# Appendix F

## RF Test Data for 5.5GWIFI(Conducted Measurement)

**Product Name: Translator**

**Test Model: V9000**

**Environmental Conditions**

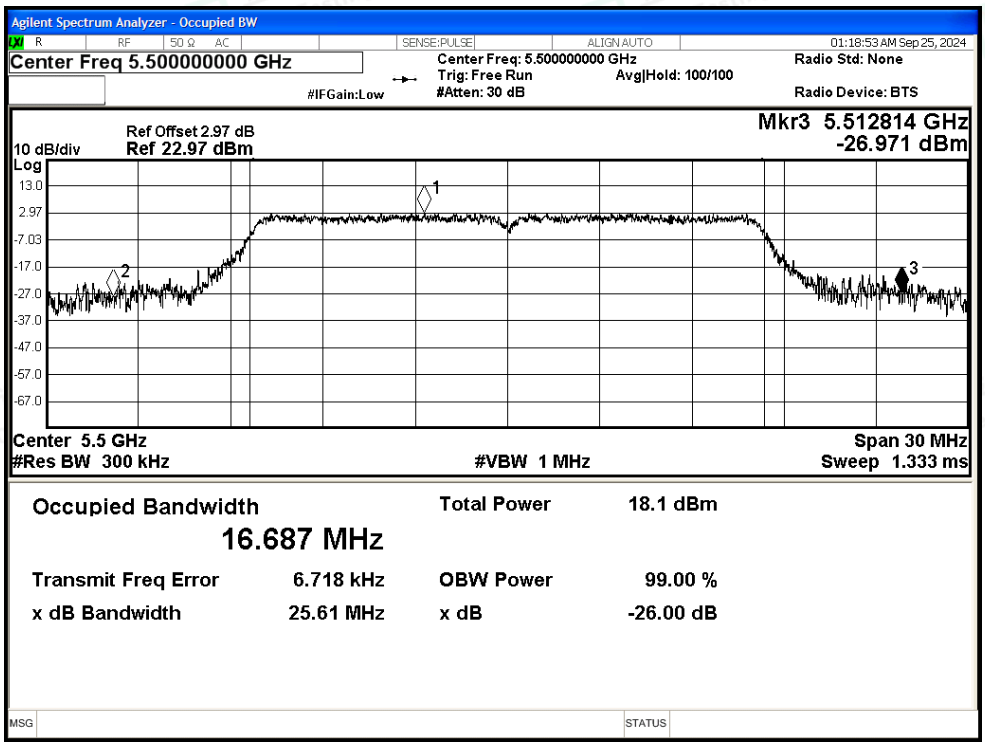
| | |
|---|---|
| Temperature: | 23.8° C |
| Relative Humidity: | 52.1% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Jay Luo |
| Supervised by: | Nick Peng |

# F.1 -26dB Bandwidth

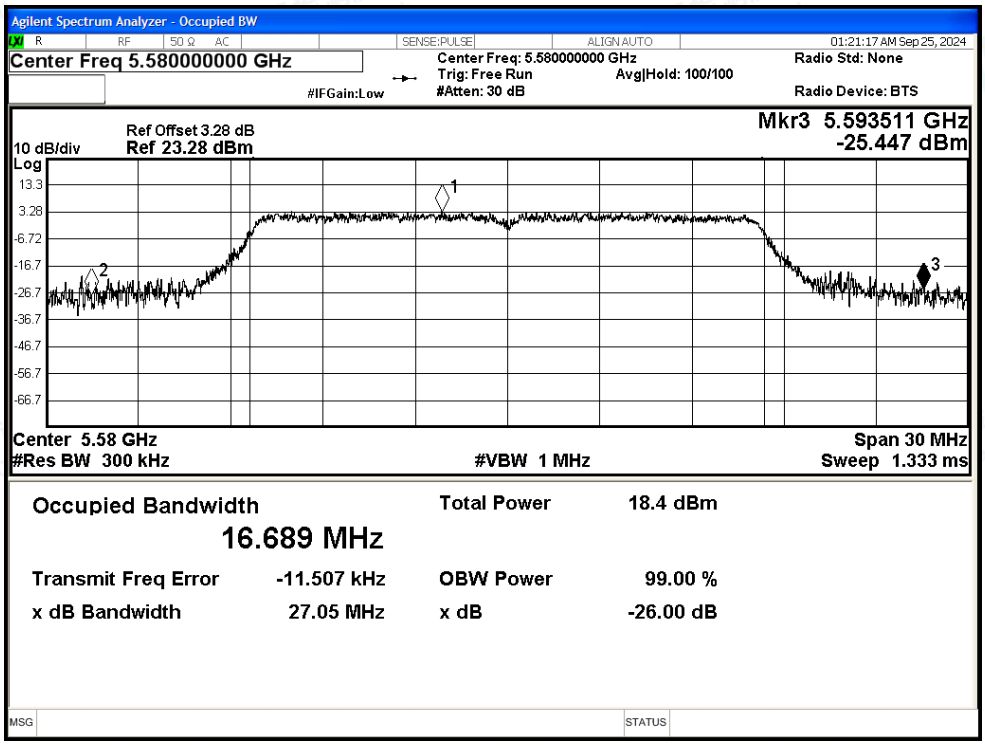
| Condition | Mode | Frequency (MHz) | Antenna | -26 dB Bandwidth (MHz) | Limit -26 dB Bandwidth (MHz) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | a | 5500 | Ant1 | 25.614 | >=0.5 | Pass |
| NVNT | a | 5580 | Ant1 | 27.046 | >=0.5 | Pass |
| NVNT | a | 5700 | Ant1 | 26.584 | >=0.5 | Pass |
| NVNT | n20 | 5500 | Ant1 | 28.579 | >=0.5 | Pass |
| NVNT | n20 | 5580 | Ant1 | 28.209 | >=0.5 | Pass |
| NVNT | n20 | 5700 | Ant1 | 28.174 | >=0.5 | Pass |
| NVNT | n40 | 5510 | Ant1 | 39.794 | >=0.5 | Pass |
| NVNT | n40 | 5550 | Ant1 | 40.468 | >=0.5 | Pass |
| NVNT | n40 | 5670 | Ant1 | 40.764 | >=0.5 | Pass |

Test Graphs

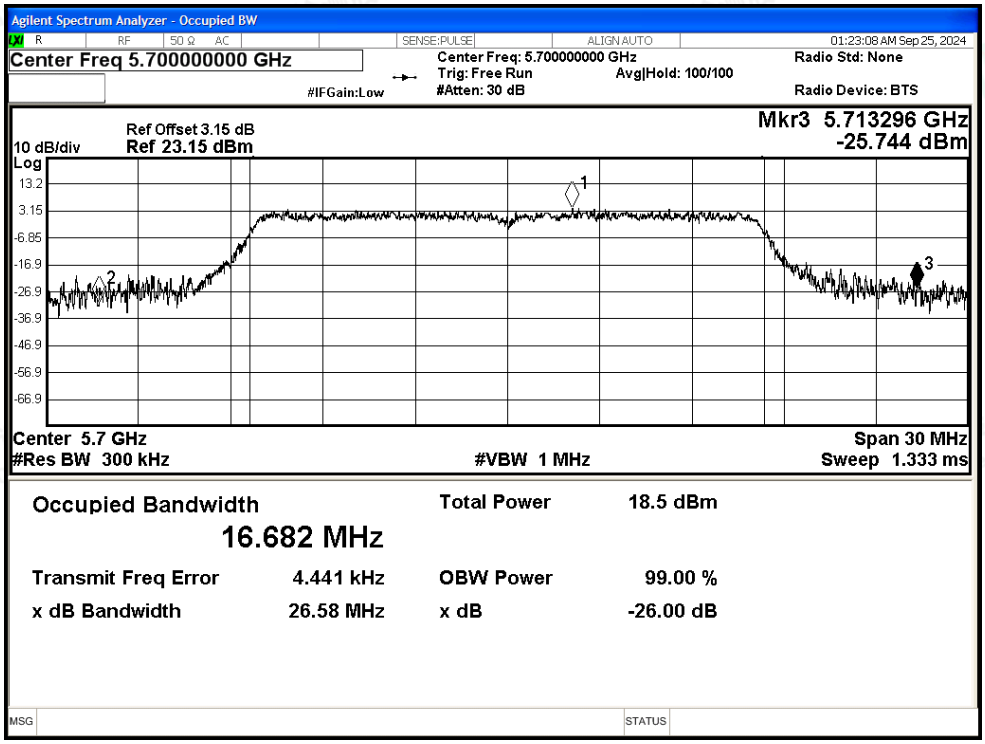
-26dB Bandwidth NVNT a 5500MHz Ant1



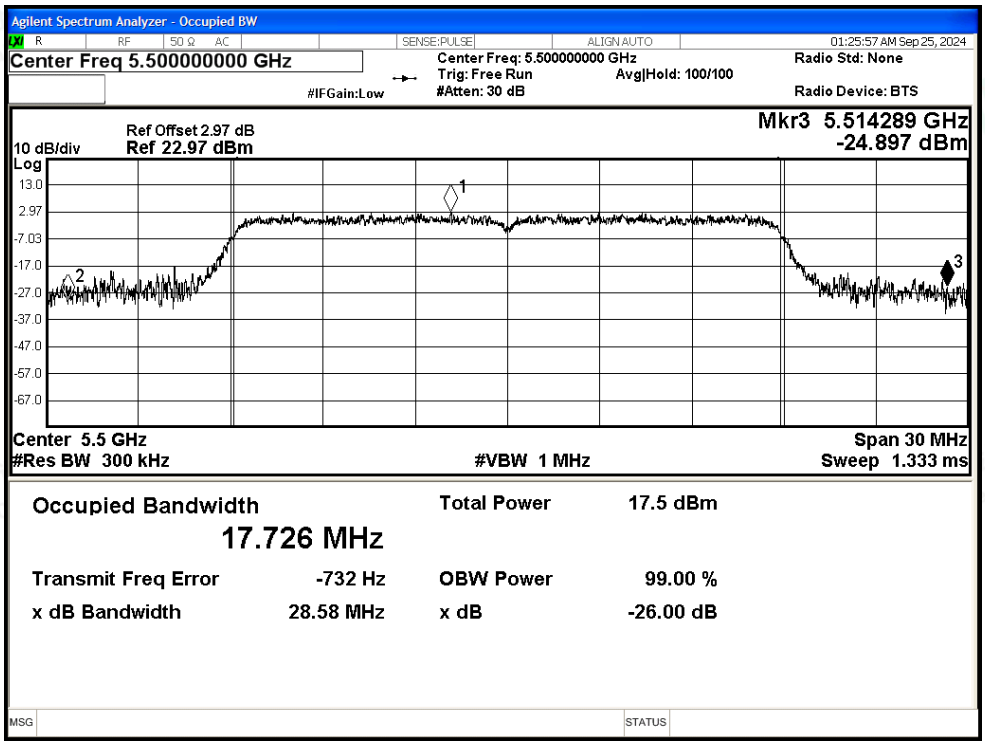

-26dB Bandwidth NVNT a 5580MHz Ant1



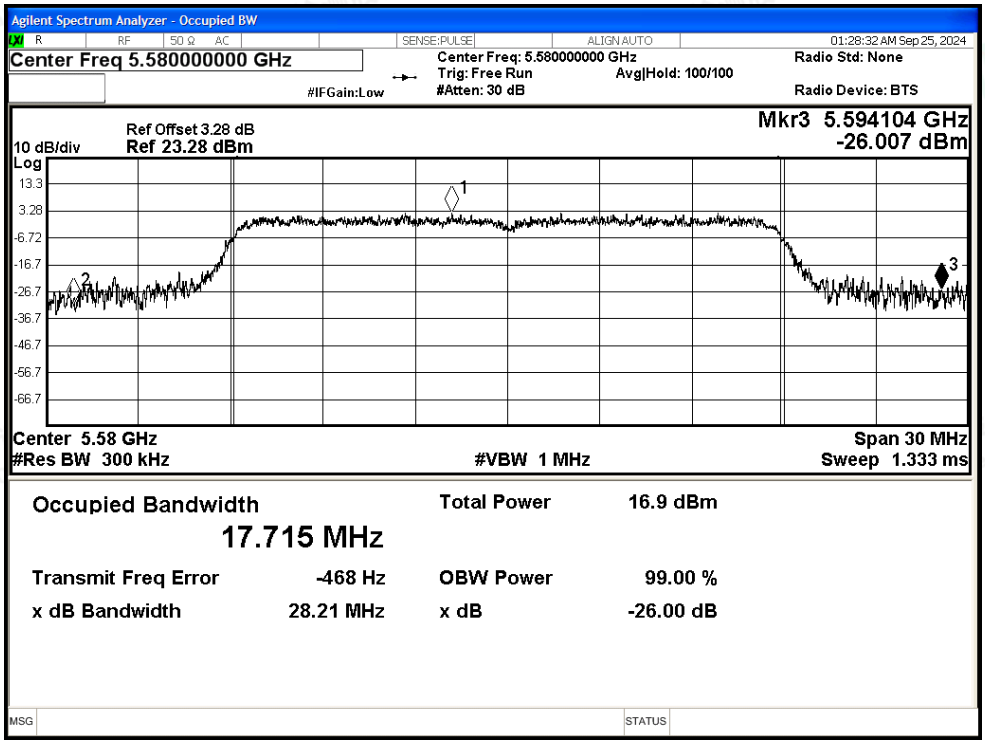
-26dB Bandwidth NVNT a 5700MHz Ant1



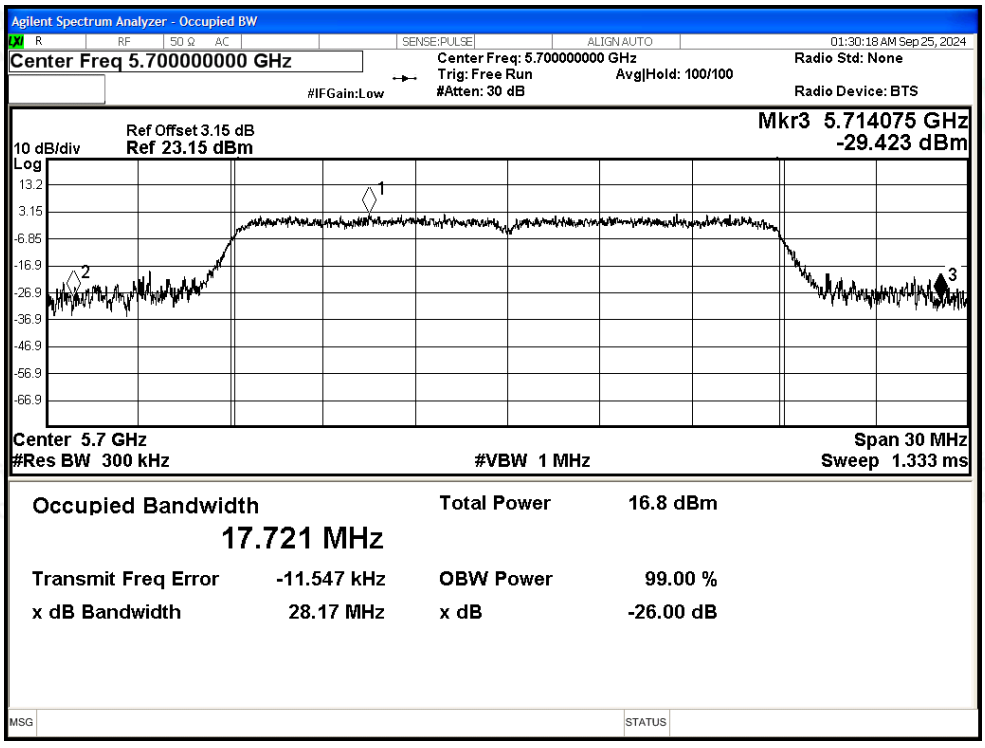

-26dB Bandwidth NVNT n20 5500MHz Ant1



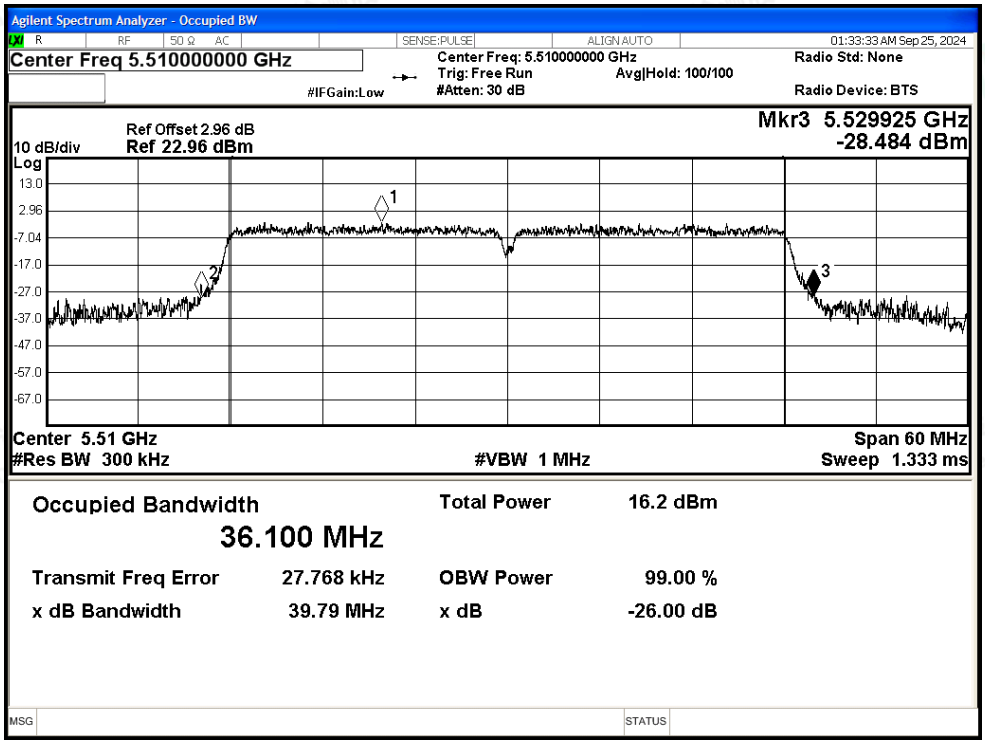
-26dB Bandwidth NVNT n20 5580MHz Ant1



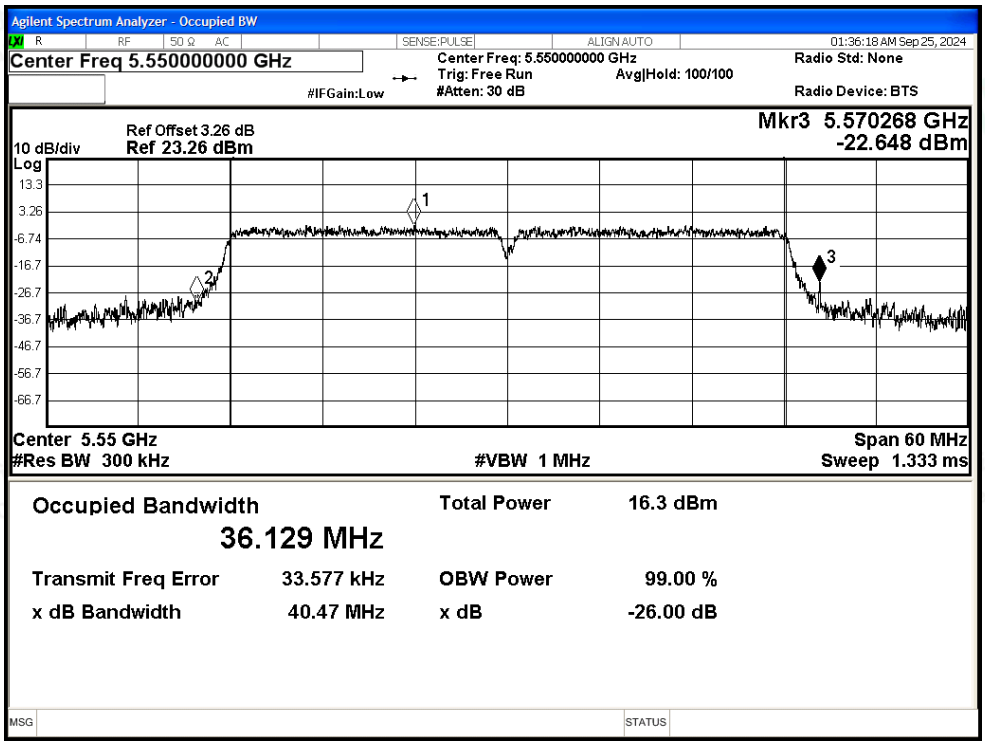

-26dB Bandwidth NVNT n20 5700MHz Ant1



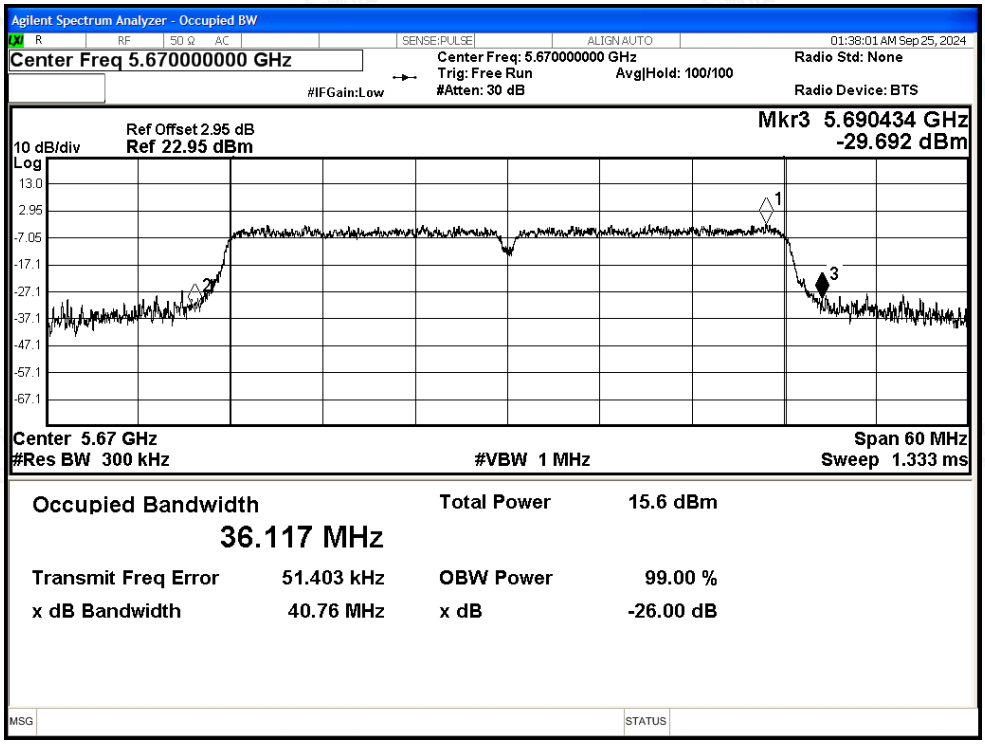
-26dB Bandwidth NVNT n40 5510MHz Ant1




-26dB Bandwidth NVNT n40 5550MHz Ant1



-26dB Bandwidth NVNT n40 5670MHz Ant1



# F.2 Maximum Conducted Output Power

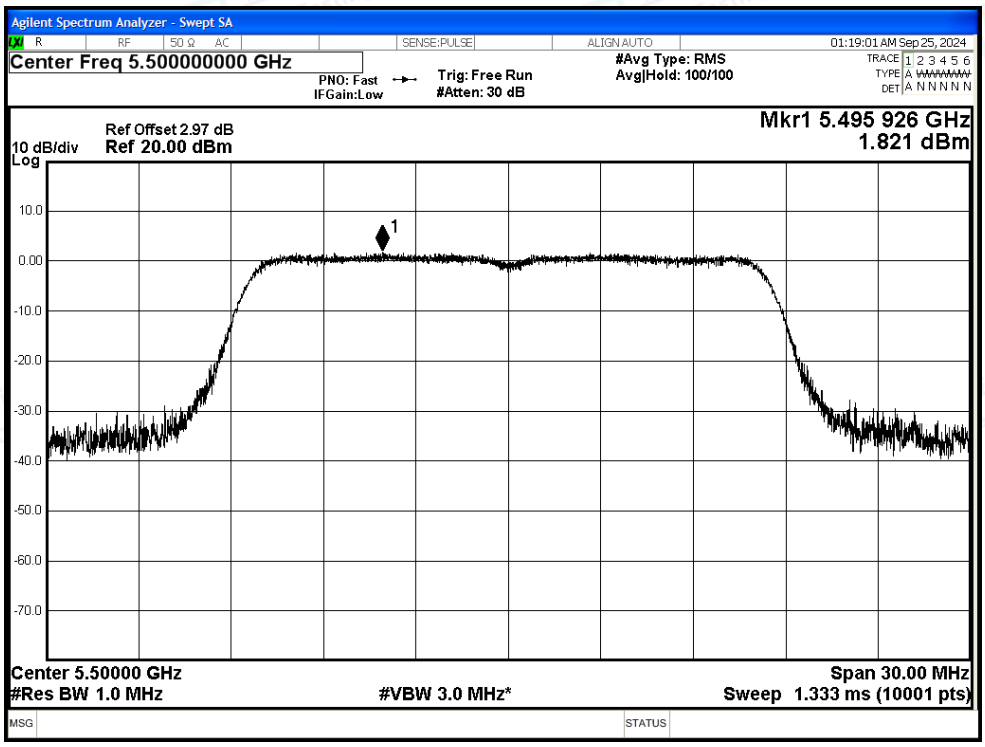
| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Duty Factor (dB) | Total Power (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| NVNT | a | 5500 | Ant1 | 12.4 | 0.24 | 12.64 | 24 | Pass |
| NVNT | a | 5580 | Ant1 | 12.73 | 0.24 | 12.97 | 24 | Pass |
| NVNT | a | 5700 | Ant1 | 12.69 | 0.24 | 12.93 | 24 | Pass |
| NVNT | n20 | 5500 | Ant1 | 11.93 | 0.12 | 12.05 | 24 | Pass |
| NVNT | n20 | 5580 | Ant1 | 11.34 | 0.12 | 11.46 | 24 | Pass |
| NVNT | n20 | 5700 | Ant1 | 11.32 | 0.12 | 11.44 | 24 | Pass |
| NVNT | n40 | 5510 | Ant1 | 10.54 | 0.12 | 10.66 | 24 | Pass |
| NVNT | n40 | 5550 | Ant1 | 10.68 | 0.12 | 10.80 | 24 | Pass |
| NVNT | n40 | 5670 | Ant1 | 10.02 | 0.12 | 10.14 | 24 | Pass |

# F.3 Maximum Power Spectral Density Level

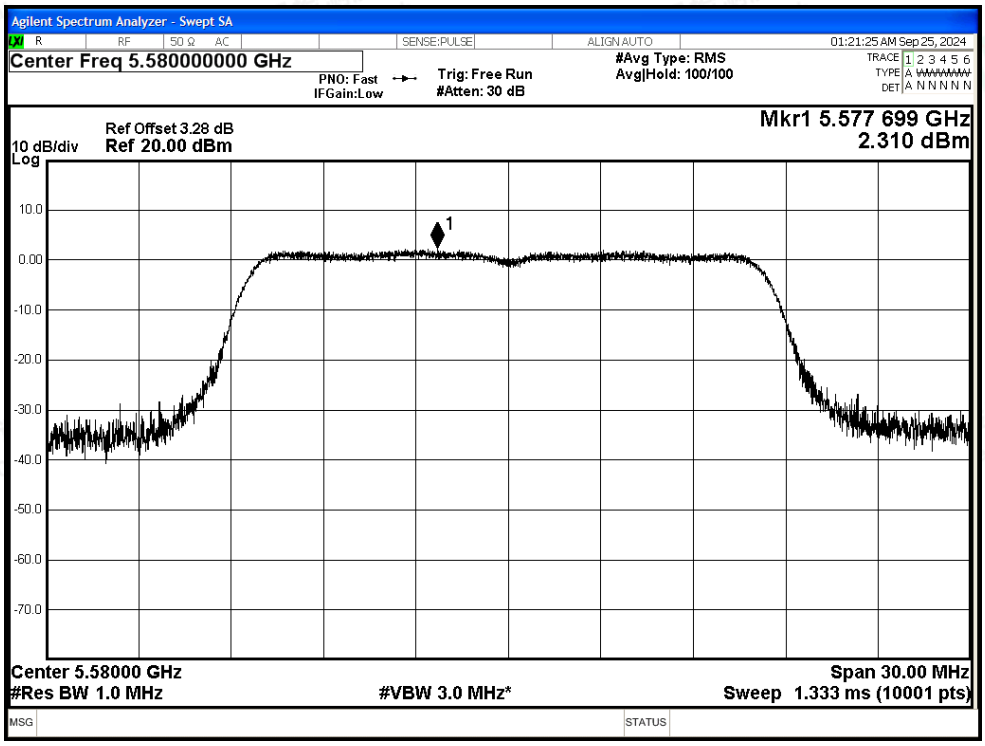
| Condition | Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm) | Duty Factor (dB) | Total PSD (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| NVNT | a | 5500 | Ant1 | 1.82 | 0.24 | 2.06 | 11 | Pass |
| NVNT | a | 5580 | Ant1 | 2.31 | 0.24 | 2.55 | 11 | Pass |
| NVNT | a | 5700 | Ant1 | 2.27 | 0.24 | 2.51 | 11 | Pass |
| NVNT | n20 | 5500 | Ant1 | 1.19 | 0.12 | 1.31 | 11 | Pass |
| NVNT | n20 | 5580 | Ant1 | 0.37 | 0.12 | 0.49 | 11 | Pass |
| NVNT | n20 | 5700 | Ant1 | 0.4 | 0.12 | 0.52 | 11 | Pass |
| NVNT | n40 | 5510 | Ant1 | -3.35 | 0.12 | -3.23 | 11 | Pass |
| NVNT | n40 | 5550 | Ant1 | -2.69 | 0.12 | -2.57 | 11 | Pass |
| NVNT | n40 | 5670 | Ant1 | -3.67 | 0.12 | -3.55 | 11 | Pass |

Test Graphs

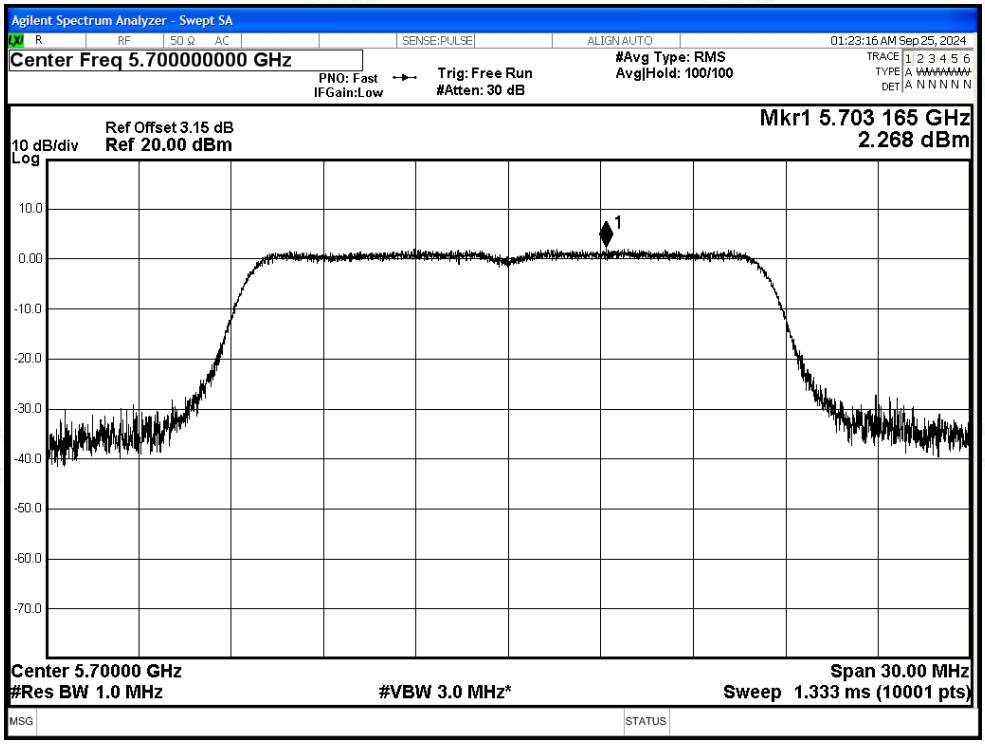
PSD NVNT a 5500MHz Ant1



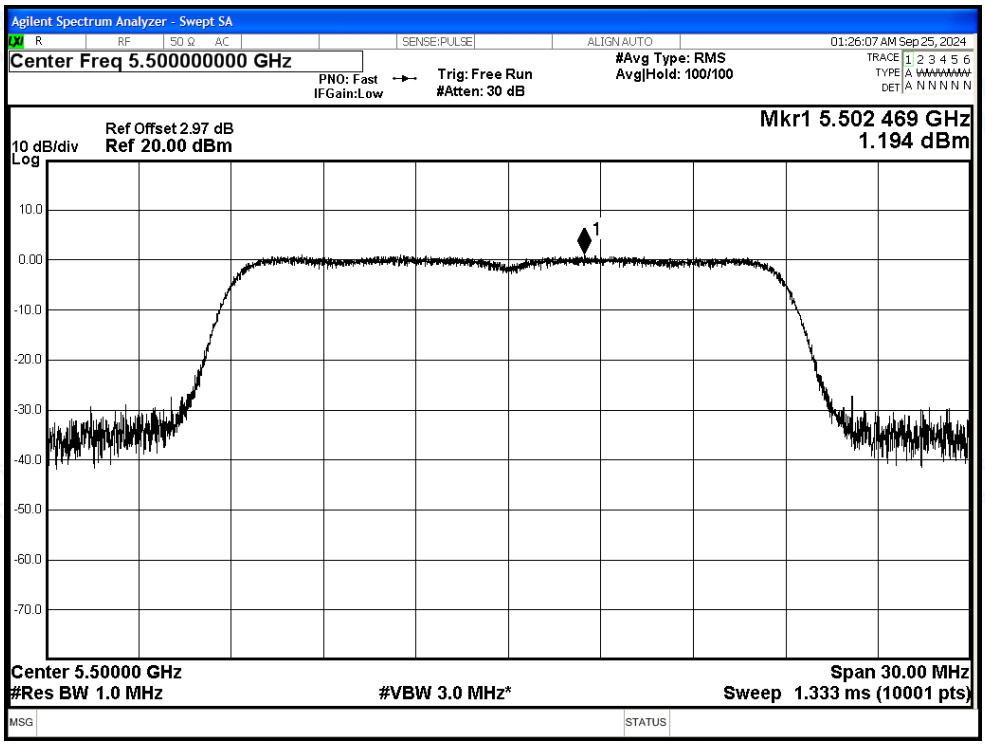

PSD NVNT a 5580MHz Ant1



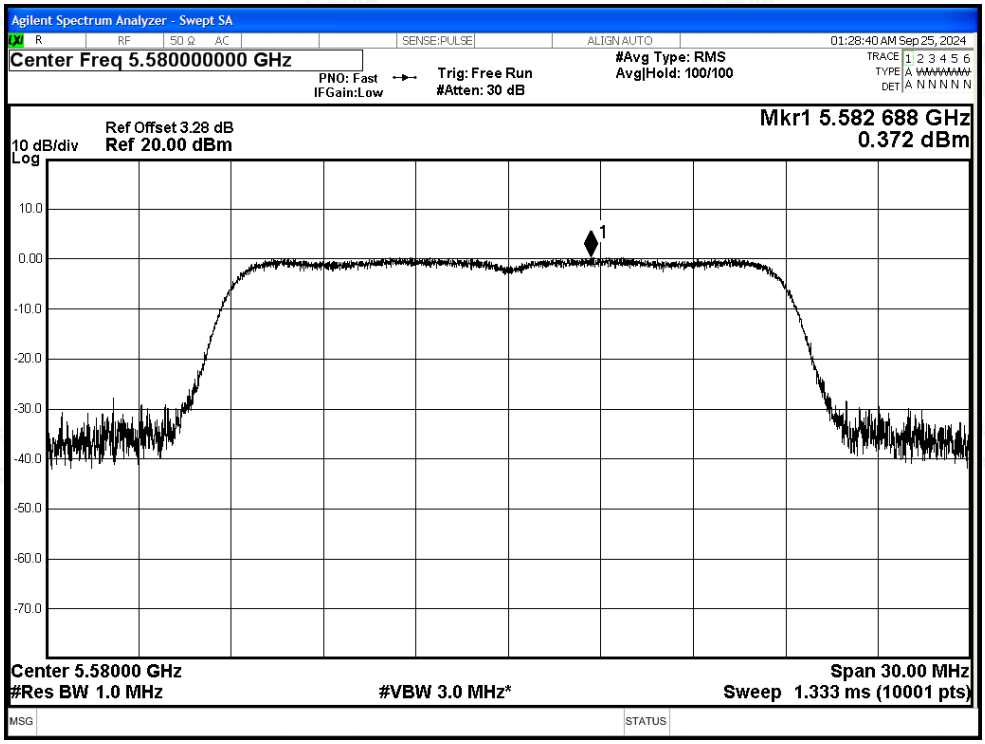
PSD NVNT a 5700MHz Ant1



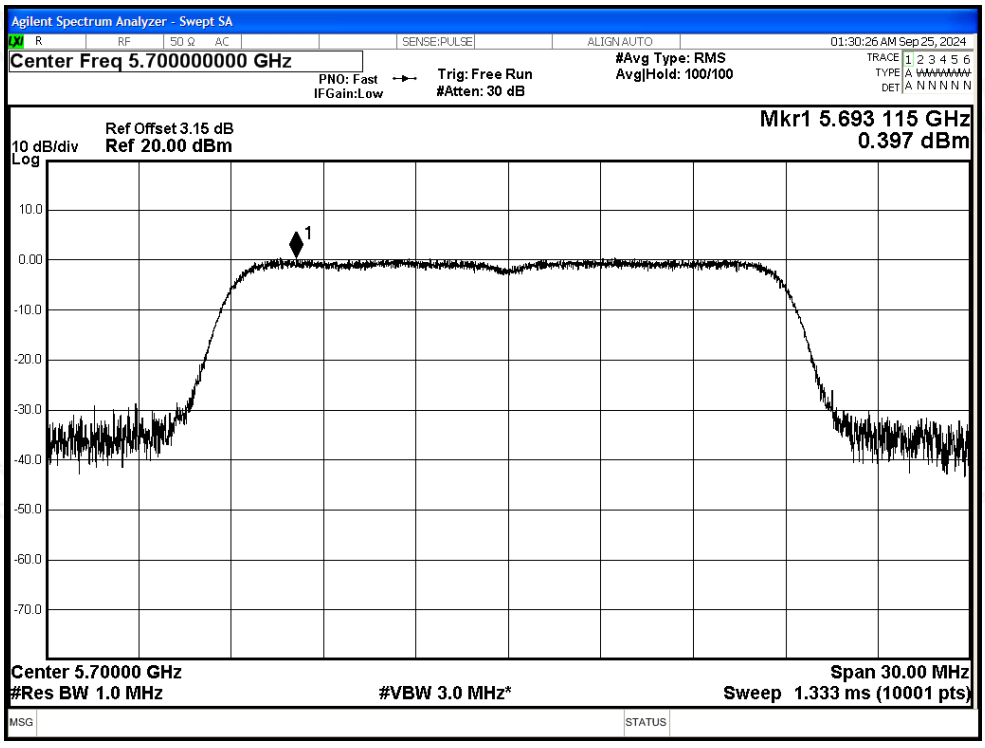

PSD NVNT n20 5500MHz Ant1



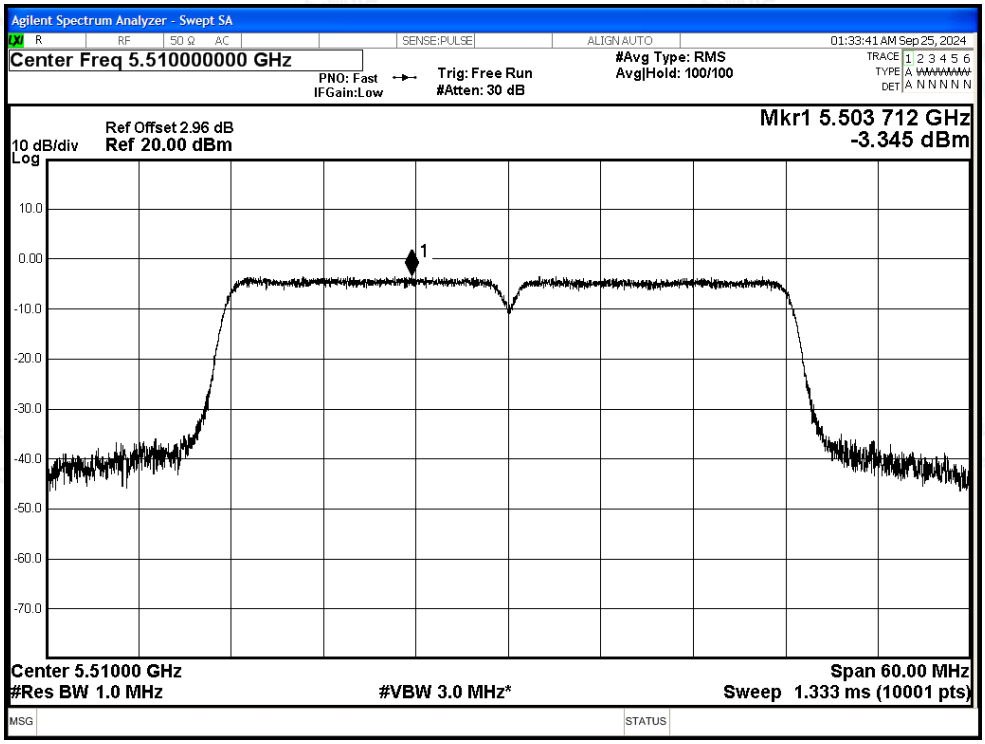
PSD NVNT n20 5580MHz Ant1



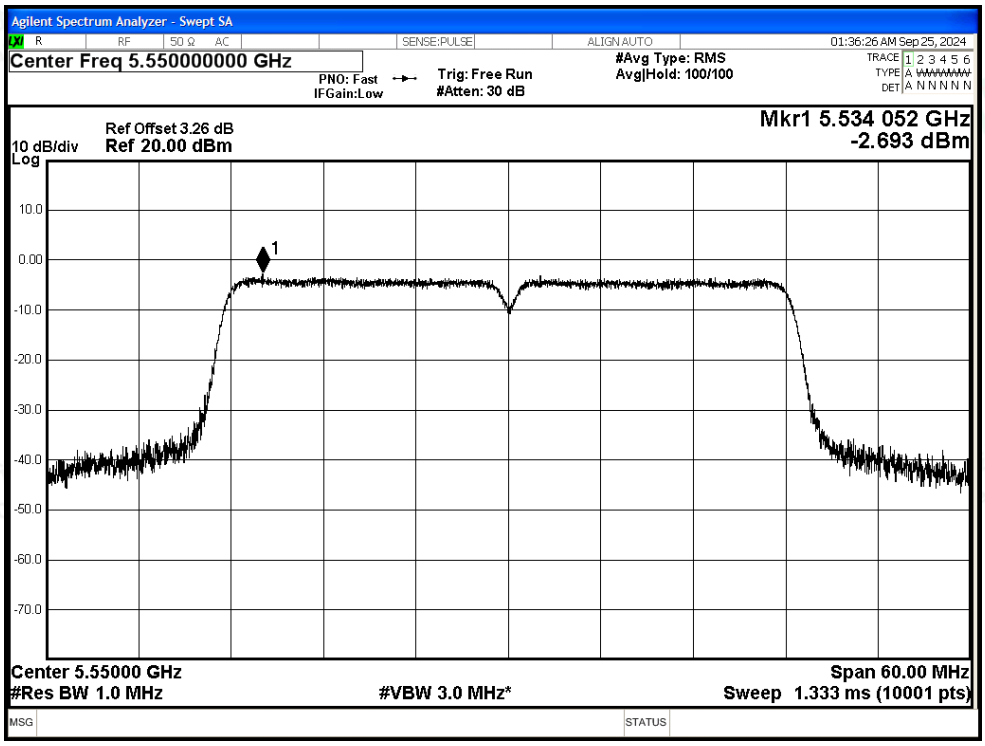

PSD NVNT n20 5700MHz Ant1



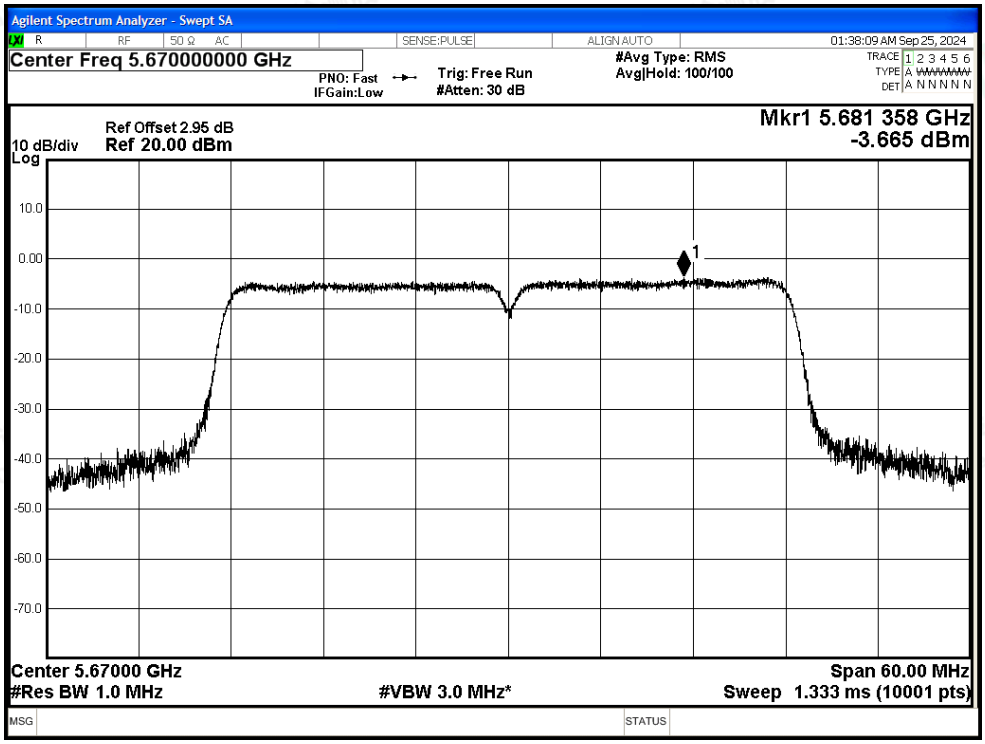
PSD NVNT n40 5510MHz Ant1




PSD NVNT n40 5550MHz Ant1



PSD NVNT n40 5670MHz Ant1

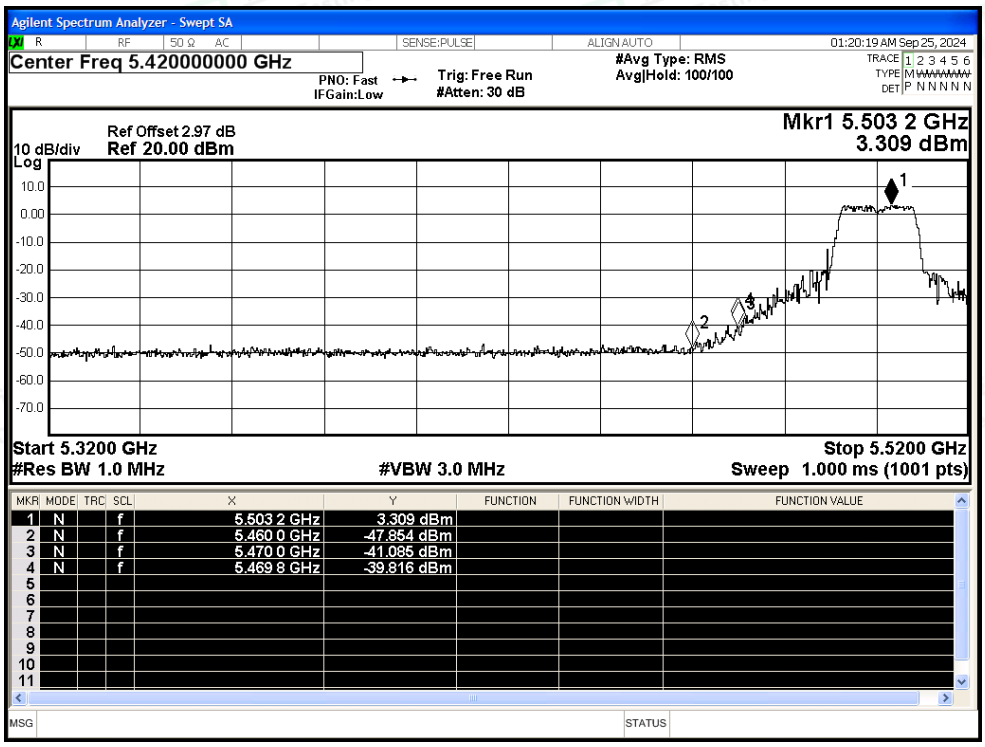


# F.4 Restrict Band

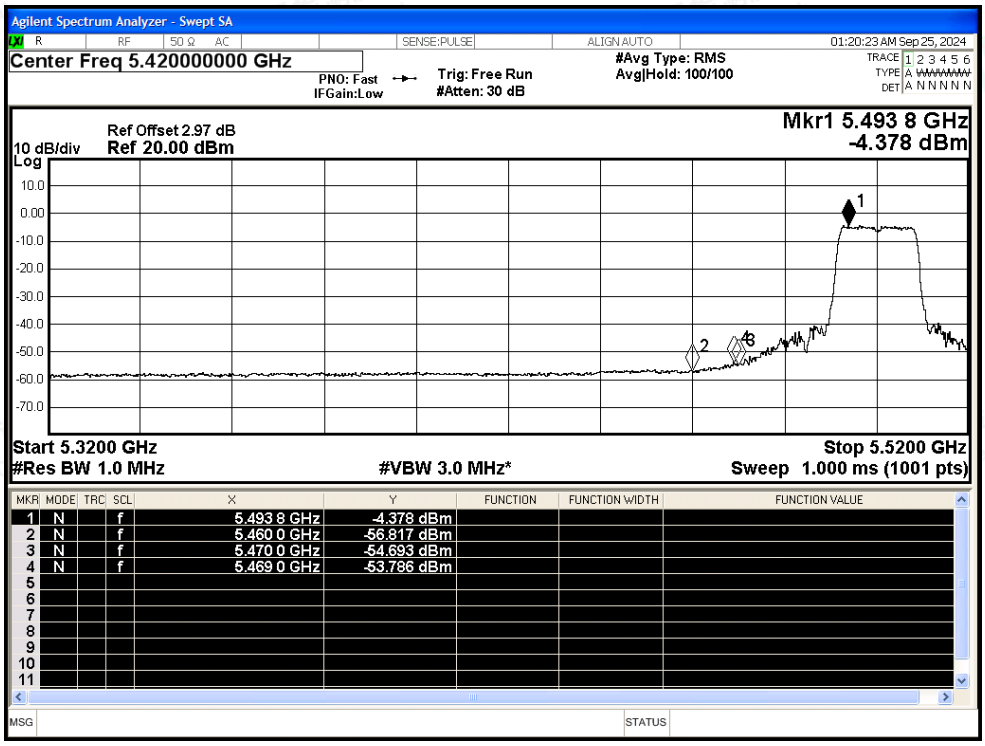
| Condition | Mode | Frequency (MHz) | Antenna | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | Duty Factor (dB) | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NVNT | a | 5500 | Ant1 | 5460 | -47.85 | 2 | - | 49.38 | Peak | 68.2 | Pass |
| NVNT | a | 5500 | Ant1 | 5460 | -56.82 | 2 | 0.24 | 40.65 | Average | 54 | Pass |
| NVNT | a | 5500 | Ant1 | 5469.8 | -39.82 | 2 | - | 57.41 | Peak | 68.2 | Pass |
| NVNT | a | 5500 | Ant1 | 5469 | -53.79 | 2 | 0.24 | 43.68 | Average | 54 | Pass |
| NVNT | a | 5500 | Ant1 | 5470 | -41.09 | 2 | - | 56.14 | Peak | 68.2 | Pass |
| NVNT | a | 5500 | Ant1 | 5470 | -54.69 | 2 | 0.24 | 42.78 | Average | 54 | Pass |
| NVNT | a | 5700 | Ant1 | 5725 | -38 | 2 | - | 59.23 | Peak | 68.2 | Pass |
| NVNT | a | 5700 | Ant1 | 5725 | -52.68 | 2 | 0.24 | 44.79 | Average | 54 | Pass |
| NVNT | a | 5700 | Ant1 | 5726.4 | -52.56 | 2 | 0.24 | 44.91 | Average | 54 | Pass |
| NVNT | a | 5700 | Ant1 | 5735 | -48.23 | 2 | - | 49 | Peak | 68.2 | Pass |
| NVNT | a | 5700 | Ant1 | 5735 | -57.05 | 2 | 0.24 | 40.42 | Average | 54 | Pass |
| NVNT | n20 | 5500 | Ant1 | 5460 | -48.48 | 2 | - | 48.75 | Peak | 68.2 | Pass |
| NVNT | n20 | 5500 | Ant1 | 5460 | -57.36 | 2 | 0.12 | 39.99 | Average | 54 | Pass |
| NVNT | n20 | 5500 | Ant1 | 5468 | -38.99 | 2 | - | 58.24 | Peak | 68.2 | Pass |
| NVNT | n20 | 5500 | Ant1 | 5470 | -54.79 | 2 | 0.12 | 42.56 | Average | 54 | Pass |
| NVNT | n20 | 5500 | Ant1 | 5470 | -42.56 | 2 | - | 54.67 | Peak | 68.2 | Pass |
| NVNT | n20 | 5700 | Ant1 | 5725 | -42.02 | 2 | - | 55.21 | Peak | 68.2 | Pass |
| NVNT | n20 | 5700 | Ant1 | 5725 | -54.67 | 2 | 0.12 | 42.68 | Average | 54 | Pass |
| NVNT | n20 | 5700 | Ant1 | 5725.8 | -38.28 | 2 | - | 58.95 | Peak | 68.2 | Pass |
| NVNT | n20 | 5700 | Ant1 | 5725.2 | -51.96 | 2 | 0.12 | 45.39 | Average | 54 | Pass |
| NVNT | n20 | 5700 | Ant1 | 5735 | -49.99 | 2 | - | 47.24 | Peak | 68.2 | Pass |
| NVNT | n20 | 5700 | Ant1 | 5735 | -57.36 | 2 | 0.12 | 39.99 | Average | 54 | Pass |
| NVNT | n40 | 5510 | Ant1 | 5460 | -46.49 | 2 | - | 50.74 | Peak | 68.2 | Pass |
| NVNT | n40 | 5510 | Ant1 | 5460 | -56.25 | 2 | 0.12 | 41.1 | Average | 54 | Pass |
| NVNT | n40 | 5510 | Ant1 | 5469.8 | -39.26 | 2 | - | 57.97 | Peak | 68.2 | Pass |
| NVNT | n40 | 5510 | Ant1 | 5470 | -51.38 | 2 | 0.12 | 45.97 | Average | 54 | Pass |
| NVNT | n40 | 5510 | Ant1 | 5470 | -39.92 | 2 | - | 57.31 | Peak | 68.2 | Pass |
| NVNT | n40 | 5670 | Ant1 | 5725 | -47.17 | 2 | - | 50.06 | Peak | 68.2 | Pass |
| NVNT | n40 | 5670 | Ant1 | 5725 | -55.91 | 2 | 0.12 | 41.44 | Average | 54 | Pass |
| NVNT | n40 | 5670 | Ant1 | 5729.6 | -46.2 | 2 | - | 51.03 | Peak | 68.2 | Pass |
| NVNT | n40 | 5670 | Ant1 | 5725.2 | -55.79 | 2 | 0.12 | 41.56 | Average | 54 | Pass |
| NVNT | n40 | 5670 | Ant1 | 5735 | -48.53 | 2 | - | 48.7 | Peak | 68.2 | Pass |
| NVNT | n40 | 5670 | Ant1 | 5735 | -56.51 | 2 | 0.12 | 40.84 | Average | 54 | Pass |

Test Graphs

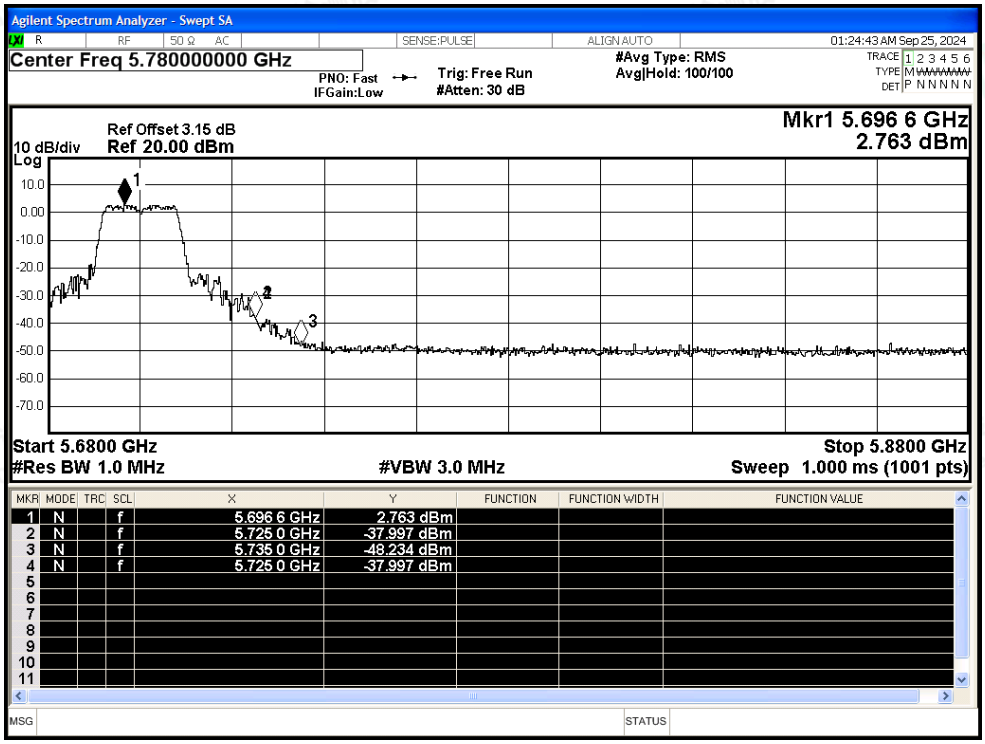
Restrict Band NVNT a 5500MHz Ant1 Peak



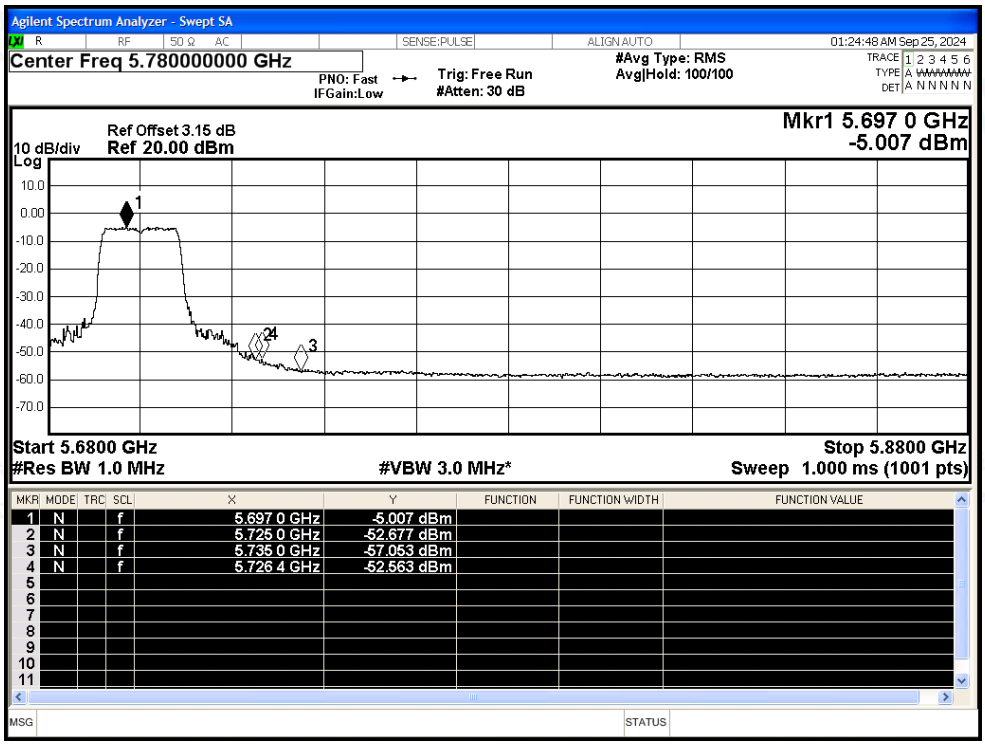

Restrict Band NVNT a 5500MHz Ant1 Average



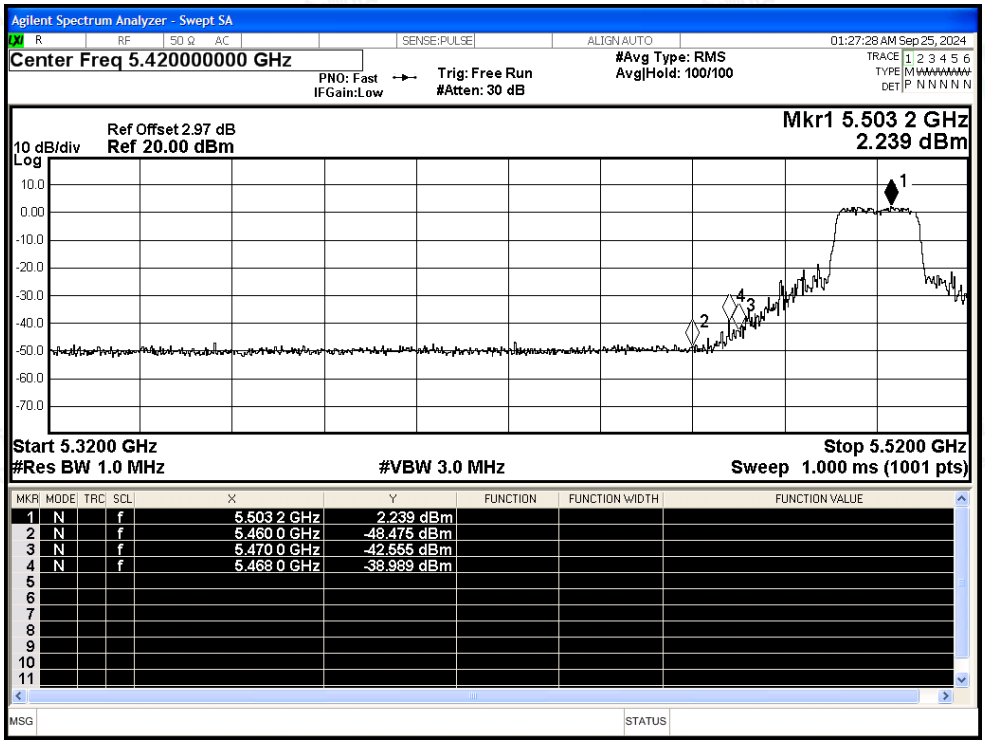
Restrict Band NVNT a 5700MHz Ant1 Peak



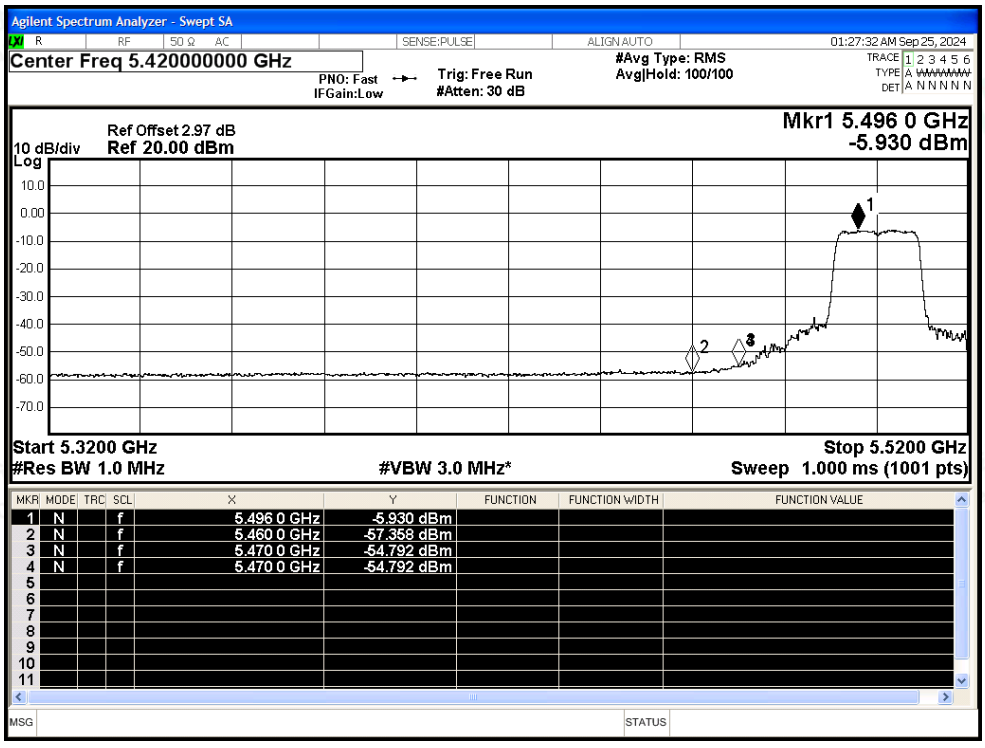

Restrict Band NVNT a 5700MHz Ant1 Average



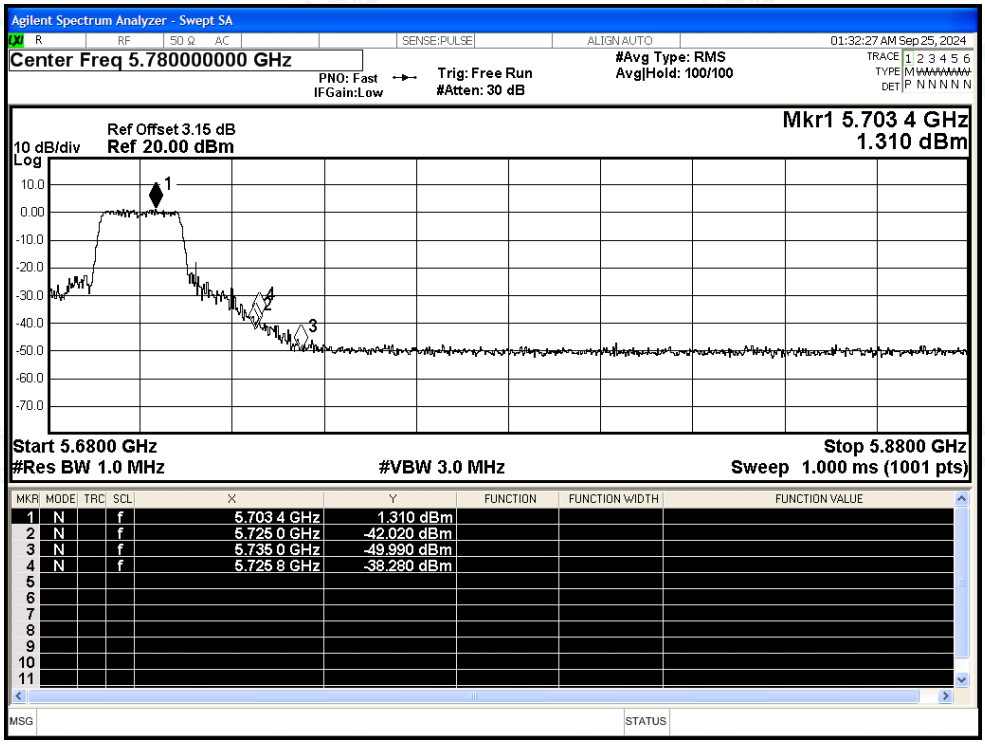
Restrict Band NVNT n20 5500MHz Ant1 Peak



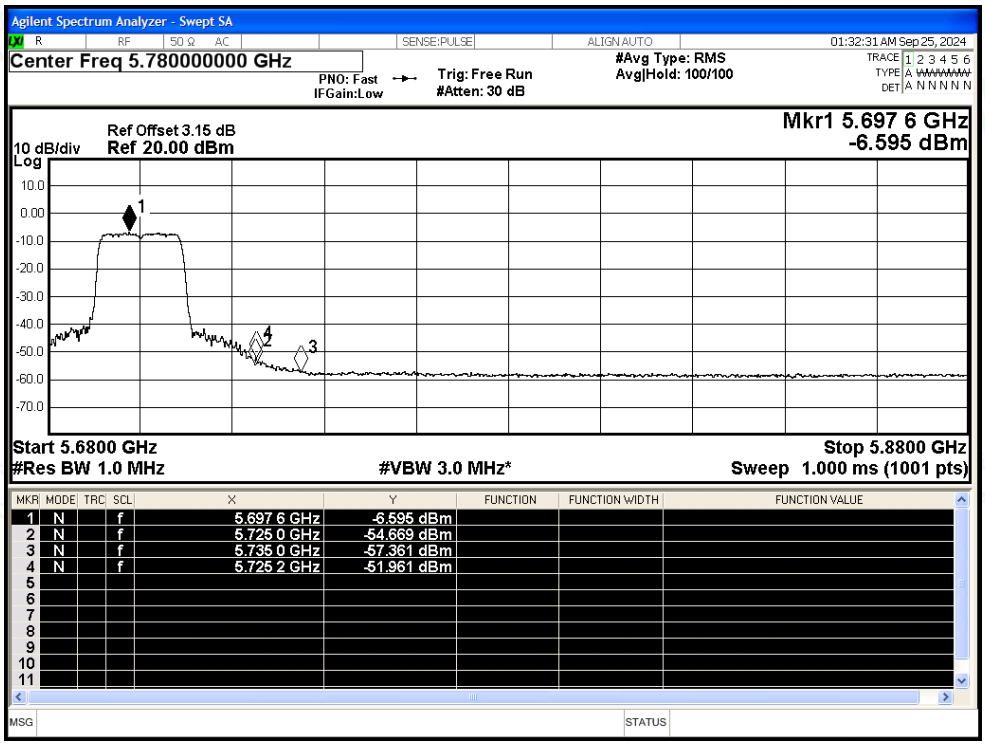

Restrict Band NVNT n20 5500MHz Ant1 Average



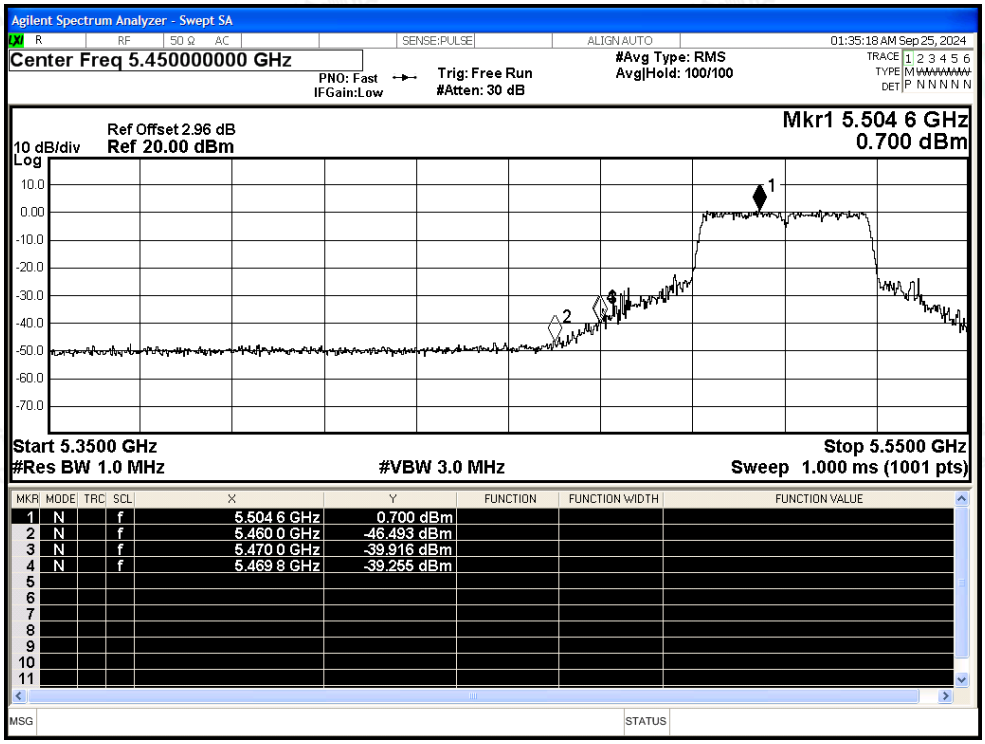
Restrict Band NVNT n20 5700MHz Ant1 Peak



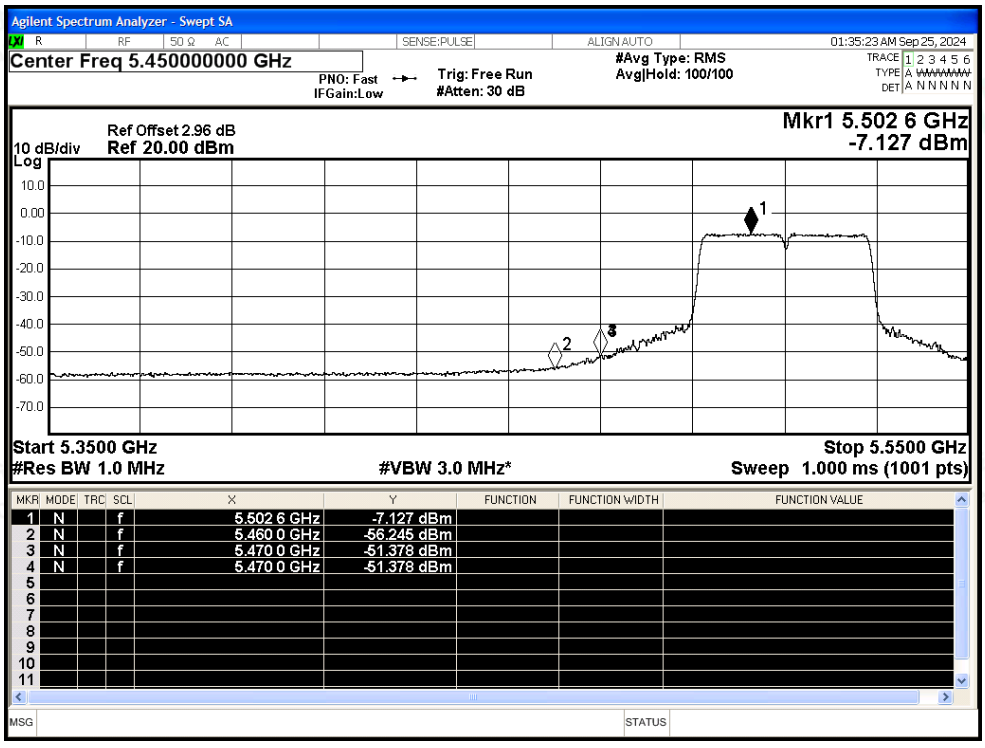

Restrict Band NVNT n20 5700MHz Ant1 Average



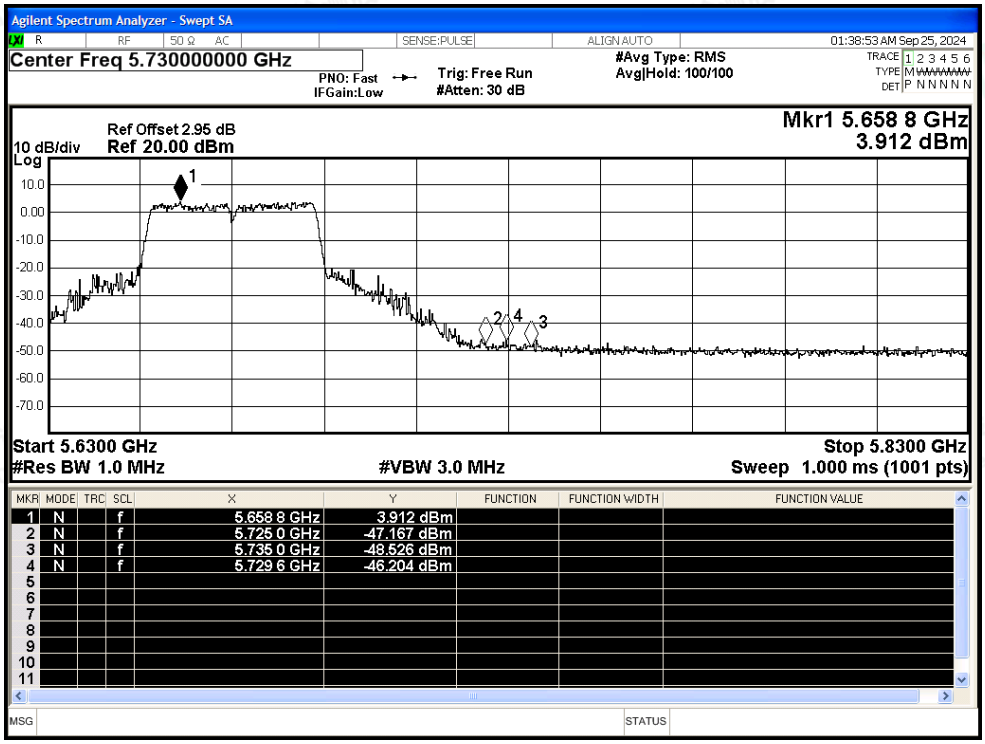
Restrict Band NVNT n40 5510MHz Ant1 Peak



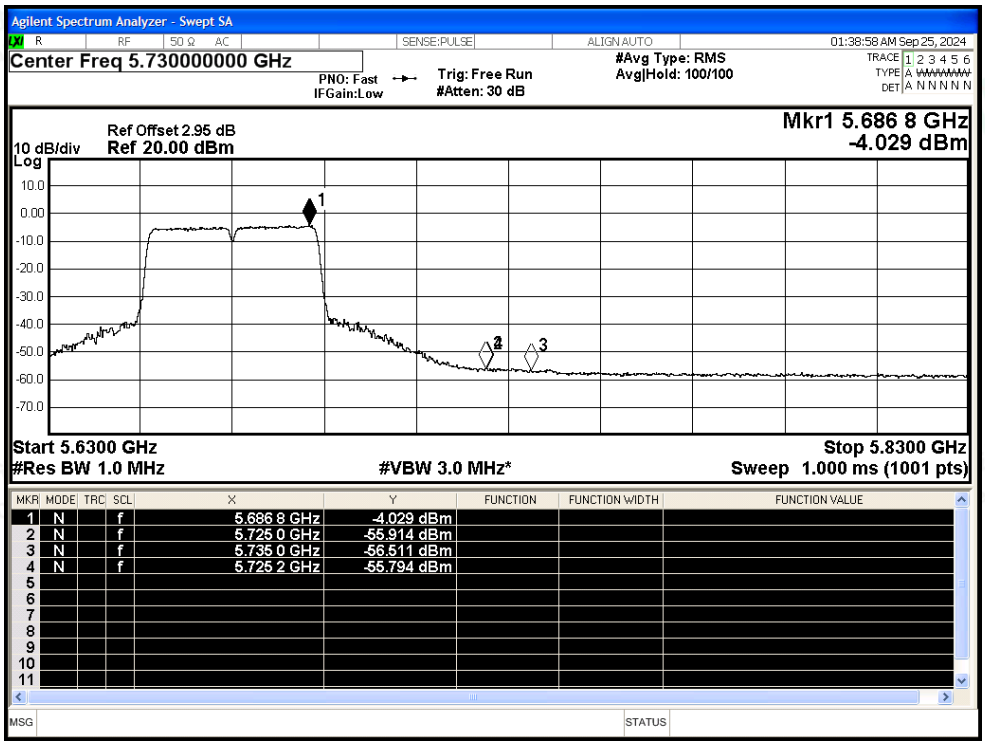

Restrict Band NVNT n40 5510MHz Ant1 Average



Restrict Band NVNT n40 5670MHz Ant1 Peak




Restrict Band NVNT n40 5670MHz Ant1 Average

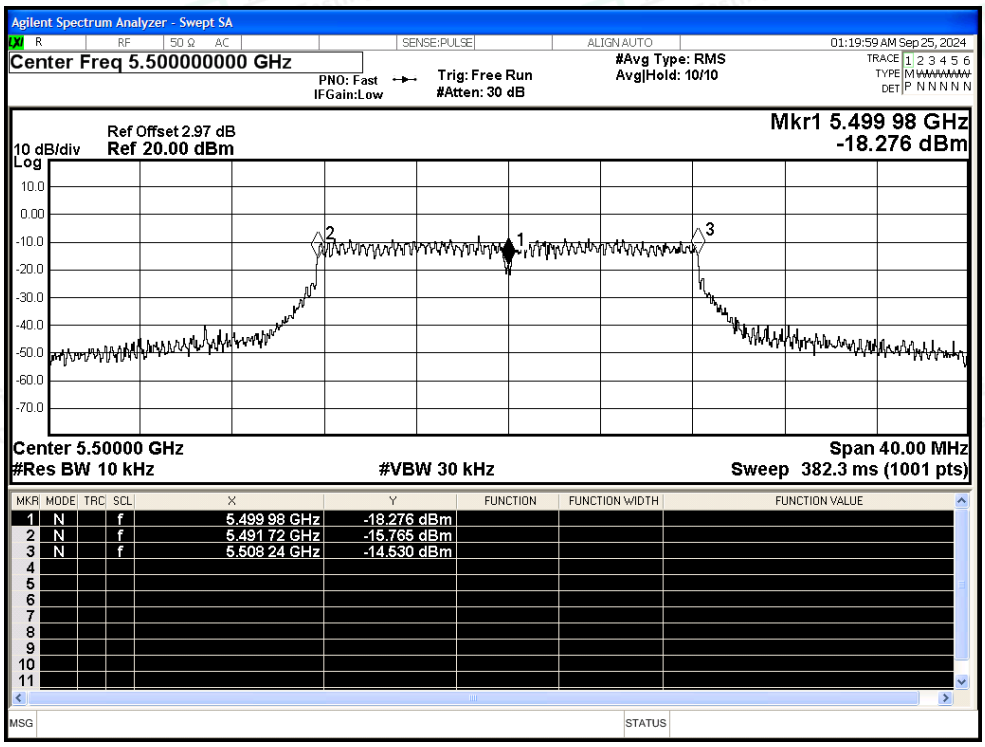


# F.5 Frequency Stability

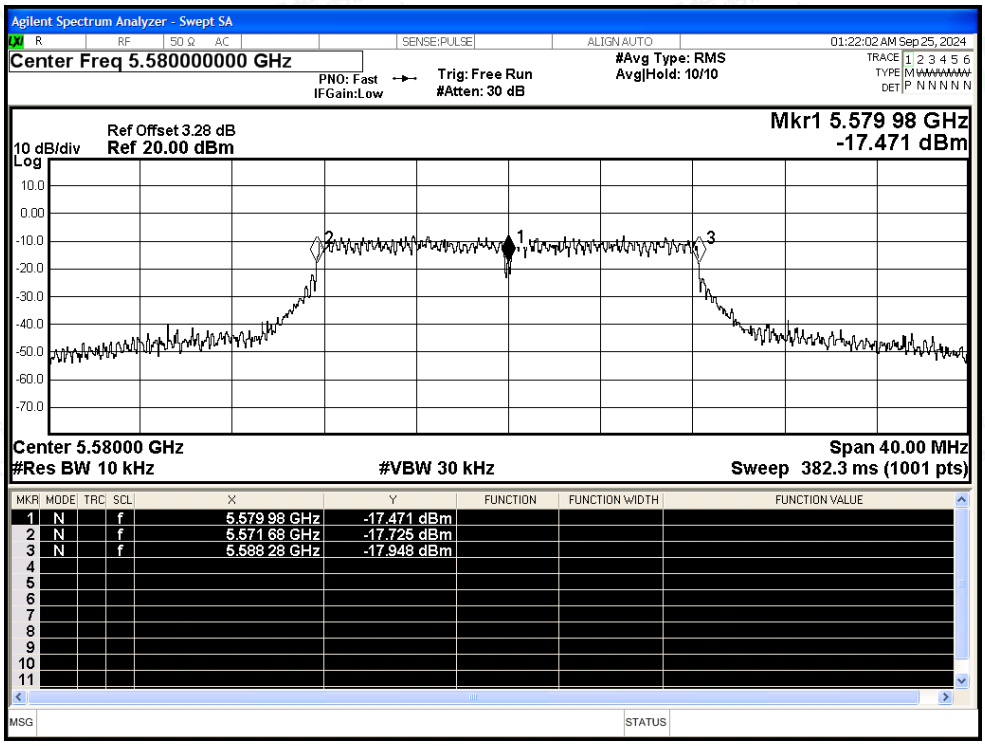
| Condition | Mode | Frequency (MHz) | Antenna | Measured Frequency (MHz) | Frequency Error (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| NVNT | a | 5500 | Ant1 | 5499.98 | -20000 | -3.64 | 25 | Pass |
| NVNT | a | 5580 | Ant1 | 5579.98 | -20000 | -3.58 | 25 | Pass |
| NVNT | a | 5700 | Ant1 | 5699.98 | -20000 | -3.51 | 25 | Pass |
| NVNT | n20 | 5500 | Ant1 | 5499.98 | -20000 | -3.64 | 25 | Pass |
| NVNT | n20 | 5580 | Ant1 | 5579.96 | -40000 | -7.17 | 25 | Pass |
| NVNT | n20 | 5700 | Ant1 | 5699.96 | -40000 | -7.02 | 25 | Pass |
| NVNT | n40 | 5510 | Ant1 | 5510 | 0 | 0 | 25 | Pass |
| NVNT | n40 | 5550 | Ant1 | 5549.96 | -40000 | -7.21 | 25 | Pass |
| NVNT | n40 | 5670 | Ant1 | 5670 | 0 | 0 | 25 | Pass |

Test Graphs

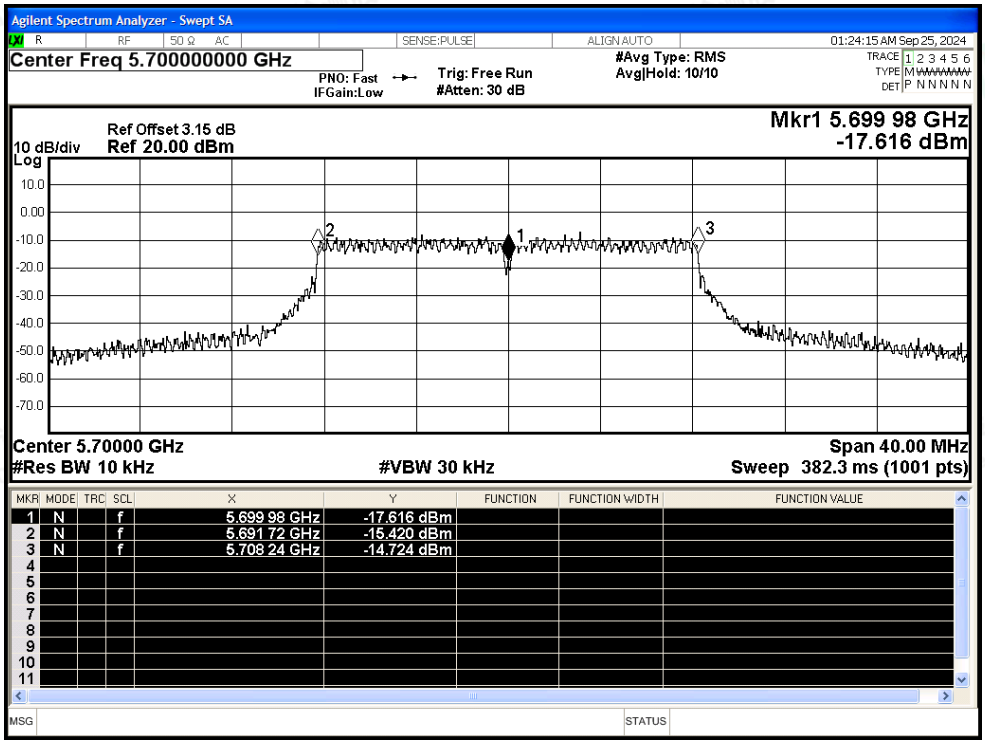
Freq. Stability NVNT a 5500MHz Ant1



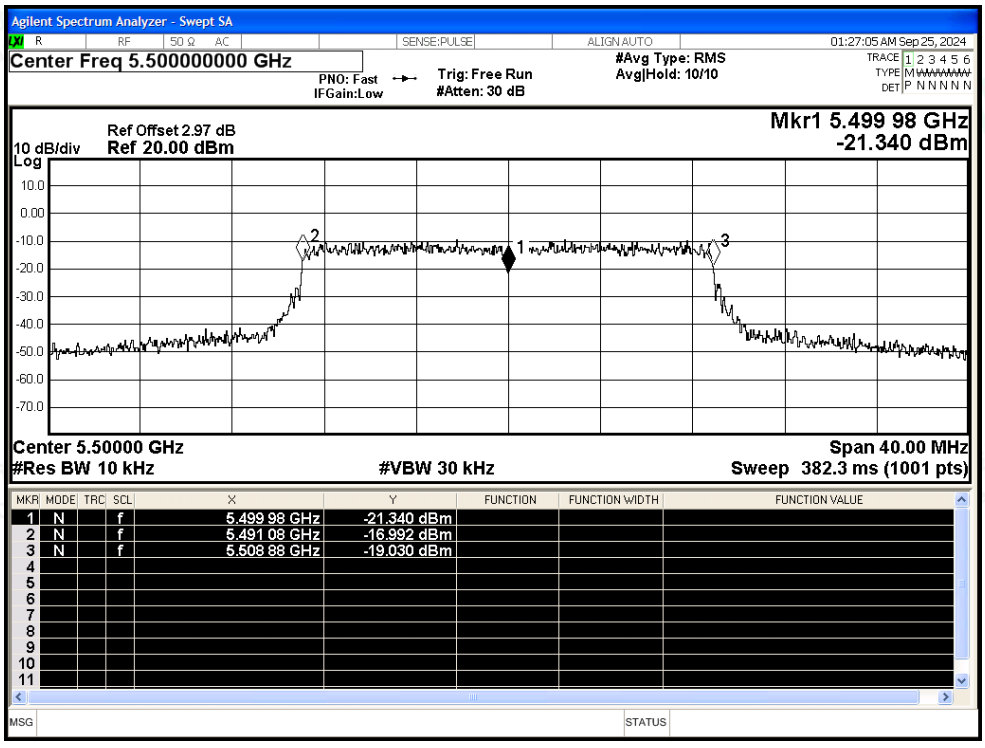

Freq. Stability NVNT a 5580MHz Ant1



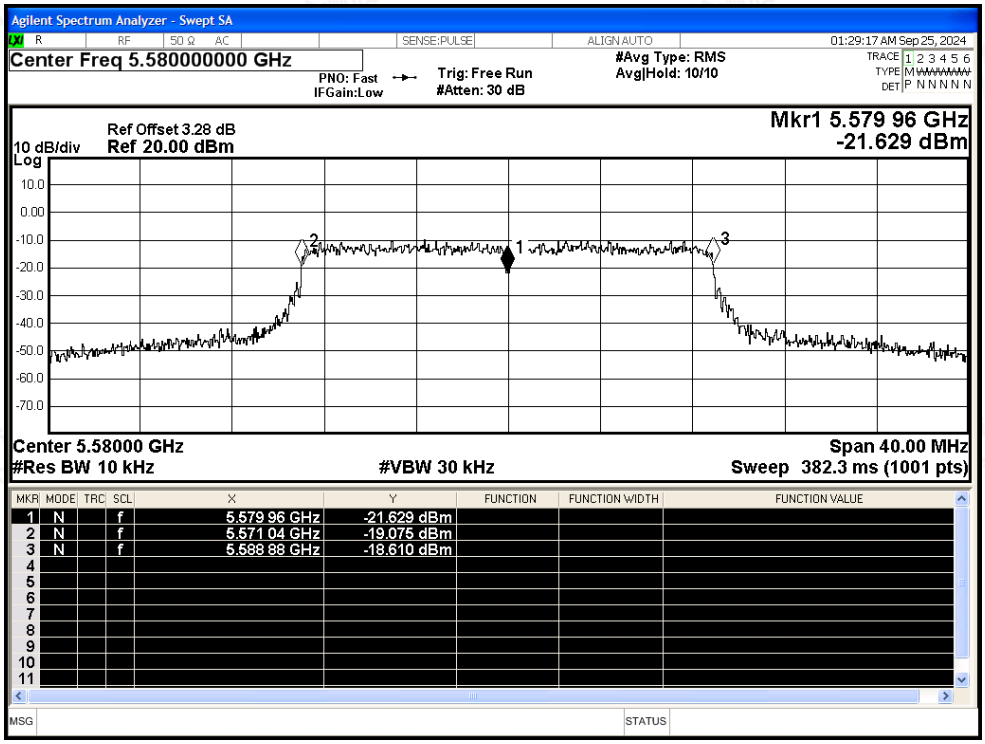
Freq. Stability NVNT a 5700MHz Ant1



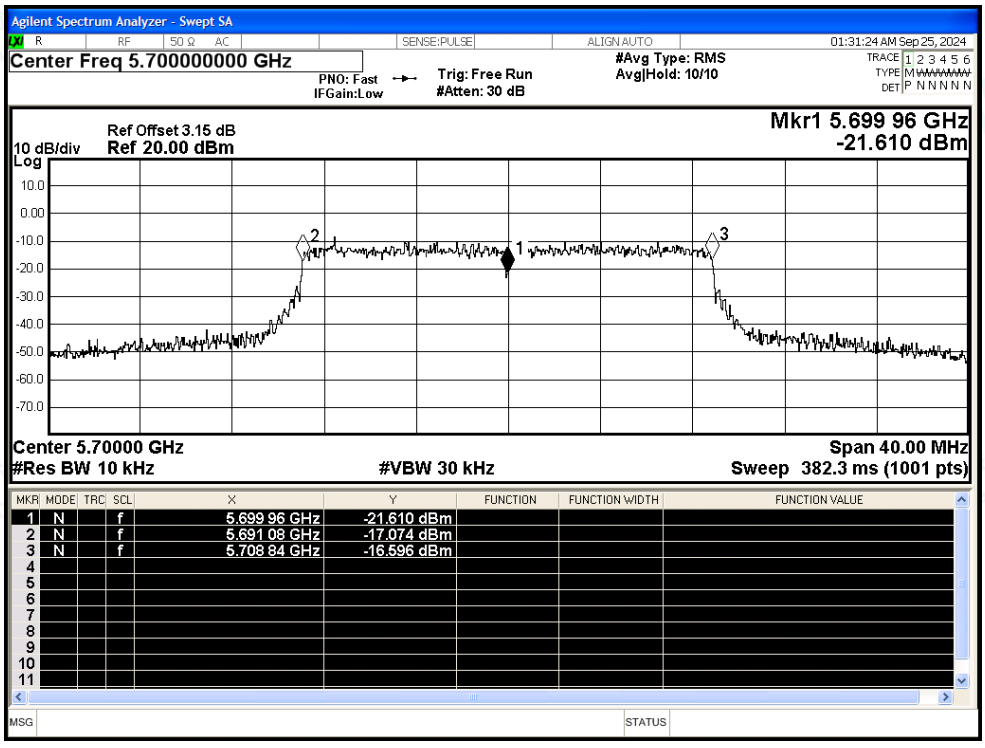

Freq. Stability NVNT n20 5500MHz Ant1



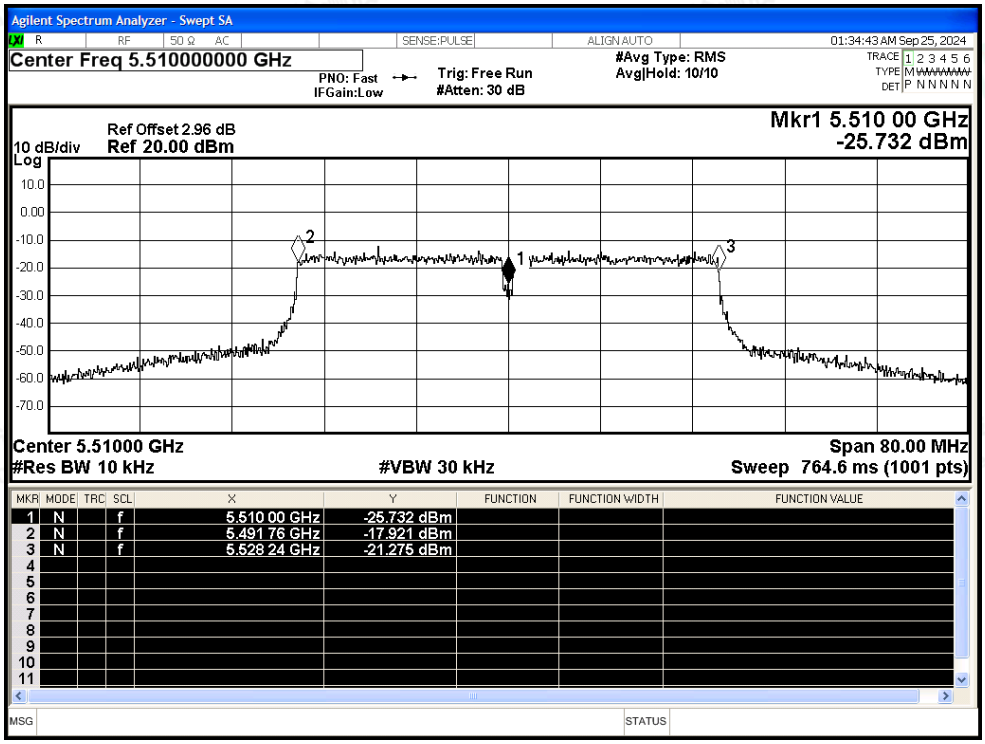
Freq. Stability NVNT n20 5580MHz Ant1



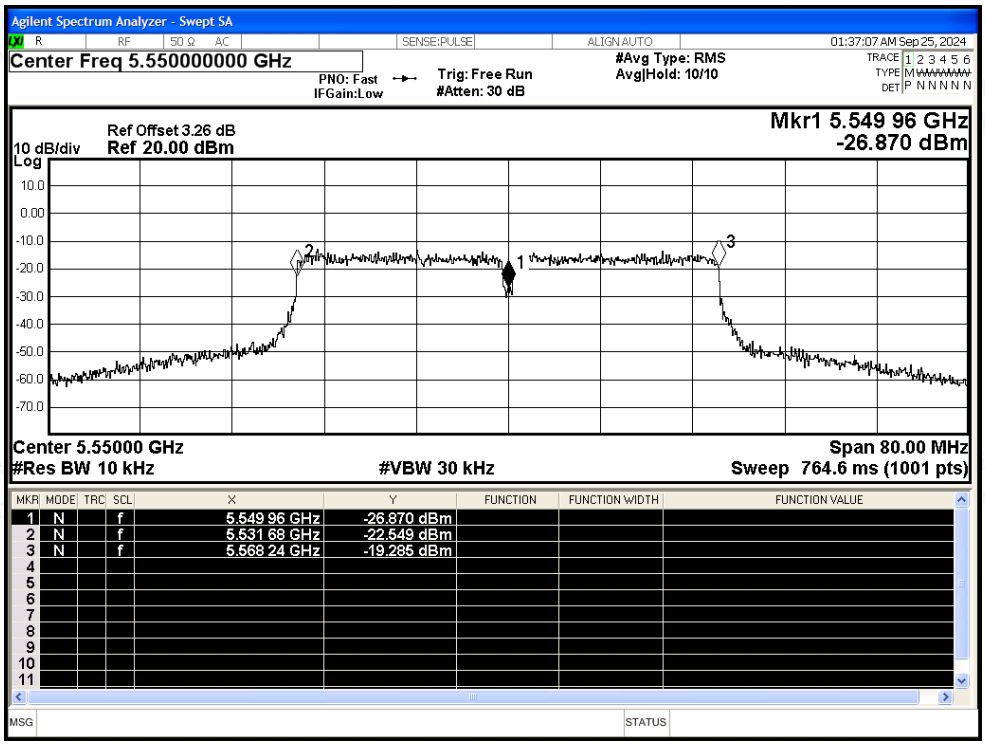

Freq. Stability NVNT n20 5700MHz Ant1



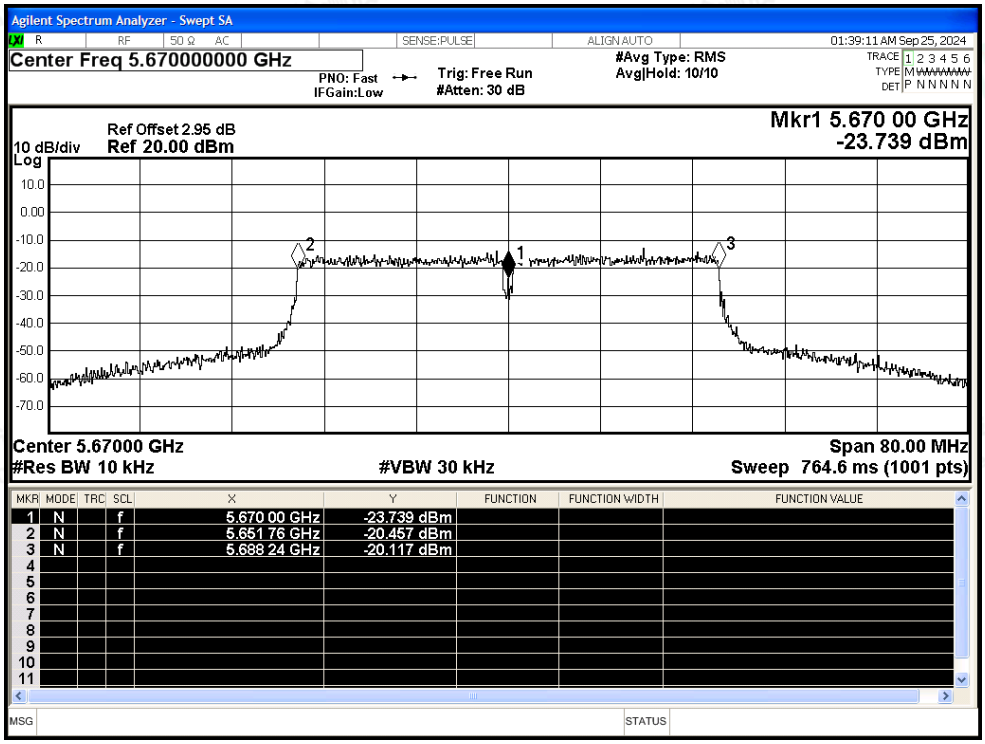
Freq. Stability NVNT n40 5510MHz Ant1




Freq. Stability NVNT n40 5550MHz Ant1



Freq. Stability NVNT n40 5670MHz Ant1

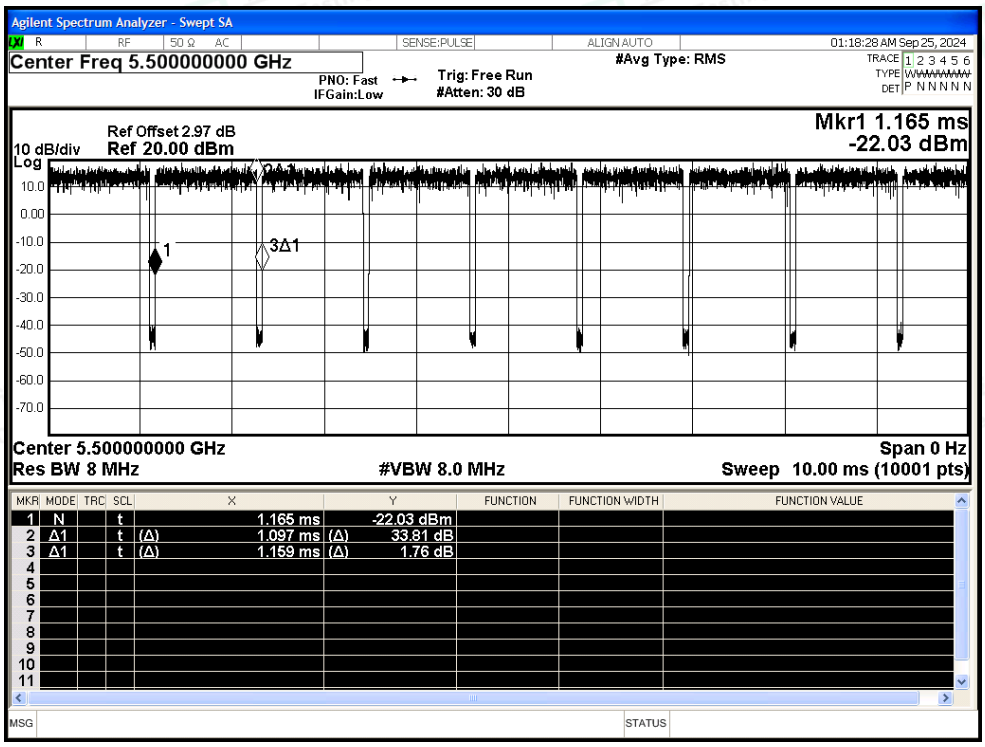


# F.6 Duty Cycle

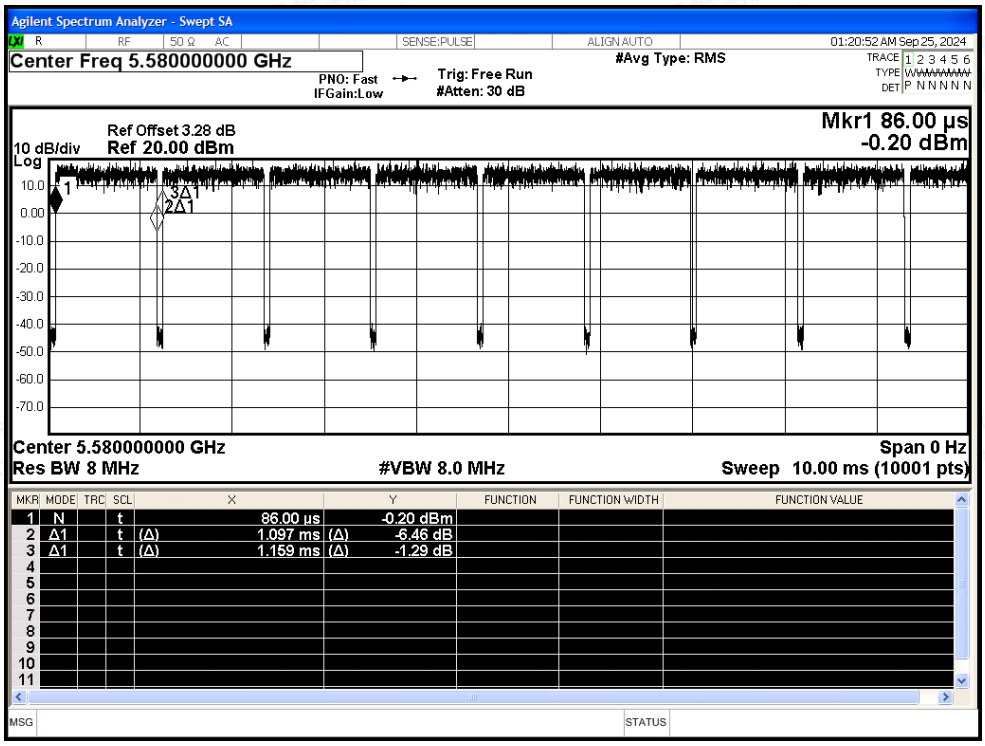
| Condition | Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|---|---|---|---|---|---|---|
| NVNT | a | 5500 | Ant1 | 94.65 | 0.24 | 0.91 |
| NVNT | a | 5580 | Ant1 | 94.65 | 0.24 | 0.91 |
| NVNT | a | 5700 | Ant1 | 94.56 | 0.24 | 0.91 |
| NVNT | n20 | 5500 | Ant1 | 97.29 | 0.12 | 0.44 |
| NVNT | n20 | 5580 | Ant1 | 97.29 | 0.12 | 0.44 |
| NVNT | n20 | 5700 | Ant1 | 97.29 | 0.12 | 0.44 |
| NVNT | n40 | 5510 | Ant1 | 97.23 | 0.12 | 0.46 |
| NVNT | n40 | 5550 | Ant1 | 97.23 | 0.12 | 0.46 |
| NVNT | n40 | 5670 | Ant1 | 97.23 | 0.12 | 0.46 |

Test Graphs

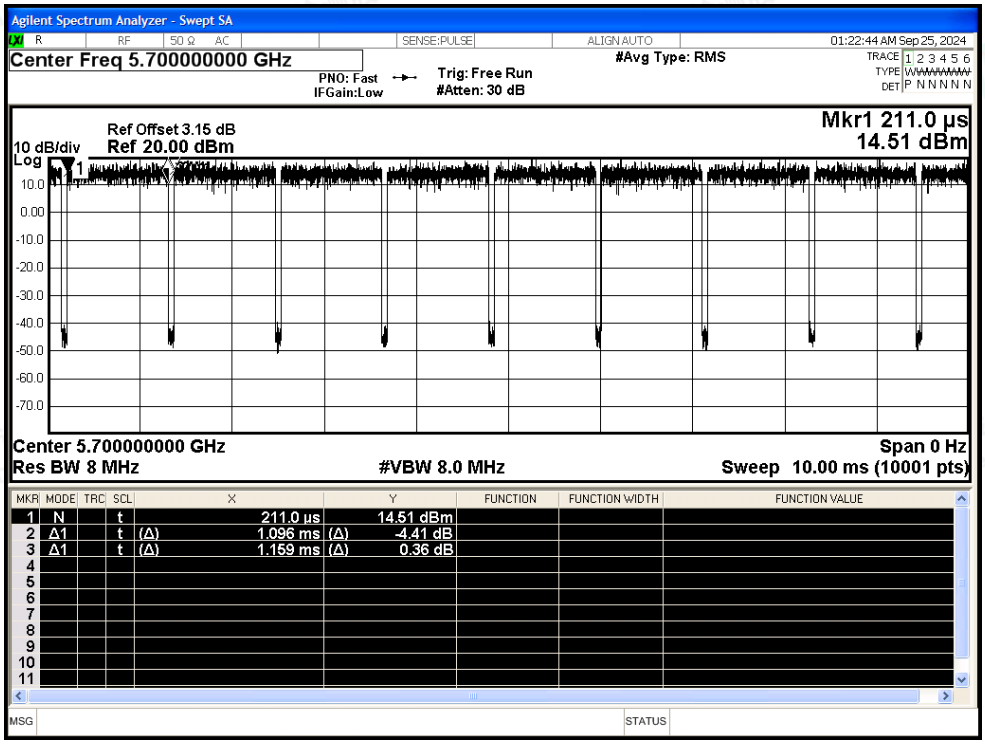
Duty Cycle NVNT a 5500MHz Ant1



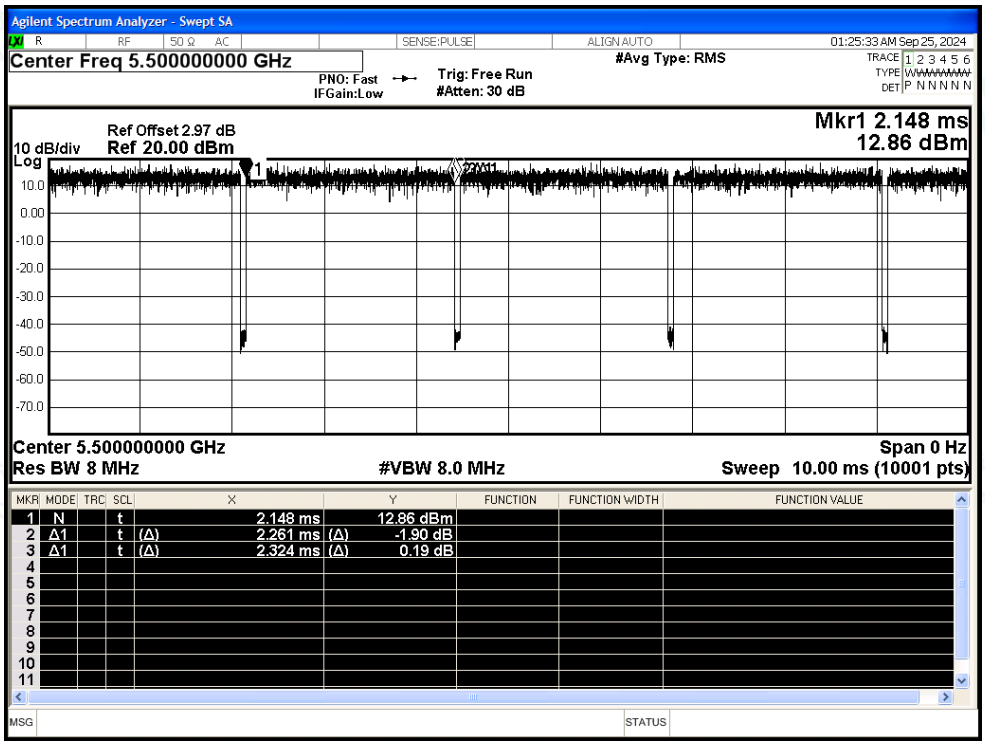

Duty Cycle NVNT a 5580MHz Ant1



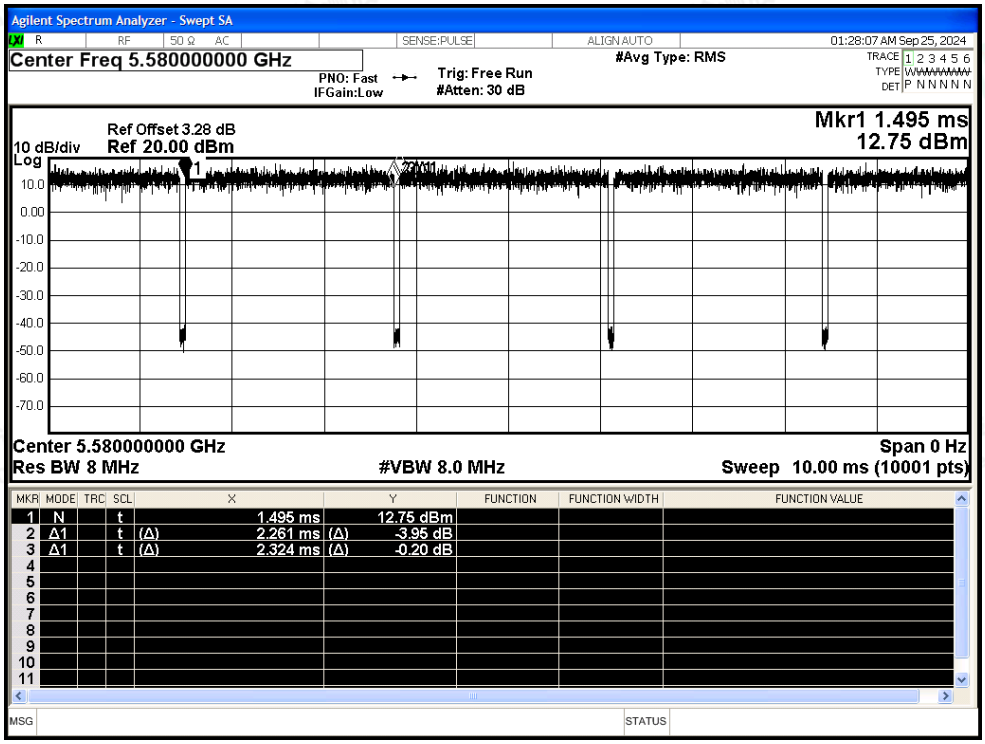
Duty Cycle NVNT a 5700MHz Ant1



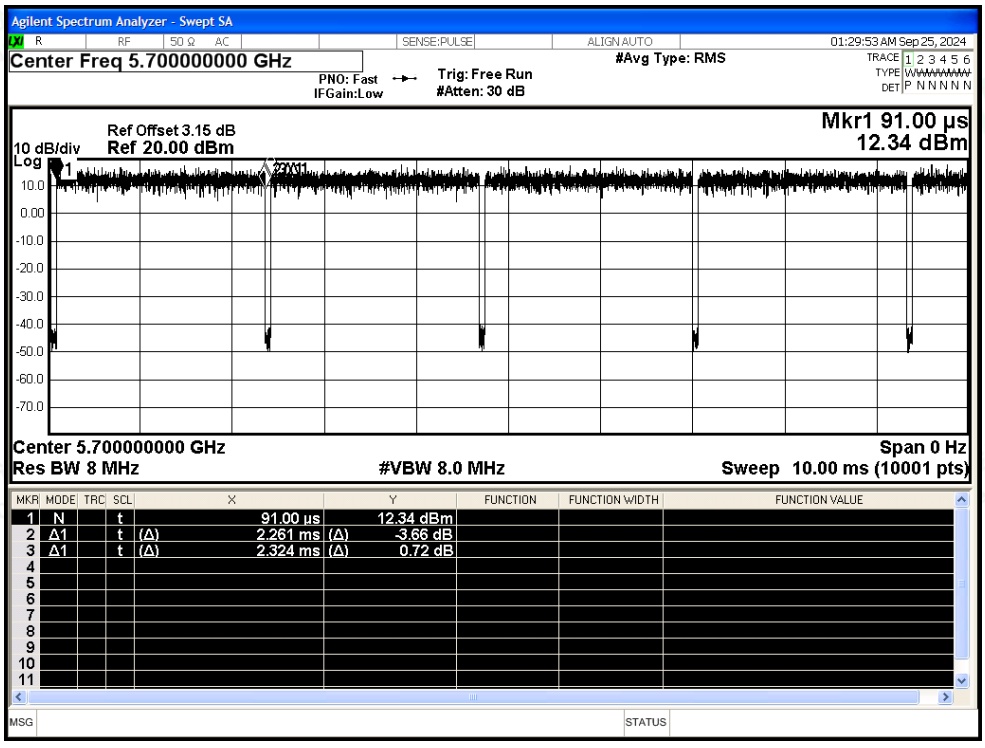

Duty Cycle NVNT n20 5500MHz Ant1



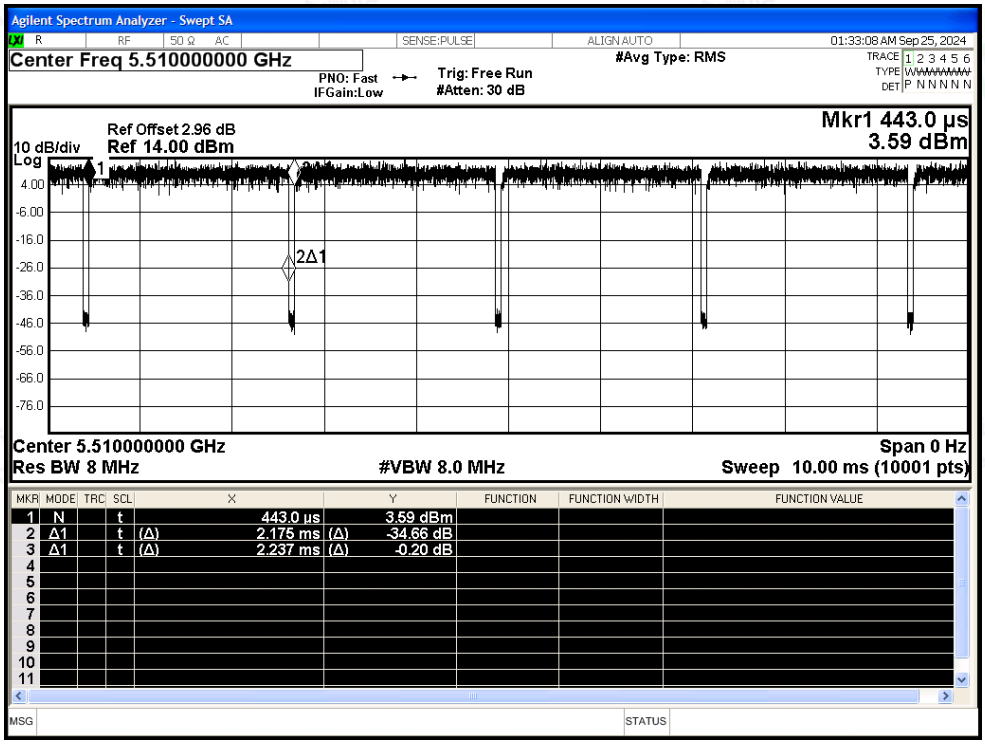
Duty Cycle NVNT n20 5580MHz Ant1



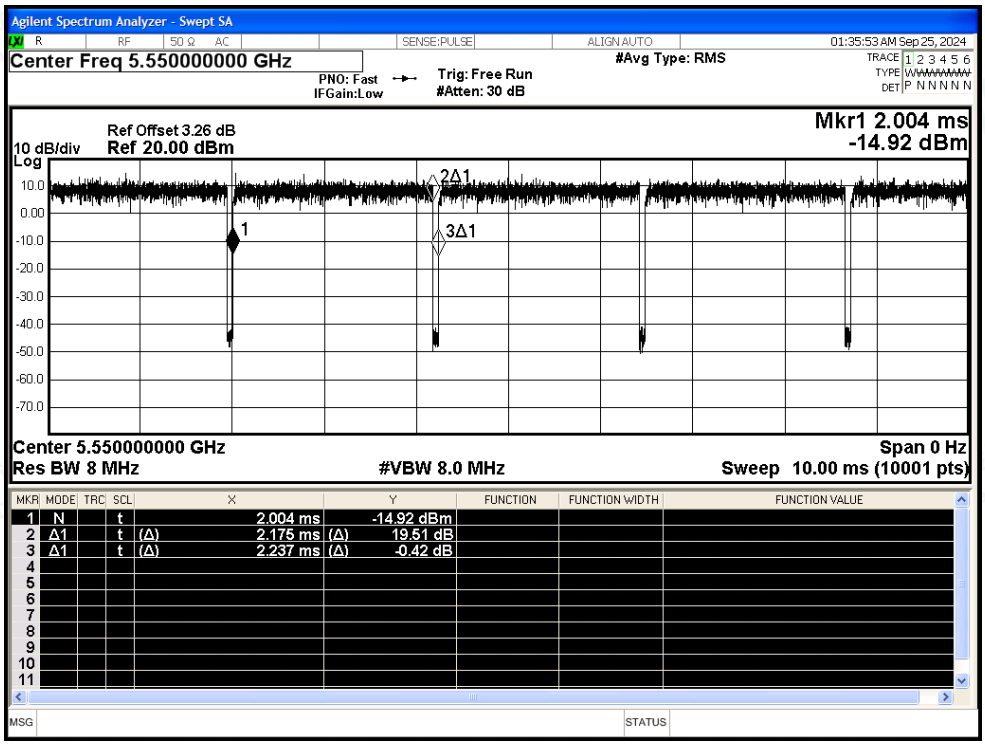
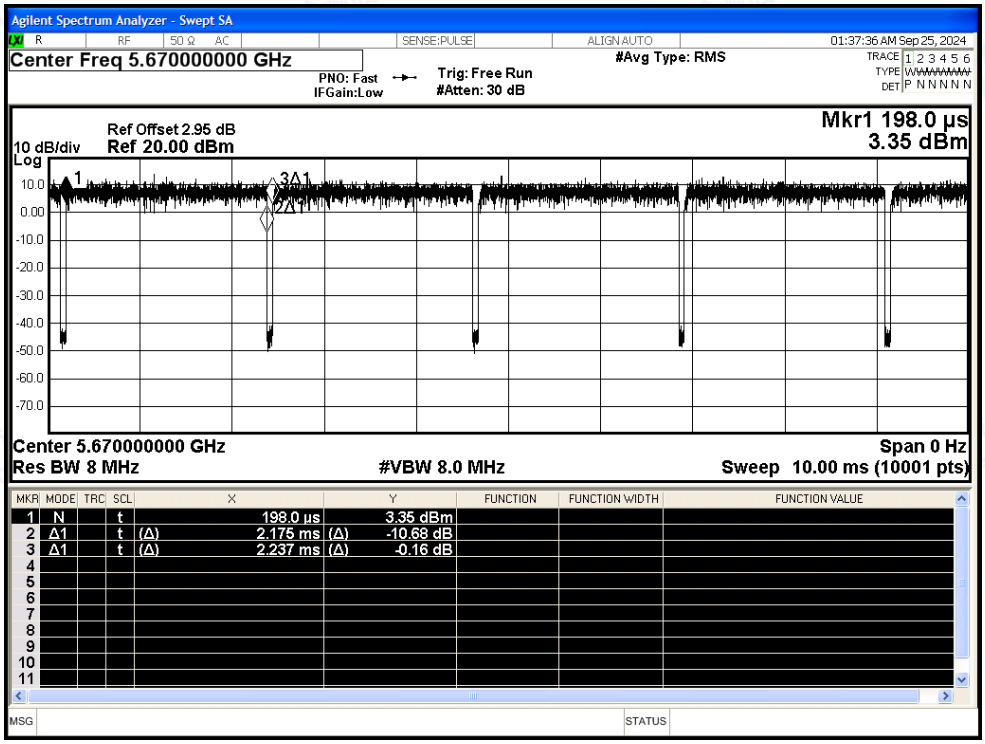

Duty Cycle NVNT n20 5700MHz Ant1



Duty Cycle NVNT n40 5510MHz Ant1




Duty Cycle NVNT n40 5550MHz Ant1



Duty Cycle NVNT n40 5670MHz Ant1