



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Mechanical keyboard

Test Model: RK-H87

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
Supervised by:	Ling Zhu





A.1 -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.99	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.97	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.954	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.282	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.286	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.278	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.279	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.296	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.297	N/A	Pass

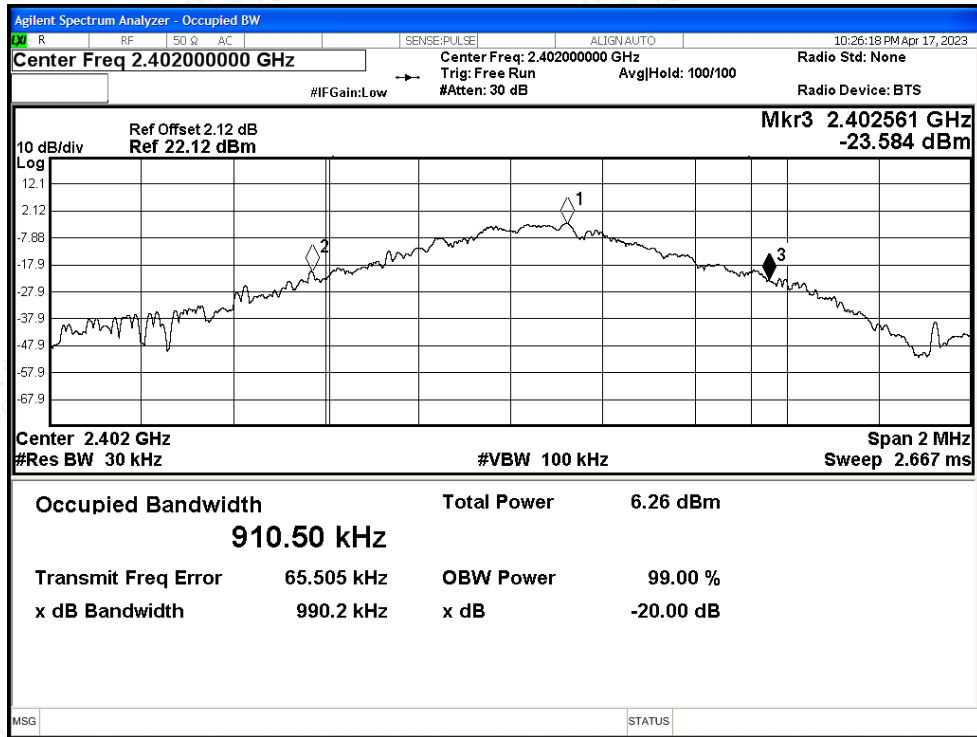


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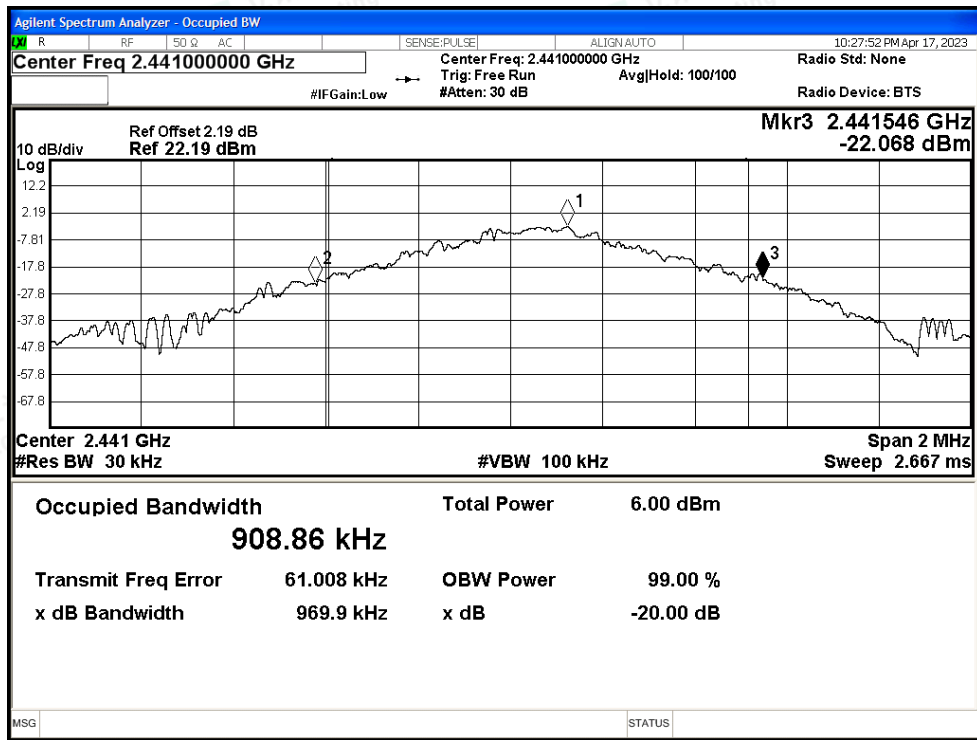


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

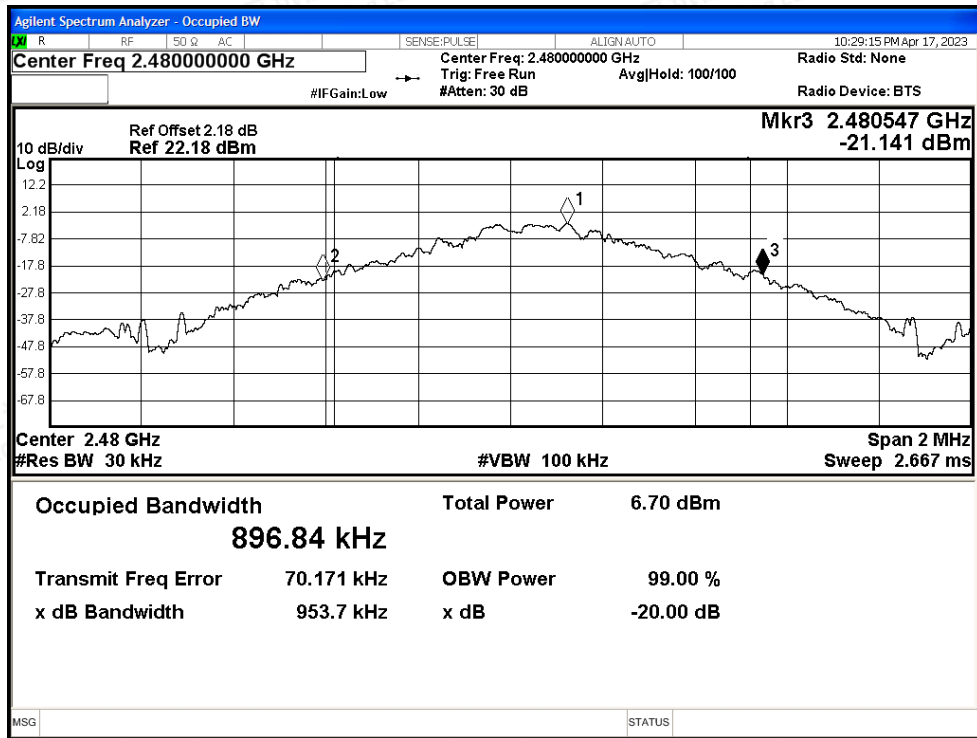


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

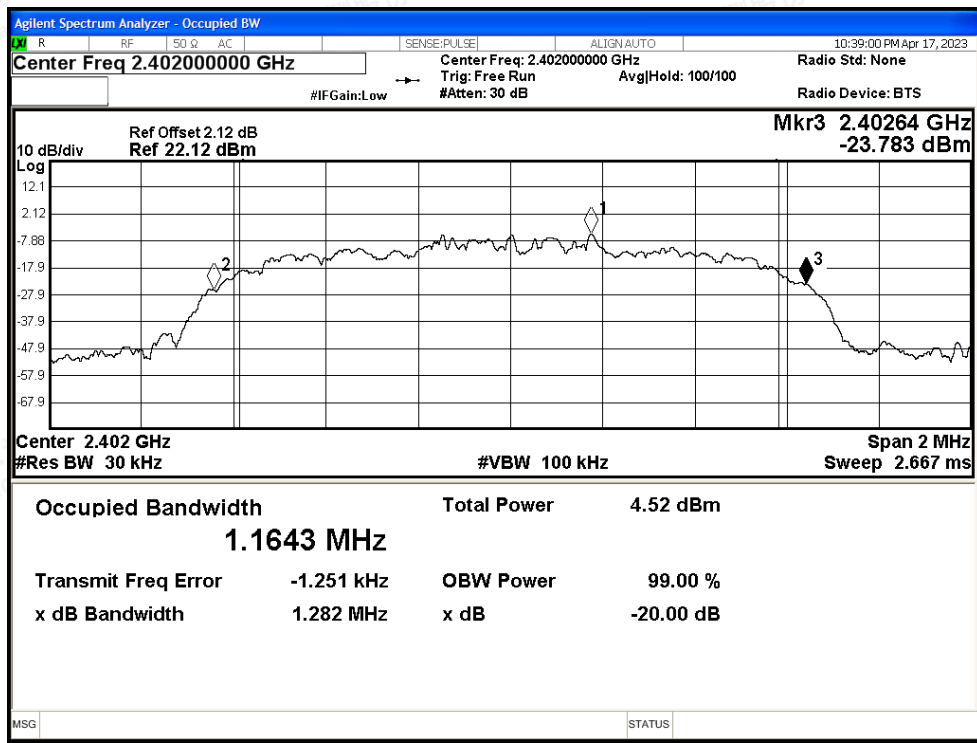




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

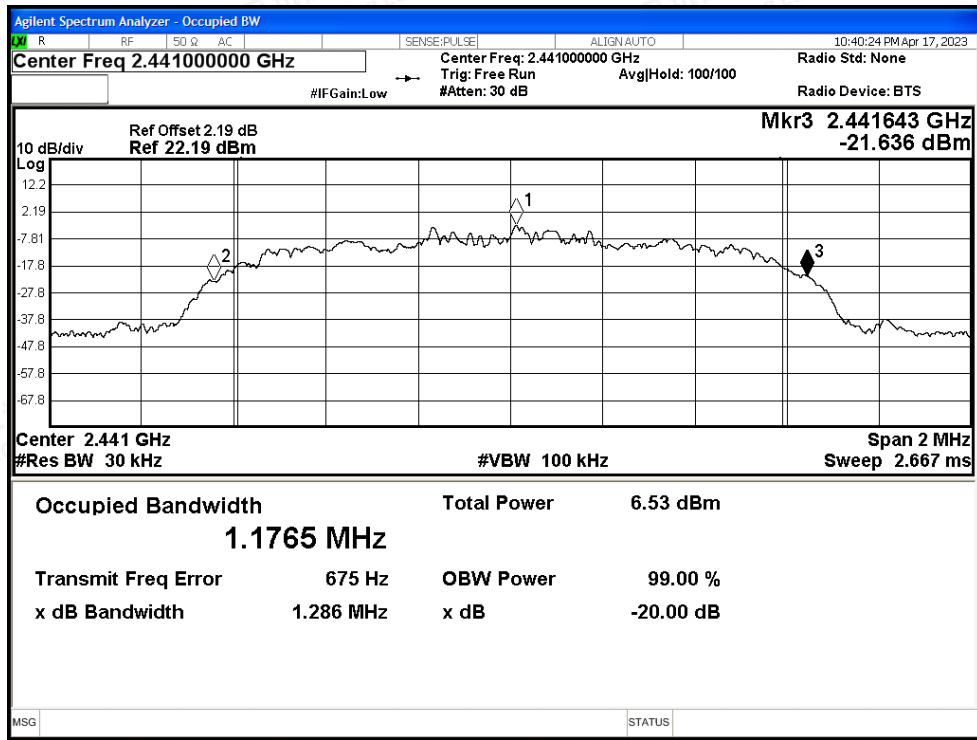


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

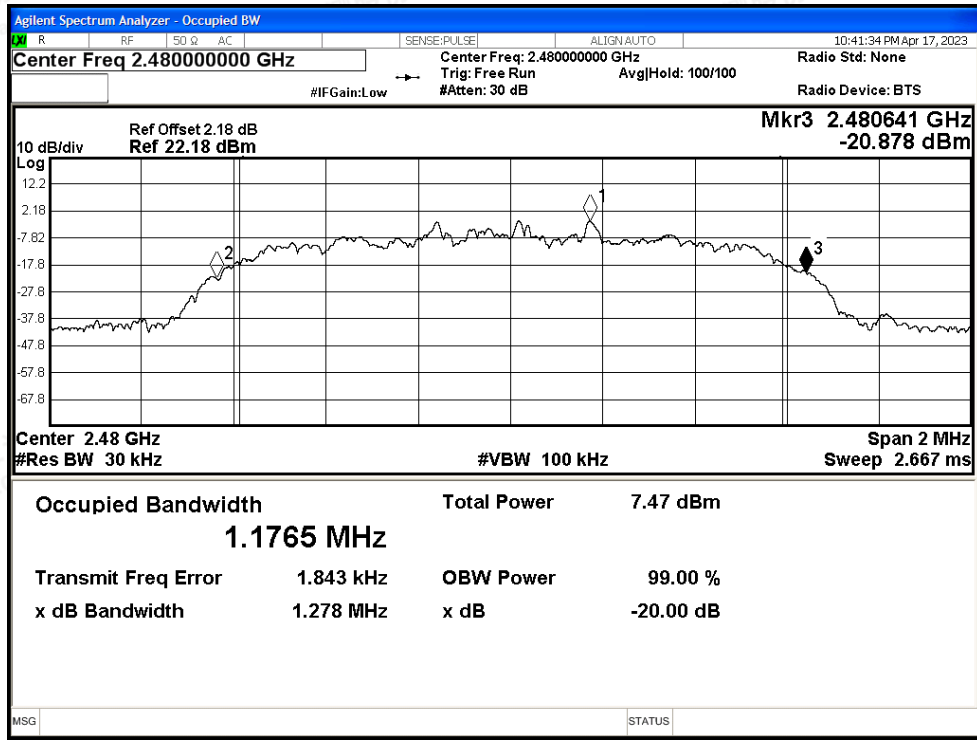




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

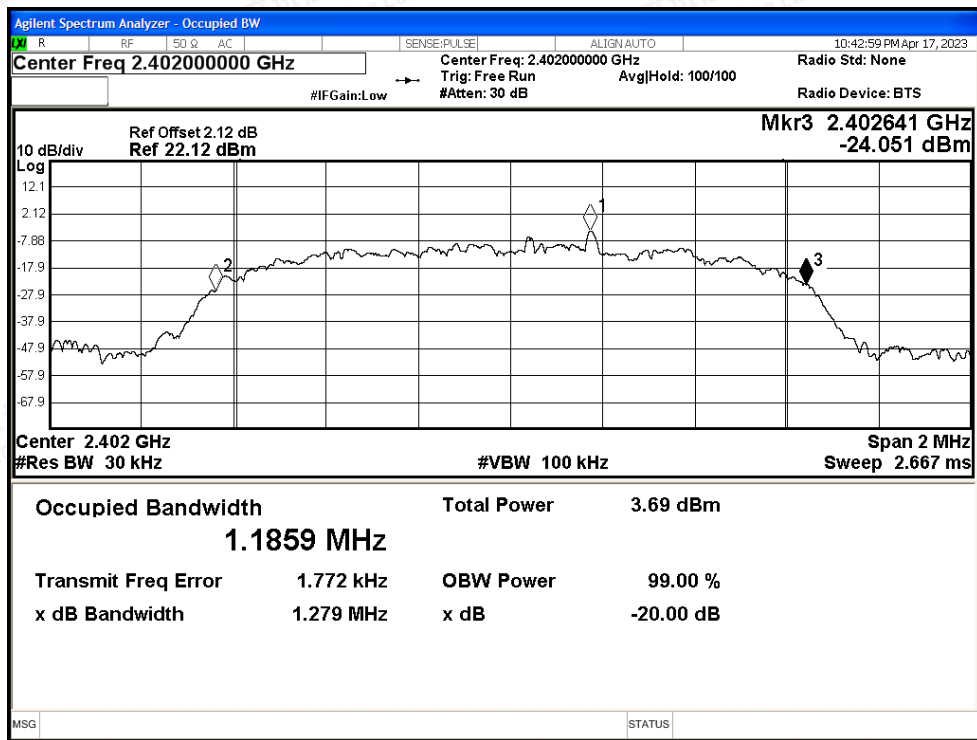


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

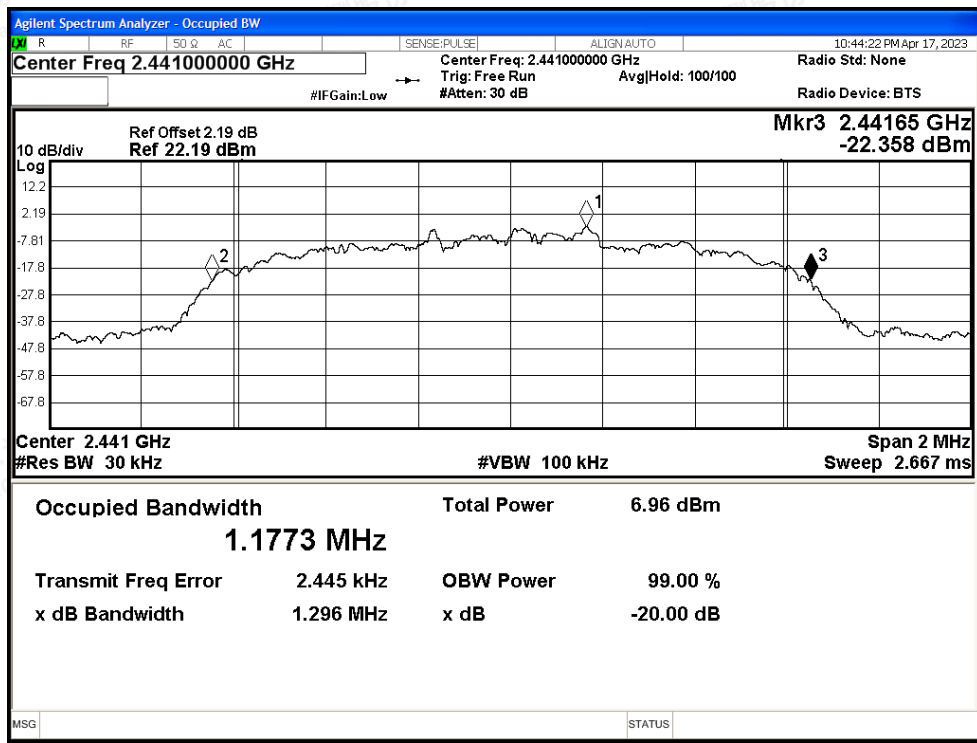




-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1

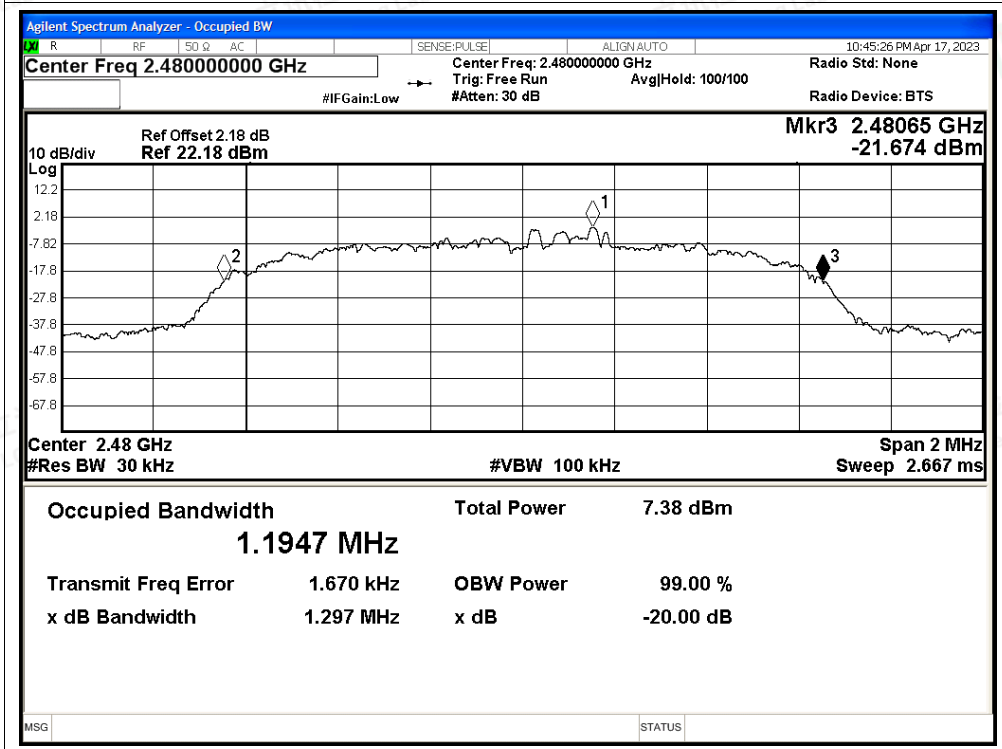


-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1





-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	-0.04	21	Pass
NVNT	1-DH5	2441	Ant1	-0.11	21	Pass
NVNT	1-DH5	2480	Ant1	0.28	21	Pass
NVNT	2-DH5	2402	Ant1	-0.47	21	Pass
NVNT	2-DH5	2441	Ant1	1.65	21	Pass
NVNT	2-DH5	2480	Ant1	2.80	21	Pass
NVNT	3-DH5	2402	Ant1	-0.49	21	Pass
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NVNT	3-DH5	2480	Ant1	2.74	21	Pass

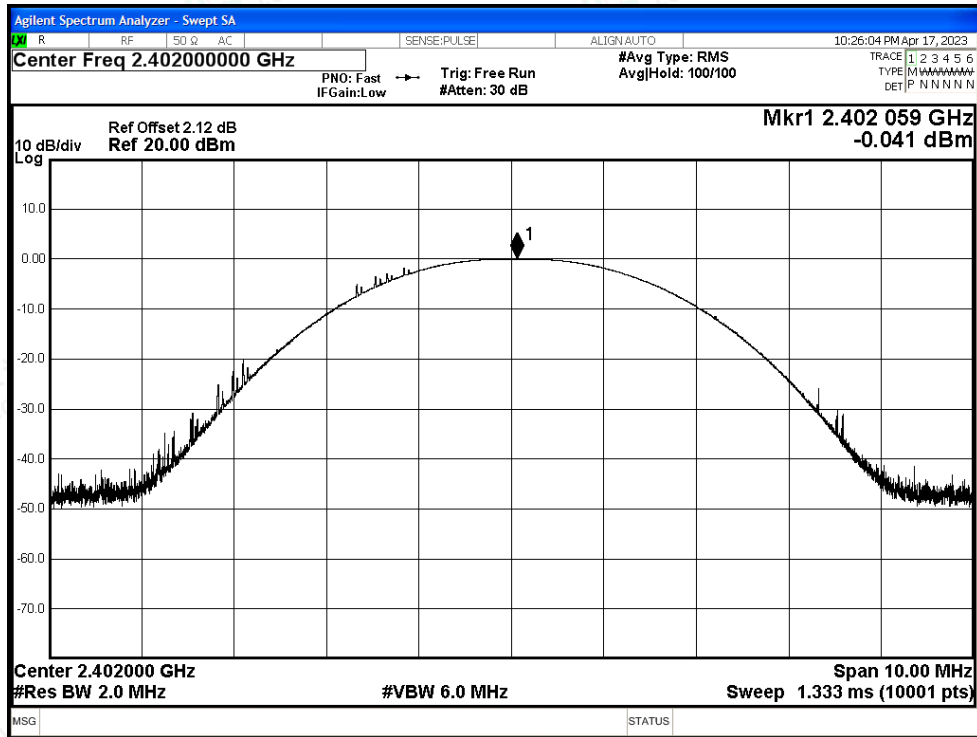


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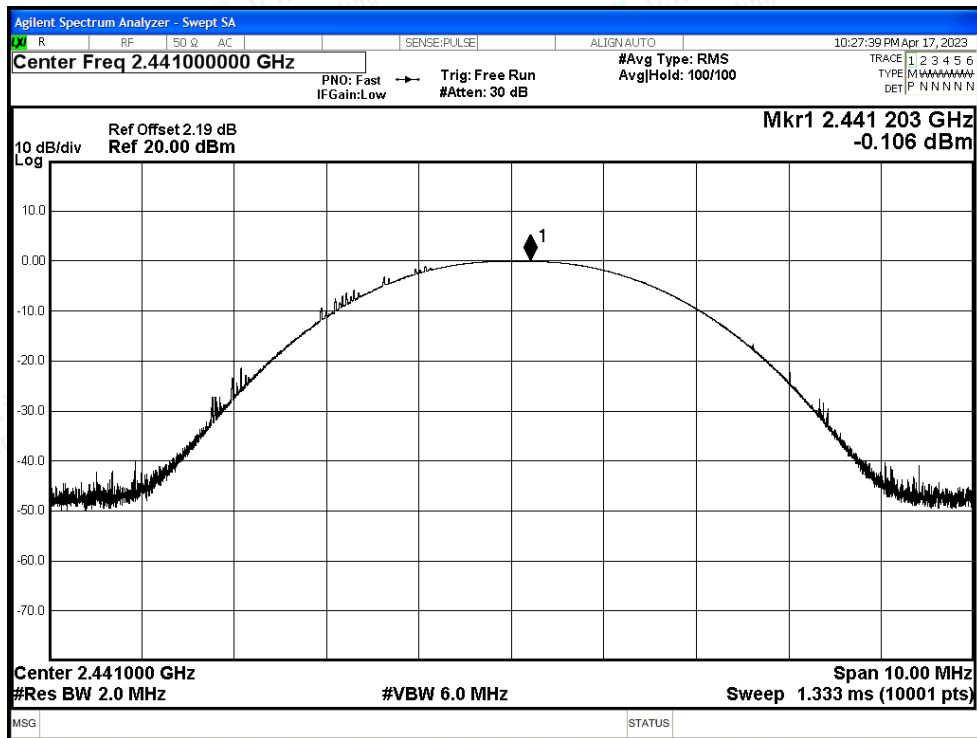


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

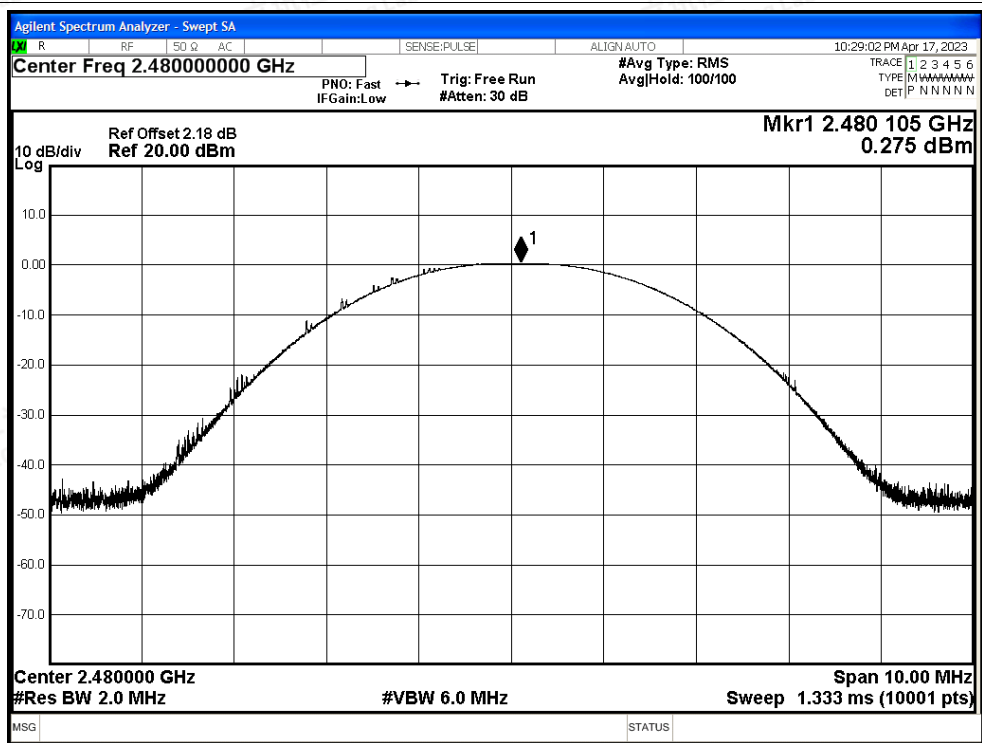


Power NVNT 1-DH5 2441MHz Ant1

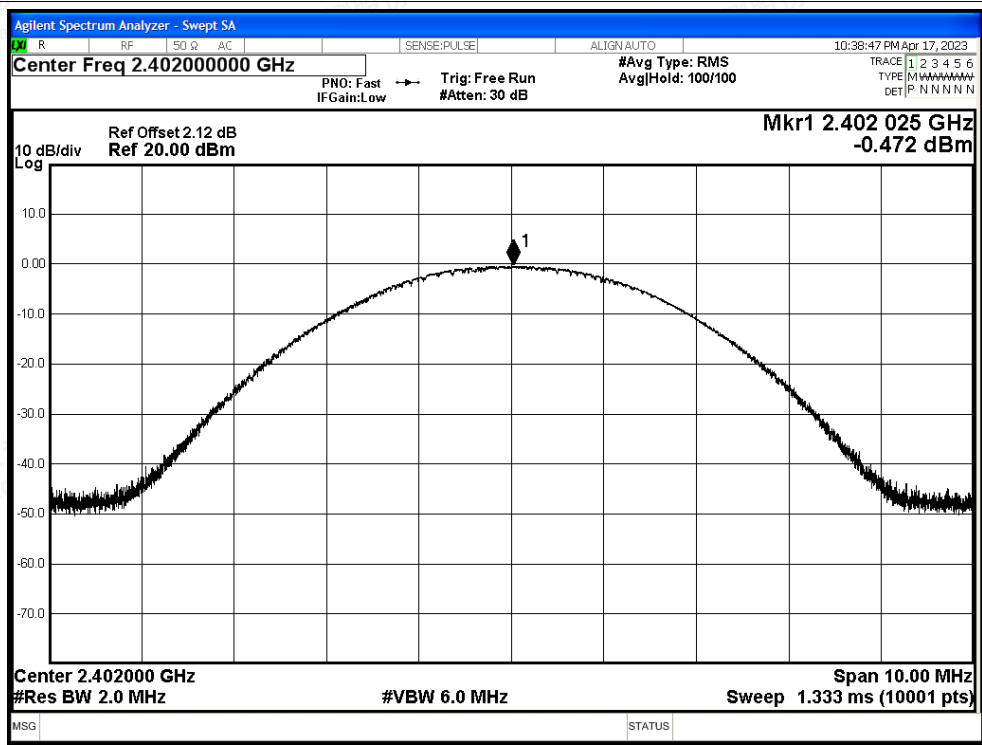




Power NVNT 1-DH5 2480MHz Ant1

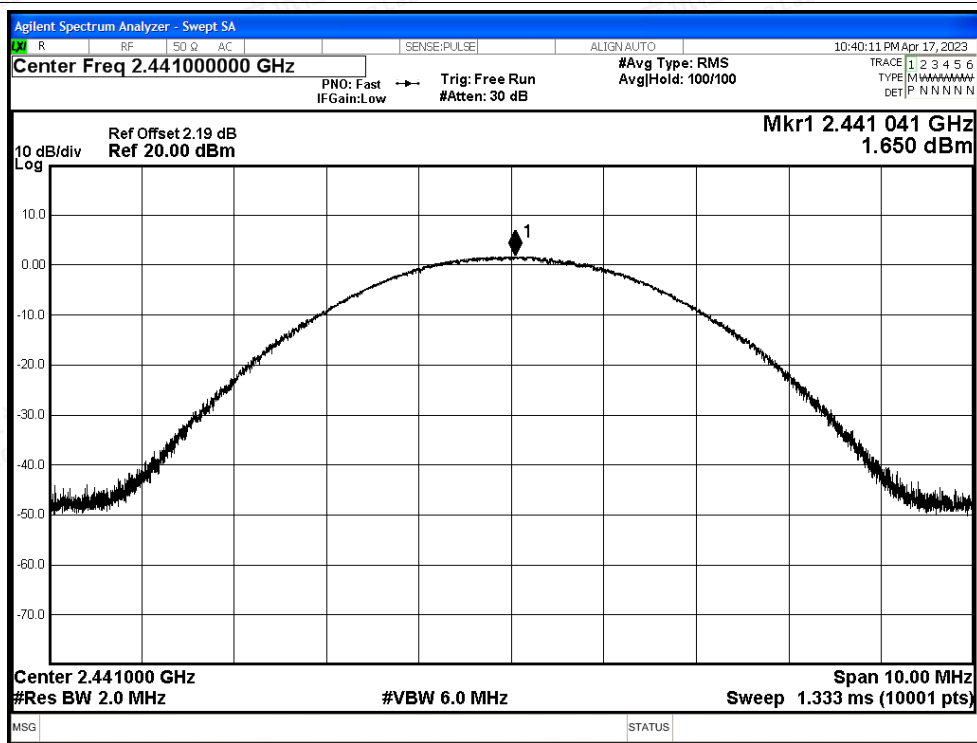


Power NVNT 2-DH5 2402MHz Ant1

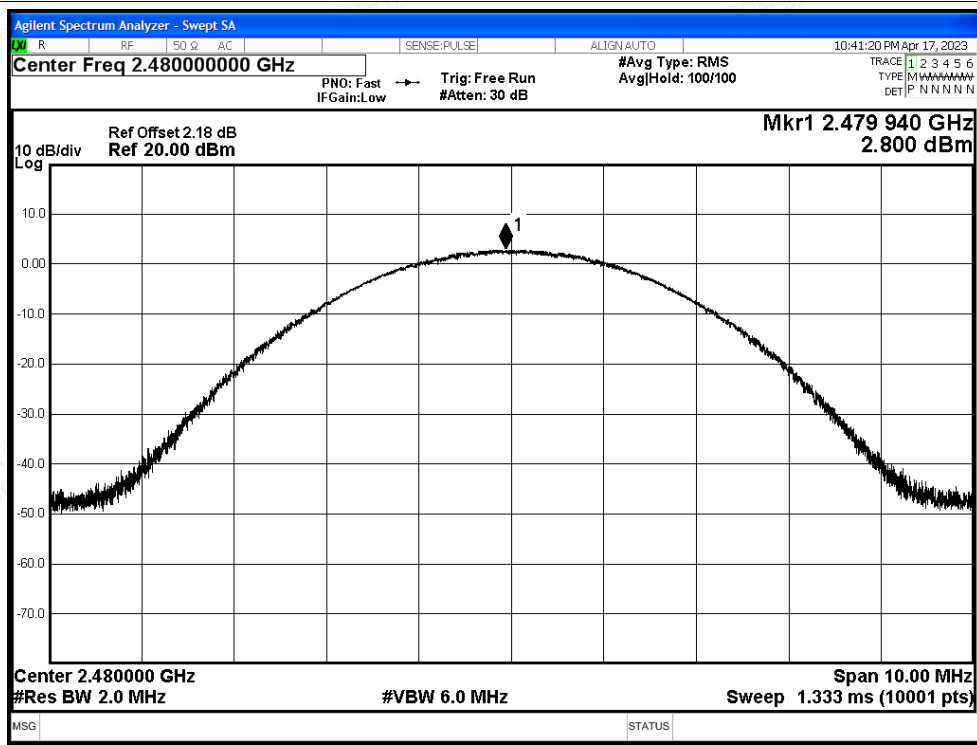




Power NVNT 2-DH5 2441MHz Ant1

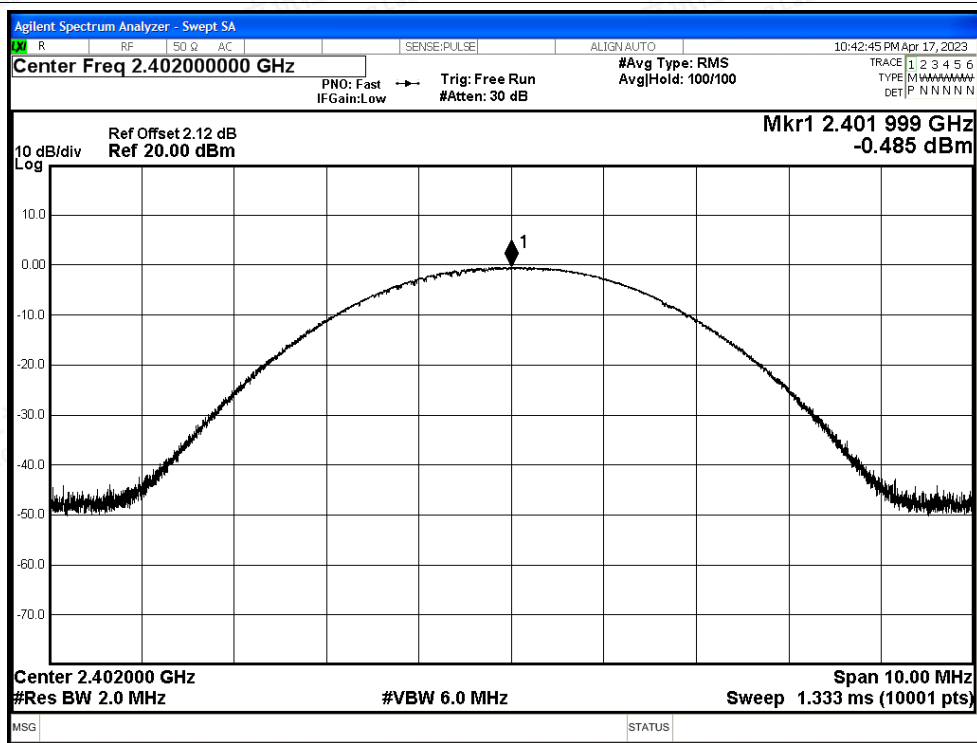


Power NVNT 2-DH5 2480MHz Ant1

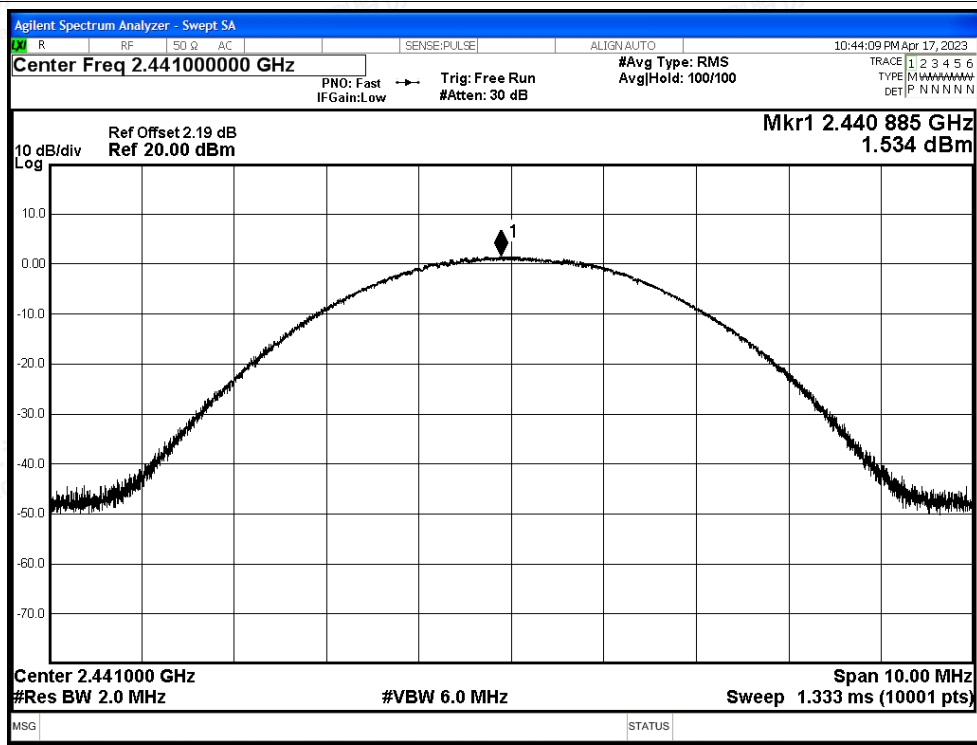




Power NVNT 3-DH5 2402MHz Ant1

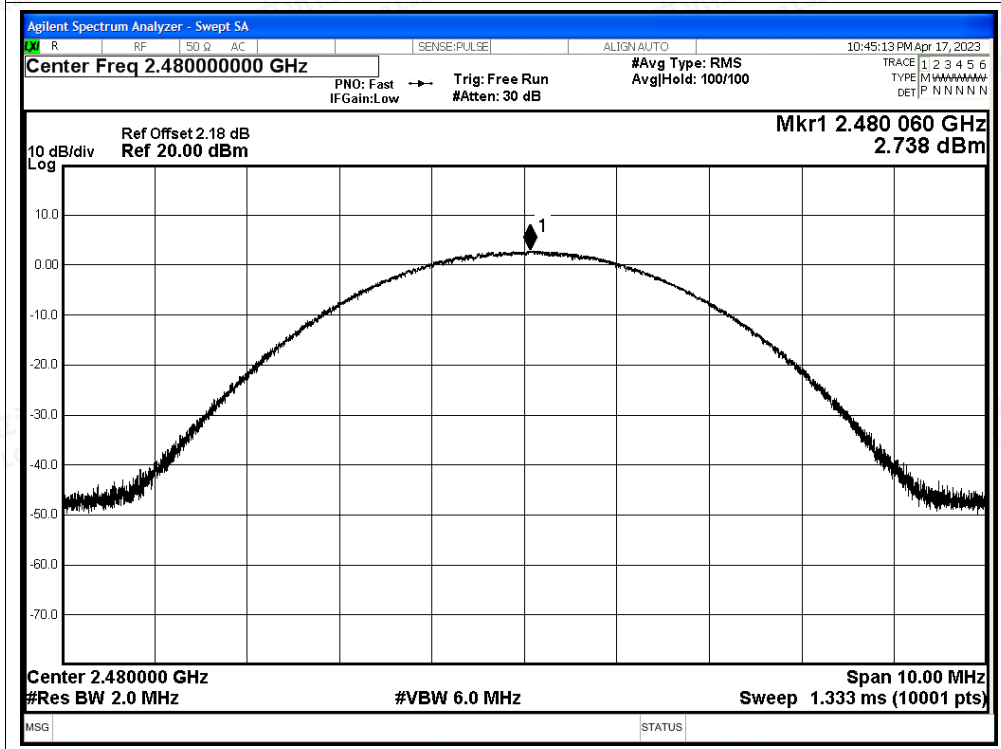


Power NVNT 3-DH5 2441MHz Ant1





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	2401.972	2403.17	1.198	0.660	Pass
NVNT	2-DH5	Ant1	2402.03	2402.956	0.926	0.857	Pass
NVNT	3-DH5	Ant1	2402.162	2403.022	0.860	0.865	Pass

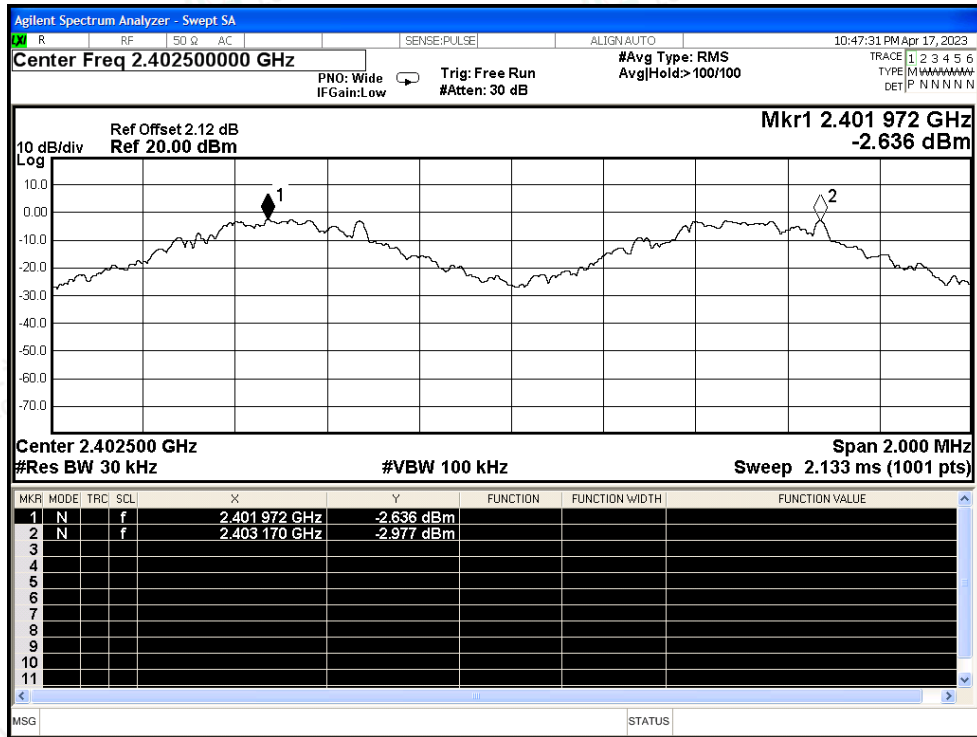


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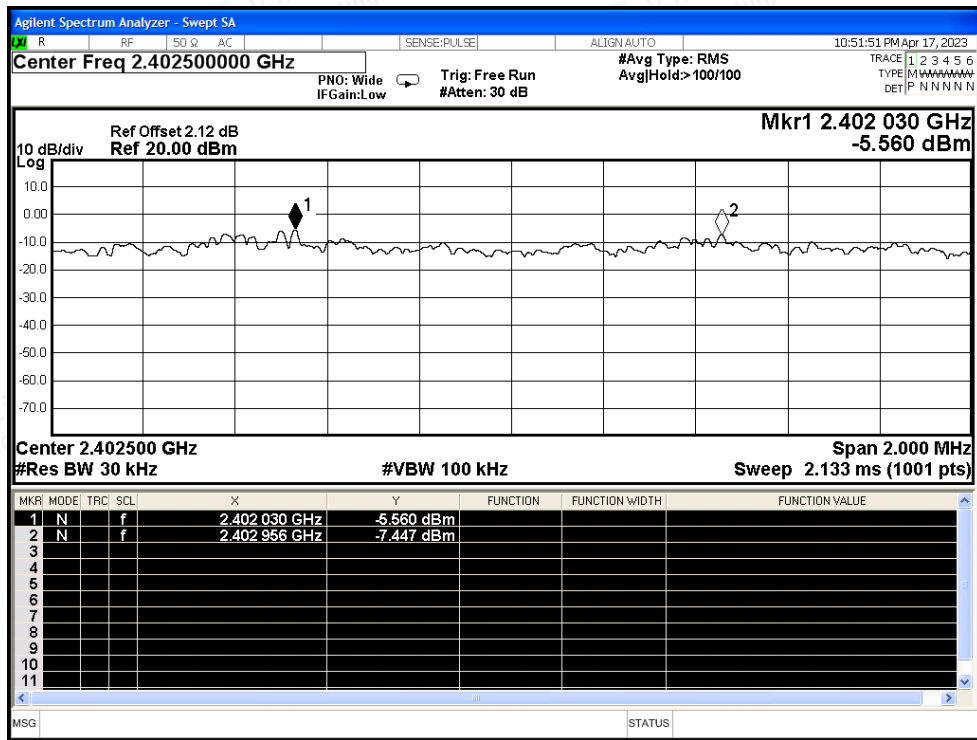


Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1

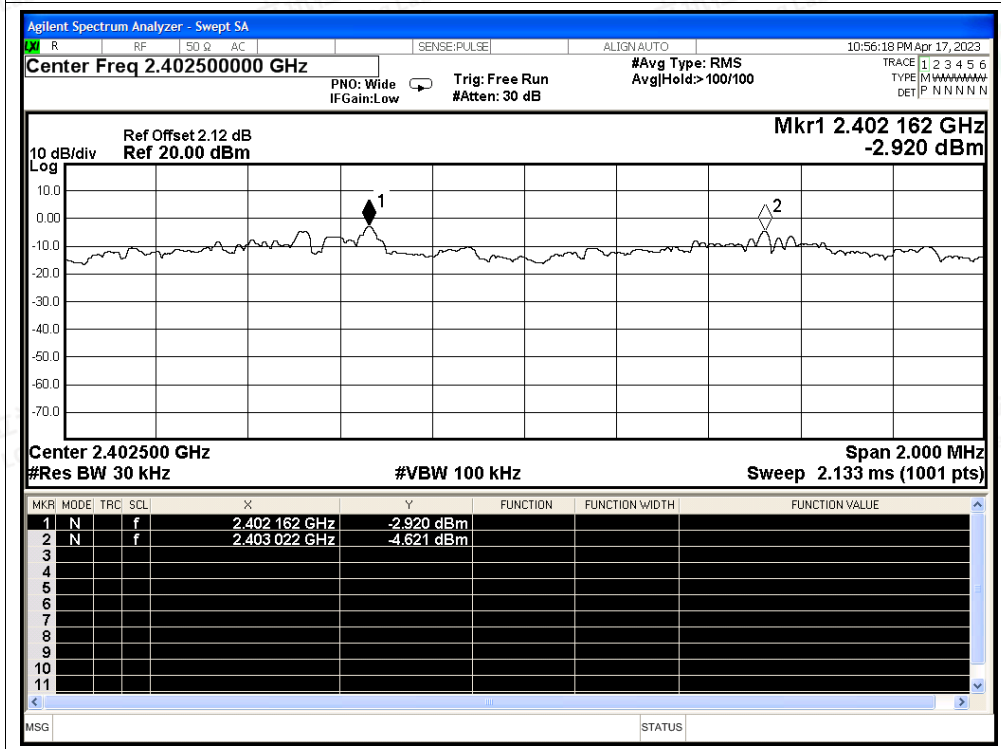


CFS NVNT 2-DH5 2402MHz Ant1





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	311.256	108	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	294.27	102	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.887	311.796	108	31600	400	Pass

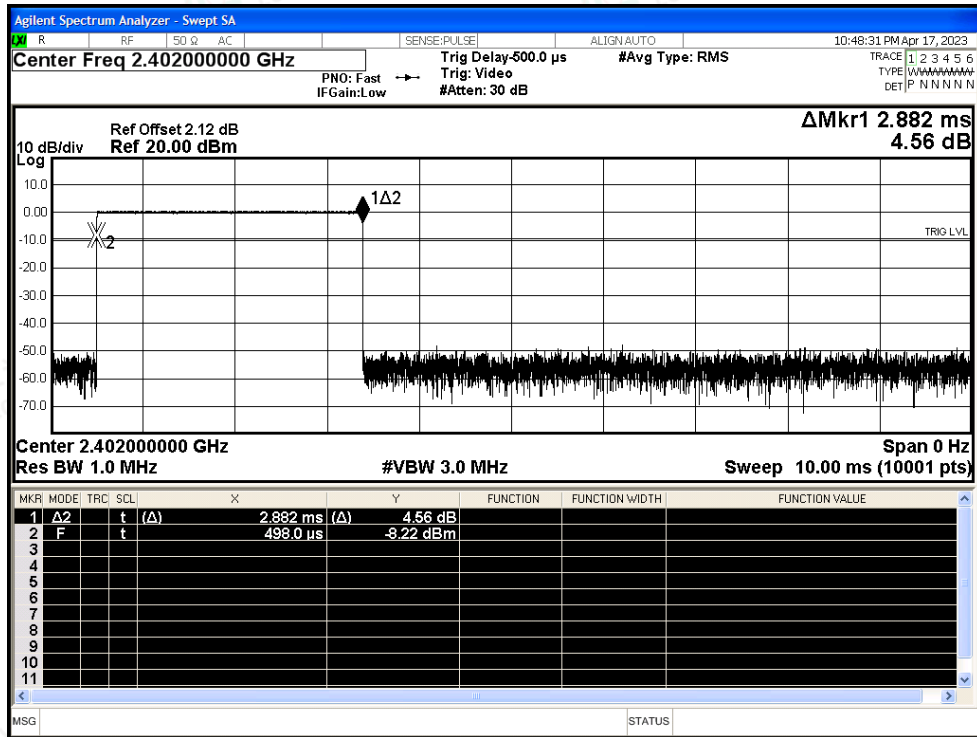


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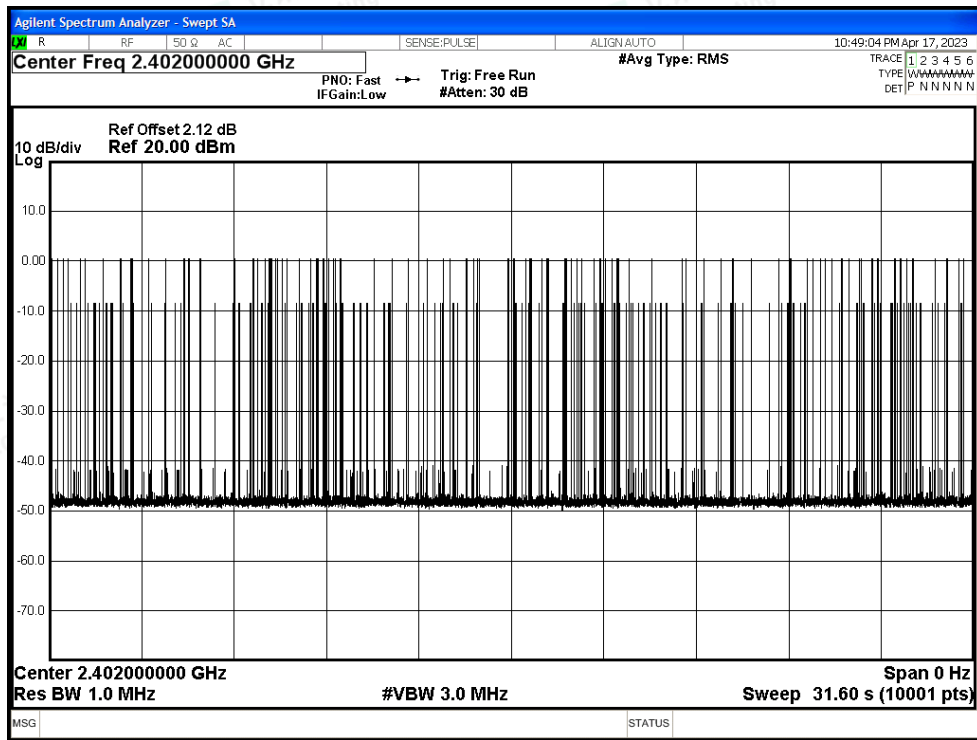


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

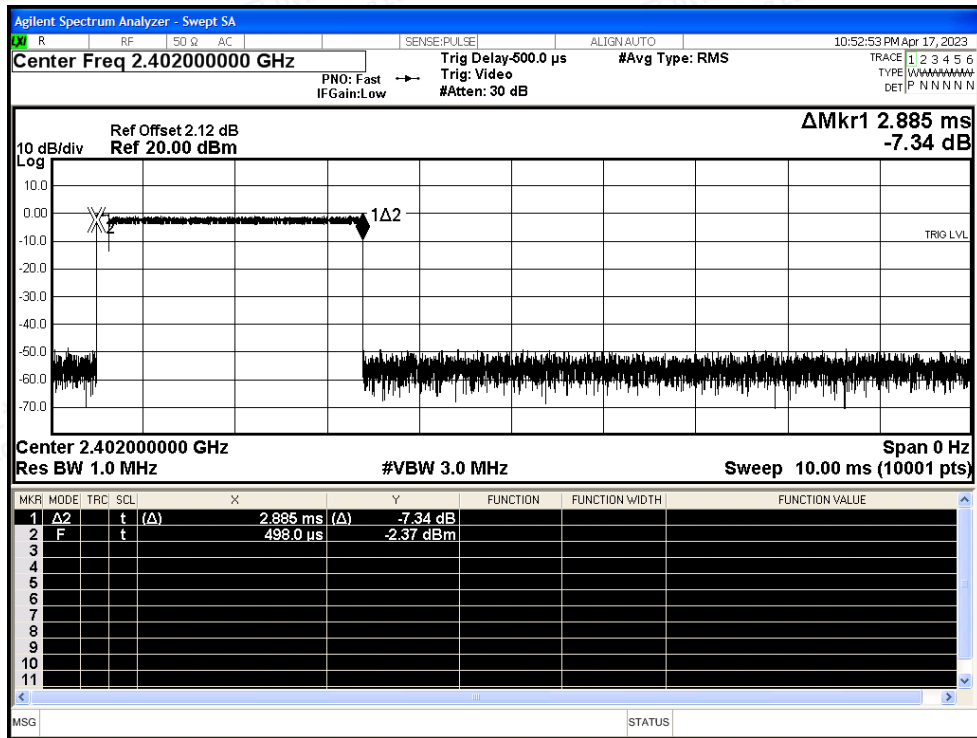


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

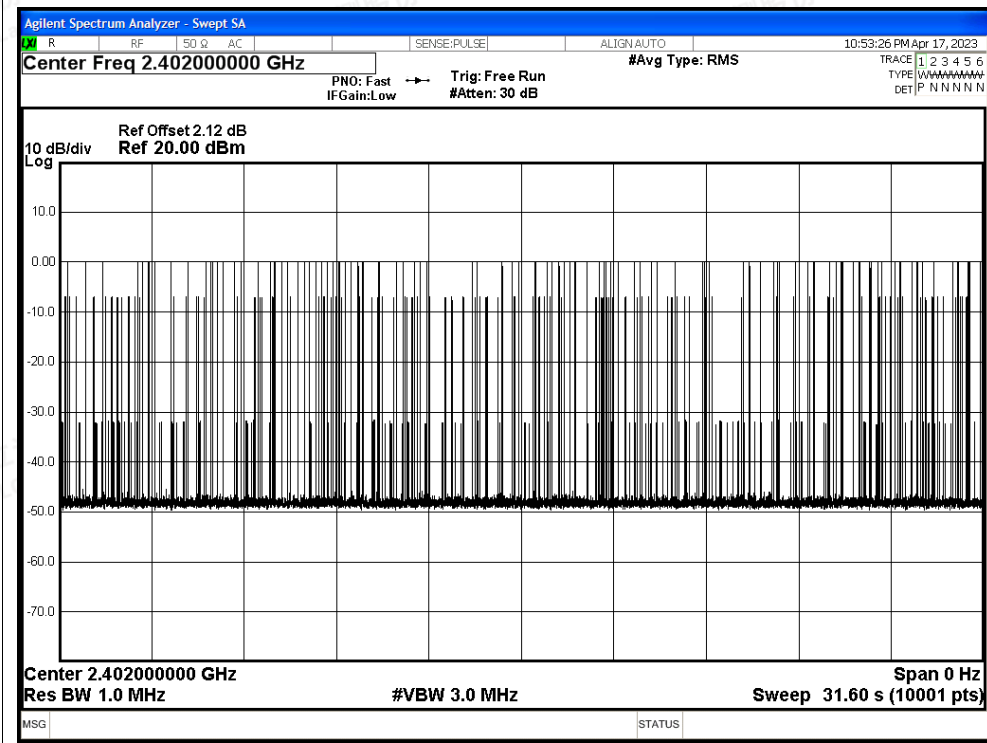




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

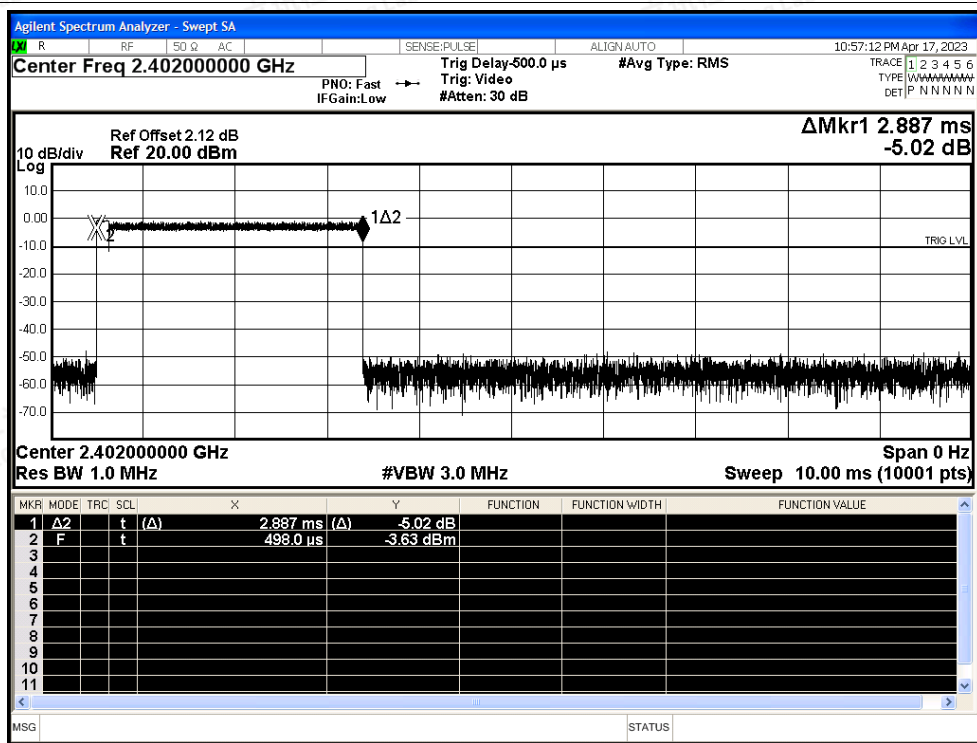


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

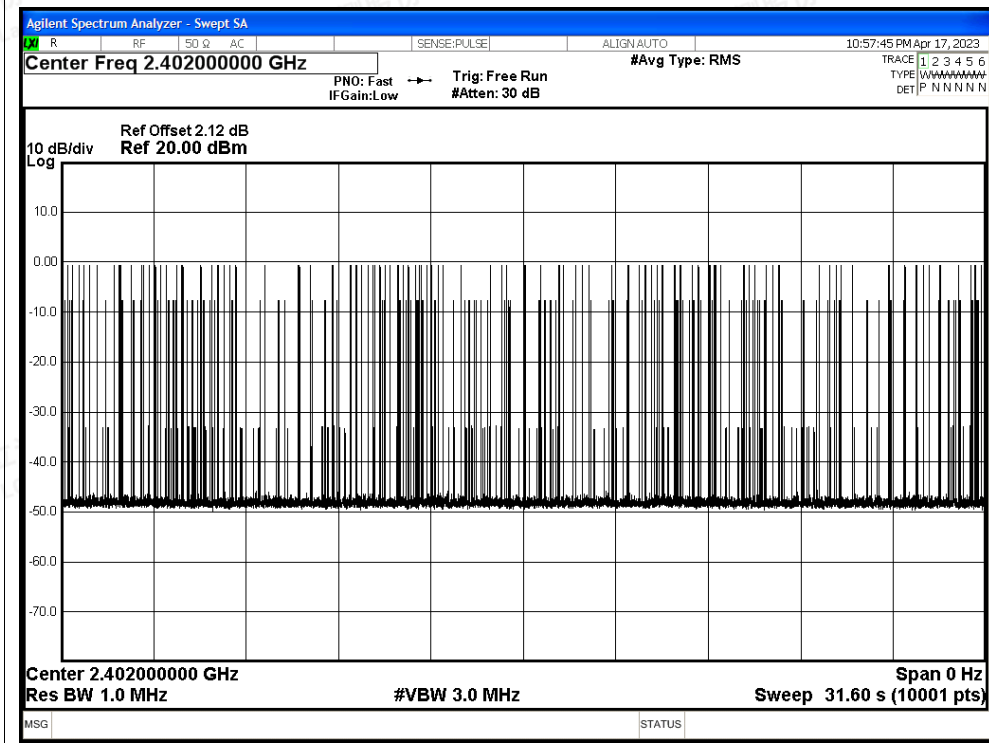




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



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

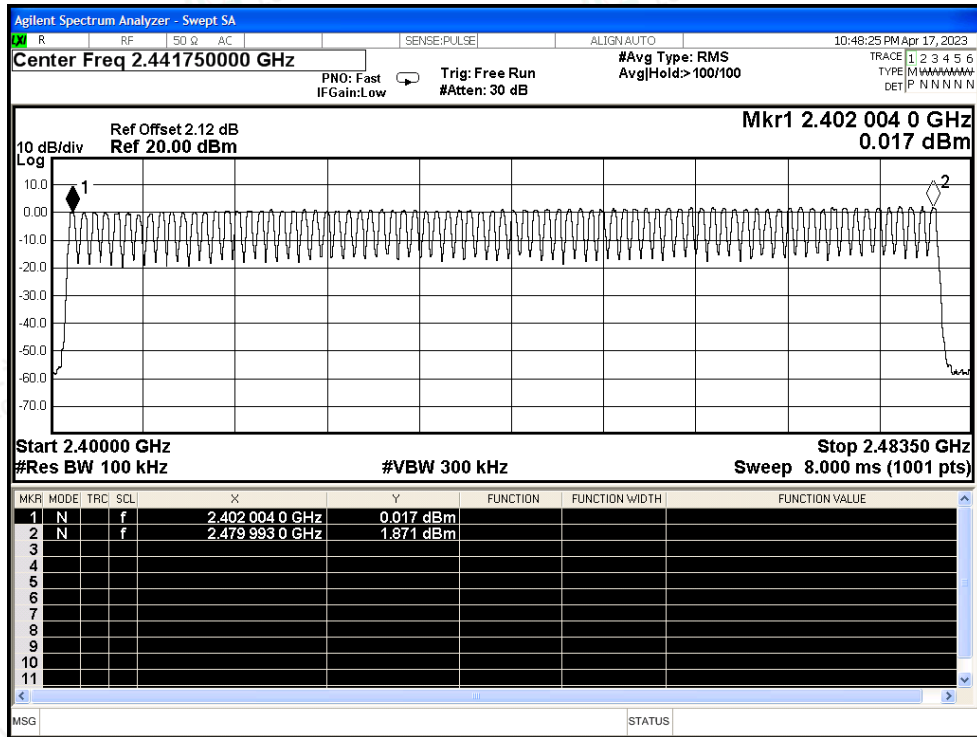


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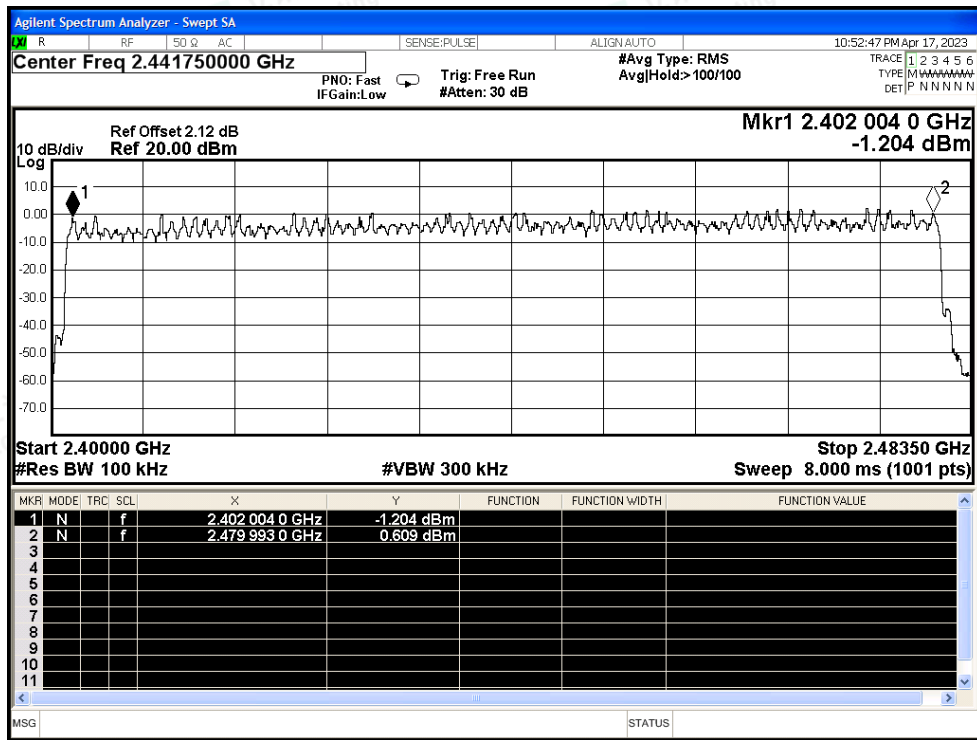


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1

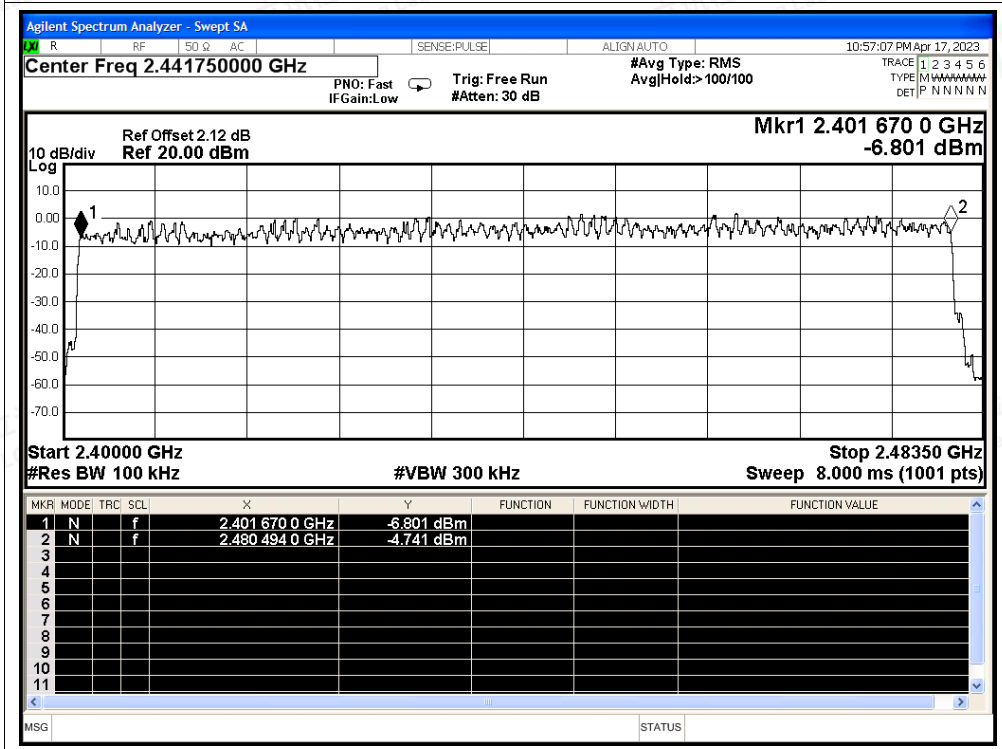


Hopping No. NVNT 2-DH5 2402MHz Ant1





Hopping No. NVNT 3-DH5 2402MHz Ant1





A.6 Band Edge

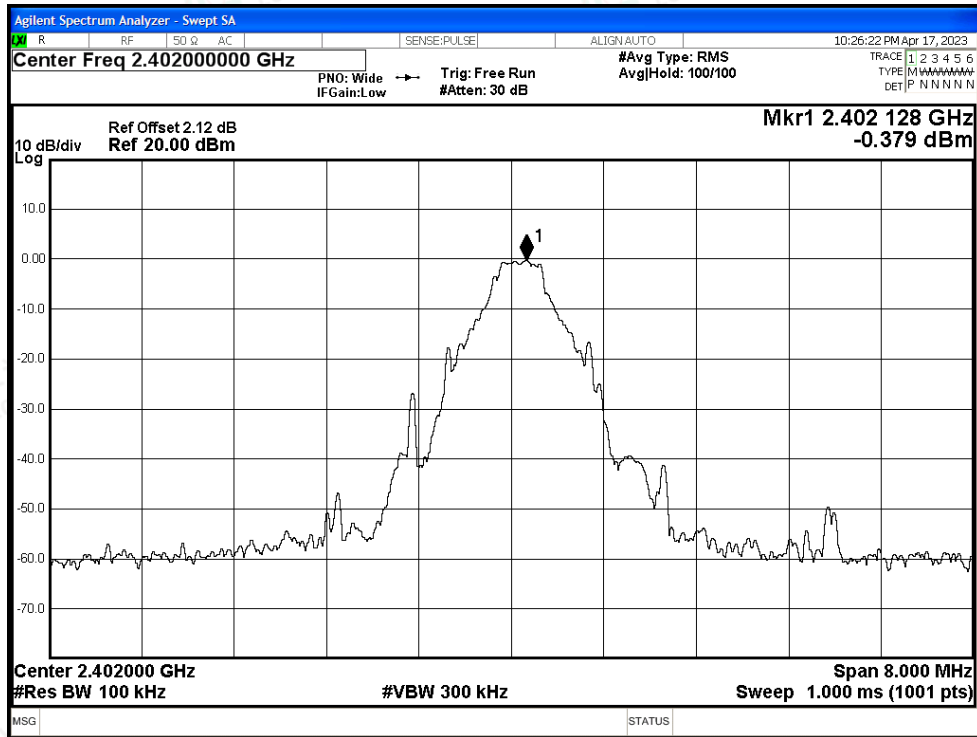
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-53.44	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-56.16	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-54.99	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-58.9	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-54.8	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-59.2	-20	Pass



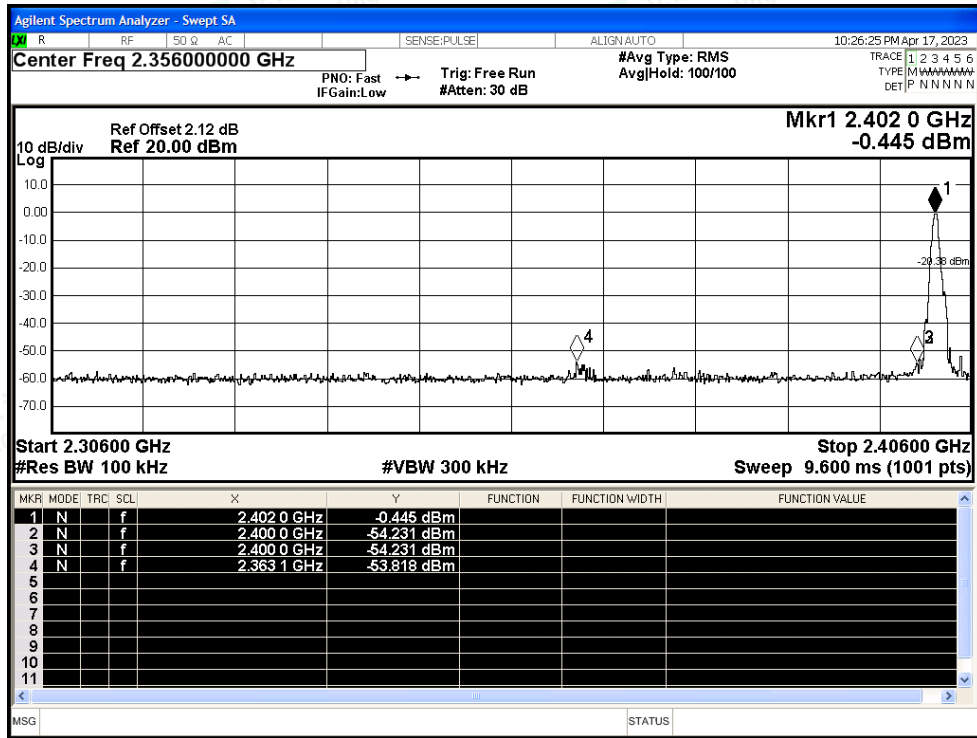


Test Graphs

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

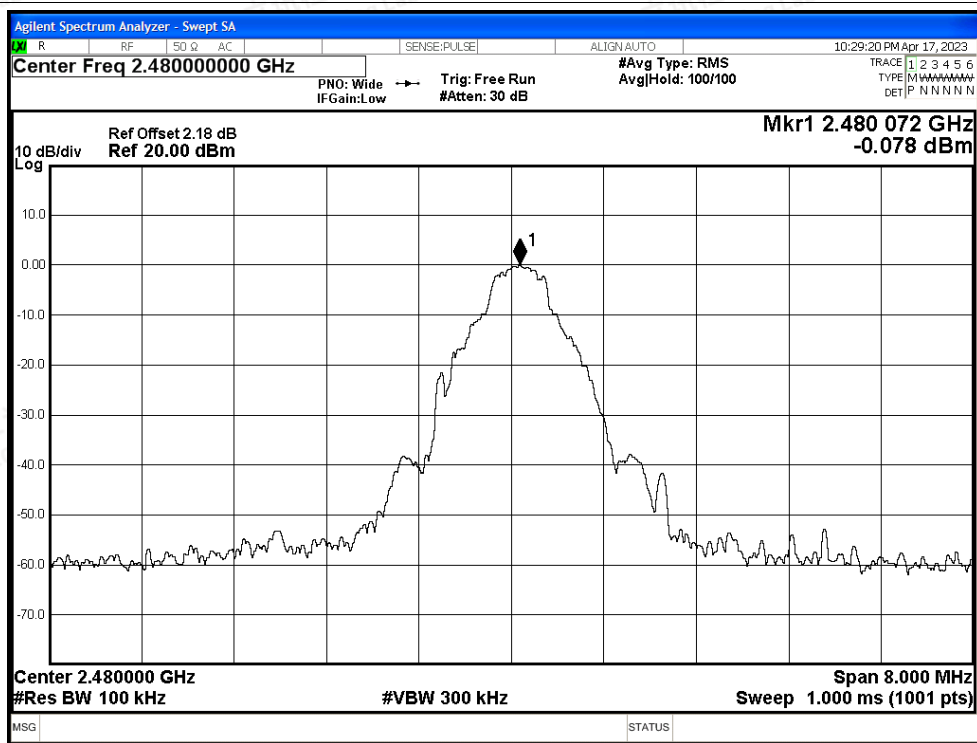


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

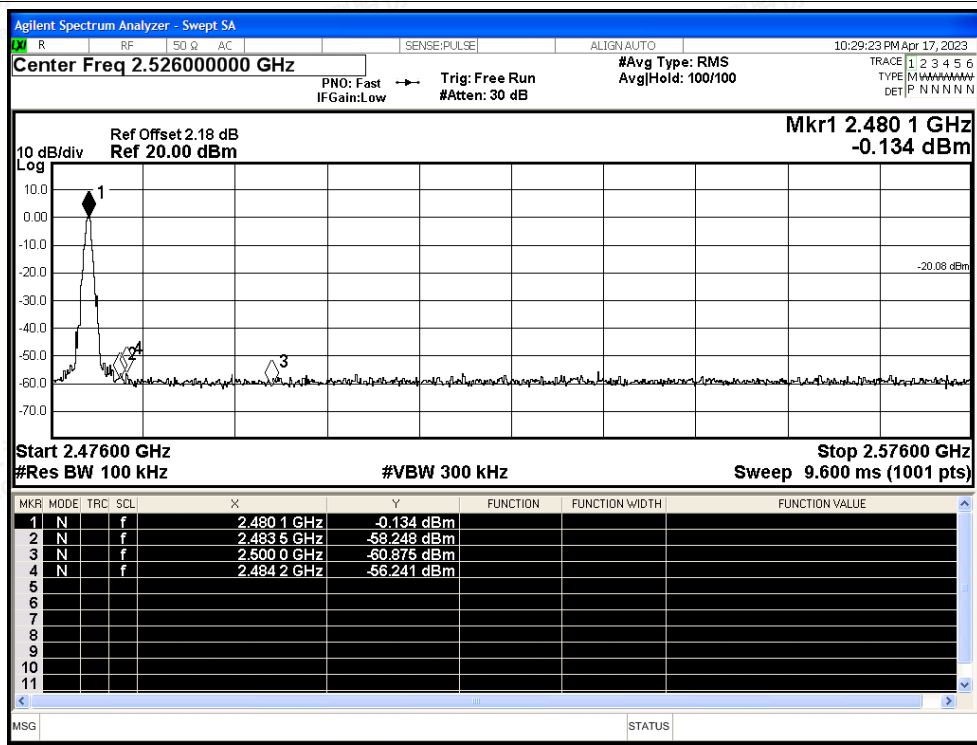




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

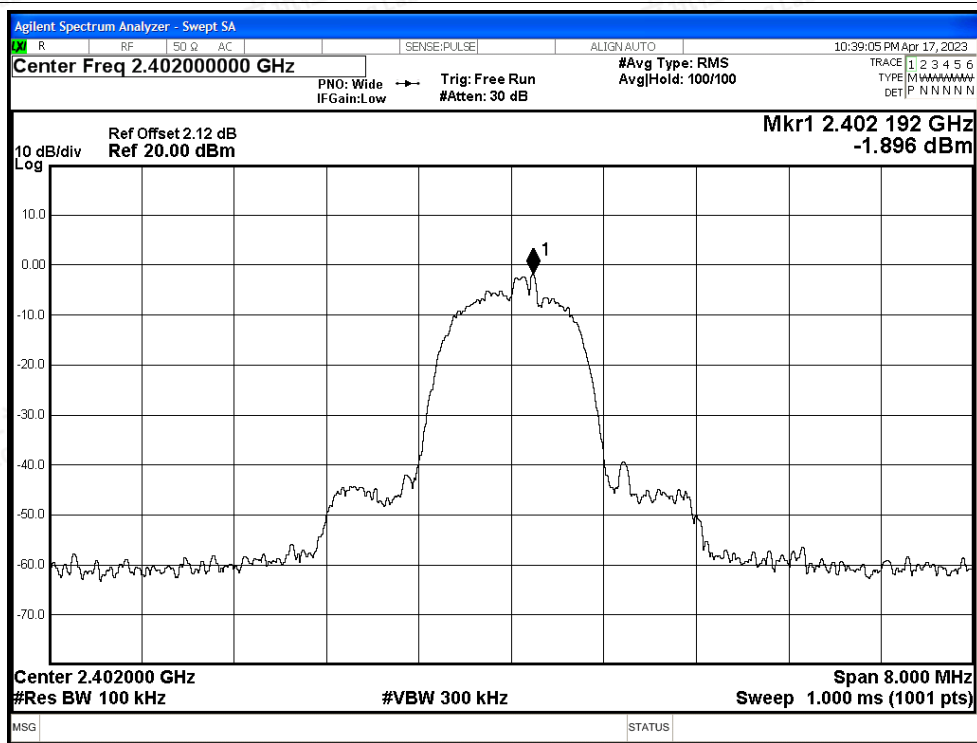


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

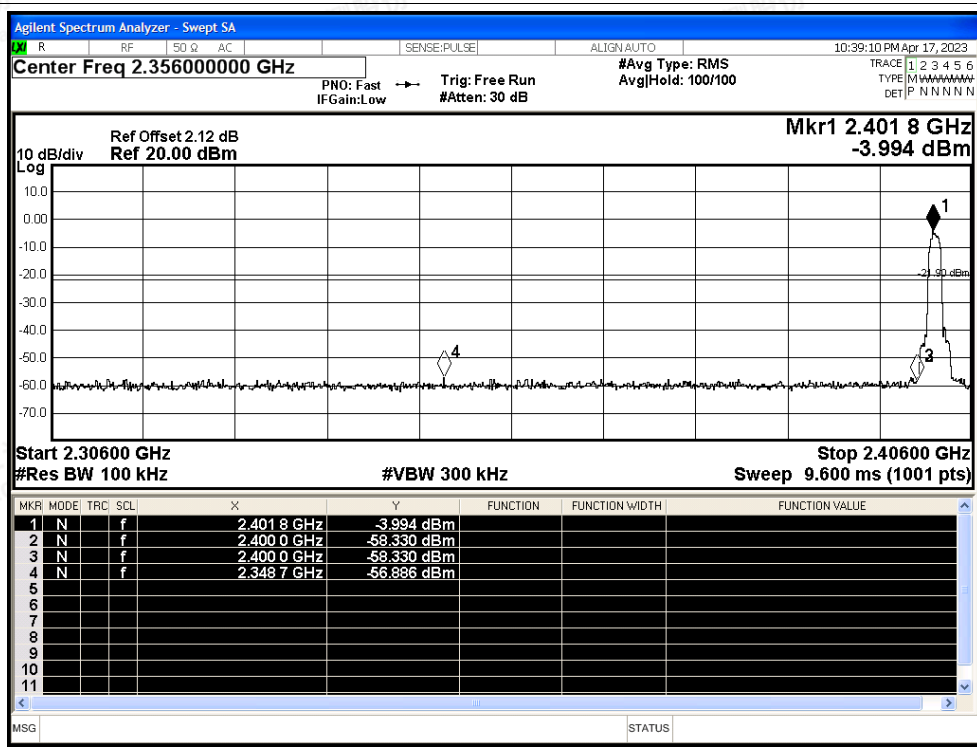




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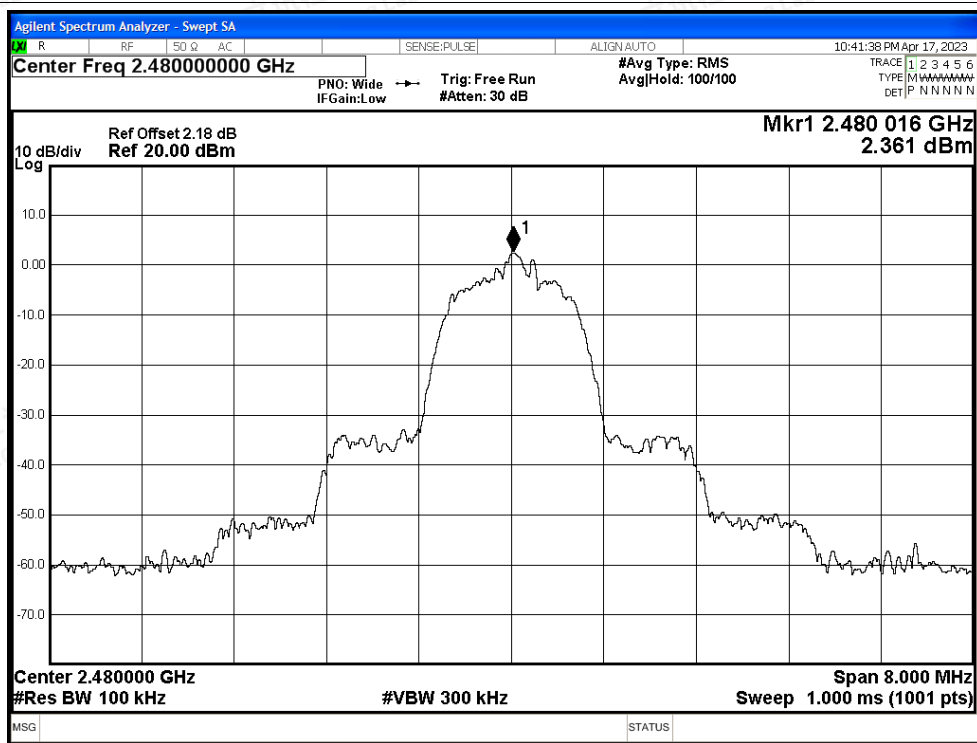


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

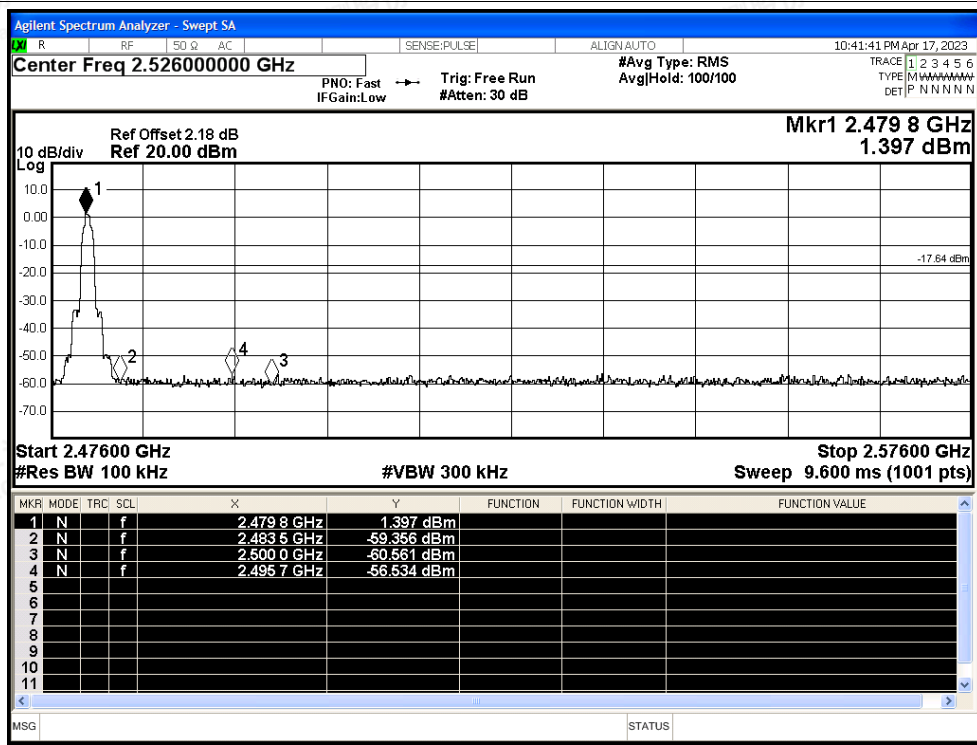




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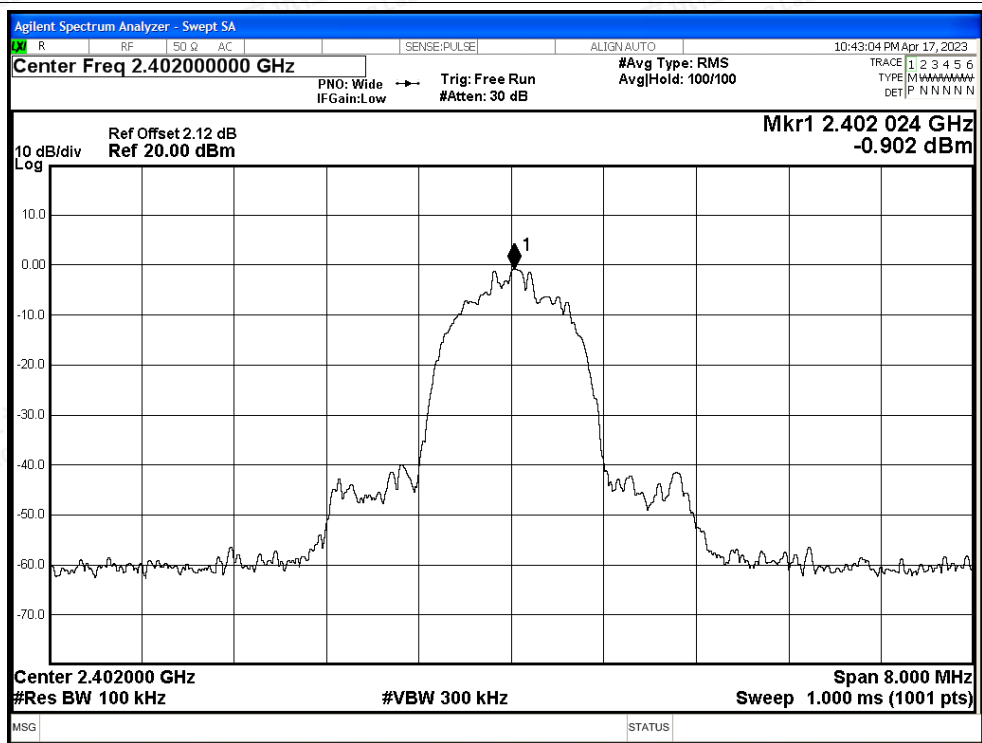


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

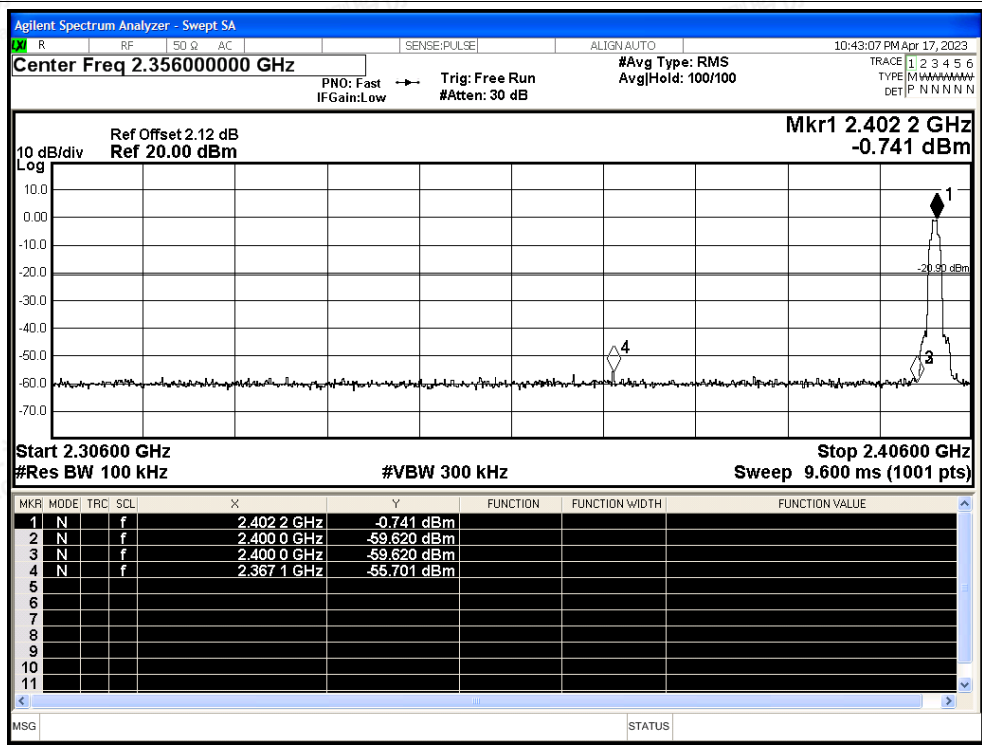




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

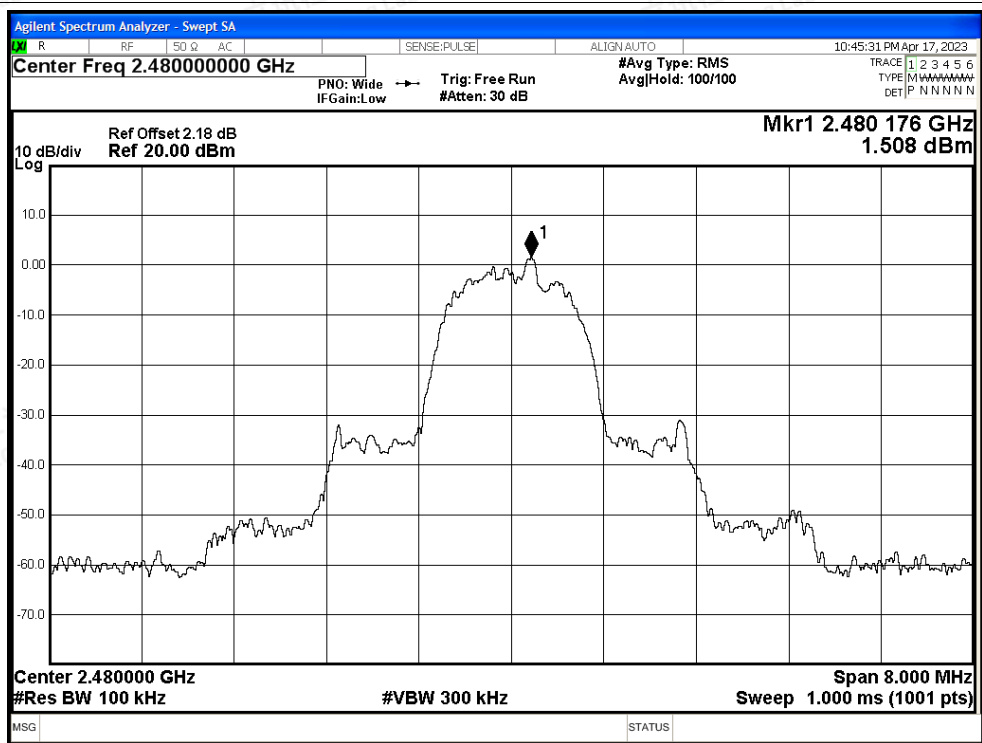


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission

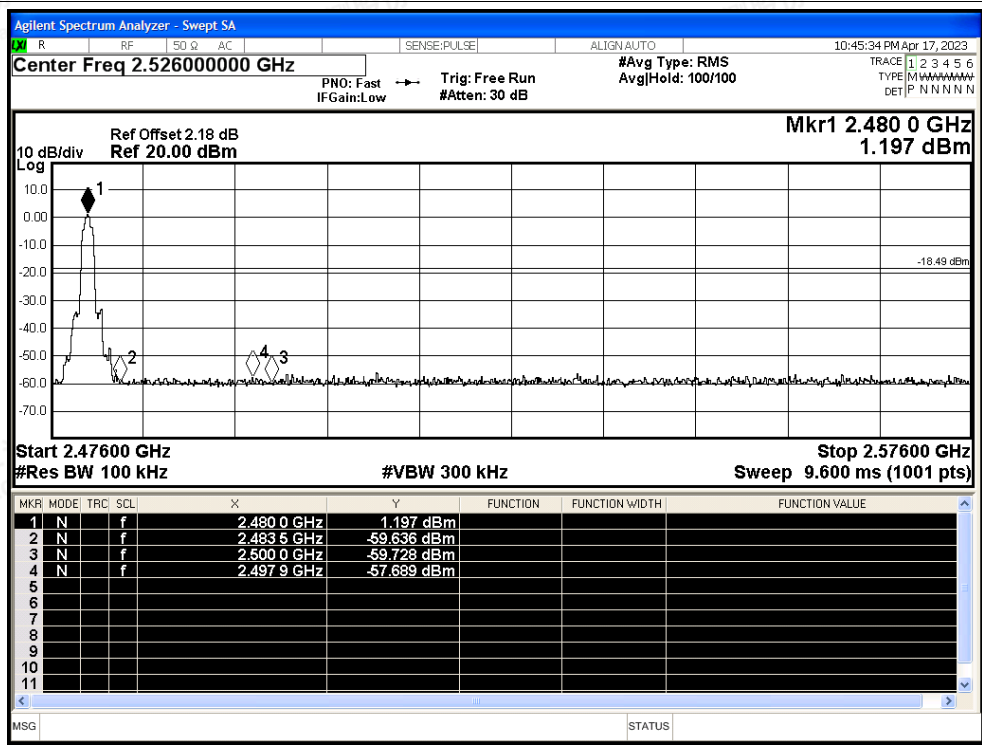




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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	-56.16	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-58.82	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-55.22	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-58.34	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-51.22	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-56.99	-20	Pass

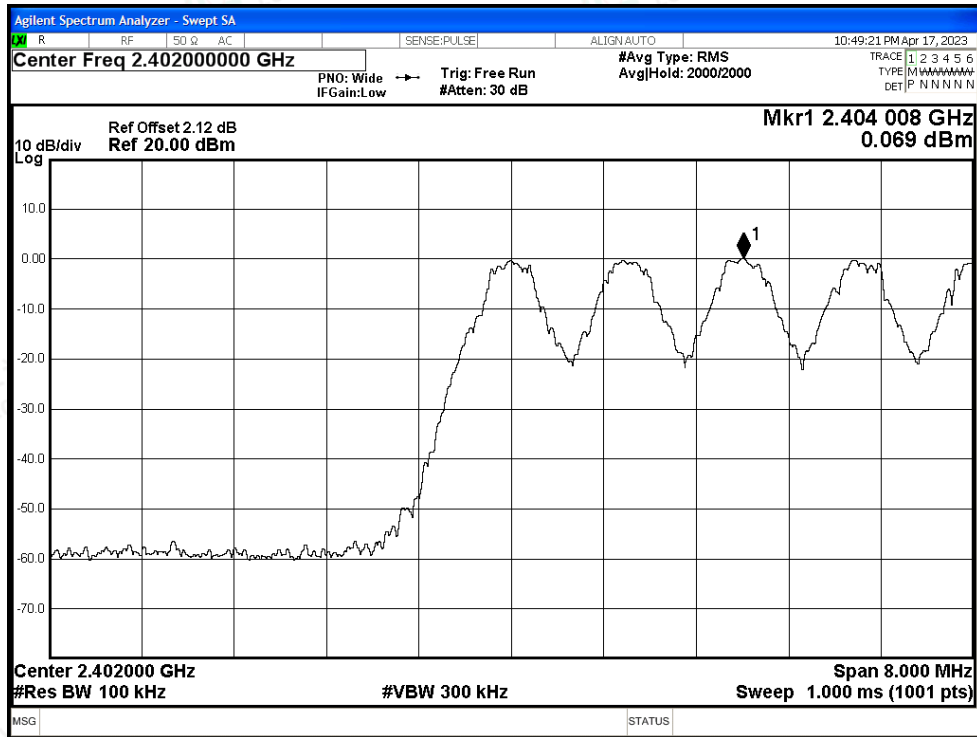


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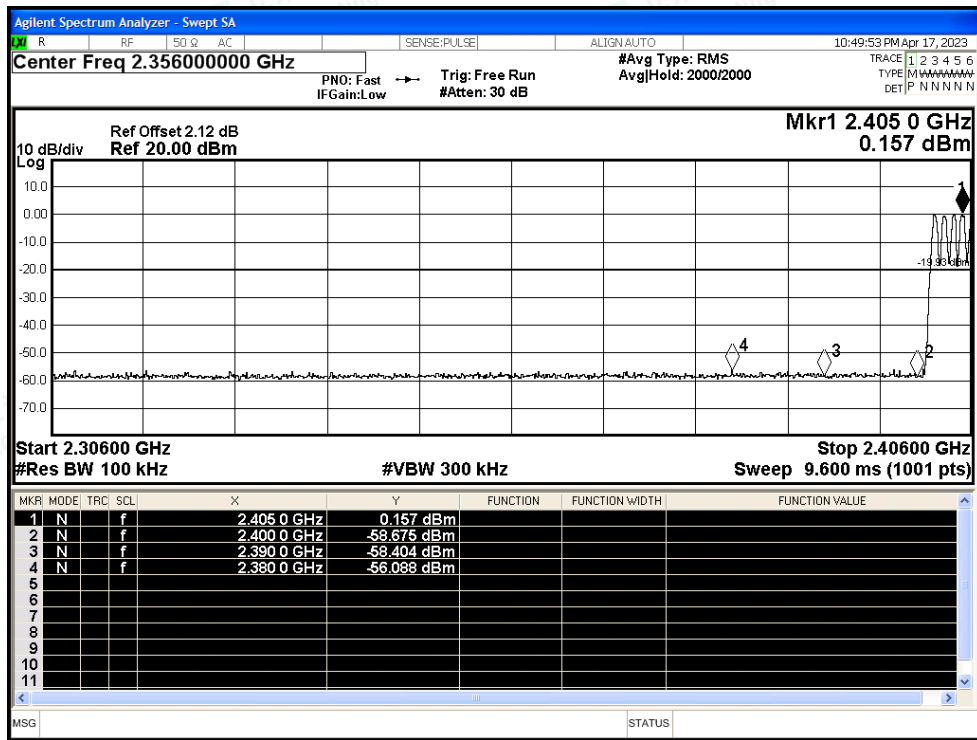


Test Graphs

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

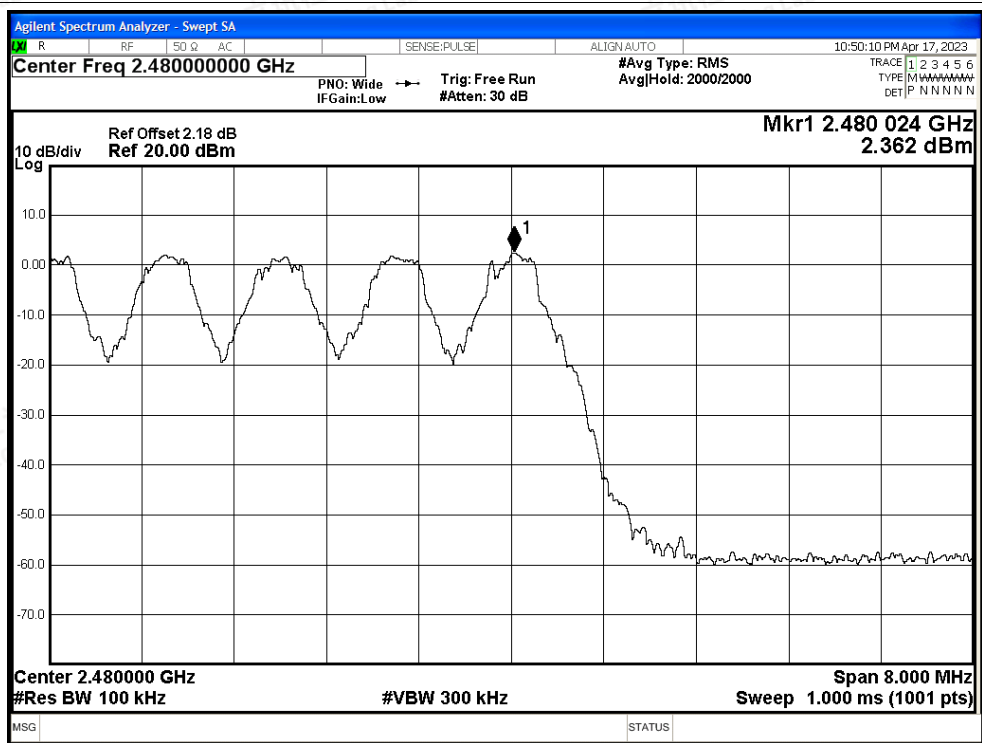


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

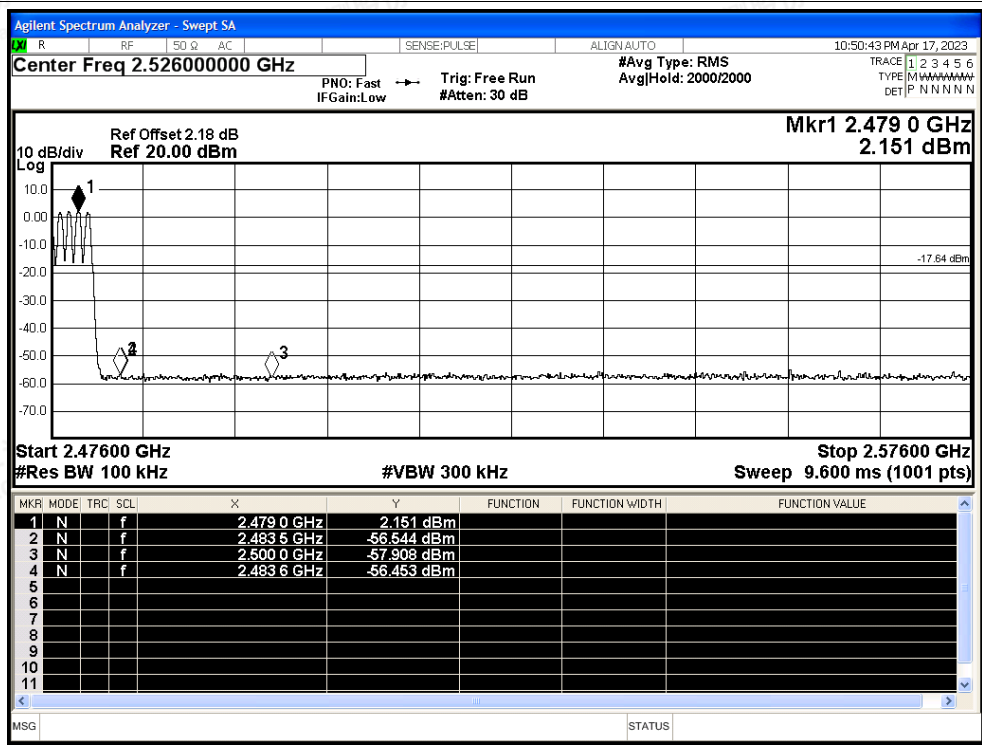




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref

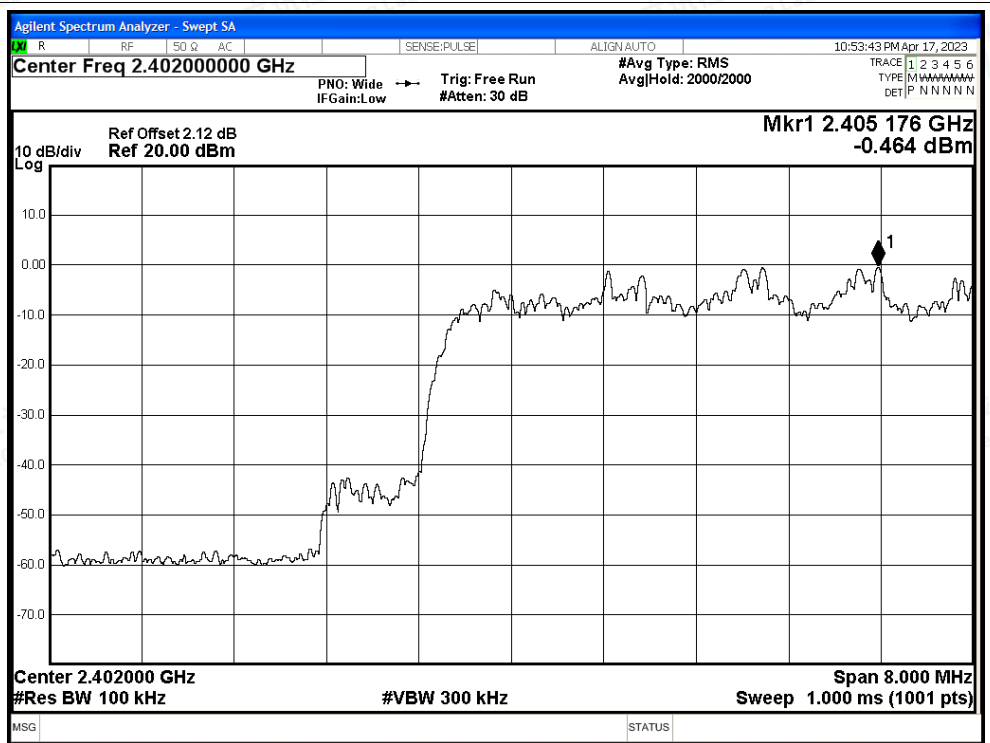


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission

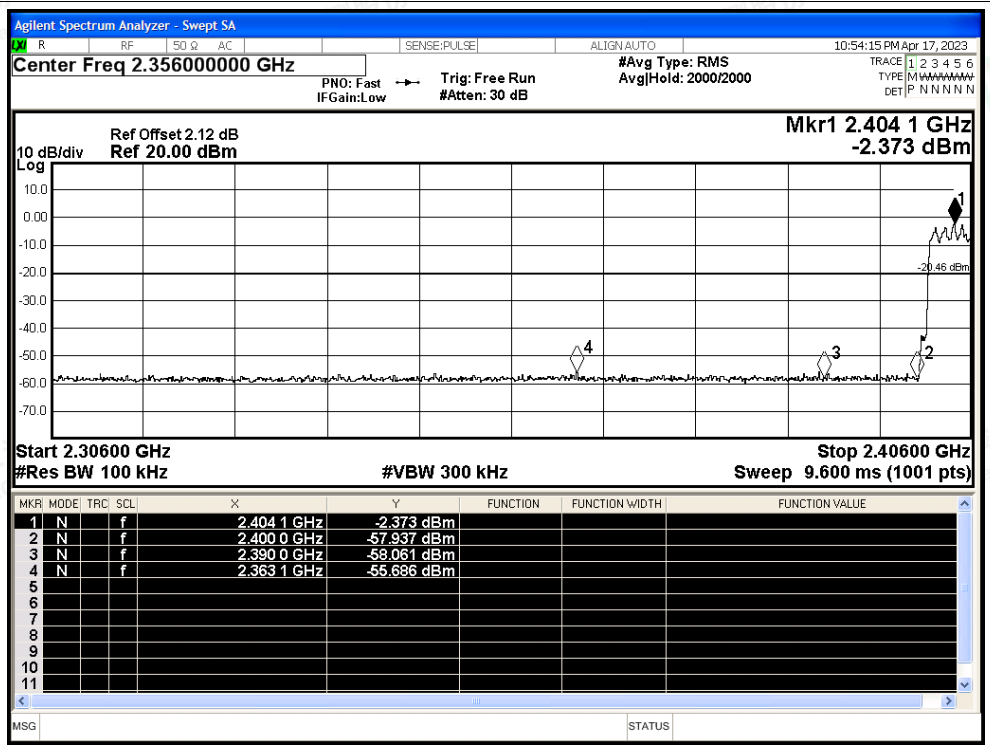




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



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

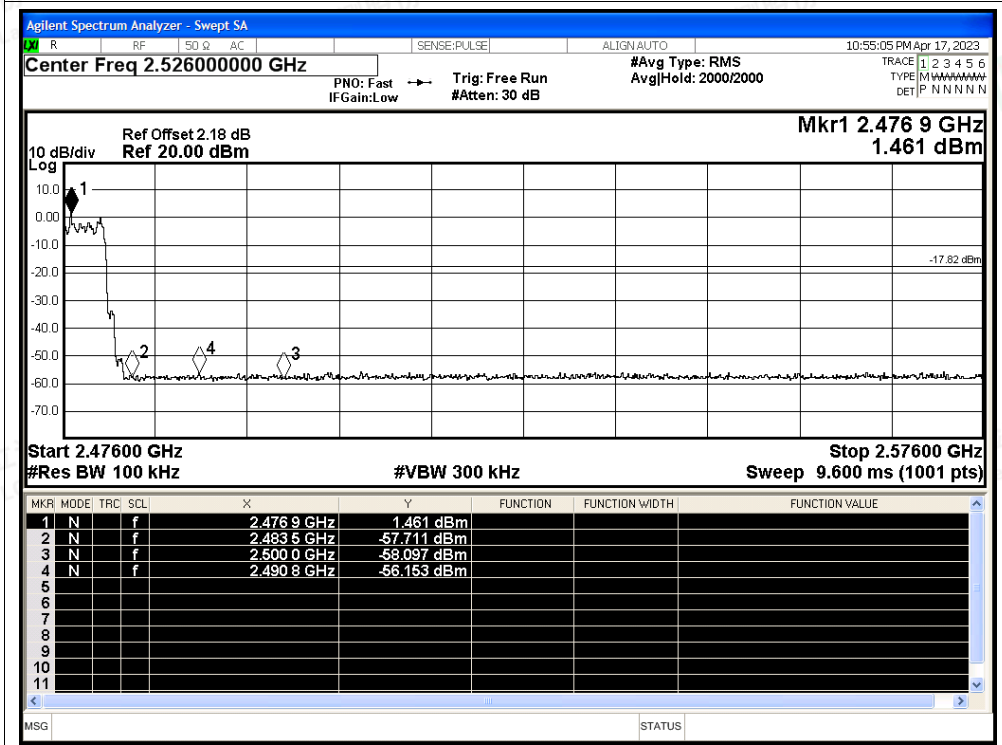




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref

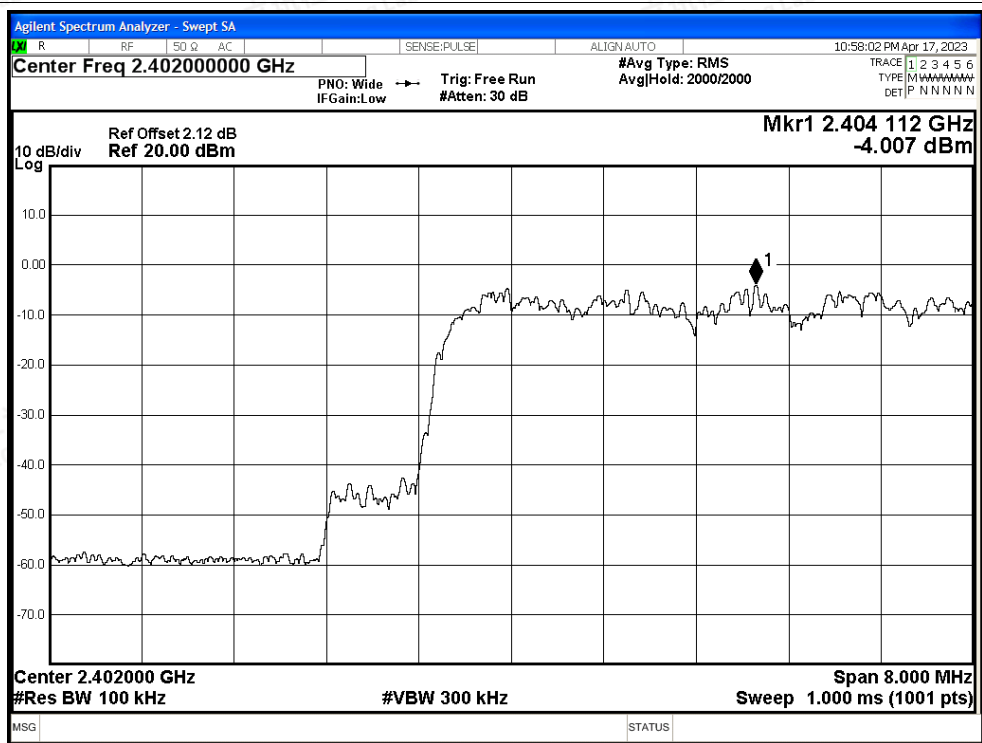


Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission

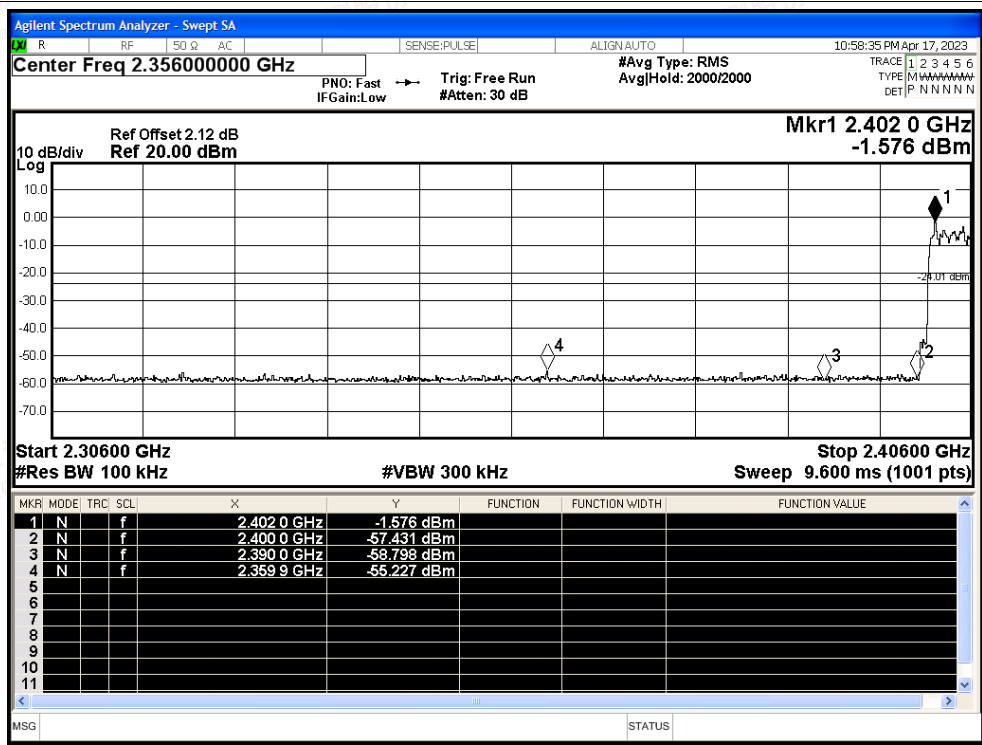




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref

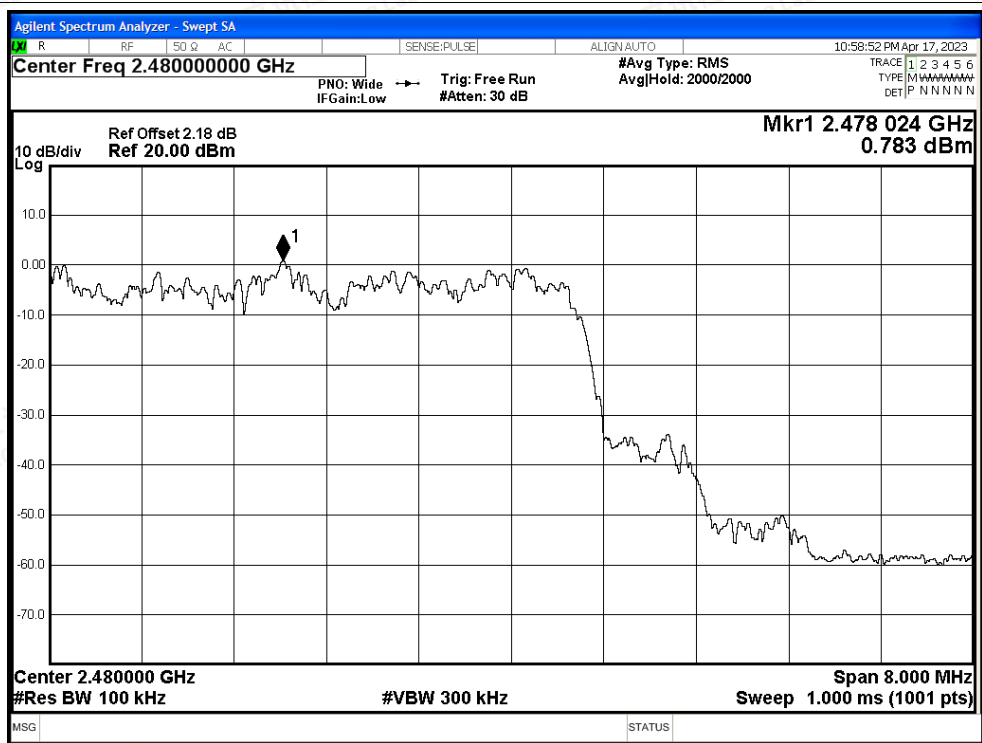


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission

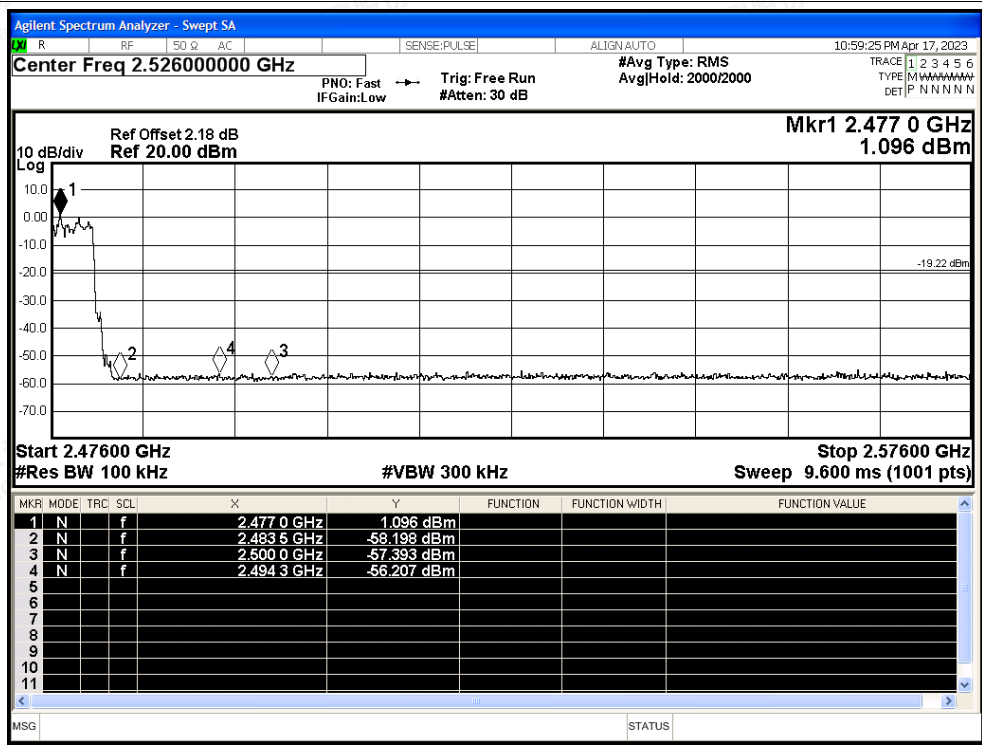




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-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	-54.96	-20	Pass
NVNT	1-DH5	2441	Ant1	-50.88	-20	Pass
NVNT	1-DH5	2480	Ant1	-47.42	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.68	-20	Pass
NVNT	2-DH5	2441	Ant1	-56.2	-20	Pass
NVNT	2-DH5	2480	Ant1	-57.6	-20	Pass
NVNT	3-DH5	2402	Ant1	-54.44	-20	Pass
NVNT	3-DH5	2441	Ant1	-55.76	-20	Pass
NVNT	3-DH5	2480	Ant1	-56.75	-20	Pass

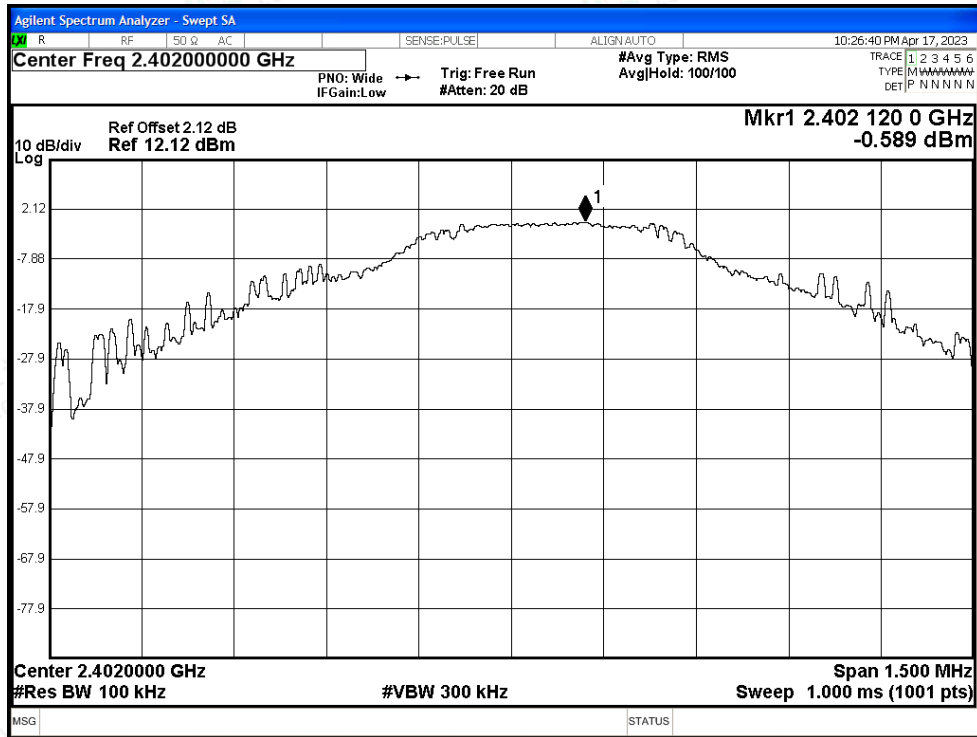


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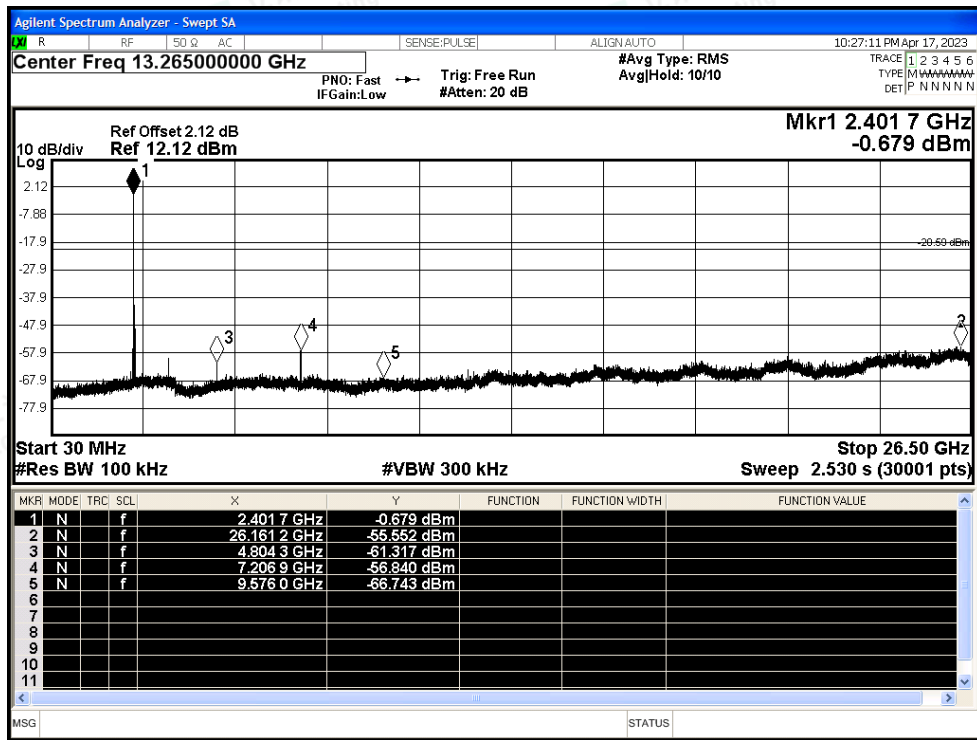


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

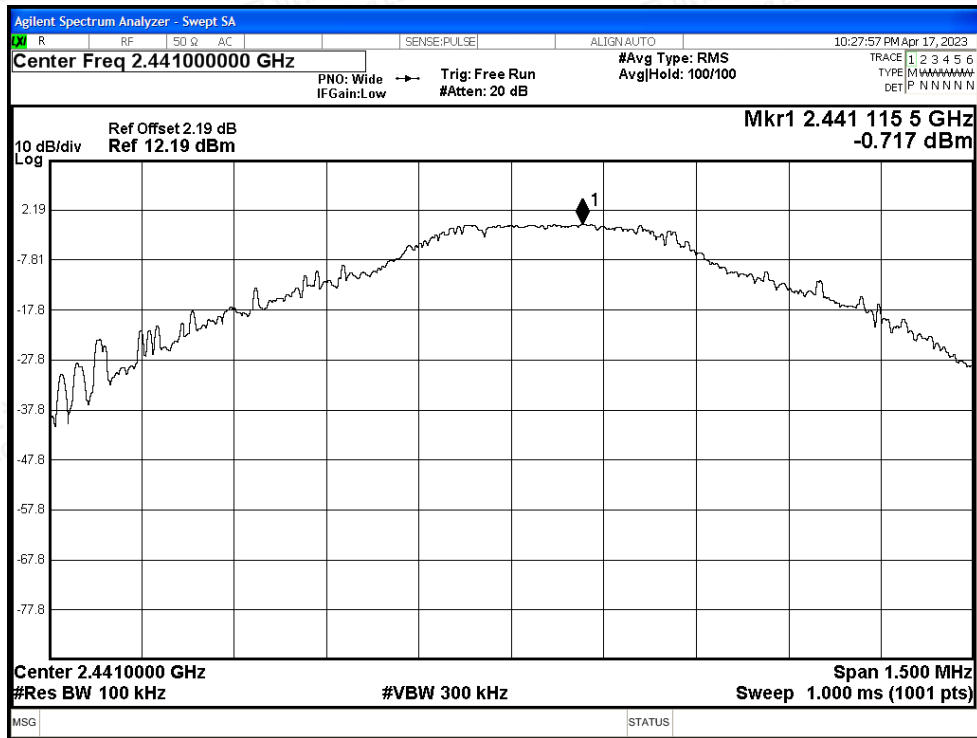


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

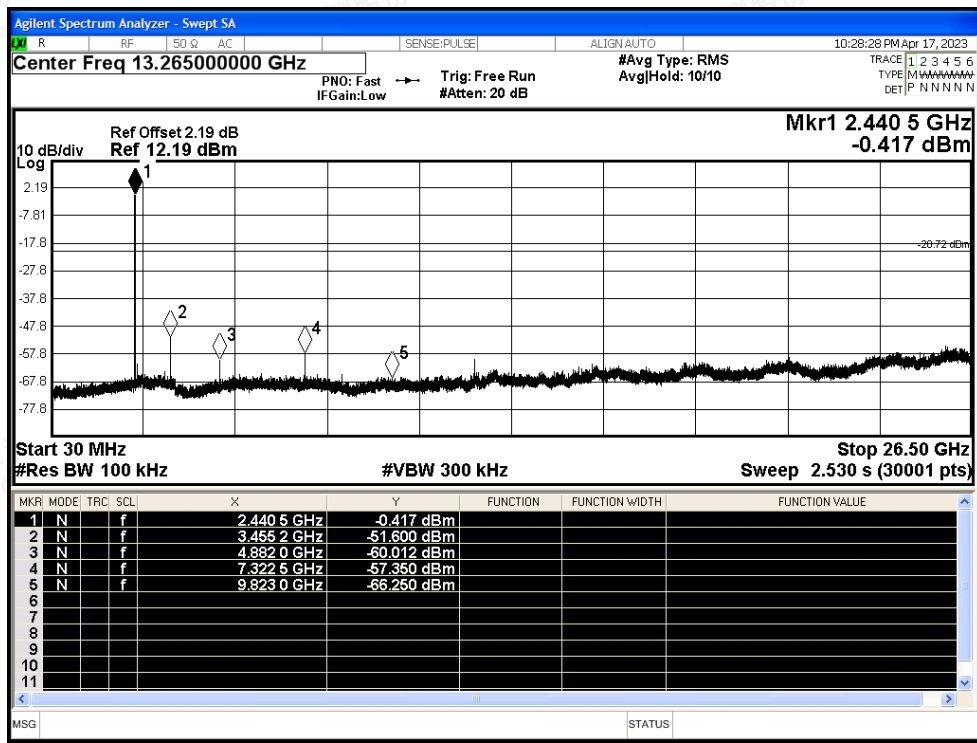




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

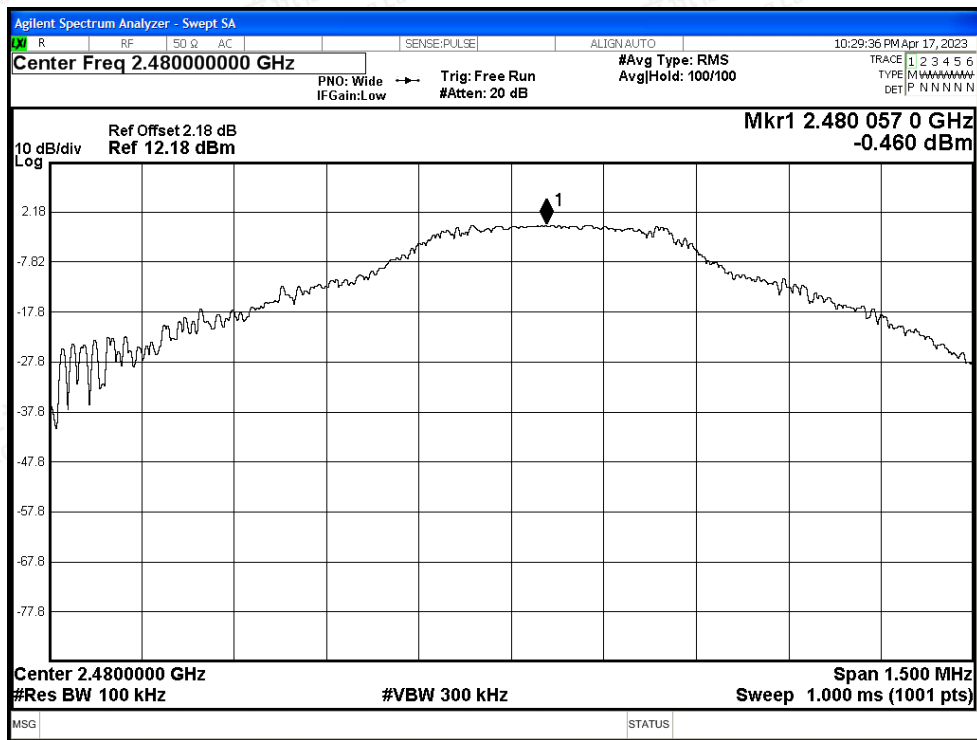


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

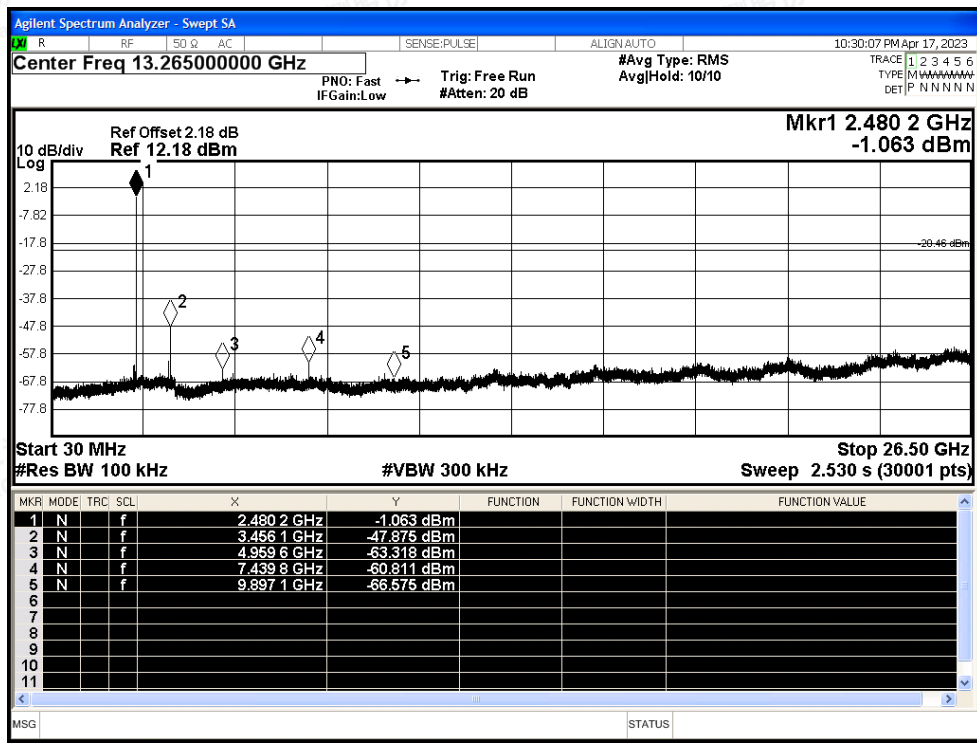




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

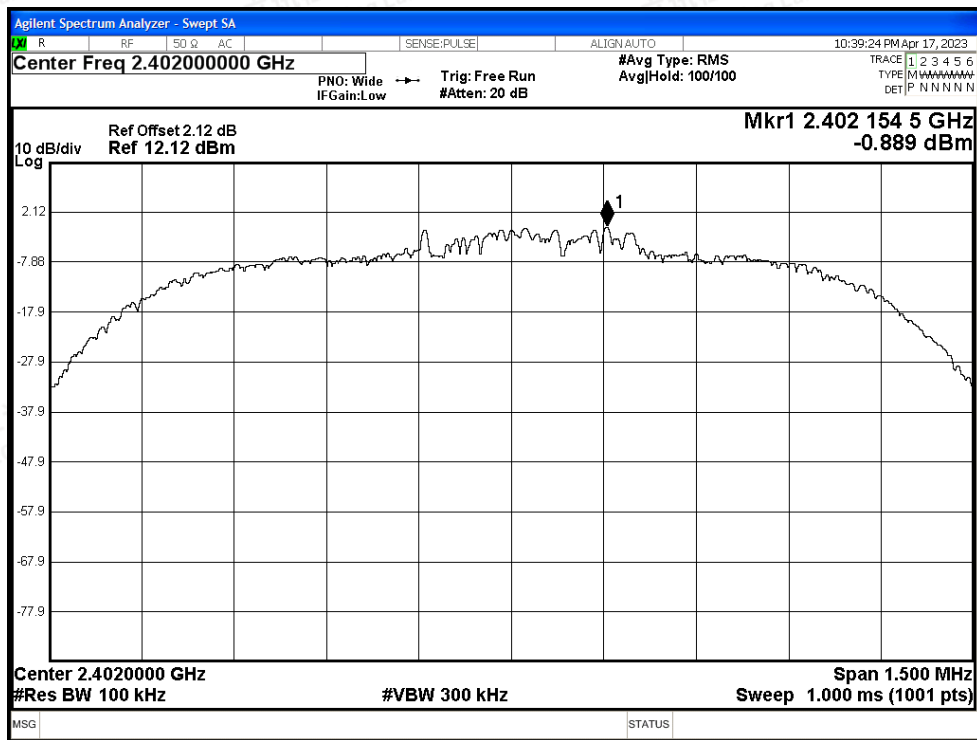


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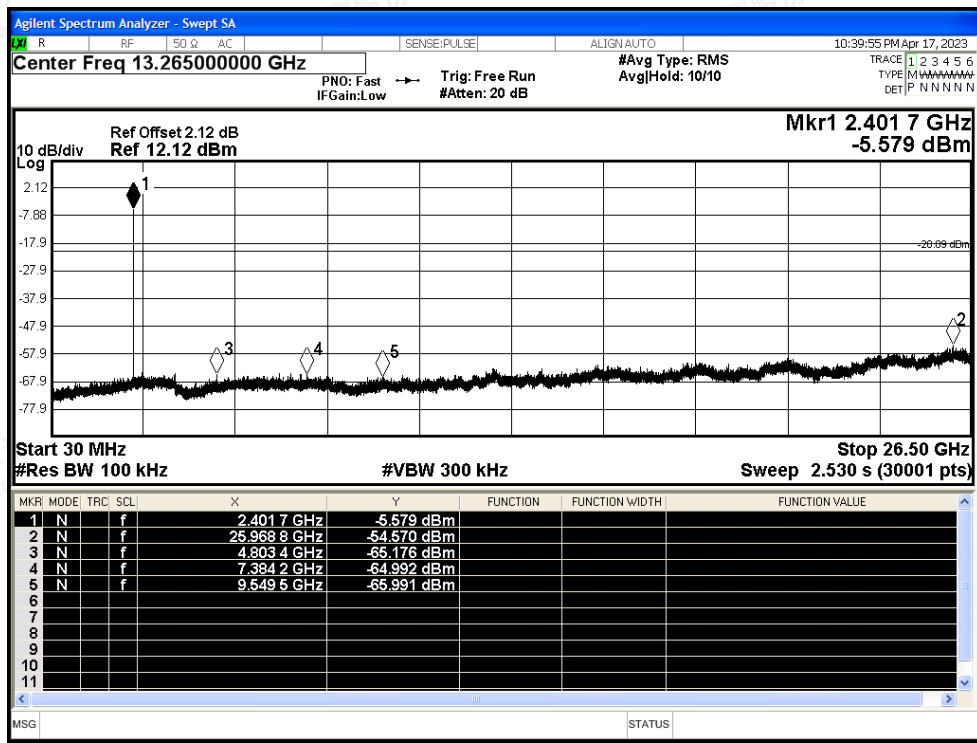




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

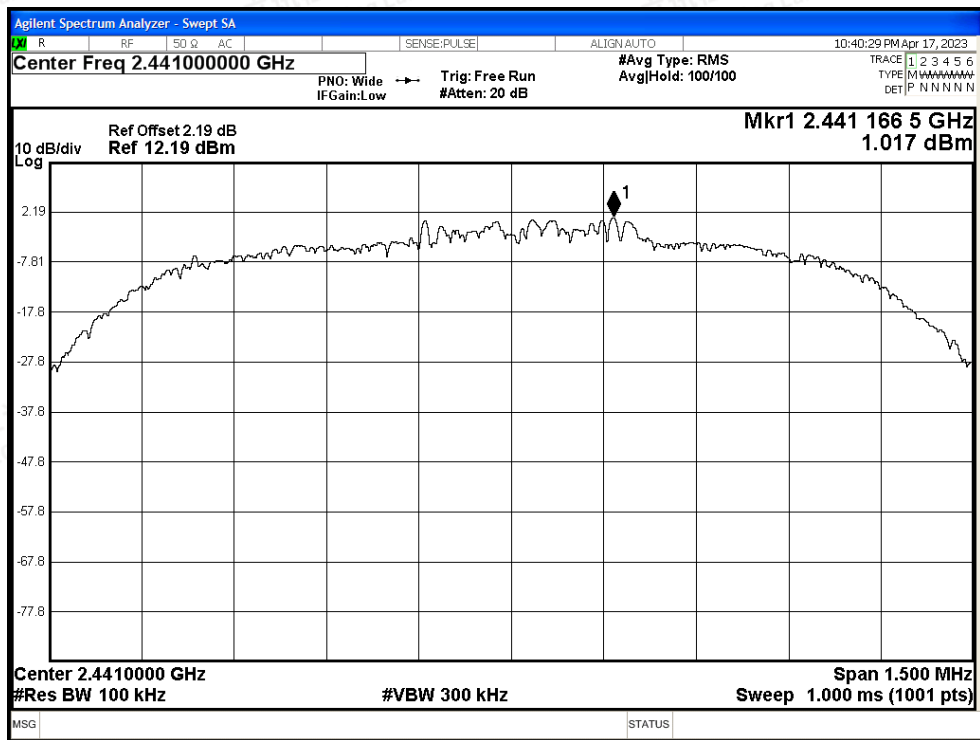


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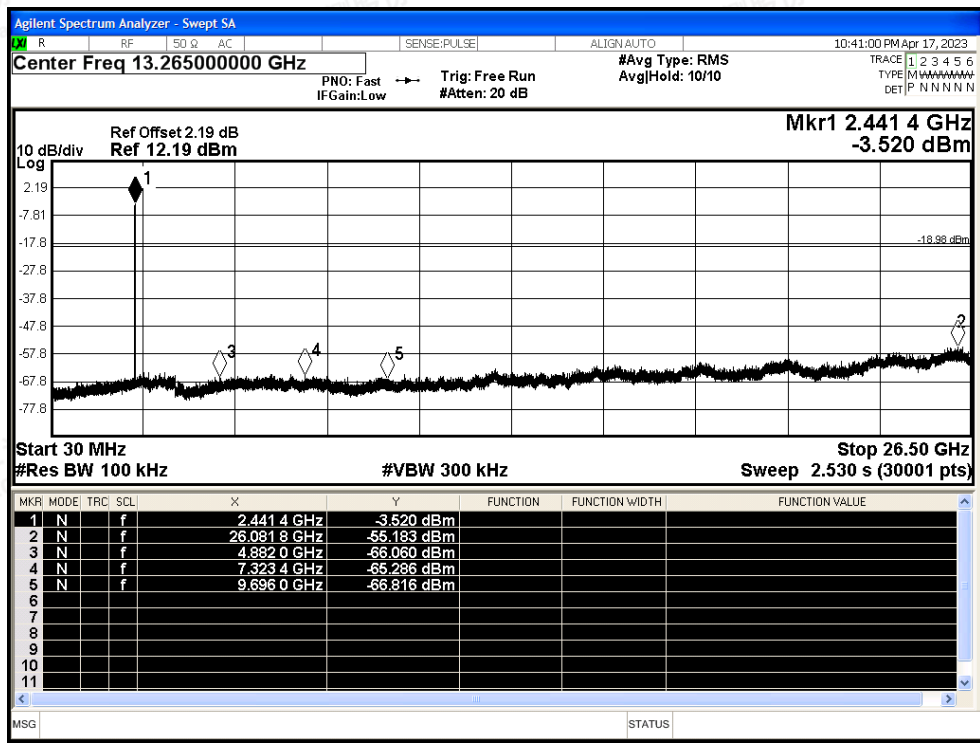




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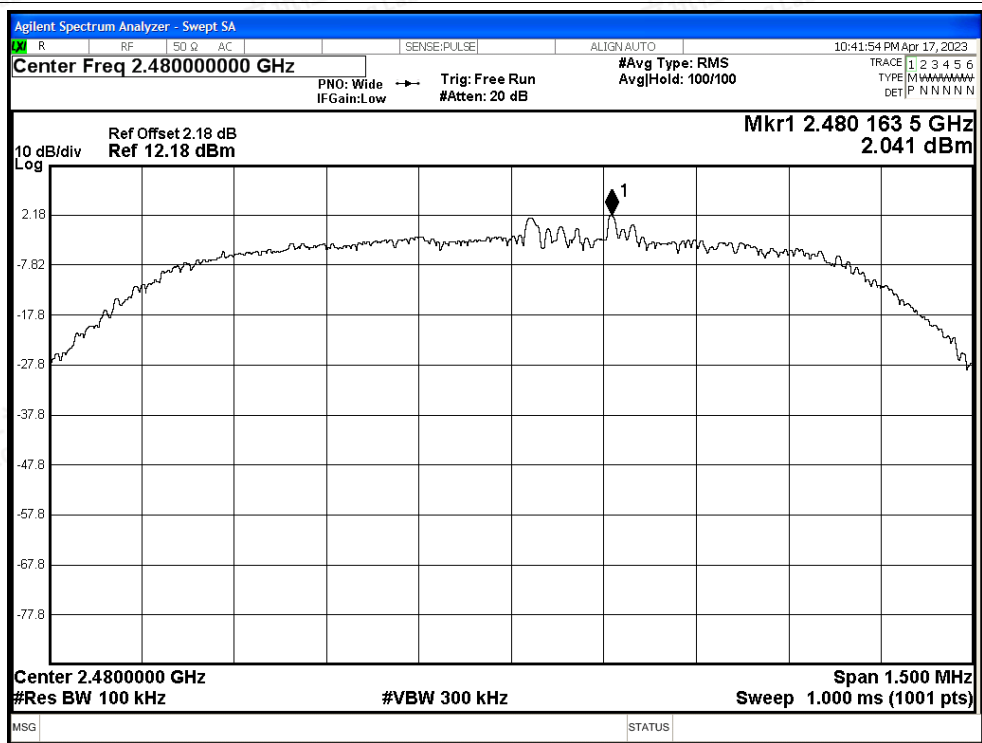


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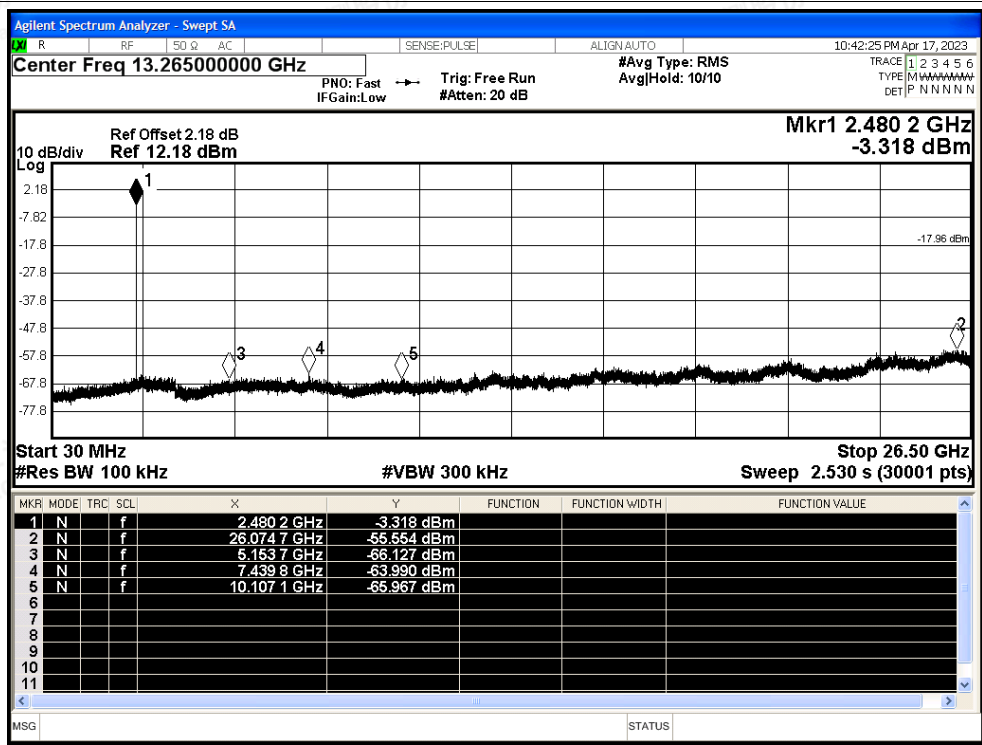




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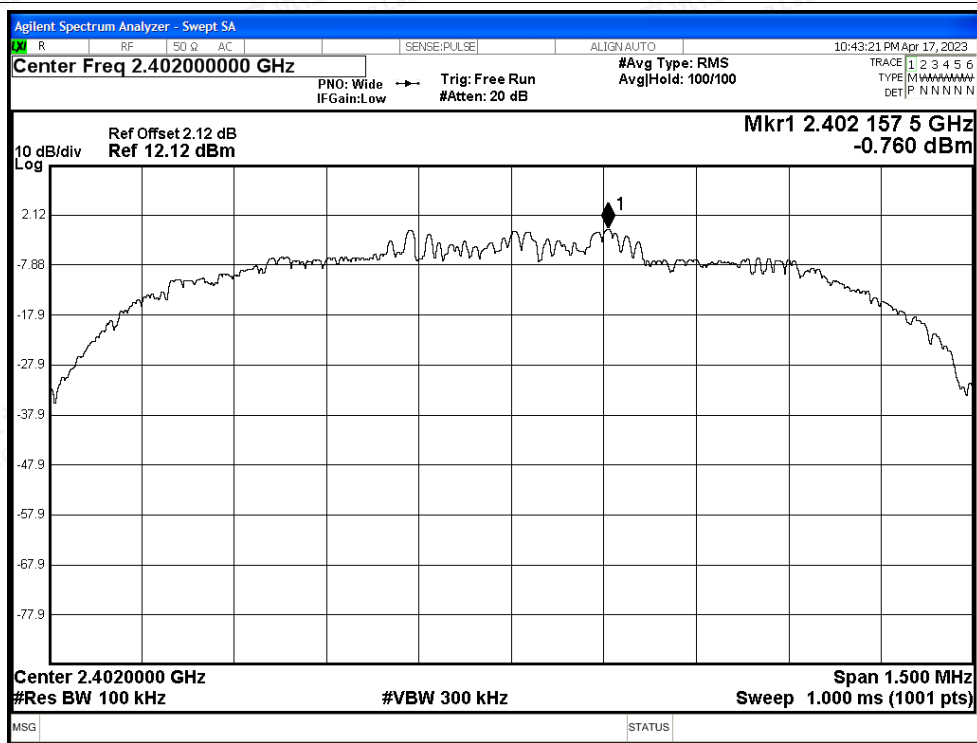


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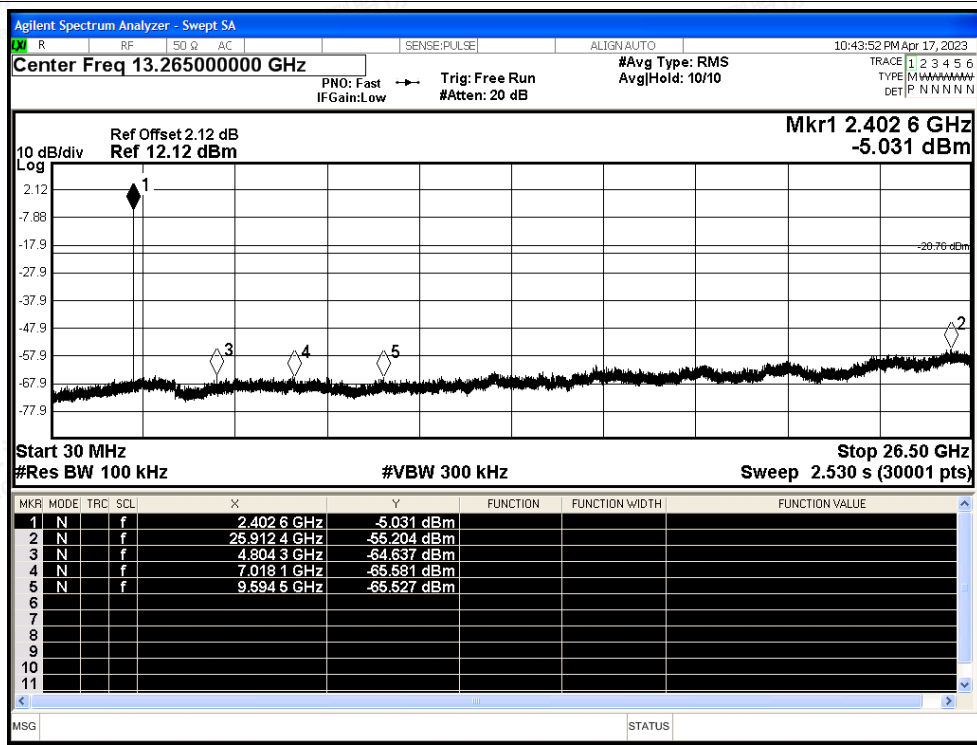




Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref

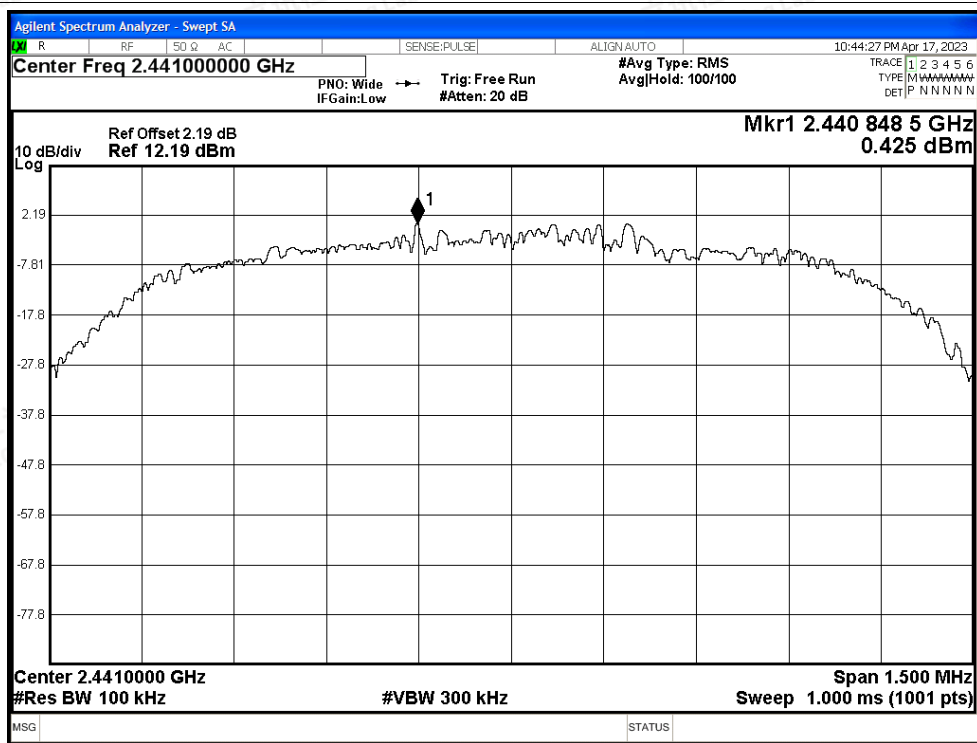


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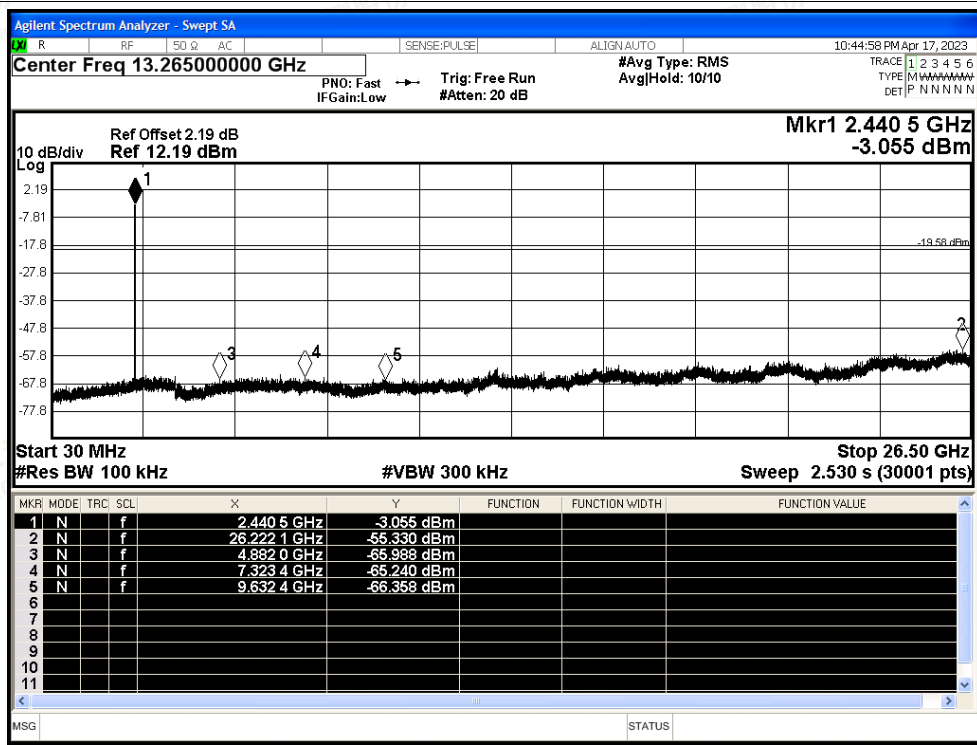




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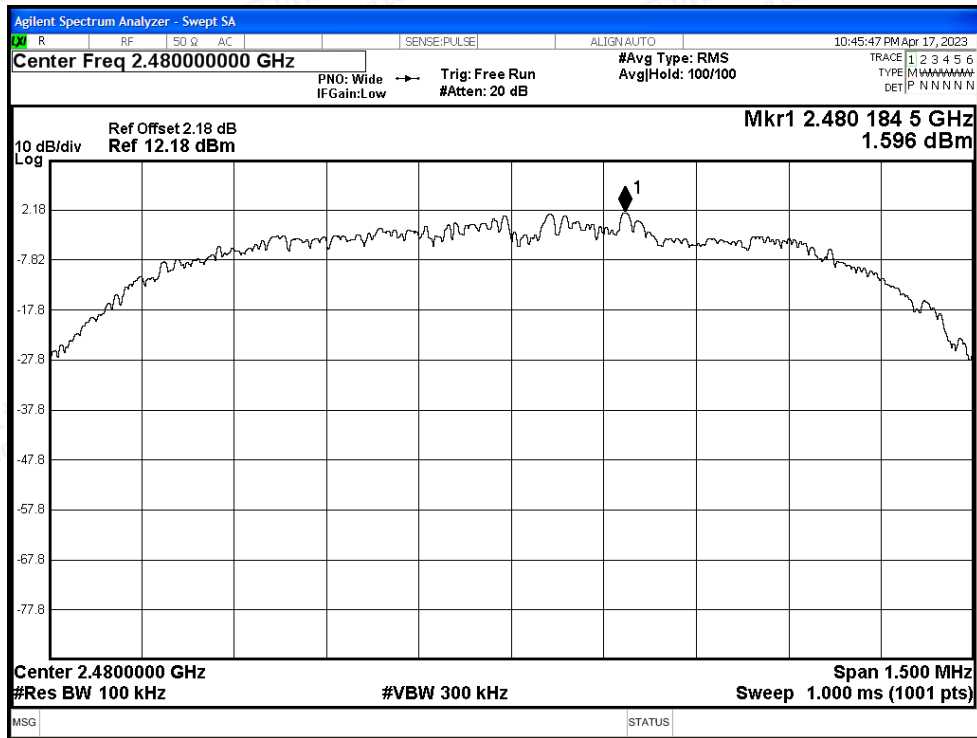


Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission

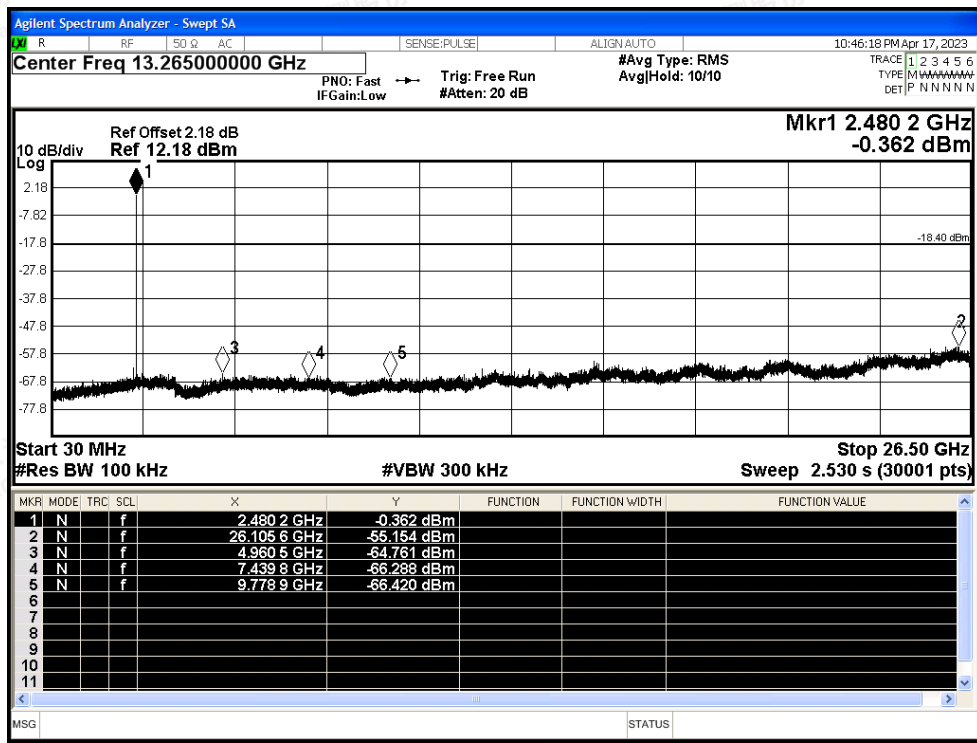




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-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	-48.78	2.43	48.91	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.04	2.43	39.65	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2375.952	-47.32	2.43	50.37	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2382.864	-57.45	2.43	40.24	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-50.11	2.43	47.58	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-57.73	2.43	39.96	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-47.95	2.43	49.74	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-54.52	2.43	43.17	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2487.496	-47.45	2.43	50.24	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.512	-54.52	2.43	43.17	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-48.81	2.43	48.88	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.23	2.43	40.46	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-50.3	2.43	47.39	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.08	2.43	39.61	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2354.256	-47.43	2.43	50.26	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2388.144	-57.46	2.43	40.23	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-49.94	2.43	47.75	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-57.55	2.43	40.14	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-49.45	2.43	48.24	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-54.01	2.43	43.68	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2497.696	-46.38	2.43	51.31	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.512	-54.01	2.43	43.68	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.95	2.43	47.74	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.3	2.43	40.39	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-51.95	2.43	45.74	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-58.02	2.43	39.67	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2348.784	-47.32	2.43	50.37	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2382	-57.47	2.43	40.22	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.09	2.43	47.60	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-57.65	2.43	40.04	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-48.33	2.43	49.36	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-54.03	2.43	43.66	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2488.552	-46.83	2.43	50.86	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-54.03	2.43	43.66	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-50.26	2.43	47.43	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-57.31	2.43	40.38	Average	54	Pass

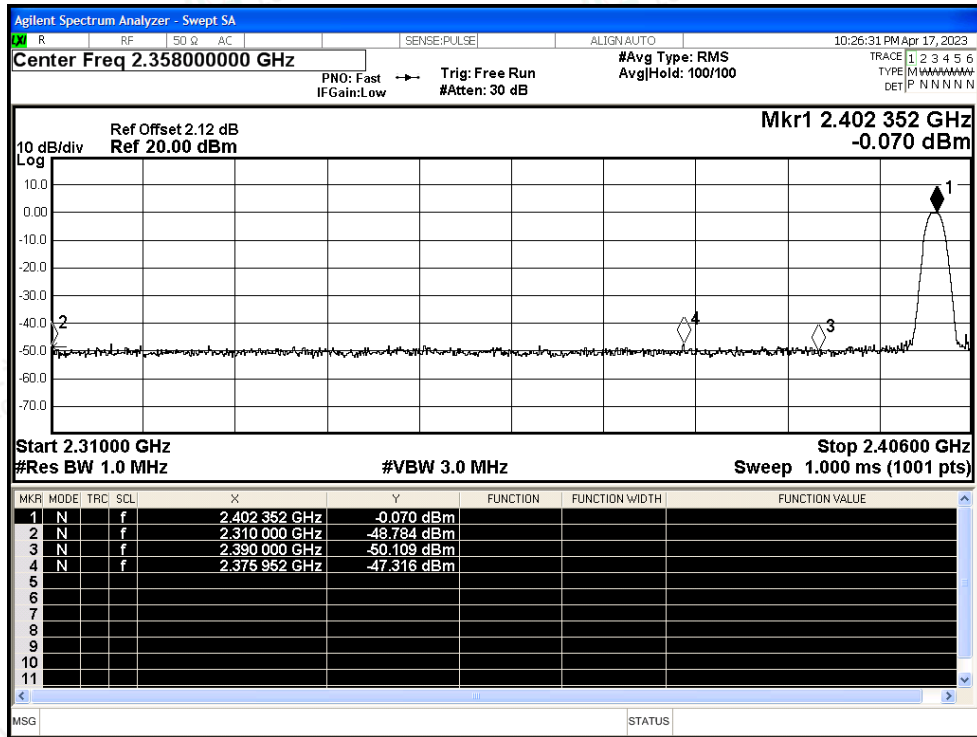


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 Scan code to check authenticity

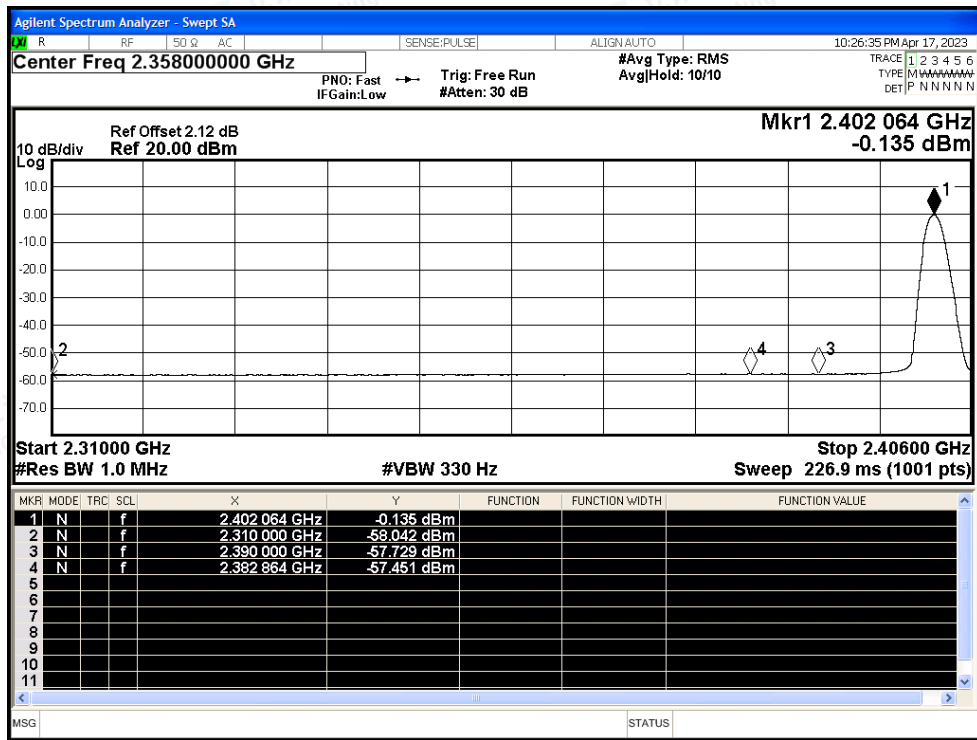


Test Graphs

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

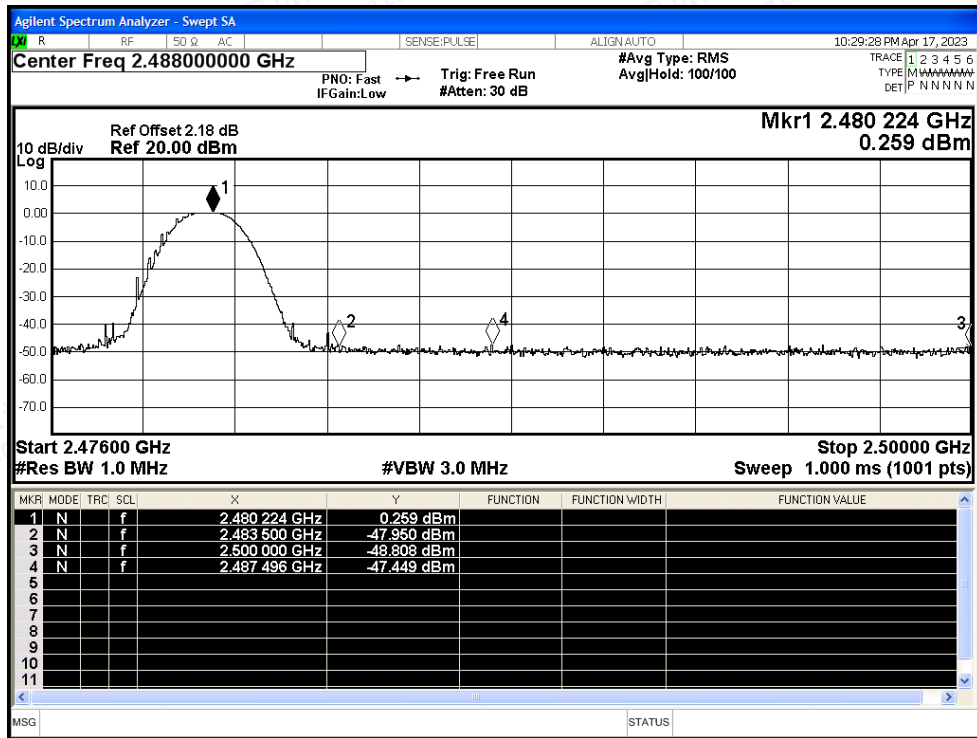


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

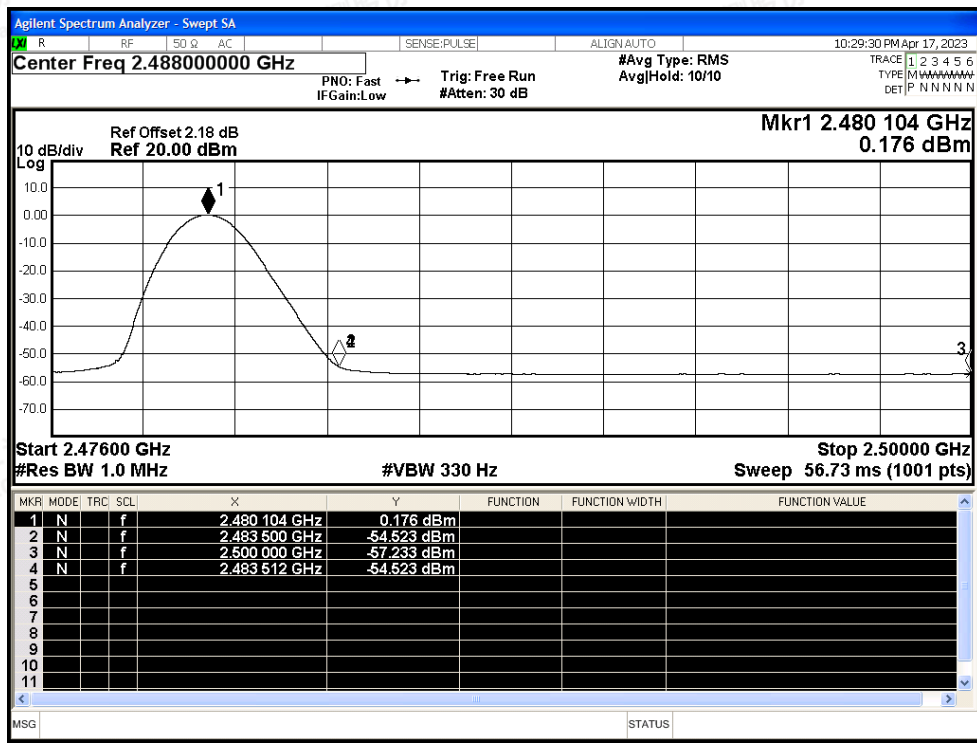




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

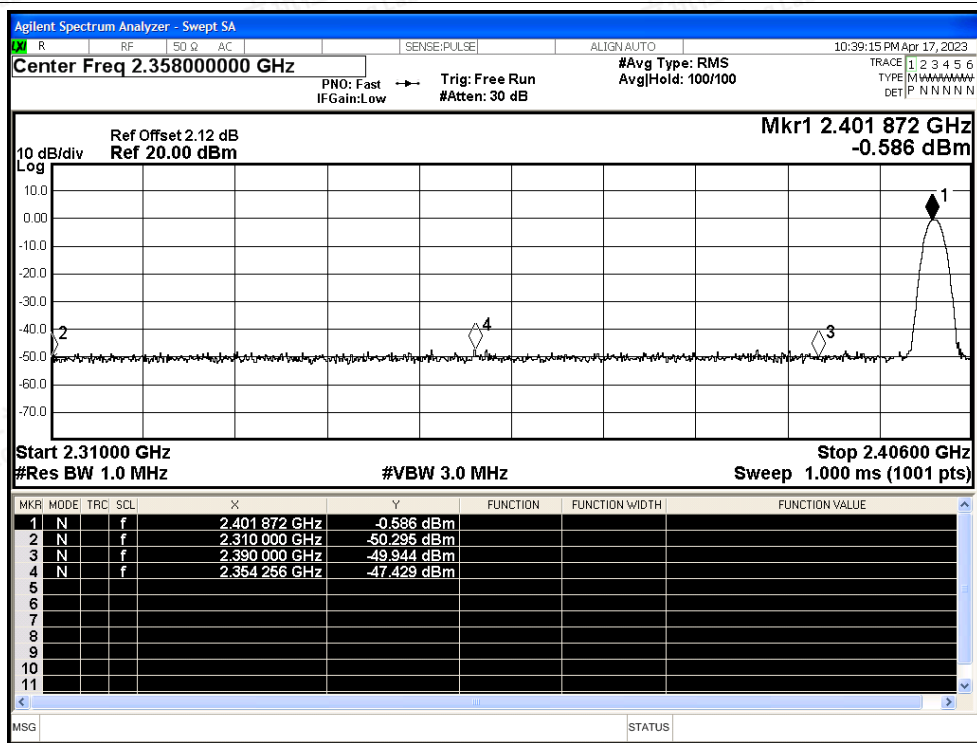


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

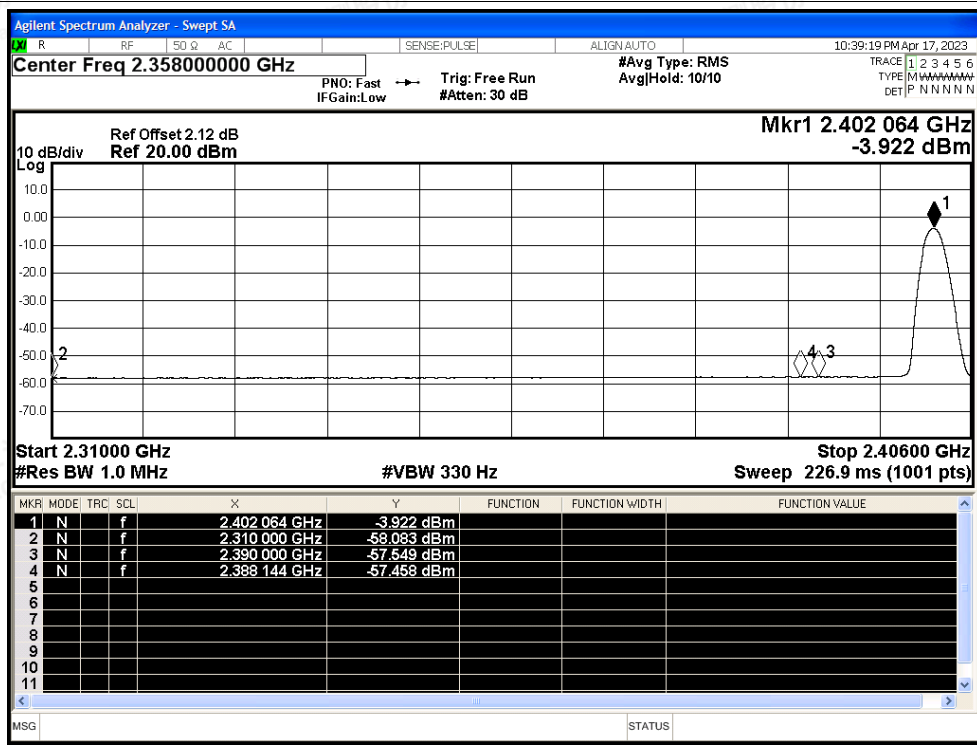




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

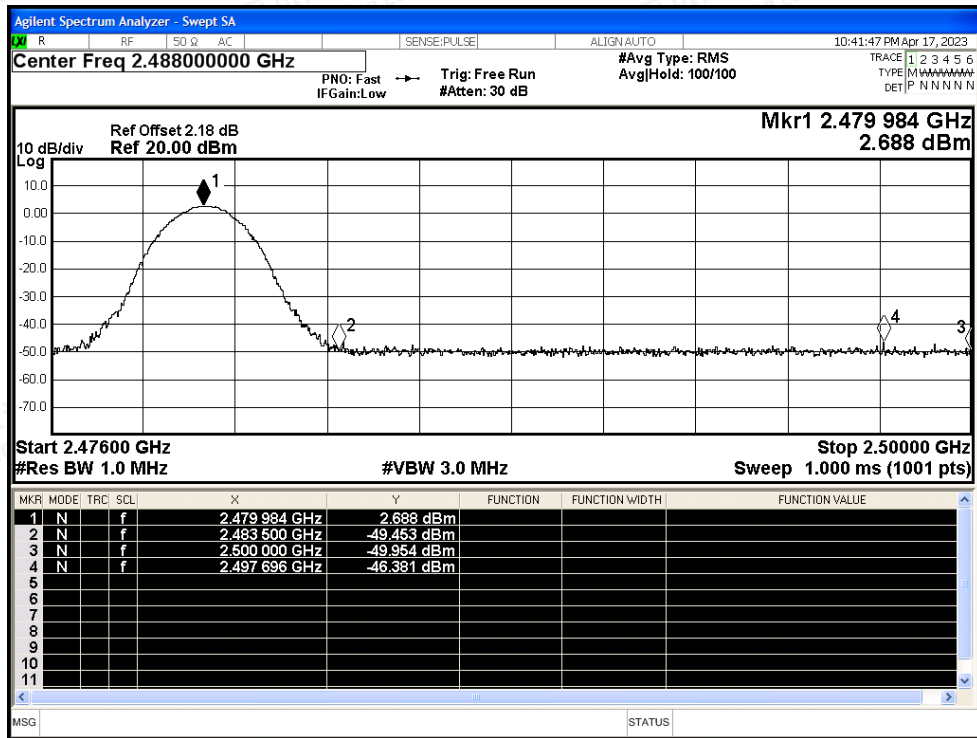


Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average

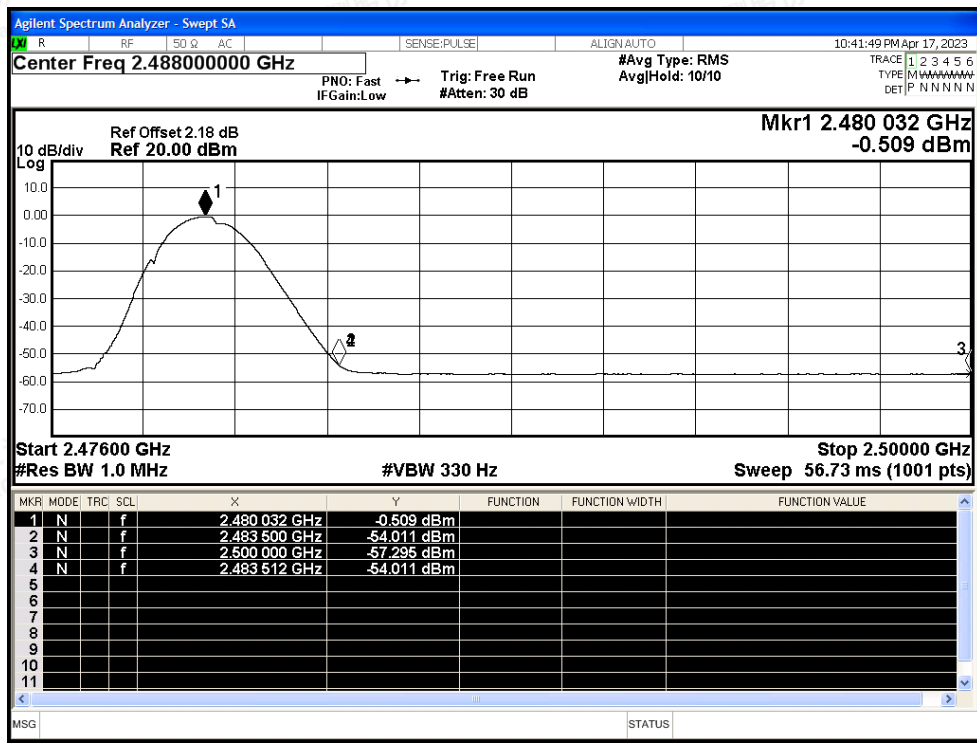




Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak

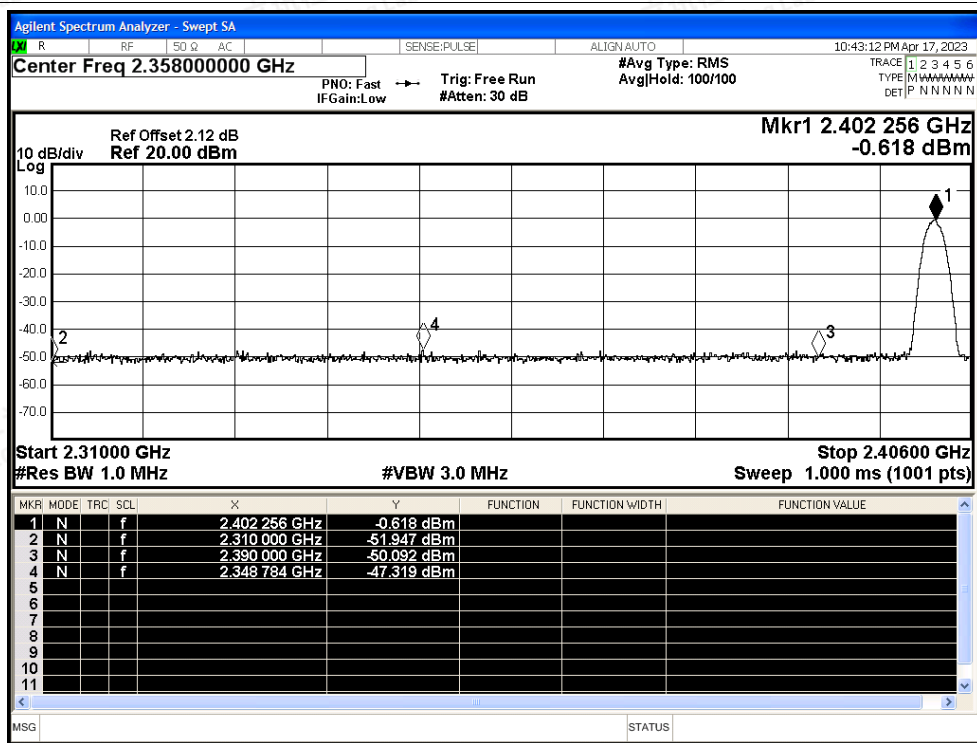


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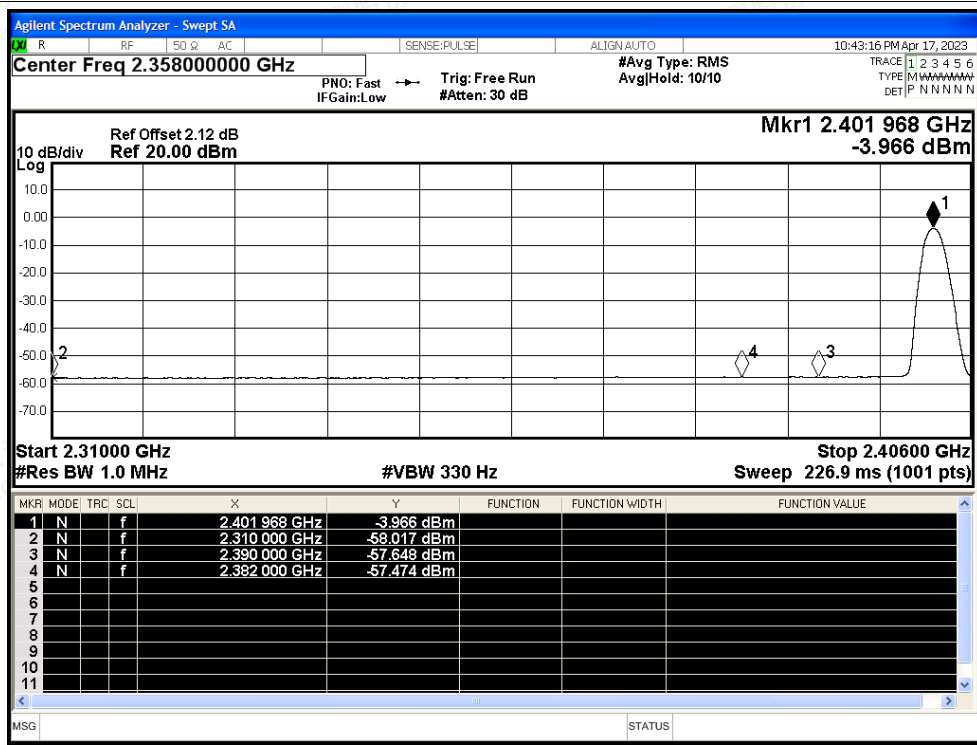




Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak

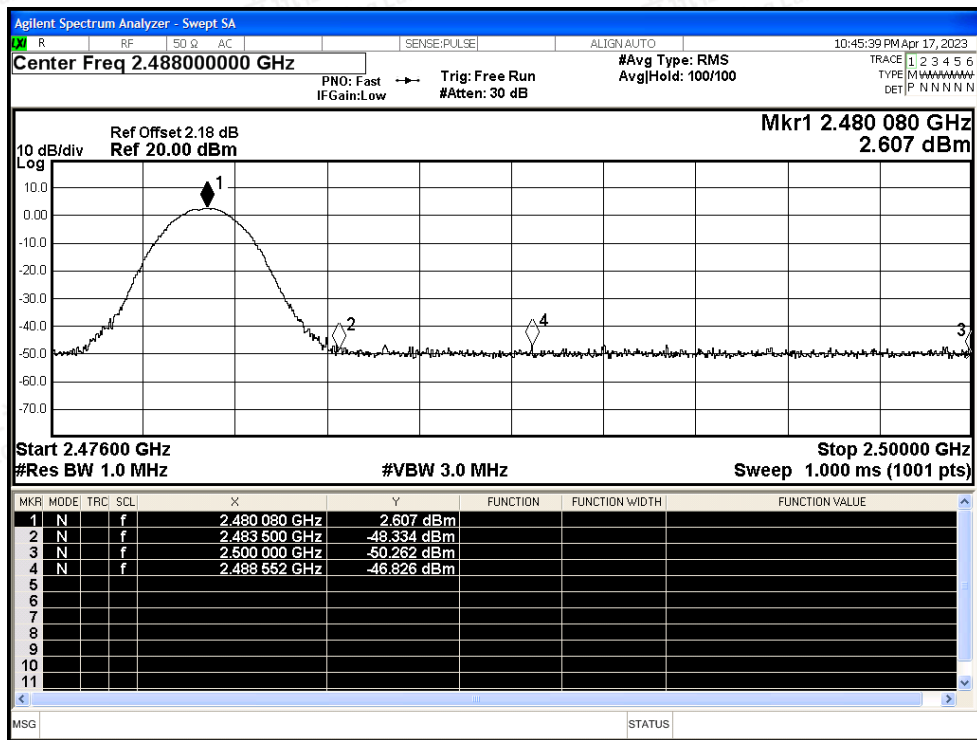


Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average





Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Peak



Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Average

