



Appendix C

RF Test Data for 5.2GWIFI (Conducted Measurement)

Product Name: Smart PTZ Camera

Test Model: CRB110

Environmental Conditions

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





C.1 -26dB Bandwidth

| Condition | Mode | Frequency (MHz) | Antenna | -26 dB Bandwidth (MHz) | Limit -26 dB Bandwidth (MHz) | Verdict |
|-----------|------|-----------------|---------|------------------------|------------------------------|---------|
| NVNT | a | 5180 | Ant1 | 22.878 | ≥ 0.5 | Pass |
| NVNT | a | 5200 | Ant1 | 22.243 | ≥ 0.5 | Pass |
| NVNT | a | 5240 | Ant1 | 21.984 | ≥ 0.5 | Pass |
| NVNT | n20 | 5180 | Ant1 | 25.346 | ≥ 0.5 | Pass |
| NVNT | n20 | 5200 | Ant1 | 26.364 | ≥ 0.5 | Pass |
| NVNT | n20 | 5240 | Ant1 | 26.139 | ≥ 0.5 | Pass |
| NVNT | n40 | 5190 | Ant1 | 45.484 | ≥ 0.5 | Pass |
| NVNT | n40 | 5230 | Ant1 | 40.243 | ≥ 0.5 | Pass |

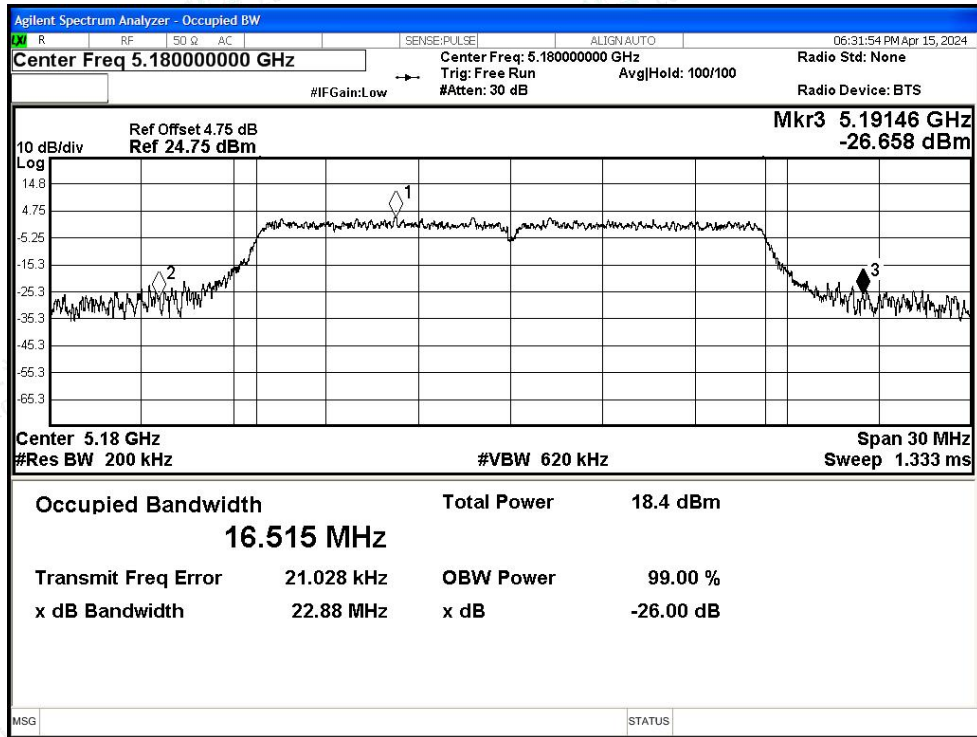


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

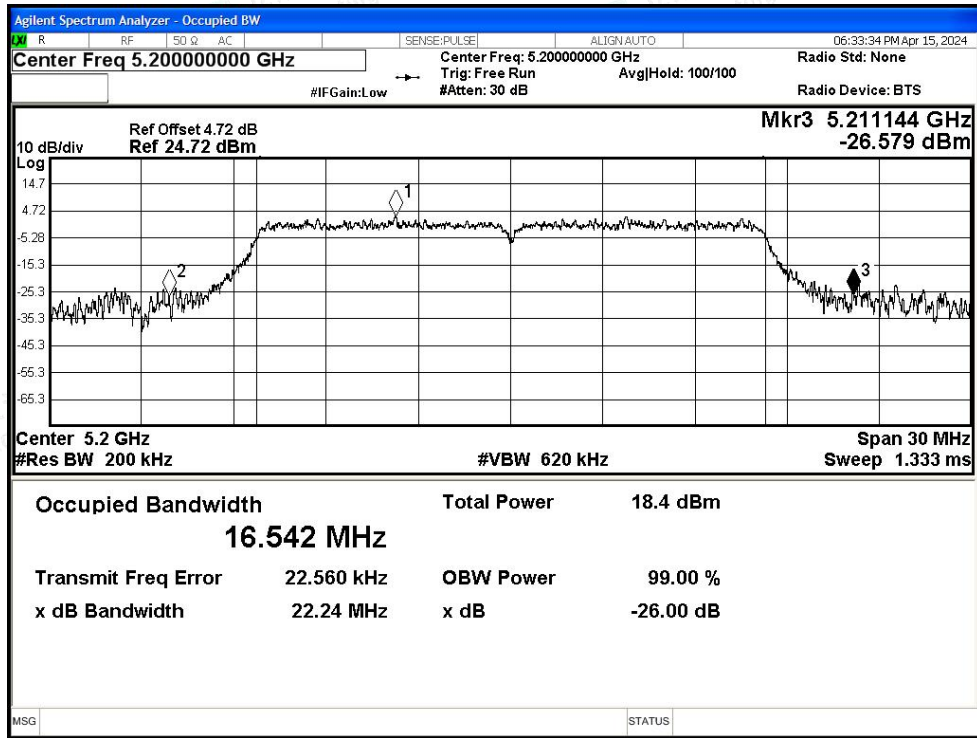


Test Graphs

-26dB Bandwidth NVNT a 5180MHz Ant1

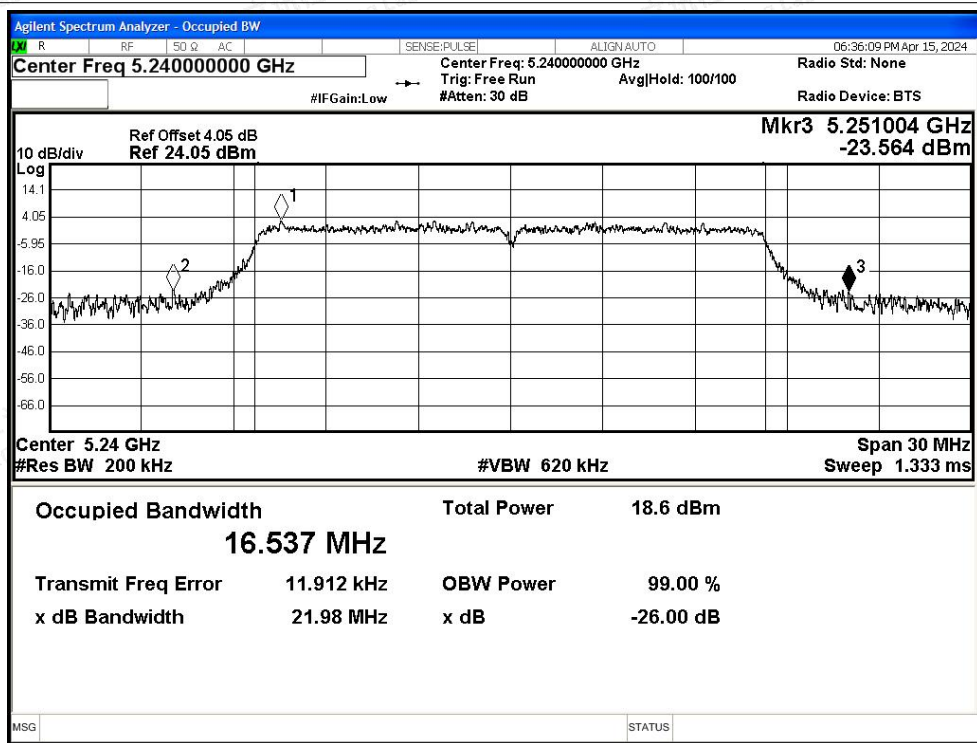


-26dB Bandwidth NVNT a 5200MHz Ant1

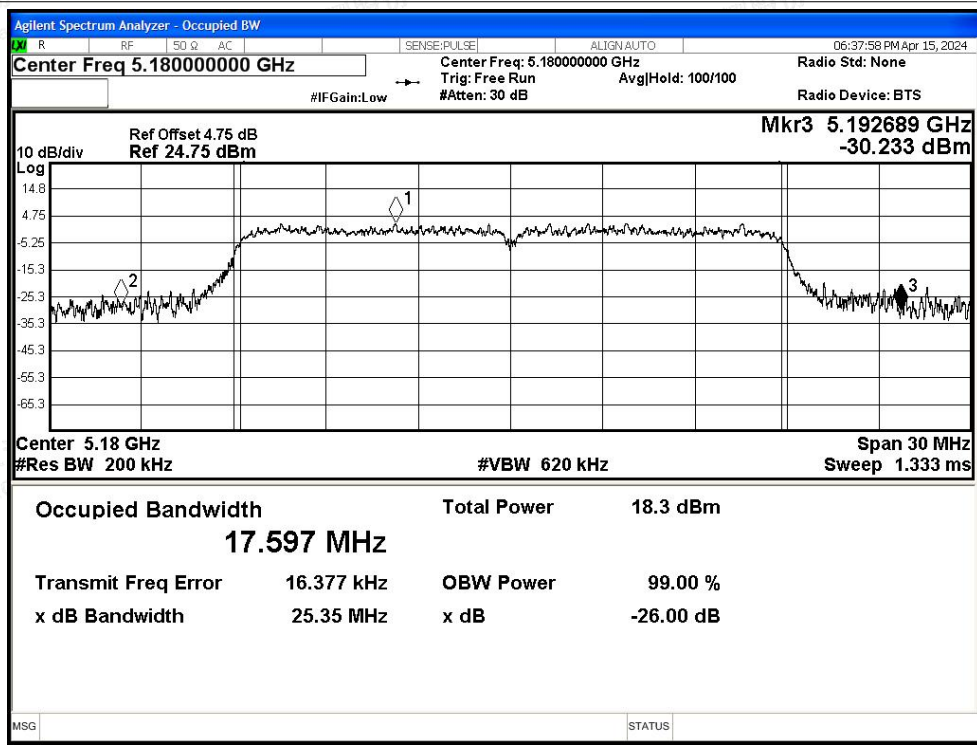




-26dB Bandwidth NVNT a 5240MHz Ant1

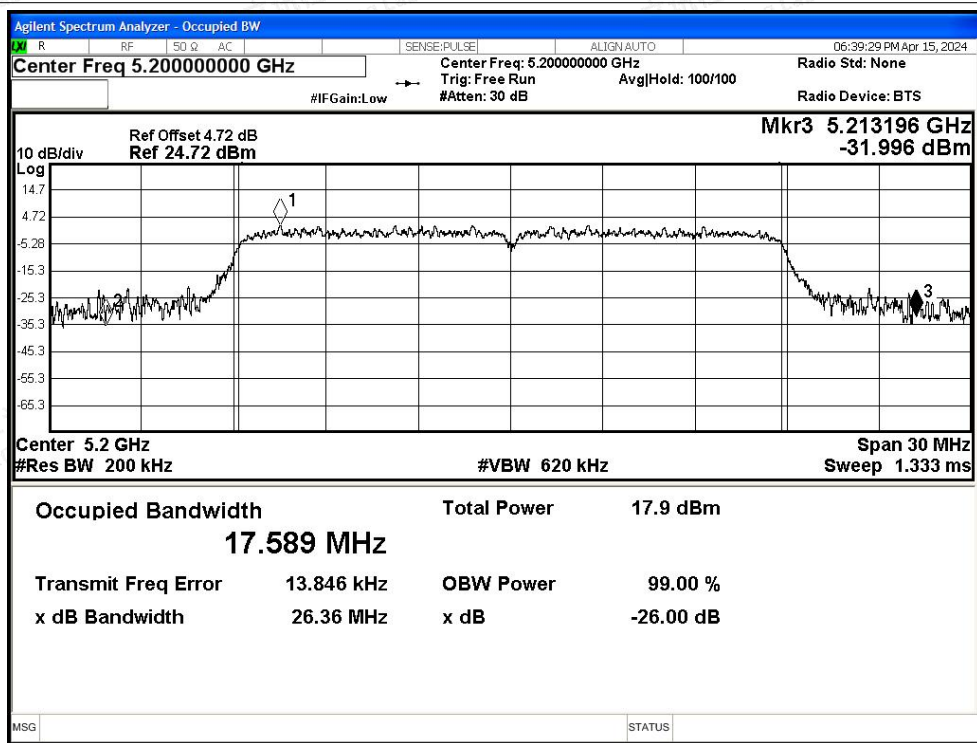


-26dB Bandwidth NVNT n20 5180MHz Ant1

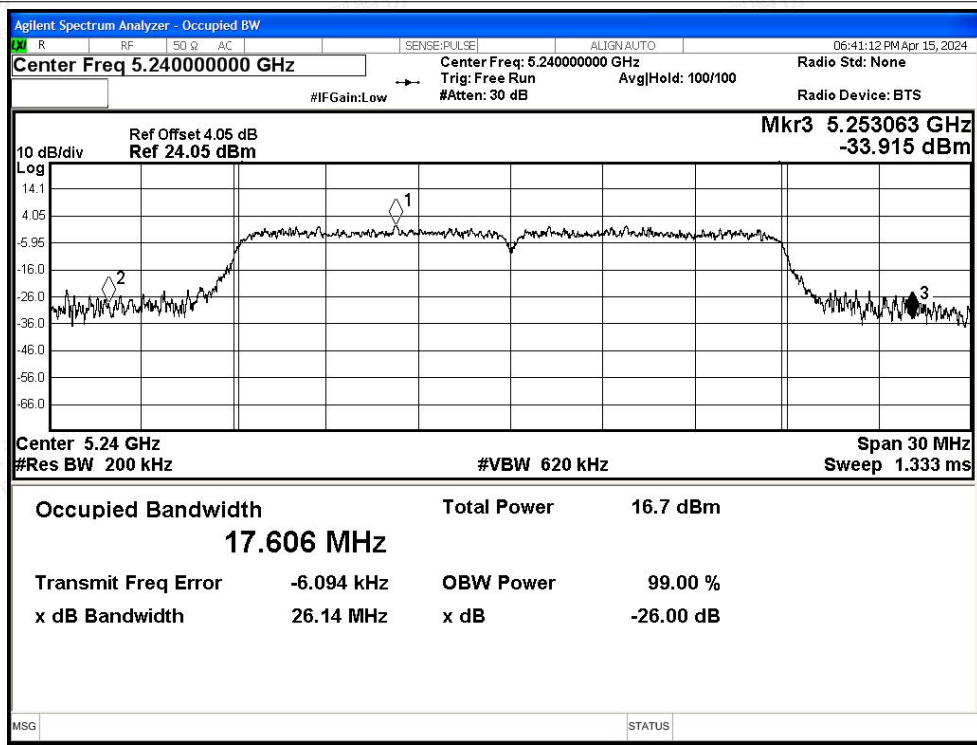




-26dB Bandwidth NVNT n20 5200MHz Ant1

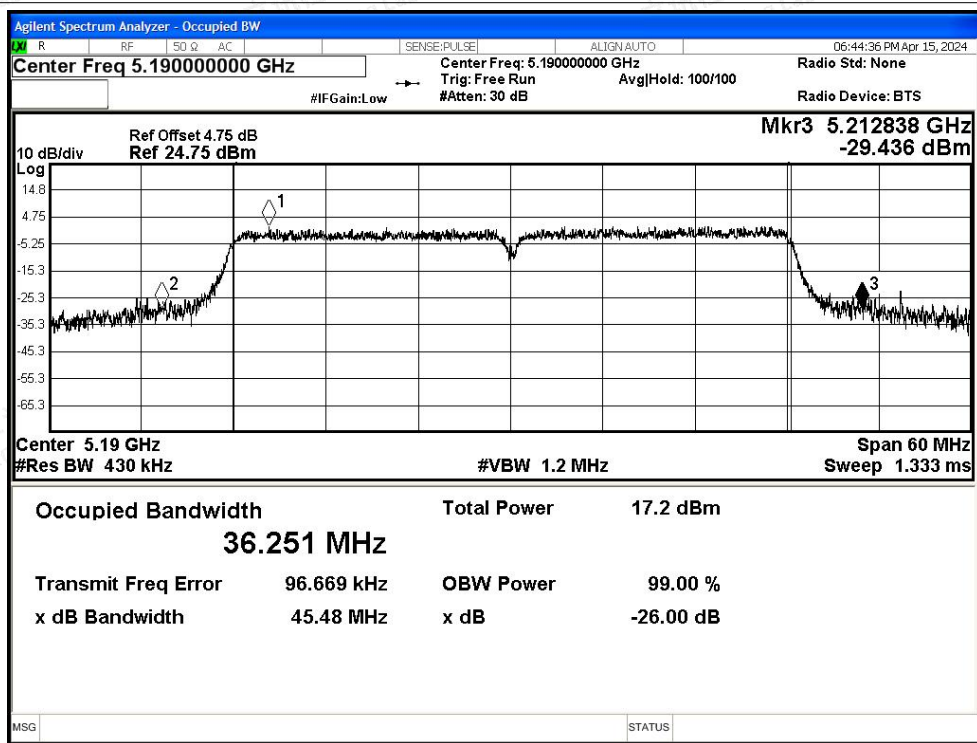


-26dB Bandwidth NVNT n20 5240MHz Ant1

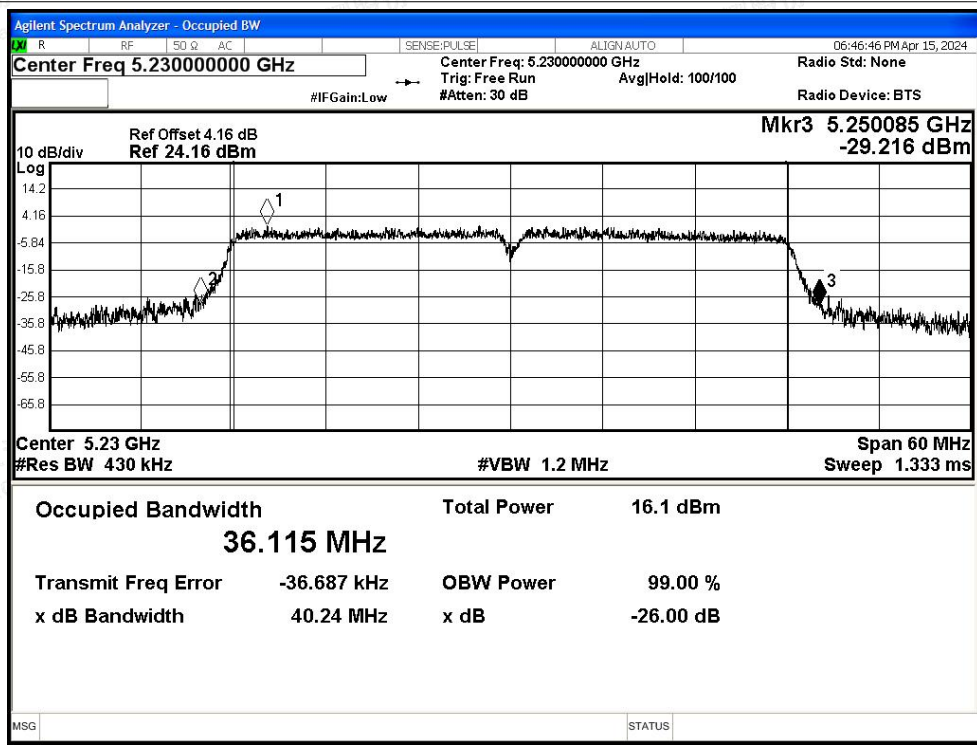




-26dB Bandwidth NVNT n40 5190MHz Ant1



-26dB Bandwidth NVNT n40 5230MHz Ant1





C.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 | 12.79 | 0.24 | 13.03 | 24 | Pass |
| NVNT | a | 5200 | Ant1 | 12.29 | 0.24 | 12.53 | 24 | Pass |
| NVNT | a | 5240 | Ant1 | 12.38 | 0.24 | 12.62 | 24 | Pass |
| NVNT | n20 | 5180 | Ant1 | 11.88 | 0.28 | 12.16 | 24 | Pass |
| NVNT | n20 | 5200 | Ant1 | 11.87 | 0.28 | 12.15 | 24 | Pass |
| NVNT | n20 | 5240 | Ant1 | 11.01 | 0.28 | 11.29 | 24 | Pass |
| NVNT | n40 | 5190 | Ant1 | 10.42 | 0.33 | 10.75 | 24 | Pass |
| NVNT | n40 | 5230 | Ant1 | 10.13 | 0.33 | 10.46 | 24 | Pass |





C.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 | 5180 | Ant1 | 2 | 0.24 | 2.24 | 11 | Pass |
| NVNT | a | 5200 | Ant1 | 2.09 | 0.24 | 2.33 | 11 | Pass |
| NVNT | a | 5240 | Ant1 | 2.27 | 0.24 | 2.51 | 11 | Pass |
| NVNT | n20 | 5180 | Ant1 | 1.8 | 0.28 | 2.08 | 11 | Pass |
| NVNT | n20 | 5200 | Ant1 | 1.29 | 0.28 | 1.57 | 11 | Pass |
| NVNT | n20 | 5240 | Ant1 | 0.22 | 0.28 | 0.5 | 11 | Pass |
| NVNT | n40 | 5190 | Ant1 | -2.19 | 0.33 | -1.86 | 11 | Pass |
| NVNT | n40 | 5230 | Ant1 | -3.63 | 0.33 | -3.3 | 11 | Pass |

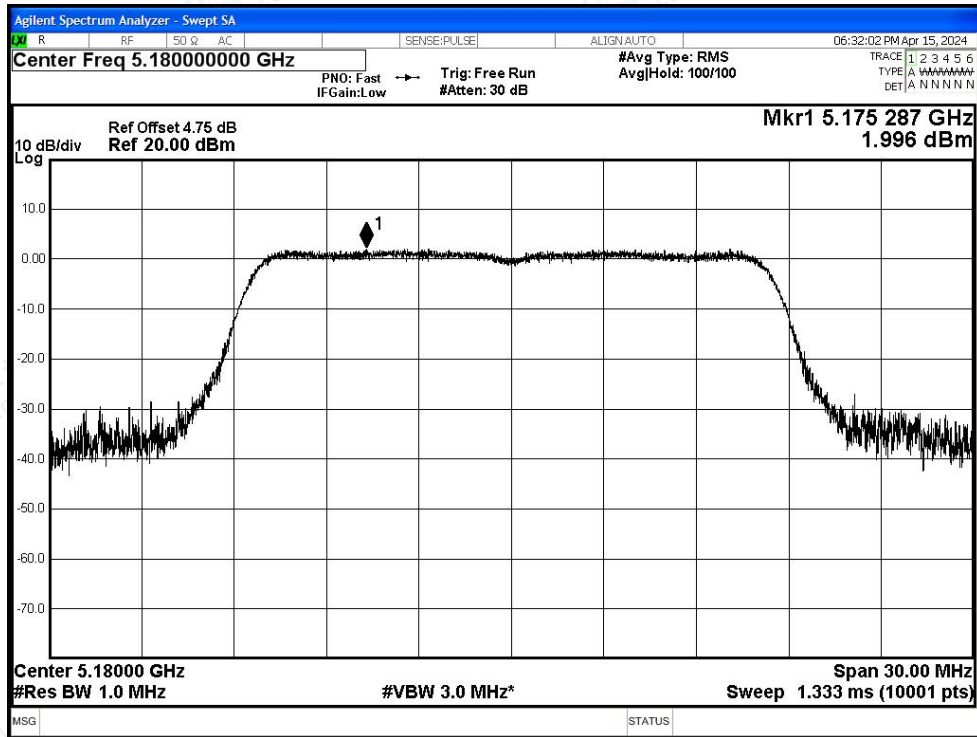


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

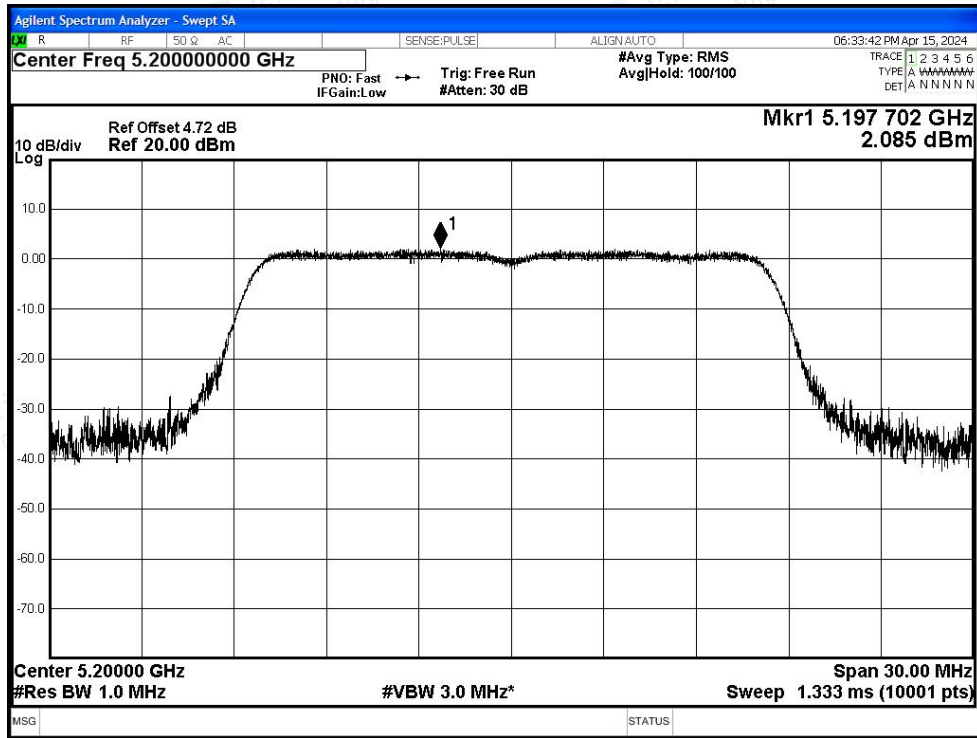


Test Graphs

PSD NVNT a 5180MHz Ant1

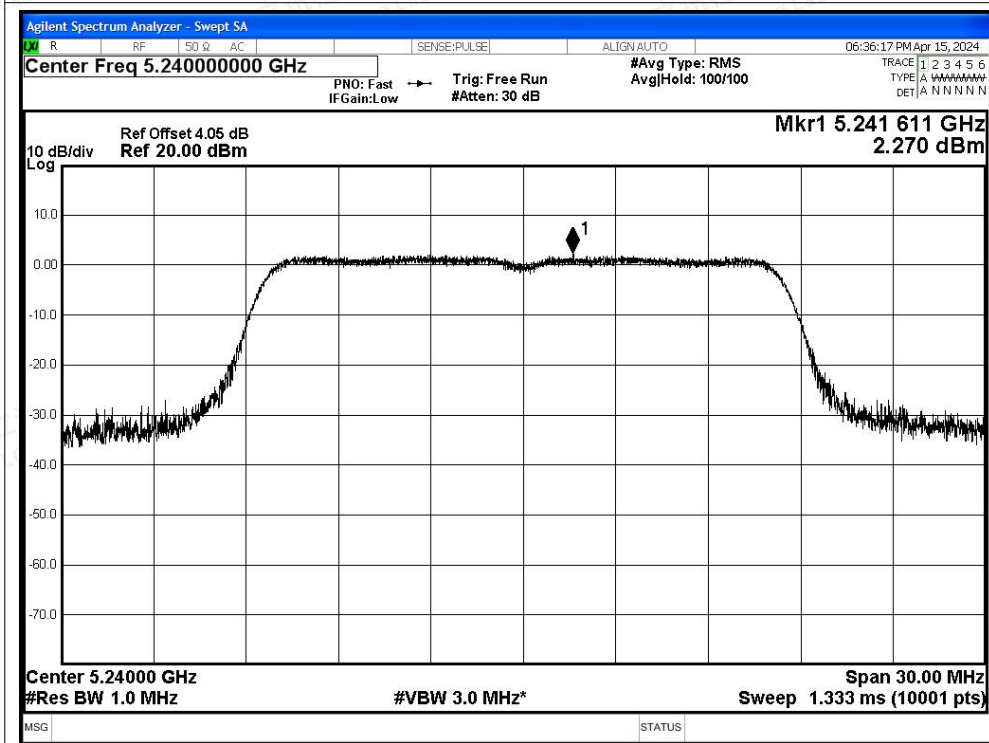


PSD NVNT a 5200MHz Ant1

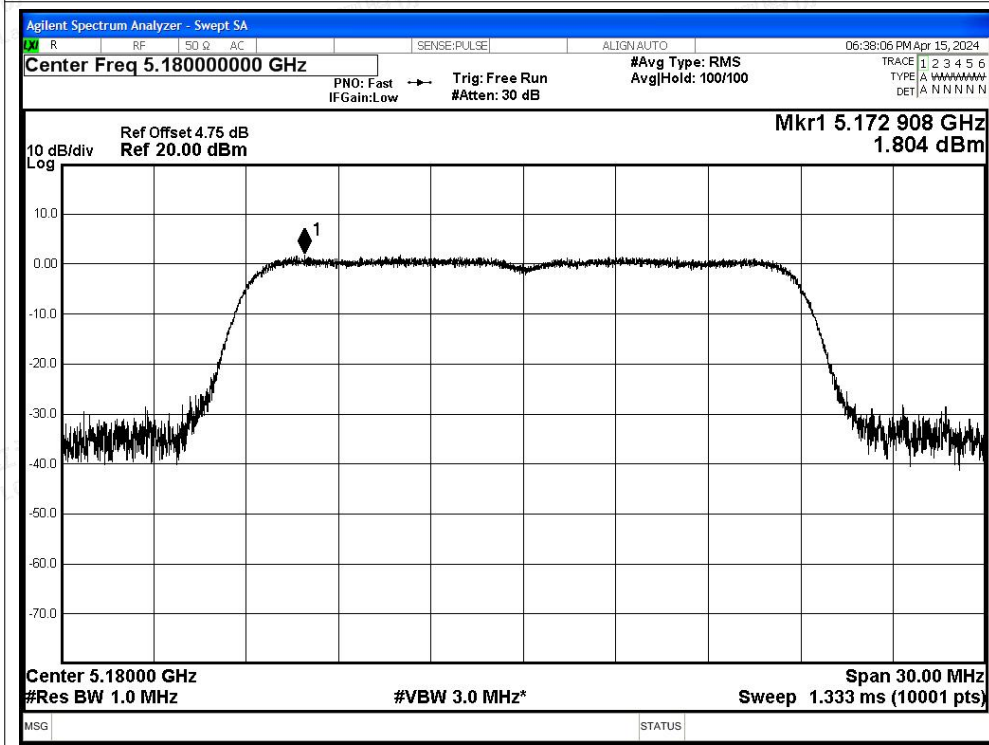


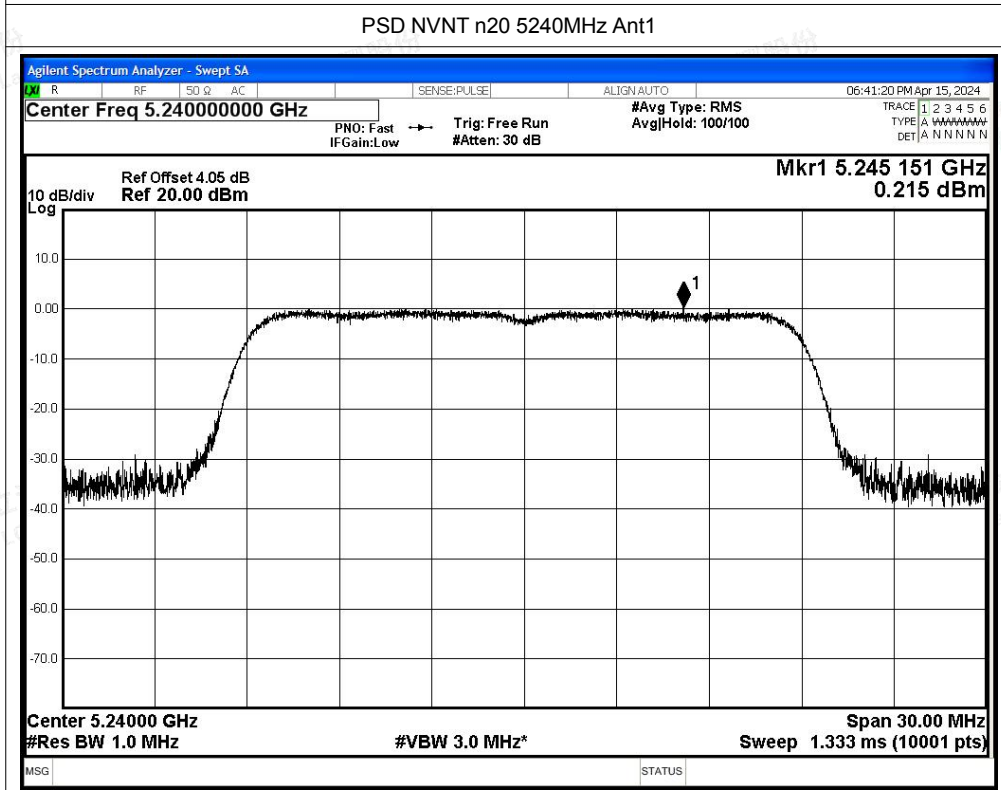
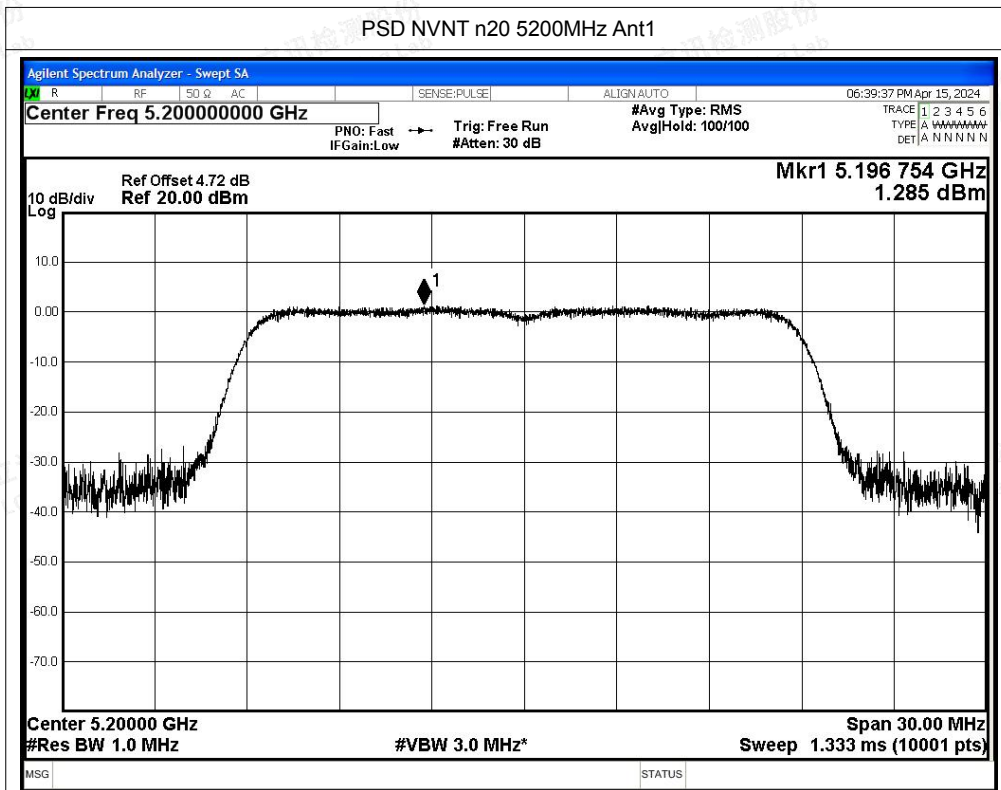


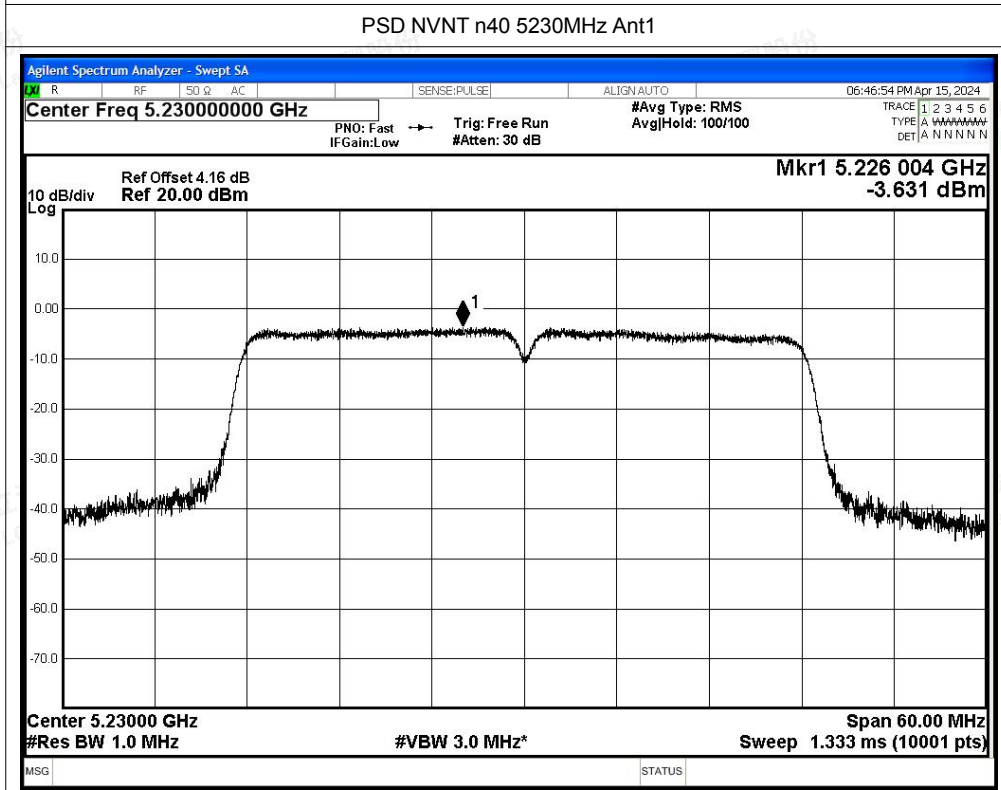
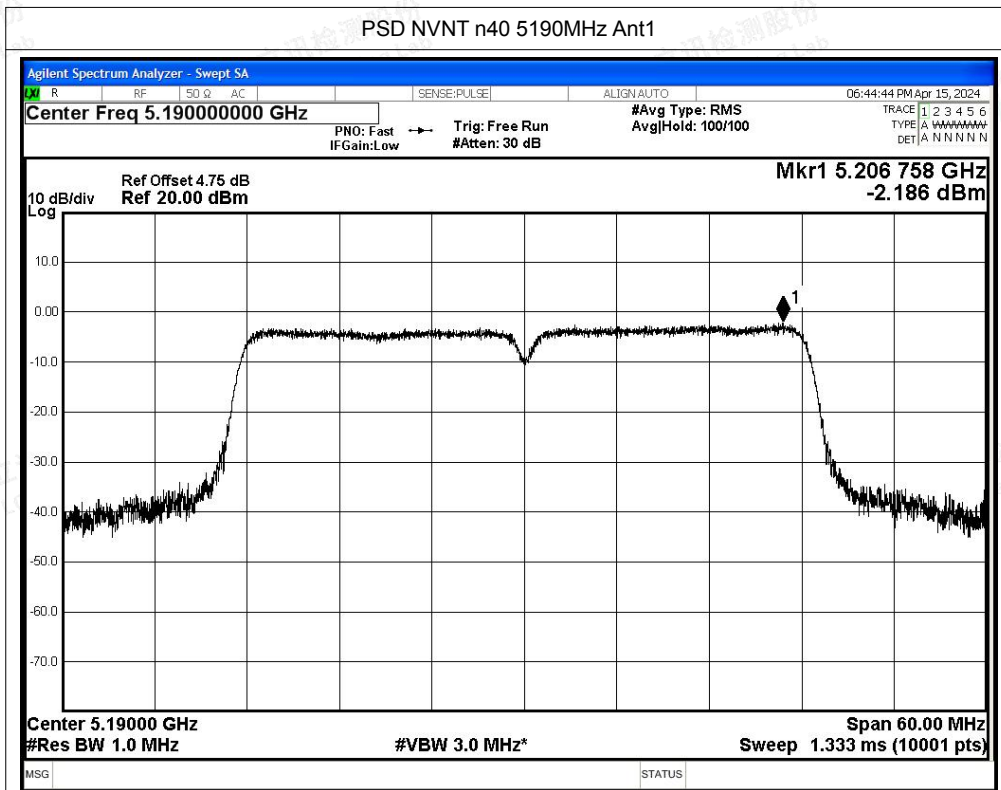
PSD NVNT a 5240MHz Ant1



PSD NVNT n20 5180MHz Ant1









C.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 | -48.53 | 3.13 | - | 49.83 | Peak | 68.2 | Pass |
| NVNT | a | 5180 | Ant1 | 4500 | -57.22 | 3.13 | 0.24 | 41.38 | Average | 54 | Pass |
| NVNT | a | 5180 | Ant1 | 5149.6 | -35.37 | 3.13 | - | 62.99 | Peak | 68.2 | Pass |
| NVNT | a | 5180 | Ant1 | 5149.6 | -48.96 | 3.13 | 0.24 | 49.64 | Average | 54 | Pass |
| NVNT | a | 5180 | Ant1 | 5150 | -38.96 | 3.13 | - | 59.4 | Peak | 68.2 | Pass |
| NVNT | a | 5180 | Ant1 | 5150 | -49.83 | 3.13 | 0.24 | 48.77 | Average | 54 | Pass |
| NVNT | a | 5240 | Ant1 | 5350 | -47.77 | 3.13 | - | 50.59 | Peak | 68.2 | Pass |
| NVNT | a | 5240 | Ant1 | 5350 | -55.81 | 3.13 | 0.24 | 42.79 | Average | 54 | Pass |
| NVNT | a | 5240 | Ant1 | 5367.6 | -46.61 | 3.13 | - | 51.75 | Peak | 68.2 | Pass |
| NVNT | a | 5240 | Ant1 | 5351.04 | -54.96 | 3.13 | 0.24 | 43.64 | Average | 54 | Pass |
| NVNT | a | 5240 | Ant1 | 5460 | -49.17 | 3.13 | - | 49.19 | Peak | 68.2 | Pass |
| NVNT | a | 5240 | Ant1 | 5460 | -57.26 | 3.13 | 0.24 | 41.34 | Average | 54 | Pass |
| NVNT | n20 | 5180 | Ant1 | 4500 | -47.79 | 3.13 | - | 50.57 | Peak | 68.2 | Pass |
| NVNT | n20 | 5180 | Ant1 | 4500 | -57.3 | 3.13 | 0.28 | 41.34 | Average | 54 | Pass |
| NVNT | n20 | 5180 | Ant1 | 5148.9 | -37.09 | 3.13 | - | 61.27 | Peak | 68.2 | Pass |
| NVNT | n20 | 5180 | Ant1 | 5149.6 | -48.86 | 3.13 | 0.28 | 49.78 | Average | 54 | Pass |
| NVNT | n20 | 5180 | Ant1 | 5150 | -38.74 | 3.13 | - | 59.62 | Peak | 68.2 | Pass |
| NVNT | n20 | 5180 | Ant1 | 5150 | -48.37 | 3.13 | 0.28 | 50.27 | Average | 54 | Pass |
| NVNT | n20 | 5240 | Ant1 | 5350 | -47.41 | 3.13 | - | 50.95 | Peak | 68.2 | Pass |
| NVNT | n20 | 5240 | Ant1 | 5350 | -56 | 3.13 | 0.28 | 42.64 | Average | 54 | Pass |
| NVNT | n20 | 5240 | Ant1 | 5375.52 | -45.75 | 3.13 | - | 52.61 | Peak | 68.2 | Pass |
| NVNT | n20 | 5240 | Ant1 | 5351.76 | -54.99 | 3.13 | 0.28 | 43.65 | Average | 54 | Pass |
| NVNT | n20 | 5240 | Ant1 | 5460 | -49.18 | 3.13 | - | 49.18 | Peak | 68.2 | Pass |
| NVNT | n20 | 5240 | Ant1 | 5460 | -56.93 | 3.13 | 0.28 | 41.71 | Average | 54 | Pass |
| NVNT | n40 | 5190 | Ant1 | 4500 | -49.04 | 3.13 | - | 49.32 | Peak | 68.2 | Pass |
| NVNT | n40 | 5190 | Ant1 | 4500 | -57.89 | 3.13 | 0.33 | 40.8 | Average | 54 | Pass |
| NVNT | n40 | 5190 | Ant1 | 5149.7 | -37.11 | 3.13 | - | 61.25 | Peak | 68.2 | Pass |
| NVNT | n40 | 5190 | Ant1 | 5148.97 | -49.06 | 3.13 | 0.33 | 49.63 | Average | 54 | Pass |
| NVNT | n40 | 5190 | Ant1 | 5150 | -37.11 | 3.13 | - | 61.25 | Peak | 68.2 | Pass |
| NVNT | n40 | 5190 | Ant1 | 5150 | -49.1 | 3.13 | 0.33 | 49.59 | Average | 54 | Pass |
| NVNT | n40 | 5230 | Ant1 | 5350 | -47.67 | 3.13 | - | 50.69 | Peak | 68.2 | Pass |
| NVNT | n40 | 5230 | Ant1 | 5350 | -56.38 | 3.13 | 0.33 | 42.31 | Average | 54 | Pass |
| NVNT | n40 | 5230 | Ant1 | 5452.44 | -45.5 | 3.13 | - | 52.86 | Peak | 68.2 | Pass |
| NVNT | n40 | 5230 | Ant1 | 5452.98 | -56.29 | 3.13 | 0.33 | 42.4 | Average | 54 | Pass |
| NVNT | n40 | 5230 | Ant1 | 5460 | -47.93 | 3.13 | - | 50.43 | Peak | 68.2 | Pass |
| NVNT | n40 | 5230 | Ant1 | 5460 | -56.95 | 3.13 | 0.33 | 41.74 | Average | 54 | Pass |

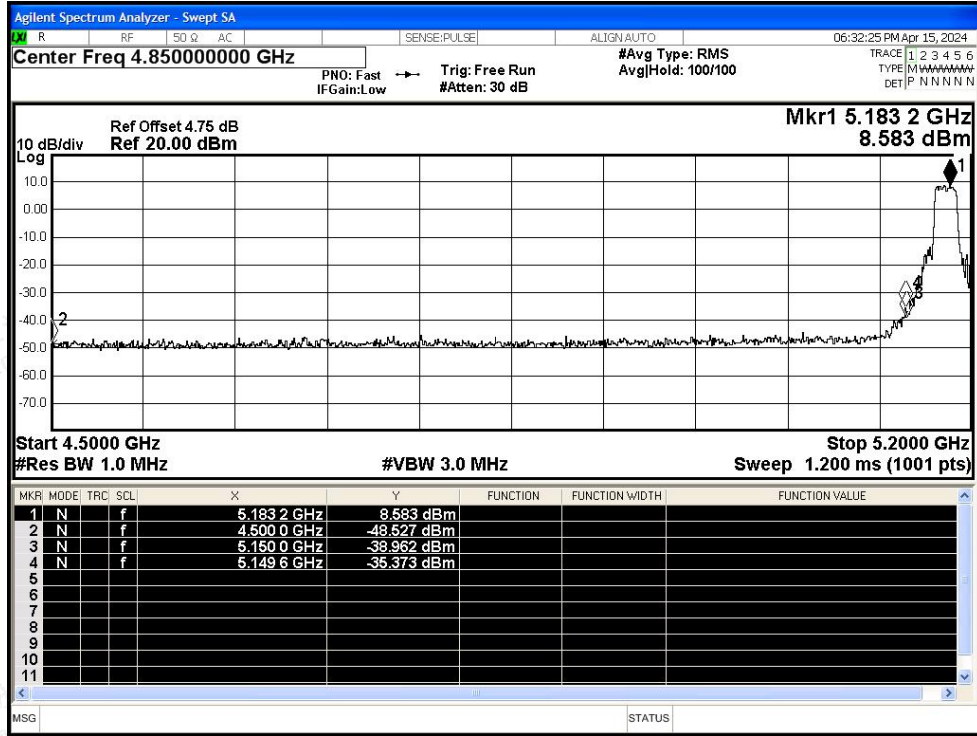


Shenzhen LCS Compliance Testing Laboratory Ltd.
 Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
 Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
 Scan code to check authenticity

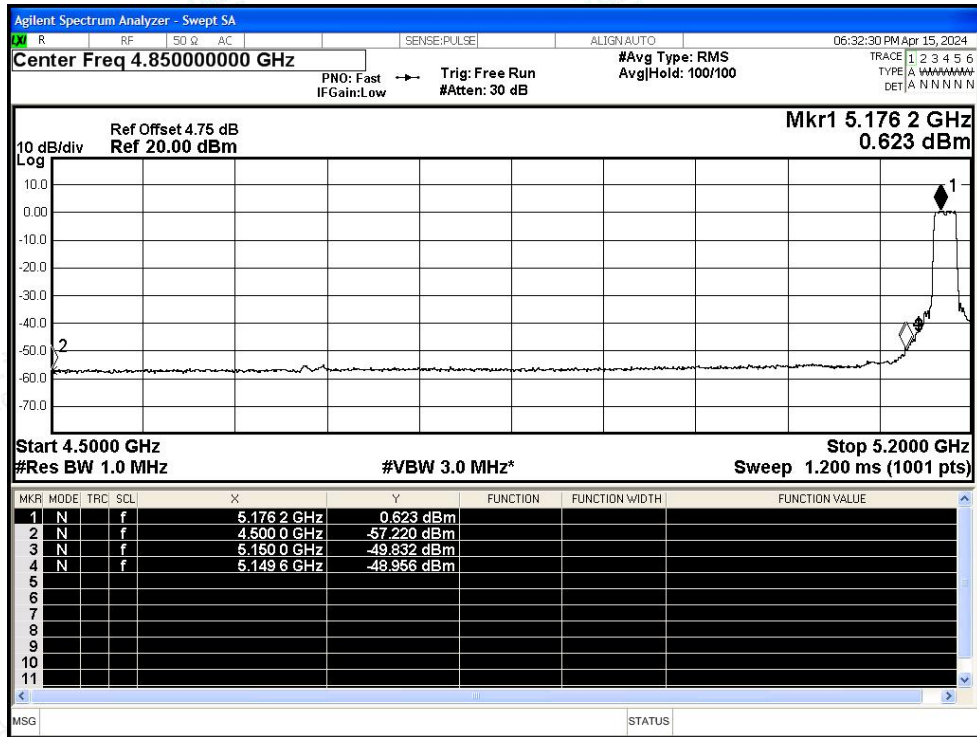


Test Graphs

Restrict Band NVNT a 5180MHz Ant1 Peak

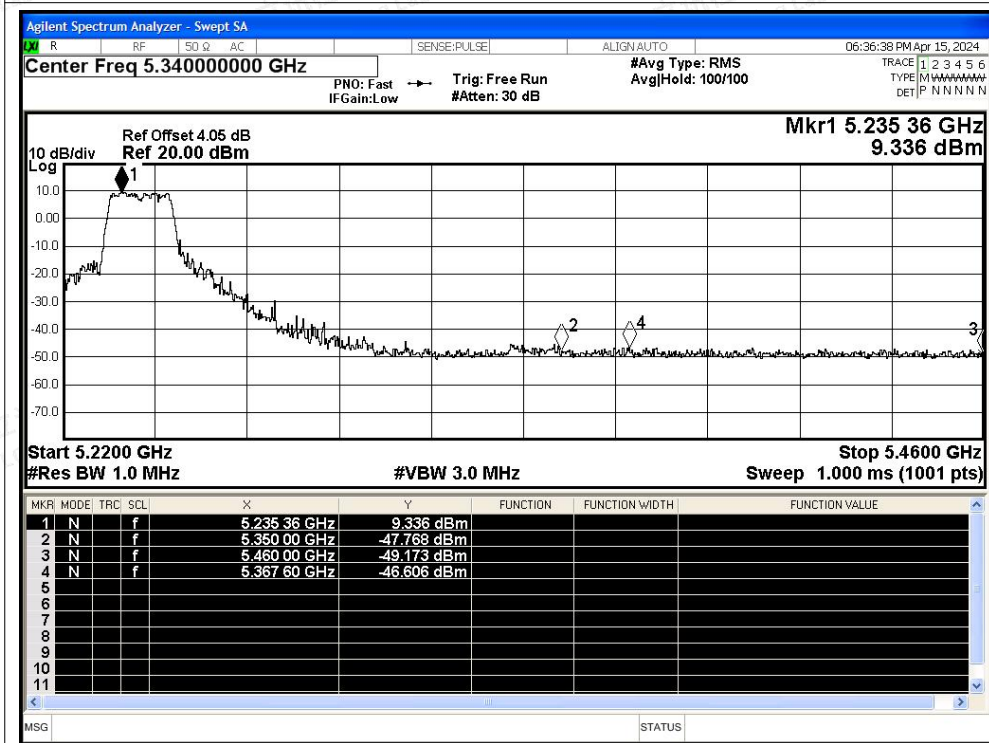


Restrict Band NVNT a 5180MHz Ant1 Average

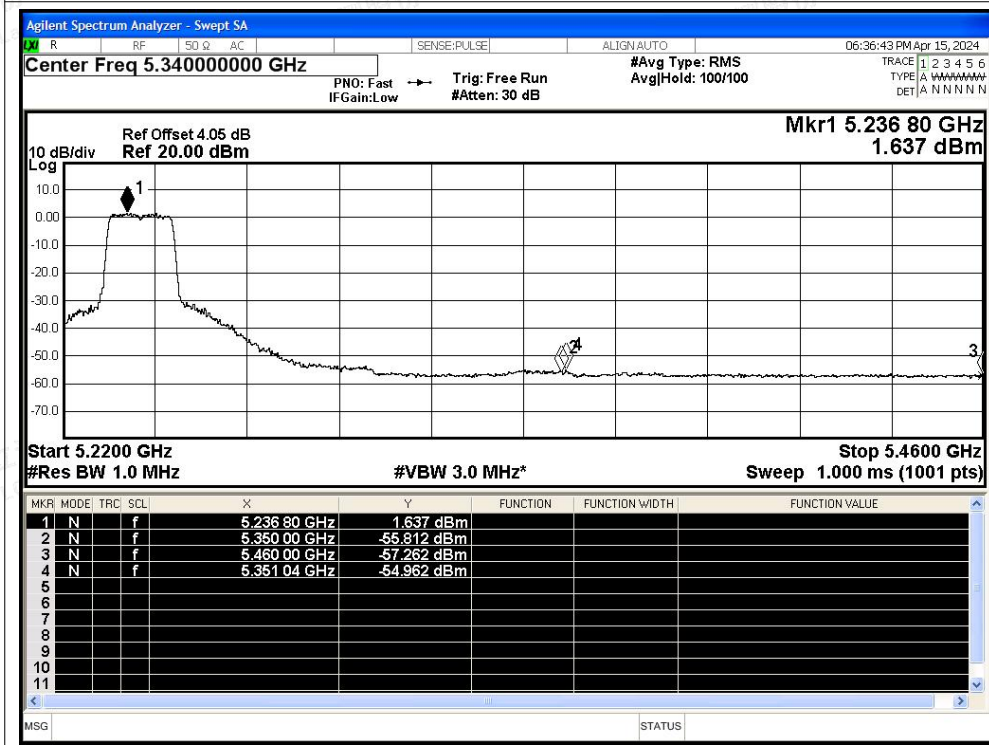




Restrict Band NVNT a 5240MHz Ant1 Peak

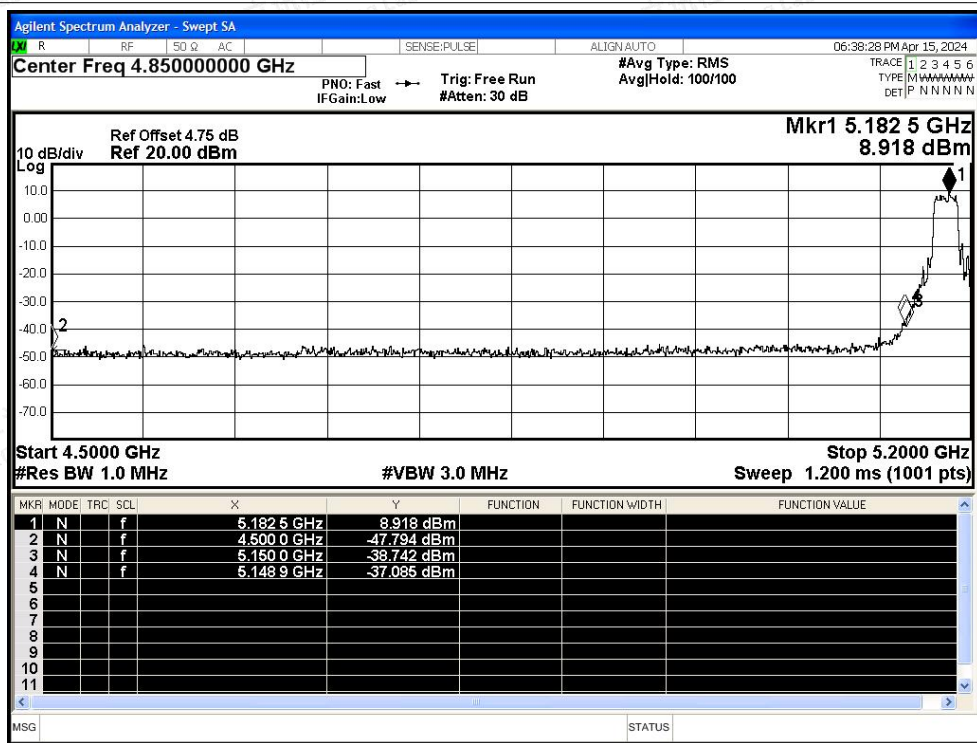


Restrict Band NVNT a 5240MHz Ant1 Average

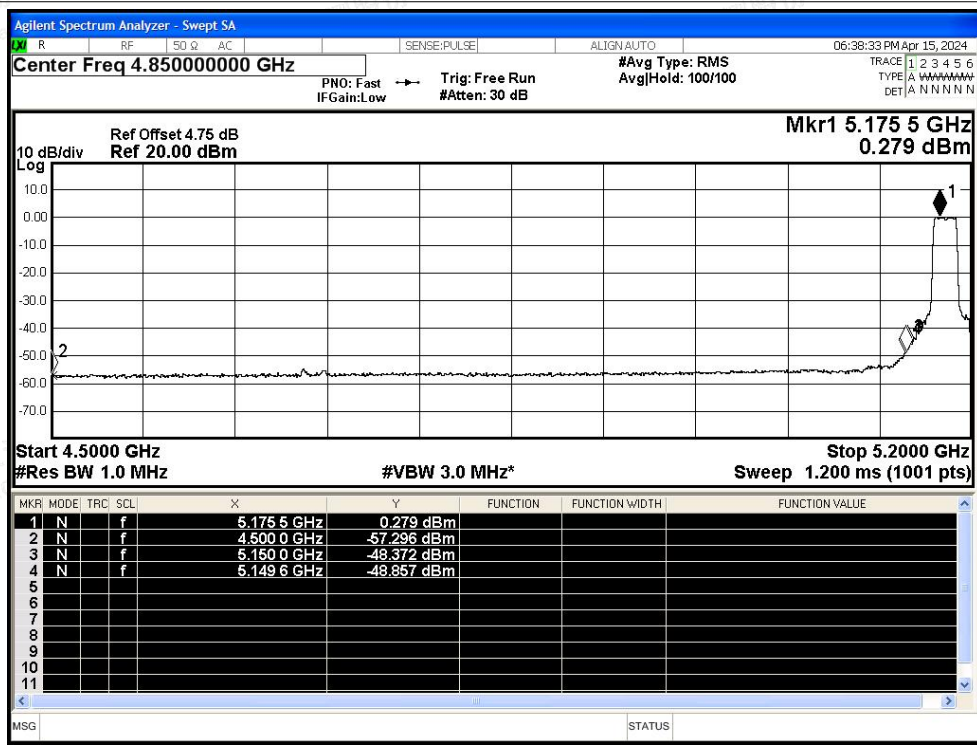




Restrict Band NVNT n20 5180MHz Ant1 Peak

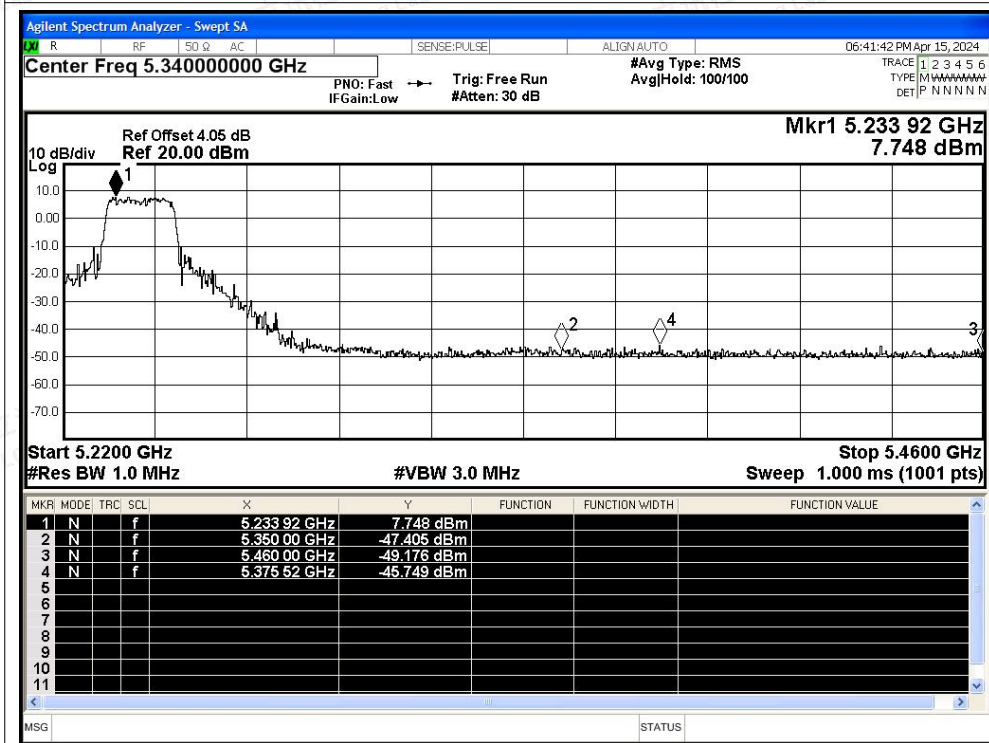


Restrict Band NVNT n20 5180MHz Ant1 Average

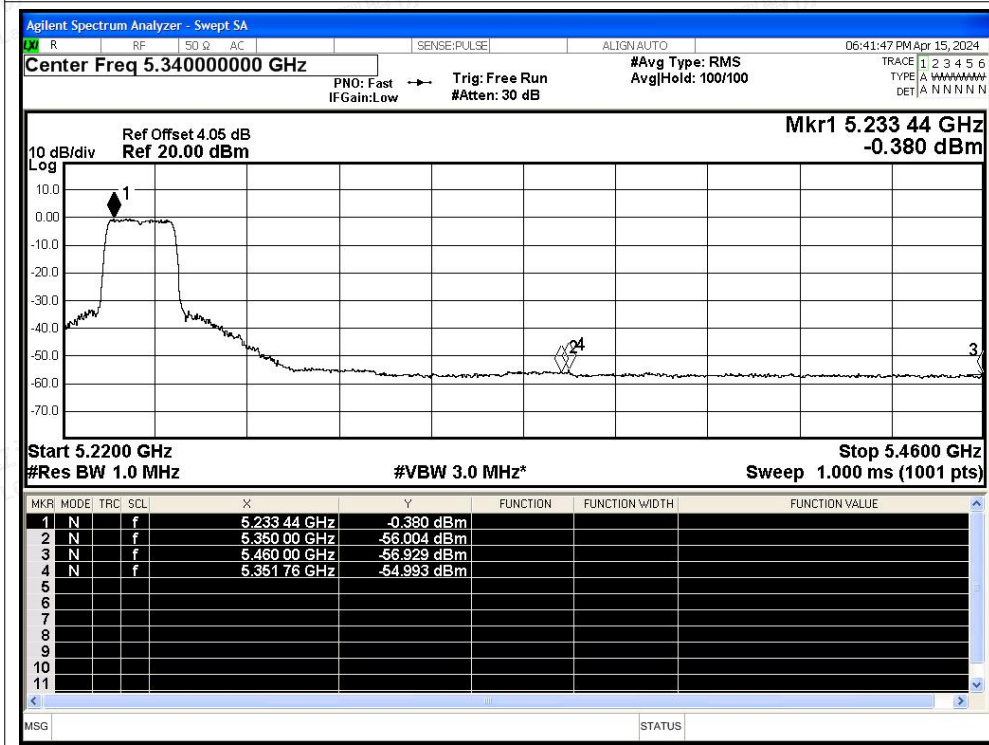




Restrict Band NVNT n20 5240MHz Ant1 Peak

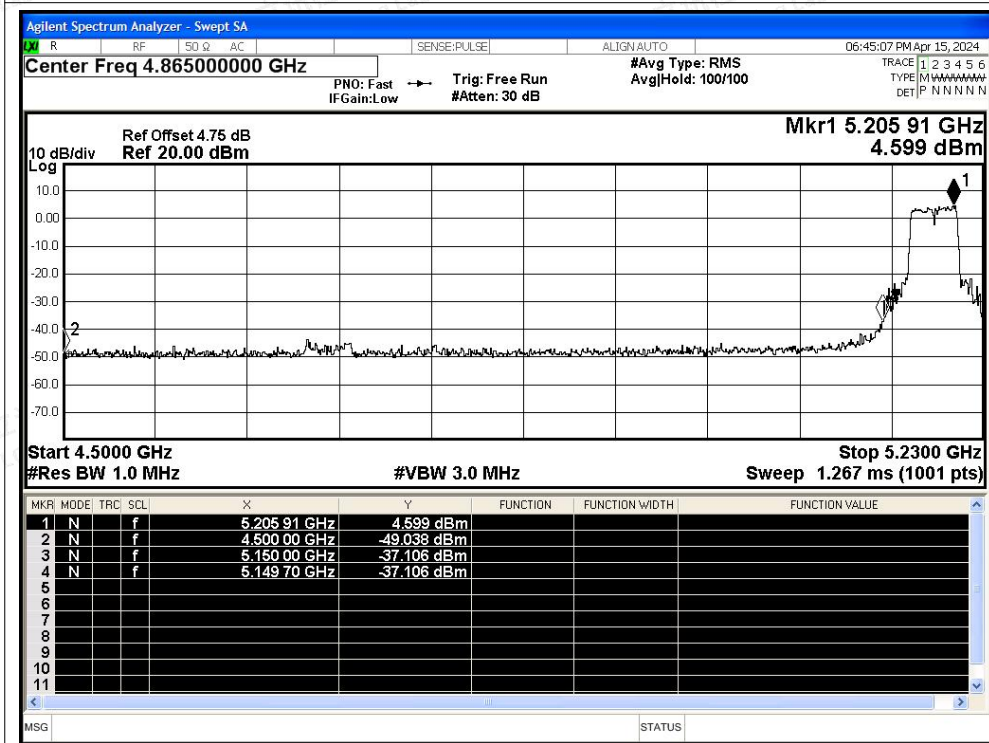


Restrict Band NVNT n20 5240MHz Ant1 Average

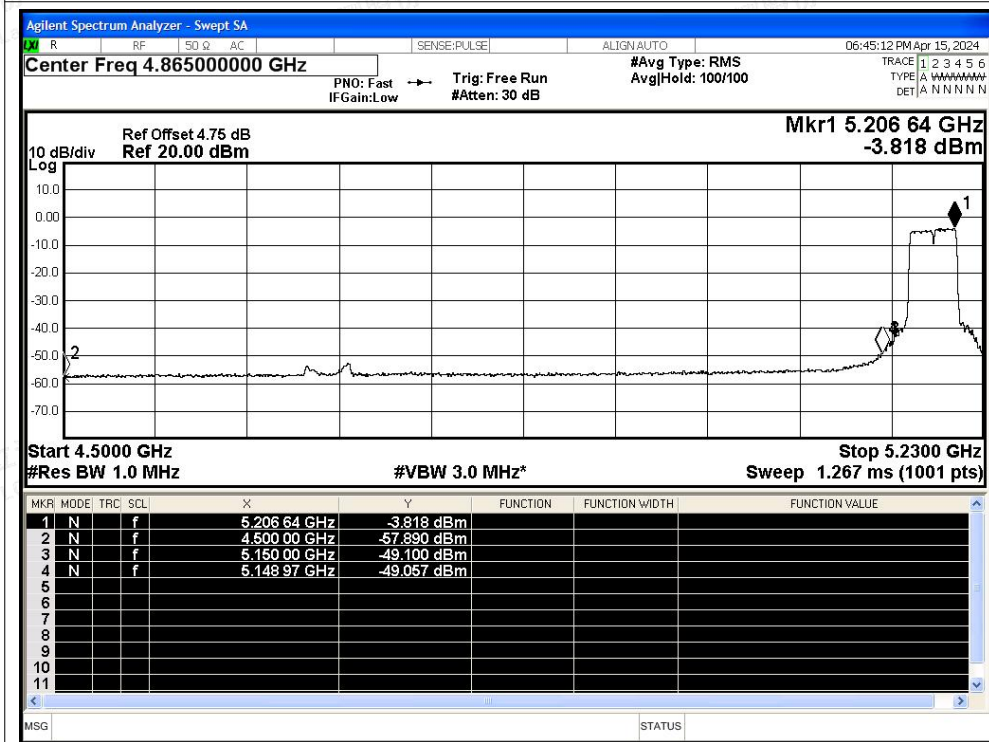




Restrict Band NVNT n40 5190MHz Ant1 Peak

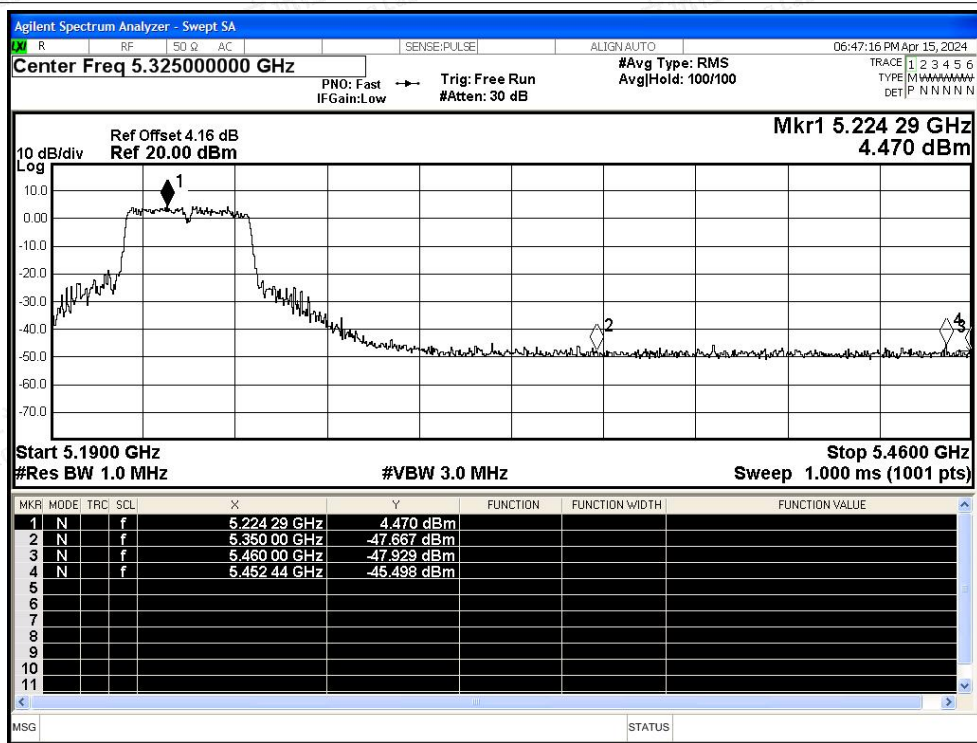


Restrict Band NVNT n40 5190MHz Ant1 Average

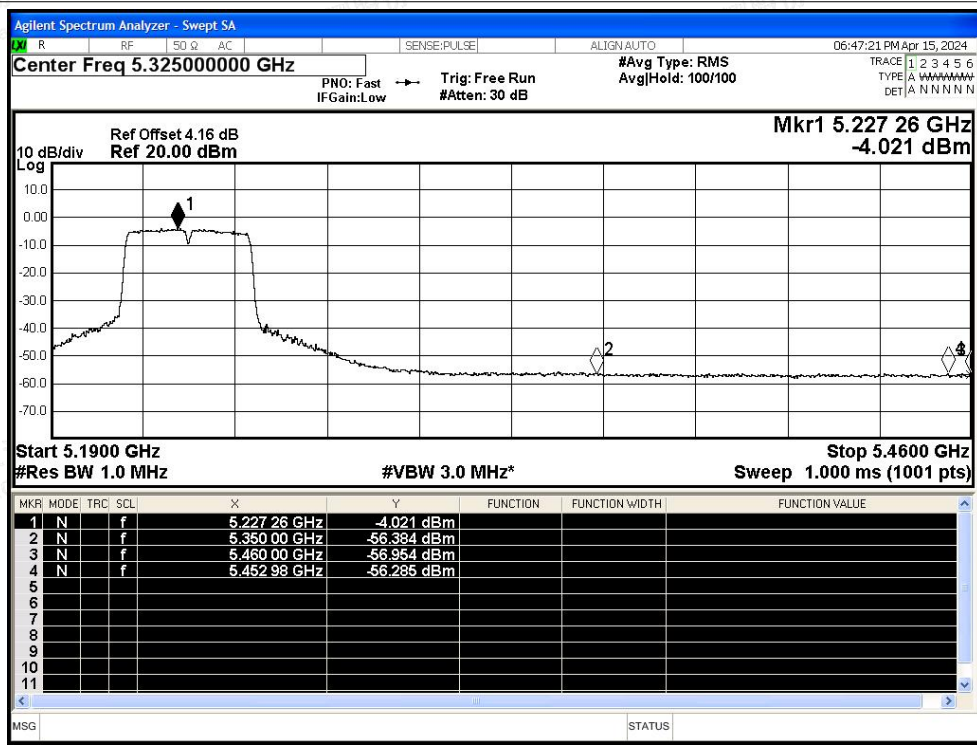




Restrict Band NVNT n40 5230MHz Ant1 Peak



Restrict Band NVNT n40 5230MHz Ant1 Average





C.5 Frequency Stability

| Condition | Mode | Frequency (MHz) | Antenna | Measured Frequency (MHz) | Frequency Error (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
|-----------|------|-----------------|---------|--------------------------|----------------------|-----------------|-------------|---------|
| NVNT | n20 | 5180 | Ant1 | 5180.02 | 20000 | 3.86 | 25 | Pass |
| NVNT | n20 | 5200 | Ant1 | 5199.98 | -20000 | -3.85 | 25 | Pass |
| NVNT | n20 | 5240 | Ant1 | 5240.02 | 20000 | 3.82 | 25 | Pass |
| NVNT | n40 | 5190 | Ant1 | 5190 | 0 | 0 | 25 | Pass |
| NVNT | n40 | 5230 | Ant1 | 5230 | 0 | 0 | 25 | Pass |

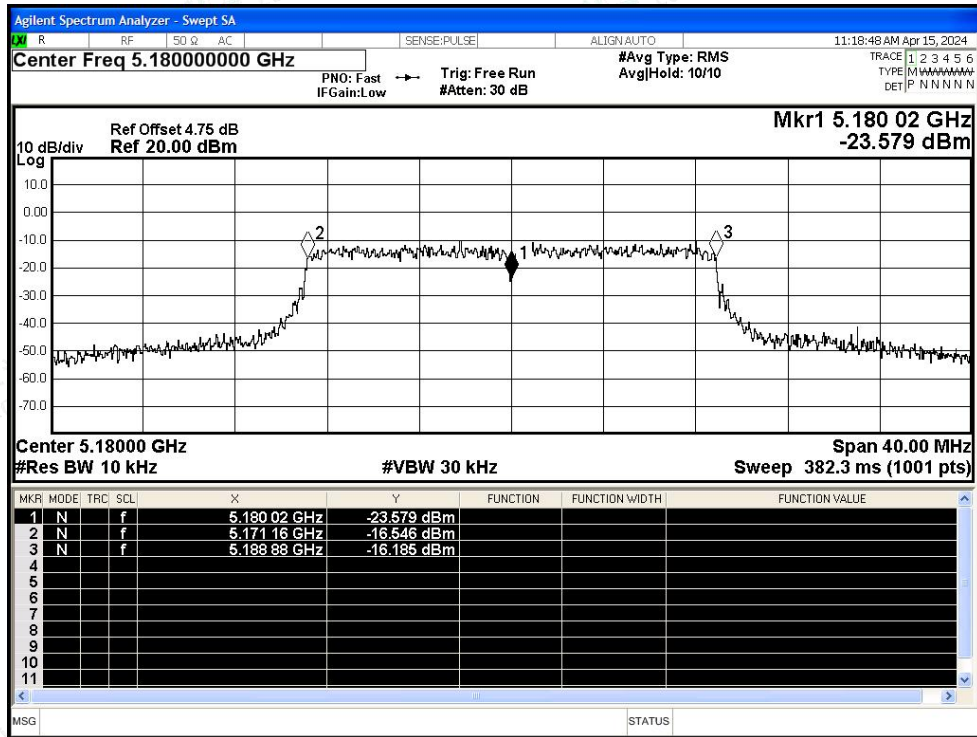


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

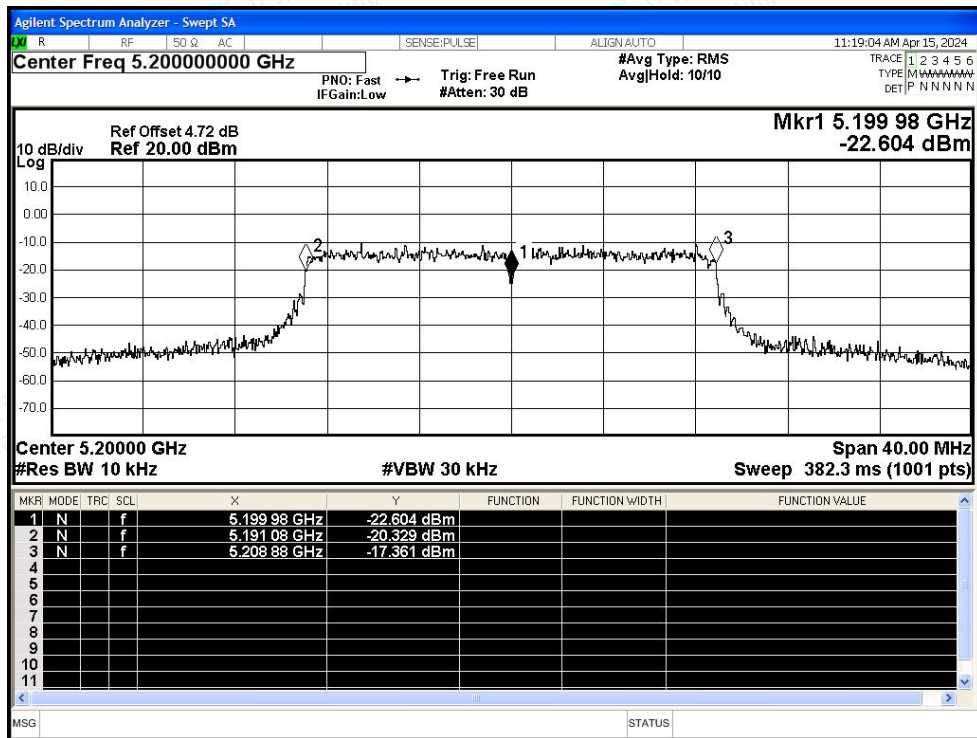


Test Graphs

Freq. Stability NVNT n20 5180MHz Ant1

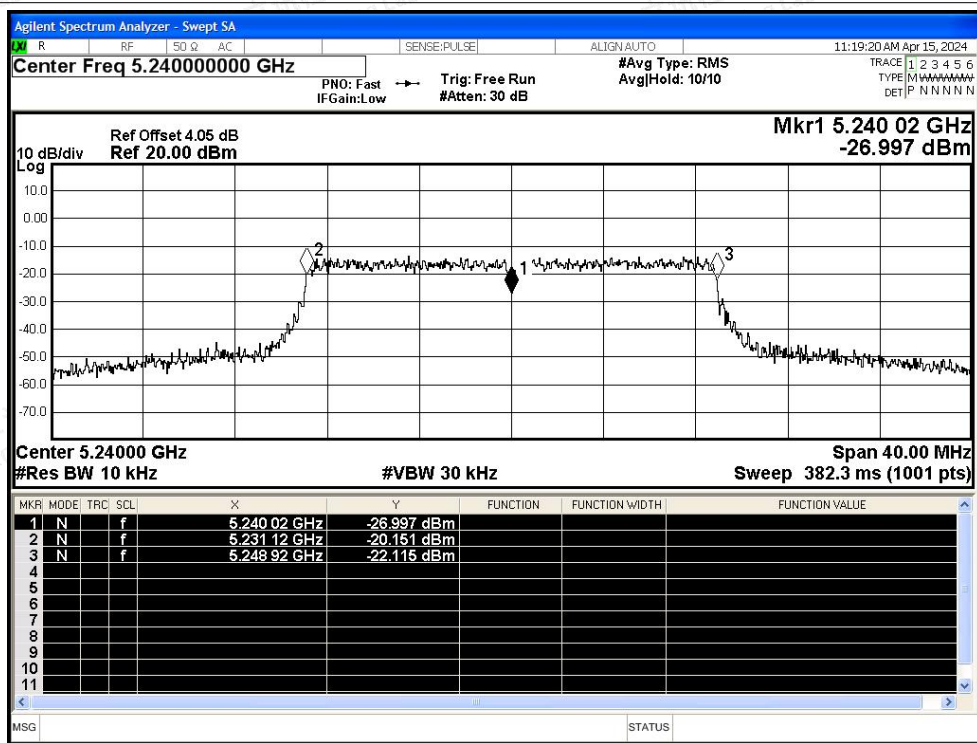


Freq. Stability NVNT n20 5200MHz Ant1

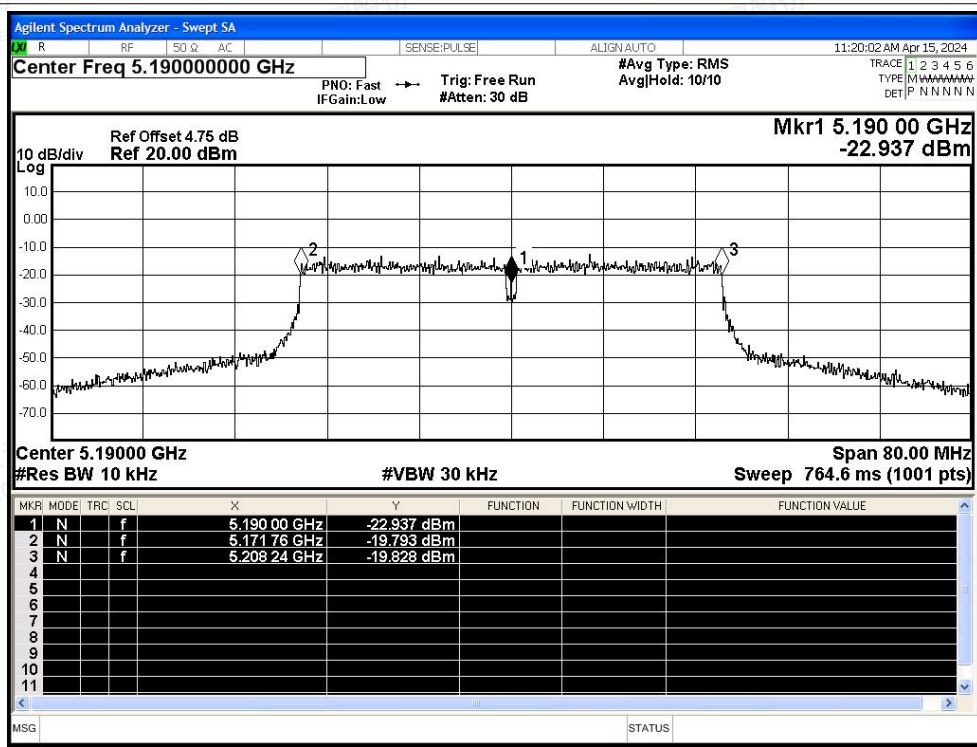


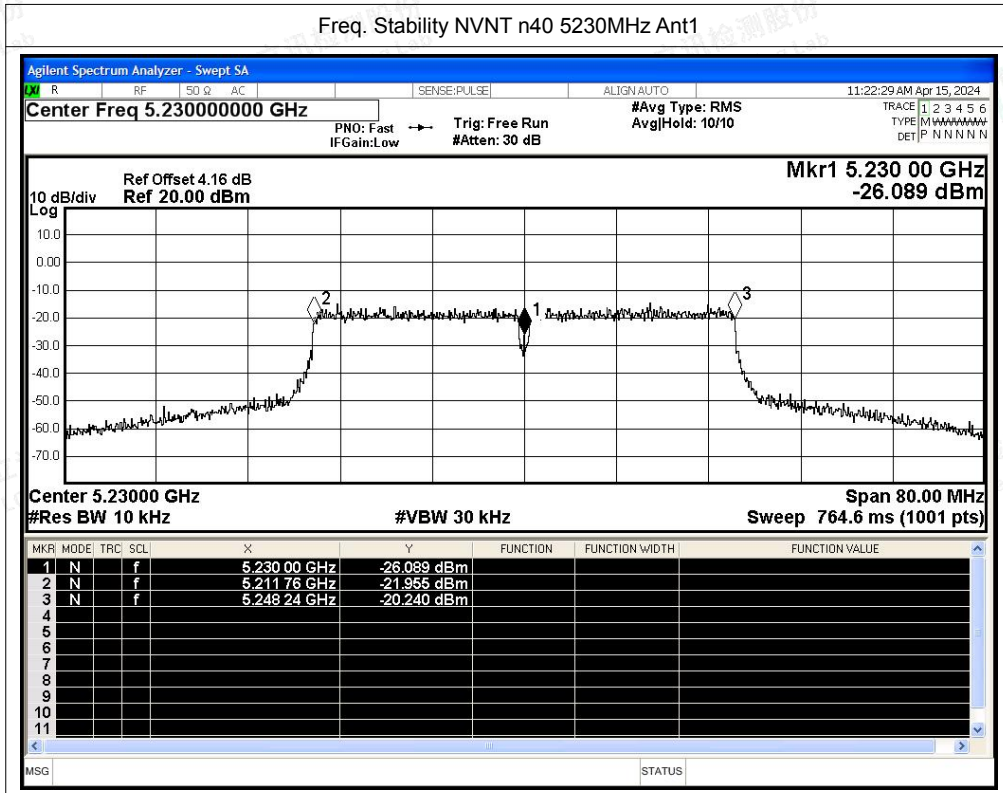


Freq. Stability NVNT n20 5240MHz Ant1



Freq. Stability NVNT n40 5190MHz Ant1







C.6 Duty Cycle

| Condition | Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|------|-----------------|---------|----------------|------------------------|-----------|
| NVNT | a | 5180 | Ant1 | 94.65 | 0.24 | 0.91 |
| NVNT | a | 5200 | Ant1 | 94.56 | 0.24 | 0.91 |
| NVNT | a | 5240 | Ant1 | 94.56 | 0.24 | 0.91 |
| NVNT | n20 | 5180 | Ant1 | 93.77 | 0.28 | 1.07 |
| NVNT | n20 | 5200 | Ant1 | 93.77 | 0.28 | 1.07 |
| NVNT | n20 | 5240 | Ant1 | 93.67 | 0.28 | 1.07 |
| NVNT | n40 | 5190 | Ant1 | 92.71 | 0.33 | 1.27 |
| NVNT | n40 | 5230 | Ant1 | 92.71 | 0.33 | 1.27 |

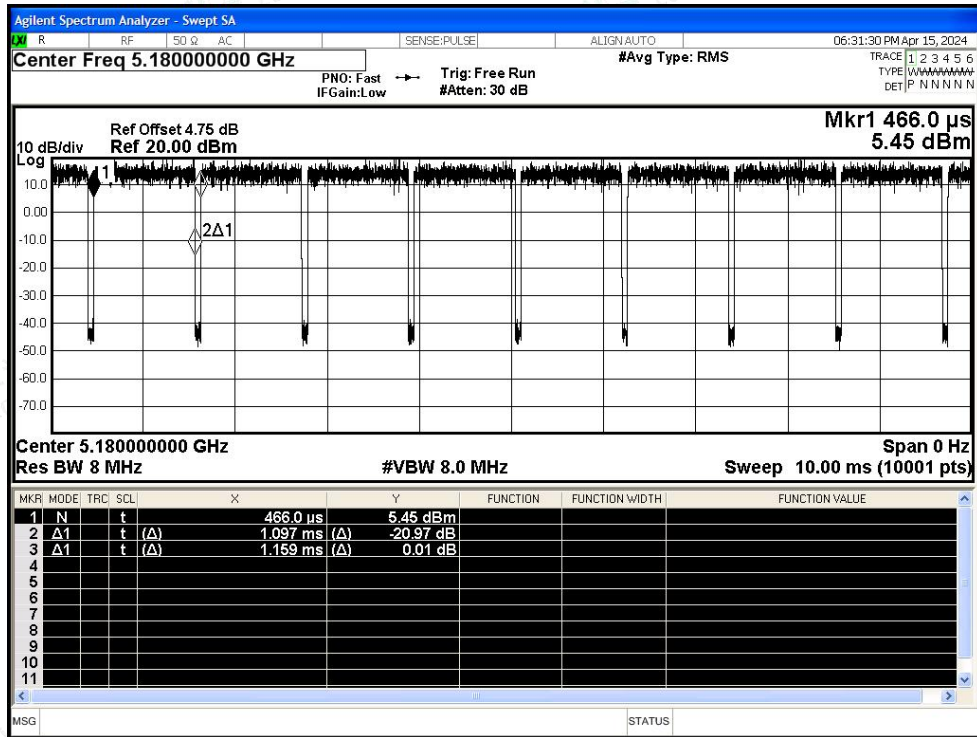


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

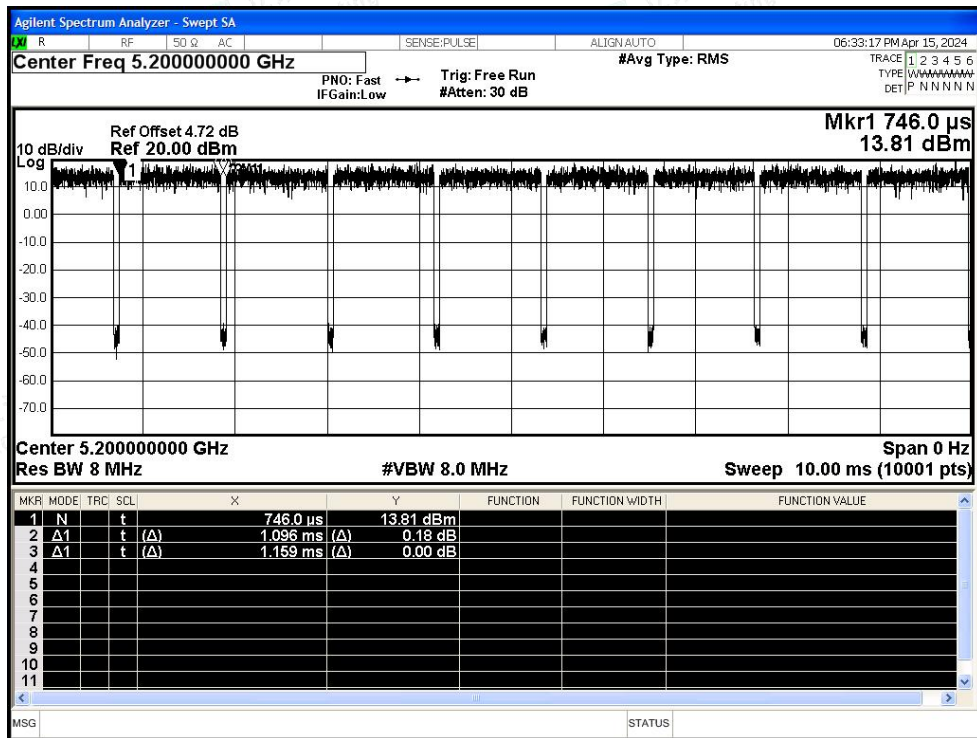


Test Graphs

Duty Cycle NVNT a 5180MHz Ant1

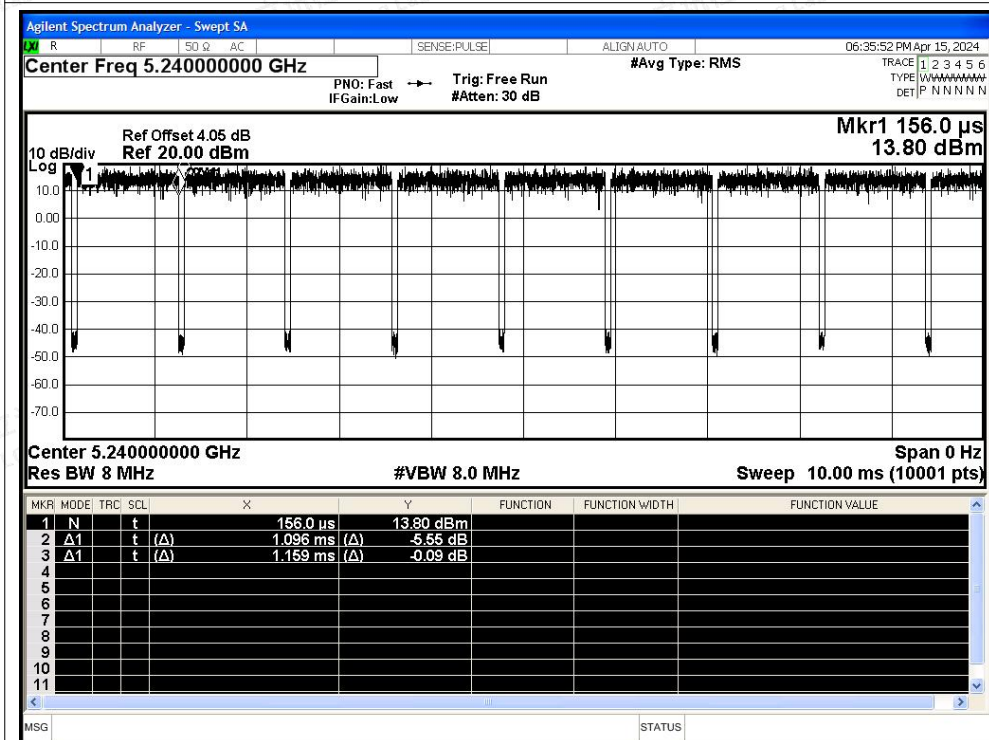


Duty Cycle NVNT a 5200MHz Ant1

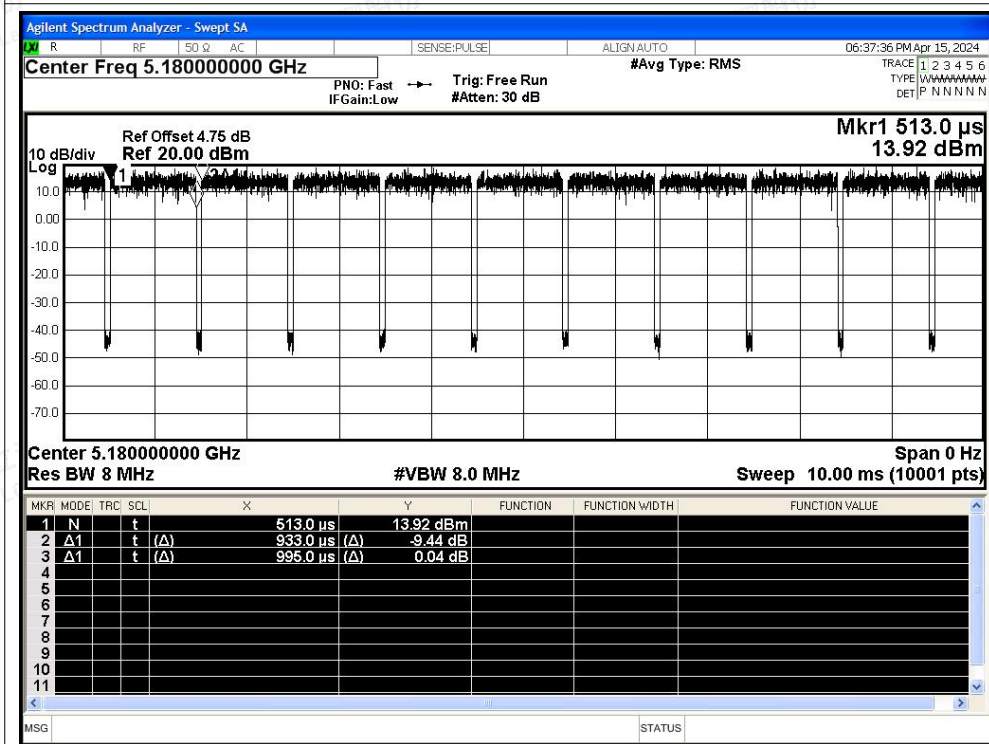




Duty Cycle NVNT a 5240MHz Ant1

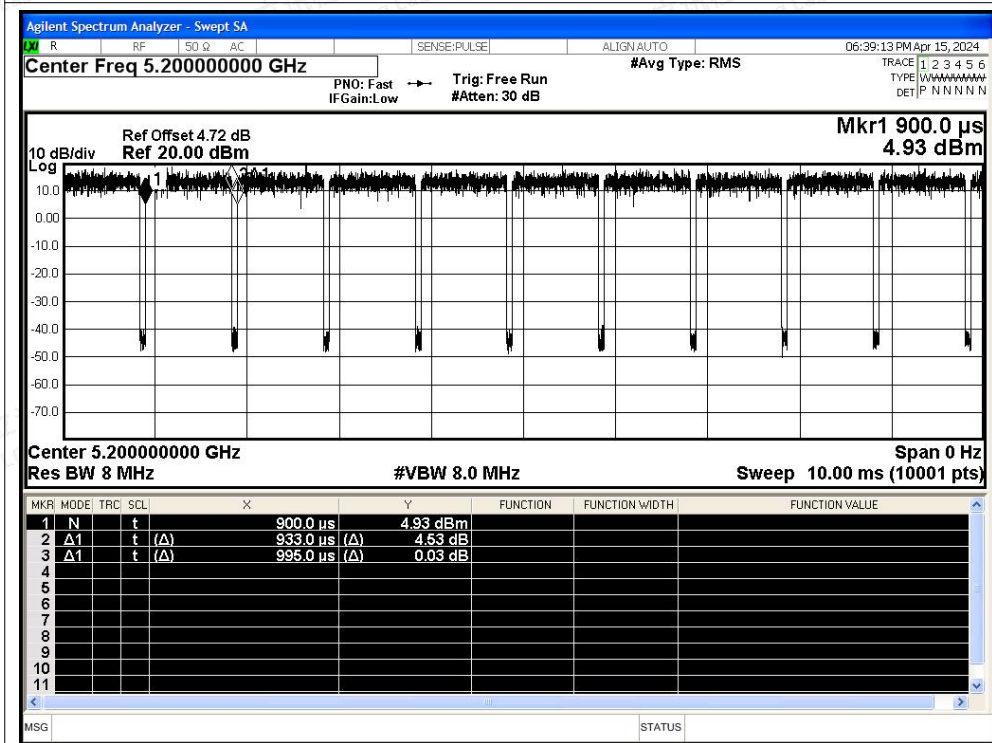


Duty Cycle NVNT n20 5180MHz Ant1

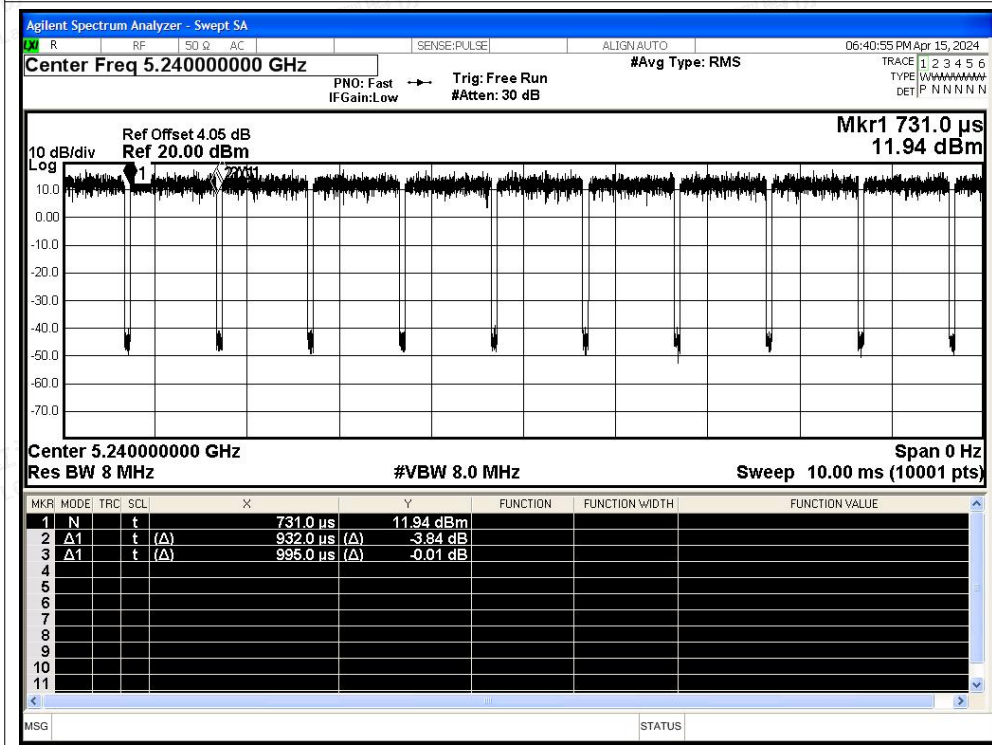




Duty Cycle NVNT n20 5200MHz Ant1

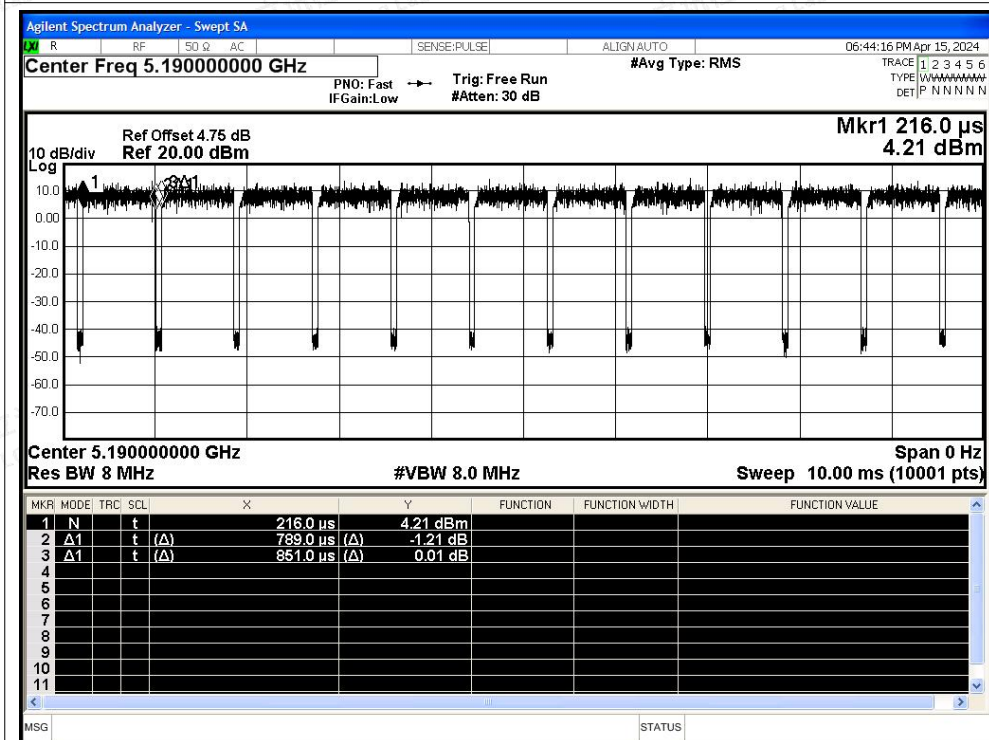


Duty Cycle NVNT n20 5240MHz Ant1





Duty Cycle NVNT n40 5190MHz Ant1



Duty Cycle NVNT n40 5230MHz Ant1

