

## Test Data

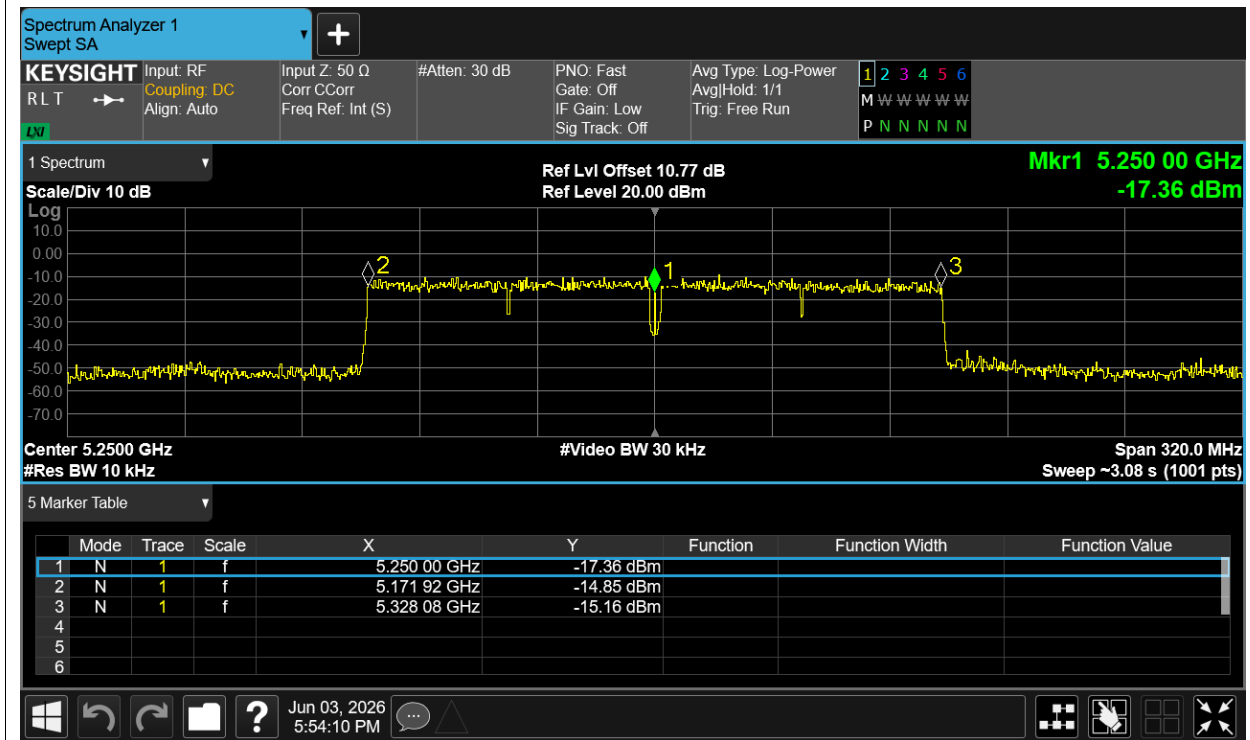
### Frequency Stability

| Condition | Mode  | Frequency (MHz) | Antenna | Measured Frequency (MHz) | Deviation (ppm) | Limit (ppm)            | Verdict |
|-----------|-------|-----------------|---------|--------------------------|-----------------|------------------------|---------|
| HVNT      | ac160 | 5250            | Sum     | 5250                     | 0               | Within authorized band | Pass    |
| LVNT      | ac160 | 5250            | Sum     | 5250                     | 0               |                        | Pass    |
| NVHT      | ac160 | 5250            | Sum     | 5250.053                 | 10.1            |                        | Pass    |
| NVLT      | ac160 | 5250            | Sum     | 5250                     | 0               |                        | Pass    |
| NVNT      | ac160 | 5250            | Sum     | 5250                     | 0               |                        | Pass    |
| HVNT      | ax160 | 5250            | Sum     | 5250                     | 0               |                        | Pass    |
| LVNT      | ax160 | 5250            | Sum     | 5250                     | 0               |                        | Pass    |
| NVHT      | ax160 | 5250            | Sum     | 5250                     | 0               |                        | Pass    |
| NVLT      | ax160 | 5250            | Sum     | 5250                     | 0               |                        | Pass    |
| NVNT      | ax160 | 5250            | Sum     | 5250                     | 0               |                        | Pass    |

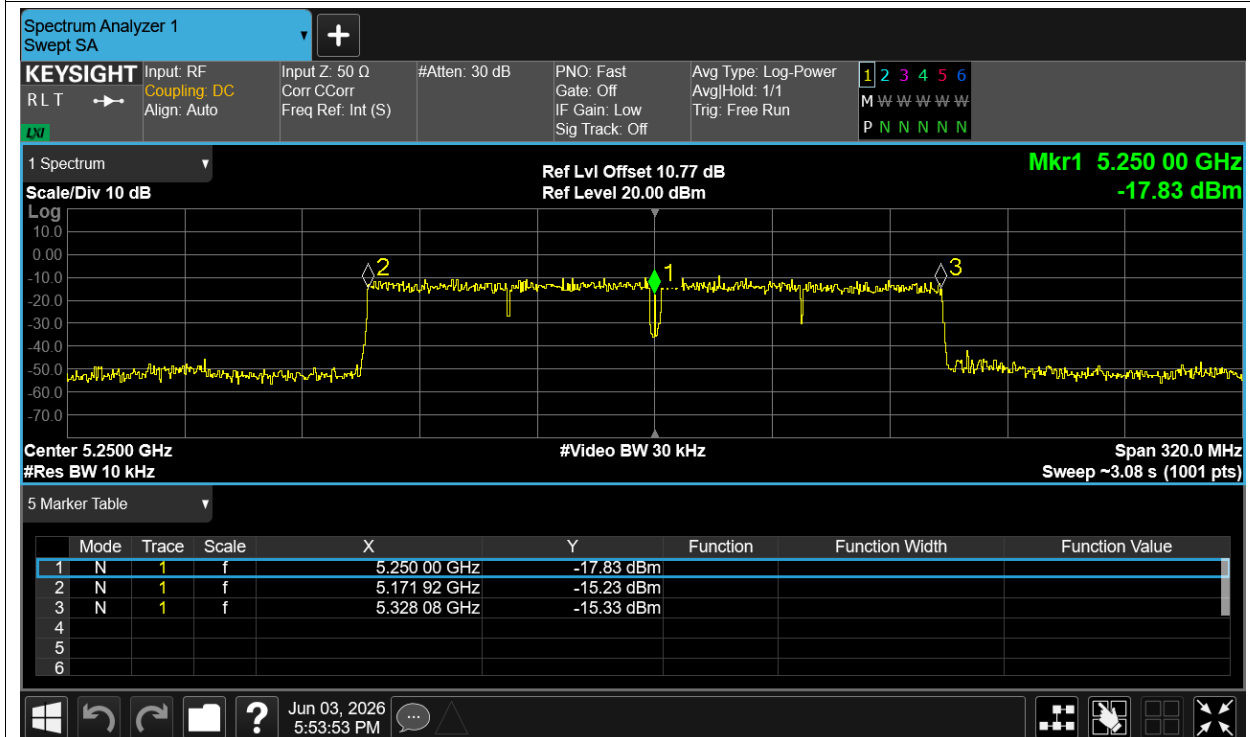
Remark: "NTNV" means Normal Temperature Normal Voltage, "NVHT" means Normal Voltage High Temperature, "NVLT" means Normal Voltage Low Temperature, "LVNT" means Low Voltage Normal Temperature, "HVNT" means High Voltage Normal Temperature.

## Test Graphs

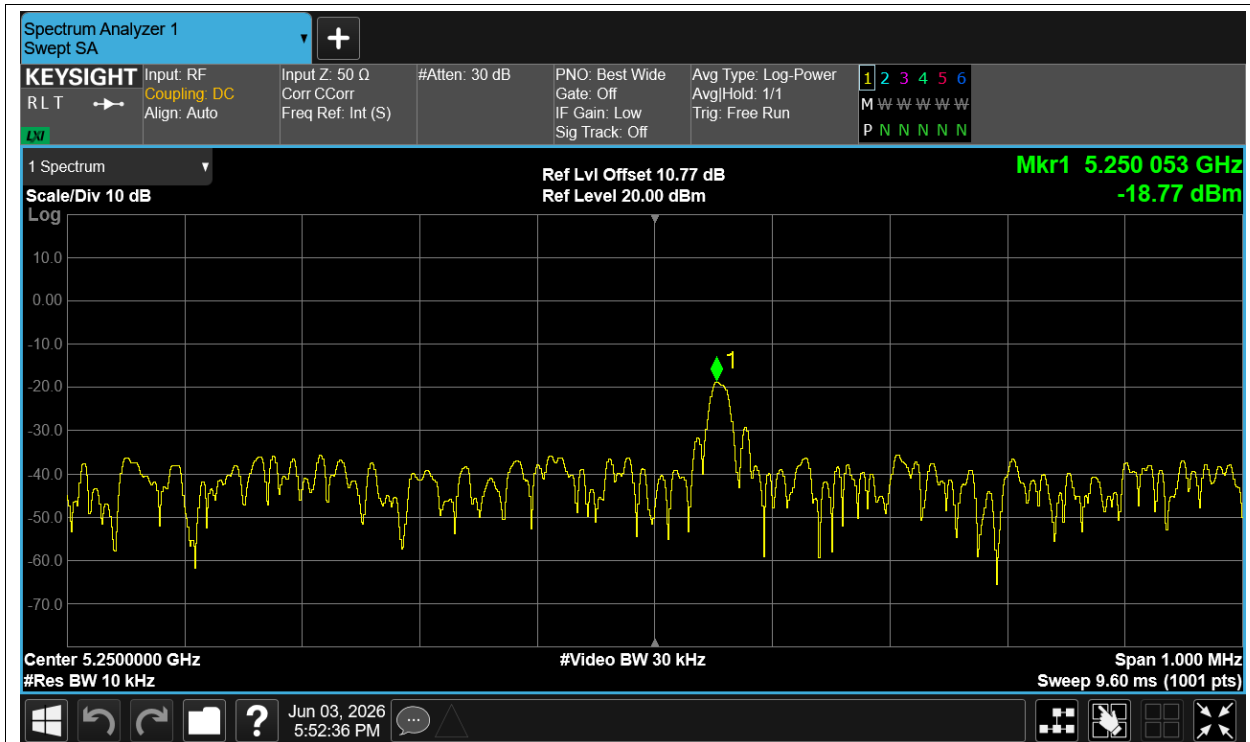
### Freq. Stability HVNT ac160 5250MHz Sum



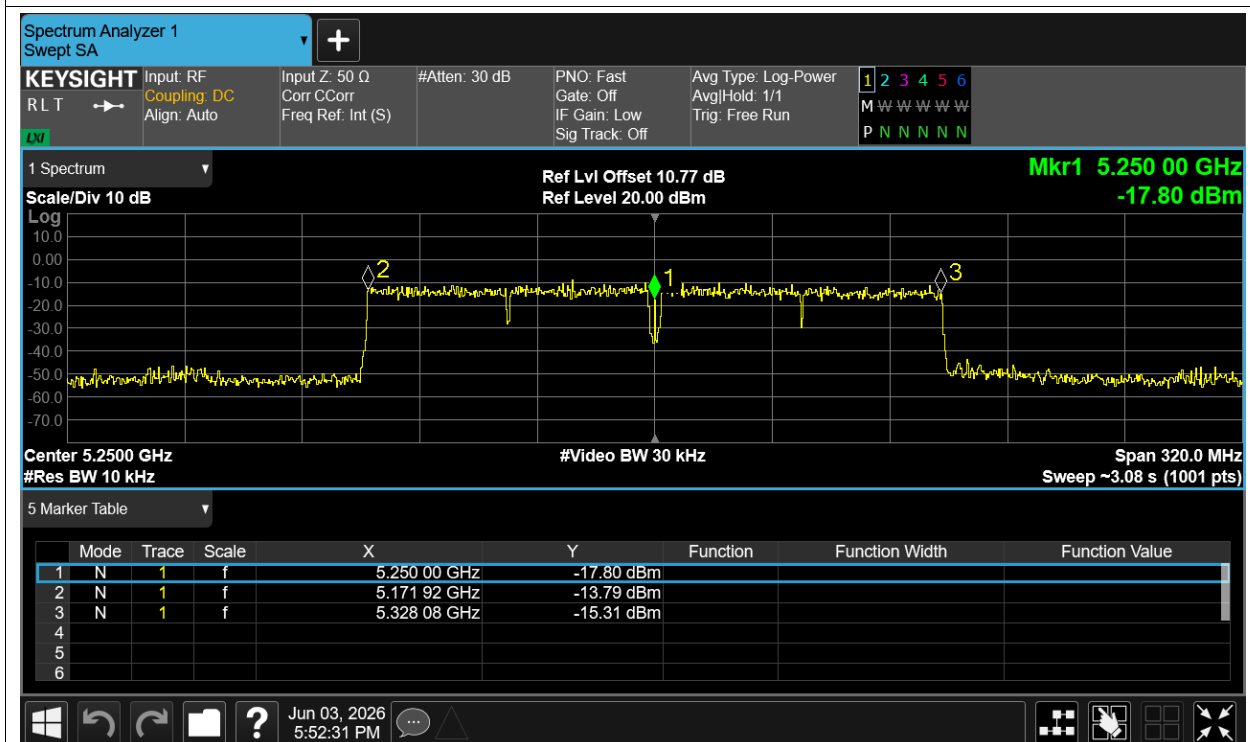
### Freq. Stability LVNT ac160 5250MHz Sum



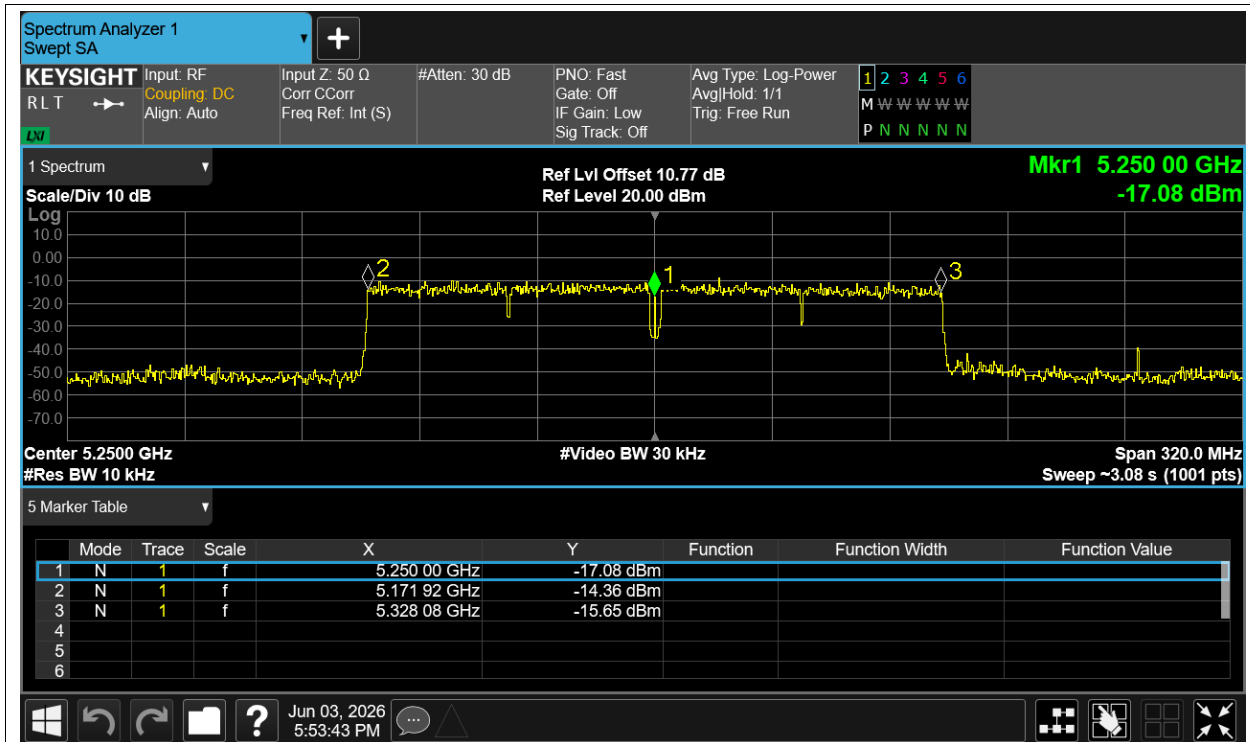
### Freq. Stability NVHT ac160 5250MHz Sum



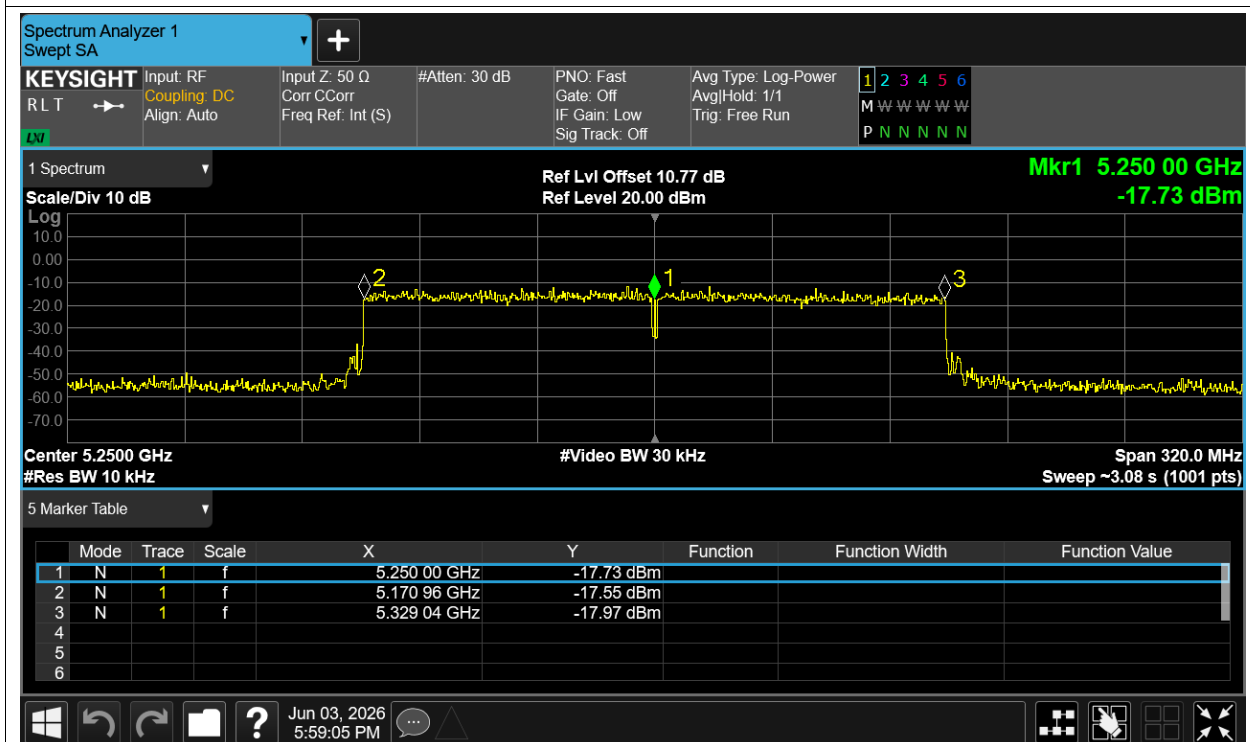
Freq. Stability NVLT ac160 5250MHz Sum



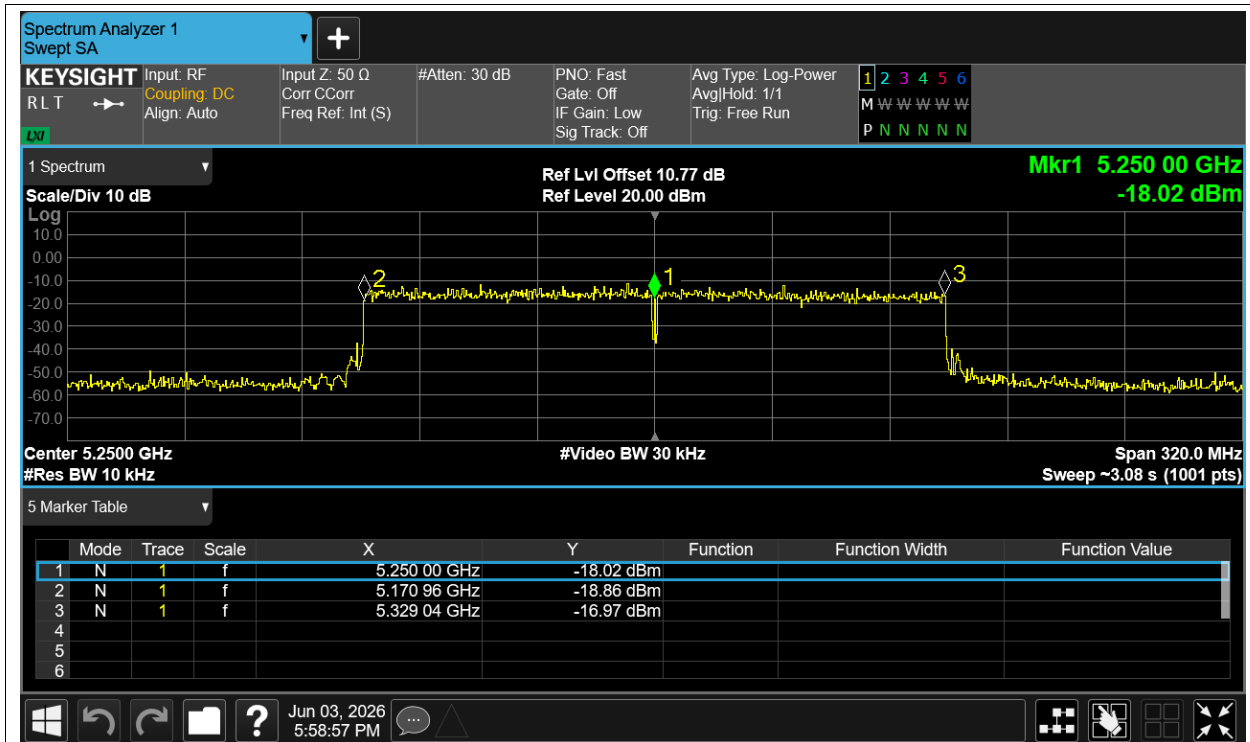
Freq. Stability NVNT ac160 5250MHz Sum



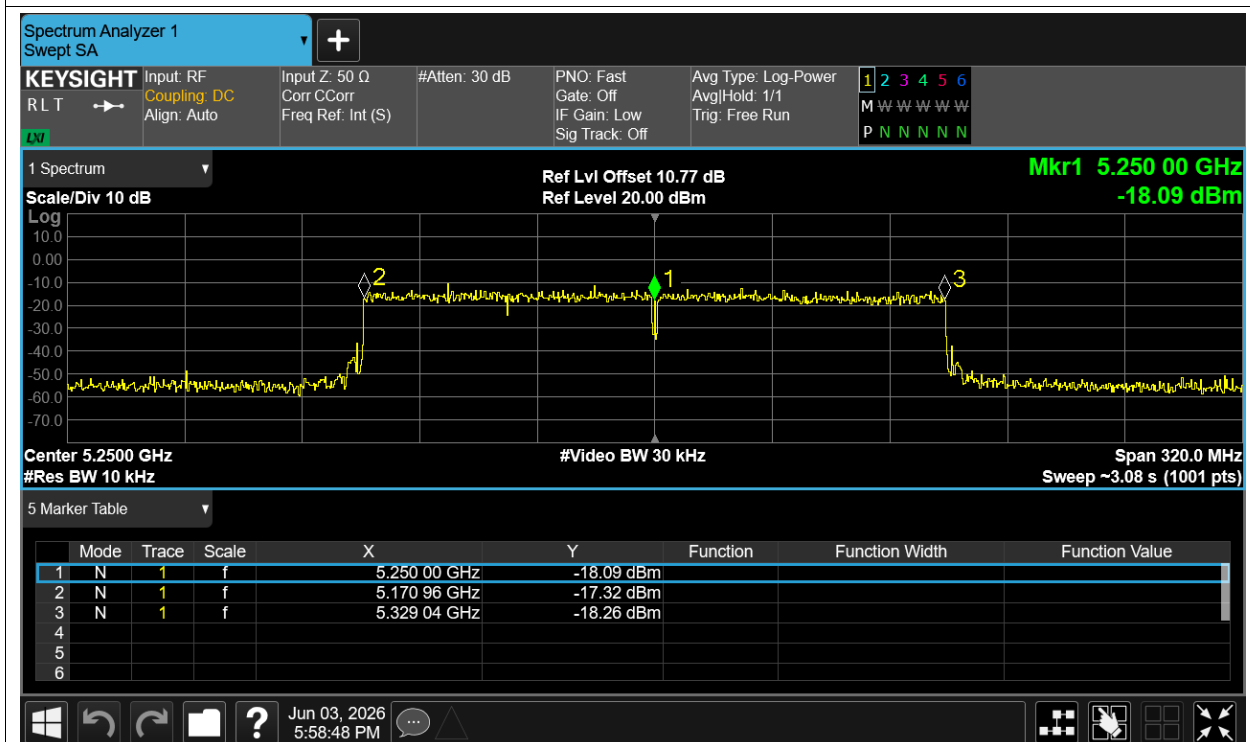
Freq. Stability HVNT ax160 5250MHz Sum



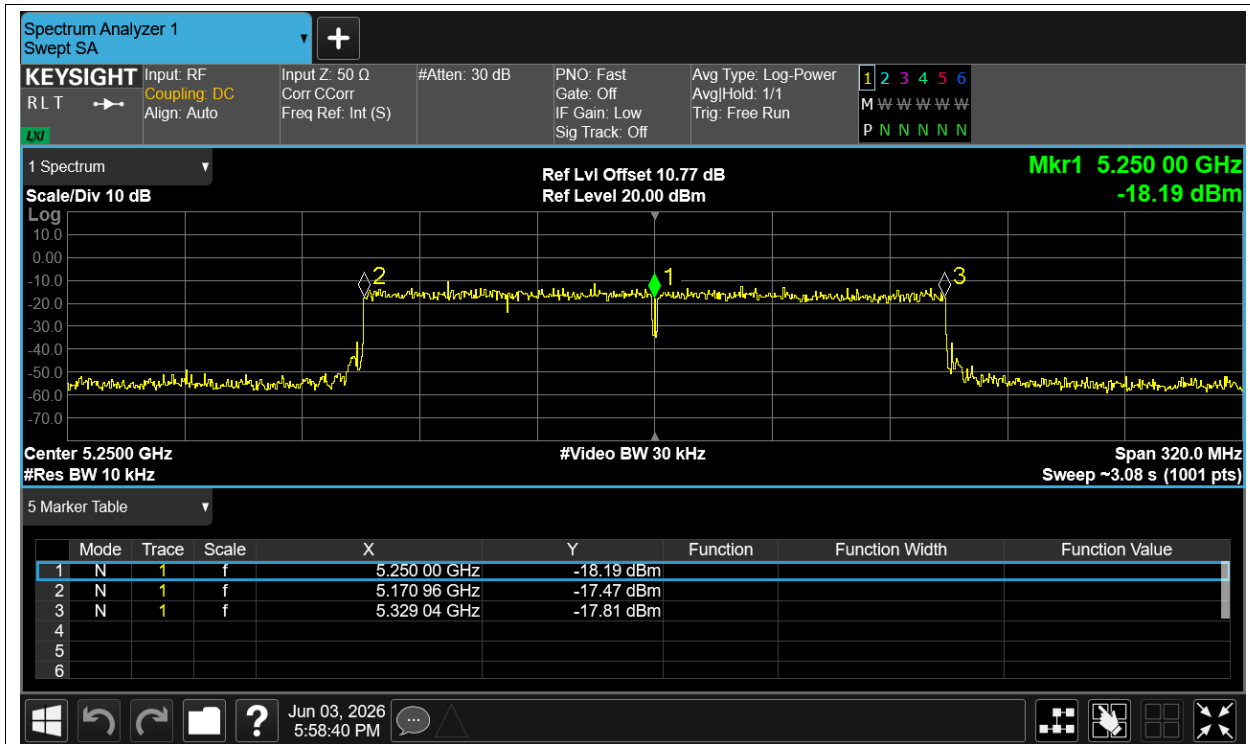
Freq. Stability LVNT ax160 5250MHz Sum



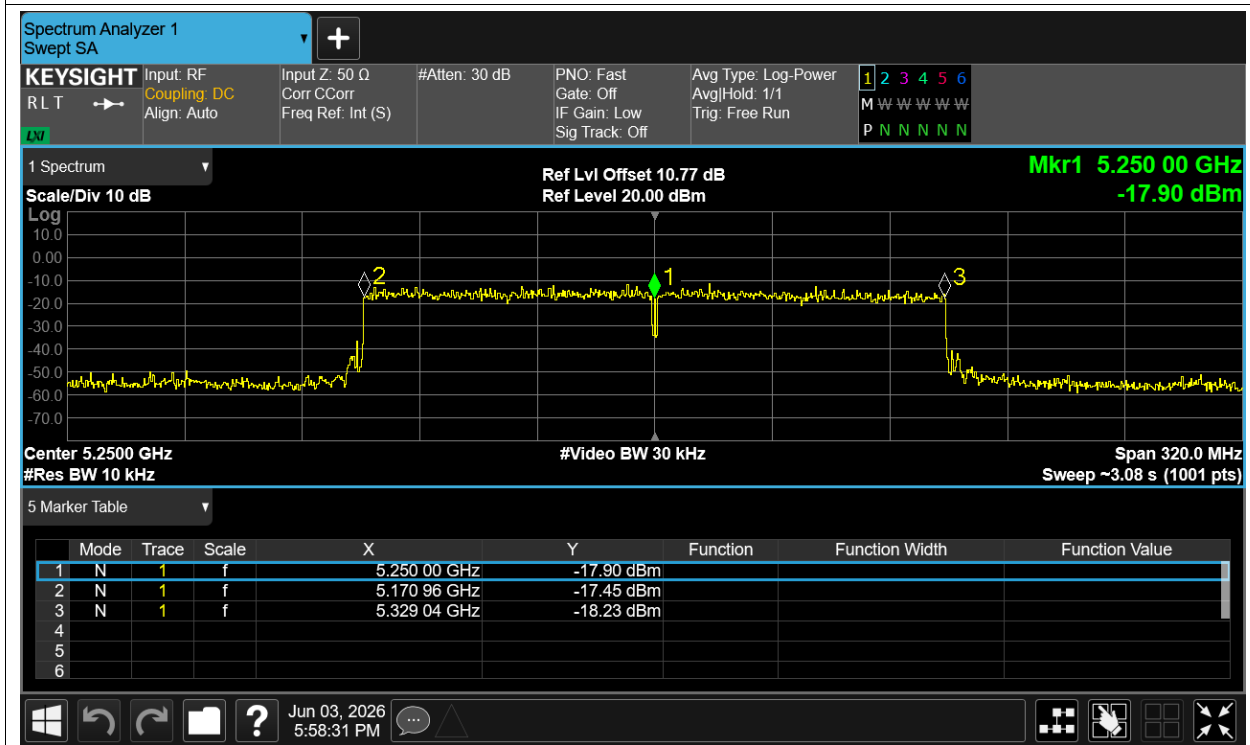
Freq. Stability NVHT ax160 5250MHz Sum



Freq. Stability NVLT ax160 5250MHz Sum

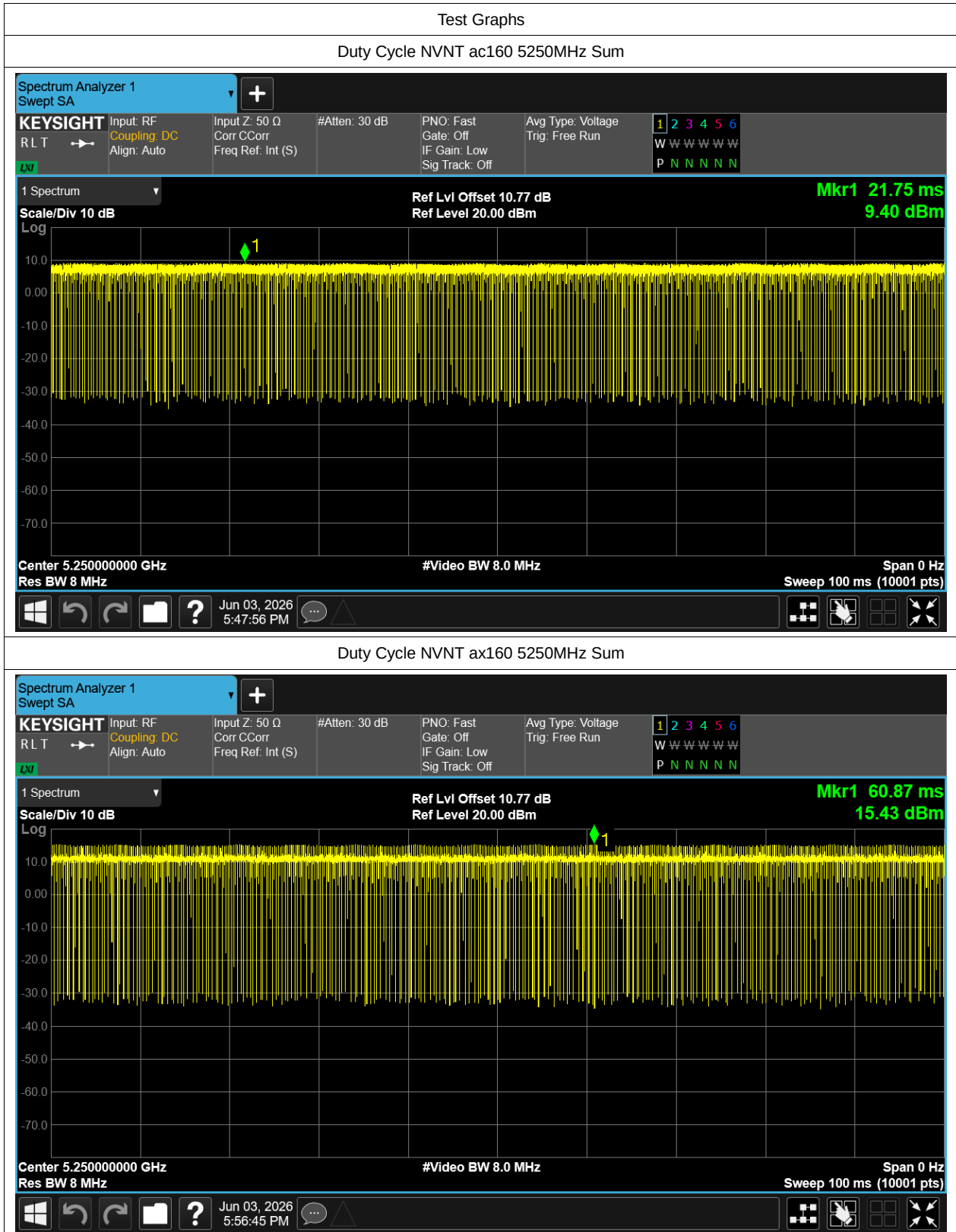


Freq. Stability NVNT ax160 5250MHz Sum



## Duty Cycle

| Condition | Mode  | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) |
|-----------|-------|-----------------|---------|----------------|------------------------|
| NVNT      | ac160 | 5250            | Sum     | 96.95          | 0.13                   |
| NVNT      | ax160 | 5250            | Sum     | 97.4           | 0.11                   |



## Maximum Conducted Output Power

| Condition | Mode  | Frequency (MHz) | Antenna | Conducted Power (dBm) | Duty Factor (dB) | Total Power (dBm) | Limit (dBm) | Verdict |
|-----------|-------|-----------------|---------|-----------------------|------------------|-------------------|-------------|---------|
| NVNT      | ac160 | 5250            | Ant1    | 17.91                 | 0.13             | 18.04             | 22.14       | Pass    |
| NVNT      | ac160 | 5250            | Ant2    | 19.34                 | 0.13             | 19.47             | 22.14       | Pass    |
| NVNT      | ac160 | 5250            | Sum     | 21.694                | 0.13             | 21.824            | 22.14       | Pass    |
| NVNT      | ax160 | 5250            | Ant1    | 17.65                 | 0.11             | 17.76             | 22.14       | Pass    |
| NVNT      | ax160 | 5250            | Ant2    | 19.06                 | 0.11             | 19.17             | 22.14       | Pass    |
| NVNT      | ax160 | 5250            | Sum     | 21.422                | 0.11             | 21.532            | 22.14       | Pass    |

Note: The limits need reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For MIMO mode: ant gain is  $4.85+10*\log_{10}(2)=4.85+3.01=7.86$  dBi, the limit is  $24-(7.86-6)=22.14$ dbm.

## E.I.R.P Power

| Condition | Mode  | Frequency<br>(MHz) | Antenna | Conducted<br>Power<br>(dBm) | Duty<br>Factor<br>(dB) | Gain<br>(dB) | Max<br>E.I.R.P<br>(dBm) | TPC<br>Limit<br>(dBm) | Verdict |
|-----------|-------|--------------------|---------|-----------------------------|------------------------|--------------|-------------------------|-----------------------|---------|
| NVNT      | ac160 | 5250               | Ant1    | 17.91                       | 0.13                   | 7.86         | 25.9                    | 30                    | Pass    |
| NVNT      | ac160 | 5250               | Ant2    | 19.34                       | 0.13                   | 7.86         | 27.33                   | 30                    | Pass    |
| NVNT      | ac160 | 5250               | Sum     | 21.694                      | 0.13                   | 7.86         | 29.684                  | 30                    | Pass    |
| NVNT      | ax160 | 5250               | Ant1    | 17.65                       | 0.11                   | 7.86         | 25.62                   | 30                    | Pass    |
| NVNT      | ax160 | 5250               | Ant2    | 19.06                       | 0.11                   | 7.86         | 27.03                   | 30                    | Pass    |
| NVNT      | ax160 | 5250               | Sum     | 21.422                      | 0.11                   | 7.86         | 29.392                  | 30                    | Pass    |

For MIMO mode: ant gain is  $4.85+10*\log_{10}(2)=4.85+3.01=7.86$  dBi

## Output Power TPC Low

| Condition | Mode  | Frequency (MHz) | Antenna | Conducted Power (dBm) | Duty Factor (dB) | Gain (dB) | Max E.I.R.P (dBm) | Limit (dBm) | Verdict |
|-----------|-------|-----------------|---------|-----------------------|------------------|-----------|-------------------|-------------|---------|
| NVNT      | ac160 | 5250            | Ant1    | 11.82                 | 0.13             | 7.86      | 19.81             | 24          | Pass    |
| NVNT      | ac160 | 5250            | Ant2    | 13.33                 | 0.13             | 7.86      | 21.32             | 24          | Pass    |
| NVNT      | ac160 | 5250            | Sum     | 15.24                 | 0.13             | 7.86      | 23.23             | 24          | Pass    |
| NVNT      | ax160 | 5250            | Ant1    | 11.54                 | 0.11             | 7.86      | 19.51             | 24          | Pass    |
| NVNT      | ax160 | 5250            | Ant2    | 13.38                 | 0.11             | 7.86      | 21.35             | 24          | Pass    |
| NVNT      | ax160 | 5250            | Sum     | 15.84                 | 0.11             | 7.86      | 23.81             | 24          | Pass    |

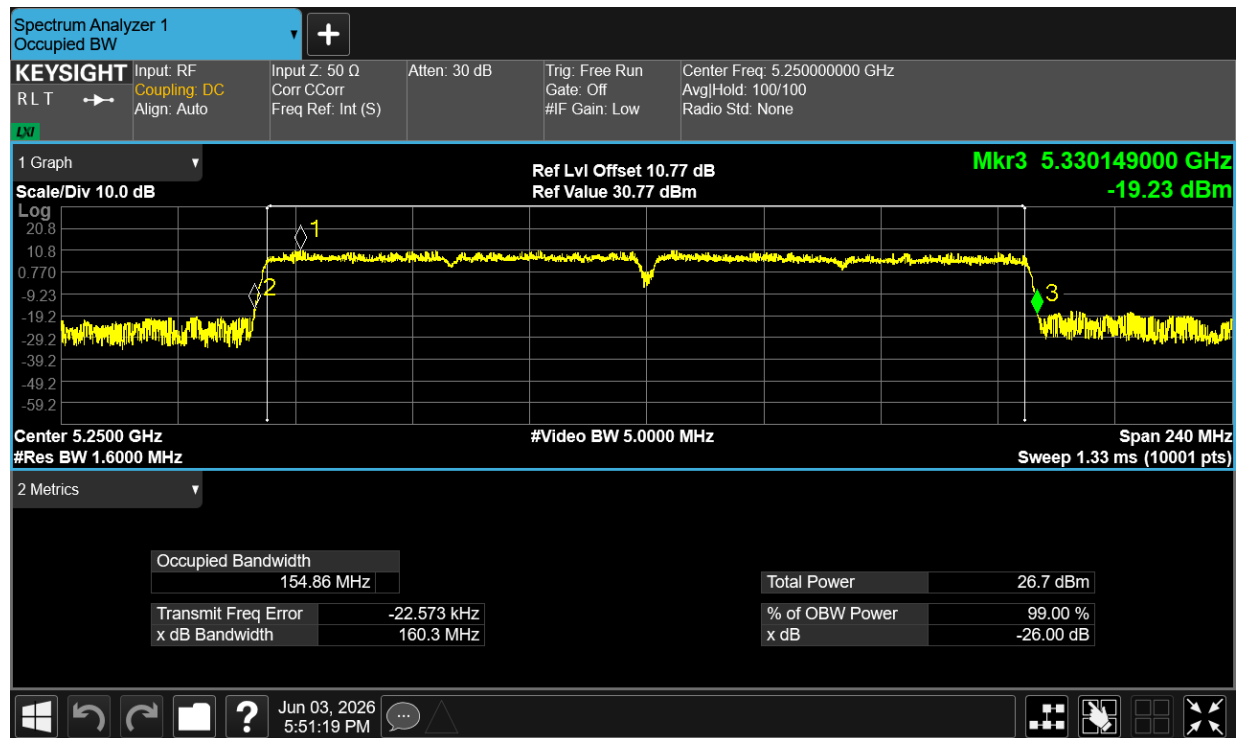
For MIMO mode: ant gain is  $4.85+10*\log_{10}(2)=4.85+3.01=7.86$  dBi

## -26dB Bandwidth

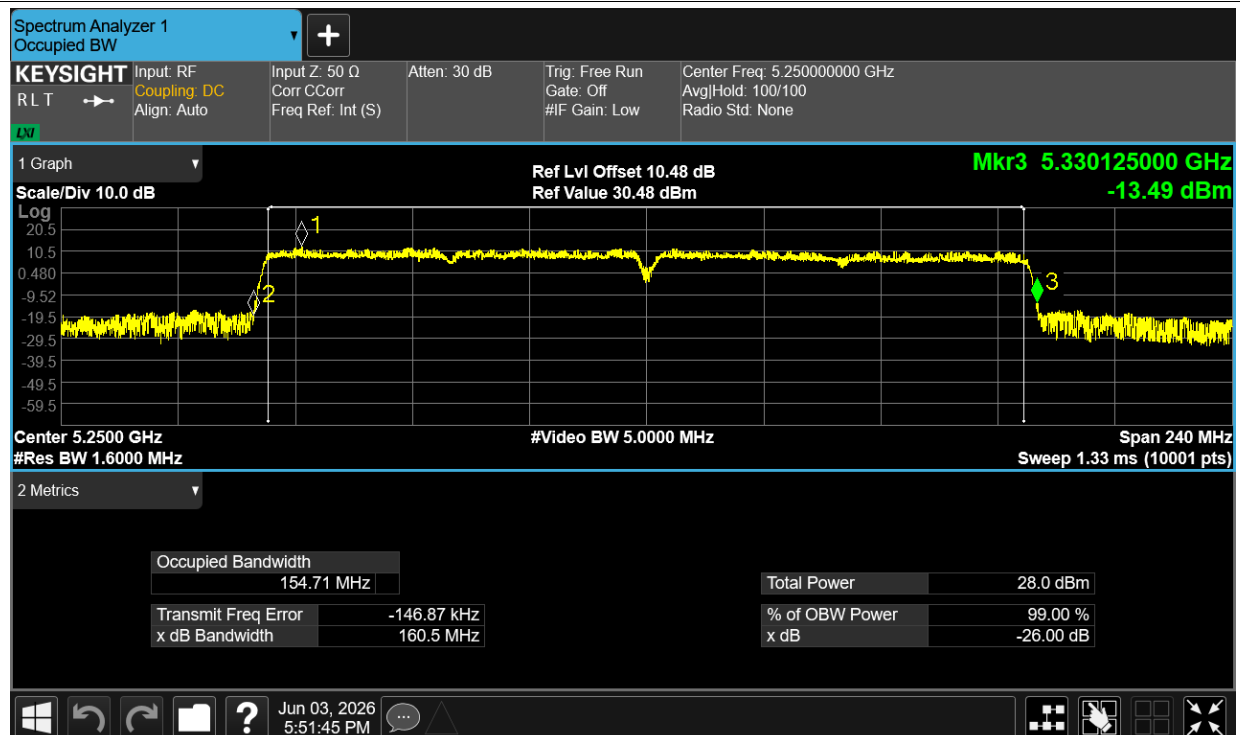
| Condition | Mode  | Frequency (MHz) | Antenna | -26 dB Bandwidth (MHz) |
|-----------|-------|-----------------|---------|------------------------|
| NVNT      | ac160 | 5250            | Ant1    | 160.343                |
| NVNT      | ac160 | 5250            | Ant2    | 160.543                |
| NVNT      | ax160 | 5250            | Ant1    | 161.497                |
| NVNT      | ax160 | 5250            | Ant2    | 161.526                |

## Test Graphs

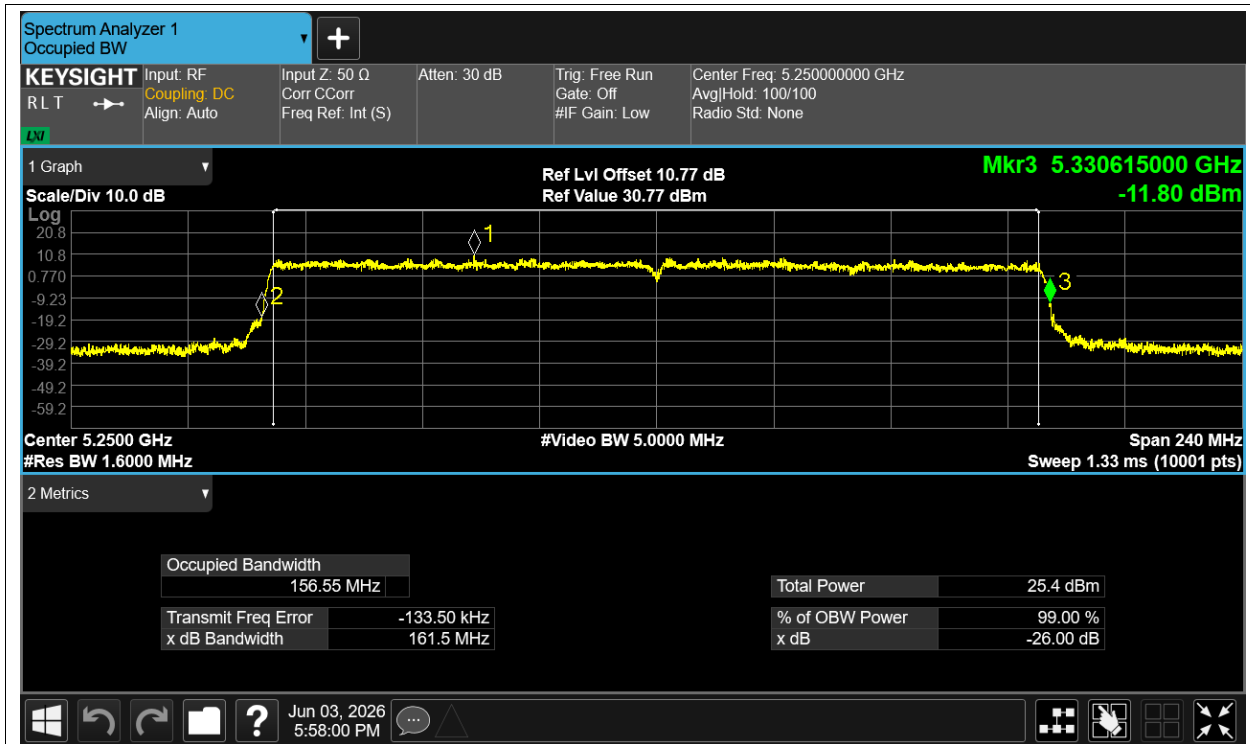
-26dB Bandwidth NVNT ac160 5250MHz Ant1



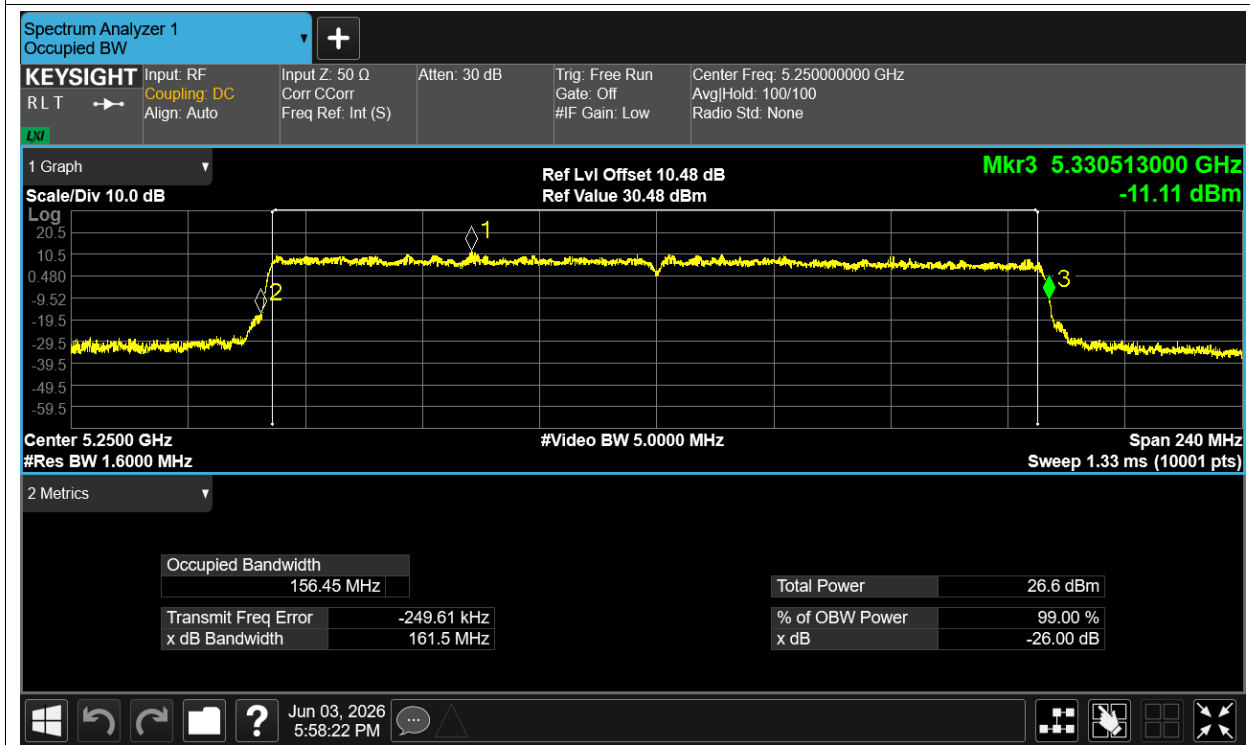
-26dB Bandwidth NVNT ac160 5250MHz Ant2



-26dB Bandwidth NVNT ax160 5250MHz Ant1



-26dB Bandwidth NVNT ax160 5250MHz Ant2

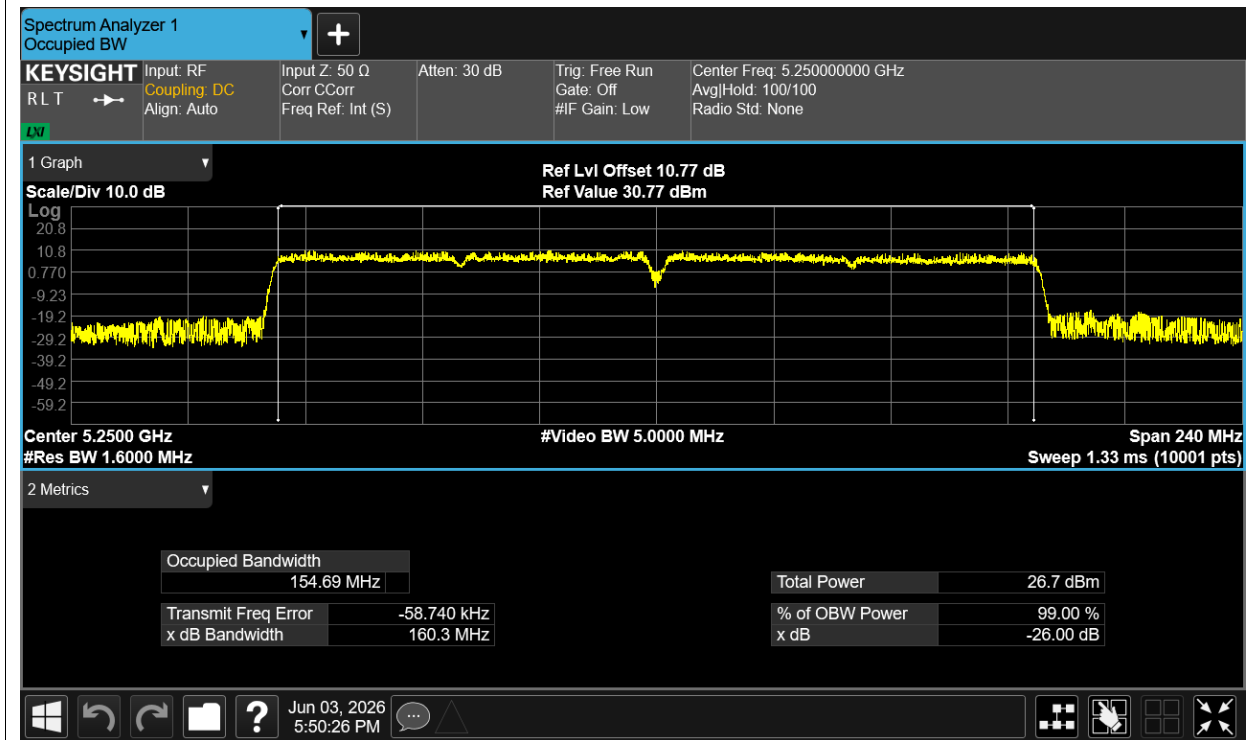


## Occupied Channel Bandwidth

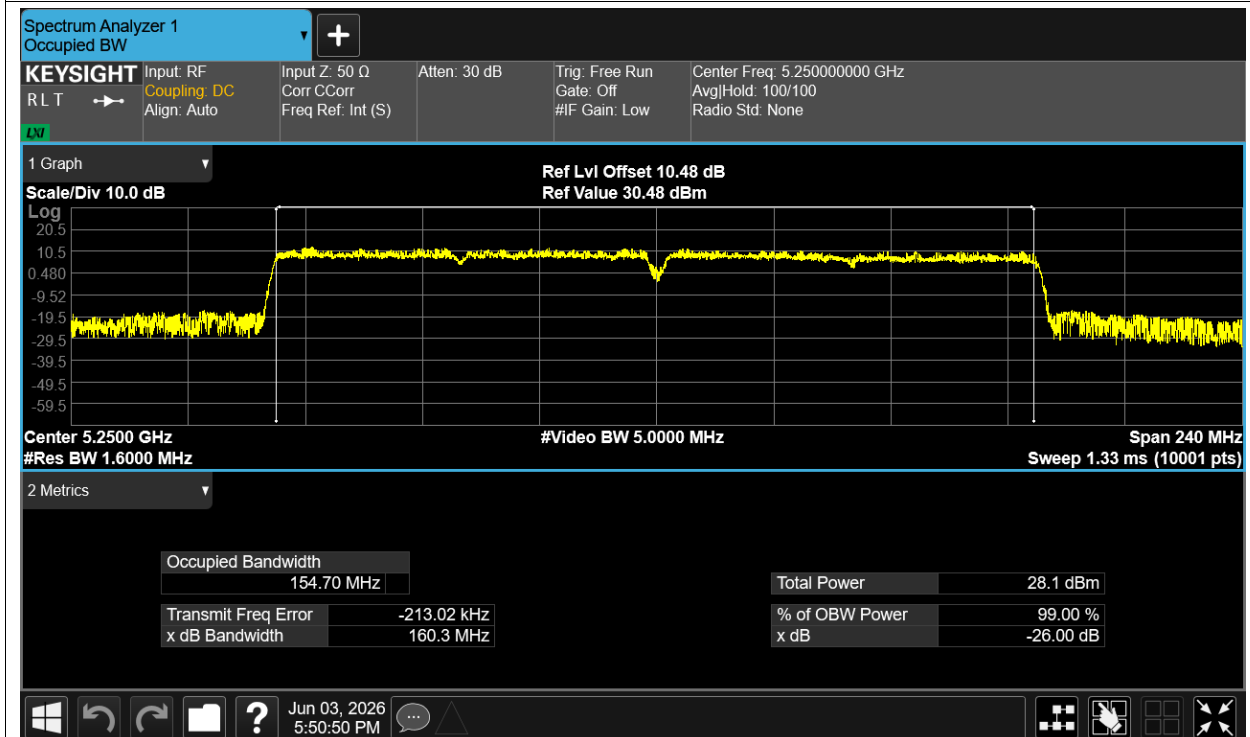
| Condition | Mode  | Frequency (MHz) | Antenna | 99% OBW (MHz) |
|-----------|-------|-----------------|---------|---------------|
| NVNT      | ac160 | 5250            | Ant1    | 154.69        |
| NVNT      | ac160 | 5250            | Ant2    | 154.702       |
| NVNT      | ax160 | 5250            | Ant1    | 156.59        |
| NVNT      | ax160 | 5250            | Ant2    | 156.347       |

## Test Graphs

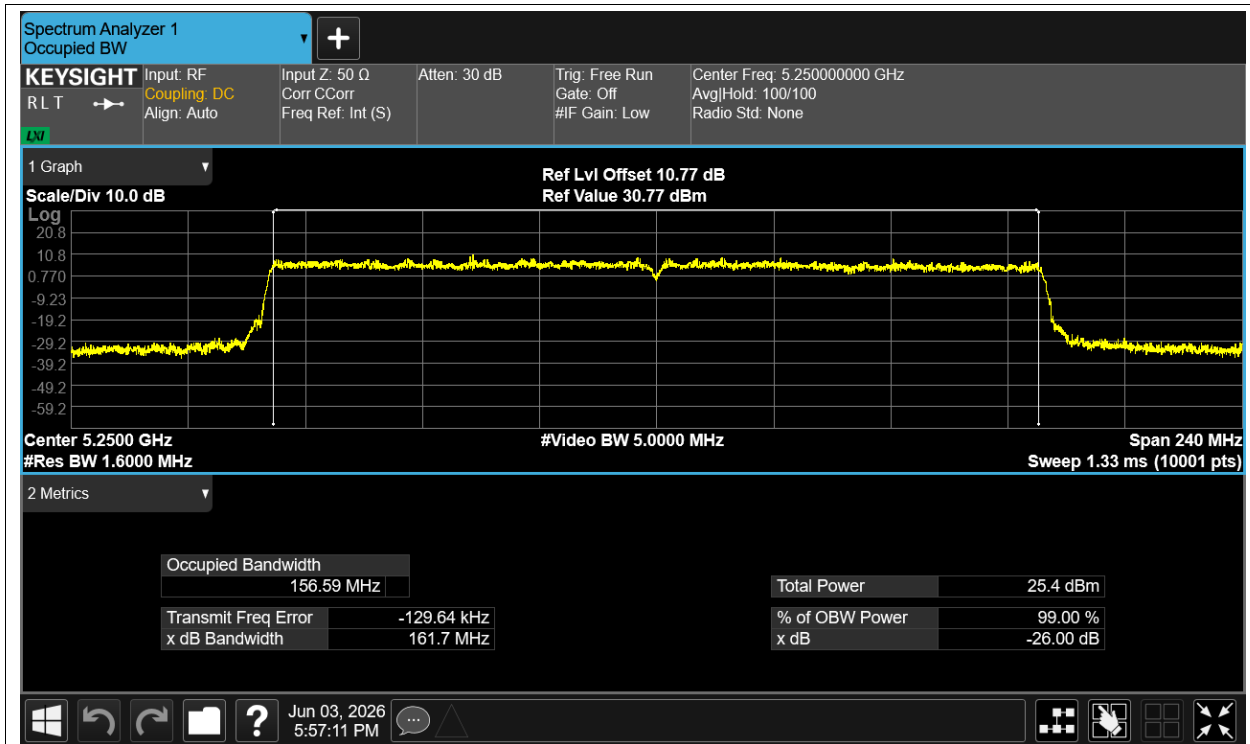
### OBW NVNT ac160 5250MHz Ant1



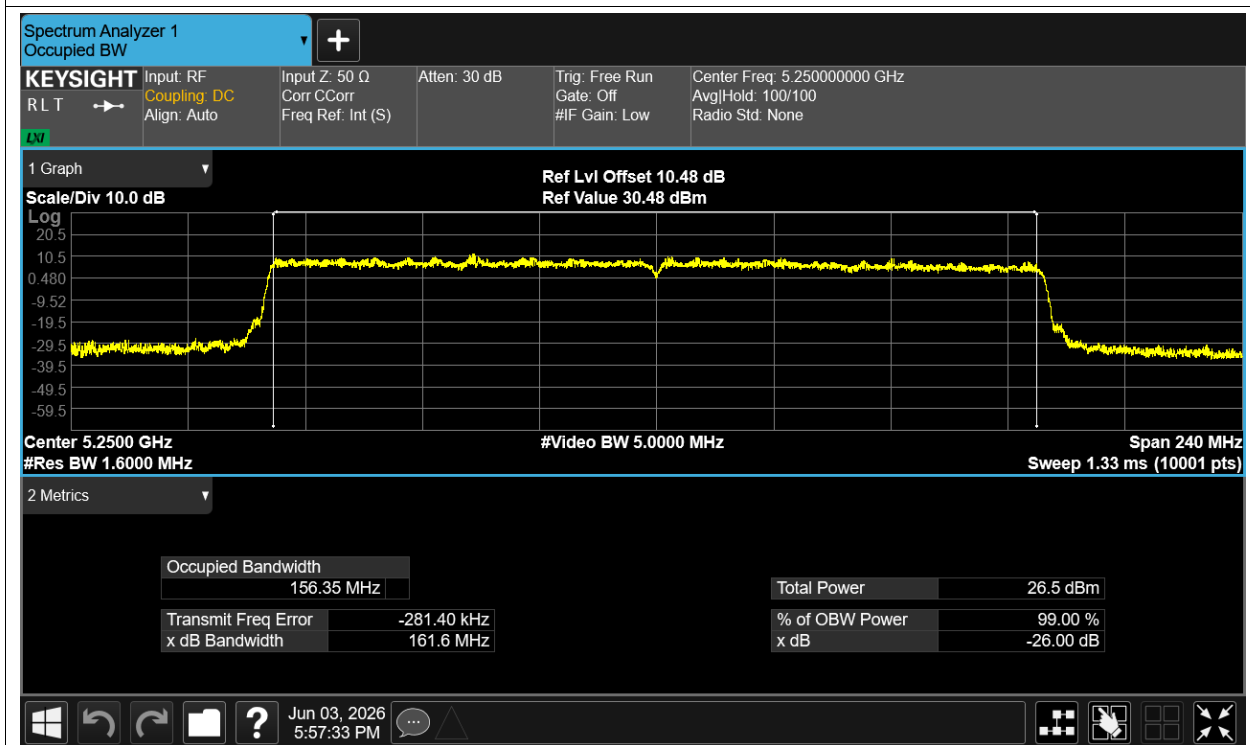
### OBW NVNT ac160 5250MHz Ant2



### OBW NVNT ax160 5250MHz Ant1



OBW NVNT ax160 5250MHz Ant2



## Maximum Power Spectral Density Level

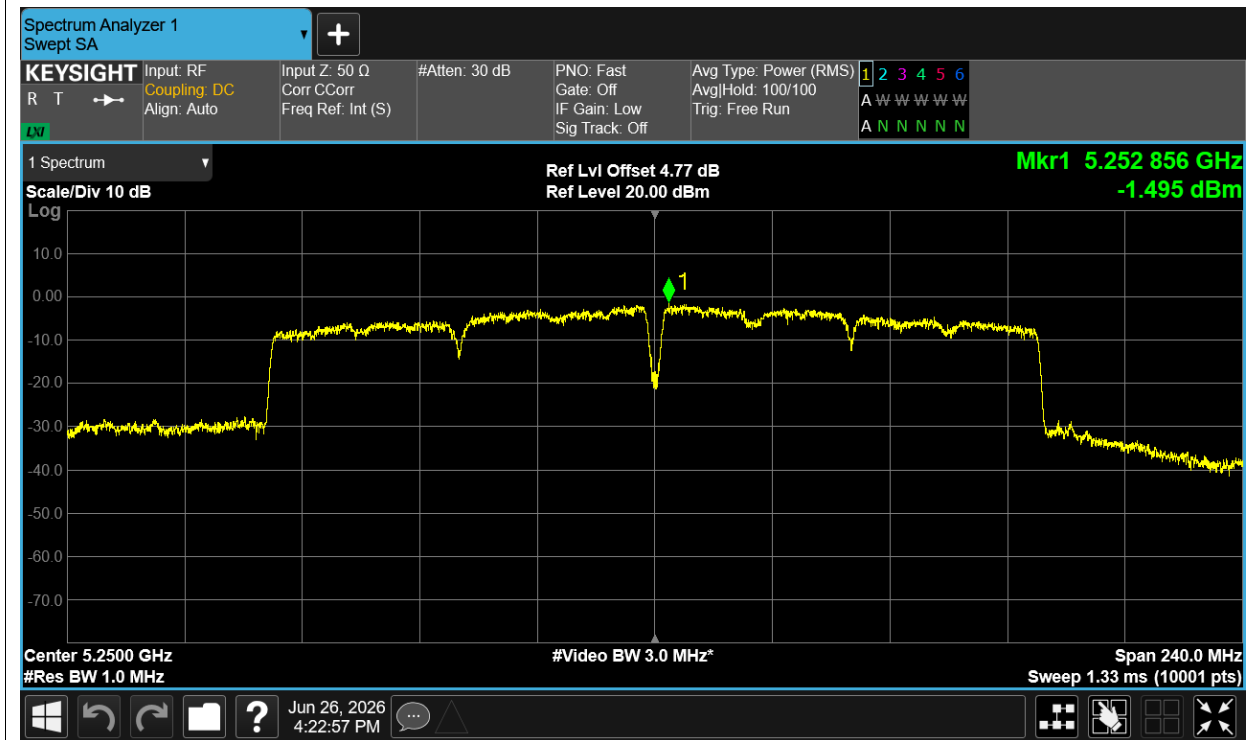
| Condition | Mode  | Frequency (MHz) | Antenna | Max PSD (dBm) | Limit (dBm) | Verdict |
|-----------|-------|-----------------|---------|---------------|-------------|---------|
| NVNT      | ac160 | 5250            | Ant1    | -1.495        | 9.14        | Pass    |
| NVNT      | ac160 | 5250            | Ant2    | -2.076        | 9.14        | Pass    |
| NVNT      | ac160 | 5250            | Sum     | 1.235         | 9.14        | Pass    |
| NVNT      | ax160 | 5250            | Ant1    | -1.164        | 9.14        | Pass    |
| NVNT      | ax160 | 5250            | Ant2    | -1.423        | 9.14        | Pass    |
| NVNT      | ax160 | 5250            | Sum     | 1.719         | 9.14        | Pass    |

Note: The limits need reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

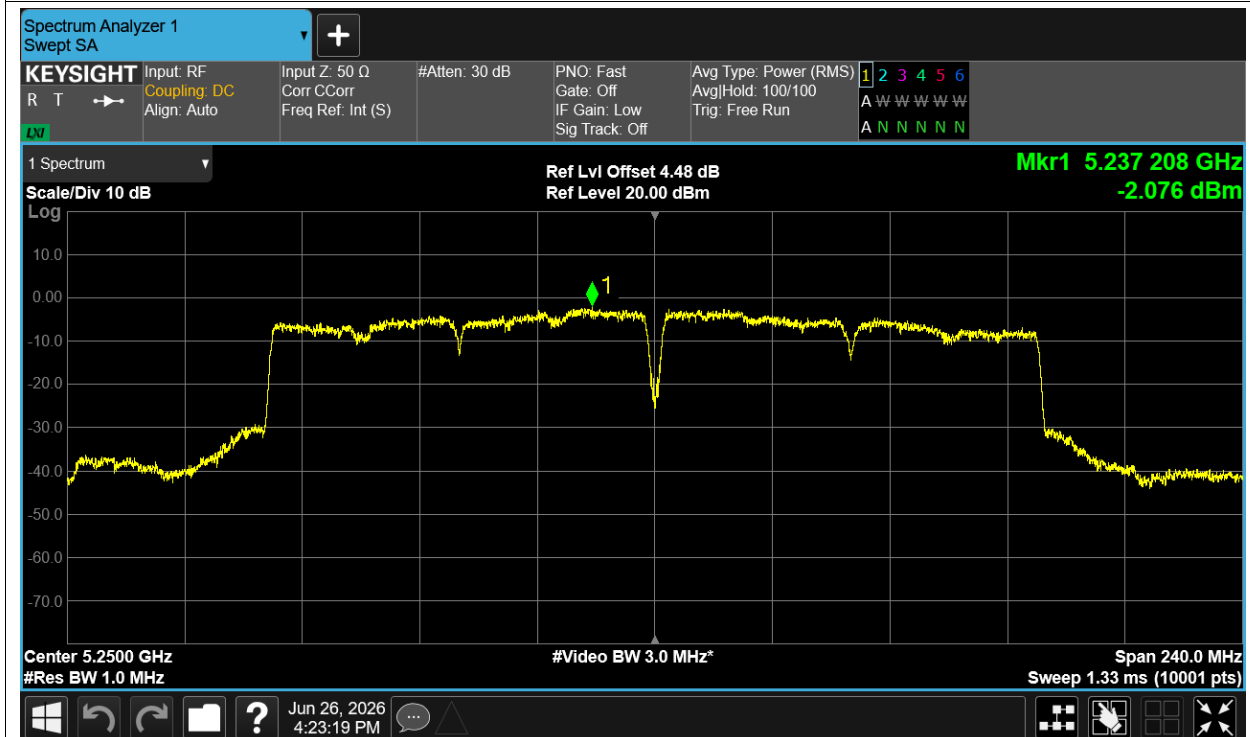
For MIMO mode: ant gain is  $4.85+10*\log_{10}(2)=4.85+3.01=7.86$  dBi, the limit is  $11-(7.86-6)=9.14$ dbm.

## Test Graphs

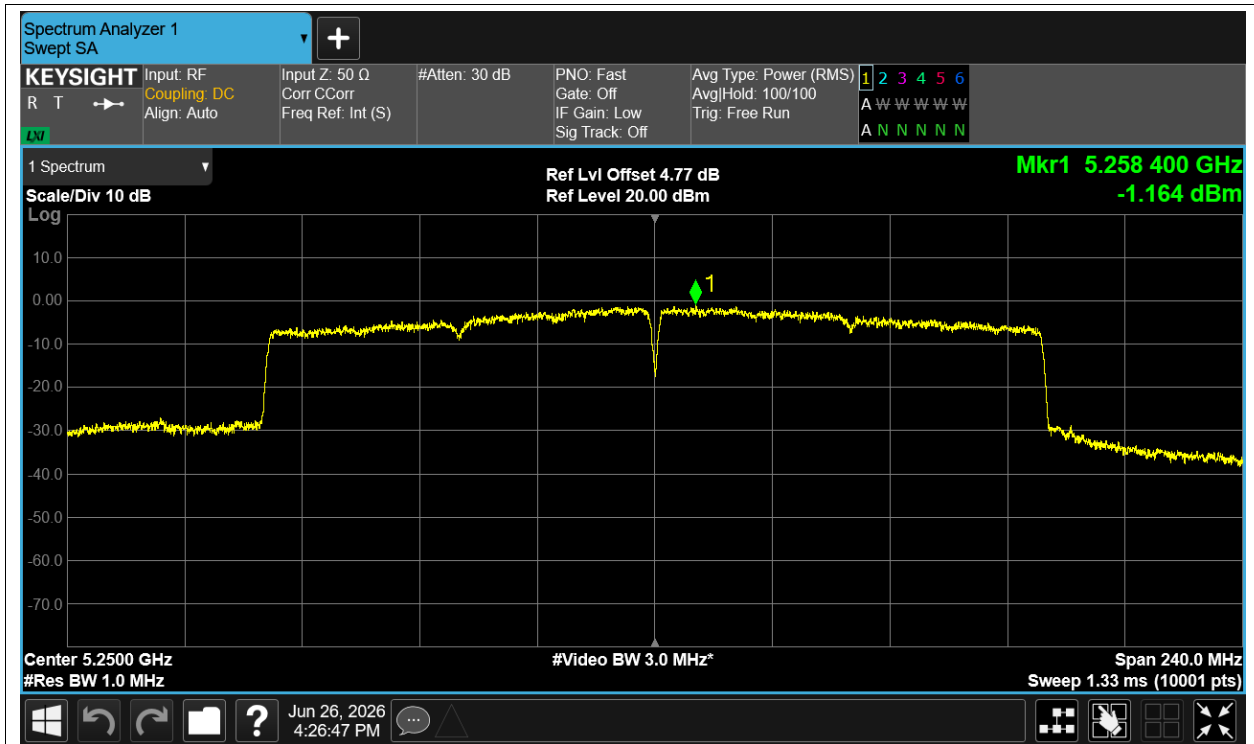
PSD NVNT ac160 5250MHz Ant1



PSD NVNT ac160 5250MHz Ant2



PSD NVNT ax160 5250MHz Ant1



PSD NVNT ax160 5250MHz Ant2

