



## Appendix A

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

Product Name: Home Stereo Shelf System

Test Model: PHSKR24

#### Environmental Conditions

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





### A.1 -20dB Bandwidth

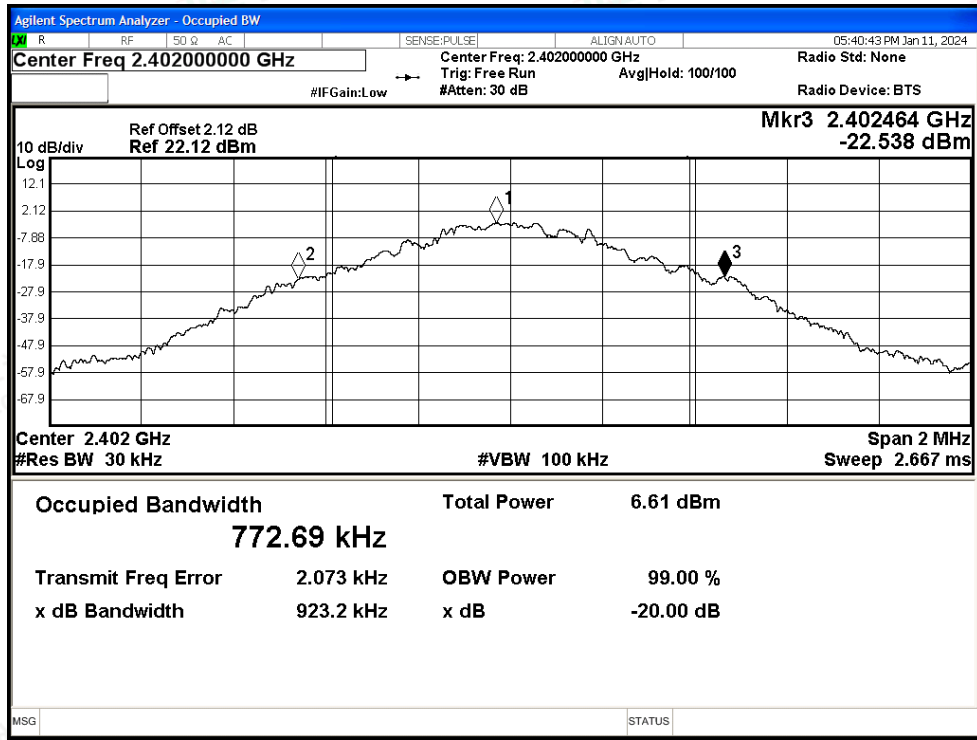
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant	0.923	N/A	Pass
NVNT	1-DH5	2441	Ant	0.844	N/A	Pass
NVNT	1-DH5	2480	Ant	0.842	N/A	Pass
NVNT	2-DH5	2402	Ant	1.273	N/A	Pass
NVNT	2-DH5	2441	Ant	1.266	N/A	Pass
NVNT	2-DH5	2480	Ant	1.281	N/A	Pass
NVNT	3-DH5	2402	Ant	1.306	N/A	Pass
NVNT	3-DH5	2441	Ant	1.288	N/A	Pass
NVNT	3-DH5	2480	Ant	1.267	N/A	Pass



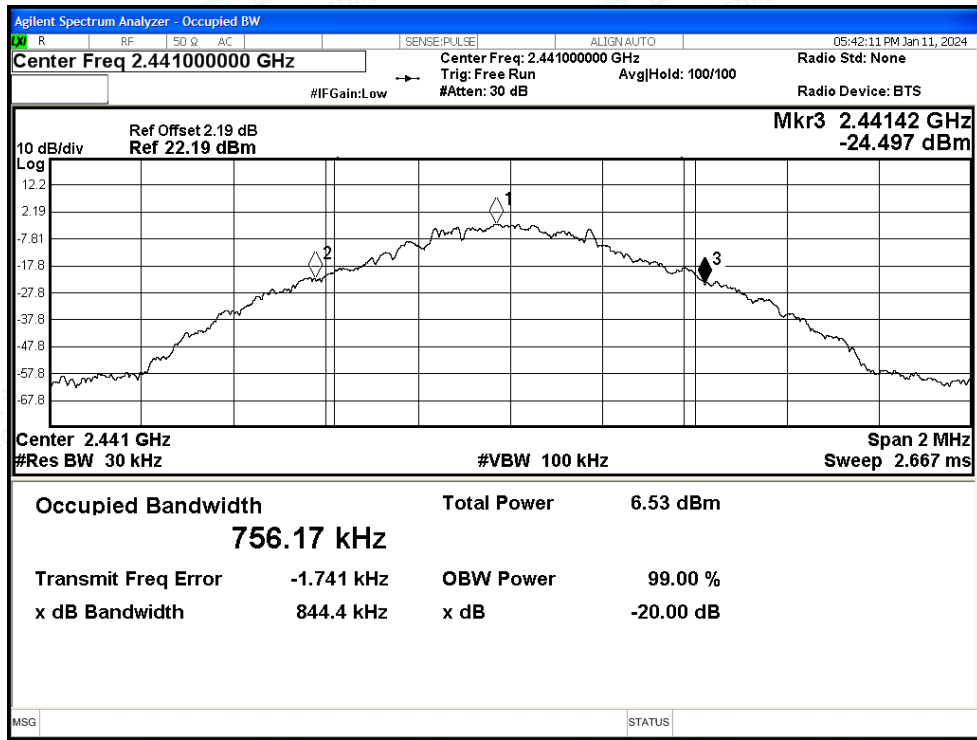


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant

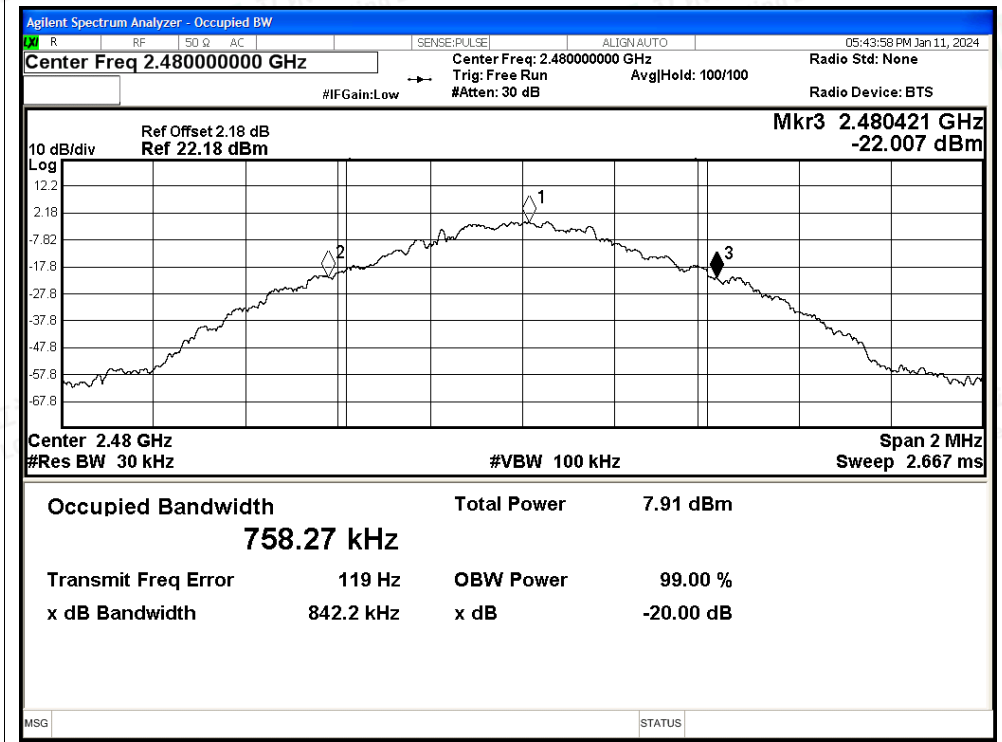


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant

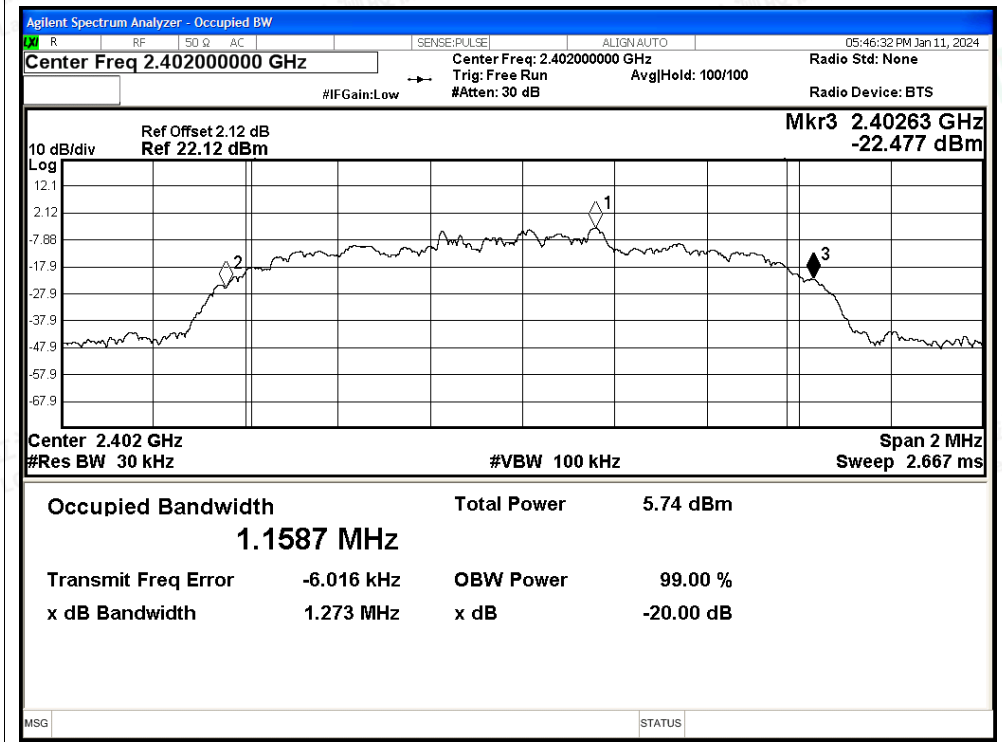




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant

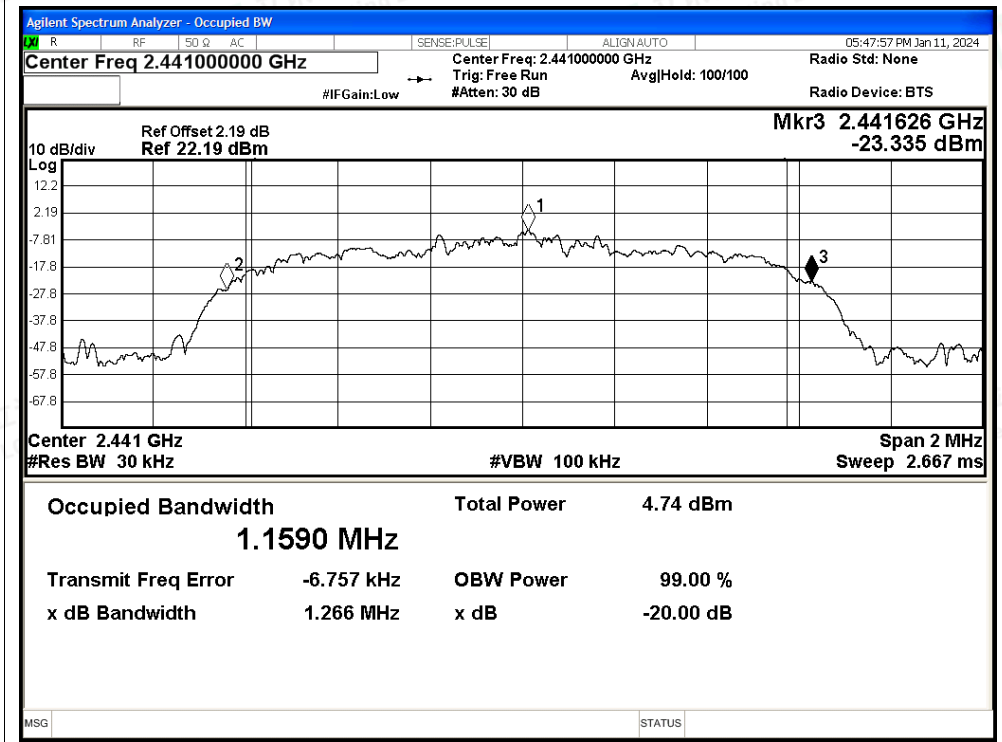


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant

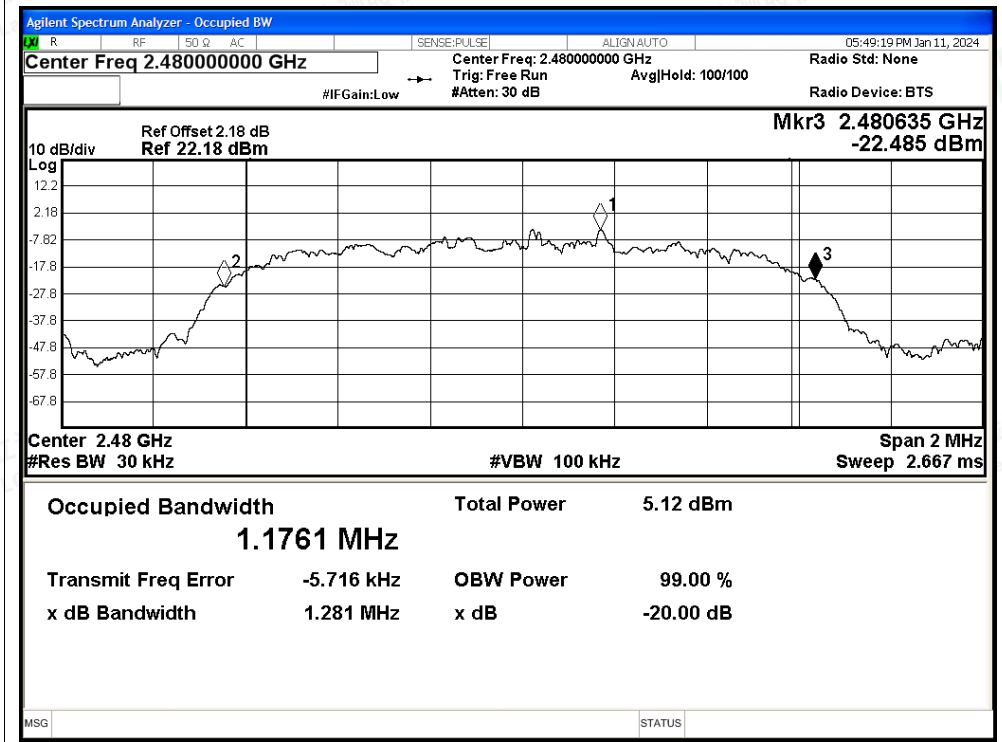




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant

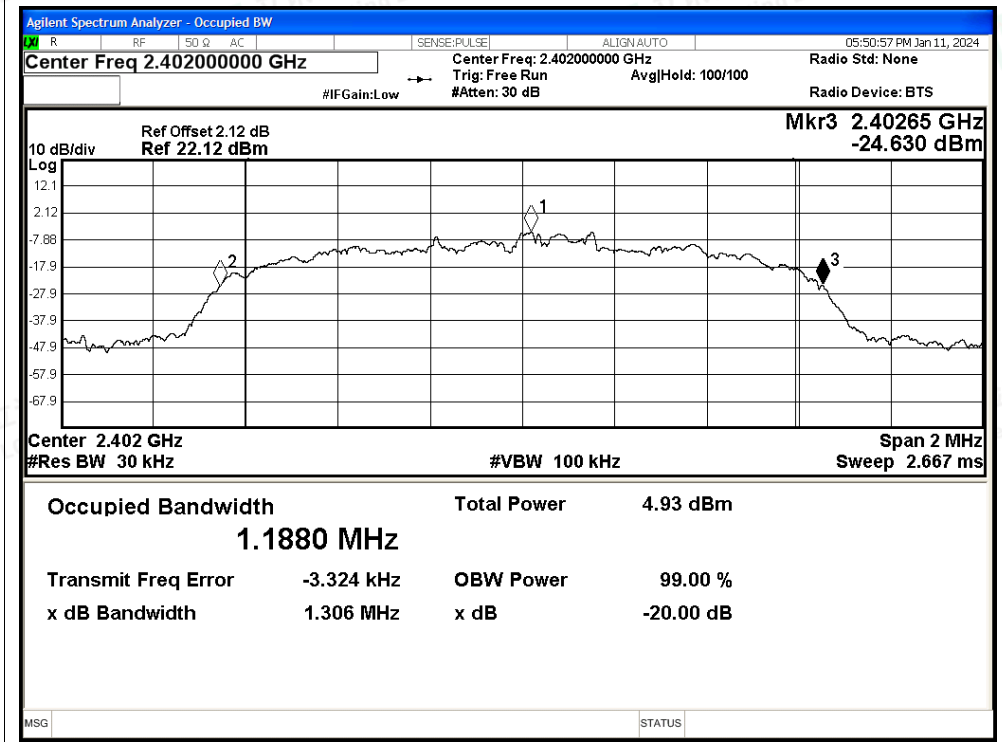


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant

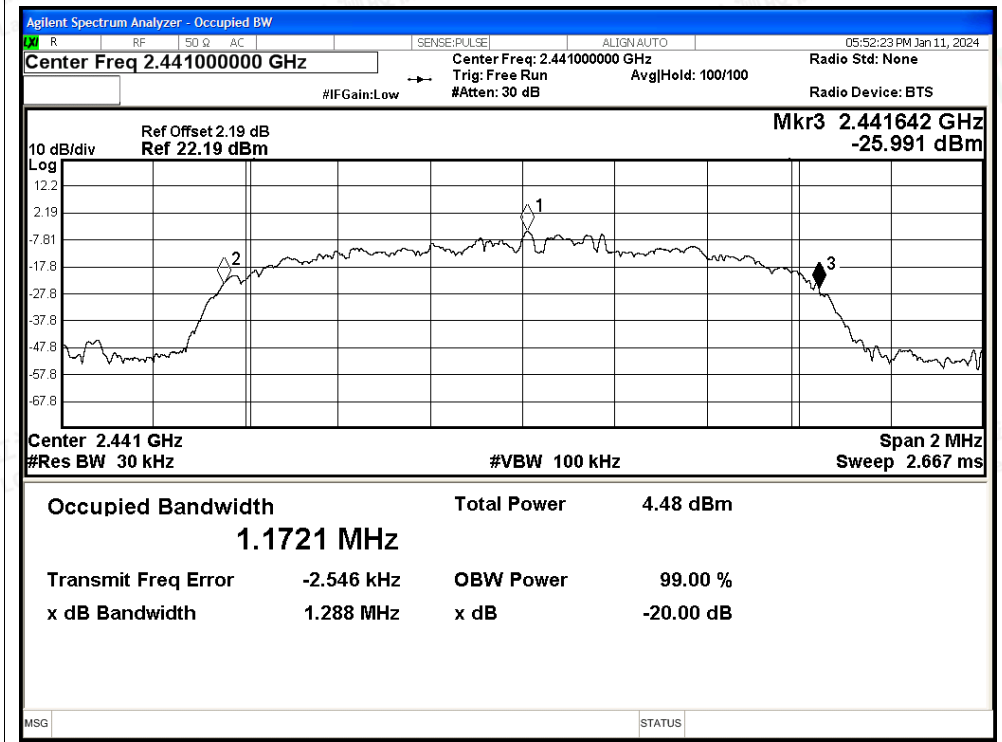


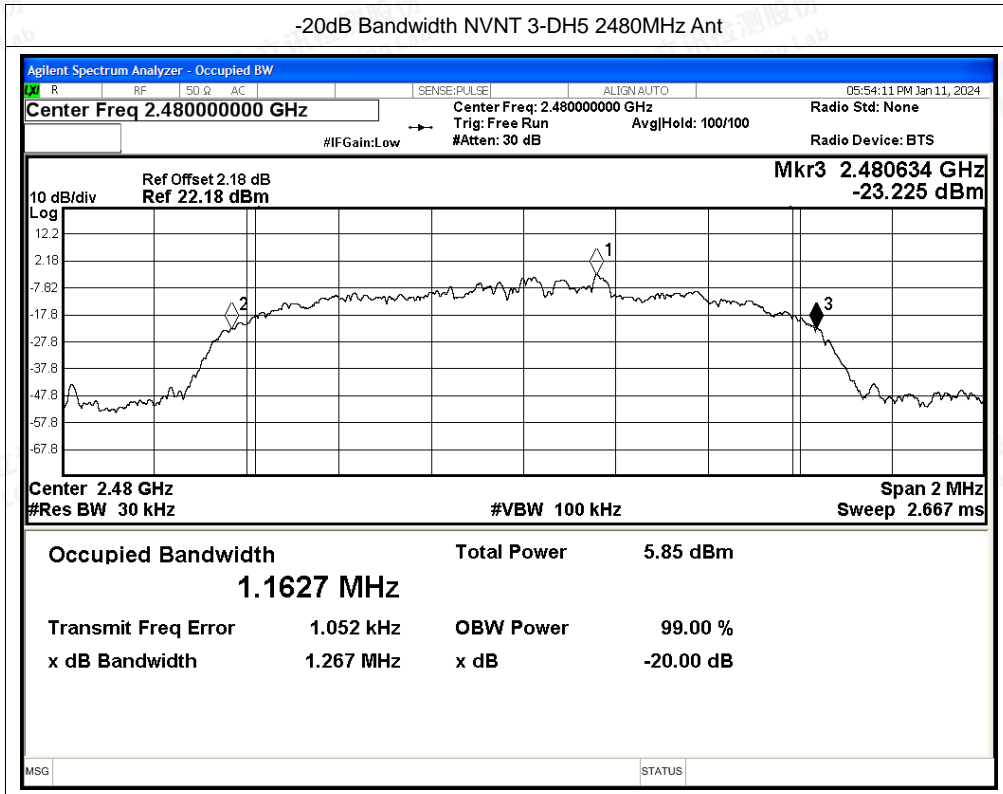


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant







## A.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant	0.89	21	Pass
NVNT	1-DH5	2441	Ant	0.46	21	Pass
NVNT	1-DH5	2480	Ant	1.77	21	Pass
NVNT	2-DH5	2402	Ant	0.36	21	Pass
NVNT	2-DH5	2441	Ant	-0.29	21	Pass
NVNT	2-DH5	2480	Ant	1.04	21	Pass
NVNT	3-DH5	2402	Ant	0.31	21	Pass
NVNT	3-DH5	2441	Ant	-0.22	21	Pass
NVNT	3-DH5	2480	Ant	1.03	21	Pass

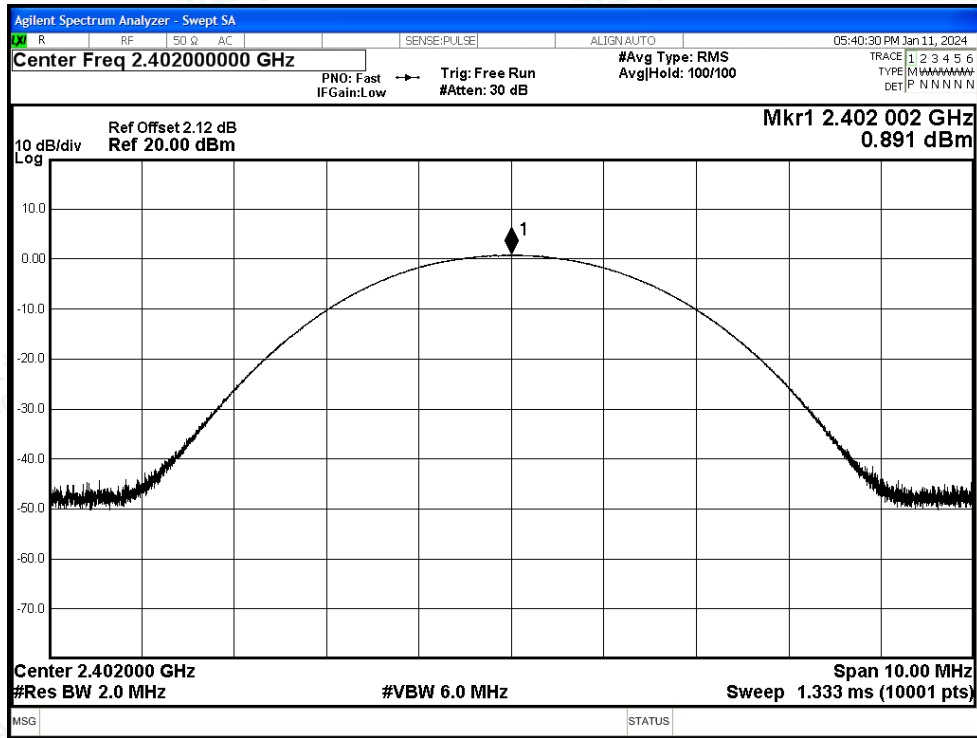




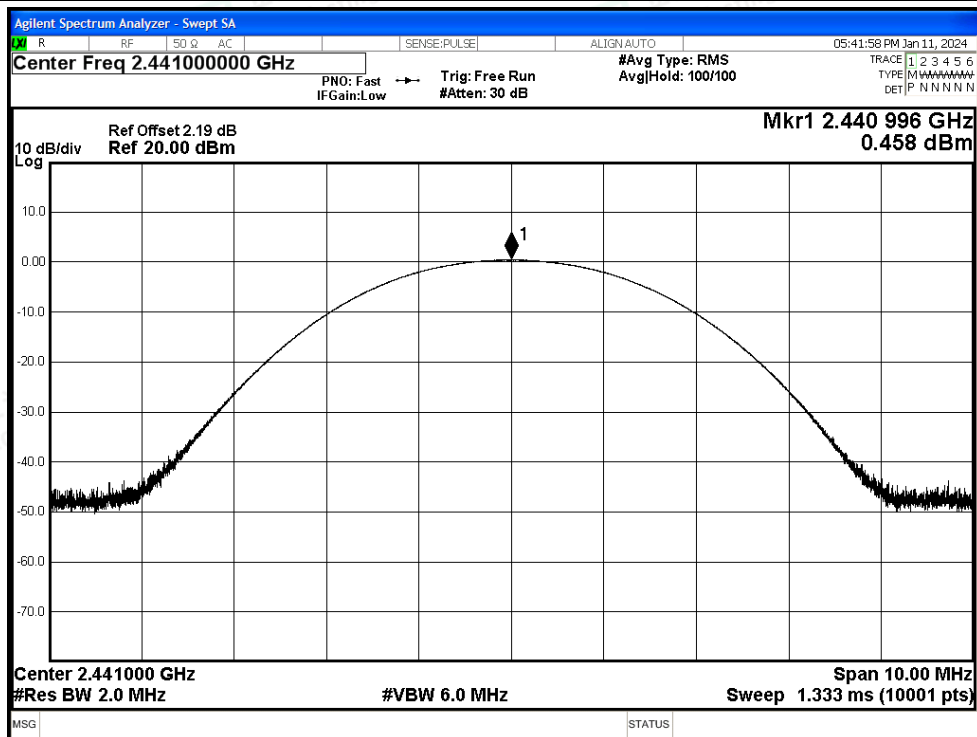


Test Graphs

Power NVNT 1-DH5 2402MHz Ant

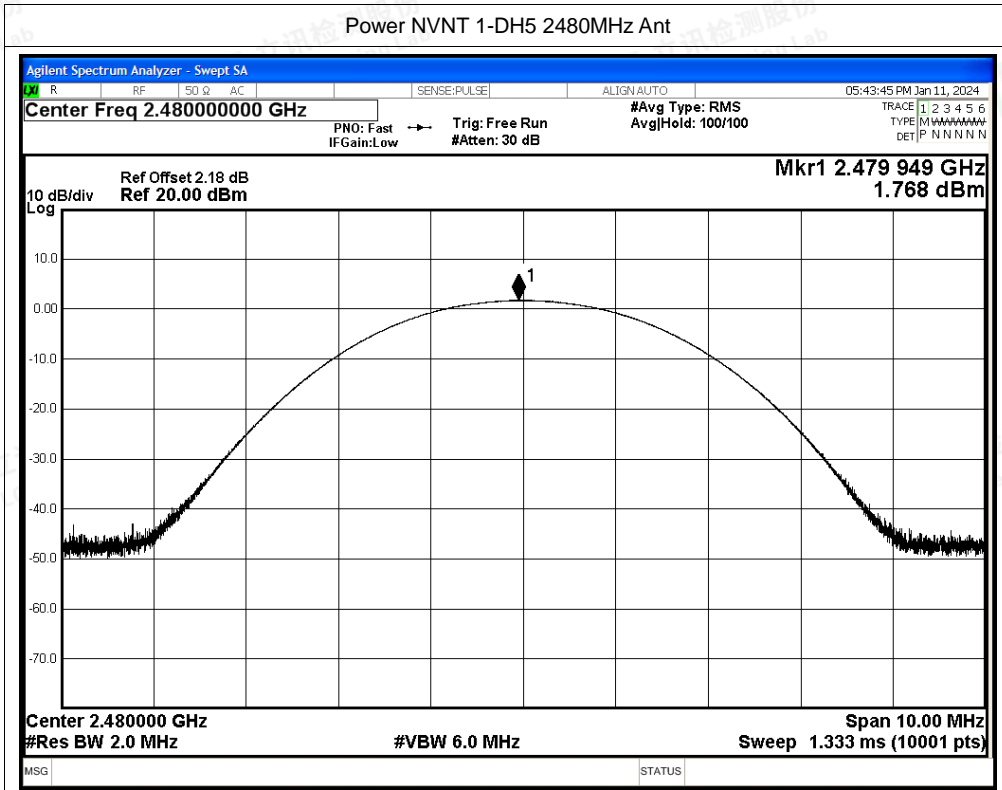


Power NVNT 1-DH5 2441MHz Ant

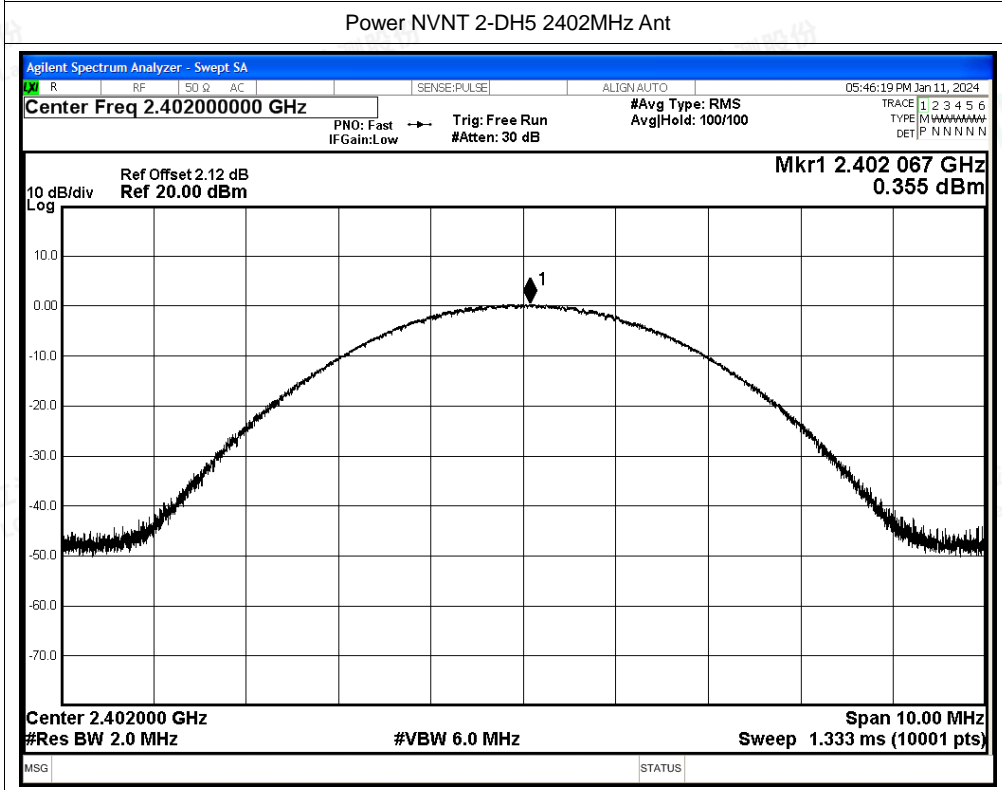




Power NVNT 1-DH5 2480MHz Ant

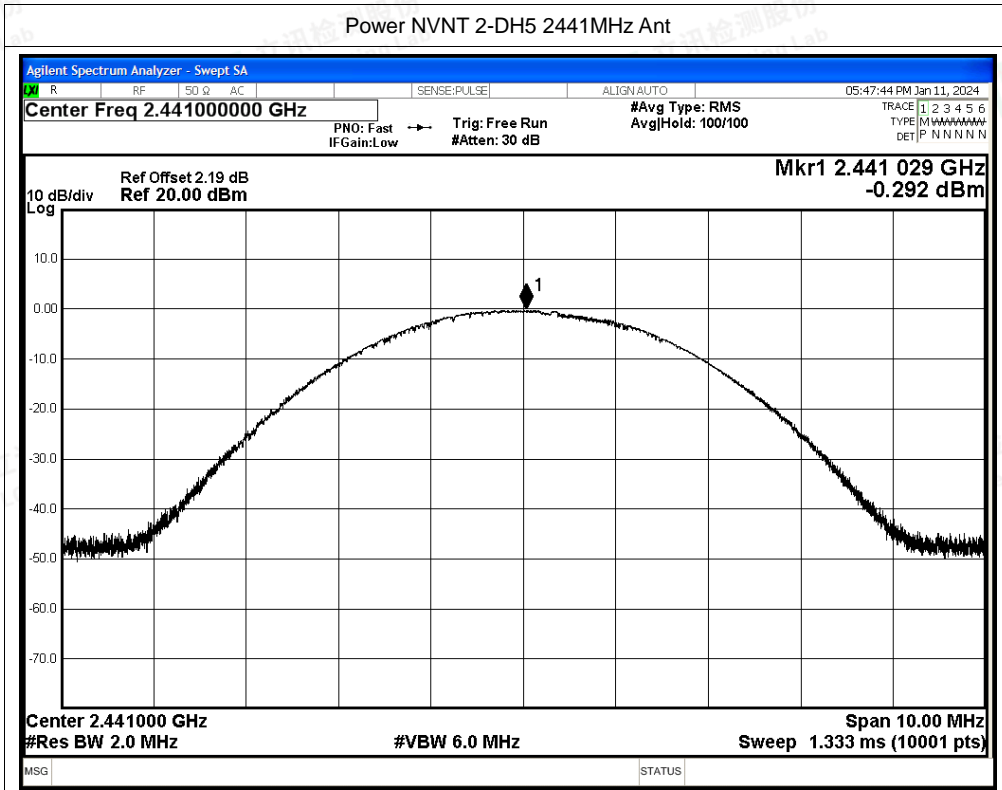


Power NVNT 2-DH5 2402MHz Ant

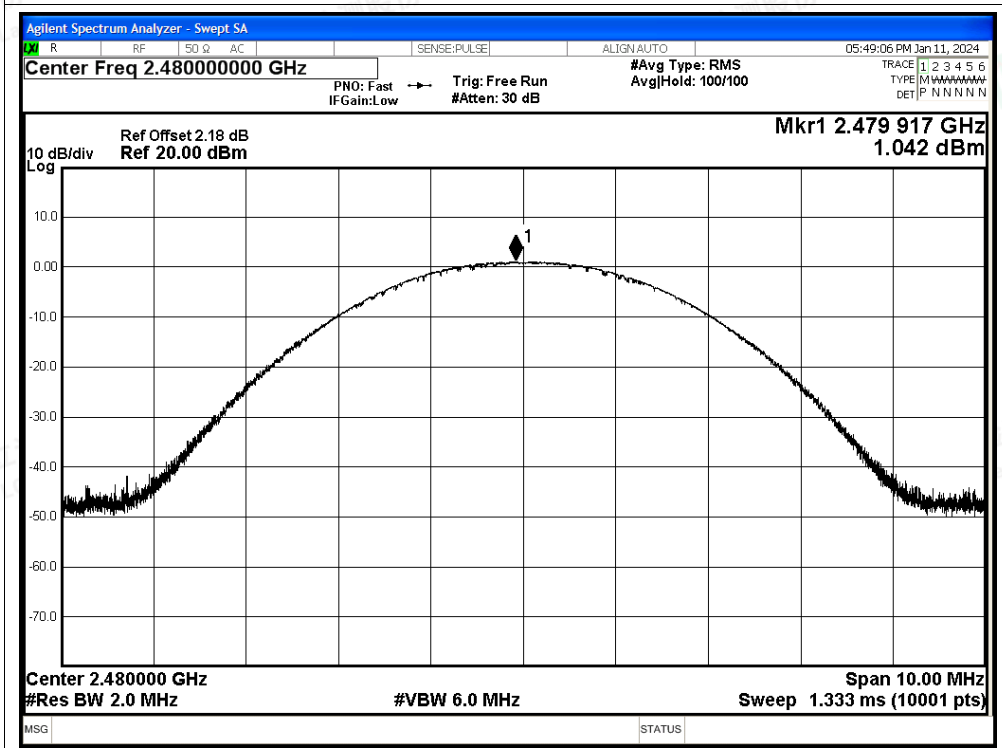




Power NVNT 2-DH5 2441MHz Ant

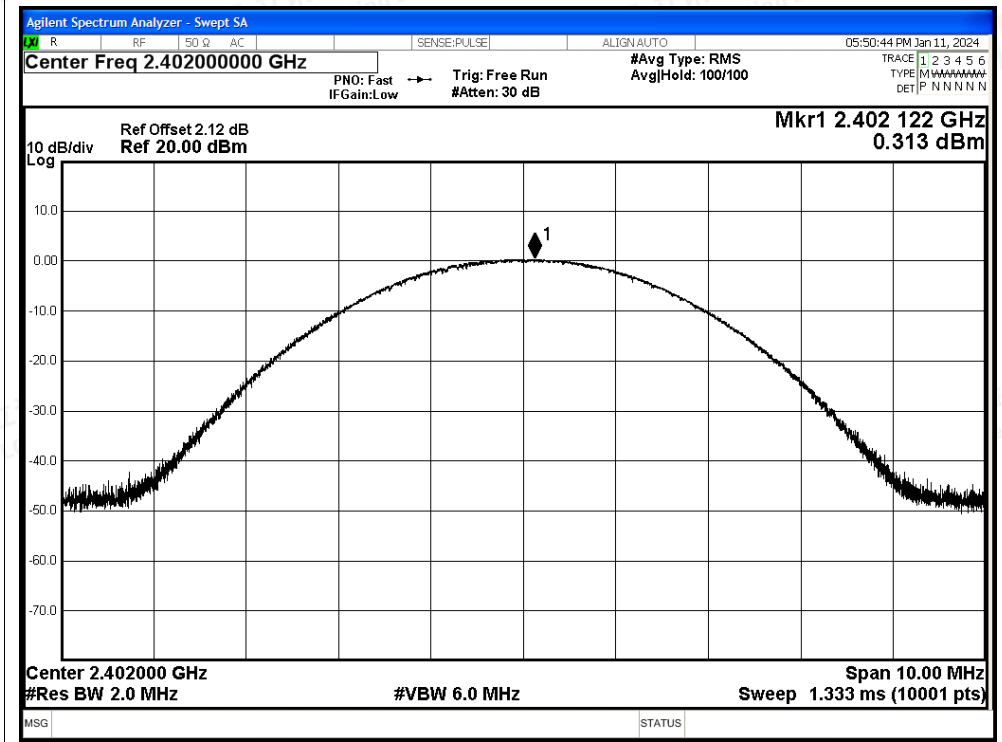


Power NVNT 2-DH5 2480MHz Ant

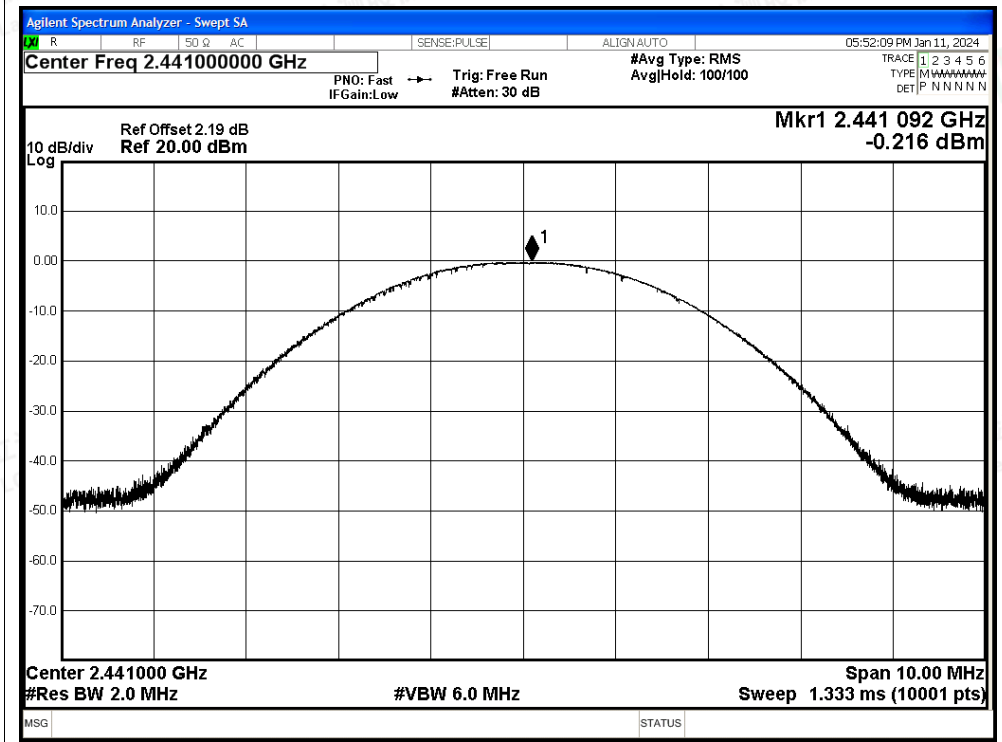


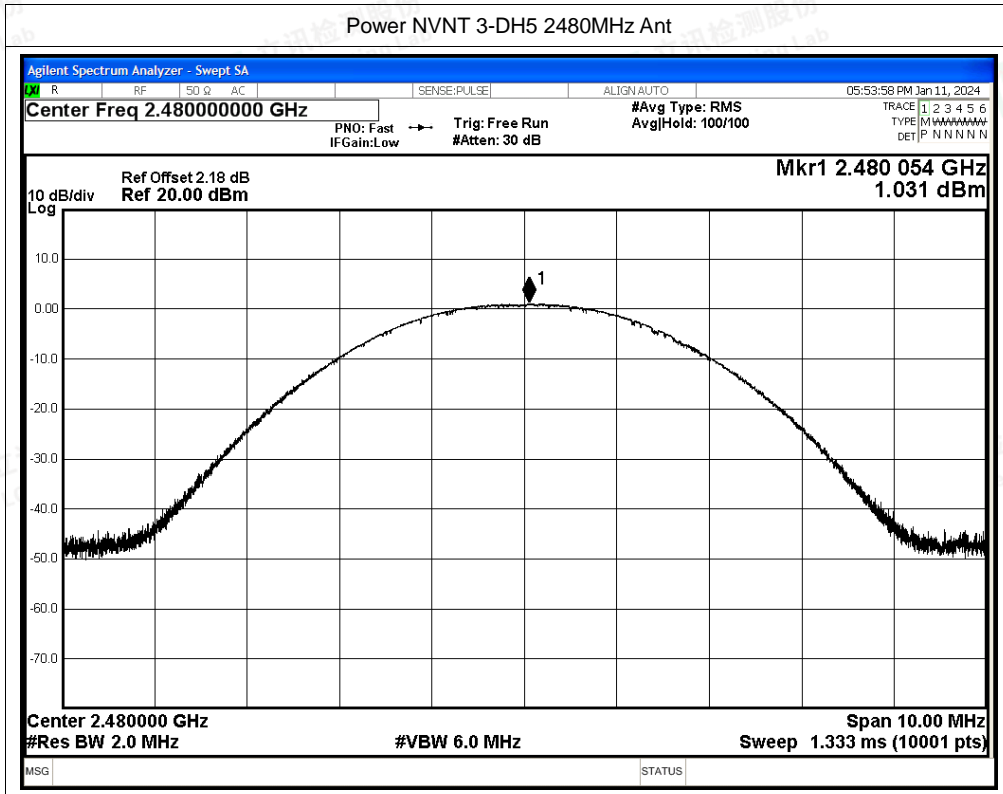


Power NVNT 3-DH5 2402MHz Ant



Power NVNT 3-DH5 2441MHz Ant







### A.3 Carrier Frequencies Separation

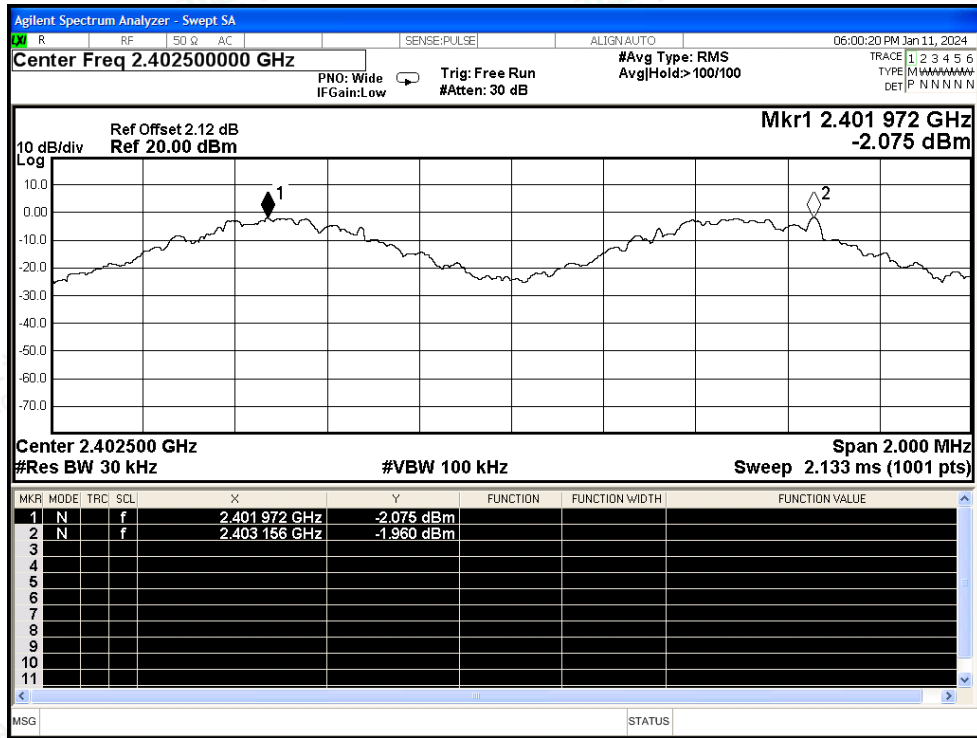
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant	2401.972	2403.156	1.184	0.615	Pass
NVNT	2-DH5	Ant	2402.01	2403.008	0.998	0.854	Pass
NVNT	3-DH5	Ant	2402.018	2403.024	1.006	0.871	Pass



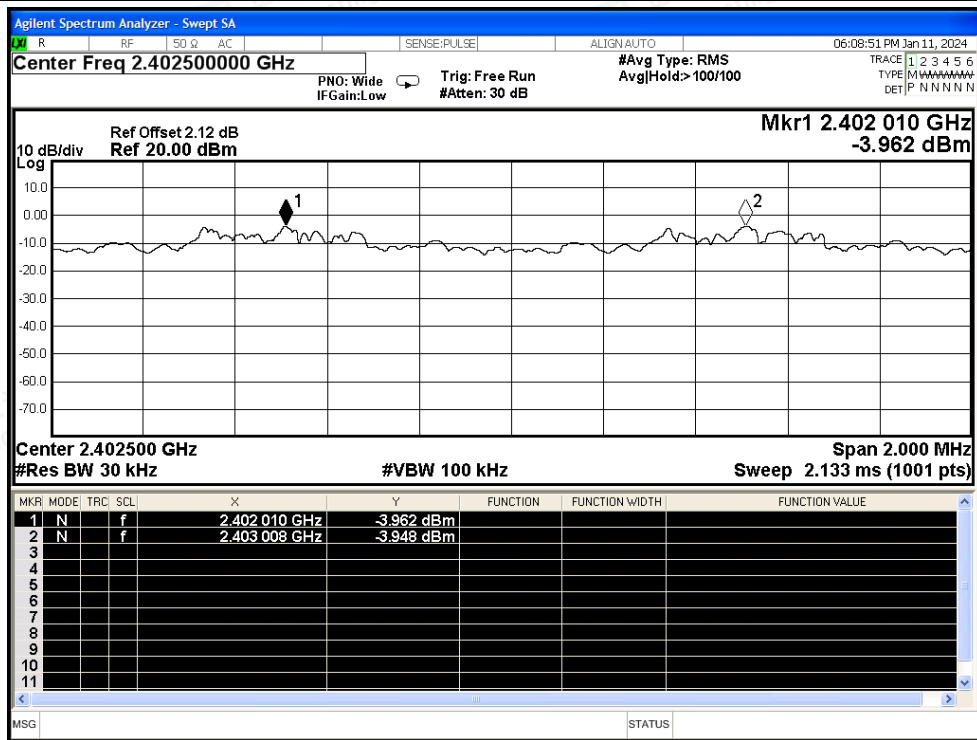


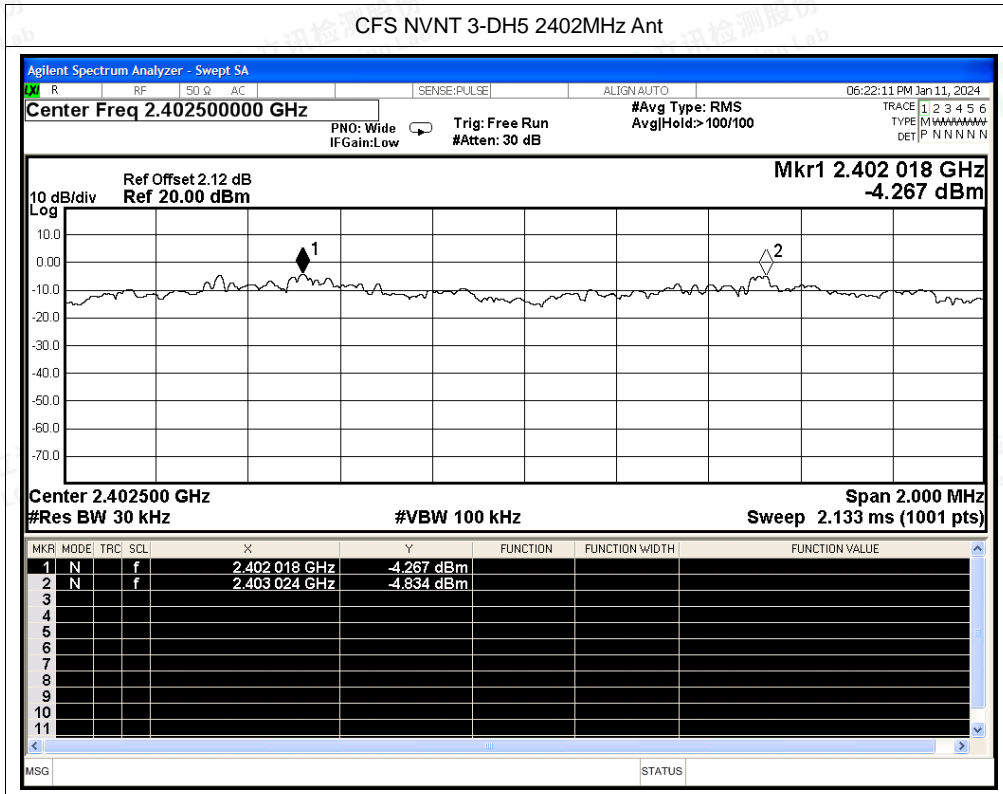
Test Graphs

CFS NVNT 1-DH5 2402MHz Ant



CFS NVNT 2-DH5 2402MHz Ant









## A.4 Dwell Time

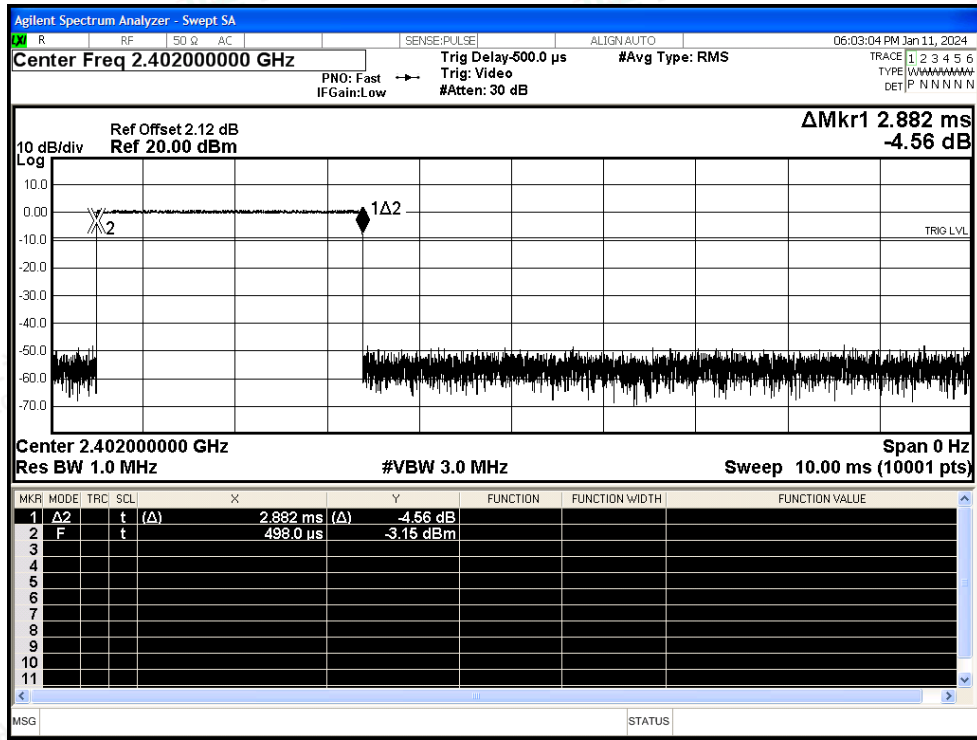
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant	2.882	276.672	96	31600	400	Pass
NVNT	2-DH5	2402	Ant	2.88	296.64	103	31600	400	Pass
NVNT	3-DH5	2402	Ant	2.887	300.248	104	31600	400	Pass



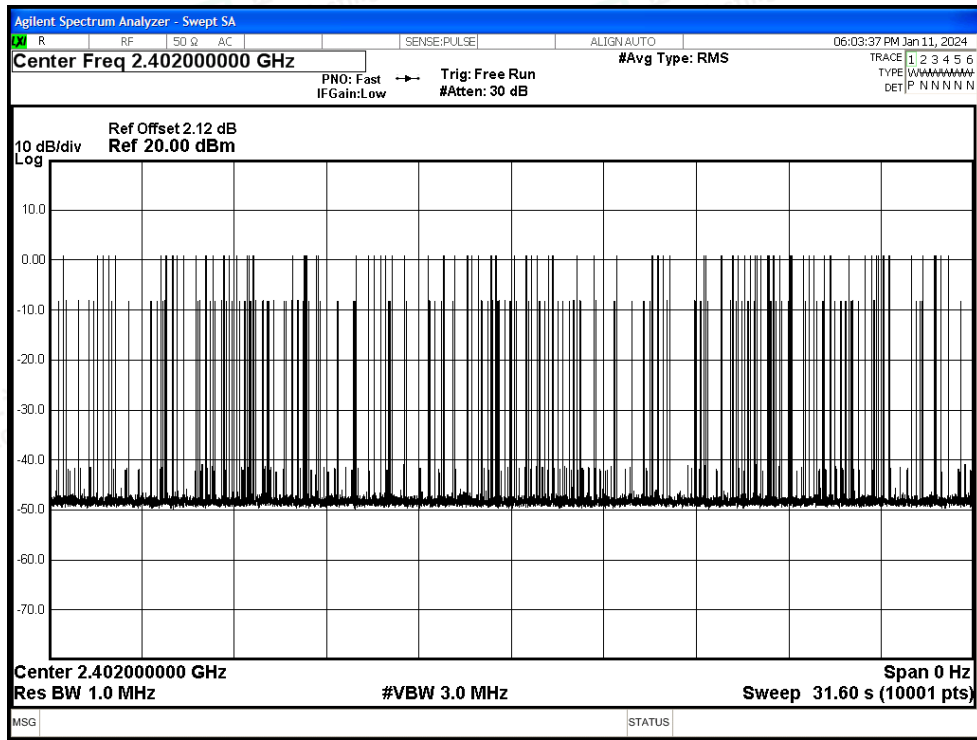


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant One Burst

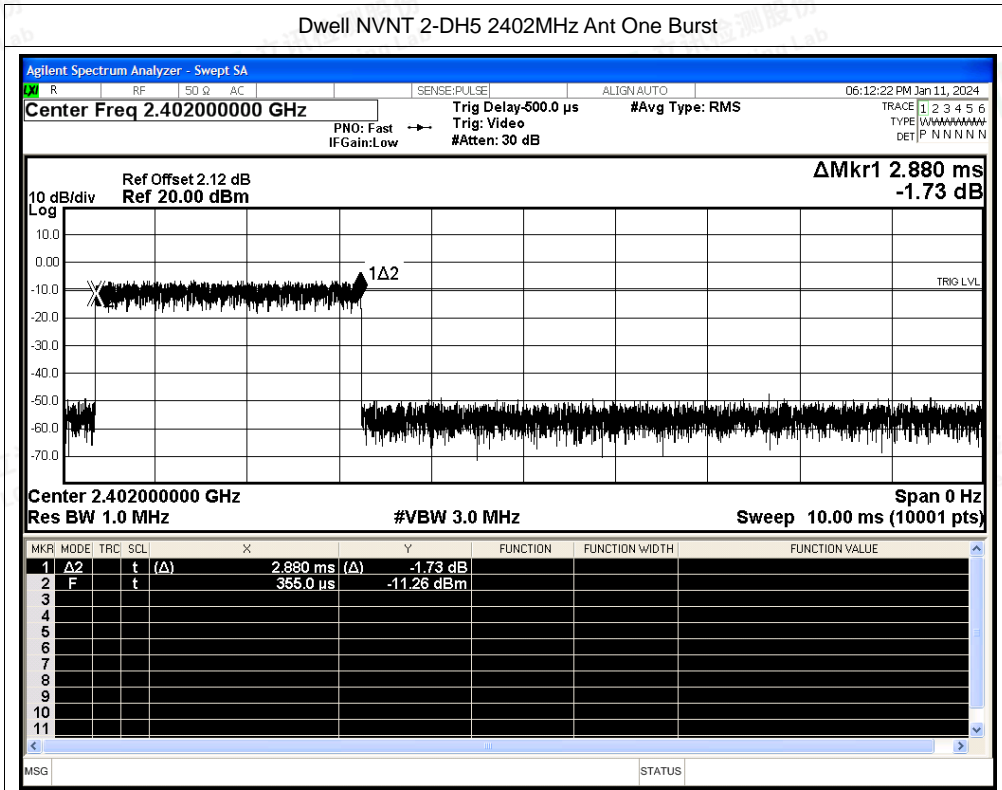


Dwell NVNT 1-DH5 2402MHz Ant Accumulated

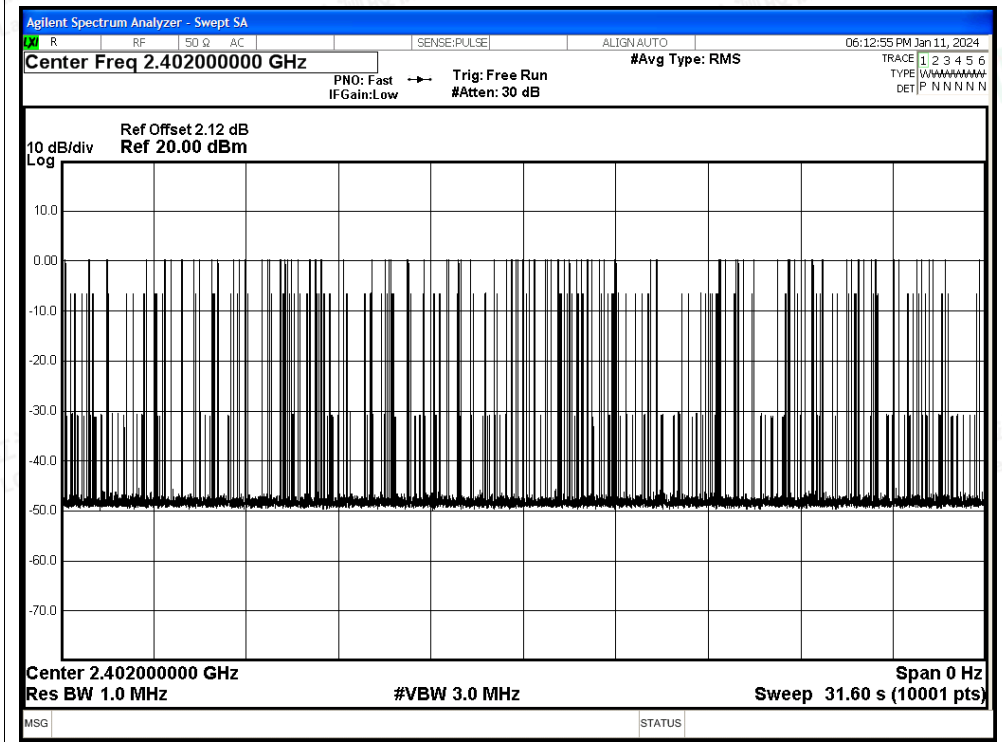




Dwell NVNT 2-DH5 2402MHz Ant One Burst

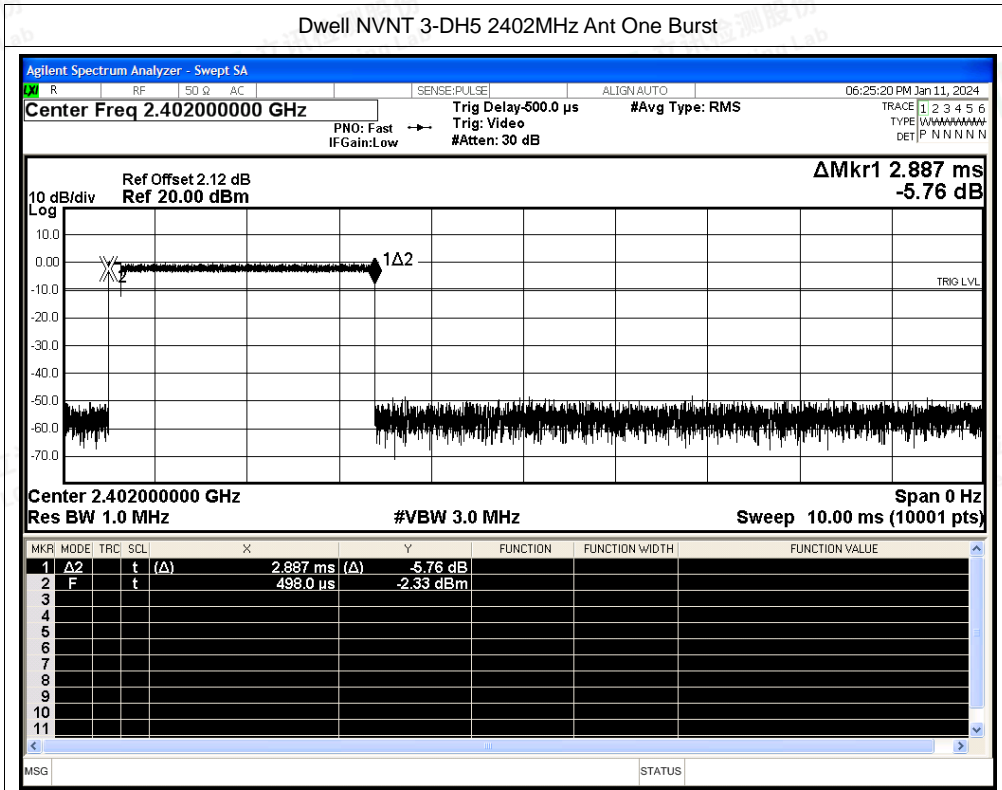


Dwell NVNT 2-DH5 2402MHz Ant Accumulated

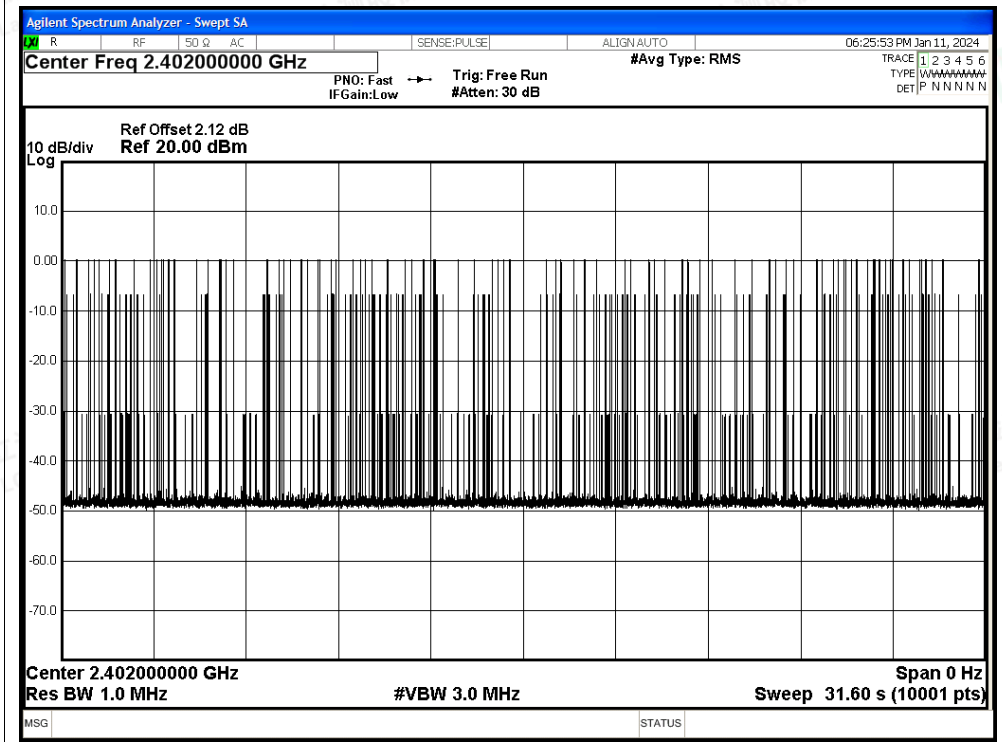




Dwell NVNT 3-DH5 2402MHz Ant One Burst



Dwell NVNT 3-DH5 2402MHz Ant Accumulated





## A.5 Number of Hopping Channel

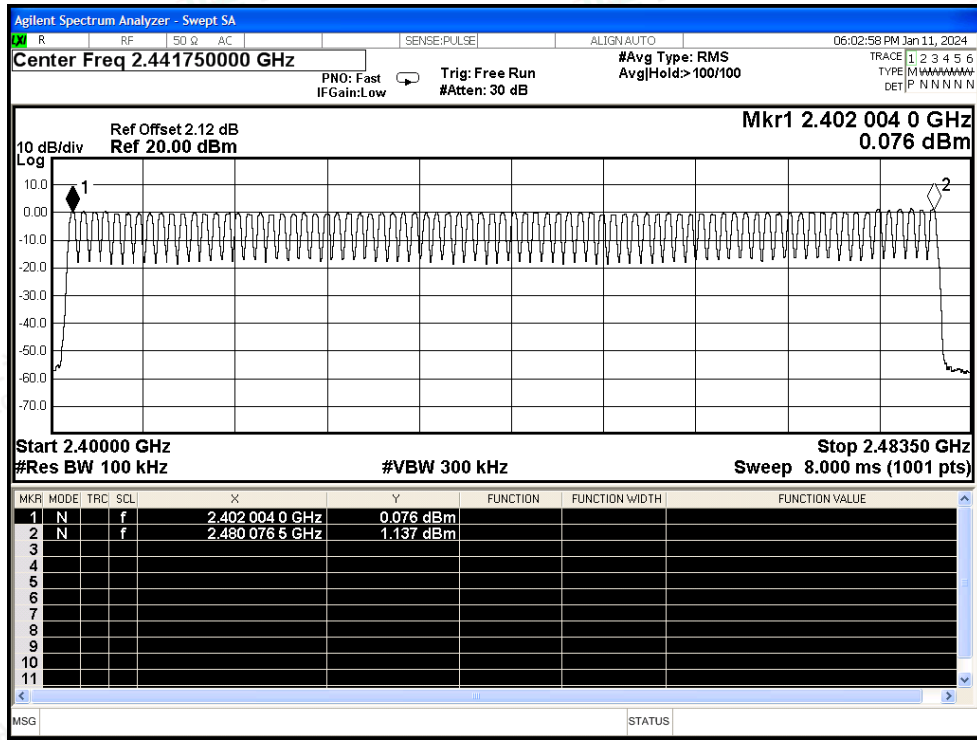
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant	79	15	Pass
NVNT	2-DH5	Ant	79	15	Pass
NVNT	3-DH5	Ant	79	15	Pass



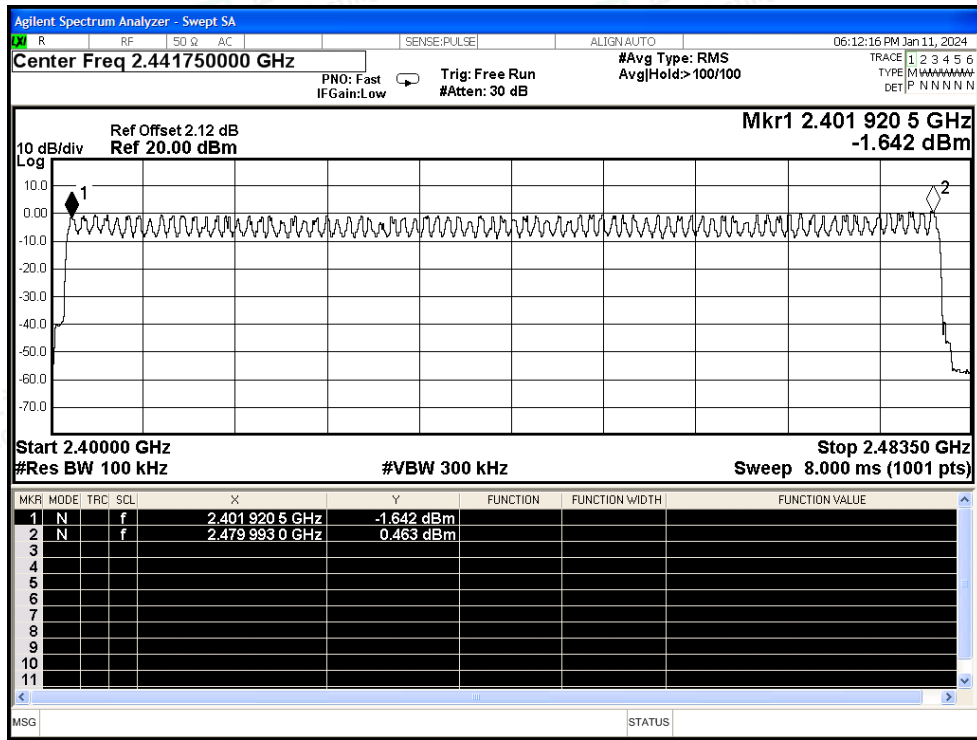


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant

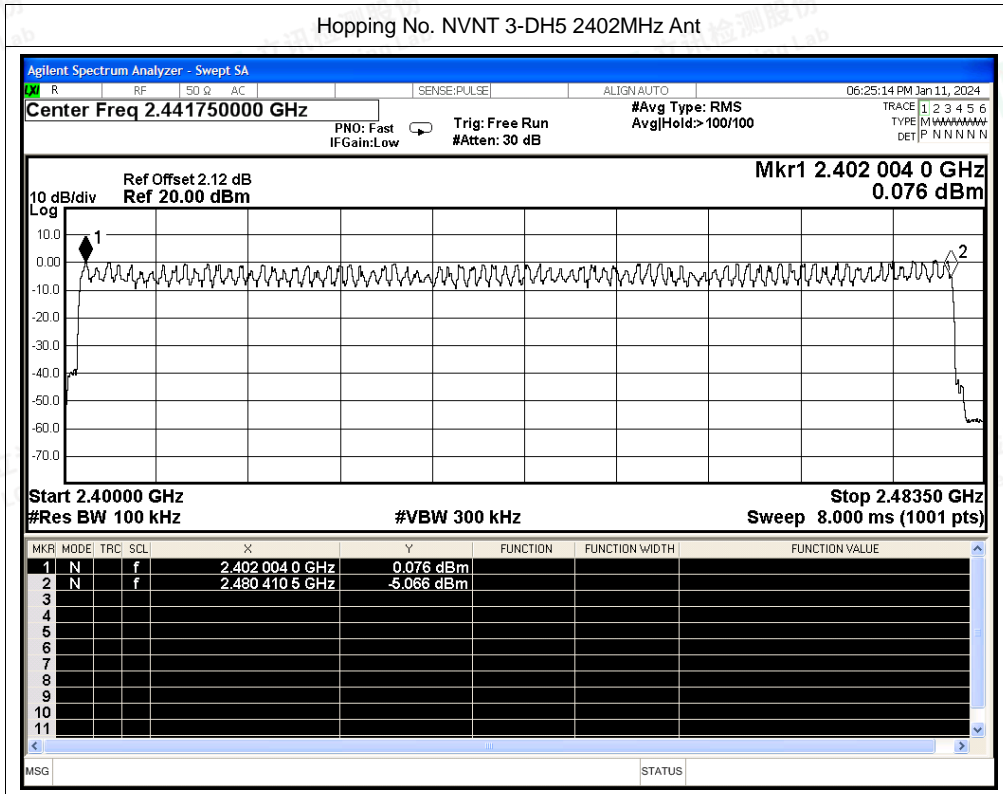


Hopping No. NVNT 2-DH5 2402MHz Ant





Hopping No. NVNT 3-DH5 2402MHz Ant





## A.6 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant	No-Hopping	-57.05	-20	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	-57.37	-20	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	-50.53	-20	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	-55.95	-20	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	-53.81	-20	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	-57.4	-20	Pass

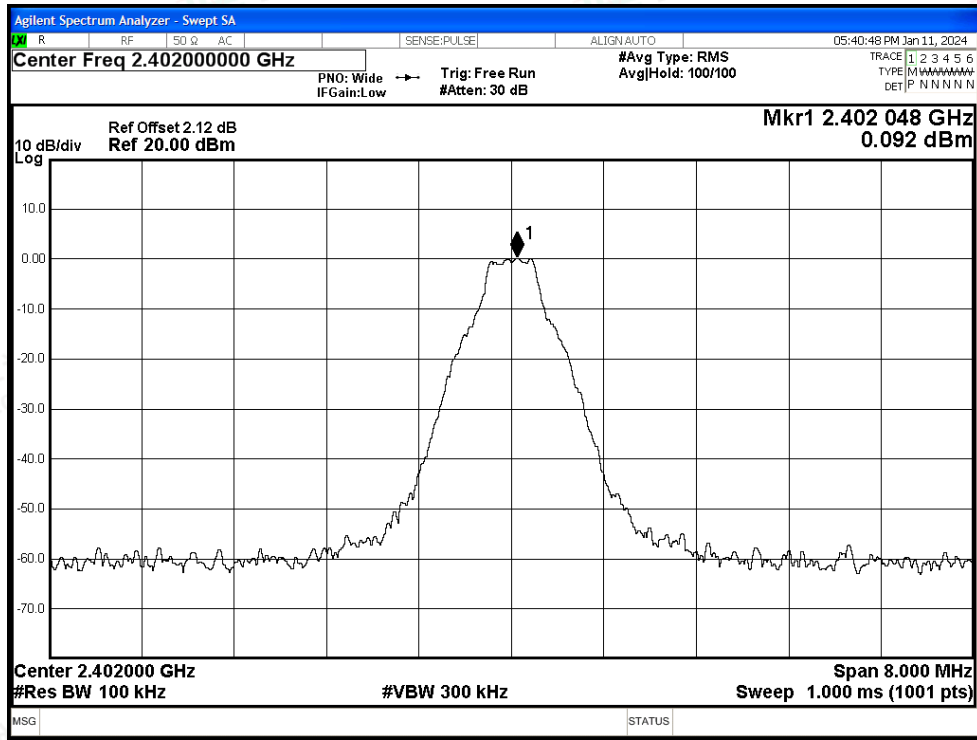




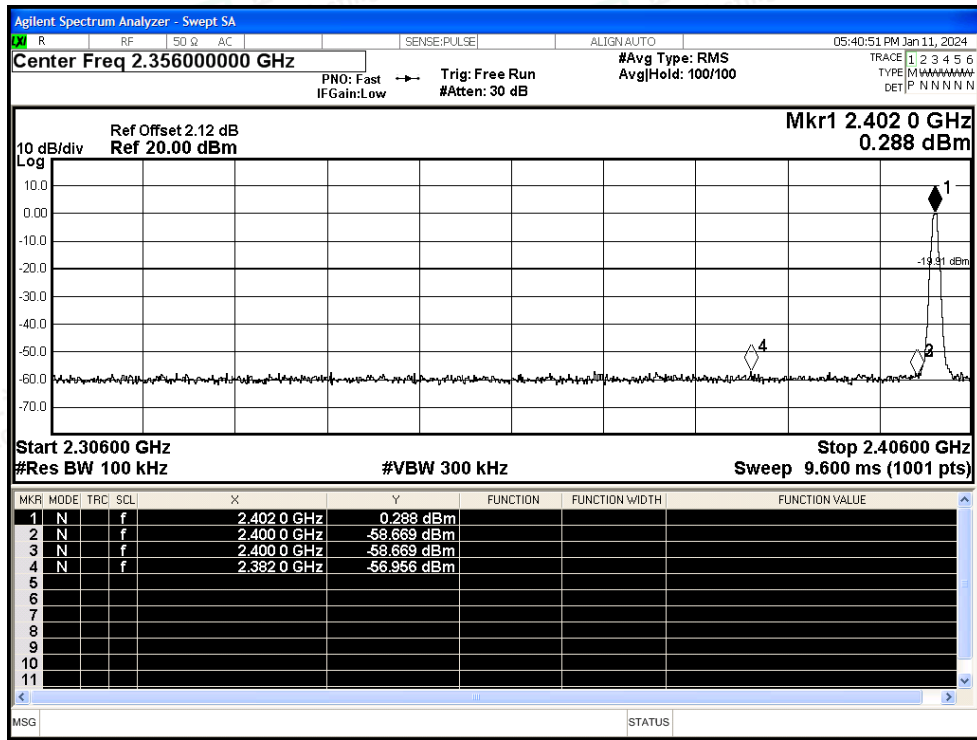


Test Graphs

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

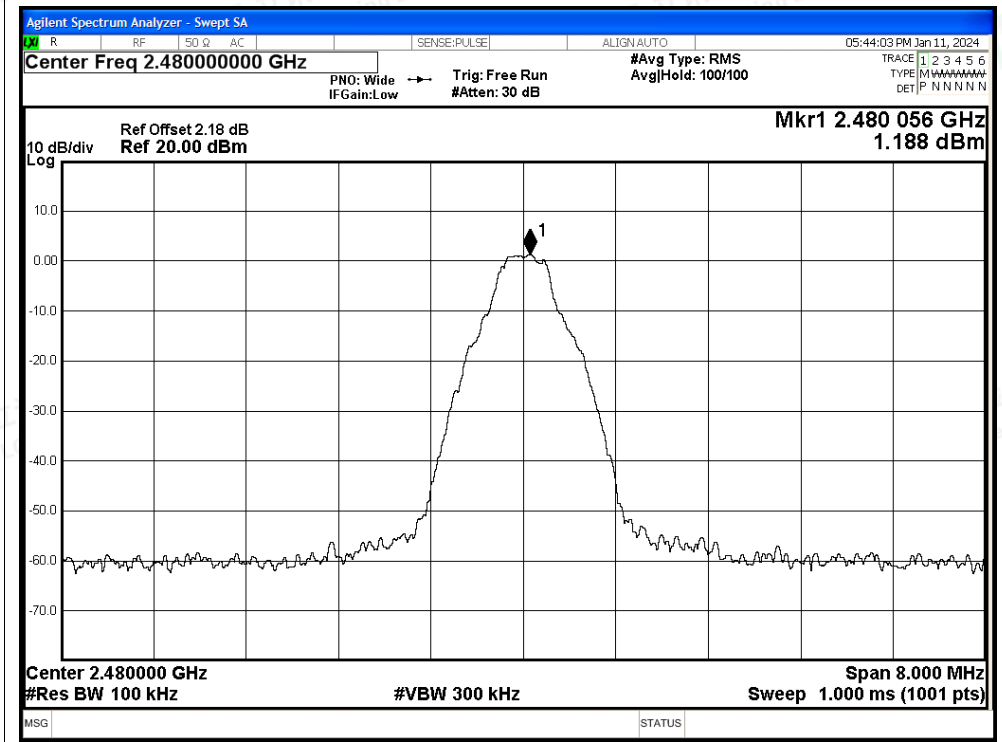


Band Edge NVNT 1-DH5 2402MHz Ant No-Hopping Emission

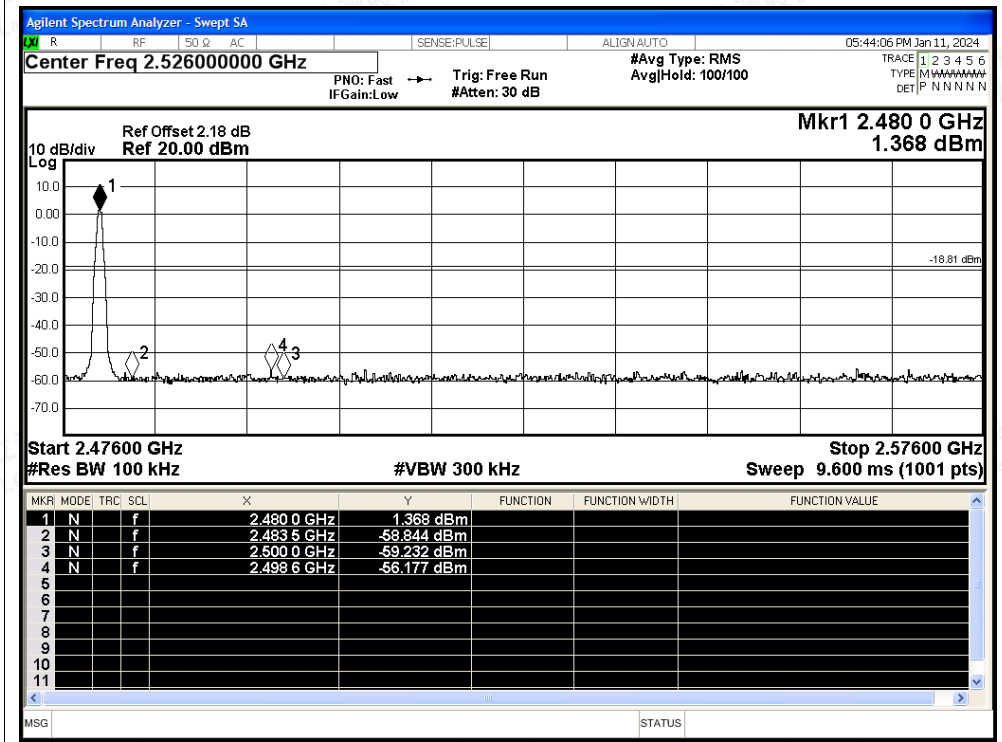




Band Edge NVNT 1-DH5 2480MHz Ant No-Hopping Ref

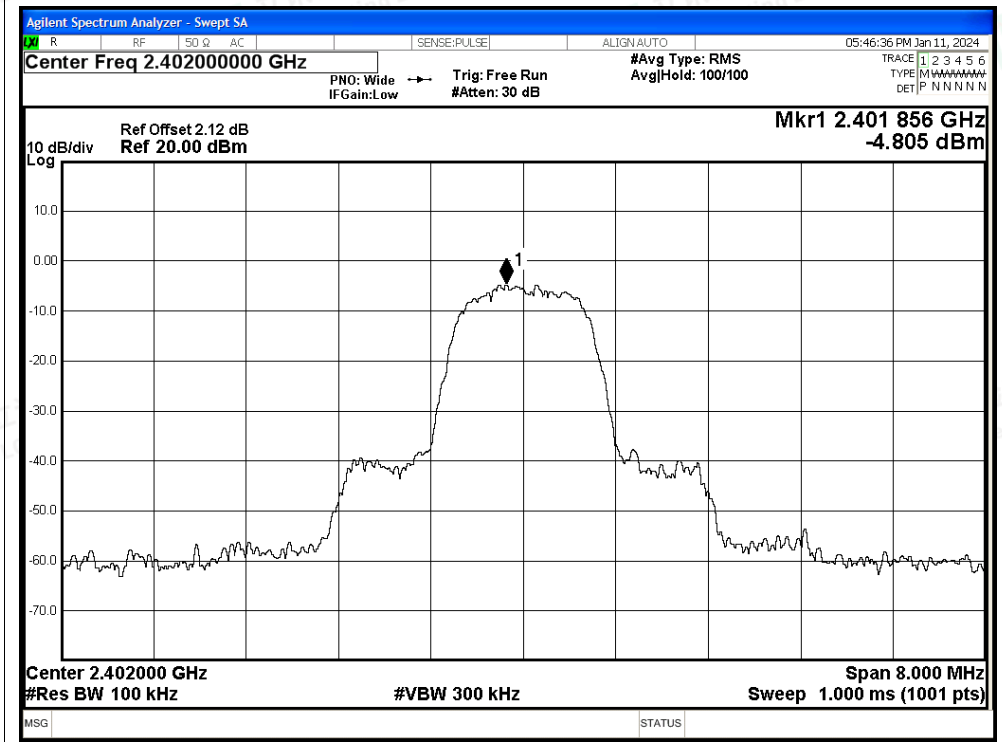


Band Edge NVNT 1-DH5 2480MHz Ant No-Hopping Emission

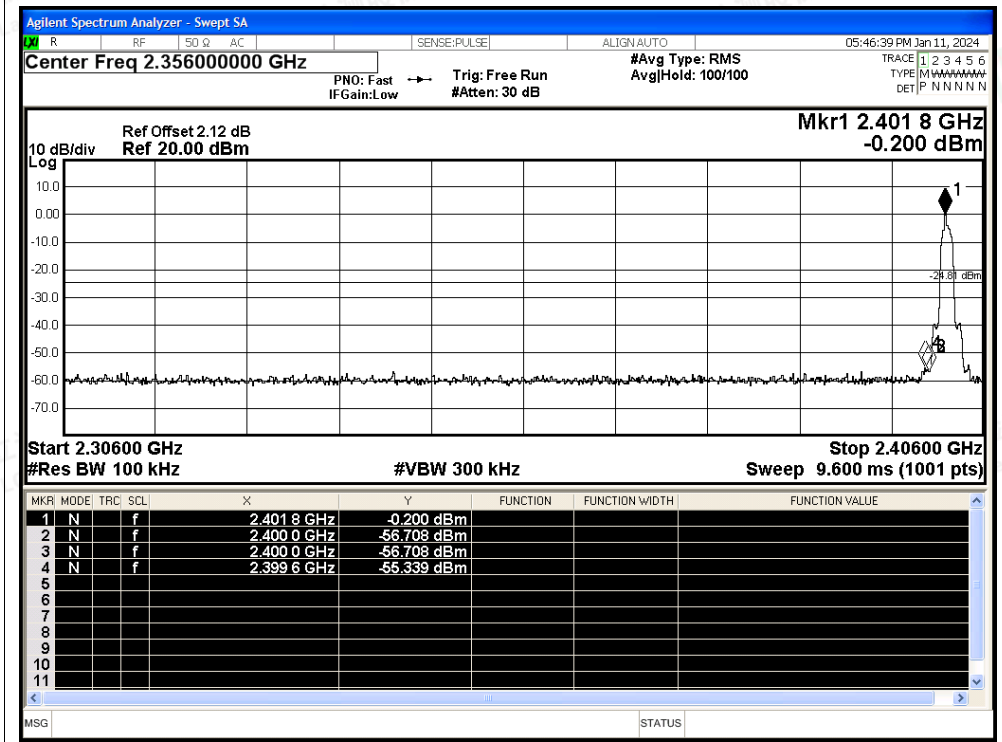




Band Edge NVNT 2-DH5 2402MHz Ant No-Hopping Ref

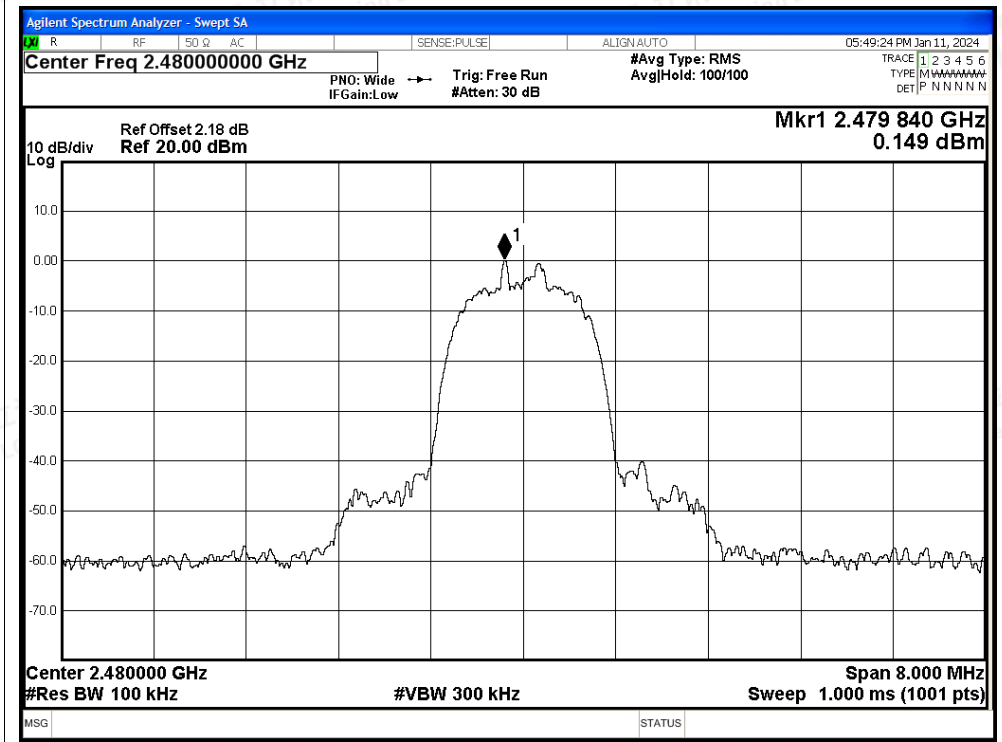


Band Edge NVNT 2-DH5 2402MHz Ant No-Hopping Emission

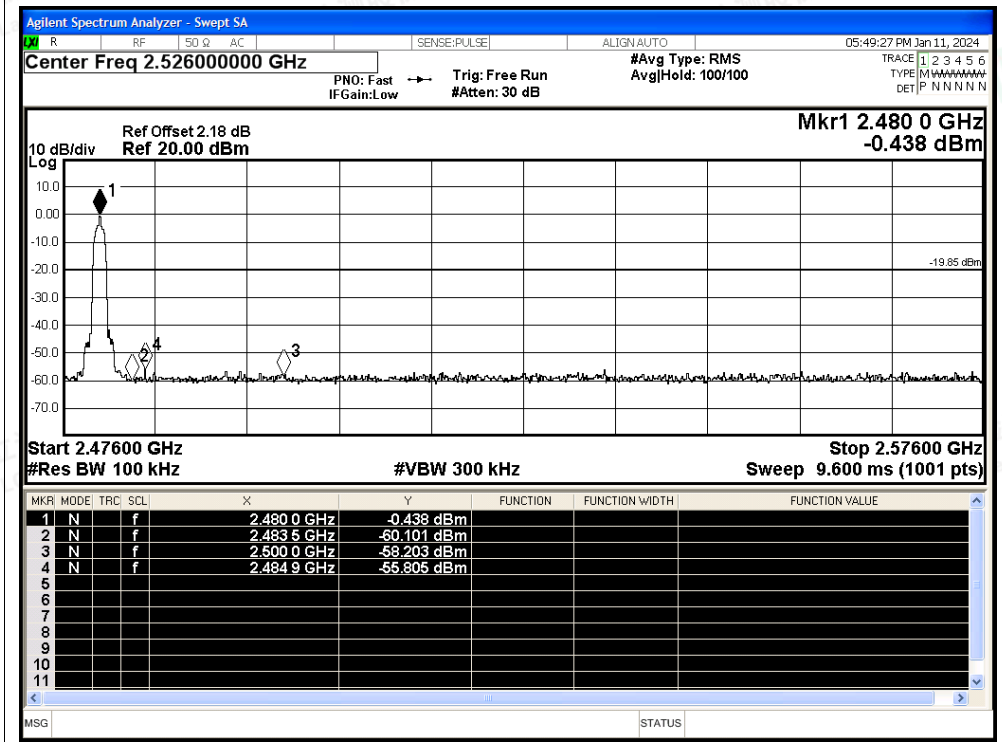




Band Edge NVNT 2-DH5 2480MHz Ant No-Hopping Ref

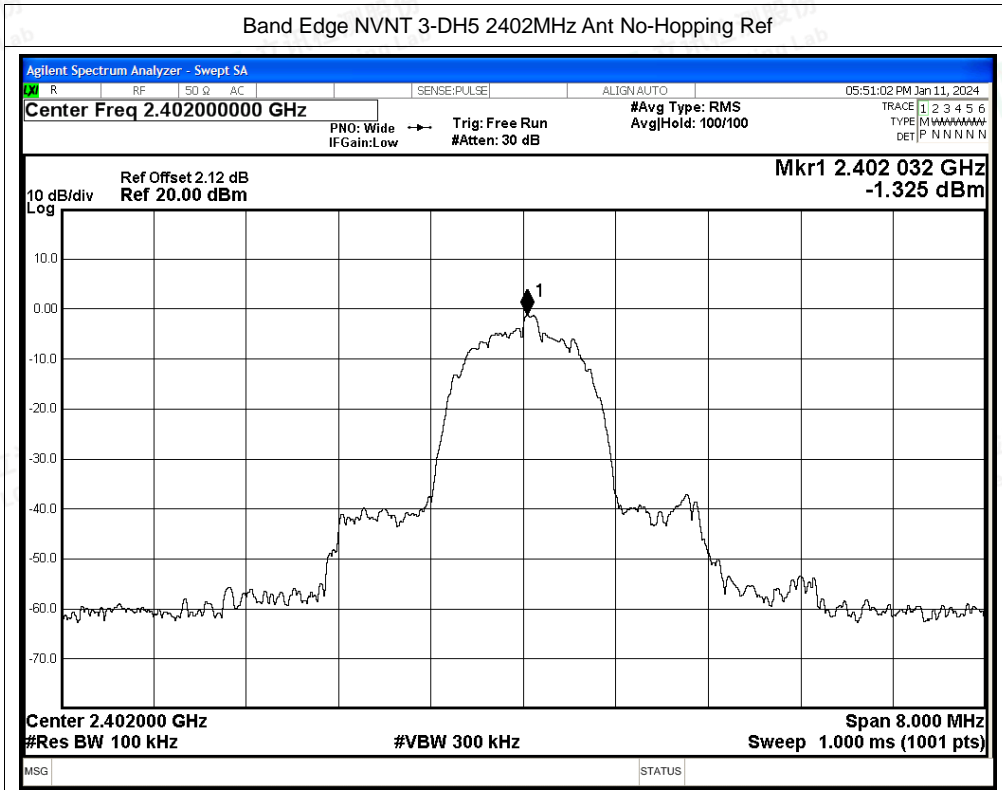


Band Edge NVNT 2-DH5 2480MHz Ant No-Hopping Emission

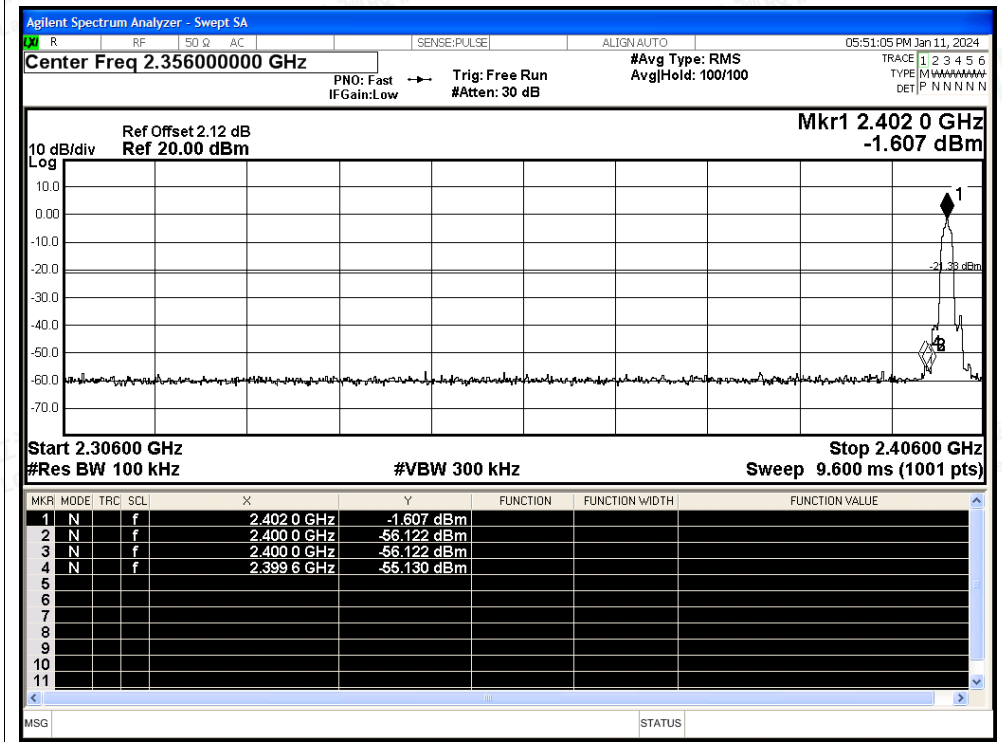




Band Edge NVNT 3-DH5 2402MHz Ant No-Hopping Ref

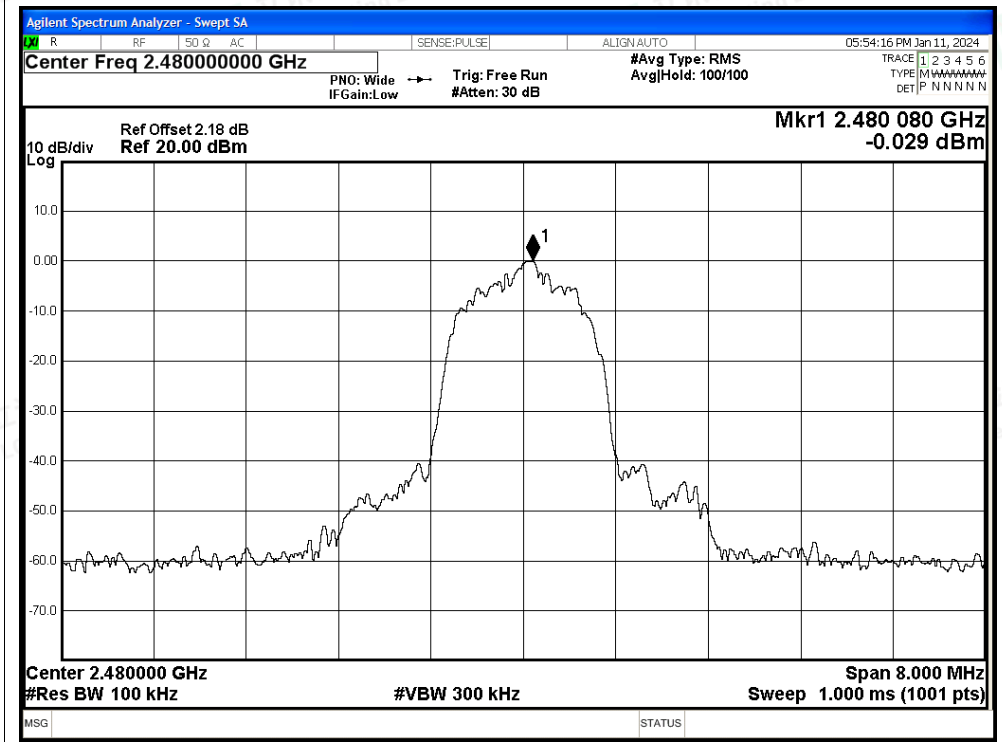


Band Edge NVNT 3-DH5 2402MHz Ant No-Hopping Emission

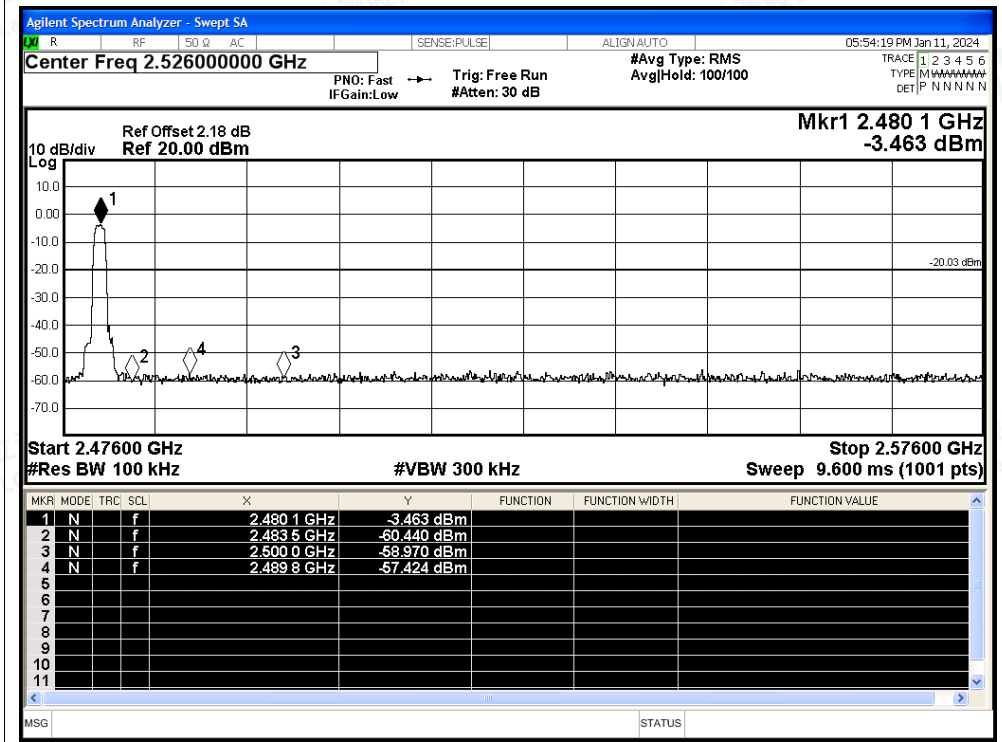




Band Edge NVNT 3-DH5 2480MHz Ant No-Hopping Ref



Band Edge NVNT 3-DH5 2480MHz Ant No-Hopping Emission





## (Hopping)

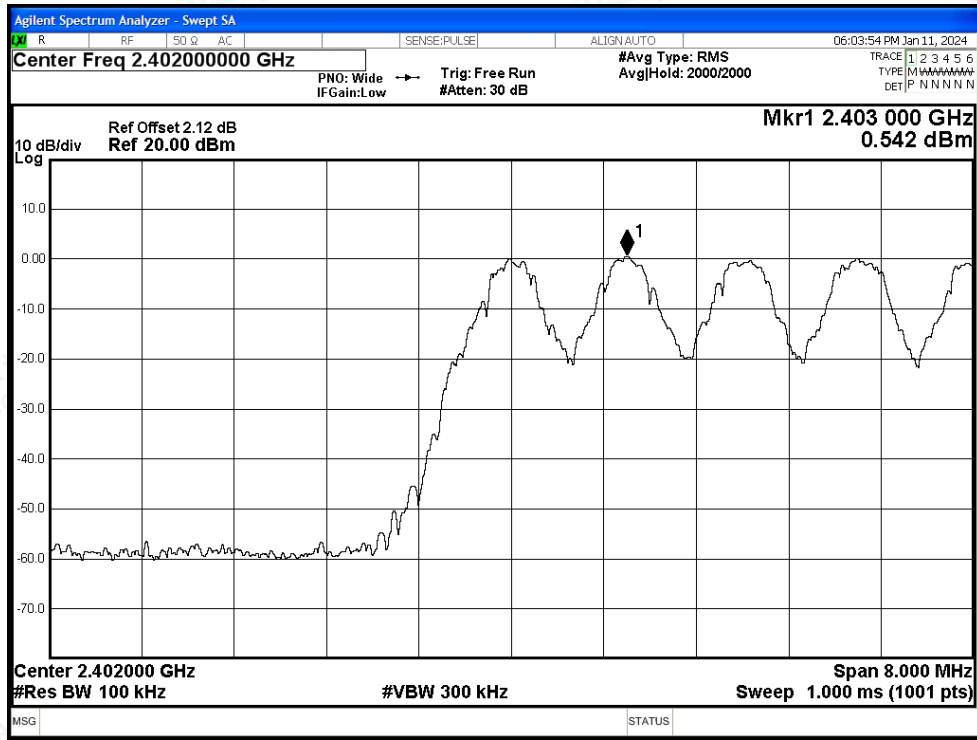
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant	Hopping	-56.55	-20	Pass
NVNT	1-DH5	2480	Ant	Hopping	-57.31	-20	Pass
NVNT	2-DH5	2402	Ant	Hopping	-55.59	-20	Pass
NVNT	2-DH5	2480	Ant	Hopping	-54.53	-20	Pass
NVNT	3-DH5	2402	Ant	Hopping	-54.63	-20	Pass
NVNT	3-DH5	2480	Ant	Hopping	-55.04	-20	Pass



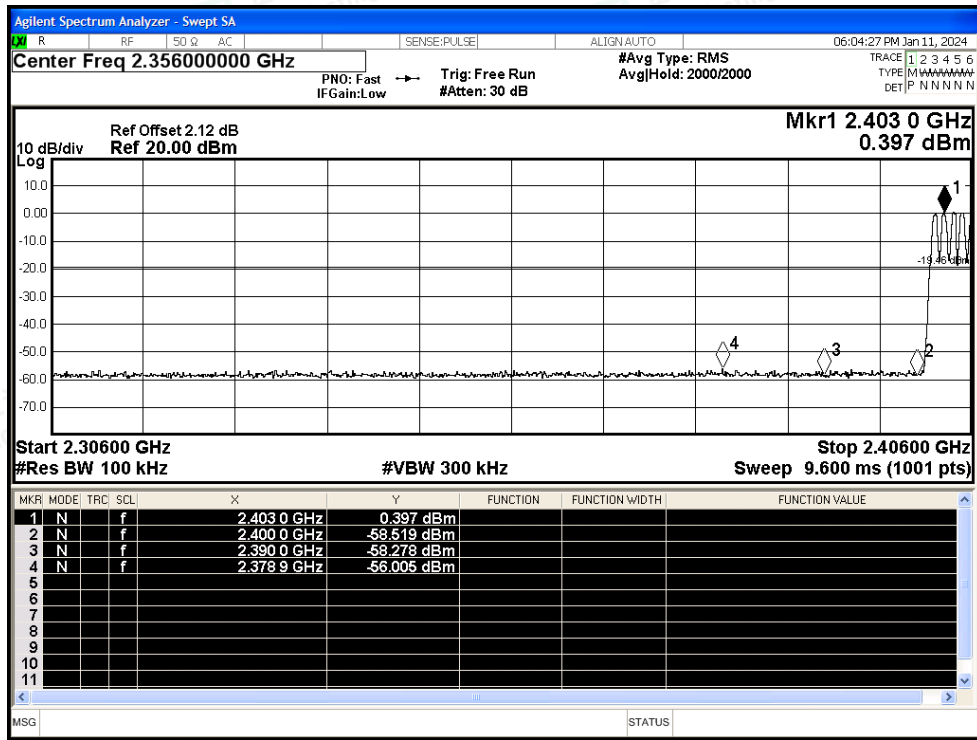


Test Graphs

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



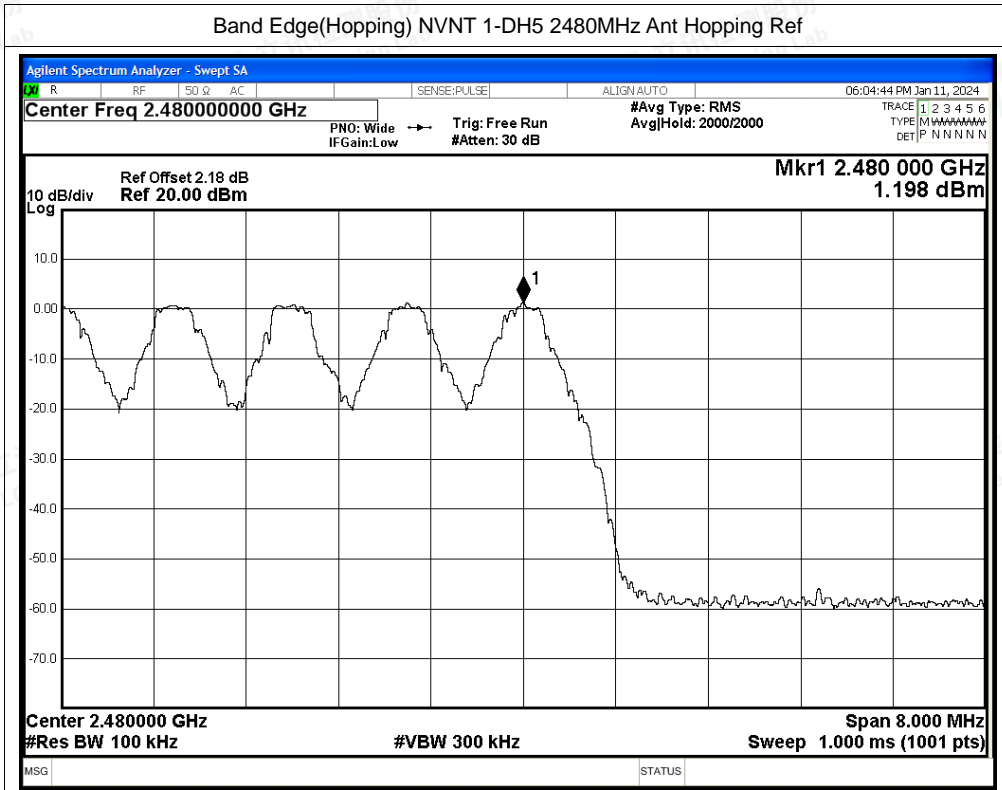
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant Hopping Emission



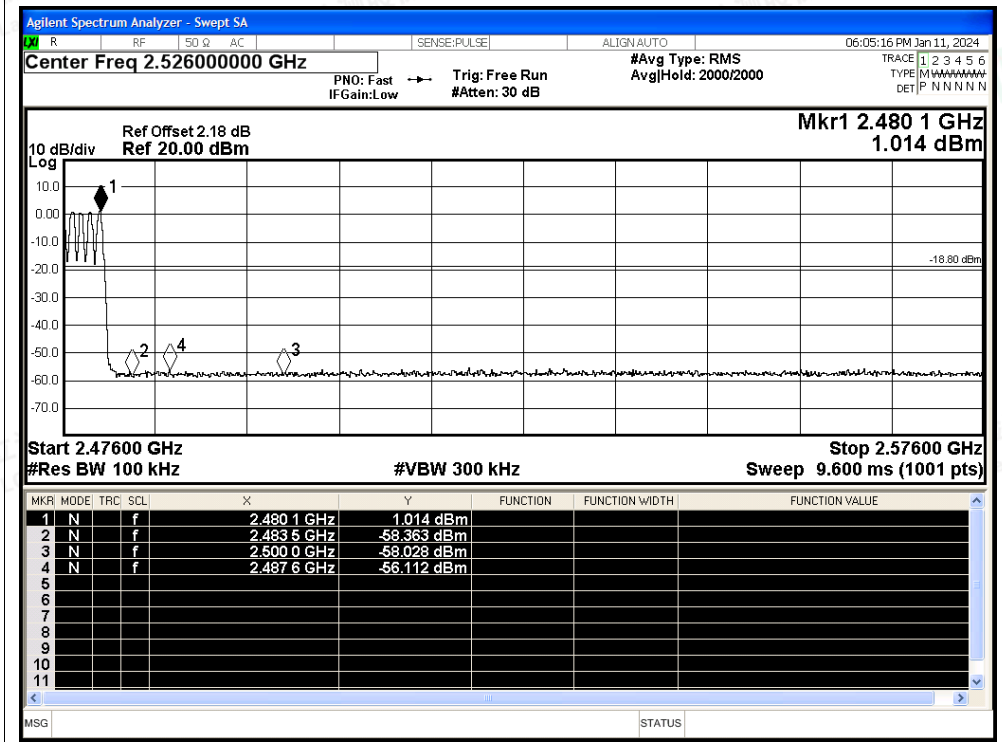




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant Hopping Ref

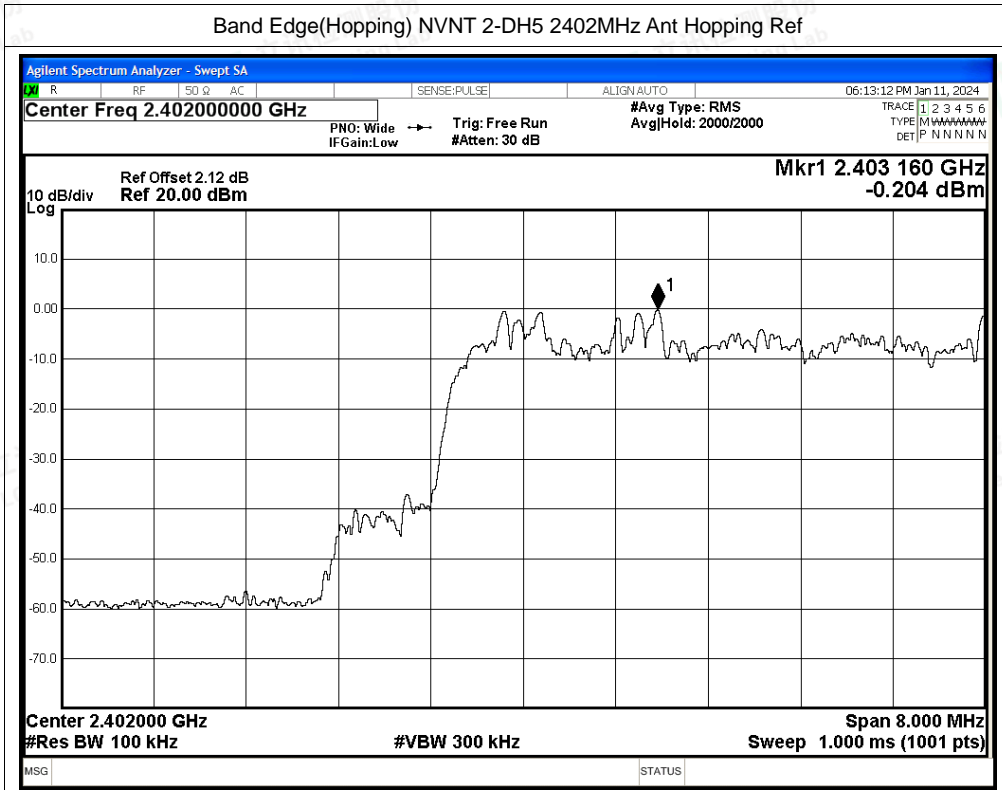


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant Hopping Emission

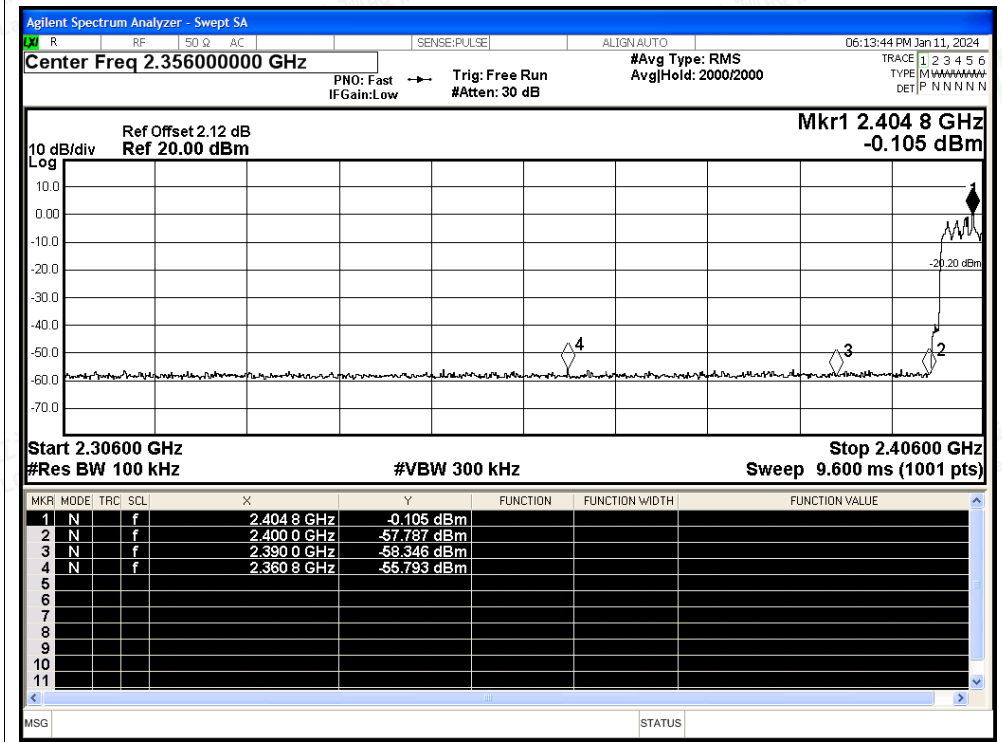




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant Hopping Ref

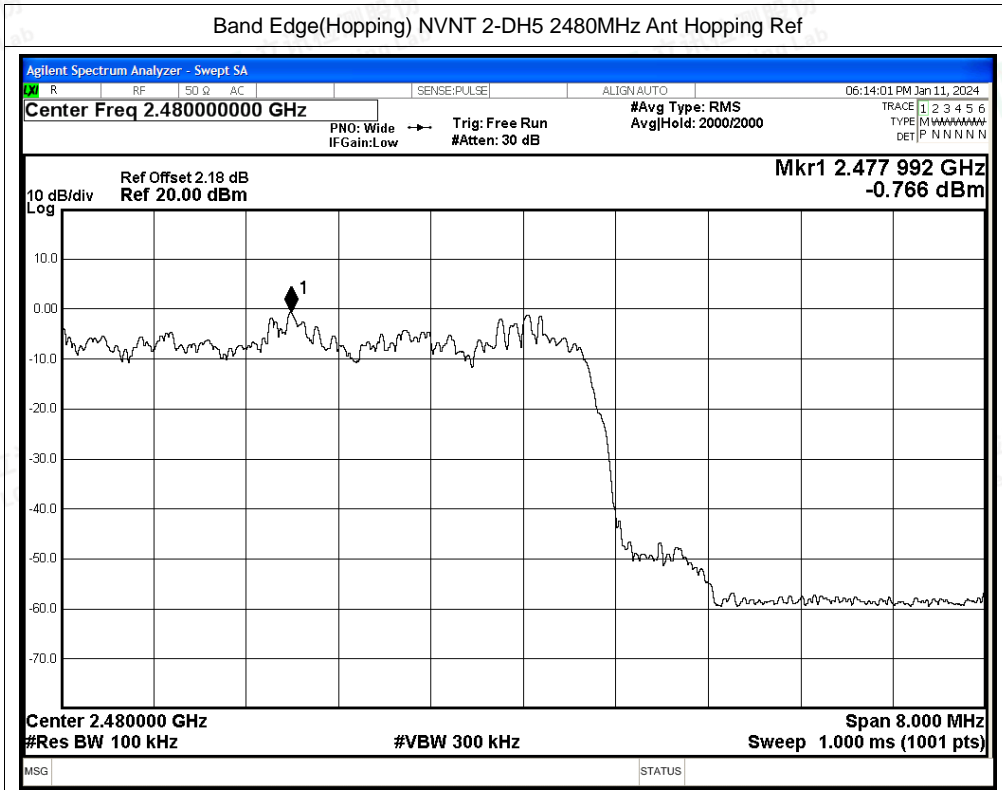


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant Hopping Emission

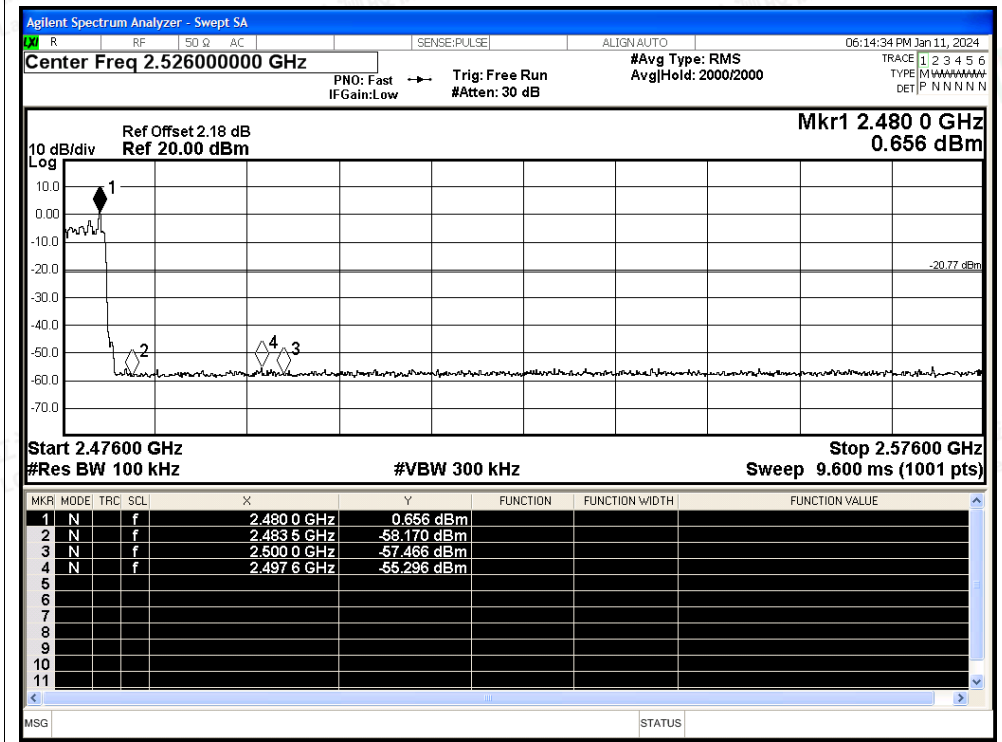




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant Hopping Ref

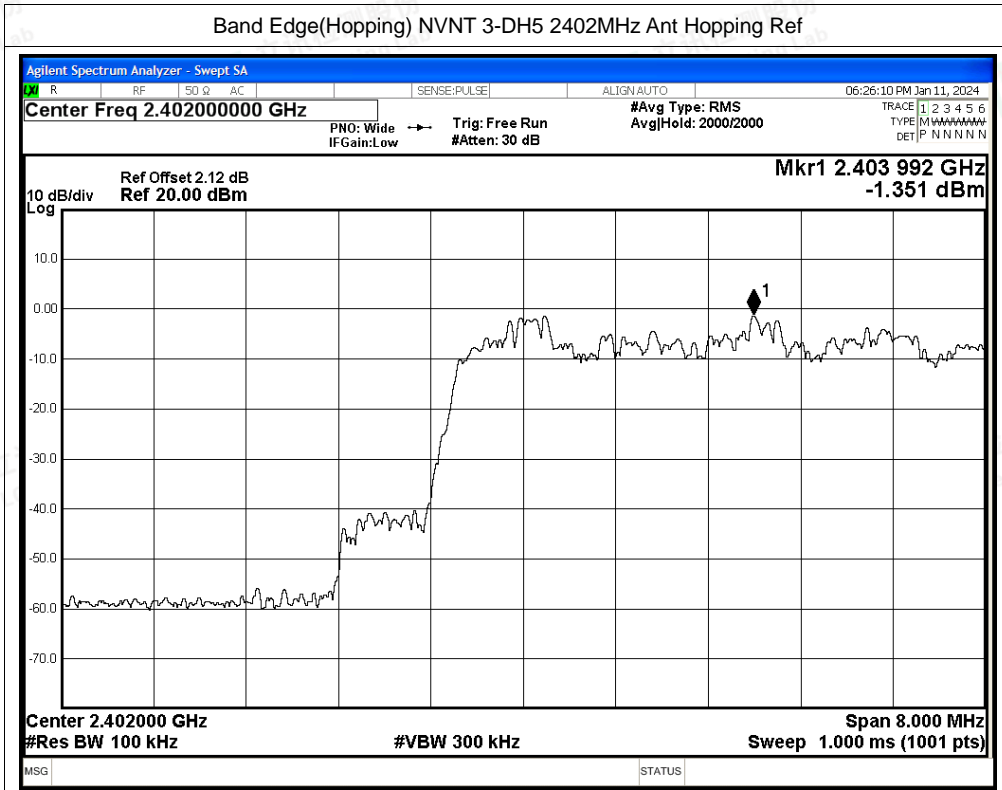


Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant Hopping Emission

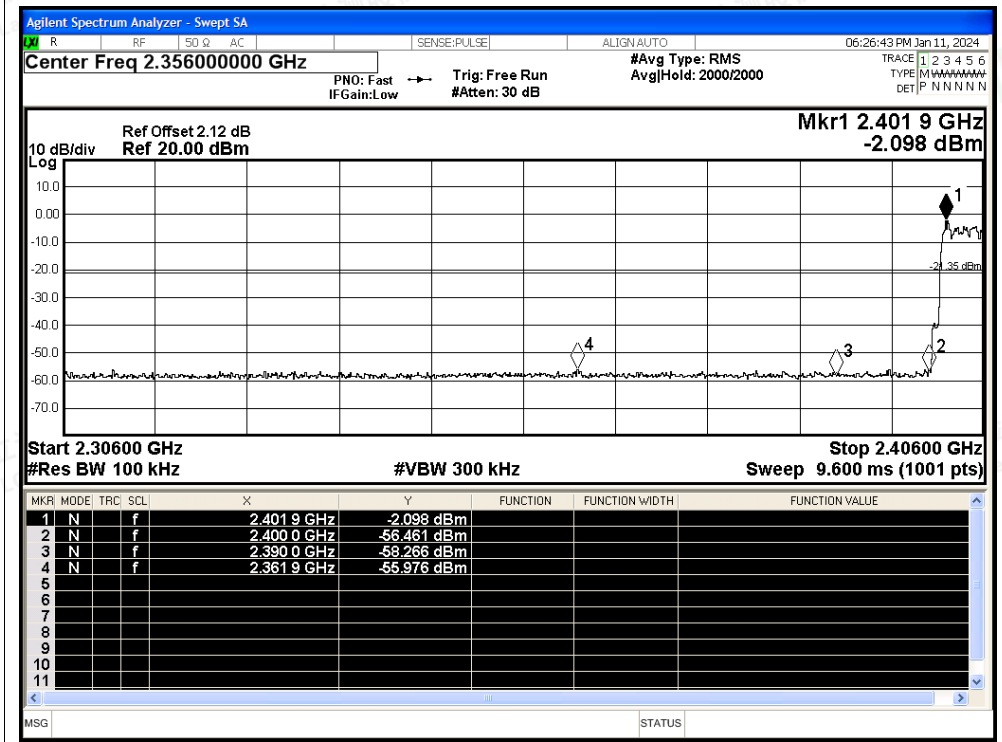




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant Hopping Ref

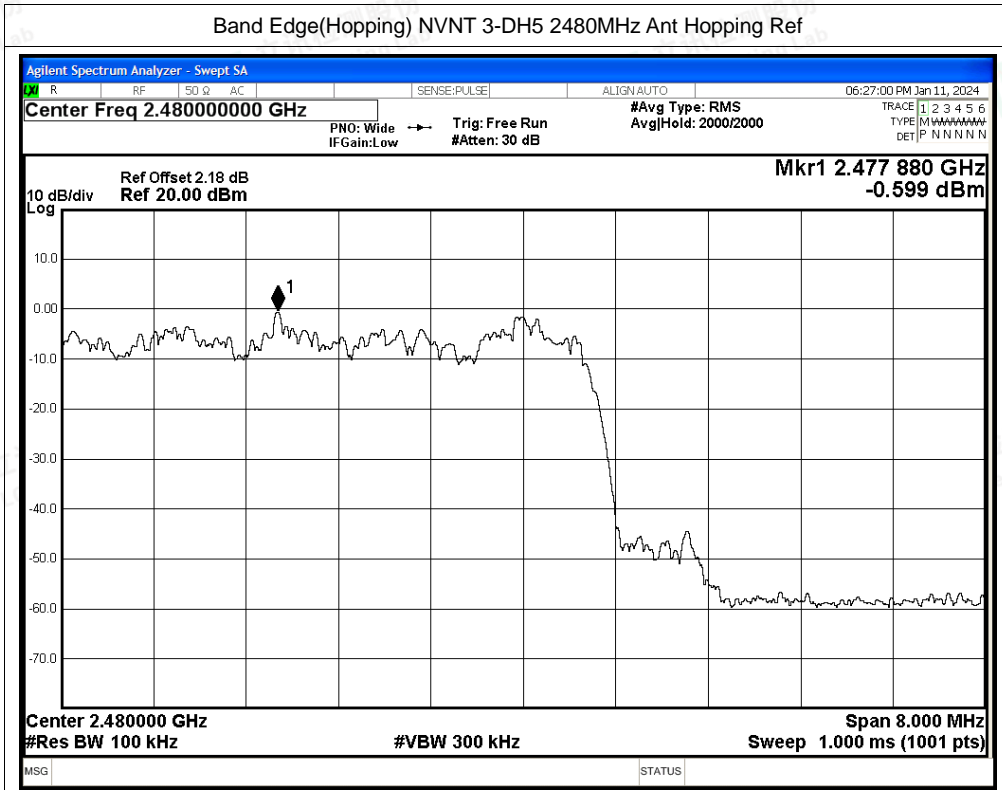


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant Hopping Emission

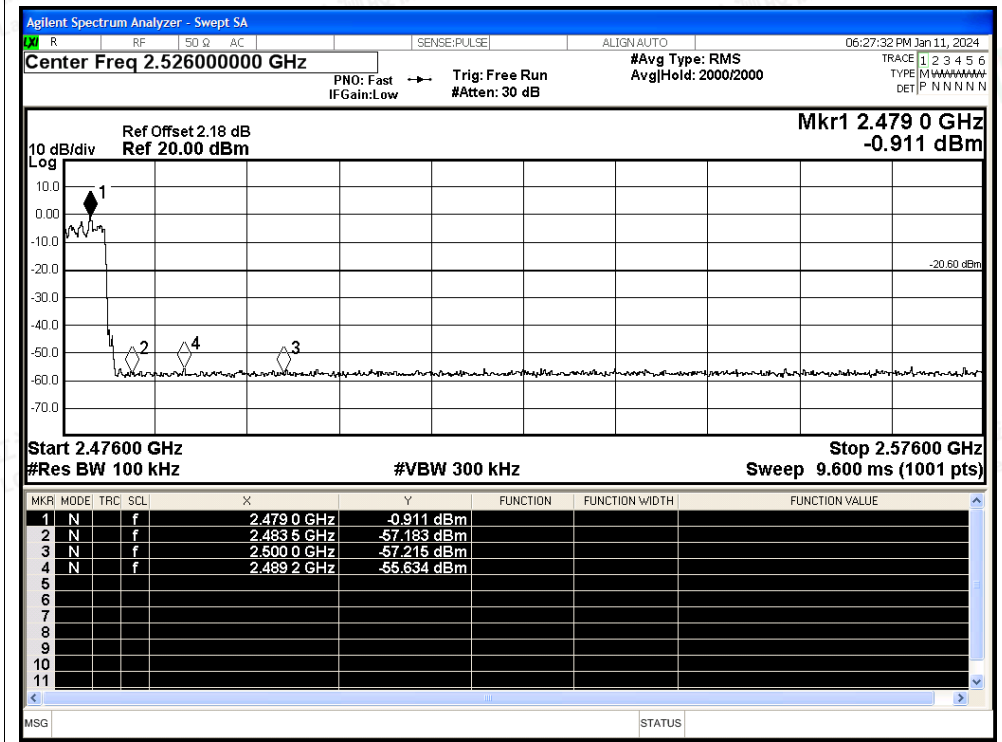




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant Hopping Ref



Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant Hopping Emission





## A.7 Conducted RF Spurious Emission

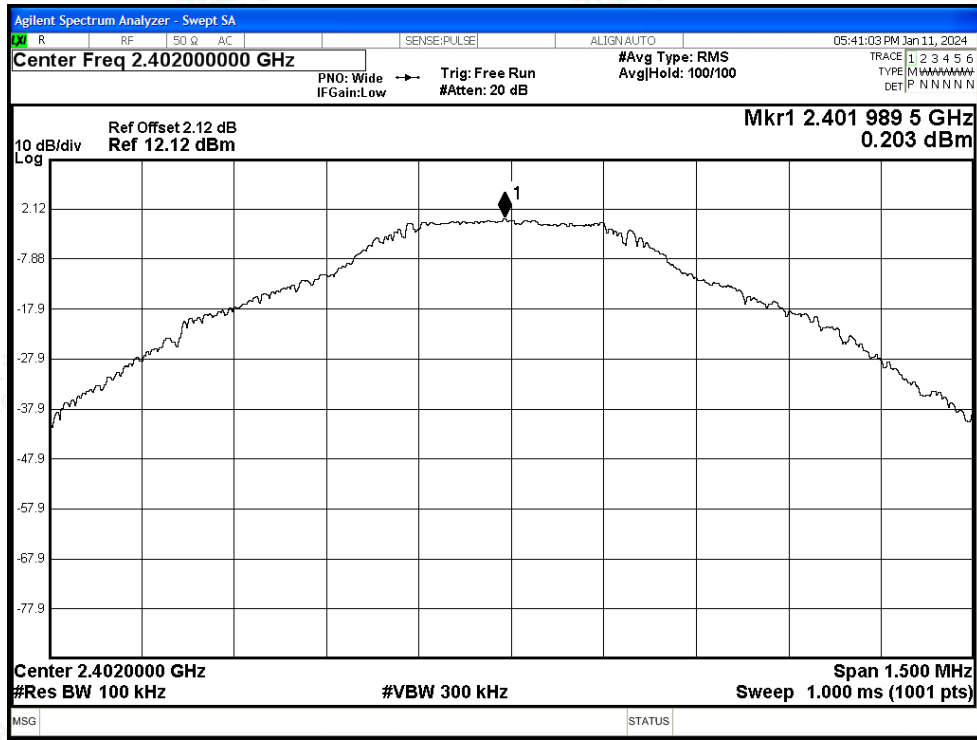
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant	-55.27	-20	Pass
NVNT	1-DH5	2441	Ant	-55.35	-20	Pass
NVNT	1-DH5	2480	Ant	-56.49	-20	Pass
NVNT	2-DH5	2402	Ant	-54.4	-20	Pass
NVNT	2-DH5	2441	Ant	-53.93	-20	Pass
NVNT	2-DH5	2480	Ant	-54.72	-20	Pass
NVNT	3-DH5	2402	Ant	-53.8	-20	Pass
NVNT	3-DH5	2441	Ant	-53.43	-20	Pass
NVNT	3-DH5	2480	Ant	-55.72	-20	Pass



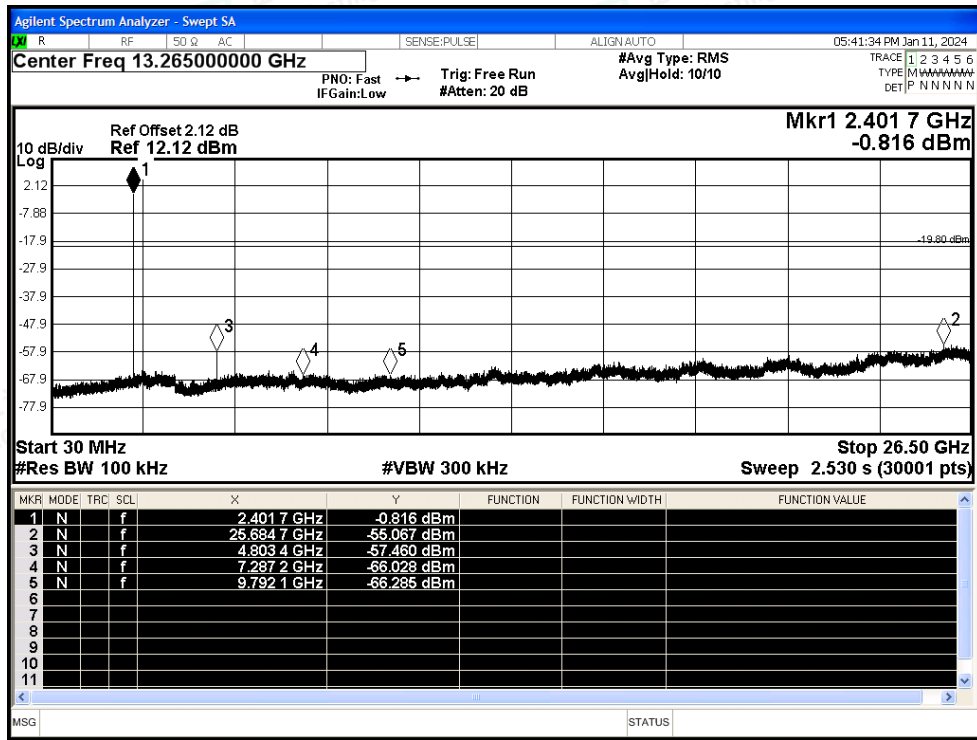


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant Ref

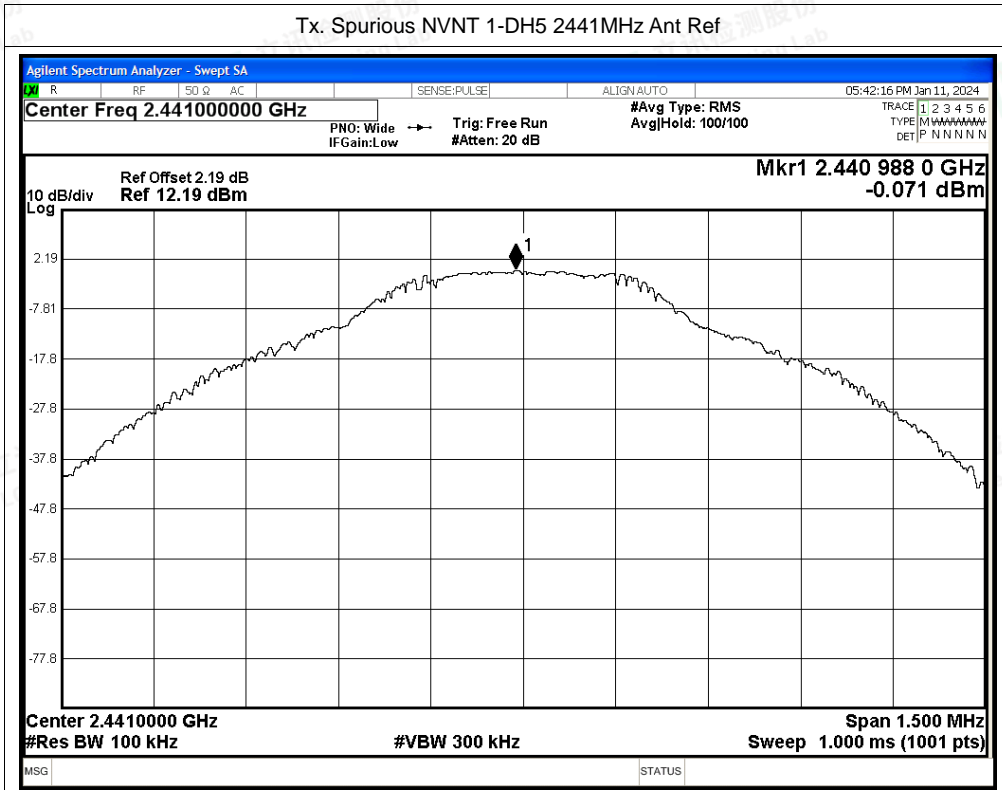


Tx. Spurious NVNT 1-DH5 2402MHz Ant Emission

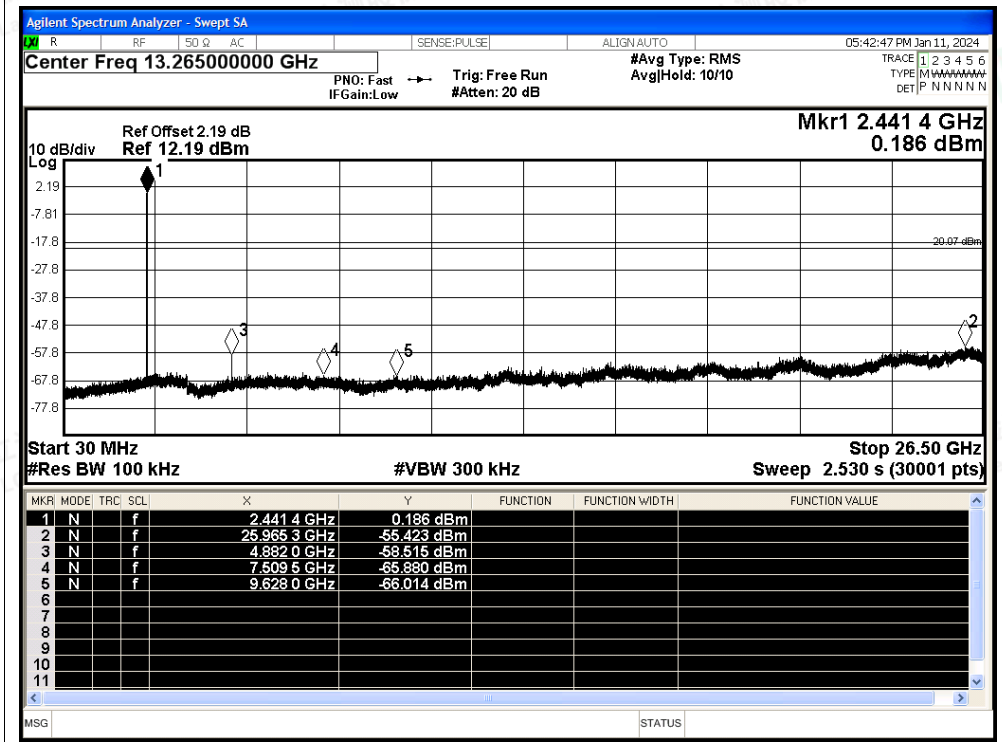




Tx. Spurious NVNT 1-DH5 2441MHz Ant Ref



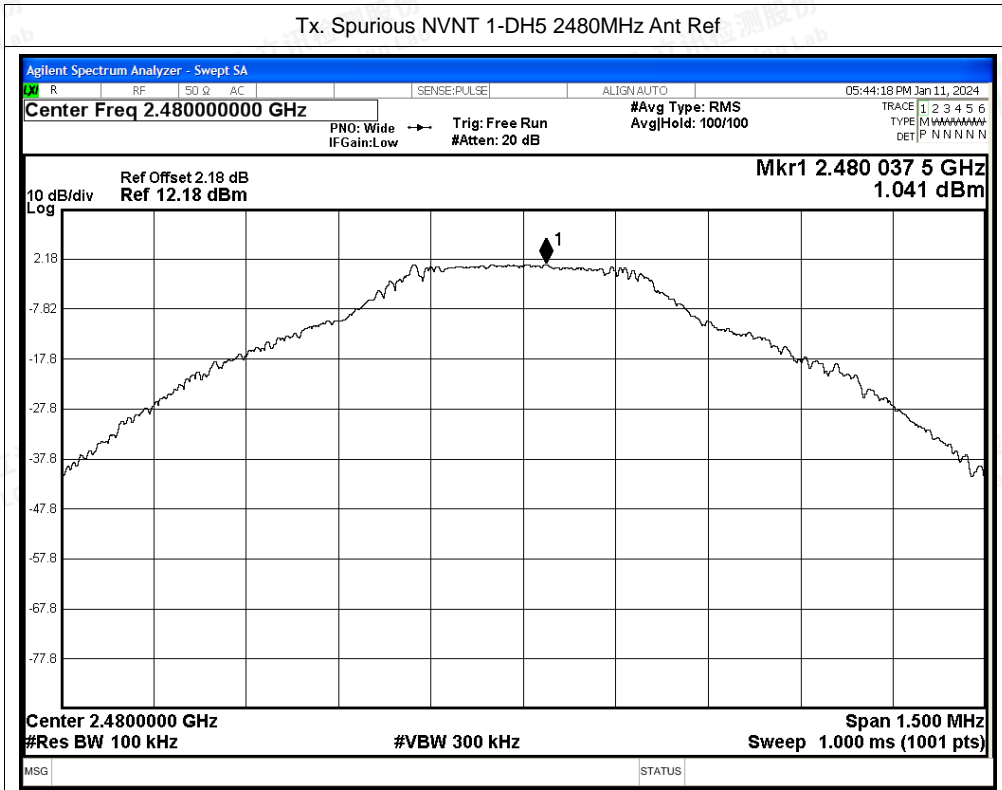
Tx. Spurious NVNT 1-DH5 2441MHz Ant Emission



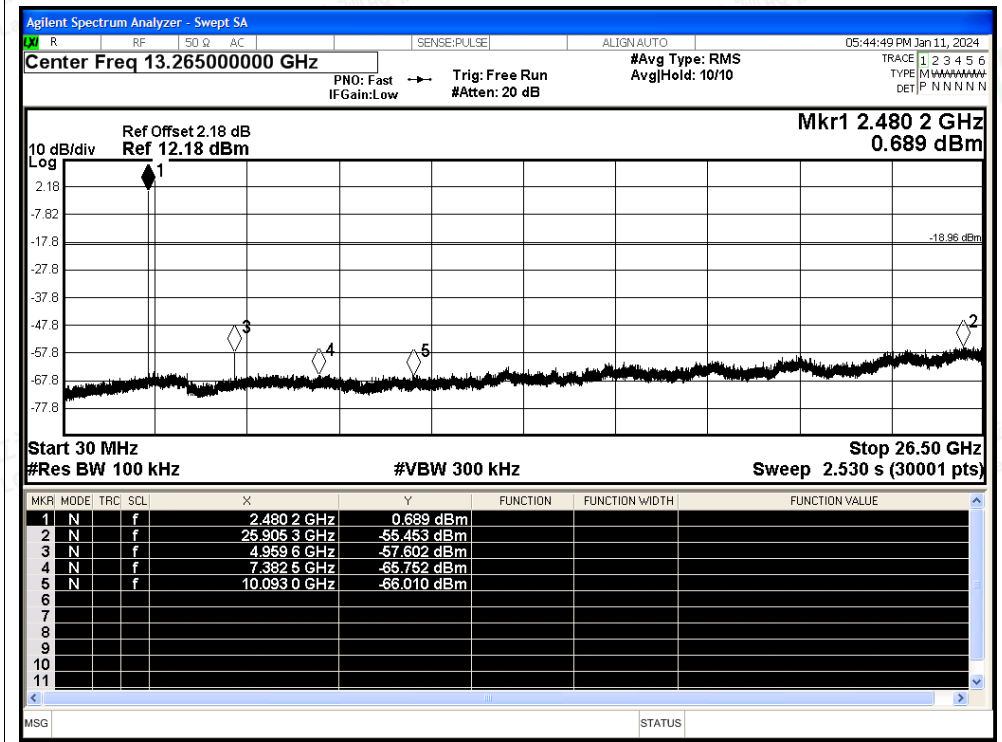




Tx. Spurious NVNT 1-DH5 2480MHz Ant Ref

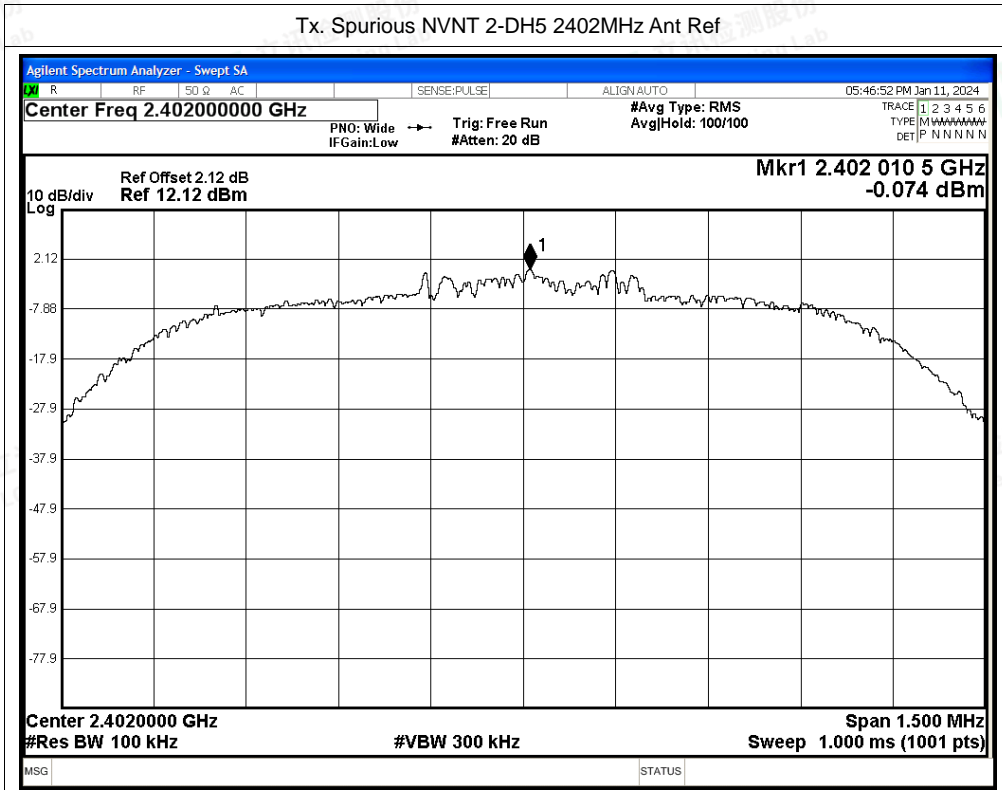


Tx. Spurious NVNT 1-DH5 2480MHz Ant Emission

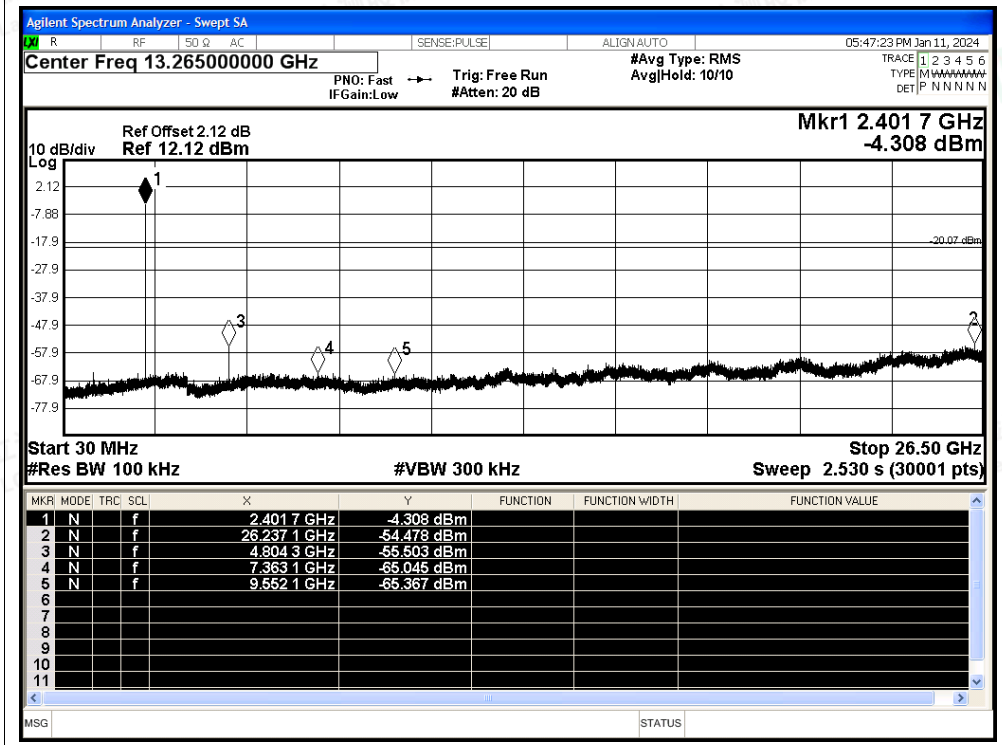




Tx. Spurious NVNT 2-DH5 2402MHz Ant Ref

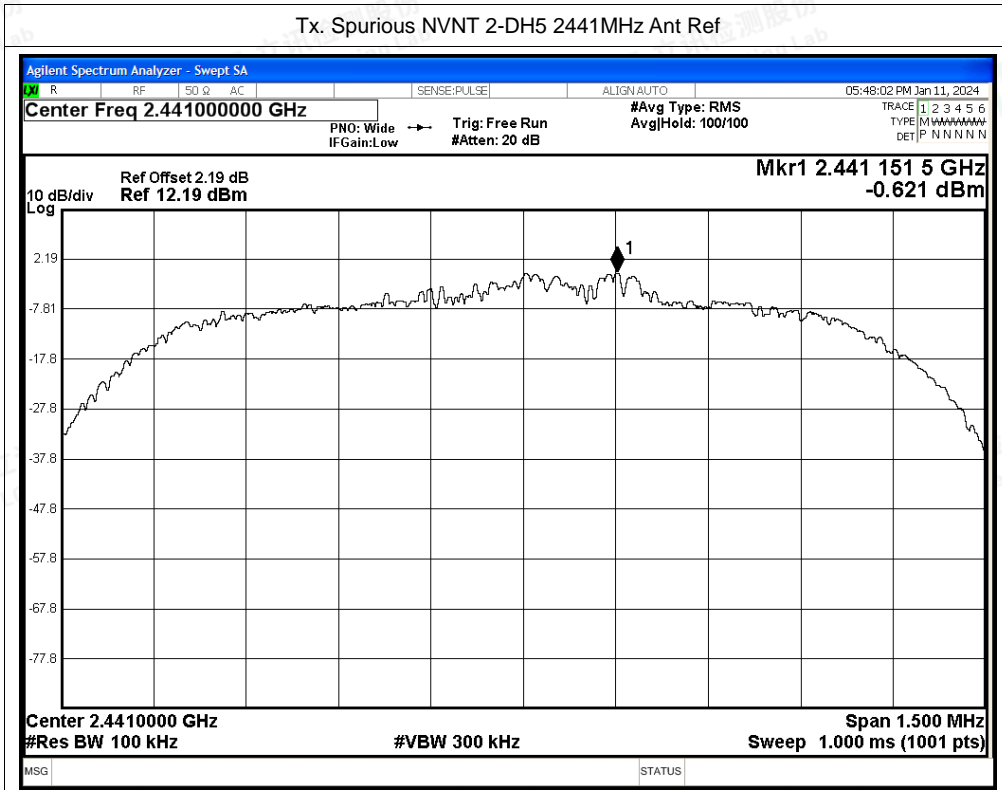


Tx. Spurious NVNT 2-DH5 2402MHz Ant Emission

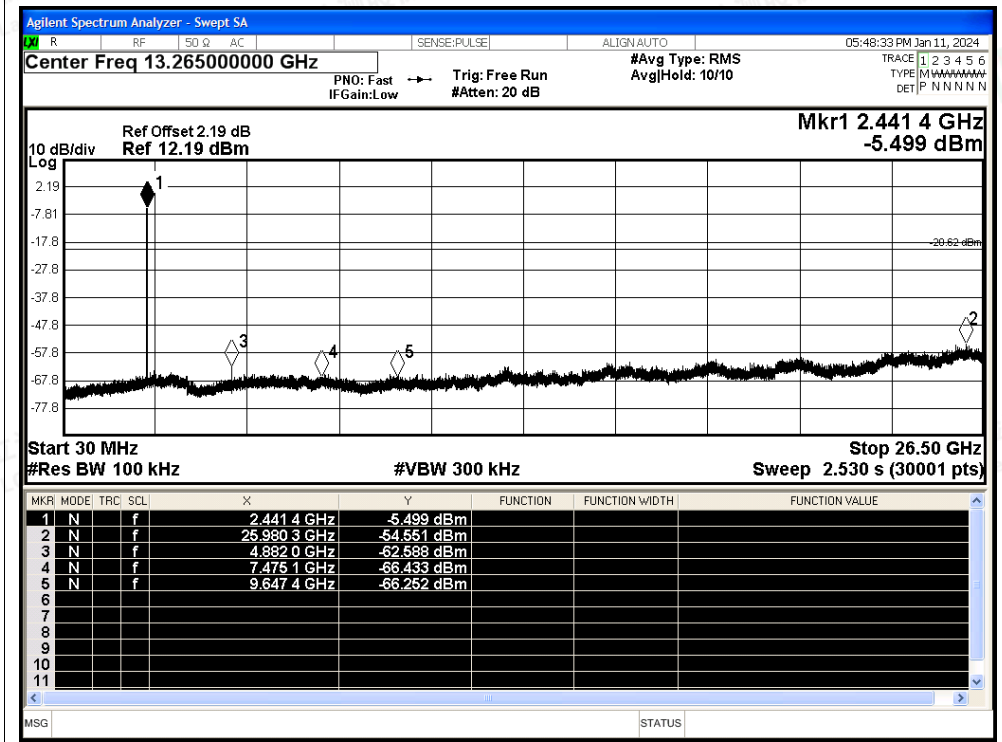




Tx. Spurious NVNT 2-DH5 2441MHz Ant Ref

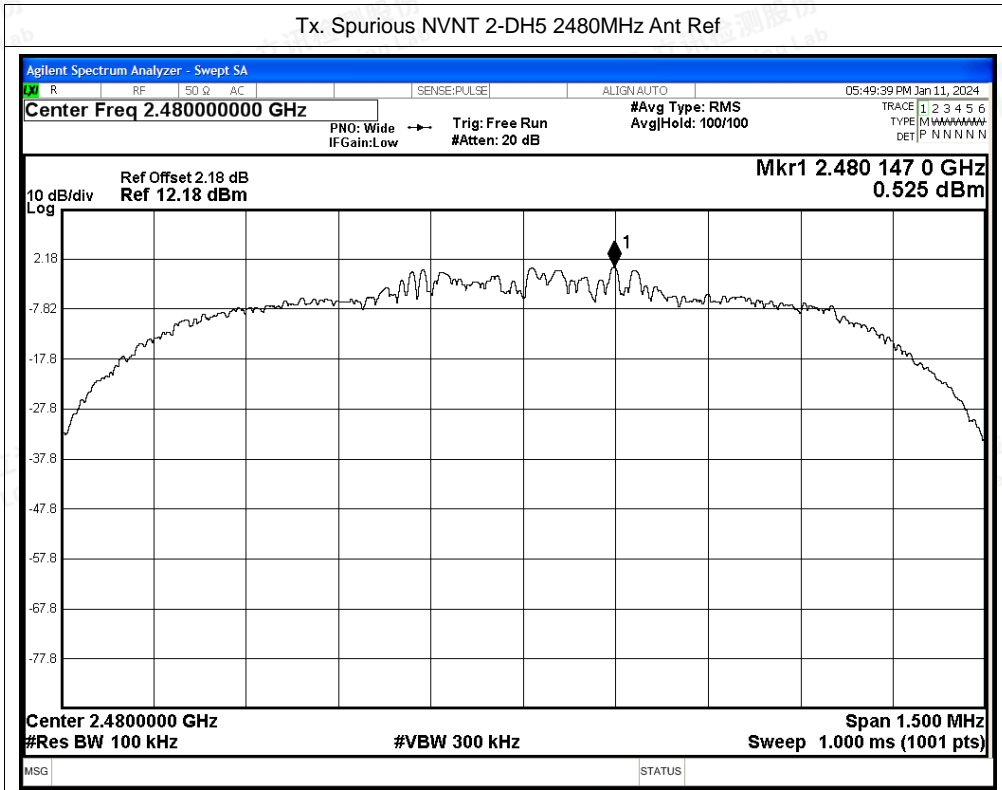


Tx. Spurious NVNT 2-DH5 2441MHz Ant Emission

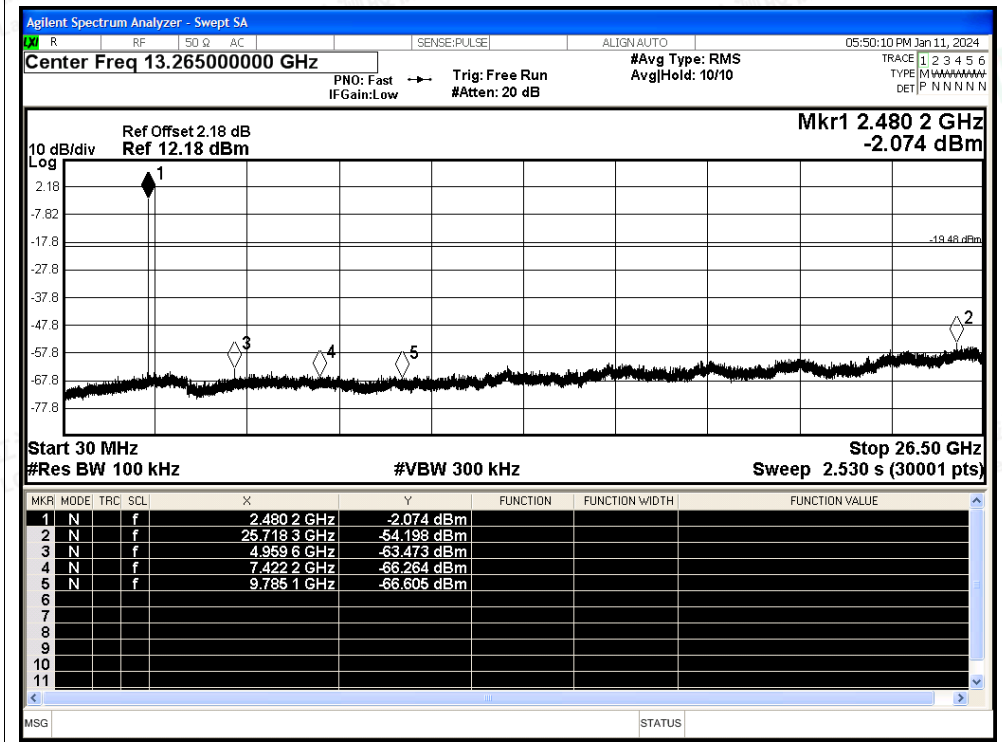




Tx. Spurious NVNT 2-DH5 2480MHz Ant Ref

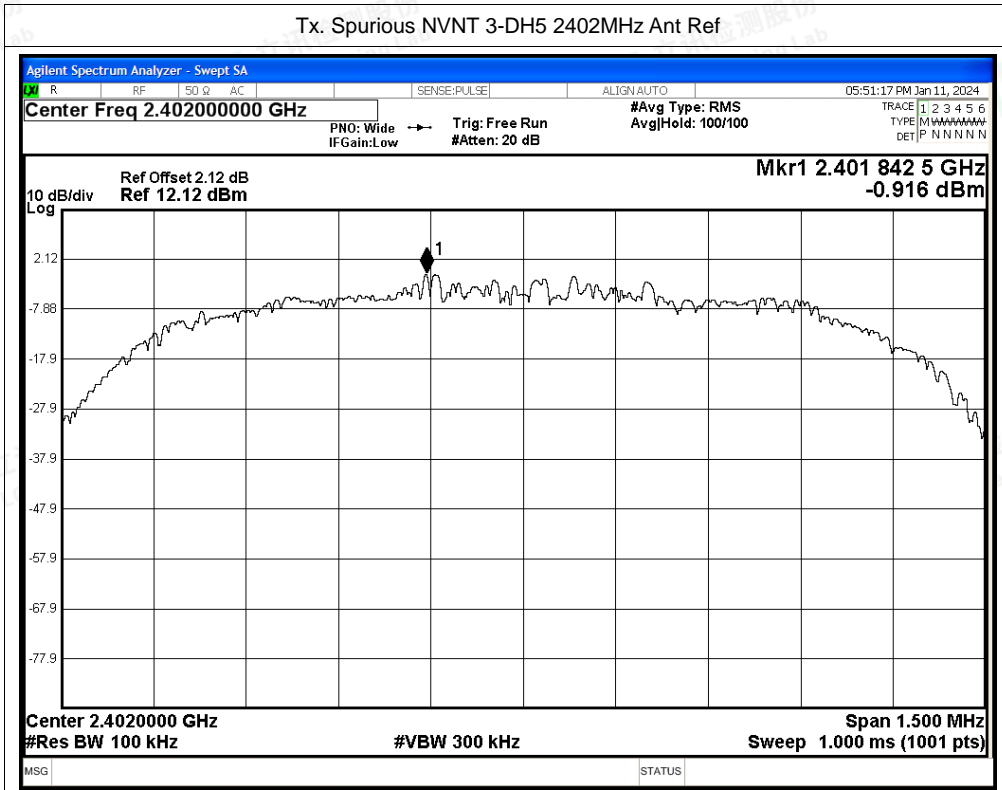


Tx. Spurious NVNT 2-DH5 2480MHz Ant Emission

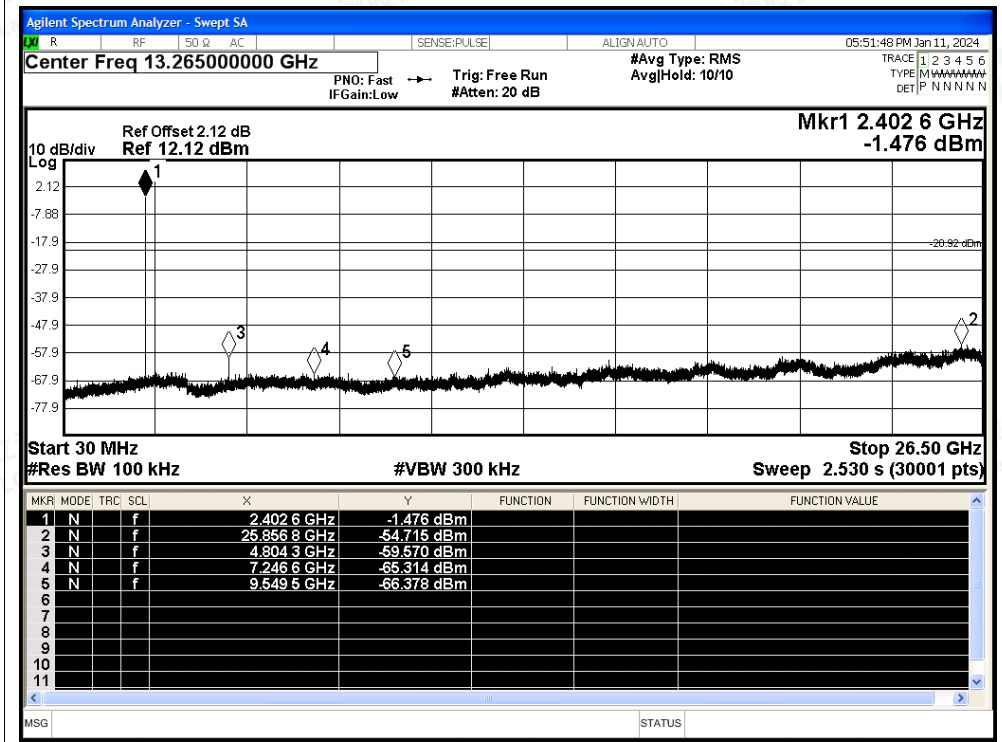




Tx. Spurious NVNT 3-DH5 2402MHz Ant Ref

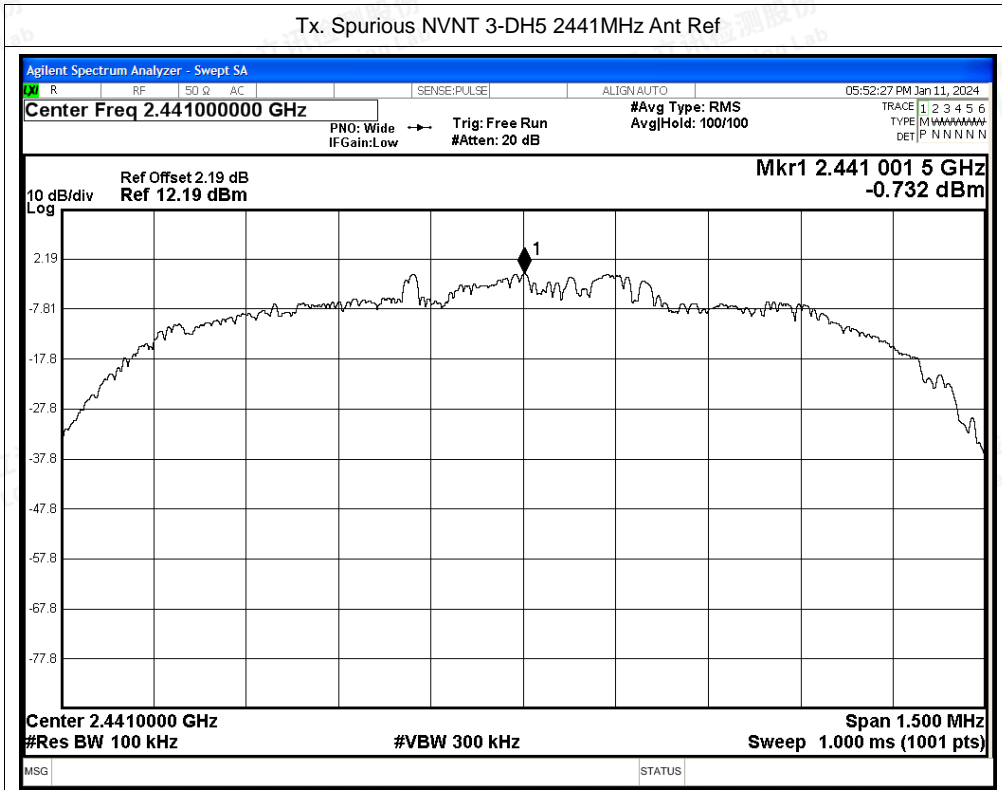


Tx. Spurious NVNT 3-DH5 2402MHz Ant Emission

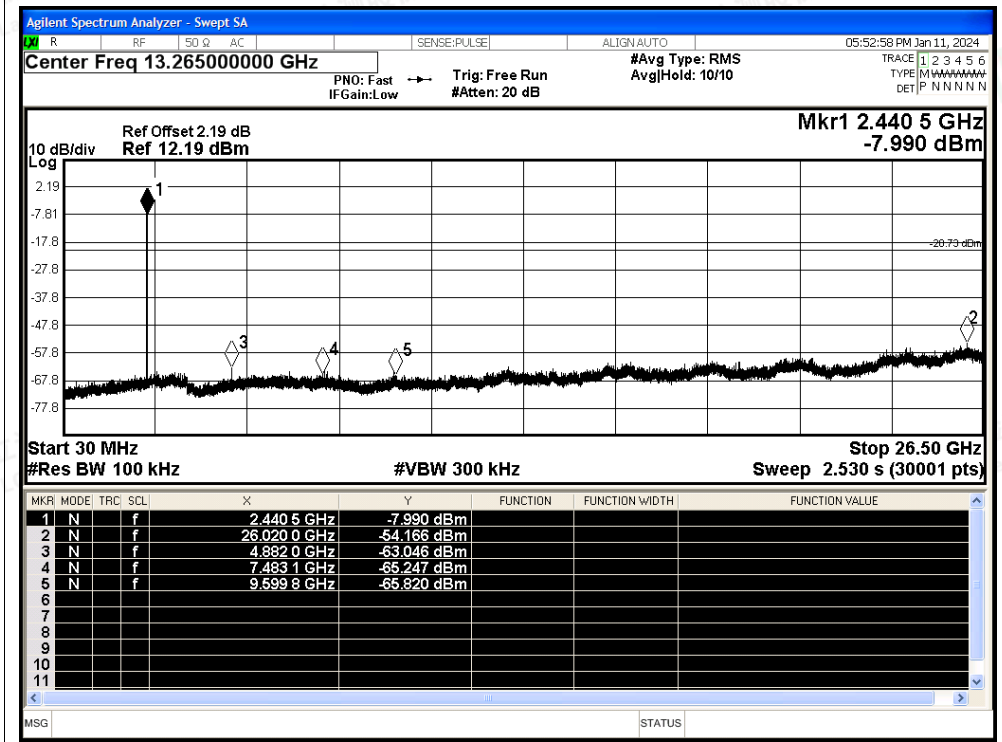




Tx. Spurious NVNT 3-DH5 2441MHz Ant Ref

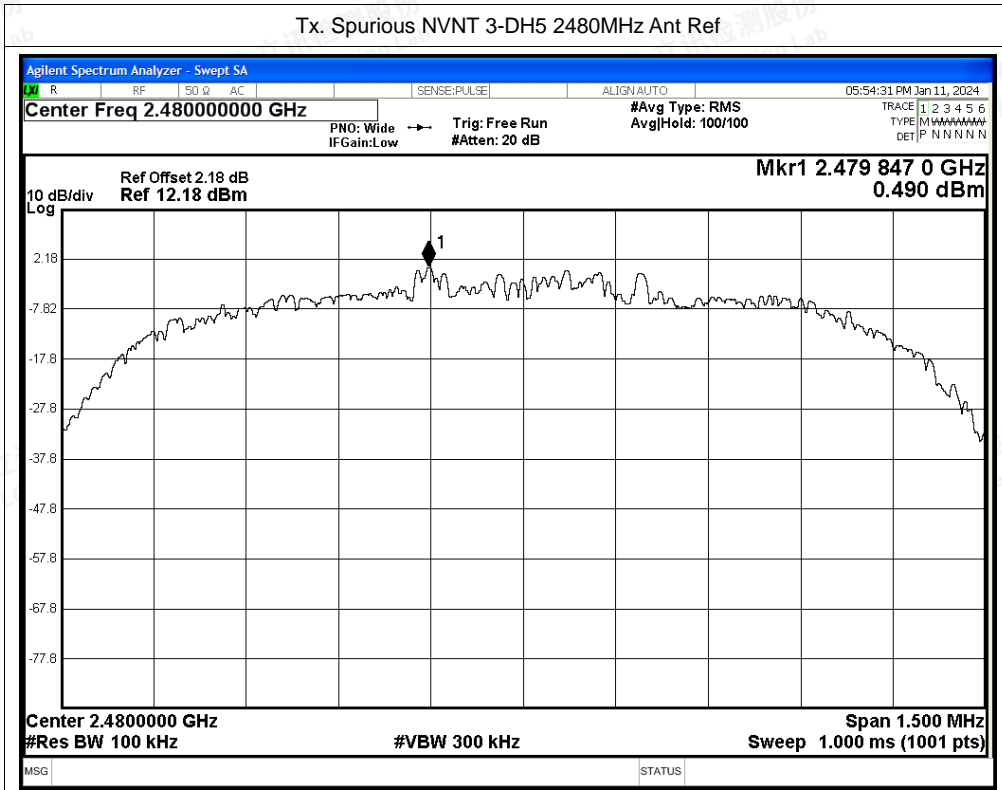


Tx. Spurious NVNT 3-DH5 2441MHz Ant Emission

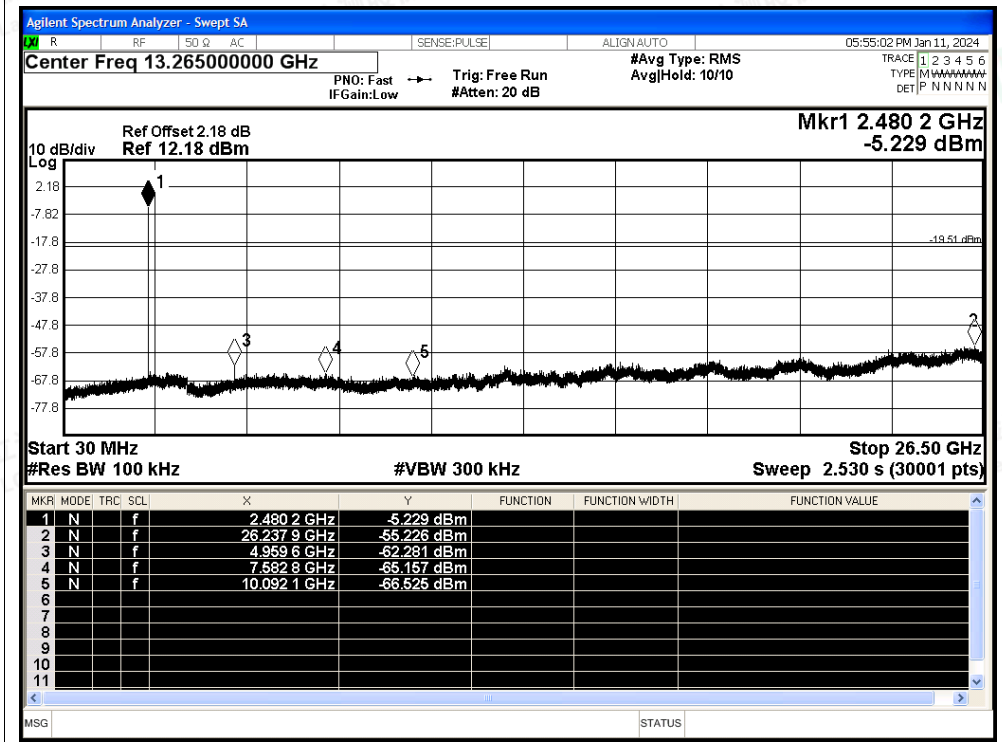




Tx. Spurious NVNT 3-DH5 2480MHz Ant Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant Emission





## A.8 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant	76.88	1.14	0.35
NVNT	1-DH5	2441	Ant	76.88	1.14	0.35
NVNT	1-DH5	2480	Ant	76.91	1.14	0.35
NVNT	2-DH5	2402	Ant	76.99	1.14	0.35
NVNT	2-DH5	2441	Ant	76.99	1.14	0.35
NVNT	2-DH5	2480	Ant	76.96	1.14	0.35
NVNT	3-DH5	2402	Ant	77.04	1.13	0.35
NVNT	3-DH5	2441	Ant	77.04	1.13	0.35
NVNT	3-DH5	2480	Ant	77.01	1.13	0.35

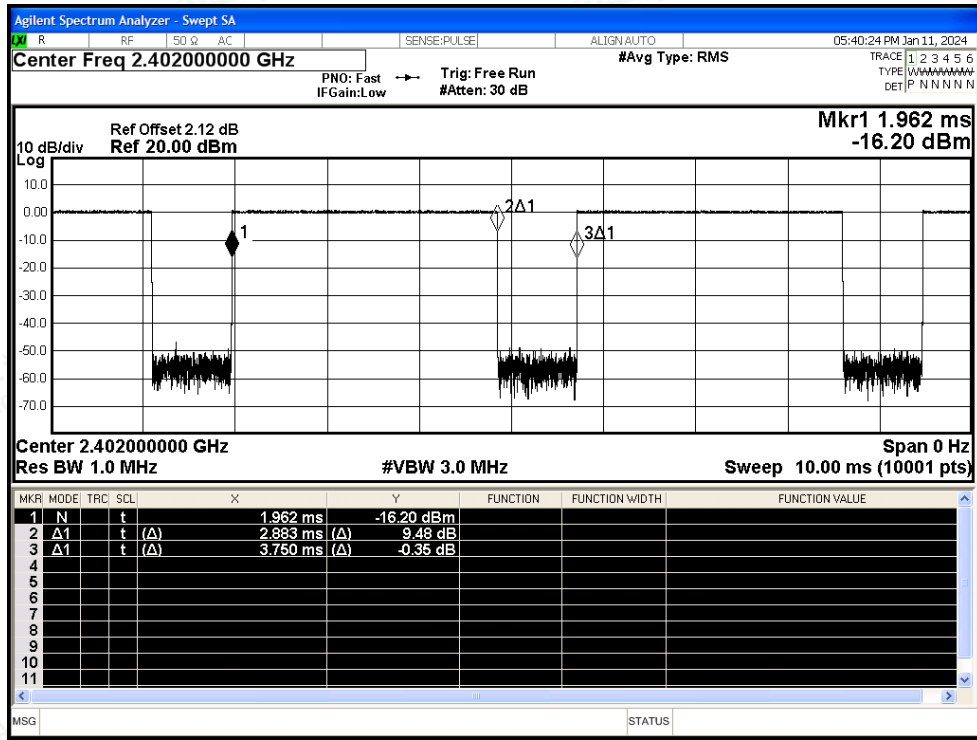




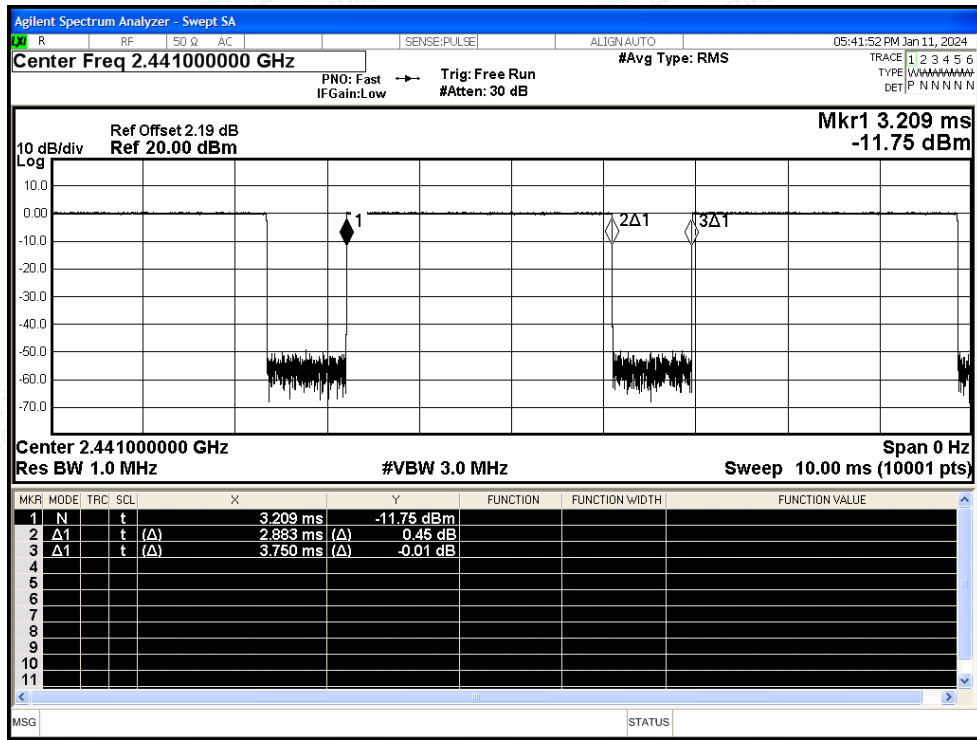


Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant

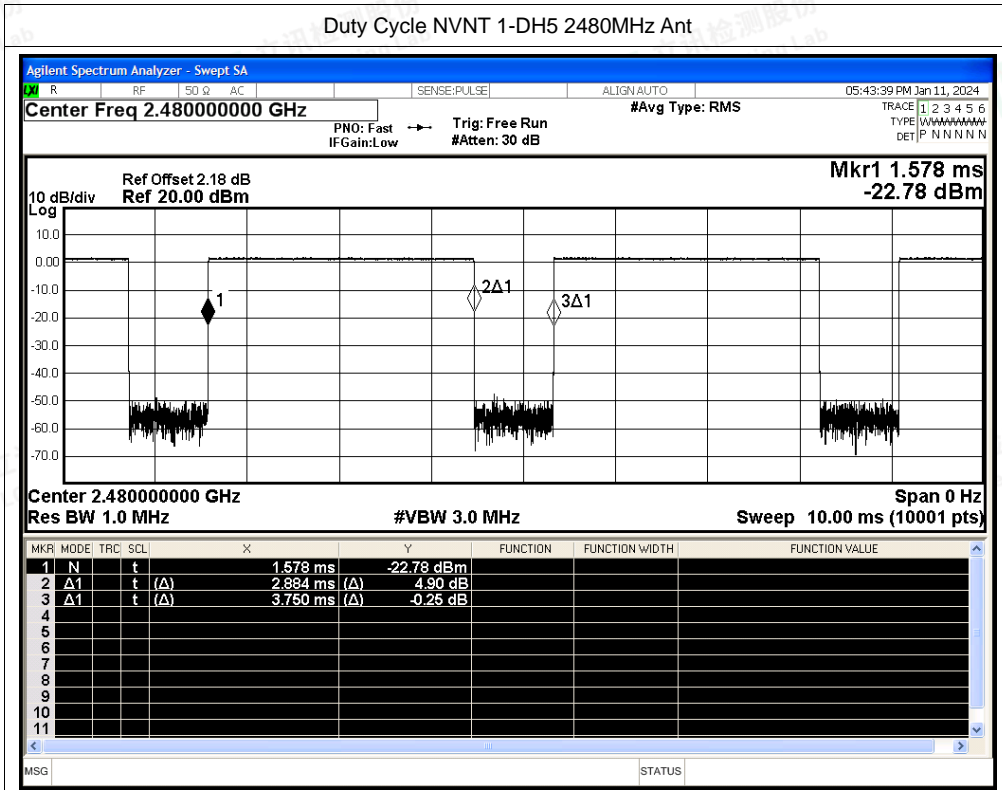


Duty Cycle NVNT 1-DH5 2441MHz Ant

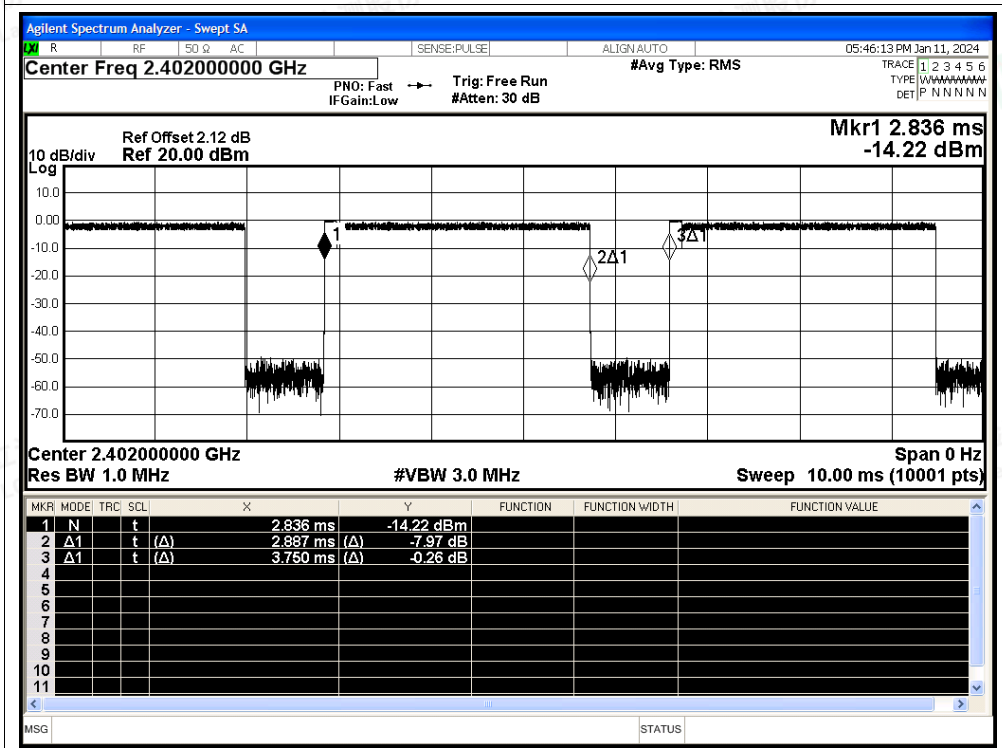




Duty Cycle NVNT 1-DH5 2480MHz Ant

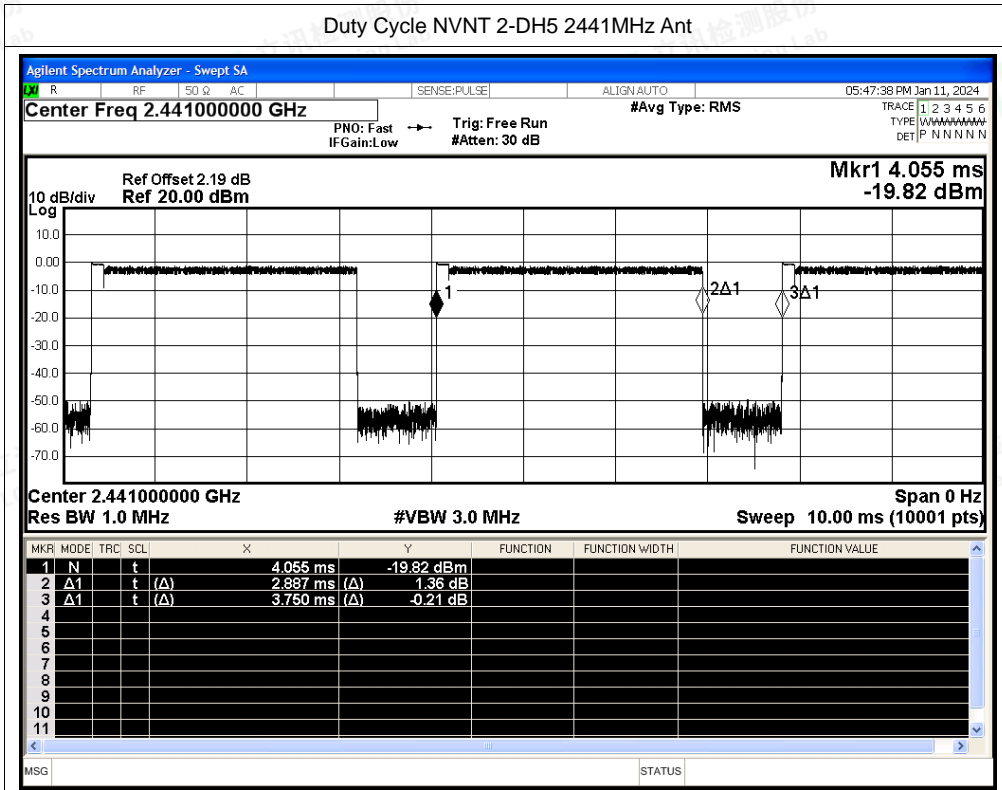


Duty Cycle NVNT 2-DH5 2402MHz Ant

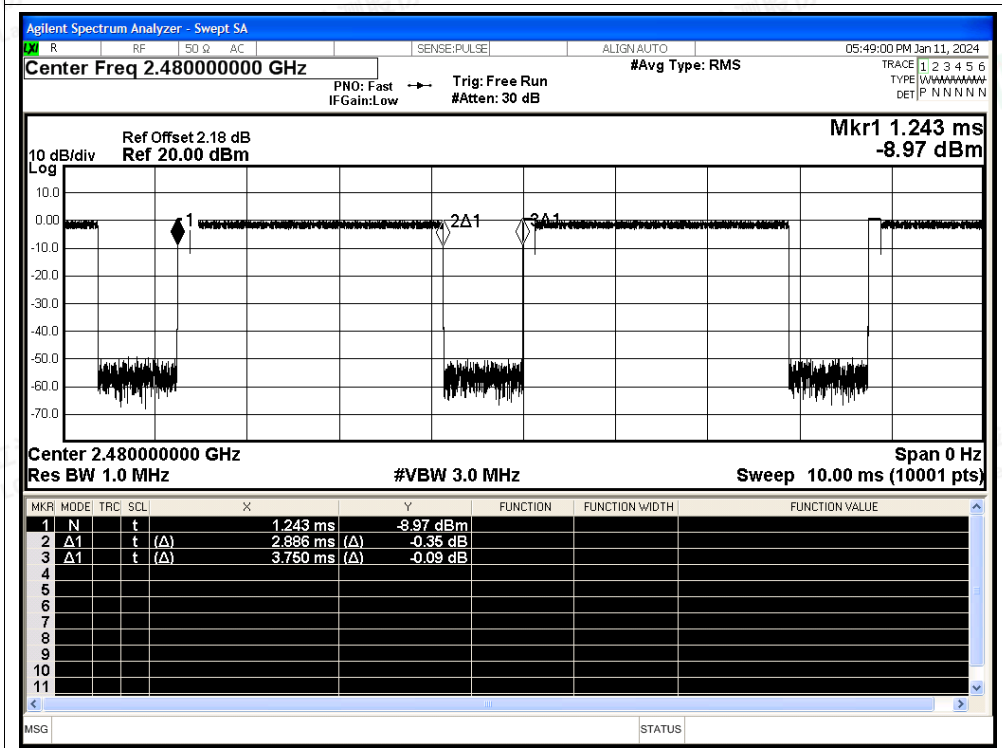




Duty Cycle NVNT 2-DH5 2441MHz Ant

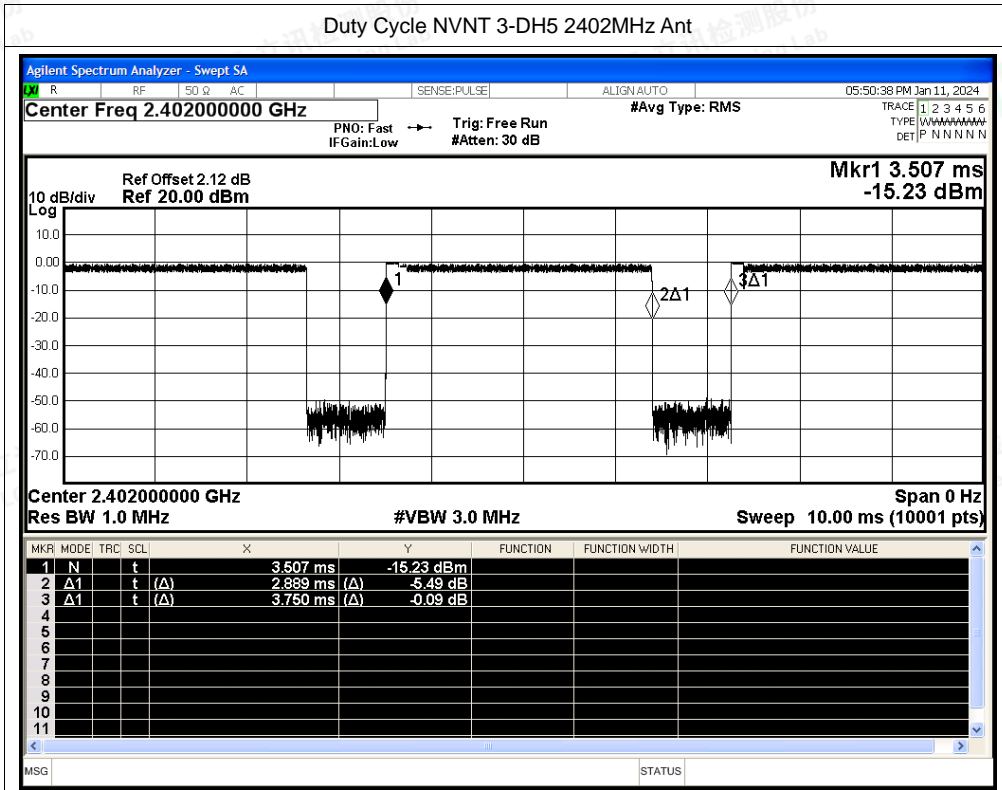


Duty Cycle NVNT 2-DH5 2480MHz Ant

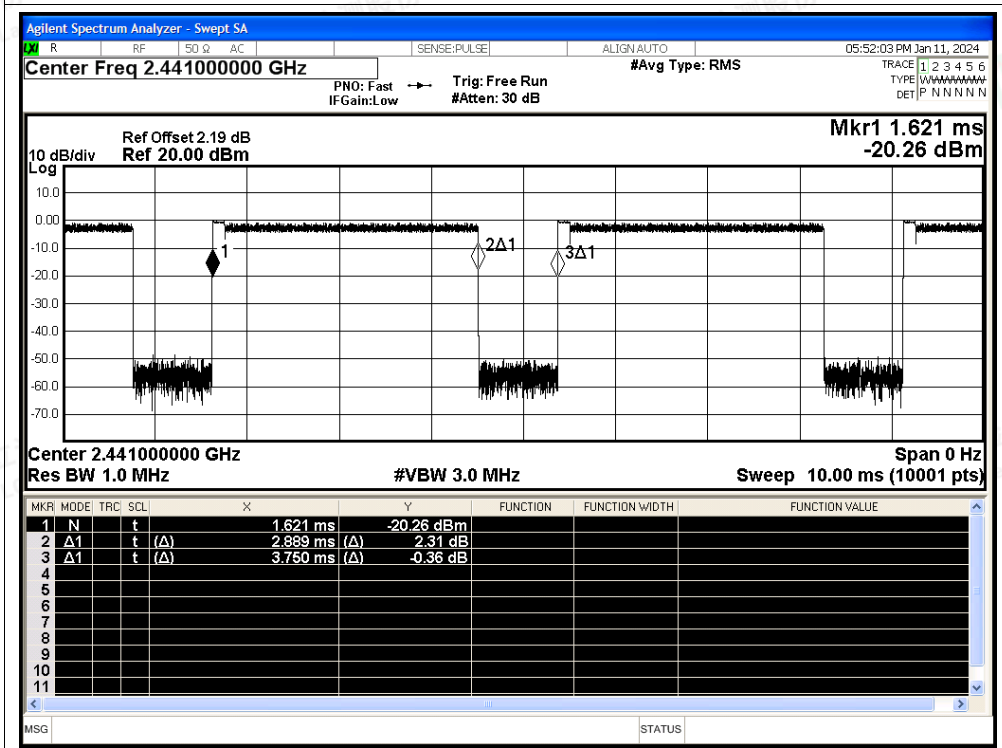


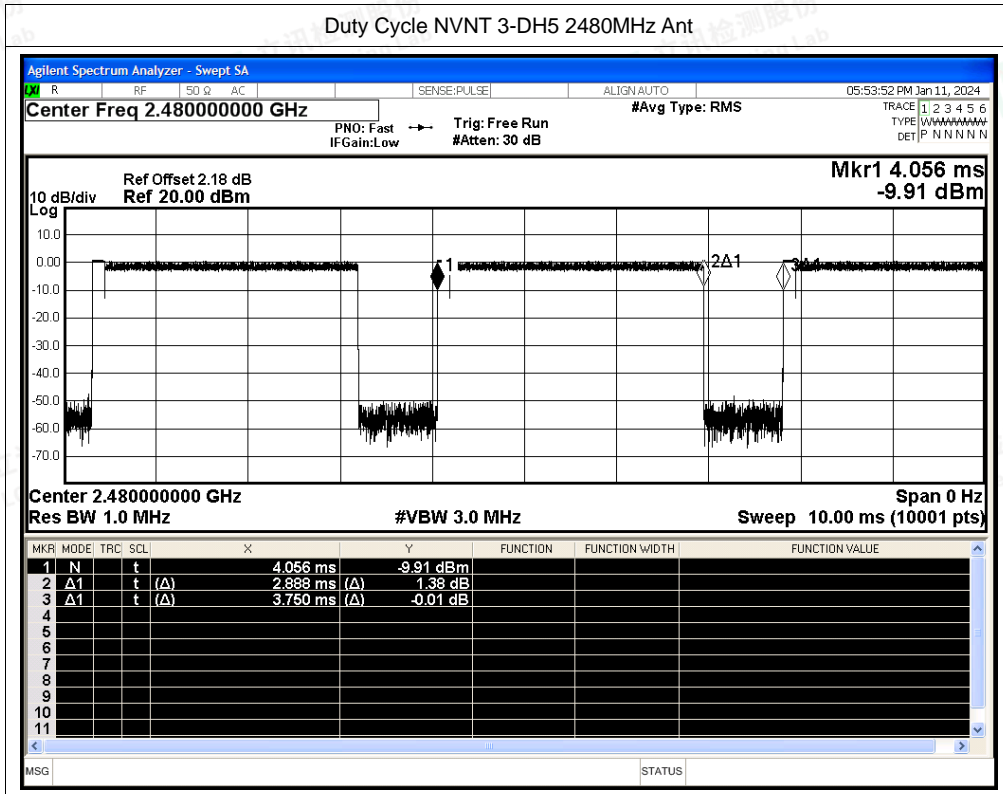


Duty Cycle NVNT 3-DH5 2402MHz Ant



Duty Cycle NVNT 3-DH5 2441MHz Ant







## A.9 Restrict Band

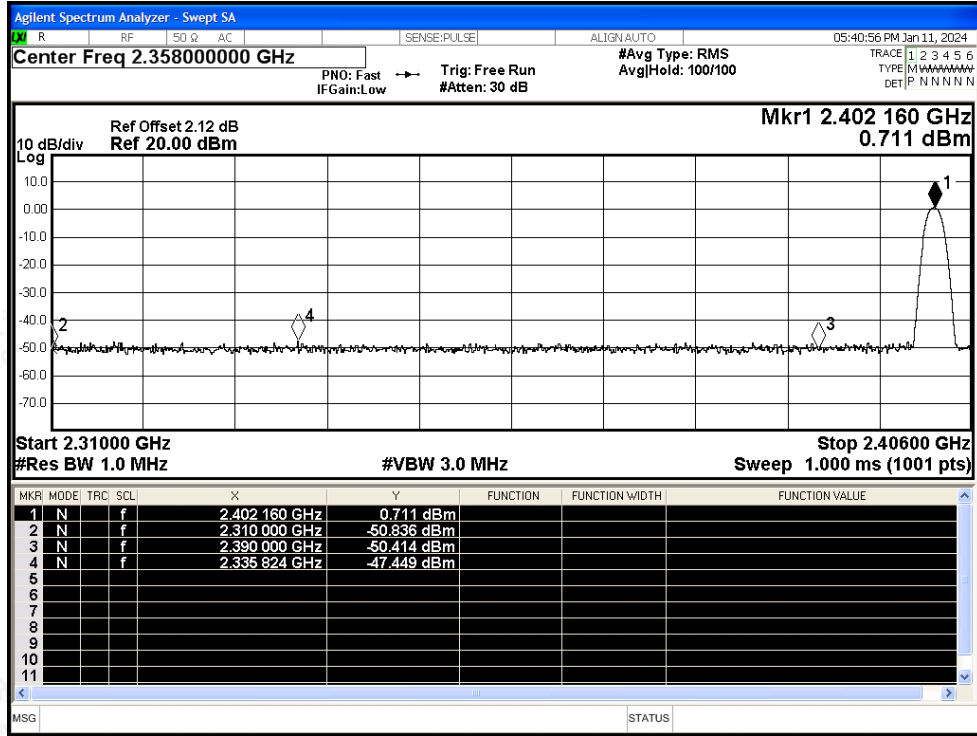
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant	No-Hopping	2310	-50.84	2	-	46.42	Peak	74	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2310	-58.58	2	1.14	39.82	Average	54	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2335.824	-47.45	2	-	49.81	Peak	74	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2383.728	-57.43	2	1.14	40.97	Average	54	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2390	-50.41	2	-	46.85	Peak	74	Pass
NVNT	1-DH5	2402	Ant	No-Hopping	2390	-58.42	2	1.14	39.98	Average	54	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2483.5	-49.84	2	-	47.42	Peak	74	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2483.5	-58.05	2	1.14	40.35	Average	54	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2489.632	-46.82	2	-	50.44	Peak	74	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2490.904	-57.06	2	1.14	41.34	Average	54	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2500	-50.17	2	-	47.09	Peak	74	Pass
NVNT	1-DH5	2480	Ant	No-Hopping	2500	-57.75	2	1.14	40.65	Average	54	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2310	-50.3	2	-	46.96	Peak	74	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2310	-58.44	2	1.14	39.96	Average	54	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2311.248	-47.7	2	-	49.56	Peak	74	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2376.336	-57.39	2	1.14	41.01	Average	54	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2390	-50.73	2	-	46.53	Peak	74	Pass
NVNT	2-DH5	2402	Ant	No-Hopping	2390	-58.47	2	1.14	39.93	Average	54	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2483.5	-49.41	2	-	47.85	Peak	74	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2483.5	-57.83	2	1.14	40.57	Average	54	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2495.944	-46.94	2	-	50.32	Peak	74	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2495.128	-56.95	2	1.14	41.45	Average	54	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2500	-50.08	2	-	47.18	Peak	74	Pass
NVNT	2-DH5	2480	Ant	No-Hopping	2500	-57.93	2	1.14	40.47	Average	54	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2310	-51.42	2	-	45.84	Peak	74	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2310	-58.86	2	1.13	39.53	Average	54	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2340.528	-47.66	2	-	49.6	Peak	74	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2376.144	-57.33	2	1.13	41.06	Average	54	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2390	-50.12	2	-	47.14	Peak	74	Pass
NVNT	3-DH5	2402	Ant	No-Hopping	2390	-58.54	2	1.13	39.85	Average	54	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2483.5	-49.39	2	-	47.87	Peak	74	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2483.5	-58.15	2	1.13	40.24	Average	54	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2484.016	-46.1	2	-	51.16	Peak	74	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2492.848	-56.96	2	1.13	41.43	Average	54	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2500	-50.13	2	-	47.13	Peak	74	Pass
NVNT	3-DH5	2480	Ant	No-Hopping	2500	-57.9	2	1.13	40.49	Average	54	Pass



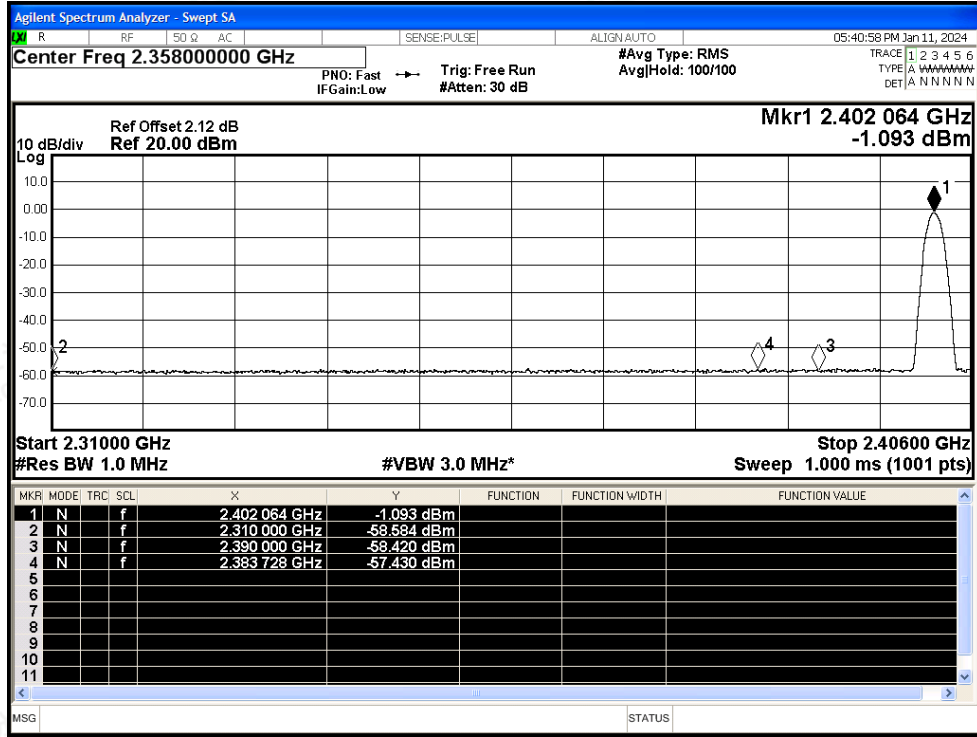


Test Graphs

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



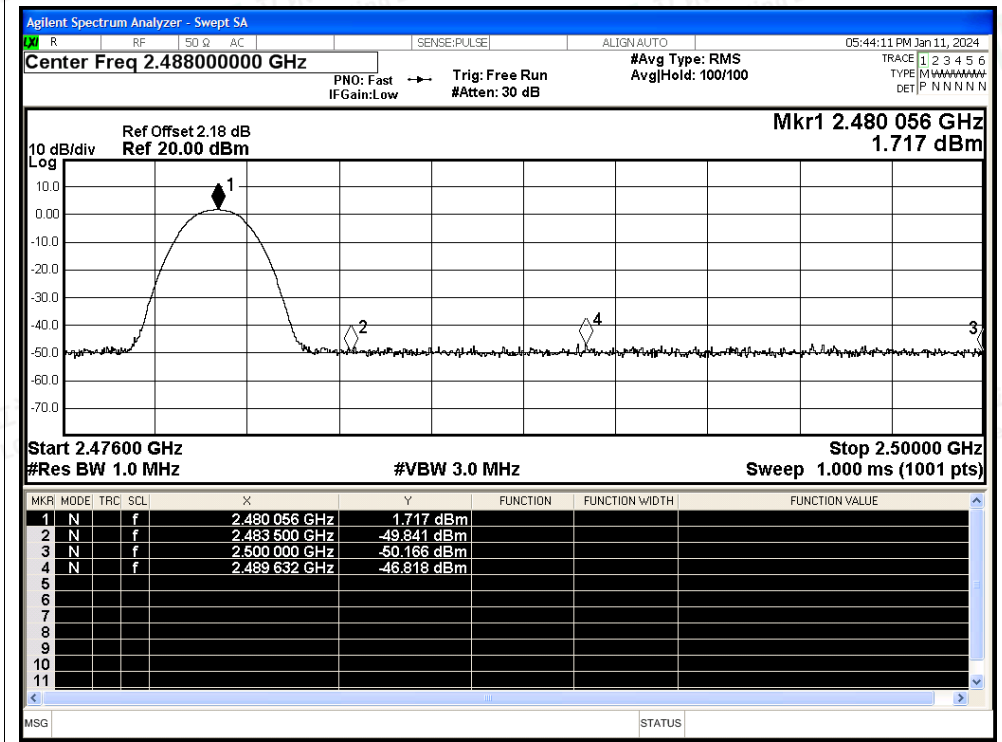
Restrict Band NVNT 1-DH5 2402MHz Ant No-Hopping Average



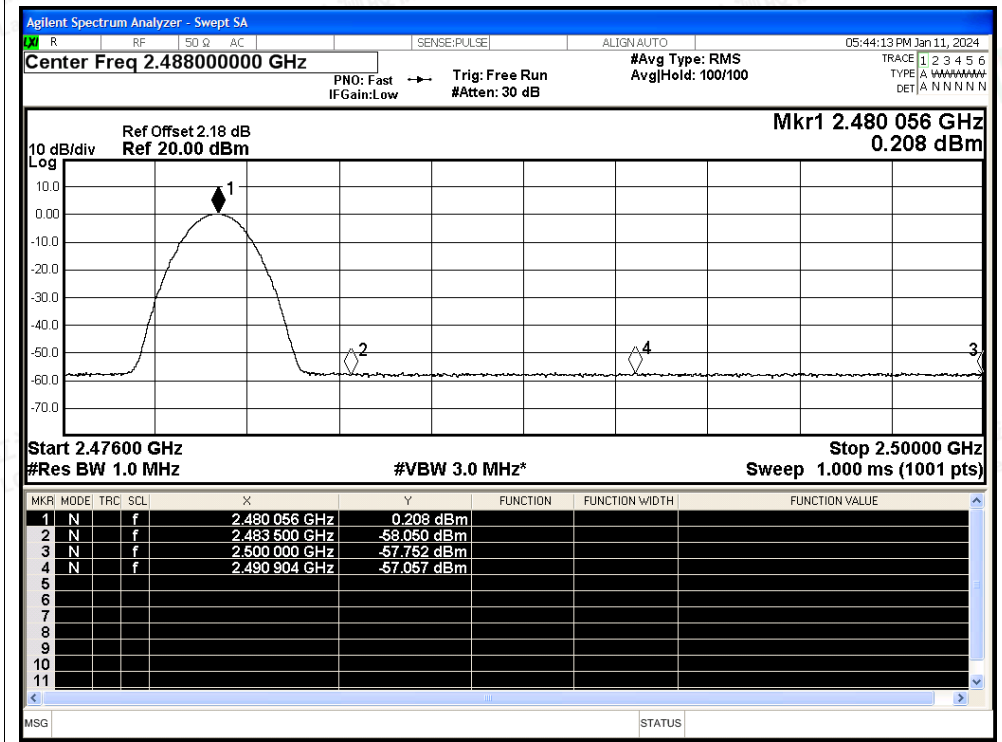




Restrict Band NVNT 1-DH5 2480MHz Ant No-Hopping Peak



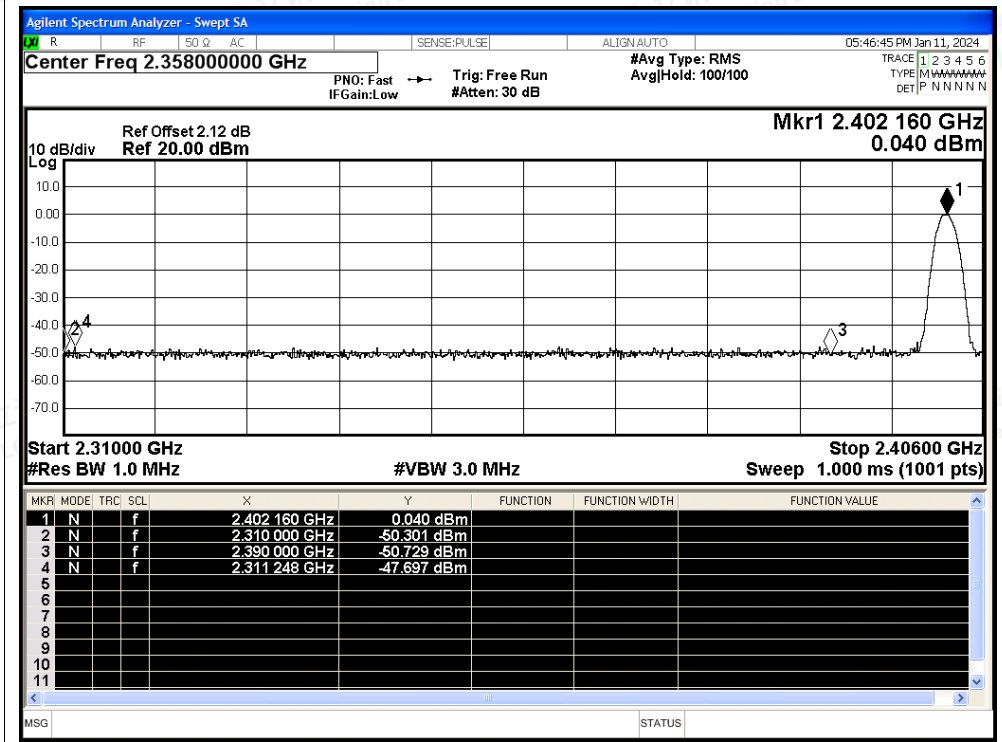
Restrict Band NVNT 1-DH5 2480MHz Ant No-Hopping Average



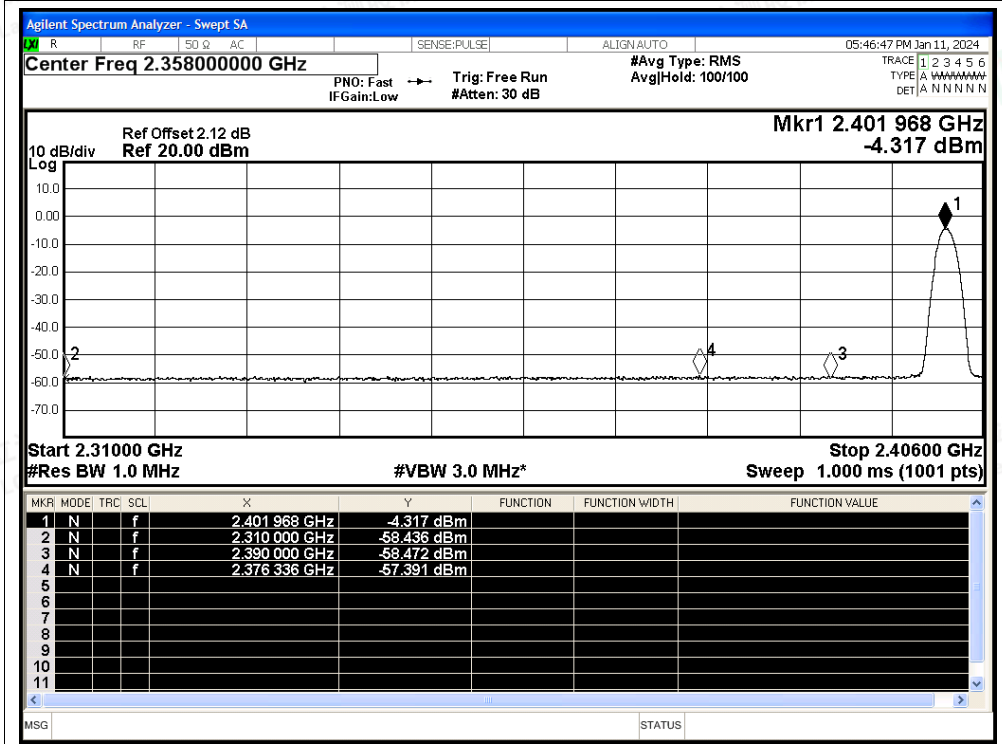




Restrict Band NVNT 2-DH5 2402MHz Ant No-Hopping Peak

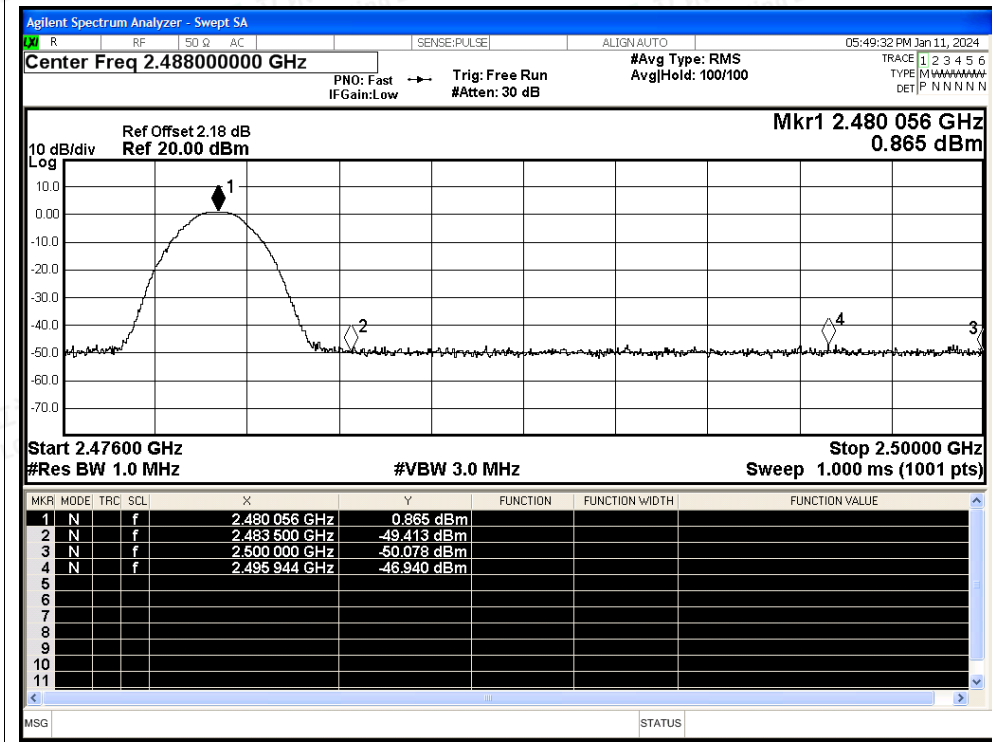


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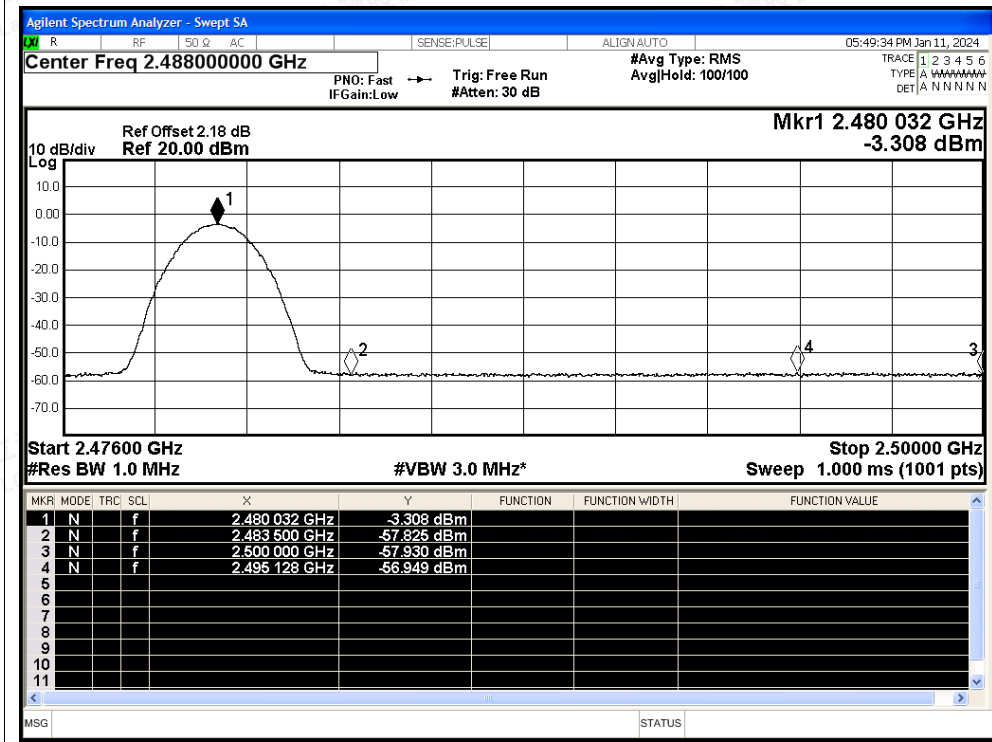




Restrict Band NVNT 2-DH5 2480MHz Ant No-Hopping Peak

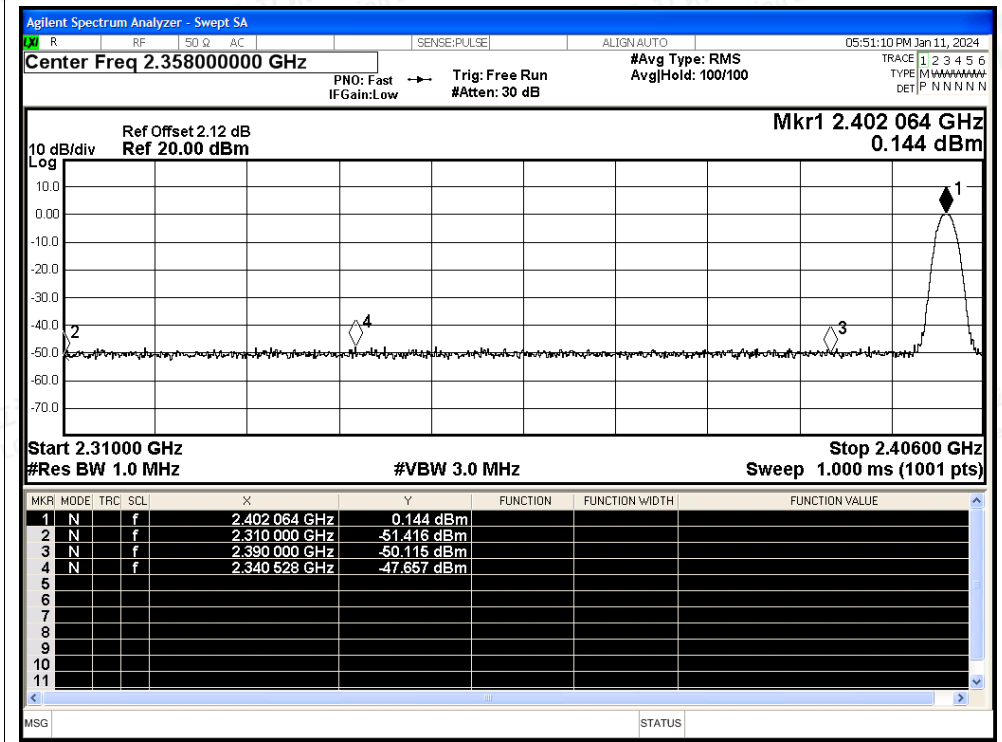


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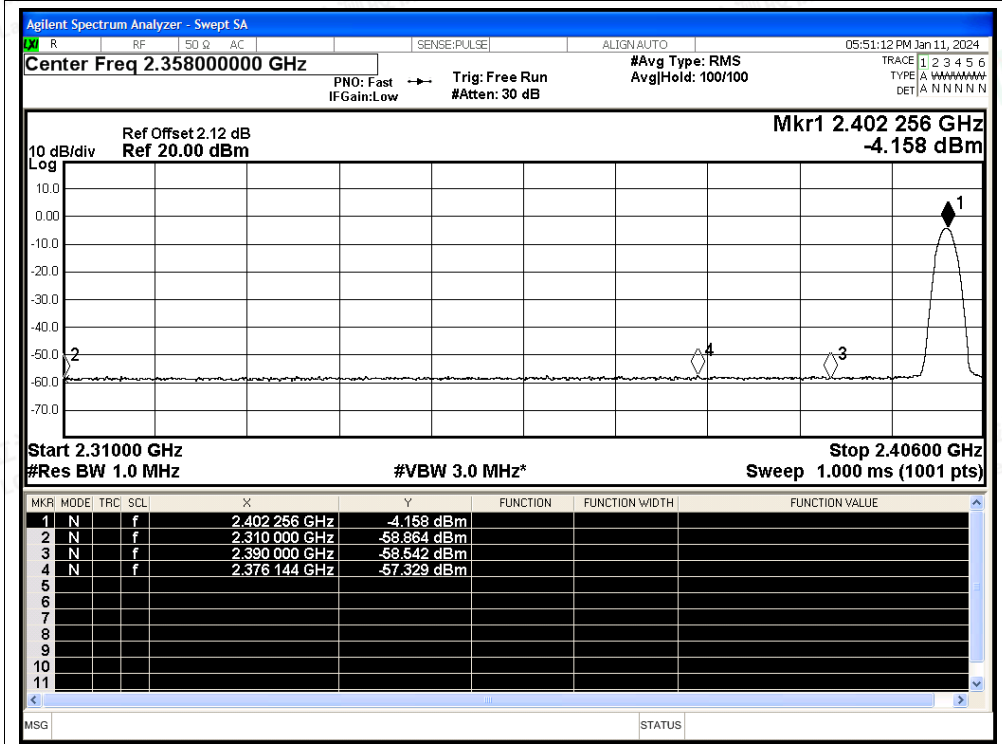




Restrict Band NVNT 3-DH5 2402MHz Ant No-Hopping Peak

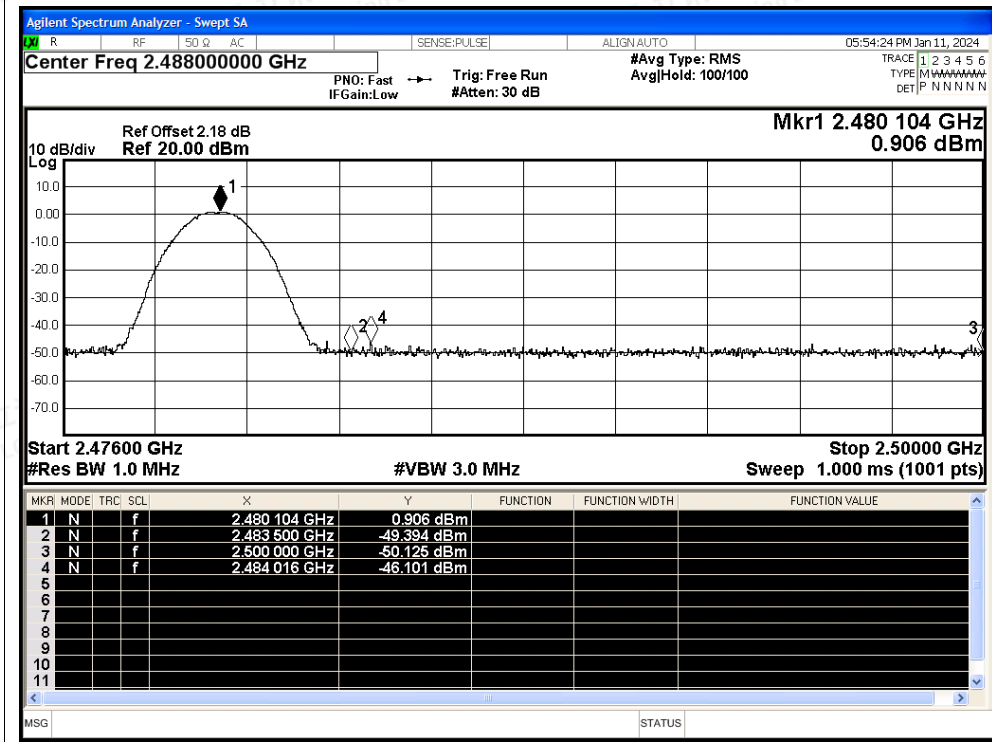


Restrict Band NVNT 3-DH5 2402MHz Ant No-Hopping Average





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



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

