



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Wireless headphones

Test Model: MBS2402

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

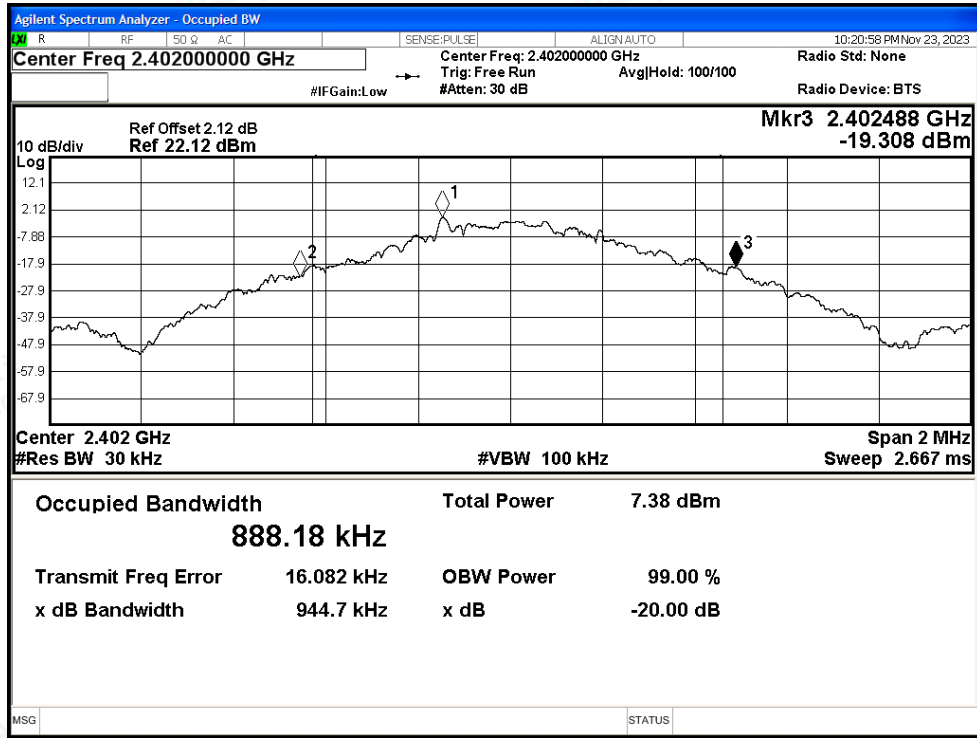
| Condition | Mode | Frequency (MHz) | Antenna | -20 dB Bandwidth (MHz) | Limit -20 dB Bandwidth (MHz) | Verdict |
|-----------|-------|-----------------|---------|------------------------|------------------------------|---------|
| NVNT | 1-DH5 | 2402 | Ant1 | 0.945 | N/A | Pass |
| NVNT | 1-DH5 | 2441 | Ant1 | 0.927 | N/A | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | 0.945 | N/A | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | 1.326 | N/A | Pass |
| NVNT | 2-DH5 | 2441 | Ant1 | 1.273 | N/A | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | 1.277 | N/A | Pass |



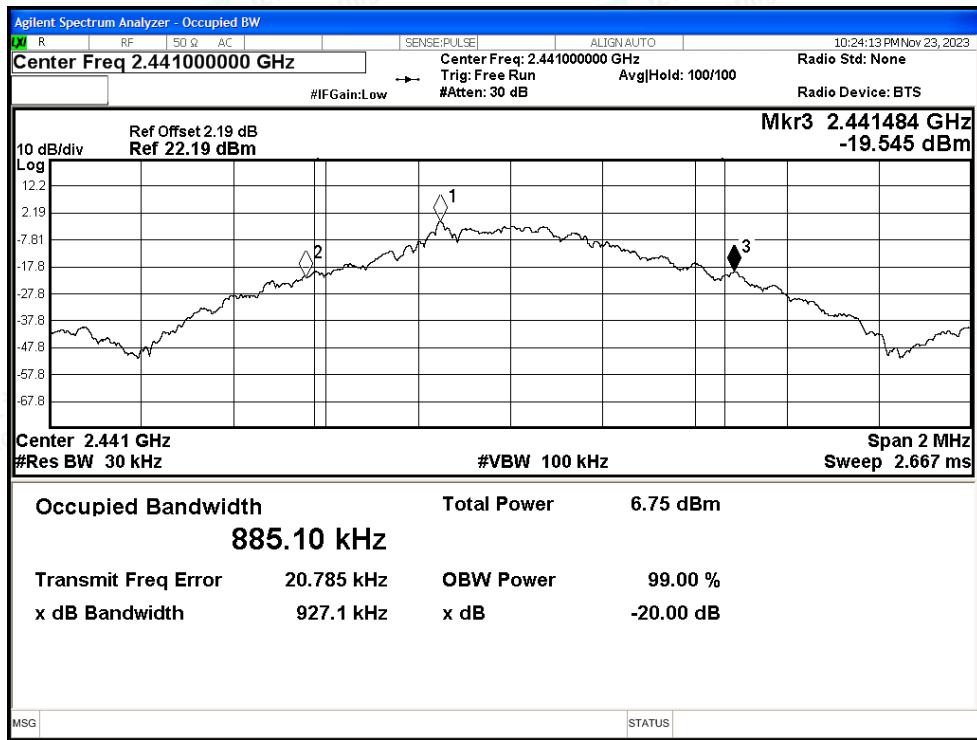


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

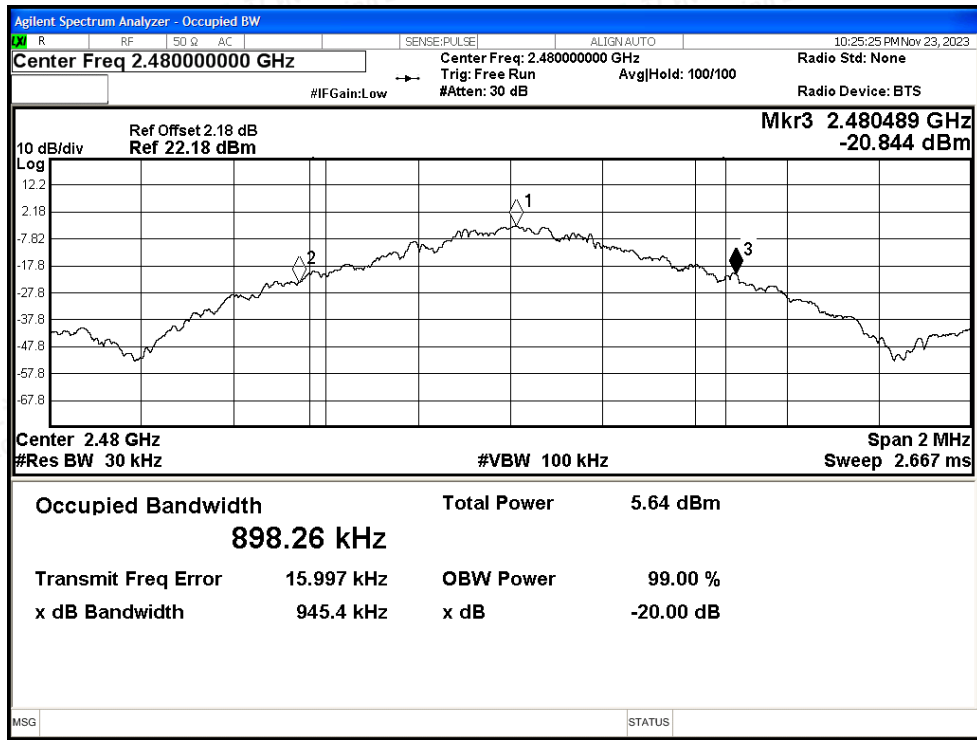


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

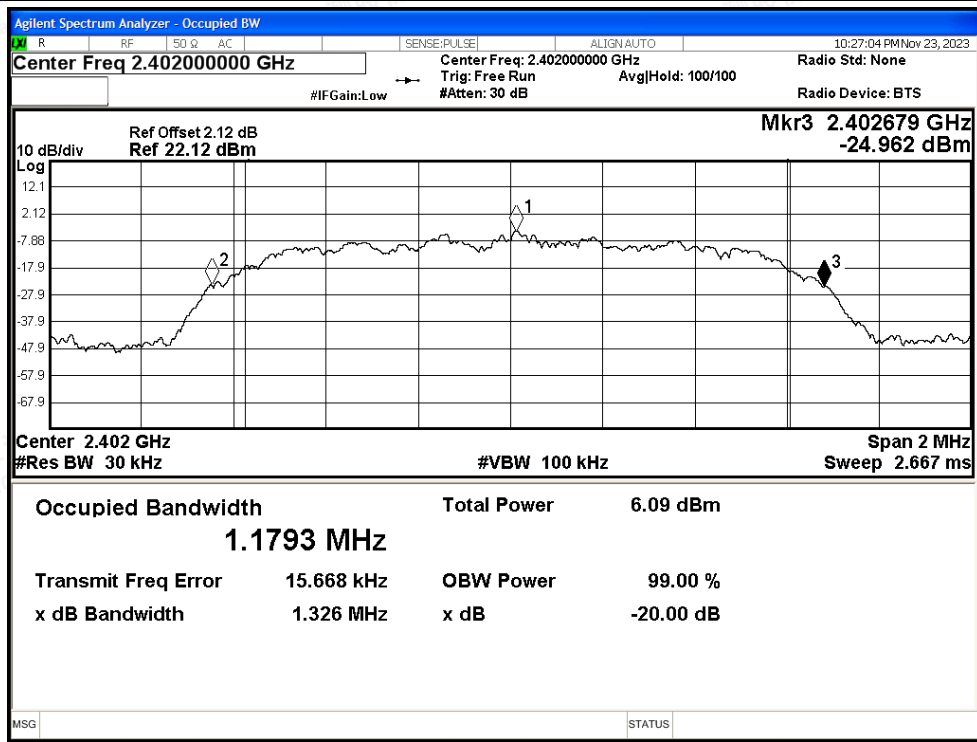




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

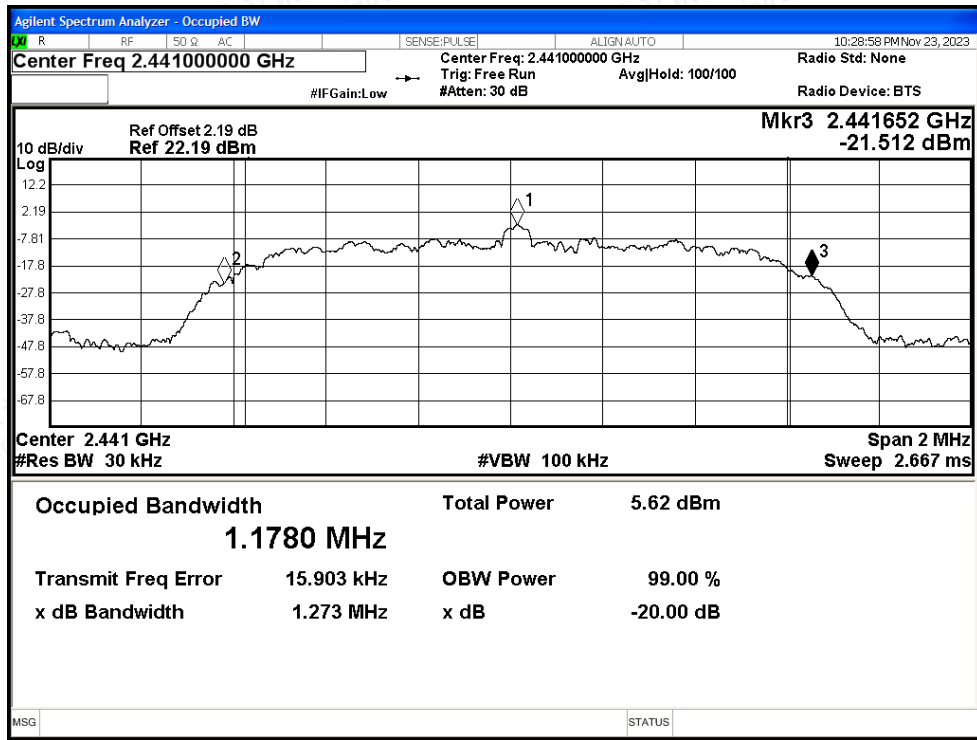


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

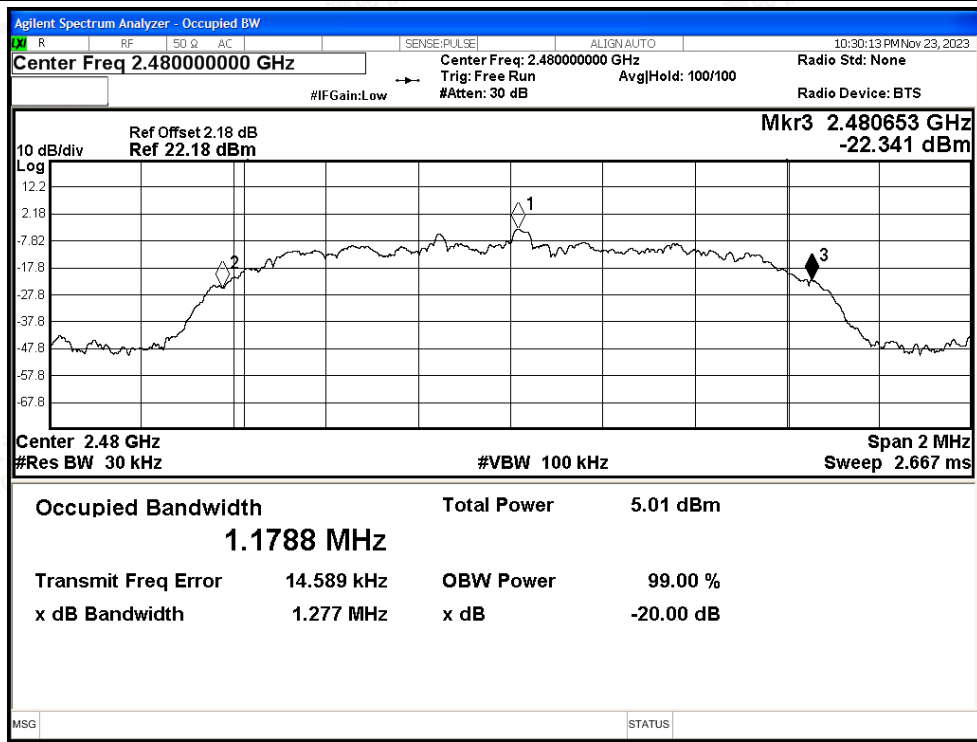




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1





A.2 Maximum Peak Conducted Output Power

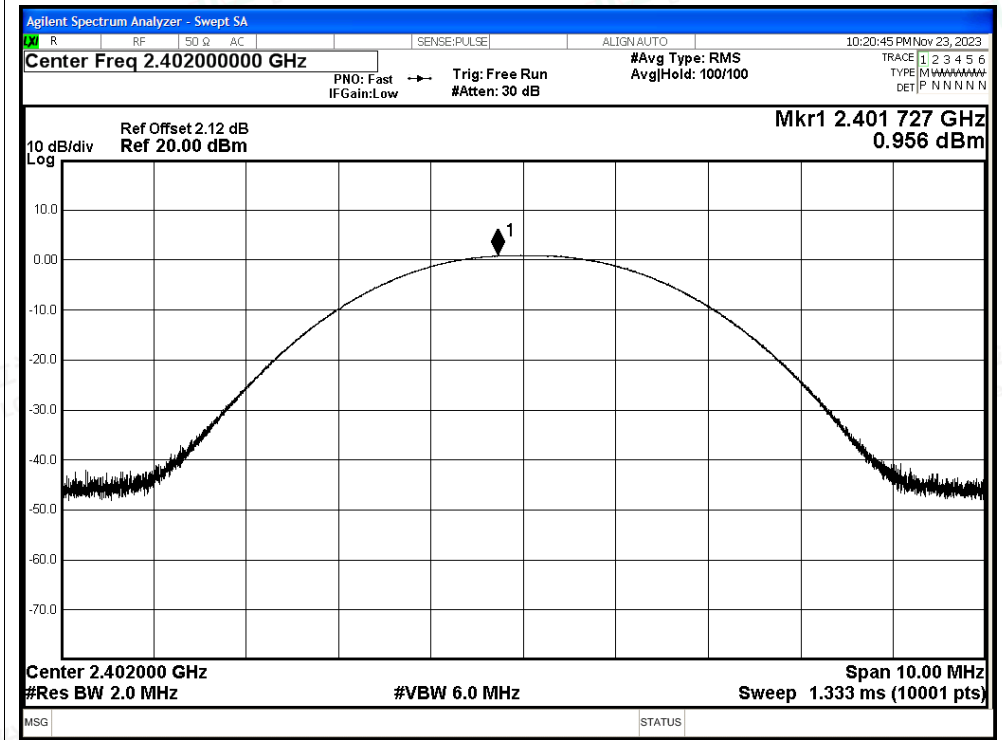
| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|-------|-----------------|---------|-----------------------|-------------|---------|
| NVNT | 1-DH5 | 2402 | Ant1 | 0.96 | 21 | Pass |
| NVNT | 1-DH5 | 2441 | Ant1 | 0.28 | 21 | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | -0.25 | 21 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | 1.56 | 21 | Pass |
| NVNT | 2-DH5 | 2441 | Ant1 | 0.85 | 21 | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | 0.27 | 21 | Pass |



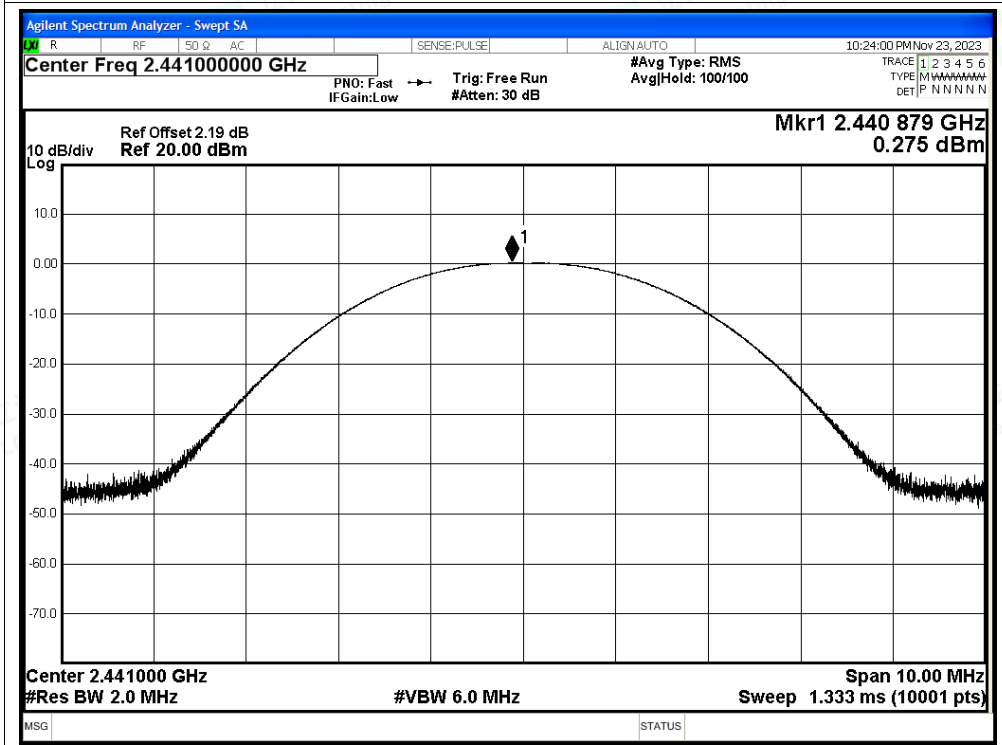


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

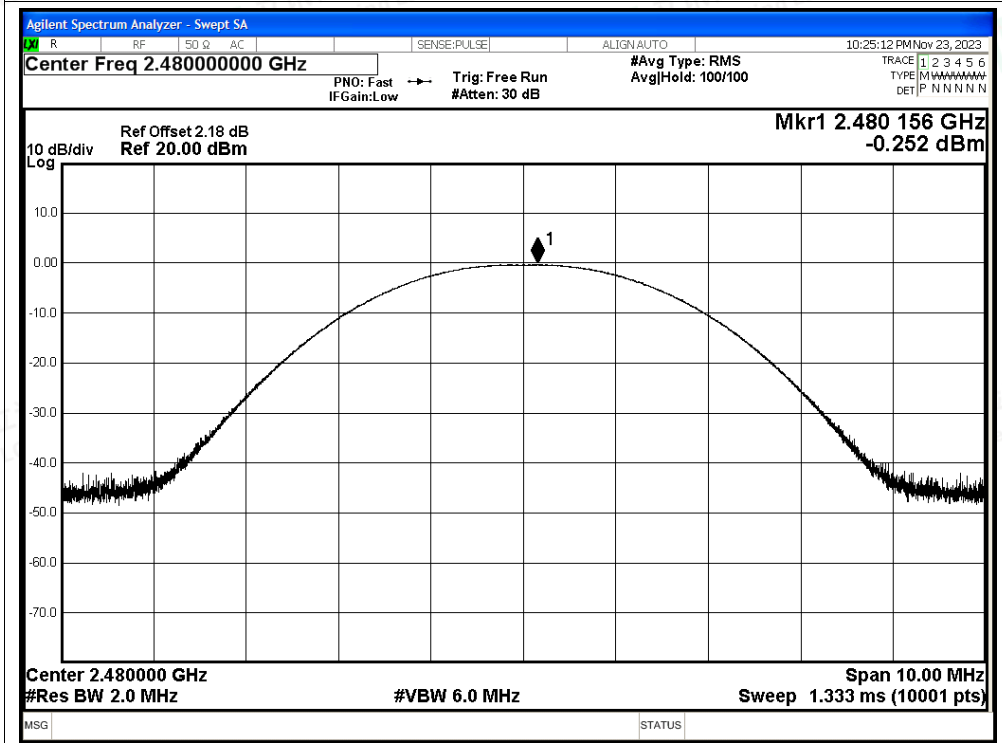


Power NVNT 1-DH5 2441MHz Ant1

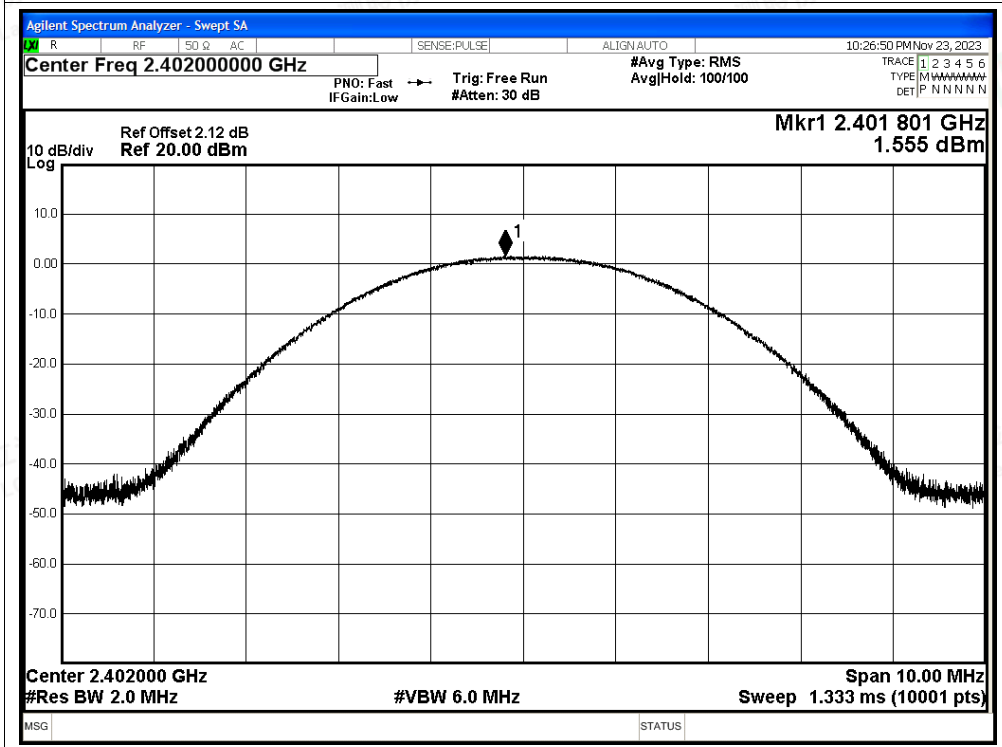




Power NVNT 1-DH5 2480MHz Ant1

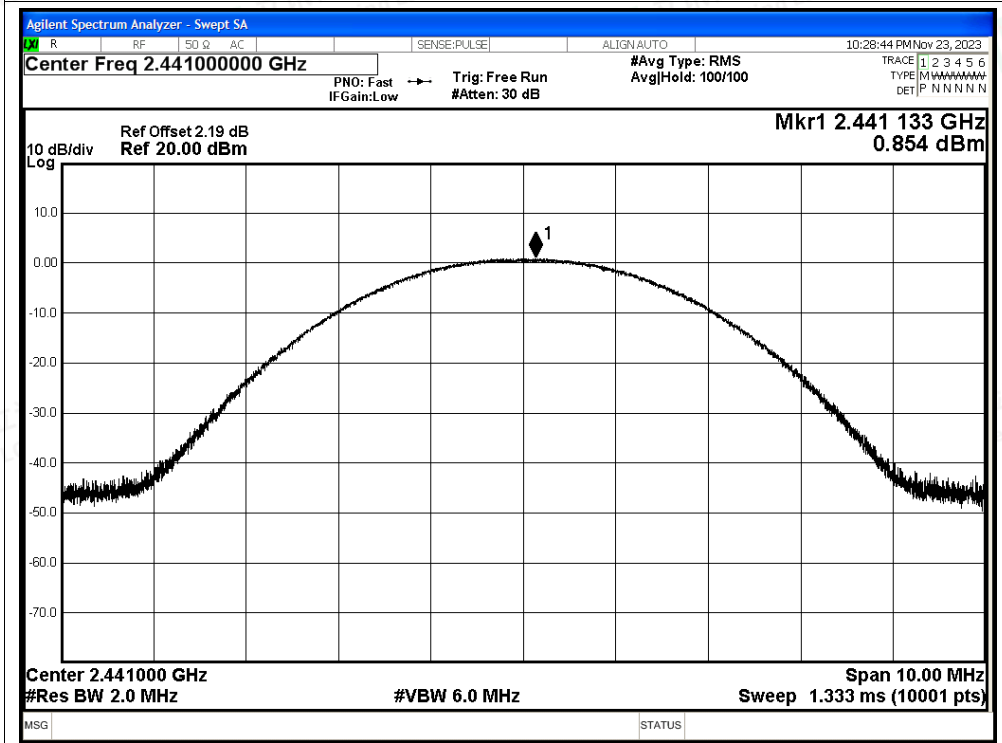


Power NVNT 2-DH5 2402MHz Ant1

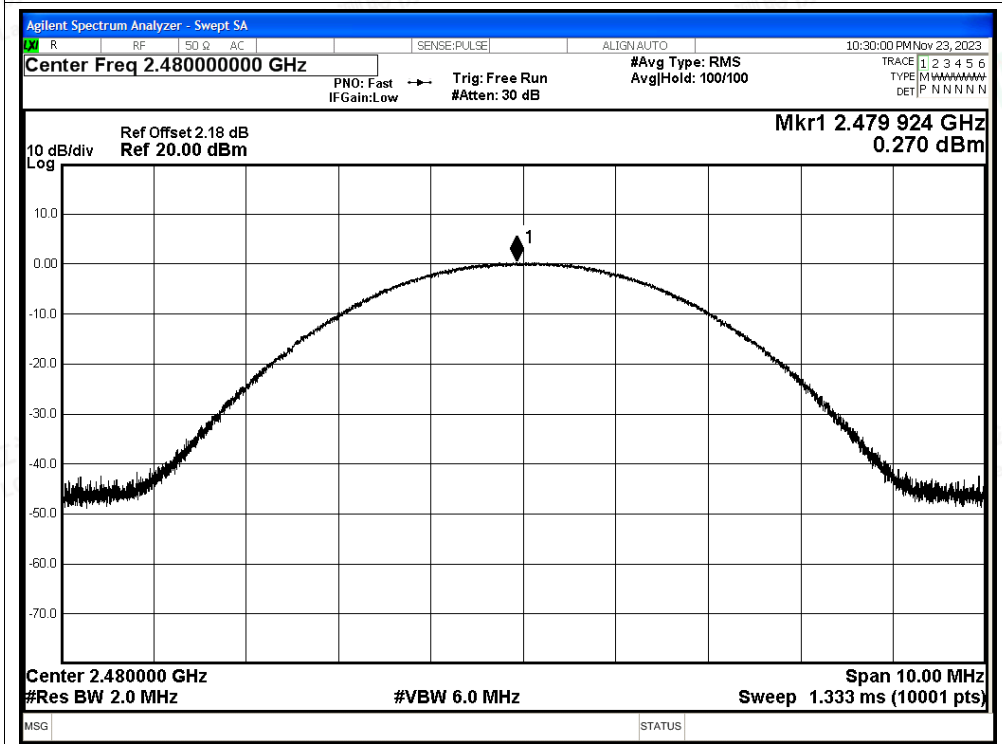




Power NVNT 2-DH5 2441MHz Ant1



Power NVNT 2-DH5 2480MHz Ant1





A.3 Carrier Frequencies Separation

| Condition | Mode | Antenna | Hopping Freq1 (MHz) | Hopping Freq2 (MHz) | HFS (MHz) | Limit (MHz) | Verdict |
|-----------|-------|---------|---------------------|---------------------|-----------|-------------|---------|
| NVNT | 1-DH5 | Ant1 | 2401.848 | 2403.072 | 1.224 | 0.63 | Pass |
| NVNT | 2-DH5 | Ant1 | 2402.006 | 2403.008 | 1.002 | 0.884 | Pass |

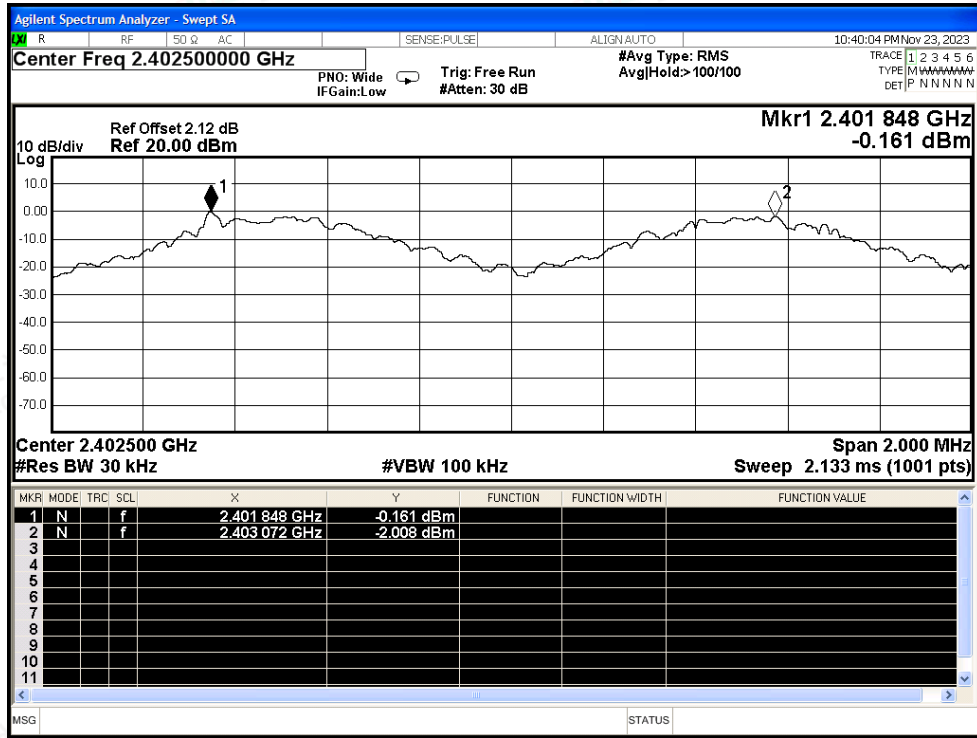


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Scan code to check authenticity

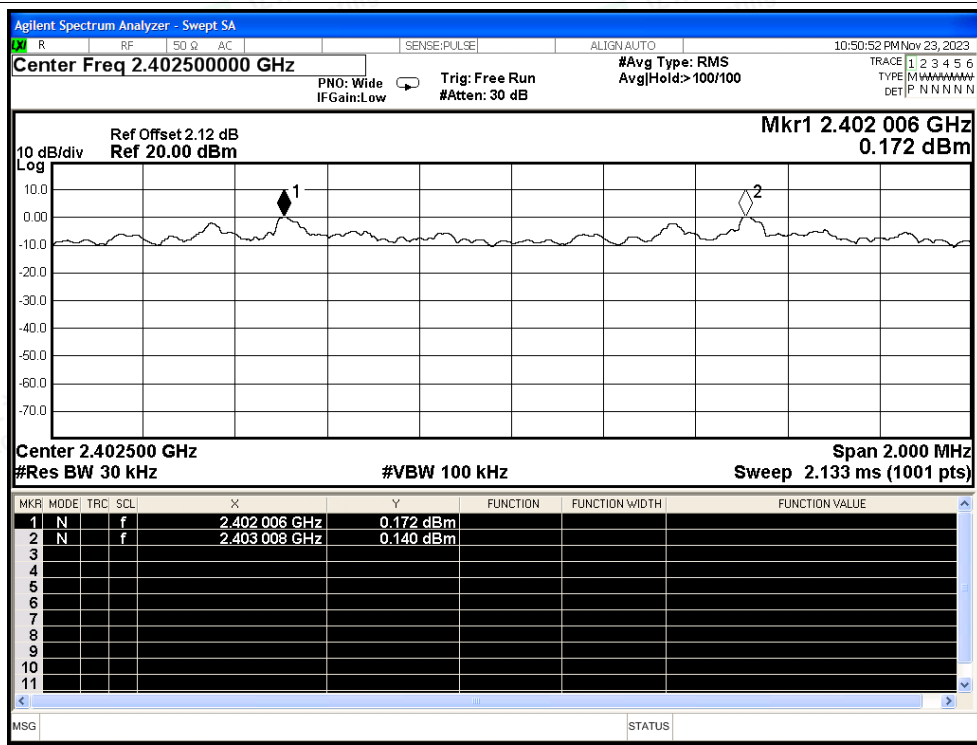


Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1





A.4 Dwell Time

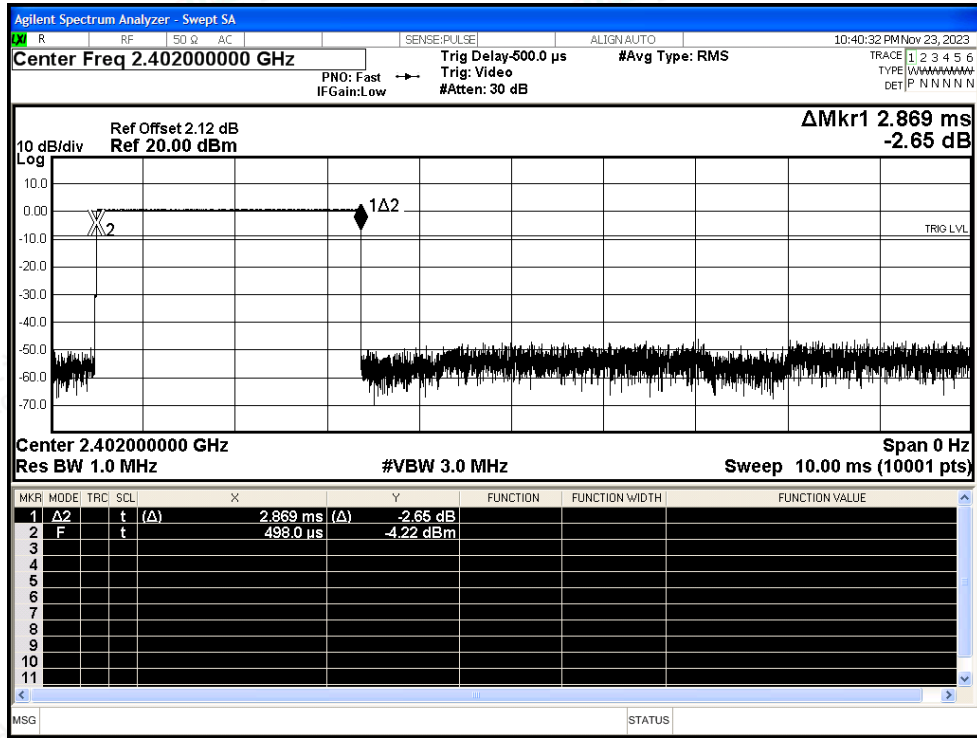
| Condition | Mode | Frequency (MHz) | Antenna | Pulse Time (ms) | Total Dwell Time (ms) | Burst Count | Period Time (ms) | Limit (ms) | Verdict |
|-----------|-------|-----------------|---------|-----------------|-----------------------|-------------|------------------|------------|---------|
| NVNT | 1-DH5 | 2402 | Ant1 | 2.869 | 306.983 | 107 | 31600 | 400 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | 2.877 | 307.839 | 107 | 31600 | 400 | Pass |



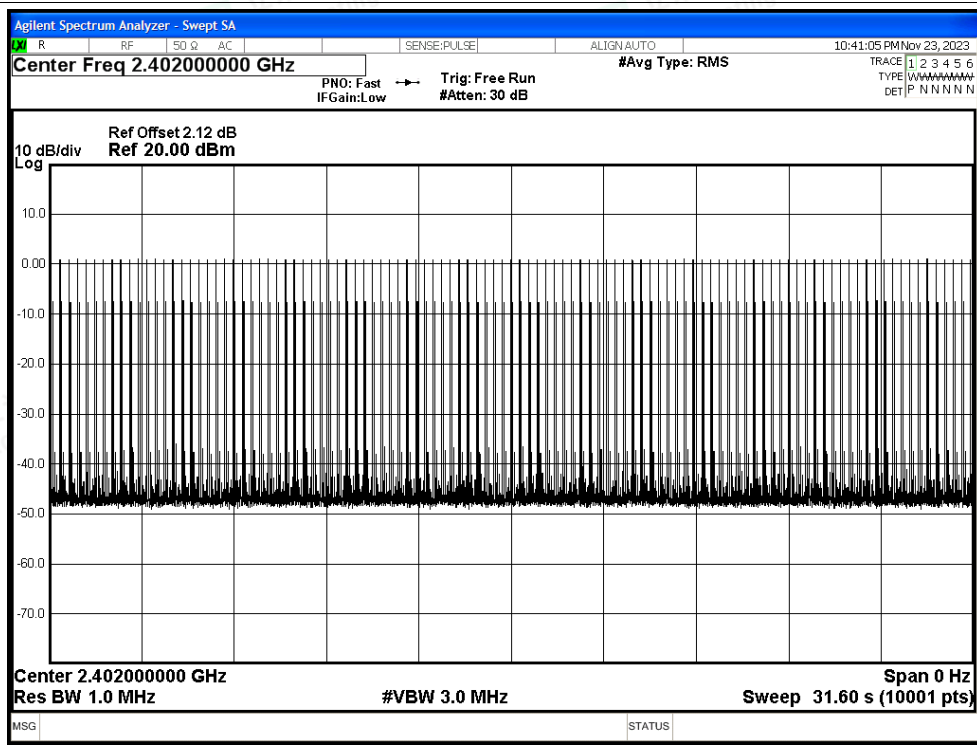


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

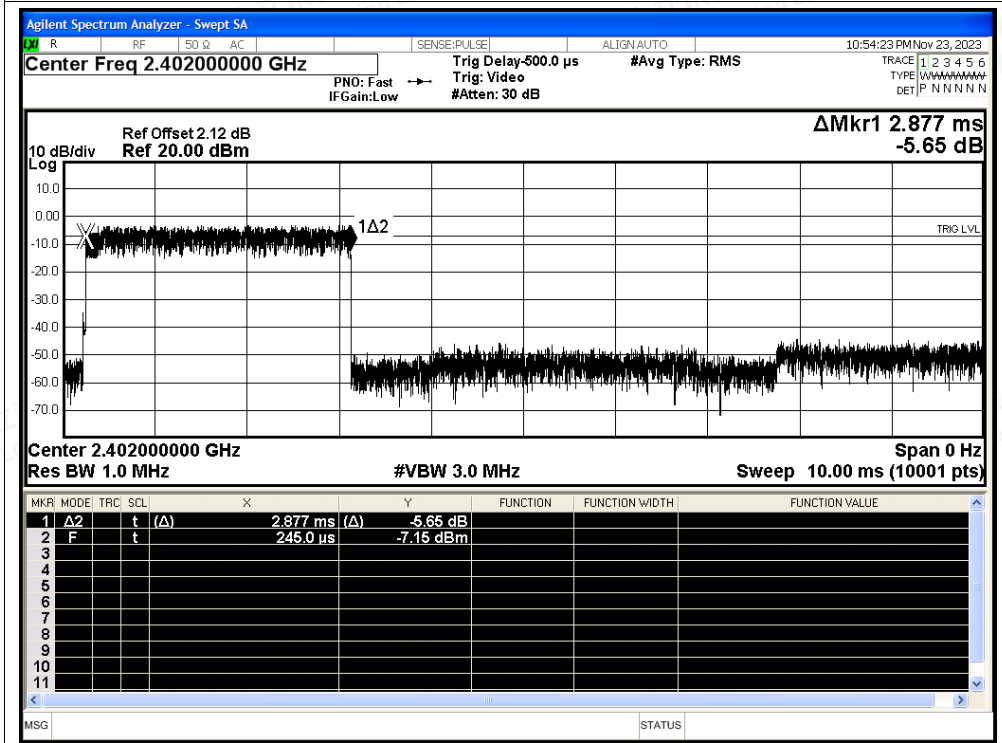


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

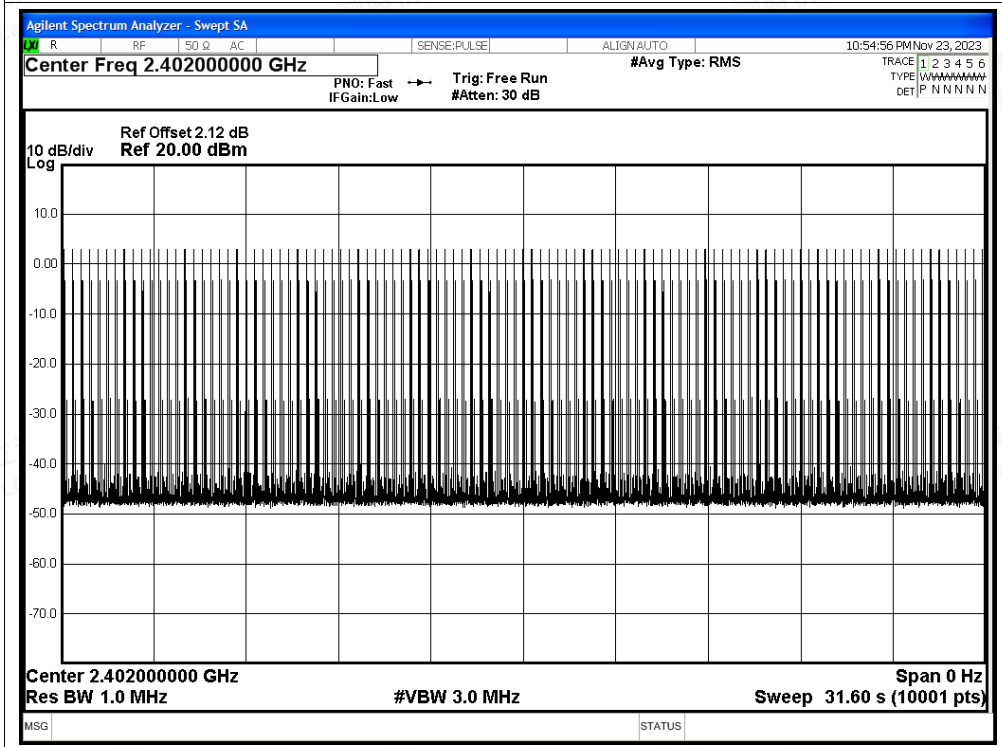




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated





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 |

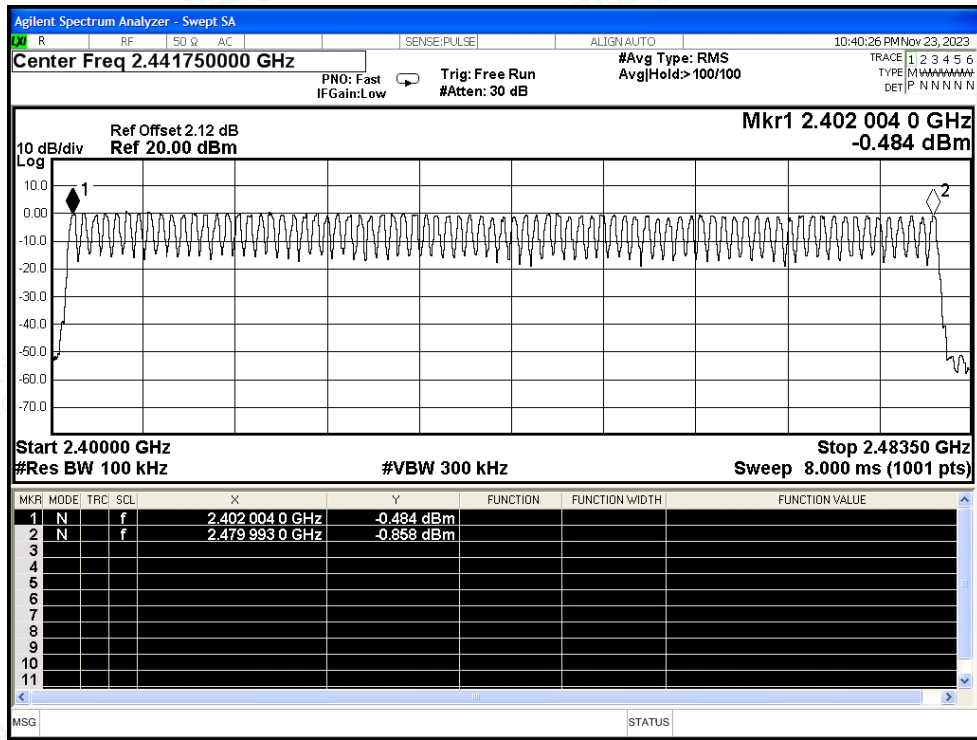


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Scan code to check authenticity

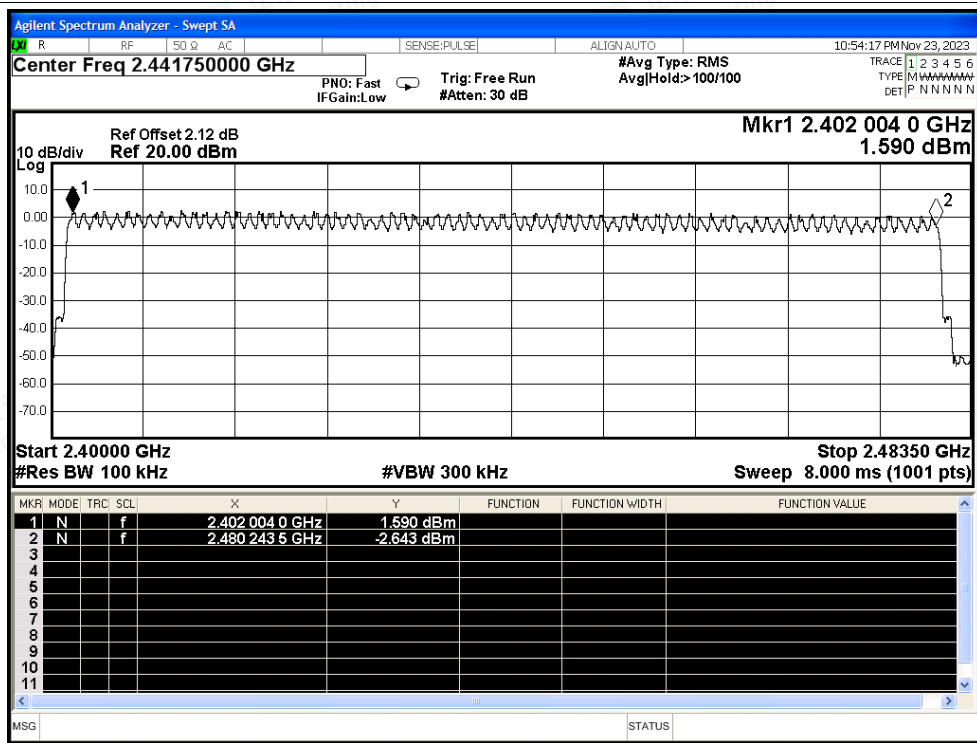


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1





A.6 Band Edge

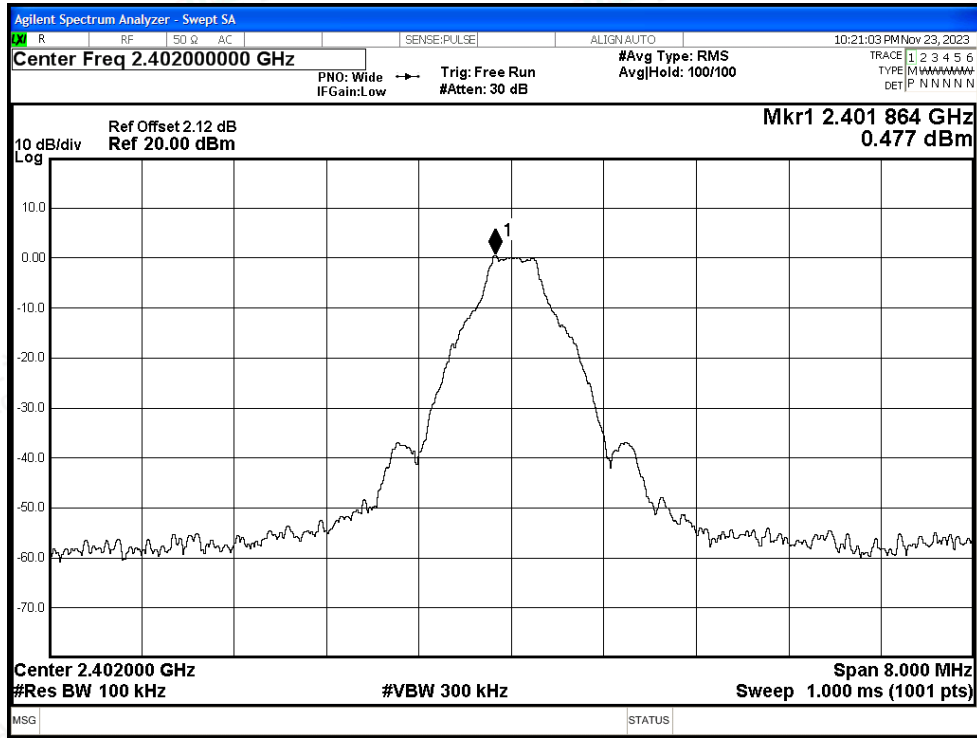
| Condition | Mode | Frequency (MHz) | Antenna | Hopping Mode | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-------|-----------------|---------|--------------|-----------------|-------------|---------|
| NVNT | 1-DH5 | 2402 | Ant1 | No-Hopping | -51.21 | -20 | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | No-Hopping | -48.87 | -20 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | No-Hopping | -49.48 | -20 | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | No-Hopping | -48.74 | -20 | Pass |



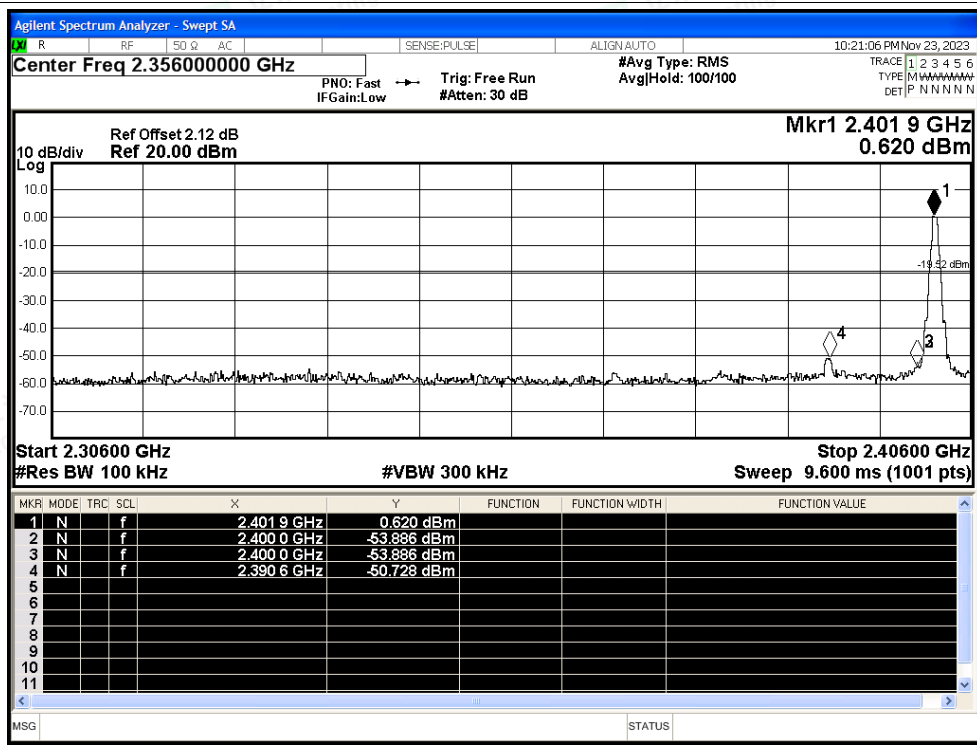


Test Graphs

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

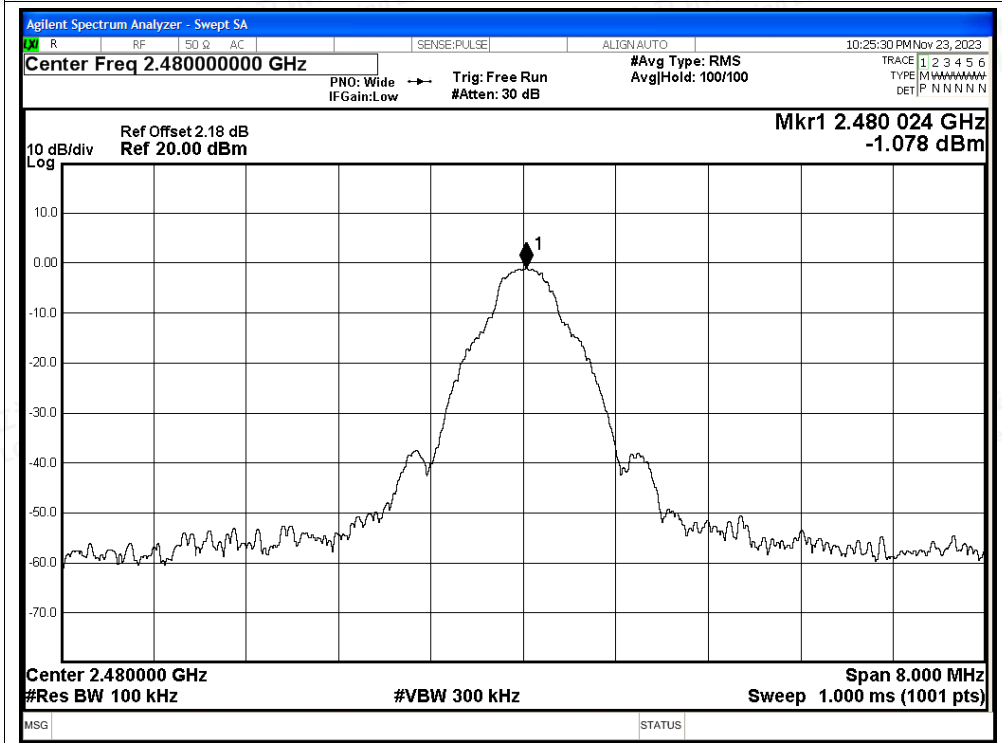


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

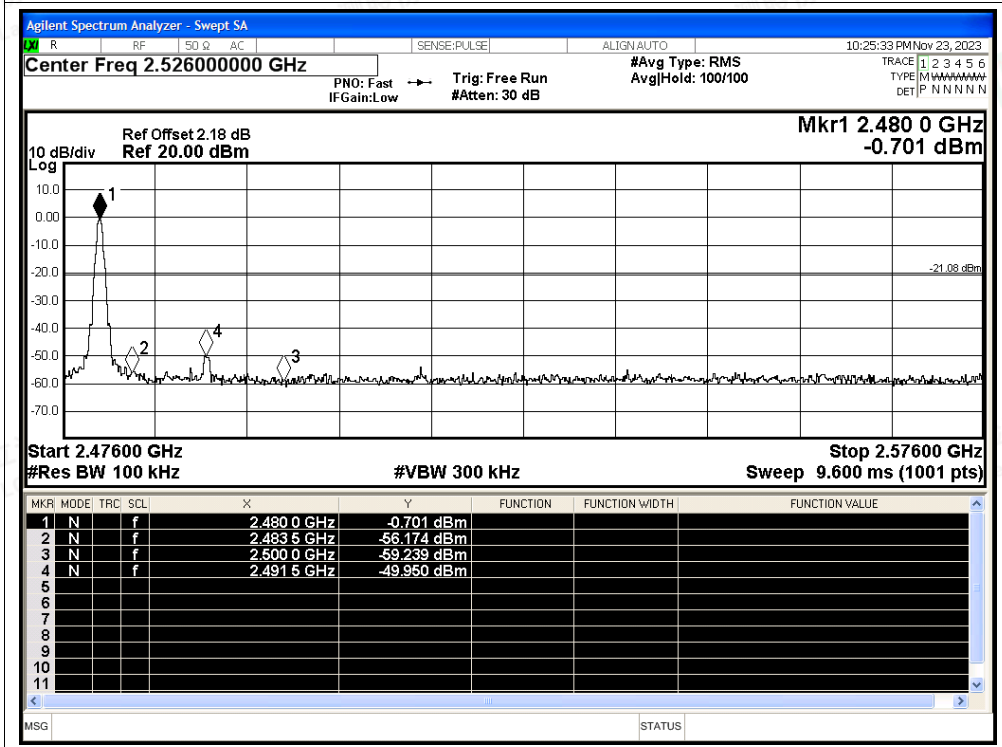




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

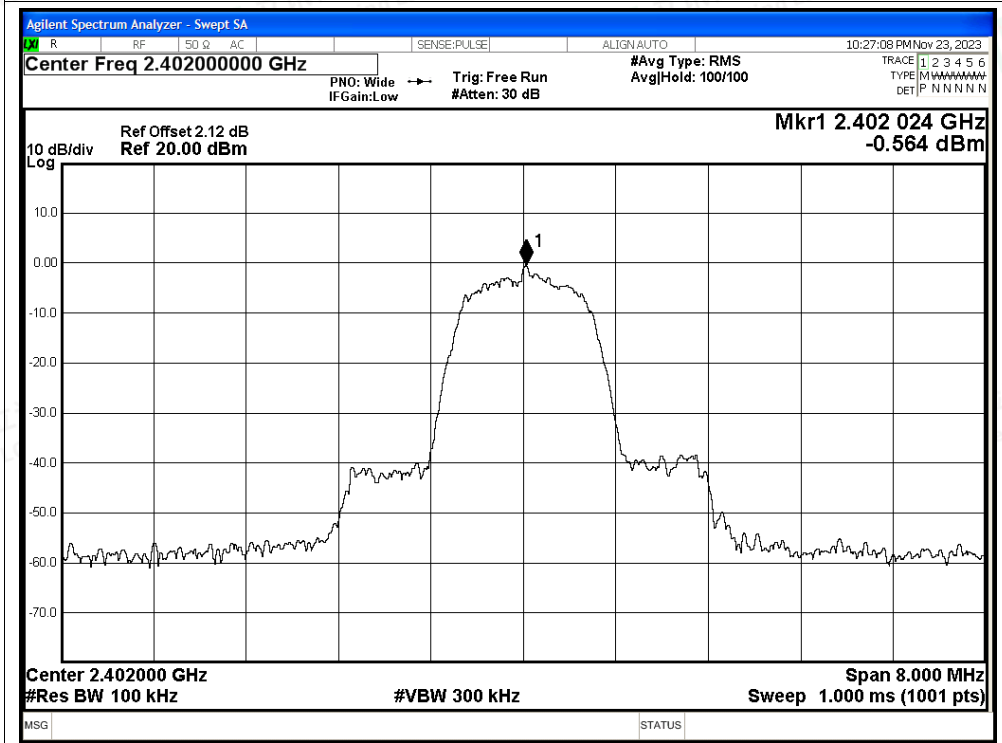


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

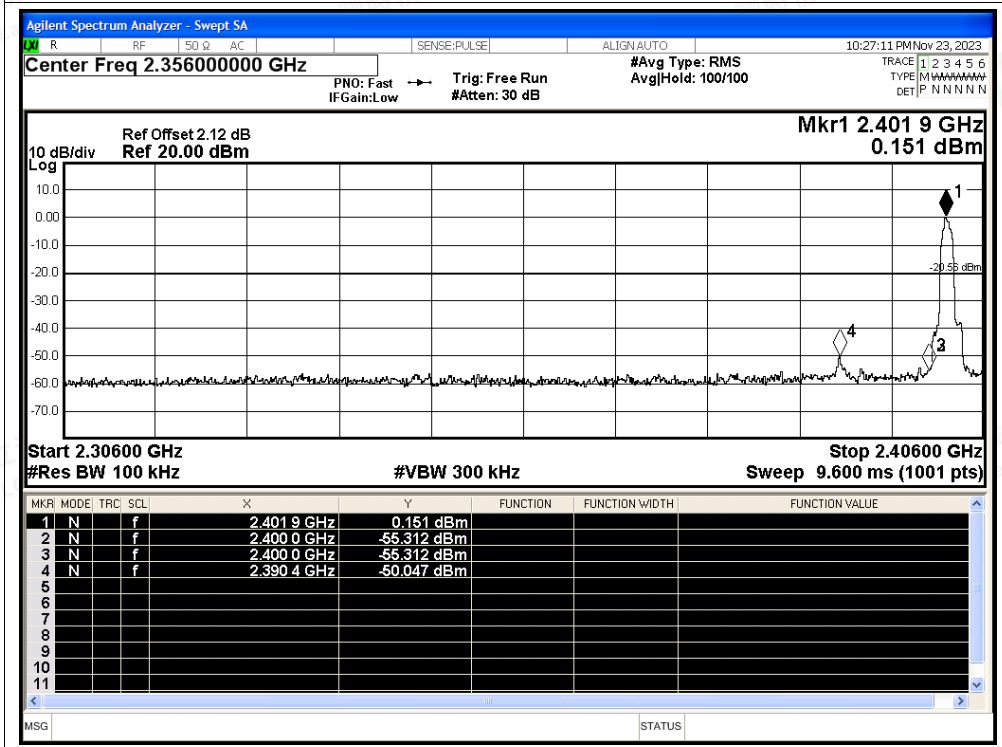




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

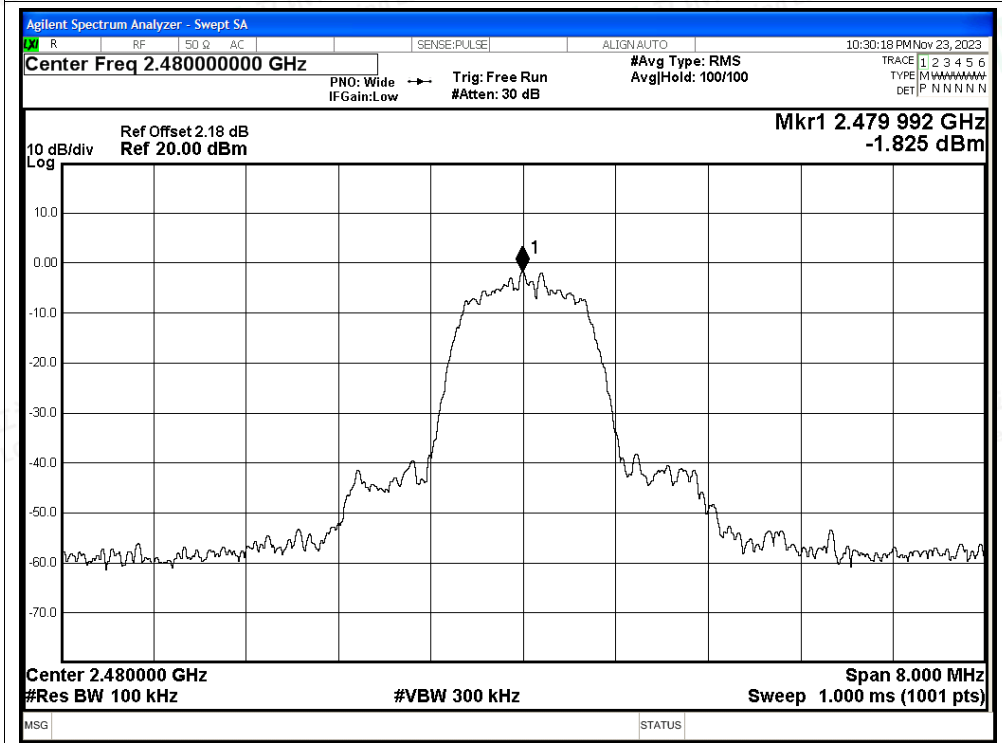


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

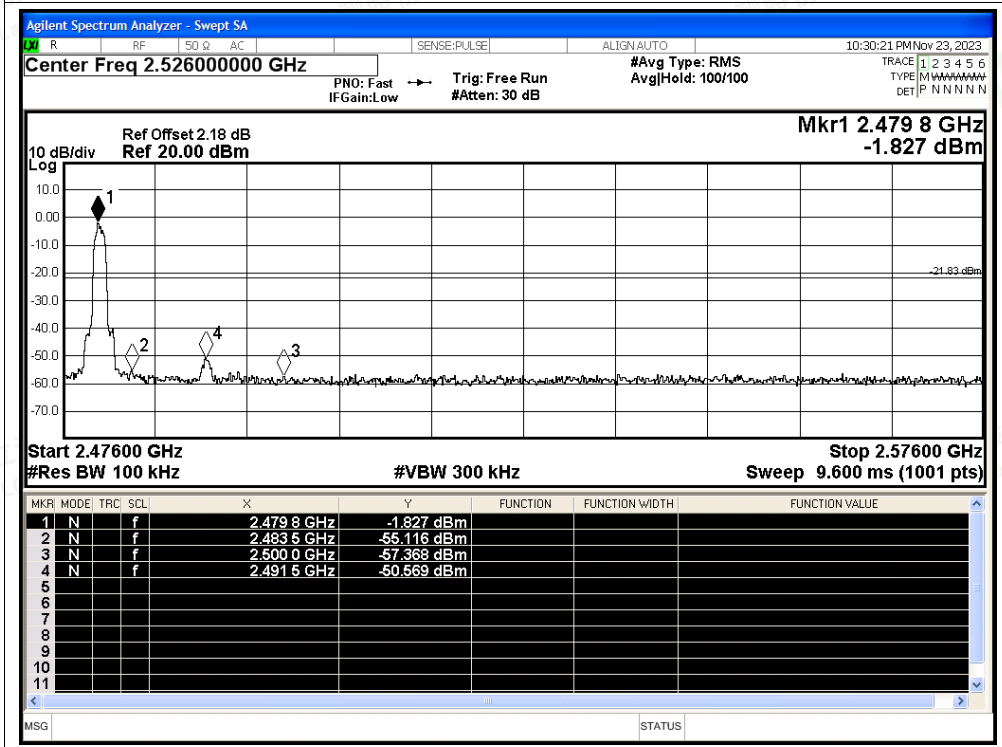




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



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





Band Edge(Hopping)

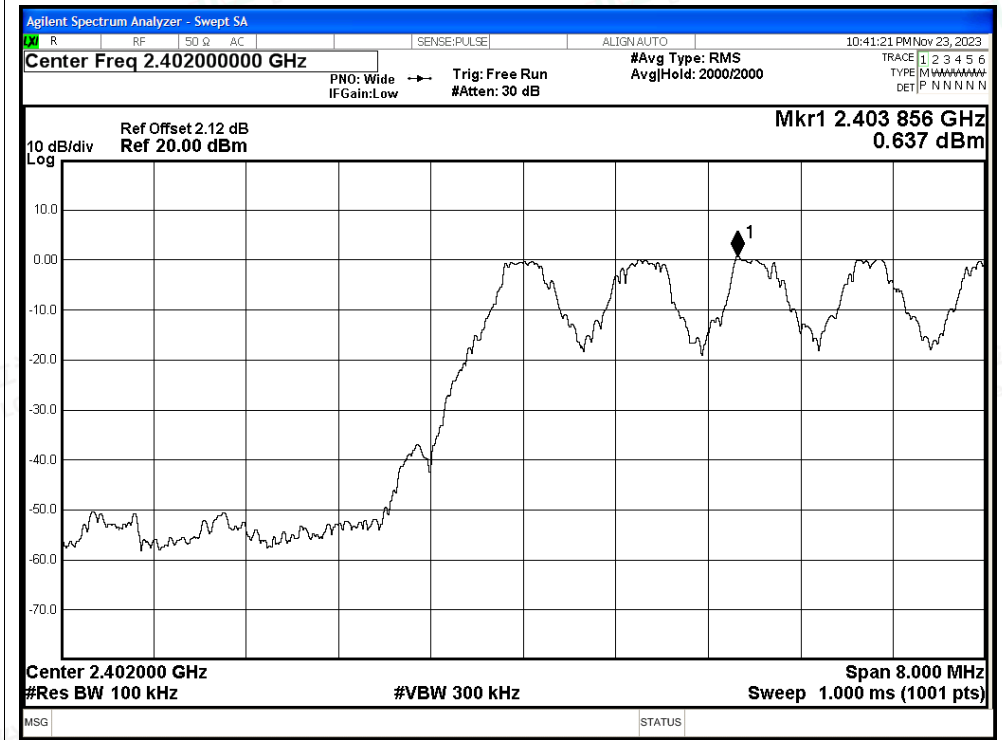
| Condition | Mode | Frequency (MHz) | Antenna | Hopping Mode | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-------|-----------------|---------|--------------|-----------------|-------------|---------|
| NVNT | 1-DH5 | 2402 | Ant1 | Hopping | -54.79 | -20 | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | Hopping | -49.38 | -20 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | Hopping | -55.22 | -20 | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | Hopping | -49.37 | -20 | Pass |



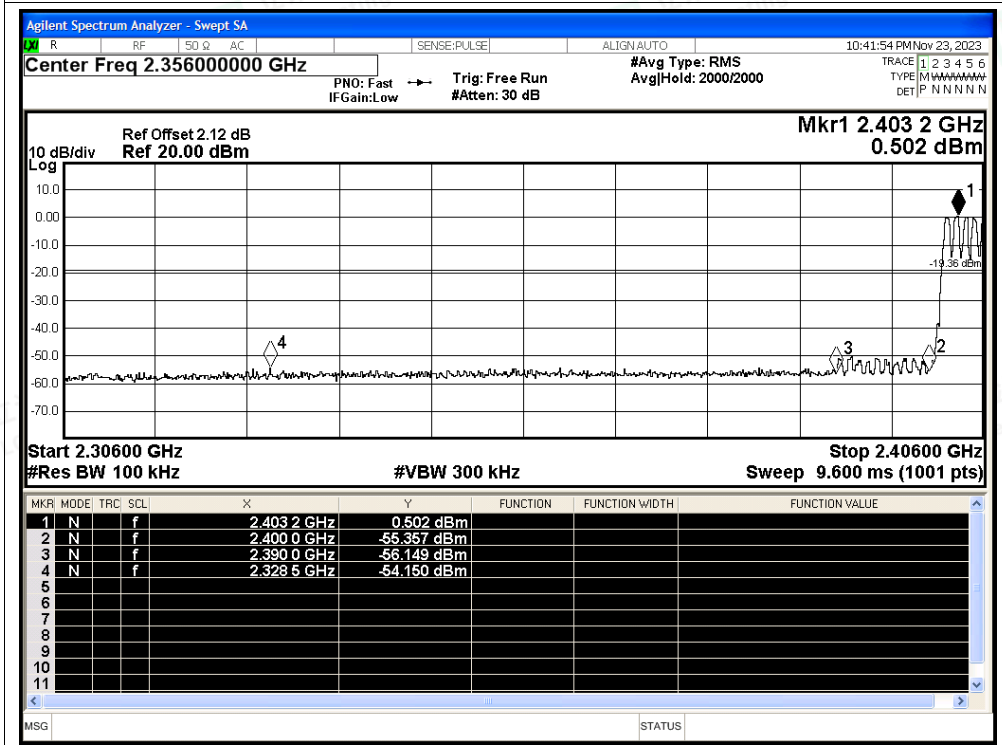


Test Graphs

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

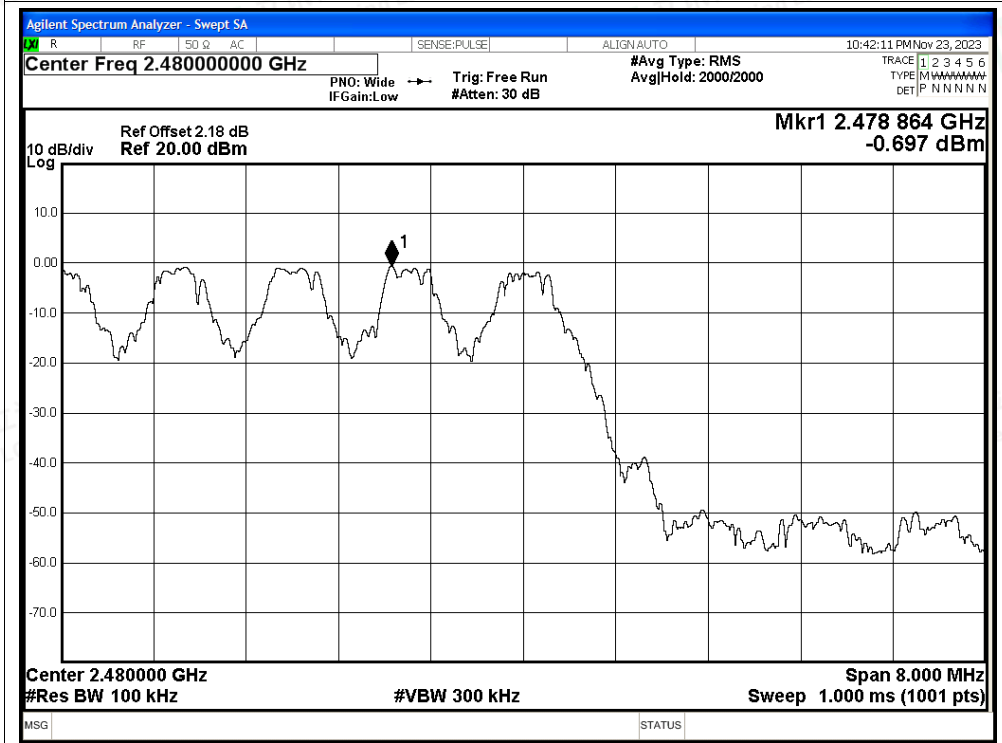


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

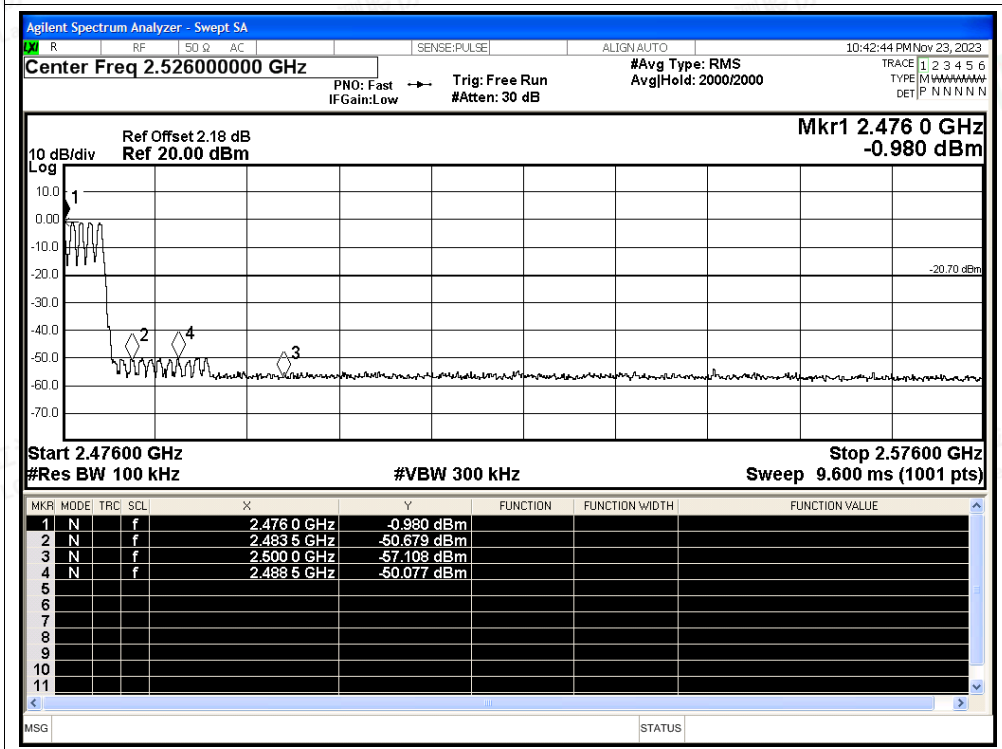




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref

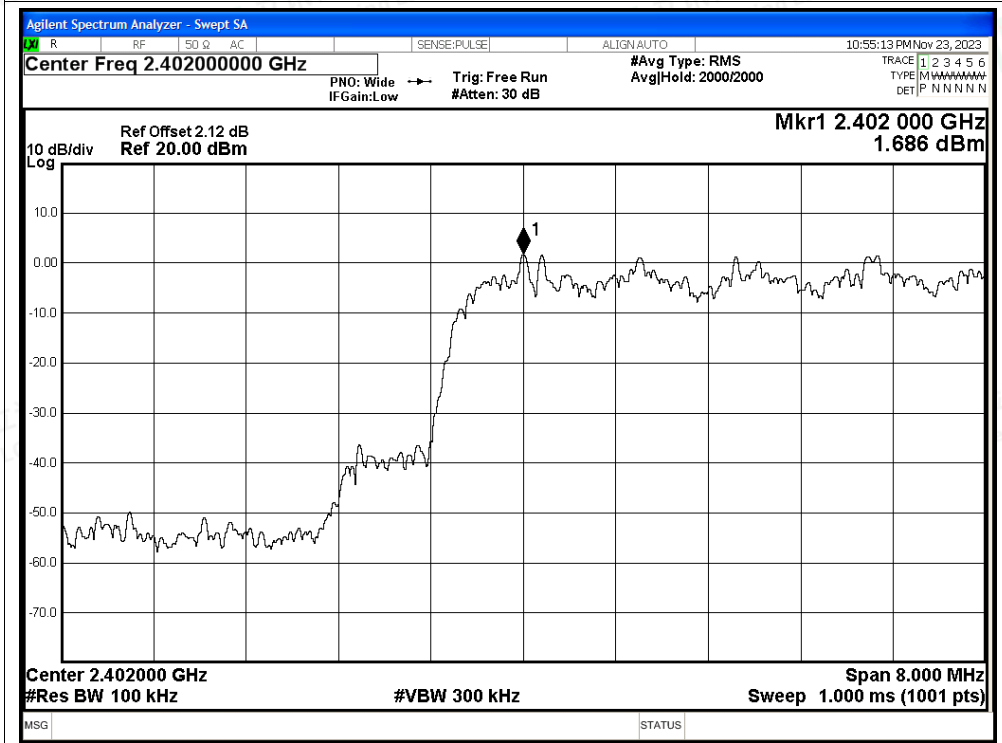


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission

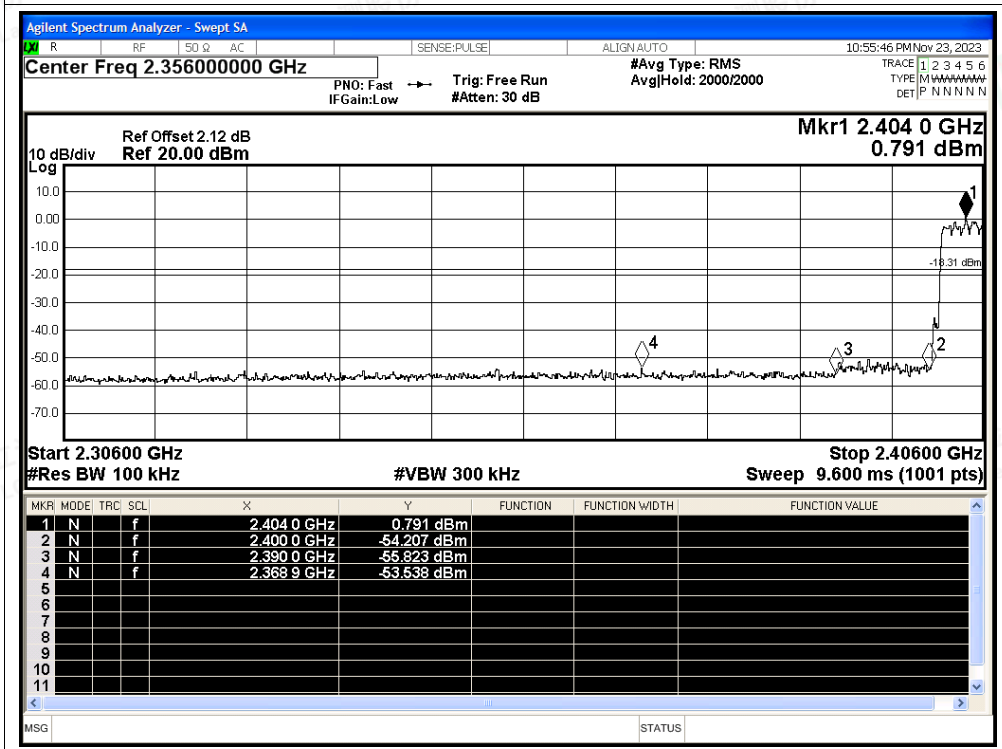




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref

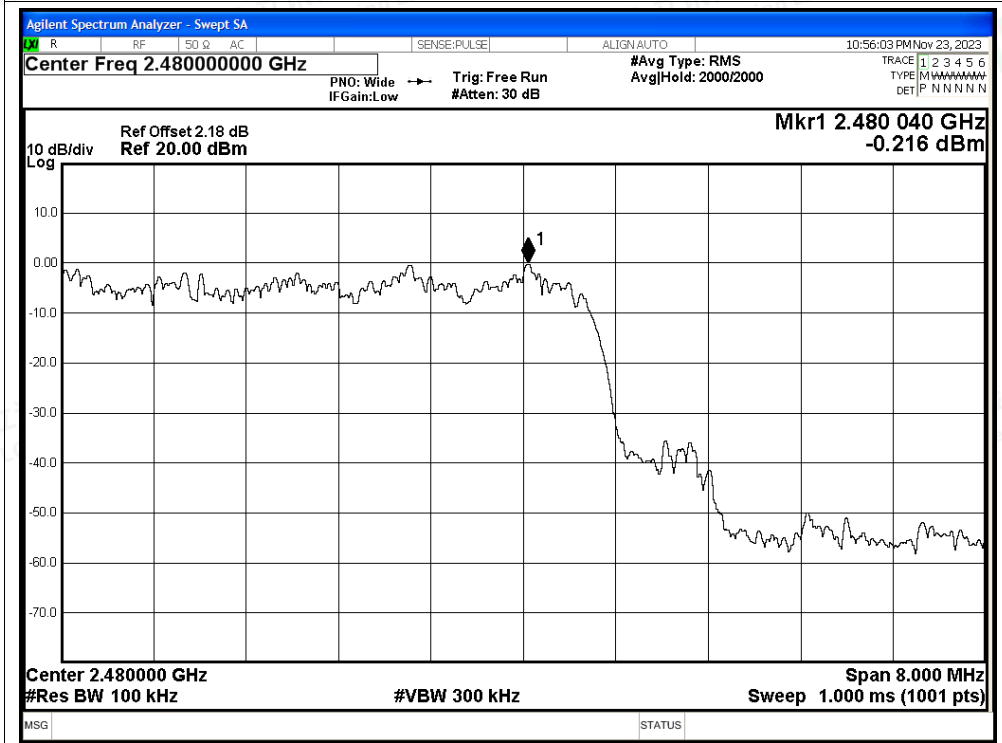


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission

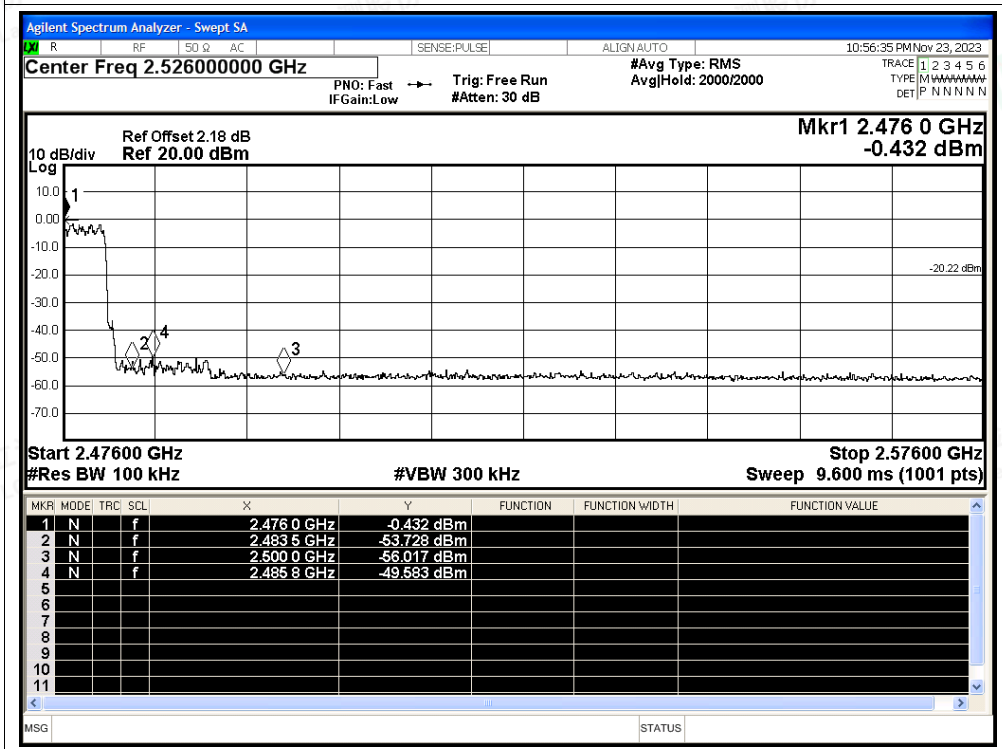




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



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





A.7 Conducted RF Spurious Emission

| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-------|-----------------|---------|-----------------|-------------|---------|
| NVNT | 1-DH5 | 2402 | Ant1 | -45.28 | -20 | Pass |
| NVNT | 1-DH5 | 2441 | Ant1 | -44.48 | -20 | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | -47.53 | -20 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | -44.63 | -20 | Pass |
| NVNT | 2-DH5 | 2441 | Ant1 | -46.62 | -20 | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | -48.1 | -20 | Pass |

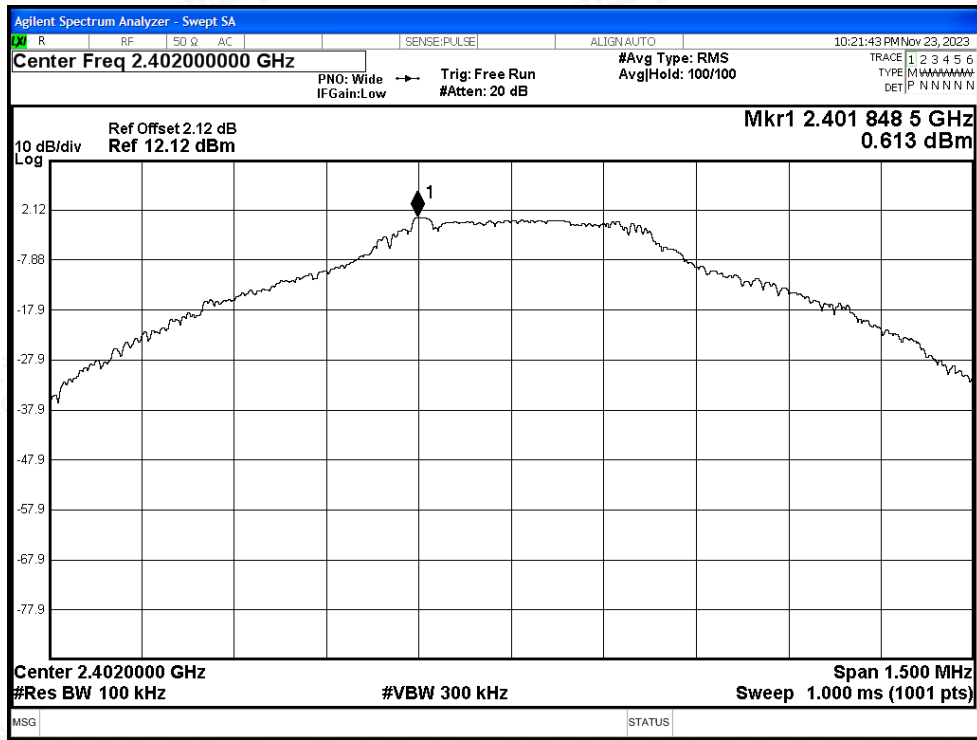


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Scan code to check authenticity

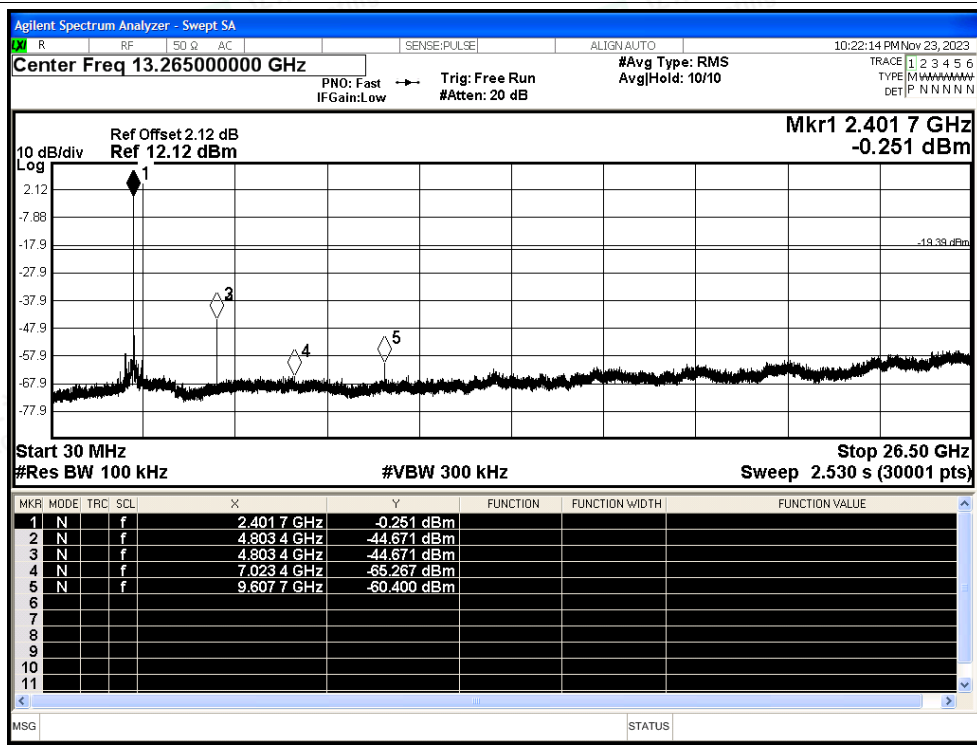


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

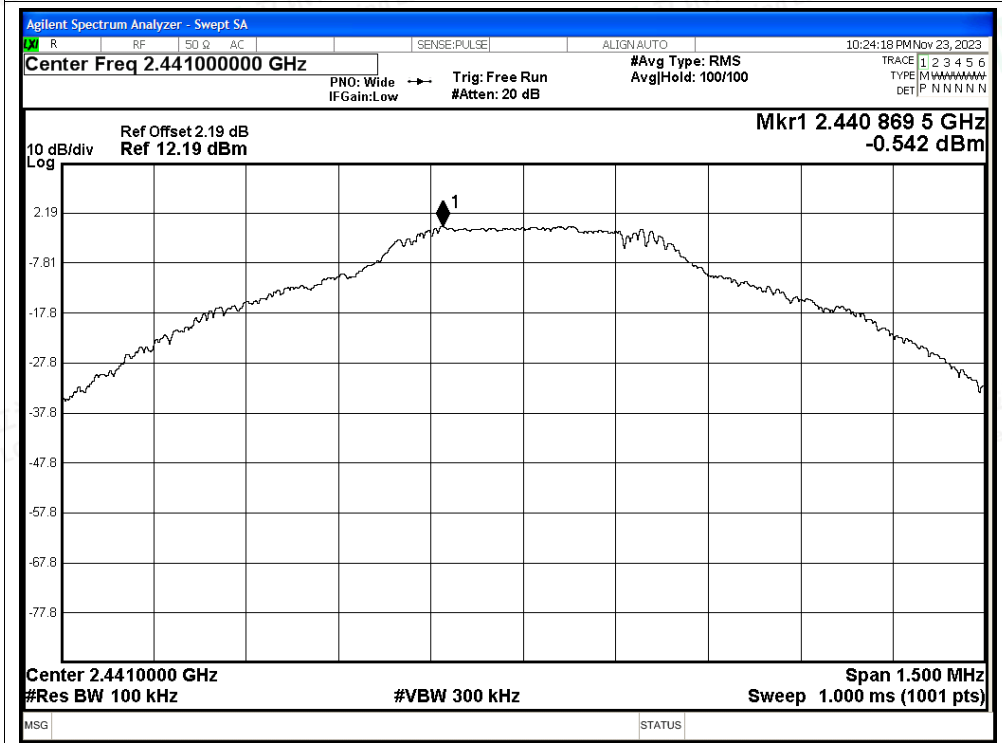


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

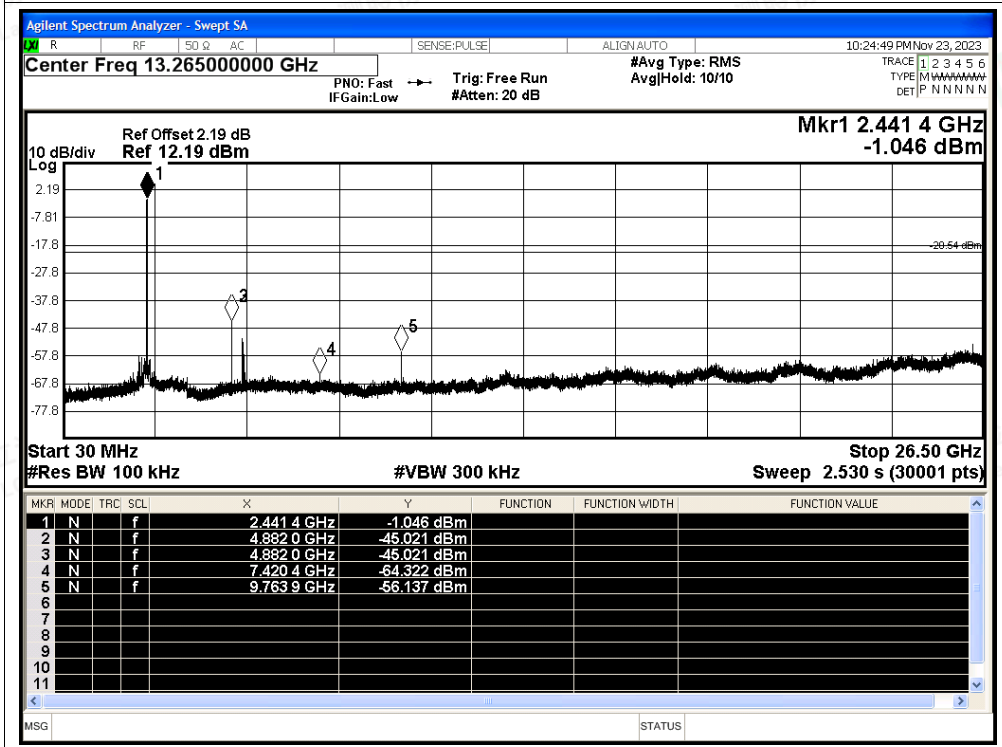




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

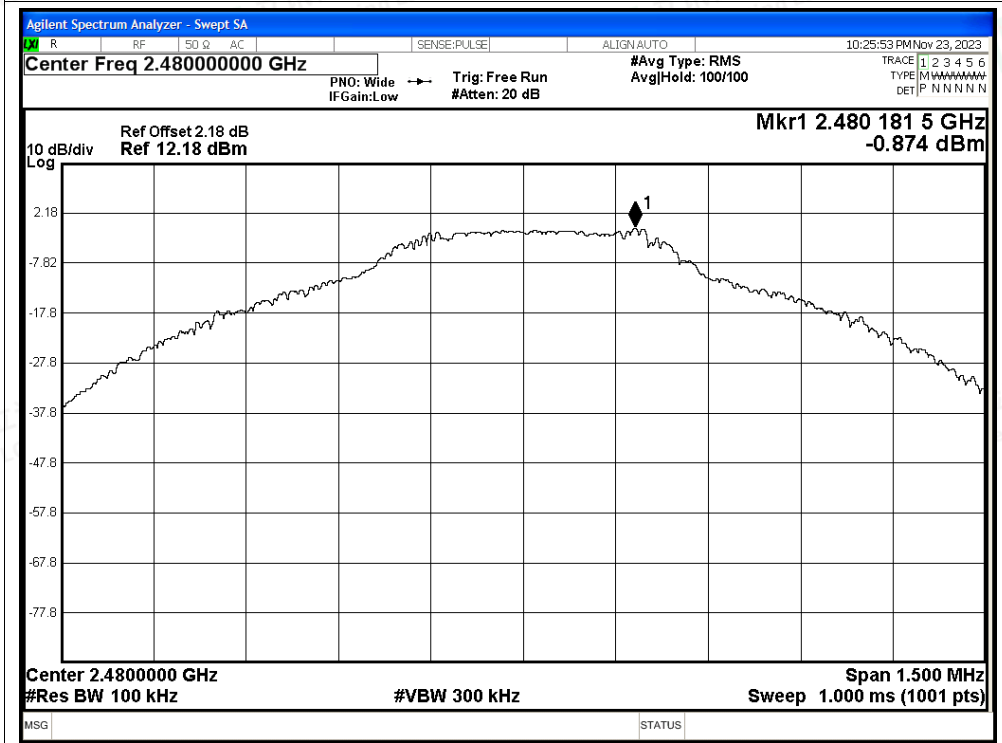


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

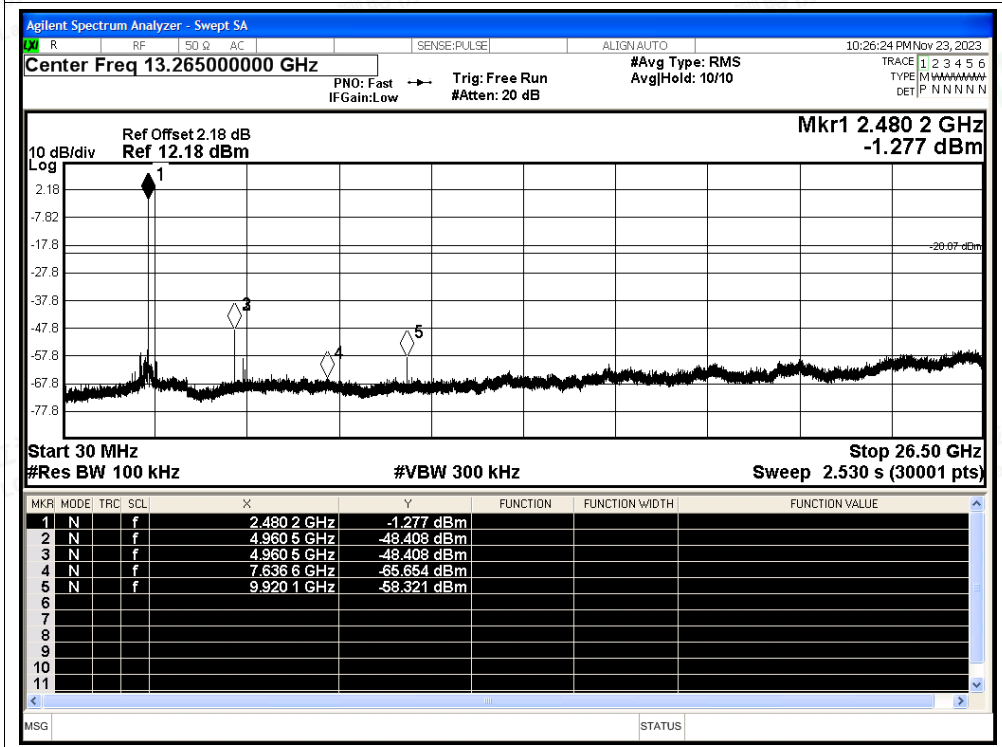




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

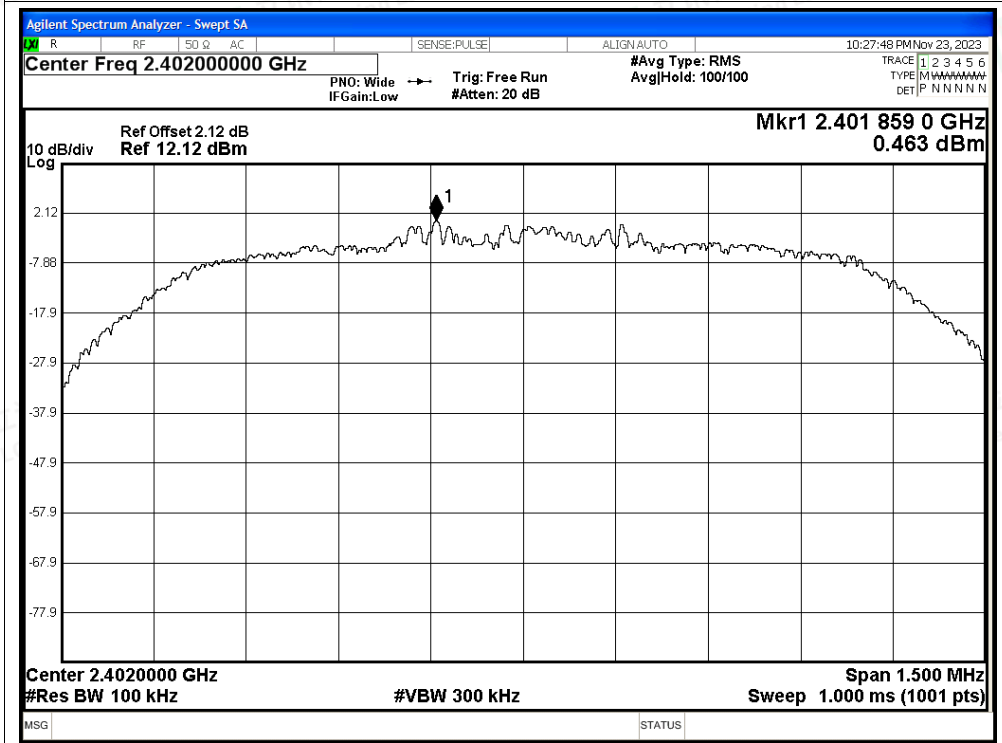


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

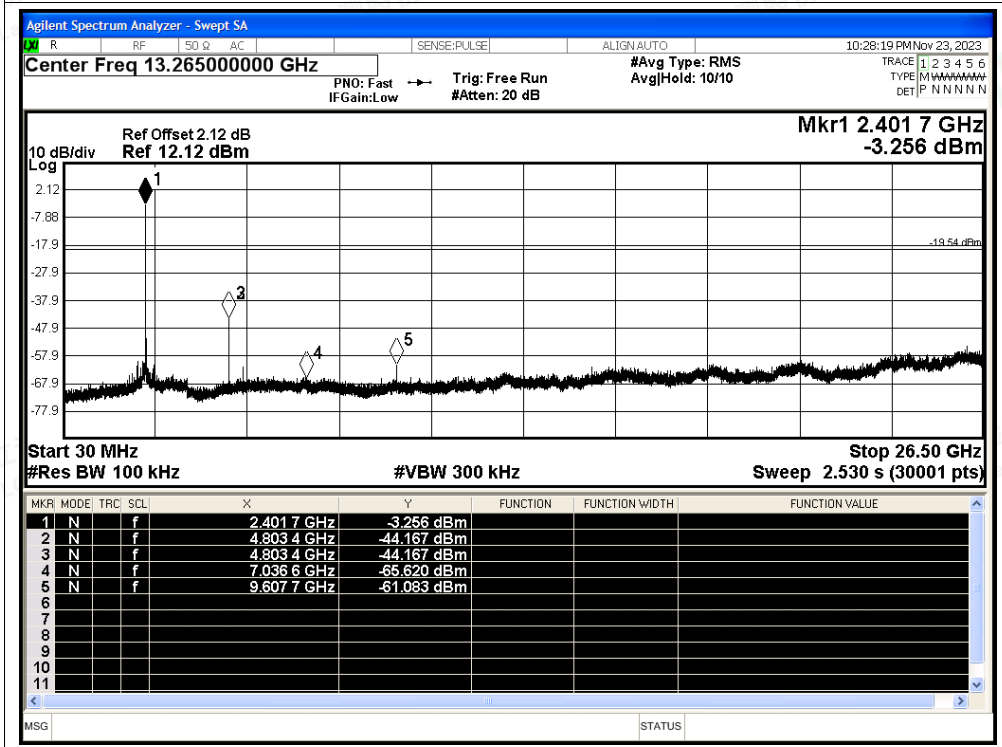




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

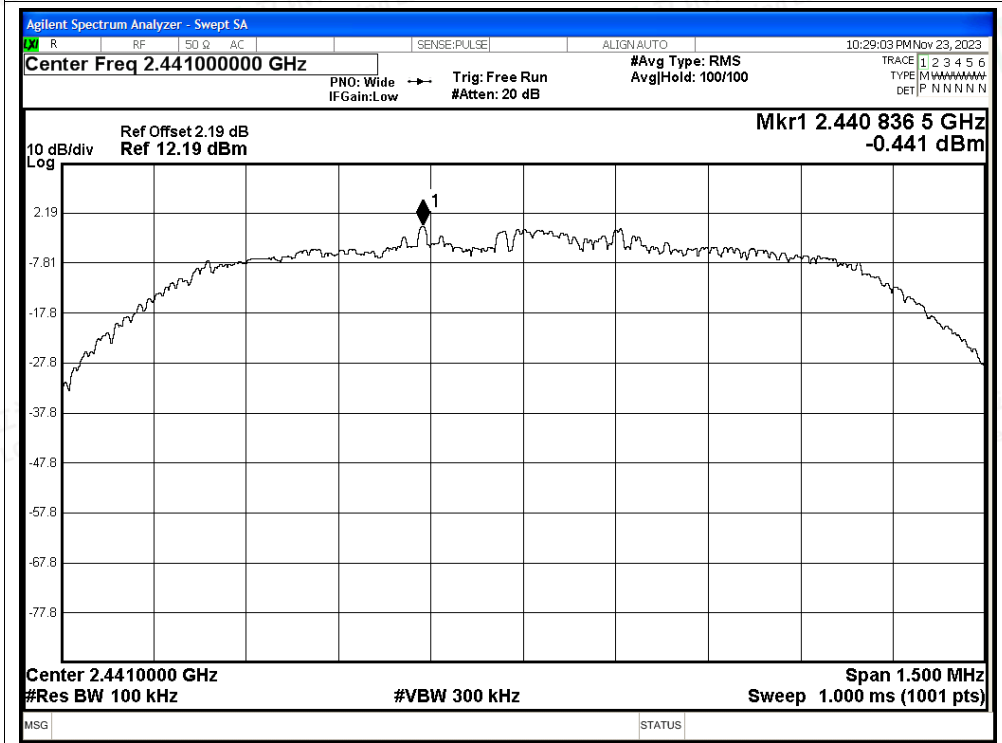


Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission

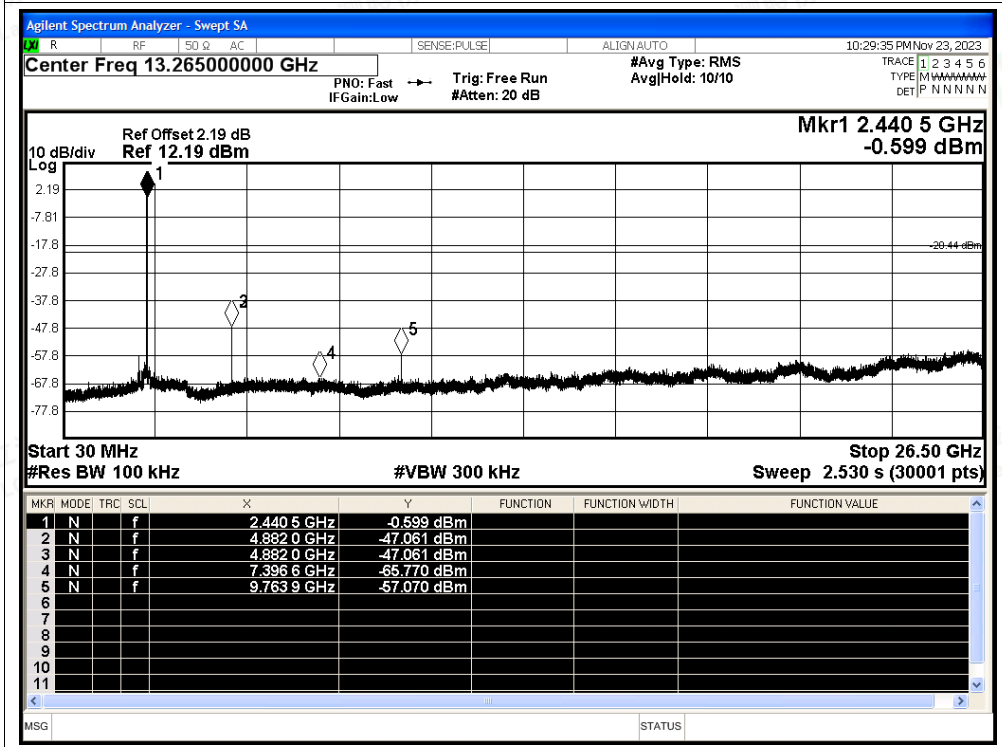




Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref

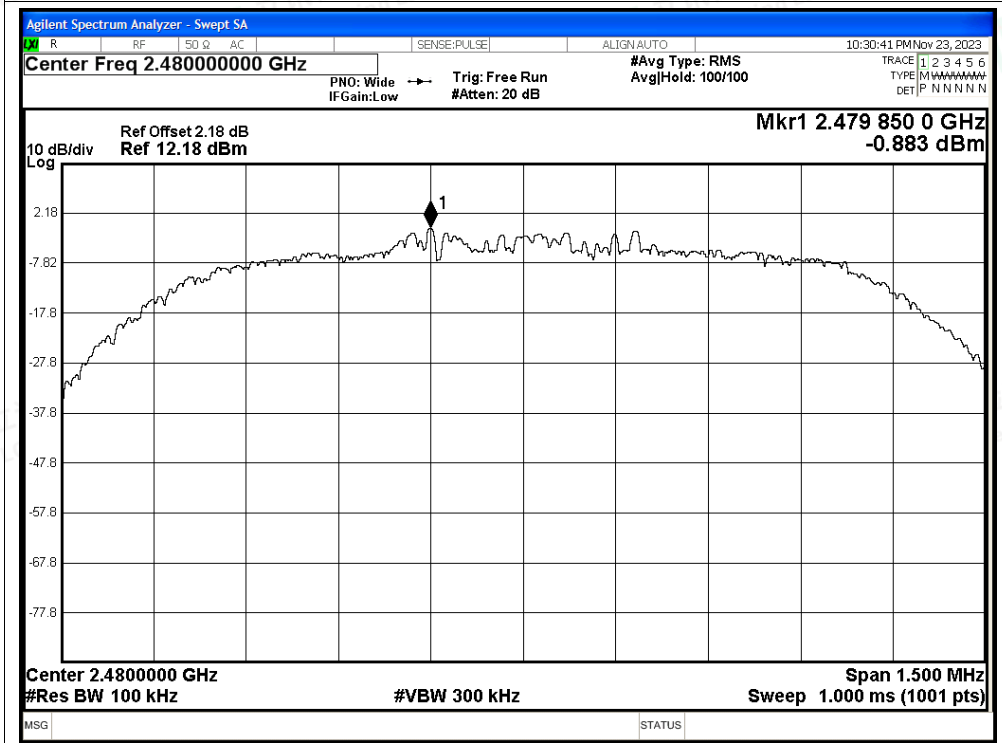


Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission

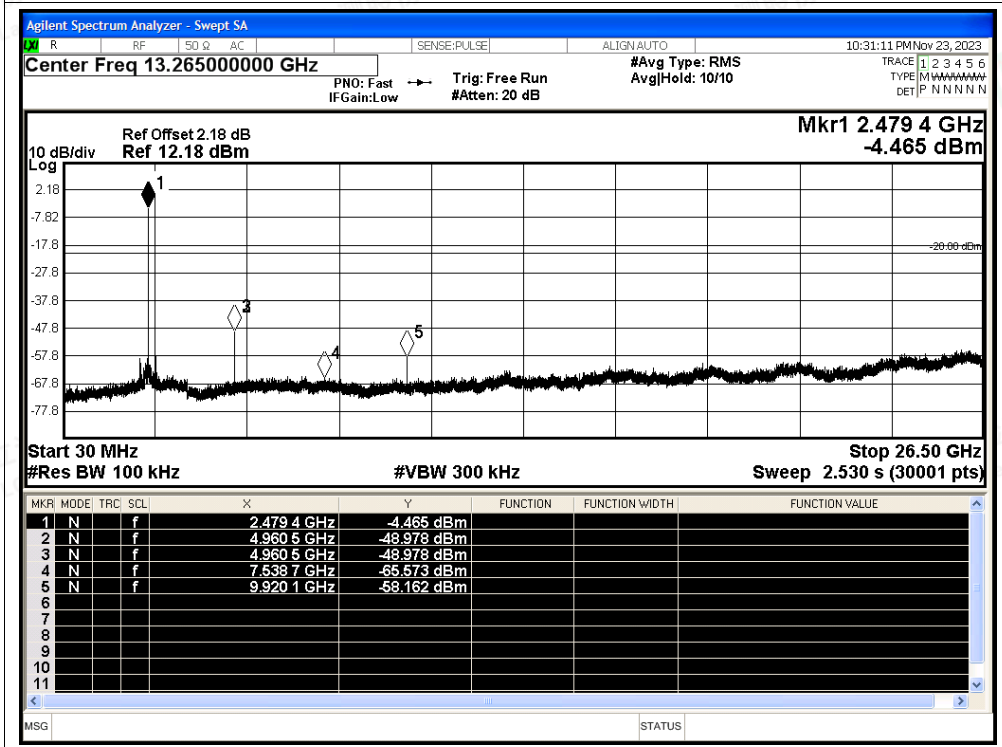




Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission





A.8 Restrict Band

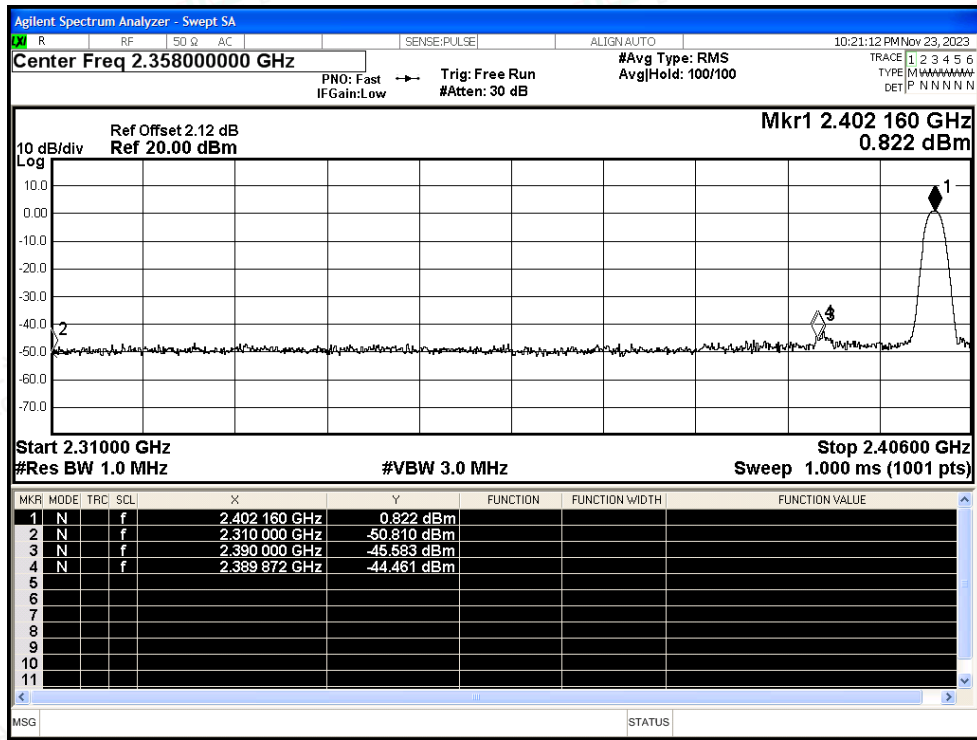
| Condition | Mode | Frequency (MHz) | Antenna | Hopping Mode | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|-----------|-------|-----------------|---------|--------------|-----------------|-------------|------------|------------|----------|----------------|---------|
| NVNT | 1-DH5 | 2402 | Ant1 | No-Hopping | 2310 | -50.81 | 2 | 46.45 | Peak | 74 | Pass |
| NVNT | 1-DH5 | 2402 | Ant1 | No-Hopping | 2310 | -57.01 | 2 | 40.25 | Average | 54 | Pass |
| NVNT | 1-DH5 | 2402 | Ant1 | No-Hopping | 2389.872 | -44.46 | 2 | 52.8 | Peak | 74 | Pass |
| NVNT | 1-DH5 | 2402 | Ant1 | No-Hopping | 2389.968 | -51.25 | 2 | 46.01 | Average | 54 | Pass |
| NVNT | 1-DH5 | 2402 | Ant1 | No-Hopping | 2390 | -45.58 | 2 | 51.68 | Peak | 74 | Pass |
| NVNT | 1-DH5 | 2402 | Ant1 | No-Hopping | 2390 | -51.25 | 2 | 46.01 | Average | 54 | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | No-Hopping | 2483.5 | -47.96 | 2 | 49.3 | Peak | 74 | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | No-Hopping | 2483.5 | -53.77 | 2 | 43.49 | Average | 54 | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | No-Hopping | 2491 | -42.92 | 2 | 54.34 | Peak | 74 | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | No-Hopping | 2491.576 | -49.91 | 2 | 47.35 | Average | 54 | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | No-Hopping | 2500 | -49.37 | 2 | 47.89 | Peak | 74 | Pass |
| NVNT | 1-DH5 | 2480 | Ant1 | No-Hopping | 2500 | -56.41 | 2 | 40.85 | Average | 54 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | No-Hopping | 2310 | -49.67 | 2 | 47.59 | Peak | 74 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | No-Hopping | 2310 | -57.21 | 2 | 40.05 | Average | 54 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | No-Hopping | 2389.872 | -46.17 | 2 | 51.09 | Peak | 74 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | No-Hopping | 2389.968 | -52.27 | 2 | 44.99 | Average | 54 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | No-Hopping | 2390 | -47.84 | 2 | 49.42 | Peak | 74 | Pass |
| NVNT | 2-DH5 | 2402 | Ant1 | No-Hopping | 2390 | -52.27 | 2 | 44.99 | Average | 54 | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | No-Hopping | 2483.5 | -47.1 | 2 | 50.16 | Peak | 74 | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | No-Hopping | 2483.5 | -53.85 | 2 | 43.41 | Average | 54 | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | No-Hopping | 2492.008 | -44.21 | 2 | 53.05 | Peak | 74 | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | No-Hopping | 2491.576 | -51.36 | 2 | 45.9 | Average | 54 | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | No-Hopping | 2500 | -49.94 | 2 | 47.32 | Peak | 74 | Pass |
| NVNT | 2-DH5 | 2480 | Ant1 | No-Hopping | 2500 | -56.61 | 2 | 40.65 | Average | 54 | Pass |



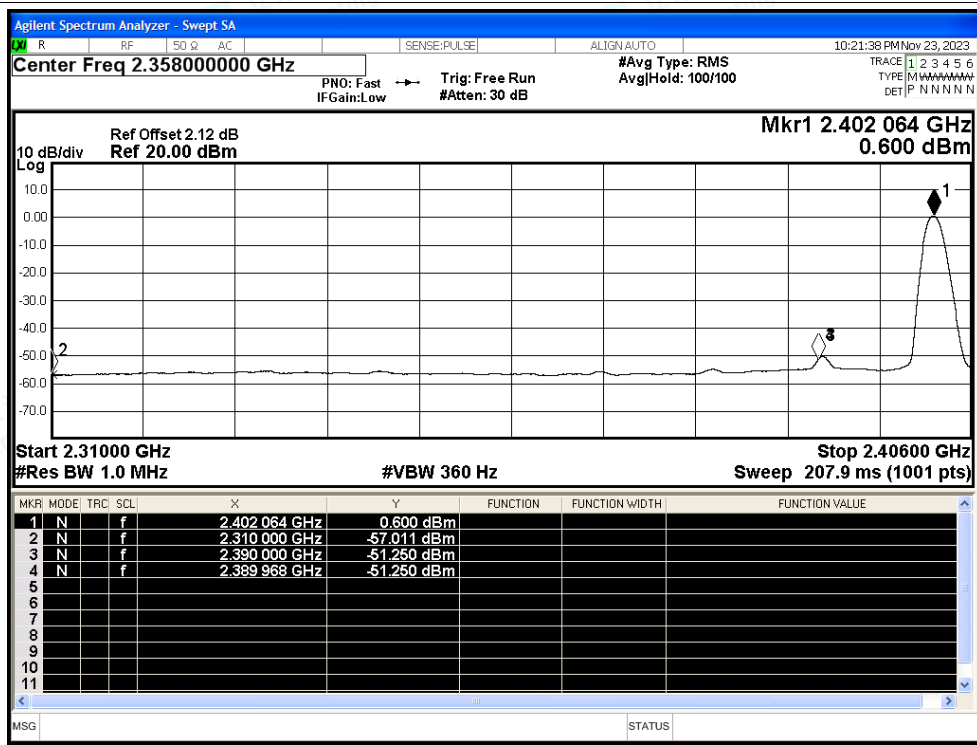


Test Graphs

Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak

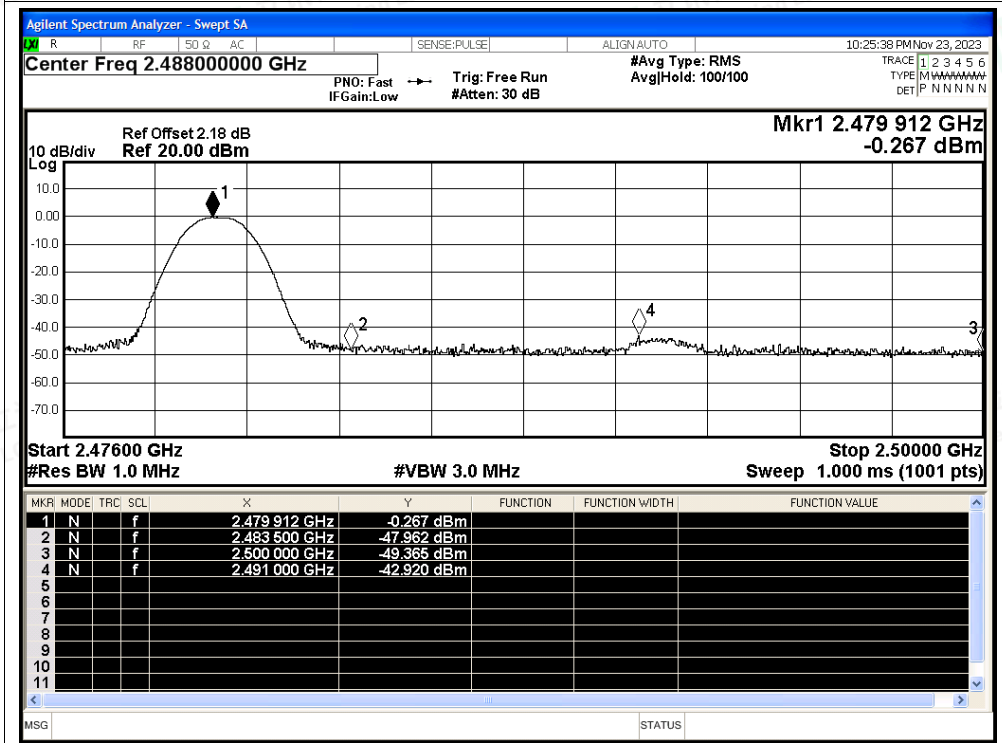


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

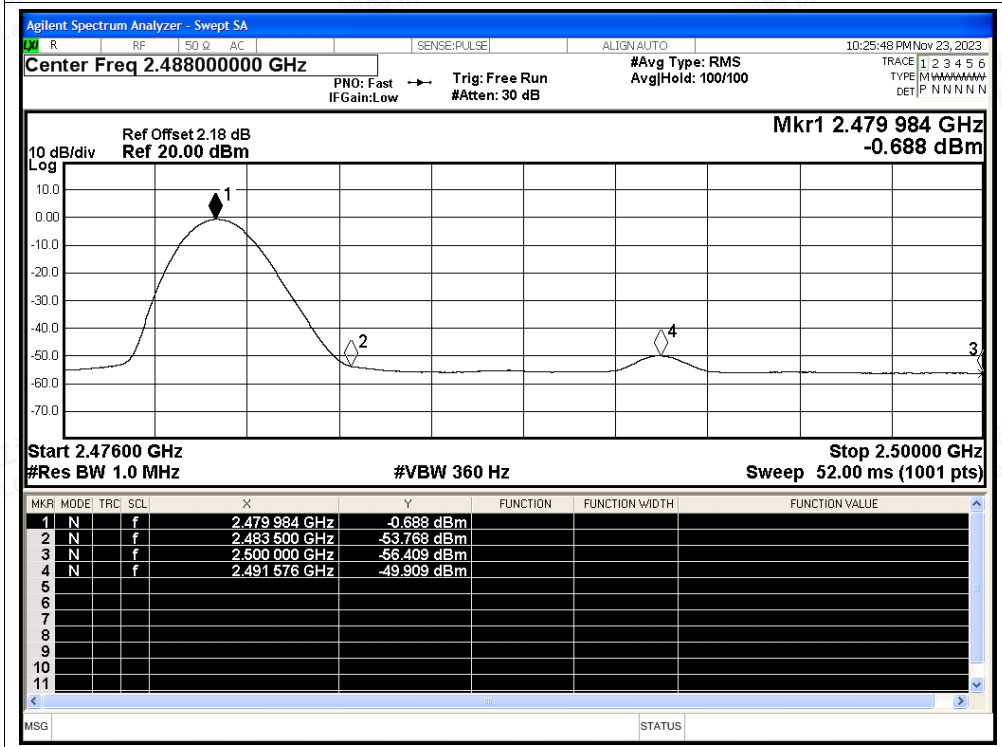




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

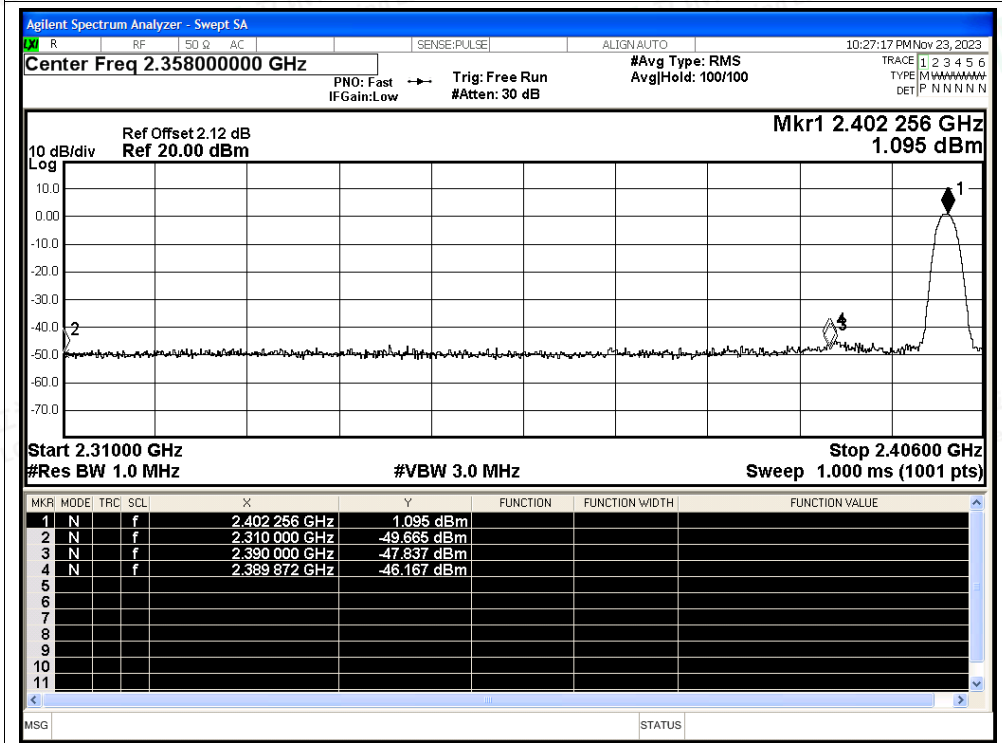


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

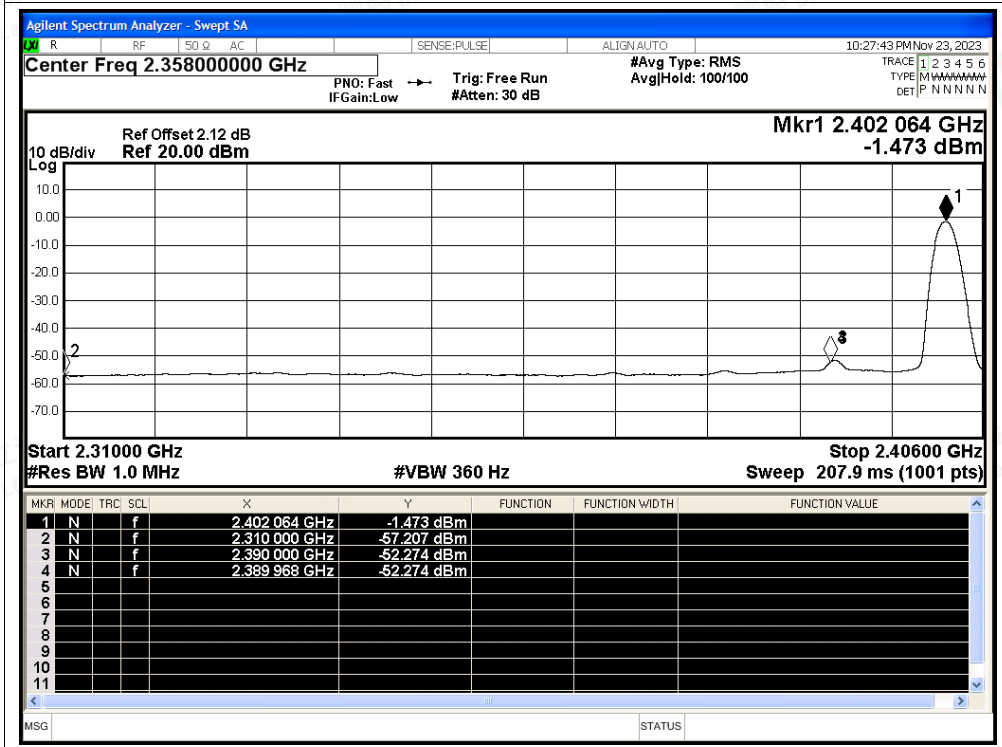




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

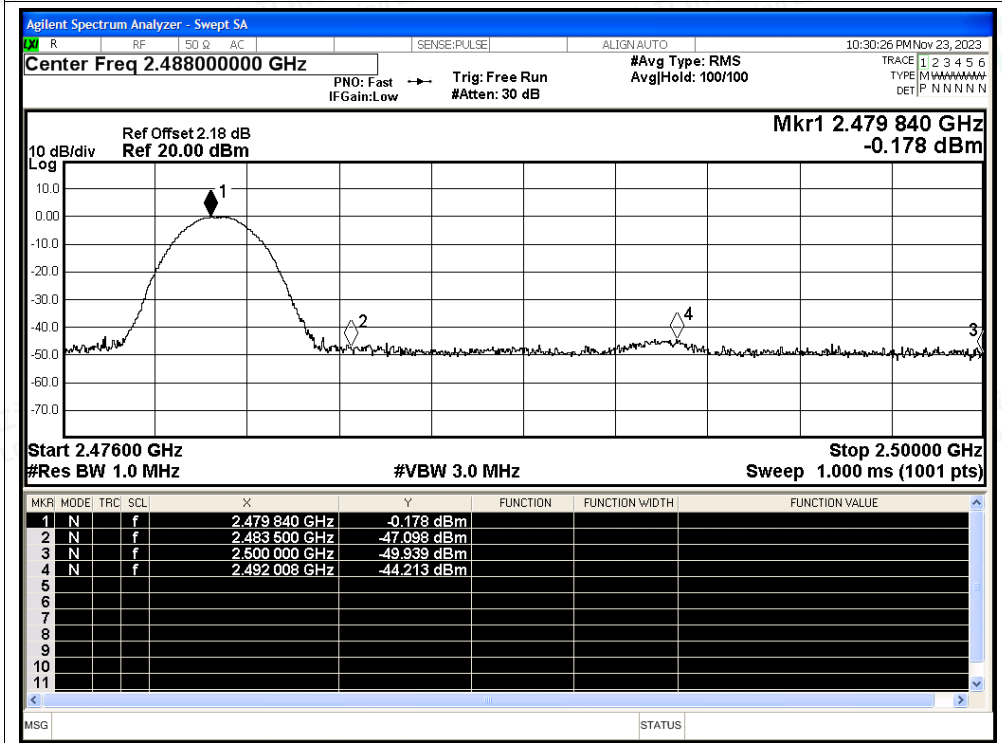


Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average





Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak



Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average

