



## Appendix E

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

Product Name: Smart Pet Feeder

Test Model: ACF100W

#### Environmental Conditions

|                    |            |
|--------------------|------------|
| Temperature:       | 23.3° C    |
| Relative Humidity: | 52.2%      |
| ATM Pressure:      | 100.0 kPa  |
| Test Engineer:     | Paddi Chen |
| Supervised by:     | Nick Peng  |



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## E.1 -26dB Bandwidth

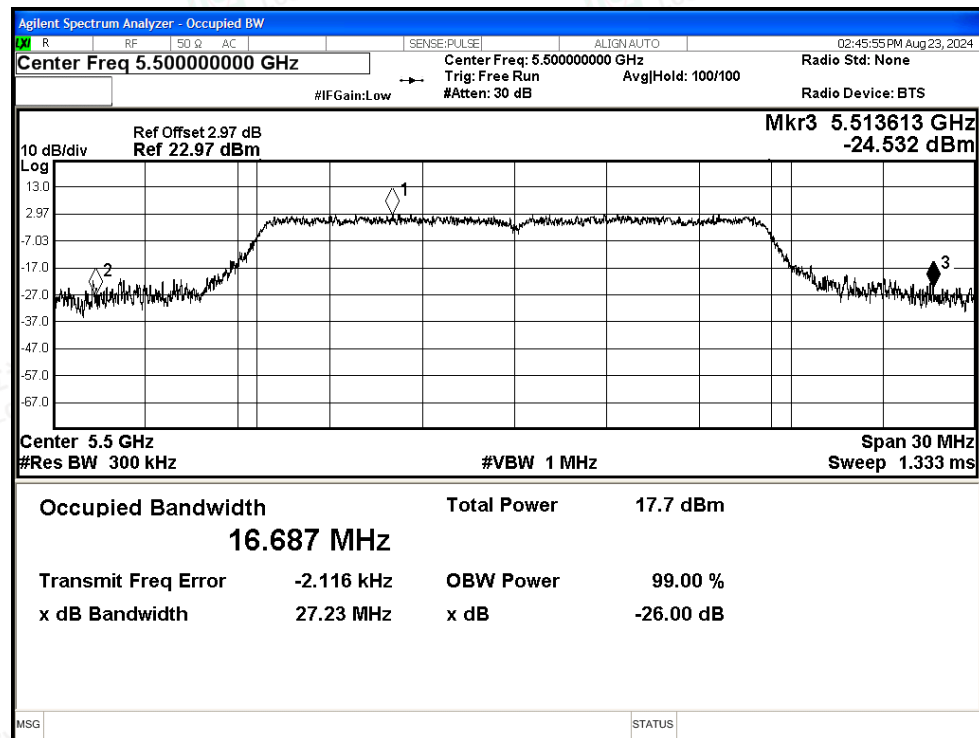
| Condition | Mode | Frequency (MHz) | Antenna | -26 dB Bandwidth (MHz) | Limit -26 dB Bandwidth (MHz) | Verdict |
|-----------|------|-----------------|---------|------------------------|------------------------------|---------|
| NVNT      | a    | 5500            | Ant1    | 27.231                 | ---                          | Pass    |
| NVNT      | a    | 5580            | Ant1    | 28.439                 | ---                          | Pass    |
| NVNT      | a    | 5700            | Ant1    | 25.598                 | ---                          | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 27.864                 | ---                          | Pass    |
| NVNT      | n20  | 5580            | Ant1    | 28.591                 | ---                          | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 27.419                 | ---                          | Pass    |
| NVNT      | n40  | 5510            | Ant1    | 40.961                 | ---                          | Pass    |
| NVNT      | n40  | 5550            | Ant1    | 45.233                 | ---                          | Pass    |
| NVNT      | n40  | 5670            | Ant1    | 42.624                 | ---                          | Pass    |



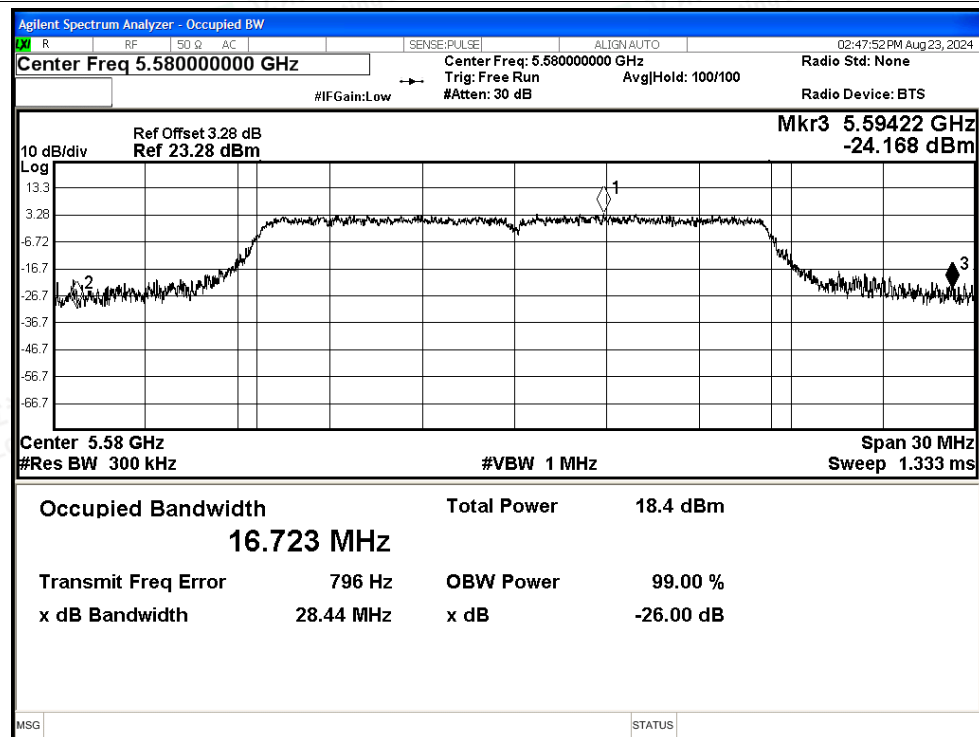


## Test Graphs

-26dB Bandwidth NVNT a 5500MHz Ant1



-26dB Bandwidth NVNT a 5580MHz Ant1



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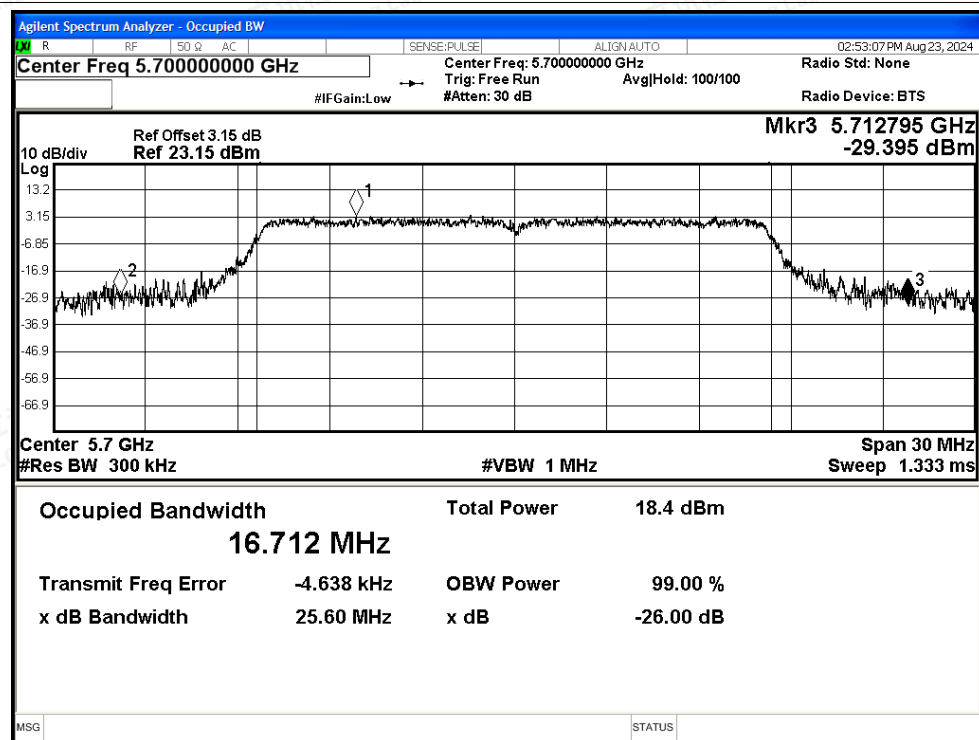
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Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

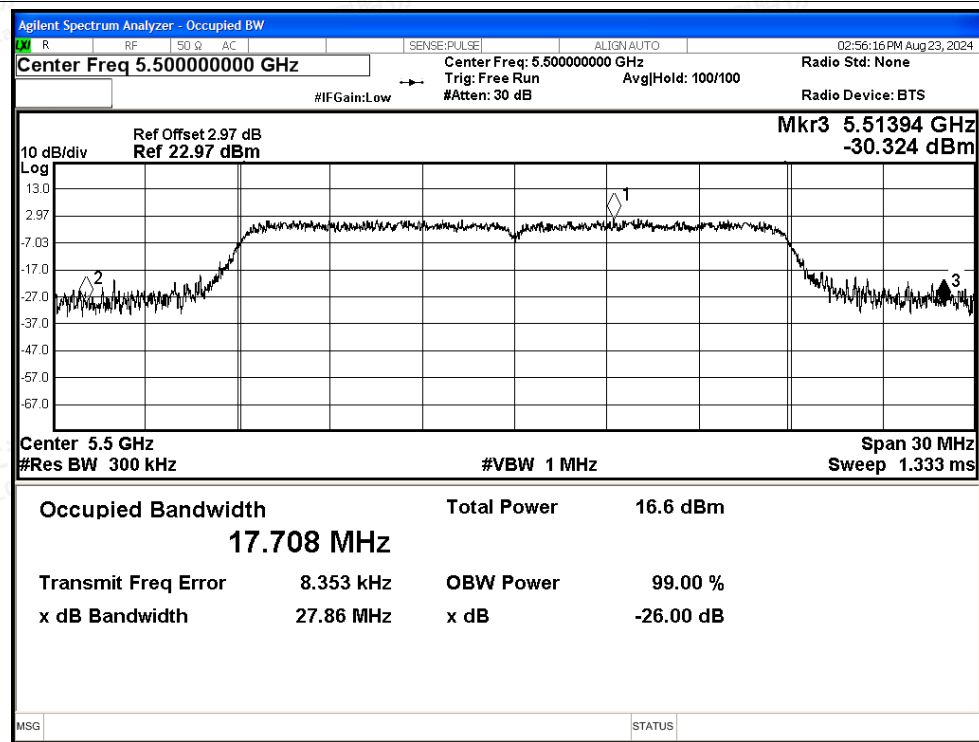
Scan code to check authenticity



-26dB Bandwidth NVNT a 5700MHz Ant1



-26dB Bandwidth NVNT n20 5500MHz Ant1



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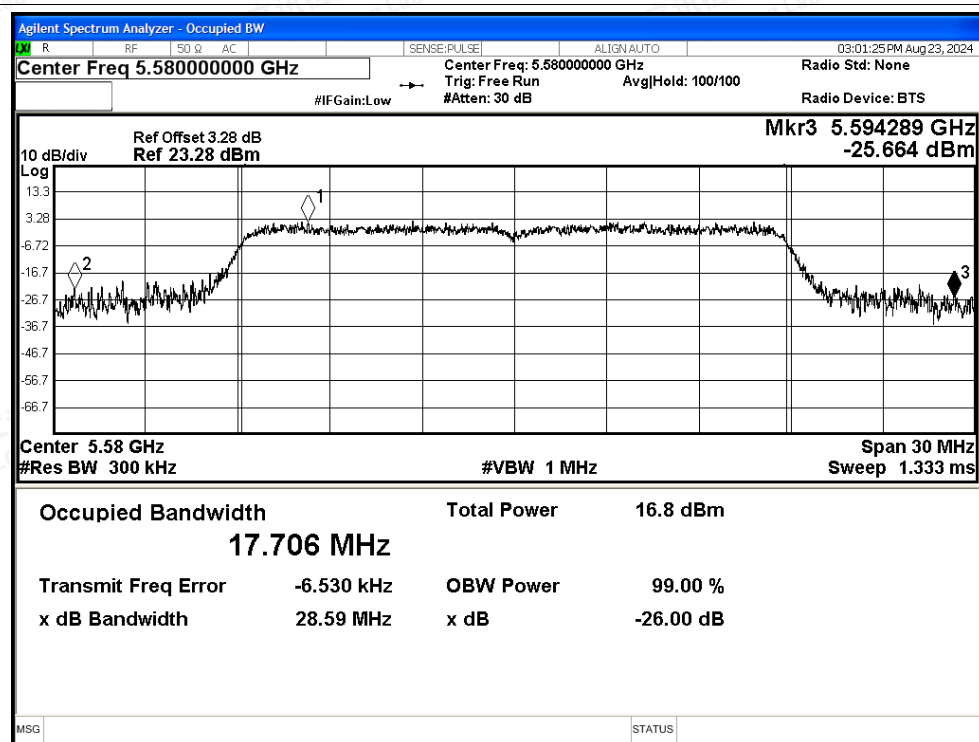
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Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

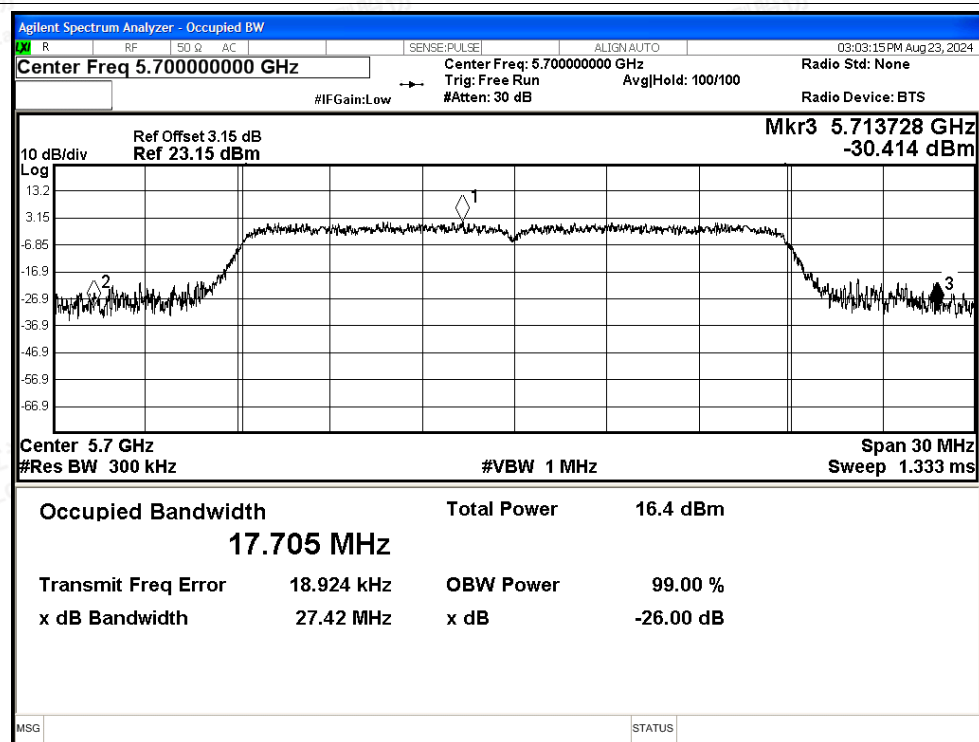
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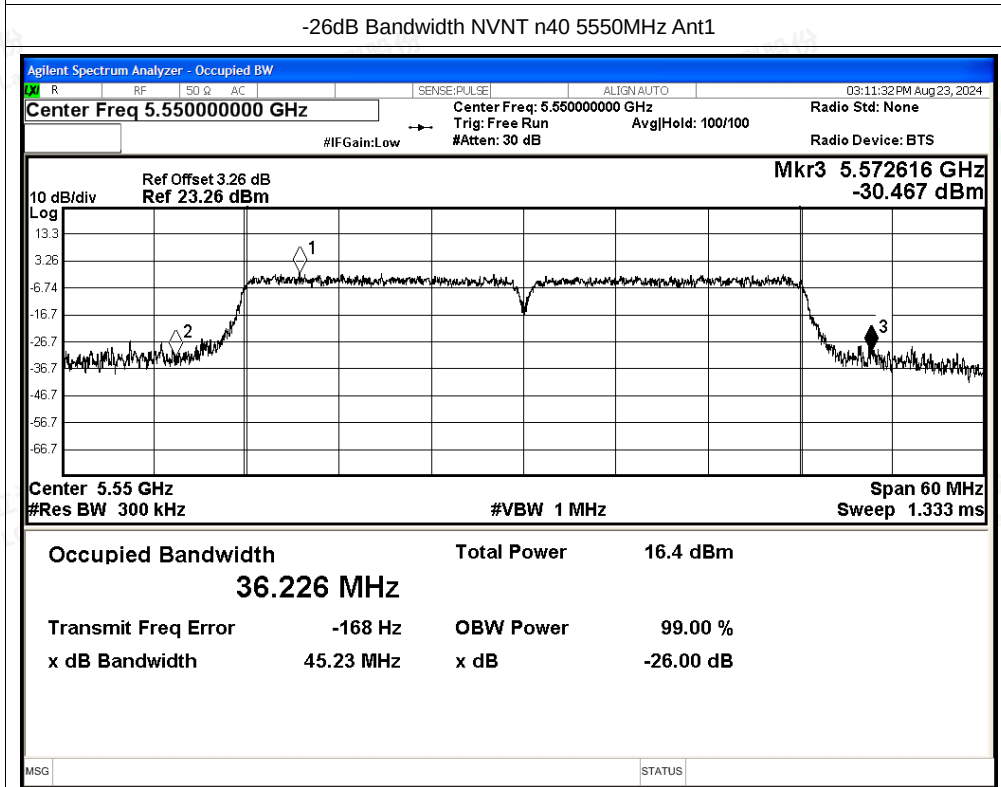
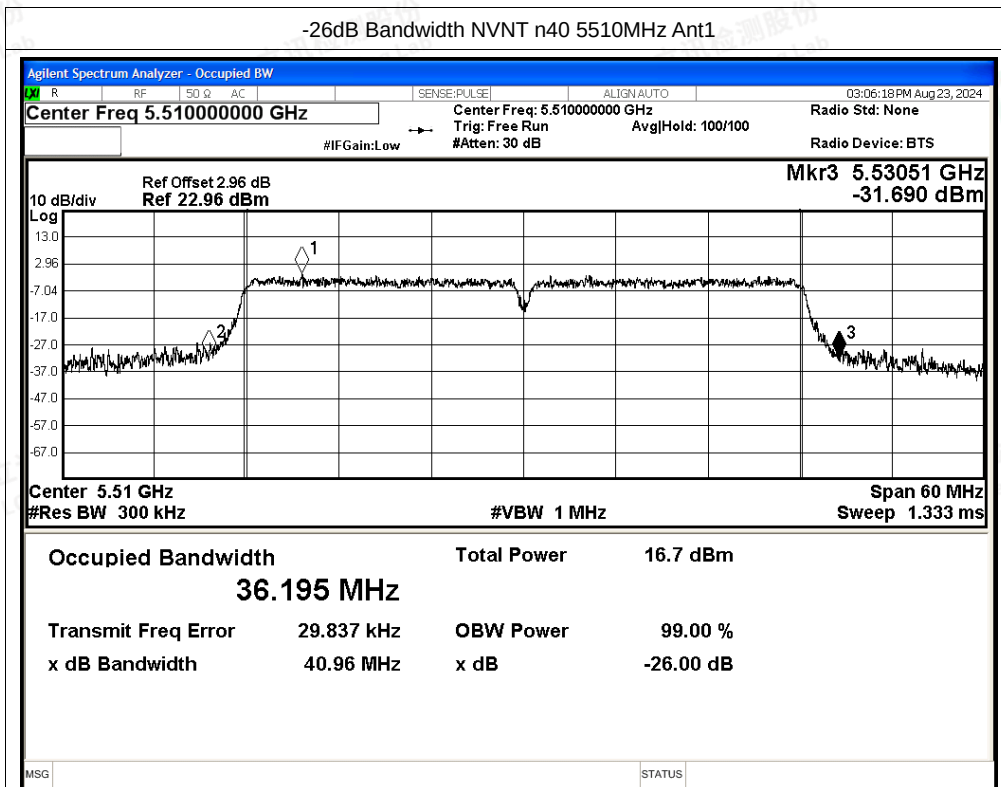


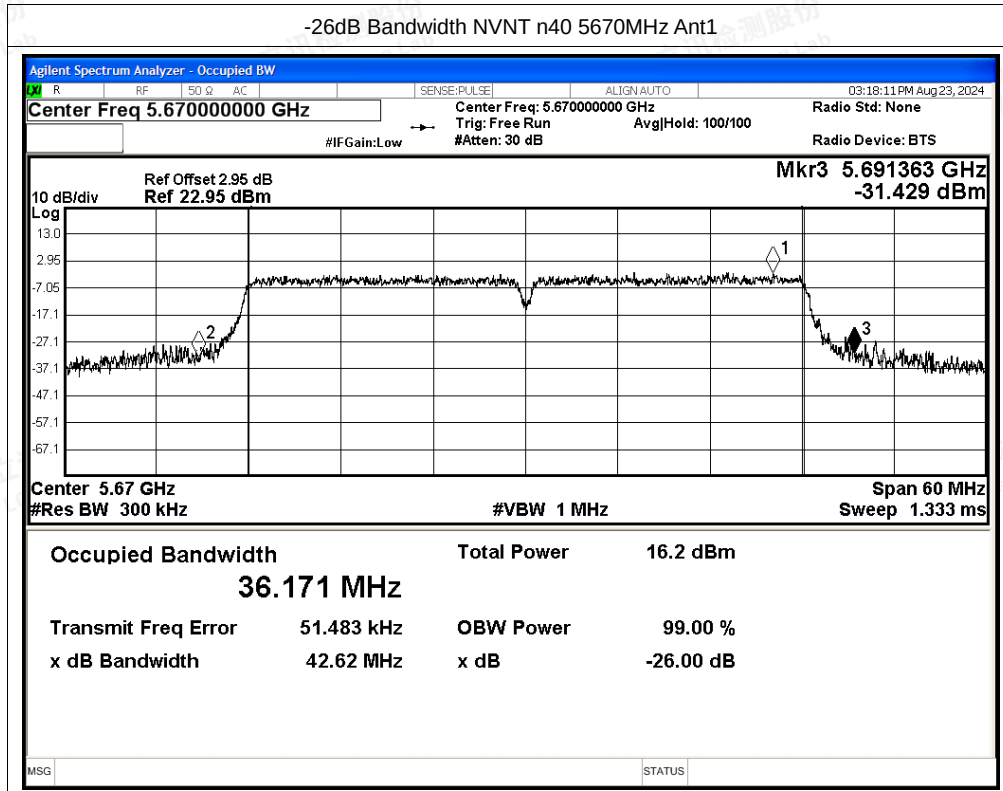
## -26dB Bandwidth NVNT n20 5580MHz Ant1



## -26dB Bandwidth NVNT n20 5700MHz Ant1









## E.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                    | 0.24             | 12.24             | 24          | Pass    |
| NVNT      | a    | 5580            | Ant1    | 12.77                 | 0.24             | 13.01             | 24          | Pass    |
| NVNT      | a    | 5700            | Ant1    | 12.65                 | 0.24             | 12.89             | 24          | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 11.35                 | 0.28             | 11.63             | 24          | Pass    |
| NVNT      | n20  | 5580            | Ant1    | 11.09                 | 0.28             | 11.37             | 24          | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 11.05                 | 0.28             | 11.33             | 24          | Pass    |
| NVNT      | n40  | 5510            | Ant1    | 10.64                 | 0.44             | 11.08             | 24          | Pass    |
| NVNT      | n40  | 5550            | Ant1    | 10.3                  | 0.45             | 10.75             | 24          | Pass    |
| NVNT      | n40  | 5670            | Ant1    | 10.49                 | 0.44             | 10.93             | 24          | Pass    |





### E.3 Maximum Power Spectral Density Level

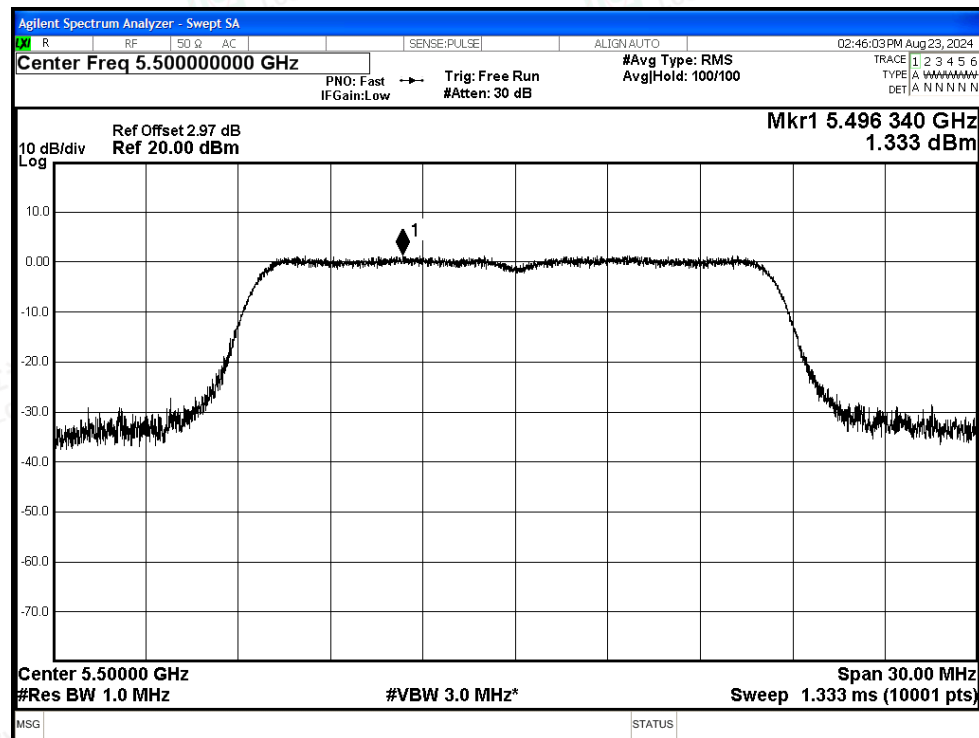
| Condition | Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm/MHz) | Duty Factor (dB) | Total PSD (dBm/MHz) | Limit (dBm/MHz) | Verdict |
|-----------|------|-----------------|---------|-------------------------|------------------|---------------------|-----------------|---------|
| NVNT      | a    | 5500            | Ant1    | 1.33                    | 0.24             | 1.57                | 11              | Pass    |
| NVNT      | a    | 5580            | Ant1    | 2.29                    | 0.24             | 2.53                | 11              | Pass    |
| NVNT      | a    | 5700            | Ant1    | 2.12                    | 0.24             | 2.36                | 11              | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 0.06                    | 0.28             | 0.34                | 11              | Pass    |
| NVNT      | n20  | 5580            | Ant1    | 0.23                    | 0.28             | 0.51                | 11              | Pass    |
| NVNT      | n20  | 5700            | Ant1    | -0.09                   | 0.28             | 0.19                | 11              | Pass    |
| NVNT      | n40  | 5510            | Ant1    | -2.8                    | 0.44             | -2.36               | 11              | Pass    |
| NVNT      | n40  | 5550            | Ant1    | -3.24                   | 0.45             | -2.79               | 11              | Pass    |
| NVNT      | n40  | 5670            | Ant1    | -3.24                   | 0.44             | -2.80               | 11              | Pass    |



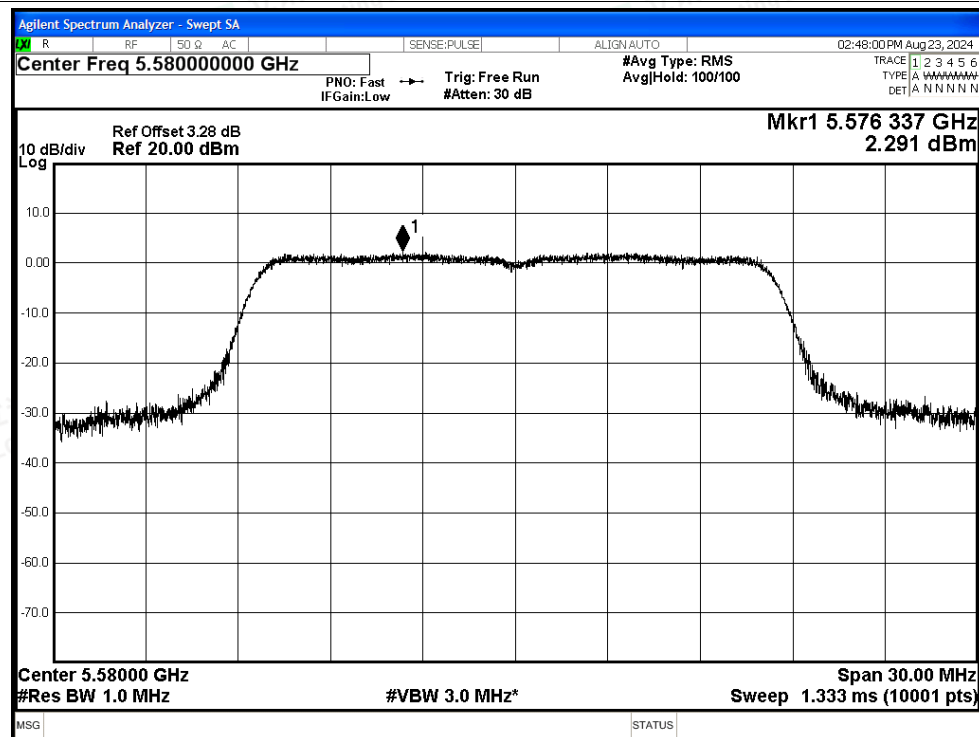


## Test Graphs

PSD NVNT a 5500MHz Ant1

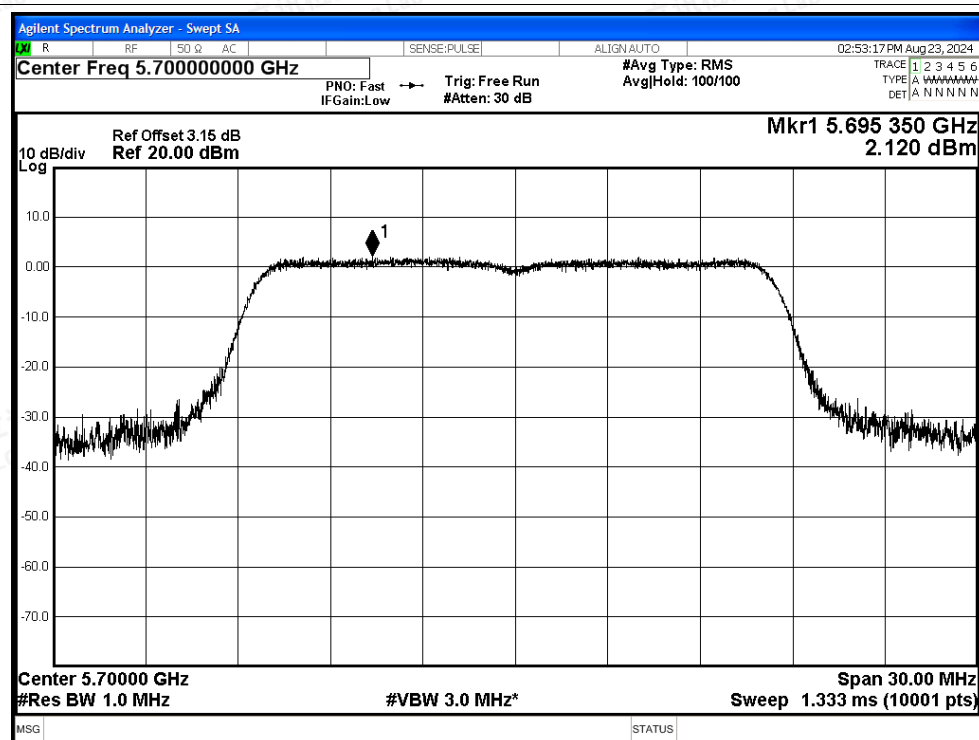


PSD NVNT a 5580MHz Ant1

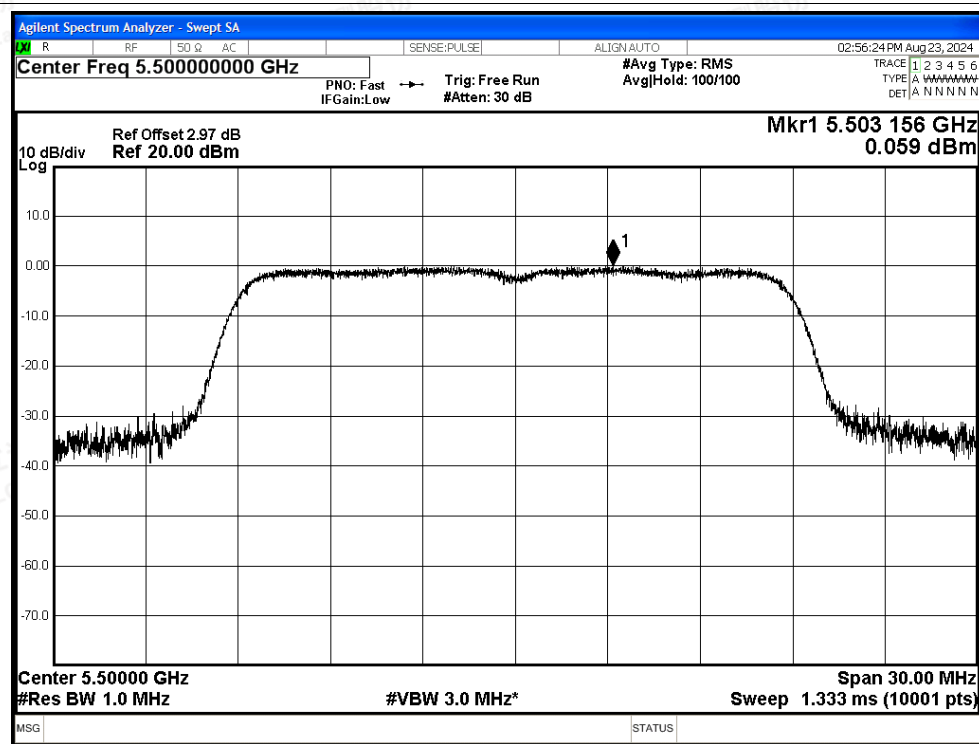




PSD NVNT a 5700MHz Ant1



PSD NVNT n20 5500MHz Ant1

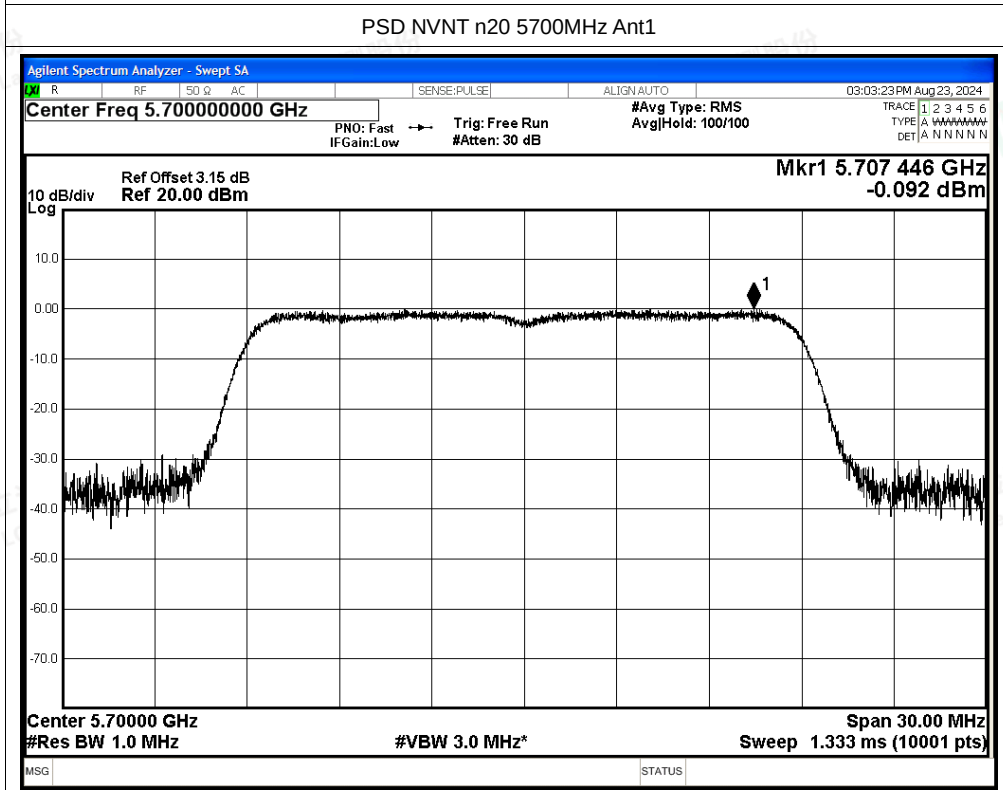
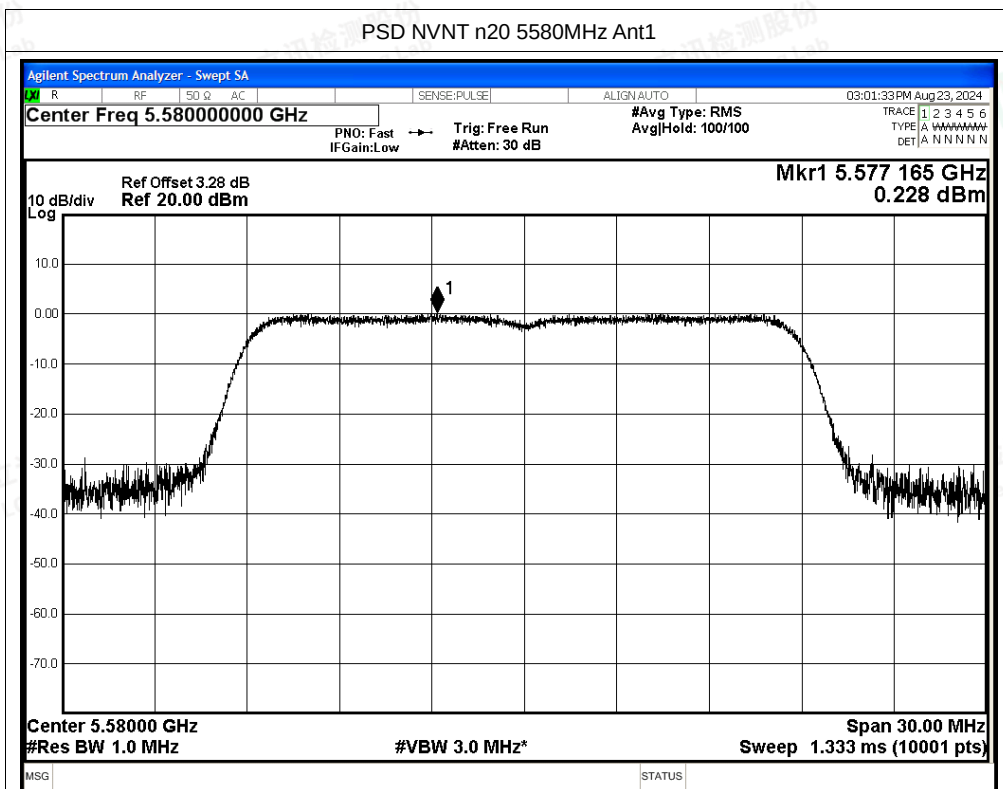


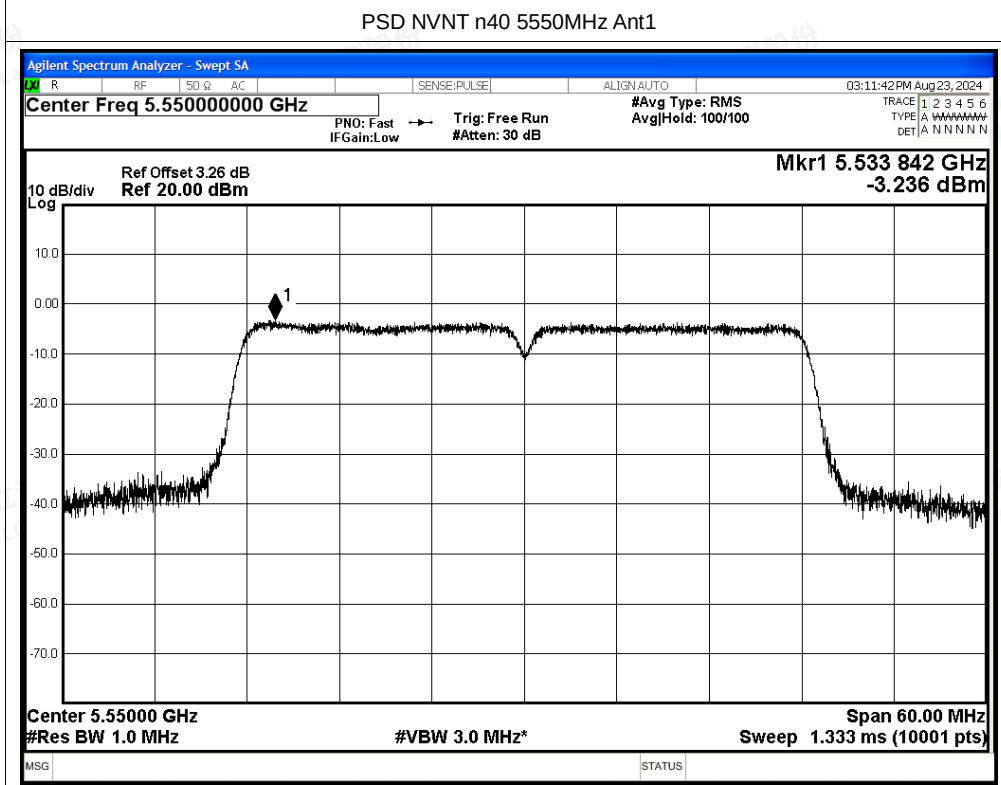
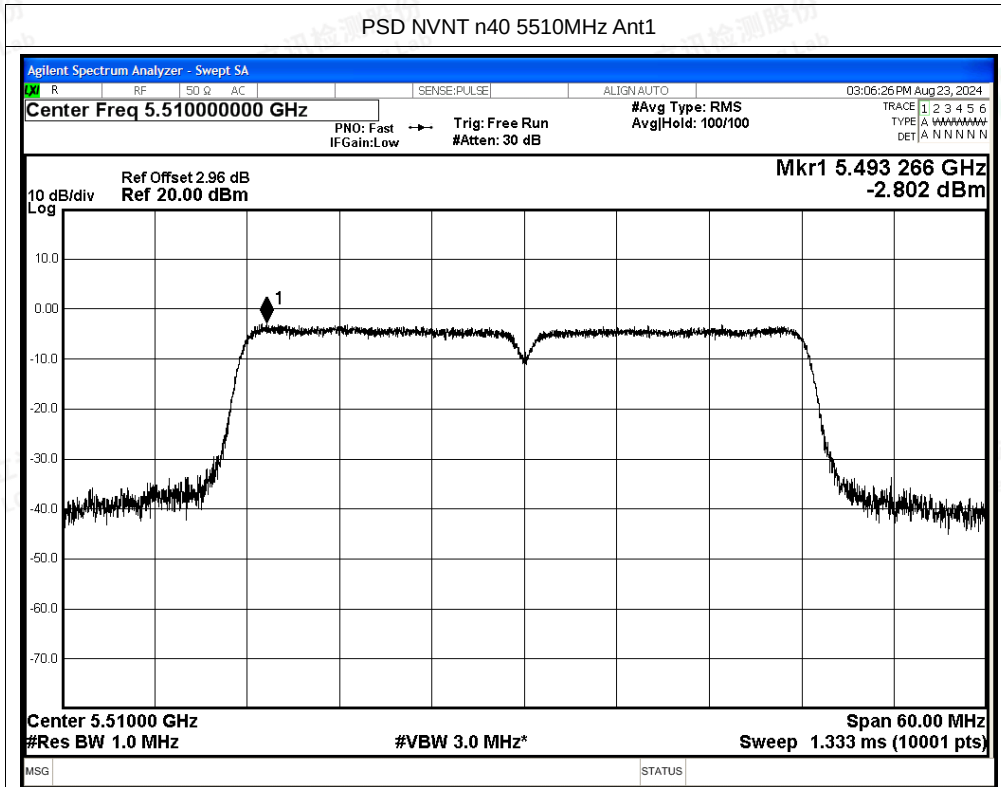
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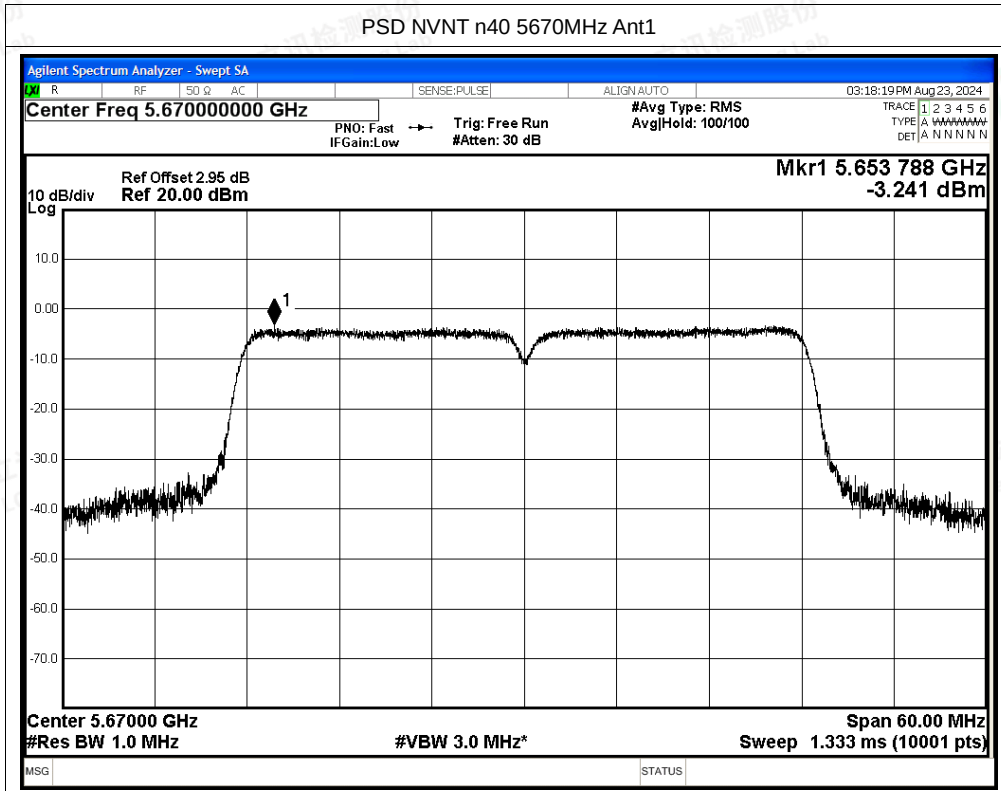
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## E.4 Restrict Band

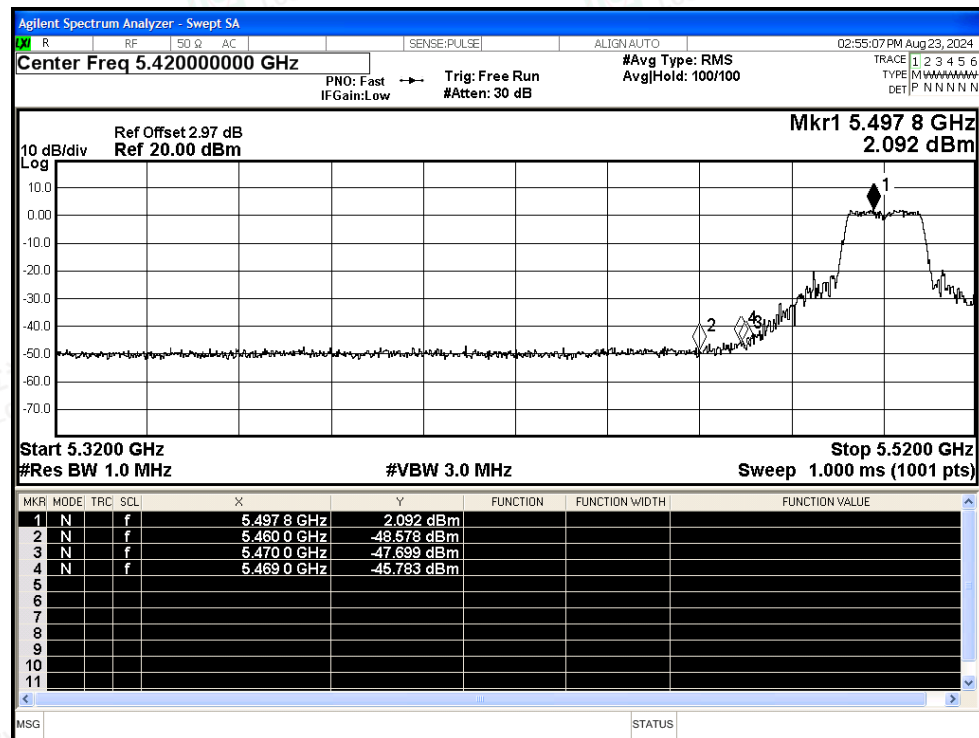
| Condition | Mode | Frequency (MHz) | Antenna | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | Duty Factor (dB) | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|------------|------------------|------------|----------|----------------|---------|
| NVNT      | a    | 5500            | Ant1    | 5460            | -48.58      | 4.05       | -                | 50.70      | Peak     | 68.2           | Pass    |
| NVNT      | a    | 5500            | Ant1    | 5460            | -57.73      | 4.05       | 0.24             | 41.79      | Average  | 54             | Pass    |
| NVNT      | a    | 5500            | Ant1    | 5469            | -45.78      | 4.05       | -                | 53.50      | Peak     | 68.2           | Pass    |
| NVNT      | a    | 5500            | Ant1    | 5467            | -55.87      | 4.05       | 0.24             | 43.65      | Average  | 54             | Pass    |
| NVNT      | a    | 5500            | Ant1    | 5470            | -47.7       | 4.05       | -                | 51.58      | Peak     | 68.2           | Pass    |
| NVNT      | a    | 5500            | Ant1    | 5470            | -55.99      | 4.05       | 0.24             | 43.53      | Average  | 54             | Pass    |
| NVNT      | a    | 5700            | Ant1    | 5725            | -35.08      | 4.05       | -                | 64.20      | Peak     | 68.2           | Pass    |
| NVNT      | a    | 5700            | Ant1    | 5725            | -50.13      | 4.05       | 0.24             | 49.39      | Average  | 54             | Pass    |
| NVNT      | a    | 5700            | Ant1    | 5725.6          | -32.96      | 4.05       | -                | 66.32      | Peak     | 68.2           | Pass    |
| NVNT      | a    | 5700            | Ant1    | 5725.6          | -49.84      | 4.05       | 0.24             | 49.68      | Average  | 54             | Pass    |
| NVNT      | a    | 5700            | Ant1    | 5735            | -44.86      | 4.05       | -                | 54.42      | Peak     | 68.2           | Pass    |
| NVNT      | a    | 5700            | Ant1    | 5735            | -56.08      | 4.05       | 0.24             | 43.44      | Average  | 54             | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 5460            | -48.39      | 4.05       | -                | 50.89      | Peak     | 68.2           | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 5460            | -57.2       | 4.05       | 0.28             | 42.36      | Average  | 54             | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 5469.4          | -38.49      | 4.05       | -                | 60.79      | Peak     | 68.2           | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 5469.8          | -53.28      | 4.05       | 0.28             | 46.28      | Average  | 54             | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 5470            | -42.8       | 4.05       | -                | 56.48      | Peak     | 68.2           | Pass    |
| NVNT      | n20  | 5500            | Ant1    | 5470            | -53.66      | 4.05       | 0.28             | 45.90      | Average  | 54             | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 5725            | -32.56      | 4.05       | -                | 66.72      | Peak     | 68.2           | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 5725            | -44.1       | 4.05       | 0.28             | 55.46      | Average  | 54             | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 5725.2          | -31.3       | 4.05       | -                | 67.98      | Peak     | 68.2           | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 5735            | -42.08      | 4.05       | -                | 57.20      | Peak     | 68.2           | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 5735            | -54.11      | 4.05       | 0.28             | 45.45      | Average  | 54             | Pass    |
| NVNT      | n40  | 5510            | Ant1    | 5460            | -48.45      | 4.05       | -                | 50.83      | Peak     | 68.2           | Pass    |
| NVNT      | n40  | 5510            | Ant1    | 5460            | -56.04      | 4.05       | 0.44             | 43.68      | Average  | 54             | Pass    |
| NVNT      | n40  | 5510            | Ant1    | 5468.8          | -37.23      | 4.05       | -                | 62.05      | Peak     | 68.2           | Pass    |
| NVNT      | n40  | 5510            | Ant1    | 5470            | -52.65      | 4.05       | 0.44             | 47.07      | Average  | 54             | Pass    |
| NVNT      | n40  | 5510            | Ant1    | 5470            | -39.16      | 4.05       | -                | 60.12      | Peak     | 68.2           | Pass    |
| NVNT      | n40  | 5670            | Ant1    | 5725            | -47.55      | 4.05       | -                | 51.73      | Peak     | 68.2           | Pass    |
| NVNT      | n40  | 5670            | Ant1    | 5725            | -55.11      | 4.05       | 0.44             | 44.61      | Average  | 54             | Pass    |
| NVNT      | n40  | 5670            | Ant1    | 5728            | -43.05      | 4.05       | -                | 56.23      | Peak     | 68.2           | Pass    |
| NVNT      | n40  | 5670            | Ant1    | 5725.6          | -54.93      | 4.05       | 0.44             | 44.79      | Average  | 54             | Pass    |
| NVNT      | n40  | 5670            | Ant1    | 5735            | -48.98      | 4.05       | -                | 50.30      | Peak     | 68.2           | Pass    |
| NVNT      | n40  | 5670            | Ant1    | 5735            | -56.57      | 4.05       | 0.44             | 43.15      | Average  | 54             | Pass    |



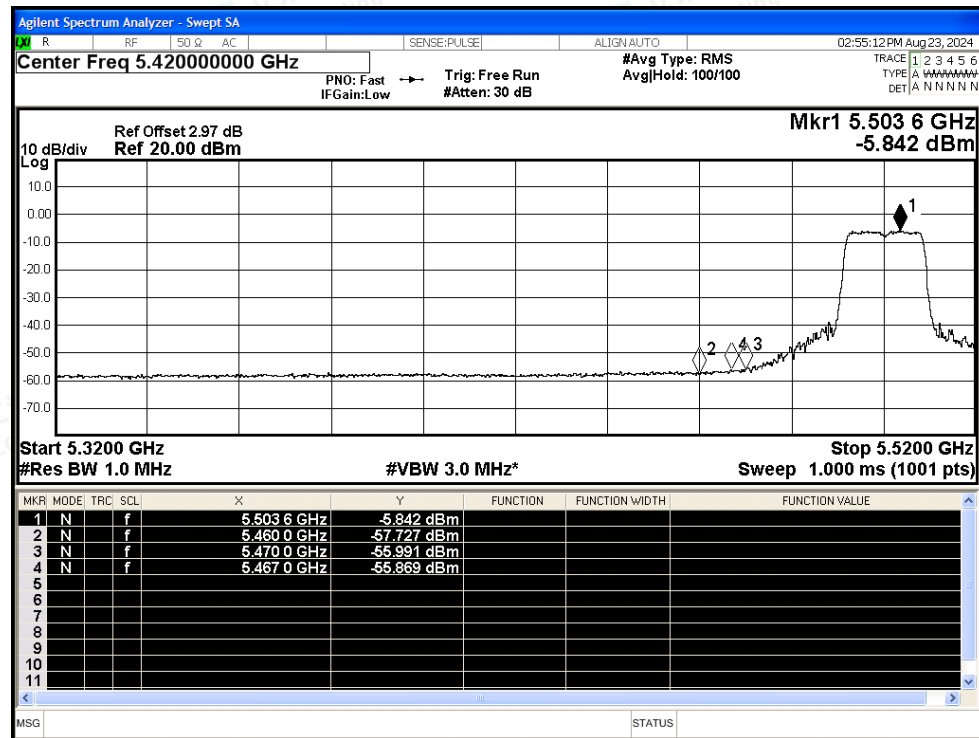


## Test Graphs

## Restrict Band NVNT a 5500MHz Ant1 Peak



## Restrict Band NVNT a 5500MHz Ant1 Average



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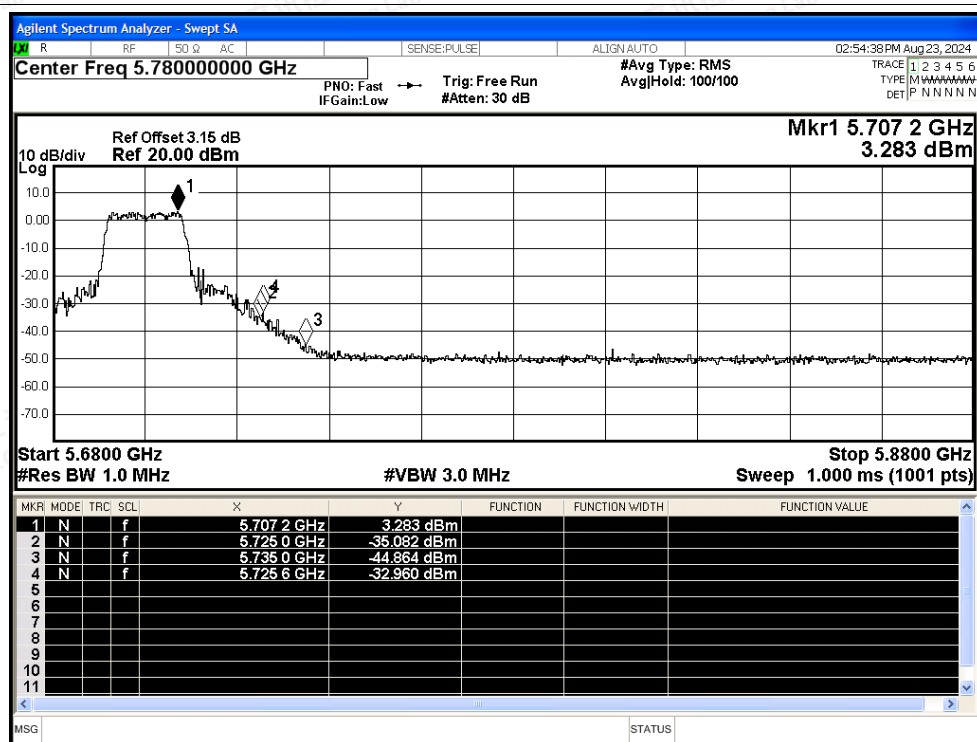
Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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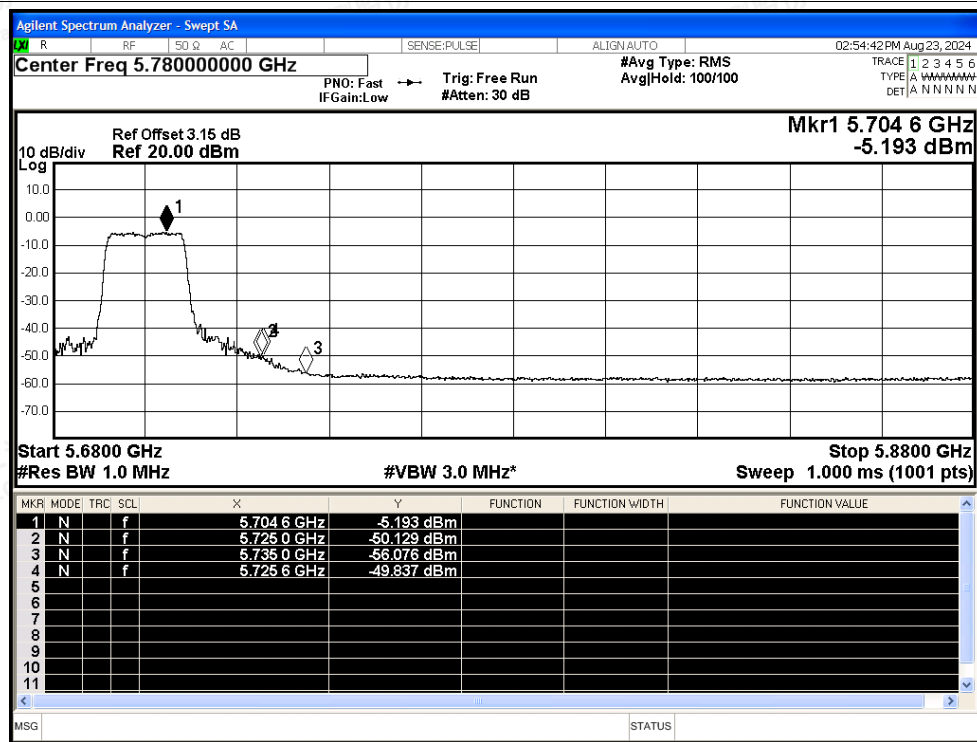
Scan code to check authenticity



## Restrict Band NVNT a 5700MHz Ant1 Peak



## Restrict Band NVNT a 5700MHz Ant1 Average



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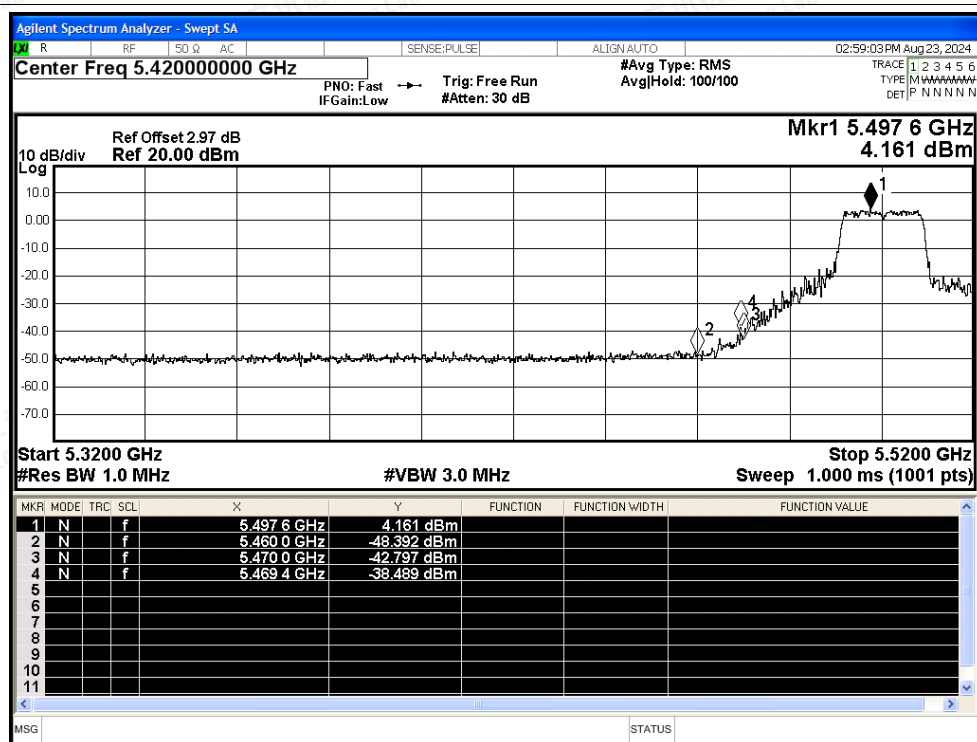
Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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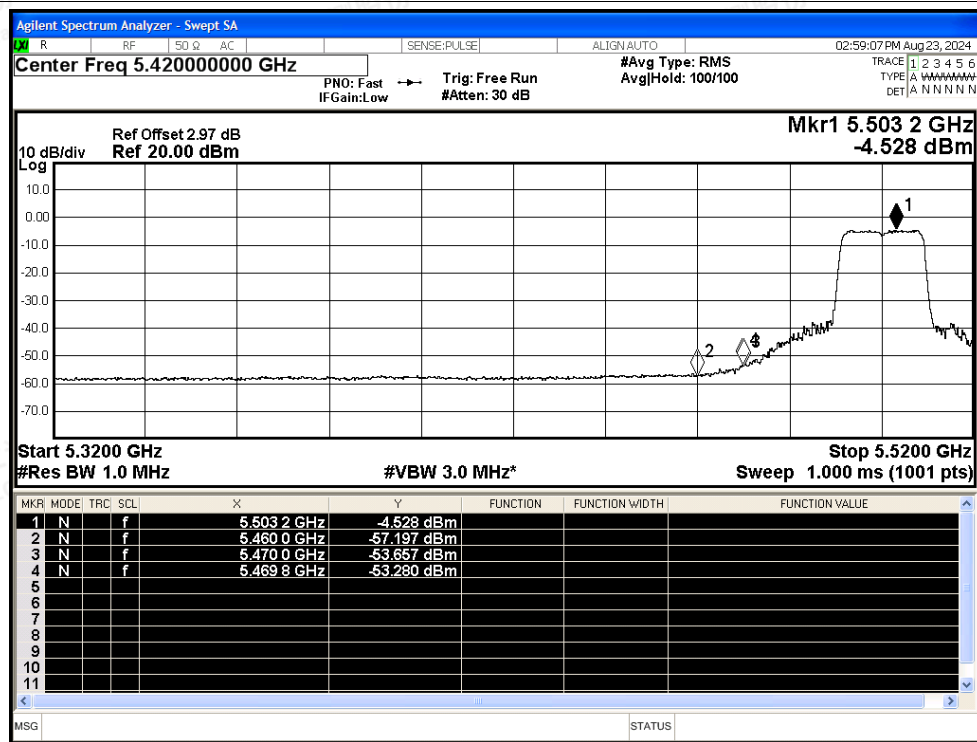
Scan code to check authenticity



## Restrict Band NVNT n20 5500MHz Ant1 Peak



## Restrict Band NVNT n20 5500MHz Ant1 Average



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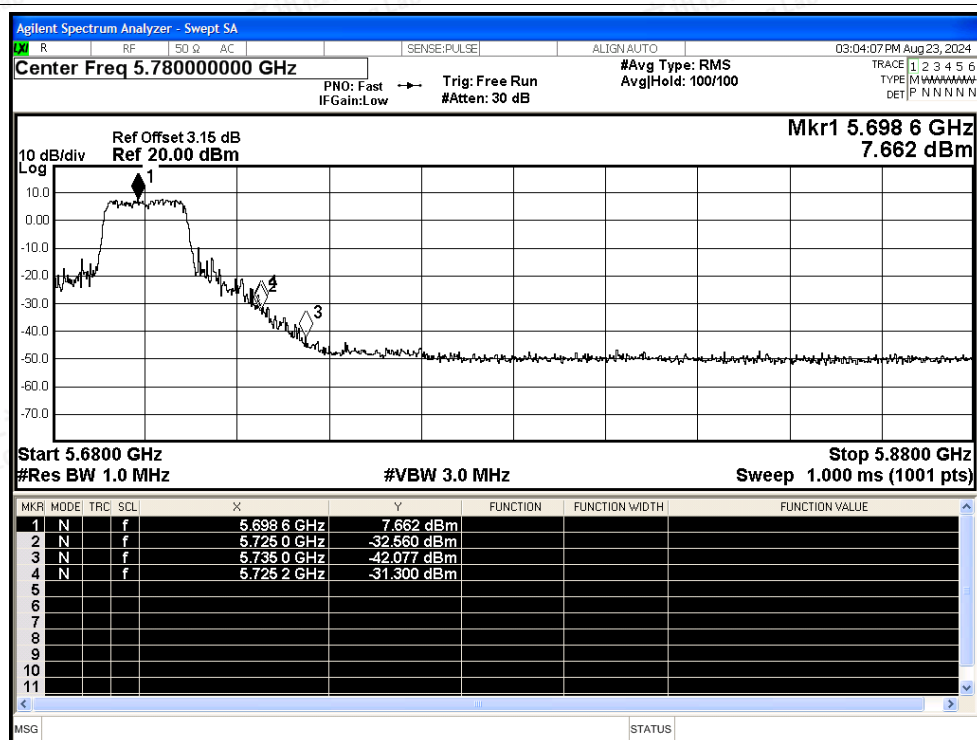
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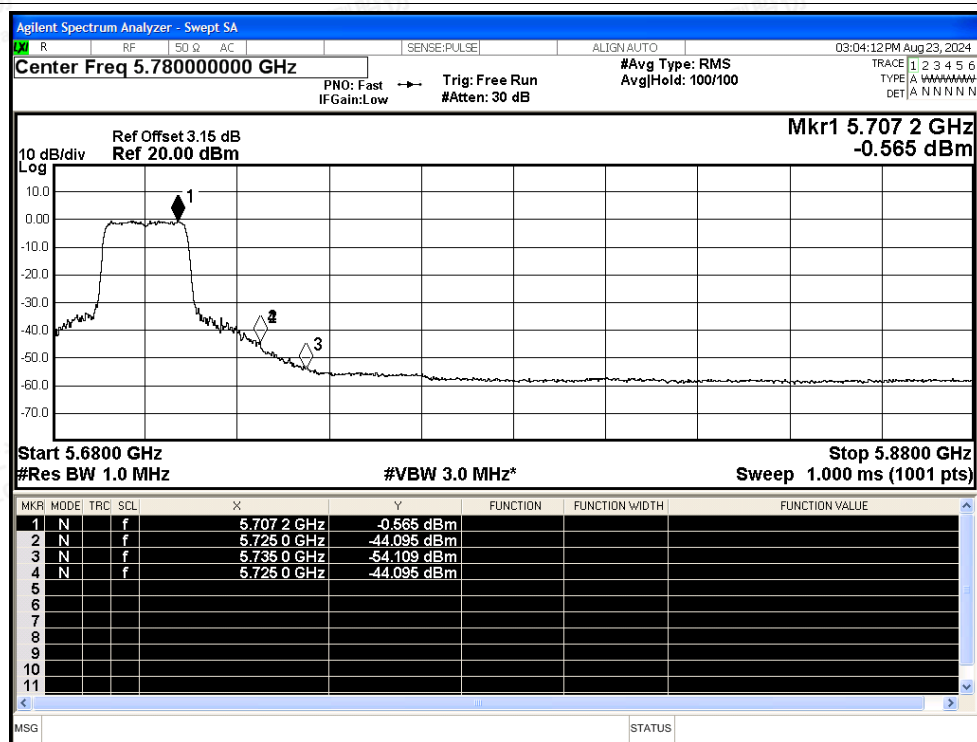
Scan code to check authenticity



## Restrict Band NVNT n20 5700MHz Ant1 Peak



## Restrict Band NVNT n20 5700MHz Ant1 Average



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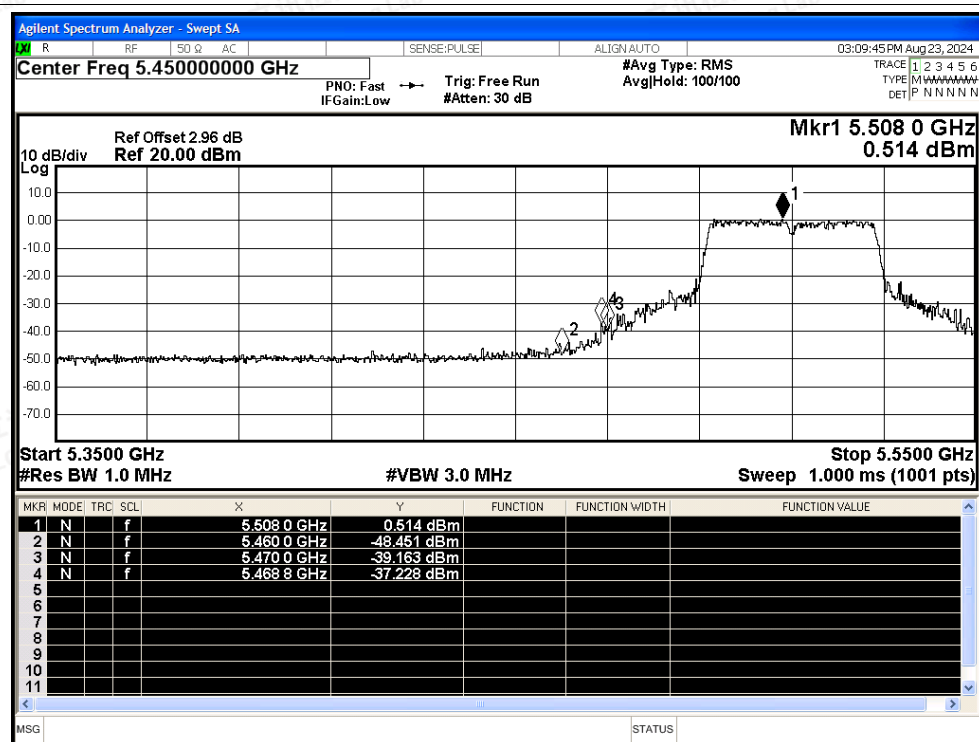
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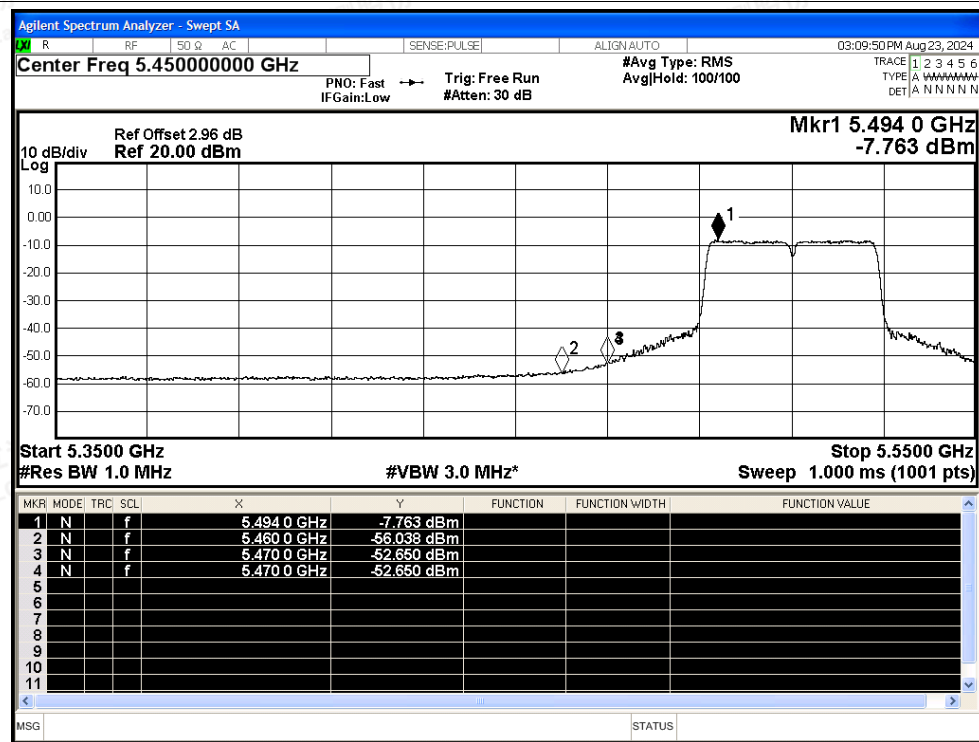
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## Restrict Band NVNT n40 5510MHz Ant1 Peak

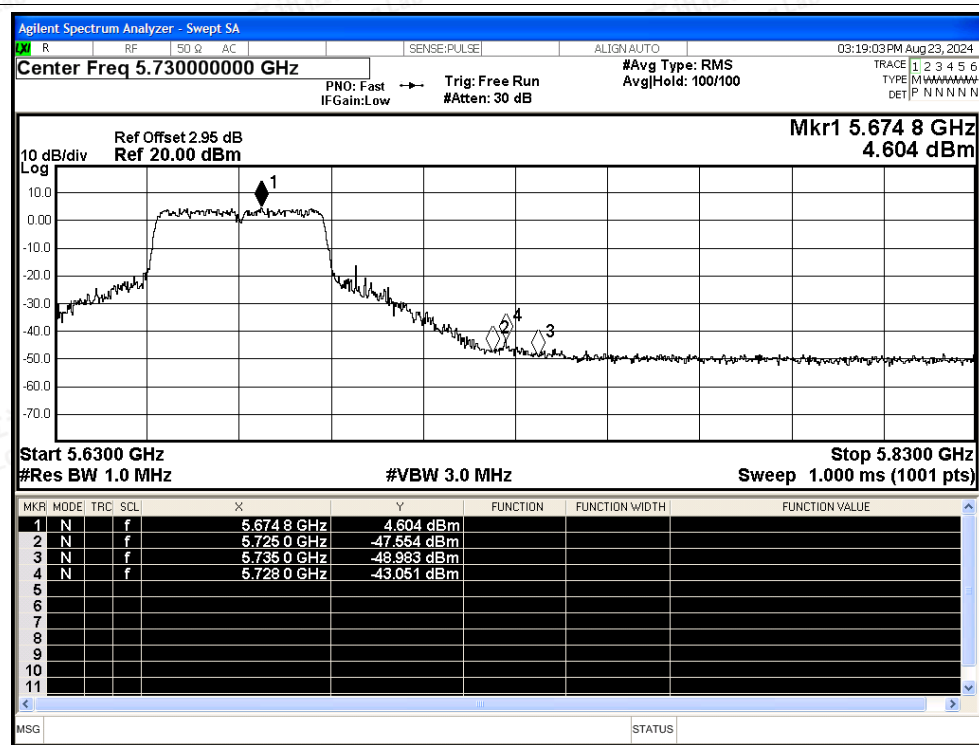


## Restrict Band NVNT n40 5510MHz Ant1 Average

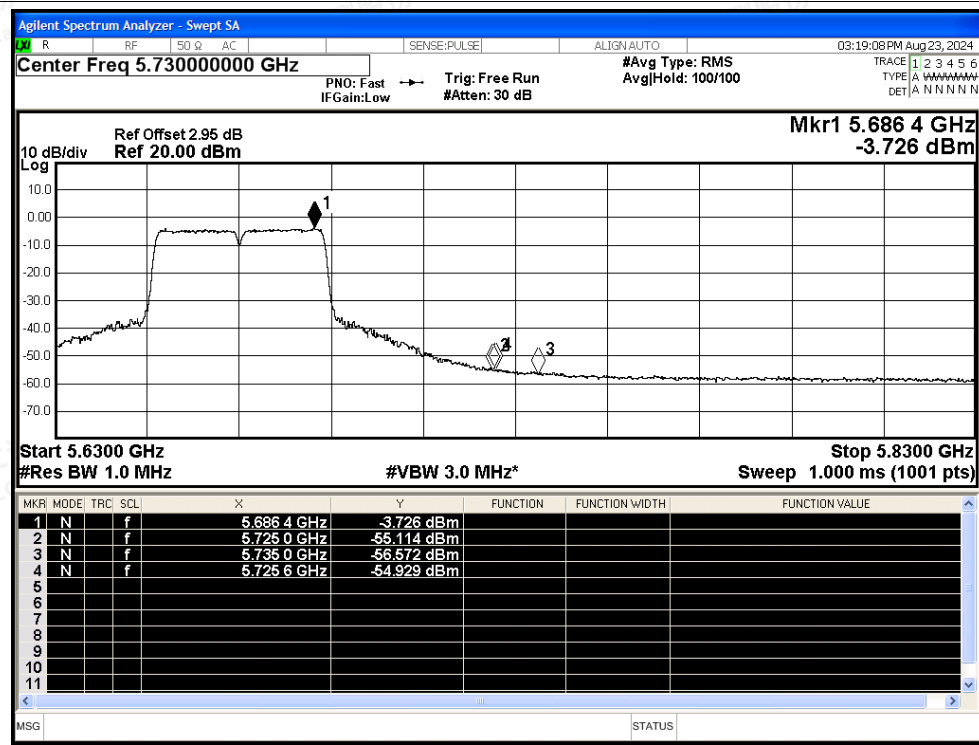




## Restrict Band NVNT n40 5670MHz Ant1 Peak



## Restrict Band NVNT n40 5670MHz Ant1 Average



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## E.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    | 5579.98                  | -20000               | -3.58           | 25          | Pass    |
| NVNT      | n20  | 5700            | Ant1    | 5700                     | 0                    | 0               | 25          | Pass    |
| NVNT      | n40  | 5510            | Ant1    | 5509.96                  | -40000               | -7.26           | 25          | Pass    |
| NVNT      | n40  | 5550            | Ant1    | 5550                     | 0                    | 0               | 25          | Pass    |
| NVNT      | n40  | 5670            | Ant1    | 5669.96                  | -40000               | -7.05           | 25          | Pass    |

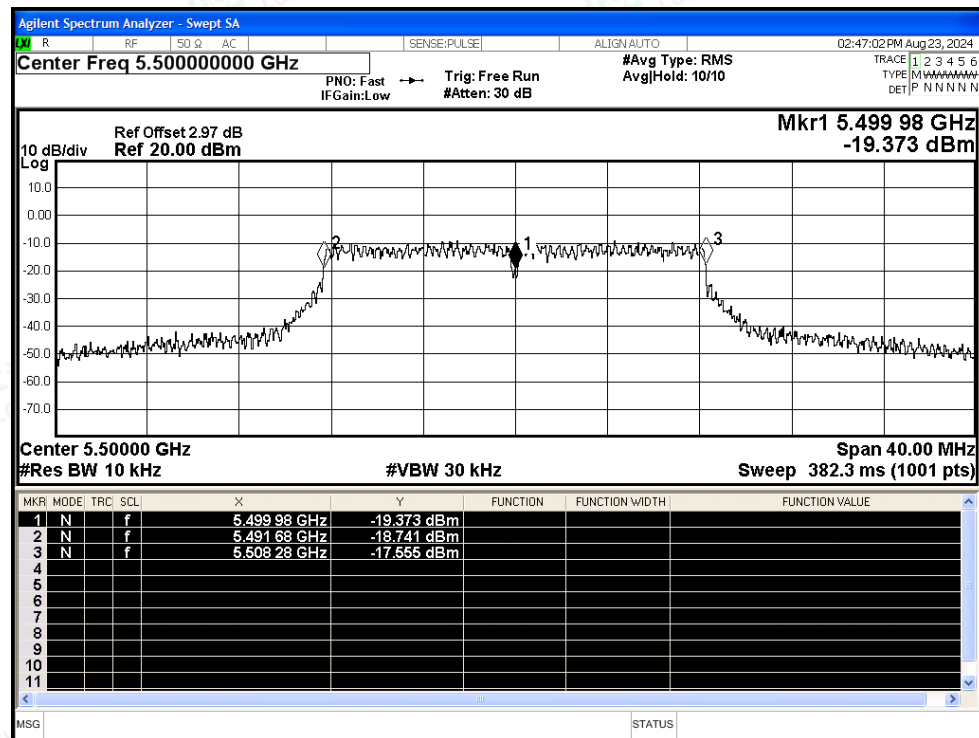


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Scan code to check authenticity

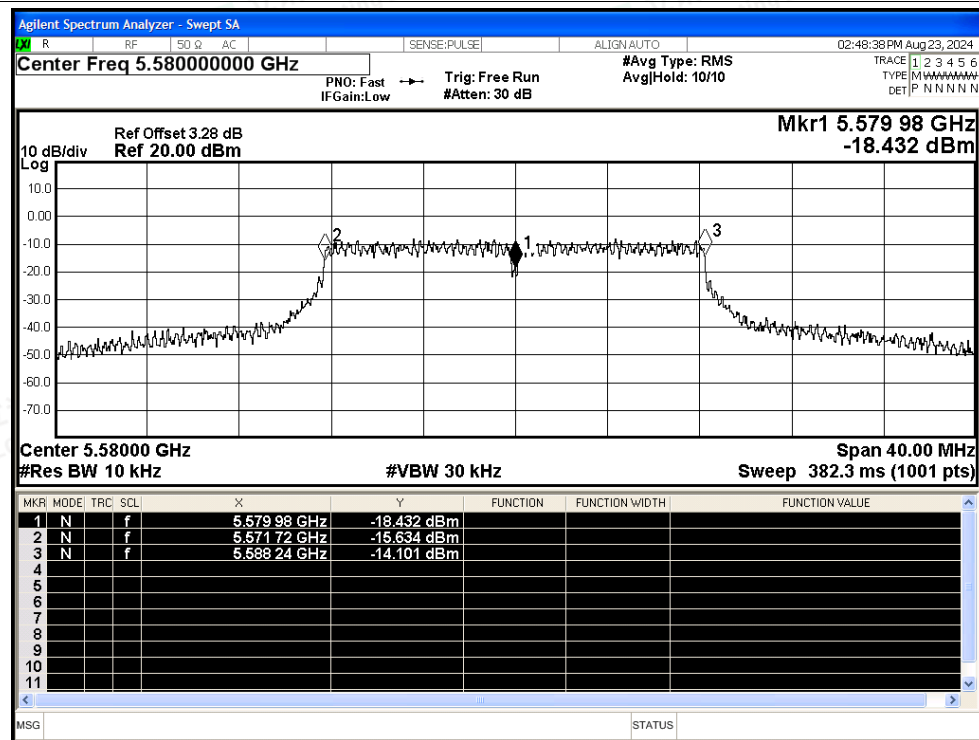


## Test Graphs

## Freq. Stability NVNT a 5500MHz Ant1

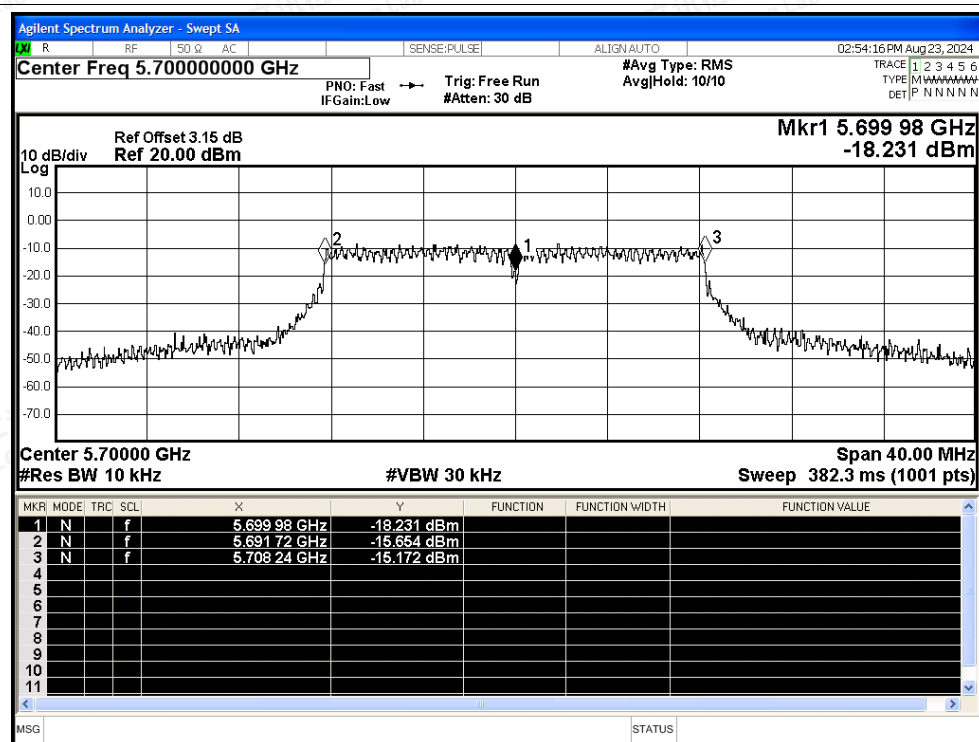


## Freq. Stability NVNT a 5580MHz Ant1

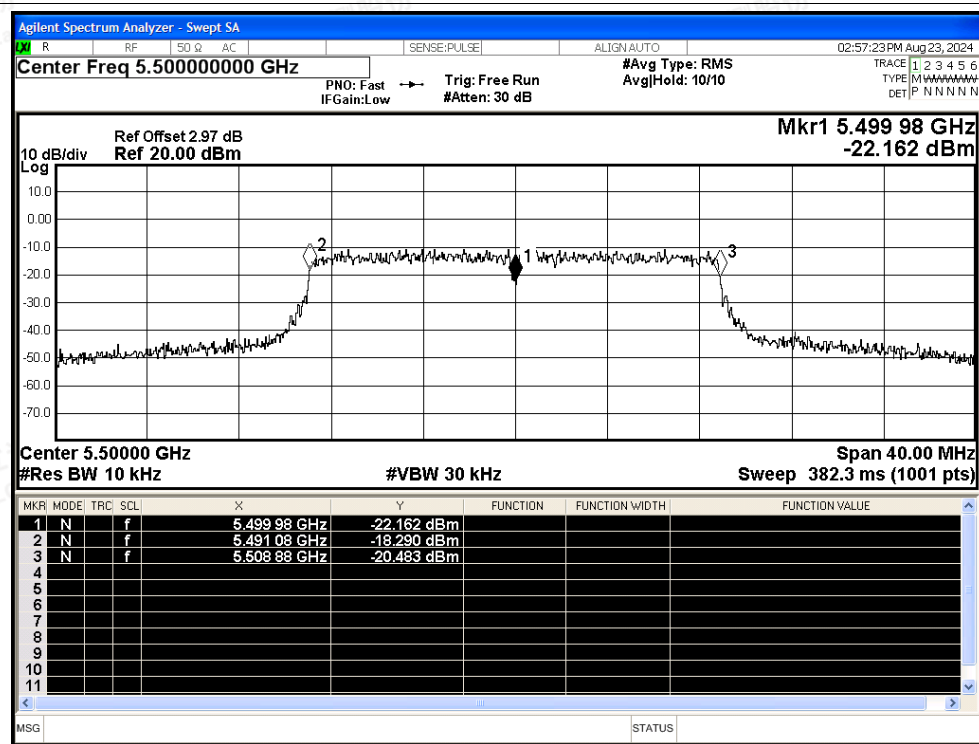




## Freq. Stability NVNT a 5700MHz Ant1



## Freq. Stability NVNT n20 5500MHz Ant1



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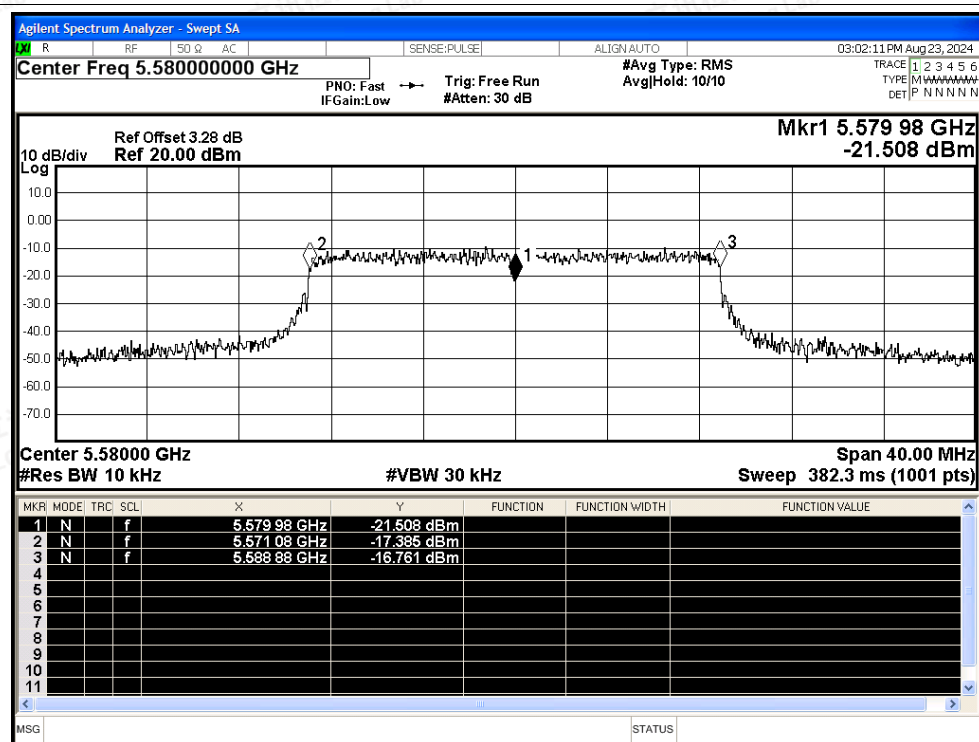
Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

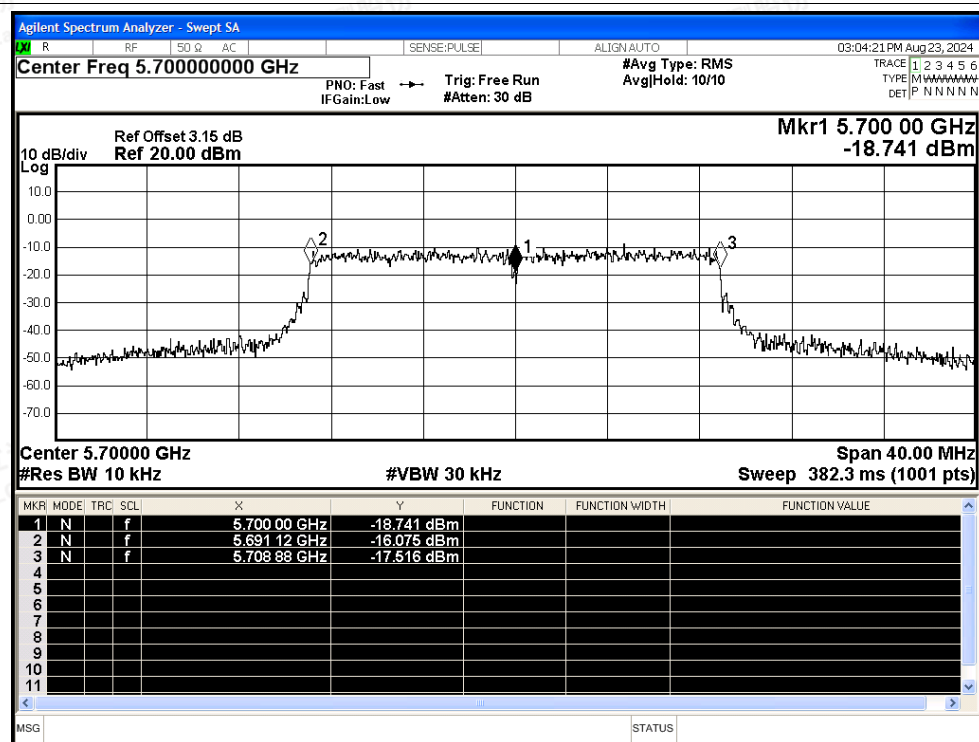
Scan code to check authenticity



## Freq. Stability NVNT n20 5580MHz Ant1



## Freq. Stability NVNT n20 5700MHz Ant1



Shenzhen LCS Compliance Testing Laboratory Ltd.

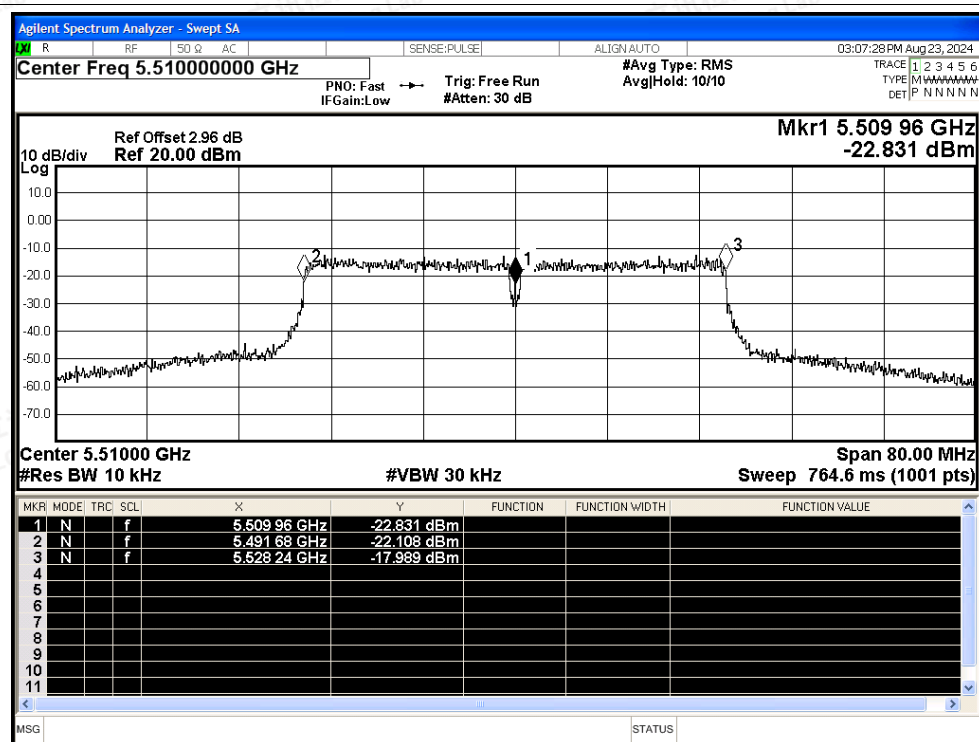
Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

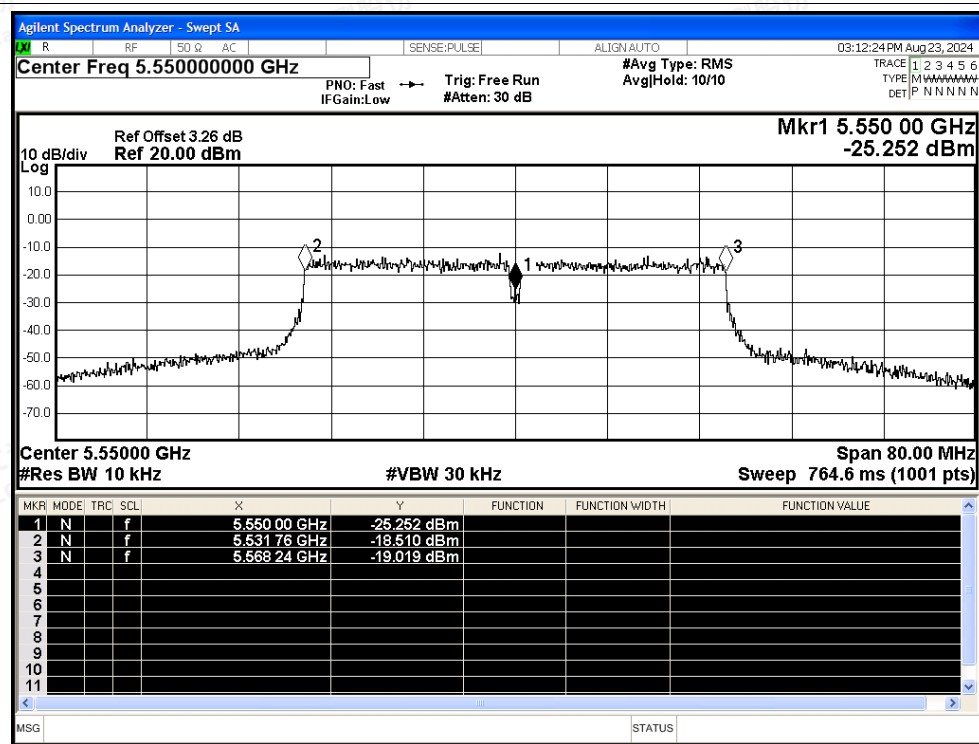
Scan code to check authenticity



## Freq. Stability NVNT n40 5510MHz Ant1



## Freq. Stability NVNT n40 5550MHz Ant1

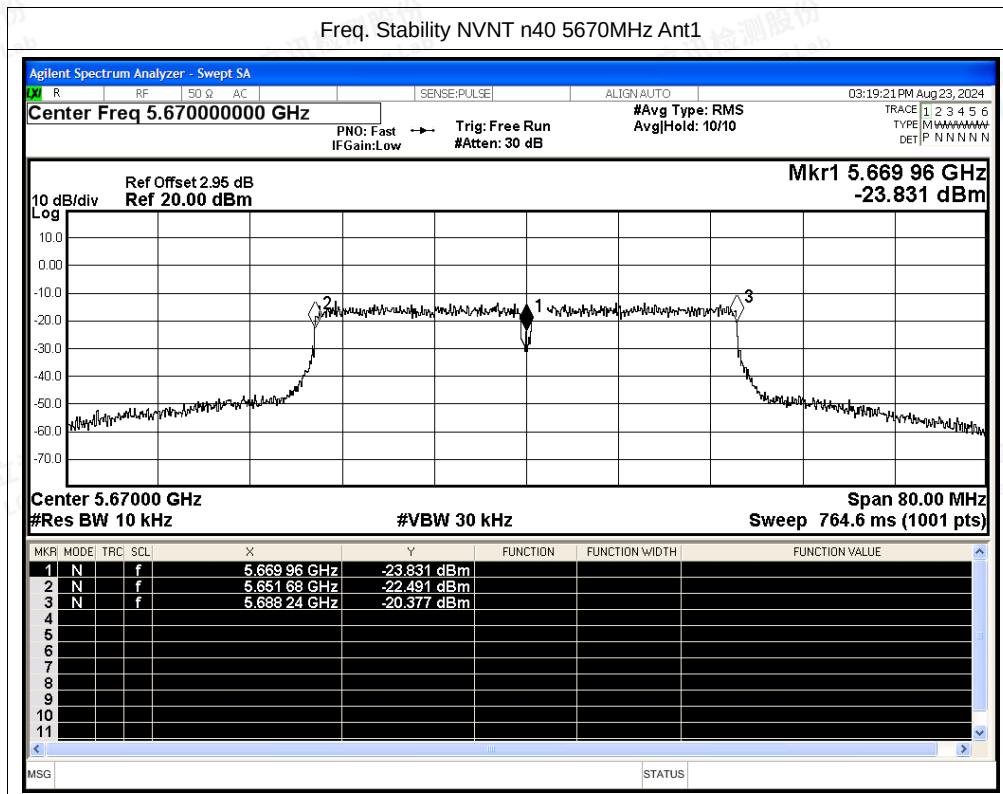


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## E.6 Duty Cycle

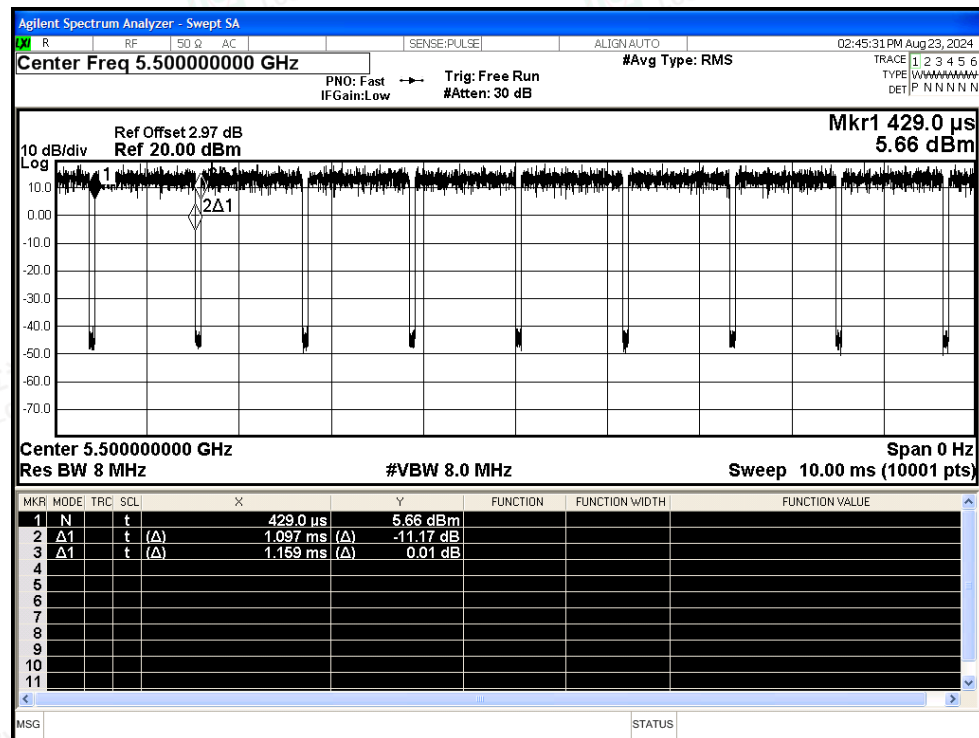
| Condition | Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | a    | 5500            | Ant1    | 94.65          | 0.24                   | 0.91      |
| NVNT      | a    | 5580            | Ant1    | 94.65          | 0.24                   | 0.91      |
| NVNT      | a    | 5700            | Ant1    | 94.65          | 0.24                   | 0.91      |
| NVNT      | n20  | 5500            | Ant1    | 93.77          | 0.28                   | 1.07      |
| NVNT      | n20  | 5580            | Ant1    | 93.77          | 0.28                   | 1.07      |
| NVNT      | n20  | 5700            | Ant1    | 93.77          | 0.28                   | 1.07      |
| NVNT      | n40  | 5510            | Ant1    | 90.3           | 0.44                   | 1.73      |
| NVNT      | n40  | 5550            | Ant1    | 90.14          | 0.45                   | 1.74      |
| NVNT      | n40  | 5670            | Ant1    | 90.3           | 0.44                   | 1.73      |



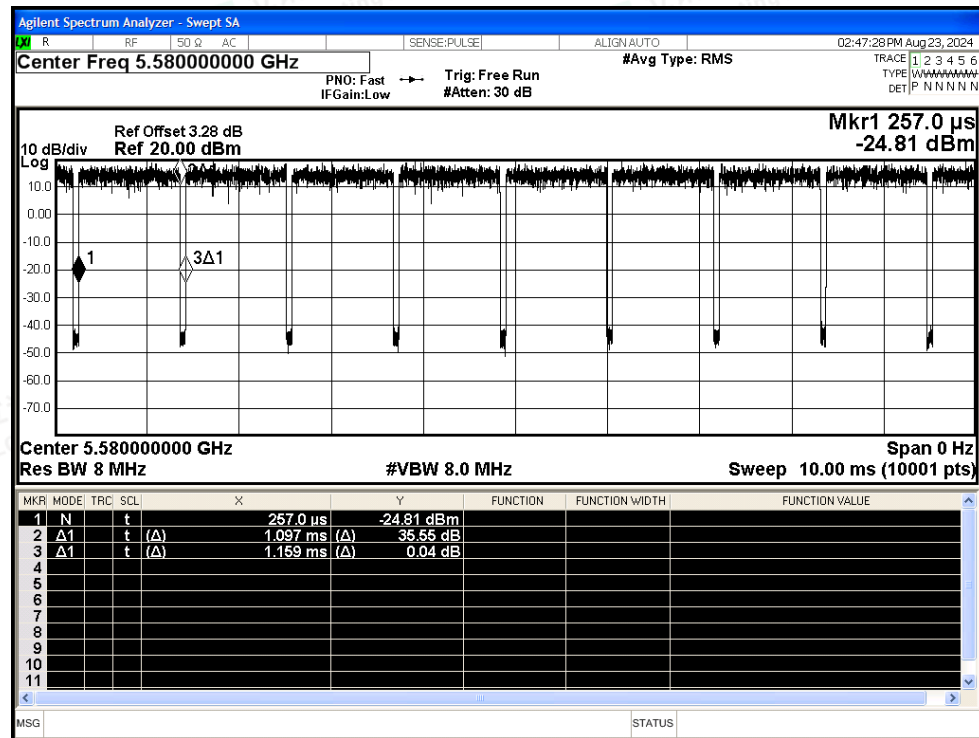


## Test Graphs

## Duty Cycle NVNT a 5500MHz Ant1



## Duty Cycle NVNT a 5580MHz Ant1



Shenzhen LCS Compliance Testing Laboratory Ltd.

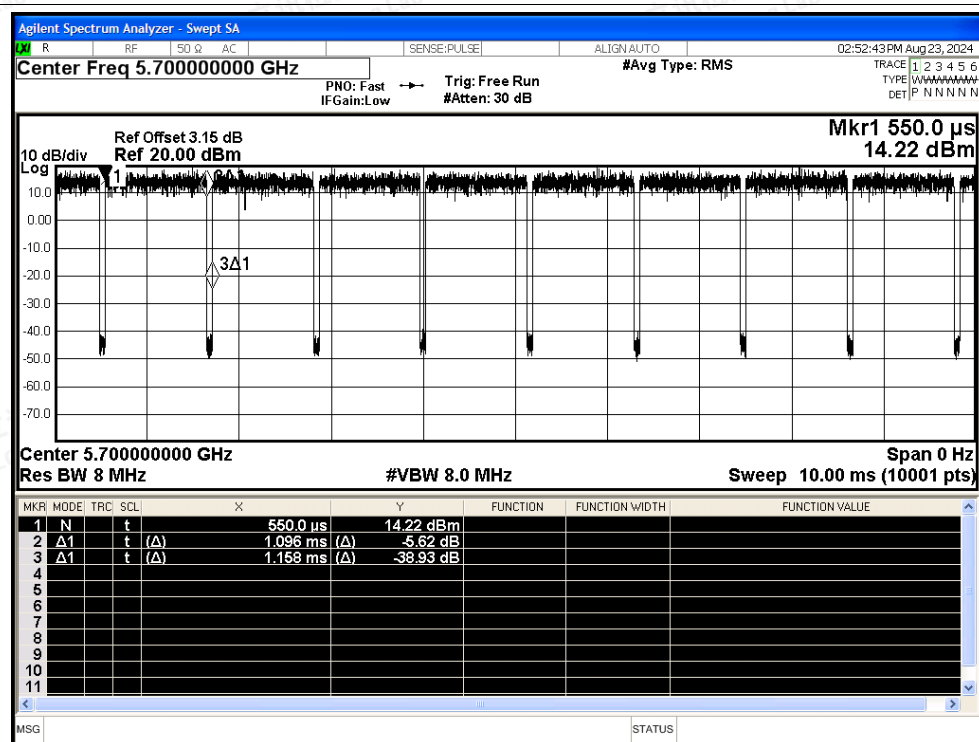
Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

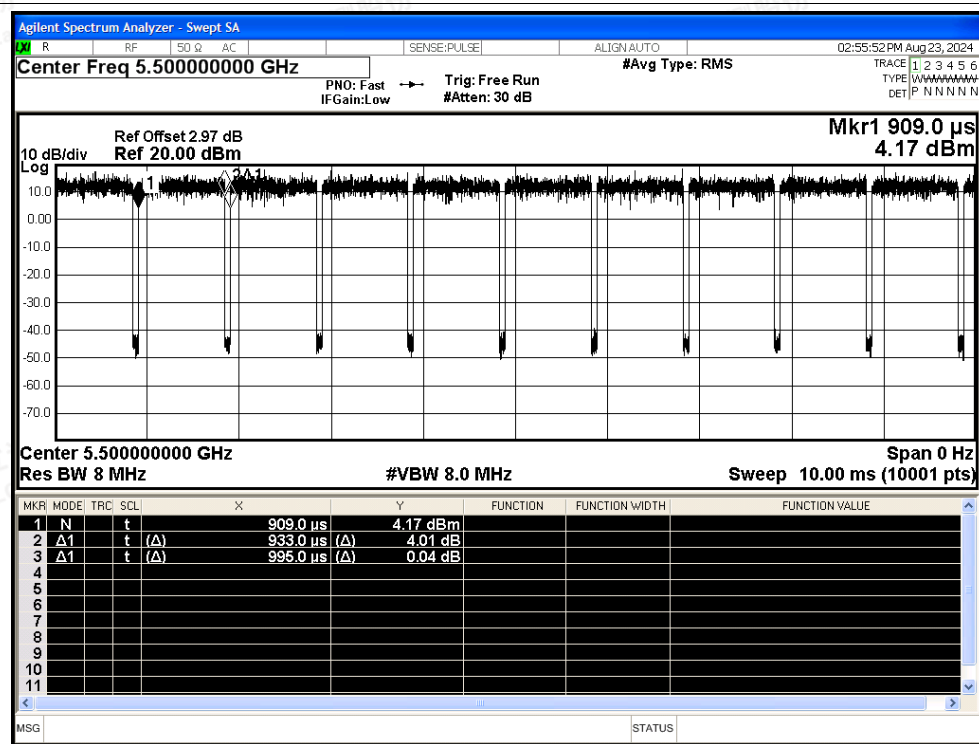
Scan code to check authenticity



## Duty Cycle NVNT a 5700MHz Ant1

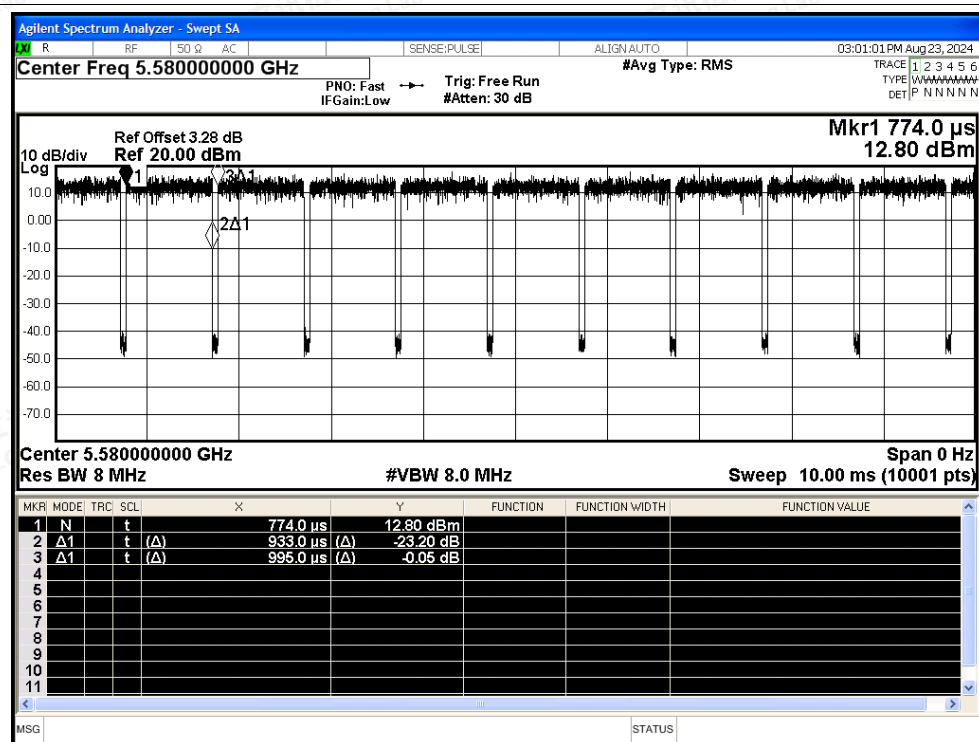


## Duty Cycle NVNT n20 5500MHz Ant1

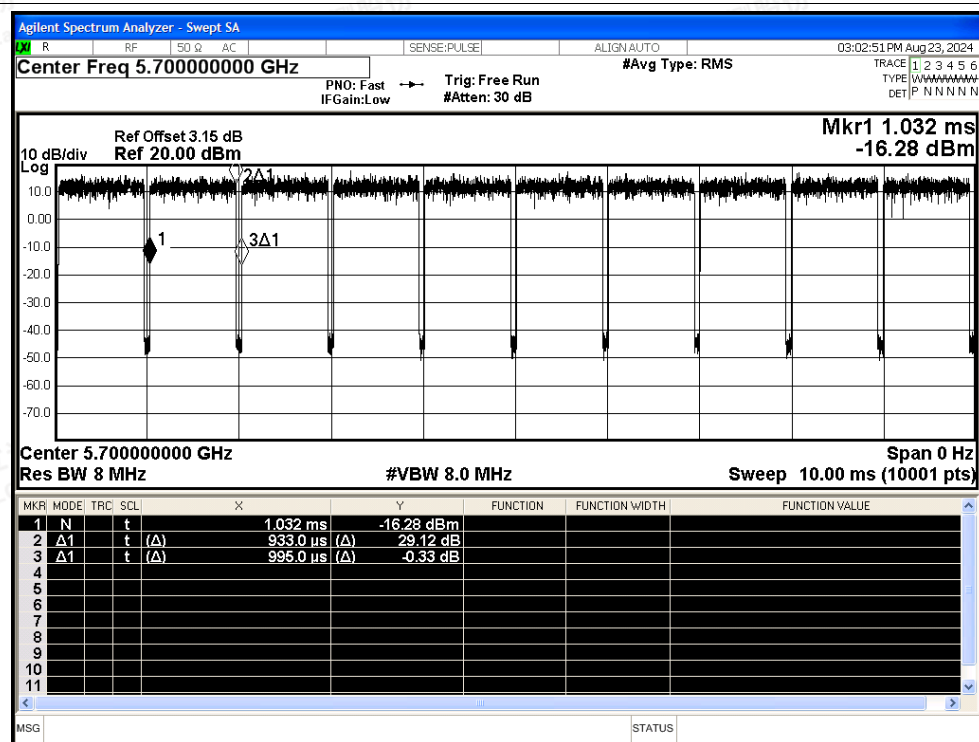




## Duty Cycle NVNT n20 5580MHz Ant1

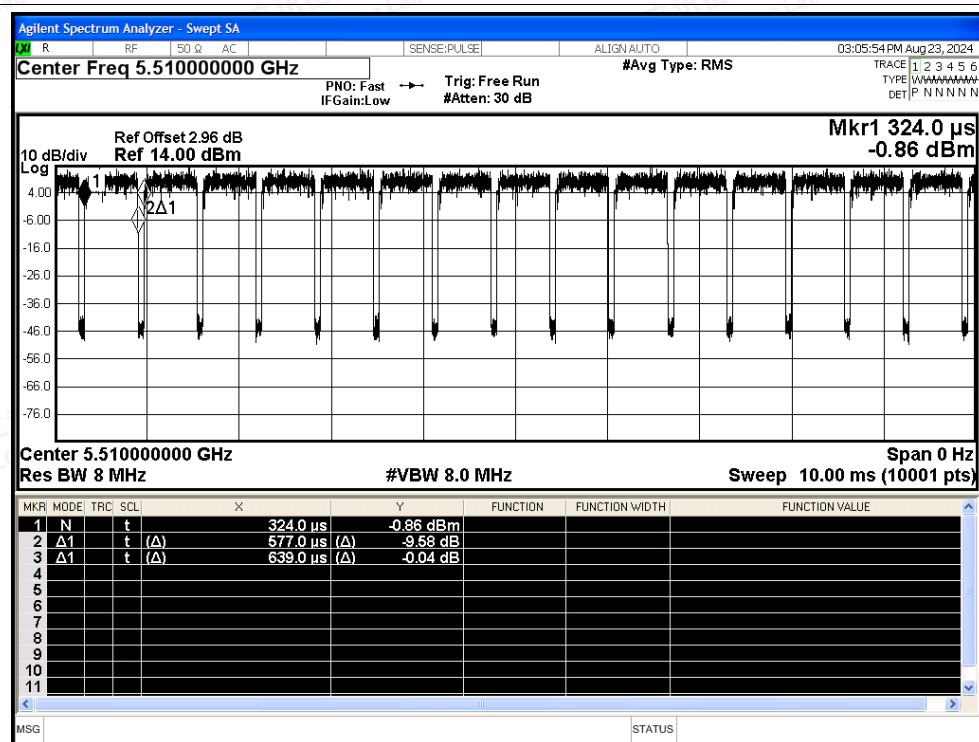


## Duty Cycle NVNT n20 5700MHz Ant1





## Duty Cycle NVNT n40 5510MHz Ant1



## Duty Cycle NVNT n40 5550MHz Ant1

