

RF Test Data for Bluetooth(BR+EDR) (Conducted Measurements)

| General Description of EUT | |
|---|--------------------------|
| Product Name: | Helmet Bluetooth Headset |
| Test Model: | X9 |
| Sample ID: | 202403-0119-1-2# |
| Environmental Conditions | |
| Temperature: | 25°C |
| Relative Humidity: | 55% |
| Test Voltage: | DC 3.7V |
| Test Engineer: | Jolin Lee |
| Note: For a more detailed features description, please refer to the report TBR-C-202403-0119-1 The report only show the worst case data. | |

Contents

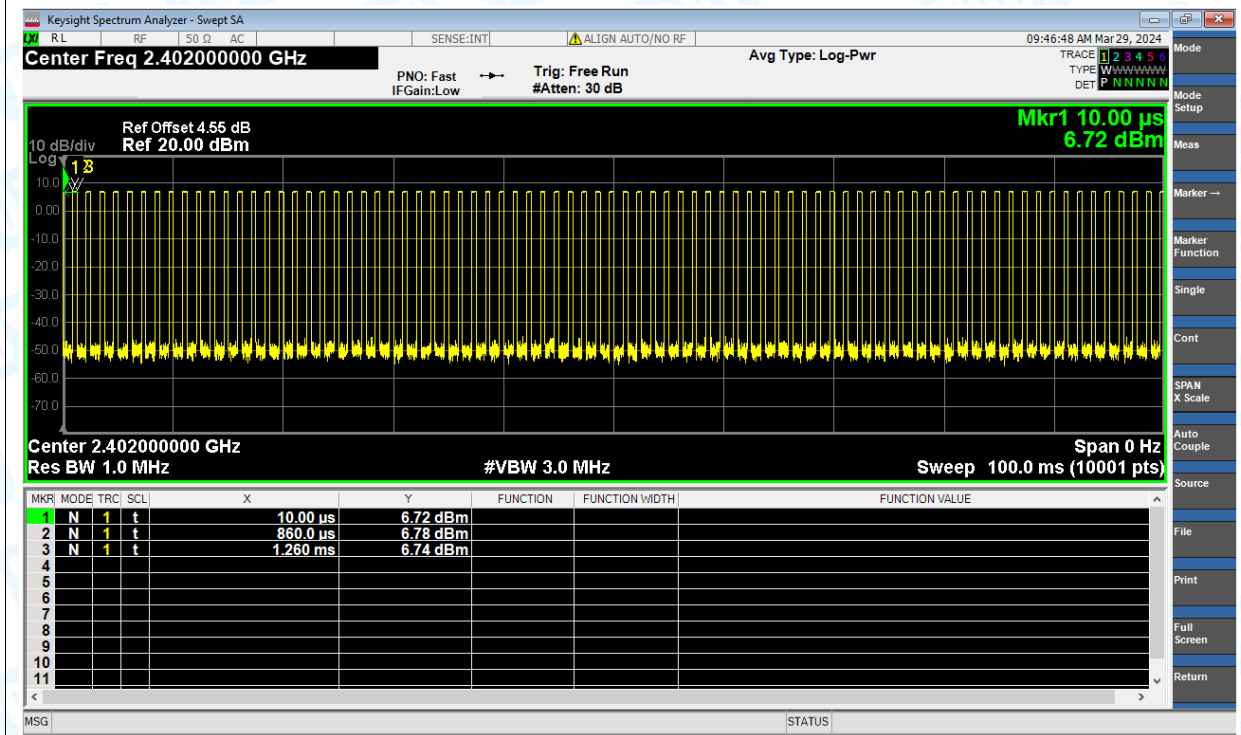
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1. Duty Cycle

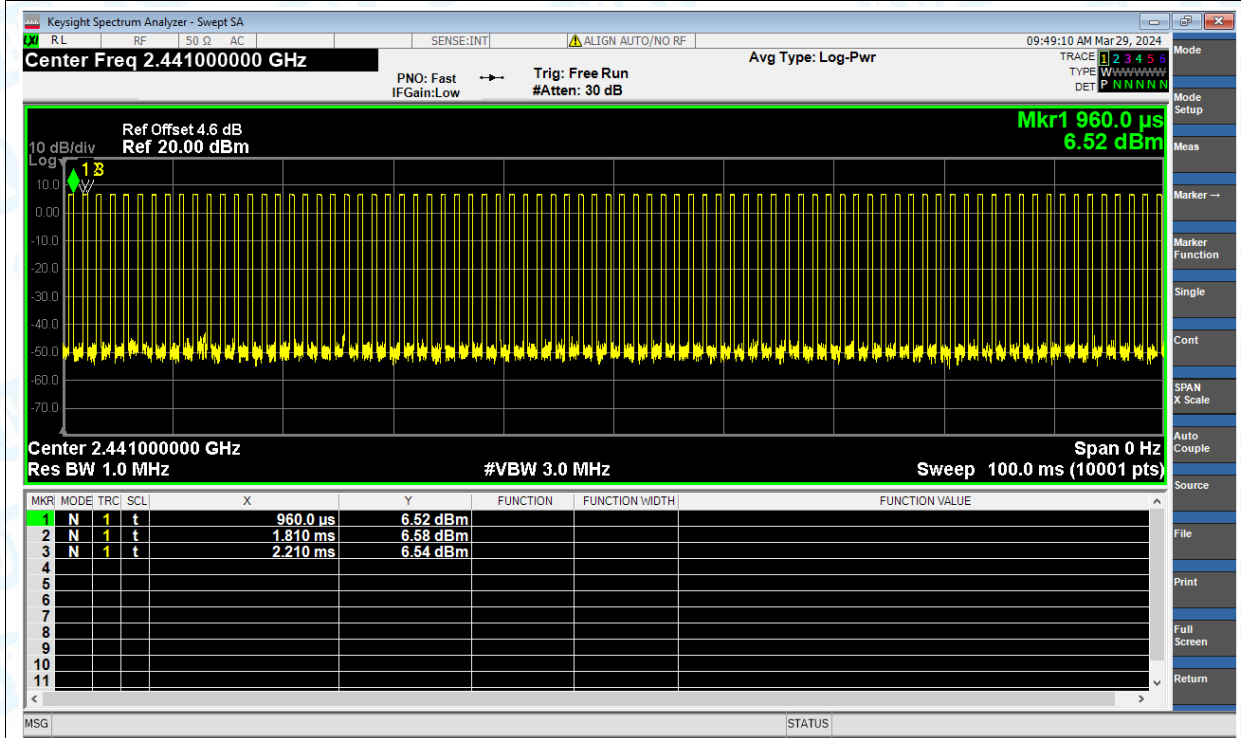
| Condition | Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|-------|-----------------|---------|----------------|------------------------|-----------|
| NVNT | 1-DH1 | 2402 | Ant1 | 32 | 4.95 | 2.5 |
| NVNT | 1-DH1 | 2441 | Ant1 | 32 | 4.95 | 2.5 |
| NVNT | 1-DH1 | 2480 | Ant1 | 32 | 4.95 | 2.5 |
| NVNT | 2-DH1 | 2402 | Ant1 | 32.8 | 4.84 | 2.44 |
| NVNT | 2-DH1 | 2441 | Ant1 | 33.6 | 4.74 | 2.38 |
| NVNT | 2-DH1 | 2480 | Ant1 | 33.6 | 4.74 | 2.38 |
| NVNT | 3-DH1 | 2402 | Ant1 | 32.8 | 4.84 | 2.44 |
| NVNT | 3-DH1 | 2441 | Ant1 | 33.6 | 4.74 | 2.38 |
| NVNT | 3-DH1 | 2480 | Ant1 | 32.8 | 4.84 | 2.44 |

Test Graphs

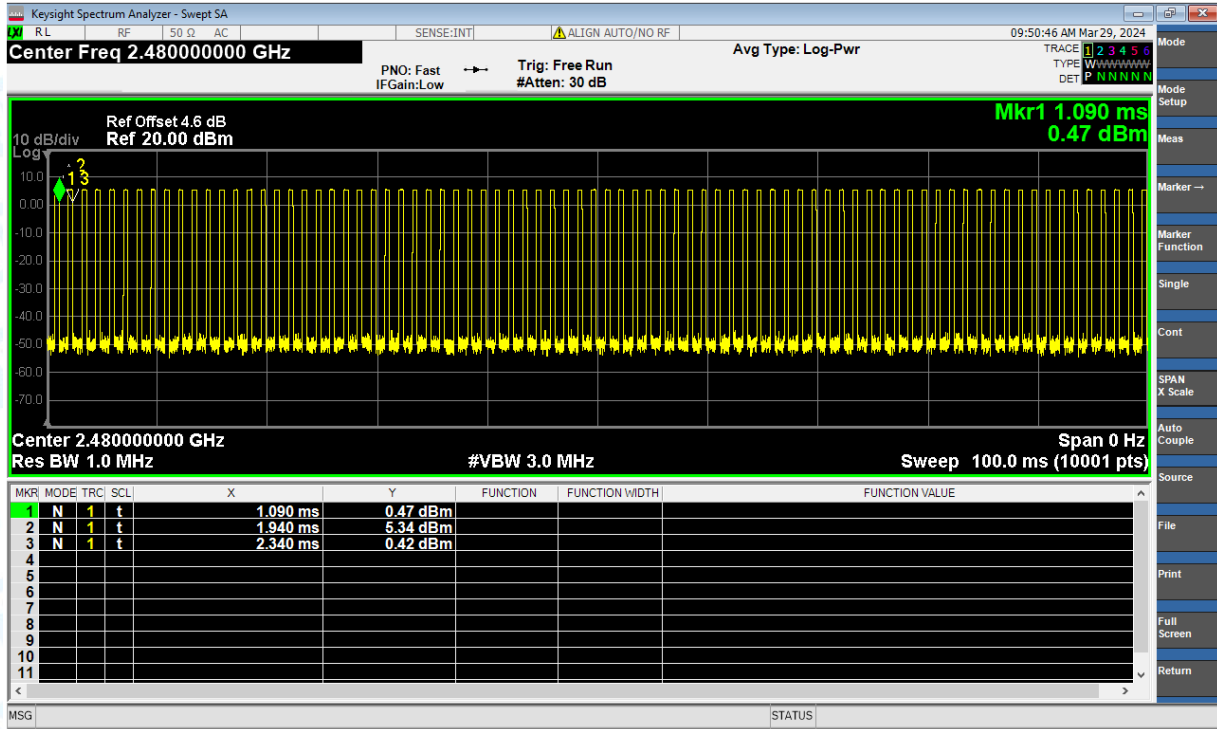
Duty Cycle NVNT 1-DH1 2402MHz Ant1



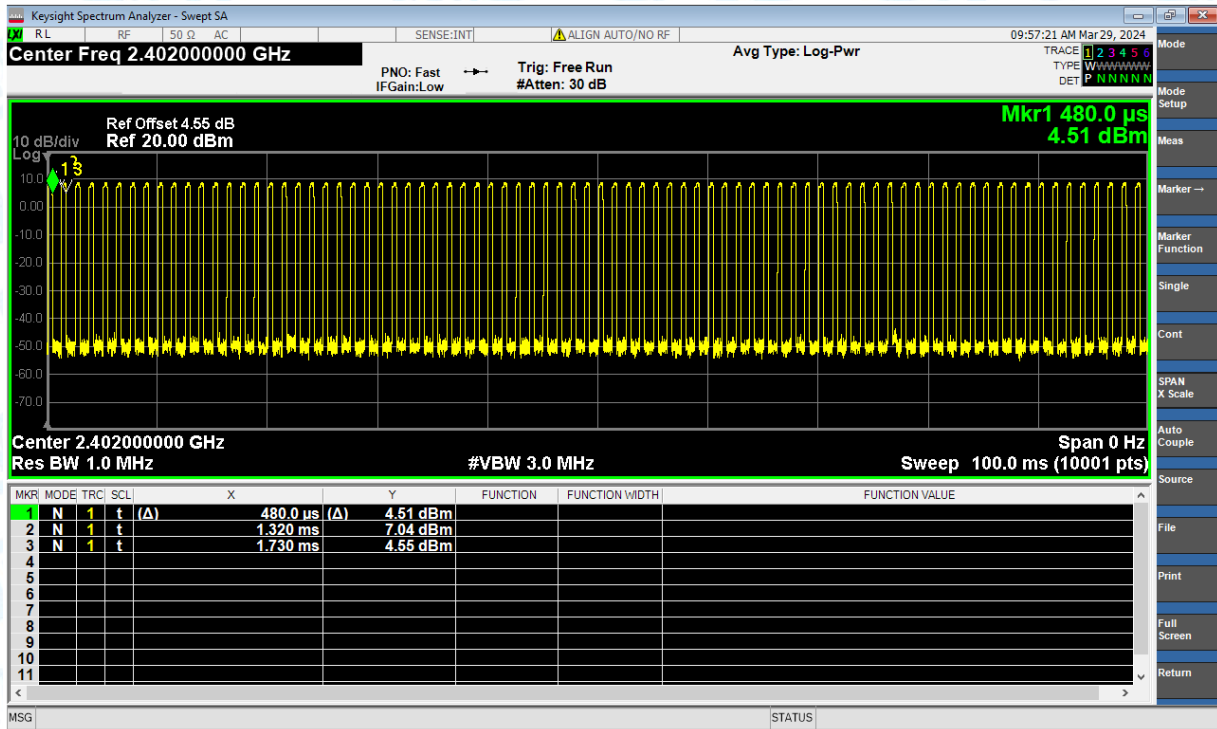
Duty Cycle NVNT 1-DH1 2441MHz Ant1



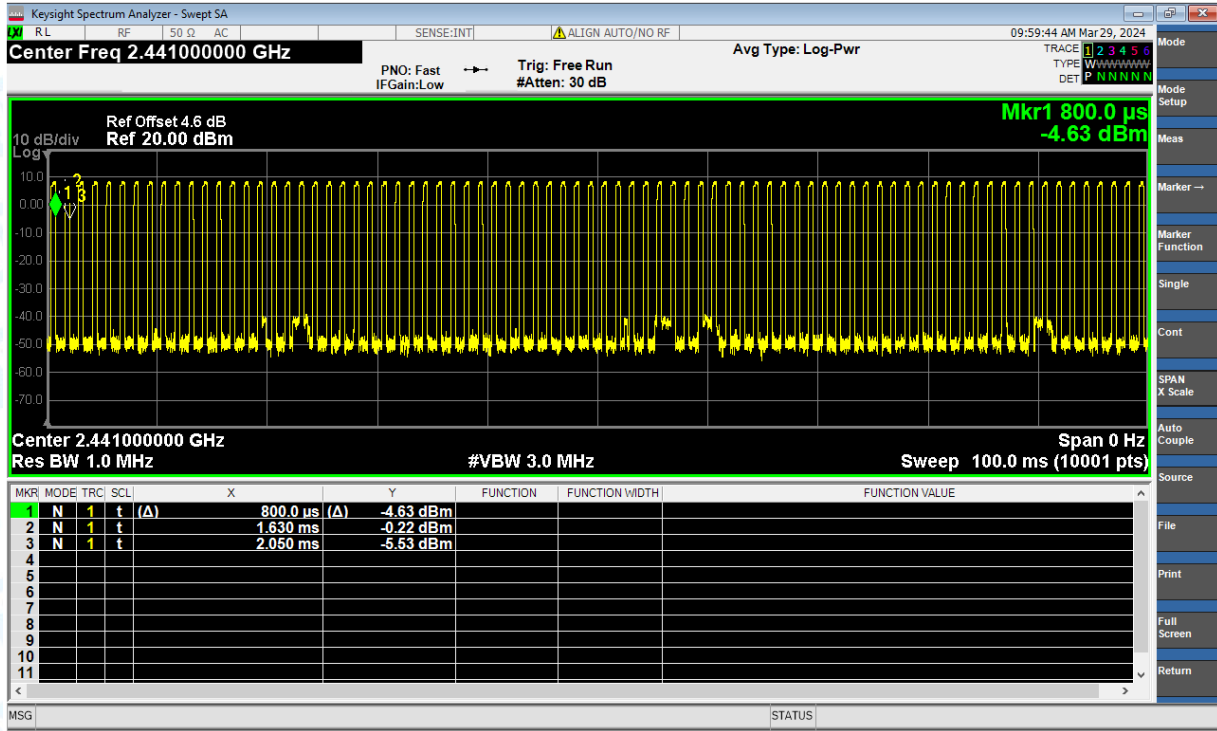
Duty Cycle NVNT 1-DH1 2480MHz Ant1



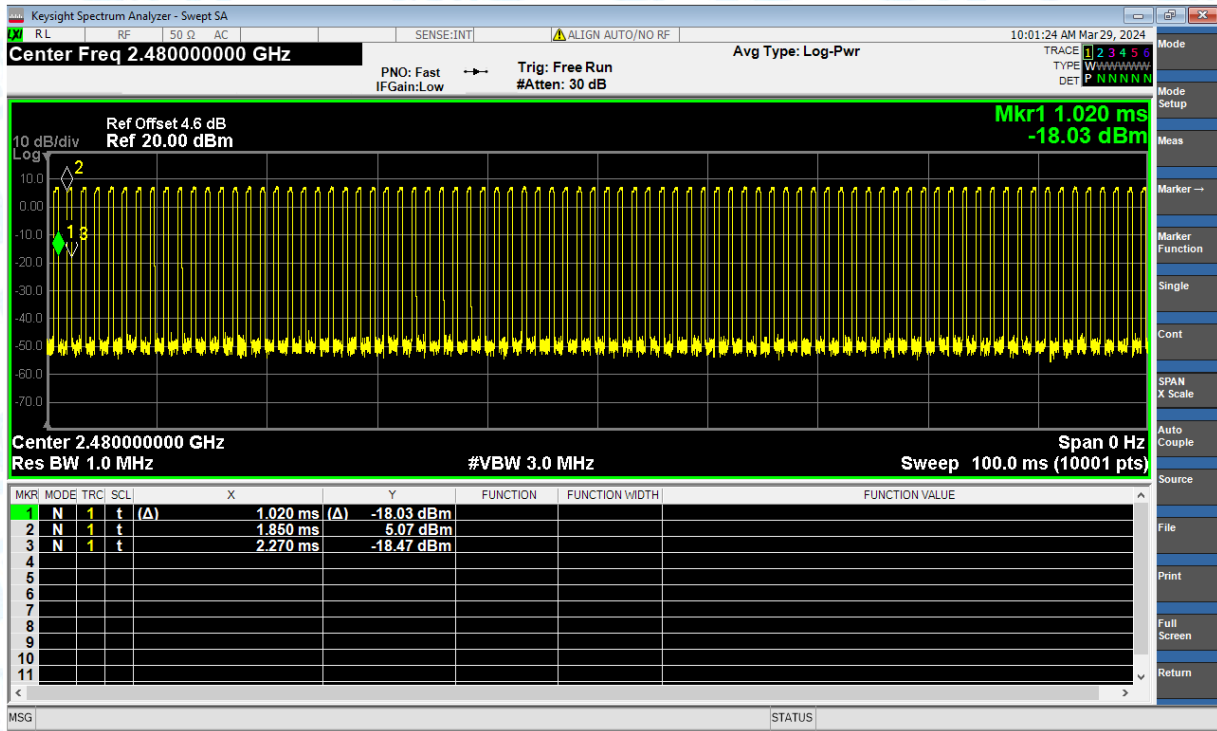
Duty Cycle NVNT 2-DH1 2402MHz Ant1



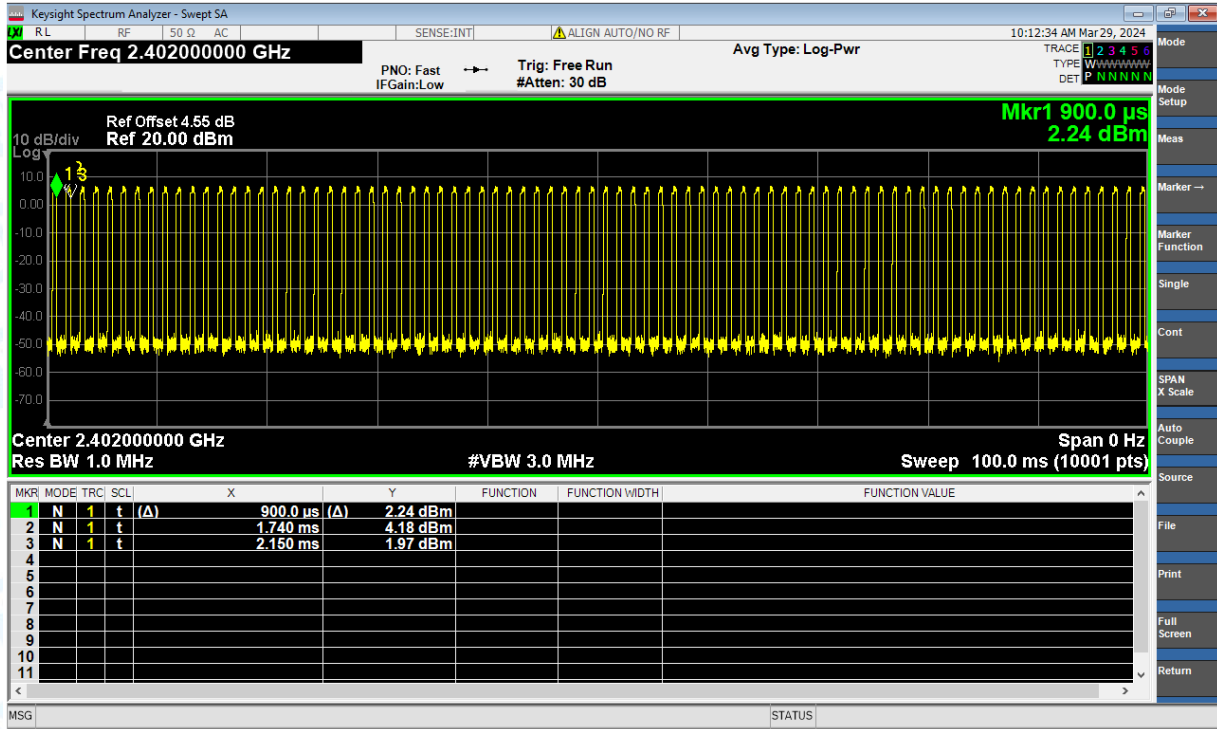
Duty Cycle NVNT 2-DH1 2441MHz Ant1



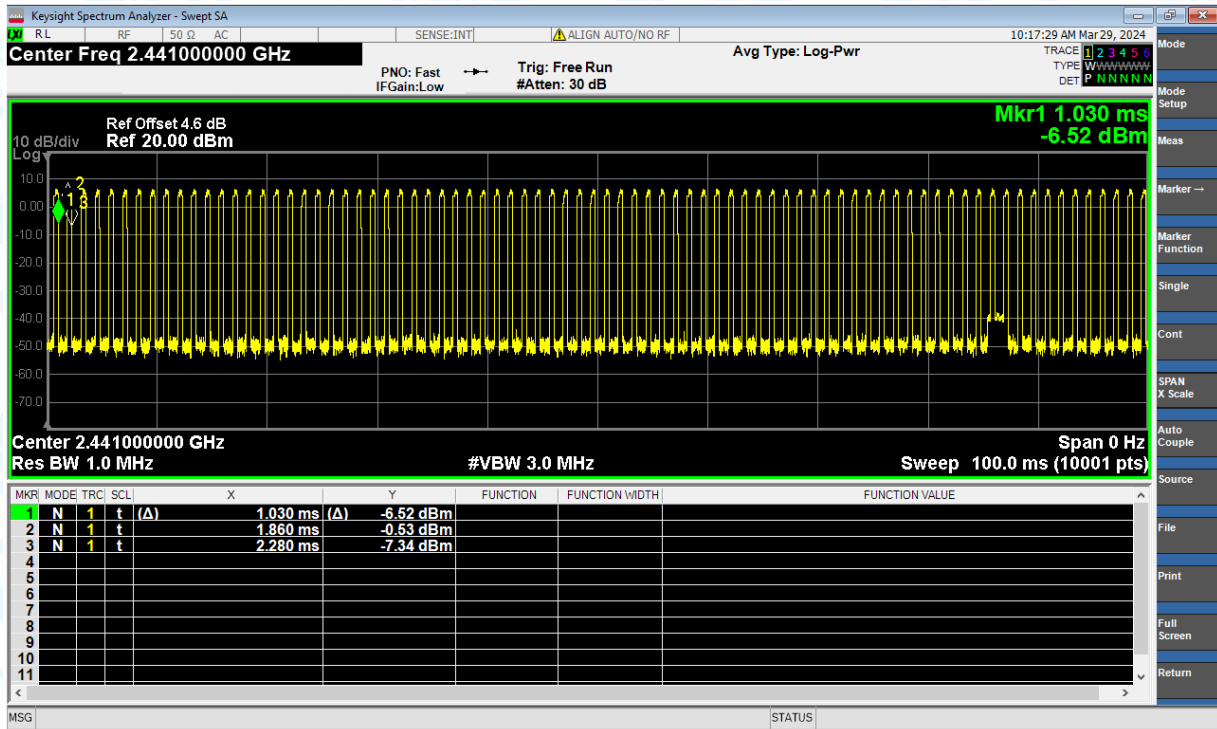
Duty Cycle NVNT 2-DH1 2480MHz Ant1

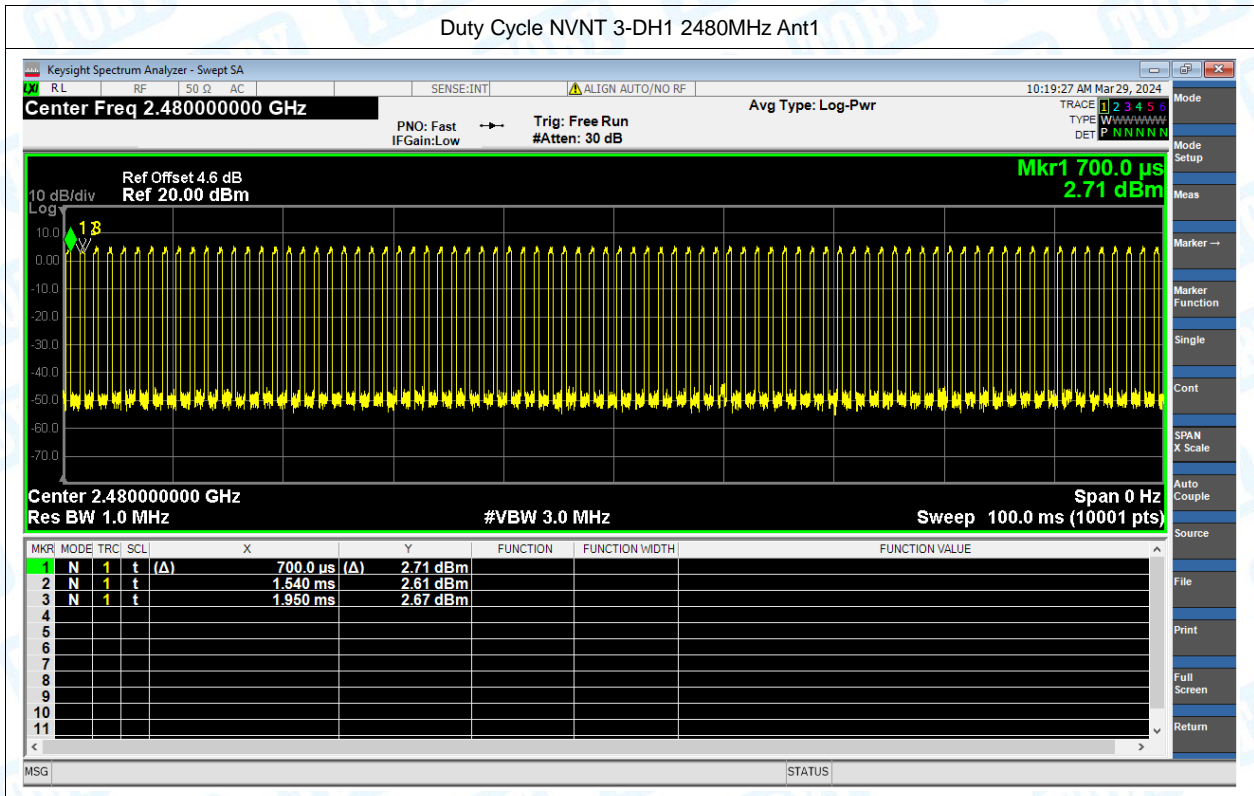


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1





2. Maximum Conducted Output Power

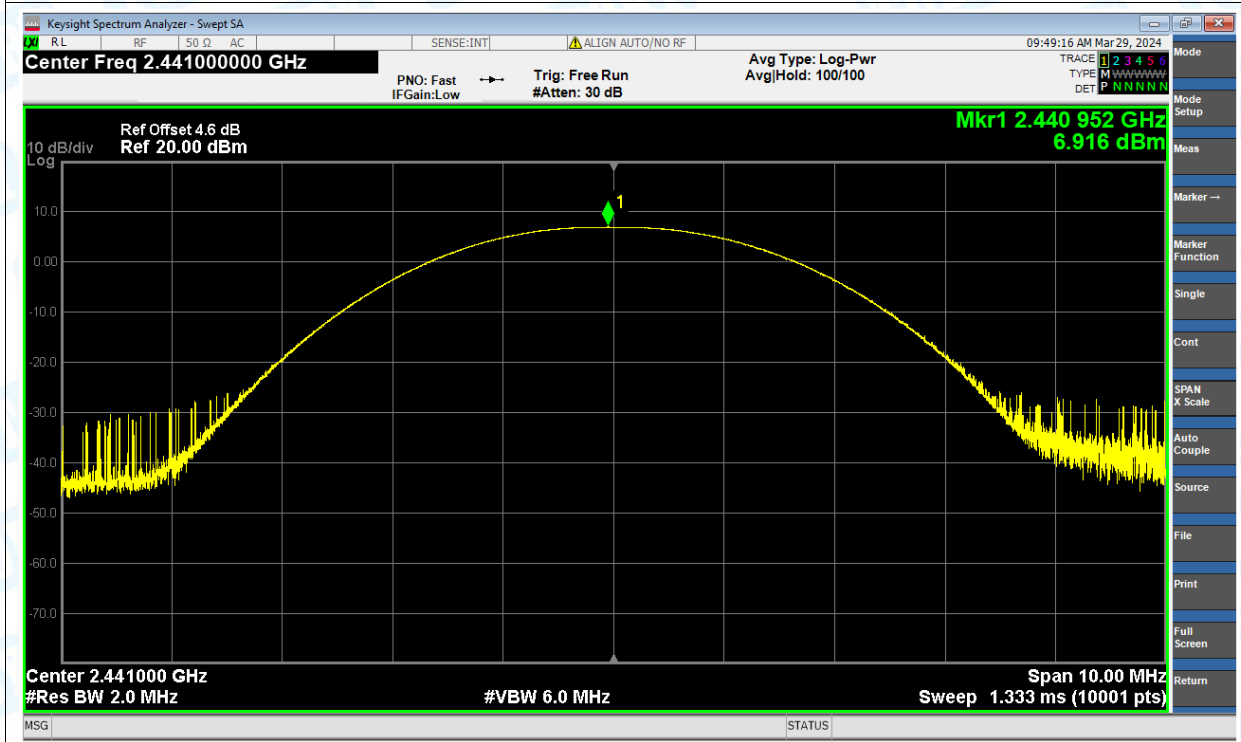
| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|-------|-----------------|---------|-----------------------|-------------|---------|
| NVNT | 1-DH1 | 2402 | Ant1 | 7.118 | 21 | Pass |
| NVNT | 1-DH1 | 2441 | Ant1 | 6.916 | 21 | Pass |
| NVNT | 1-DH1 | 2480 | Ant1 | 5.646 | 21 | Pass |
| NVNT | 2-DH1 | 2402 | Ant1 | 6.493 | 21 | Pass |
| NVNT | 2-DH1 | 2441 | Ant1 | 6.201 | 21 | Pass |
| NVNT | 2-DH1 | 2480 | Ant1 | 5.076 | 21 | Pass |
| NVNT | 3-DH1 | 2402 | Ant1 | 7.339 | 21 | Pass |
| NVNT | 3-DH1 | 2441 | Ant1 | 7.034 | 21 | Pass |
| NVNT | 3-DH1 | 2480 | Ant1 | 5.763 | 21 | Pass |

Test Graphs

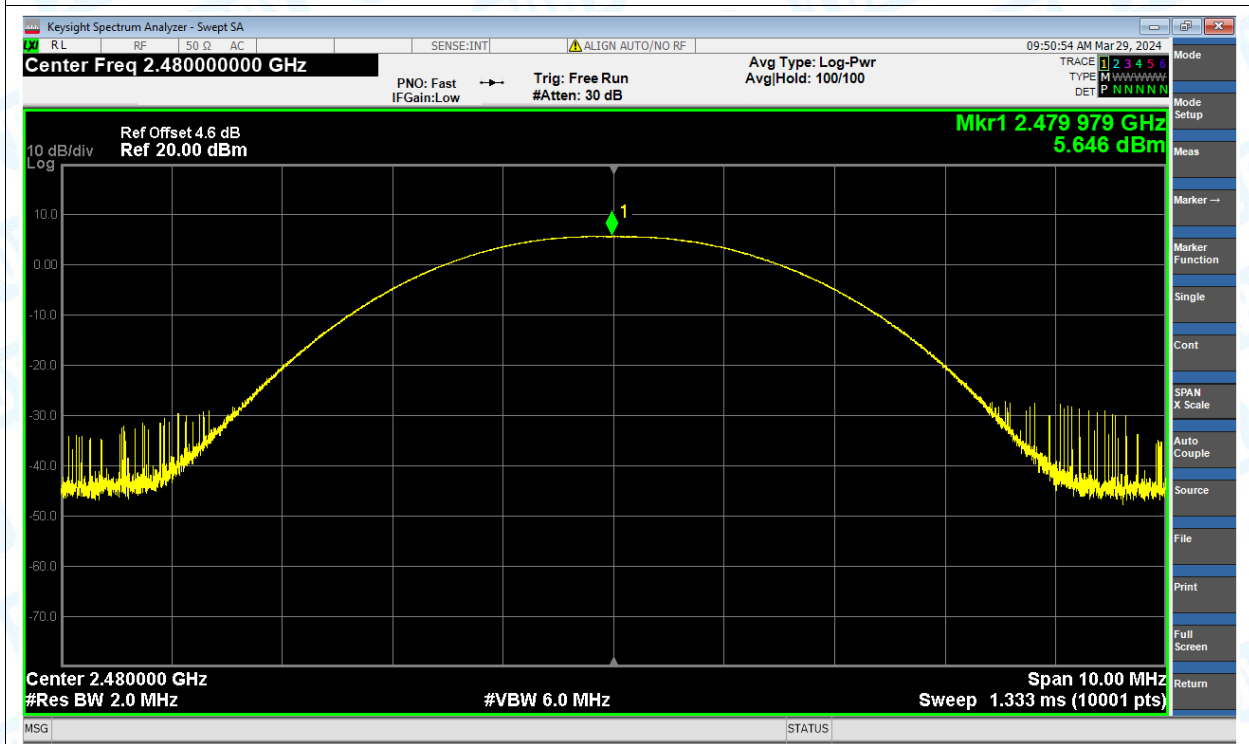
Power NVNT 1-DH1 2402MHz Ant1



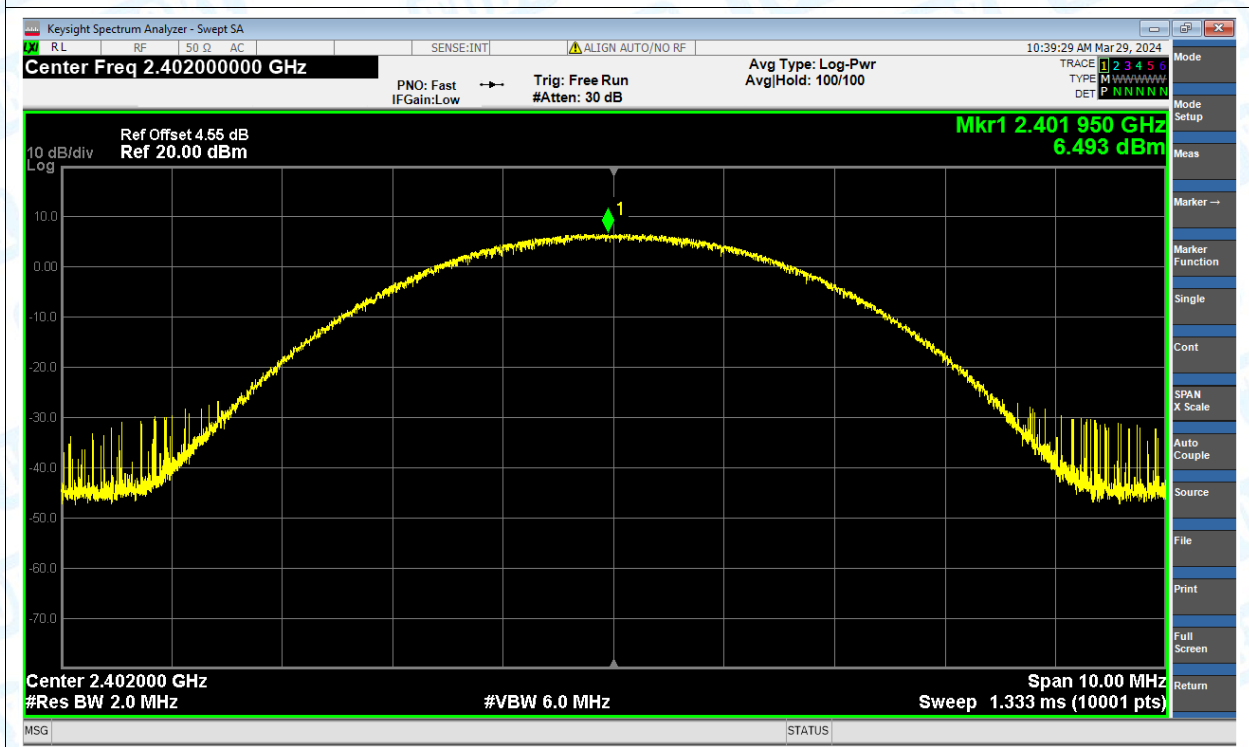
Power NVNT 1-DH1 2441MHz Ant1



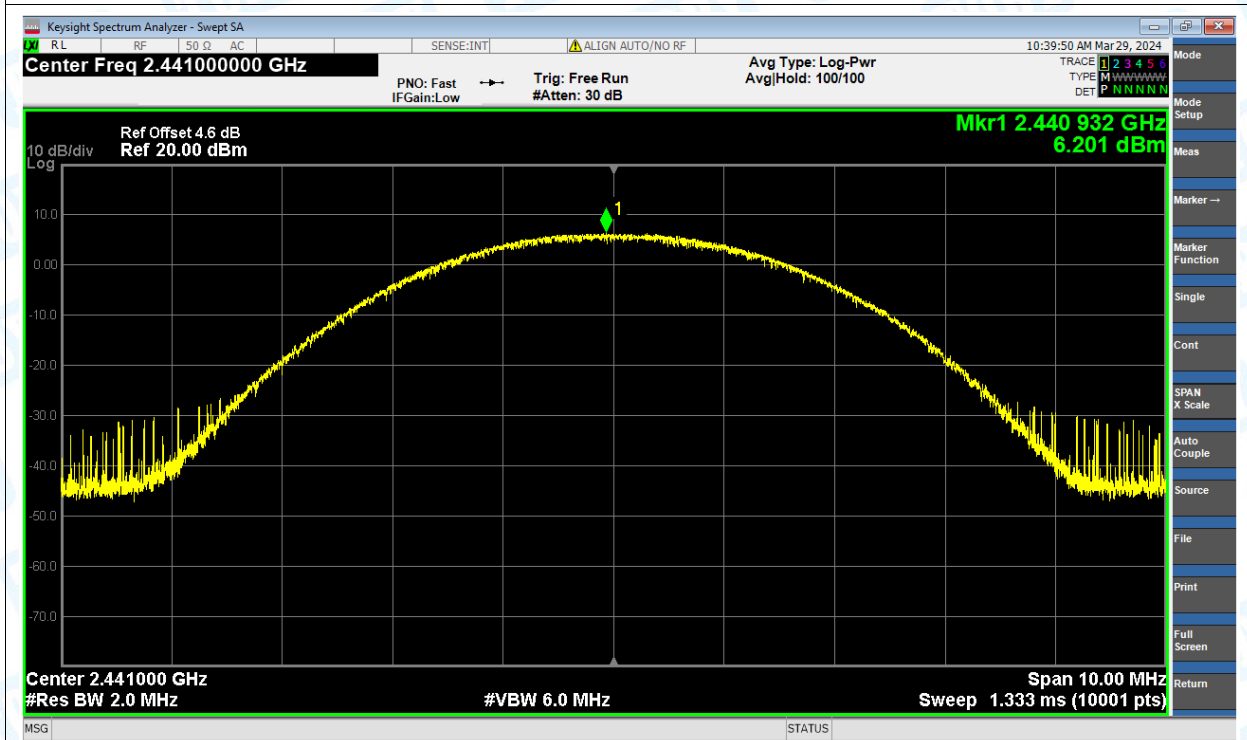
Power NVNT 1-DH1 2480MHz Ant1



Power NVNT 2-DH1 2402MHz Ant1



Power NVNT 2-DH1 2441MHz Ant1



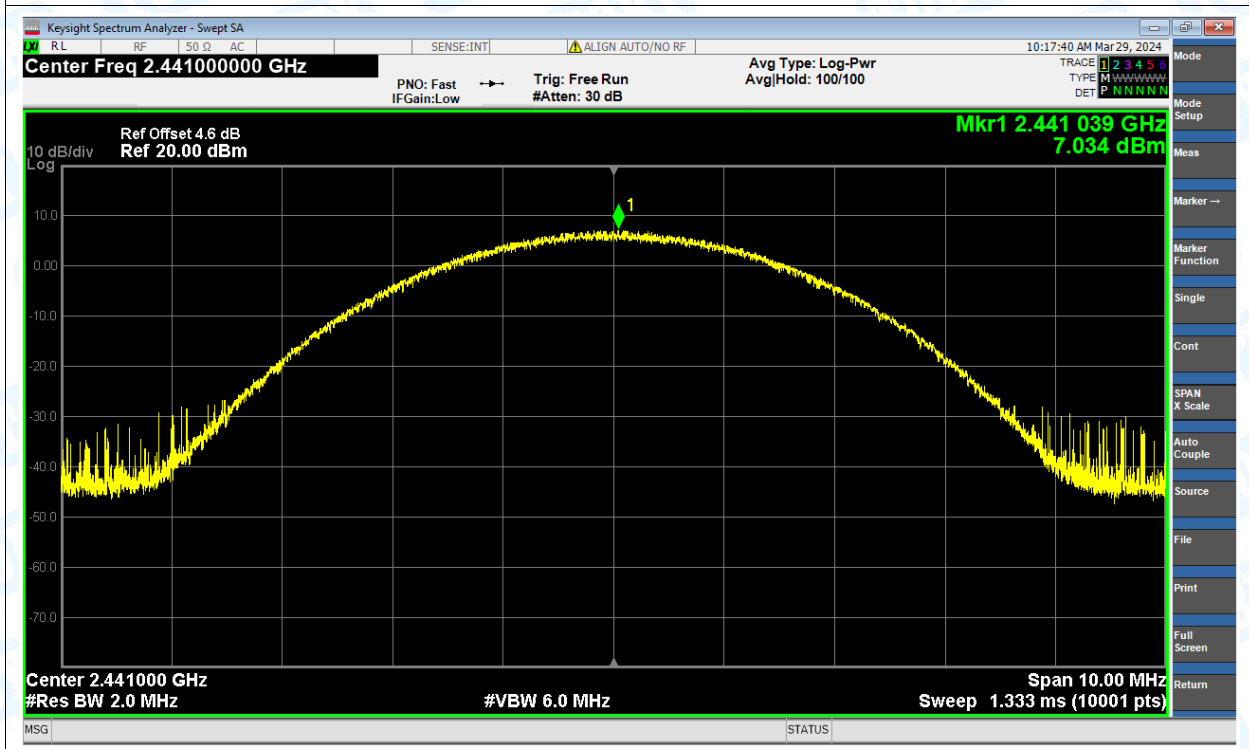
Power NVNT 2-DH1 2480MHz Ant1

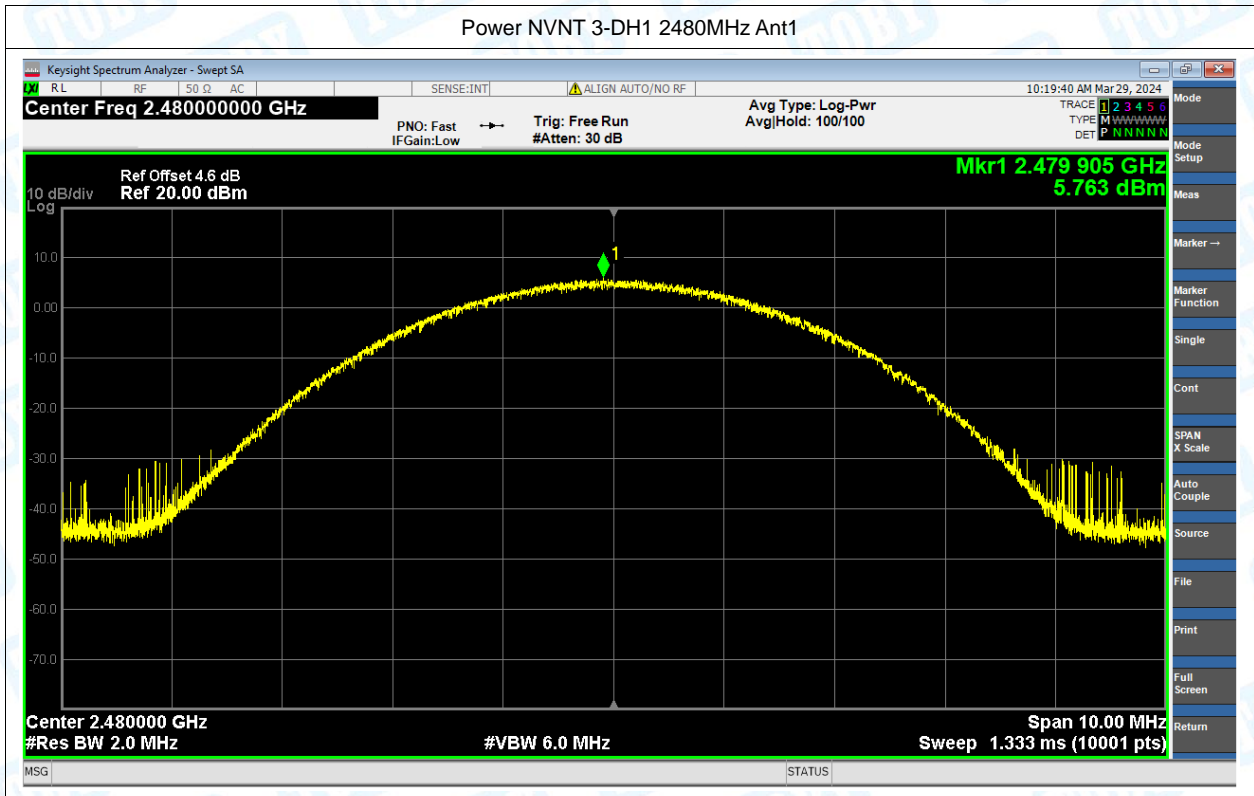


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



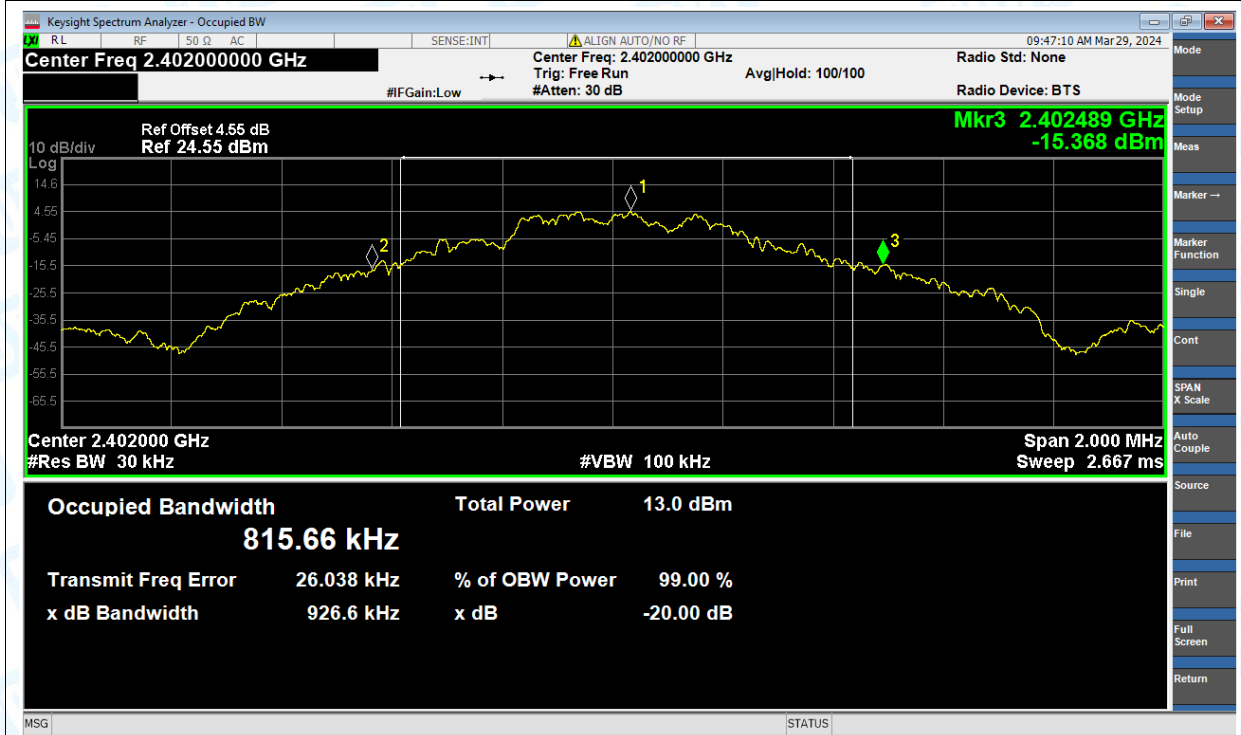


3. -20dB Bandwidth

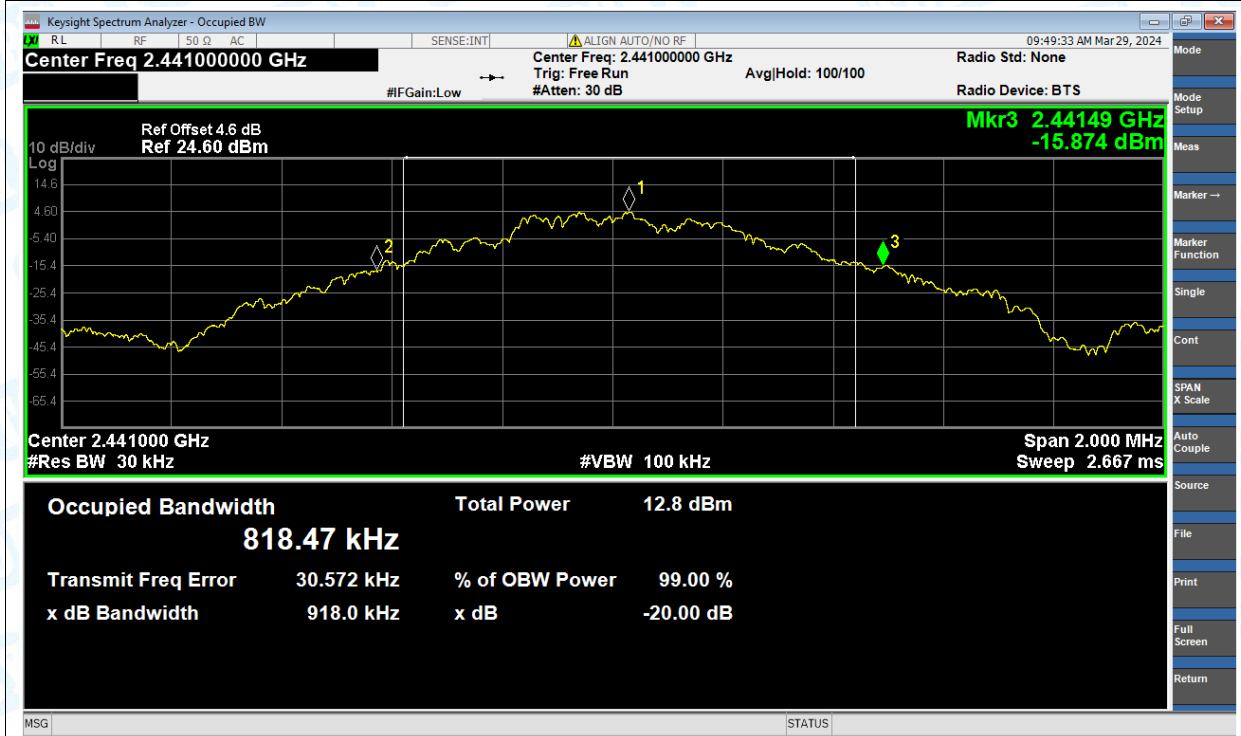
| Condition | Mode | Frequency (MHz) | Antenna | -20 dB Bandwidth (MHz) | Limit -20 dB Bandwidth (MHz) | Verdict |
|-----------|-------|-----------------|---------|------------------------|------------------------------|---------|
| NVNT | 1-DH1 | 2402 | Ant1 | 0.93 | 0 | Pass |
| NVNT | 1-DH1 | 2441 | Ant1 | 0.92 | 0 | Pass |
| NVNT | 1-DH1 | 2480 | Ant1 | 0.92 | 0 | Pass |
| NVNT | 2-DH1 | 2402 | Ant1 | 1.29 | 0 | Pass |
| NVNT | 2-DH1 | 2441 | Ant1 | 1.29 | 0 | Pass |
| NVNT | 2-DH1 | 2480 | Ant1 | 1.28 | 0 | Pass |
| NVNT | 3-DH1 | 2402 | Ant1 | 1.23 | 0 | Pass |
| NVNT | 3-DH1 | 2441 | Ant1 | 1.22 | 0 | Pass |
| NVNT | 3-DH1 | 2480 | Ant1 | 1.23 | 0 | Pass |

Test Graphs

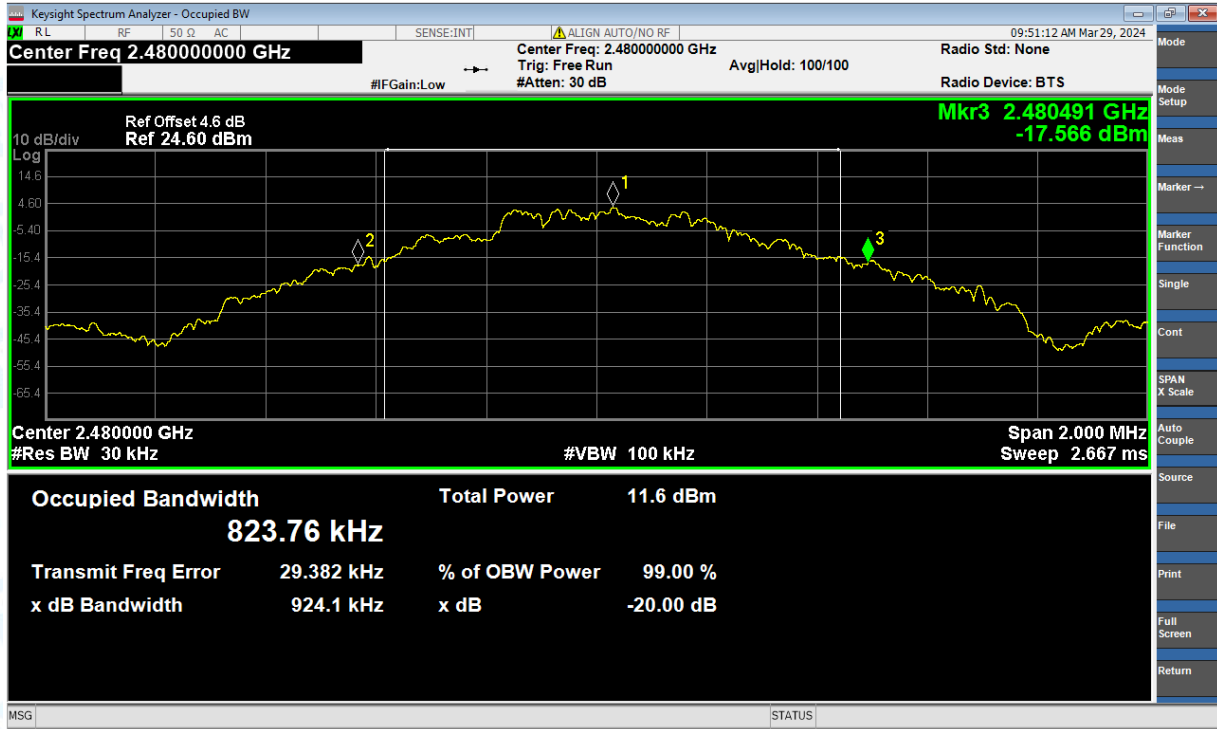
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



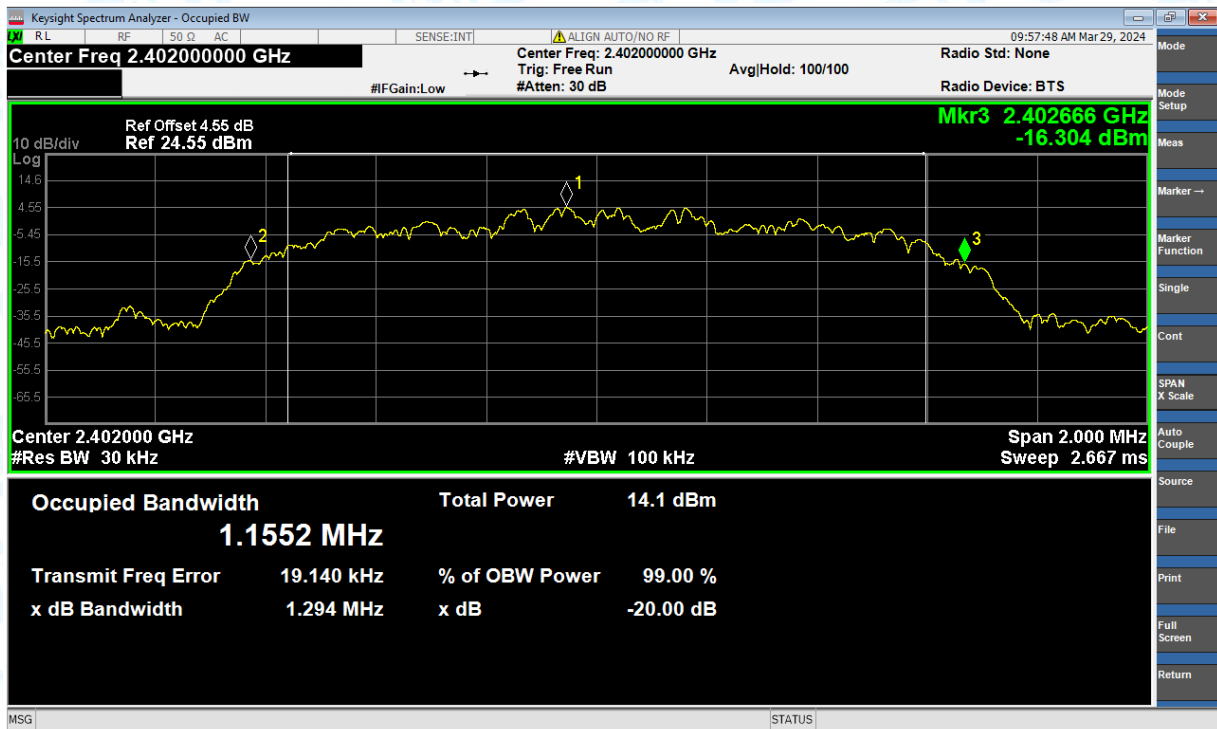
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



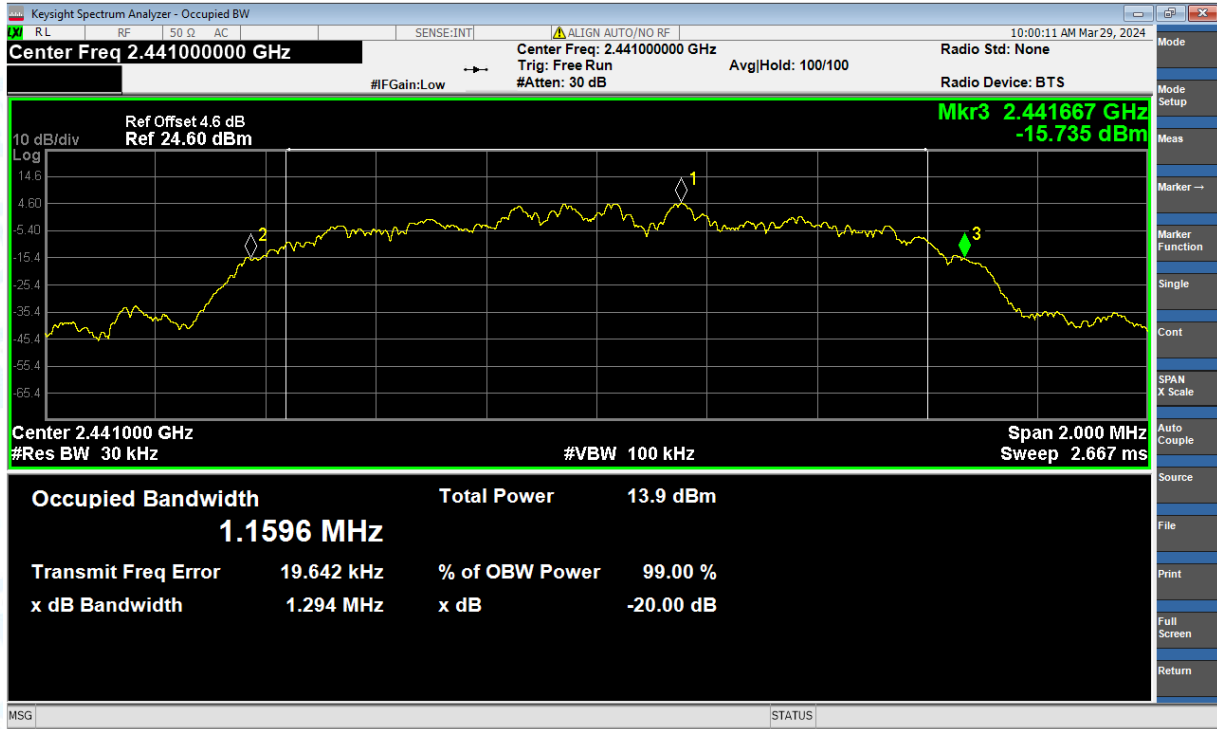
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



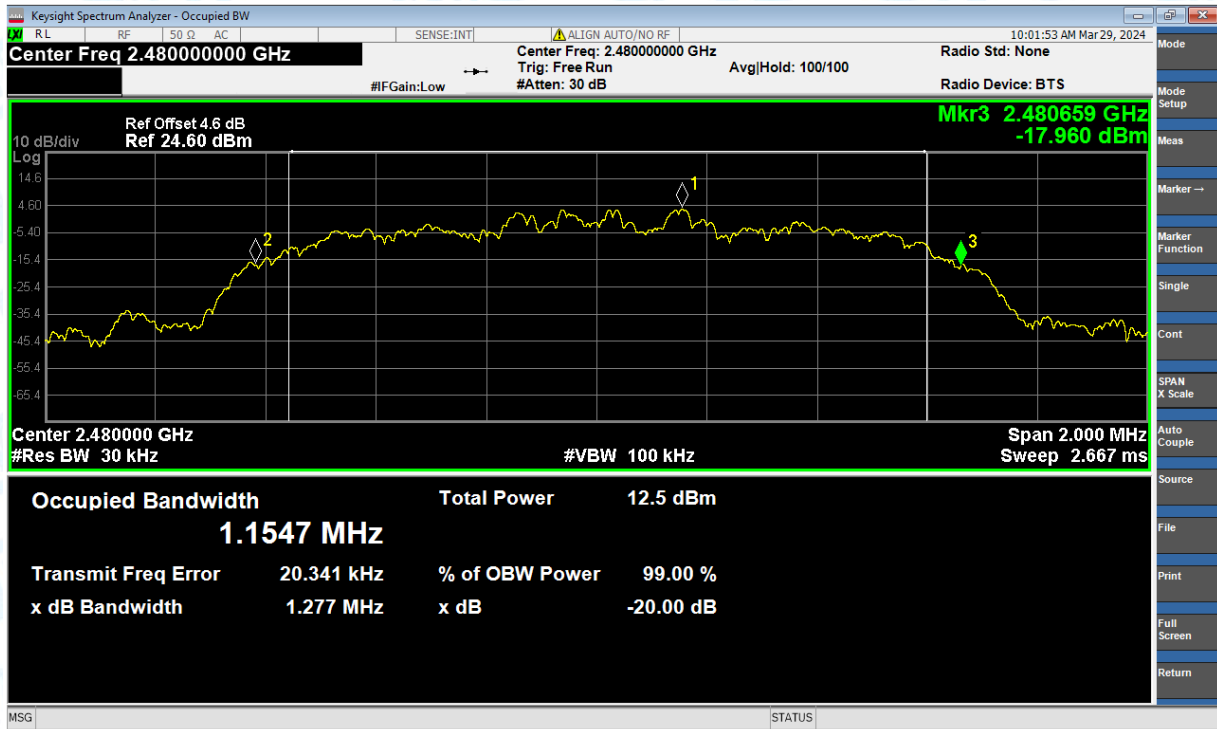
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



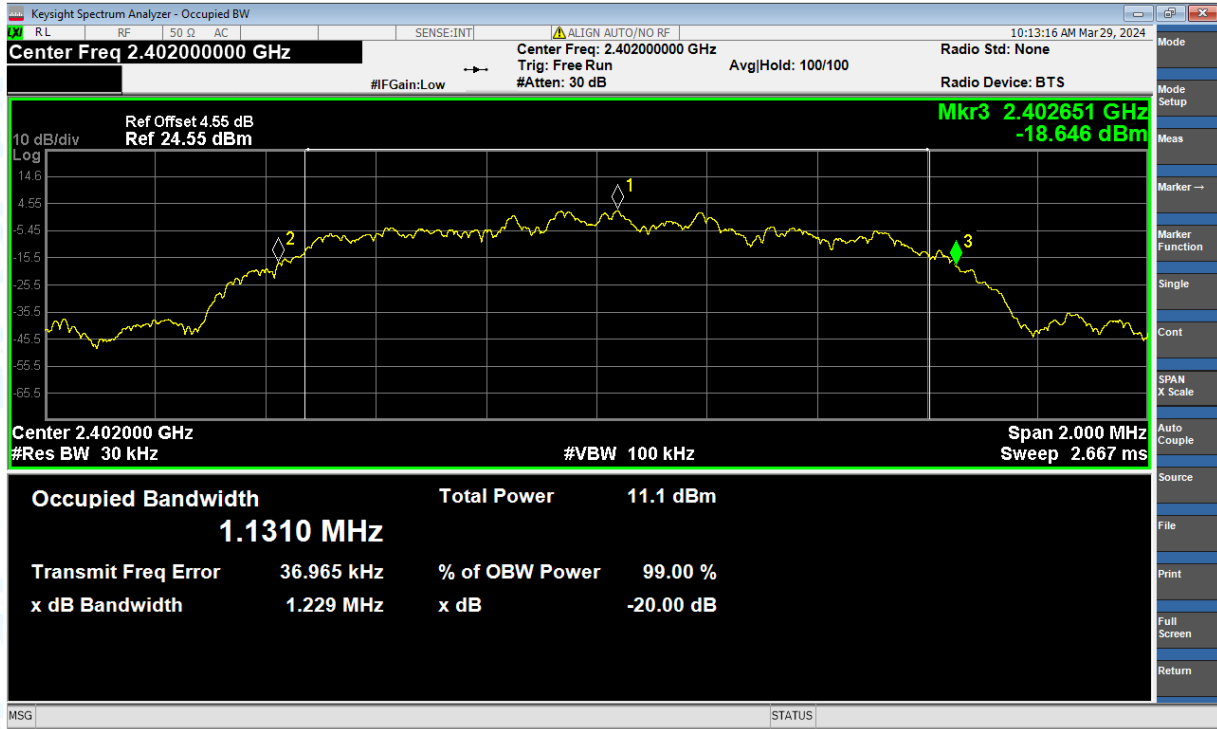
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



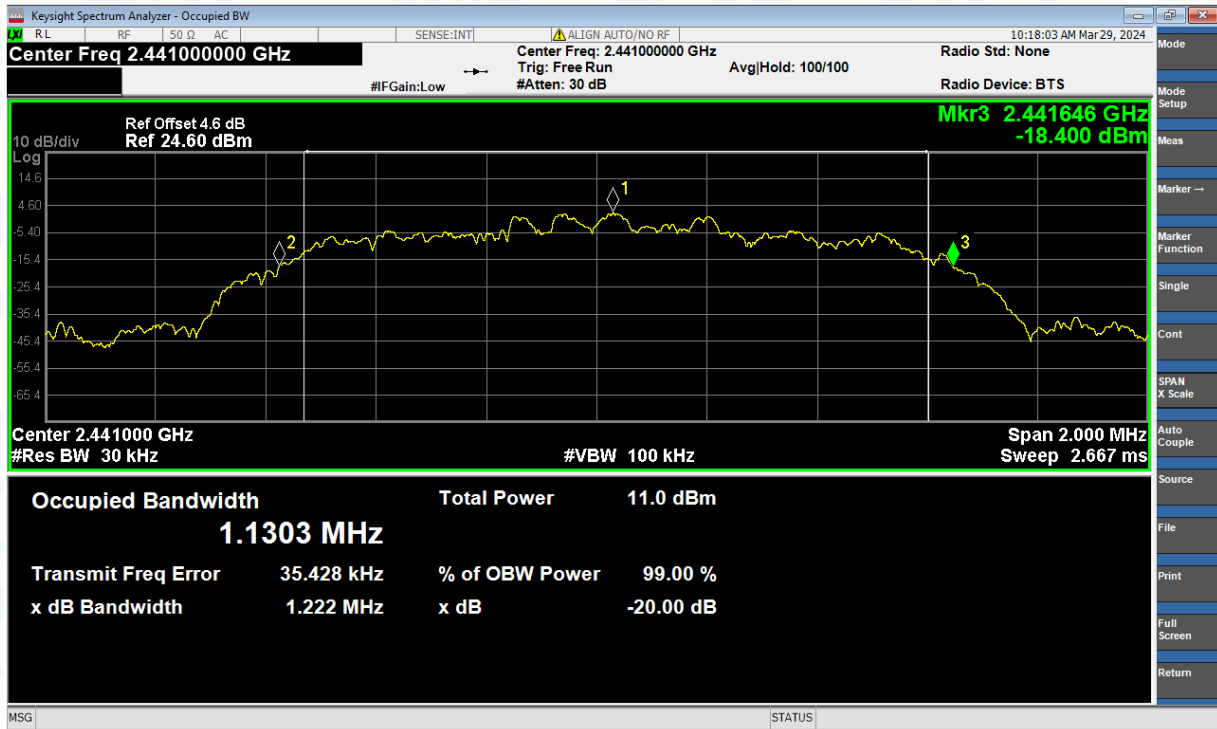
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

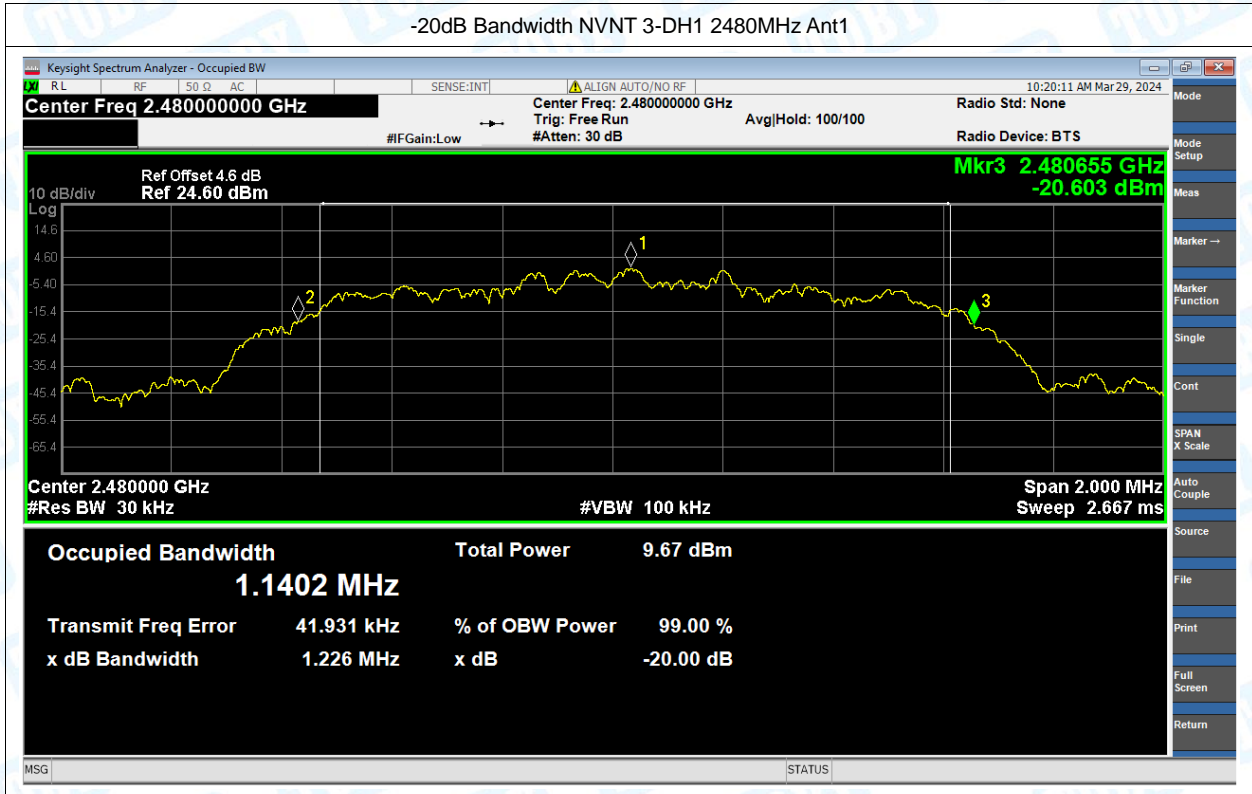


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



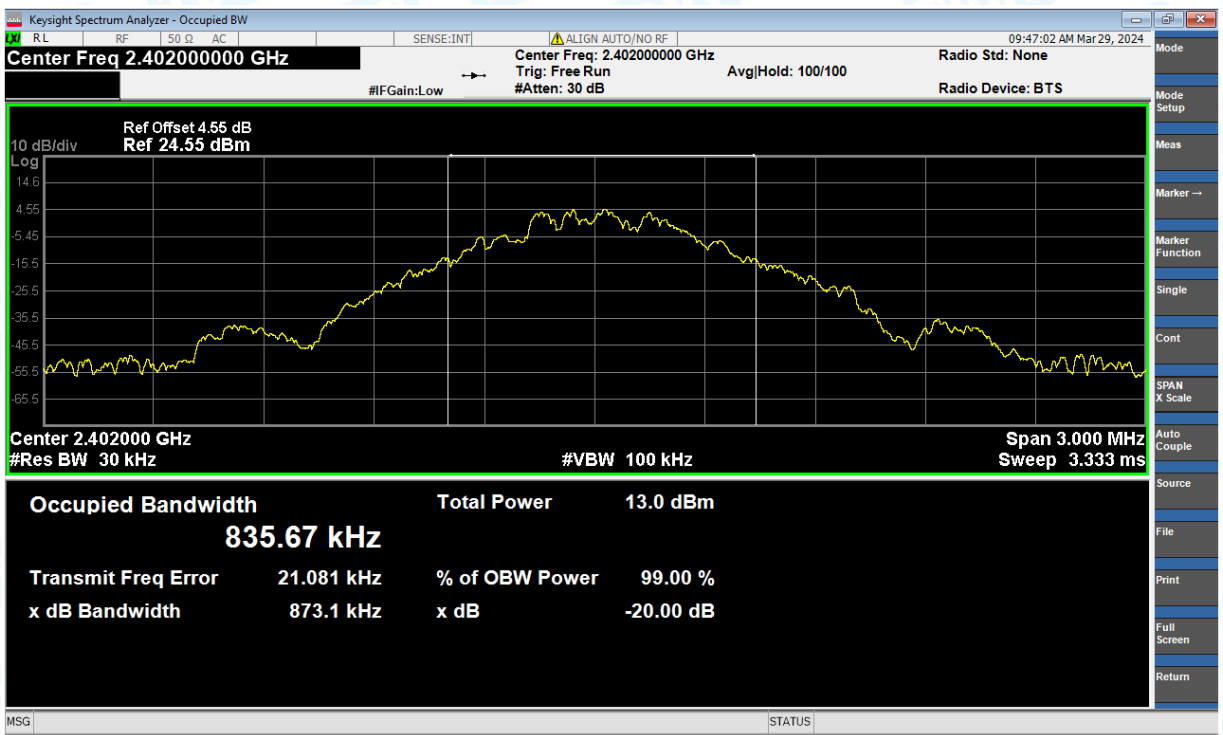


4. Occupied Channel Bandwidth

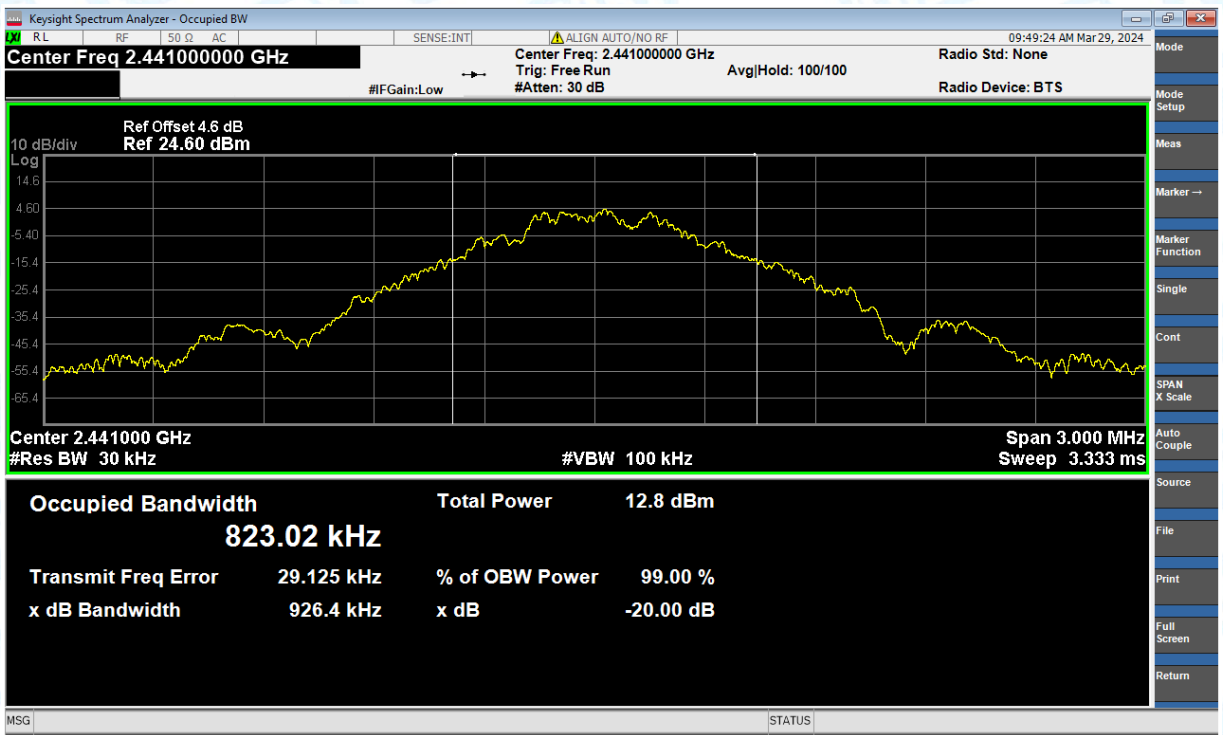
| Condition | Mode | Frequency (MHz) | Antenna | 99% OBW (MHz) |
|-----------|-------|-----------------|---------|---------------|
| NVNT | 1-DH1 | 2402 | Ant1 | 0.836 |
| NVNT | 1-DH1 | 2441 | Ant1 | 0.823 |
| NVNT | 1-DH1 | 2480 | Ant1 | 0.801 |
| NVNT | 2-DH1 | 2402 | Ant1 | 1.16 |
| NVNT | 2-DH1 | 2441 | Ant1 | 1.154 |
| NVNT | 2-DH1 | 2480 | Ant1 | 1.13 |
| NVNT | 3-DH1 | 2402 | Ant1 | 1.142 |
| NVNT | 3-DH1 | 2441 | Ant1 | 1.146 |
| NVNT | 3-DH1 | 2480 | Ant1 | 1.133 |

Test Graphs

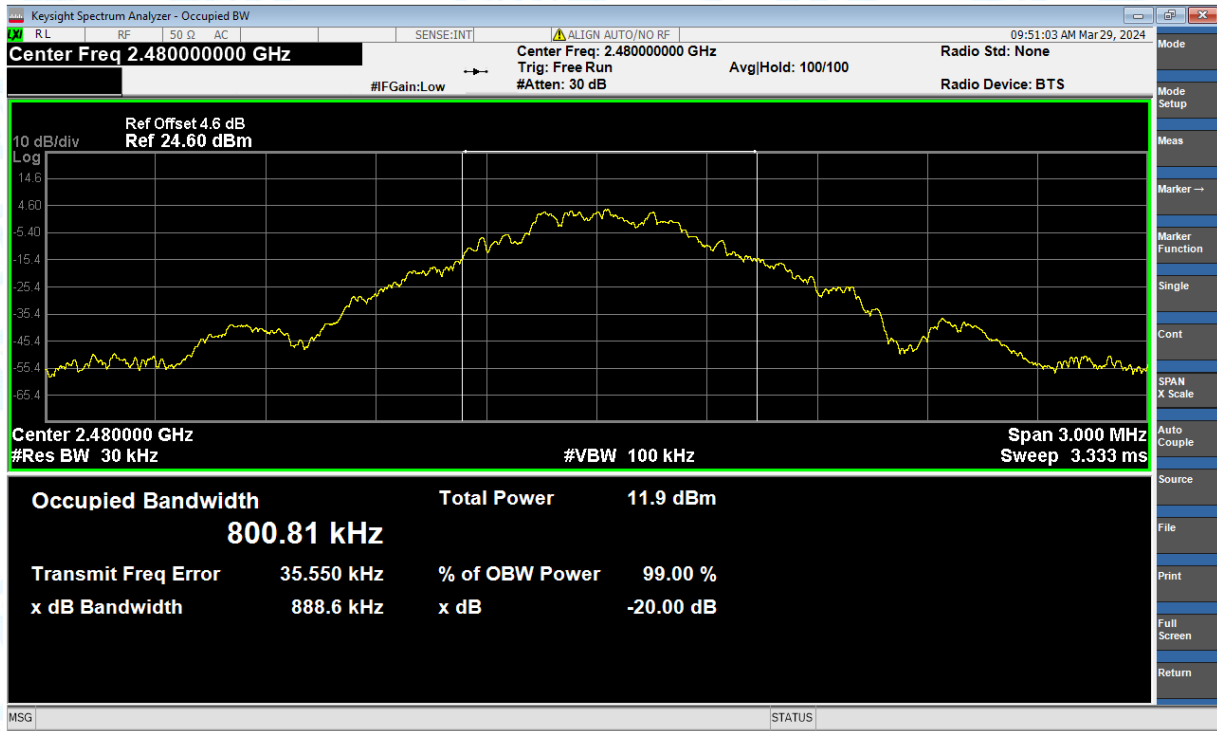
OBW NVNT 1-DH1 2402MHz Ant1



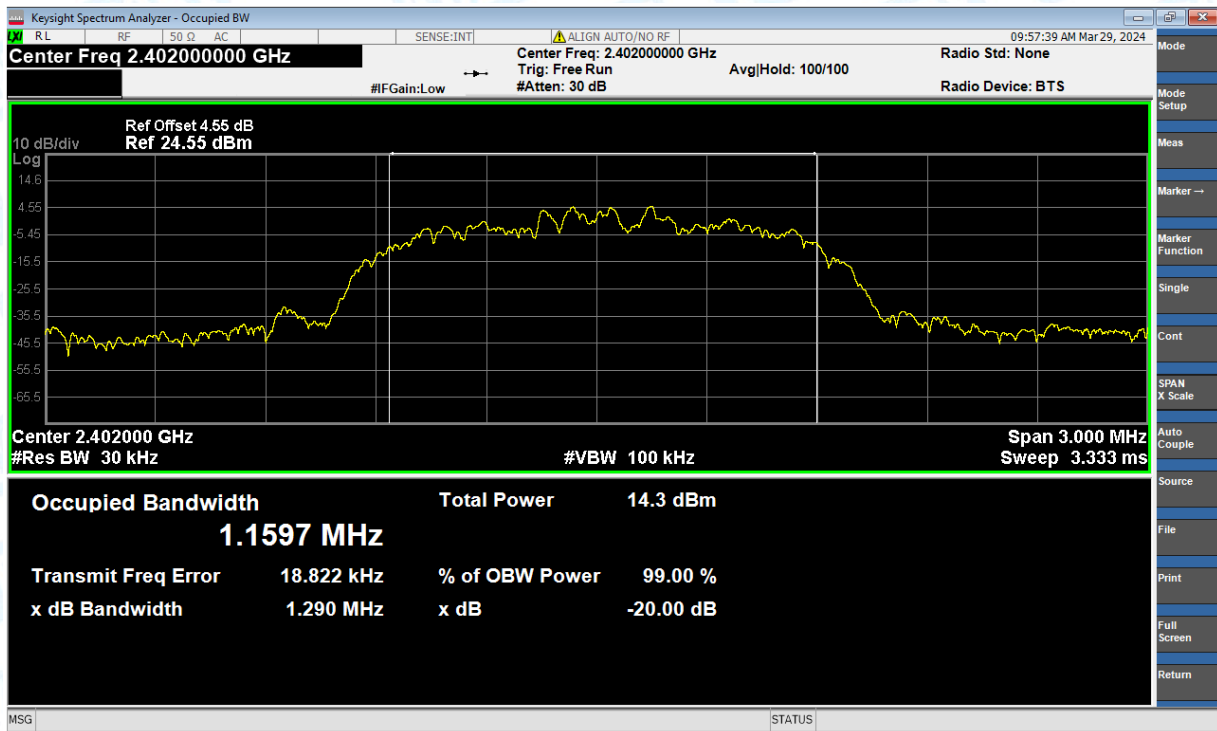
OBW NVNT 1-DH1 2441MHz Ant1



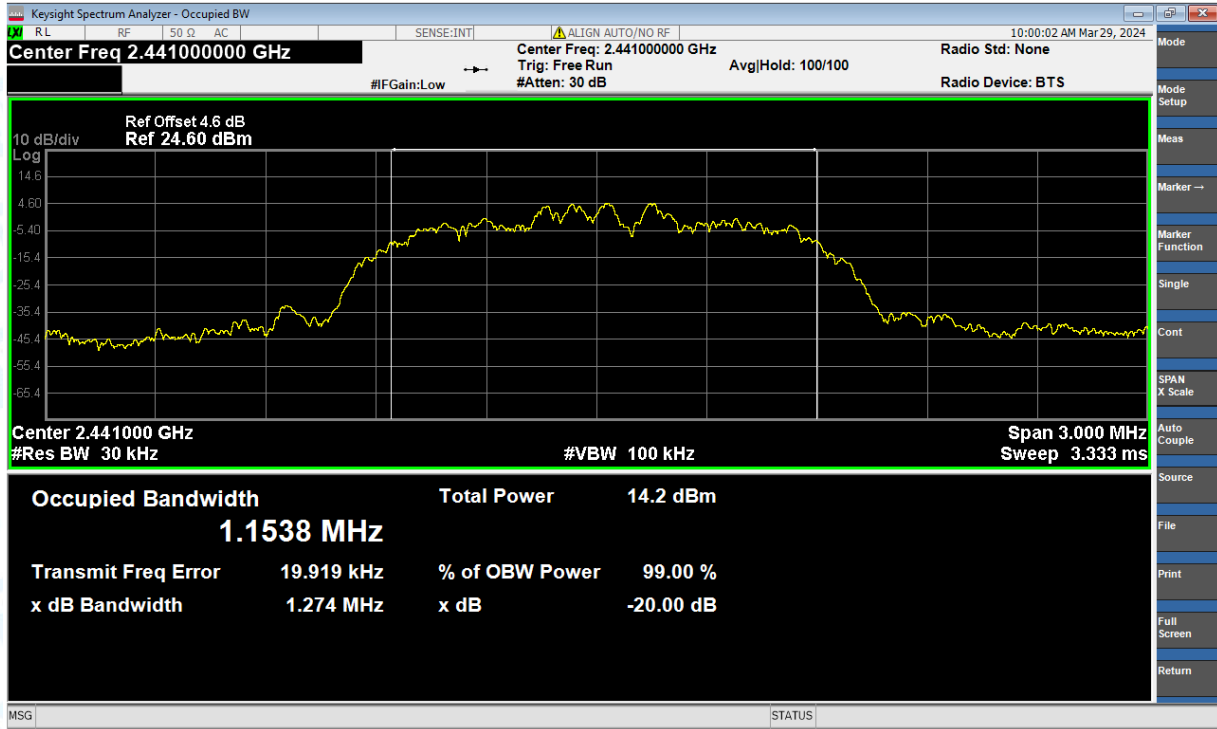
OBW NVNT 1-DH1 2480MHz Ant1



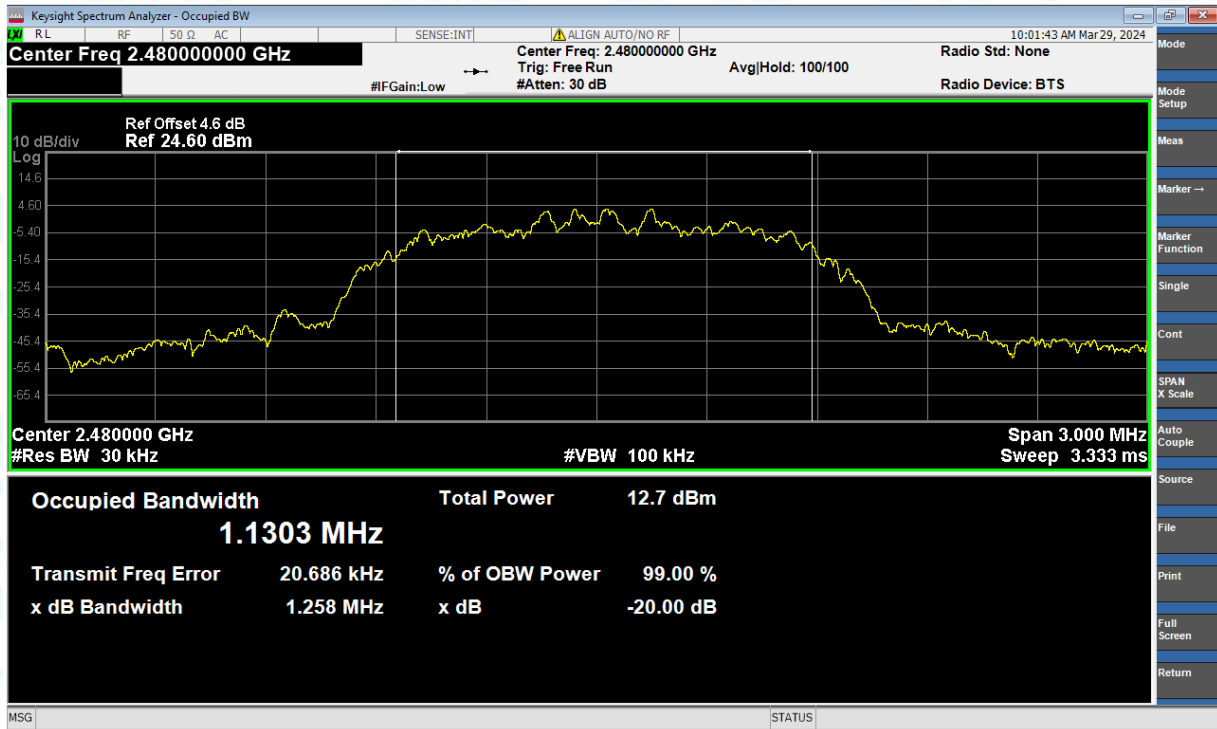
OBW NVNT 2-DH1 2402MHz Ant1



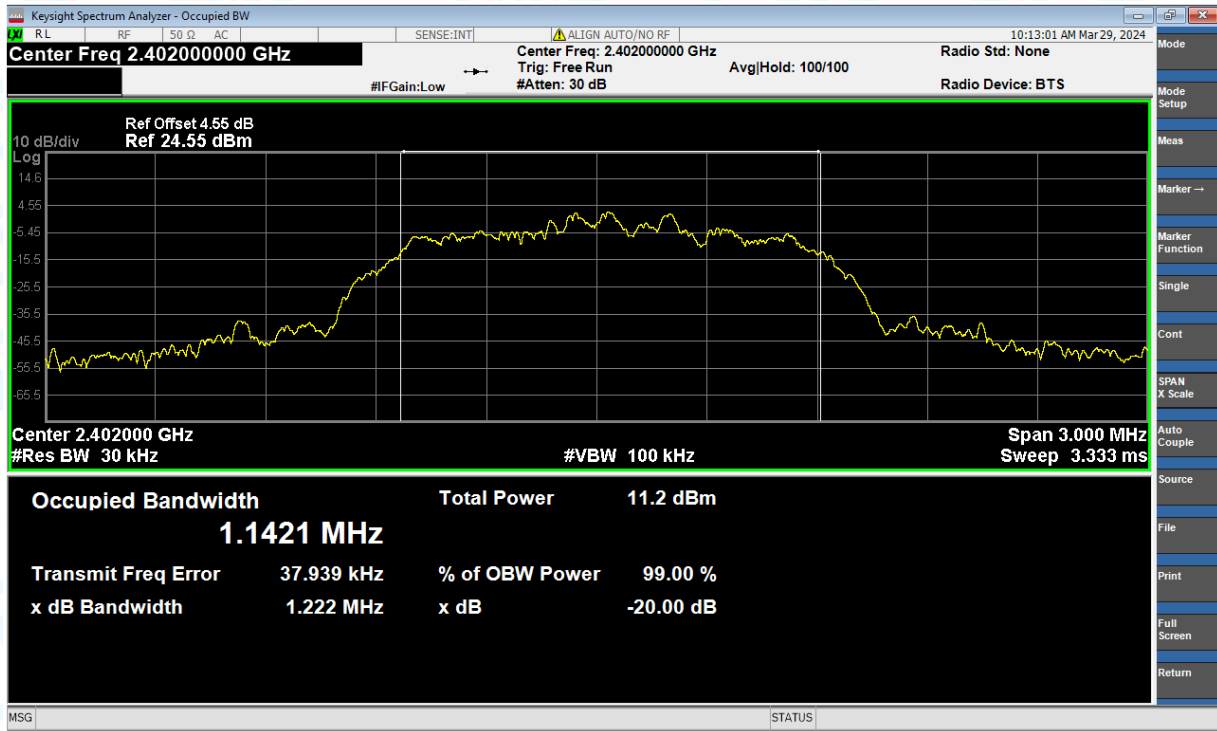
OBW NVNT 2-DH1 2441MHz Ant1



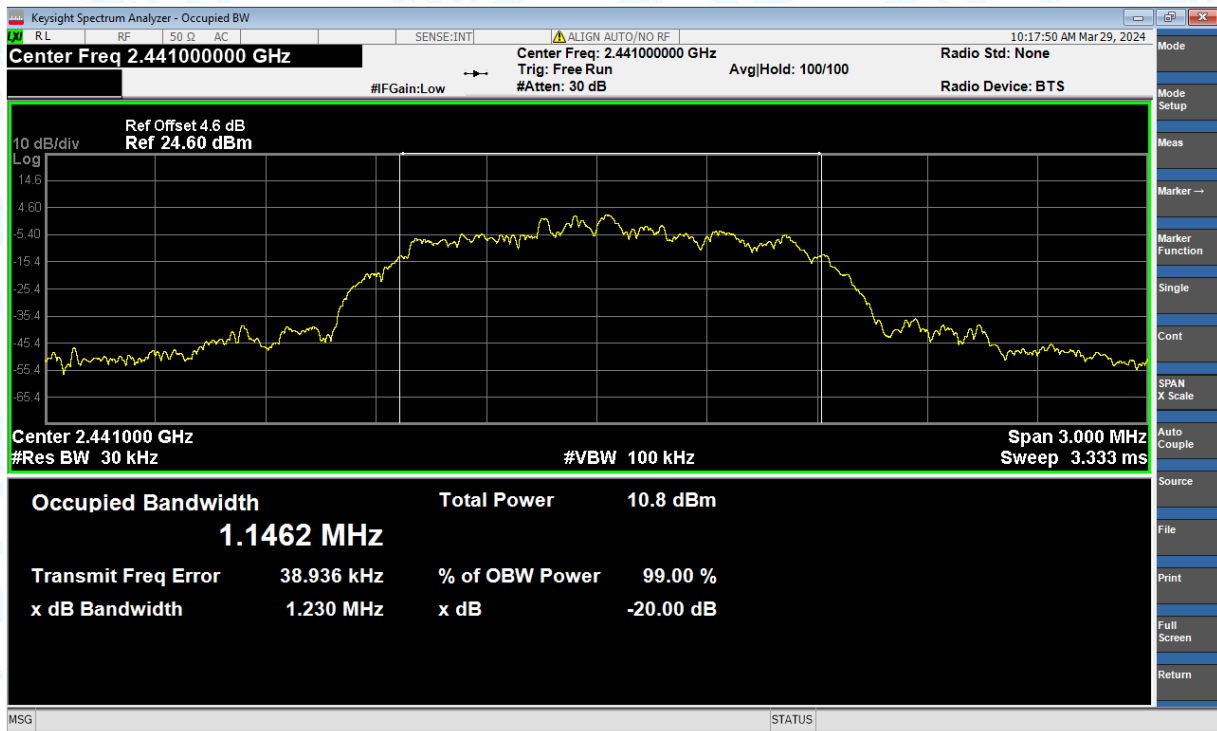
OBW NVNT 2-DH1 2480MHz Ant1

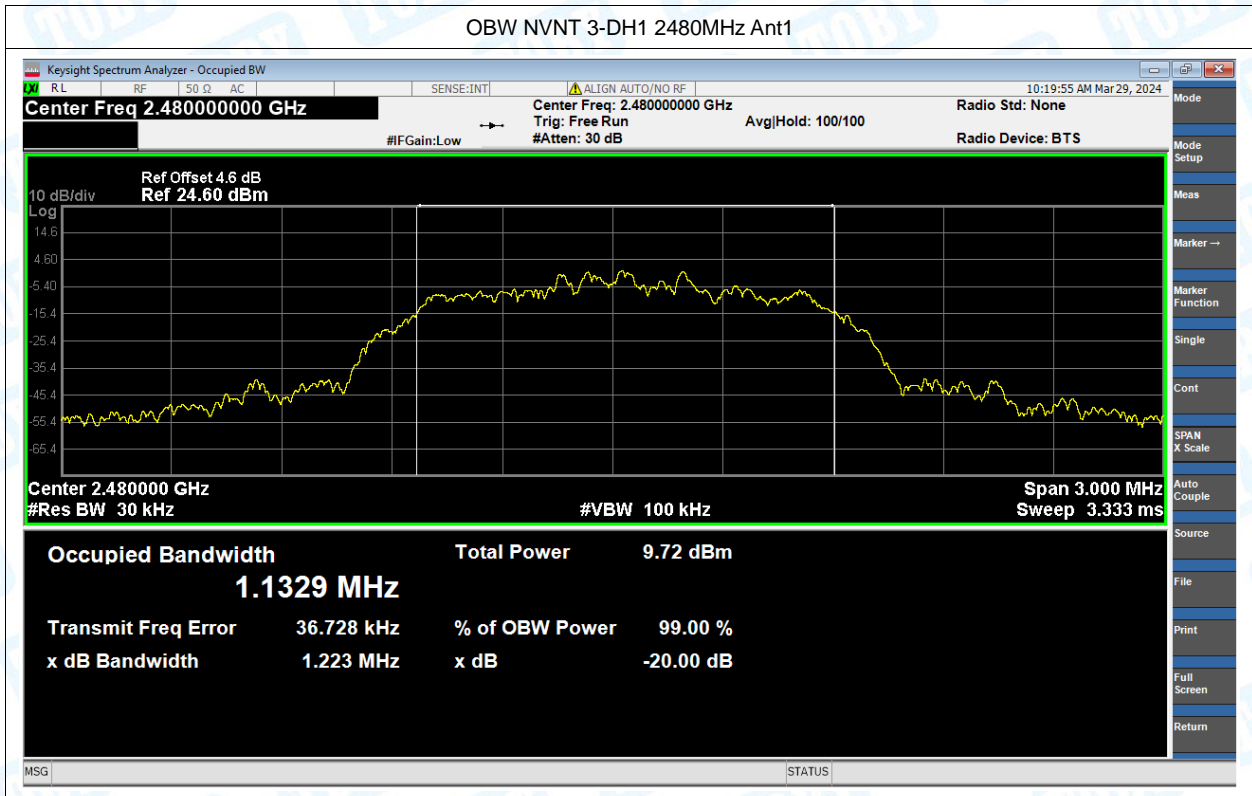


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



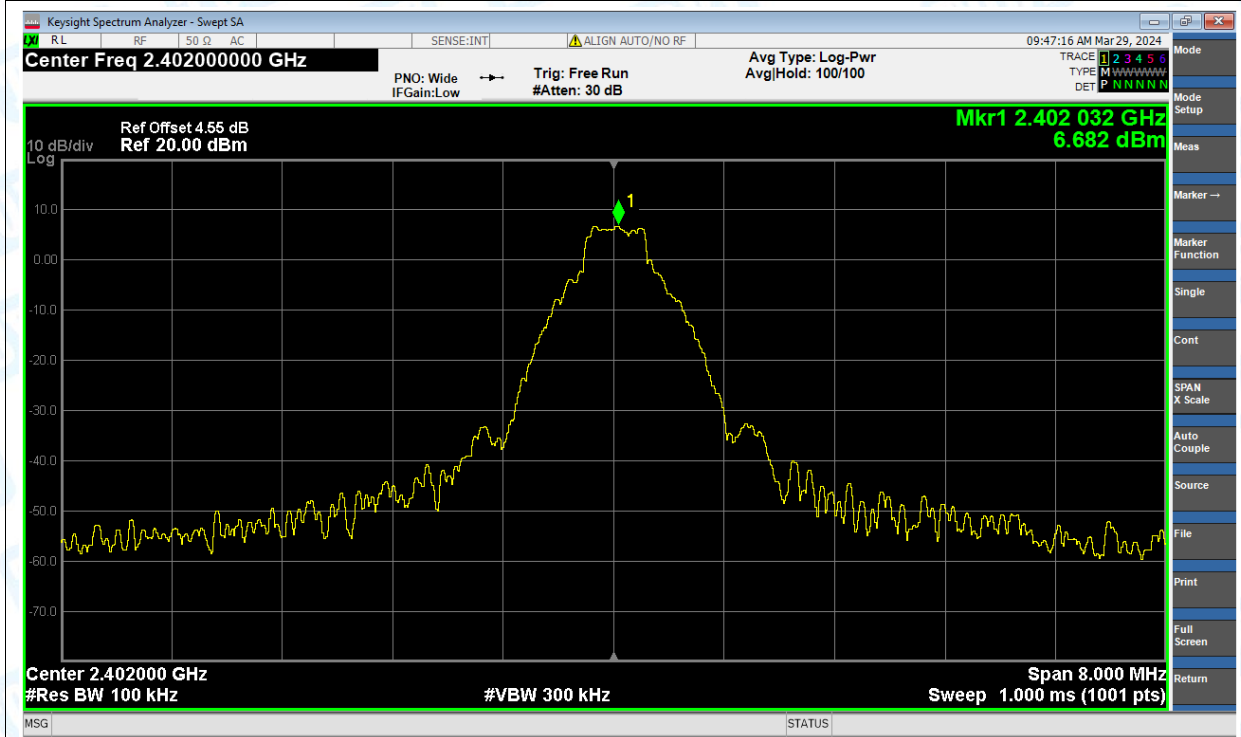


5. Band Edge

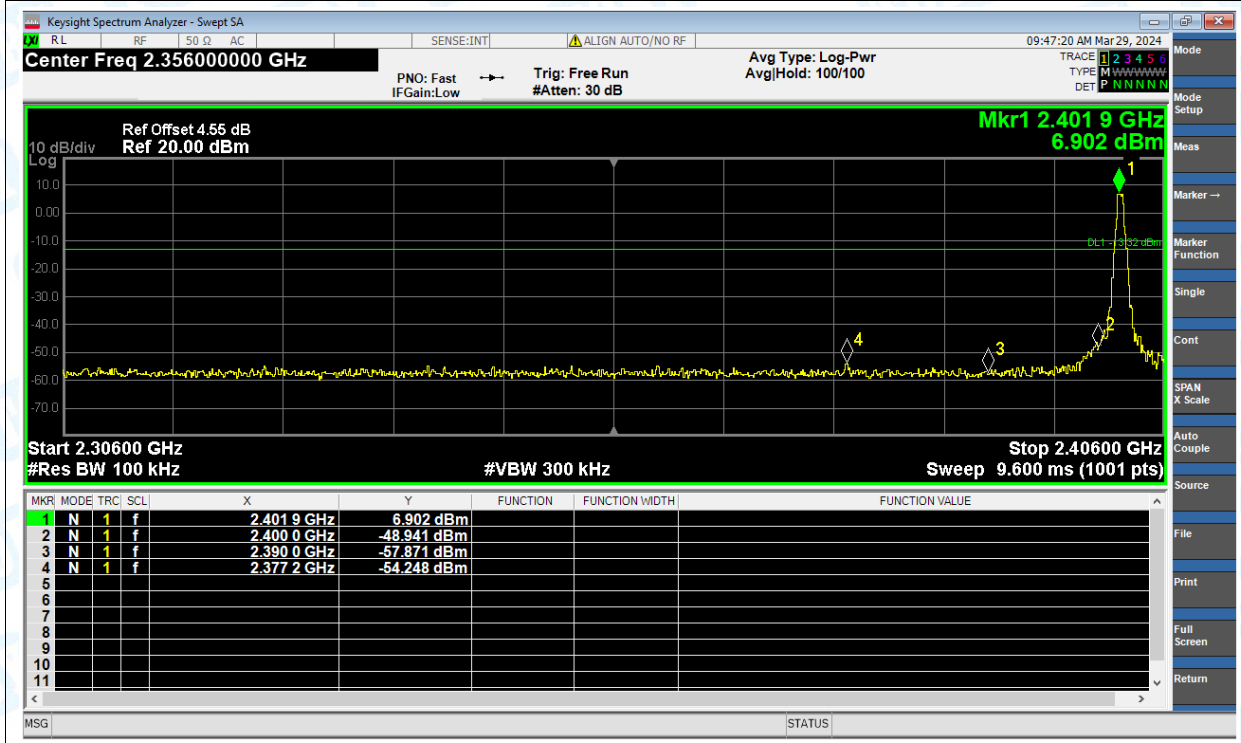
| Condition | Mode | Frequency (MHz) | Antenna | Hopping Mode | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-------|-----------------|---------|--------------|-----------------|-------------|---------|
| NVNT | 1-DH1 | 2402 | Ant1 | No-Hopping | -60.93 | -20 | Pass |
| NVNT | 1-DH1 | 2480 | Ant1 | No-Hopping | -56.93 | -20 | Pass |
| NVNT | 2-DH1 | 2402 | Ant1 | No-Hopping | -60.04 | -20 | Pass |
| NVNT | 2-DH1 | 2480 | Ant1 | No-Hopping | -58.01 | -20 | Pass |
| NVNT | 3-DH1 | 2402 | Ant1 | No-Hopping | -58.13 | -20 | Pass |
| NVNT | 3-DH1 | 2480 | Ant1 | No-Hopping | -56.61 | -20 | Pass |

Test Graphs

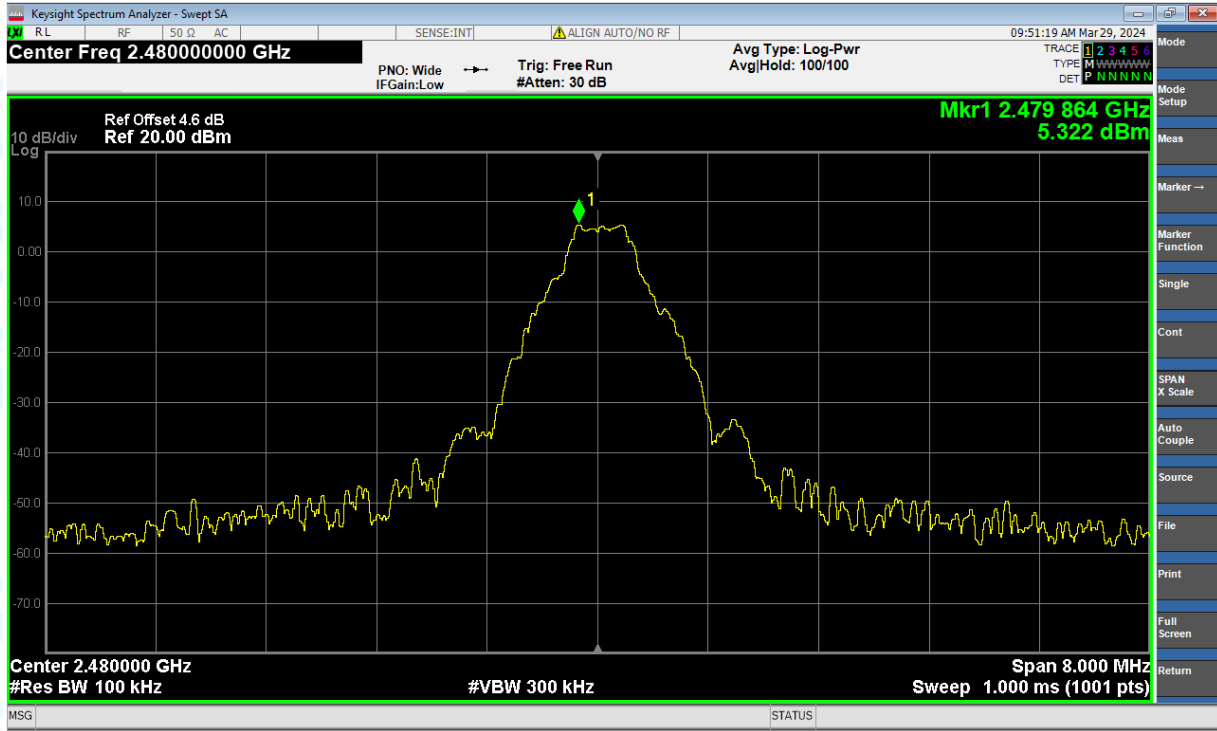
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



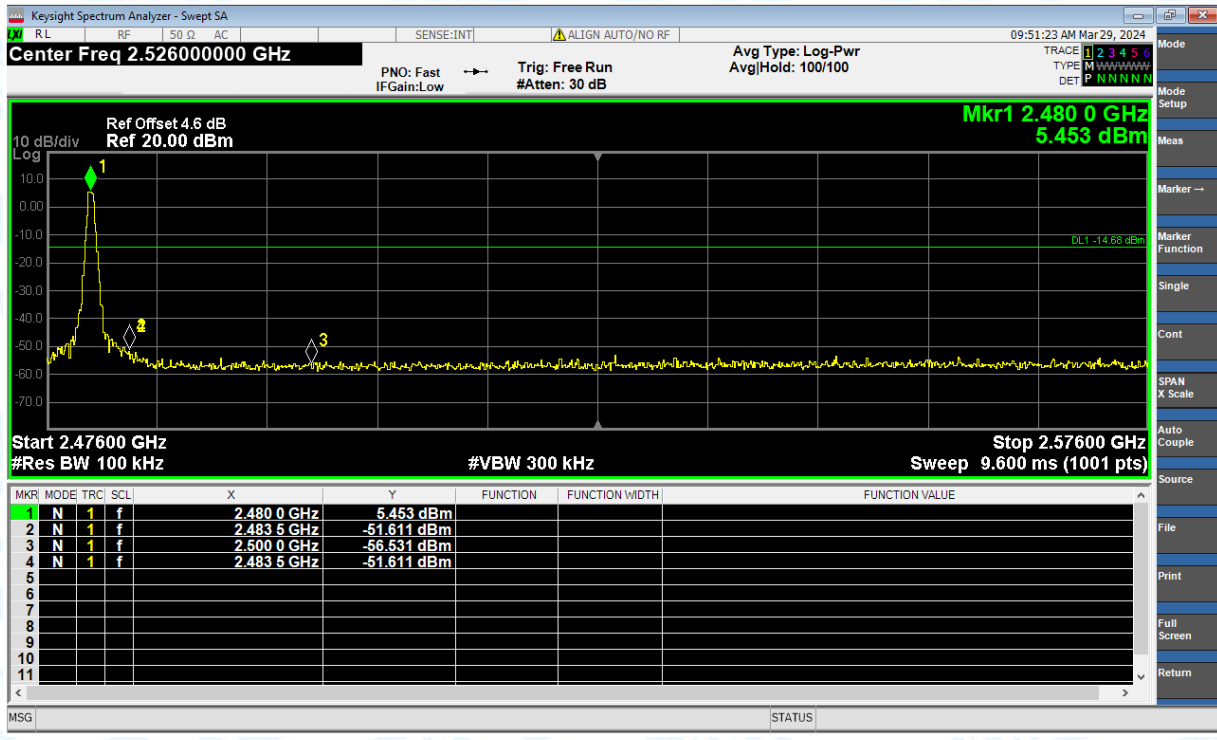
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



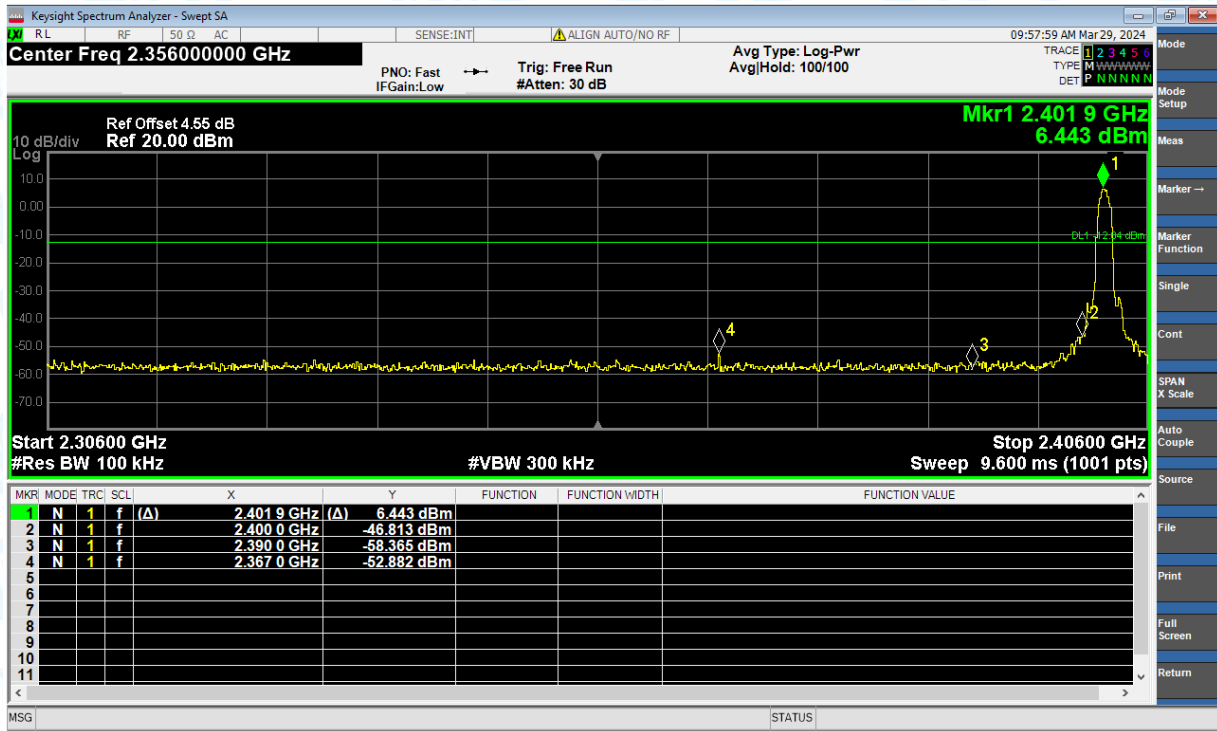
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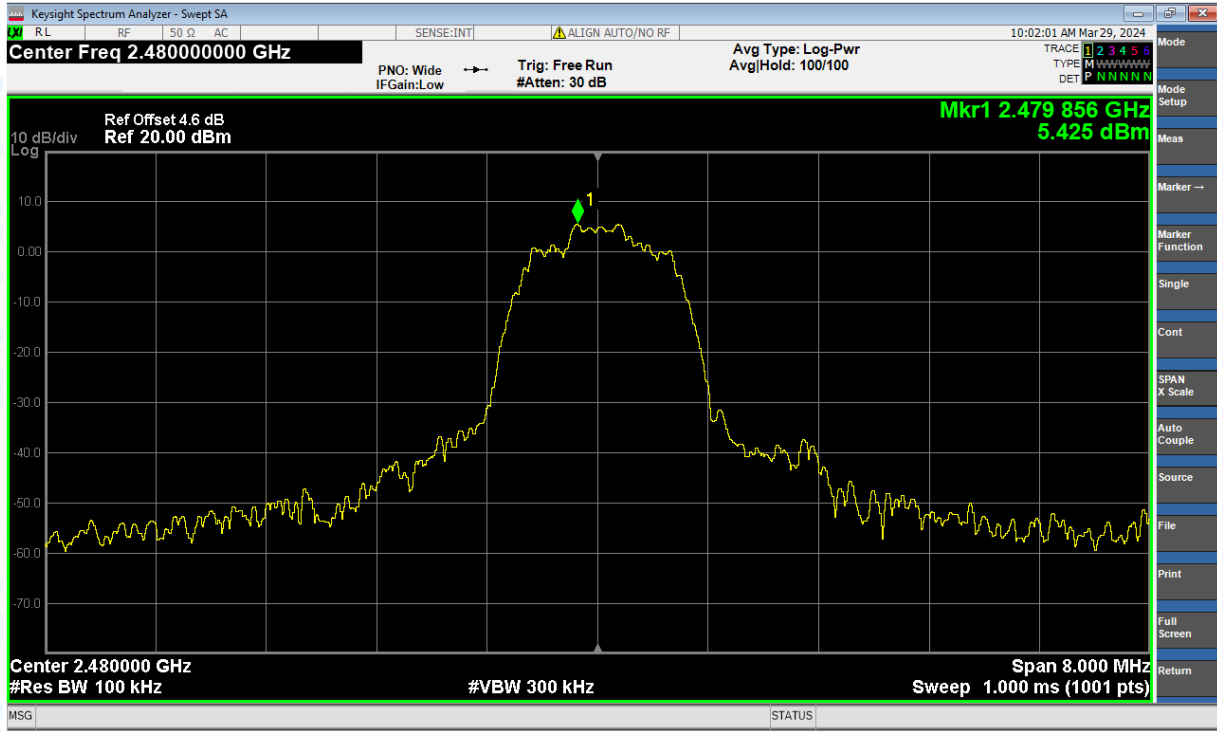
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



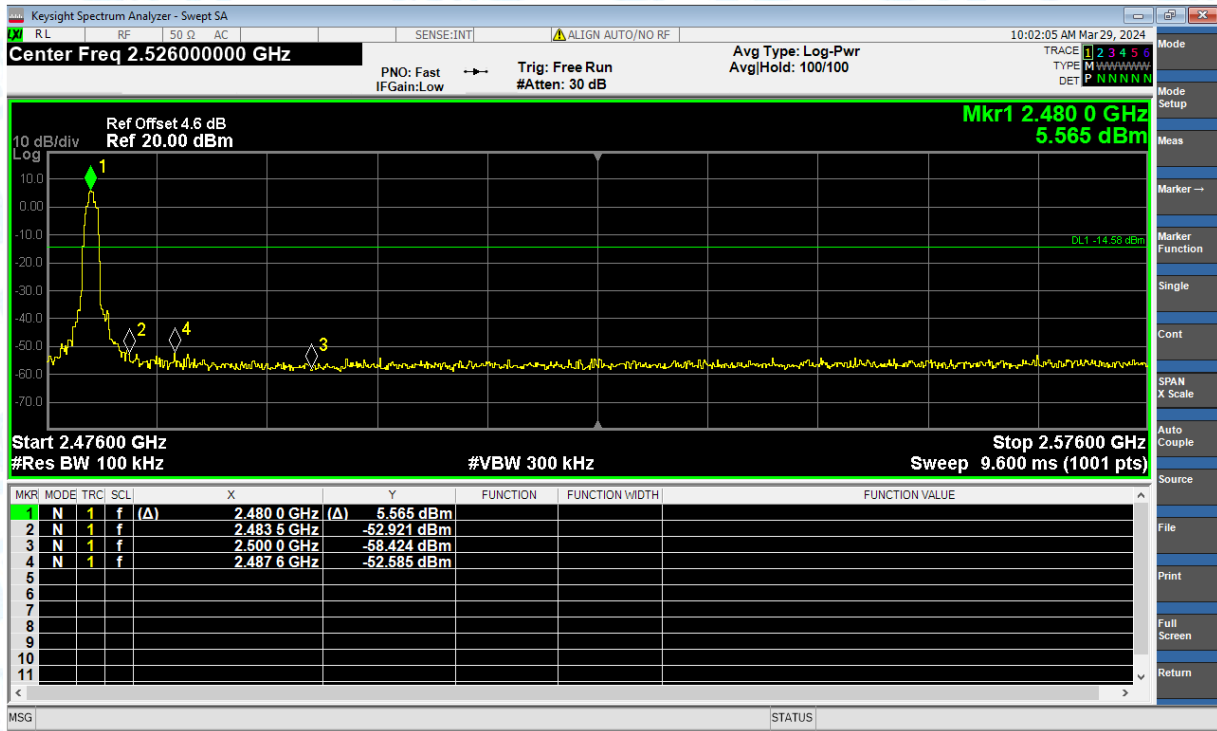
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



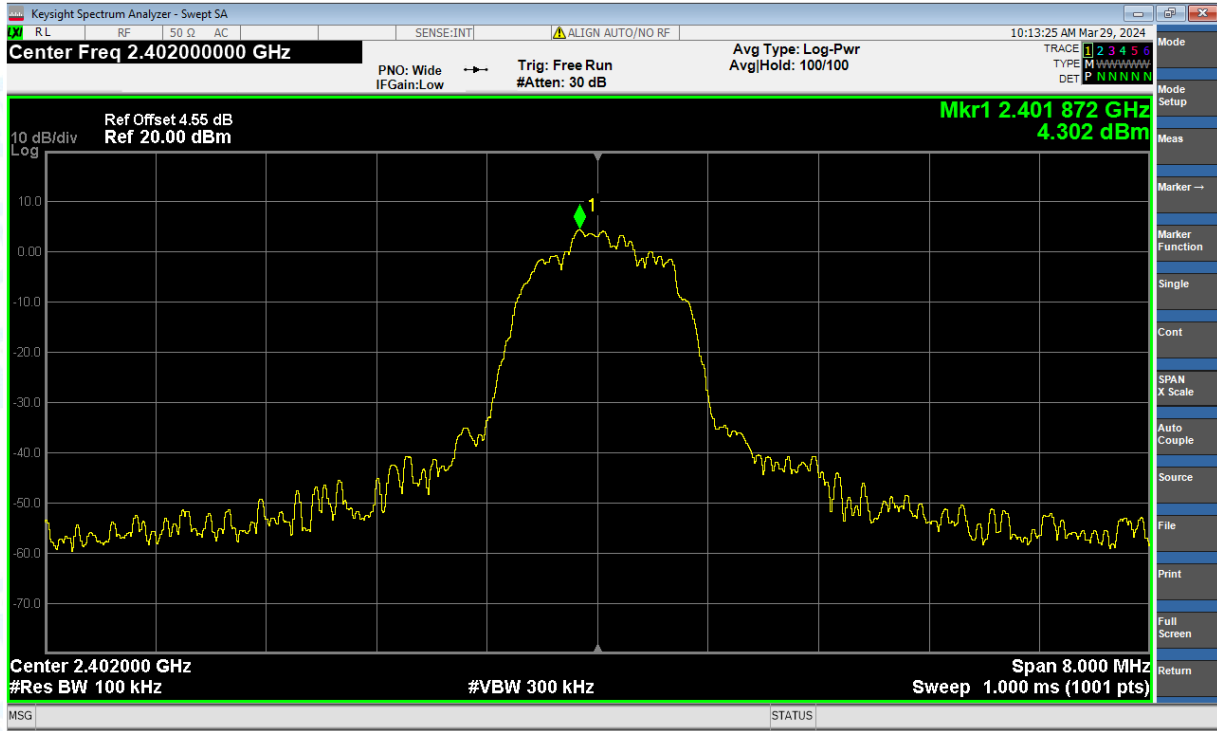
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



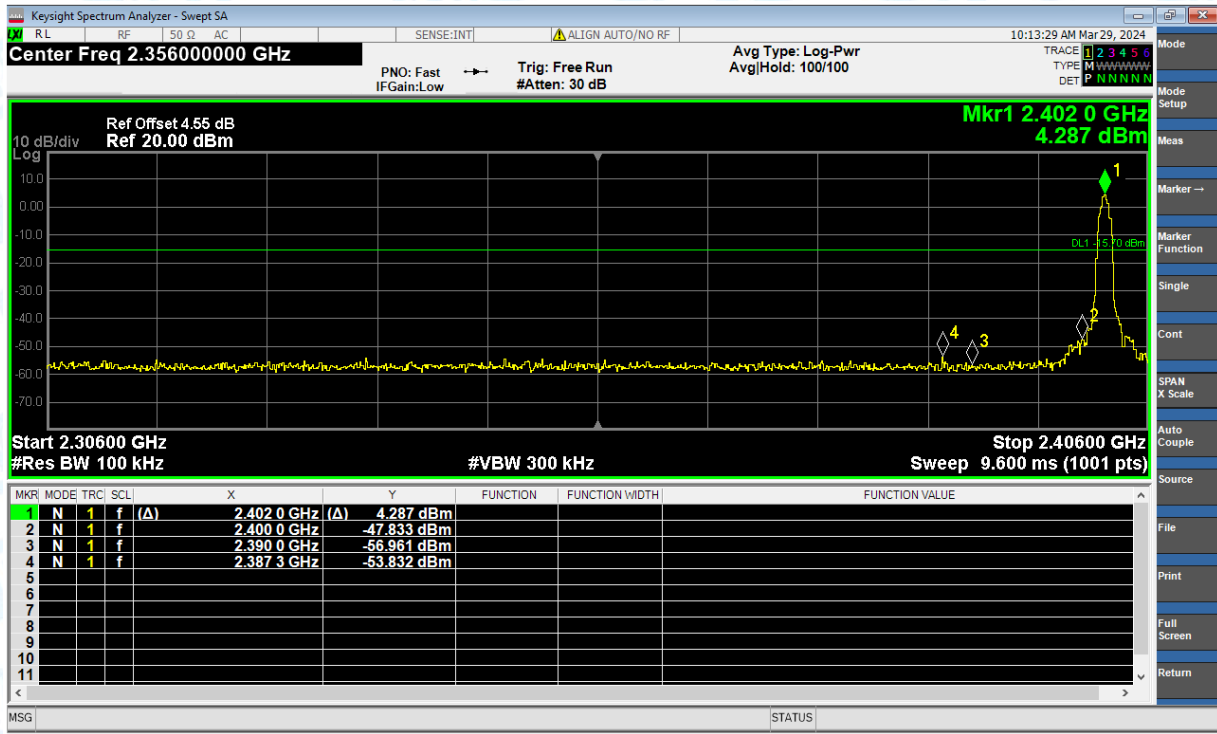
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



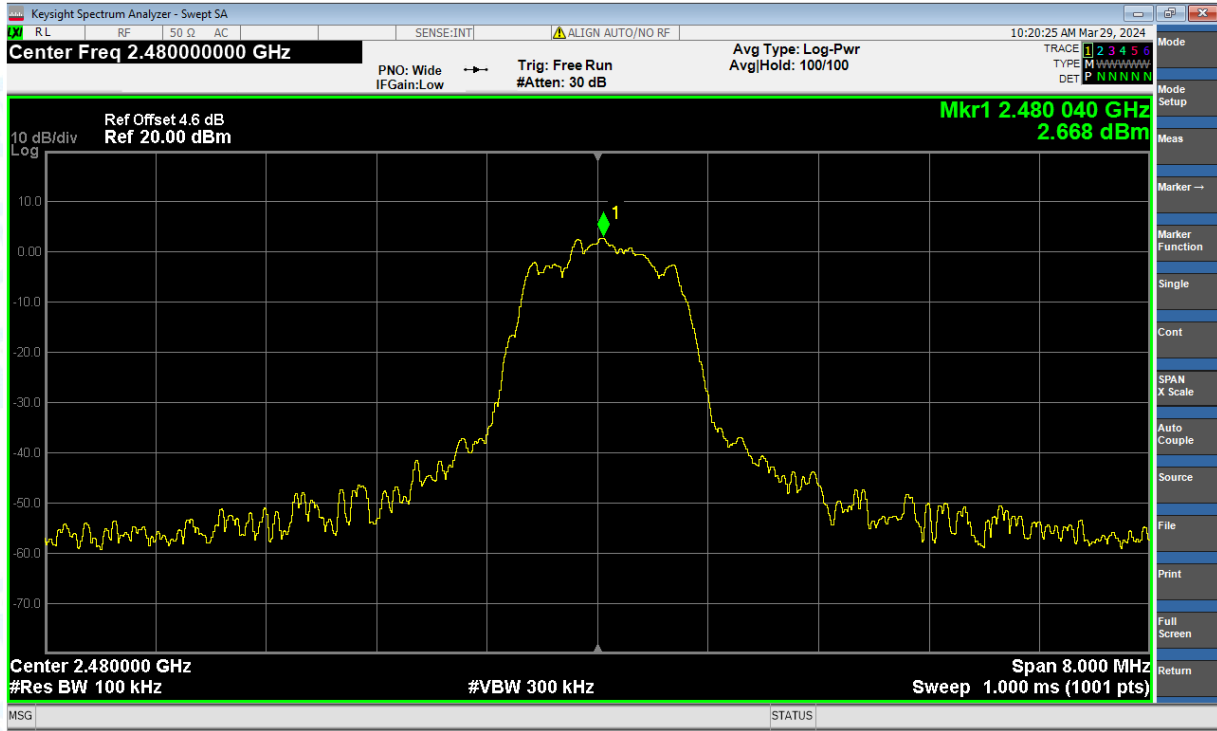
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



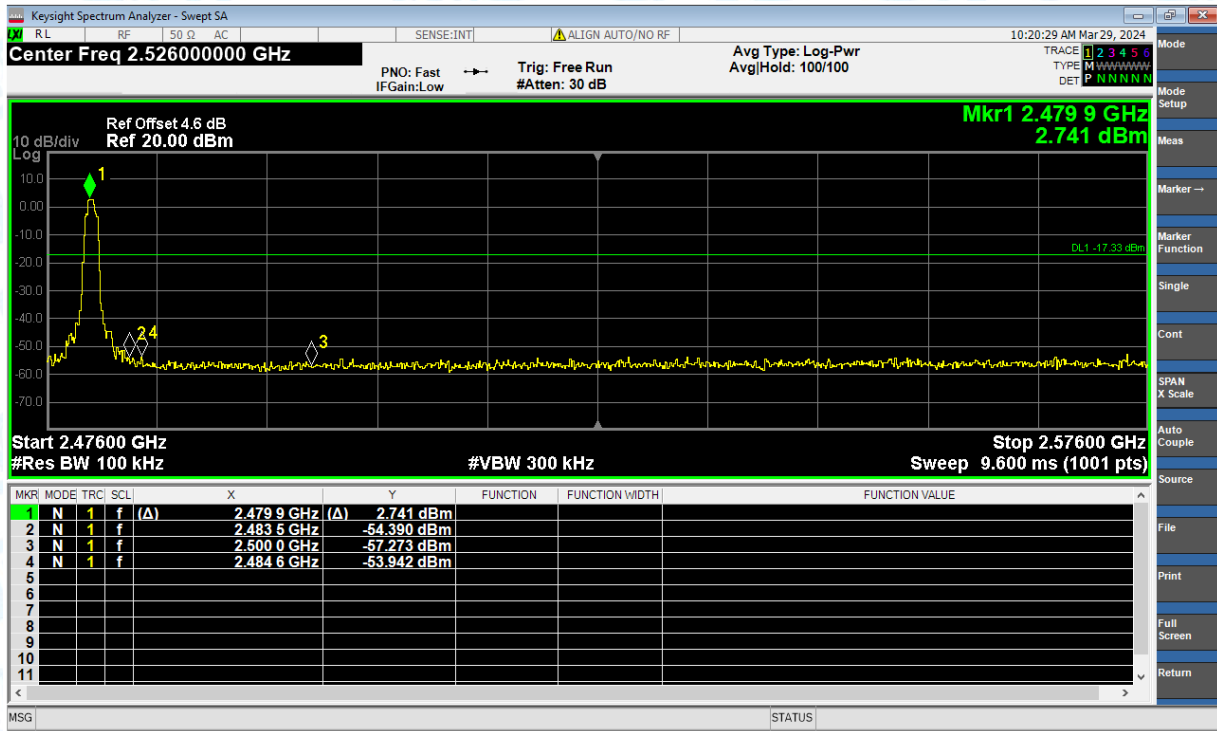
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Emission



6. Band Edge(Hopping)

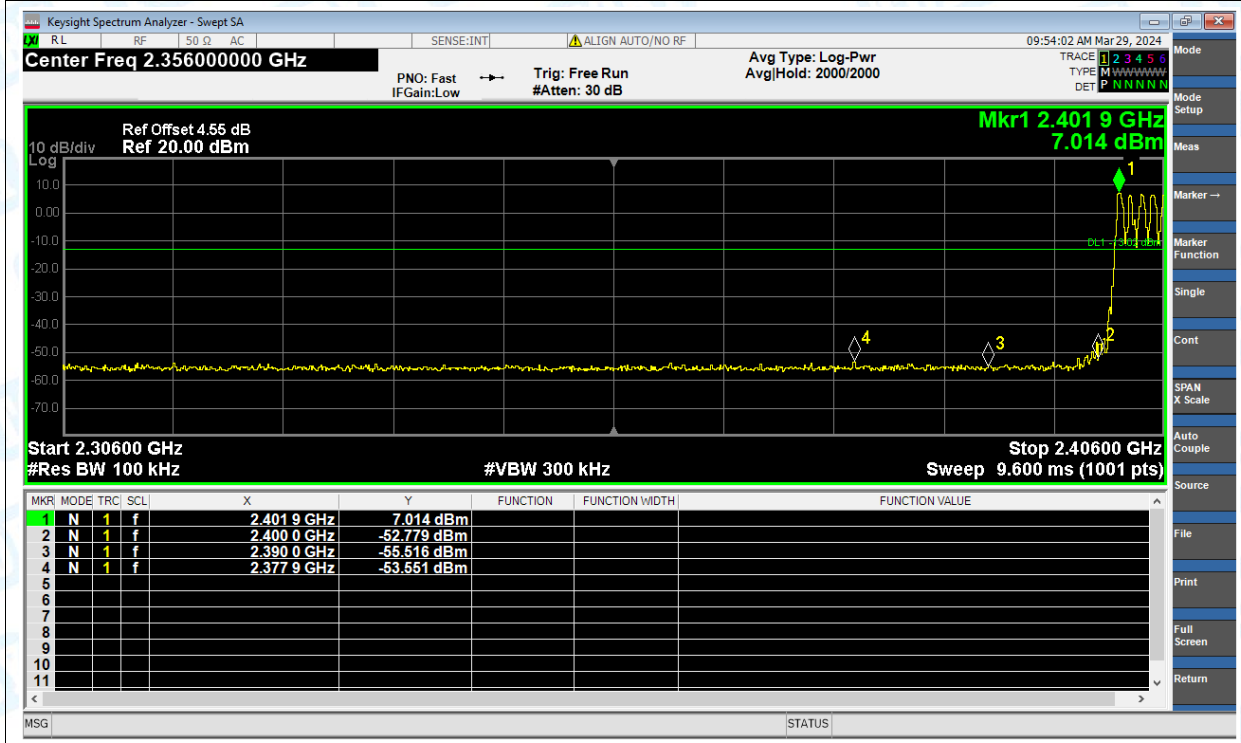
| Condition | Mode | Frequency (MHz) | Antenna | Hopping Mode | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-------|-----------------|---------|--------------|-----------------|-------------|---------|
| NVNT | 1-DH1 | 2402 | Ant1 | Hopping | -60.53 | -20 | Pass |
| NVNT | 1-DH1 | 2480 | Ant1 | Hopping | -57.72 | -20 | Pass |
| NVNT | 2-DH1 | 2402 | Ant1 | Hopping | -60.43 | -20 | Pass |
| NVNT | 2-DH1 | 2480 | Ant1 | Hopping | -58.42 | -20 | Pass |
| NVNT | 3-DH1 | 2402 | Ant1 | Hopping | -57.42 | -20 | Pass |
| NVNT | 3-DH1 | 2480 | Ant1 | Hopping | -55.54 | -20 | Pass |

Test Graphs

Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



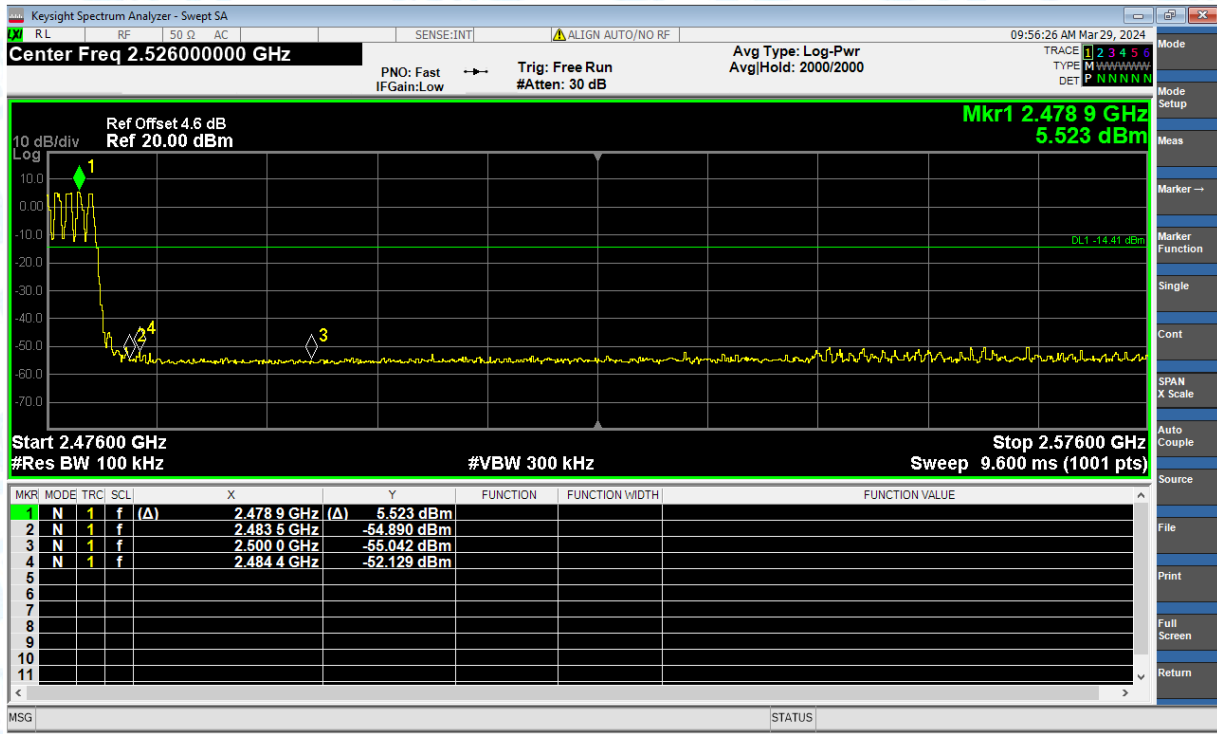
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



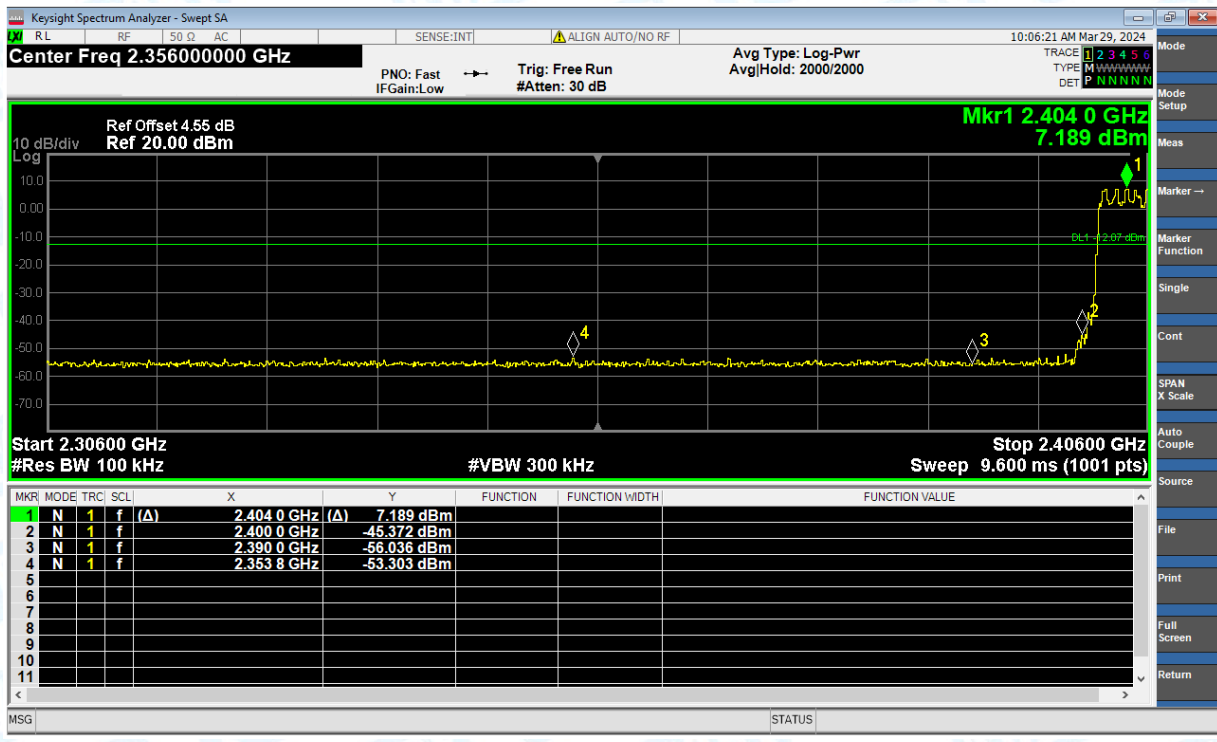
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



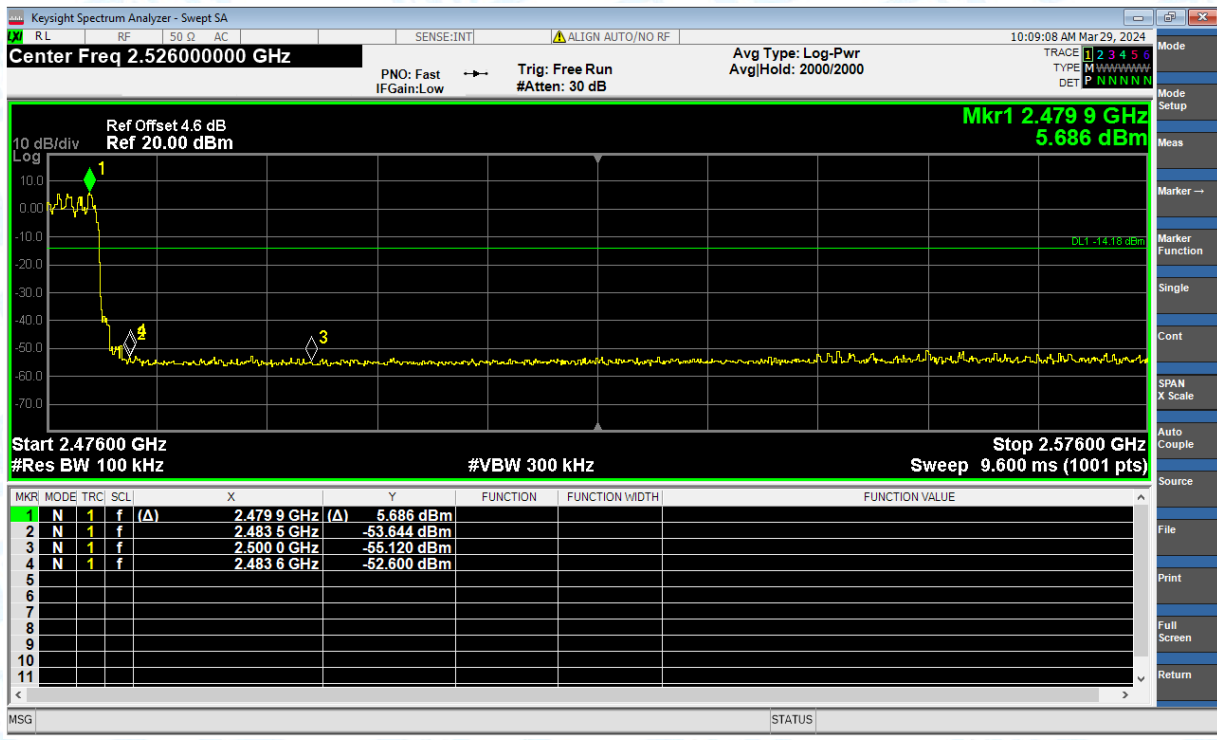
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



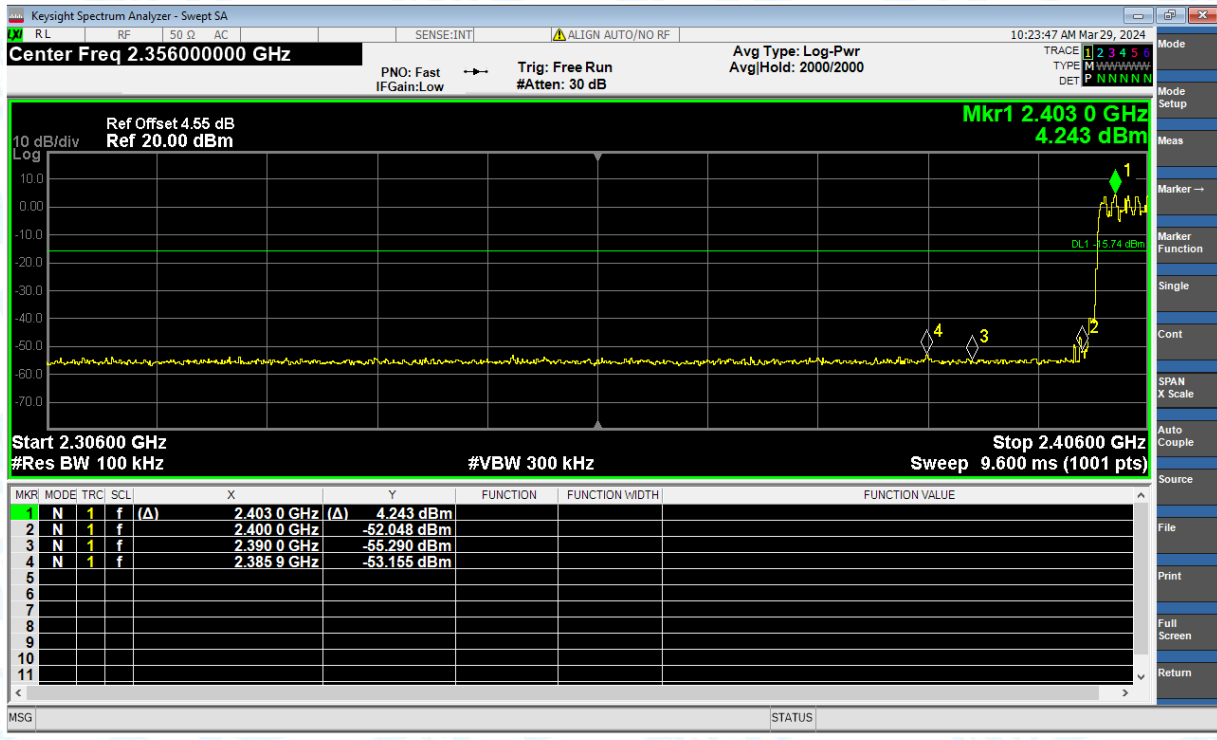
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



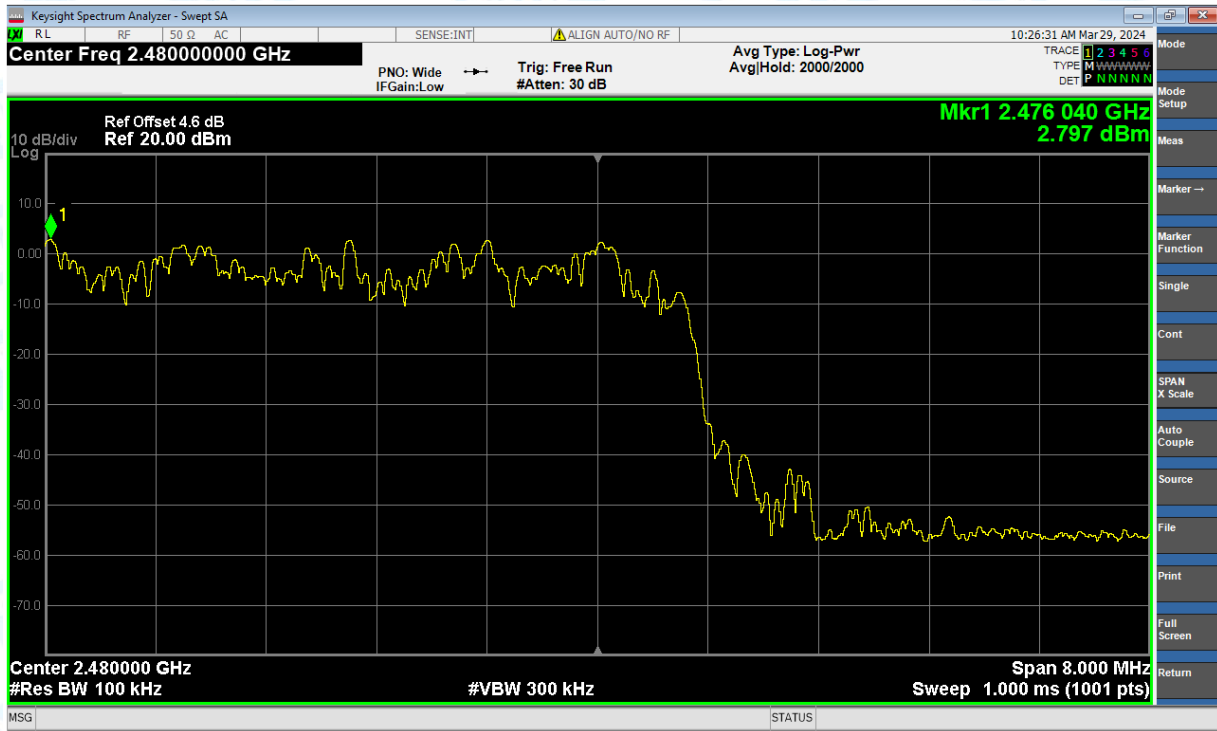
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Emission

