

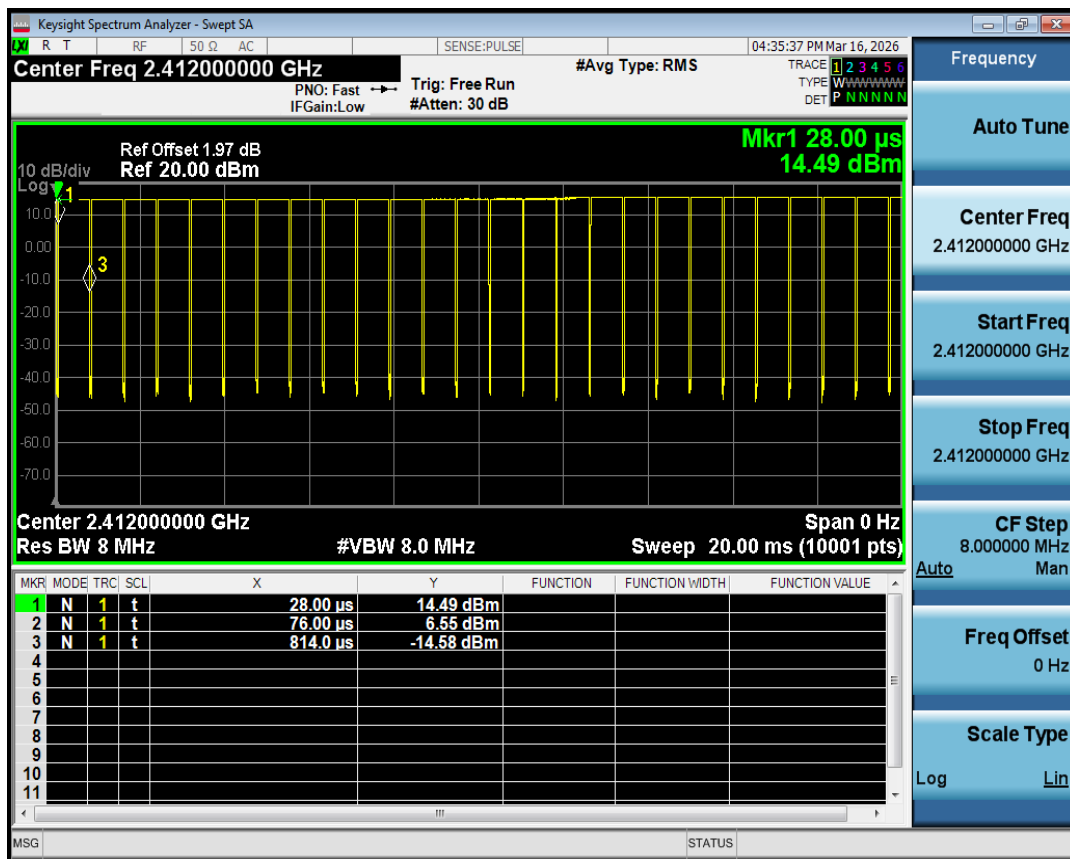
# FCC ID:2BULW-QH-SJQ01

## RF Test Data

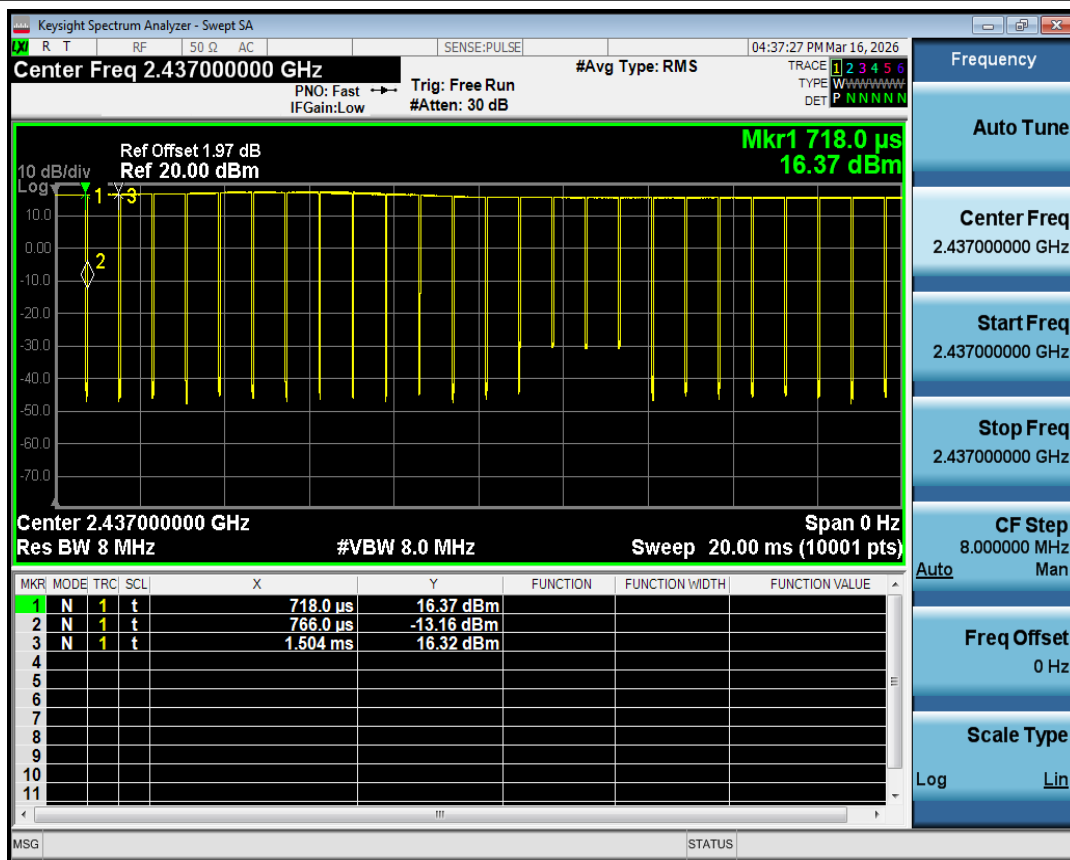
|                                              |    |
|----------------------------------------------|----|
| Duty Cycle .....                             | 2  |
| Maximum Average Conducted Output Power ..... | 9  |
| -6dB Bandwidth .....                         | 16 |
| Occupied Channel Bandwidth .....             | 23 |
| Maximum Power Spectral Density Level .....   | 30 |
| Band Edge .....                              | 37 |
| Conducted RF Spurious Emission .....         | 46 |

## Duty Cycle

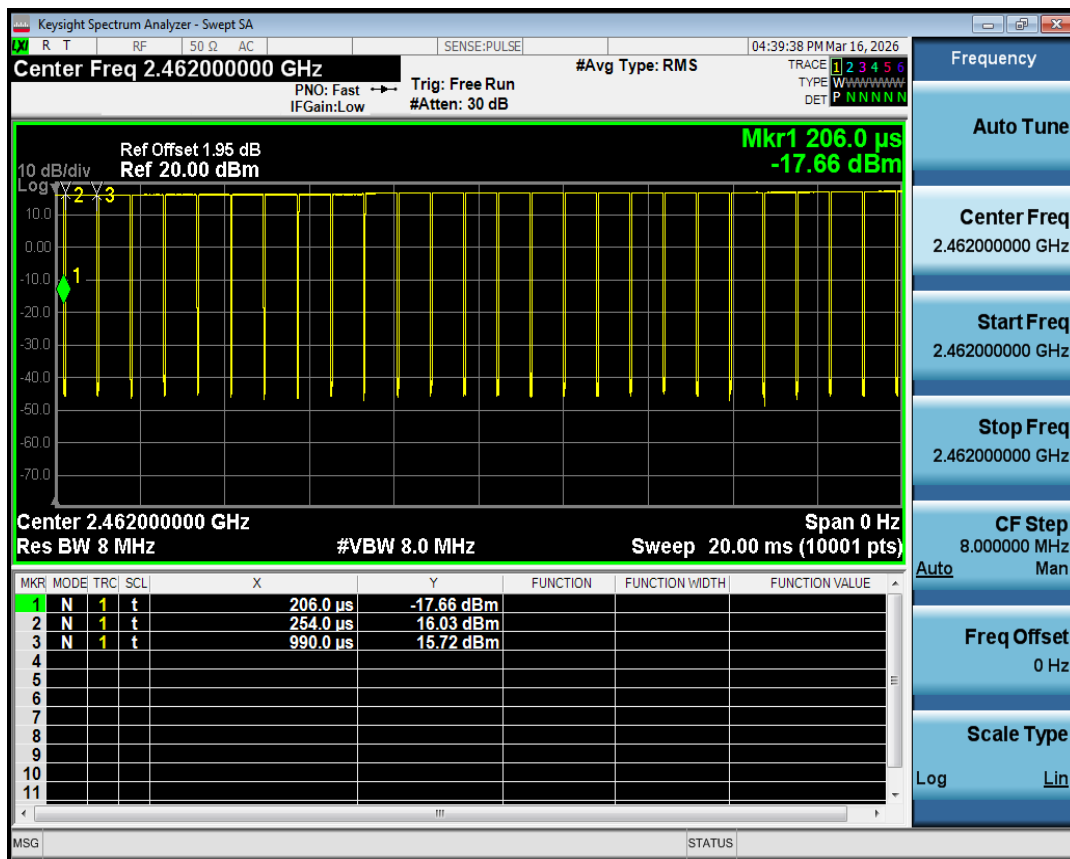
| Condition | Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | b    | 2412            | Ant1    | 93.89          | 0.27                   | 1.36      |
| NVNT      | b    | 2437            | Ant1    | 93.89          | 0.27                   | 1.36      |
| NVNT      | b    | 2462            | Ant1    | 93.88          | 0.27                   | 1.36      |
| NVNT      | g    | 2412            | Ant1    | 68.24          | 1.66                   | 8.62      |
| NVNT      | g    | 2437            | Ant1    | 69.05          | 1.61                   | 8.62      |
| NVNT      | g    | 2462            | Ant1    | 68.24          | 1.66                   | 8.62      |
| NVNT      | n20  | 2412            | Ant1    | 68.24          | 1.66                   | 8.62      |
| NVNT      | n20  | 2437            | Ant1    | 67.86          | 1.68                   | 8.77      |
| NVNT      | n20  | 2462            | Ant1    | 68.24          | 1.66                   | 8.62      |
| NVNT      | n40  | 2422            | Ant1    | 57.81          | 2.38                   | 13.51     |
| NVNT      | n40  | 2437            | Ant1    | 58.46          | 2.33                   | 13.16     |
| NVNT      | n40  | 2462            | Ant1    | 59.38          | 2.26                   | 13.16     |



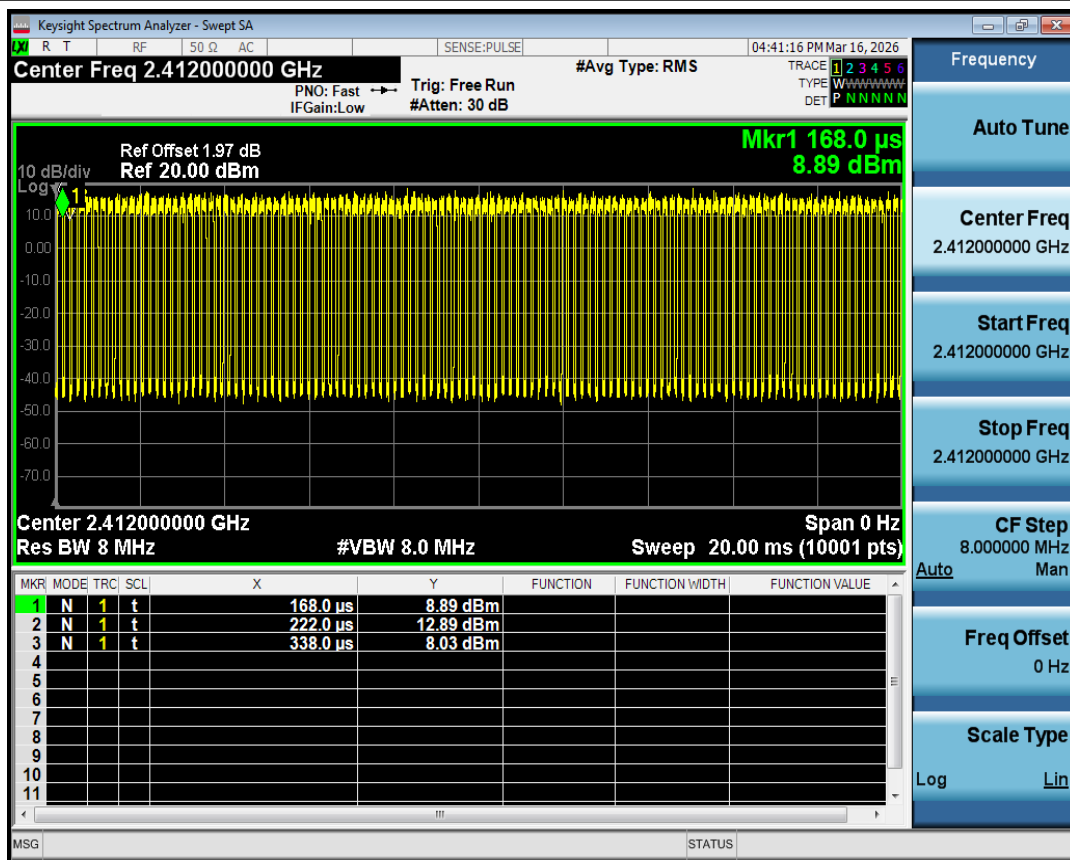
Duty Cycle NVNT b 2412MHz Ant1



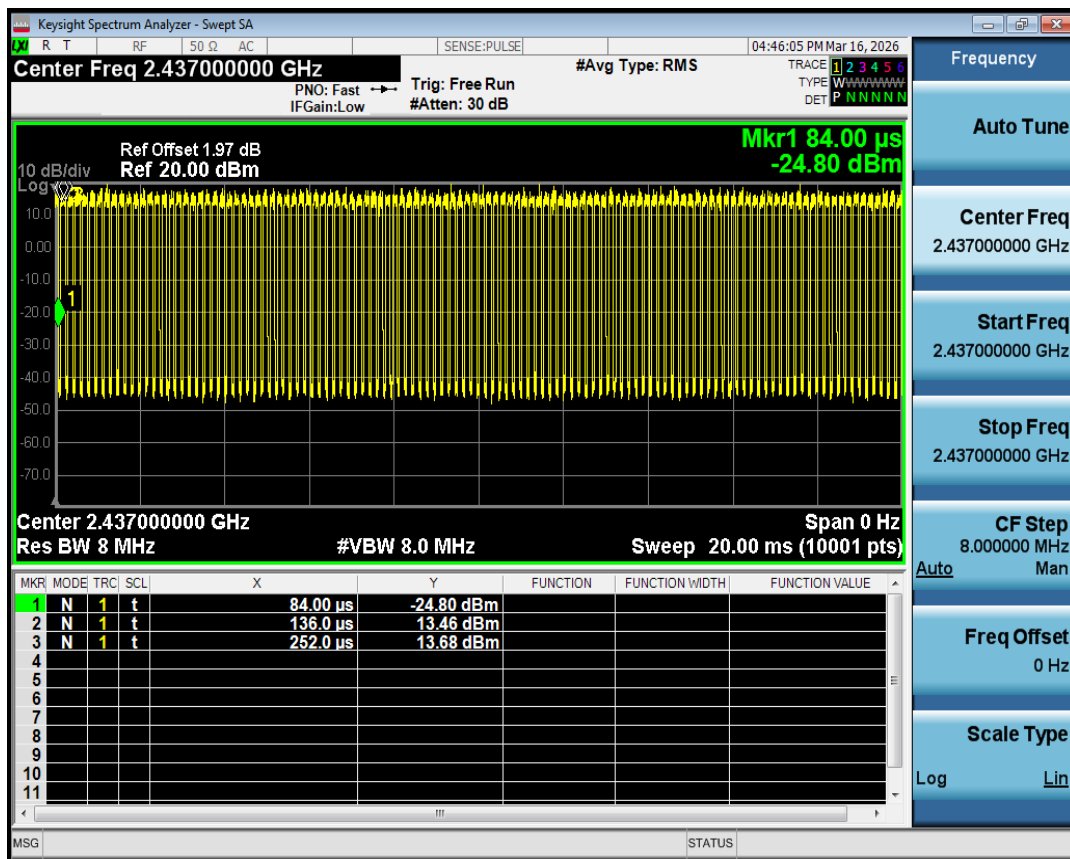
Duty Cycle NVNT b 2437MHz Ant1



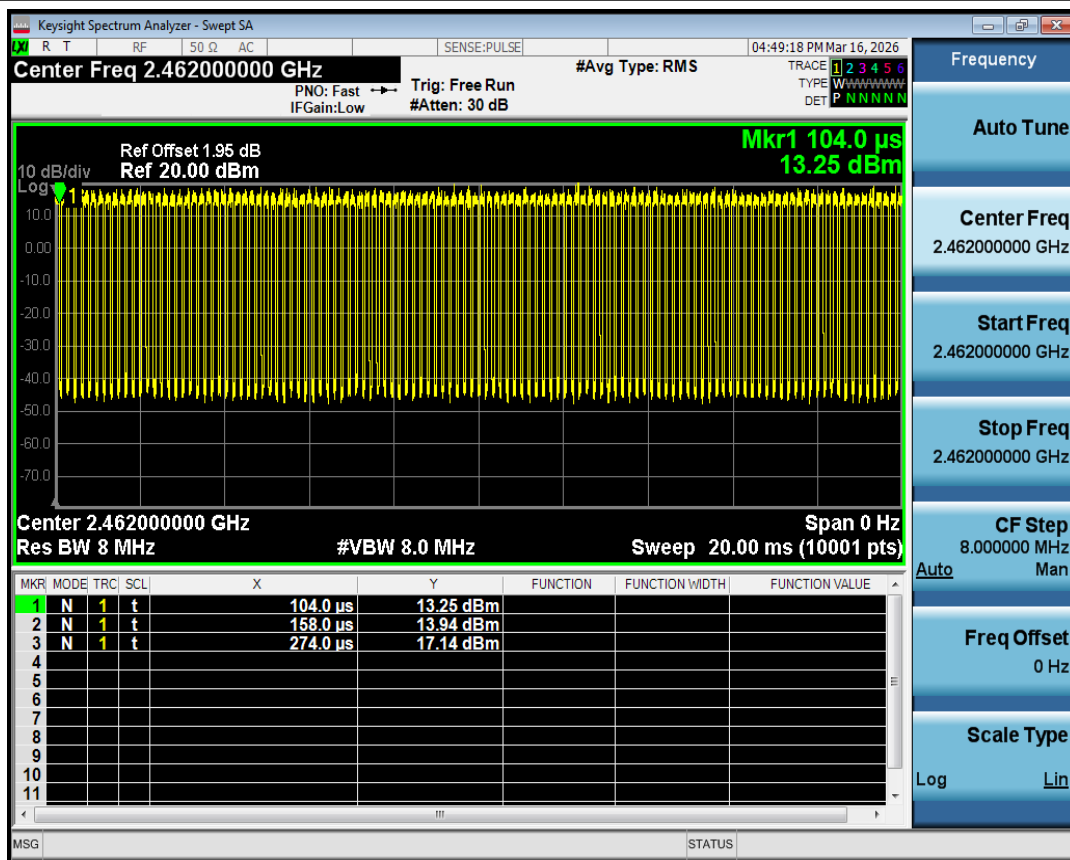
Duty Cycle NVNT b 2462MHz Ant1



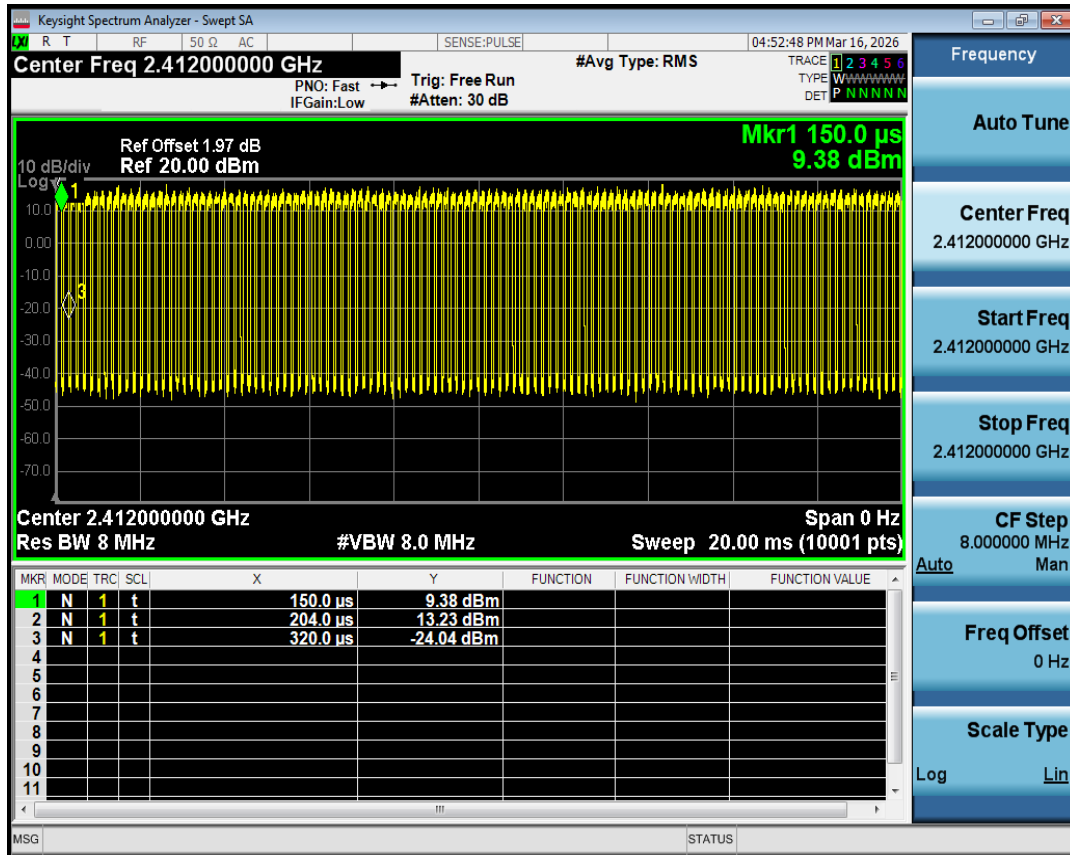
Duty Cycle NVNT g 2412MHz Ant1



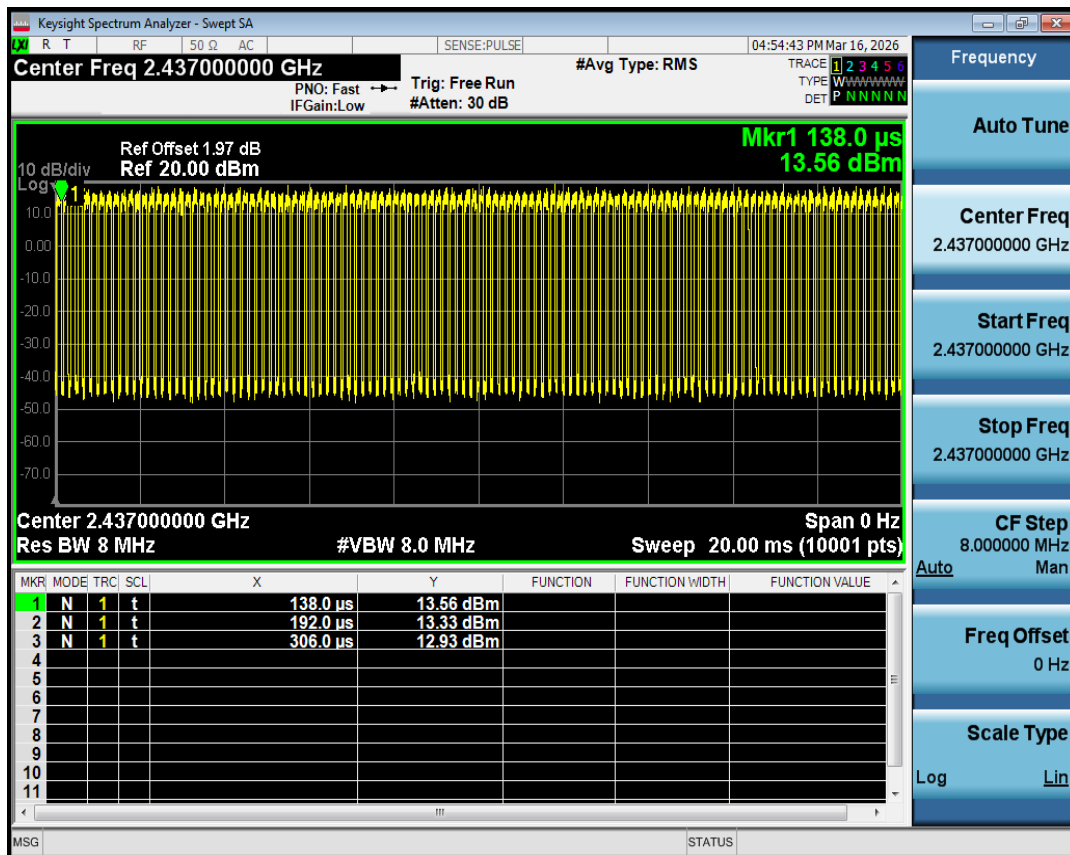
Duty Cycle NVNT g 2437MHz Ant1



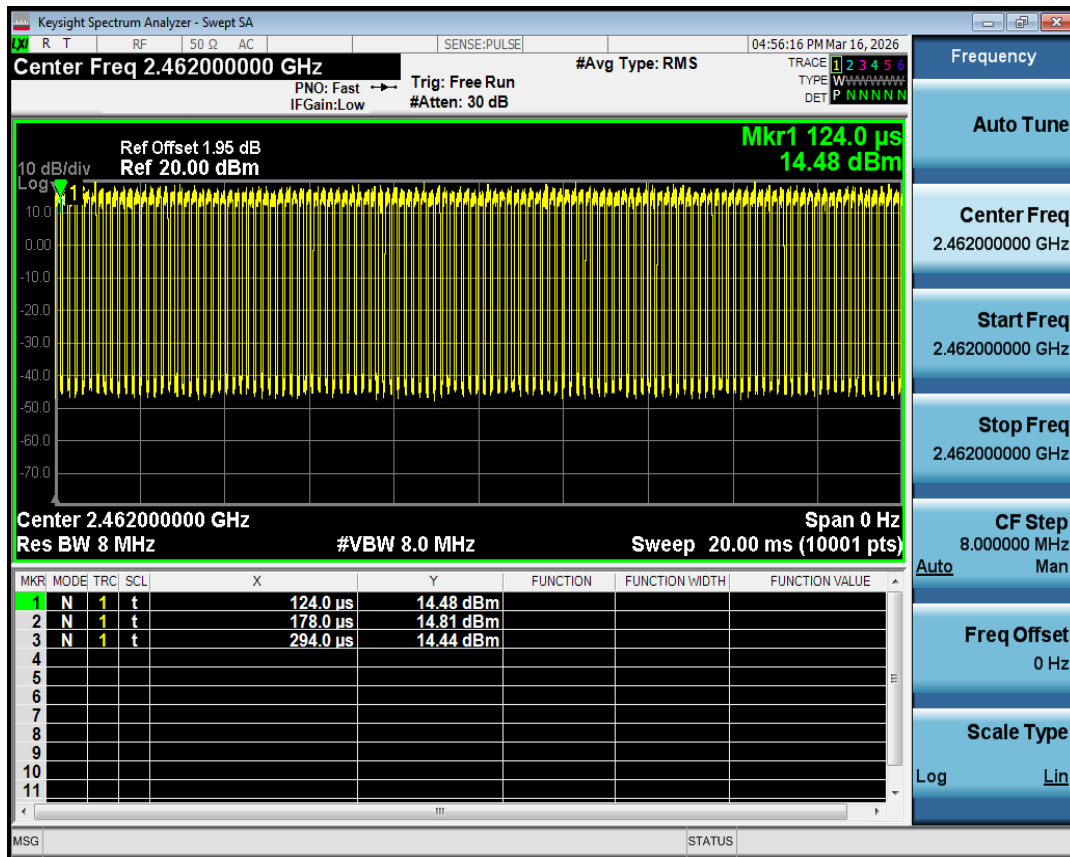
Duty Cycle NVNT g 2462MHz Ant1



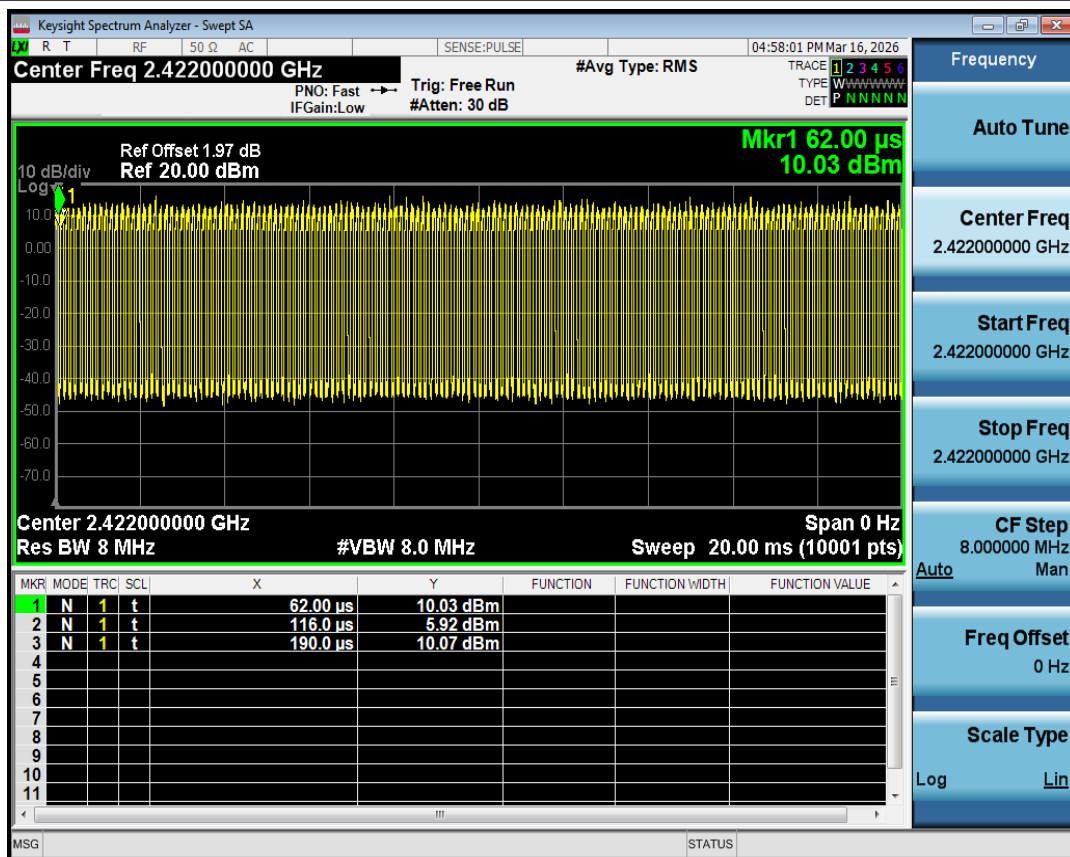
Duty Cycle NVNT n20 2412MHz Ant1



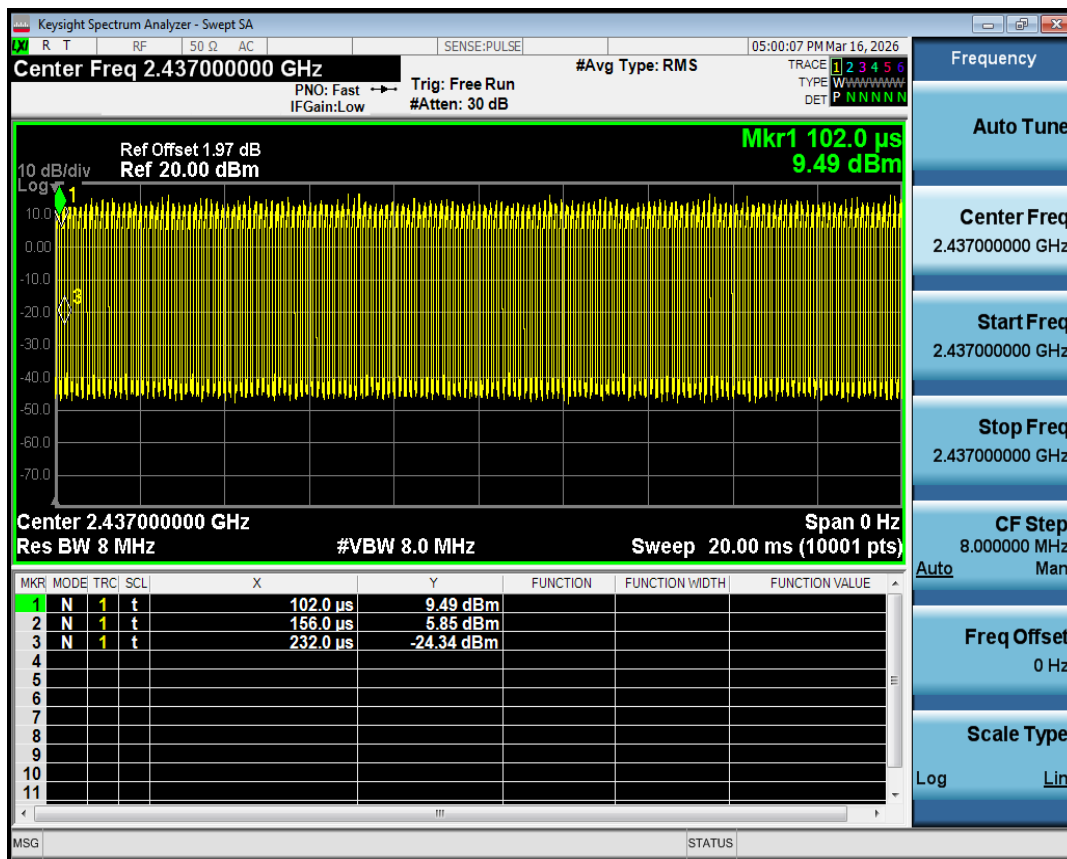
Duty Cycle NVNT n20 2437MHz Ant1



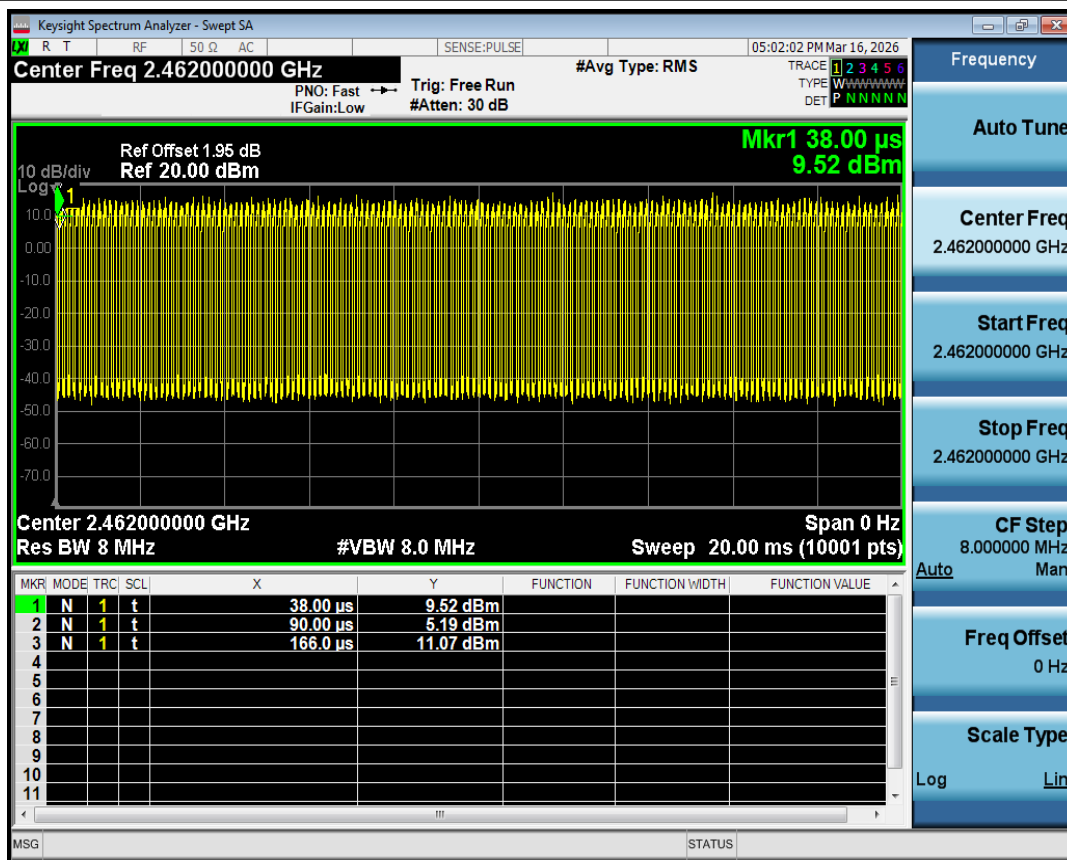
Duty Cycle NVNT n20 2462MHz Ant1



Duty Cycle NVNT n40 2422MHz Ant1



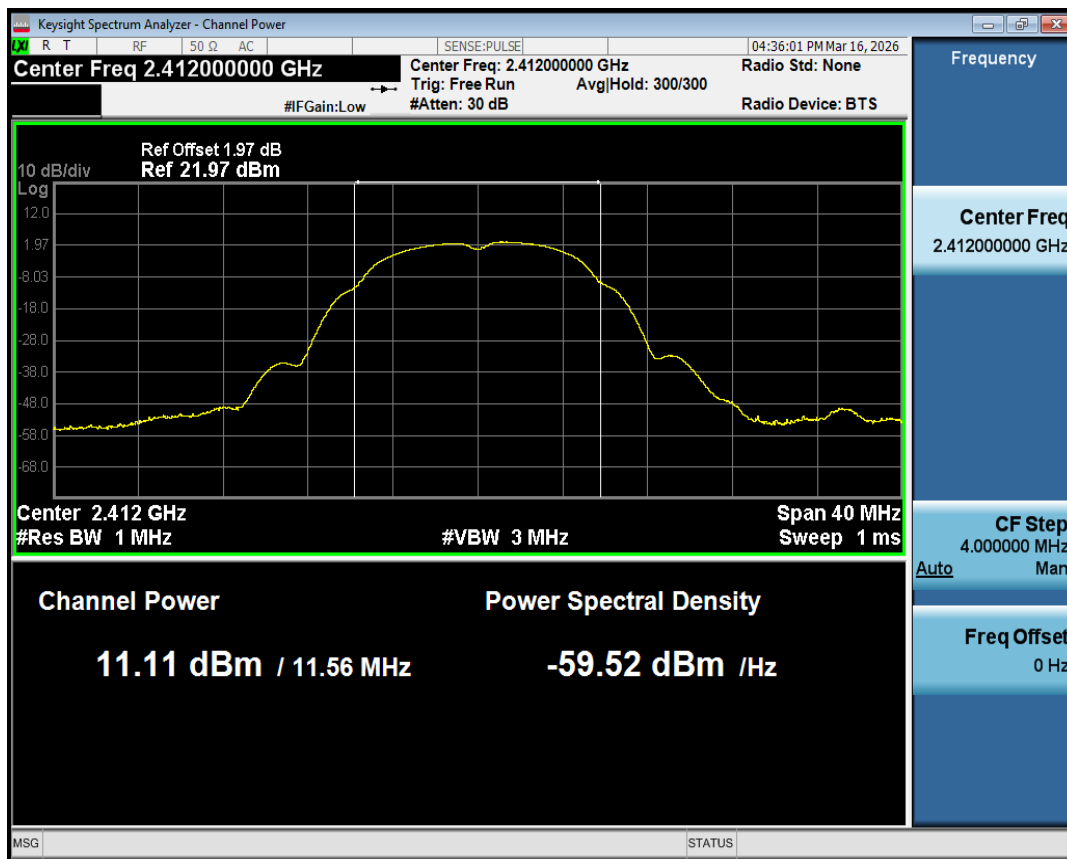
Duty Cycle NVNT n40 2437MHz Ant1



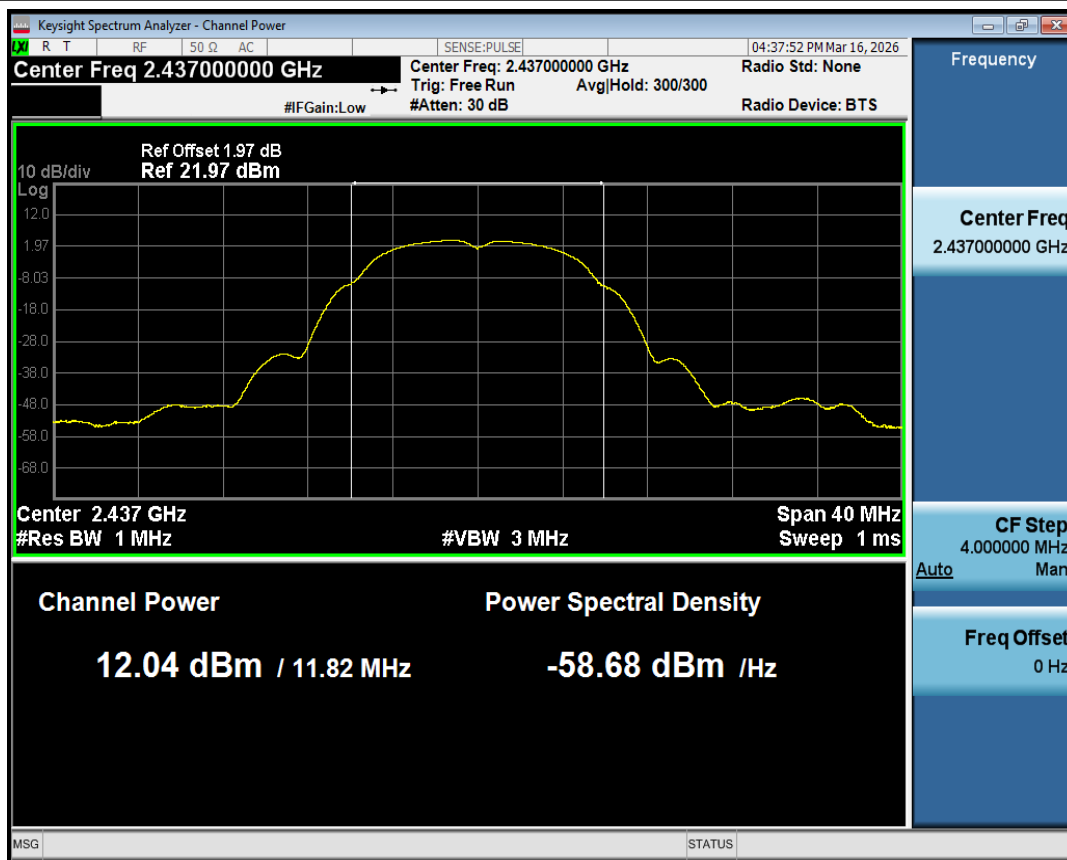
Duty Cycle NVNT n40 2462MHz Ant1

## Maximum Average Conducted Output Power

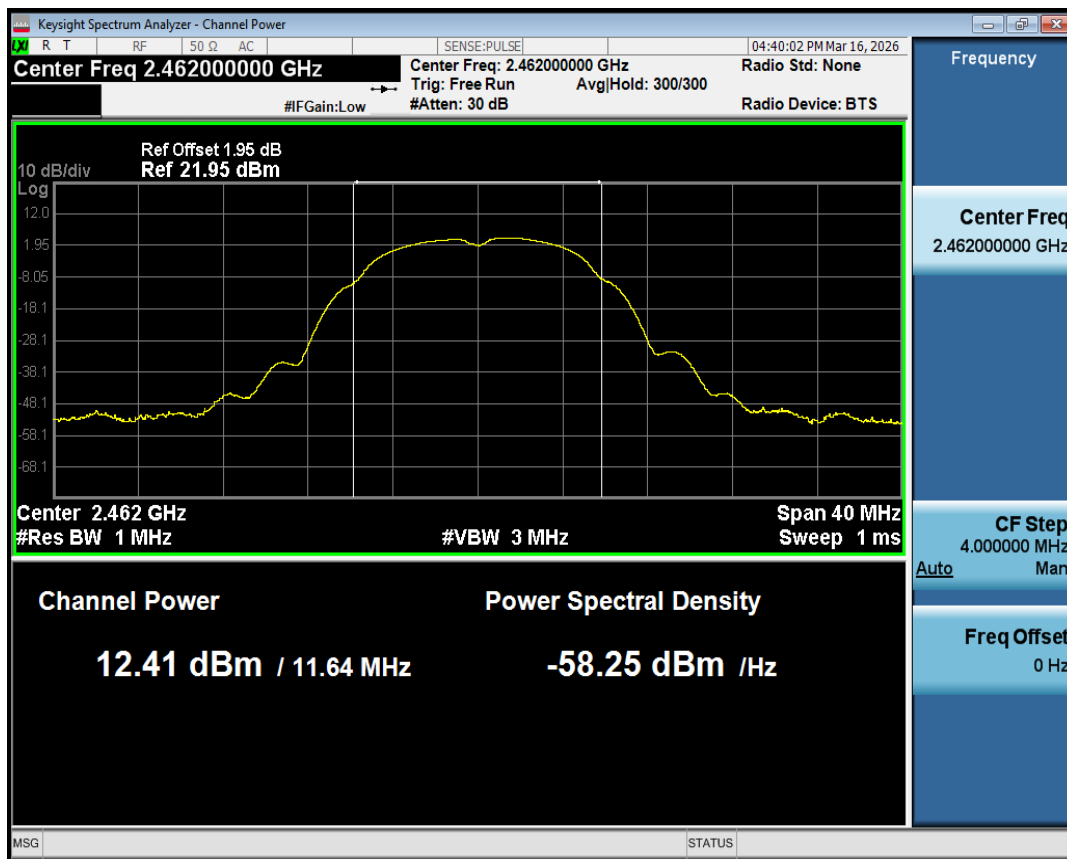
| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Duty Factor (dB) | Total Conducted Power (dBm) | Total Conducted Power (W) | Limit Conducted(dBm) | Verdict |
|-----------|------|-----------------|---------|-----------------------|------------------|-----------------------------|---------------------------|----------------------|---------|
| NVNT      | b    | 2412            | Ant1    | 11.11                 | 0.27             | 11.38                       | 0.01374                   | 30                   | Pass    |
| NVNT      | b    | 2437            | Ant1    | 12.04                 | 0.27             | 12.31                       | 0.01702                   | 30                   | Pass    |
| NVNT      | b    | 2462            | Ant1    | 12.41                 | 0.27             | 12.68                       | 0.01854                   | 30                   | Pass    |
| NVNT      | g    | 2412            | Ant1    | 9.31                  | 1.66             | 10.97                       | 0.0125                    | 30                   | Pass    |
| NVNT      | g    | 2437            | Ant1    | 10.35                 | 1.61             | 11.96                       | 0.0157                    | 30                   | Pass    |
| NVNT      | g    | 2462            | Ant1    | 10.74                 | 1.66             | 12.4                        | 0.01738                   | 30                   | Pass    |
| NVNT      | n20  | 2412            | Ant1    | 9.56                  | 1.66             | 11.22                       | 0.01324                   | 30                   | Pass    |
| NVNT      | n20  | 2437            | Ant1    | 10.5                  | 1.68             | 12.18                       | 0.01652                   | 30                   | Pass    |
| NVNT      | n20  | 2462            | Ant1    | 10.89                 | 1.66             | 12.55                       | 0.01799                   | 30                   | Pass    |
| NVNT      | n40  | 2422            | Ant1    | 9.79                  | 2.38             | 12.17                       | 0.01648                   | 30                   | Pass    |
| NVNT      | n40  | 2437            | Ant1    | 9.9                   | 2.33             | 12.23                       | 0.01671                   | 30                   | Pass    |
| NVNT      | n40  | 2462            | Ant1    | 10.86                 | 2.26             | 13.12                       | 0.02051                   | 30                   | Pass    |



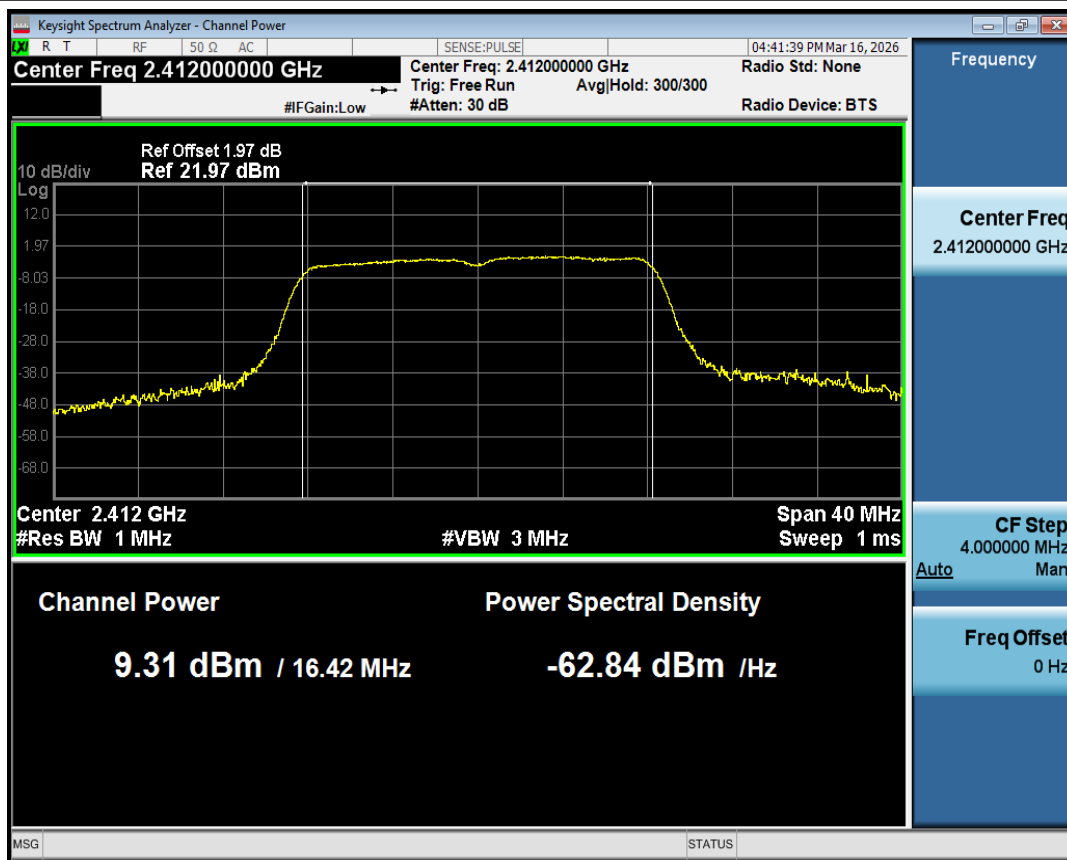
Average Power NVNT b 2412MHz Ant1



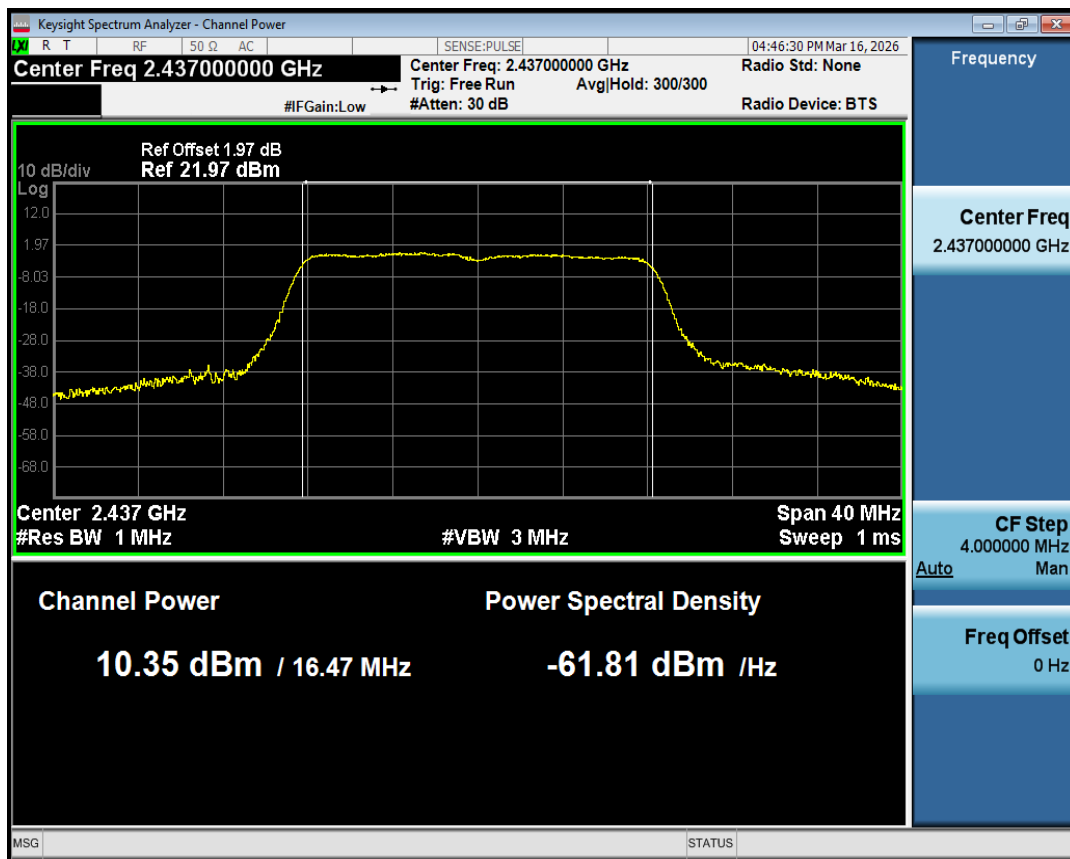
Average Power NVNT b 2437MHz Ant1



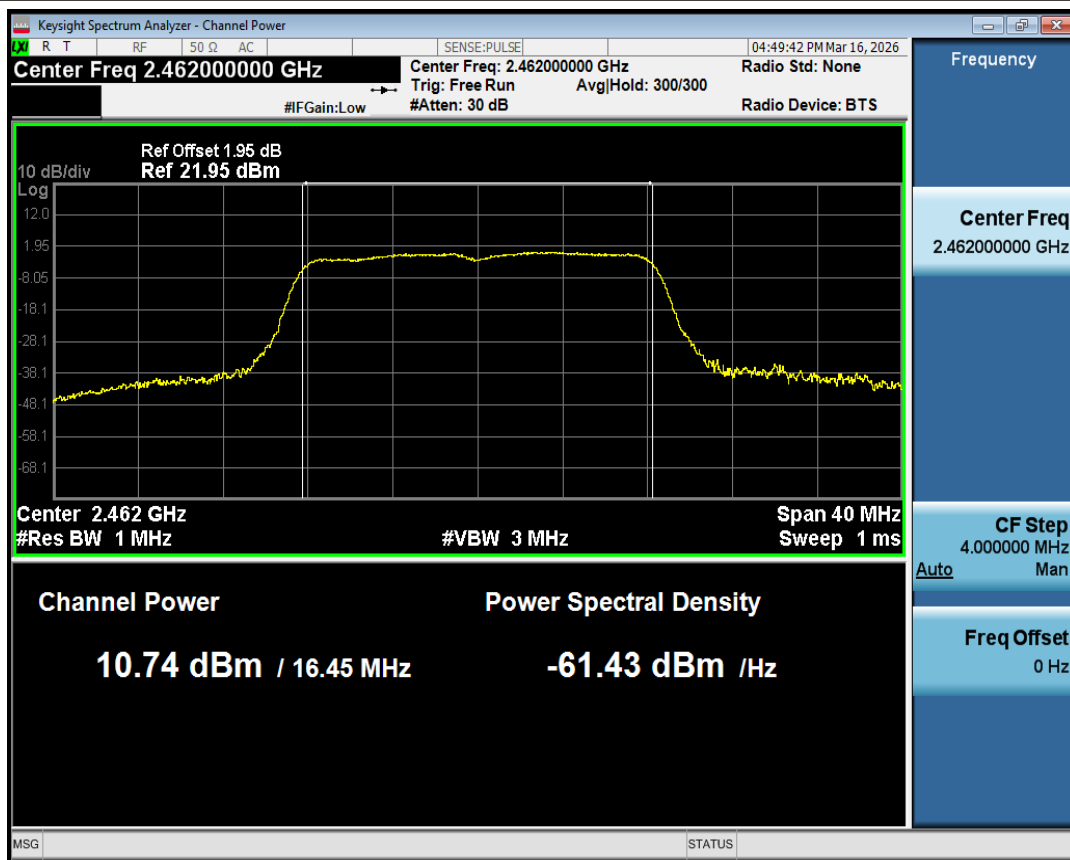
Average Power NVNT b 2462MHz Ant1



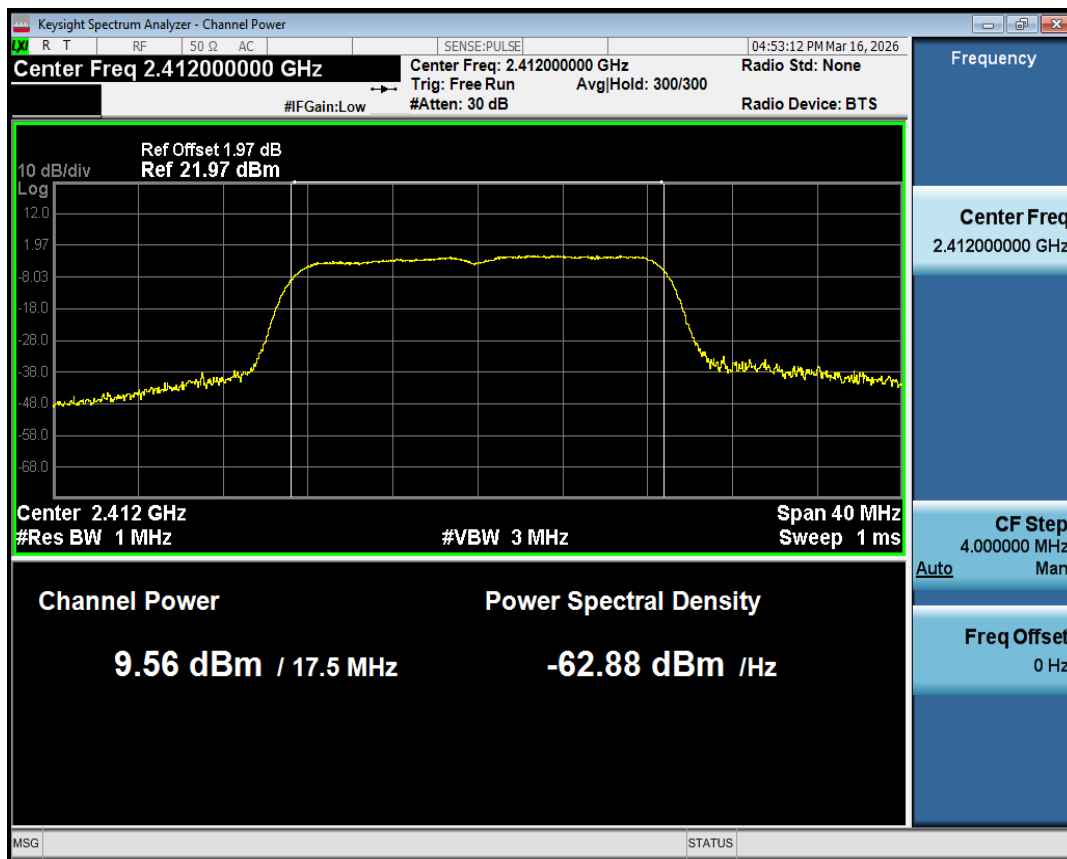
Average Power NVNT g 2412MHz Ant1



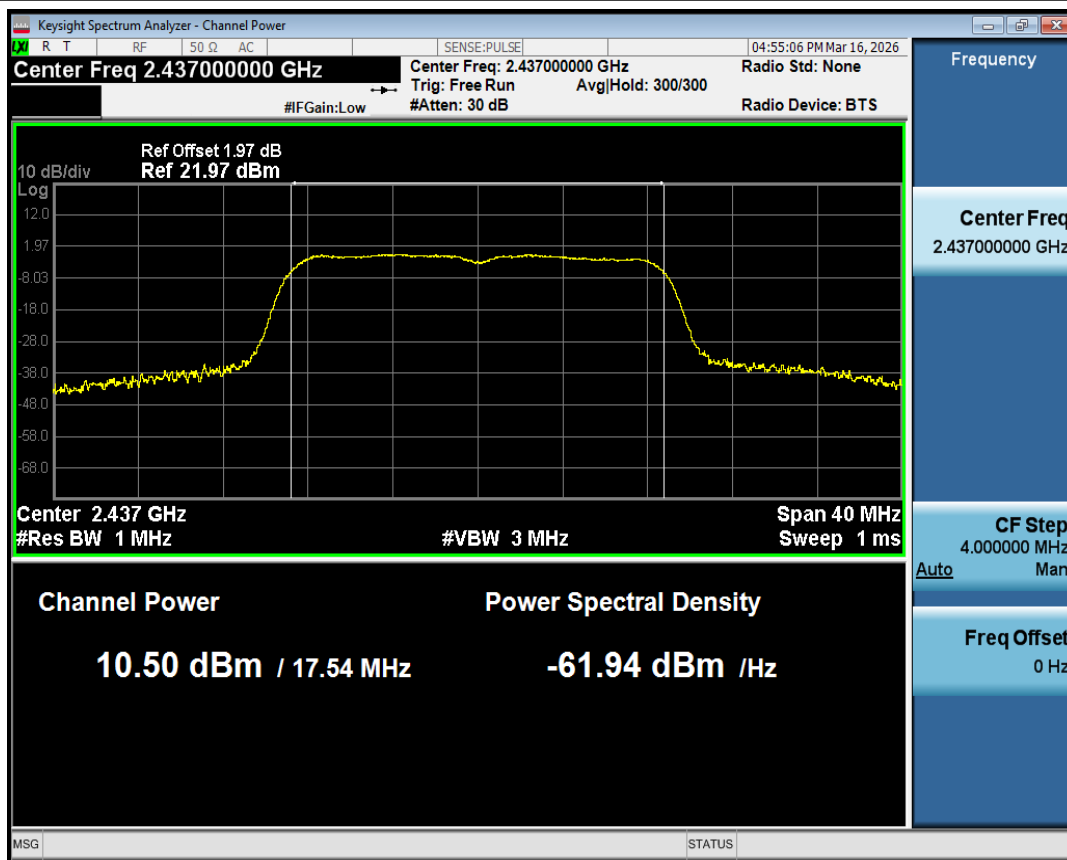
Average Power NVNT g 2437MHz Ant1



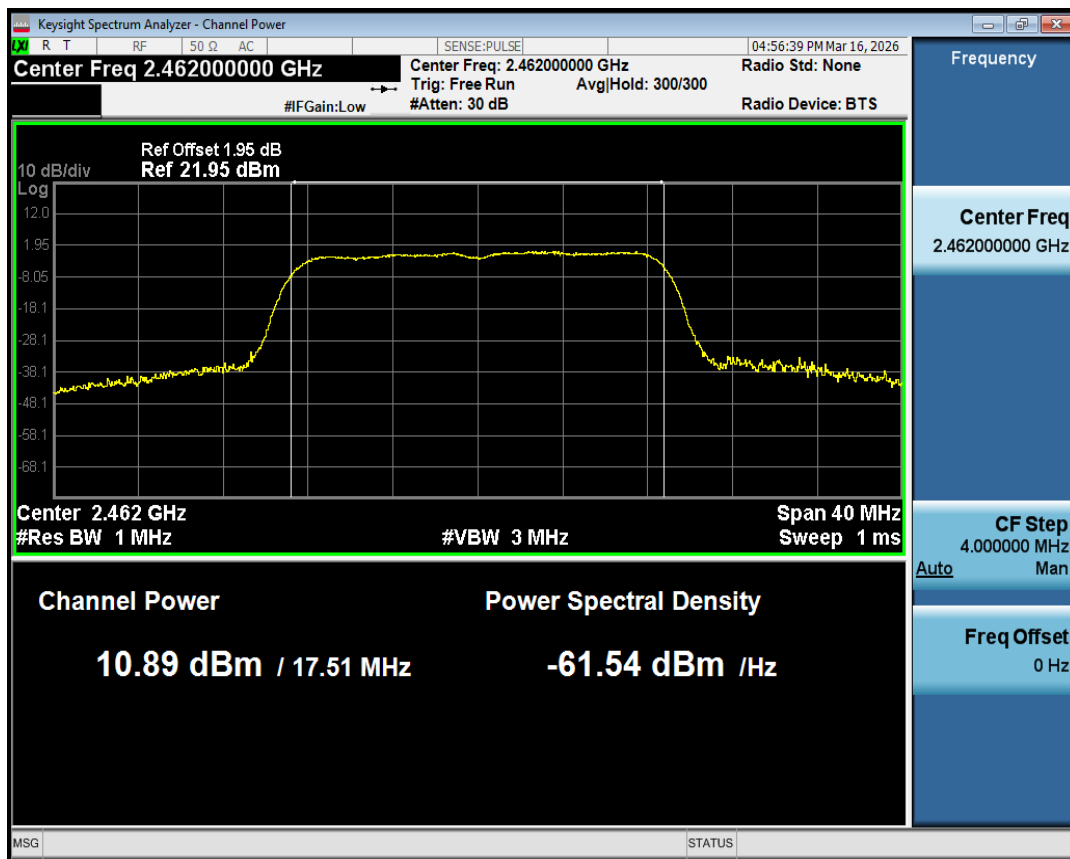
Average Power NVNT g 2462MHz Ant1



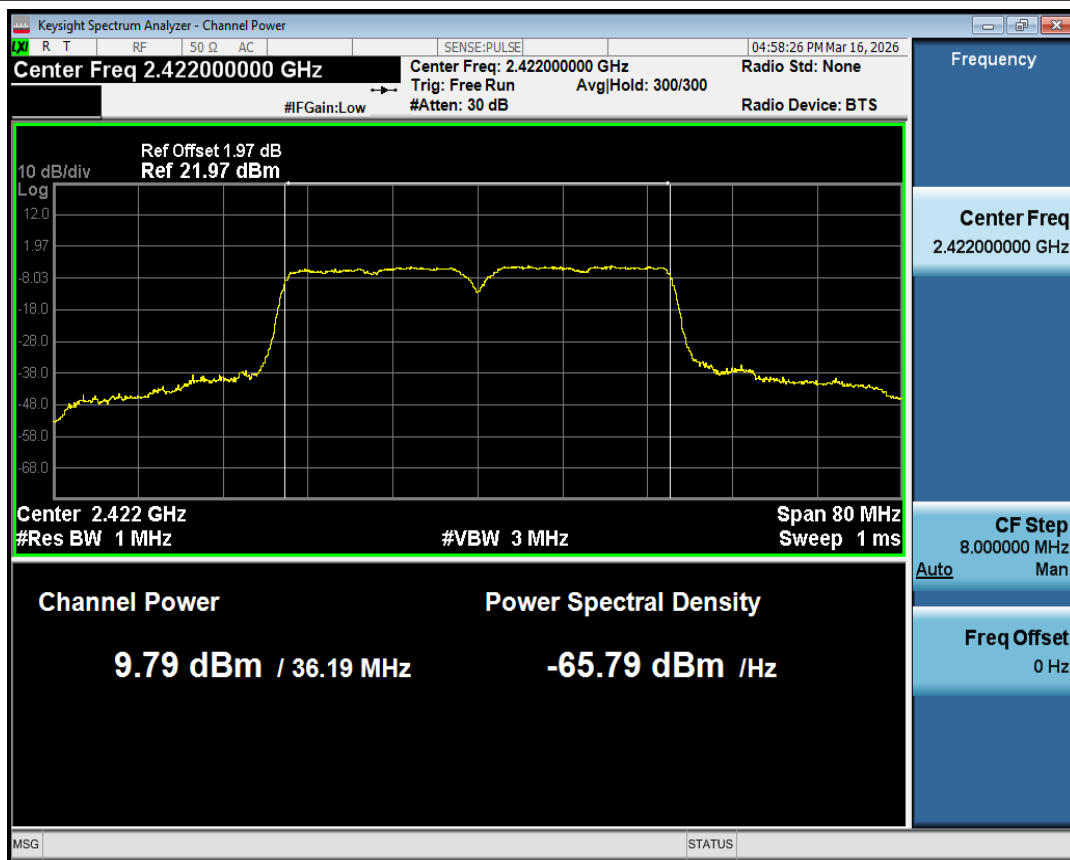
Average Power NVNT n20 2412MHz Ant1



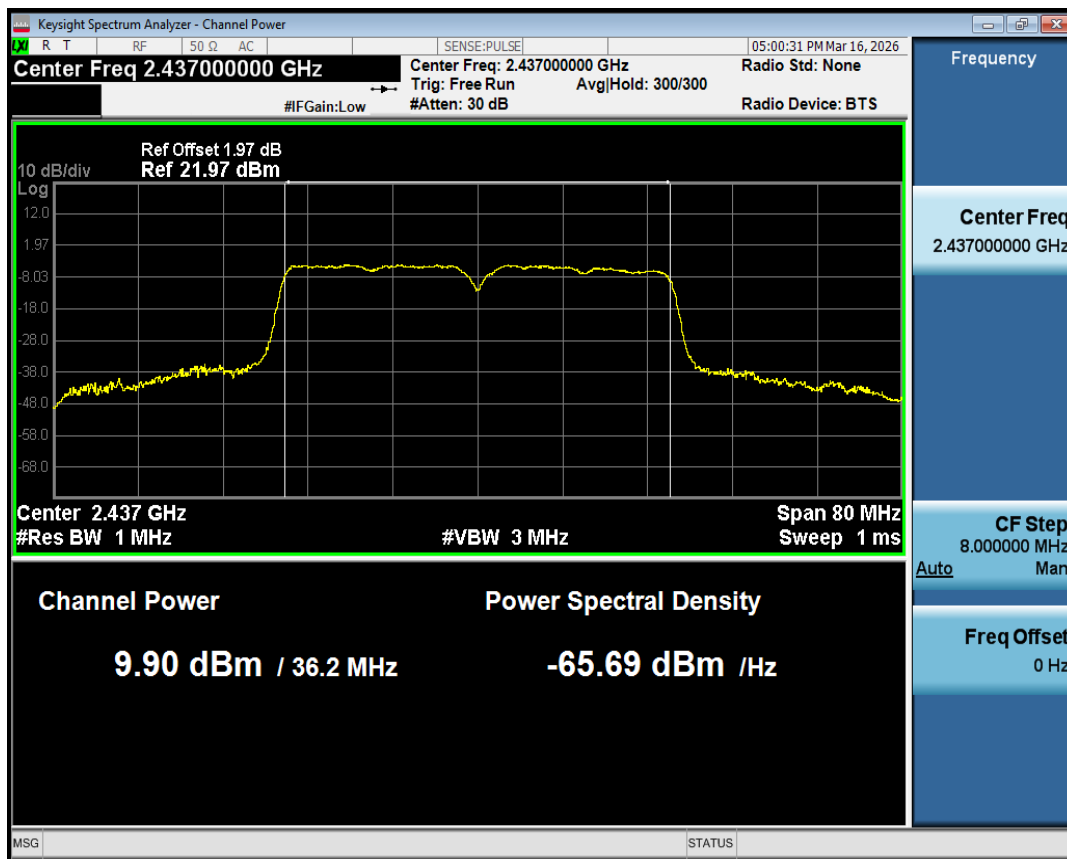
Average Power NVNT n20 2437MHz Ant1



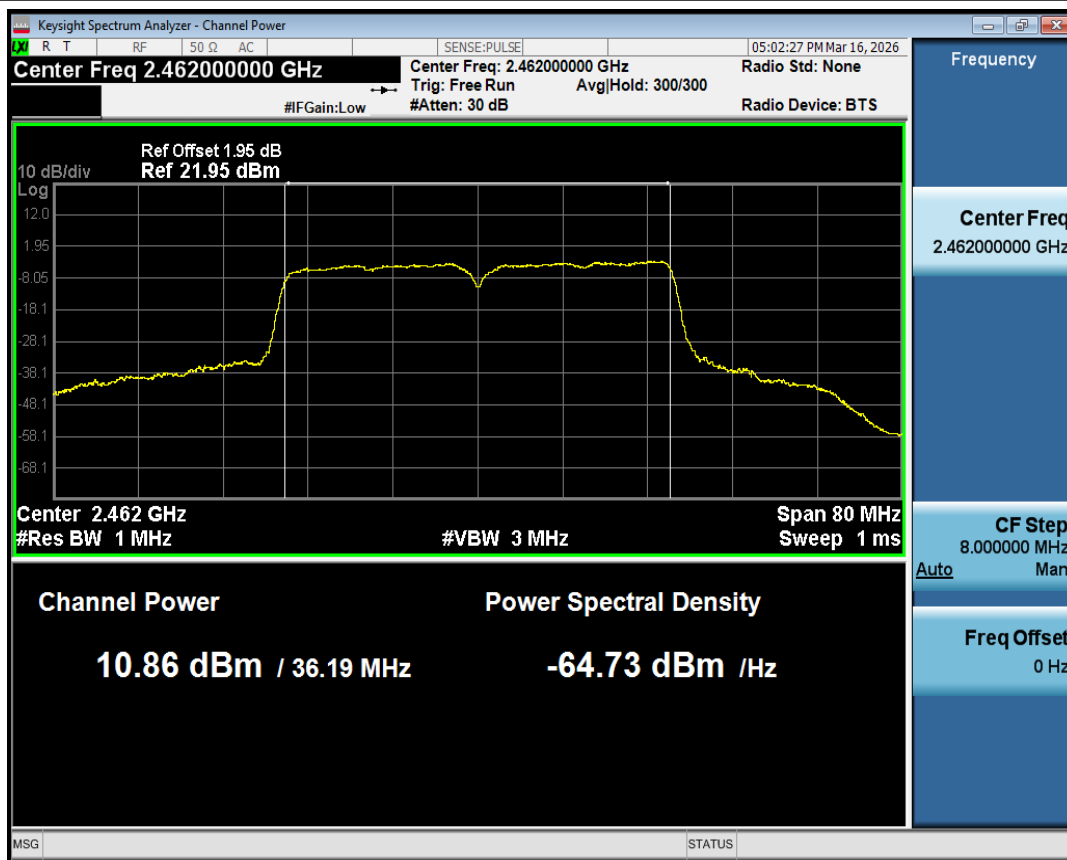
Average Power NVNT n20 2462MHz Ant1



Average Power NVNT n40 2422MHz Ant1



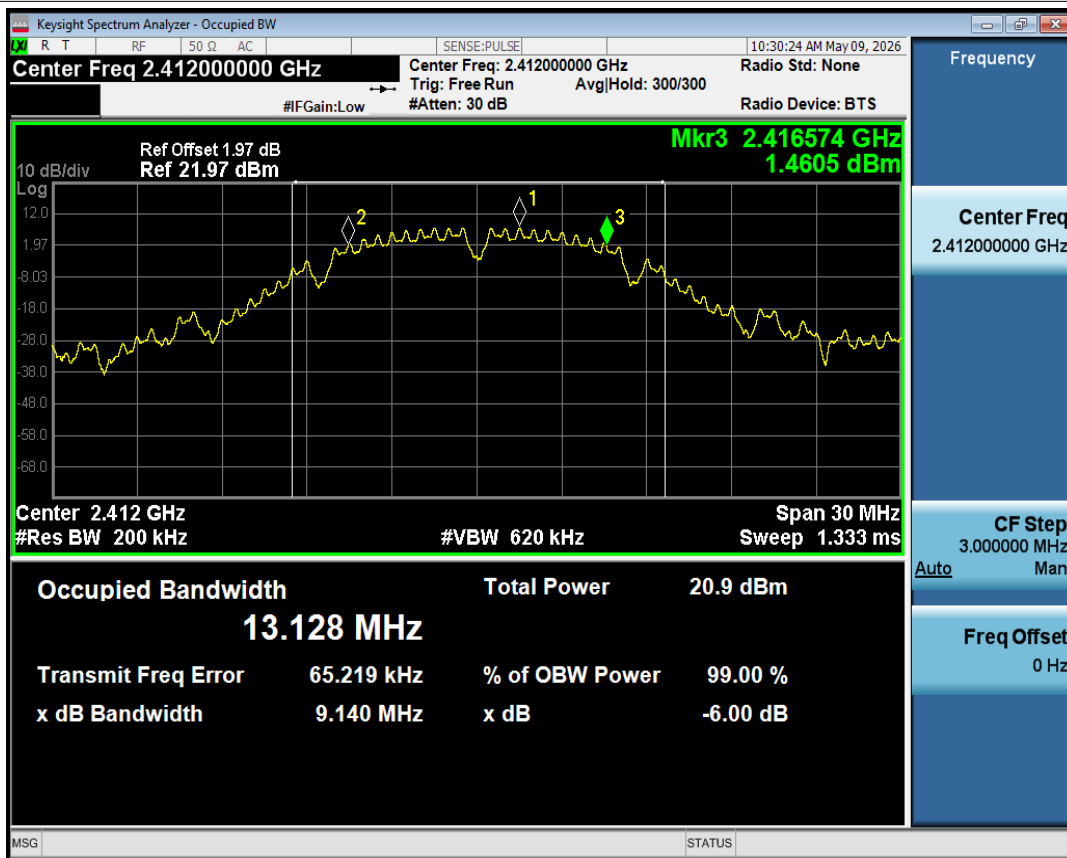
Average Power NVNT n40 2437MHz Ant1



Average Power NVNT n40 2462MHz Ant1

## -6dB Bandwidth

| Condition | Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | b    | 2412            | Ant1    | 9.14                  | 0.5                         | Pass    |
| NVNT      | b    | 2437            | Ant1    | 9.102                 | 0.5                         | Pass    |
| NVNT      | b    | 2462            | Ant1    | 9.59                  | 0.5                         | Pass    |
| NVNT      | g    | 2412            | Ant1    | 16.31                 | 0.5                         | Pass    |
| NVNT      | g    | 2437            | Ant1    | 16.16                 | 0.5                         | Pass    |
| NVNT      | g    | 2462            | Ant1    | 16.16                 | 0.5                         | Pass    |
| NVNT      | n20  | 2412            | Ant1    | 17.04                 | 0.5                         | Pass    |
| NVNT      | n20  | 2437            | Ant1    | 17.07                 | 0.5                         | Pass    |
| NVNT      | n20  | 2462            | Ant1    | 17.08                 | 0.5                         | Pass    |
| NVNT      | n40  | 2422            | Ant1    | 35.86                 | 0.5                         | Pass    |
| NVNT      | n40  | 2437            | Ant1    | 35.42                 | 0.5                         | Pass    |
| NVNT      | n40  | 2452            | Ant1    | 35.1                  | 0.5                         | Pass    |



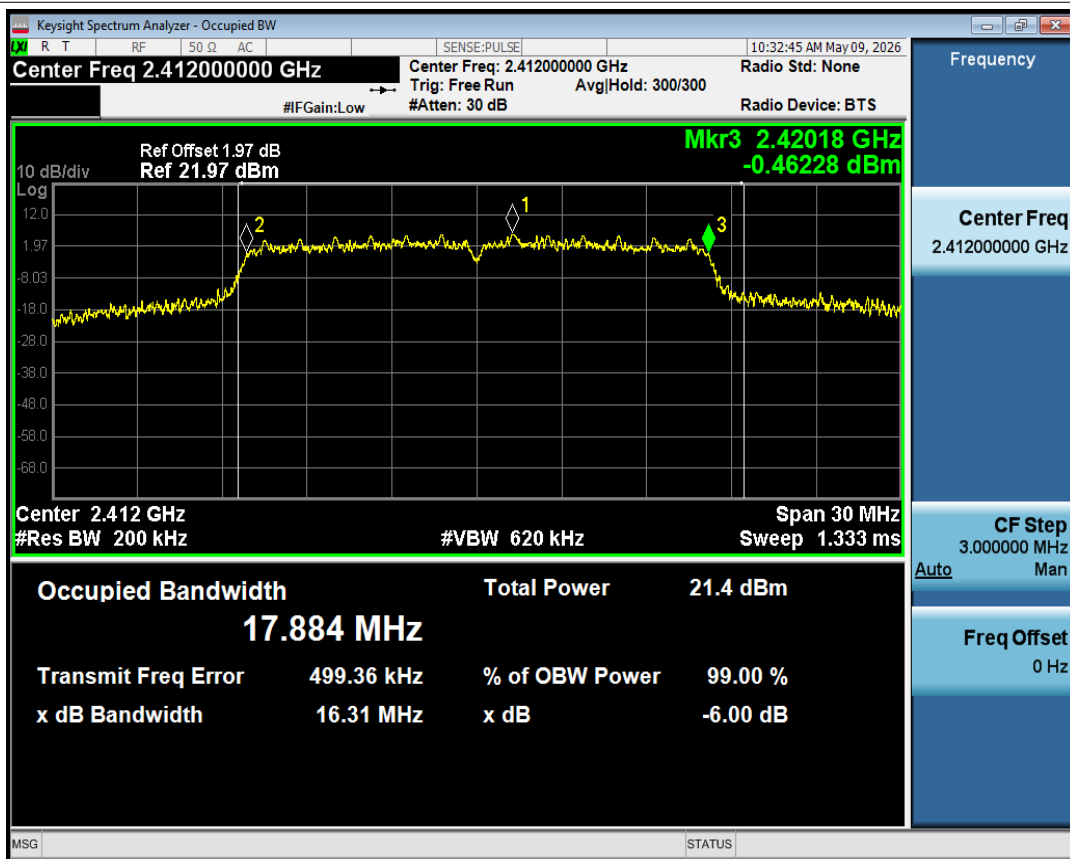
-6dB Bandwidth NVNT b 2412MHz Ant1



-6dB Bandwidth NVNT b 2437MHz Ant1



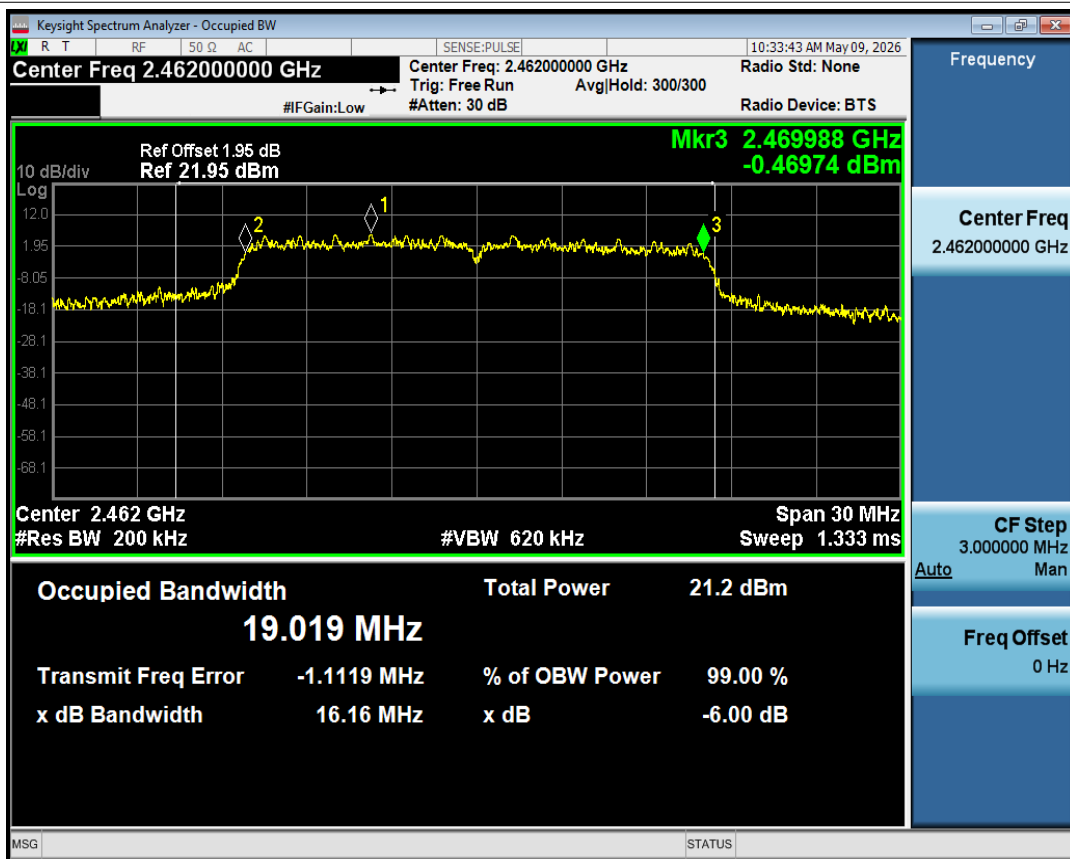
-6dB Bandwidth NVNT b 2462MHz Ant1



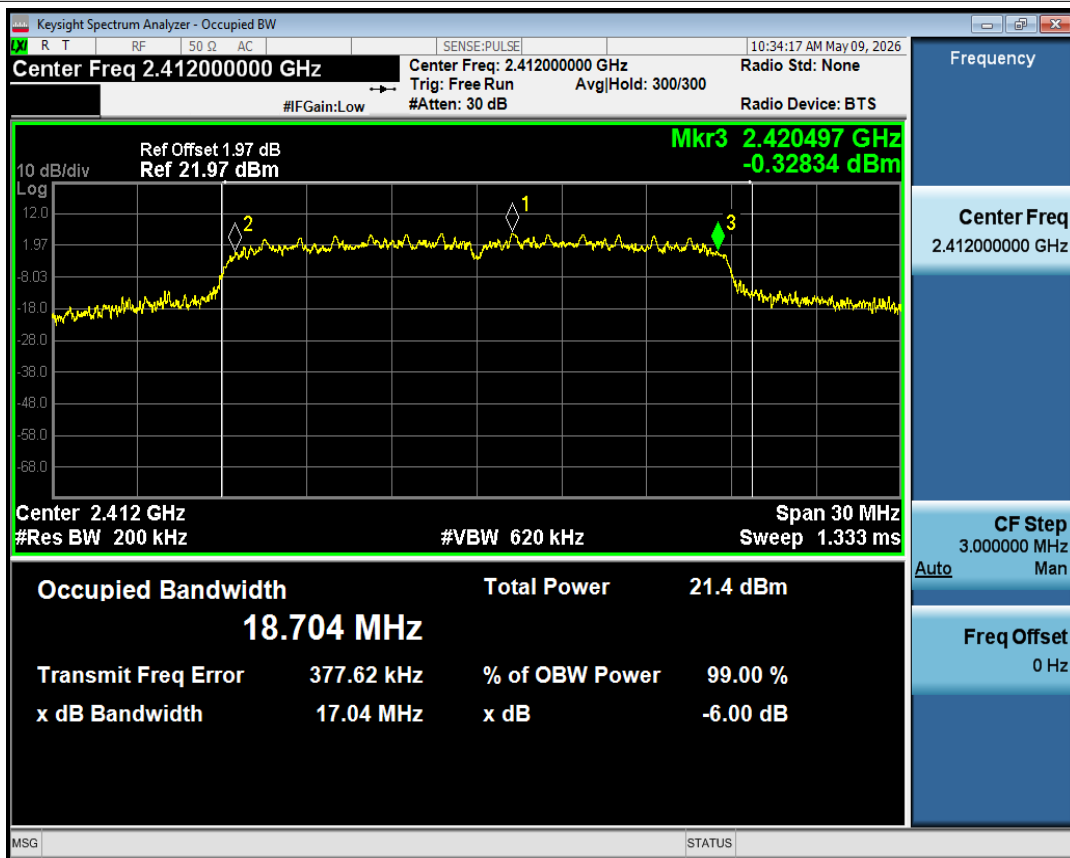
-6dB Bandwidth NVNT g 2412MHz Ant1



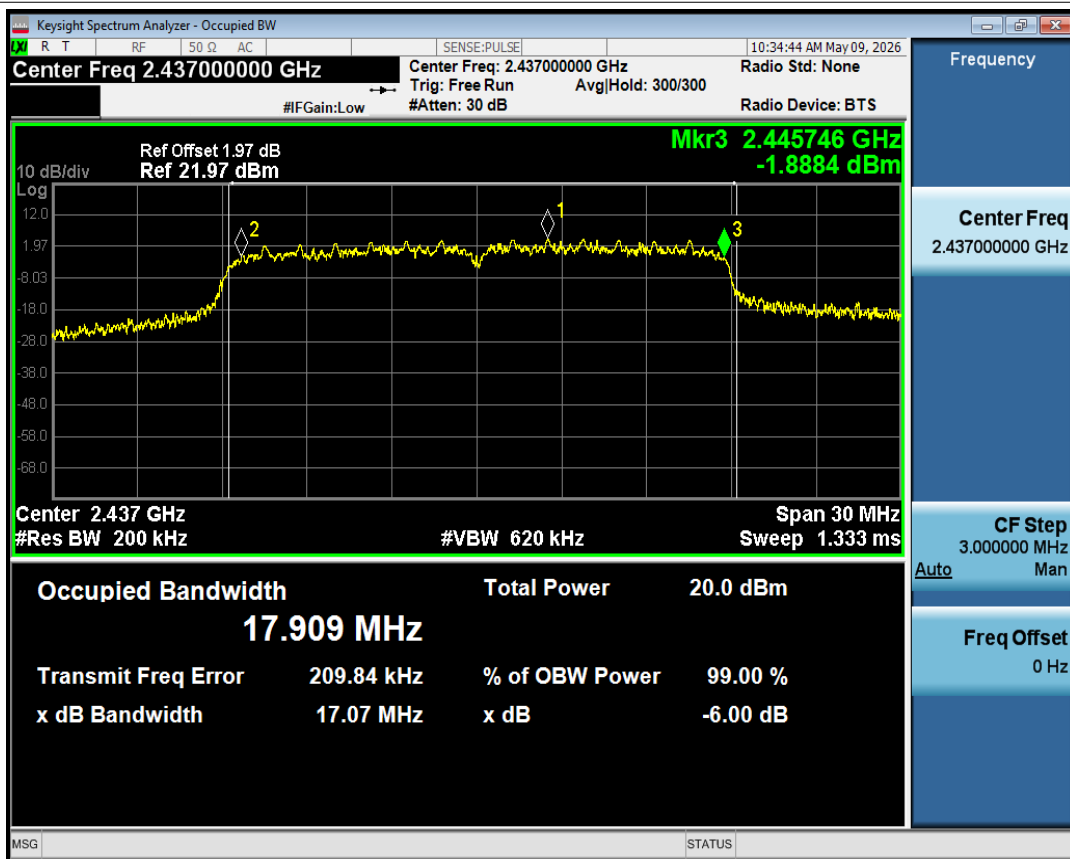
-6dB Bandwidth NVNT g 2437MHz Ant1



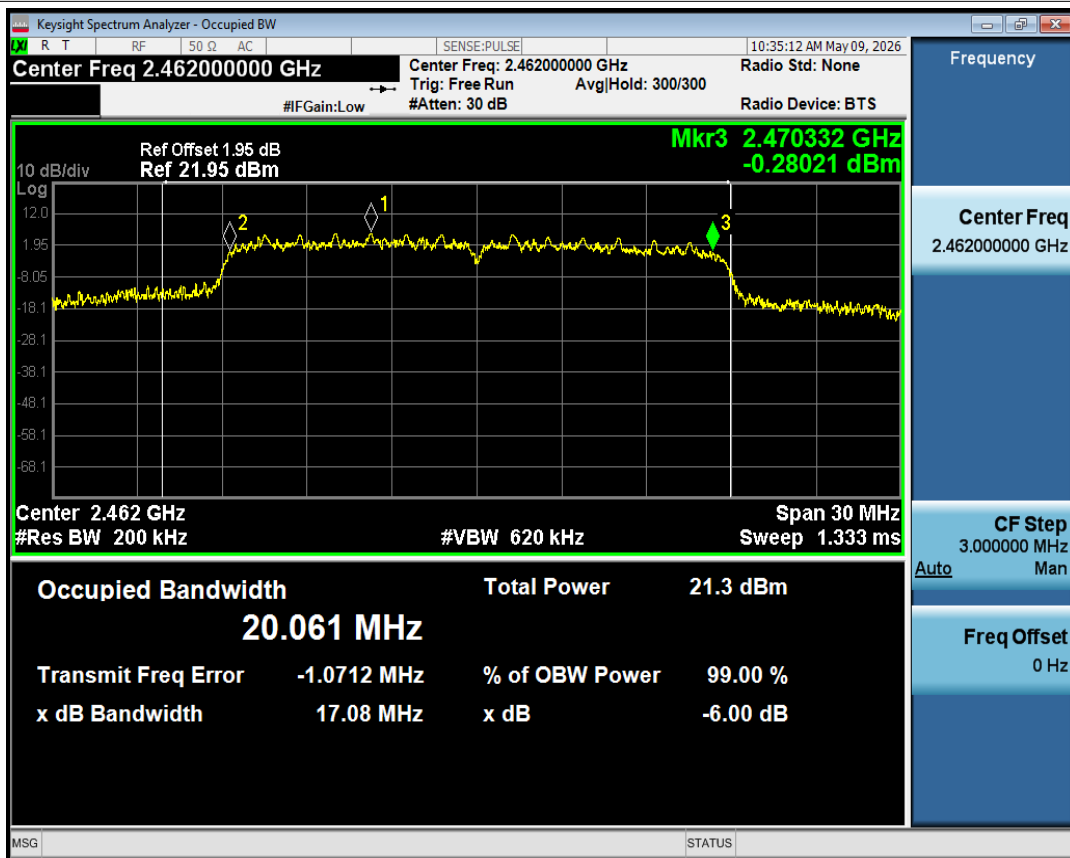
-6dB Bandwidth NVNT g 2462MHz Ant1



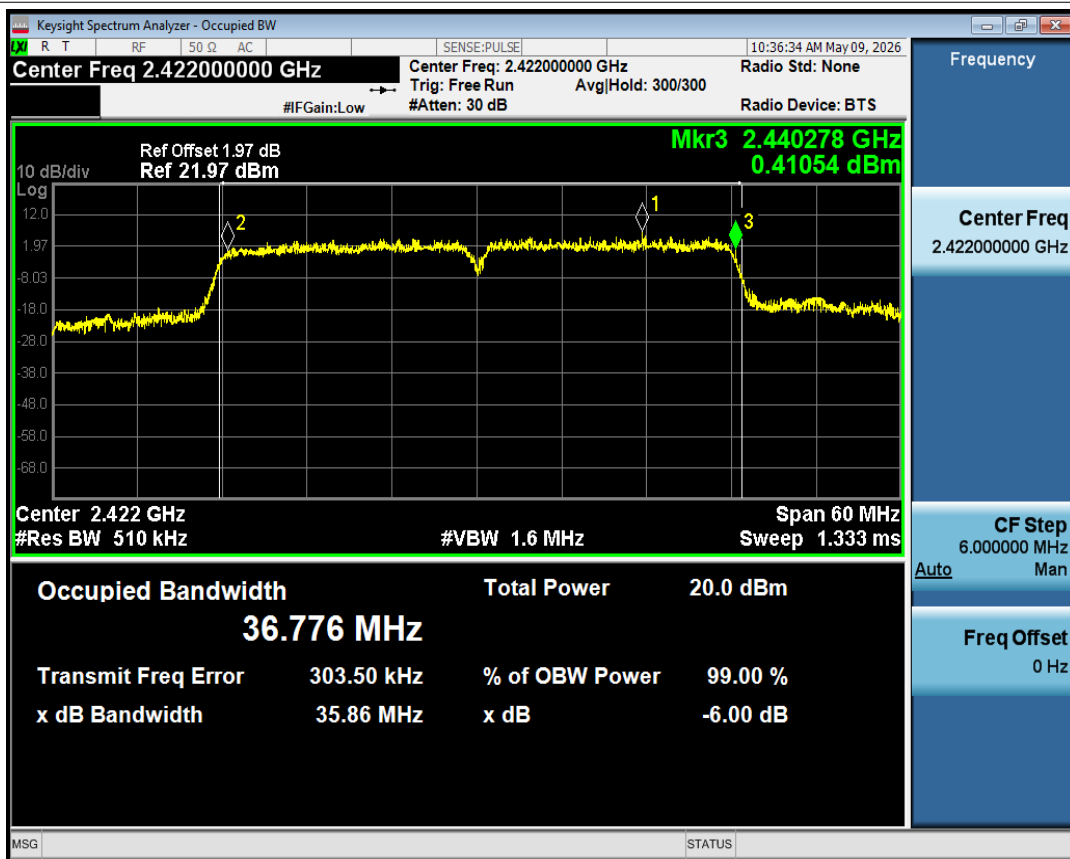
-6dB Bandwidth NVNT n20 2412MHz Ant1



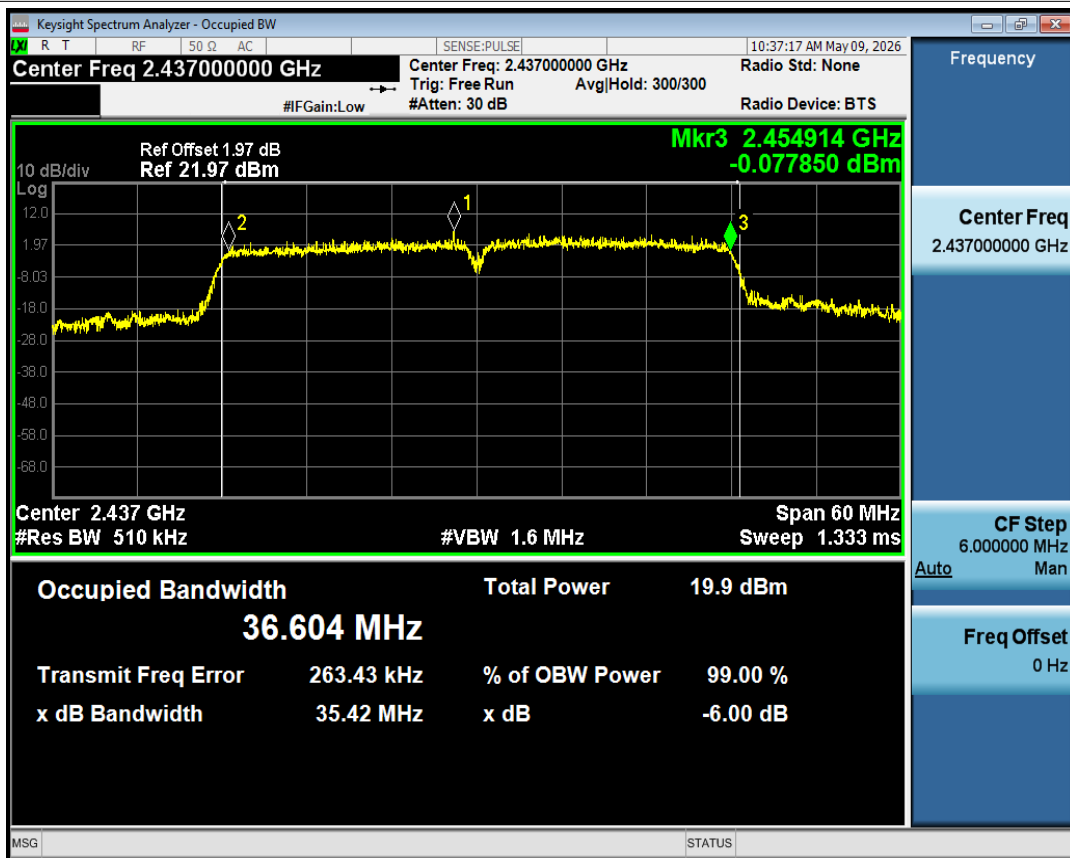
-6dB Bandwidth NVNT n20 2437MHz Ant1



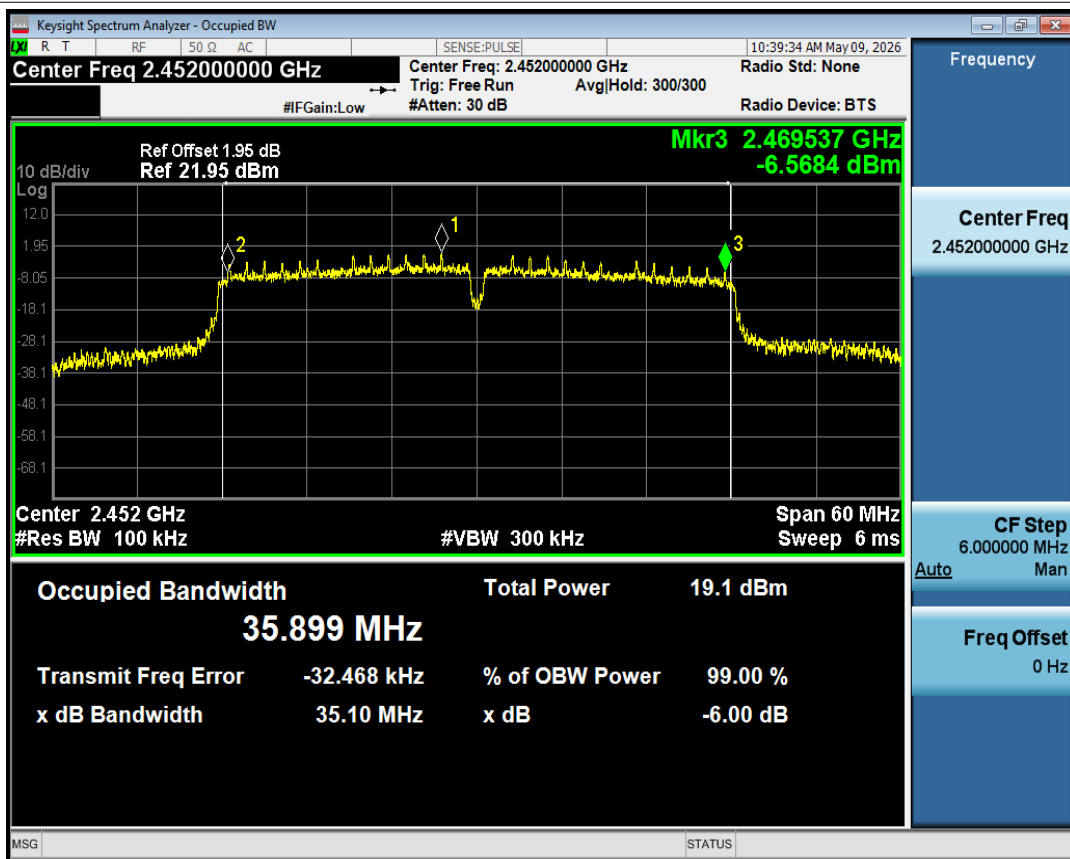
-6dB Bandwidth NVNT n20 2462MHz Ant1



-6dB Bandwidth NVNT n40 2422MHz Ant1



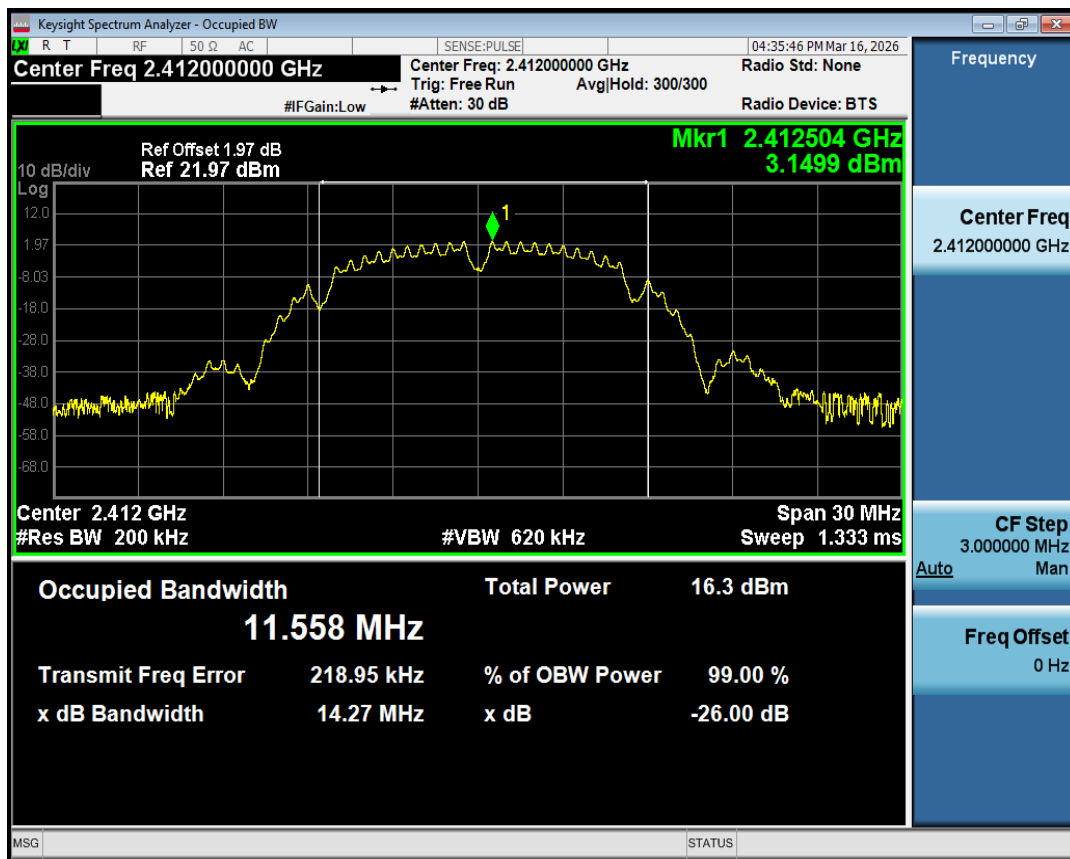
-6dB Bandwidth NVNT n40 2437MHz Ant1



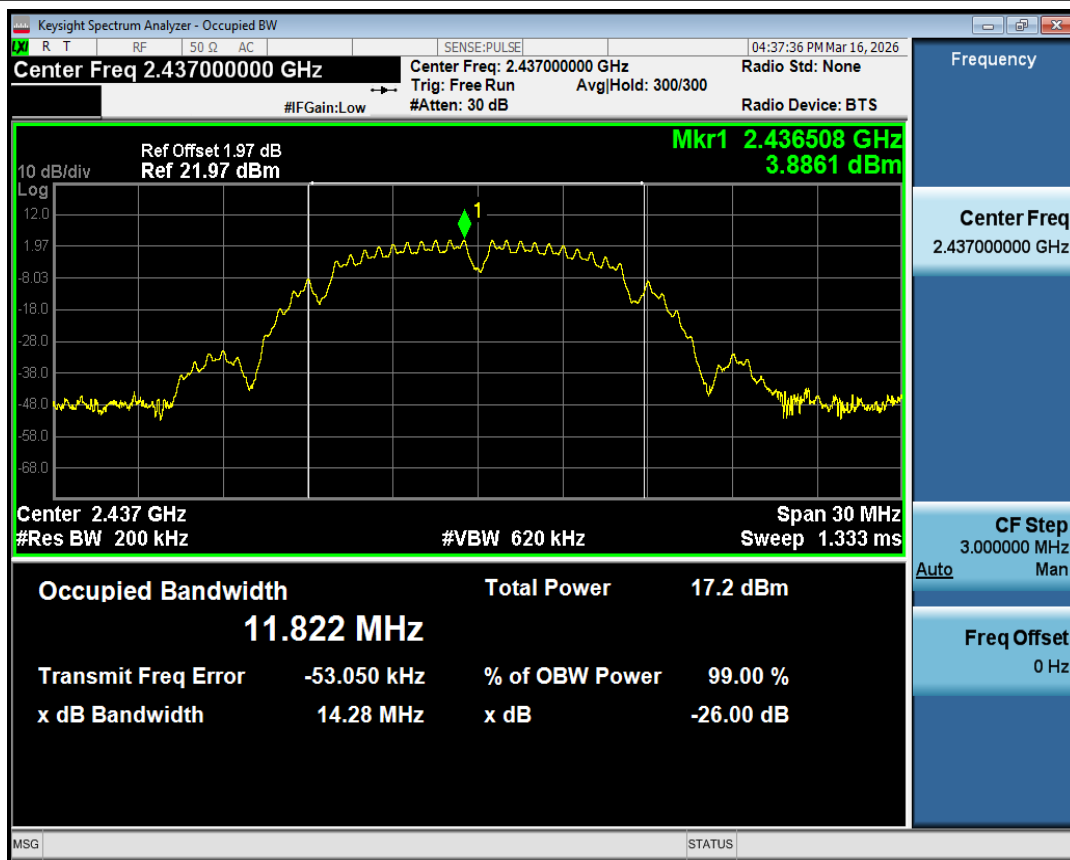
-6dB Bandwidth NVNT n40 2452MHz Ant1

## Occupied Channel Bandwidth

| Condition | Mode | Frequency (MHz) | Antenna | 99% OBW (MHz) |
|-----------|------|-----------------|---------|---------------|
| NVNT      | b    | 2412            | Ant1    | 11.558        |
| NVNT      | b    | 2437            | Ant1    | 11.822        |
| NVNT      | b    | 2462            | Ant1    | 11.642        |
| NVNT      | g    | 2412            | Ant1    | 16.422        |
| NVNT      | g    | 2437            | Ant1    | 16.47         |
| NVNT      | g    | 2462            | Ant1    | 16.451        |
| NVNT      | n20  | 2412            | Ant1    | 17.503        |
| NVNT      | n20  | 2437            | Ant1    | 17.539        |
| NVNT      | n20  | 2462            | Ant1    | 17.508        |
| NVNT      | n40  | 2422            | Ant1    | 36.188        |
| NVNT      | n40  | 2437            | Ant1    | 36.197        |
| NVNT      | n40  | 2462            | Ant1    | 36.189        |



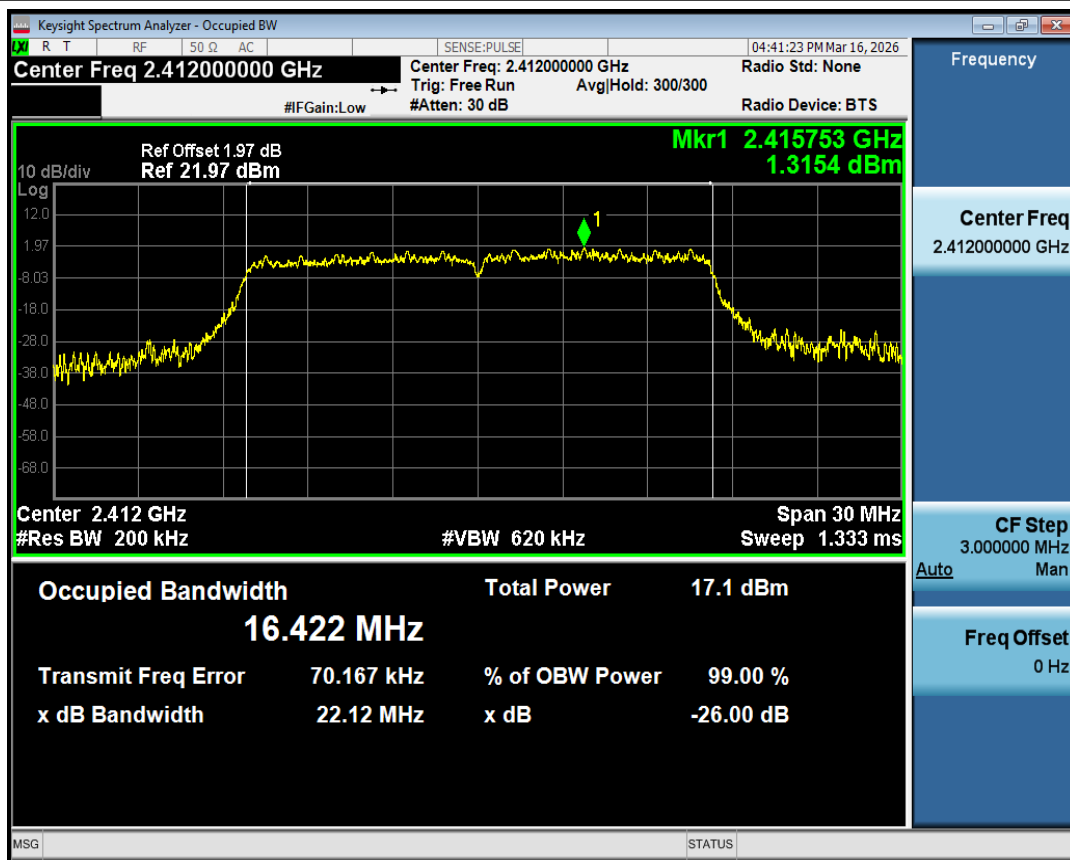
OBW NVNT b 2412MHz Ant1



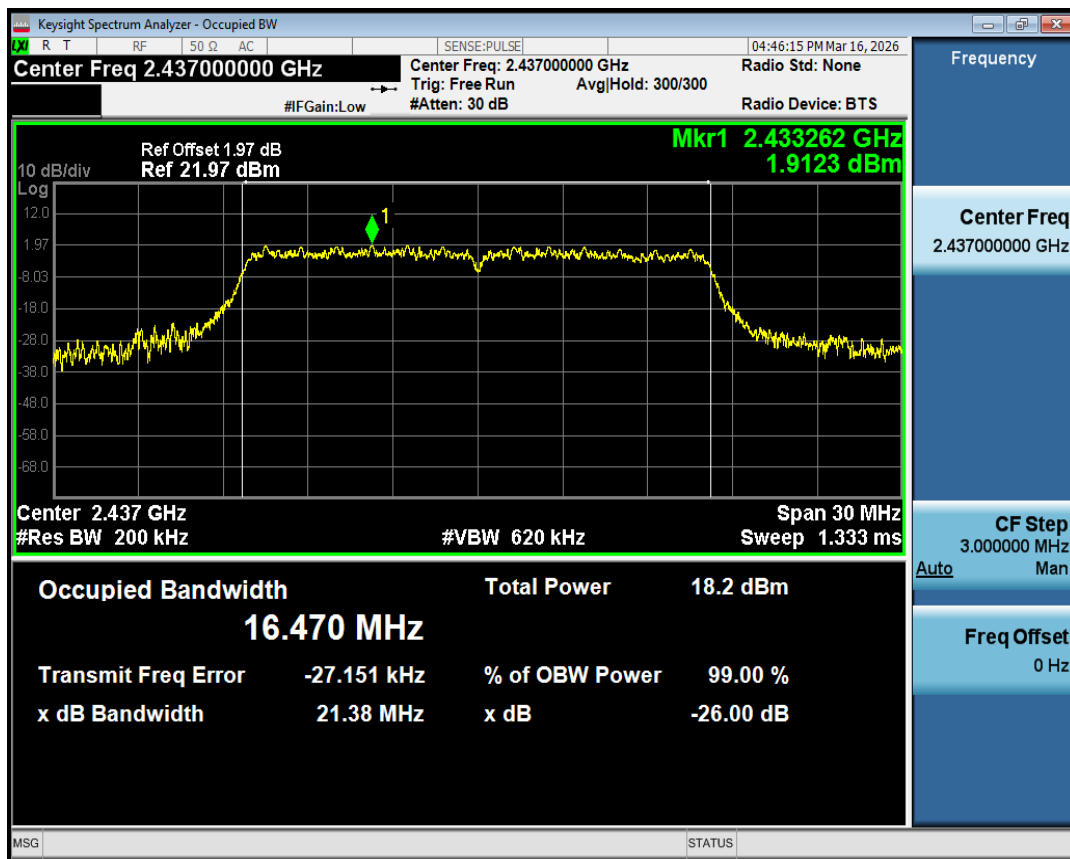
OBW NVNT b 2437MHz Ant1



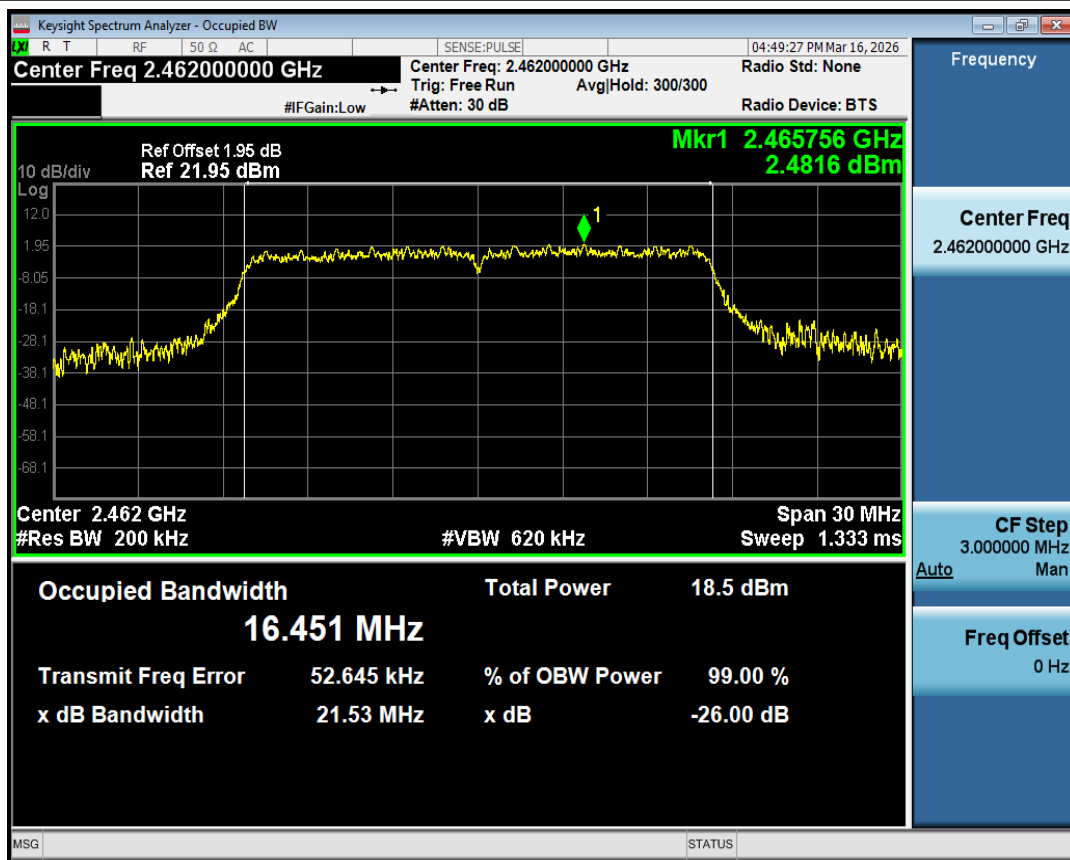
OBW NVNT b 2462MHz Ant1



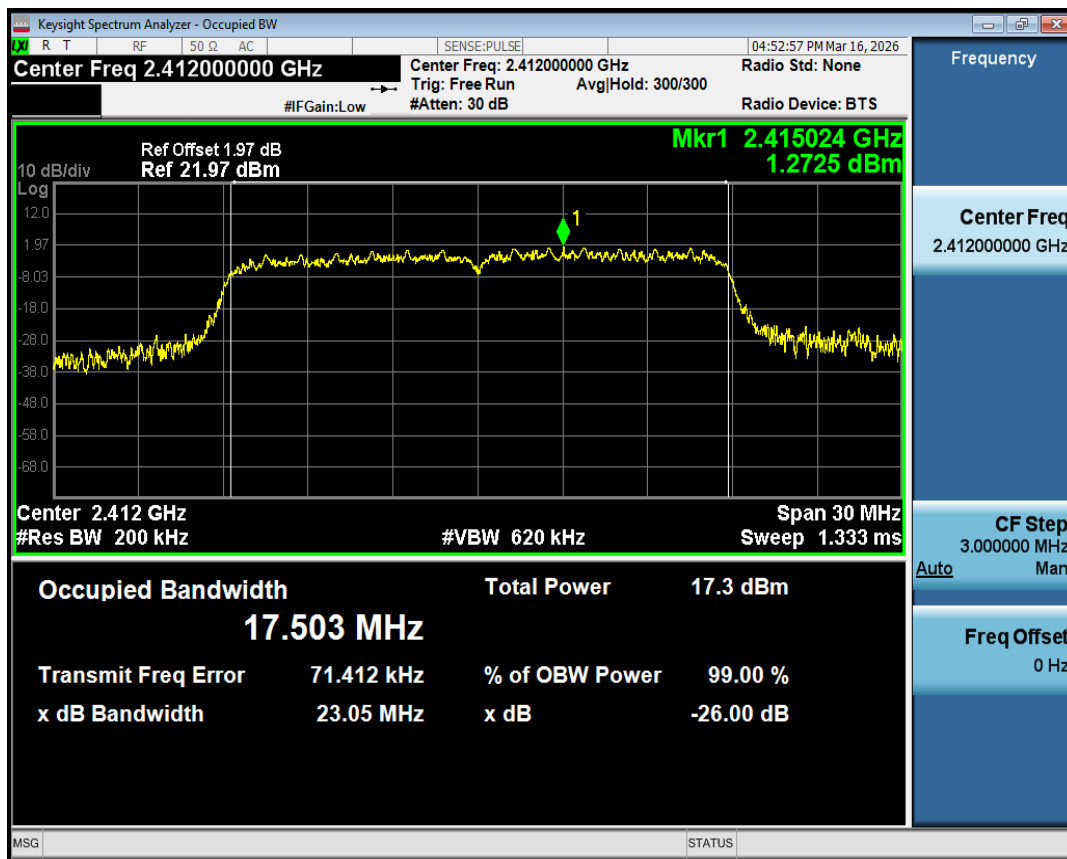
OBW NVNT g 2412MHz Ant1



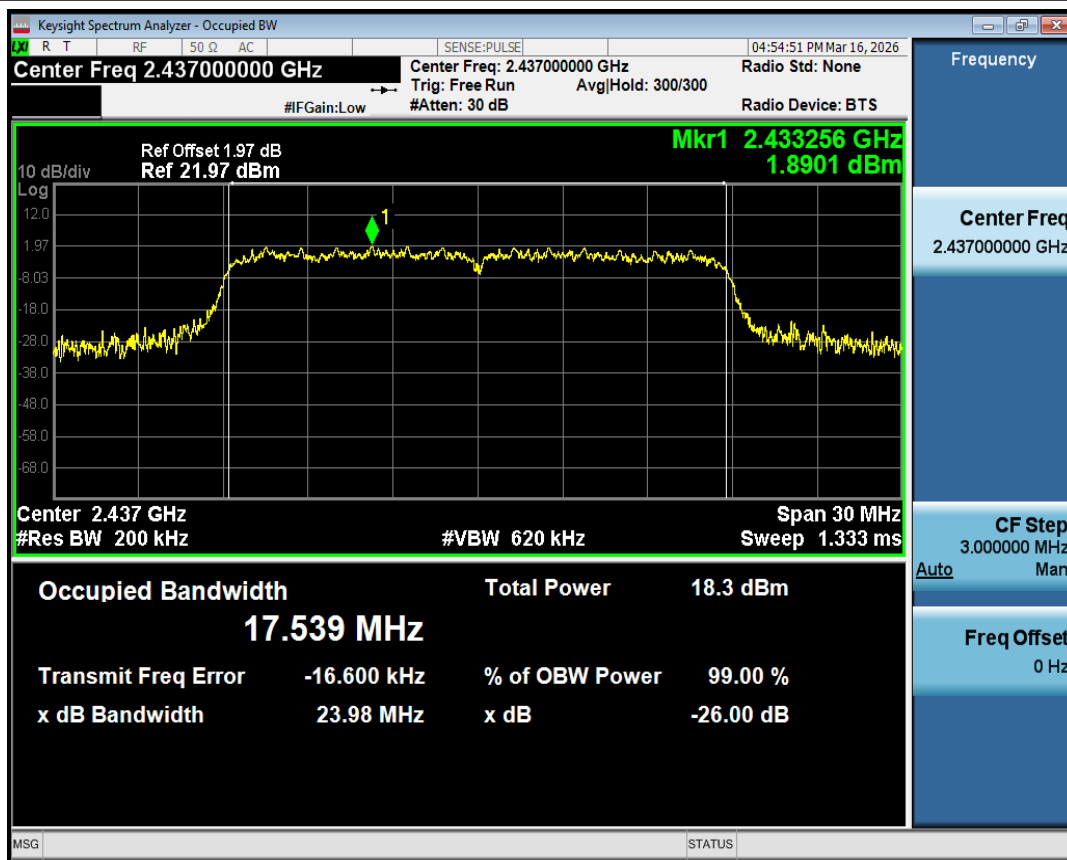
OBW NVNT g 2437MHz Ant1



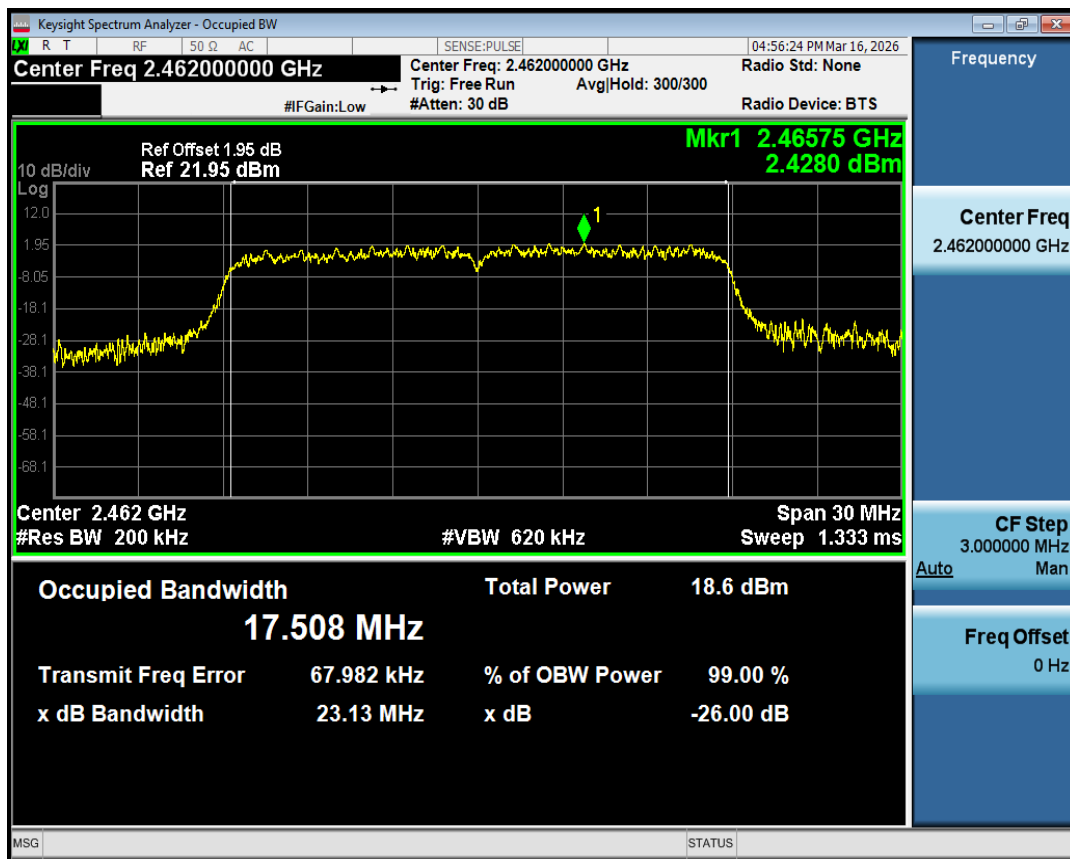
OBW NVNT g 2462MHz Ant1



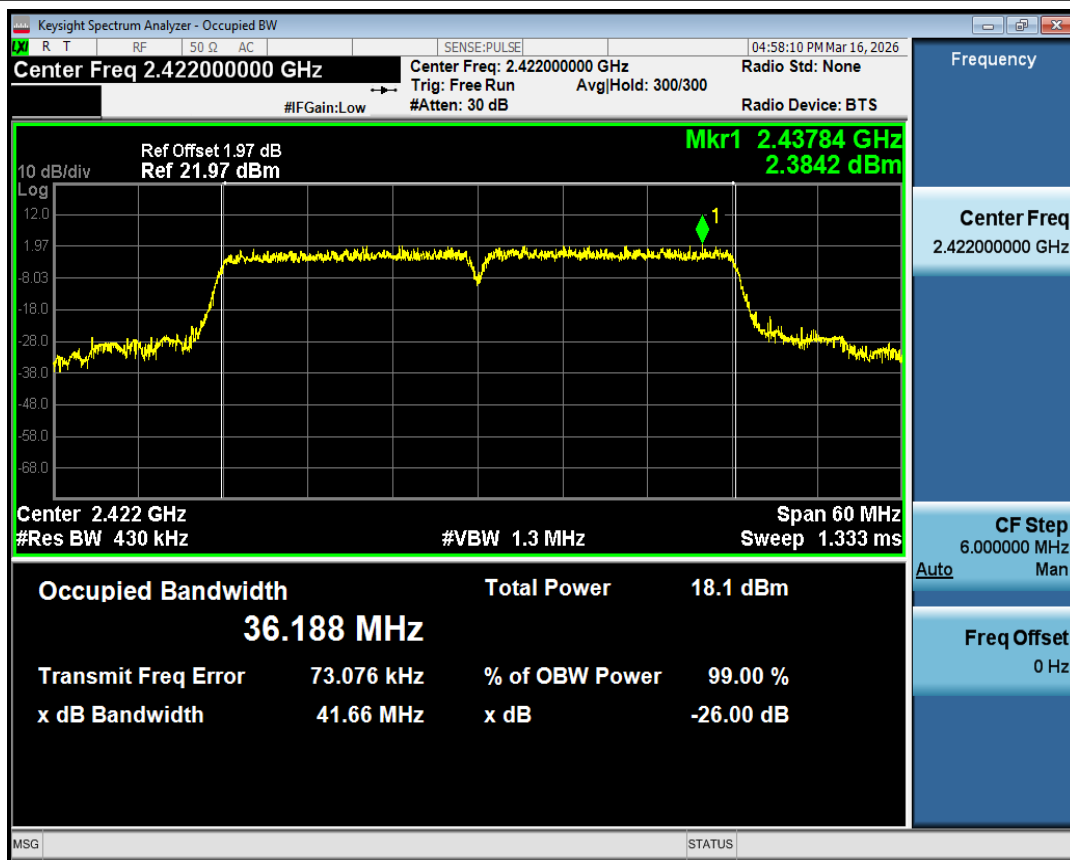
OBW NVNT n20 2412MHz Ant1



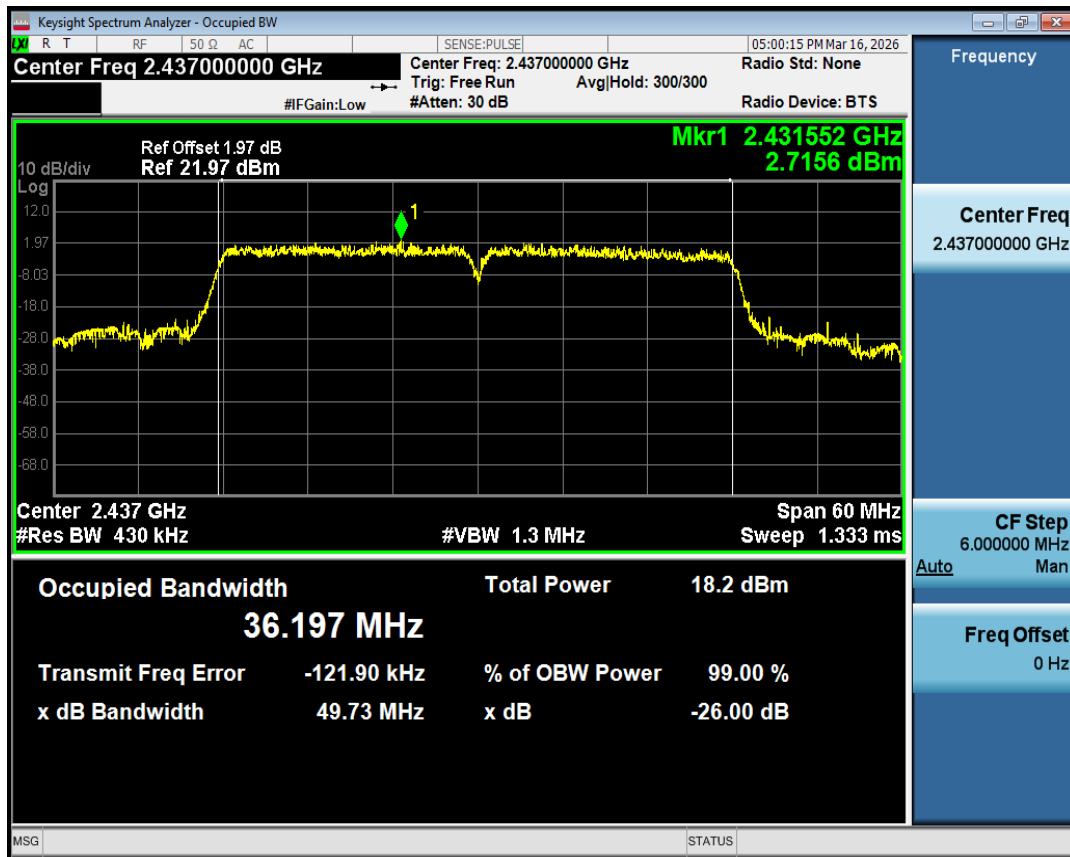
OBW NVNT n20 2437MHz Ant1



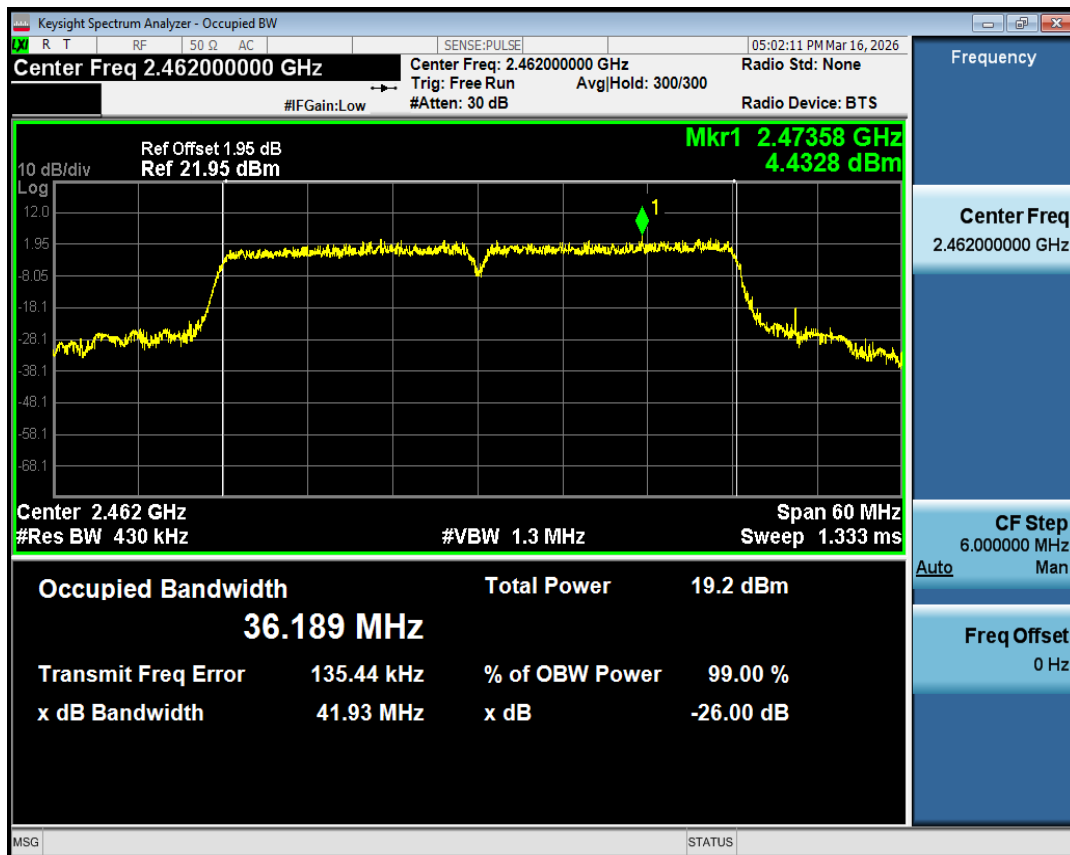
OBW NVNT n20 2462MHz Ant1



OBW NVNT n40 2422MHz Ant1



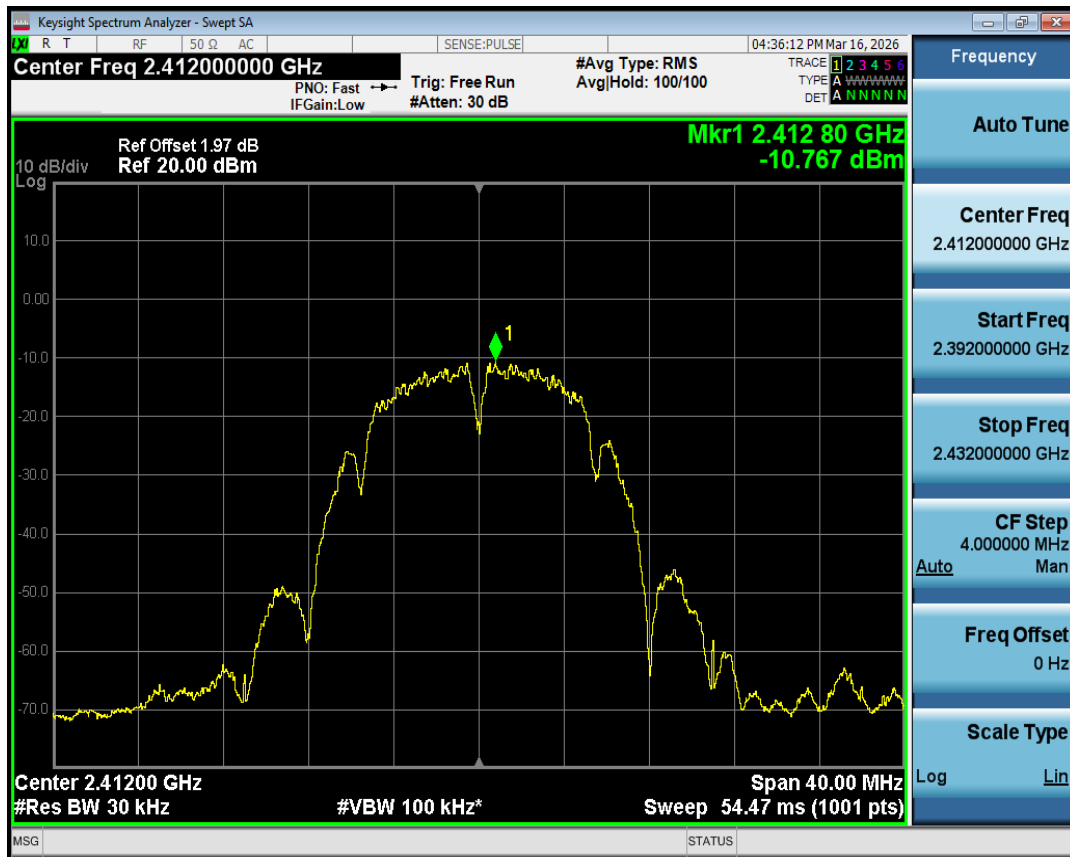
OBW NVNT n40 2437MHz Ant1



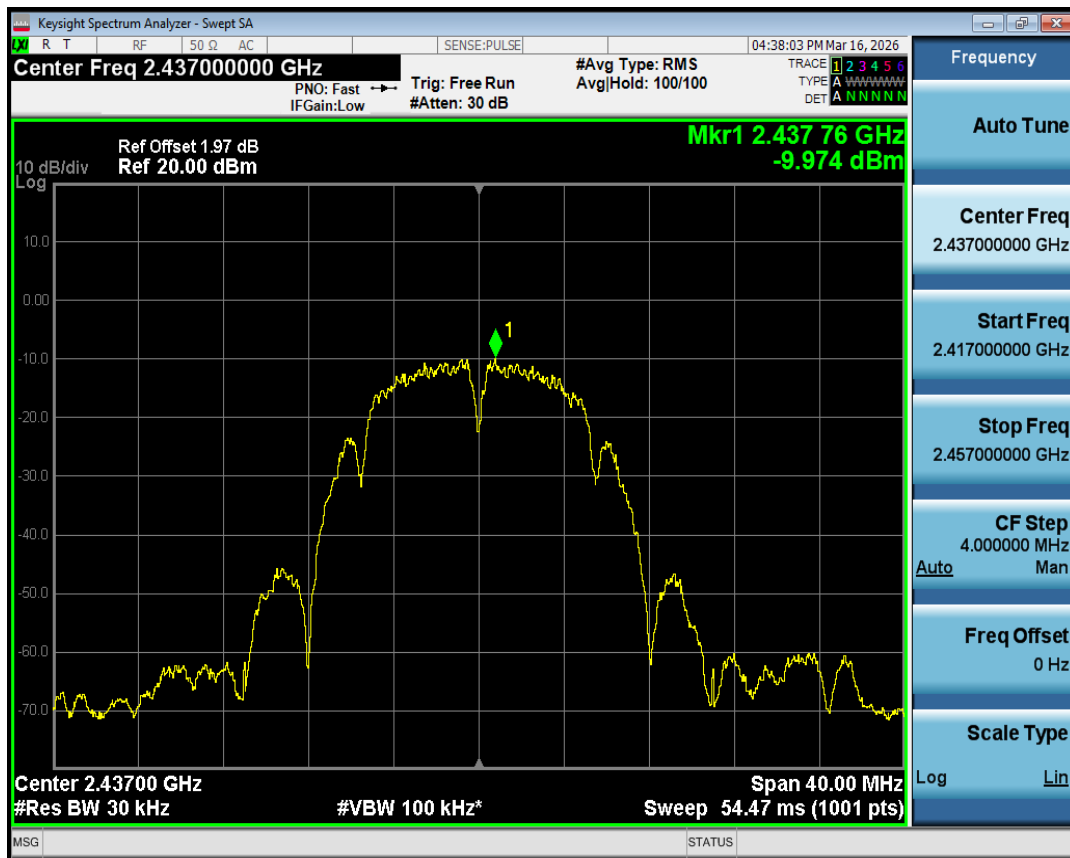
OBW NVNT n40 2462MHz Ant1

## Maximum Power Spectral Density Level

| Condition                                              | Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm/3kHz) | Duty Factor (dB) | Total PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|--------------------------------------------------------|------|-----------------|---------|--------------------------|------------------|----------------------|------------------|---------|
| NVNT                                                   | b    | 2412            | Ant1    | -20.77                   | 0.27             | -20.5                | 8                | Pass    |
| NVNT                                                   | b    | 2437            | Ant1    | -19.97                   | 0.27             | -19.7                | 8                | Pass    |
| NVNT                                                   | b    | 2462            | Ant1    | -19.51                   | 0.27             | -19.24               | 8                | Pass    |
| NVNT                                                   | g    | 2412            | Ant1    | -22.85                   | 1.66             | -21.19               | 8                | Pass    |
| NVNT                                                   | g    | 2437            | Ant1    | -21.91                   | 1.61             | -20.3                | 8                | Pass    |
| NVNT                                                   | g    | 2462            | Ant1    | -20.93                   | 1.66             | -19.27               | 8                | Pass    |
| NVNT                                                   | n20  | 2412            | Ant1    | -22.38                   | 1.66             | -20.72               | 8                | Pass    |
| NVNT                                                   | n20  | 2437            | Ant1    | -22.53                   | 1.68             | -20.85               | 8                | Pass    |
| NVNT                                                   | n20  | 2462            | Ant1    | -21.16                   | 1.66             | -19.5                | 8                | Pass    |
| NVNT                                                   | n40  | 2422            | Ant1    | -25.29                   | 2.38             | -22.91               | 8                | Pass    |
| NVNT                                                   | n40  | 2437            | Ant1    | -25                      | 2.33             | -22.67               | 8                | Pass    |
| NVNT                                                   | n40  | 2462            | Ant1    | -24.18                   | 2.26             | -21.92               | 8                | Pass    |
| Remark: PSD(dBm/3kHz)=PSD(dBm/30kHz)-10Log(30kHz/3kHz) |      |                 |         |                          |                  |                      |                  |         |



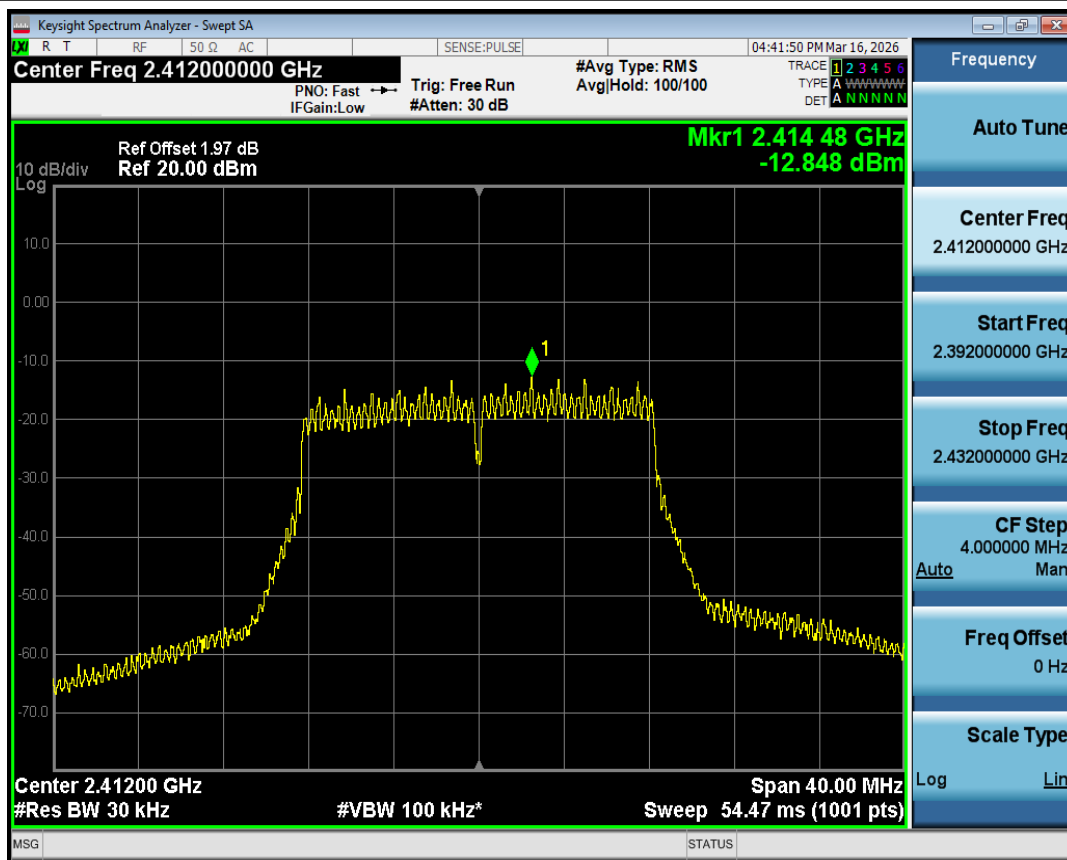
PSD NVNT b 2412MHz Ant1



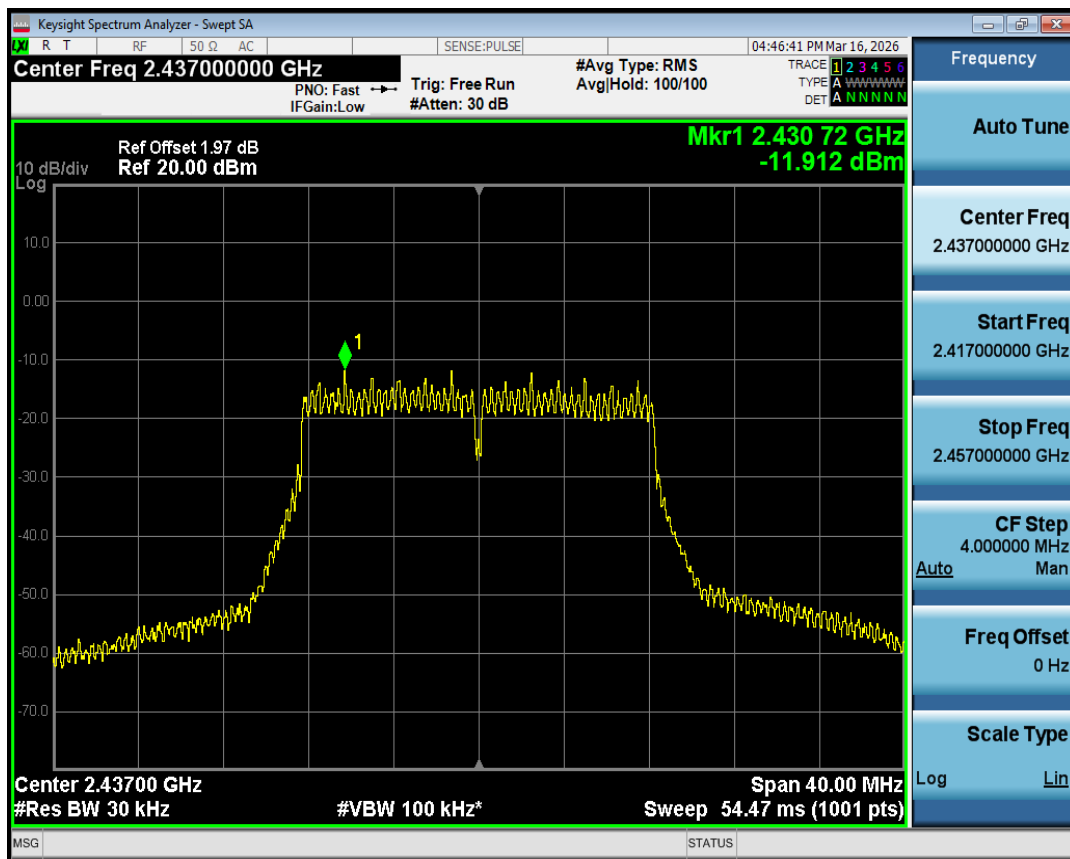
PSD NVNT b 2437MHz Ant1



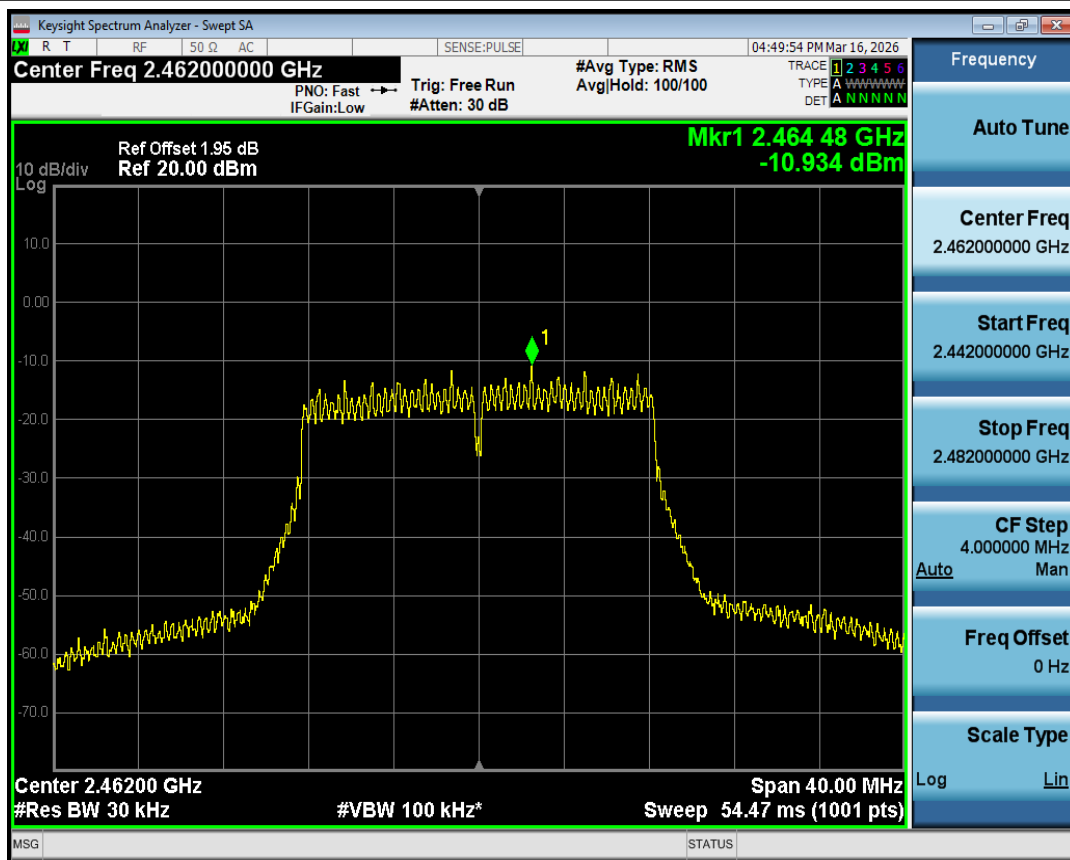
PSD NVNT b 2462MHz Ant1



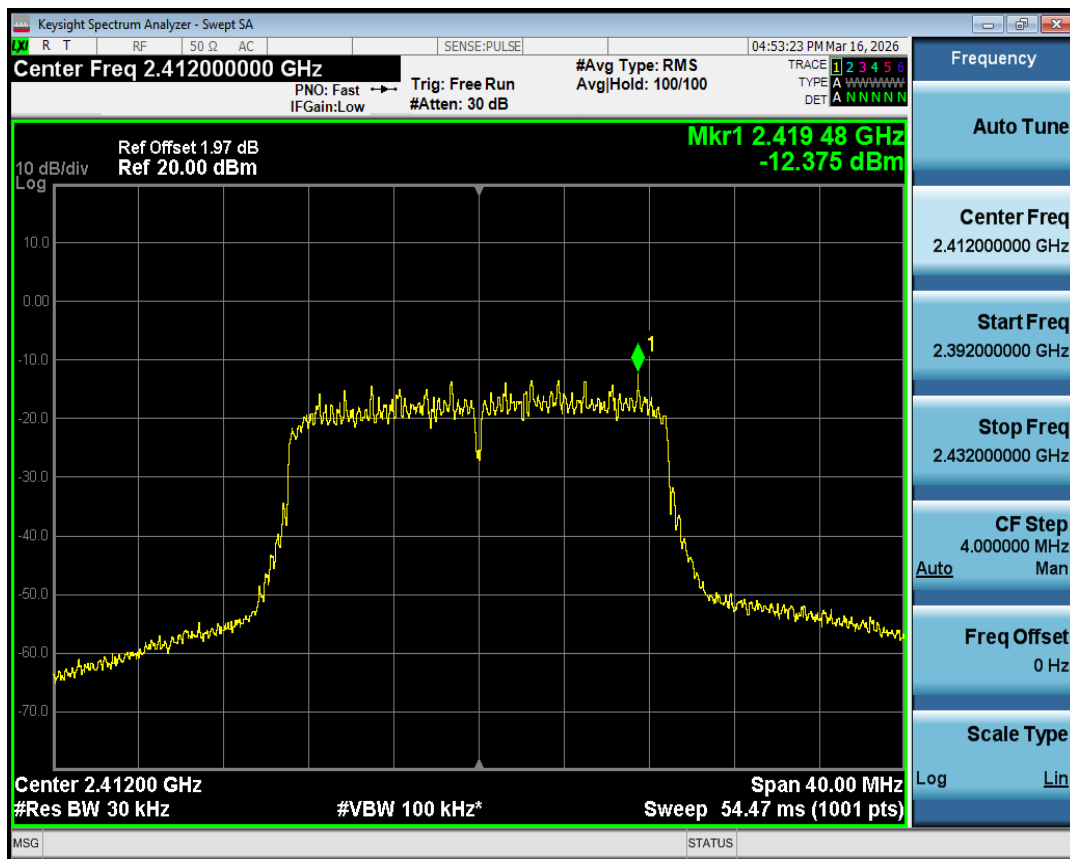
PSD NVNT g 2412MHz Ant1



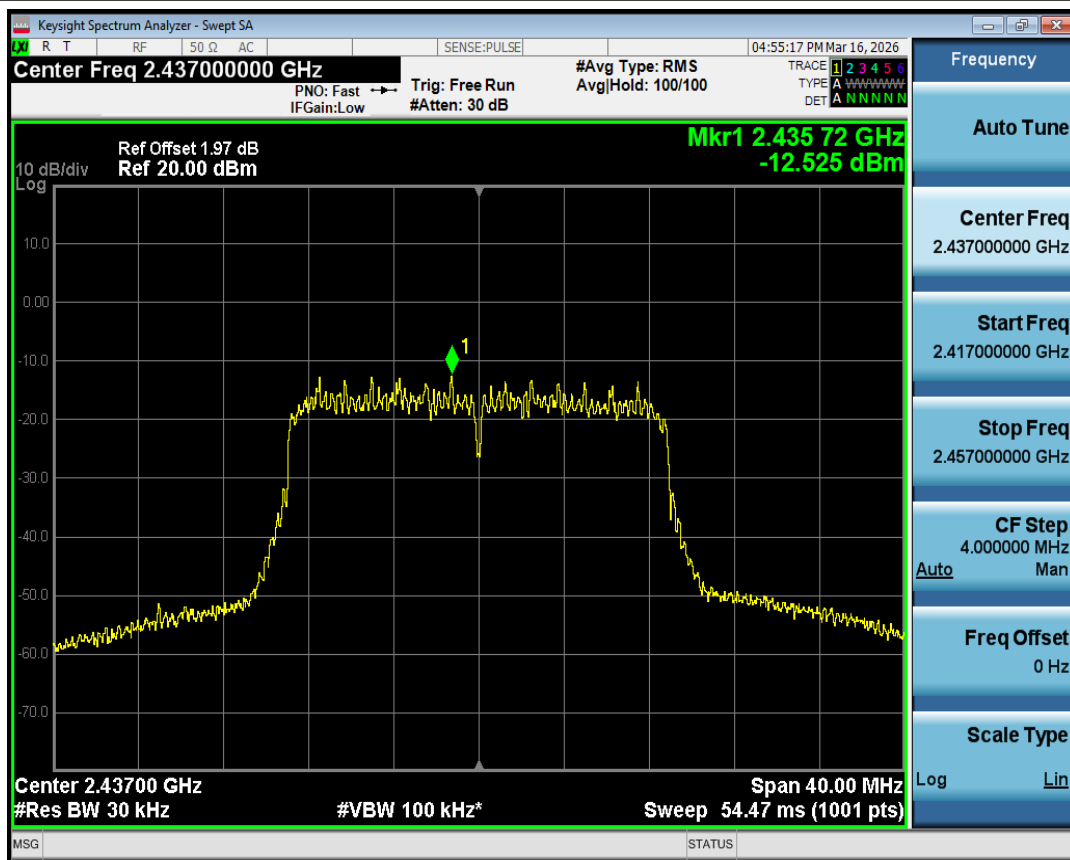
PSD NVNT g 2437MHz Ant1



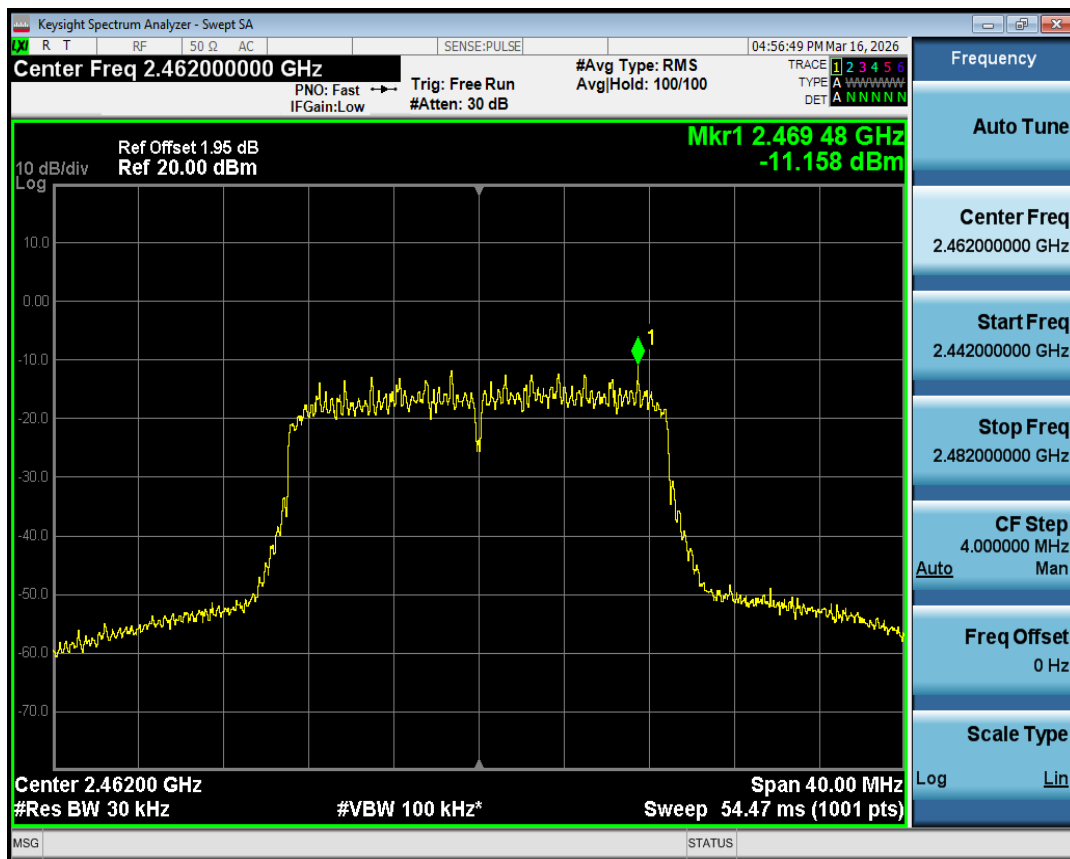
PSD NVNT g 2462MHz Ant1



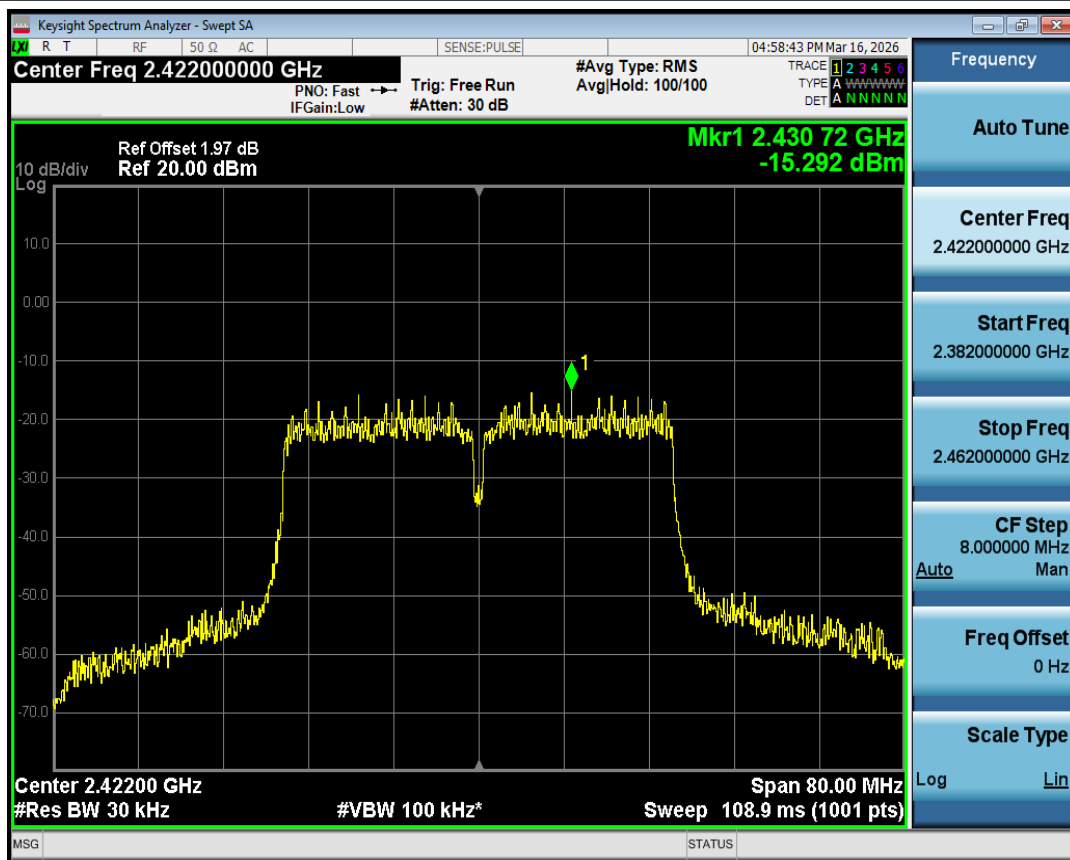
PSD NVNT n20 2412MHz Ant1



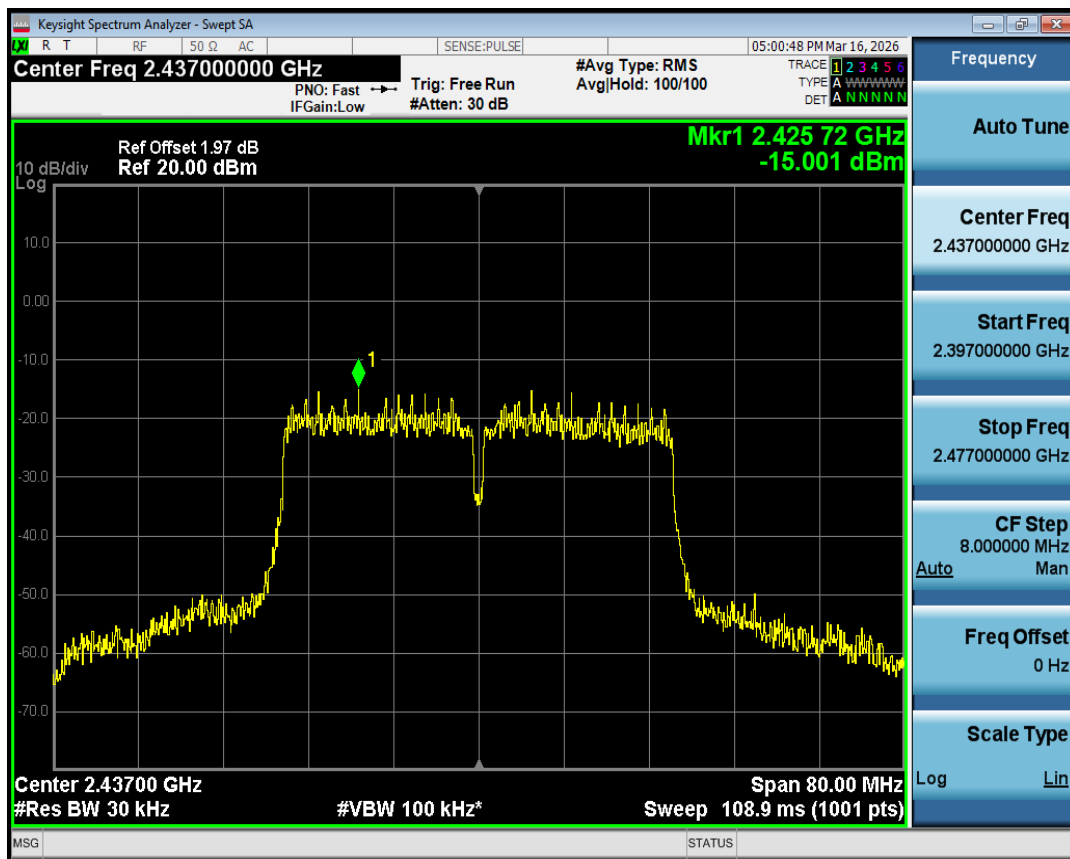
PSD NVNT n20 2437MHz Ant1



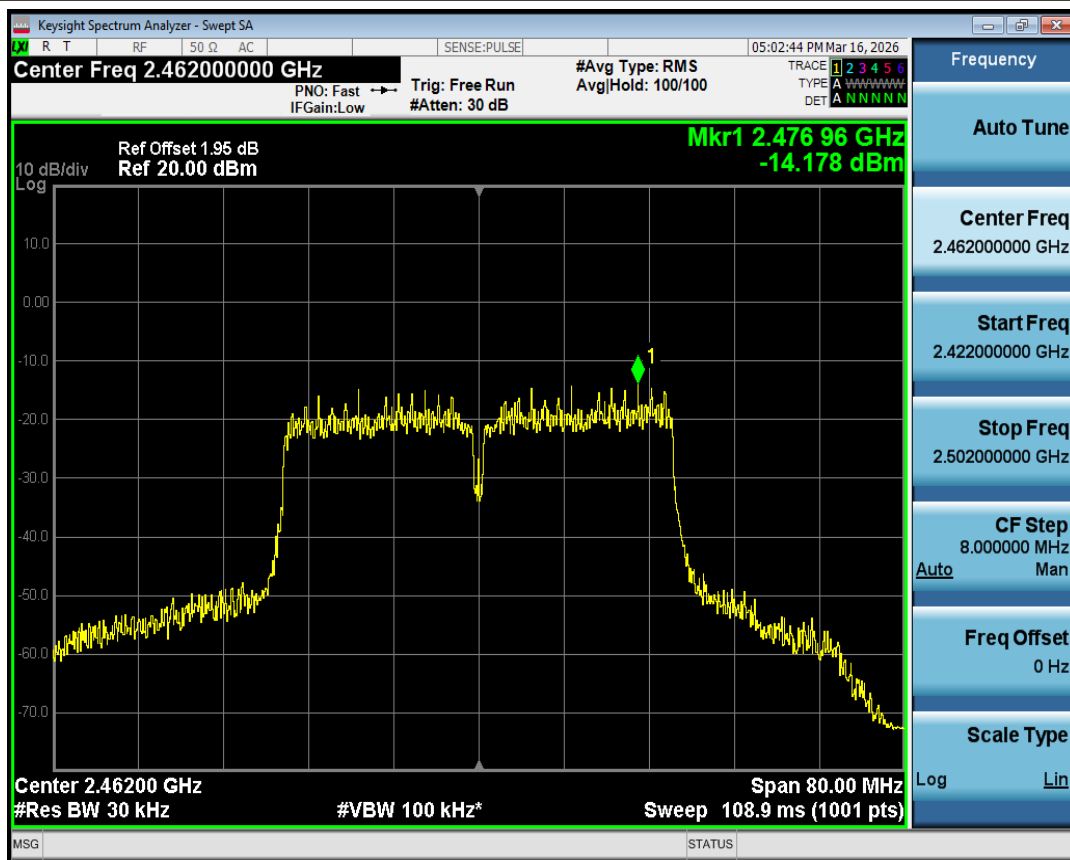
PSD NVNT n20 2462MHz Ant1



PSD NVNT n40 2422MHz Ant1



PSD NVNT n40 2437MHz Ant1



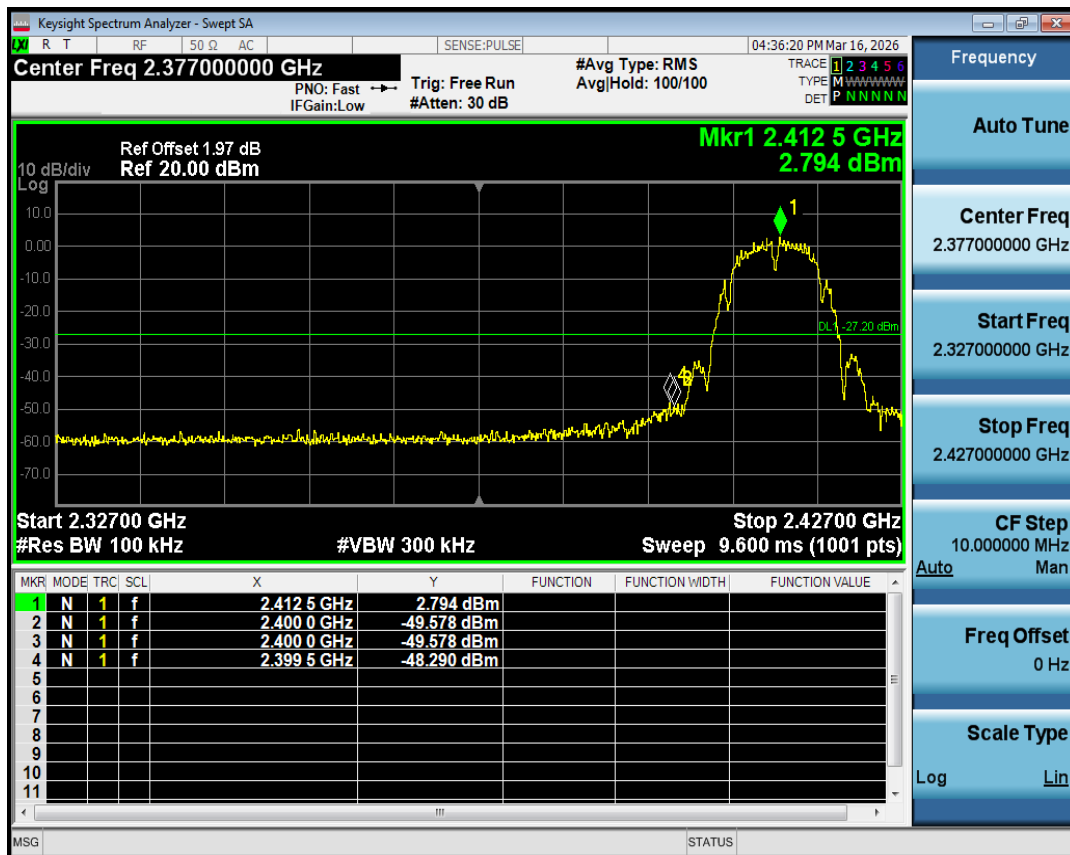
PSD NVNT n40 2462MHz Ant1

## Band Edge

| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | b    | 2412            | Ant1    | -51.09          | -30         | Pass    |
| NVNT      | b    | 2462            | Ant1    | -56.49          | -30         | Pass    |
| NVNT      | g    | 2412            | Ant1    | -35.61          | -30         | Pass    |
| NVNT      | g    | 2462            | Ant1    | -39.22          | -30         | Pass    |
| NVNT      | n20  | 2412            | Ant1    | -34.23          | -30         | Pass    |
| NVNT      | n20  | 2462            | Ant1    | -41.18          | -30         | Pass    |
| NVNT      | n40  | 2422            | Ant1    | -32.25          | -30         | Pass    |
| NVNT      | n40  | 2462            | Ant1    | -31.99          | -30         | Pass    |



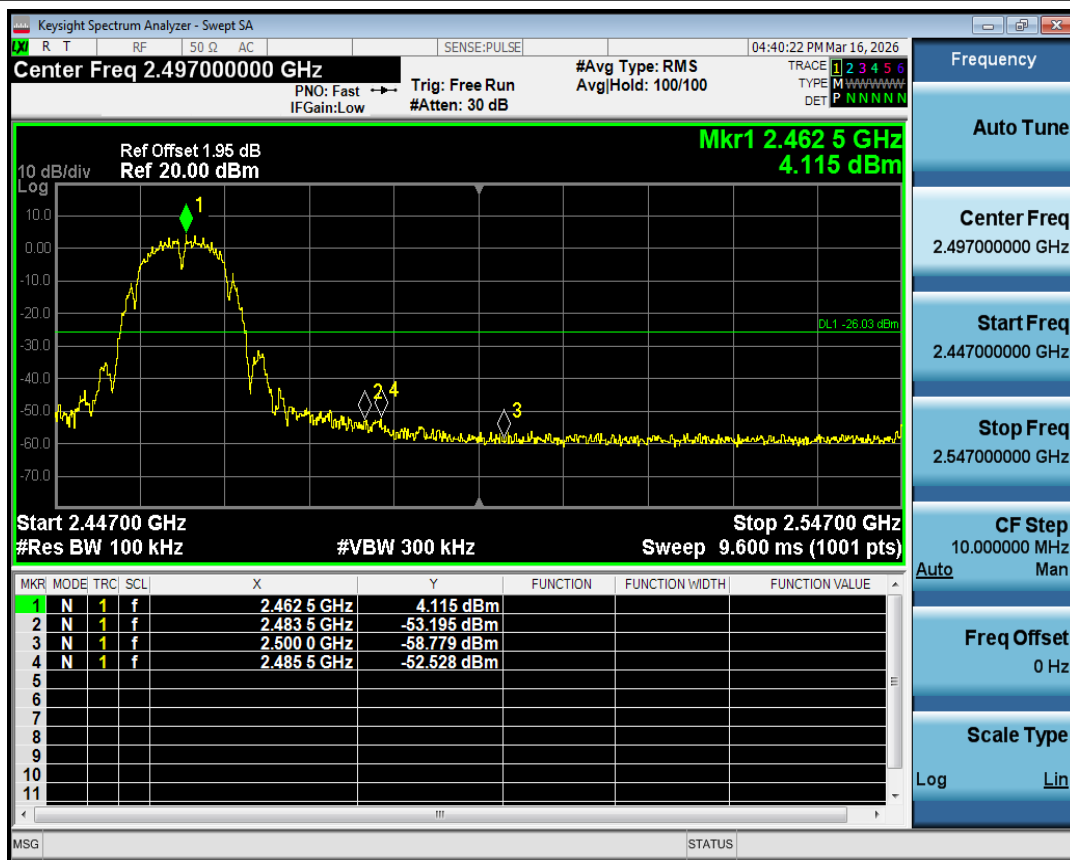
Band Edge NVNT b 2412MHz Ant1 Ref



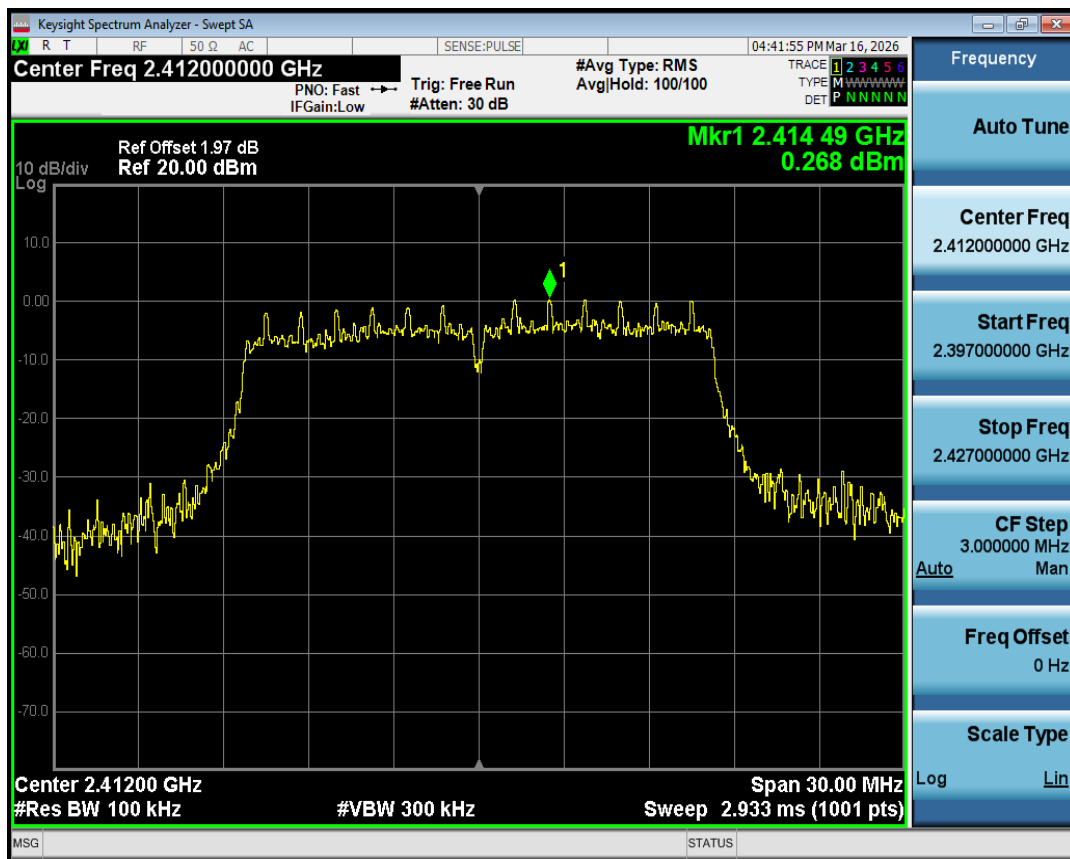
Band Edge NVNT b 2412MHz Ant1 Emission



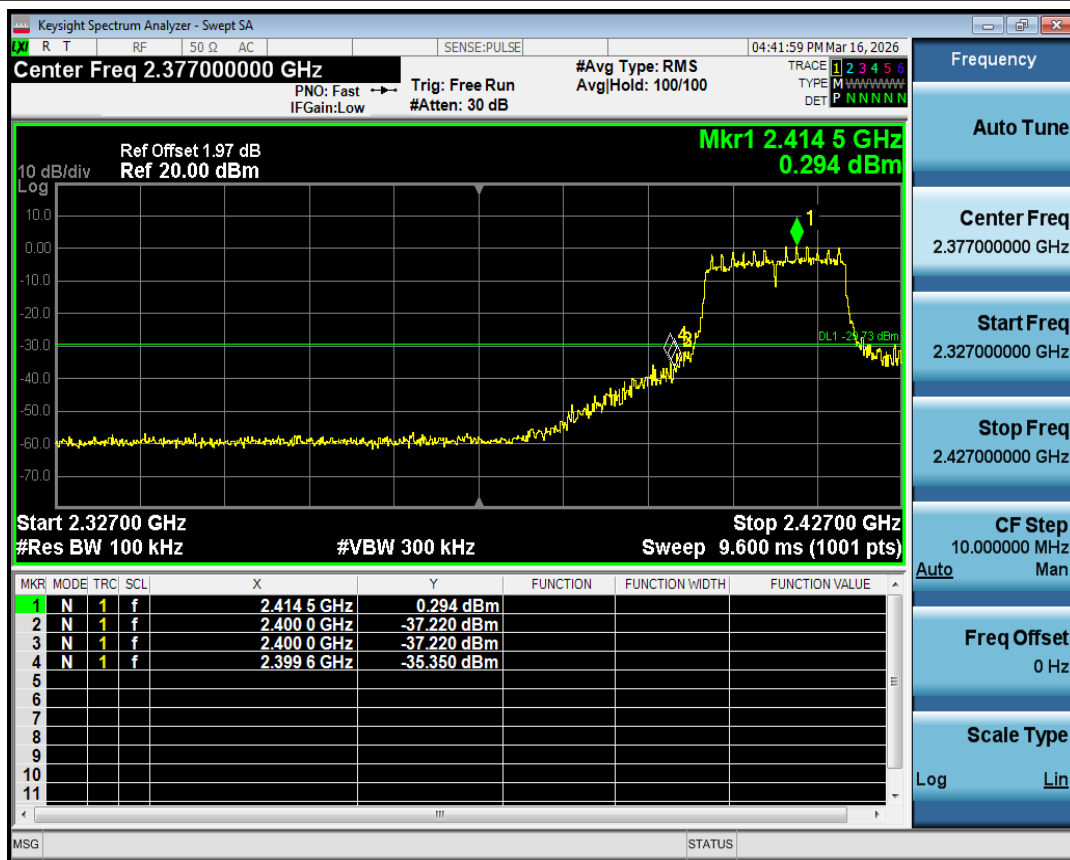
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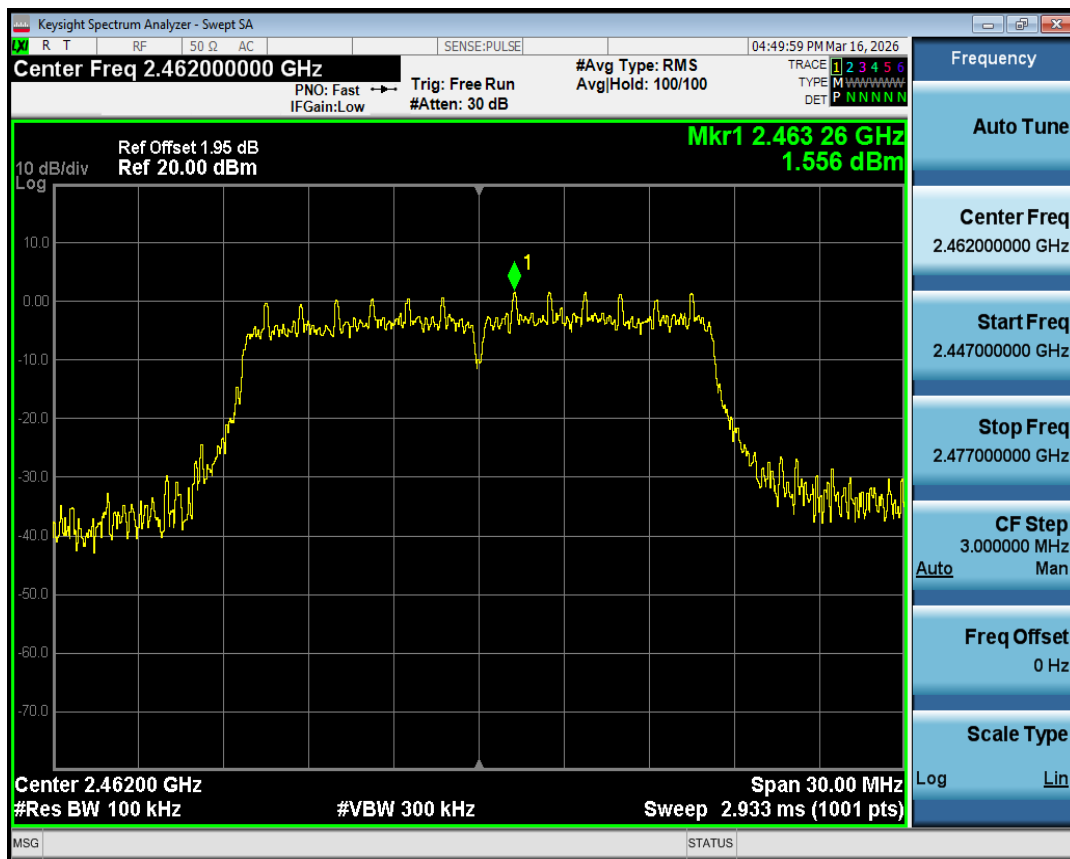
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Band Edge NVNT g 2412MHz Ant1 Ref



Band Edge NVNT g 2412MHz Ant1 Emission



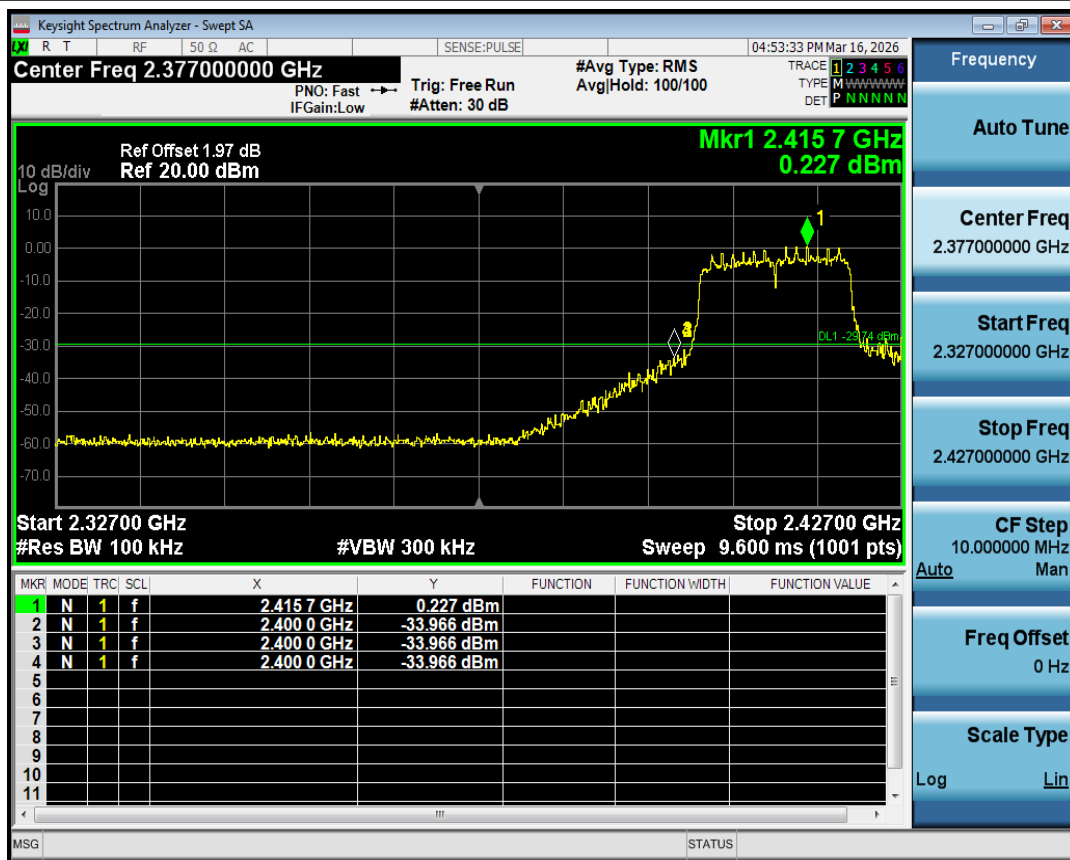
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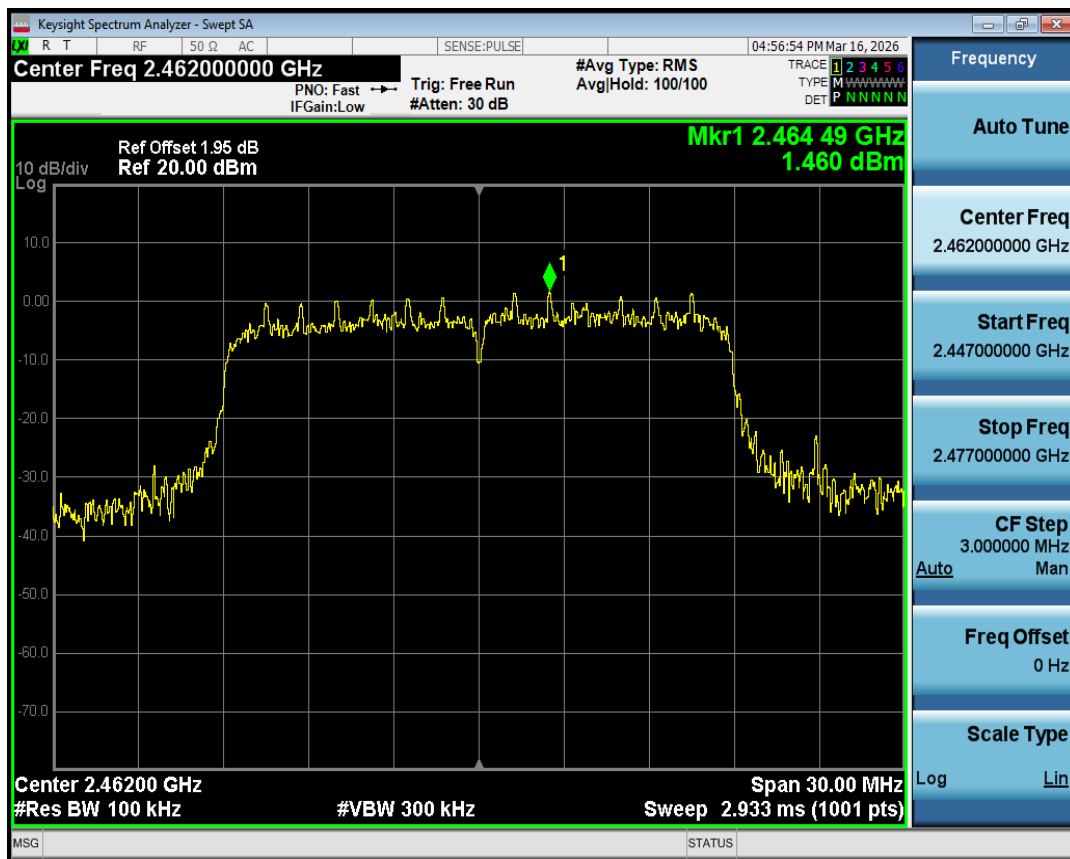
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Band Edge NVNT n20 2412MHz Ant1 Ref



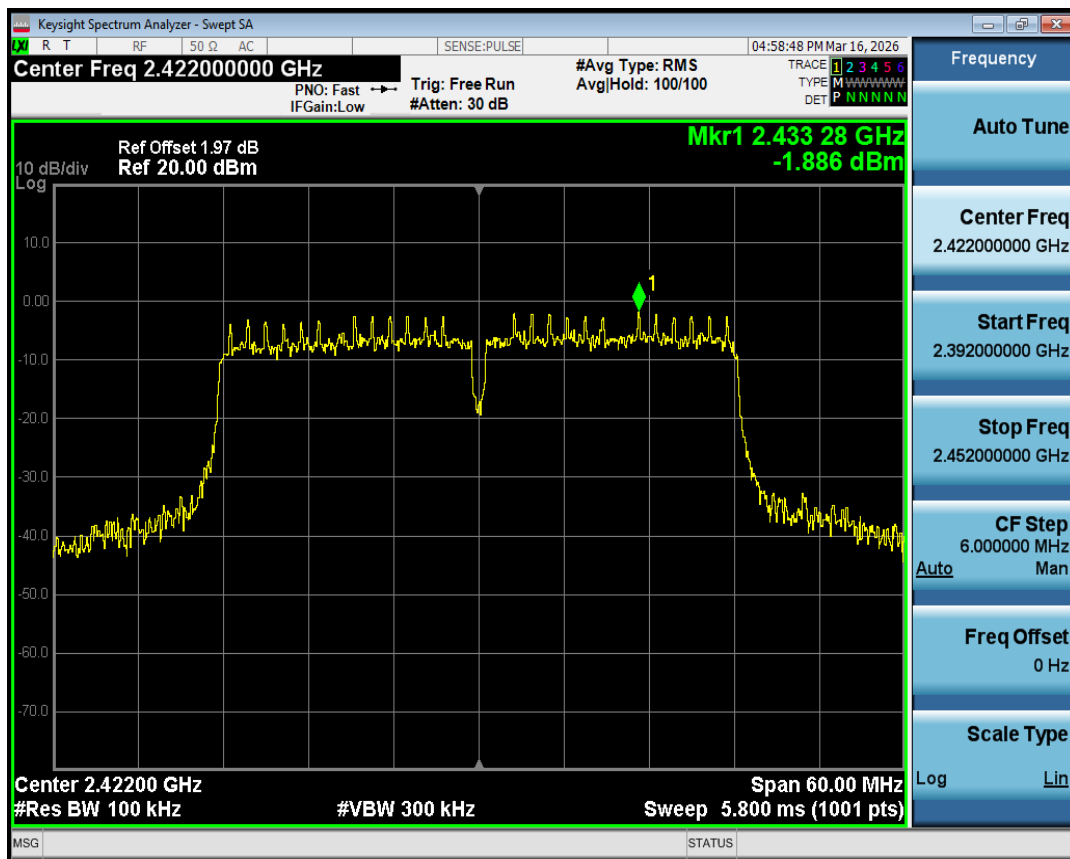
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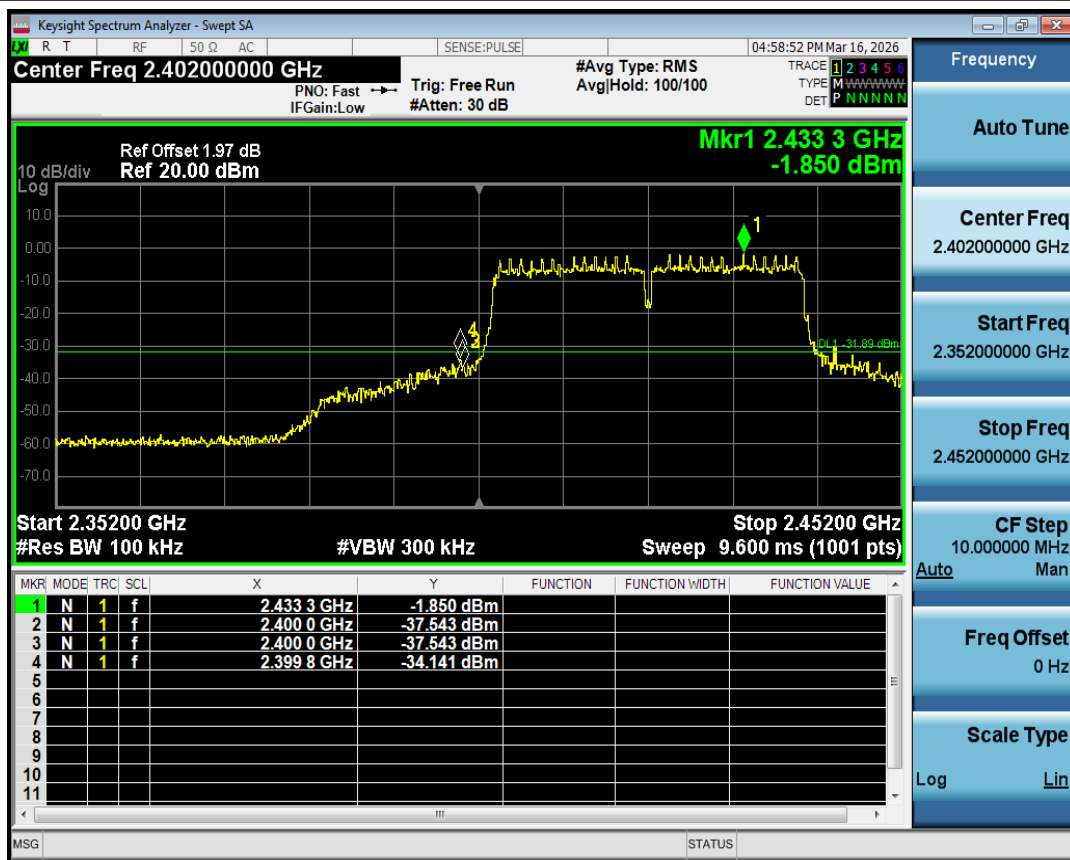
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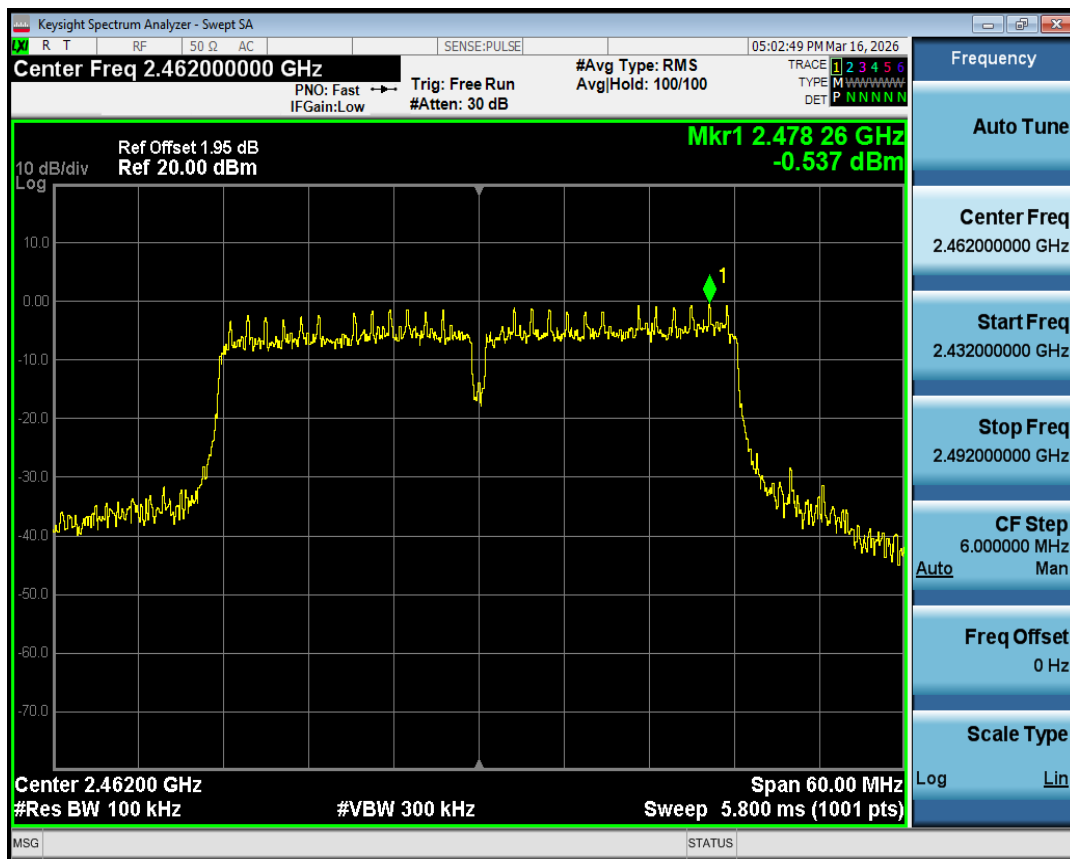
Band Edge NVNT n20 2462MHz Ant1 Emission



Band Edge NVNT n40 2422MHz Ant1 Ref



Band Edge NVNT n40 2422MHz Ant1 Emission



Band Edge NVNT n40 2462MHz Ant1 Ref



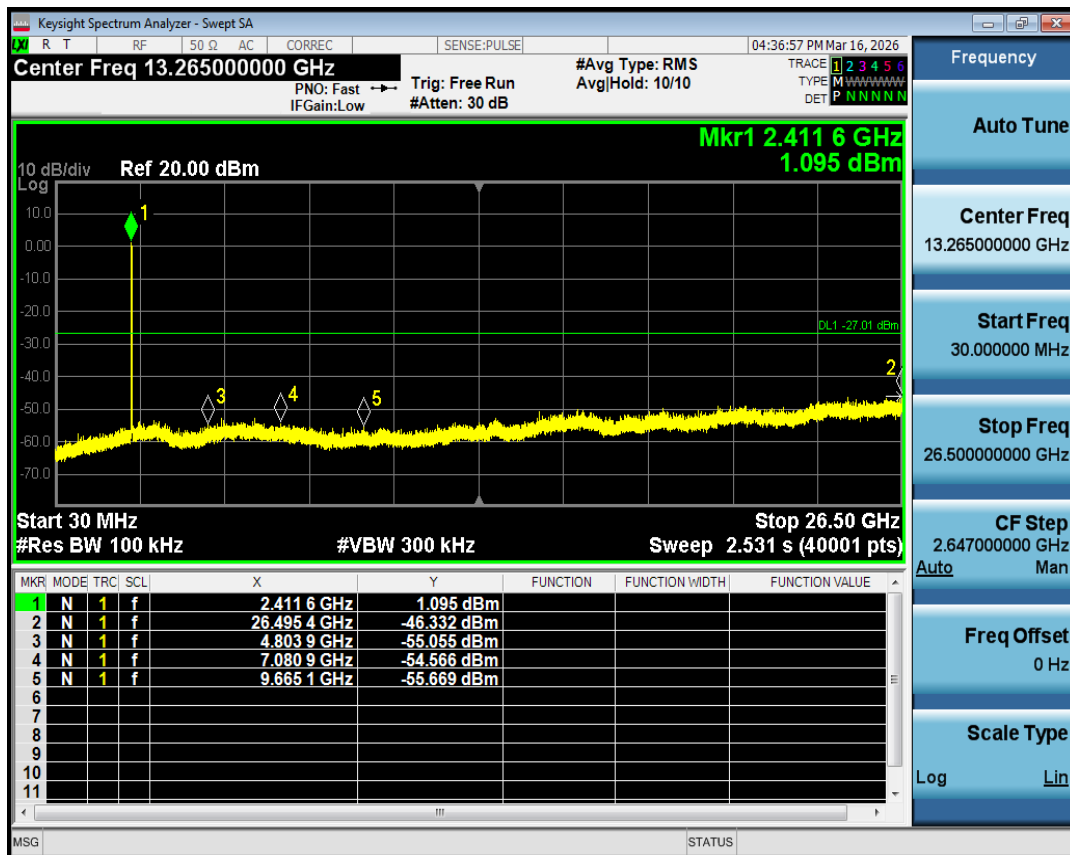
Band Edge NVNT n40 2462MHz Ant1 Emission

## Conducted RF Spurious Emission

| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | b    | 2412            | Ant1    | -49.33          | -30         | Pass    |
| NVNT      | b    | 2437            | Ant1    | -49.34          | -30         | Pass    |
| NVNT      | b    | 2462            | Ant1    | -50.56          | -30         | Pass    |
| NVNT      | g    | 2412            | Ant1    | -46.72          | -30         | Pass    |
| NVNT      | g    | 2437            | Ant1    | -47.58          | -30         | Pass    |
| NVNT      | g    | 2462            | Ant1    | -48.03          | -30         | Pass    |
| NVNT      | n20  | 2412            | Ant1    | -45.76          | -30         | Pass    |
| NVNT      | n20  | 2437            | Ant1    | -42.05          | -30         | Pass    |
| NVNT      | n20  | 2462            | Ant1    | -48.2           | -30         | Pass    |
| NVNT      | n40  | 2422            | Ant1    | -43.71          | -30         | Pass    |
| NVNT      | n40  | 2437            | Ant1    | -38.83          | -30         | Pass    |
| NVNT      | n40  | 2462            | Ant1    | -45.55          | -30         | Pass    |



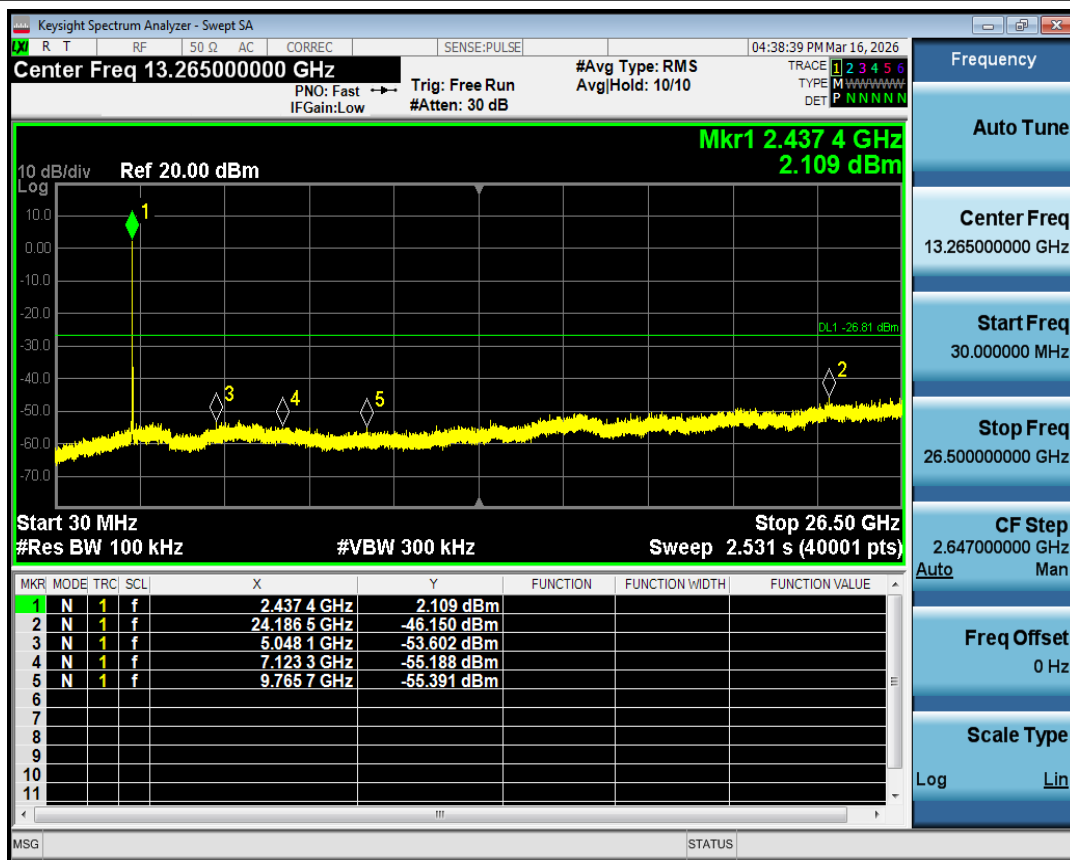
Tx. Spurious NVNT b 2412MHz Ant1 Ref



Tx. Spurious NVNT b 2412MHz Ant1 Emission



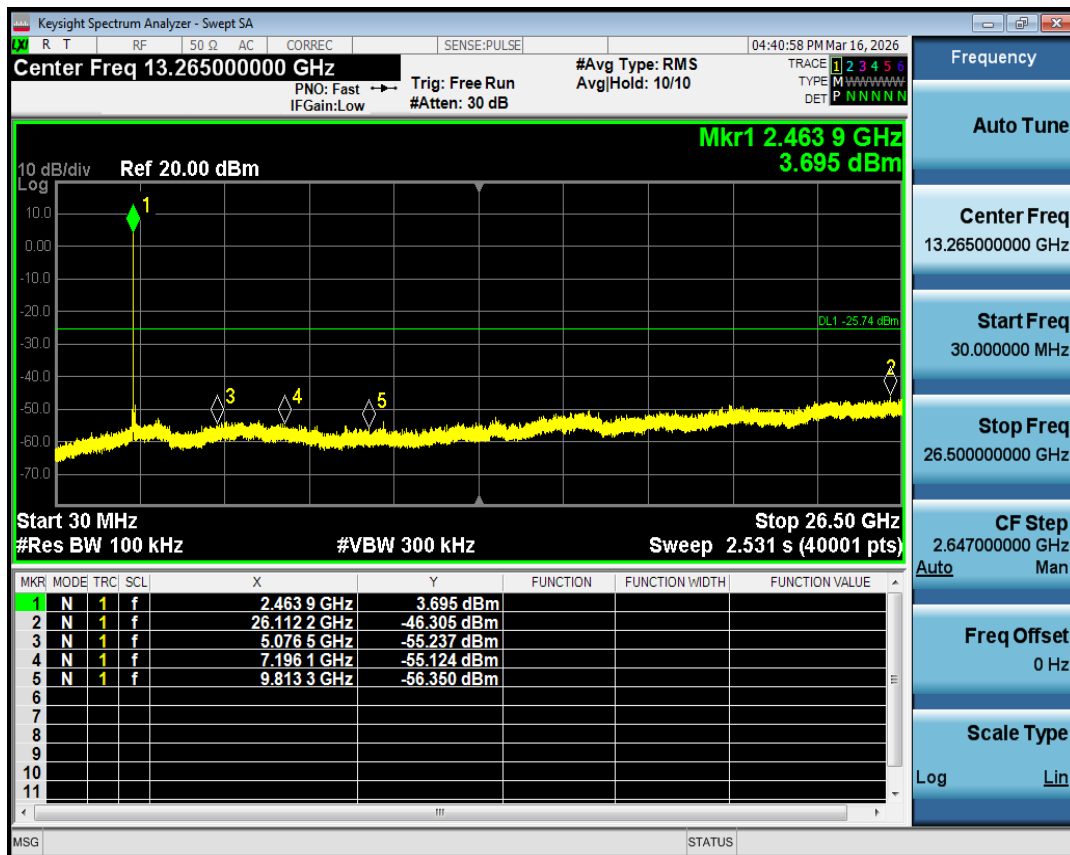
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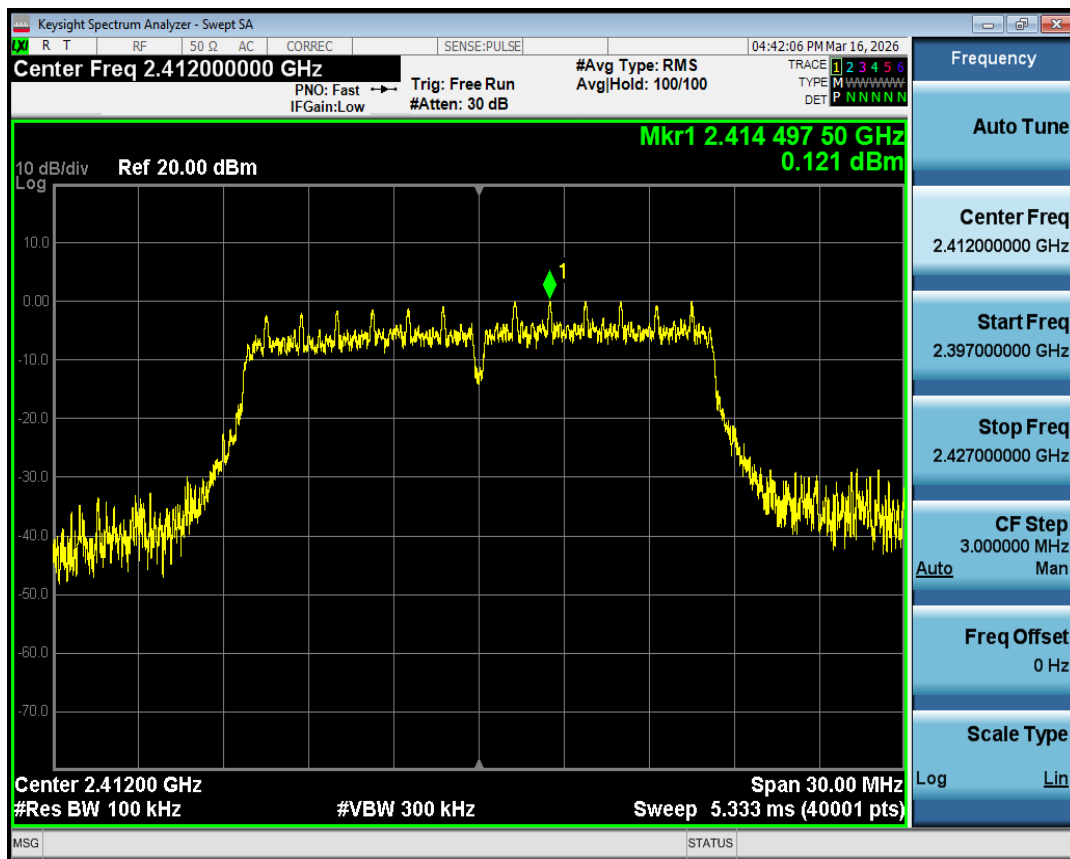
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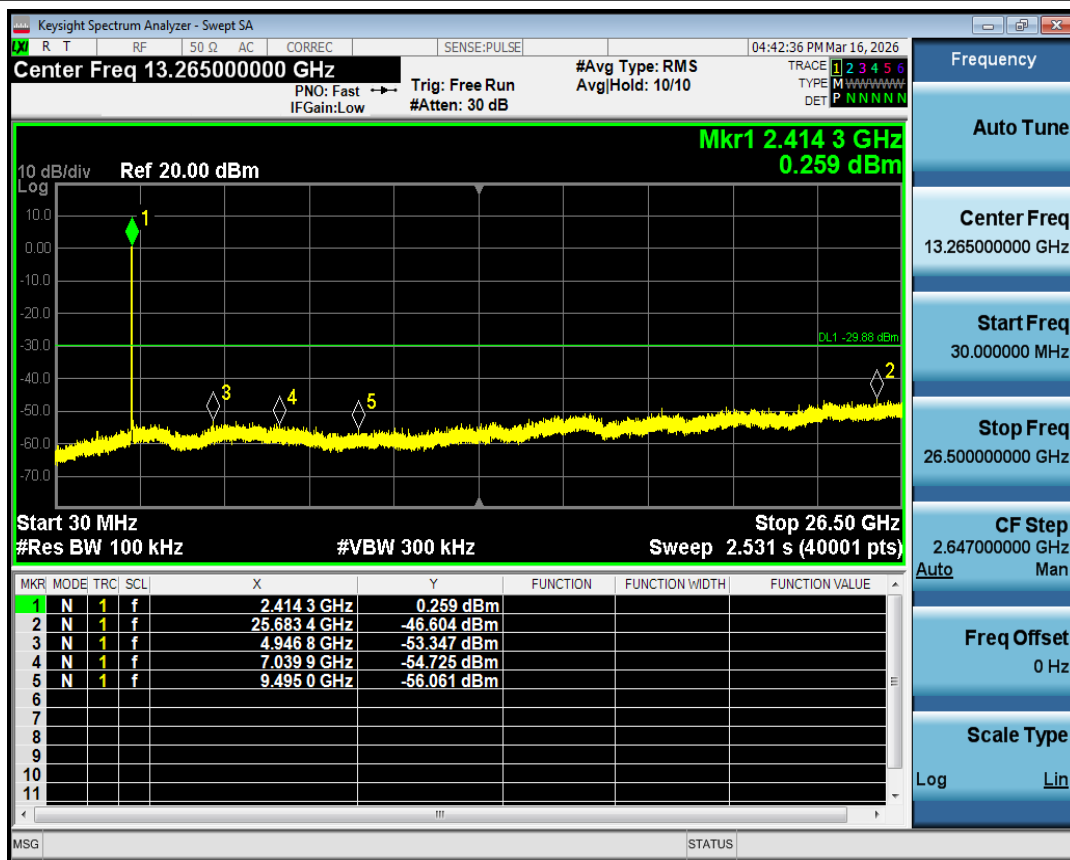
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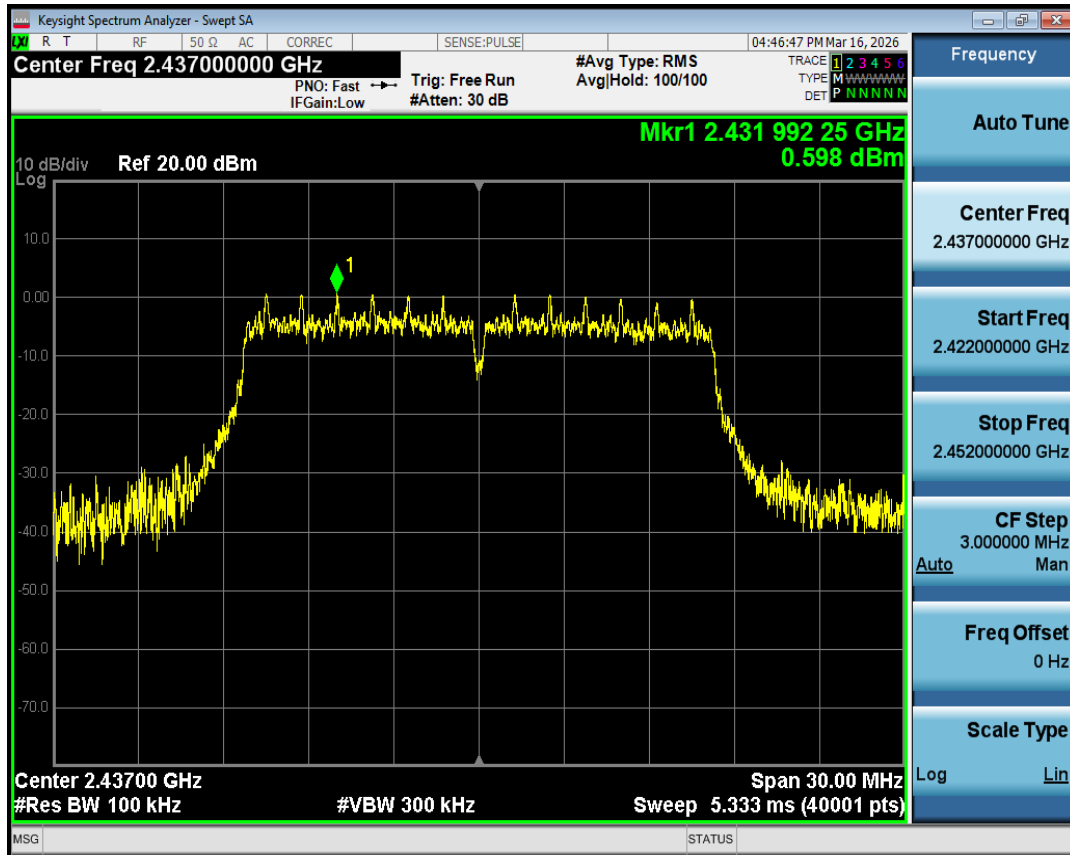
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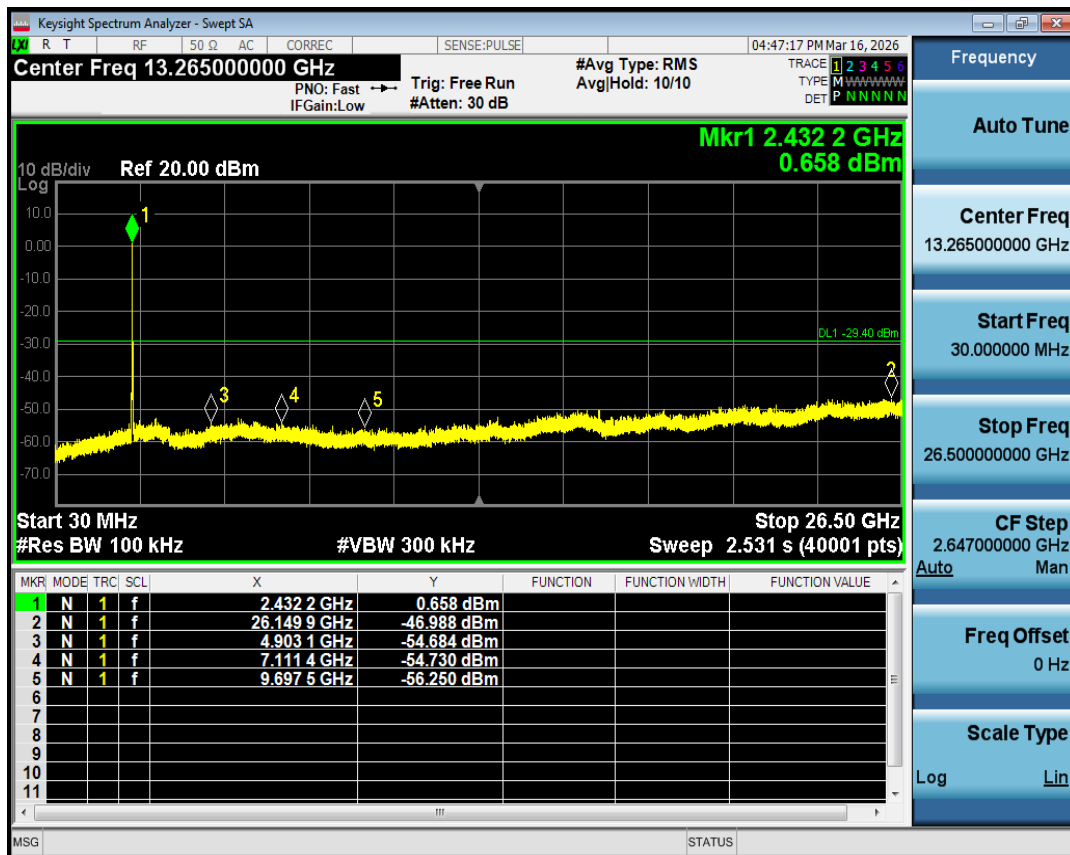
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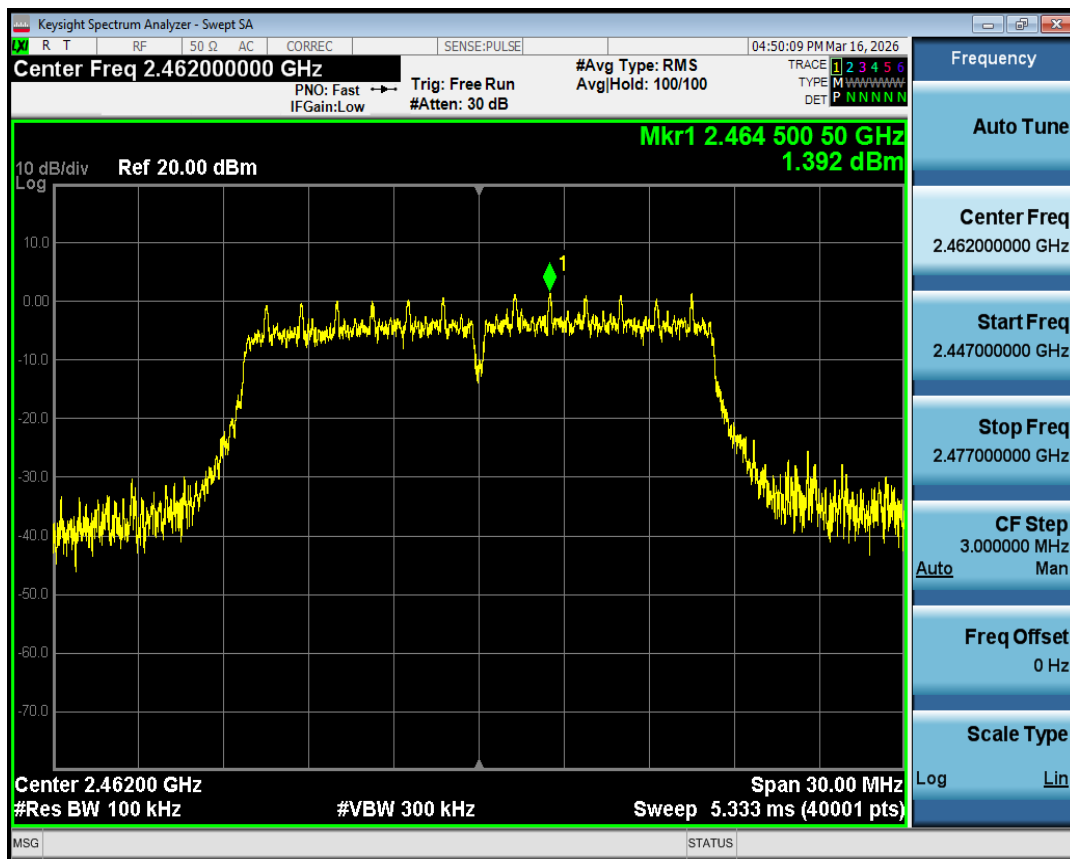
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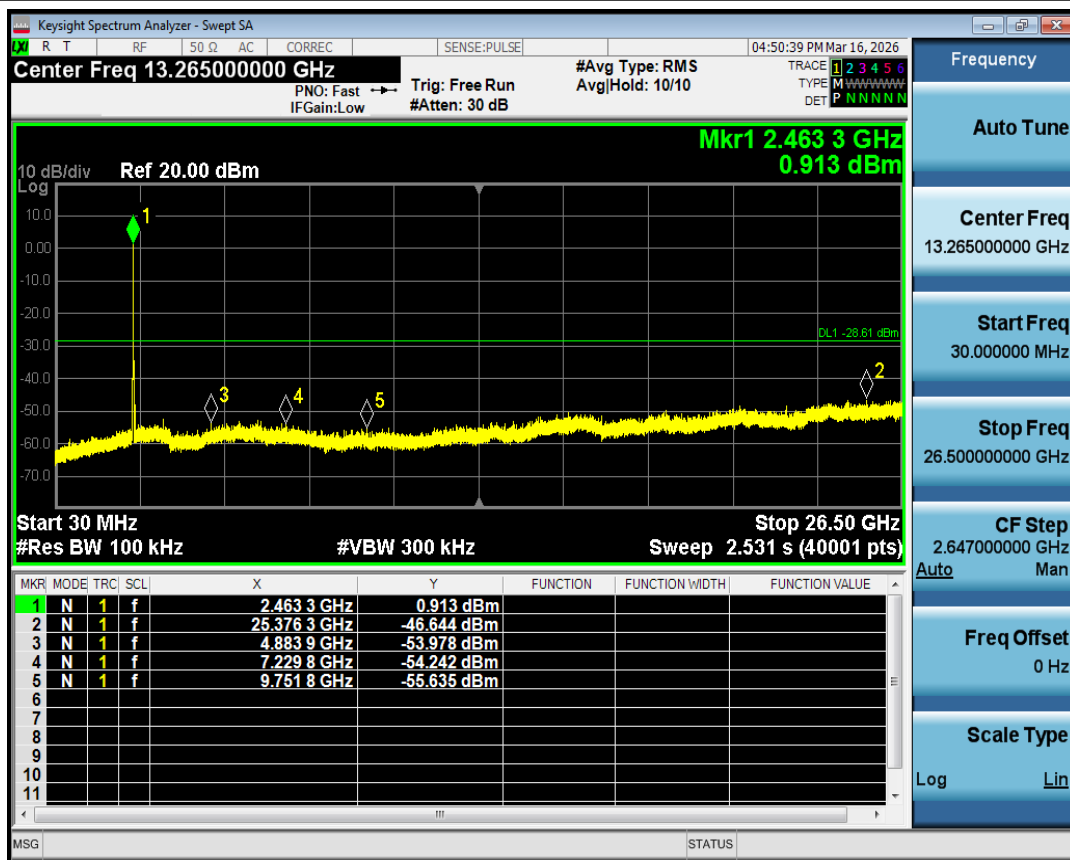
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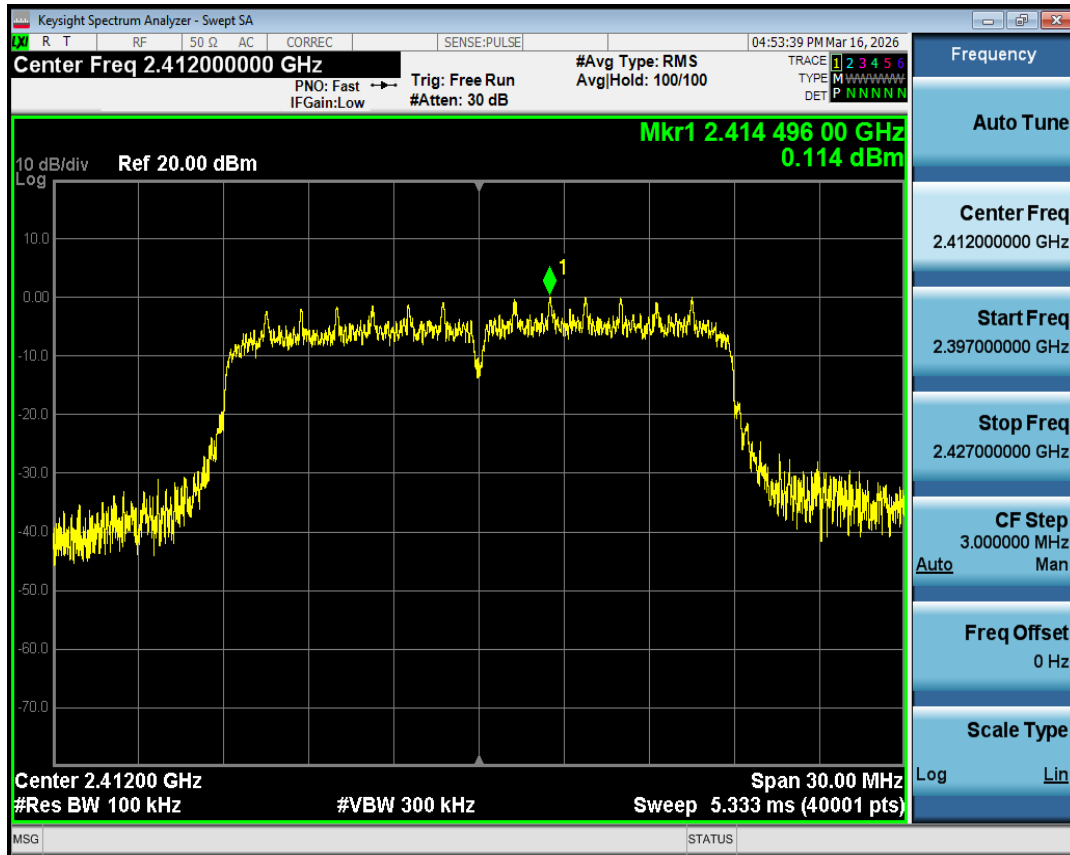
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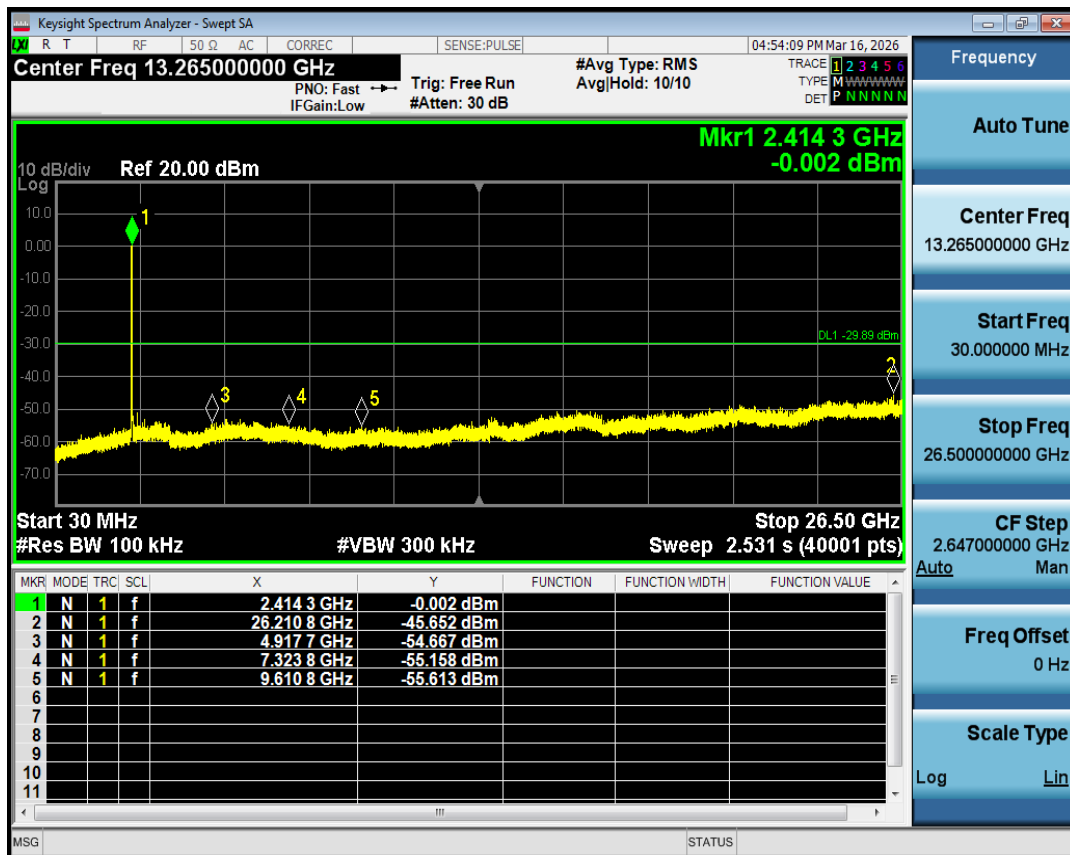
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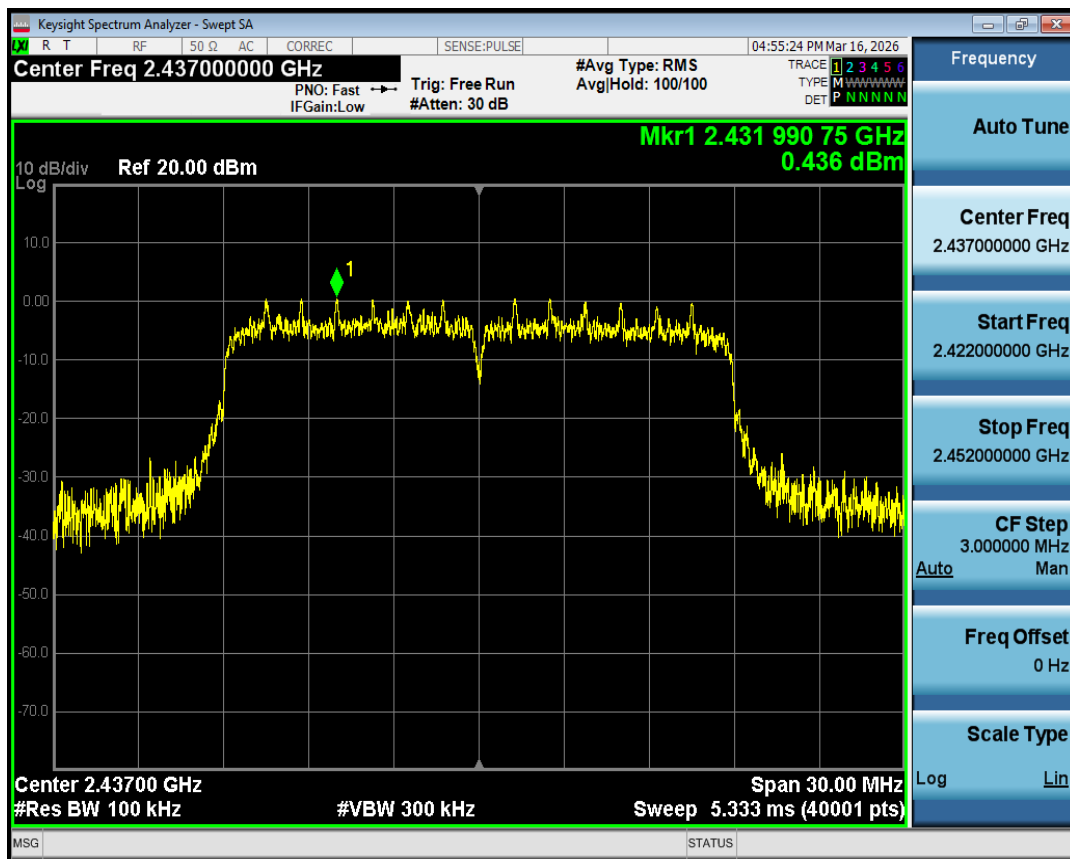
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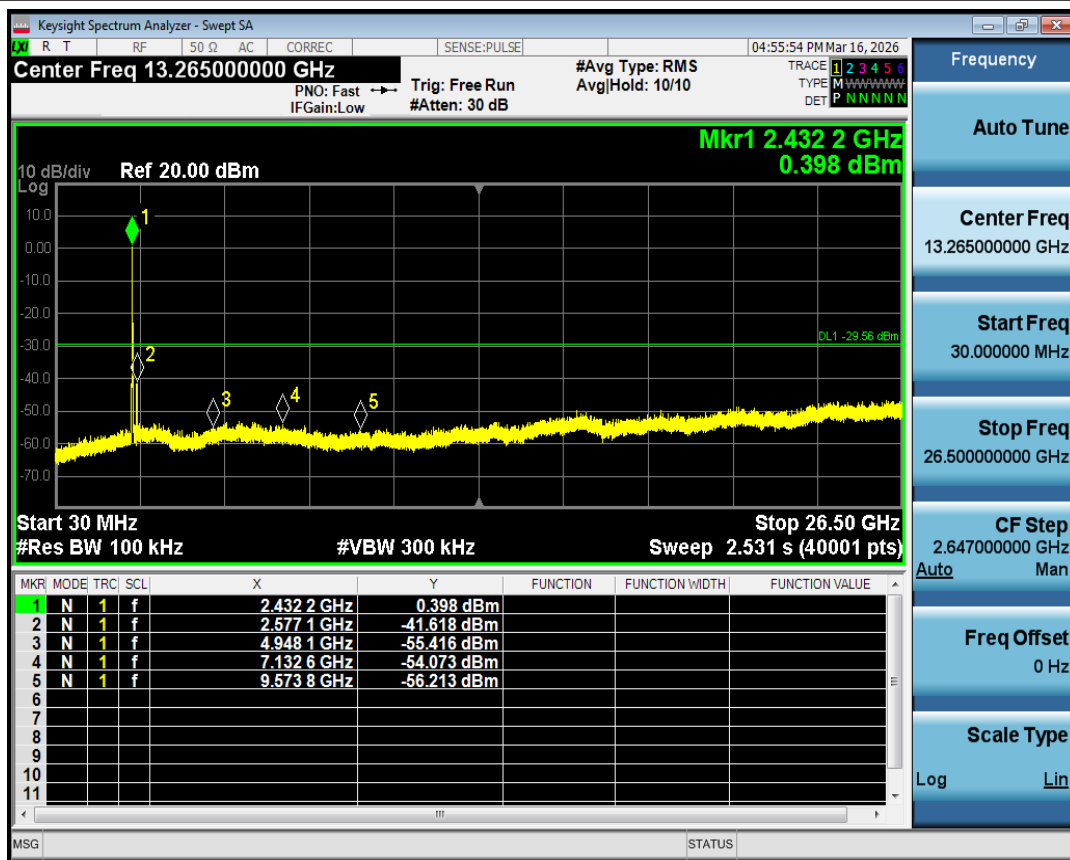
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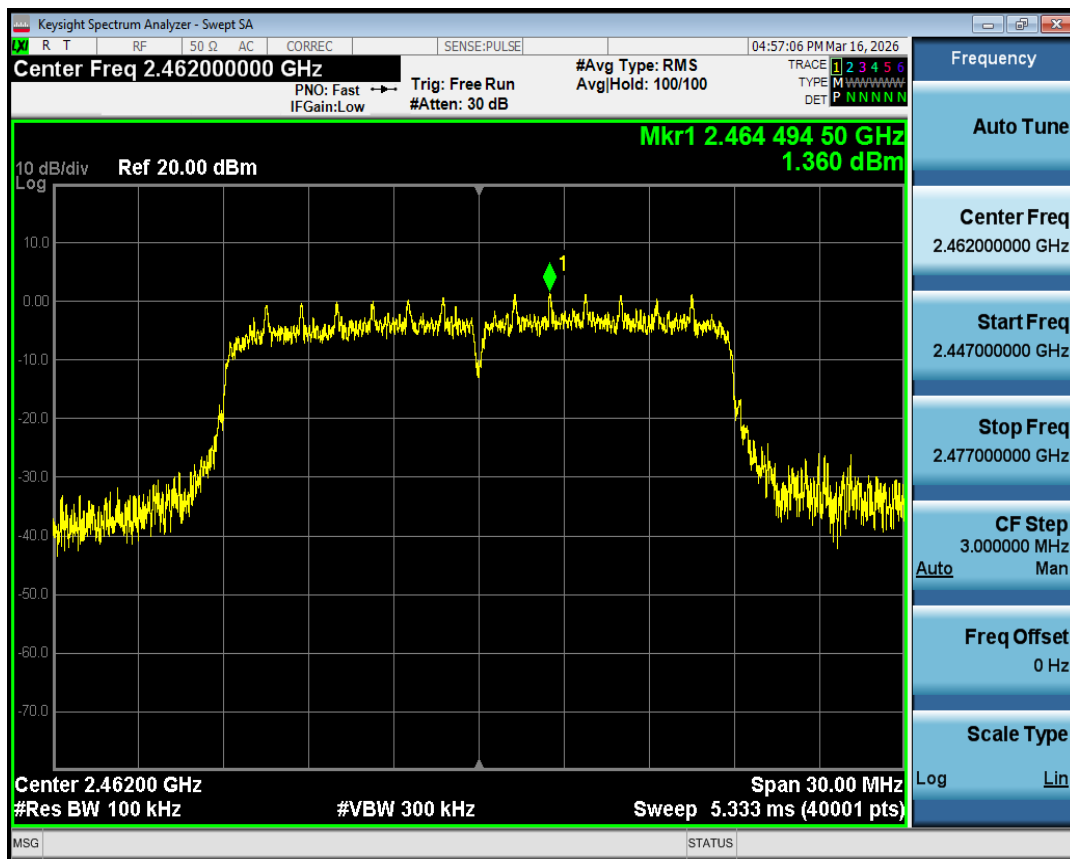
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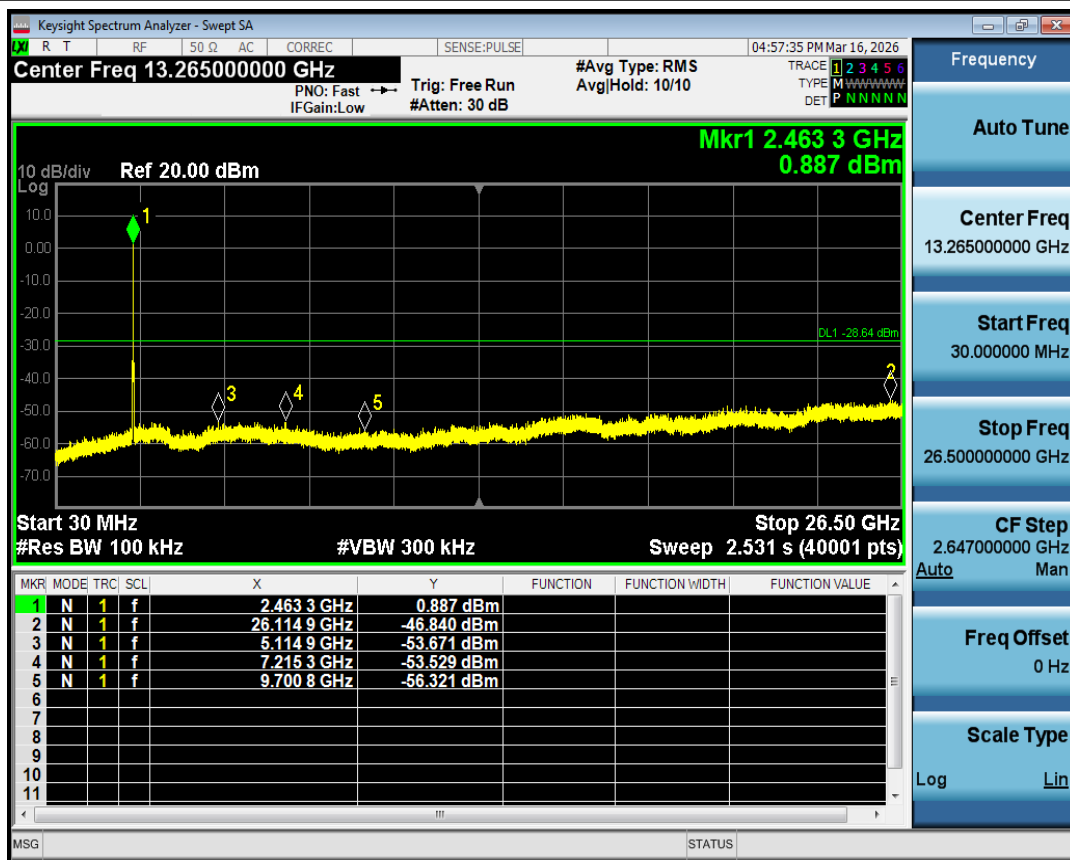
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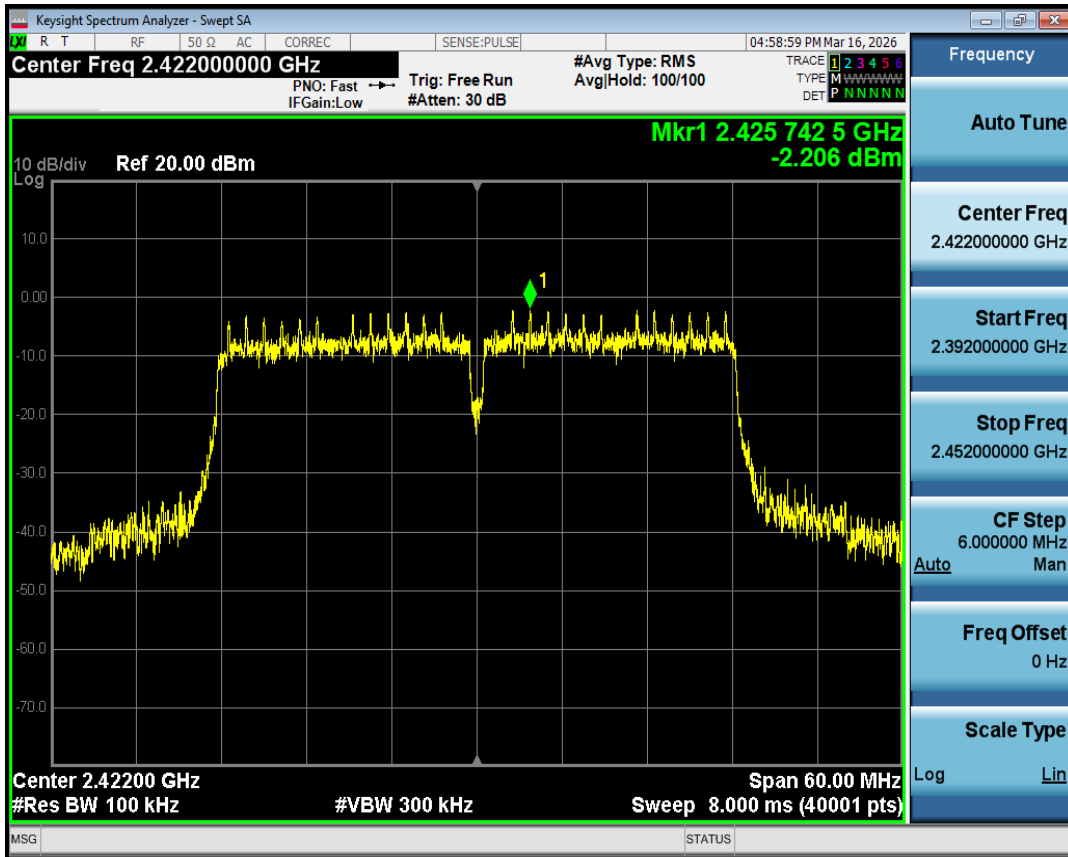
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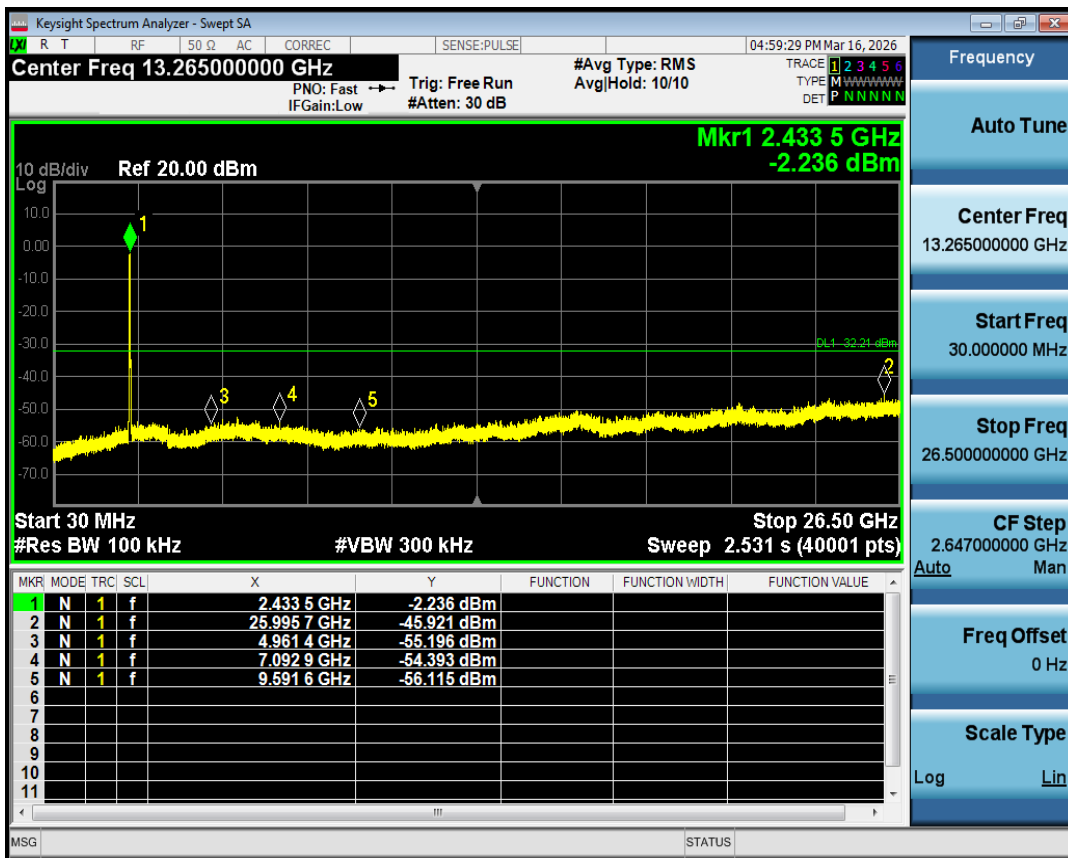
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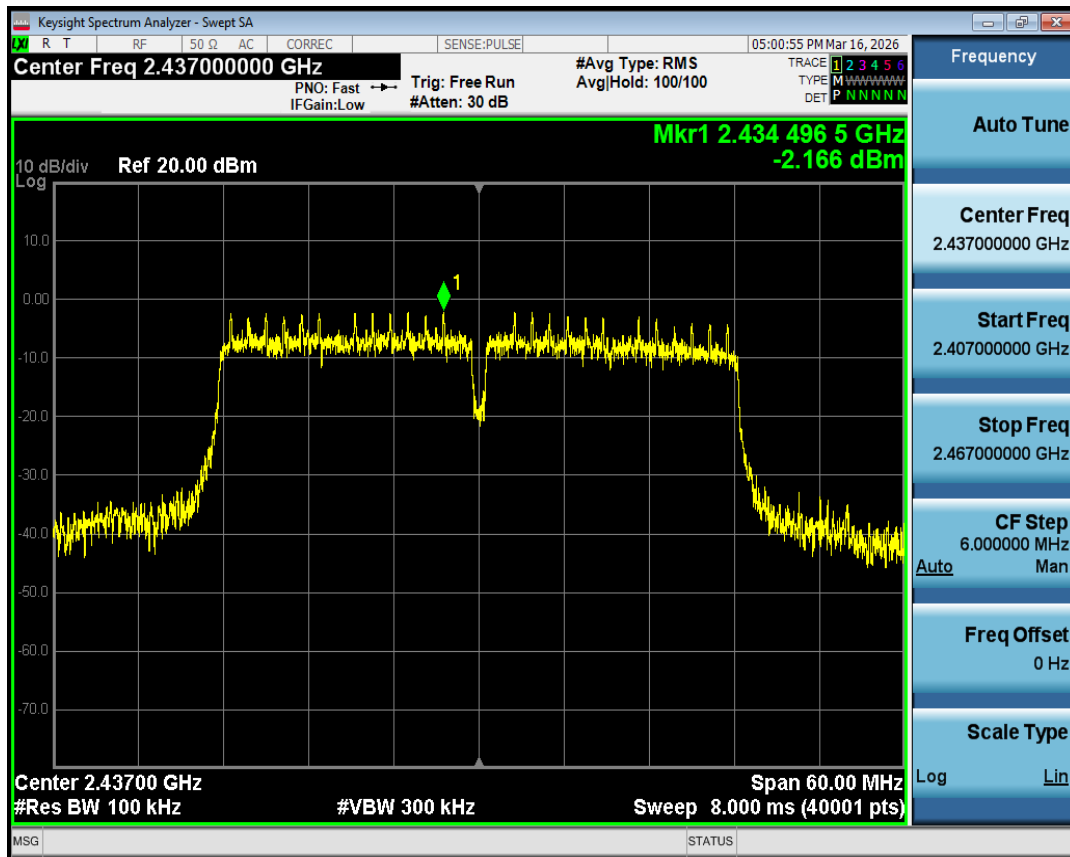
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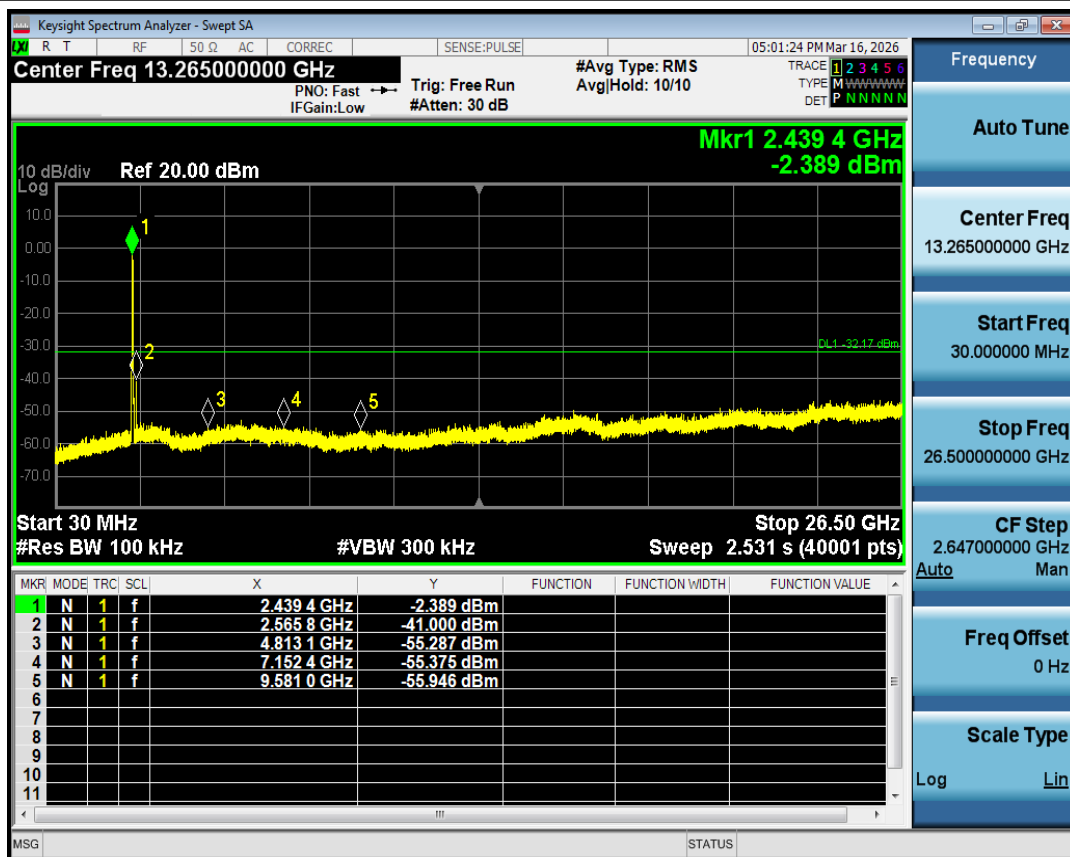
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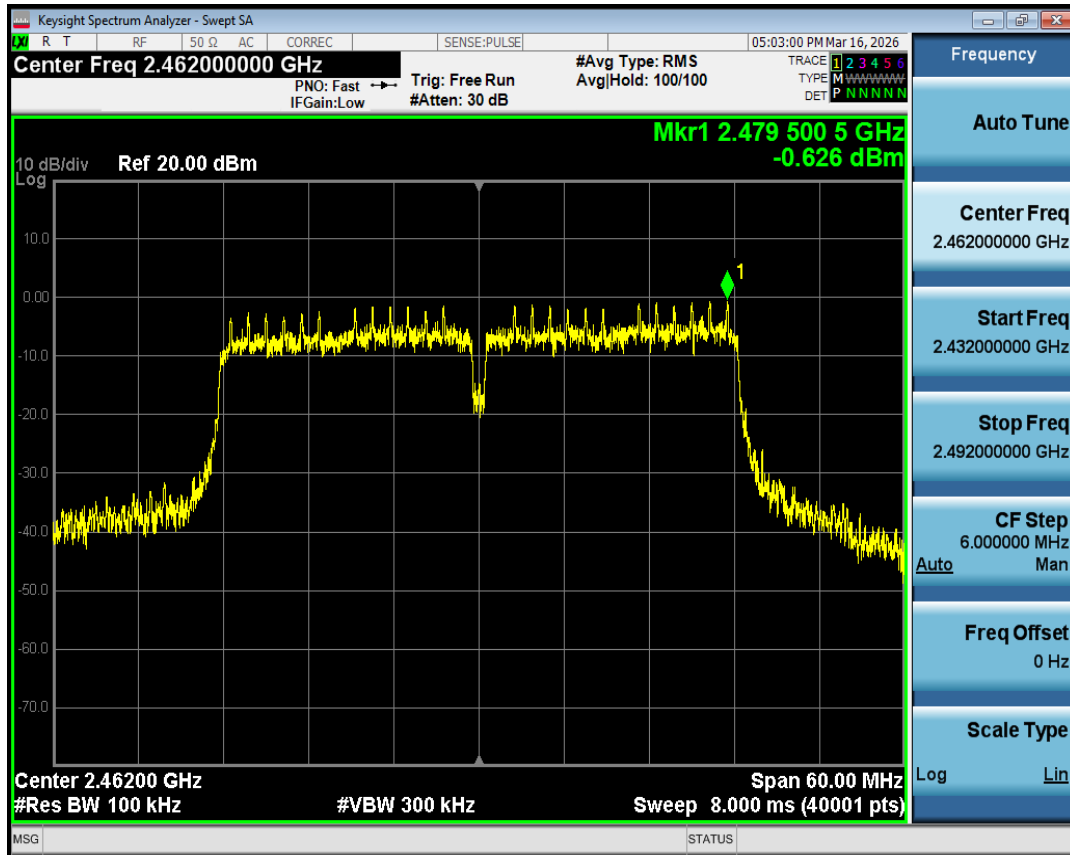
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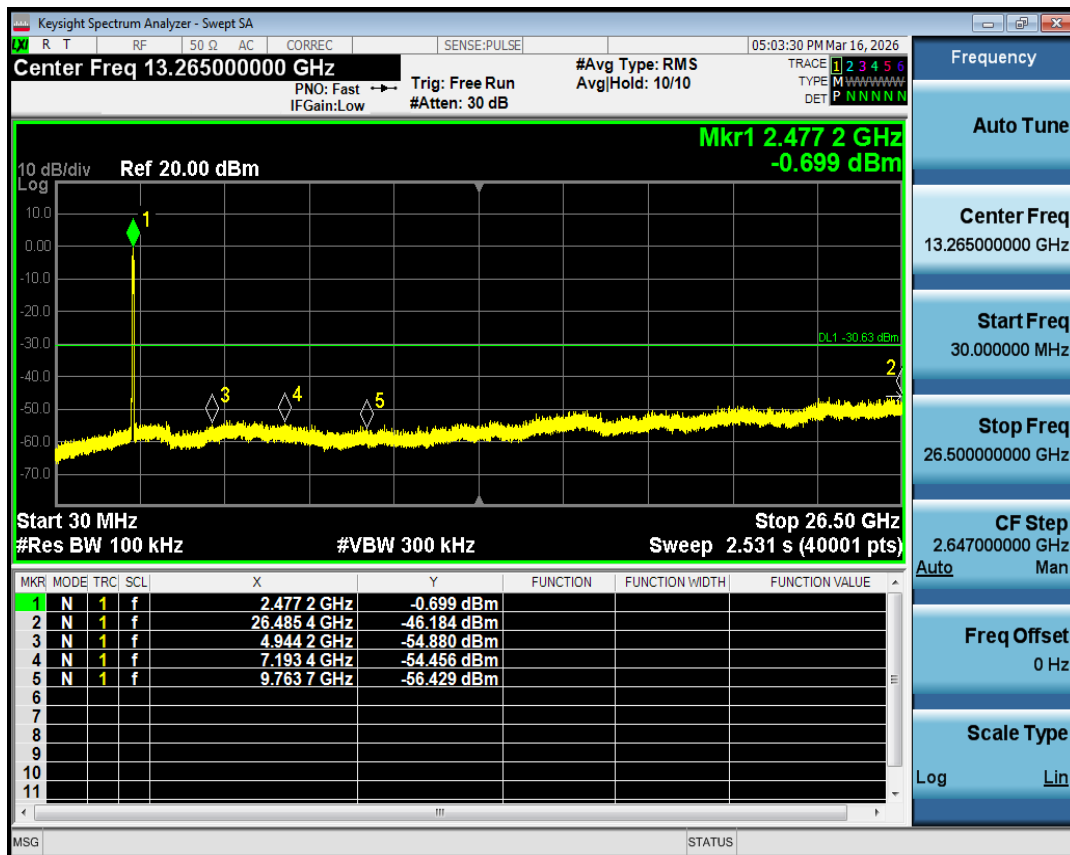
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Tx. Spurious NVNT n40 2437MHz Ant1 Emission



Tx. Spurious NVNT n40 2462MHz Ant1 Ref



Tx. Spurious NVNT n40 2462MHz Ant1 Emission