



## Appendix A

### RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: 3D laser scanner

Test Model: SPL-500

#### Environmental Conditions

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



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Scan code to check authenticity



## A.1 -6dB Bandwidth

| Condition | Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | b    | 2412            | Ant1    | 8.577                 | $\geq 0.5$                  | Pass    |
| NVNT      | b    | 2437            | Ant1    | 8.279                 | $\geq 0.5$                  | Pass    |
| NVNT      | b    | 2462            | Ant1    | 8.548                 | $\geq 0.5$                  | Pass    |
| NVNT      | g    | 2412            | Ant1    | 16.173                | $\geq 0.5$                  | Pass    |
| NVNT      | g    | 2437            | Ant1    | 16.329                | $\geq 0.5$                  | Pass    |
| NVNT      | g    | 2462            | Ant1    | 16.308                | $\geq 0.5$                  | Pass    |
| NVNT      | n20  | 2412            | Ant1    | 17.277                | $\geq 0.5$                  | Pass    |
| NVNT      | n20  | 2437            | Ant1    | 17.543                | $\geq 0.5$                  | Pass    |
| NVNT      | n20  | 2462            | Ant1    | 17.284                | $\geq 0.5$                  | Pass    |
| NVNT      | n40  | 2422            | Ant1    | 35.153                | $\geq 0.5$                  | Pass    |
| NVNT      | n40  | 2437            | Ant1    | 35.67                 | $\geq 0.5$                  | Pass    |
| NVNT      | n40  | 2452            | Ant1    | 34.341                | $\geq 0.5$                  | Pass    |



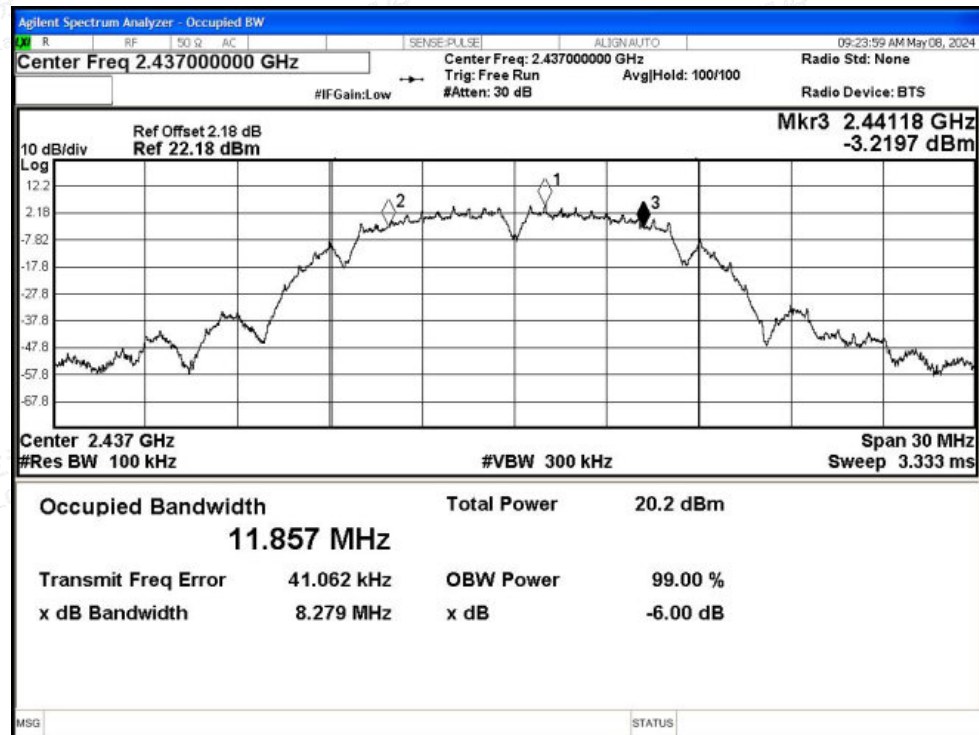


## Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1



-6dB Bandwidth NVNT b 2437MHz Ant1

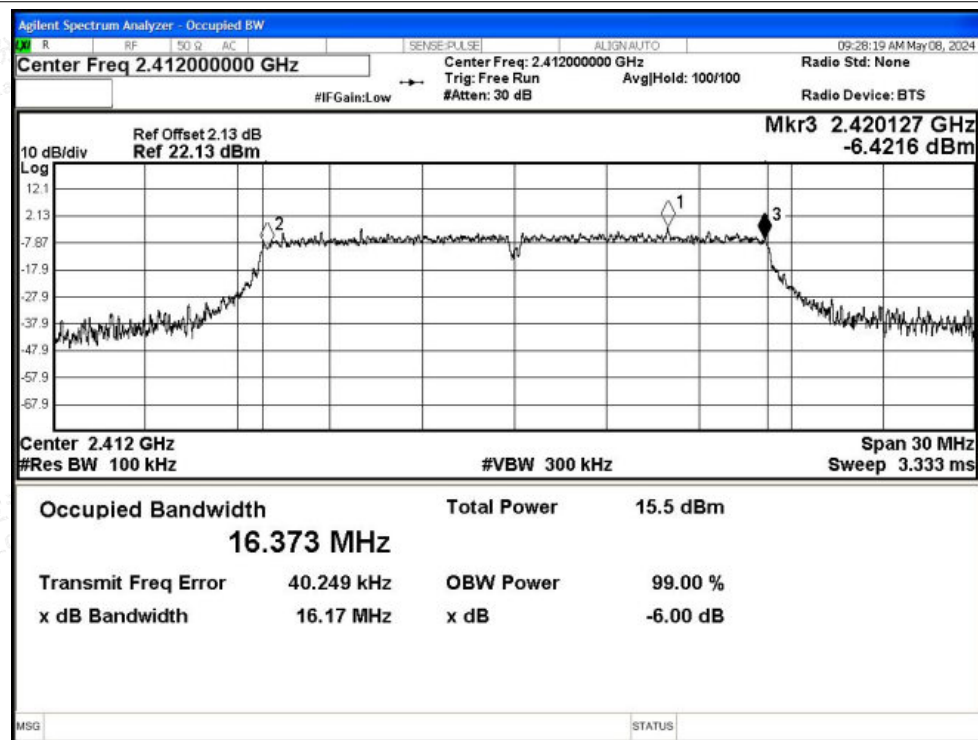




## -6dB Bandwidth NVNT b 2462MHz Ant1

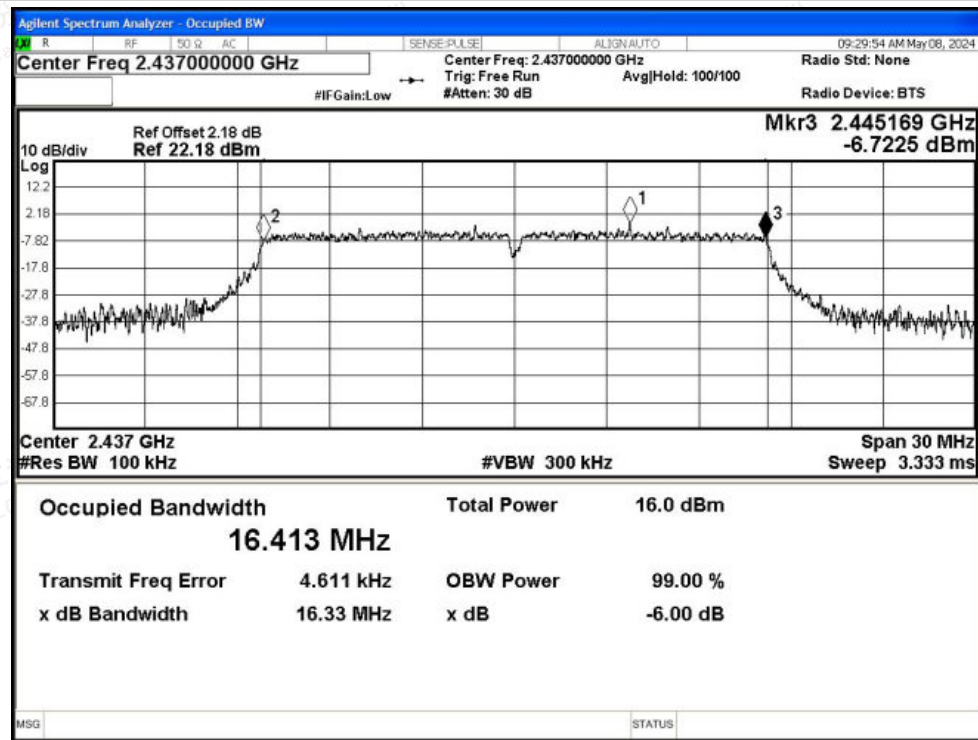


## -6dB Bandwidth NVNT g 2412MHz Ant1

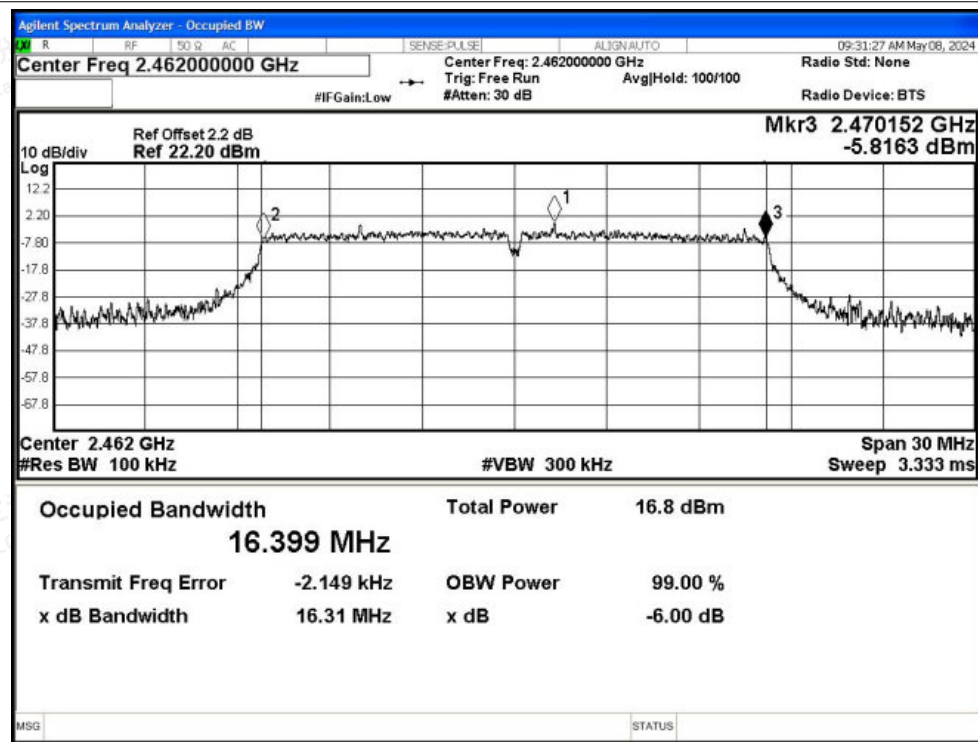




## -6dB Bandwidth NVNT g 2437MHz Ant1

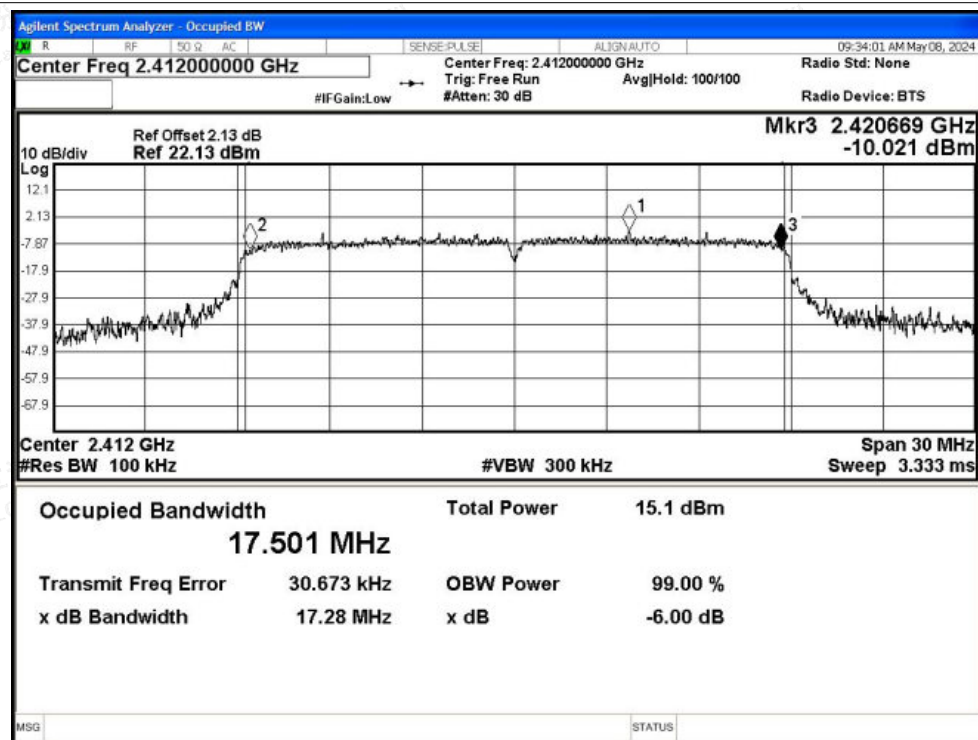


## -6dB Bandwidth NVNT g 2462MHz Ant1

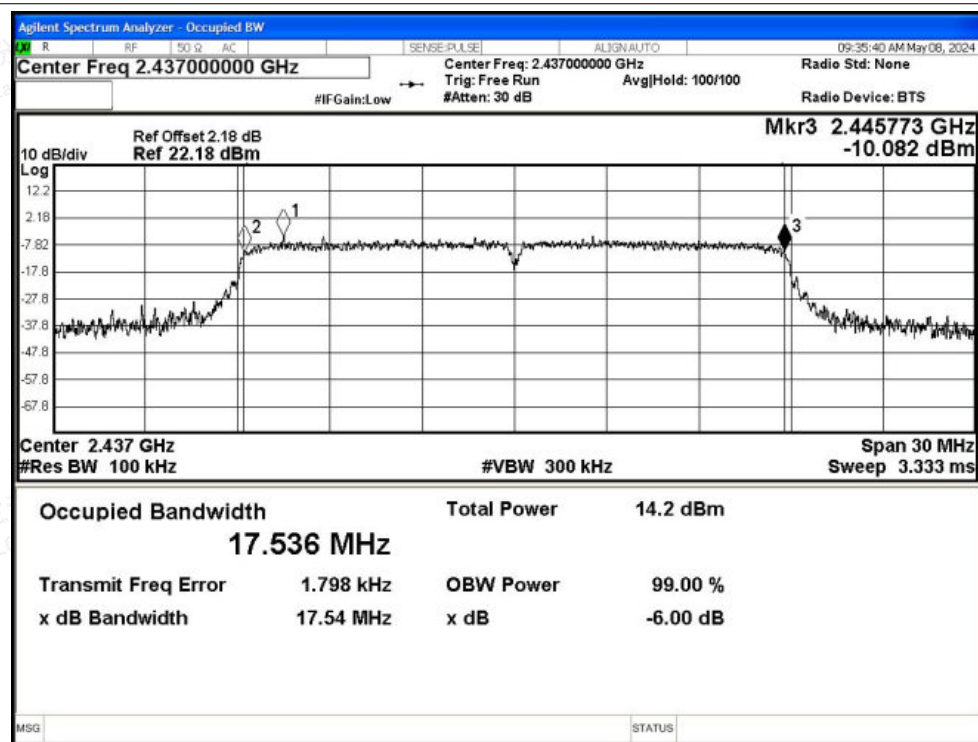




## -6dB Bandwidth NVNT n20 2412MHz Ant1

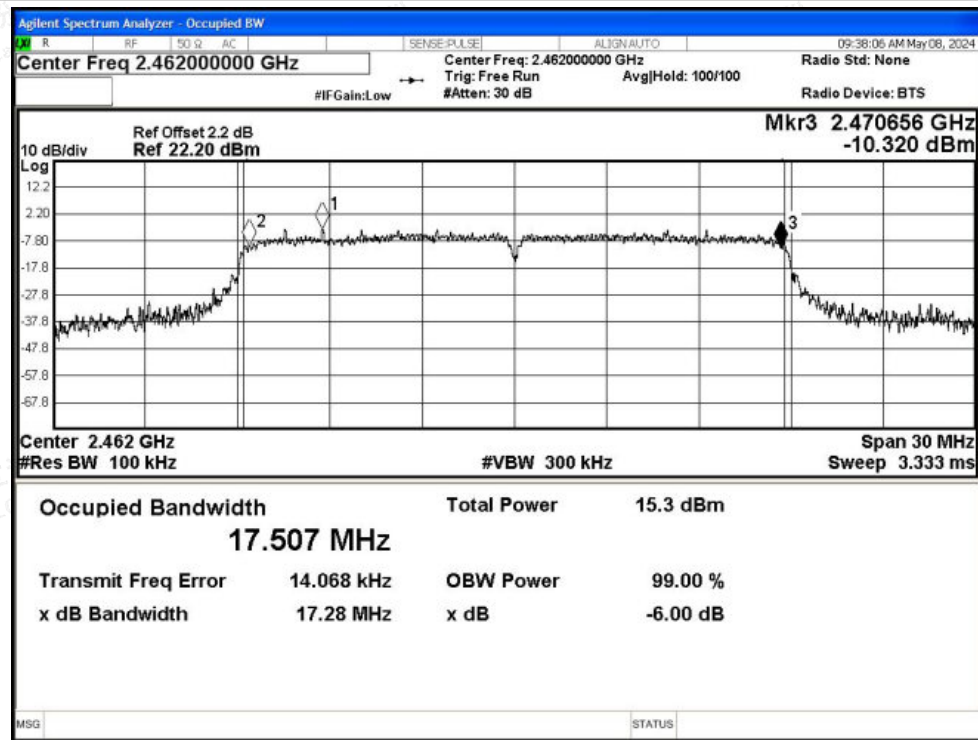


## -6dB Bandwidth NVNT n20 2437MHz Ant1

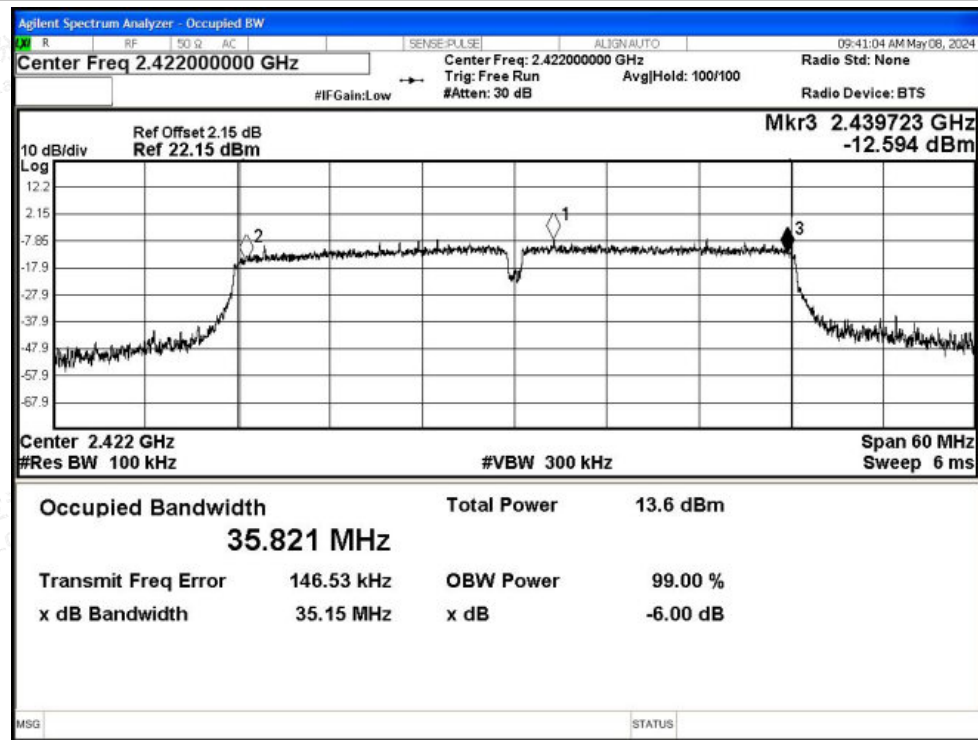




## -6dB Bandwidth NVNT n20 2462MHz Ant1

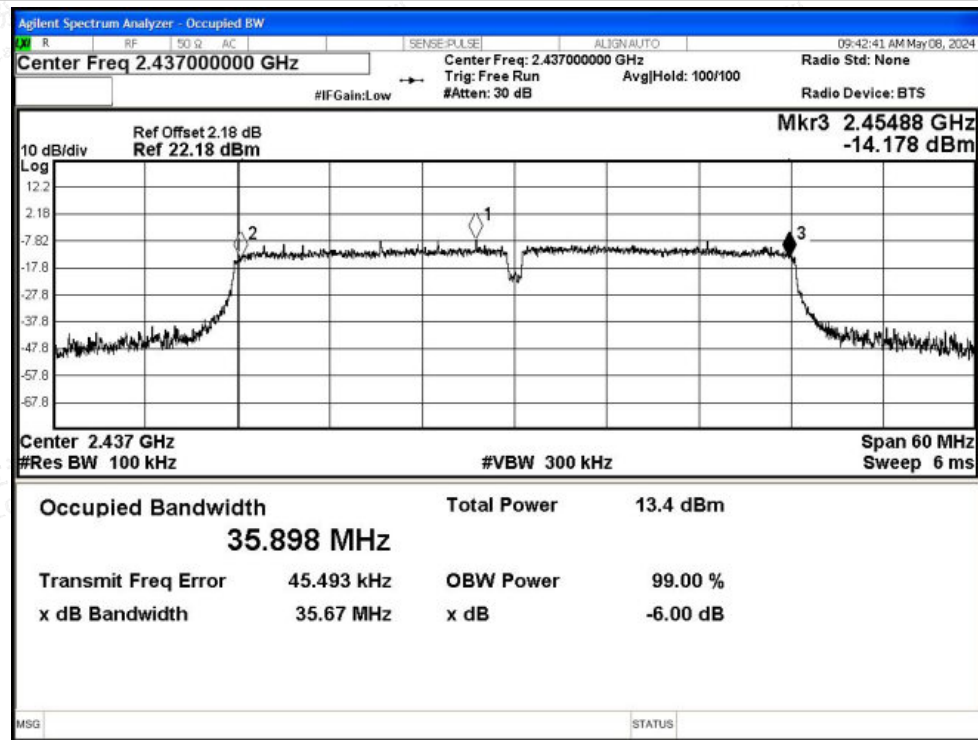


## -6dB Bandwidth NVNT n40 2422MHz Ant1

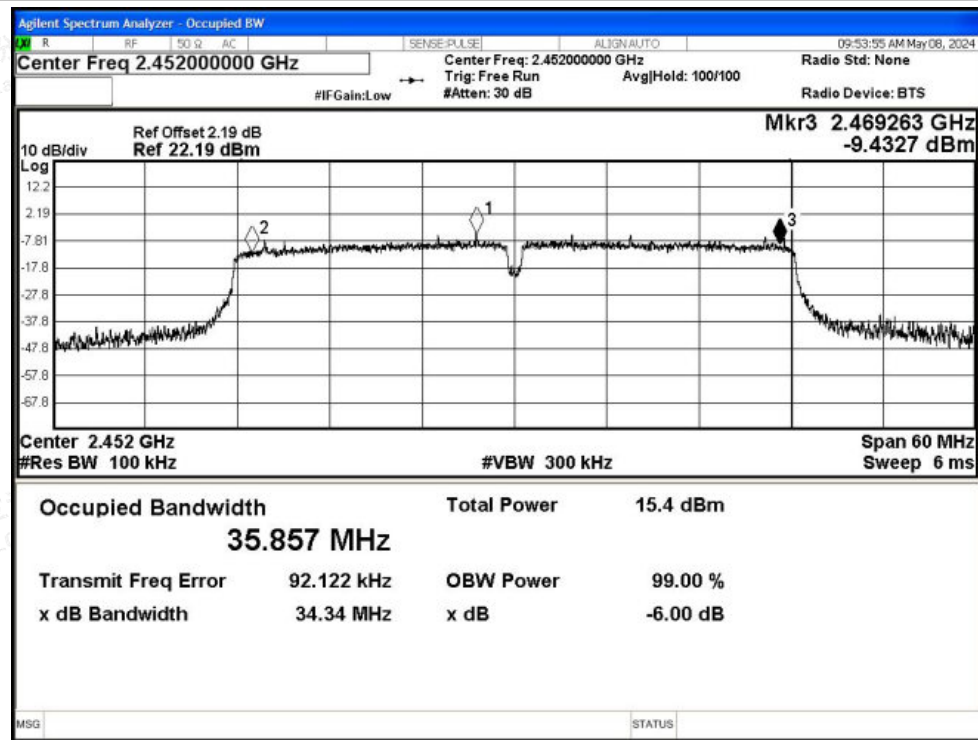




## -6dB Bandwidth NVNT n40 2437MHz Ant1



## -6dB Bandwidth NVNT n40 2452MHz Ant1





## A.2 Maximum Peak Conducted Output Power

| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|------|-----------------|---------|-----------------------|-------------|---------|
| NVNT      | b    | 2412            | Ant1    | 15.06                 | 30          | Pass    |
| NVNT      | b    | 2437            | Ant1    | 15.25                 | 30          | Pass    |
| NVNT      | b    | 2462            | Ant1    | 15.95                 | 30          | Pass    |
| NVNT      | g    | 2412            | Ant1    | 14.35                 | 30          | Pass    |
| NVNT      | g    | 2437            | Ant1    | 14.81                 | 30          | Pass    |
| NVNT      | g    | 2462            | Ant1    | 14.55                 | 30          | Pass    |
| NVNT      | n20  | 2412            | Ant1    | 13.76                 | 30          | Pass    |
| NVNT      | n20  | 2437            | Ant1    | 13.51                 | 30          | Pass    |
| NVNT      | n20  | 2462            | Ant1    | 13.96                 | 30          | Pass    |
| NVNT      | n40  | 2422            | Ant1    | 12.16                 | 30          | Pass    |
| NVNT      | n40  | 2437            | Ant1    | 12.02                 | 30          | Pass    |
| NVNT      | n40  | 2452            | Ant1    | 12.8                  | 30          | Pass    |





### A.3 Maximum Power Spectral Density Level

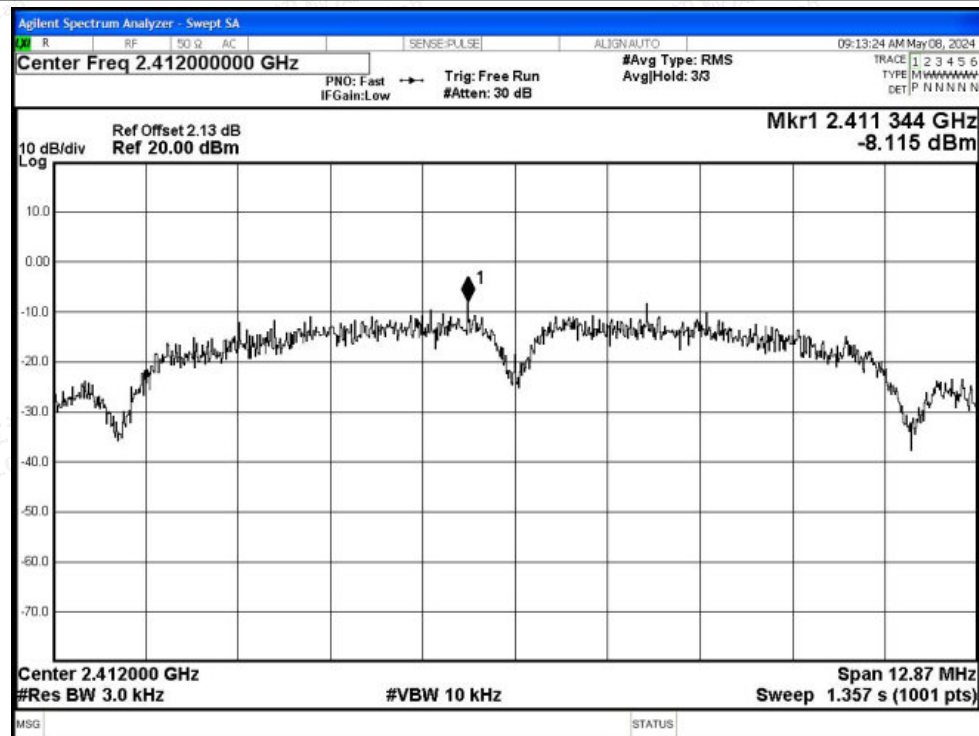
| Condition | Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|-----------|------|-----------------|---------|--------------------------|------------------|---------|
| NVNT      | b    | 2412            | Ant1    | -8.12                    | 8                | Pass    |
| NVNT      | b    | 2437            | Ant1    | -9.64                    | 8                | Pass    |
| NVNT      | b    | 2462            | Ant1    | -7.69                    | 8                | Pass    |
| NVNT      | g    | 2412            | Ant1    | -15.4                    | 8                | Pass    |
| NVNT      | g    | 2437            | Ant1    | -16.05                   | 8                | Pass    |
| NVNT      | g    | 2462            | Ant1    | -16.09                   | 8                | Pass    |
| NVNT      | n20  | 2412            | Ant1    | -16.43                   | 8                | Pass    |
| NVNT      | n20  | 2437            | Ant1    | -17.97                   | 8                | Pass    |
| NVNT      | n20  | 2462            | Ant1    | -17.04                   | 8                | Pass    |
| NVNT      | n40  | 2422            | Ant1    | -22.06                   | 8                | Pass    |
| NVNT      | n40  | 2437            | Ant1    | -22.16                   | 8                | Pass    |
| NVNT      | n40  | 2452            | Ant1    | -19.53                   | 8                | Pass    |



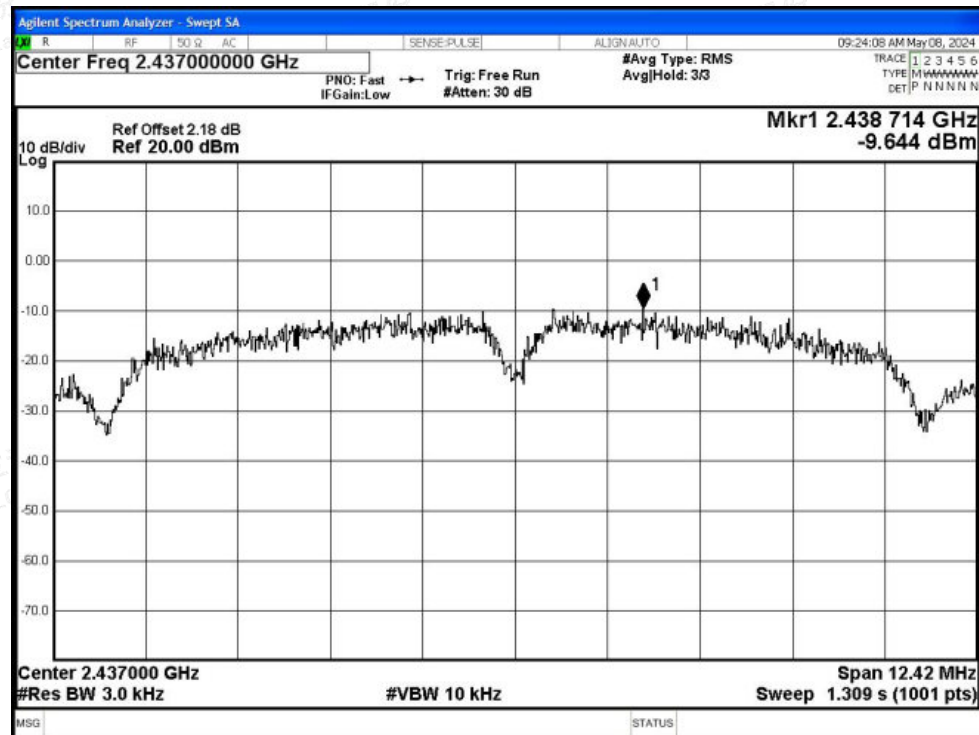


## Test Graphs

PSD NVNT b 2412MHz Ant1

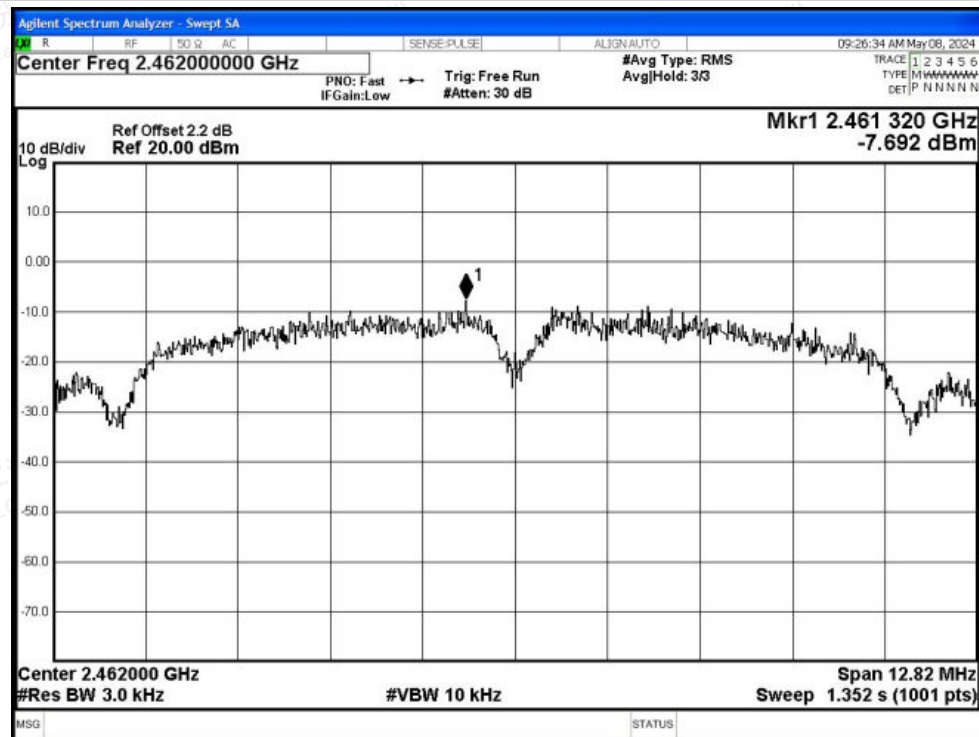


PSD NVNT b 2437MHz Ant1

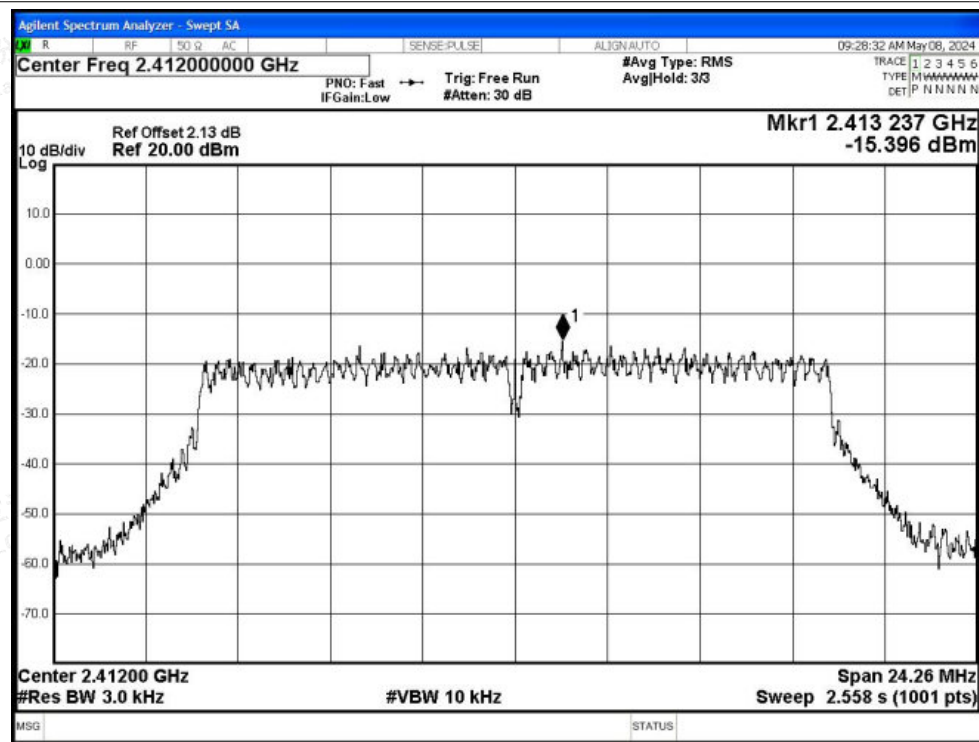




PSD NVNT b 2462MHz Ant1

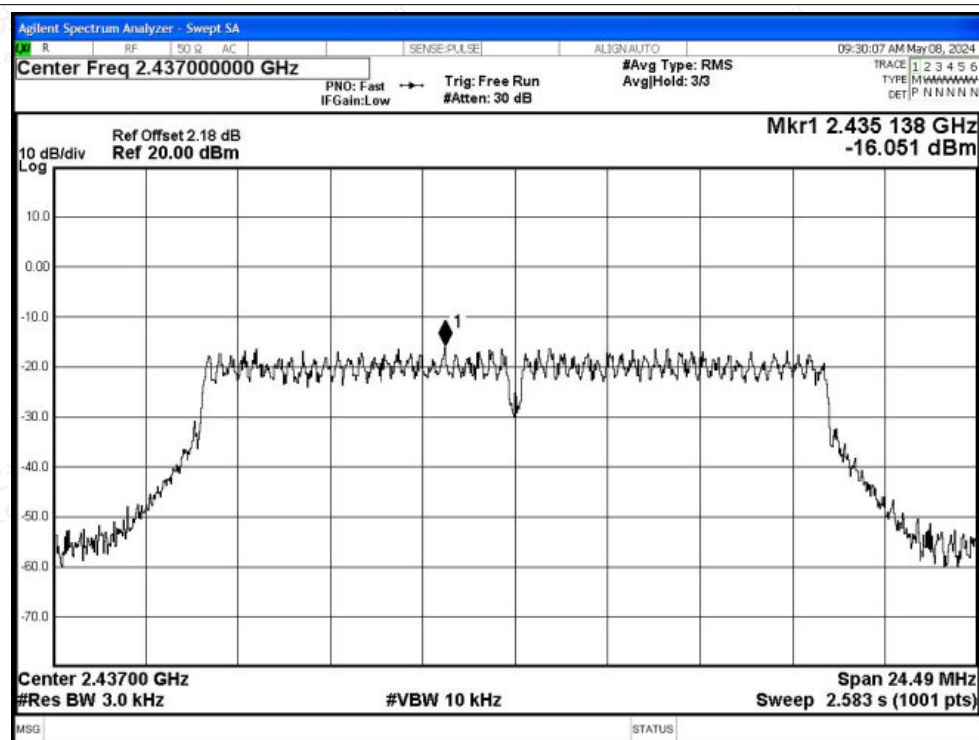


PSD NVNT g 2412MHz Ant1

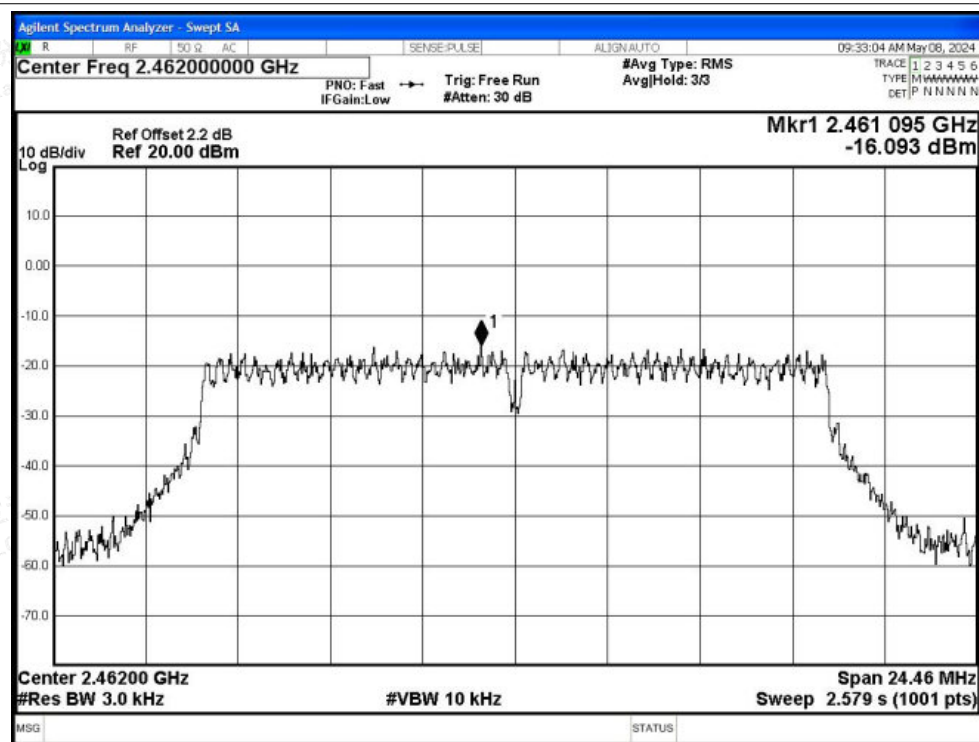




PSD NVNT g 2437MHz Ant1

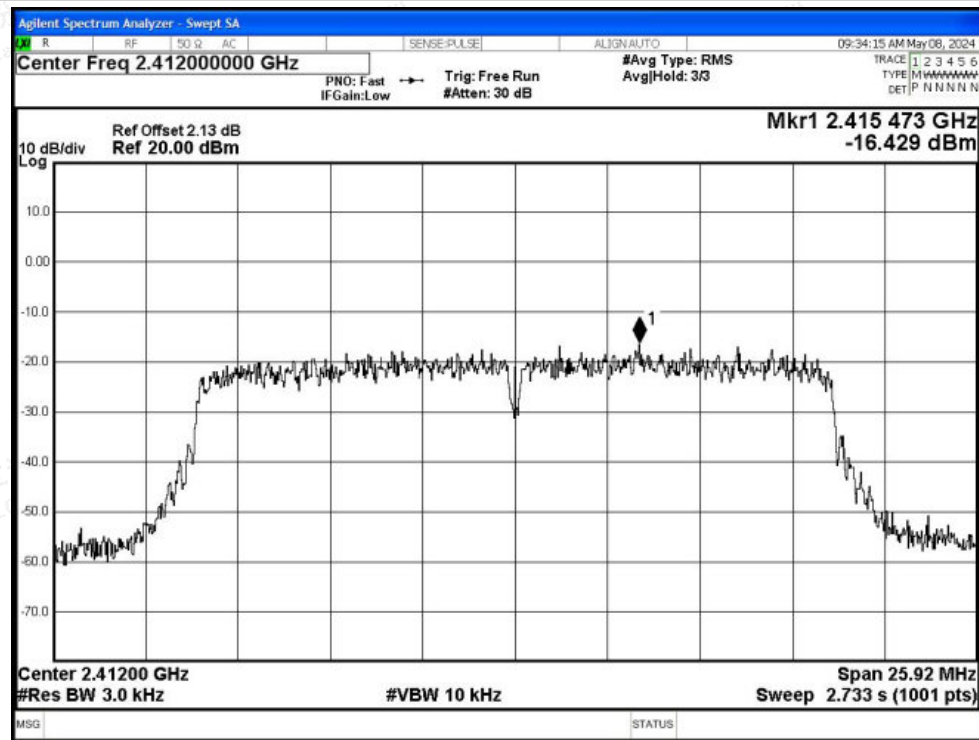


PSD NVNT g 2462MHz Ant1

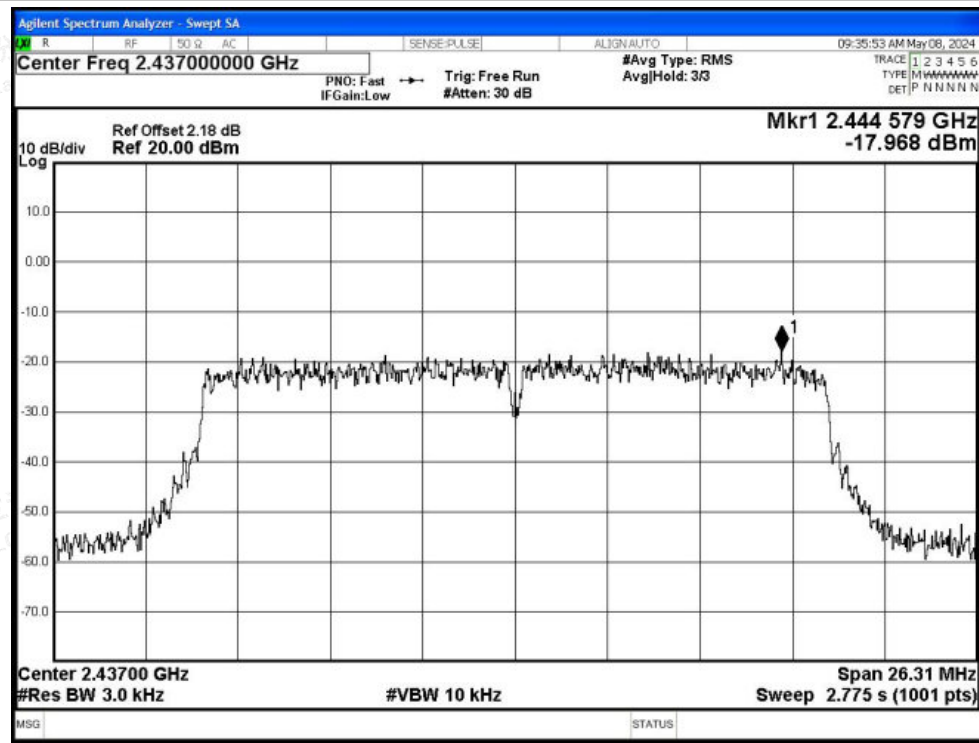


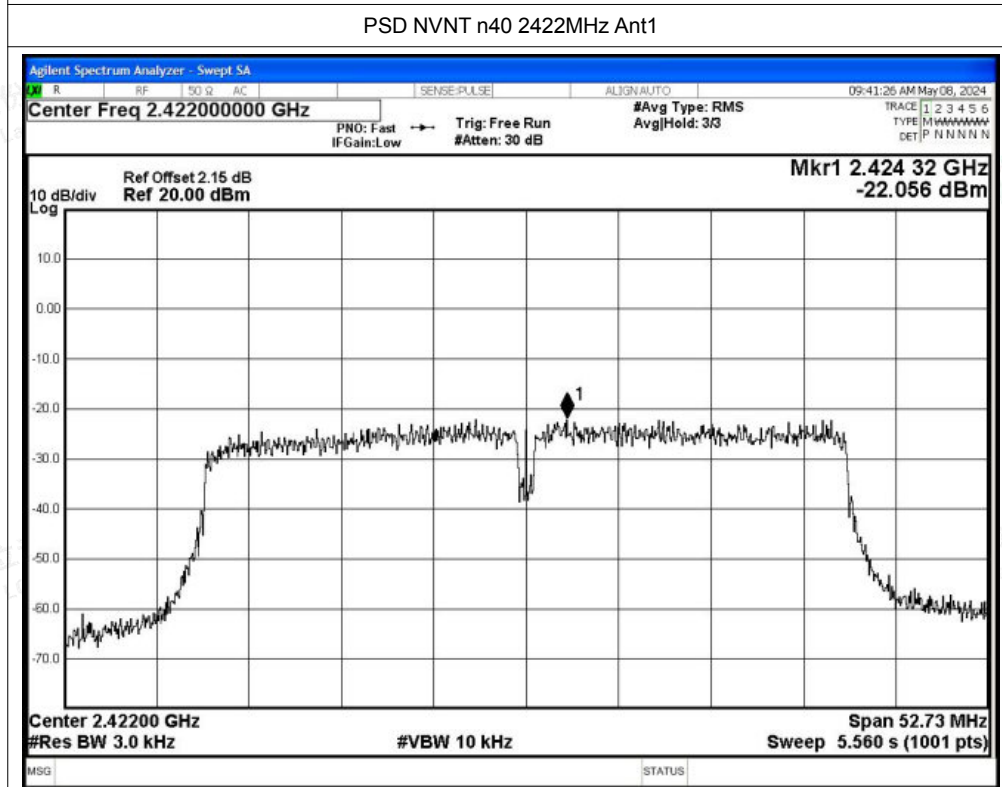
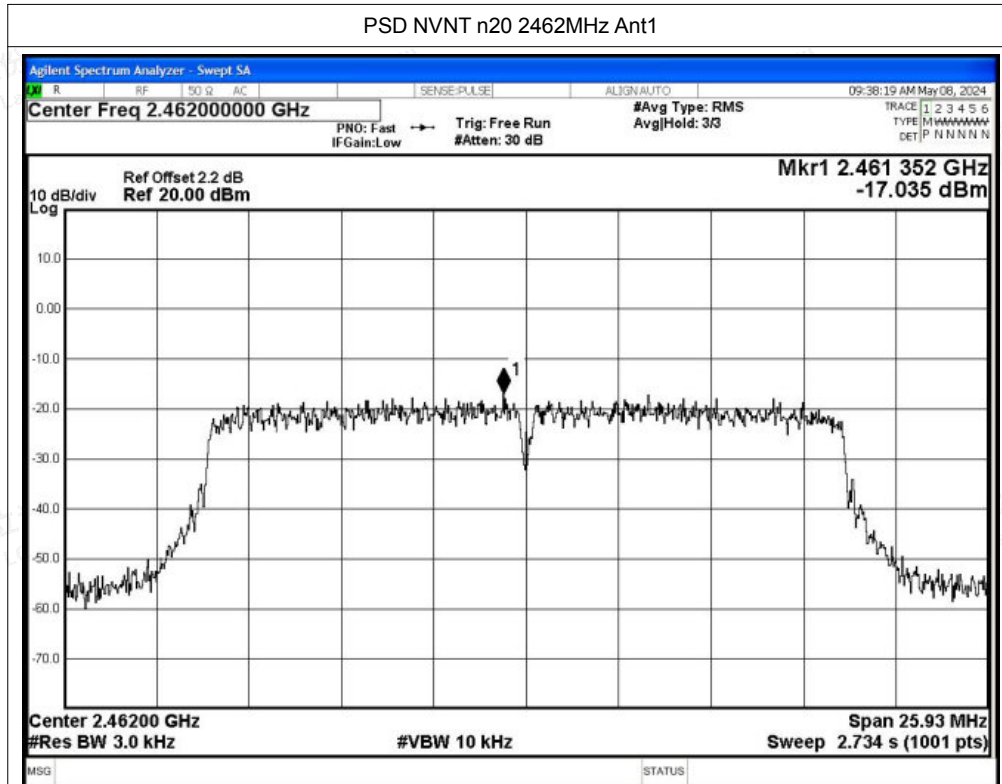


PSD NVNT n20 2412MHz Ant1



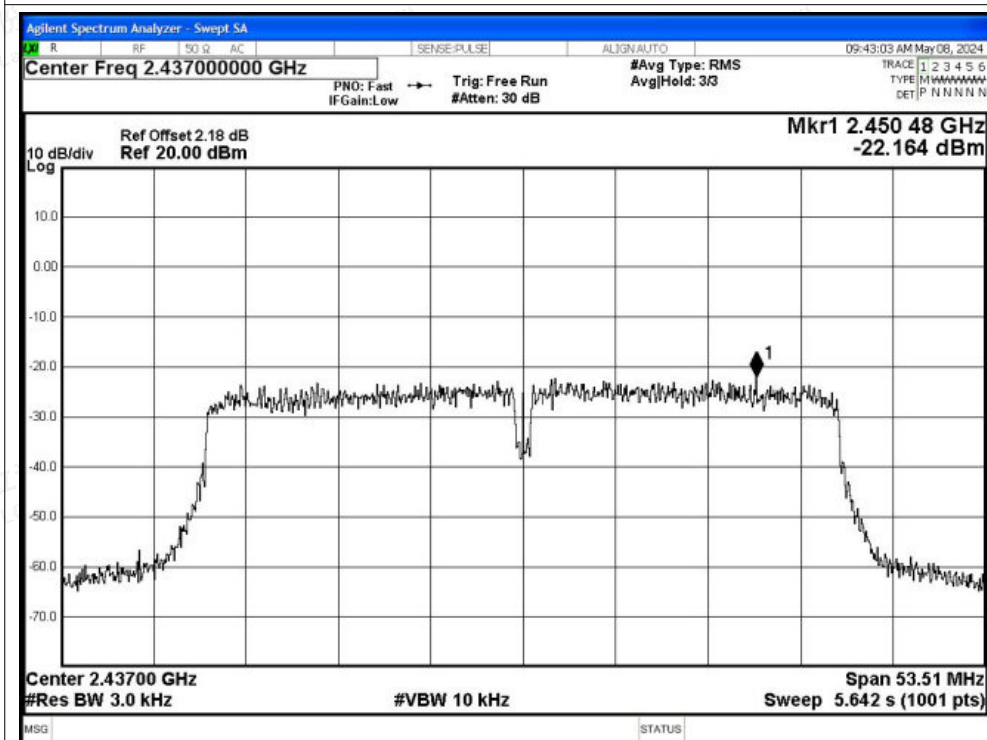
PSD NVNT n20 2437MHz Ant1



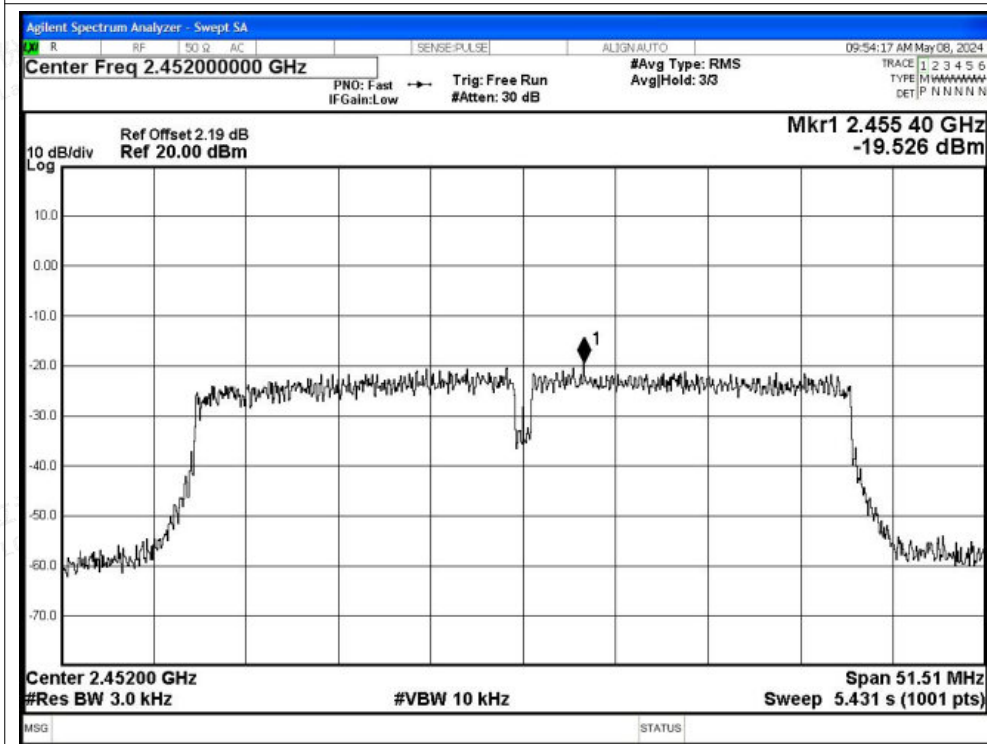




PSD NVNT n40 2437MHz Ant1



PSD NVNT n40 2452MHz Ant1





## A.4 Band Edge

| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | b    | 2412            | Ant1    | -45.85          | -20         | Pass    |
| NVNT      | b    | 2462            | Ant1    | -61.48          | -20         | Pass    |
| NVNT      | g    | 2412            | Ant1    | -32.88          | -20         | Pass    |
| NVNT      | g    | 2462            | Ant1    | -46.62          | -20         | Pass    |
| NVNT      | n20  | 2412            | Ant1    | -28.85          | -20         | Pass    |
| NVNT      | n20  | 2462            | Ant1    | -40.44          | -20         | Pass    |
| NVNT      | n40  | 2422            | Ant1    | -36.45          | -20         | Pass    |
| NVNT      | n40  | 2452            | Ant1    | -36.15          | -20         | Pass    |



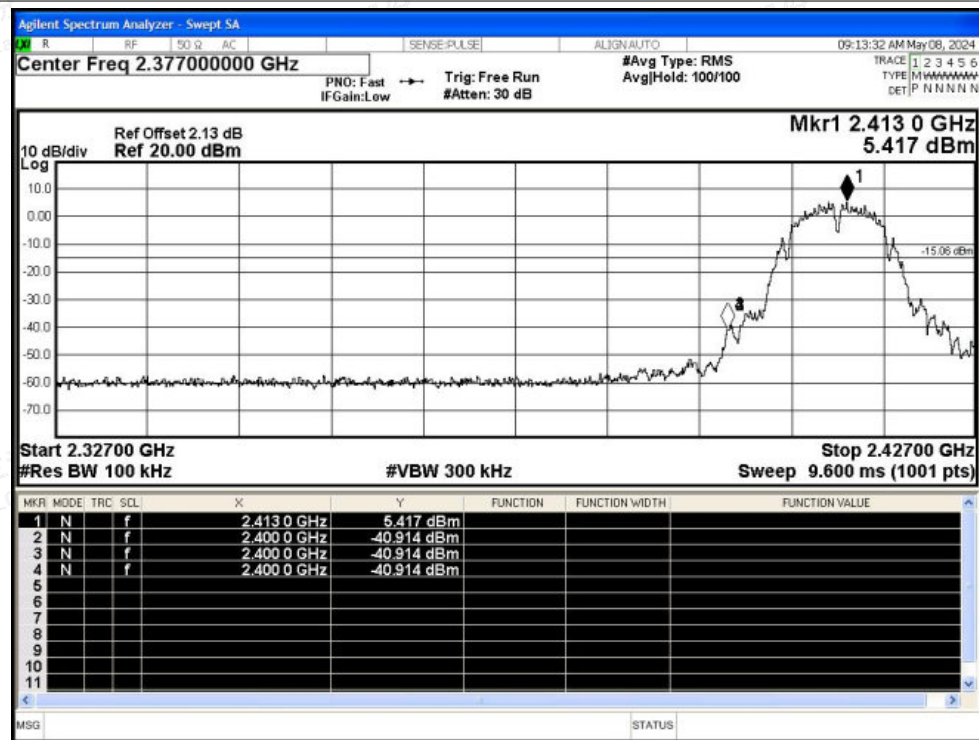


## Test Graphs

## Band Edge NVNT b 2412MHz Ant1 Ref

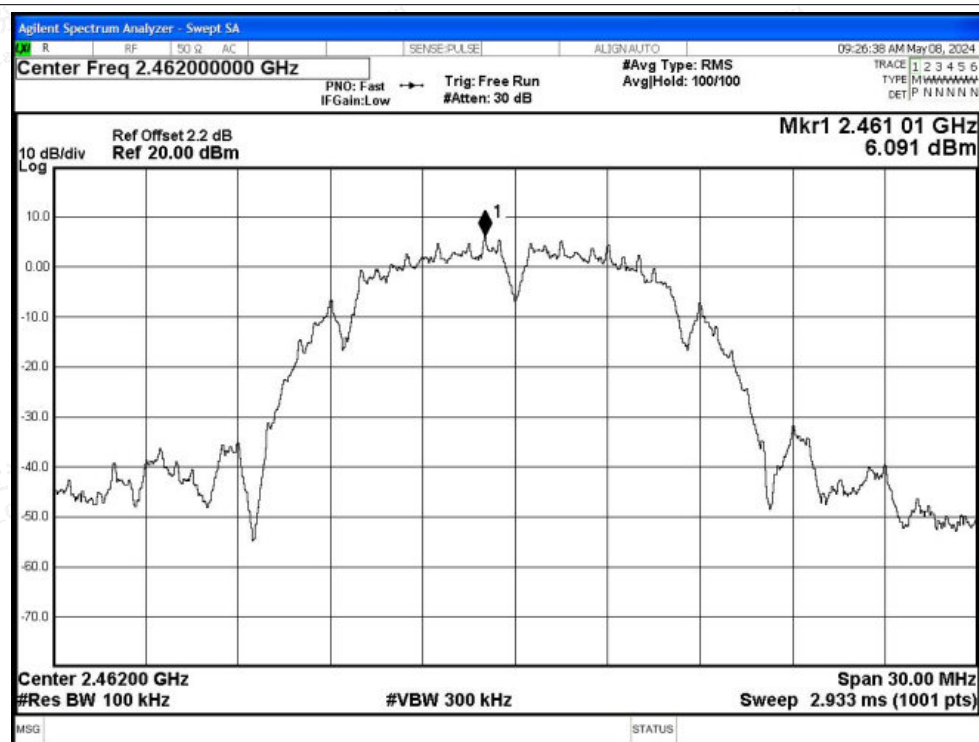


## Band Edge NVNT b 2412MHz Ant1 Emission





## Band Edge NVNT b 2462MHz Ant1 Ref

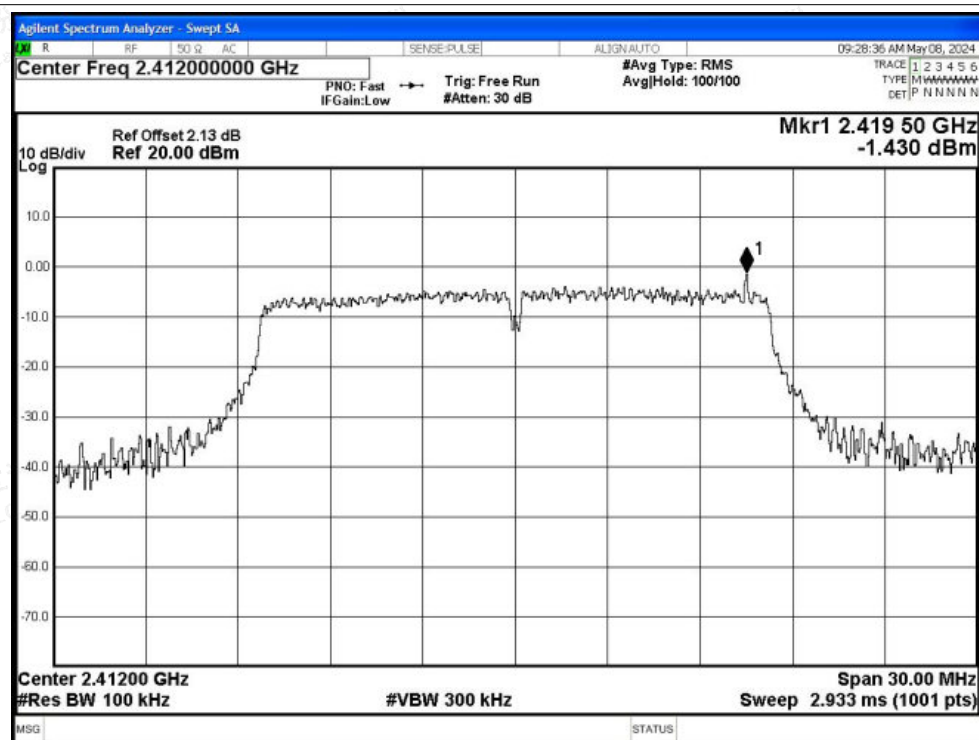


## Band Edge NVNT b 2462MHz Ant1 Emission

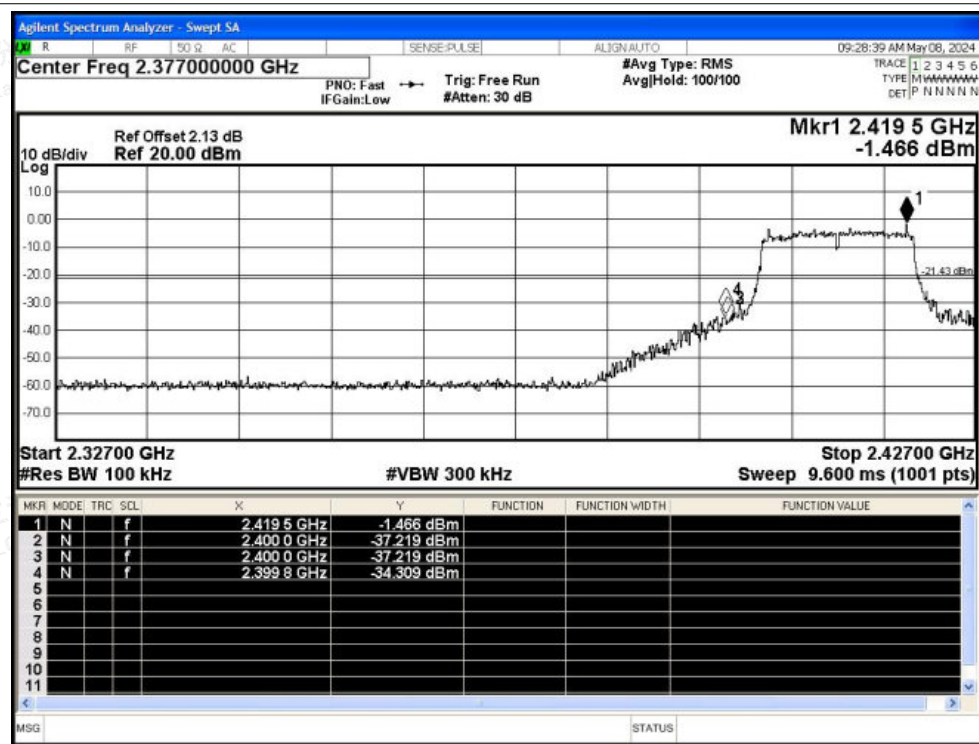




## Band Edge NVNT g 2412MHz Ant1 Ref

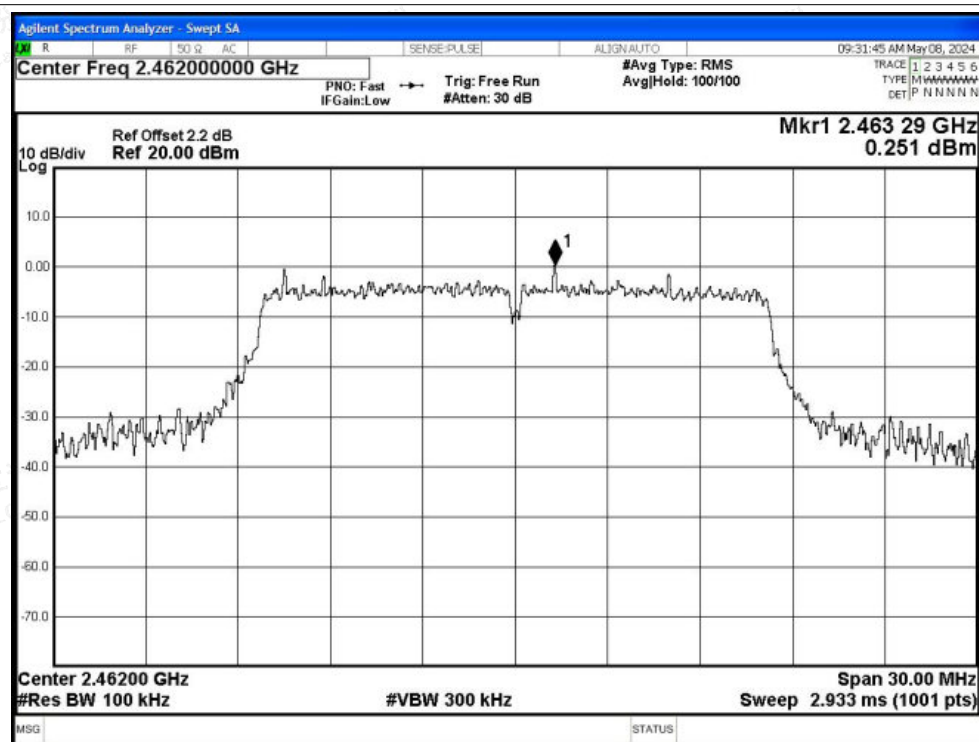


## Band Edge NVNT g 2412MHz Ant1 Emission

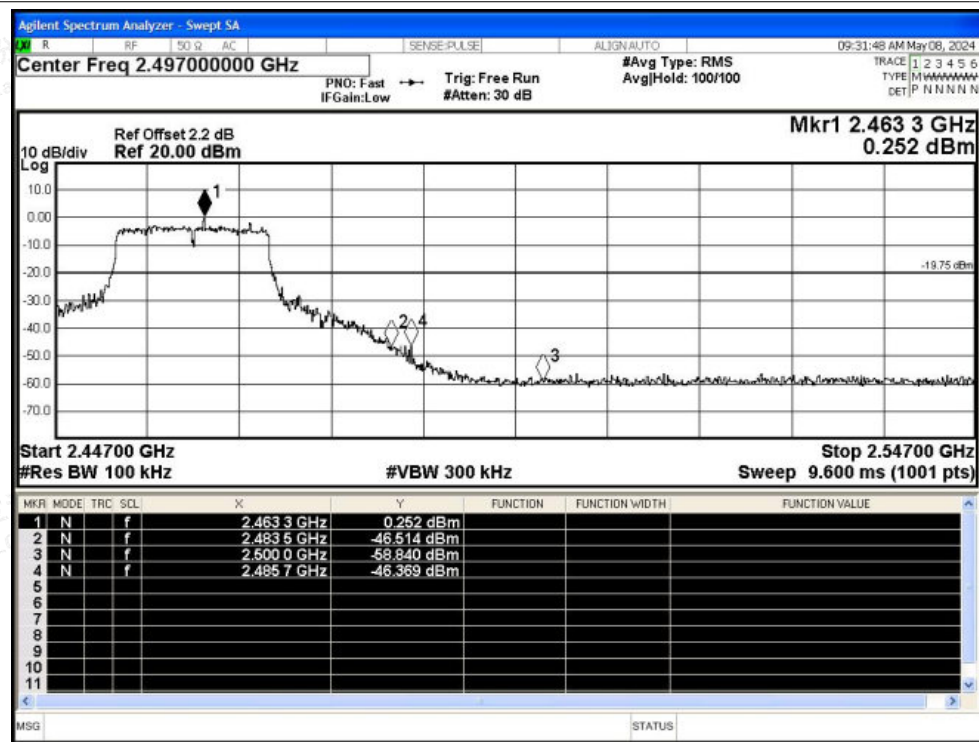




## Band Edge NVNT g 2462MHz Ant1 Ref

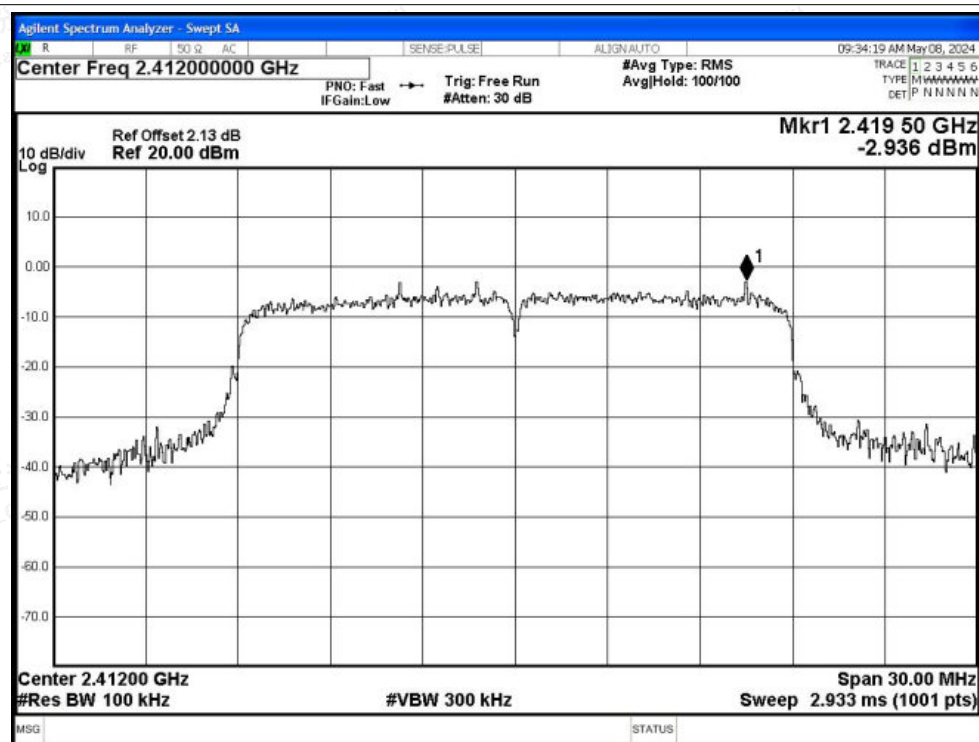


## Band Edge NVNT g 2462MHz Ant1 Emission

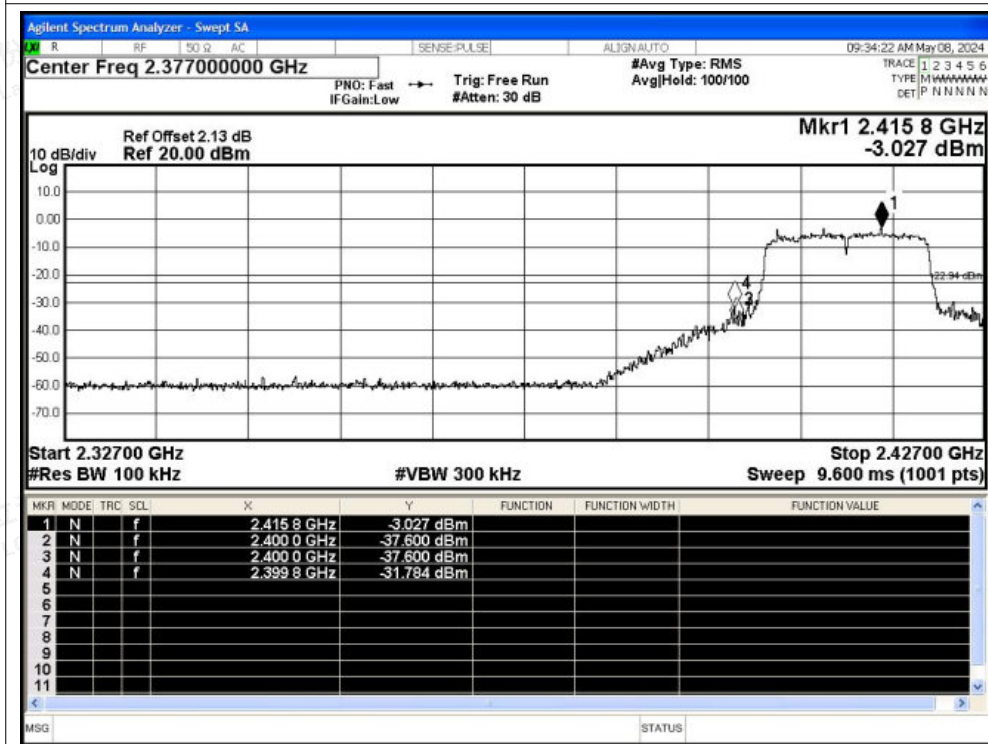




## Band Edge NVNT n20 2412MHz Ant1 Ref

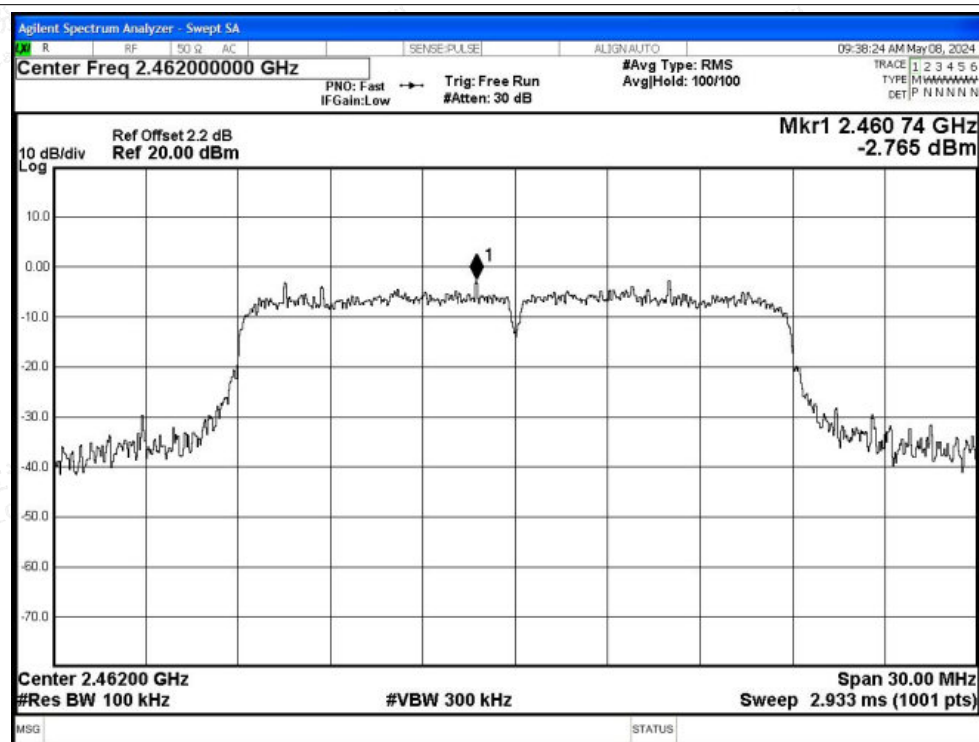


## Band Edge NVNT n20 2412MHz Ant1 Emission

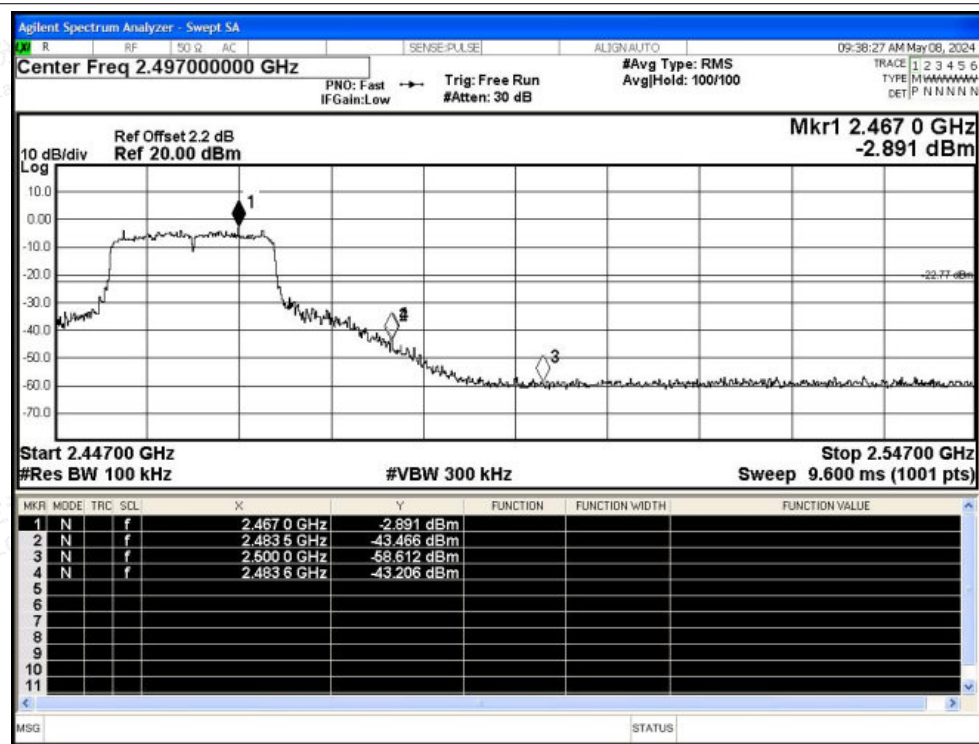




## Band Edge NVNT n20 2462MHz Ant1 Ref

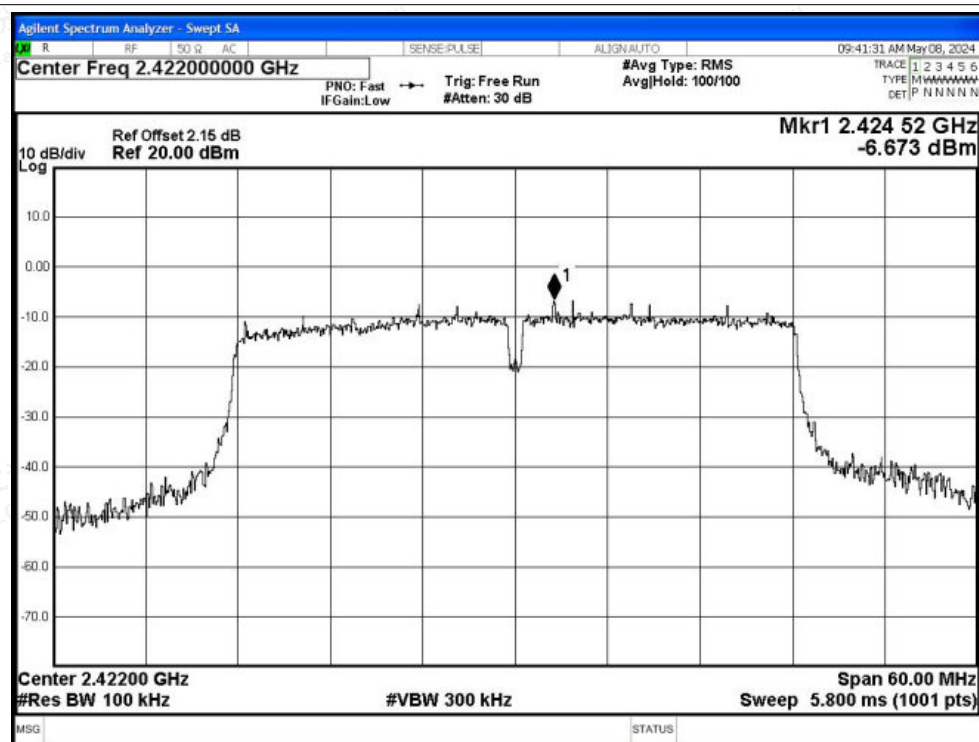


## Band Edge NVNT n20 2462MHz Ant1 Emission

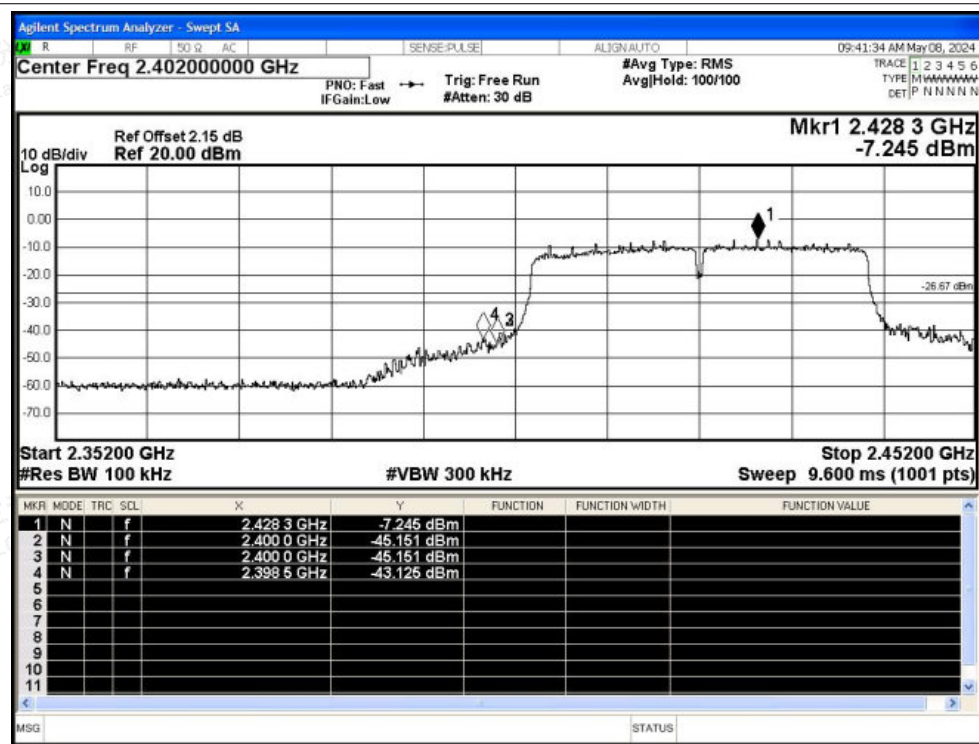




## Band Edge NVNT n40 2422MHz Ant1 Ref

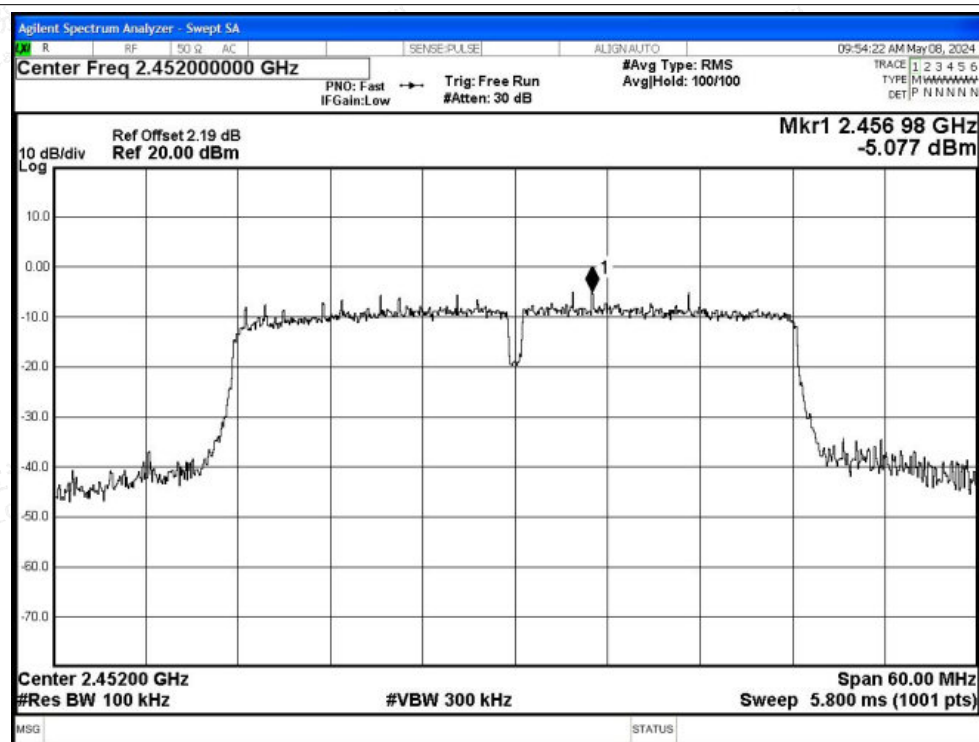


## Band Edge NVNT n40 2422MHz Ant1 Emission

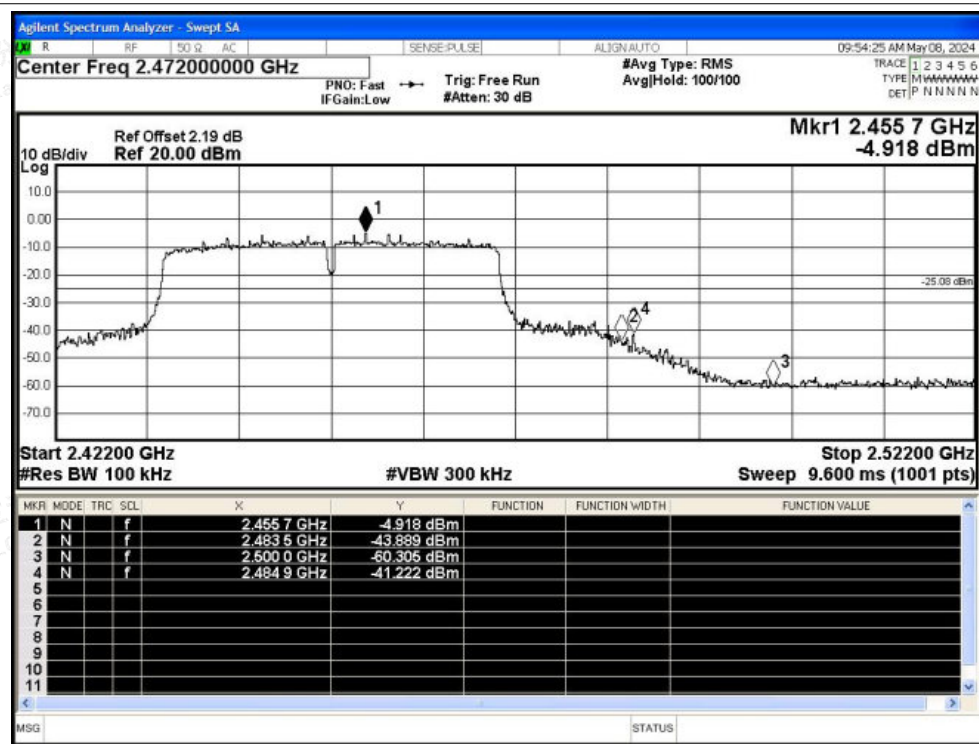




## Band Edge NVNT n40 2452MHz Ant1 Ref



## Band Edge NVNT n40 2452MHz Ant1 Emission





## A.5 Conducted RF Spurious Emission

| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | b    | 2412            | Ant1    | -52.27          | -20         | Pass    |
| NVNT      | b    | 2437            | Ant1    | -51.53          | -20         | Pass    |
| NVNT      | b    | 2462            | Ant1    | -52.41          | -20         | Pass    |
| NVNT      | g    | 2412            | Ant1    | -44.37          | -20         | Pass    |
| NVNT      | g    | 2437            | Ant1    | -44.87          | -20         | Pass    |
| NVNT      | g    | 2462            | Ant1    | -45.8           | -20         | Pass    |
| NVNT      | n20  | 2412            | Ant1    | -43.99          | -20         | Pass    |
| NVNT      | n20  | 2437            | Ant1    | -43.63          | -20         | Pass    |
| NVNT      | n20  | 2462            | Ant1    | -43.09          | -20         | Pass    |
| NVNT      | n40  | 2422            | Ant1    | -38.78          | -20         | Pass    |
| NVNT      | n40  | 2437            | Ant1    | -39.34          | -20         | Pass    |
| NVNT      | n40  | 2452            | Ant1    | -41.23          | -20         | Pass    |



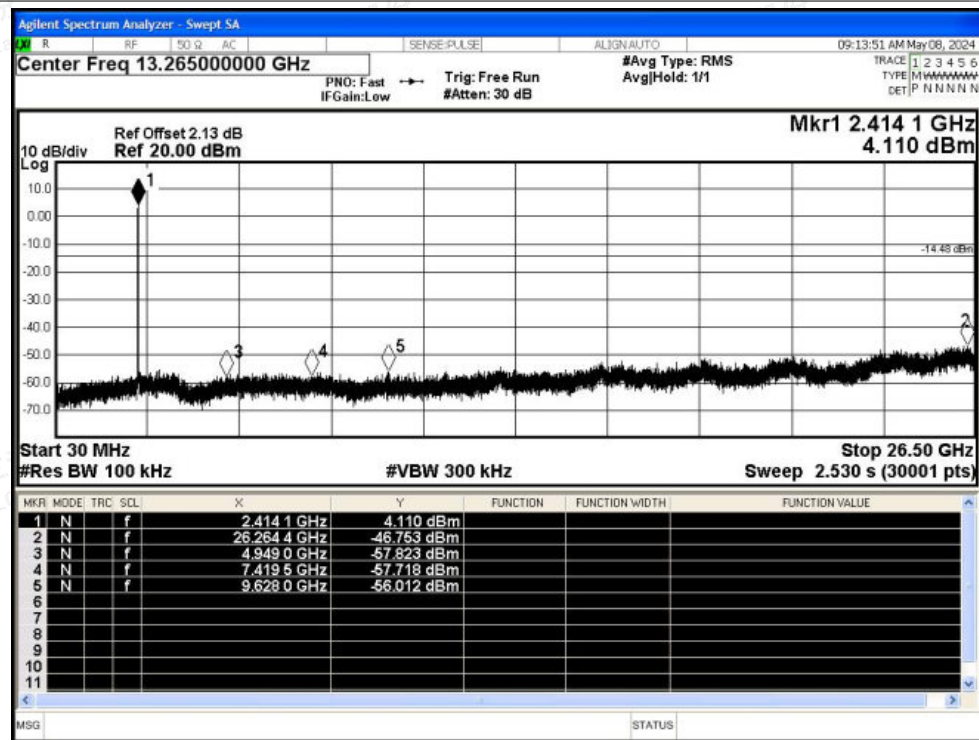


## Test Graphs

## Tx. Spurious NVNT b 2412MHz Ant1 Ref

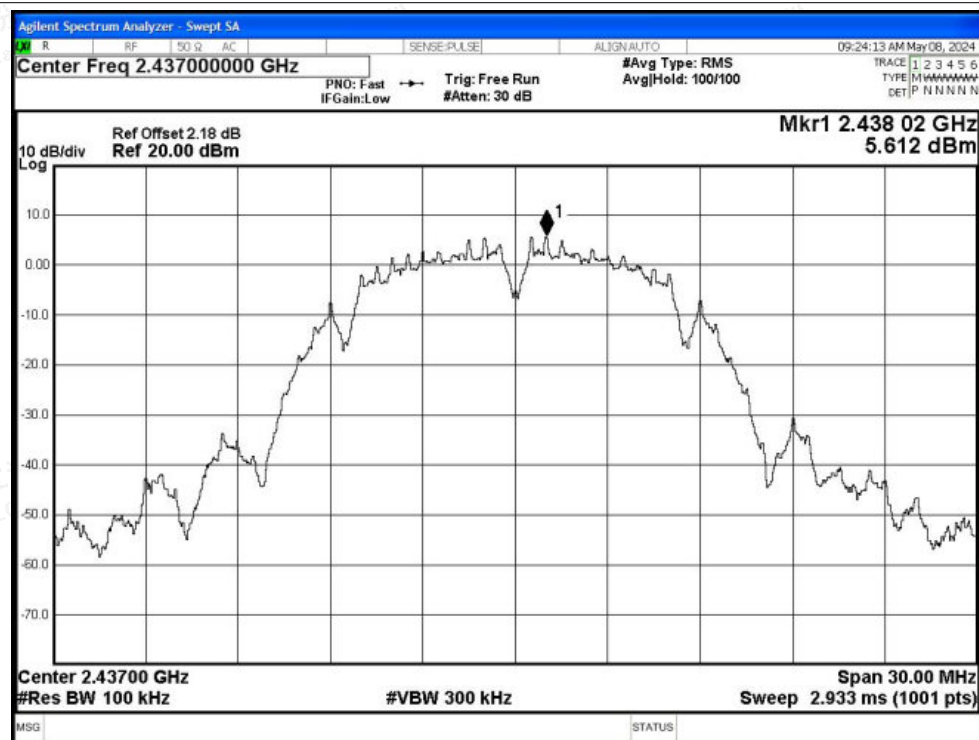


## Tx. Spurious NVNT b 2412MHz Ant1 Emission

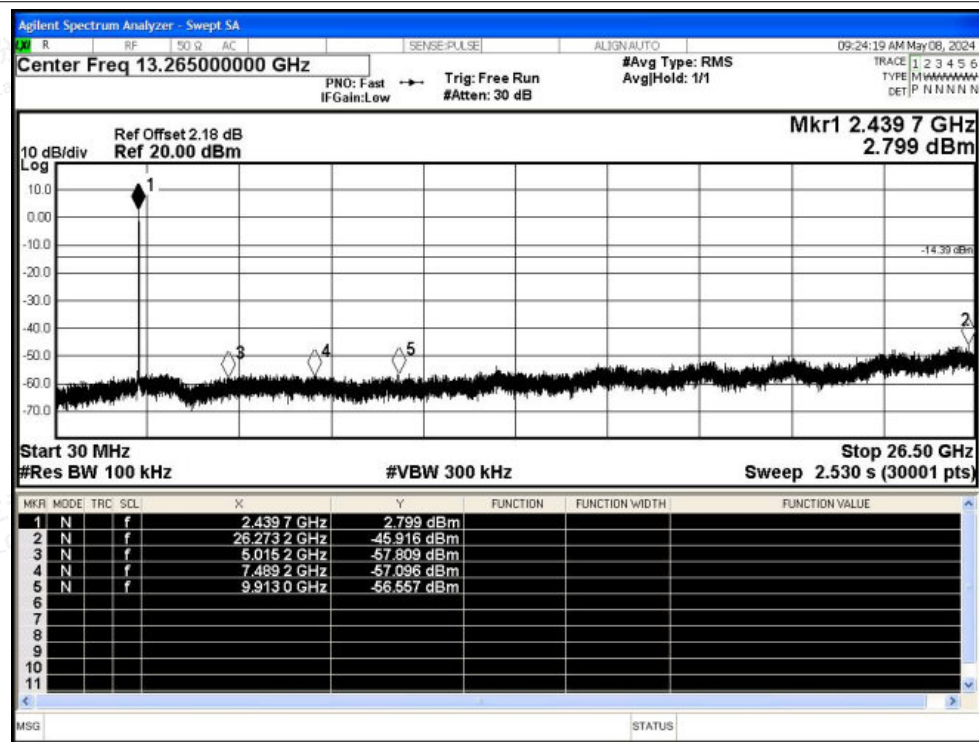




## Tx. Spurious NVNT b 2437MHz Ant1 Ref

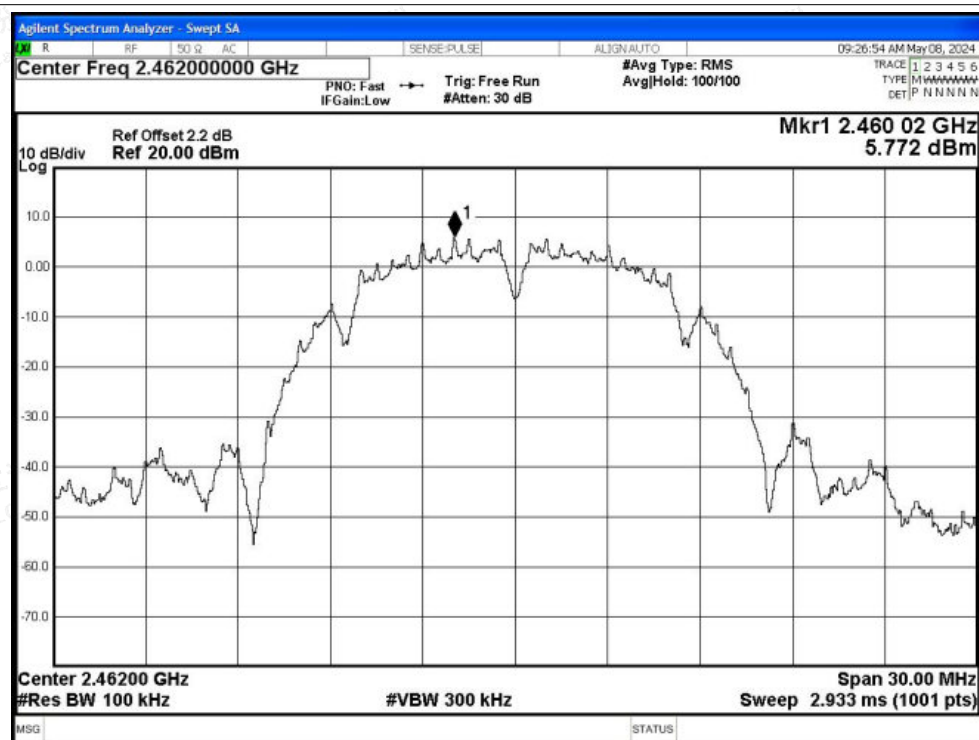


## Tx. Spurious NVNT b 2437MHz Ant1 Emission

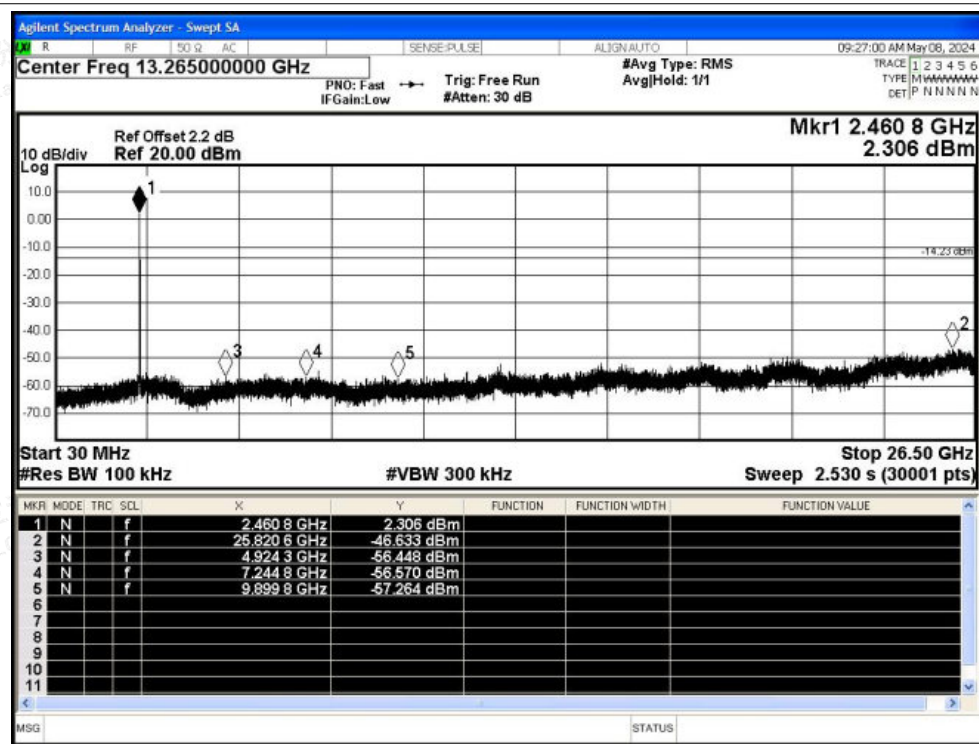




## Tx. Spurious NVNT b 2462MHz Ant1 Ref

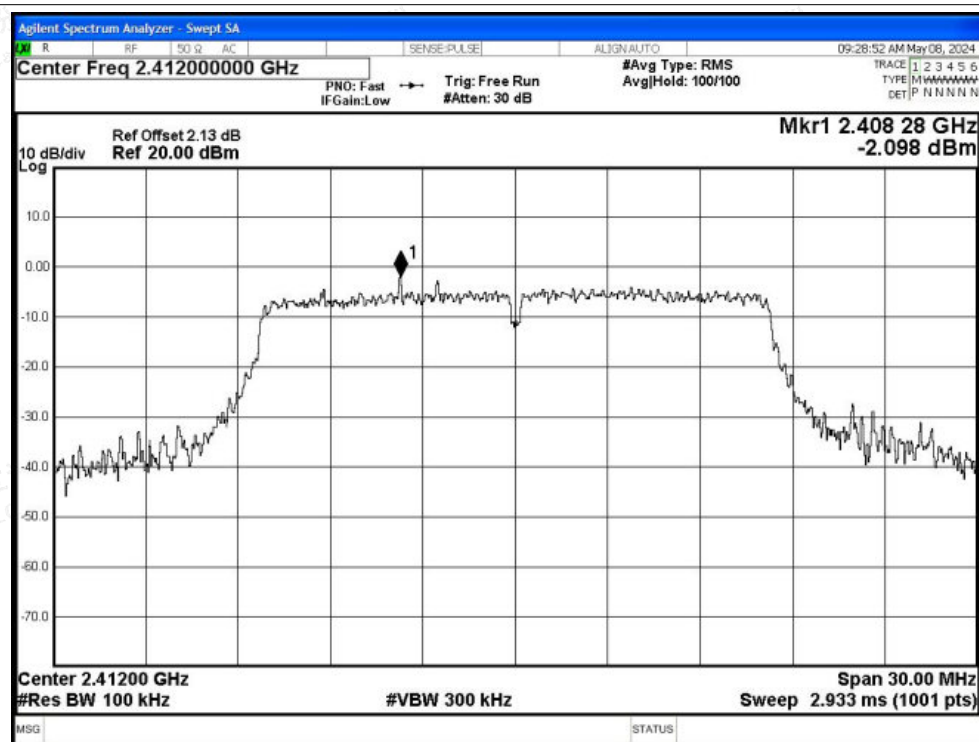


## Tx. Spurious NVNT b 2462MHz Ant1 Emission

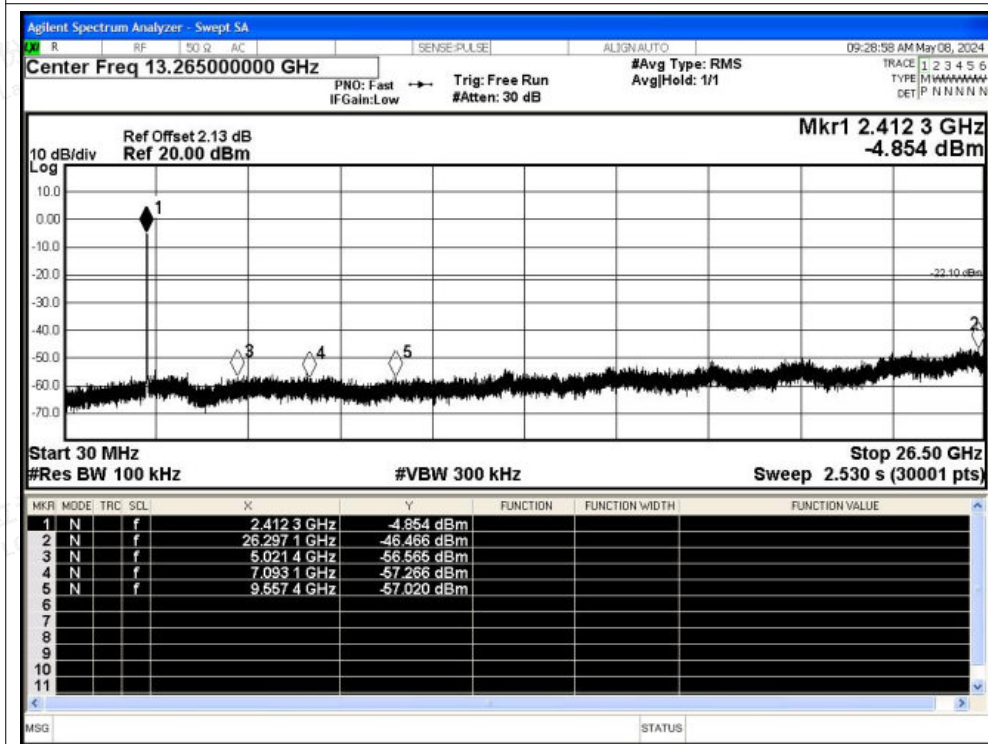




## Tx. Spurious NVNT g 2412MHz Ant1 Ref

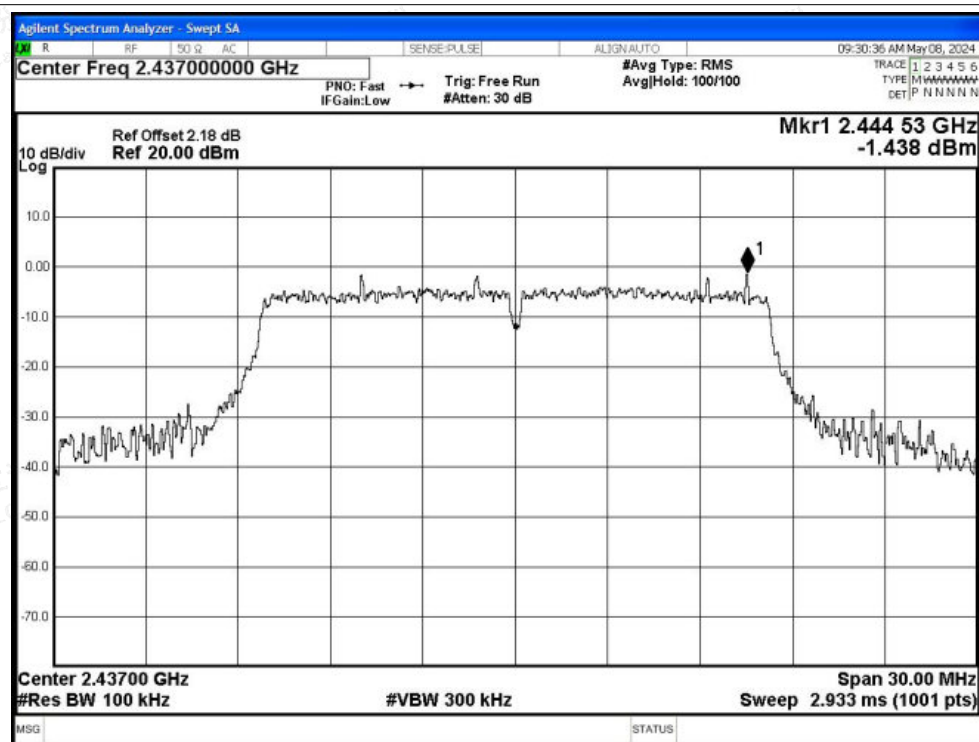


## Tx. Spurious NVNT g 2412MHz Ant1 Emission

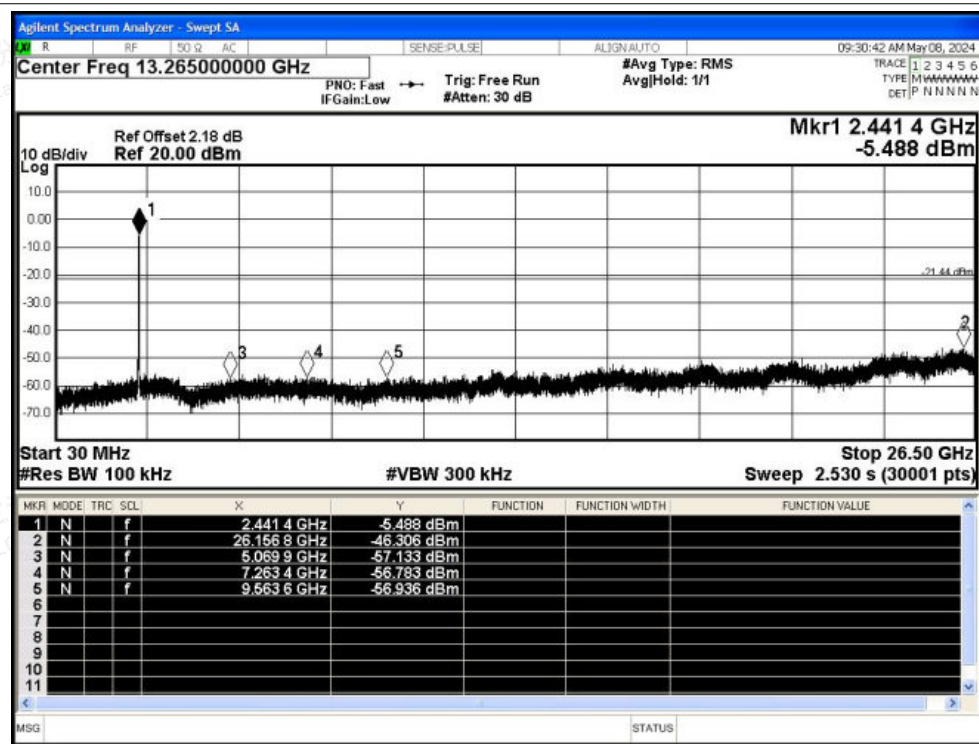




## Tx. Spurious NVNT g 2437MHz Ant1 Ref

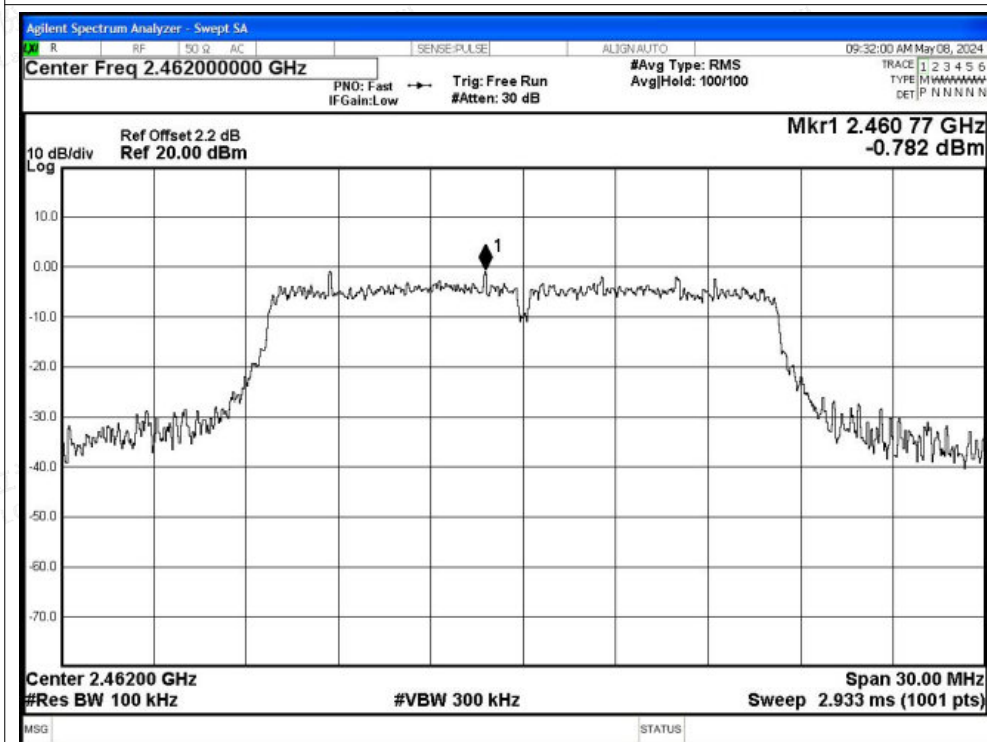


## Tx. Spurious NVNT g 2437MHz Ant1 Emission

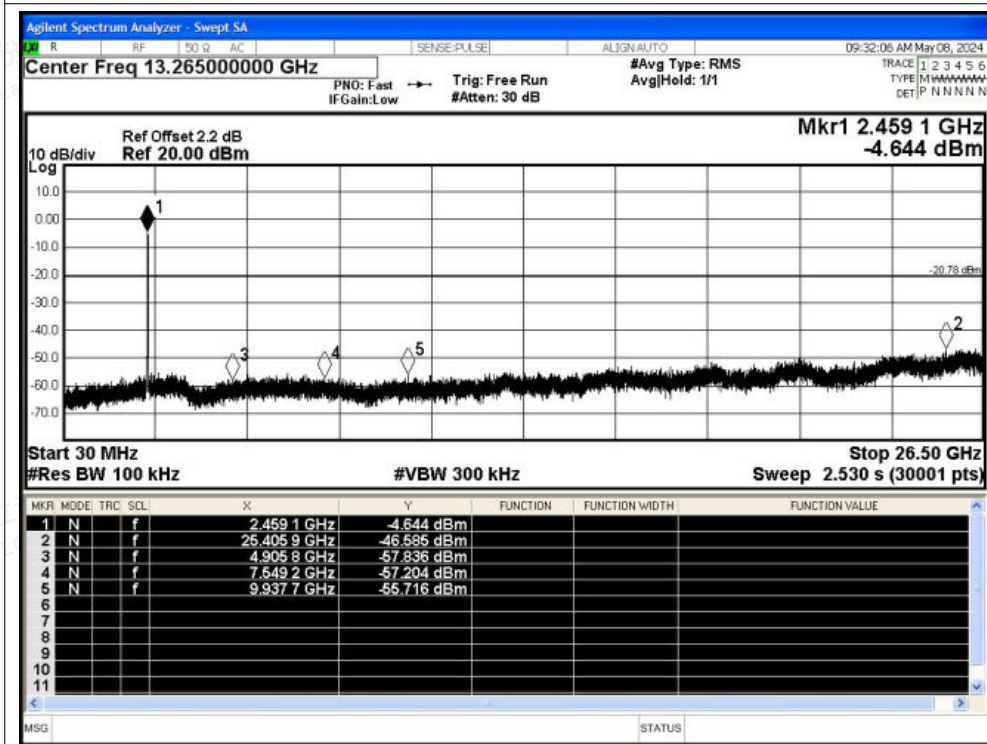




## Tx. Spurious NVNT g 2462MHz Ant1 Ref

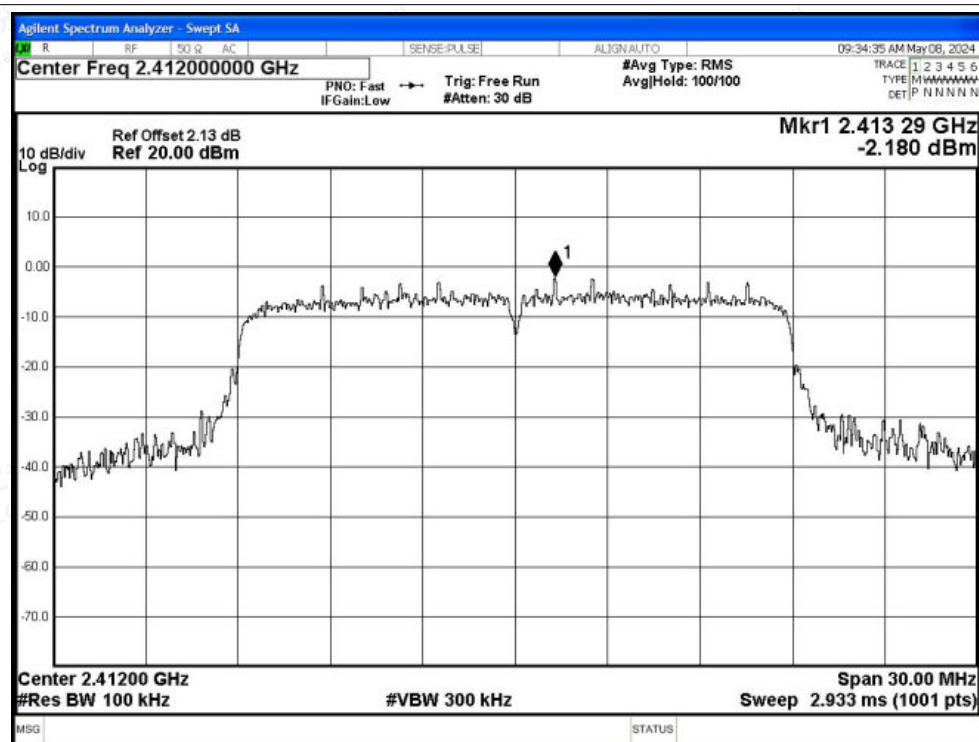


## Tx. Spurious NVNT g 2462MHz Ant1 Emission

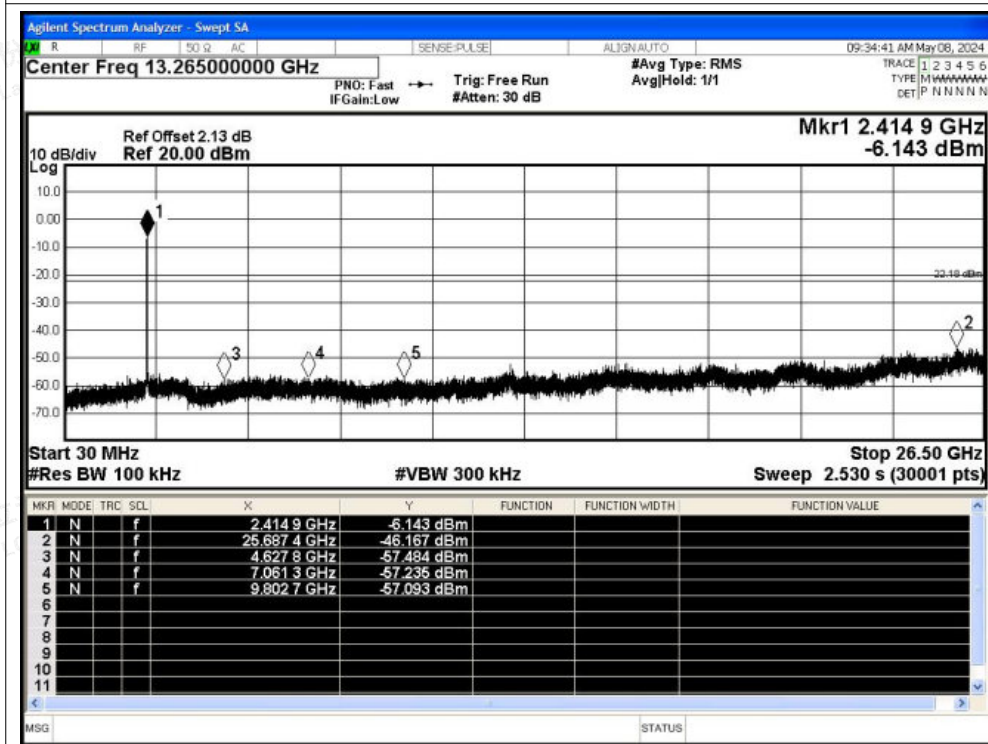




## Tx. Spurious NVNT n20 2412MHz Ant1 Ref

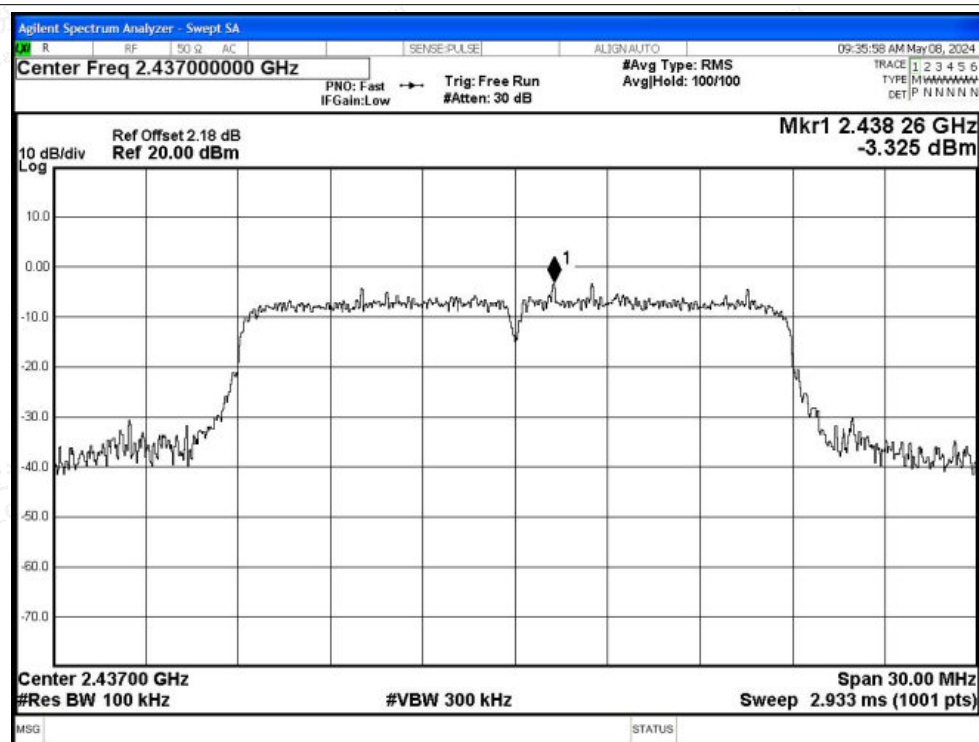


## Tx. Spurious NVNT n20 2412MHz Ant1 Emission

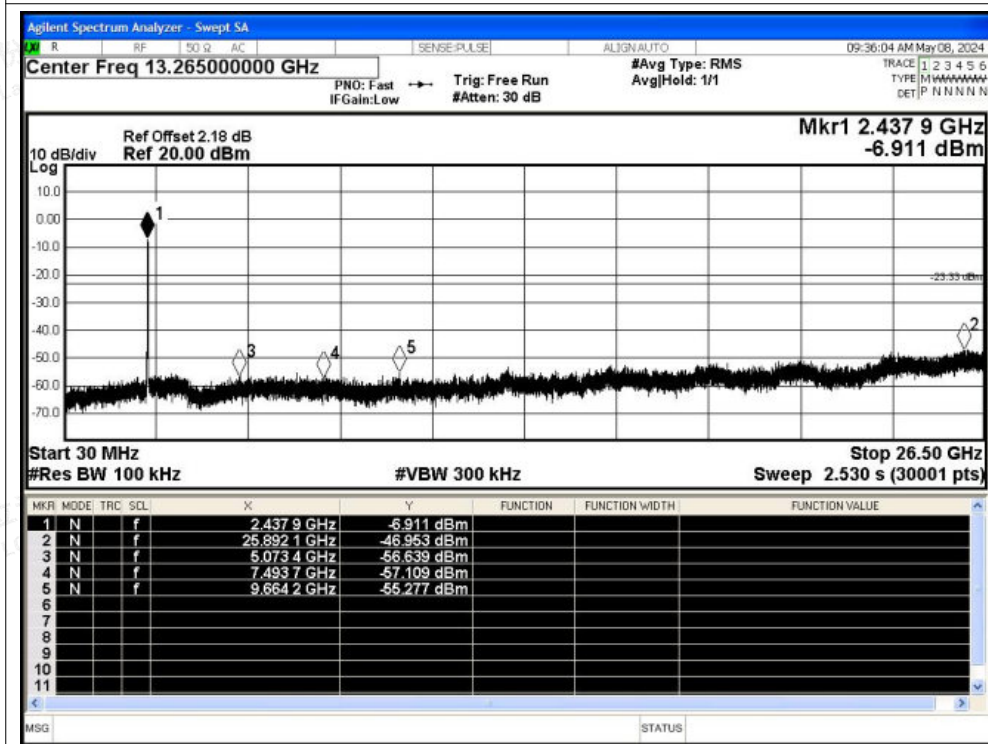




## Tx. Spurious NVNT n20 2437MHz Ant1 Ref

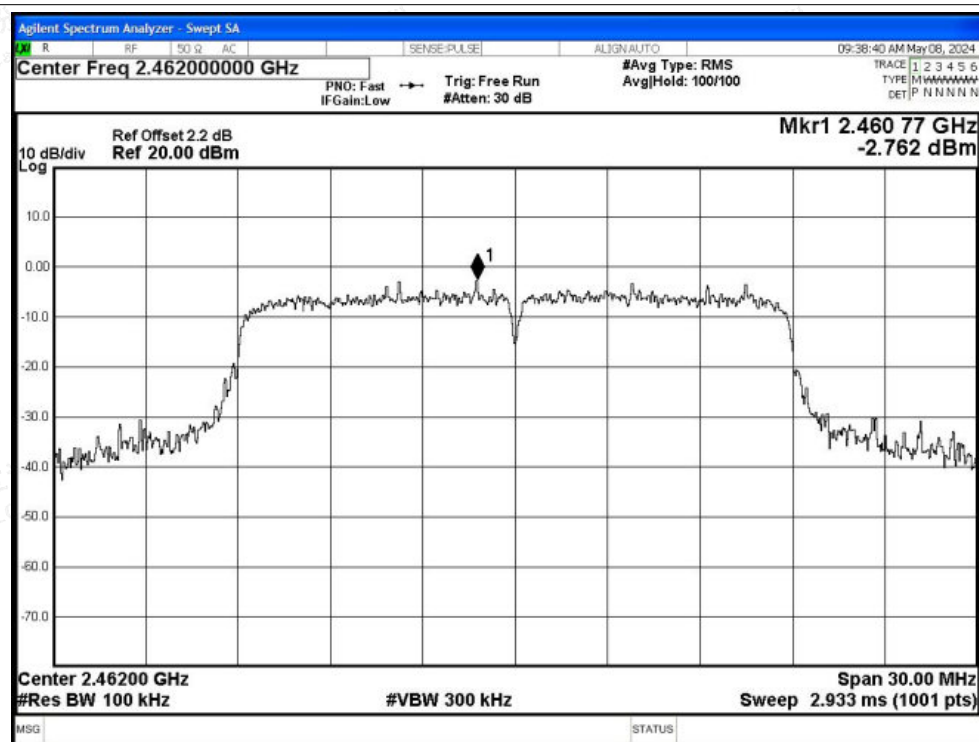


## Tx. Spurious NVNT n20 2437MHz Ant1 Emission





## Tx. Spurious NVNT n20 2462MHz Ant1 Ref



## Tx. Spurious NVNT n20 2462MHz Ant1 Emission

