



## Appendix A

### RF Test Data for BT (Conducted Measurement)

Product Name: Multifunctional radio

Test Model: CR-077

#### Environmental Conditions

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



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## A.1 -20dB Bandwidth

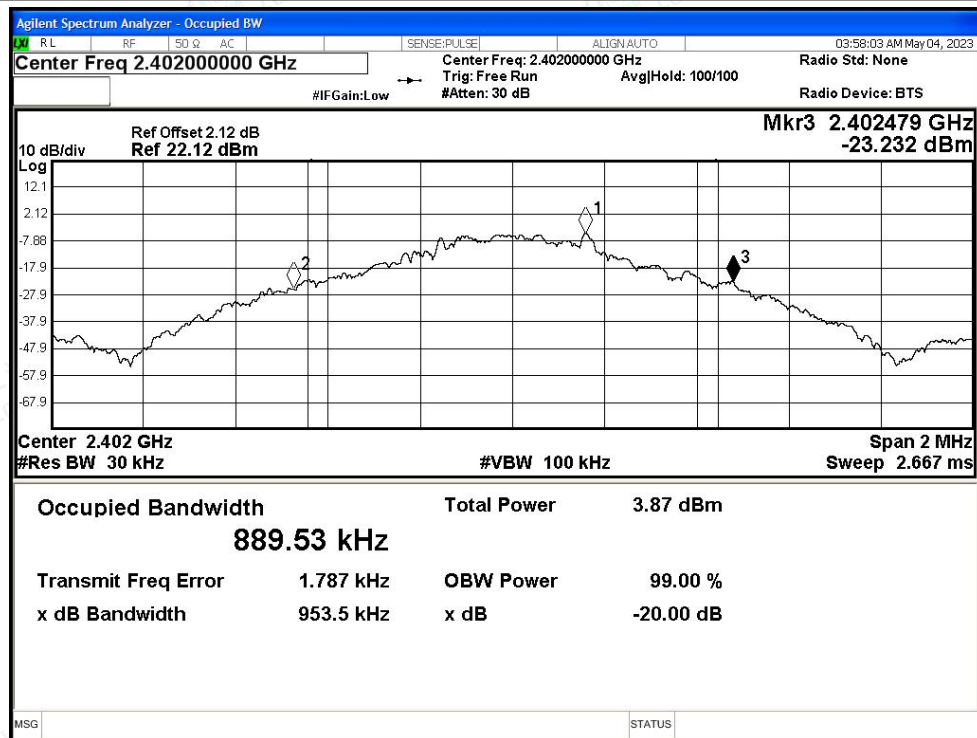
| Condition | Mode  | Frequency (MHz) | Antenna | -20 dB Bandwidth (MHz) | Limit -20 dB Bandwidth (MHz) | Verdict |
|-----------|-------|-----------------|---------|------------------------|------------------------------|---------|
| NVNT      | 1-DH5 | 2402            | Ant1    | 0.953                  | N/A                          | Pass    |
| NVNT      | 1-DH5 | 2441            | Ant1    | 1.033                  | N/A                          | Pass    |
| NVNT      | 1-DH5 | 2480            | Ant1    | 0.983                  | N/A                          | Pass    |
| NVNT      | 2-DH5 | 2402            | Ant1    | 1.283                  | N/A                          | Pass    |
| NVNT      | 2-DH5 | 2441            | Ant1    | 1.321                  | N/A                          | Pass    |
| NVNT      | 2-DH5 | 2480            | Ant1    | 1.32                   | N/A                          | Pass    |
| NVNT      | 3-DH5 | 2402            | Ant1    | 1.298                  | N/A                          | Pass    |
| NVNT      | 3-DH5 | 2441            | Ant1    | 1.288                  | N/A                          | Pass    |
| NVNT      | 3-DH5 | 2480            | Ant1    | 1.291                  | N/A                          | Pass    |



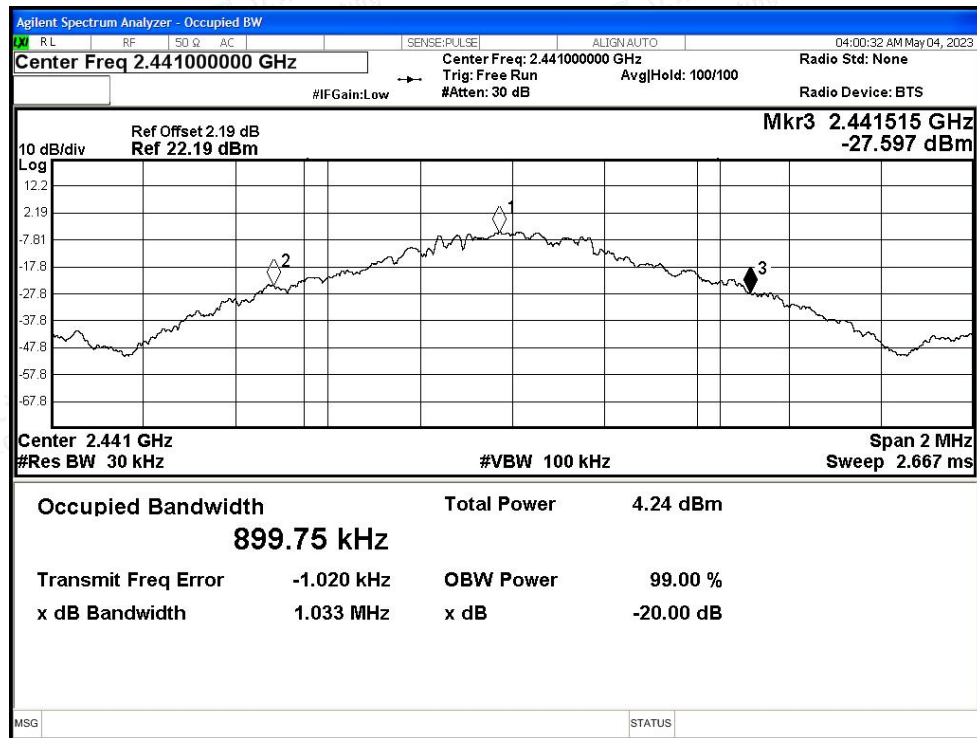


## Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

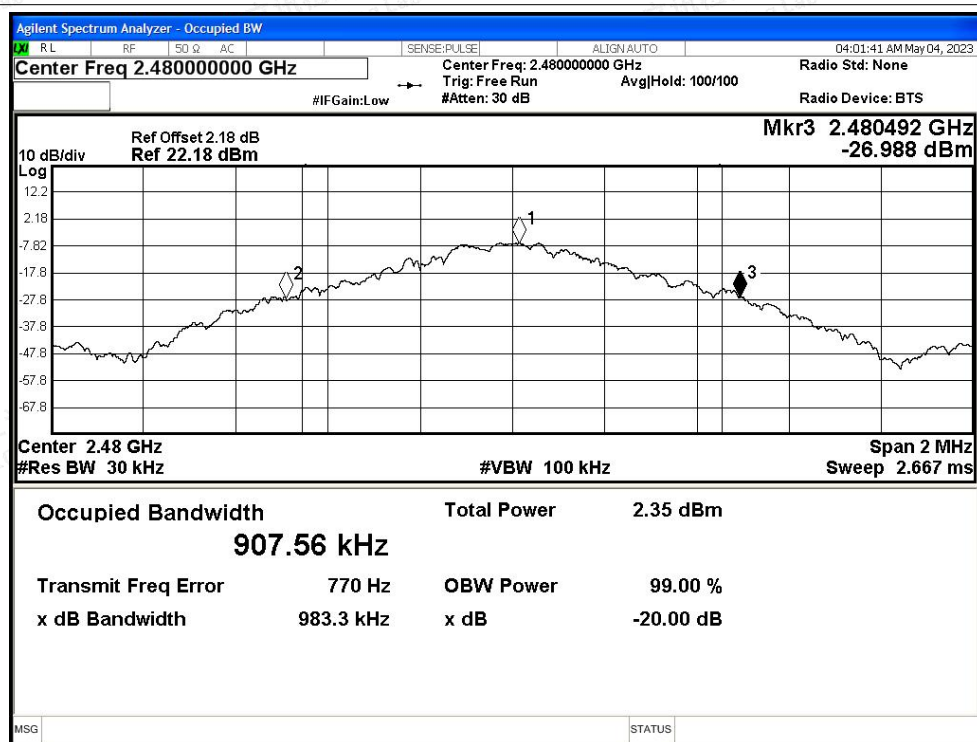


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

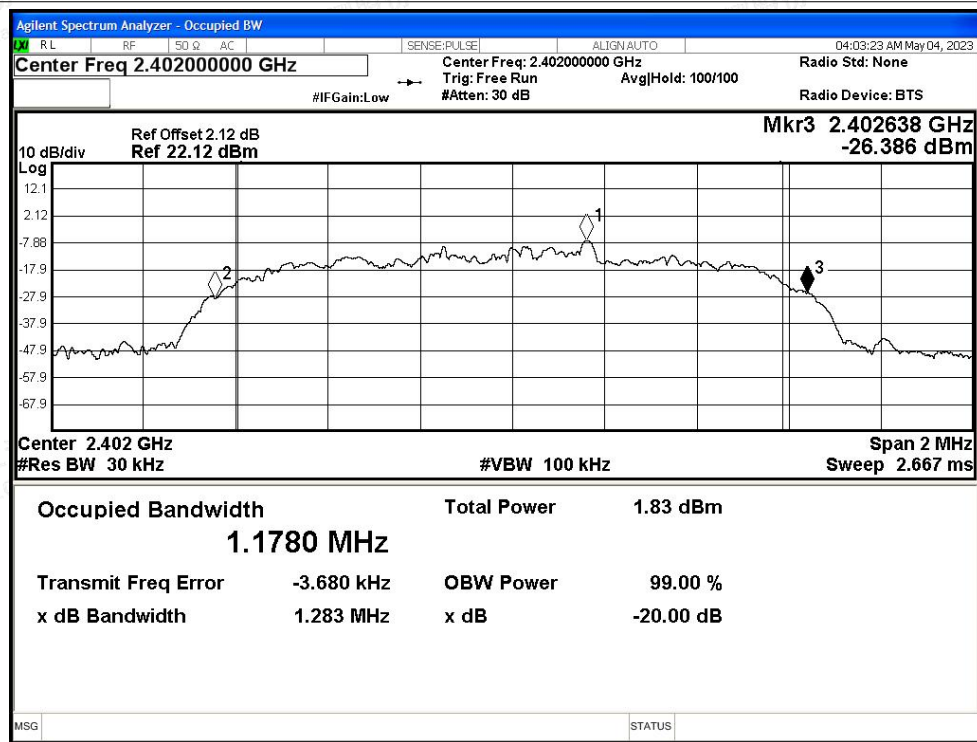




## -20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



## -20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



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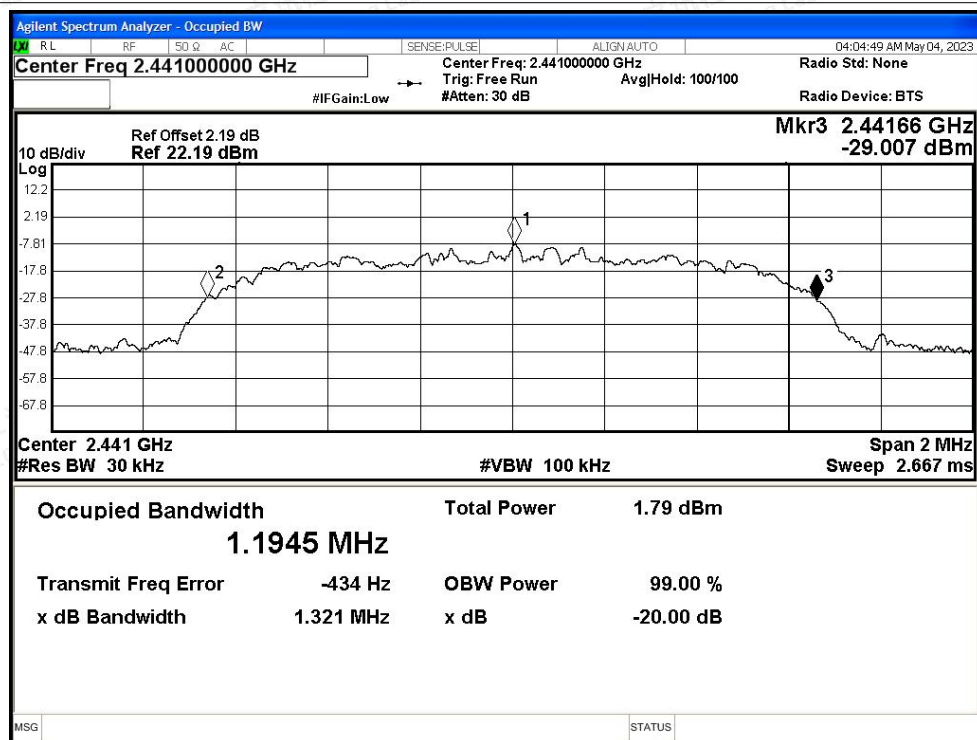
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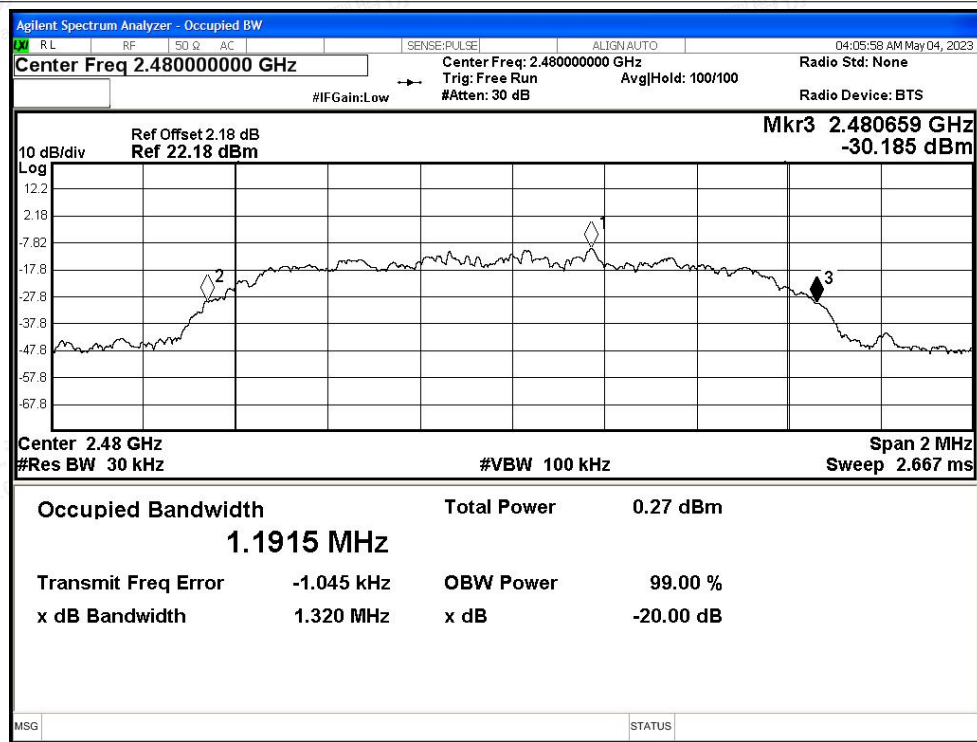
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## -20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



## -20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



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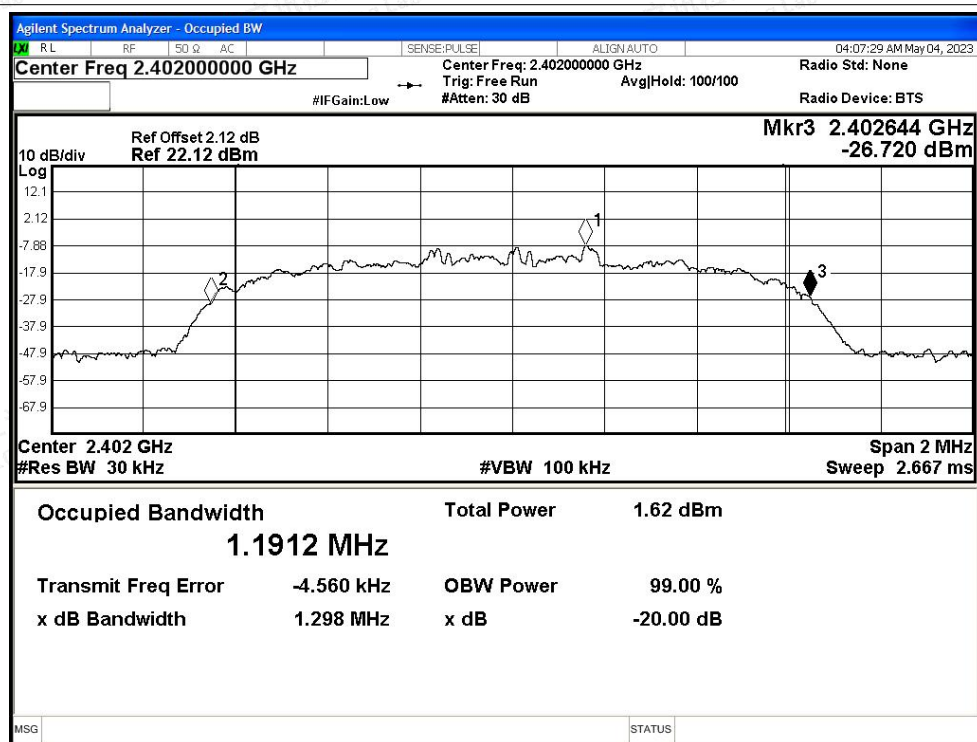
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Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

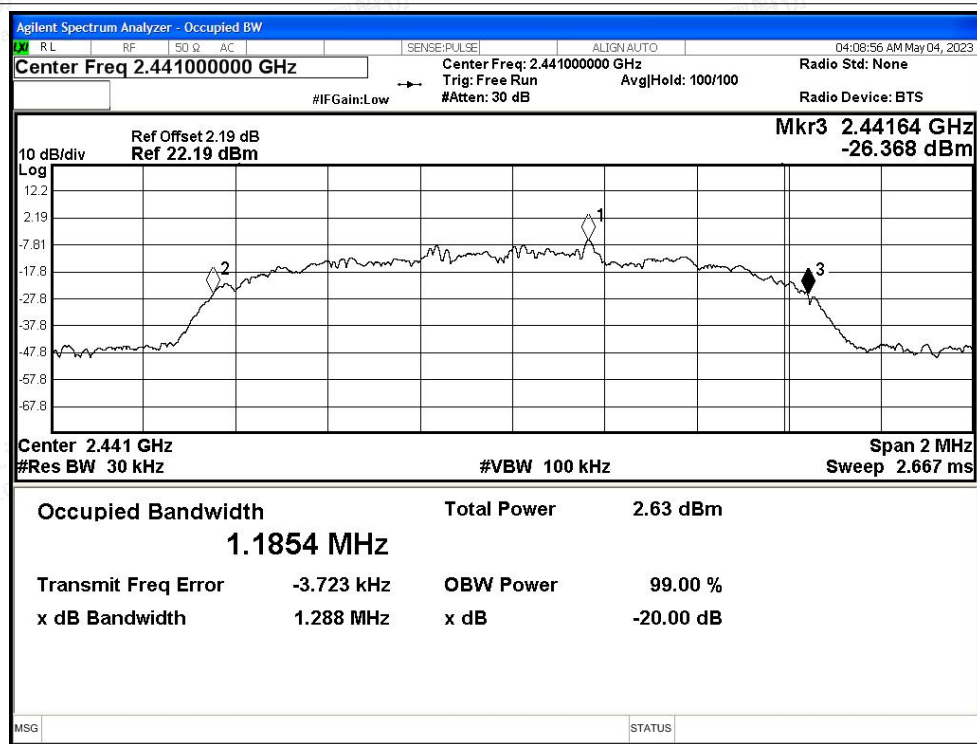
Scan code to check authenticity



## -20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



## -20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



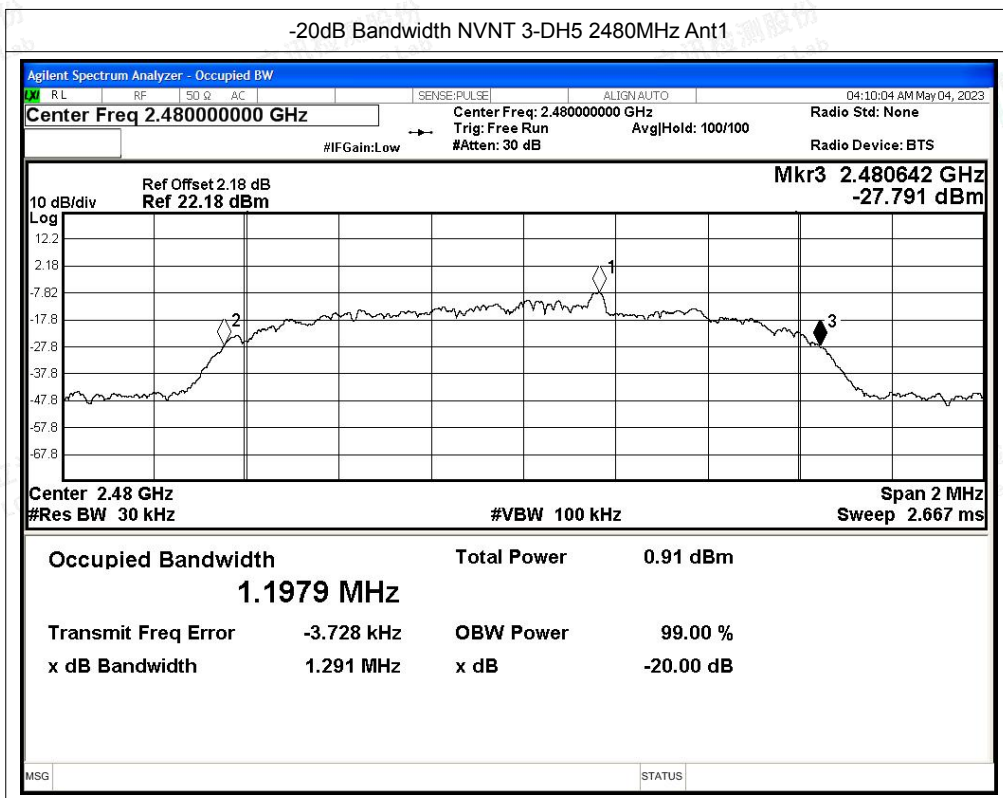
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## A.2 Maximum Conducted Output Power

| Condition | Mode  | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|-------|-----------------|---------|-----------------------|-------------|---------|
| NVNT      | 1-DH5 | 2402            | Ant1    | -2.58                 | 21          | Pass    |
| NVNT      | 1-DH5 | 2441            | Ant1    | -1.99                 | 21          | Pass    |
| NVNT      | 1-DH5 | 2480            | Ant1    | -3.83                 | 21          | Pass    |
| NVNT      | 2-DH5 | 2402            | Ant1    | -3.29                 | 21          | Pass    |
| NVNT      | 2-DH5 | 2441            | Ant1    | -2.77                 | 21          | Pass    |
| NVNT      | 2-DH5 | 2480            | Ant1    | -4.51                 | 21          | Pass    |
| NVNT      | 3-DH5 | 2402            | Ant1    | -3.18                 | 21          | Pass    |
| NVNT      | 3-DH5 | 2441            | Ant1    | -2.68                 | 21          | Pass    |
| NVNT      | 3-DH5 | 2480            | Ant1    | -4.36                 | 21          | Pass    |

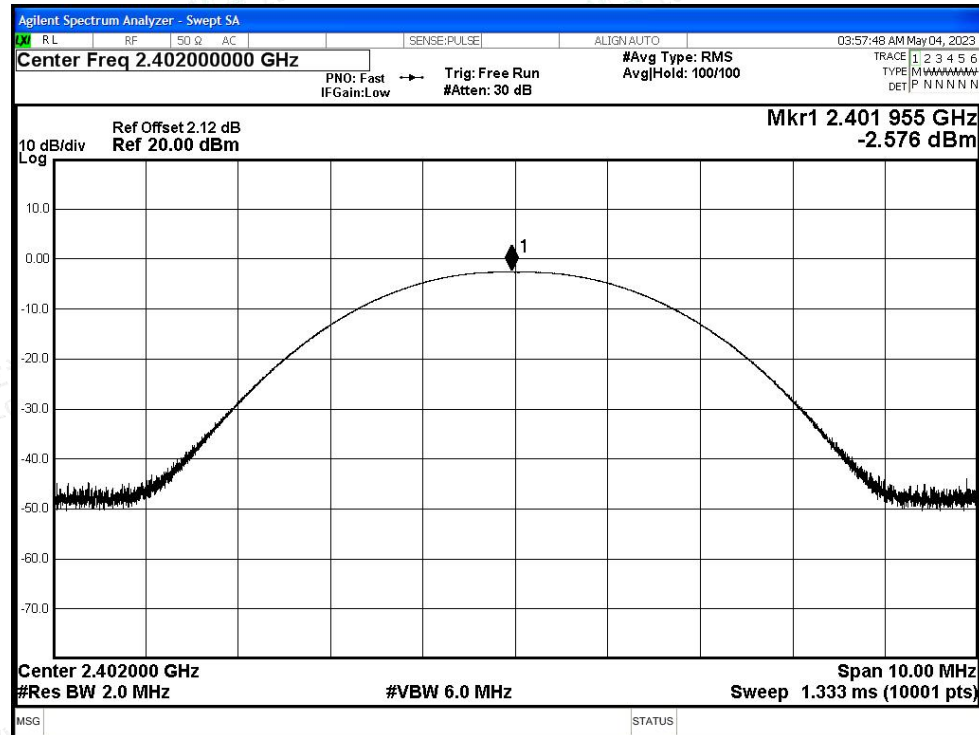




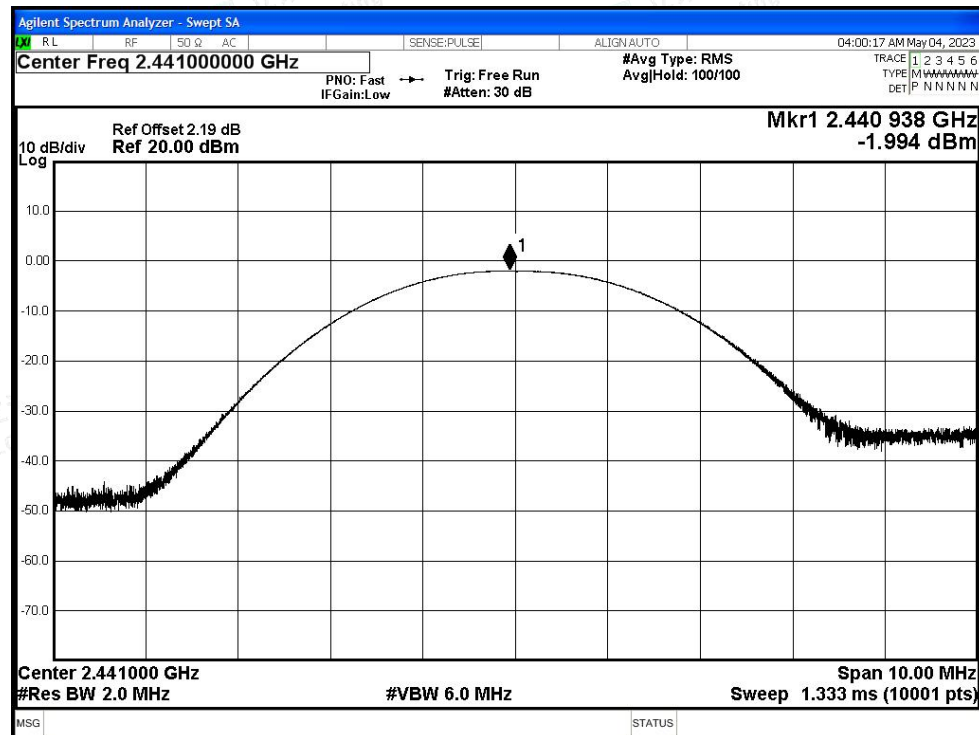


## Test Graphs

## Power NVNT 1-DH5 2402MHz Ant1

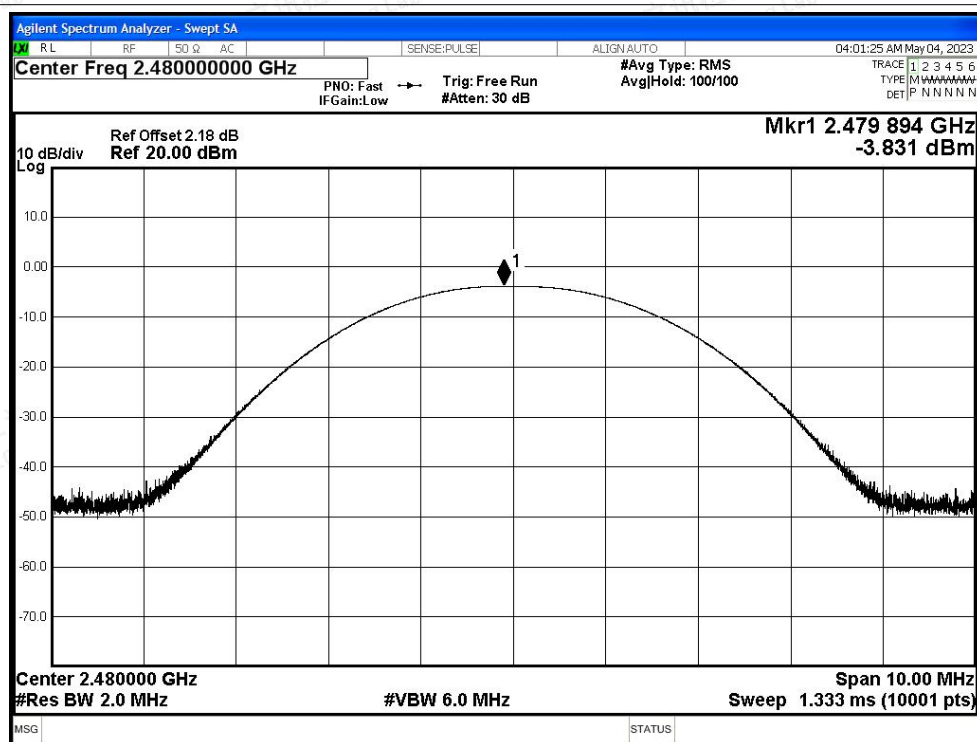


## Power NVNT 1-DH5 2441MHz Ant1

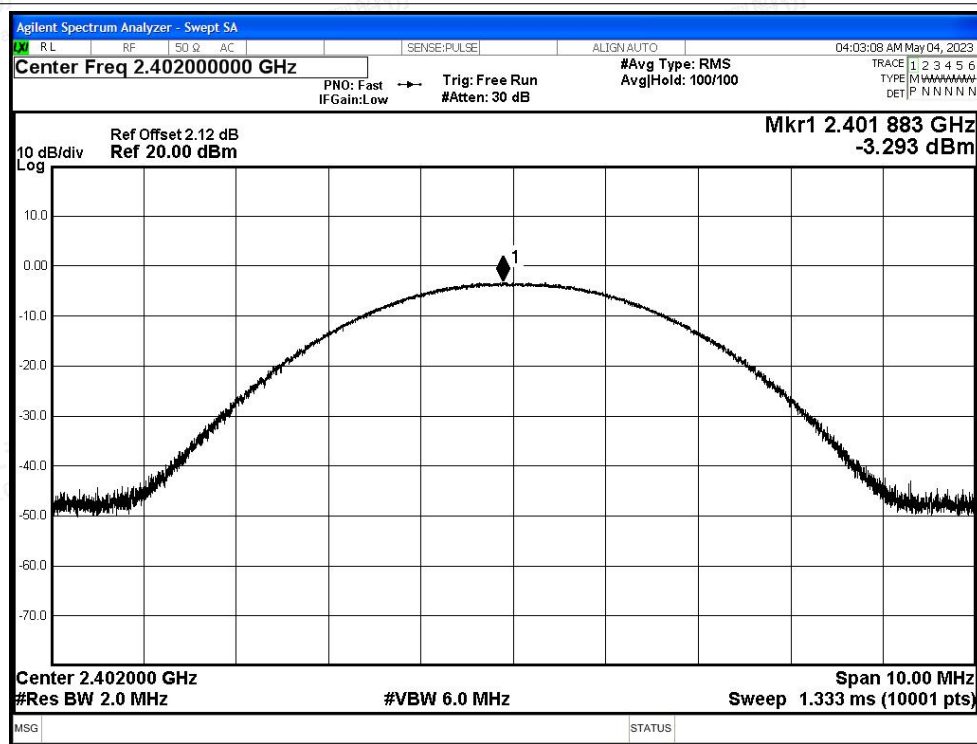




## Power NVNT 1-DH5 2480MHz Ant1



## Power NVNT 2-DH5 2402MHz Ant1



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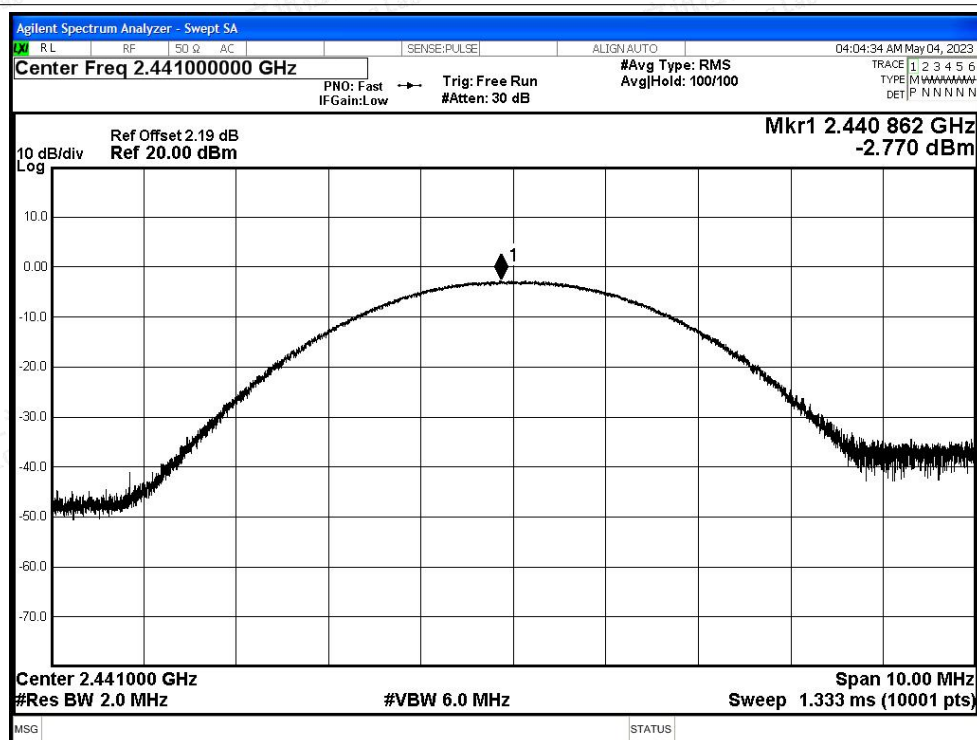
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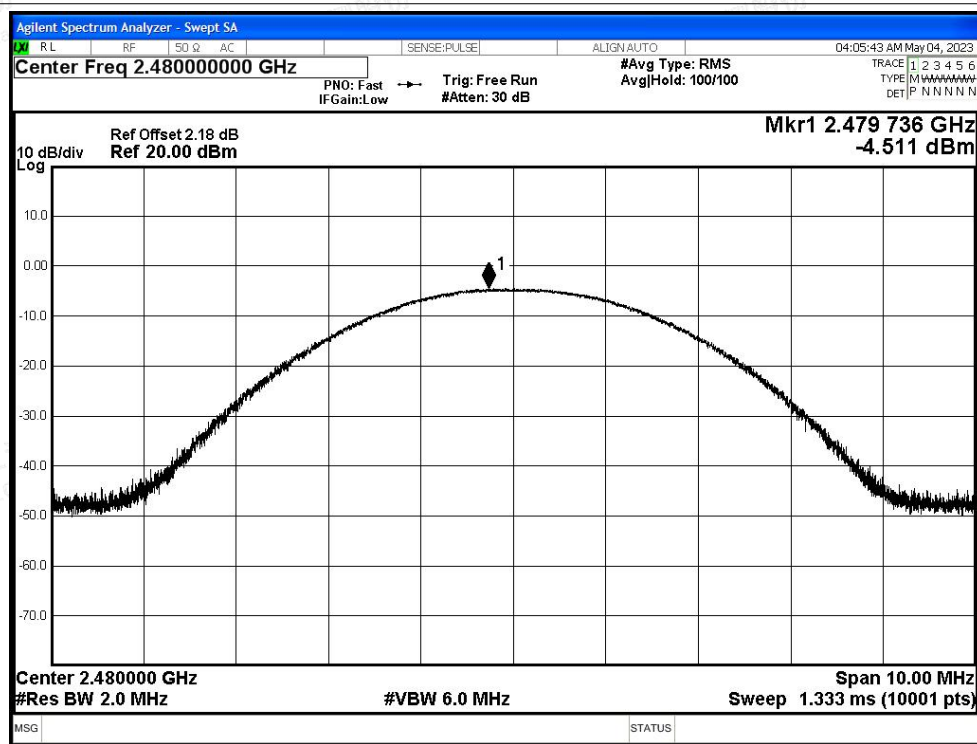
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## Power NVNT 2-DH5 2441MHz Ant1

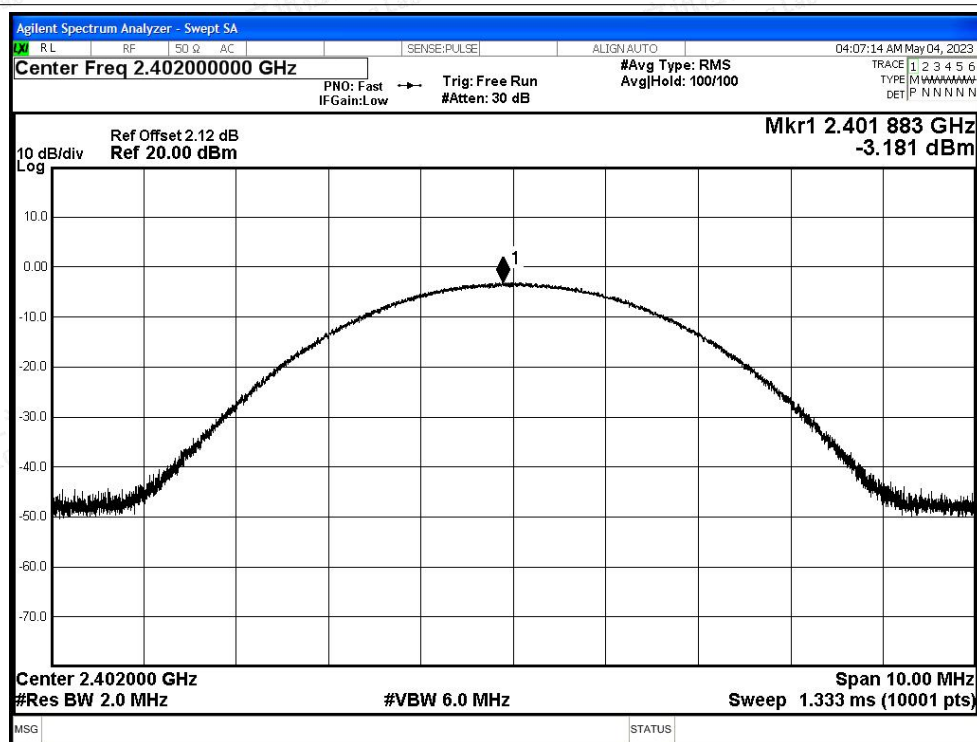


## Power NVNT 2-DH5 2480MHz Ant1

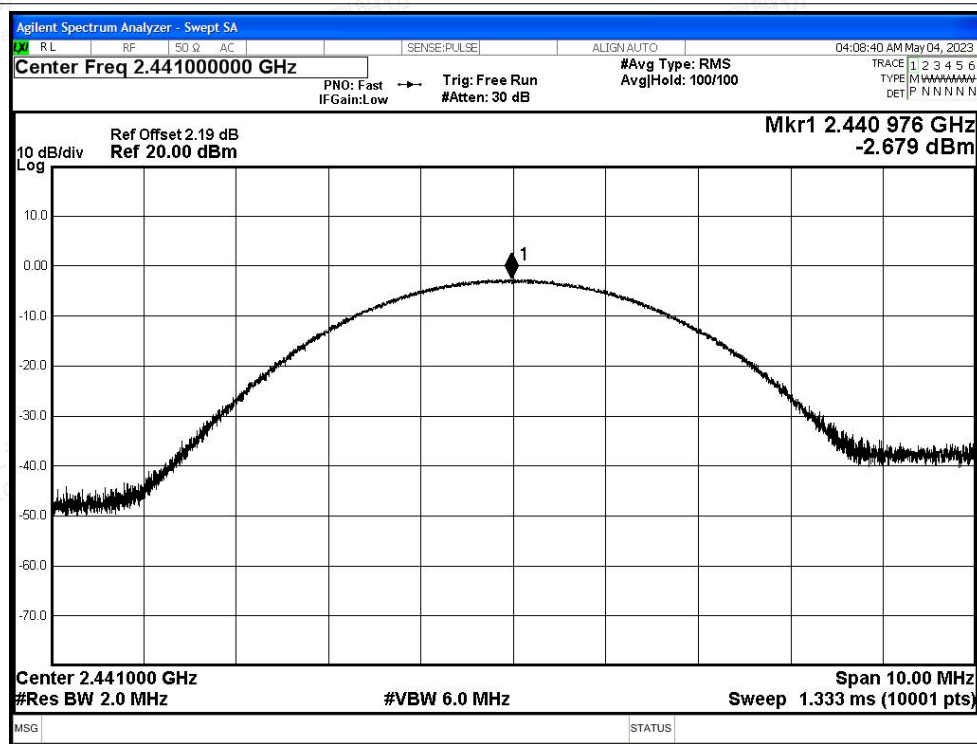


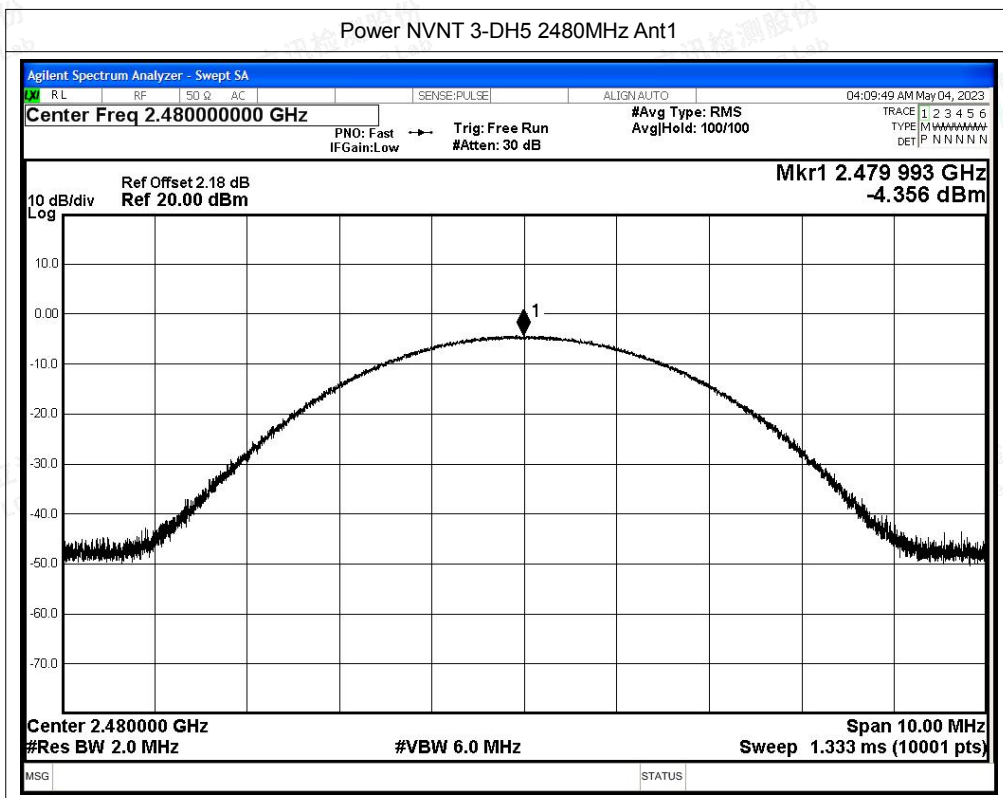


## Power NVNT 3-DH5 2402MHz Ant1



## Power NVNT 3-DH5 2441MHz Ant1







### A.3 Carrier Frequencies Separation

| Condition | Mode  | Antenna | Hopping Freq1 (MHz) | Hopping Freq2 (MHz) | HFS (MHz) | Limit (MHz) | Verdict |
|-----------|-------|---------|---------------------|---------------------|-----------|-------------|---------|
| NVNT      | 1-DH5 | Ant1    | 2402.16             | 2402.986            | 0.826     | 0.689       | Pass    |
| NVNT      | 2-DH5 | Ant1    | 2401.846            | 2403.08             | 1.234     | 0.881       | Pass    |
| NVNT      | 3-DH5 | Ant1    | 2402.08             | 2403.146            | 1.066     | 0.865       | Pass    |

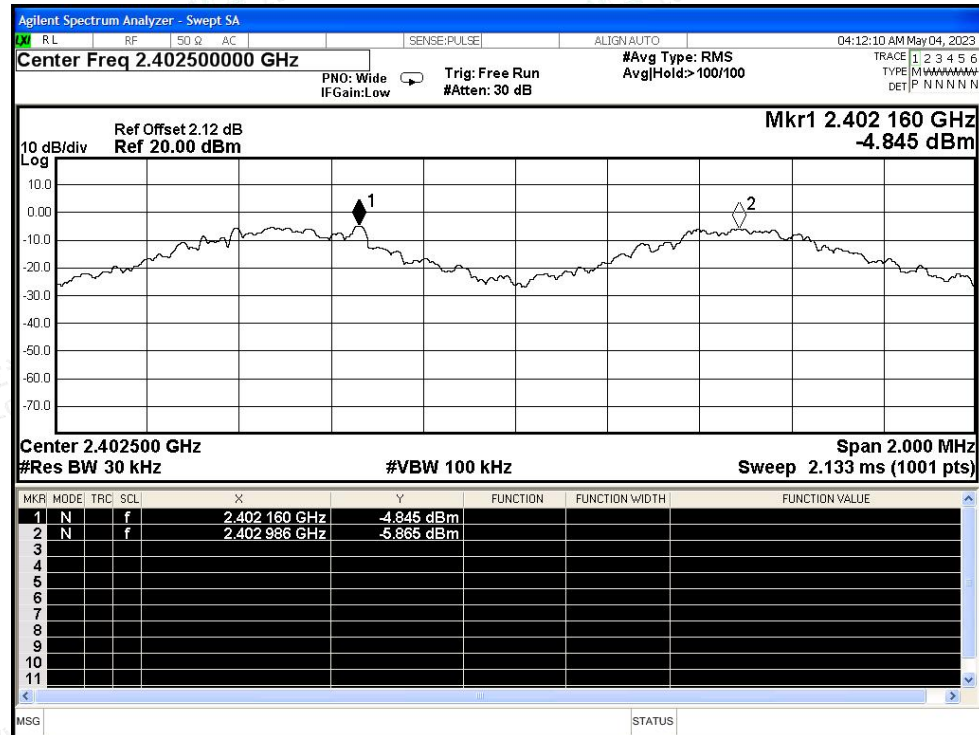




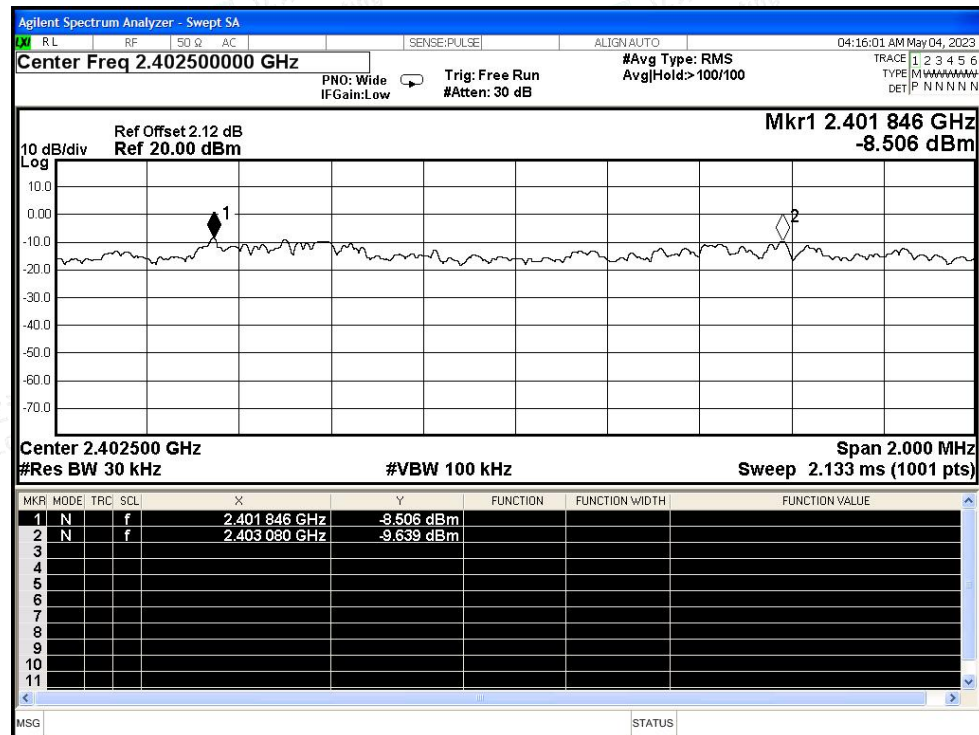


## Test Graphs

## CFS NVNT 1-DH5 2402MHz Ant1

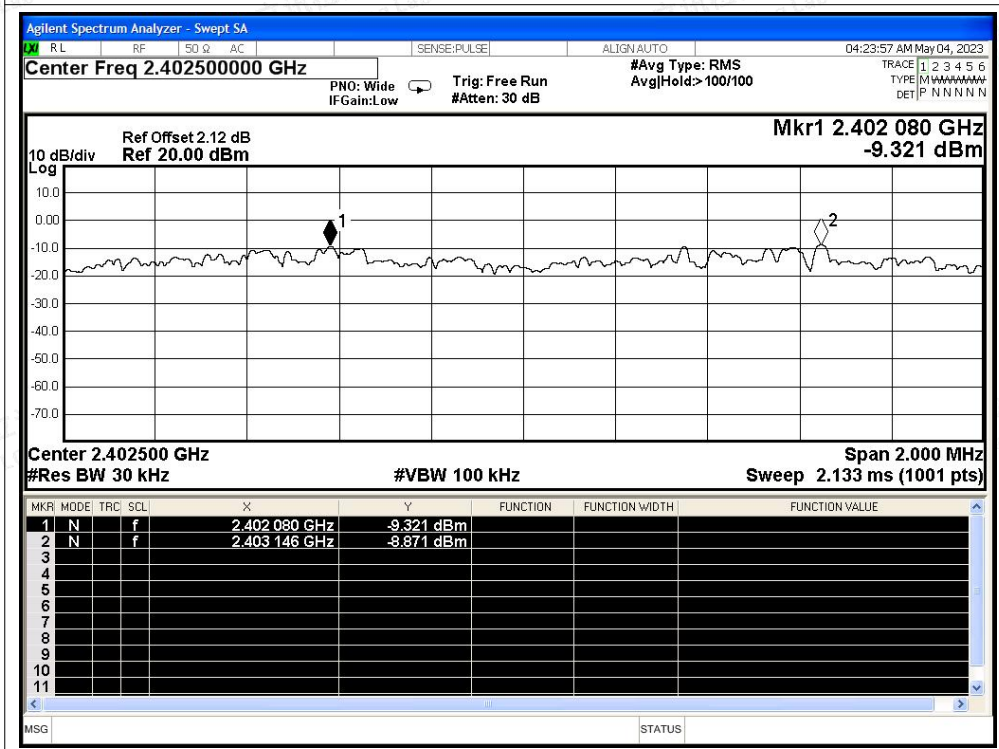


## CFS NVNT 2-DH5 2402MHz Ant1





## CFS NVNT 3-DH5 2402MHz Ant1





## A.4 Dwell Time

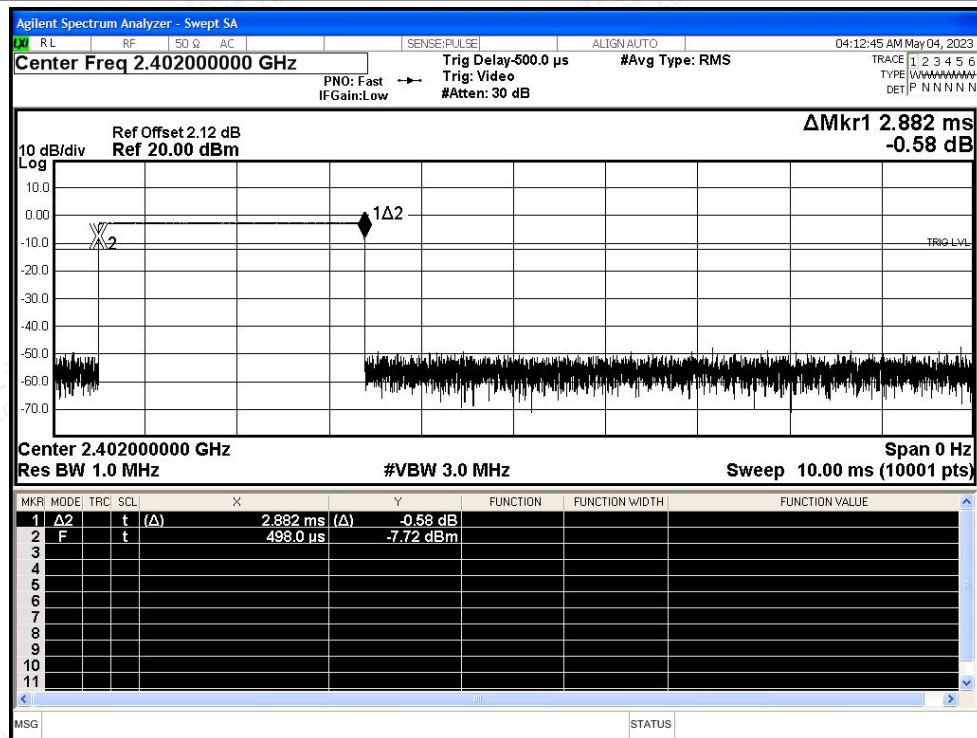
| Condition | Mode  | Frequency<br>(MHz) | Antenna | Pulse Time<br>(ms) | Total Dwell Time<br>(ms) | Burst<br>Count | Period Time<br>(ms) | Limit<br>(ms) | Verdict |
|-----------|-------|--------------------|---------|--------------------|--------------------------|----------------|---------------------|---------------|---------|
| NVNT      | 1-DH5 | 2402               | Ant1    | 2.882              | 328.548                  | 114            | 31600               | 400           | Pass    |
| NVNT      | 2-DH5 | 2402               | Ant1    | 2.88               | 273.6                    | 95             | 31600               | 400           | Pass    |
| NVNT      | 3-DH5 | 2402               | Ant1    | 2.887              | 291.587                  | 101            | 31600               | 400           | Pass    |



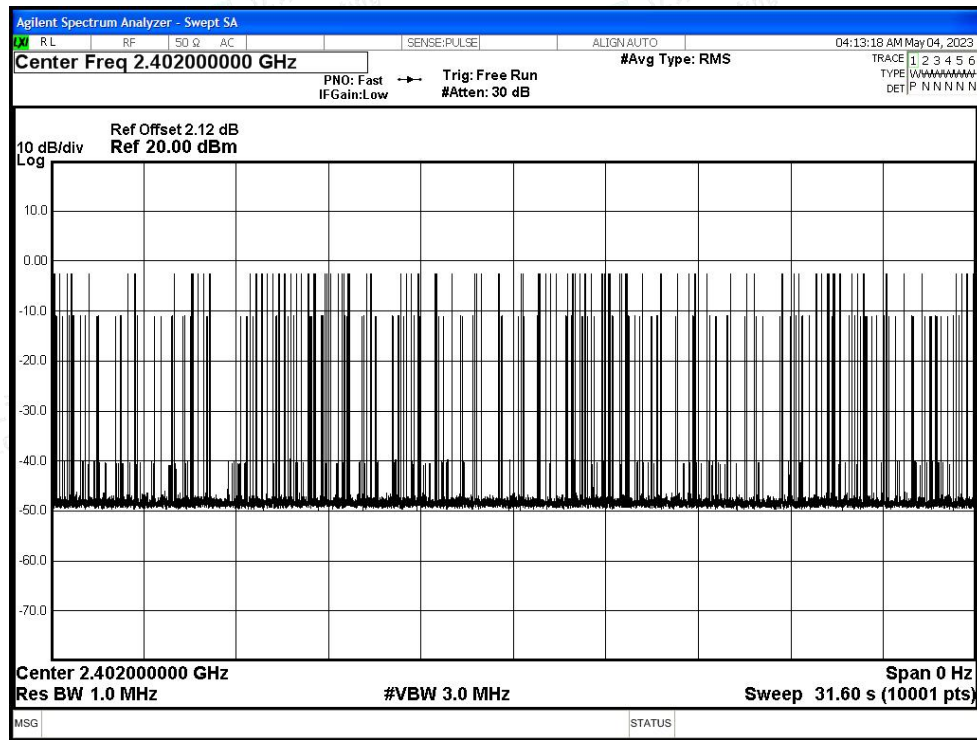


## Test Graphs

## Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



## Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



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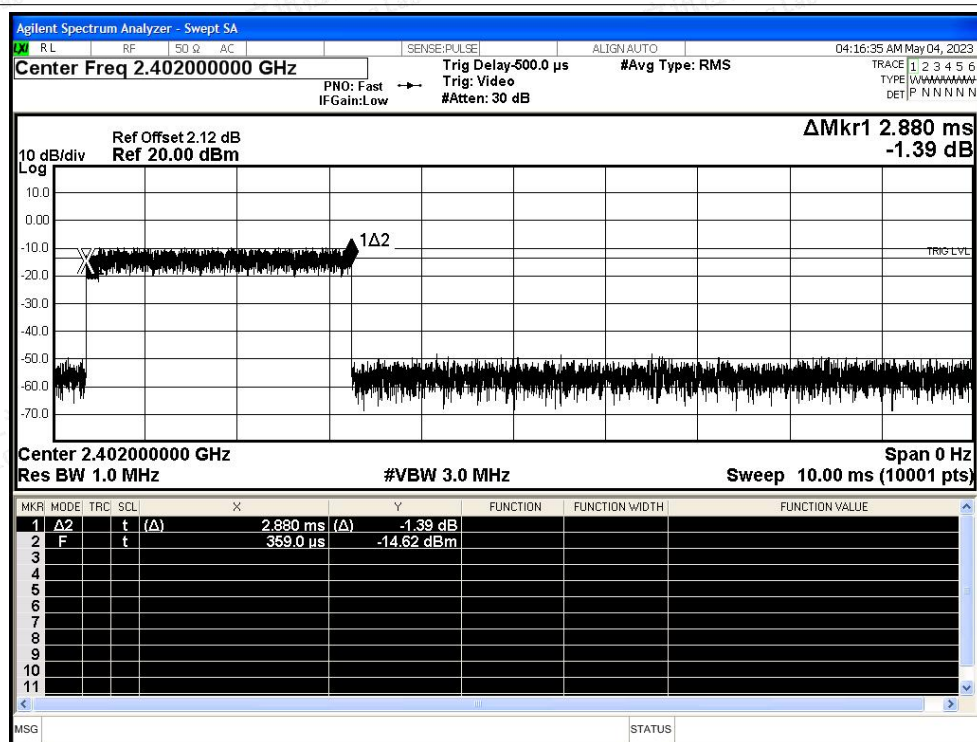
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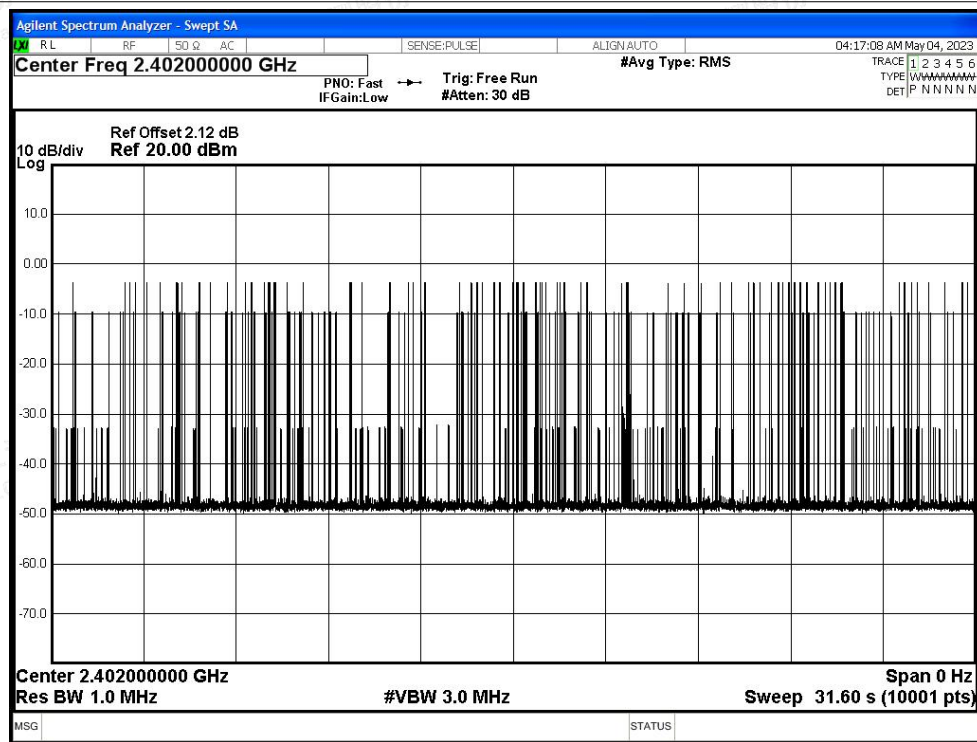
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## Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

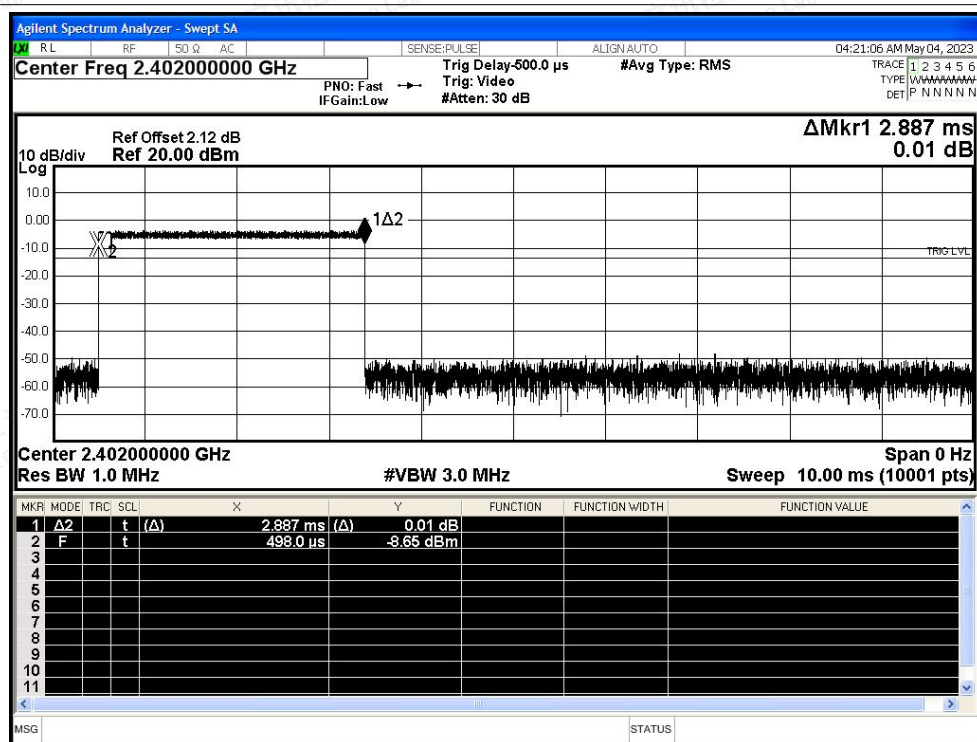


## Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

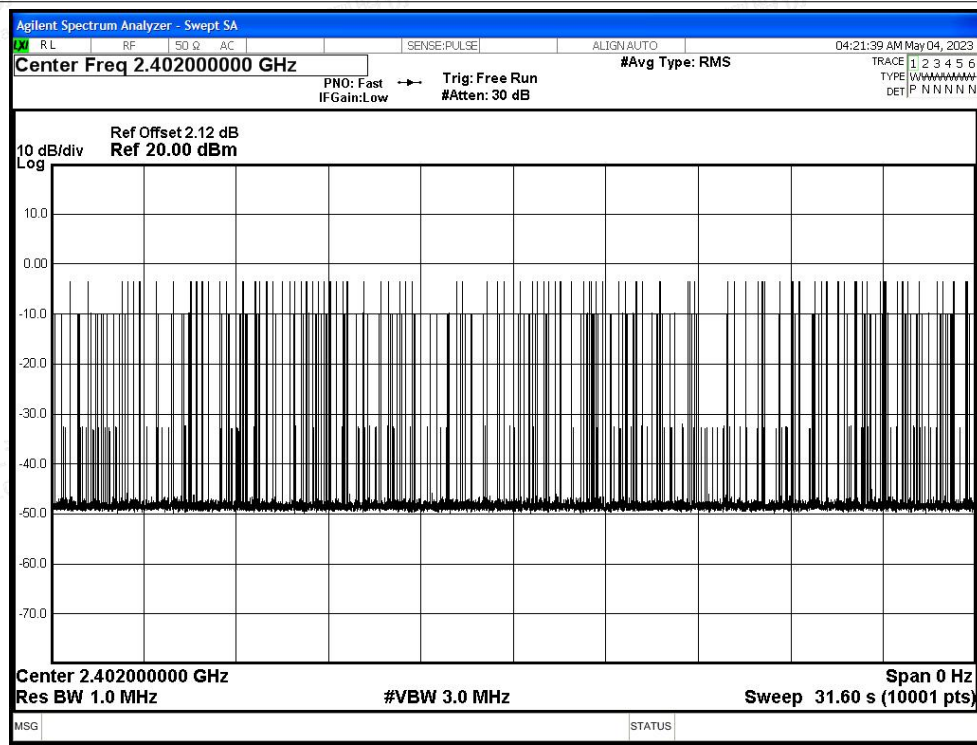




## Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



## Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated



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## A.5 Number of Hopping Channel

| Condition | Mode  | Antenna | Hopping Number | Limit | Verdict |
|-----------|-------|---------|----------------|-------|---------|
| NVNT      | 1-DH5 | Ant1    | 79             | 15    | Pass    |
| NVNT      | 2-DH5 | Ant1    | 79             | 15    | Pass    |
| NVNT      | 3-DH5 | Ant1    | 79             | 15    | Pass    |

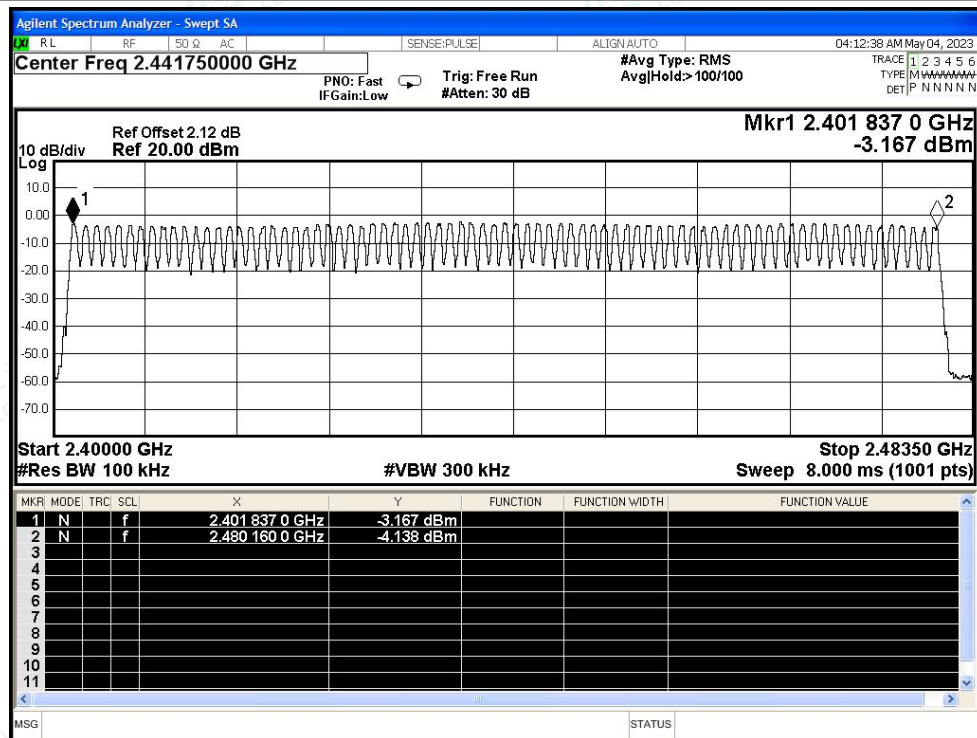




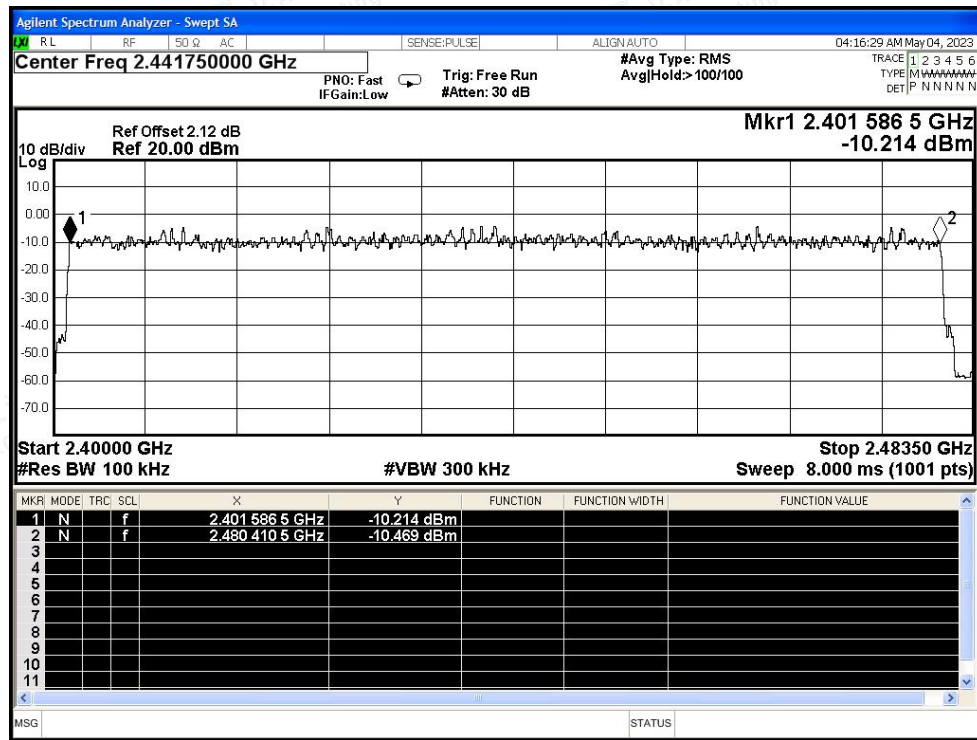


## Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1

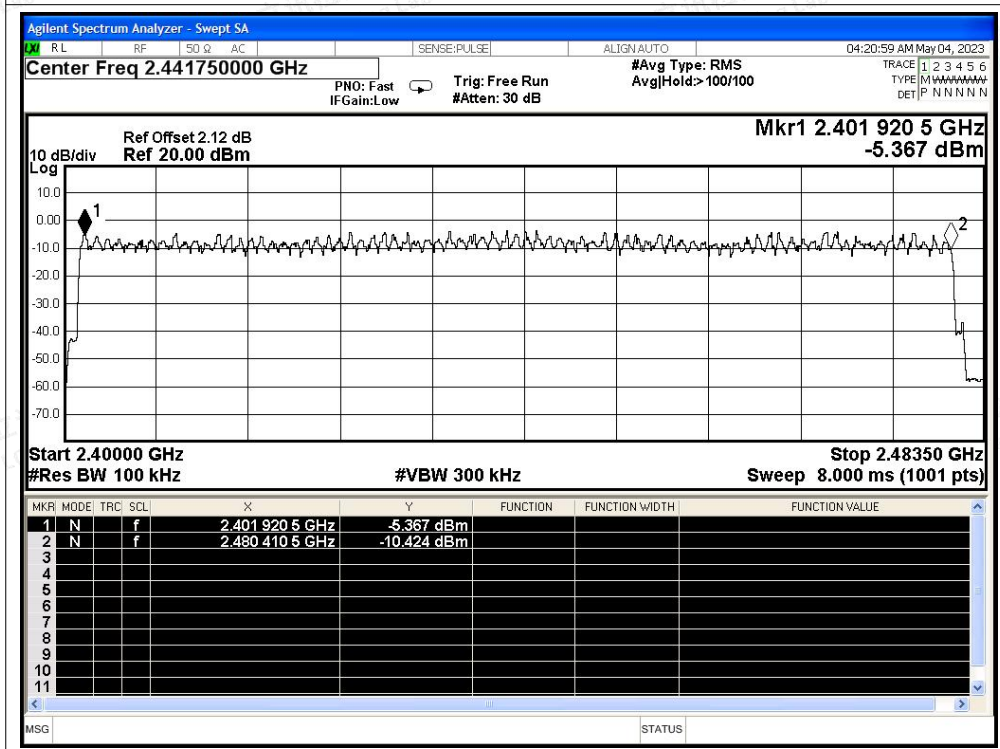


Hopping No. NVNT 2-DH5 2402MHz Ant1





Hopping No. NVNT 3-DH5 2402MHz Ant1





## A.6 Band Edge

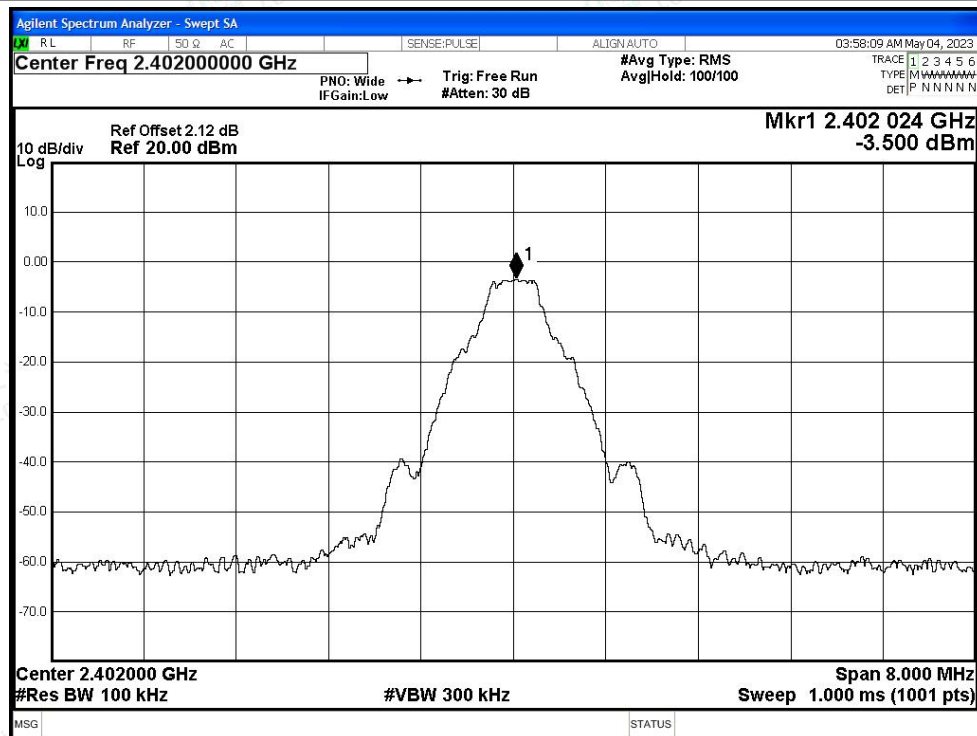
| Condition | Mode  | Frequency (MHz) | Antenna | Hopping Mode | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-------|-----------------|---------|--------------|-----------------|-------------|---------|
| NVNT      | 1-DH5 | 2402            | Ant1    | No-Hopping   | -52.28          | -20         | Pass    |
| NVNT      | 1-DH5 | 2480            | Ant1    | No-Hopping   | -52.68          | -20         | Pass    |
| NVNT      | 2-DH5 | 2402            | Ant1    | No-Hopping   | -52.79          | -20         | Pass    |
| NVNT      | 2-DH5 | 2480            | Ant1    | No-Hopping   | -48.88          | -20         | Pass    |
| NVNT      | 3-DH5 | 2402            | Ant1    | No-Hopping   | -52.31          | -20         | Pass    |
| NVNT      | 3-DH5 | 2480            | Ant1    | No-Hopping   | -52.2           | -20         | Pass    |



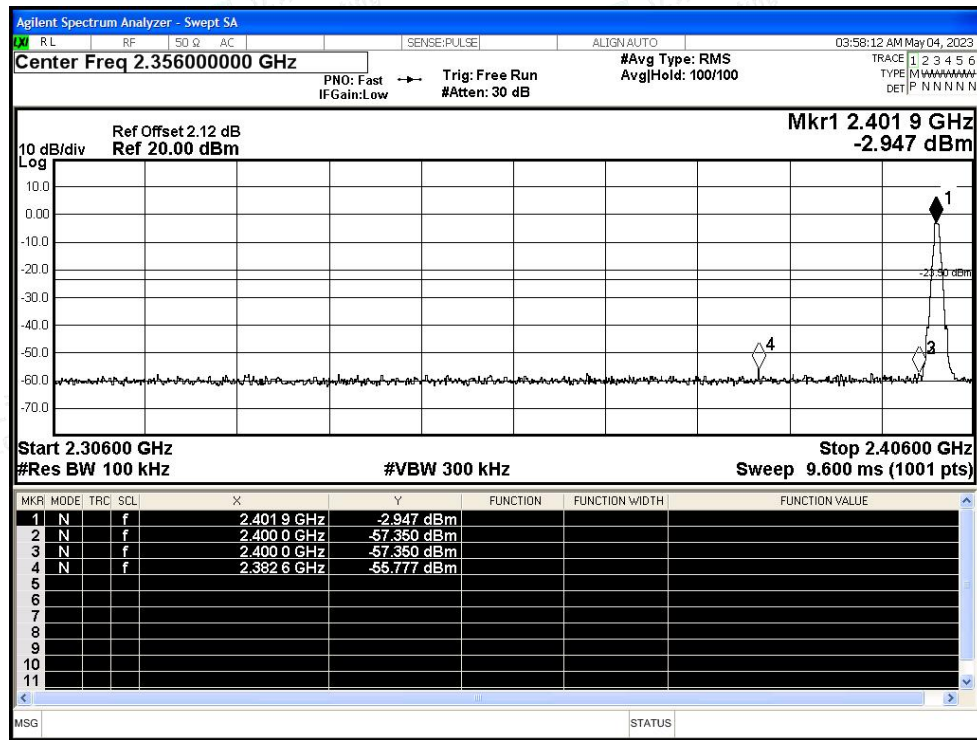


## Test Graphs

## Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



## Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



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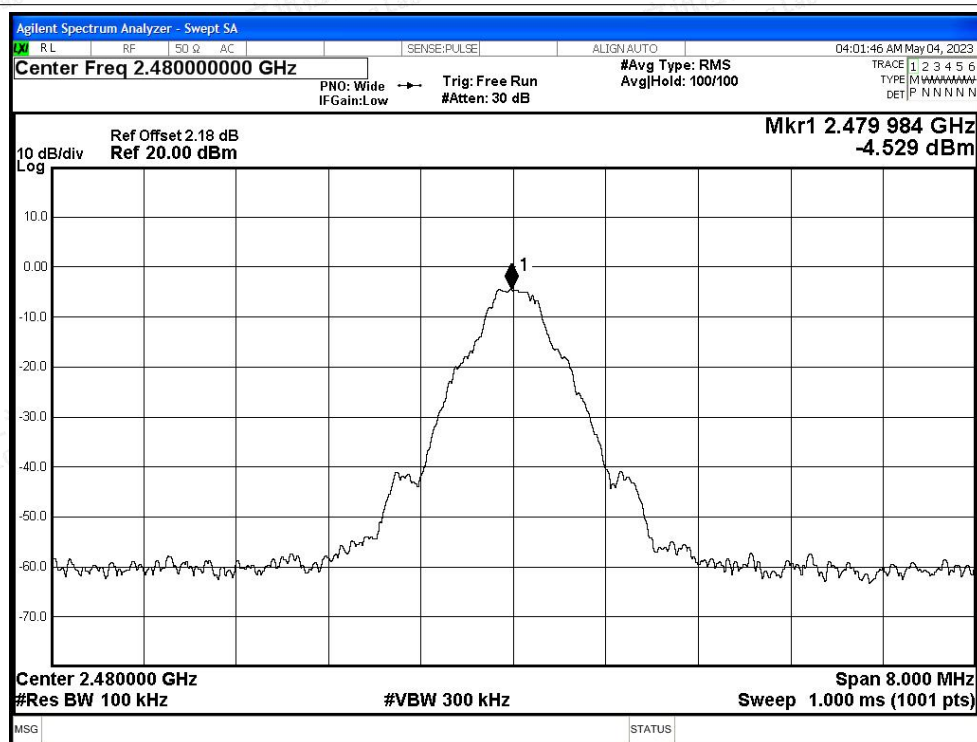
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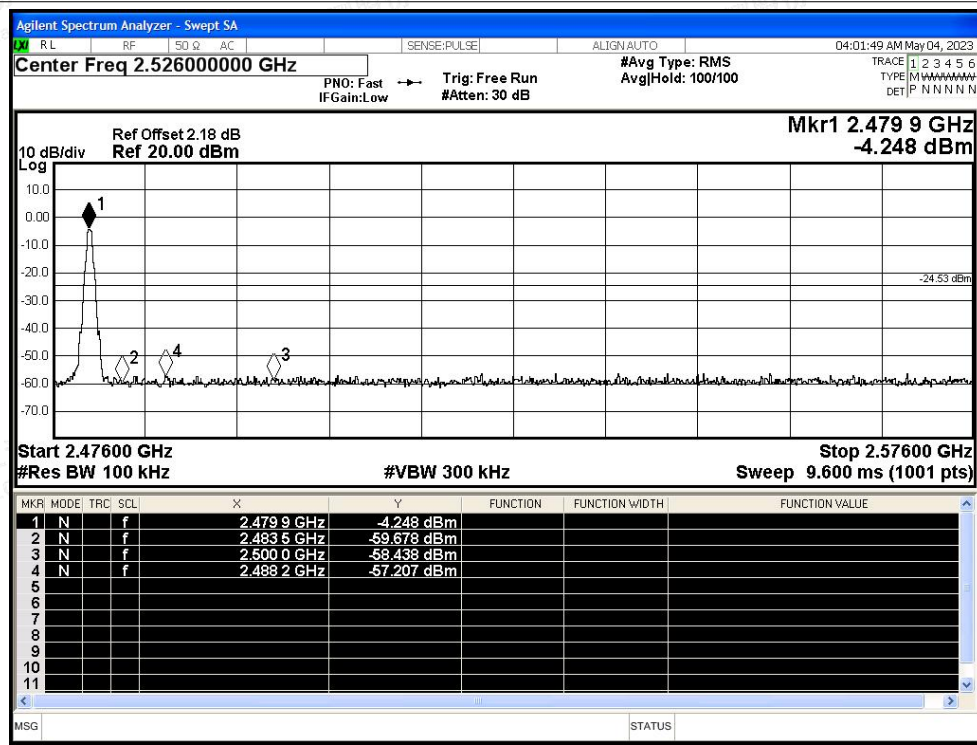
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## Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



## Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



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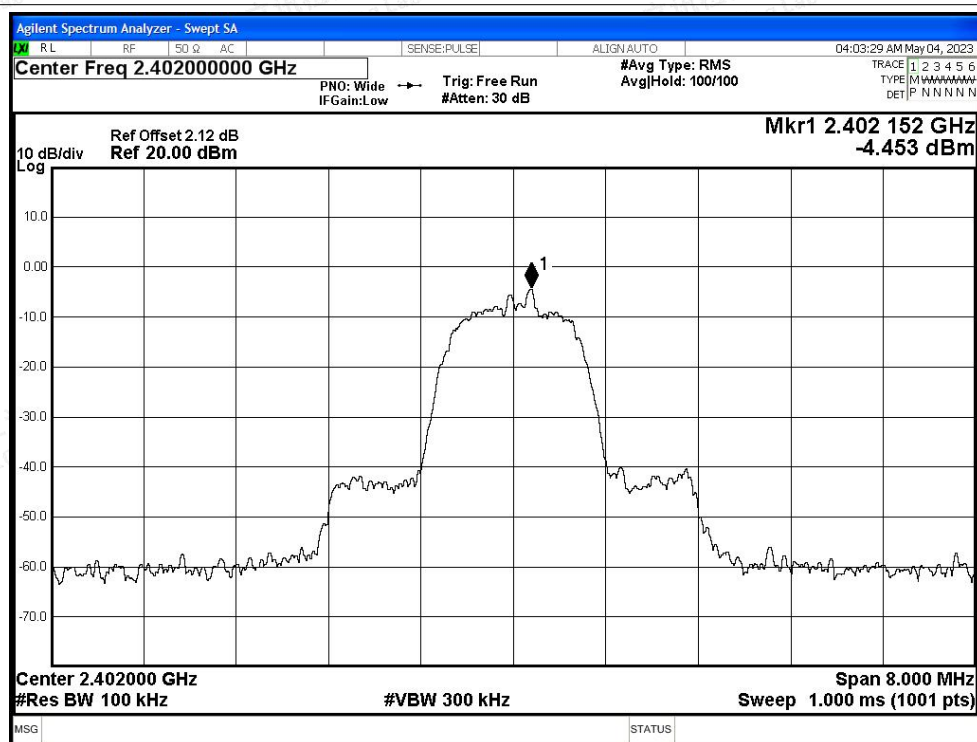
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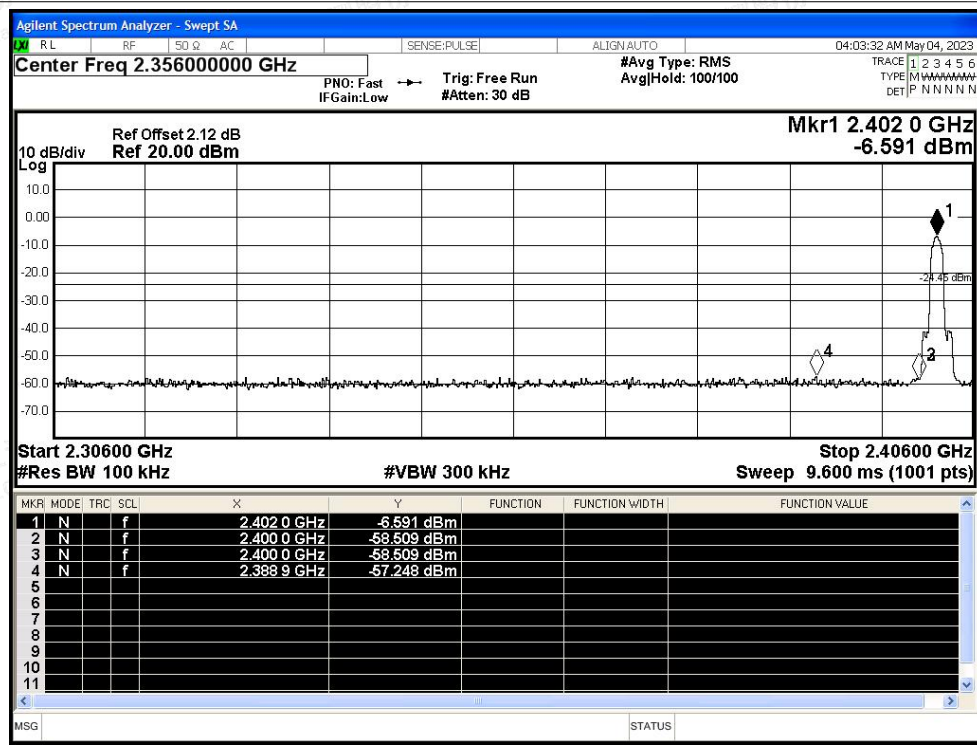
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## Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



## Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



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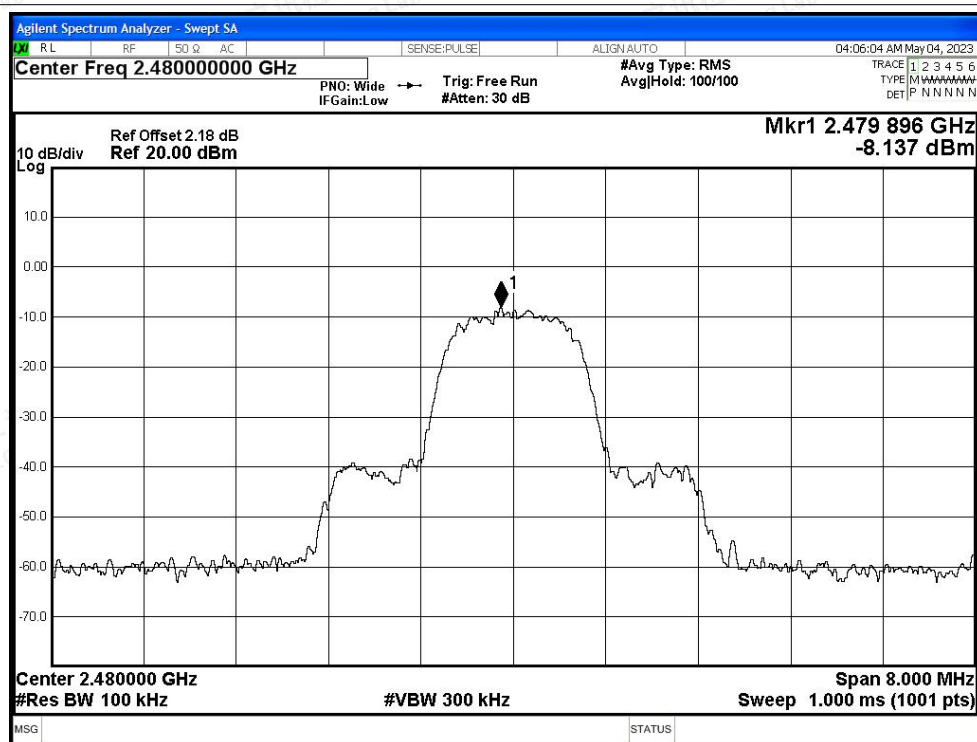
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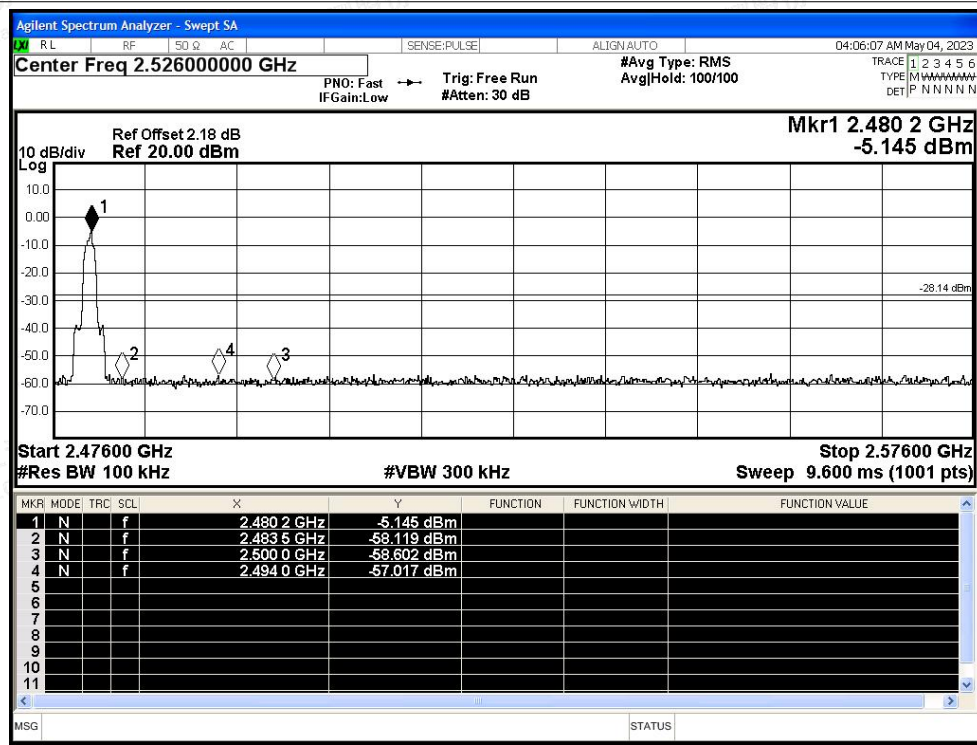




## Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



## Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



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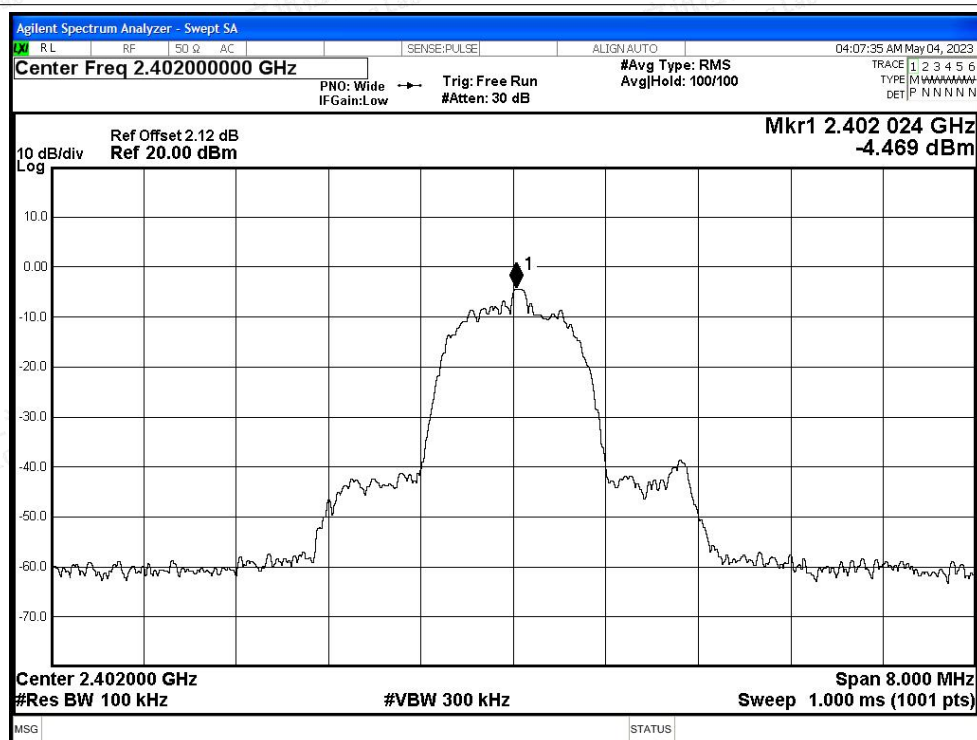
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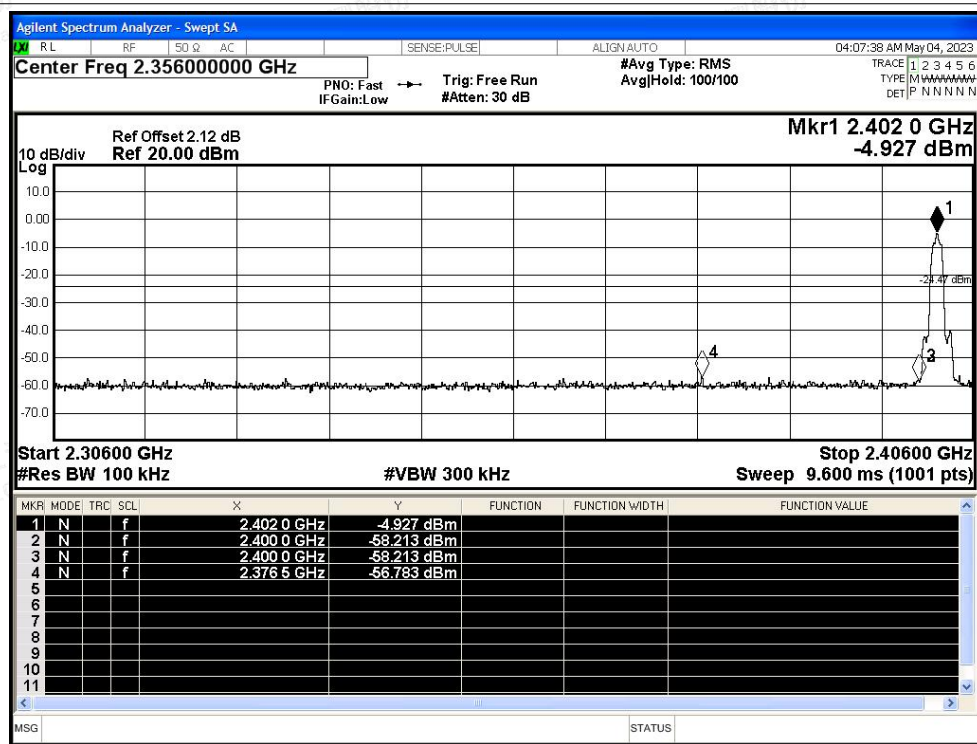
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## Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

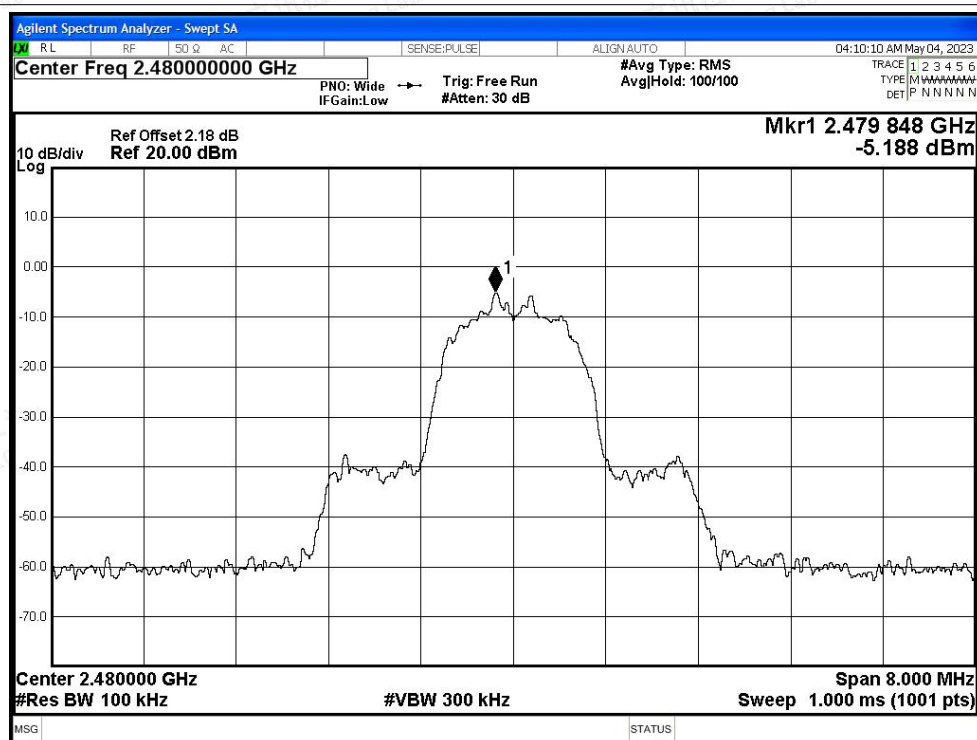


## Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission

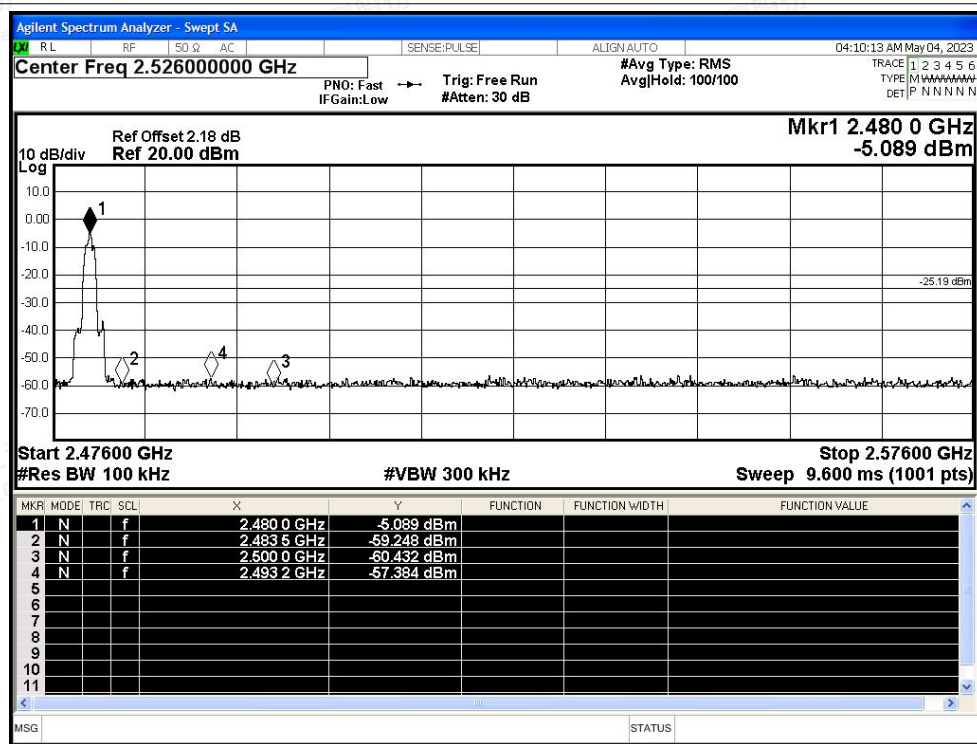




## Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



## Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission



**(Hopping)**

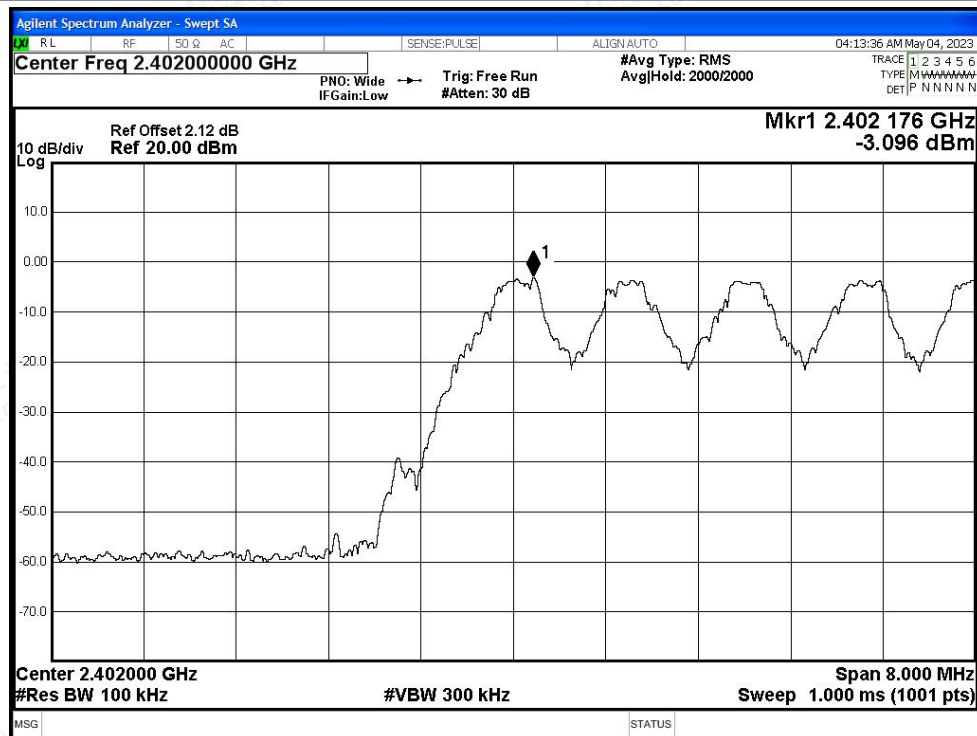
| Condition | Mode  | Frequency (MHz) | Antenna | Hopping Mode | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-------|-----------------|---------|--------------|-----------------|-------------|---------|
| NVNT      | 1-DH5 | 2402            | Ant1    | Hopping      | -52.79          | -20         | Pass    |
| NVNT      | 1-DH5 | 2480            | Ant1    | Hopping      | -52.8           | -20         | Pass    |
| NVNT      | 2-DH5 | 2402            | Ant1    | Hopping      | -51.83          | -20         | Pass    |
| NVNT      | 2-DH5 | 2480            | Ant1    | Hopping      | -51.54          | -20         | Pass    |
| NVNT      | 3-DH5 | 2402            | Ant1    | Hopping      | -49.15          | -20         | Pass    |
| NVNT      | 3-DH5 | 2480            | Ant1    | Hopping      | -49.21          | -20         | Pass    |



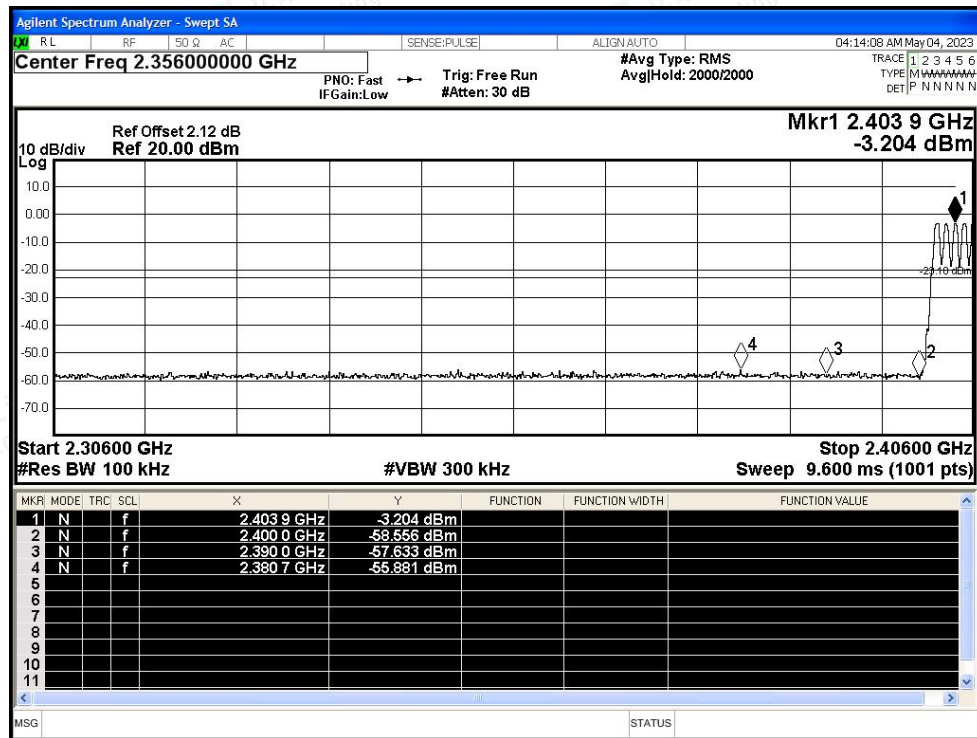


## Test Graphs

## Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



## Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



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