

**REMARKS:**

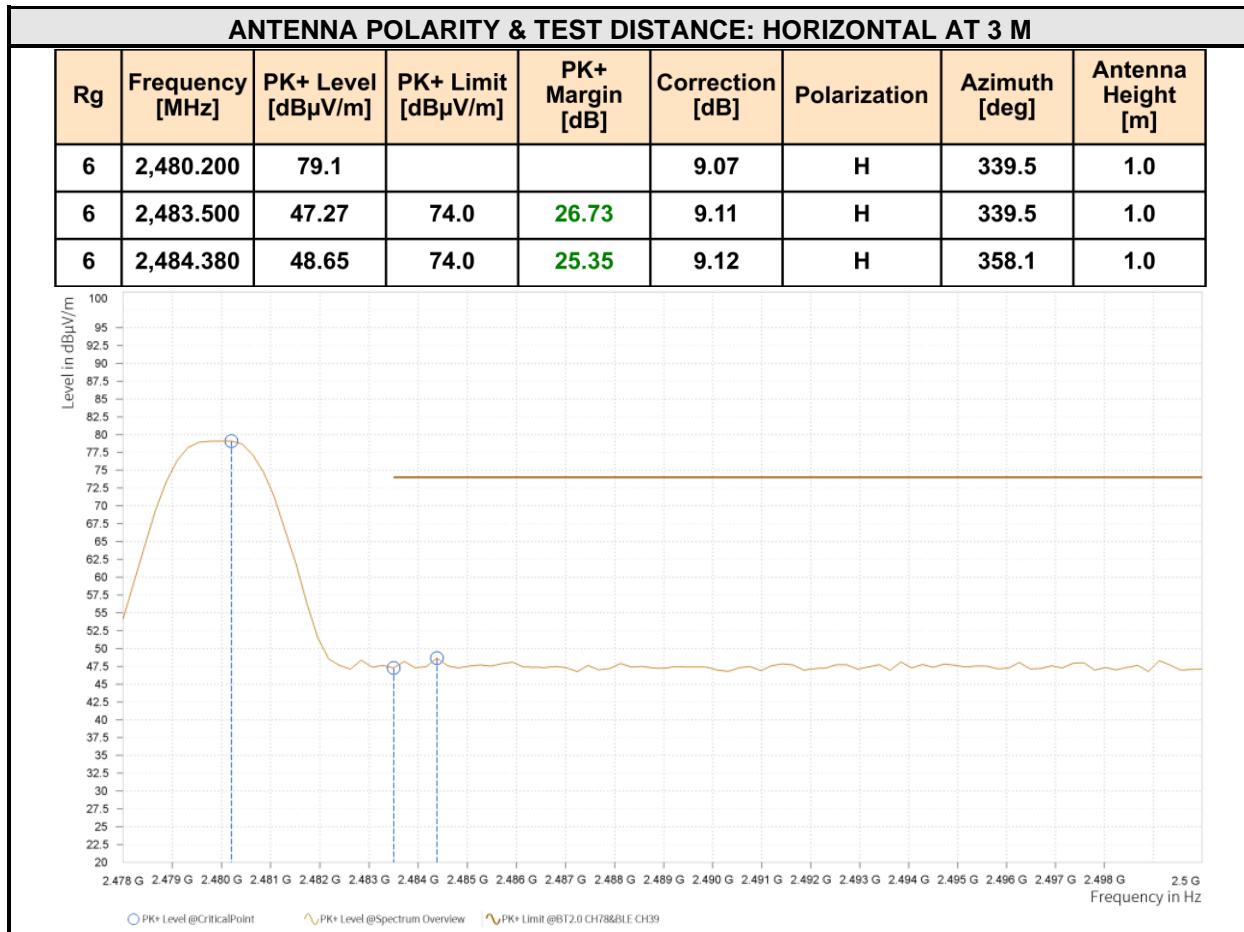
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Limit value-Emission level.
2. 2440MHz: Fundamental frequency.

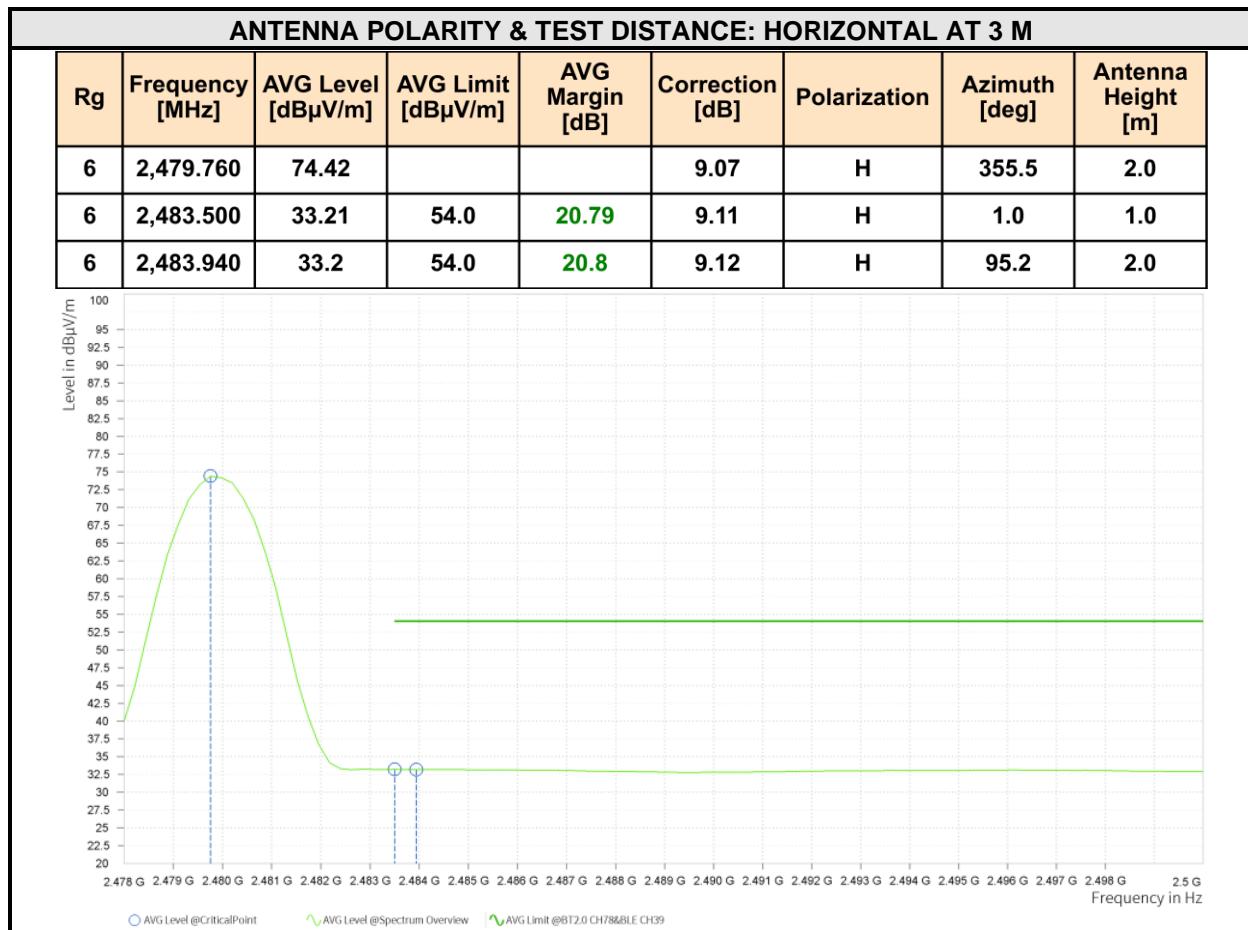


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Test Report No.: PSU-QBJ2408220111RF05

|                 |               |                      |              |
|-----------------|---------------|----------------------|--------------|
| CHANNEL         | TX Channel 39 | DETECTOR<br>FUNCTION | Peak (PK)    |
| FREQUENCY RANGE | 1GHz ~ 25GHz  |                      | Average (AV) |

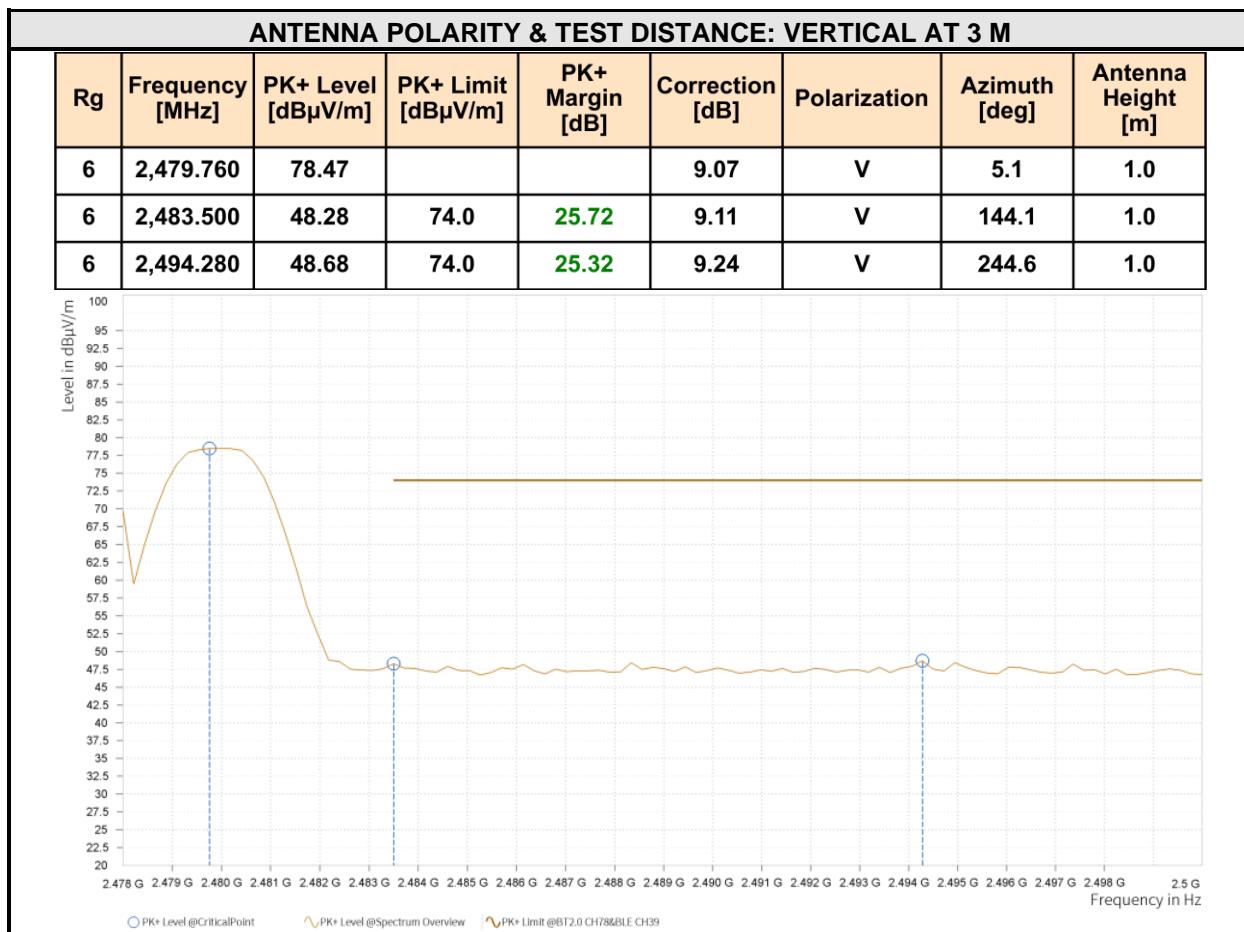


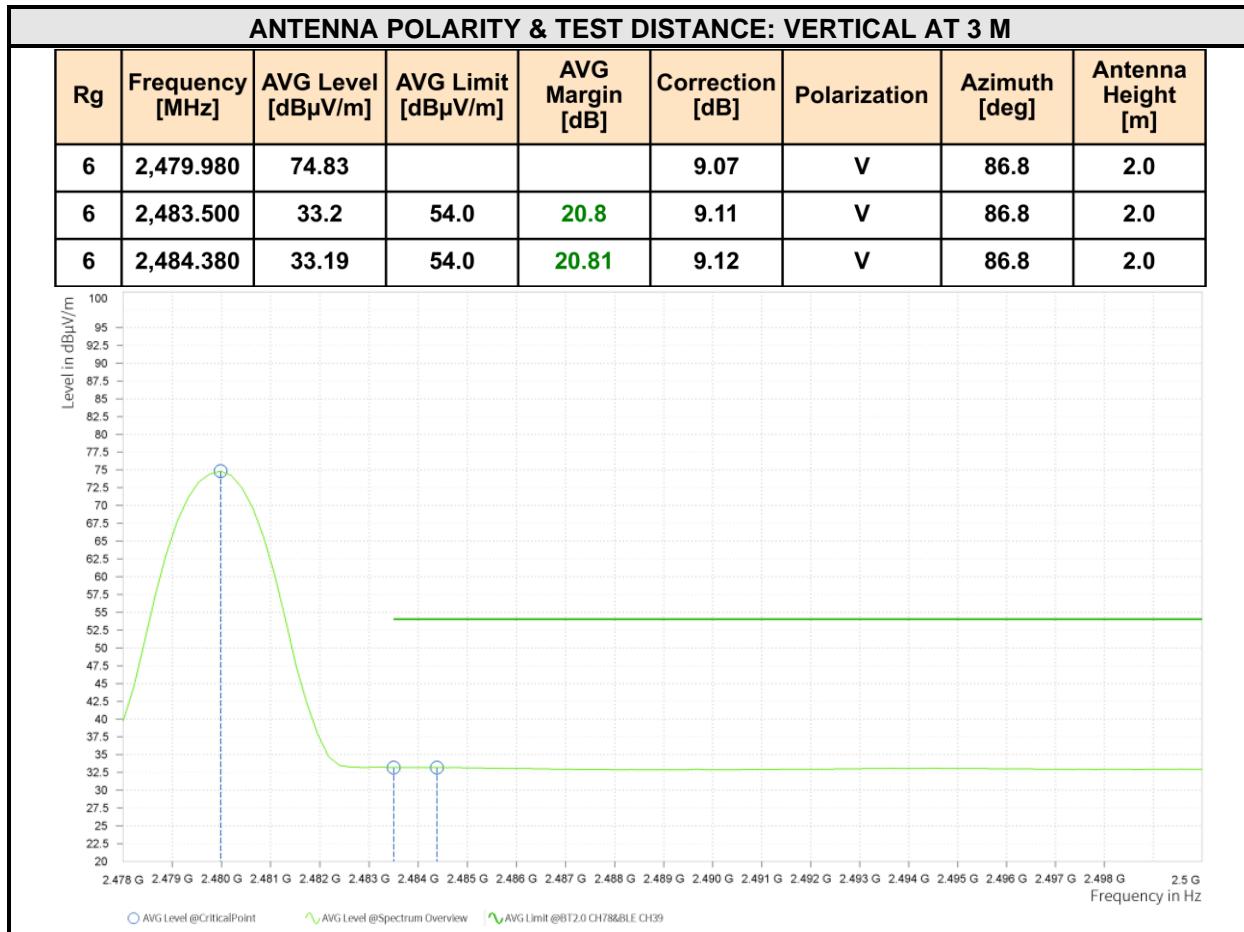




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#### REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor  
Margin value = Limit value—Emission level.
2. 2480MHz: Fundamental frequency.



### 3.2 6 dB BANDWIDTH MEASUREMENT

#### 3.2.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum 6dB Bandwidth Measurement is 0.5 MHz.

#### 3.2.2 TEST INSTRUMENTS

| Equipment                          | Manufacturer | Model No.       | Serial No.     | Last Cal. | Next Cal. |
|------------------------------------|--------------|-----------------|----------------|-----------|-----------|
| EMI Test Receiver                  | R&S          | ESW 44          | 101973         | Mar.28,24 | Mar.27,26 |
| Open Switch and Control Unit       | R&S          | OSP-B157W8      | 100836         | N/A       | N/A       |
| Vector Signal Generator            | R&S          | SMBV100B        | 102176         | Mar.29,24 | Mar.28,26 |
| Signal Generator                   | R&S          | SMB100A03       | 182185         | Mar.29,24 | Mar.28,26 |
| WIDEBANDRADIO COMMUNICATION TESTER | R&S          | CMW500          | 169399         | Jun.19,24 | Jun.18,26 |
| Hygrothermograph                   | DELI         | 20210528        | SZ015          | Sep.06,22 | Sep.05,24 |
| Hygrothermograph                   | DELI         | 20210528        | SZ015          | Sep.05,24 | Sep.04,26 |
| PC                                 | LENOVO       | E14             | HRSW0024       | N/A       | N/A       |
| CABLE                              | R&S          | J12J103539-00-1 | SEP-03-20-069  | Apr.27,24 | Apr.26,25 |
| CABLE                              | R&S          | J12J103539-00-1 | SEP-03-20-070  | Apr.27,24 | Apr.26,25 |
| Test Software                      | EMC32        | EMC32           | N/A            | N/A       | N/A       |
| Temperature Chamber                | votsch       | VT4002          | 58566078100050 | May.30,24 | May.29,26 |
| Power Meter                        | R&S          | NRX             | 102380         | Mar.28,24 | Mar.27,26 |
| Power Meter probe                  | R&S          | NRP6A           | 102942         | Mar.28,24 | Mar.27,26 |

#### NOTE:

1. The calibration interval of the above test instruments is 12/ 24 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in RF Oven room.



### 3.2.3 TEST PROCEDURE

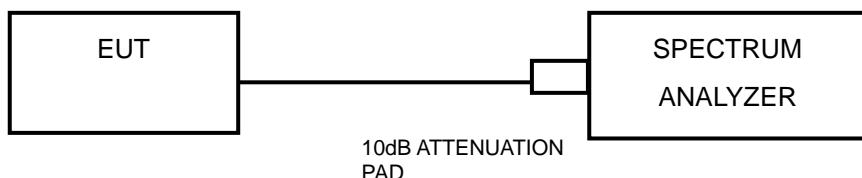
1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW)  $\geq 3$  RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.



### 3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

### 3.2.5 TEST SETUP



### 3.2.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



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### 3.2.7 TEST RESULTS

Please Refer to Appendix Of this test report..

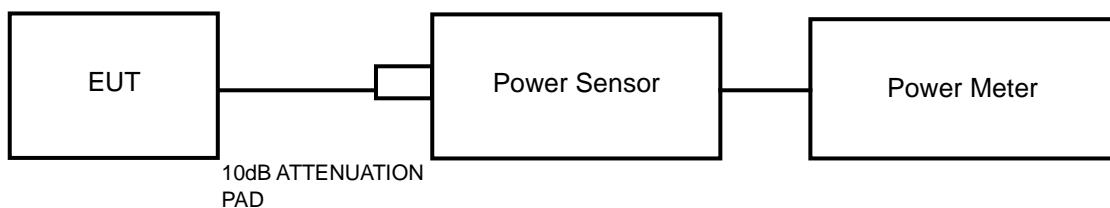


### 3.3 CONDUCTED OUTPUT POWER

#### 3.3.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 2400–2483.5 MHz band: 1 Watt (30dBm)

#### 3.3.2 TEST SETUP



#### 3.3.3 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

#### 3.3.4 TEST PROCEDURES

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

#### 3.3.5 DEVIATION FROM TEST STANDARD

No deviation.

#### 3.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



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### 3.3.7 TEST RESULTS

#### 3.4.7.1 MAXIMUM PEAK OUTPUT POWER

Please Refer to Appendix Of this test report.



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### 3.4.7.2 AVERAGE OUTPUT POWER (FOR REFERENCE)

The average power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. Record the power level.

Please Refer to Appendix Of this test report.

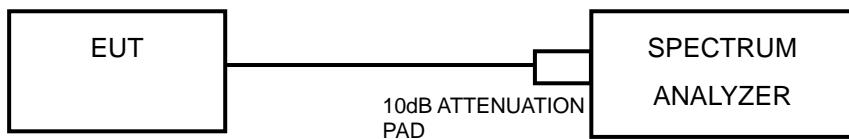


### 3.4 POWER SPECTRAL DENSITY MEASUREMENT

#### 3.4.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm/3KHz.

#### 3.4.2 TEST SETUP



#### 3.4.3 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

#### 3.4.4 TEST PROCEDURE

1. Set the span to 1.5 times the DTS bandwidth
2. Set the RBW = 3 kHz, VBW  $\geq$  3 x RBW, Detector = peak.
3. Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
4. Use the peak marker function to determine the maximum amplitude level.

#### 3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

#### 3.4.6 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



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### 3.4.7 TEST RESULTS

Please Refer to Appendix Of this test report.

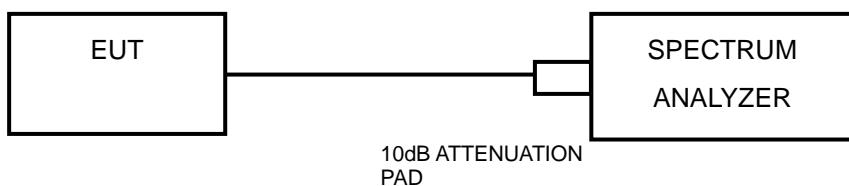


### 3.5 OUT OF BAND EMISSION MEASUREMENT

#### 3.5.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

#### 3.5.2 TEST SETUP



#### 3.5.3 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

#### 3.5.4 TEST PROCEDURE

##### MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW  $\geq$  300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.



## **MEASUREMENT PROCEDURE OUBE**

1. Set RBW = 100 kHz.
2. Set VBW  $\geq$  300 kHz.
3. Set span to encompass the spectrum to be examined
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.

### **3.5.5 DEVIATION FROM TEST STANDARD**

No deviation.

### **3.5.6 EUT OPERATING CONDITION**

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

### **3.5.7 TEST RESULTS**

The spectrum plots are attached on the following images. D1 line indicates the highest level. D2 line indicates the 20dB offset below D1. It shows compliance to the requirement.

Please Refer to Appendix Of this test report.



### 3.6 ANTENNA REQUIREMENTS

#### 3.6.1 STANDARD APPLICABLE

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### 3.6.2 ANTENNA CONNECTED CONSTRUCTION

An embedded-in antenna design is used.

#### 3.6.3 ANTENNA GAIN

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit and PSD limit.



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## 4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



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## 5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.



## 6 Appendix

### WLAN

#### DTS BANDWIDTH

#### TEST RESULT

| TestMode  | Antenna | Frequency[MHz] | DTS BW [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|-----------|---------|----------------|--------------|----------|----------|------------|---------|
| 11B       | Ant1    | 2412           | 8.920        | 2407.440 | 2416.360 | 0.5        | PASS    |
|           |         | 2437           | 9.360        | 2432.000 | 2441.360 | 0.5        | PASS    |
|           |         | 2462           | 9.320        | 2456.960 | 2466.280 | 0.5        | PASS    |
| 11G       | Ant1    | 2412           | 16.360       | 2403.800 | 2420.160 | 0.5        | PASS    |
|           |         | 2437           | 16.320       | 2428.840 | 2445.160 | 0.5        | PASS    |
|           |         | 2462           | 16.320       | 2453.840 | 2470.160 | 0.5        | PASS    |
| 11N20SISO | Ant1    | 2412           | 17.000       | 2403.480 | 2420.480 | 0.5        | PASS    |
|           |         | 2437           | 16.920       | 2428.560 | 2445.480 | 0.5        | PASS    |
|           |         | 2462           | 16.720       | 2453.760 | 2470.480 | 0.5        | PASS    |
| 11N40SISO | Ant1    | 2422           | 31.840       | 2406.080 | 2437.920 | 0.5        | PASS    |
|           |         | 2437           | 31.680       | 2421.320 | 2453.000 | 0.5        | PASS    |
|           |         | 2452           | 31.680       | 2436.320 | 2468.000 | 0.5        | PASS    |



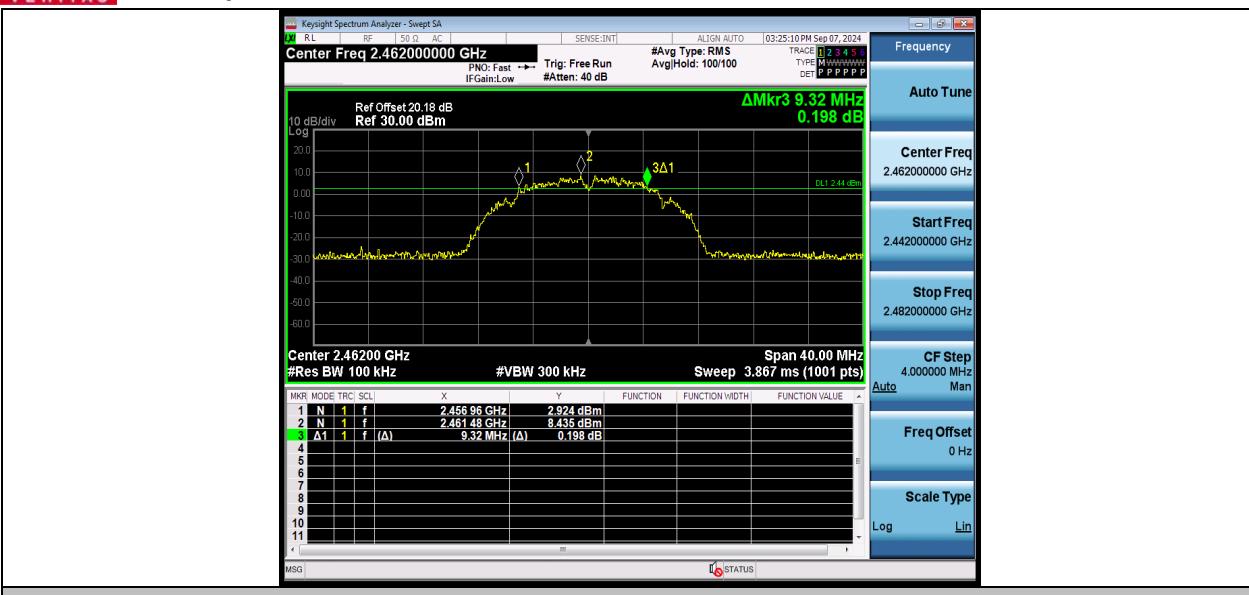
## TEST GRAPHS



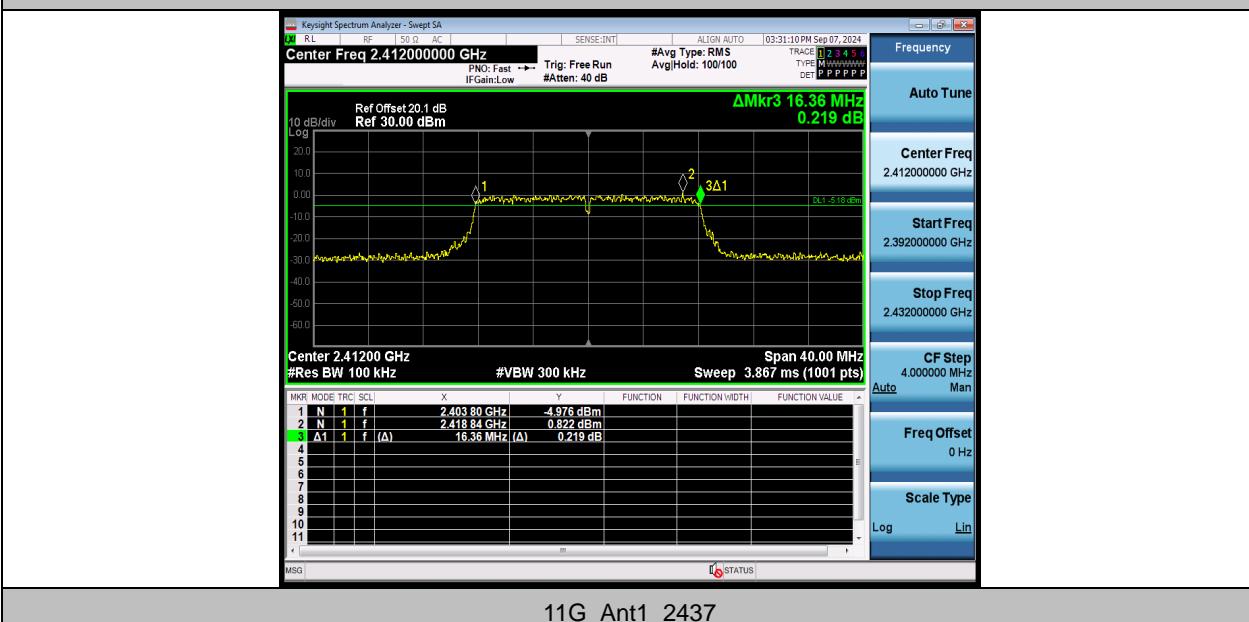


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11G\_Ant1\_2412

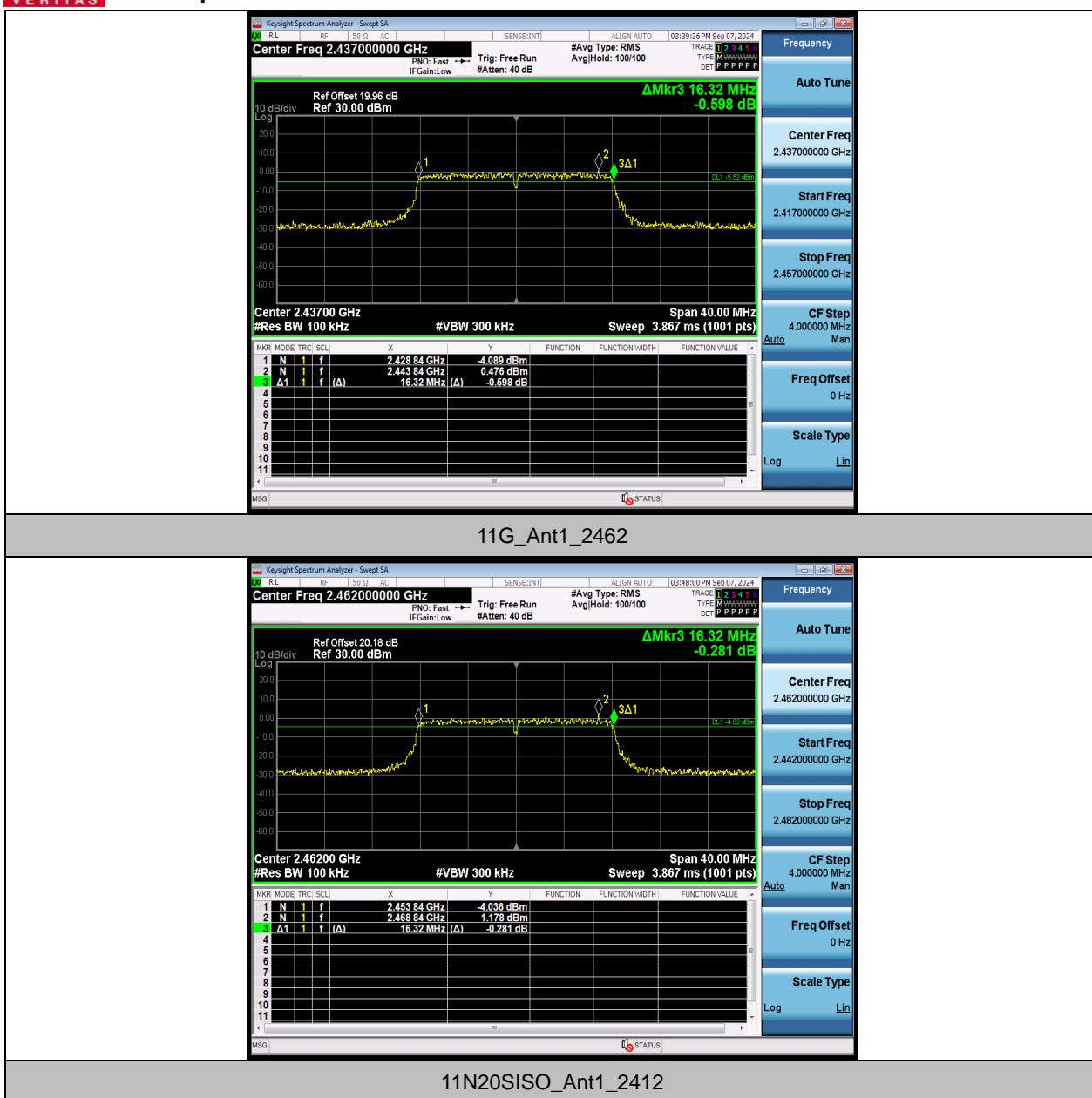


11G Ant1 2437



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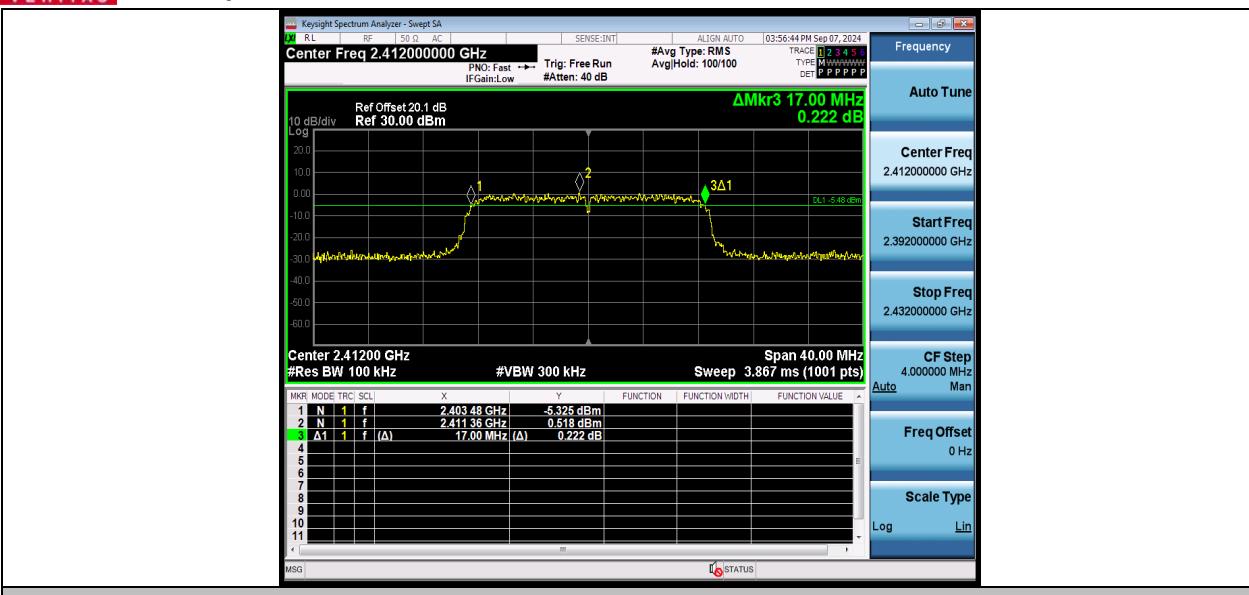
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11N20SISO\_Ant1\_2437

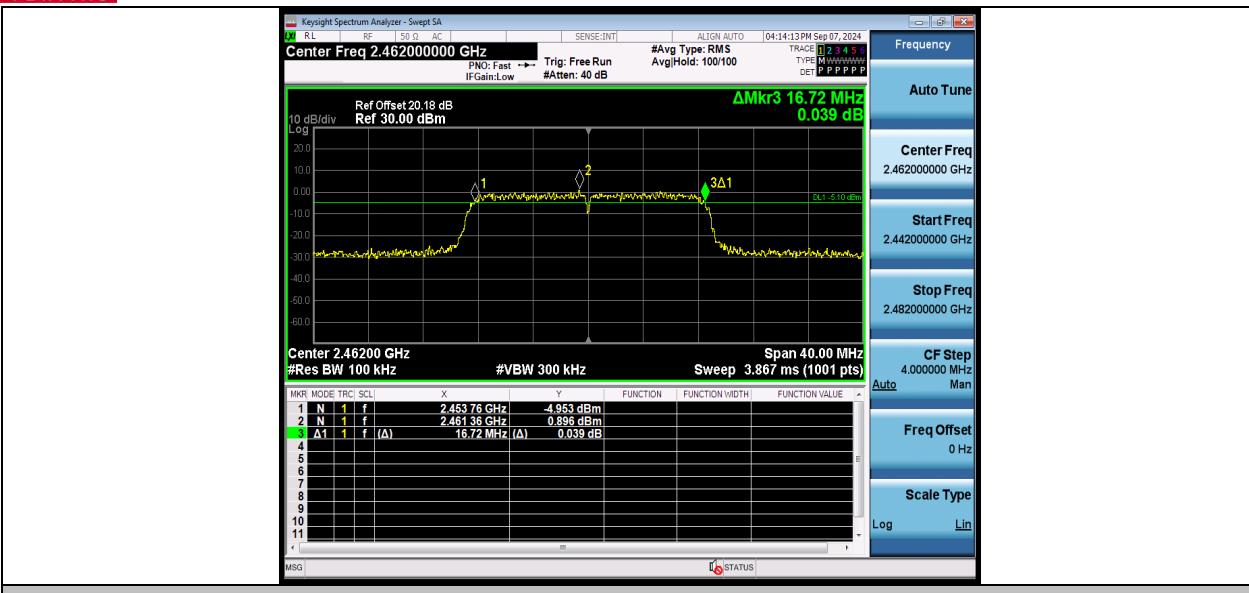


11N20SISO Ant1 2462



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**Test Report No.: PSU-QBJ240822011RF05**



11N40SISO\_Ant1\_2422

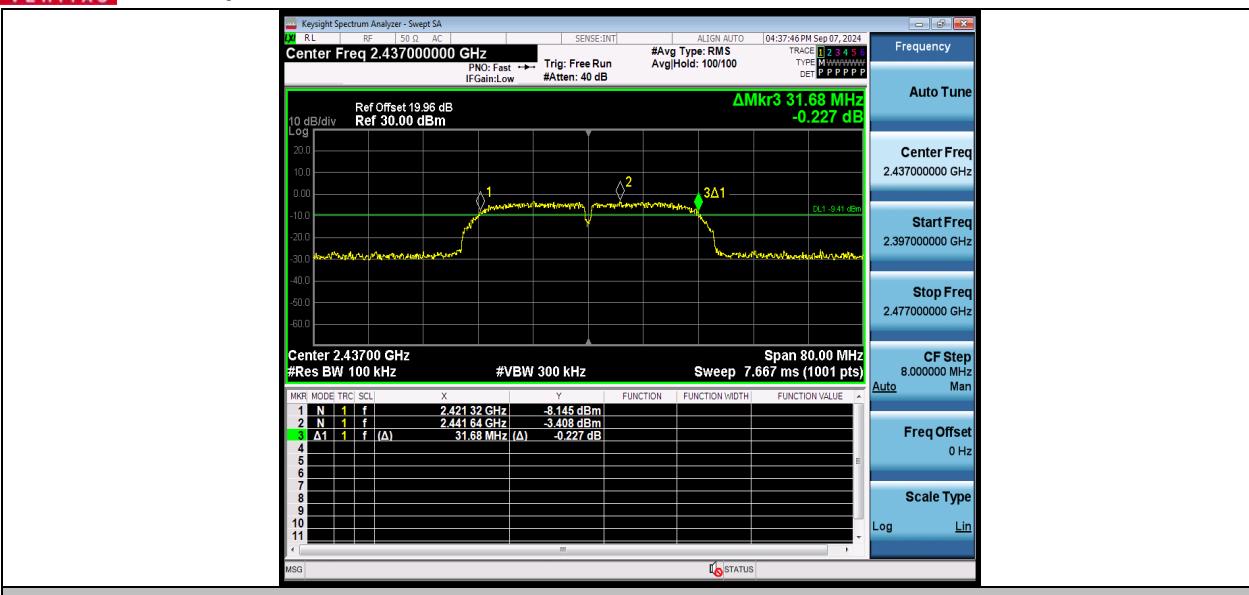


11N40SISO Ant1 2437



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**Test Report No.: PSU-QBJ240822011RF05**



11N40SISO\_Ant1\_2452



Huarui 7layers High Technology  
(Suzhou) Co., Ltd.

Tower N, Innovation Center, 88 Zuyi Road,  
High-tech District, Suzhou City, Anhui Province

Tel: +86 (0557) 368 1008



## OCCUPIED CHANNEL BANDWIDTH

### TEST RESULT

| TestMode  | Antenna | Channel Frequency[MHz] | OCB [MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|-----------|---------|------------------------|-----------|-----------|-----------|------------|---------|
| 11B       | Ant1    | 2412                   | 13.390    | 2405.1994 | 2418.5894 | ---        | ---     |
|           |         | 2437                   | 13.392    | 2430.2075 | 2443.5995 | ---        | ---     |
|           |         | 2462                   | 13.385    | 2455.2267 | 2468.6117 | ---        | ---     |
| 11G       | Ant1    | 2412                   | 16.545    | 2403.7435 | 2420.2885 | ---        | ---     |
|           |         | 2437                   | 16.581    | 2428.7153 | 2445.2963 | ---        | ---     |
|           |         | 2462                   | 16.615    | 2453.6982 | 2470.3132 | ---        | ---     |
| 11N20SISO | Ant1    | 2412                   | 17.319    | 2403.3147 | 2420.6337 | ---        | ---     |
|           |         | 2437                   | 17.347    | 2428.3125 | 2445.6595 | ---        | ---     |
|           |         | 2462                   | 17.331    | 2453.3420 | 2470.6730 | ---        | ---     |
| 11N40SISO | Ant1    | 2422                   | 34.809    | 2404.6260 | 2439.4350 | ---        | ---     |
|           |         | 2437                   | 34.785    | 2419.6181 | 2454.4031 | ---        | ---     |
|           |         | 2452                   | 34.866    | 2434.6252 | 2469.4912 | ---        | ---     |



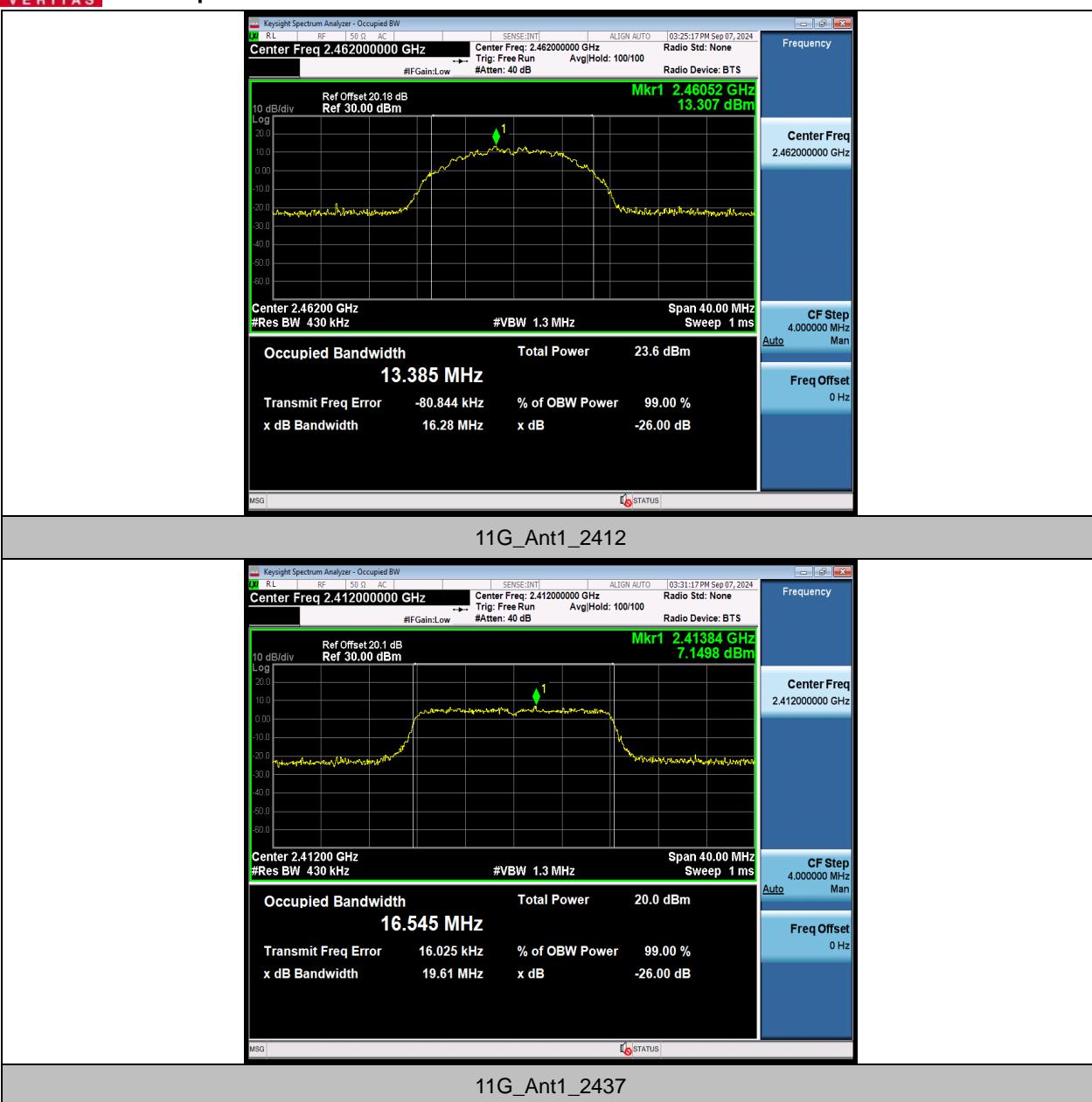
## TEST GRAPHS





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## MAXIMUM CONDUCTED OUTPUT POWER

### TEST RESULT

| Test Mode | TX Mod. | Freq. [MHz] | Ant. | Average power [dBm] | Peak power [dBm] | Peak power [mw] | Conducted Power Limit [dBm] | EIRP power [dBm] | EIRP power [mw] | EIRP Limit [dBm] | Verdict | Power Setting |
|-----------|---------|-------------|------|---------------------|------------------|-----------------|-----------------------------|------------------|-----------------|------------------|---------|---------------|
| 11B       | SISO    | 2412        | ANT1 | 6.91                | 10.70            | 11.75           | ≤30.00                      | 10.87            | 12.22           | ≤36.00           | PASS    | 41            |
|           |         | 2437        | ANT1 | 8.47                | 12.26            | 16.81           | ≤30.00                      | 12.43            | 17.50           | ≤36.00           | PASS    | 41            |
|           |         | 2462        | ANT1 | 9.78                | 13.53            | 22.55           | ≤30.00                      | 13.70            | 23.44           | ≤36.00           | PASS    | 41            |
| 11G       | SISO    | 2412        | ANT1 | 13.87               | 19.84            | 96.38           | ≤30.00                      | 20.01            | 100.23          | ≤36.00           | PASS    | 8             |
|           |         | 2437        | ANT1 | 13.91               | 19.86            | 96.83           | ≤30.00                      | 20.03            | 100.69          | ≤36.00           | PASS    | 8             |
|           |         | 2462        | ANT1 | 13.89               | 19.75            | 94.41           | ≤30.00                      | 19.92            | 98.17           | ≤36.00           | PASS    | 8             |
| 11N20     | SISO    | 2412        | ANT1 | 13.71               | 20.29            | 106.91          | ≤30.00                      | 20.46            | 111.17          | ≤36.00           | PASS    | 8             |
|           |         | 2437        | ANT1 | 13.61               | 20.19            | 104.47          | ≤30.00                      | 20.36            | 108.64          | ≤36.00           | PASS    | 8             |
|           |         | 2462        | ANT1 | 13.55               | 20.13            | 103.04          | ≤30.00                      | 20.30            | 107.15          | ≤36.00           | PASS    | 8             |
| 11N40     | SISO    | 2422        | ANT1 | 13.31               | 19.74            | 94.19           | ≤30.00                      | 19.91            | 97.95           | ≤36.00           | PASS    | 8             |
|           |         | 2437        | ANT1 | 13.1                | 19.42            | 87.50           | ≤30.00                      | 19.59            | 90.99           | ≤36.00           | PASS    | 8             |
|           |         | 2452        | ANT1 | 13.04               | 19.39            | 86.90           | ≤30.00                      | 19.56            | 90.36           | ≤36.00           | PASS    | 8             |

Note: The Average power with duty cycle factor.

## MAXIMUM POWER SPECTRAL DENSITY

### TEST RESULT

| TestMode | Antenna | Frequency[MHz] | Result[dBm/3-100kHz] | Limit[dBm/3kHz] | Verdict |
|----------|---------|----------------|----------------------|-----------------|---------|
| 11B      | Ant1    | 2412           | -12.92               | ≤8.00           | PASS    |
|          |         | 2437           | -13.14               | ≤8.00           | PASS    |
|          |         | 2462           | -12.77               | ≤8.00           | PASS    |
| 11G      | Ant1    | 2412           | -14.14               | ≤8.00           | PASS    |
|          |         | 2437           | -14.44               | ≤8.00           | PASS    |
|          |         | 2462           | -14.16               | ≤8.00           | PASS    |

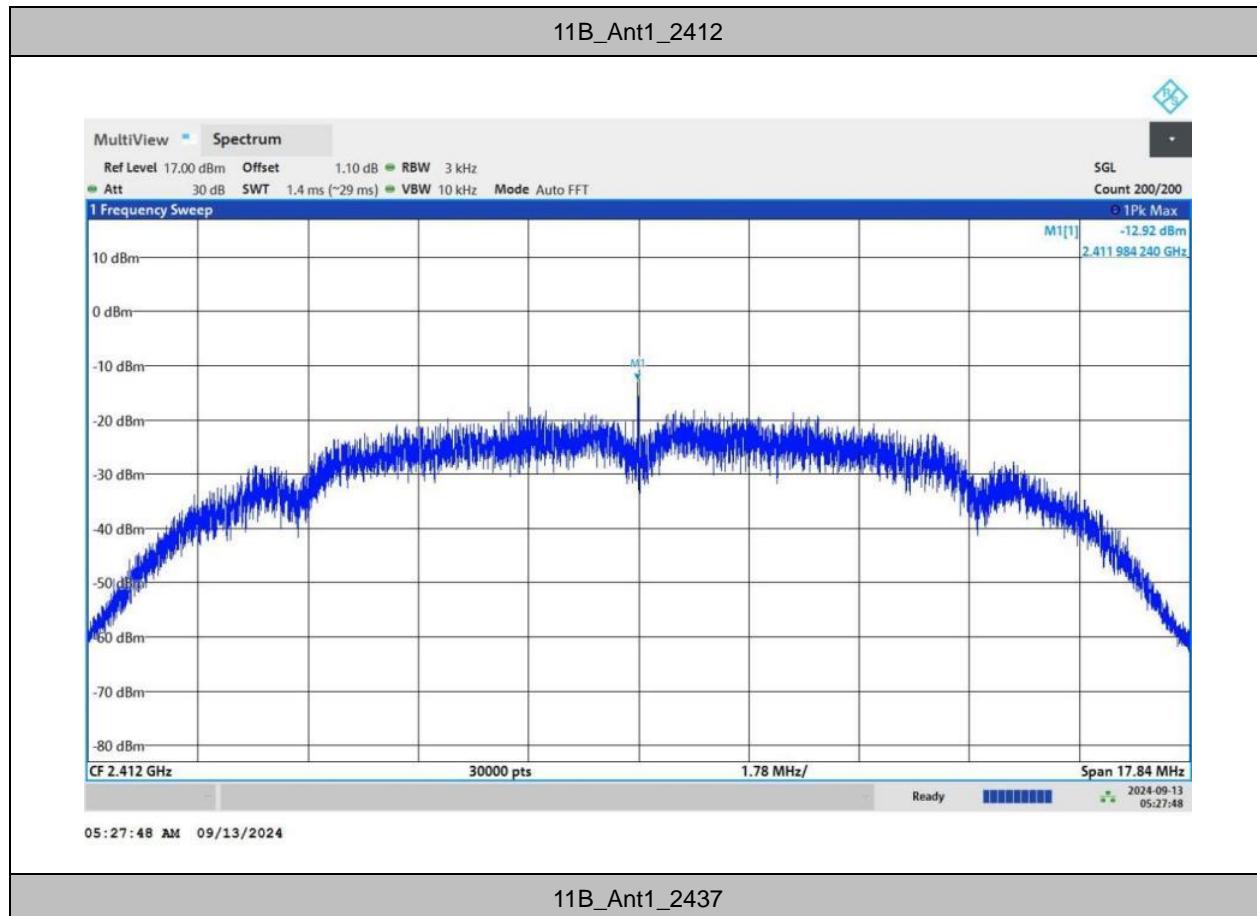


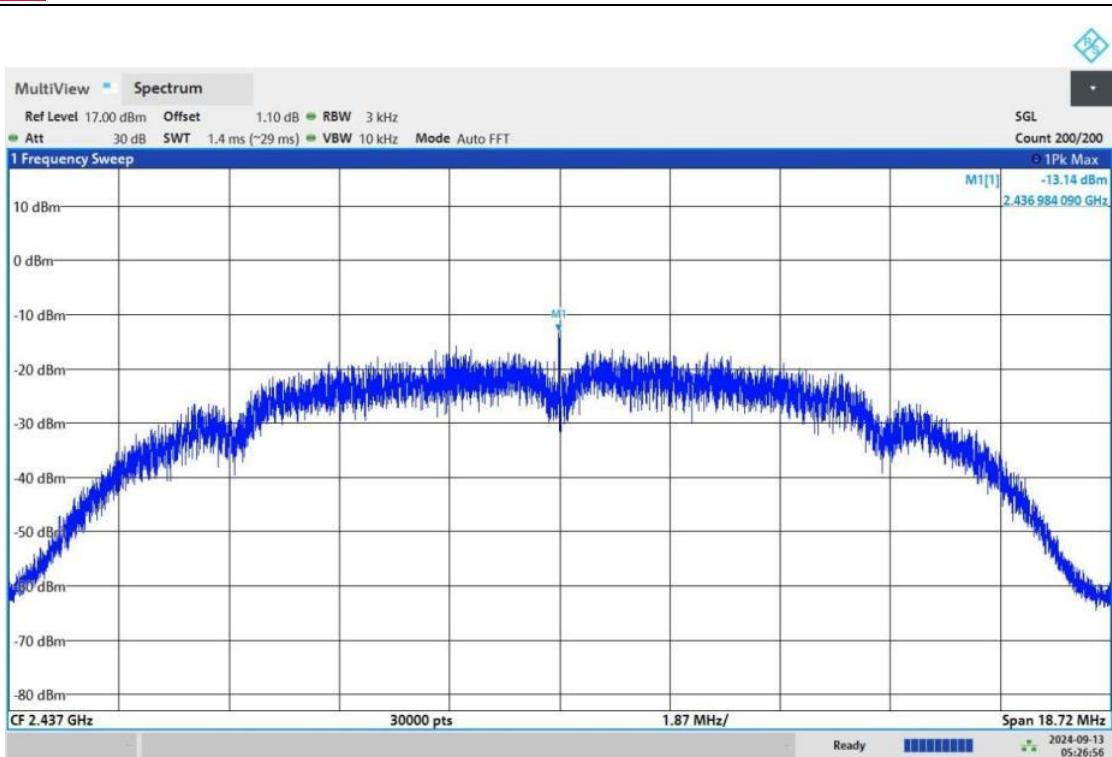
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|           |      |      |        |             |      |
|-----------|------|------|--------|-------------|------|
| 11N20SISO | Ant1 | 2412 | -13.94 | $\leq 8.00$ | PASS |
|           |      | 2437 | -14.18 | $\leq 8.00$ | PASS |
|           |      | 2462 | -13.76 | $\leq 8.00$ | PASS |
| 11N40SISO | Ant1 | 2422 | -15.02 | $\leq 8.00$ | PASS |
|           |      | 2437 | -15.39 | $\leq 8.00$ | PASS |
|           |      | 2452 | -15.30 | $\leq 8.00$ | PASS |



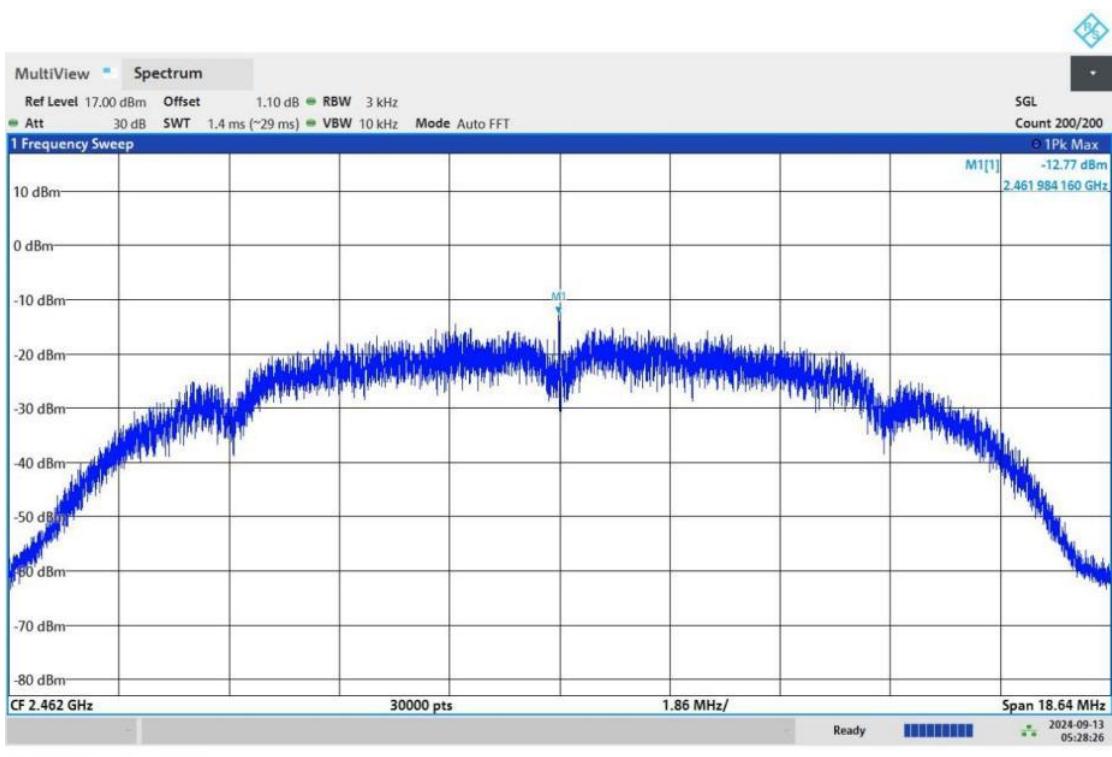
## TEST GRAPHS





05:26:57 AM 09/13/2024

### 11B\_Ant1\_2462



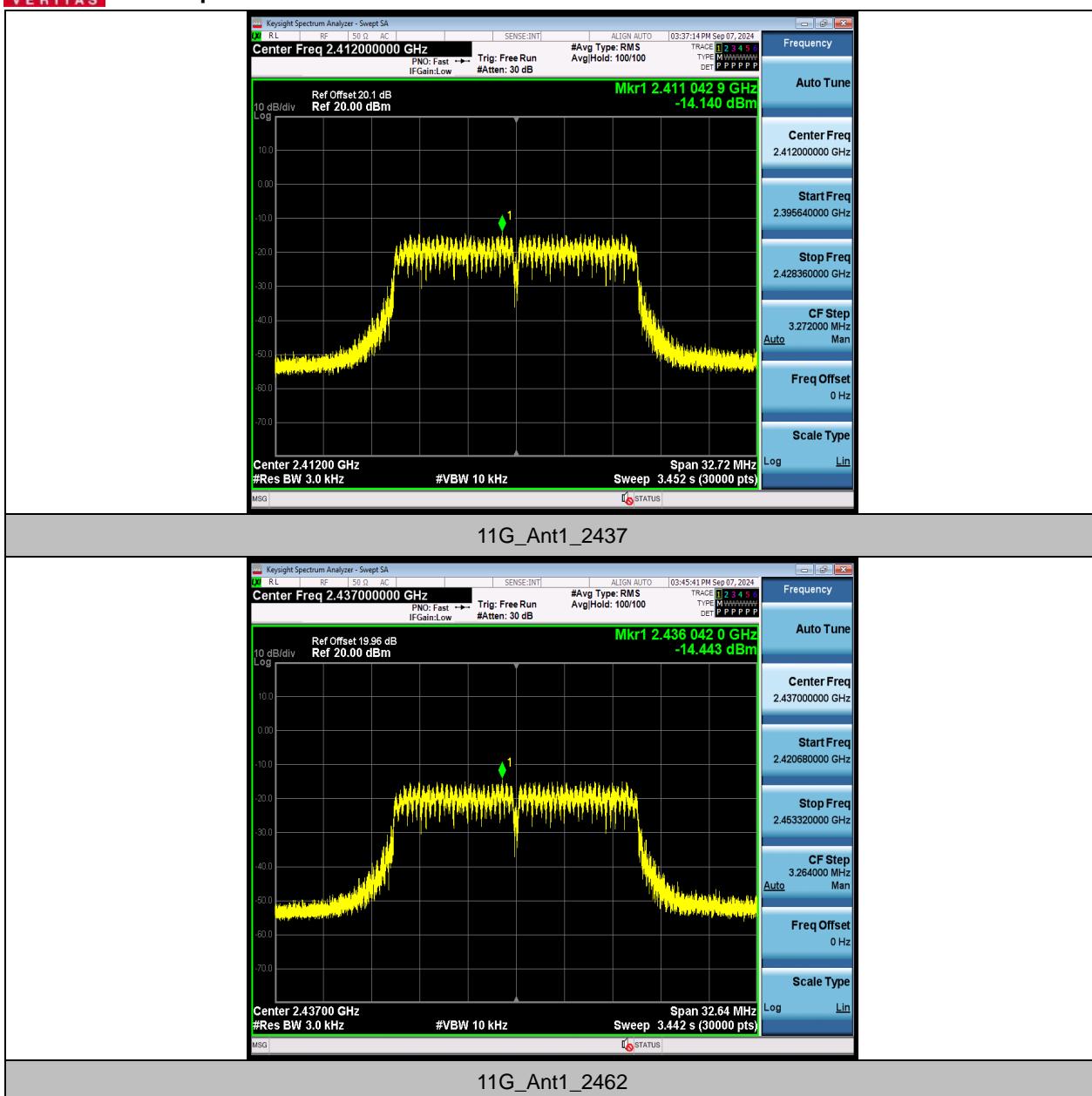
05:28:26 AM 09/13/2024

### 11G\_Ant1\_2412



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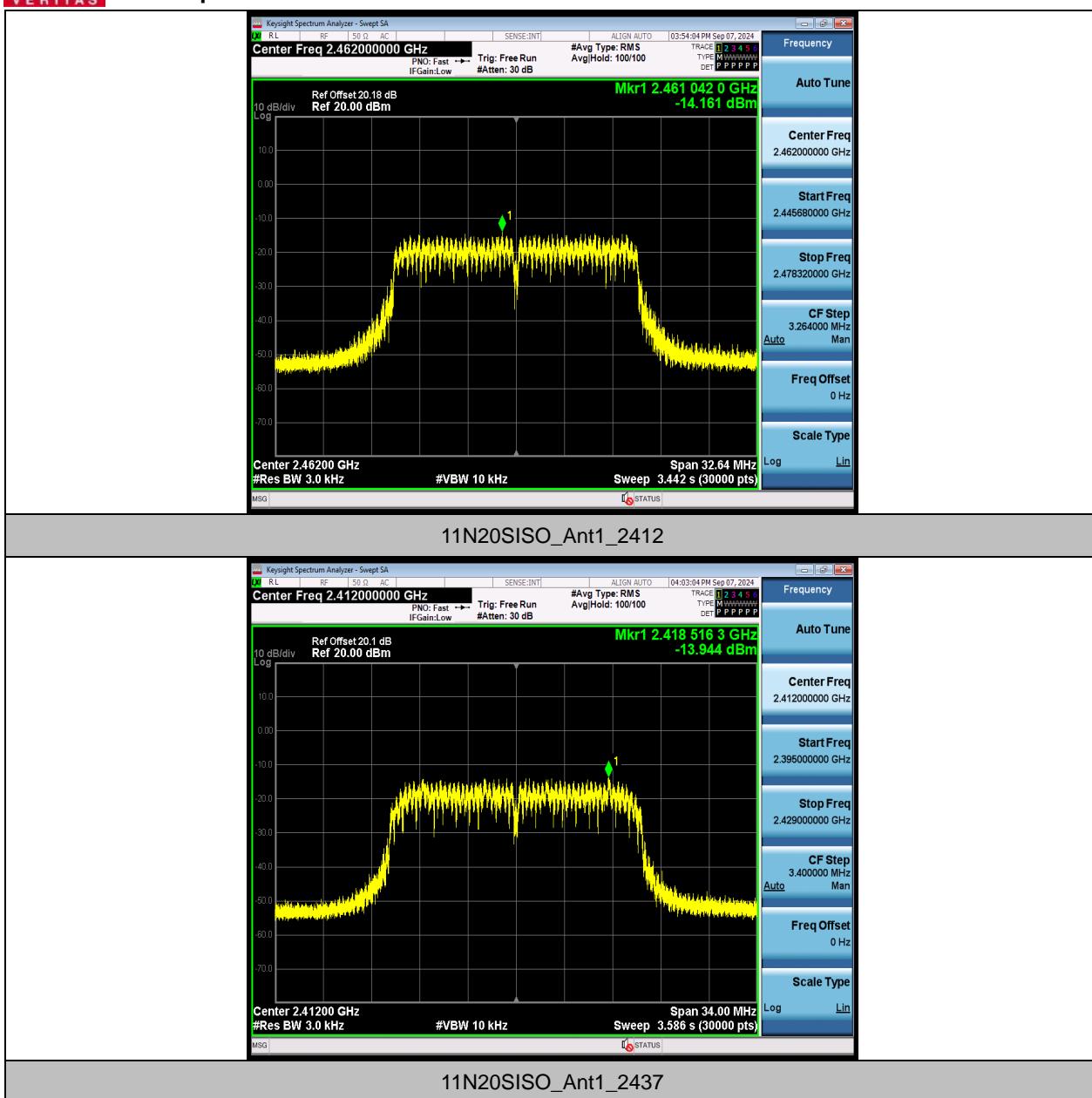
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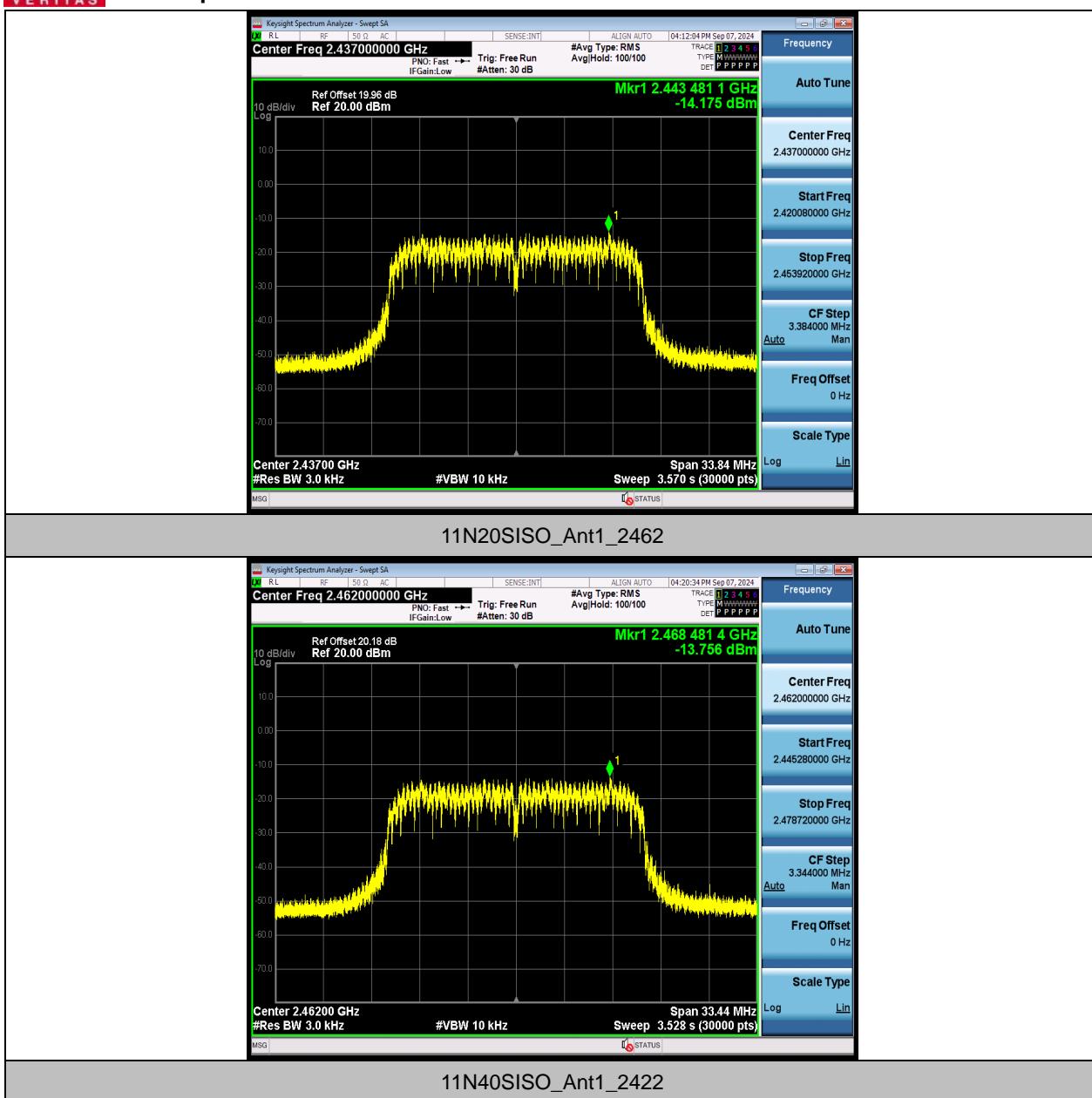
Test Report No.: PSU-QBJ2408220111RF05





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Test Report No.: PSU-QBJ2408220111RF05





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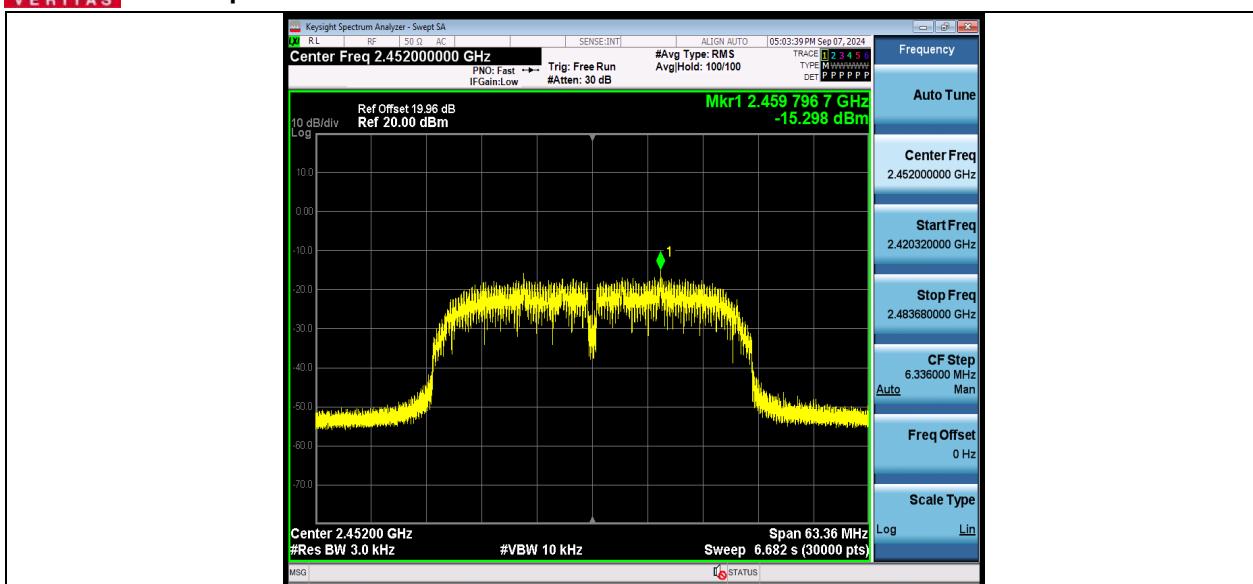
Test Report No.: PSU-QBJ2408220111RF05





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Test Report No.: PSU-QBJ2408220111RF05





## BAND EDGE MEASUREMENTS

### TEST RESULT

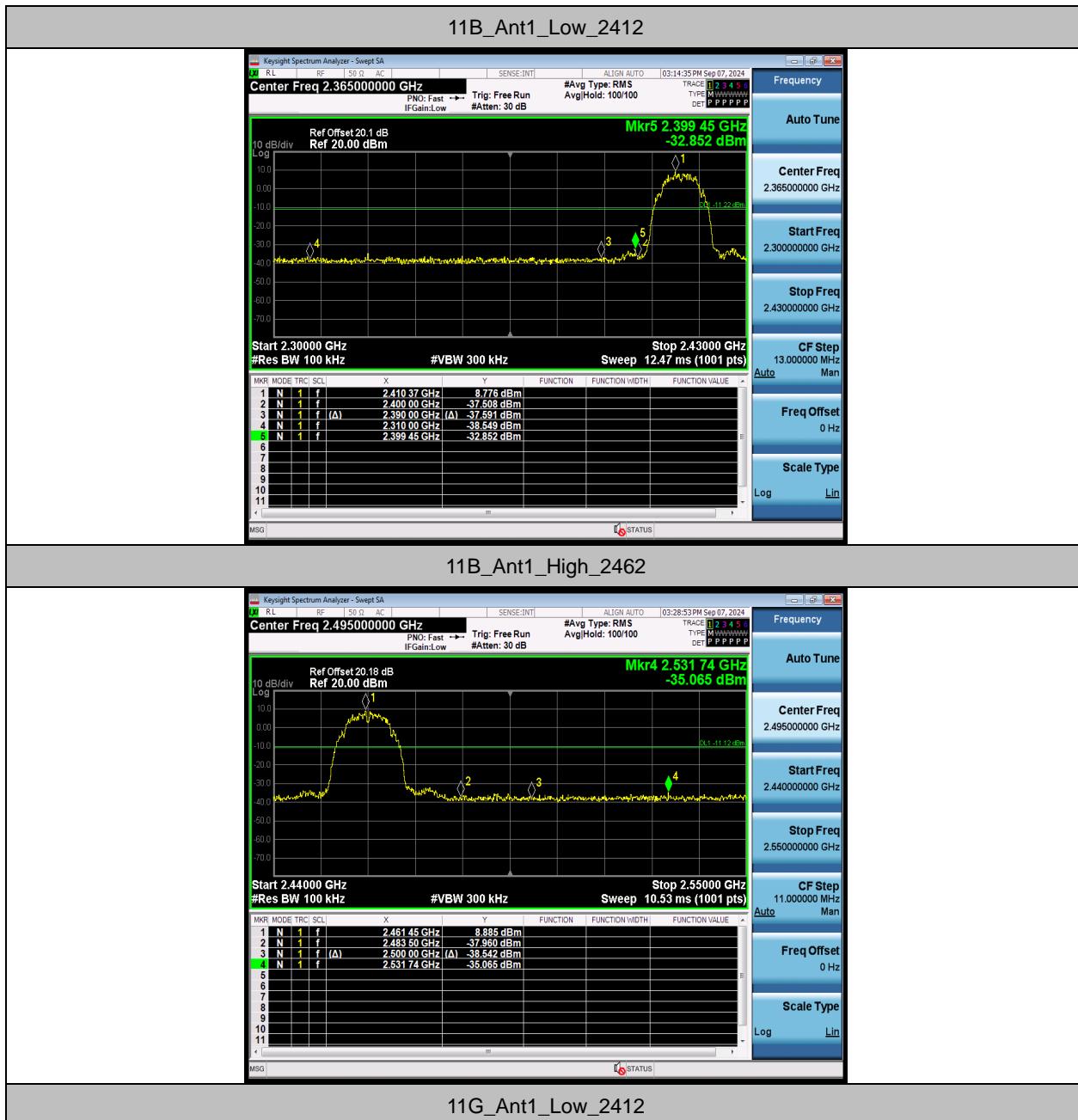
| TestMode  | Antenna | ChName | Frequency[MHz] | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|-----------|---------|--------|----------------|---------------|-------------|------------|---------|
| 11B       | Ant1    | Low    | 2412           | 8.78          | -32.85      | ≤-11.22    | PASS    |
|           |         | High   | 2462           | 8.89          | -35.07      | ≤-11.12    | PASS    |
| 11G       | Ant1    | Low    | 2412           | 0.85          | -35.15      | ≤-19.15    | PASS    |
|           |         | High   | 2462           | 0.28          | -34.65      | ≤-19.72    | PASS    |
| 11N20SISO | Ant1    | Low    | 2412           | 0.06          | -34.42      | ≤-19.94    | PASS    |
|           |         | High   | 2462           | 0.39          | -34.15      | ≤-19.61    | PASS    |
| 11N40SISO | Ant1    | Low    | 2422           | -2.62         | -35.31      | ≤-22.62    | PASS    |
|           |         | High   | 2452           | -3.27         | -35.41      | ≤-23.27    | PASS    |



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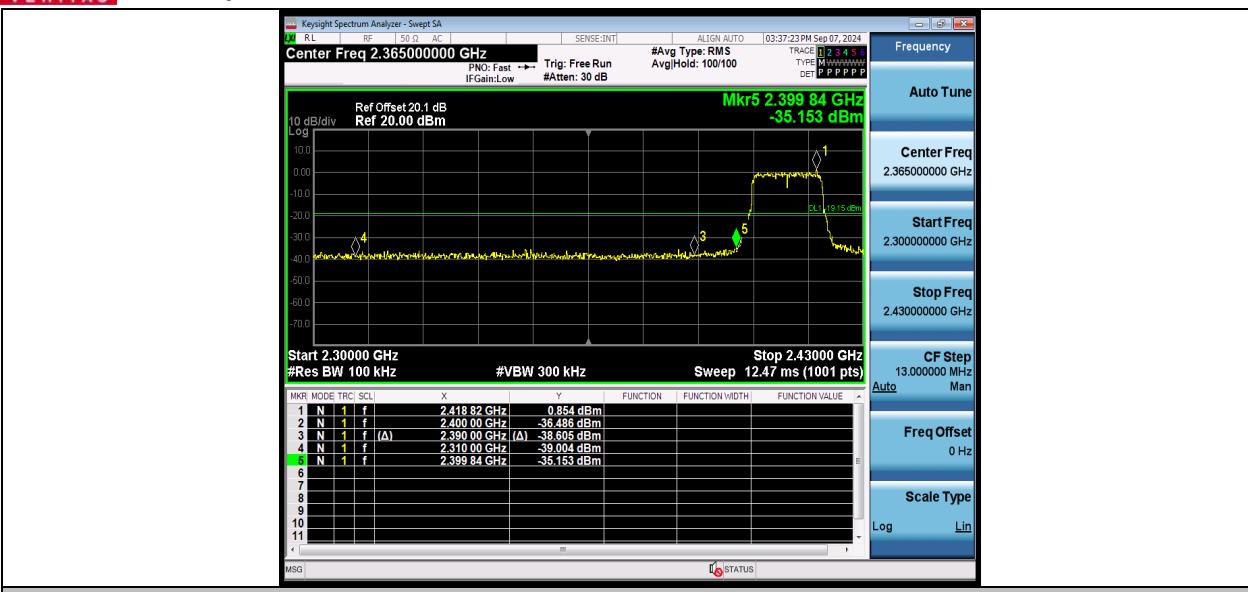
## TEST GRAPHS





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Test Report No.: PSU-QBJ2408220111RF05



11G\_Ant1\_High\_2462

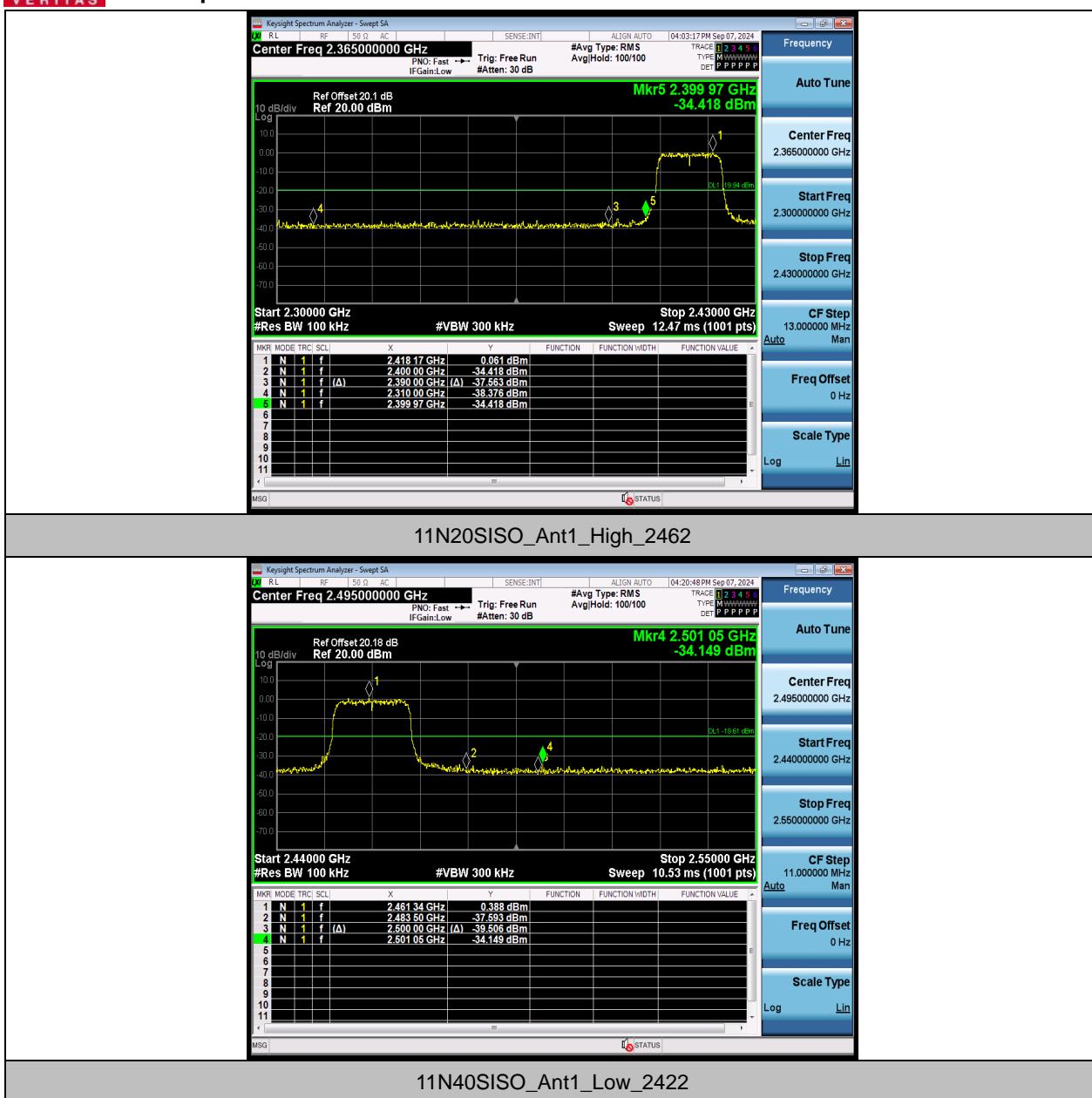


11N20SISO\_Ant1\_Low\_2412



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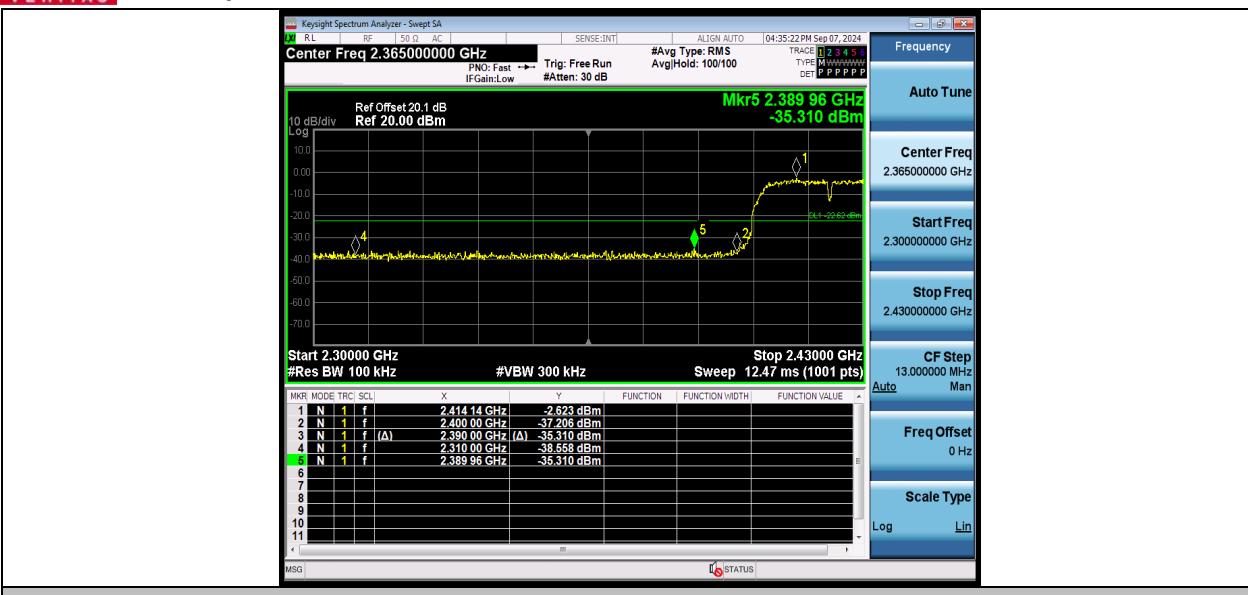
Test Report No.: PSU-QBJ2408220111RF05





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Test Report No.: PSU-QBJ2408220111RF05



11N40SISO\_Ant1\_High\_2452



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Tel: +86 (0557) 368 1008



## CONDUCTED SPURIOUS EMISSION

### TEST RESULT

| TestMode  | Antenna | Frequency[MHz] | FreqRange [Mhz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|-----------|---------|----------------|-----------------|----------------|--------------|-------------|---------|
| 11B       | Ant1    | 2412           | Reference       | 7.03           | 7.03         | ---         | PASS    |
|           |         |                | 30~1000         | 7.03           | -52.98       | ≤-12.97     | PASS    |
|           |         |                | 1000~26500      | 7.03           | -23.19       | ≤-12.97     | PASS    |
|           |         | 2437           | Reference       | 8.02           | 8.02         | ---         | PASS    |
|           |         |                | 30~1000         | 8.02           | -52.26       | ≤-11.98     | PASS    |
|           |         |                | 1000~26500      | 8.02           | -24.43       | ≤-11.98     | PASS    |
|           |         | 2462           | Reference       | 8.04           | 8.04         | ---         | PASS    |
|           |         |                | 30~1000         | 8.04           | -53.04       | ≤-11.96     | PASS    |
|           |         |                | 1000~26500      | 8.04           | -22.64       | ≤-11.96     | PASS    |
| 11G       | Ant1    | 2412           | Reference       | -0.84          | -0.84        | ---         | PASS    |
|           |         |                | 30~1000         | -0.84          | -53.94       | ≤-20.84     | PASS    |
|           |         |                | 1000~26500      | -0.84          | -35.2        | ≤-20.84     | PASS    |
|           |         | 2437           | Reference       | -1.08          | -1.08        | ---         | PASS    |
|           |         |                | 30~1000         | -1.08          | -54.24       | ≤-21.08     | PASS    |
|           |         |                | 1000~26500      | -1.08          | -35.34       | ≤-21.08     | PASS    |
|           |         | 2462           | Reference       | -0.48          | -0.48        | ---         | PASS    |
|           |         |                | 30~1000         | -0.48          | -54.04       | ≤-20.48     | PASS    |
|           |         |                | 1000~26500      | -0.48          | -34.73       | ≤-20.48     | PASS    |
| 11N20SISO | Ant1    | 2412           | Reference       | 0.00           | 0.00         | ---         | PASS    |
|           |         |                | 30~1000         | 0.00           | -54.5        | ≤-20        | PASS    |
|           |         |                | 1000~26500      | 0.00           | -34.9        | ≤-20        | PASS    |
|           |         | 2437           | Reference       | 0.06           | 0.06         | ---         | PASS    |
|           |         |                | 30~1000         | 0.06           | -54.01       | ≤-19.94     | PASS    |
|           |         |                | 1000~26500      | 0.06           | -35.95       | ≤-19.94     | PASS    |
|           |         | 2462           | Reference       | -0.14          | -0.14        | ---         | PASS    |
|           |         |                | 30~1000         | -0.14          | -53.32       | ≤-20.14     | PASS    |
|           |         |                | 1000~26500      | -0.14          | -35.23       | ≤-20.14     | PASS    |
| 11N40SISO | Ant1    | 2422           | Reference       | -3.57          | -3.57        | ---         | PASS    |
|           |         |                | 30~1000         | -3.57          | -53.4        | ≤-23.57     | PASS    |
|           |         |                | 1000~26500      | -3.57          | -35.84       | ≤-23.57     | PASS    |

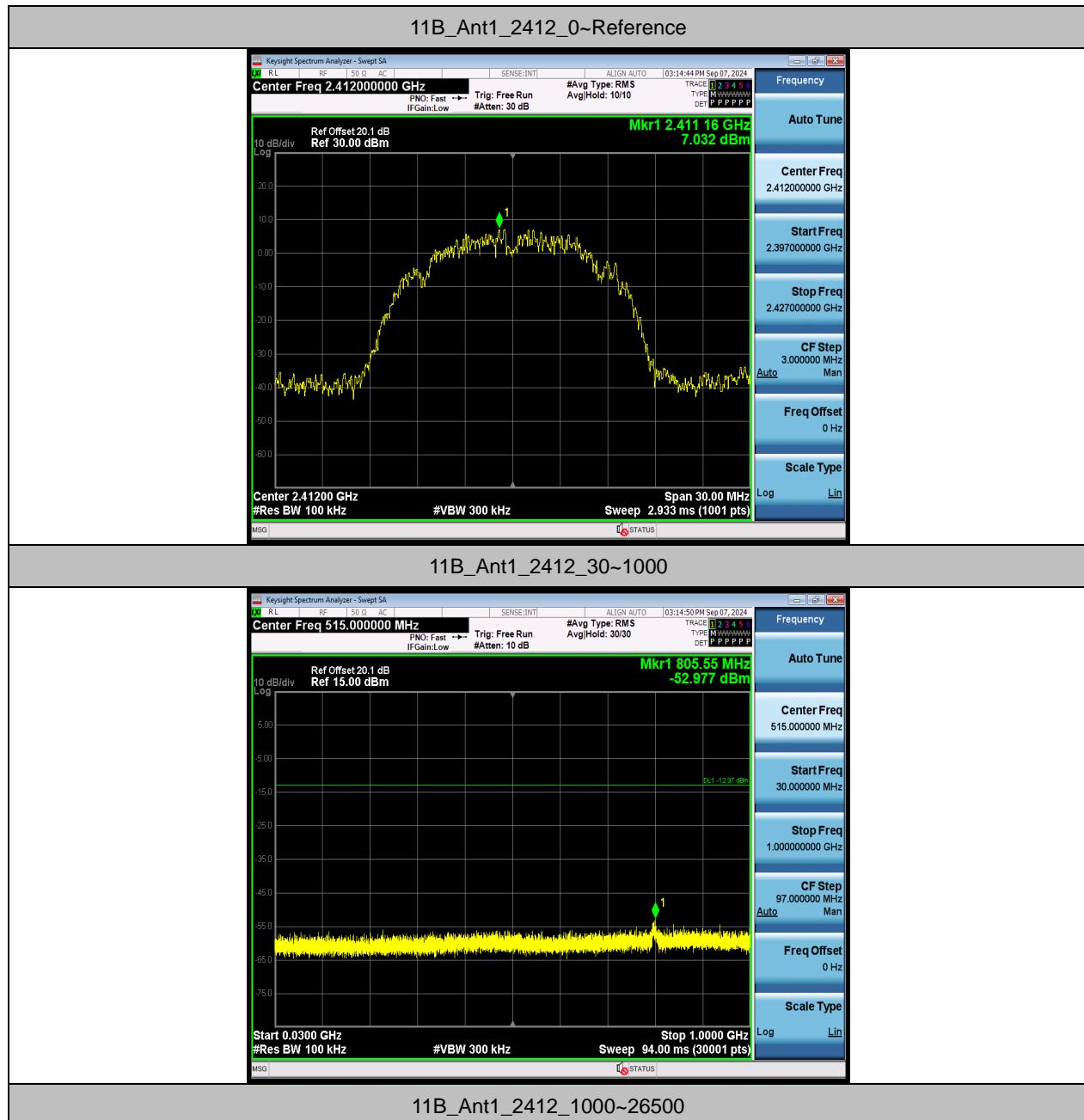


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|  |  |      |            |       |        |              |      |
|--|--|------|------------|-------|--------|--------------|------|
|  |  | 2437 | Reference  | -3.68 | -3.68  | ---          | PASS |
|  |  |      | 30~1000    | -3.68 | -53.81 | $\leq$ 23.68 | PASS |
|  |  |      | 1000~26500 | -3.68 | -34.55 | $\leq$ 23.68 | PASS |
|  |  | 2452 | Reference  | -3.84 | -3.84  | ---          | PASS |
|  |  |      | 30~1000    | -3.84 | -53.39 | $\leq$ 23.84 | PASS |
|  |  |      | 1000~26500 | -3.84 | -35.63 | $\leq$ 23.84 | PASS |



## TEST GRAPHS





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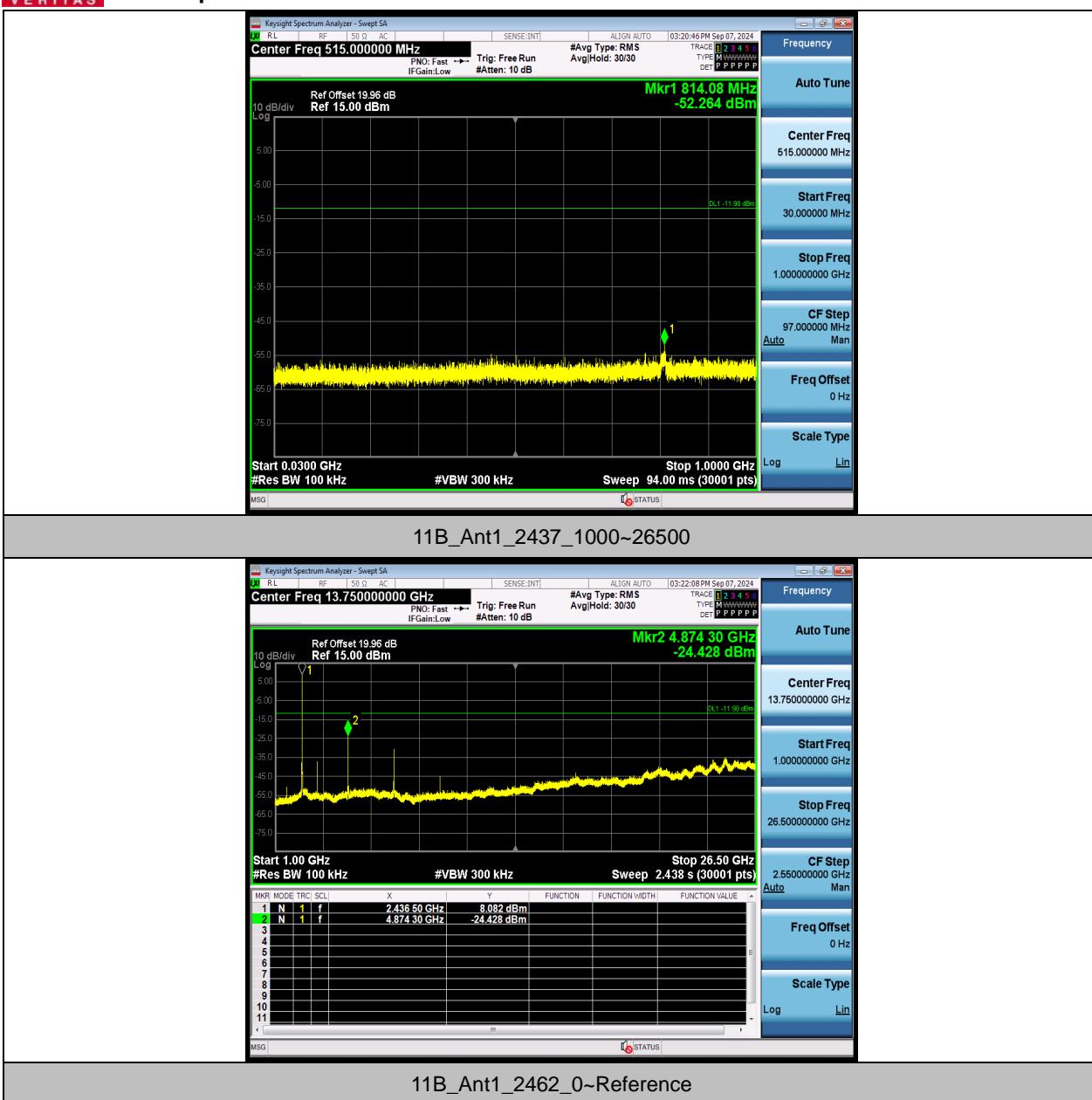
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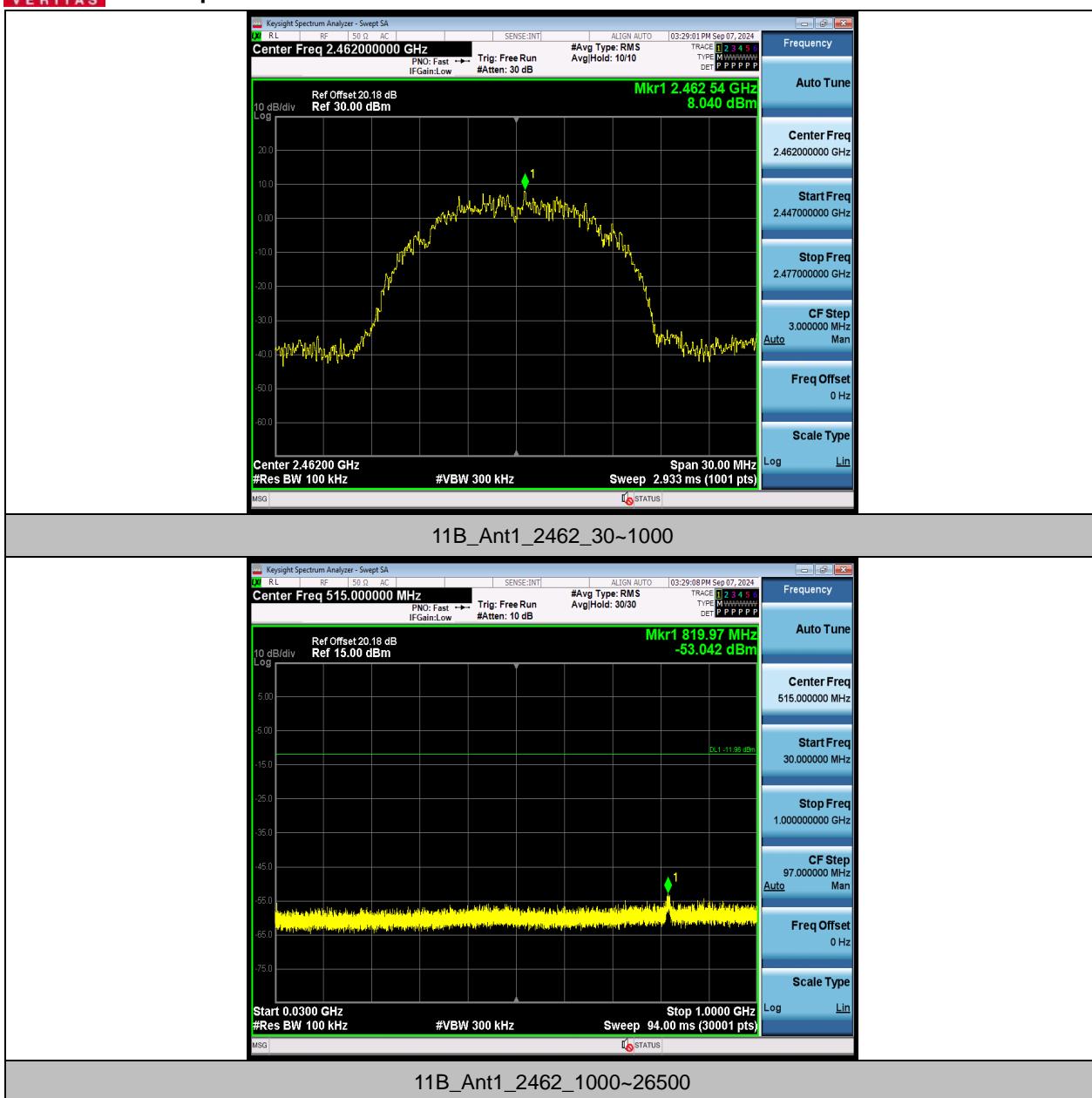
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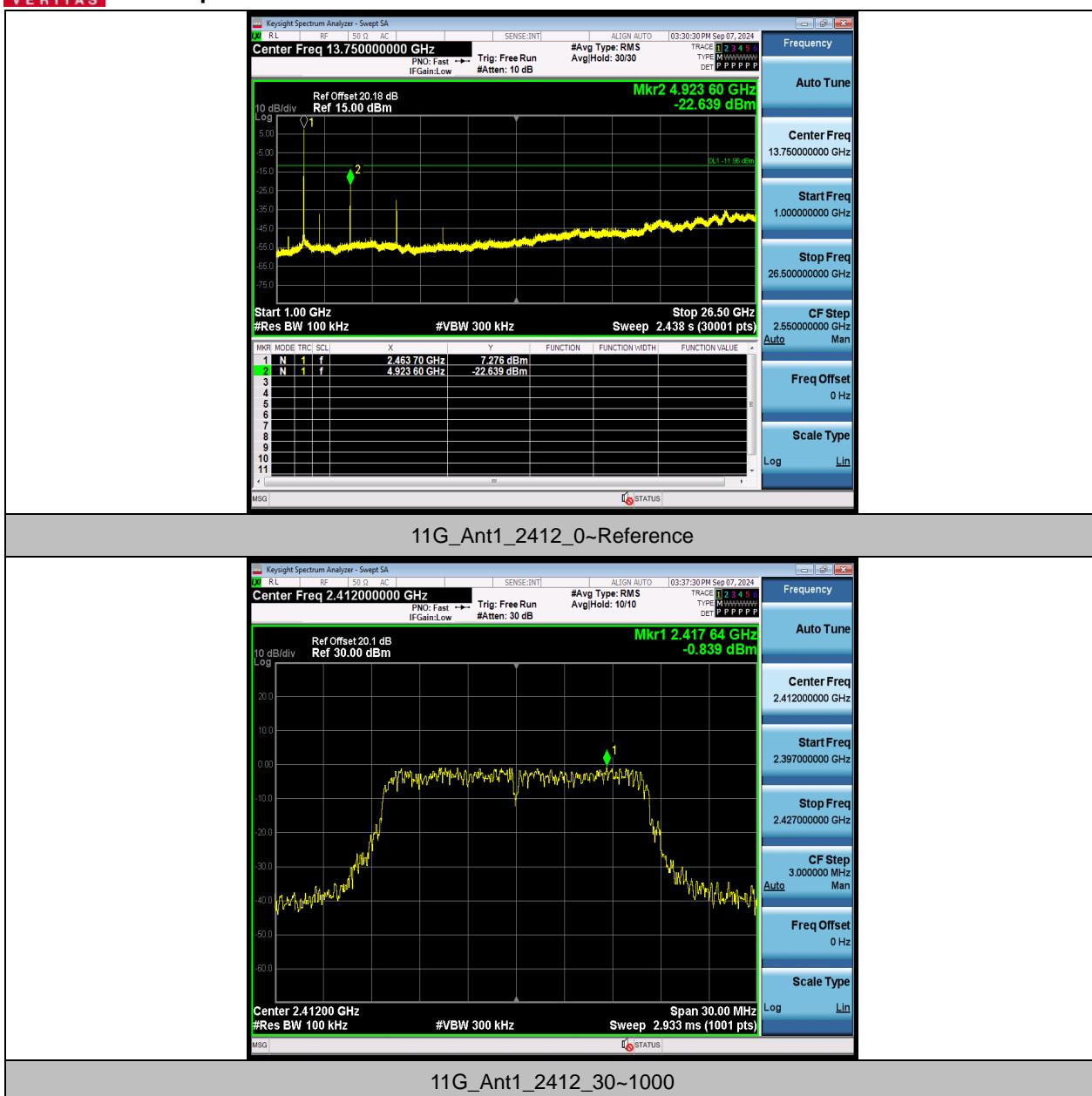
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VERITAS

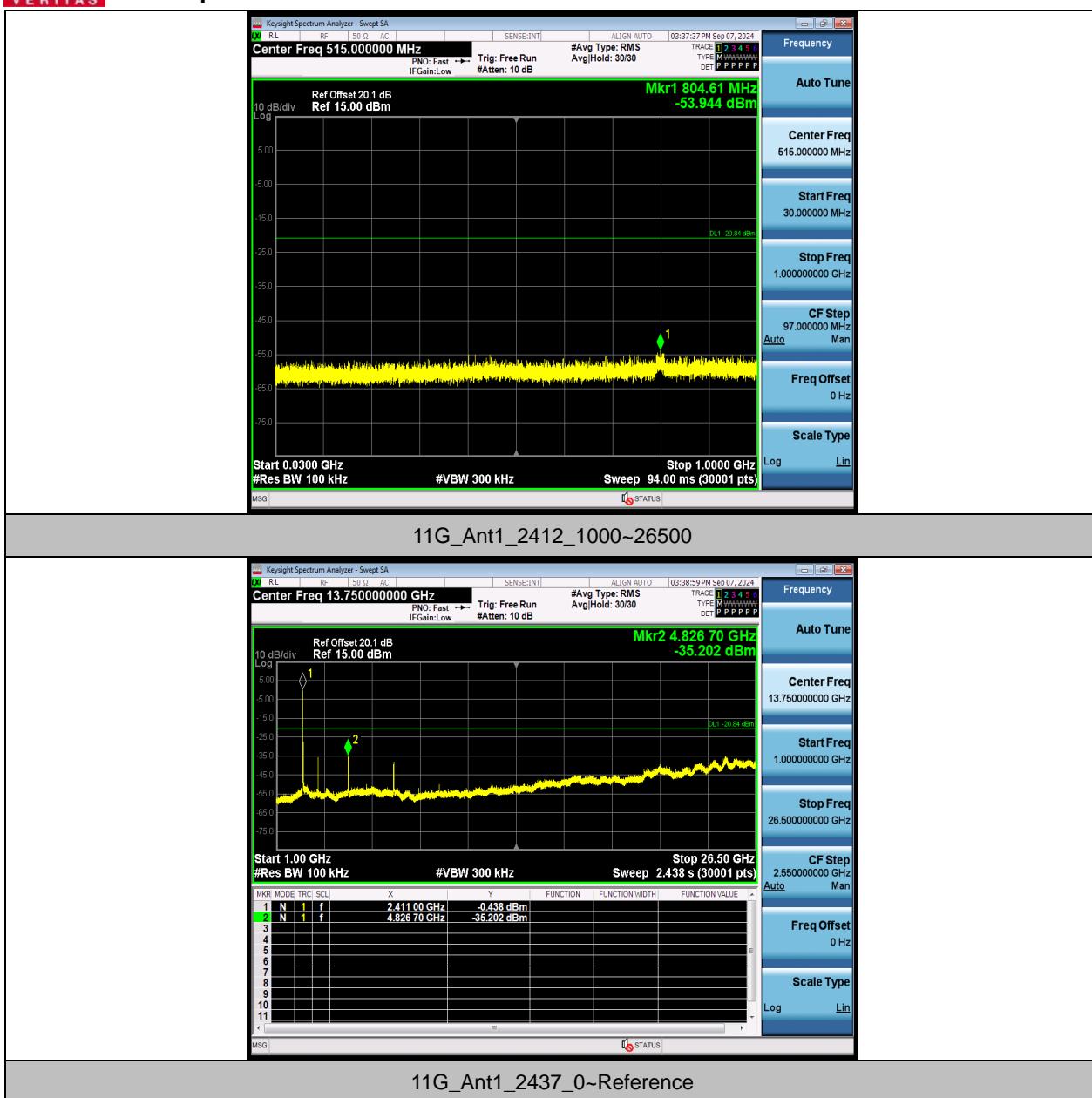
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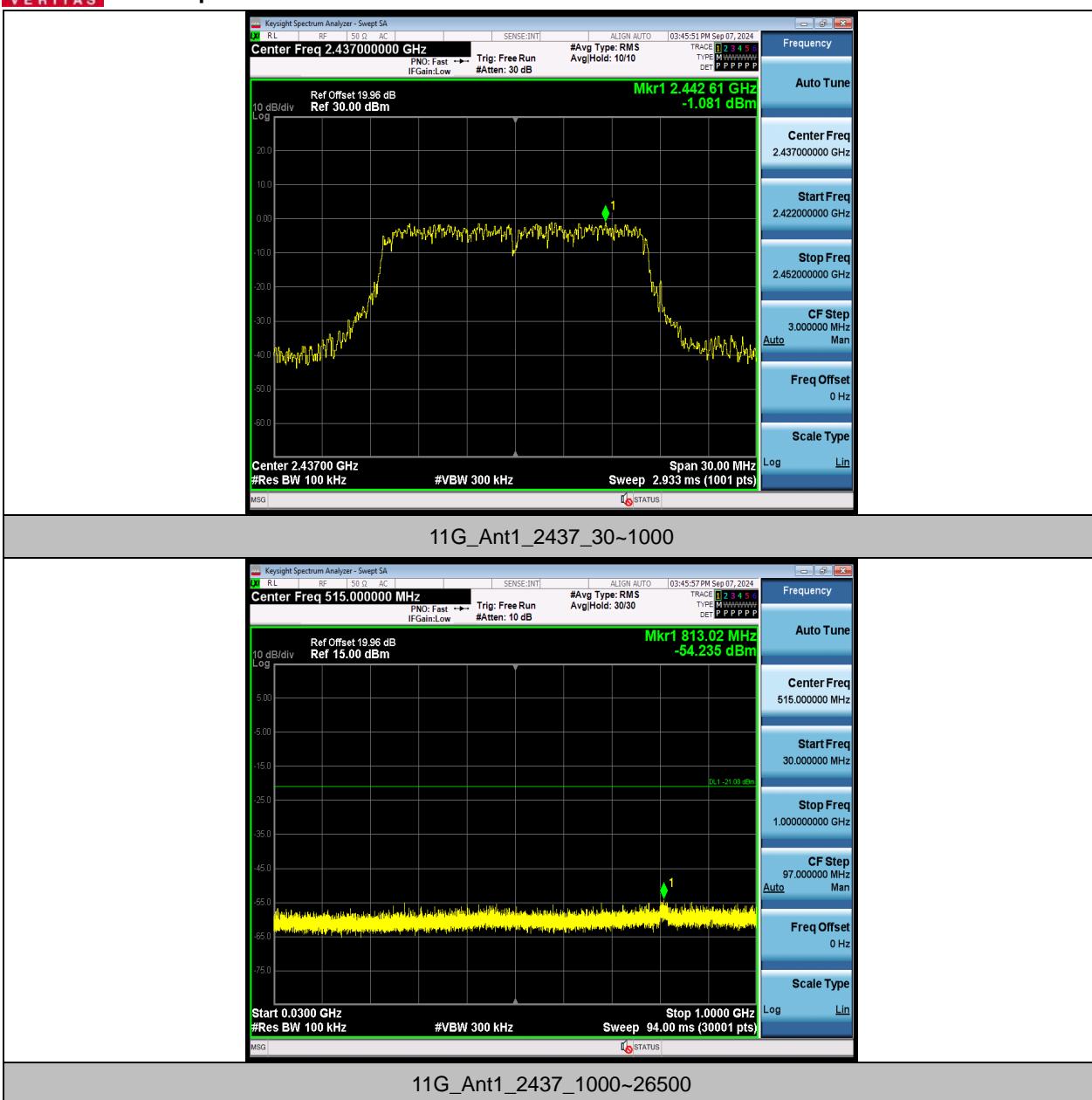
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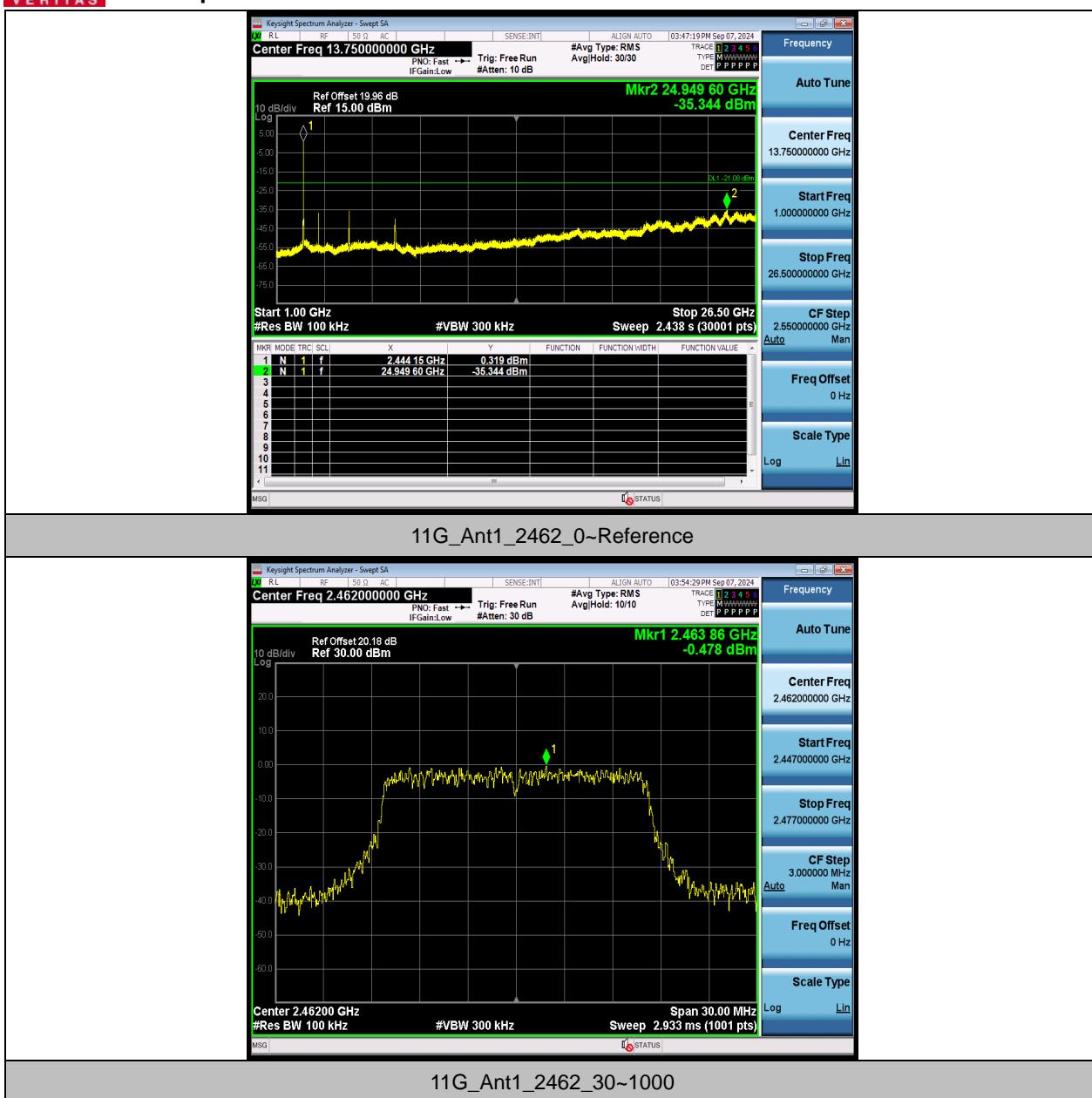
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Test Report No.: PSU-QBJ2408220111RF05





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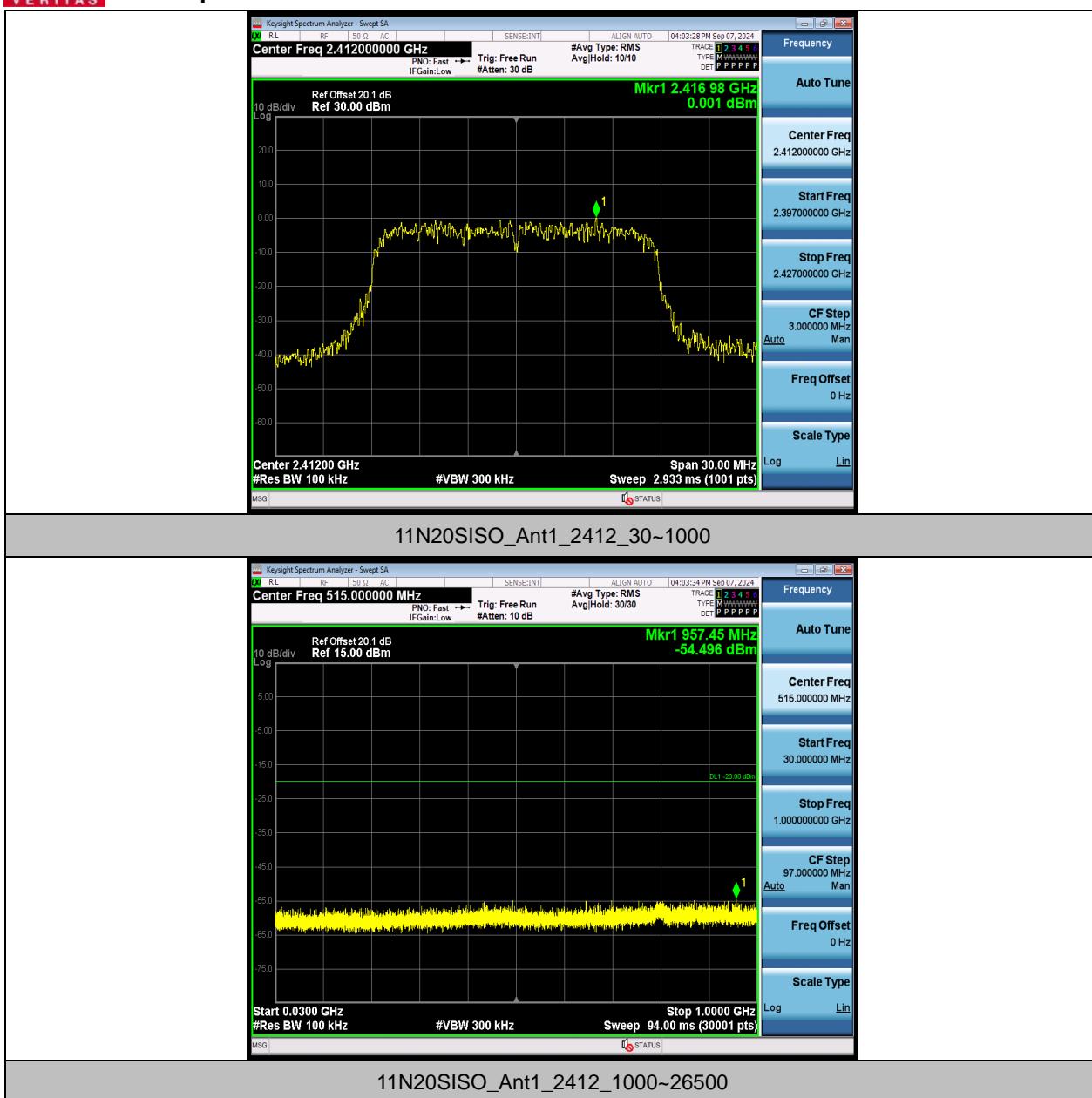
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VERITAS

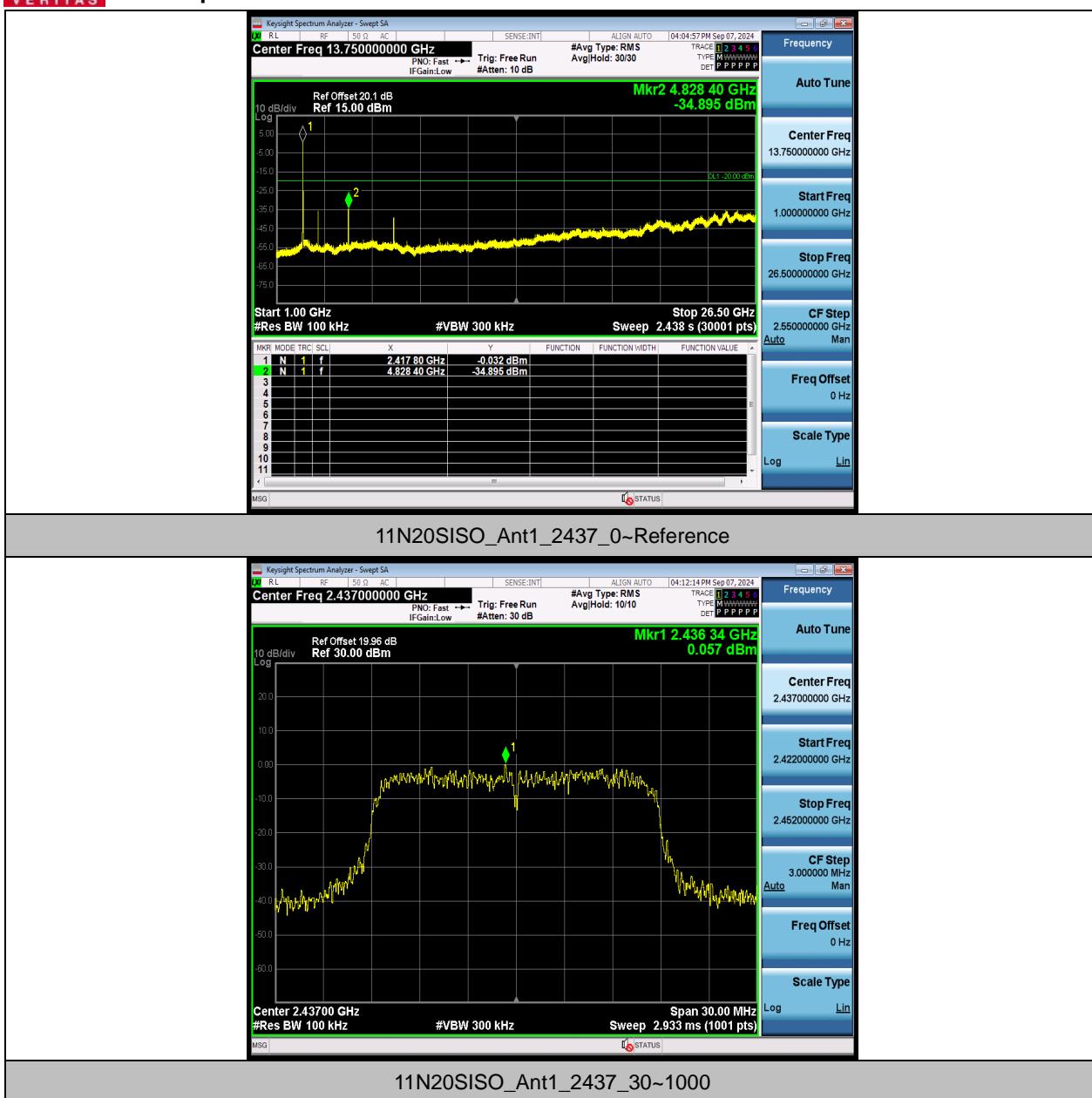
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VERITAS

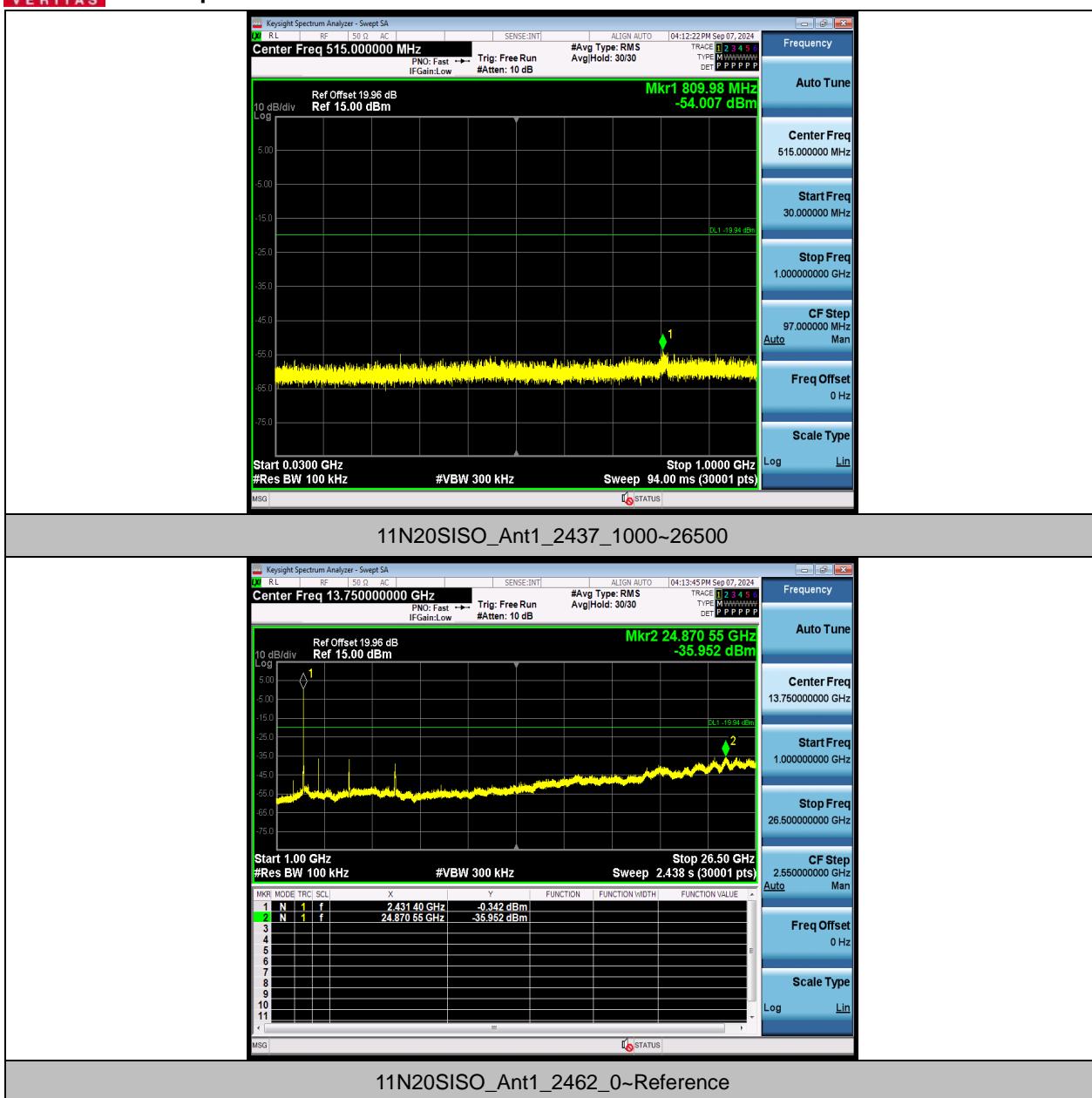
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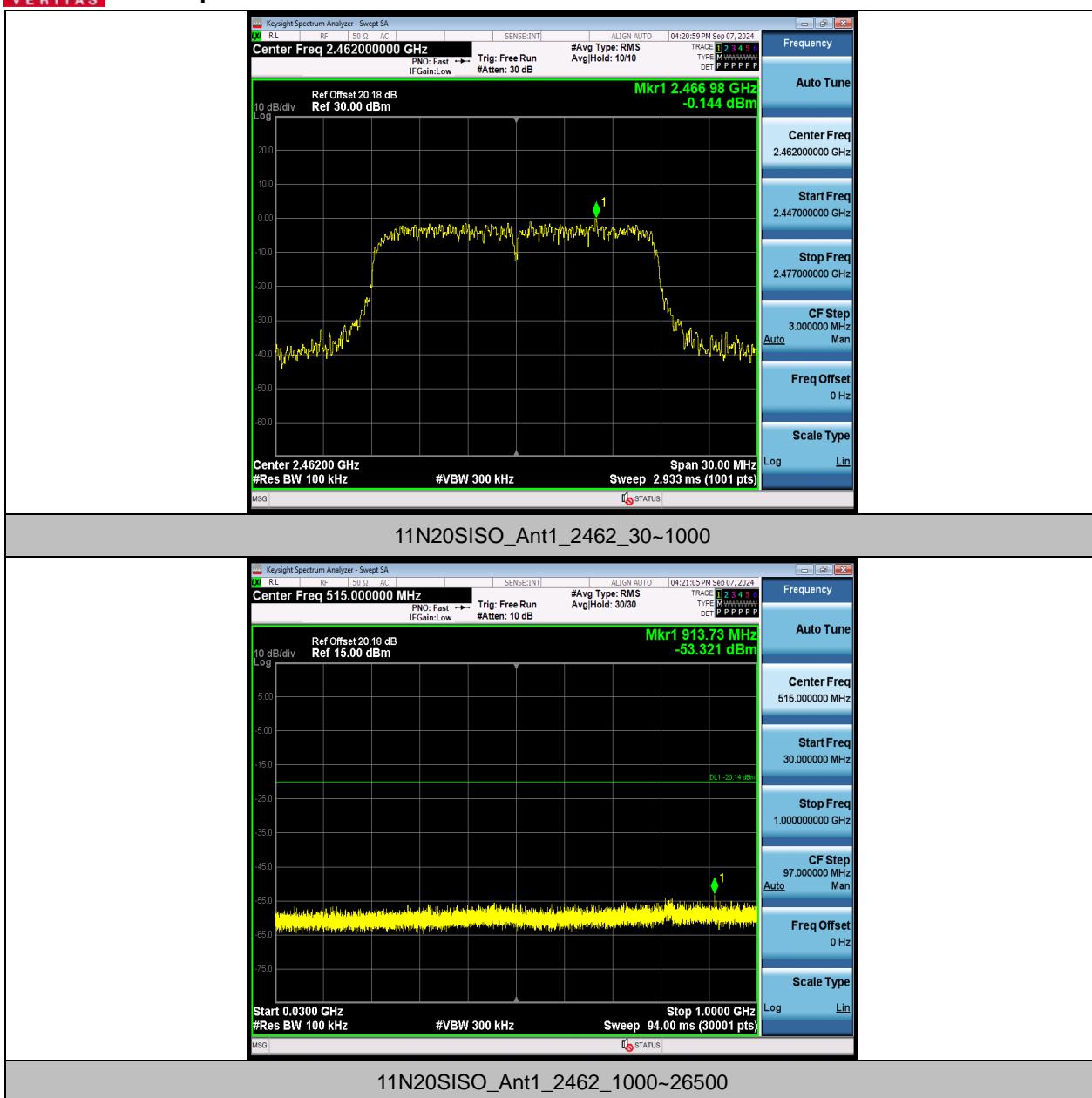
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Test Report No.: PSU-QBJ2408220111RF05





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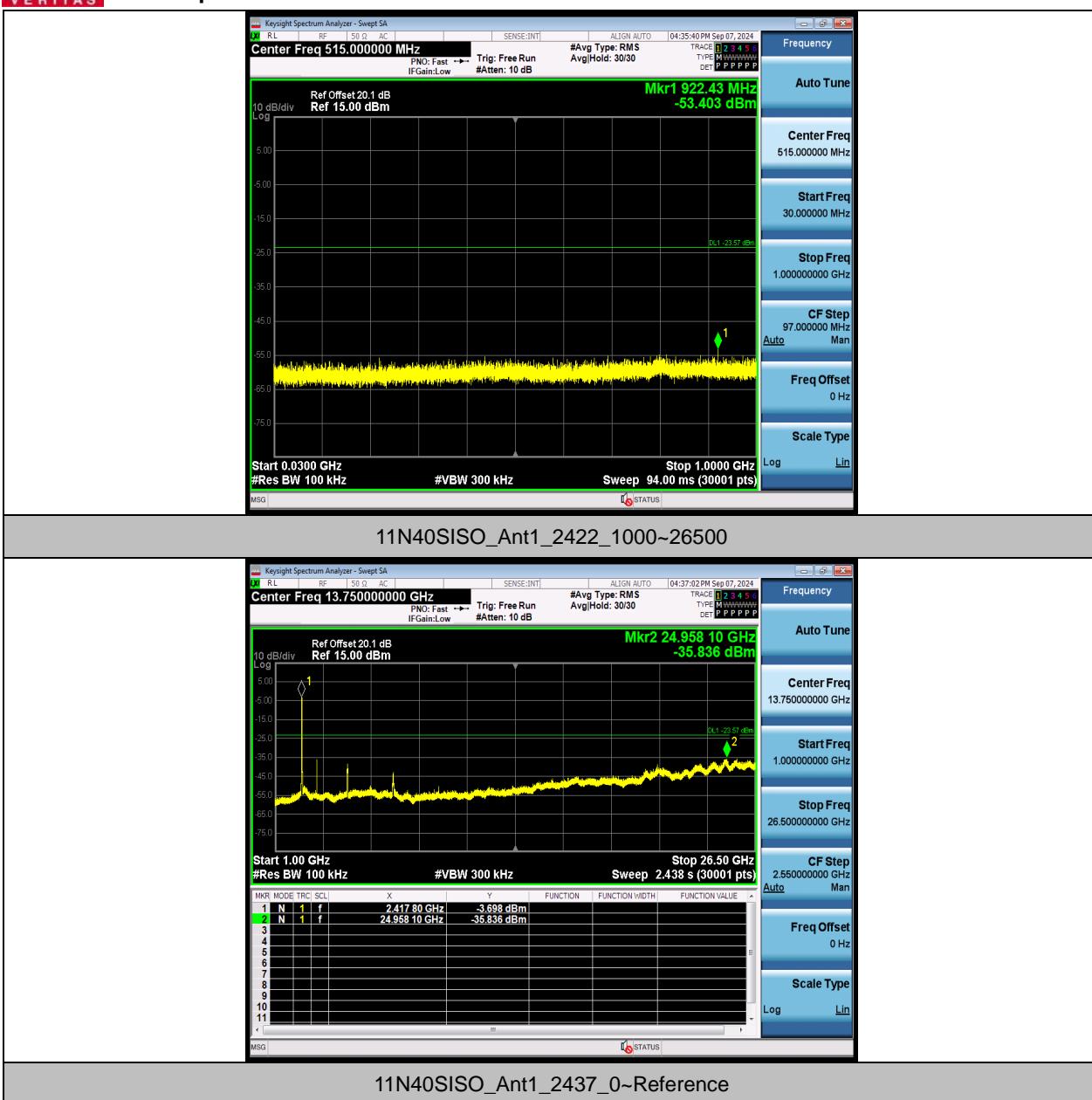
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VERITAS

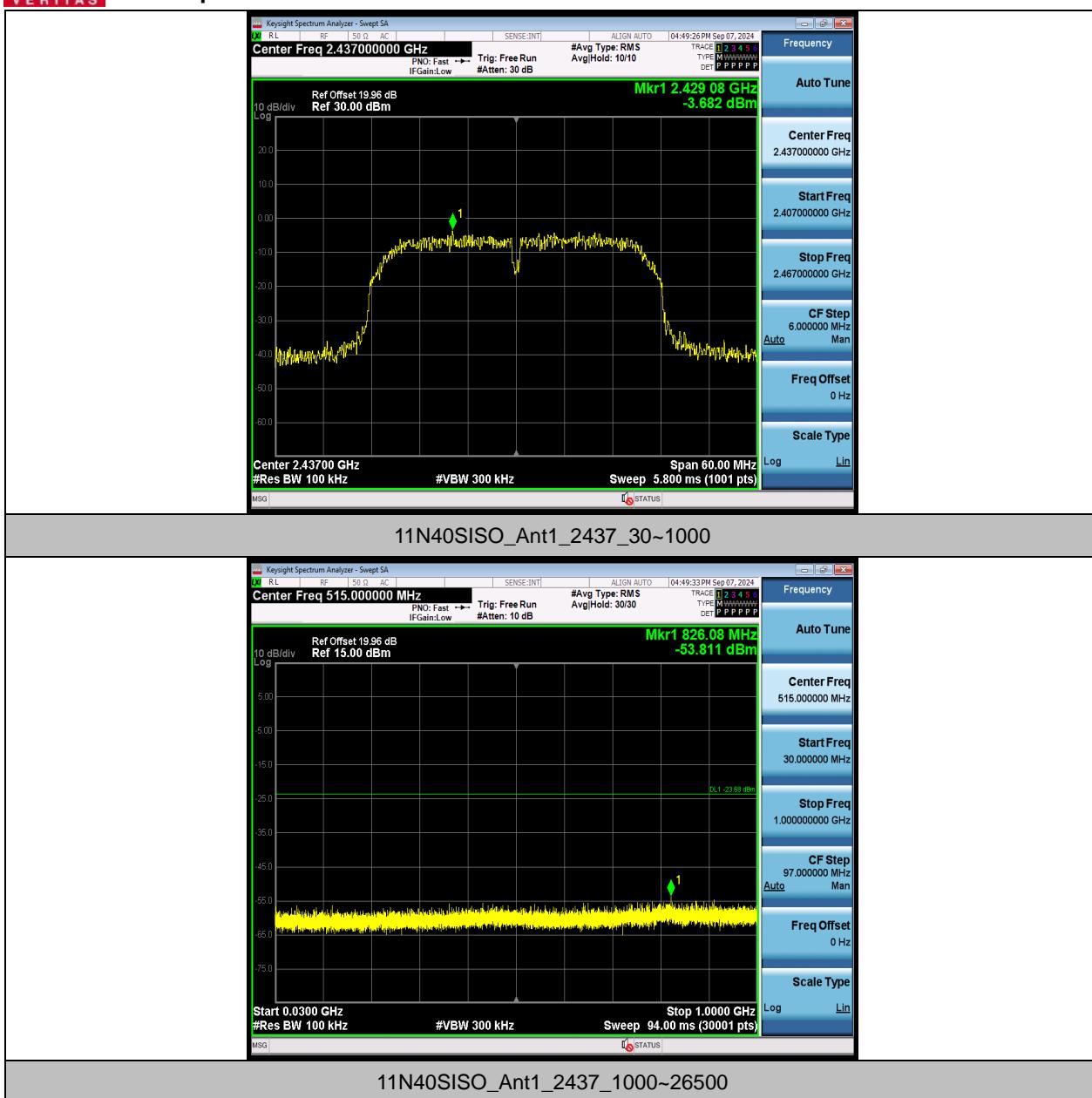
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Test Report No.: PSU-QBJ2408220111RF05





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VERITAS

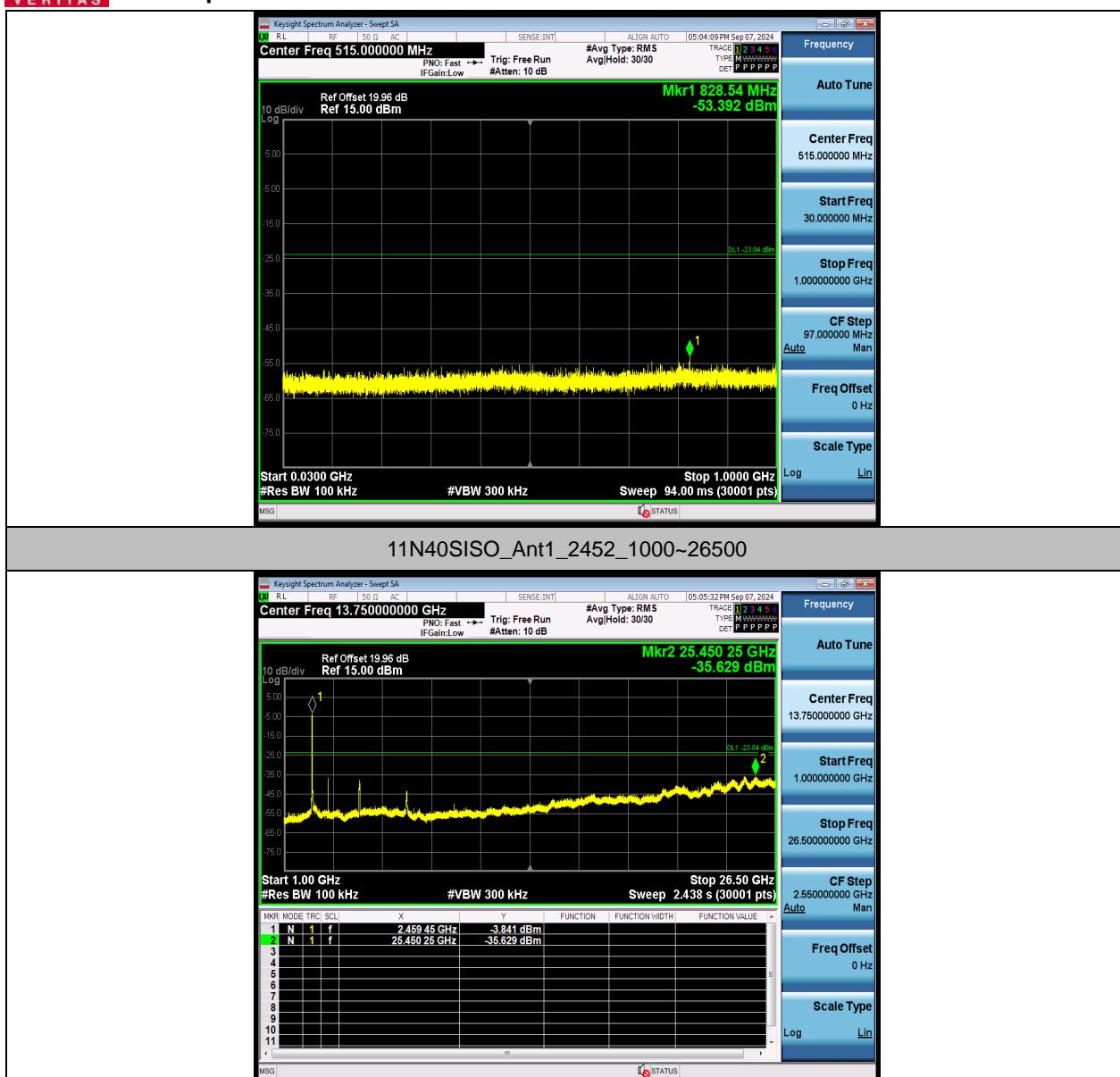
Test Report No.: PSU-QBJ2408220111RF05





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## DUTY CYCLE

## TEST RESULT

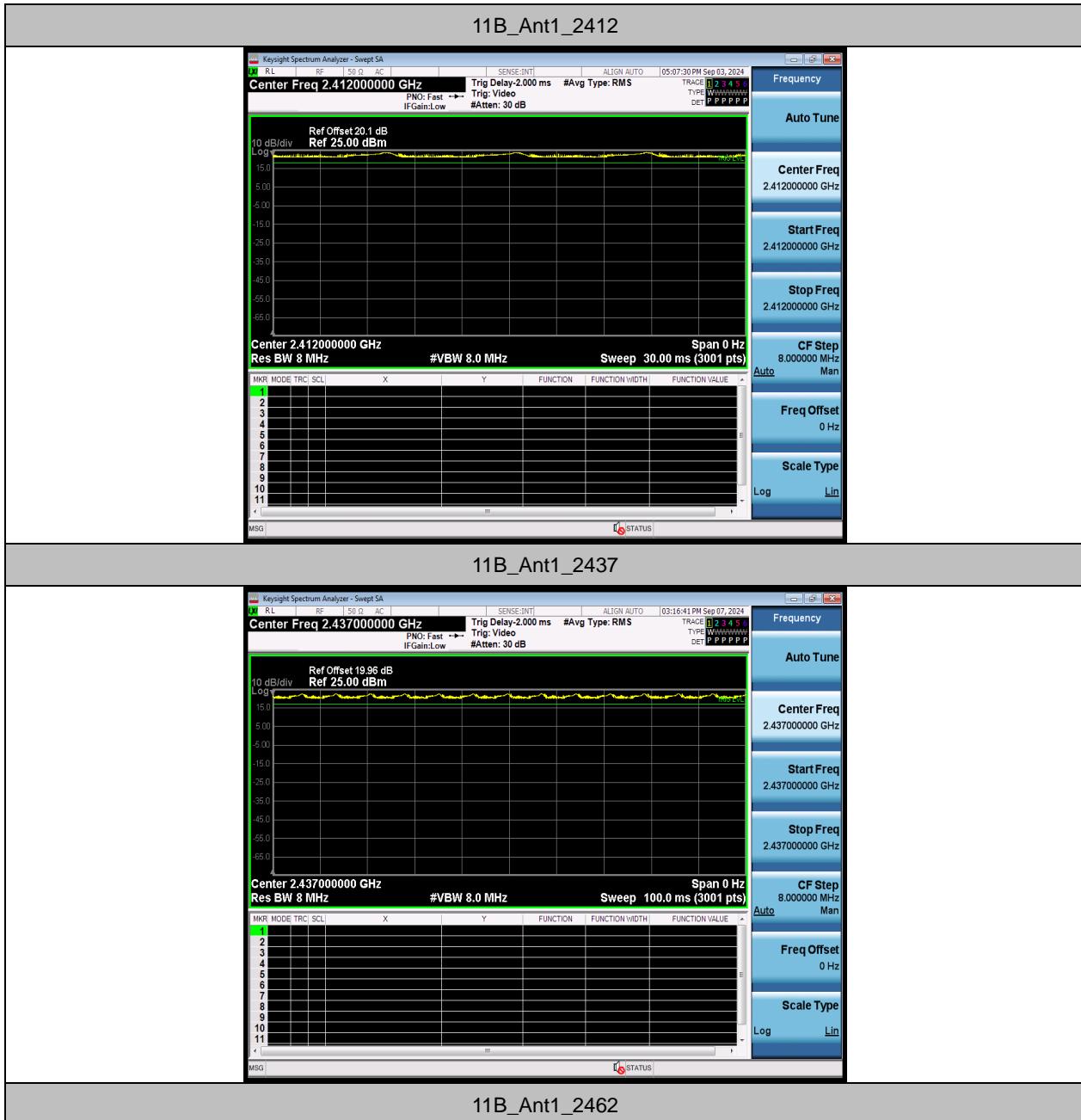
| TestMode  | Antenna | Frequency[MHz] | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] | Factor |
|-----------|---------|----------------|----------------------------|--------------------------|----------------|--------|
| 11B       | Ant1    | 2412           | 30.00                      | 30.00                    | 100.00         | 0.00   |
|           |         | 2437           | 100.00                     | 100.00                   | 100.00         | 0.00   |
|           |         | 2462           | 100.00                     | 100.00                   | 100.00         | 0.00   |
| 11G       | Ant1    | 2412           | 100.00                     | 100.00                   | 100.00         | 0.00   |
|           |         | 2437           | 100.00                     | 100.00                   | 100.00         | 0.00   |
|           |         | 2462           | 100.00                     | 100.00                   | 100.00         | 0.00   |
| 11N20SISO | Ant1    | 2412           | 100.00                     | 100.00                   | 100.00         | 0.00   |
|           |         | 2437           | 100.00                     | 100.00                   | 100.00         | 0.00   |
|           |         | 2462           | 100.00                     | 100.00                   | 100.00         | 0.00   |
| 11N40SISO | Ant1    | 2422           | 100.00                     | 100.00                   | 100.00         | 0.00   |
|           |         | 2437           | 100.00                     | 100.00                   | 100.00         | 0.00   |
|           |         | 2452           | 100.00                     | 100.00                   | 100.00         | 0.00   |



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Test Report No.: PSU-QBJ2408220111RF05

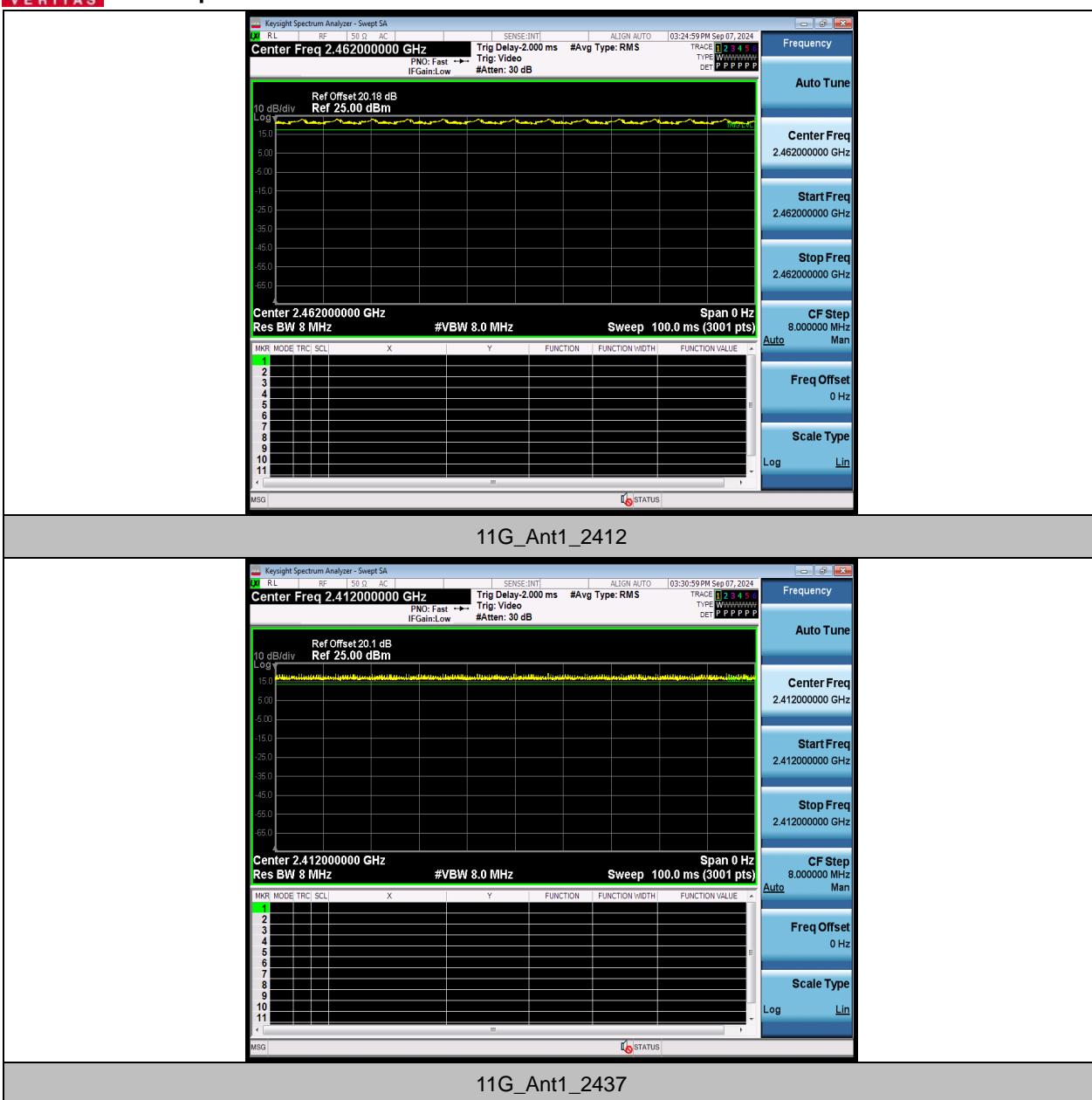
## TEST GRAPHS





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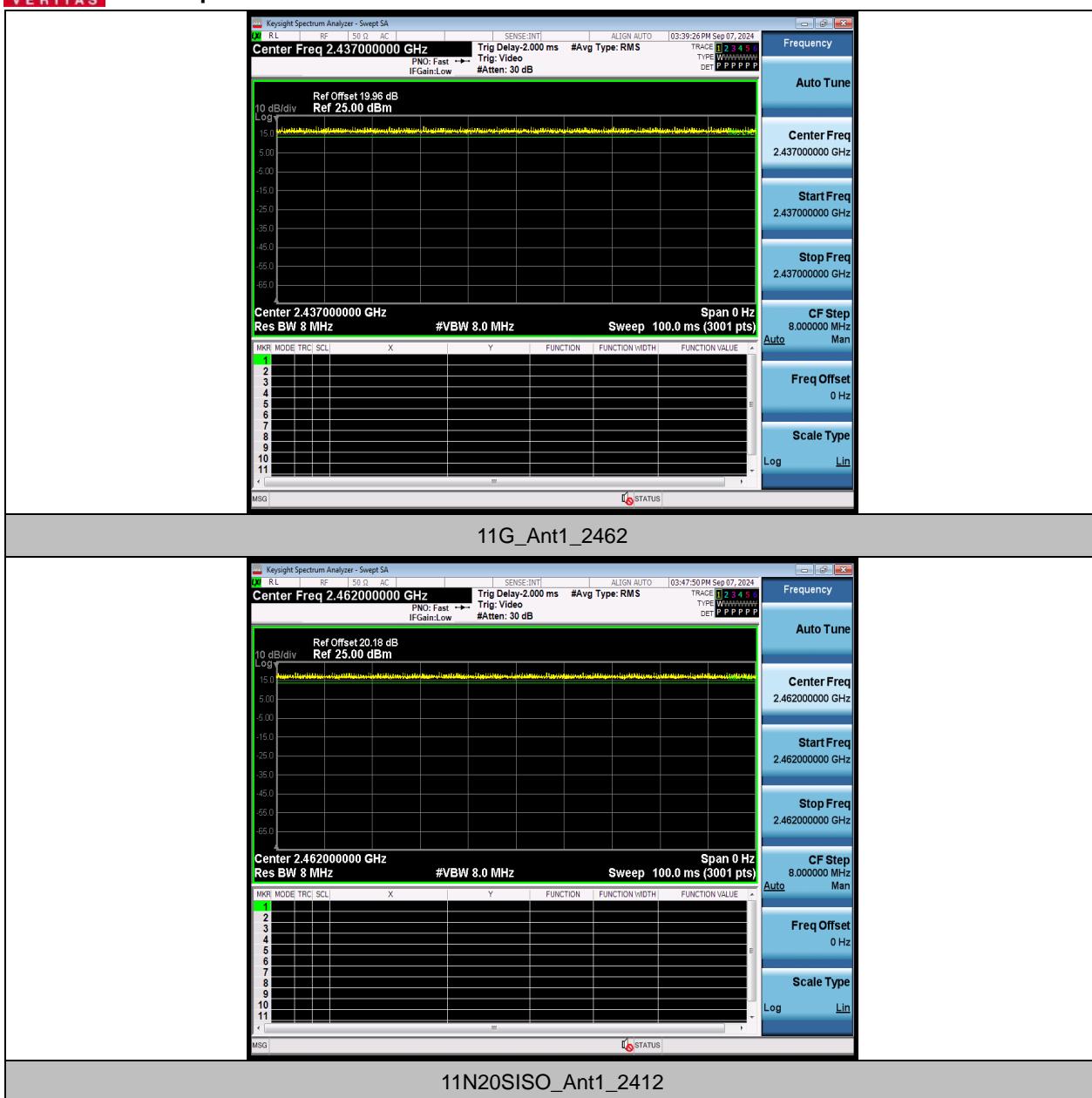
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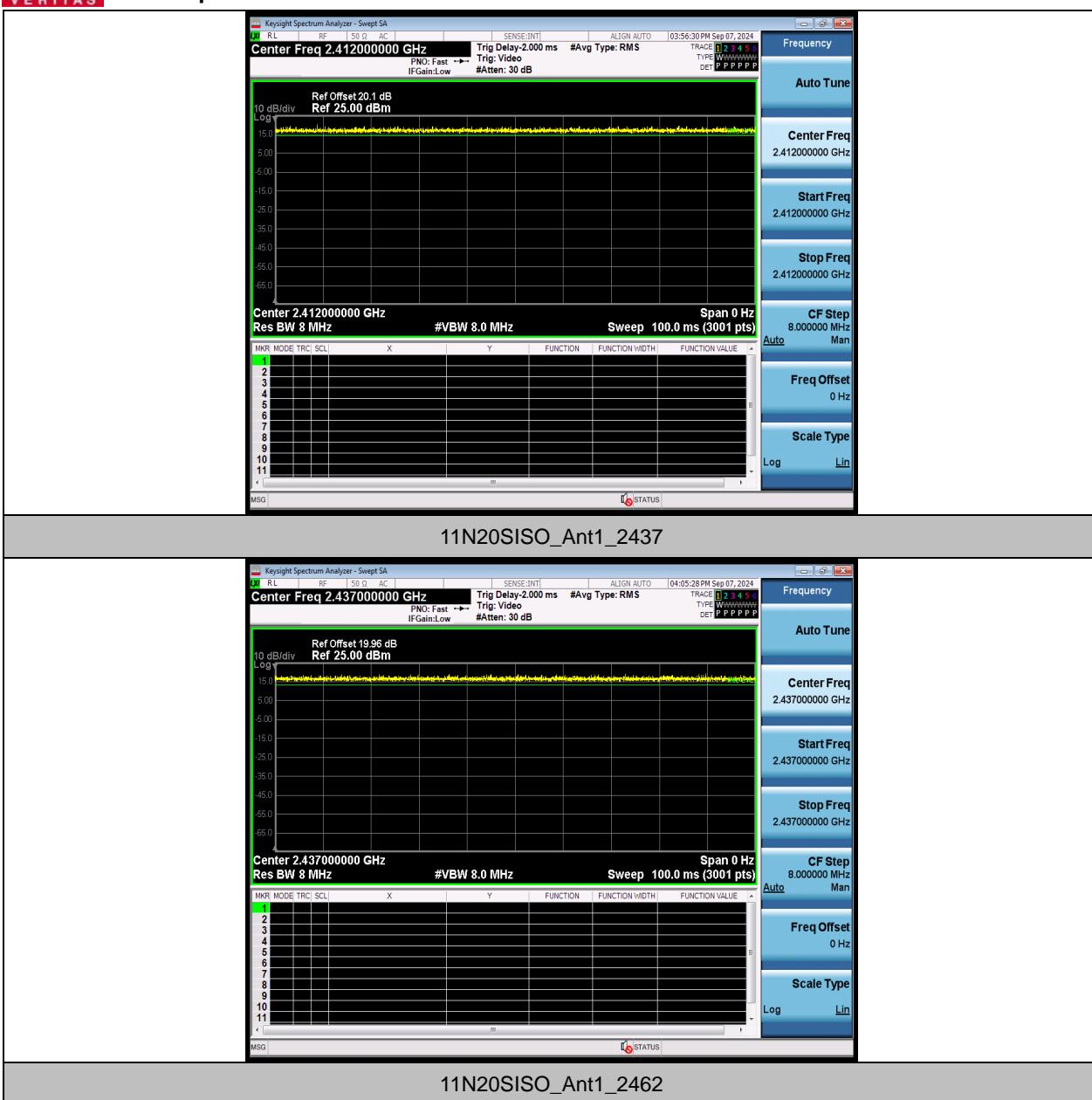
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VERITAS

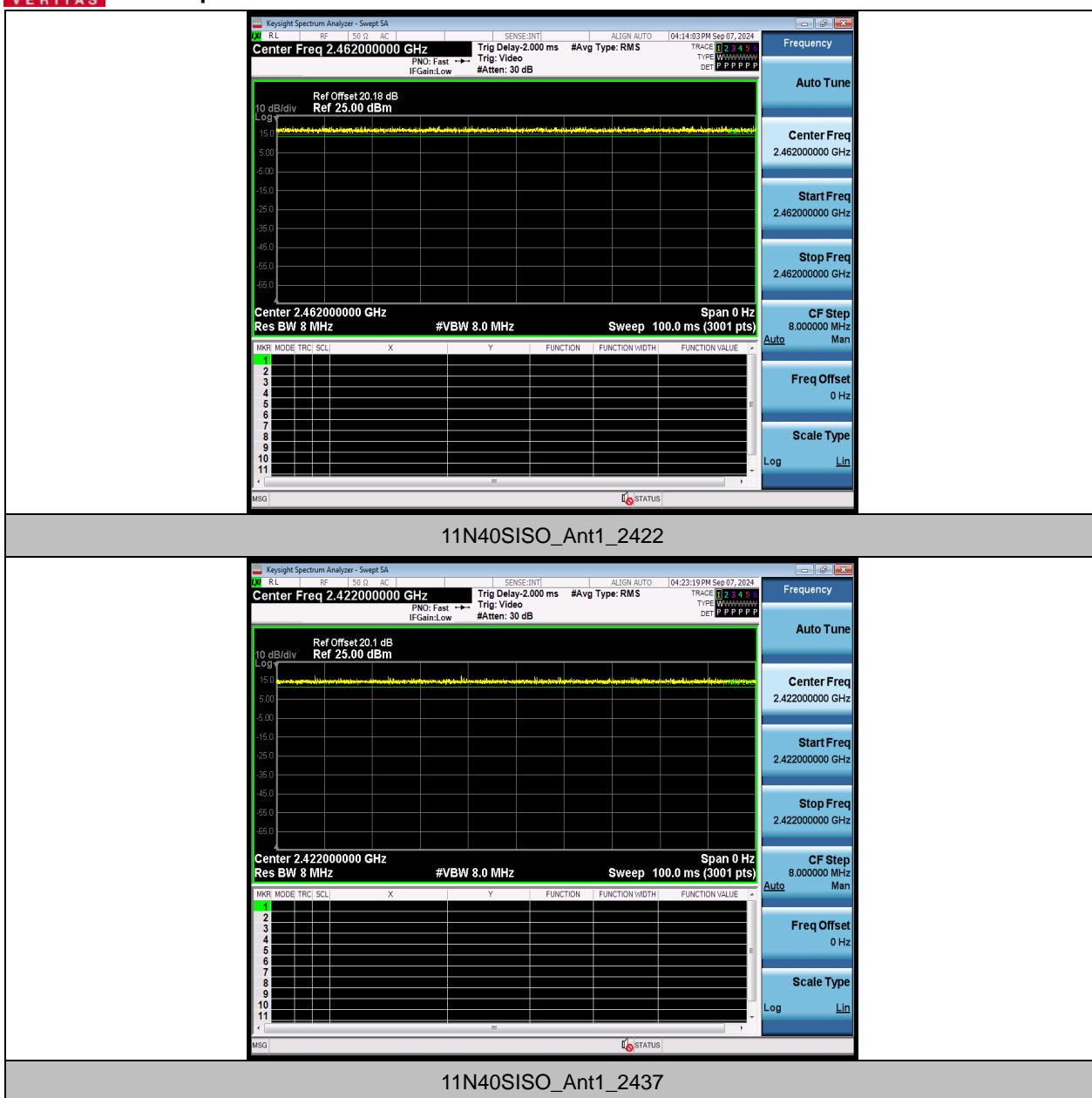
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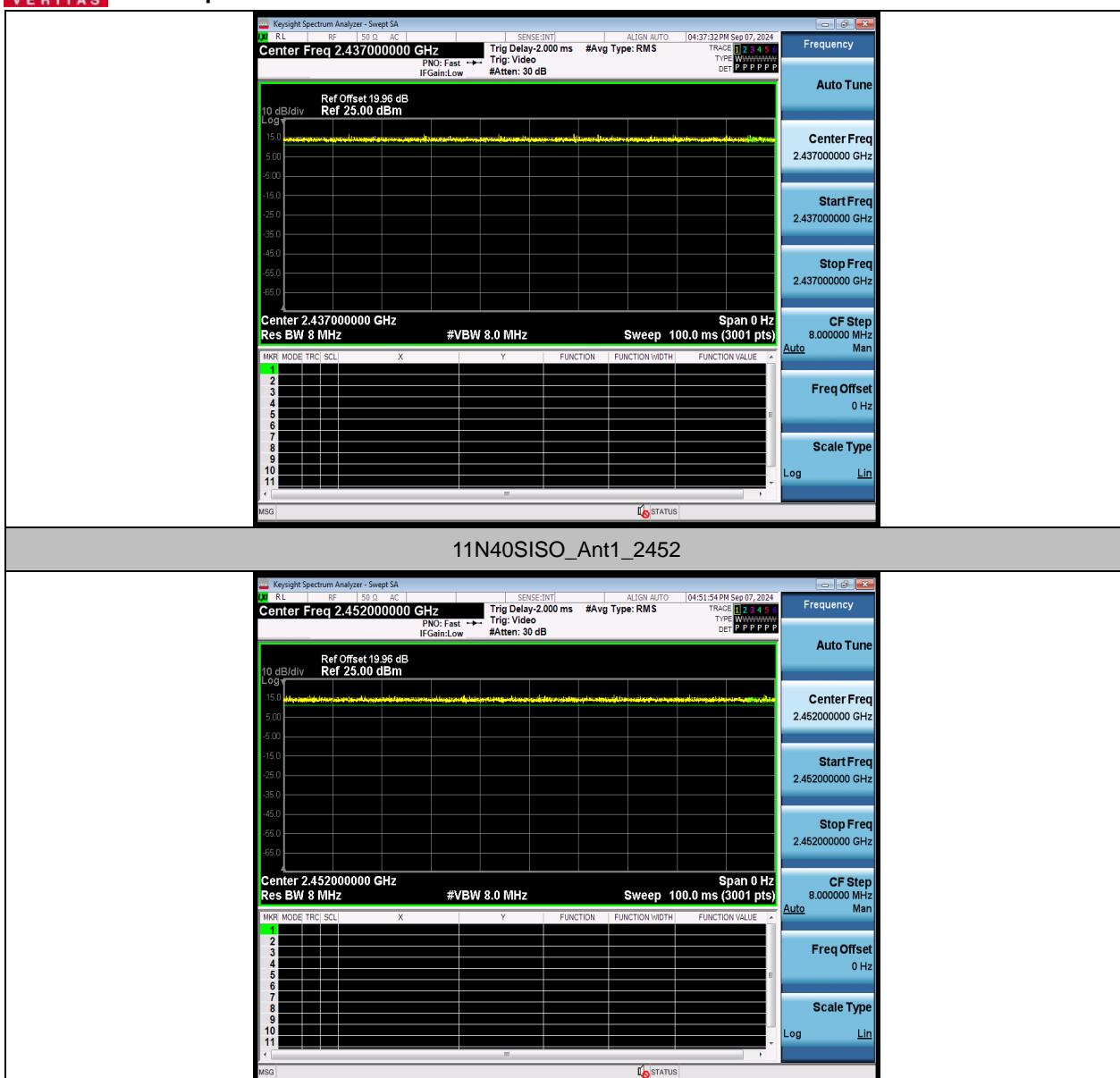
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Test Report No.: PSU-QBJ2408220111RF05





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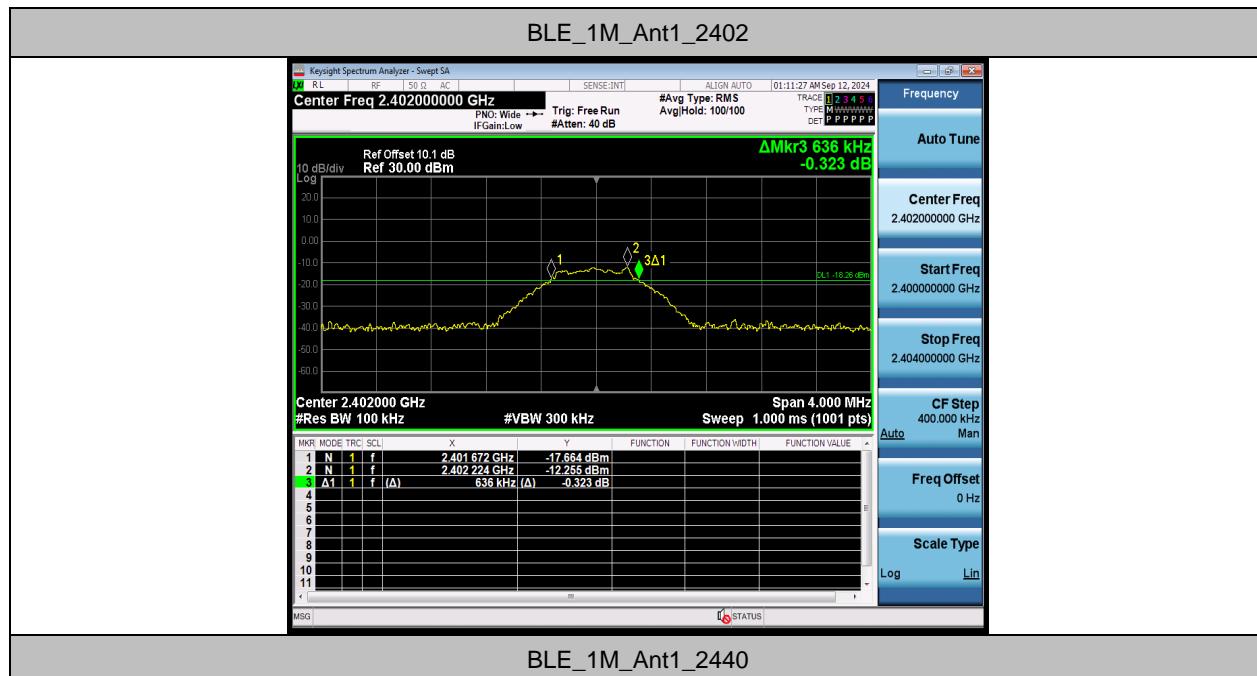
## BLE

## DTS BANDWIDTH

## TEST RESULT

| TestMode | Antenna | Frequency[MHz] | DTS BW [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|----------------|--------------|----------|----------|------------|---------|
| BLE_1M   | Ant1    | 2402           | 0.636        | 2401.672 | 2402.308 | 0.5        | PASS    |
|          |         | 2440           | 0.652        | 2439.660 | 2440.312 | 0.5        | PASS    |
|          |         | 2480           | 0.664        | 2479.660 | 2480.324 | 0.5        | PASS    |

## TEST GRAPHS





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Test Report No.: PSU-QBJ2408220111RF05



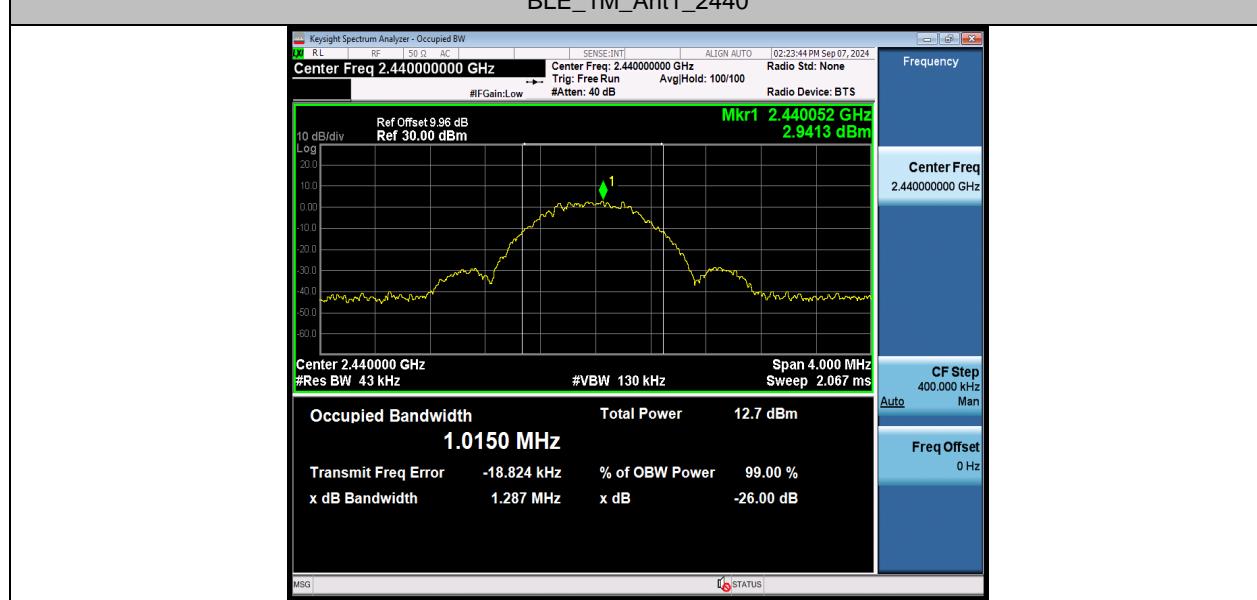
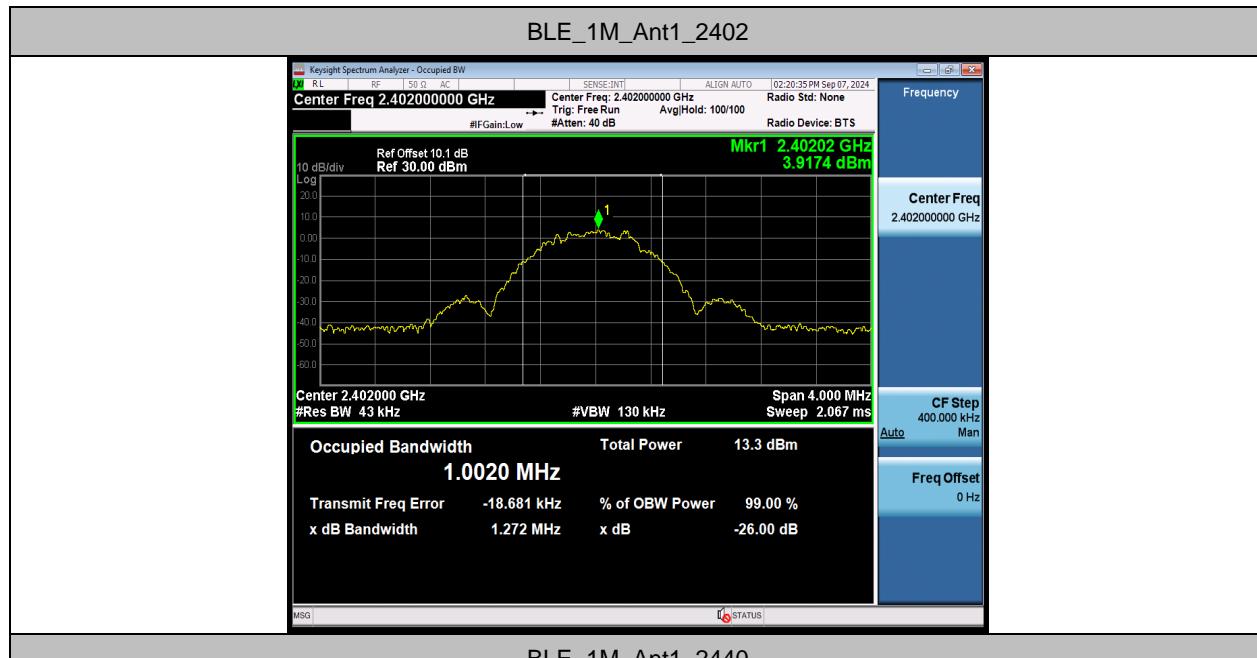


## OCCUPIED CHANNEL BANDWIDTH

## TEST RESULT

| TestMode | Antenna | Frequency[MHz] | OCB [MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|----------|---------|----------------|-----------|-----------|-----------|------------|---------|
| BLE_1M   | Ant1    | 2402           | 1.0020    | 2401.4803 | 2402.4823 | ---        | ---     |
|          |         | 2440           | 1.0150    | 2439.4737 | 2440.4887 | ---        | ---     |
|          |         | 2480           | 1.0124    | 2479.4744 | 2480.4868 | ---        | ---     |

## TEST GRAPHS





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## MAXIMUM CONDUCTED OUTPUT POWER

### TEST RESULT

| TestMode | Antenna | Channel | Average power<br>[dBm] | Peak power<br>[dBm] | Peak power<br>[mw] | Conducted Limit<br>[dBm] | EIRP<br>[dBm] | EIRP<br>[mw] | EIRP Limit<br>[dBm] | Verdict | Power Setting |
|----------|---------|---------|------------------------|---------------------|--------------------|--------------------------|---------------|--------------|---------------------|---------|---------------|
| BLE_1M   | Ant1    | 2402    | 7.40                   | 7.51                | 5.64               | ≤30                      | 7.68          | 5.86         | ≤36                 | PASS    | Defult        |
|          |         | 2440    | 7.51                   | 7.55                | 5.69               | ≤30                      | 7.72          | 5.92         | ≤36                 | PASS    | Defult        |
|          |         | 2480    | 7.61                   | 7.66                | 5.83               | ≤30                      | 7.83          | 6.07         | ≤36                 | PASS    | Defult        |

Note: EIRP=Peak Power+Gain



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Test Report No.: PSU-QBJ2408220111RF05

## MAXIMUM POWER SPECTRAL DENSITY

### TEST RESULT

| TestMode | Antenna | Frequency[MHz] | Result[dBm/3kHz] | Limit[dBm/3kHz] | Verdict |
|----------|---------|----------------|------------------|-----------------|---------|
| BLE_1M   | Ant1    | 2402           | -8.48            | ≤8.00           | PASS    |
|          |         | 2440           | -8.84            | ≤8.00           | PASS    |
|          |         | 2480           | -8.63            | ≤8.00           | PASS    |

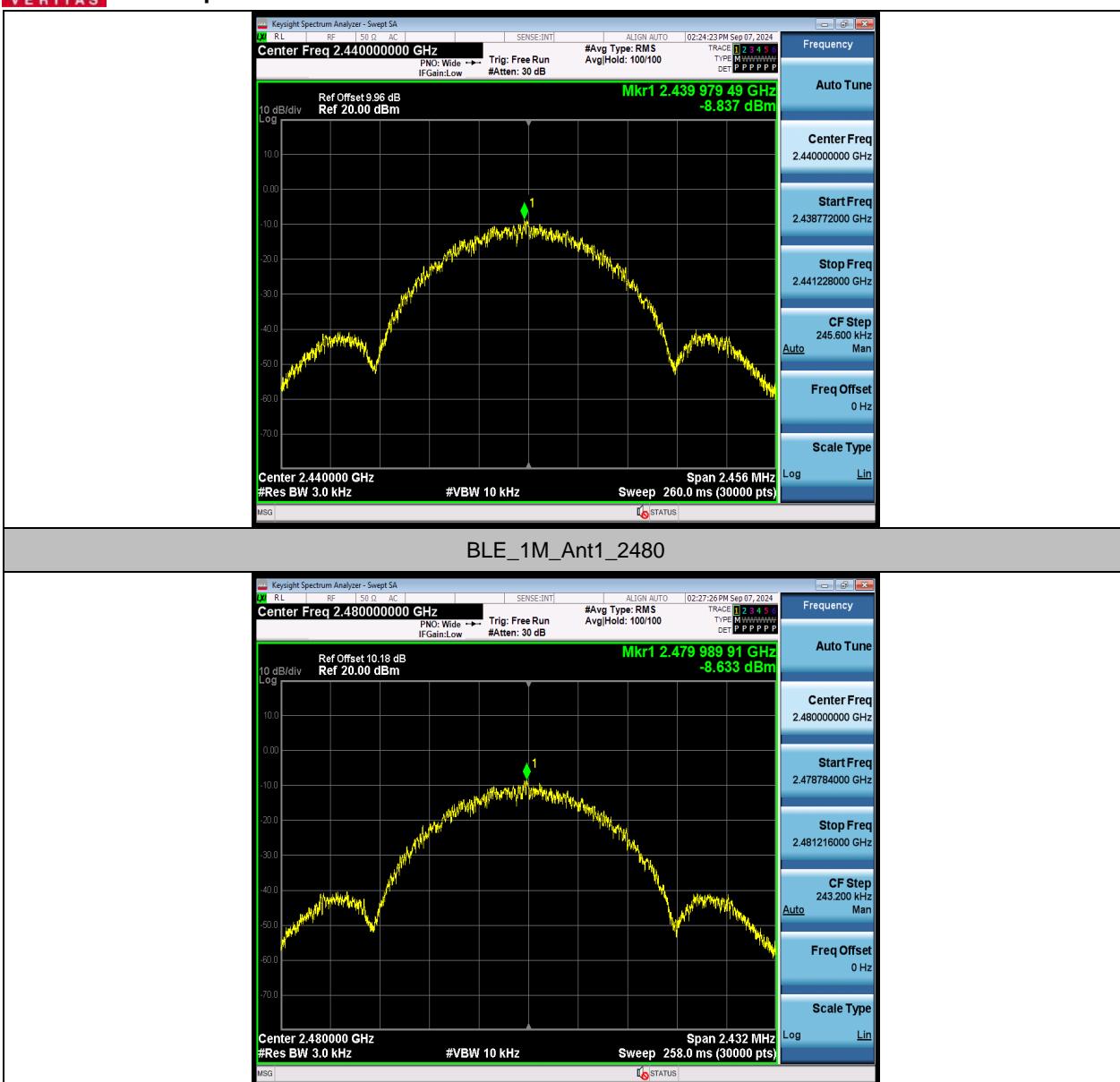
### TEST GRAPHS





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Test Report No.: PSU-QBJ2408220111RF05



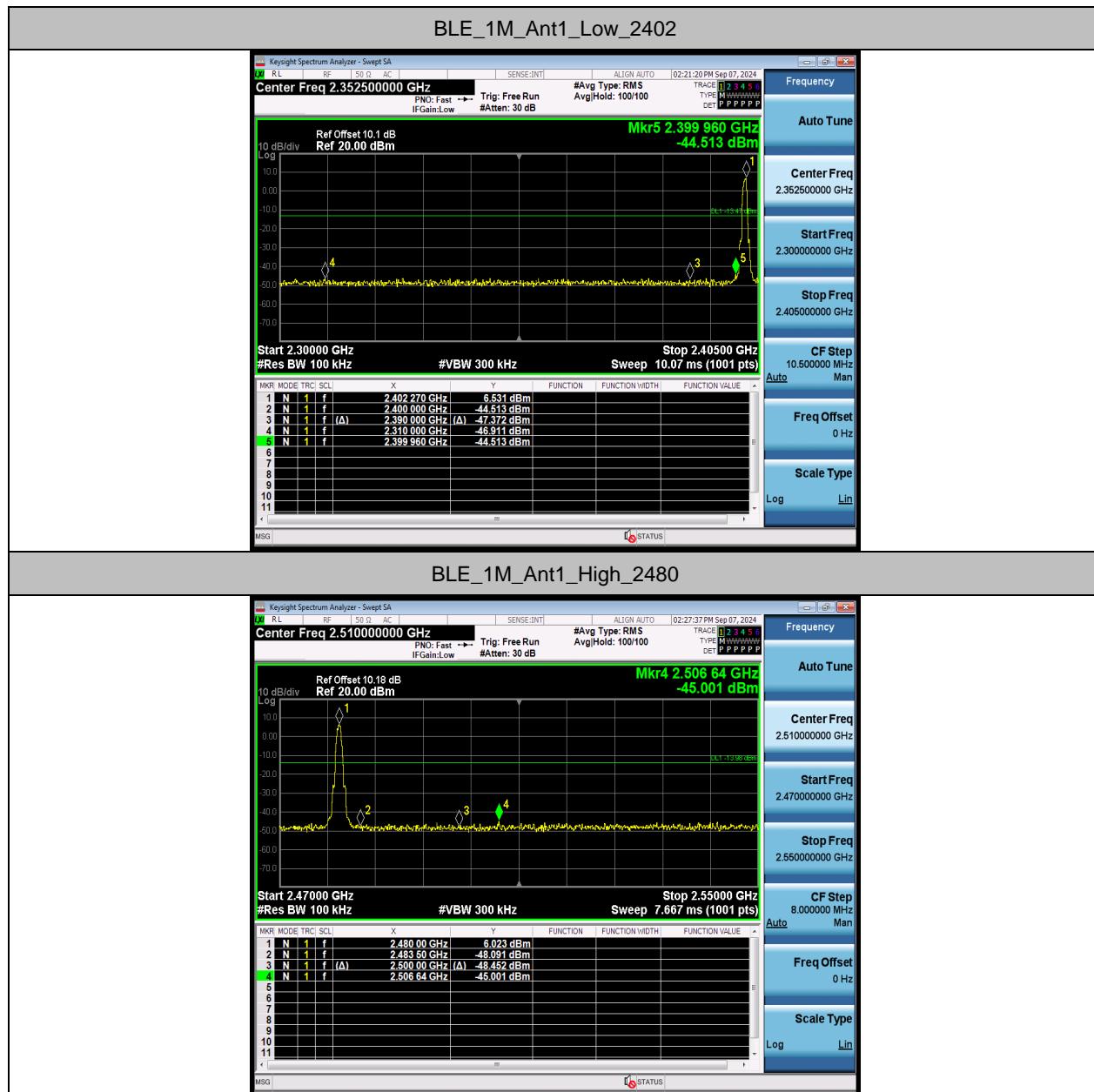


## BAND EDGE MEASUREMENTS

### TEST RESULT

| TestMode | Antenna | ChName | Frequency[MHz] | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|--------|----------------|---------------|-------------|------------|---------|
| BLE_1M   | Ant1    | Low    | 2402           | 6.53          | -44.51      | ≤-13.47    | PASS    |
|          |         | High   | 2480           | 6.02          | -45         | ≤-13.98    | PASS    |

### TEST GRAPHS



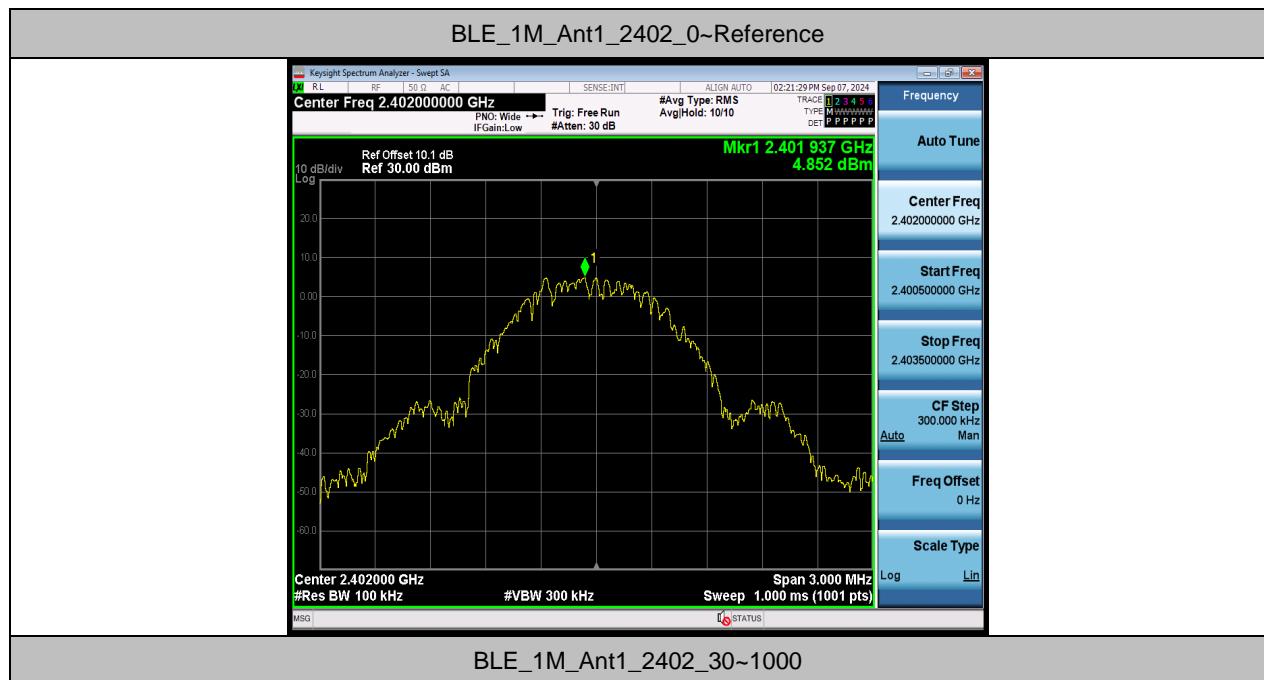


## CONDUCTED SPURIOUS EMISSION

### TEST RESULT

| TestMode | Antenna | Frequency[MHz] | FreqRange [MHz] | RefLevel [dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|----------------|-----------------|----------------|-------------|------------|---------|
| BLE_1M   | Ant1    | 2402           | Reference       | 4.85           | 4.85        | ---        | PASS    |
|          |         |                | 30~1000         | 4.85           | -50.06      | ≤-15.15    | PASS    |
|          |         |                | 1000~26500      | 4.85           | -32.31      | ≤-15.15    | PASS    |
|          |         | 2440           | Reference       | 4.32           | 4.32        | ---        | PASS    |
|          |         |                | 30~1000         | 4.32           | -50.65      | ≤-15.68    | PASS    |
|          |         |                | 1000~26500      | 4.32           | -33.68      | ≤-15.68    | PASS    |
|          |         | 2480           | Reference       | 5.09           | 5.09        | ---        | PASS    |
|          |         |                | 30~1000         | 5.09           | -50.52      | ≤-14.91    | PASS    |
|          |         |                | 1000~26500      | 5.09           | -32.35      | ≤-14.91    | PASS    |

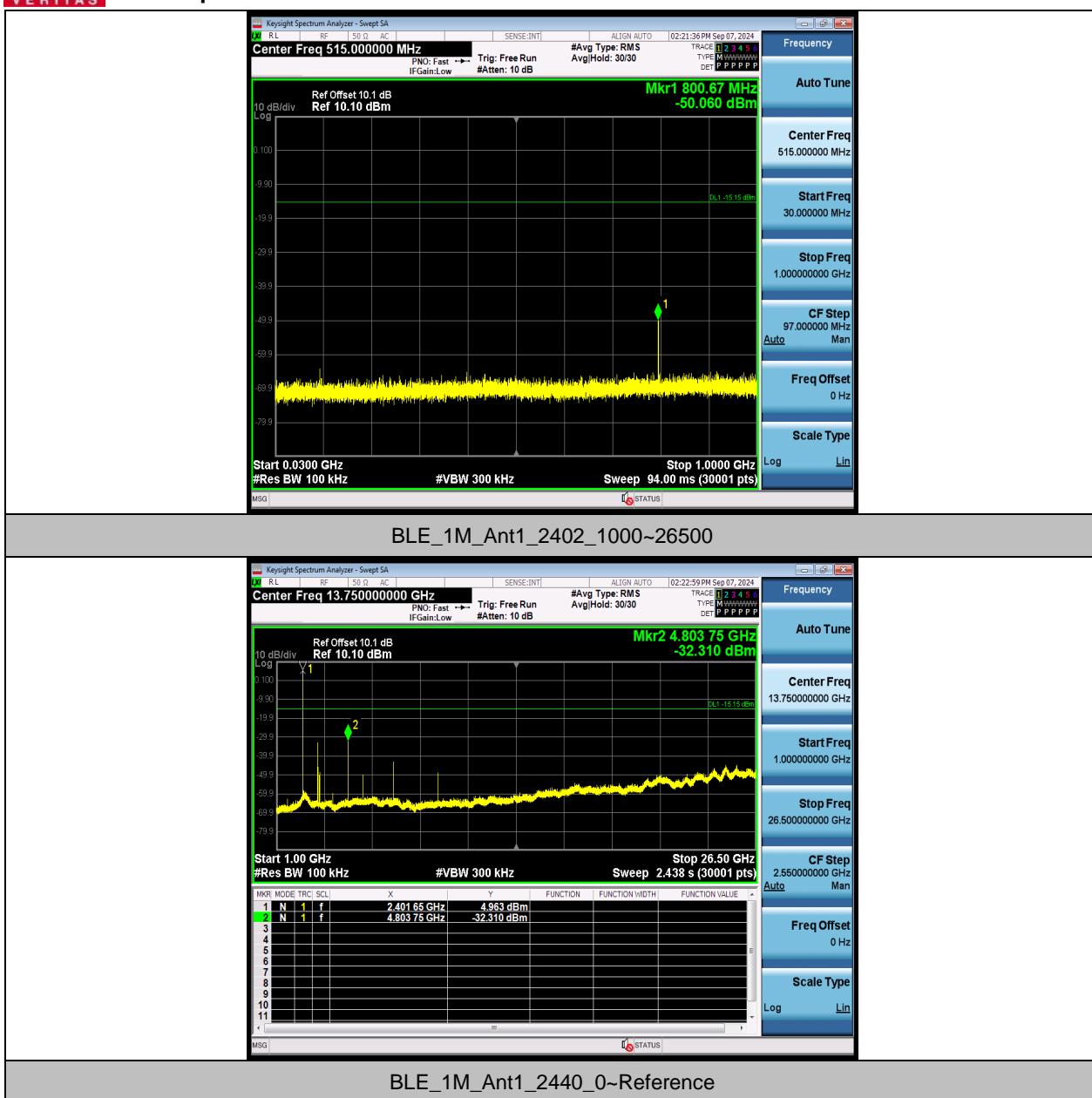
### TEST GRAPHS





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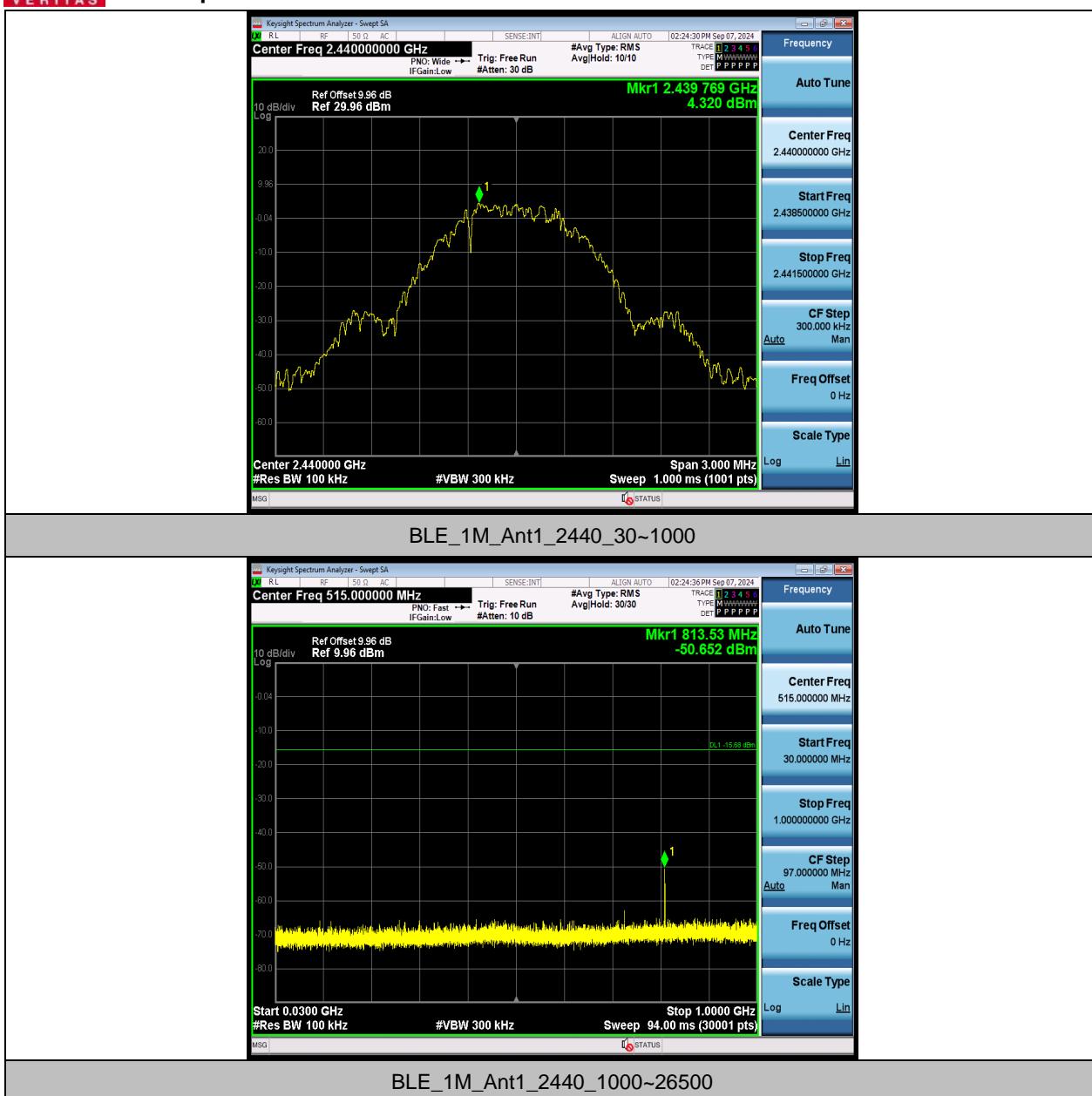
Test Report No.: PSU-QBJ2408220111RF05





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Test Report No.: PSU-QBJ2408220111RF05





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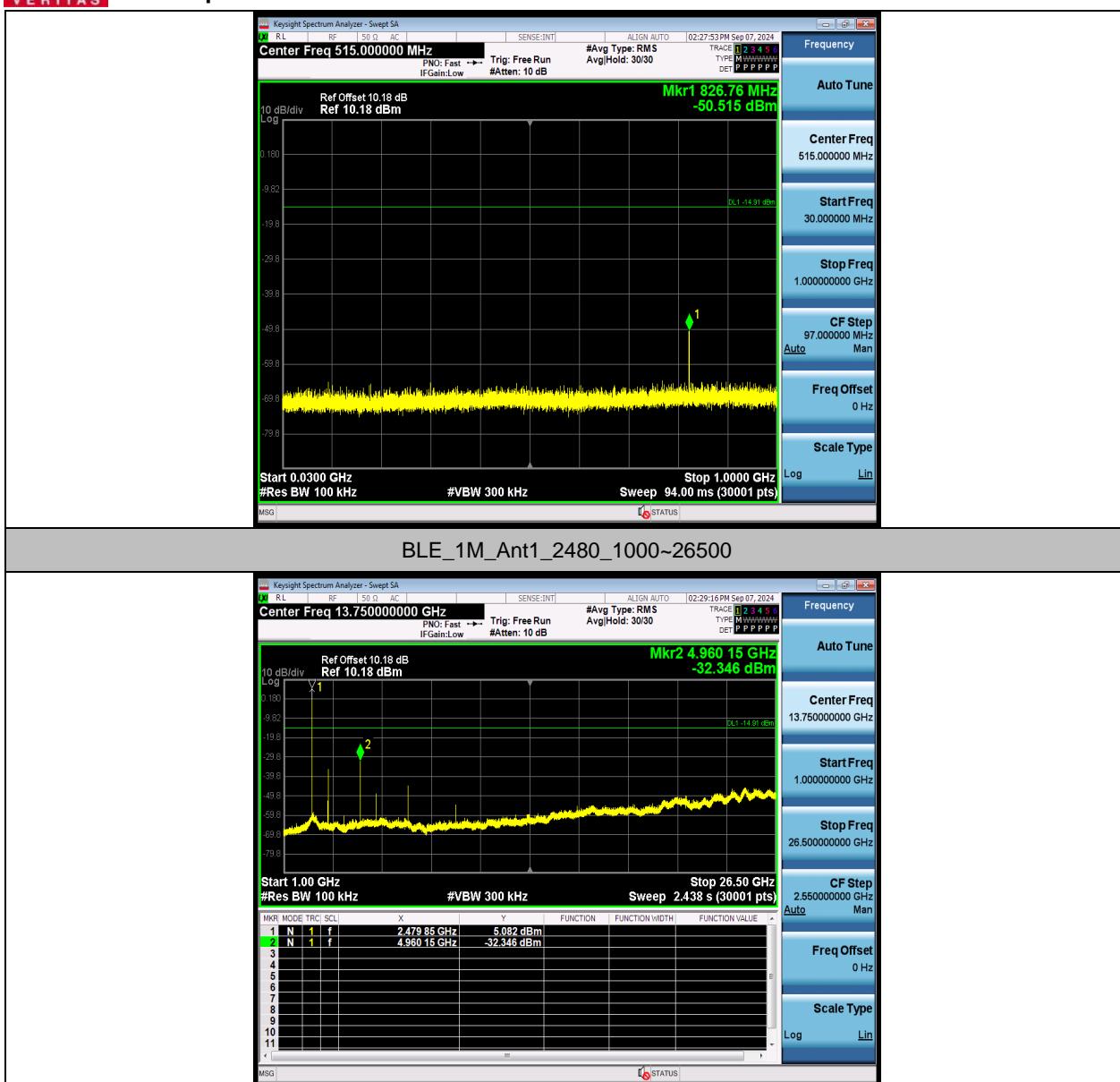
Test Report No.: PSU-QBJ2408220111RF05





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Test Report No.: PSU-QBJ2408220111RF05



## DUTY CYCLE

### TEST RESULT

| TestMode | Antenna | Frequency[MHz] | ON Time<br>[ms] | Period<br>[ms] | Duty Cycle<br>[%] | Duty Cycle<br>Factor[dB] |
|----------|---------|----------------|-----------------|----------------|-------------------|--------------------------|
| BLE_1M   | Ant1    | 2402           | 2.09            | 3.13           | 66.77             | 1.75                     |
|          |         | 2440           | 2.10            | 3.13           | 67.09             | 1.73                     |
|          |         | 2480           | 2.09            | 2.50           | 83.60             | 0.78                     |



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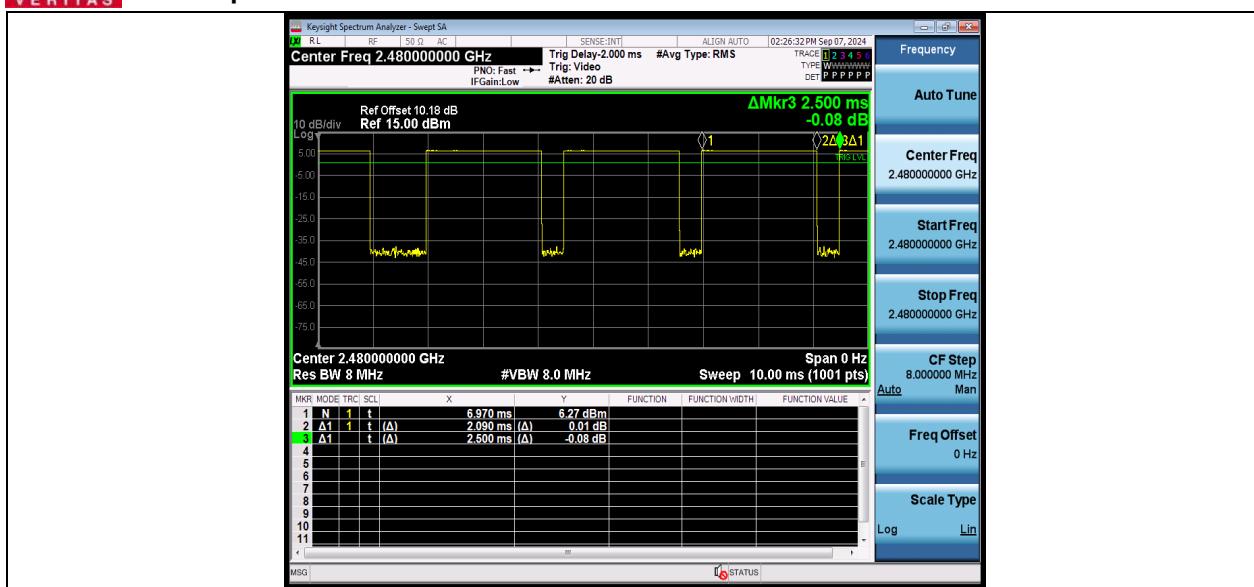
## TEST GRAPHS





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VERITAS

Test Report No.: PSU-QBJ2408220111RF05



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