

# RF Test Data for 2.4G WiFi (Conducted Measurements)

| General Description of EUT                                                                                                                  |                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Product Name:                                                                                                                               | Wireless Network Video Recorder |
| Test Model:                                                                                                                                 | K8210-W6-CE-1                   |
| Sample ID:                                                                                                                                  | HC-C-202407-0153-01-02#         |
| Environmental Conditions                                                                                                                    |                                 |
| Temperature:                                                                                                                                | 25℃                             |
| Relative Humidity:                                                                                                                          | 55%                             |
| Test Voltage:                                                                                                                               | DC 3.8V                         |
| Test Engineer:                                                                                                                              | ZKn Zhou                        |
| Note: For a more detailed features description, please refer to the report TBR-C-202407-0153-2<br>The report only show the worst case data. |                                 |

## Contents

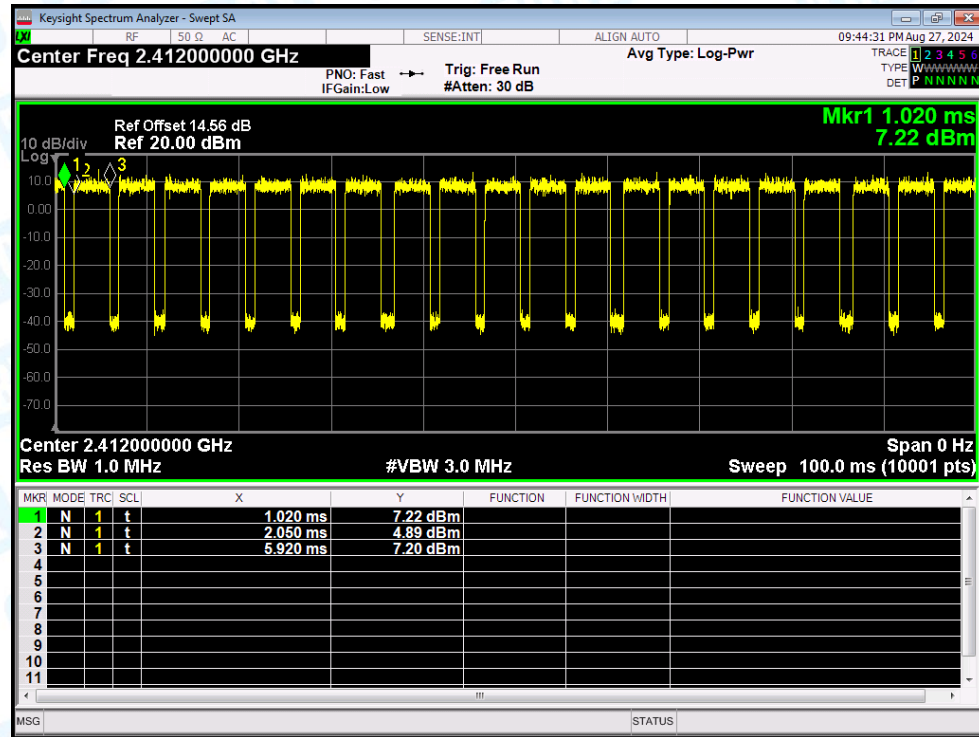
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## 1. Duty Cycle

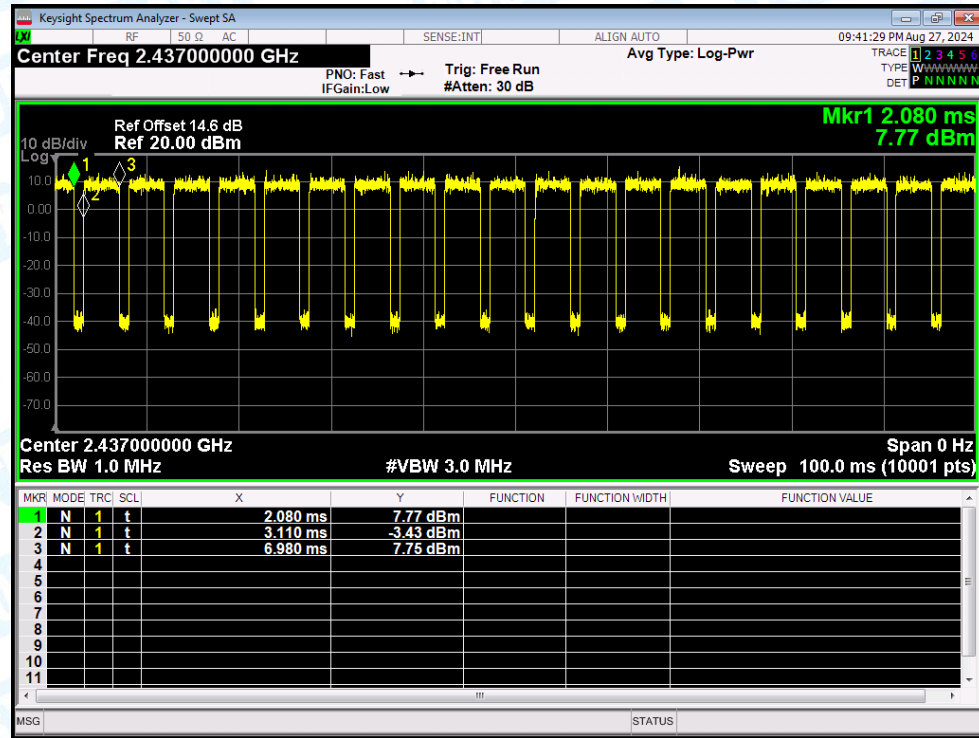
| Condition | Mode      | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|-----------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | ax(VHT20) | 2412            | Ant2    | 78.98          | 1.02                   | 0.26      |
| NVNT      | ax(VHT20) | 2437            | Ant2    | 78.98          | 1.02                   | 0.26      |
| NVNT      | ax(VHT20) | 2462            | Ant2    | 79.18          | 1.01                   | 0.26      |
| NVNT      | ax(VHT40) | 2422            | Ant2    | 65.89          | 1.81                   | 0.51      |
| NVNT      | ax(VHT40) | 2437            | Ant2    | 65.67          | 1.83                   | 0.51      |
| NVNT      | ax(VHT40) | 2452            | Ant2    | 65.55          | 1.83                   | 0.51      |
| NVNT      | b         | 2412            | Ant2    | 80.79          | 0.93                   | 0.12      |
| NVNT      | b         | 2437            | Ant2    | 80.71          | 0.93                   | 0.12      |
| NVNT      | b         | 2462            | Ant2    | 80.73          | 0.93                   | 0.12      |
| NVNT      | g         | 2412            | Ant2    | 57.44          | 2.41                   | 0.72      |
| NVNT      | g         | 2437            | Ant2    | 57.85          | 2.38                   | 0.71      |
| NVNT      | g         | 2462            | Ant2    | 57.85          | 2.38                   | 0.71      |
| NVNT      | n(HT20)   | 2412            | Ant2    | 83.14          | 0.8                    | 0.2       |
| NVNT      | n(HT20)   | 2437            | Ant2    | 83.31          | 0.79                   | 0.2       |
| NVNT      | n(HT20)   | 2462            | Ant2    | 83.17          | 0.8                    | 0.2       |
| NVNT      | n(HT40)   | 2422            | Ant2    | 70.77          | 1.5                    | 0.4       |
| NVNT      | n(HT40)   | 2437            | Ant2    | 70.57          | 1.51                   | 0.4       |
| NVNT      | n(HT40)   | 2452            | Ant2    | 70.77          | 1.5                    | 0.4       |

### Test Graphs

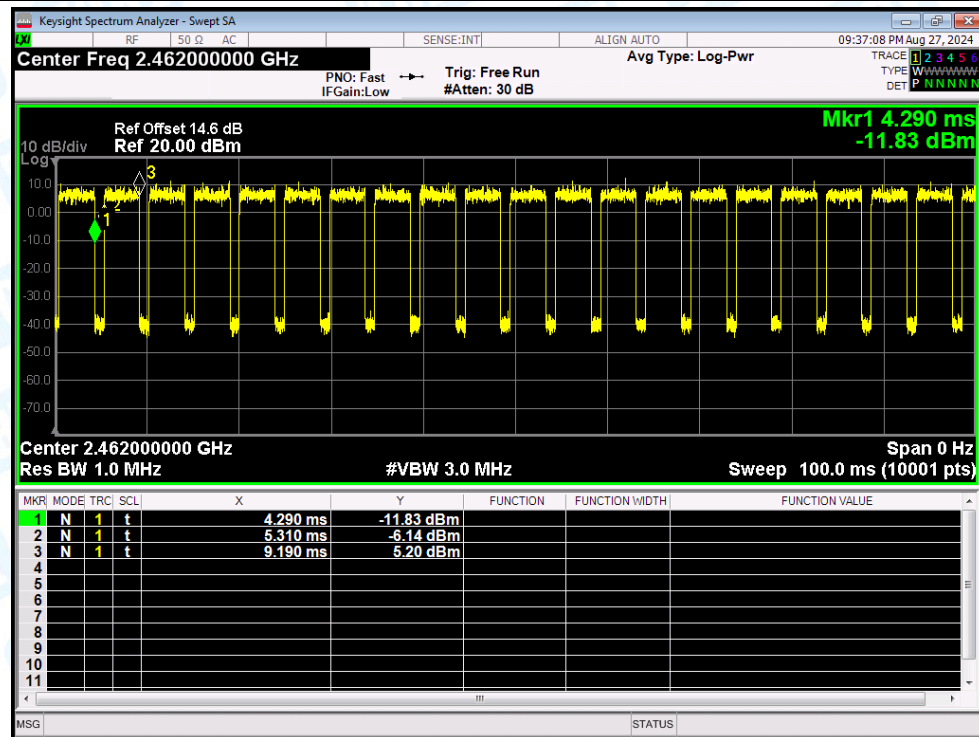
#### Duty Cycle NVNT ax(VHT20) 2412MHz Ant2



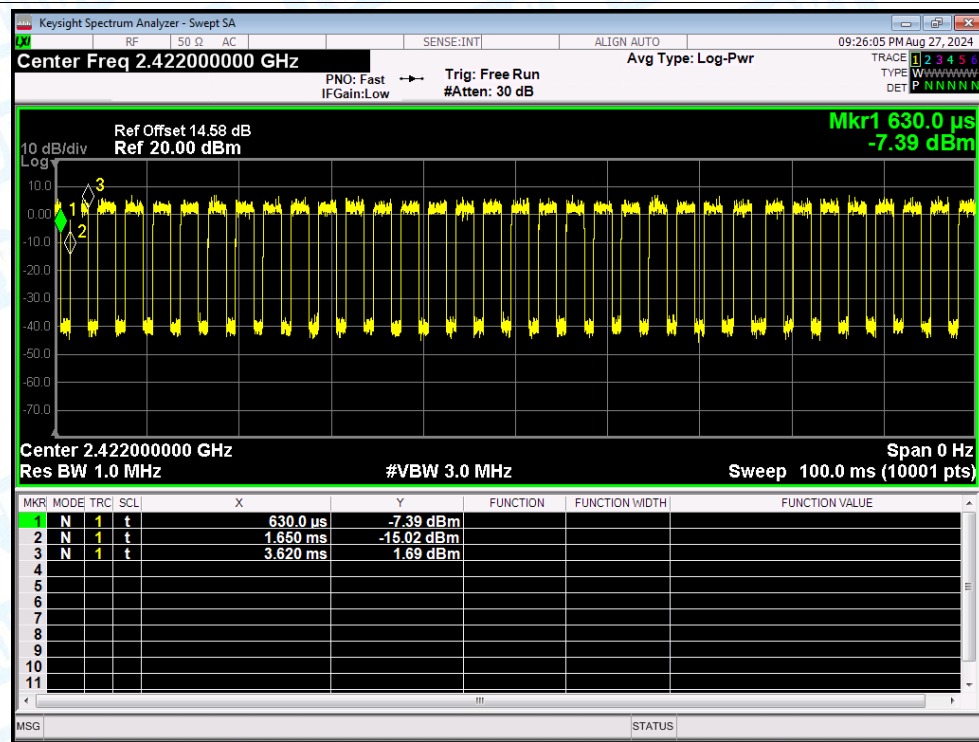
#### Duty Cycle NVNT ax(VHT20) 2437MHz Ant2



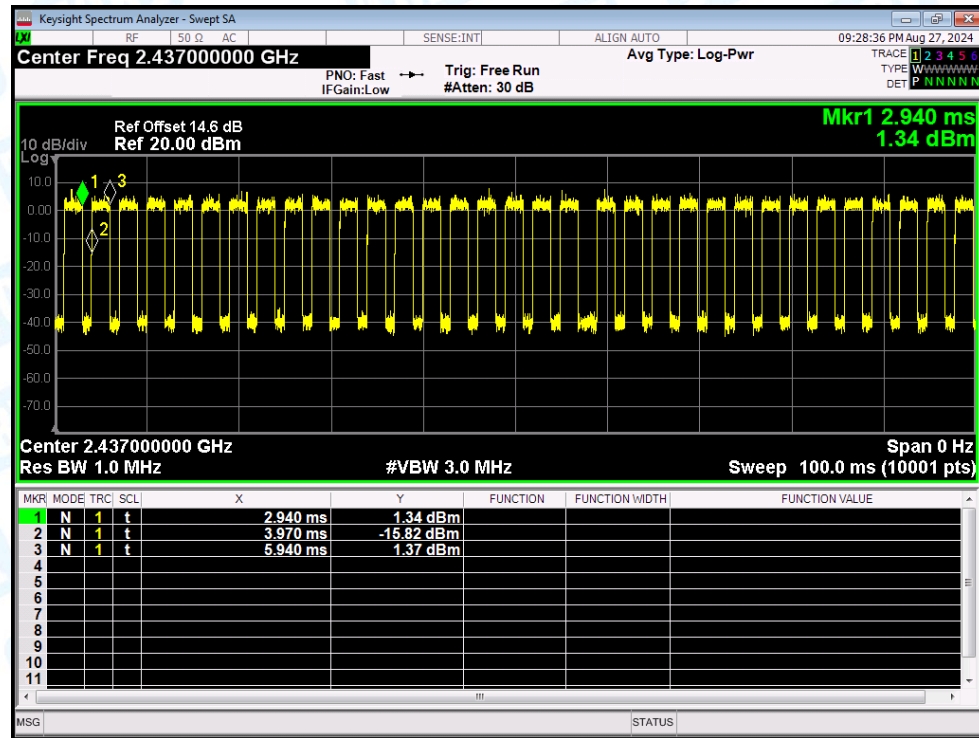
Duty Cycle NVNT ax(VHT20) 2462MHz Ant2



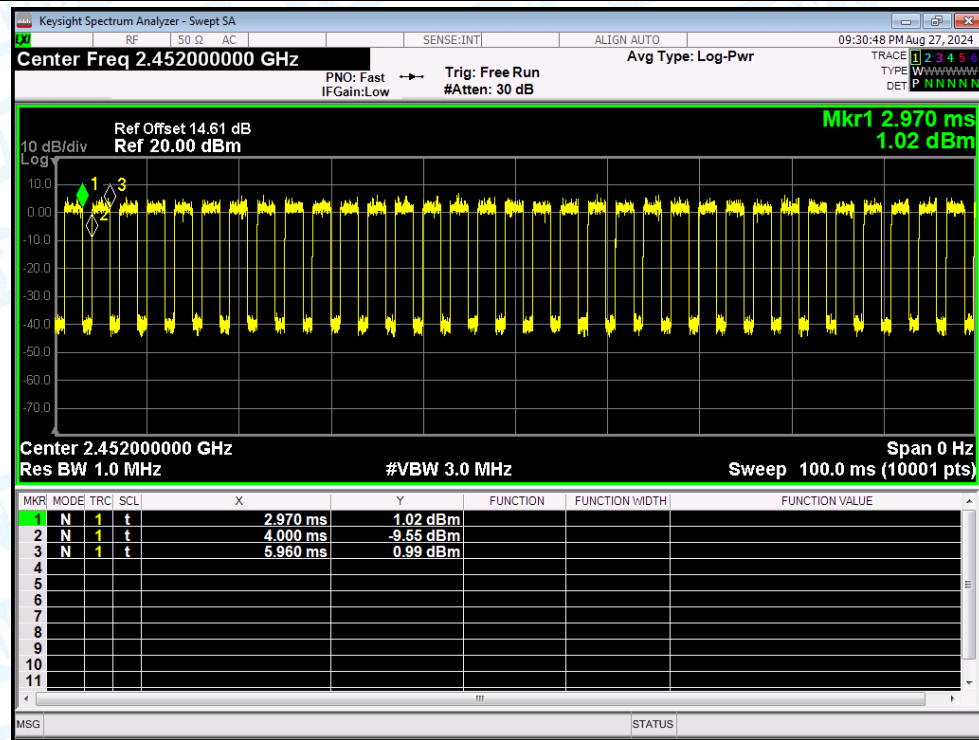
Duty Cycle NVNT ax(VHT40) 2422MHz Ant2



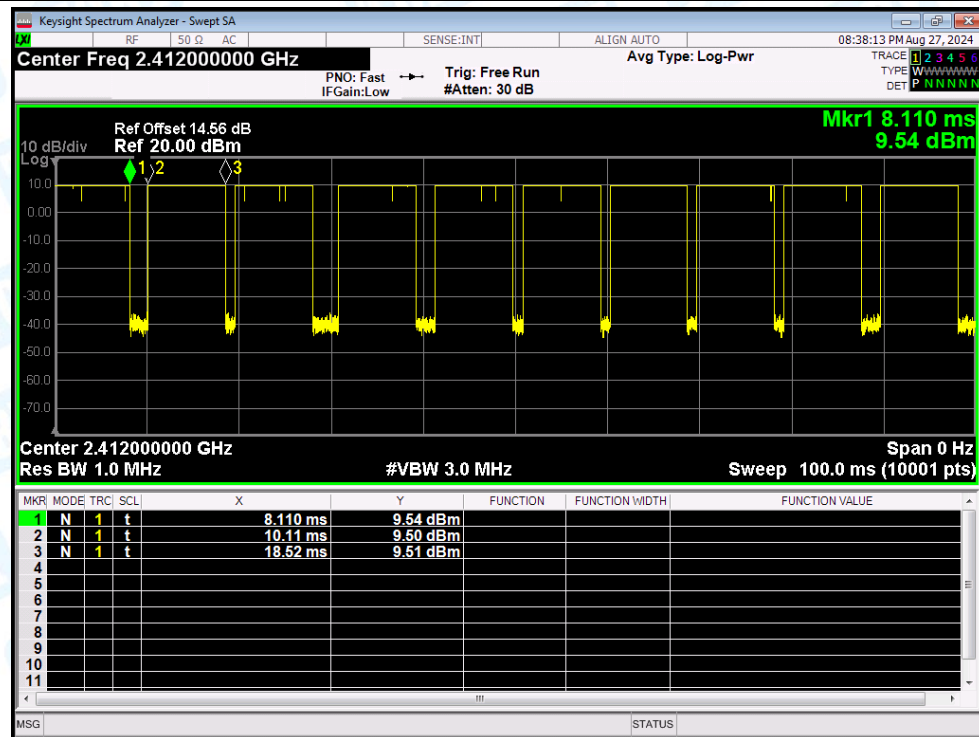
Duty Cycle NVNT ax(VHT40) 2437MHz Ant2



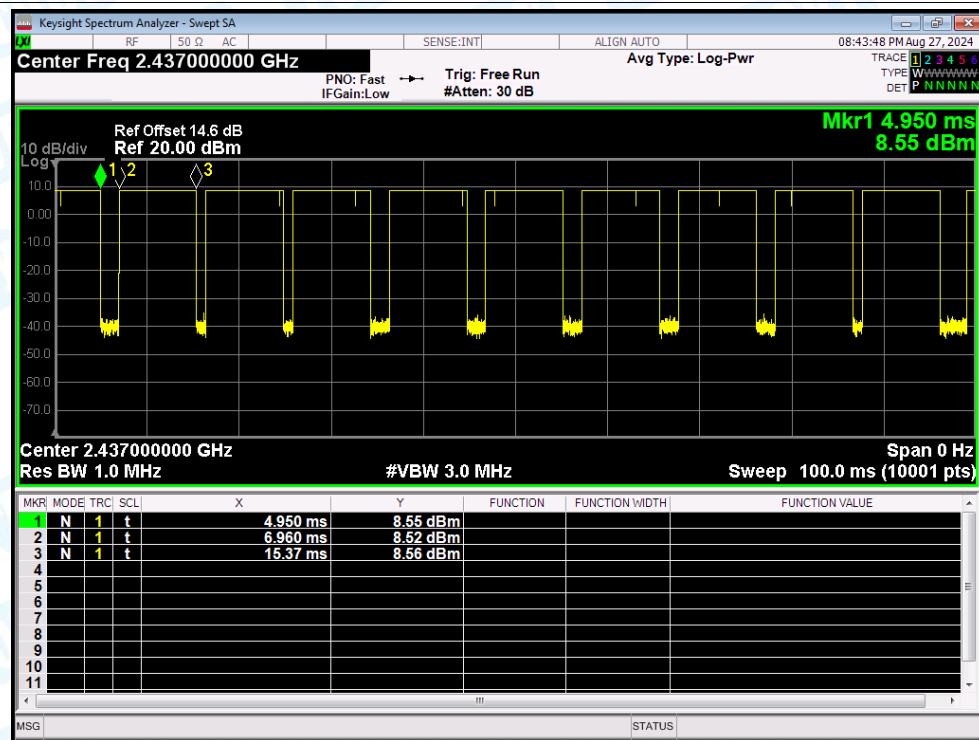
Duty Cycle NVNT ax(VHT40) 2452MHz Ant2



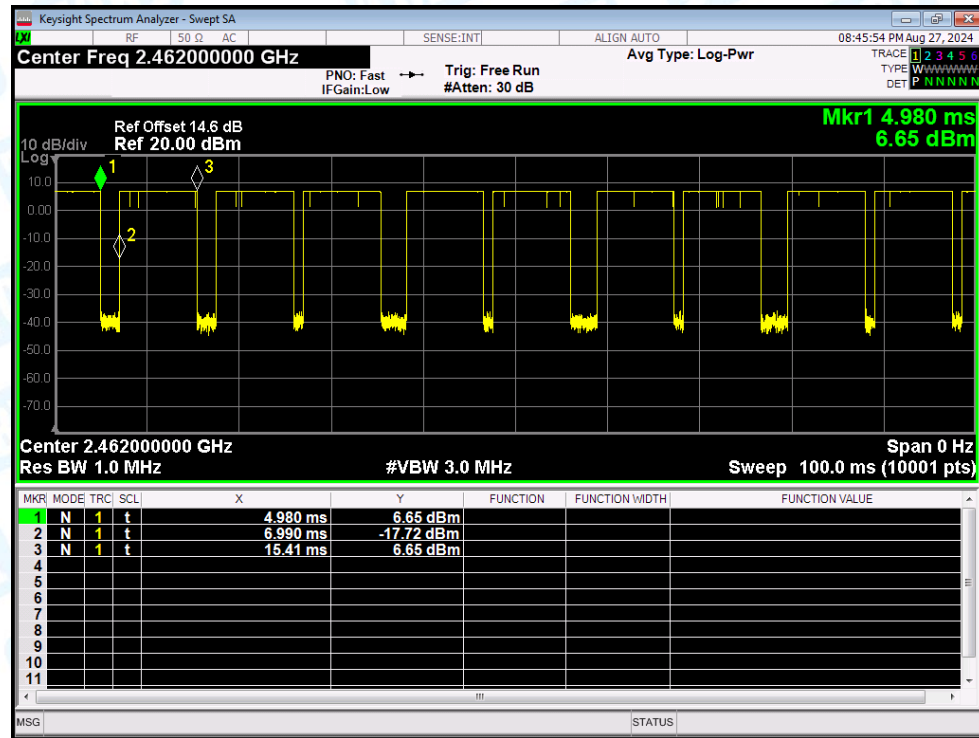
### Duty Cycle NVNT b 2412MHz Ant2



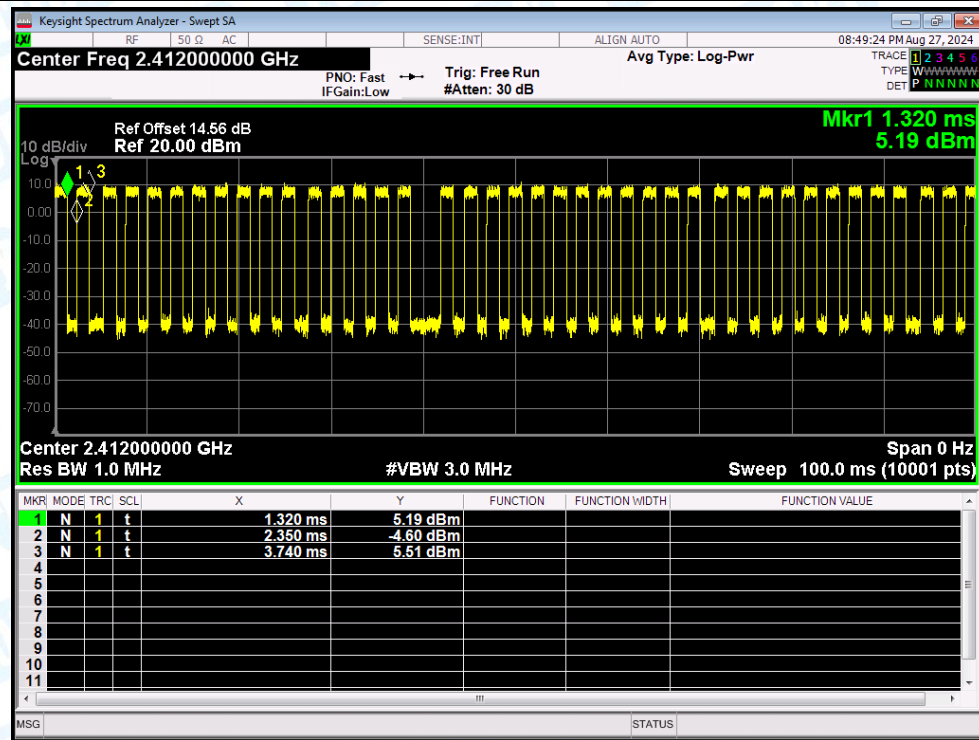
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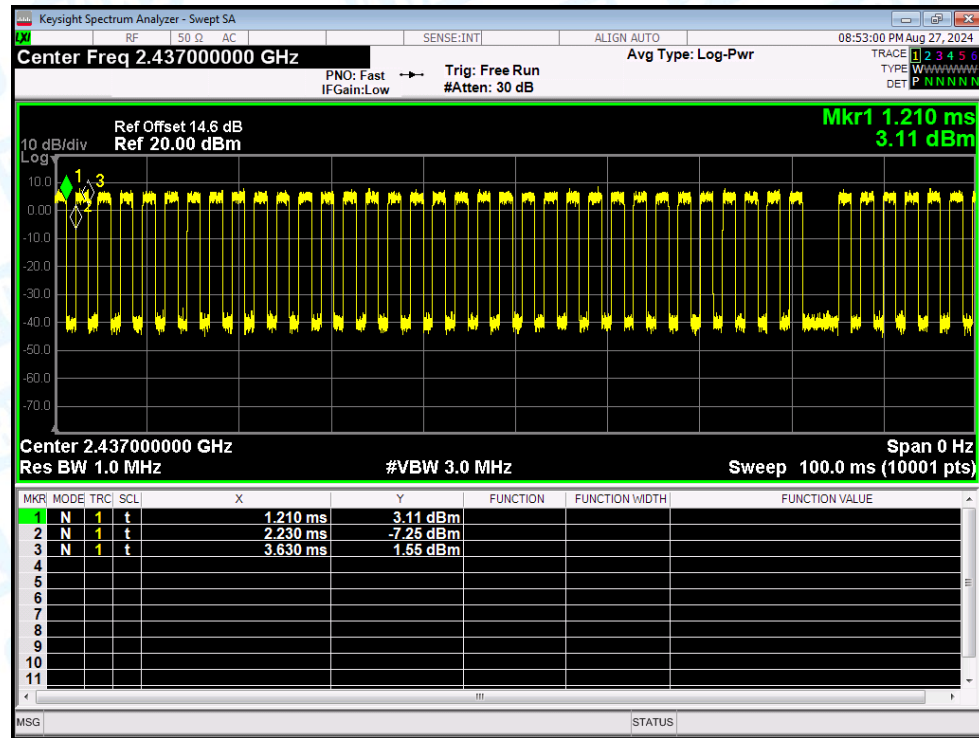
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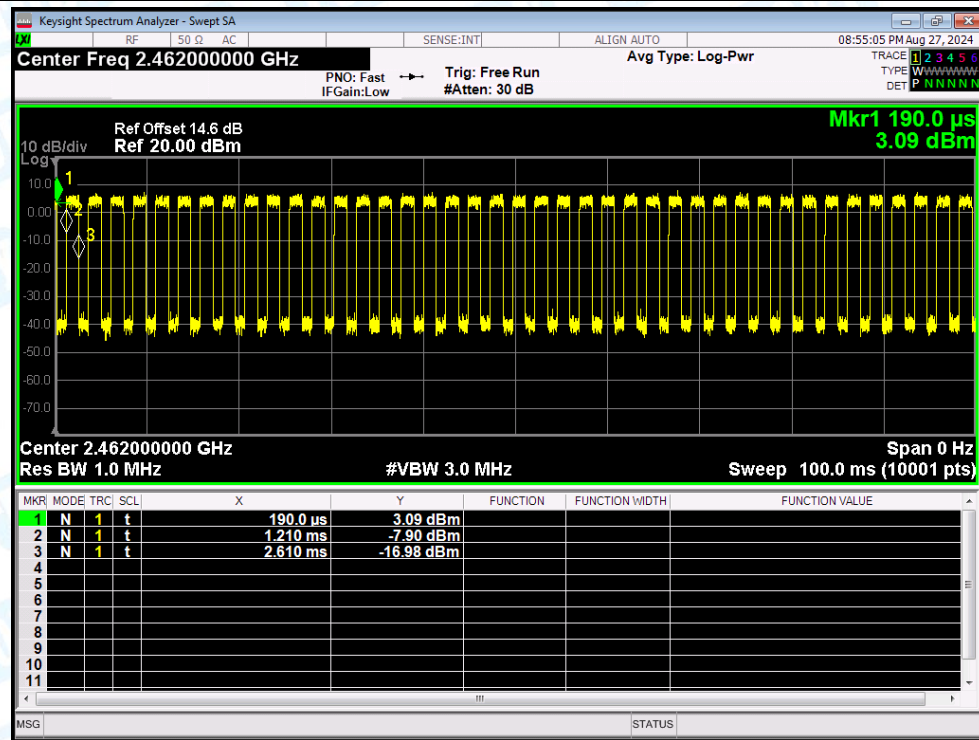
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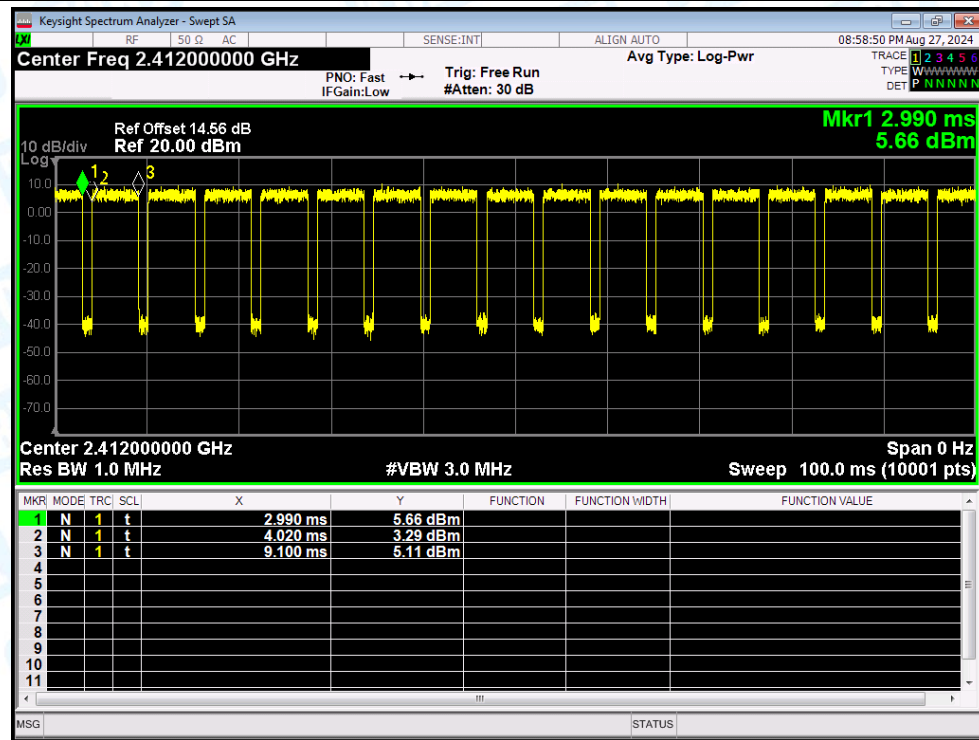
Duty Cycle NVNT g 2437MHz Ant2



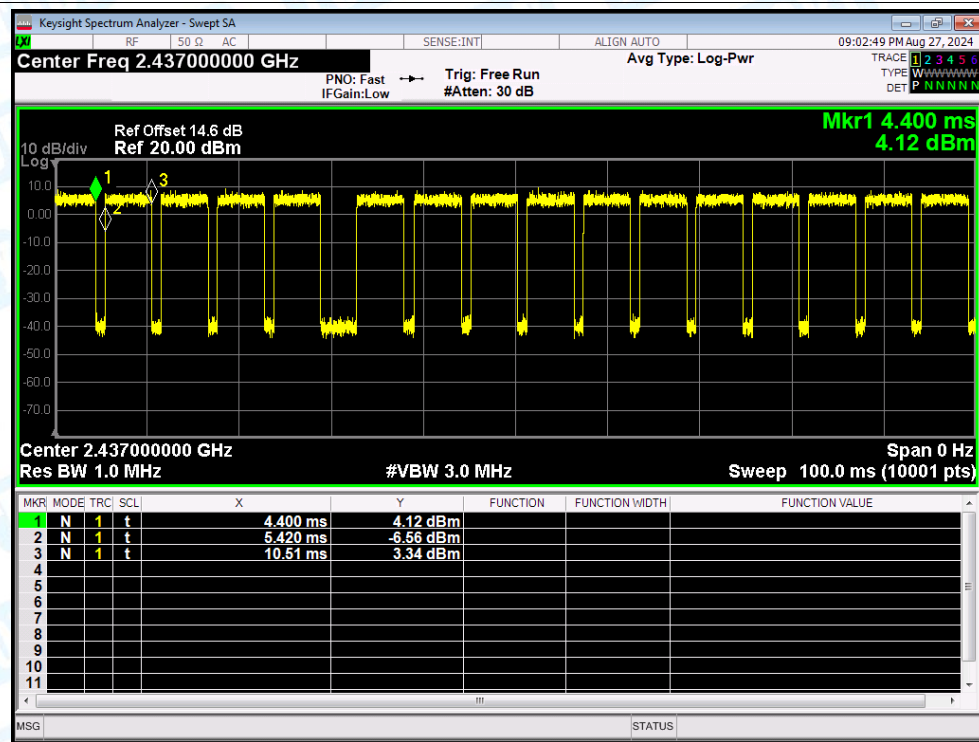
Duty Cycle NVNT g 2462MHz Ant2



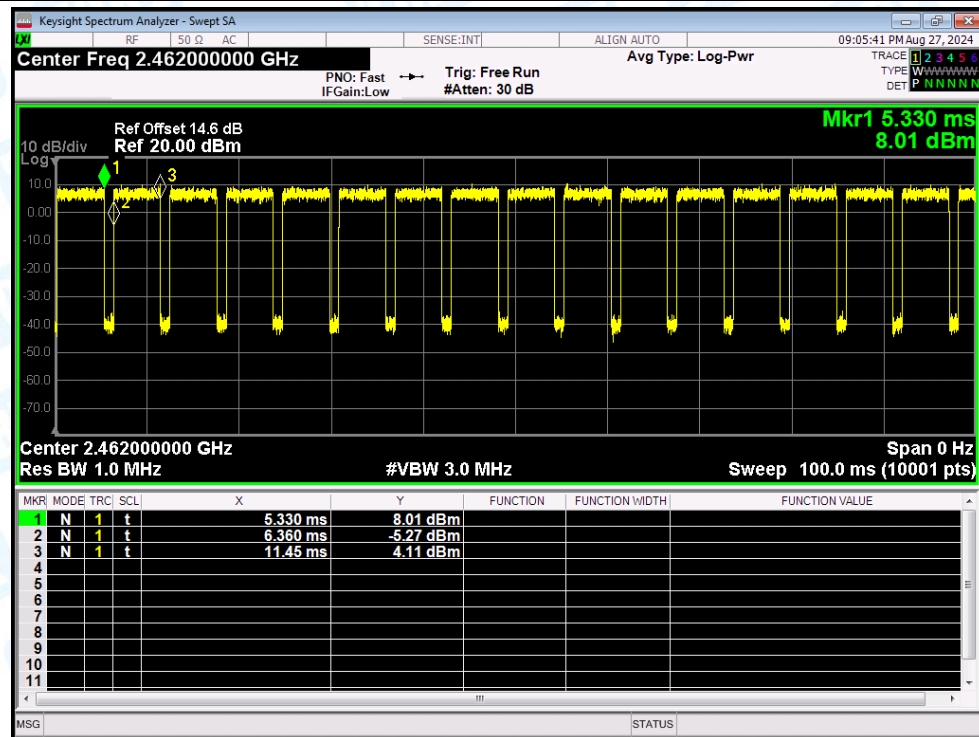
Duty Cycle NVNT n(HT20) 2412MHz Ant2



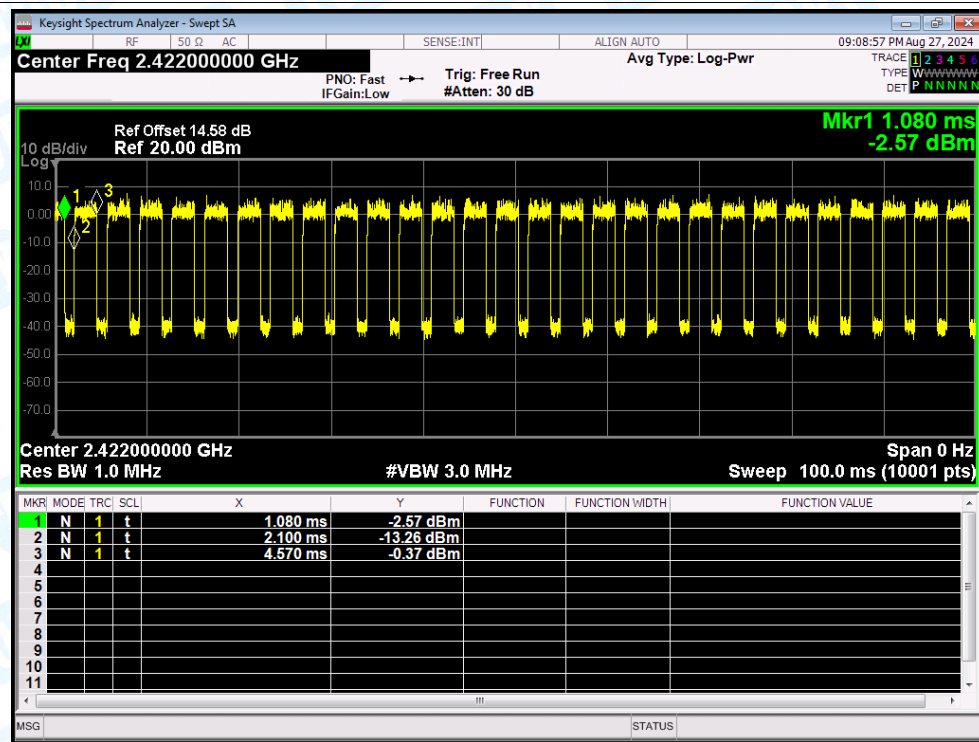
Duty Cycle NVNT n(HT20) 2437MHz Ant2



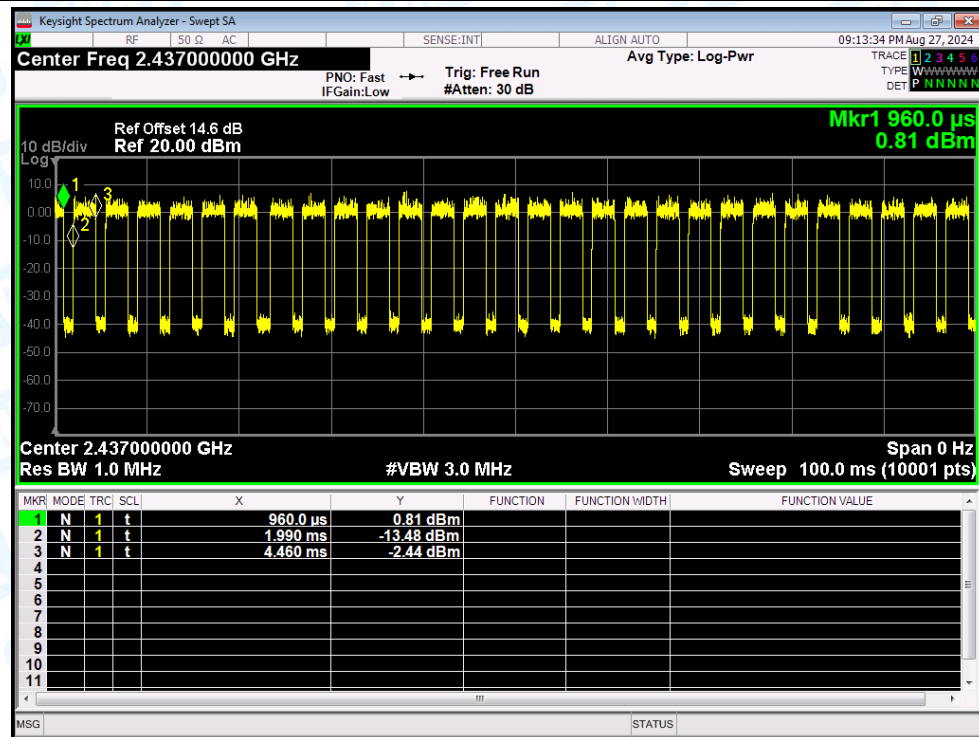
Duty Cycle NVNT n(HT20) 2462MHz Ant2



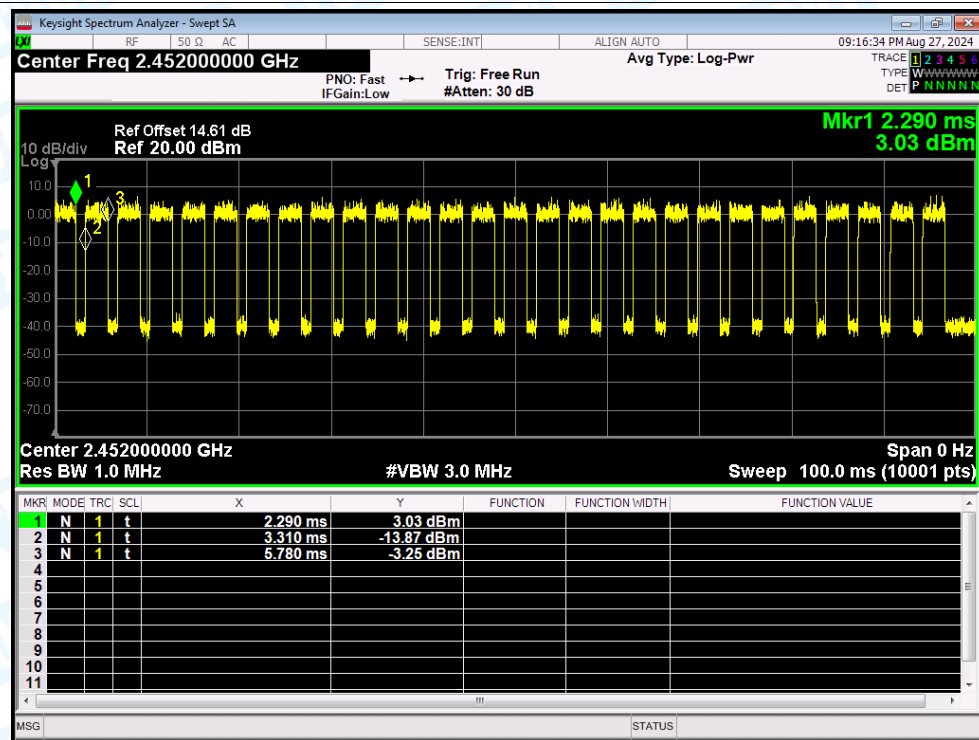
Duty Cycle NVNT n(HT40) 2422MHz Ant2



Duty Cycle NVNT n(HT40) 2437MHz Ant2



Duty Cycle NVNT n(HT40) 2452MHz Ant2



## 2.Maximum Conducted Output Power

| Condition | Mode      | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|-----------|-----------------|---------|-----------------------|-------------|---------|
| NVNT      | ax(VHT20) | 2412            | Ant2    | 15.12                 | 30          | Pass    |
| NVNT      | ax(VHT20) | 2437            | Ant2    | 14.57                 | 30          | Pass    |
| NVNT      | ax(VHT20) | 2462            | Ant2    | 14.88                 | 30          | Pass    |
| NVNT      | ax(VHT40) | 2422            | Ant2    | 13.77                 | 30          | Pass    |
| NVNT      | ax(VHT40) | 2437            | Ant2    | 13.38                 | 30          | Pass    |
| NVNT      | ax(VHT40) | 2452            | Ant2    | 13.97                 | 30          | Pass    |
| NVNT      | b         | 2412            | Ant2    | 14.32                 | 30          | Pass    |
| NVNT      | b         | 2437            | Ant2    | 14.62                 | 30          | Pass    |
| NVNT      | b         | 2462            | Ant2    | 13.35                 | 30          | Pass    |
| NVNT      | g         | 2412            | Ant2    | 14.09                 | 30          | Pass    |
| NVNT      | g         | 2437            | Ant2    | 13.42                 | 30          | Pass    |
| NVNT      | g         | 2462            | Ant2    | 14.99                 | 30          | Pass    |
| NVNT      | n(HT20)   | 2412            | Ant2    | 13.58                 | 30          | Pass    |
| NVNT      | n(HT20)   | 2437            | Ant2    | 14.54                 | 30          | Pass    |
| NVNT      | n(HT20)   | 2462            | Ant2    | 13.77                 | 30          | Pass    |
| NVNT      | n(HT40)   | 2422            | Ant2    | 15.41                 | 30          | Pass    |
| NVNT      | n(HT40)   | 2437            | Ant2    | 15.07                 | 30          | Pass    |
| NVNT      | n(HT40)   | 2452            | Ant2    | 14.64                 | 30          | Pass    |

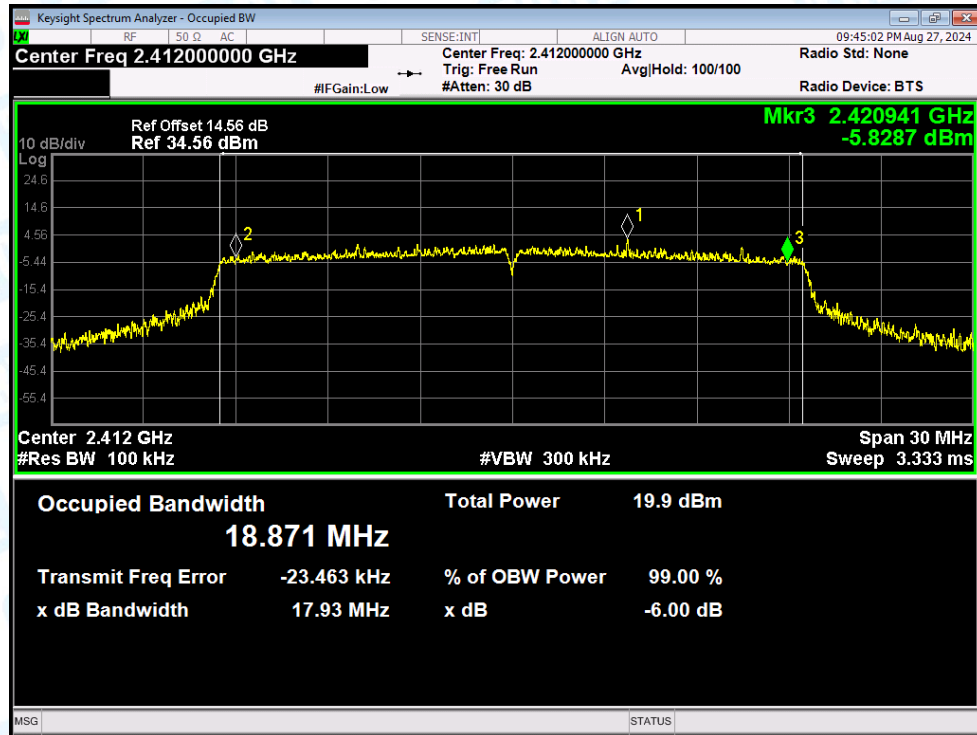
Note: The duty factor has been compensated into the result.

### 3.-6dB Bandwidth

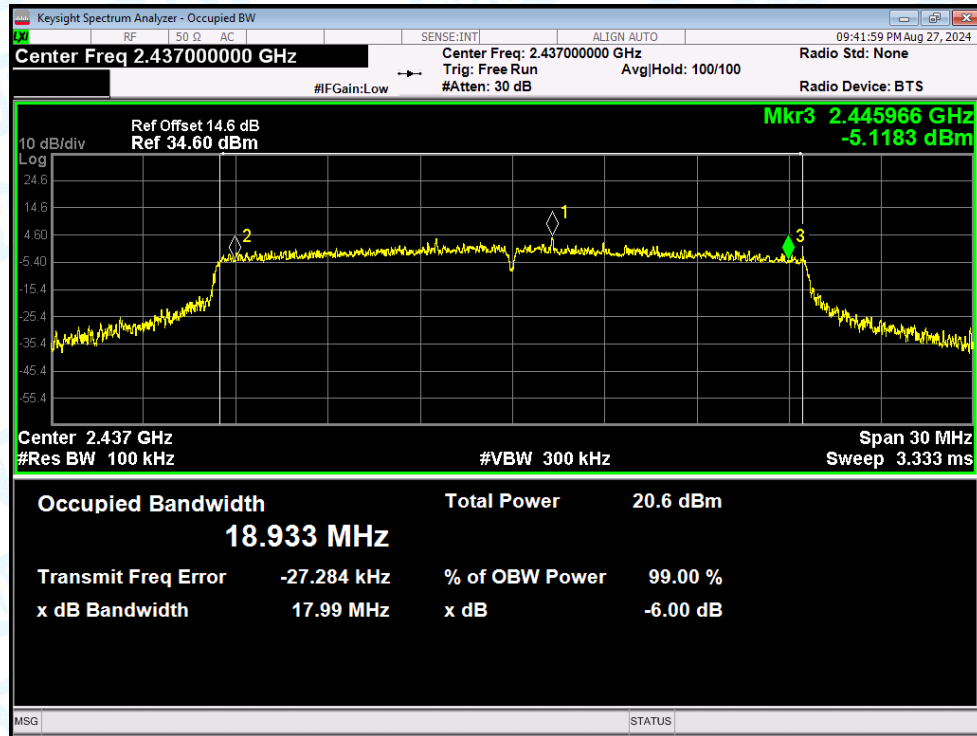
| Condition | Mode      | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|-----------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | ax(VHT20) | 2412            | Ant2    | 17.93                 | 0.5                         | Pass    |
| NVNT      | ax(VHT20) | 2437            | Ant2    | 17.99                 | 0.5                         | Pass    |
| NVNT      | ax(VHT20) | 2462            | Ant2    | 18.25                 | 0.5                         | Pass    |
| NVNT      | ax(VHT40) | 2422            | Ant2    | 36.26                 | 0.5                         | Pass    |
| NVNT      | ax(VHT40) | 2437            | Ant2    | 36.06                 | 0.5                         | Pass    |
| NVNT      | ax(VHT40) | 2452            | Ant2    | 35.44                 | 0.5                         | Pass    |
| NVNT      | b         | 2412            | Ant2    | 7.11                  | 0.5                         | Pass    |
| NVNT      | b         | 2437            | Ant2    | 7.05                  | 0.5                         | Pass    |
| NVNT      | b         | 2462            | Ant2    | 7.05                  | 0.5                         | Pass    |
| NVNT      | g         | 2412            | Ant2    | 14.23                 | 0.5                         | Pass    |
| NVNT      | g         | 2437            | Ant2    | 15.82                 | 0.5                         | Pass    |
| NVNT      | g         | 2462            | Ant2    | 14.79                 | 0.5                         | Pass    |
| NVNT      | n(HT20)   | 2412            | Ant2    | 17.62                 | 0.5                         | Pass    |
| NVNT      | n(HT20)   | 2437            | Ant2    | 17.61                 | 0.5                         | Pass    |
| NVNT      | n(HT20)   | 2462            | Ant2    | 17.16                 | 0.5                         | Pass    |
| NVNT      | n(HT40)   | 2422            | Ant2    | 34.62                 | 0.5                         | Pass    |
| NVNT      | n(HT40)   | 2437            | Ant2    | 31.95                 | 0.5                         | Pass    |
| NVNT      | n(HT40)   | 2452            | Ant2    | 33.81                 | 0.5                         | Pass    |

# Test Graphs

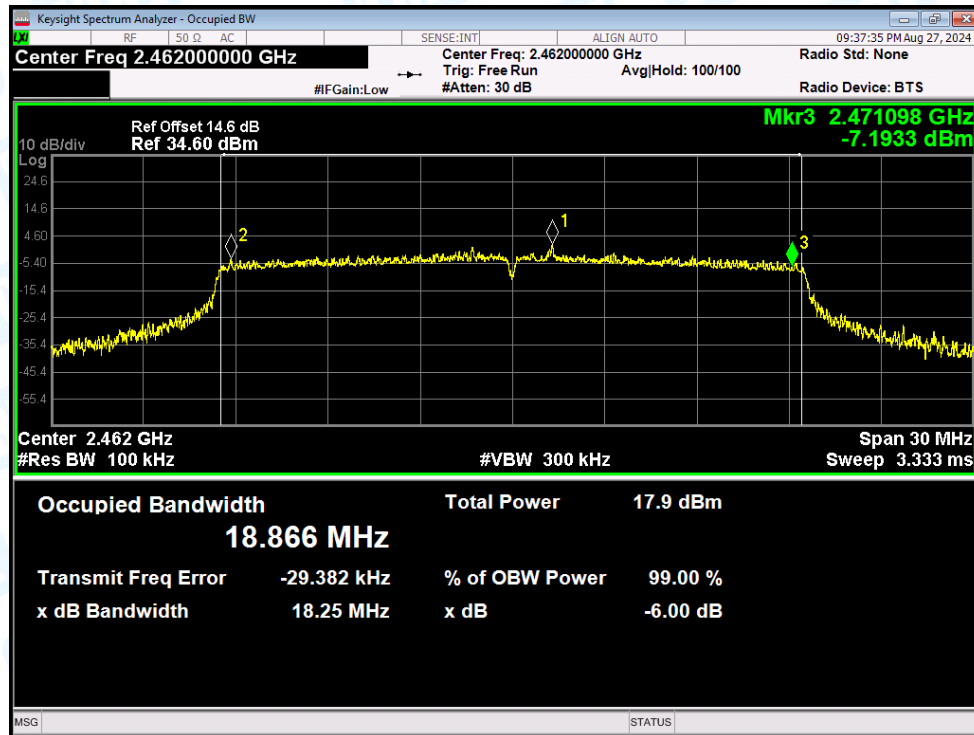
-6dB Bandwidth NVNT ax(VHT20) 2412MHz Ant2



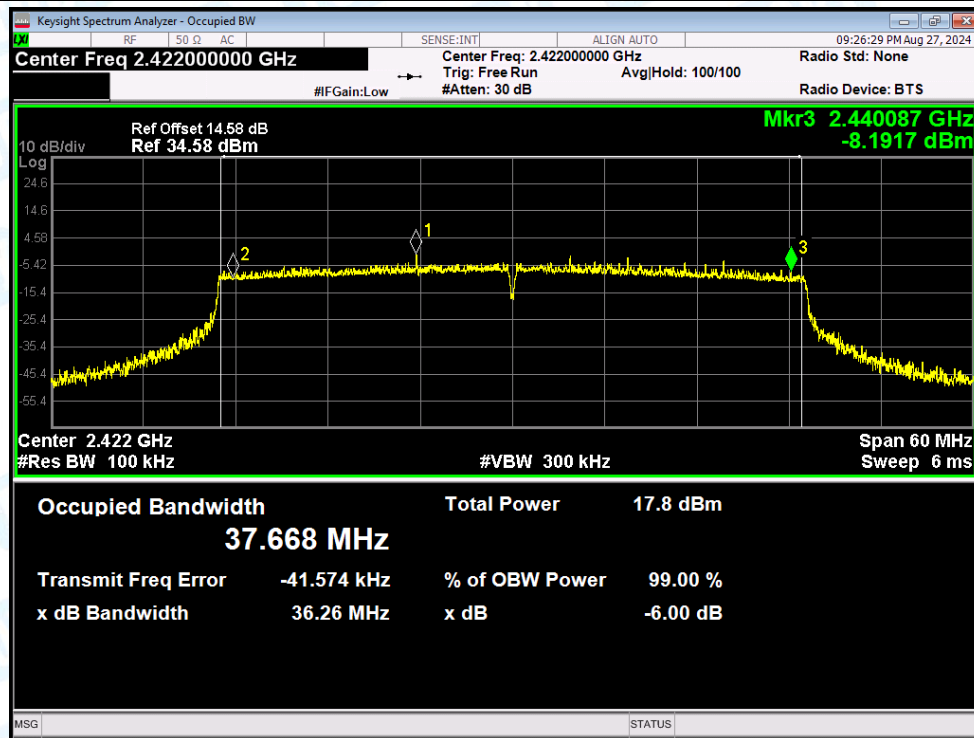
-6dB Bandwidth NVNT ax(VHT20) 2437MHz Ant2



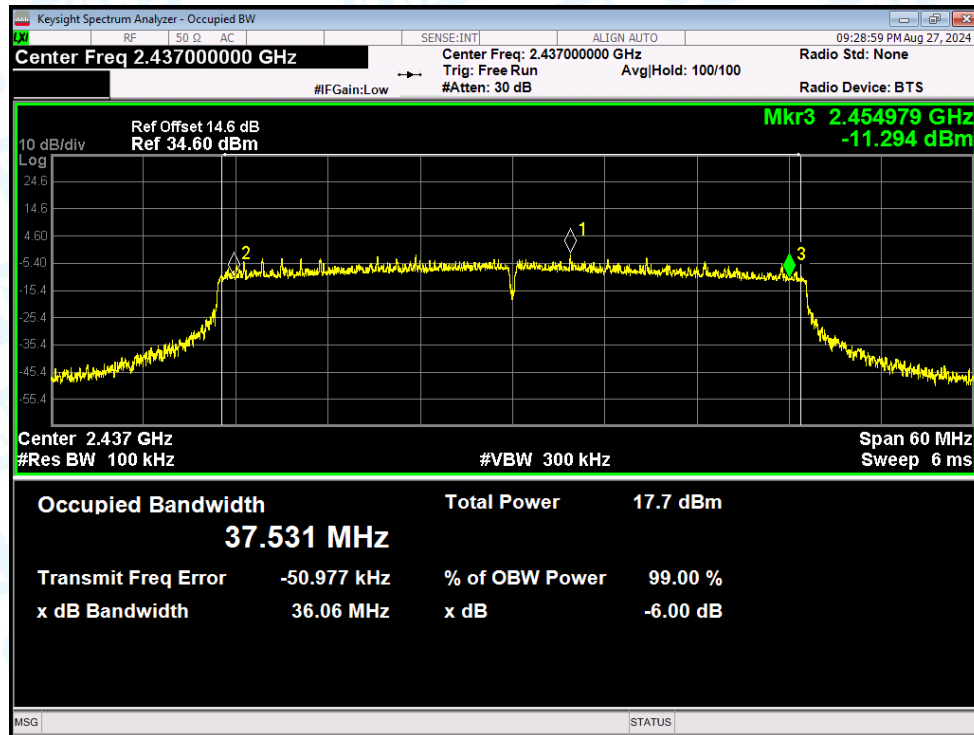
-6dB Bandwidth NVNT ax(VHT20) 2462MHz Ant2



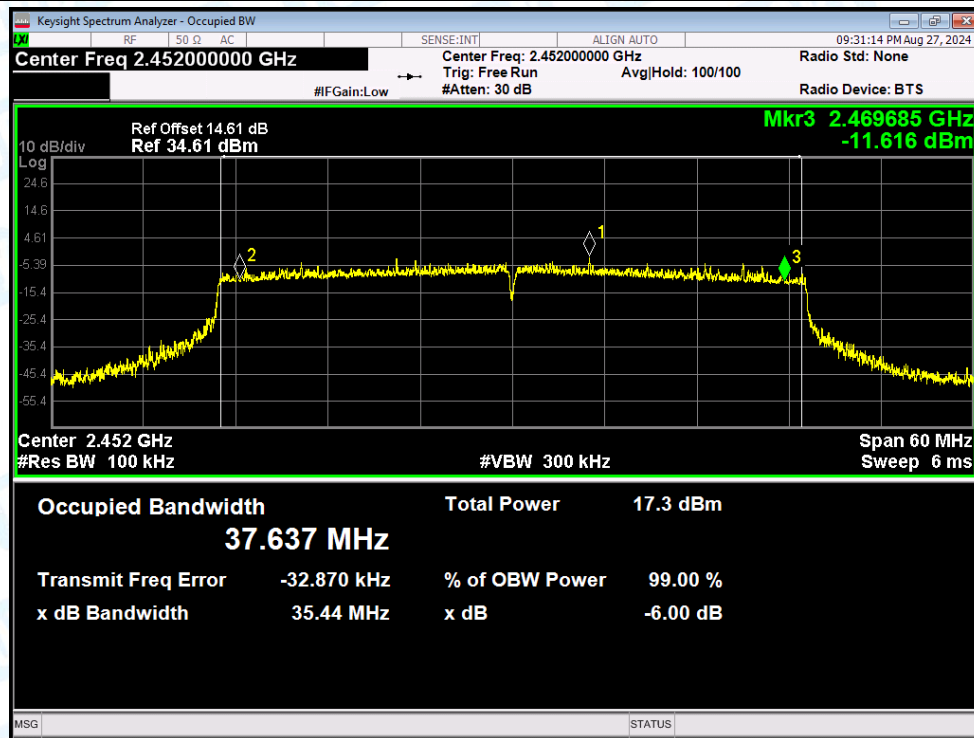
-6dB Bandwidth NVNT ax(VHT40) 2422MHz Ant2



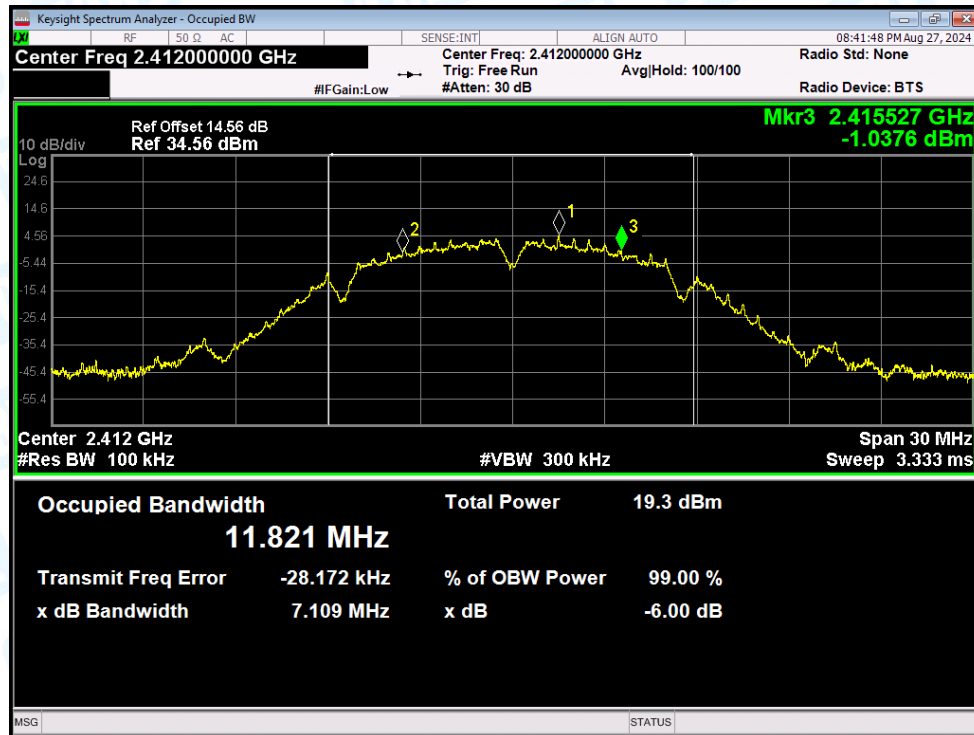
-6dB Bandwidth NVNT ax(VHT40) 2437MHz Ant2



-6dB Bandwidth NVNT ax(VHT40) 2452MHz Ant2



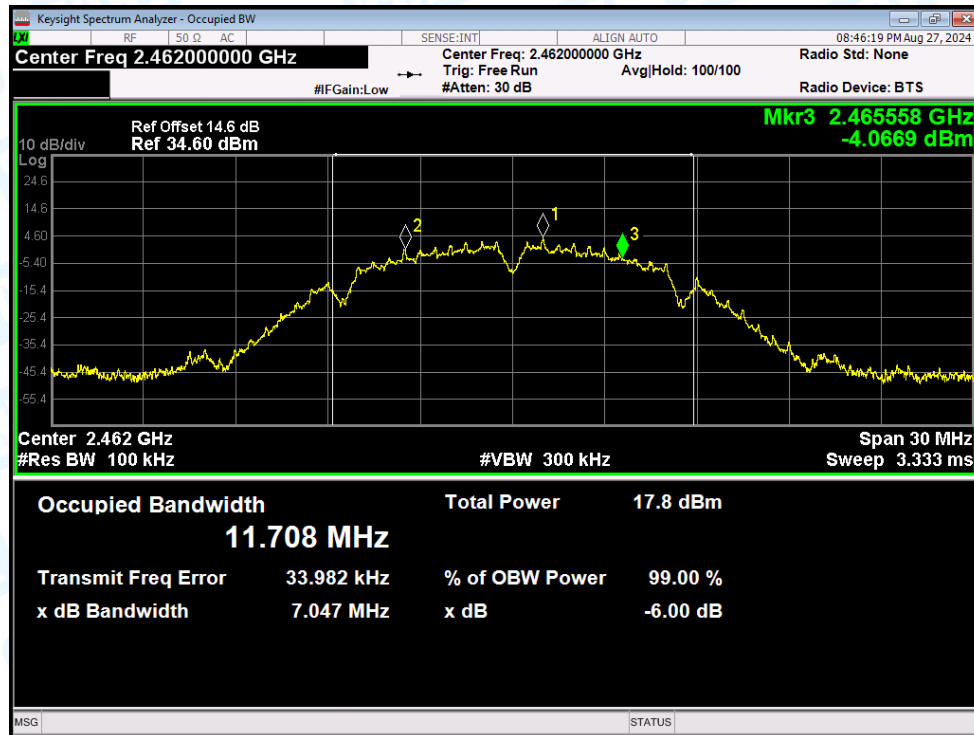
-6dB Bandwidth NVNT b 2412MHz Ant2



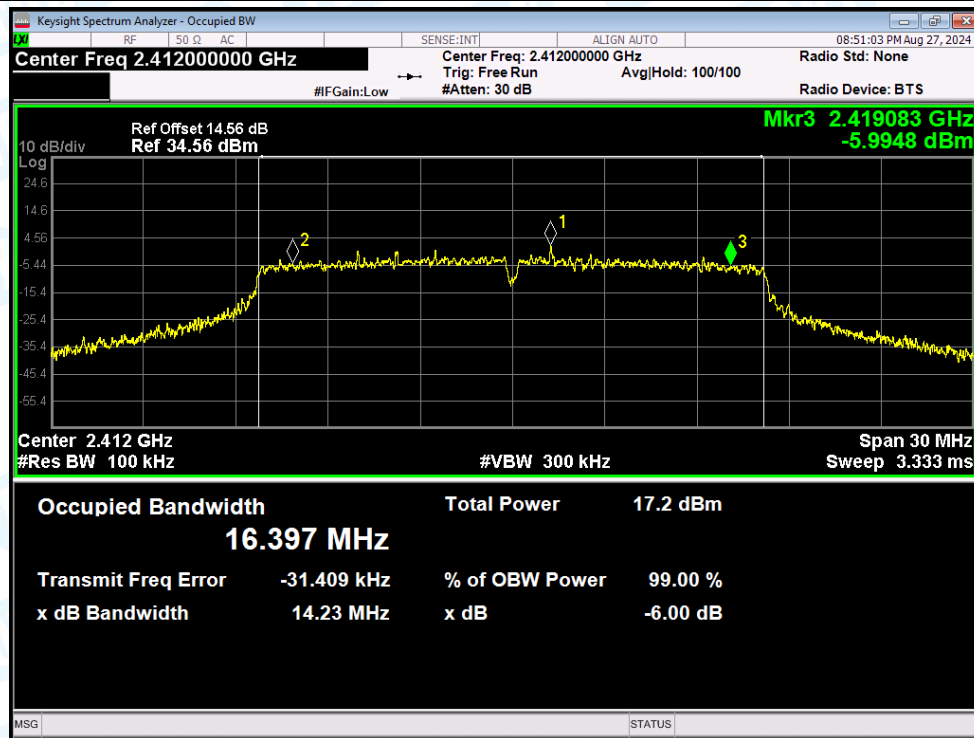
-6dB Bandwidth NVNT b 2437MHz Ant2



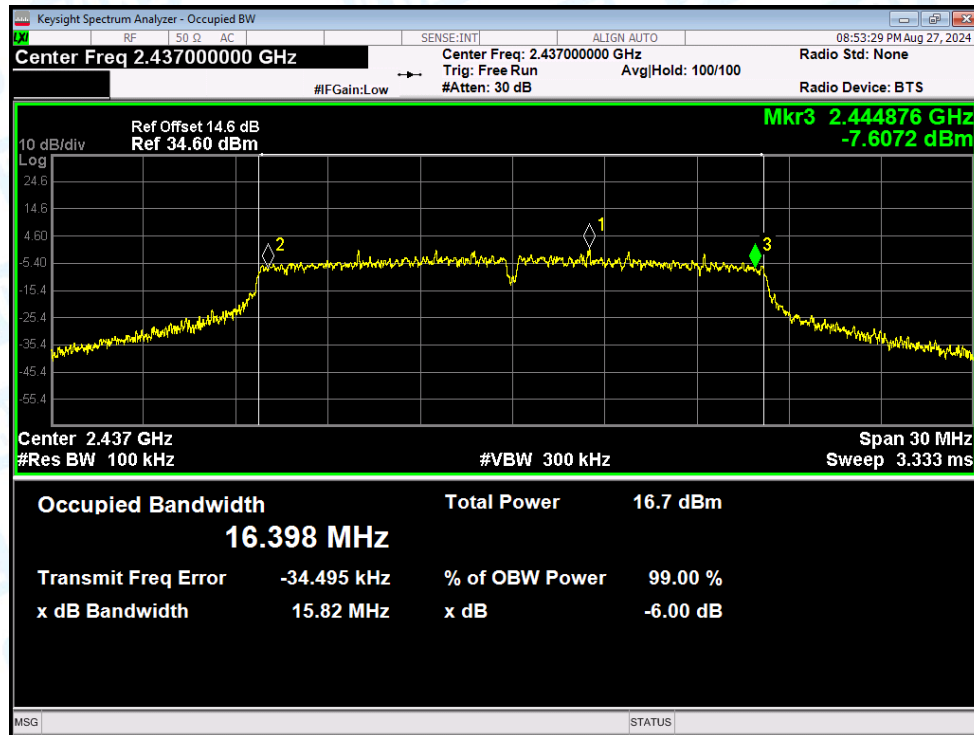
-6dB Bandwidth NVNT b 2462MHz Ant2



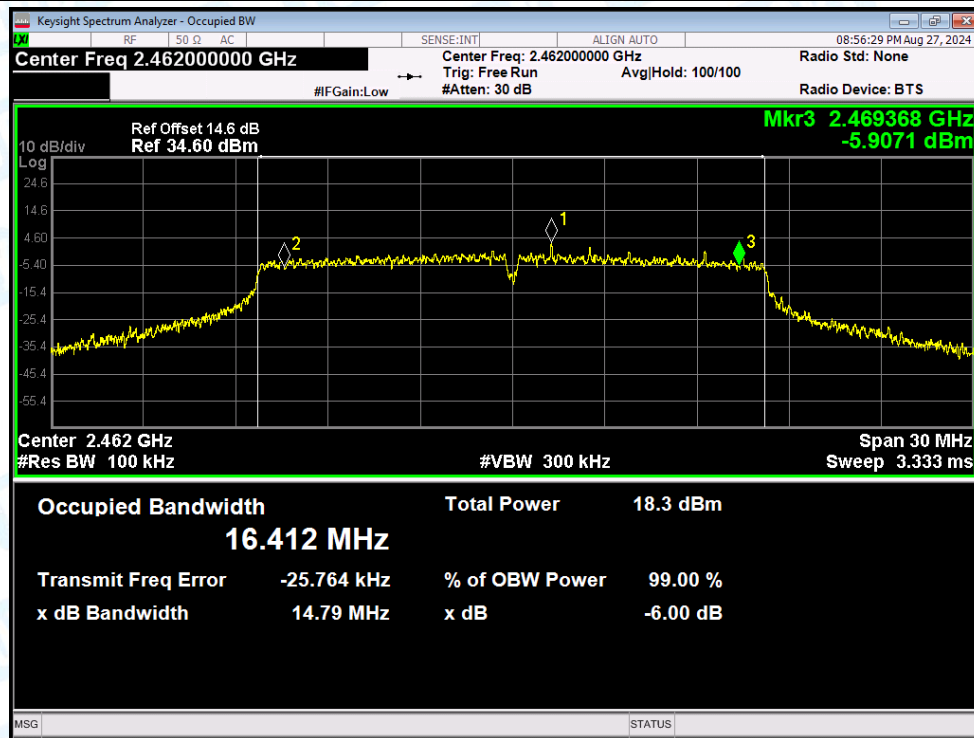
-6dB Bandwidth NVNT g 2412MHz Ant2



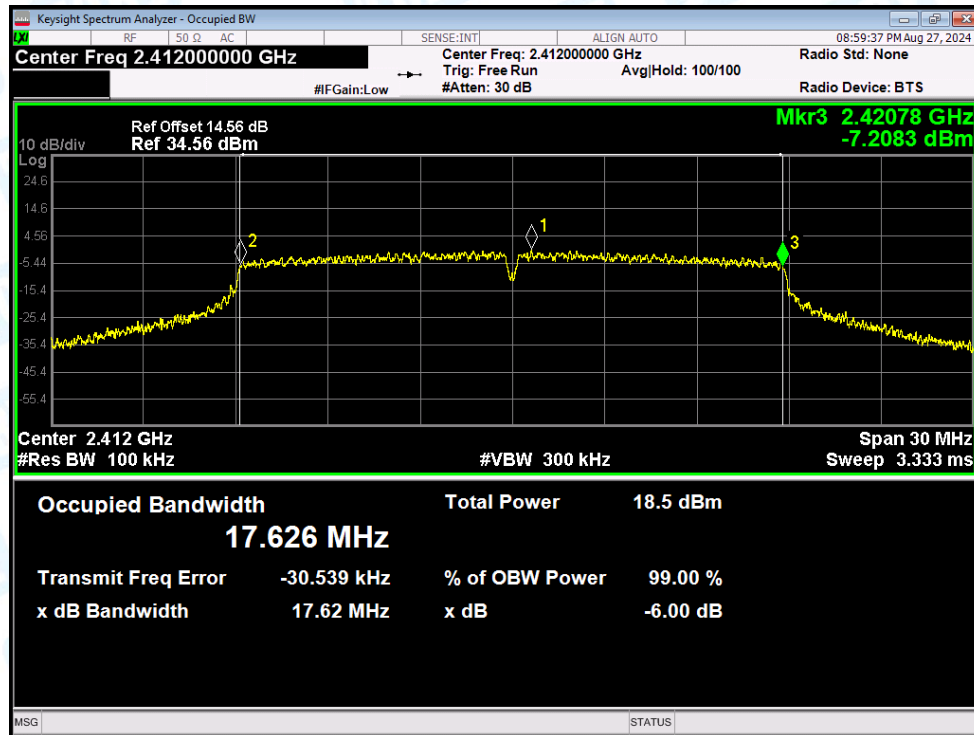
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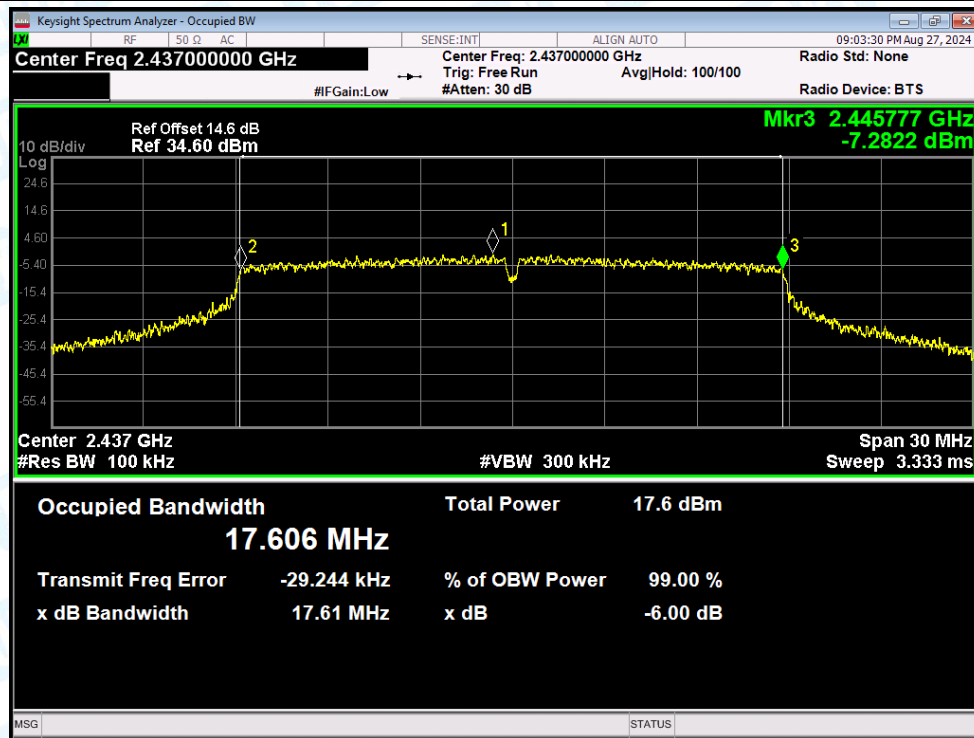
-6dB Bandwidth NVNT g 2462MHz Ant2



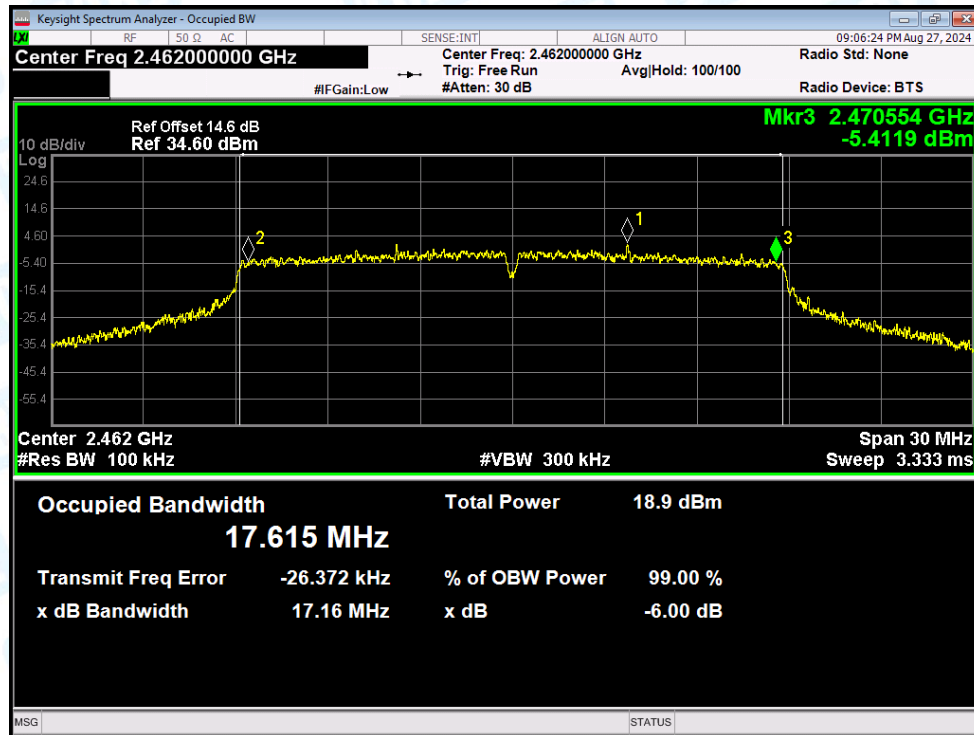
-6dB Bandwidth NVNT n(HT20) 2412MHz Ant2



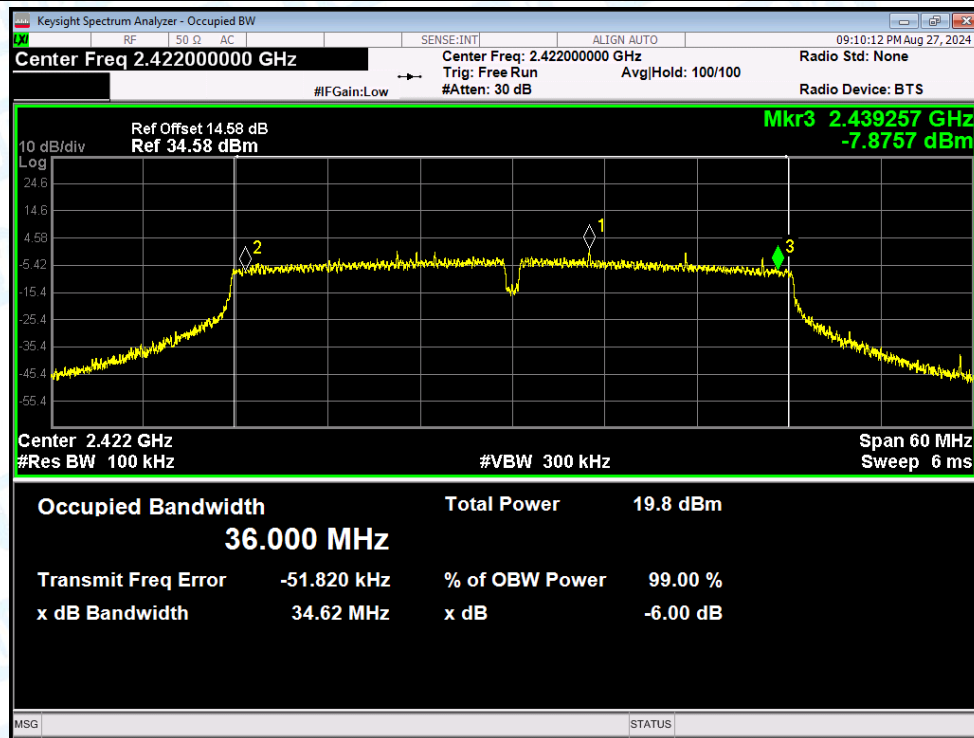
-6dB Bandwidth NVNT n(HT20) 2437MHz Ant2



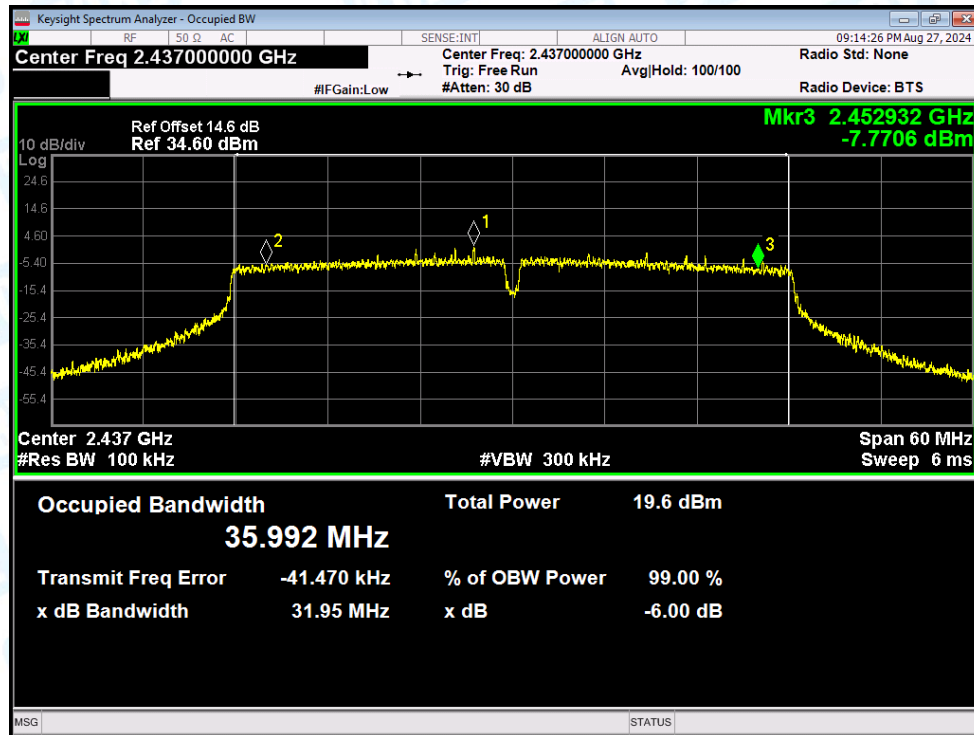
-6dB Bandwidth NVNT n(HT20) 2462MHz Ant2



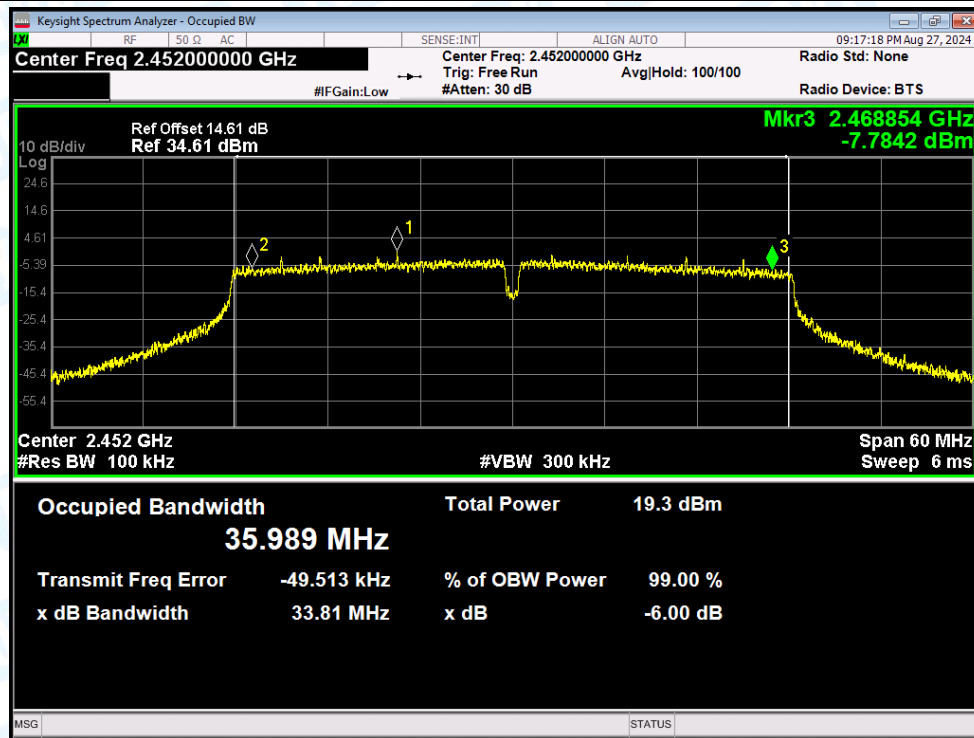
-6dB Bandwidth NVNT n(HT40) 2422MHz Ant2



-6dB Bandwidth NVNT n(HT40) 2437MHz Ant2



-6dB Bandwidth NVNT n(HT40) 2452MHz Ant2

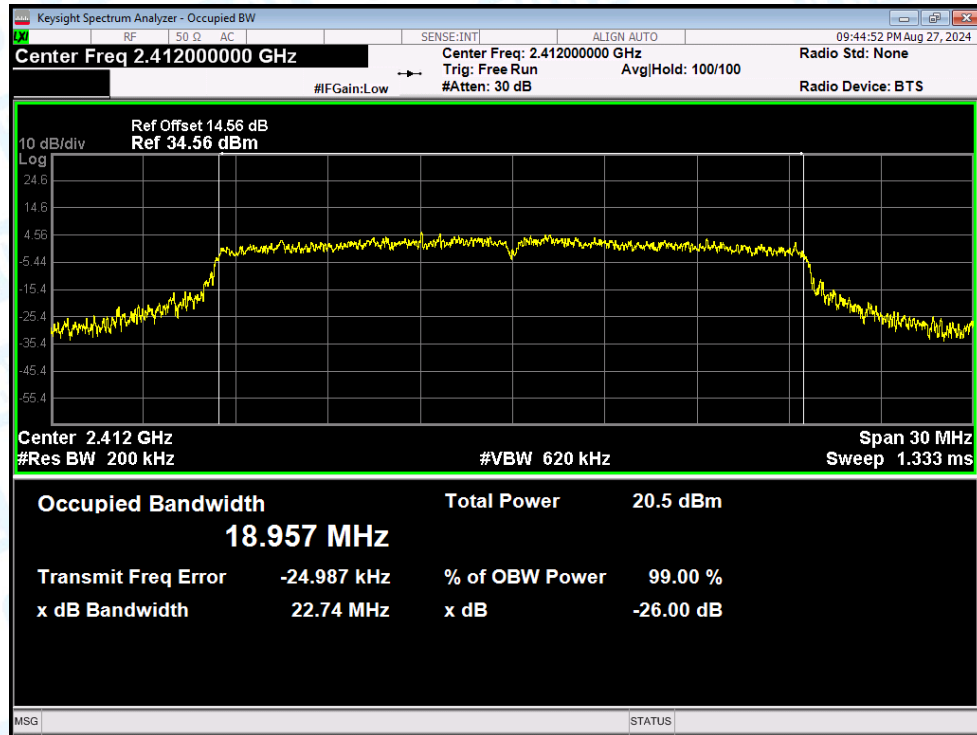


## 4.Occupied Channel Bandwidth

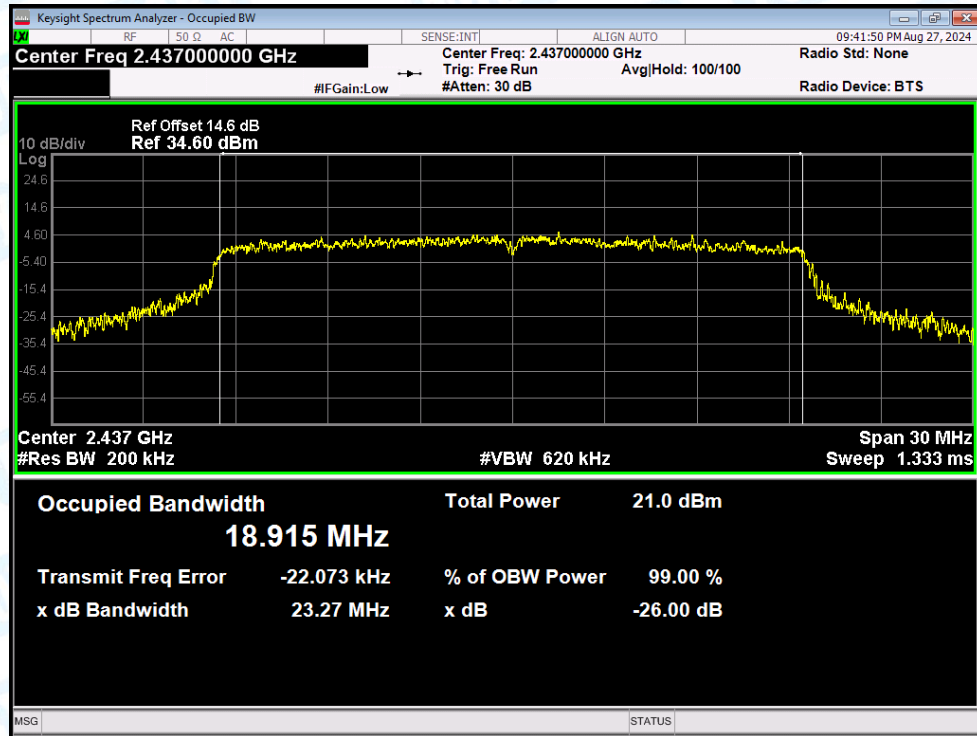
| Condition | Mode      | Frequency (MHz) | Antenna | 99% OBW (MHz) |
|-----------|-----------|-----------------|---------|---------------|
| NVNT      | ax(VHT20) | 2412            | Ant2    | 18.957        |
| NVNT      | ax(VHT20) | 2437            | Ant2    | 18.915        |
| NVNT      | ax(VHT20) | 2462            | Ant2    | 18.929        |
| NVNT      | ax(VHT40) | 2422            | Ant2    | 37.74         |
| NVNT      | ax(VHT40) | 2437            | Ant2    | 37.665        |
| NVNT      | ax(VHT40) | 2452            | Ant2    | 37.656        |
| NVNT      | b         | 2412            | Ant2    | 11.747        |
| NVNT      | b         | 2437            | Ant2    | 11.863        |
| NVNT      | b         | 2462            | Ant2    | 11.612        |
| NVNT      | g         | 2412            | Ant2    | 16.516        |
| NVNT      | g         | 2437            | Ant2    | 16.493        |
| NVNT      | g         | 2462            | Ant2    | 16.541        |
| NVNT      | n(HT20)   | 2412            | Ant2    | 17.745        |
| NVNT      | n(HT20)   | 2437            | Ant2    | 17.731        |
| NVNT      | n(HT20)   | 2462            | Ant2    | 17.748        |
| NVNT      | n(HT40)   | 2422            | Ant2    | 36.183        |
| NVNT      | n(HT40)   | 2437            | Ant2    | 36.135        |
| NVNT      | n(HT40)   | 2452            | Ant2    | 36.181        |

### Test Graphs

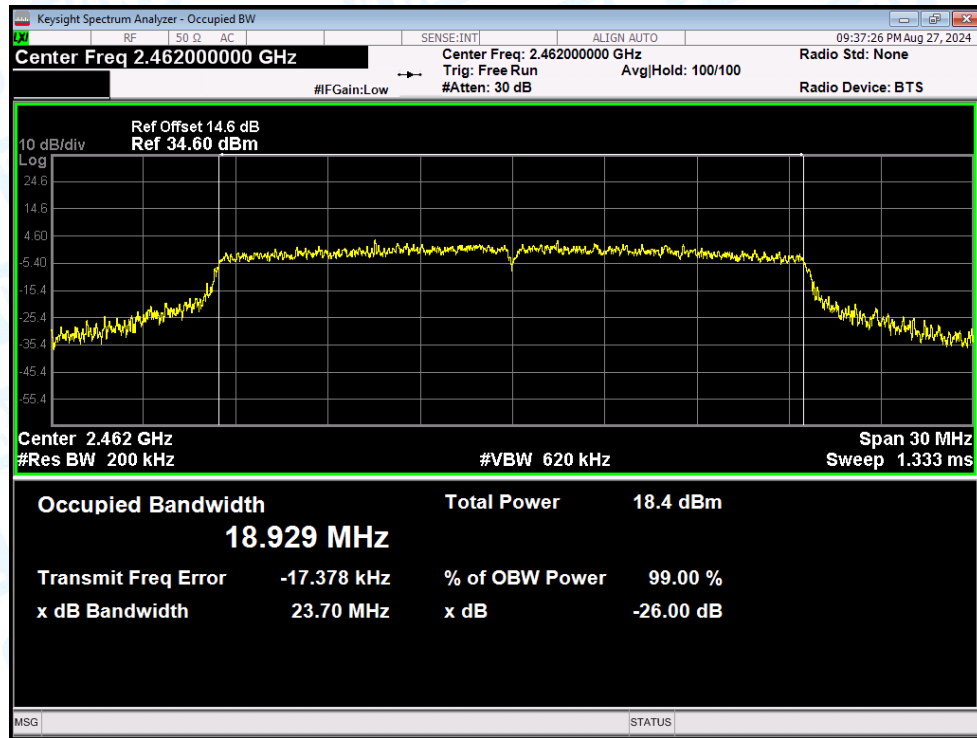
#### OBW NVNT ax(VHT20) 2412MHz Ant2



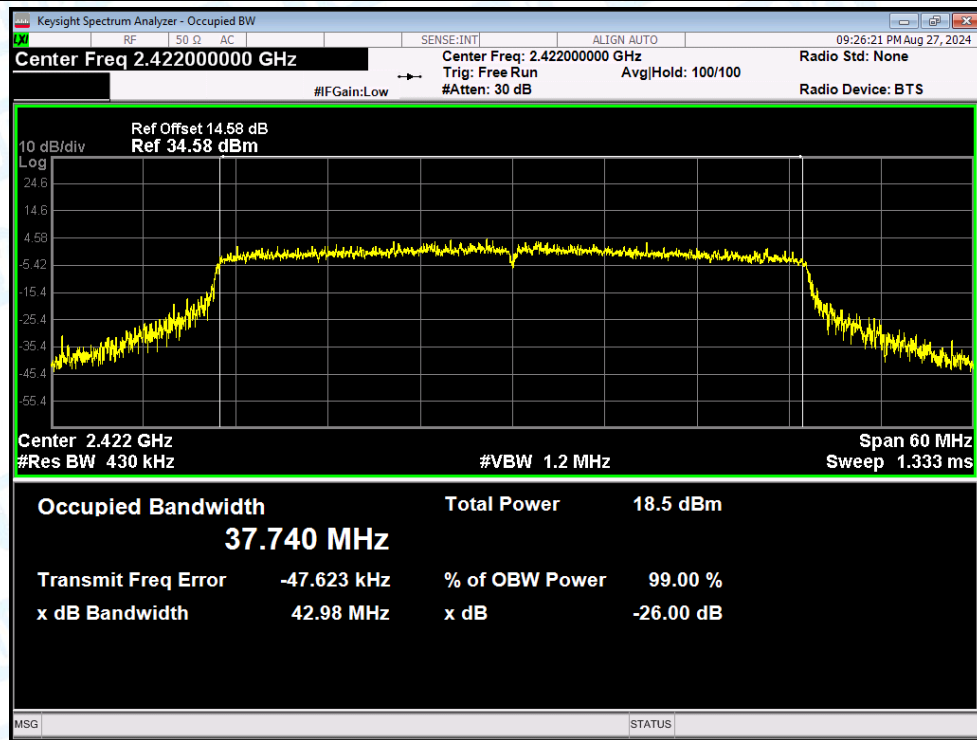
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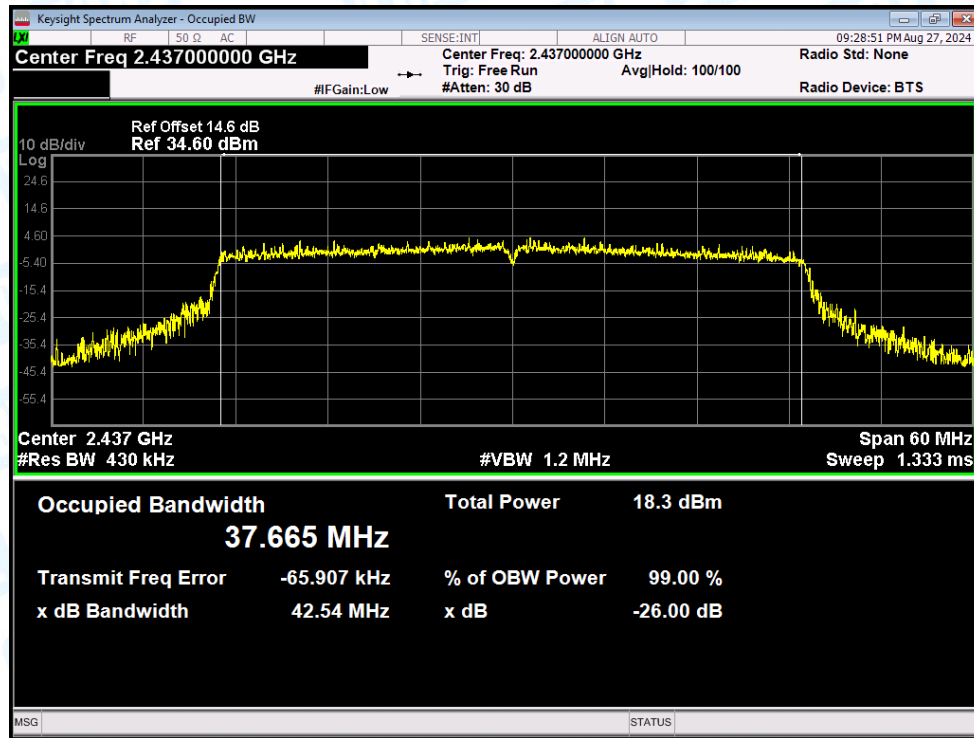
OBW NVNT ax(VHT20) 2462MHz Ant2



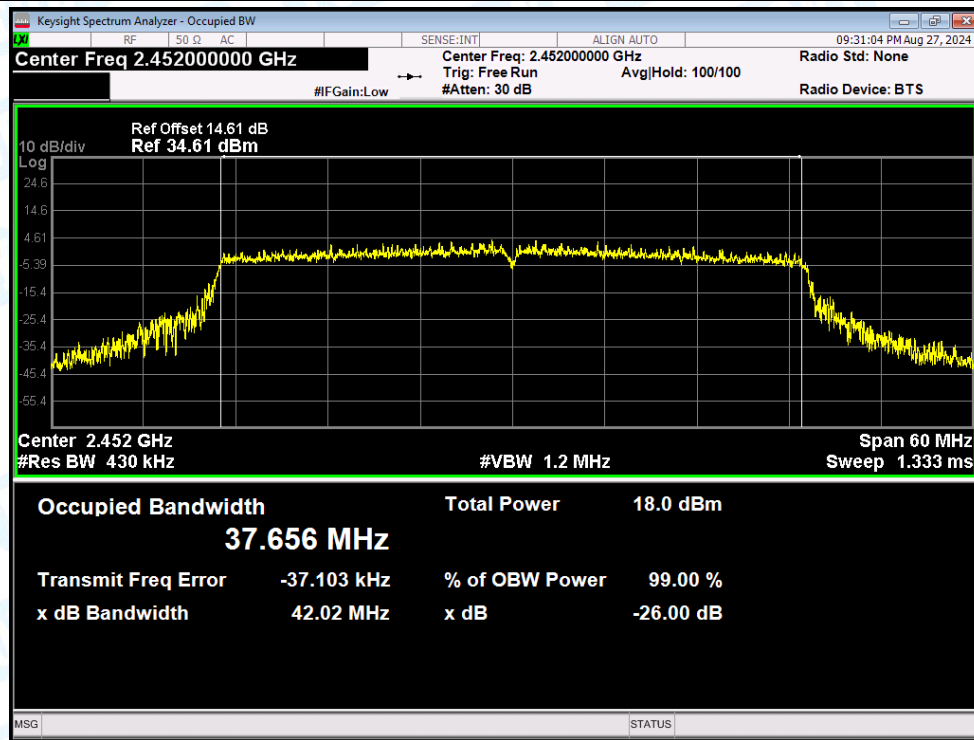
OBW NVNT ax(VHT40) 2422MHz Ant2

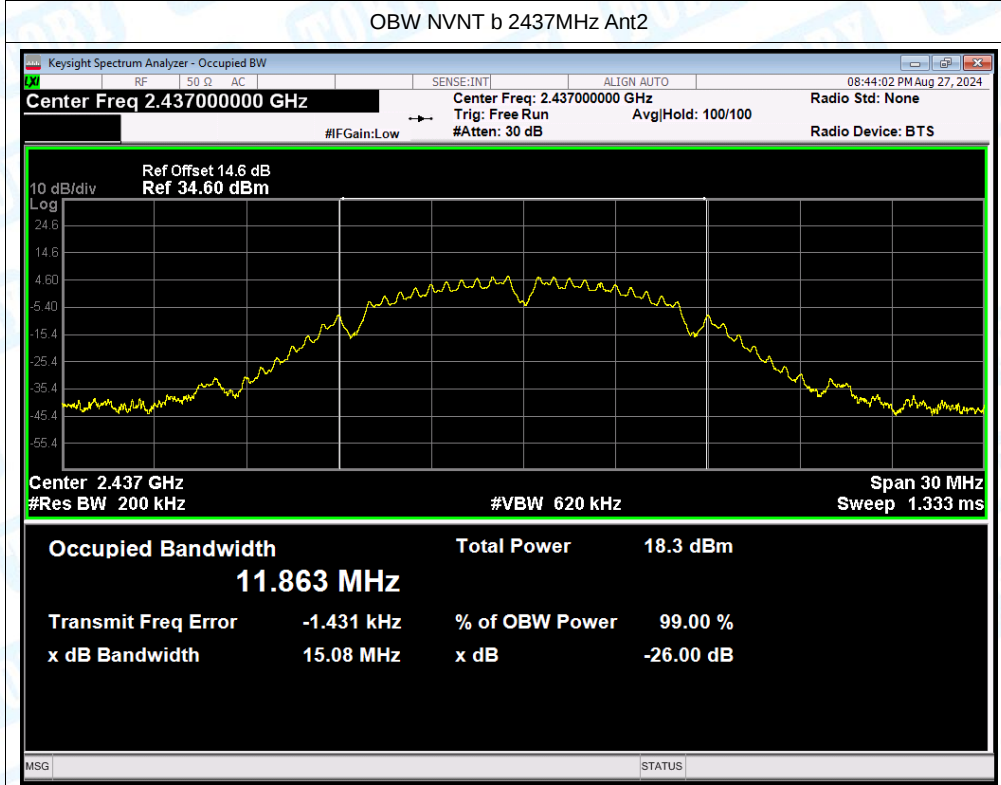
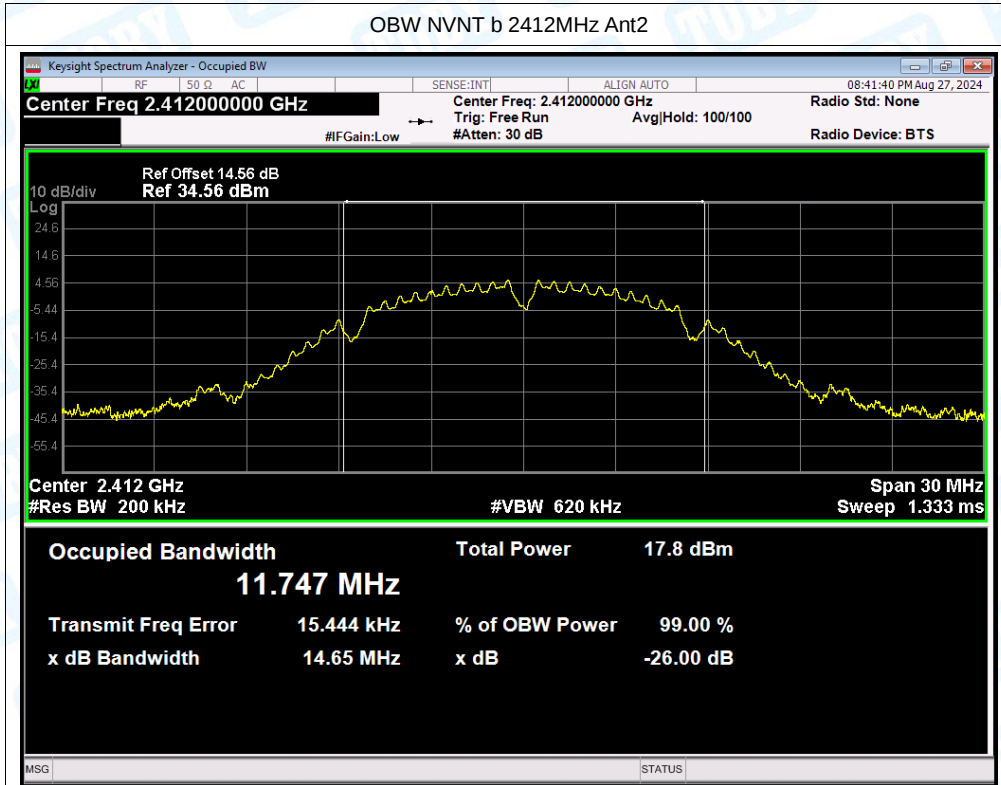


OBW NVNT ax(VHT40) 2437MHz Ant2

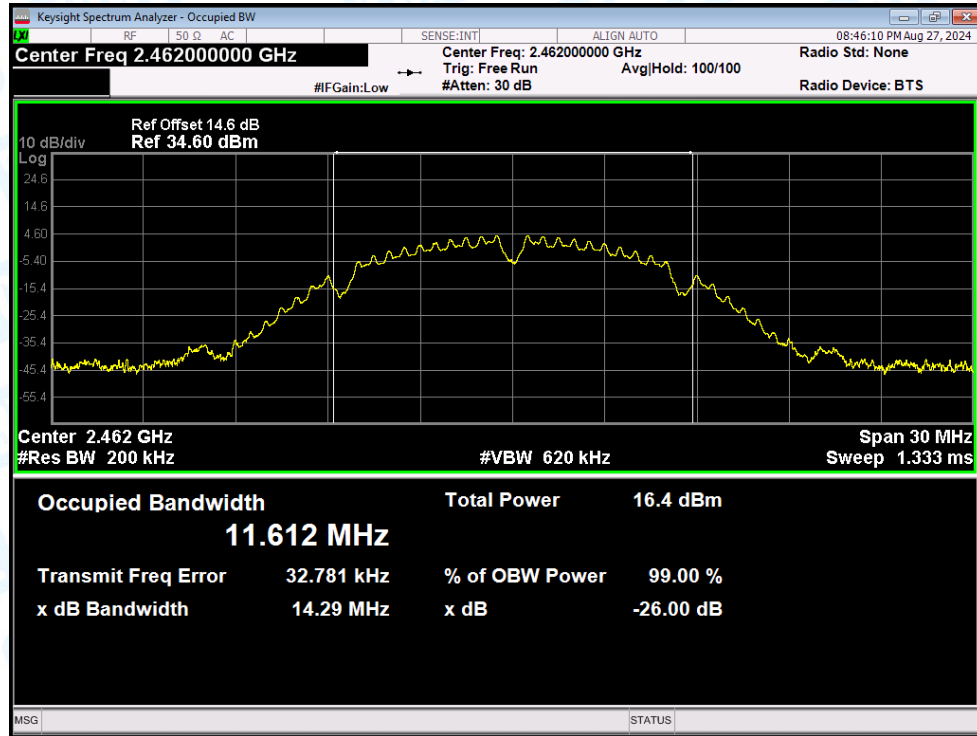


OBW NVNT ax(VHT40) 2452MHz Ant2

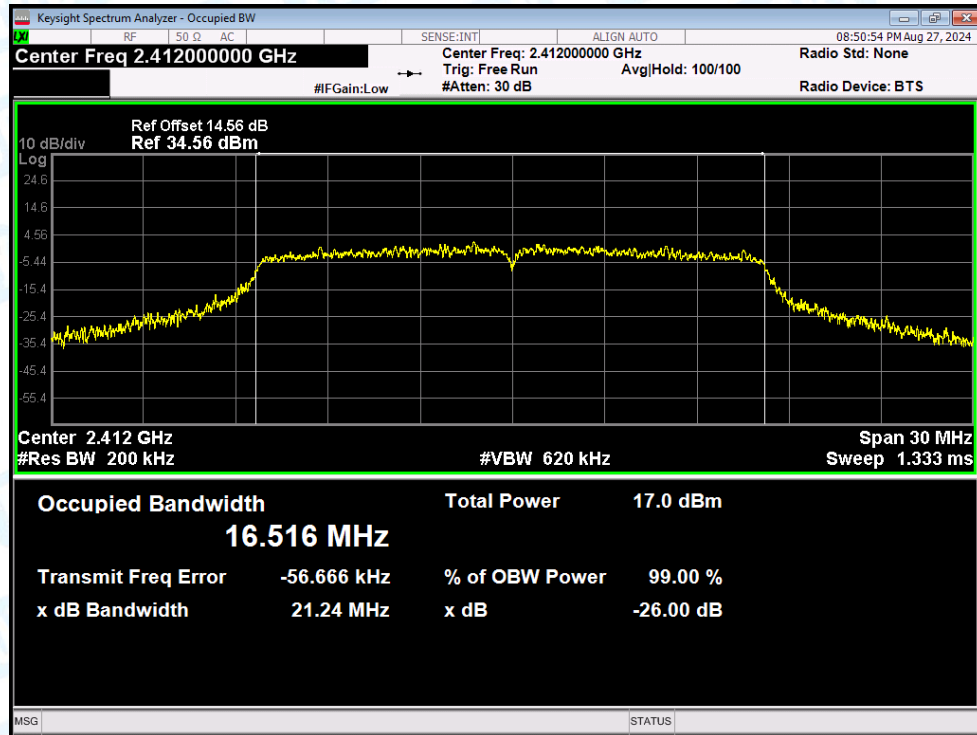




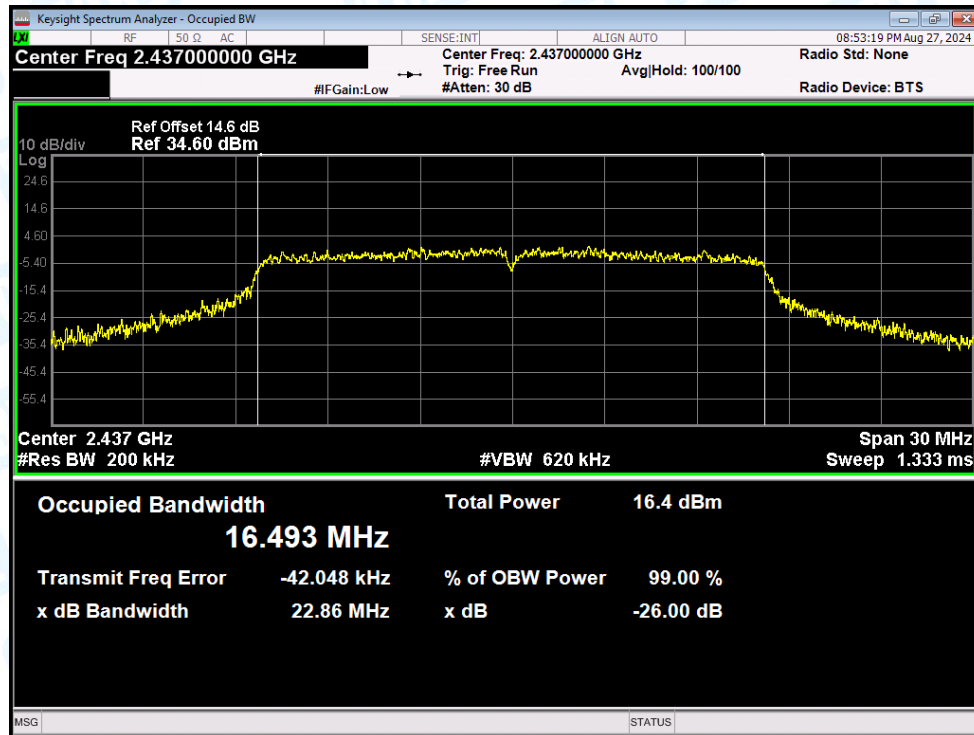
OBW NVNT b 2462MHz Ant2



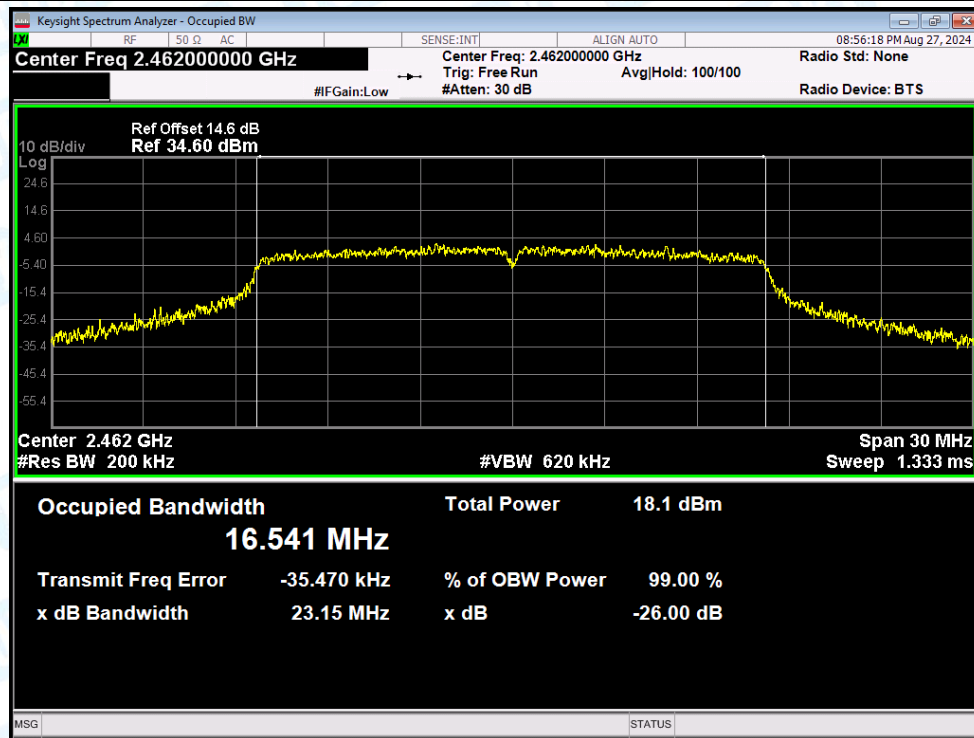
OBW NVNT g 2412MHz Ant2



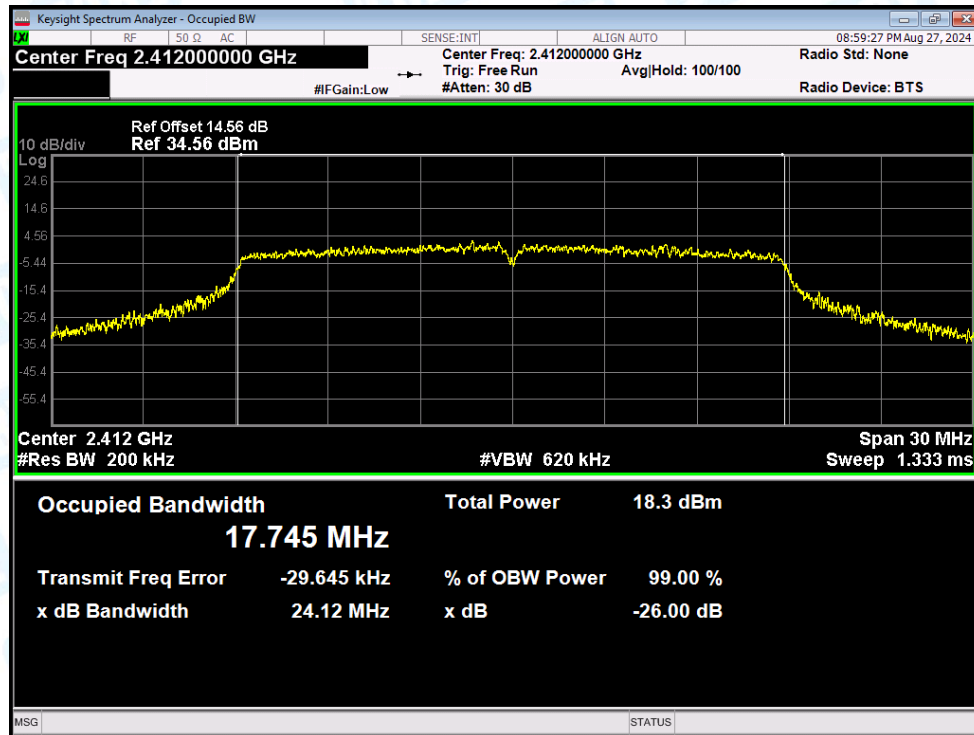
OBW NVNT g 2437MHz Ant2



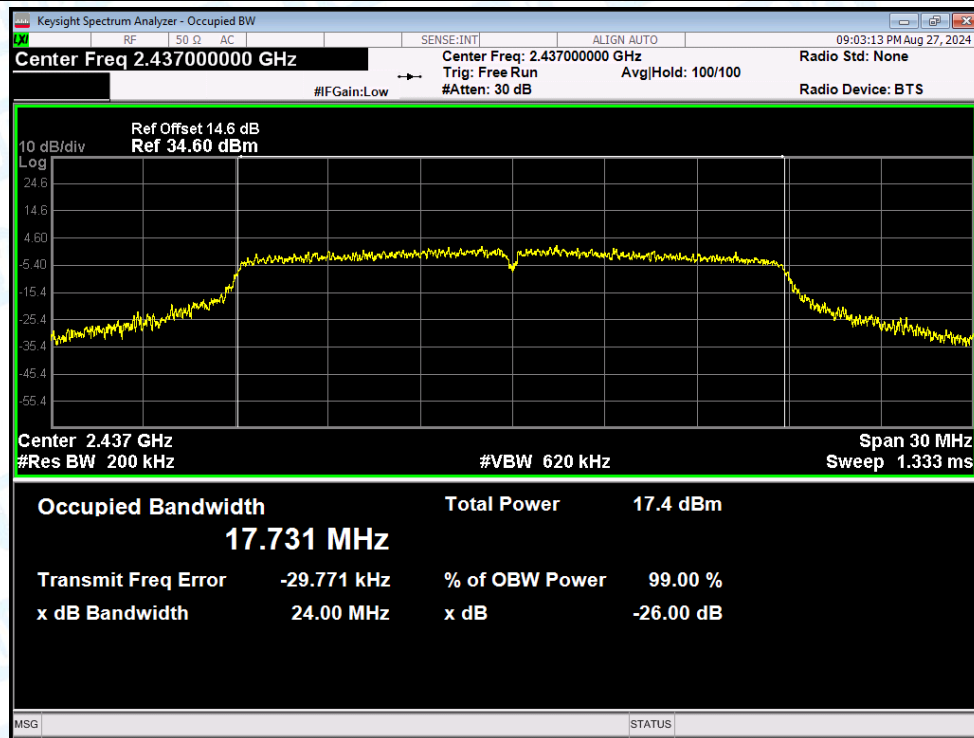
OBW NVNT g 2462MHz Ant2



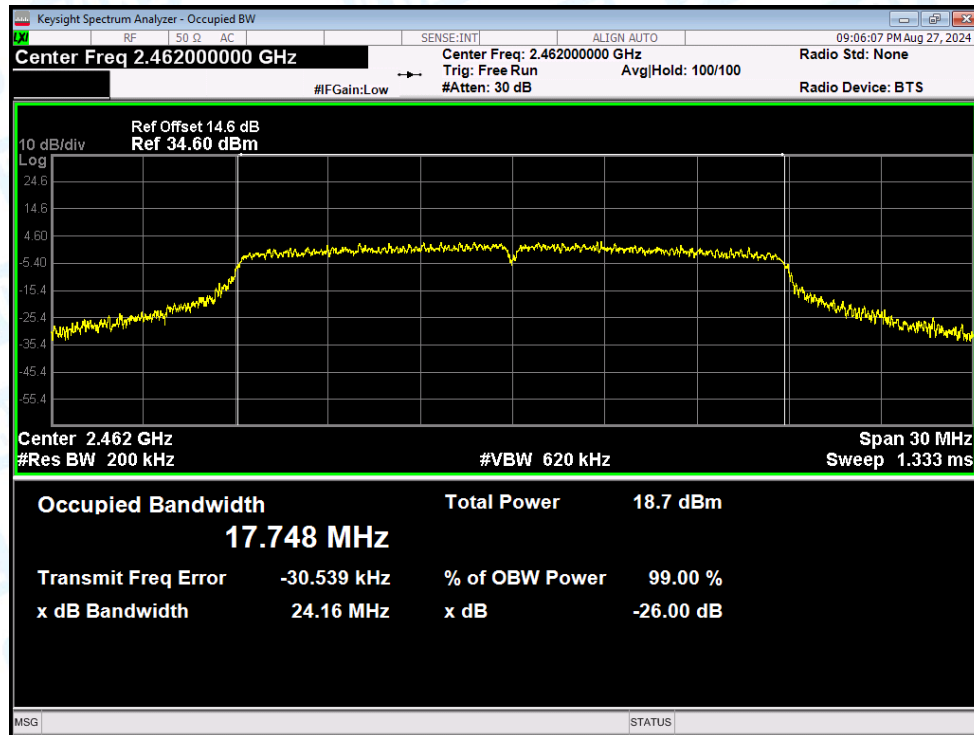
OBW NVNT n(HT20) 2412MHz Ant2



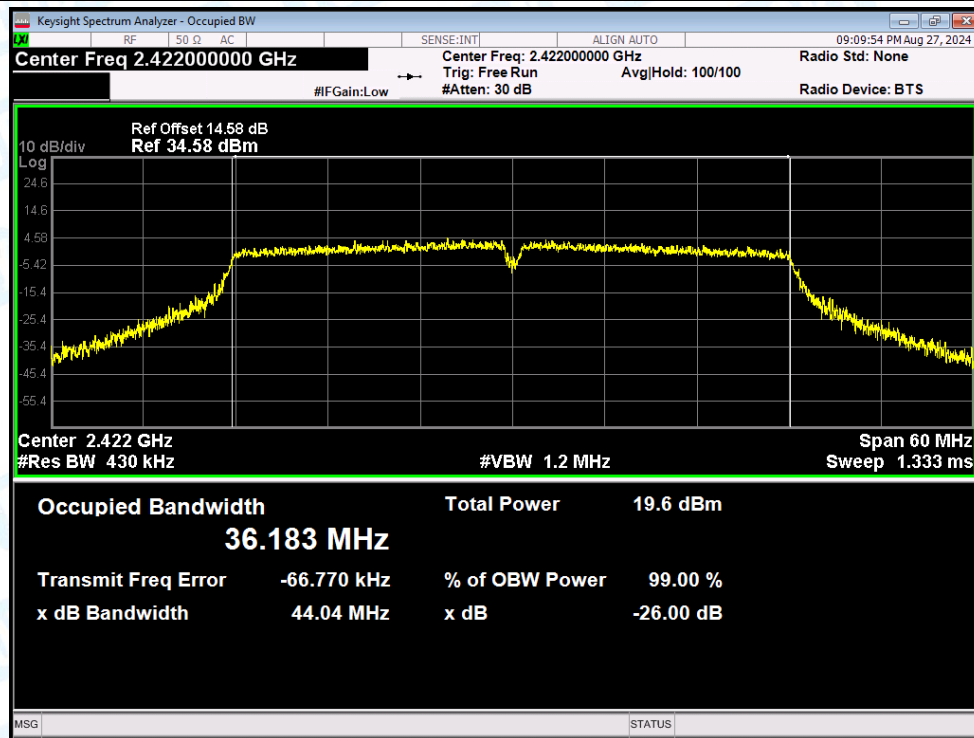
OBW NVNT n(HT20) 2437MHz Ant2



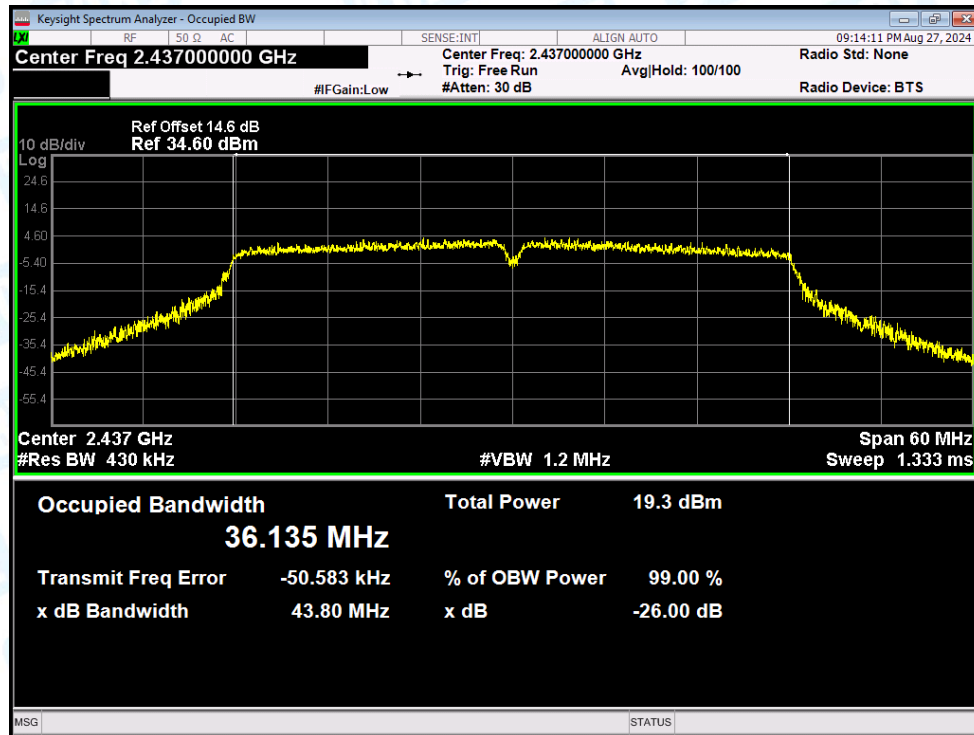
OBW NVNT n(HT20) 2462MHz Ant2



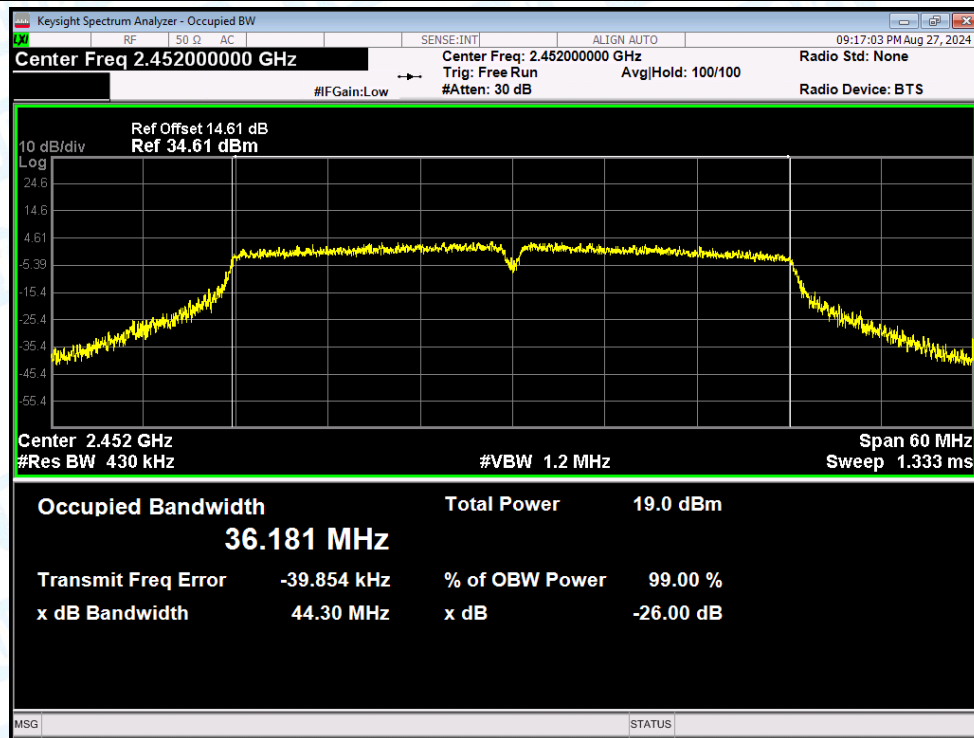
OBW NVNT n(HT40) 2422MHz Ant2



OBW NVNT n(HT40) 2437MHz Ant2



OBW NVNT n(HT40) 2452MHz Ant2



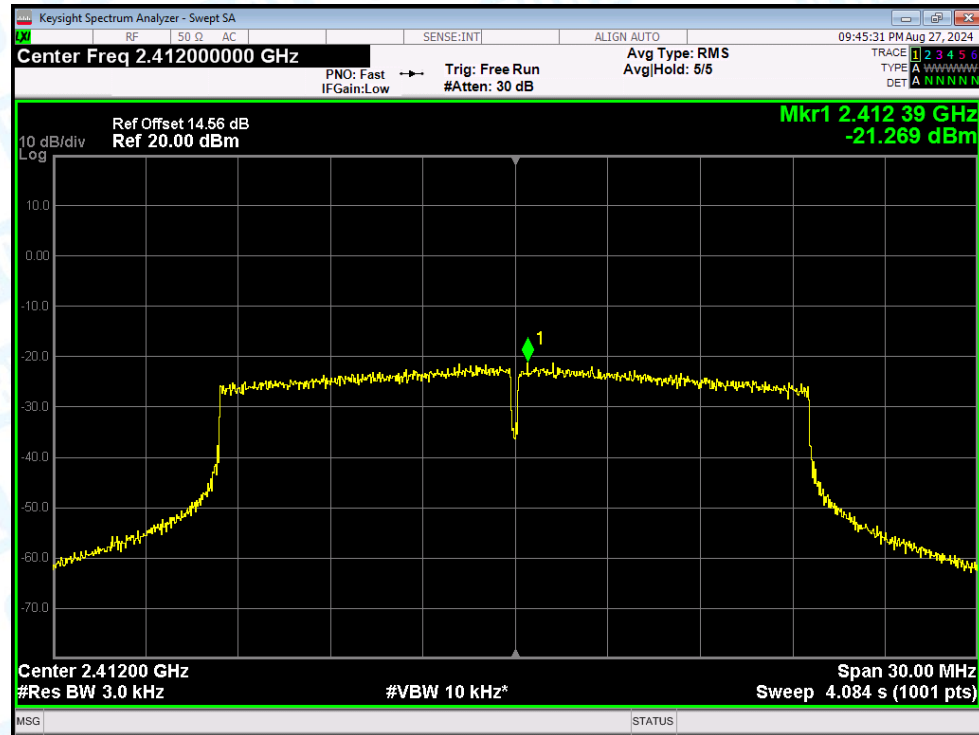
## 5. Maximum Power Spectral Density Level

| Condition | Mode      | Frequency (MHz) | Antenna | Max PSD (dBm) | Limit (dBm) | Verdict |
|-----------|-----------|-----------------|---------|---------------|-------------|---------|
| NVNT      | ax(VHT20) | 2412            | Ant2    | -21.269       | 8           | Pass    |
| NVNT      | ax(VHT20) | 2437            | Ant2    | -22.771       | 8           | Pass    |
| NVNT      | ax(VHT20) | 2462            | Ant2    | -21.878       | 8           | Pass    |
| NVNT      | ax(VHT40) | 2422            | Ant2    | -27.83        | 8           | Pass    |
| NVNT      | ax(VHT40) | 2437            | Ant2    | -27.953       | 8           | Pass    |
| NVNT      | ax(VHT40) | 2452            | Ant2    | -28.407       | 8           | Pass    |
| NVNT      | b         | 2412            | Ant2    | -18.44        | 8           | Pass    |
| NVNT      | b         | 2437            | Ant2    | -17.596       | 8           | Pass    |
| NVNT      | b         | 2462            | Ant2    | -20.309       | 8           | Pass    |
| NVNT      | g         | 2412            | Ant2    | -24.293       | 8           | Pass    |
| NVNT      | g         | 2437            | Ant2    | -24.877       | 8           | Pass    |
| NVNT      | g         | 2462            | Ant2    | -22.981       | 8           | Pass    |
| NVNT      | n(HT20)   | 2412            | Ant2    | -21.658       | 8           | Pass    |
| NVNT      | n(HT20)   | 2437            | Ant2    | -22.781       | 8           | Pass    |
| NVNT      | n(HT20)   | 2462            | Ant2    | -21.344       | 8           | Pass    |
| NVNT      | n(HT40)   | 2422            | Ant2    | -24.357       | 8           | Pass    |
| NVNT      | n(HT40)   | 2437            | Ant2    | -24.811       | 8           | Pass    |
| NVNT      | n(HT40)   | 2452            | Ant2    | -25.097       | 8           | Pass    |

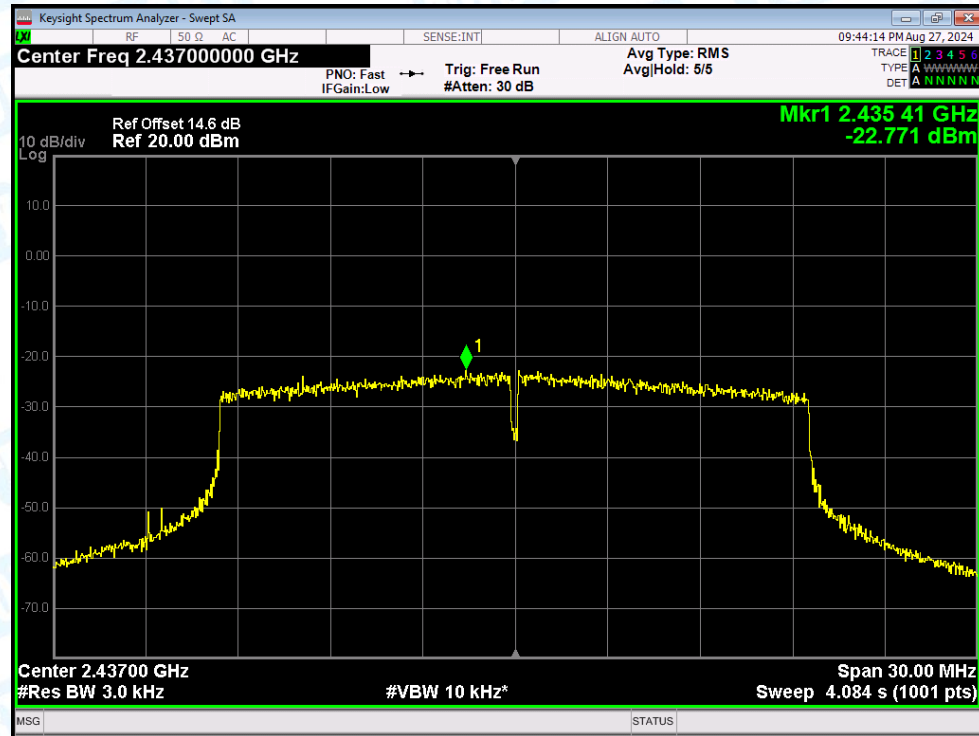
Note: The duty factor has been compensated into the result.

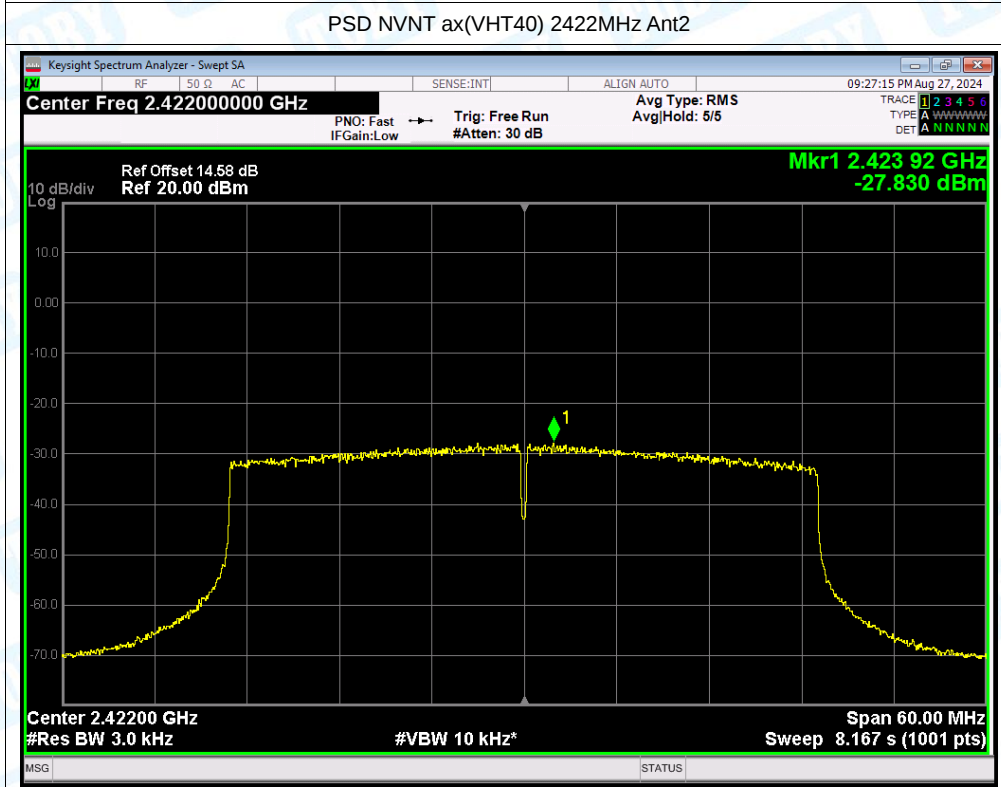
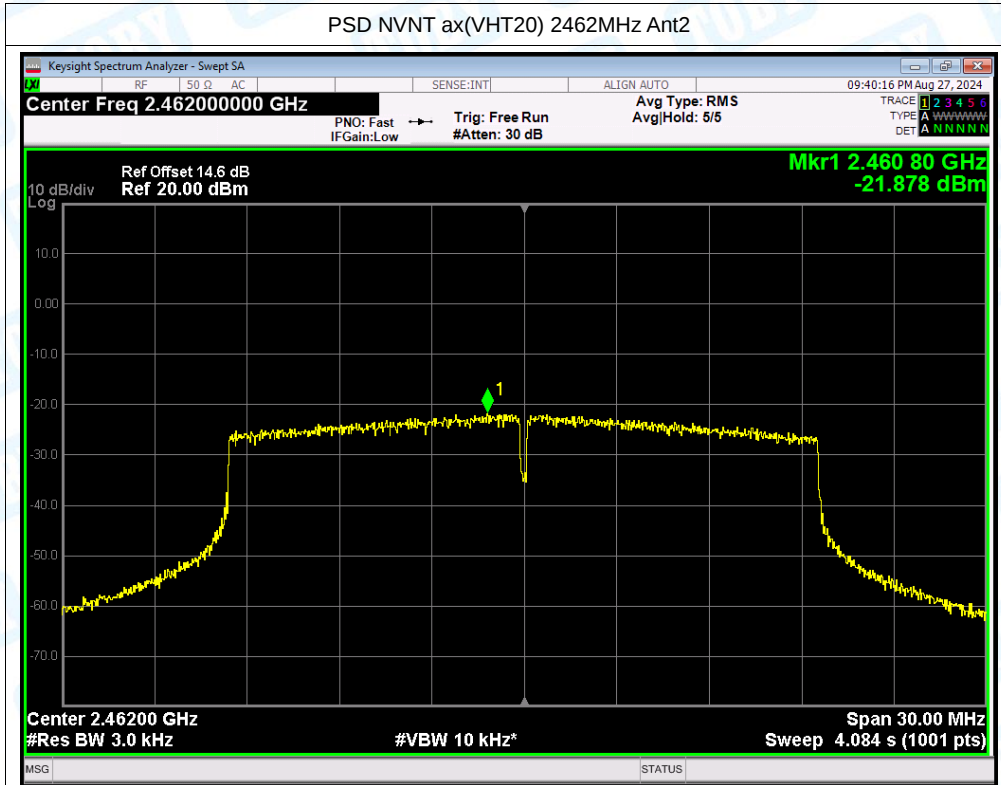
### Test Graphs

PSD NVNT ax(VHT20) 2412MHz Ant2

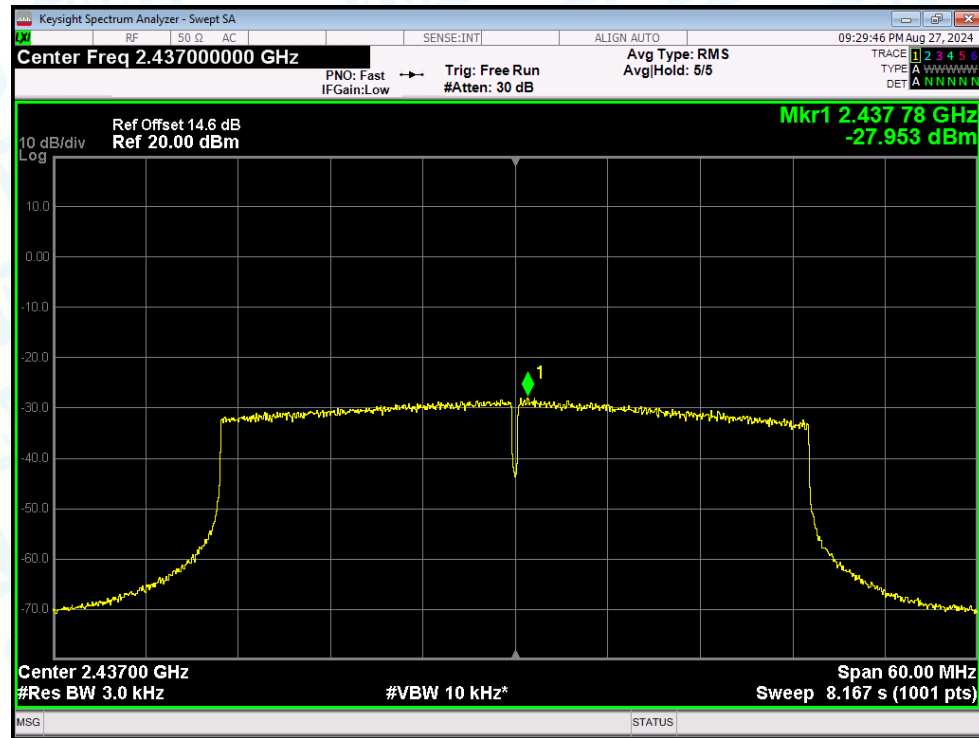


PSD NVNT ax(VHT20) 2437MHz Ant2

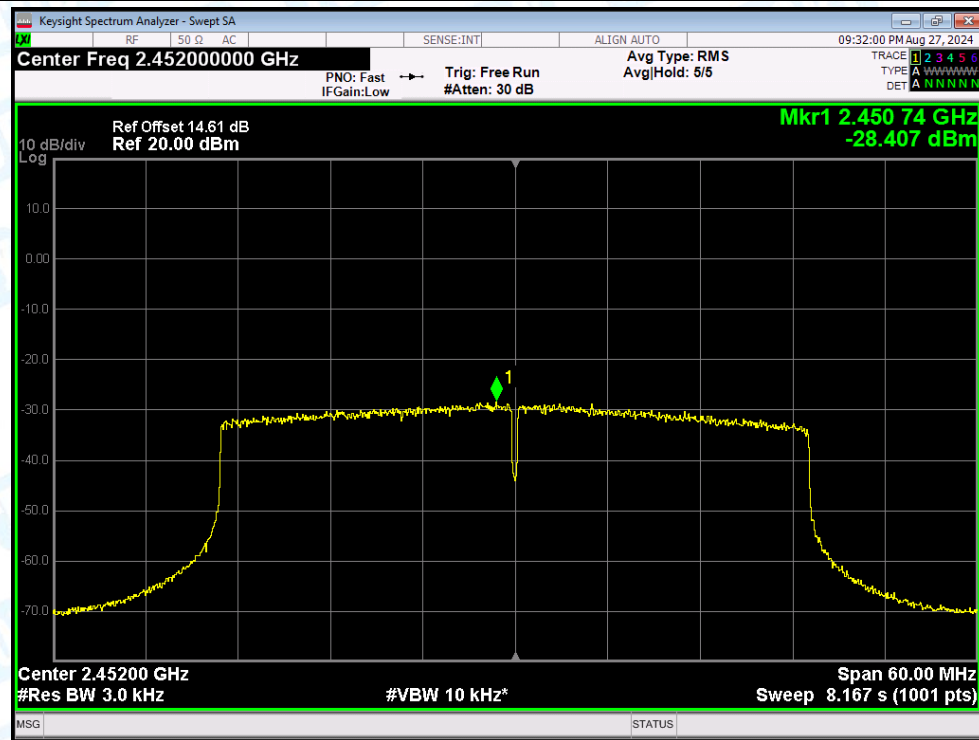




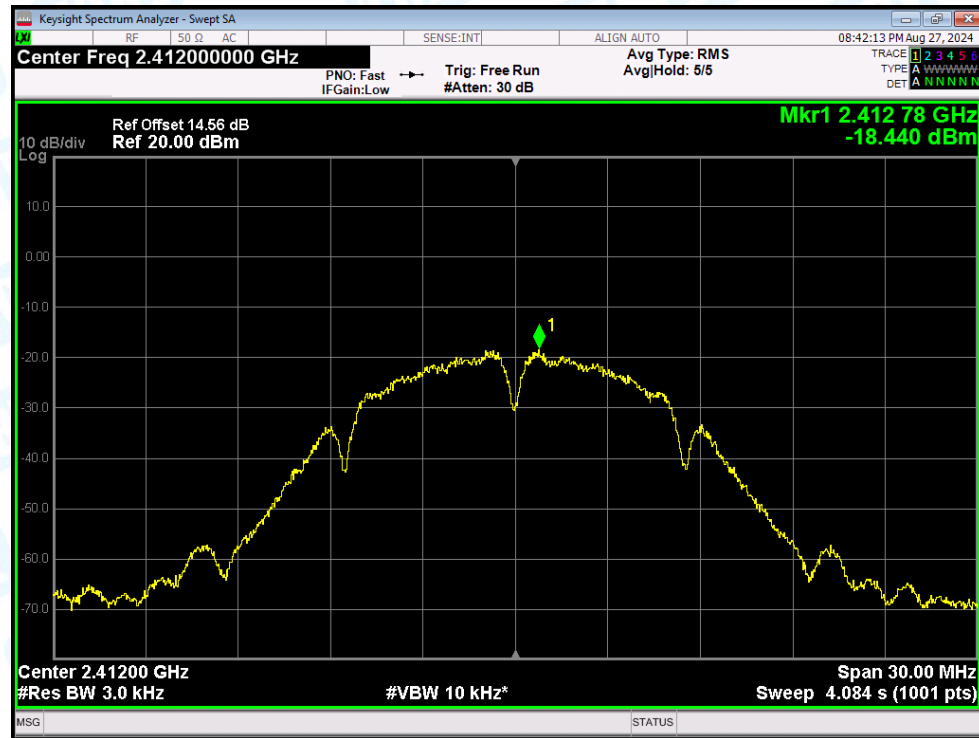
PSD NVNT ax(VHT40) 2437MHz Ant2



PSD NVNT ax(VHT40) 2452MHz Ant2



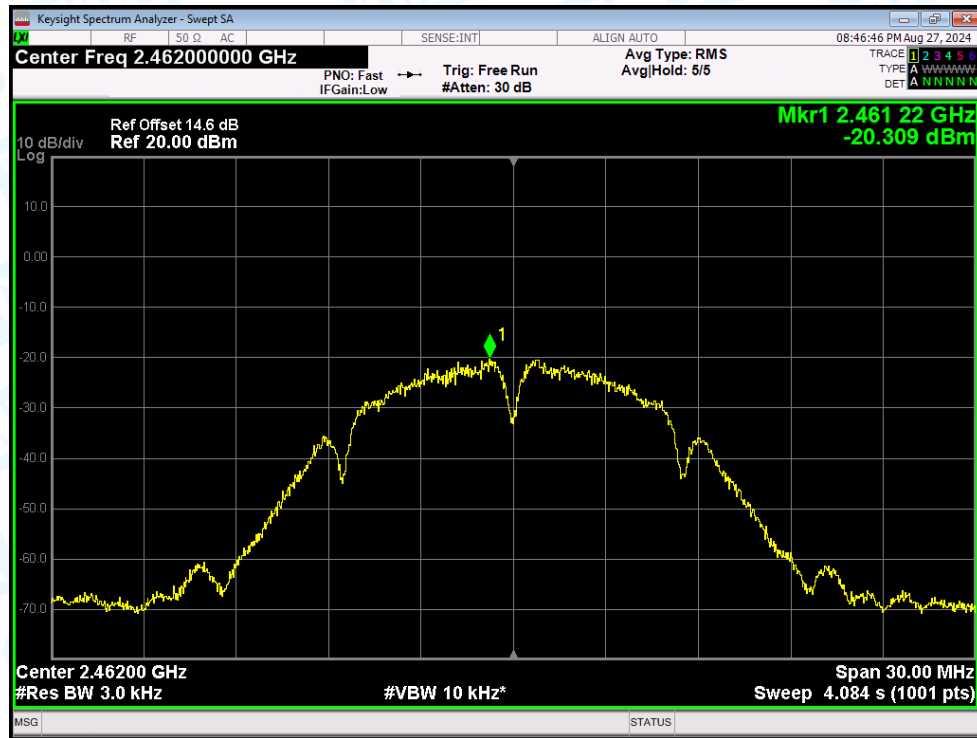
PSD NVNT b 2412MHz Ant2



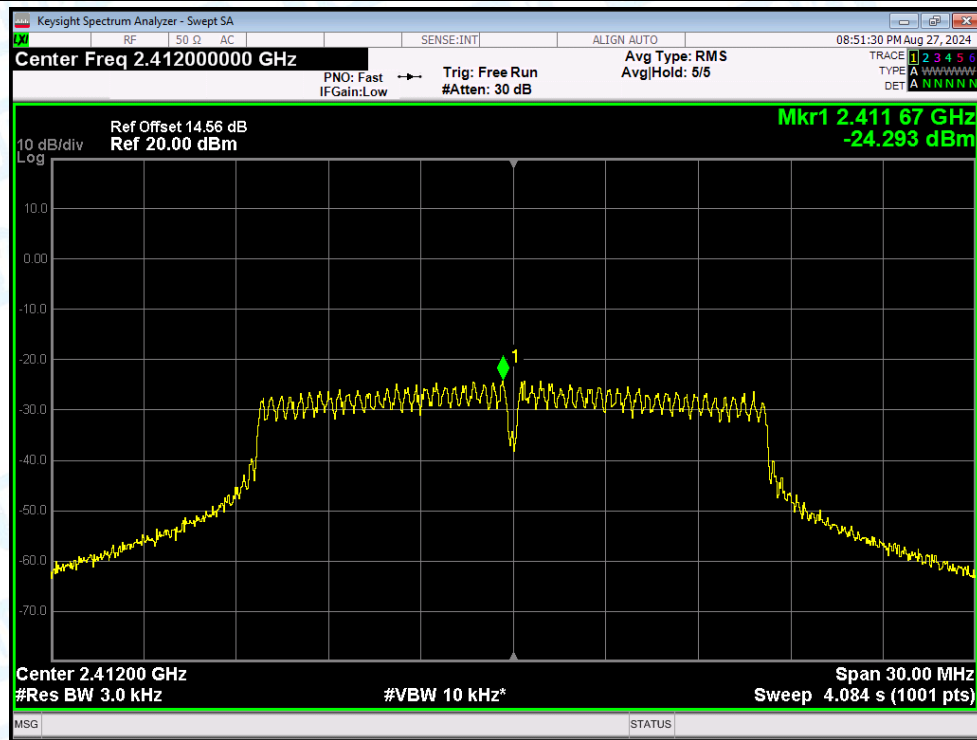
PSD NVNT b 2437MHz Ant2

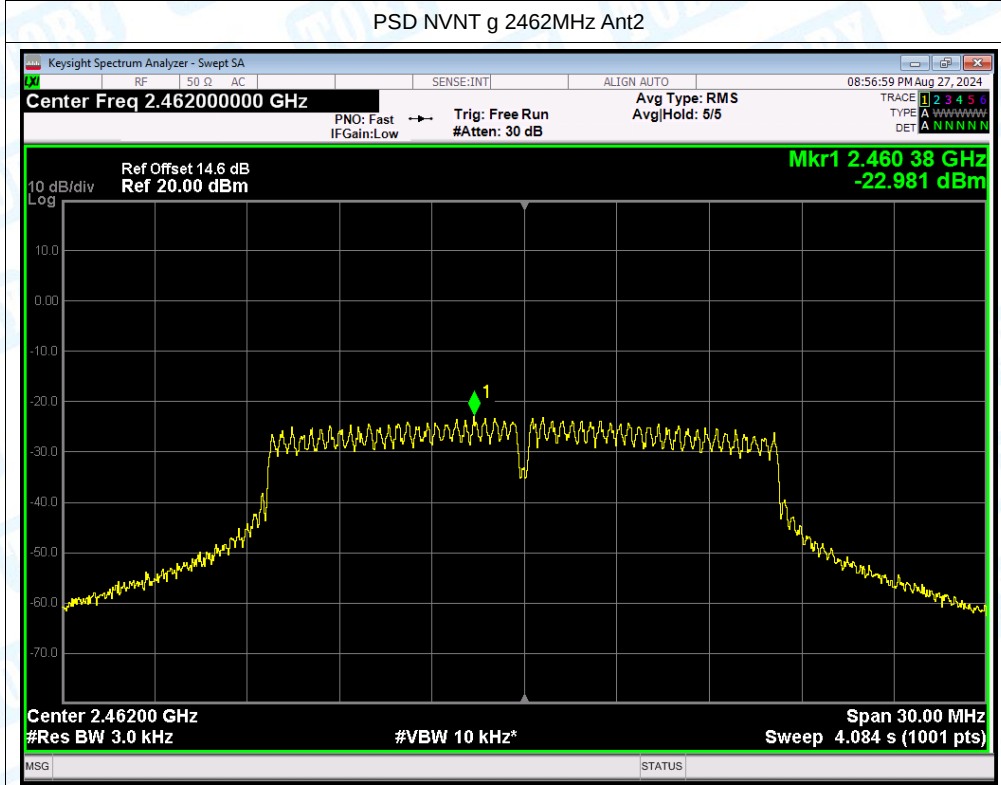
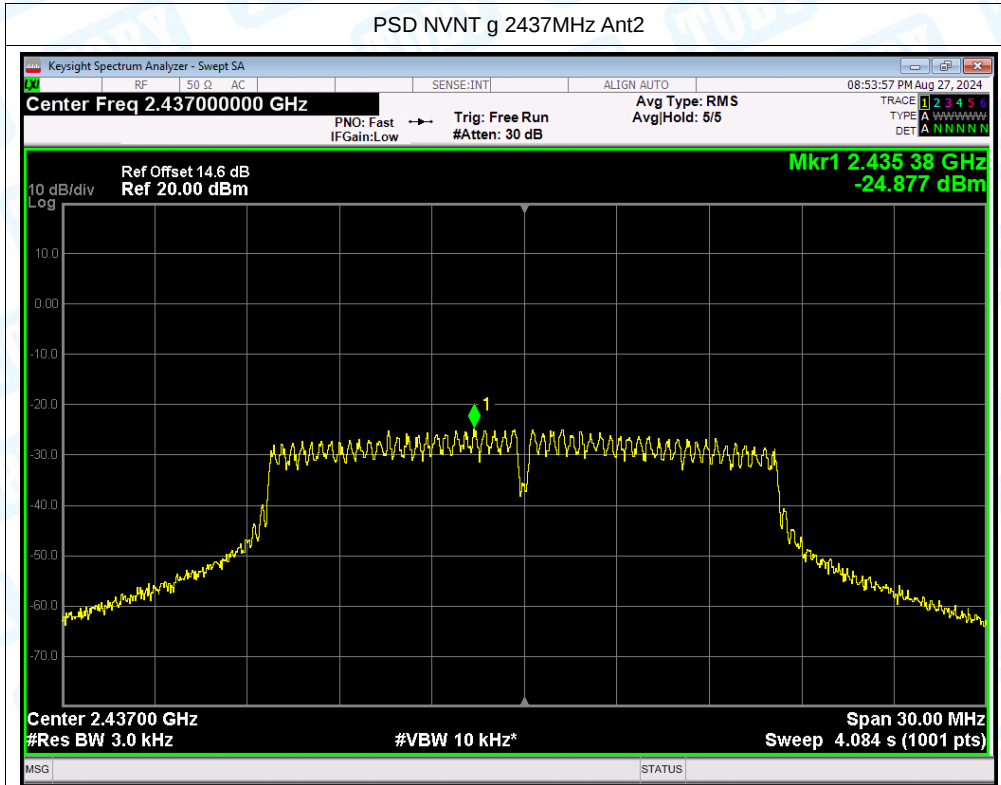


PSD NVNT b 2462MHz Ant2

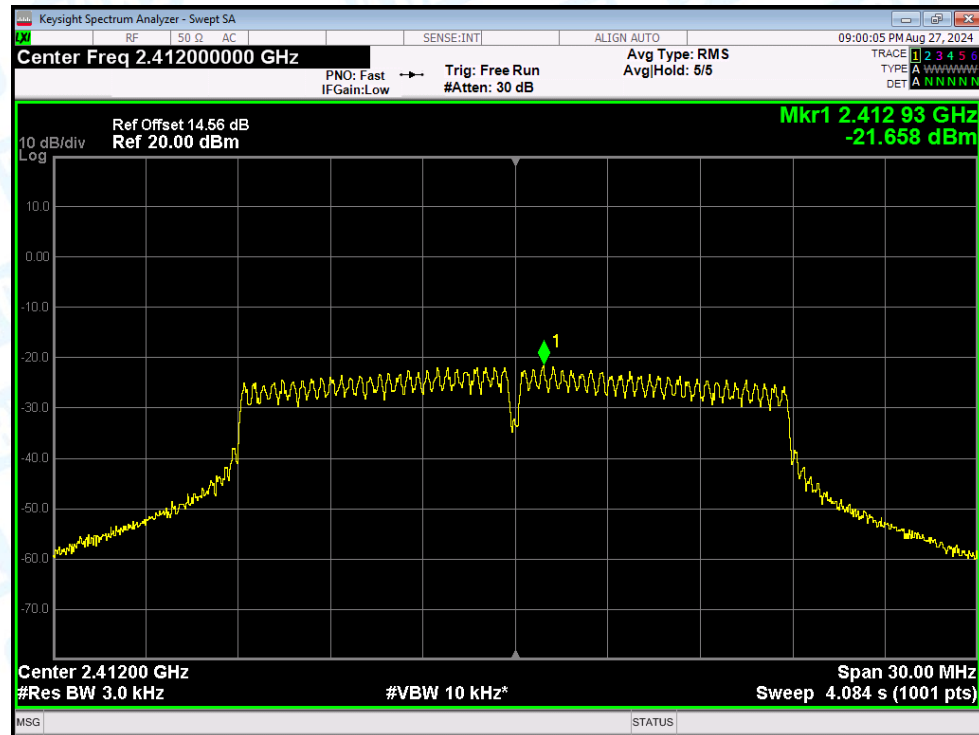


PSD NVNT g 2412MHz Ant2

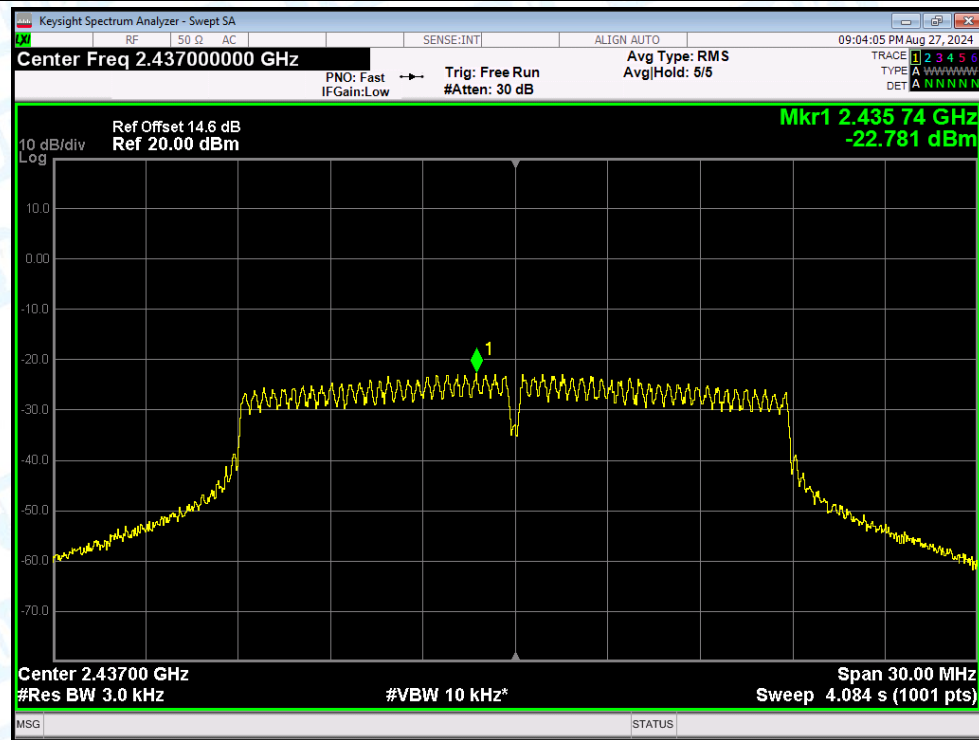




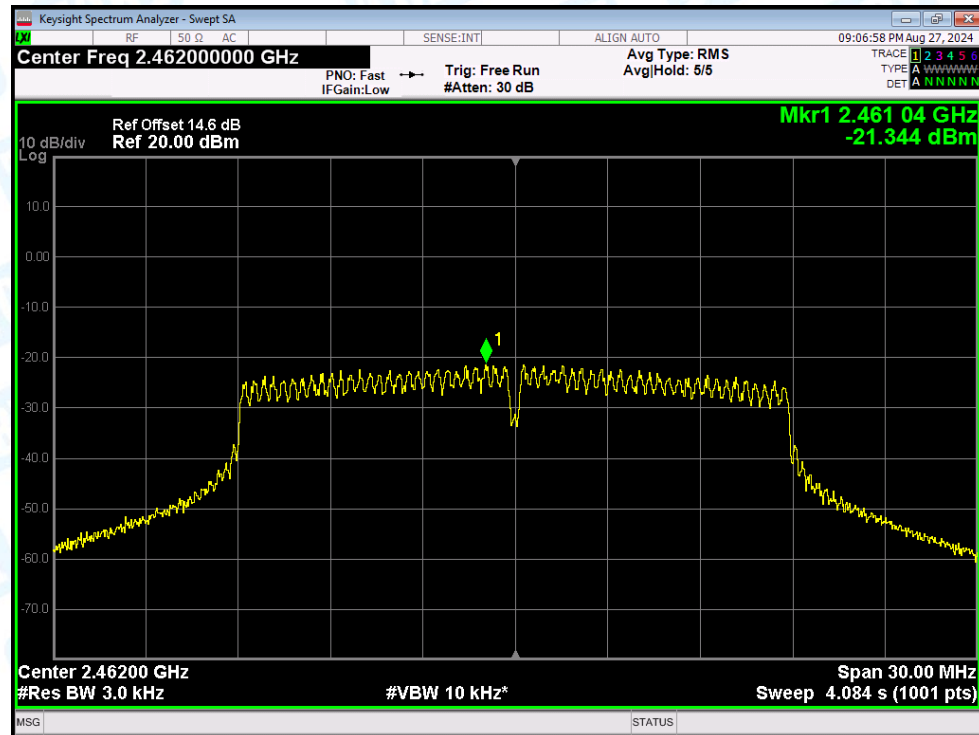
PSD NVNT n(HT20) 2412MHz Ant2



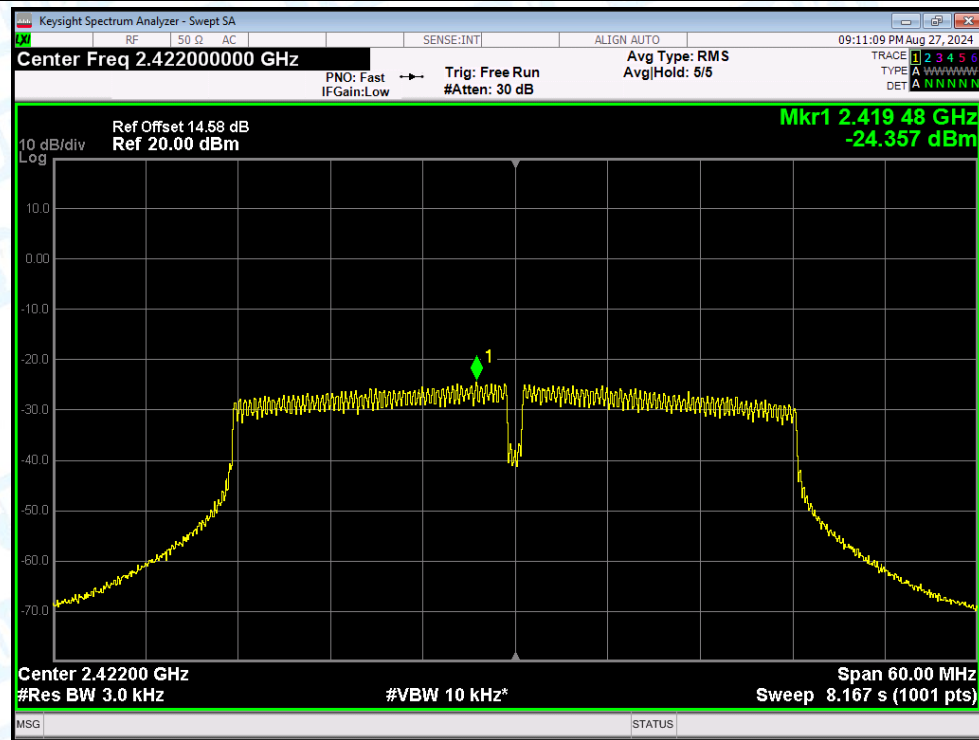
PSD NVNT n(HT20) 2437MHz Ant2



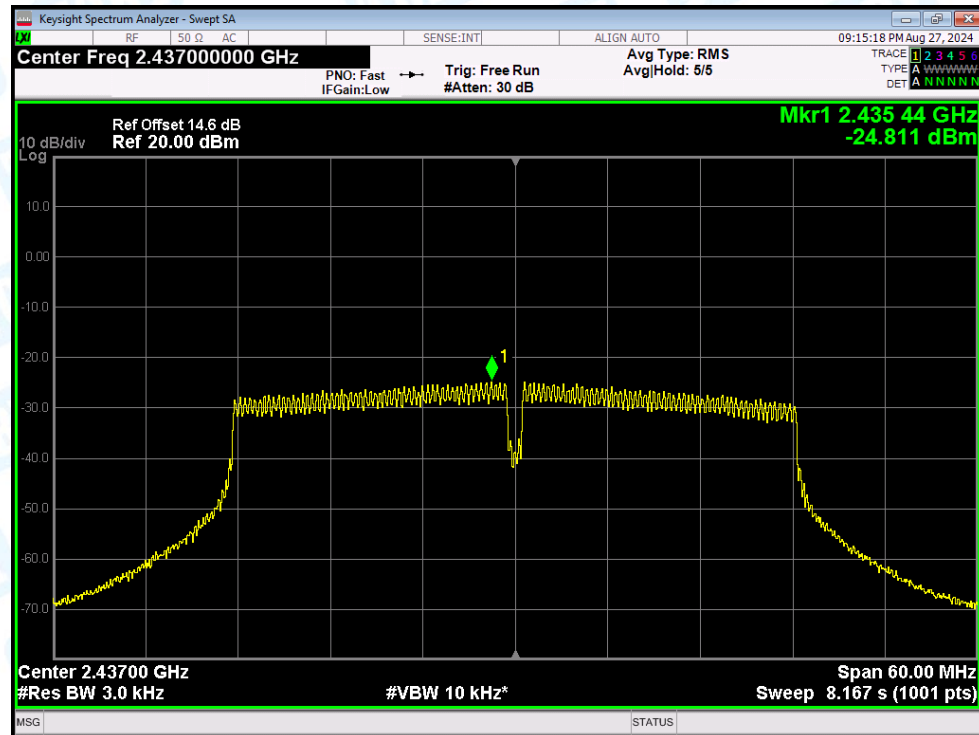
PSD NVNT n(HT20) 2462MHz Ant2



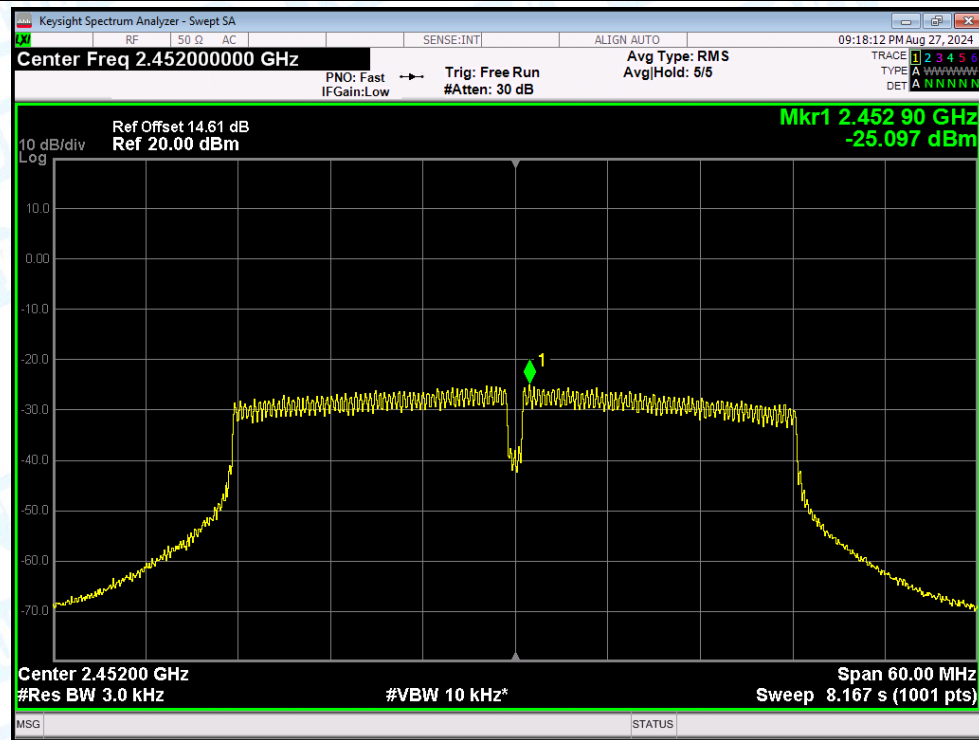
PSD NVNT n(HT40) 2422MHz Ant2



PSD NVNT n(HT40) 2437MHz Ant2



PSD NVNT n(HT40) 2452MHz Ant2

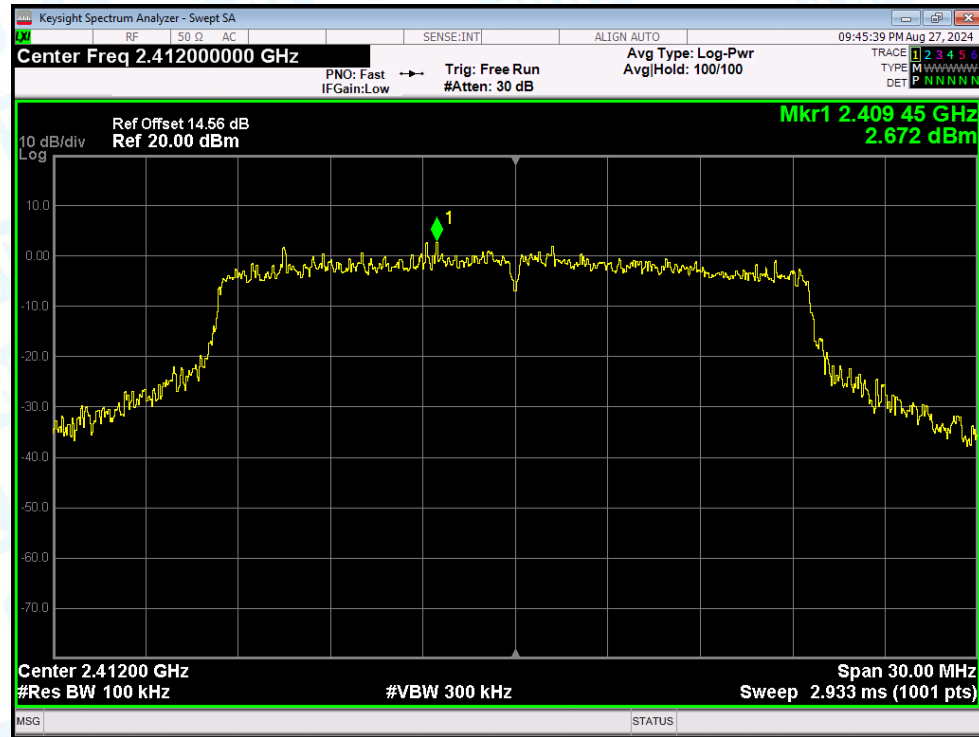


## 6.Band Edge

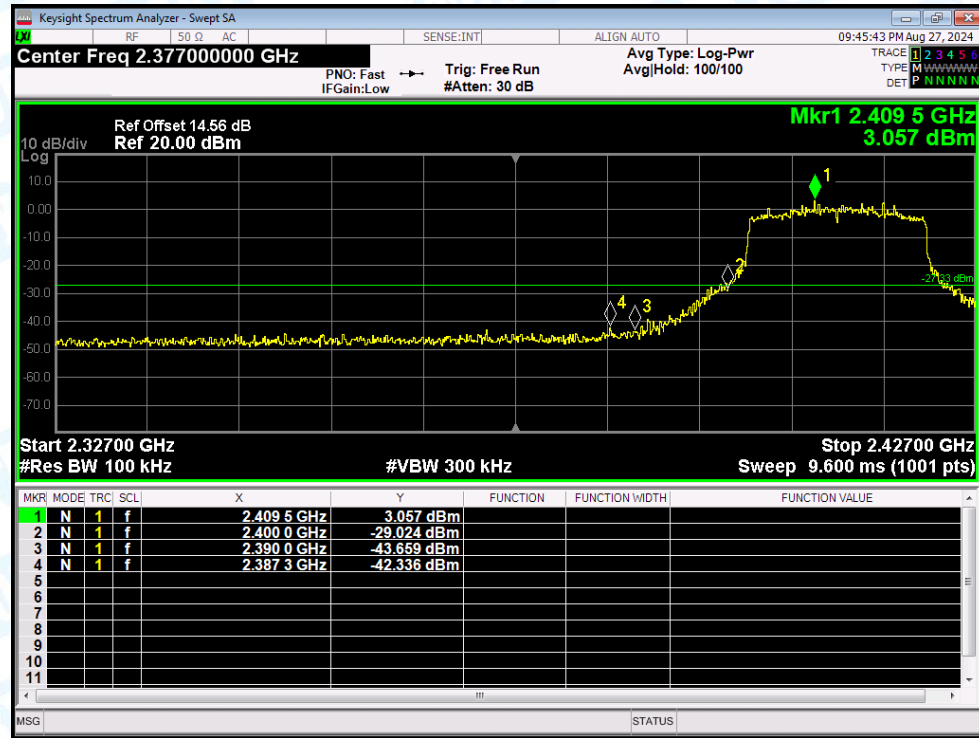
| Condition | Mode      | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-----------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | ax(VHT20) | 2412            | Ant2    | -45.01          | -30         | Pass    |
| NVNT      | ax(VHT20) | 2462            | Ant2    | -46.49          | -30         | Pass    |
| NVNT      | ax(VHT40) | 2422            | Ant2    | -42.58          | -30         | Pass    |
| NVNT      | ax(VHT40) | 2452            | Ant2    | -46.84          | -30         | Pass    |
| NVNT      | b         | 2412            | Ant2    | -56.99          | -30         | Pass    |
| NVNT      | b         | 2462            | Ant2    | -47.5           | -30         | Pass    |
| NVNT      | g         | 2412            | Ant2    | -44.72          | -30         | Pass    |
| NVNT      | g         | 2462            | Ant2    | -45.94          | -30         | Pass    |
| NVNT      | n(HT20)   | 2412            | Ant2    | -45.56          | -30         | Pass    |
| NVNT      | n(HT20)   | 2462            | Ant2    | -46.2           | -30         | Pass    |
| NVNT      | n(HT40)   | 2422            | Ant2    | -42.34          | -30         | Pass    |
| NVNT      | n(HT40)   | 2452            | Ant2    | -43.94          | -30         | Pass    |

### Test Graphs

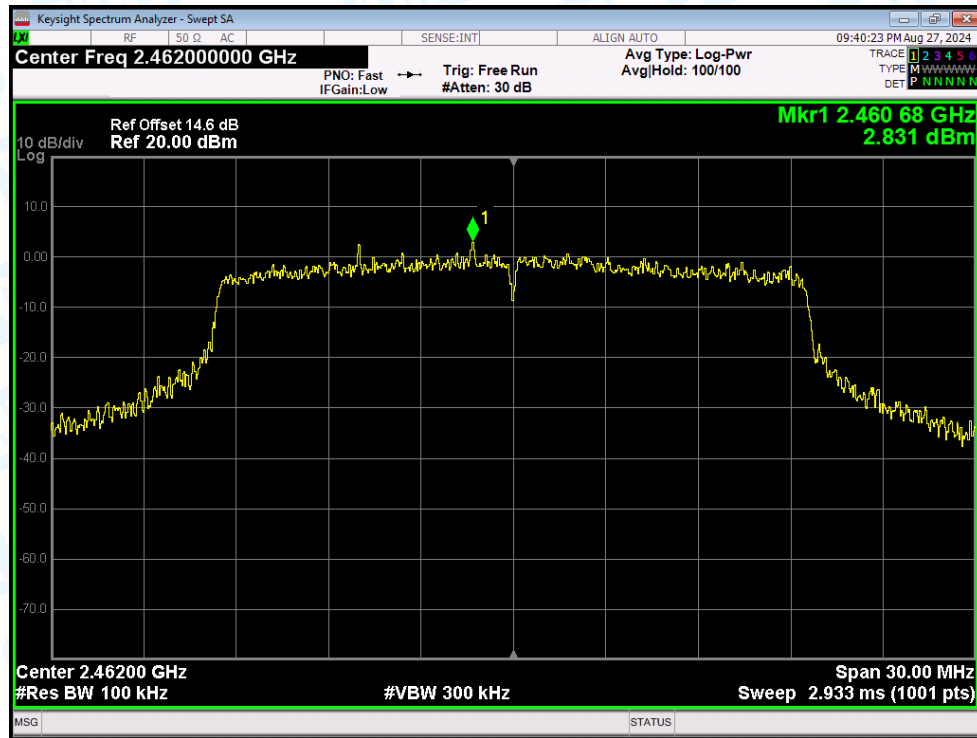
#### Band Edge NVNT ax(VHT20) 2412MHz Ant2 Ref



#### Band Edge NVNT ax(VHT20) 2412MHz Ant2 Emission



Band Edge NVNT ax(VHT20) 2462MHz Ant2 Ref



Band Edge NVNT ax(VHT20) 2462MHz Ant2 Emission

