

# RF Test Data for Bluetooth(BDR+EDR) (Conducted Measurements)

General Description of EUT	
Product Name:	StiX
Test Model:	3700
Sample ID:	202211-0053-01-2
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	55%
Test Voltage:	DC 5V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202211-0053-5	

## Contents

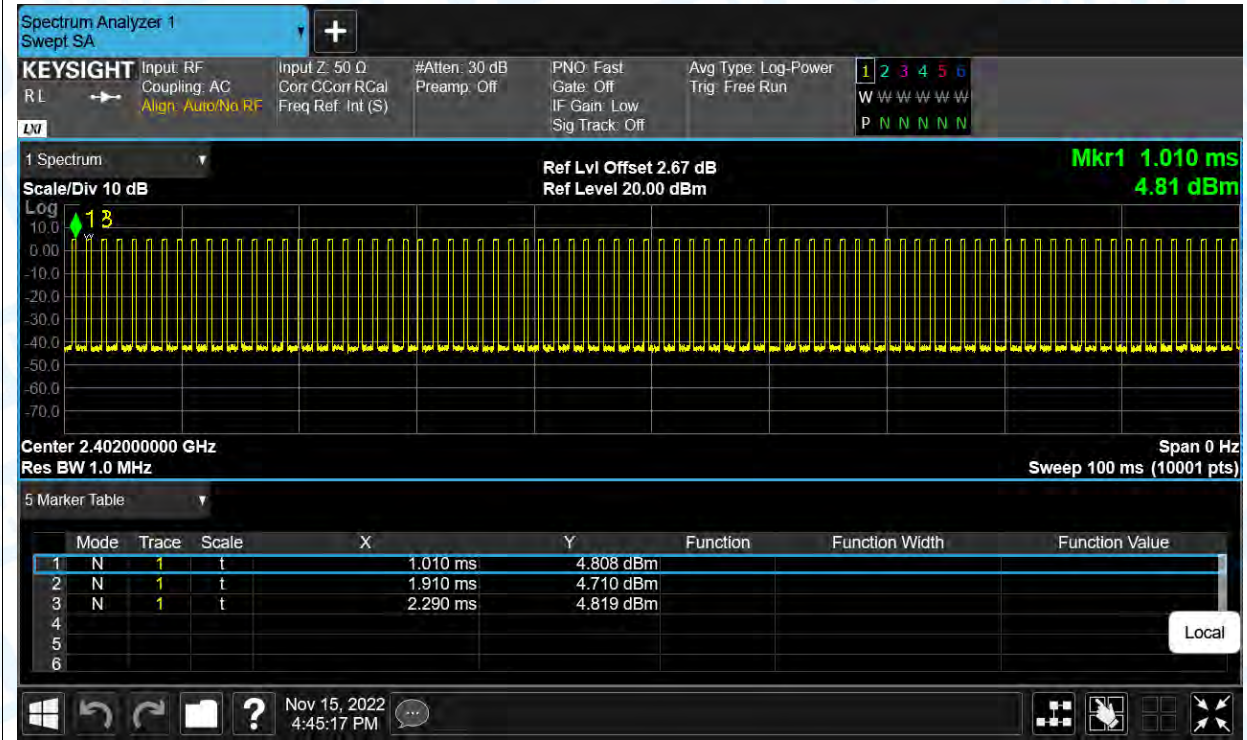
1. Duty Cycle.....	3
2. Maximum Conducted Output Power.....	9
3. -20dB Bandwidth.....	15
4. Occupied Channel Bandwidth.....	21
5. Band Edge.....	27
6. Band Edge(Hopping).....	34
7. Conducted RF Spurious Emission.....	41
8. Restrict Band.....	51
9. Carrier Frequencies Separation.....	58
10. Number of Hopping Channel.....	61
11. Dwell Time.....	64

## 1. Duty Cycle

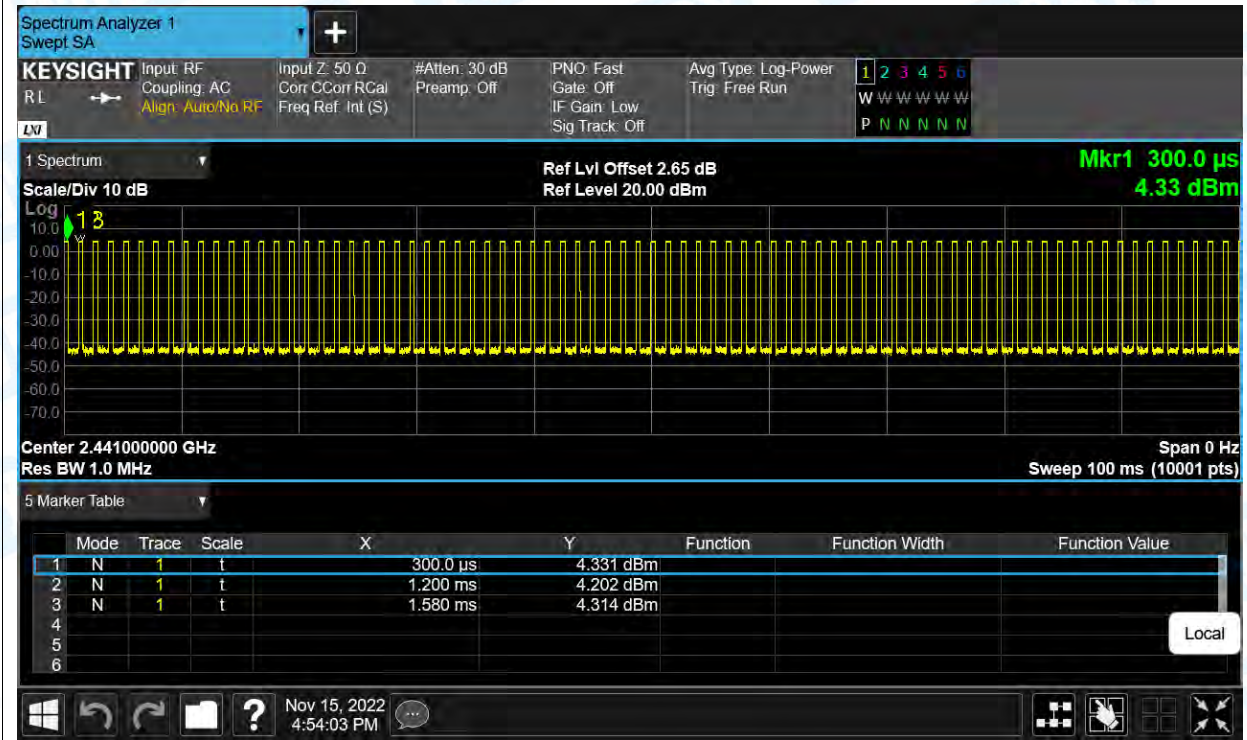
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	29.69	5.27	2.63
NVNT	1-DH1	2441	Ant1	29.69	5.27	2.63
NVNT	1-DH1	2480	Ant1	29.69	5.27	2.63
NVNT	2-DH1	2402	Ant1	30.23	5.2	2.56
NVNT	2-DH1	2441	Ant1	30	5.23	2.56
NVNT	2-DH1	2480	Ant1	29.46	5.31	2.63
NVNT	3-DH1	2402	Ant1	30.23	5.2	2.56
NVNT	3-DH1	2441	Ant1	30	5.23	2.56
NVNT	3-DH1	2480	Ant1	30.23	5.2	2.56

Test Graphs

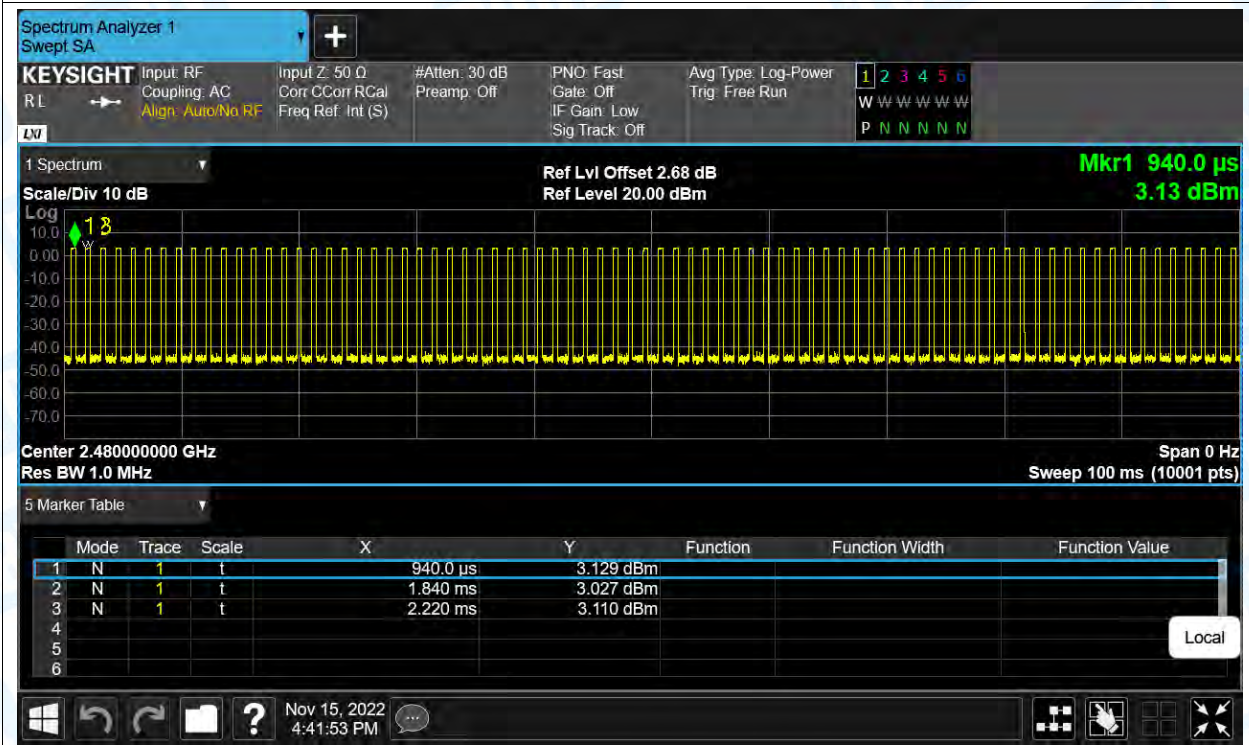
Duty Cycle NVNT 1-DH1 2402MHz Ant1



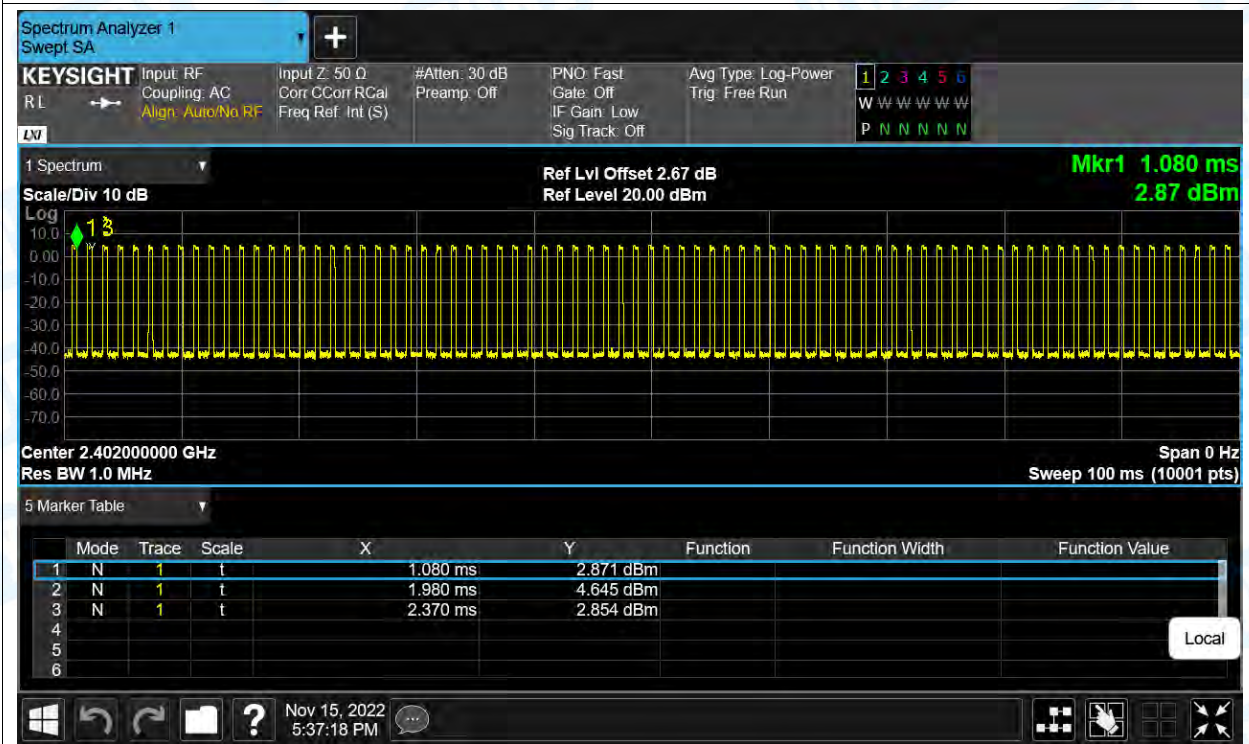
Duty Cycle NVNT 1-DH1 2441MHz Ant1



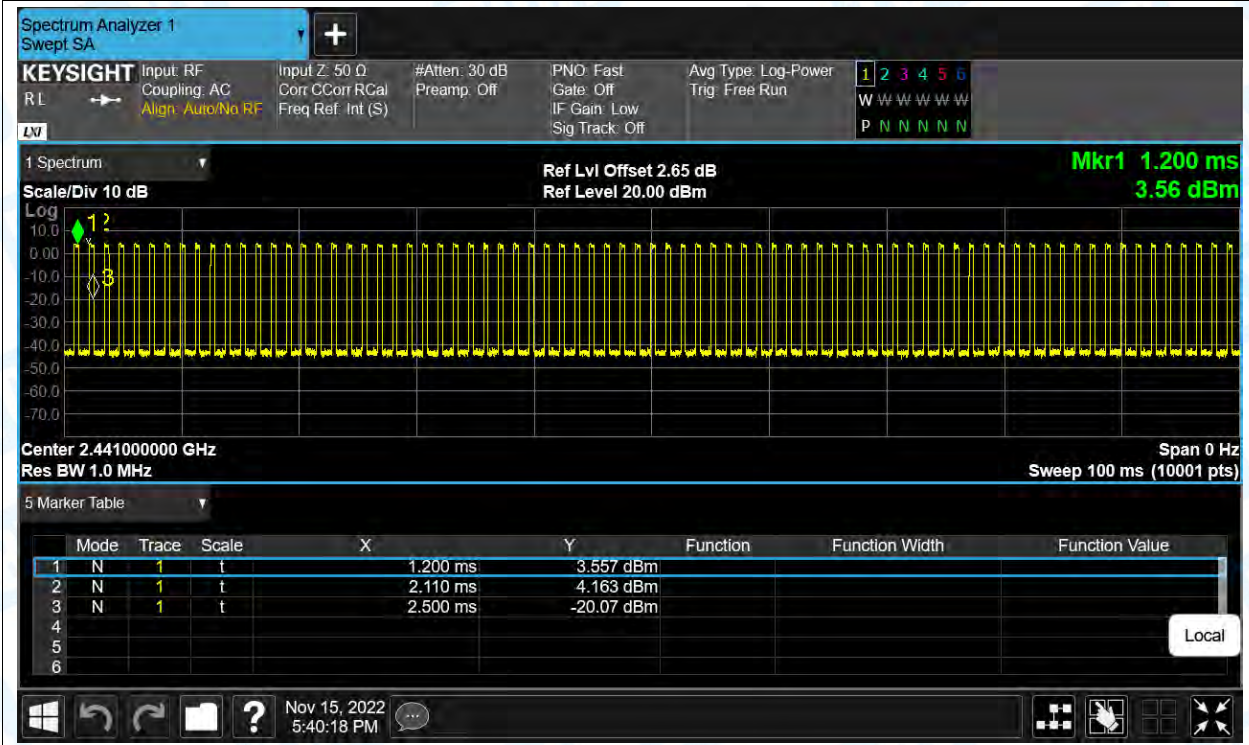
Duty Cycle NVNT 1-DH1 2480MHz Ant1



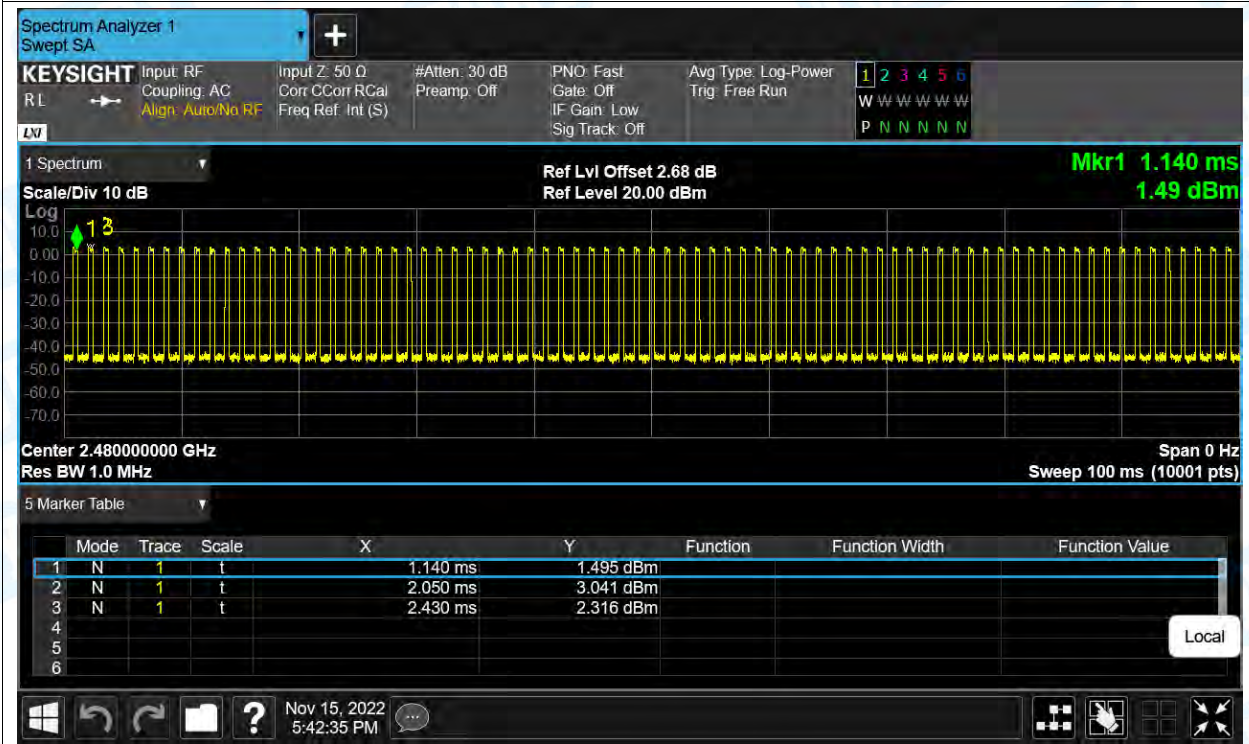
Duty Cycle NVNT 2-DH1 2402MHz Ant1



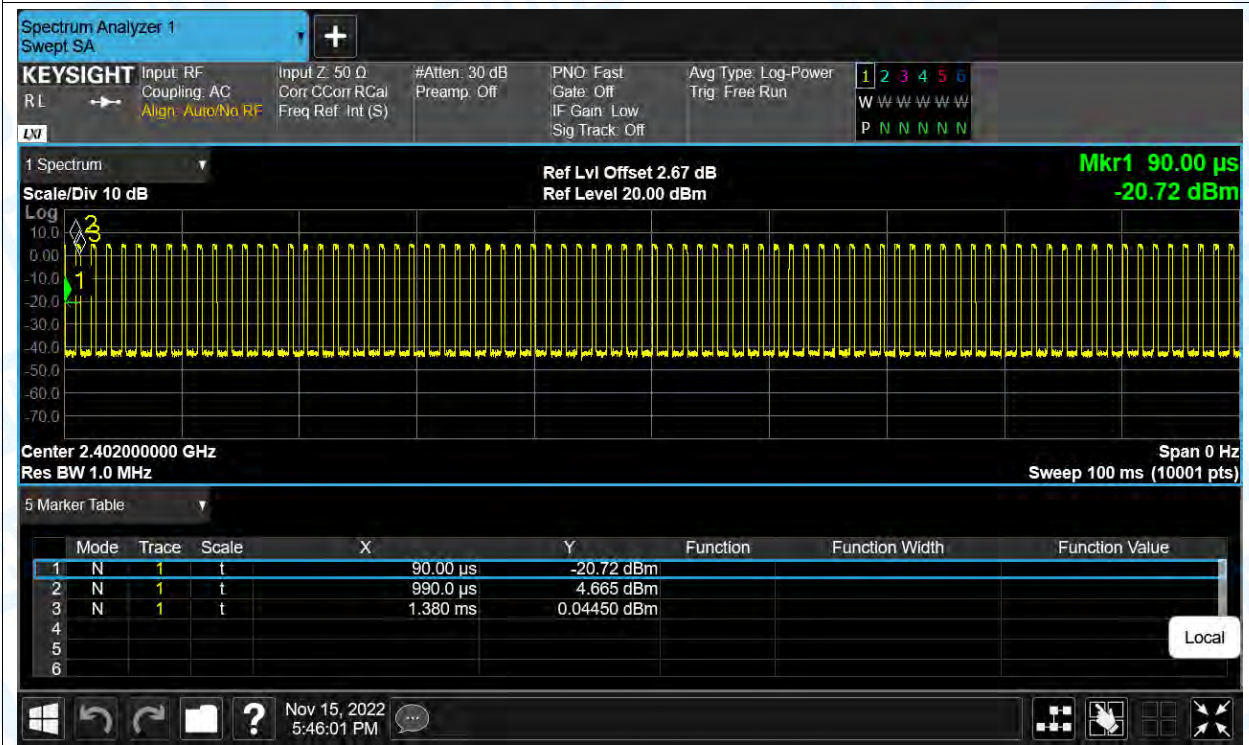
Duty Cycle NVNT 2-DH1 2441MHz Ant1



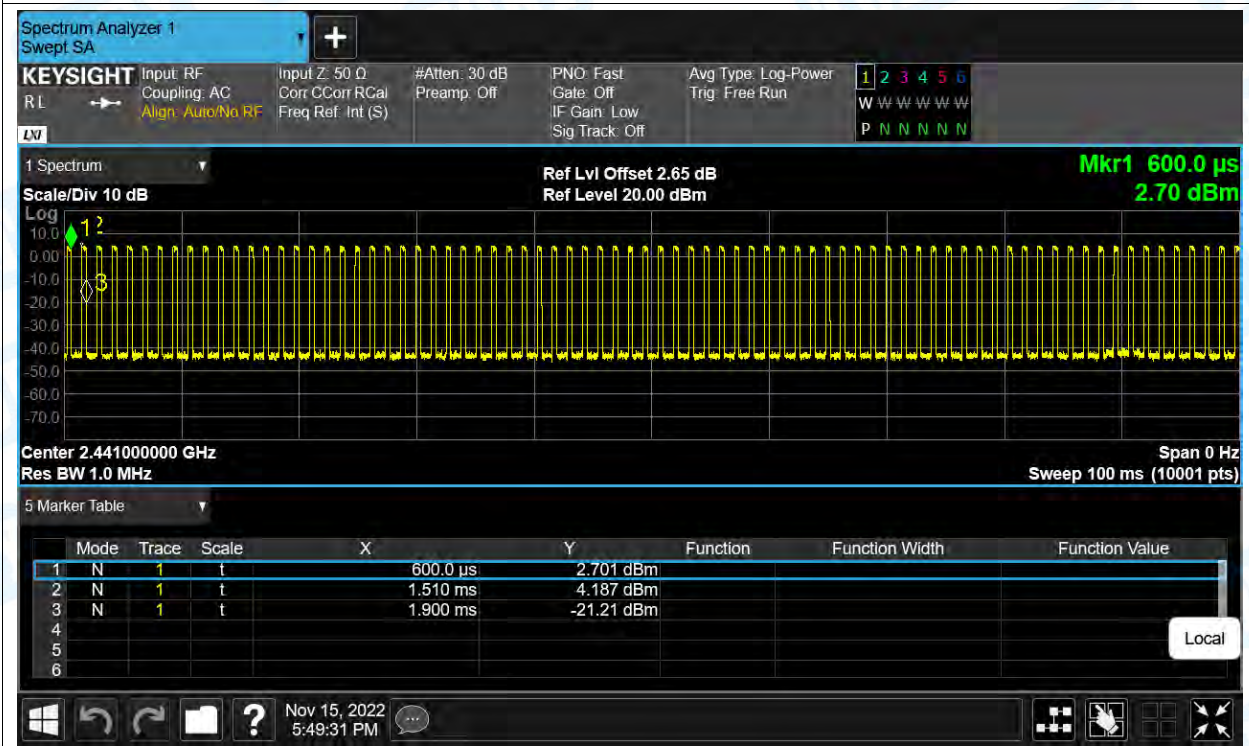
Duty Cycle NVNT 2-DH1 2480MHz Ant1

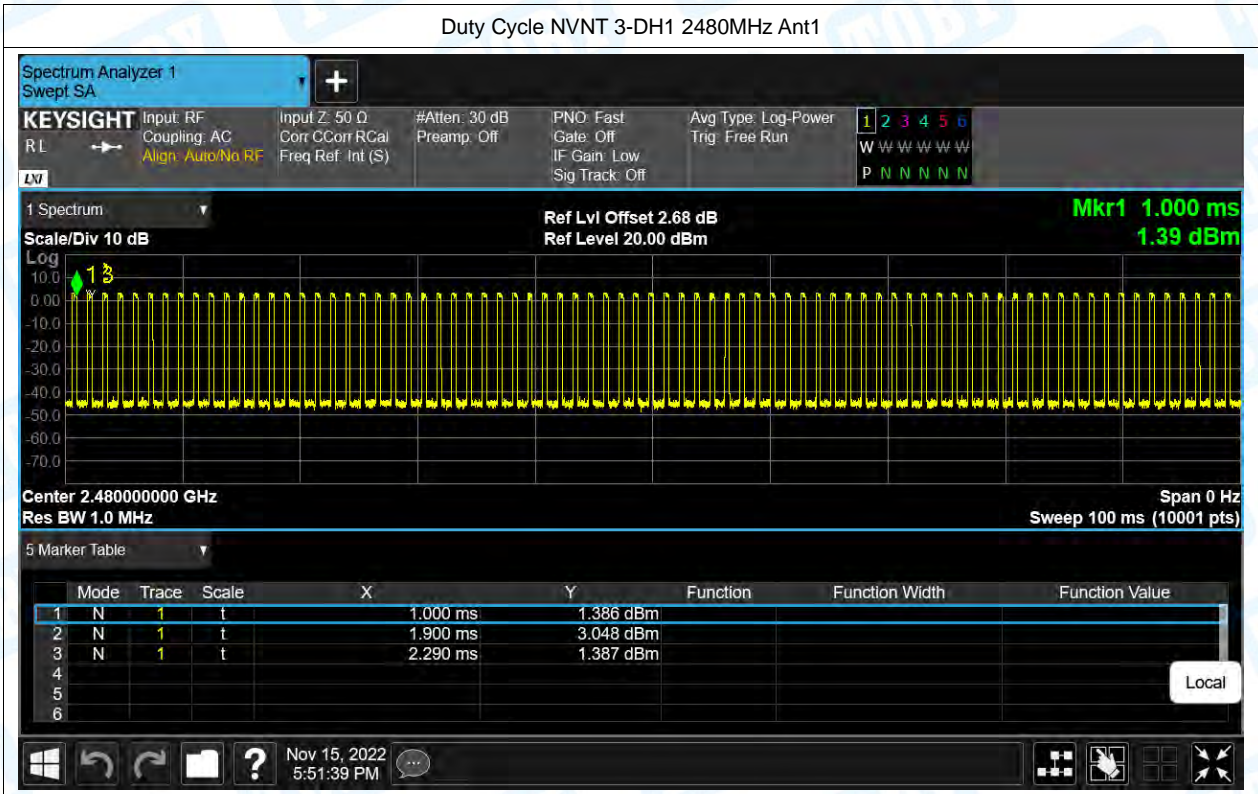


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1







## 2. Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	4.944	21	Pass
NVNT	1-DH1	2441	Ant1	4.346	21	Pass
NVNT	1-DH1	2480	Ant1	3.235	21	Pass
NVNT	2-DH1	2402	Ant1	4.885	21	Pass
NVNT	2-DH1	2441	Ant1	4.404	21	Pass
NVNT	2-DH1	2480	Ant1	3.24	21	Pass
NVNT	3-DH1	2402	Ant1	5.267	21	Pass
NVNT	3-DH1	2441	Ant1	4.812	21	Pass
NVNT	3-DH1	2480	Ant1	3.762	21	Pass

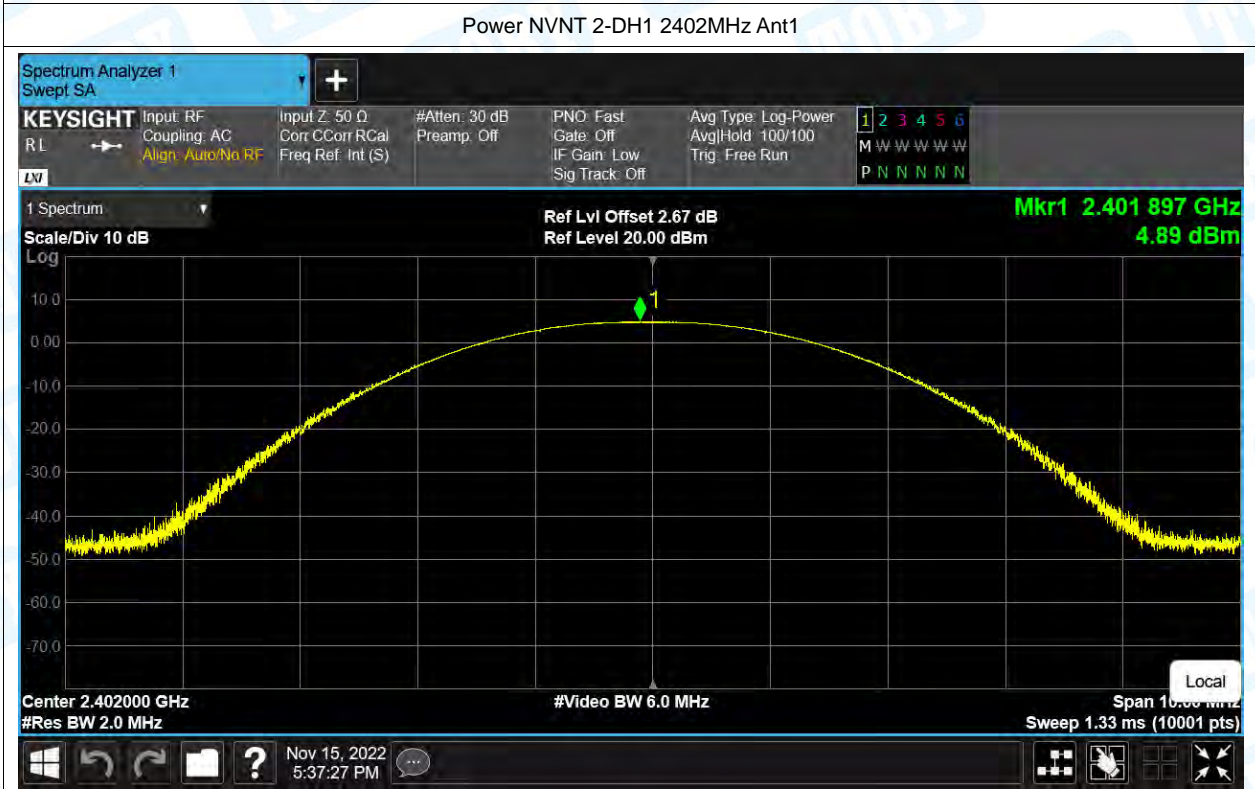
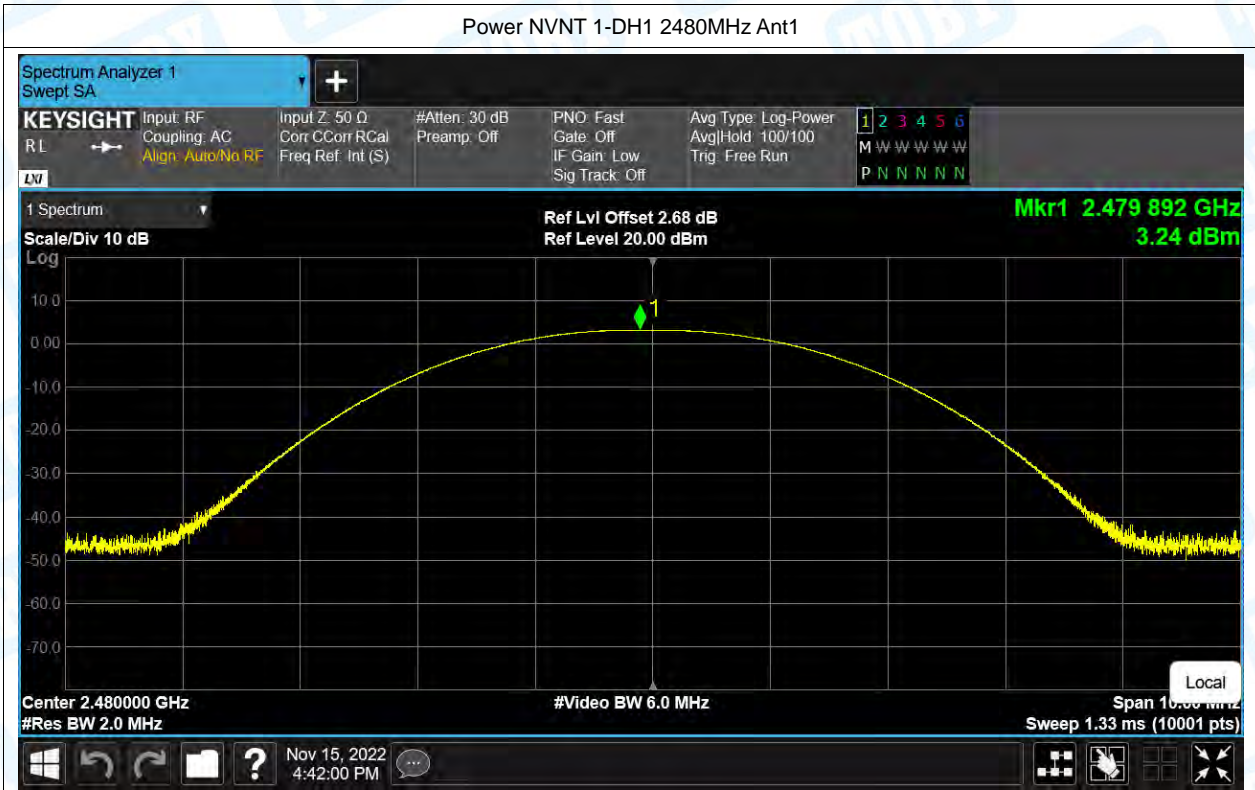
Test Graphs

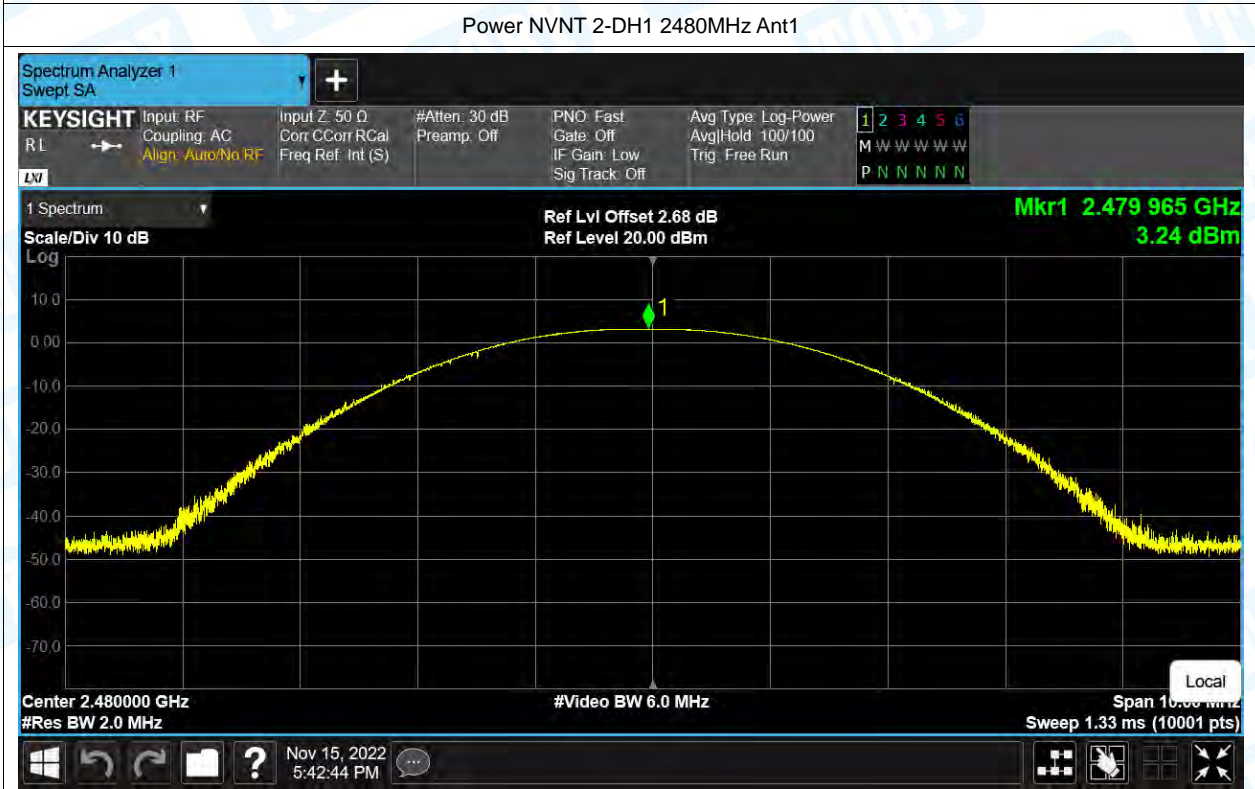
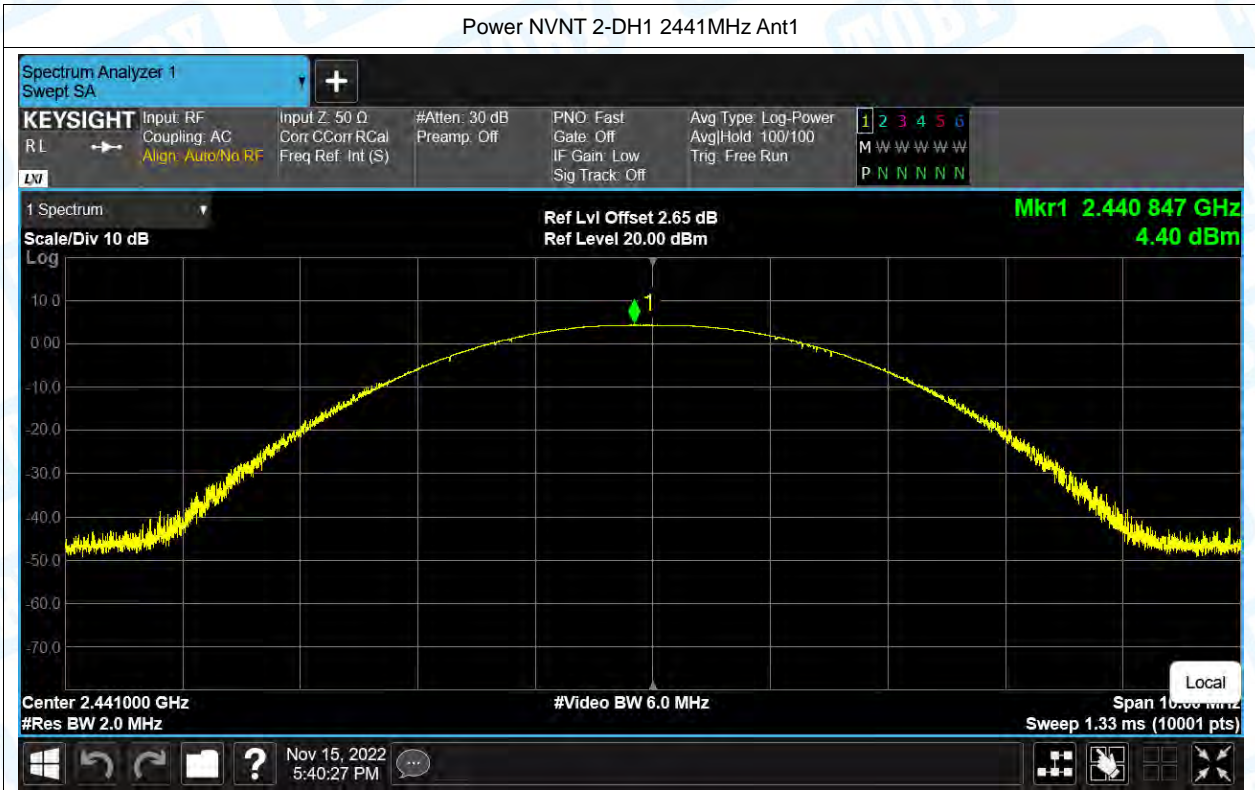
Power NVNT 1-DH1 2402MHz Ant1

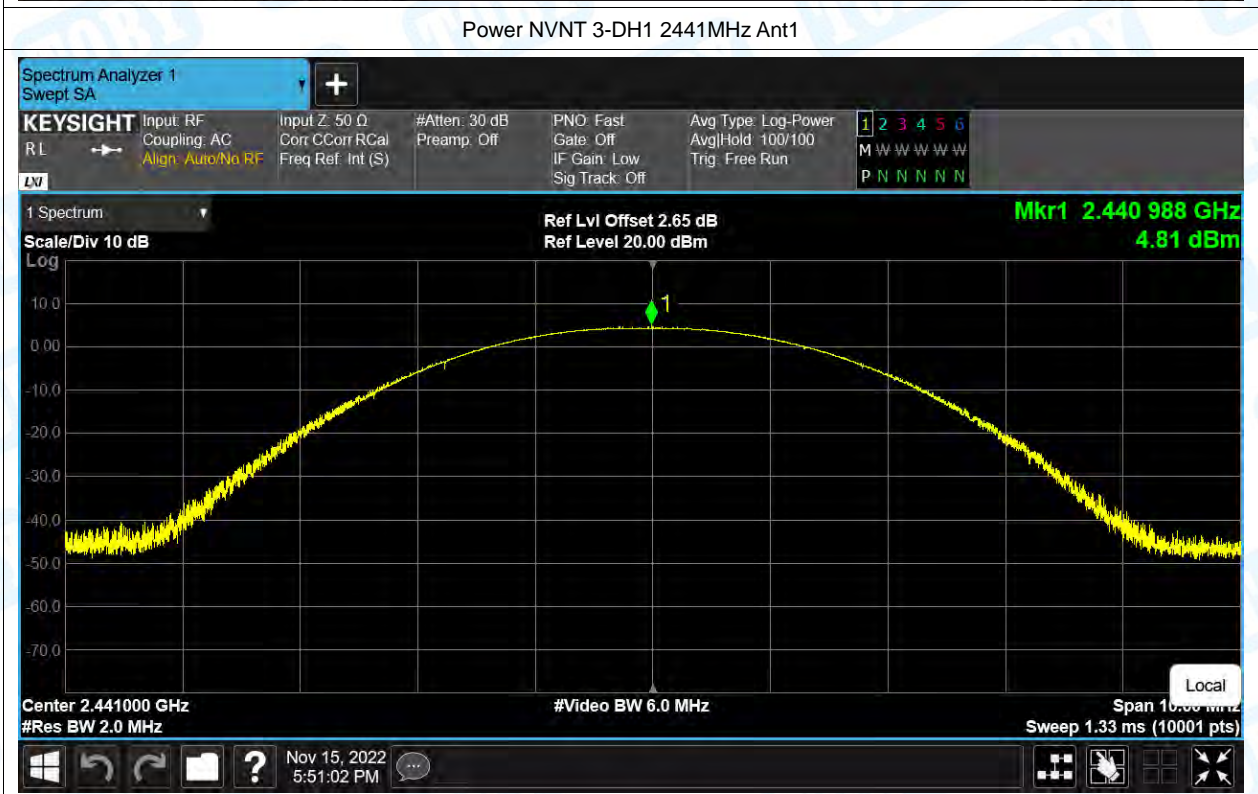
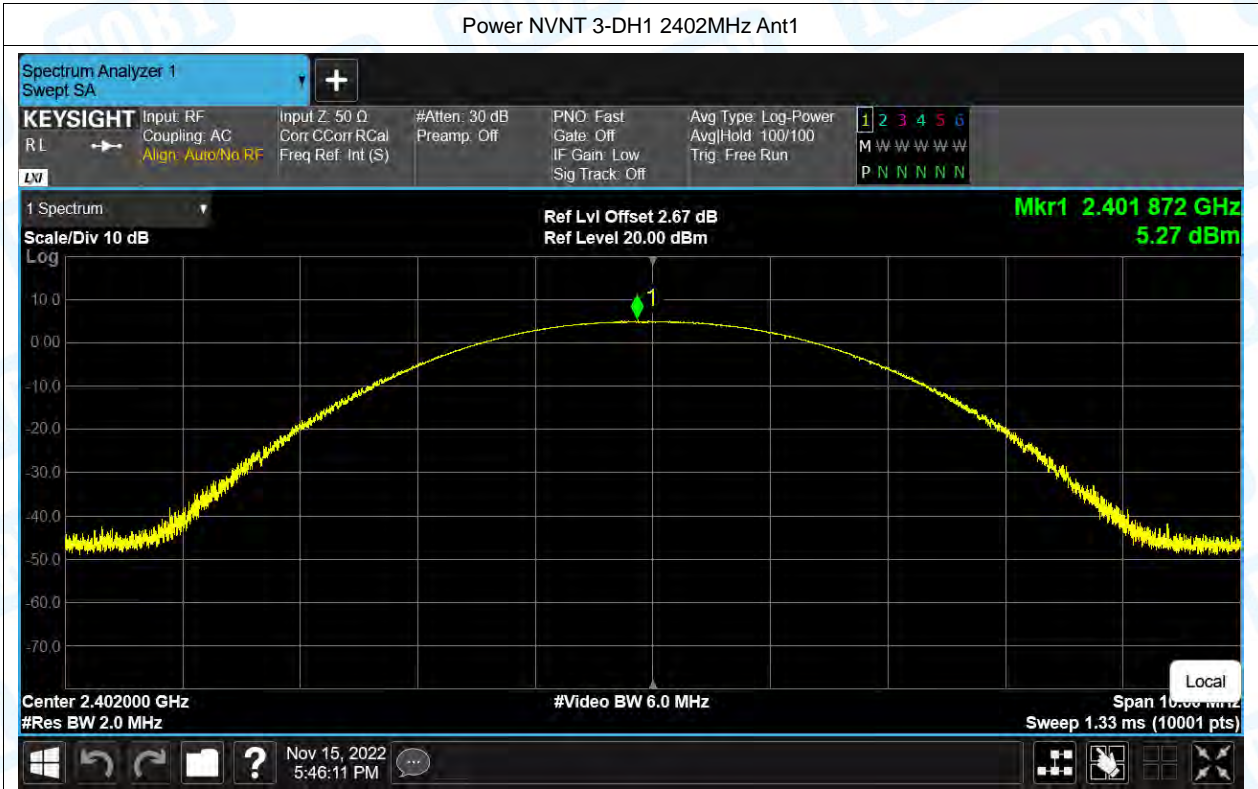


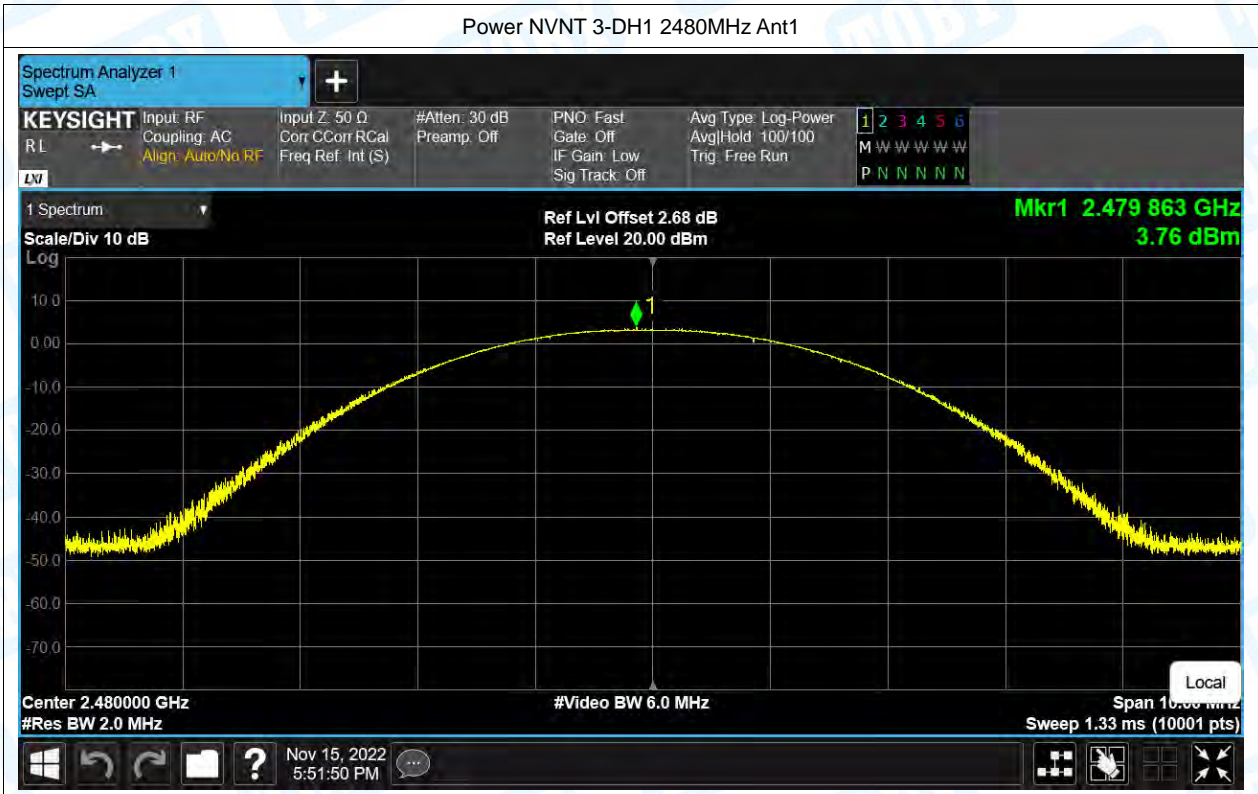
Power NVNT 1-DH1 2441MHz Ant1











### 3. -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.96	0	Pass
NVNT	1-DH1	2441	Ant1	1	0	Pass
NVNT	1-DH1	2480	Ant1	0.94	0	Pass
NVNT	2-DH1	2402	Ant1	1.24	0	Pass
NVNT	2-DH1	2441	Ant1	1.24	0	Pass
NVNT	2-DH1	2480	Ant1	1.23	0	Pass
NVNT	3-DH1	2402	Ant1	1.22	0	Pass
NVNT	3-DH1	2441	Ant1	1.2	0	Pass
NVNT	3-DH1	2480	Ant1	1.19	0	Pass

Test Graphs

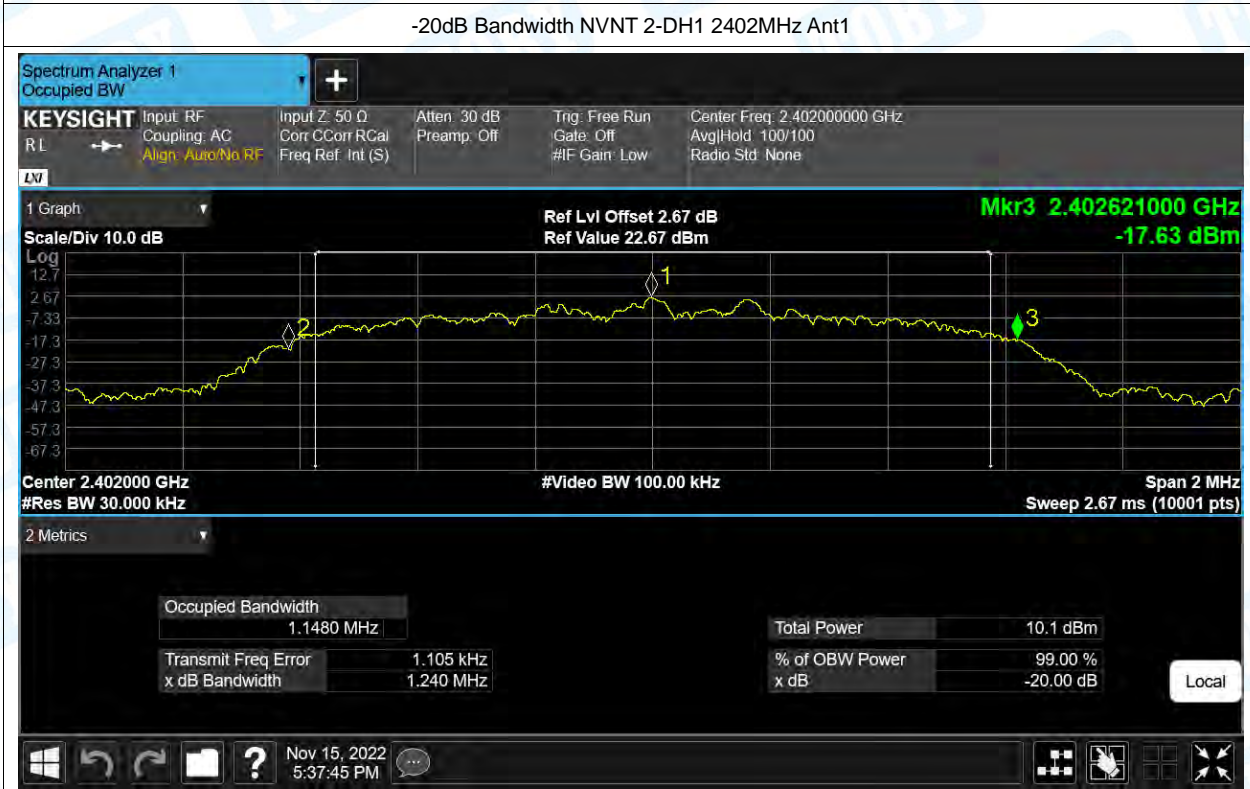
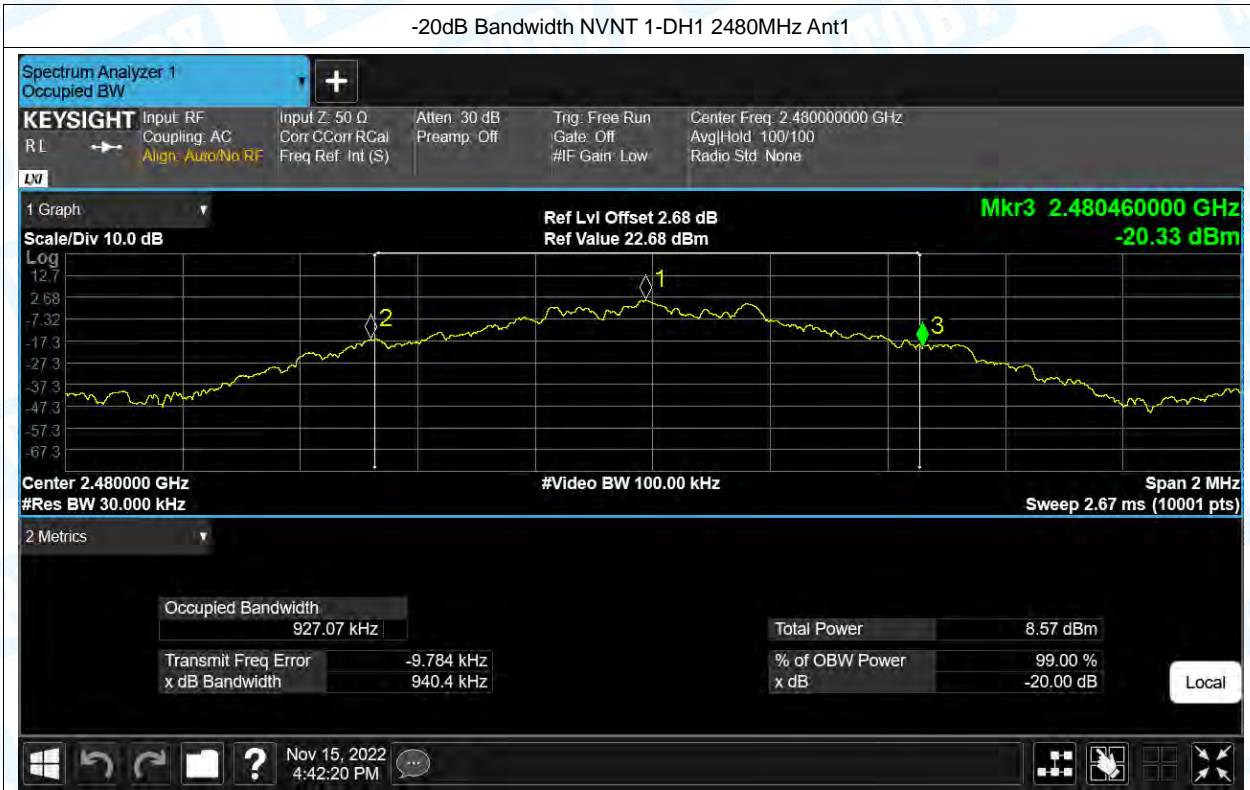
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1

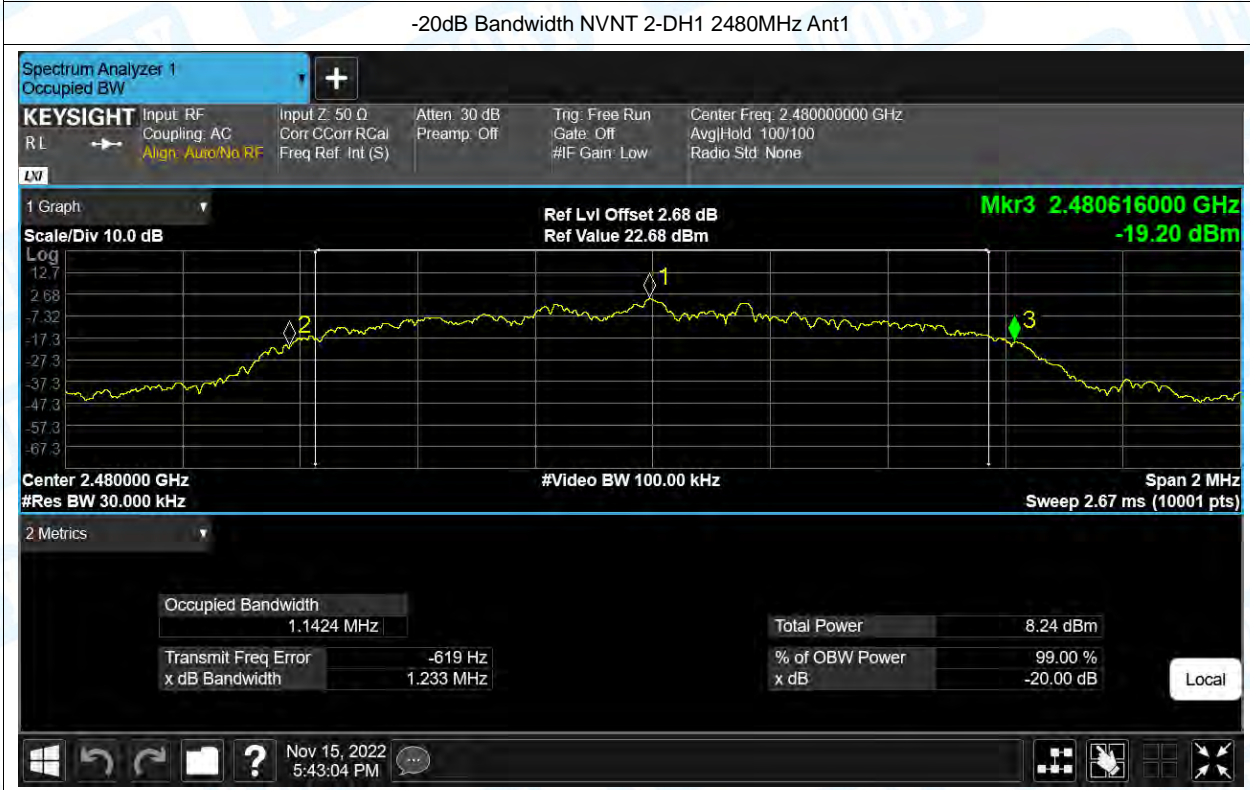
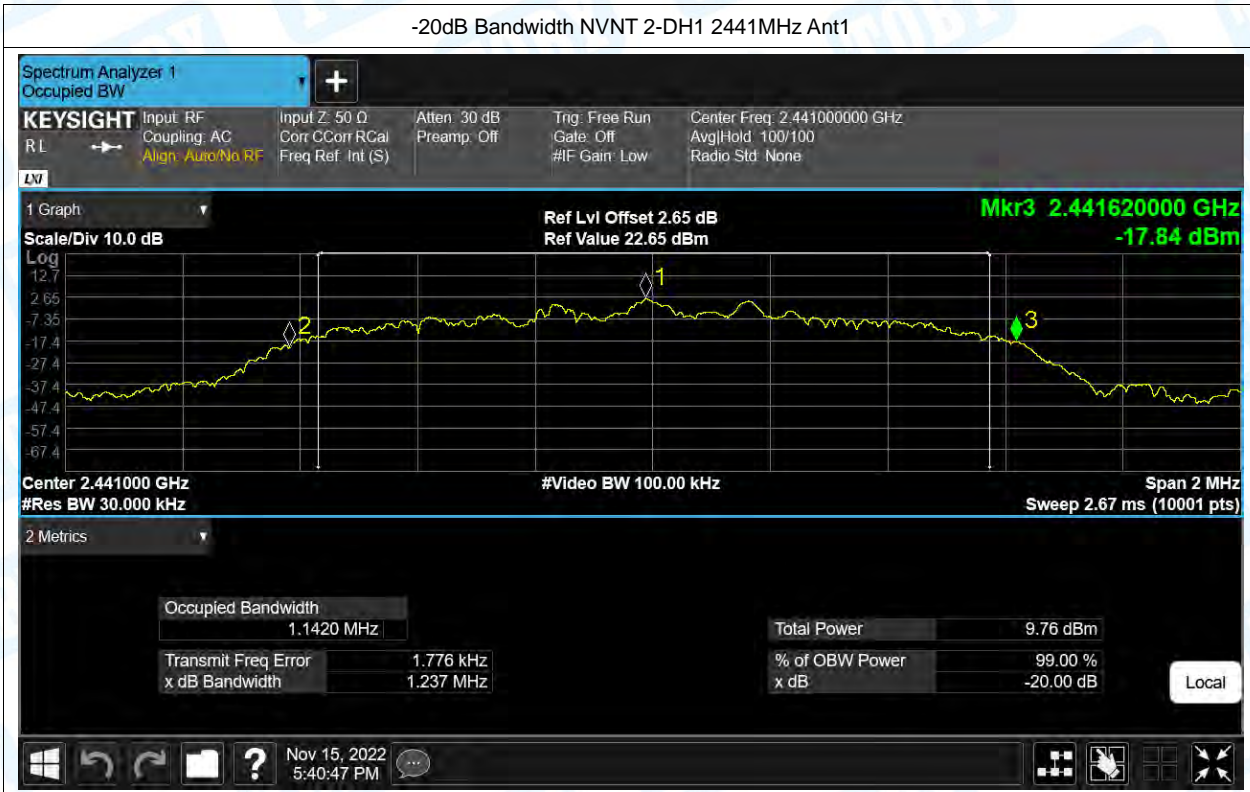


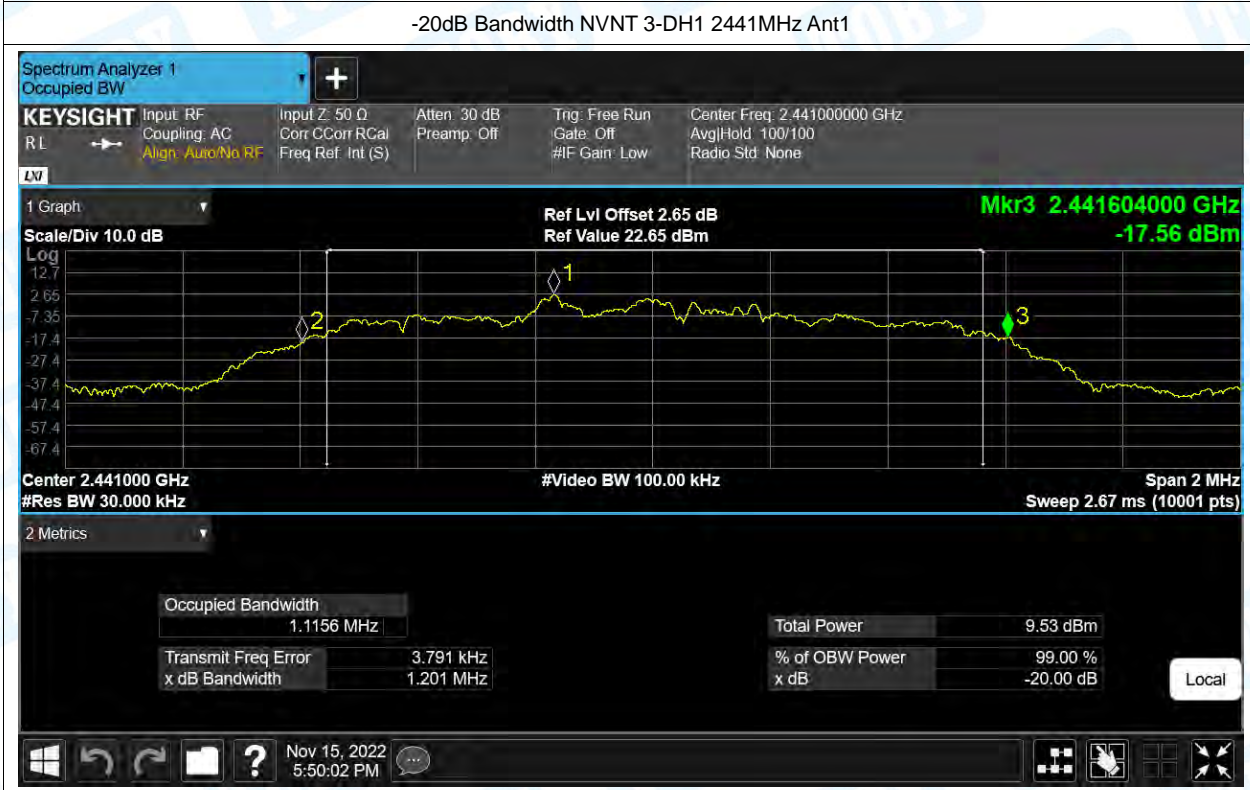
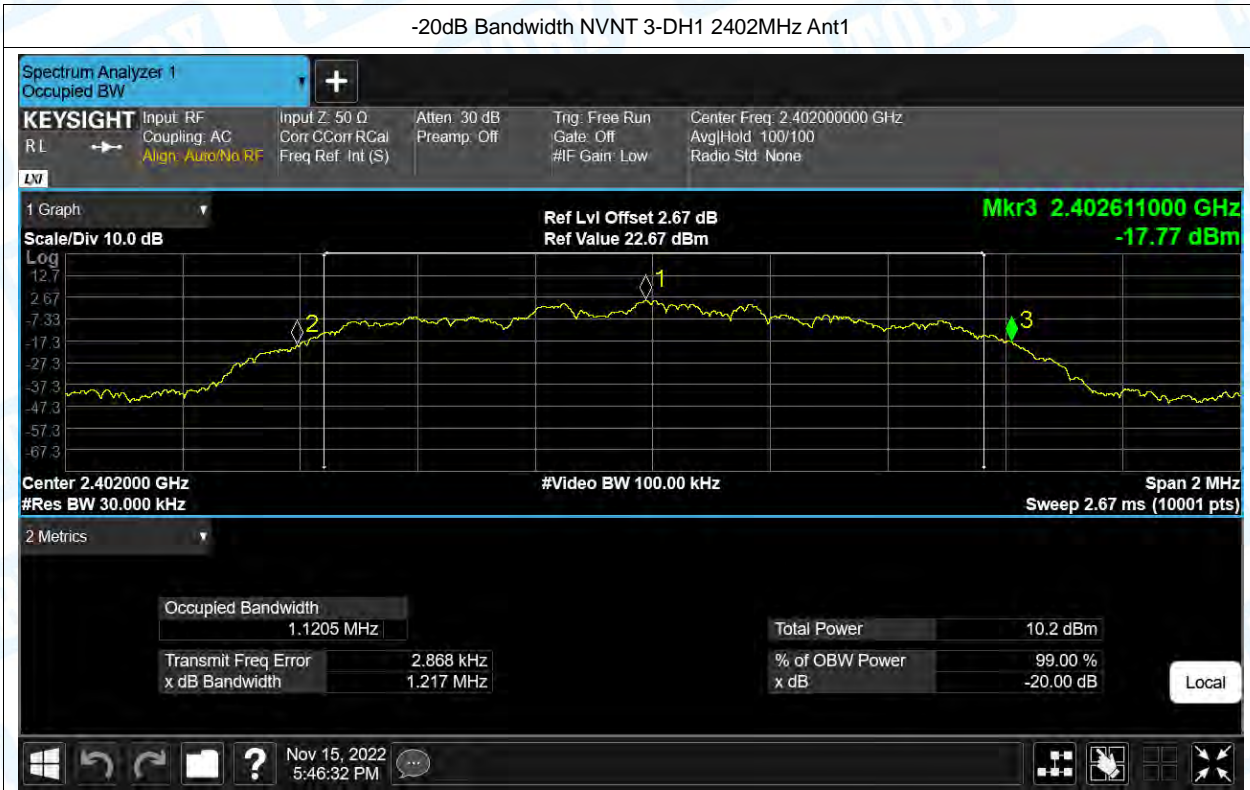
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1

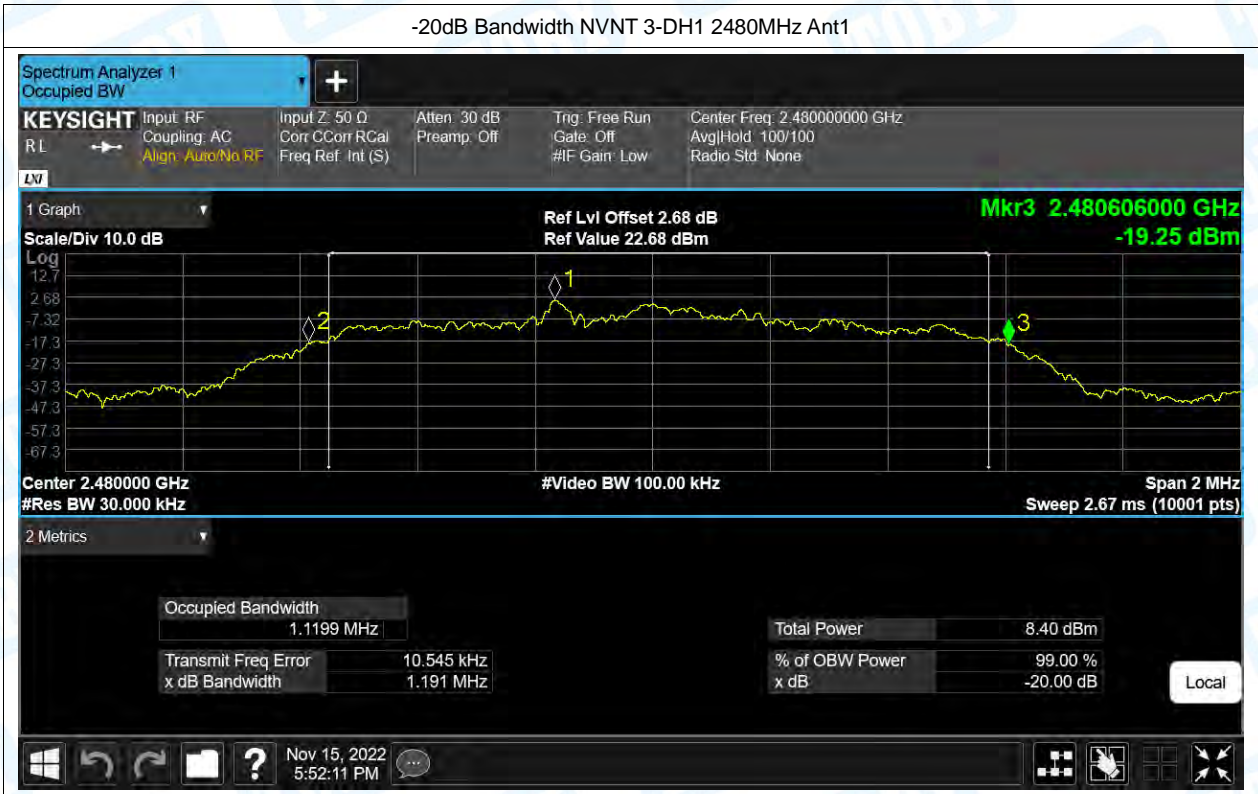












## 4. Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.921
NVNT	1-DH1	2441	Ant1	0.917
NVNT	1-DH1	2480	Ant1	0.918
NVNT	2-DH1	2402	Ant1	1.136
NVNT	2-DH1	2441	Ant1	1.139
NVNT	2-DH1	2480	Ant1	1.141
NVNT	3-DH1	2402	Ant1	1.107
NVNT	3-DH1	2441	Ant1	1.155
NVNT	3-DH1	2480	Ant1	1.121

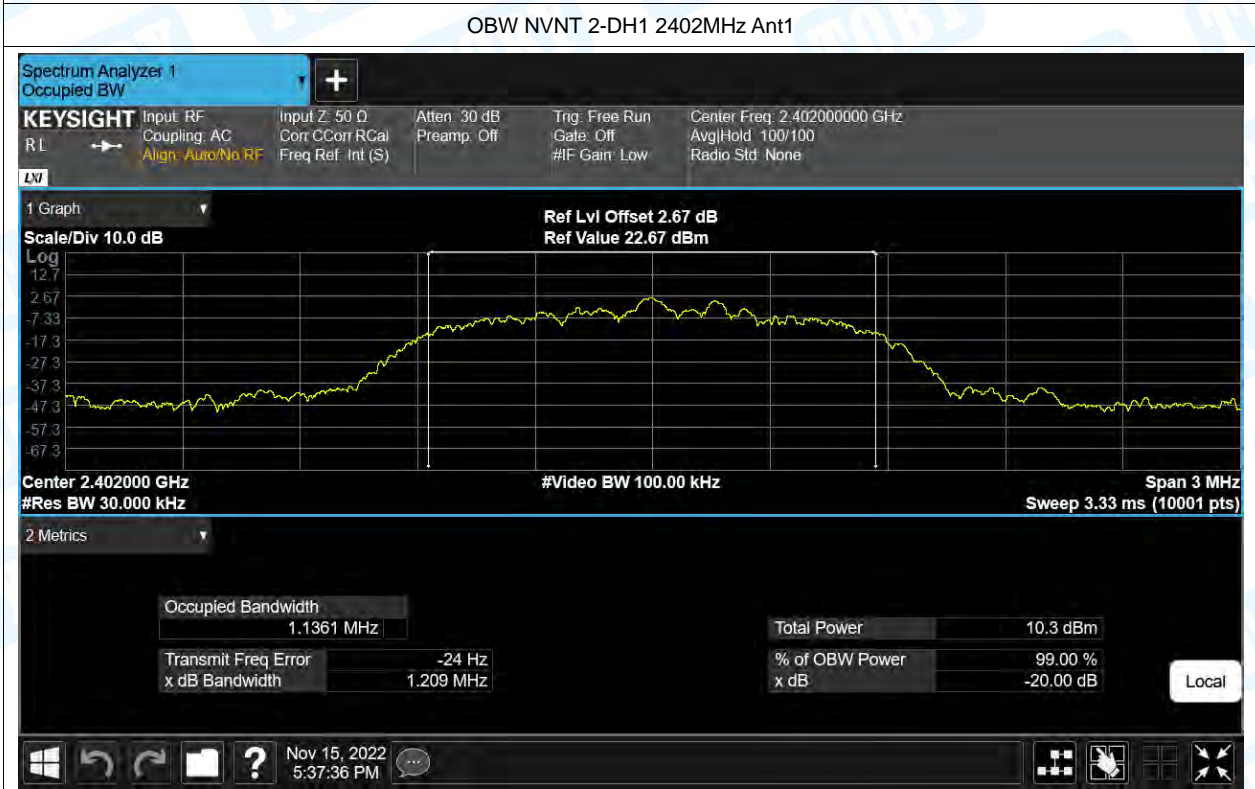
Test Graphs

OBW NVNT 1-DH1 2402MHz Ant1



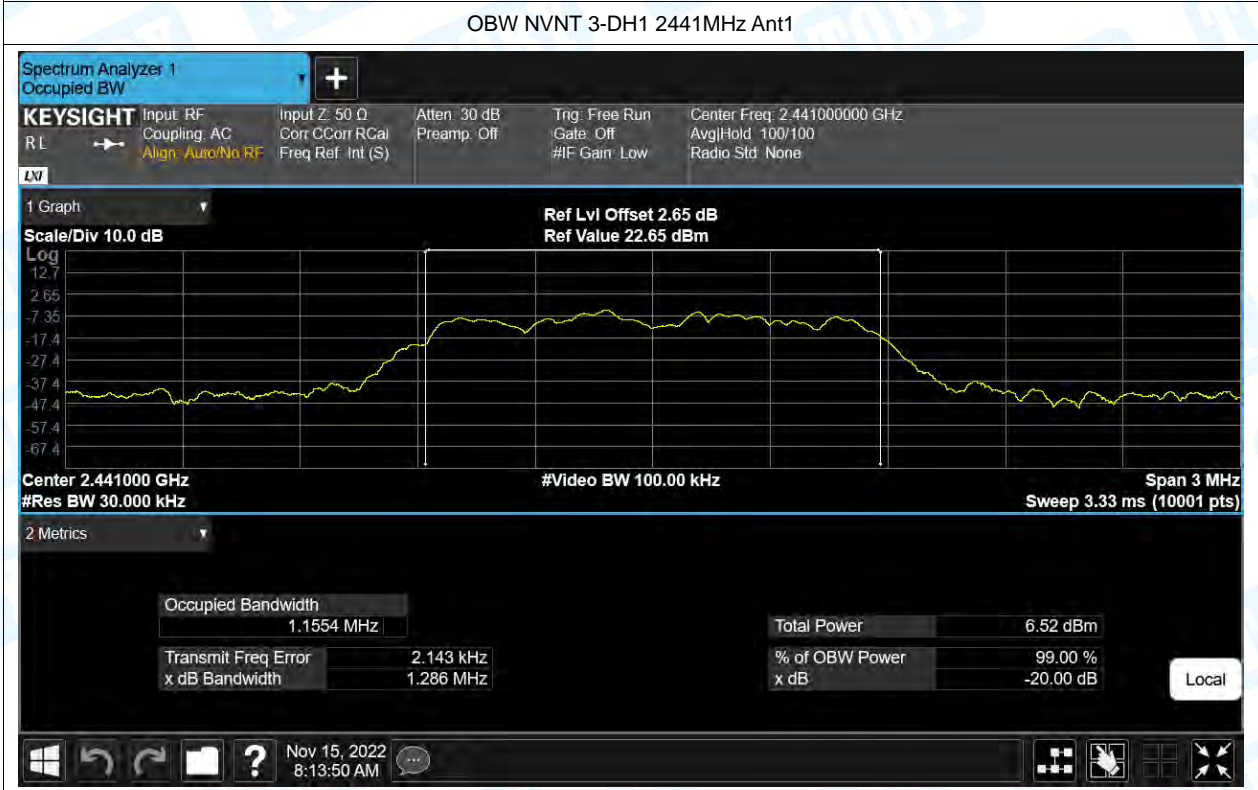
OBW NVNT 1-DH1 2441MHz Ant1













## 5. Band Edge

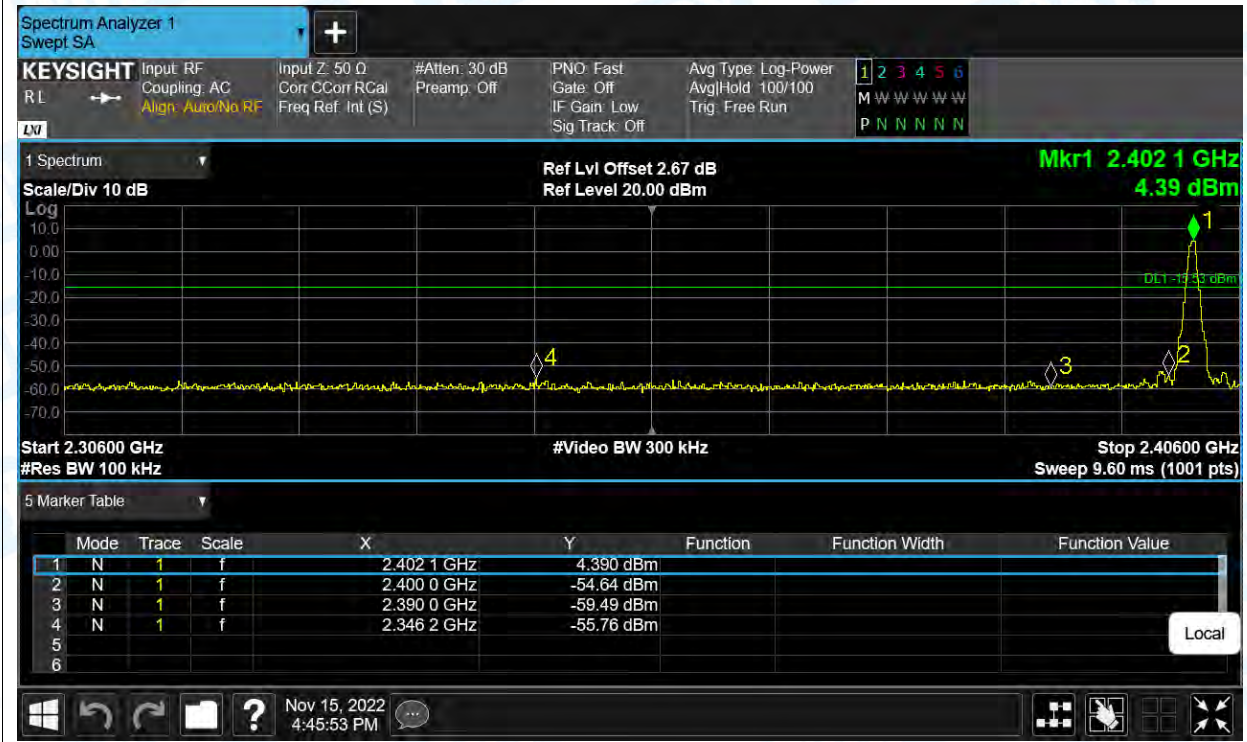
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-60.23	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-58.94	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-61.06	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-59.73	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-60.79	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-59.43	-20	Pass

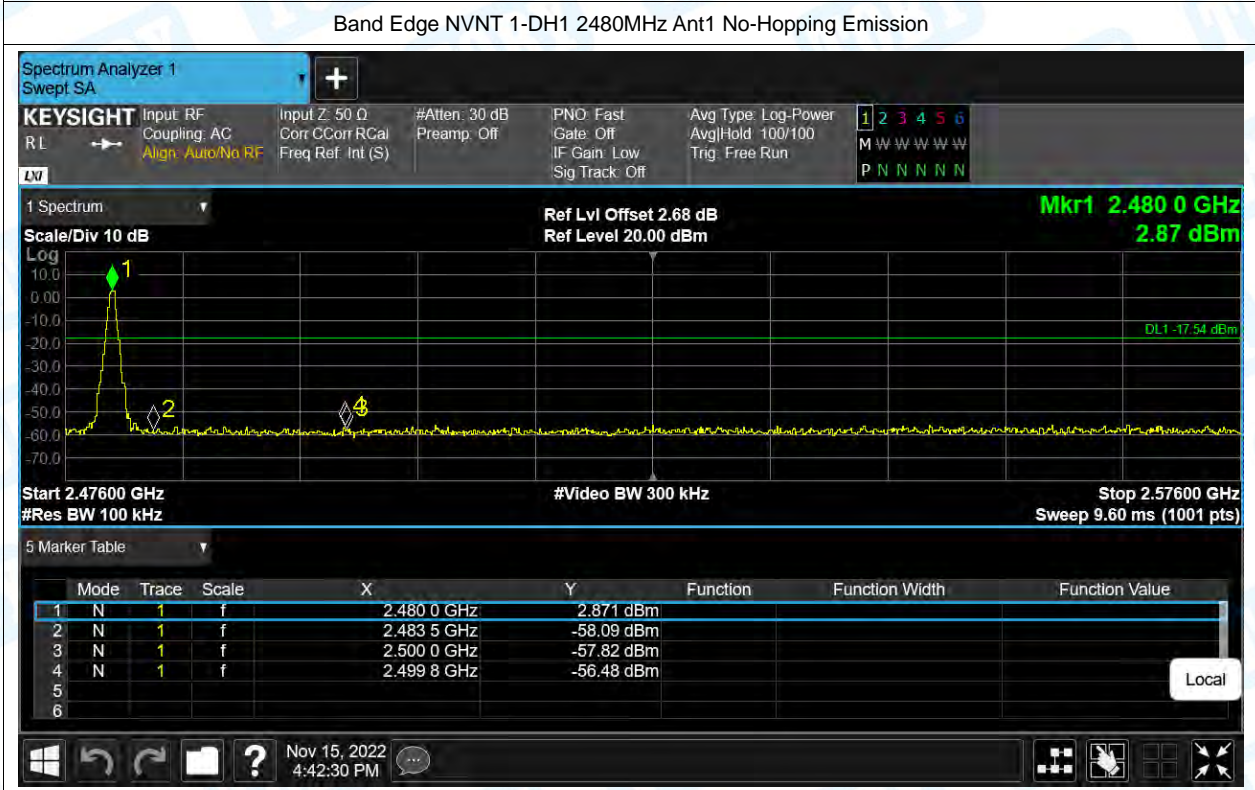
Test Graphs

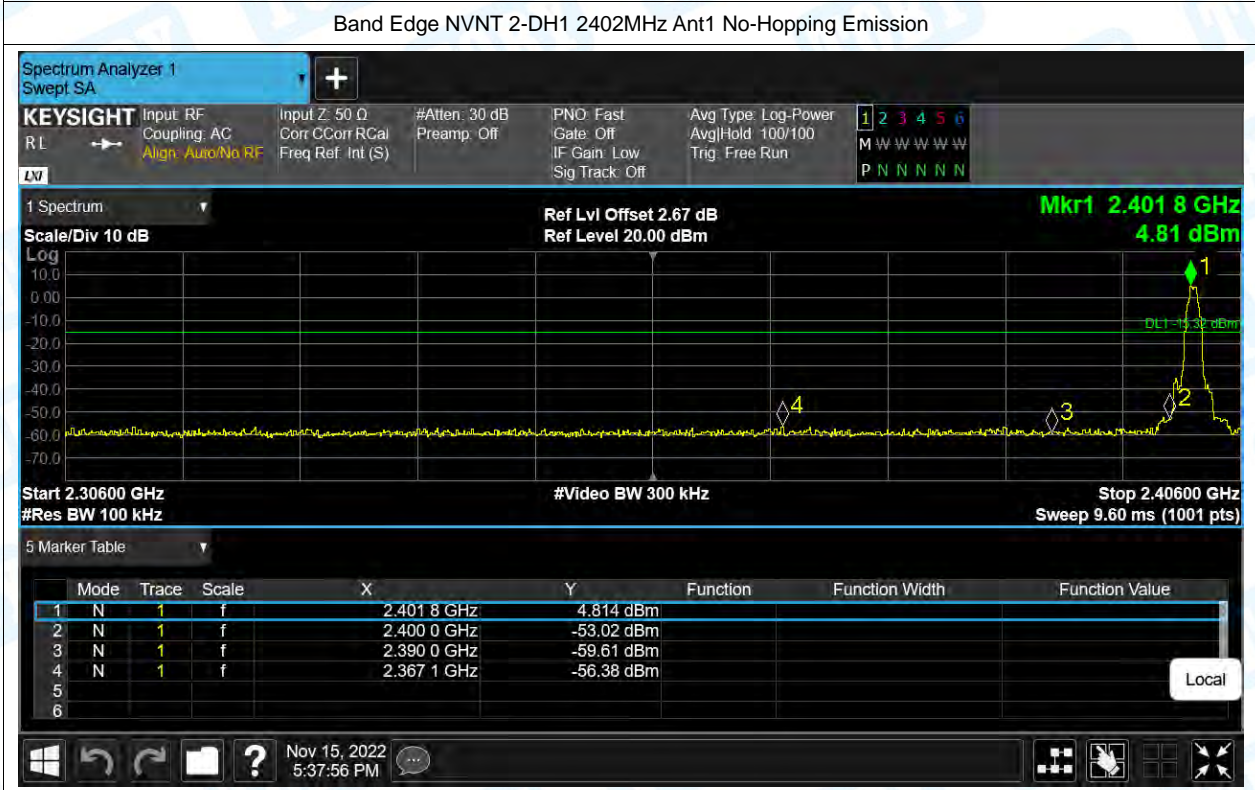
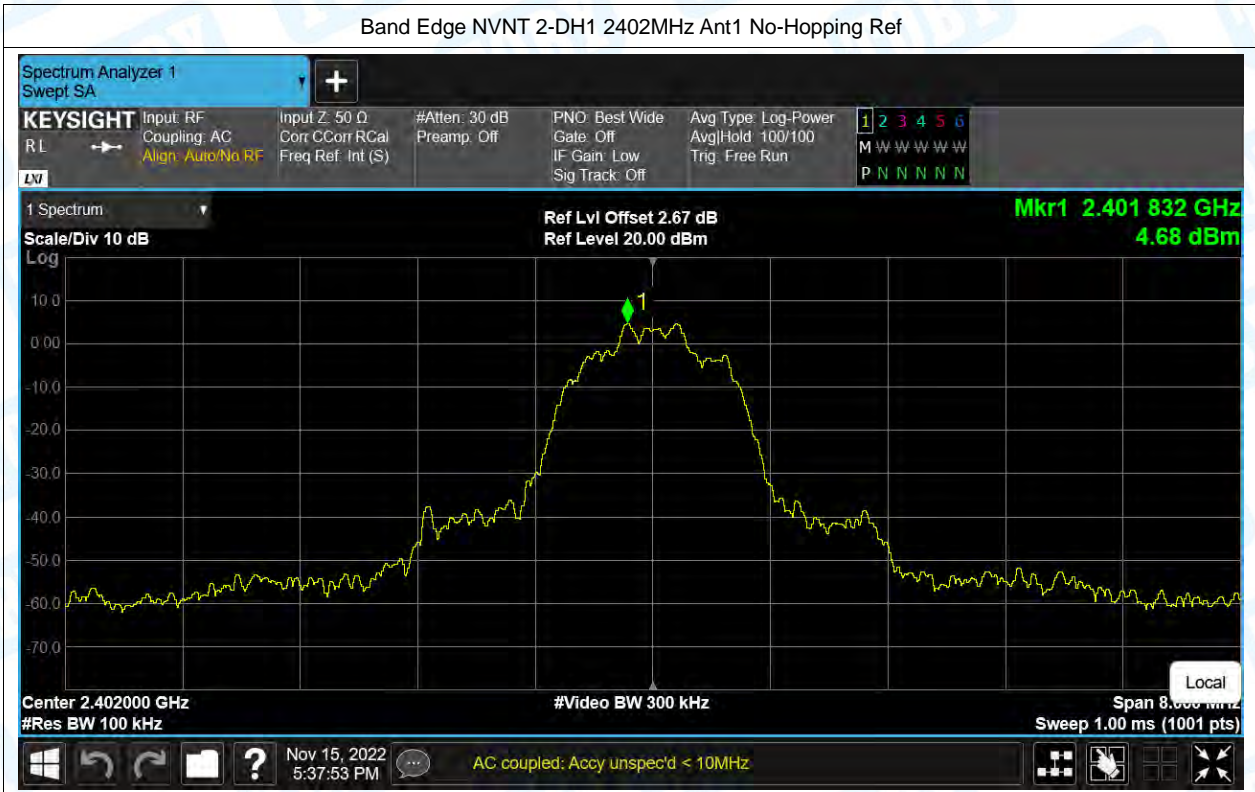
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref

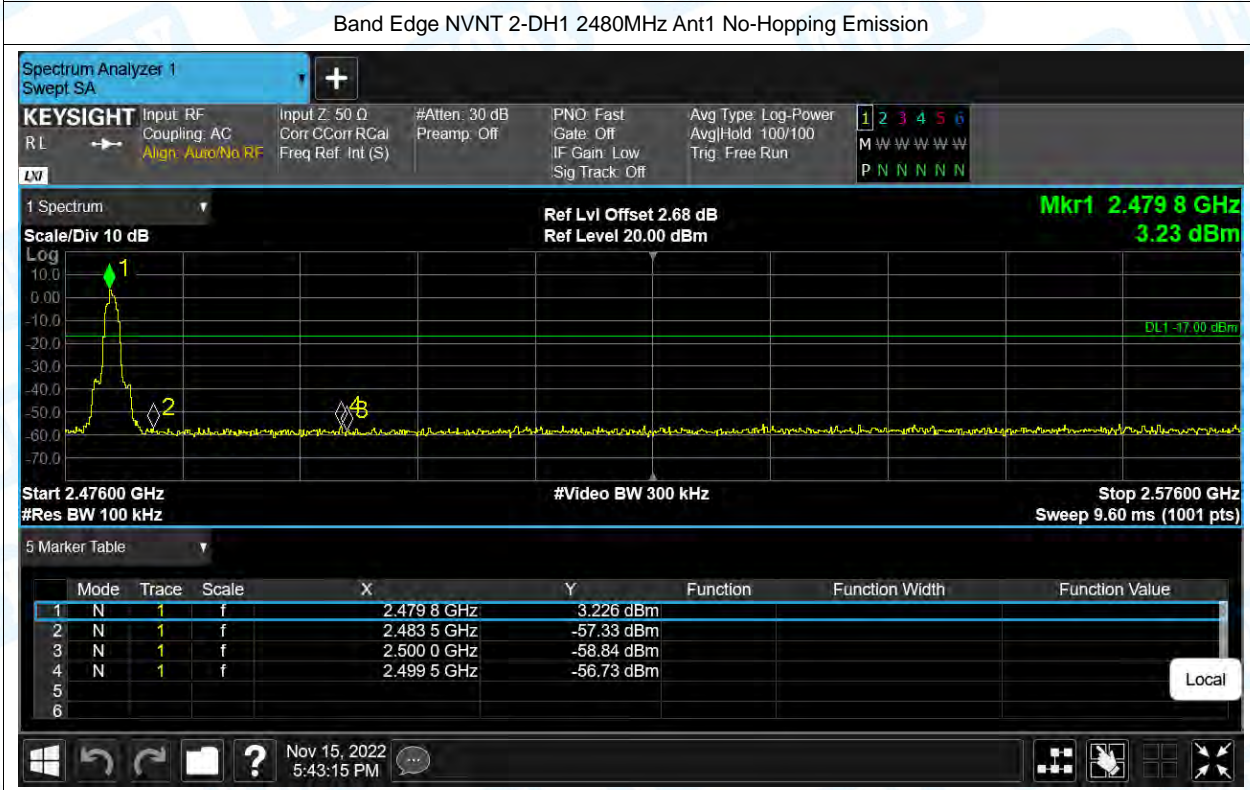
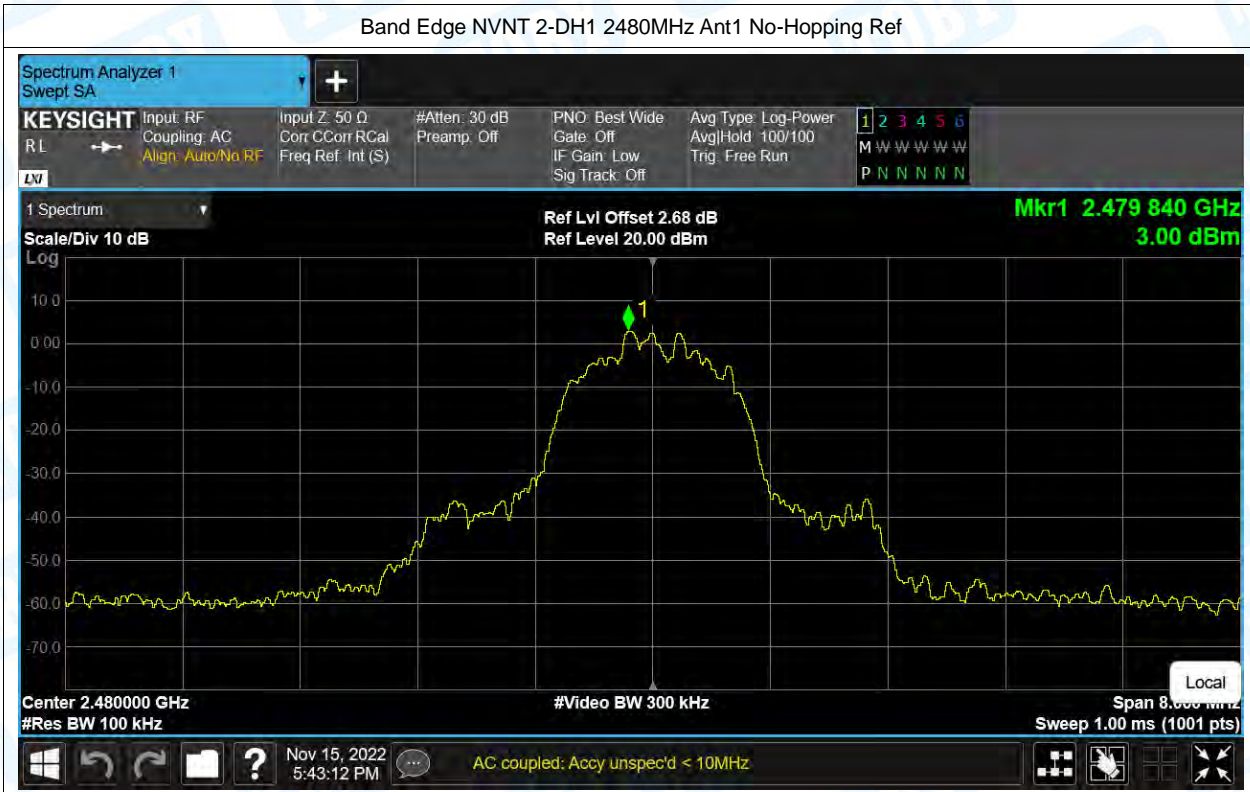


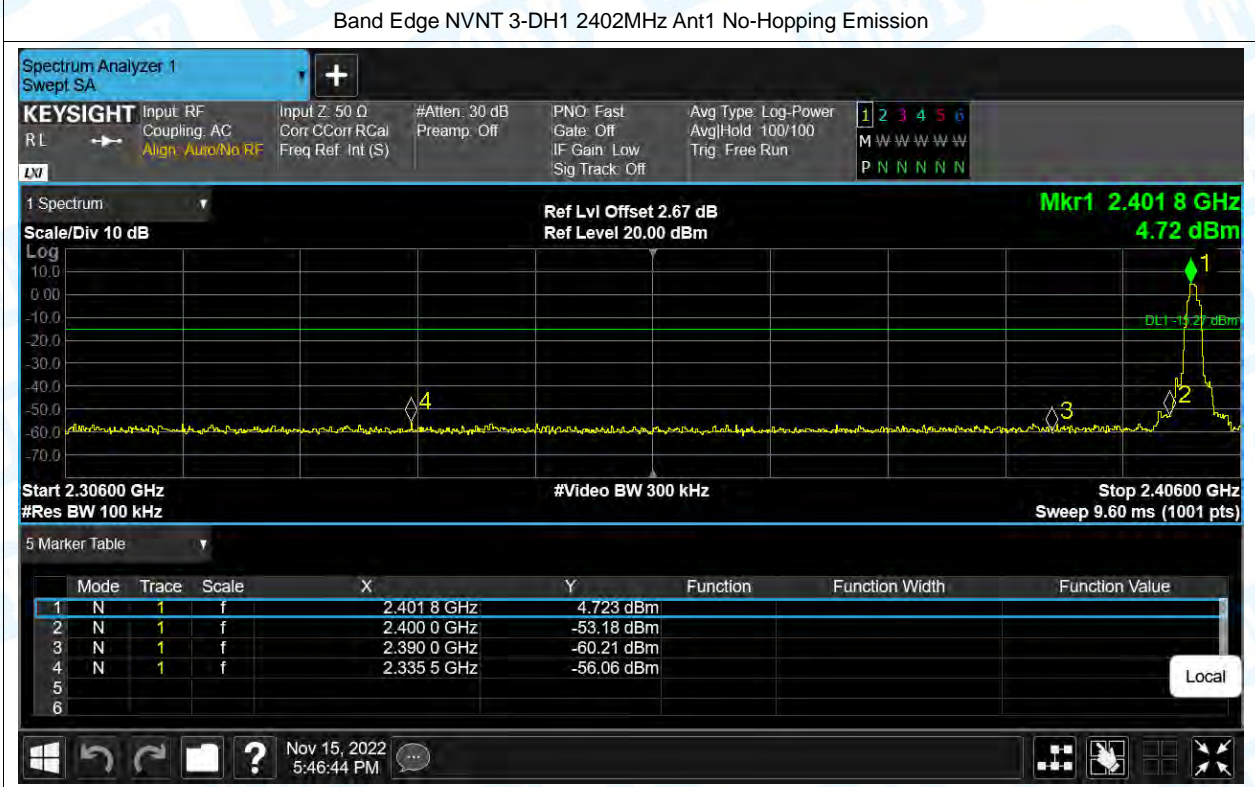
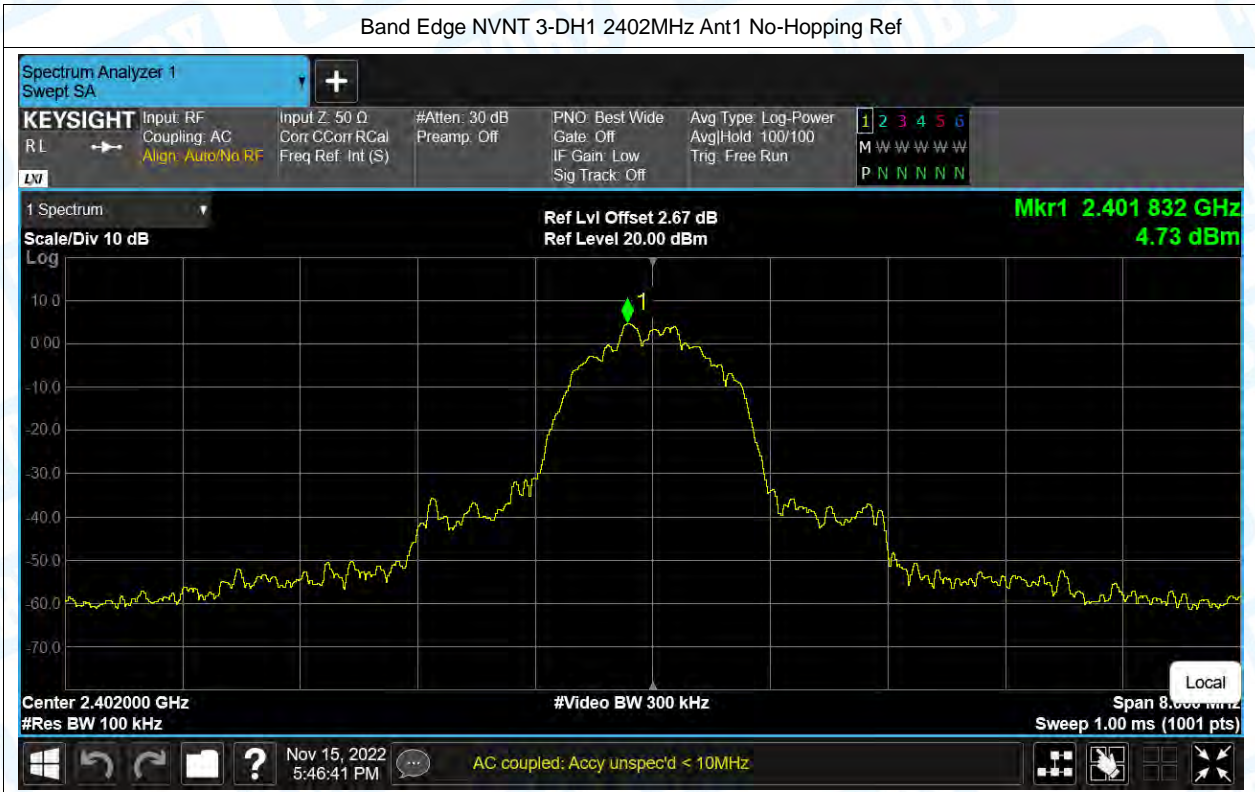
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



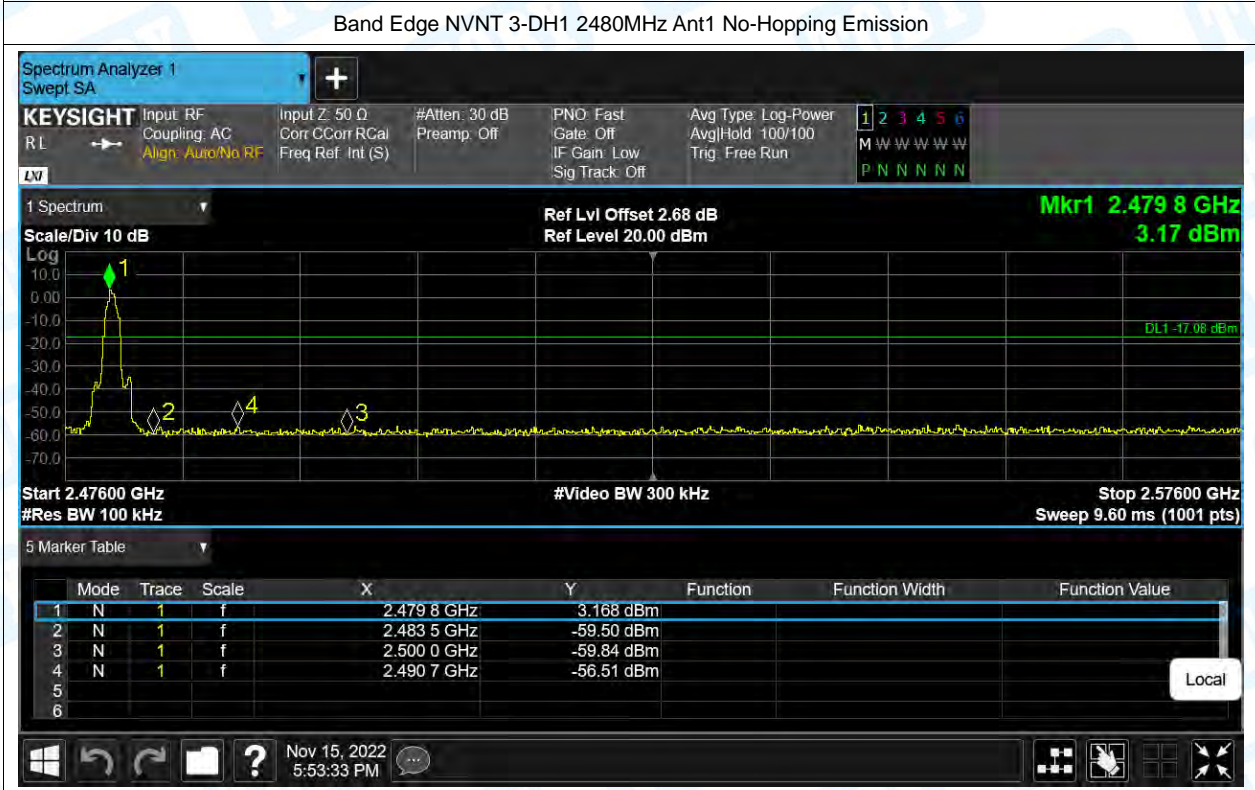












## 6. Band Edge(Hopping)

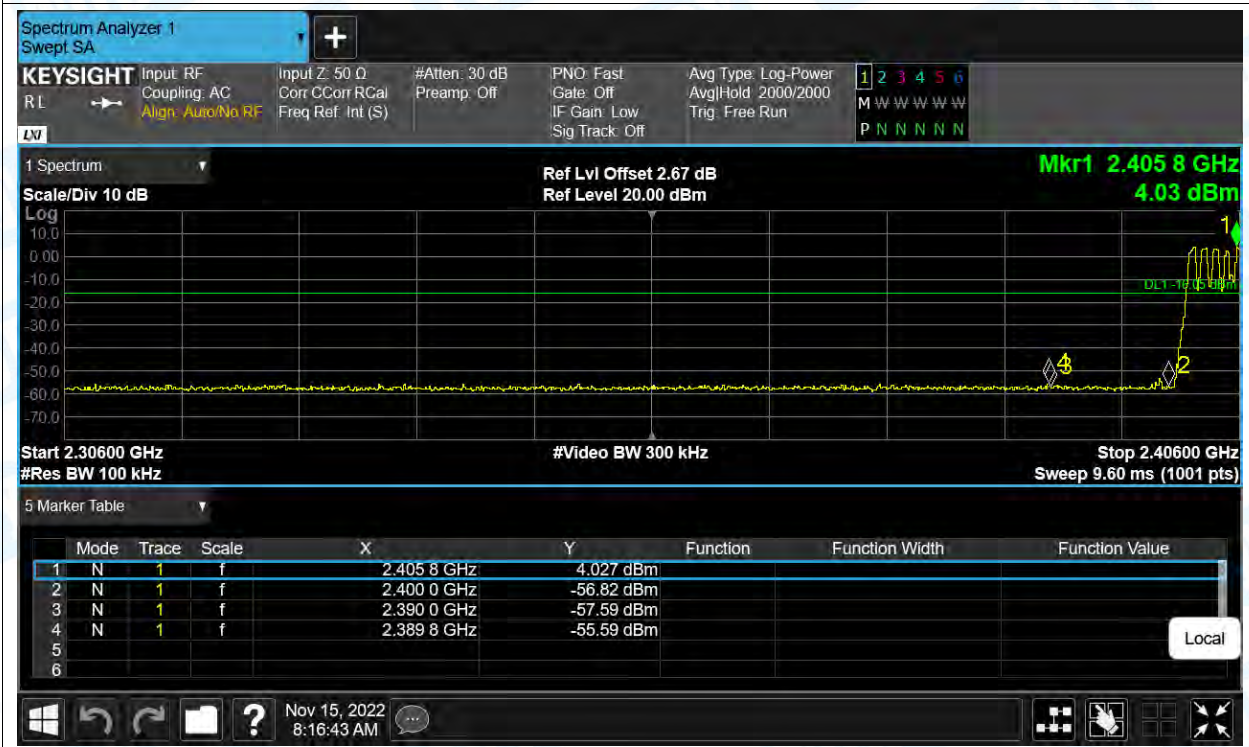
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-59.54	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-57.29	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-58.77	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-57.61	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-58.68	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-57.66	-20	Pass

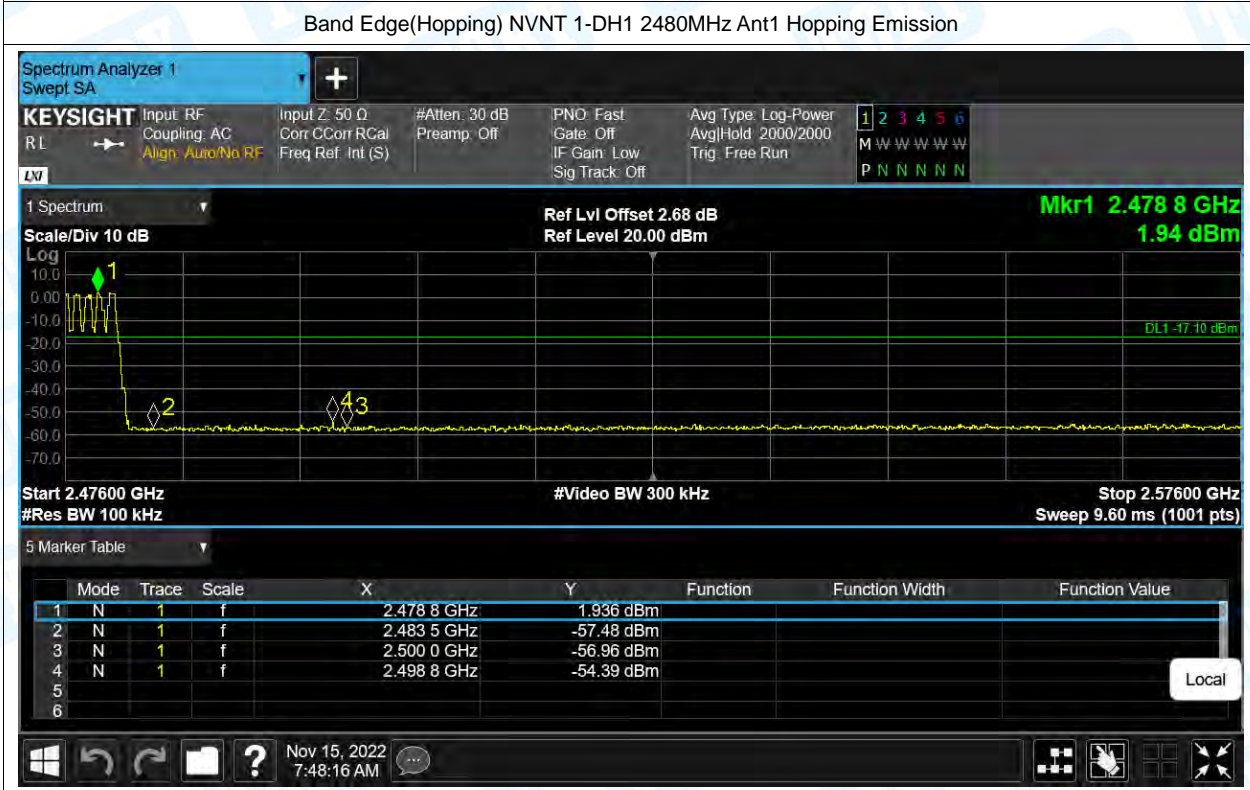
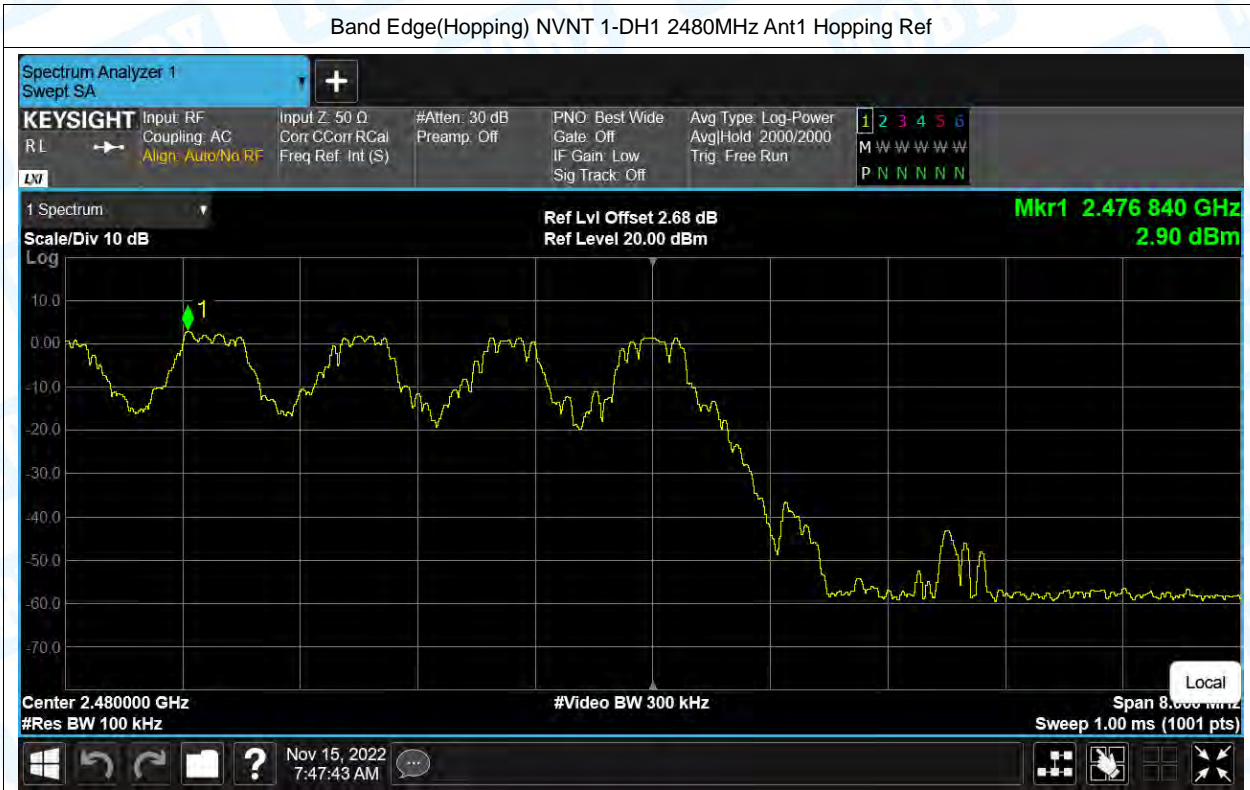
Test Graphs

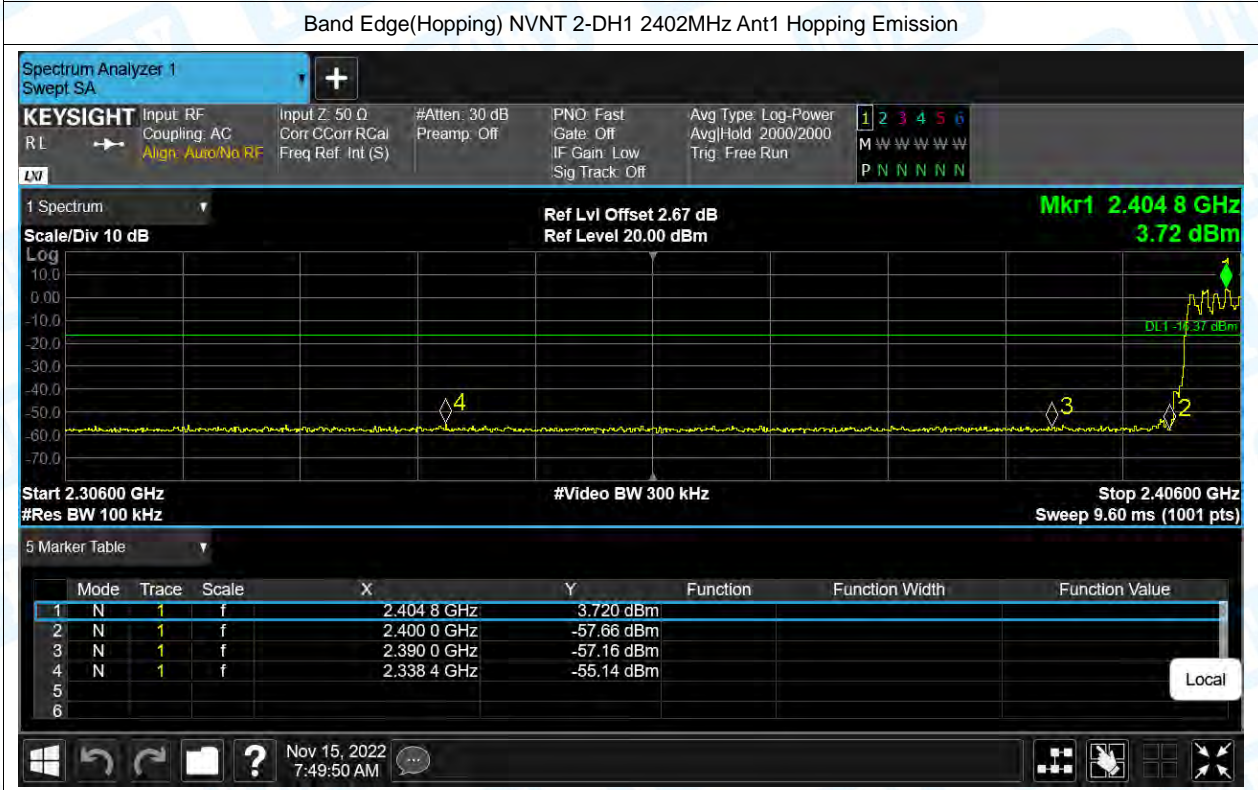
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref

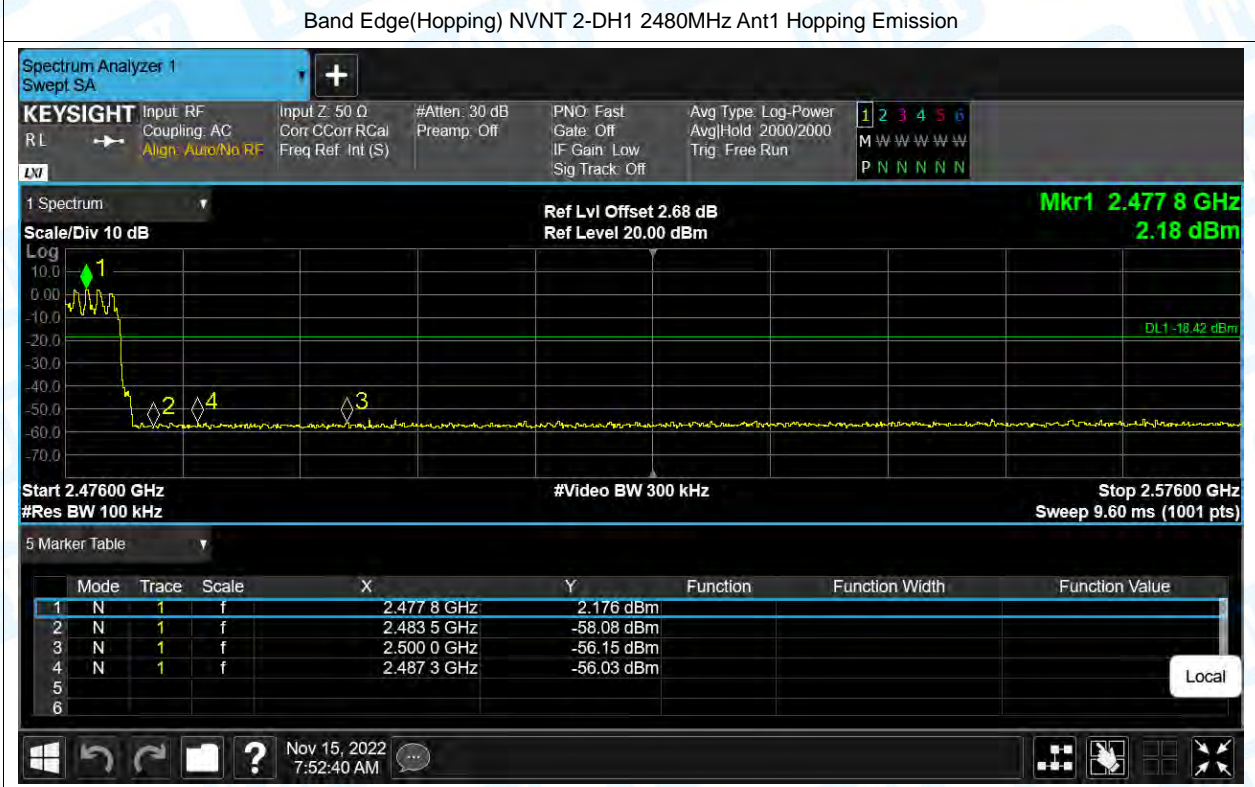


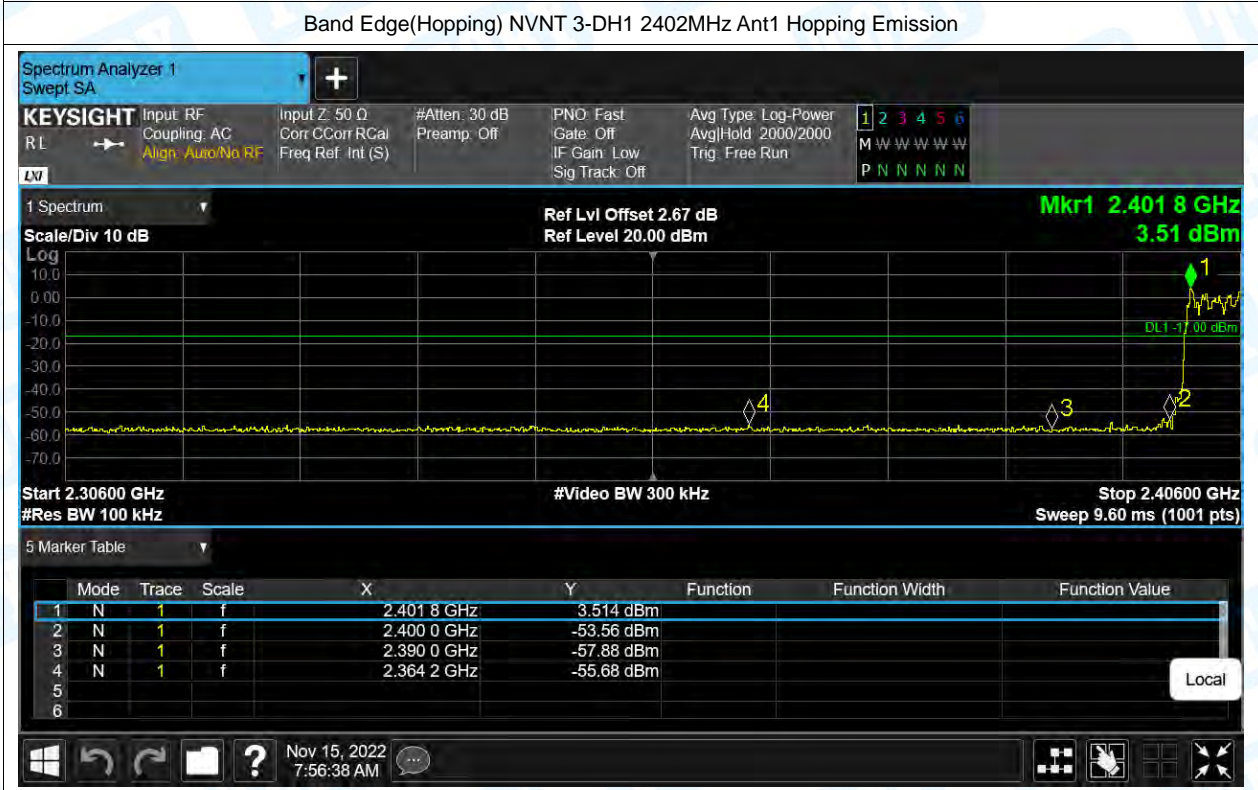
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission

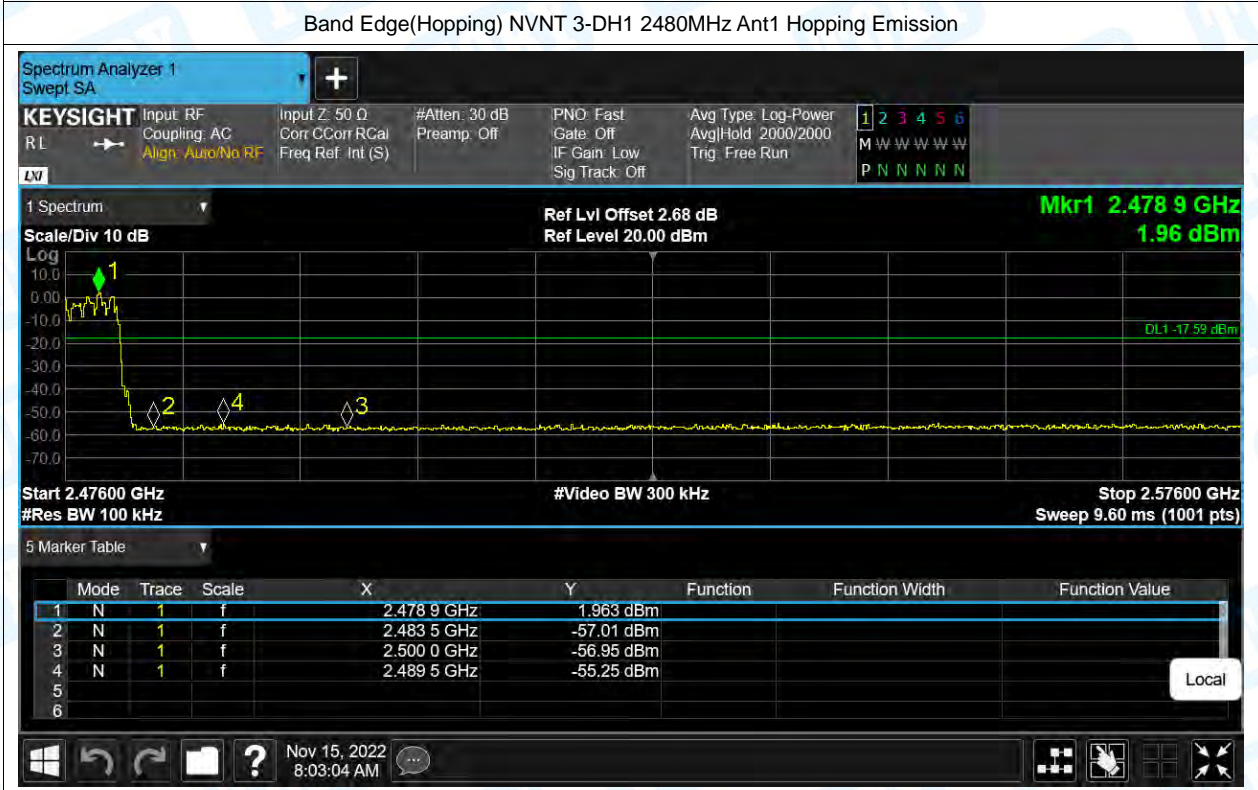














## 7. Conducted RF Spurious Emission

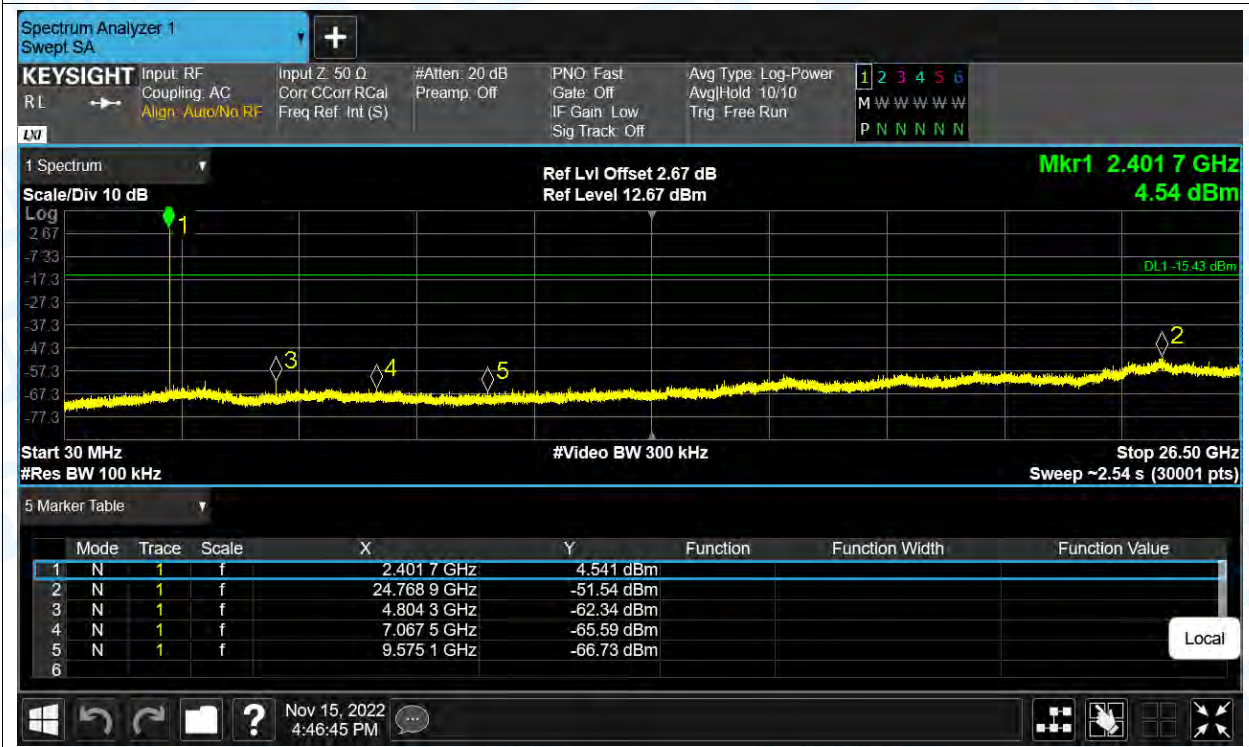
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-56.11	-20	Pass
NVNT	1-DH1	2441	Ant1	-55.51	-20	Pass
NVNT	1-DH1	2480	Ant1	-54.58	-20	Pass
NVNT	2-DH1	2402	Ant1	-56.18	-20	Pass
NVNT	2-DH1	2441	Ant1	-55.53	-20	Pass
NVNT	2-DH1	2480	Ant1	-55.31	-20	Pass
NVNT	3-DH1	2402	Ant1	-55.52	-20	Pass
NVNT	3-DH1	2441	Ant1	-56.09	-20	Pass
NVNT	3-DH1	2480	Ant1	-54.64	-20	Pass

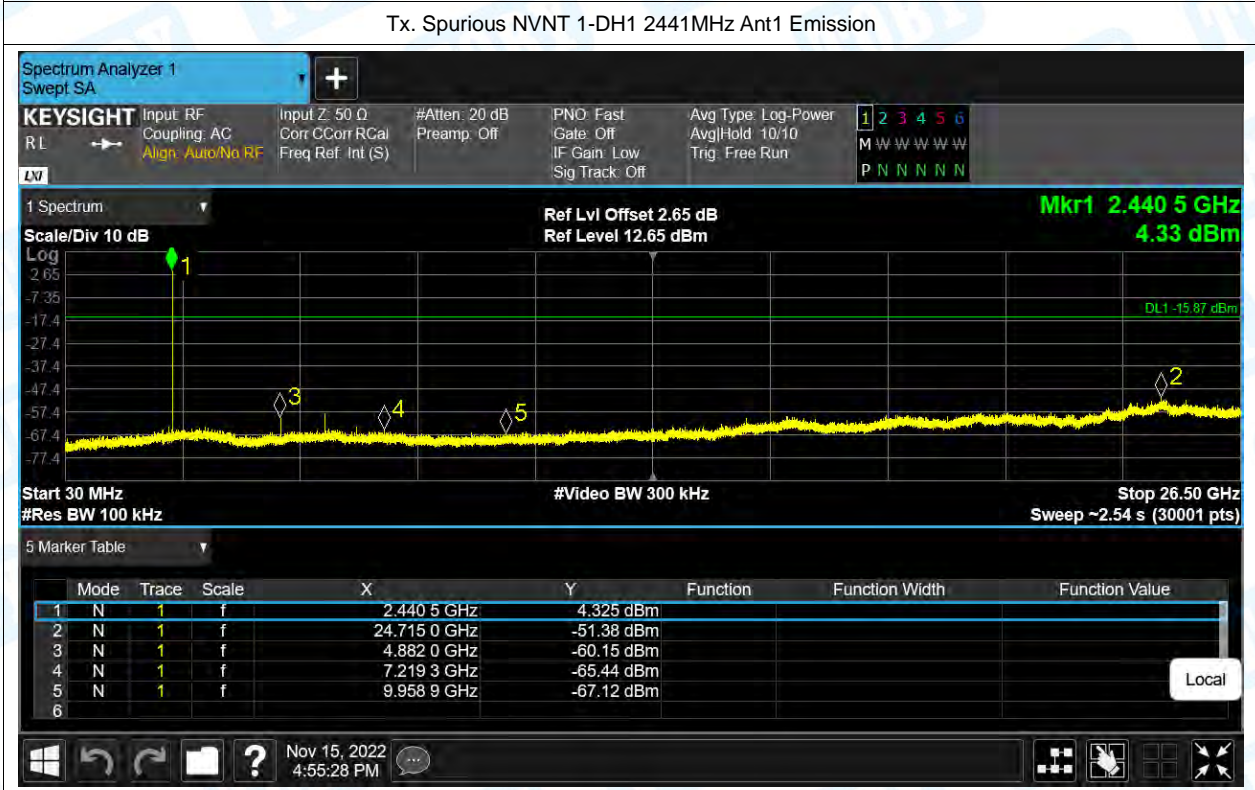
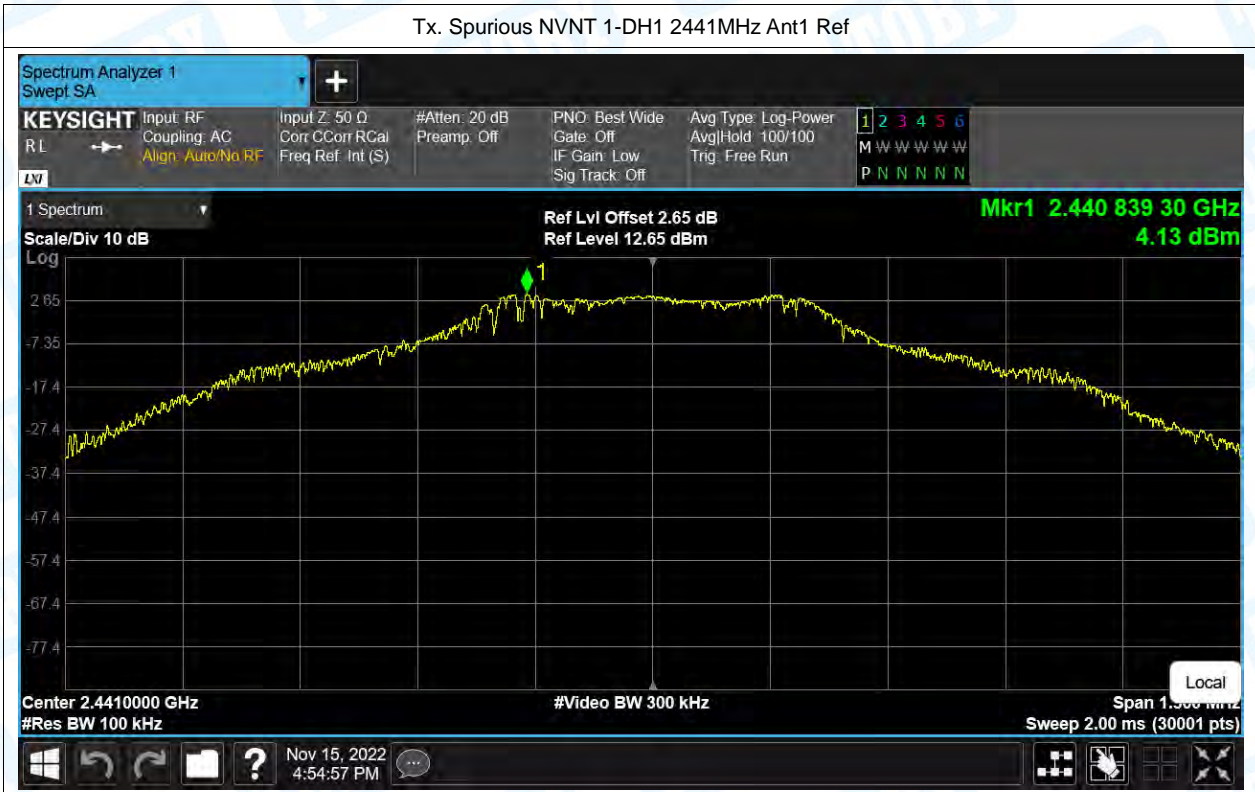
Test Graphs

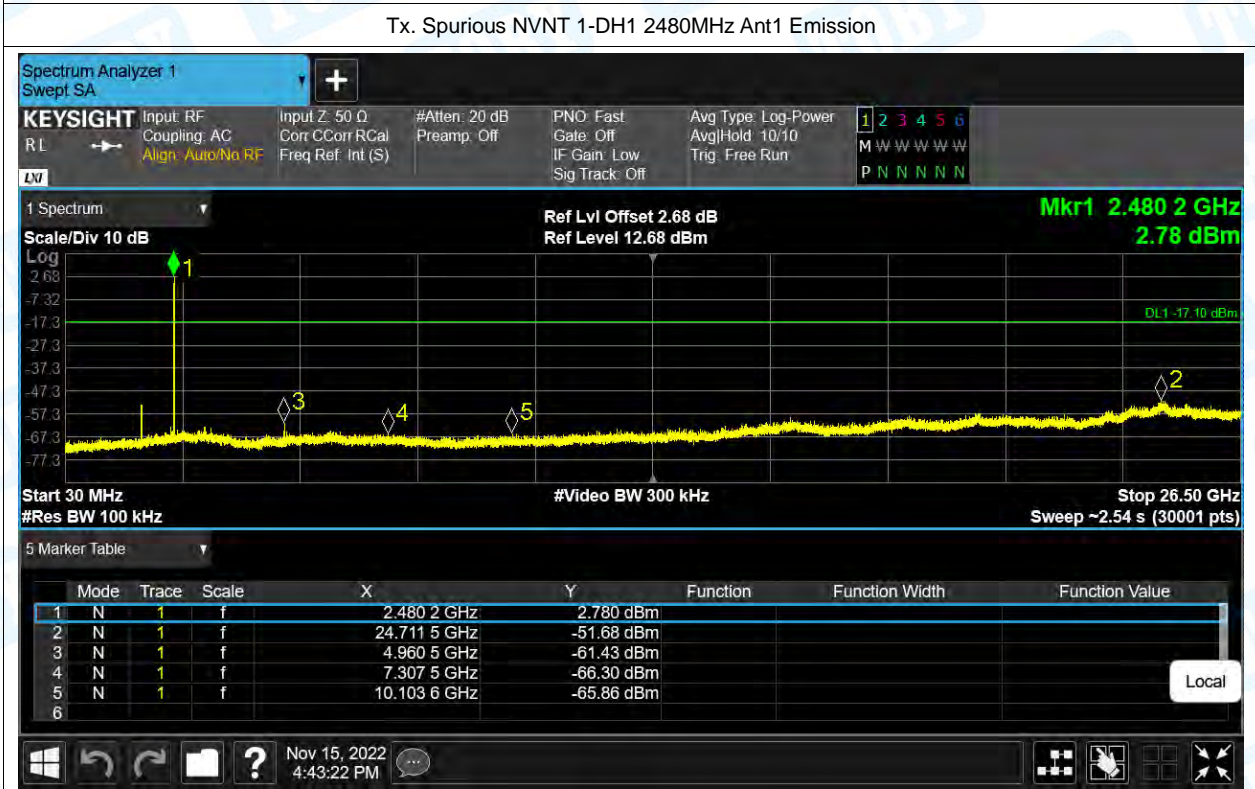
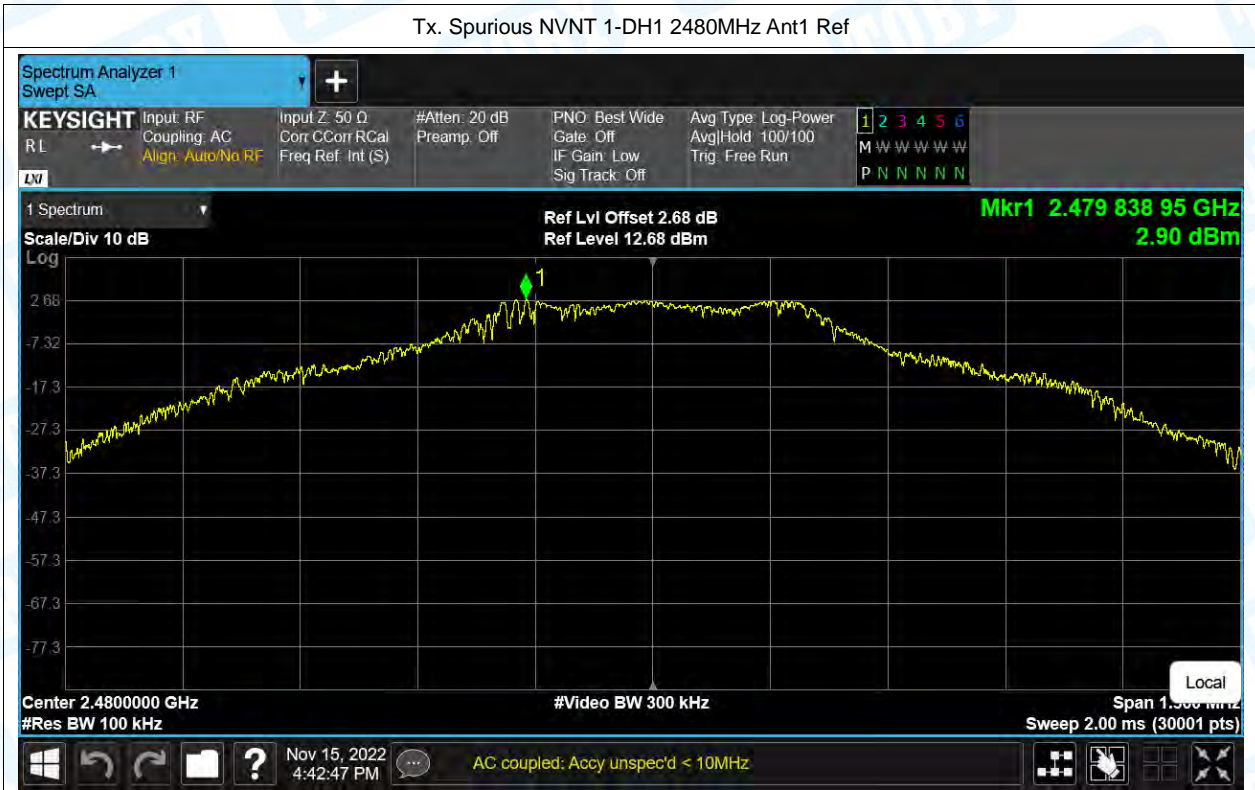
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref

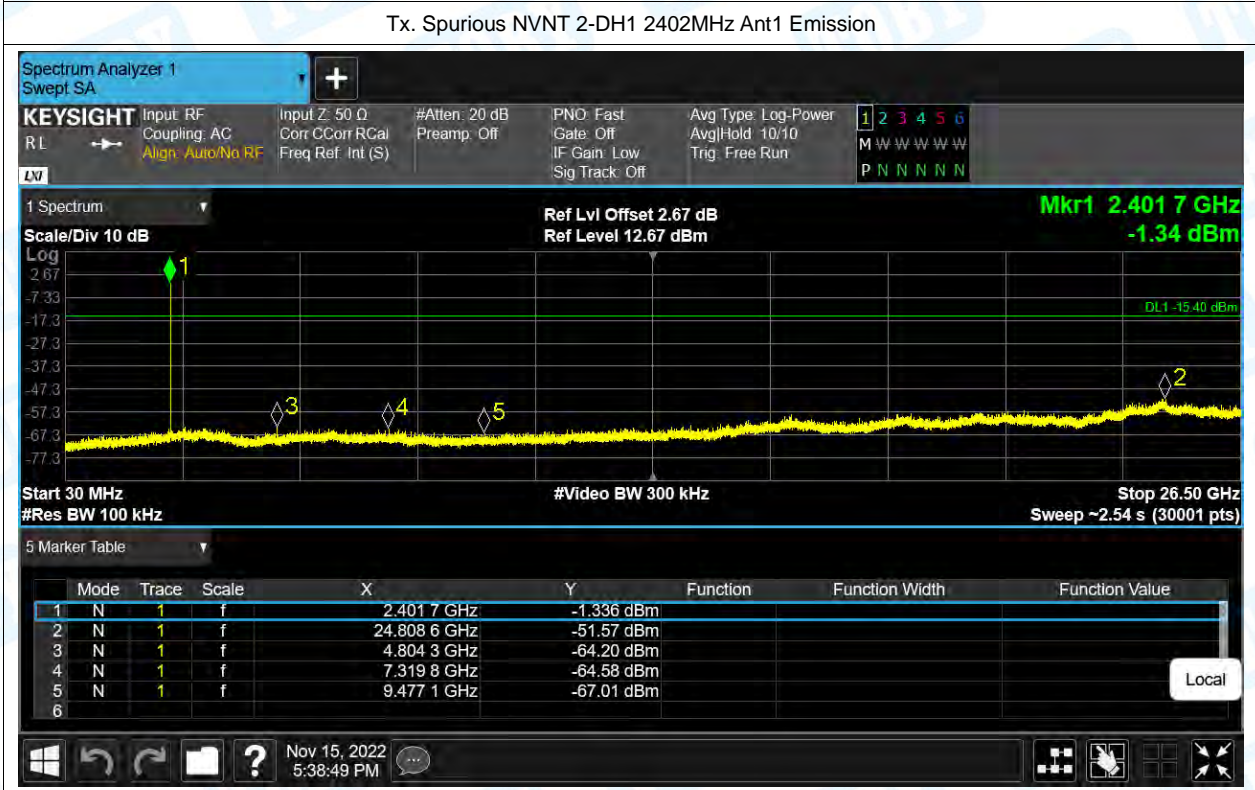
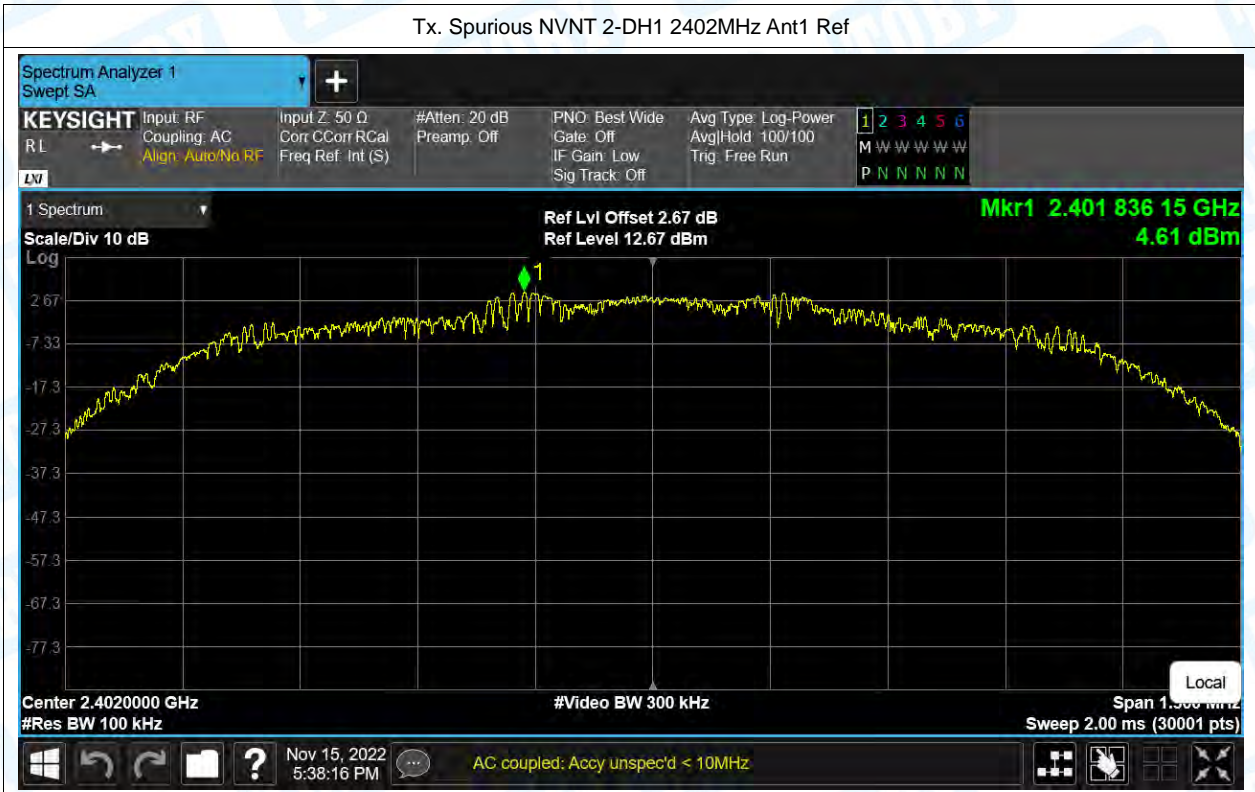


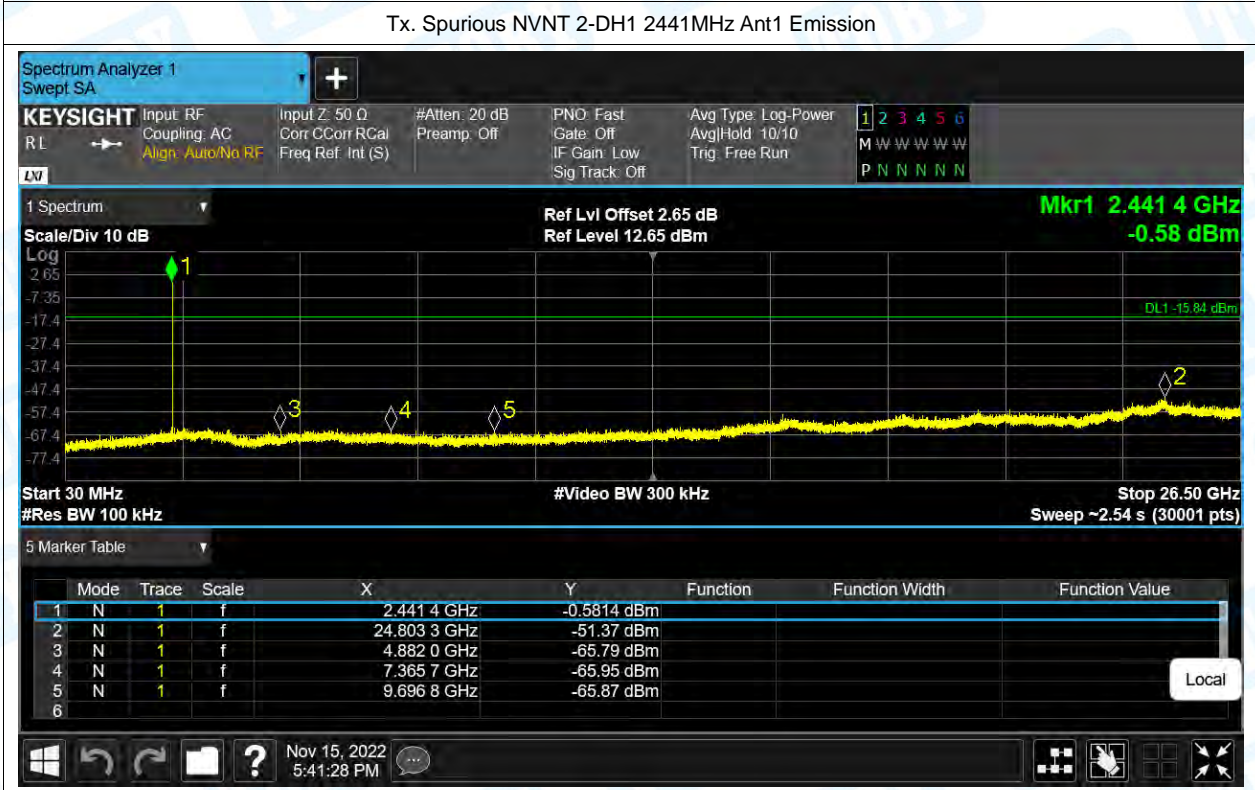
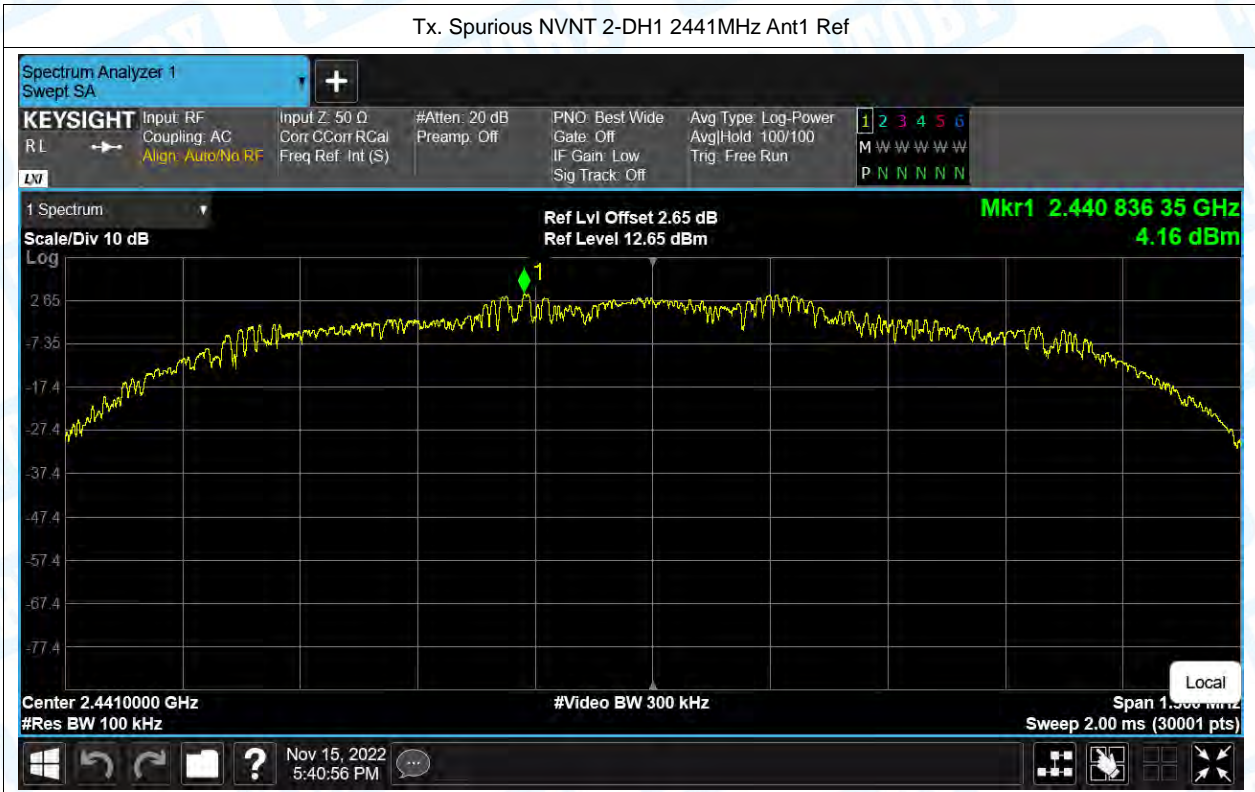
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission

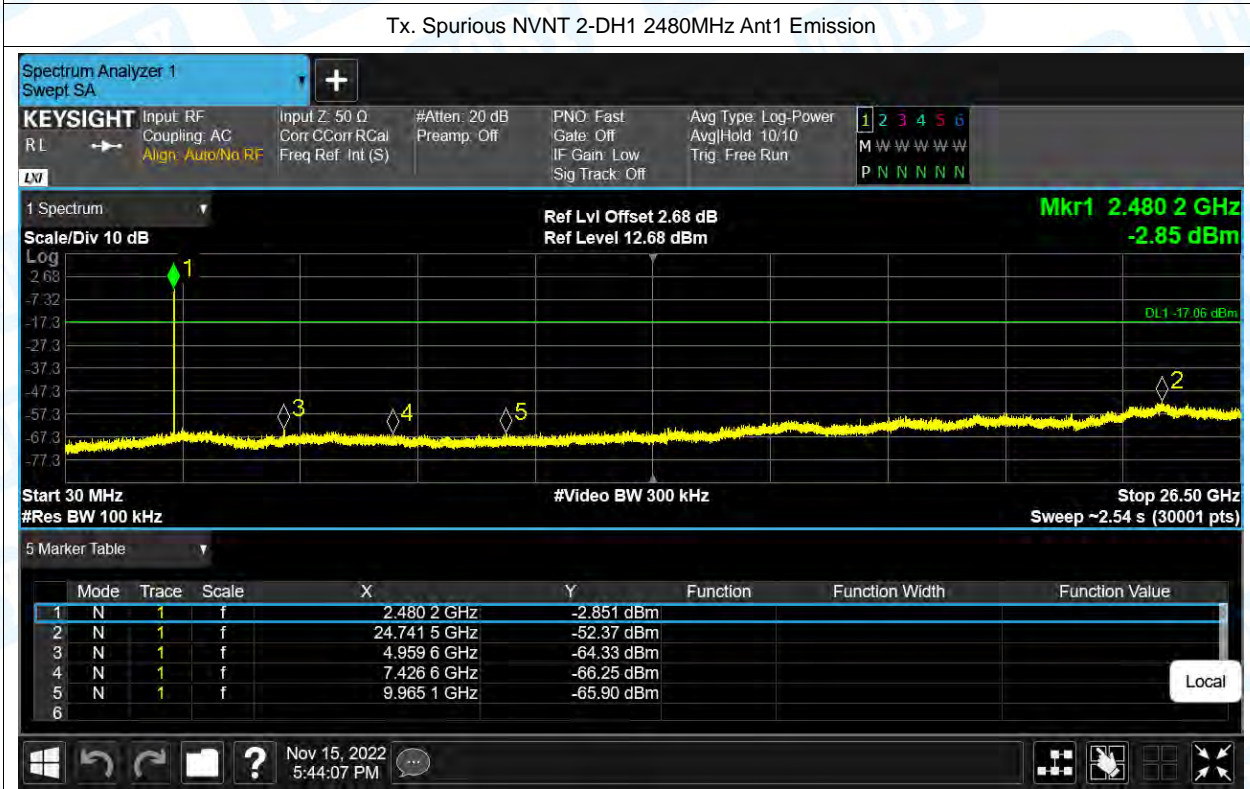
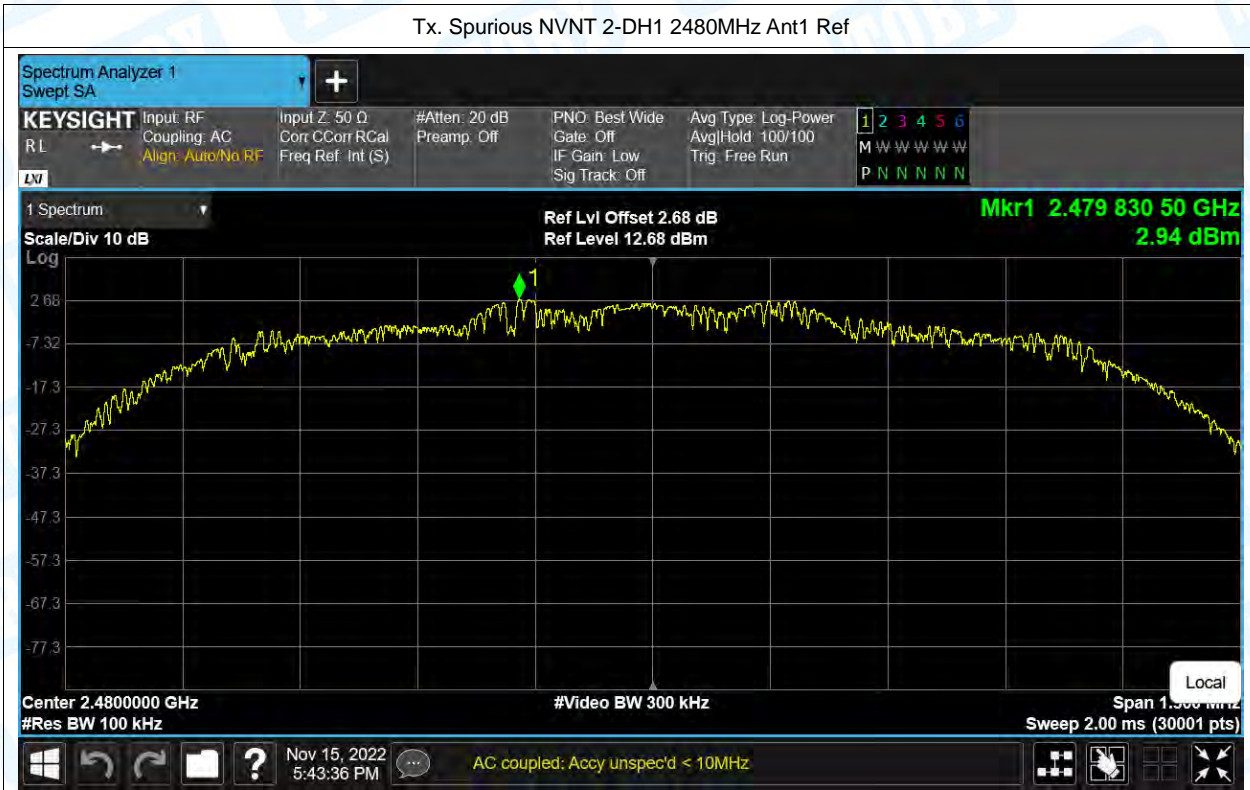


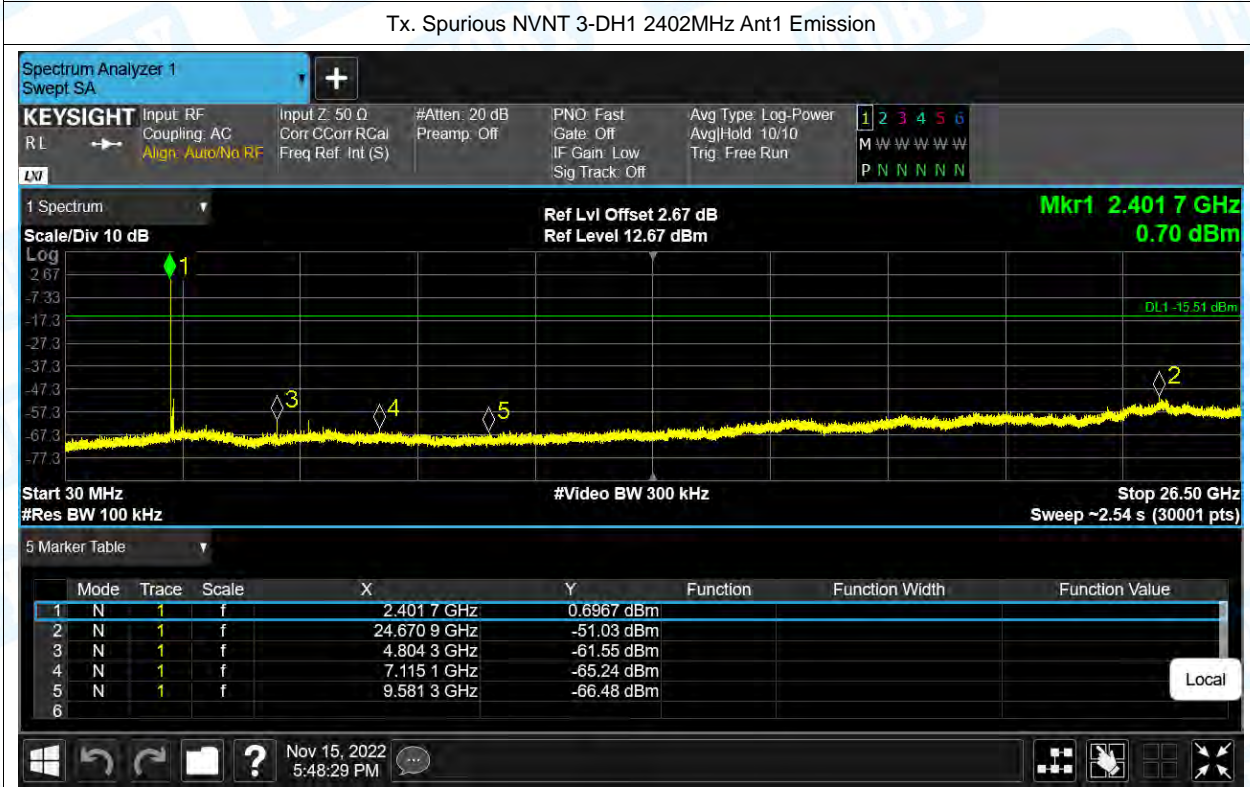
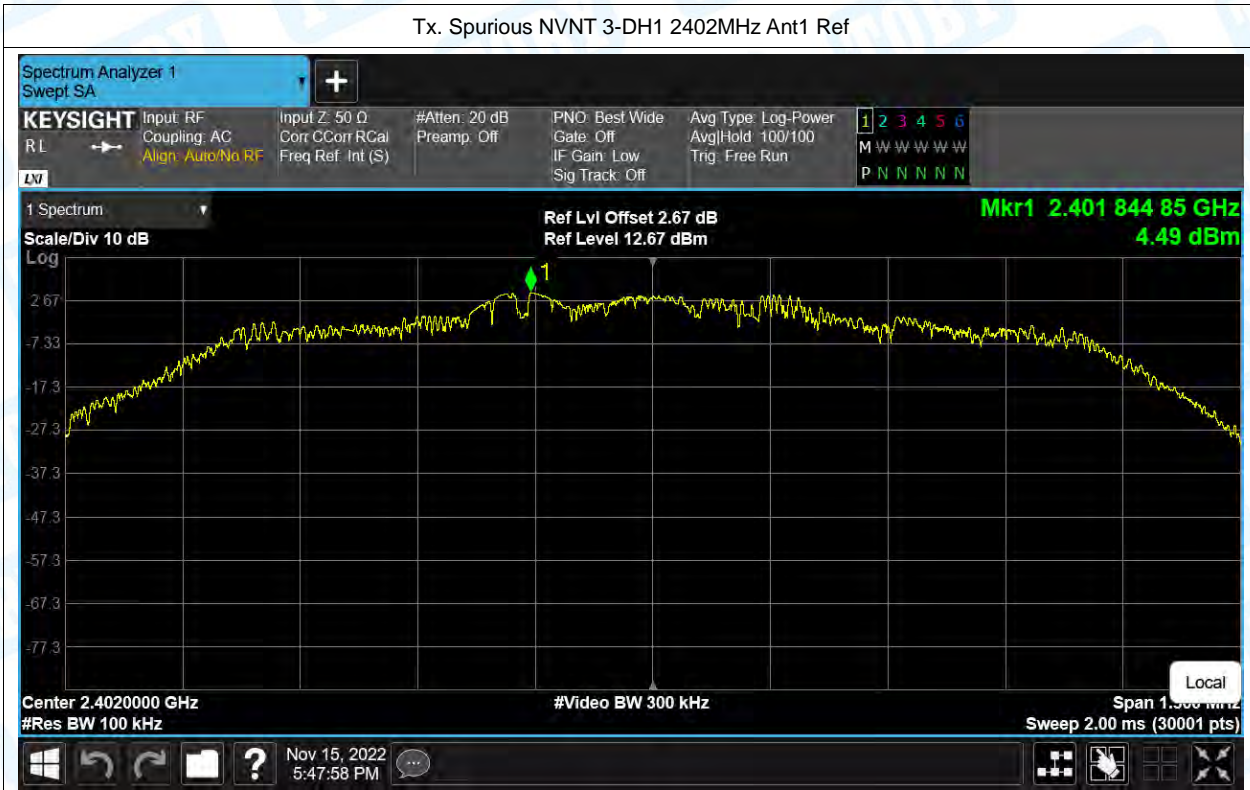




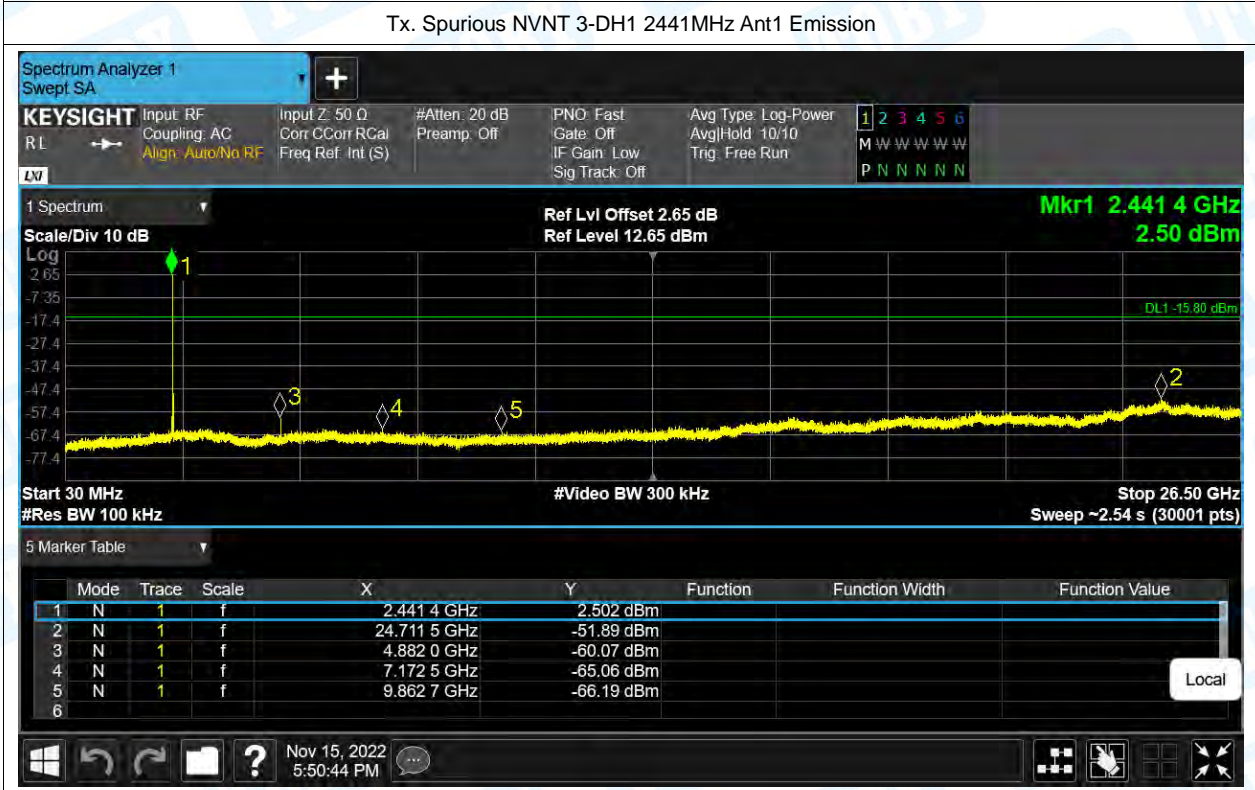
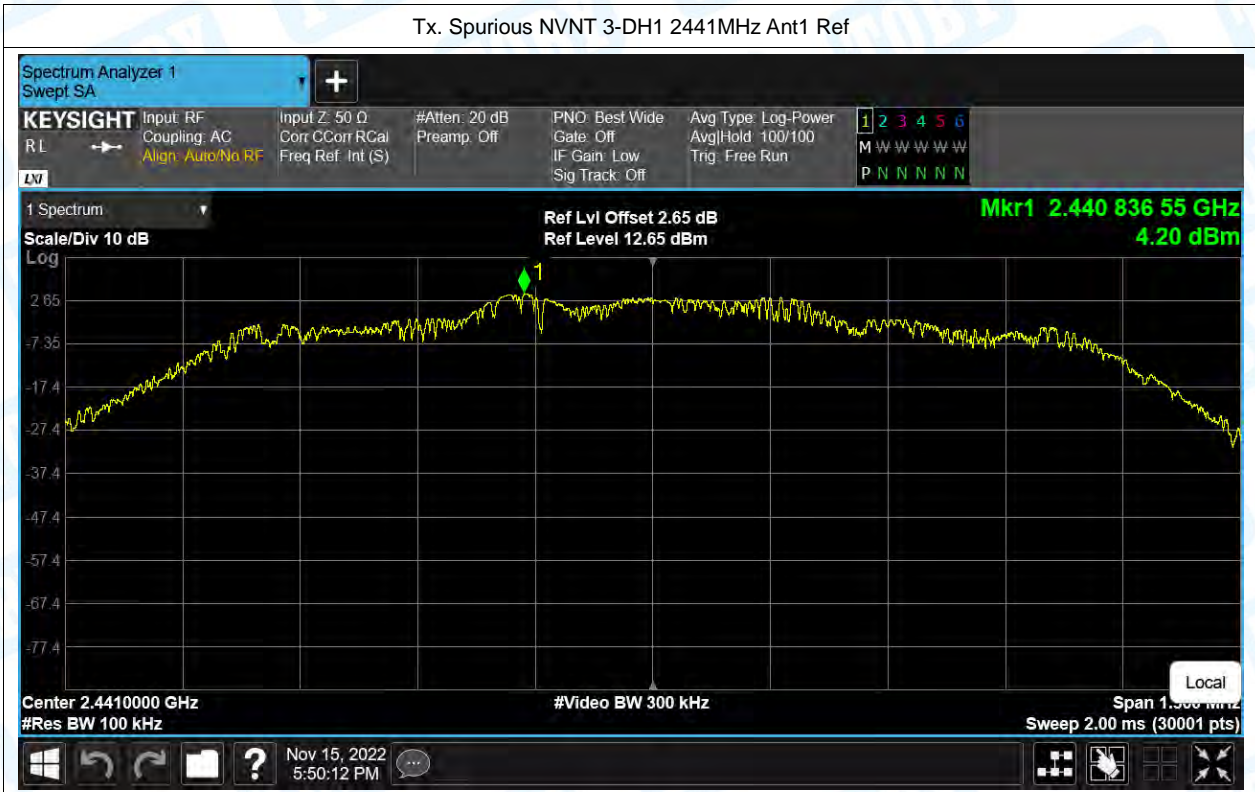


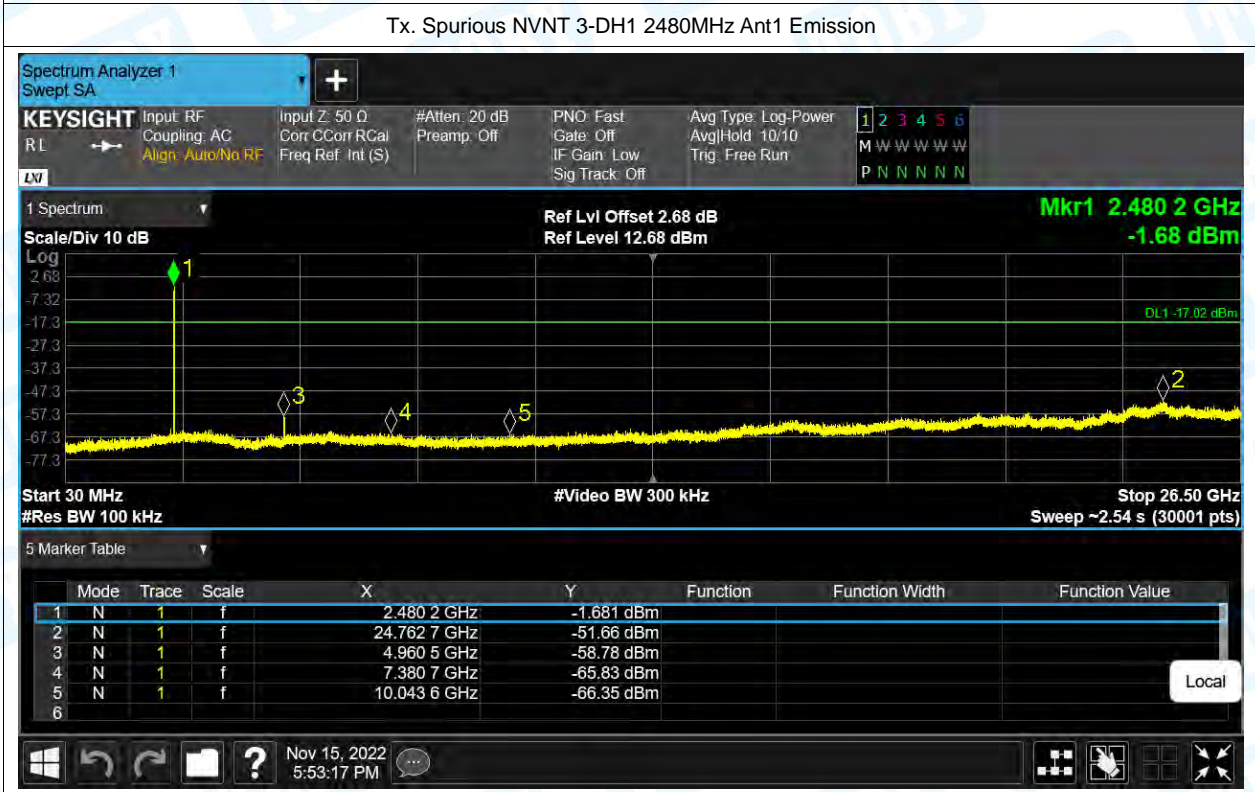
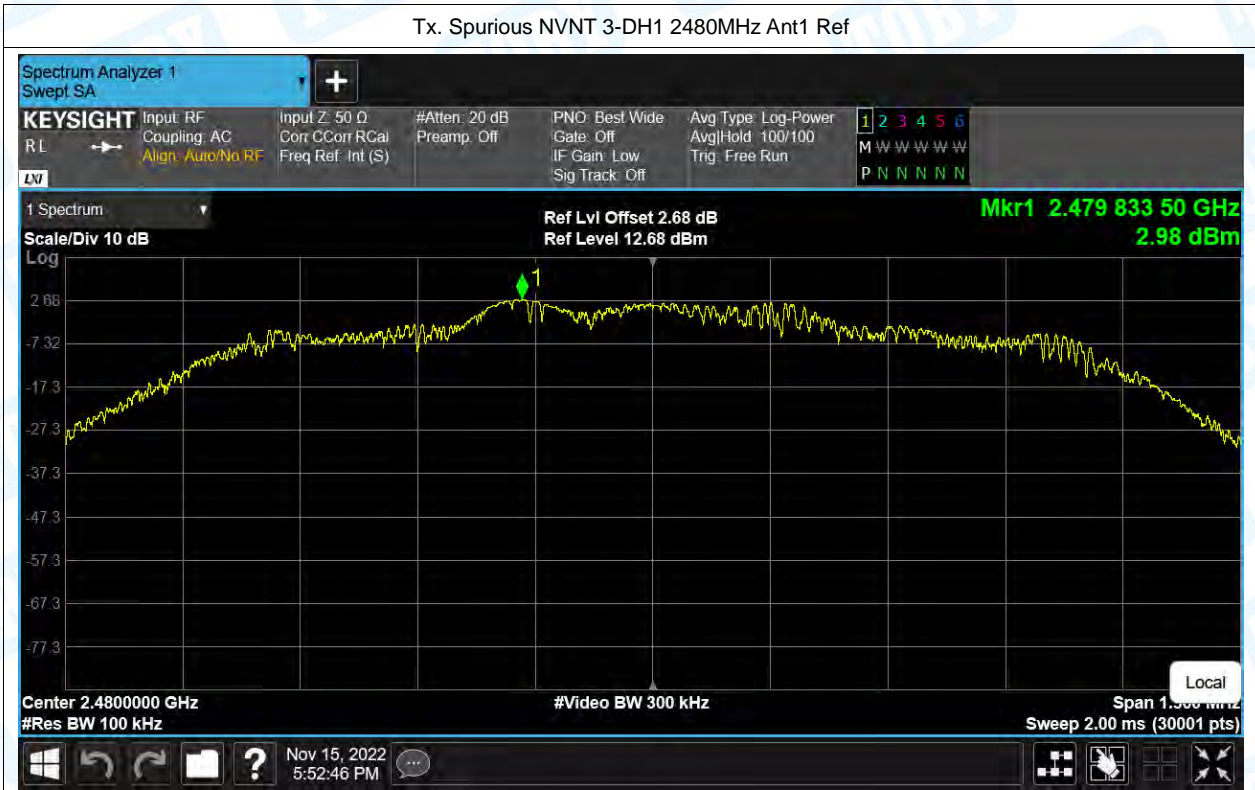










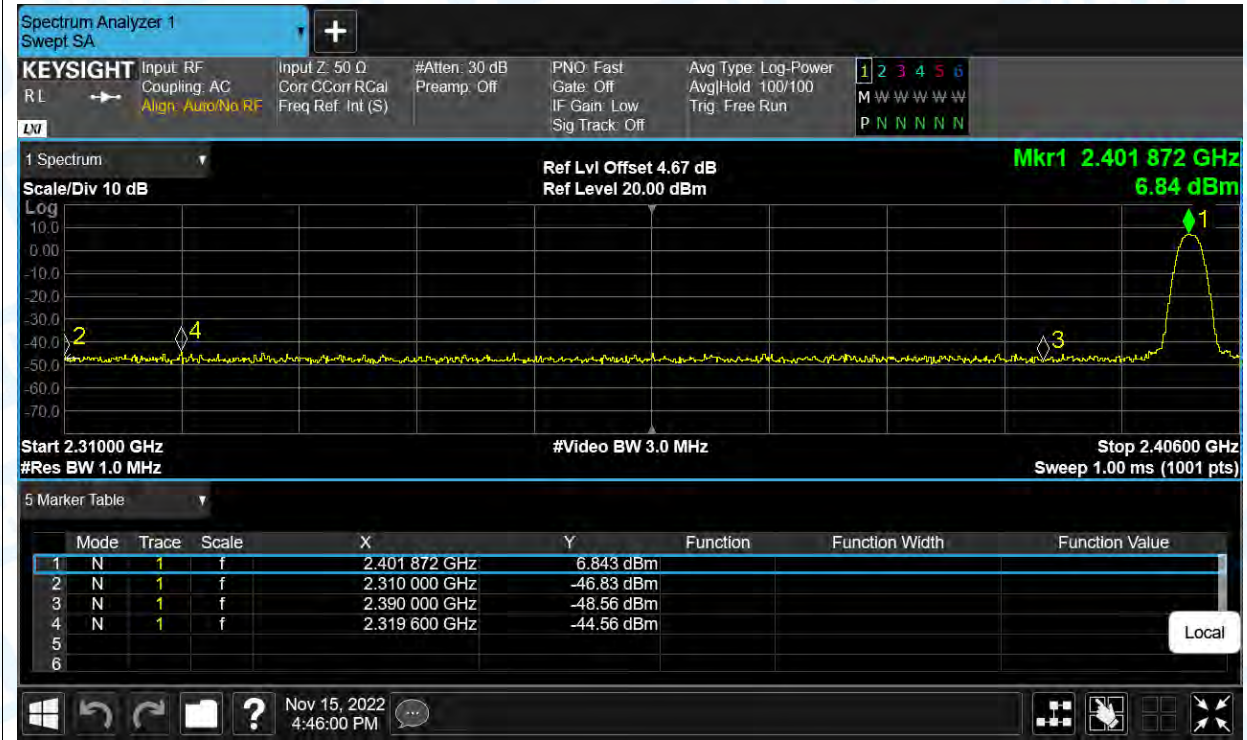


### 8. Restrict Band

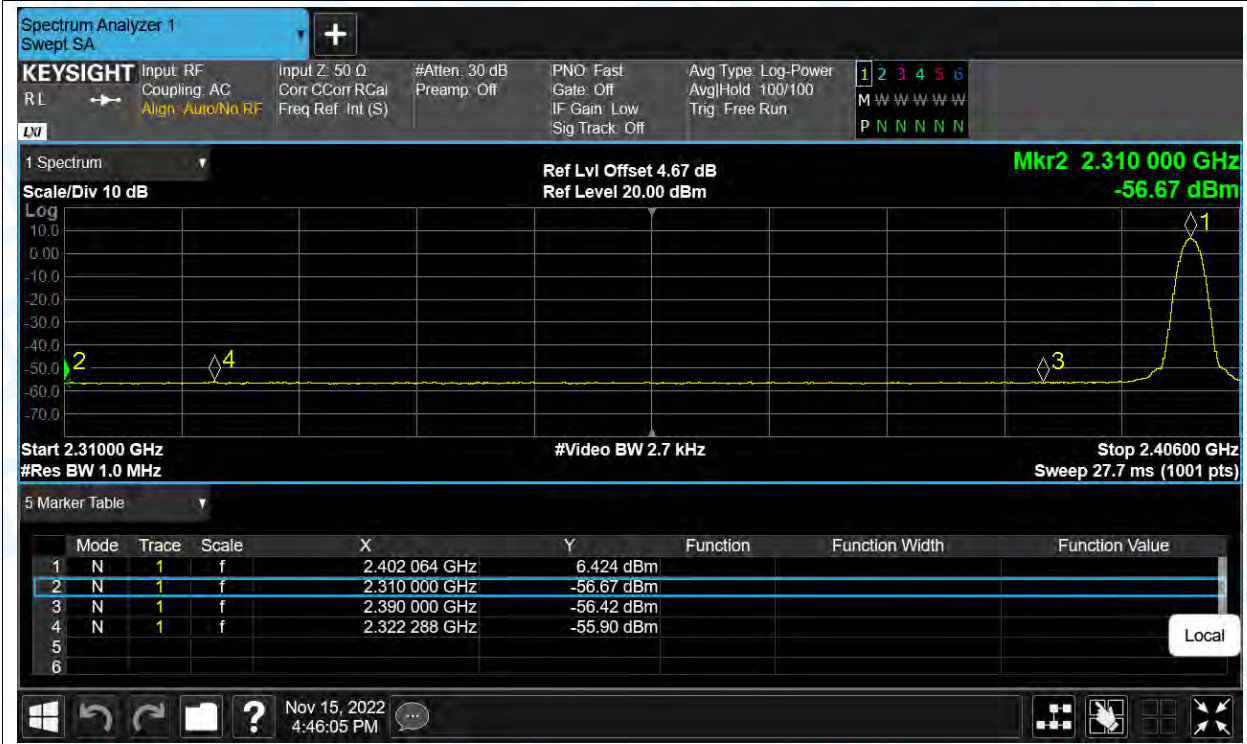
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-46.83	2	50.43	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.67	2	40.59	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2319.6	-44.56	2	52.7	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2322.288	-55.9	2	41.36	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-47.92	2	49.34	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.44	2	40.82	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-46.91	2	50.35	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-55.82	2	41.44	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2484.016	-44.46	2	52.8	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.824	-55.23	2	42.03	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-45.56	2	51.7	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-56.36	2	40.9	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-45.97	2	51.29	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.74	2	40.52	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2366.928	-44.42	2	52.84	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2321.904	-55.96	2	41.3	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-47.65	2	49.61	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-56.64	2	40.62	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-47.98	2	49.28	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-55.87	2	41.39	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2490.616	-43.61	2	53.65	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.896	-55.44	2	41.82	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-46.73	2	50.53	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-56.13	2	41.13	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-45.9	2	51.36	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.59	2	40.67	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2370.96	-44.67	2	52.59	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2389.68	-55.79	2	41.47	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-47.65	2	49.61	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-56.32	2	40.94	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-46.99	2	50.27	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-55.87	2	41.39	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2498.536	-44.17	2	53.09	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.872	-55.42	2	41.84	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-47.46	2	49.8	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-56.38	2	40.88	Average	54	Pass

Test Graphs

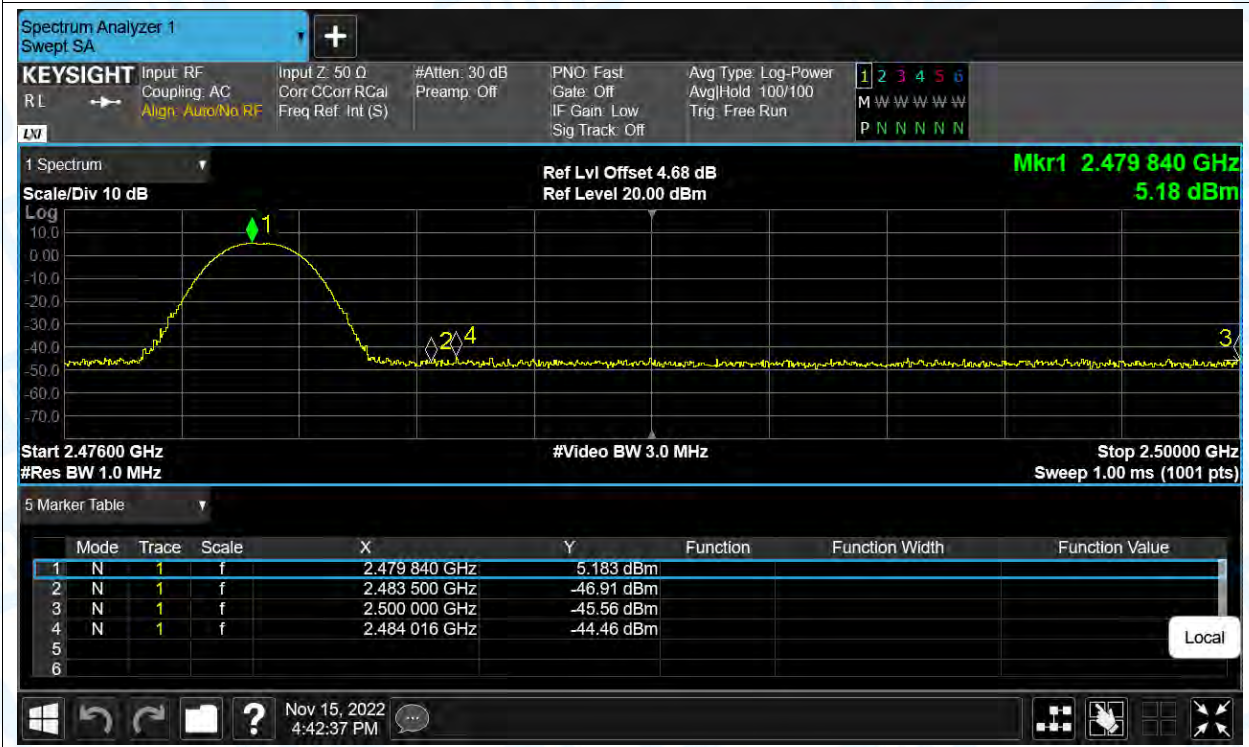
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



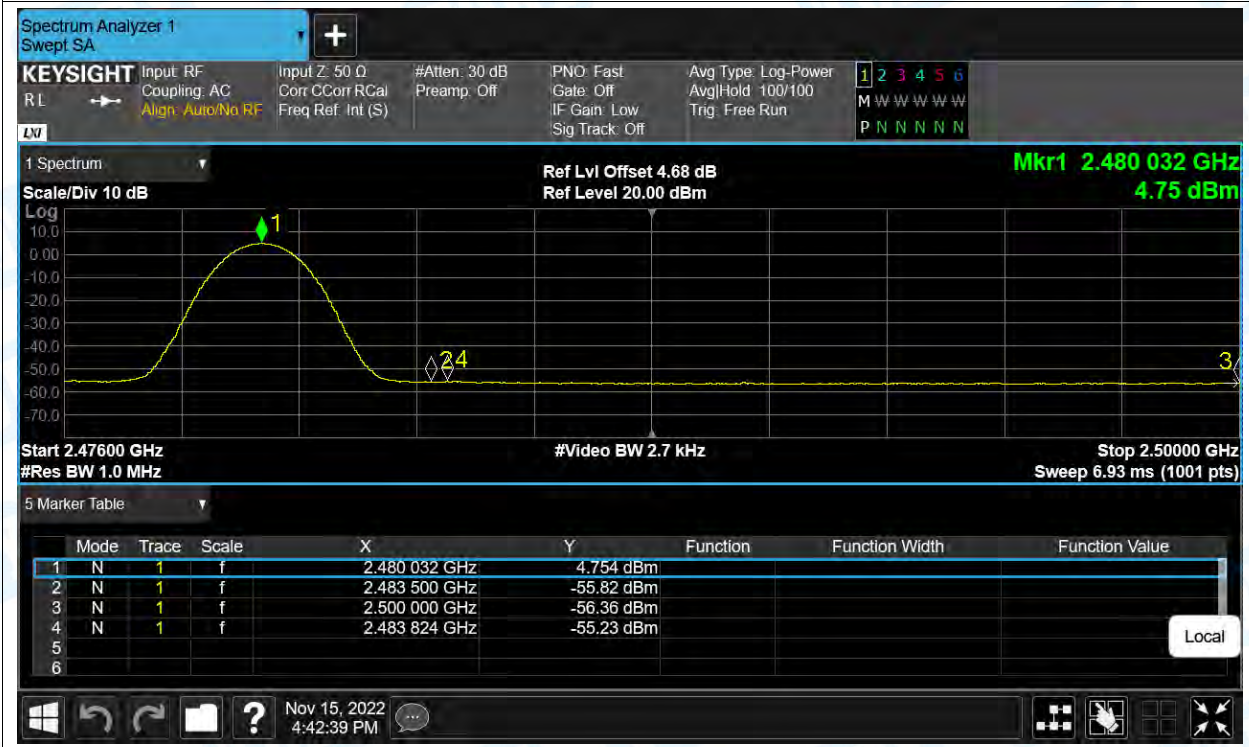
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average

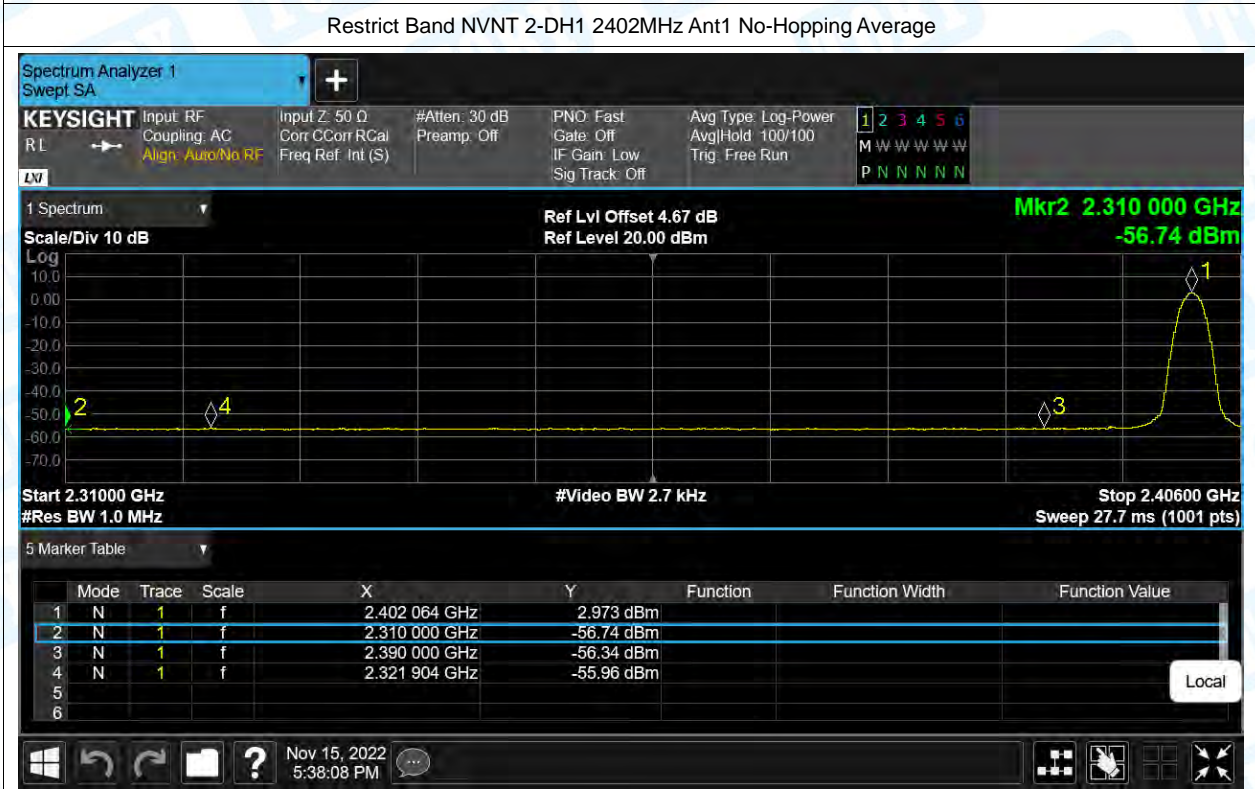
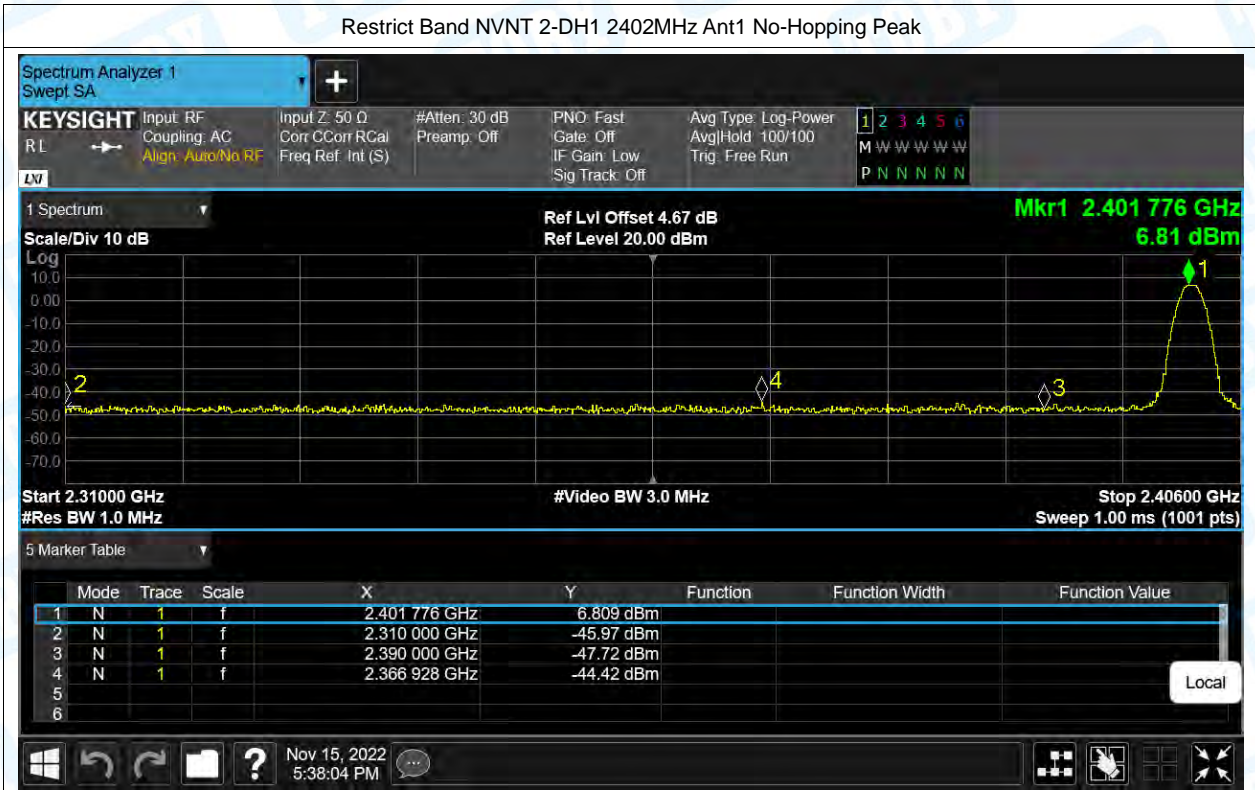


Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak

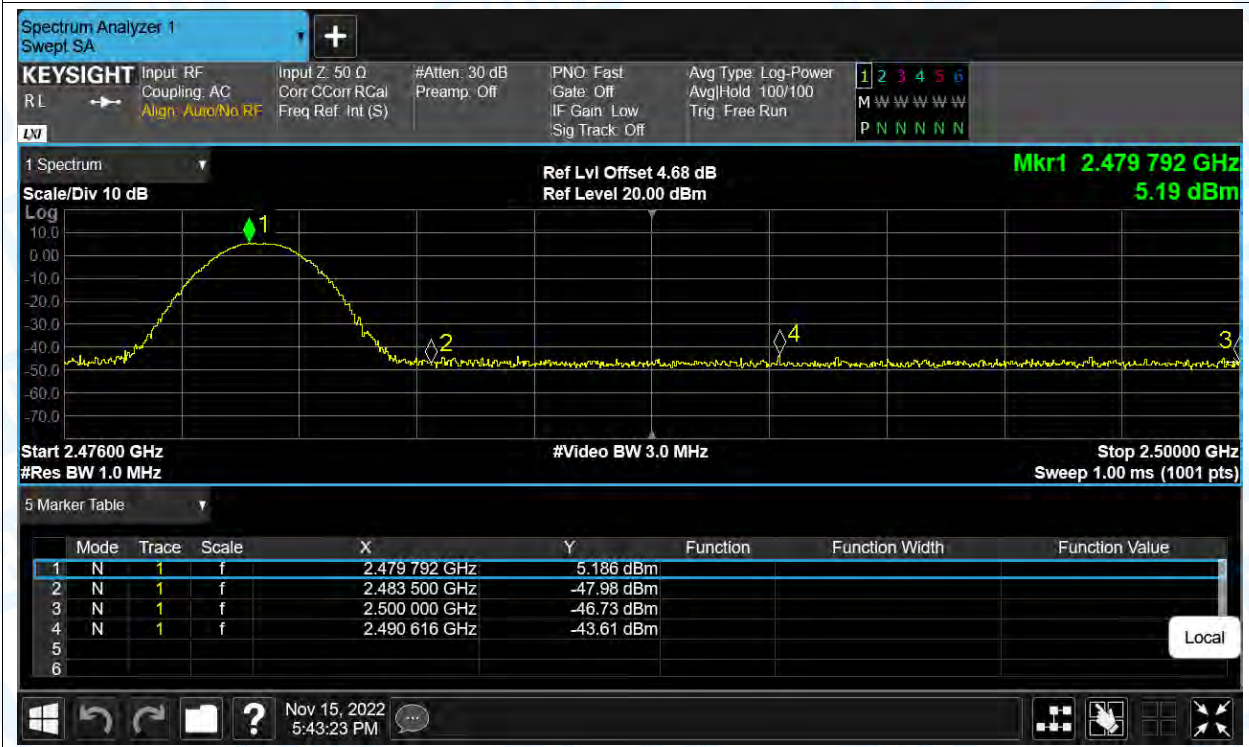


Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average

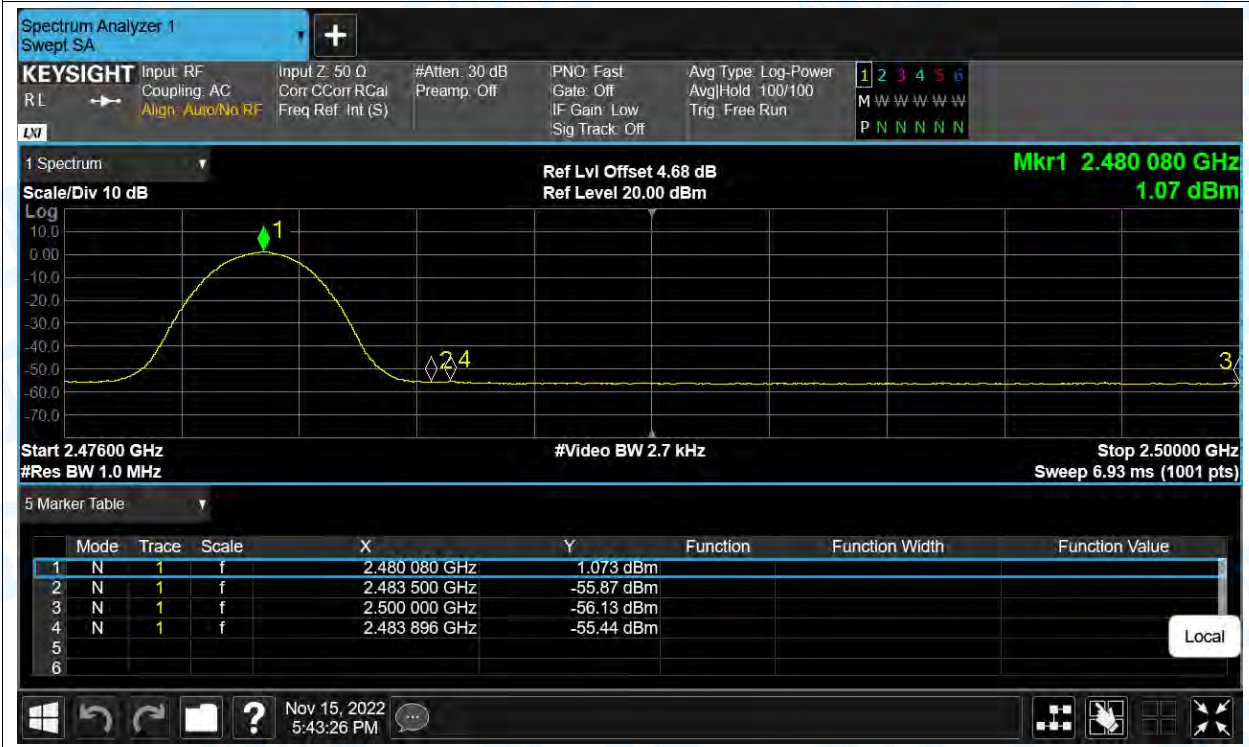


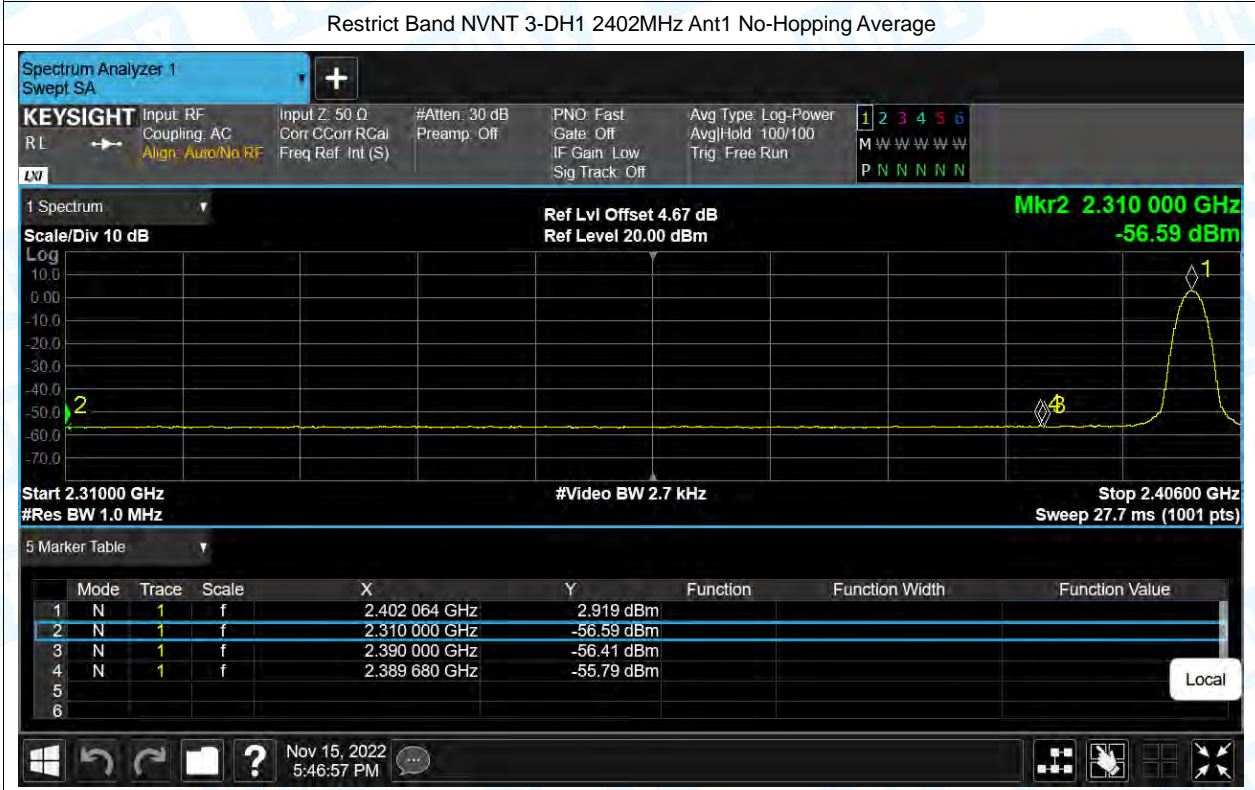
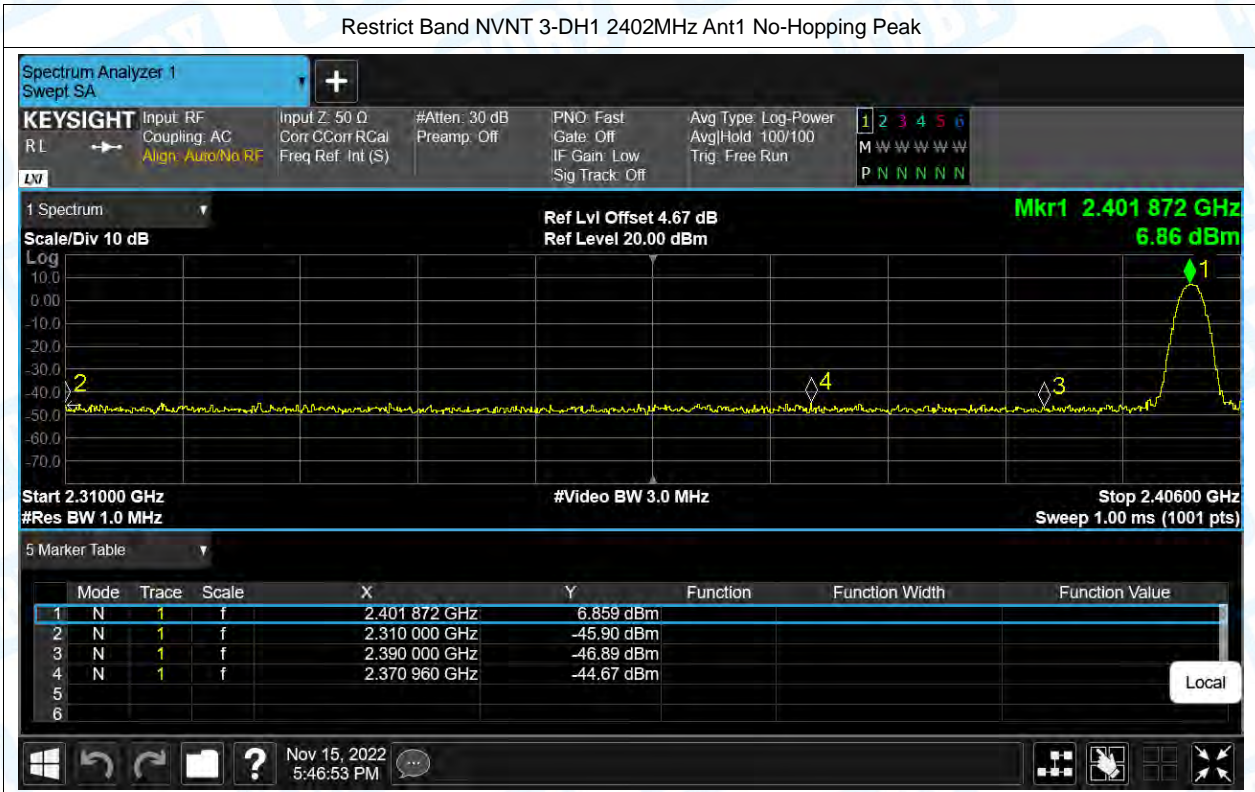


Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



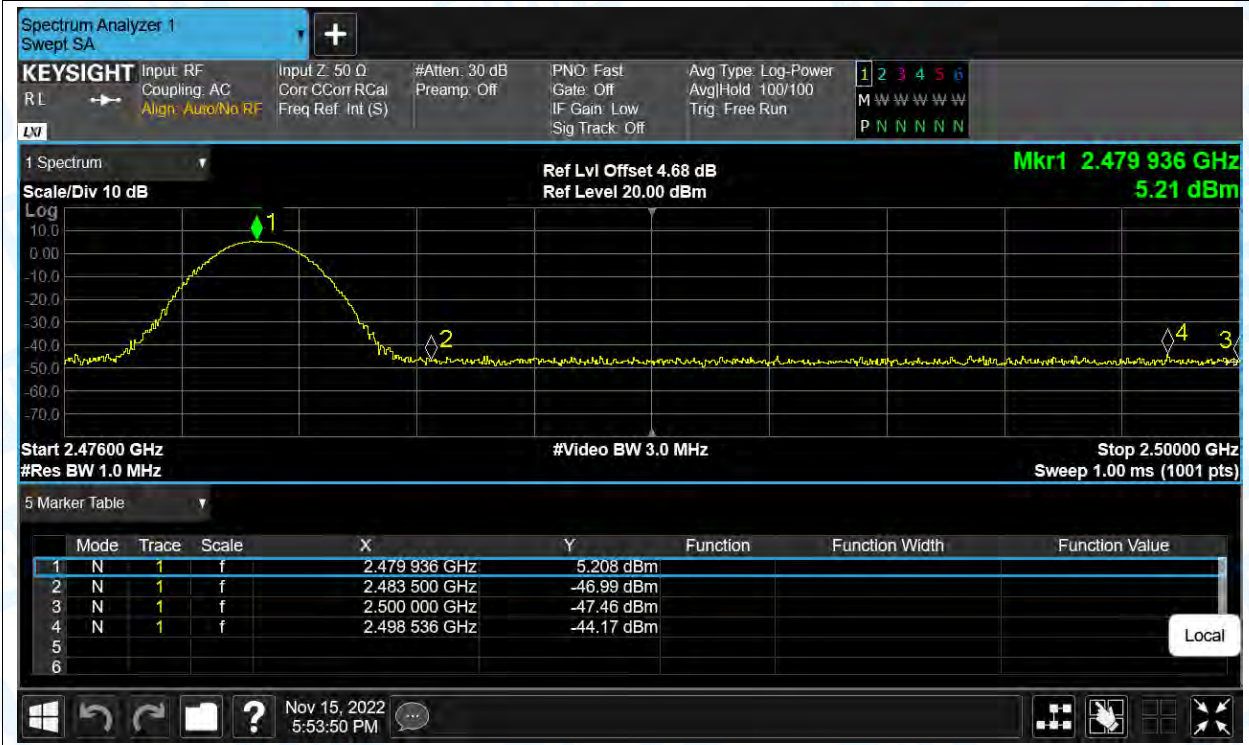
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average







Restrict Band NVNT 3-DH1 2480MHz Ant1 No-Hopping Peak

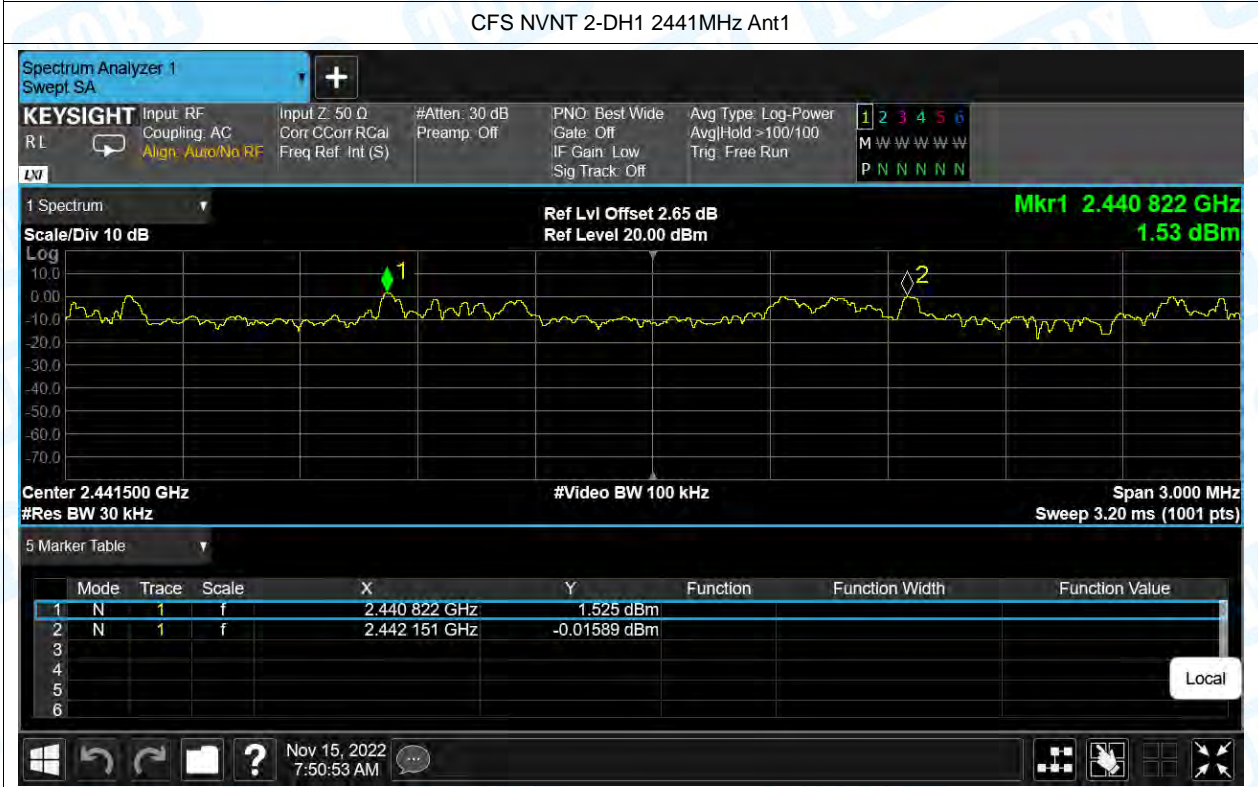
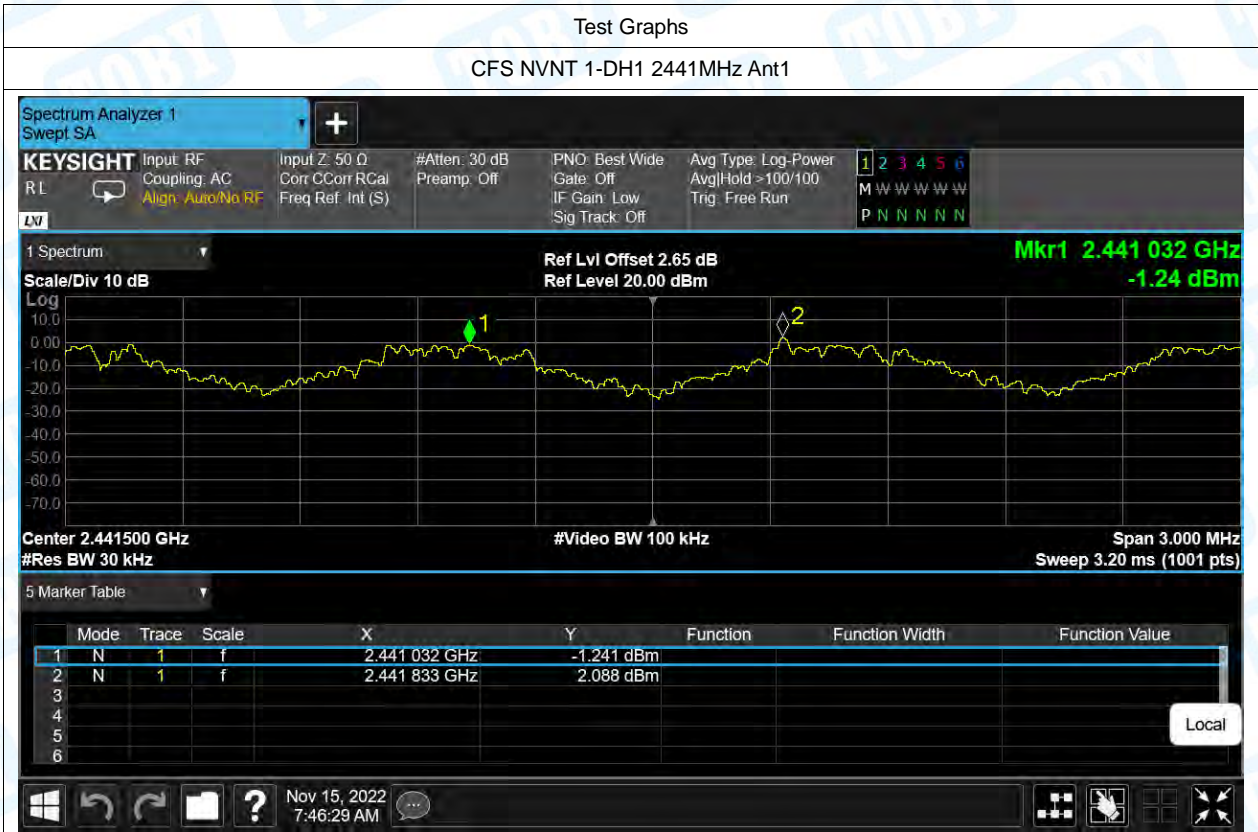


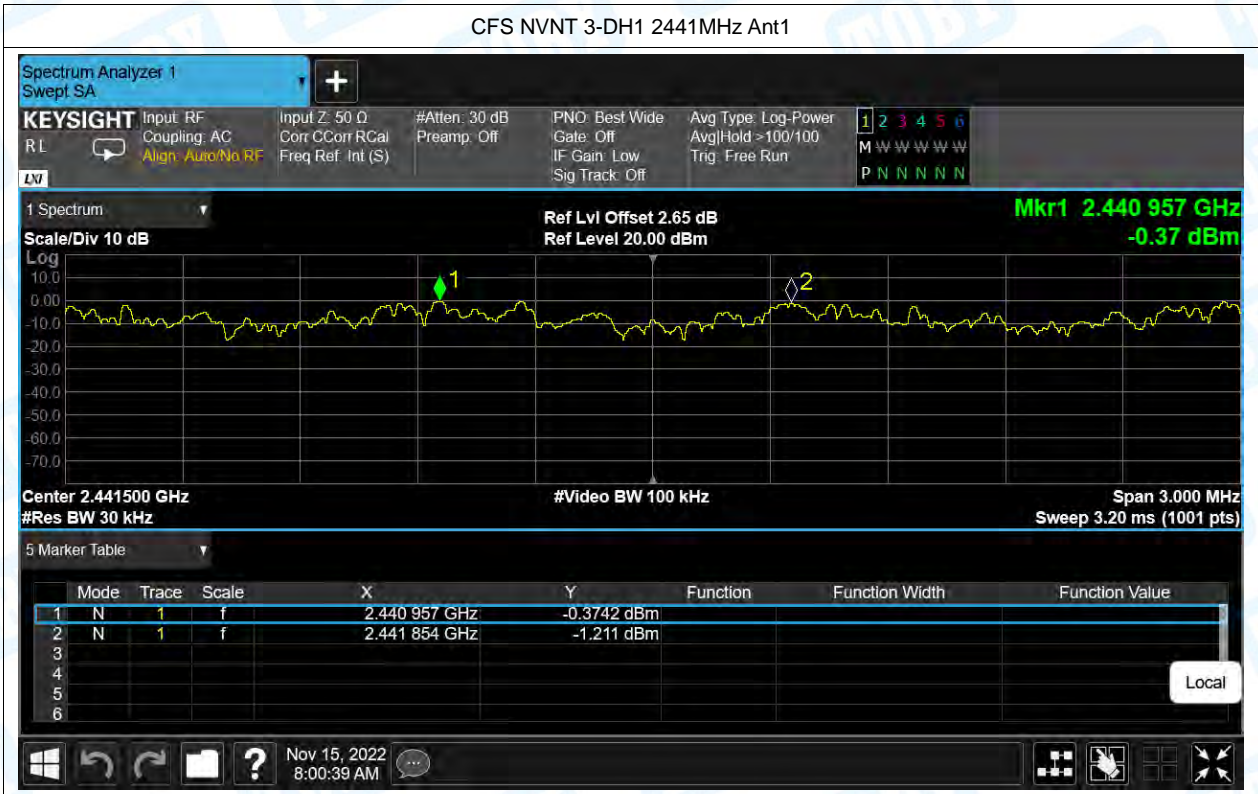
Restrict Band NVNT 3-DH1 2480MHz Ant1 No-Hopping Average



## 9. Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2441.032	2441.833	0.801	0.025	Pass
NVNT	2-DH1	Ant1	2440.822	2442.151	1.329	0.025	Pass
NVNT	3-DH1	Ant1	2440.957	2441.854	0.897	0.025	Pass



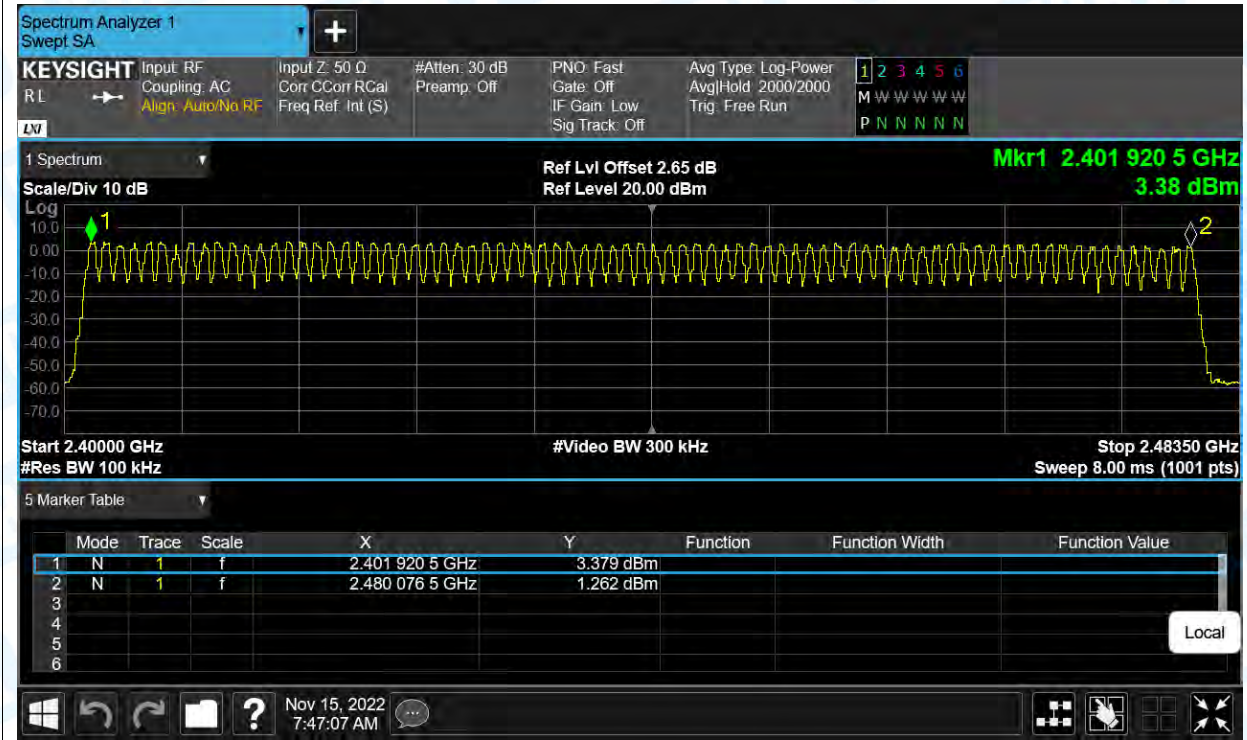


## 10. Number of Hopping Channel

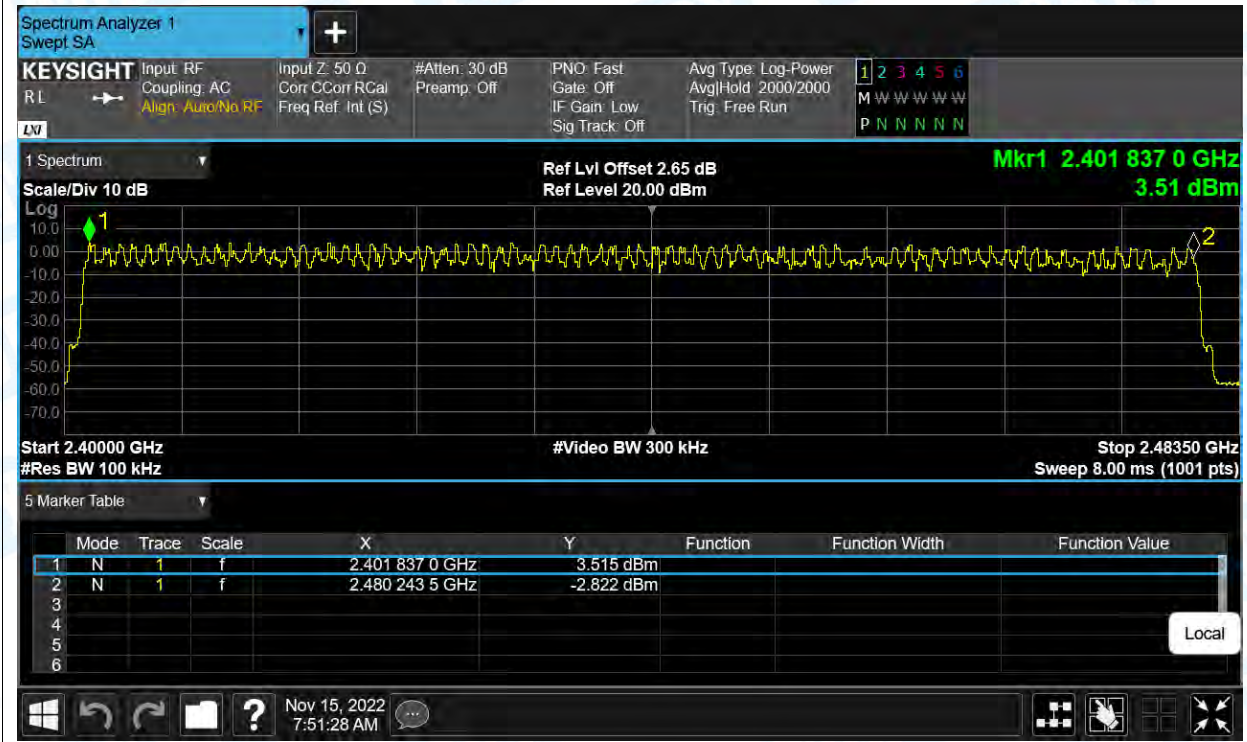
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

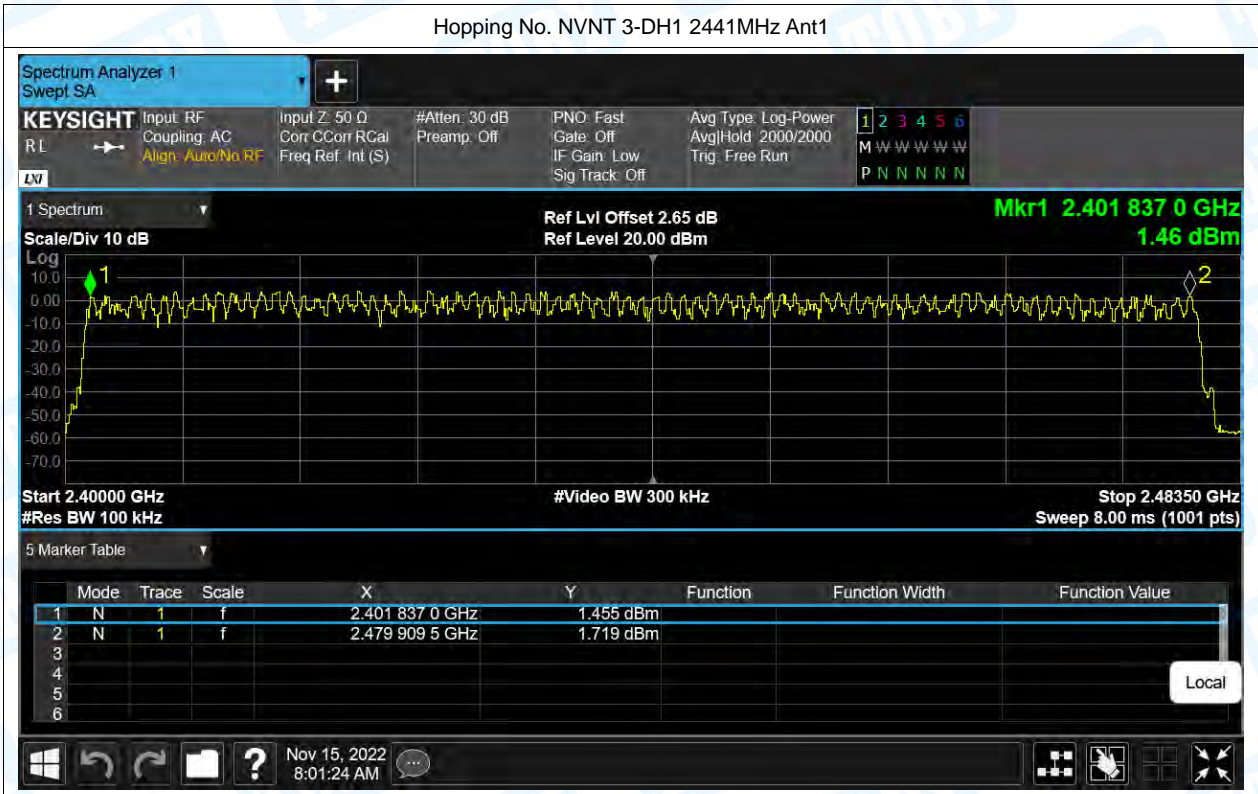
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1

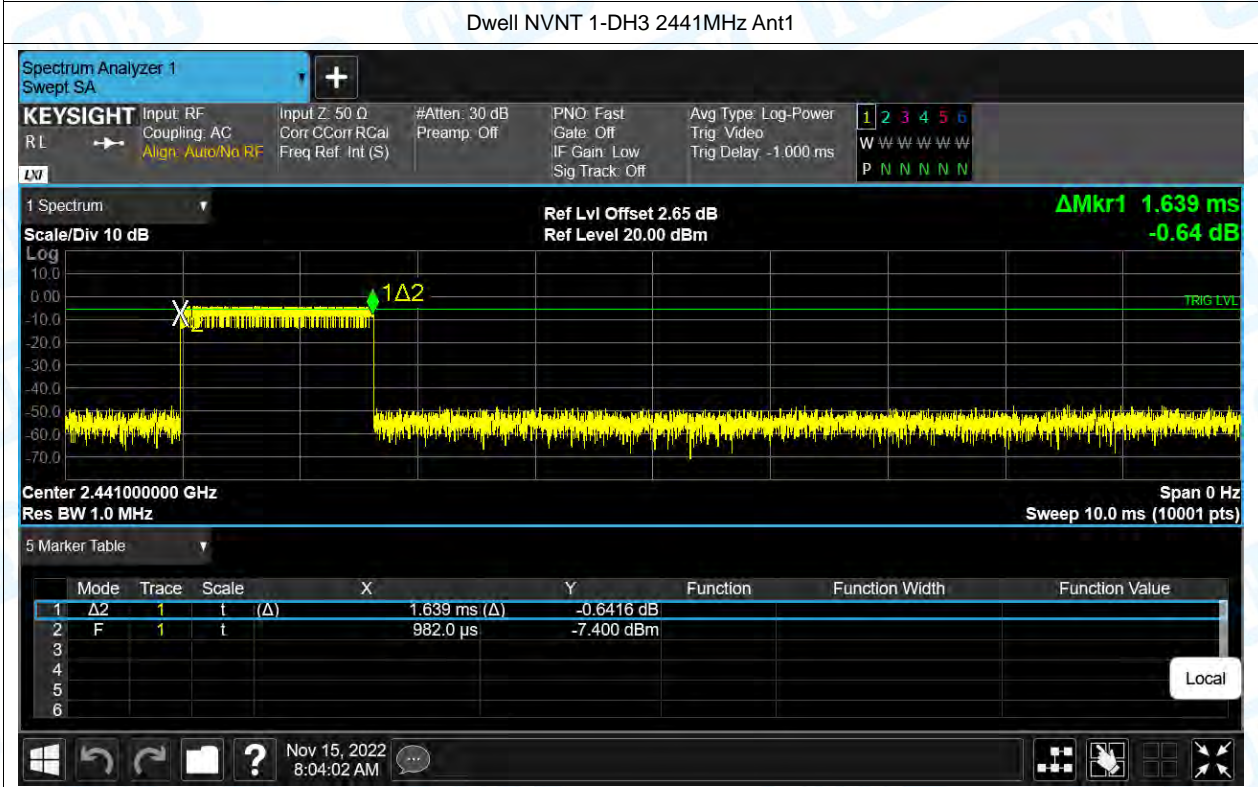
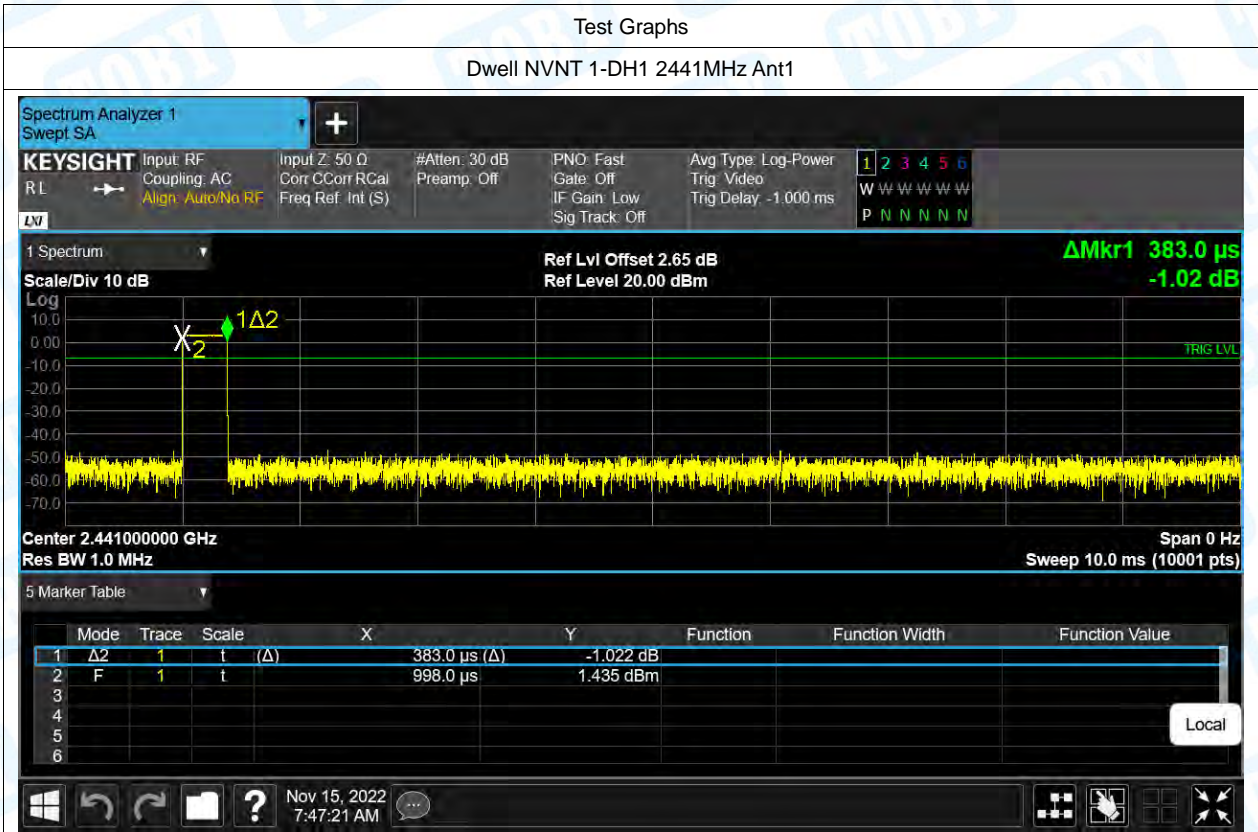


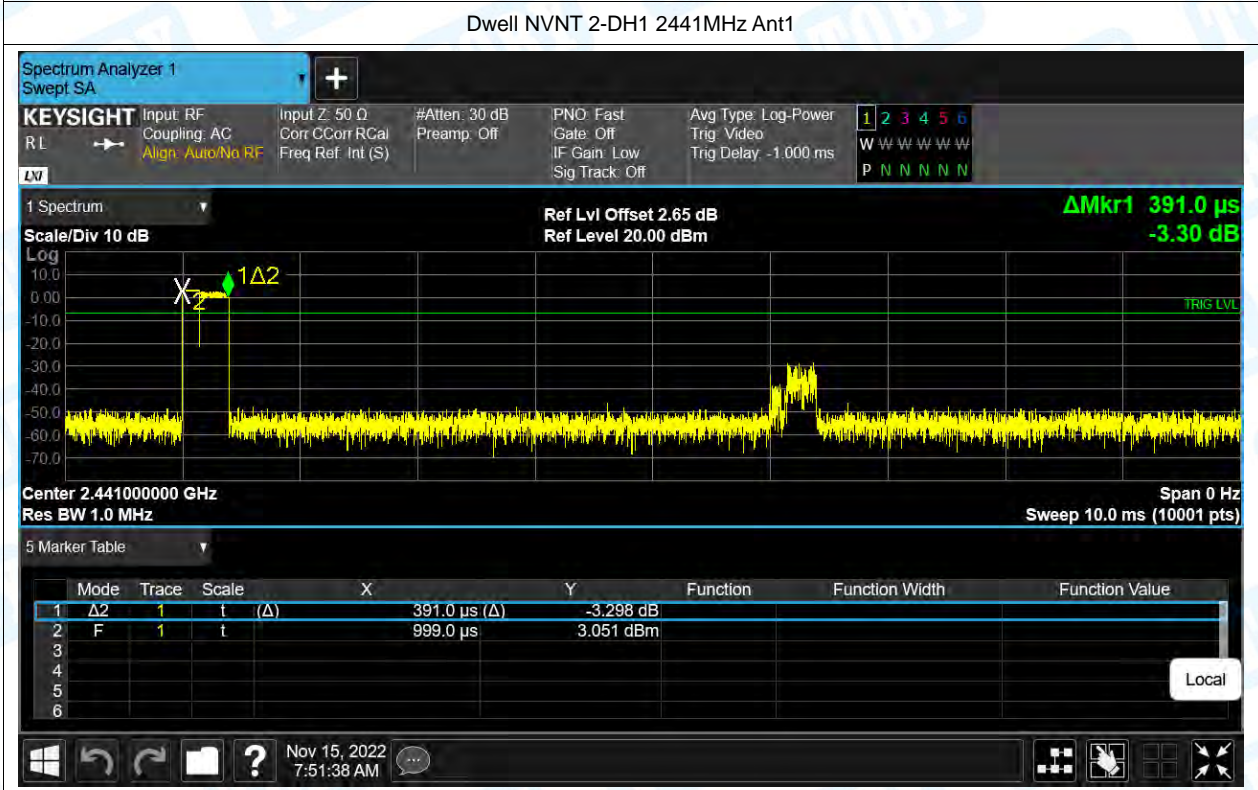
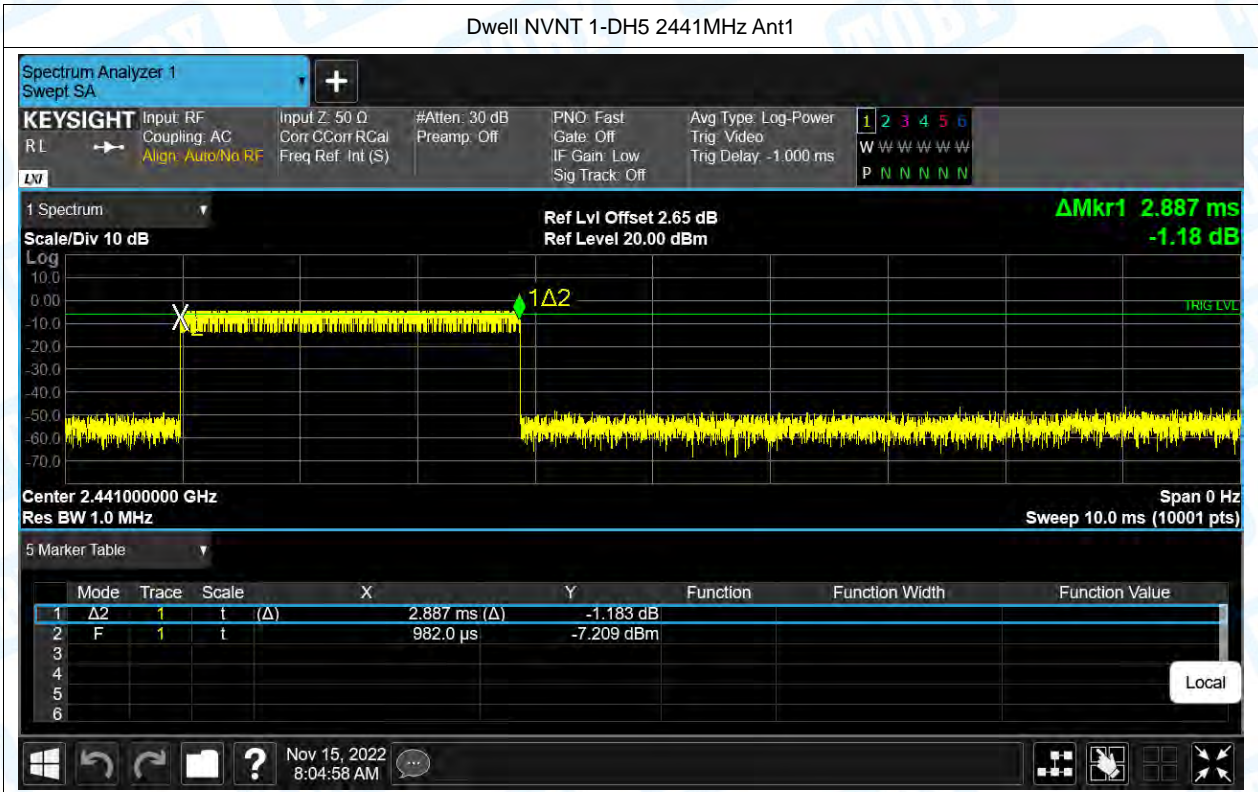


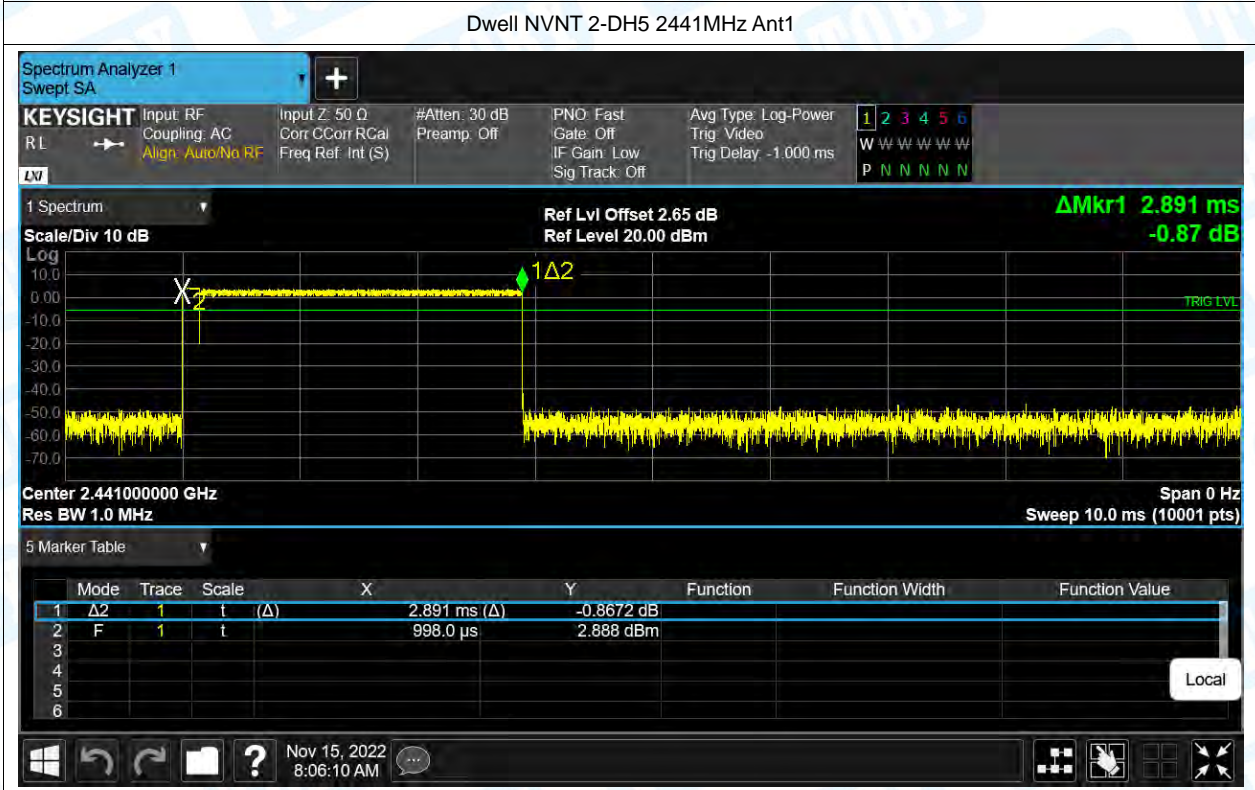
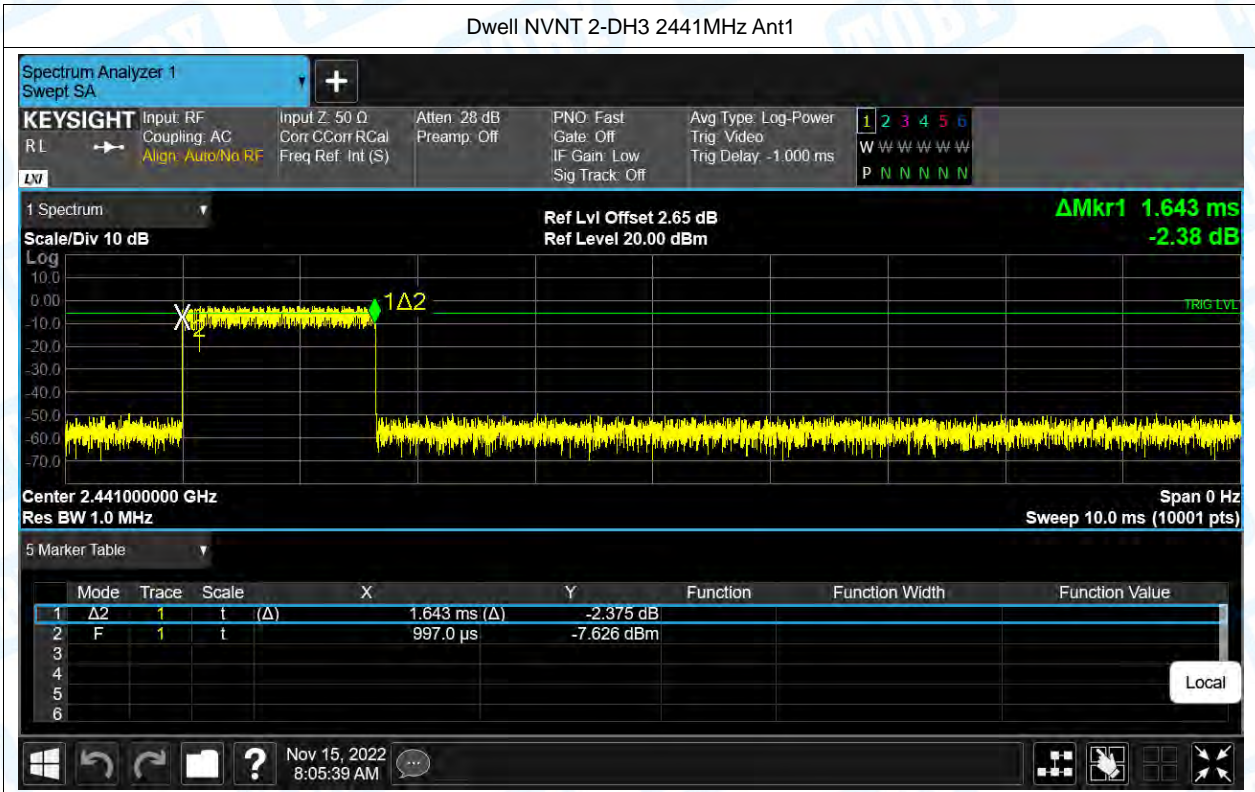
## 11. Dwell Time

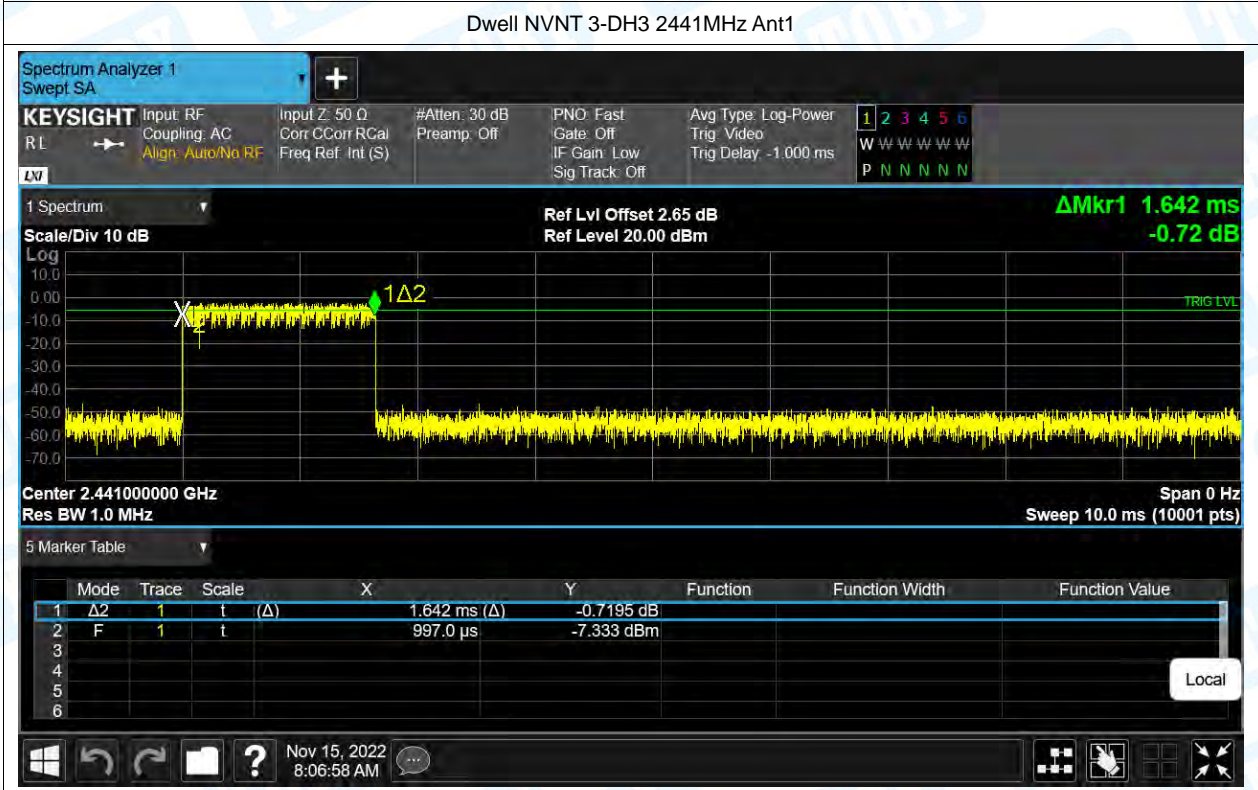
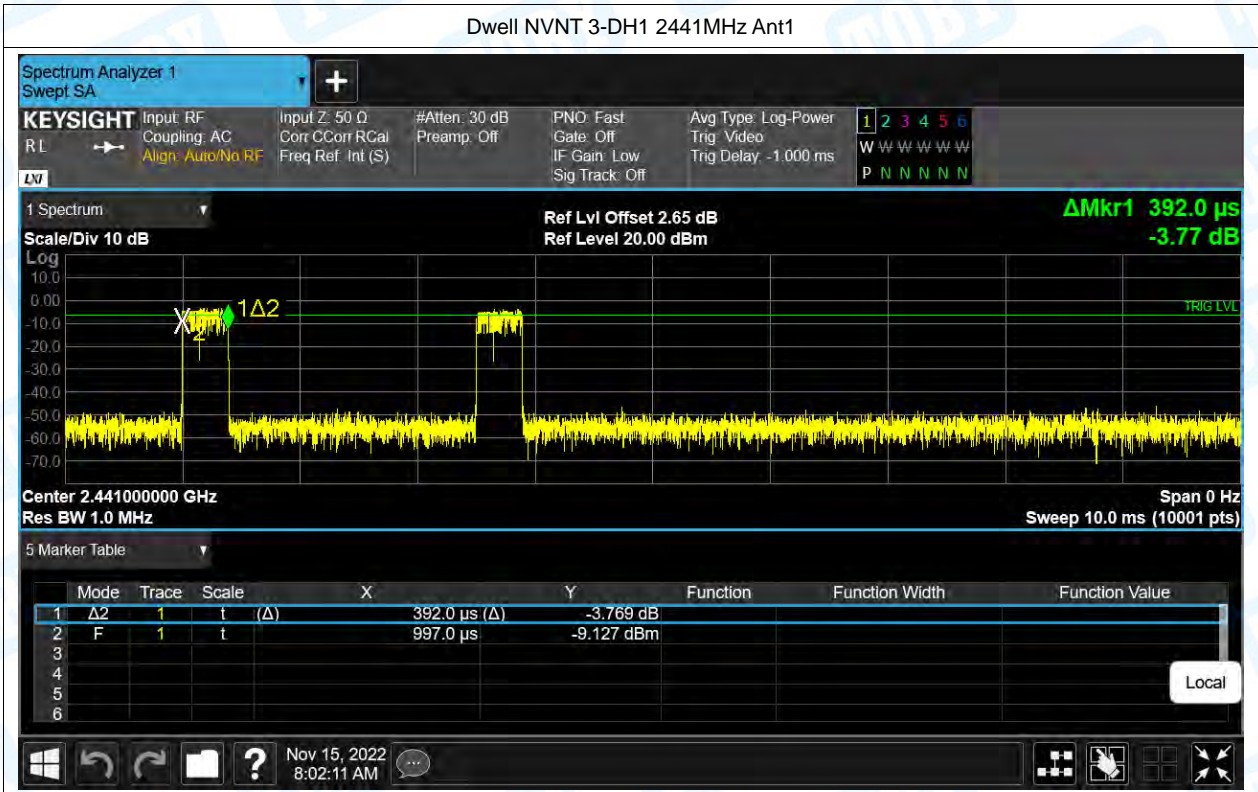
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.383	122.56	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.639	262.24	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.887	307.947	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.391	125.12	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.643	262.88	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.891	308.373	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.642	262.72	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.893	308.587	31600	400	Pass

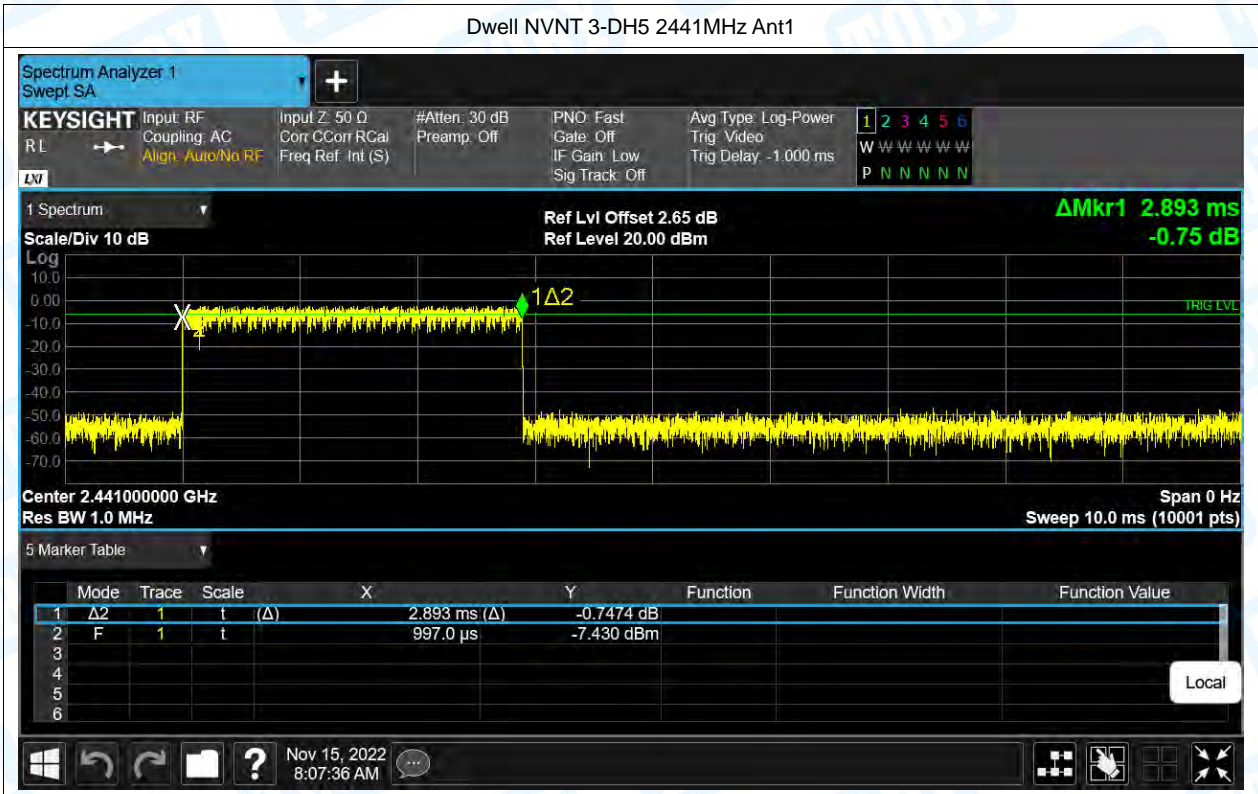












-----END OF THE REPORT-----