/3-100kHz] | Limit[dBm/3kHz] | Verdict |
|-----------|---------|---------|----------------------|-----------------|---------|
| 11B       | Ant1    | 2412    | -4.82                | <=8             | PASS    |
|           | Ant2    | 2412    | -4.78                | <=8             | PASS    |
|           | Ant1    | 2437    | -5.63                | <=8             | PASS    |
|           | Ant2    | 2437    | -4.35                | <=8             | PASS    |
|           | Ant1    | 2462    | -4.73                | <=8             | PASS    |
|           | Ant2    | 2462    | -5.21                | <=8             | PASS    |
| 11G       | Ant1    | 2412    | -7.32                | <=8             | PASS    |
|           | Ant2    | 2412    | -10.19               | <=8             | PASS    |
|           | Ant1    | 2437    | -7.77                | <=8             | PASS    |
|           | Ant2    | 2437    | -10.48               | <=8             | PASS    |
|           | Ant1    | 2462    | -7.16                | <=8             | PASS    |
|           | Ant2    | 2462    | -9.65                | <=8             | PASS    |
| 11N20MIMO | Ant1    | 2412    | -9.47                | <=8             | PASS    |
|           | Ant2    | 2412    | -11.52               | <=8             | PASS    |
|           | total   | 2412    | -7.36                | <=8             | PASS    |
|           | Ant1    | 2437    | -11.58               | <=8             | PASS    |
|           | Ant2    | 2437    | -11.22               | <=8             | PASS    |
|           | total   | 2437    | -8.39                | <=8             | PASS    |
|           | Ant1    | 2462    | -12.13               | <=8             | PASS    |
|           | Ant2    | 2462    | -11.84               | <=8             | PASS    |
|           | total   | 2462    | -8.97                | <=8             | PASS    |
| 11N40MIMO | Ant1    | 2422    | -15                  | <=8             | PASS    |
|           | Ant2    | 2422    | -14.23               | <=8             | PASS    |
|           | total   | 2422    | -11.59               | <=8             | PASS    |
|           | Ant1    | 2437    | -14.31               | <=8             | PASS    |
|           | Ant2    | 2437    | -14.88               | <=8             | PASS    |
|           | total   | 2437    | -11.58               | <=8             | PASS    |
|           | Ant1    | 2452    | -14.77               | <=8             | PASS    |
|           | Ant2    | 2452    | -15.05               | <=8             | PASS    |
|           | total   | 2452    | -11.90               | <=8             | PASS    |



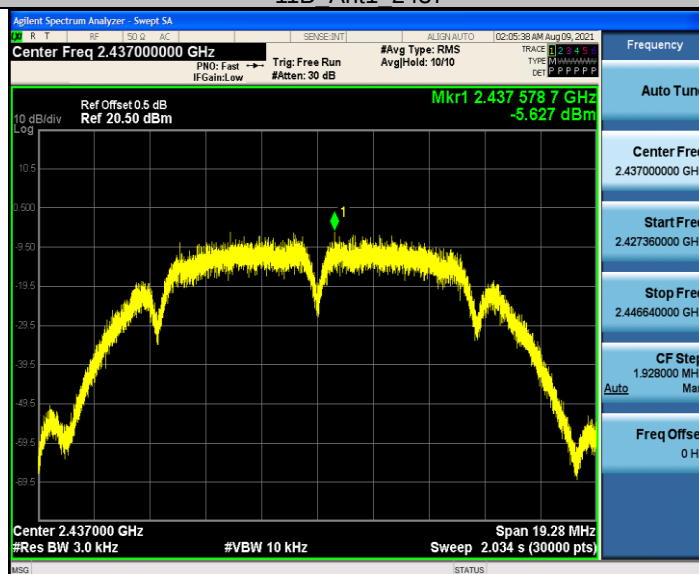
## 11B Ant1 2412



## 11B Ant2 2412



## 11B Ant1 2437



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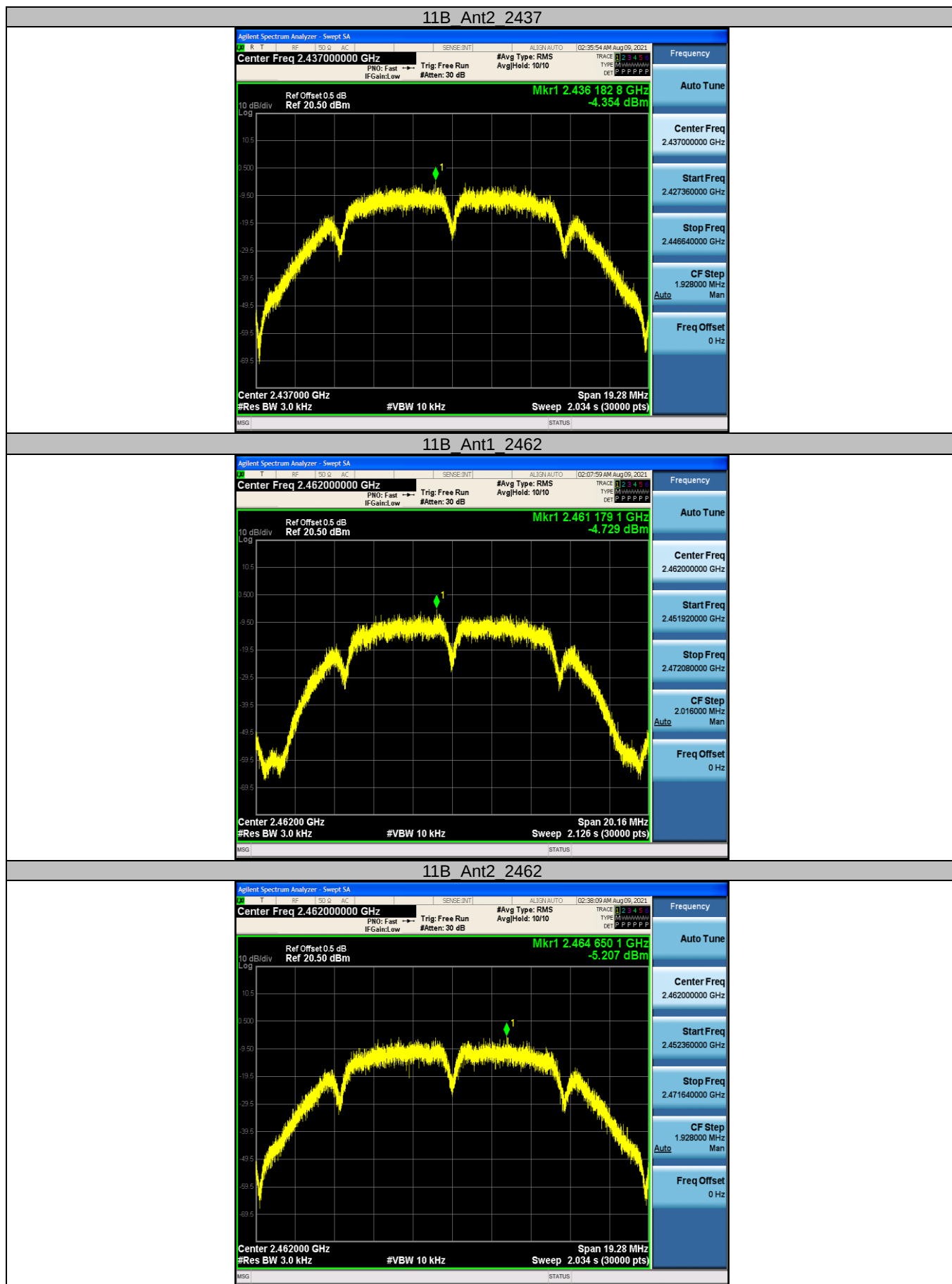
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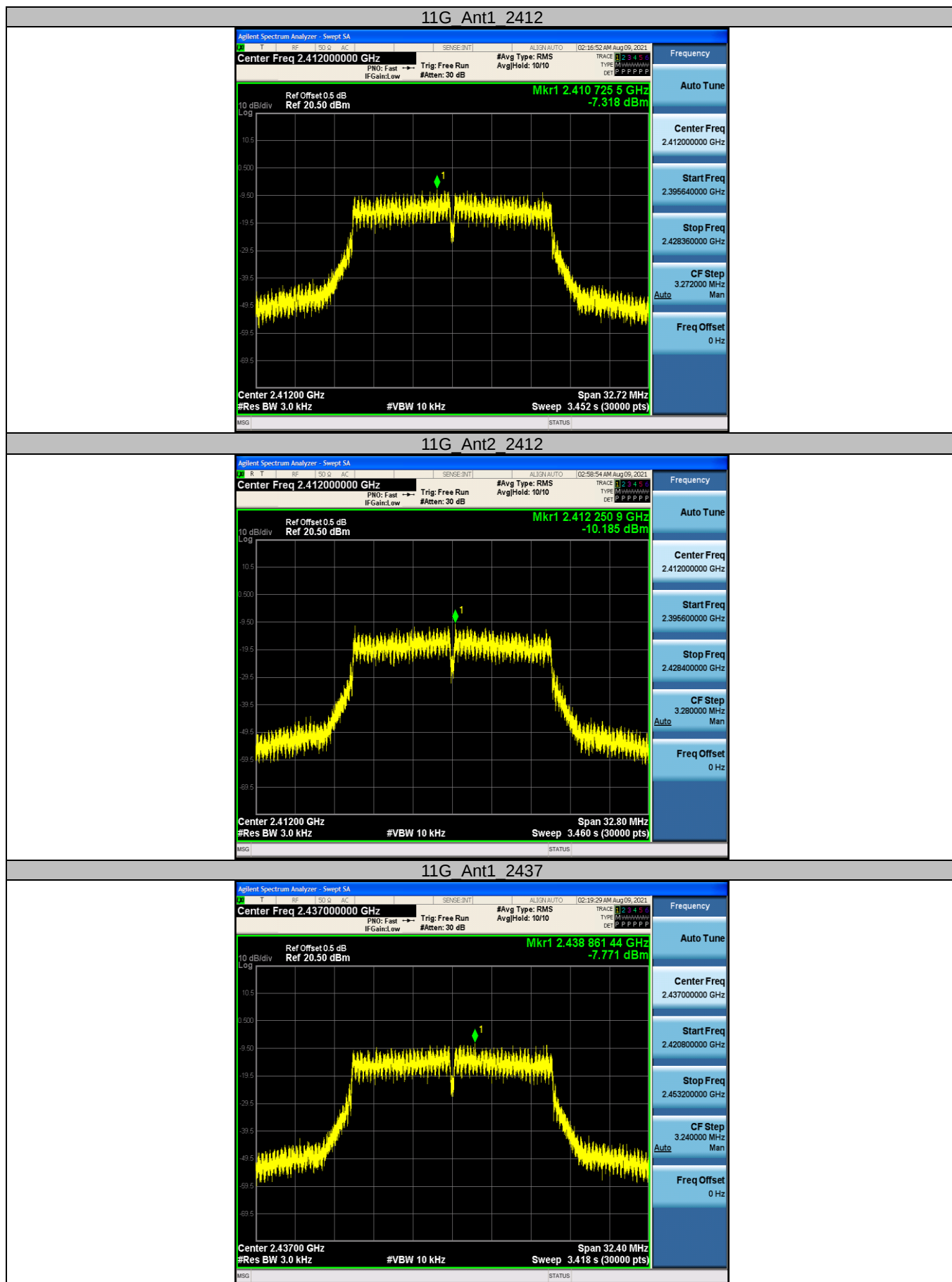
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

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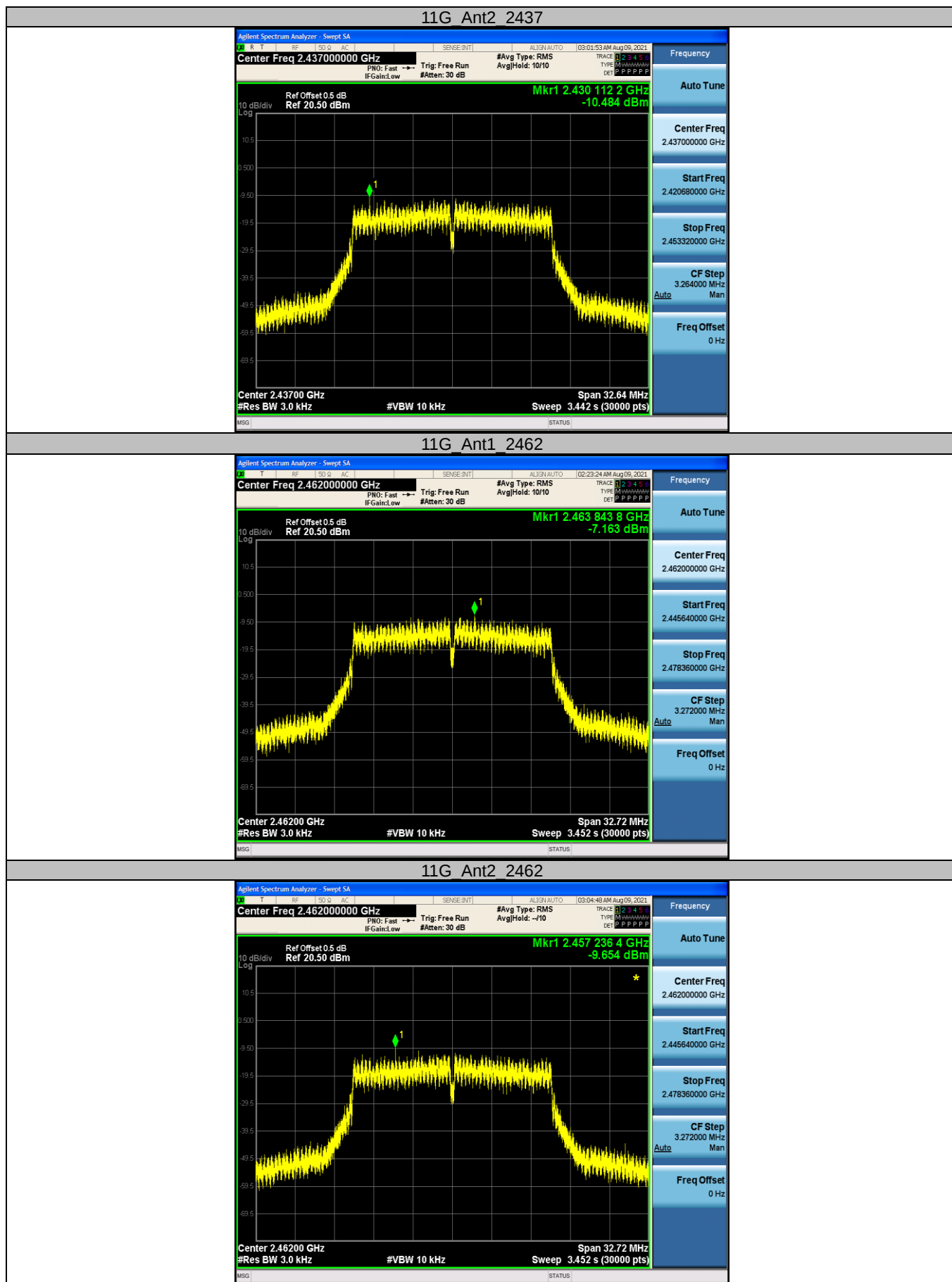
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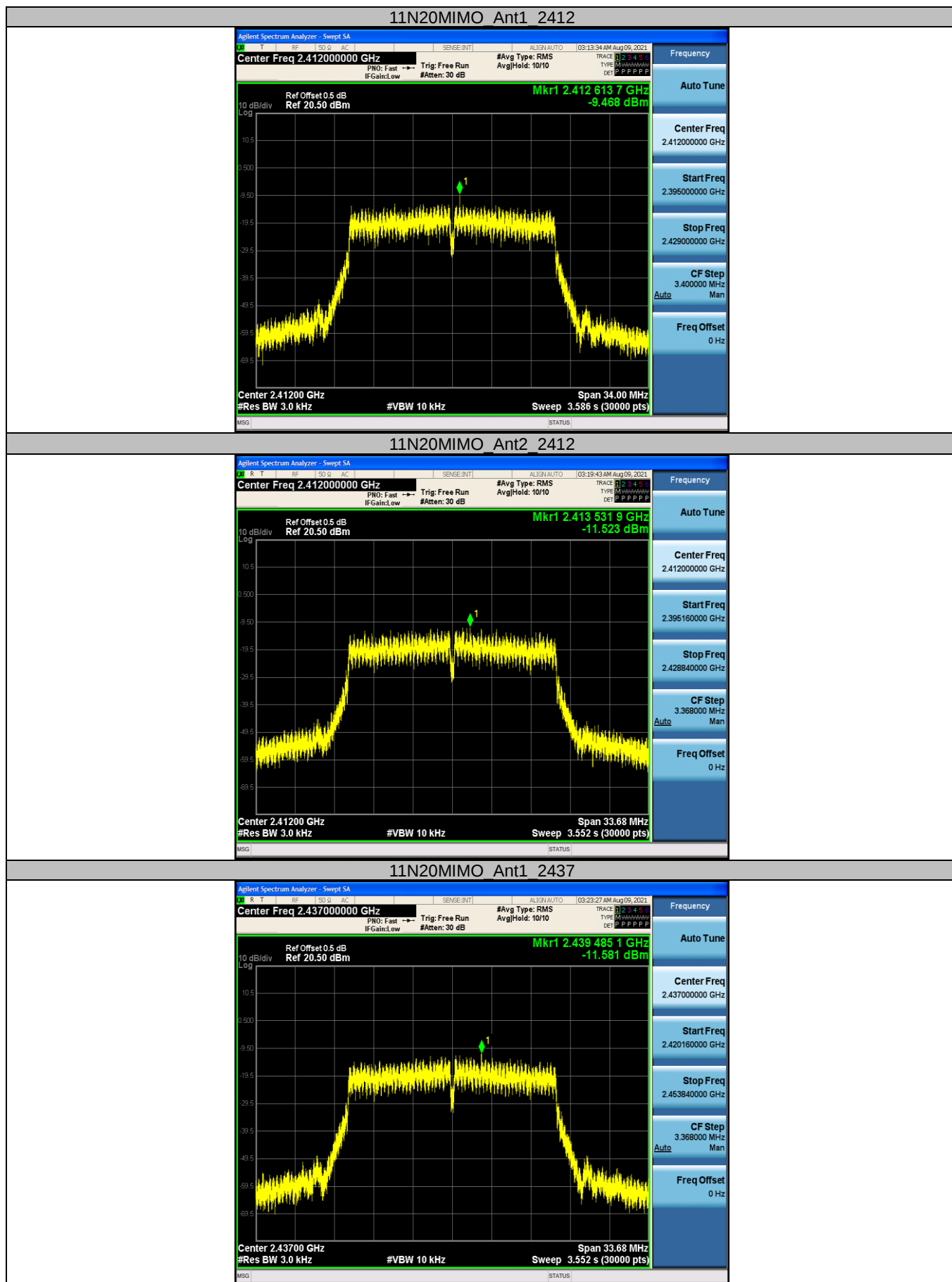
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

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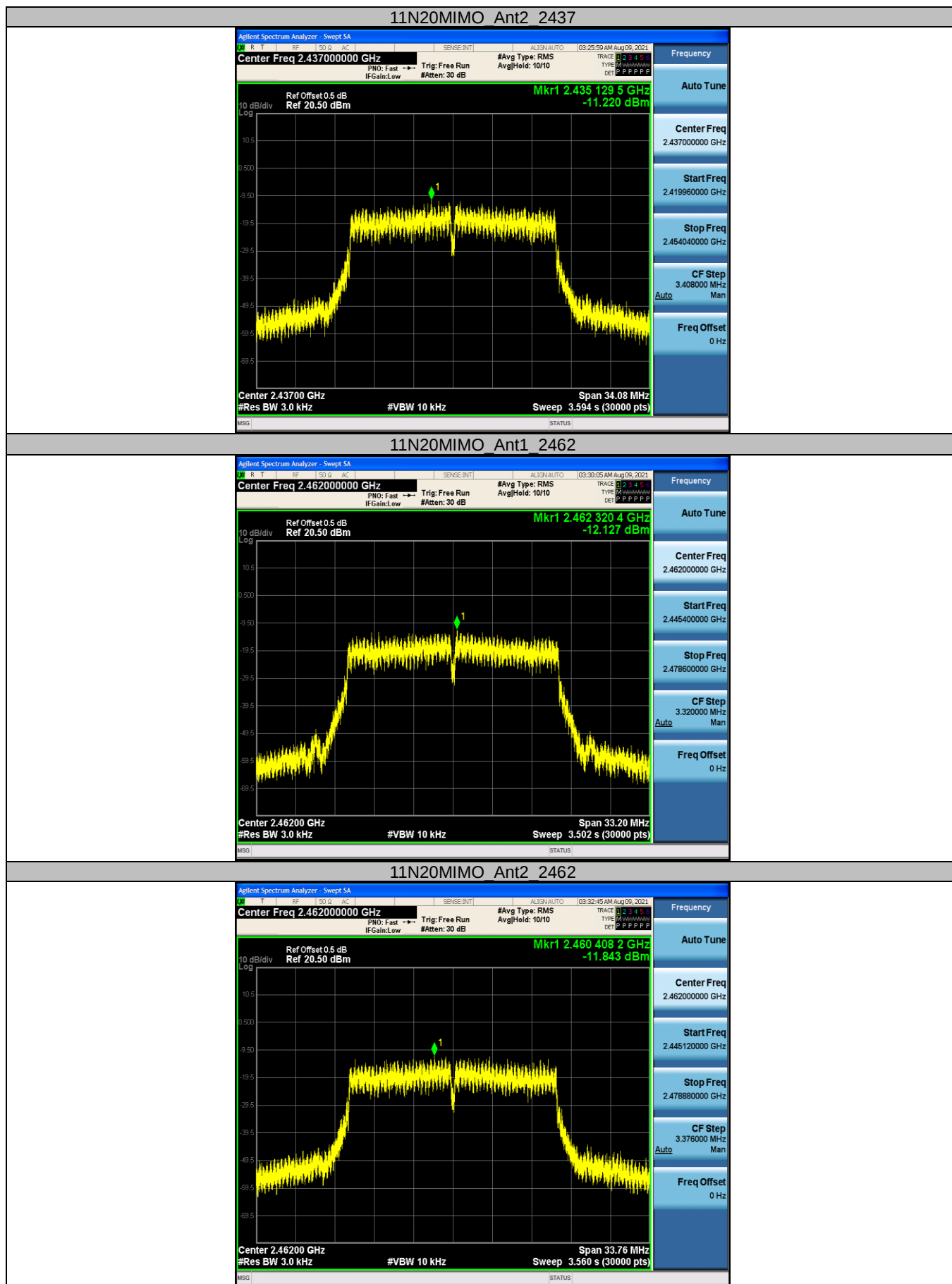
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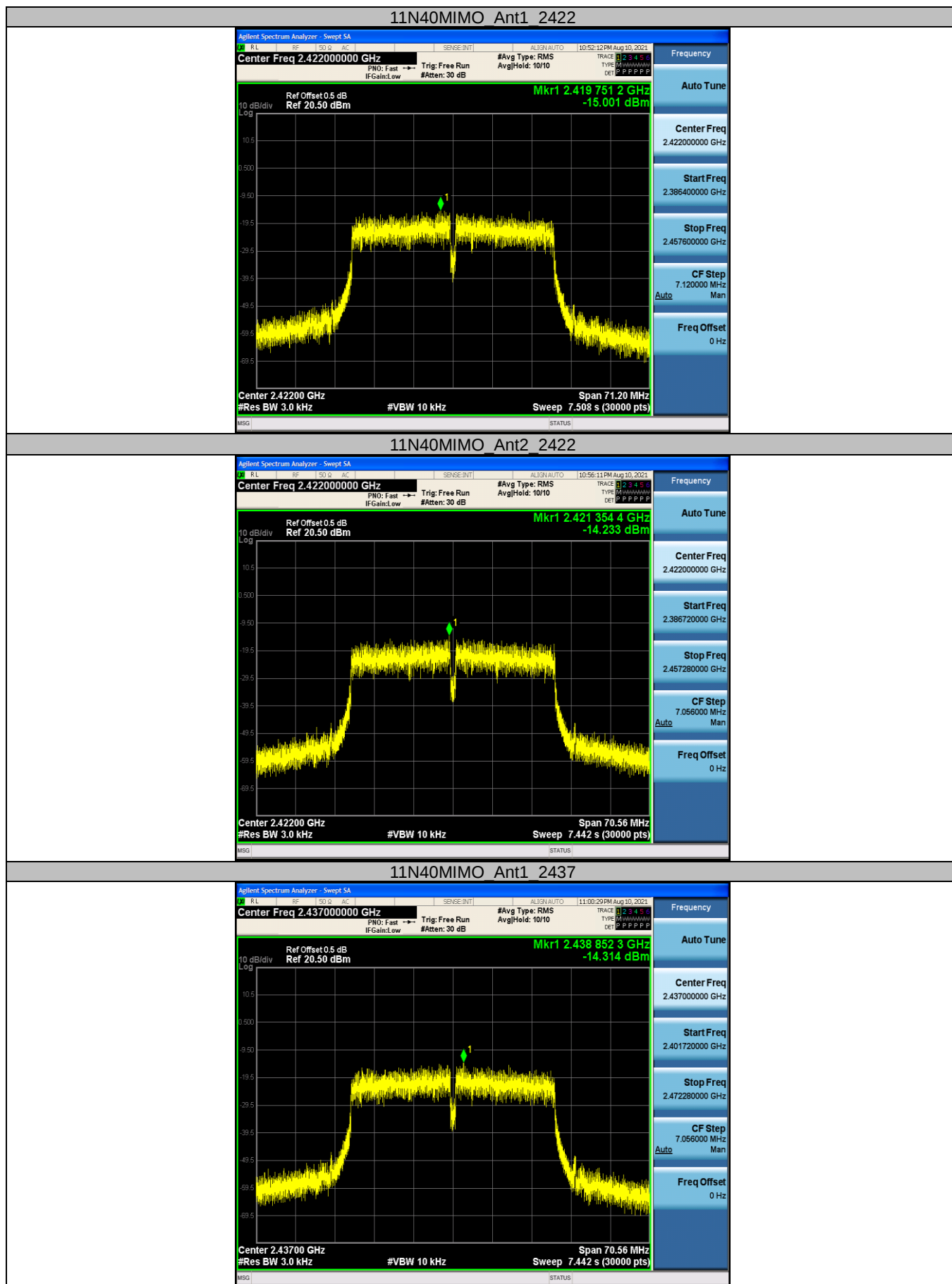
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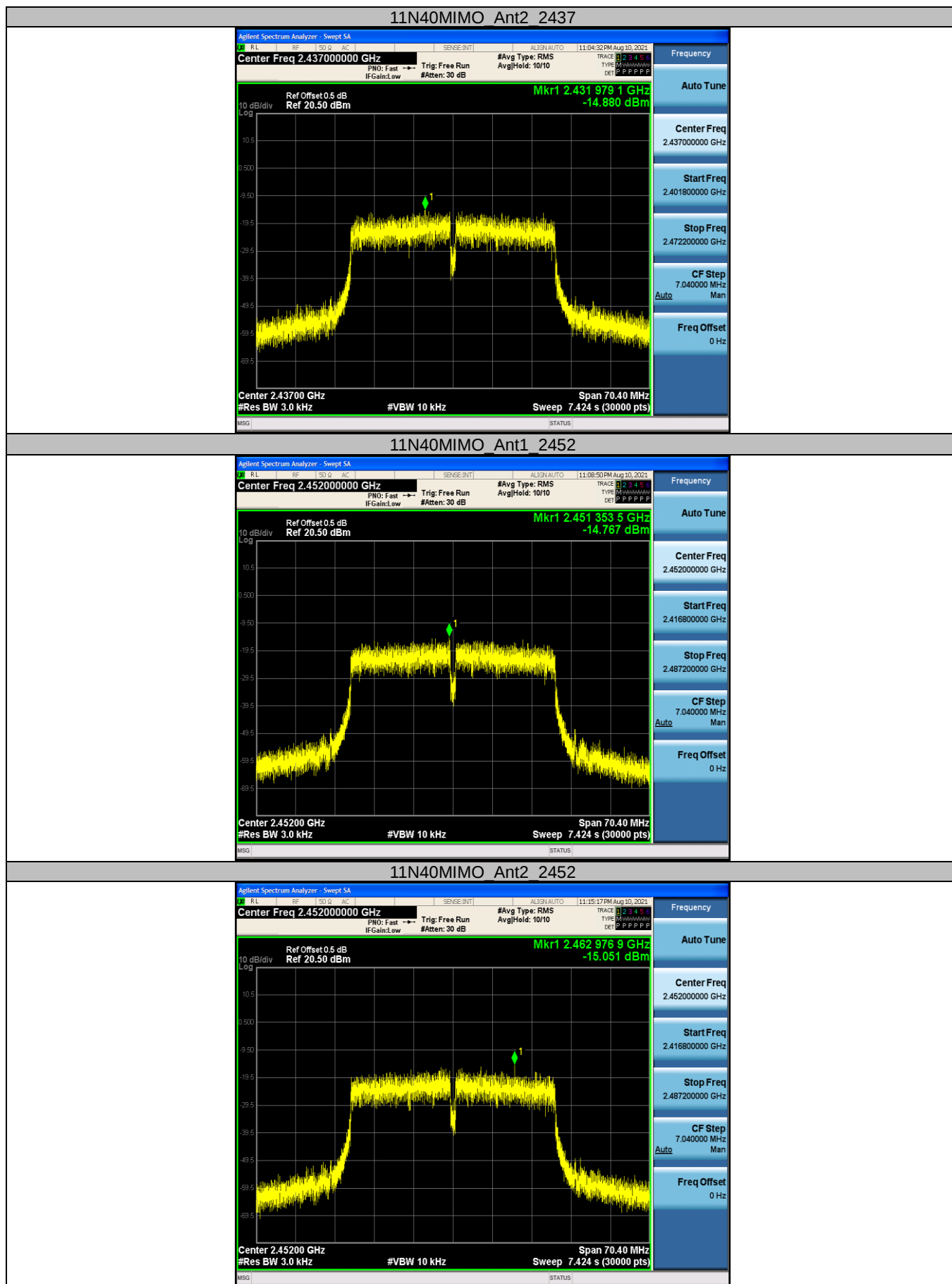
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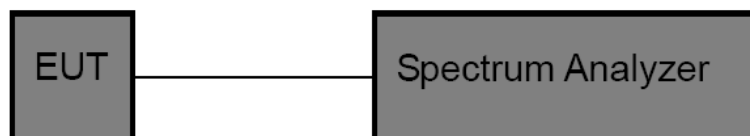
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### 3.8. Duty Cycle

#### Limit

None, for report purposes only.

#### Test Configuration



#### Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.
3. Spectrum Setting:  
Set analyzer center frequency to DTS channel center frequency.  
Set the span to 0Hz  
Set the RBW to 10MHz  
Set the VBW to 10MHz  
Detector: peak  
Sweep time: auto  
Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

#### Test Mode

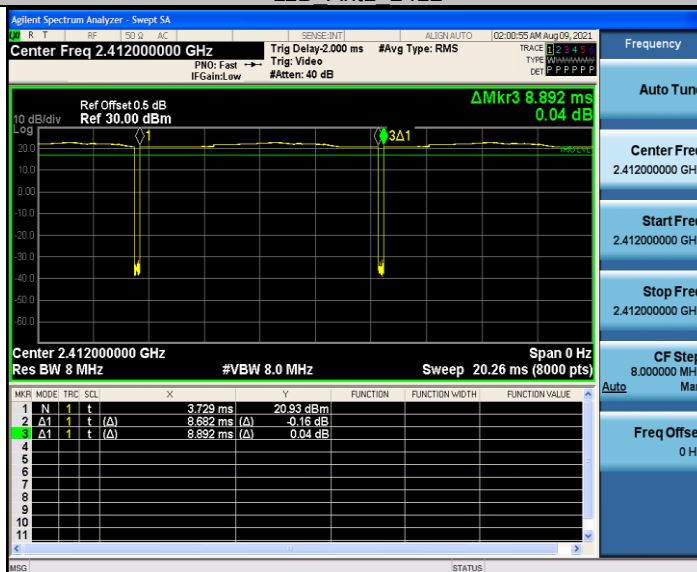
Please refer to the clause 2.4.

**Test Result**

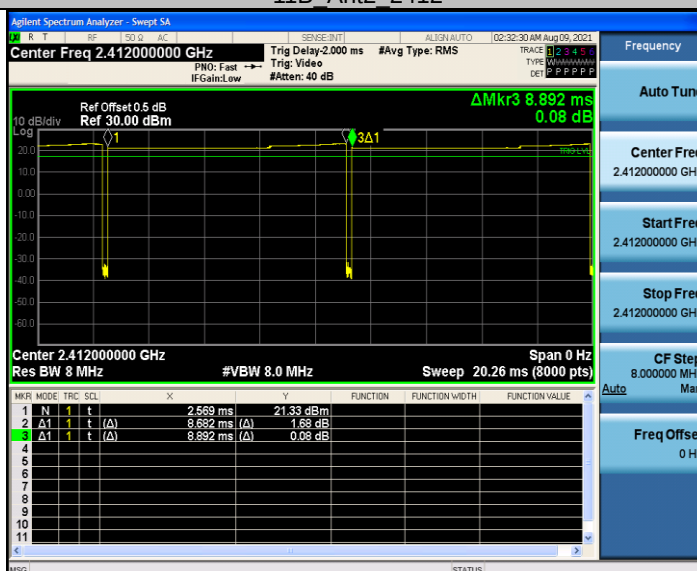
| TestMode  | Antenna | Channel | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] | 1/T Minimum VBW (kHz) | Final setting For VBW (kHz) |
|-----------|---------|---------|----------------------------|--------------------------|----------------|-----------------------|-----------------------------|
| 11B       | Ant1    | 2412    | 8.68                       | 8.89                     | 97.64          | 0.11                  | 1.00                        |
|           | Ant2    | 2412    | 8.68                       | 8.89                     | 97.64          | 0.11                  | 1.00                        |
|           | Ant1    | 2437    | 8.68                       | 8.89                     | 97.64          | 0.11                  | 1.00                        |
|           | Ant2    | 2437    | 8.68                       | 8.89                     | 97.64          | 0.11                  | 1.00                        |
|           | Ant1    | 2462    | 8.68                       | 8.89                     | 97.64          | 0.11                  | 1.00                        |
|           | Ant2    | 2462    | 8.68                       | 8.89                     | 97.64          | 0.11                  | 1.00                        |
| 11G       | Ant1    | 2412    | 1.44                       | 1.65                     | 87.27          | 0.61                  | 1.00                        |
|           | Ant2    | 2412    | 1.44                       | 1.65                     | 87.27          | 0.61                  | 1.00                        |
|           | Ant1    | 2437    | 1.44                       | 1.65                     | 87.27          | 0.61                  | 1.00                        |
|           | Ant2    | 2437    | 1.44                       | 1.65                     | 87.27          | 0.61                  | 1.00                        |
|           | Ant1    | 2462    | 1.44                       | 1.65                     | 87.27          | 0.61                  | 1.00                        |
|           | Ant2    | 2462    | 1.44                       | 1.65                     | 87.27          | 0.61                  | 1.00                        |
| 11N20MIMO | Ant1    | 2412    | 0.68                       | 0.89                     | 76.40          | 1.12                  | 2.00                        |
|           | Ant2    | 2412    | 0.68                       | 0.89                     | 76.40          | 1.12                  | 2.00                        |
|           | Ant1    | 2437    | 0.68                       | 0.89                     | 76.40          | 1.12                  | 2.00                        |
|           | Ant2    | 2437    | 0.68                       | 0.89                     | 76.40          | 1.12                  | 2.00                        |
|           | Ant1    | 2462    | 0.68                       | 0.89                     | 76.40          | 1.12                  | 2.00                        |
|           | Ant2    | 2462    | 0.68                       | 0.89                     | 76.40          | 1.12                  | 2.00                        |
| 11N40MIMO | Ant1    | 2422    | 0.35                       | 0.56                     | 62.50          | 1.79                  | 2.00                        |
|           | Ant2    | 2422    | 0.35                       | 0.56                     | 62.50          | 1.79                  | 2.00                        |
|           | Ant1    | 2437    | 0.35                       | 0.56                     | 62.50          | 1.79                  | 2.00                        |
|           | Ant2    | 2437    | 0.35                       | 0.56                     | 62.50          | 1.79                  | 2.00                        |
|           | Ant1    | 2452    | 0.35                       | 0.56                     | 62.50          | 1.79                  | 2.00                        |
|           | Ant2    | 2452    | 0.35                       | 0.56                     | 62.50          | 1.79                  | 2.00                        |



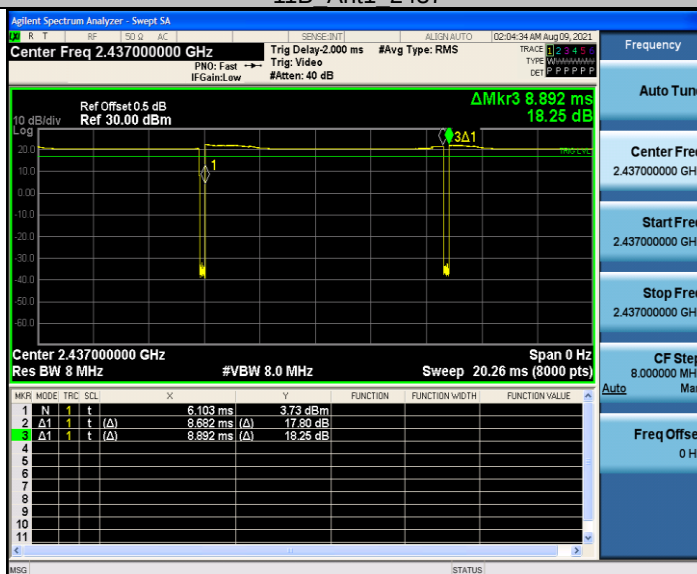
## 11B Ant1 2412



## 11B Ant2 2412



## 11B Ant1 2437



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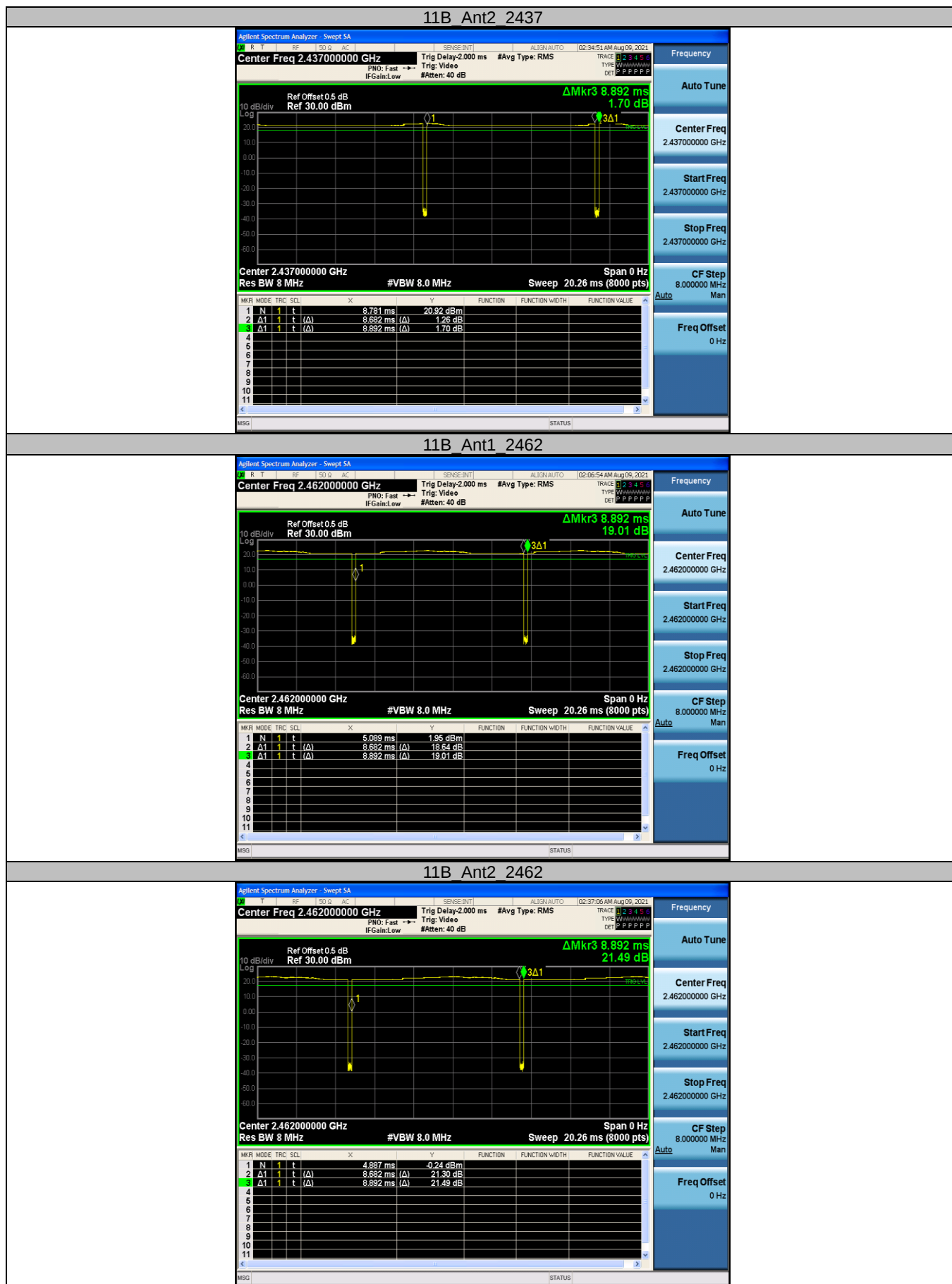
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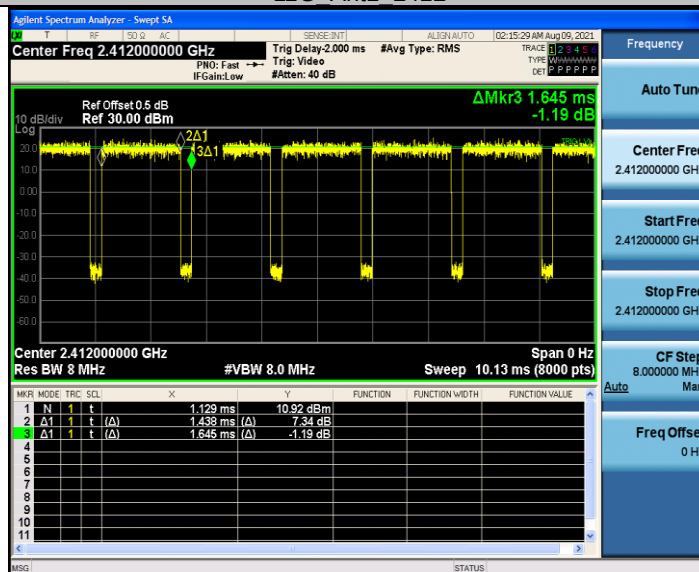
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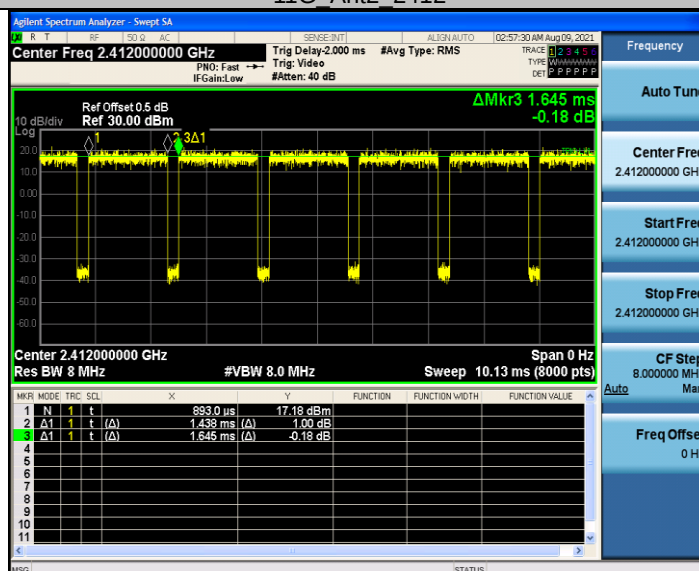
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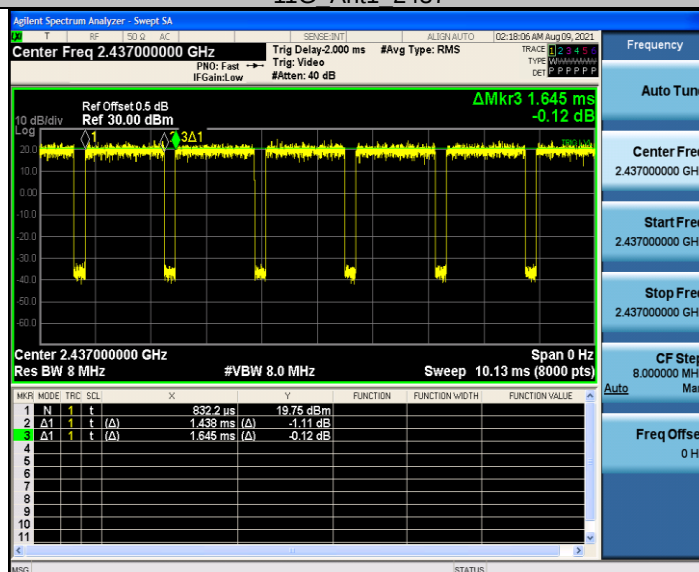
## 11G Ant1 2412



## 11G Ant2 2412



## 11G Ant1 2437



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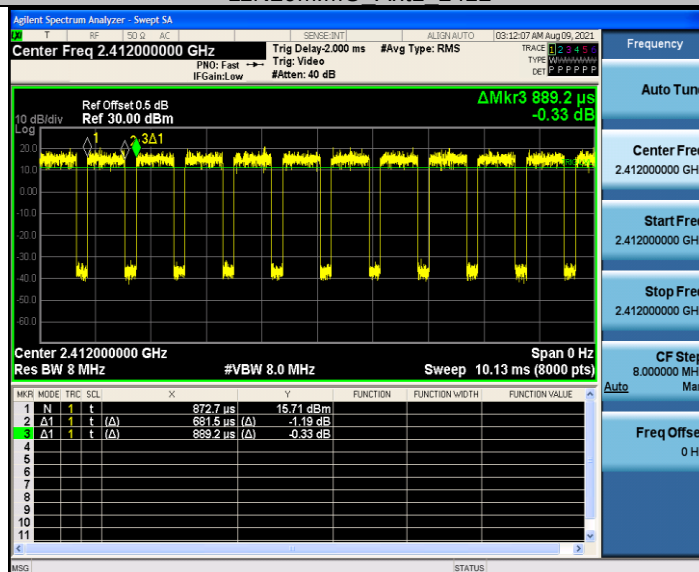
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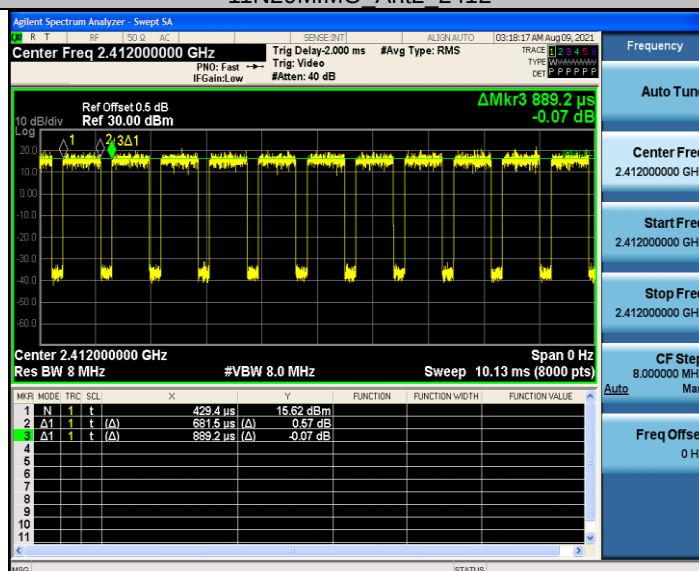
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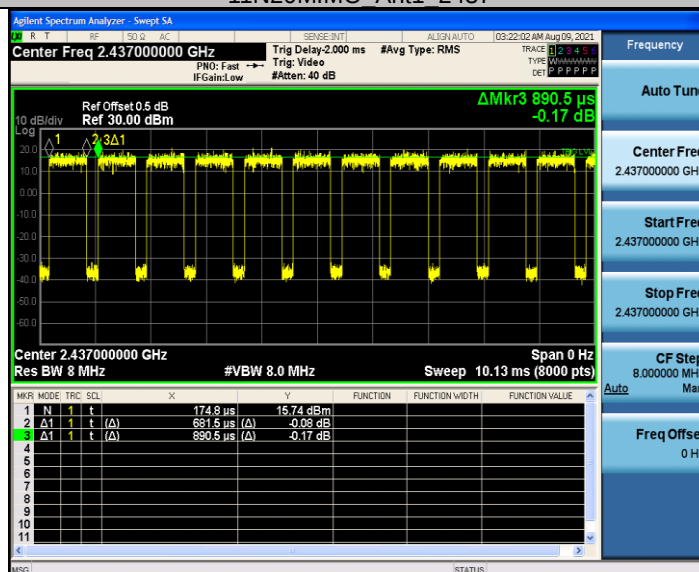
## 11N20MIMO Ant1 2412



## 11N20MIMO Ant2 2412



## 11N20MIMO Ant1 2437



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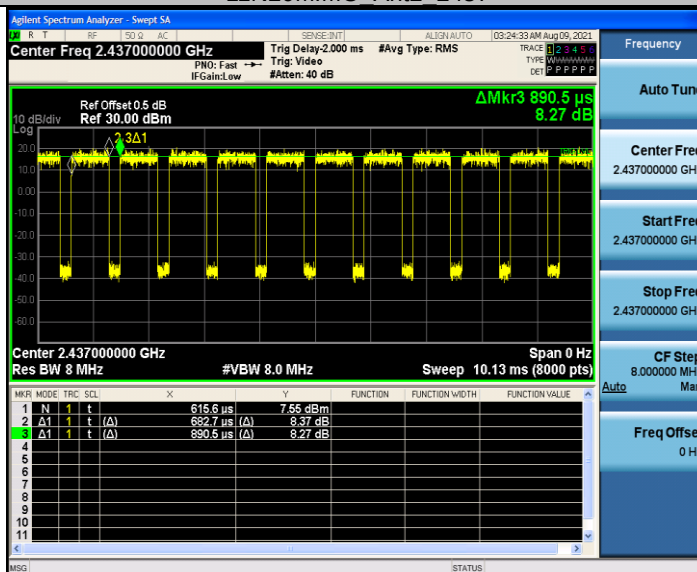
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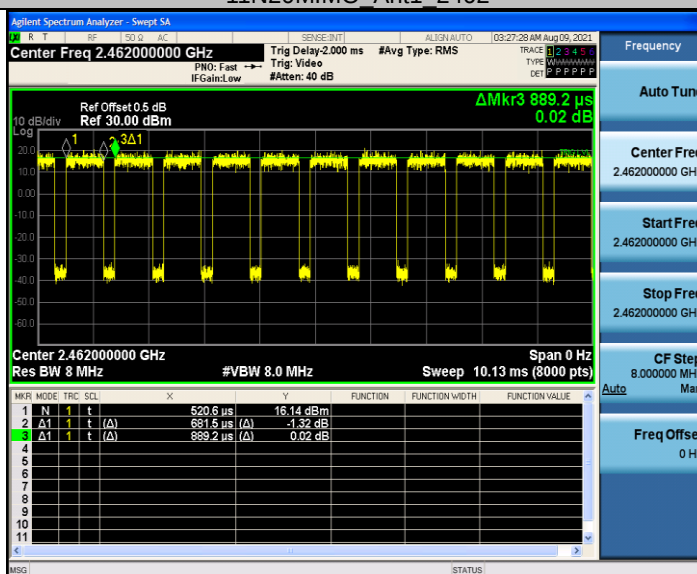
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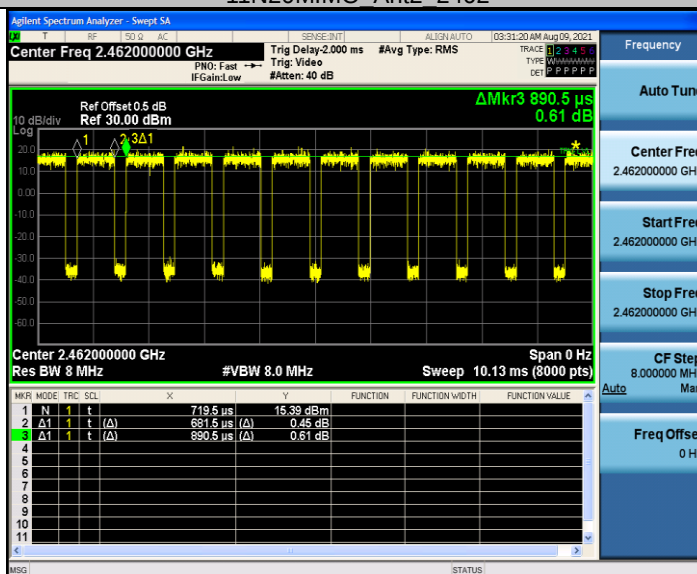
## 11N20MIMO Ant2 2437



## 11N20MIMO Ant1 2462



## 11N20MIMO Ant2 2462



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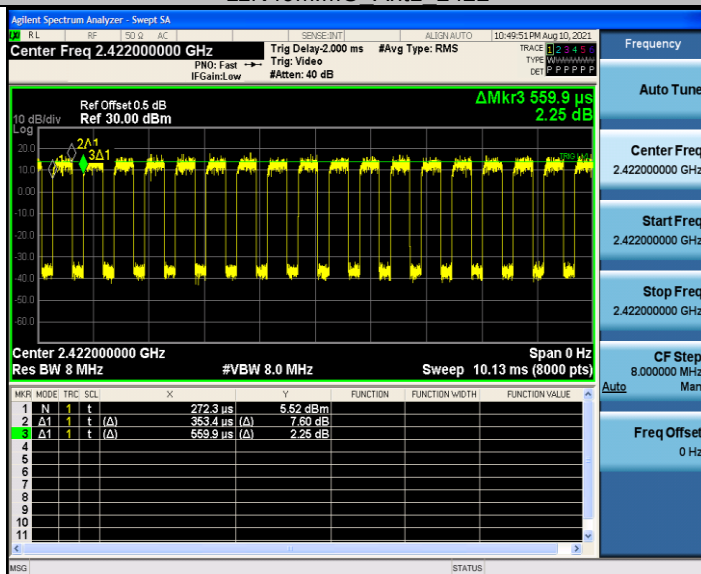
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

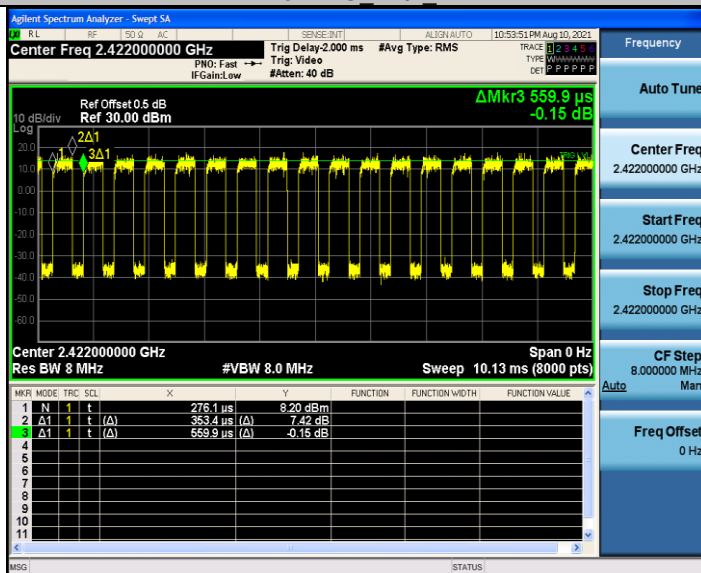
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China: [yz.cnca.cn](http://yz.cnca.cn)



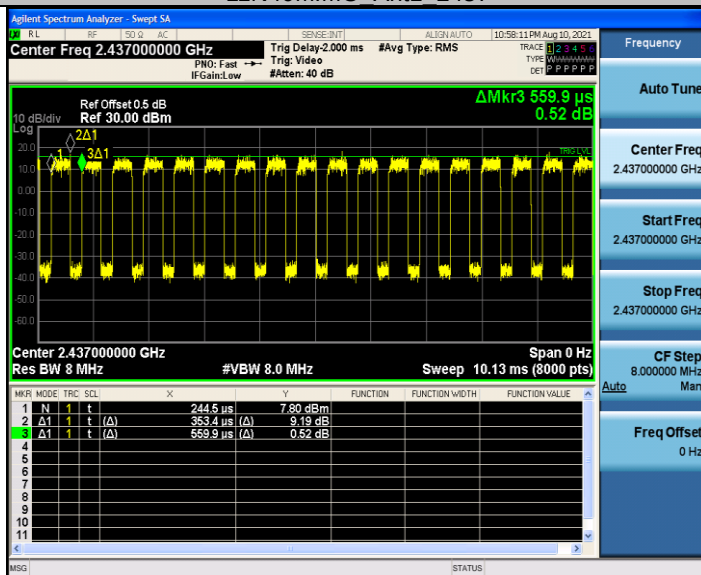
## 11N40MIMO Ant1 2422



## 11N40MIMO Ant2 2422



## 11N40MIMO Ant1 2437



CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

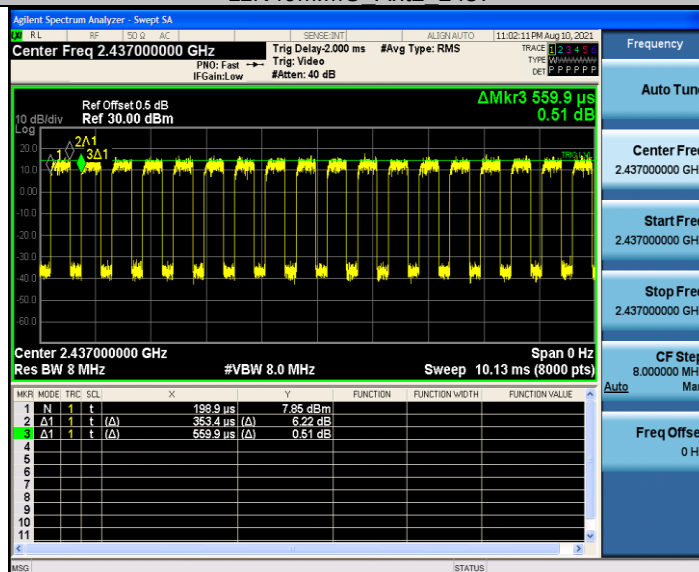
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

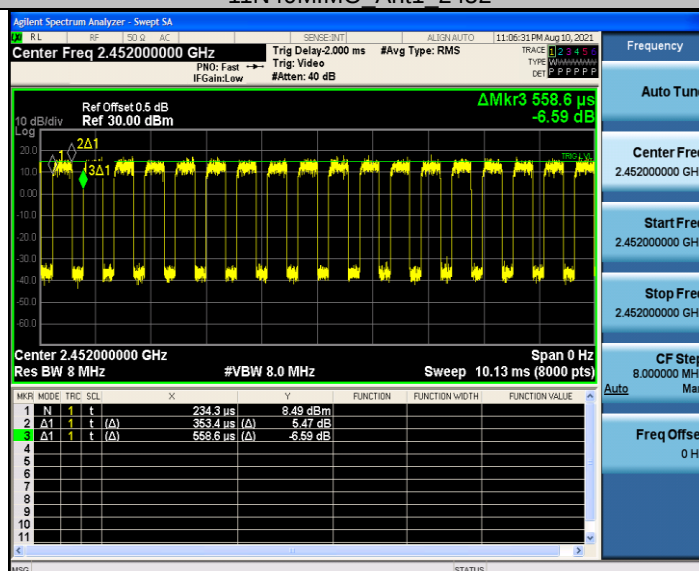
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China: [yz.cnca.cn](http://yz.cnca.cn)



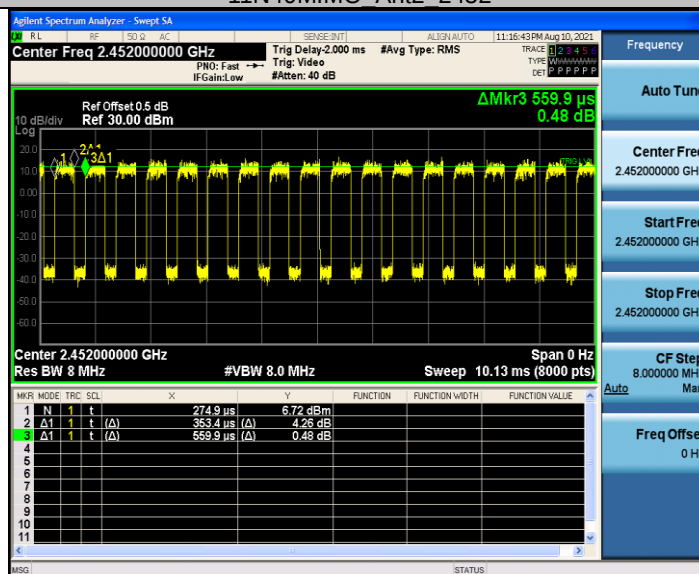
## 11N40MIMO Ant2 2437



## 11N40MIMO Ant1 2452



## 11N40MIMO Ant2 2452



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### 3.9. Antenna Requirement

#### Requirement

**FCC CFR Title 47 Part 15 Subpart C 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 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.

**FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i):**

(i) Systems operating in the 2400~2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

#### Test Result

Complies

Directional gain =  $G_{ANT}$  = 5dBi

Note: All transmit signals are completely uncorrelated with each other in MIMO transmitting modes (Manufacturer's Declaration).

\*\*\*\*\*THE END\*\*\*\*\*