



## Appendix D

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

Product Name: wireless module

Test Model: 52205

#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 24.2° C   |
| Relative Humidity: | 52.6%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Can Kun   |
| Supervised by:     | Nick Peng |



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## D.1 -26dB Bandwidth

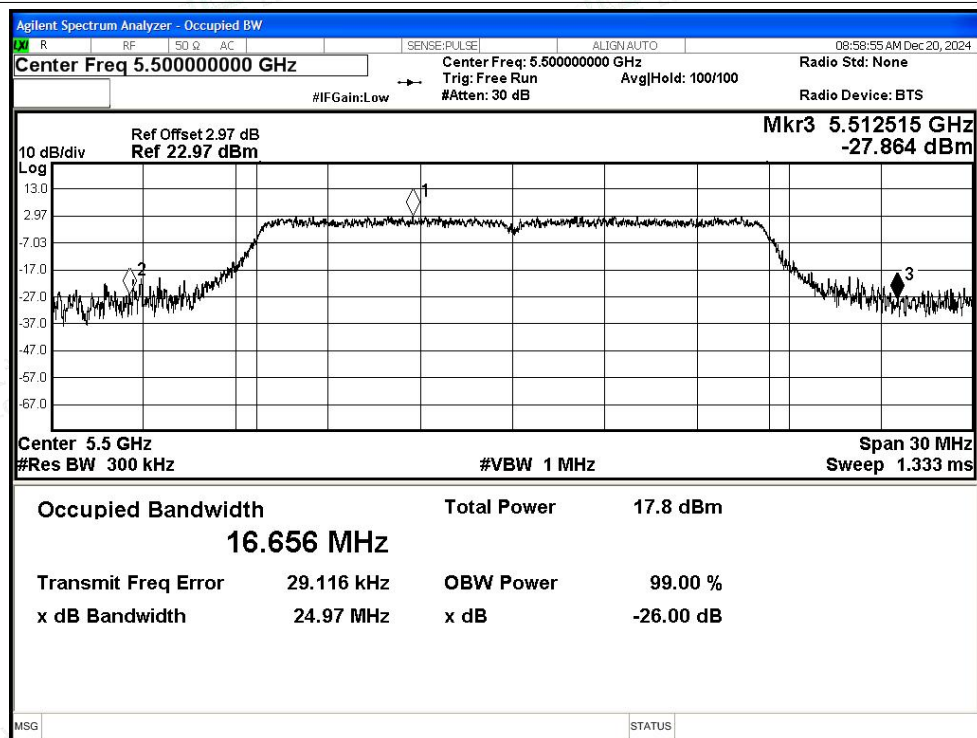
| Condition | Mode | Frequency (MHz) | Antenna | -26 dB Bandwidth (MHz) | Limit -26 dB Bandwidth (MHz) | Verdict |
|-----------|------|-----------------|---------|------------------------|------------------------------|---------|
| NVNT      | a    | 5500            | Ant1    | 24.972                 | ---                          | Pass    |
| NVNT      | a    | 5580            | Ant1    | 26.867                 | ---                          | Pass    |
| NVNT      | a    | 5700            | Ant1    | 27.806                 | ---                          | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 27.481                 | ---                          | Pass    |
| NVNT      | n20  | 5580            | Ant1    | 26.142                 | ---                          | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 28.055                 | ---                          | Pass    |



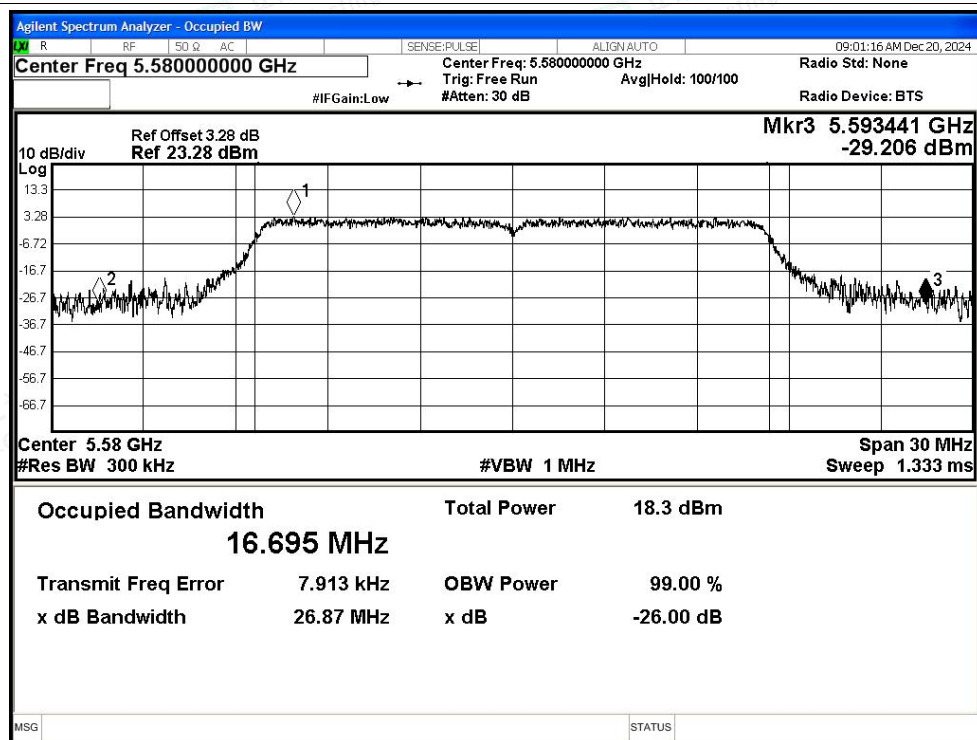


## Test Graphs

-26dB Bandwidth NVNT a 5500MHz Ant1



-26dB Bandwidth NVNT a 5580MHz Ant1



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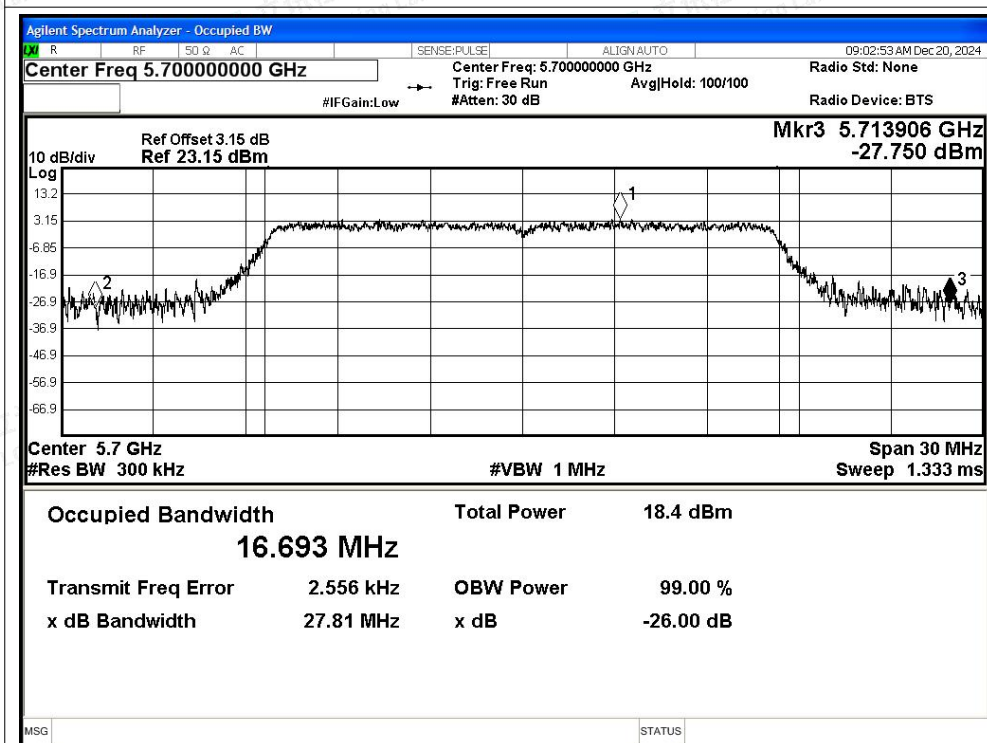
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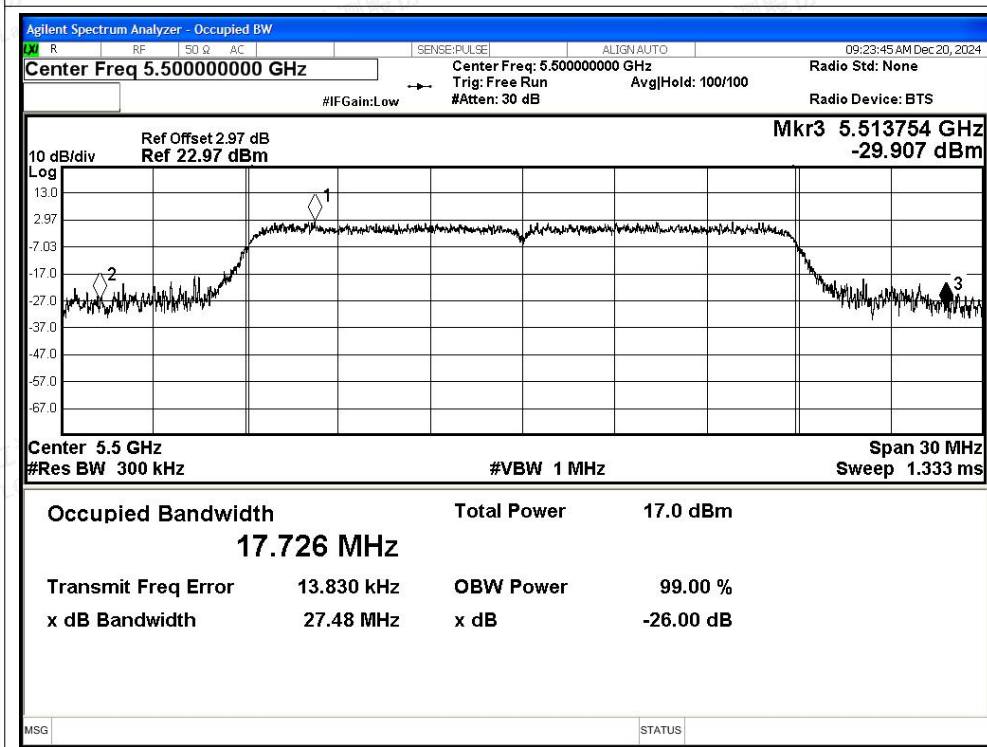
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## -26dB Bandwidth NVNT a 5700MHz Ant1



## -26dB Bandwidth NVNT n20 5500MHz Ant1



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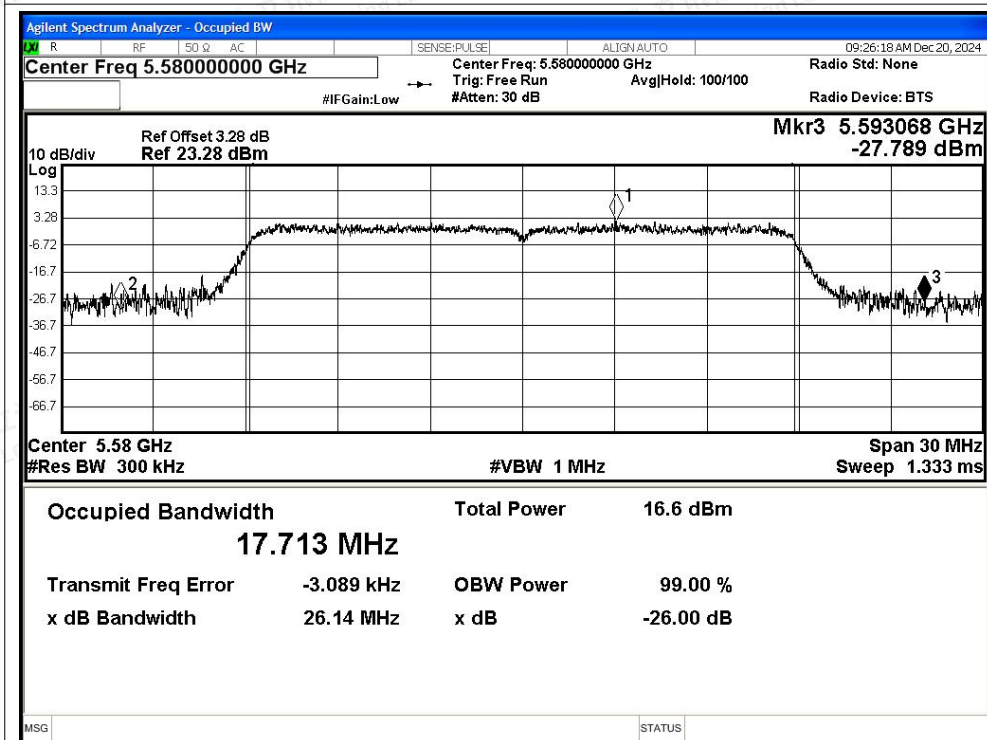
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Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

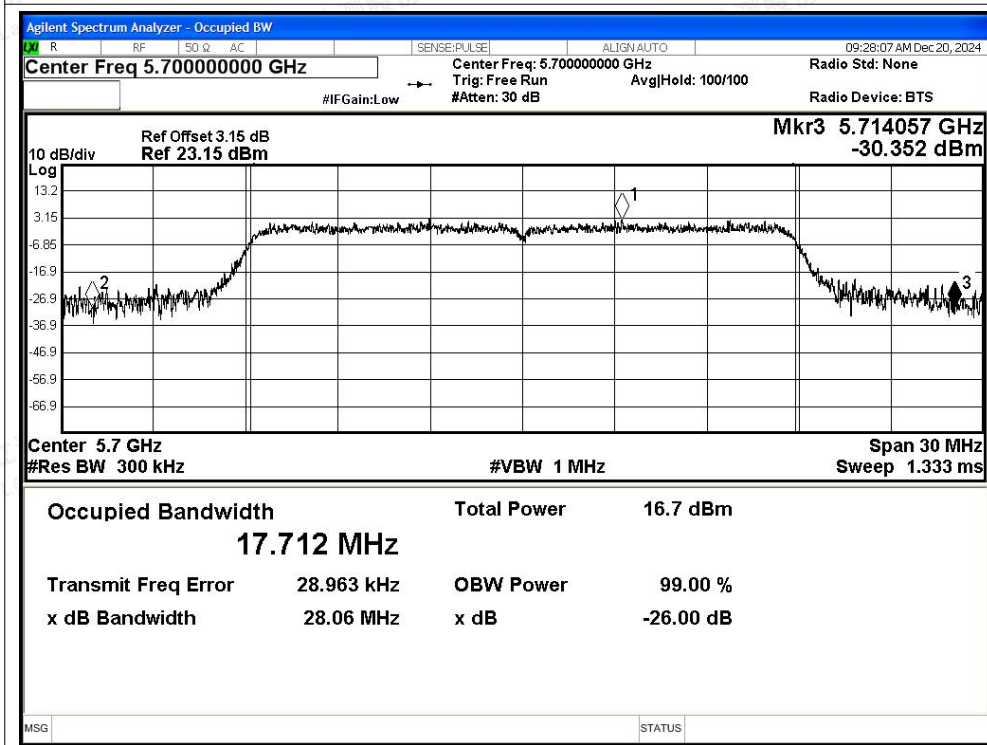
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-26dB Bandwidth NVNT n20 5580MHz Ant1



-26dB Bandwidth NVNT n20 5700MHz Ant1



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## 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    | 5500            | Ant1    | 12.11                 | 0.24             | 12.35             | 24          | Pass    |
| NVNT      | a    | 5580            | Ant1    | 12.52                 | 0.24             | 12.76             | 24          | Pass    |
| NVNT      | a    | 5700            | Ant1    | 12.61                 | 0.24             | 12.85             | 24          | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 11.53                 | 0.12             | 11.65             | 24          | Pass    |
| NVNT      | n20  | 5580            | Ant1    | 11.05                 | 0.12             | 11.17             | 24          | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 11.19                 | 0.12             | 11.31             | 24          | Pass    |



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### D.3 Maximum Power Spectral Density Level

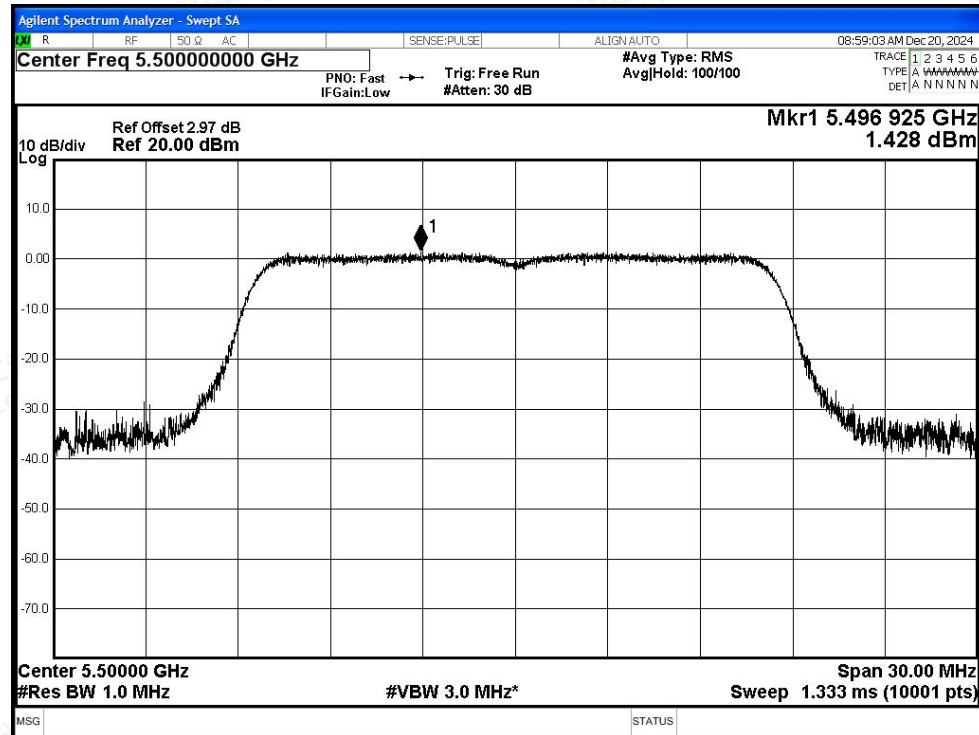
| Condition | Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm/MHz) | Duty Factor (dB) | Total PSD (dBm/MHz) | Limit (dBm/MHz) | Verdict |
|-----------|------|-----------------|---------|-------------------------|------------------|---------------------|-----------------|---------|
| NVNT      | a    | 5500            | Ant1    | 1.43                    | 0.24             | 1.67                | 11              | Pass    |
| NVNT      | a    | 5580            | Ant1    | 2.23                    | 0.24             | 2.47                | 11              | Pass    |
| NVNT      | a    | 5700            | Ant1    | 2.24                    | 0.24             | 2.48                | 11              | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 0.82                    | 0.12             | 0.94                | 11              | Pass    |
| NVNT      | n20  | 5580            | Ant1    | 0.31                    | 0.12             | 0.43                | 11              | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 0.46                    | 0.12             | 0.58                | 11              | Pass    |



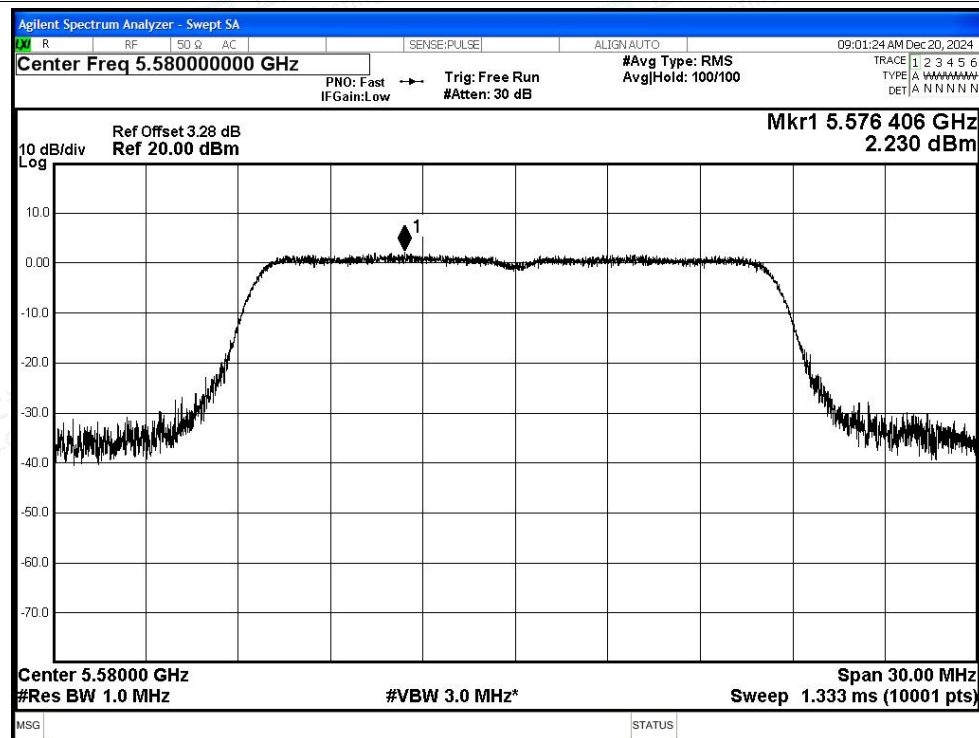


## Test Graphs

PSD NVNT a 5500MHz Ant1

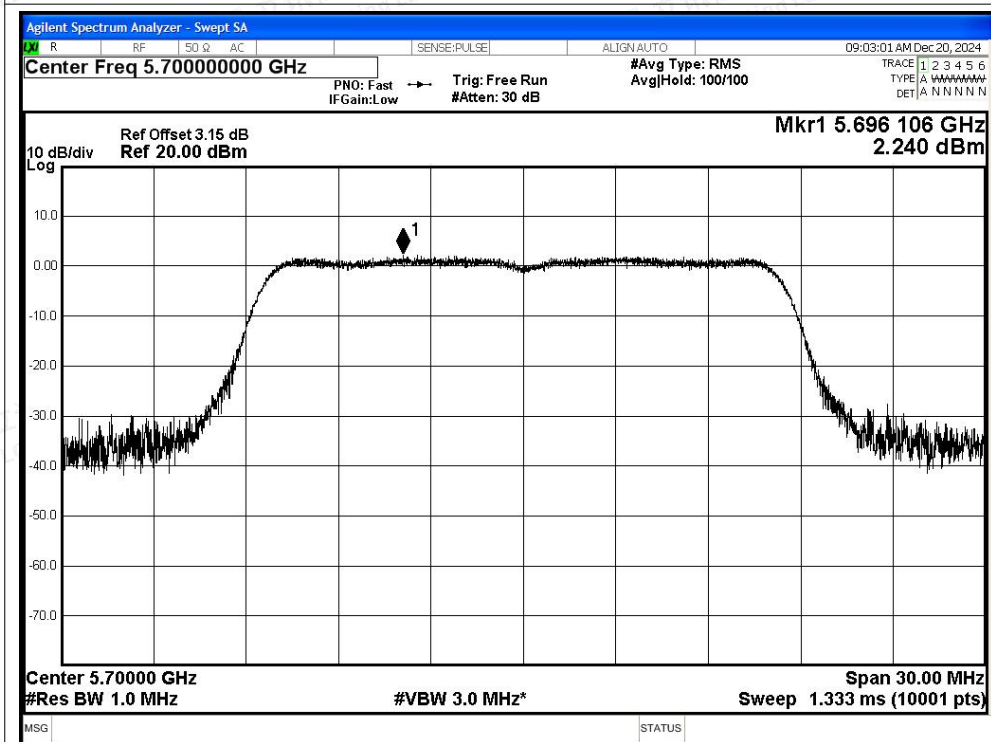


PSD NVNT a 5580MHz Ant1

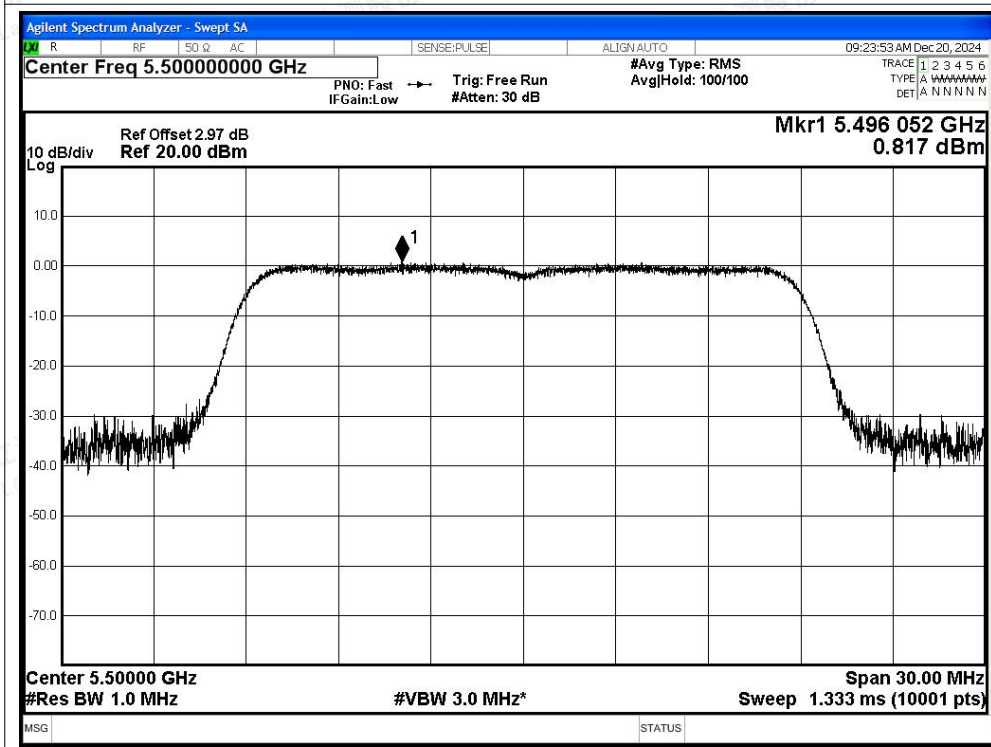


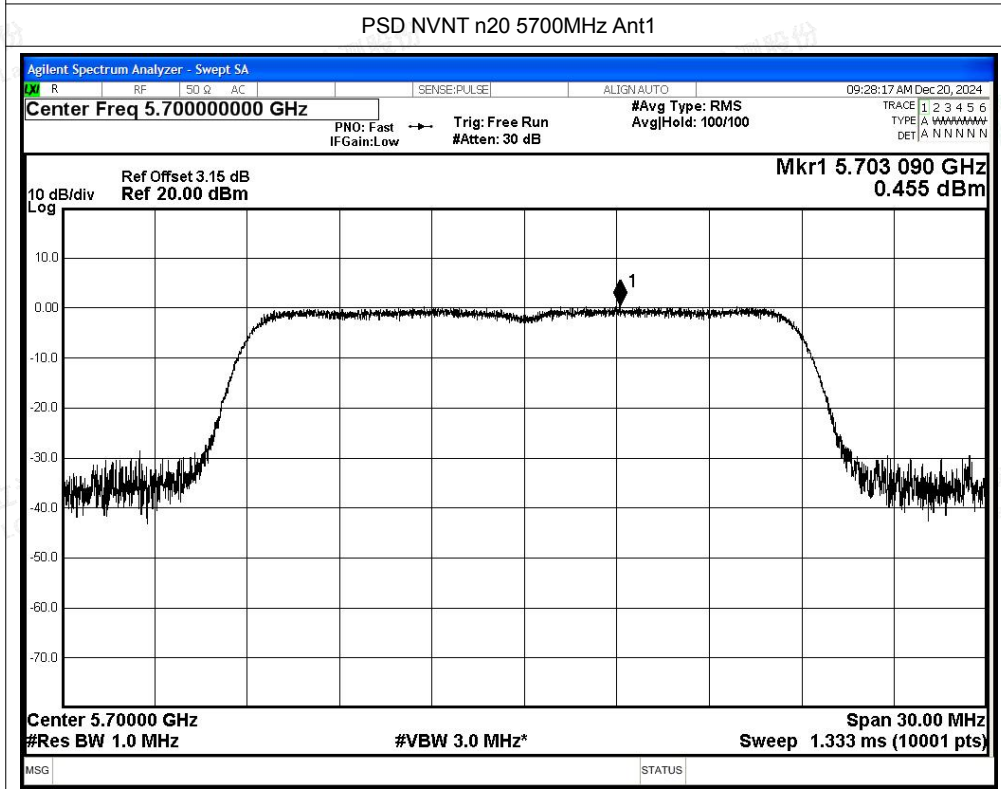
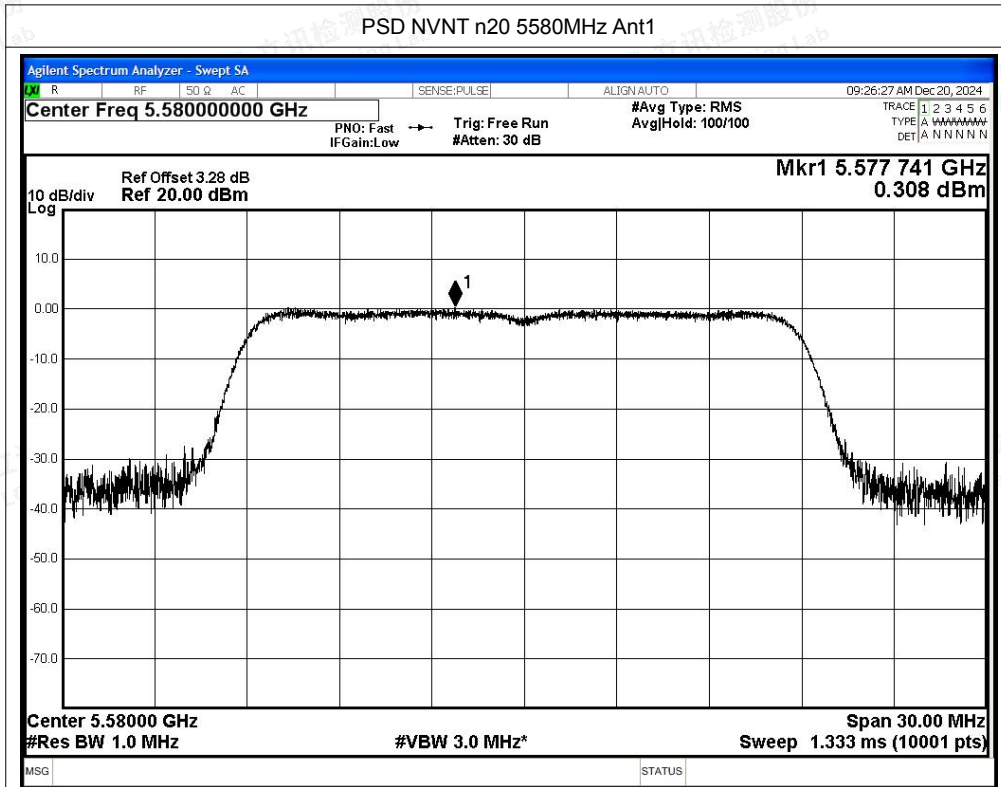


PSD NVNT a 5700MHz Ant1



PSD NVNT n20 5500MHz Ant1







## D.4 Restrict Band

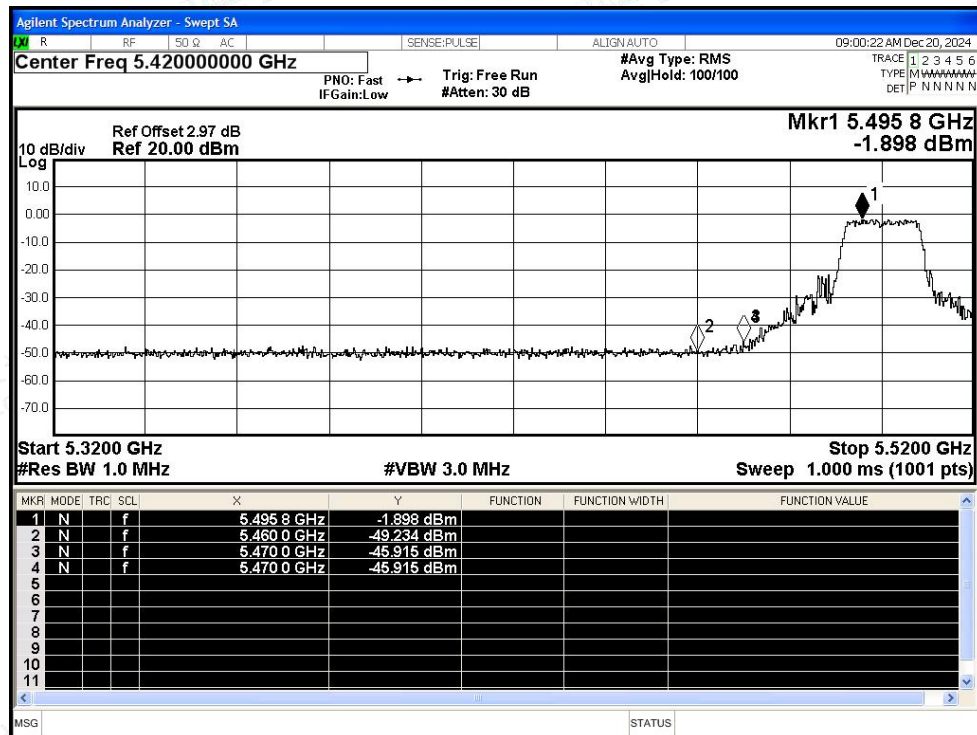
| Condition | Mode | Frequency (MHz) | Antenna | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | Duty Factor (dB) | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|------------|------------------|------------|----------|----------------|---------|
| NVNT      | a    | 5500            | Ant1    | 5460            | -49.23      | 2.6        | -                | 48.60      | Peak     | 68.2           | Pass    |
| NVNT      | a    | 5500            | Ant1    | 5460            | -58.12      | 2.6        | 0.24             | 39.95      | Average  | 54             | Pass    |
| NVNT      | a    | 5500            | Ant1    | 5470            | -45.92      | 2.6        | -                | 51.91      | Peak     | 68.2           | Pass    |
| NVNT      | a    | 5500            | Ant1    | 5470            | -56.98      | 2.6        | 0.24             | 41.09      | Average  | 54             | Pass    |
| NVNT      | a    | 5700            | Ant1    | 5725            | -41.76      | 2.6        | -                | 56.07      | Peak     | 68.2           | Pass    |
| NVNT      | a    | 5700            | Ant1    | 5725            | -54.86      | 2.6        | 0.24             | 43.21      | Average  | 54             | Pass    |
| NVNT      | a    | 5700            | Ant1    | 5725.2          | -37.92      | 2.6        | -                | 59.91      | Peak     | 68.2           | Pass    |
| NVNT      | a    | 5700            | Ant1    | 5735            | -49.45      | 2.6        | -                | 48.38      | Peak     | 68.2           | Pass    |
| NVNT      | a    | 5700            | Ant1    | 5735            | -58.01      | 2.6        | 0.24             | 40.06      | Average  | 54             | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 5460            | -49.68      | 2.6        | -                | 48.15      | Peak     | 68.2           | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 5460            | -57.94      | 2.6        | 0.12             | 40.01      | Average  | 54             | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 5469.4          | -45.11      | 2.6        | -                | 52.72      | Peak     | 68.2           | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 5470            | -56.12      | 2.6        | 0.12             | 41.83      | Average  | 54             | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 5470            | -48.31      | 2.6        | -                | 49.52      | Peak     | 68.2           | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 5725            | -41.87      | 2.6        | -                | 55.96      | Peak     | 68.2           | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 5725            | -53.98      | 2.6        | 0.12             | 43.97      | Average  | 54             | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 5726.2          | -40.19      | 2.6        | -                | 57.64      | Peak     | 68.2           | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 5726.2          | -53.7       | 2.6        | 0.12             | 44.25      | Average  | 54             | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 5735            | -49.34      | 2.6        | -                | 48.49      | Peak     | 68.2           | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 5735            | -57.52      | 2.6        | 0.12             | 40.43      | Average  | 54             | Pass    |



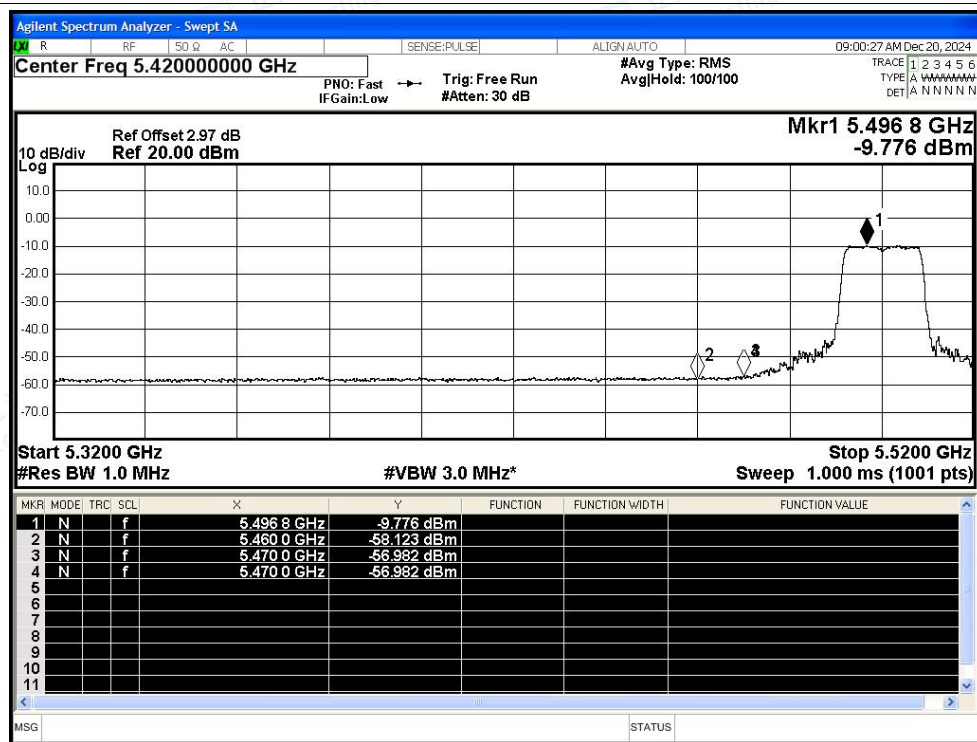


## Test Graphs

## Restrict Band NVNT a 5500MHz Ant1 Peak



## Restrict Band NVNT a 5500MHz Ant1 Average



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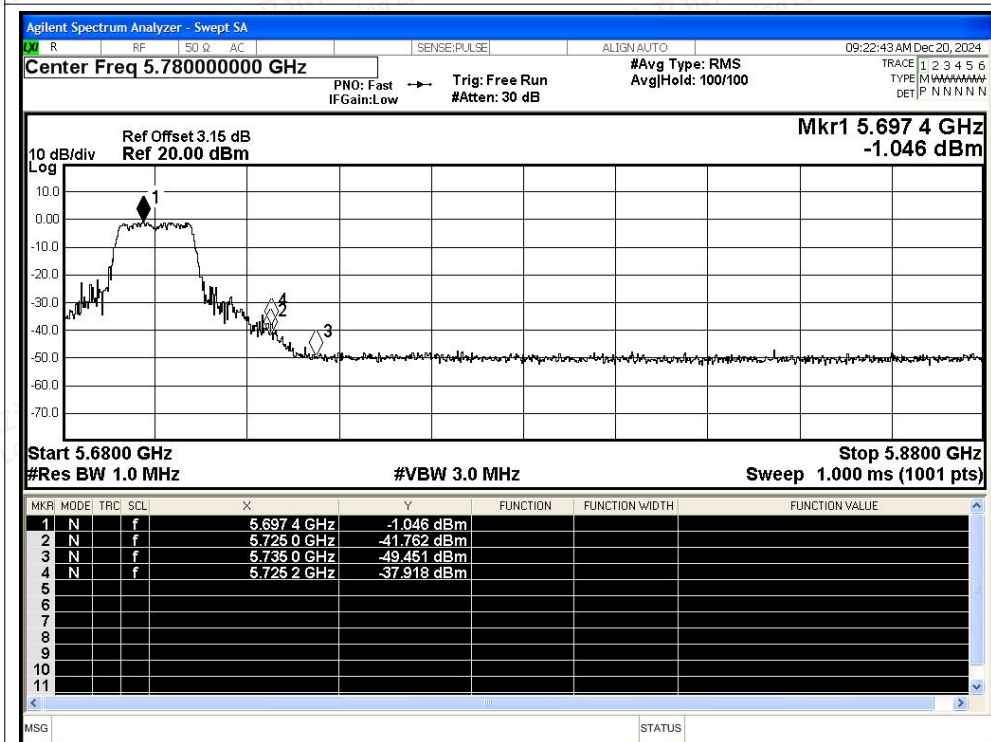
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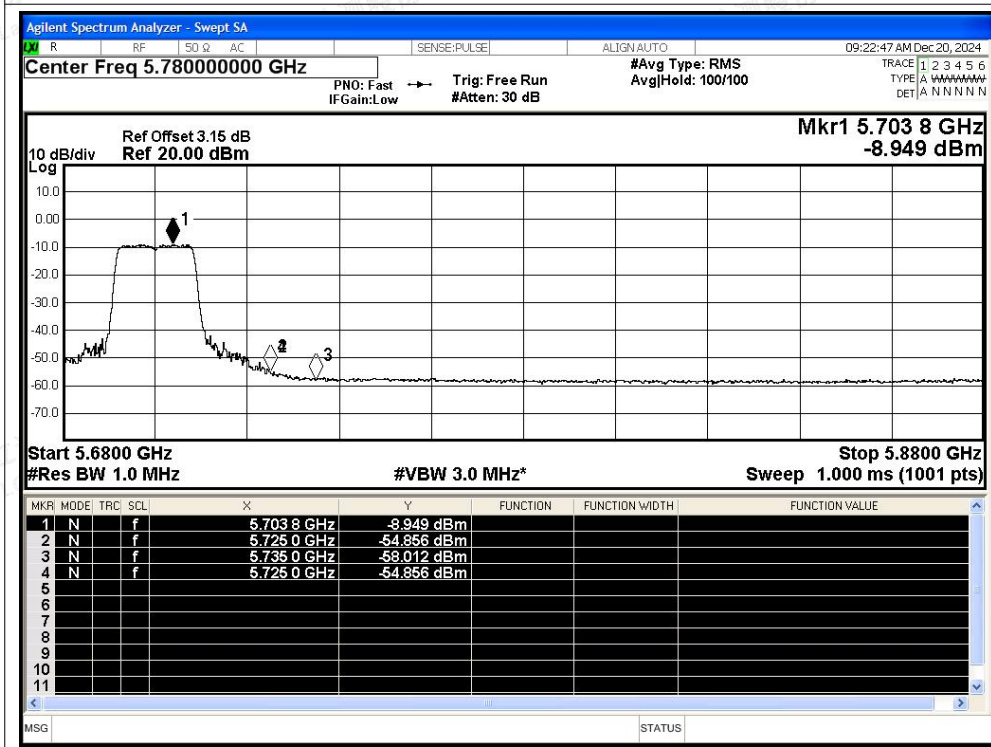
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## Restrict Band NVNT a 5700MHz Ant1 Peak



## Restrict Band NVNT a 5700MHz Ant1 Average



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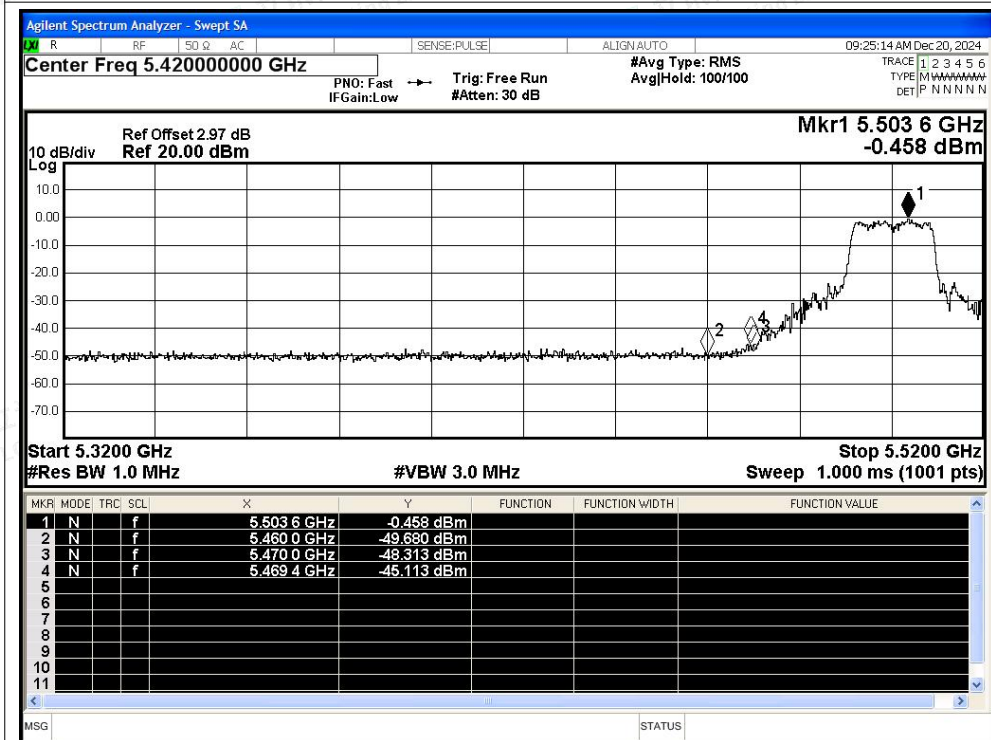
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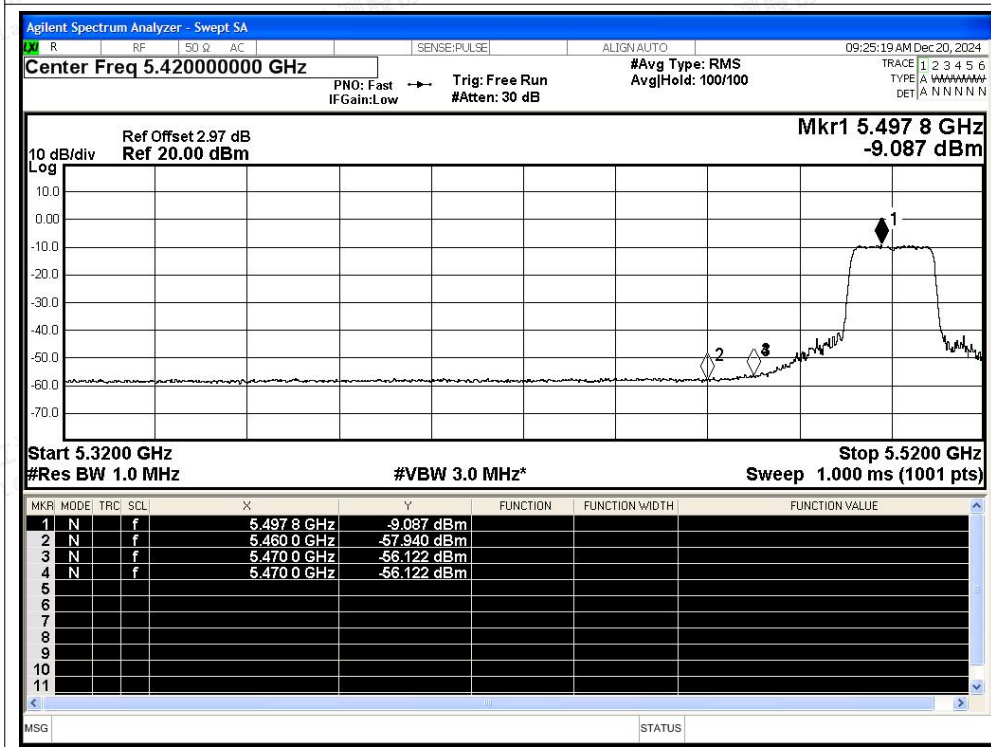
Scan code to check authenticity



## Restrict Band NVNT n20 5500MHz Ant1 Peak



## Restrict Band NVNT n20 5500MHz Ant1 Average



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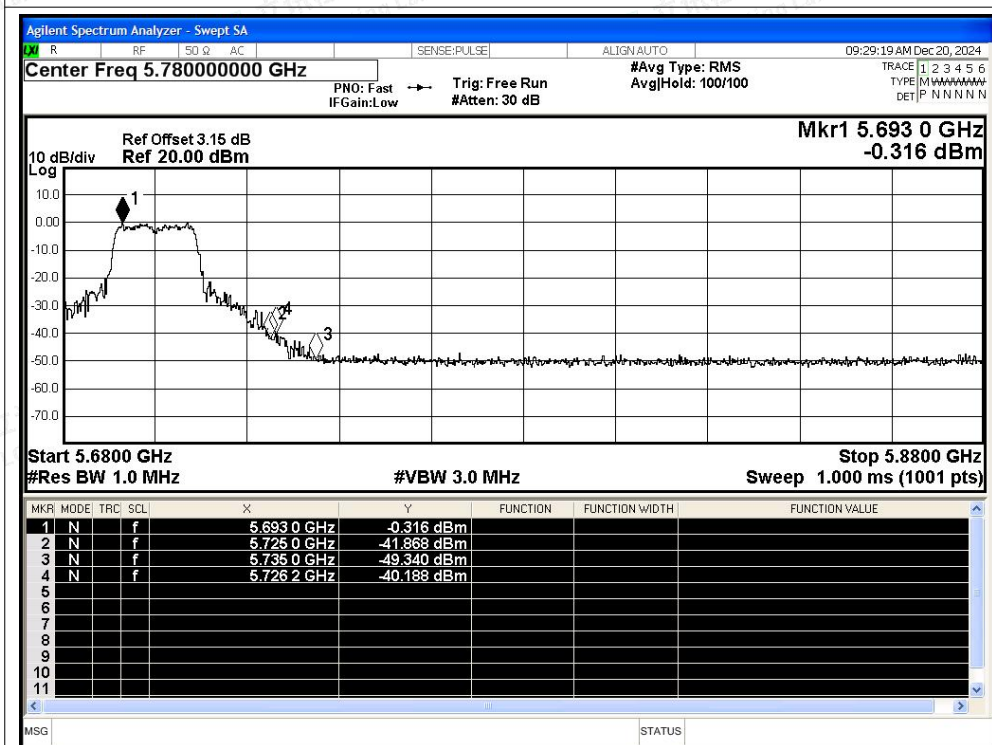
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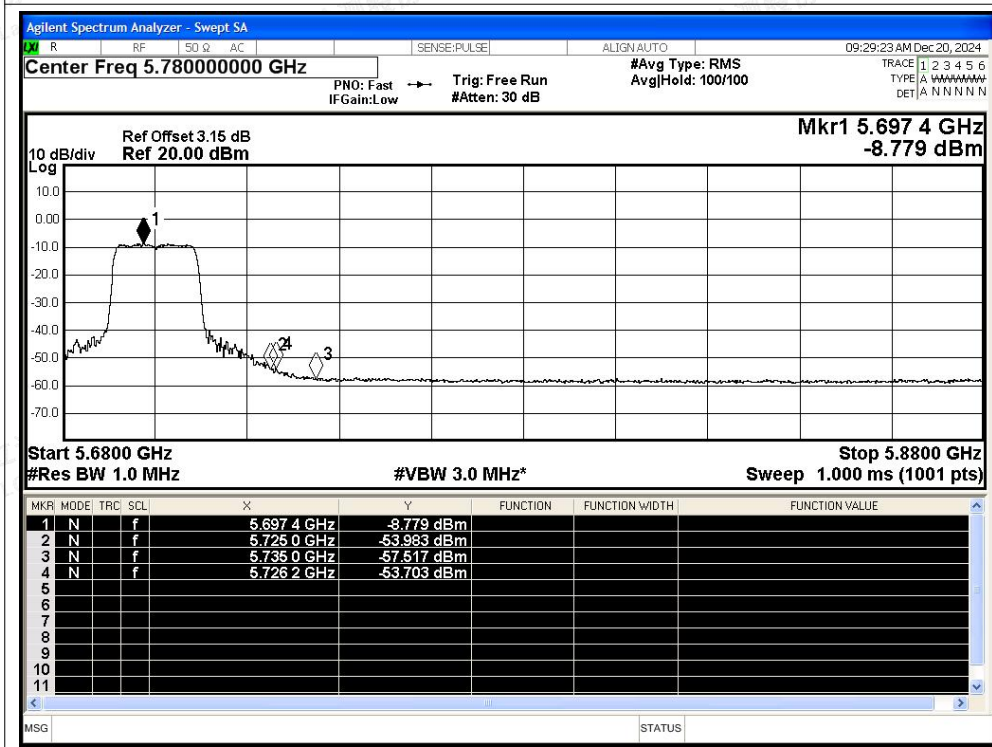
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## Restrict Band NVNT n20 5700MHz Ant1 Peak



## Restrict Band NVNT n20 5700MHz Ant1 Average



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## D.5 Frequency Stability

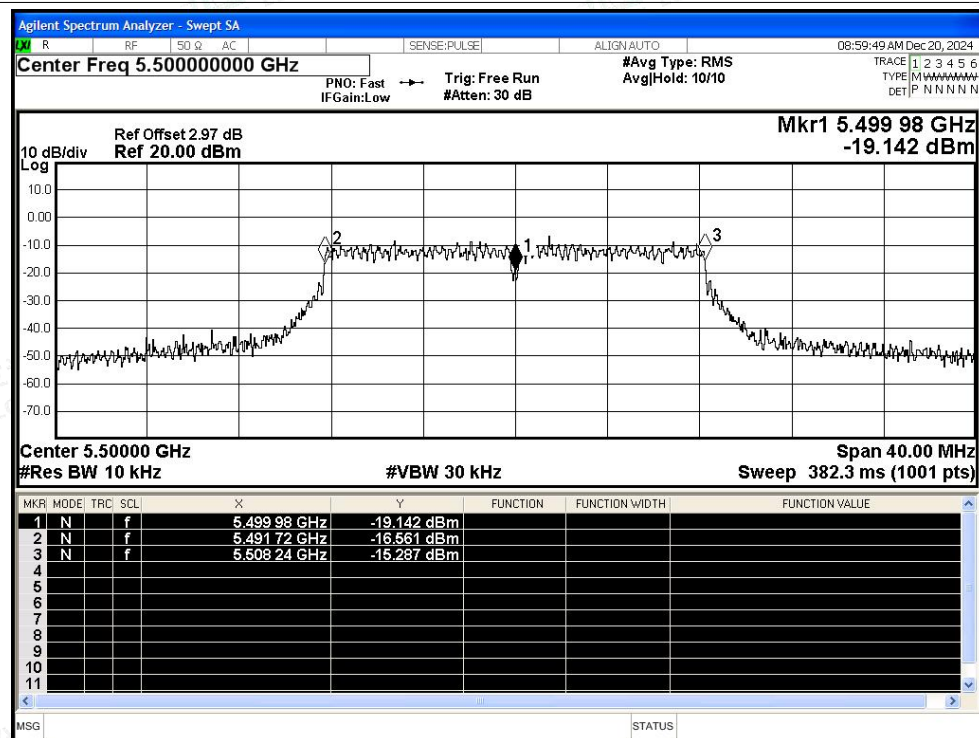
| Condition | Mode | Frequency (MHz) | Antenna | Measured Frequency (MHz) | Frequency Error (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
|-----------|------|-----------------|---------|--------------------------|----------------------|-----------------|-------------|---------|
| NVNT      | a    | 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    | 5500                     | 0                    | 0               | 25          | Pass    |
| NVNT      | n20  | 5580            | Ant1    | 5580                     | 0                    | 0               | 25          | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 5700                     | 0                    | 0               | 25          | Pass    |



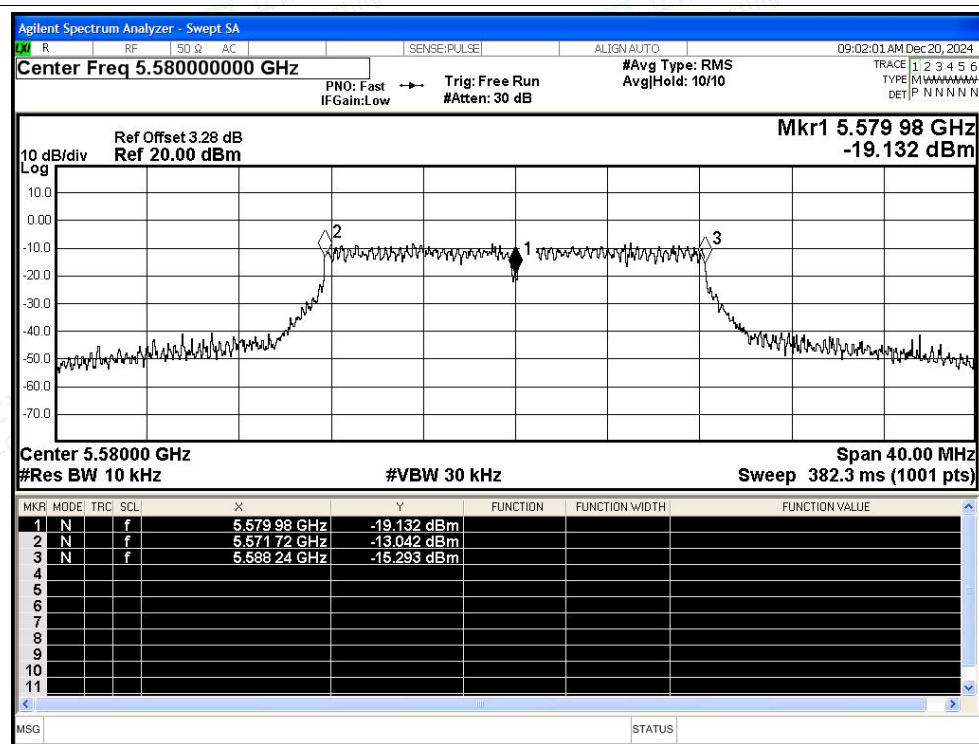


## Test Graphs

## Freq. Stability NVNT a 5500MHz Ant1



## Freq. Stability NVNT a 5580MHz Ant1



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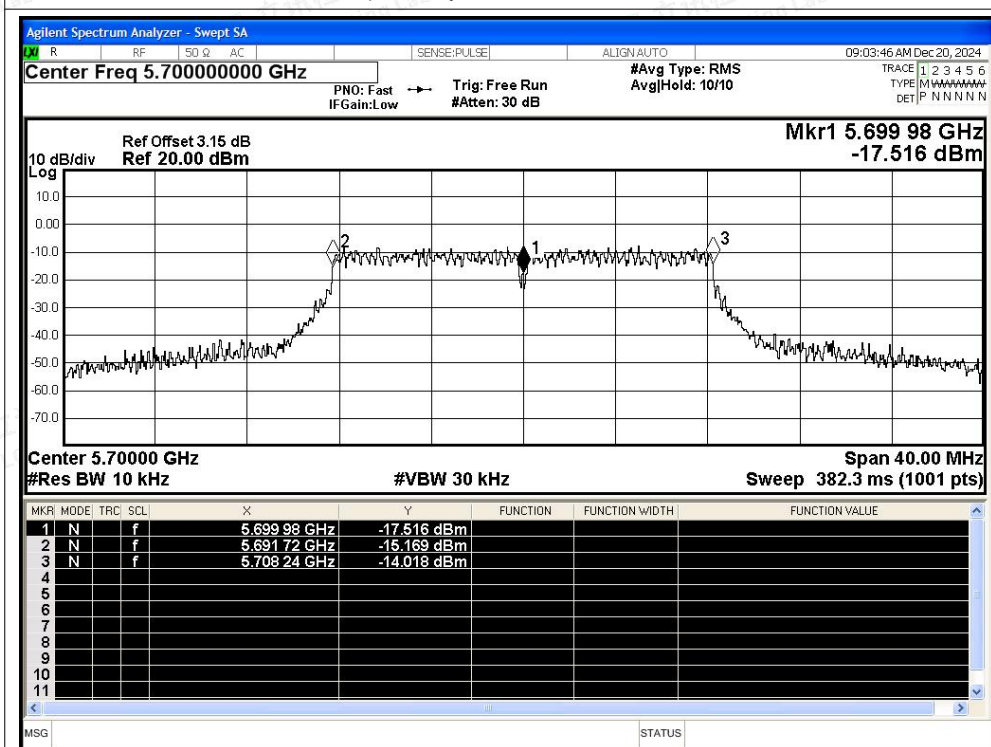
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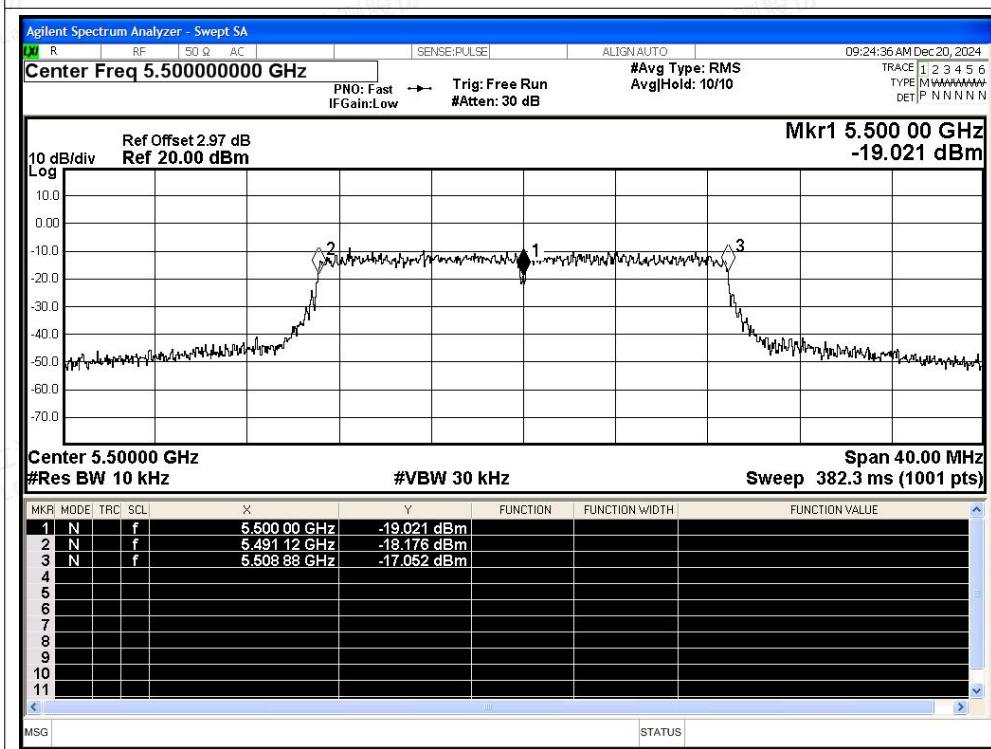
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## Freq. Stability NVNT a 5700MHz Ant1

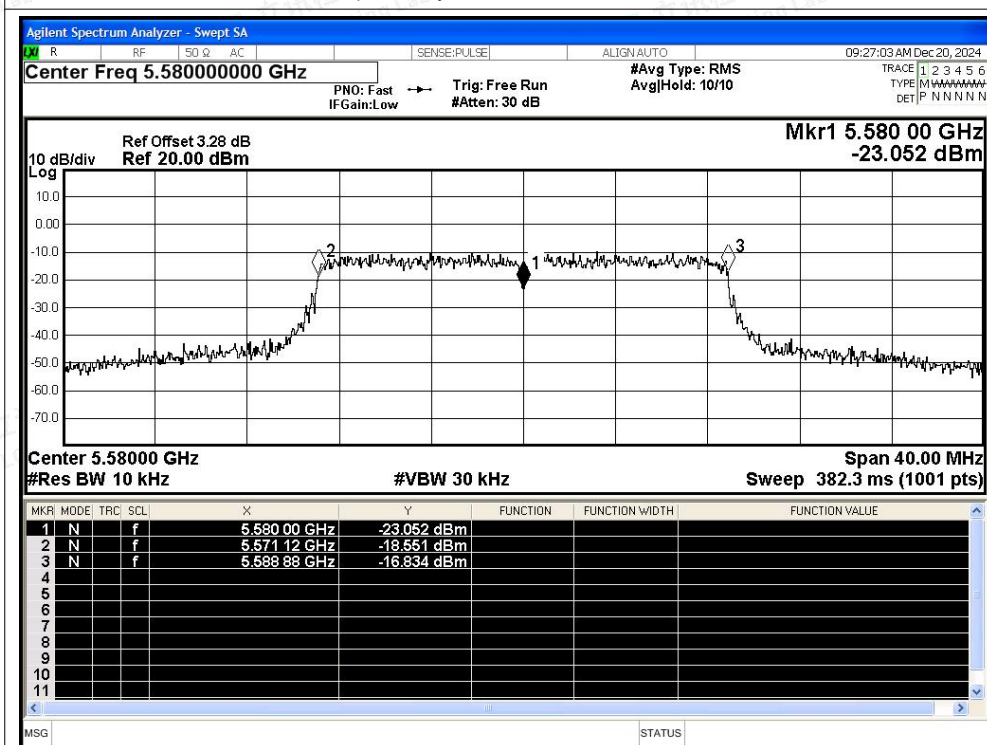


## Freq. Stability NVNT n20 5500MHz Ant1

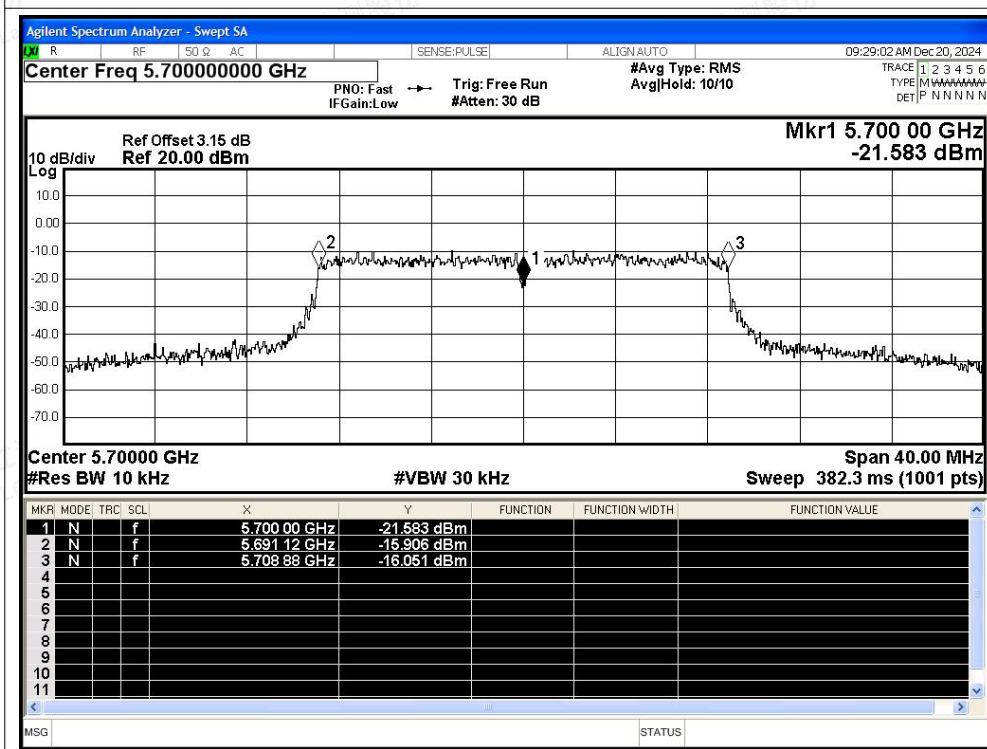




## Freq. Stability NVNT n20 5580MHz Ant1



## Freq. Stability NVNT n20 5700MHz Ant1



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## D.6 Duty Cycle

| Condition | Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | a    | 5500            | Ant1    | 94.56          | 0.24                   | 0.91      |
| NVNT      | a    | 5580            | Ant1    | 94.56          | 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      |



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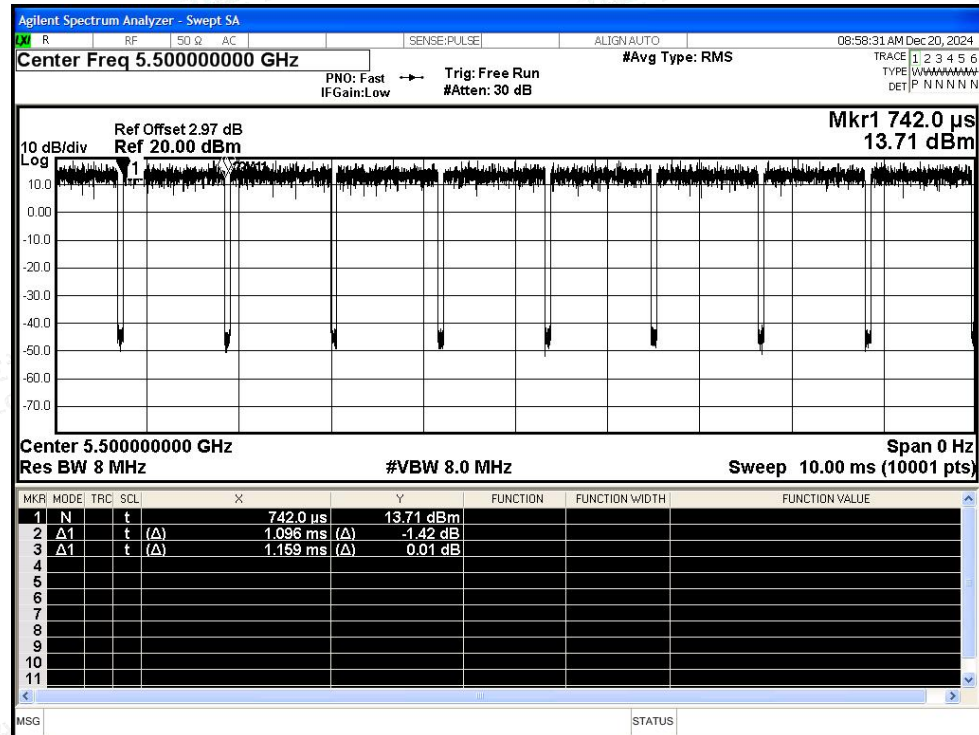
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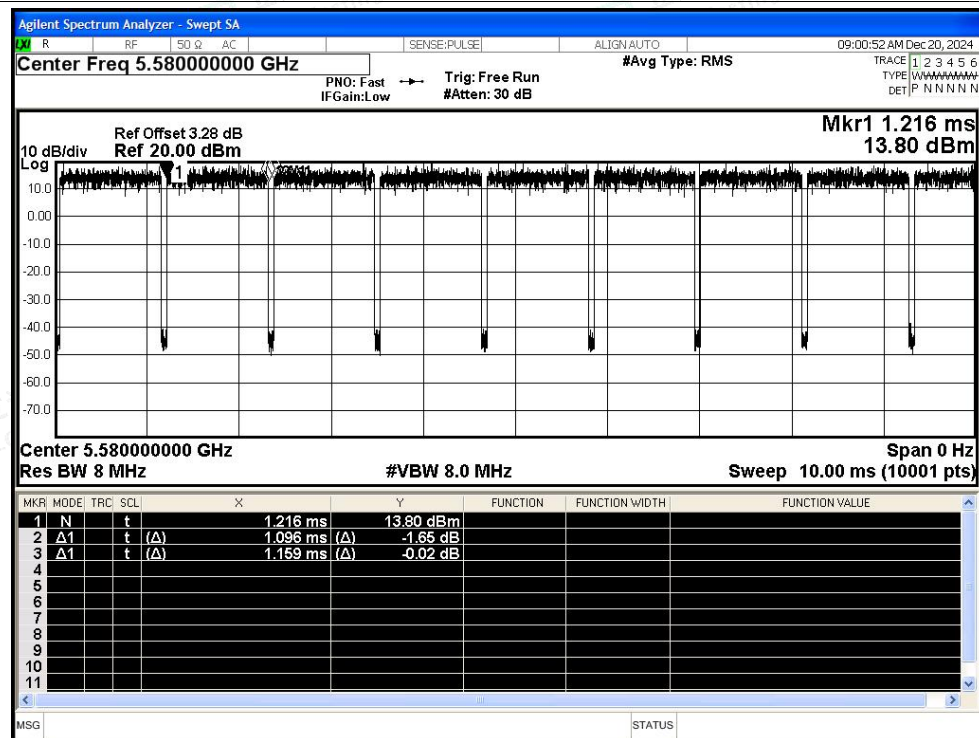


## Test Graphs

## Duty Cycle NVNT a 5500MHz Ant1



## Duty Cycle NVNT a 5580MHz Ant1



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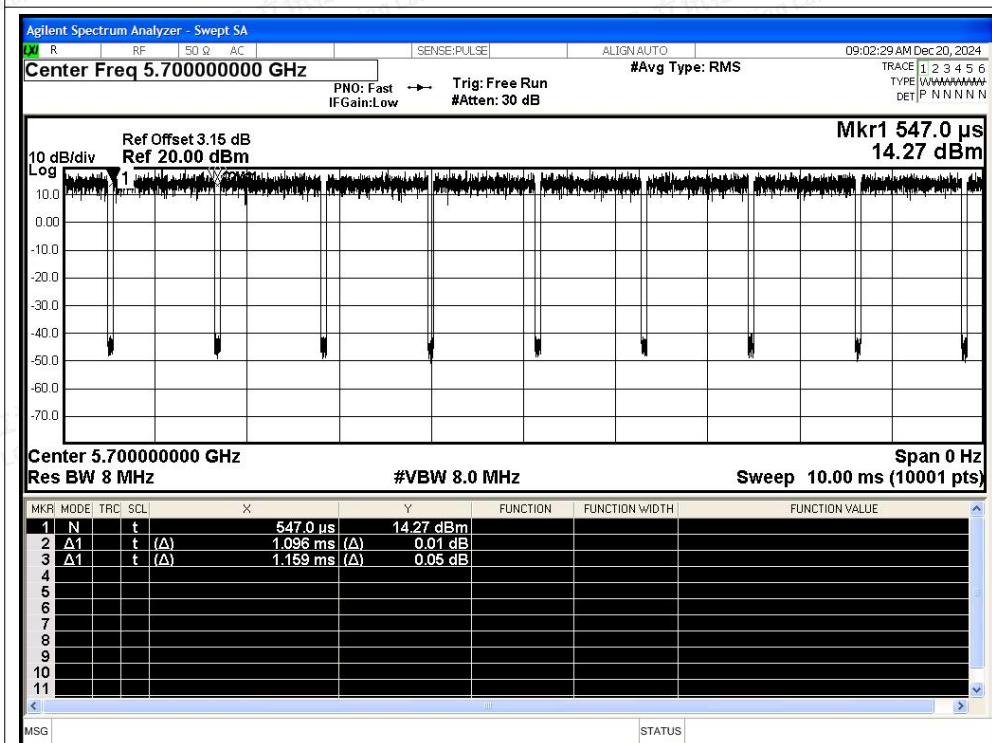
Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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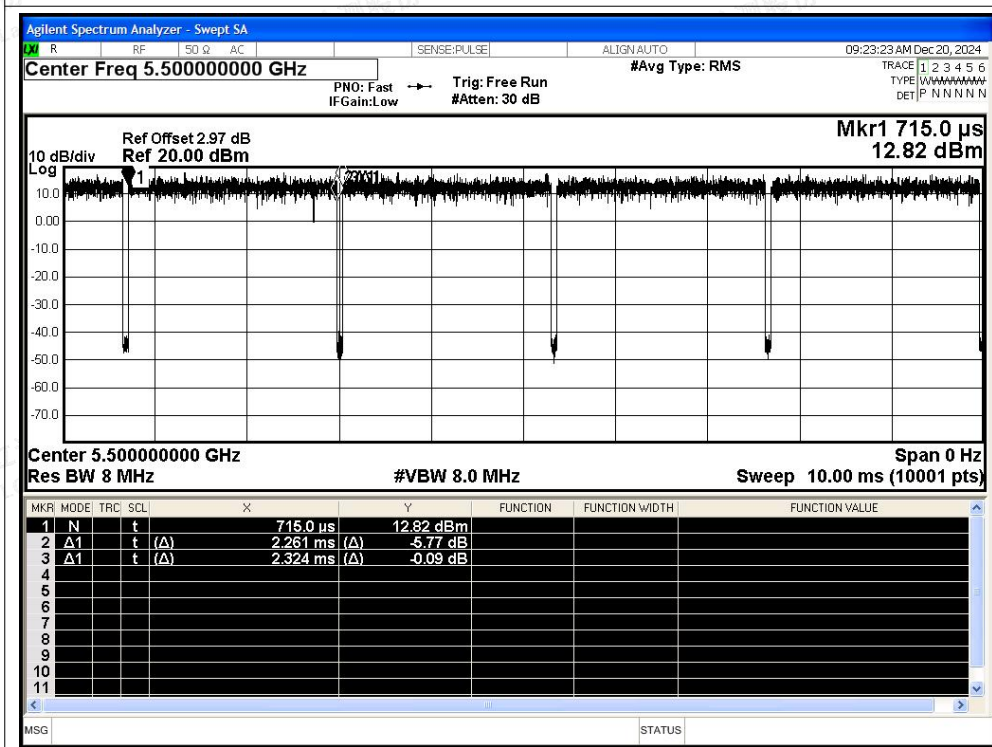
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## Duty Cycle NVNT a 5700MHz Ant1



## Duty Cycle NVNT n20 5500MHz Ant1



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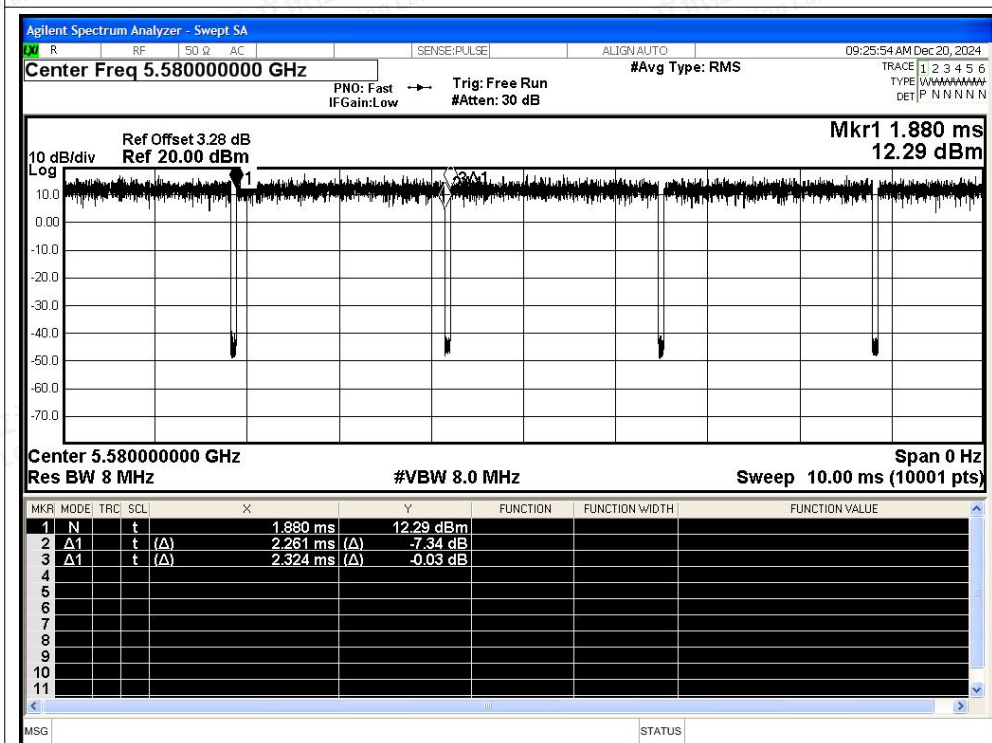
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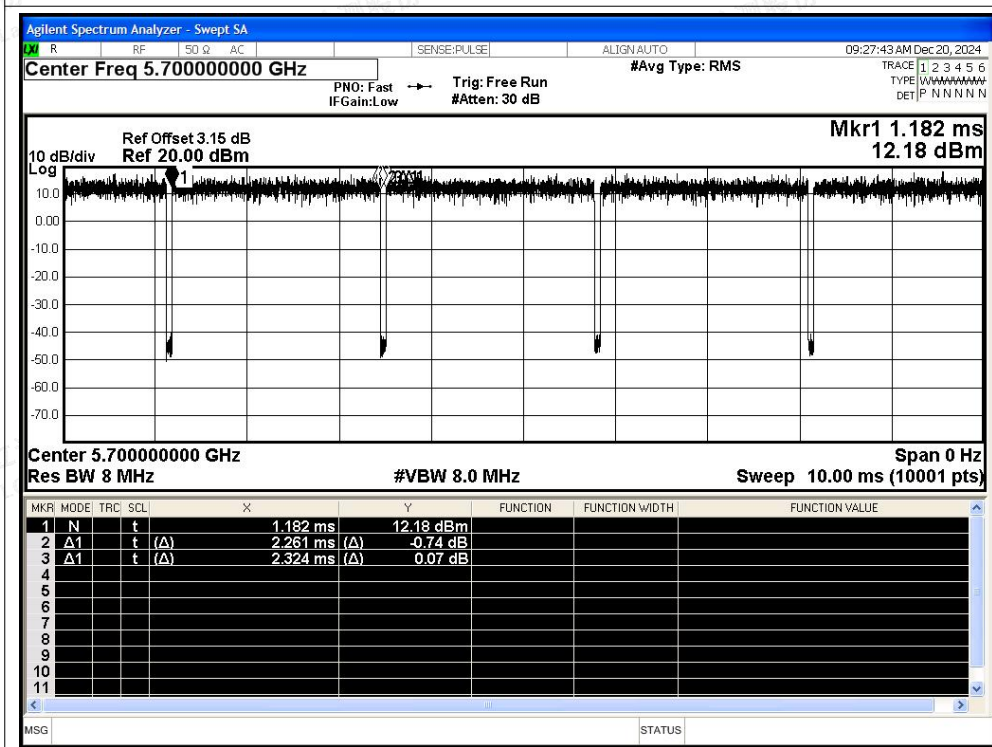
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## Duty Cycle NVNT n20 5580MHz Ant1



## Duty Cycle NVNT n20 5700MHz Ant1



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