# Appendix D

## RF Test Data for 5.2GWIFI (Conducted Measurement)

**Product Name: SMARTPHONE**

**Test Model: SP-7275**

**Environmental Conditions**

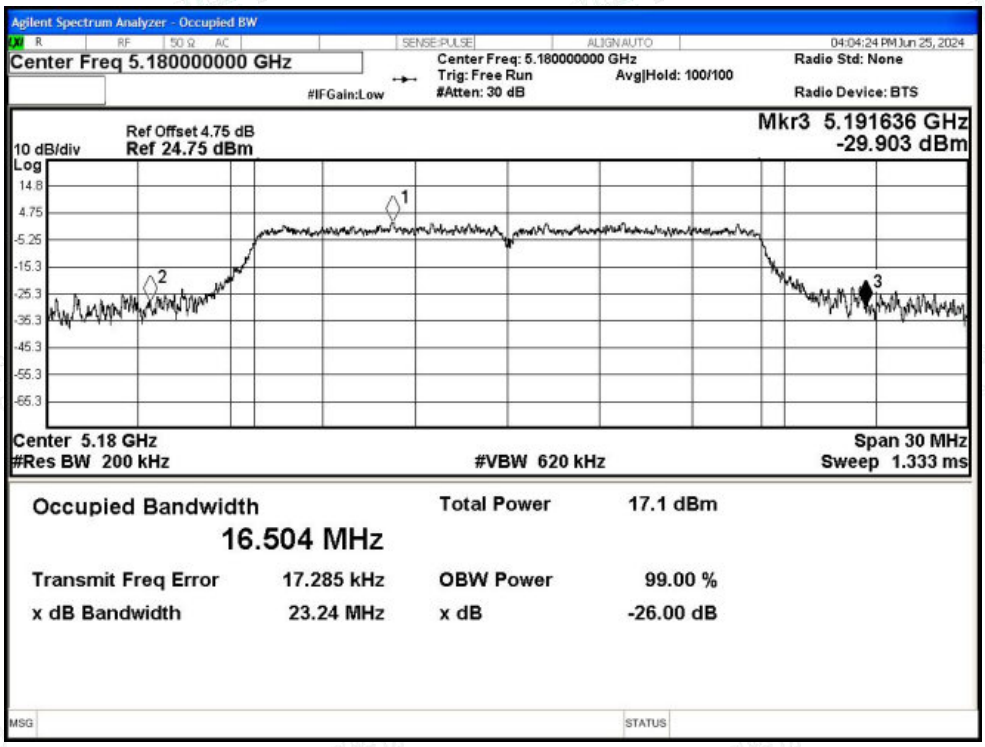
| | |
|---|---|
| Temperature: | 23.8°C |
| Relative Humidity: | 52.1% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Paddi Chen |
| Supervised by: | Nick Peng |

# D.1 -26dB Bandwidth

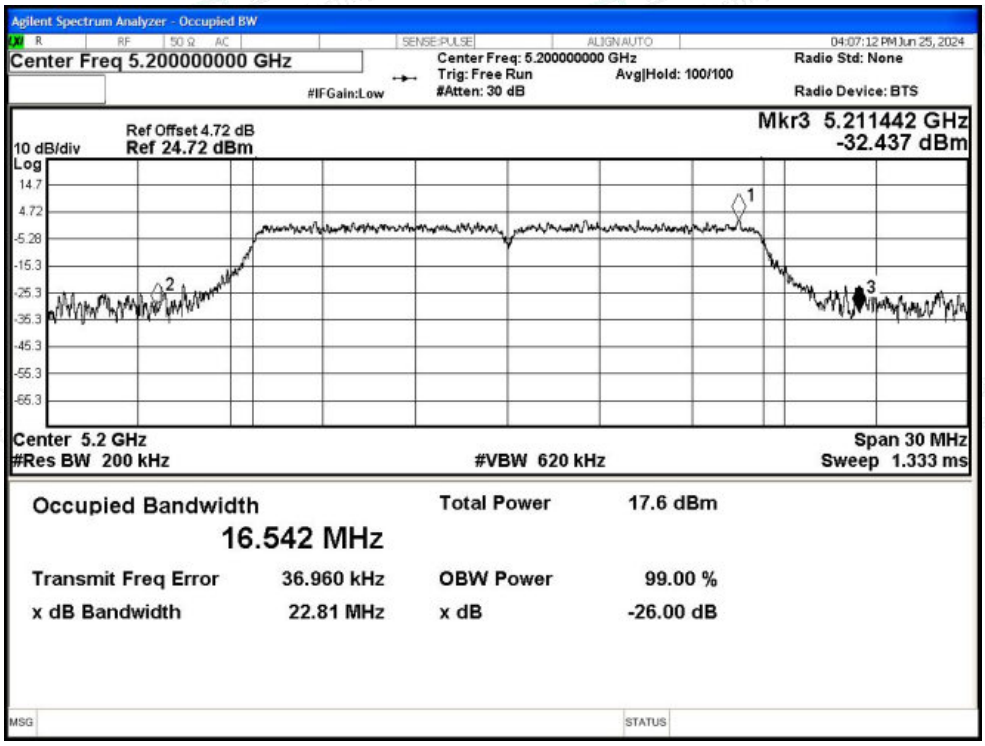
| Condition | Mode | Frequency (MHz) | Antenna | -26 dB Bandwidth (MHz) | Limit -26 dB Bandwidth (MHz) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | a | 5180 | Ant1 | 23.237 | >=0.5 | Pass |
| NVNT | a | 5200 | Ant1 | 22.811 | >=0.5 | Pass |
| NVNT | a | 5240 | Ant1 | 23.94 | >=0.5 | Pass |
| NVNT | n20 | 5180 | Ant1 | 27.347 | >=0.5 | Pass |
| NVNT | n20 | 5200 | Ant1 | 24.015 | >=0.5 | Pass |
| NVNT | n20 | 5240 | Ant1 | 25.423 | >=0.5 | Pass |
| NVNT | n40 | 5190 | Ant1 | 45.212 | >=0.5 | Pass |
| NVNT | n40 | 5230 | Ant1 | 41.15 | >=0.5 | Pass |
| NVNT | ac20 | 5180 | Ant1 | 27.512 | >=0.5 | Pass |
| NVNT | ac20 | 5200 | Ant1 | 27.412 | >=0.5 | Pass |
| NVNT | ac20 | 5240 | Ant1 | 25.066 | >=0.5 | Pass |
| NVNT | ac40 | 5190 | Ant1 | 49.893 | >=0.5 | Pass |
| NVNT | ac40 | 5230 | Ant1 | 45.131 | >=0.5 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 82.158 | >=0.5 | Pass |

Test Graphs

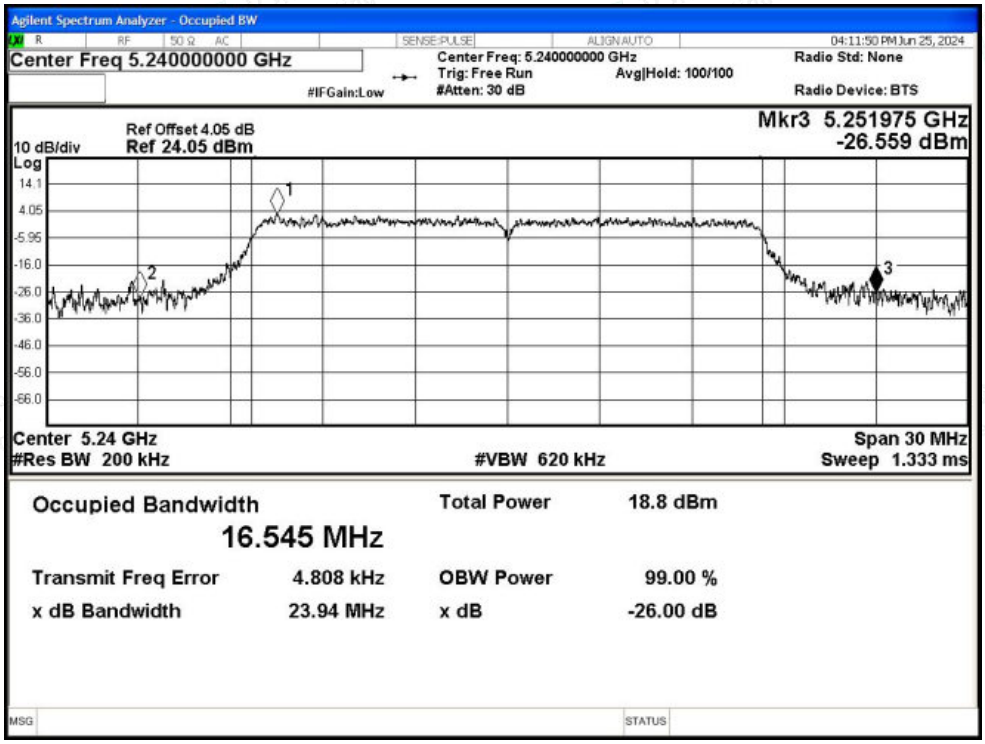
-26dB Bandwidth NVNT a 5180MHz Ant1



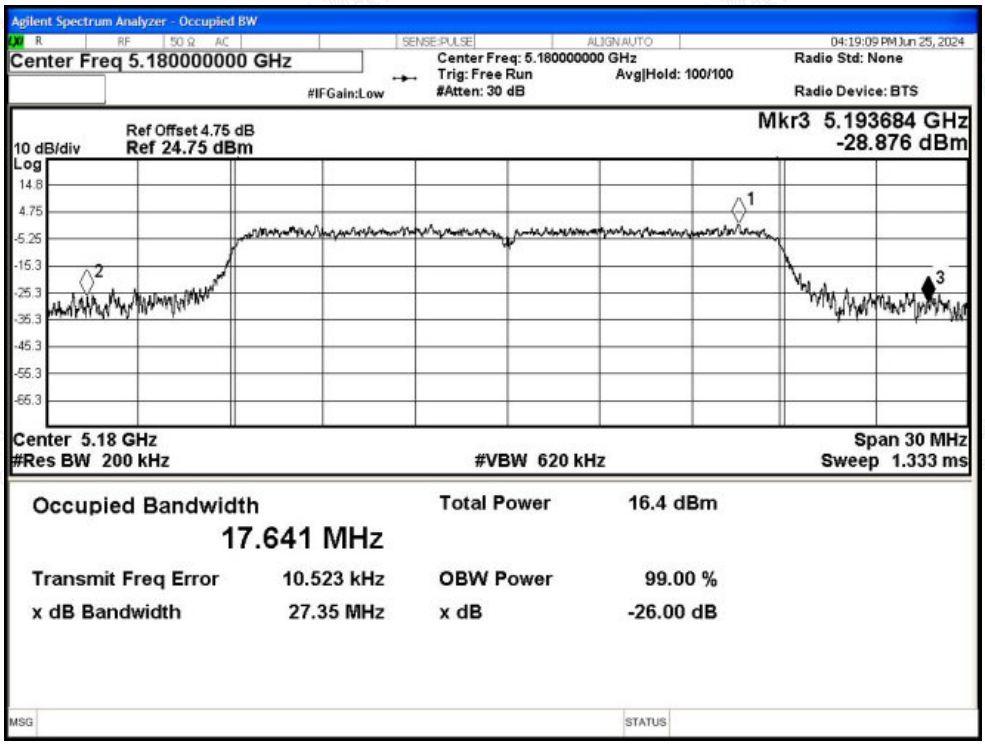

-26dB Bandwidth NVNT a 5200MHz Ant1



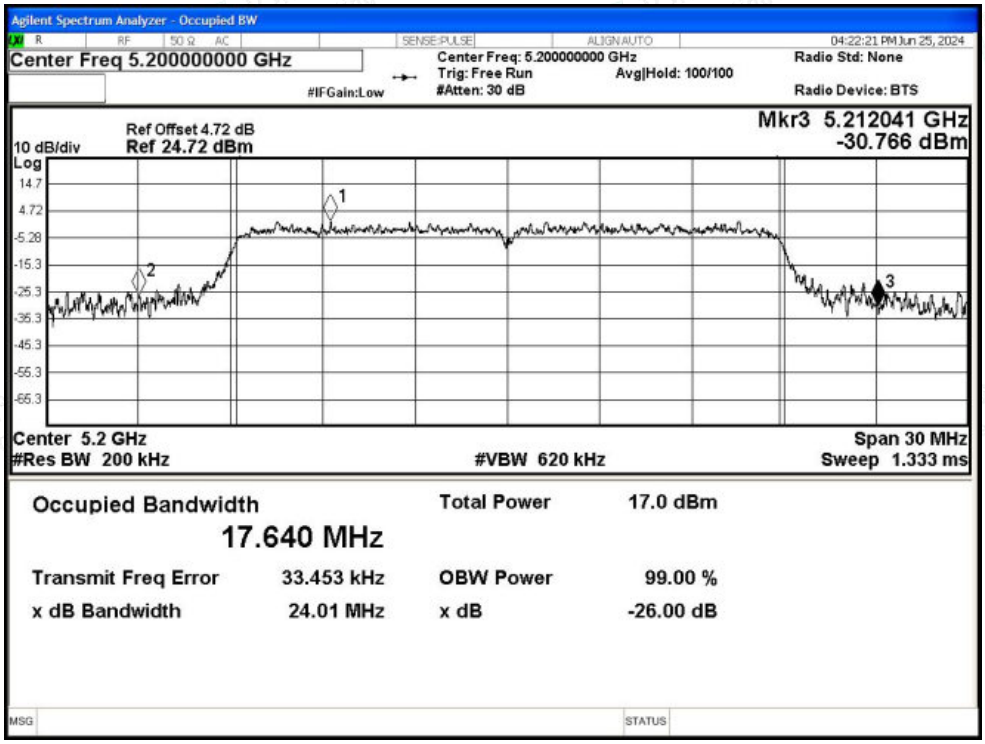
-26dB Bandwidth NVNT a 5240MHz Ant1



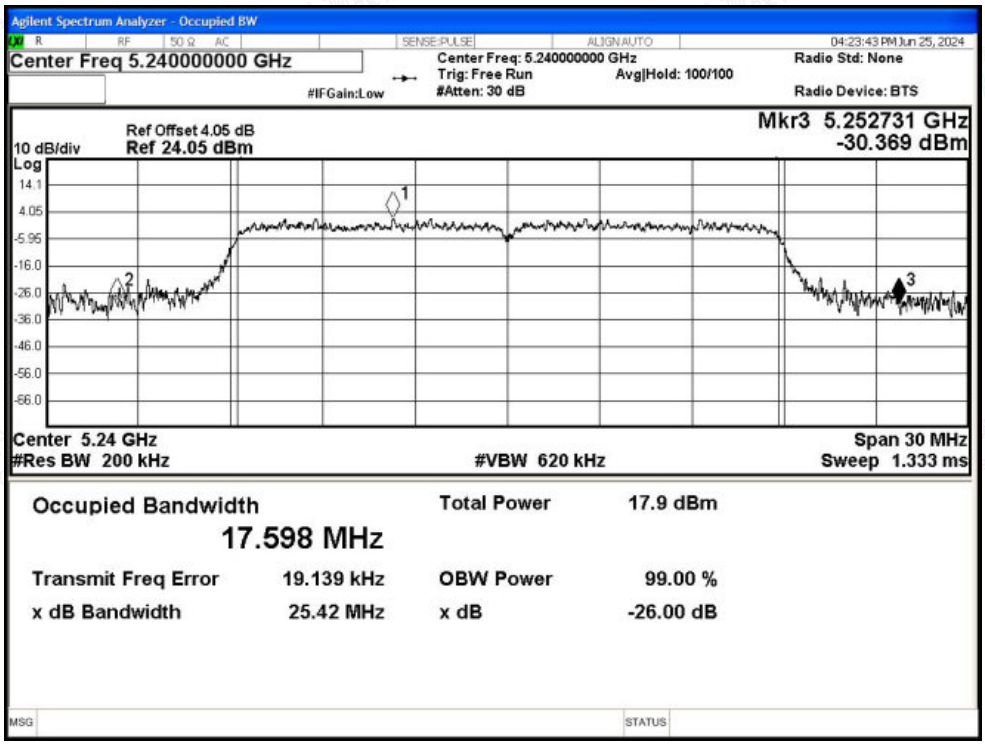

-26dB Bandwidth NVNT n20 5180MHz Ant1



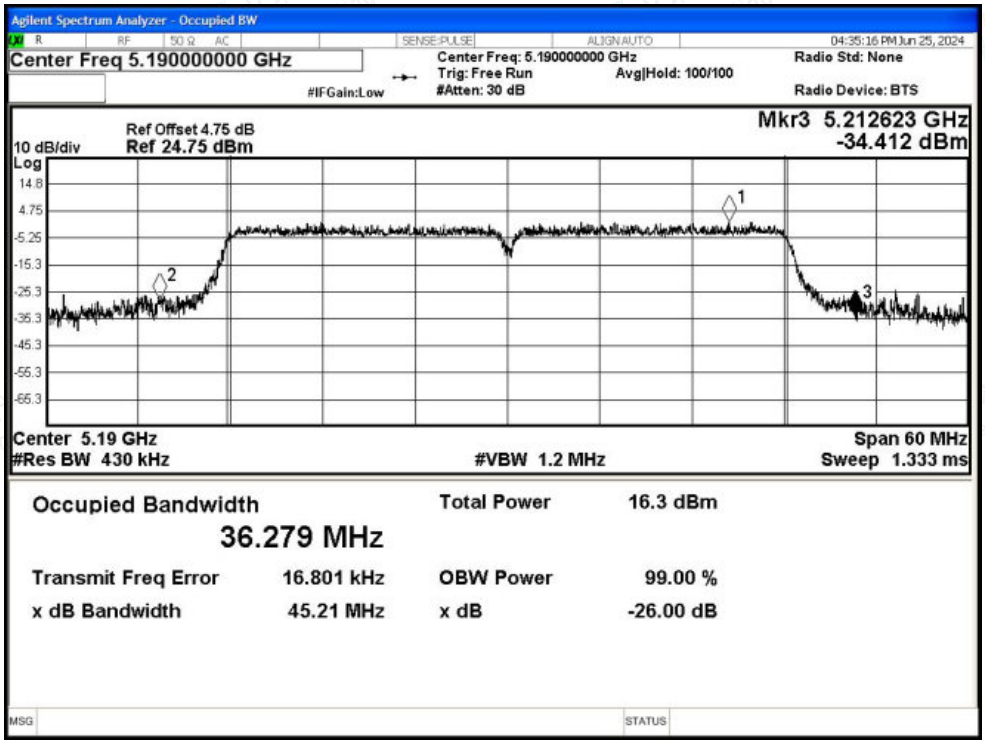
-26dB Bandwidth NVNT n20 5200MHz Ant1



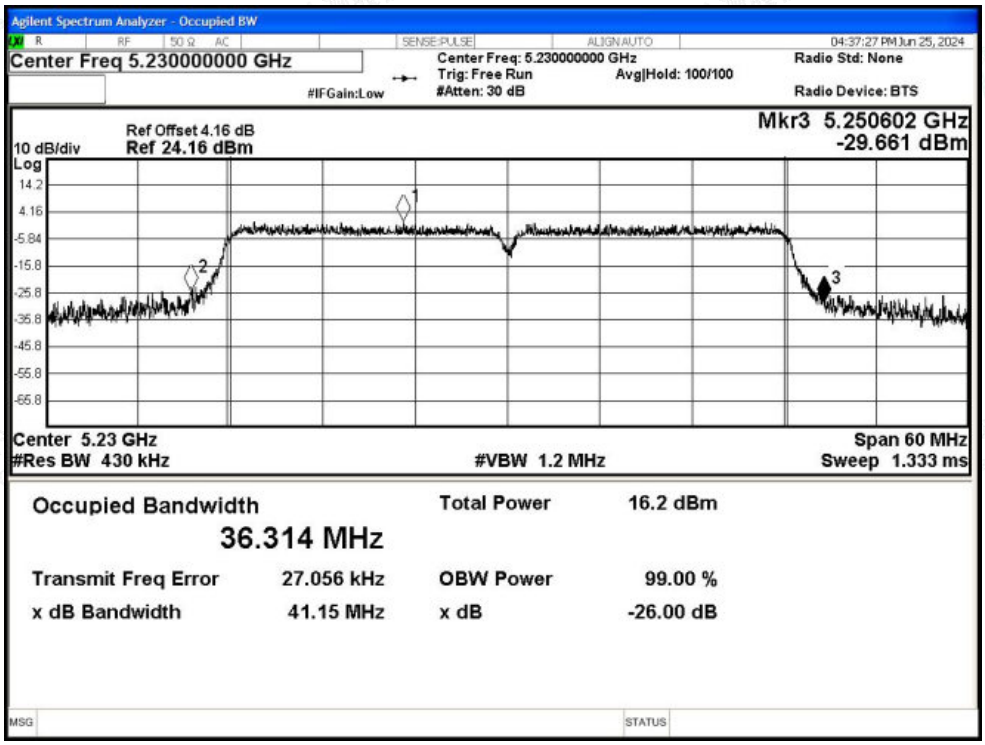

-26dB Bandwidth NVNT n20 5240MHz Ant1



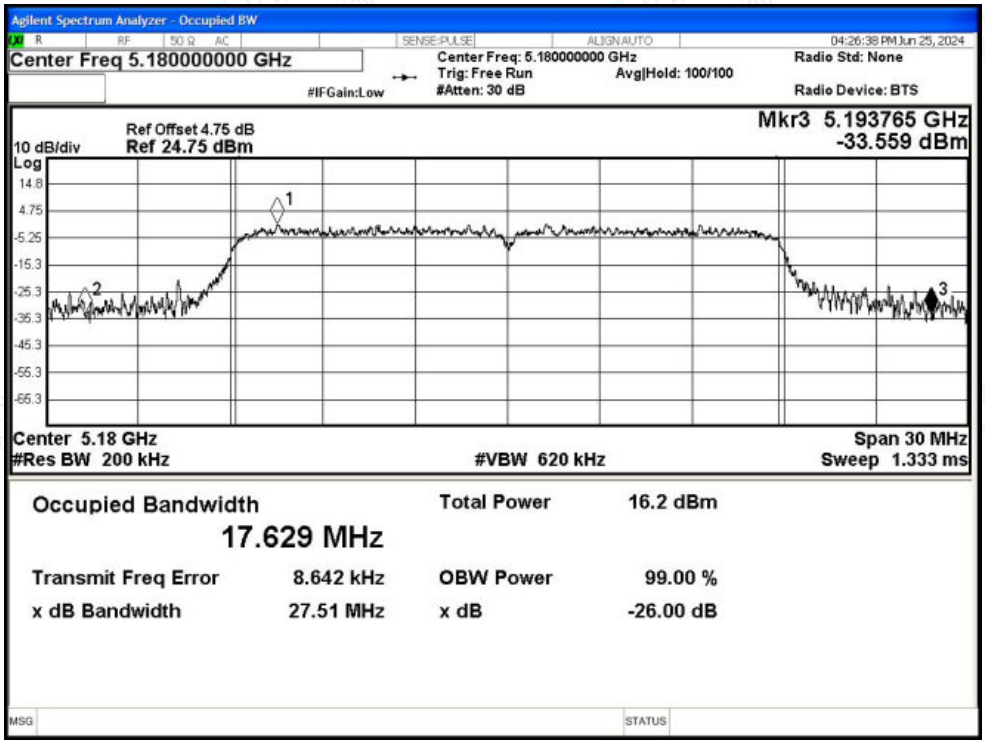
-26dB Bandwidth NVNT n40 5190MHz Ant1



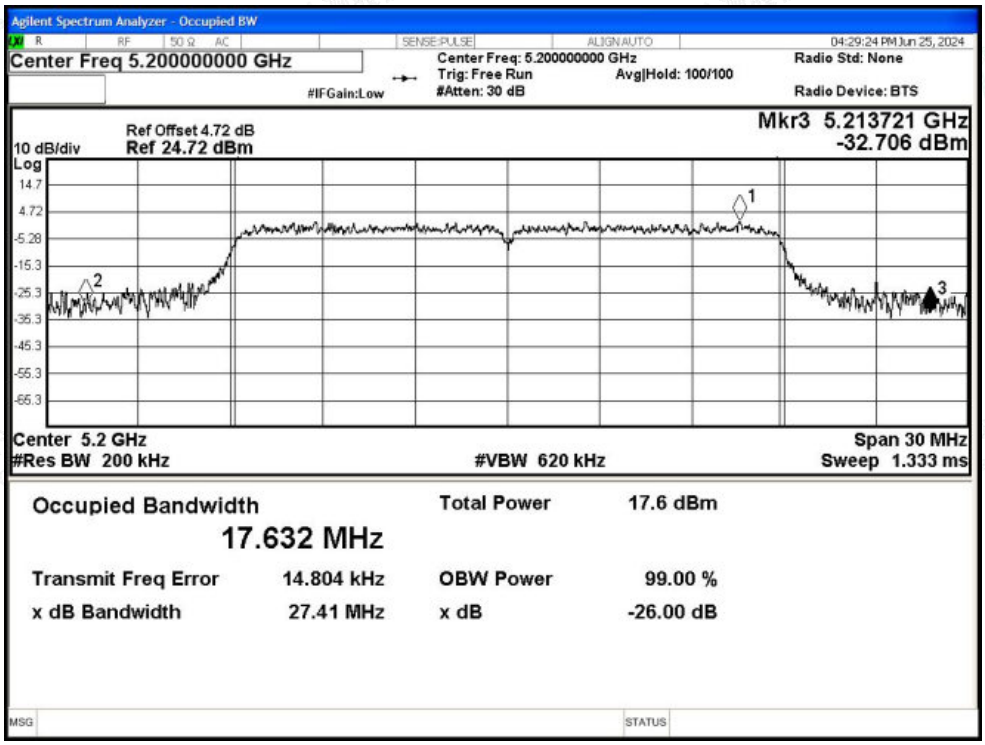

-26dB Bandwidth NVNT n40 5230MHz Ant1



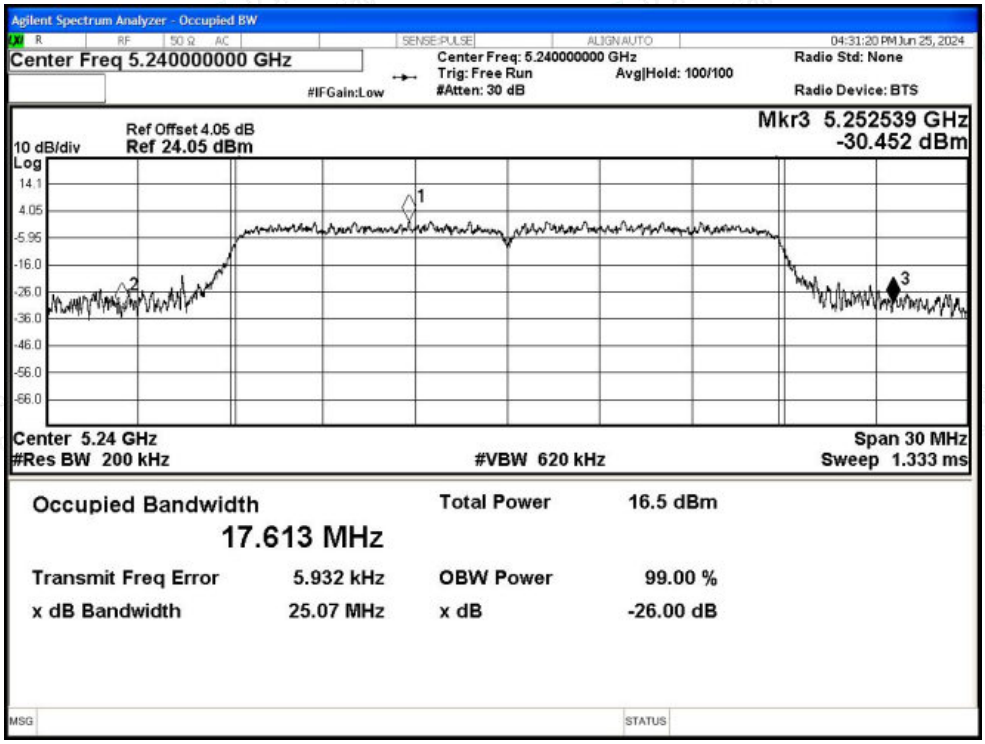
-26dB Bandwidth NVNT ac20 5180MHz Ant1



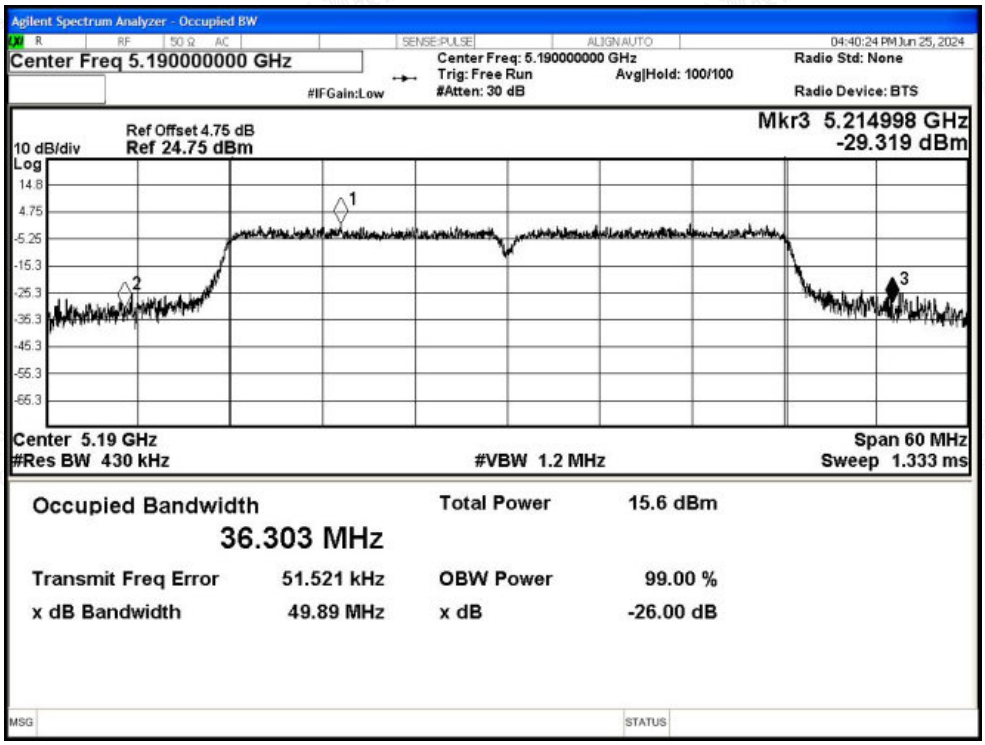

-26dB Bandwidth NVNT ac20 5200MHz Ant1



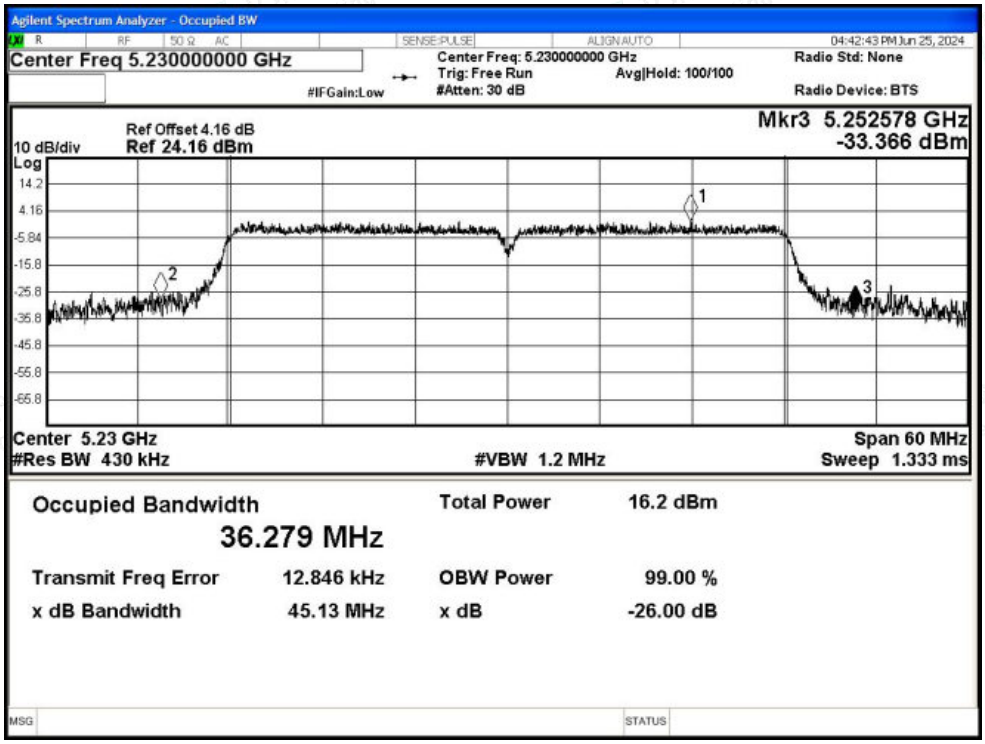
-26dB Bandwidth NVNT ac20 5240MHz Ant1



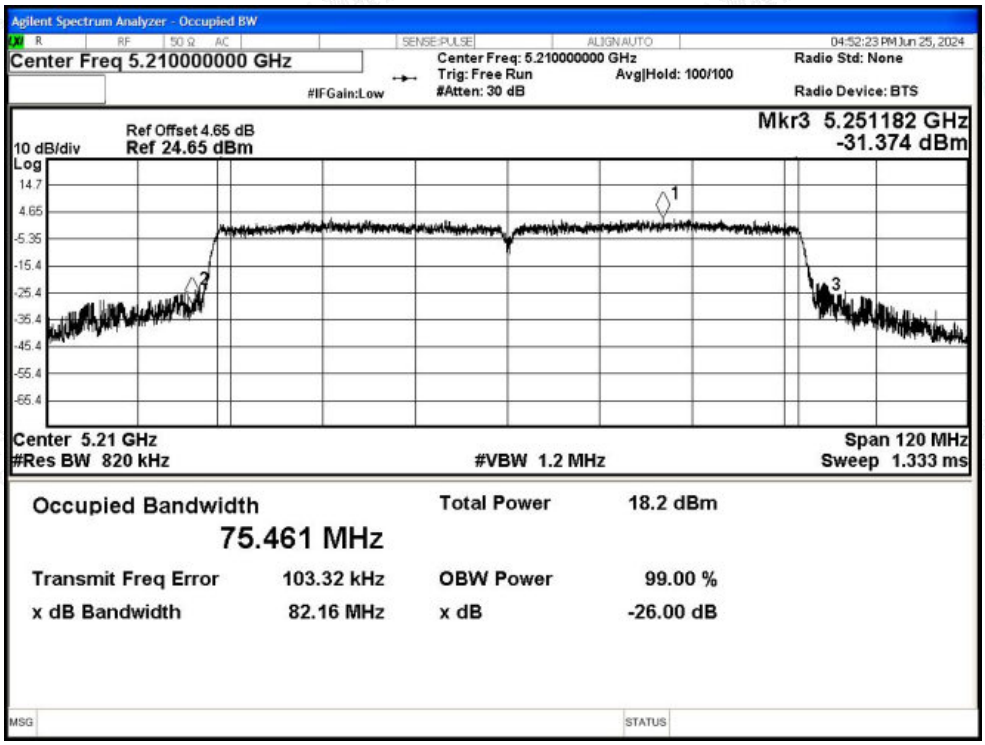

-26dB Bandwidth NVNT ac40 5190MHz Ant1



-26dB Bandwidth NVNT ac40 5230MHz Ant1




-26dB Bandwidth NVNT ac80 5210MHz Ant1



# D.2 Maximum Conducted Output Power

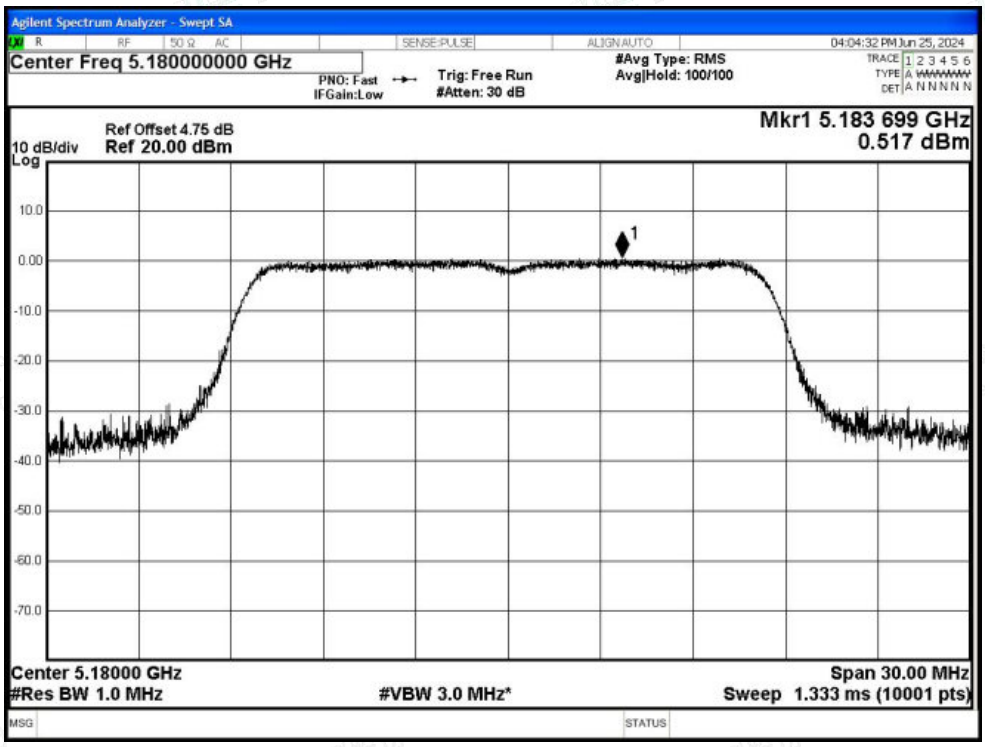
| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Duty Factor (dB) | Total Power (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| NVNT | a | 5180 | Ant1 | 12.28 | 0.24 | 12.52 | 24 | Pass |
| NVNT | a | 5200 | Ant1 | 12.69 | 0.24 | 12.93 | 24 | Pass |
| NVNT | a | 5240 | Ant1 | 12.89 | 0.24 | 13.13 | 24 | Pass |
| NVNT | n20 | 5180 | Ant1 | 11.81 | 0.28 | 12.09 | 24 | Pass |
| NVNT | n20 | 5200 | Ant1 | 11.24 | 0.28 | 11.52 | 24 | Pass |
| NVNT | n20 | 5240 | Ant1 | 11.19 | 0.28 | 11.47 | 24 | Pass |
| NVNT | n40 | 5190 | Ant1 | 10.63 | 0.45 | 11.08 | 24 | Pass |
| NVNT | n40 | 5230 | Ant1 | 10.11 | 0.44 | 10.55 | 24 | Pass |
| NVNT | ac20 | 5180 | Ant1 | 11.83 | 0.28 | 12.11 | 24 | Pass |
| NVNT | ac20 | 5200 | Ant1 | 11.8 | 0.28 | 12.08 | 24 | Pass |
| NVNT | ac20 | 5240 | Ant1 | 11.47 | 0.28 | 11.75 | 24 | Pass |
| NVNT | ac40 | 5190 | Ant1 | 10.89 | 0.45 | 11.34 | 24 | Pass |
| NVNT | ac40 | 5230 | Ant1 | 10.08 | 0.45 | 10.53 | 24 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 9.17 | 0.73 | 9.9 | 24 | Pass |

# D.3 Maximum Power Spectral Density Level

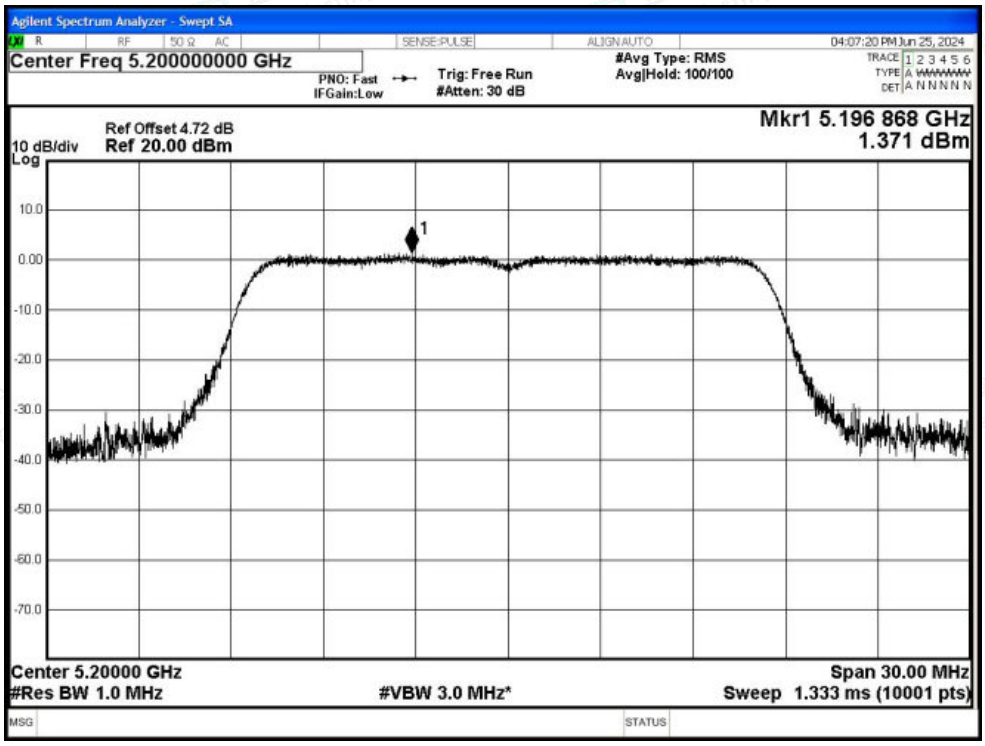
| Condition | Mode | Frequency (MHz) | Antenna | Conducted PSD(dBm/MHz) | Duty Factor (dB) | Total PSD (dBm/MHz) | Limit (dBm/MHz) | Verdict |
|---|---|---|---|---|---|---|---|---|
| NVNT | a | 5180 | Ant1 | 0.52 | 0.24 | 0.76 | 11 | Pass |
| NVNT | a | 5200 | Ant1 | 1.37 | 0.24 | 1.61 | 11 | Pass |
| NVNT | a | 5240 | Ant1 | 2.31 | 0.24 | 2.55 | 11 | Pass |
| NVNT | n20 | 5180 | Ant1 | 0.14 | 0.28 | 0.42 | 11 | Pass |
| NVNT | n20 | 5200 | Ant1 | 0.78 | 0.28 | 1.06 | 11 | Pass |
| NVNT | n20 | 5240 | Ant1 | 1.05 | 0.28 | 1.33 | 11 | Pass |
| NVNT | n40 | 5190 | Ant1 | -2.49 | 0.45 | -2.04 | 11 | Pass |
| NVNT | n40 | 5230 | Ant1 | -3.75 | 0.44 | -3.31 | 11 | Pass |
| NVNT | ac20 | 5180 | Ant1 | -0.04 | 0.28 | 0.24 | 11 | Pass |
| NVNT | ac20 | 5200 | Ant1 | 0.92 | 0.28 | 1.2 | 11 | Pass |
| NVNT | ac20 | 5240 | Ant1 | 0.09 | 0.28 | 0.37 | 11 | Pass |
| NVNT | ac40 | 5190 | Ant1 | -4.1 | 0.45 | -3.65 | 11 | Pass |
| NVNT | ac40 | 5230 | Ant1 | -3.58 | 0.45 | -3.13 | 11 | Pass |
| NVNT | ac80 | 5210 | Ant1 | -5.06 | 0.73 | -4.33 | 11 | Pass |

Test Graphs

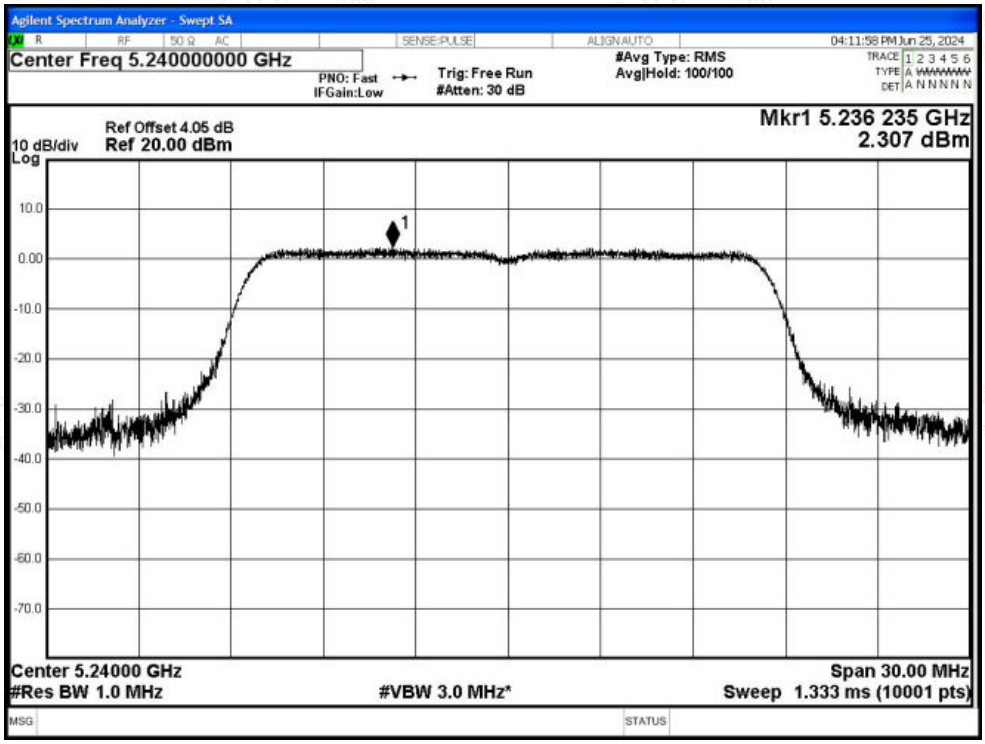
PSD NVNT a 5180MHz Ant1



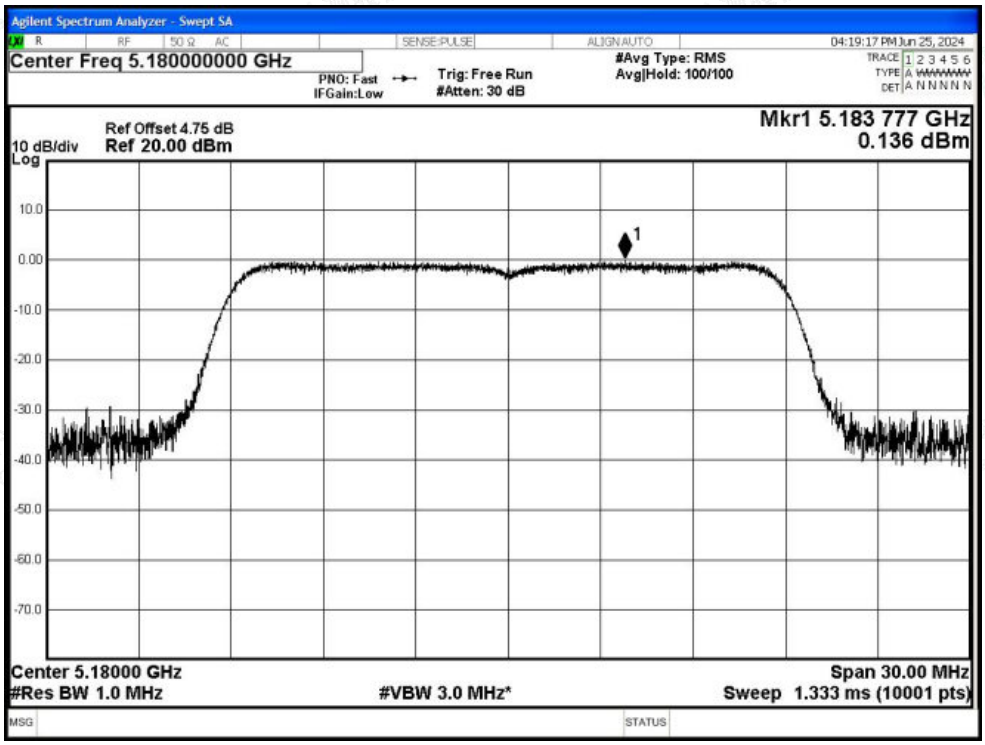

PSD NVNT a 5200MHz Ant1



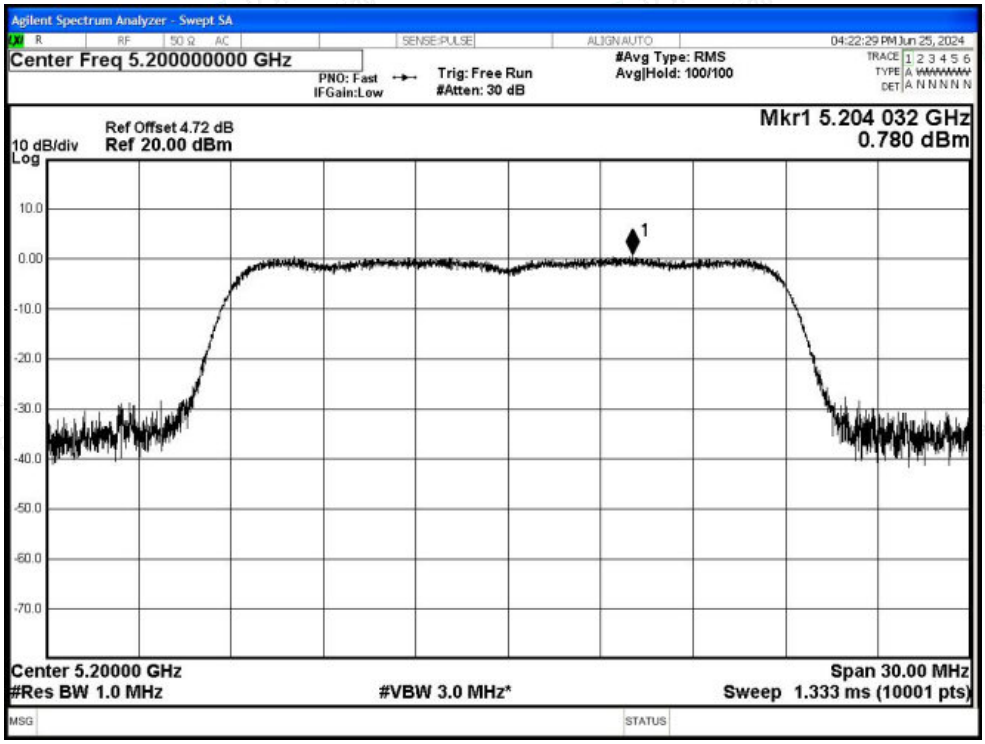
PSD NVNT a 5240MHz Ant1



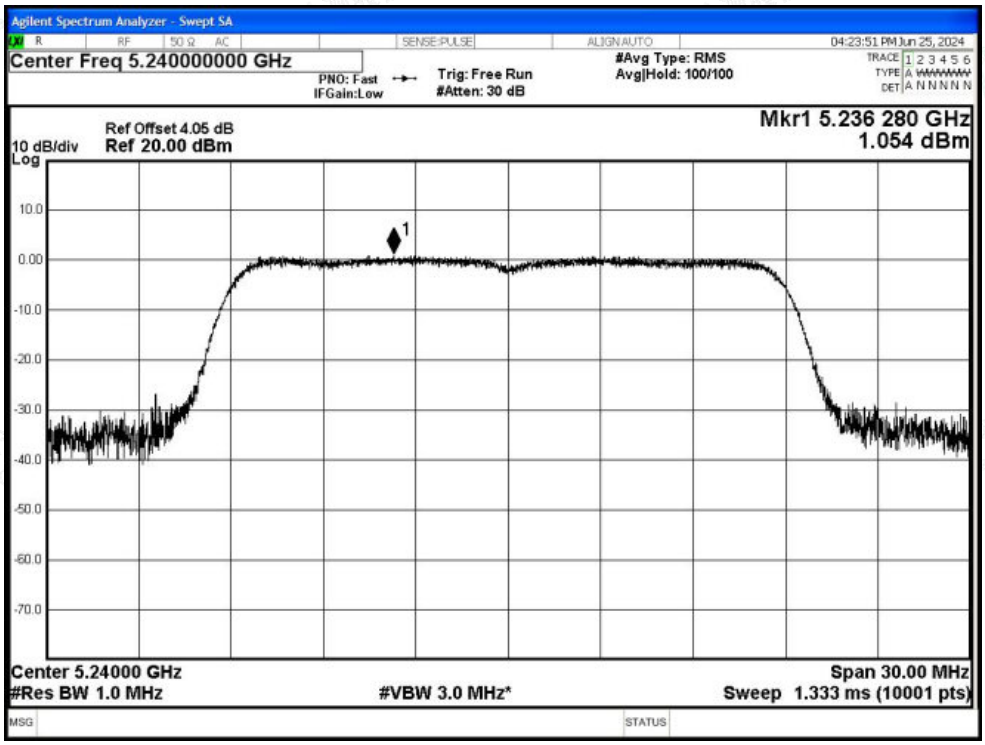

PSD NVNT n20 5180MHz Ant1



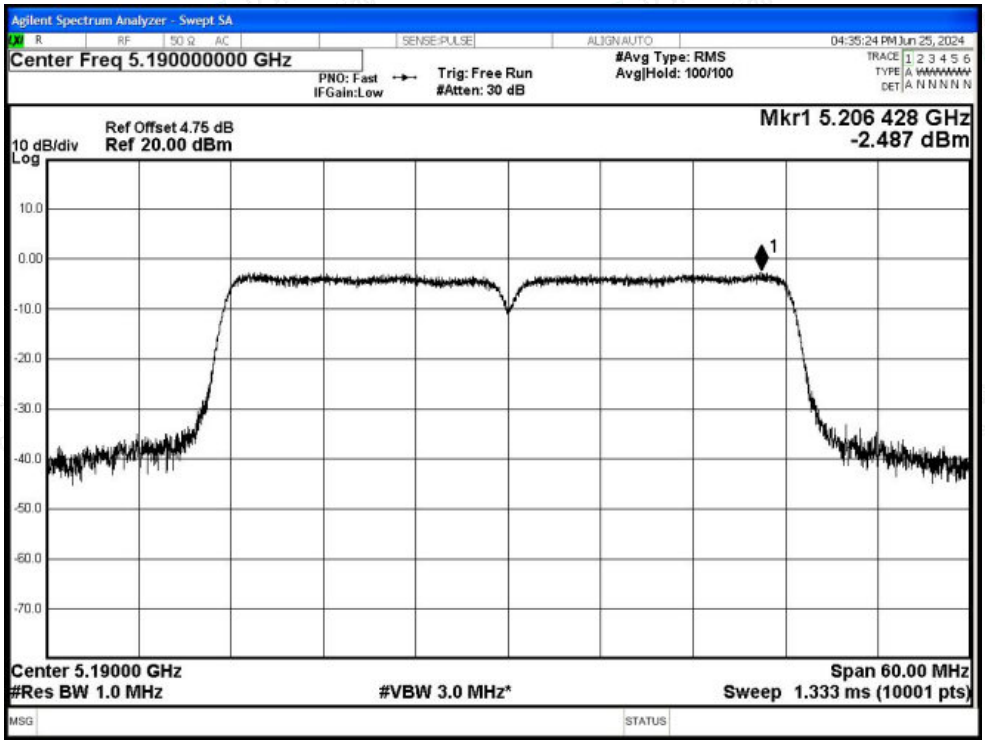
PSD NVNT n20 5200MHz Ant1



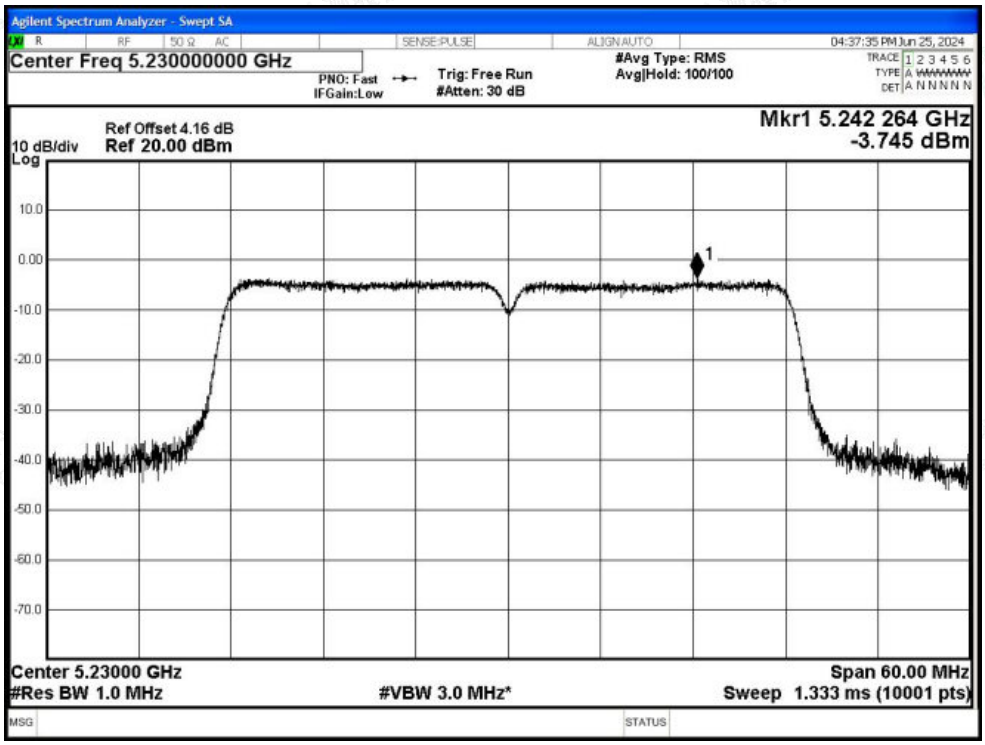

PSD NVNT n20 5240MHz Ant1



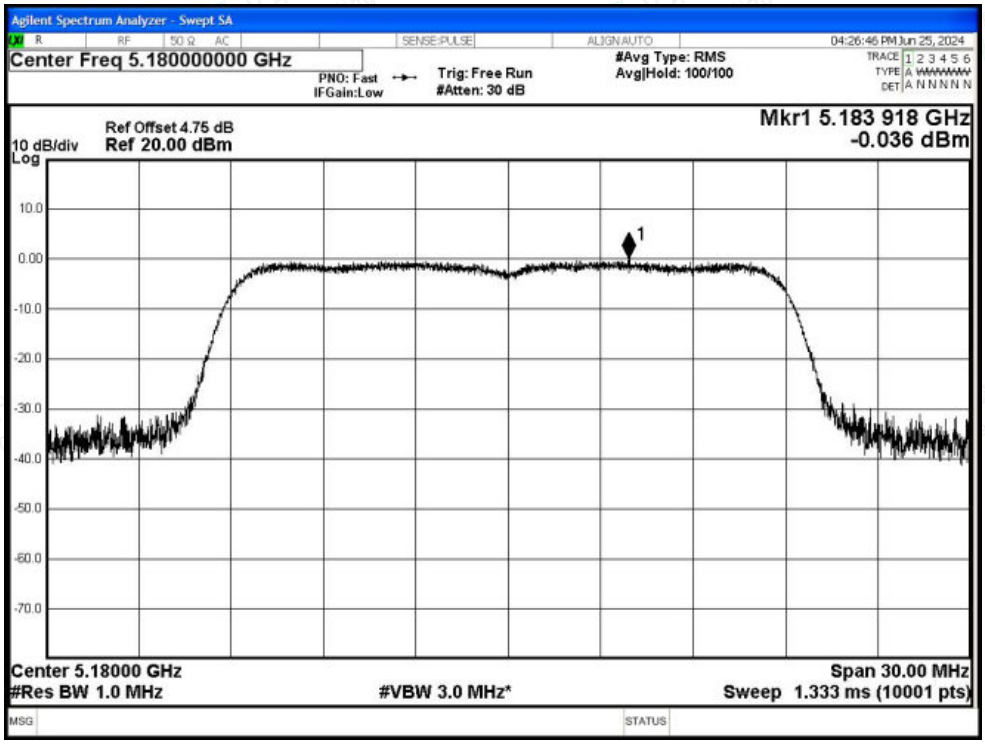
PSD NVNT n40 5190MHz Ant1



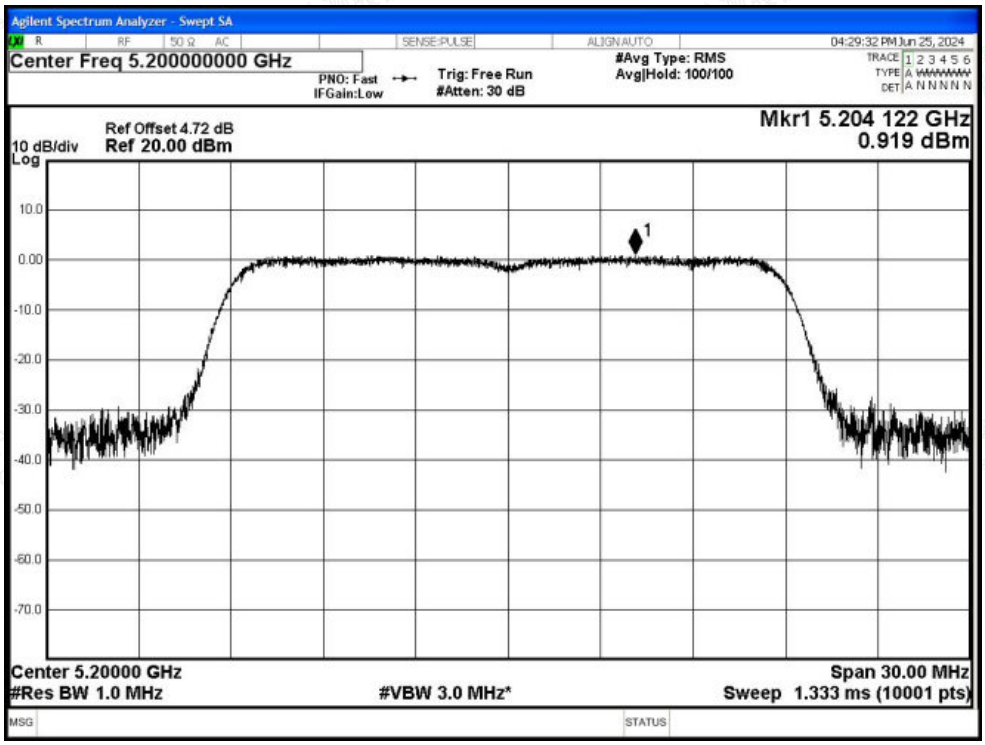

PSD NVNT n40 5230MHz Ant1



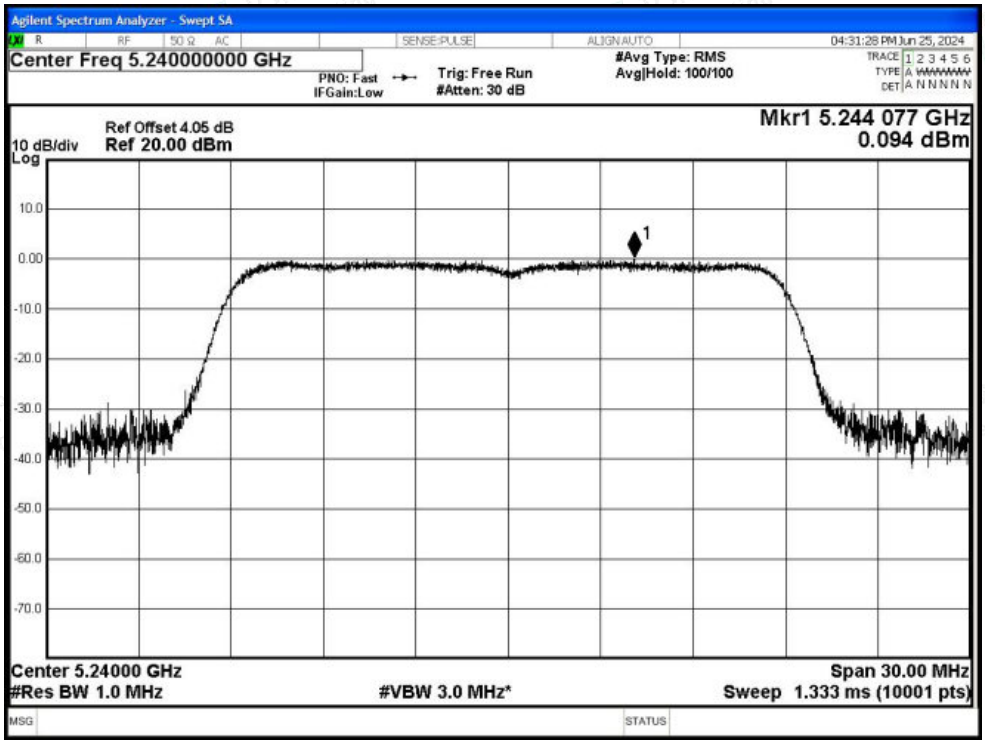
PSD NVNT ac20 5180MHz Ant1



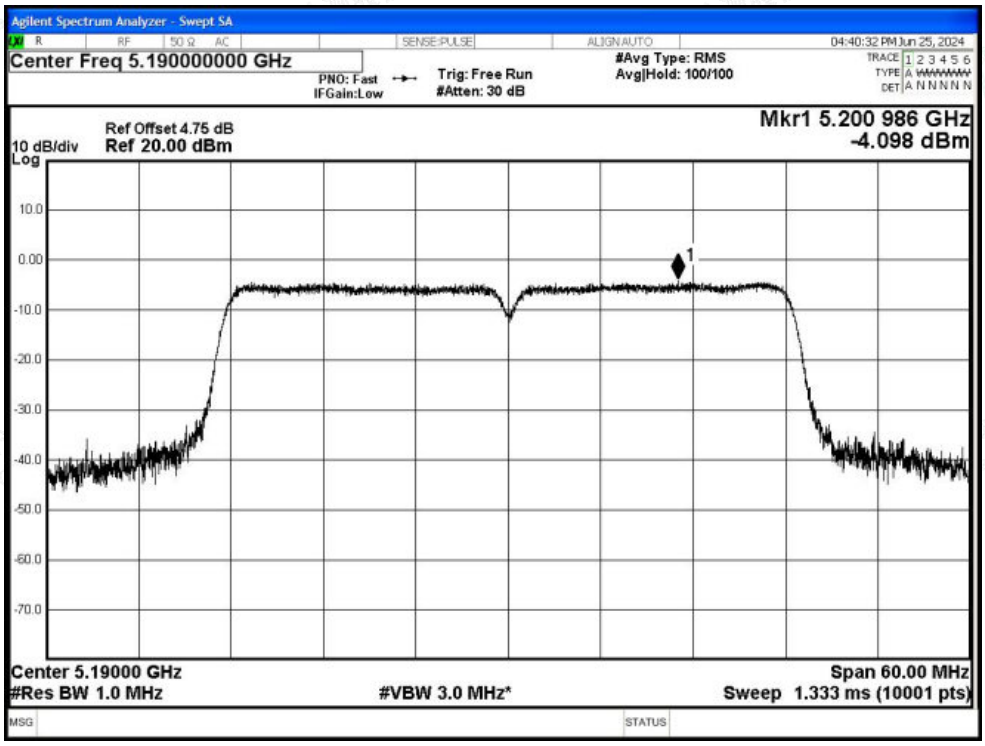

PSD NVNT ac20 5200MHz Ant1



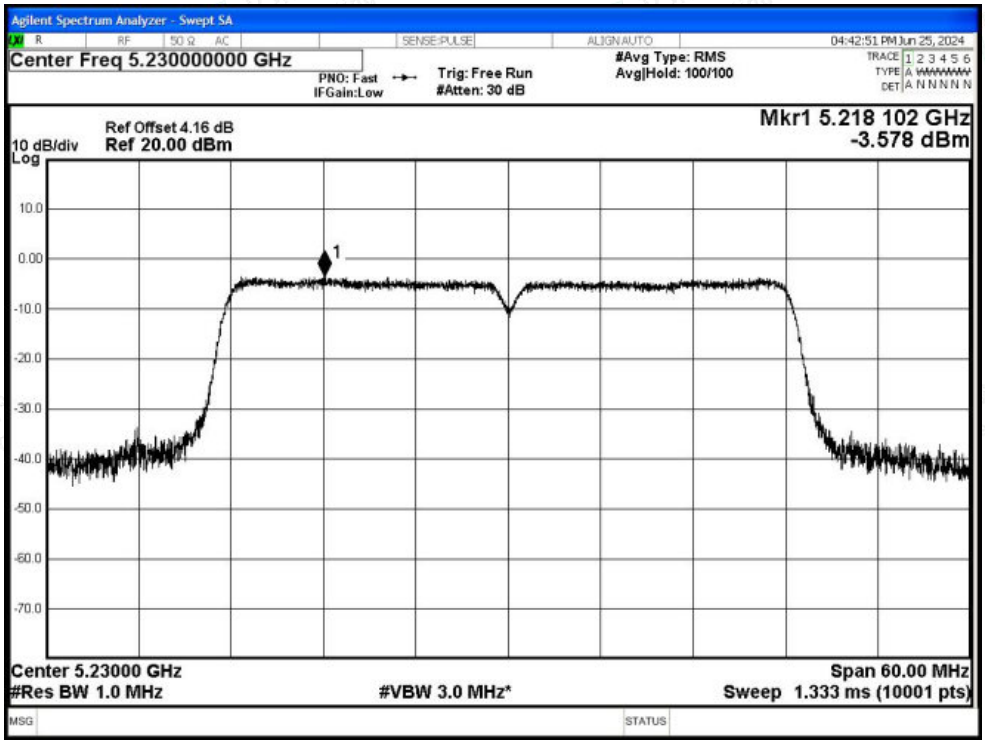
PSD NVNT ac20 5240MHz Ant1



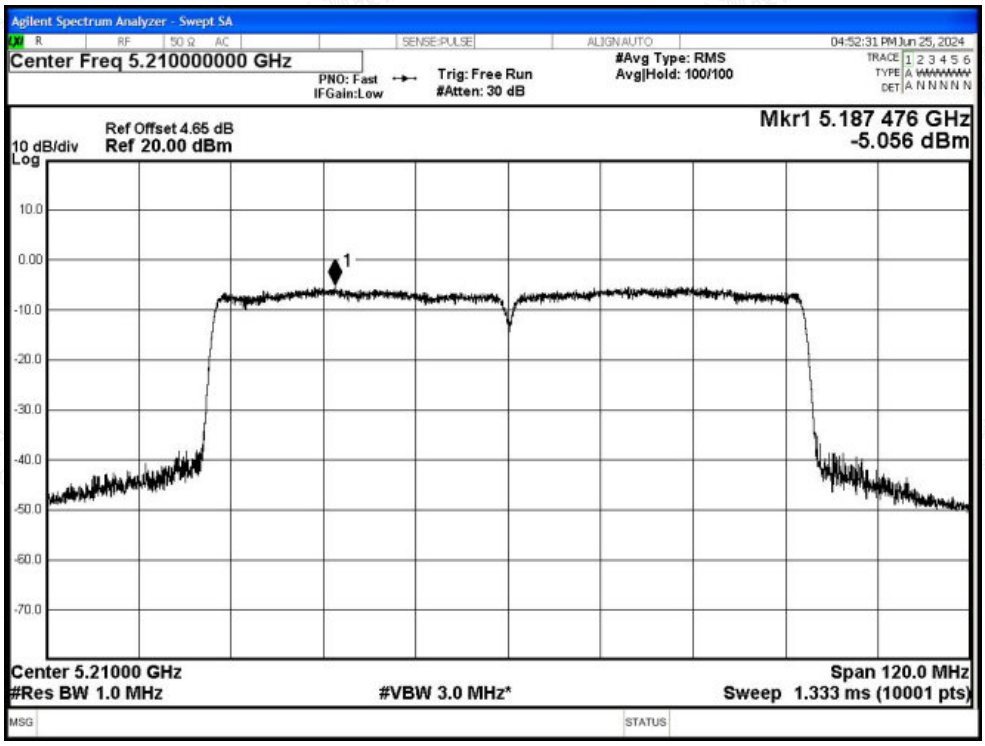

PSD NVNT ac40 5190MHz Ant1



PSD NVNT ac40 5230MHz Ant1




PSD NVNT ac80 5210MHz Ant1



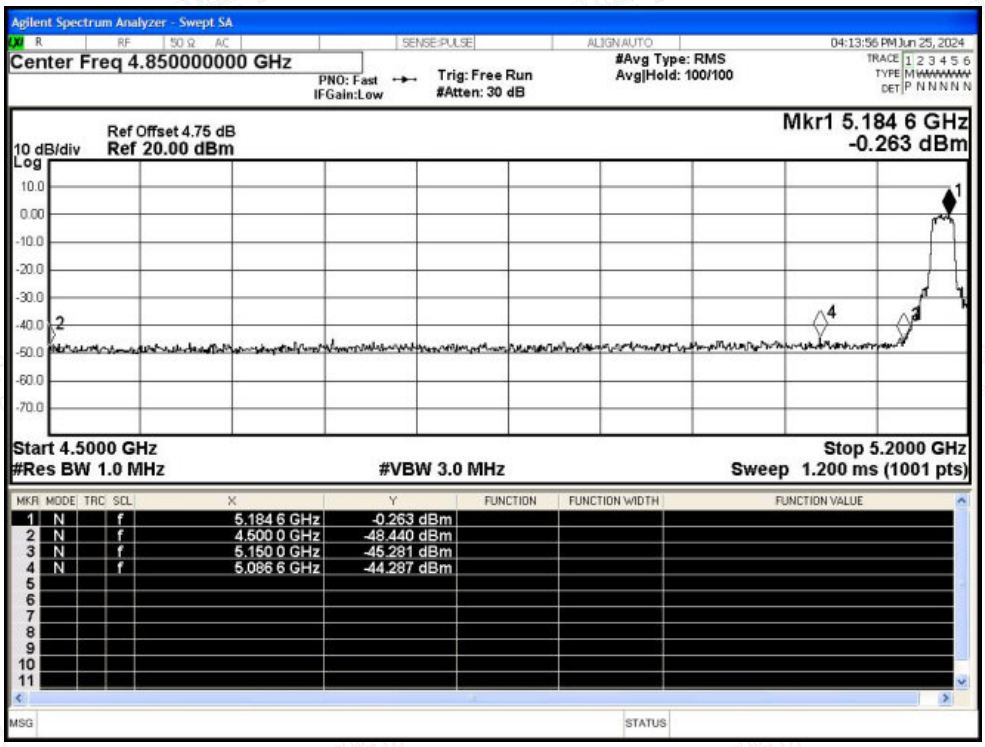
## D.4 Restrict Band

| 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 | 5180 | Ant1 | 4500 | -48.44 | 2 | - | 48.79 | Peak | 68.2 | Pass |
| NVNT | a | 5180 | Ant1 | 4500 | -56.71 | 2 | 0.24 | 40.76 | Average | 54 | Pass |
| NVNT | a | 5180 | Ant1 | 5086.6 | -44.29 | 2 | - | 52.94 | Peak | 68.2 | Pass |
| NVNT | a | 5180 | Ant1 | 5127.9 | -54.54 | 2 | 0.24 | 42.93 | Average | 54 | Pass |
| NVNT | a | 5180 | Ant1 | 5150 | -45.28 | 2 | - | 51.95 | Peak | 68.2 | Pass |
| NVNT | a | 5180 | Ant1 | 5150 | -54.61 | 2 | 0.24 | 42.86 | Average | 54 | Pass |
| NVNT | a | 5240 | Ant1 | 5350 | -49.54 | 2 | - | 47.69 | Peak | 68.2 | Pass |
| NVNT | a | 5240 | Ant1 | 5350 | -57.37 | 2 | 0.24 | 40.1 | Average | 54 | Pass |
| NVNT | a | 5240 | Ant1 | 5421.84 | -45.52 | 2 | - | 51.71 | Peak | 68.2 | Pass |
| NVNT | a | 5240 | Ant1 | 5381.76 | -56.27 | 2 | 0.24 | 41.2 | Average | 54 | Pass |
| NVNT | a | 5240 | Ant1 | 5460 | -48.86 | 2 | - | 48.37 | Peak | 68.2 | Pass |
| NVNT | a | 5240 | Ant1 | 5460 | -57.02 | 2 | 0.24 | 40.45 | Average | 54 | Pass |
| NVNT | n20 | 5180 | Ant1 | 4500 | -49.38 | 2 | - | 47.85 | Peak | 68.2 | Pass |
| NVNT | n20 | 5180 | Ant1 | 4500 | -57.49 | 2 | 0.28 | 40.02 | Average | 54 | Pass |
| NVNT | n20 | 5180 | Ant1 | 5102 | -44.83 | 2 | - | 52.4 | Peak | 68.2 | Pass |
| NVNT | n20 | 5180 | Ant1 | 5149.6 | -54.85 | 2 | 0.28 | 42.66 | Average | 54 | Pass |
| NVNT | n20 | 5180 | Ant1 | 5150 | -44.96 | 2 | - | 52.27 | Peak | 68.2 | Pass |
| NVNT | n20 | 5180 | Ant1 | 5150 | -55 | 2 | 0.28 | 42.51 | Average | 54 | Pass |
| NVNT | n20 | 5240 | Ant1 | 5350 | -48.27 | 2 | - | 48.96 | Peak | 68.2 | Pass |
| NVNT | n20 | 5240 | Ant1 | 5350 | -57.03 | 2 | 0.28 | 40.48 | Average | 54 | Pass |
| NVNT | n20 | 5240 | Ant1 | 5459.28 | -46.27 | 2 | - | 50.96 | Peak | 68.2 | Pass |
| NVNT | n20 | 5240 | Ant1 | 5398.32 | -56.43 | 2 | 0.28 | 41.08 | Average | 54 | Pass |
| NVNT | n20 | 5240 | Ant1 | 5460 | -48.01 | 2 | - | 49.22 | Peak | 68.2 | Pass |
| NVNT | n20 | 5240 | Ant1 | 5460 | -57.3 | 2 | 0.28 | 40.21 | Average | 54 | Pass |
| NVNT | n40 | 5190 | Ant1 | 4500 | -49.43 | 2 | - | 47.8 | Peak | 68.2 | Pass |
| NVNT | n40 | 5190 | Ant1 | 4500 | -57.33 | 2 | 0.45 | 40.35 | Average | 54 | Pass |
| NVNT | n40 | 5190 | Ant1 | 5149.7 | -39.07 | 2 | - | 58.16 | Peak | 68.2 | Pass |
| NVNT | n40 | 5190 | Ant1 | 5149.7 | -53.71 | 2 | 0.45 | 43.97 | Average | 54 | Pass |
| NVNT | n40 | 5190 | Ant1 | 5150 | -39.07 | 2 | - | 58.16 | Peak | 68.2 | Pass |
| NVNT | n40 | 5190 | Ant1 | 5150 | -53.71 | 2 | 0.45 | 43.97 | Average | 54 | Pass |
| NVNT | n40 | 5230 | Ant1 | 5350 | -48.26 | 2 | - | 48.97 | Peak | 68.2 | Pass |
| NVNT | n40 | 5230 | Ant1 | 5350 | -56.77 | 2 | 0.44 | 40.9 | Average | 54 | Pass |
| NVNT | n40 | 5230 | Ant1 | 5454.06 | -45.75 | 2 | - | 51.48 | Peak | 68.2 | Pass |
| NVNT | n40 | 5230 | Ant1 | 5377.38 | -56.33 | 2 | 0.44 | 41.34 | Average | 54 | Pass |
| NVNT | n40 | 5230 | Ant1 | 5460 | -49.78 | 2 | - | 47.45 | Peak | 68.2 | Pass |
| NVNT | n40 | 5230 | Ant1 | 5460 | -56.96 | 2 | 0.44 | 40.71 | Average | 54 | Pass |

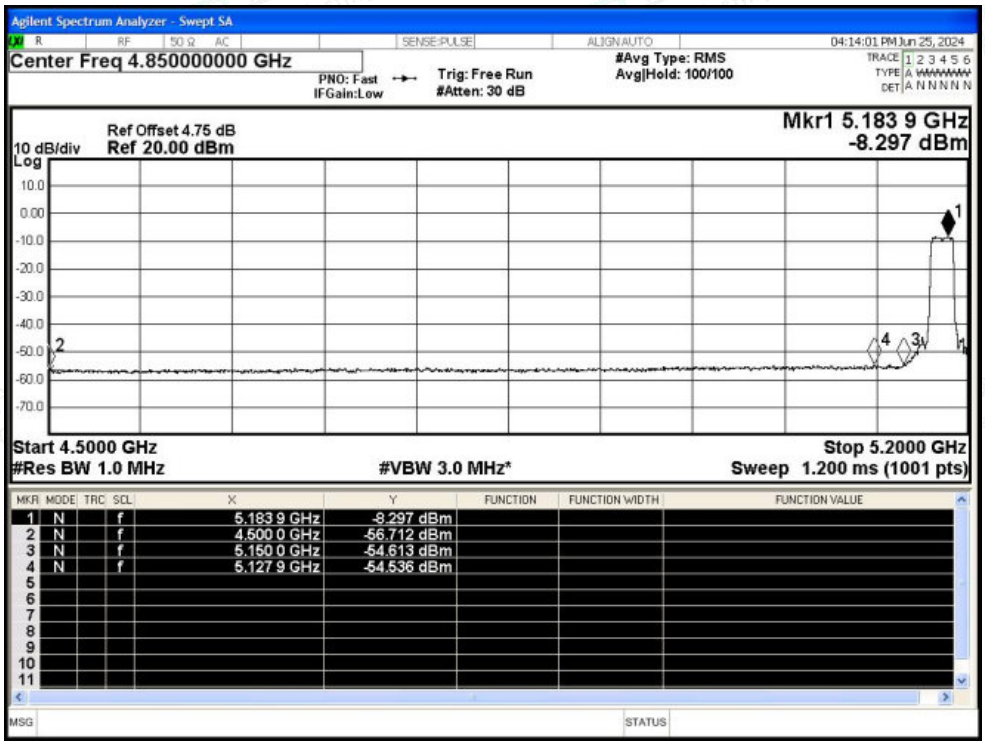
| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NVNT | ac20 | 5180 | Ant1 | 4500 | -49.18 | 2 | - | 48.05 | Peak | 68.2 | Pass |
| NVNT | ac20 | 5180 | Ant1 | 4500 | -57.51 | 2 | 0.28 | 40 | Average | 54 | Pass |
| NVNT | ac20 | 5180 | Ant1 | 5149.6 | -43.55 | 2 | - | 53.68 | Peak | 68.2 | Pass |
| NVNT | ac20 | 5180 | Ant1 | 5149.6 | -54.89 | 2 | 0.28 | 42.62 | Average | 54 | Pass |
| NVNT | ac20 | 5180 | Ant1 | 5150 | -43.42 | 2 | - | 53.81 | Peak | 68.2 | Pass |
| NVNT | ac20 | 5180 | Ant1 | 5150 | -54.57 | 2 | 0.28 | 42.94 | Average | 54 | Pass |
| NVNT | ac20 | 5240 | Ant1 | 5350 | -49.49 | 2 | - | 47.74 | Peak | 68.2 | Pass |
| NVNT | ac20 | 5240 | Ant1 | 5350 | -57.44 | 2 | 0.28 | 40.07 | Average | 54 | Pass |
| NVNT | ac20 | 5240 | Ant1 | 5392.32 | -46.43 | 2 | - | 50.8 | Peak | 68.2 | Pass |
| NVNT | ac20 | 5240 | Ant1 | 5396.16 | -56.4 | 2 | 0.28 | 41.11 | Average | 54 | Pass |
| NVNT | ac20 | 5240 | Ant1 | 5460 | -49.39 | 2 | - | 47.84 | Peak | 68.2 | Pass |
| NVNT | ac20 | 5240 | Ant1 | 5460 | -57.24 | 2 | 0.28 | 40.27 | Average | 54 | Pass |
| NVNT | ac40 | 5190 | Ant1 | 4500 | -48.28 | 2 | - | 48.95 | Peak | 68.2 | Pass |
| NVNT | ac40 | 5190 | Ant1 | 4500 | -57.24 | 2 | 0.45 | 40.44 | Average | 54 | Pass |
| NVNT | ac40 | 5190 | Ant1 | 5149.7 | -42.94 | 2 | - | 54.29 | Peak | 68.2 | Pass |
| NVNT | ac40 | 5190 | Ant1 | 5149.7 | -53.32 | 2 | 0.45 | 44.36 | Average | 54 | Pass |
| NVNT | ac40 | 5190 | Ant1 | 5150 | -42.94 | 2 | - | 54.29 | Peak | 68.2 | Pass |
| NVNT | ac40 | 5190 | Ant1 | 5150 | -53.32 | 2 | 0.45 | 44.36 | Average | 54 | Pass |
| NVNT | ac40 | 5230 | Ant1 | 5350 | -48.69 | 2 | - | 48.54 | Peak | 68.2 | Pass |
| NVNT | ac40 | 5230 | Ant1 | 5350 | -57.01 | 2 | 0.45 | 40.67 | Average | 54 | Pass |
| NVNT | ac40 | 5230 | Ant1 | 5376.57 | -45.38 | 2 | - | 51.85 | Peak | 68.2 | Pass |
| NVNT | ac40 | 5230 | Ant1 | 5409.78 | -55.94 | 2 | 0.45 | 41.74 | Average | 54 | Pass |
| NVNT | ac40 | 5230 | Ant1 | 5460 | -48 | 2 | - | 49.23 | Peak | 68.2 | Pass |
| NVNT | ac40 | 5230 | Ant1 | 5460 | -56.81 | 2 | 0.45 | 40.87 | Average | 54 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 5350 | -47.93 | 2 | - | 49.3 | Peak | 68.2 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 5350 | -56.5 | 2 | 0.73 | 41.46 | Average | 54 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 5416.11 | -45.58 | 2 | - | 51.65 | Peak | 68.2 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 5366.94 | -55.59 | 2 | 0.73 | 42.37 | Average | 54 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 5460 | -48.2 | 2 | - | 49.03 | Peak | 68.2 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 5460 | -56.71 | 2 | 0.73 | 41.25 | Average | 54 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 4500 | -49.47 | 2 | - | 47.76 | Peak | 68.2 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 4500 | -57.07 | 2 | 0.73 | 40.89 | Average | 54 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 5148.59 | -40.12 | 2 | - | 57.11 | Peak | 68.2 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 5149.38 | -53.74 | 2 | 0.73 | 44.22 | Average | 54 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 5150 | -45.82 | 2 | - | 51.41 | Peak | 68.2 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 5150 | -53.26 | 2 | 0.73 | 44.7 | Average | 54 | Pass |

Test Graphs

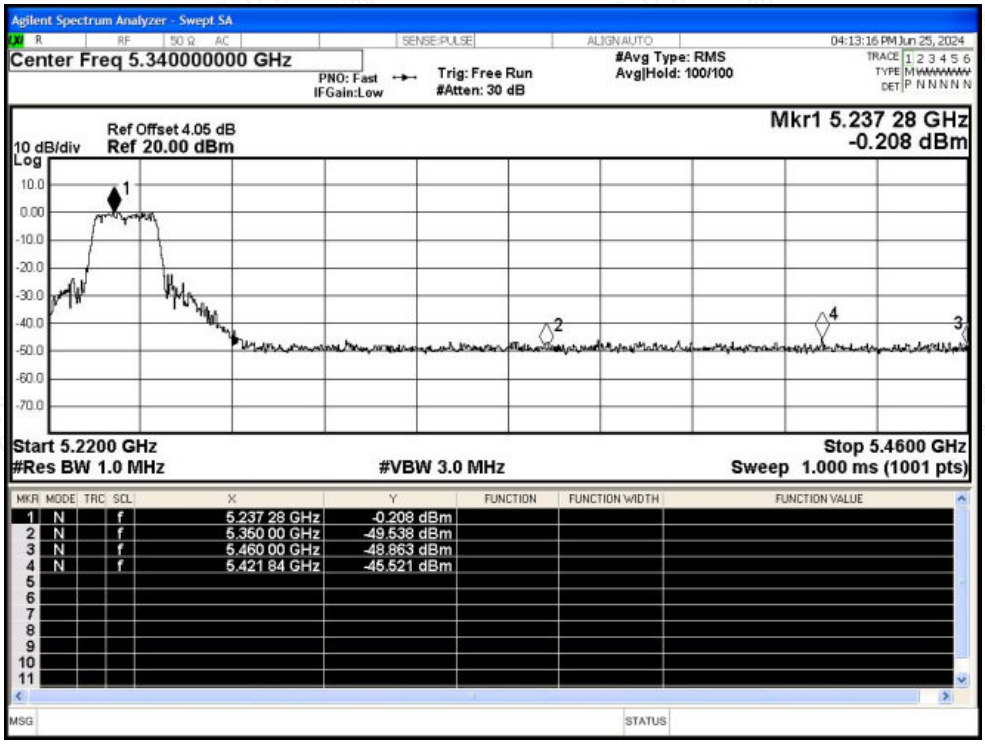
Restrict Band NVNT a 5180MHz Ant1 Peak



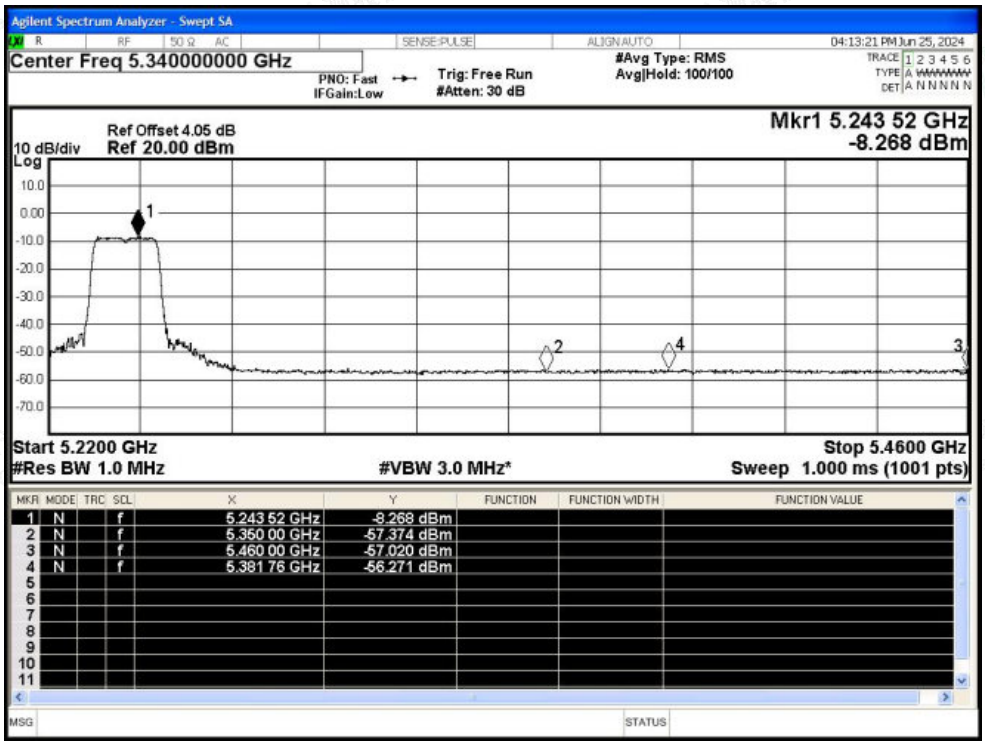

Restrict Band NVNT a 5180MHz Ant1 Average



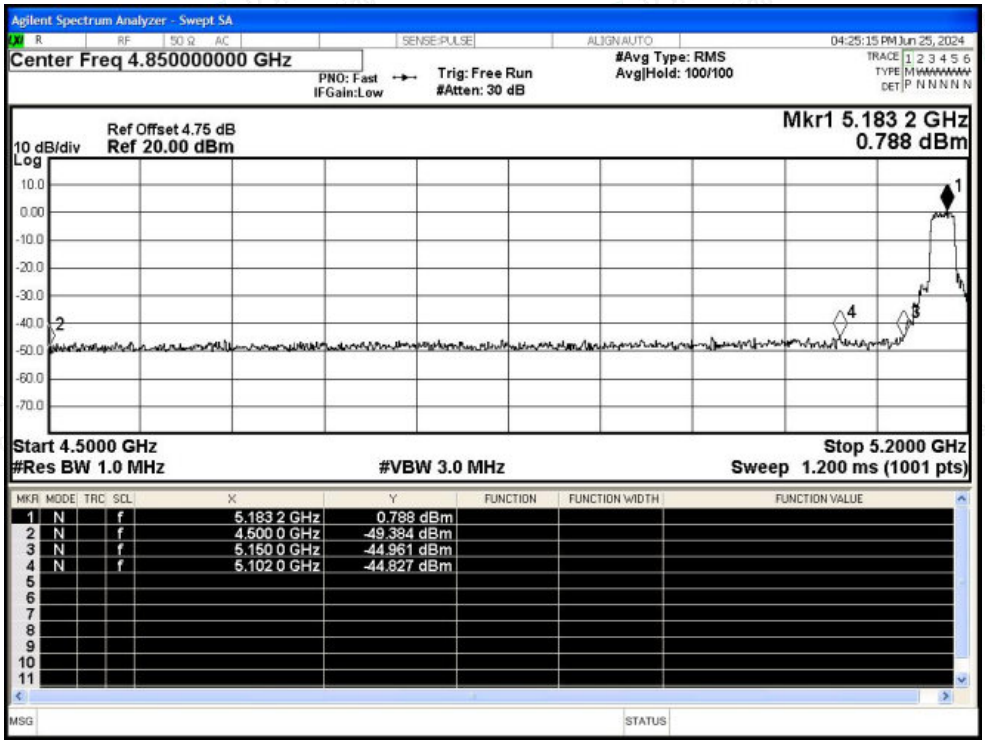
Restrict Band NVNT a 5240MHz Ant1 Peak



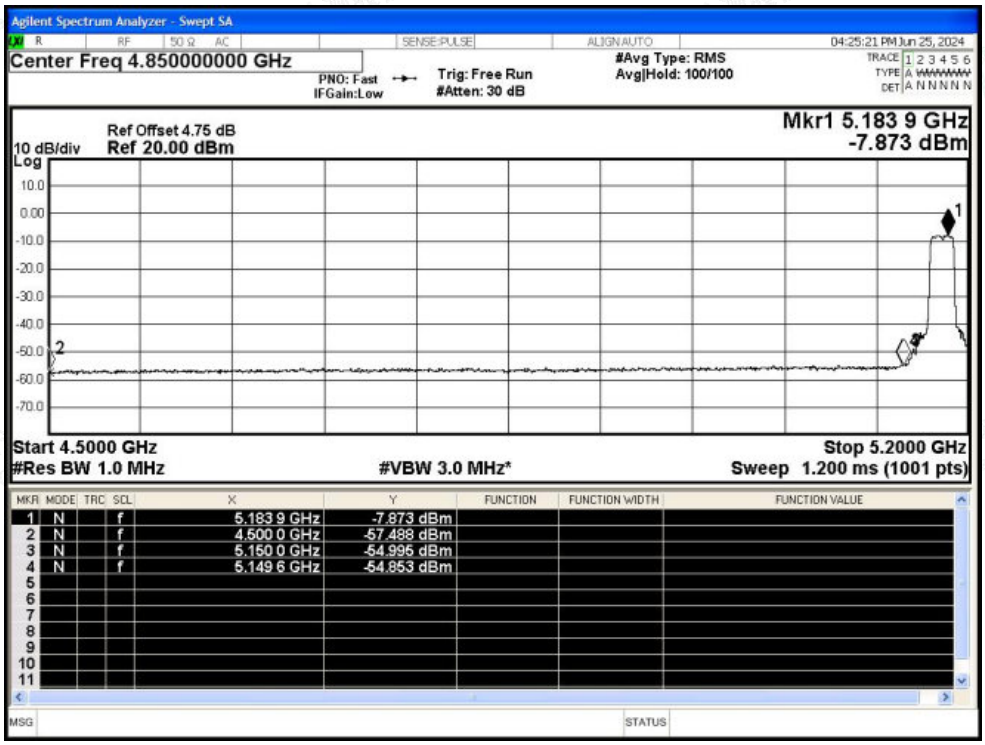

Restrict Band NVNT a 5240MHz Ant1 Average



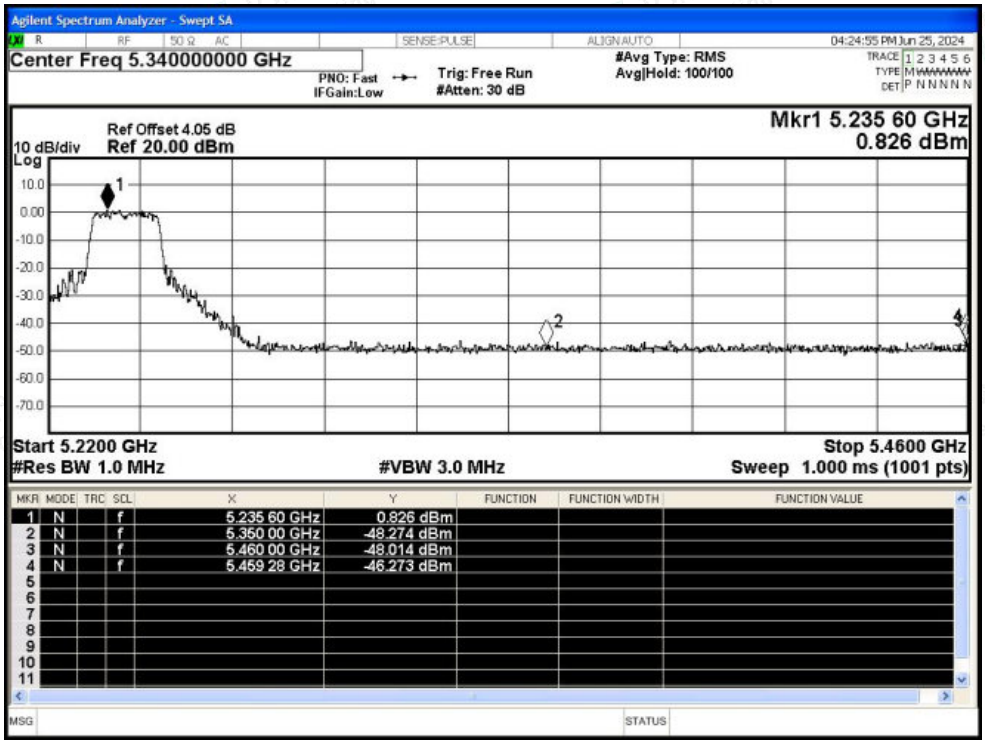
Restrict Band NVNT n20 5180MHz Ant1 Peak



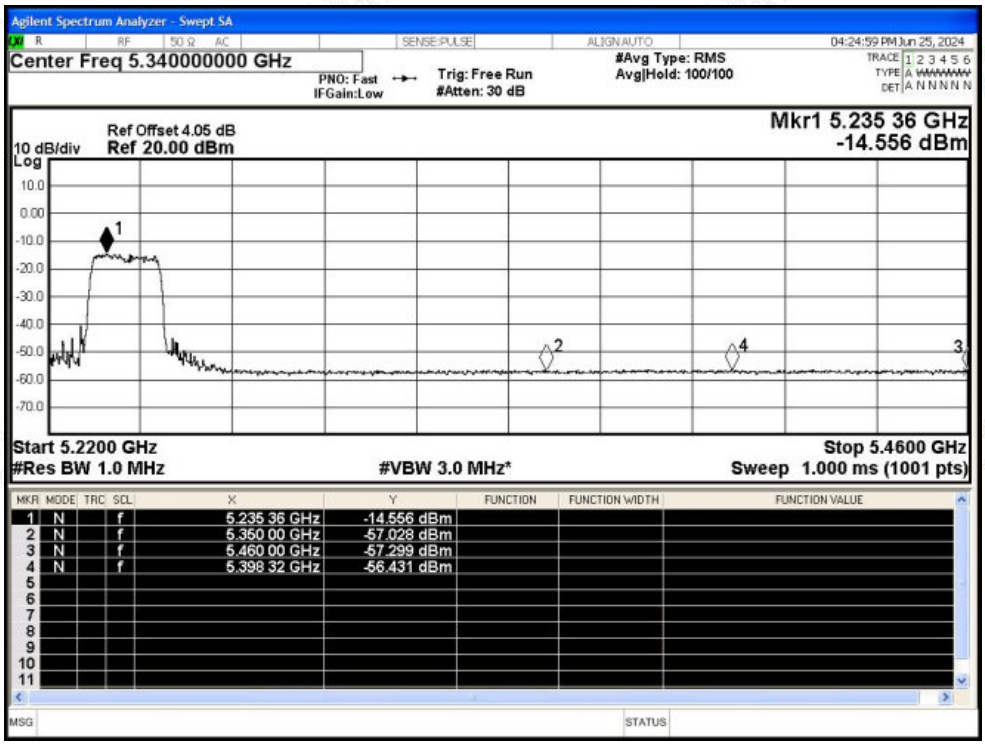

Restrict Band NVNT n20 5180MHz Ant1 Average



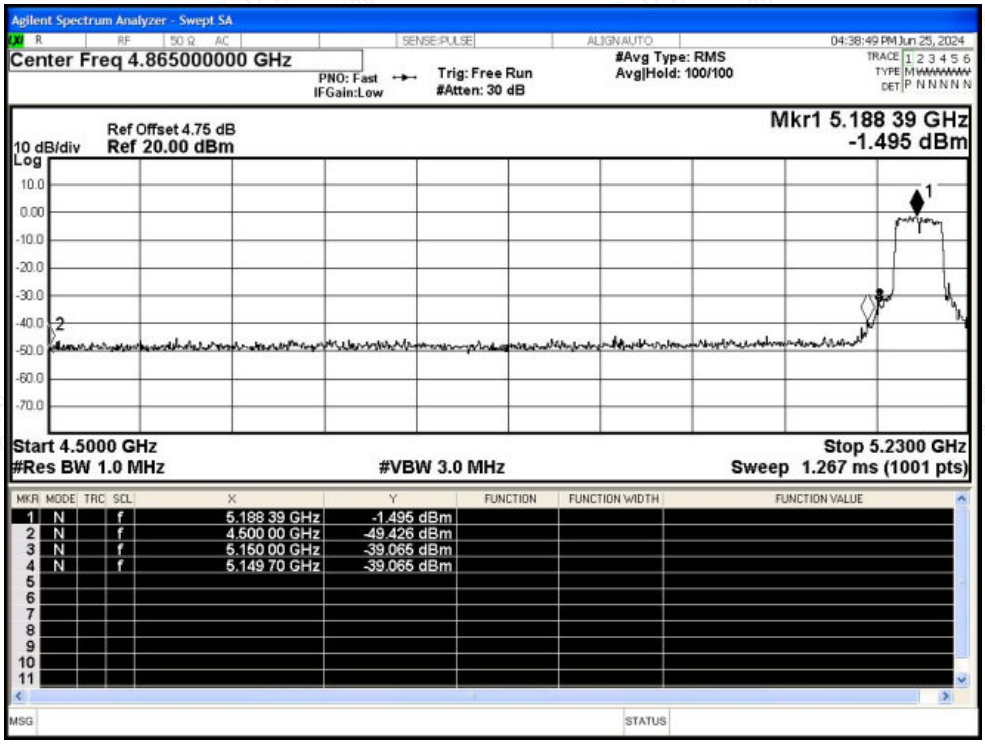
Restrict Band NVNT n20 5240MHz Ant1 Peak

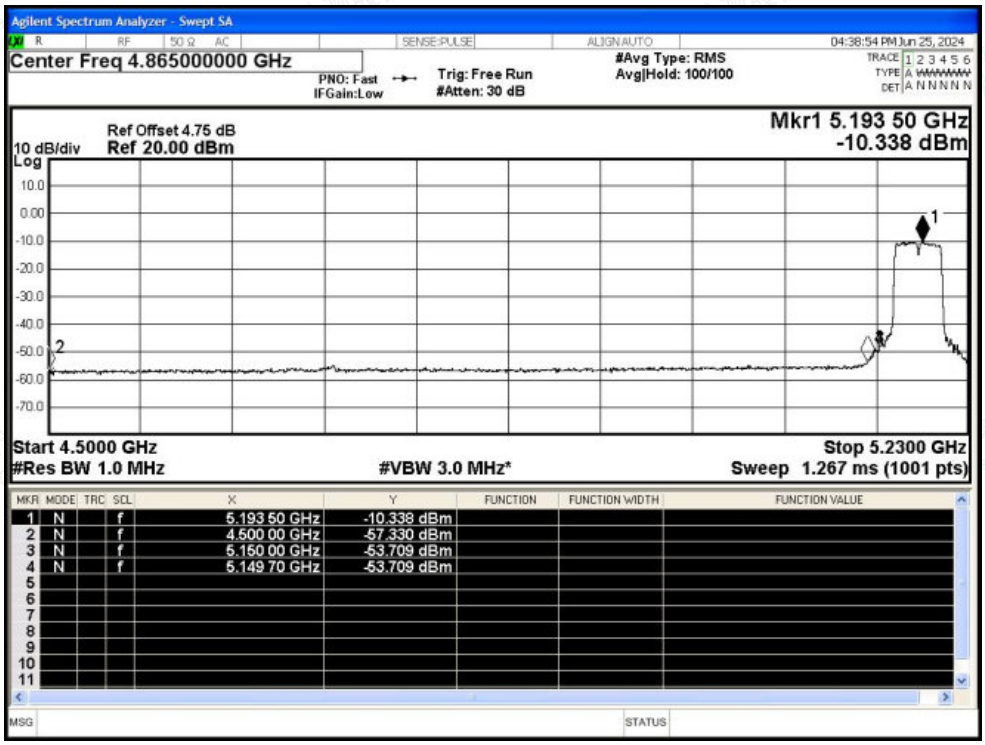



Restrict Band NVNT n20 5240MHz Ant1 Average



Restrict Band NVNT n40 5190MHz Ant1 Peak




Restrict Band NVNT n40 5190MHz Ant1 Average