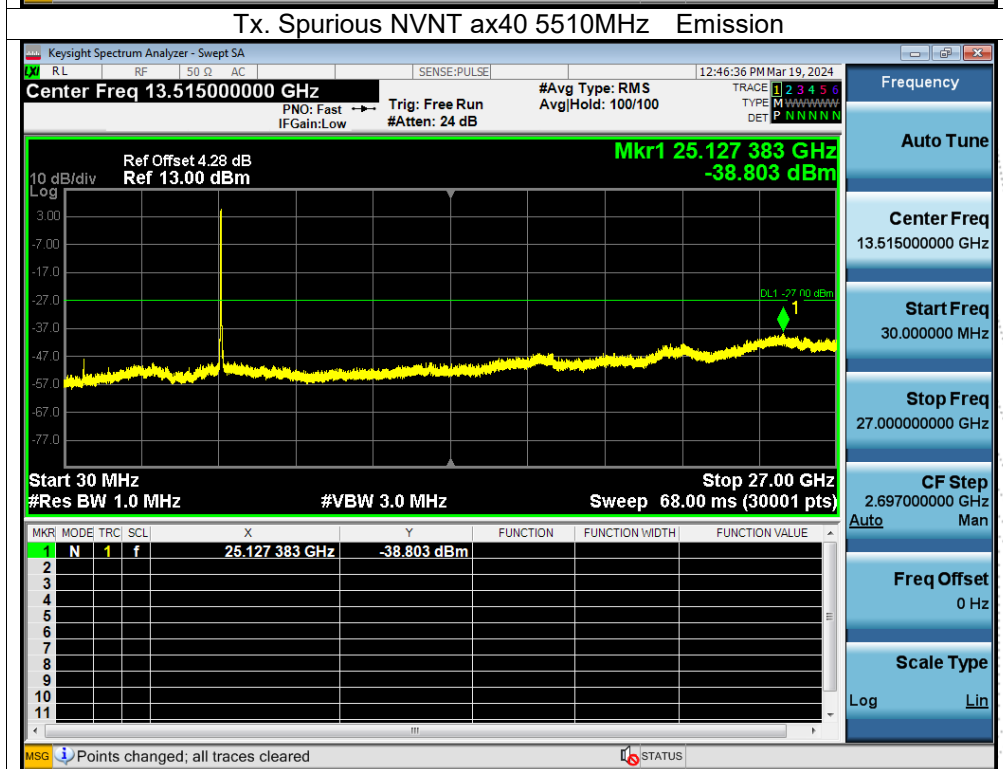
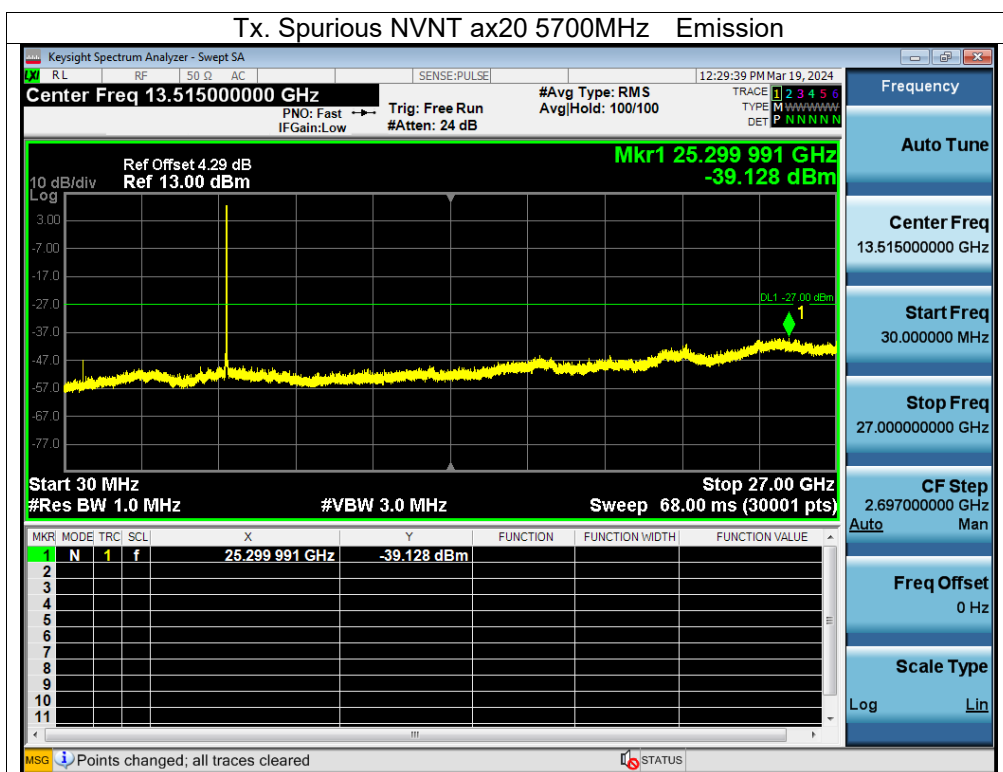
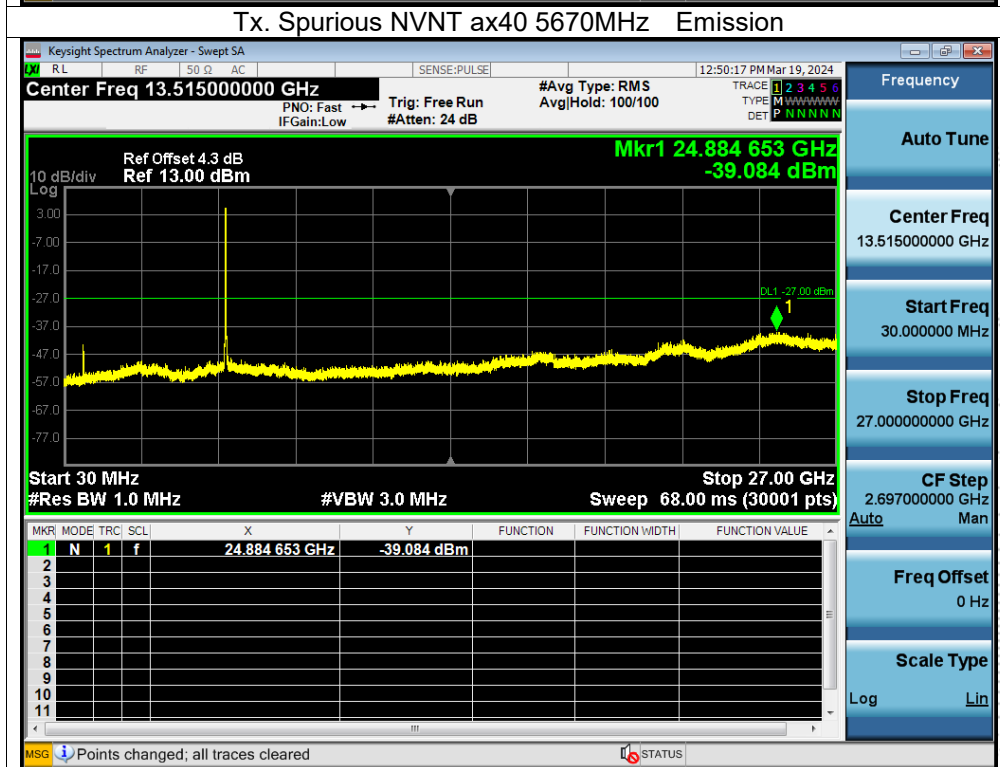
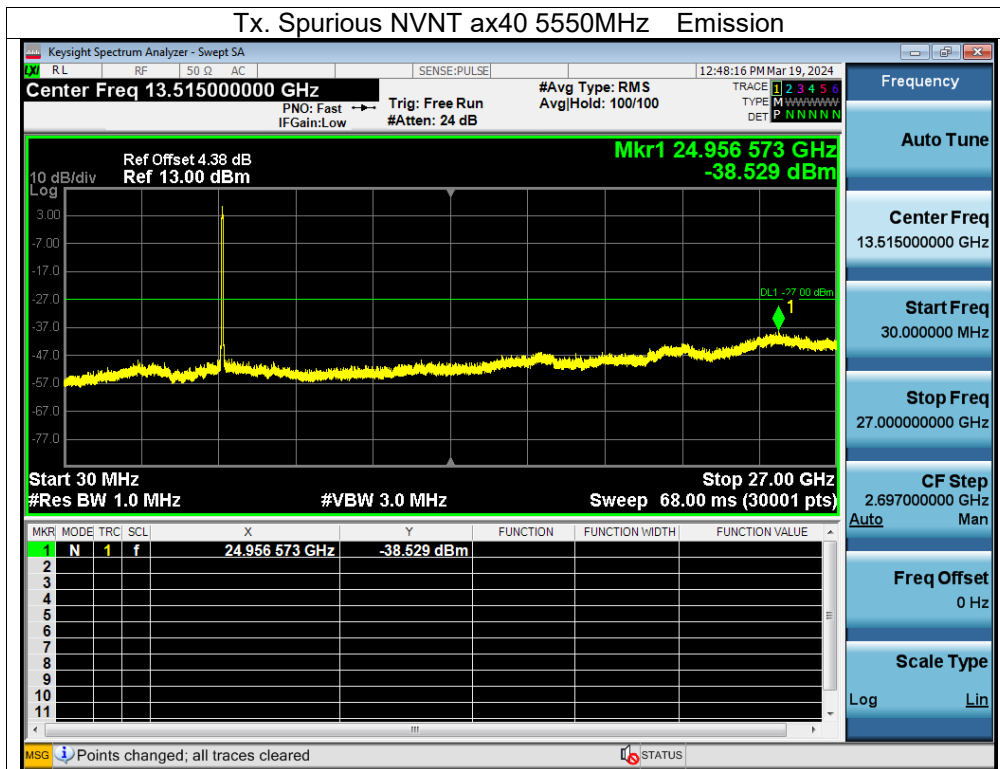
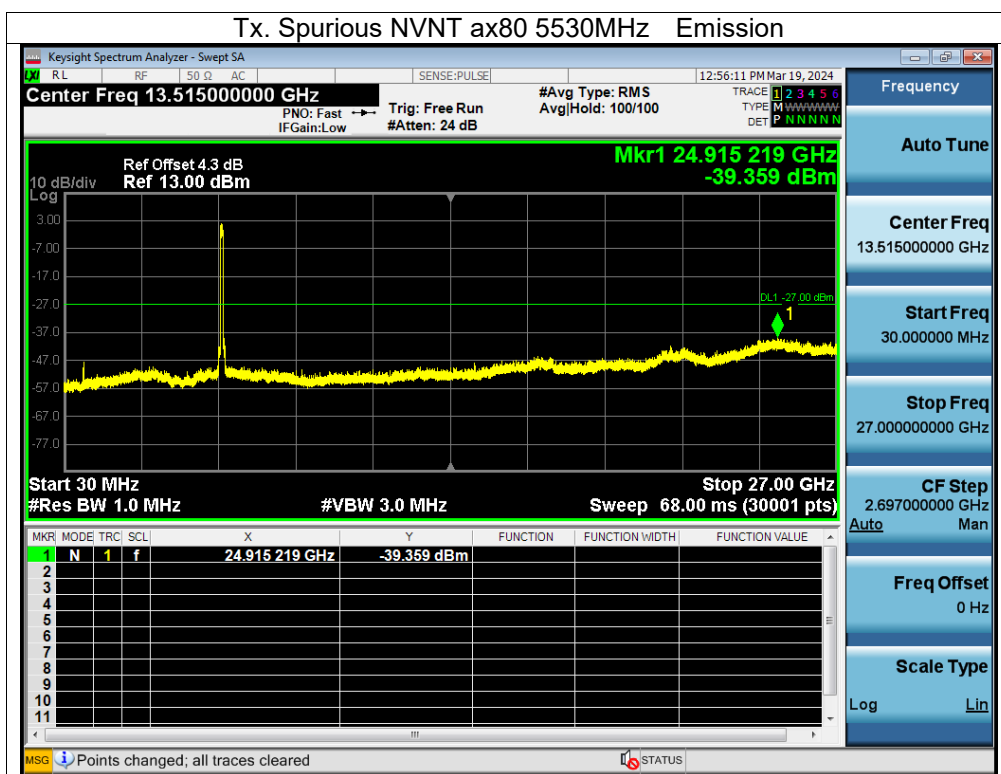
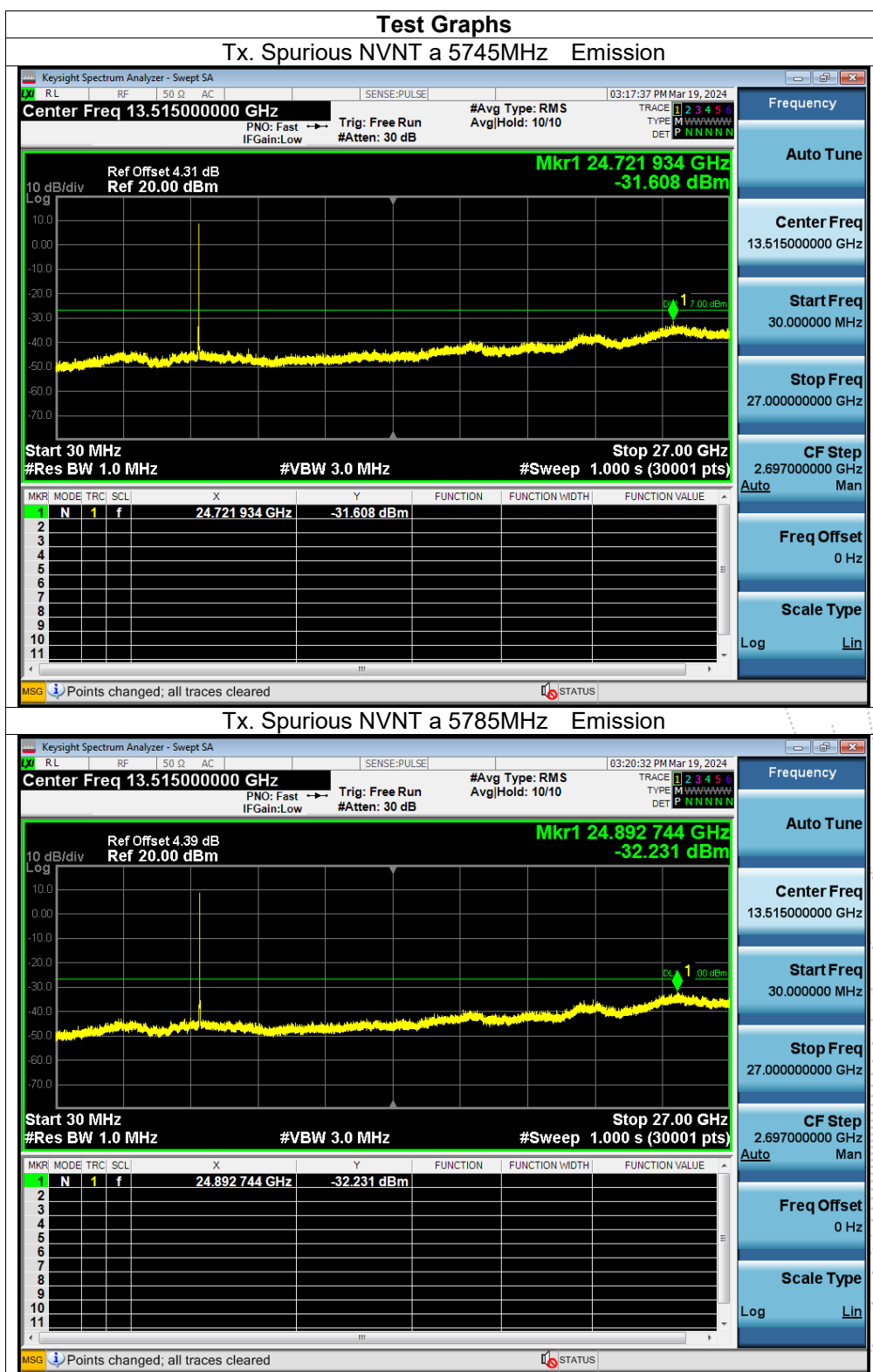


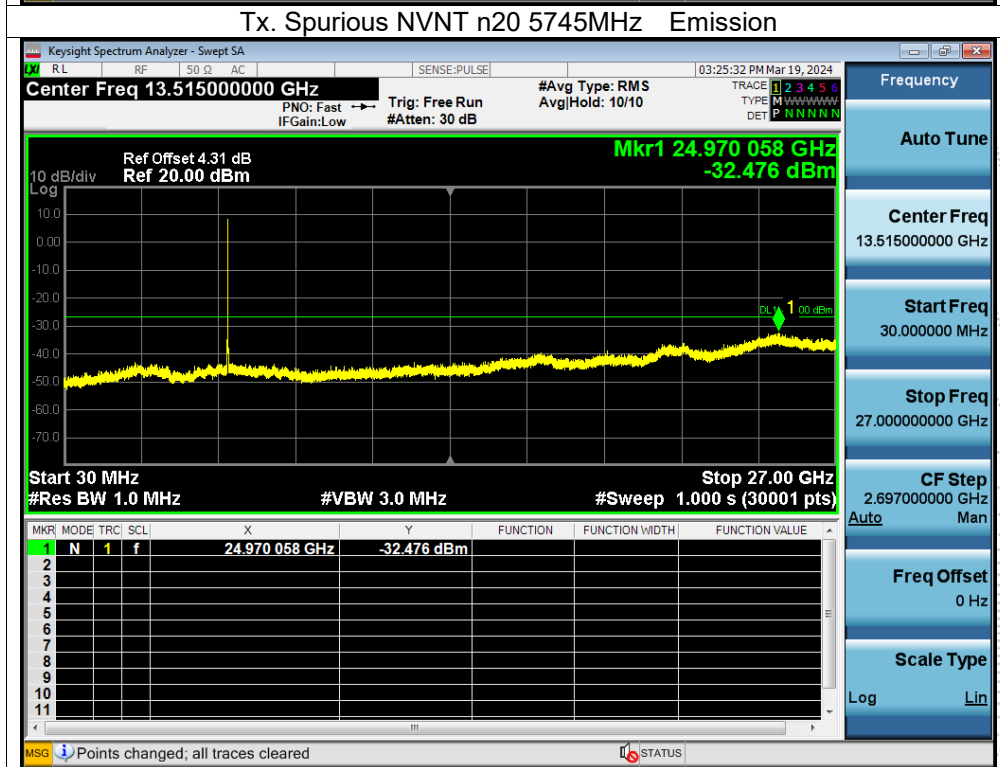
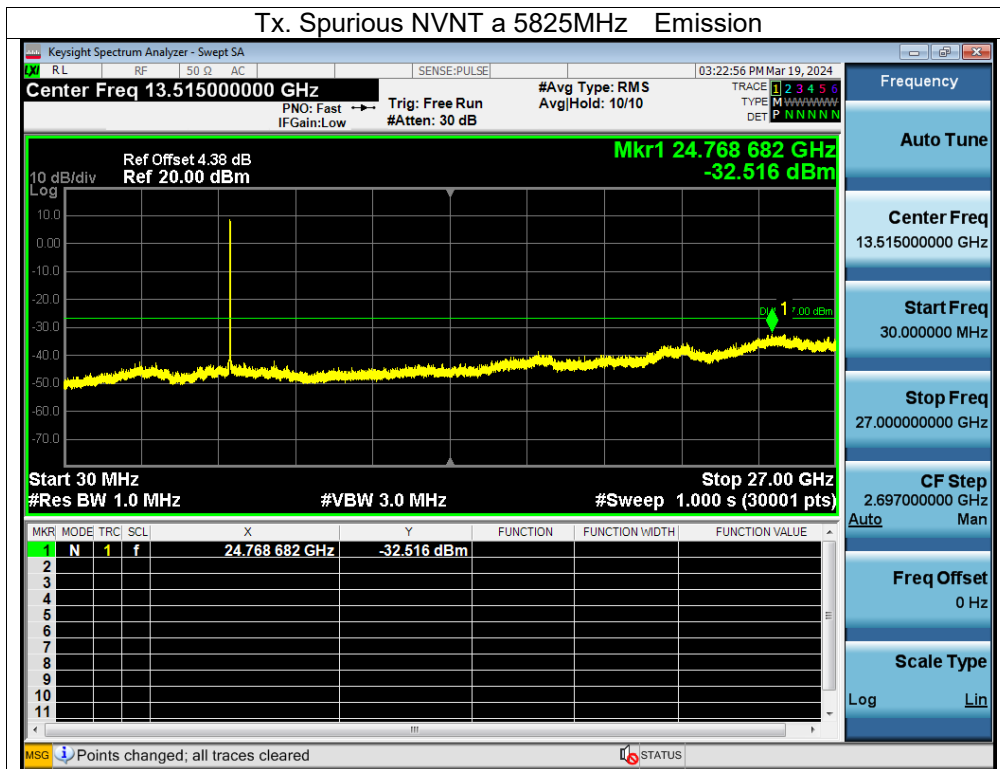


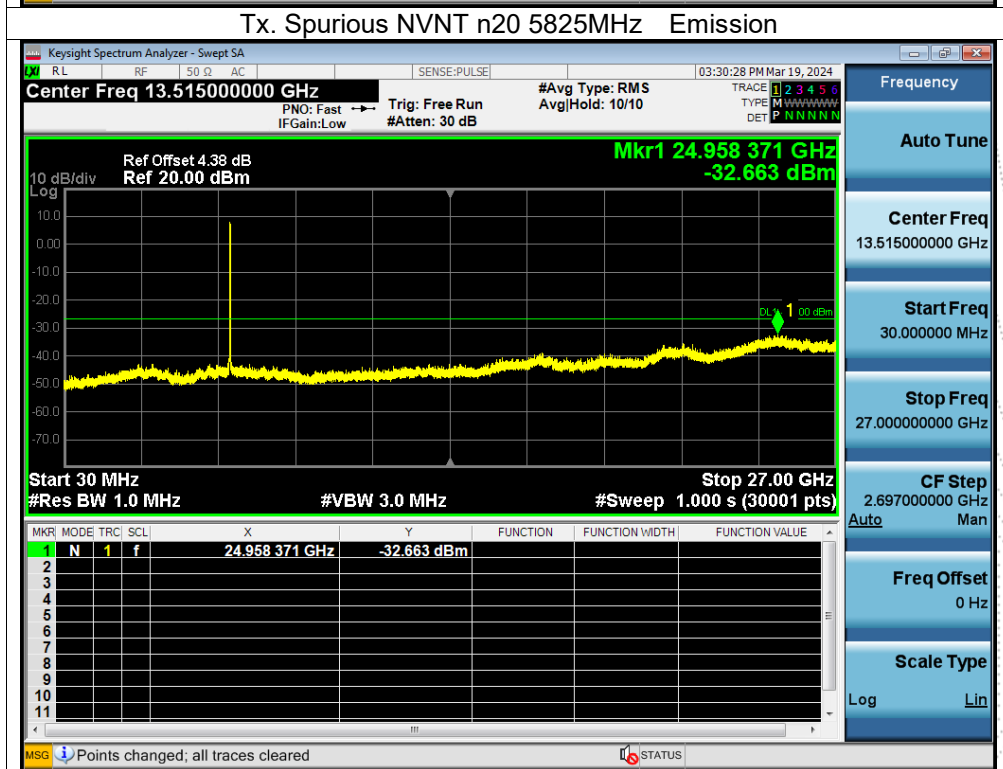
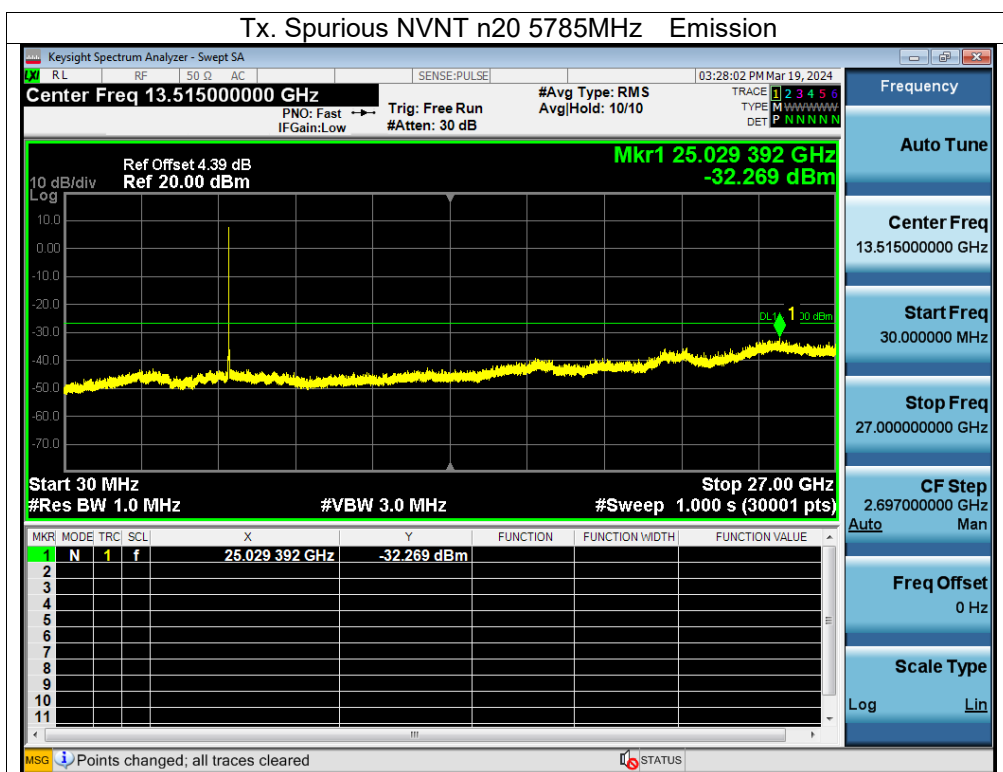


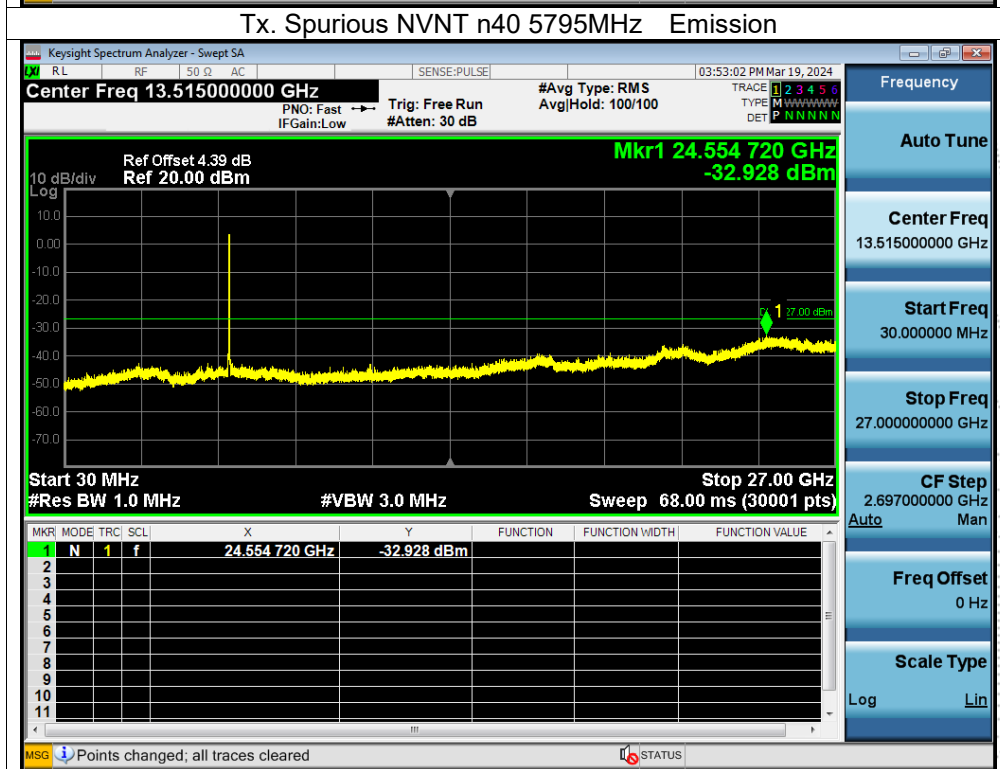
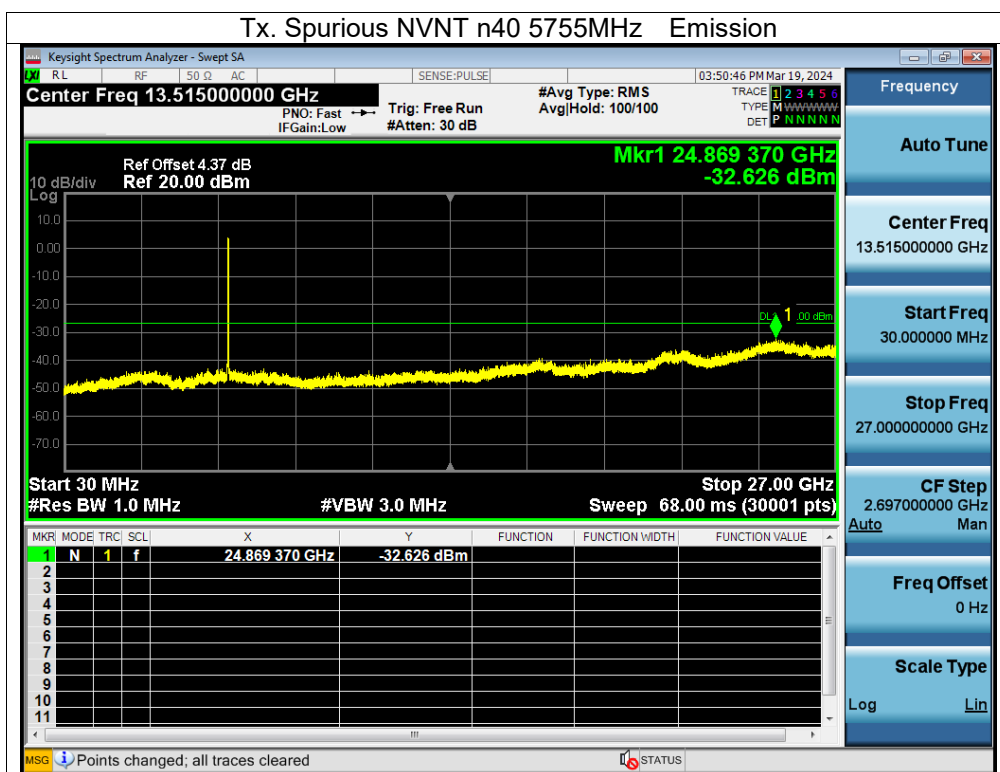


Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot. Antenna A: 5745-5825 MHz

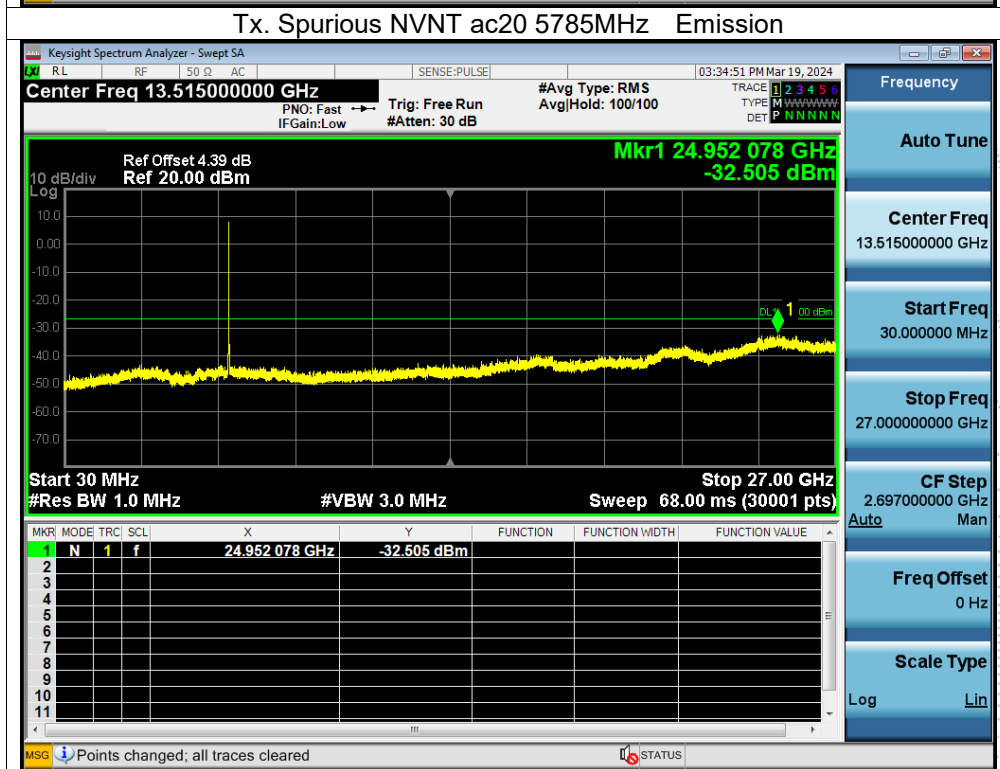
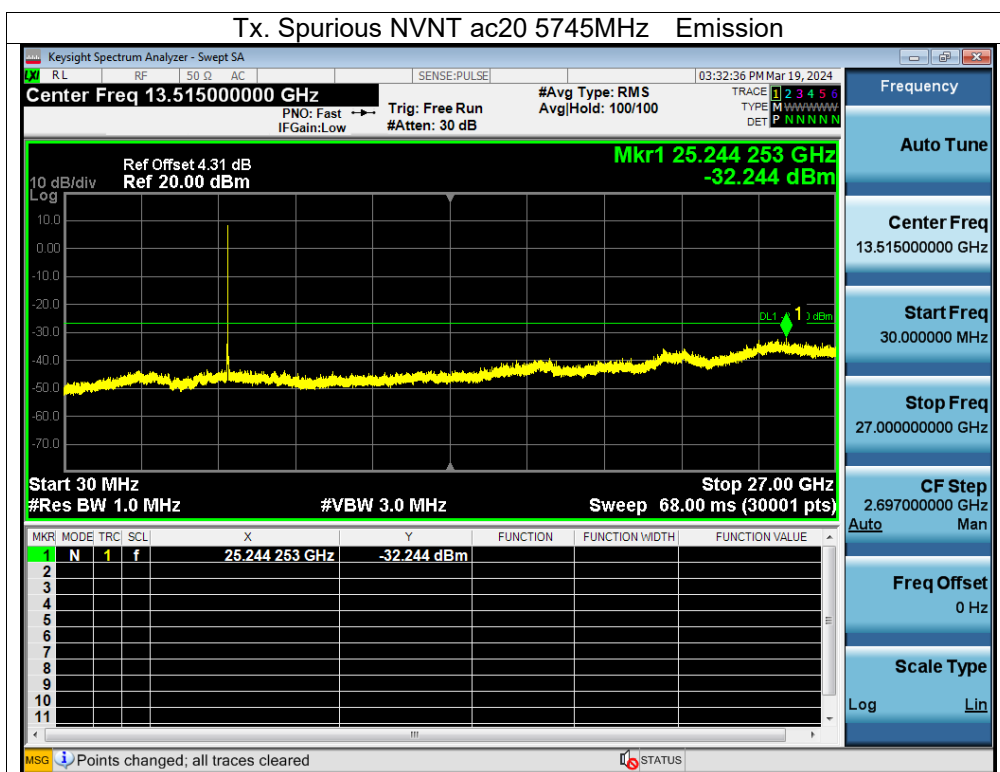




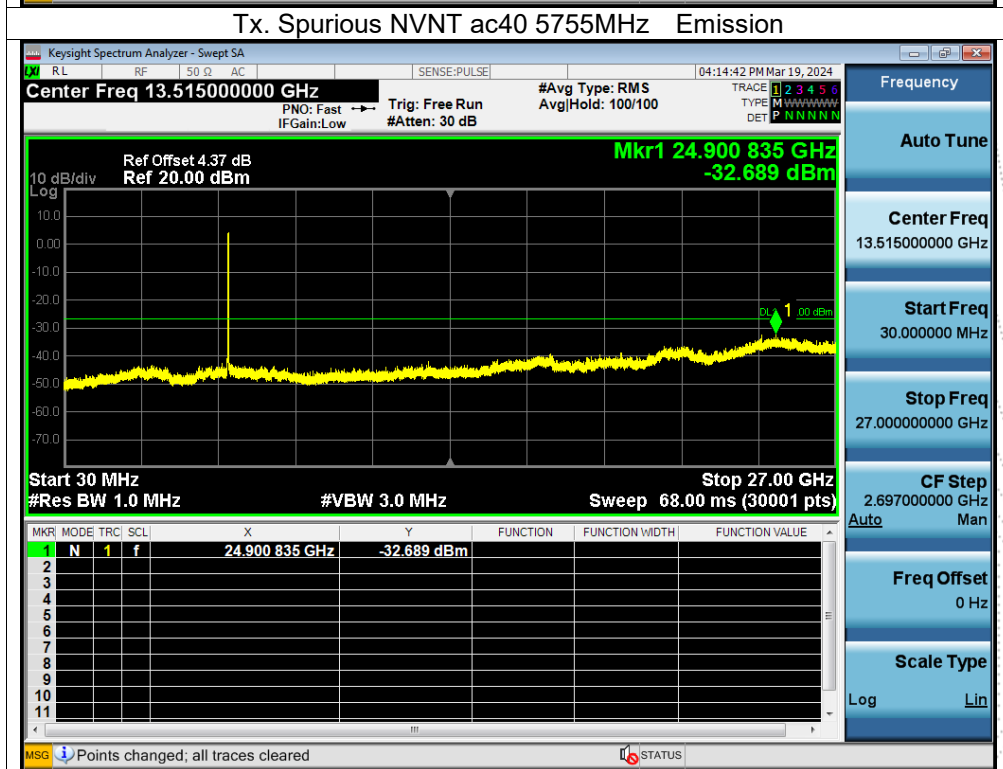
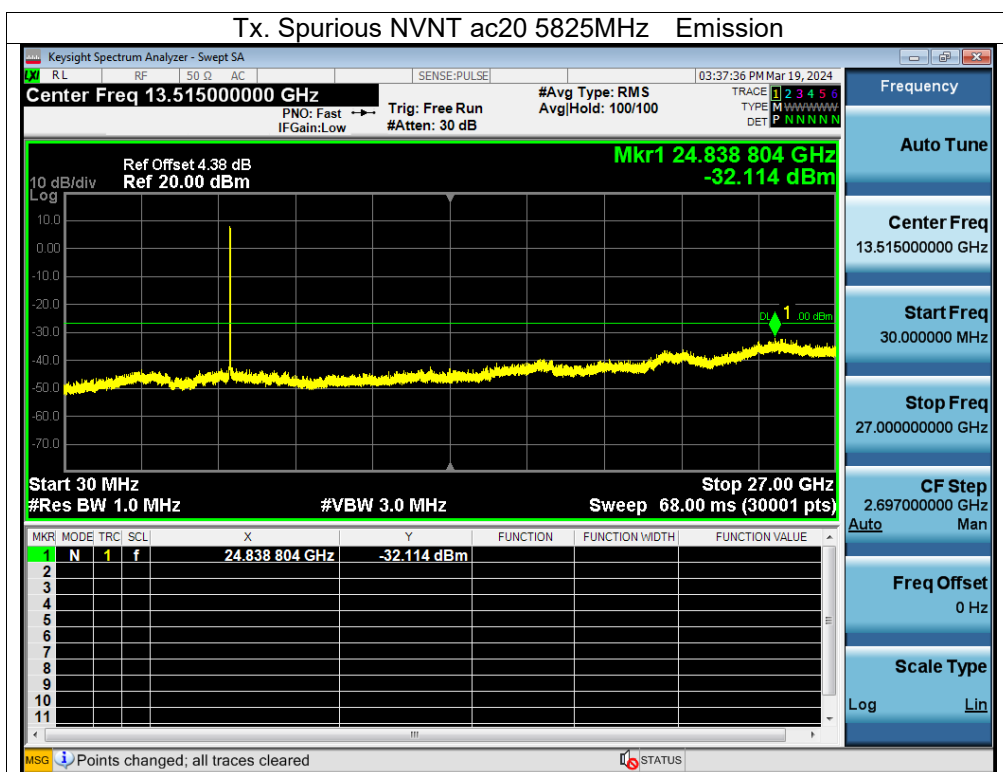


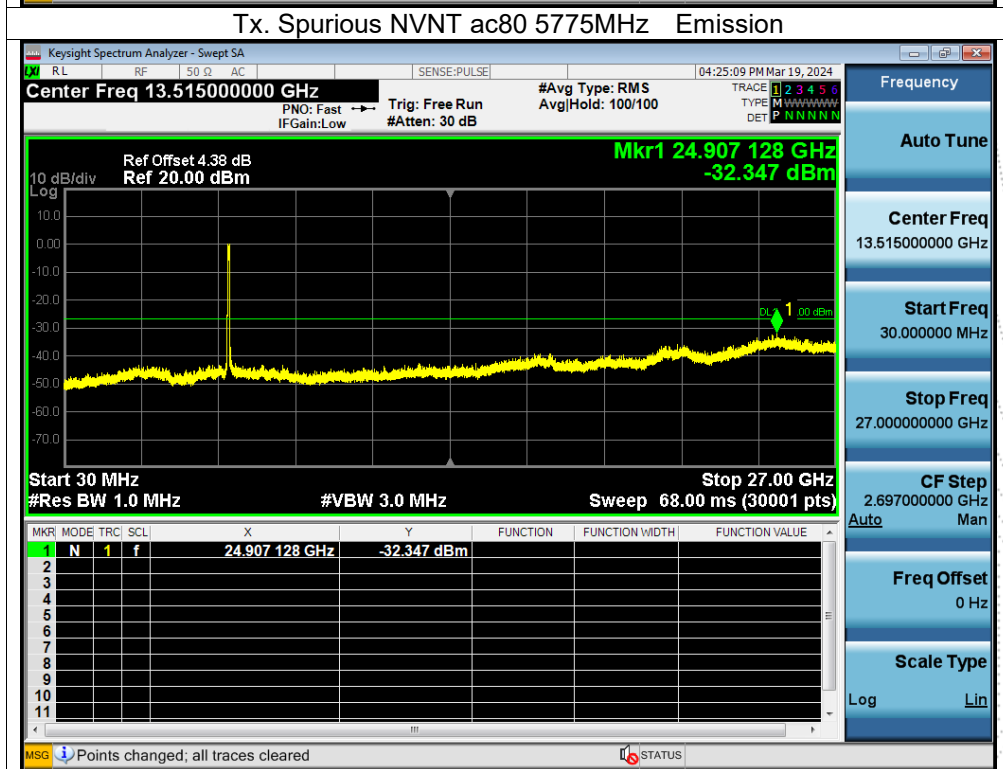
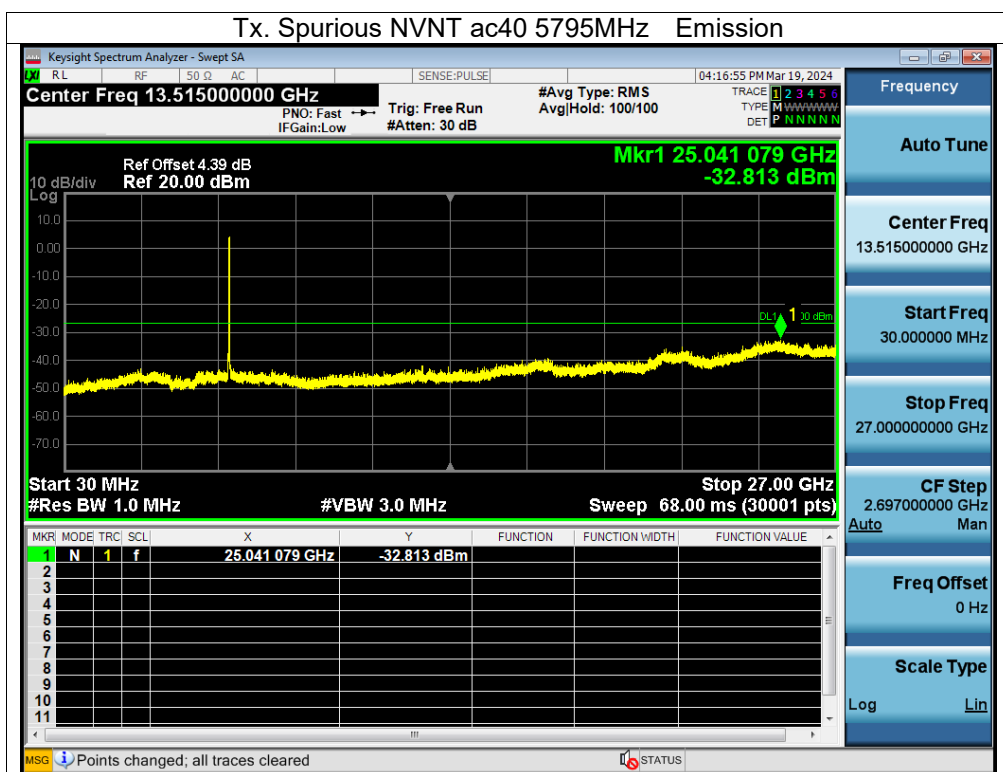


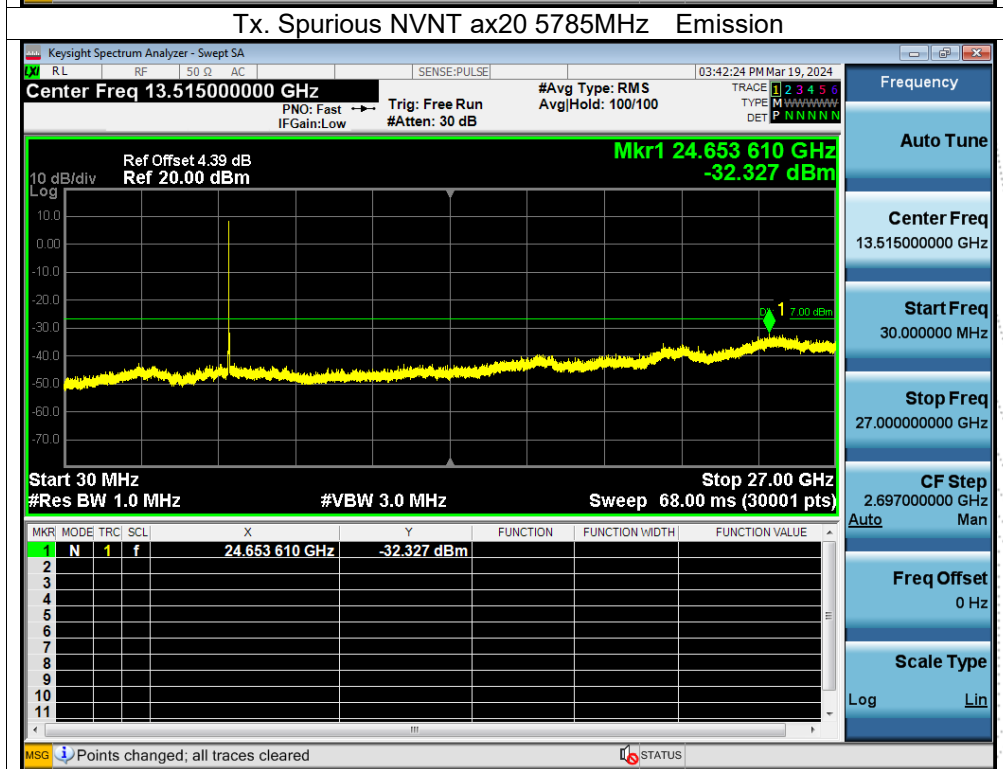
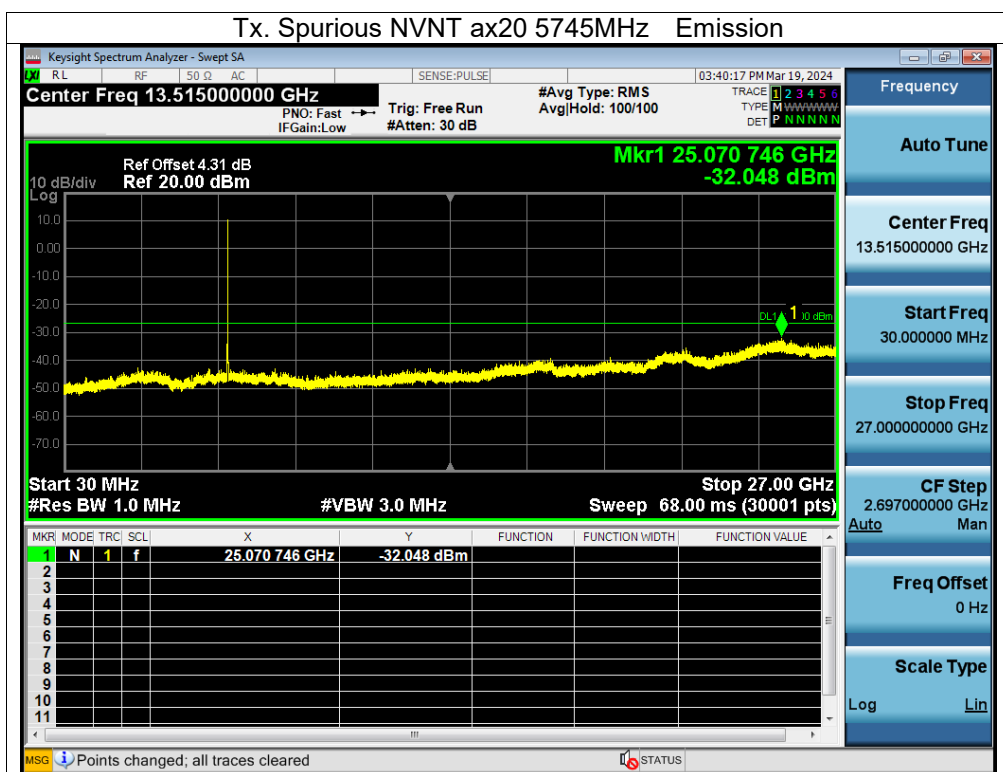


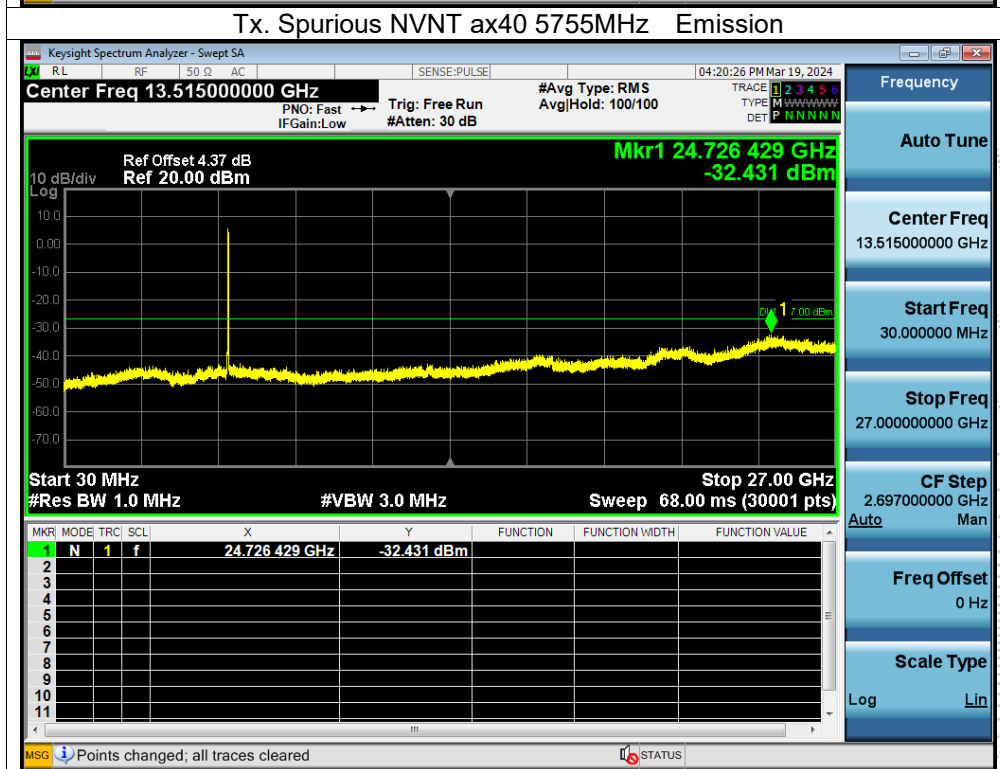
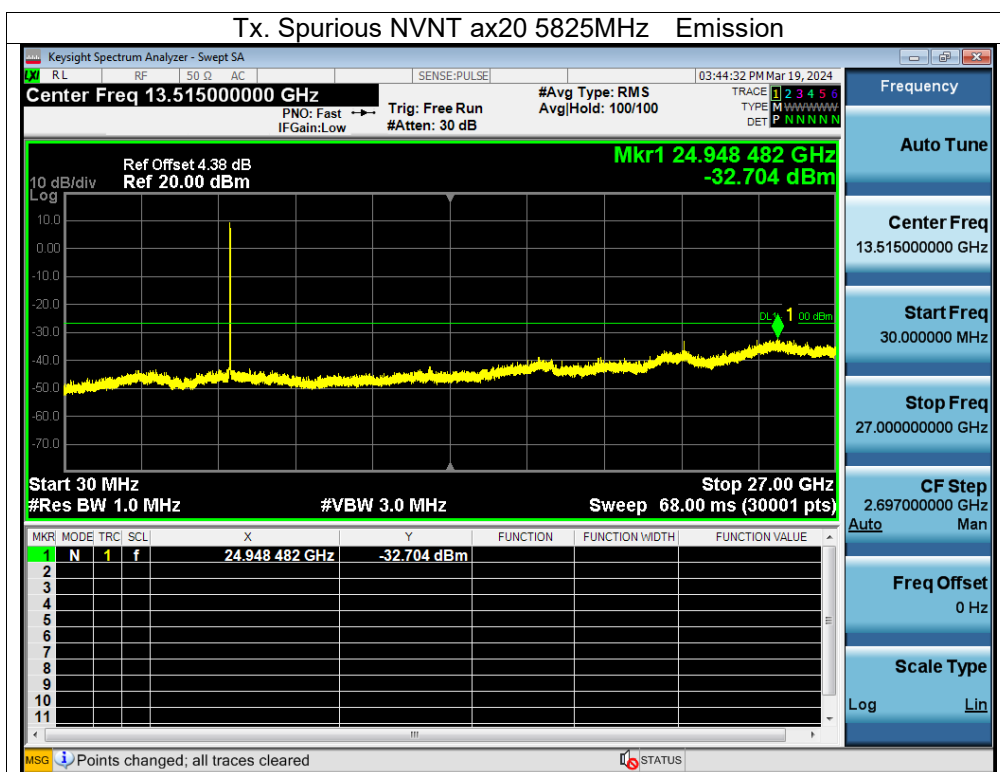


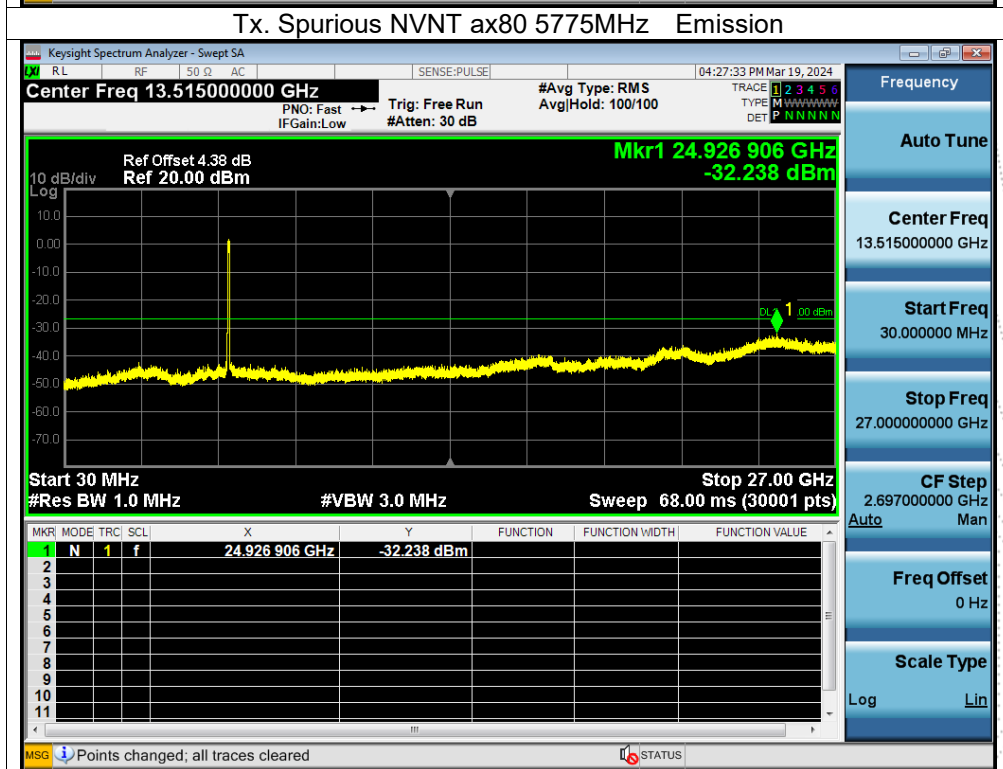
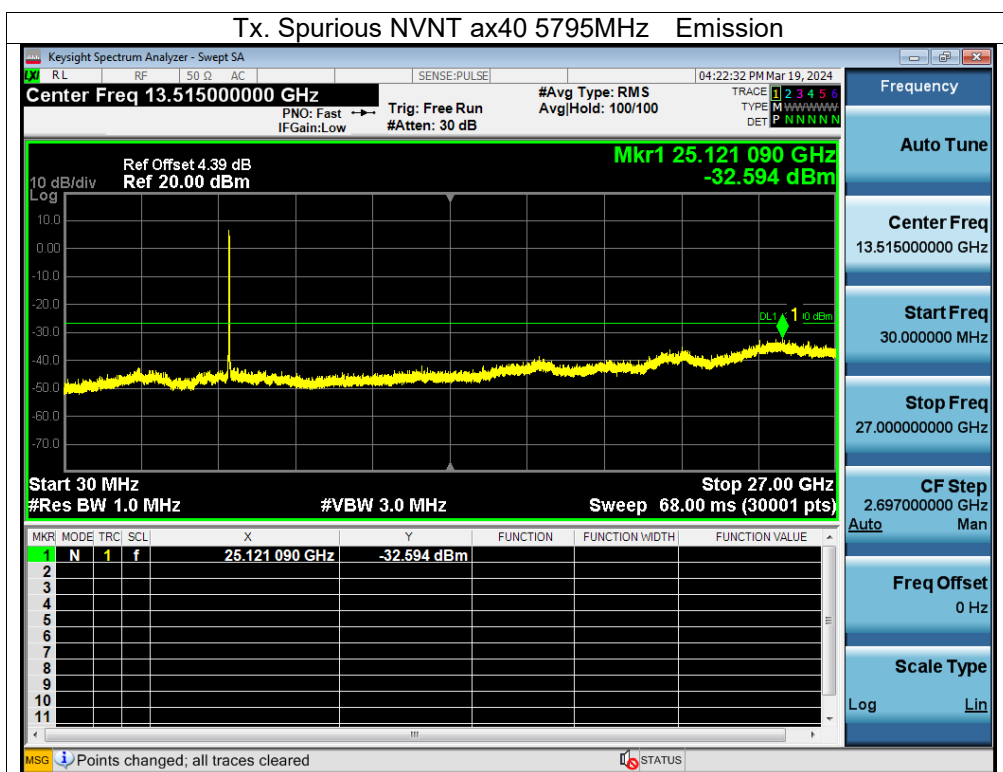












### 13. Frequency Stability Measurement

#### 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  $(f_c - f)/f_c \times 106$  ppm and he limit is less than  $\pm 20$ ppm (IEEE 802.11nspecification).
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  $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$ .

### 13.4 Test Result

|              |                                                 |                    |              |
|--------------|-------------------------------------------------|--------------------|--------------|
| Temperature: | 26 °C                                           | Relative Humidity: | 54%          |
| Pressure:    | 101KPa                                          | Test Voltage:      | AC 120V/60Hz |
| 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) | 120.00 | 5180.0048                     | 5180 | 0.0048               | 0.9266               |
|                 |    | V max (V) | 138.00 | 5180.0033                     | 5180 | 0.0033               | 0.6371               |
|                 |    | V min (V) | 102.00 | 5180.0052                     | 5180 | 0.0052               | 1.0039               |
| 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 | 5180.0043                     | 5180 | 0.0043               | 0.8301               |
|                 |     | T (°C) | -10 | 5180.0066                     | 5180 | 0.0066               | 1.2741               |
|                 |     | T (°C) | 0   | 5180.0055                     | 5180 | 0.0055               | 1.0618               |
|                 |     | T (°C) | 10  | 5180.0022                     | 5180 | 0.0022               | 0.4247               |
|                 |     | T (°C) | 20  | 5180.0000                     | 5180 | 0.0000               | 0.0000               |
|                 |     | T (°C) | 30  | 5180.0066                     | 5180 | 0.0066               | 1.2741               |
|                 |     | T (°C) | 40  | 5180.0131                     | 5180 | 0.0131               | 2.5290               |
|                 |     | T (°C) | 50  | 5180.0134                     | 5180 | 0.0134               | 2.5869               |
|                 |     | T (°C) | 60  | 5180.0048                     | 5180 | 0.0048               | 0.9266               |
|                 |     | T (°C) | 70  | 5180.0115                     | 5180 | 0.0115               | 2.2201               |
| 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) | 120.00 | 5200.0060                    | 5200 | 0.0060               | 1.1538               |
|                 |    | V max (V) | 138.00 | 5200.0121                    | 5200 | 0.0121               | 2.3269               |
|                 |    | V min (V) | 102.00 | 5200.0015                    | 5200 | 0.0015               | 0.2885               |
| 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 | 5200.00160                   | 5200 | 0.00160              | 0.3077               |
|                 |     | T (°C) | -10 | 5200.01170                   | 5200 | 0.01170              | 2.2500               |
|                 |     | T (°C) | 0   | 5200.00580                   | 5200 | 0.00580              | 1.1154               |
|                 |     | T (°C) | 10  | 5200.00050                   | 5200 | 0.00050              | 0.0962               |
|                 |     | T (°C) | 20  | 5200.00880                   | 5200 | 0.00880              | 1.6923               |
|                 |     | T (°C) | 30  | 5200.01330                   | 5200 | 0.01330              | 2.5577               |
|                 |     | T (°C) | 40  | 5200.01250                   | 5200 | 0.01250              | 2.4038               |
|                 |     | T (°C) | 50  | 5200.00910                   | 5200 | 0.00910              | 1.7500               |
|                 |     | T (°C) | 60  | 5200.00760                   | 5200 | 0.00760              | 1.4615               |
|                 |     | T (°C) | 70  | 5200.00810                   | 5200 | 0.00810              | 1.5577               |
| 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) | 120.00 | 5240.0046                    | 5240 | 0.0046               | 0.8779               |
|                 |    | V max (V) | 138.00 | 5240.0040                    | 5240 | 0.0040               | 0.7634               |
|                 |    | V min (V) | 102.00 | 5240.0009                    | 5240 | 0.0009               | 0.1718               |
| 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 | 5240.0025                     | 5240 | 0.0025               | 0.4771               |
|                 |     | T (°C) | -10 | 5240.0007                     | 5240 | 0.0007               | 0.1336               |
|                 |     | T (°C) | 0   | 5240.0008                     | 5240 | 0.0008               | 0.1527               |
|                 |     | T (°C) | 10  | 5240.0100                     | 5240 | 0.0100               | 1.9084               |
|                 |     | T (°C) | 20  | 5240.0014                     | 5240 | 0.0014               | 0.2672               |
|                 |     | T (°C) | 30  | 5240.0089                     | 5240 | 0.0089               | 1.6985               |
|                 |     | T (°C) | 40  | 5240.0125                     | 5240 | 0.0125               | 2.3855               |
|                 |     | T (°C) | 50  | 5240.0020                     | 5240 | 0.0020               | 0.3817               |
|                 |     | T (°C) | 60  | 5240.0045                     | 5240 | 0.0045               | 0.8588               |
|                 |     | T (°C) | 70  | 5240.0091                     | 5240 | 0.0091               | 1.7366               |
| Limits          |     |        |     | 5150-5250 MHz                 |      |                      |                      |
| Result          |     |        |     | Complies                      |      |                      |                      |

|              |                                                  |                    |              |
|--------------|--------------------------------------------------|--------------------|--------------|
| Temperature: | 26 °C                                            | Relative Humidity: | 54%          |
| Pressure:    | 101KPa                                           | Test Voltage:      | AC 120V/60Hz |
| Test Mode:   | TX (5.3G) Mode Frequency U-NII-2A (5260-5320MHz) |                    |              |

#### Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |        | Reference Frequency: 5260MHz |      |                      |                      |
|-----------------|----|-----------|--------|------------------------------|------|----------------------|----------------------|
|                 |    |           |        | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120.00 | 5260.0128                    | 5260 | 0.0128               | 2.4335               |
|                 |    | V max (V) | 138.00 | 5260.0054                    | 5260 | 0.0054               | 1.0266               |
|                 |    | V min (V) | 102.00 | 5260.0121                    | 5260 | 0.0121               | 2.3004               |
| Limits          |    |           |        | 5260-5320 MHz                |      |                      |                      |
| Result          |    |           |        | Complies                     |      |                      |                      |

#### Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency: 5260MHz |      |                      |                      |
|-----------------|-----|--------|-----|------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5260.0050                    | 5260 | 0.0050               | 0.9506               |
|                 |     | T (°C) | -10 | 5260.0102                    | 5260 | 0.0102               | 1.9392               |
|                 |     | T (°C) | 0   | 5260.0056                    | 5260 | 0.0056               | 1.0646               |
|                 |     | T (°C) | 10  | 5260.0105                    | 5260 | 0.0105               | 1.9962               |
|                 |     | T (°C) | 20  | 5260.0038                    | 5260 | 0.0038               | 0.7224               |
|                 |     | T (°C) | 30  | 5260.0123                    | 5260 | 0.0123               | 2.3384               |
|                 |     | T (°C) | 40  | 5260.0025                    | 5260 | 0.0025               | 0.4753               |
|                 |     | T (°C) | 50  | 5260.0044                    | 5260 | 0.0044               | 0.8365               |
|                 |     | T (°C) | 60  | 5260.0024                    | 5260 | 0.0024               | 0.4563               |
|                 |     | T (°C) | 70  | 5260.0000                    | 5260 | 0.0000               | 0.0000               |
| Limits          |     |        |     | 5260-5320 MHz                |      |                      |                      |
| Result          |     |        |     | Complies                     |      |                      |                      |

## Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |        | Reference Frequency: 5280MHz |      |                      |                      |
|-----------------|----|-----------|--------|------------------------------|------|----------------------|----------------------|
|                 |    |           |        | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120.00 | 5280.0044                    | 5280 | 0.0044               | 0.8333               |
|                 |    | V max (V) | 138.00 | 5280.0010                    | 5280 | 0.0010               | 0.1894               |
|                 |    | V min (V) | 102.00 | 5280.0050                    | 5280 | 0.0050               | 0.9470               |
| Limits          |    |           |        | 5260-5320 MHz                |      |                      |                      |
| Result          |    |           |        | Complies                     |      |                      |                      |

## Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency: 5280MHz |      |                      |                      |
|-----------------|-----|--------|-----|------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5280.00460                   | 5280 | 0.00460              | 0.8712               |
|                 |     | T (°C) | -10 | 5280.00490                   | 5280 | 0.00490              | 0.9280               |
|                 |     | T (°C) | 0   | 5280.01010                   | 5280 | 0.01010              | 1.9129               |
|                 |     | T (°C) | 10  | 5280.00770                   | 5280 | 0.00770              | 1.4583               |
|                 |     | T (°C) | 20  | 5280.00440                   | 5280 | 0.00440              | 0.8333               |
|                 |     | T (°C) | 30  | 5280.00830                   | 5280 | 0.00830              | 1.5720               |
|                 |     | T (°C) | 40  | 5280.01040                   | 5280 | 0.01040              | 1.9697               |
|                 |     | T (°C) | 50  | 5280.01340                   | 5280 | 0.01340              | 2.5379               |
|                 |     | T (°C) | 60  | 5280.00880                   | 5280 | 0.00880              | 1.6667               |
|                 |     | T (°C) | 70  | 5280.00630                   | 5280 | 0.00630              | 1.1932               |
| Limits          |     |        |     | 5260-5320 MHz                |      |                      |                      |
| Result          |     |        |     | Complies                     |      |                      |                      |

## Voltage vs. Frequency Stability

| TEST CONDITIONS |    |           |        | Reference Frequency: 5320MHz |      |                      |                      |
|-----------------|----|-----------|--------|------------------------------|------|----------------------|----------------------|
|                 |    |           |        | f                            | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| T nom (°C)      | 20 | V nom (V) | 120.00 | 5320.0060                    | 5320 | 0.0060               | 1.1278               |
|                 |    | V max (V) | 138.00 | 5320.0072                    | 5320 | 0.0072               | 1.3534               |
|                 |    | V min (V) | 102.00 | 5320.0120                    | 5320 | 0.0120               | 2.2556               |
| Limits          |    |           |        | 5260-5320 MHz                |      |                      |                      |
| Result          |    |           |        | Complies                     |      |                      |                      |

## Temperature vs. Frequency Stability

| TEST CONDITIONS |     |        |     | Reference Frequency : 5320MHz |      |                      |                      |
|-----------------|-----|--------|-----|-------------------------------|------|----------------------|----------------------|
|                 |     |        |     | f                             | fc   | Max. Deviation (MHz) | Max. Deviation (ppm) |
| V nom (V)       | 120 | T (°C) | -20 | 5320.0024                     | 5320 | 0.0024               | 0.4511               |
|                 |     | T (°C) | -10 | 5320.0080                     | 5320 | 0.0080               | 1.5038               |
|                 |     | T (°C) | 0   | 5320.0001                     | 5320 | 0.0001               | 0.0188               |
|                 |     | T (°C) | 10  | 5320.0027                     | 5320 | 0.0027               | 0.5075               |
|                 |     | T (°C) | 20  | 5320.0066                     | 5320 | 0.0066               | 1.2406               |
|                 |     | T (°C) | 30  | 5320.0032                     | 5320 | 0.0032               | 0.6015               |
|                 |     | T (°C) | 40  | 5320.0111                     | 5320 | 0.0111               | 2.0865               |
|                 |     | T (°C) | 50  | 5320.0046                     | 5320 | 0.0046               | 0.8647               |
|                 |     | T (°C) | 60  | 5320.0017                     | 5320 | 0.0017               | 0.3195               |
|                 |     | T (°C) | 70  | 5320.0129                     | 5320 | 0.0129               | 2.4248               |
| Limits          |     |        |     | 5260-5320 MHz                 |      |                      |                      |
| Result          |     |        |     | Complies                      |      |                      |                      |

|              |                                                  |                    |              |
|--------------|--------------------------------------------------|--------------------|--------------|
| Temperature: | 26 °C                                            | Relative Humidity: | 54%          |
| Pressure:    | 101KPa                                           | Test Voltage:      | AC 120V/60Hz |
| 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) | 120.00 | 5500.0070                    | 5500 | 0.0070               | 1.2727               |
|                 |    | V max (V) | 138.00 | 5500.0043                    | 5500 | 0.0043               | 0.7818               |
|                 |    | V min (V) | 102.00 | 5500.0052                    | 5500 | 0.0052               | 0.9455               |
| 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 | 5500.0101                    | 5500 | 0.0101               | 1.8364               |
|                 |     | T (°C) | -10 | 5500.0108                    | 5500 | 0.0108               | 1.9636               |
|                 |     | T (°C) | 0   | 5500.0067                    | 5500 | 0.0067               | 1.2182               |
|                 |     | T (°C) | 10  | 5500.0097                    | 5500 | 0.0097               | 1.7636               |
|                 |     | T (°C) | 20  | 5500.0053                    | 5500 | 0.0053               | 0.9636               |
|                 |     | T (°C) | 30  | 5500.0023                    | 5500 | 0.0023               | 0.4182               |
|                 |     | T (°C) | 40  | 5500.0047                    | 5500 | 0.0047               | 0.8545               |
|                 |     | T (°C) | 50  | 5500.0105                    | 5500 | 0.0105               | 1.9091               |
|                 |     | T (°C) | 60  | 5500.0028                    | 5500 | 0.0028               | 0.5091               |
|                 |     | T (°C) | 70  | 5500.0029                    | 5500 | 0.0029               | 0.5273               |
| 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) | 120.00 | 5580.0056                    | 5580 | 0.0056               | 1.0036               |
|                 |    | V max (V) | 138.00 | 5580.0134                    | 5580 | 0.0134               | 2.4014               |
|                 |    | V min (V) | 102.00 | 5580.0099                    | 5580 | 0.0099               | 1.7742               |
| 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 | 5580.00240                   | 5580 | 0.00240              | 0.4301               |
|                 |     | T (°C) | -10 | 5580.01120                   | 5580 | 0.01120              | 2.0072               |
|                 |     | T (°C) | 0   | 5580.00760                   | 5580 | 0.00760              | 1.3620               |
|                 |     | T (°C) | 10  | 5580.01100                   | 5580 | 0.01100              | 1.9713               |
|                 |     | T (°C) | 20  | 5580.00800                   | 5580 | 0.00800              | 1.4337               |
|                 |     | T (°C) | 30  | 5580.00590                   | 5580 | 0.00590              | 1.0573               |
|                 |     | T (°C) | 40  | 5580.01040                   | 5580 | 0.01040              | 1.8638               |
|                 |     | T (°C) | 50  | 5580.01340                   | 5580 | 0.01340              | 2.4014               |
|                 |     | T (°C) | 60  | 5580.00720                   | 5580 | 0.00720              | 1.2903               |
|                 |     | T (°C) | 70  | 5580.00170                   | 5580 | 0.00170              | 0.3047               |
| 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) | 120.00 | 5700.0015                    | 5700 | 0.0015               | 0.2632               |
|                 |    | V max (V) | 138.00 | 5700.0075                    | 5700 | 0.0075               | 1.3158               |
|                 |    | V min (V) | 102.00 | 5700.0039                    | 5700 | 0.0039               | 0.6842               |
| Limits          |    |           |        | 5725-5850 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 | 5700.0045                    | 5700 | 0.0045               | 0.7895               |
|                 |     | T (°C) | -10 | 5700.0121                    | 5700 | 0.0121               | 2.1228               |
|                 |     | T (°C) | 0   | 5700.0010                    | 5700 | 0.0010               | 0.1754               |
|                 |     | T (°C) | 10  | 5700.0038                    | 5700 | 0.0038               | 0.6667               |
|                 |     | T (°C) | 20  | 5700.0005                    | 5700 | 0.0005               | 0.0877               |
|                 |     | T (°C) | 30  | 5700.0100                    | 5700 | 0.0100               | 1.7544               |
|                 |     | T (°C) | 40  | 5700.0006                    | 5700 | 0.0006               | 0.1053               |
|                 |     | T (°C) | 50  | 5700.0048                    | 5700 | 0.0048               | 0.8421               |
|                 |     | T (°C) | 60  | 5700.0107                    | 5700 | 0.0107               | 1.8772               |
|                 |     | T (°C) | 70  | 5700.0079                    | 5700 | 0.0079               | 1.3860               |
| Limits          |     |        |     | 5725-5850 MHz                |      |                      |                      |
| Result          |     |        |     | Complies                     |      |                      |                      |

|              |                                                 |                    |              |
|--------------|-------------------------------------------------|--------------------|--------------|
| Temperature: | 26 °C                                           | Relative Humidity: | 54%          |
| Pressure:    | 101KPa                                          | Test Voltage:      | AC 120V/60Hz |
| 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) | 120.00 | 5745.01040                   | 5745 | 0.01040              | 1.8103               |
|                 |    | V max (V) | 138.00 | 5745.00850                   | 5745 | 0.00850              | 1.4795               |
|                 |    | V min (V) | 102.00 | 5745.00580                   | 5745 | 0.00580              | 1.0096               |
| 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 | 5745.00080                   | 5745 | 0.00080              | 0.1393               |
|                 |     | T (°C) | -10 | 5745.00050                   | 5745 | 0.00050              | 0.0870               |
|                 |     | T (°C) | 0   | 5745.01060                   | 5745 | 0.01060              | 1.8451               |
|                 |     | T (°C) | 10  | 5745.00140                   | 5745 | 0.00140              | 0.2437               |
|                 |     | T (°C) | 20  | 5745.01050                   | 5745 | 0.01050              | 1.8277               |
|                 |     | T (°C) | 30  | 5745.01350                   | 5745 | 0.01350              | 2.3499               |
|                 |     | T (°C) | 40  | 5745.00610                   | 5745 | 0.00610              | 1.0618               |
|                 |     | T (°C) | 50  | 5745.00780                   | 5745 | 0.00780              | 1.3577               |
|                 |     | T (°C) | 60  | 5745.00450                   | 5745 | 0.00450              | 0.7833               |
|                 |     | T (°C) | 70  | 5745.01330                   | 5745 | 0.01330              | 2.3151               |
| 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) | 120.00 | 5785.00840                    | 5785 | 0.00840              | 1.4520               |
|                 |    | V max (V) | 138.00 | 5785.00120                    | 5785 | 0.00120              | 0.2074               |
|                 |    | V min (V) | 102.00 | 5785.01080                    | 5785 | 0.01080              | 1.8669               |
| 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 | 5785.00310                    | 5785 | 0.00310              | 0.5359               |
|                 |     | T (°C) | -10 | 5785.00890                    | 5785 | 0.00890              | 1.5385               |
|                 |     | T (°C) | 0   | 5785.01200                    | 5785 | 0.01200              | 2.0743               |
|                 |     | T (°C) | 10  | 5785.00050                    | 5785 | 0.00050              | 0.0864               |
|                 |     | T (°C) | 20  | 5785.01060                    | 5785 | 0.01060              | 1.8323               |
|                 |     | T (°C) | 30  | 5785.00340                    | 5785 | 0.00340              | 0.5877               |
|                 |     | T (°C) | 40  | 5785.01170                    | 5785 | 0.01170              | 2.0225               |
|                 |     | T (°C) | 50  | 5785.01020                    | 5785 | 0.01020              | 1.7632               |
|                 |     | T (°C) | 60  | 5785.00280                    | 5785 | 0.00280              | 0.4840               |
|                 |     | T (°C) | 70  | 5785.00530                    | 5785 | 0.00530              | 0.9162               |
| 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) | 120.00 | 5825.00500                   | 5825 | 0.00500              | 0.8584               |
|                 |    | V max (V) | 138.00 | 5825.00010                   | 5825 | 0.00010              | 0.0172               |
|                 |    | V min (V) | 102.00 | 5825.01270                   | 5825 | 0.01270              | 2.1803               |
| 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 | 5825.00520                    | 5825 | 0.00520              | 0.8927               |
|                 |     | T (°C) | -10 | 5825.01300                    | 5825 | 0.01300              | 2.2318               |
|                 |     | T (°C) | 0   | 5825.01290                    | 5825 | 0.01290              | 2.2146               |
|                 |     | T (°C) | 10  | 5825.00040                    | 5825 | 0.00040              | 0.0687               |
|                 |     | T (°C) | 20  | 5825.01100                    | 5825 | 0.01100              | 1.8884               |
|                 |     | T (°C) | 30  | 5825.01140                    | 5825 | 0.01140              | 1.9571               |
|                 |     | T (°C) | 40  | 5825.00840                    | 5825 | 0.00840              | 1.4421               |
|                 |     | T (°C) | 50  | 5825.00810                    | 5825 | 0.00810              | 1.3906               |
|                 |     | T (°C) | 60  | 5825.00600                    | 5825 | 0.00600              | 1.0300               |
|                 |     | 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 =  $T_{on} / (T_{on} + T_{off})$

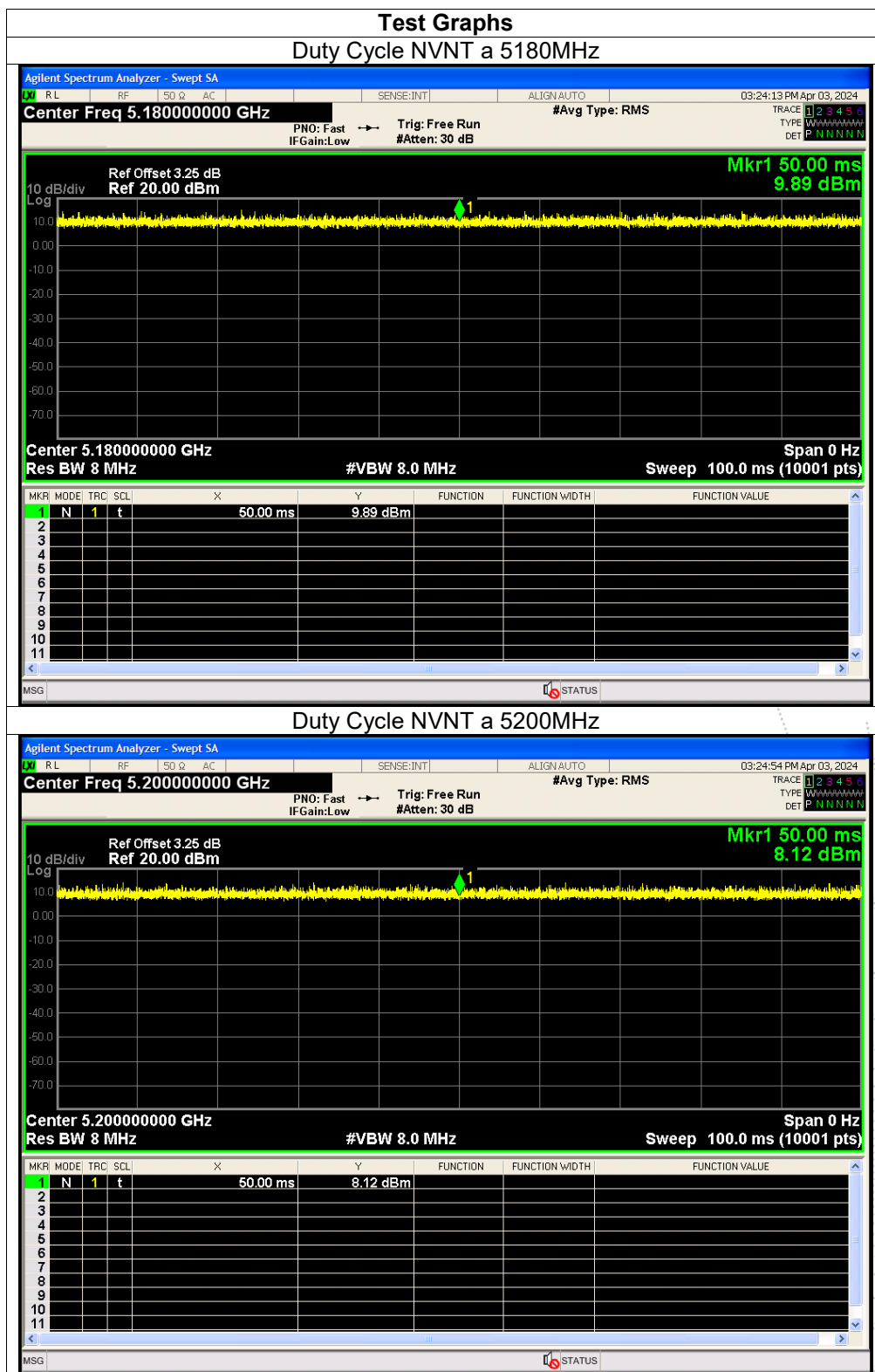
### 14.3 Test Procedure

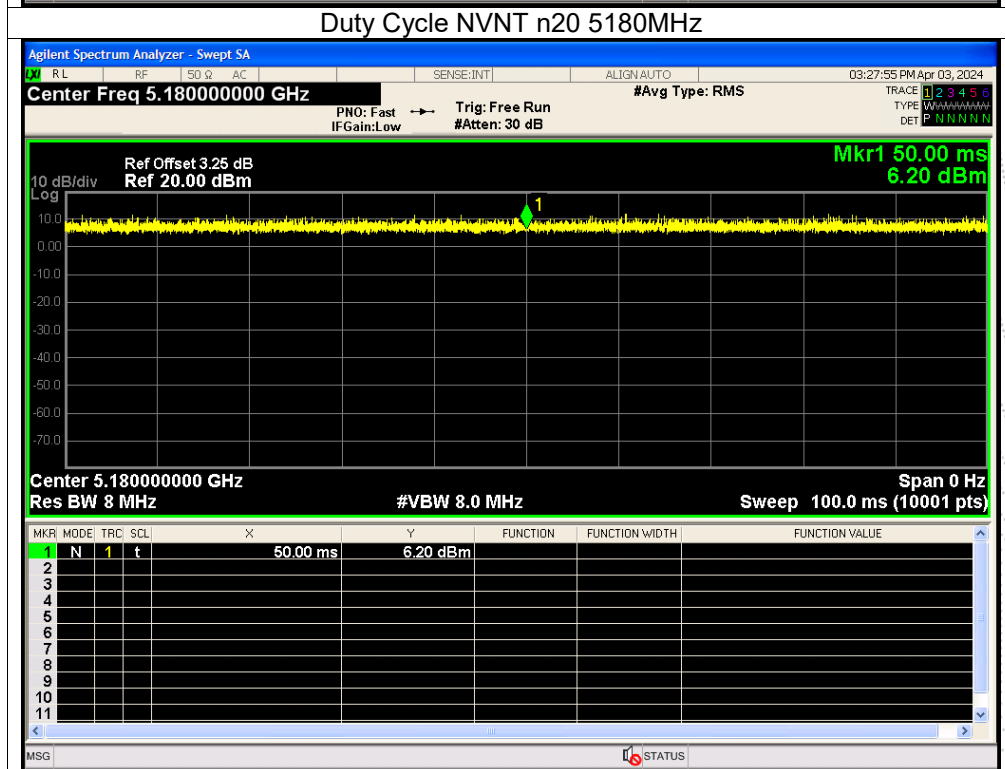
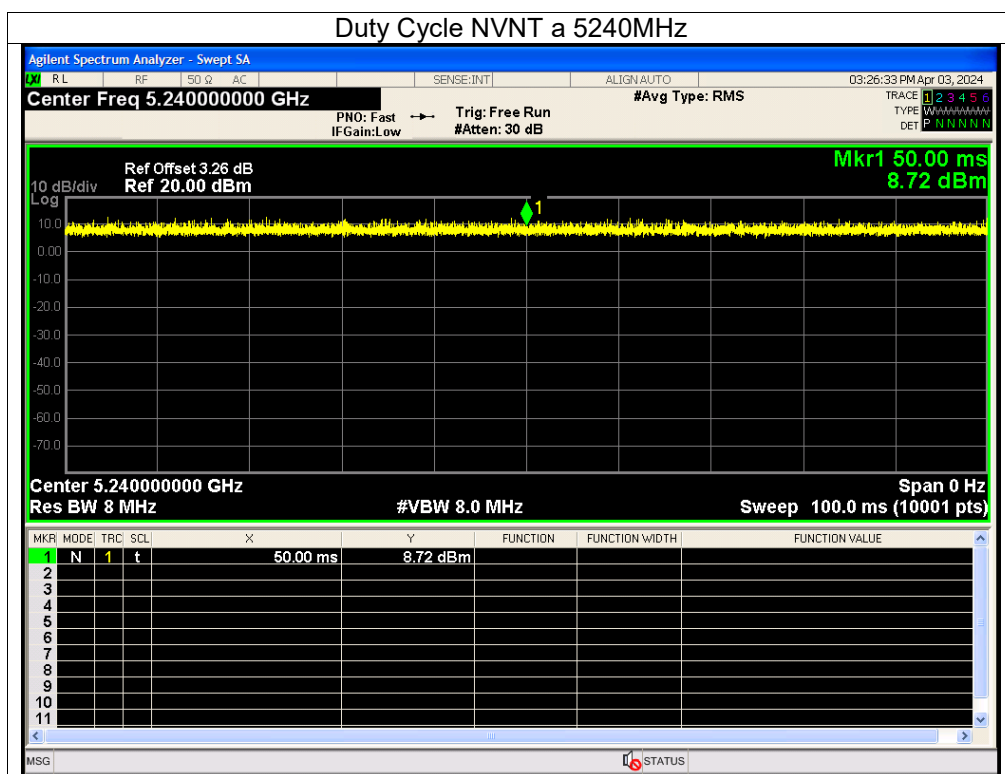
1. Set span = Zero
2. RBW = 8MHz
3. VBW = 8MHz,
4. Detector = Peak

### 14.4 Test Result

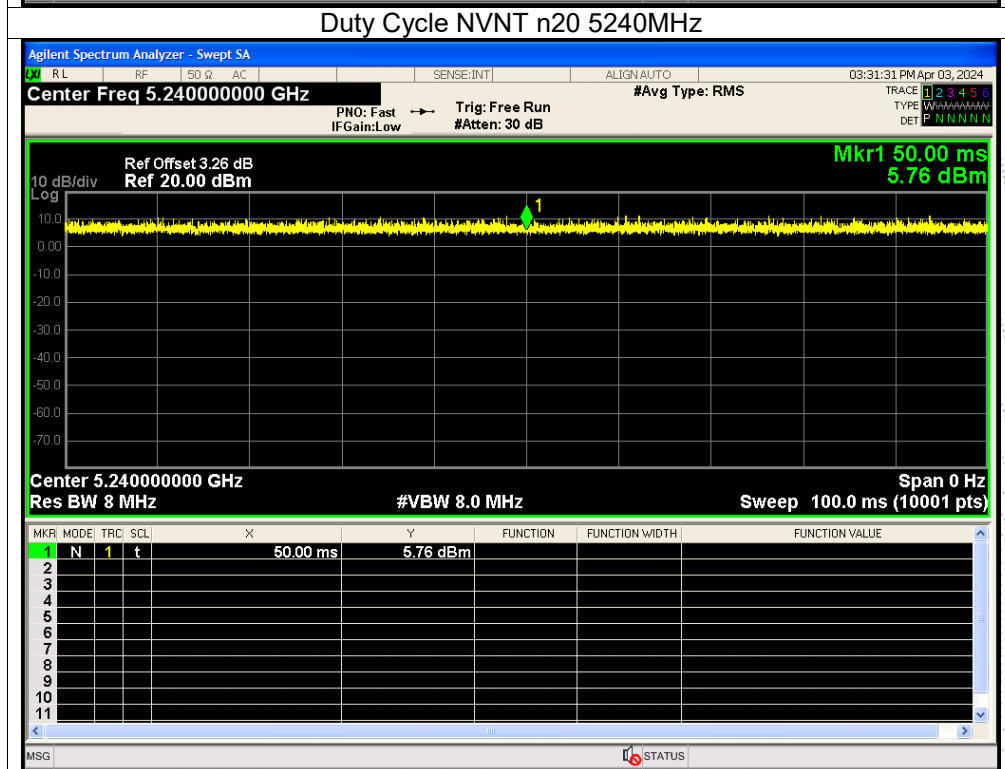
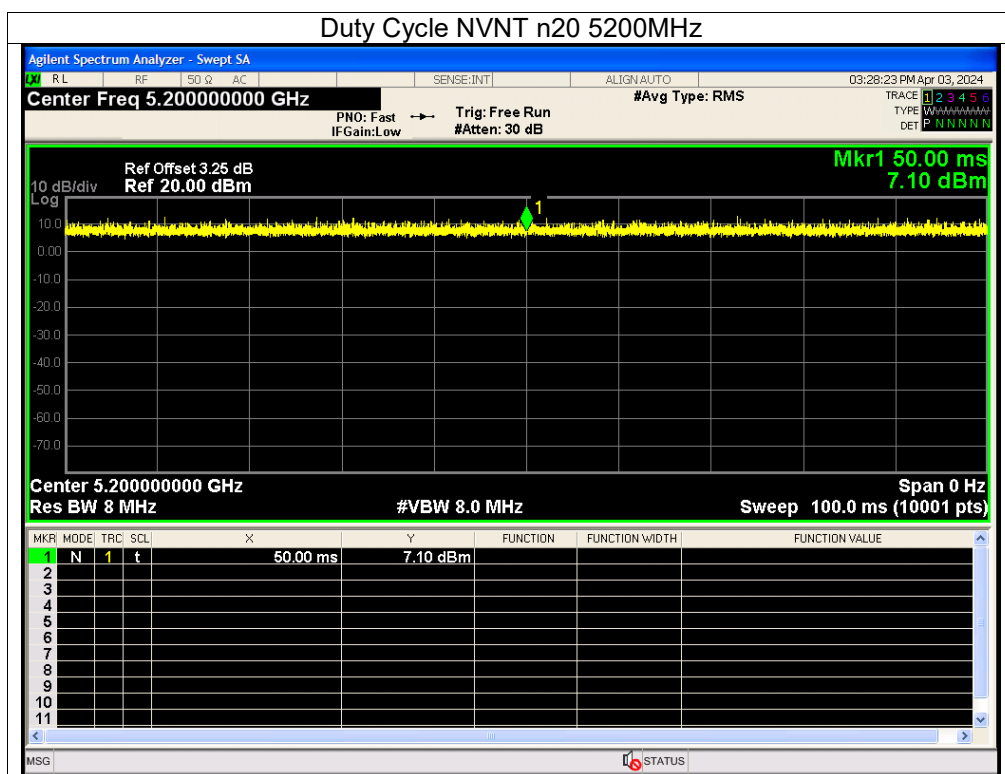
| Condition | Mode | Frequency (MHz) | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|------|-----------------|----------------|------------------------|-----------|
| NVNT      | a    | 5180            | 100            | 0                      | 0         |
| NVNT      | a    | 5200            | 100            | 0                      | 0         |
| NVNT      | a    | 5240            | 100            | 0                      | 0         |
| NVNT      | n20  | 5180            | 100            | 0                      | 0         |
| NVNT      | n20  | 5200            | 100            | 0                      | 0         |
| NVNT      | n20  | 5240            | 100            | 0                      | 0         |
| NVNT      | n40  | 5190            | 100            | 0                      | 0         |
| NVNT      | n40  | 5230            | 100            | 0                      | 0         |
| NVNT      | ac20 | 5180            | 100            | 0                      | 0         |
| NVNT      | ac20 | 5200            | 100            | 0                      | 0         |
| NVNT      | ac20 | 5240            | 100            | 0                      | 0         |
| NVNT      | ac40 | 5190            | 100            | 0                      | 0         |
| NVNT      | ac40 | 5230            | 100            | 0                      | 0         |
| NVNT      | ac80 | 5210            | 100            | 0                      | 0         |
| NVNT      | ax20 | 5180            | 100            | 0                      | 0         |
| NVNT      | ax20 | 5200            | 100            | 0                      | 0         |
| NVNT      | ax20 | 5240            | 100            | 0                      | 0         |
| NVNT      | ax40 | 5190            | 100            | 0                      | 0         |
| NVNT      | ax40 | 5230            | 100            | 0                      | 0         |
| NVNT      | ax80 | 5210            | 100            | 0                      | 0         |

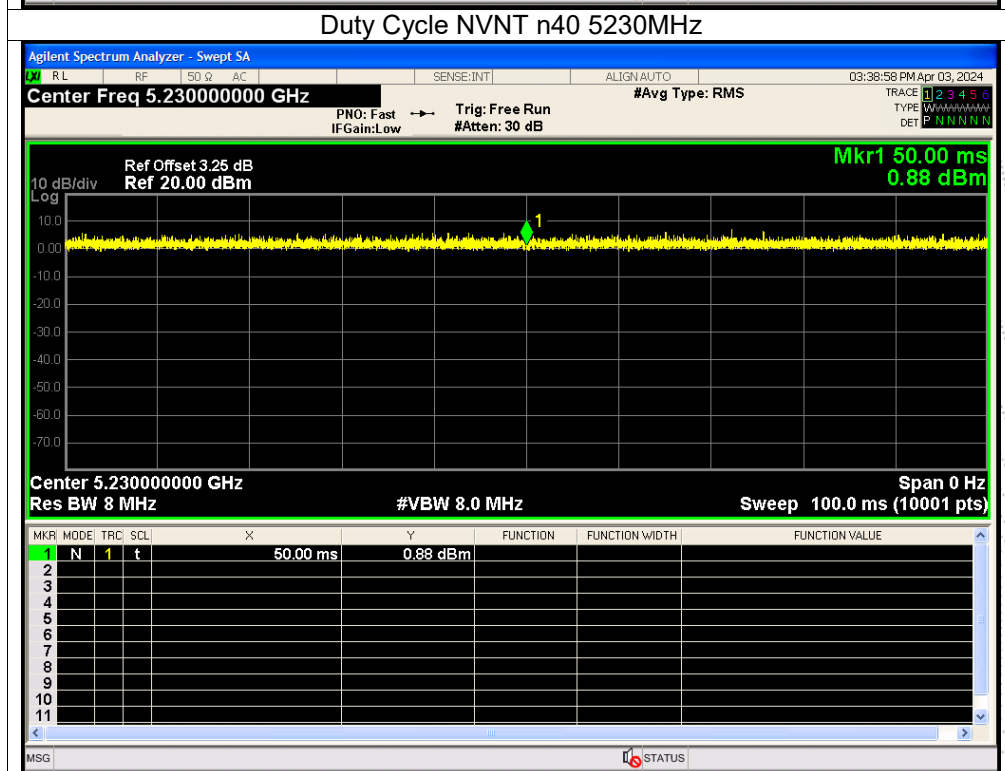
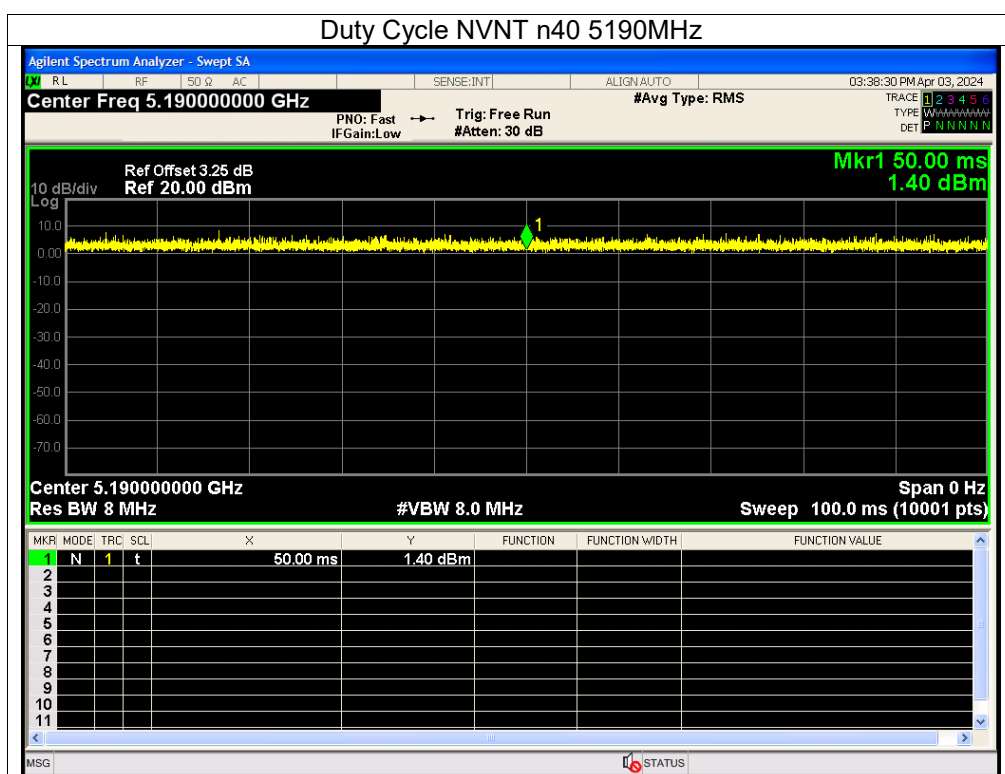
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A . Plot.

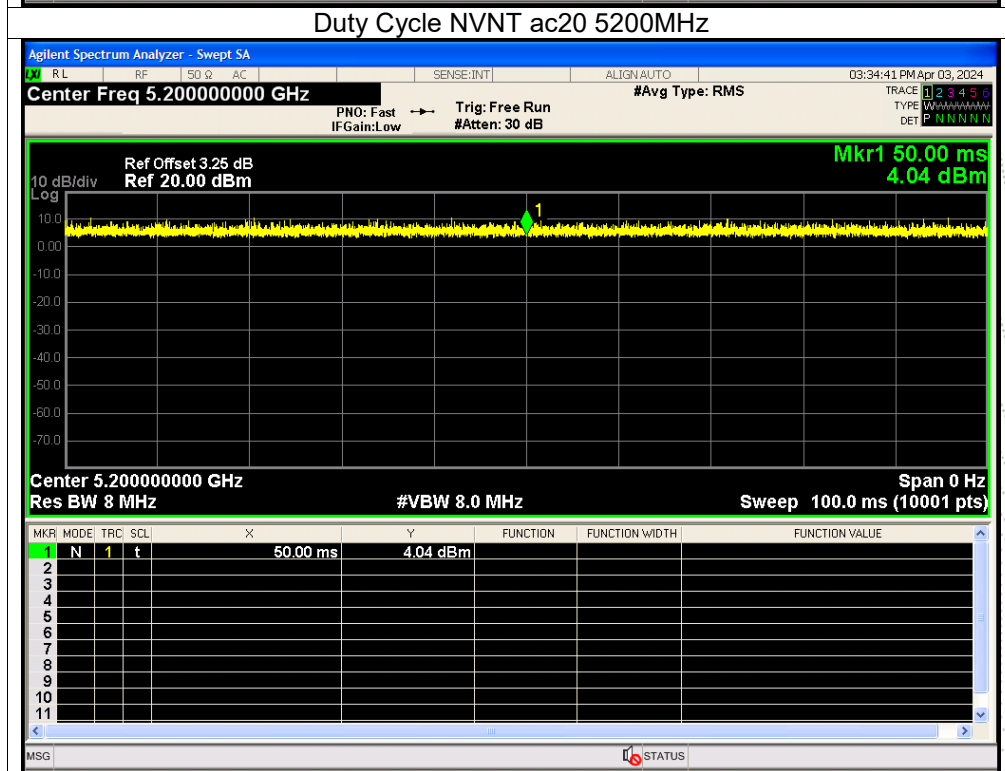
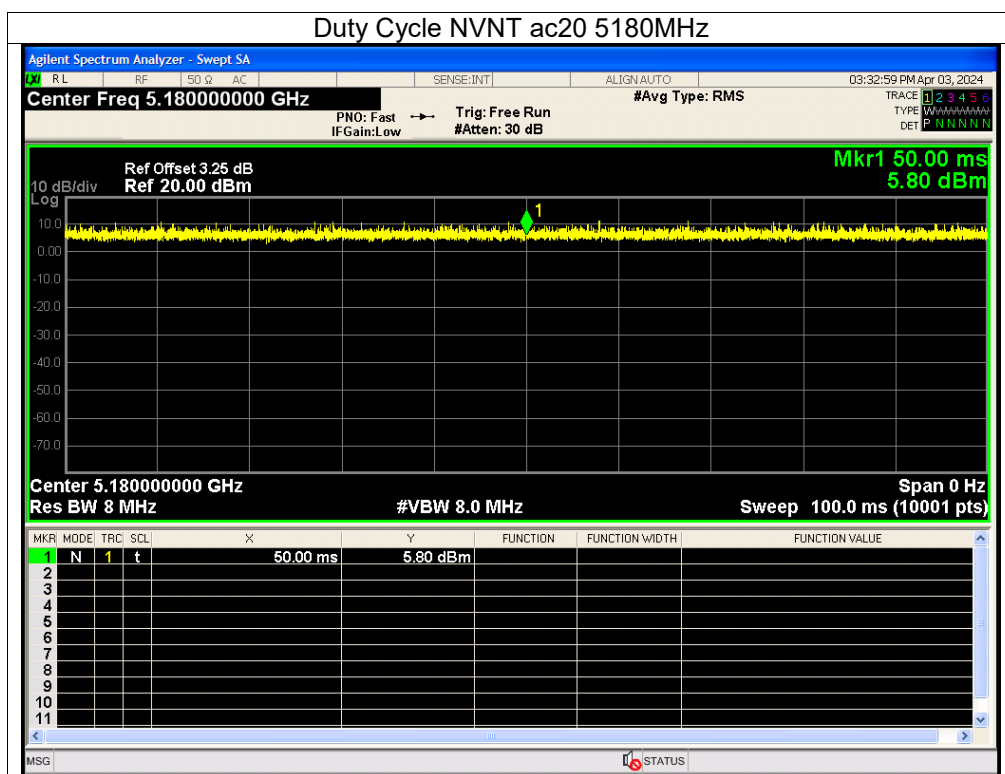


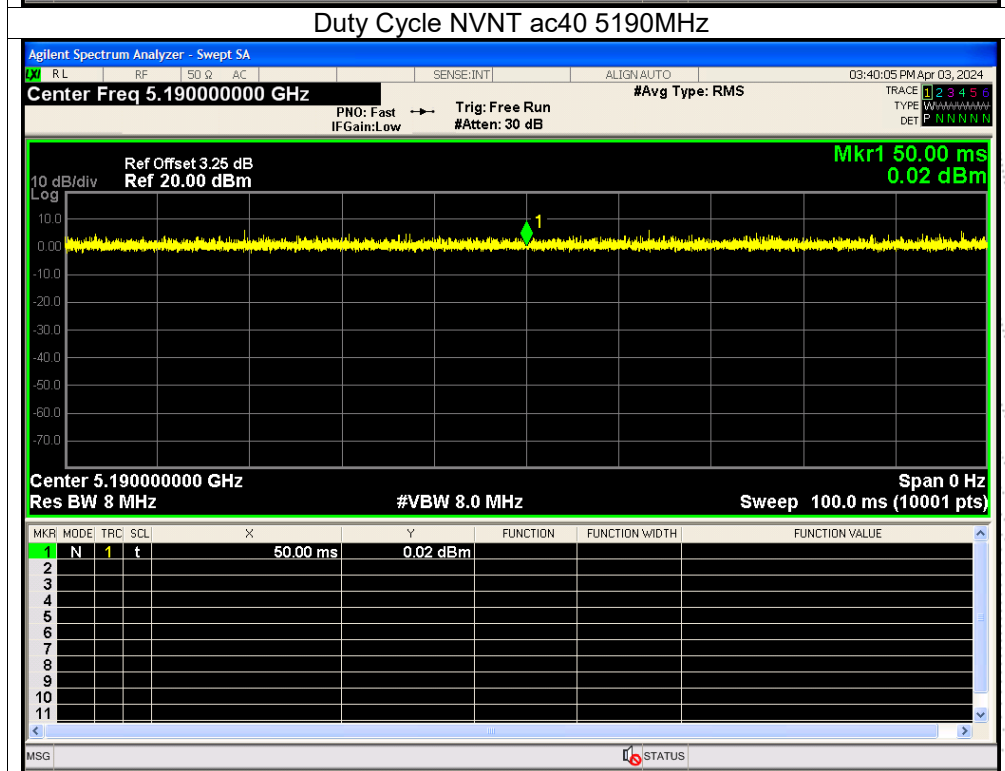
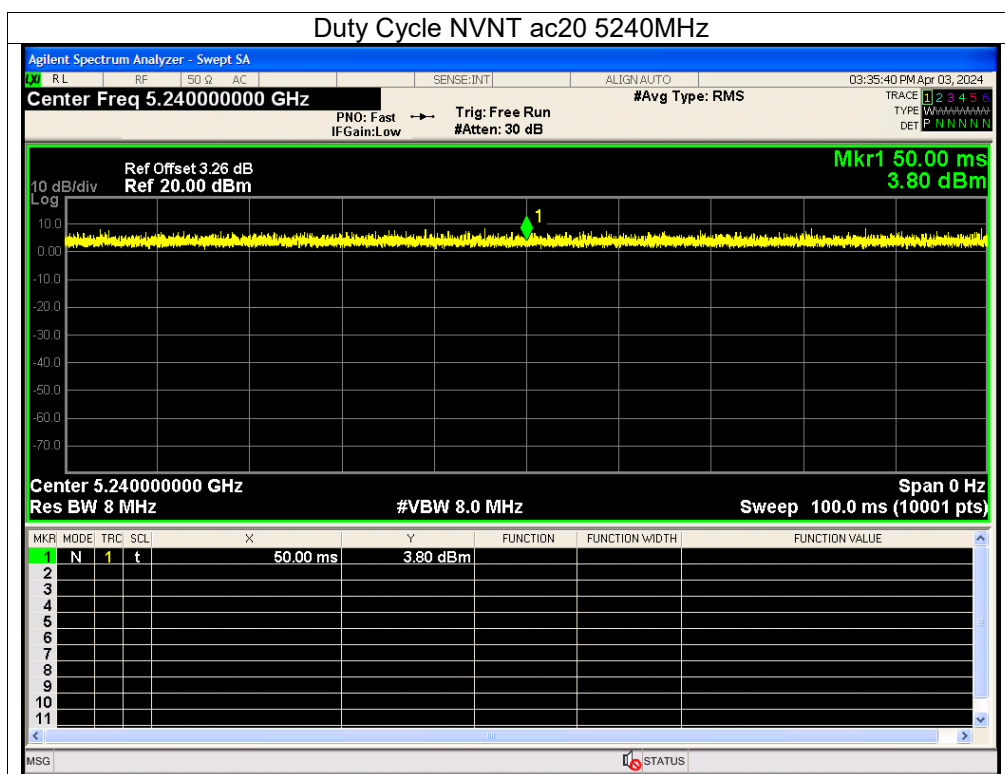


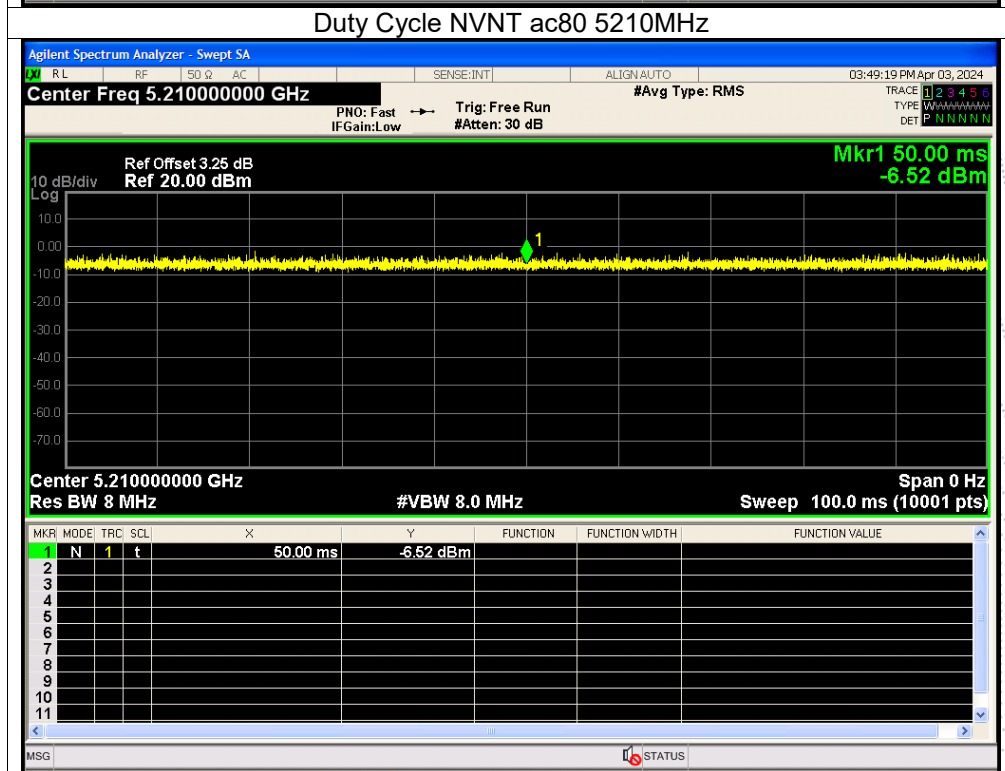
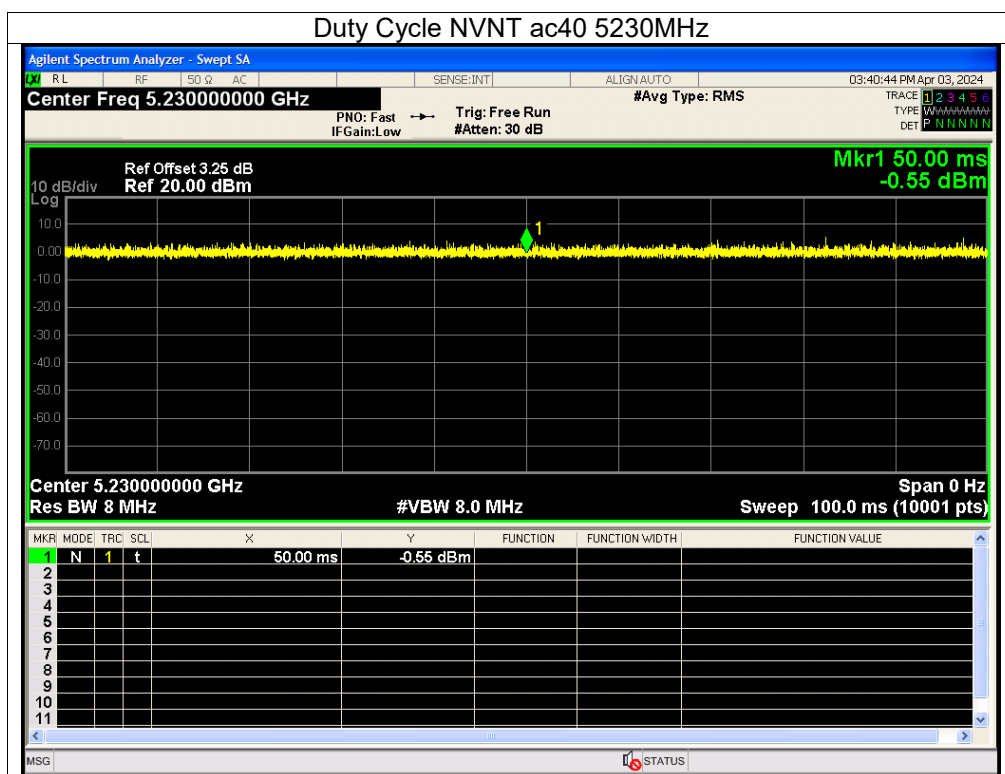


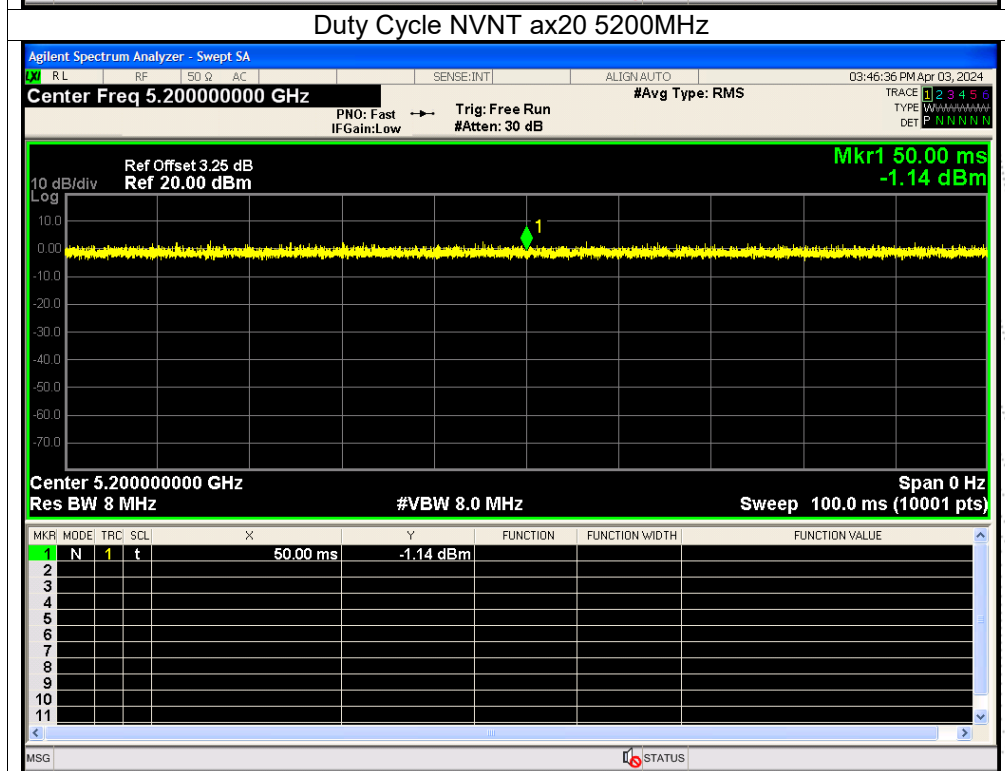
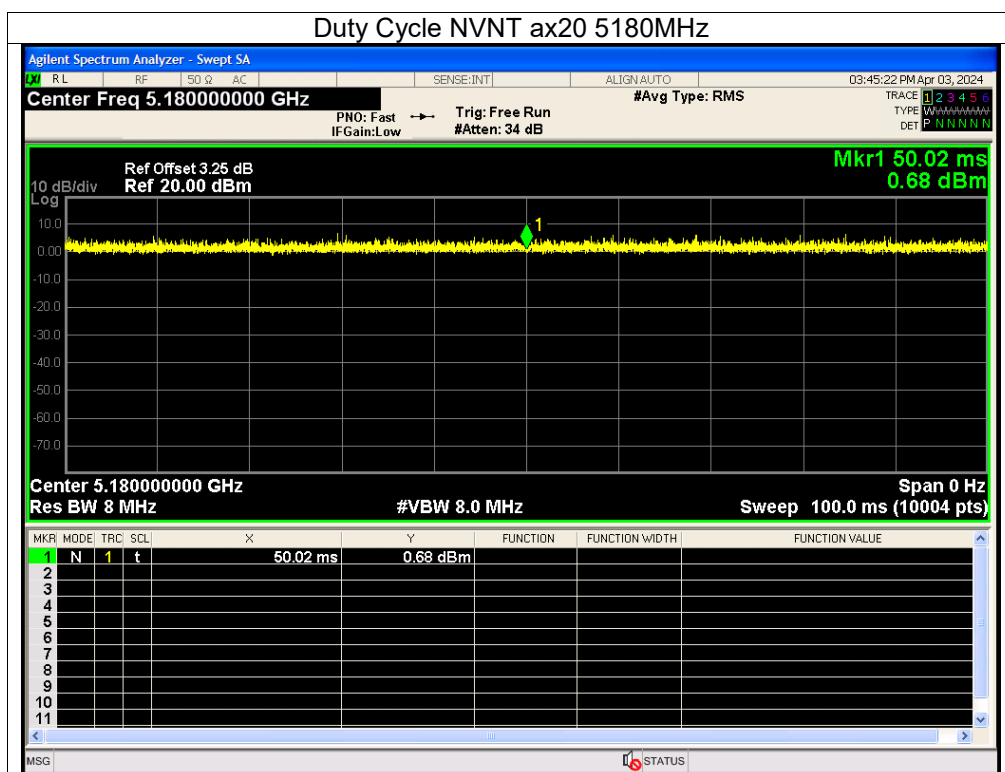


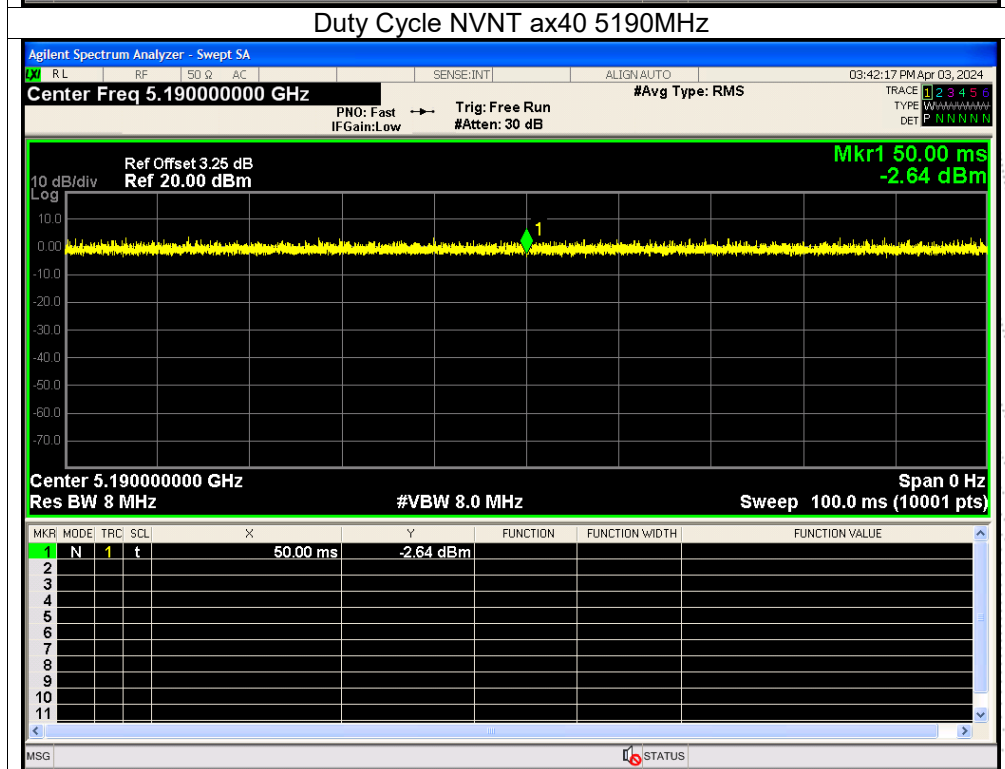
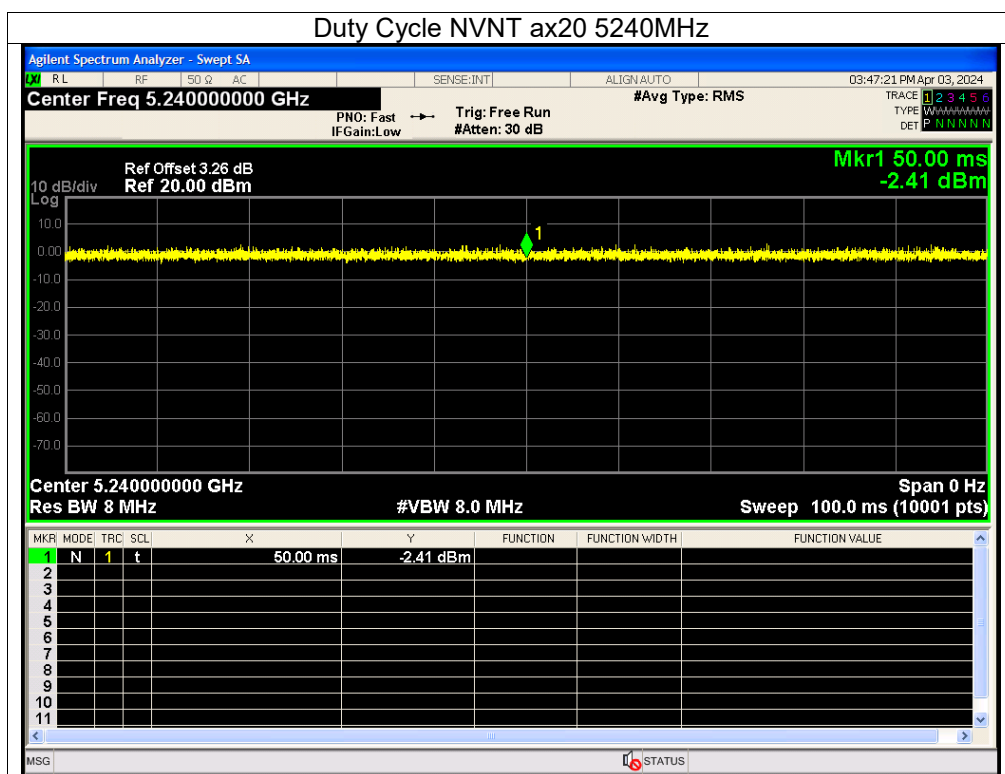




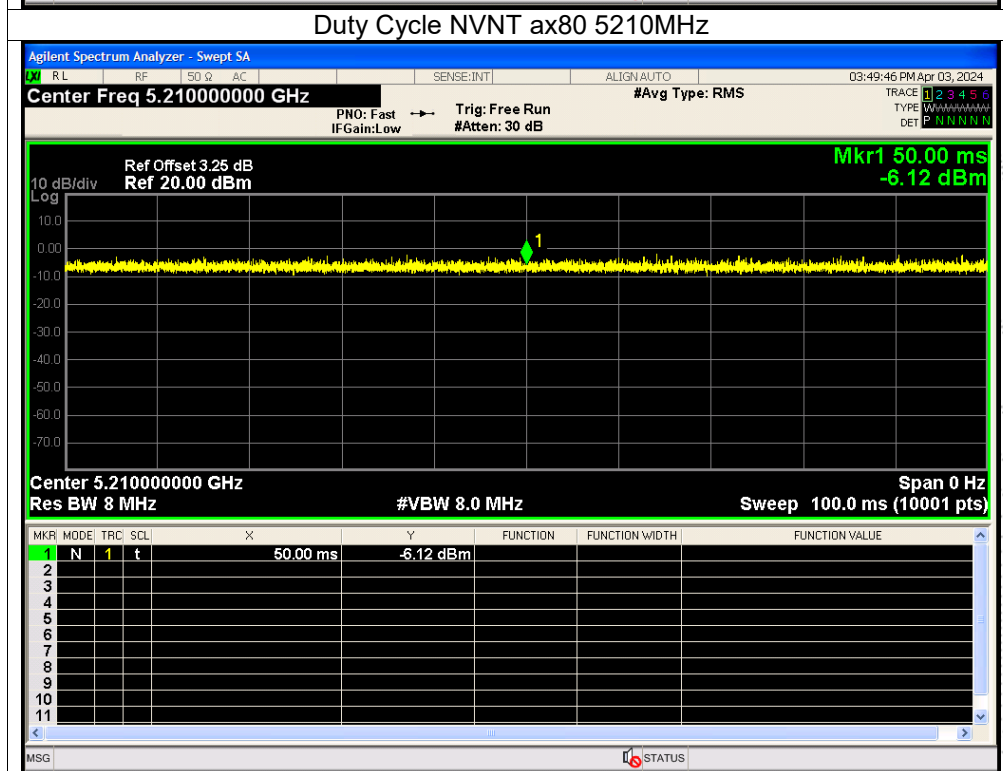
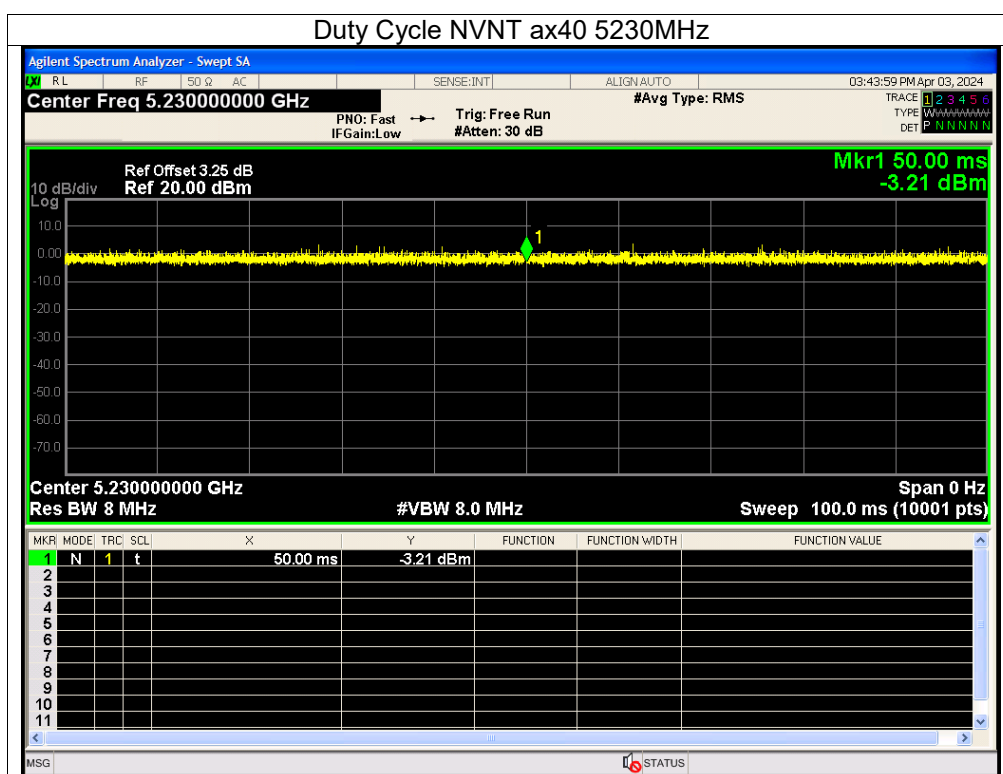




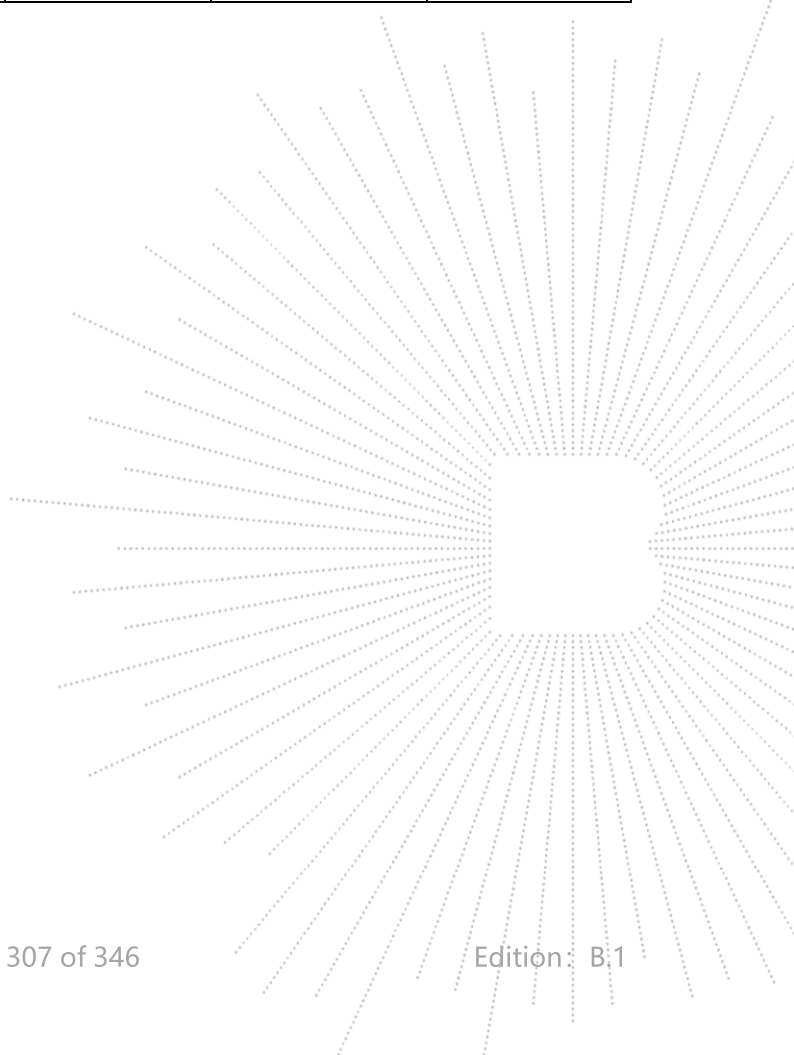




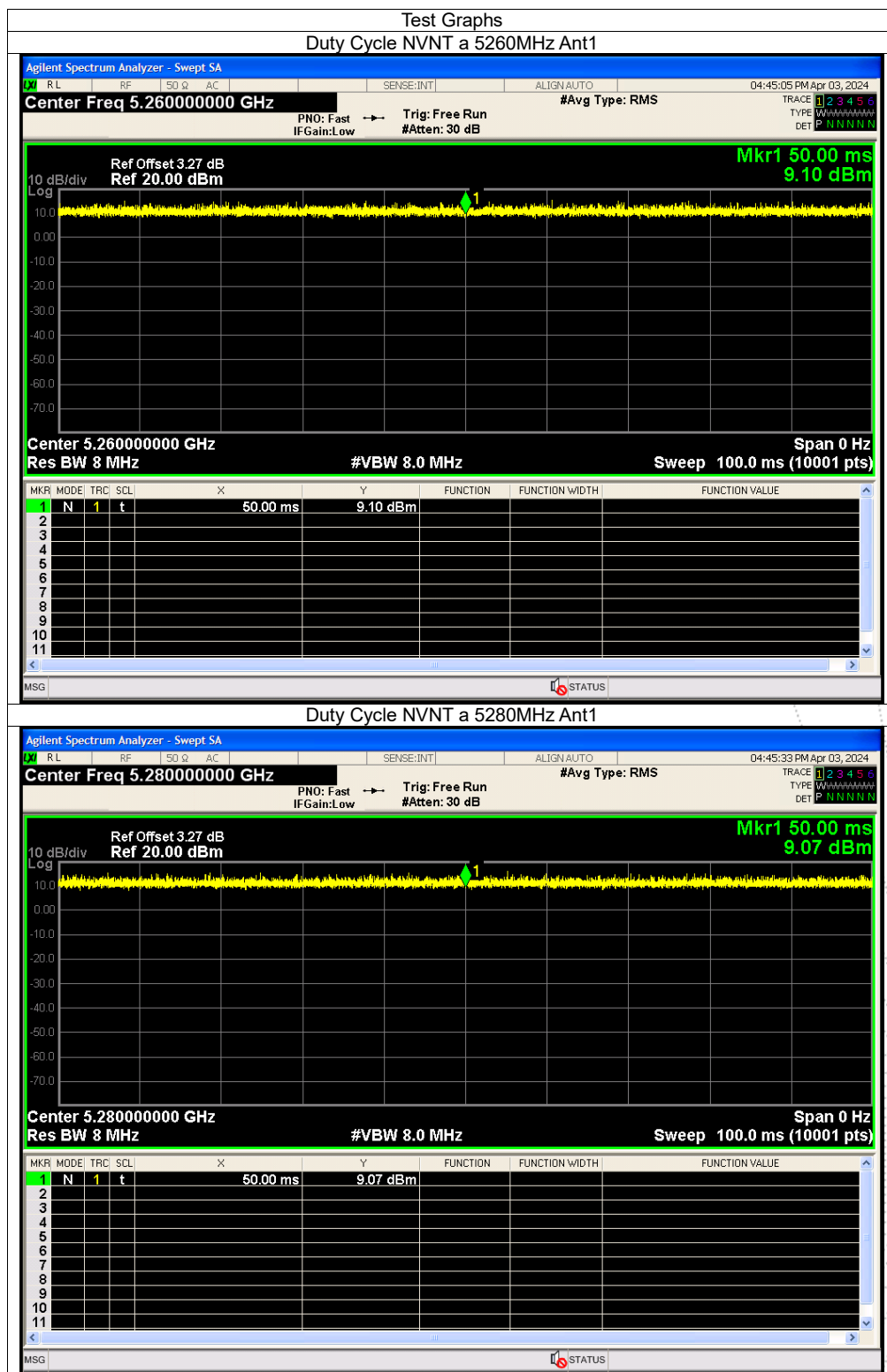


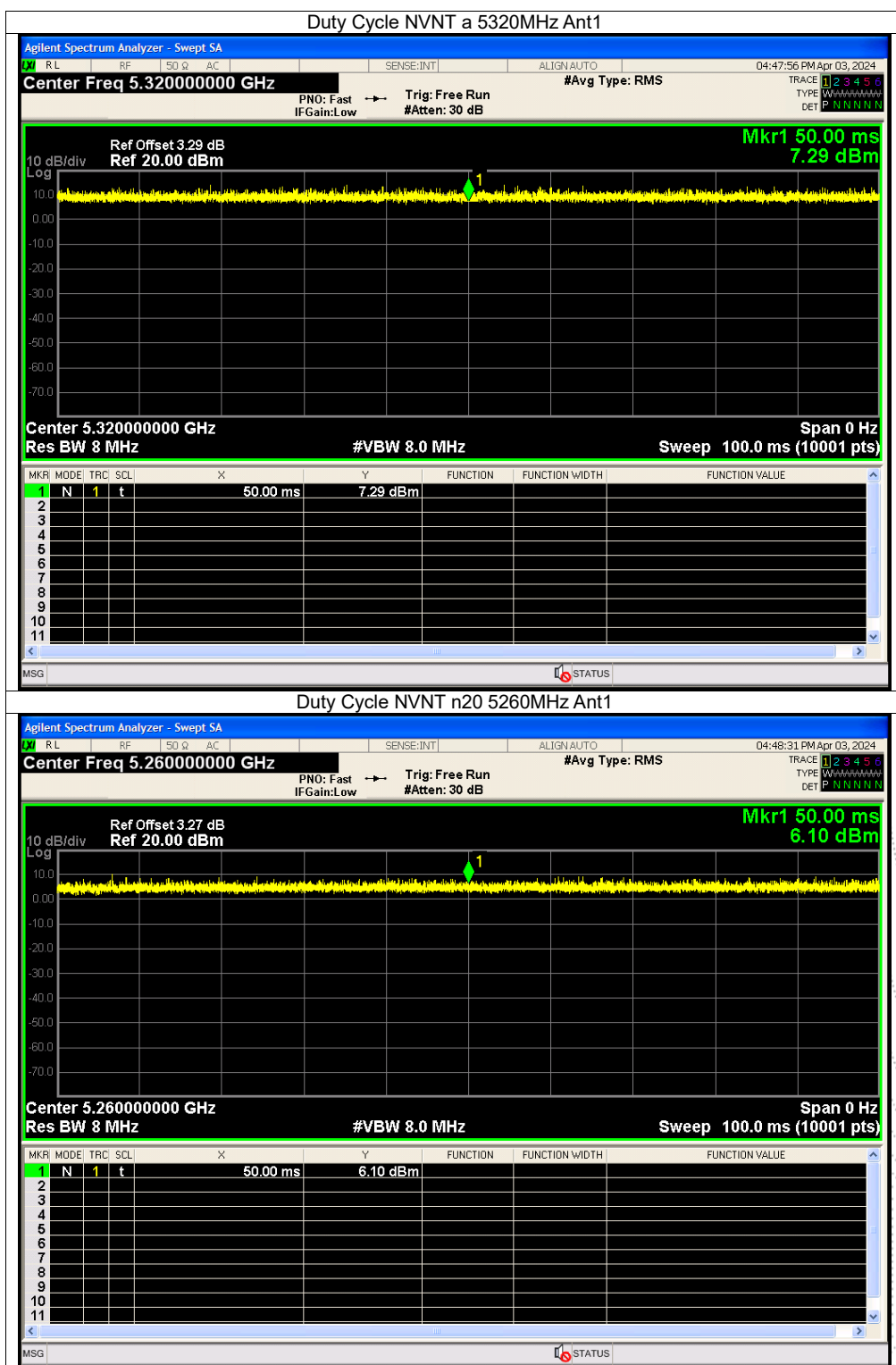


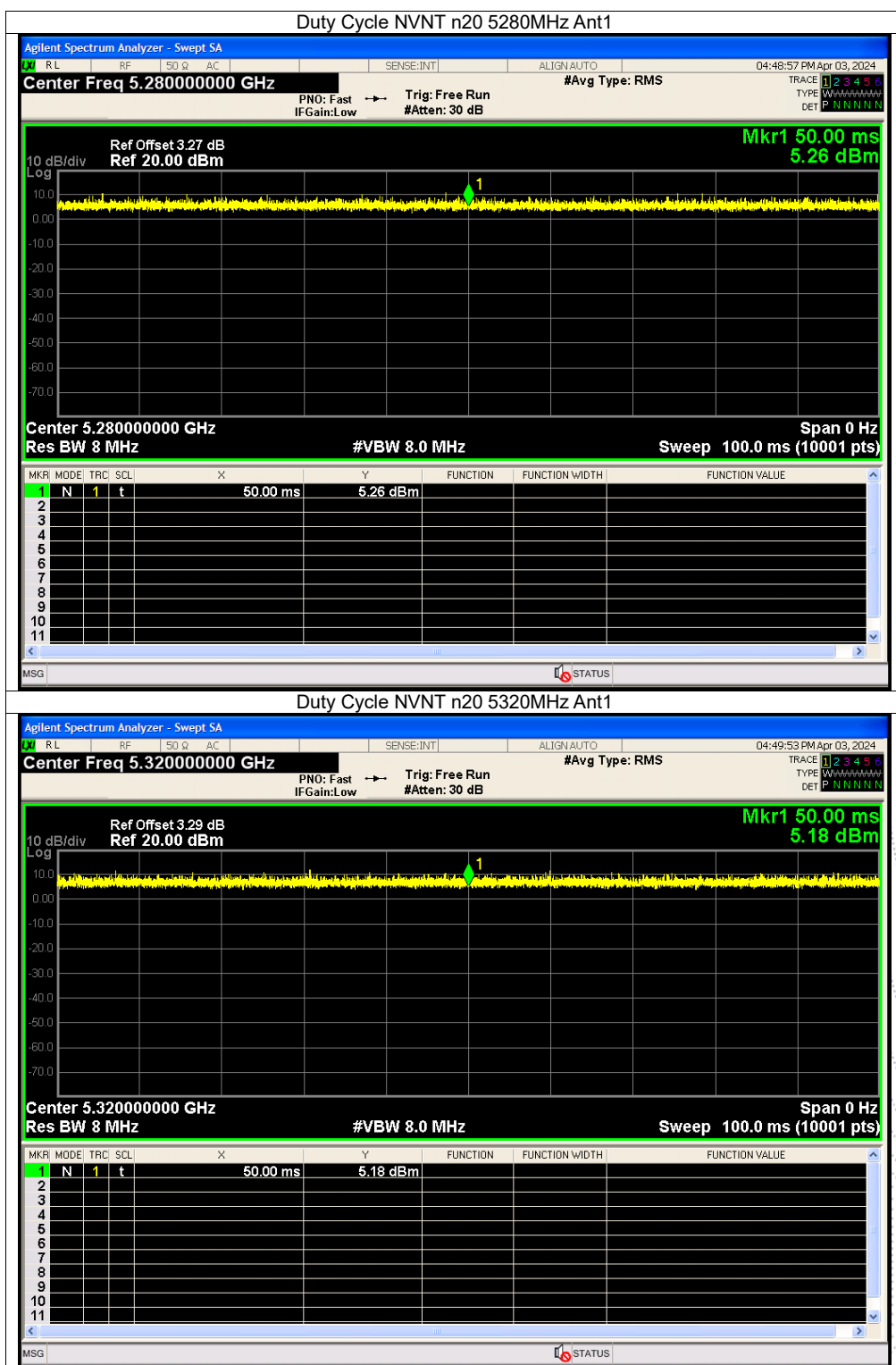
| Condition | Mode | Frequency (MHz) | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|------|-----------------|----------------|------------------------|-----------|
| NVNT      | a    | 5260            | 100            | 0                      | 0         |
| NVNT      | a    | 5280            | 100            | 0                      | 0         |
| NVNT      | a    | 5320            | 100            | 0                      | 0         |
| NVNT      | n20  | 5260            | 100            | 0                      | 0         |
| NVNT      | n20  | 5280            | 100            | 0                      | 0         |
| NVNT      | n20  | 5320            | 100            | 0                      | 0         |
| NVNT      | n40  | 5270            | 100            | 0                      | 0         |
| NVNT      | n40  | 5310            | 100            | 0                      | 0         |
| NVNT      | ac20 | 5260            | 100            | 0                      | 0         |
| NVNT      | ac20 | 5280            | 100            | 0                      | 0         |
| NVNT      | ac20 | 5320            | 100            | 0                      | 0         |
| NVNT      | ac40 | 5270            | 100            | 0                      | 0         |
| NVNT      | ac40 | 5310            | 100            | 0                      | 0         |
| NVNT      | ac80 | 5290            | 100            | 0                      | 0         |
| NVNT      | ax20 | 5260            | 100            | 0                      | 0         |
| NVNT      | ax20 | 5280            | 100            | 0                      | 0         |
| NVNT      | ax20 | 5320            | 100            | 0                      | 0         |
| NVNT      | ax40 | 5270            | 100            | 0                      | 0         |
| NVNT      | ax40 | 5310            | 100            | 0                      | 0         |
| NVNT      | ax80 | 5290            | 100            | 0                      | 0         |

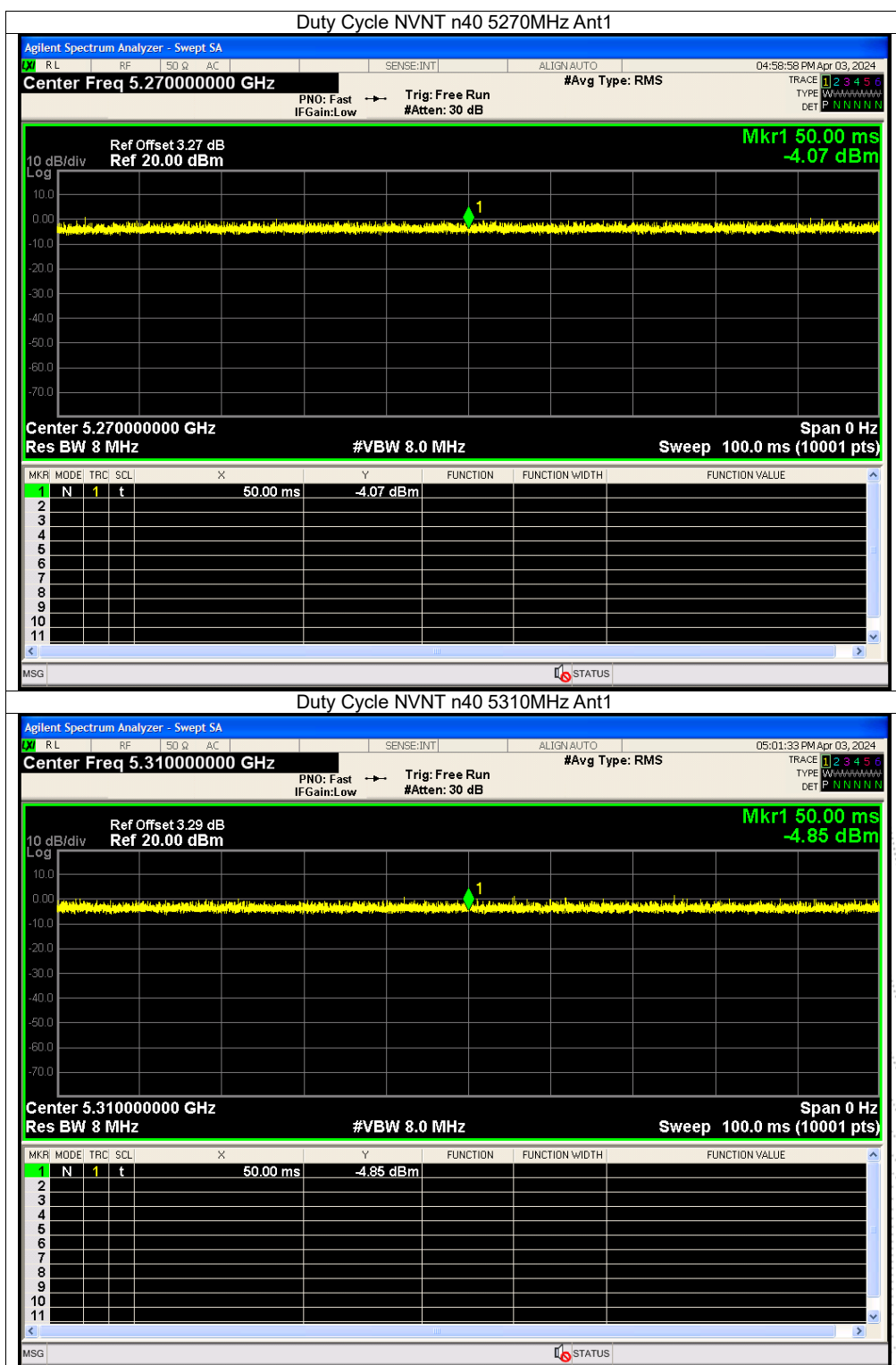


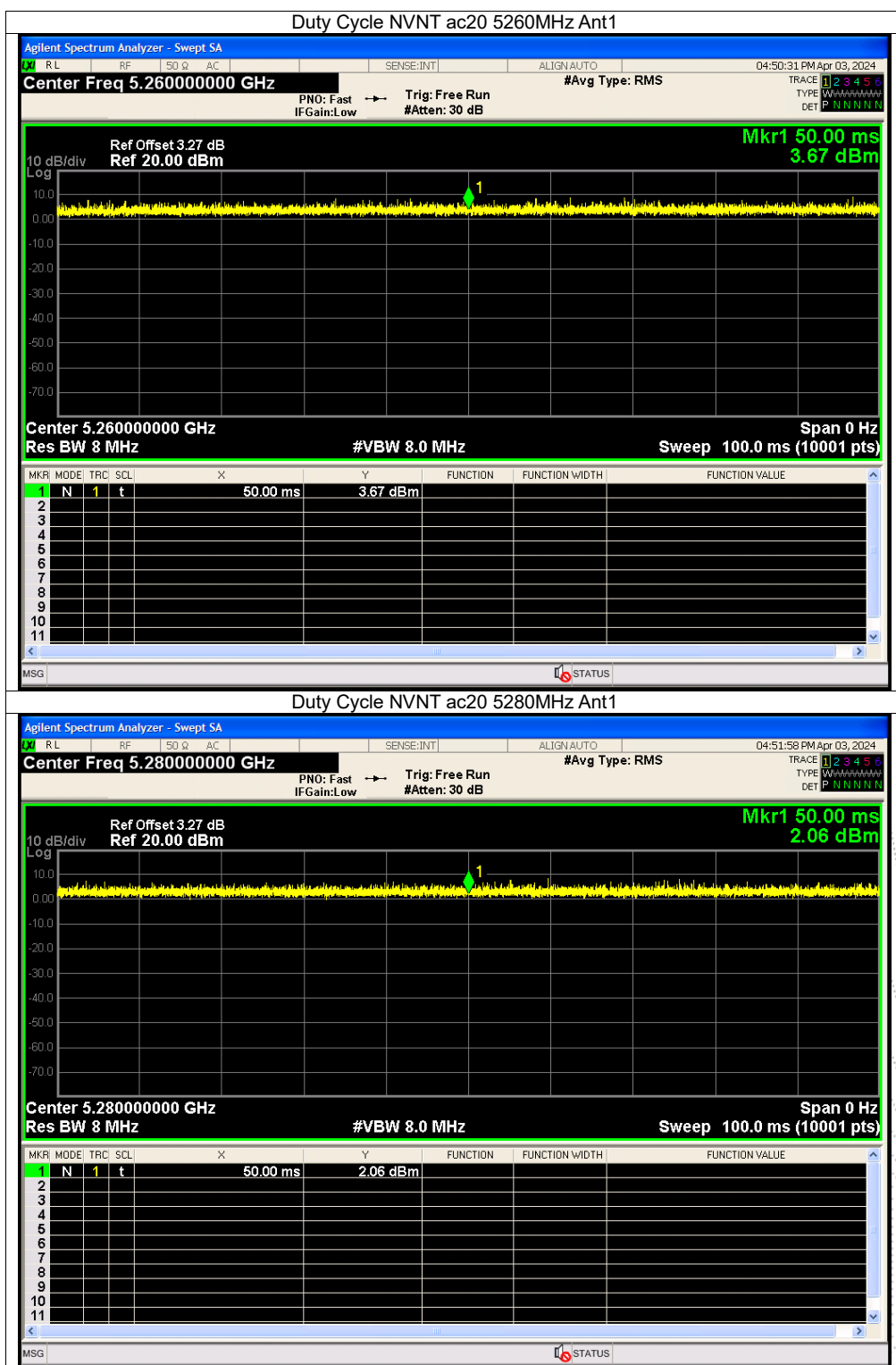
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A . Plot.



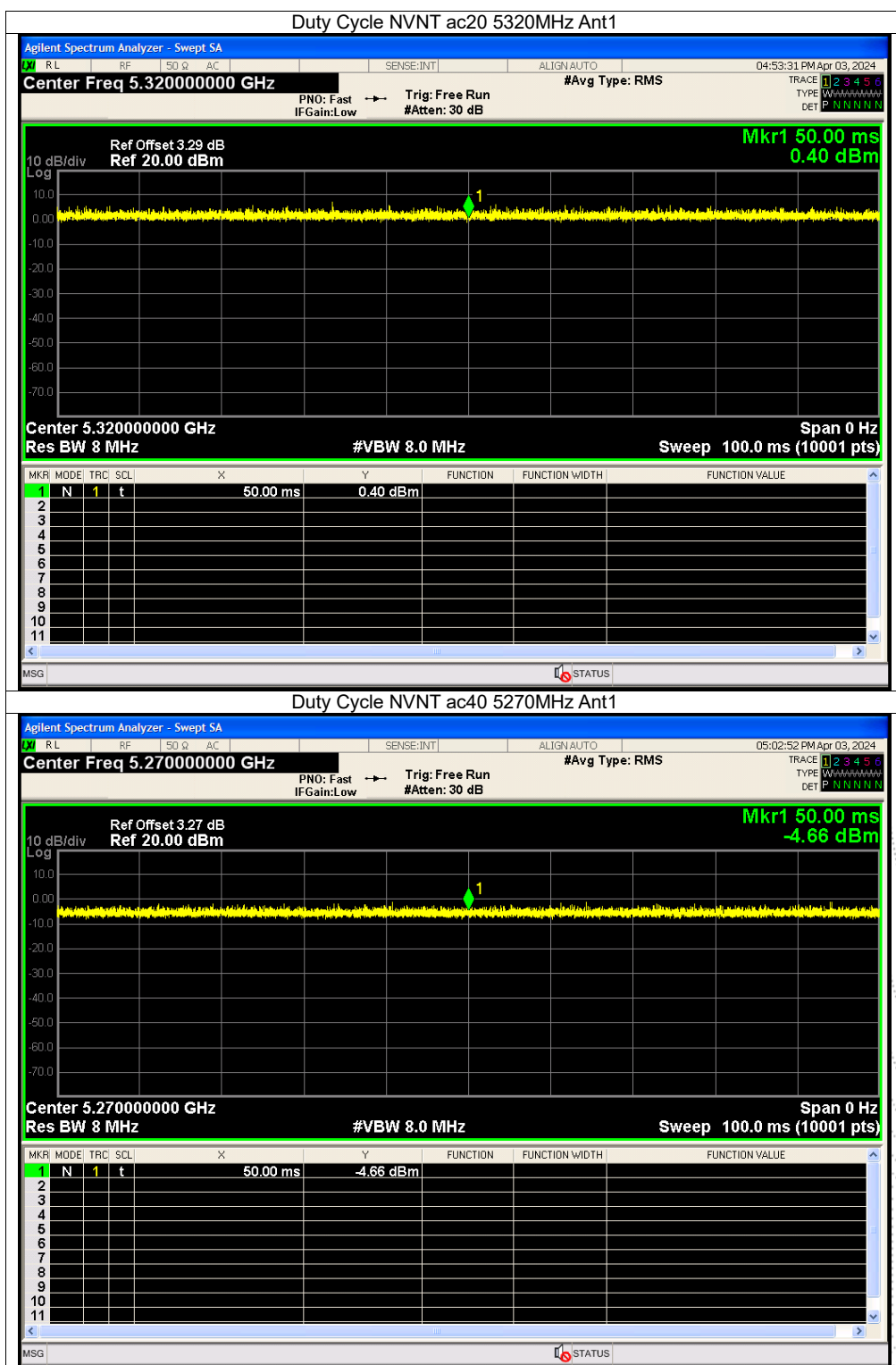


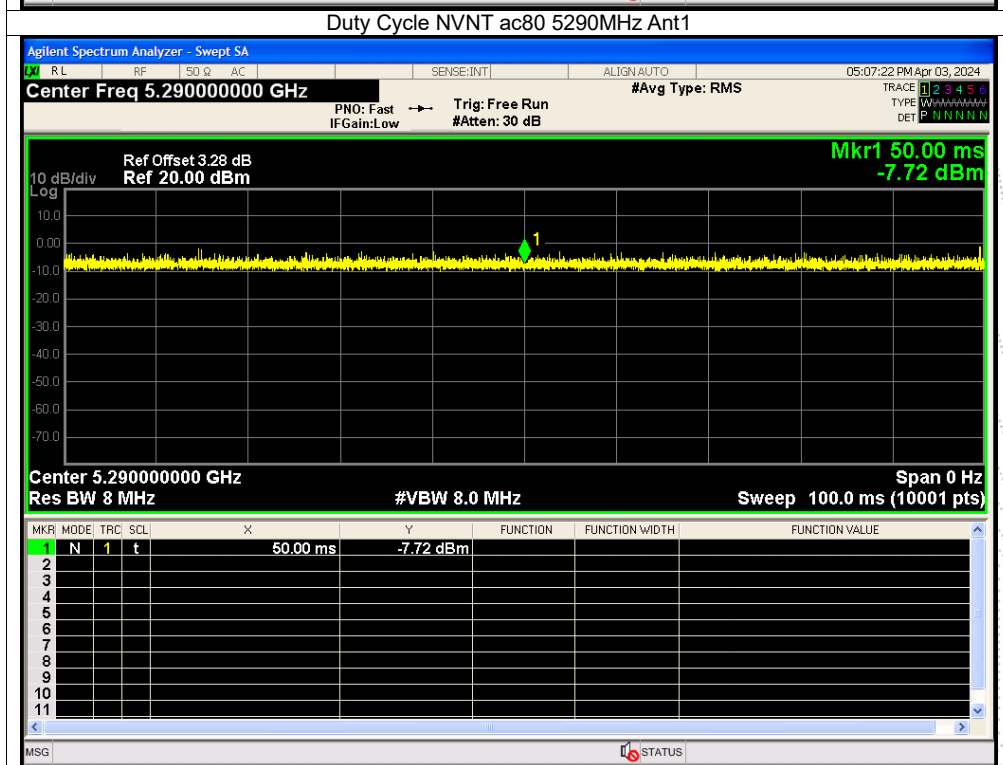
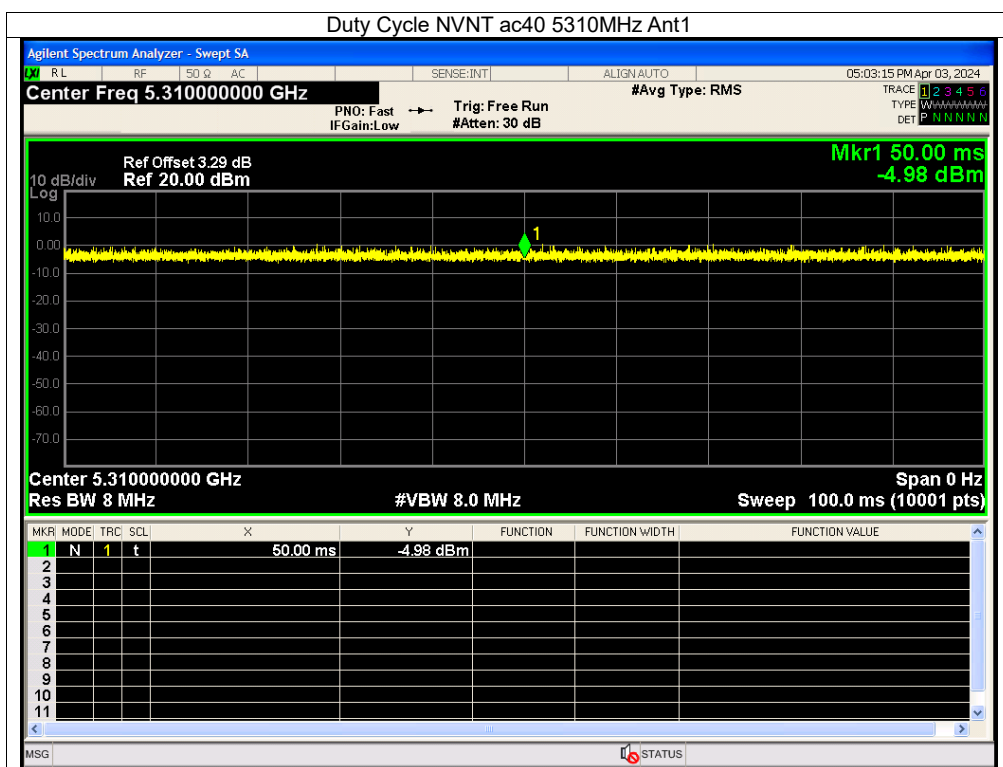


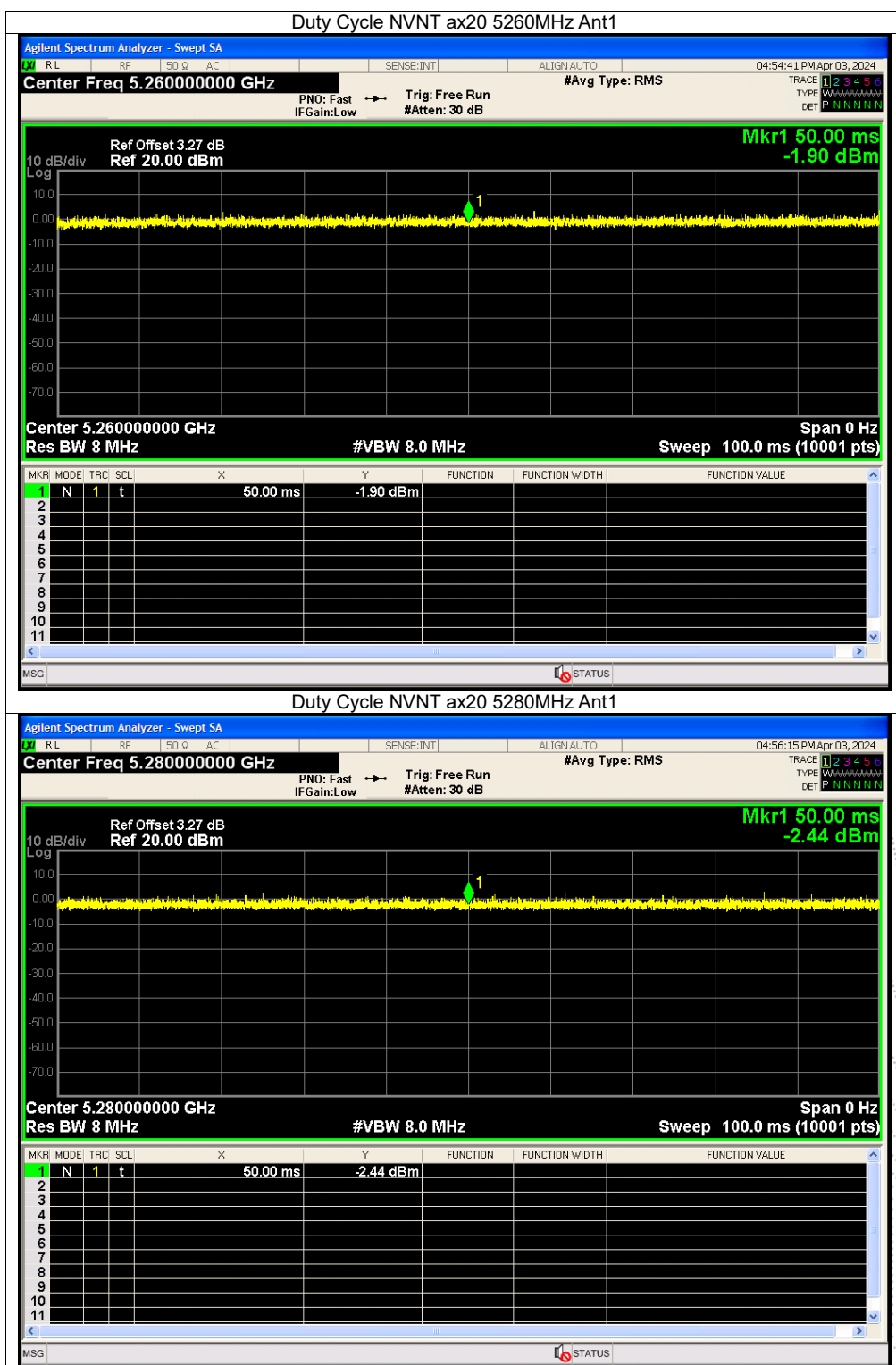


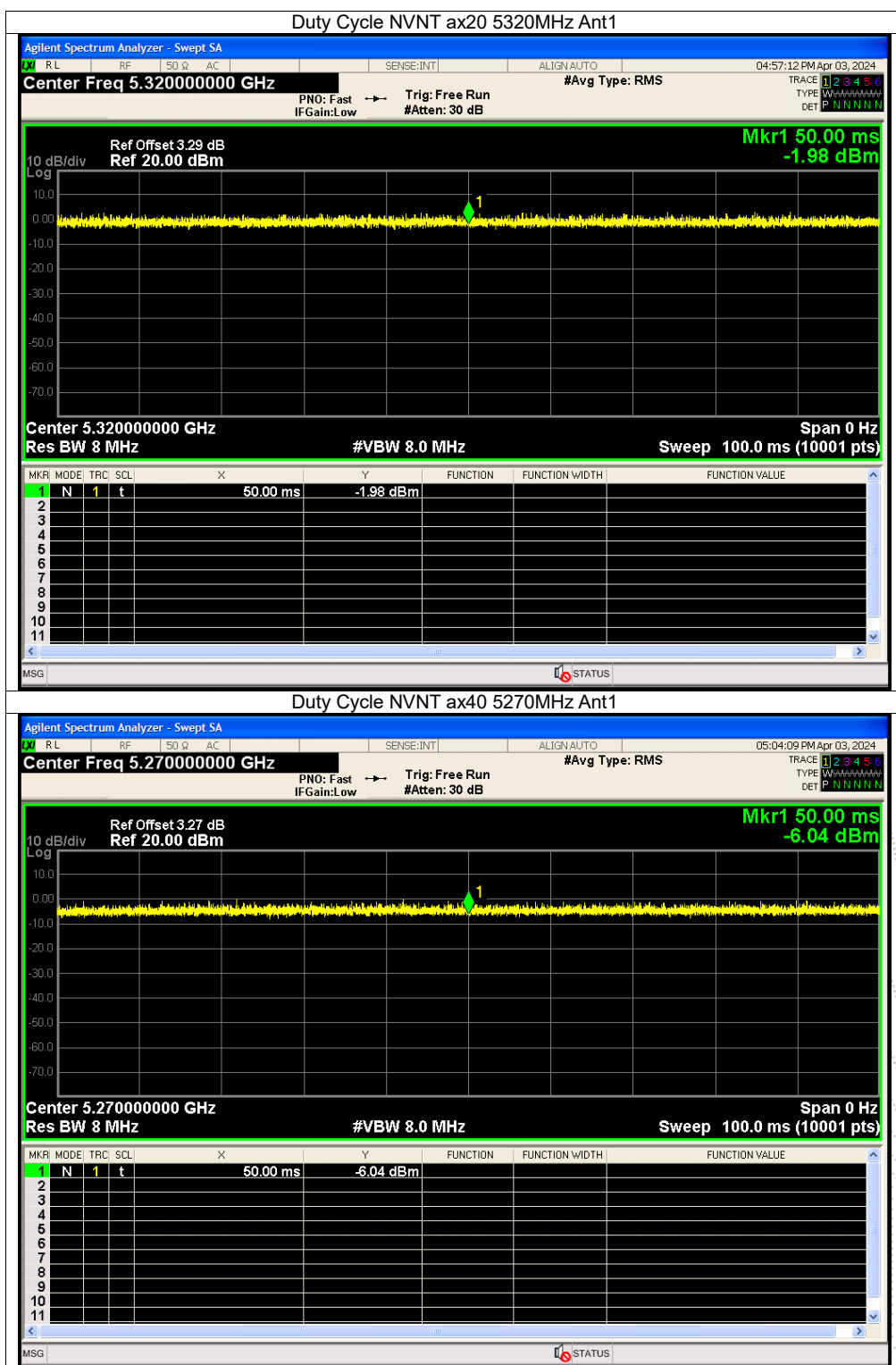


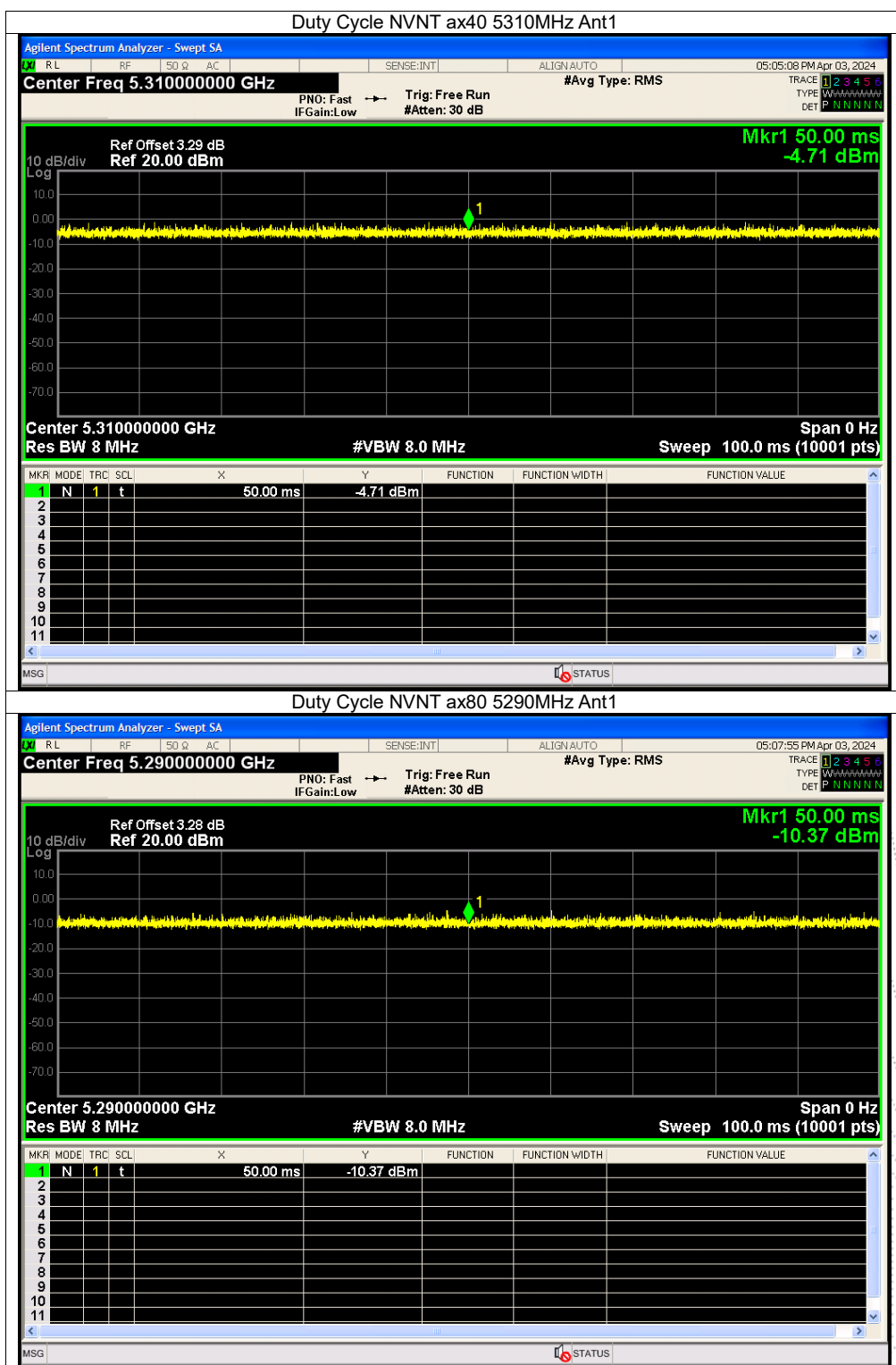




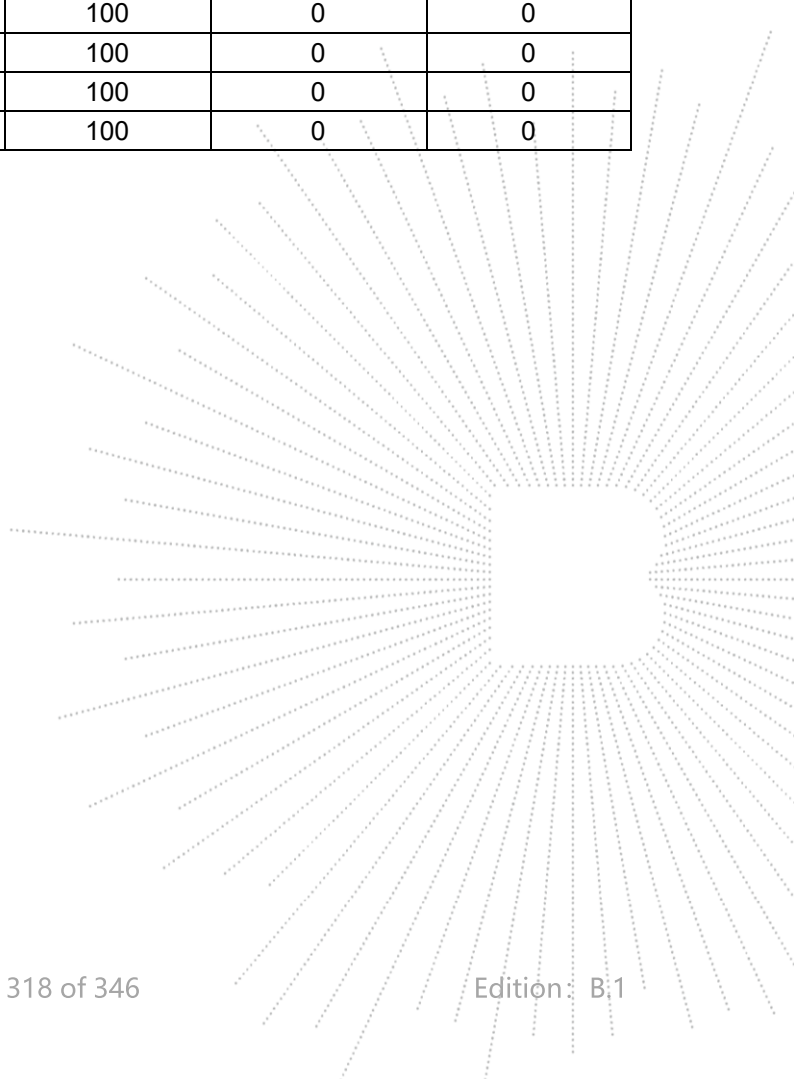




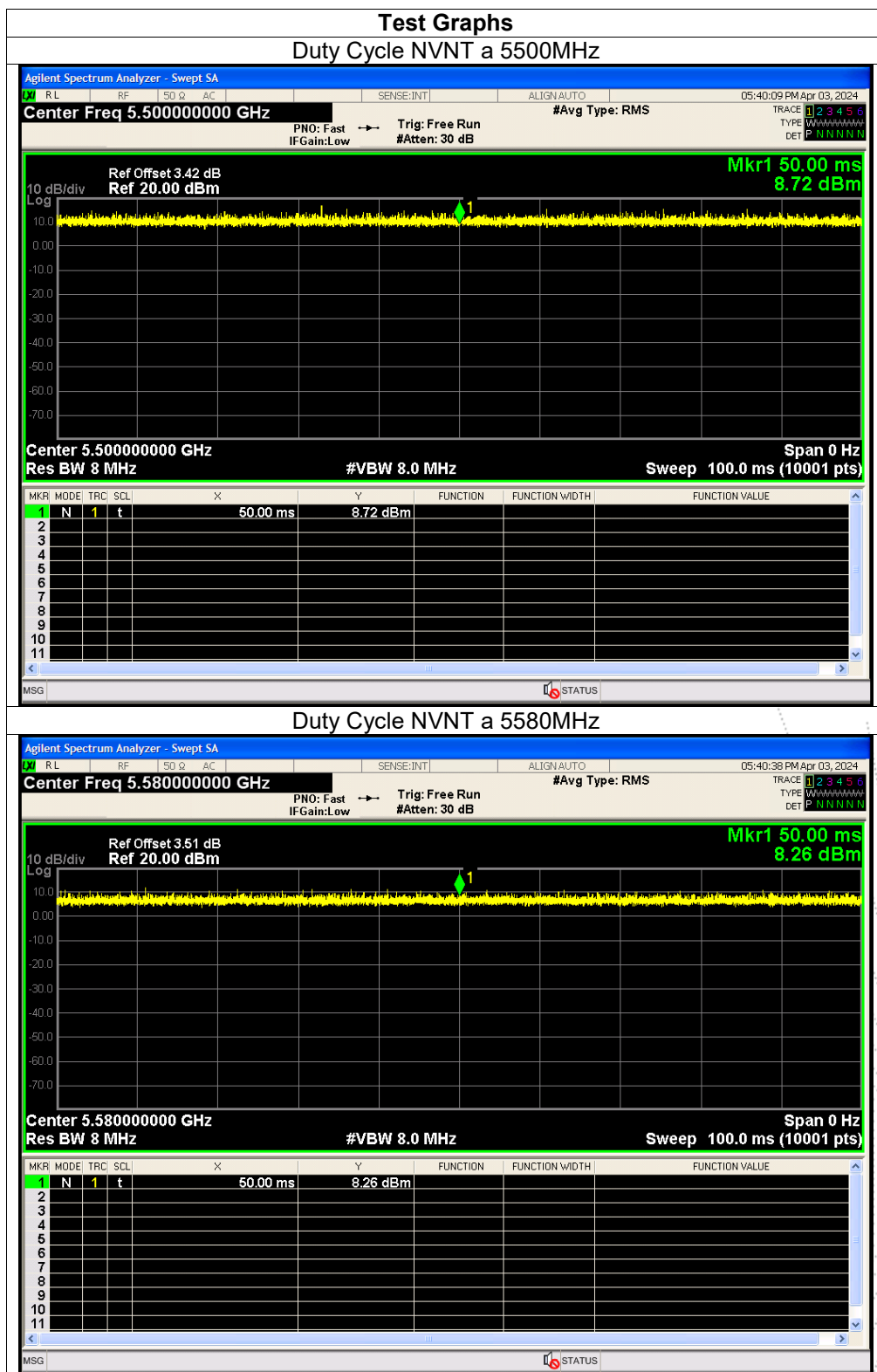




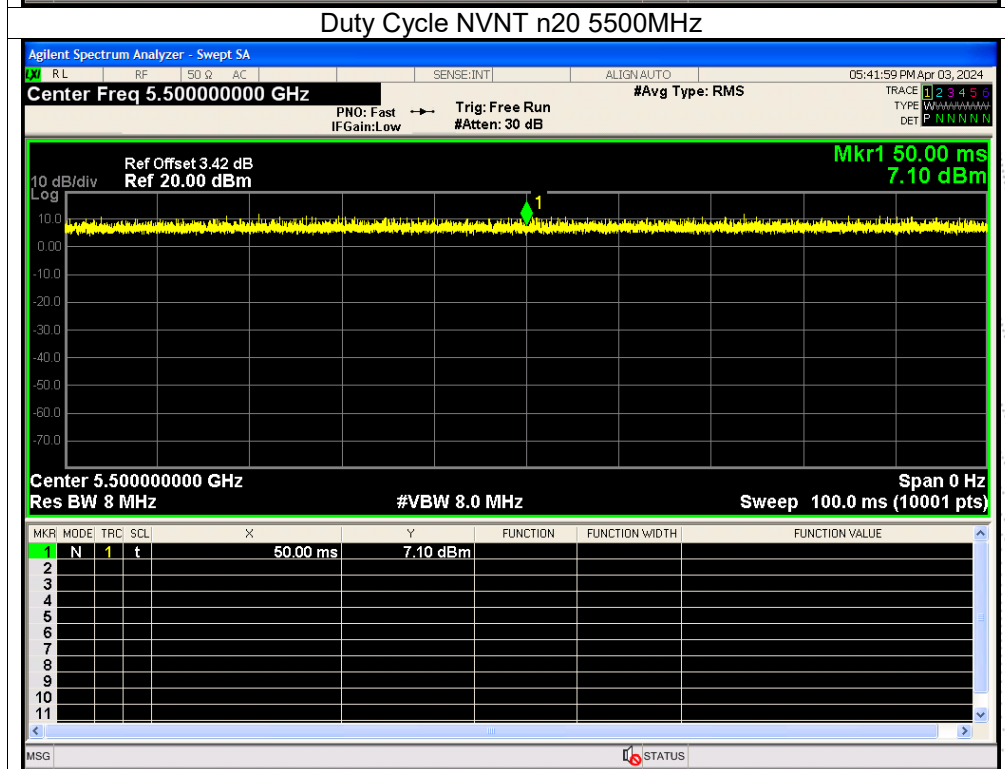
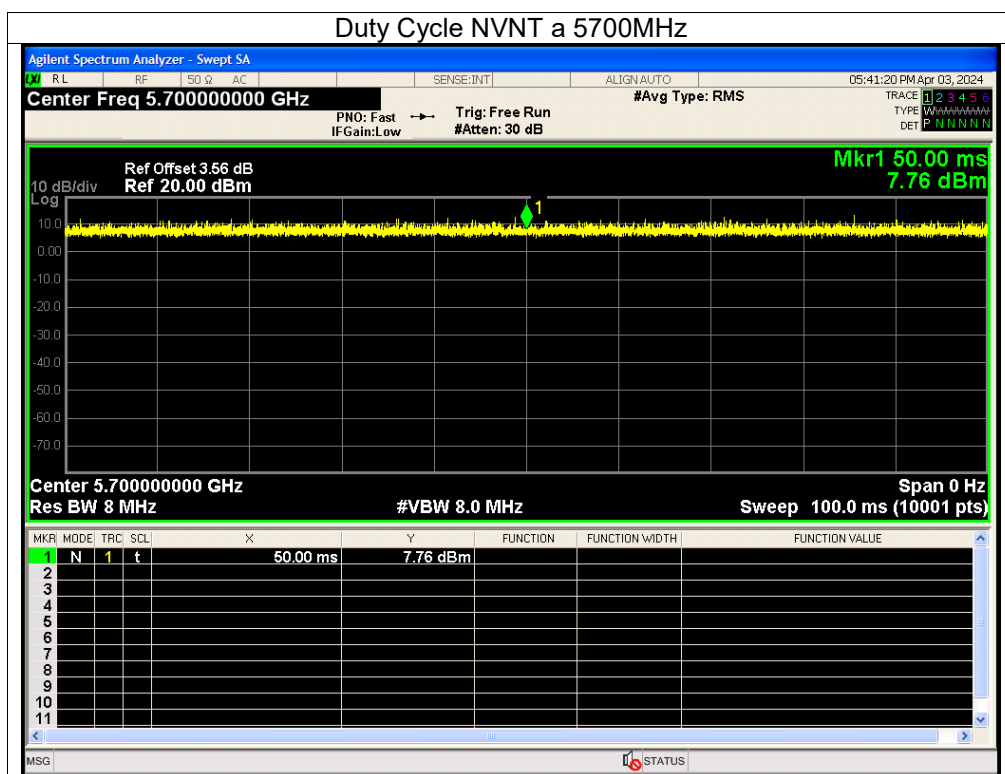
| Condition | Mode | Frequency (MHz) | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|------|-----------------|----------------|------------------------|-----------|
| NVNT      | a    | 5500            | 100            | 0                      | 0         |
| NVNT      | a    | 5580            | 100            | 0                      | 0         |
| NVNT      | a    | 5700            | 100            | 0                      | 0         |
| NVNT      | n20  | 5500            | 100            | 0                      | 0         |
| NVNT      | n20  | 5580            | 100            | 0                      | 0         |
| NVNT      | n20  | 5700            | 100            | 0                      | 0         |
| NVNT      | n40  | 5510            | 100            | 0                      | 0         |
| NVNT      | n40  | 5550            | 100            | 0                      | 0         |
| NVNT      | n40  | 5670            | 100            | 0                      | 0         |
| NVNT      | ac20 | 5500            | 100            | 0                      | 0         |
| NVNT      | ac20 | 5580            | 100            | 0                      | 0         |
| NVNT      | ac20 | 5700            | 100            | 0                      | 0         |
| NVNT      | ac40 | 5510            | 100            | 0                      | 0         |
| NVNT      | ac40 | 5550            | 100            | 0                      | 0         |
| NVNT      | ac40 | 5670            | 100            | 0                      | 0         |
| NVNT      | ac80 | 5530            | 100            | 0                      | 0         |
| NVNT      | ax20 | 5500            | 100            | 0                      | 0         |
| NVNT      | ax20 | 5580            | 100            | 0                      | 0         |
| NVNT      | ax20 | 5700            | 100            | 0                      | 0         |
| NVNT      | ax40 | 5510            | 100            | 0                      | 0         |
| NVNT      | ax40 | 5550            | 100            | 0                      | 0         |
| NVNT      | ax40 | 5670            | 100            | 0                      | 0         |
| NVNT      | ax80 | 5530            | 100            | 0                      | 0         |

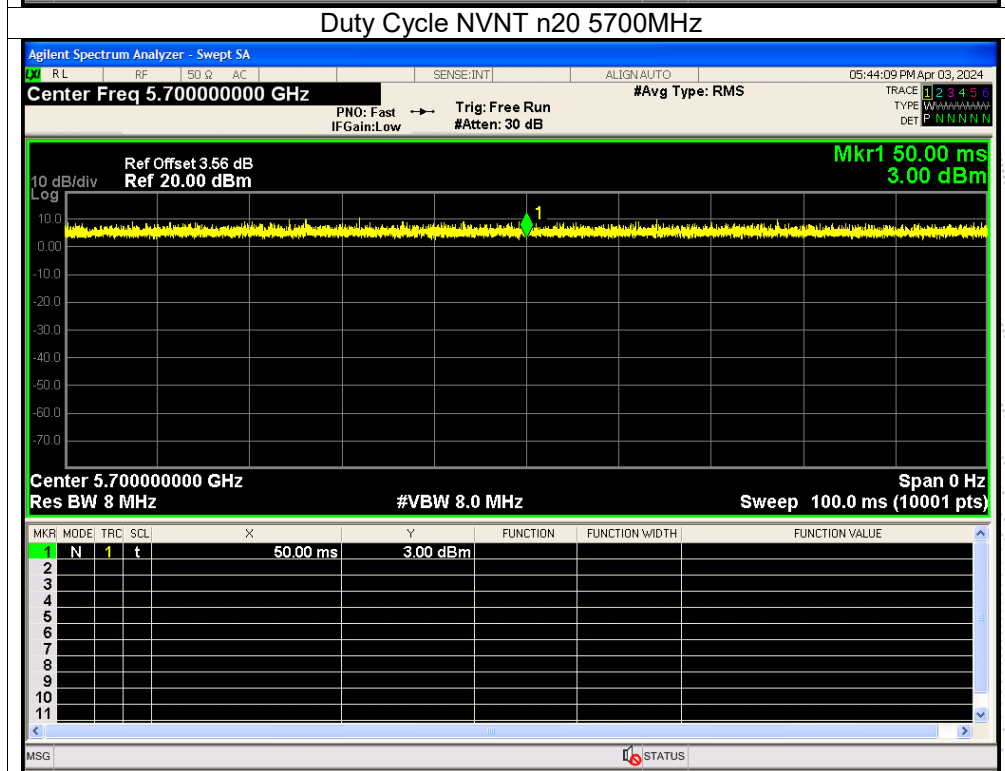
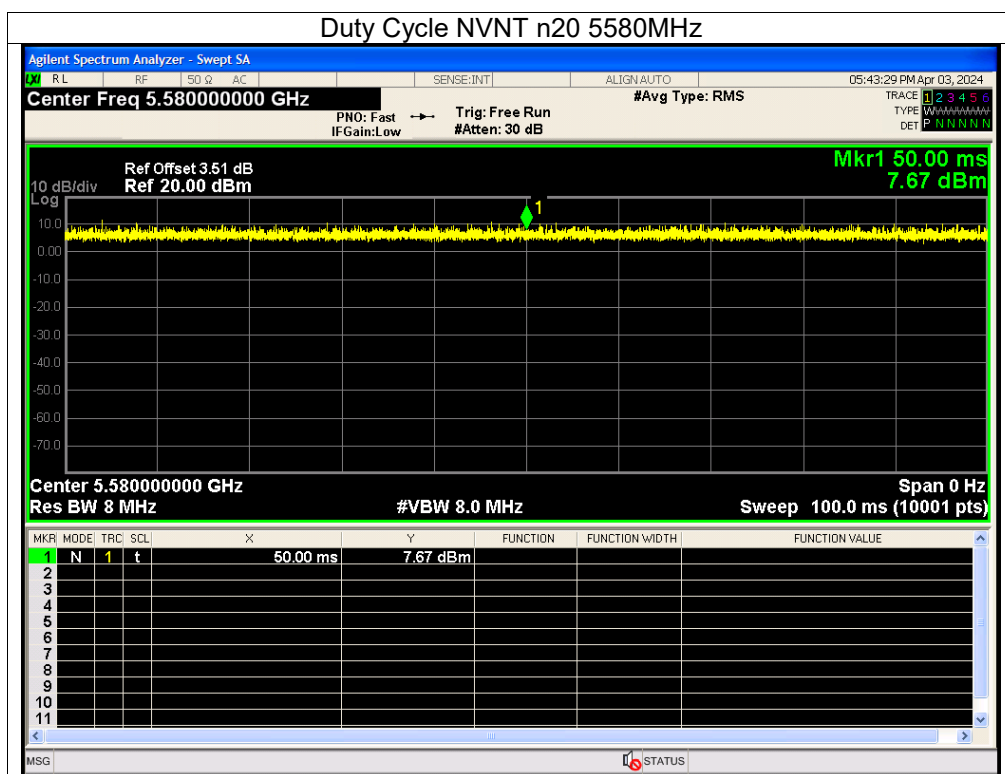


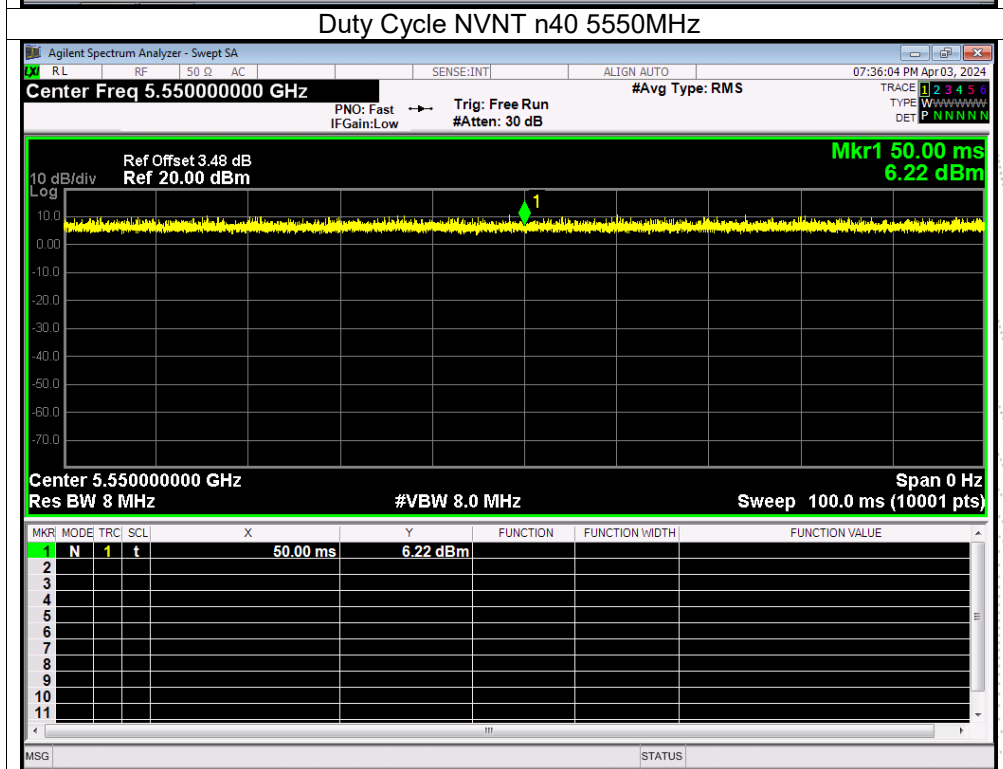
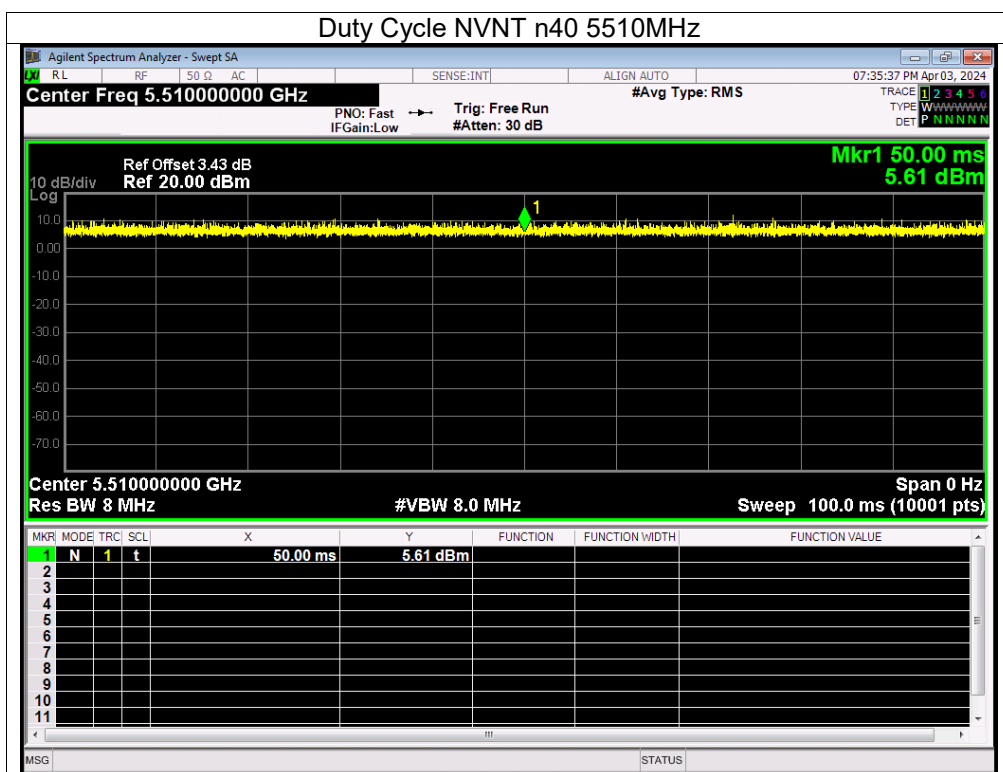
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A . Plot.

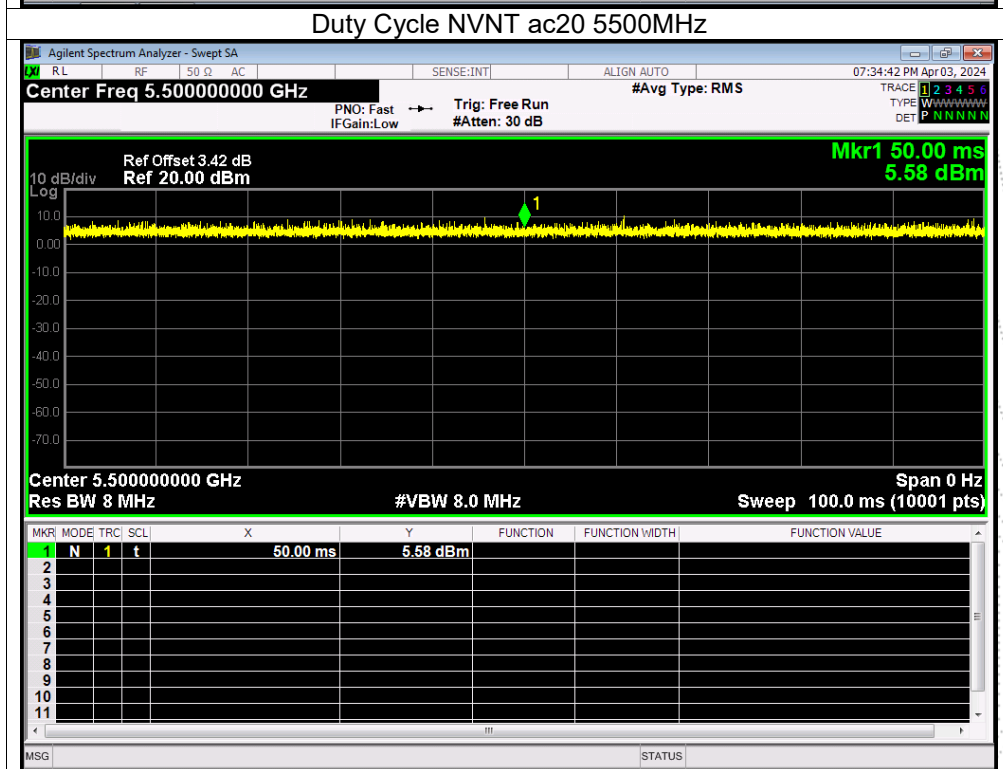
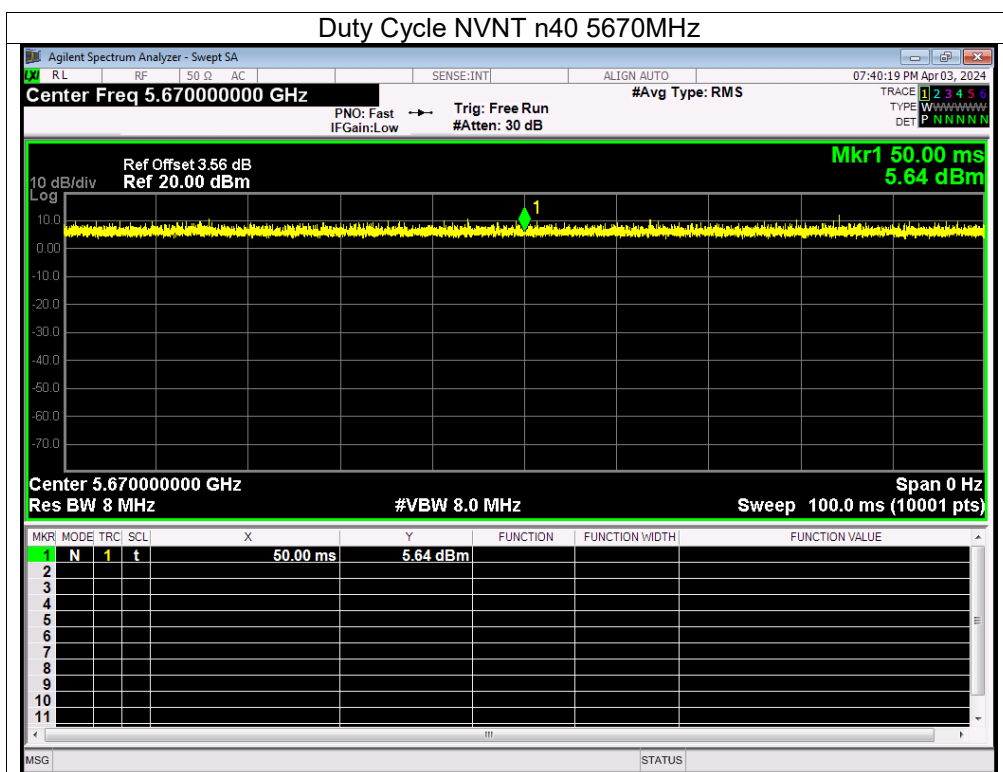


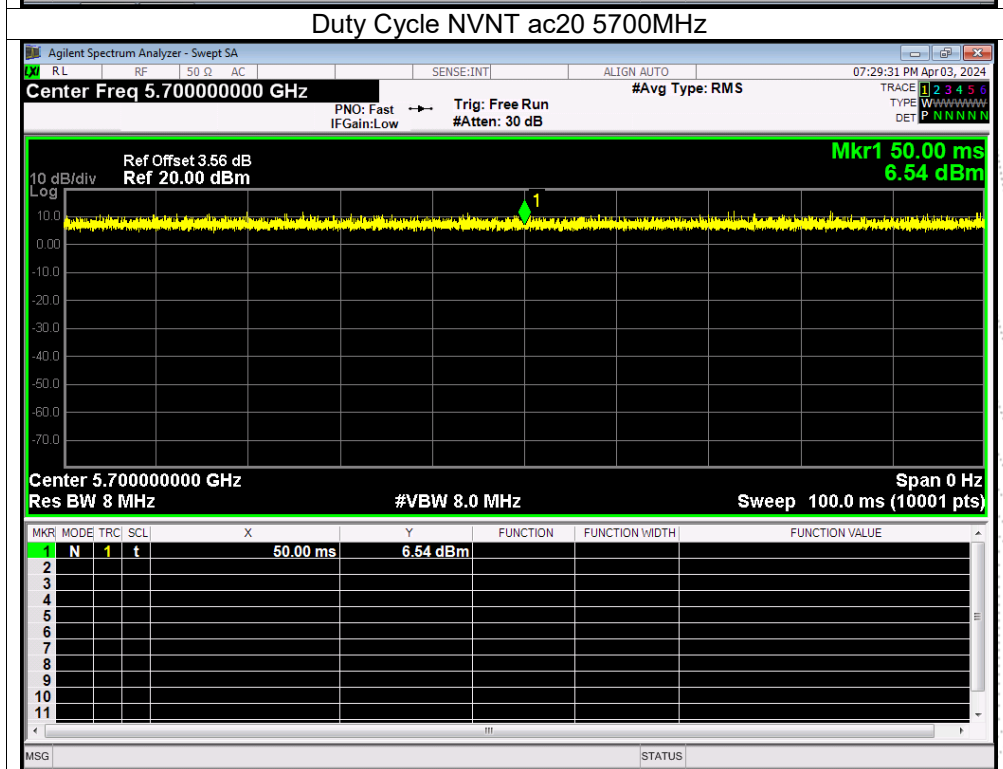
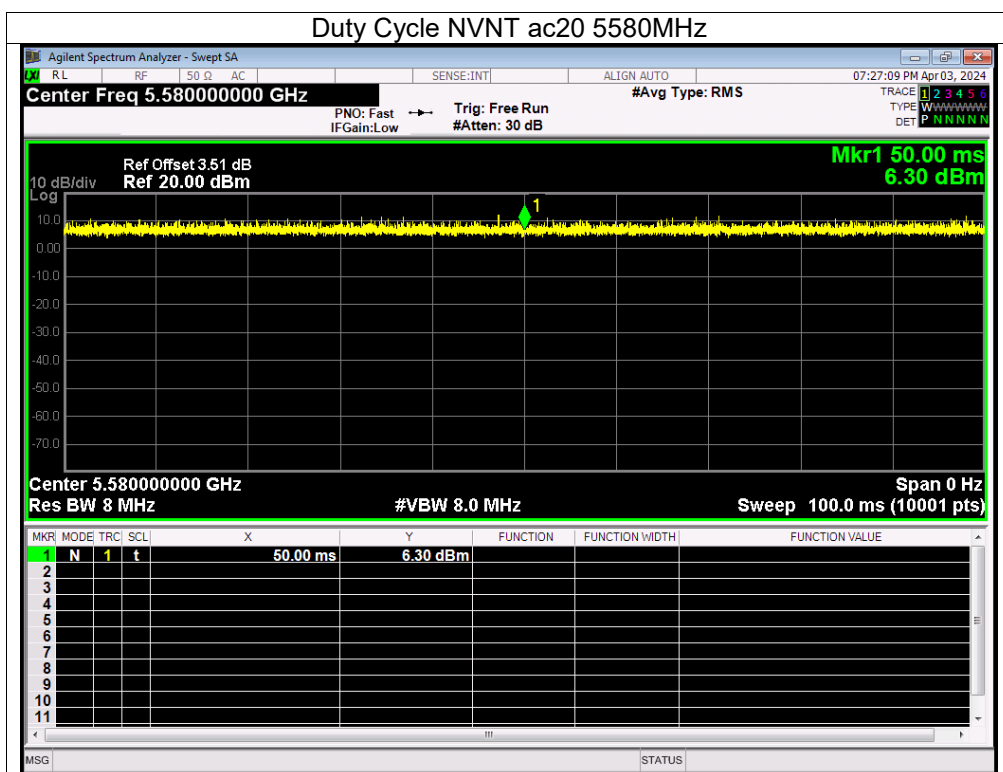


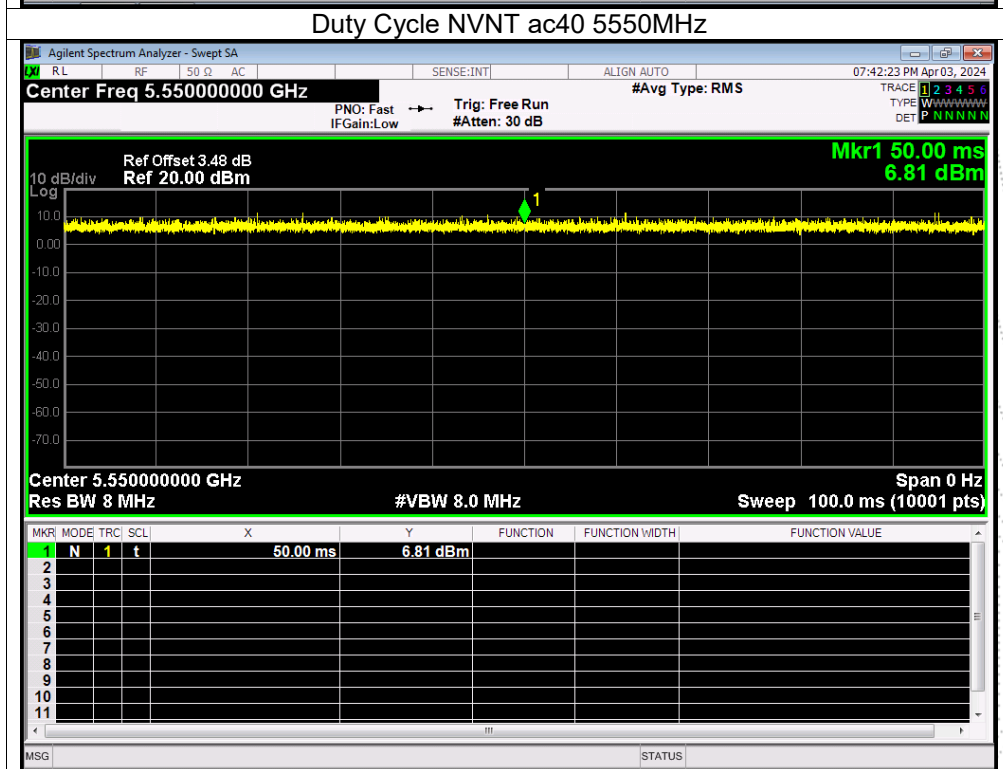
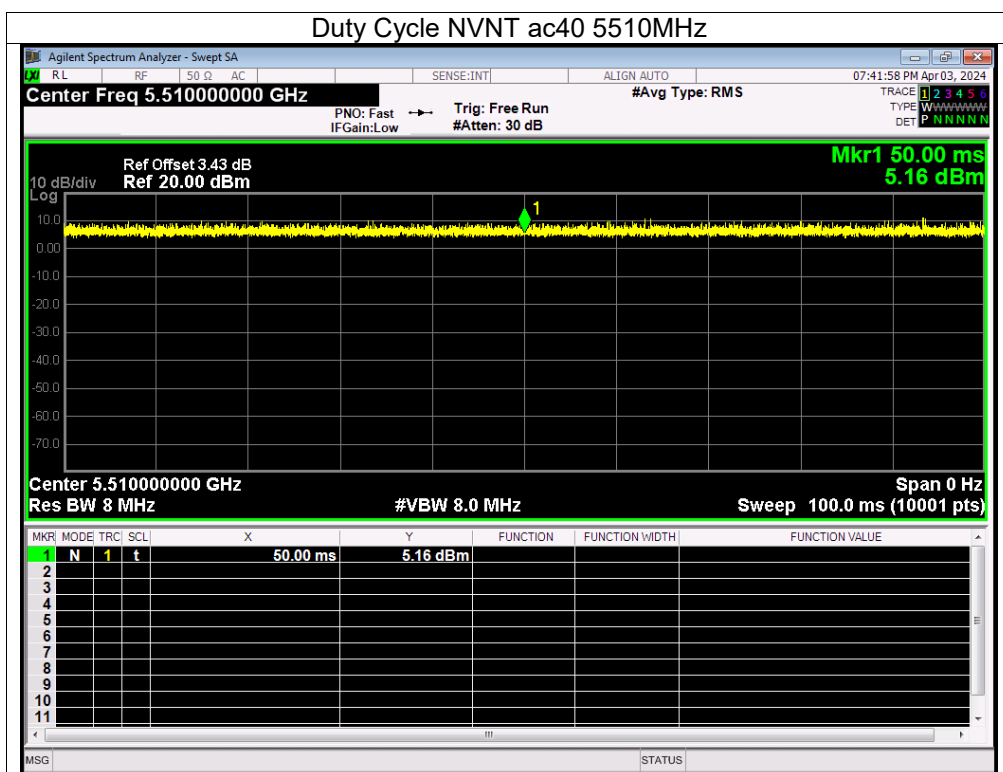


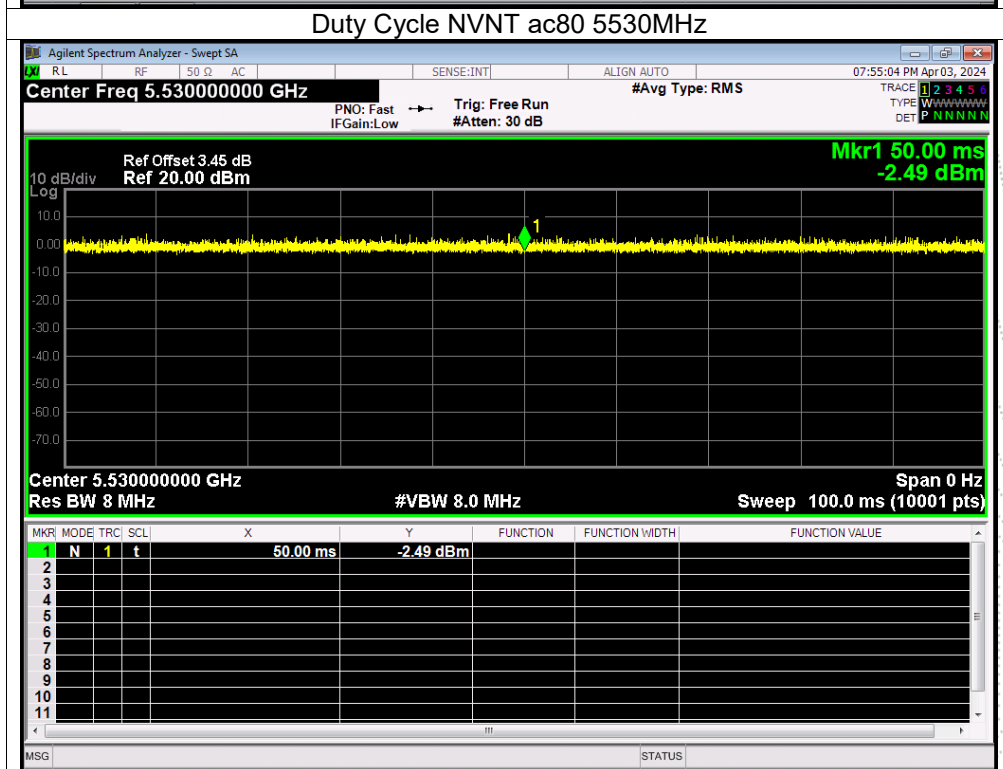
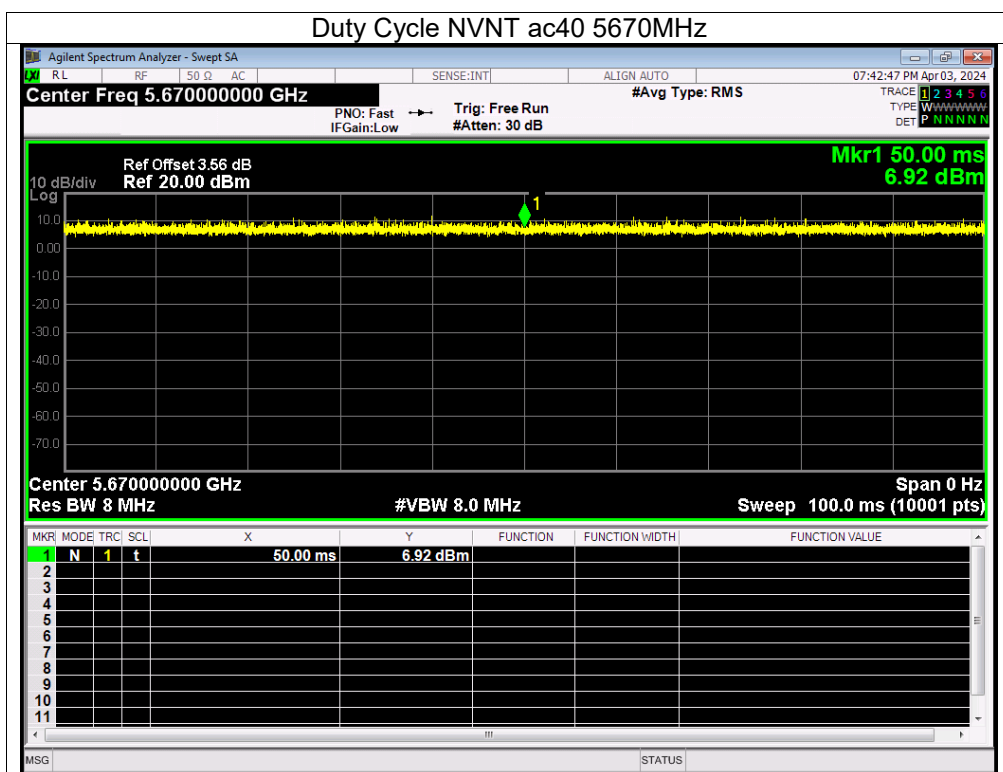




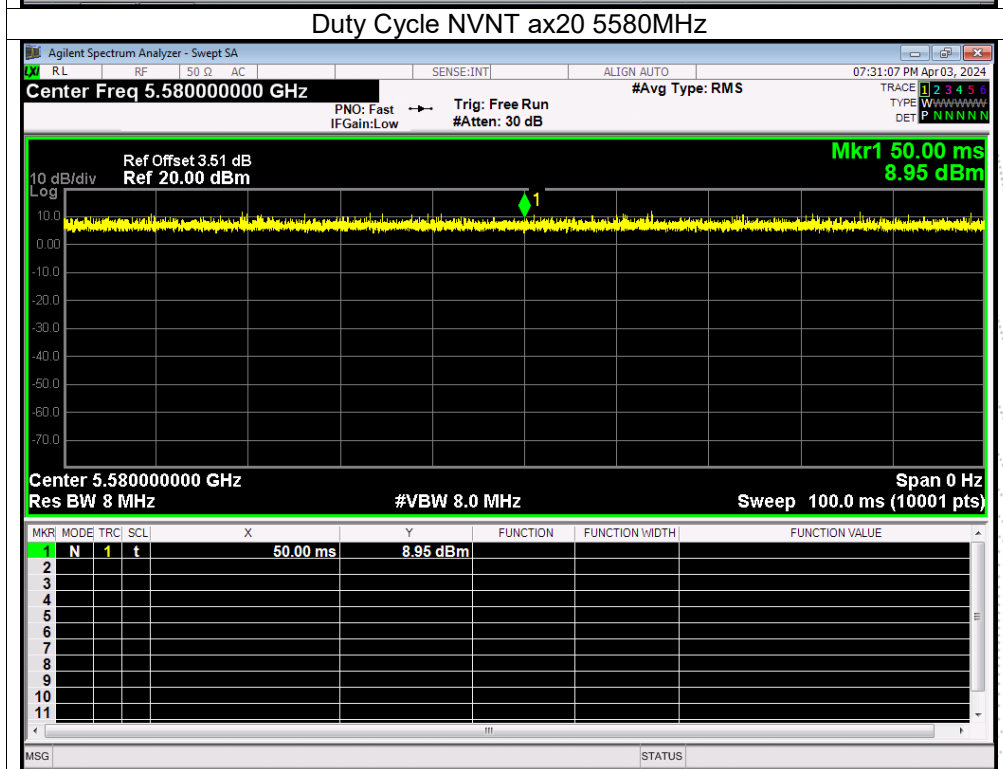
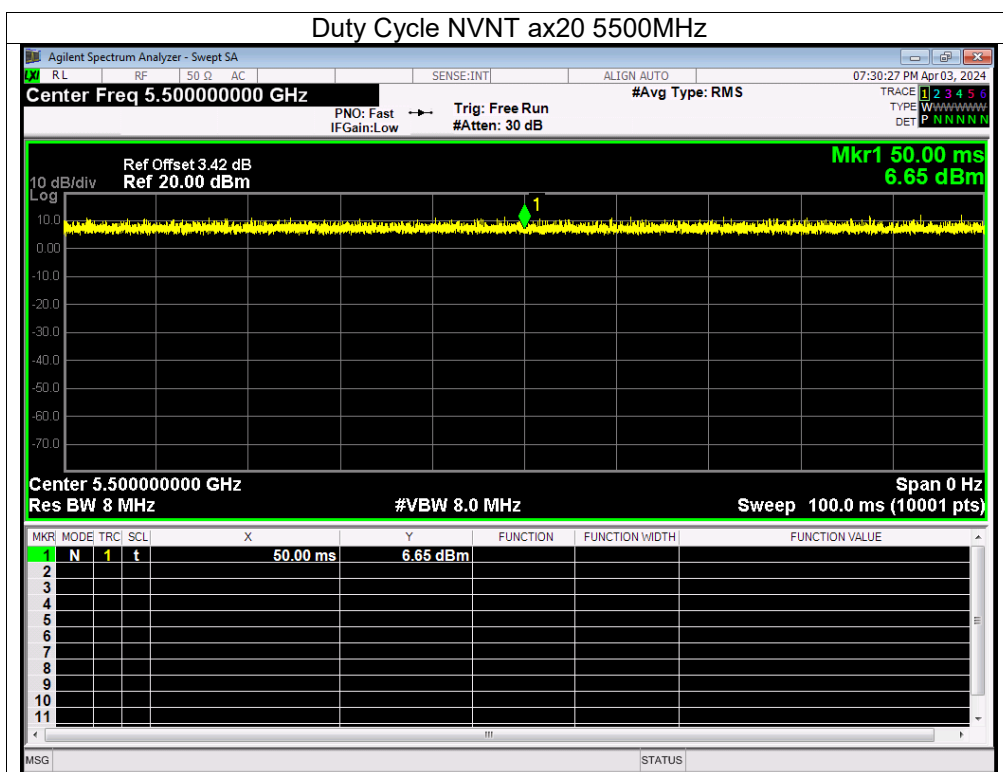


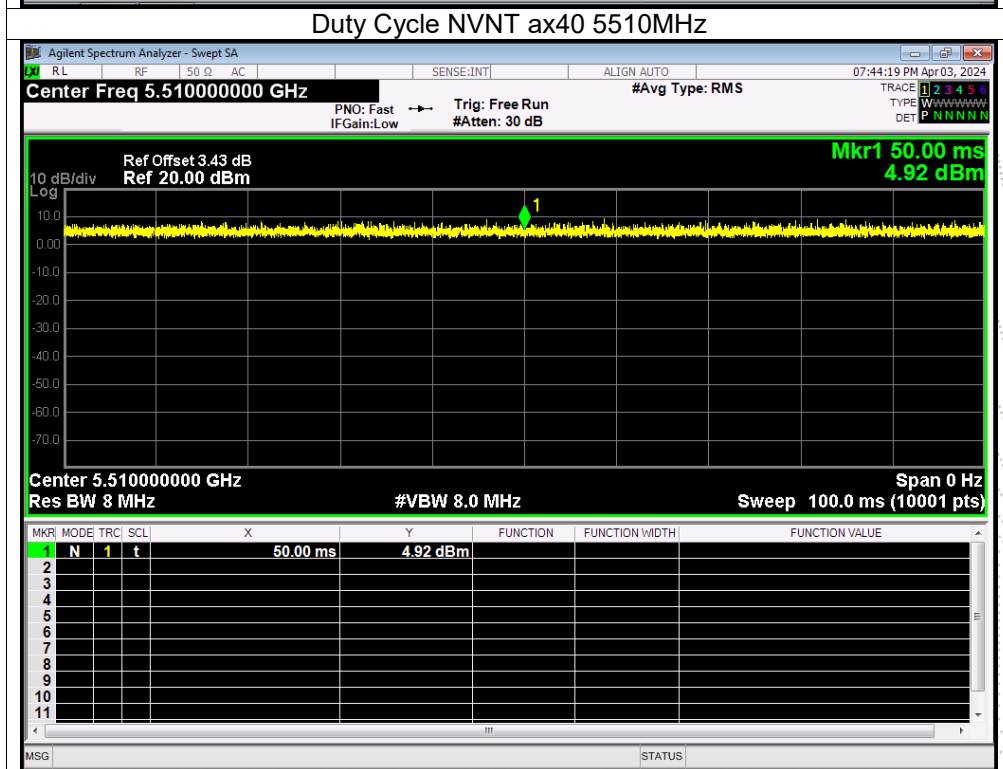
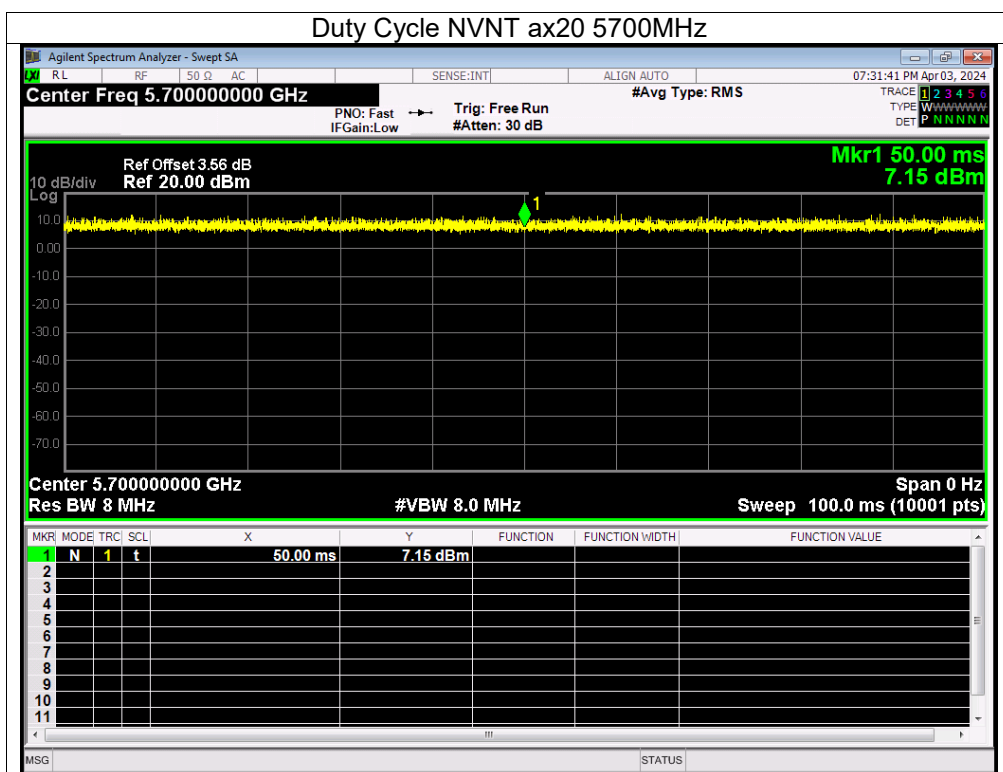


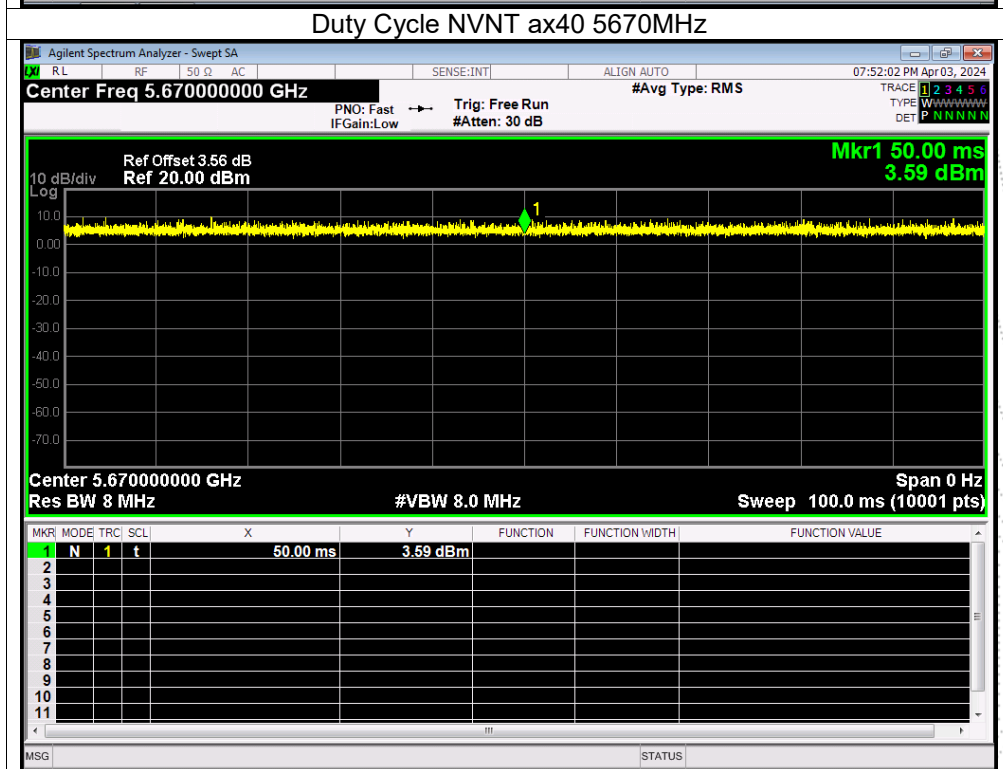
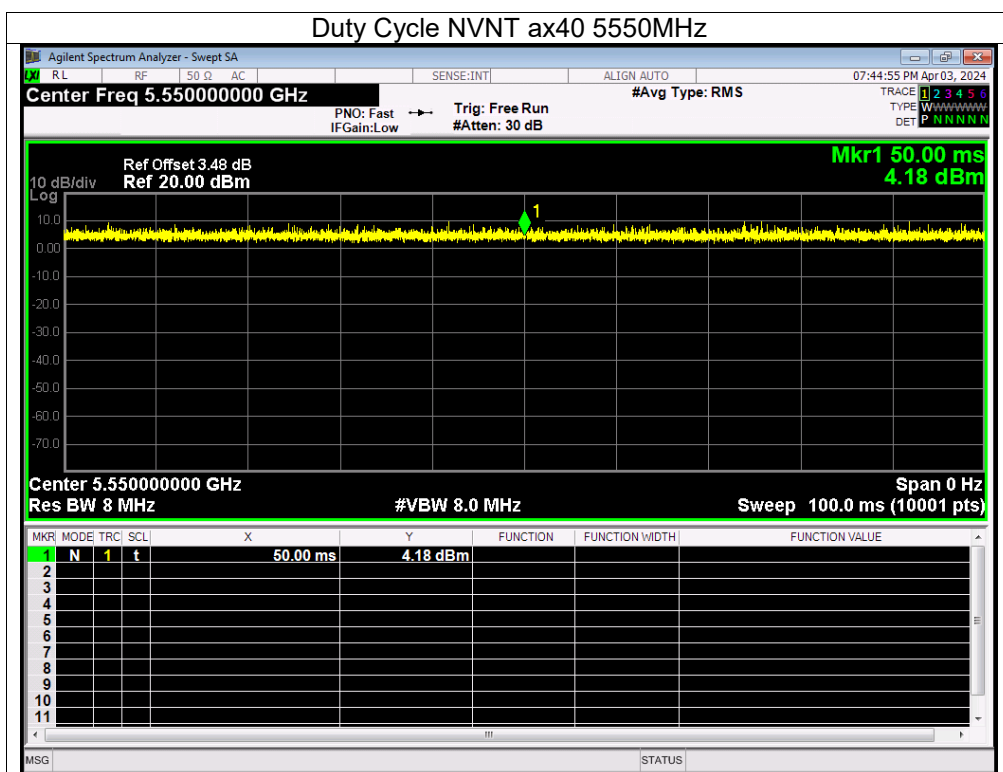


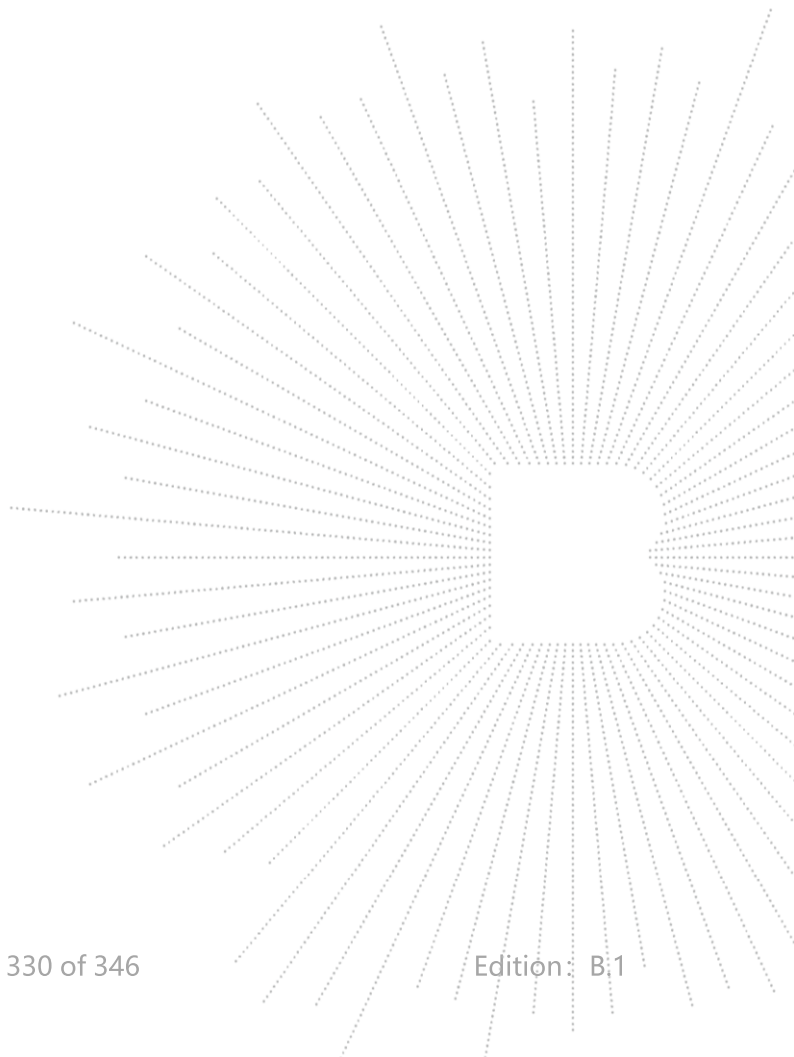
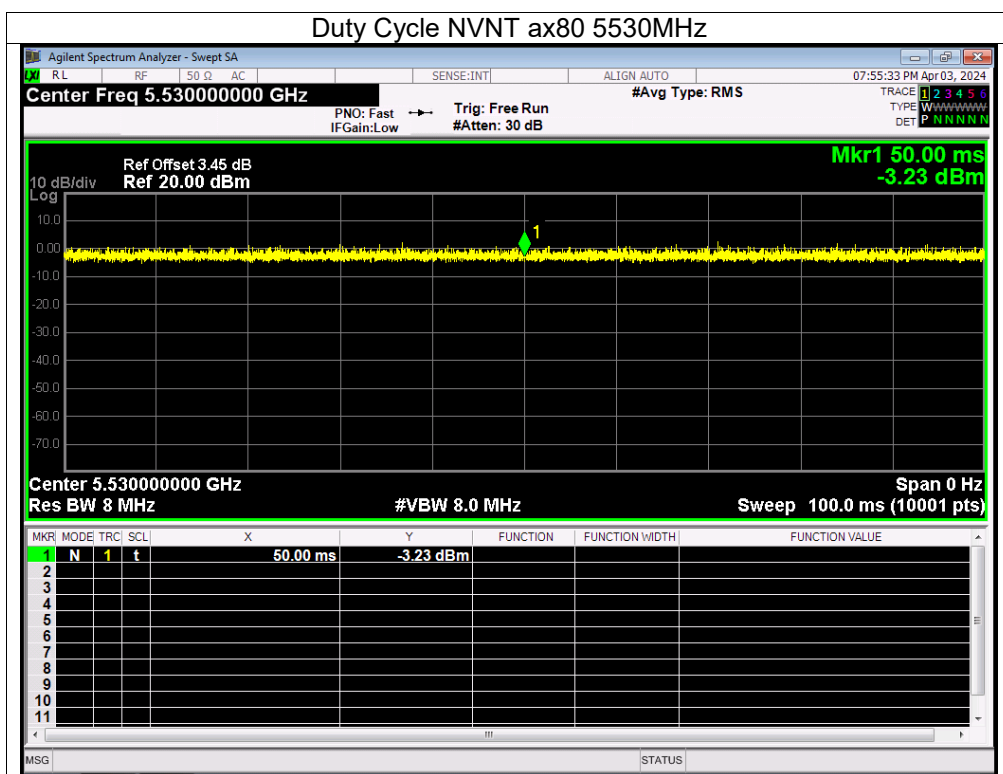












| Condition | Mode | Frequency (MHz) | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|------|-----------------|----------------|------------------------|-----------|
| NVNT      | a    | 5745            | 100            | 0                      | 0         |
| NVNT      | a    | 5785            | 100            | 0                      | 0         |
| NVNT      | a    | 5825            | 100            | 0                      | 0         |
| NVNT      | n20  | 5745            | 100            | 0                      | 0         |
| NVNT      | n20  | 5785            | 100            | 0                      | 0         |
| NVNT      | n20  | 5825            | 100            | 0                      | 0         |
| NVNT      | n40  | 5755            | 100            | 0                      | 0         |
| NVNT      | n40  | 5795            | 100            | 0                      | 0         |
| NVNT      | ac20 | 5745            | 100            | 0                      | 0         |
| NVNT      | ac20 | 5785            | 100            | 0                      | 0         |
| NVNT      | ac20 | 5825            | 100            | 0                      | 0         |
| NVNT      | ac40 | 5755            | 100            | 0                      | 0         |
| NVNT      | ac40 | 5795            | 100            | 0                      | 0         |
| NVNT      | ac80 | 5775            | 100            | 0                      | 0         |
| NVNT      | ax20 | 5745            | 100            | 0                      | 0         |
| NVNT      | ax20 | 5785            | 100            | 0                      | 0         |
| NVNT      | ax20 | 5825            | 100            | 0                      | 0         |
| NVNT      | ax40 | 5755            | 100            | 0                      | 0         |
| NVNT      | ax40 | 5795            | 100            | 0                      | 0         |
| NVNT      | ax80 | 5775            | 100            | 0                      | 0         |

Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A . Plot.

