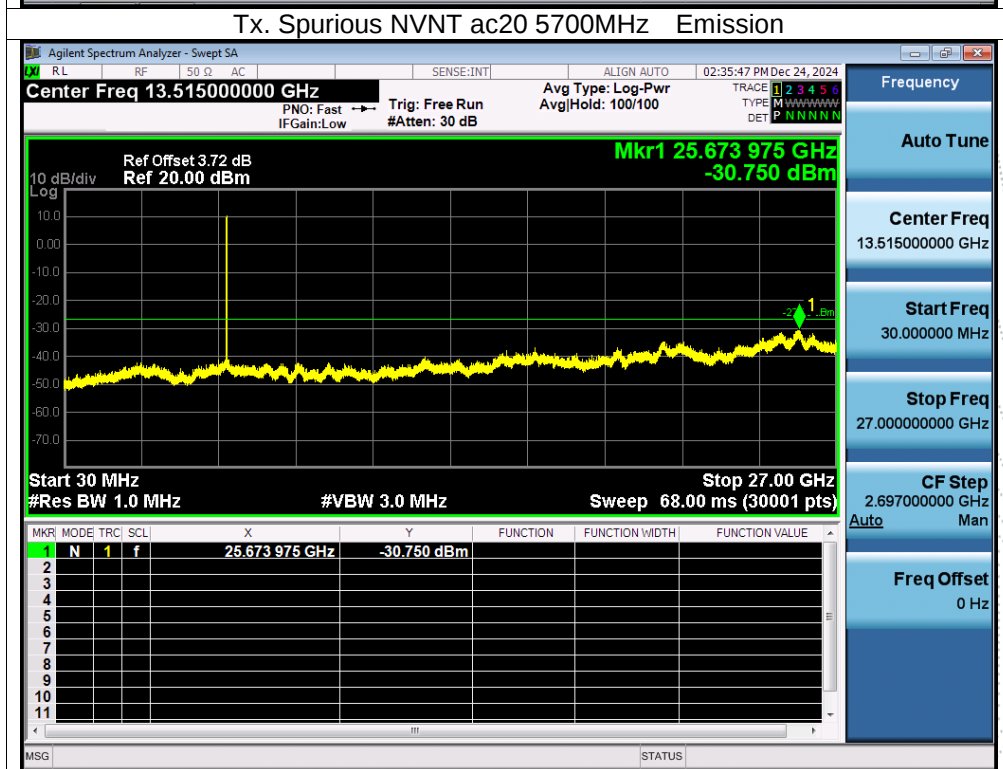
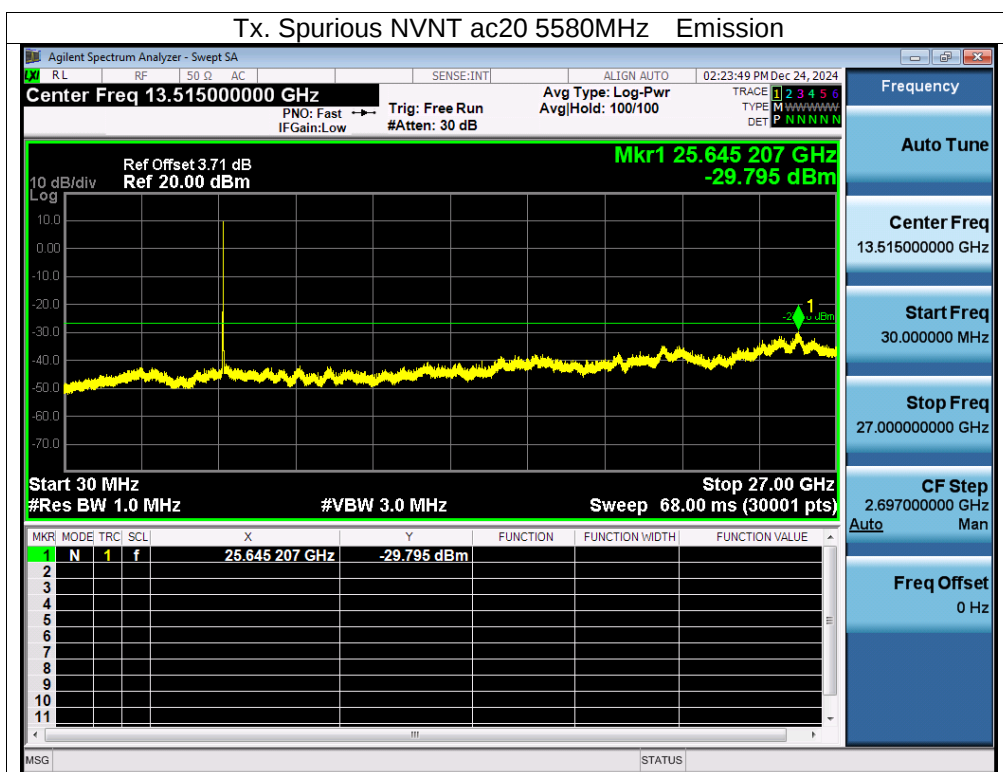
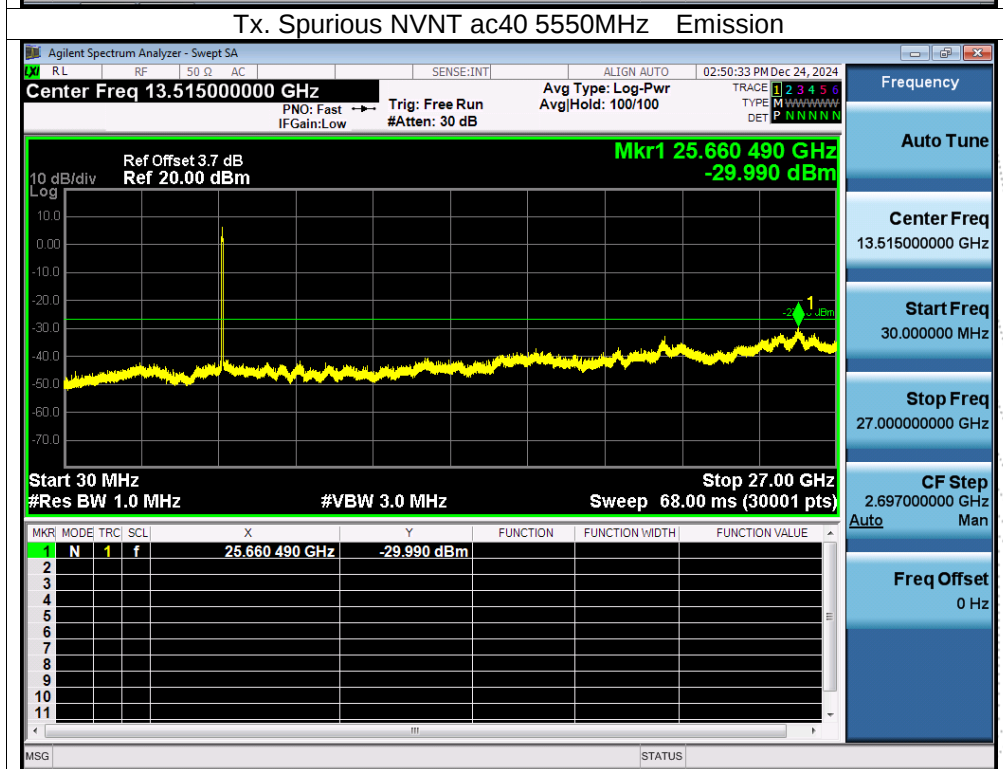
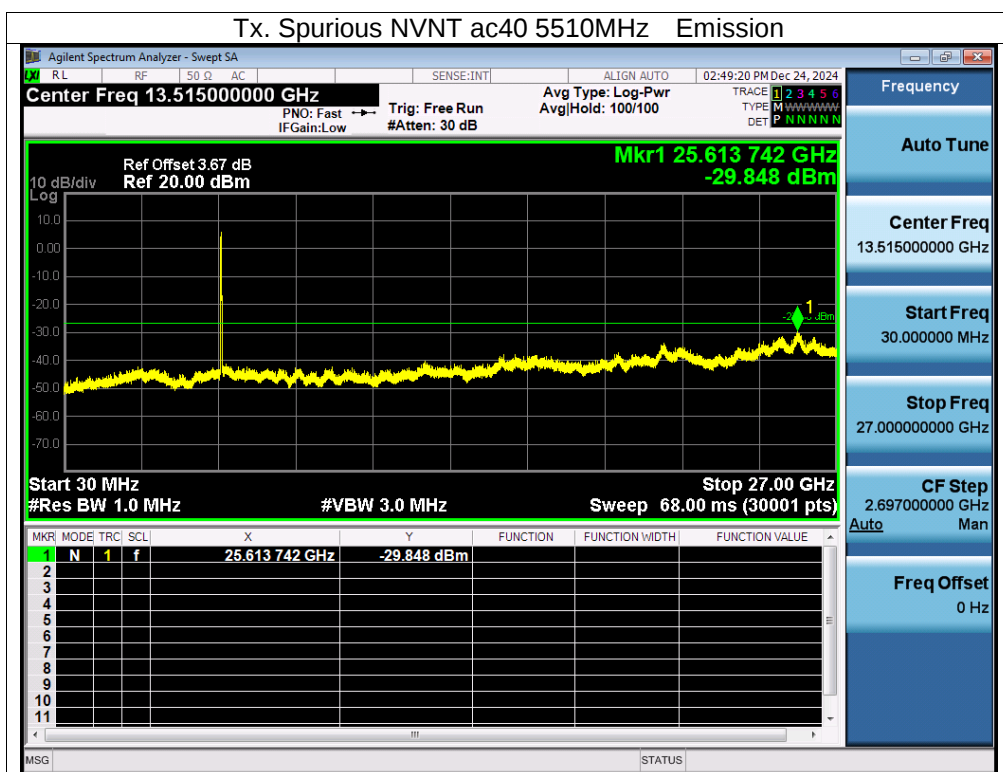
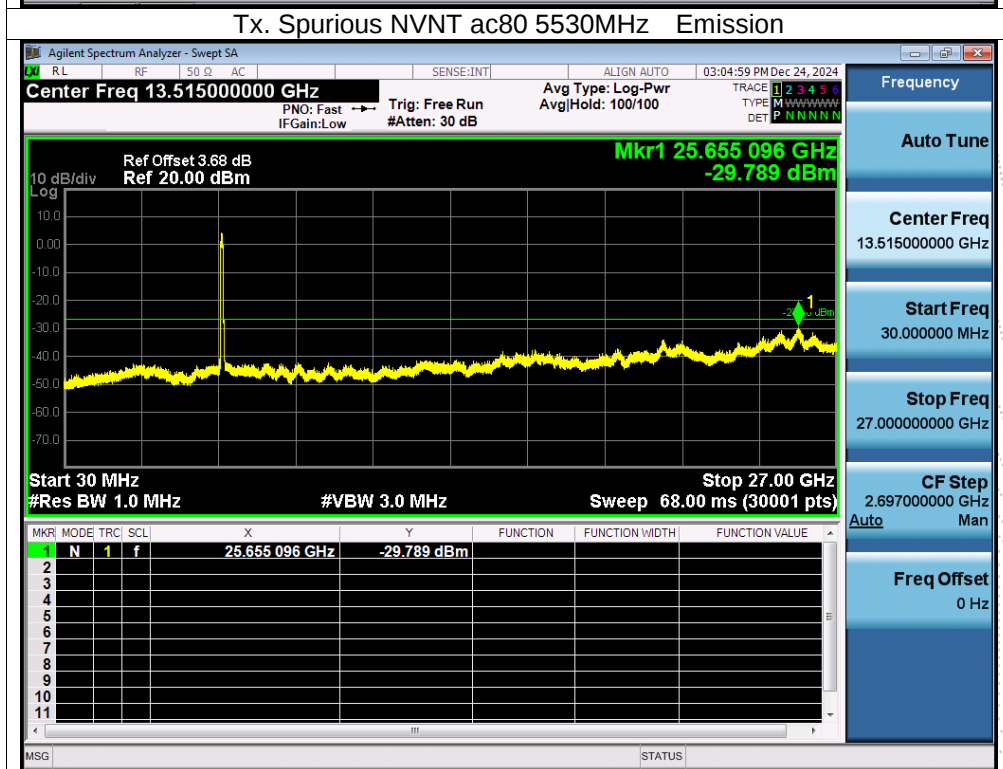
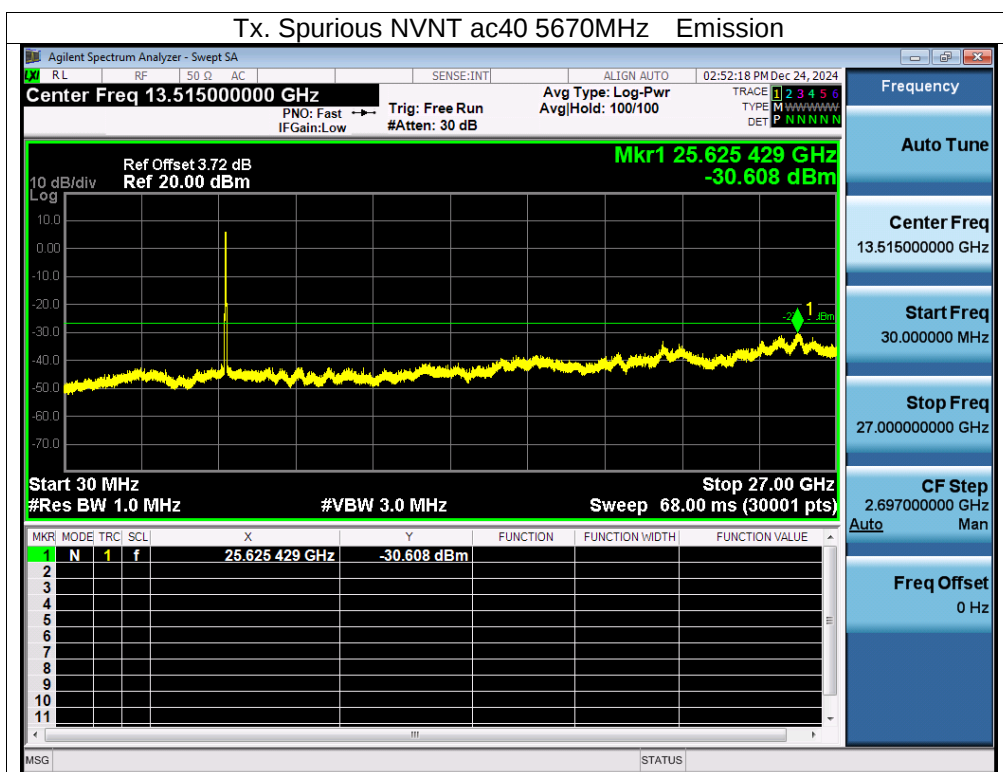
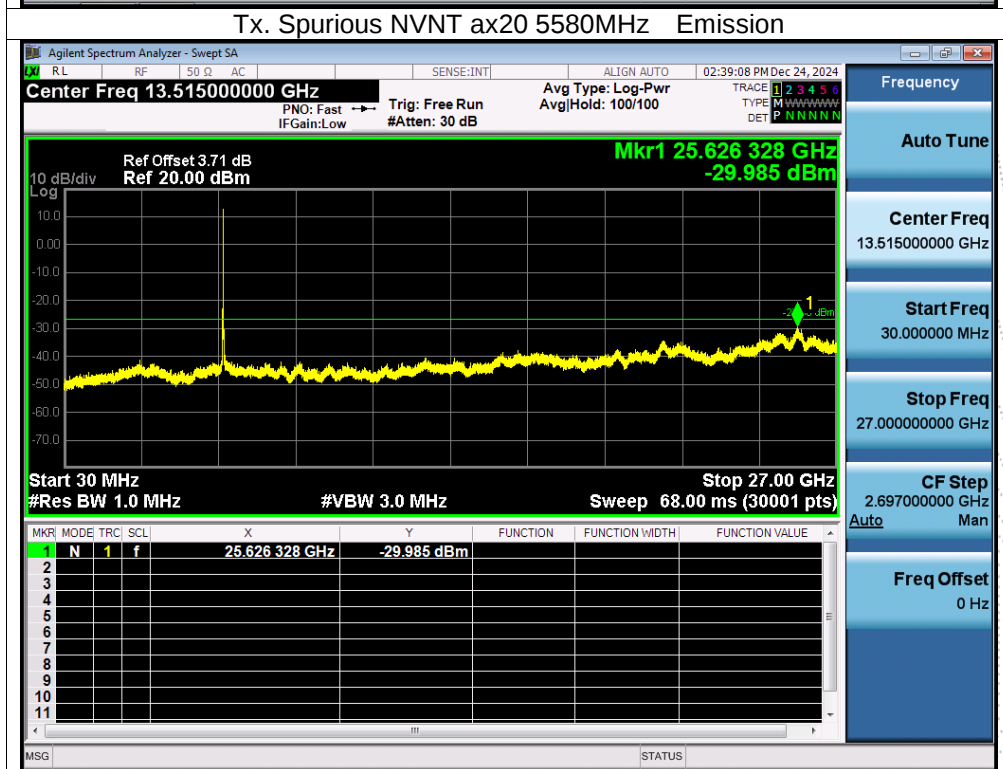
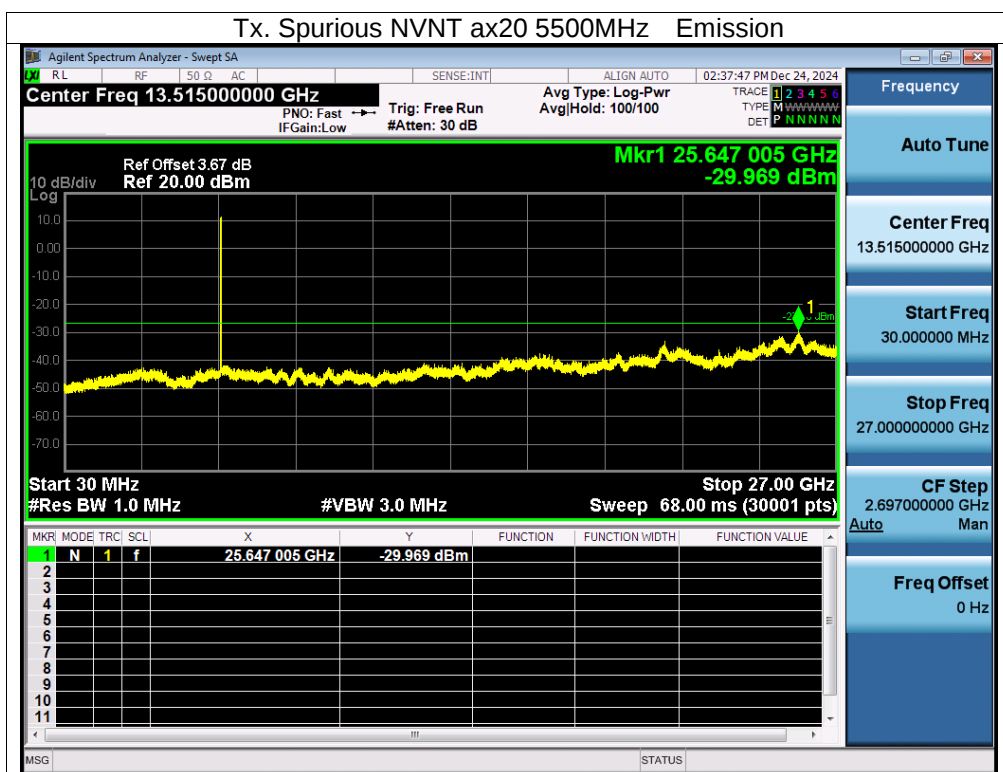
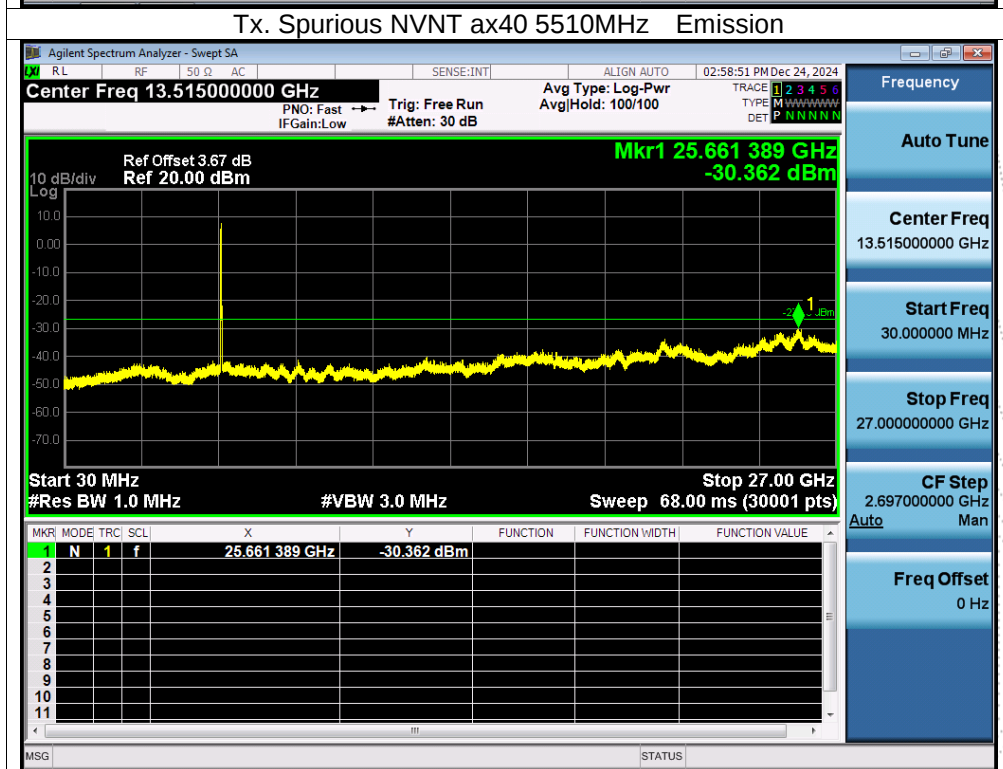
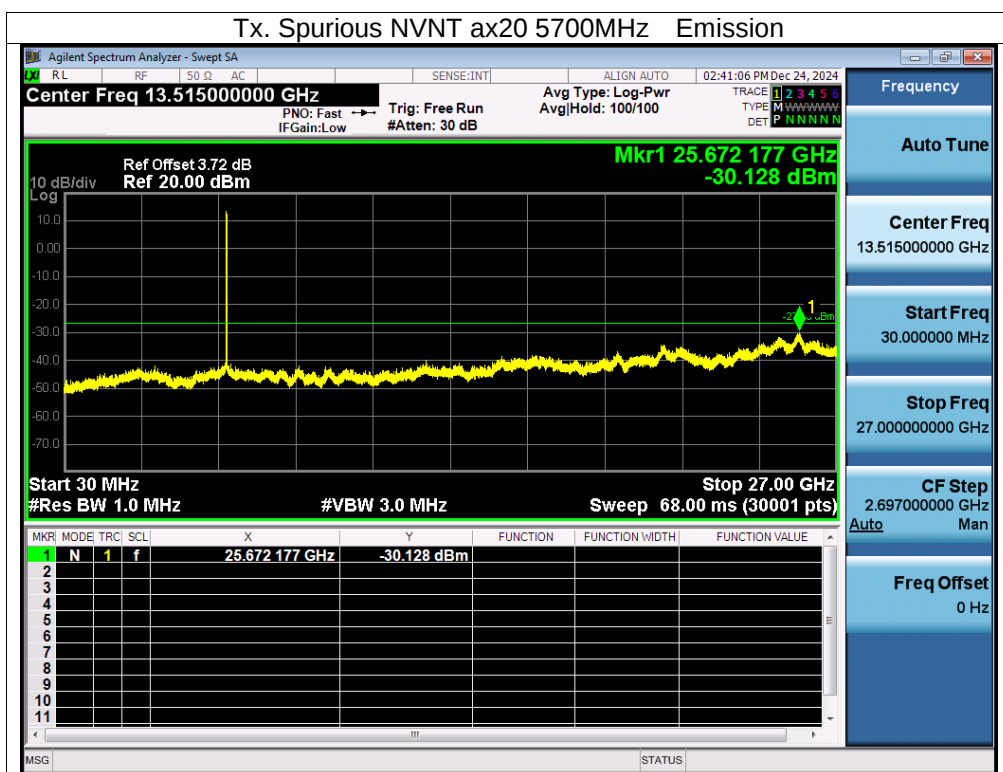


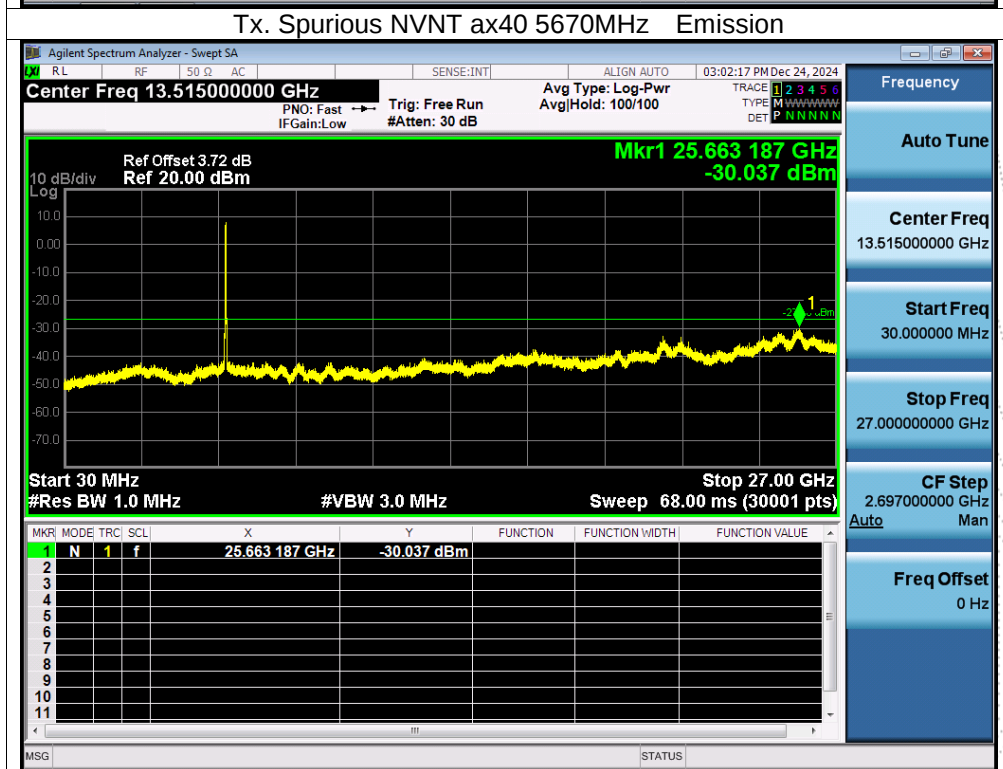
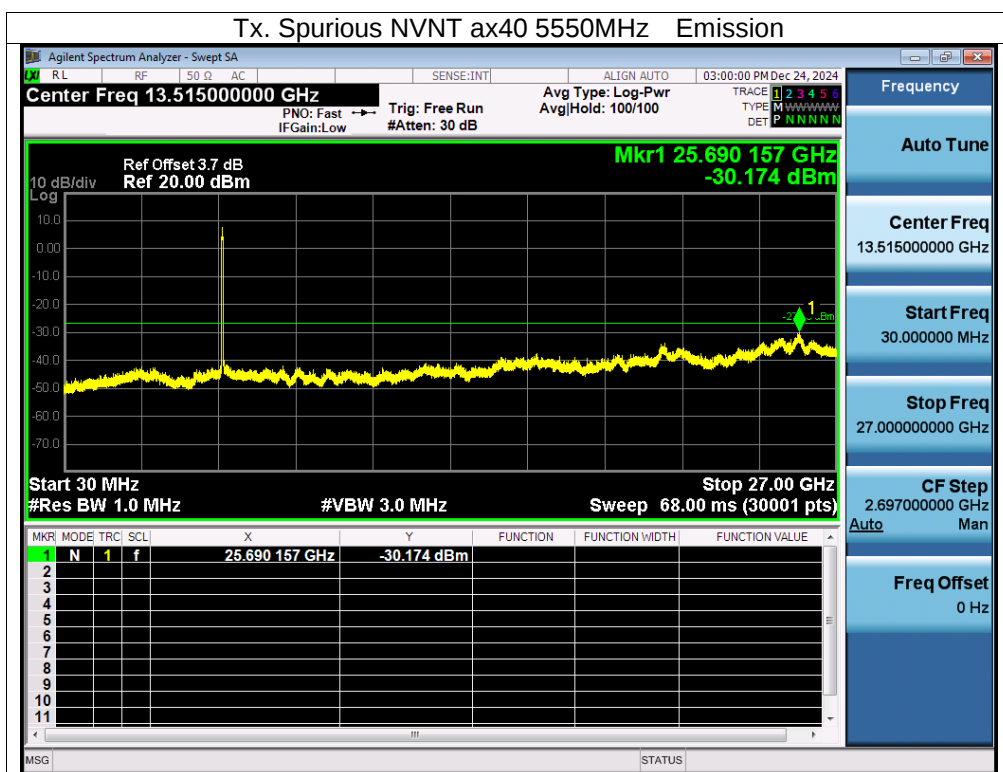


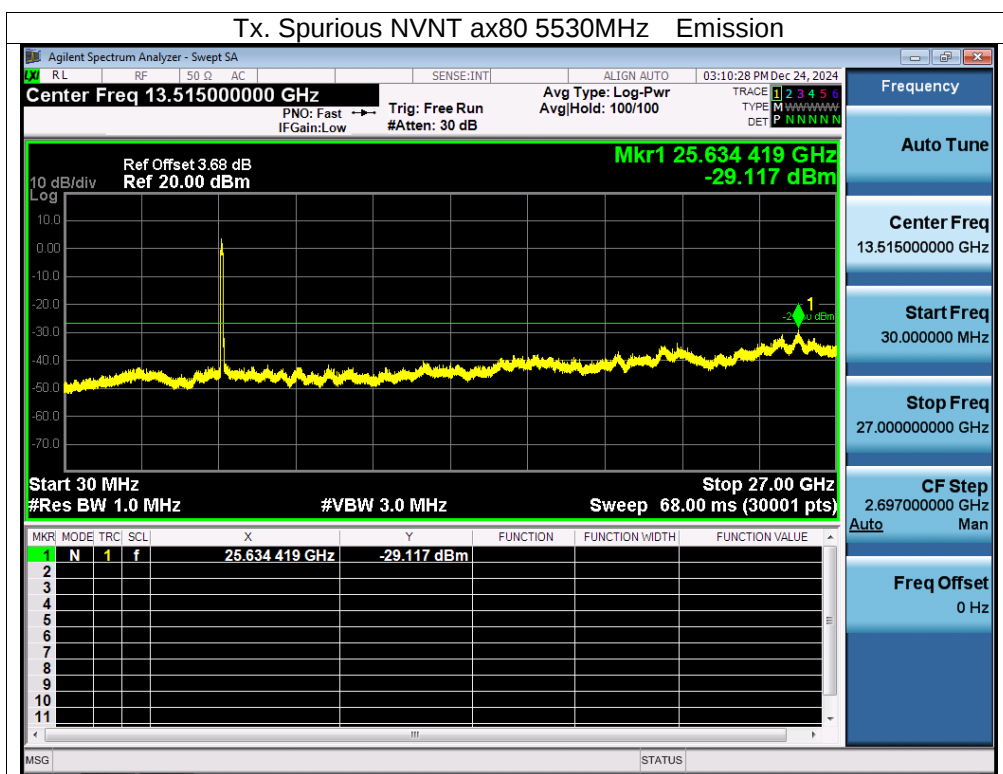






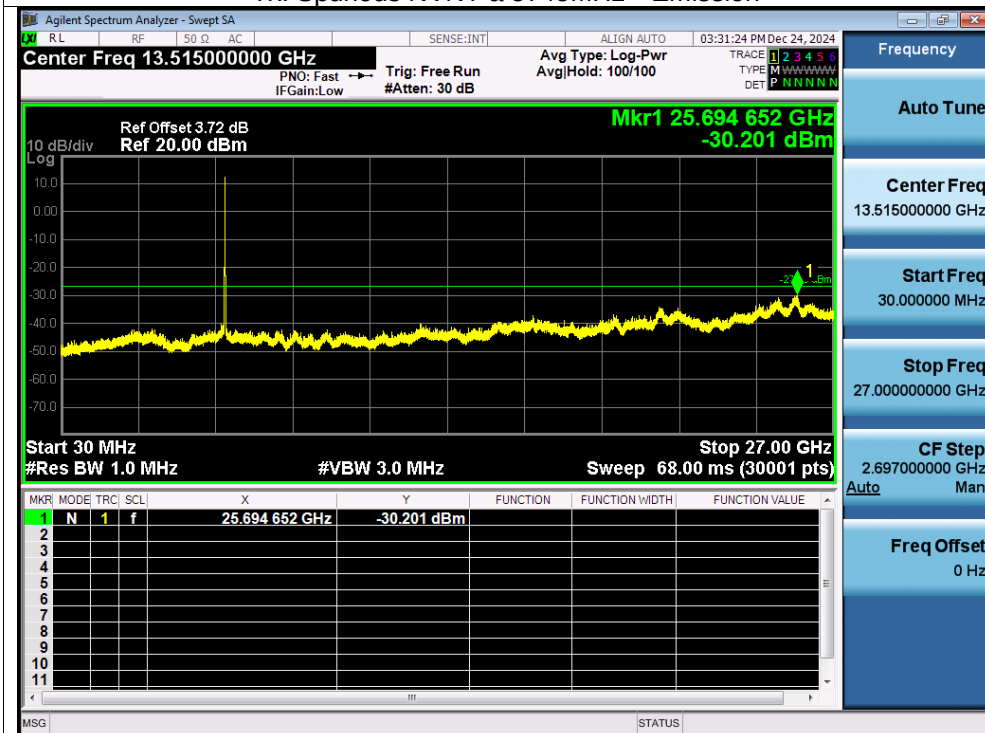




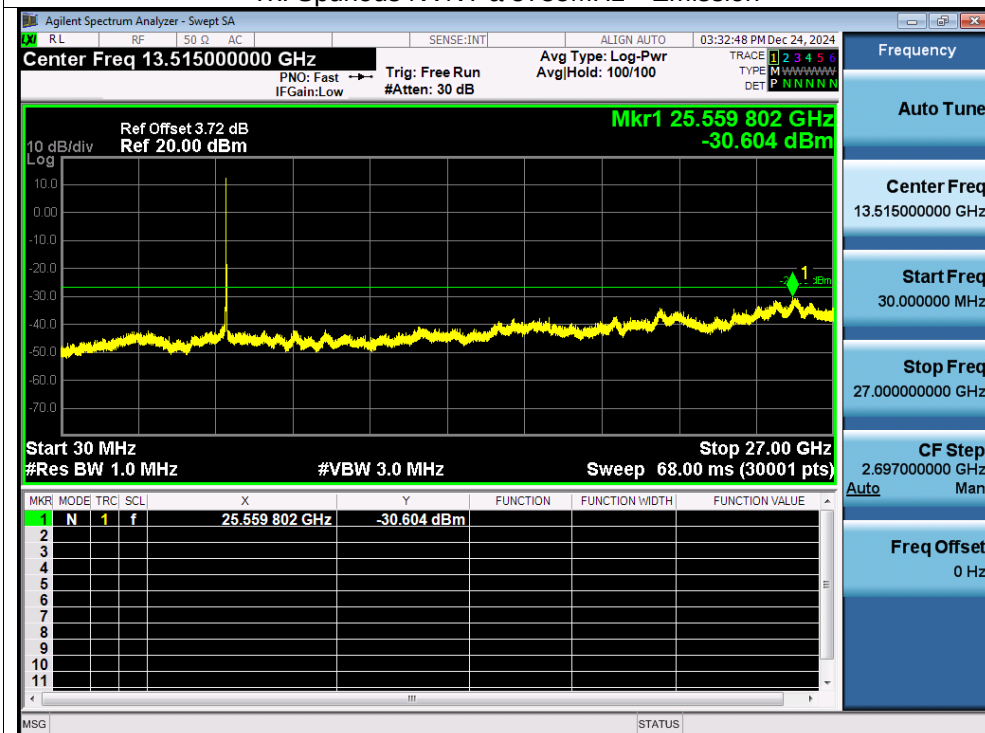


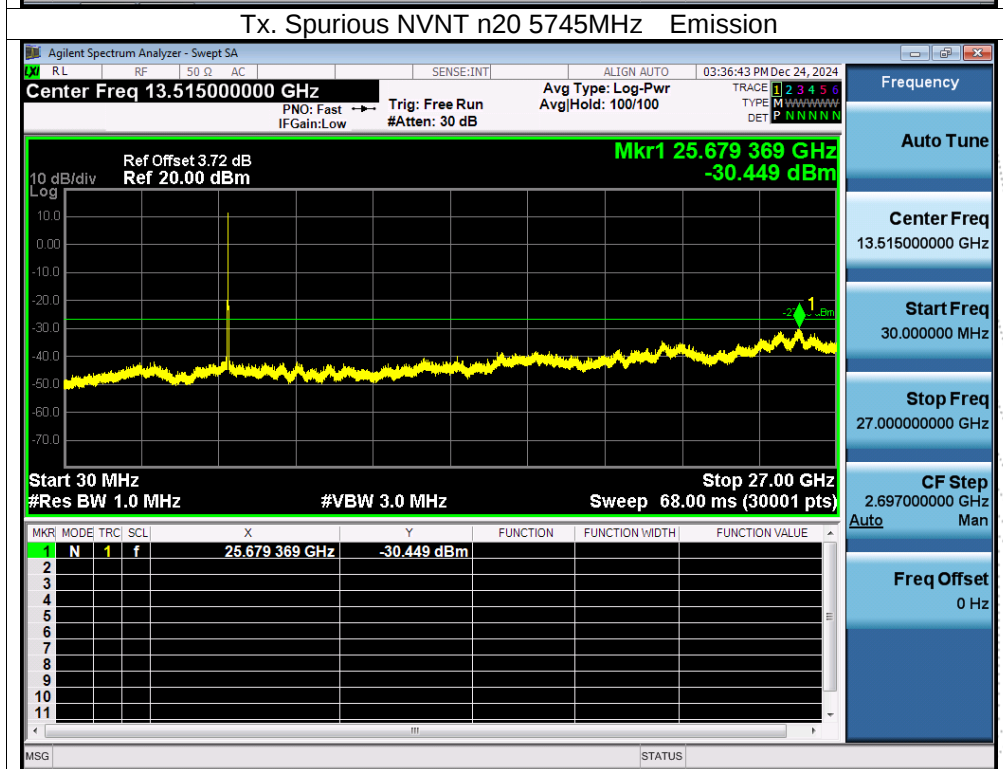
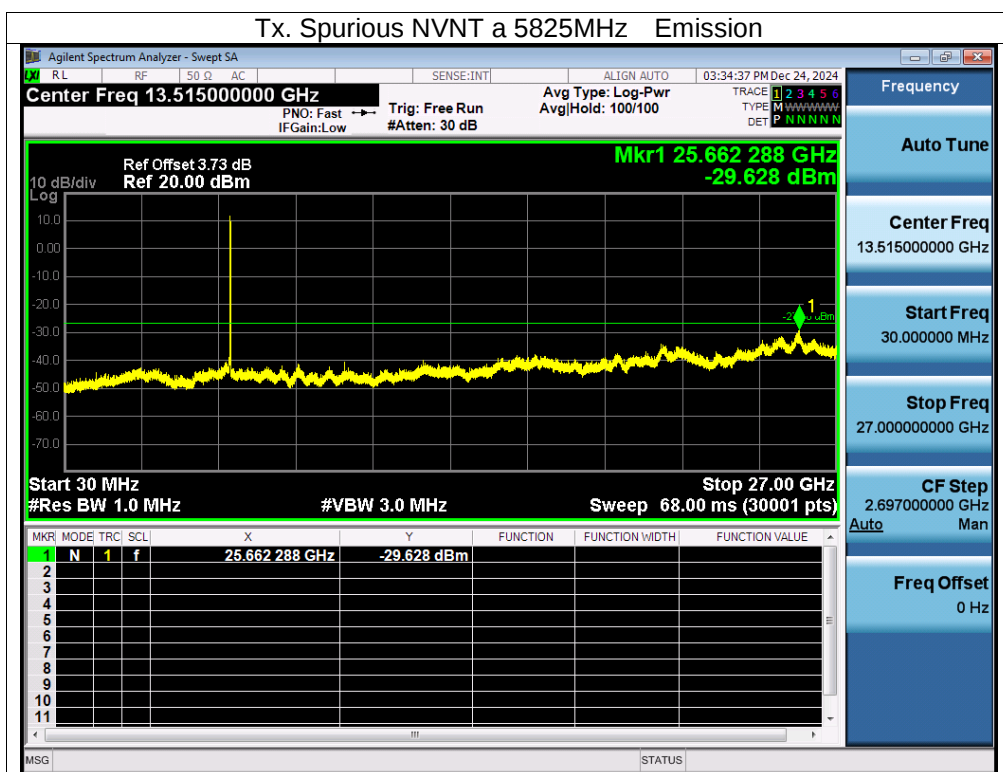
### Test Graphs

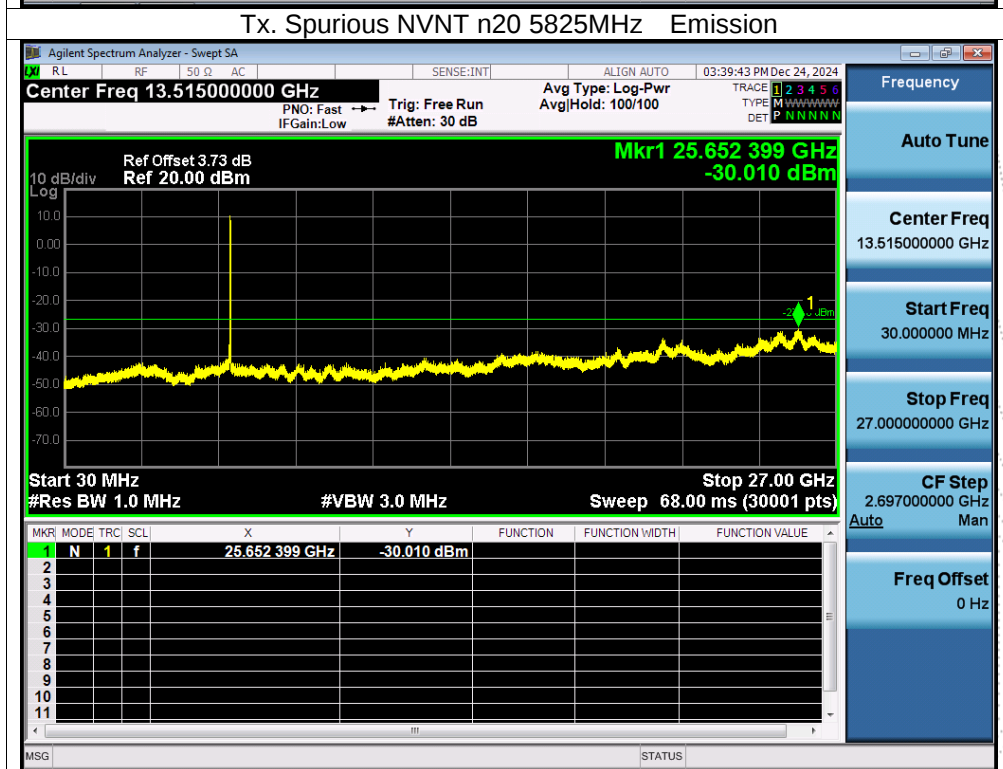
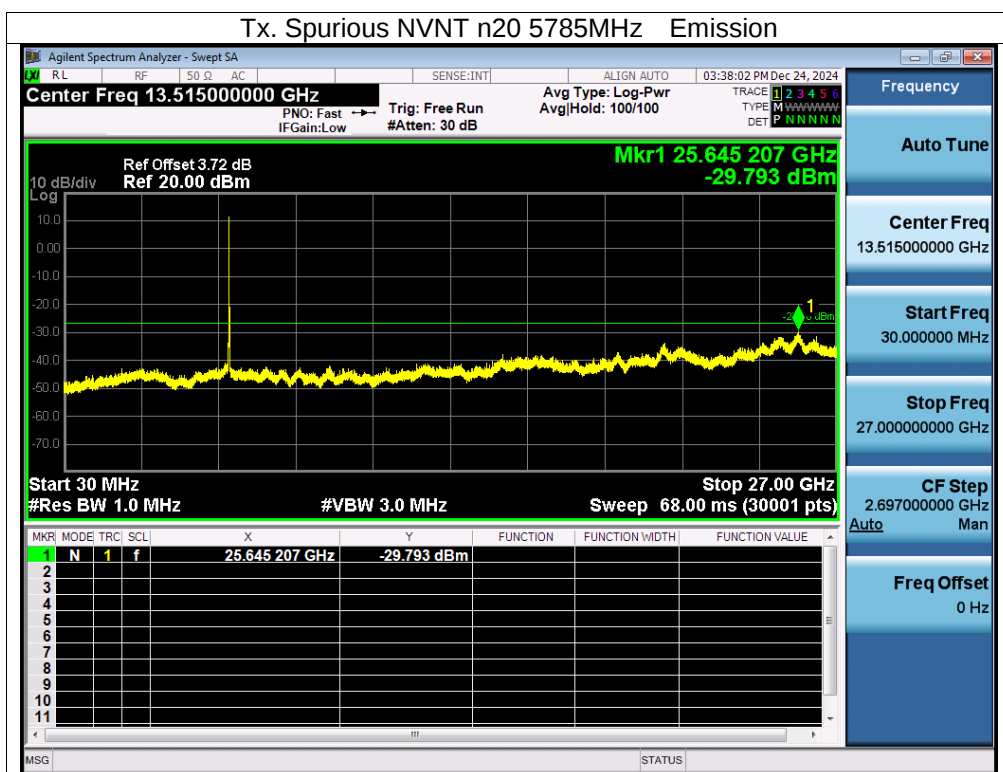
#### Tx. Spurious NVNT a 5745MHz Emission

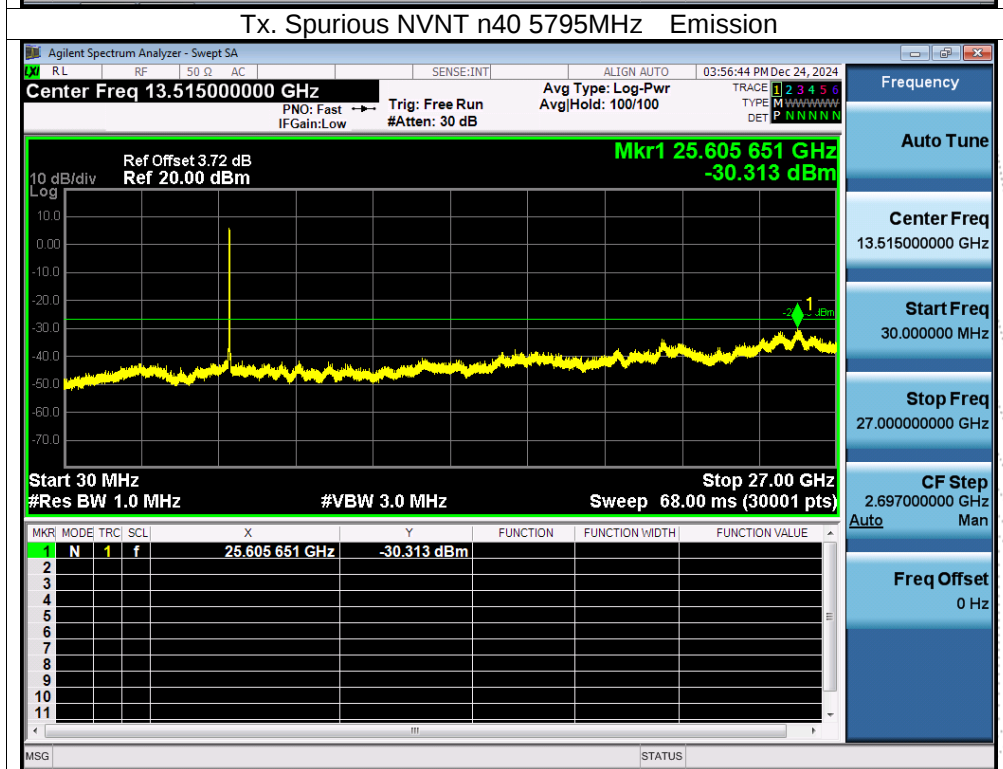
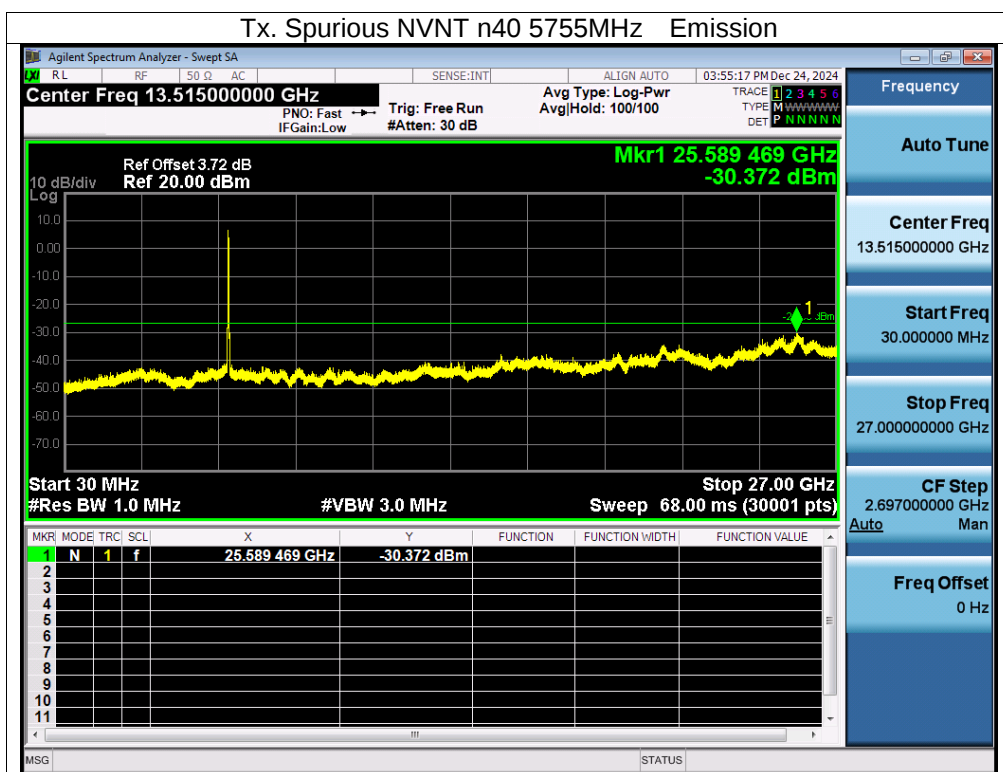


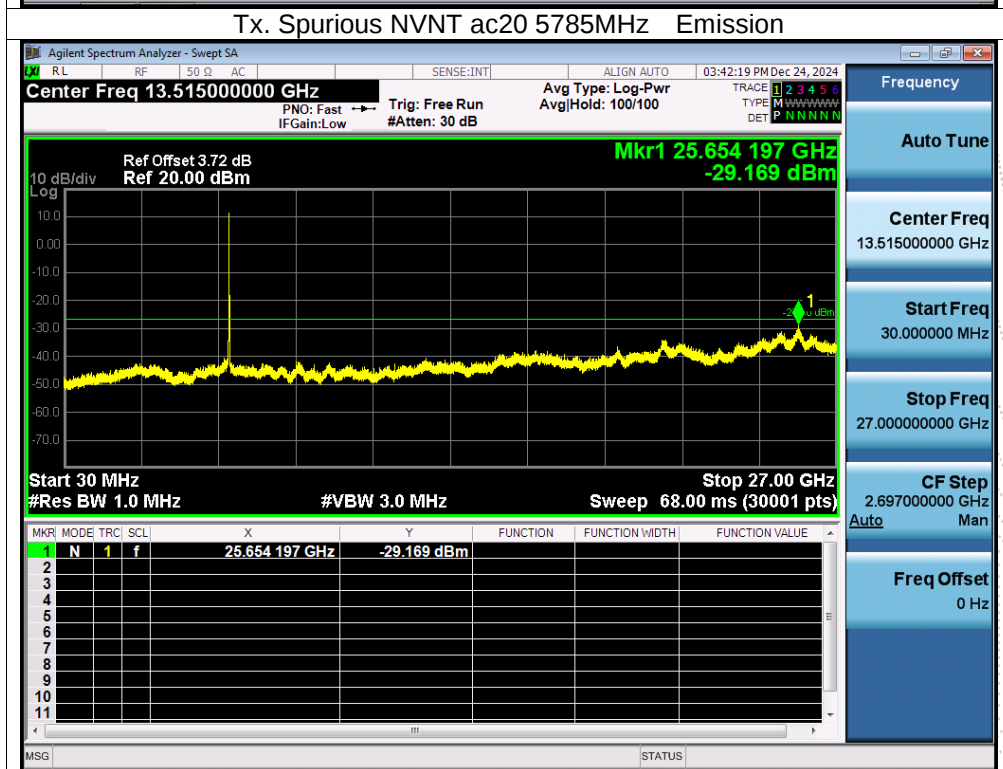
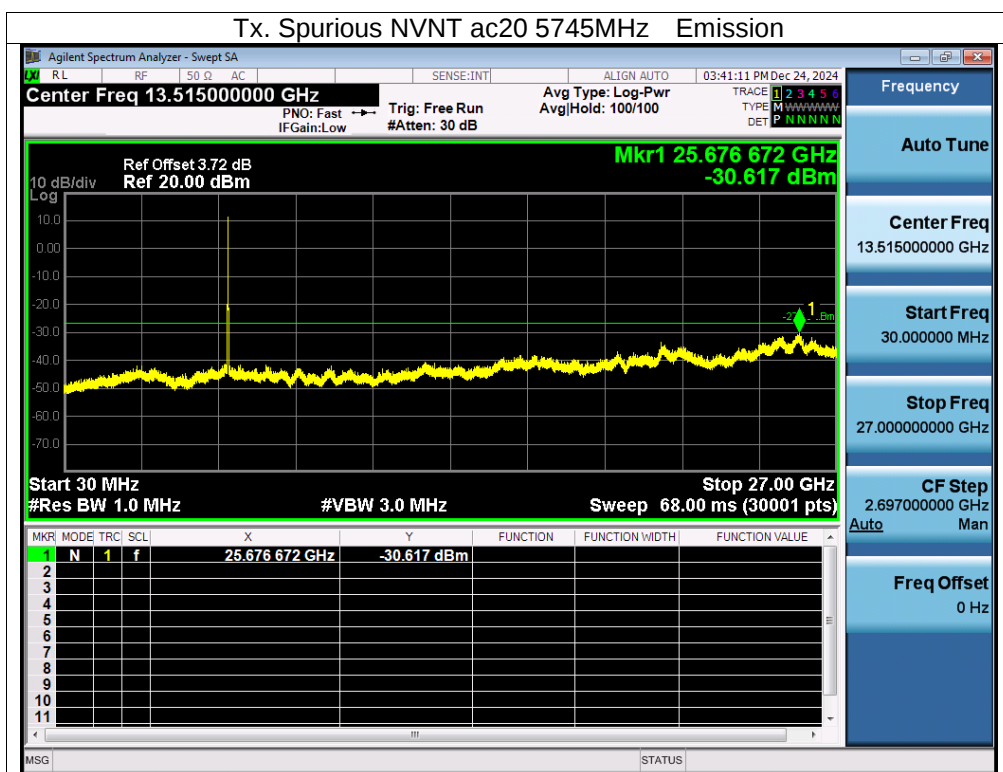
#### Tx. Spurious NVNT a 5785MHz Emission

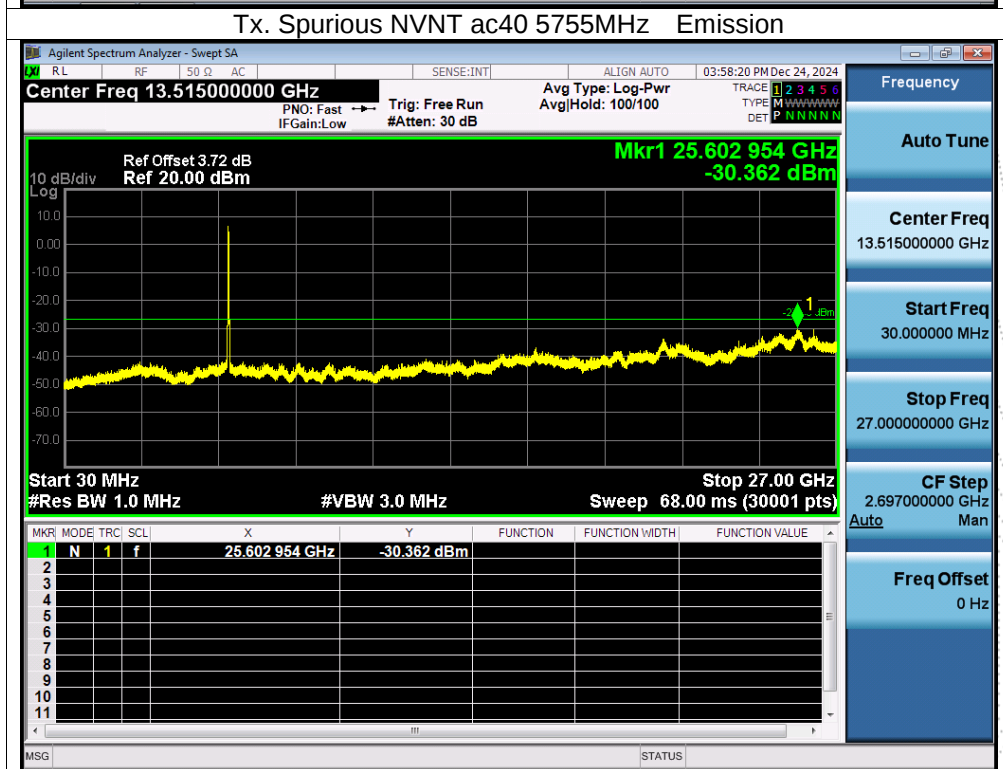
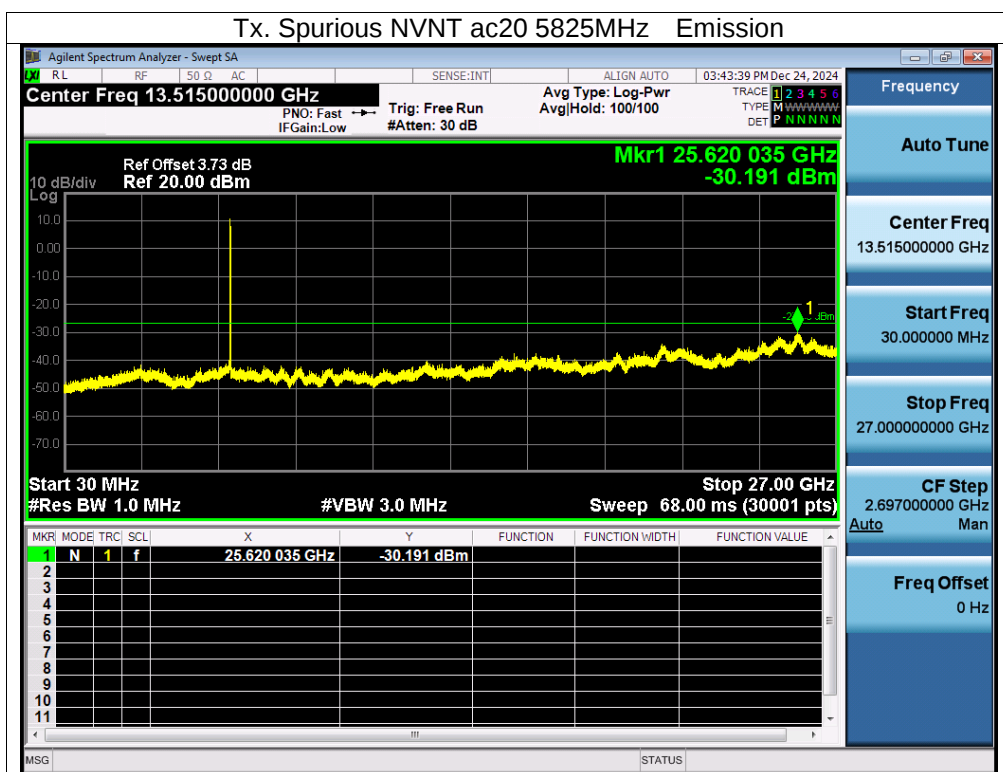


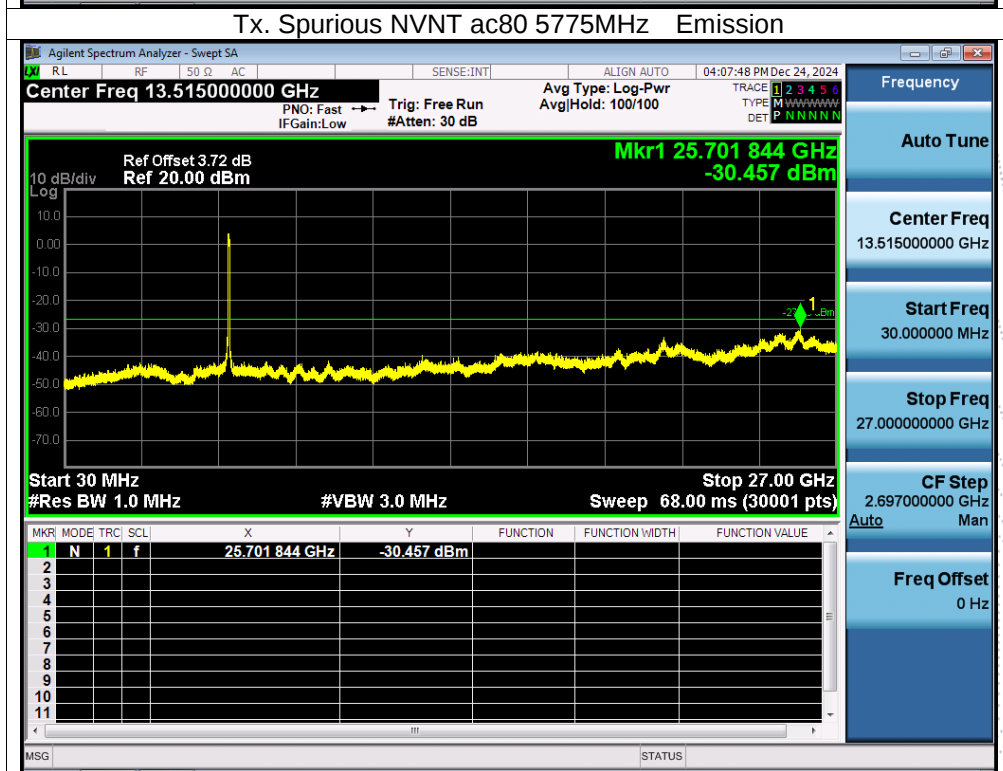
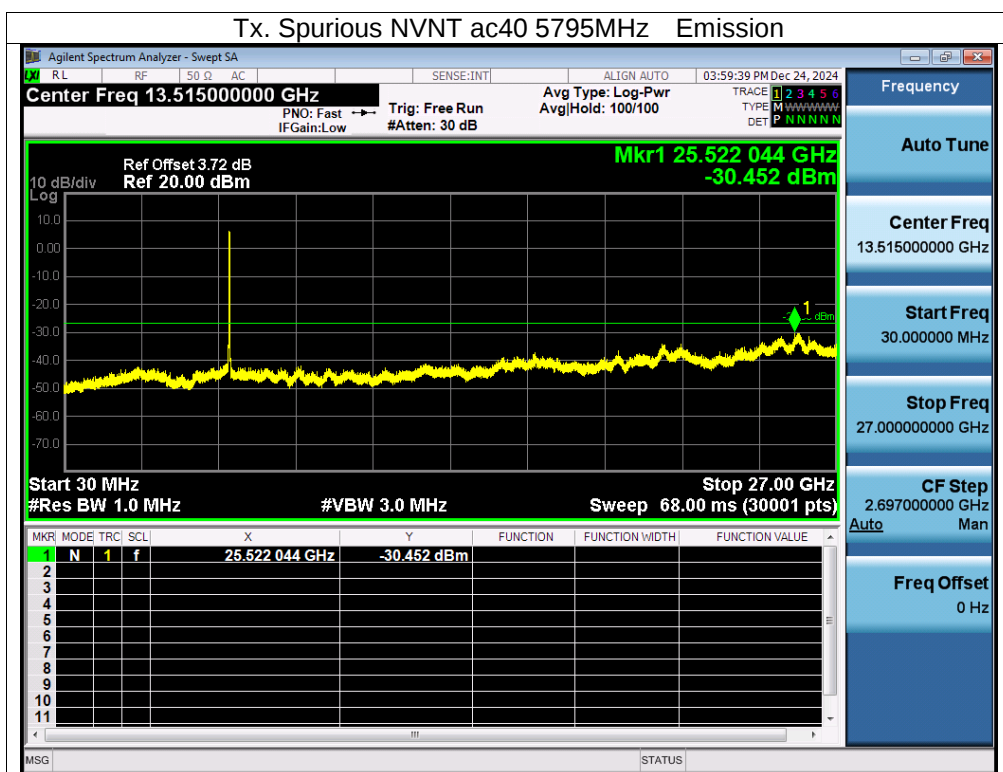


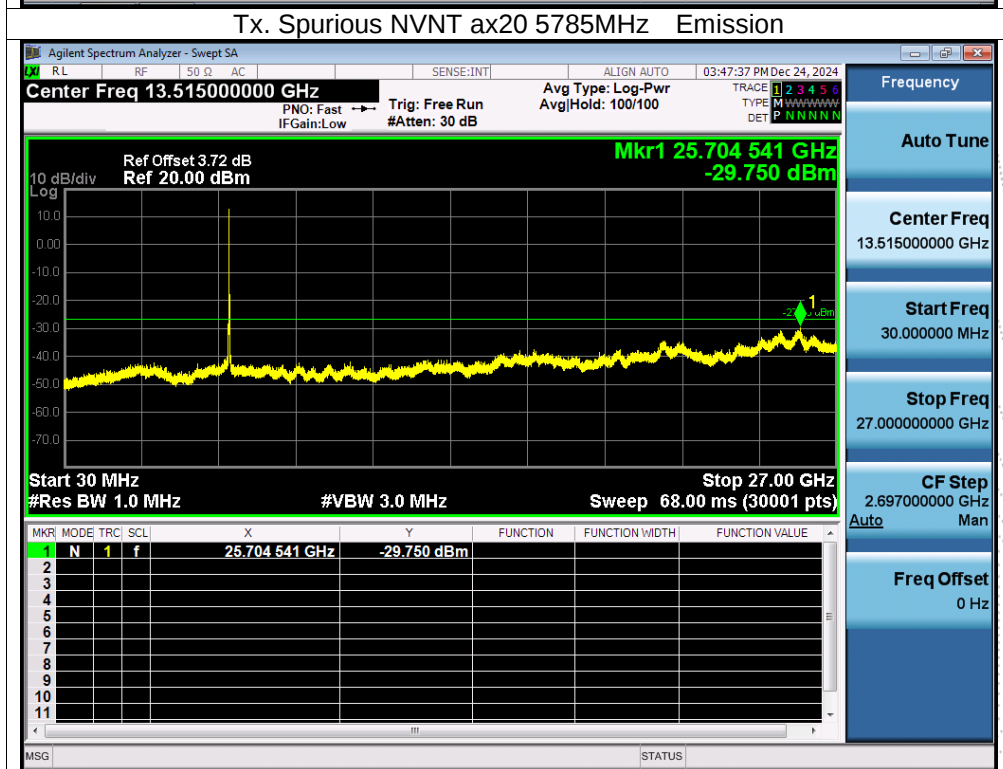
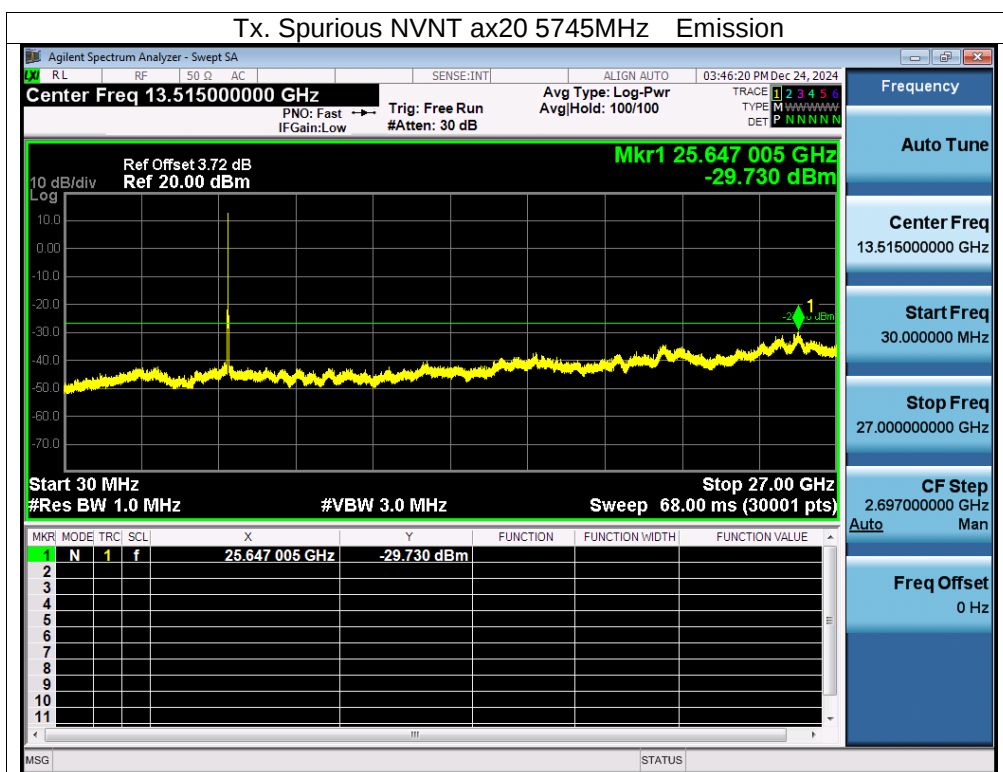


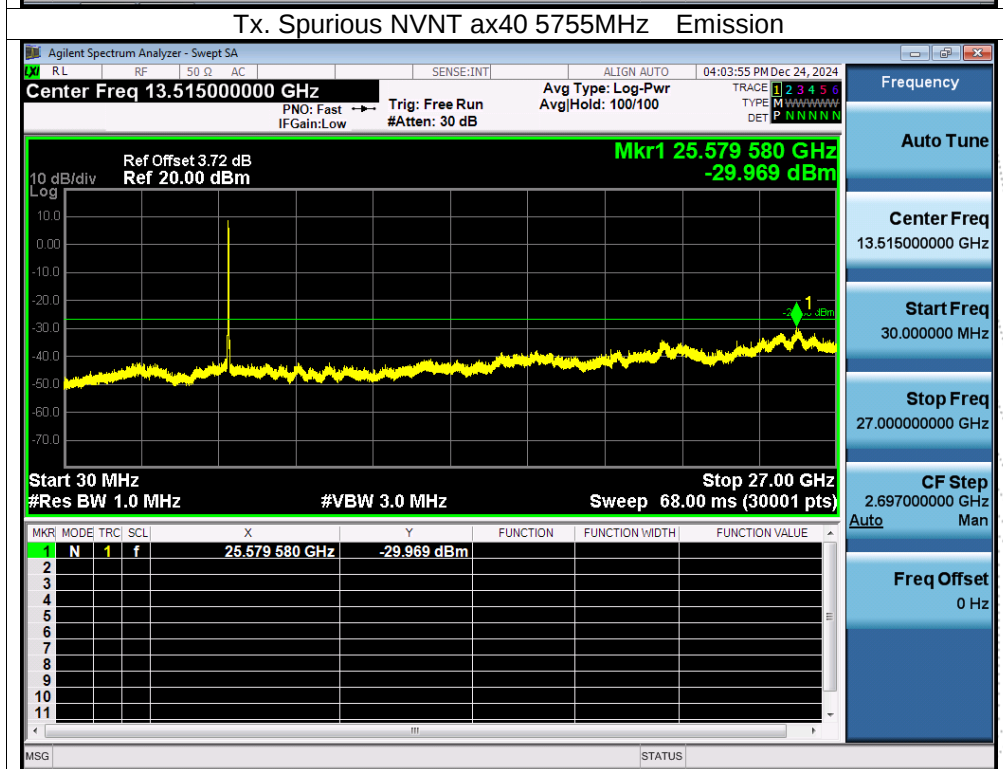
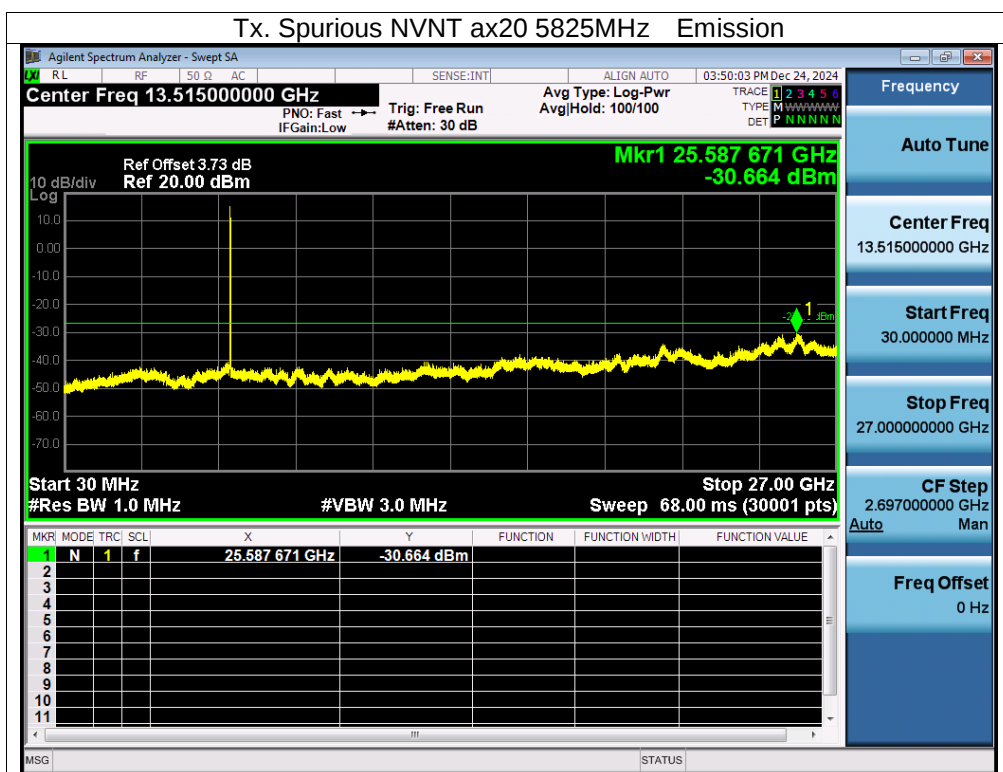


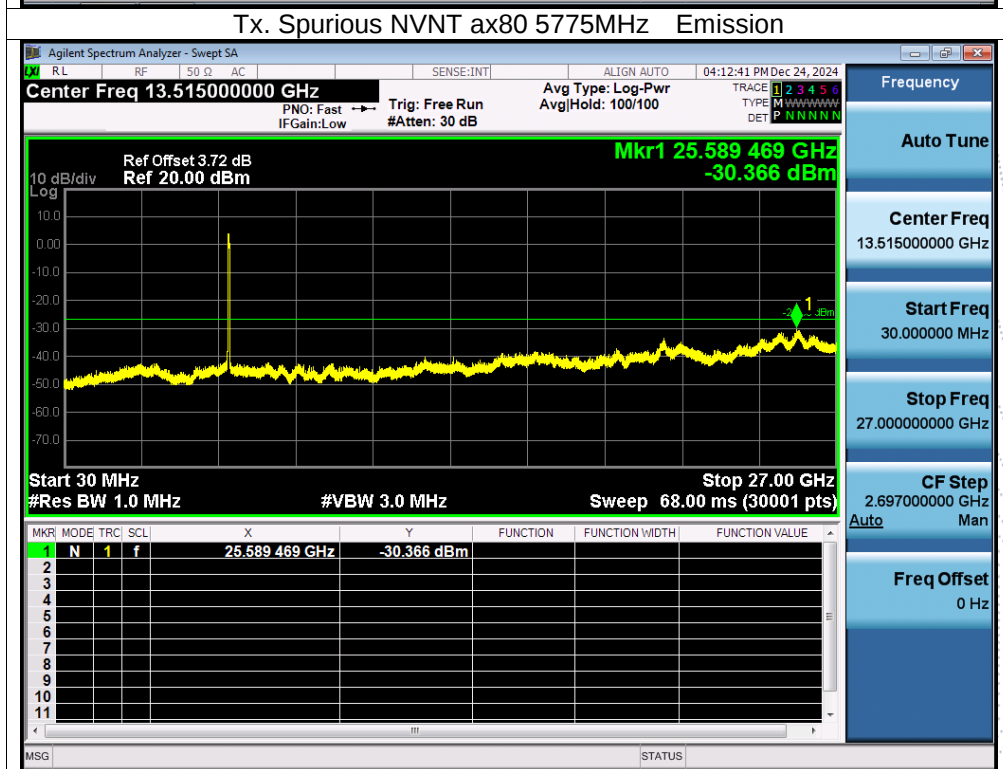
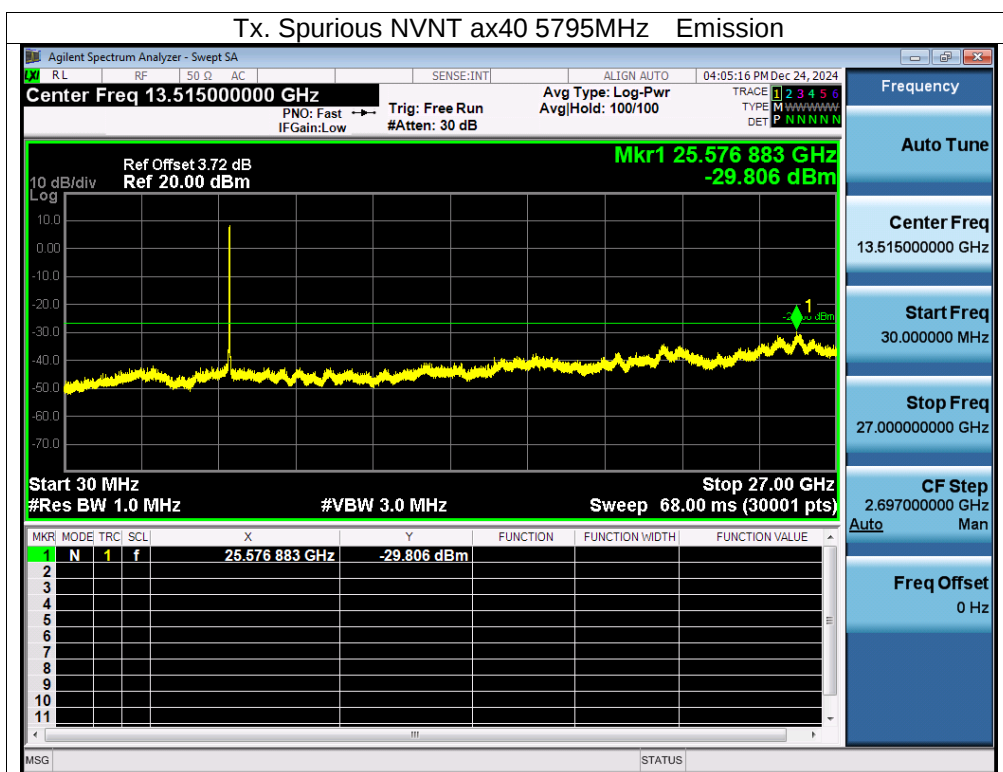












### 13. Frequency Stability Measurement

#### 13.1 Block Diagram Of Test Setup



#### 13.2 Limit

Manufactures 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 user's manual.

The transmitter center frequency tolerance shall be  $\pm 20$  ppm maximum for the 5 GHz band (IEEE 802.11n specification)..

#### 13.3 Test Procedure

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5.  $f_c$  is declaring of channel frequency. Then the frequency error formula is  $(f_c - f)/f_c \times 10^6$  ppm and he limit is less than  $\pm 20$  ppm (IEEE 802.11n specification).
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature is  $-20^\circ\text{C}$ ~ $70^\circ\text{C}$ .

### 13.4 Test Result

|              |                                                 |                    |         |
|--------------|-------------------------------------------------|--------------------|---------|
| Temperature: | 26 °C                                           | Relative Humidity: | 54%     |
| Pressure:    | 101KPa                                          | Test Voltage:      | AC 120V |
| Test Mode:   | TX (5.1G) Mode Frequency U-NII-1 (5180-5240MHz) |                    |         |

#### Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |     | Reference Frequency: 5180MHz |      |                      |                      |
|-----------------|----|-----------|-----|------------------------------|------|----------------------|----------------------|
|                 |    |           |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120 | 5180.0028                    | 5180 | 0.0028               | 0.5405               |
|                 |    | V max (V) | 138 | 5180.0056                    | 5180 | 0.0056               | 1.0811               |
|                 |    | V min (V) | 102 | 5180.0015                    | 5180 | 0.0015               | 0.2896               |
| Limits          |    |           |     | 5150-5250 MHz                |      |                      |                      |
| Result          |    |           |     | Complies                     |      |                      |                      |

#### Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency : 5180MHz |      |                      |                      |
|-----------------|-----|--------|-----|-------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                             | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5180.0019                     | 5180 | 0.0019               | 0.3668               |
|                 |     | T (°C) | -10 | 5180.0008                     | 5180 | 0.0008               | 0.1544               |
|                 |     | T (°C) | 0   | 5180.0038                     | 5180 | 0.0038               | 0.7336               |
|                 |     | T (°C) | 10  | 5180.0077                     | 5180 | 0.0077               | 1.4865               |
|                 |     | T (°C) | 20  | 5180.0036                     | 5180 | 0.0036               | 0.6950               |
|                 |     | T (°C) | 30  | 5180.0002                     | 5180 | 0.0002               | 0.0386               |
|                 |     | T (°C) | 40  | 5180.0079                     | 5180 | 0.0079               | 1.5251               |
|                 |     | T (°C) | 50  | 5180.0097                     | 5180 | 0.0097               | 1.8726               |
|                 |     | T (°C) | 60  | 5180.0074                     | 5180 | 0.0074               | 1.4286               |
|                 |     | T (°C) | 70  | 5180.0033                     | 5180 | 0.0033               | 0.6371               |
| Limits          |     |        |     | 5150-5250 MHz                 |      |                      |                      |
| Result          |     |        |     | Complies                      |      |                      |                      |

## Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |     | Reference Frequency: 5200MHz |      |                      |                      |
|-----------------|----|-----------|-----|------------------------------|------|----------------------|----------------------|
|                 |    |           |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120 | 5200.0029                    | 5200 | 0.0029               | 0.5577               |
|                 |    | V max (V) | 138 | 5200.0054                    | 5200 | 0.0054               | 1.0385               |
|                 |    | V min (V) | 102 | 5200.0010                    | 5200 | 0.0010               | 0.1923               |
| Limits          |    |           |     | 5725-5850 MHz                |      |                      |                      |
| Result          |    |           |     | Complies                     |      |                      |                      |

## Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency: 5200MHz |      |                      |                      |
|-----------------|-----|--------|-----|------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5200.00050                   | 5200 | 0.00050              | 0.0962               |
|                 |     | T (°C) | -10 | 5200.00470                   | 5200 | 0.00470              | 0.9038               |
|                 |     | T (°C) | 0   | 5200.01280                   | 5200 | 0.01280              | 2.4615               |
|                 |     | T (°C) | 10  | 5200.01180                   | 5200 | 0.01180              | 2.2692               |
|                 |     | T (°C) | 20  | 5200.00160                   | 5200 | 0.00160              | 0.3077               |
|                 |     | T (°C) | 30  | 5200.01110                   | 5200 | 0.01110              | 2.1346               |
|                 |     | T (°C) | 40  | 5200.00470                   | 5200 | 0.00470              | 0.9038               |
|                 |     | T (°C) | 50  | 5200.00660                   | 5200 | 0.00660              | 1.2692               |
|                 |     | T (°C) | 60  | 5200.01080                   | 5200 | 0.01080              | 2.0769               |
|                 |     | T (°C) | 70  | 5200.00820                   | 5200 | 0.00820              | 1.5769               |
| Limits          |     |        |     | 5150-5250 MHz                |      |                      |                      |
| Result          |     |        |     | Complies                     |      |                      |                      |

## Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |     | Reference Frequency: 5240MHz |      |                      |                      |
|-----------------|----|-----------|-----|------------------------------|------|----------------------|----------------------|
|                 |    |           |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120 | 5240.0129                    | 5240 | 0.0129               | 2.4618               |
|                 |    | V max (V) | 138 | 5240.0077                    | 5240 | 0.0077               | 1.4695               |
|                 |    | V min (V) | 102 | 5240.0079                    | 5240 | 0.0079               | 1.5076               |
| Limits          |    |           |     | 5150-5250 MHz                |      |                      |                      |
| Result          |    |           |     | Complies                     |      |                      |                      |

## Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency : 5240MHz |      |                      |                      |
|-----------------|-----|--------|-----|-------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                             | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5240.0006                     | 5240 | 0.0006               | 0.1145               |
|                 |     | T (°C) | -10 | 5240.0037                     | 5240 | 0.0037               | 0.7061               |
|                 |     | T (°C) | 0   | 5240.0075                     | 5240 | 0.0075               | 1.4313               |
|                 |     | T (°C) | 10  | 5240.0051                     | 5240 | 0.0051               | 0.9733               |
|                 |     | T (°C) | 20  | 5240.0098                     | 5240 | 0.0098               | 1.8702               |
|                 |     | T (°C) | 30  | 5240.0104                     | 5240 | 0.0104               | 1.9847               |
|                 |     | T (°C) | 40  | 5240.0045                     | 5240 | 0.0045               | 0.8588               |
|                 |     | T (°C) | 50  | 5240.0135                     | 5240 | 0.0135               | 2.5763               |
|                 |     | T (°C) | 60  | 5240.0110                     | 5240 | 0.0110               | 2.0992               |
|                 |     | T (°C) | 70  | 5240.0001                     | 5240 | 0.0001               | 0.0191               |
| Limits          |     |        |     | 5150-5250 MHz                 |      |                      |                      |
| Result          |     |        |     | Complies                      |      |                      |                      |

|              |                                                  |                    |         |
|--------------|--------------------------------------------------|--------------------|---------|
| Temperature: | 26 °C                                            | Relative Humidity: | 54%     |
| Pressure:    | 101KPa                                           | Test Voltage:      | AC 120V |
| Test Mode:   | TX (5.3G) Mode Frequency U-NII-2A (5260-5320MHz) |                    |         |

## Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |     | Reference Frequency: 5180MHz |      |                      |                      |
|-----------------|----|-----------|-----|------------------------------|------|----------------------|----------------------|
|                 |    |           |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120 | 5260.0130                    | 5260 | 0.0130               | 2.4715               |
|                 |    | V max (V) | 138 | 5260.0116                    | 5260 | 0.0116               | 2.2053               |
|                 |    | V min (V) | 102 | 5260.0037                    | 5260 | 0.0037               | 0.7034               |
| Limits          |    |           |     | 5260-5320 MHz                |      |                      |                      |
| Result          |    |           |     | Complies                     |      |                      |                      |

## Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency: 5180MHz |      |                      |                      |
|-----------------|-----|--------|-----|------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5260.0090                    | 5260 | 0.0090               | 1.7110               |
|                 |     | T (°C) | -10 | 5260.0100                    | 5260 | 0.0100               | 1.9011               |
|                 |     | T (°C) | 0   | 5260.0124                    | 5260 | 0.0124               | 2.3574               |
|                 |     | T (°C) | 10  | 5260.0057                    | 5260 | 0.0057               | 1.0837               |
|                 |     | T (°C) | 20  | 5260.0103                    | 5260 | 0.0103               | 1.9582               |
|                 |     | T (°C) | 30  | 5260.0105                    | 5260 | 0.0105               | 1.9962               |
|                 |     | T (°C) | 40  | 5260.0006                    | 5260 | 0.0006               | 0.1141               |
|                 |     | T (°C) | 50  | 5260.0135                    | 5260 | 0.0135               | 2.5665               |
|                 |     | T (°C) | 60  | 5260.0101                    | 5260 | 0.0101               | 1.9202               |
|                 |     | T (°C) | 70  | 5260.0125                    | 5260 | 0.0125               | 2.3764               |
| Limits          |     |        |     | 5260-5320 MHz                |      |                      |                      |
| Result          |     |        |     | Complies                     |      |                      |                      |

## Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |     | Reference Frequency: 5200MHz |      |                      |                      |
|-----------------|----|-----------|-----|------------------------------|------|----------------------|----------------------|
|                 |    |           |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120 | 5280.0102                    | 5280 | 0.0102               | 1.9318               |
|                 |    | V max (V) | 138 | 5280.0065                    | 5280 | 0.0065               | 1.2311               |
|                 |    | V min (V) | 102 | 5280.0108                    | 5280 | 0.0108               | 2.0455               |
| Limits          |    |           |     | 5260-5320 MHz                |      |                      |                      |
| Result          |    |           |     | Complies                     |      |                      |                      |

## Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency: 5200MHz |      |                      |                      |
|-----------------|-----|--------|-----|------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5280.00610                   | 5280 | 0.00610              | 1.1553               |
|                 |     | T (°C) | -10 | 5280.01050                   | 5280 | 0.01050              | 1.9886               |
|                 |     | T (°C) | 0   | 5280.00730                   | 5280 | 0.00730              | 1.3826               |
|                 |     | T (°C) | 10  | 5280.01260                   | 5280 | 0.01260              | 2.3864               |
|                 |     | T (°C) | 20  | 5280.01200                   | 5280 | 0.01200              | 2.2727               |
|                 |     | T (°C) | 30  | 5280.01040                   | 5280 | 0.01040              | 1.9697               |
|                 |     | T (°C) | 40  | 5280.00570                   | 5280 | 0.00570              | 1.0795               |
|                 |     | T (°C) | 50  | 5280.00360                   | 5280 | 0.00360              | 0.6818               |
|                 |     | T (°C) | 60  | 5280.01110                   | 5280 | 0.01110              | 2.1023               |
|                 |     | T (°C) | 70  | 5280.00510                   | 5280 | 0.00510              | 0.9659               |
| Limits          |     |        |     | 5260-5320 MHz                |      |                      |                      |
| Result          |     |        |     | Complies                     |      |                      |                      |

## Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |     | Reference Frequency: 5240MHz |      |                      |                      |
|-----------------|----|-----------|-----|------------------------------|------|----------------------|----------------------|
|                 |    |           |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120 | 5320.0048                    | 5320 | 0.0048               | 0.9023               |
|                 |    | V max (V) | 138 | 5320.0068                    | 5320 | 0.0068               | 1.2782               |
|                 |    | V min (V) | 102 | 5320.0085                    | 5320 | 0.0085               | 1.5977               |
| Limits          |    |           |     | 5260-5320 MHz                |      |                      |                      |
| Result          |    |           |     | Complies                     |      |                      |                      |

## Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency : 5240MHz |      |                      |                      |
|-----------------|-----|--------|-----|-------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                             | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5320.0079                     | 5320 | 0.0079               | 1.4850               |
|                 |     | T (°C) | -10 | 5320.0070                     | 5320 | 0.0070               | 1.3158               |
|                 |     | T (°C) | 0   | 5320.0044                     | 5320 | 0.0044               | 0.8271               |
|                 |     | T (°C) | 10  | 5320.0069                     | 5320 | 0.0069               | 1.2970               |
|                 |     | T (°C) | 20  | 5320.0120                     | 5320 | 0.0120               | 2.2556               |
|                 |     | T (°C) | 30  | 5320.0096                     | 5320 | 0.0096               | 1.8045               |
|                 |     | T (°C) | 40  | 5320.0130                     | 5320 | 0.0130               | 2.4436               |
|                 |     | T (°C) | 50  | 5320.0089                     | 5320 | 0.0089               | 1.6729               |
|                 |     | T (°C) | 60  | 5320.0108                     | 5320 | 0.0108               | 2.0301               |
|                 |     | T (°C) | 70  | 5320.0046                     | 5320 | 0.0046               | 0.8647               |
| Limits          |     |        |     | 5260-5320 MHz                 |      |                      |                      |
| Result          |     |        |     | Complies                      |      |                      |                      |

|              |                                                  |                    |         |
|--------------|--------------------------------------------------|--------------------|---------|
| Temperature: | 26 °C                                            | Relative Humidity: | 54%     |
| Pressure:    | 101KPa                                           | Test Voltage:      | AC 120V |
| Test Mode:   | TX (5.6G) Mode Frequency U-NII-2C (5500-5700MHz) |                    |         |

#### Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |     | Reference Frequency: 5500MHz |      |                      |                      |
|-----------------|----|-----------|-----|------------------------------|------|----------------------|----------------------|
|                 |    |           |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120 | 5500.0084                    | 5500 | 0.0084               | 1.5273               |
|                 |    | V max (V) | 138 | 5500.0021                    | 5500 | 0.0021               | 0.3818               |
|                 |    | V min (V) | 102 | 5500.0093                    | 5500 | 0.0093               | 1.6909               |
| Limits          |    |           |     | 5500-5700 MHz                |      |                      |                      |
| Result          |    |           |     | Complies                     |      |                      |                      |

#### Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency : 5500MHz |      |                      |                      |
|-----------------|-----|--------|-----|-------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                             | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5500.0000                     | 5500 | 0.0000               | 0.0000               |
|                 |     | T (°C) | -10 | 5500.0036                     | 5500 | 0.0036               | 0.6545               |
|                 |     | T (°C) | 0   | 5500.0111                     | 5500 | 0.0111               | 2.0182               |
|                 |     | T (°C) | 10  | 5500.0052                     | 5500 | 0.0052               | 0.9455               |
|                 |     | T (°C) | 20  | 5500.0090                     | 5500 | 0.0090               | 1.6364               |
|                 |     | T (°C) | 30  | 5500.0013                     | 5500 | 0.0013               | 0.2364               |
|                 |     | T (°C) | 40  | 5500.0071                     | 5500 | 0.0071               | 1.2909               |
|                 |     | T (°C) | 50  | 5500.0078                     | 5500 | 0.0078               | 1.4182               |
|                 |     | T (°C) | 60  | 5500.0066                     | 5500 | 0.0066               | 1.2000               |
|                 |     | T (°C) | 70  | 5500.0046                     | 5500 | 0.0046               | 0.8364               |
| Limits          |     |        |     | 5500-5700 MHz                 |      |                      |                      |
| Result          |     |        |     | Complies                      |      |                      |                      |

## Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |     | Reference Frequency: 5580MHz |      |                      |                      |
|-----------------|----|-----------|-----|------------------------------|------|----------------------|----------------------|
|                 |    |           |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120 | 5580.0124                    | 5580 | 0.0124               | 2.2222               |
|                 |    | V max (V) | 138 | 5580.0048                    | 5580 | 0.0048               | 0.8602               |
|                 |    | V min (V) | 102 | 5580.0112                    | 5580 | 0.0112               | 2.0072               |
| Limits          |    |           |     | 5500-5700 MHz                |      |                      |                      |
| Result          |    |           |     | Complies                     |      |                      |                      |

## Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency: 5580MHz |      |                      |                      |
|-----------------|-----|--------|-----|------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5580.00880                   | 5580 | 0.00880              | 1.5771               |
|                 |     | T (°C) | -10 | 5580.00720                   | 5580 | 0.00720              | 1.2903               |
|                 |     | T (°C) | 0   | 5580.00250                   | 5580 | 0.00250              | 0.4480               |
|                 |     | T (°C) | 10  | 5580.00090                   | 5580 | 0.00090              | 0.1613               |
|                 |     | T (°C) | 20  | 5580.00700                   | 5580 | 0.00700              | 1.2545               |
|                 |     | T (°C) | 30  | 5580.00380                   | 5580 | 0.00380              | 0.6810               |
|                 |     | T (°C) | 40  | 5580.00790                   | 5580 | 0.00790              | 1.4158               |
|                 |     | T (°C) | 50  | 5580.00980                   | 5580 | 0.00980              | 1.7563               |
|                 |     | T (°C) | 60  | 5580.00650                   | 5580 | 0.00650              | 1.1649               |
|                 |     | T (°C) | 70  | 5580.00140                   | 5580 | 0.00140              | 0.2509               |
| Limits          |     |        |     | 5500-5700 MHz                |      |                      |                      |
| Result          |     |        |     | Complies                     |      |                      |                      |

## Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |     | Reference Frequency: 5700MHz |      |                      |                      |
|-----------------|----|-----------|-----|------------------------------|------|----------------------|----------------------|
|                 |    |           |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120 | 5700.0066                    | 5700 | 0.0066               | 1.1579               |
|                 |    | V max (V) | 138 | 5700.0036                    | 5700 | 0.0036               | 0.6316               |
|                 |    | V min (V) | 102 | 5700.0096                    | 5700 | 0.0096               | 1.6842               |
| Limits          |    |           |     | 5500-5700 MHz                |      |                      |                      |
| Result          |    |           |     | Complies                     |      |                      |                      |

## Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency : 5700MHz |      |                      |                      |
|-----------------|-----|--------|-----|-------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                             | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5700.0132                     | 5700 | 0.0132               | 2.3158               |
|                 |     | T (°C) | -10 | 5700.0073                     | 5700 | 0.0073               | 1.2807               |
|                 |     | T (°C) | 0   | 5700.0073                     | 5700 | 0.0073               | 1.2807               |
|                 |     | T (°C) | 10  | 5700.0032                     | 5700 | 0.0032               | 0.5614               |
|                 |     | T (°C) | 20  | 5700.0074                     | 5700 | 0.0074               | 1.2982               |
|                 |     | T (°C) | 30  | 5700.0099                     | 5700 | 0.0099               | 1.7368               |
|                 |     | T (°C) | 40  | 5700.0039                     | 5700 | 0.0039               | 0.6842               |
|                 |     | T (°C) | 50  | 5700.0031                     | 5700 | 0.0031               | 0.5439               |
|                 |     | T (°C) | 60  | 5700.0104                     | 5700 | 0.0104               | 1.8246               |
|                 |     | T (°C) | 70  | 5700.0017                     | 5700 | 0.0017               | 0.2982               |
| Limits          |     |        |     | 5500-5700 MHz                 |      |                      |                      |
| Result          |     |        |     | Complies                      |      |                      |                      |

|              |                                                 |                    |         |
|--------------|-------------------------------------------------|--------------------|---------|
| Temperature: | 26 °C                                           | Relative Humidity: | 54%     |
| Pressure:    | 101KPa                                          | Test Voltage:      | AC 120V |
| Test Mode:   | TX (5.8G) Mode Frequency U-NII-3 (5745-5825MHz) |                    |         |

#### Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |     | Reference Frequency: 5745MHz |      |                      |                      |
|-----------------|----|-----------|-----|------------------------------|------|----------------------|----------------------|
|                 |    |           |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120 | 5745.01040                   | 5745 | 0.01040              | 1.8103               |
|                 |    | V max (V) | 138 | 5745.01050                   | 5745 | 0.01050              | 1.8277               |
|                 |    | V min (V) | 102 | 5745.00480                   | 5745 | 0.00480              | 0.8355               |
| Limits          |    |           |     | 5725-5850 MHz                |      |                      |                      |
| Result          |    |           |     | Complies                     |      |                      |                      |

#### Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency: 5745MHz |      |                      |                      |
|-----------------|-----|--------|-----|------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5745.00980                   | 5745 | 0.00980              | 1.7058               |
|                 |     | T (°C) | -10 | 5745.01300                   | 5745 | 0.01300              | 2.2628               |
|                 |     | T (°C) | 0   | 5745.00220                   | 5745 | 0.00220              | 0.3829               |
|                 |     | T (°C) | 10  | 5745.00020                   | 5745 | 0.00020              | 0.0348               |
|                 |     | T (°C) | 20  | 5745.00250                   | 5745 | 0.00250              | 0.4352               |
|                 |     | T (°C) | 30  | 5745.00720                   | 5745 | 0.00720              | 1.2533               |
|                 |     | T (°C) | 40  | 5745.00120                   | 5745 | 0.00120              | 0.2089               |
|                 |     | T (°C) | 50  | 5745.01340                   | 5745 | 0.01340              | 2.3325               |
|                 |     | T (°C) | 60  | 5745.00100                   | 5745 | 0.00100              | 0.1741               |
|                 |     | T (°C) | 70  | 5745.00590                   | 5745 | 0.00590              | 1.0270               |
| Limits          |     |        |     | 5725-5850 MHz                |      |                      |                      |
| Result          |     |        |     | Complies                     |      |                      |                      |

## Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |     | Reference Frequency: 5785MHz |      |                      |                      |
|-----------------|----|-----------|-----|------------------------------|------|----------------------|----------------------|
|                 |    |           |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120 | 5785.00090                   | 5785 | 0.00090              | 0.1556               |
|                 |    | V max (V) | 138 | 5785.00780                   | 5785 | 0.00780              | 1.3483               |
|                 |    | V min (V) | 102 | 5785.00170                   | 5785 | 0.00170              | 0.2939               |
| Limits          |    |           |     | 5725-5850 MHz                |      |                      |                      |
| Result          |    |           |     | Complies                     |      |                      |                      |

## Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency: 5785MHz |      |                      |                      |
|-----------------|-----|--------|-----|------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5785.00710                   | 5785 | 0.00710              | 1.2273               |
|                 |     | T (°C) | -10 | 5785.00130                   | 5785 | 0.00130              | 0.2247               |
|                 |     | T (°C) | 0   | 5785.00190                   | 5785 | 0.00190              | 0.3284               |
|                 |     | T (°C) | 10  | 5785.01210                   | 5785 | 0.01210              | 2.0916               |
|                 |     | T (°C) | 20  | 5785.01270                   | 5785 | 0.01270              | 2.1953               |
|                 |     | T (°C) | 30  | 5785.00560                   | 5785 | 0.00560              | 0.9680               |
|                 |     | T (°C) | 40  | 5785.00660                   | 5785 | 0.00660              | 1.1409               |
|                 |     | T (°C) | 50  | 5785.00780                   | 5785 | 0.00780              | 1.3483               |
|                 |     | T (°C) | 60  | 5785.00670                   | 5785 | 0.00670              | 1.1582               |
|                 |     | T (°C) | 70  | 5785.00660                   | 5785 | 0.00660              | 1.1409               |
| Limits          |     |        |     | 5725-5850 MHz                |      |                      |                      |
| Result          |     |        |     | Complies                     |      |                      |                      |

## Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |     | Reference Frequency: 5825MHz |      |                      |                      |
|-----------------|----|-----------|-----|------------------------------|------|----------------------|----------------------|
|                 |    |           |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120 | 5825.00740                   | 5825 | 0.00740              | 1.2704               |
|                 |    | V max (V) | 138 | 5825.01330                   | 5825 | 0.01330              | 2.2833               |
|                 |    | V min (V) | 102 | 5825.00990                   | 5825 | 0.00990              | 1.6996               |
| Limits          |    |           |     | 5725-5850 MHz                |      |                      |                      |
| Result          |    |           |     | Complies                     |      |                      |                      |

## Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency: 5825MHz |      |                      |                      |
|-----------------|-----|--------|-----|------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5825.00440                   | 5825 | 0.00440              | 0.7554               |
|                 |     | T (°C) | -10 | 5825.00020                   | 5825 | 0.00020              | 0.0343               |
|                 |     | T (°C) | 0   | 5825.00580                   | 5825 | 0.00580              | 0.9957               |
|                 |     | T (°C) | 10  | 5825.00150                   | 5825 | 0.00150              | 0.2575               |
|                 |     | T (°C) | 20  | 5825.00790                   | 5825 | 0.00790              | 1.3562               |
|                 |     | T (°C) | 30  | 5825.01000                   | 5825 | 0.01000              | 1.7167               |
|                 |     | T (°C) | 40  | 5825.00070                   | 5825 | 0.00070              | 0.1202               |
|                 |     | T (°C) | 50  | 5825.00050                   | 5825 | 0.00050              | 0.0858               |
|                 |     | T (°C) | 60  | 5825.01050                   | 5825 | 0.01050              | 1.8026               |
|                 |     | T (°C) | 70  | 5825.00730                   | 5825 | 0.00730              | 1.2532               |
| Limits          |     |        |     | 5725-5850 MHz                |      |                      |                      |
| Result          |     |        |     | Complies                     |      |                      |                      |

## 14. Duty Cycle Of Test Signal

### 14.1 Standard Requirement

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle. All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

### 14.2 Formula

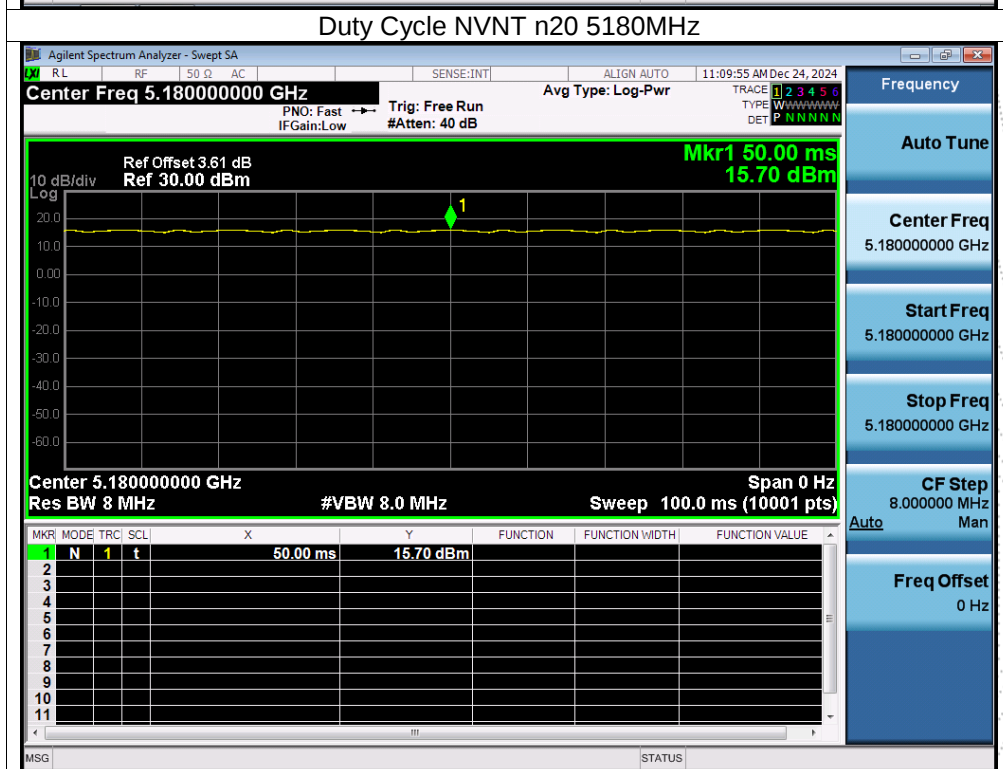
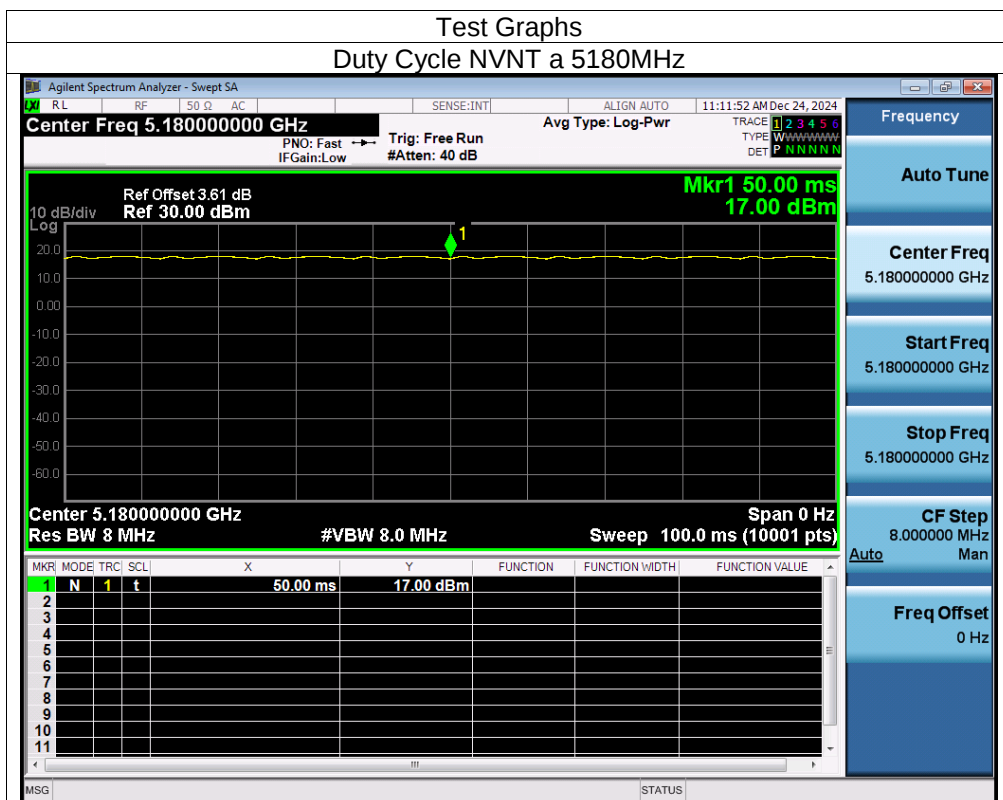
Duty Cycle =  $T_{on} / (T_{on} + T_{off})$

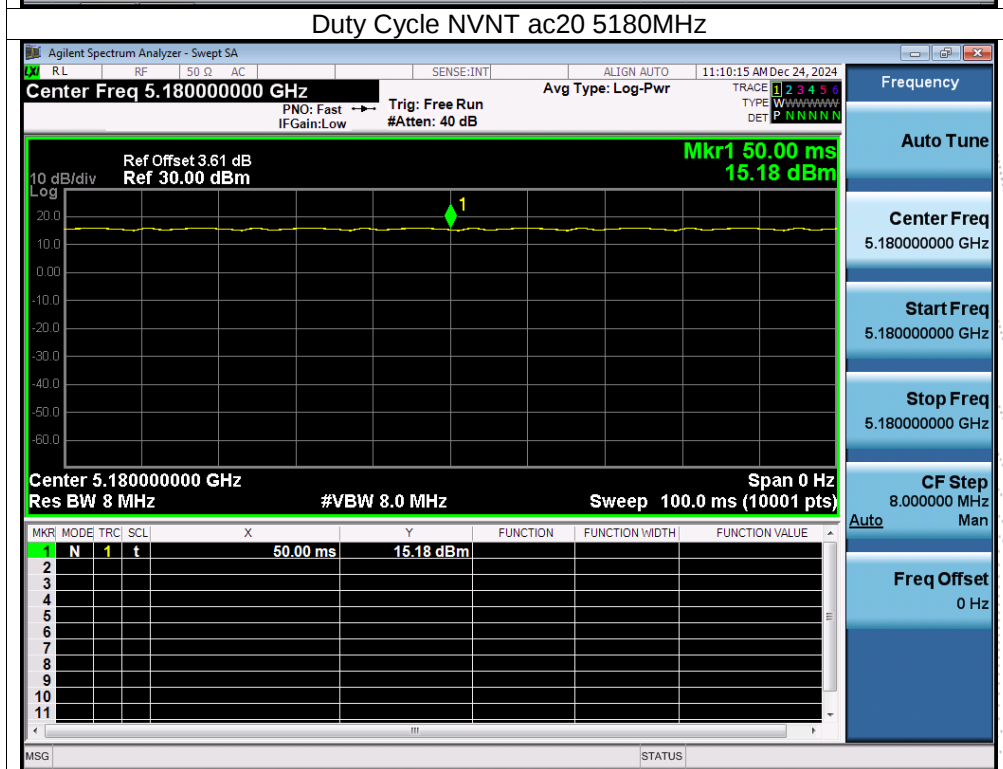
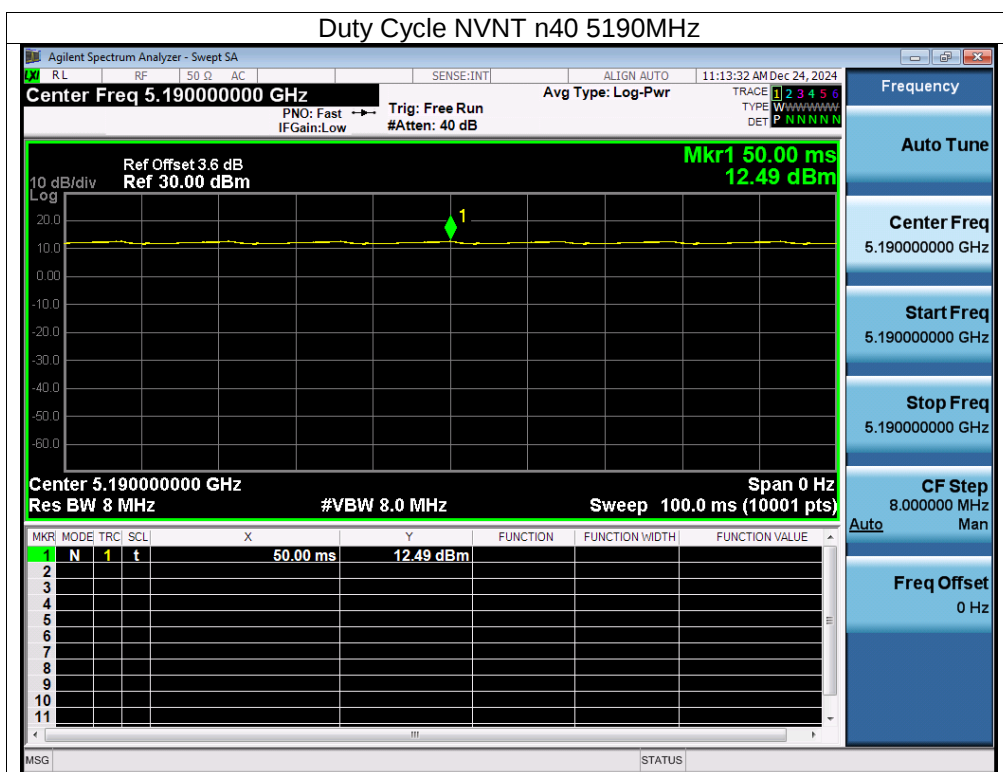
### 14.3 Test Procedure

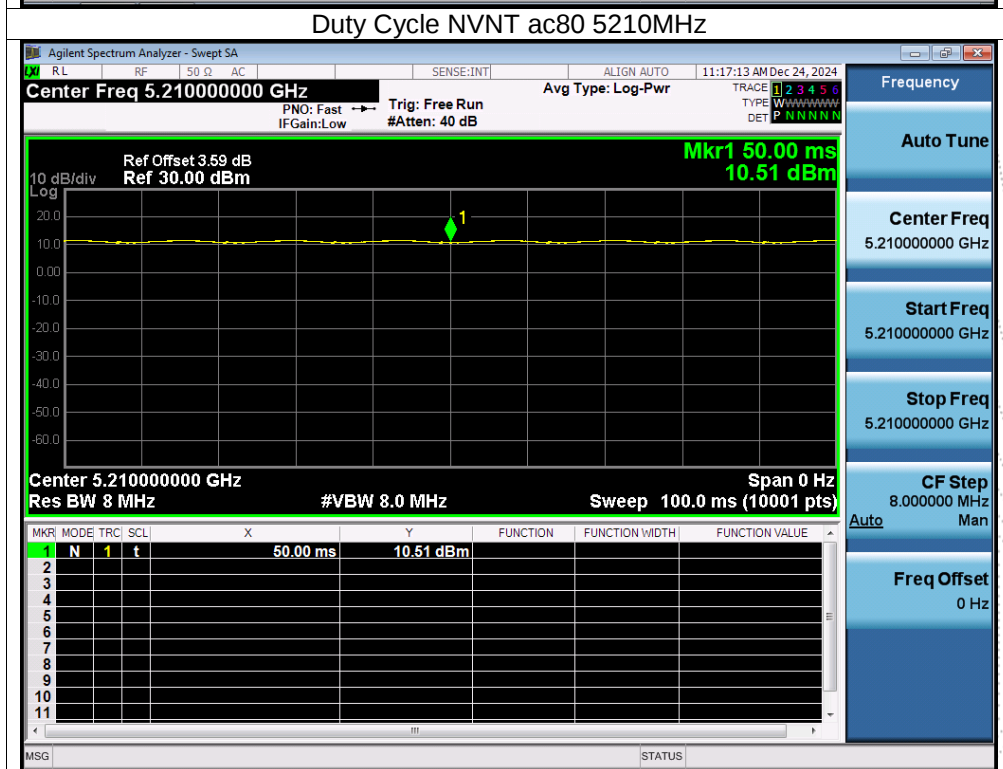
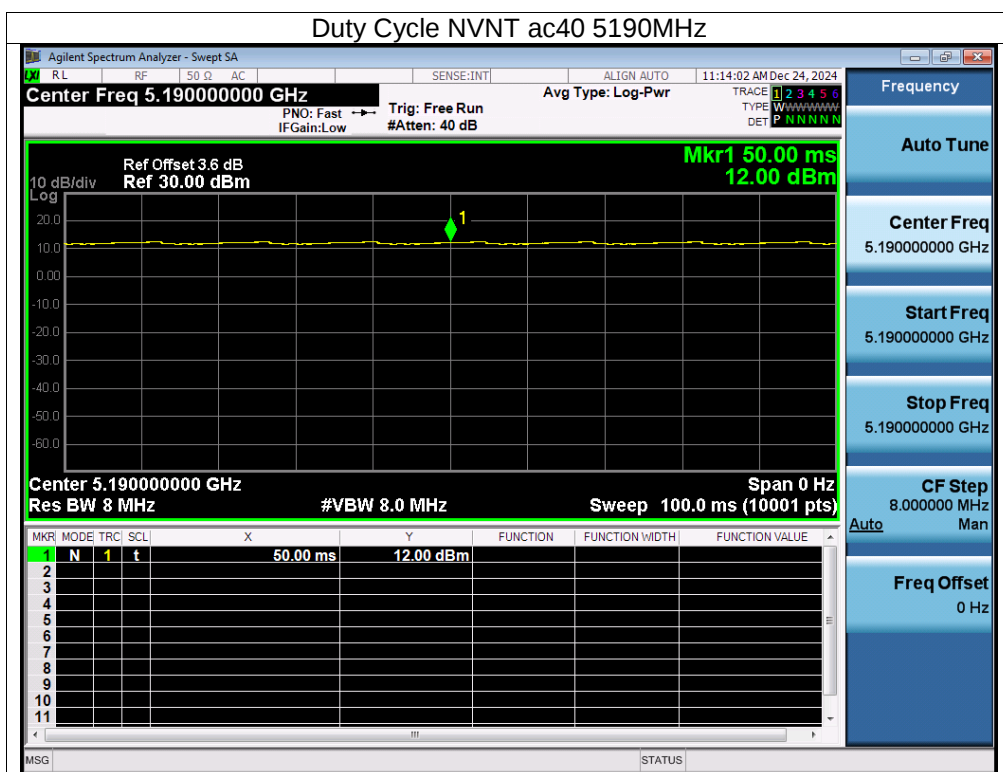
1. Set span = Zero
2. RBW = 8MHz
3. VBW = 8MHz,
4. Detector = Peak

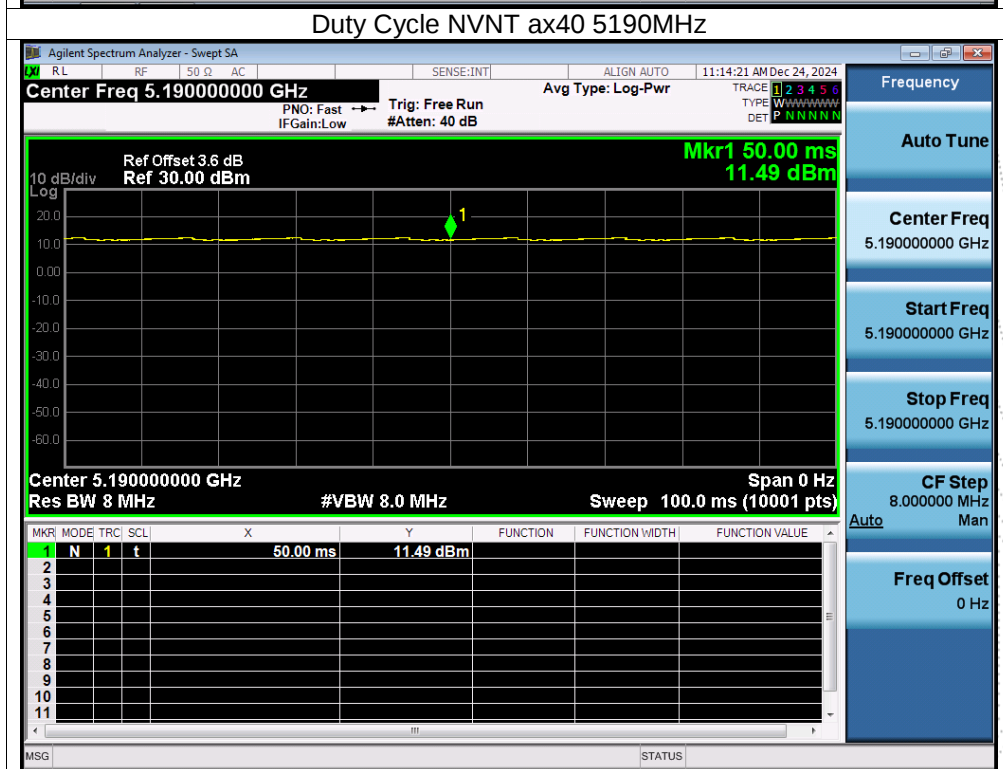
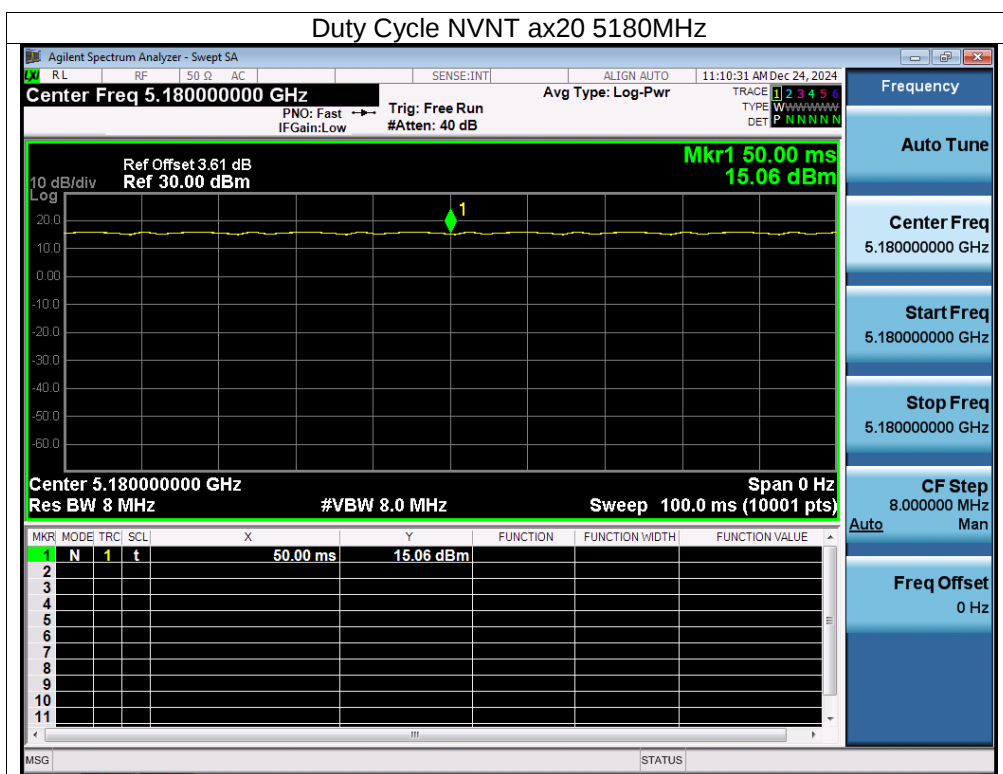
### 14.4 Test Result

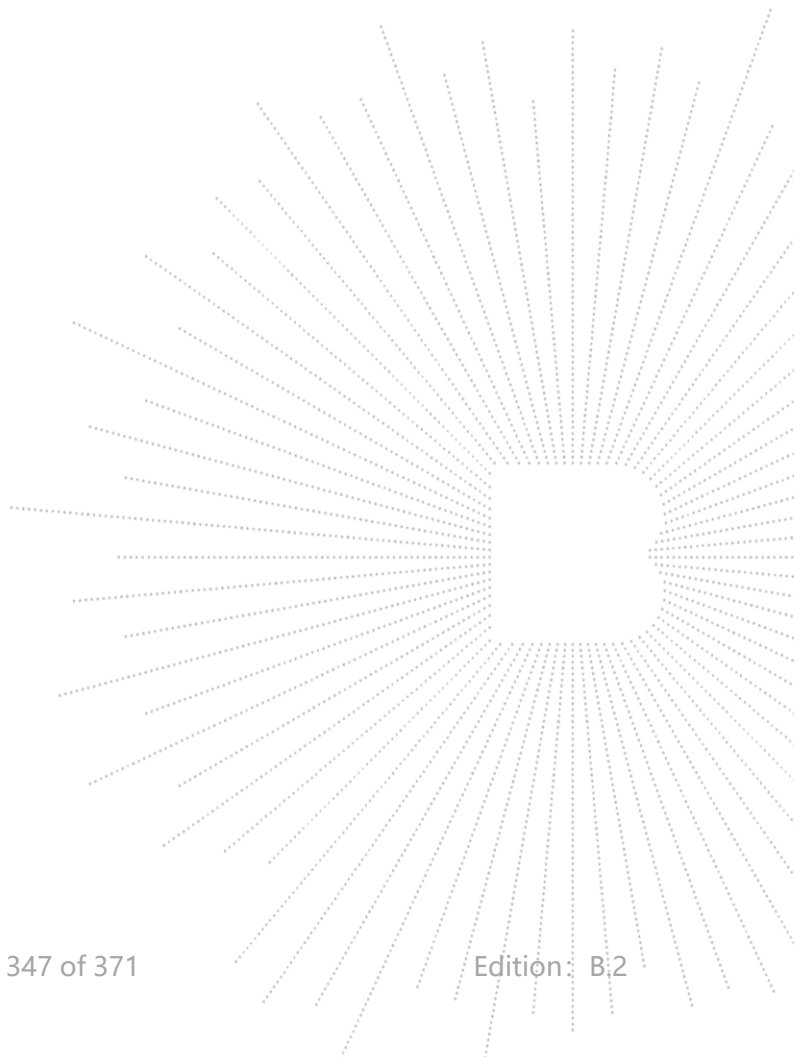
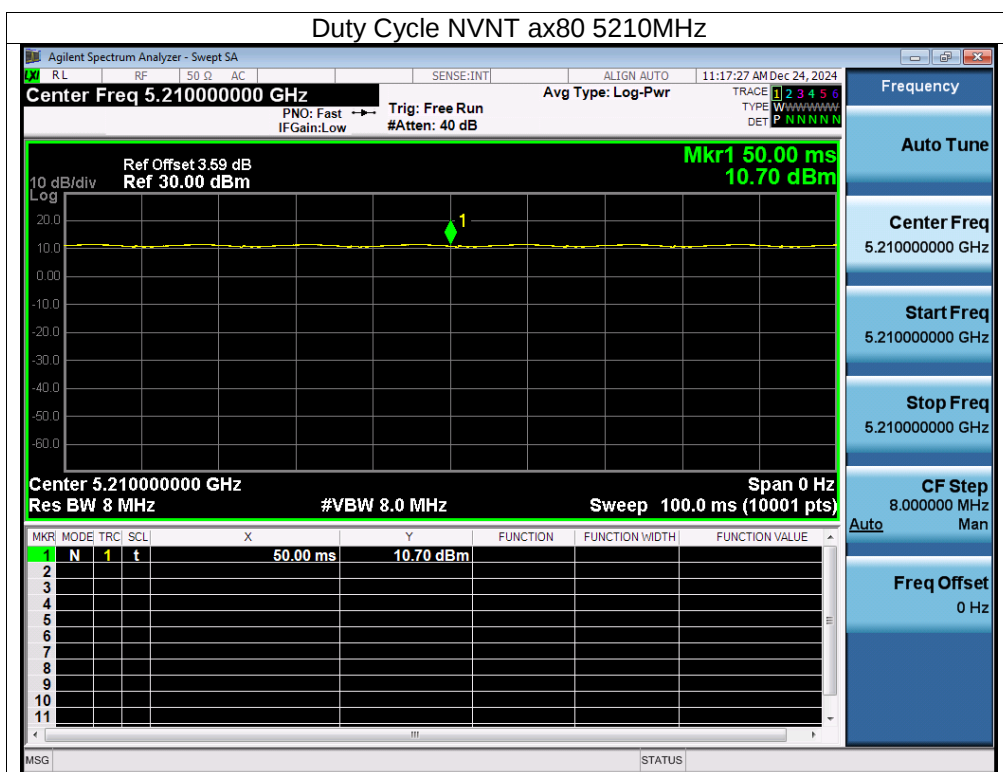
| Condition | Mode | Frequency (MHz) | Duty Cycle (%) | Correction Factor (dB) |
|-----------|------|-----------------|----------------|------------------------|
| NVNT      | a    | 5180            | 100            | 0                      |
| NVNT      | n20  | 5180            | 100            | 0                      |
| NVNT      | n40  | 5190            | 100            | 0                      |
| NVNT      | ac20 | 5180            | 100            | 0                      |
| NVNT      | ac40 | 5190            | 100            | 0                      |
| NVNT      | ac80 | 5210            | 100            | 0                      |
| NVNT      | ax20 | 5180            | 100            | 0                      |
| NVNT      | ax40 | 5190            | 100            | 0                      |
| NVNT      | ax80 | 5210            | 100            | 0                      |



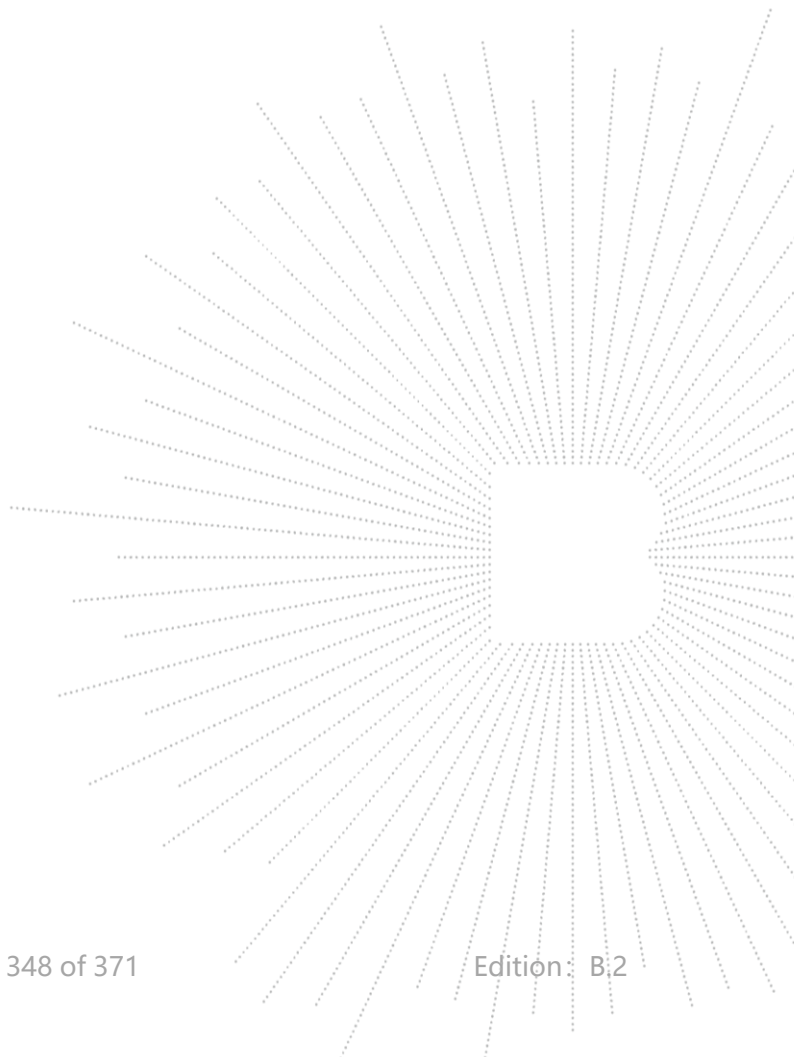


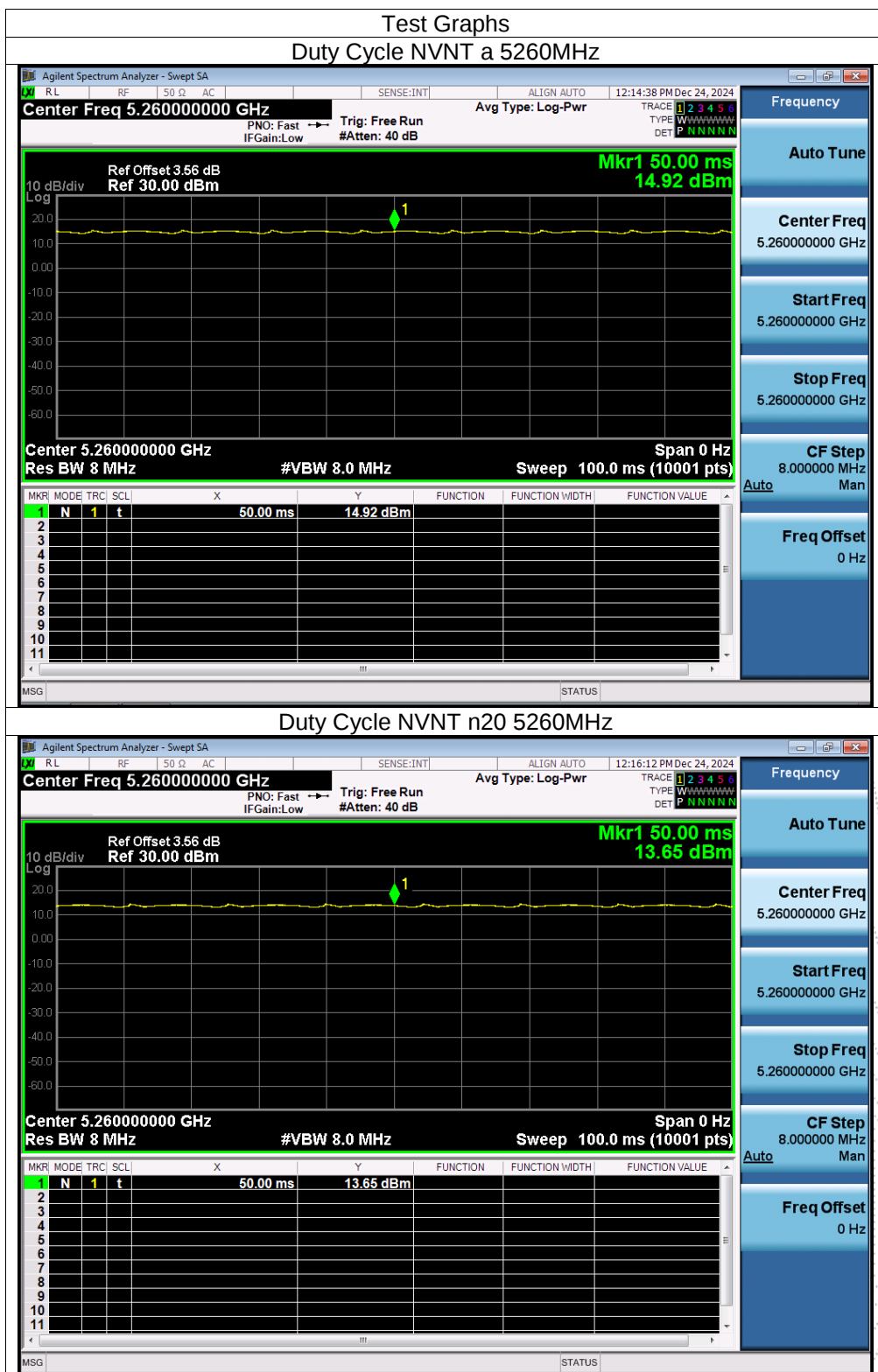


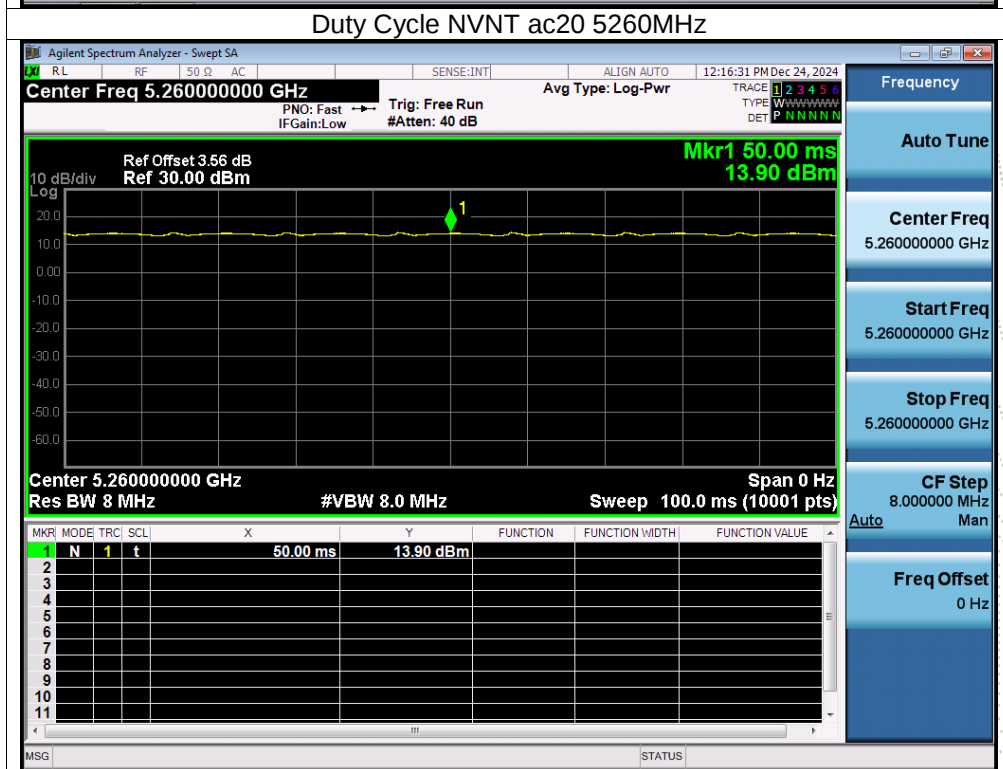
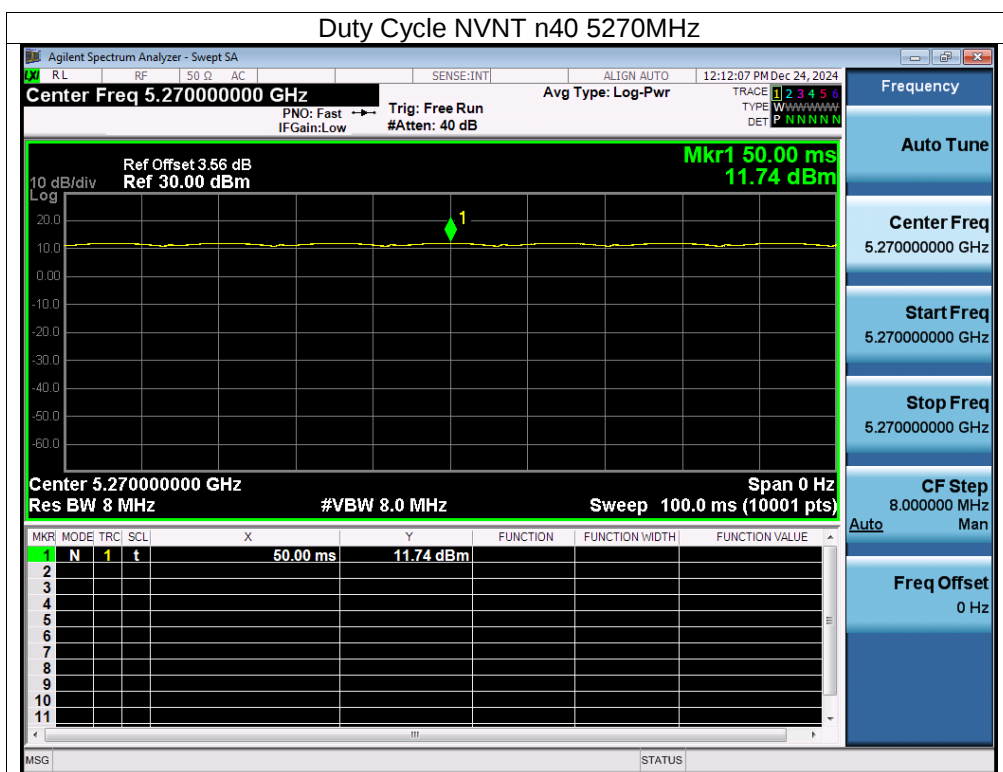


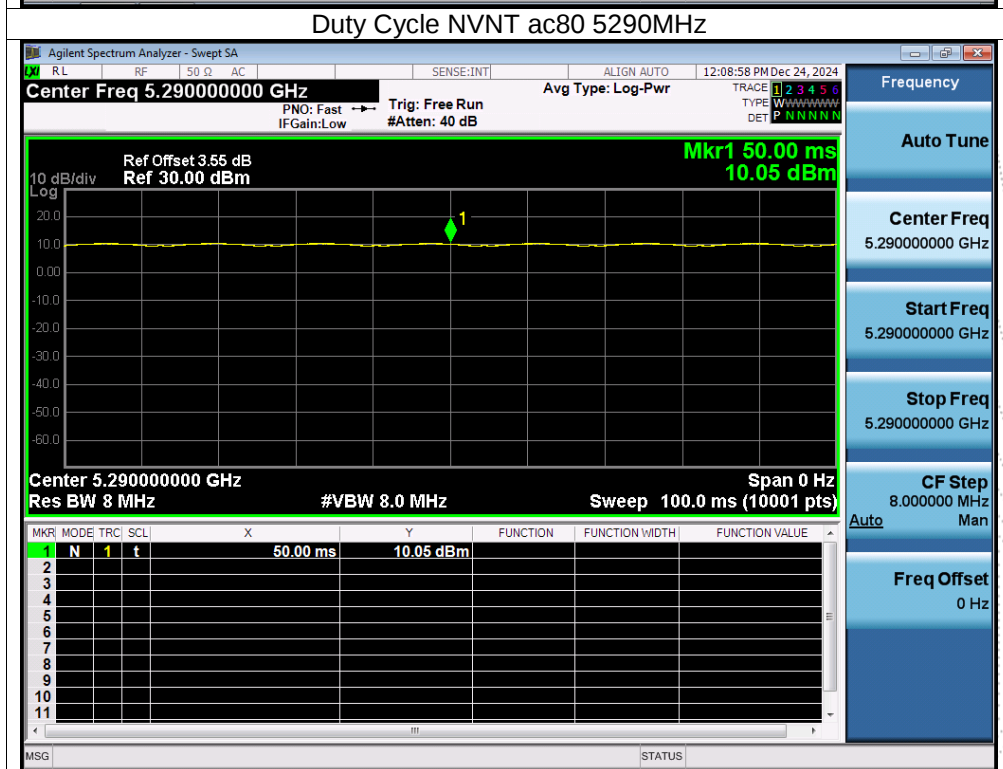
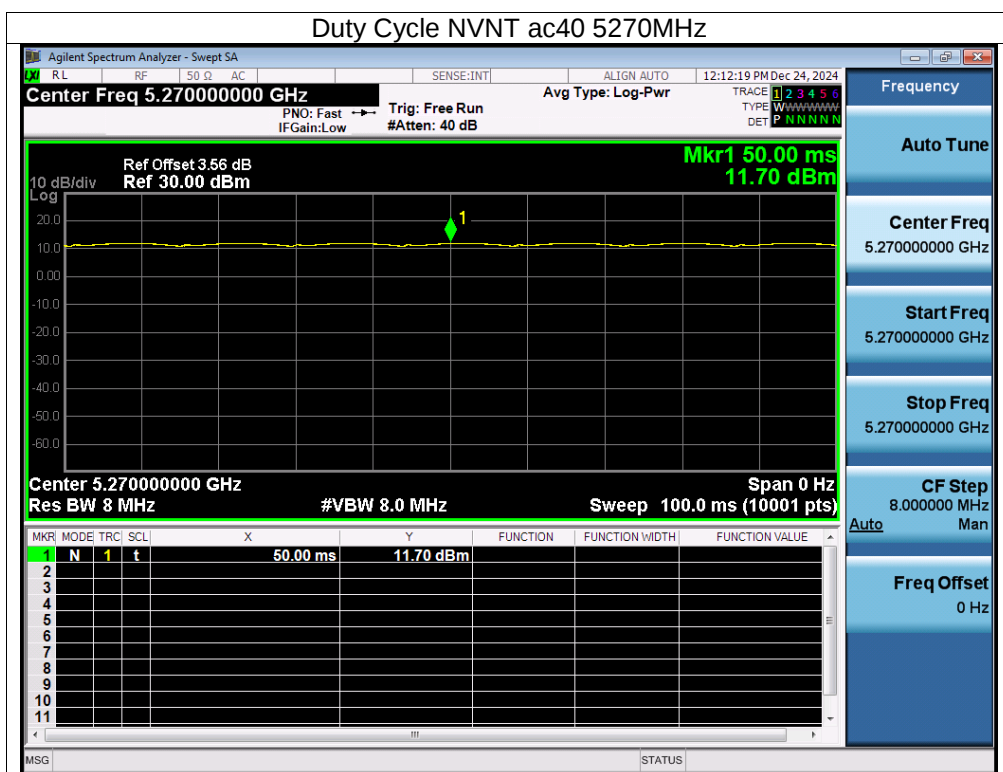


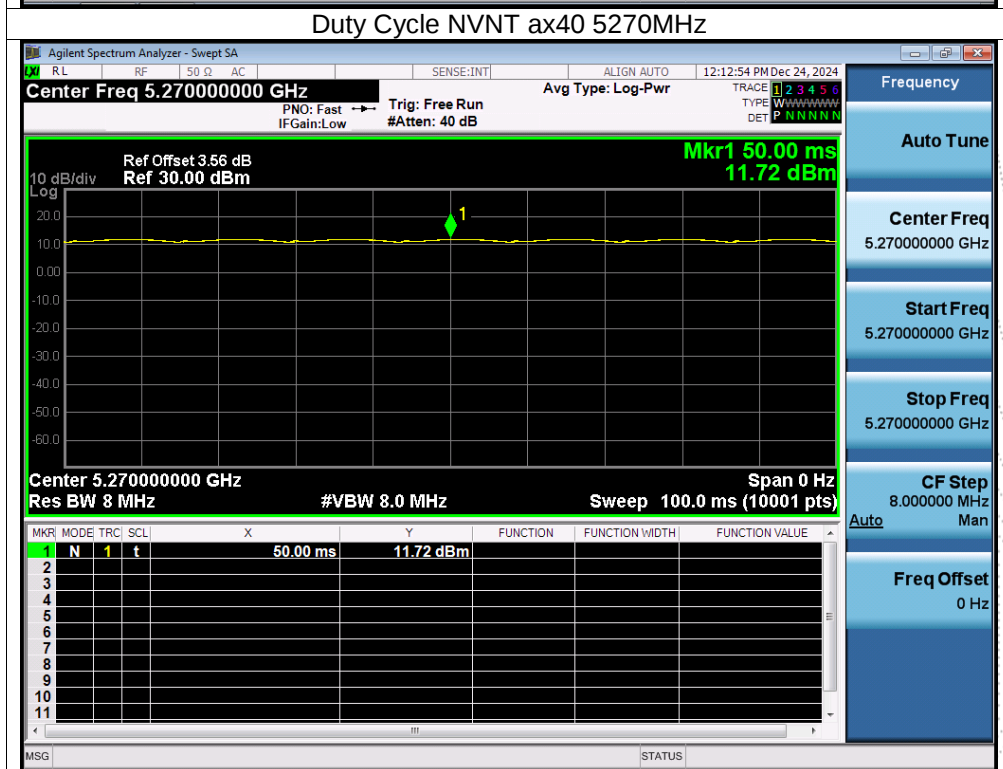
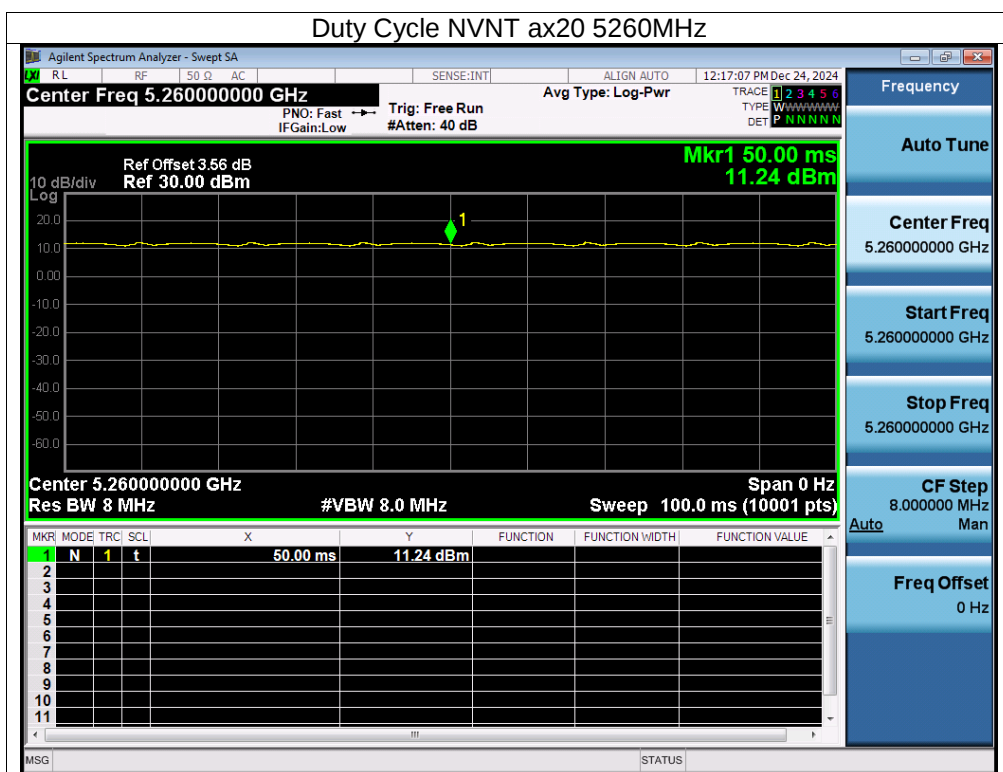
| Condition | Mode | Frequency (MHz) | Duty Cycle (%) | Correction Factor (dB) |
|-----------|------|-----------------|----------------|------------------------|
| NVNT      | a    | 5260            | 100            | 0                      |
| NVNT      | n20  | 5260            | 100            | 0                      |
| NVNT      | n40  | 5270            | 100            | 0                      |
| NVNT      | ac20 | 5260            | 100            | 0                      |
| NVNT      | ac40 | 5270            | 100            | 0                      |
| NVNT      | ac80 | 5290            | 100            | 0                      |
| NVNT      | ax20 | 5260            | 100            | 0                      |
| NVNT      | ax40 | 5270            | 100            | 0                      |
| NVNT      | ax80 | 5290            | 100            | 0                      |

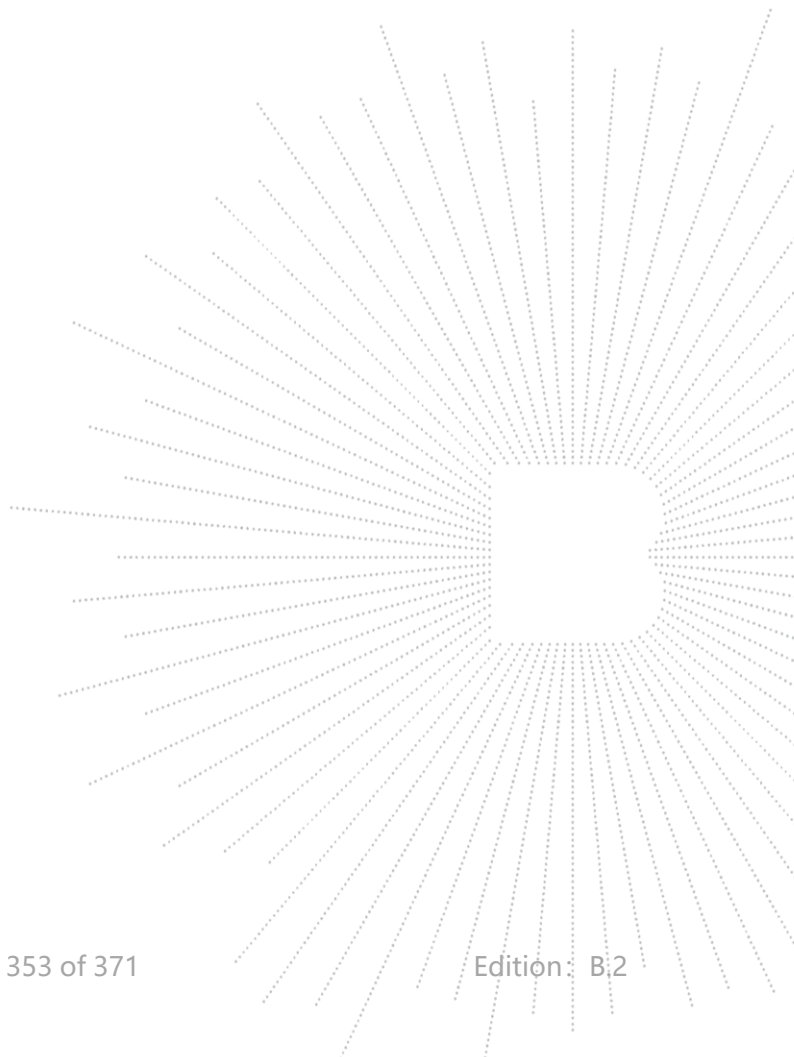
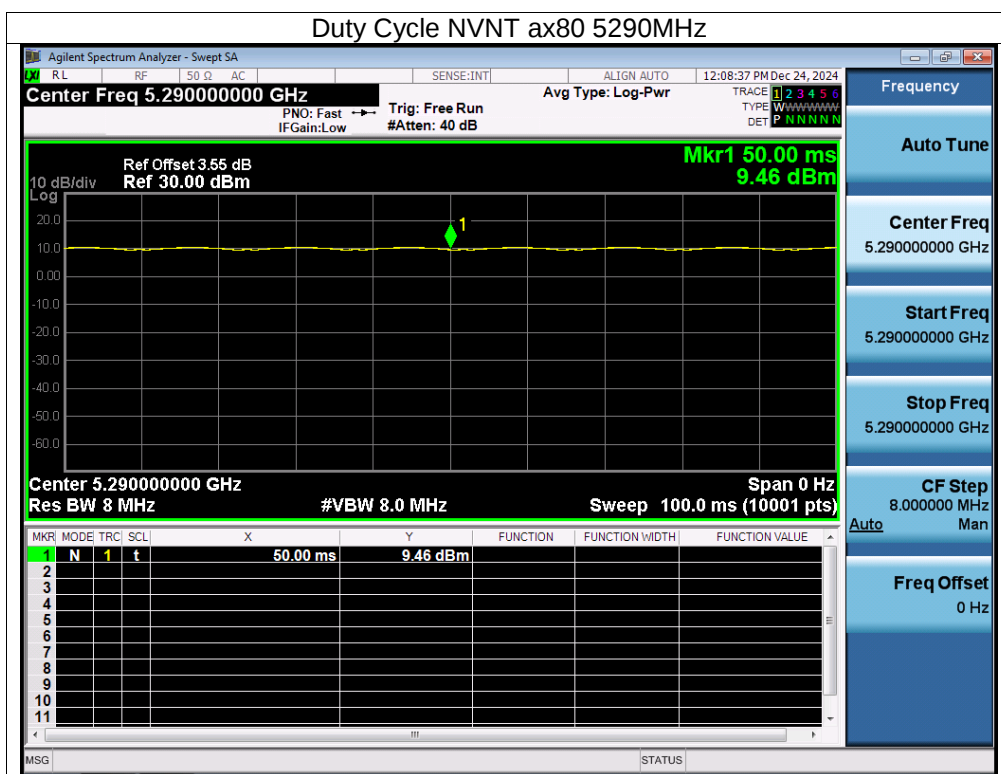




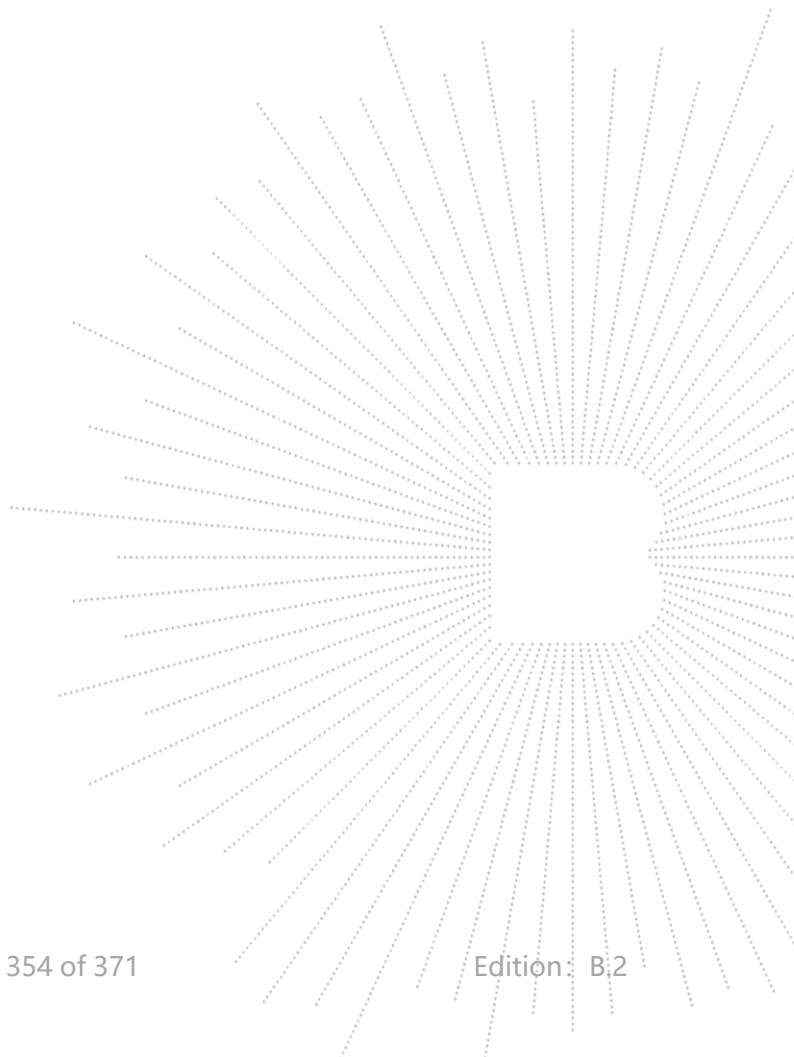


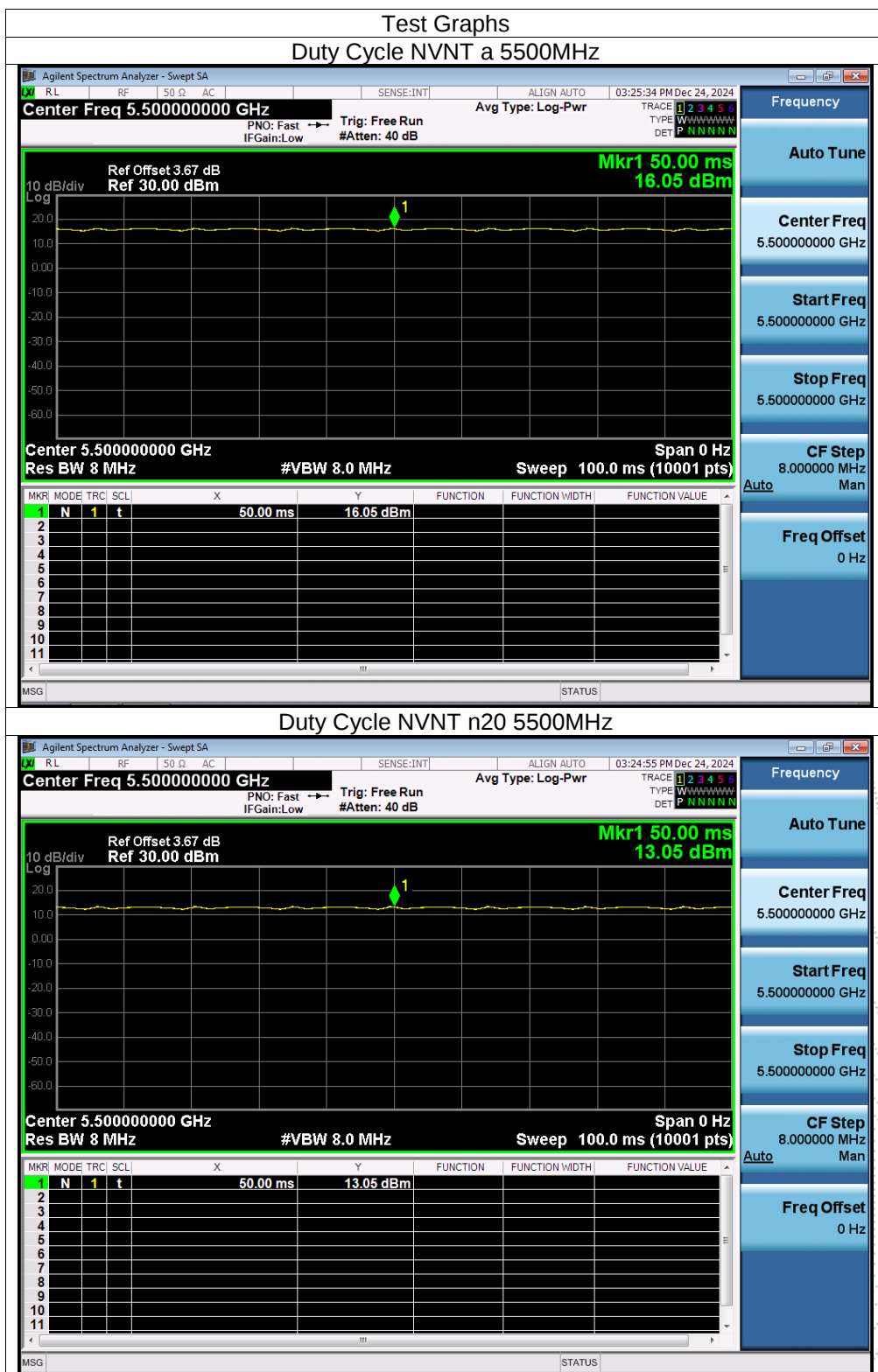


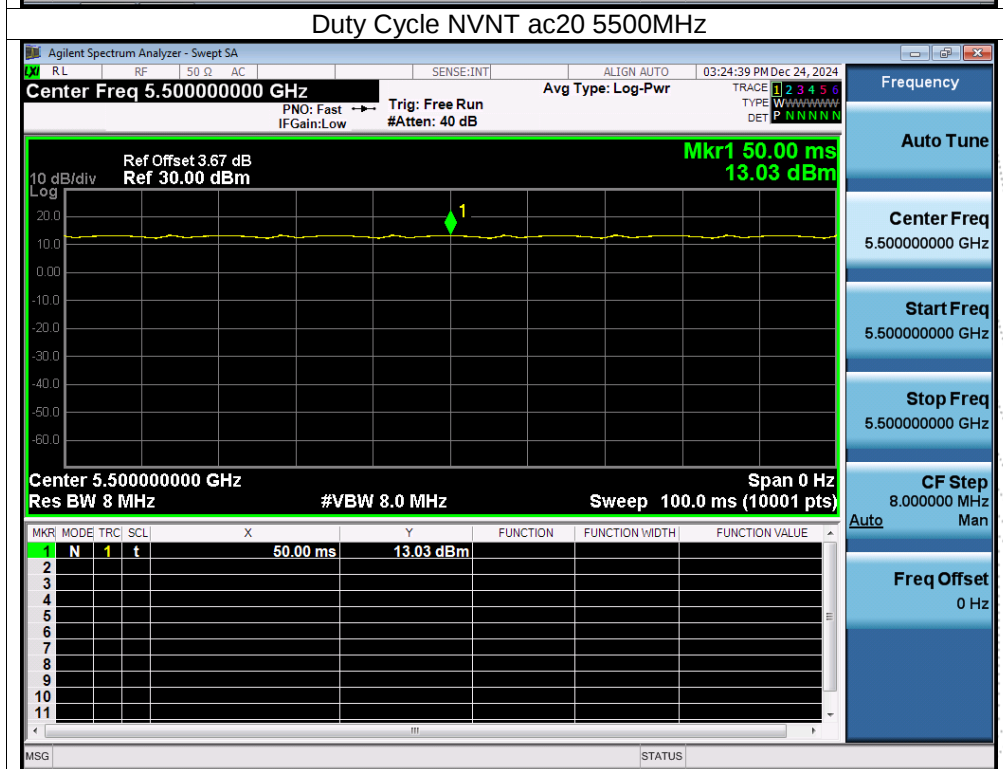
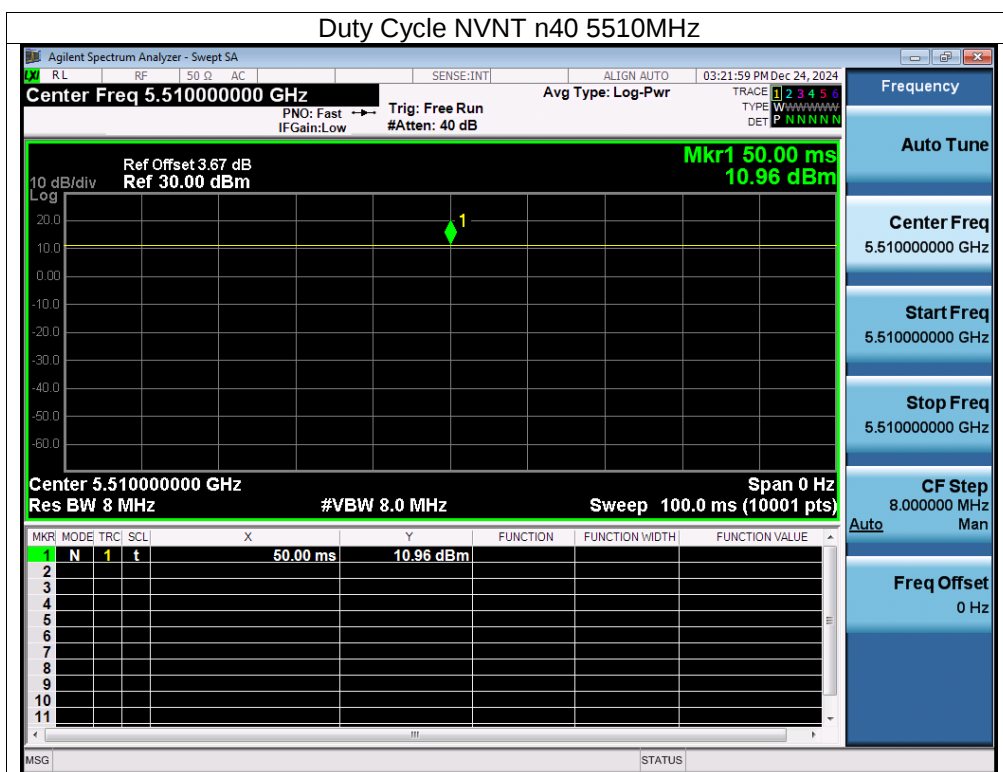


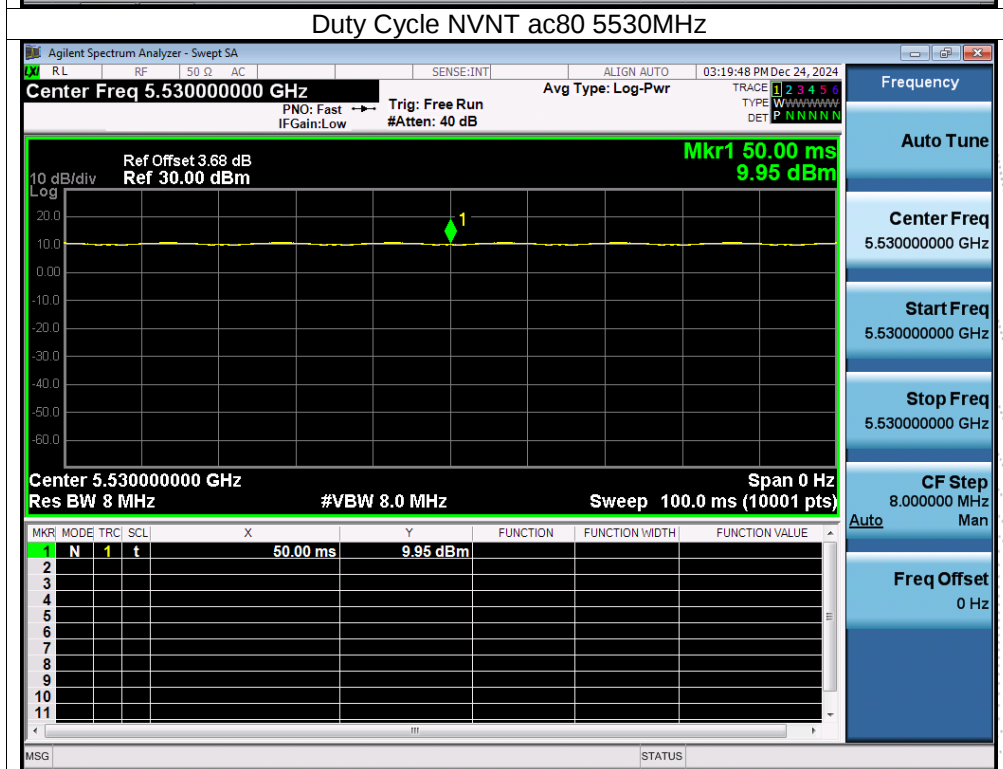
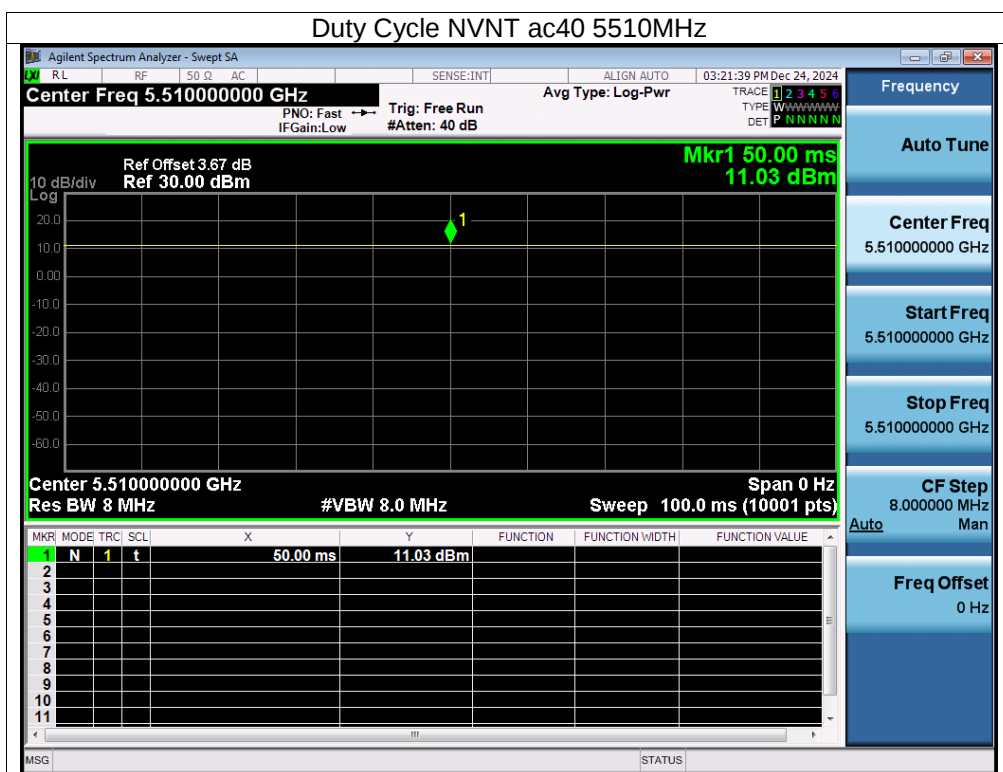


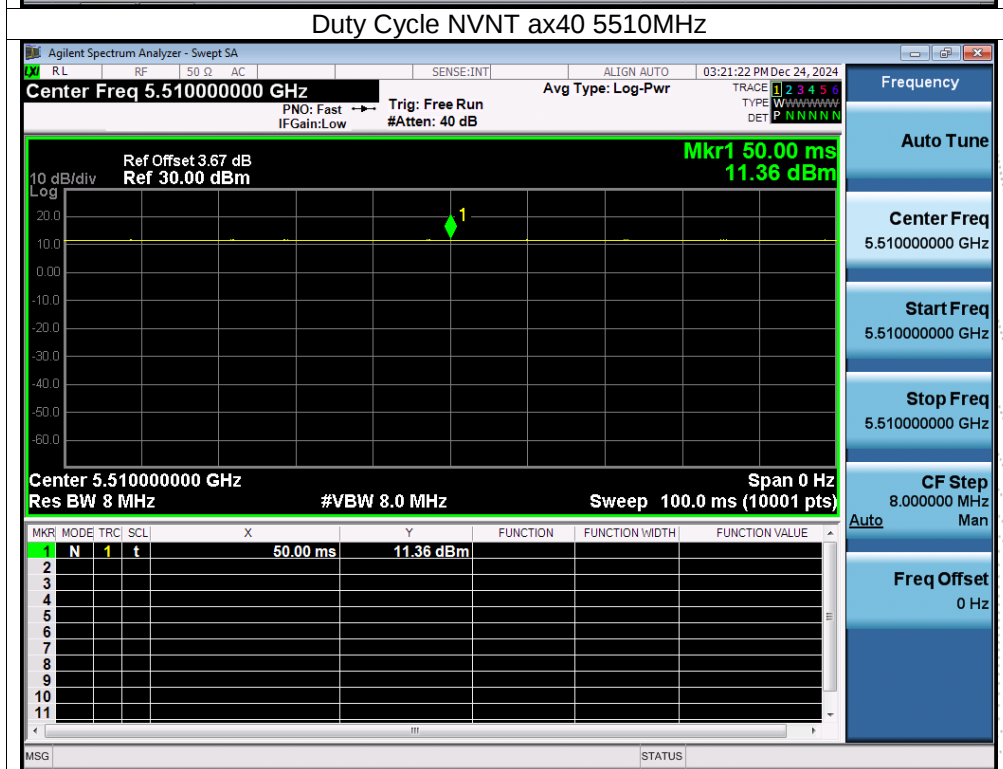
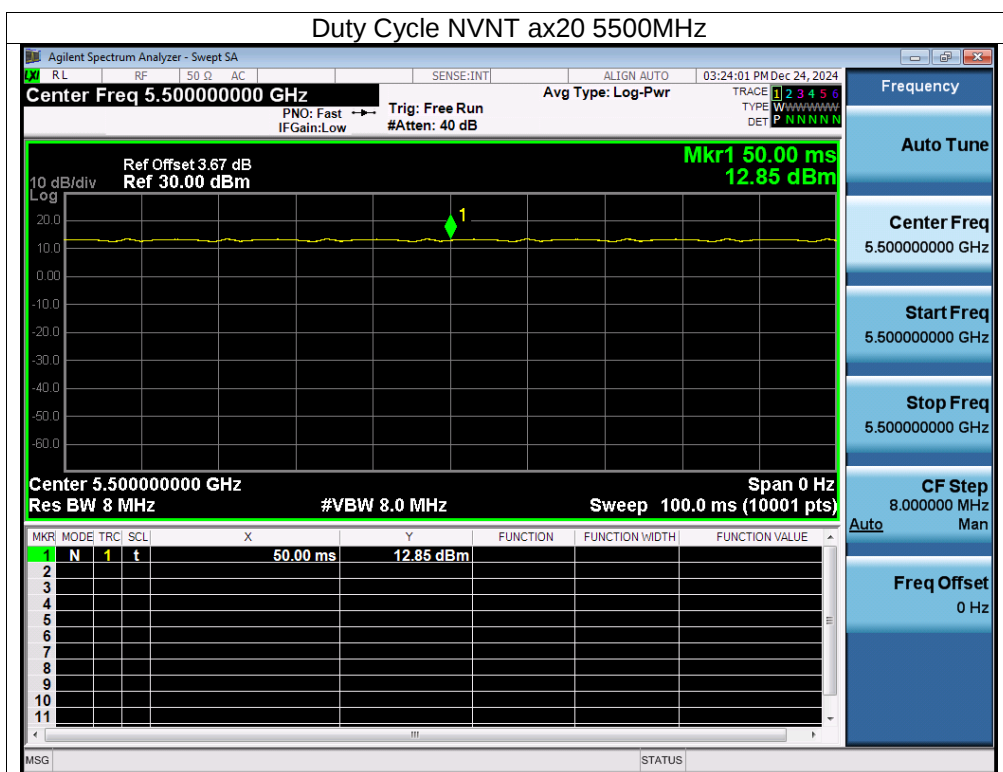
| Condition | Mode | Frequency (MHz) | Duty Cycle (%) | Correction Factor (dB) |
|-----------|------|-----------------|----------------|------------------------|
| NVNT      | a    | 5500            | 100            | 0                      |
| NVNT      | n20  | 5500            | 100            | 0                      |
| NVNT      | n40  | 5510            | 100            | 0                      |
| NVNT      | ac20 | 5500            | 100            | 0                      |
| NVNT      | ac40 | 5510            | 100            | 0                      |
| NVNT      | ac80 | 5530            | 100            | 0                      |
| NVNT      | ax20 | 5500            | 100            | 0                      |
| NVNT      | ax40 | 5510            | 100            | 0                      |
| NVNT      | ax80 | 5530            | 100            | 0                      |

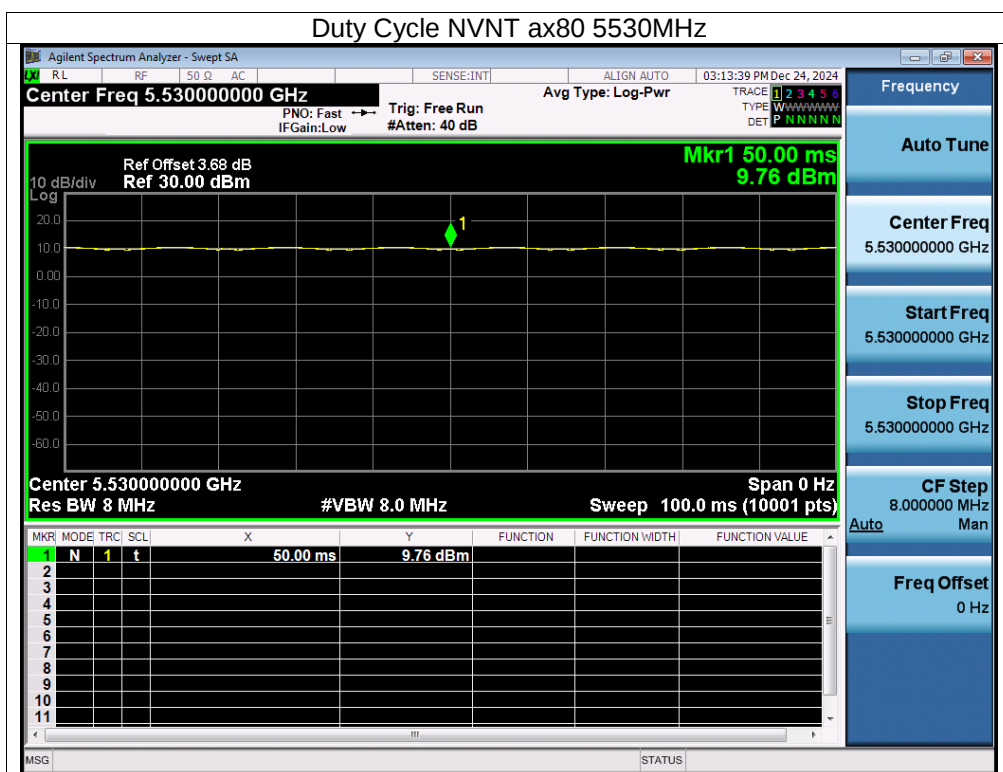












| Condition | Mode | Frequency (MHz) | Duty Cycle (%) | Correction Factor (dB) |
|-----------|------|-----------------|----------------|------------------------|
| NVNT      | a    | 5745            | 100            | 0                      |
| NVNT      | n20  | 5745            | 100            | 0                      |
| NVNT      | n40  | 5755            | 100            | 0                      |
| NVNT      | ac20 | 5745            | 100            | 0                      |
| NVNT      | ac40 | 5755            | 100            | 0                      |
| NVNT      | ac80 | 5775            | 100            | 0                      |
| NVNT      | ax20 | 5745            | 100            | 0                      |
| NVNT      | ax40 | 5755            | 100            | 0                      |
| NVNT      | ax80 | 5775            | 100            | 0                      |

