



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Wireless headphones

Test Model: GM200

Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Luo
Supervised by:	Nick Peng



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A.1 -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.96	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.978	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.959	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.285	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.284	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.287	N/A	Pass



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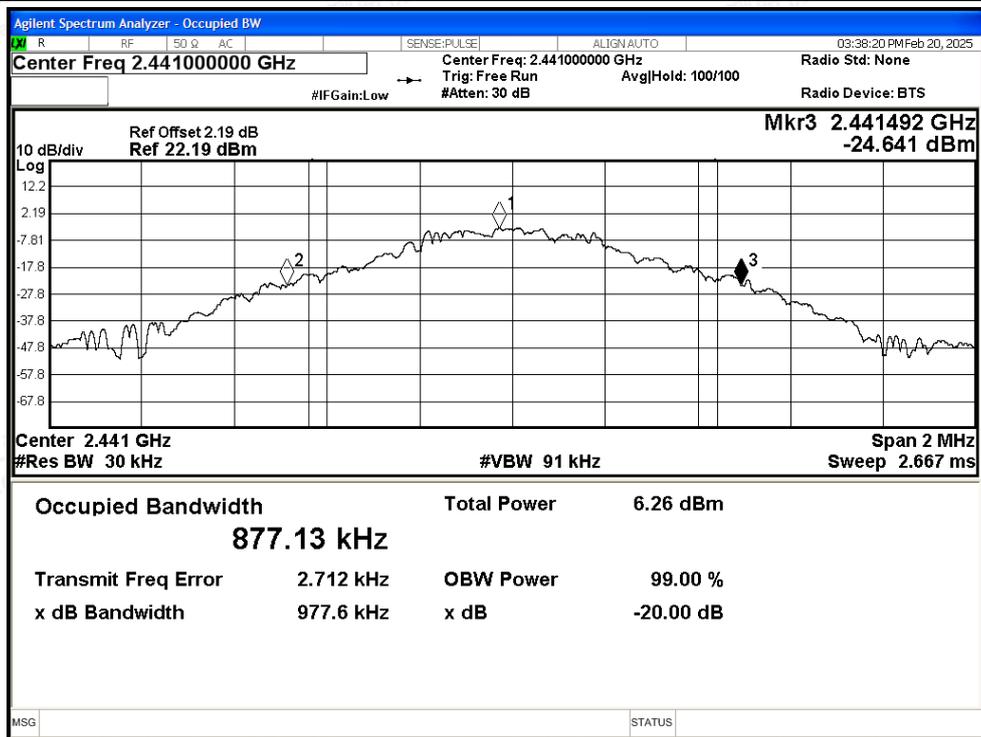


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

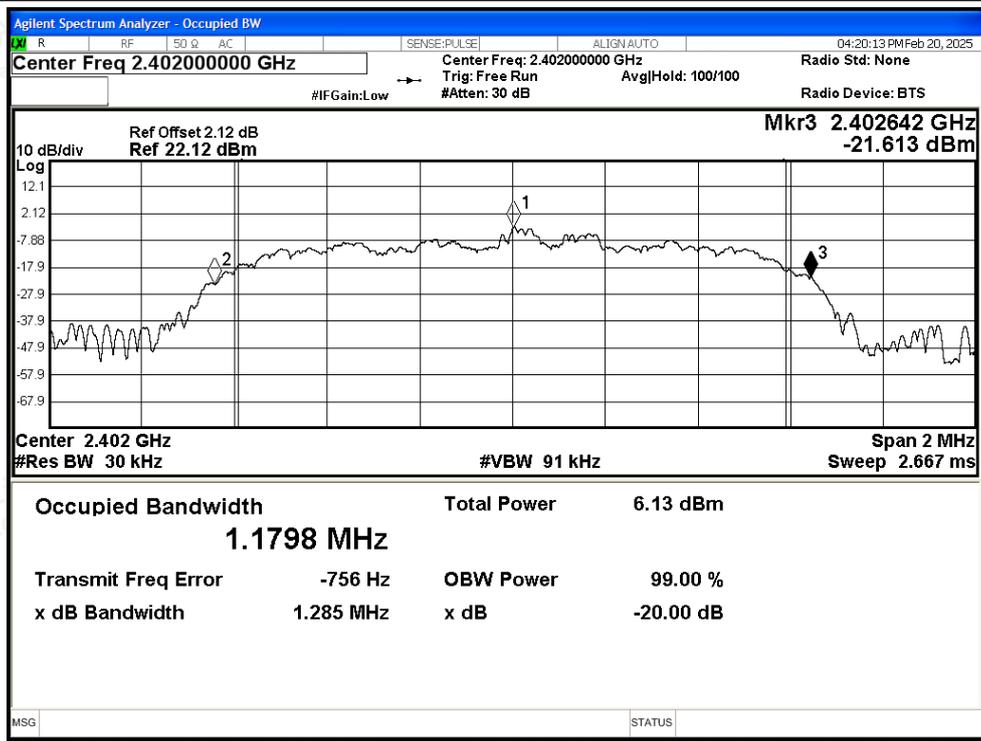




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

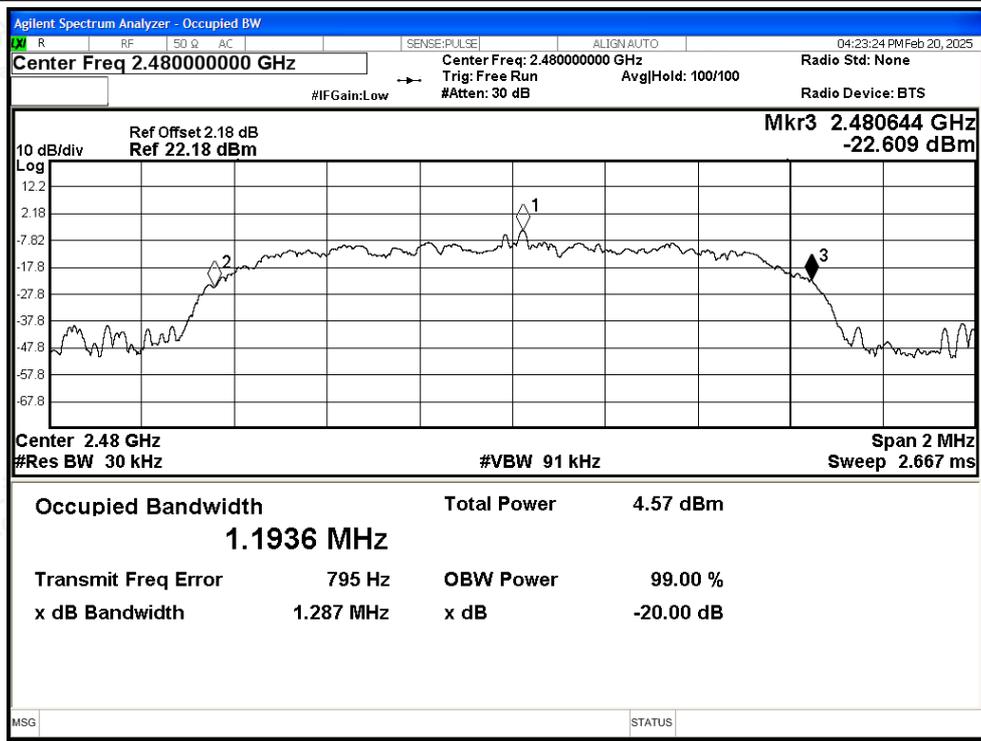




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1





A.2 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.26	21	Pass
NVNT	1-DH5	2441	Ant1	-0.01	21	Pass
NVNT	1-DH5	2480	Ant1	-1.16	21	Pass
NVNT	2-DH5	2402	Ant1	1.52	21	Pass
NVNT	2-DH5	2441	Ant1	1.80	21	Pass
NVNT	2-DH5	2480	Ant1	0.61	21	Pass

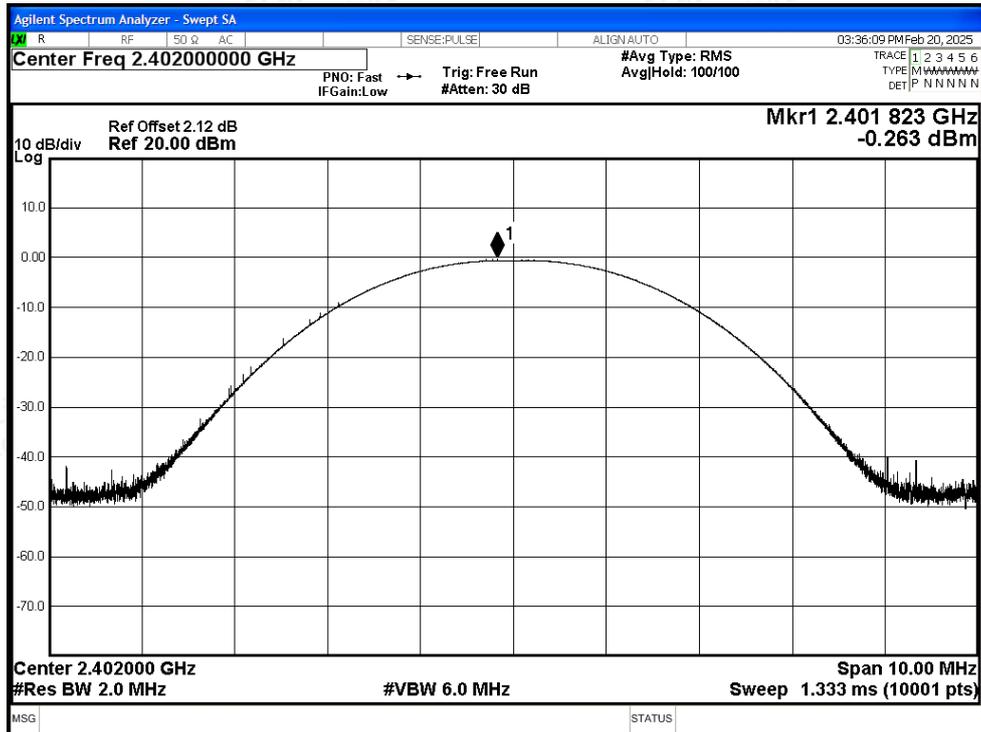


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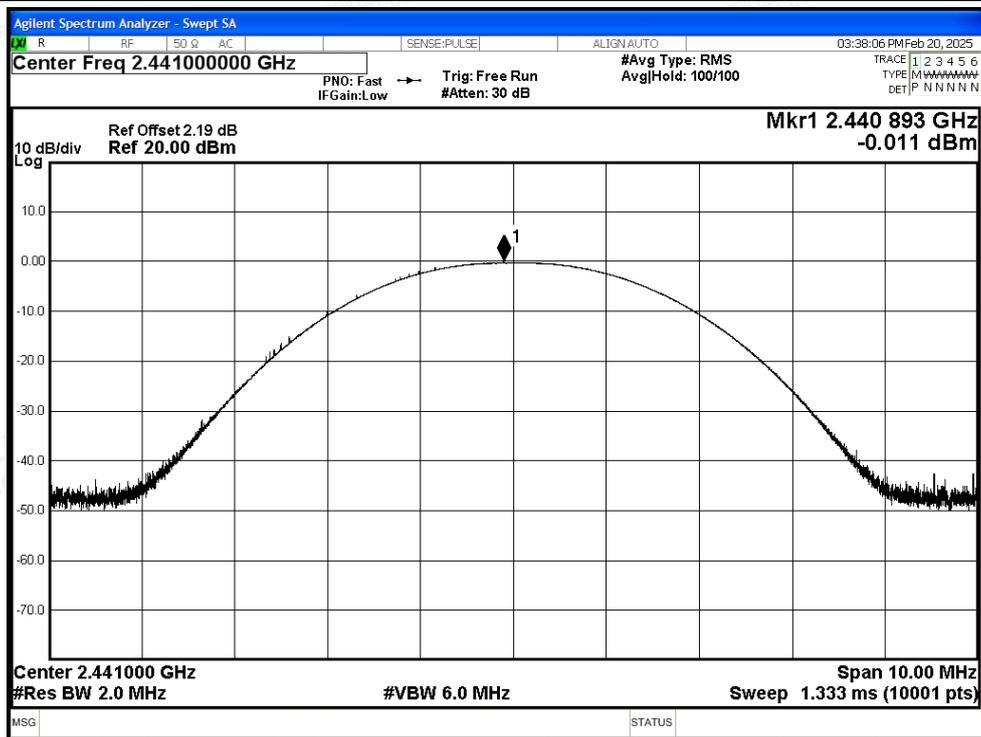


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

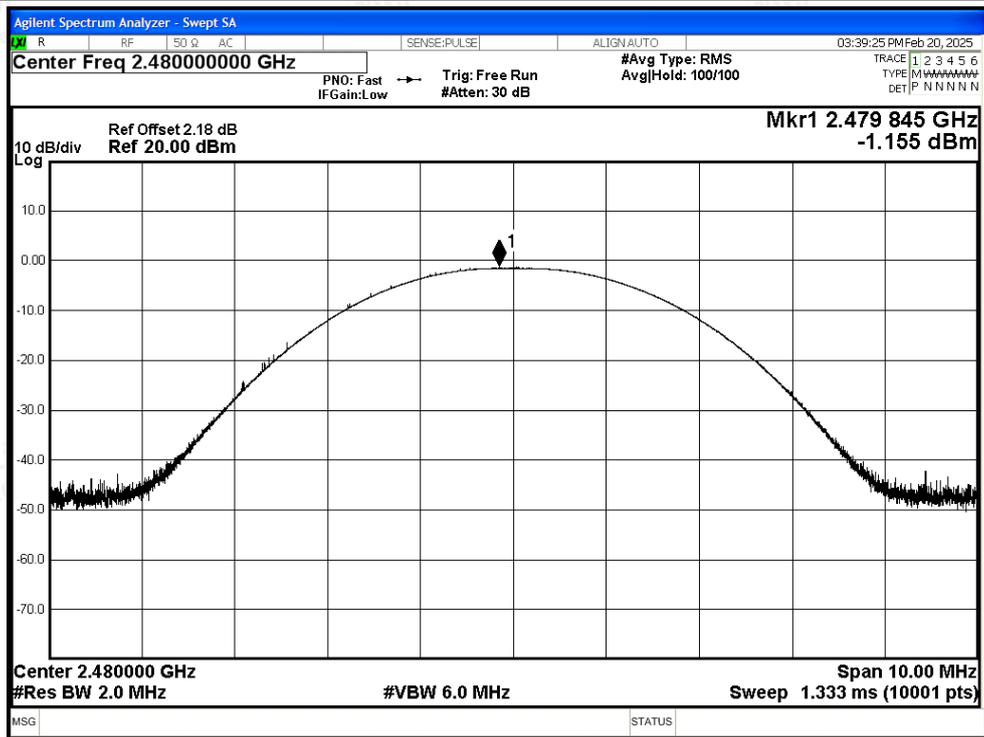


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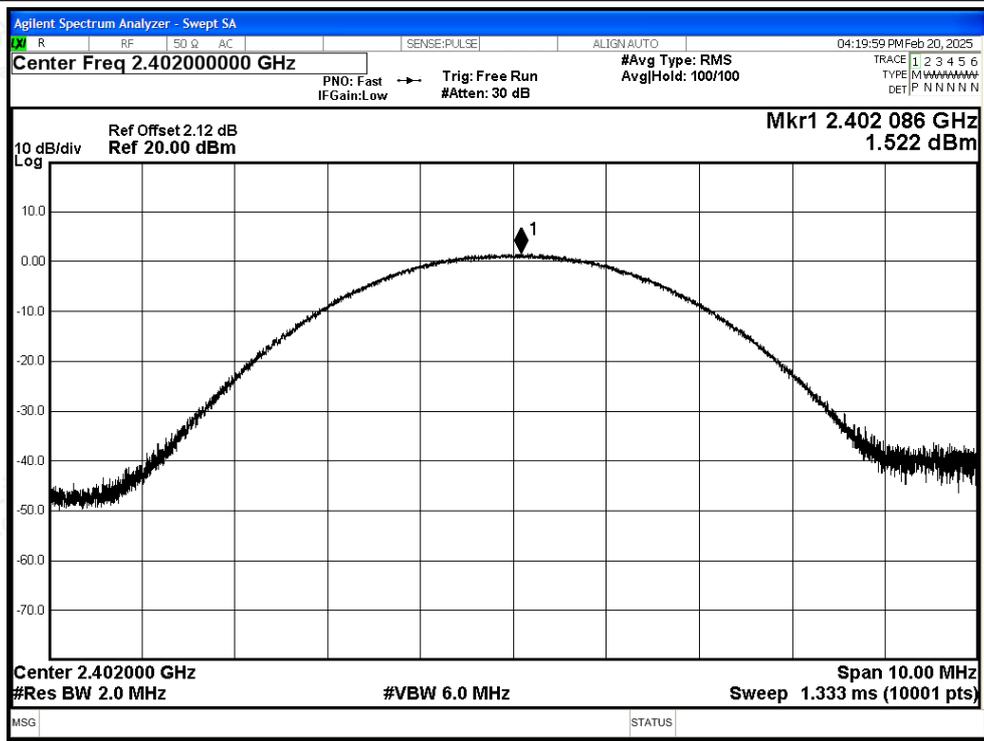




Power NVNT 1-DH5 2480MHz Ant1

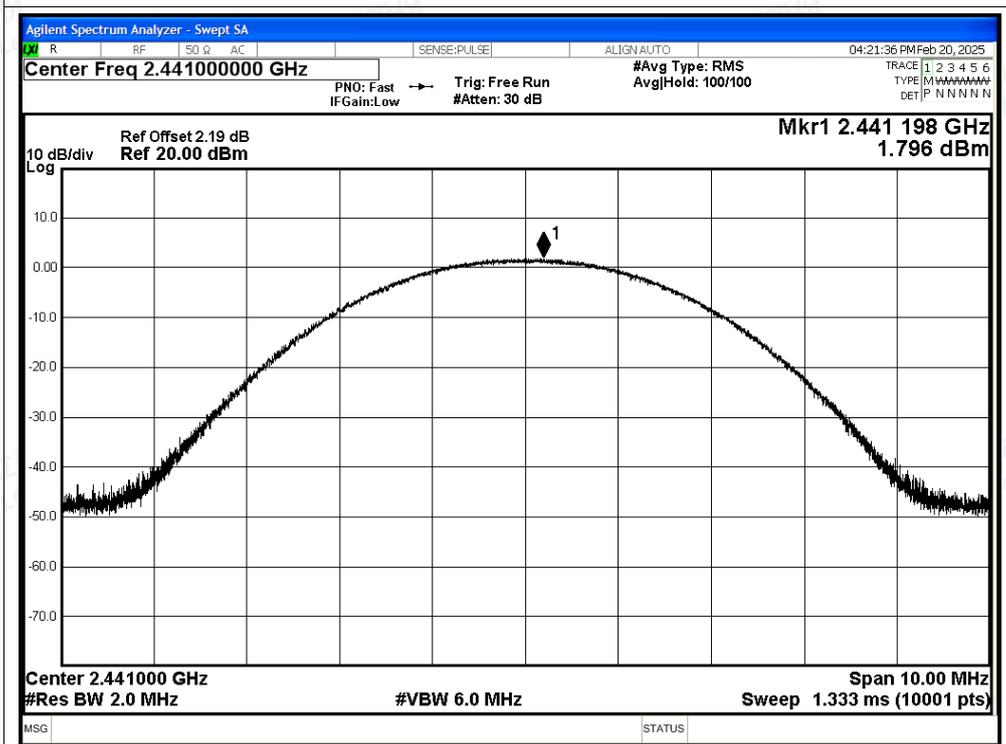


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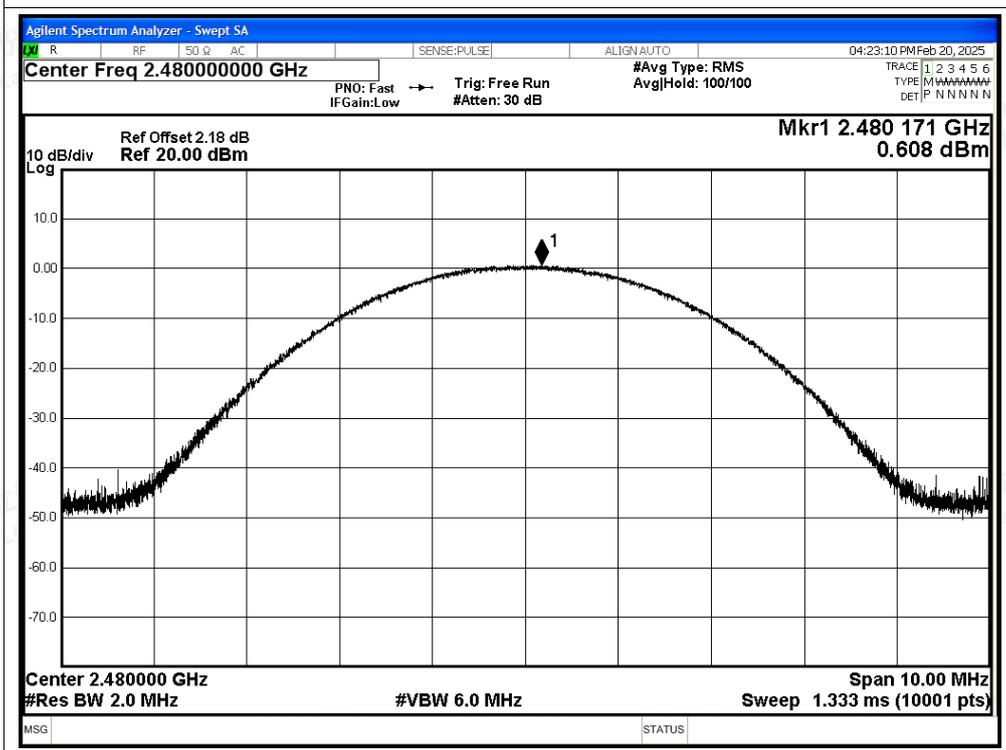




Power NVNT 2-DH5 2441MHz Ant1



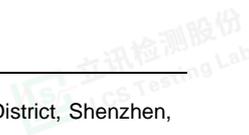
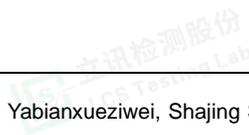
Power NVNT 2-DH5 2480MHz Ant1





A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.024	2402.828	0.804	0.652	Pass
NVNT	2-DH5	Ant1	2402.034	2403.14	1.106	0.858	Pass

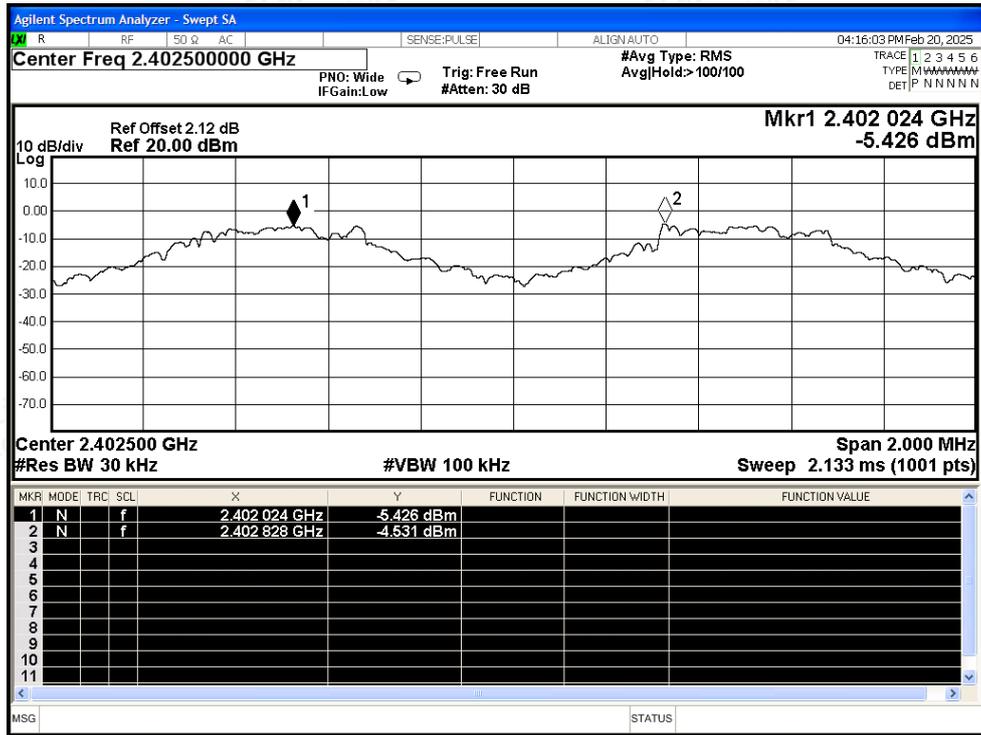


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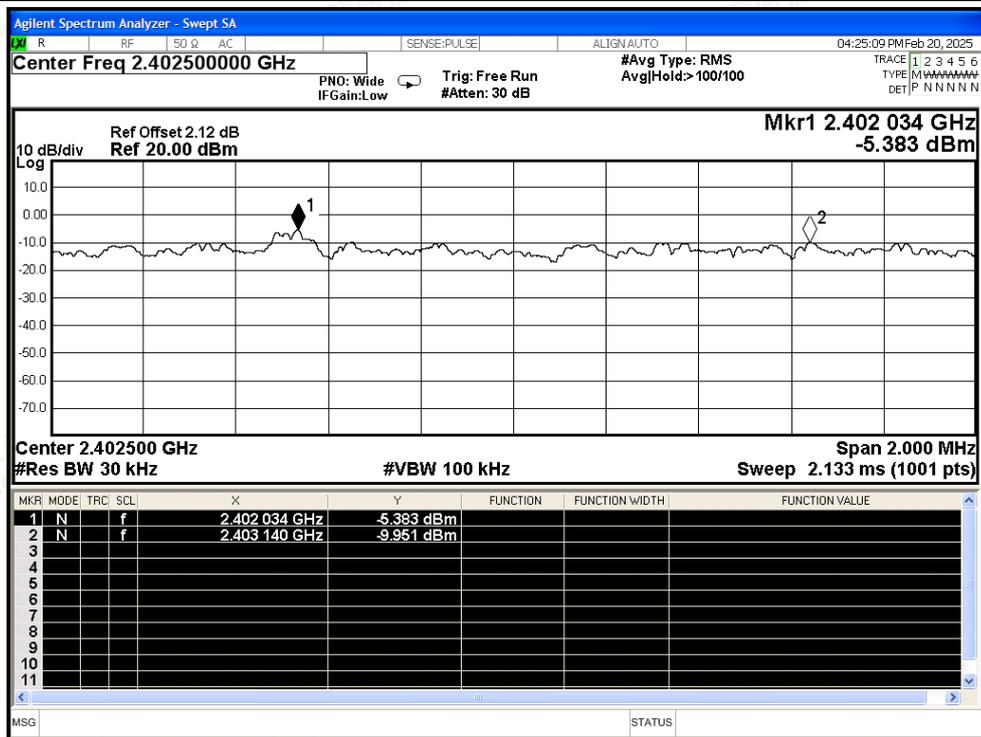


Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



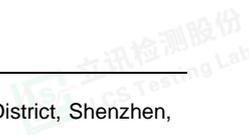
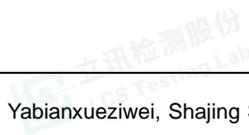
CFS NVNT 2-DH5 2402MHz Ant1





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	2.91	291	100	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.899	362.375	125	31600	400	Pass

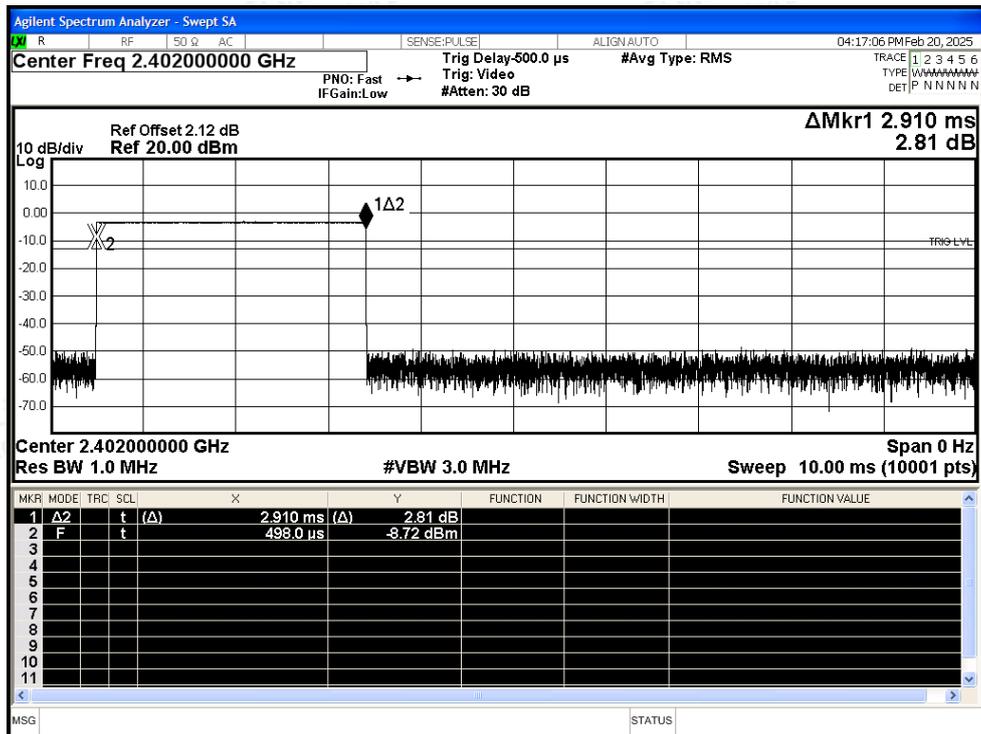


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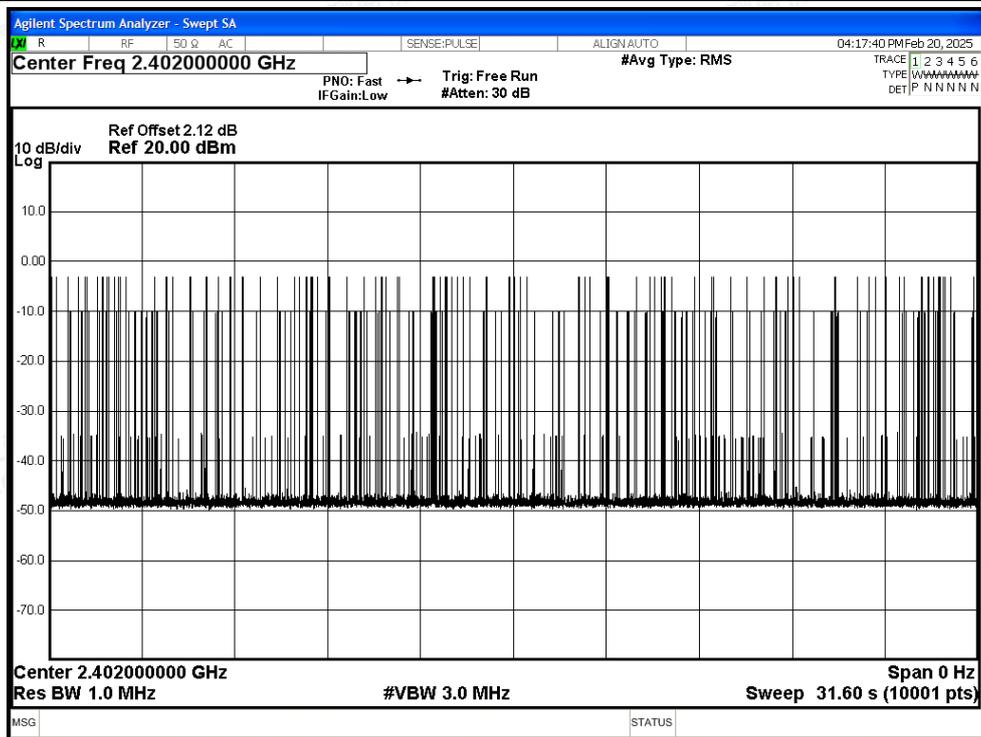


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

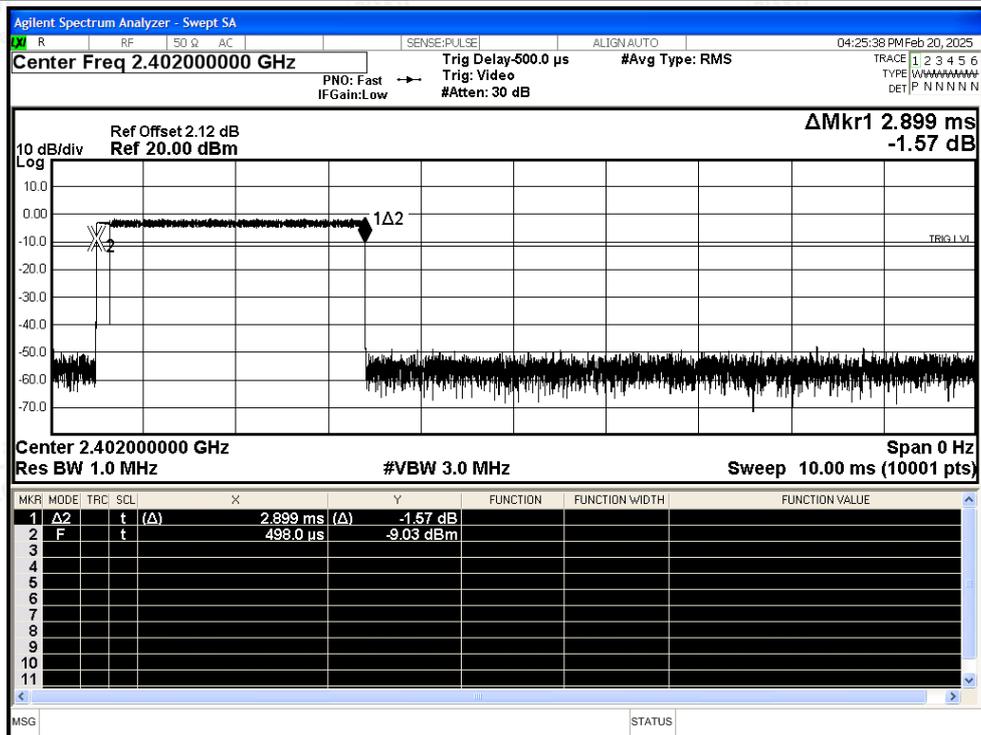


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

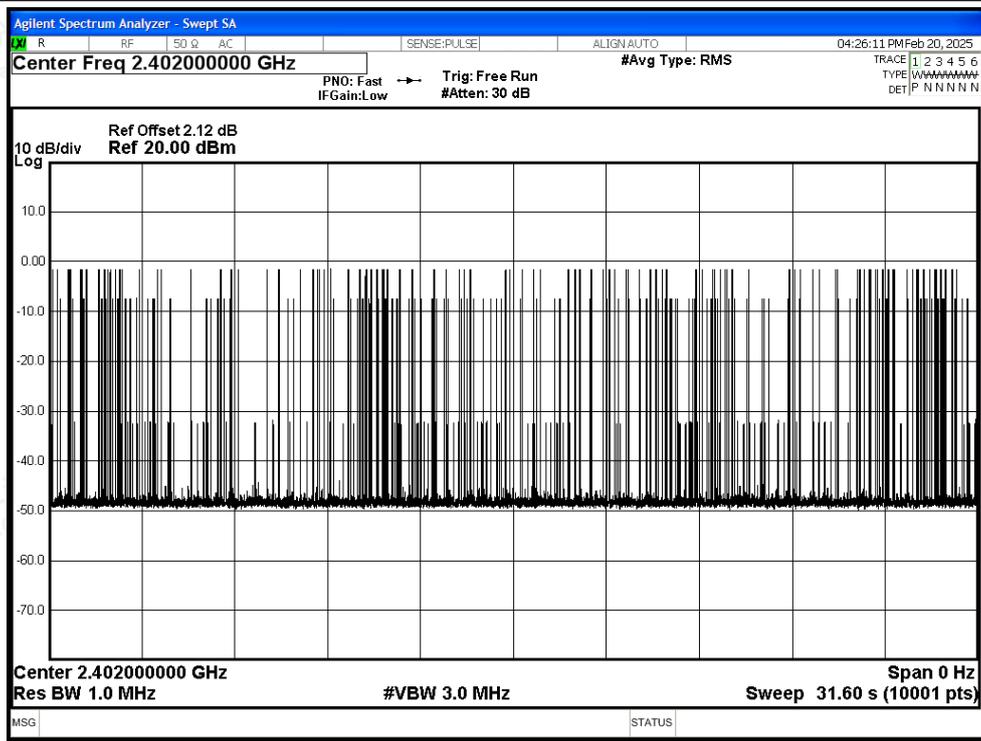




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



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

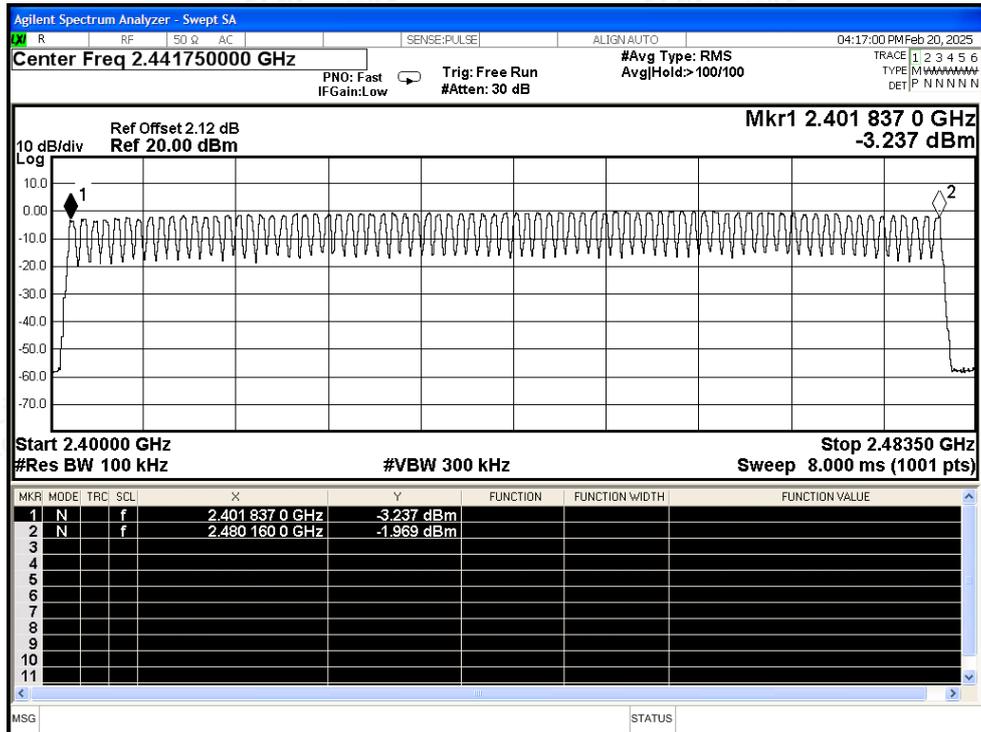


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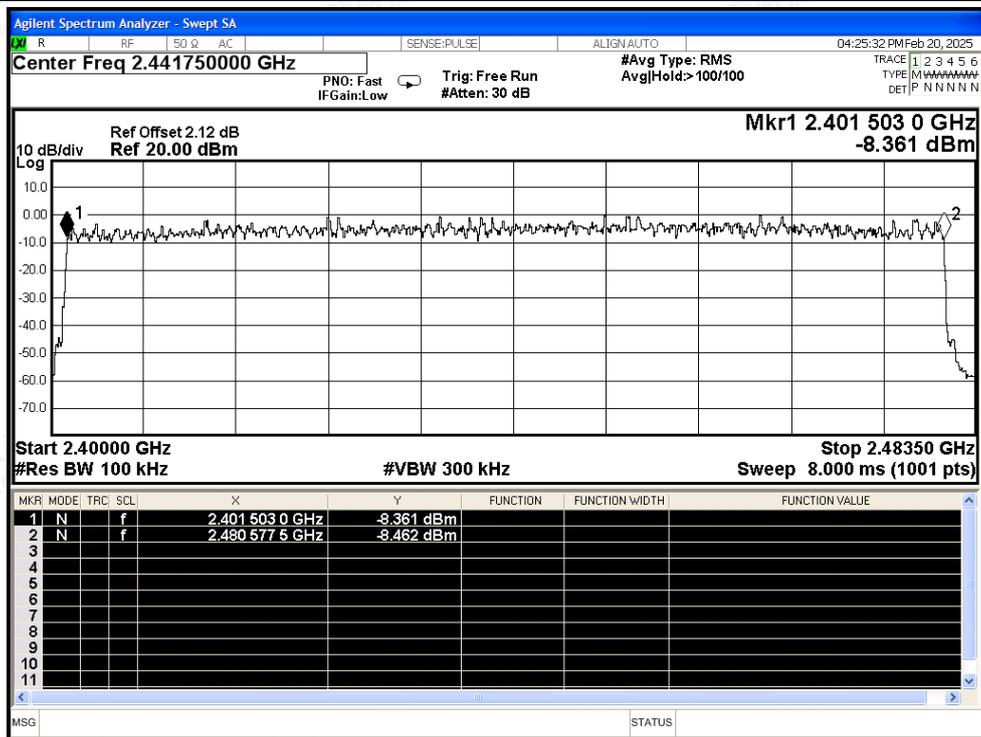


Test Graphs

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	-55.95	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-54.57	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-51.93	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-54.27	-20	Pass

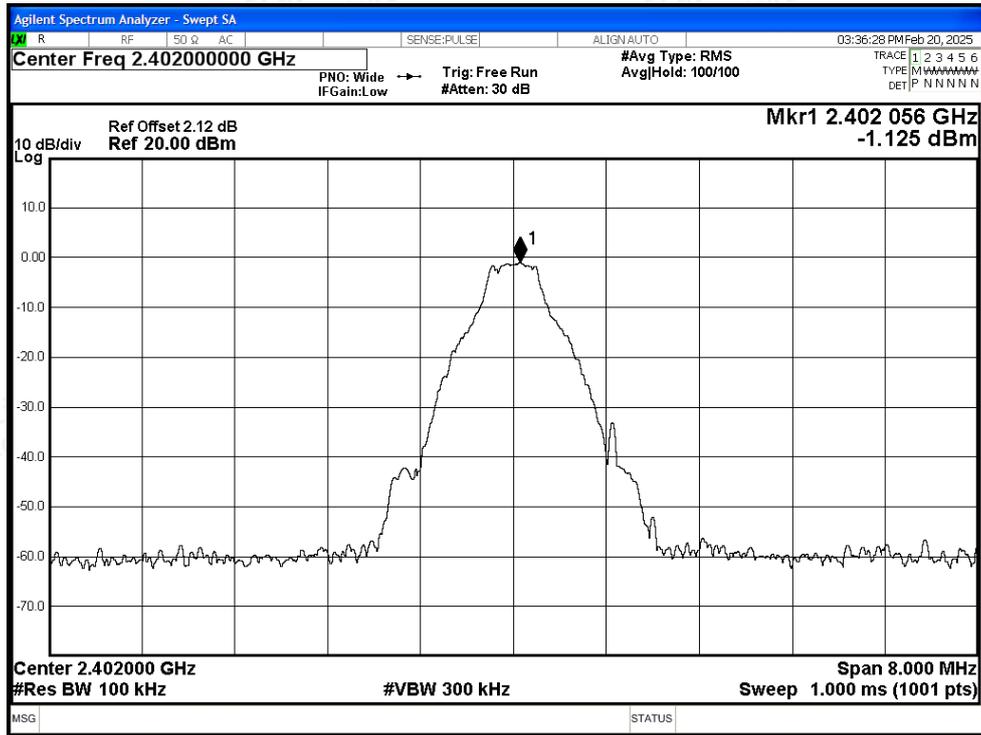


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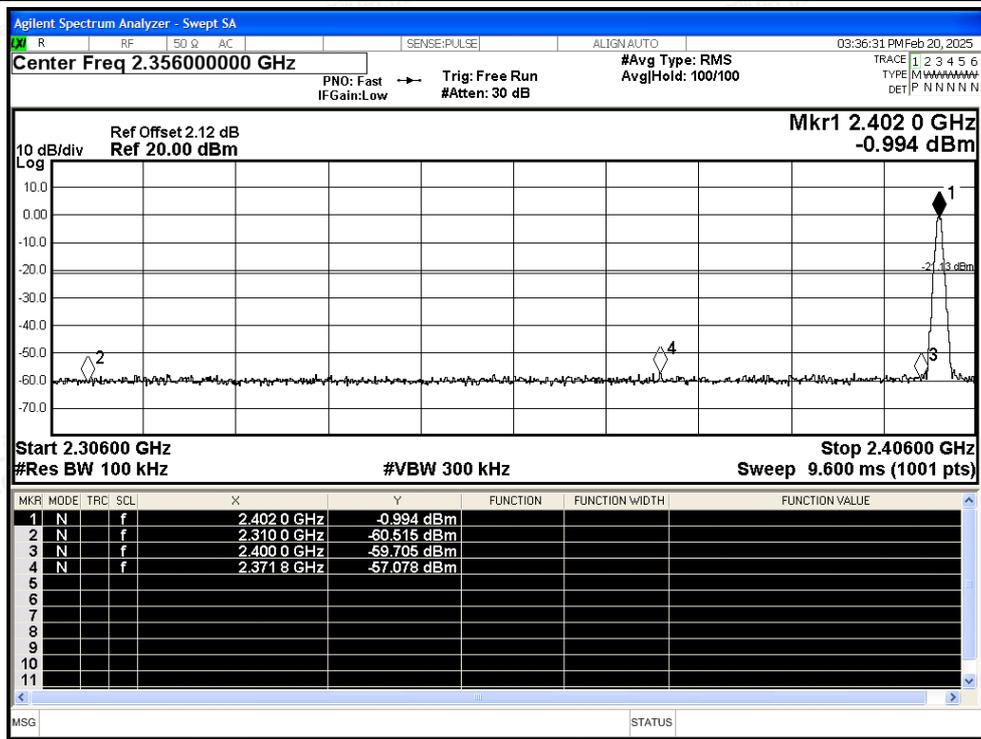


Test Graphs

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

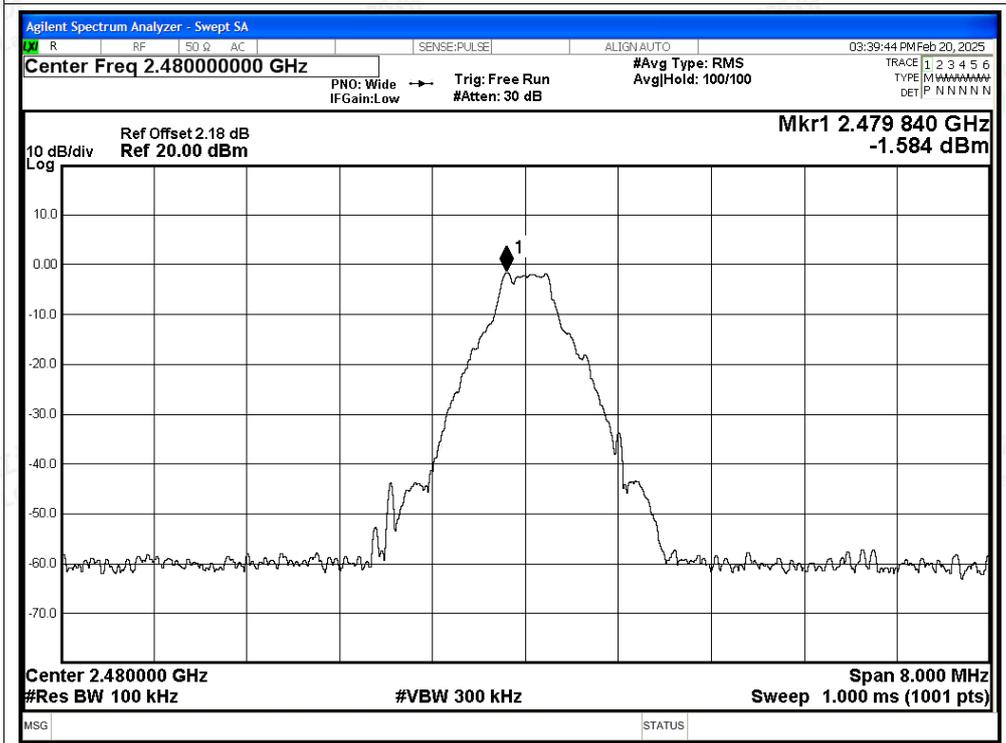


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

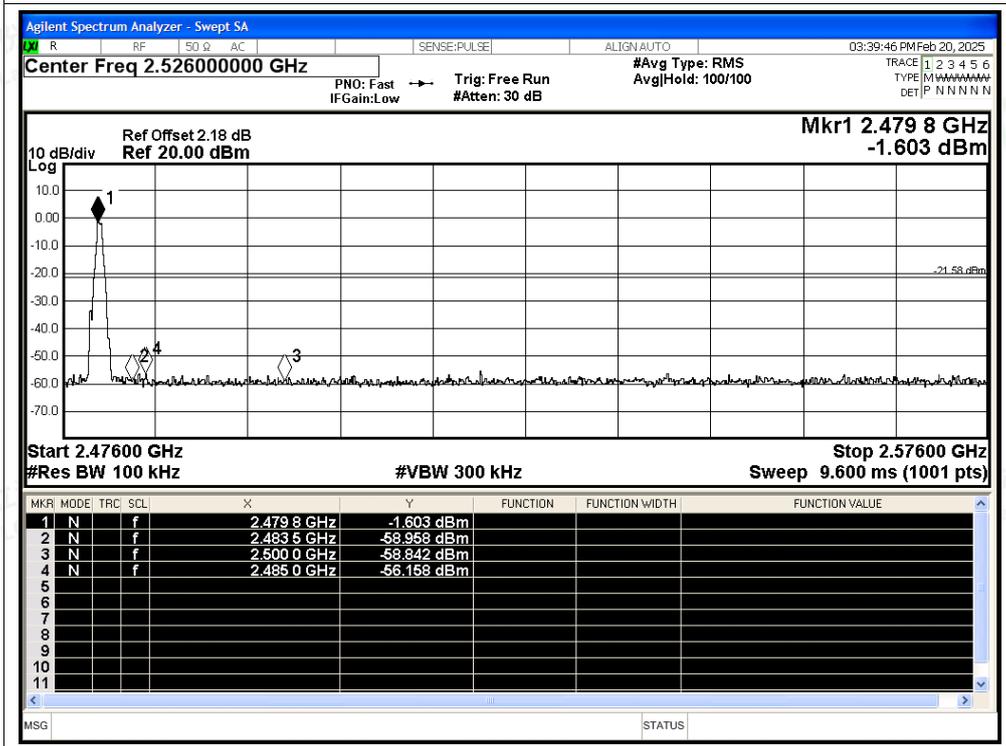




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

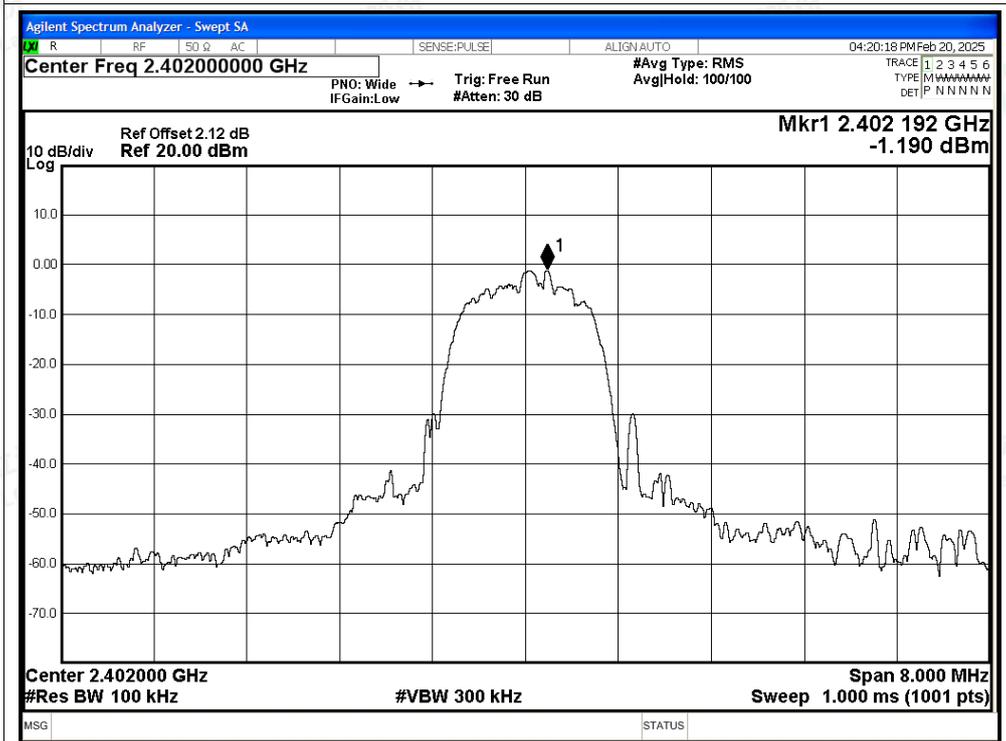


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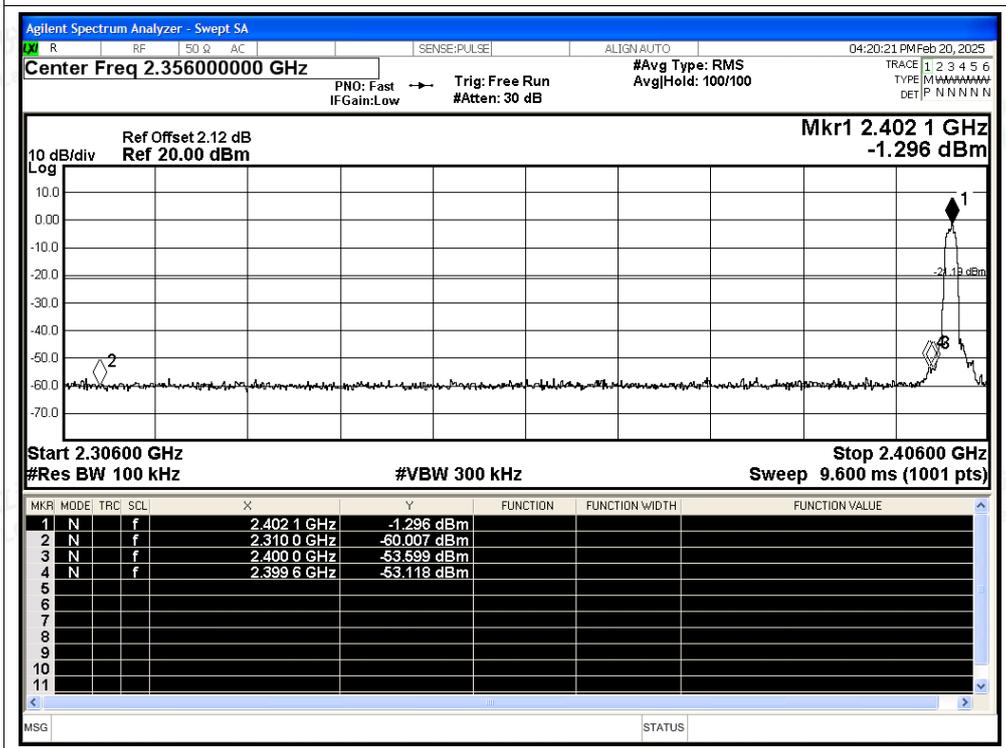




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

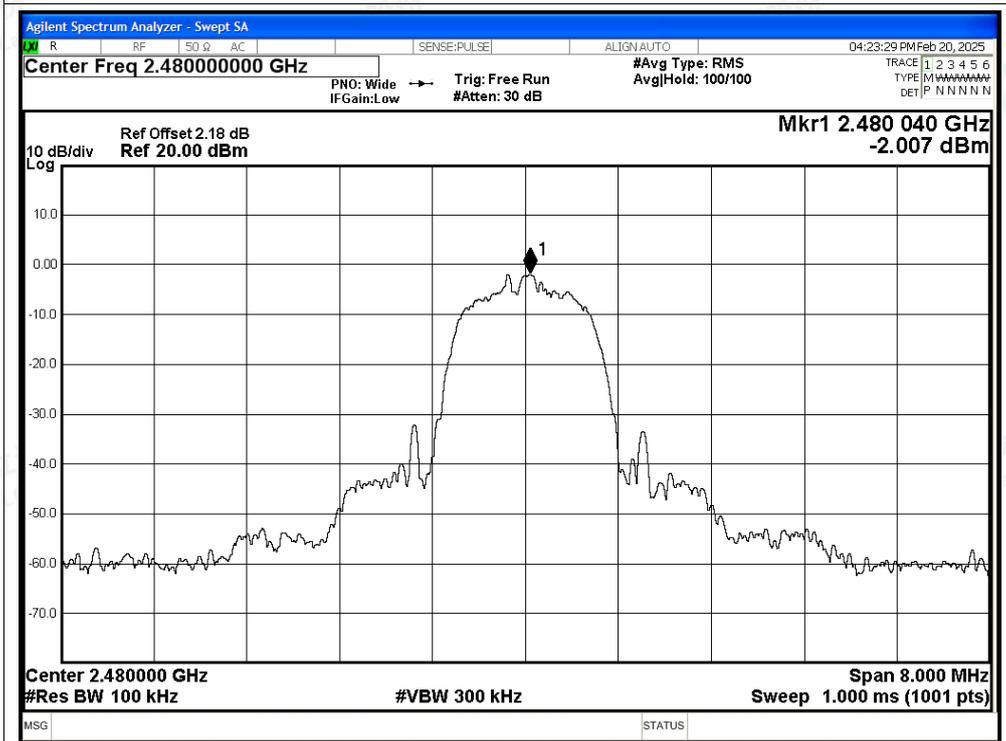


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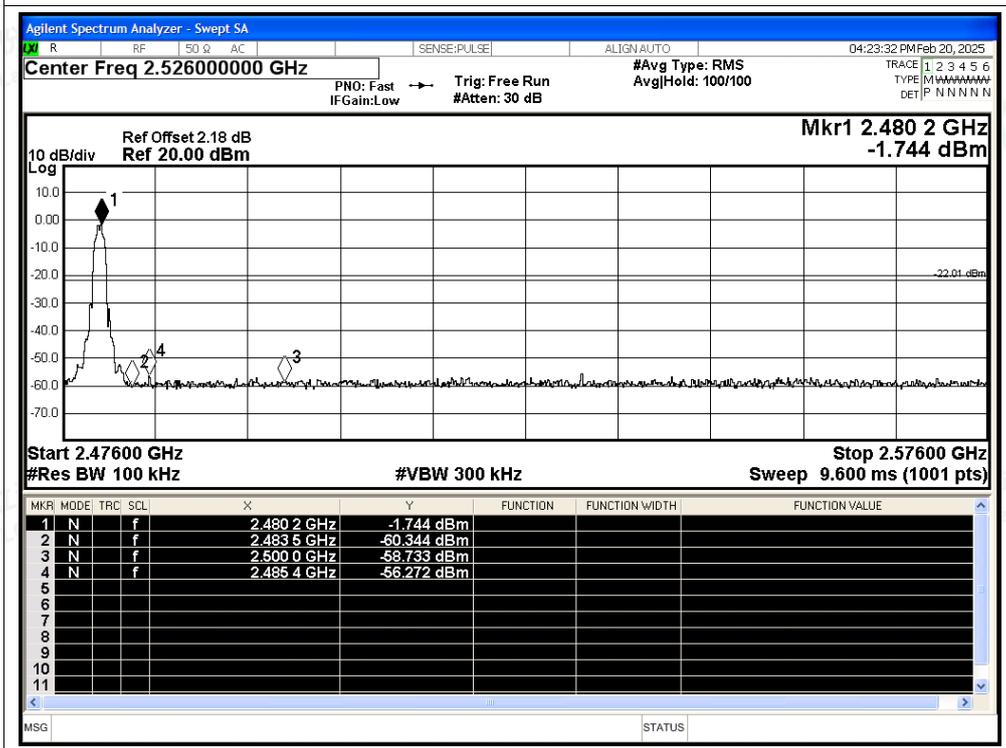




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 2-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	-52.97	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-53.78	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-52.69	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-53.63	-20	Pass

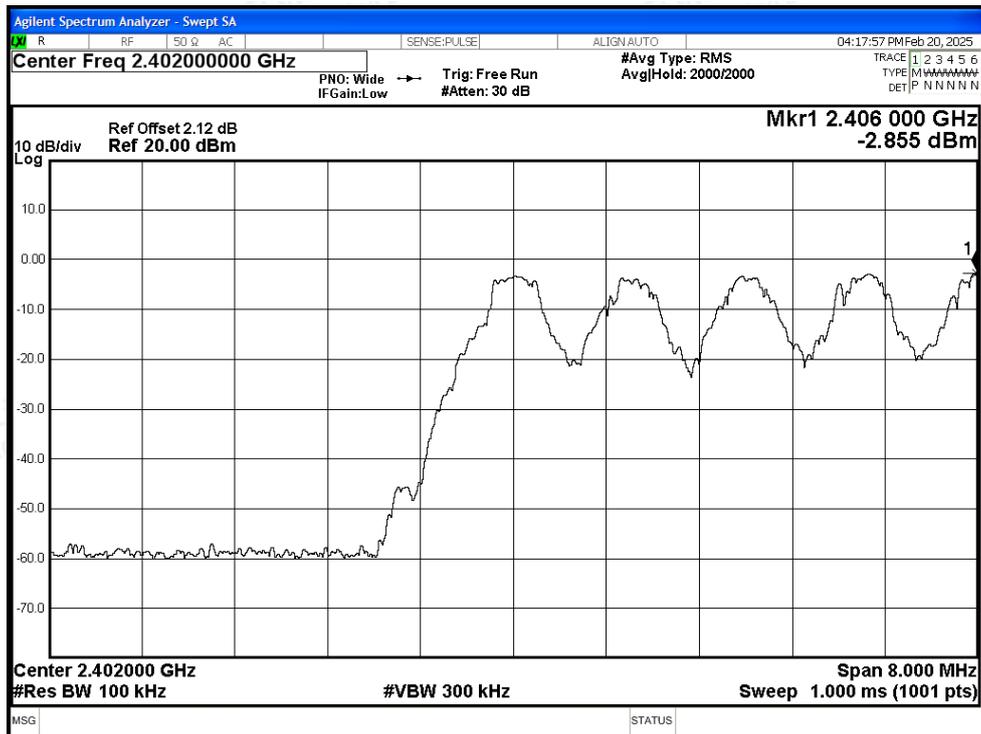


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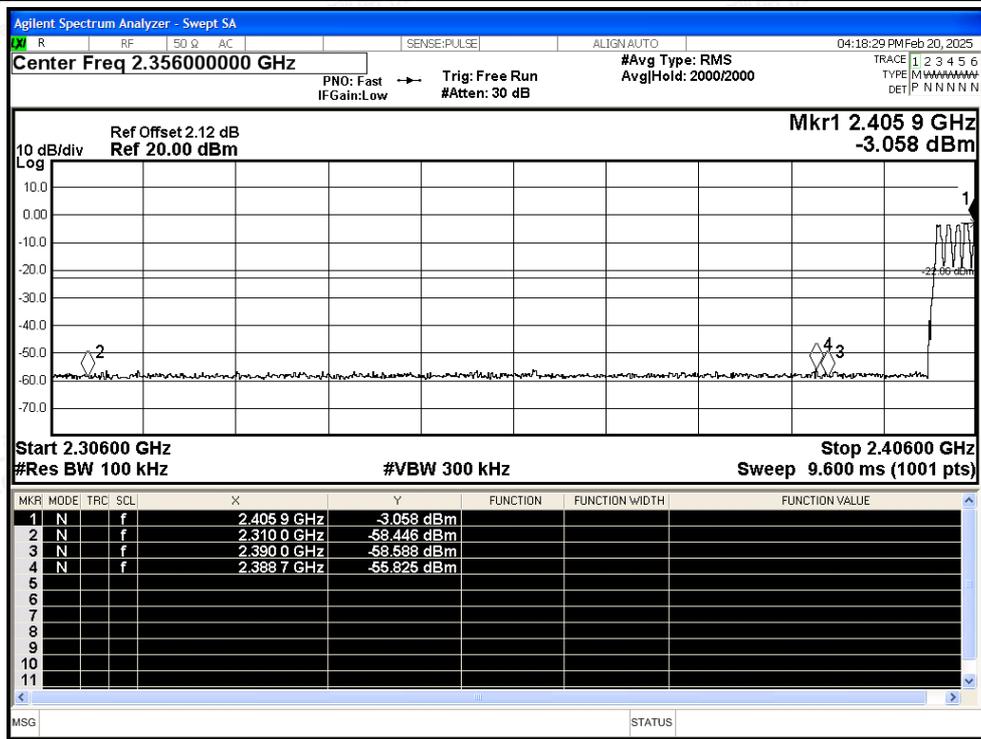


Test Graphs

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

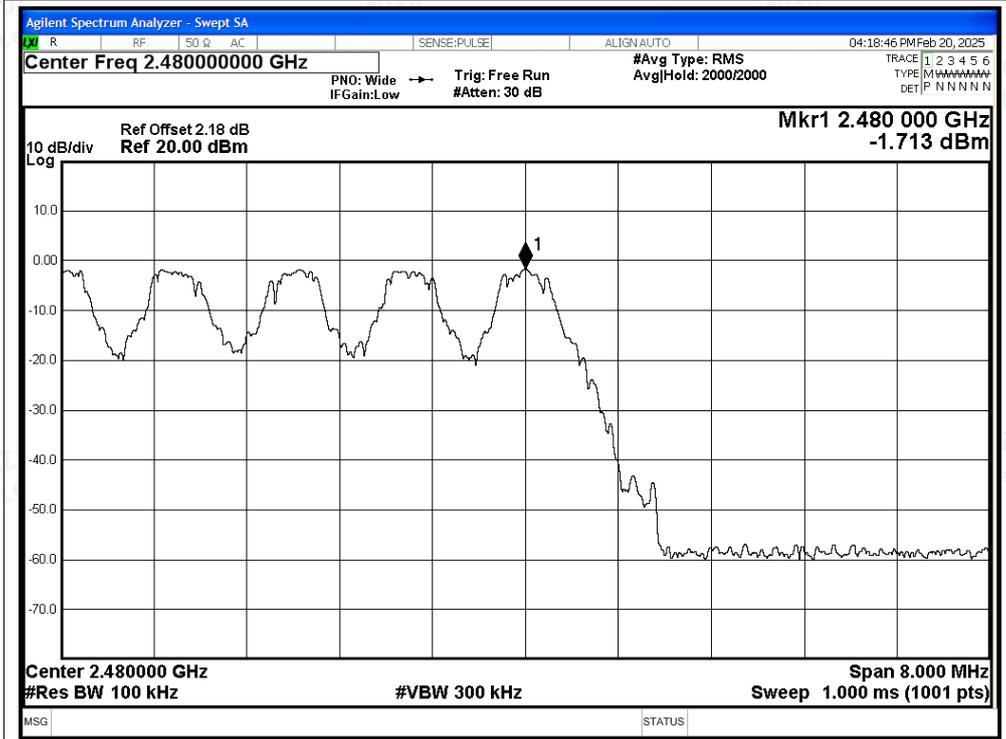


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

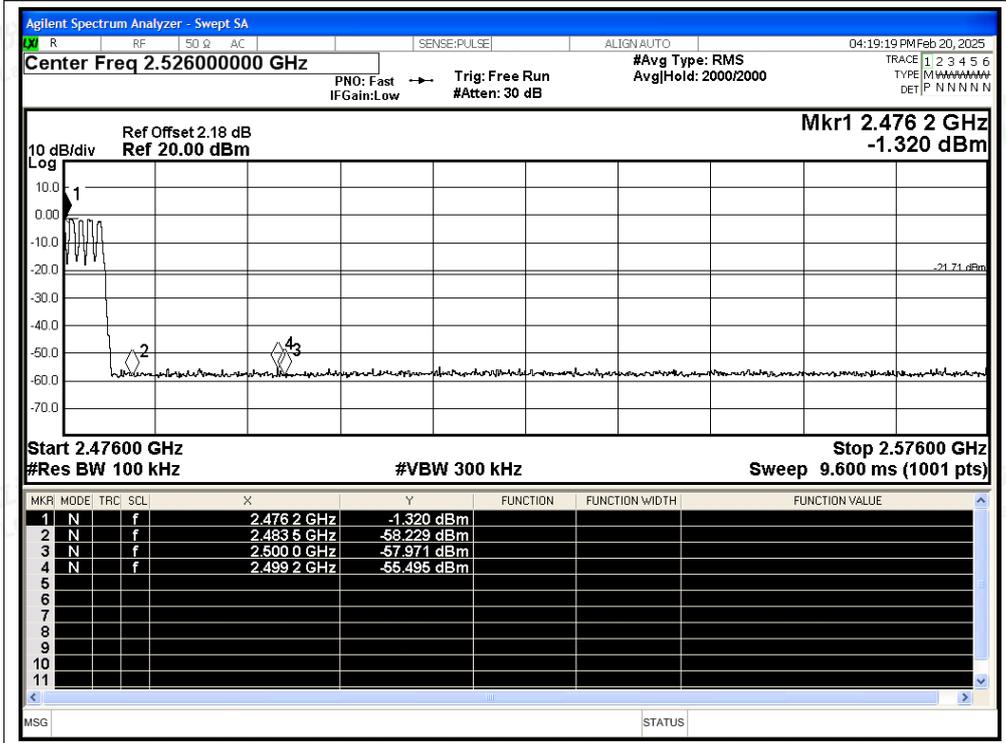




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



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

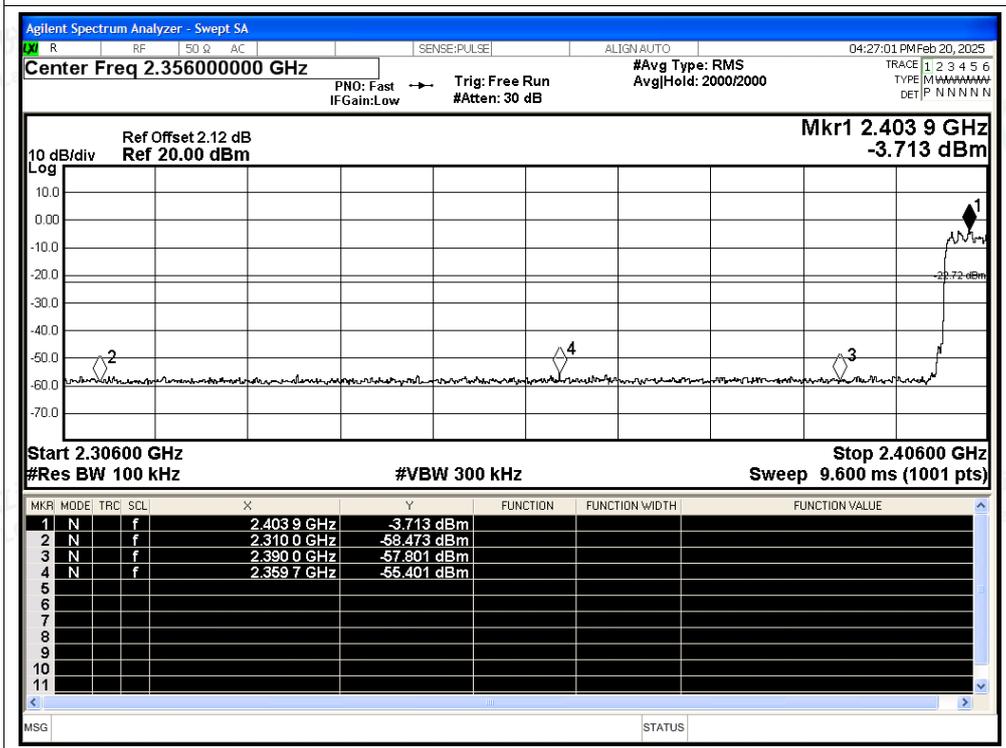




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref

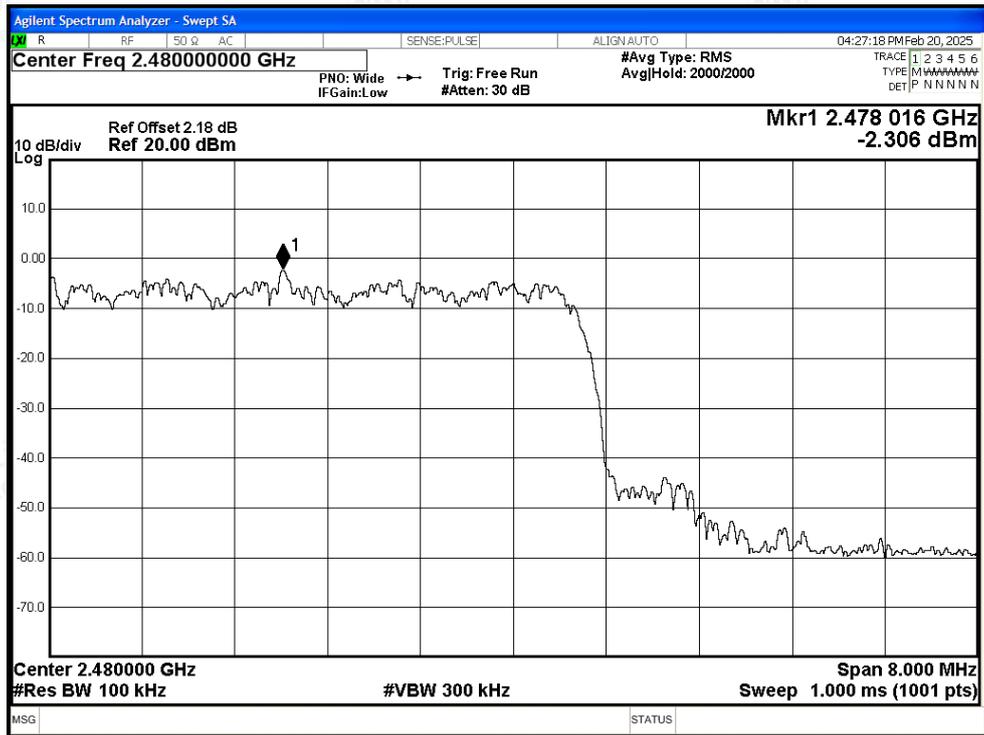


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission

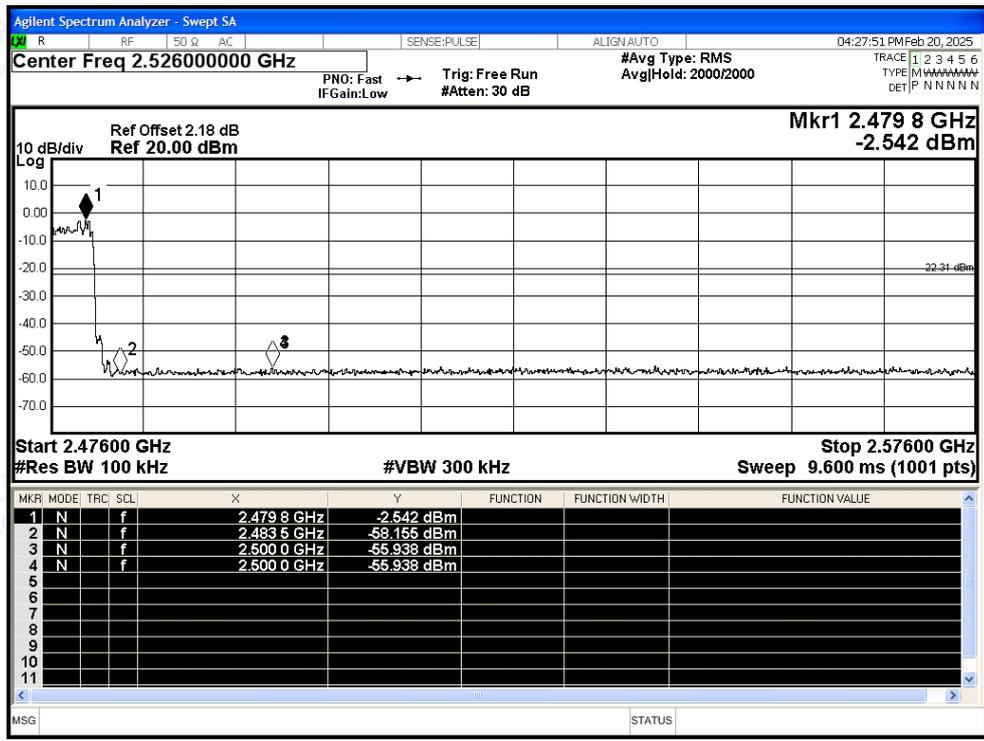




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



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	-52.45	-20	Pass
NVNT	1-DH5	2441	Ant1	-54.86	-20	Pass
NVNT	1-DH5	2480	Ant1	-52.92	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.21	-20	Pass
NVNT	2-DH5	2441	Ant1	-54.08	-20	Pass
NVNT	2-DH5	2480	Ant1	-53.44	-20	Pass

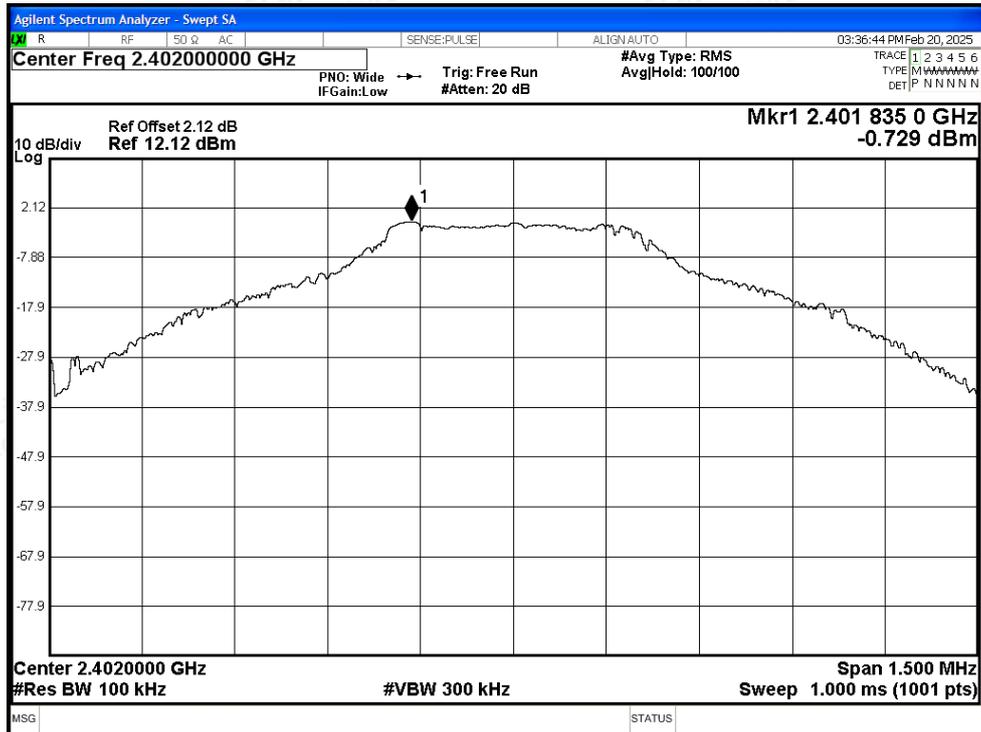


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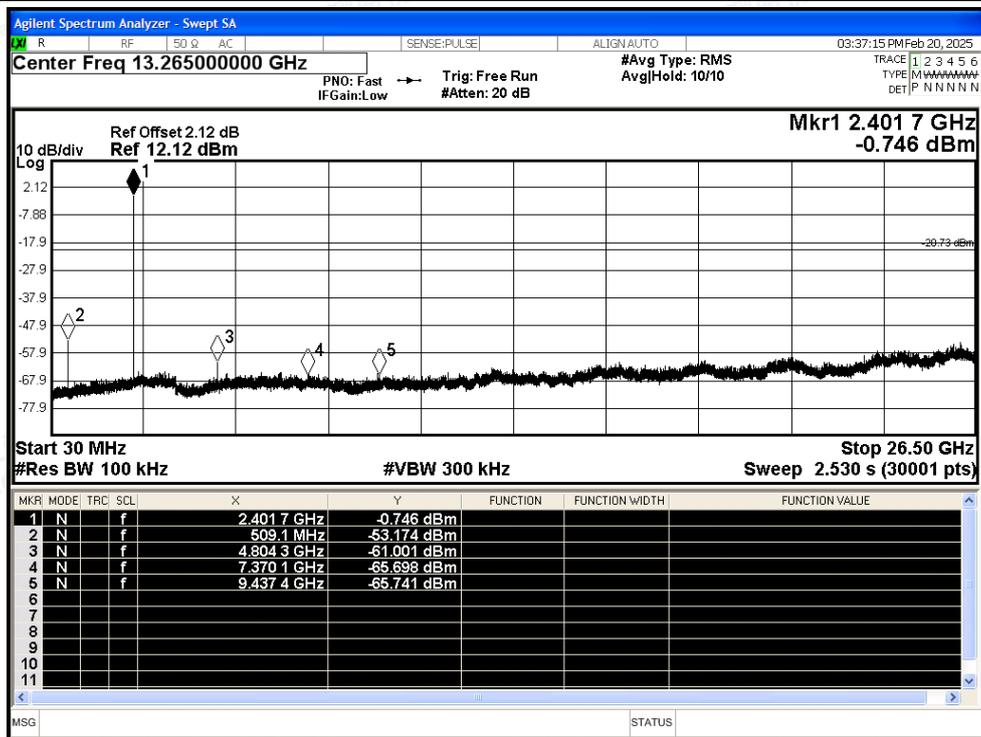


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

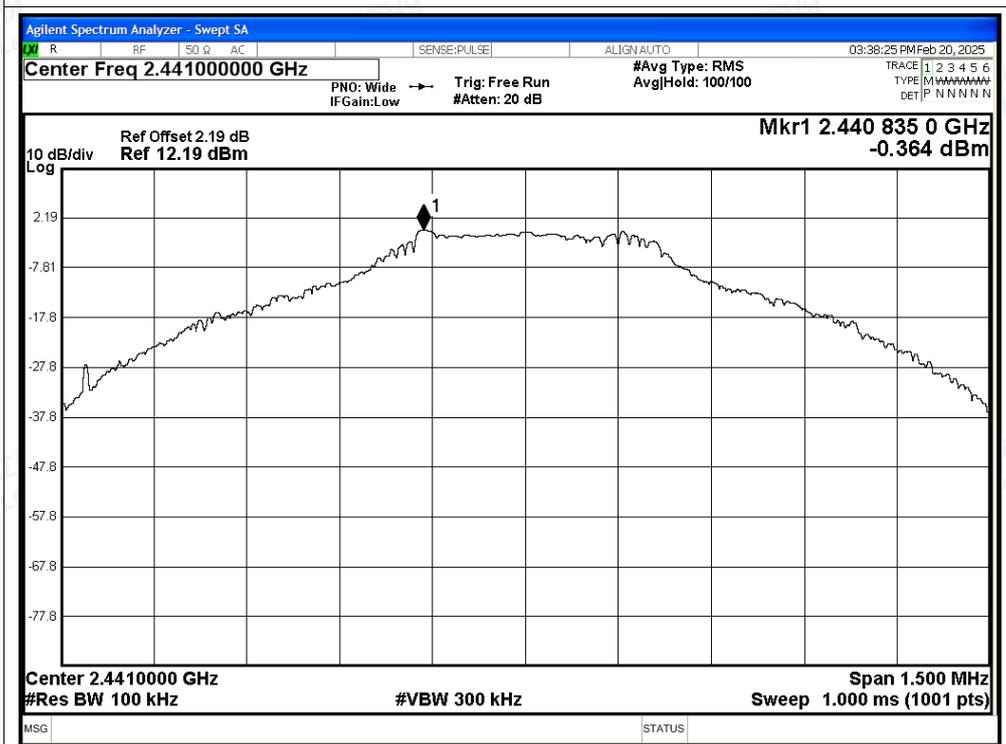


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

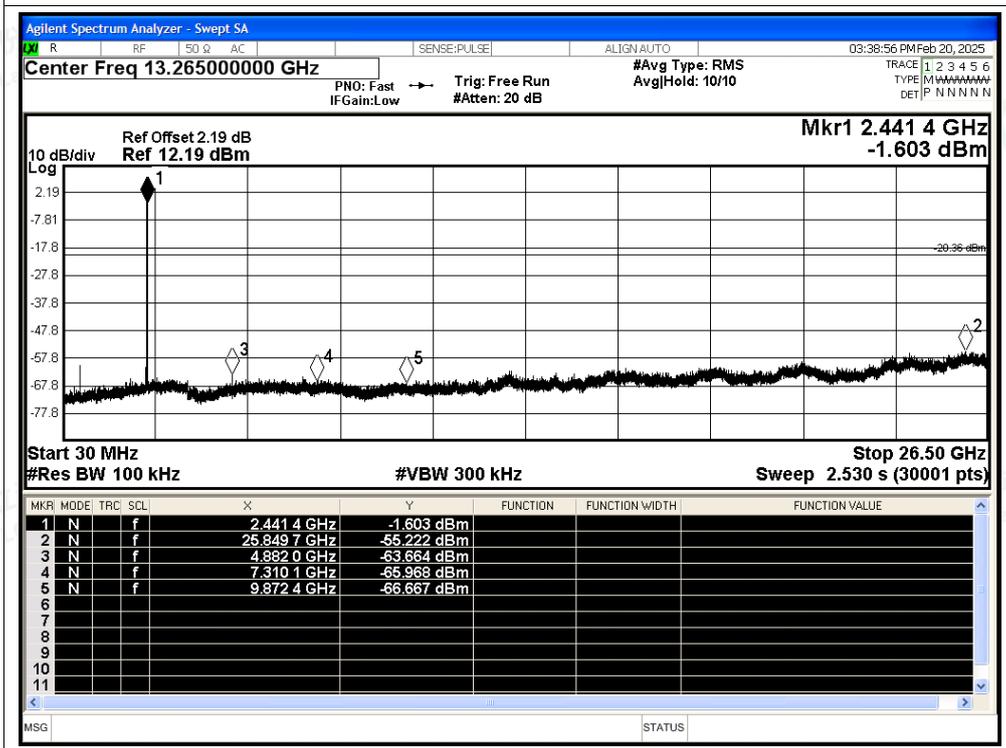




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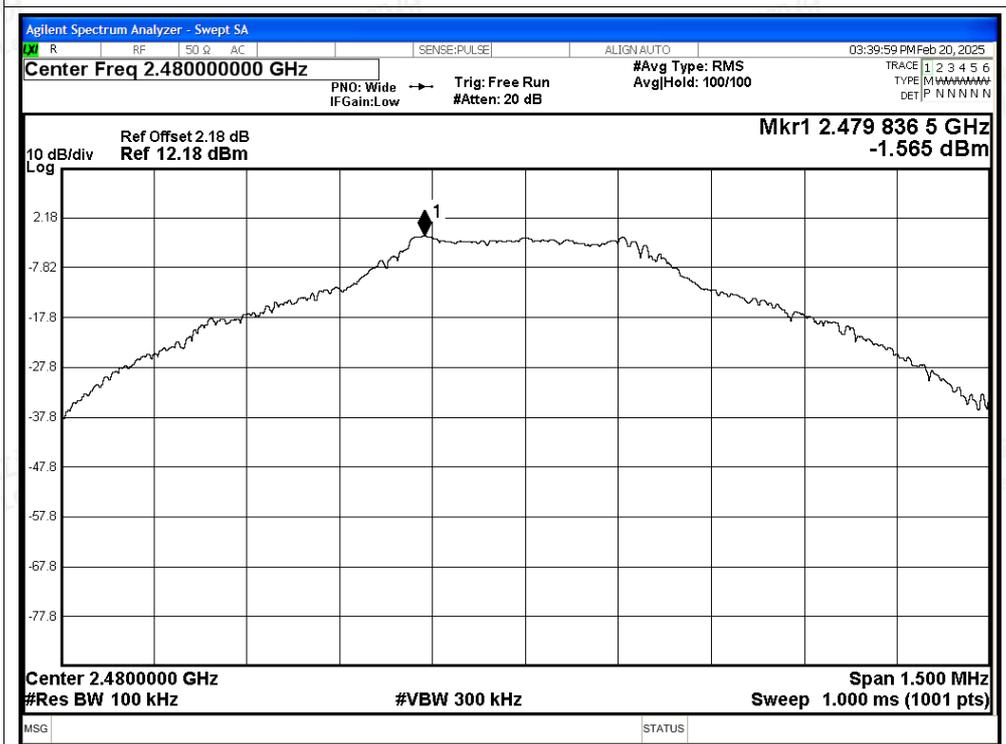


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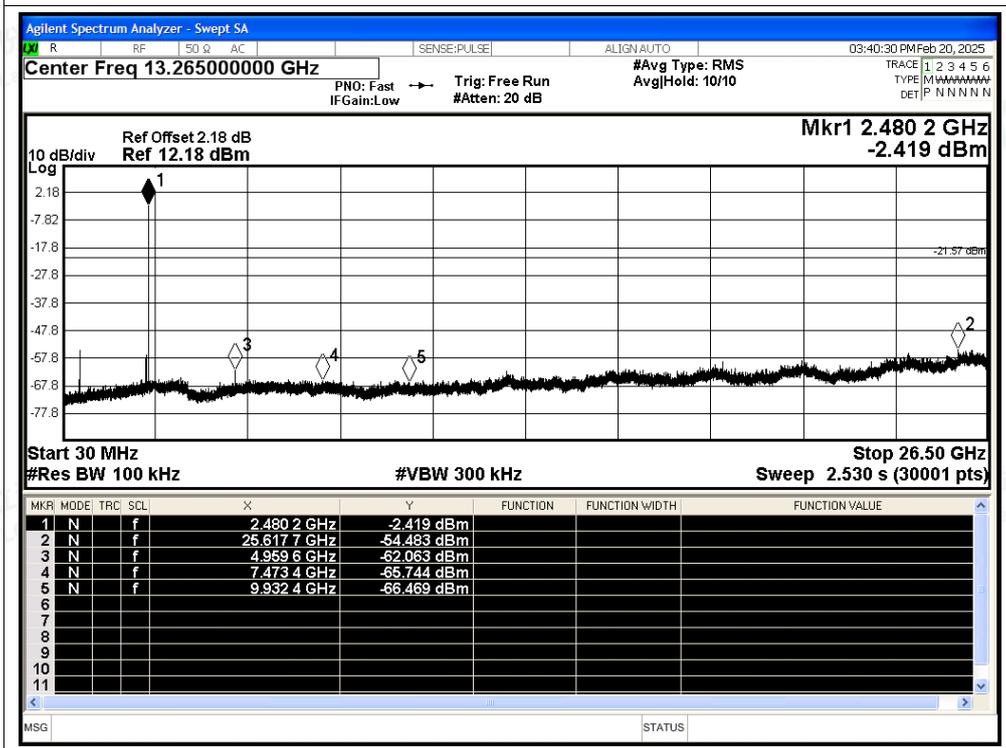




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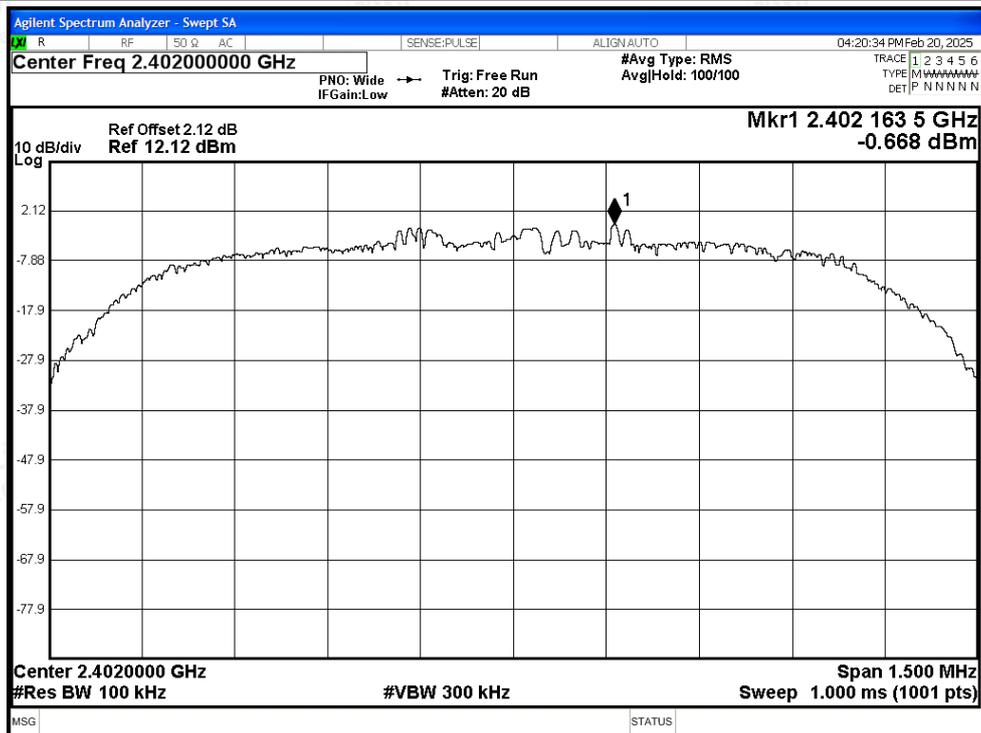


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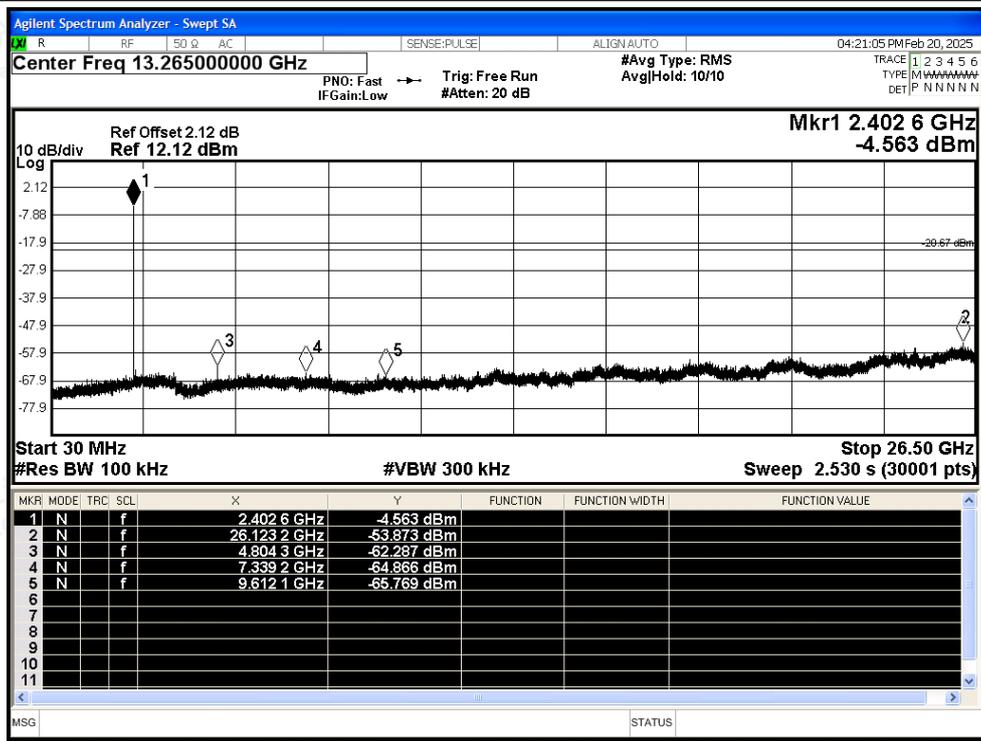




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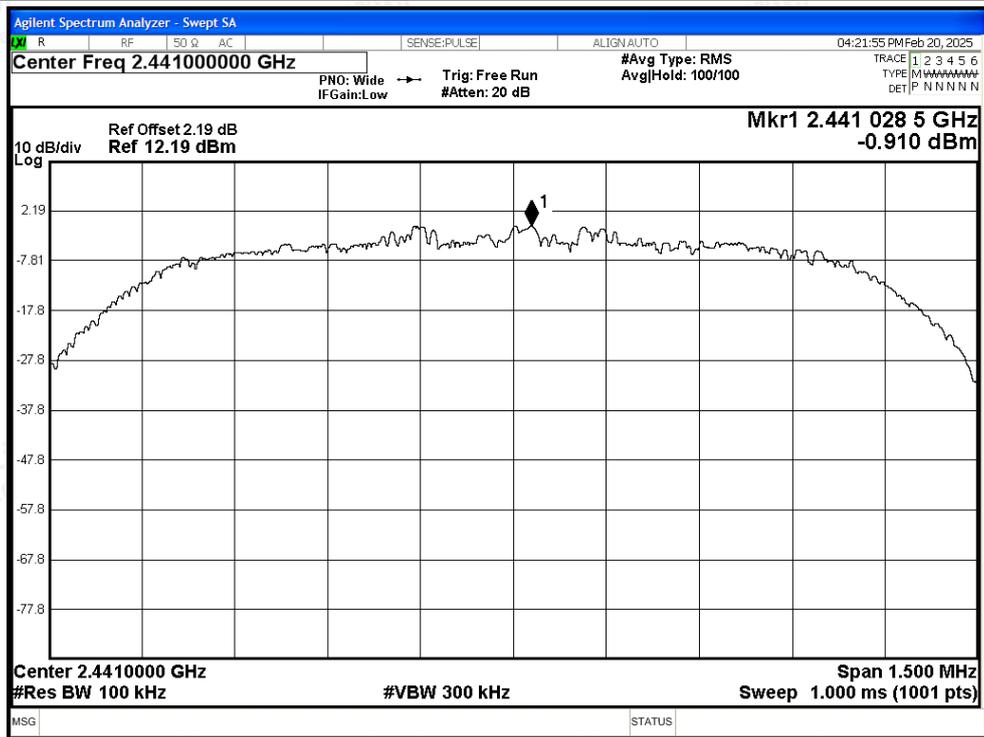


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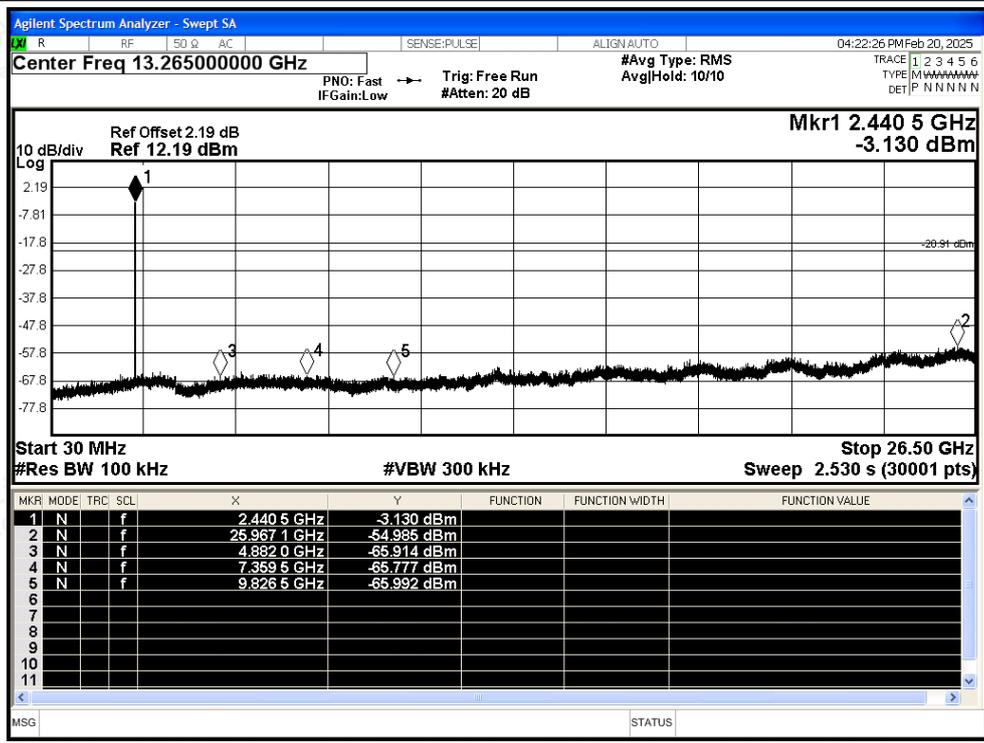




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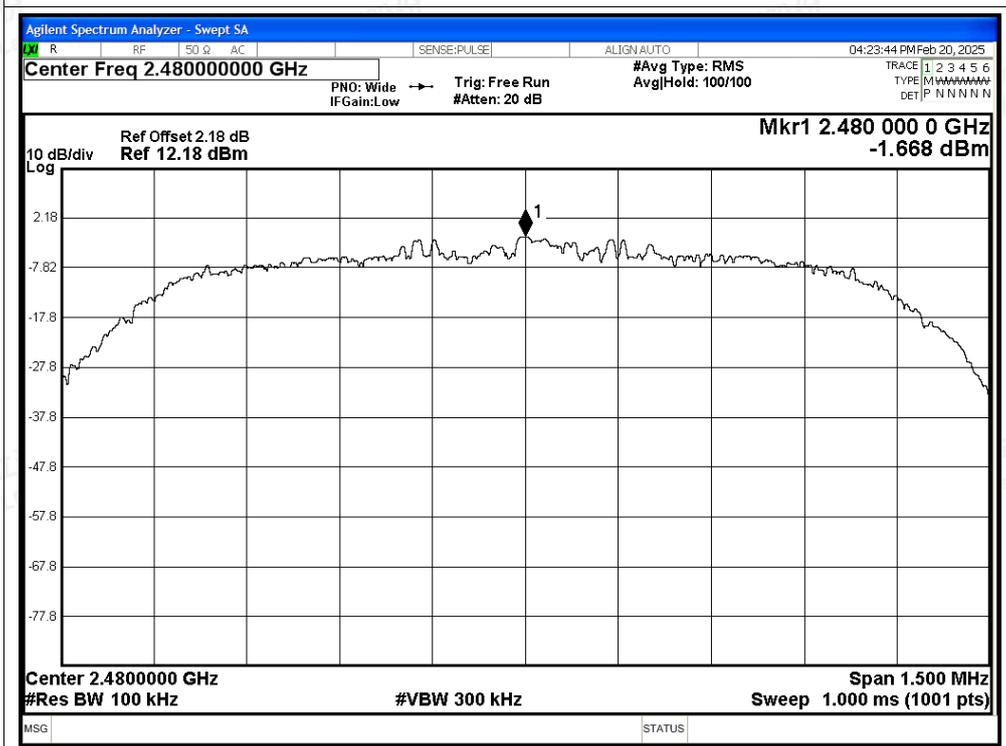


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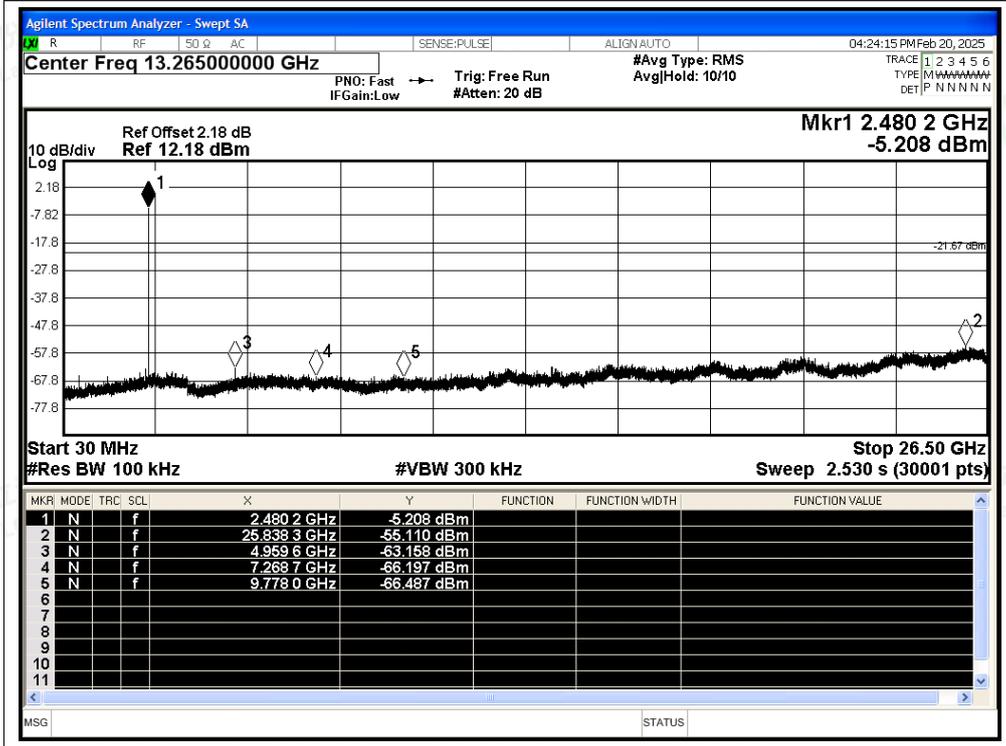




Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission





A.8 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2480	Ant1	77.28	1.12	0.35

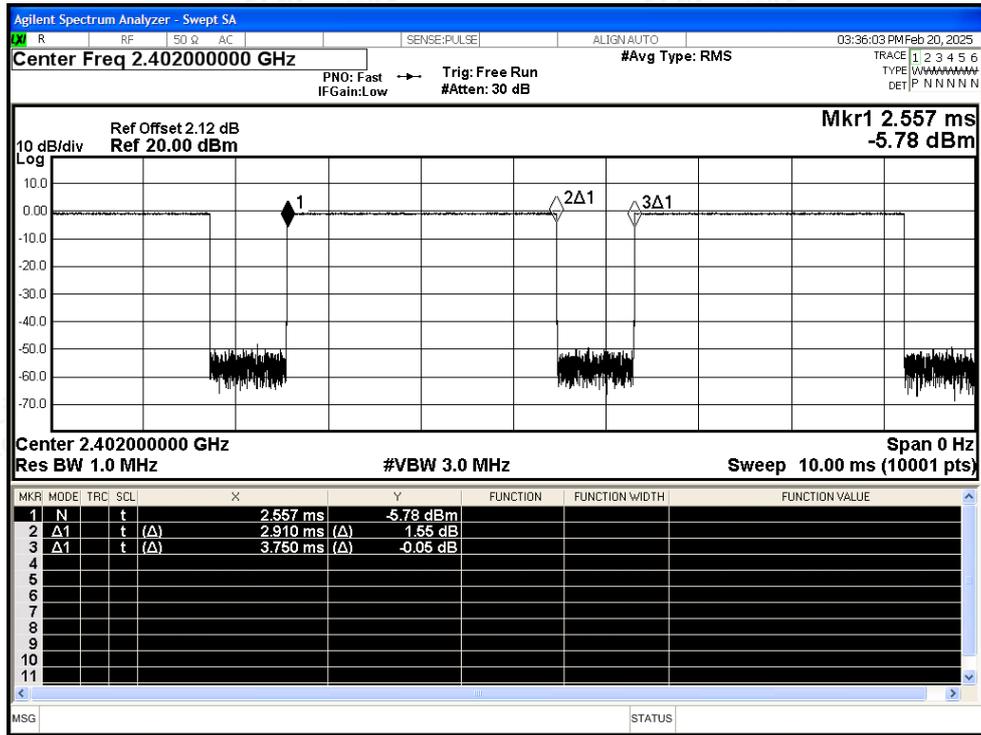


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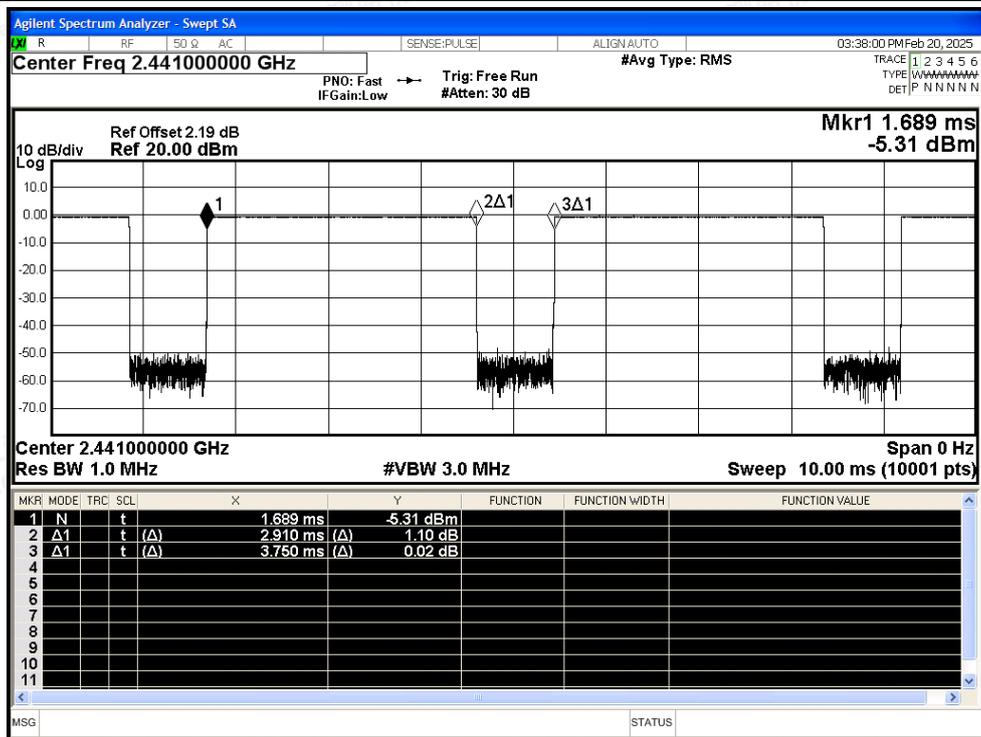


Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant1

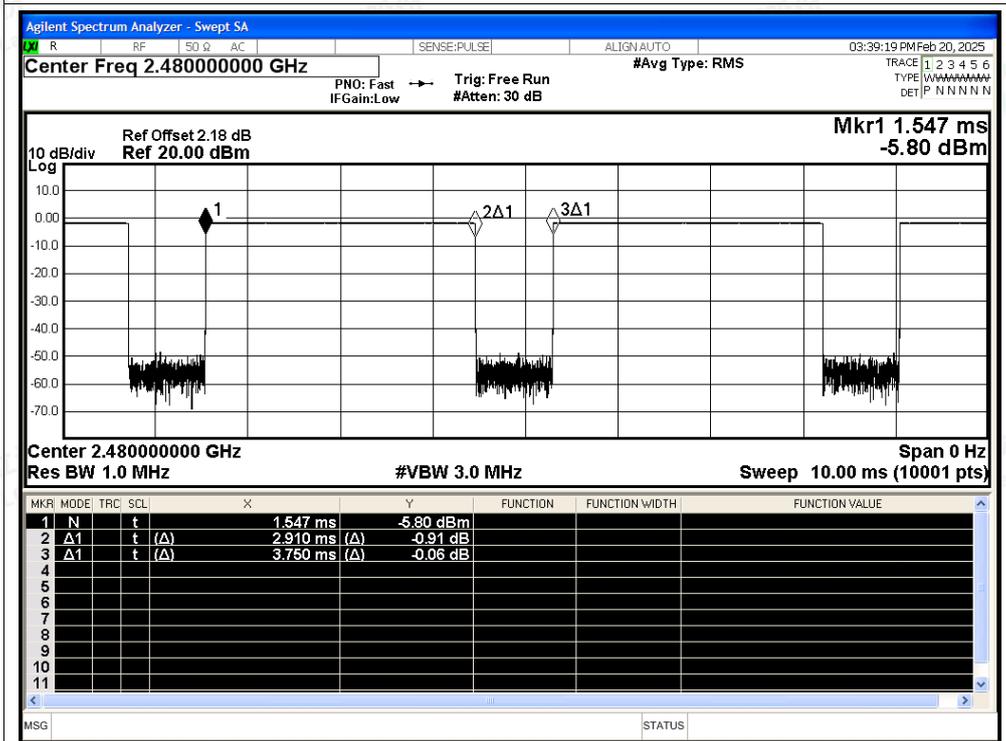


Duty Cycle NVNT 1-DH5 2441MHz Ant1

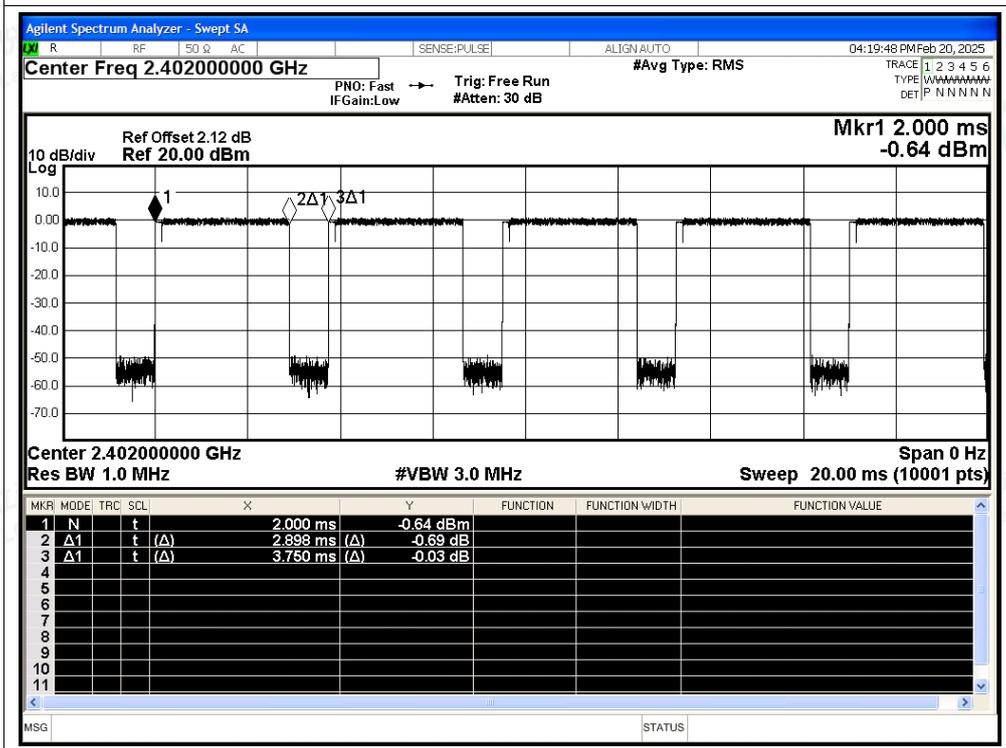




Duty Cycle NVNT 1-DH5 2480MHz Ant1

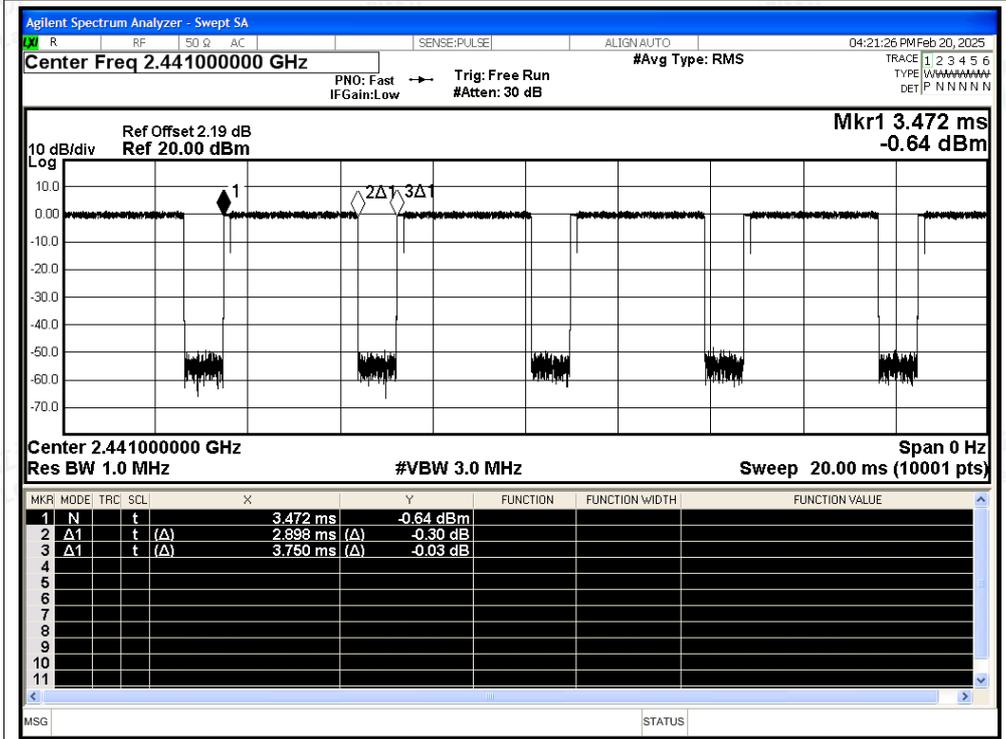


Duty Cycle NVNT 2-DH5 2402MHz Ant1

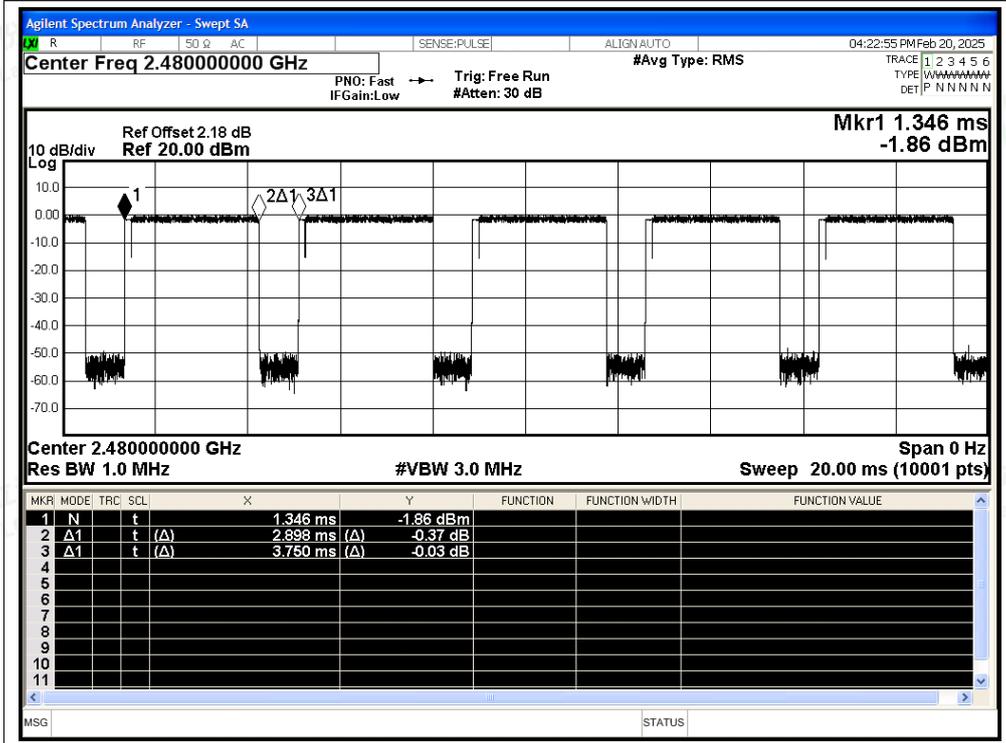




Duty Cycle NVNT 2-DH5 2441MHz Ant1



Duty Cycle NVNT 2-DH5 2480MHz Ant1





A.9 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-50.31	2.67	-	47.62	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.4	2.67	1.1	40.63	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2359.056	-47.68	2.67	-	50.25	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2389.488	-57.54	2.67	1.1	41.49	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.8	2.67	-	48.13	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.32	2.67	1.1	40.71	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-49.91	2.67	-	48.02	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-57.99	2.67	1.1	41.04	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2489.296	-47.1	2.67	-	50.83	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2490.64	-56.97	2.67	1.1	42.06	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.72	2.67	-	48.21	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.64	2.67	1.1	41.39	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-52.36	2.67	-	45.57	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.86	2.67	1.12	40.19	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2385.552	-46.73	2.67	-	51.20	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2343.504	-57.53	2.67	1.12	41.52	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-49.13	2.67	-	48.80	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-58.62	2.67	1.12	40.43	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-48.8	2.67	-	49.13	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.08	2.67	1.12	41.97	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2490.976	-46.81	2.67	-	51.12	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2499.04	-57.01	2.67	1.12	42.04	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.46	2.67	-	48.47	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.78	2.67	1.12	41.27	Average	54	Pass

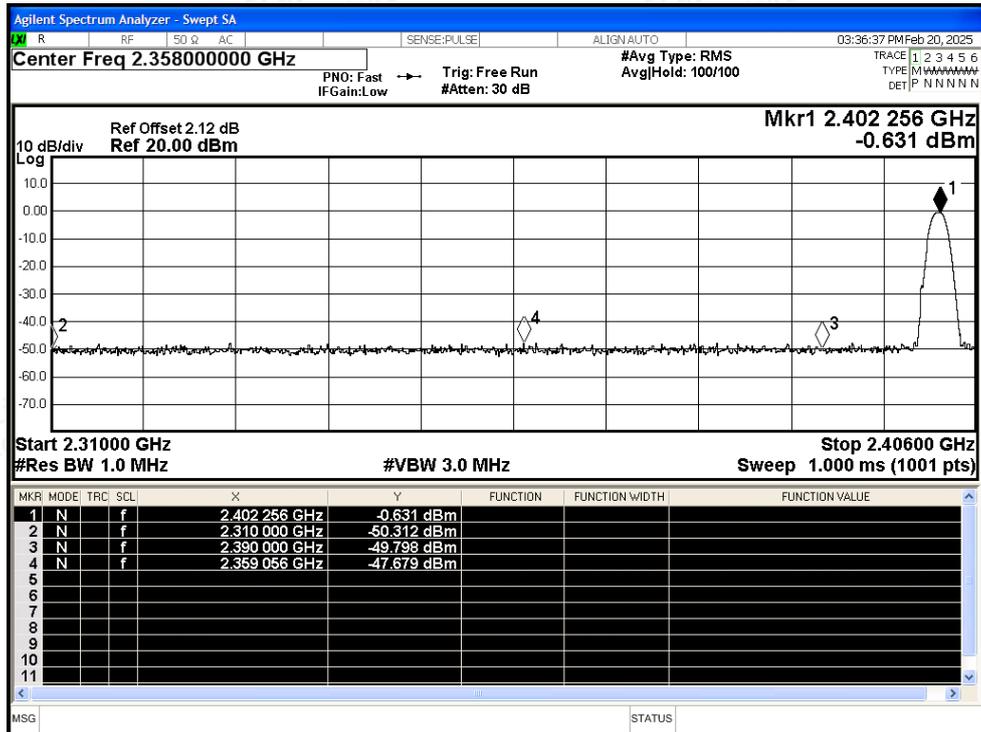


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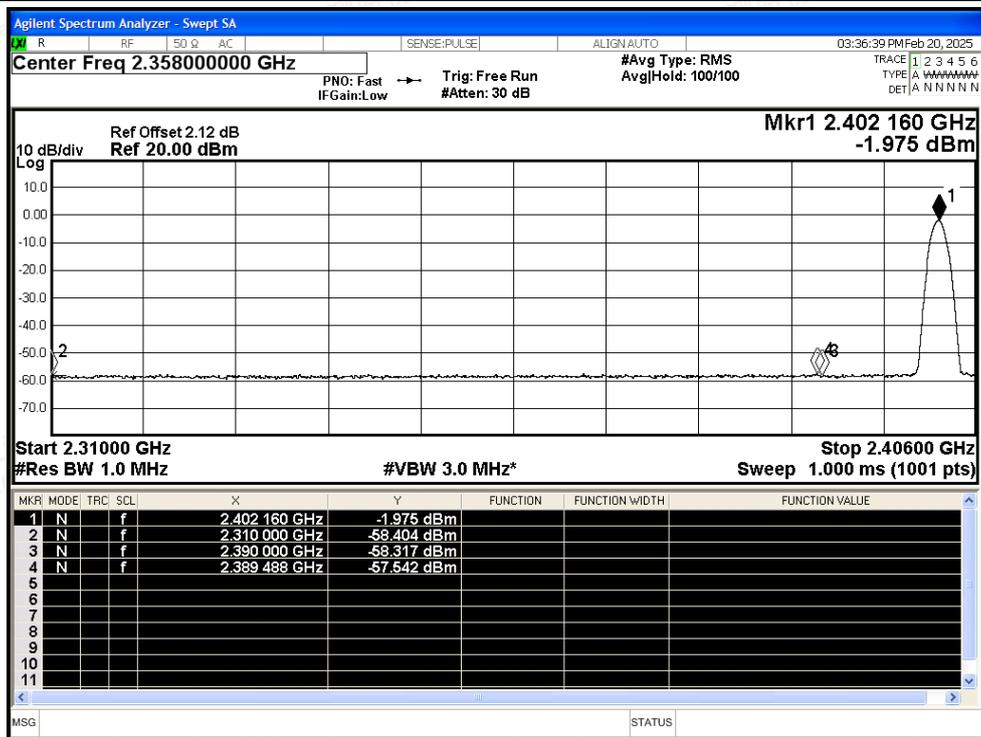


Test Graphs

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

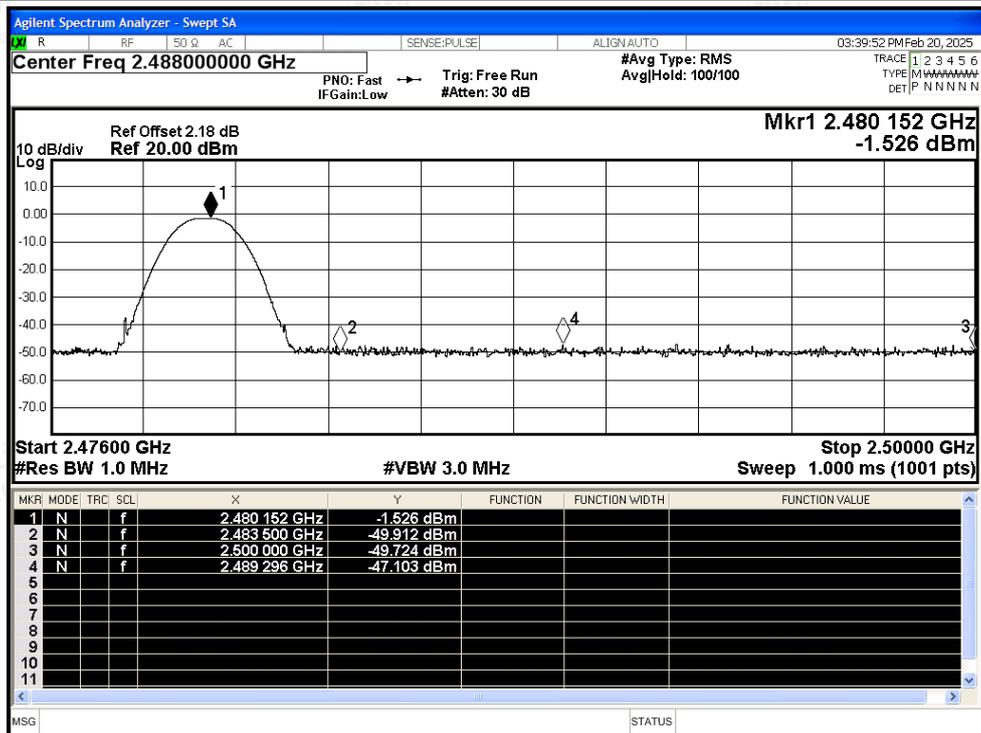


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

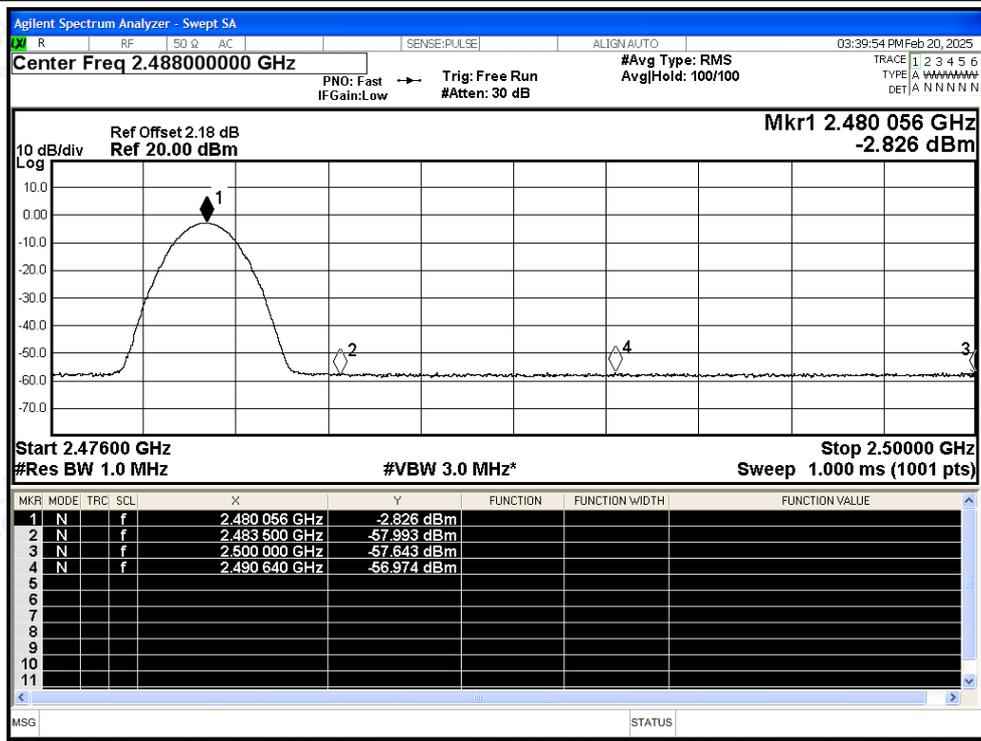




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

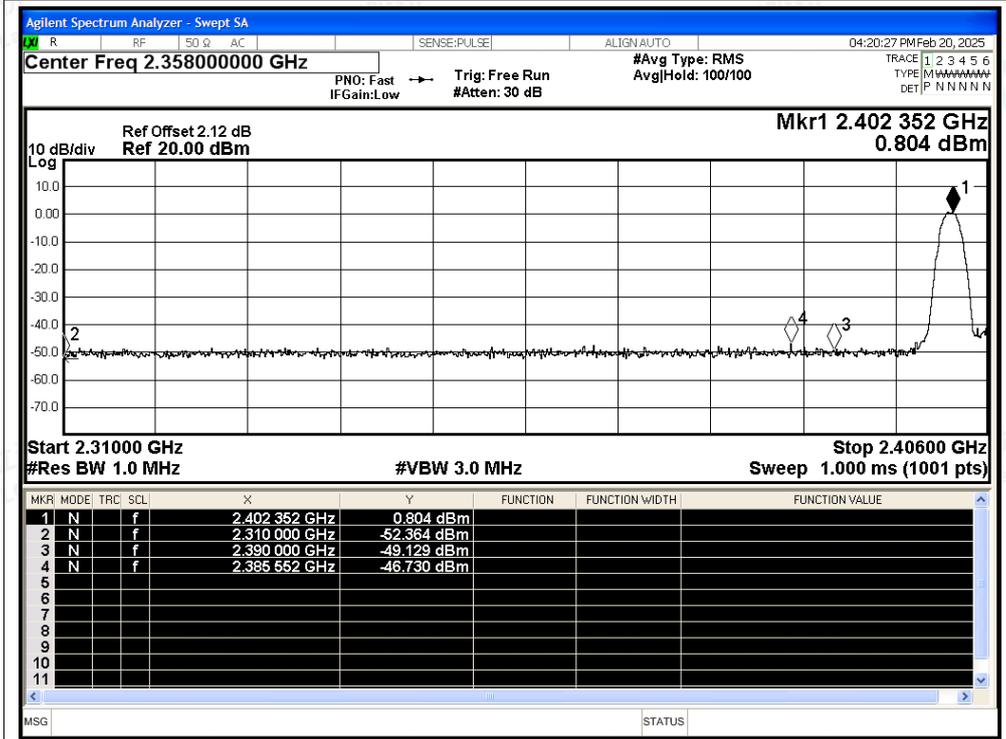


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

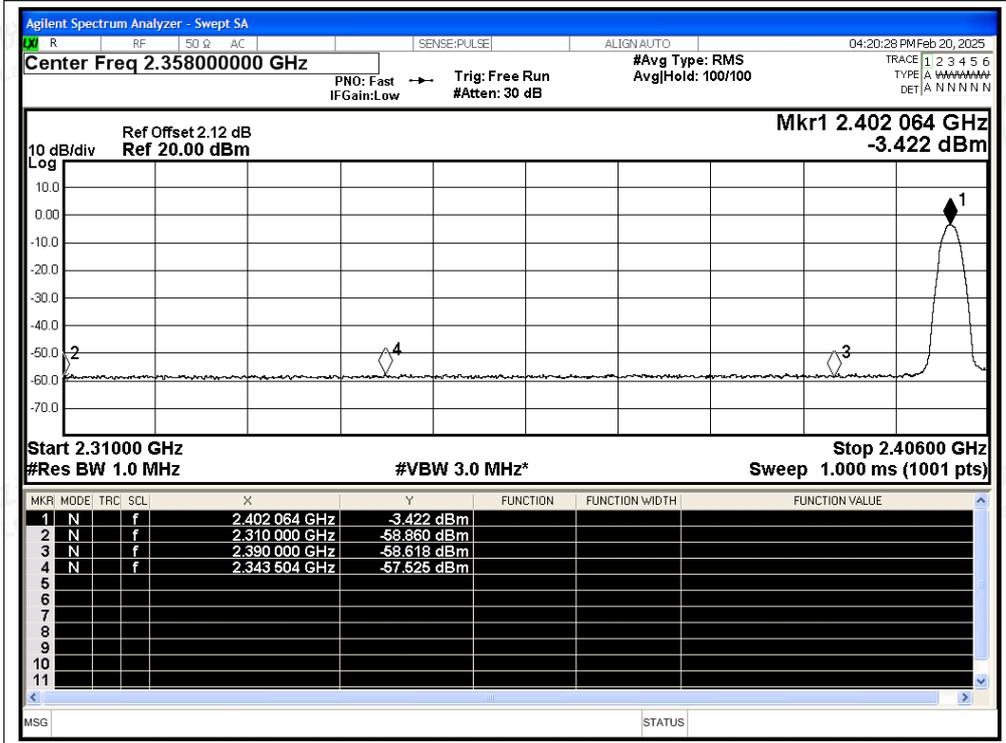




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

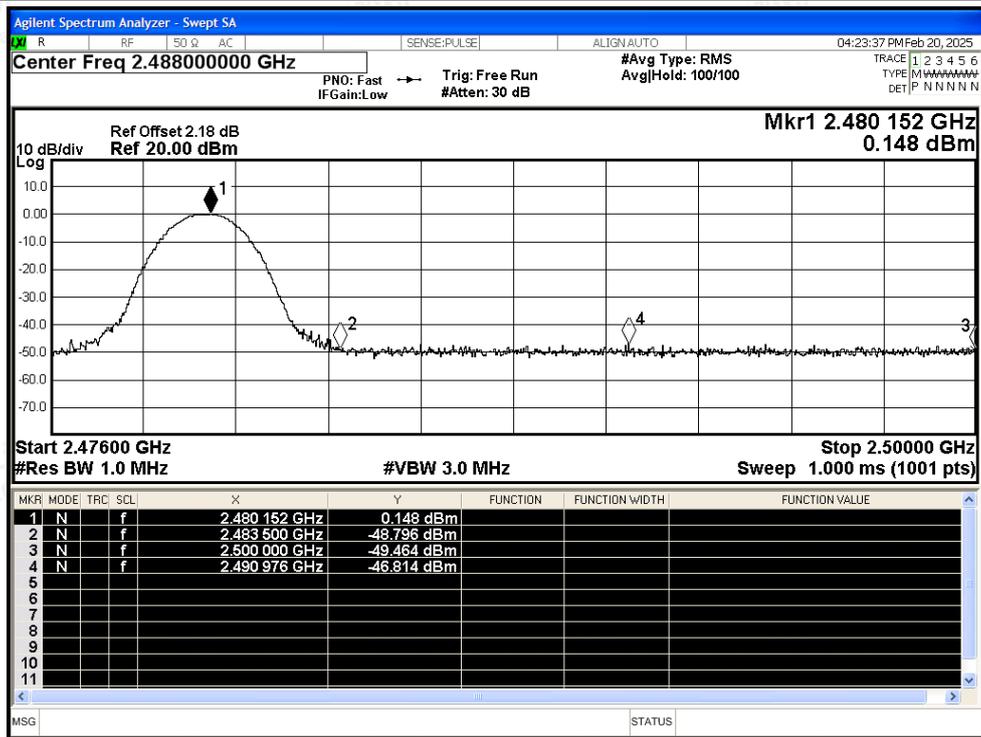


Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average





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



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

