# Appendix F

## RF Test Data for 5.8GWIFI (Conducted Measurement)

**Product Name: Wali Smart Pet Feeder With AI Camera**

**Test Model: P-LFP01**

**Environmental Conditions**

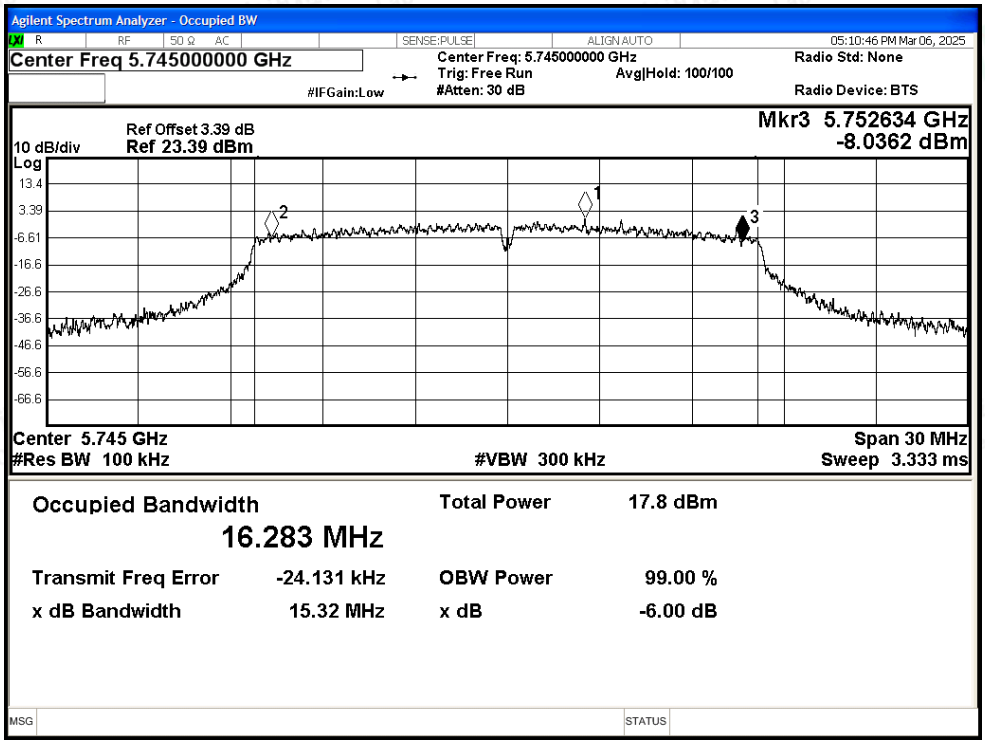
| | |
|---|---|
| Temperature: | 23.8° C |
| Relative Humidity: | 52.1% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Paddi Chen |
| Supervised by: | Nick Peng |

# F.1 -6dB Bandwidth

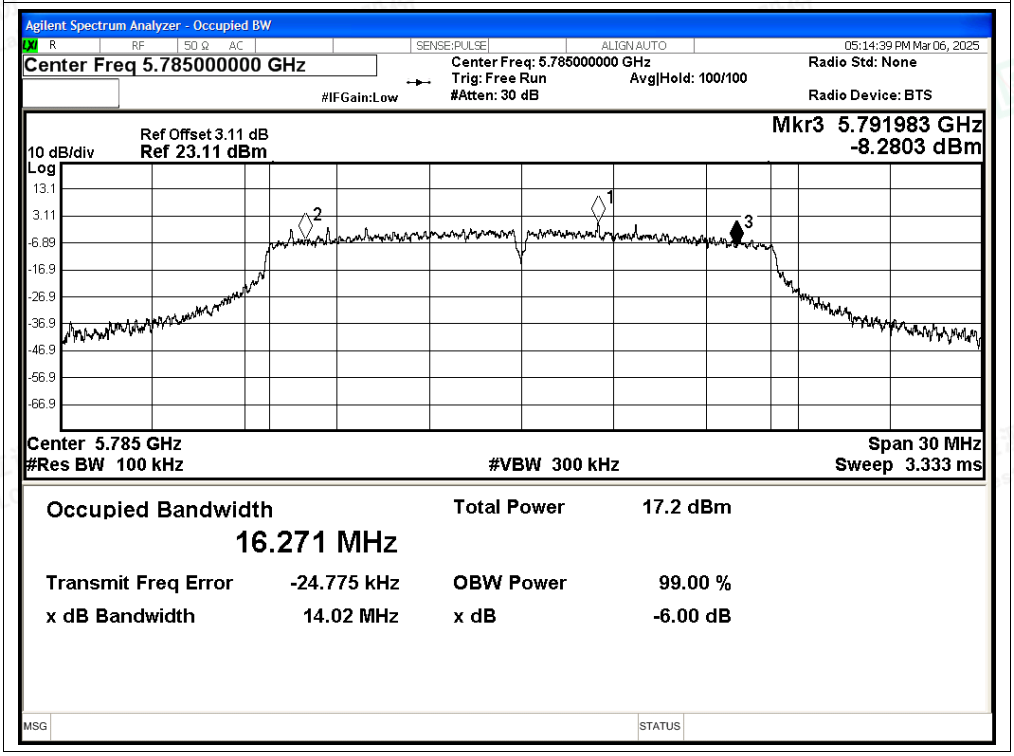
| Condition | Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | a | 5745 | Ant1 | 15.317 | >=0.5 | Pass |
| NVNT | a | 5785 | Ant1 | 14.016 | >=0.5 | Pass |
| NVNT | a | 5825 | Ant1 | 13.406 | >=0.5 | Pass |
| NVNT | n20 | 5745 | Ant1 | 14.969 | >=0.5 | Pass |
| NVNT | n20 | 5785 | Ant1 | 15.023 | >=0.5 | Pass |
| NVNT | n20 | 5825 | Ant1 | 13.869 | >=0.5 | Pass |

Test Graphs

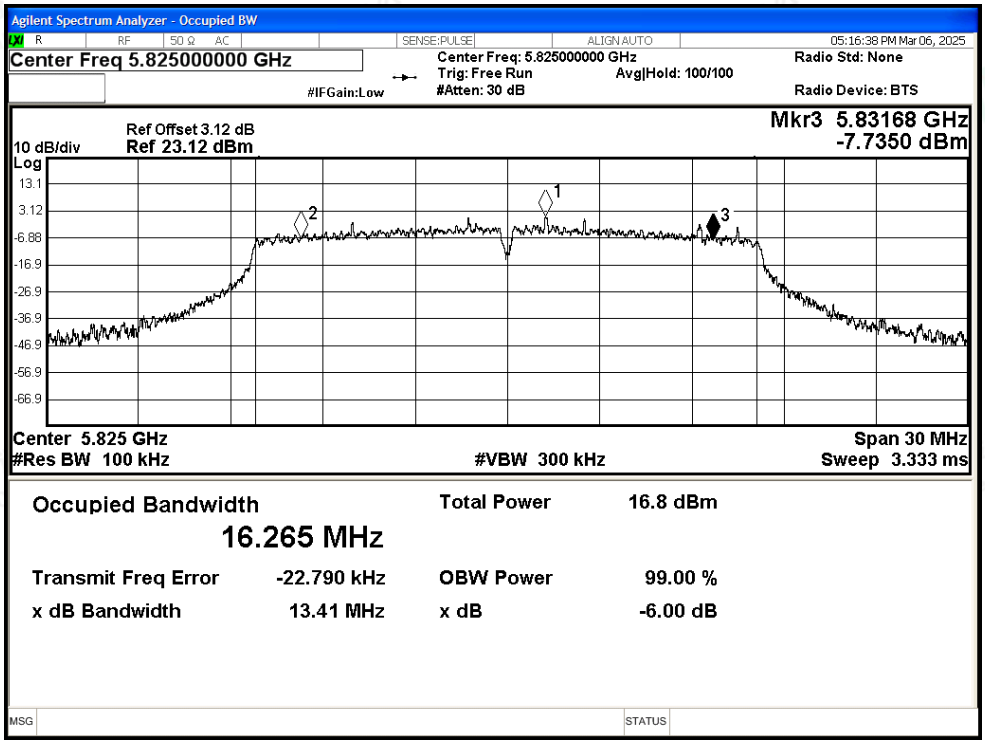
-6dB Bandwidth NVNT a 5745MHz Ant1



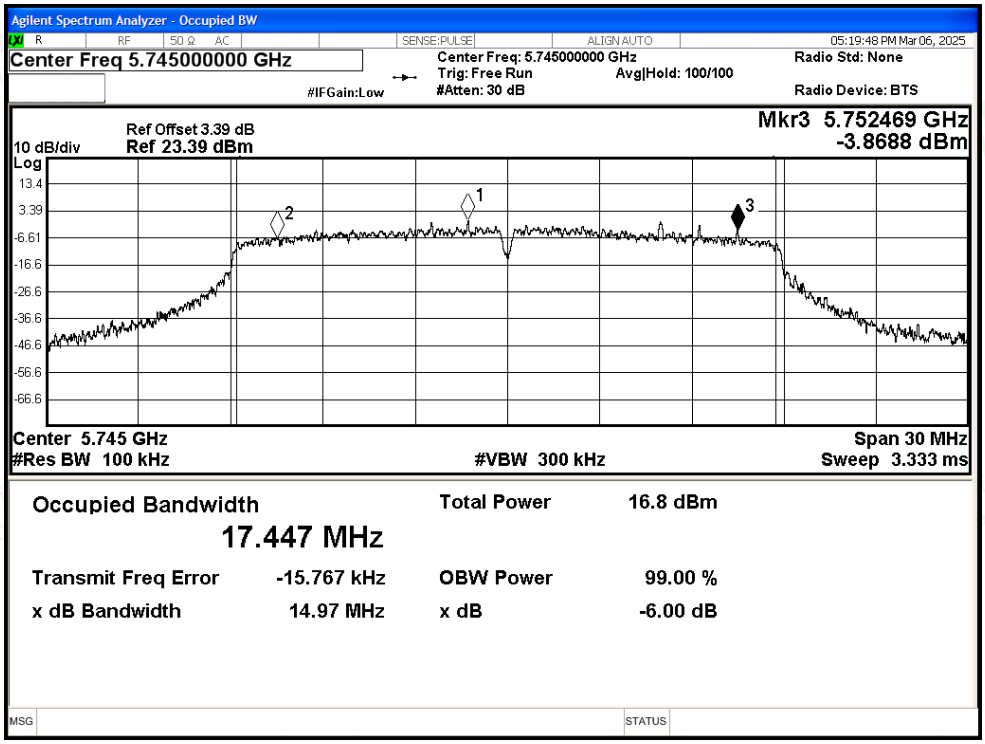

-6dB Bandwidth NVNT a 5785MHz Ant1



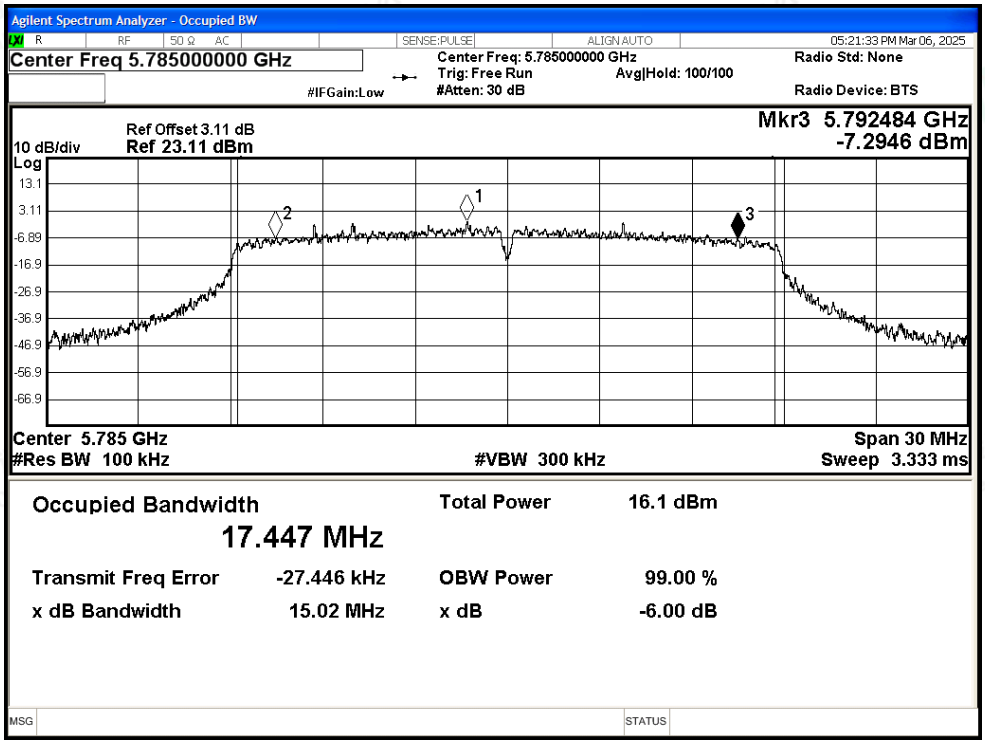
-6dB Bandwidth NVNT a 5825MHz Ant1



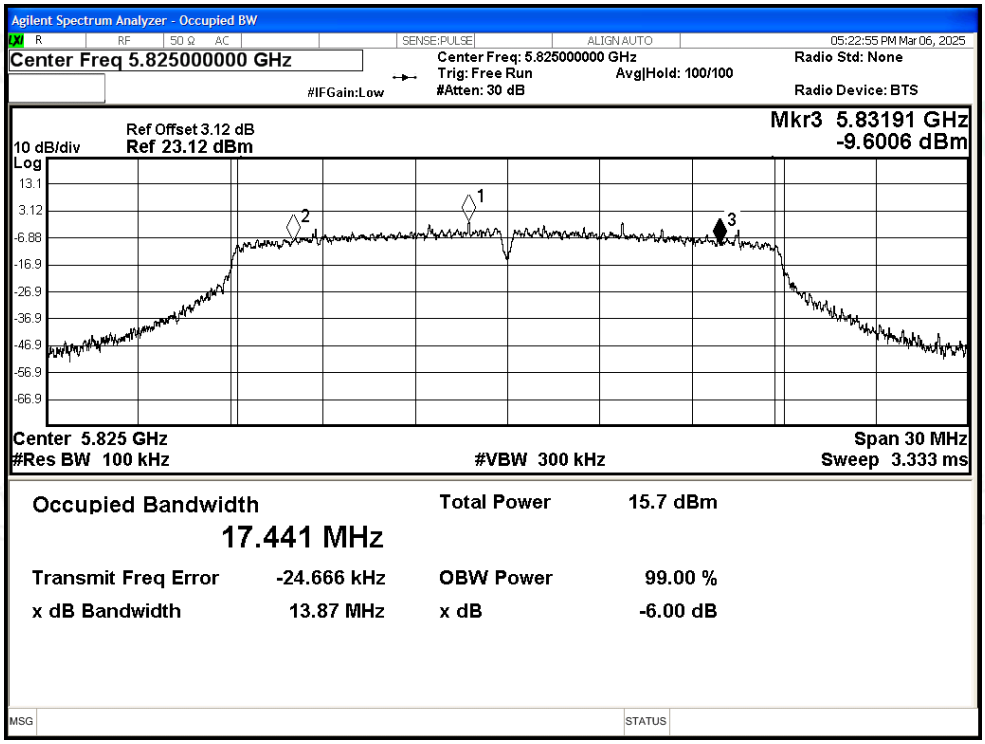

-6dB Bandwidth NVNT n20 5745MHz Ant1



-6dB Bandwidth NVNT n20 5785MHz Ant1




-6dB Bandwidth NVNT n20 5825MHz Ant1



# F.2 Maximum Conducted Output Power

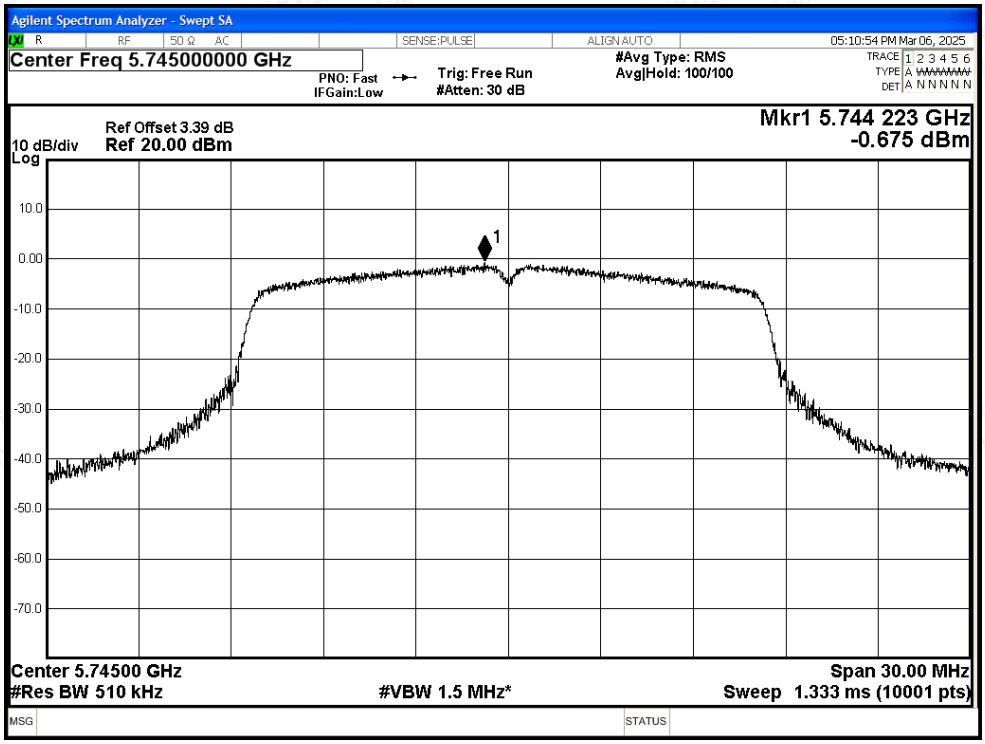
| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Duty Factor (dB) | Total Power (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| NVNT | a | 5745 | Ant1 | 11.32 | 0.96 | **12.28** | 30 | Pass |
| NVNT | a | 5785 | Ant1 | 10.66 | 0.96 | 11.62 | 30 | Pass |
| NVNT | a | 5825 | Ant1 | 10.24 | 0.96 | 11.2 | 30 | Pass |
| NVNT | n20 | 5745 | Ant1 | 10.12 | 1.02 | 11.14 | 30 | Pass |
| NVNT | n20 | 5785 | Ant1 | 9.3 | 1.02 | 10.32 | 30 | Pass |
| NVNT | n20 | 5825 | Ant1 | 8.81 | 1.02 | 9.83 | 30 | Pass |

# F.3 Maximum Power Spectral Density Level

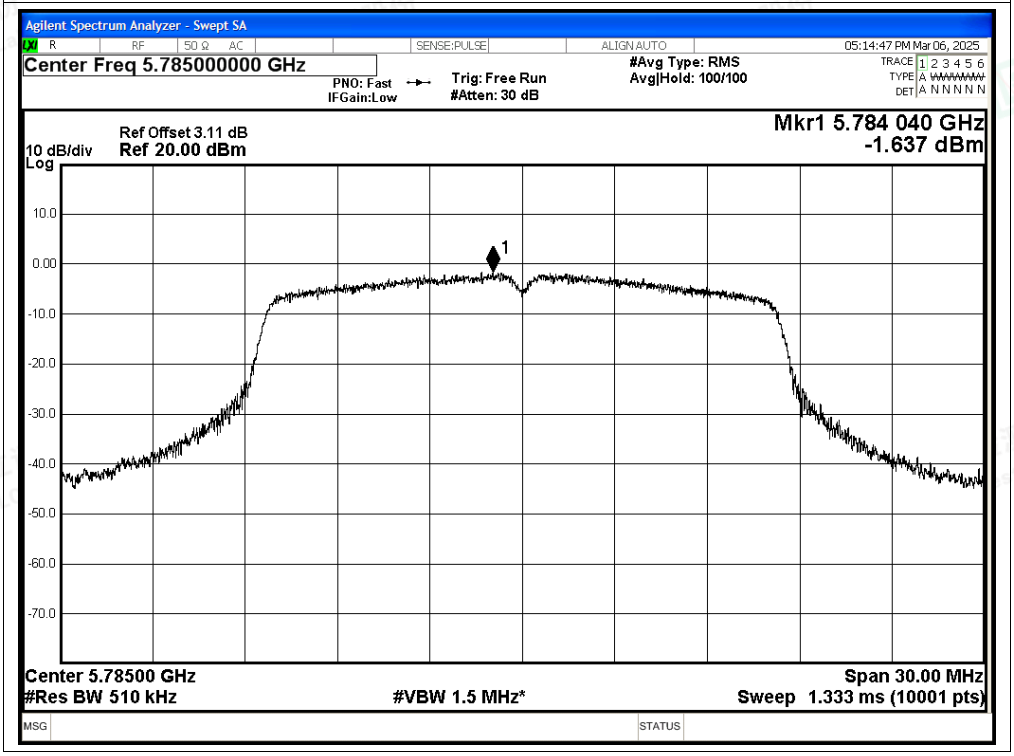
| Condition | Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm/500KHz) | Duty Factor (dB) | Total PSD (dBm/500KHz) | Limit (dBm/500KHz) | Verdict |
|---|---|---|---|---|---|---|---|---|
| NVNT | a | 5745 | Ant1 | -0.68 | 0.96 | 0.28 | 30 | Pass |
| NVNT | a | 5785 | Ant1 | -1.64 | 0.96 | -0.68 | 30 | Pass |
| NVNT | a | 5825 | Ant1 | -2.25 | 0.96 | -1.29 | 30 | Pass |
| NVNT | n20 | 5745 | Ant1 | -2.35 | 1.02 | -1.33 | 30 | Pass |
| NVNT | n20 | 5785 | Ant1 | -3.14 | 1.02 | -2.12 | 30 | Pass |
| NVNT | n20 | 5825 | Ant1 | -3.19 | 1.02 | -2.17 | 30 | Pass |

Test Graphs

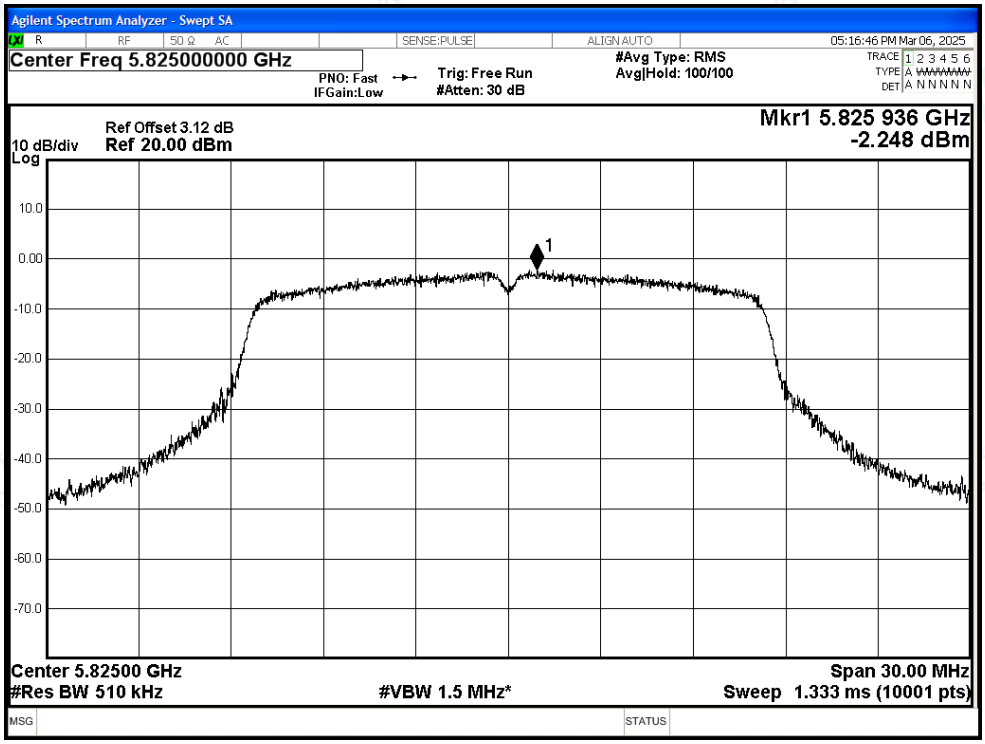
PSD NVNT a 5745MHz Ant1



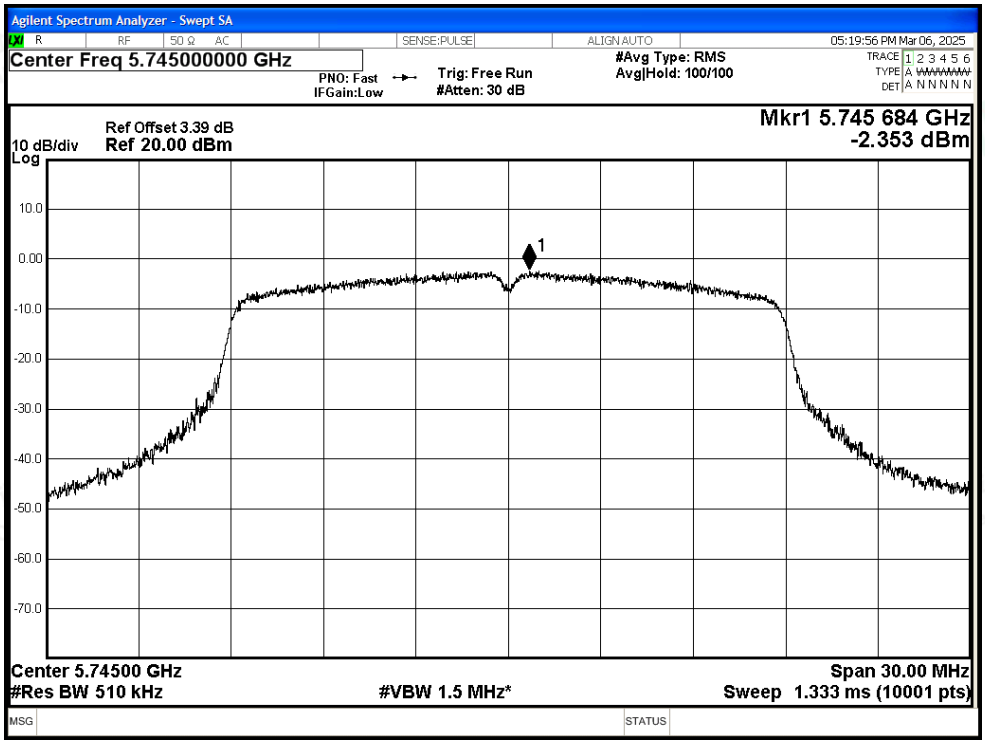

PSD NVNT a 5785MHz Ant1



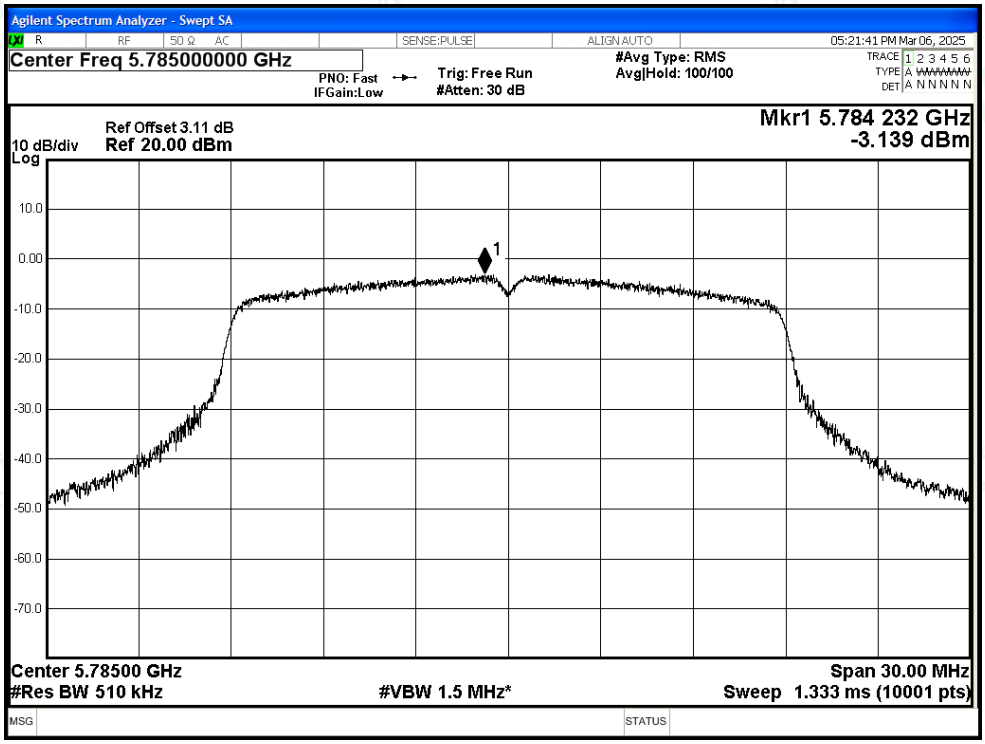
PSD NVNT a 5825MHz Ant1



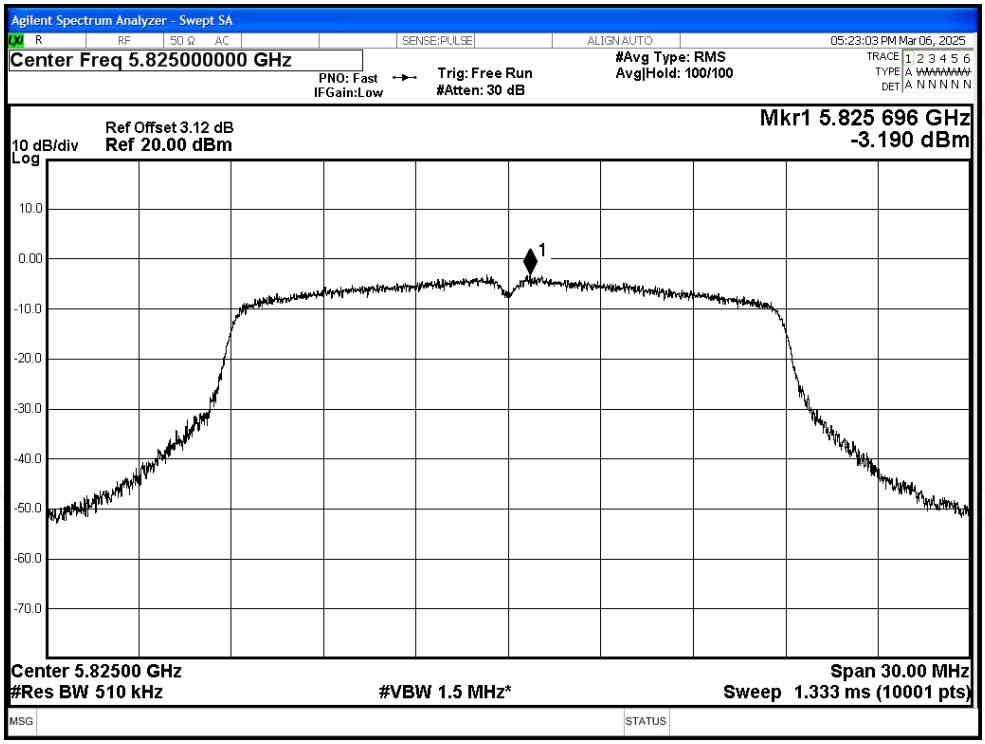

PSD NVNT n20 5745MHz Ant1



PSD NVNT n20 5785MHz Ant1




PSD NVNT n20 5825MHz Ant1

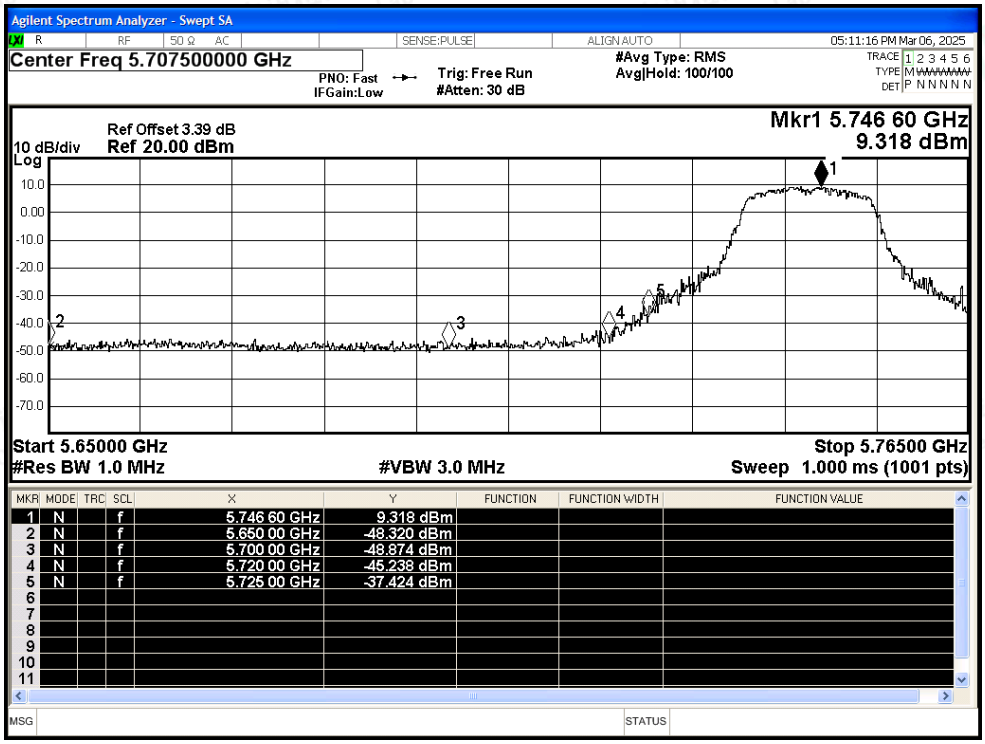


## F.4 Restrict Band

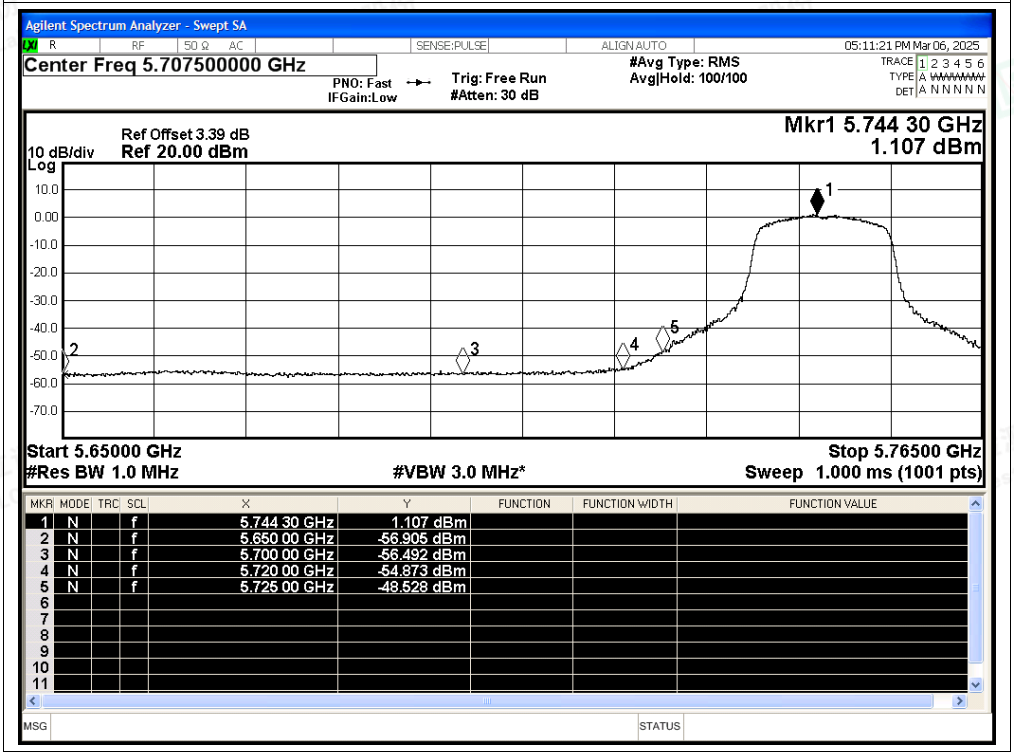
| Condition | Mode | Frequency (MHz) | Antenna | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | Duty Factor (dB) | EIRP Power (dBm) | Detector | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NVNT | a | 5745 | Ant1 | 5650 | -48.32 | 5.26 | - | -43.06 | Peak | -27 | Pass |
| NVNT | a | 5745 | Ant1 | 5650 | -56.91 | 5.26 | 0.96 | -50.69 | Average | -27 | Pass |
| NVNT | a | 5745 | Ant1 | 5700 | -48.87 | 5.26 | - | -43.61 | Peak | 10 | Pass |
| NVNT | a | 5745 | Ant1 | 5700 | -56.49 | 5.26 | 0.96 | -50.27 | Average | 10 | Pass |
| NVNT | a | 5745 | Ant1 | 5720 | -45.24 | 5.26 | - | -39.98 | Peak | 15.6 | Pass |
| NVNT | a | 5745 | Ant1 | 5720 | -54.87 | 5.26 | 0.96 | -48.65 | Average | 15.6 | Pass |
| NVNT | a | 5745 | Ant1 | 5725 | -37.42 | 5.26 | - | -32.16 | Peak | 27 | Pass |
| NVNT | a | 5745 | Ant1 | 5725 | -48.53 | 5.26 | 0.96 | -42.31 | Average | 27 | Pass |
| NVNT | a | 5825 | Ant1 | 5850 | -45.35 | 5.26 | - | -40.09 | Peak | 27 | Pass |
| NVNT | a | 5825 | Ant1 | 5850 | -55.79 | 5.26 | 0.96 | -49.57 | Average | 27 | Pass |
| NVNT | a | 5825 | Ant1 | 5855 | -49.27 | 5.26 | - | -44.01 | Peak | 15.6 | Pass |
| NVNT | a | 5825 | Ant1 | 5855 | -57.17 | 5.26 | 0.96 | -50.95 | Average | 15.6 | Pass |
| NVNT | a | 5825 | Ant1 | 5875 | -48.76 | 5.26 | - | -43.50 | Peak | 10 | Pass |
| NVNT | a | 5825 | Ant1 | 5875 | -57.98 | 5.26 | 0.96 | -51.76 | Average | 10 | Pass |
| NVNT | a | 5825 | Ant1 | 5925 | -49 | 5.26 | - | -43.74 | Peak | -27 | Pass |
| NVNT | a | 5825 | Ant1 | 5925 | -57.36 | 5.26 | 0.96 | -51.14 | Average | -27 | Pass |
| NVNT | n20 | 5745 | Ant1 | 5650 | -48.8 | 5.26 | - | -43.54 | Peak | -27 | Pass |
| NVNT | n20 | 5745 | Ant1 | 5650 | -57.09 | 5.26 | 1.02 | -50.81 | Average | -27 | Pass |
| NVNT | n20 | 5745 | Ant1 | 5700 | -45.21 | 5.26 | - | -39.95 | Peak | 10 | Pass |
| NVNT | n20 | 5745 | Ant1 | 5700 | -55.98 | 5.26 | 1.02 | -49.70 | Average | 10 | Pass |
| NVNT | n20 | 5745 | Ant1 | 5720 | -45.68 | 5.26 | - | -40.42 | Peak | 15.6 | Pass |
| NVNT | n20 | 5745 | Ant1 | 5720 | -55.04 | 5.26 | 1.02 | -48.76 | Average | 15.6 | Pass |
| NVNT | n20 | 5745 | Ant1 | 5725 | -35.85 | 5.26 | - | -30.59 | Peak | 27 | Pass |
| NVNT | n20 | 5745 | Ant1 | 5725 | -49.52 | 5.26 | 1.02 | -43.24 | Average | 27 | Pass |
| NVNT | n20 | 5825 | Ant1 | 5850 | -48.32 | 5.26 | - | -43.06 | Peak | 27 | Pass |
| NVNT | n20 | 5825 | Ant1 | 5850 | -57 | 5.26 | 1.02 | -50.72 | Average | 27 | Pass |
| NVNT | n20 | 5825 | Ant1 | 5855 | -50.08 | 5.26 | - | -44.82 | Peak | 15.6 | Pass |
| NVNT | n20 | 5825 | Ant1 | 5855 | -57.34 | 5.26 | 1.02 | -51.06 | Average | 15.6 | Pass |
| NVNT | n20 | 5825 | Ant1 | 5875 | -51.11 | 5.26 | - | -45.85 | Peak | 10 | Pass |
| NVNT | n20 | 5825 | Ant1 | 5875 | -57.56 | 5.26 | 1.02 | -51.28 | Average | 10 | Pass |
| NVNT | n20 | 5825 | Ant1 | 5925 | -50.59 | 5.26 | - | -45.33 | Peak | -27 | Pass |
| NVNT | n20 | 5825 | Ant1 | 5925 | -57.49 | 5.26 | 1.02 | -51.21 | Average | -27 | Pass |

Test Graphs

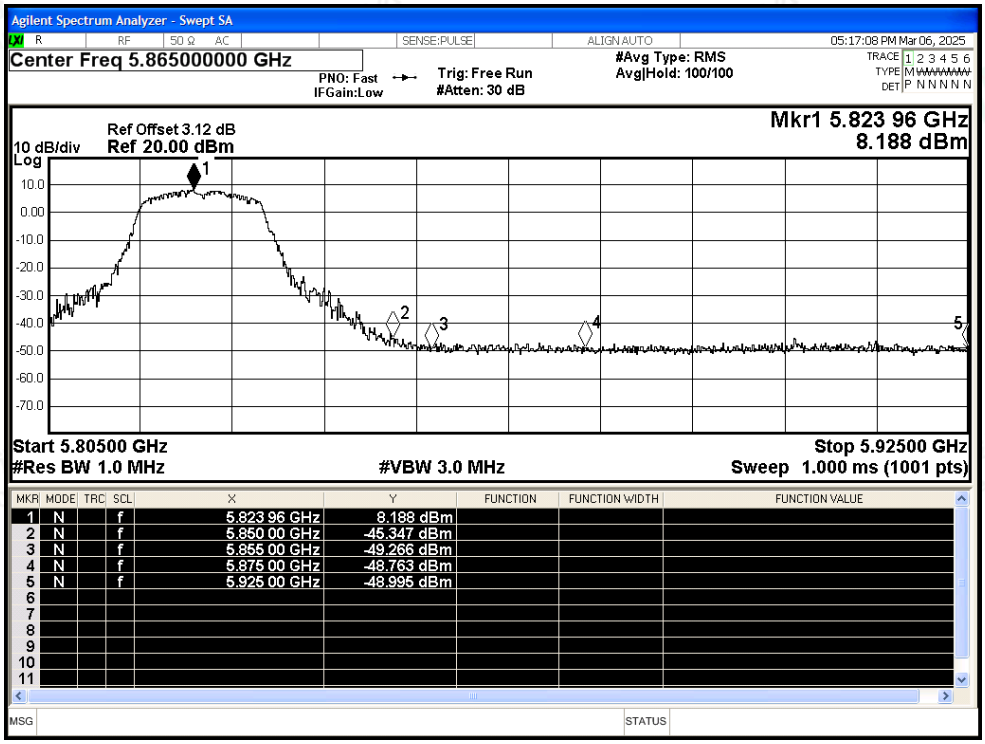
Restrict Band NVNT a 5745MHz Ant1 Peak



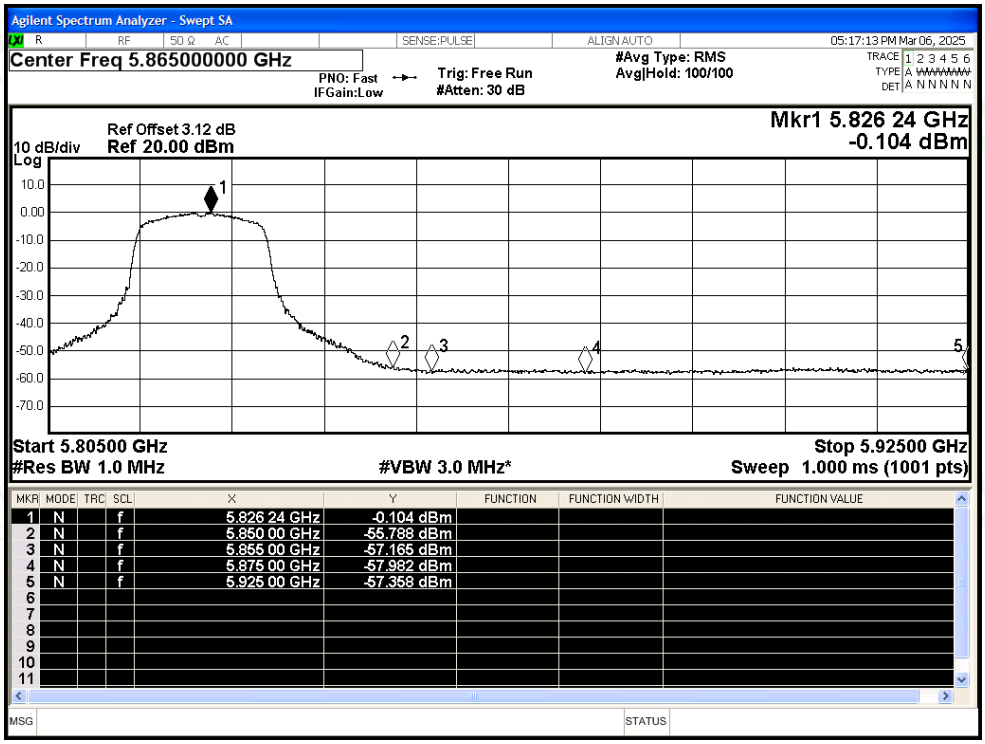

Restrict Band NVNT a 5745MHz Ant1 Average



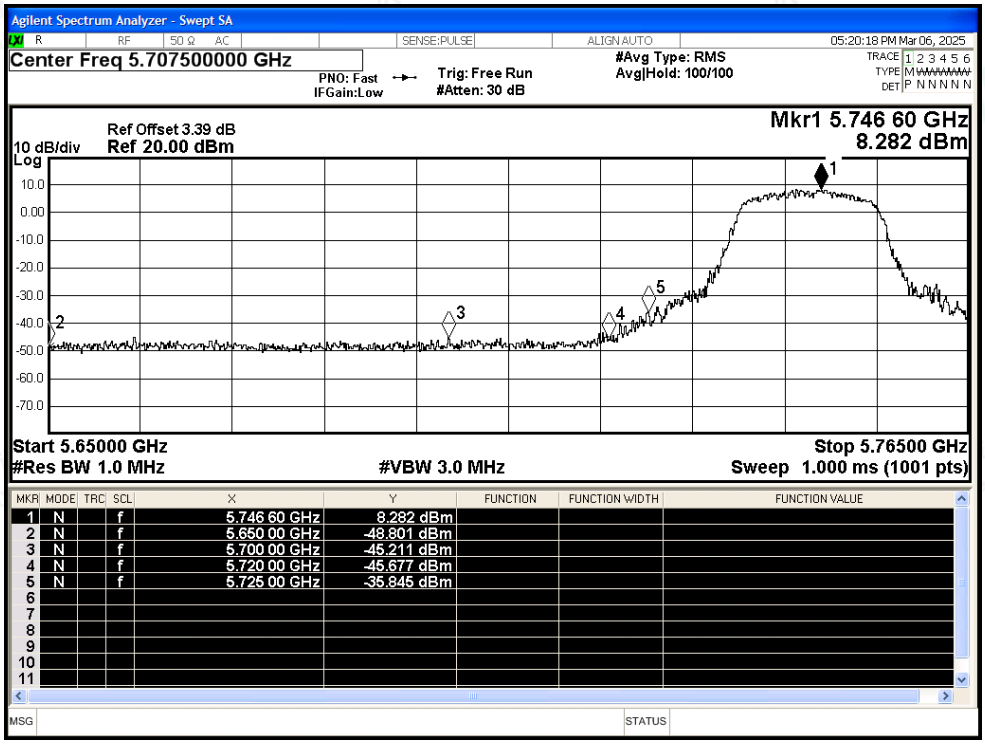
Restrict Band NVNT a 5825MHz Ant1 Peak



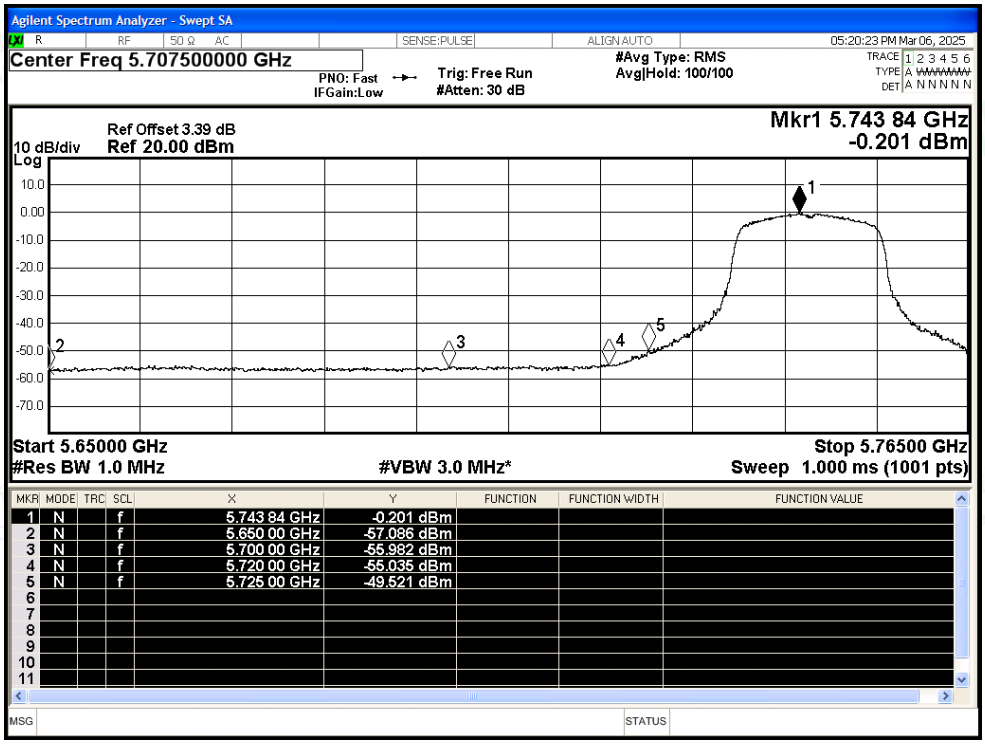

Restrict Band NVNT a 5825MHz Ant1 Average



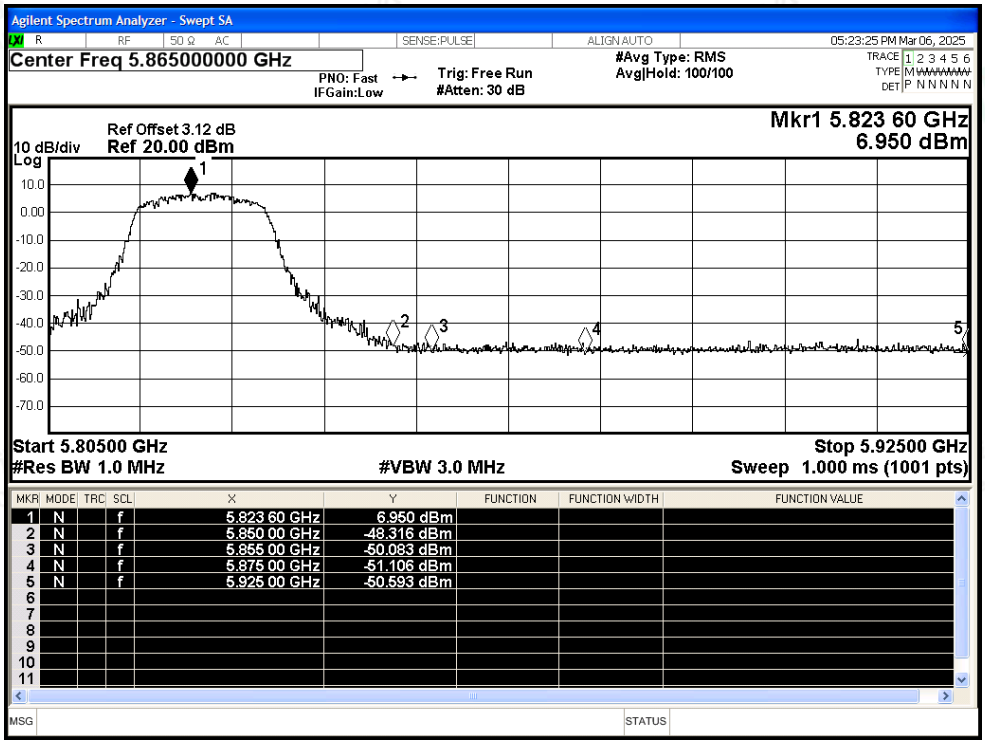
Restrict Band NVNT n20 5745MHz Ant1 Peak



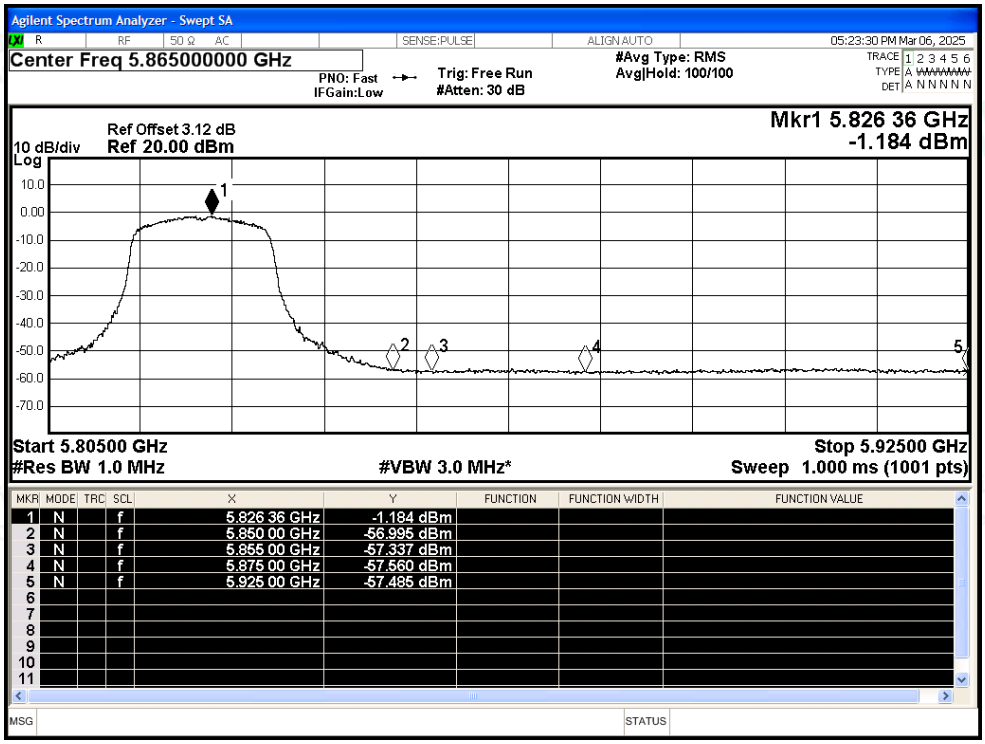

Restrict Band NVNT n20 5745MHz Ant1 Average



Restrict Band NVNT n20 5825MHz Ant1 Peak




Restrict Band NVNT n20 5825MHz Ant1 Average

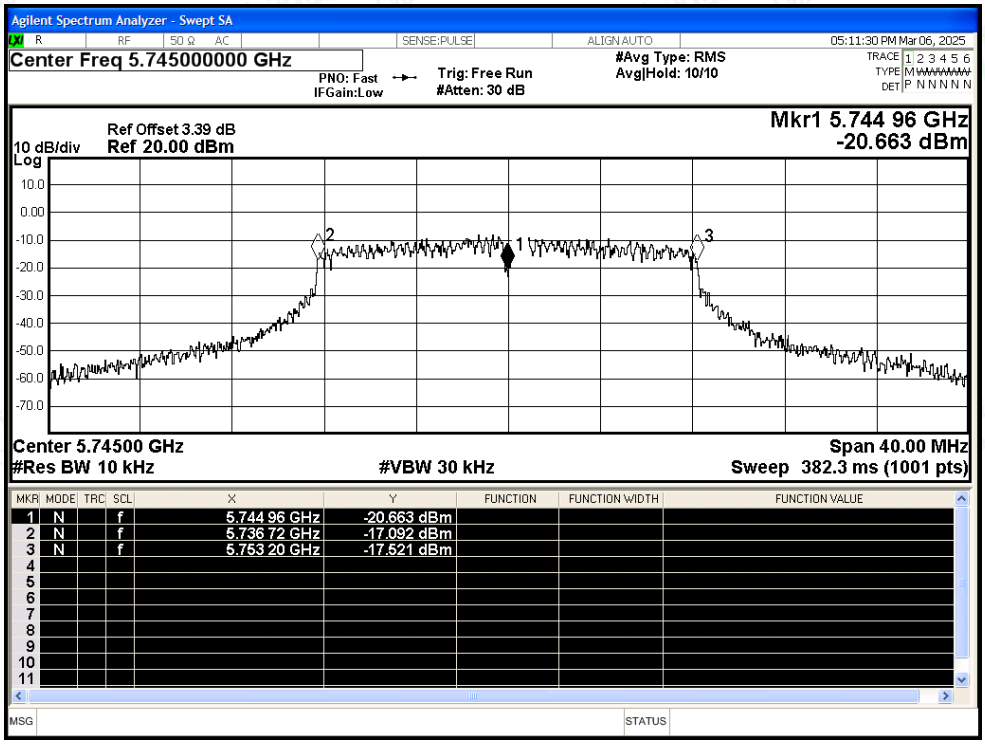


# F.5 Frequency Stability

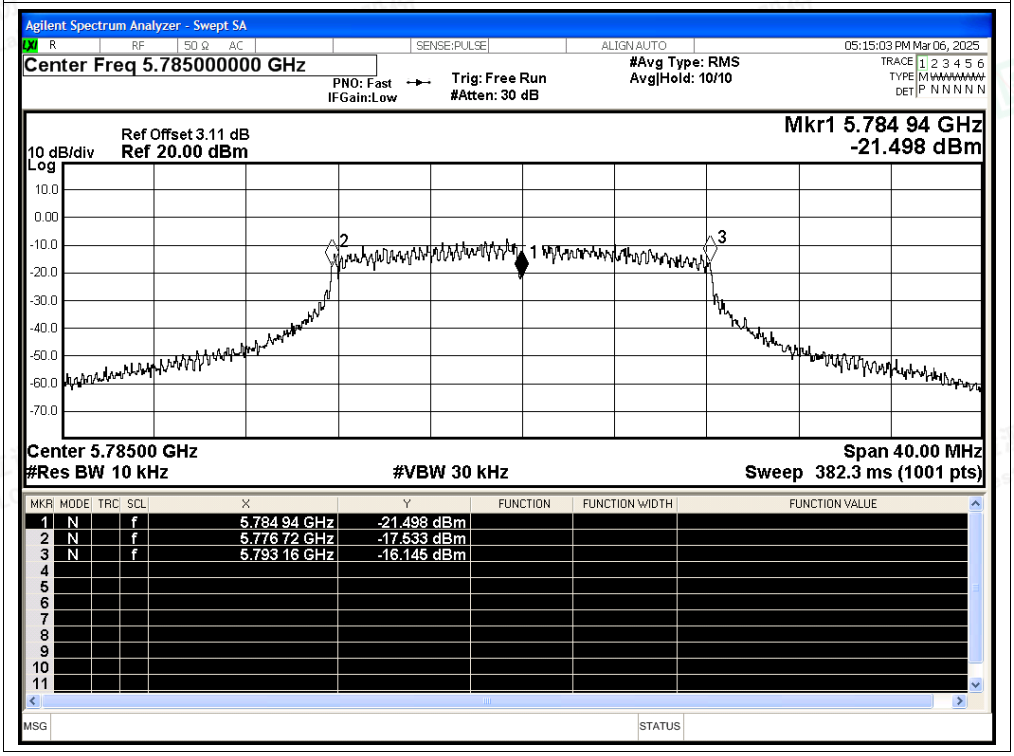
| Condition | Mode | Frequency (MHz) | Antenna | Measured Frequency (MHz) | Frequency Error (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| NVNT | a | 5745 | Ant1 | 5744.96 | -40000 | -6.96 | 25 | Pass |
| NVNT | a | 5785 | Ant1 | 5784.94 | -60000 | -10.37 | 25 | Pass |
| NVNT | a | 5825 | Ant1 | 5824.98 | -20000 | -3.43 | 25 | Pass |
| NVNT | n20 | 5745 | Ant1 | 5744.96 | -40000 | -6.96 | 25 | Pass |
| NVNT | n20 | 5785 | Ant1 | 5784.96 | -40000 | -6.91 | 25 | Pass |
| NVNT | n20 | 5825 | Ant1 | 5825 | 0 | 0 | 25 | Pass |

Test Graphs

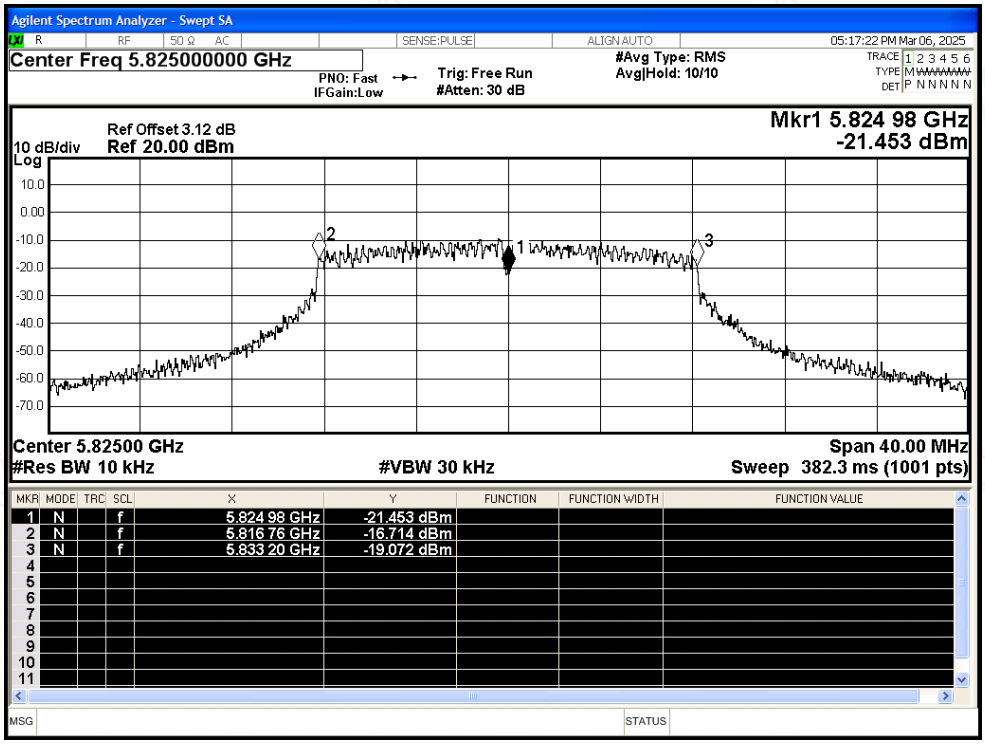
Freq. Stability NVNT a 5745MHz Ant1



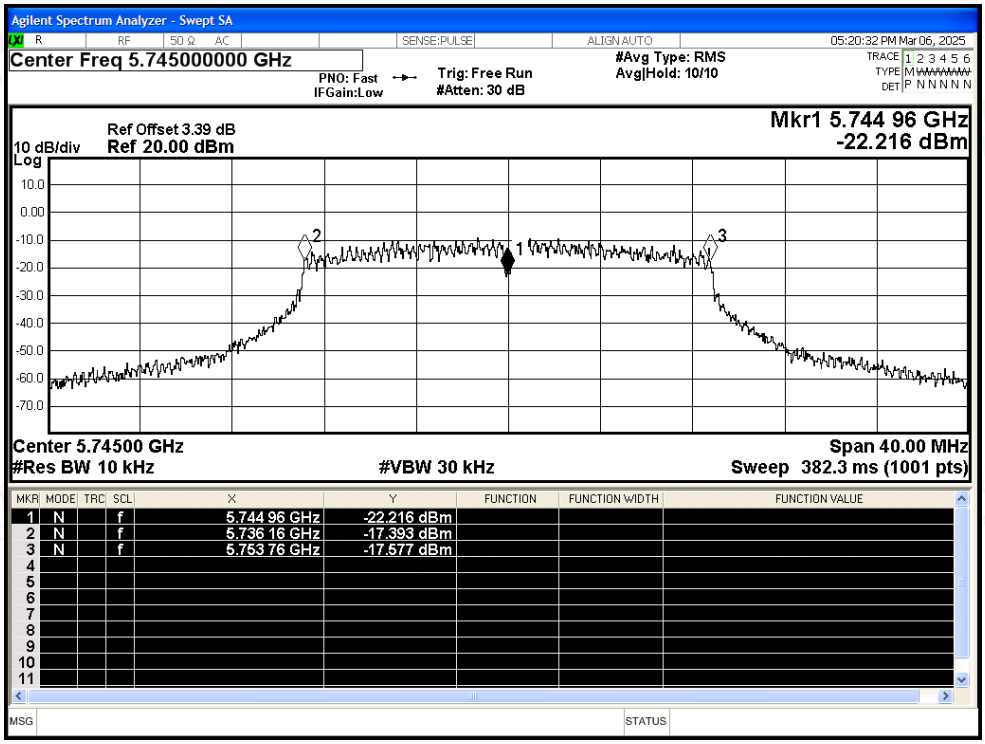

Freq. Stability NVNT a 5785MHz Ant1



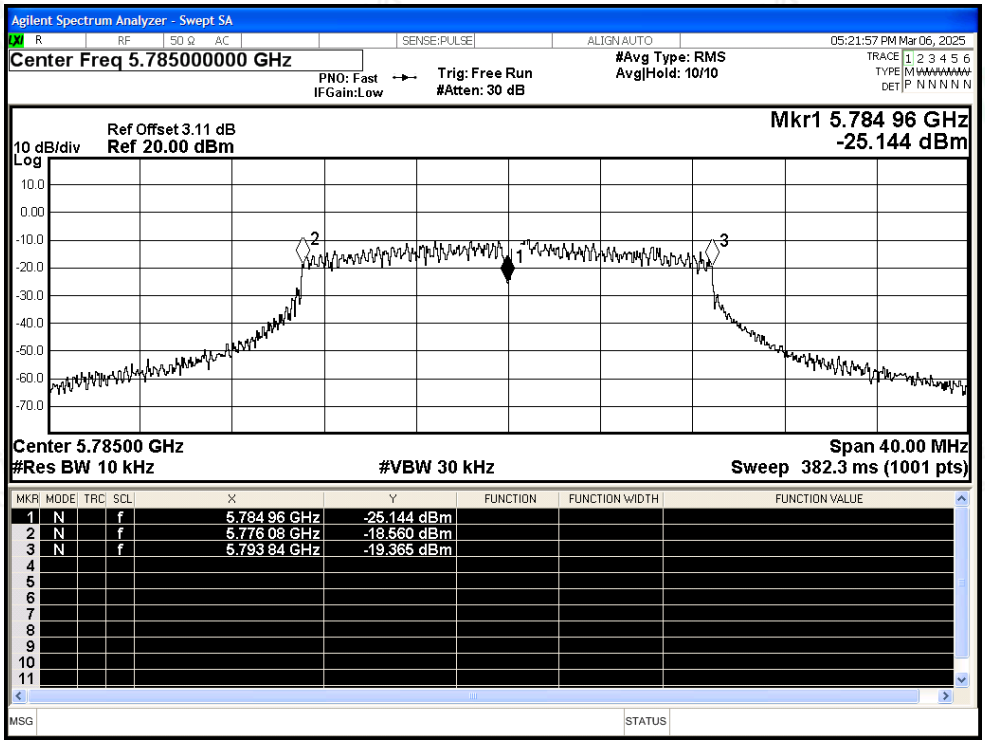
Freq. Stability NVNT a 5825MHz Ant1



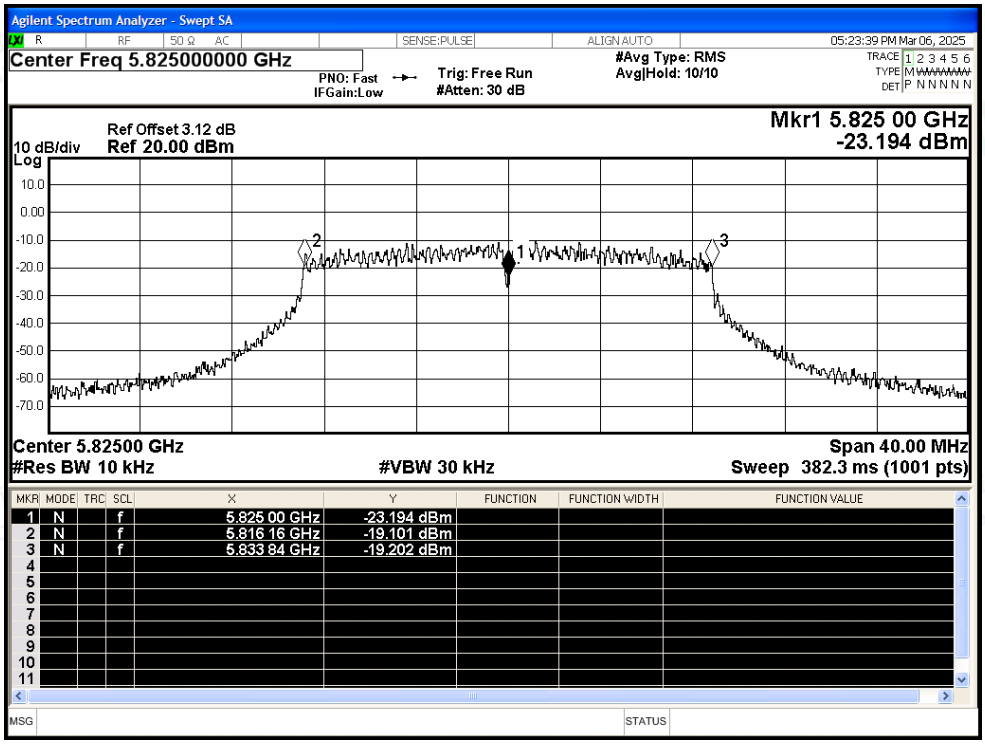

Freq. Stability NVNT n20 5745MHz Ant1



Freq. Stability NVNT n20 5785MHz Ant1




Freq. Stability NVNT n20 5825MHz Ant1

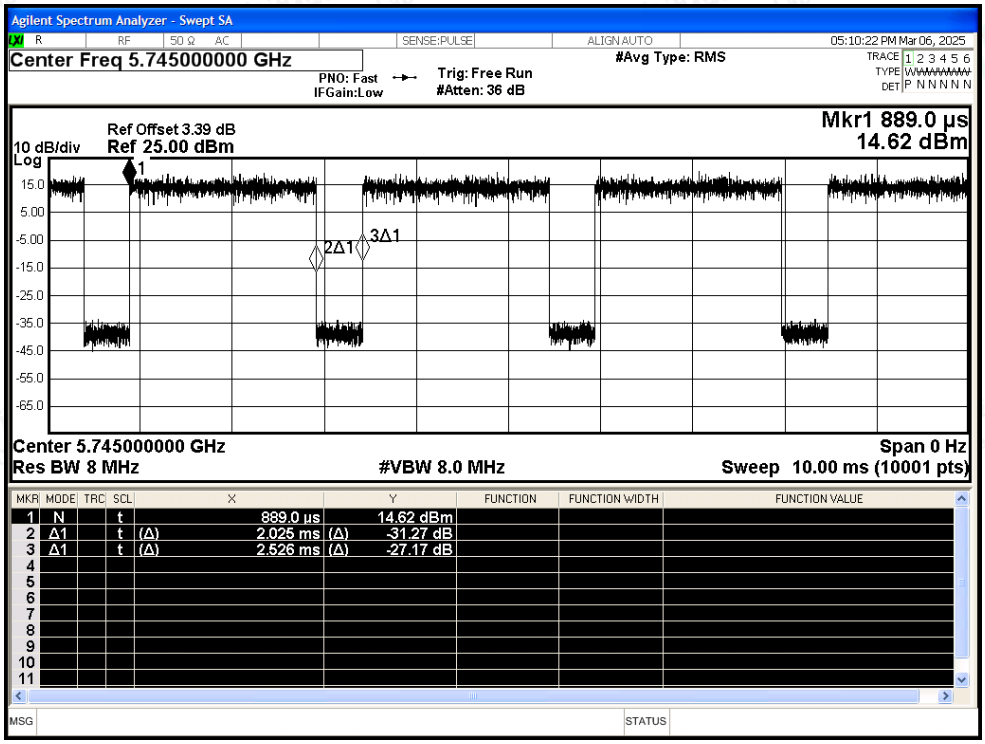


## F.6 Duty Cycle

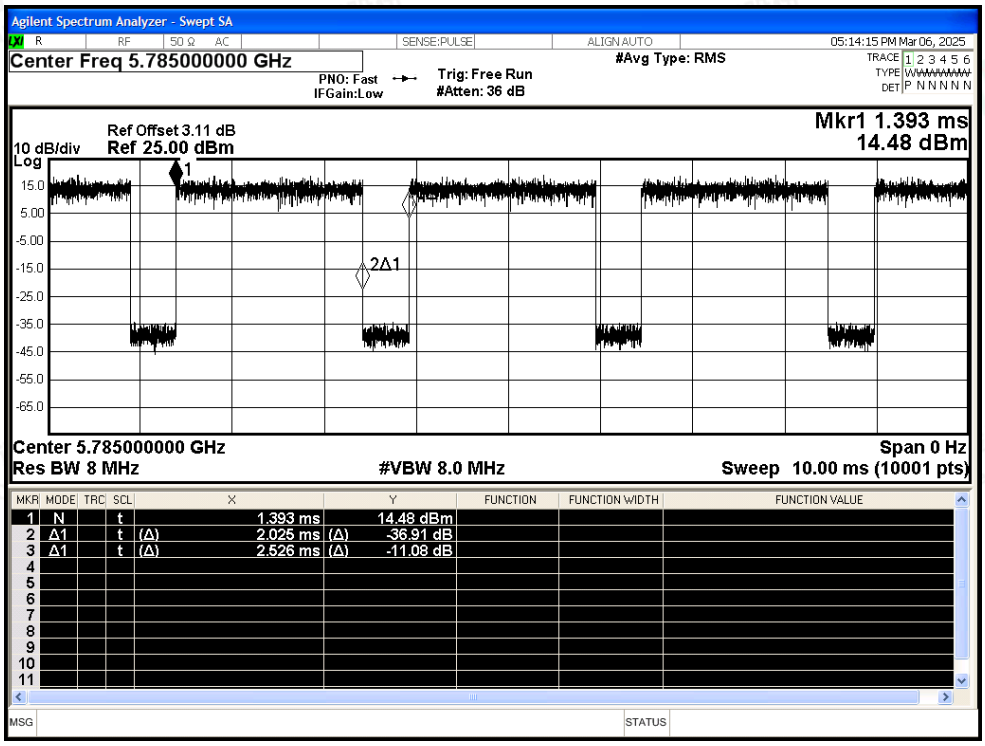
| Condition | Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|---|---|---|---|---|---|---|
| NVNT | a | 5745 | Ant1 | 80.17 | 0.96 | 0.49 |
| NVNT | a | 5785 | Ant1 | 80.17 | 0.96 | 0.49 |
| NVNT | a | 5825 | Ant1 | 80.13 | 0.96 | 0.49 |
| NVNT | n20 | 5745 | Ant1 | 79 | 1.02 | 0.53 |
| NVNT | n20 | 5785 | Ant1 | 79 | 1.02 | 0.53 |
| NVNT | n20 | 5825 | Ant1 | 79.04 | 1.02 | 0.53 |

Test Graphs

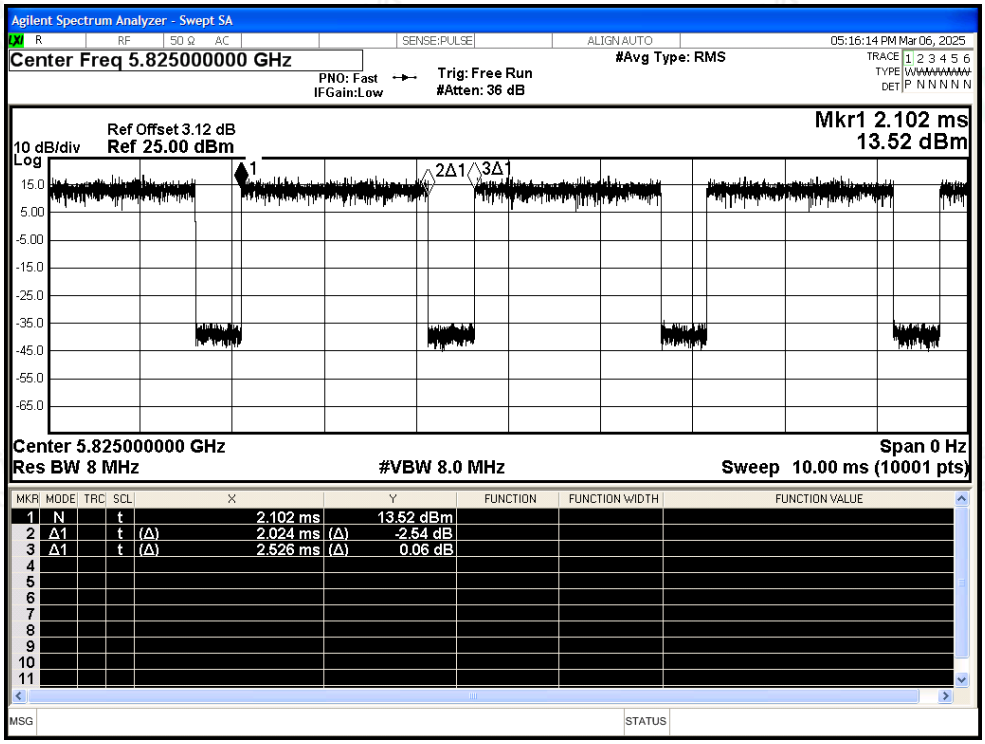
Duty Cycle NVNT a 5745MHz Ant1



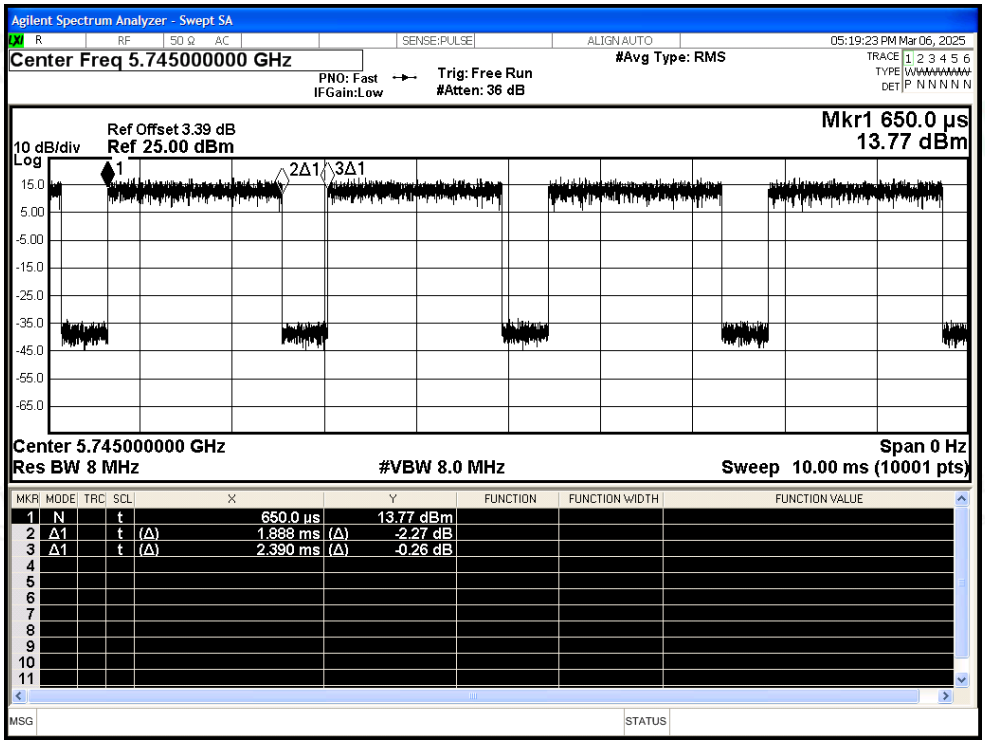

Duty Cycle NVNT a 5785MHz Ant1



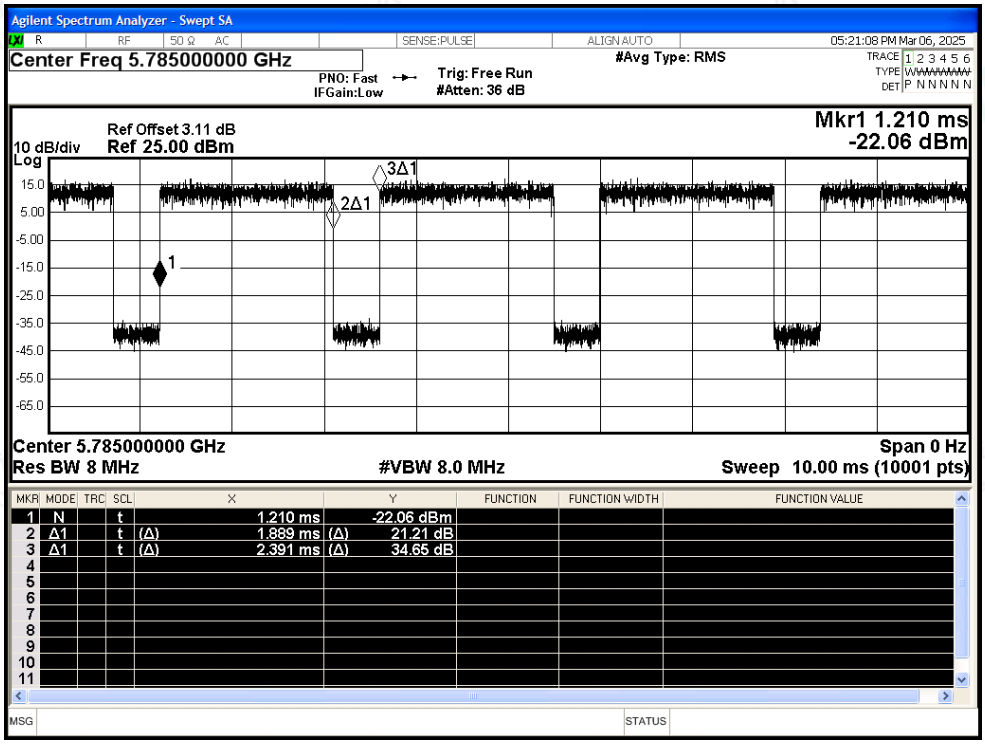
Duty Cycle NVNT a 5825MHz Ant1

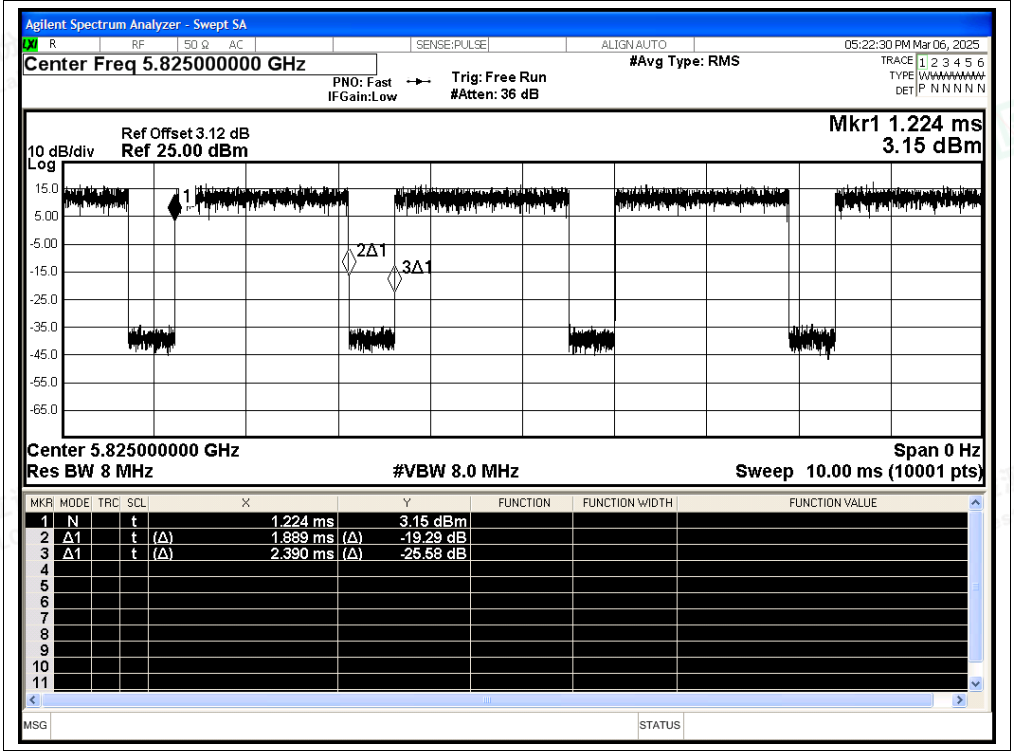



Duty Cycle NVNT n20 5745MHz Ant1



Duty Cycle NVNT n20 5785MHz Ant1




Duty Cycle NVNT n20 5825MHz Ant1