



## Appendix A

### RF Test Data for BT (Conducted Measurement)

Product Name: Wireless earphone

Test Model: BHD-TW11

#### Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Taylor Hu
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	1.005	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.007	N/A	Pass
NVNT	1-DH5	2480	Ant1	1.018	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.307	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.299	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.311	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.008	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.014	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.026	N/A	Pass

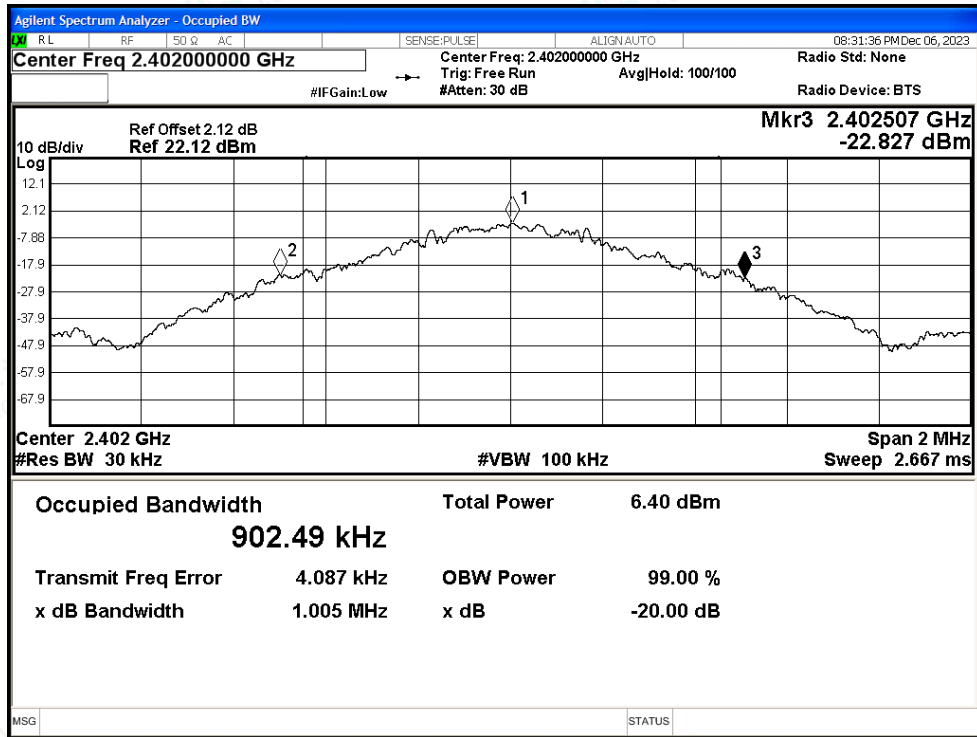


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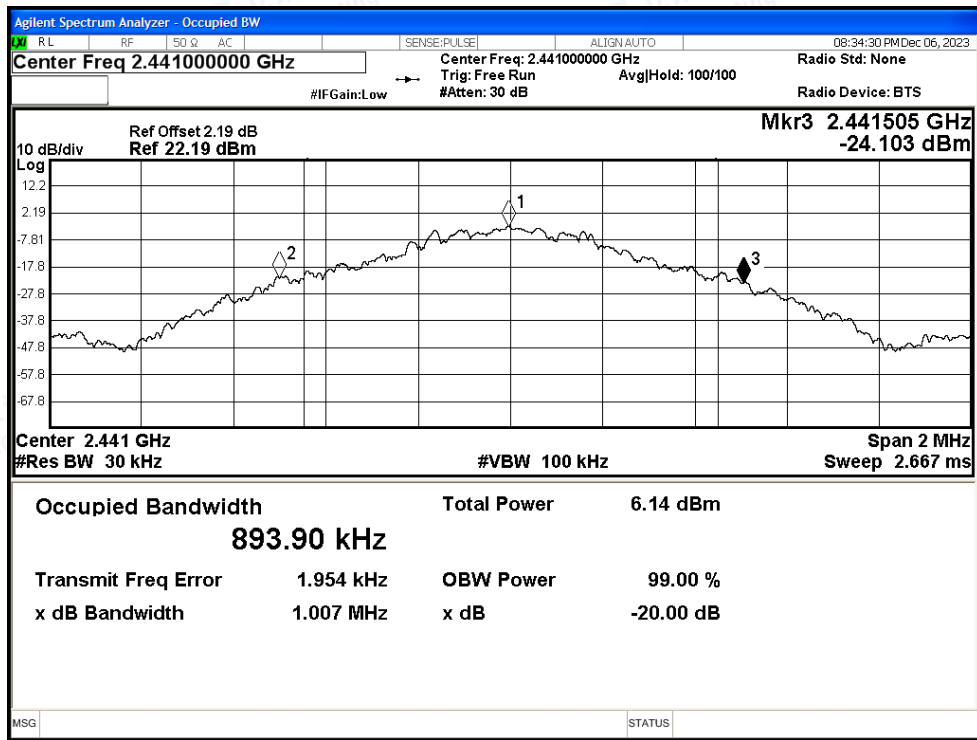


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

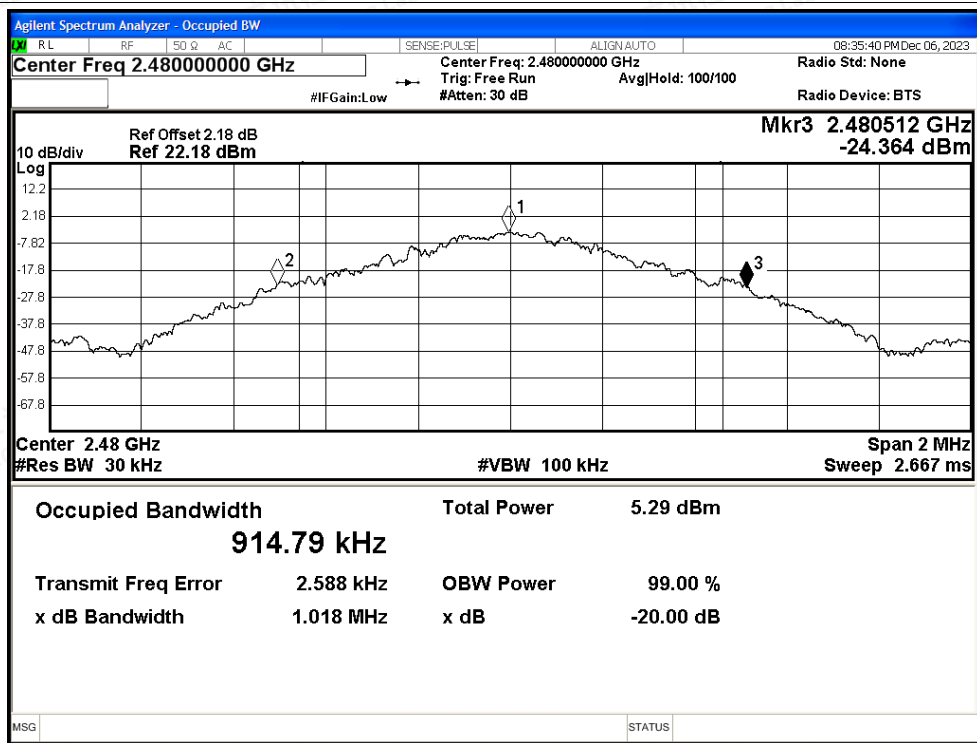


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

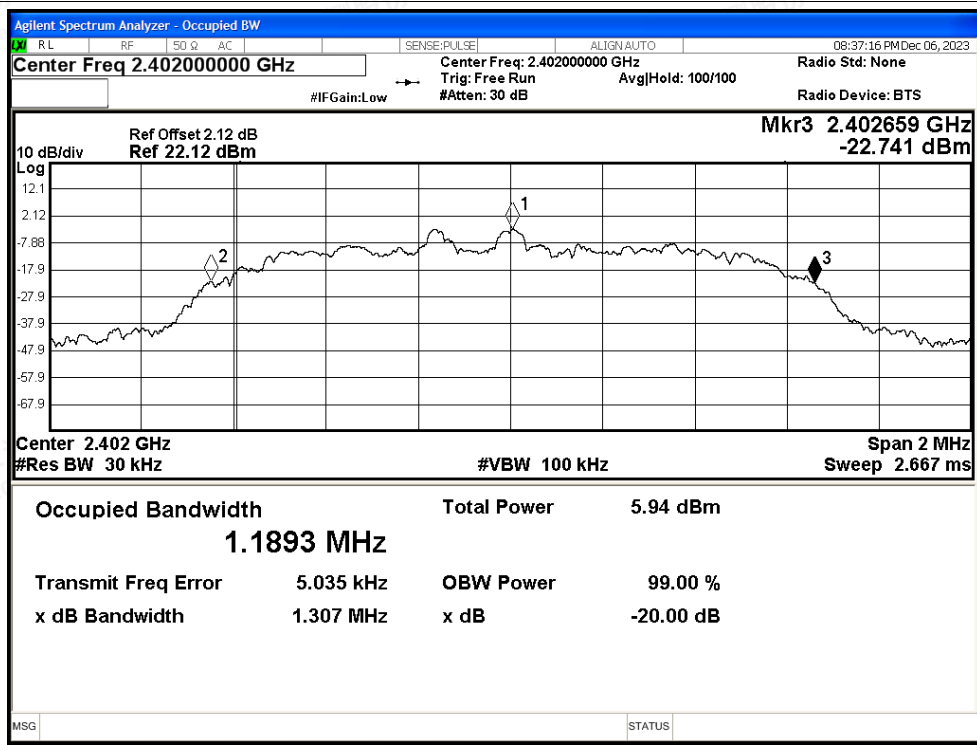




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

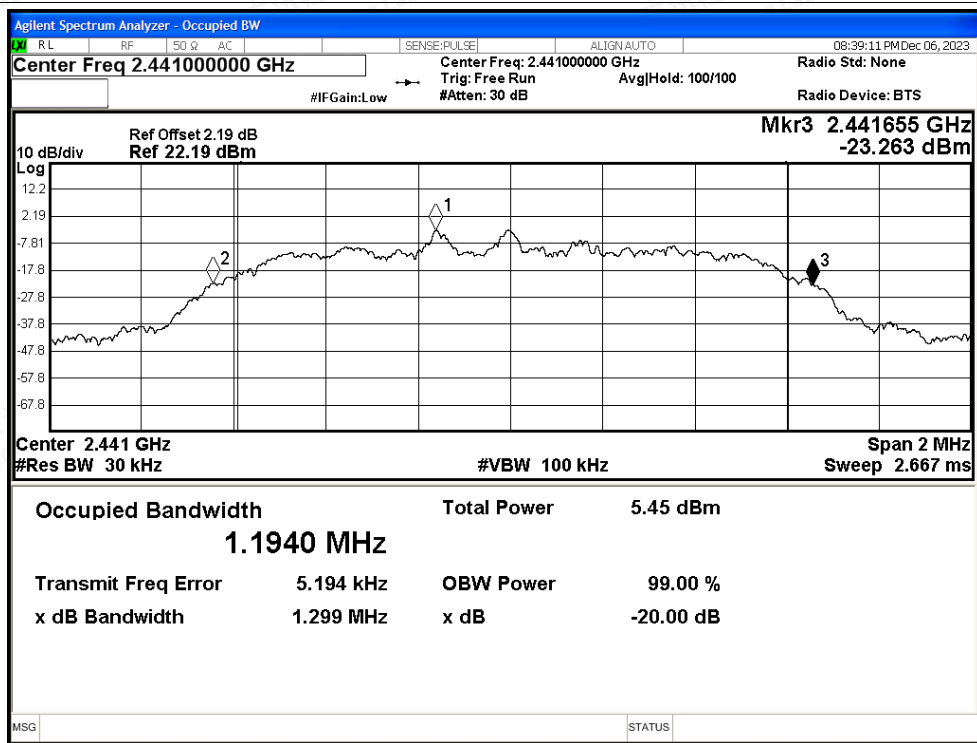


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

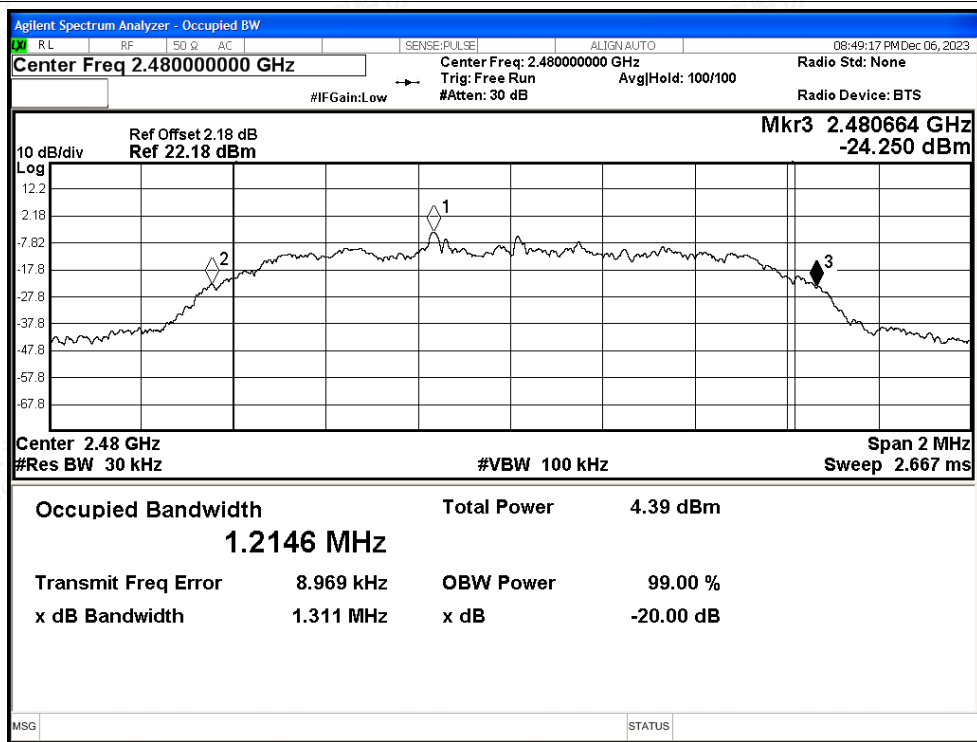




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

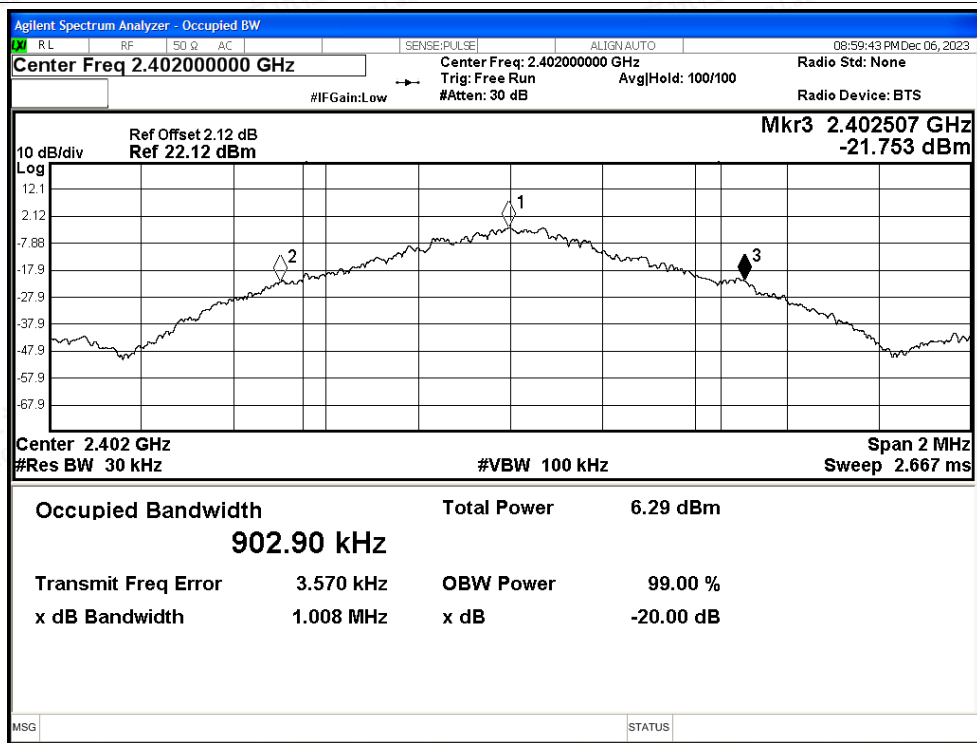


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

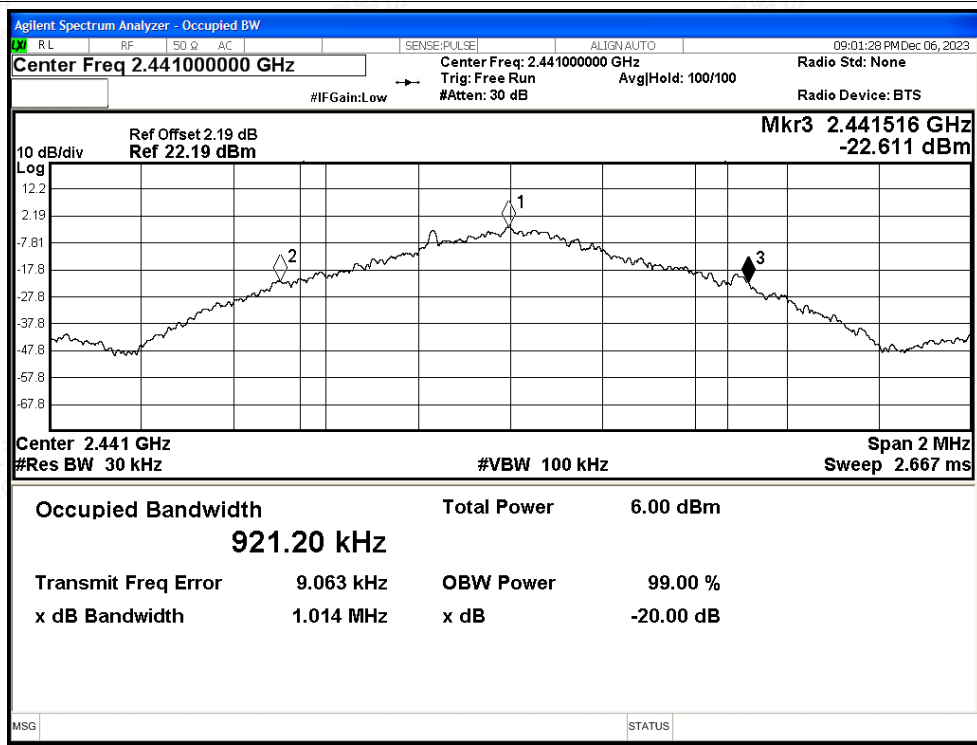


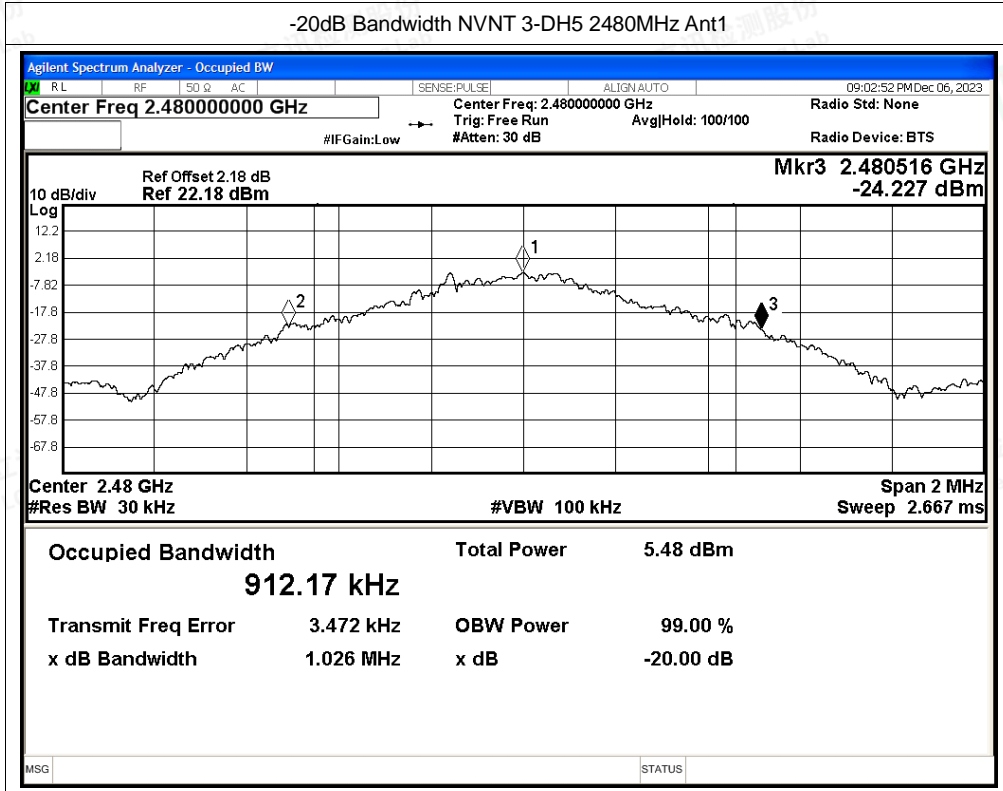


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1







## A.2 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	0.01	21	Pass
NVNT	1-DH5	2441	Ant1	-0.52	21	Pass
NVNT	1-DH5	2480	Ant1	-1.03	21	Pass
NVNT	2-DH5	2402	Ant1	0.67	21	Pass
NVNT	2-DH5	2441	Ant1	0.3	21	Pass
NVNT	2-DH5	2480	Ant1	-0.19	21	Pass
NVNT	3-DH5	2402	Ant1	-0.06	21	Pass
NVNT	3-DH5	2441	Ant1	-0.39	21	Pass
NVNT	3-DH5	2480	Ant1	-0.91	21	Pass

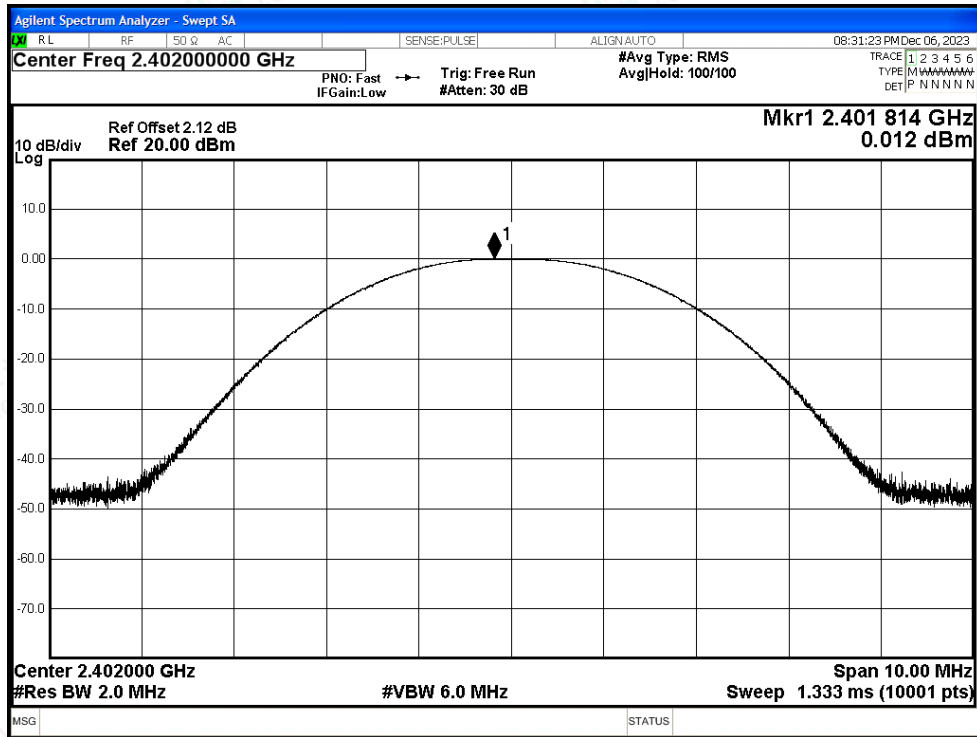




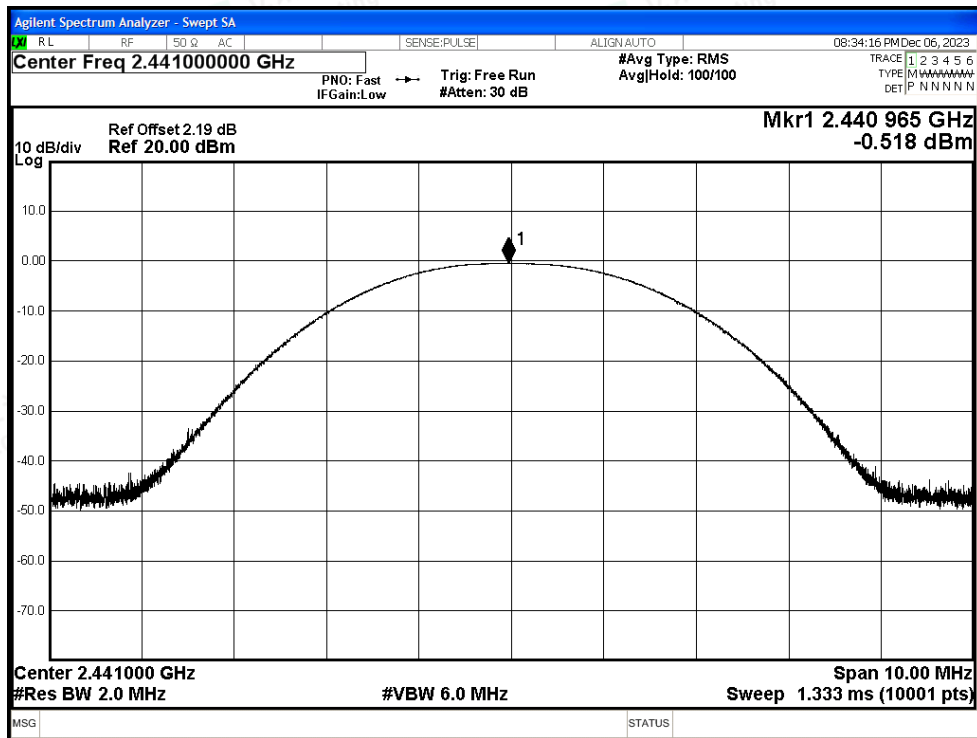


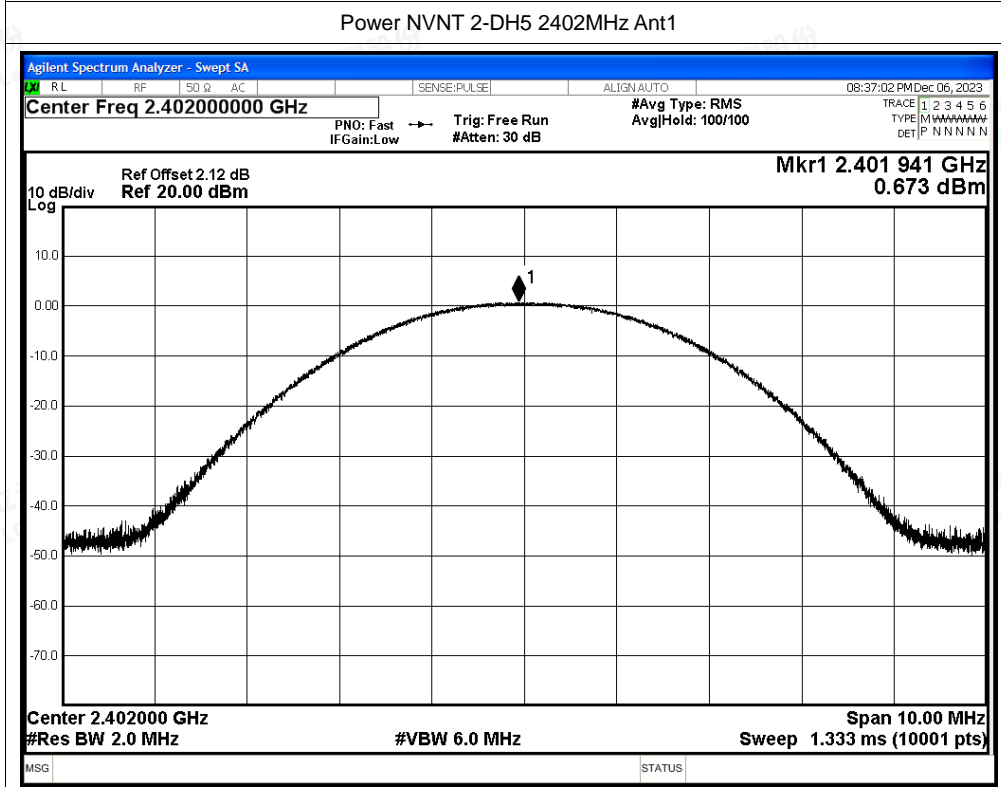
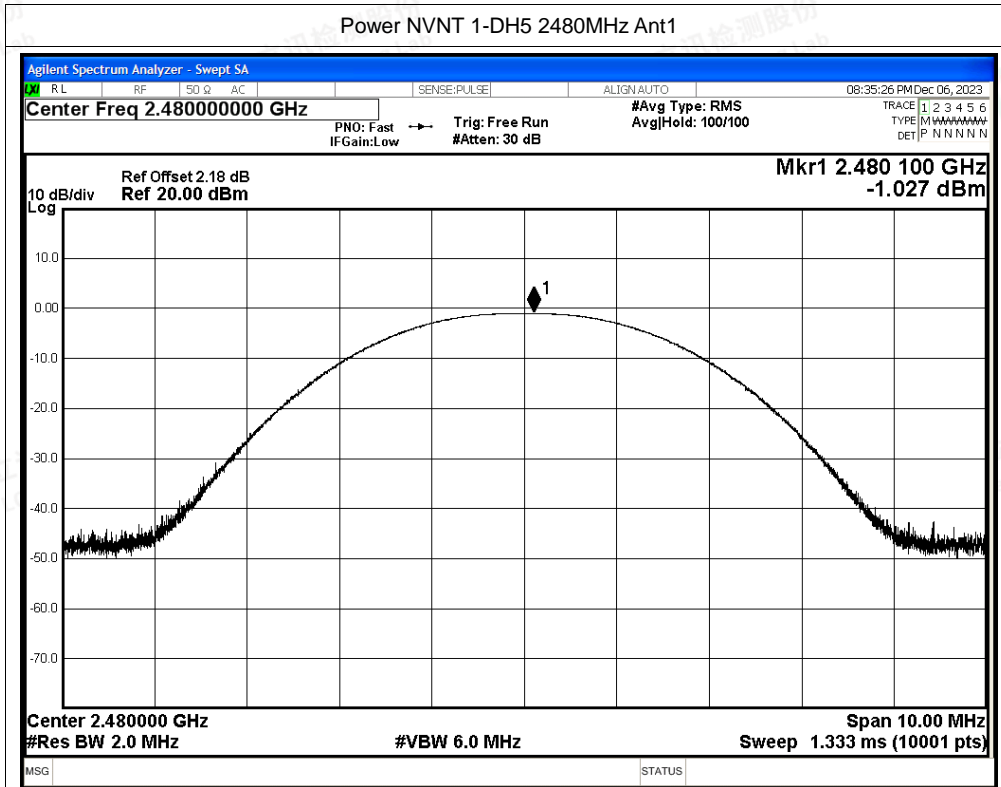
Test Graphs

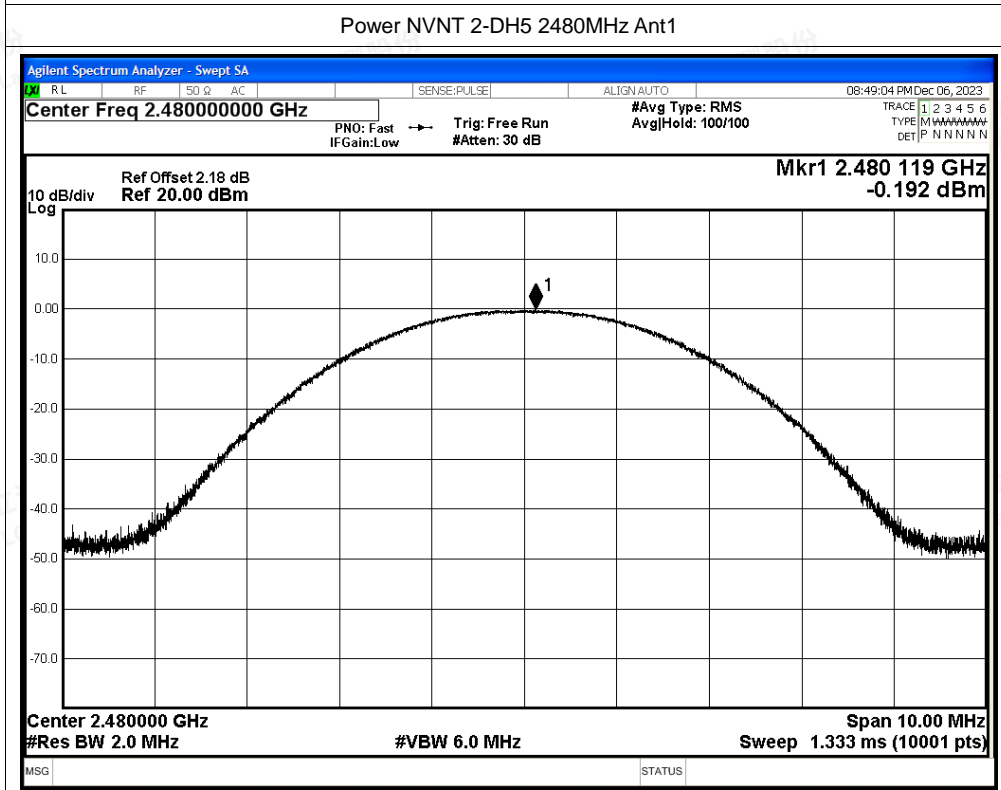
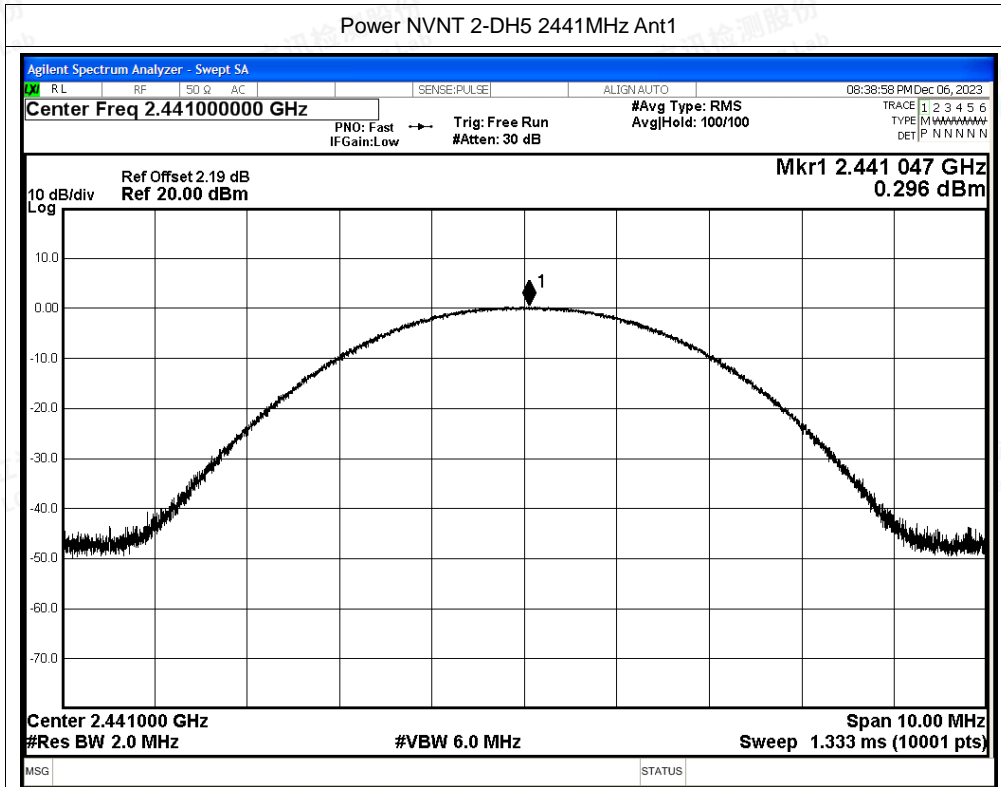
Power NVNT 1-DH5 2402MHz Ant1

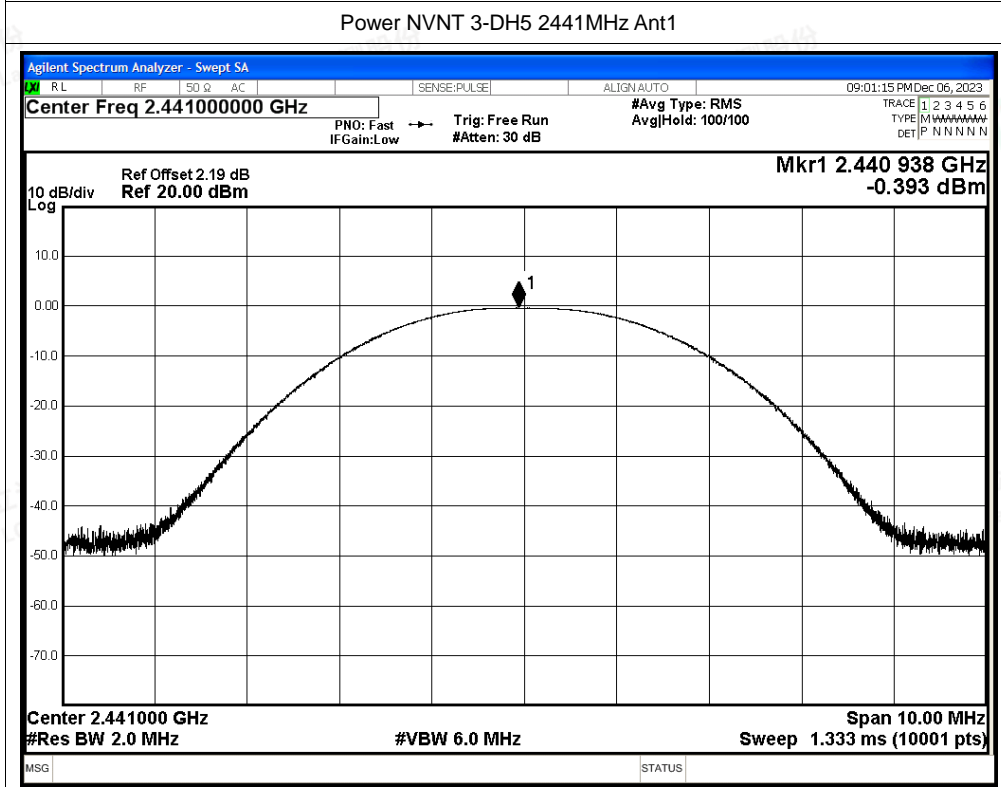
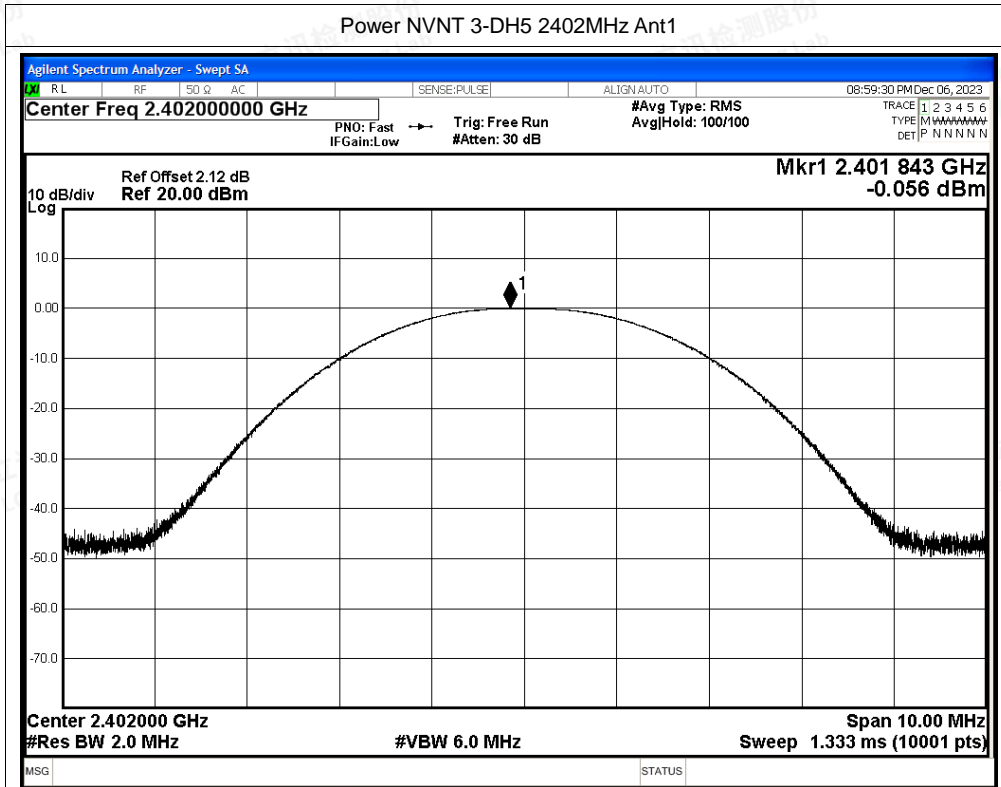


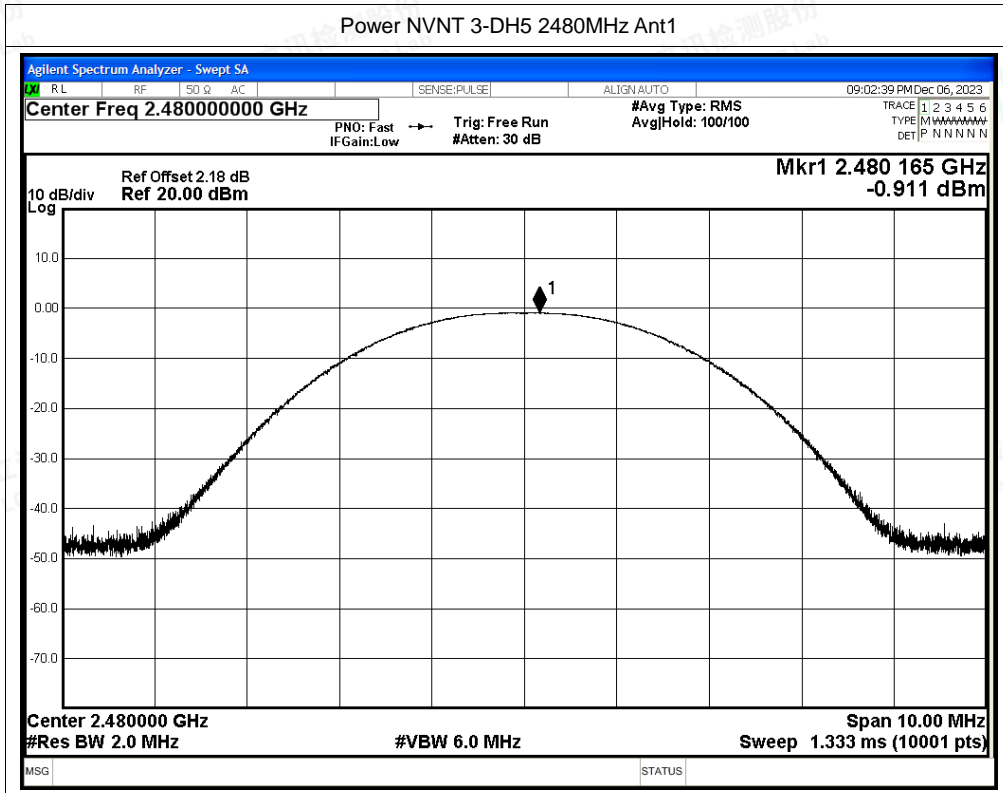
Power NVNT 1-DH5 2441MHz Ant1













### A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.998	2403.014	1.016	0.679	Pass
NVNT	2-DH5	Ant1	2402.004	2402.998	0.994	0.874	Pass
NVNT	3-DH5	Ant1	2402.064	2402.98	0.916	0.684	Pass

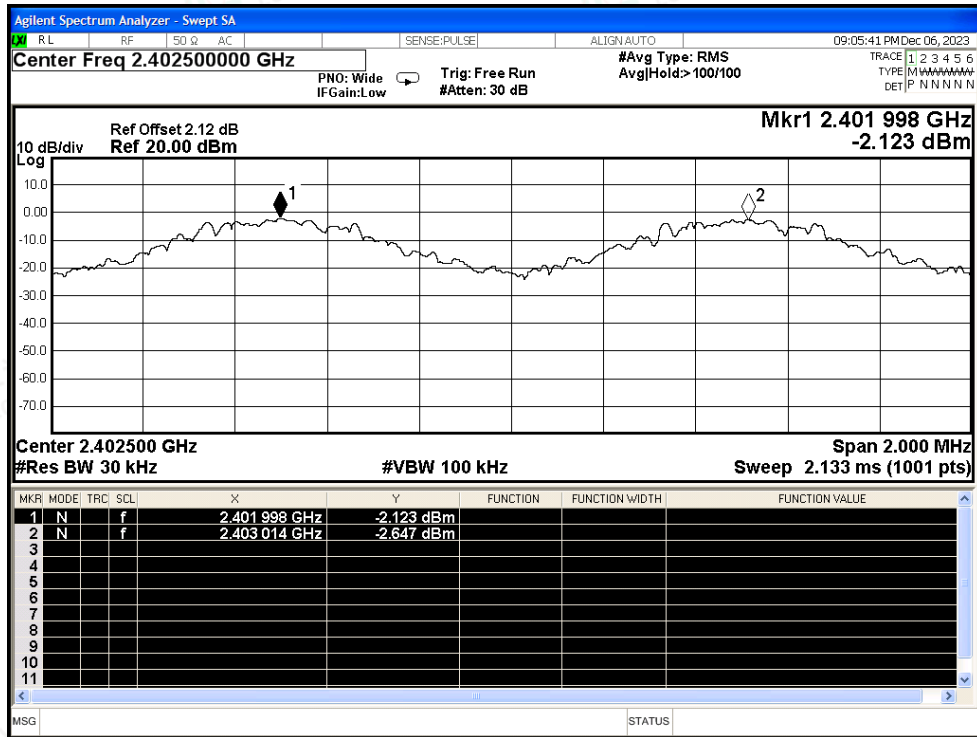


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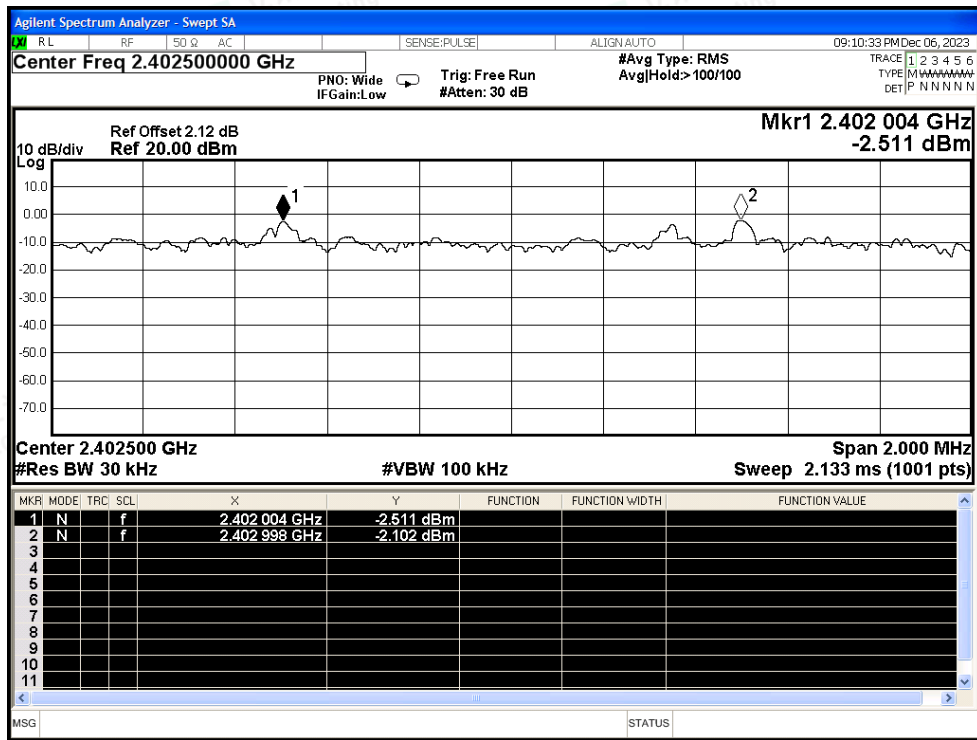


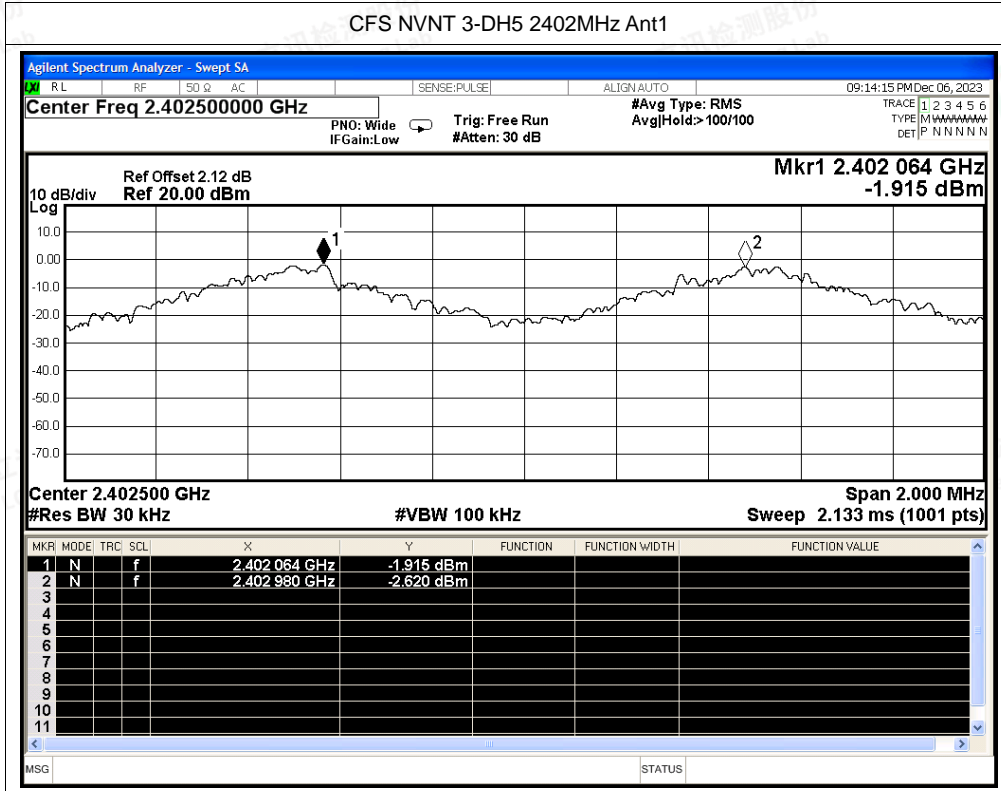
Test Graphs

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	2.886	288.6	100	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	291.385	101	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.363	274.108	116	31600	400	Pass

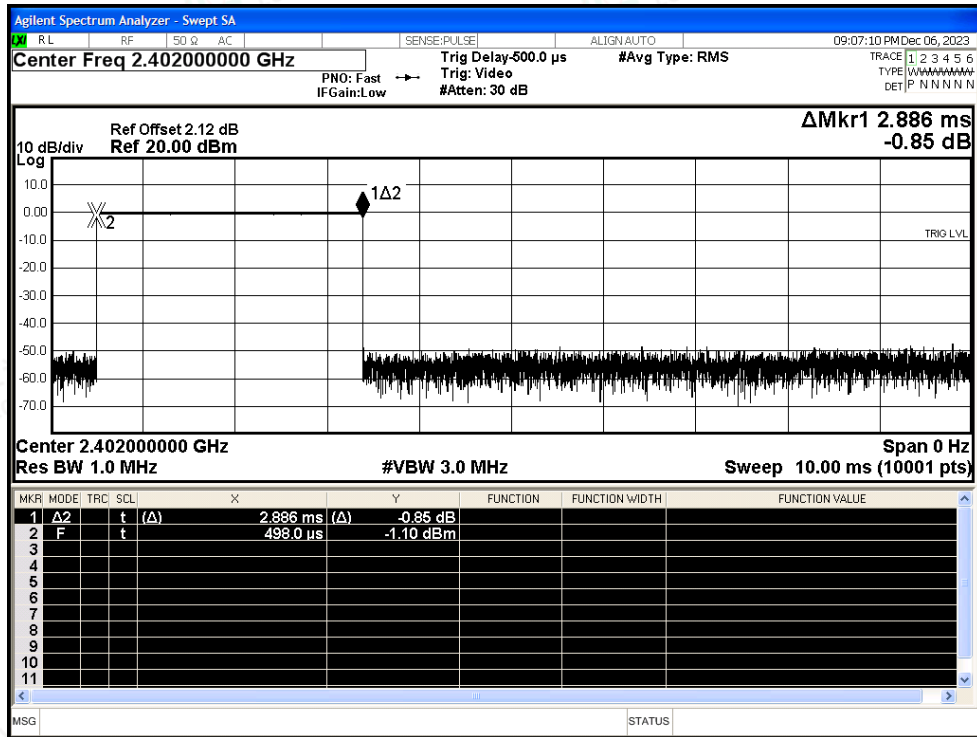


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Scan code to check authenticity

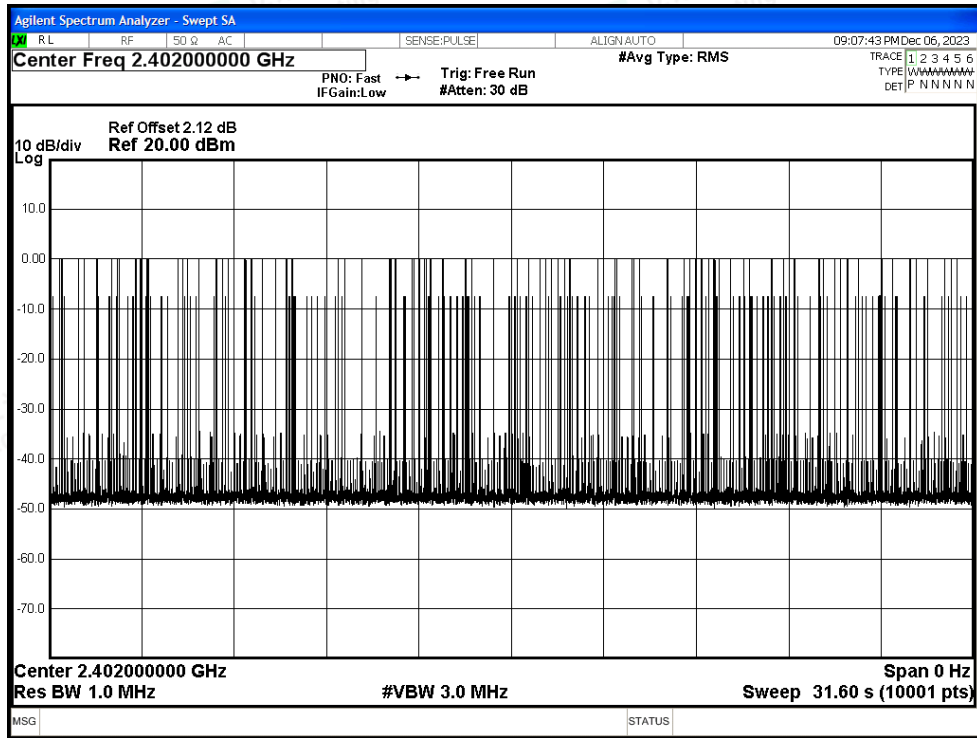


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

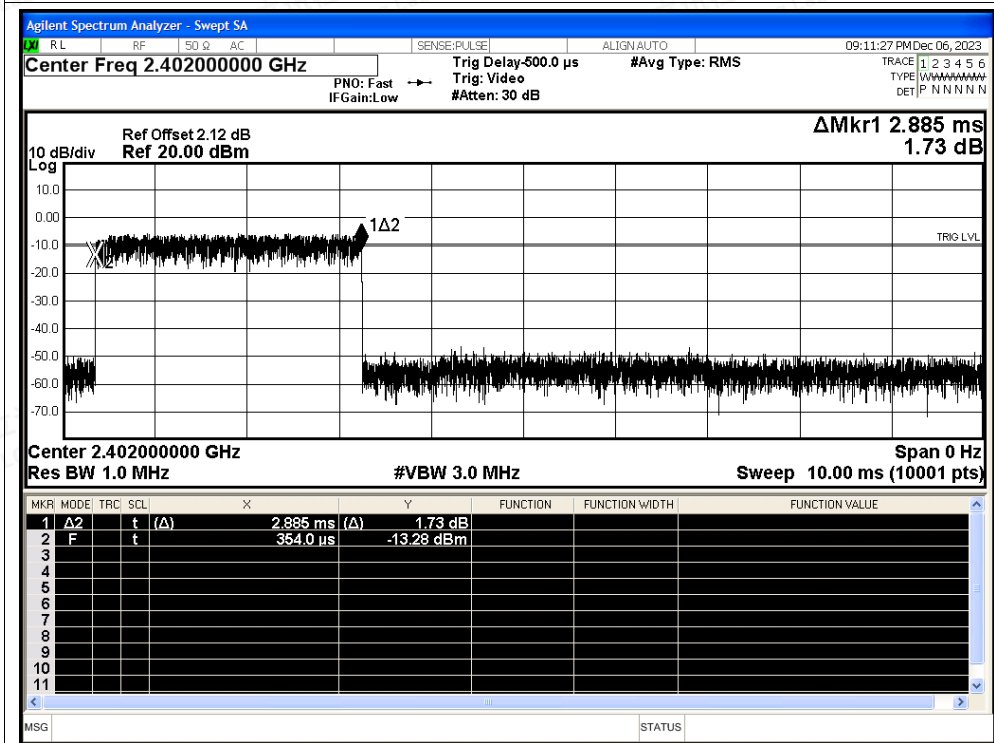


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

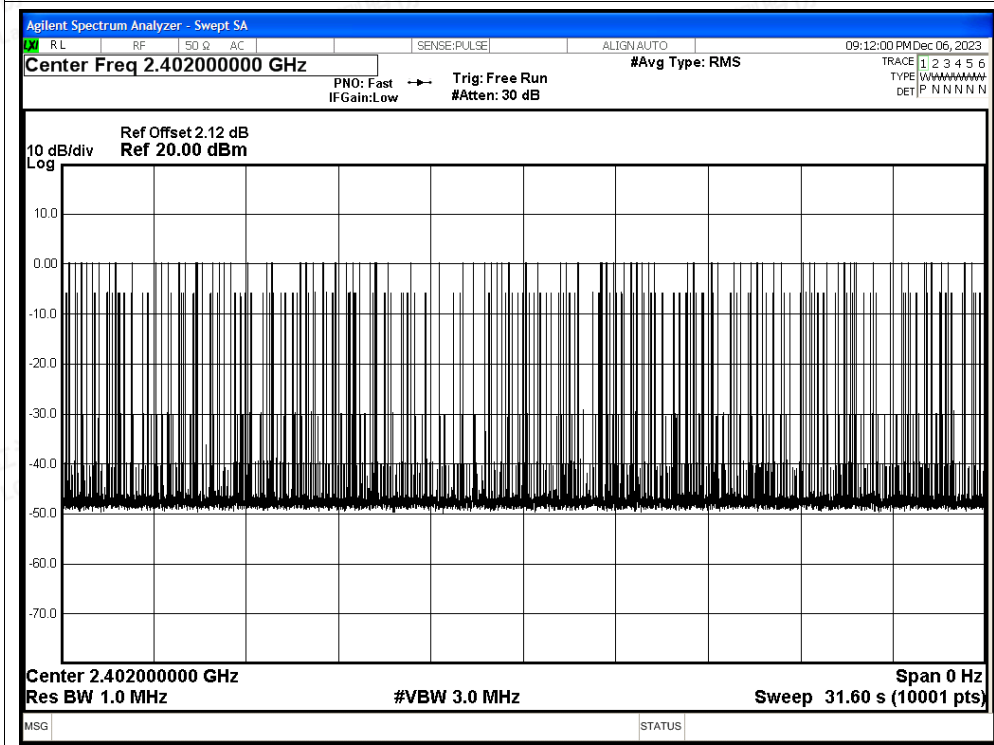




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

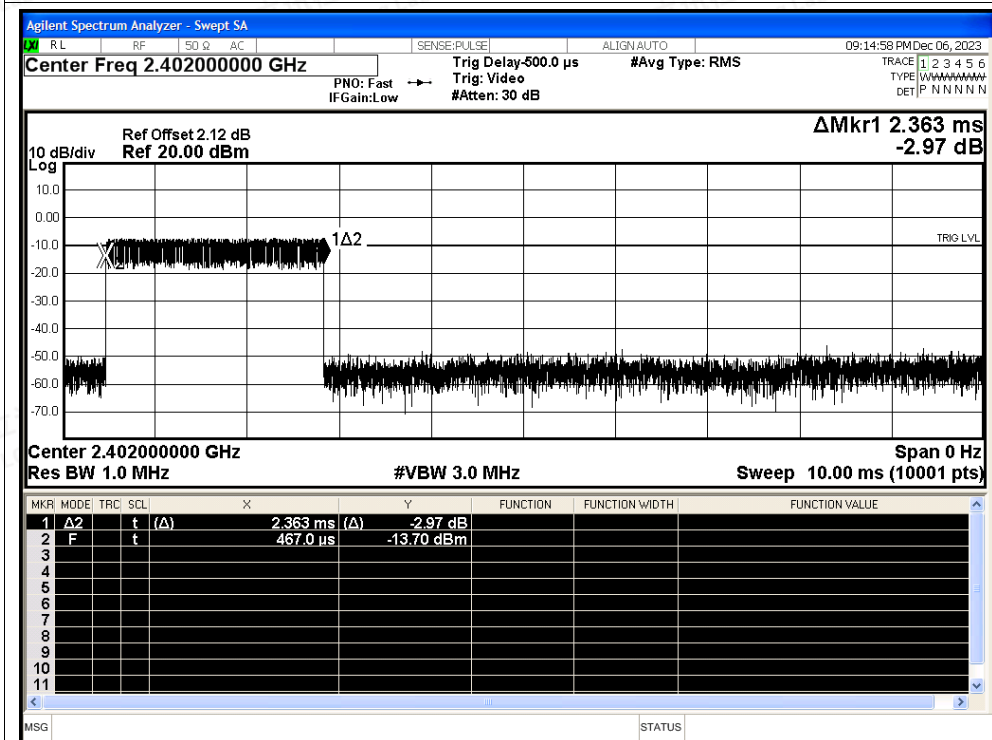


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

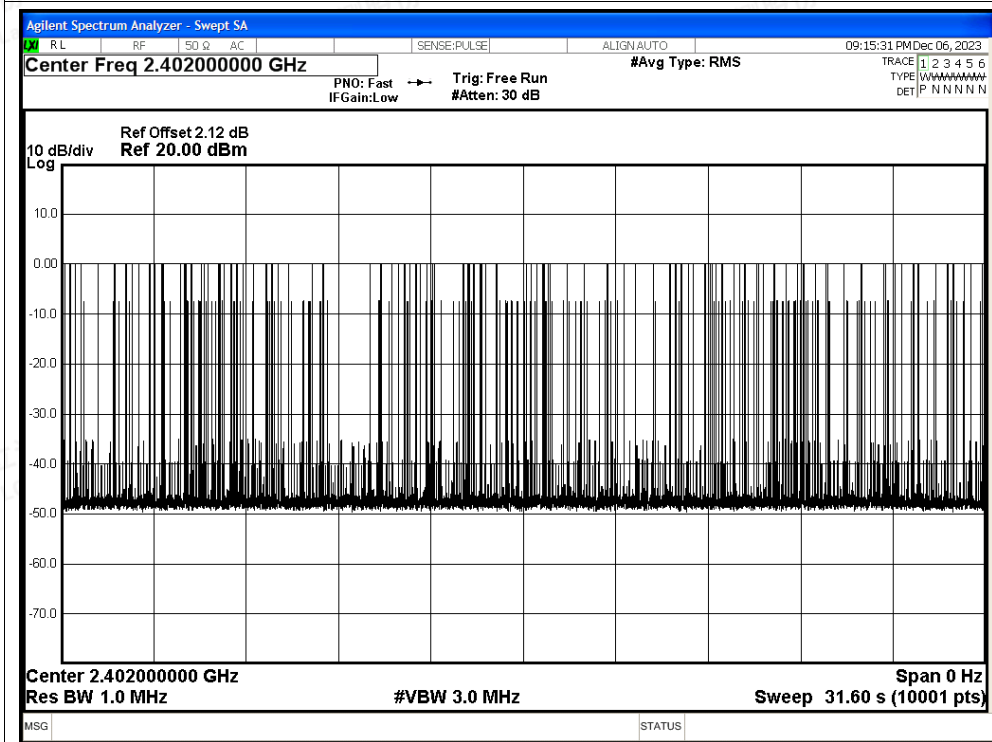




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated





## A.5 Number of Hopping Channel

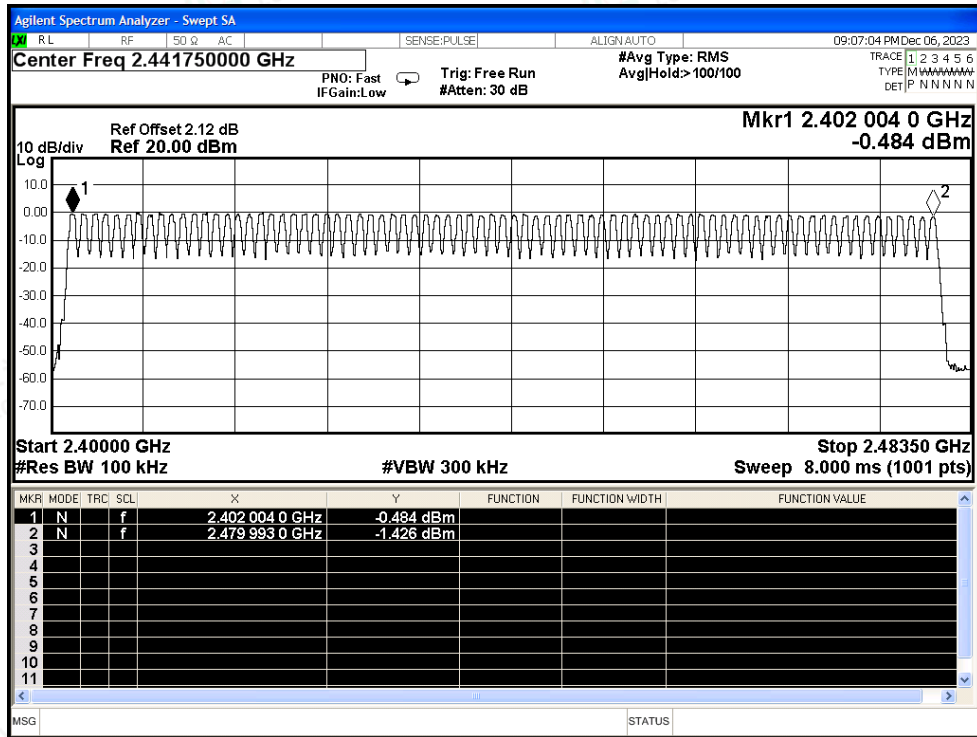
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass



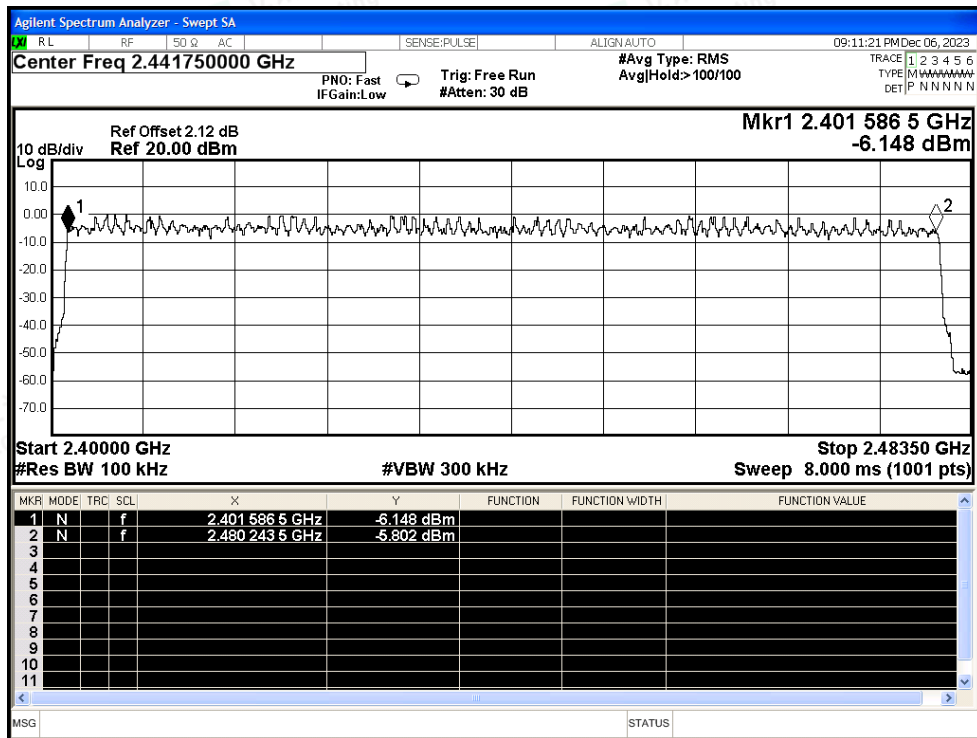


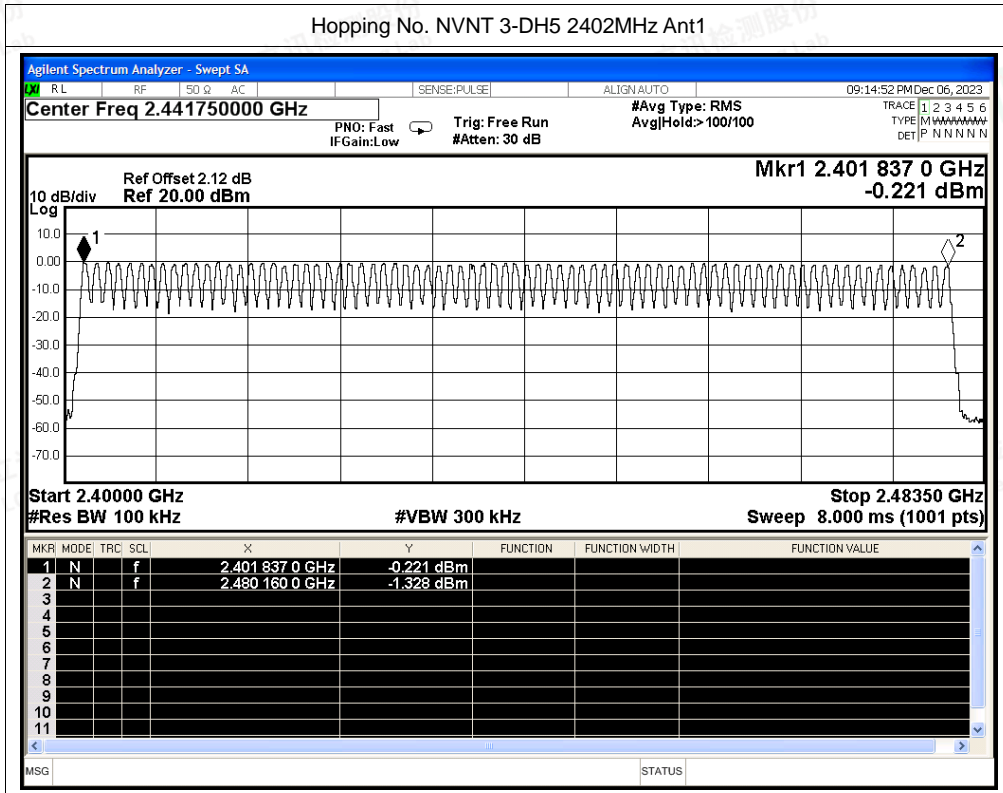
Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1







## A.6 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-54.14	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-55.17	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-52.52	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-55.05	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-54.45	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-55.22	-20	Pass

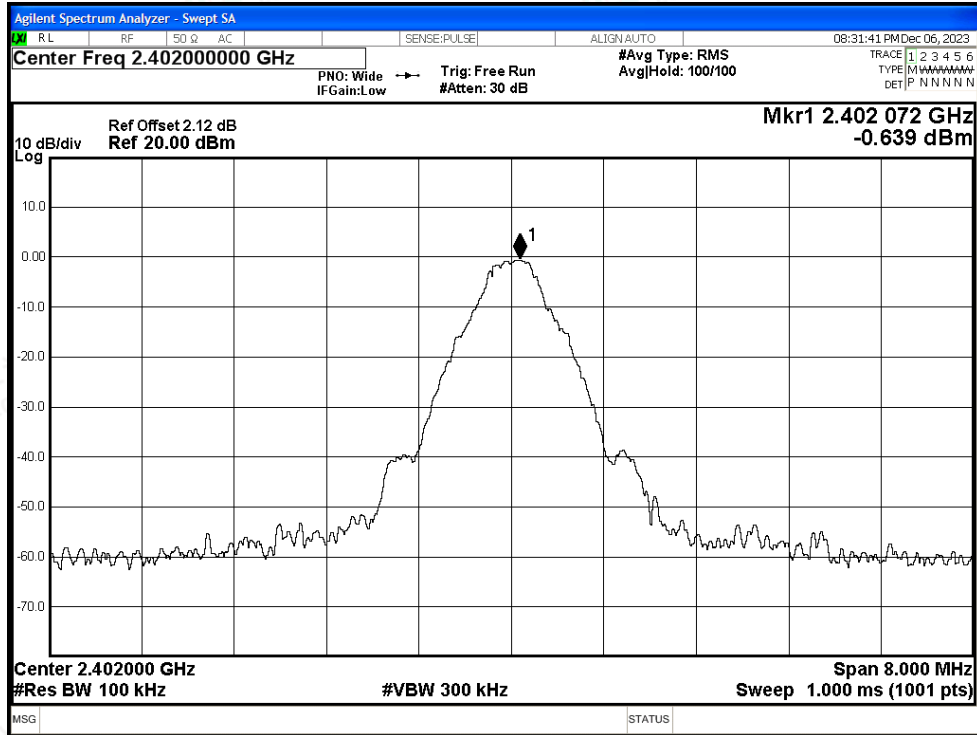




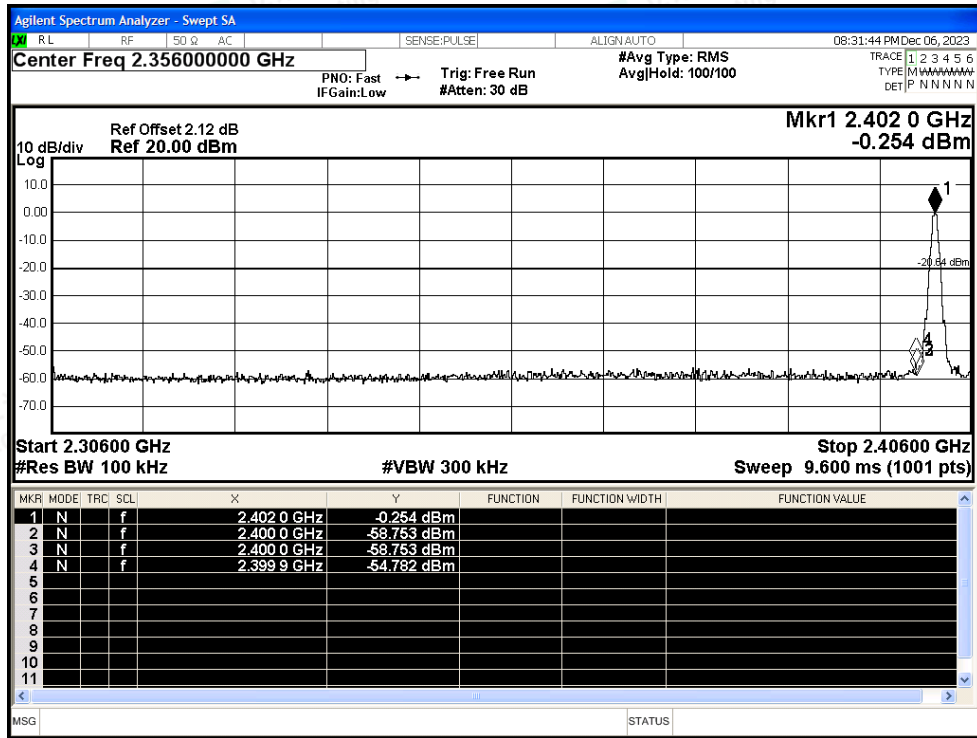


Test Graphs

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

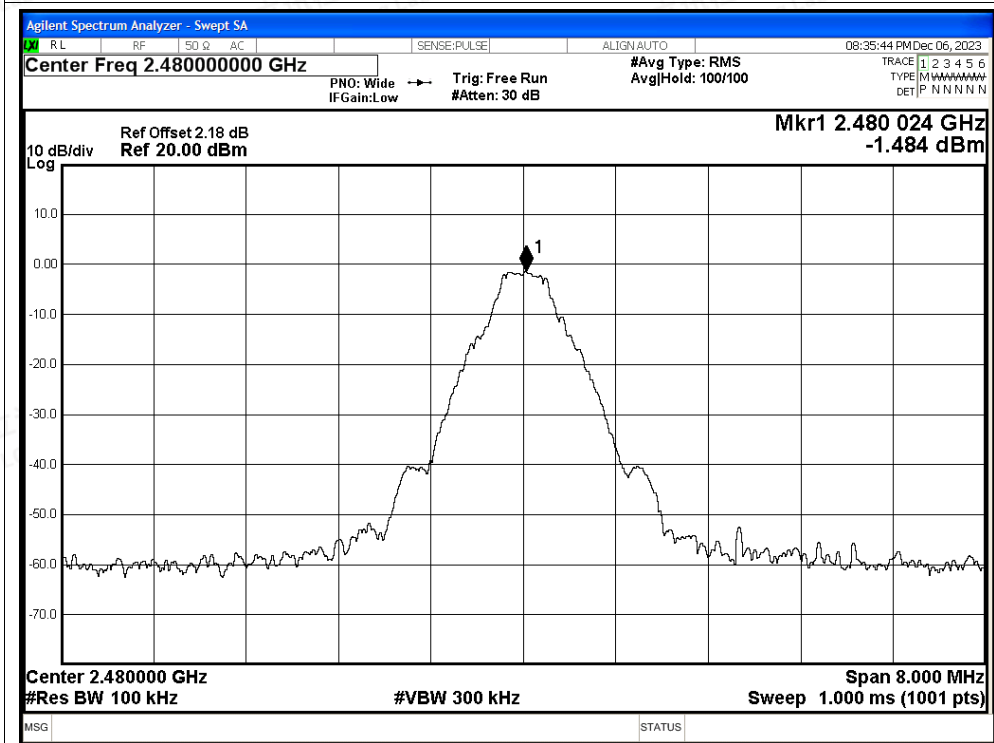


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

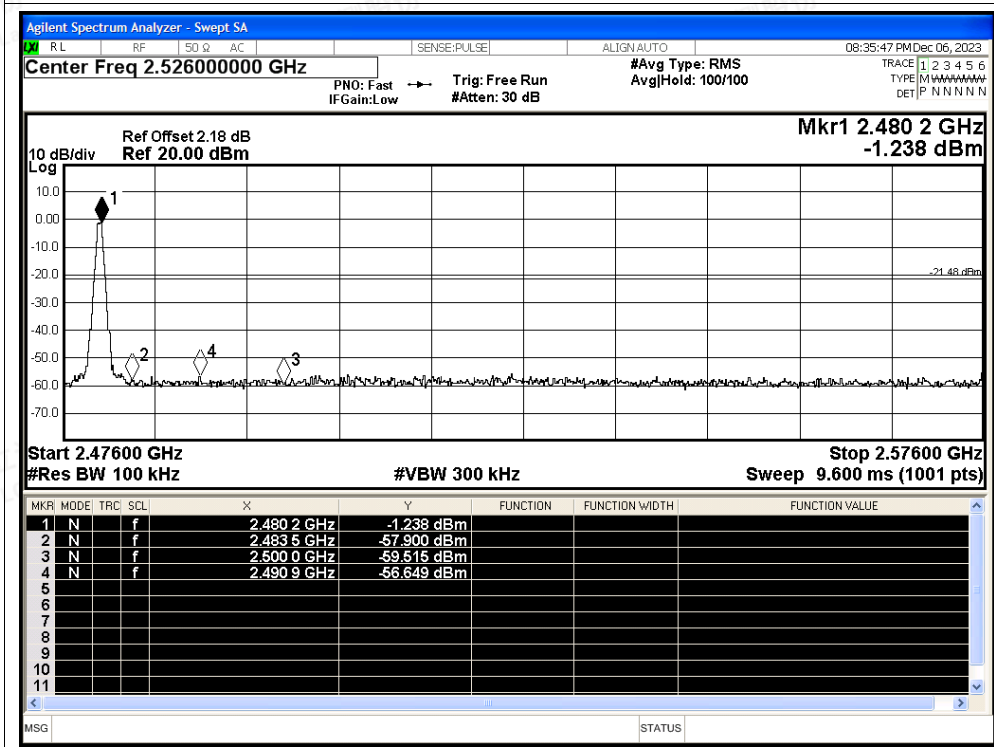




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

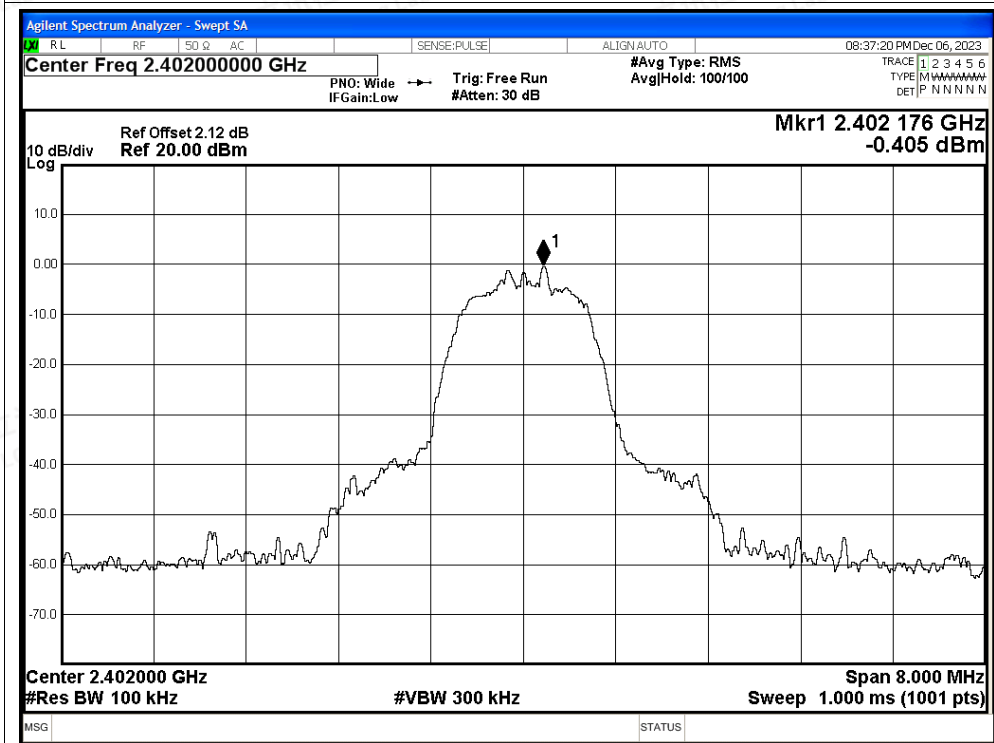


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

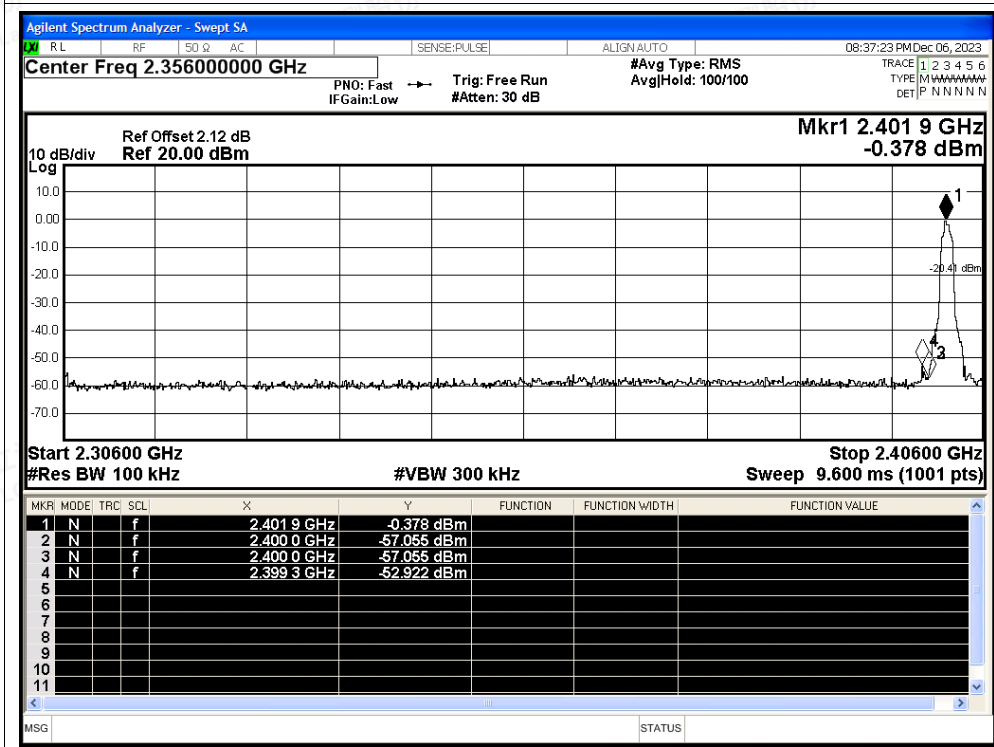




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

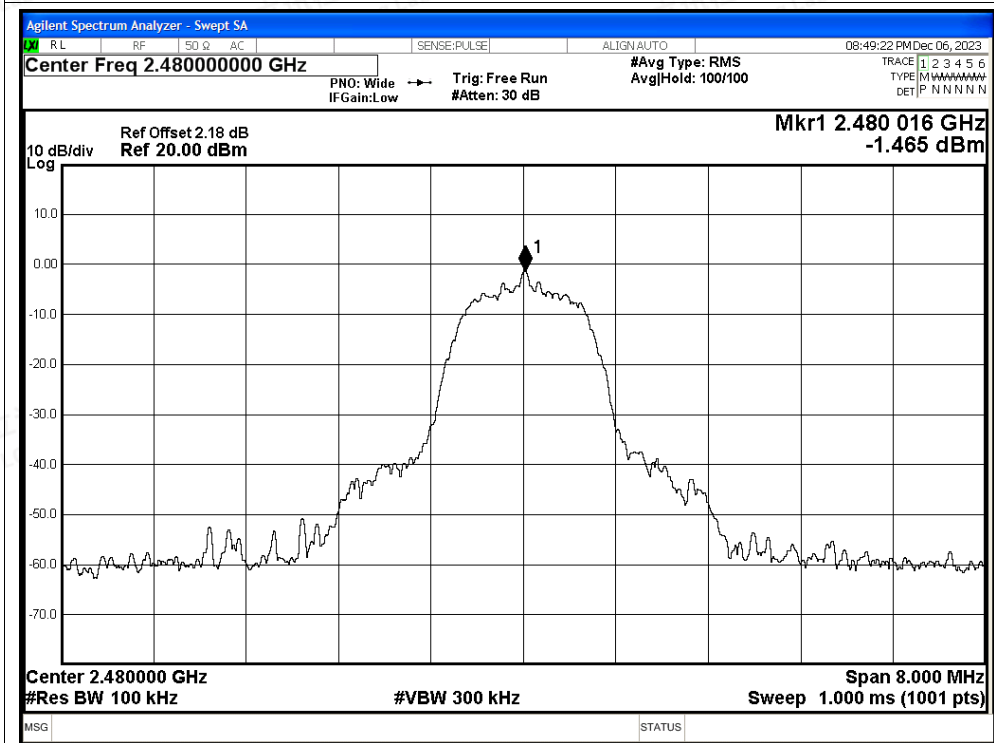


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

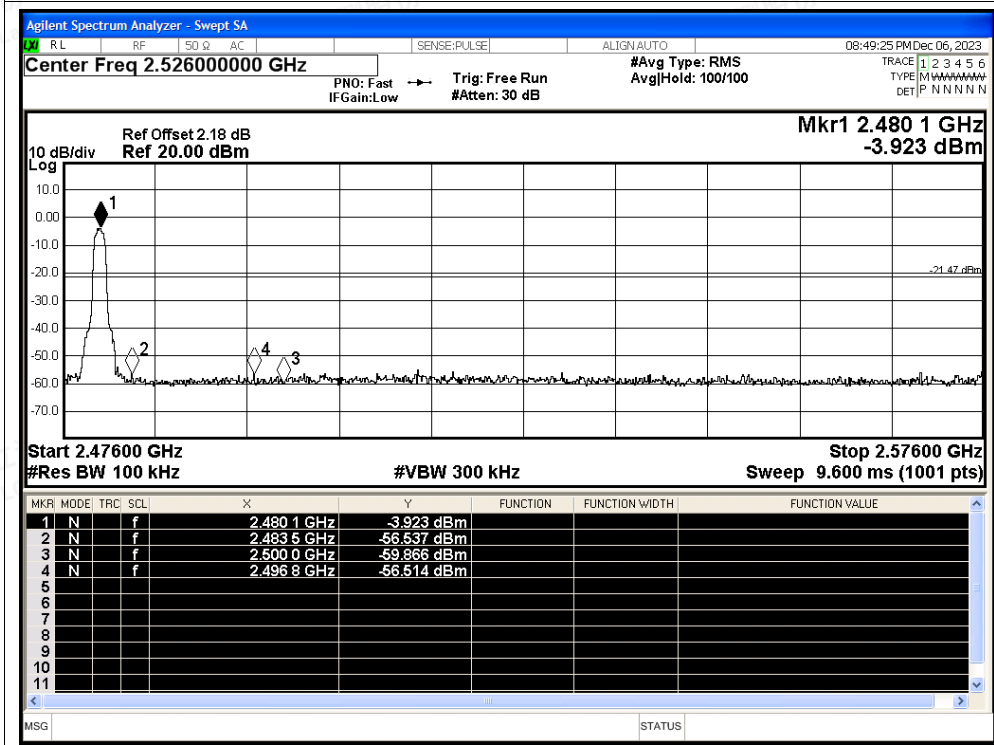




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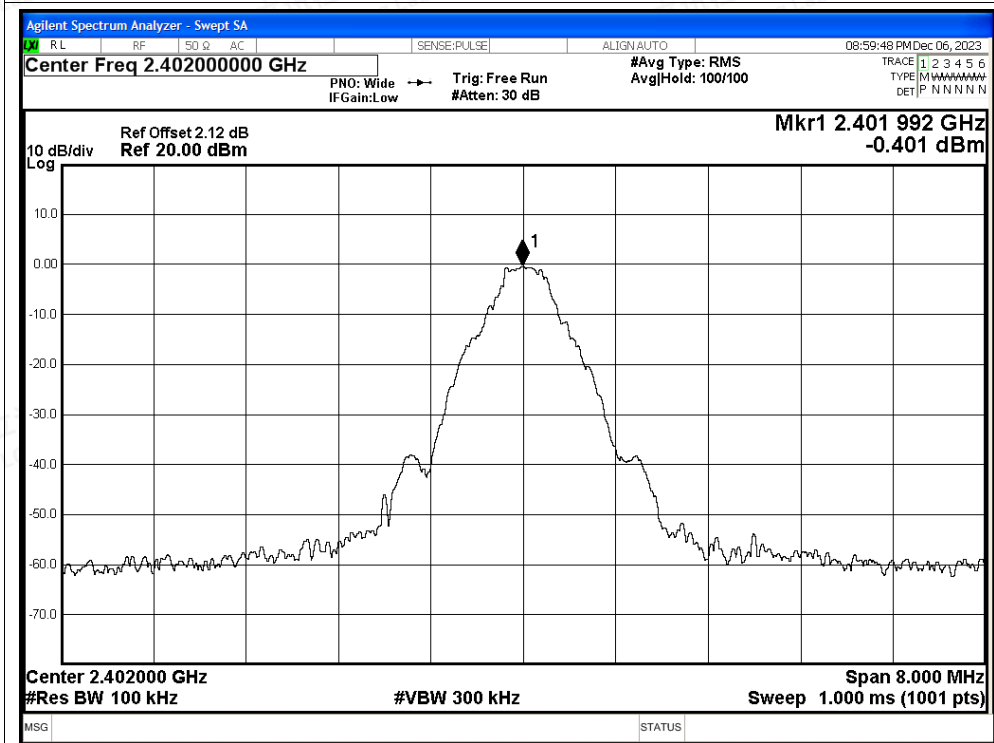


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

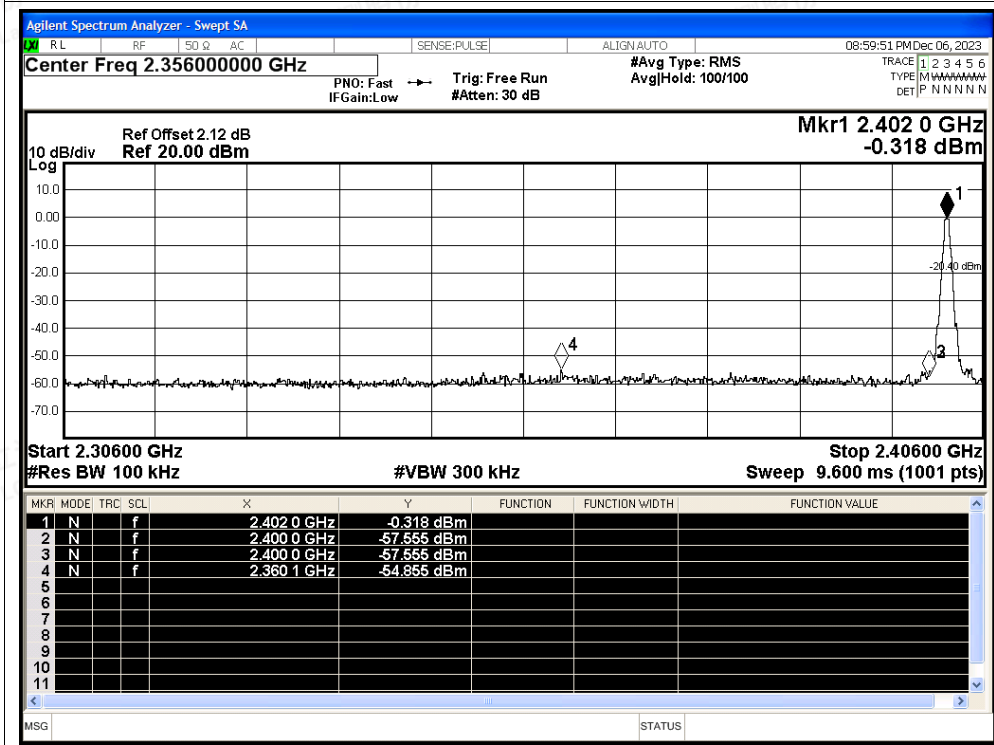




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

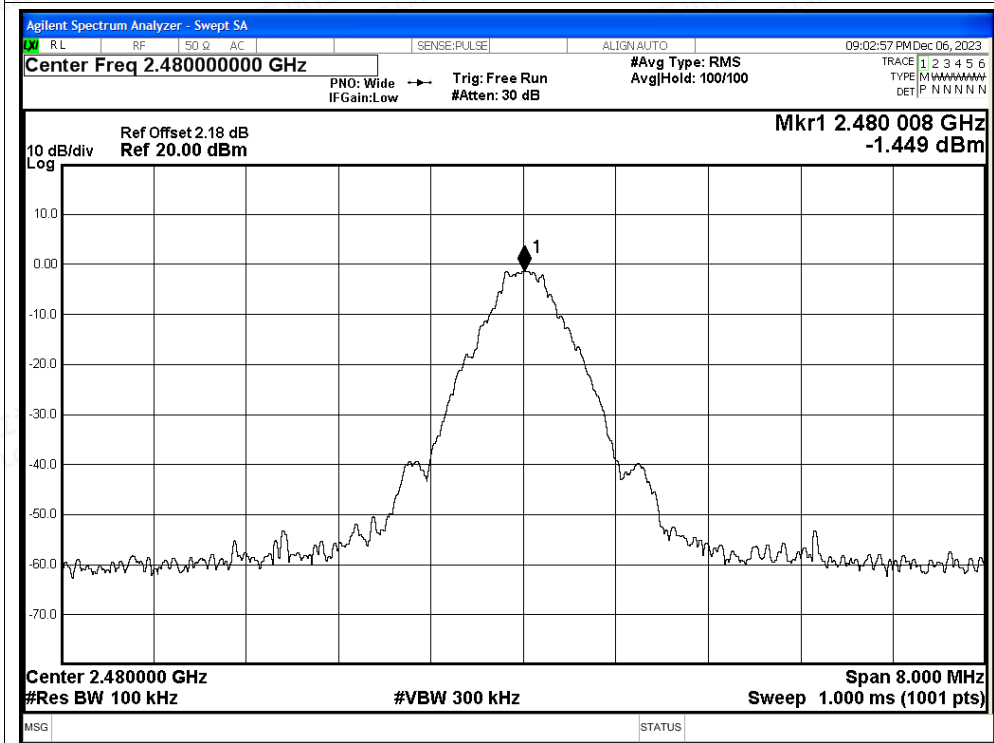


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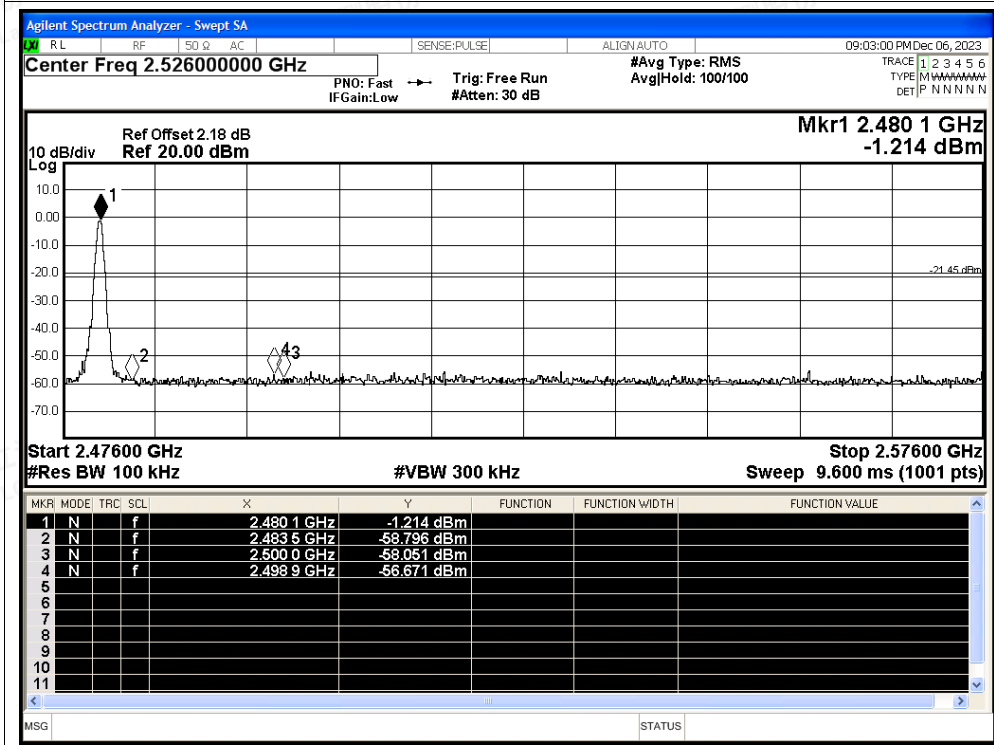




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-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	-51.14	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-50.39	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-52.46	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-53.47	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-51.11	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-51.6	-20	Pass

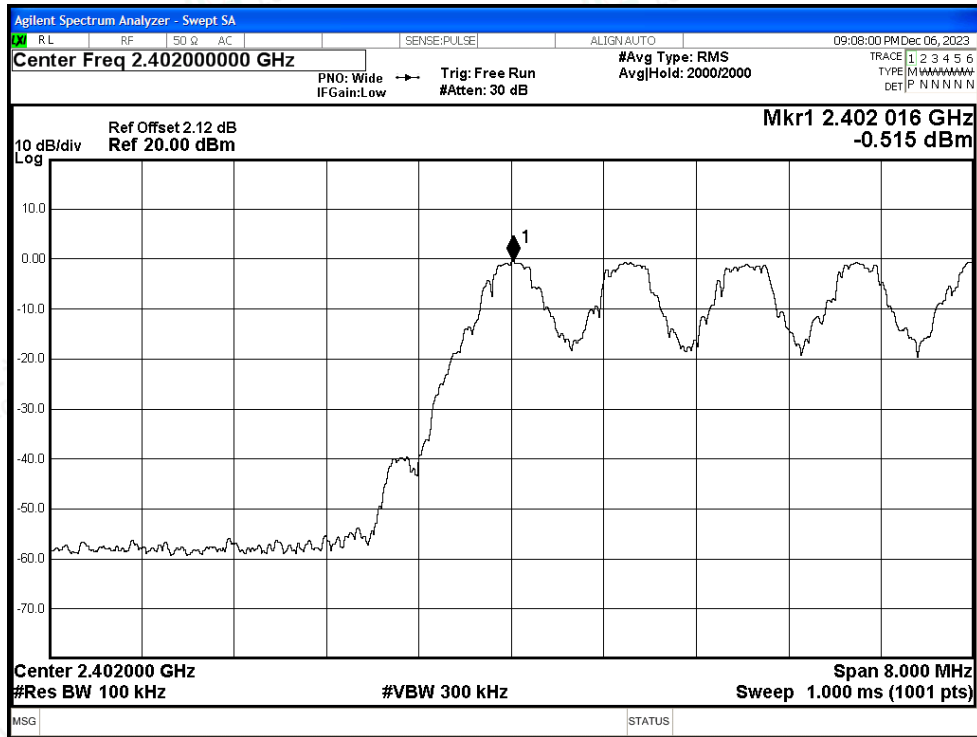


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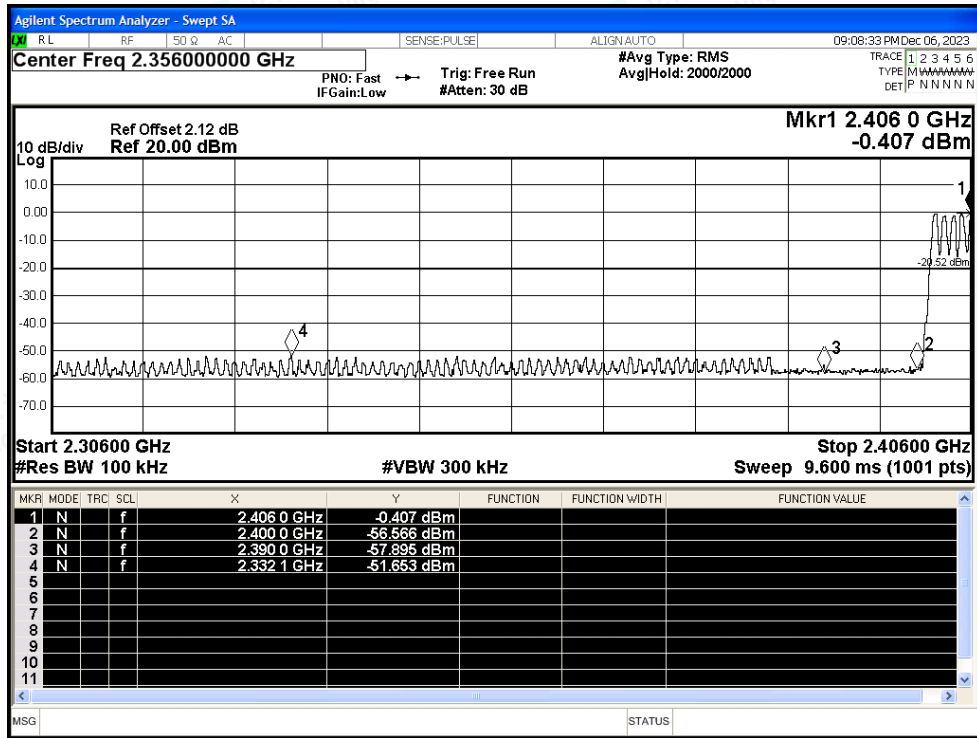


Test Graphs

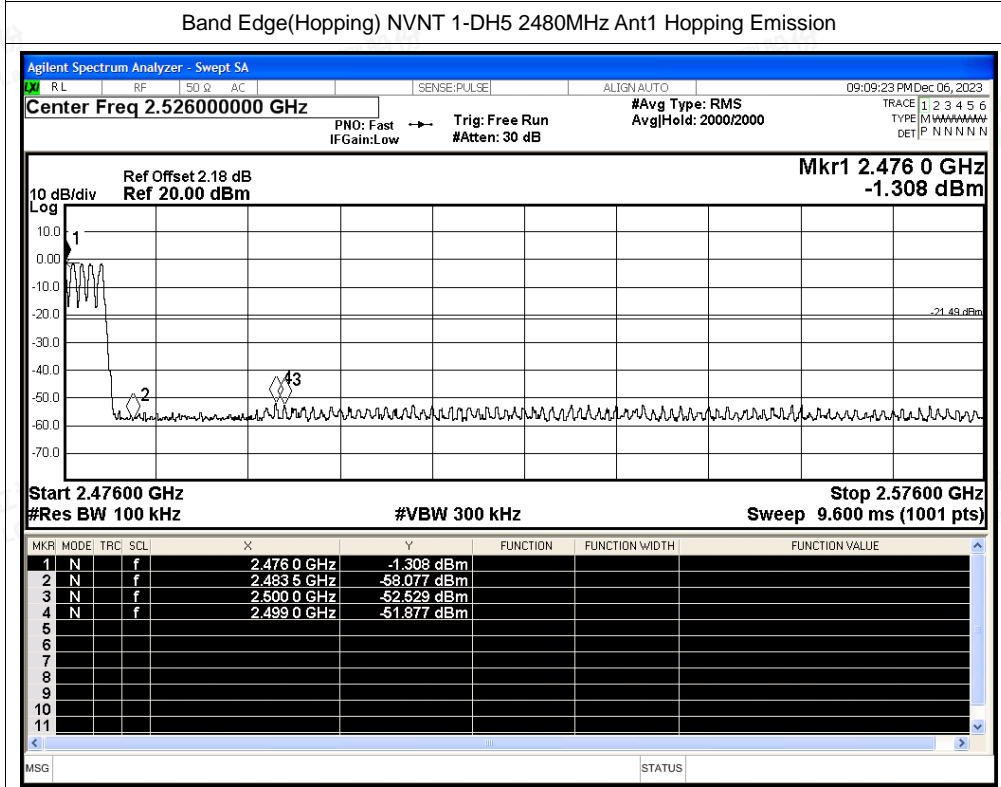
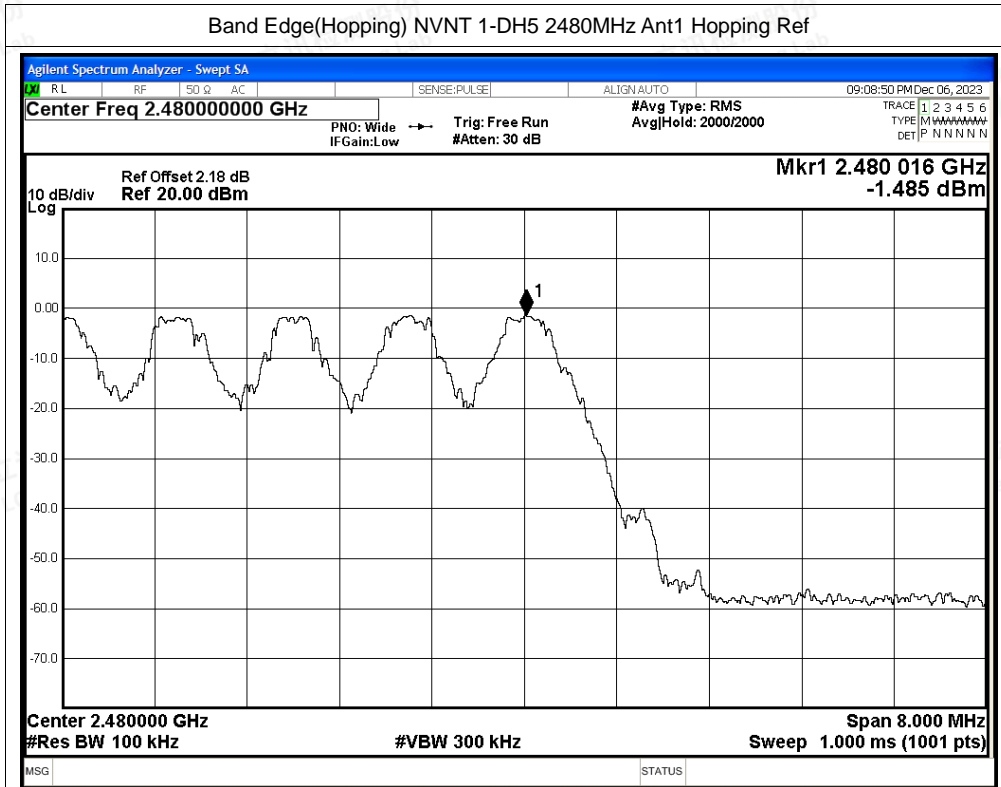
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref

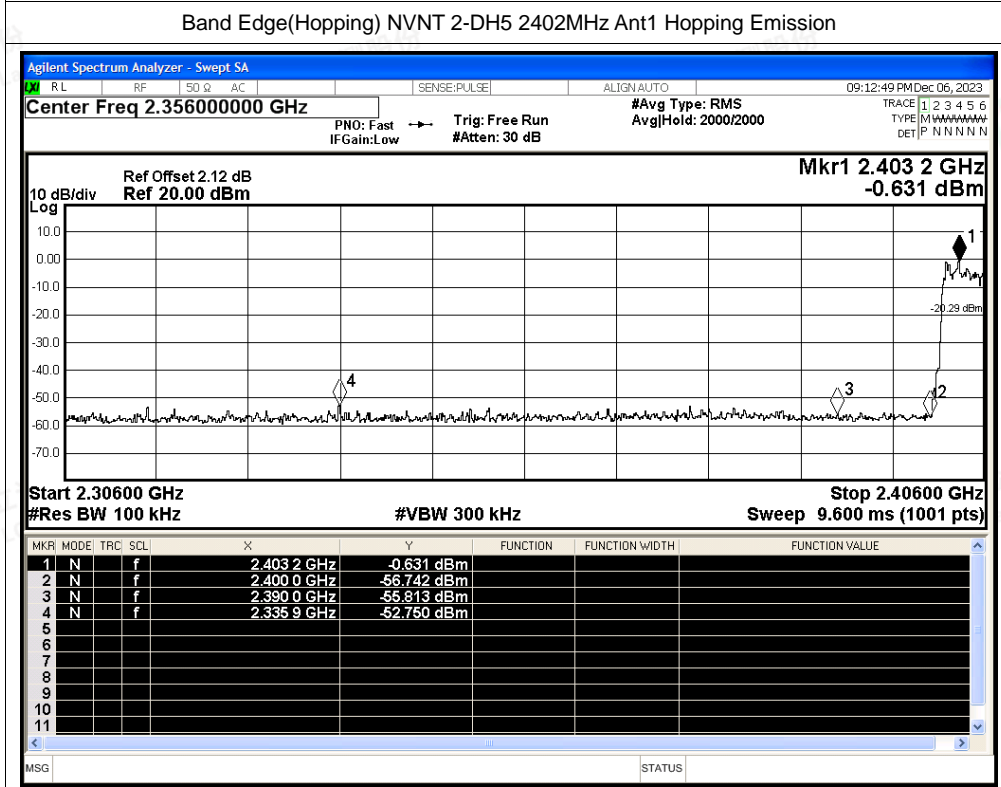
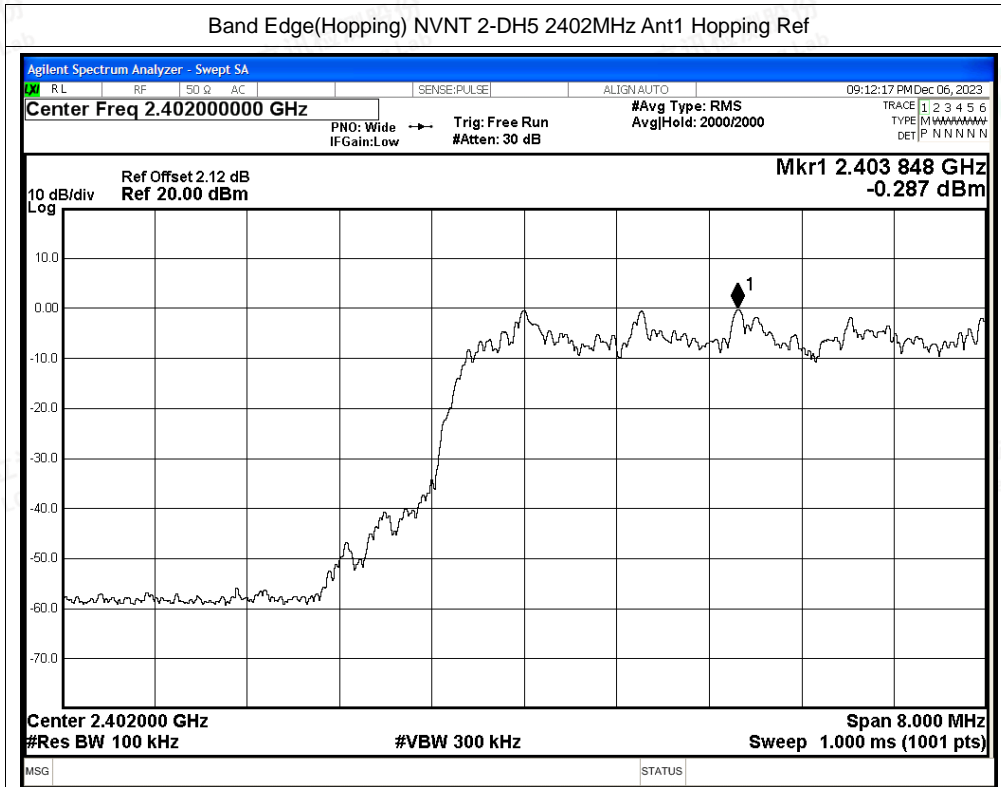


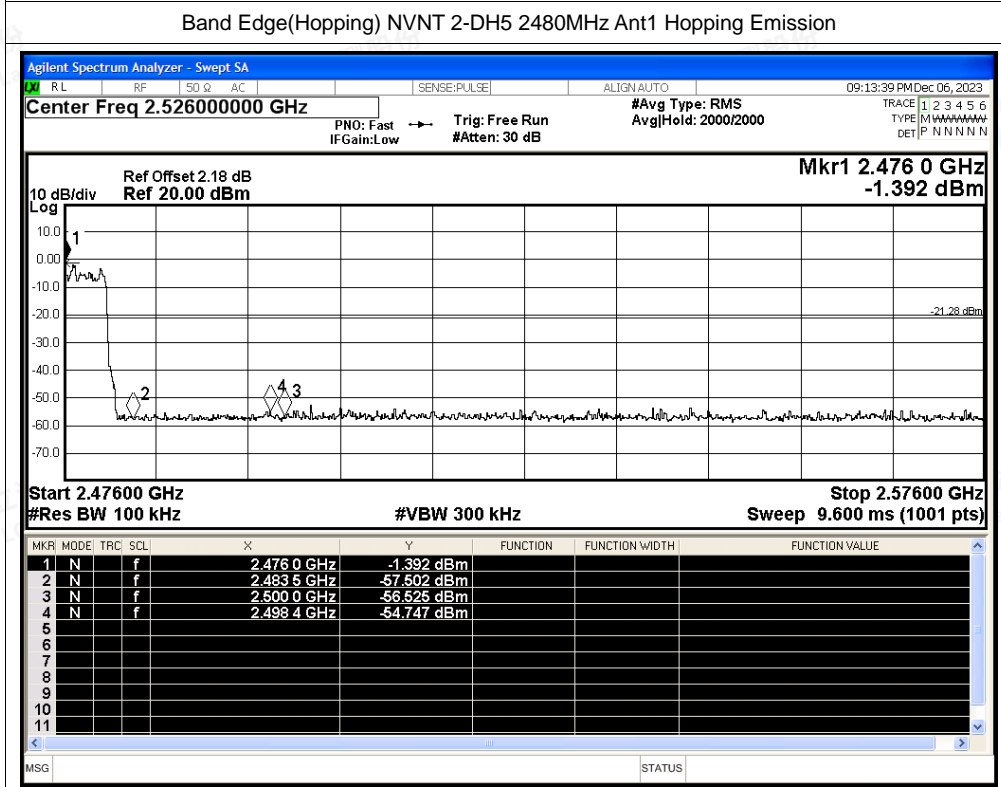
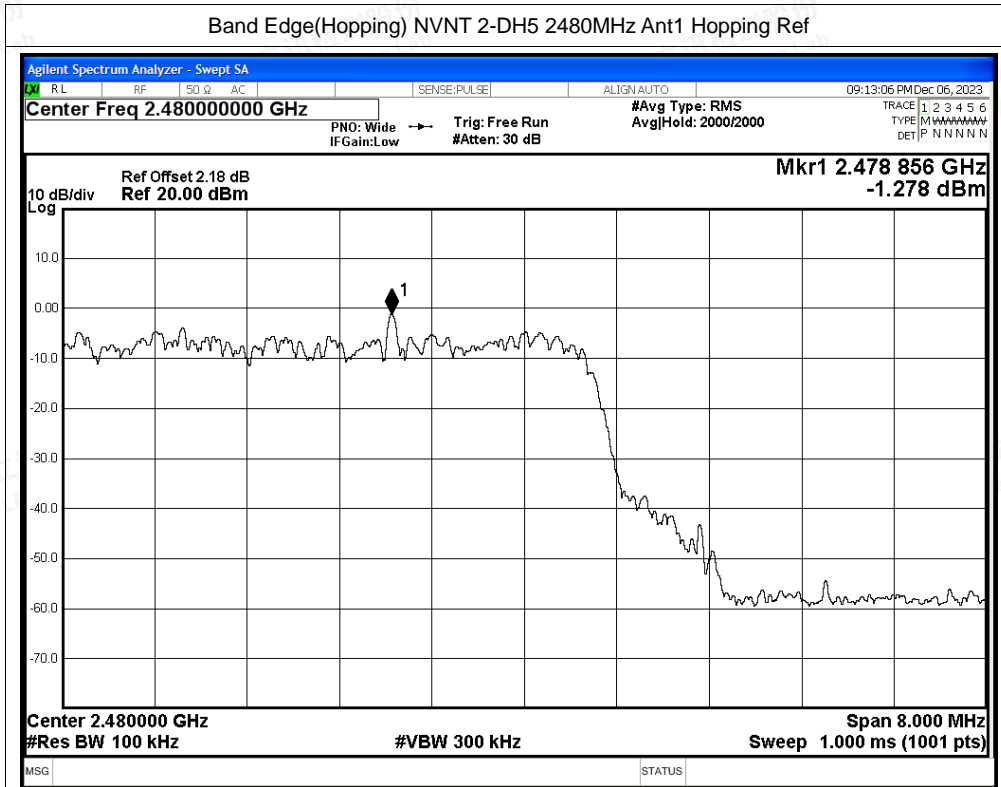
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

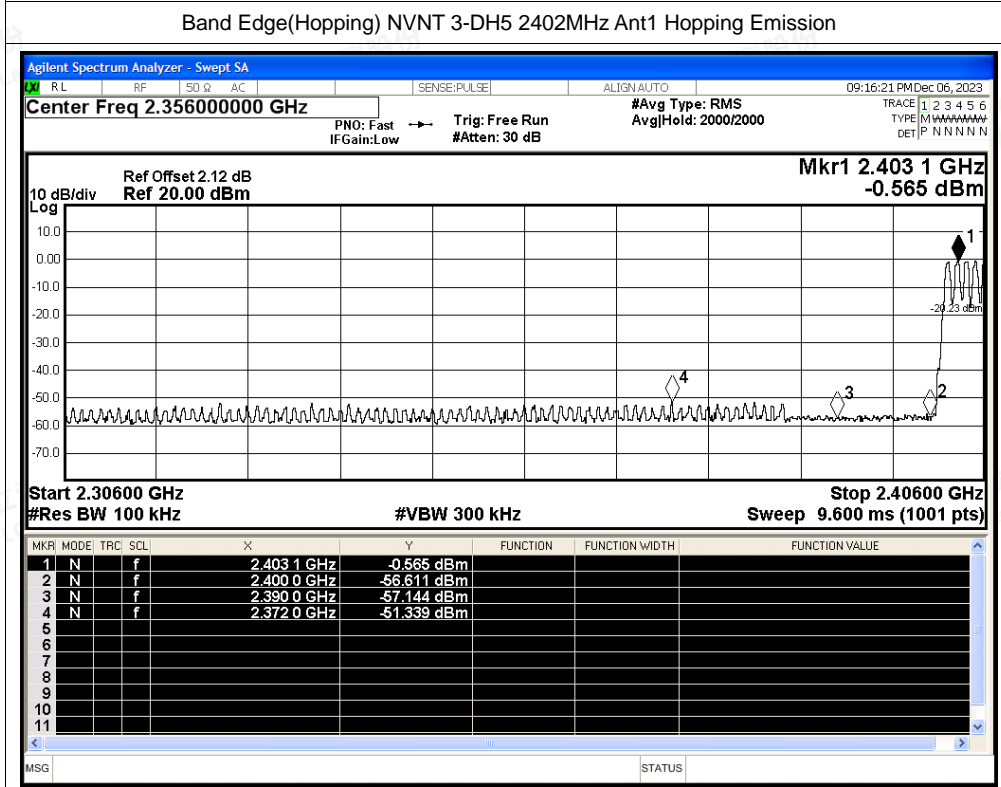
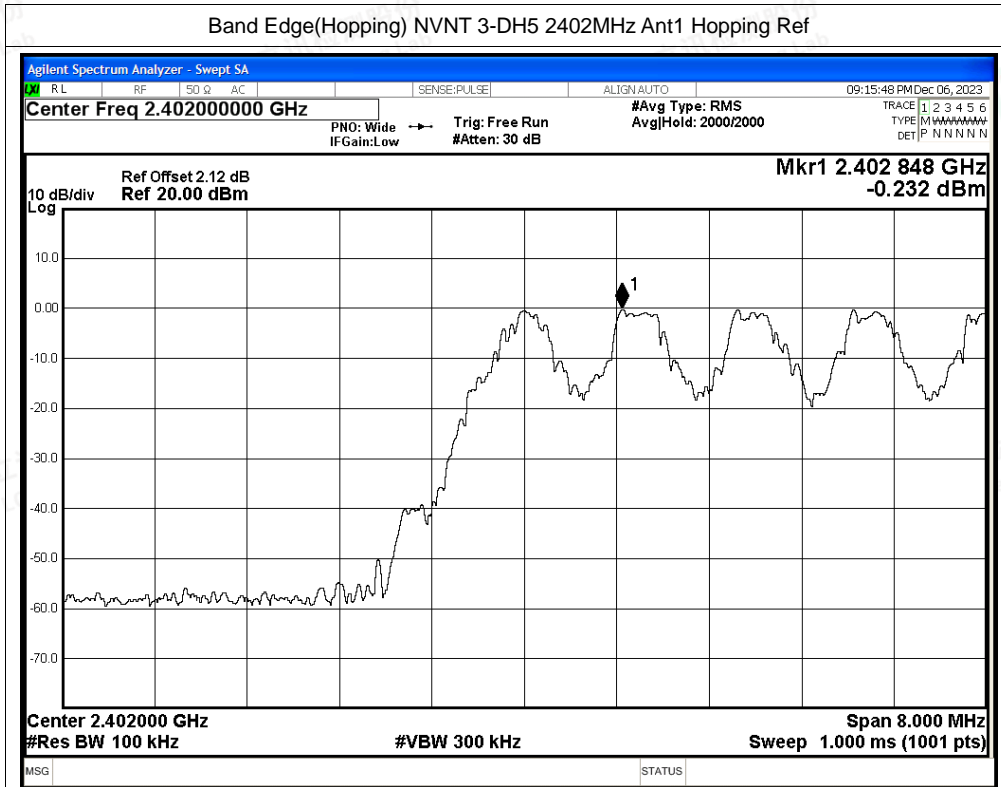


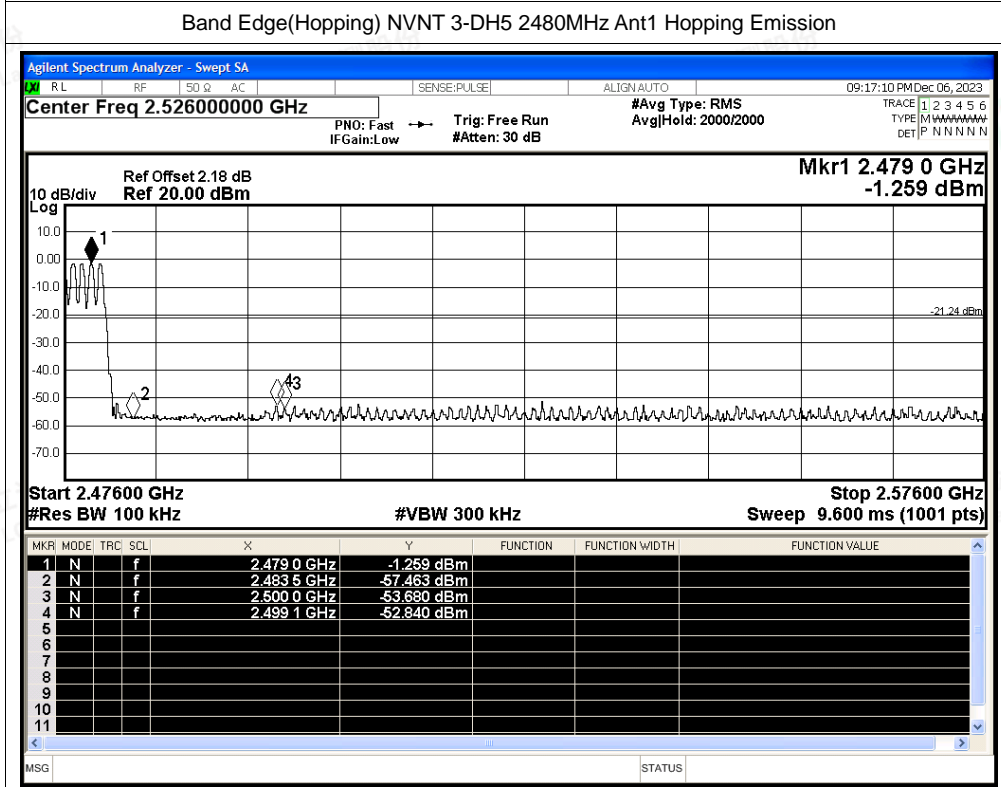
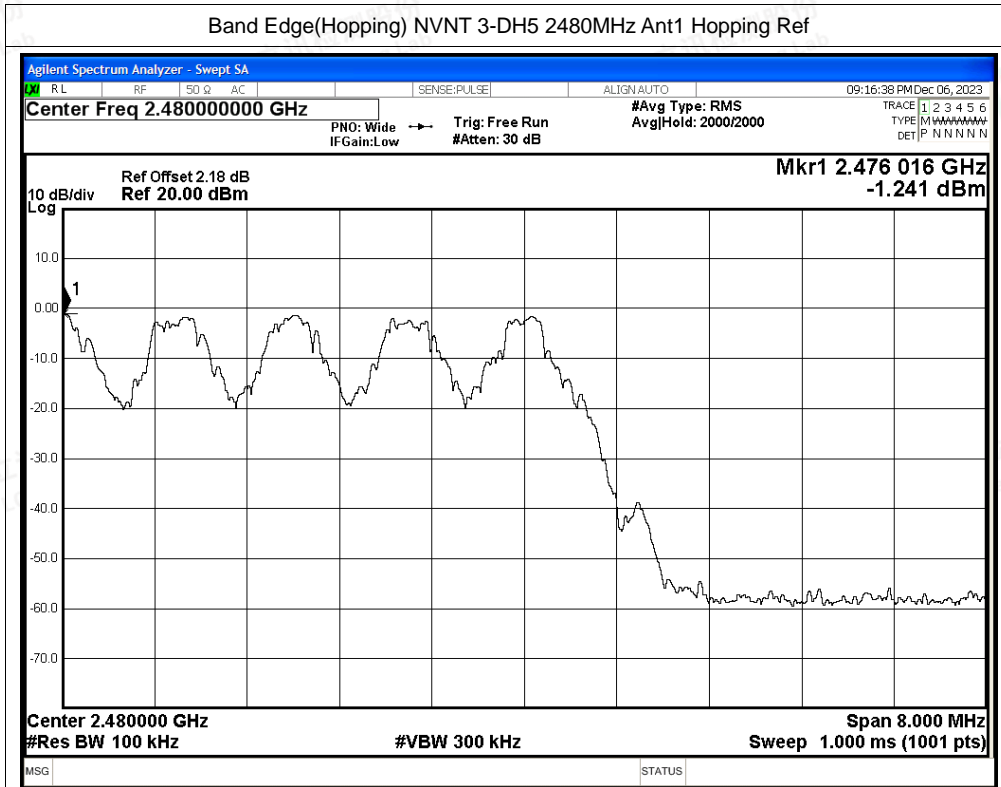














## A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-48.1	-20	Pass
NVNT	1-DH5	2441	Ant1	-47.2	-20	Pass
NVNT	1-DH5	2480	Ant1	-45.98	-20	Pass
NVNT	2-DH5	2402	Ant1	-48.97	-20	Pass
NVNT	2-DH5	2441	Ant1	-47.66	-20	Pass
NVNT	2-DH5	2480	Ant1	-46.01	-20	Pass
NVNT	3-DH5	2402	Ant1	-47.7	-20	Pass
NVNT	3-DH5	2441	Ant1	-47.94	-20	Pass
NVNT	3-DH5	2480	Ant1	-47.03	-20	Pass

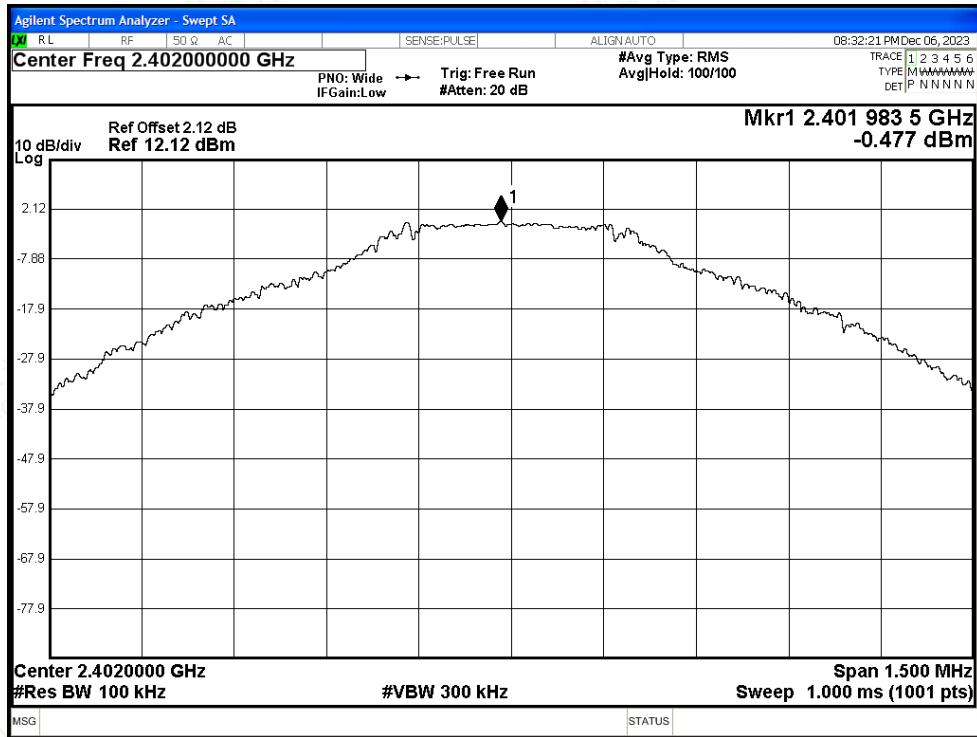


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Scan code to check authenticity

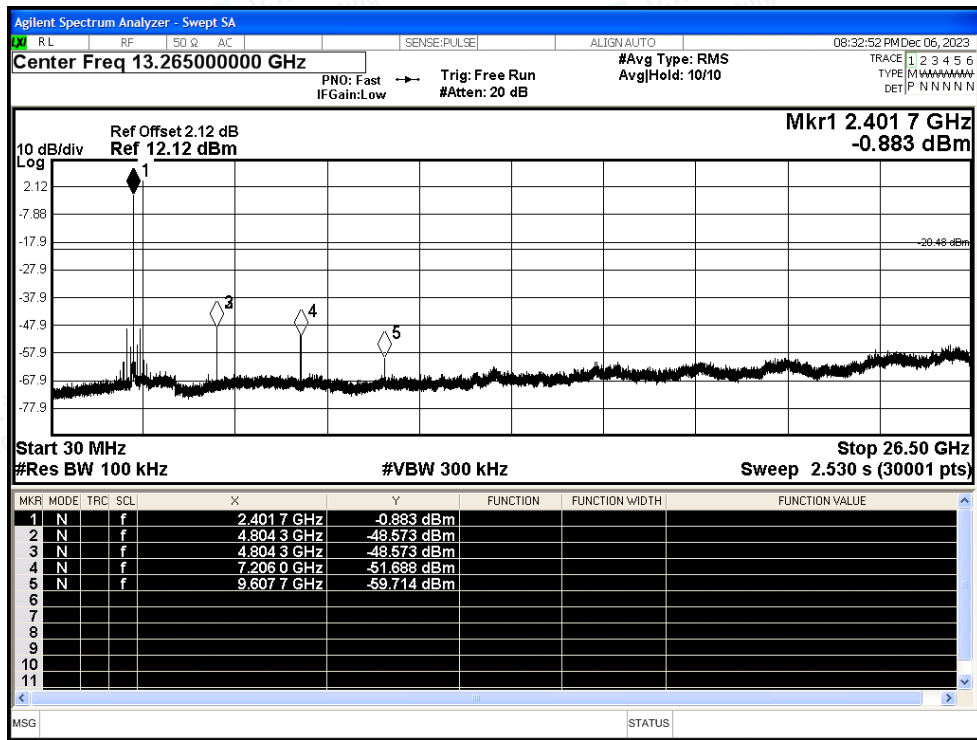


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

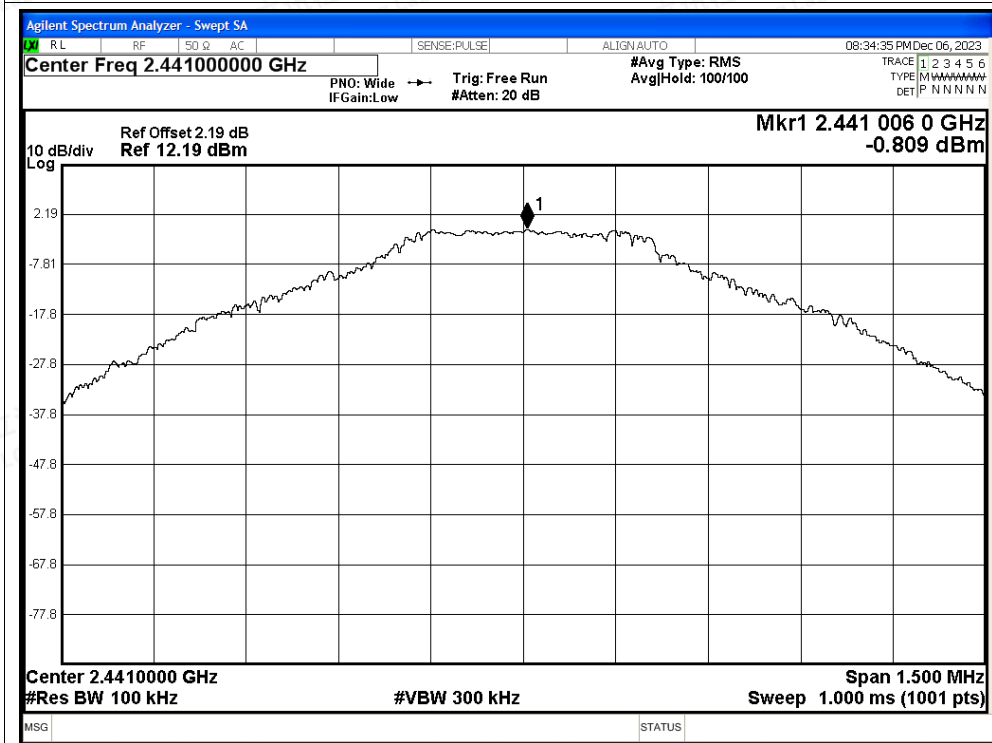


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

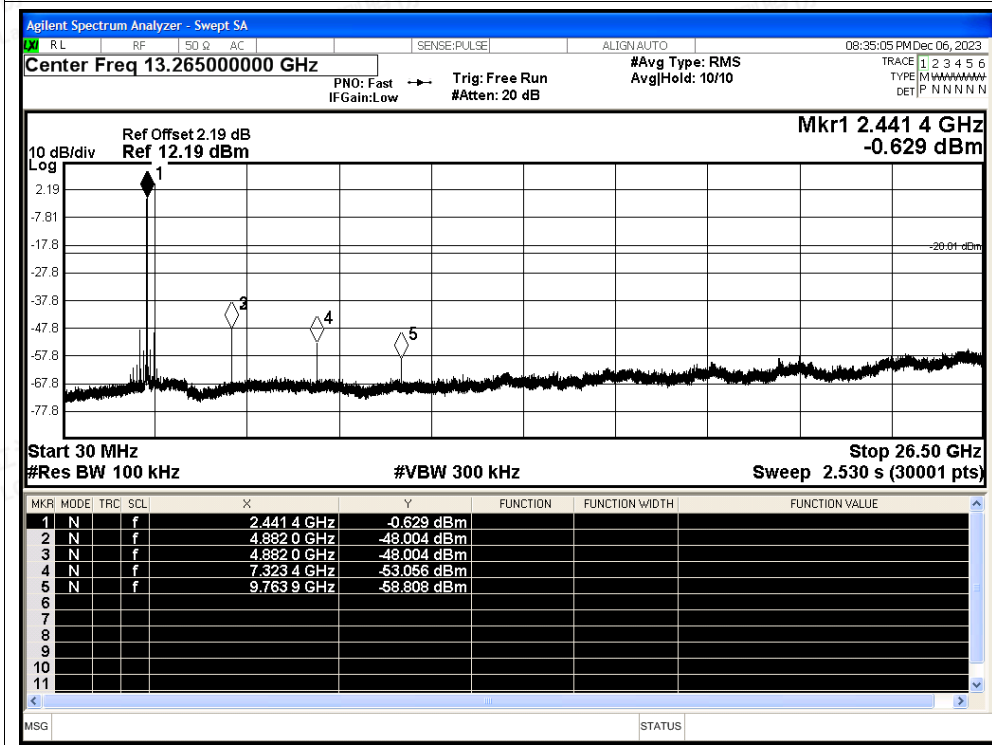




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



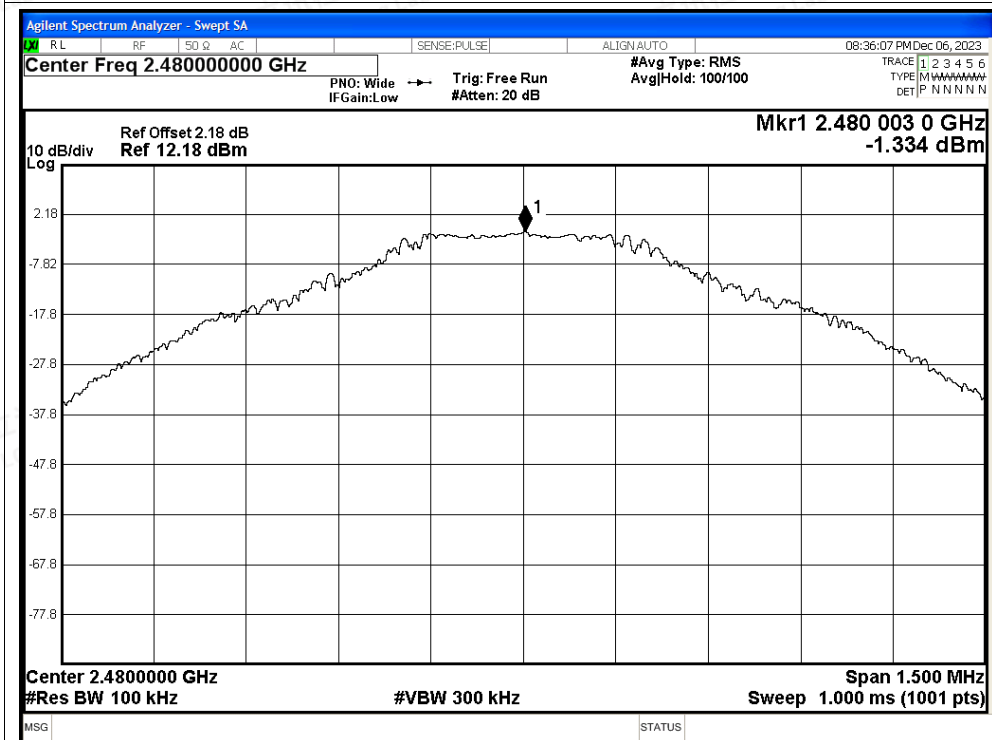
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



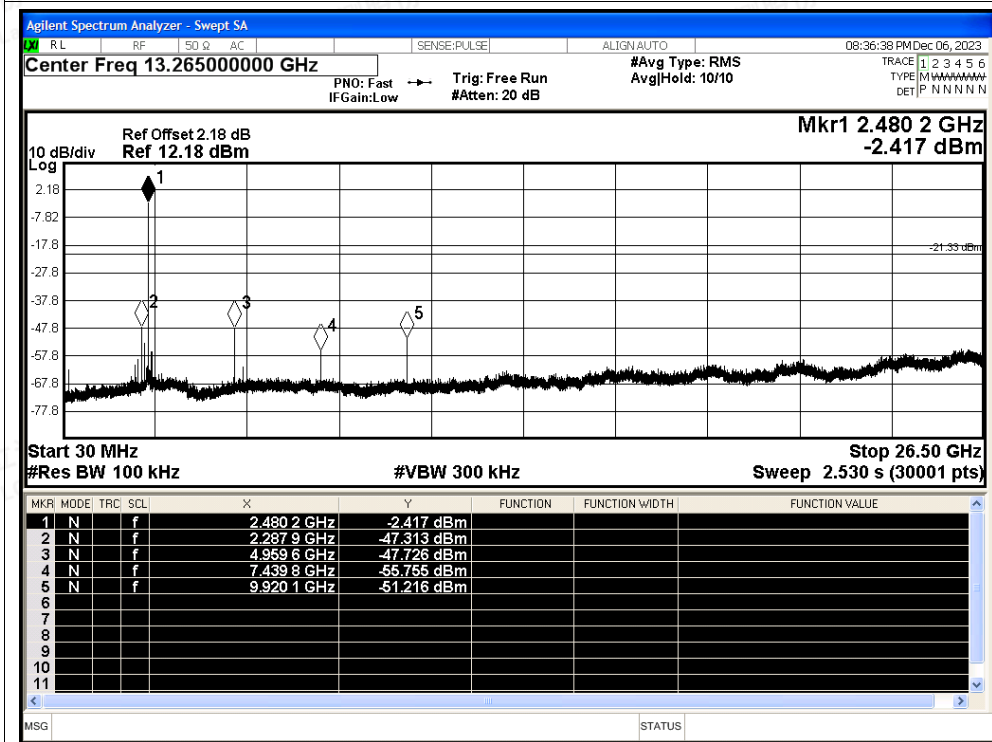




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

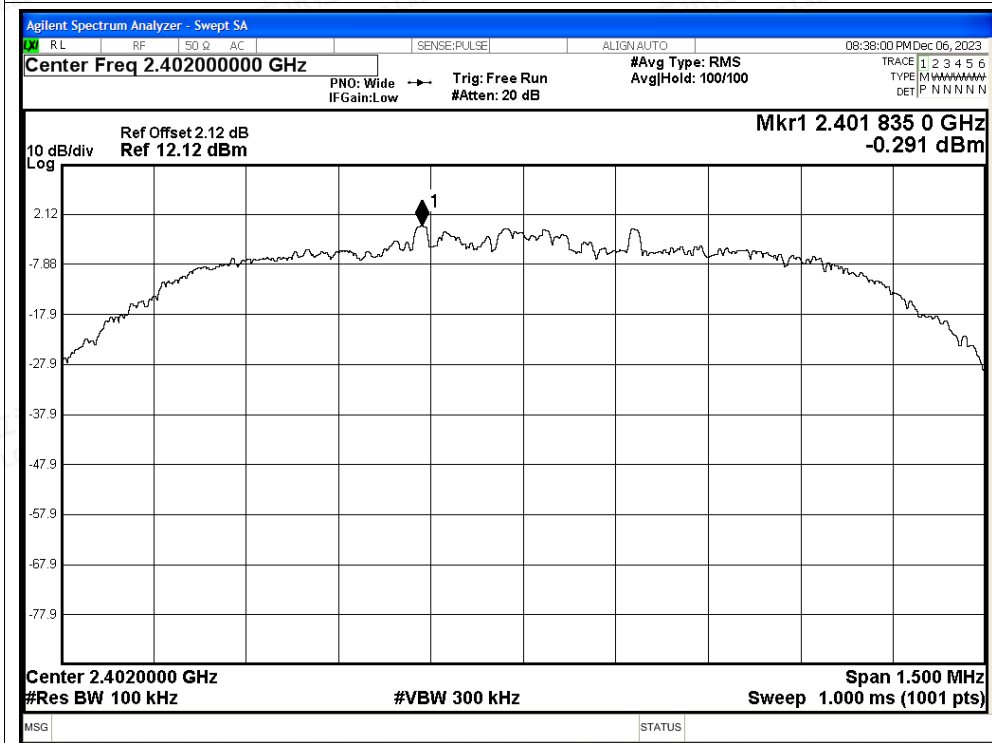


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

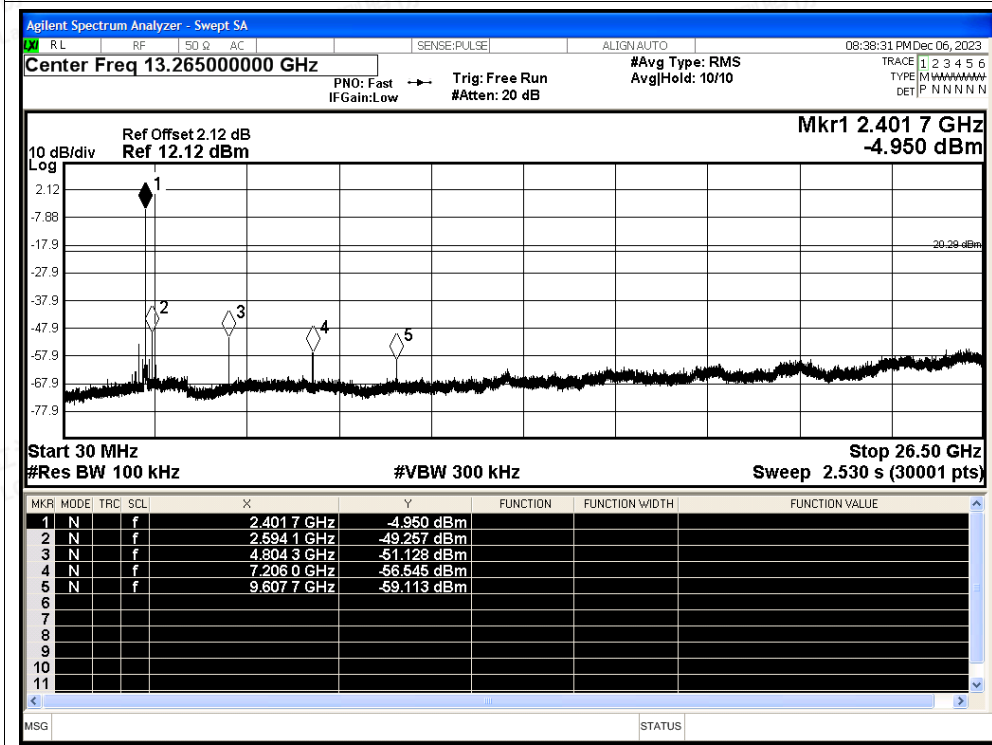




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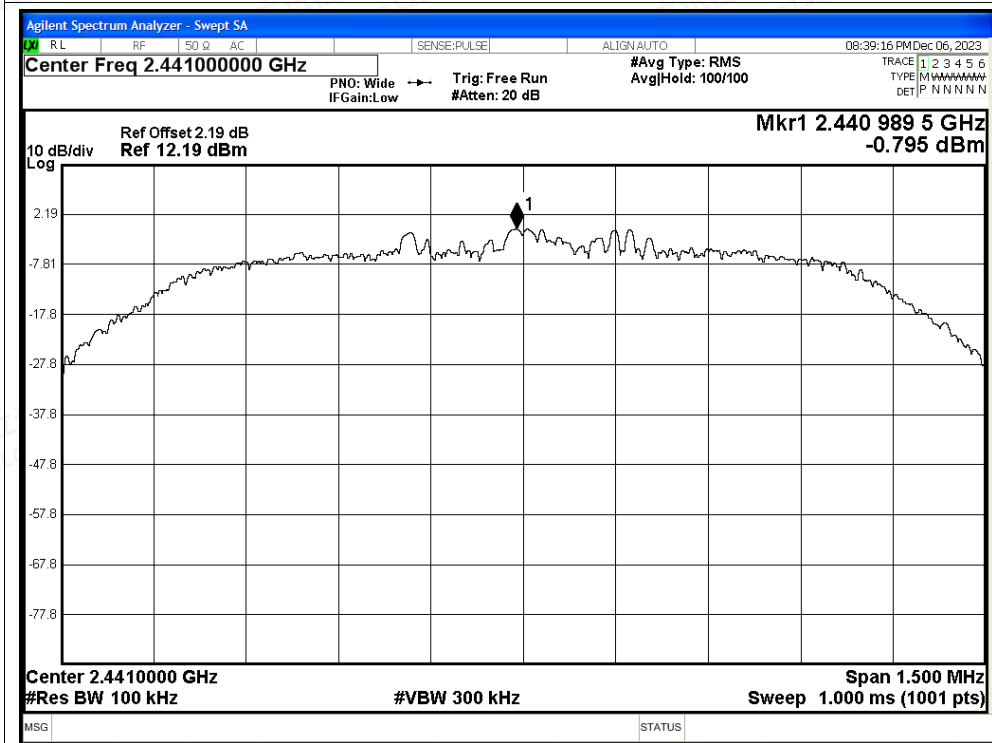


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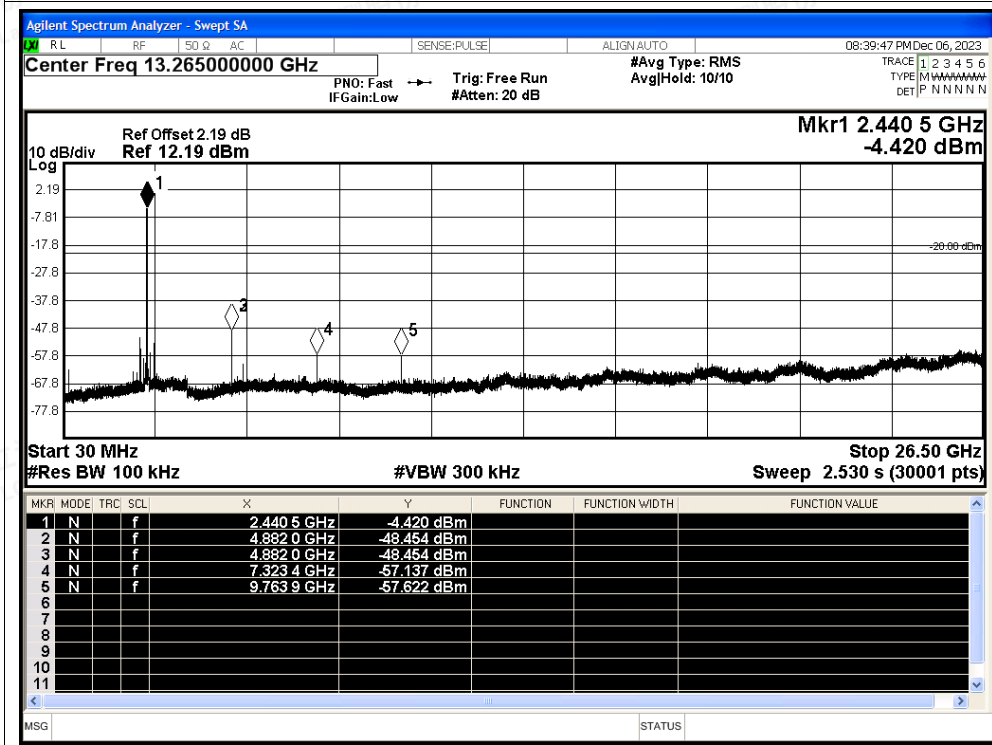




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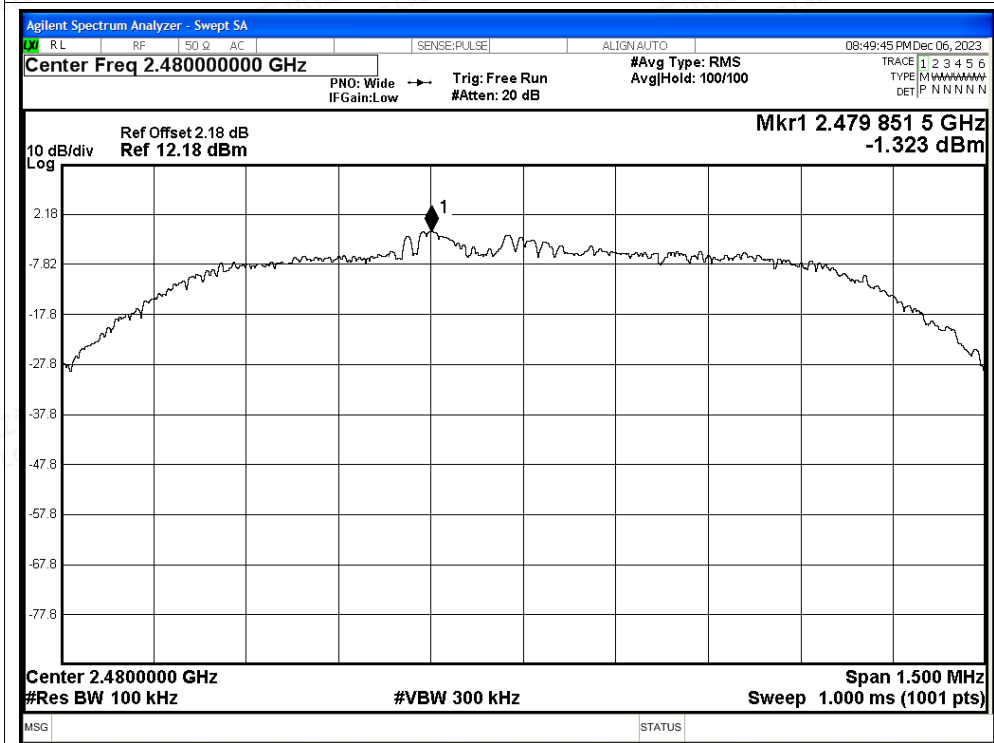


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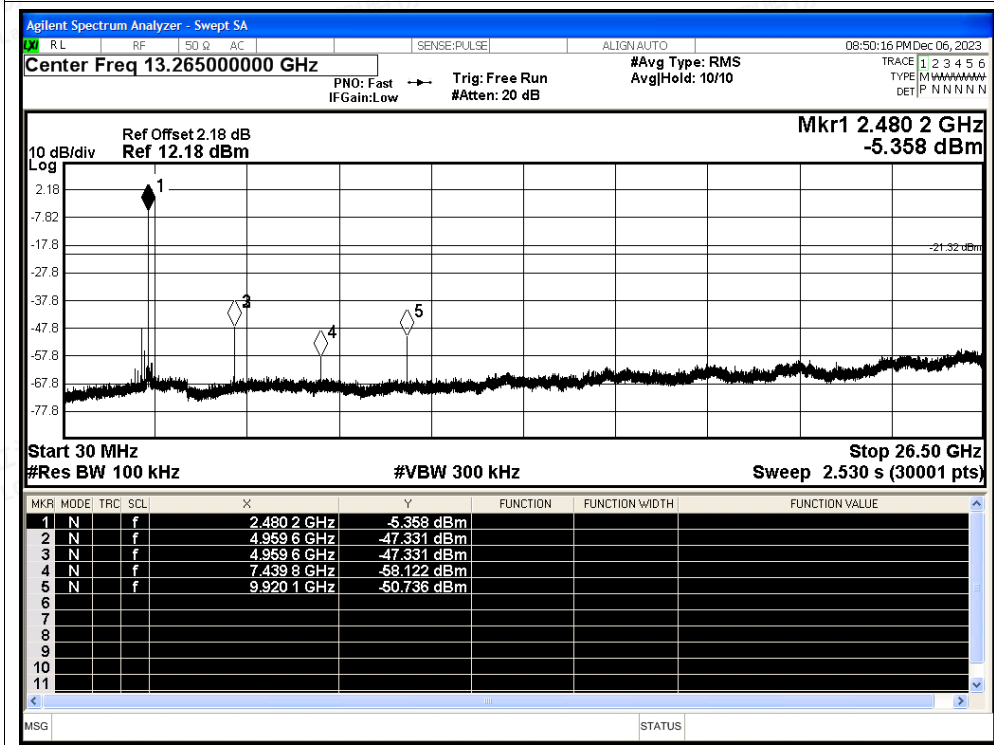




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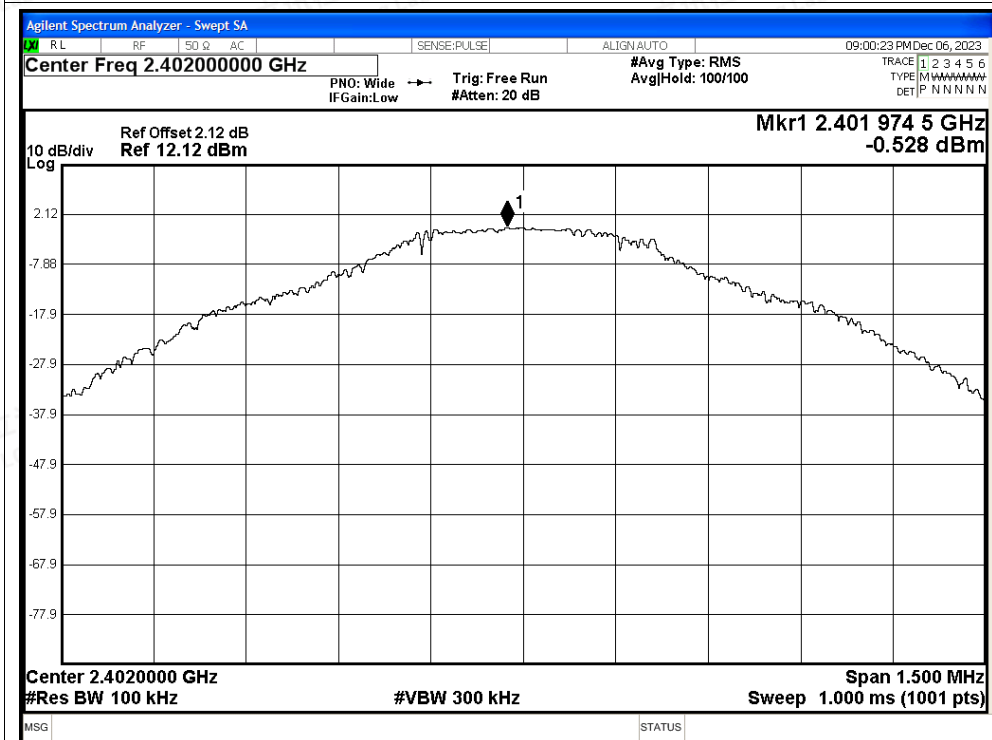


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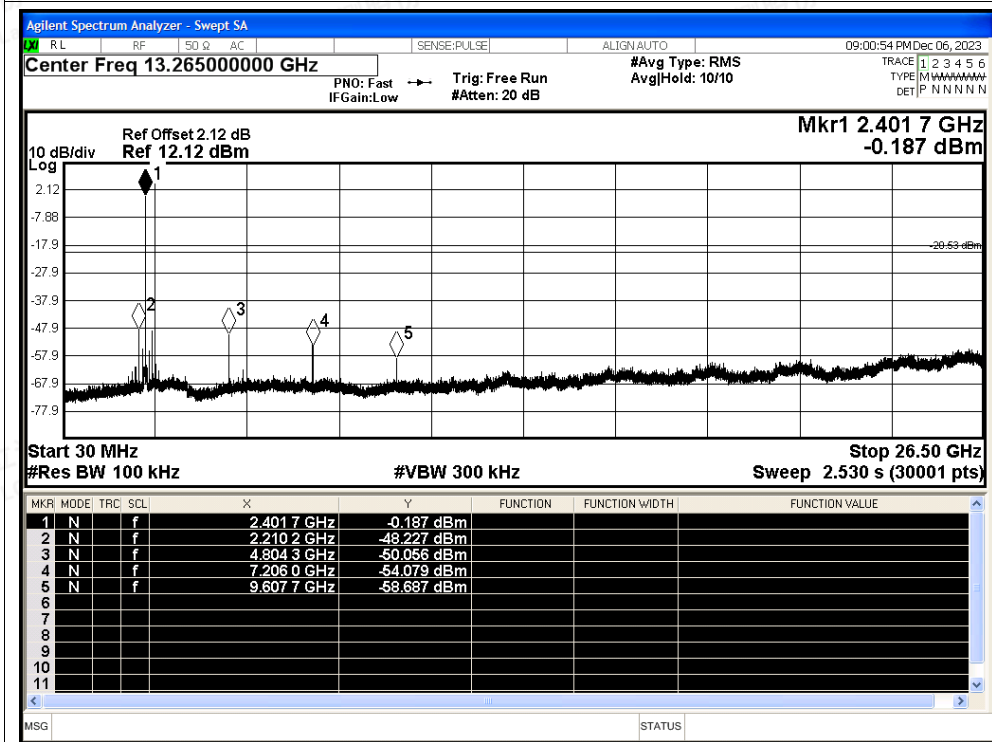




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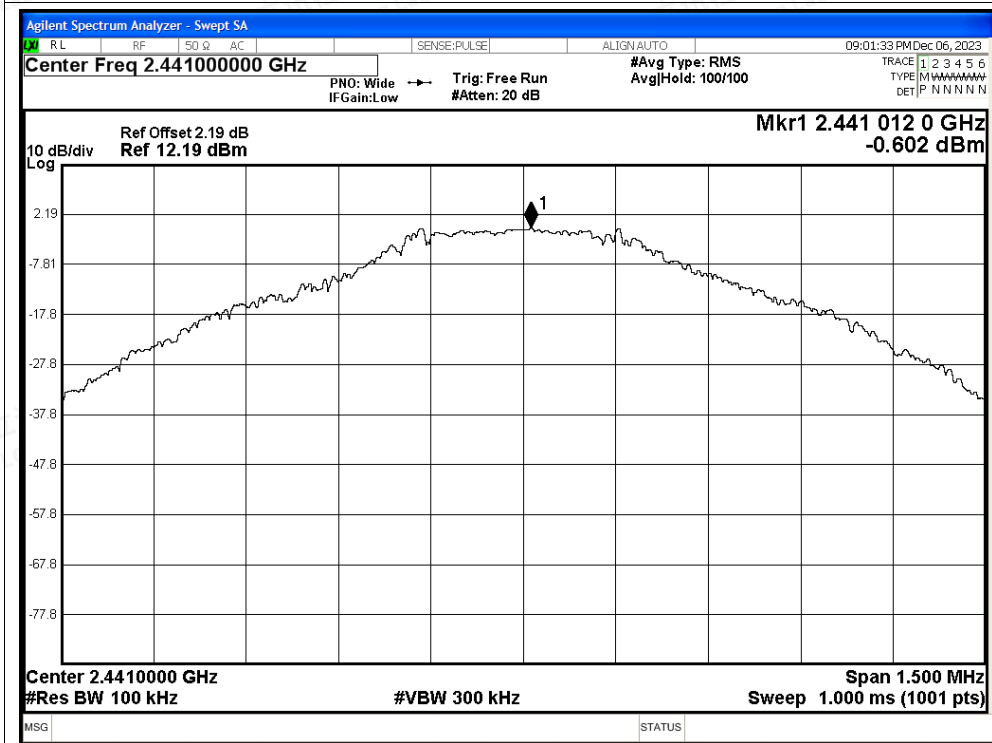


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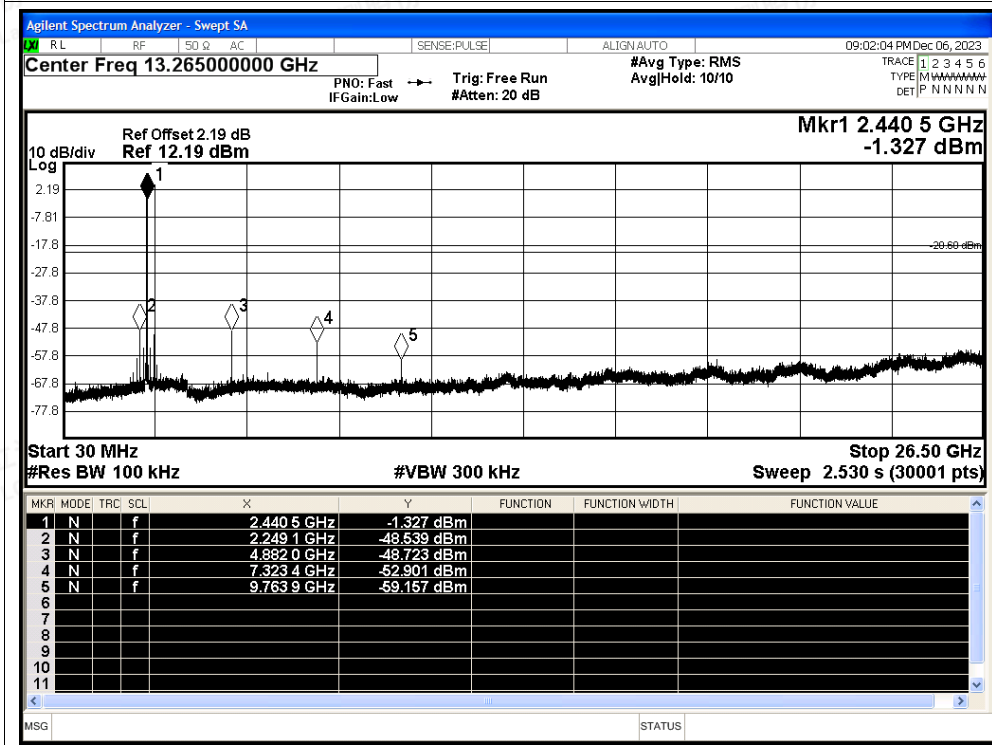




Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission

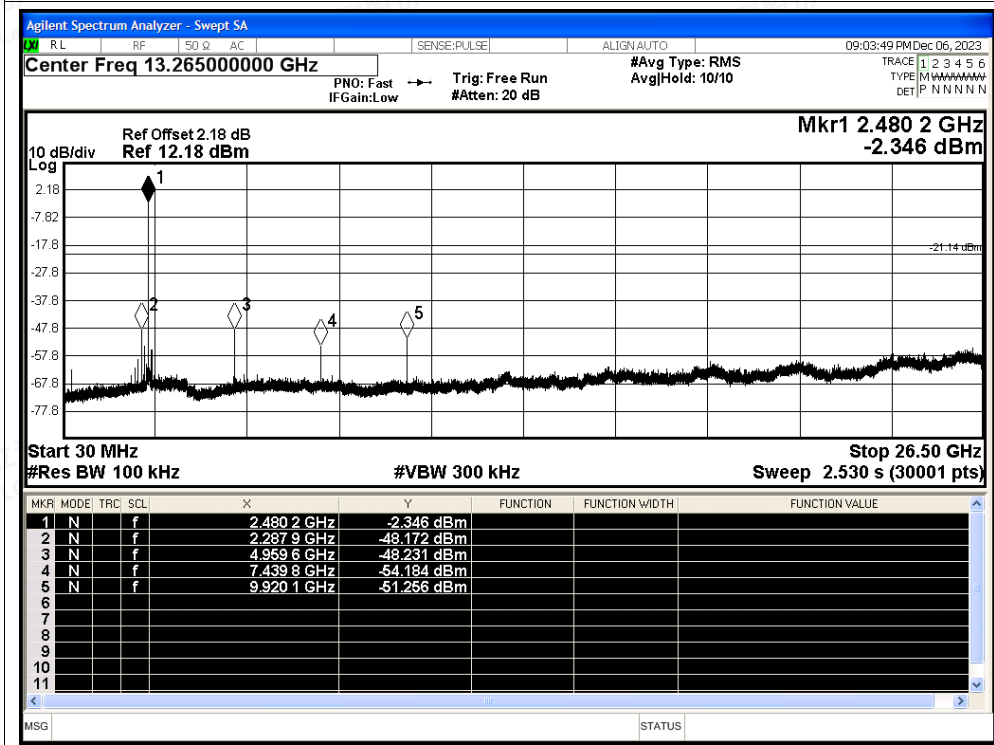




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



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	-52.18	3.5	46.58	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-57.73	3.5	41.03	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2364.528	-45.82	3.5	52.94	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2366.352	-56.03	3.5	42.73	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.6	3.5	49.16	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-56.86	3.5	41.90	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-50	3.5	48.76	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-55.63	3.5	43.13	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2499.304	-46.45	3.5	52.31	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.512	-55.63	3.5	43.13	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-48.72	3.5	50.04	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-56.46	3.5	42.30	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-50	3.5	48.76	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-57.79	3.5	40.97	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2360.112	-46.76	3.5	52.00	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2363.664	-55.96	3.5	42.80	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-49.33	3.5	49.43	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-56.9	3.5	41.86	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-49.36	3.5	49.40	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-55.19	3.5	43.57	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2493.88	-46.26	3.5	52.50	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.512	-55.19	3.5	43.57	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-47.43	3.5	51.33	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-56.19	3.5	42.57	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-50.37	3.5	48.39	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-57.73	3.5	41.03	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2372.592	-46.93	3.5	51.83	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2368.176	-55.93	3.5	42.83	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.12	3.5	48.64	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-56.88	3.5	41.88	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-48.34	3.5	50.42	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-55.64	3.5	43.12	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2493.736	-46.75	3.5	52.01	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-55.64	3.5	43.12	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-49.27	3.5	49.49	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-56.27	3.5	42.49	Average	54	Pass

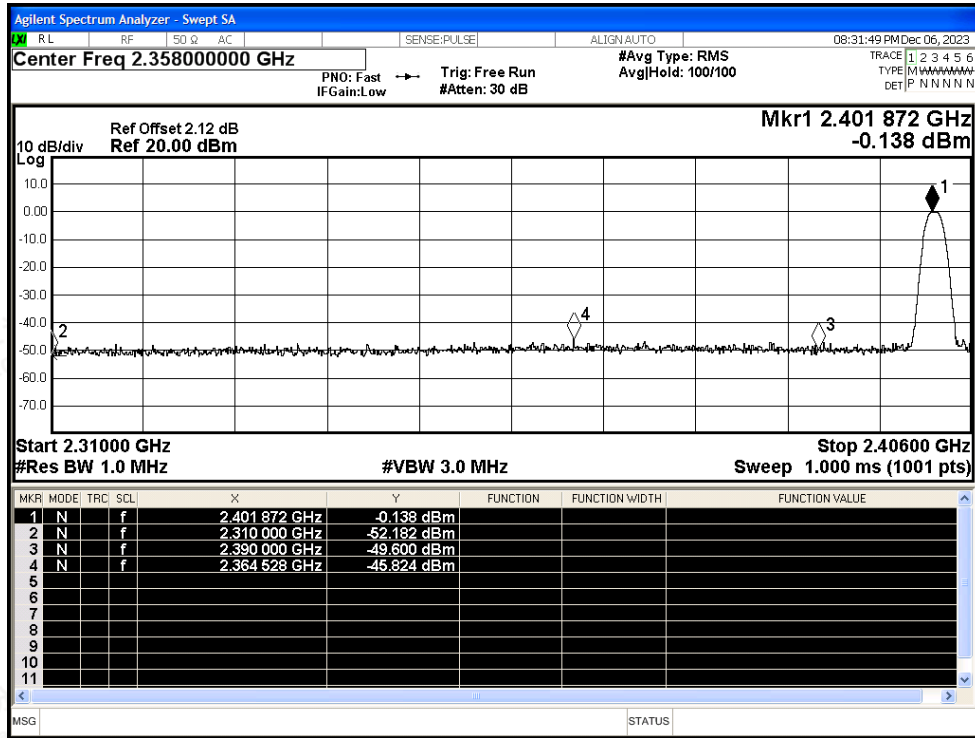




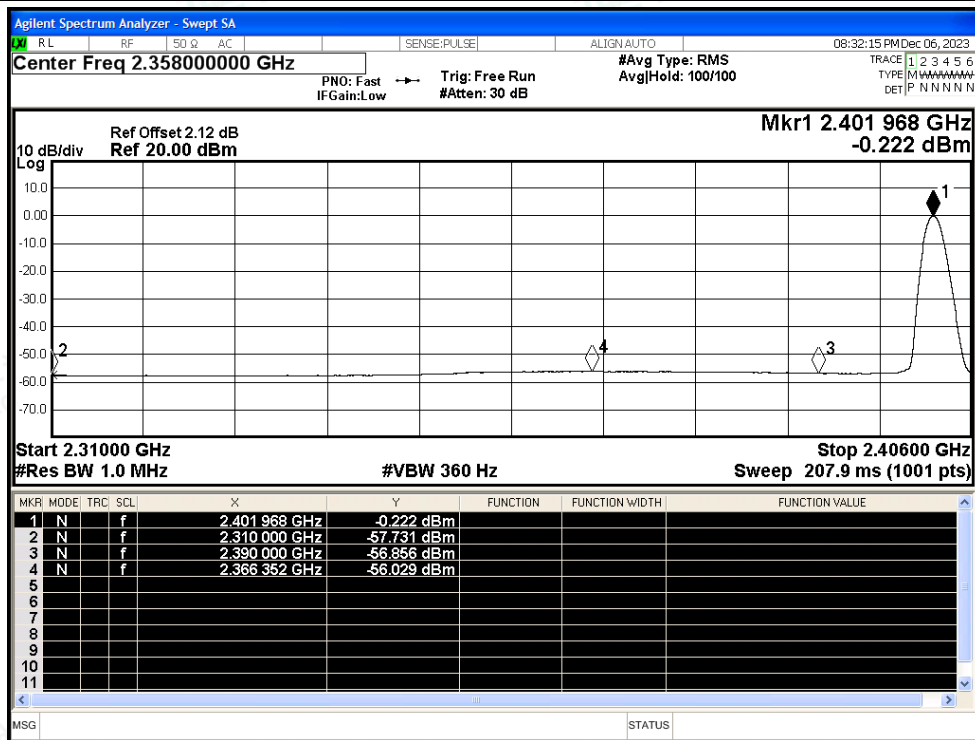


Test Graphs

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

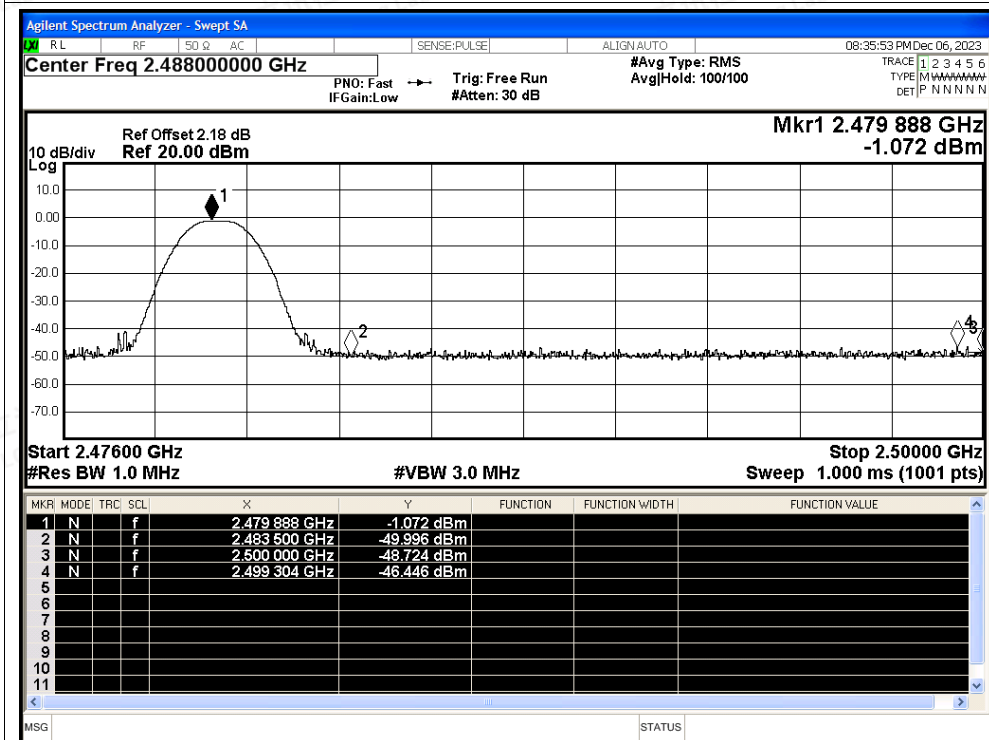


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

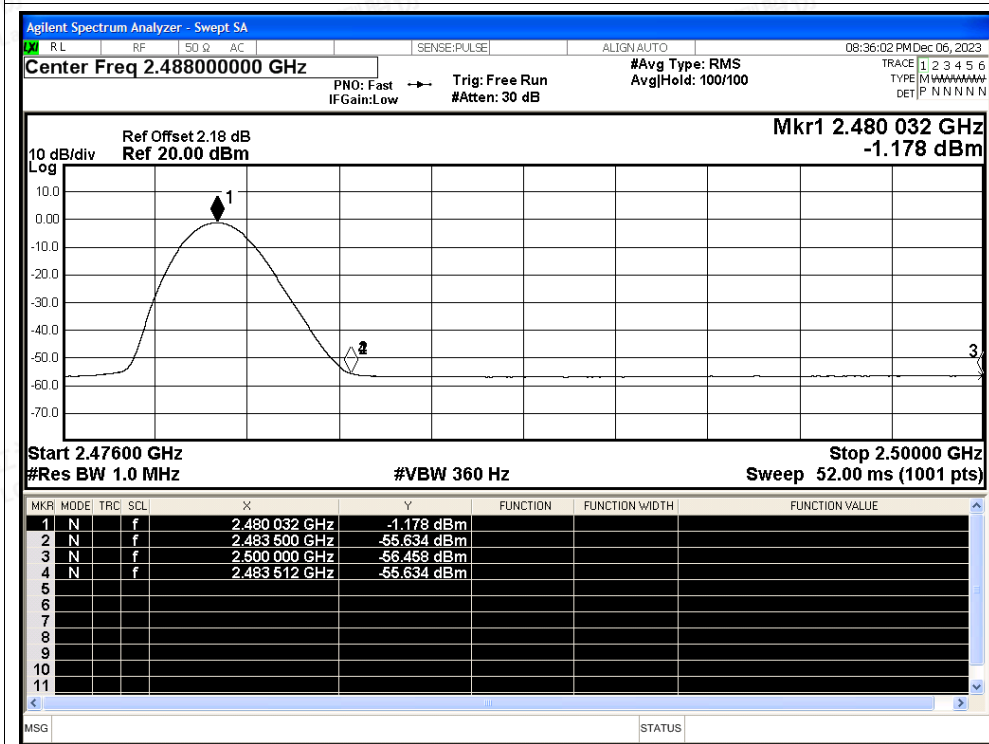




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

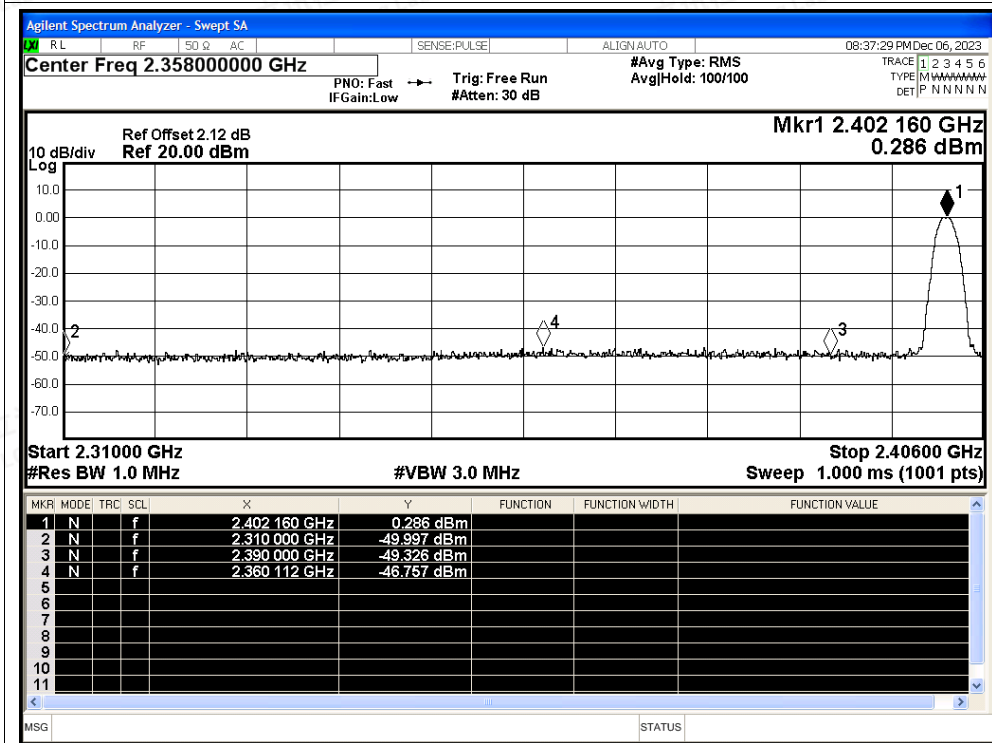


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

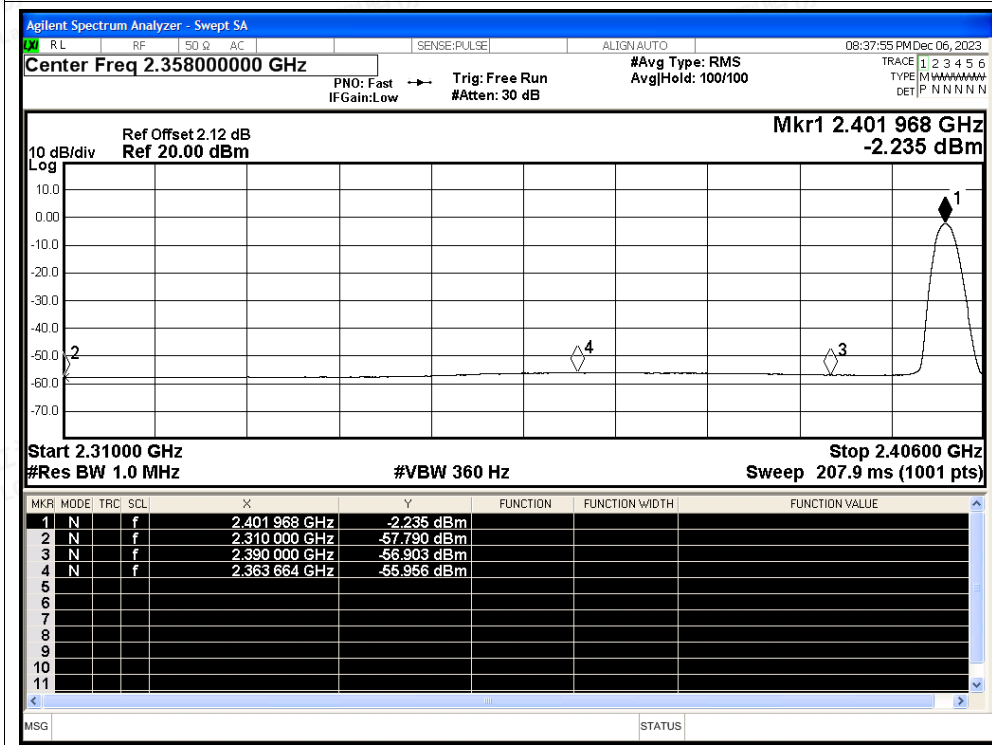




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

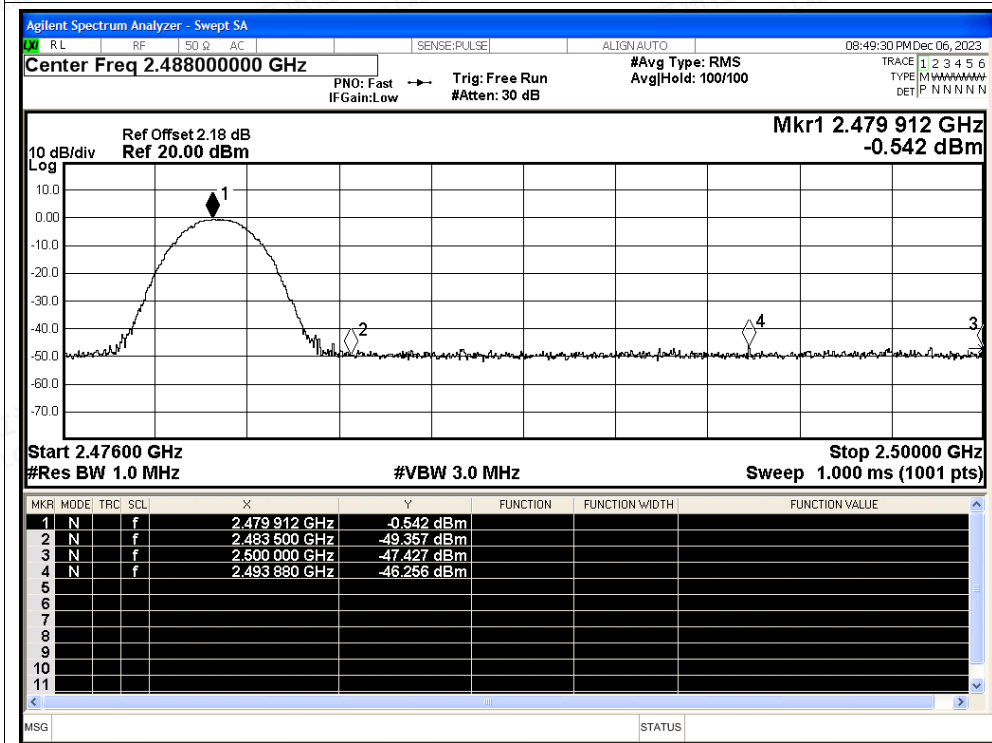


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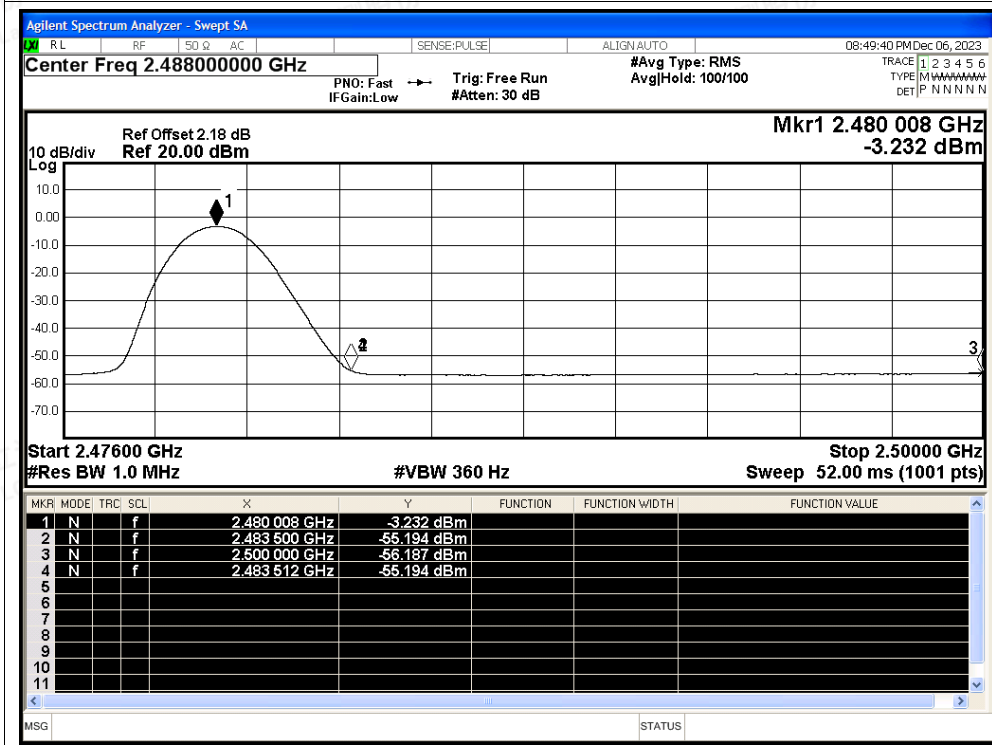




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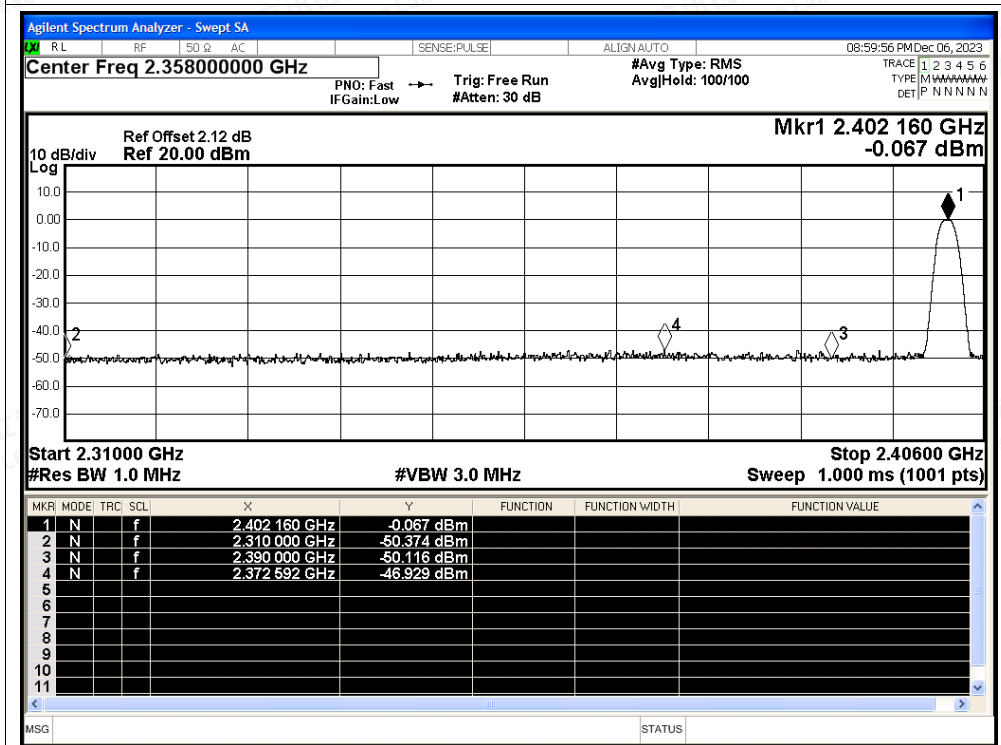


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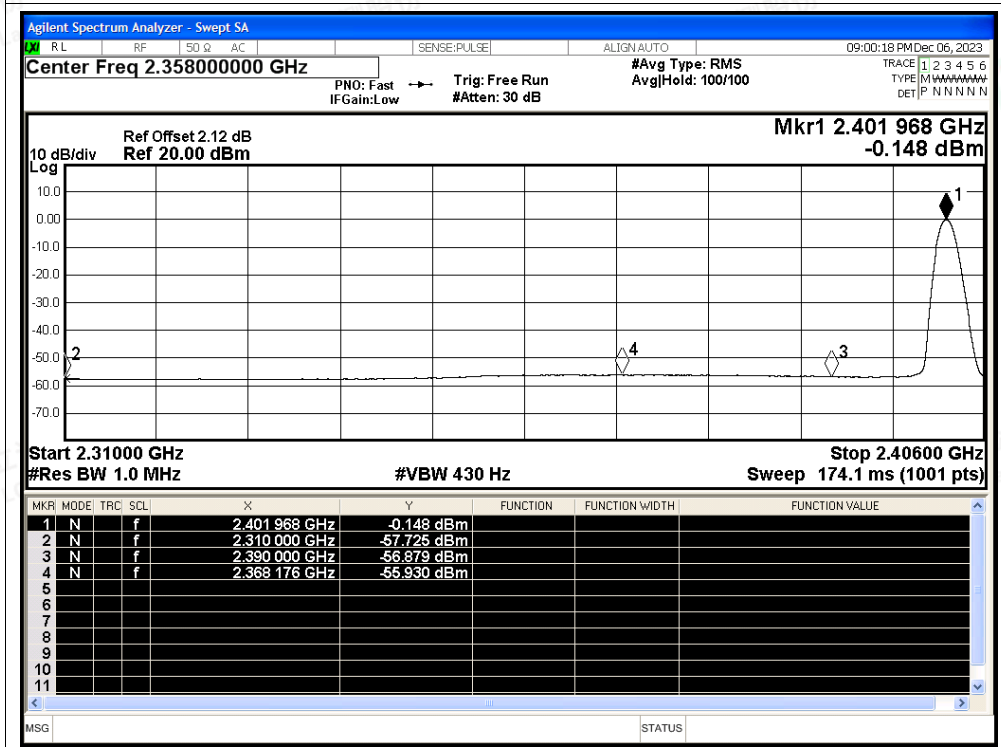




Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak

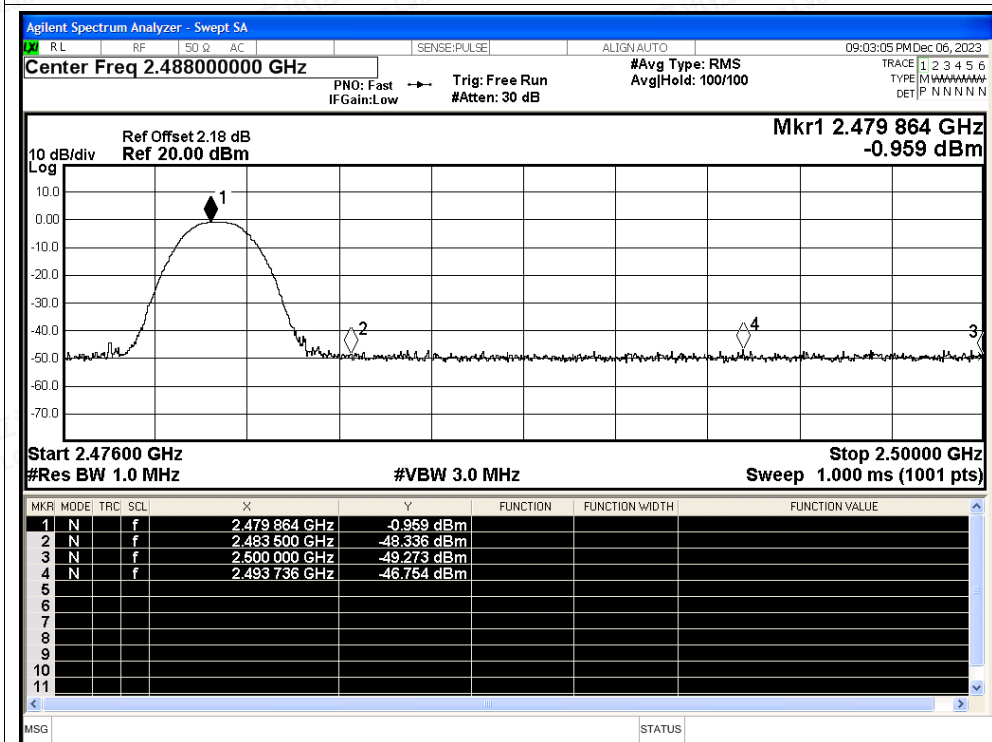


Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average





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



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

