# Appendix A

## RF Test Data for BT (Conducted Measurement)

**Product Name: PROFESSIONAL BATTERY TROLLEY SPEAKER**

**Test Model: RA 1210**

**Environmental Conditions**

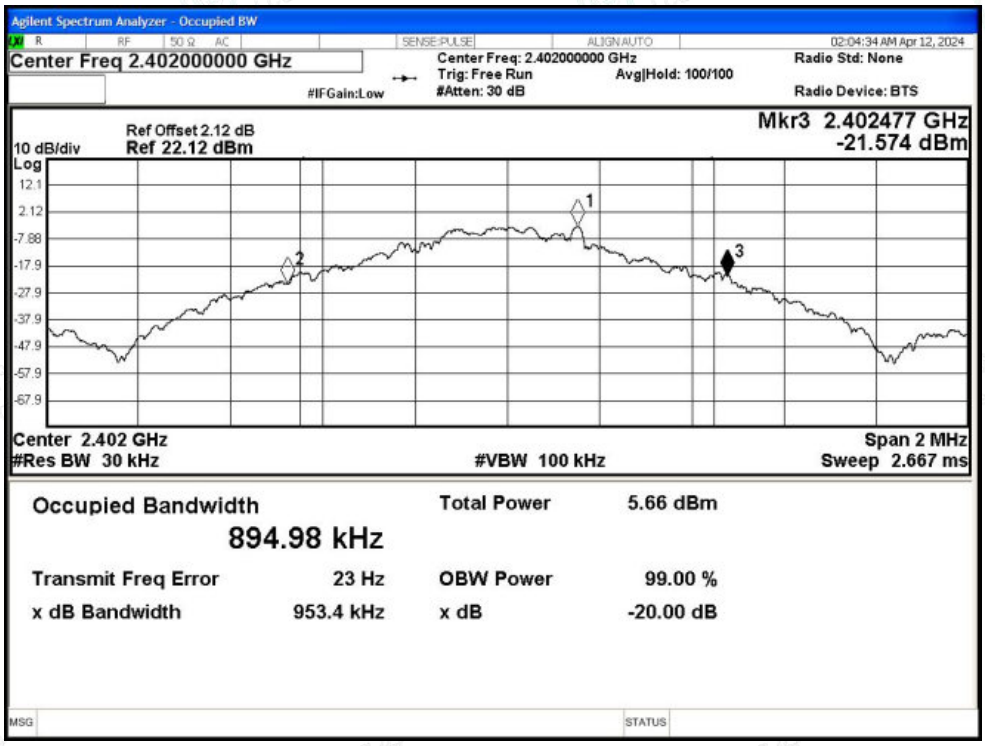
| | |
|---|---|
| Temperature: | 23.8 ° C |
| Relative Humidity: | 52.1% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Paddi Chen |
| Supervised by: | Nick Peng |

# A.1 -20dB Bandwidth

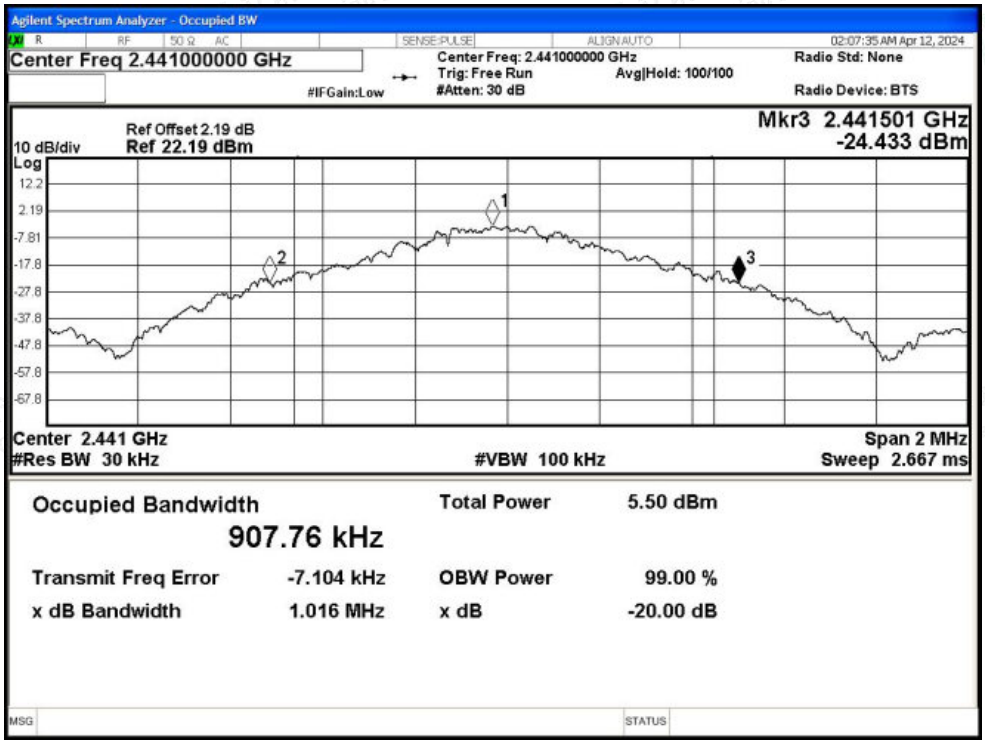
| Condition | Mode | Frequency (MHz) | Antenna | -20 dB Bandwidth (MHz) | Limit -20 dB Bandwidth (MHz) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | 1-DH5 | 2402 | Ant1 | 0.953 | N/A | Pass |
| NVNT | 1-DH5 | 2441 | Ant1 | 1.016 | N/A | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | 0.976 | N/A | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | 1.288 | N/A | Pass |
| NVNT | 2-DH5 | 2441 | Ant1 | 1.279 | N/A | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | 1.277 | N/A | Pass |
| NVNT | 3-DH5 | 2402 | Ant1 | 1.299 | N/A | Pass |
| NVNT | 3-DH5 | 2441 | Ant1 | 1.293 | N/A | Pass |
| NVNT | 3-DH5 | 2480 | Ant1 | 1.286 | N/A | Pass |

Test Graphs

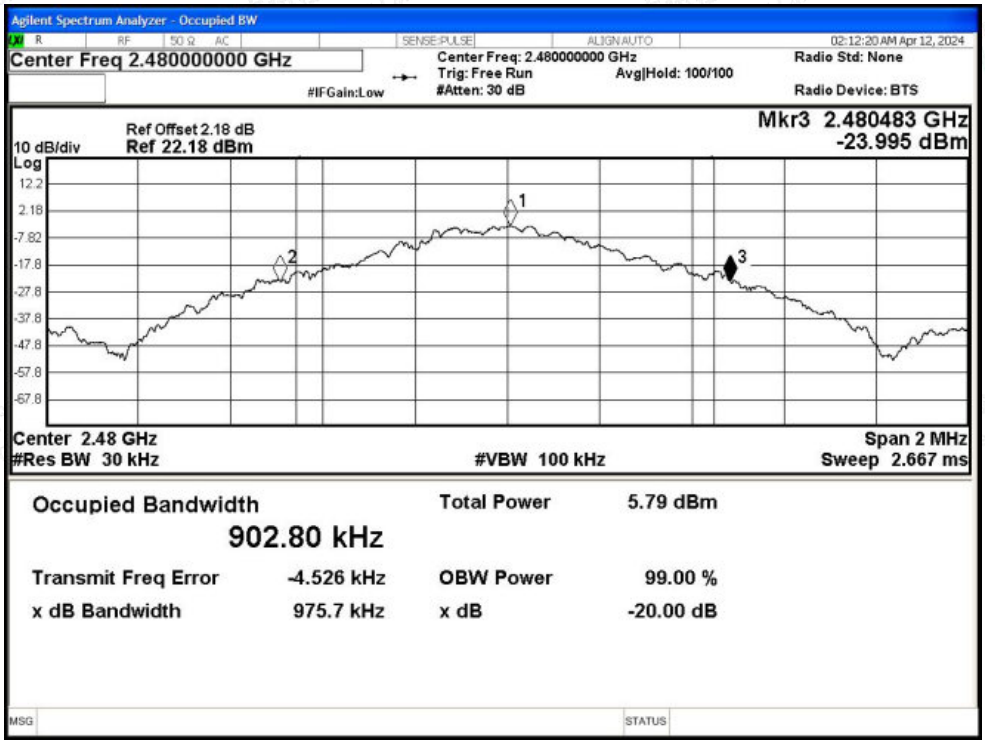
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



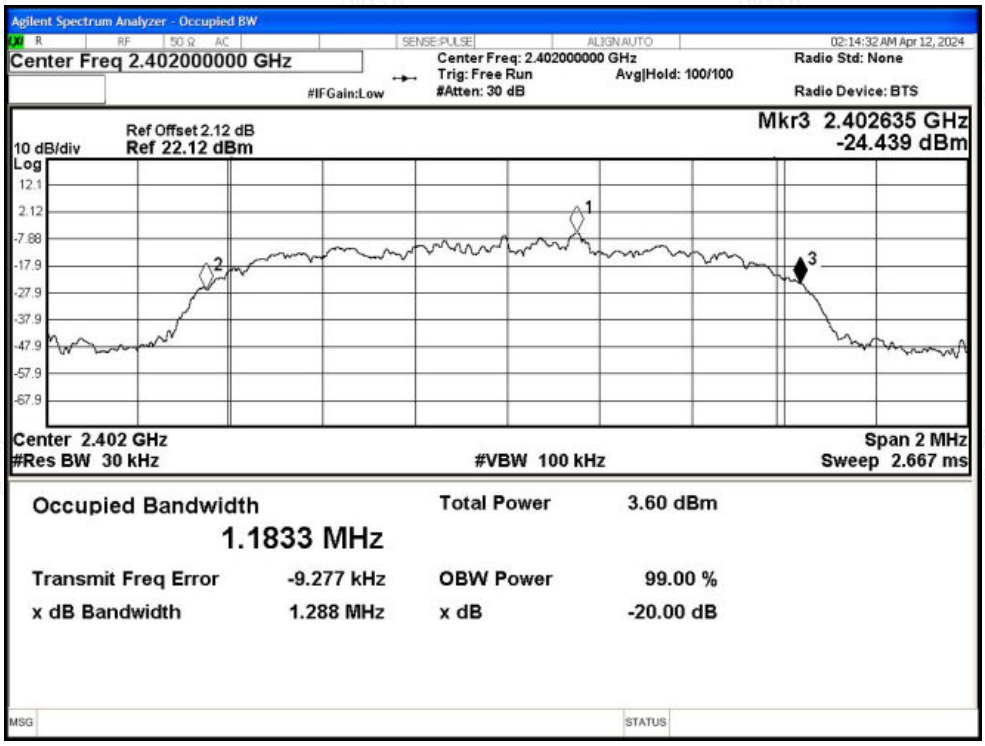

-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



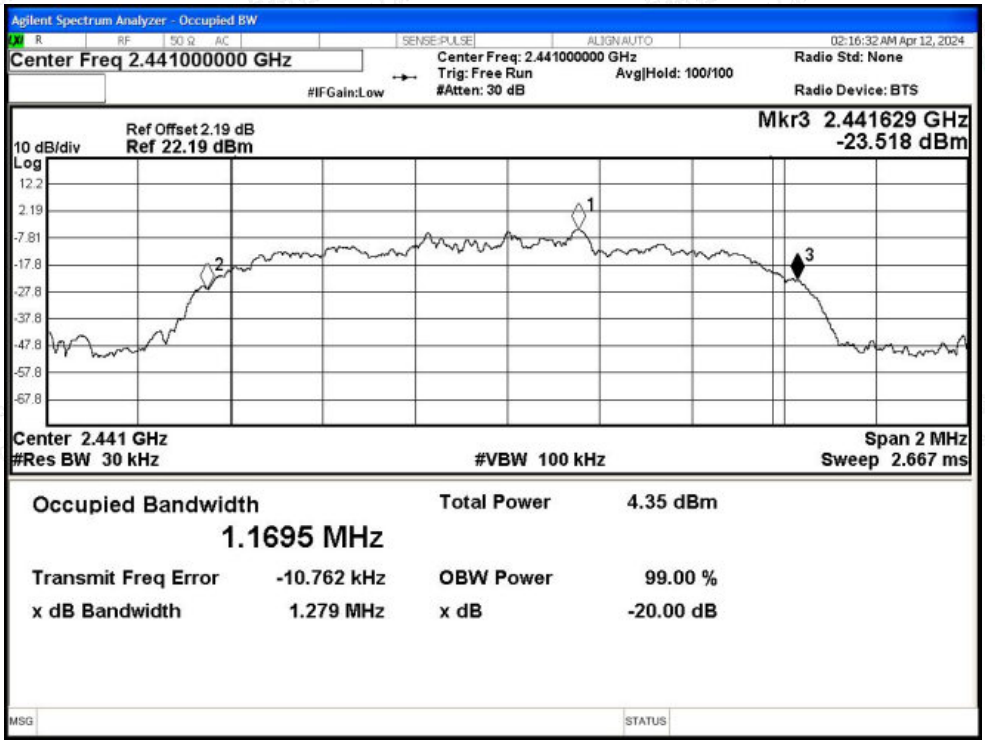
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



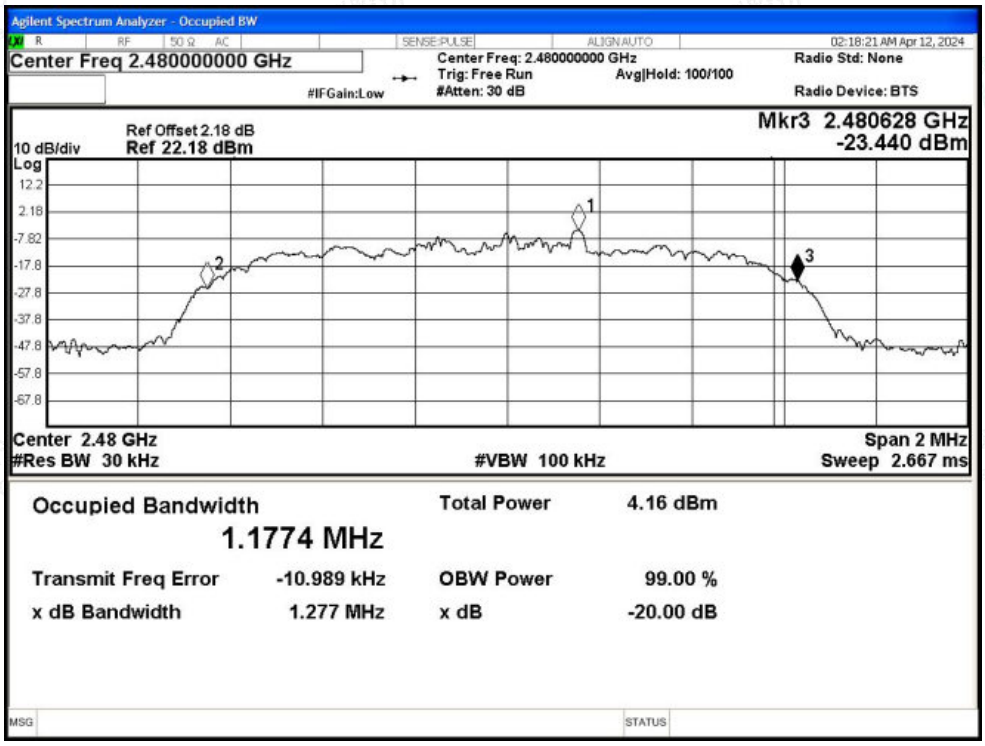

-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



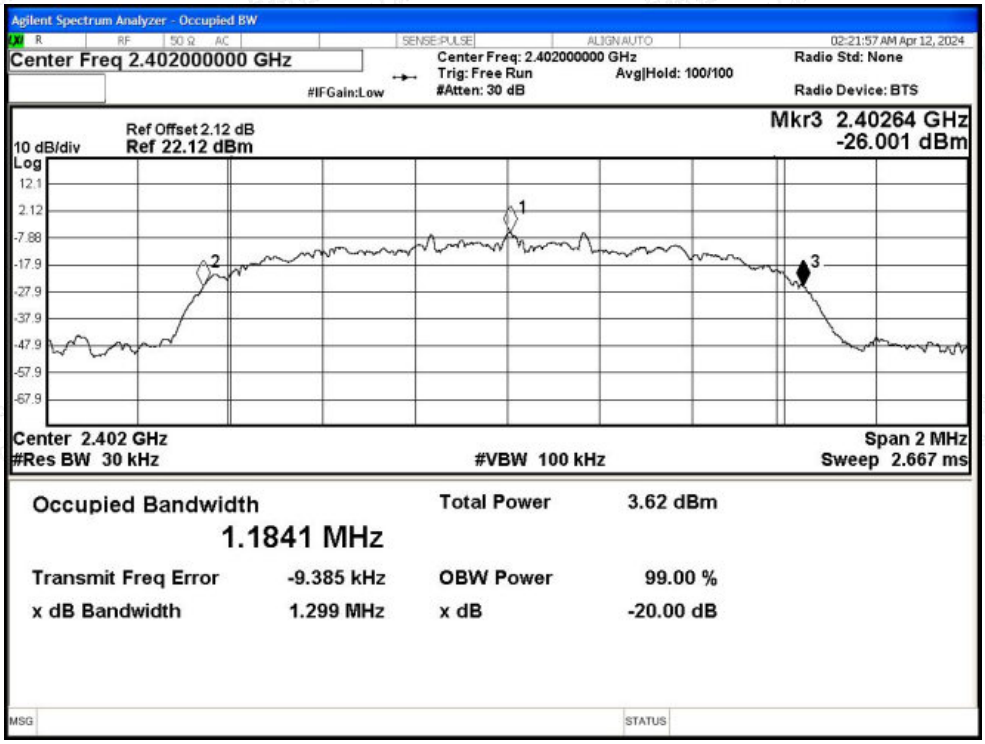
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



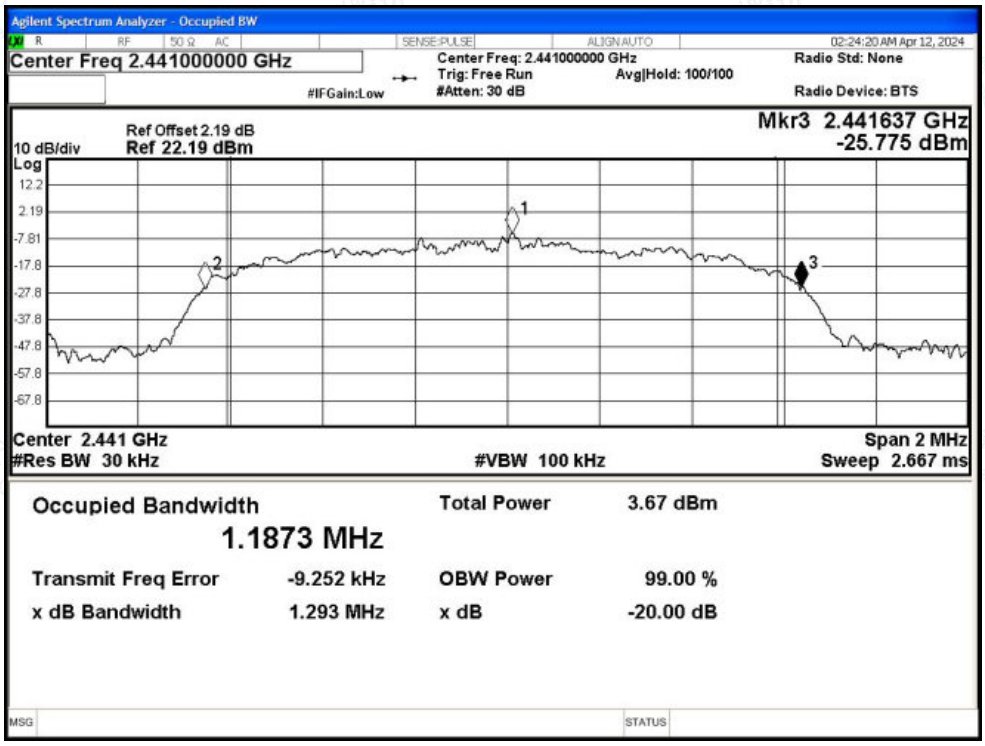

-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



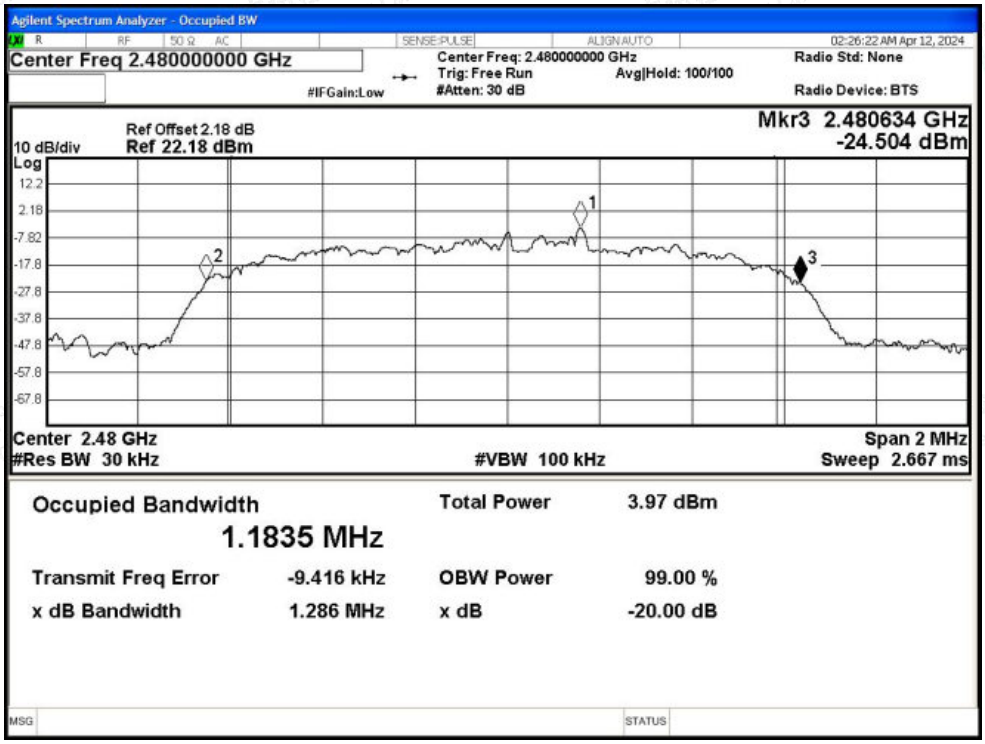
-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1




-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1

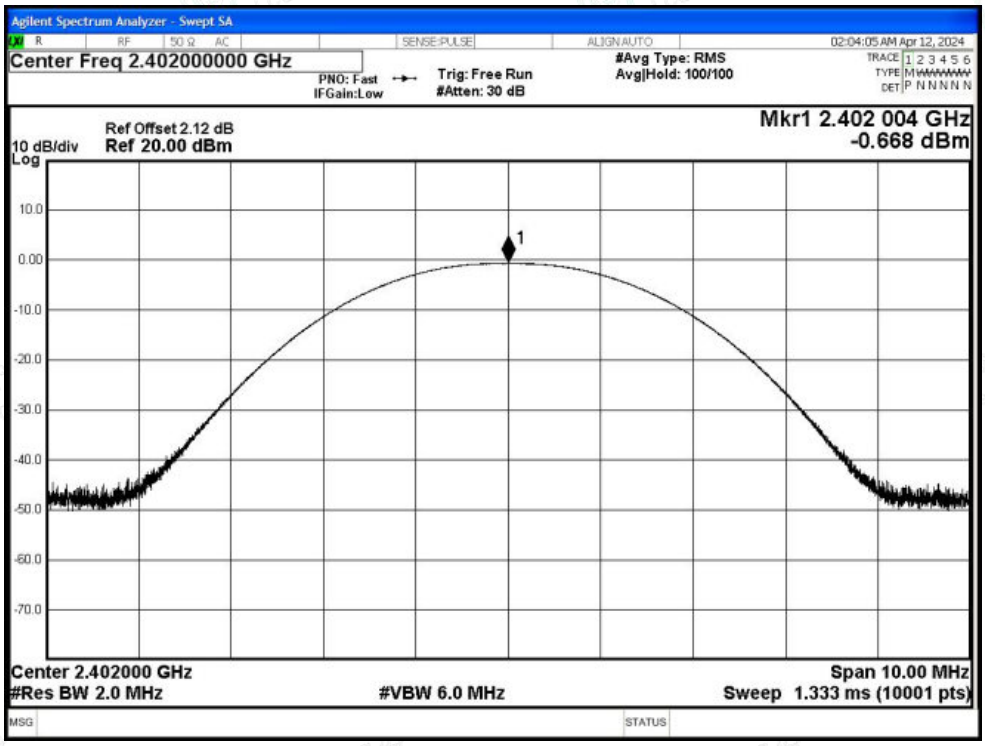


# A.2 Maximum Conducted Output Power

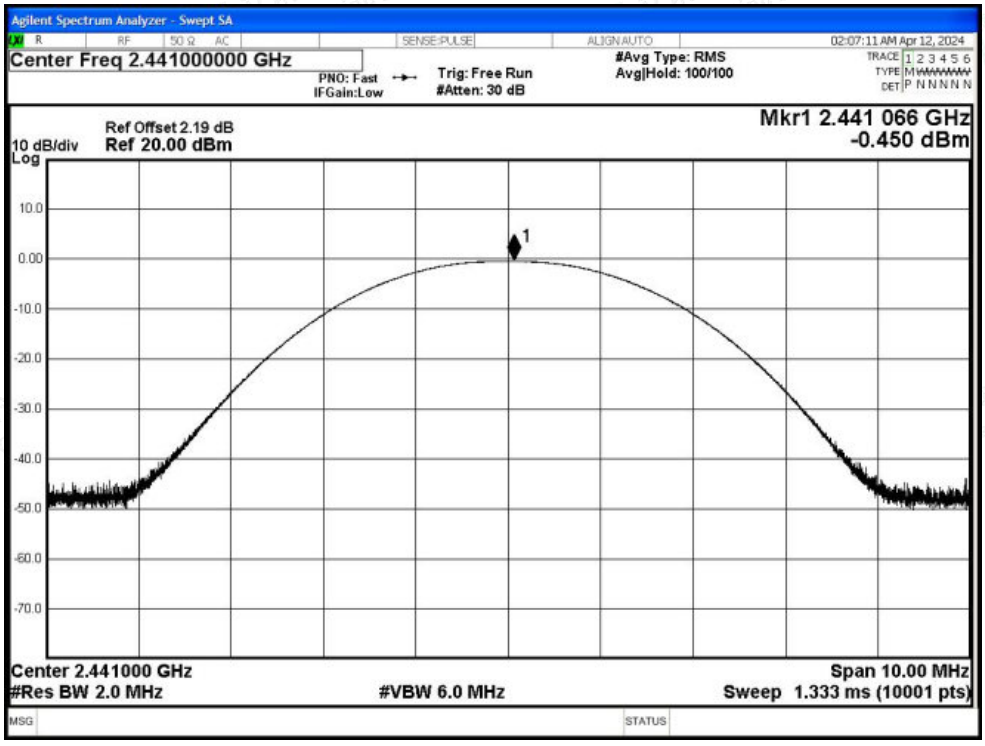
| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | 1-DH5 | 2402 | Ant1 | -0.67 | 21 | Pass |
| NVNT | 1-DH5 | 2441 | Ant1 | -0.45 | 21 | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | **-0.38** | 21 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | -0.93 | 21 | Pass |
| NVNT | 2-DH5 | 2441 | Ant1 | -0.7 | 21 | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | -0.67 | 21 | Pass |
| NVNT | 3-DH5 | 2402 | Ant1 | -0.87 | 21 | Pass |
| NVNT | 3-DH5 | 2441 | Ant1 | -0.66 | 21 | Pass |
| NVNT | 3-DH5 | 2480 | Ant1 | -0.53 | 21 | Pass |

Test Graphs

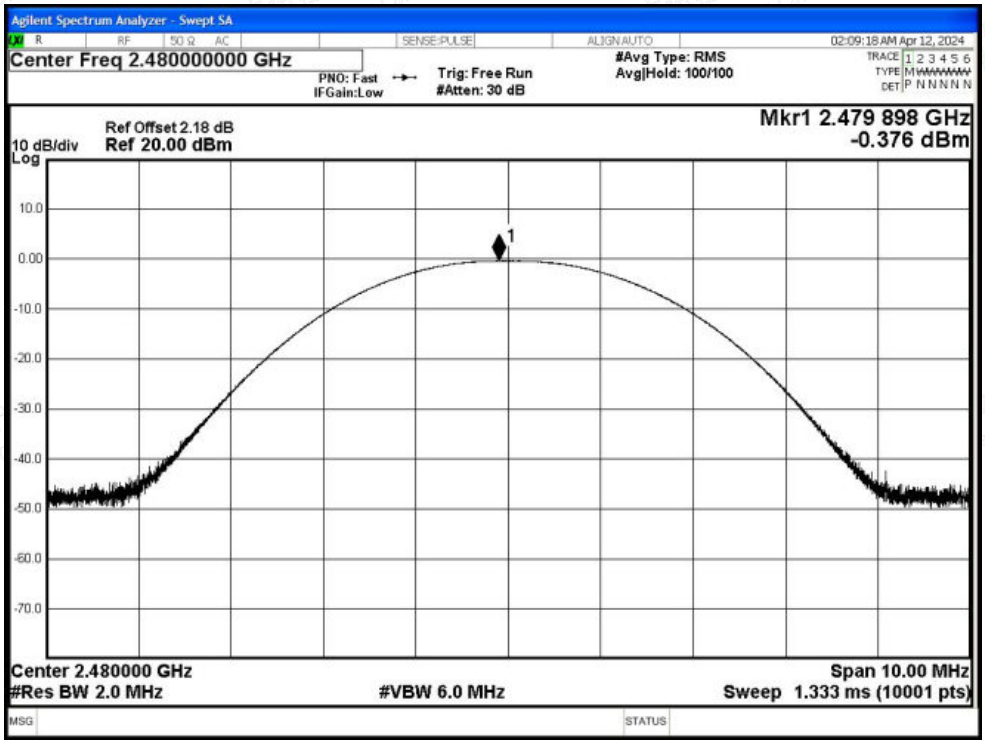
Power NVNT 1-DH5 2402MHz Ant1



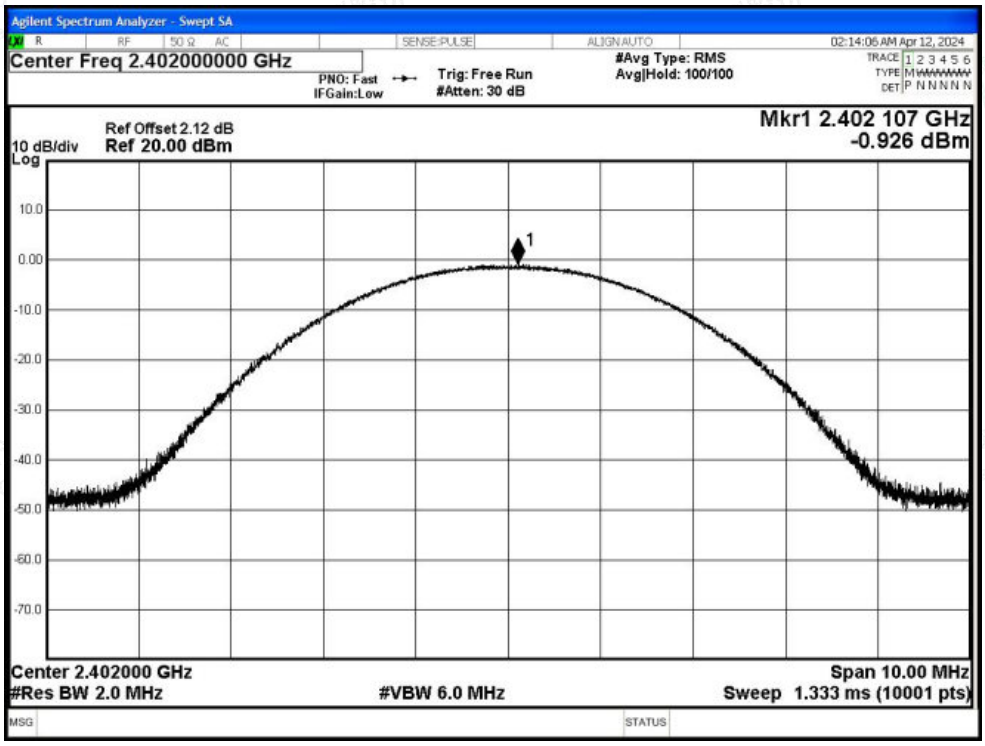

Power NVNT 1-DH5 2441MHz Ant1



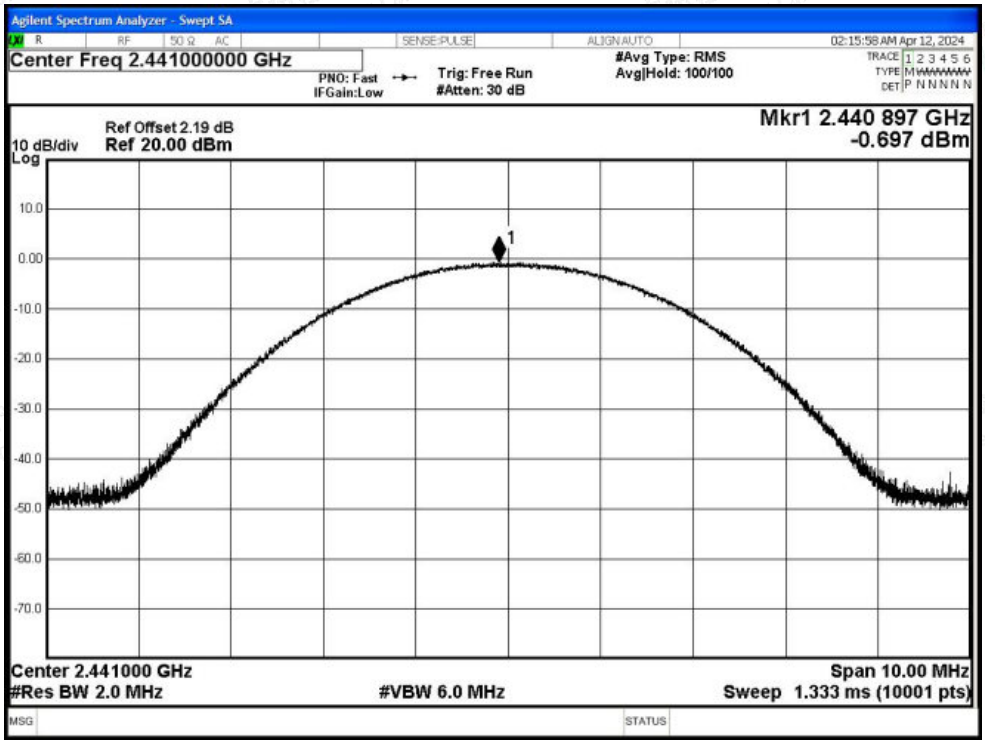
Power NVNT 1-DH5 2480MHz Ant1



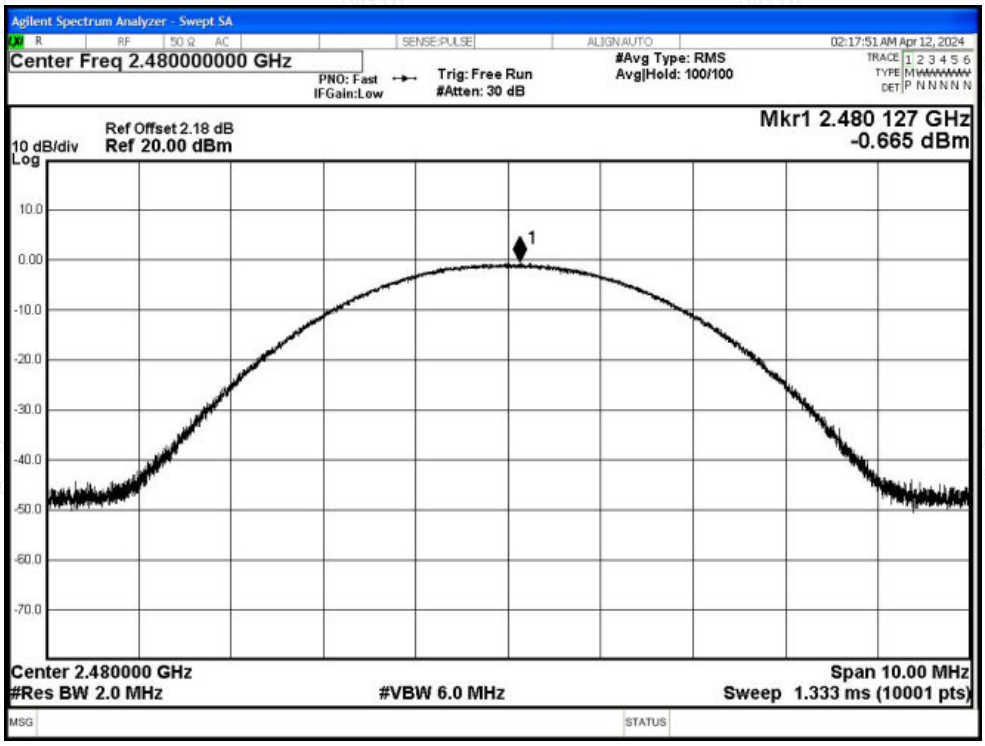

Power NVNT 2-DH5 2402MHz Ant1



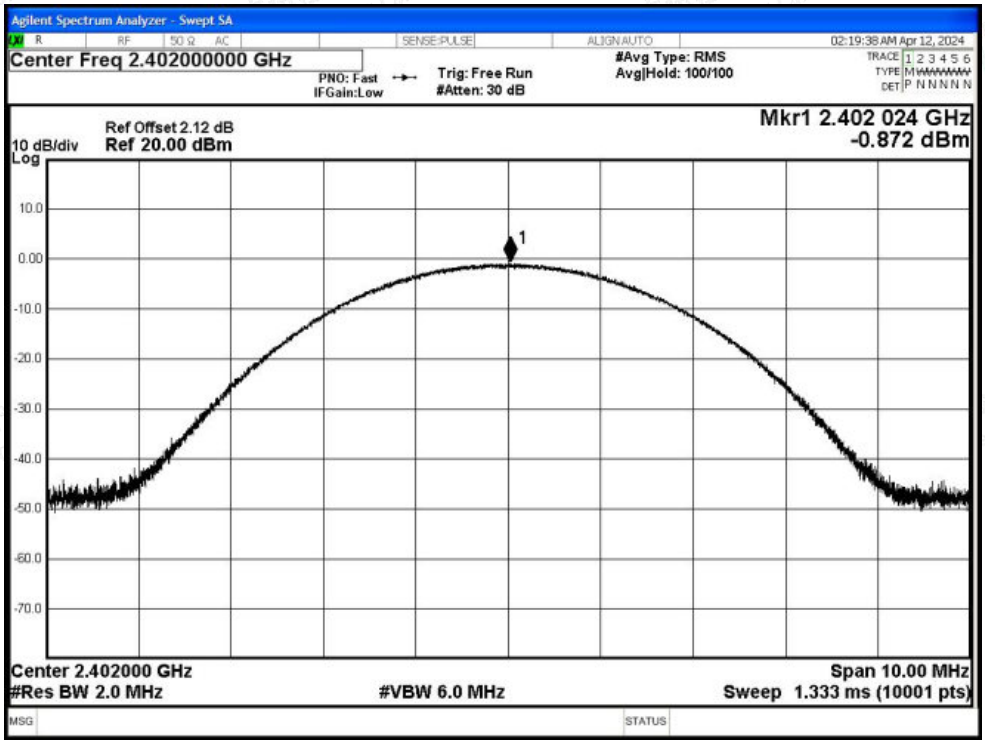
Power NVNT 2-DH5 2441MHz Ant1



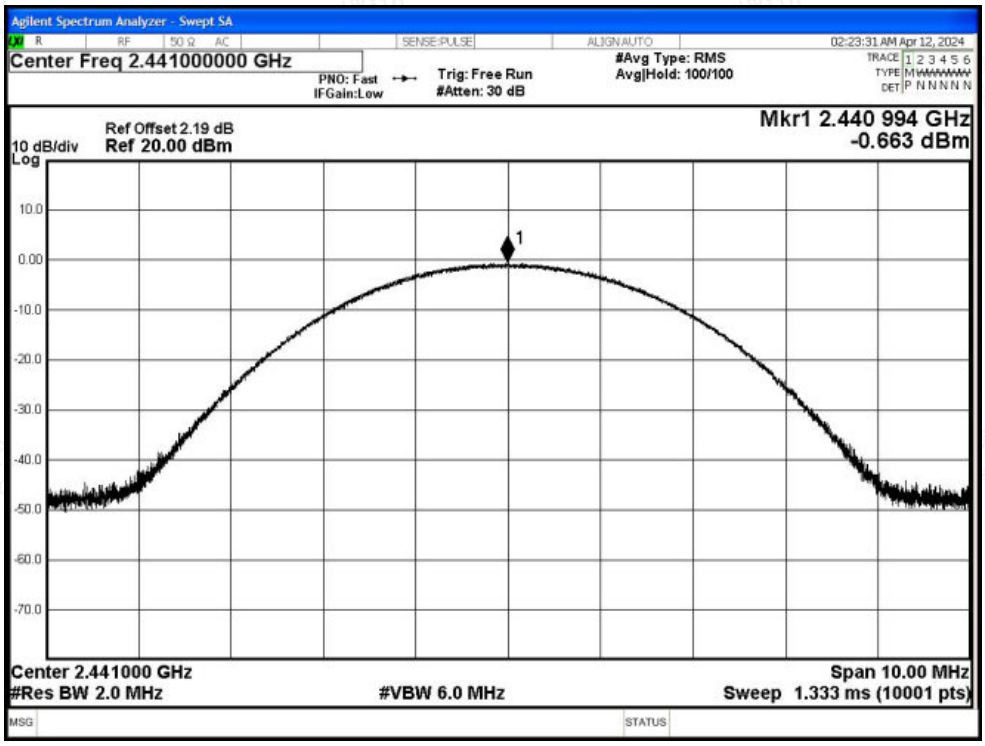

Power NVNT 2-DH5 2480MHz Ant1



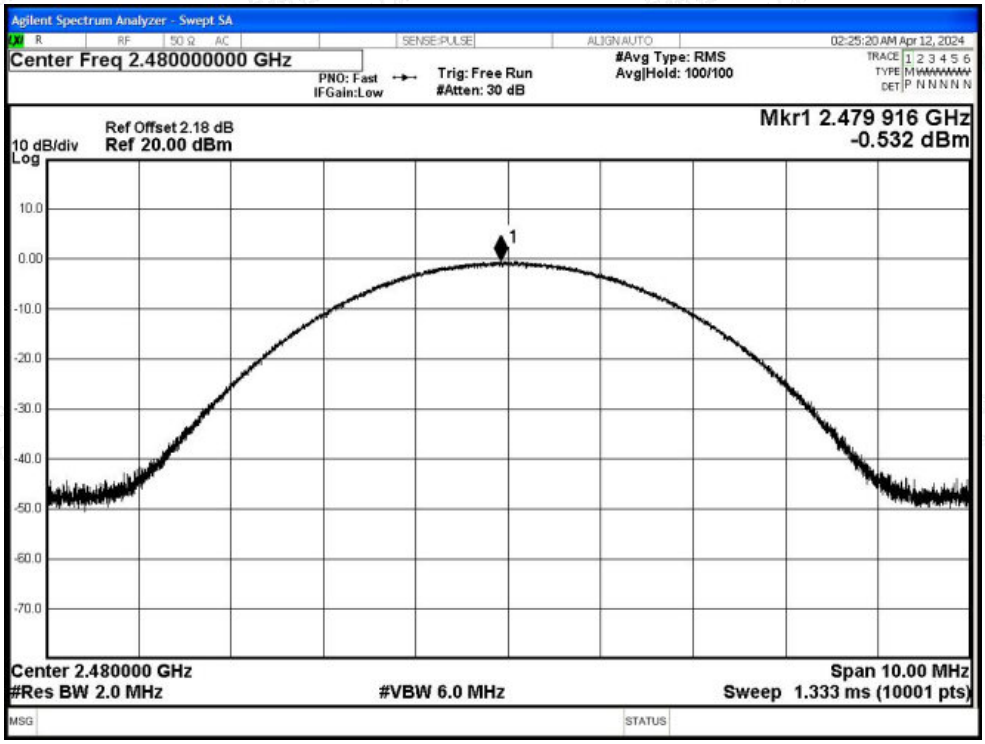
Power NVNT 3-DH5 2402MHz Ant1




Power NVNT 3-DH5 2441MHz Ant1



Power NVNT 3-DH5 2480MHz Ant1

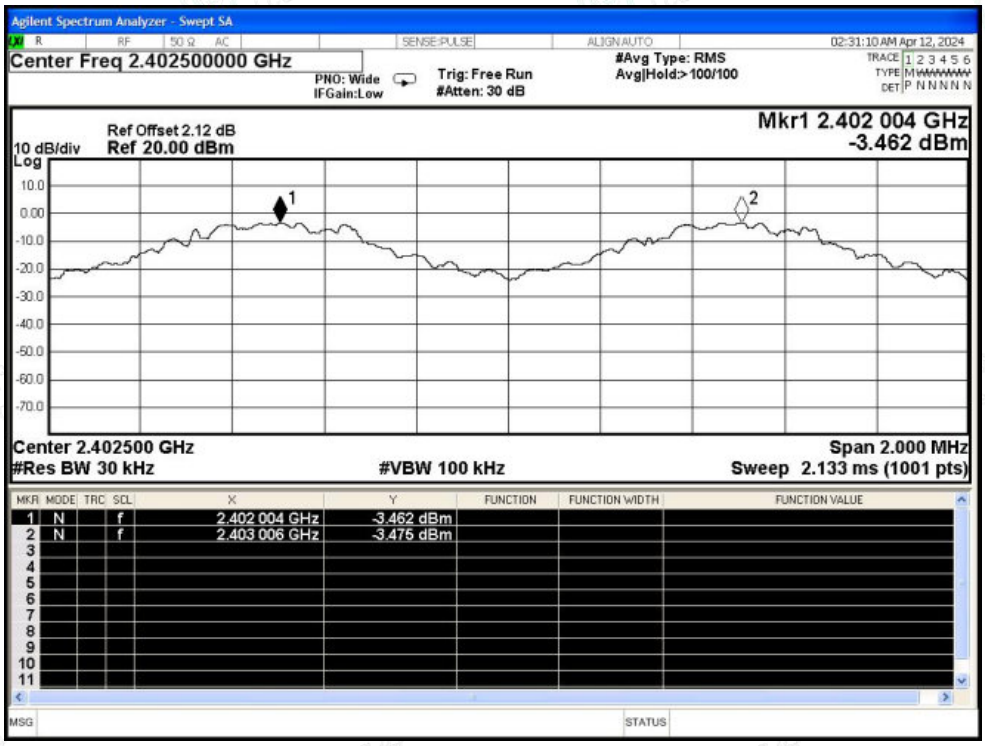


# A.3 Carrier Frequencies Separation

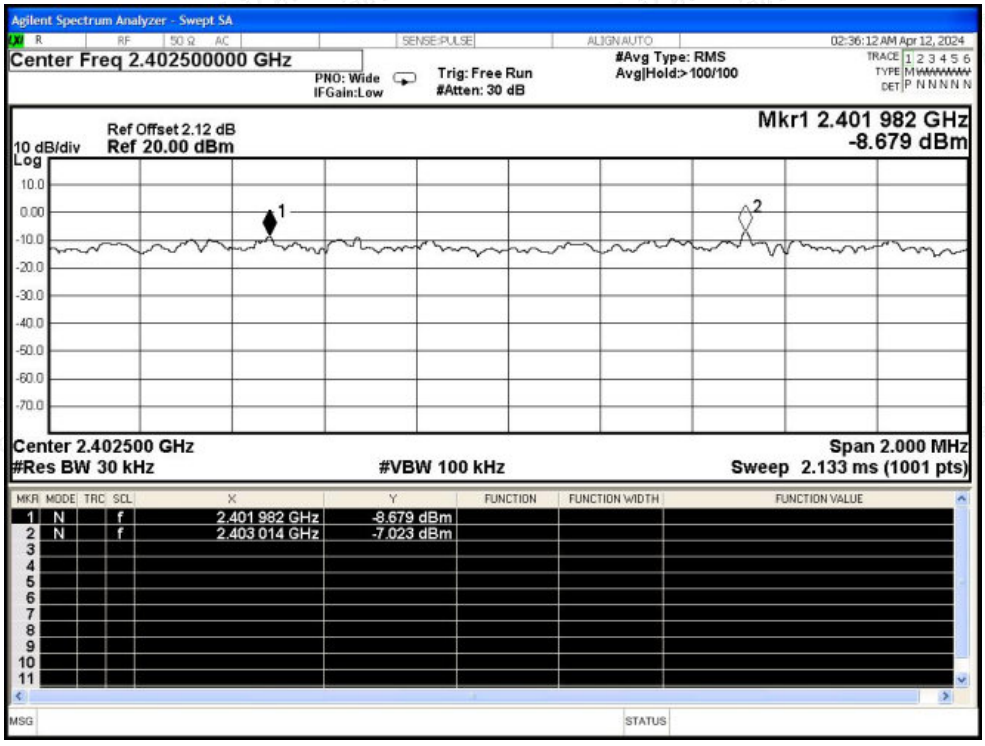
| Condition | Mode | Antenna | Hopping Freq1 (MHz) | Hopping Freq2 (MHz) | HFS (MHz) | Limit (MHz) | Verdict |
|---|---|---|---|---|---|---|---|
| NVNT | 1-DH5 | Ant1 | 2402.004 | 2403.006 | 1.002 | 0.677 | Pass |
| NVNT | 2-DH5 | Ant1 | 2401.982 | 2403.014 | 1.032 | 0.859 | Pass |
| NVNT | 3-DH5 | Ant1 | 2402.148 | 2403.156 | 1.008 | 0.866 | Pass |

Test Graphs

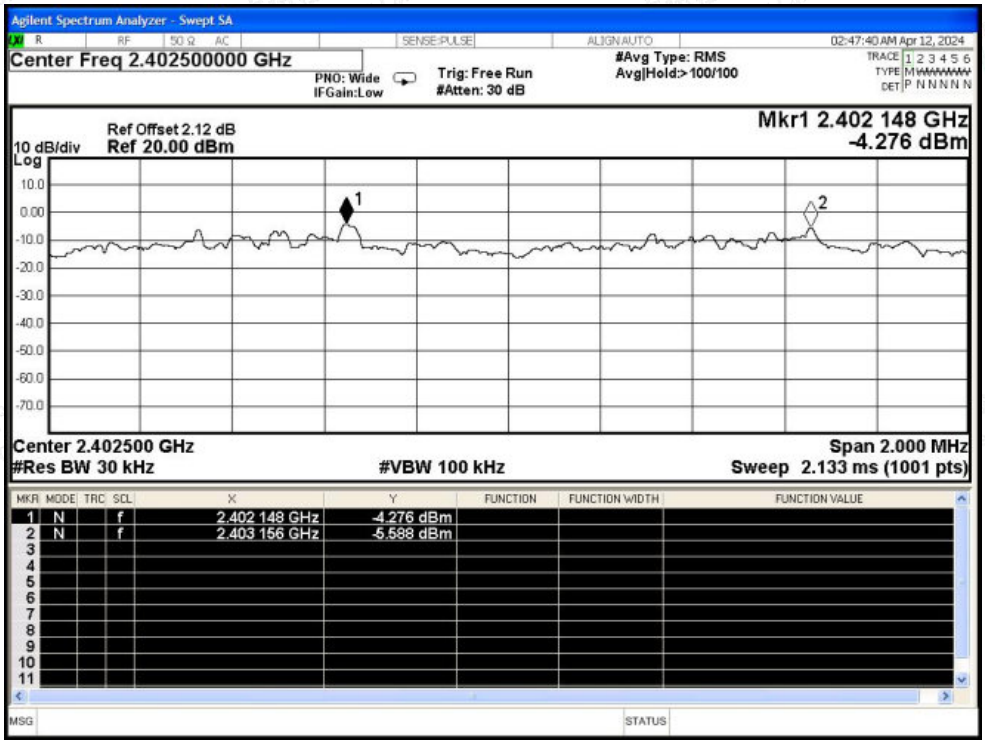
CFS NVNT 1-DH5 2402MHz Ant1




CFS NVNT 2-DH5 2402MHz Ant1



CFS NVNT 3-DH5 2402MHz Ant1

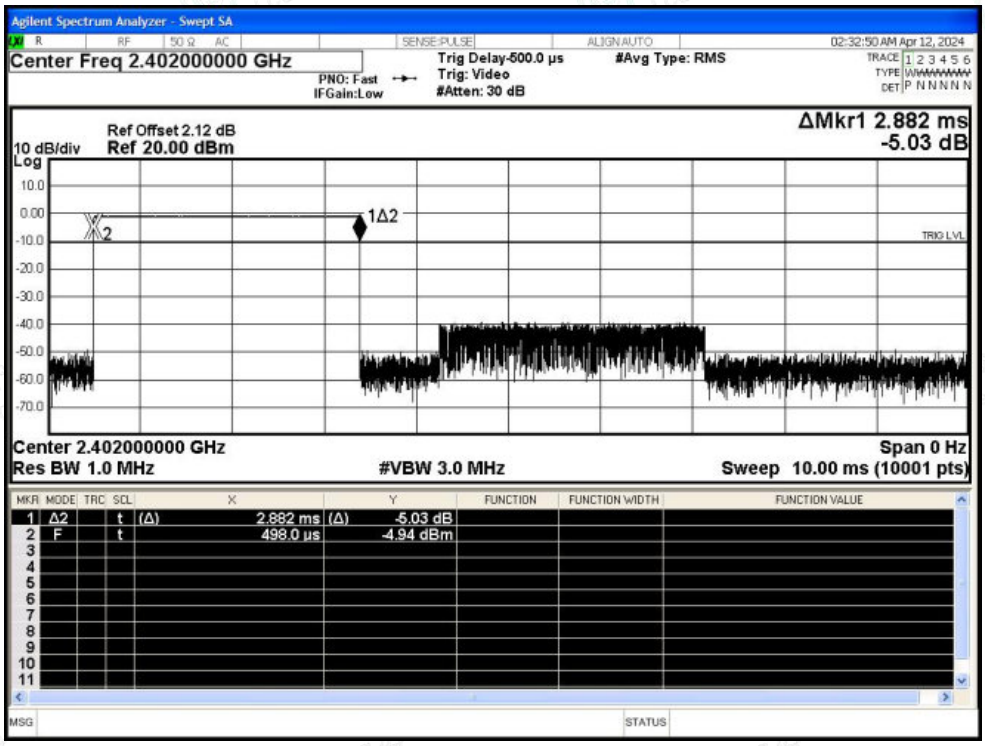


## A.4 Dwell Time

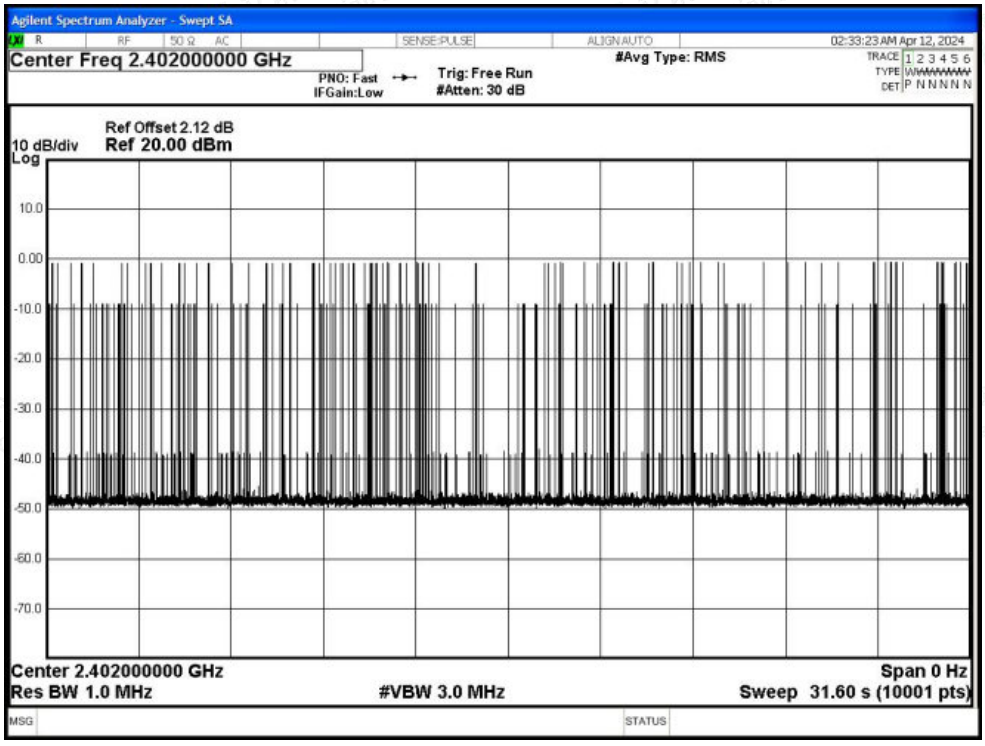
| Condition | Mode | Frequency (MHz) | Antenna | Pulse Time (ms) | Total Dwell Time (ms) | Burst Count | Period Time (ms) | Limit (ms) | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| NVNT | 1-DH5 | 2402 | Ant1 | 2.882 | 262.262 | 91 | 31600 | 400 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | 2.88 | 293.76 | 102 | 31600 | 400 | Pass |
| NVNT | 3-DH5 | 2402 | Ant1 | 2.887 | 285.813 | 99 | 31600 | 400 | Pass |

Test Graphs

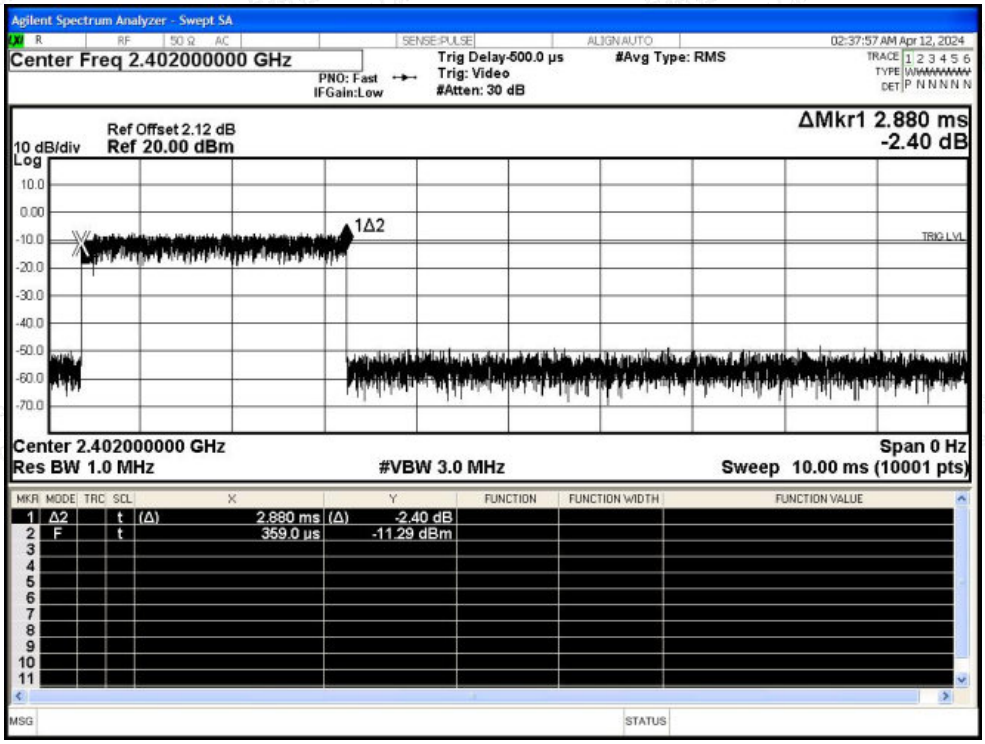
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



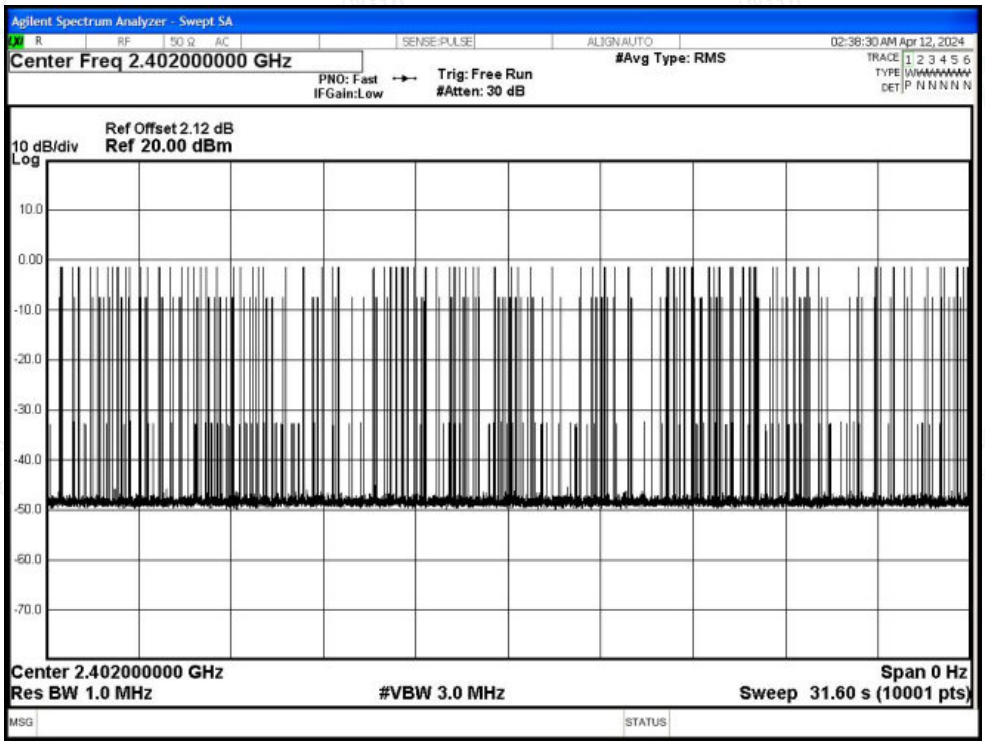

Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



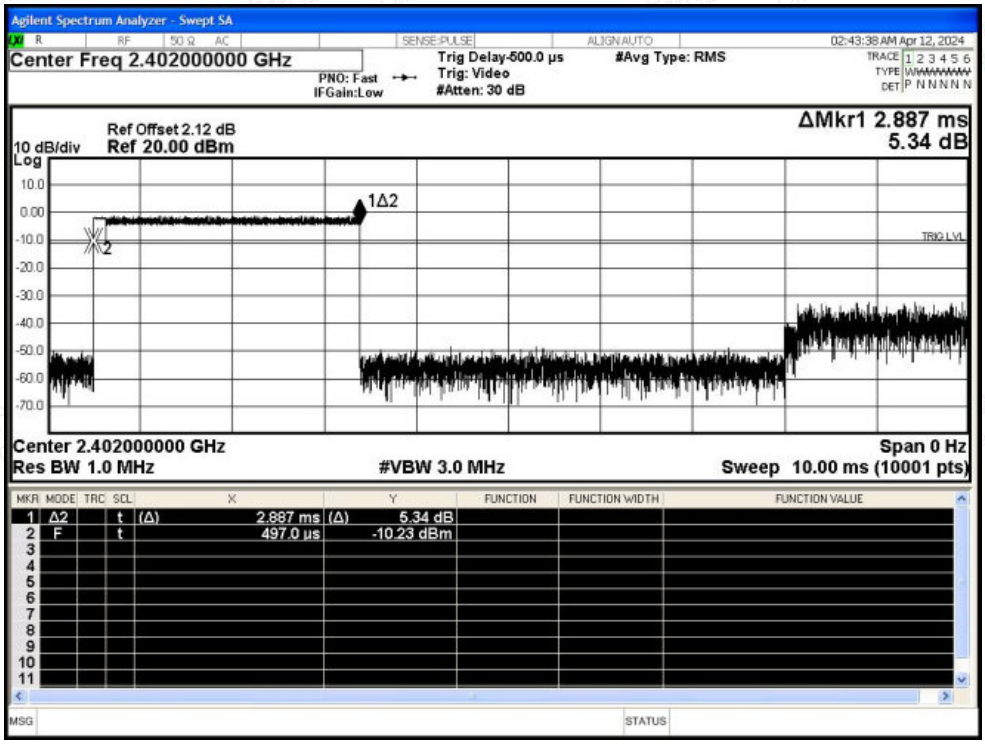
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



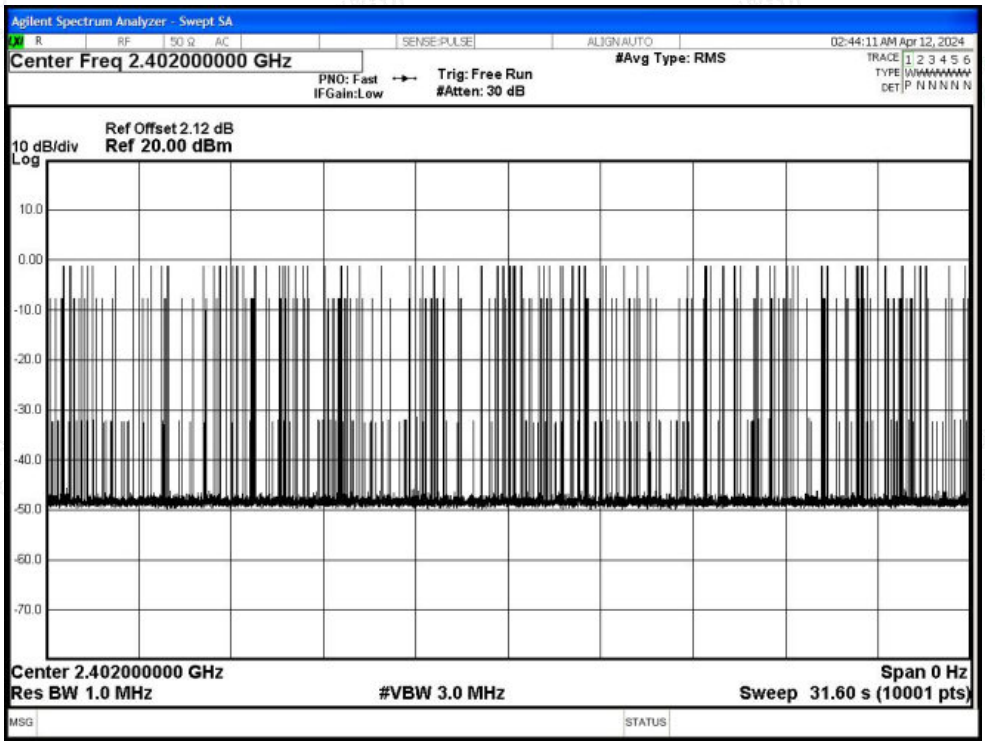

Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2402MHz Ant1 One Burst




Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated

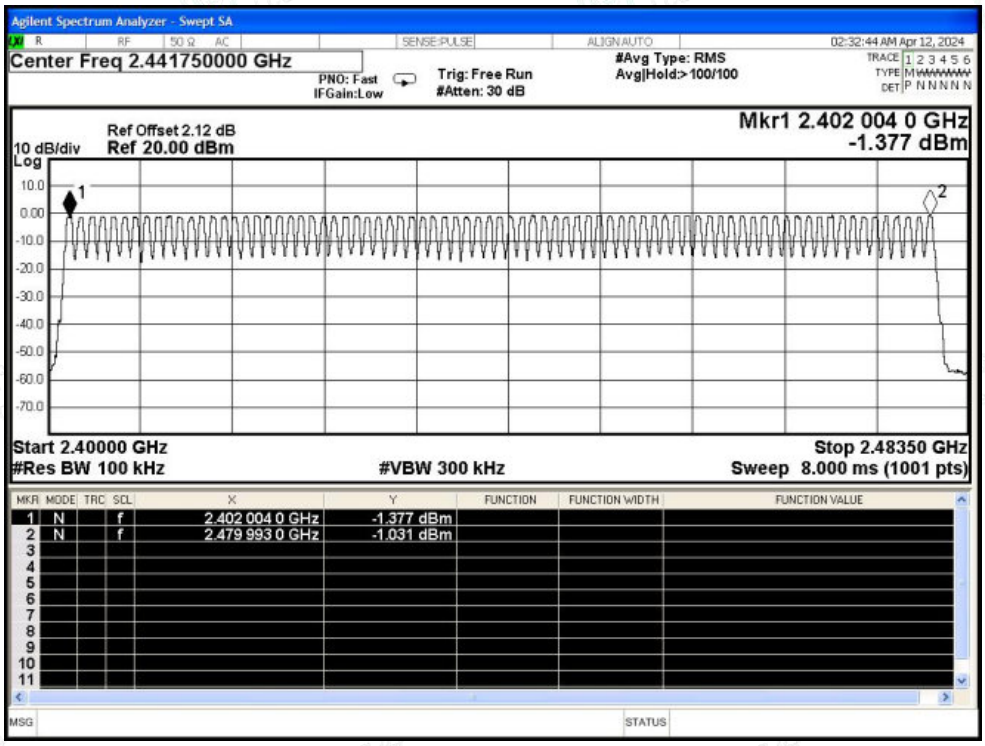


# A.5 Number of Hopping Channel

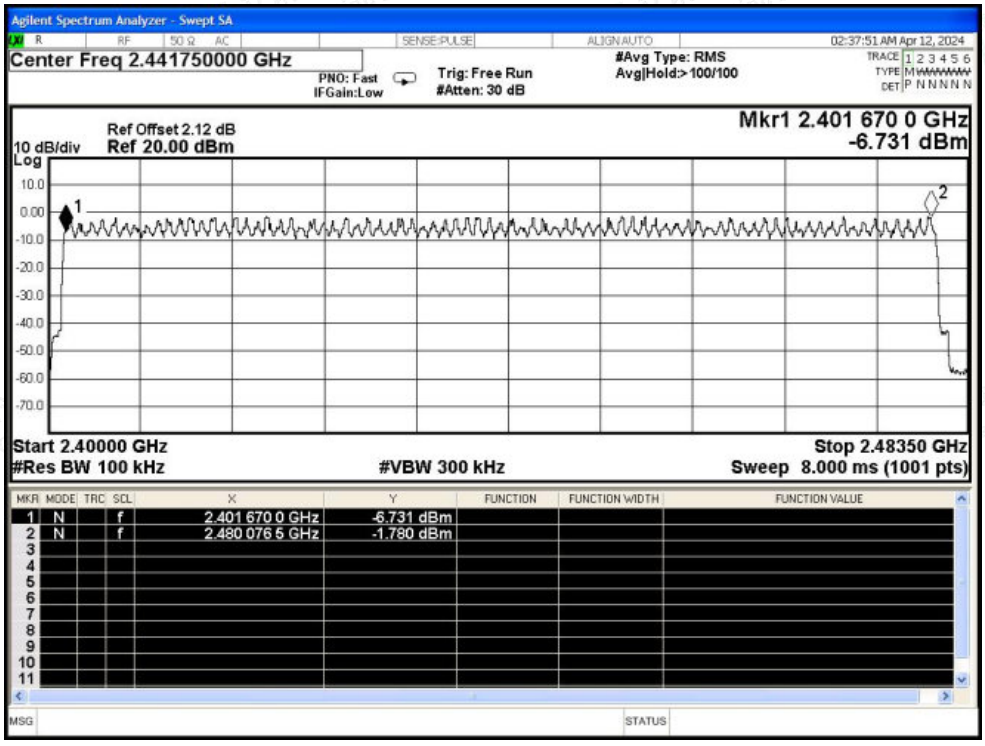
| Condition | Mode | Antenna | Hopping Number | Limit | Verdict |
|---|---|---|---|---|---|
| NVNT | 1-DH5 | Ant1 | 79 | 15 | Pass |
| NVNT | 2-DH5 | Ant1 | 79 | 15 | Pass |
| NVNT | 3-DH5 | Ant1 | 79 | 15 | Pass |

Test Graphs

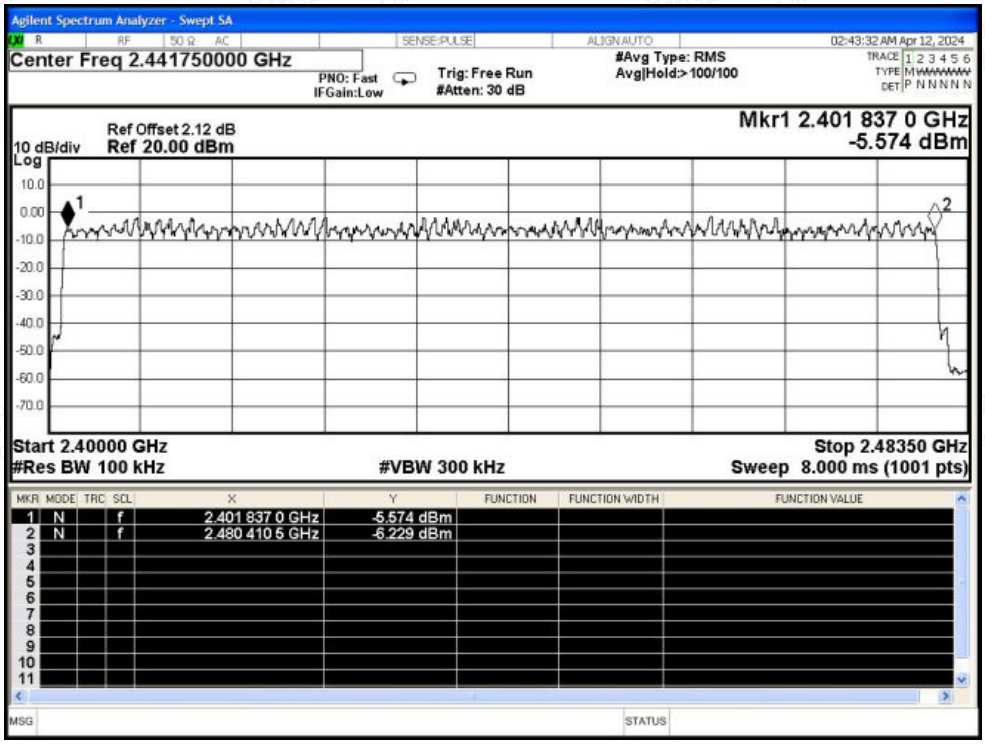
Hopping No. NVNT 1-DH5 2402MHz Ant1




Hopping No. NVNT 2-DH5 2402MHz Ant1



Hopping No. NVNT 3-DH5 2402MHz Ant1

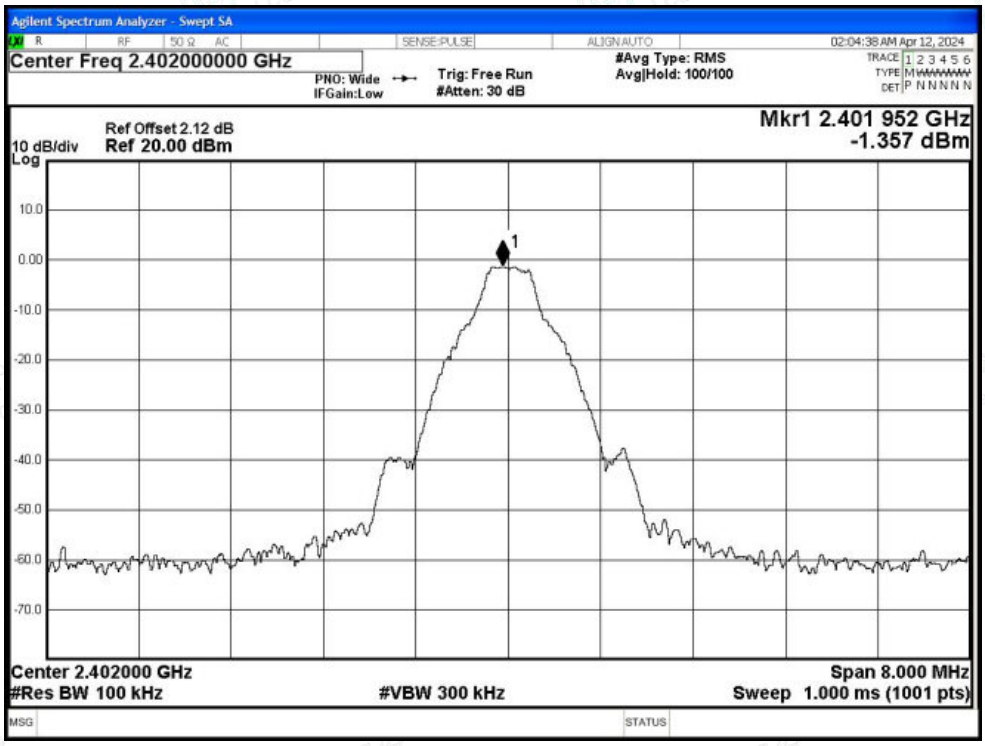


# A.6 Band Edge

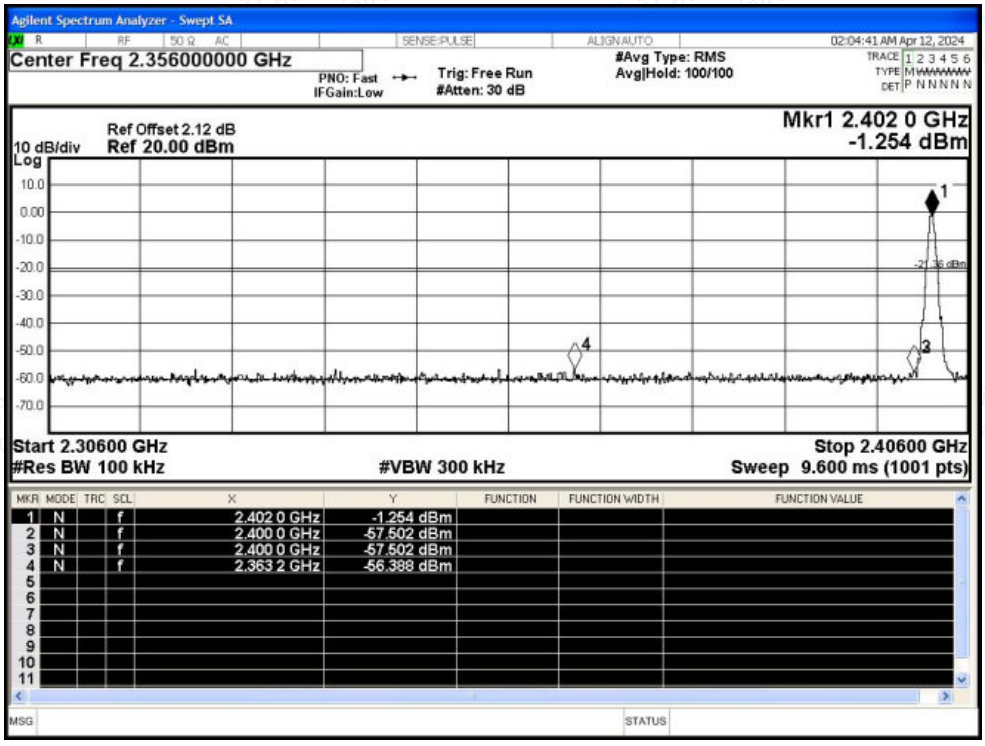
| Condition | Mode | Frequency (MHz) | Antenna | Hopping Mode | Max Value (dBc) | Limit (dBc) | Verdict |
|---|---|---|---|---|---|---|---|
| NVNT | 1-DH5 | 2402 | Ant1 | No-Hopping | -55.03 | -20 | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | No-Hopping | -56.42 | -20 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | No-Hopping | -54.15 | -20 | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | No-Hopping | -54.75 | -20 | Pass |
| NVNT | 3-DH5 | 2402 | Ant1 | No-Hopping | -52.37 | -20 | Pass |
| NVNT | 3-DH5 | 2480 | Ant1 | No-Hopping | -54.11 | -20 | Pass |

Test Graphs

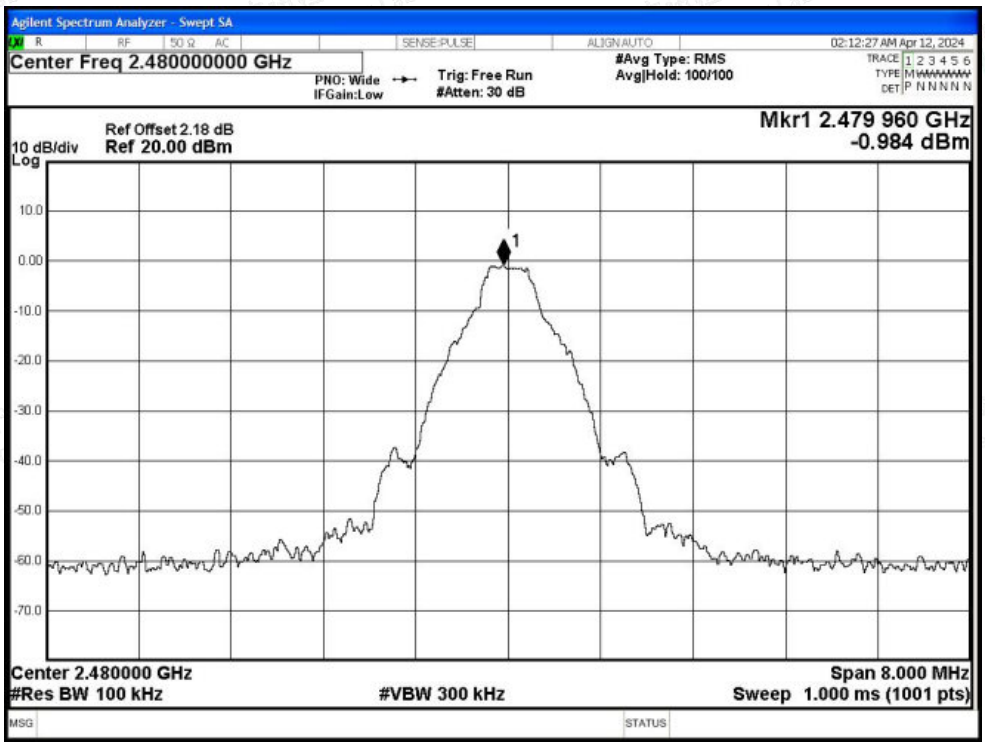
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



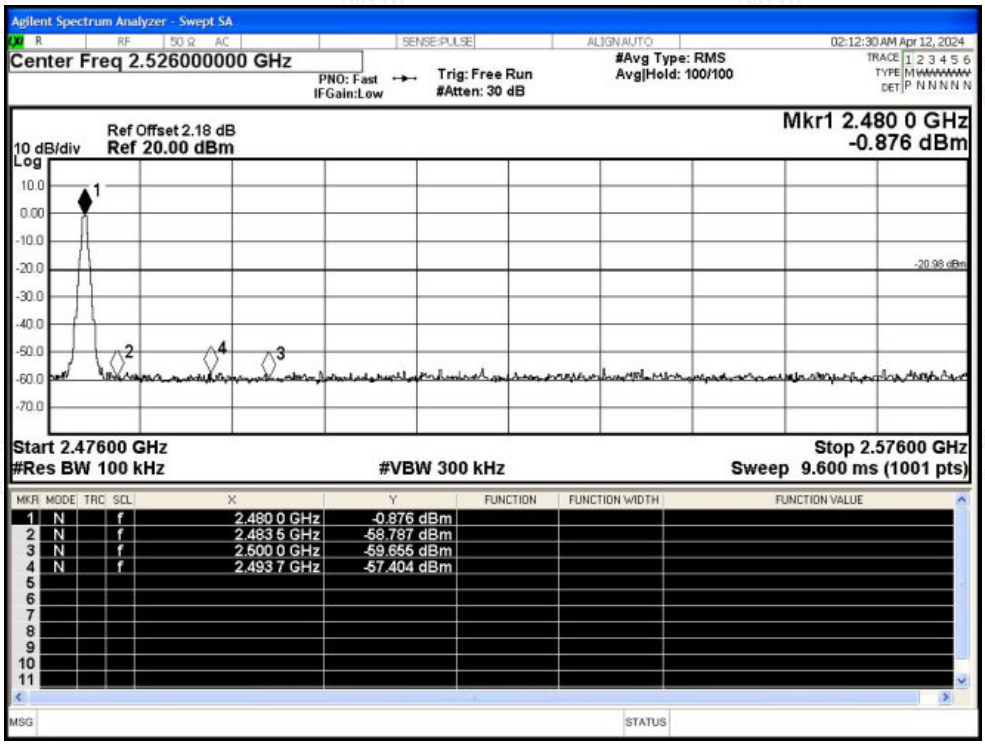

Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



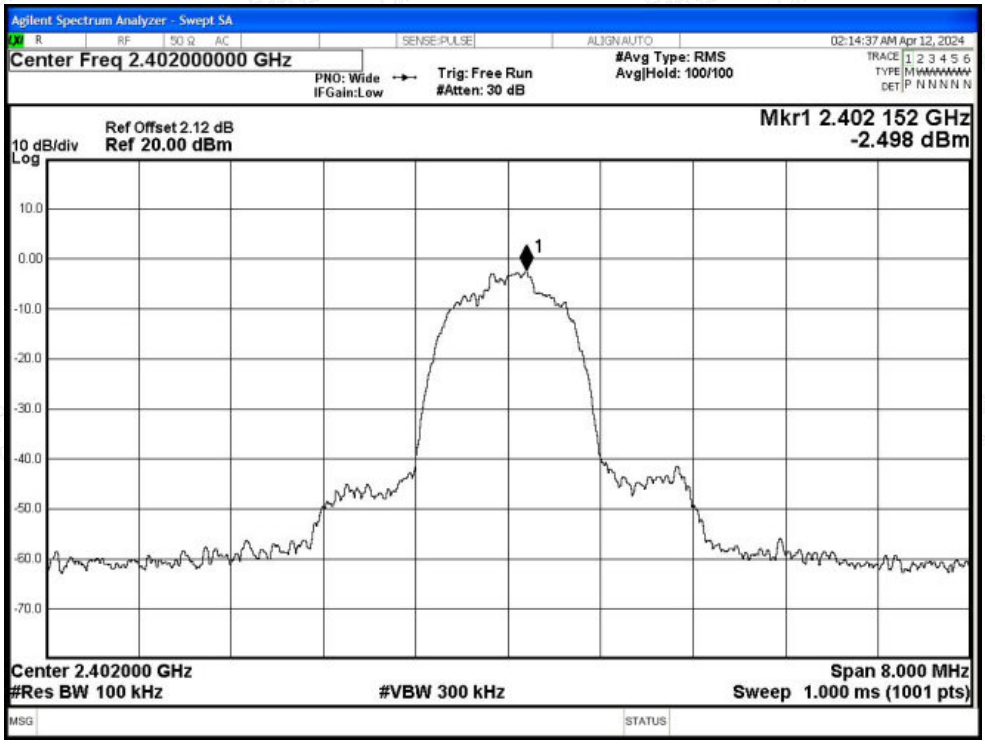
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



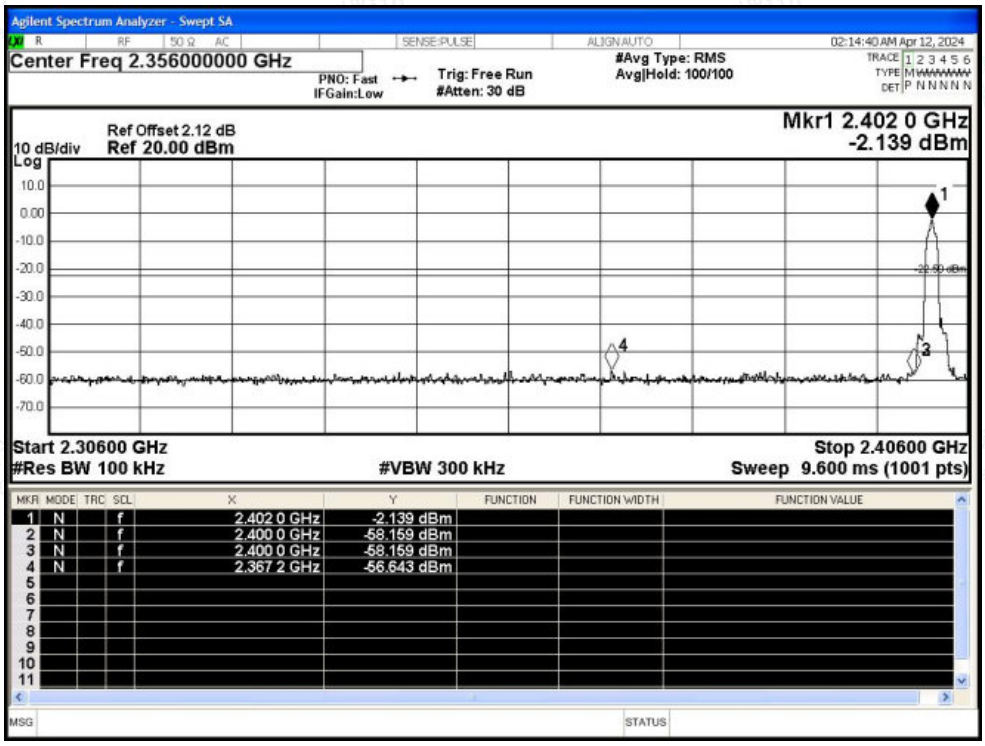

Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



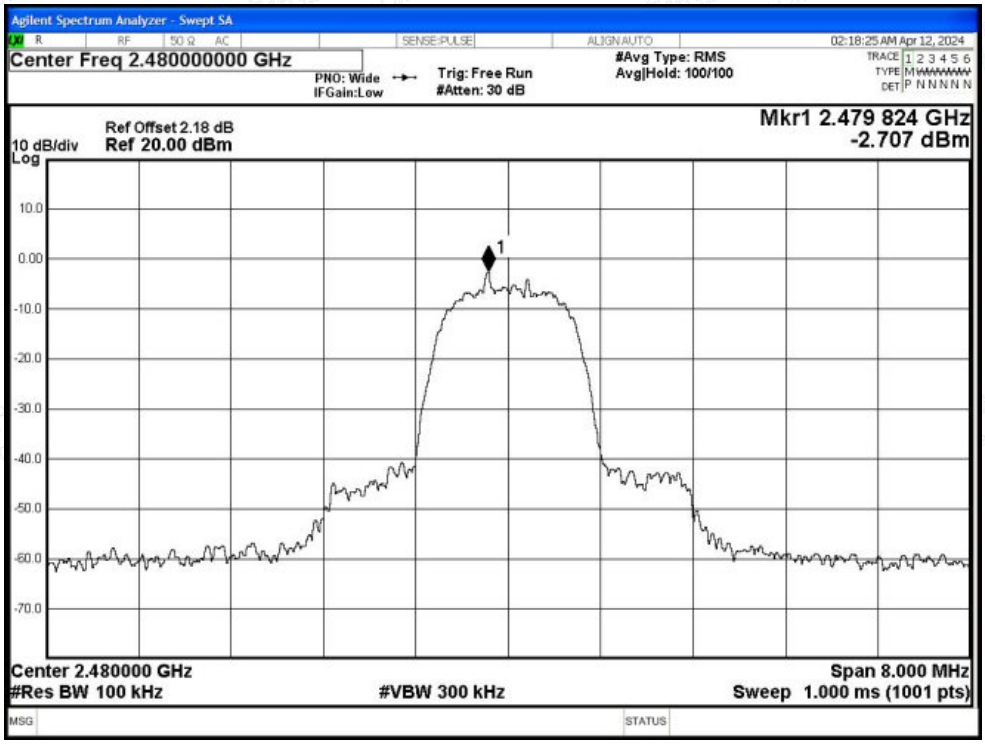
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



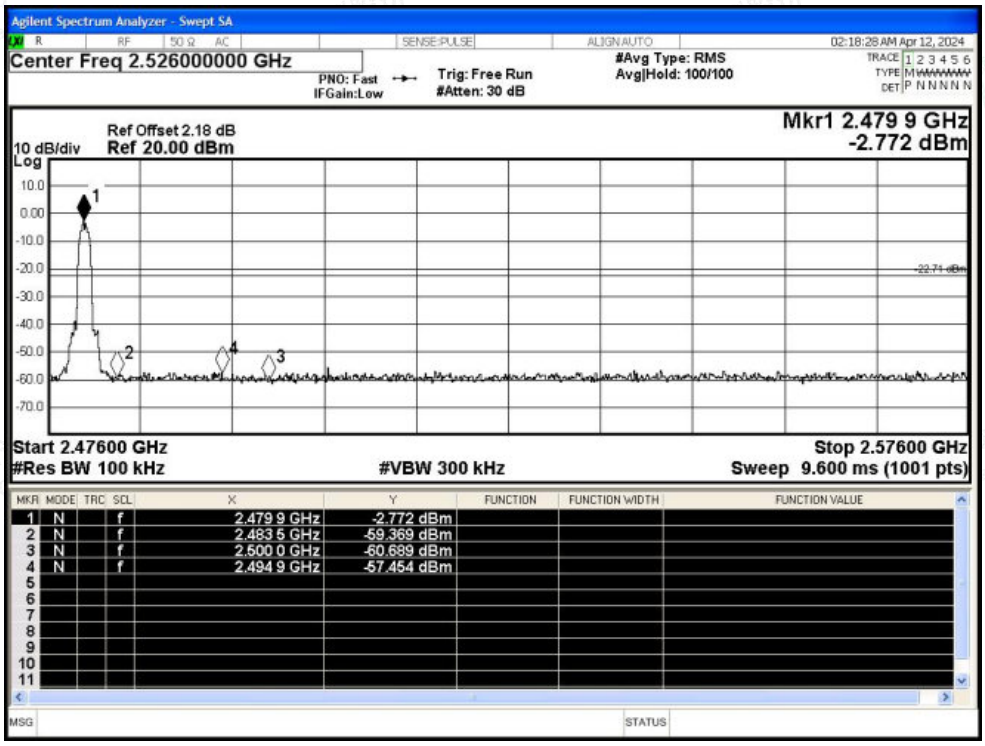

Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



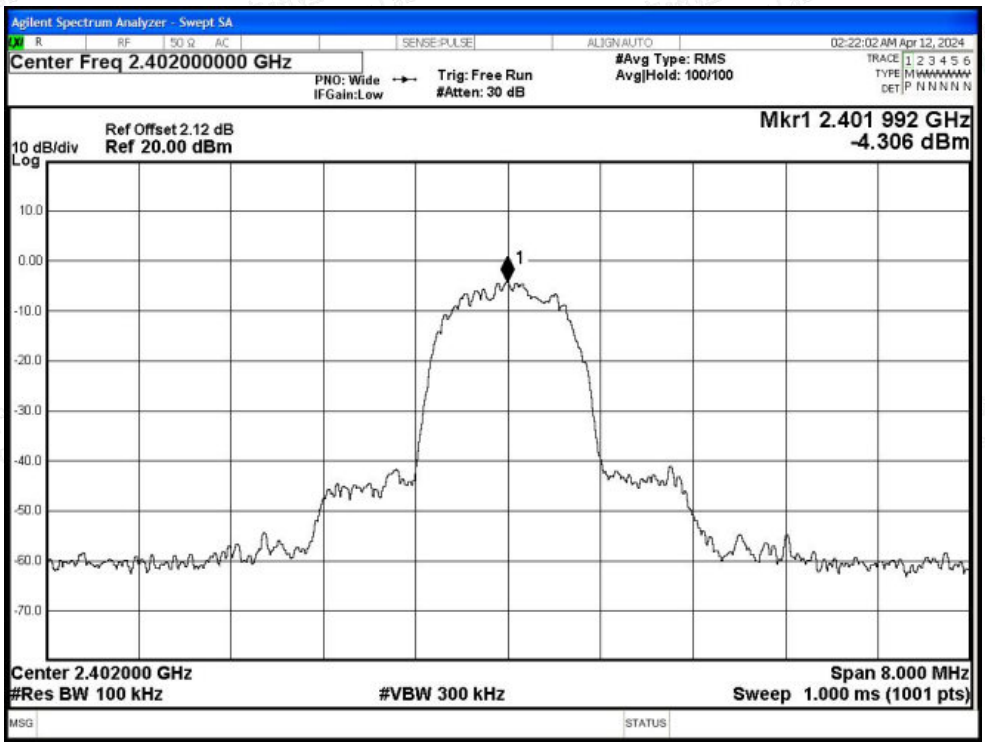
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



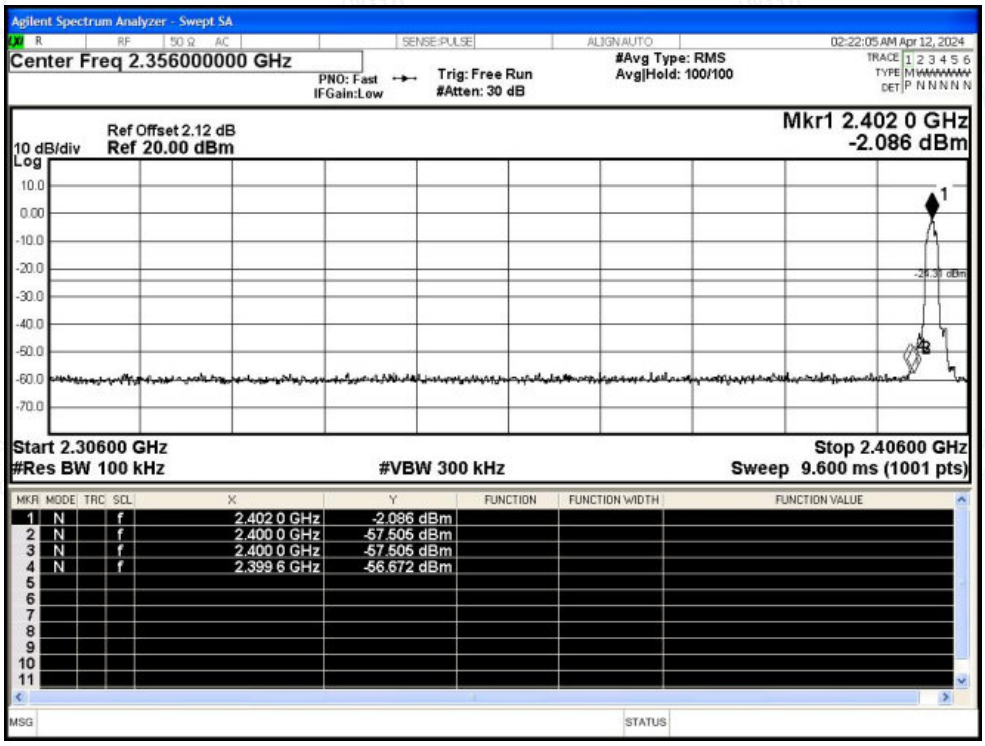

Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



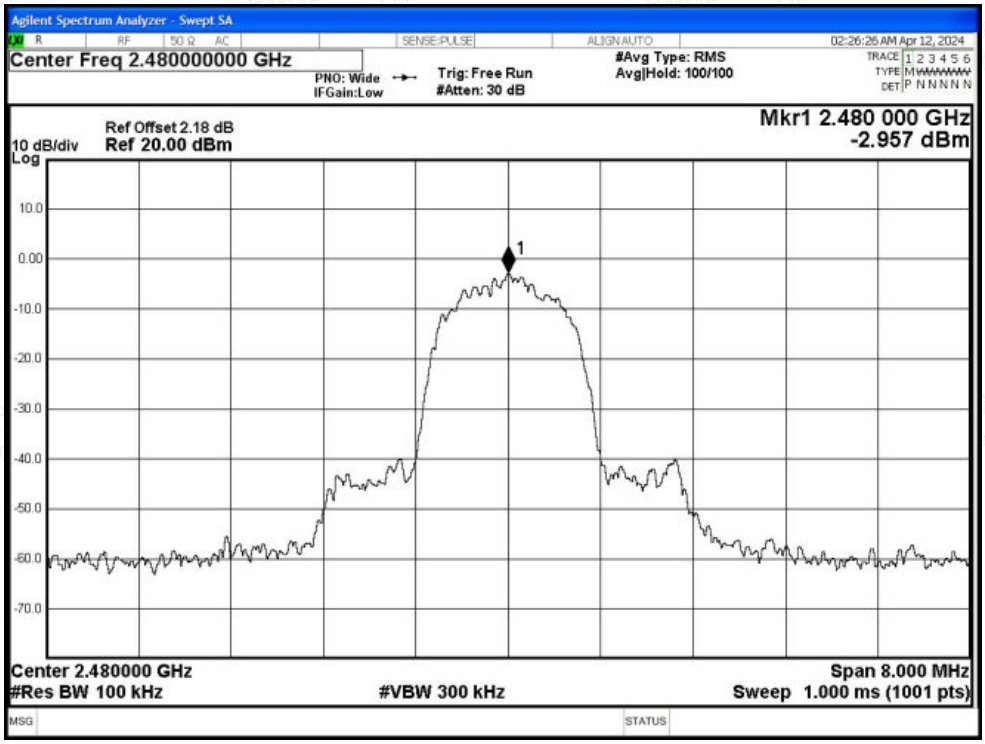
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



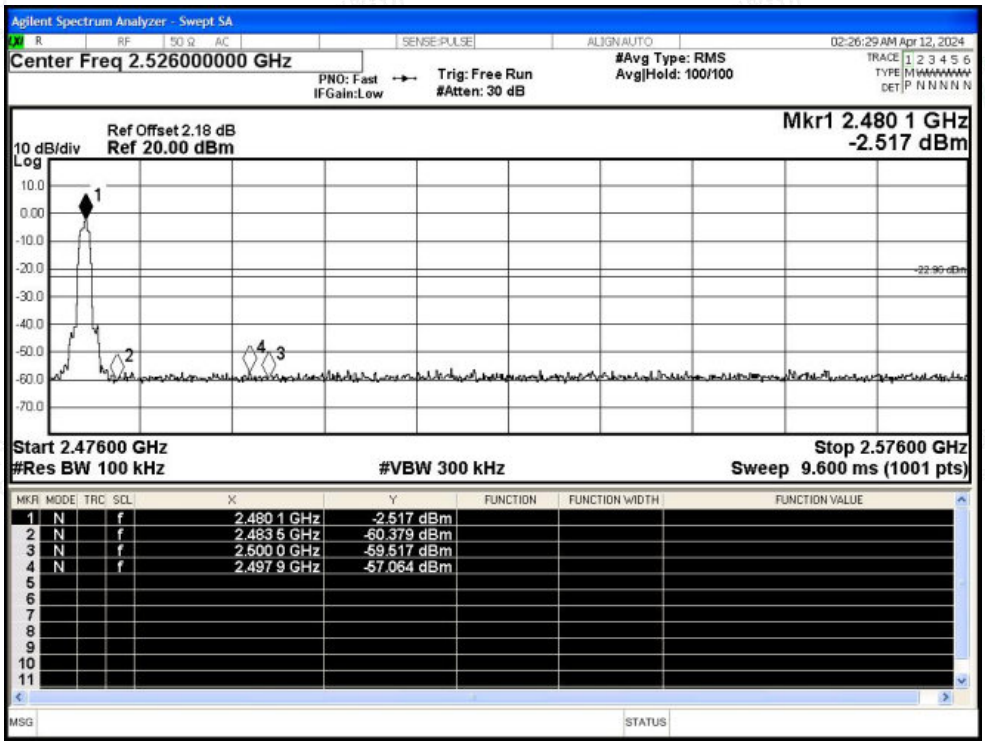

Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



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




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

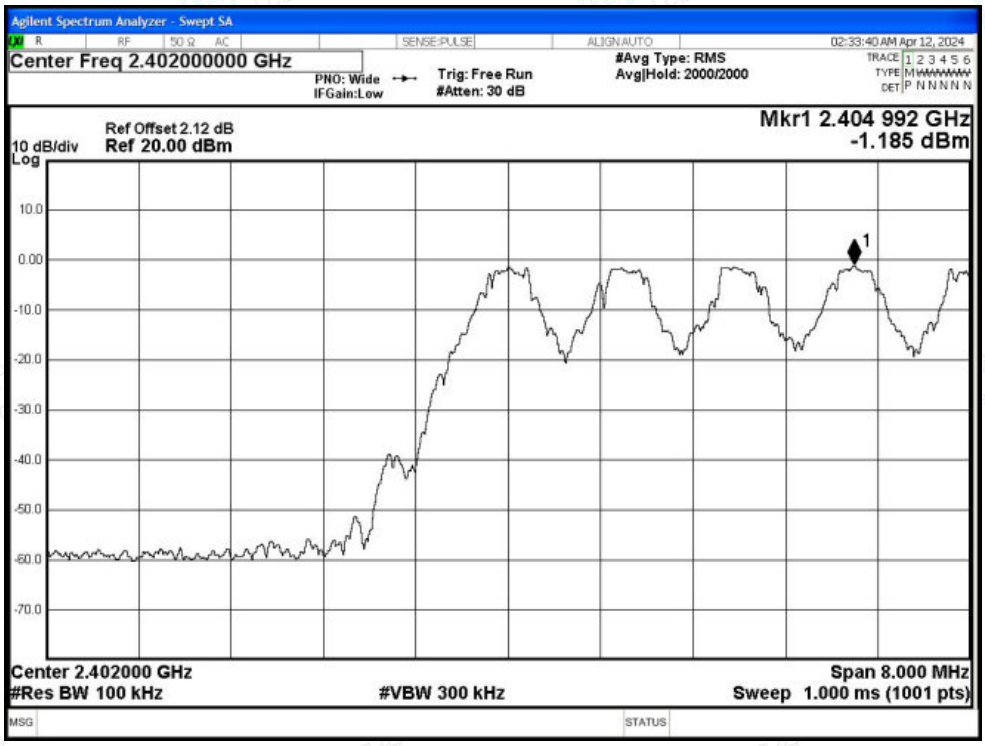


## (Hopping)

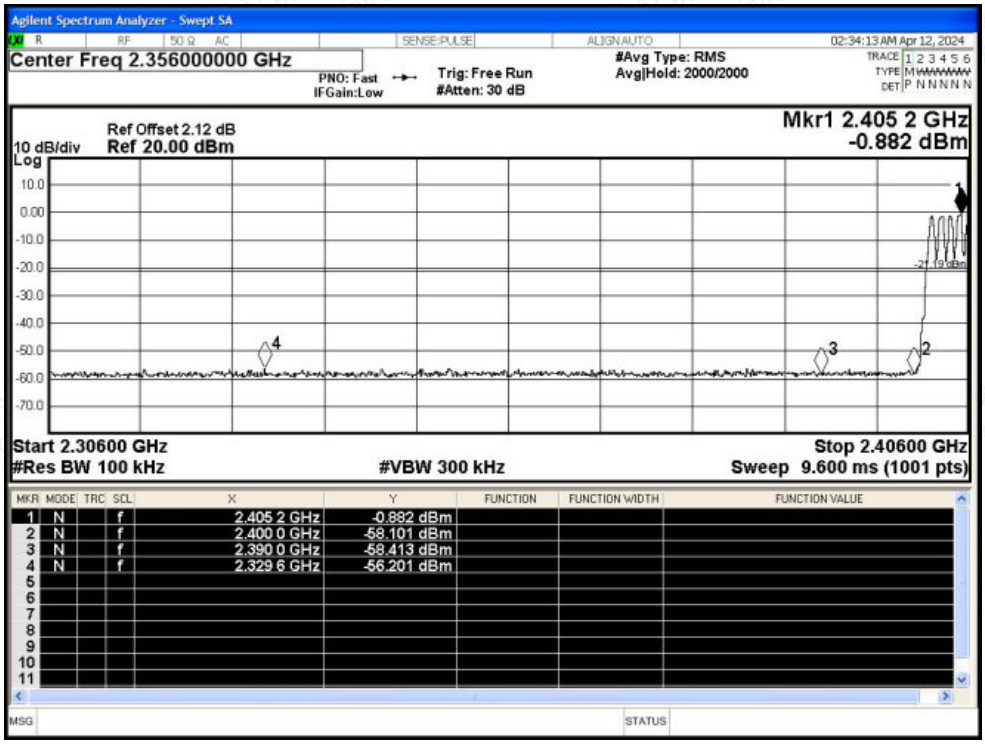
| Condition | Mode | Frequency (MHz) | Antenna | Hopping Mode | Max Value (dBc) | Limit (dBc) | Verdict |
|---|---|---|---|---|---|---|---|
| NVNT | 1-DH5 | 2402 | Ant1 | Hopping | -55.02 | -20 | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | Hopping | -54.64 | -20 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | Hopping | -53.97 | -20 | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | Hopping | -54.24 | -20 | Pass |
| NVNT | 3-DH5 | 2402 | Ant1 | Hopping | -53.43 | -20 | Pass |
| NVNT | 3-DH5 | 2480 | Ant1 | Hopping | -54.08 | -20 | Pass |

Test Graphs

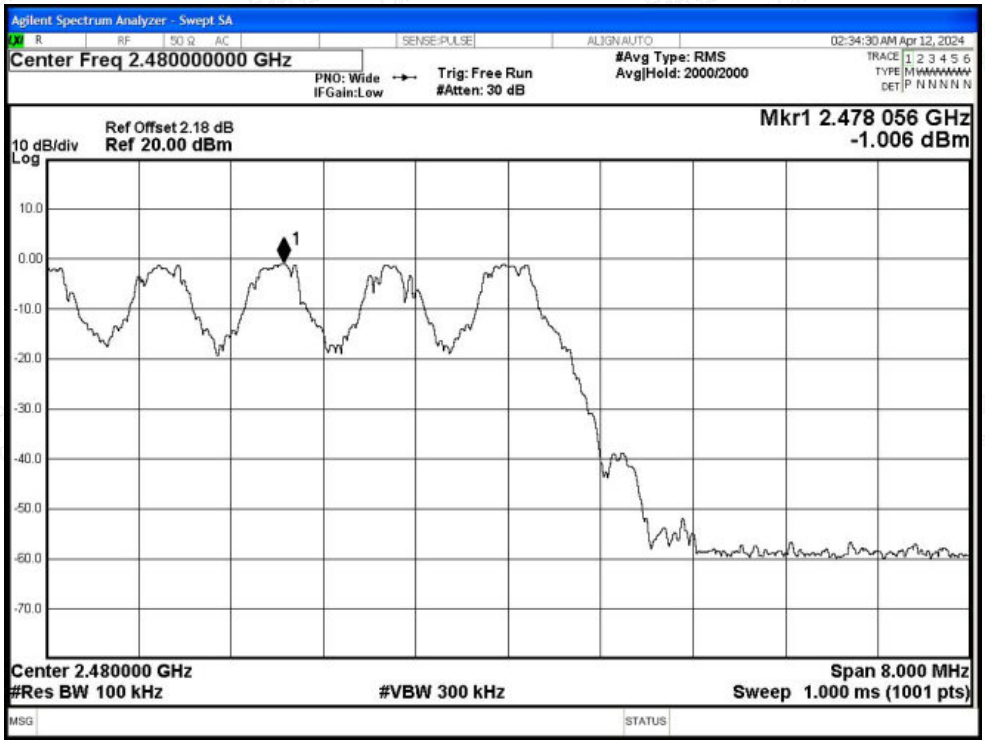
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



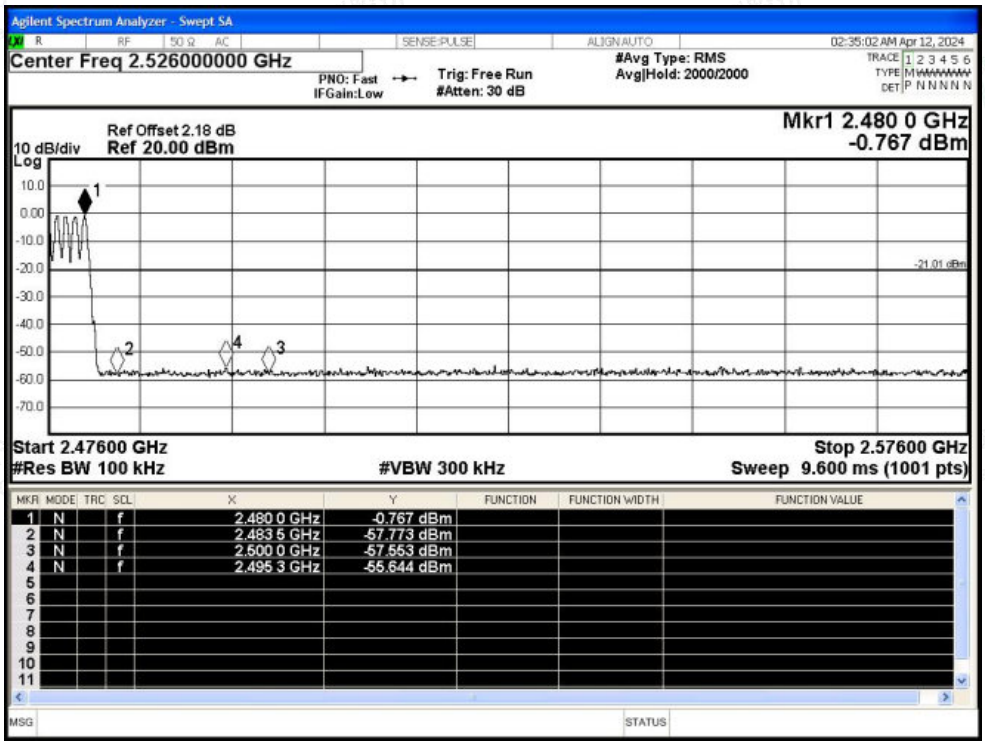

Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



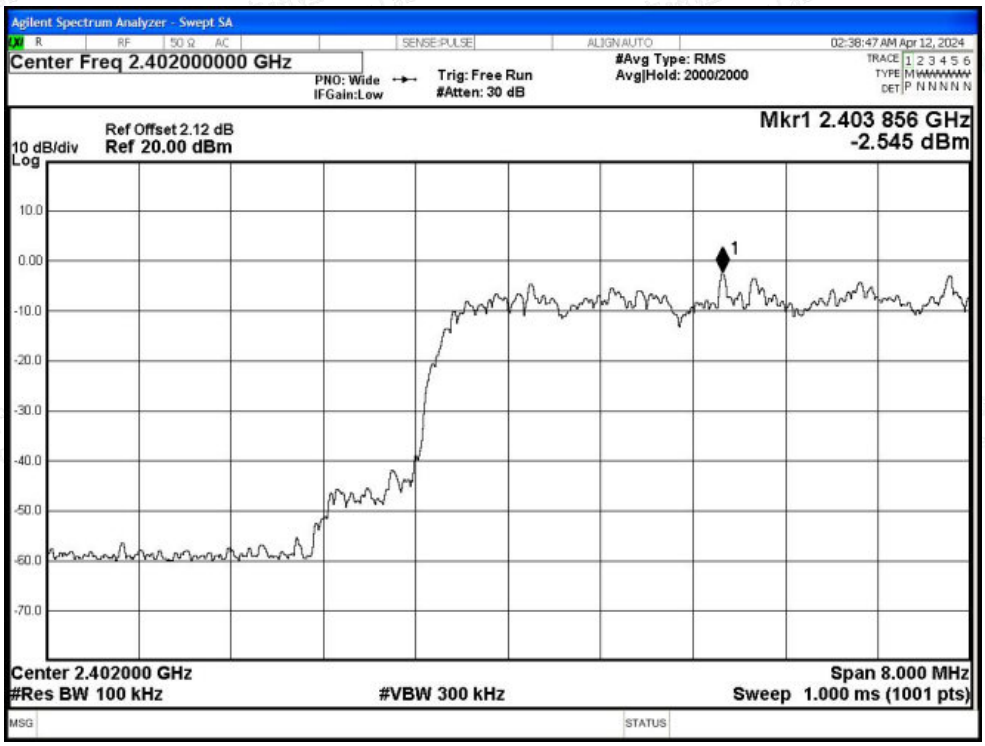
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



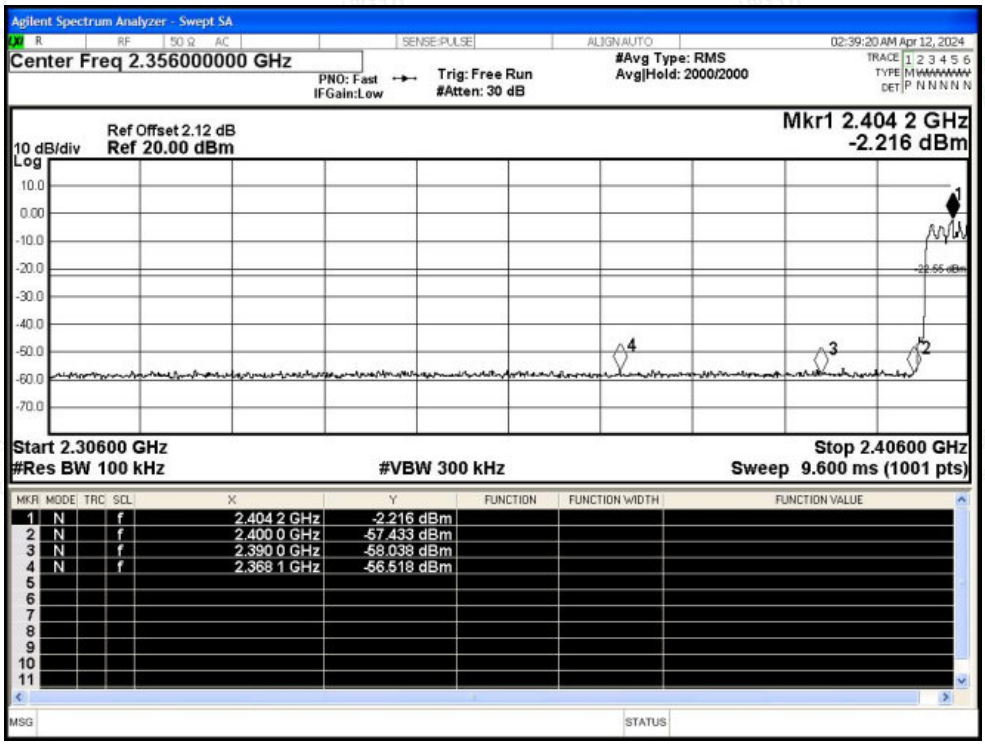

Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission

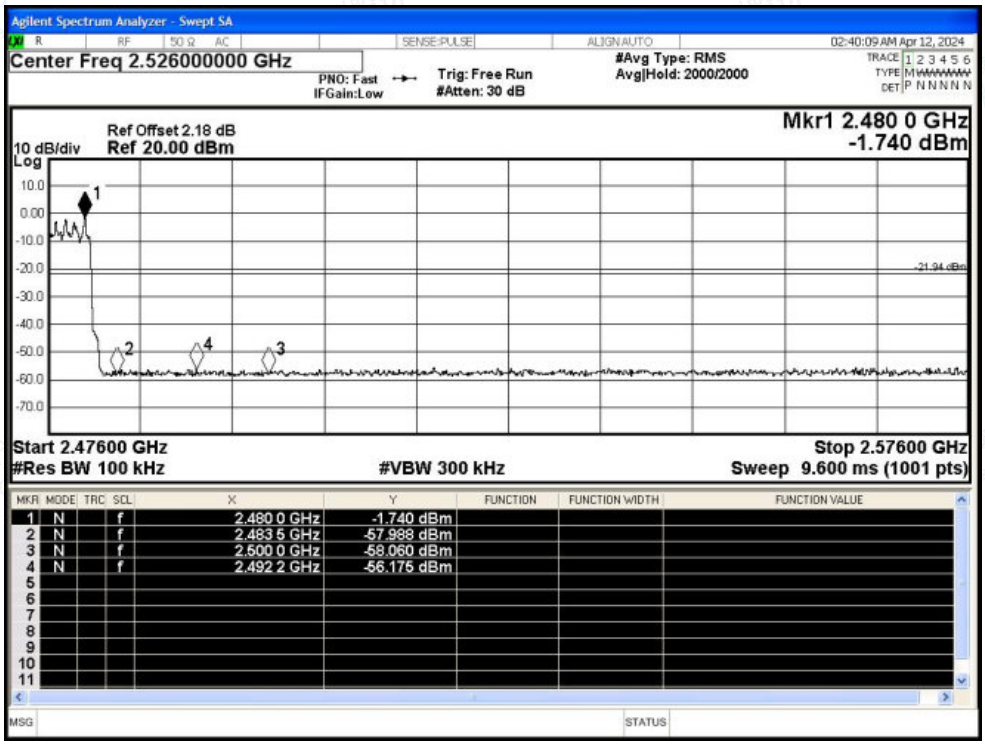


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref

Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission