

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

General Description of EUT	
Product Name:	Bluetooth Earphone
Test Model:	MA18
Sample ID:	202206-0264-1-2#
Environmental Conditions	
Temperature:	26°C
Relative Humidity:	54%
Test Voltage:	DC 3.7V
Test Engineer:	Huangjianping
Note: For a more detailed features description, please refer to the report TBR-C-202206-0264-1.	

Contents

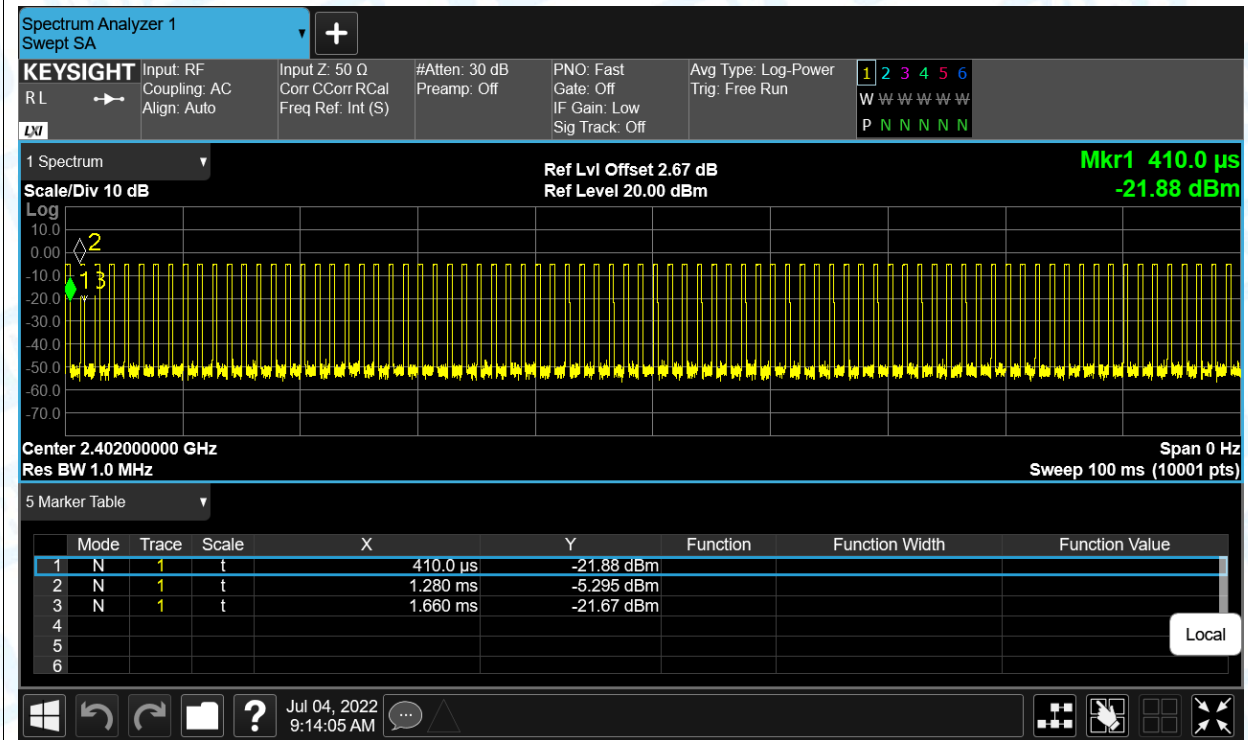
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1. Duty Cycle

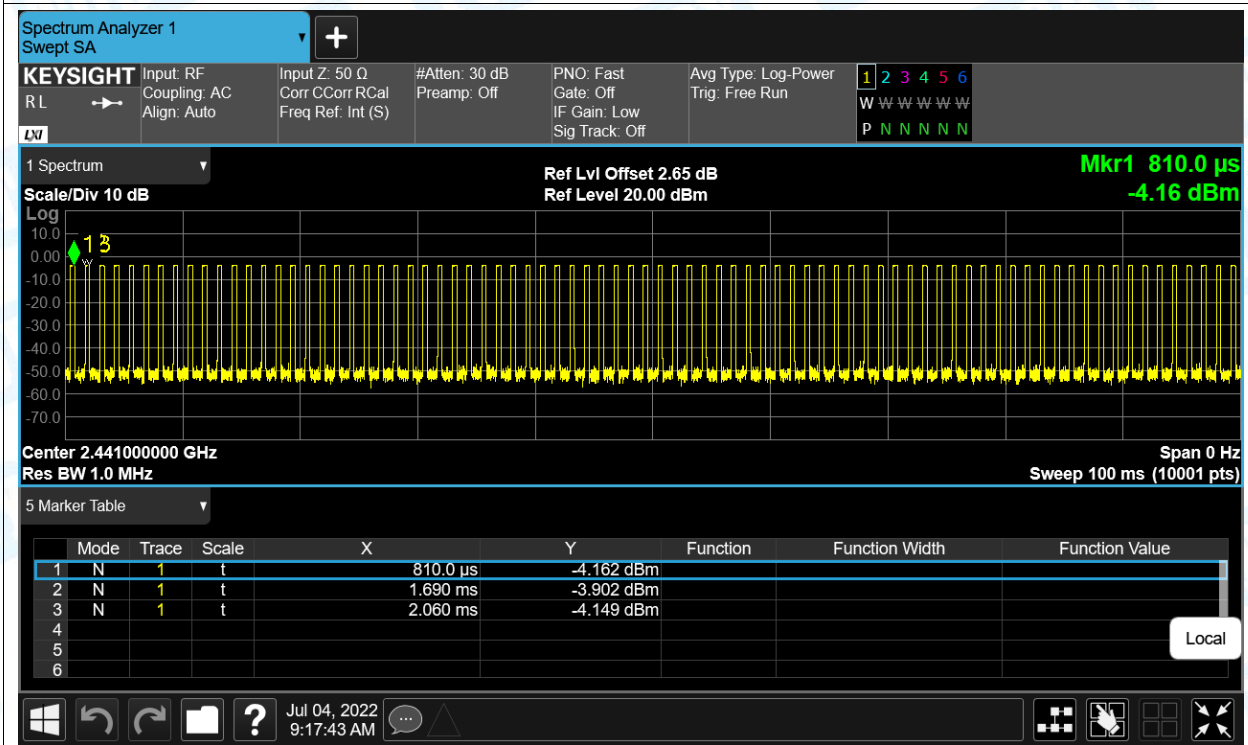
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	31.2	5.06	2.63
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.7
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.7
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.63
NVNT	2-DH1	2441	Ant1	31.21	5.06	2.63
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.63

Test Graphs

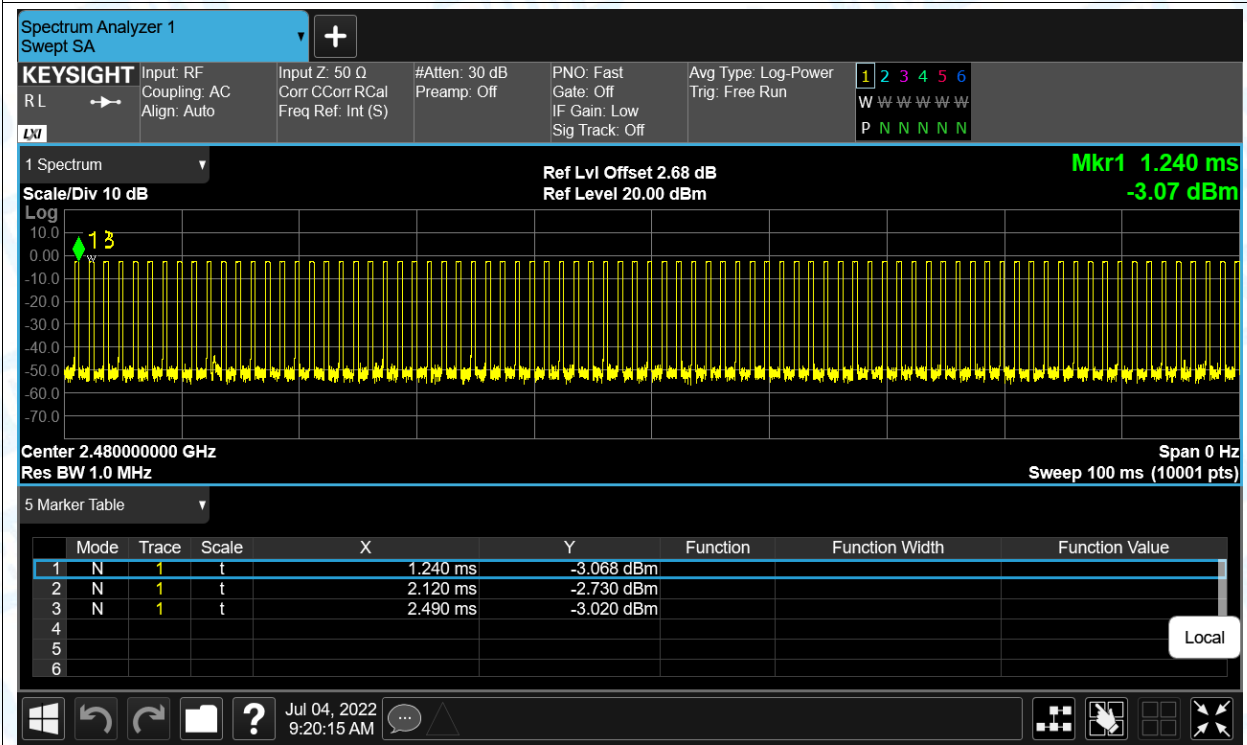
Duty Cycle NVNT 1-DH1 2402MHz Ant1



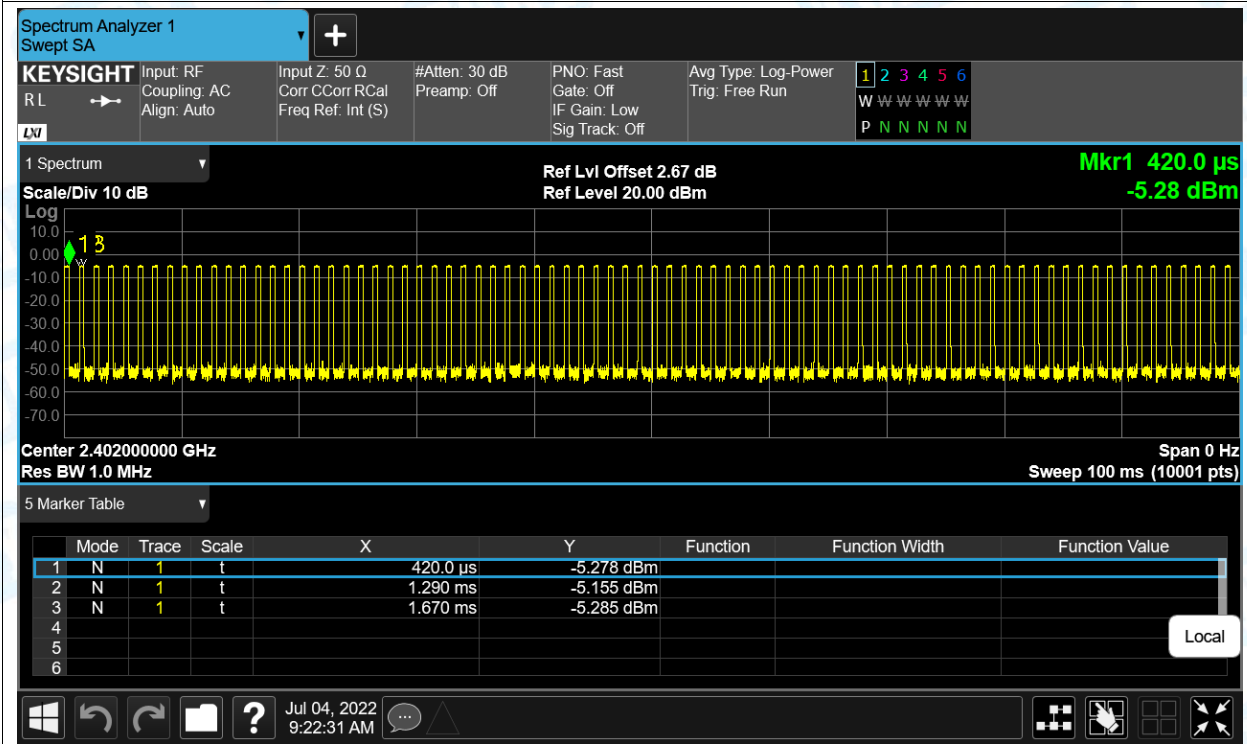
Duty Cycle NVNT 1-DH1 2441MHz Ant1



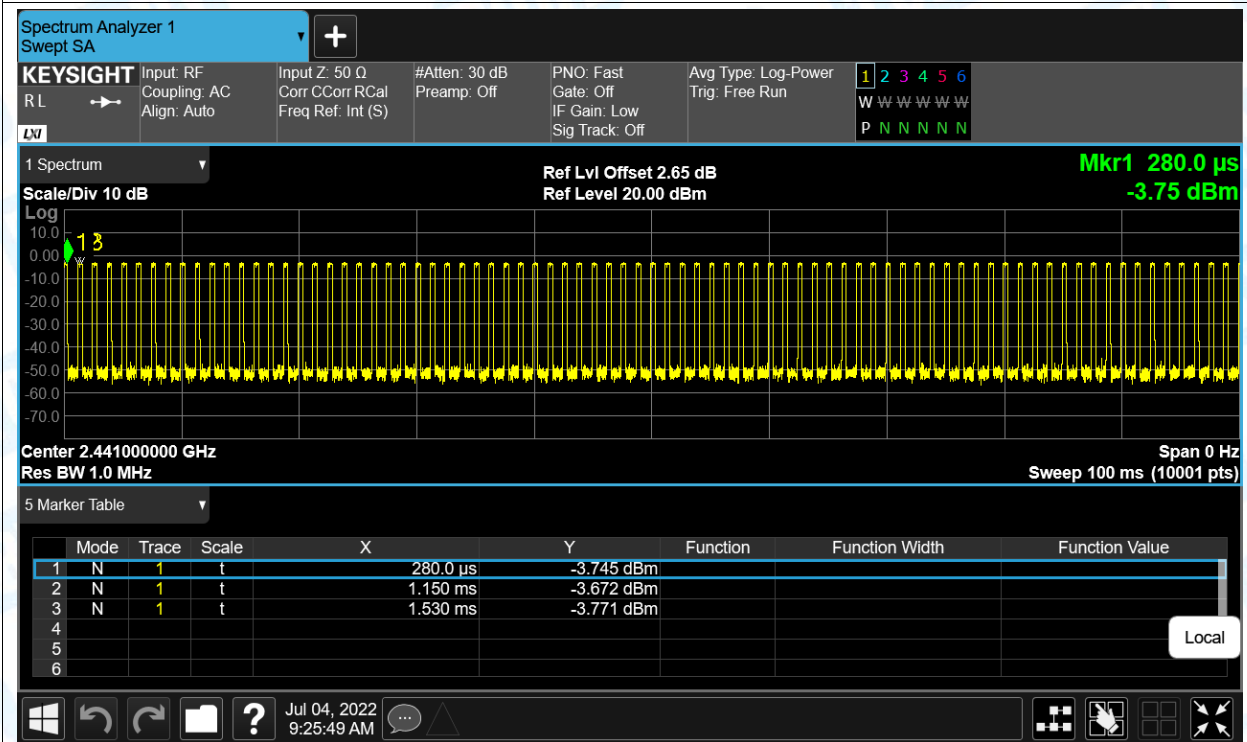
Duty Cycle NVNT 1-DH1 2480MHz Ant1



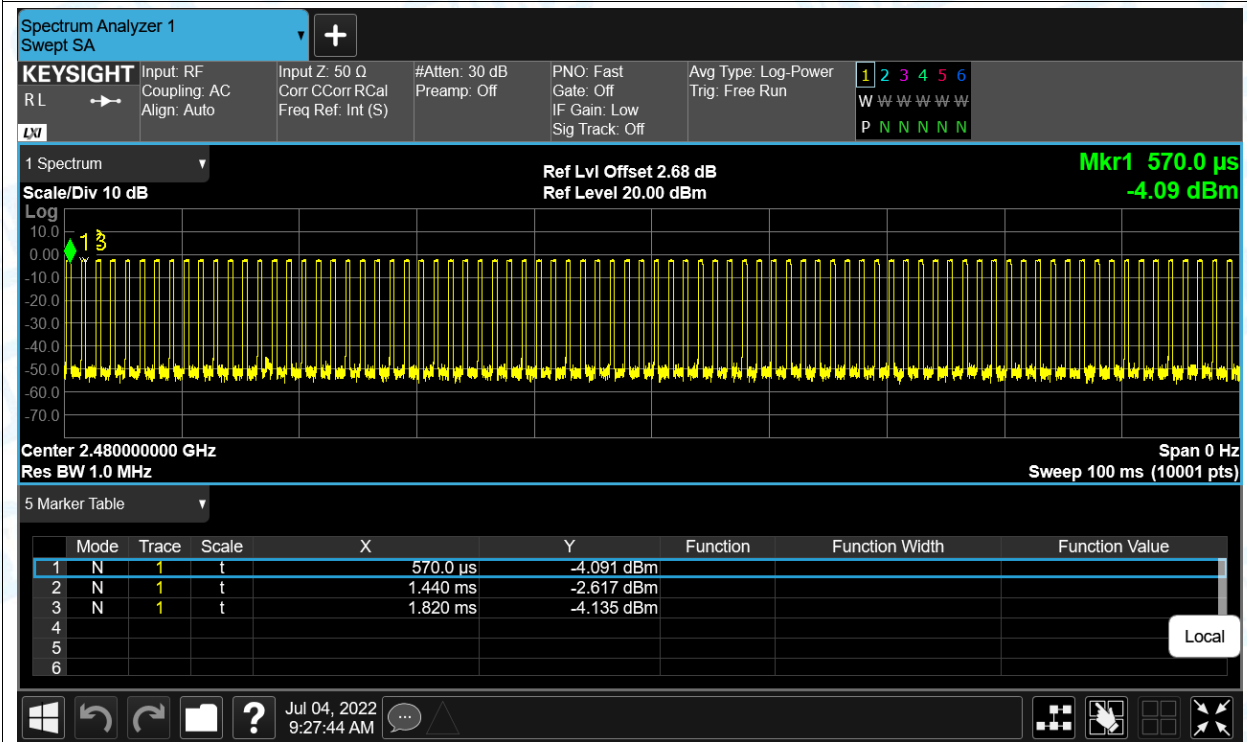
Duty Cycle NVNT 2-DH1 2402MHz Ant1



Duty Cycle NVNT 2-DH1 2441MHz Ant1



Duty Cycle NVNT 2-DH1 2480MHz Ant1

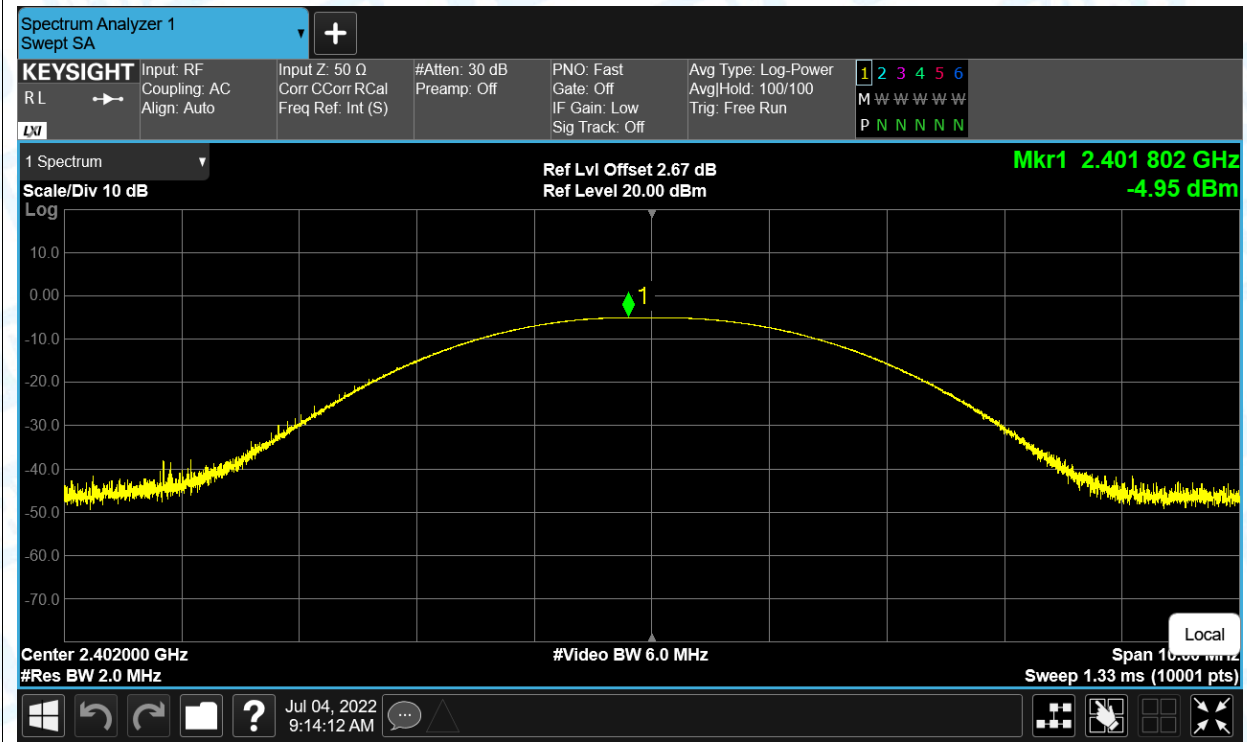


2. Maximum Conducted Output Power

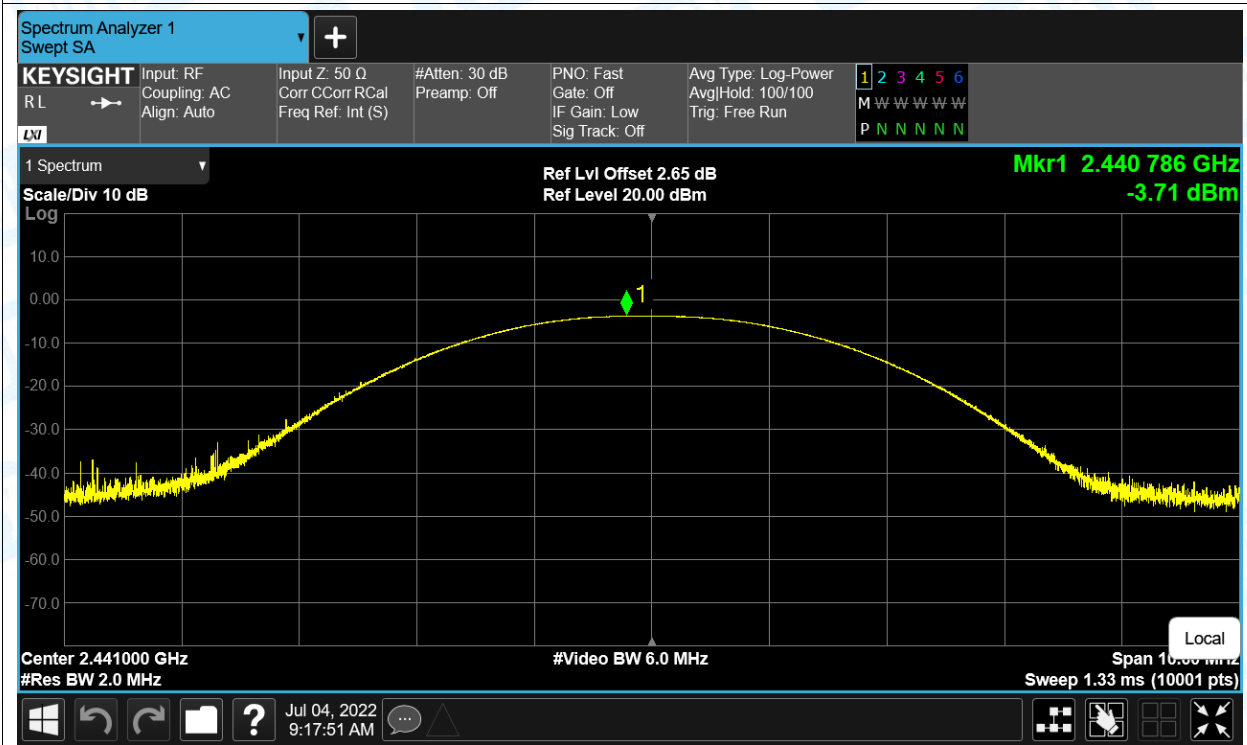
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	-4.947	21	Pass
NVNT	1-DH1	2441	Ant1	-3.708	21	Pass
NVNT	1-DH1	2480	Ant1	-2.578	21	Pass
NVNT	2-DH1	2402	Ant1	-4.064	21	Pass
NVNT	2-DH1	2441	Ant1	-2.613	21	Pass
NVNT	2-DH1	2480	Ant1	-1.617	21	Pass

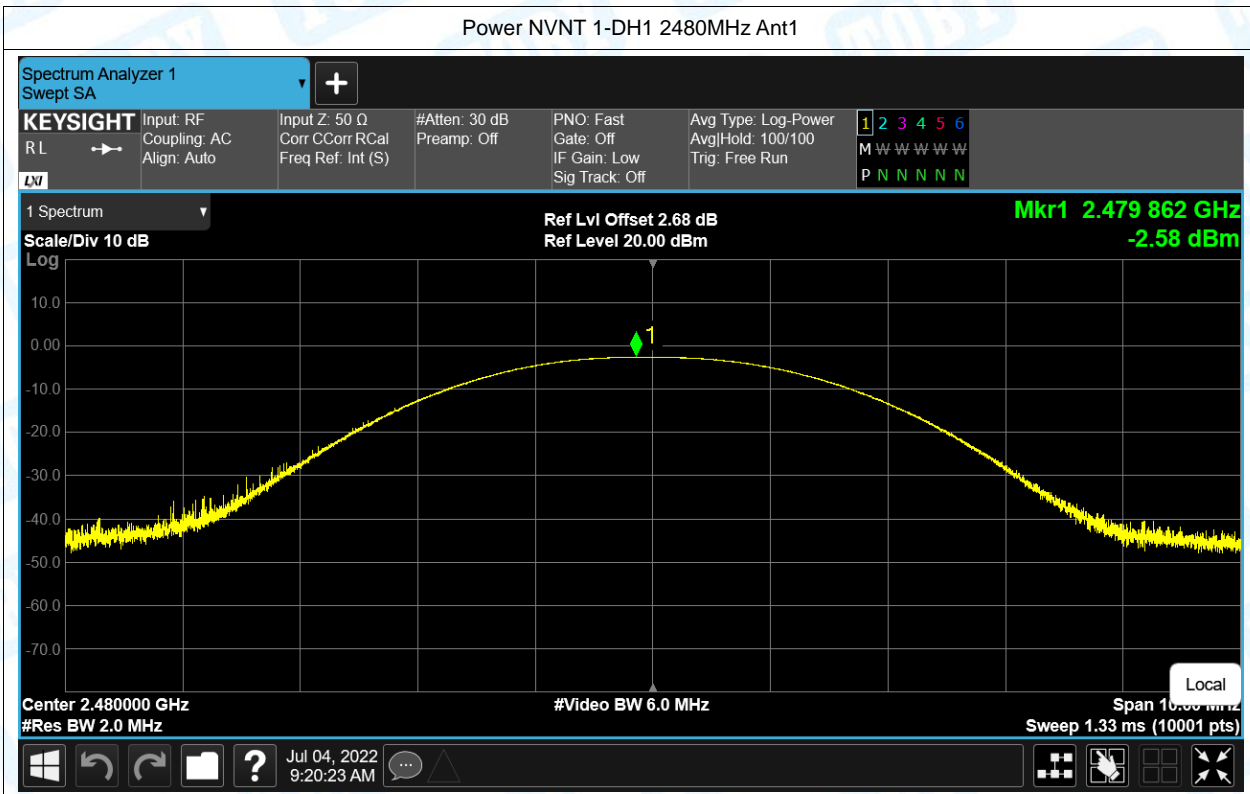
Test Graphs

Power NVNT 1-DH1 2402MHz Ant1

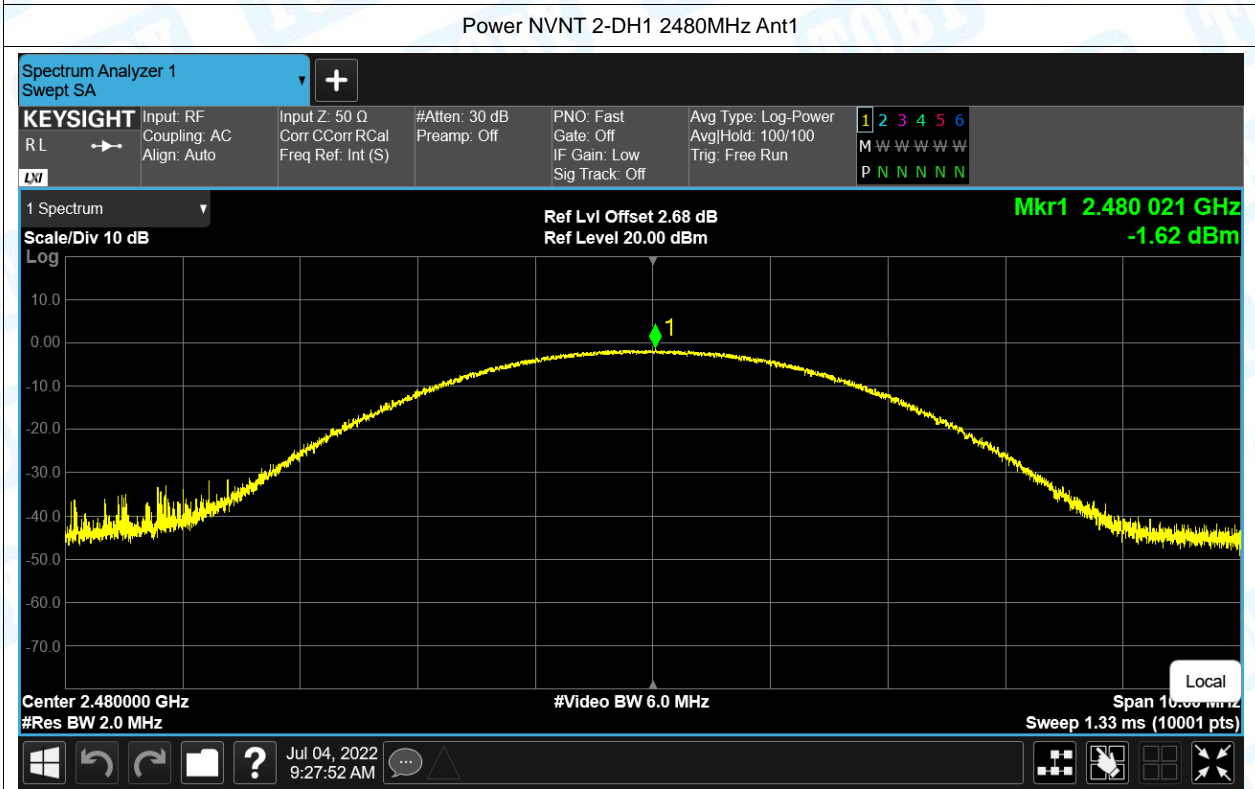


Power NVNT 1-DH1 2441MHz Ant1







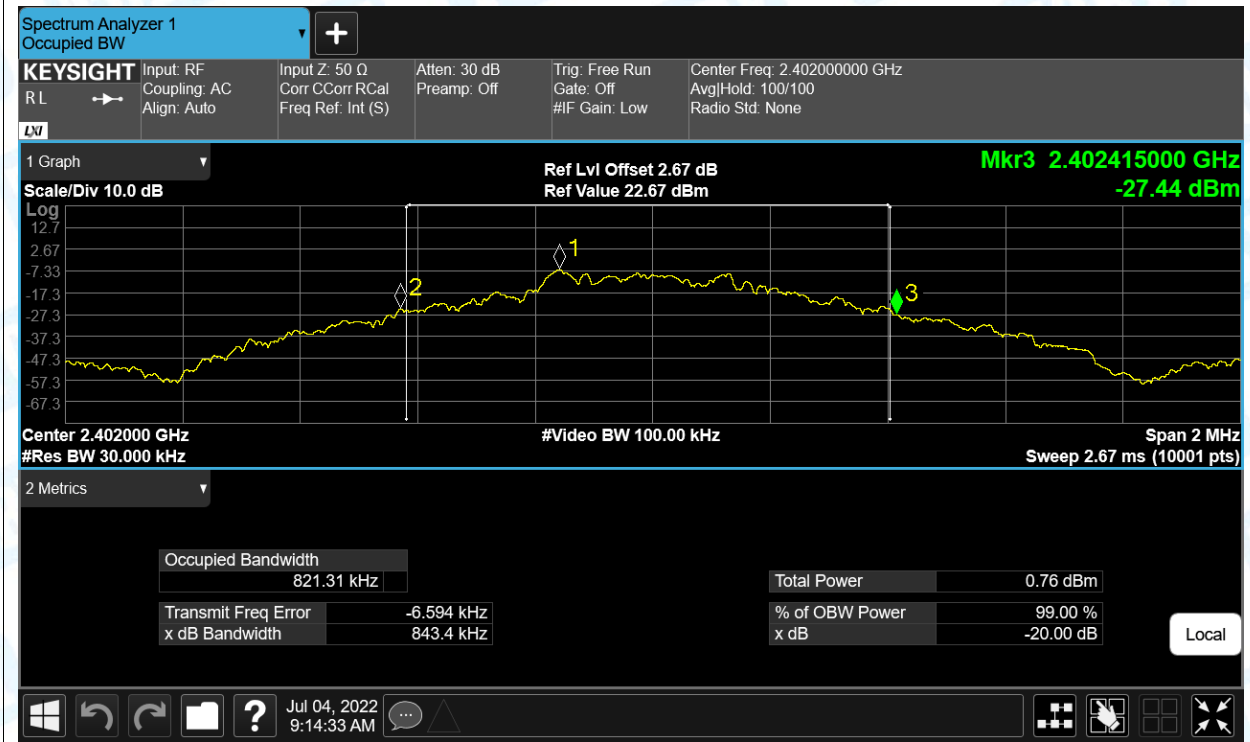


3. -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	2/3 *20dB BW (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.84	0.56	Pass
NVNT	1-DH1	2441	Ant1	0.86	0.57	Pass
NVNT	1-DH1	2480	Ant1	0.87	0.58	Pass
NVNT	2-DH1	2402	Ant1	1.24	0.83	Pass
NVNT	2-DH1	2441	Ant1	1.23	0.82	Pass
NVNT	2-DH1	2480	Ant1	1.23	0.82	Pass

Test Graphs

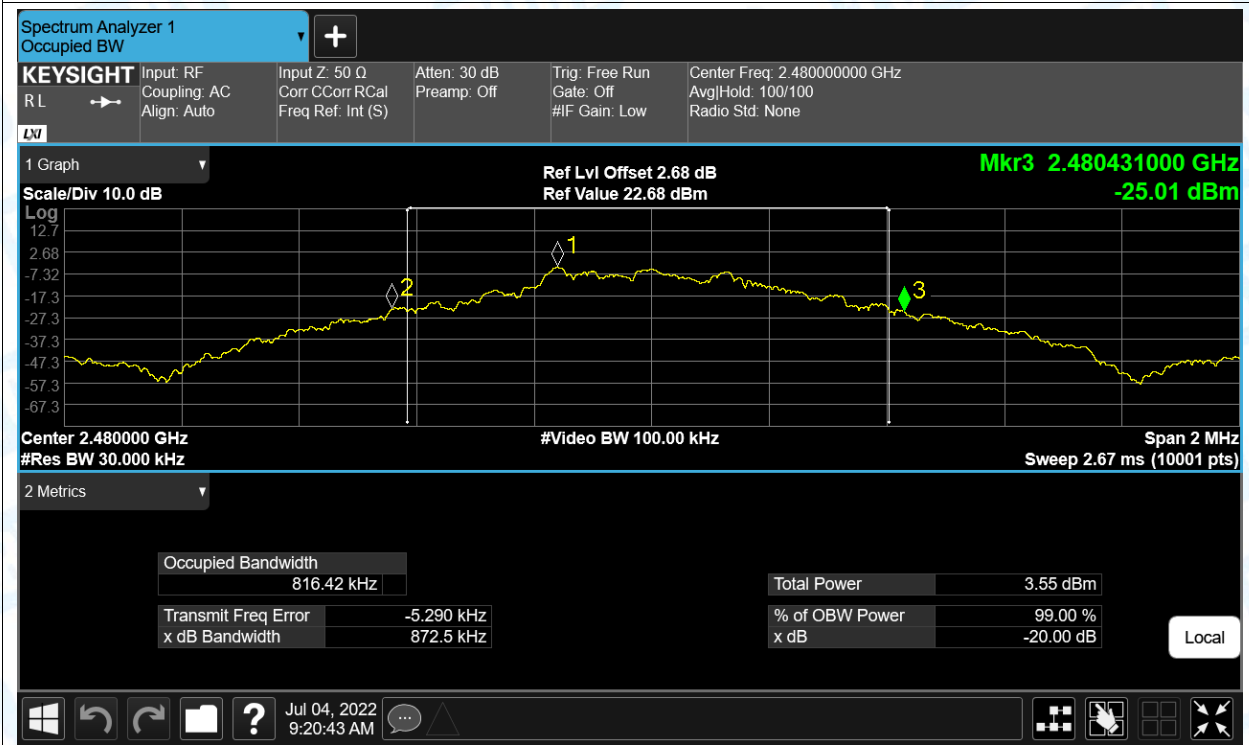
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



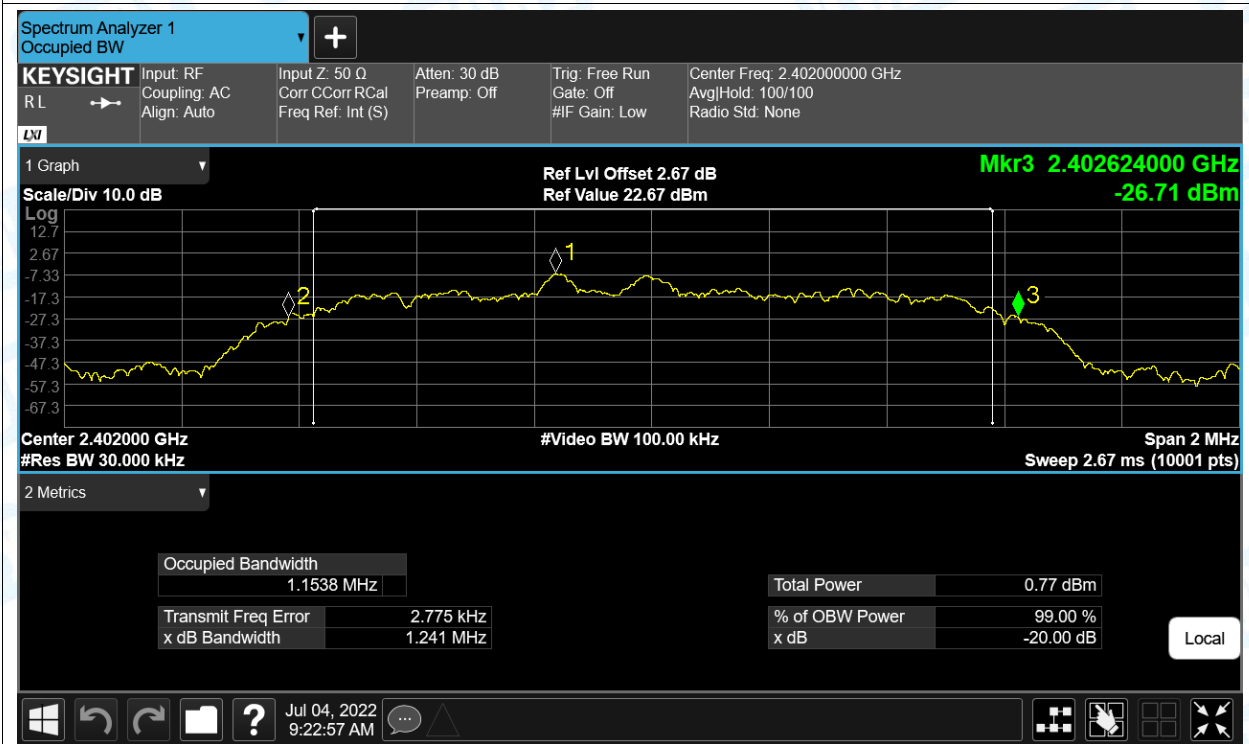
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



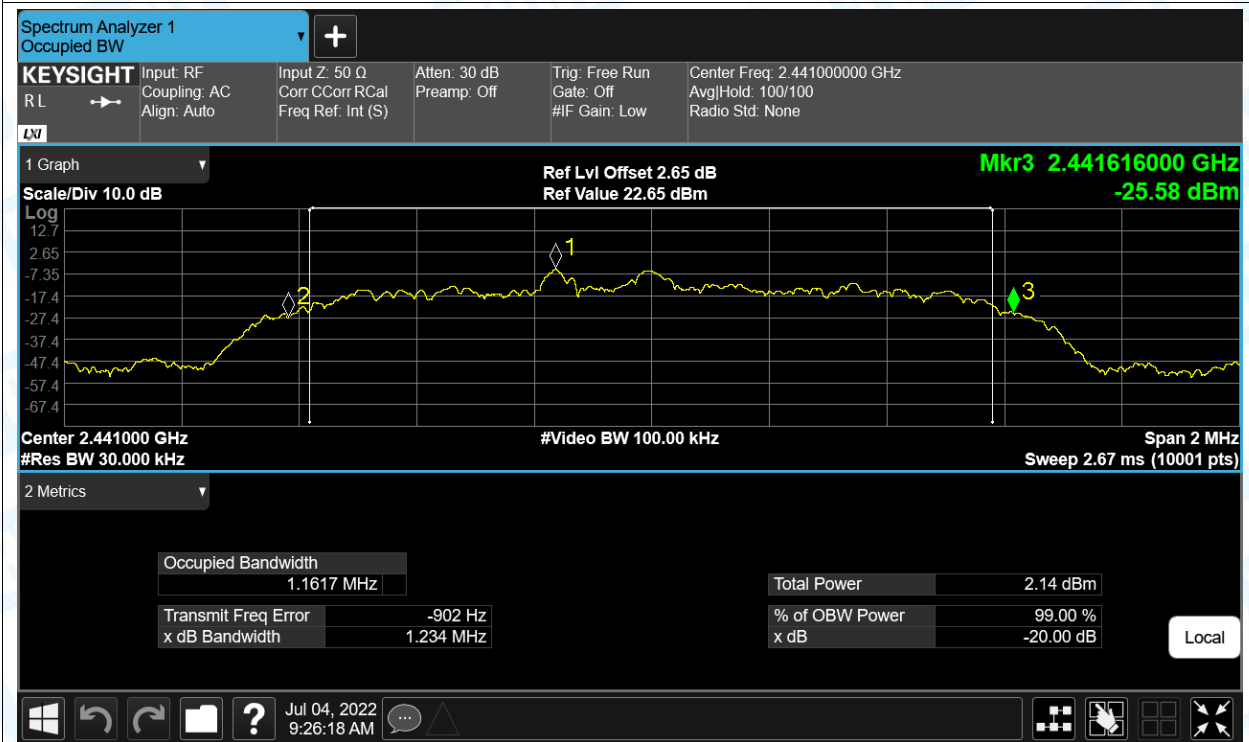
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



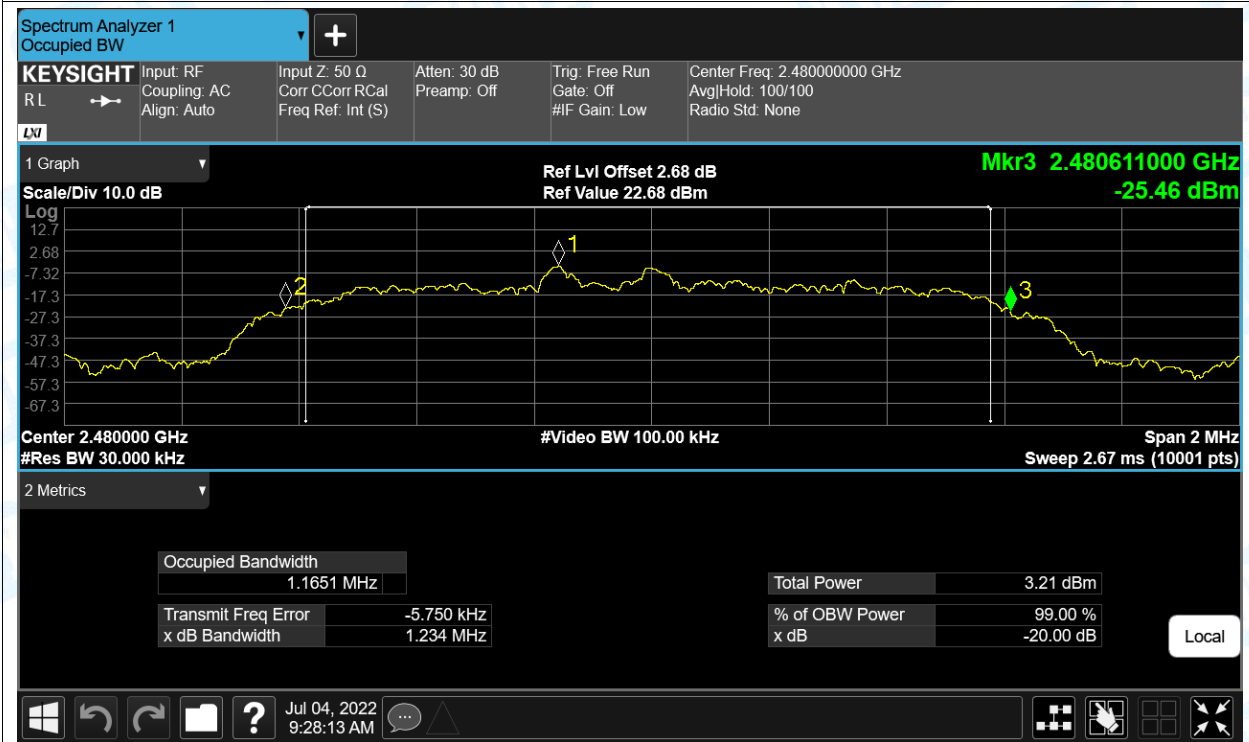
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

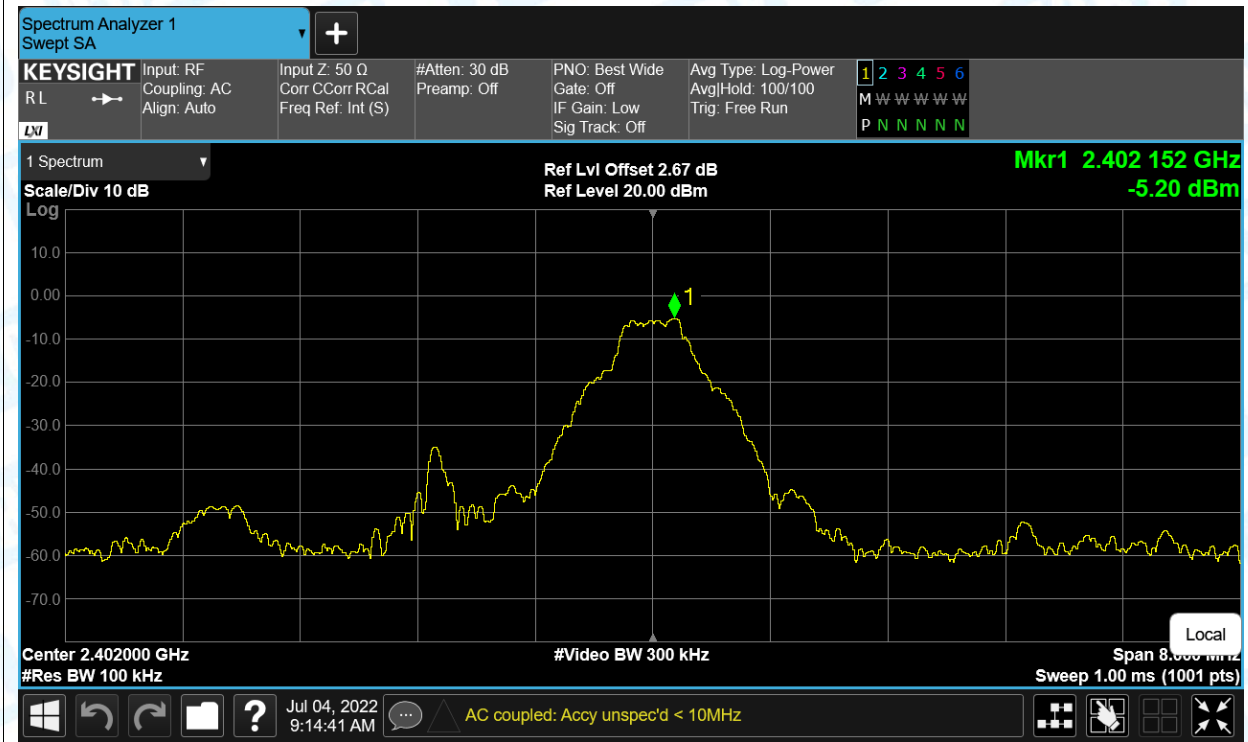


5. Band Edge

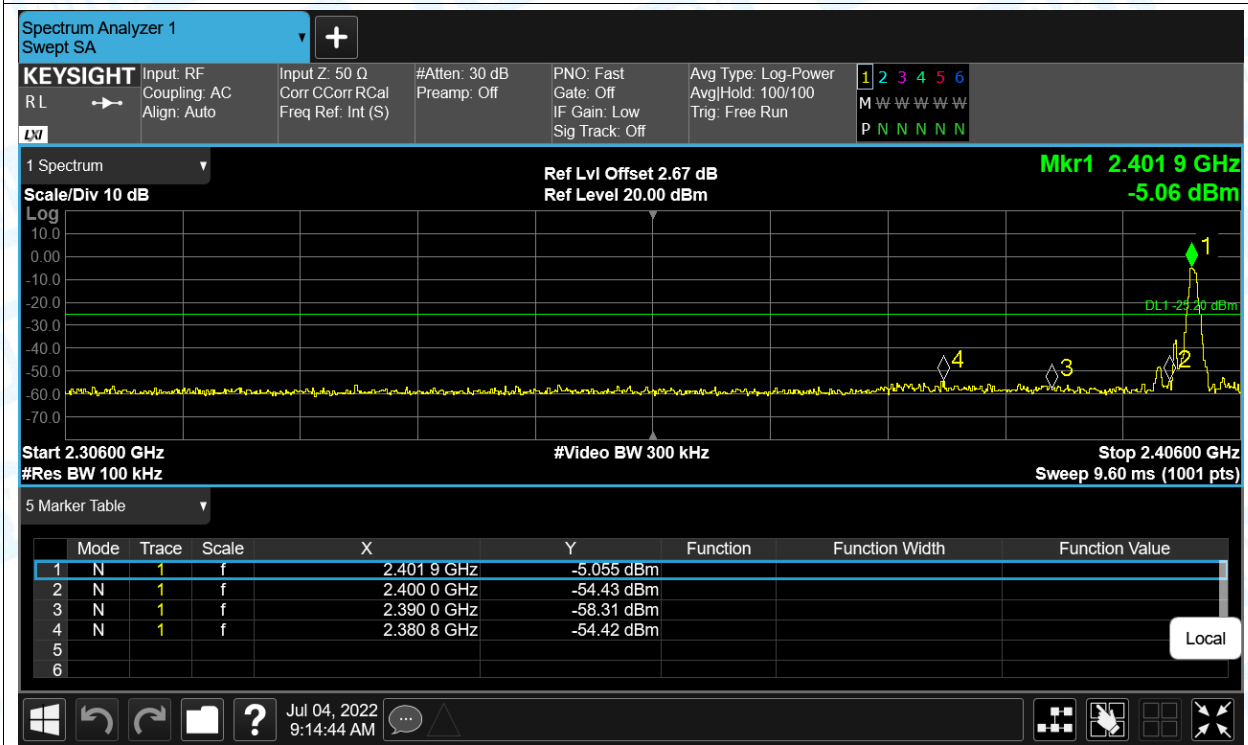
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-49.22	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-47.08	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-50.05	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-47.07	-20	Pass

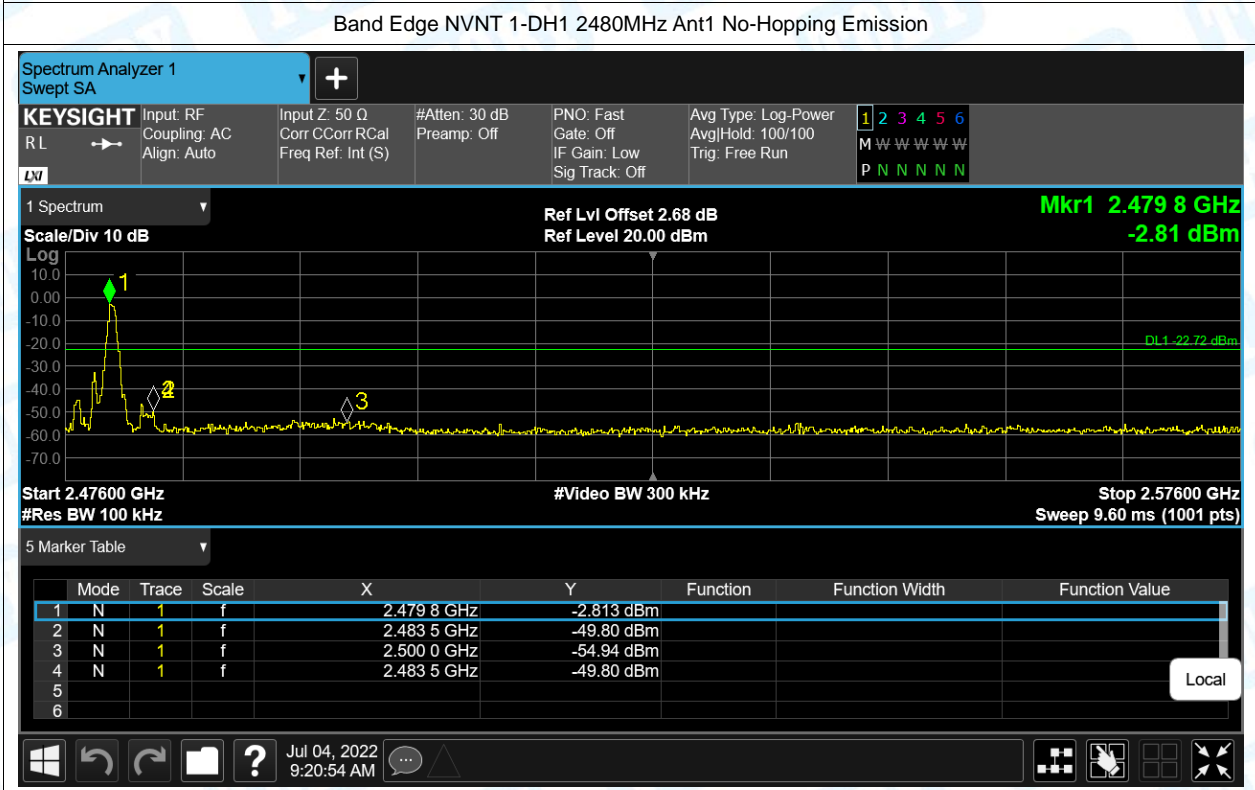
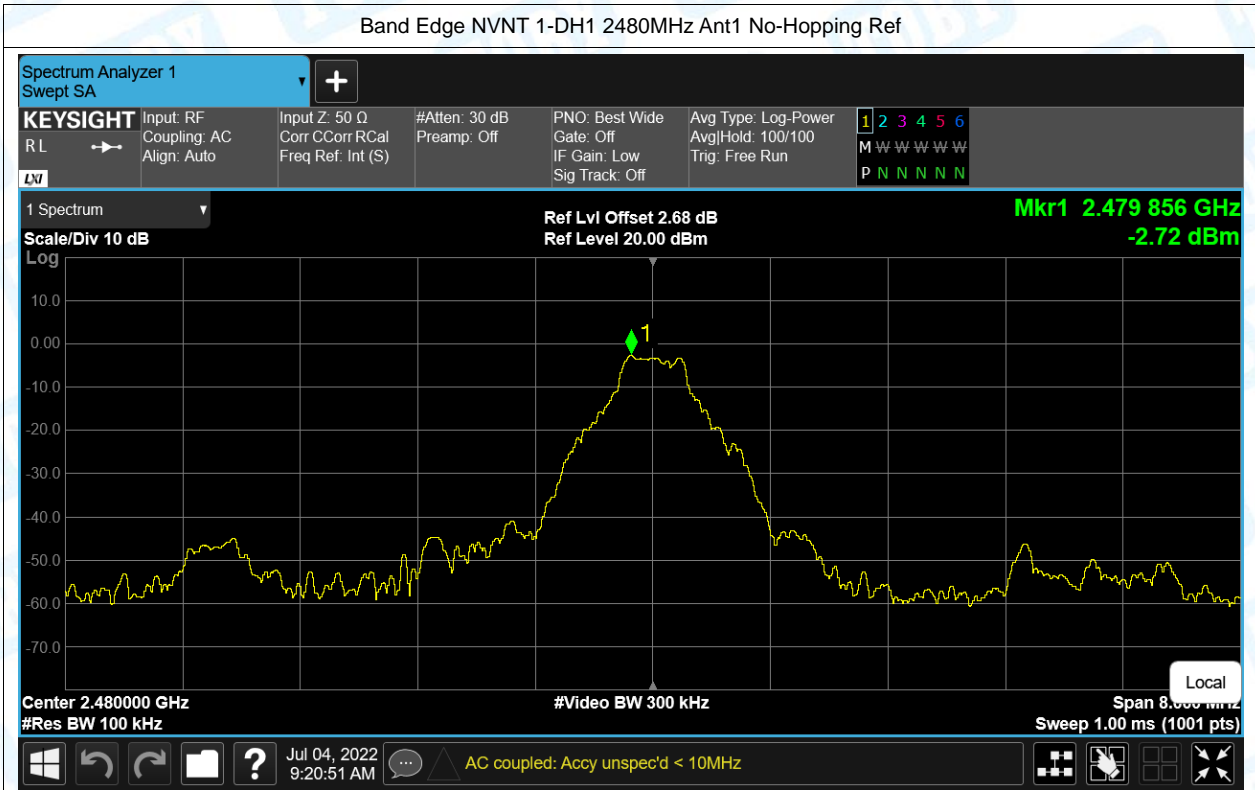
Test Graphs

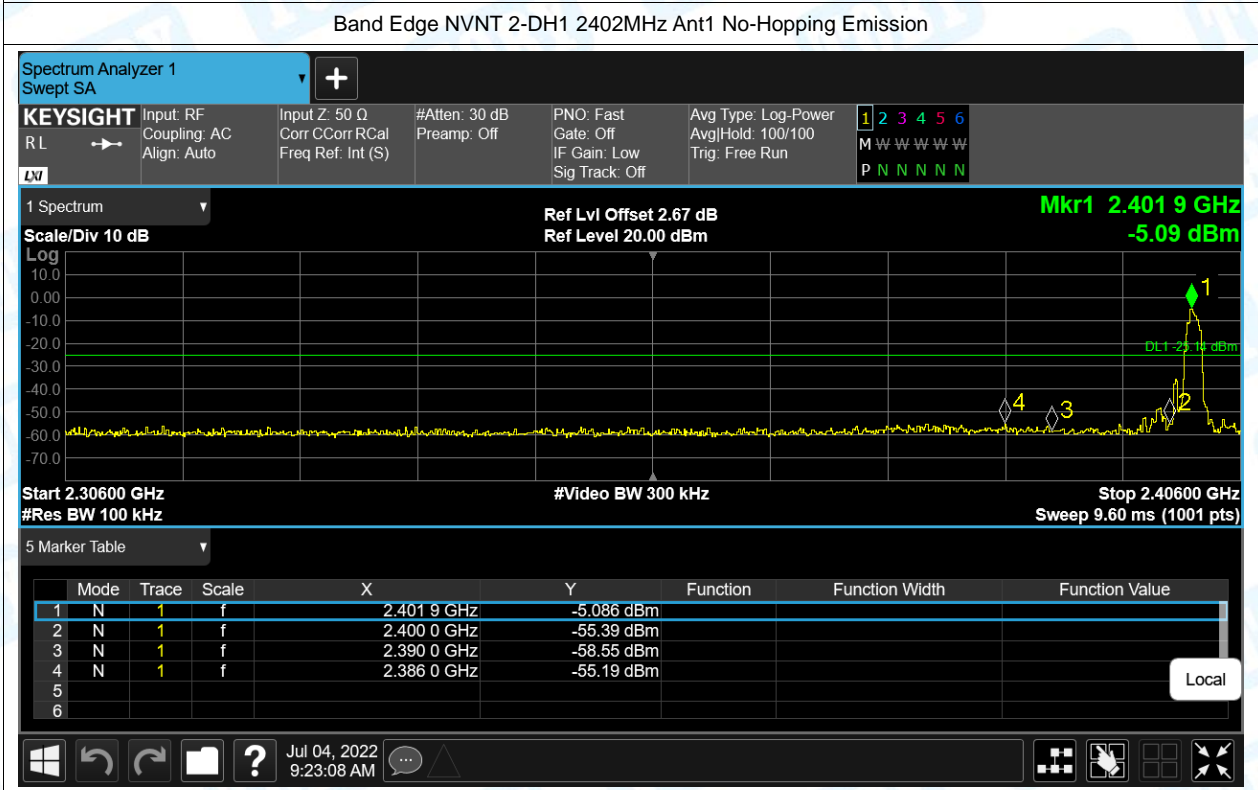
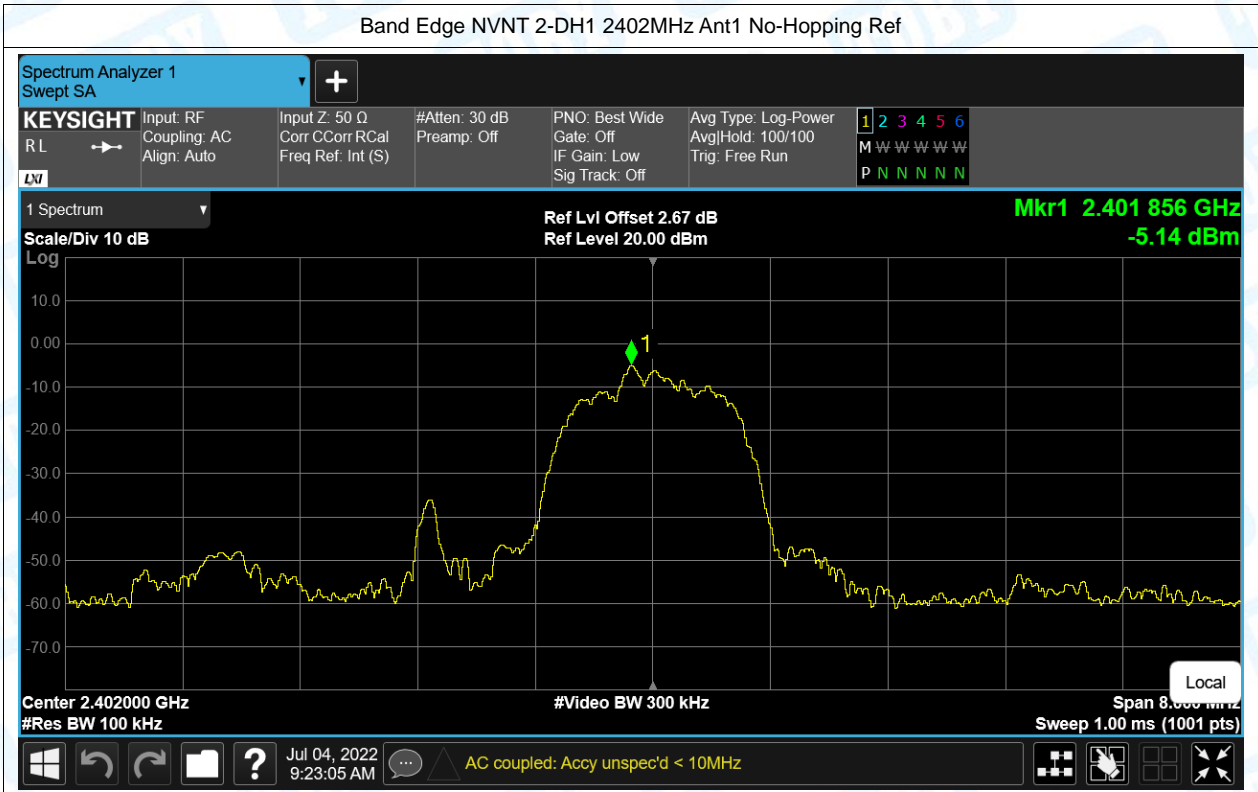
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref

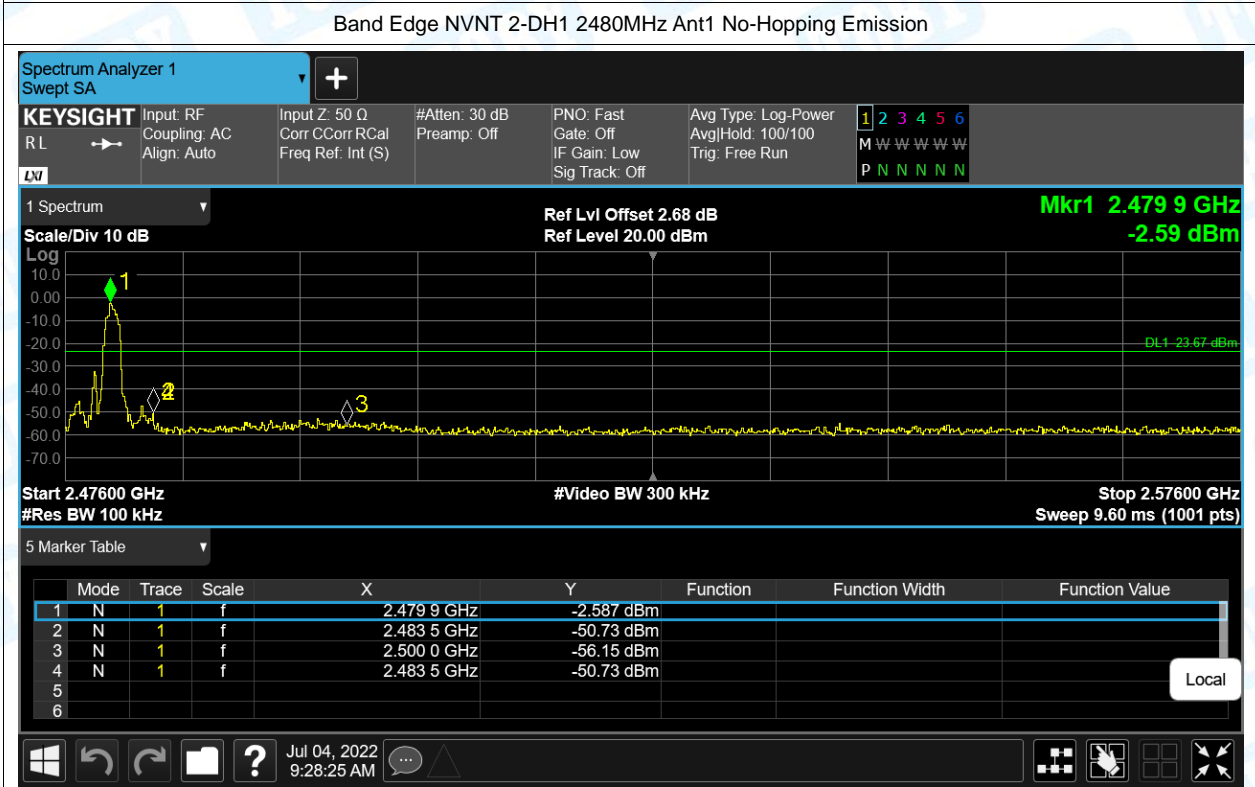
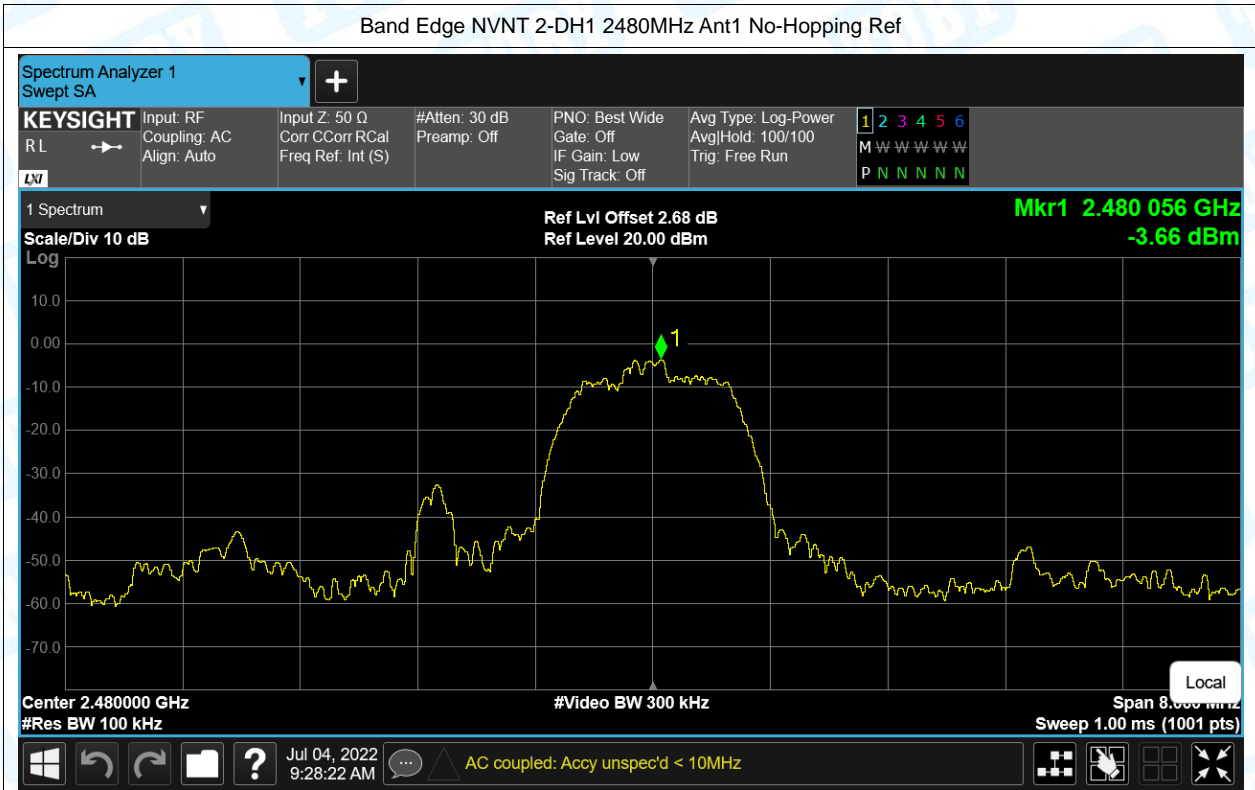


Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission







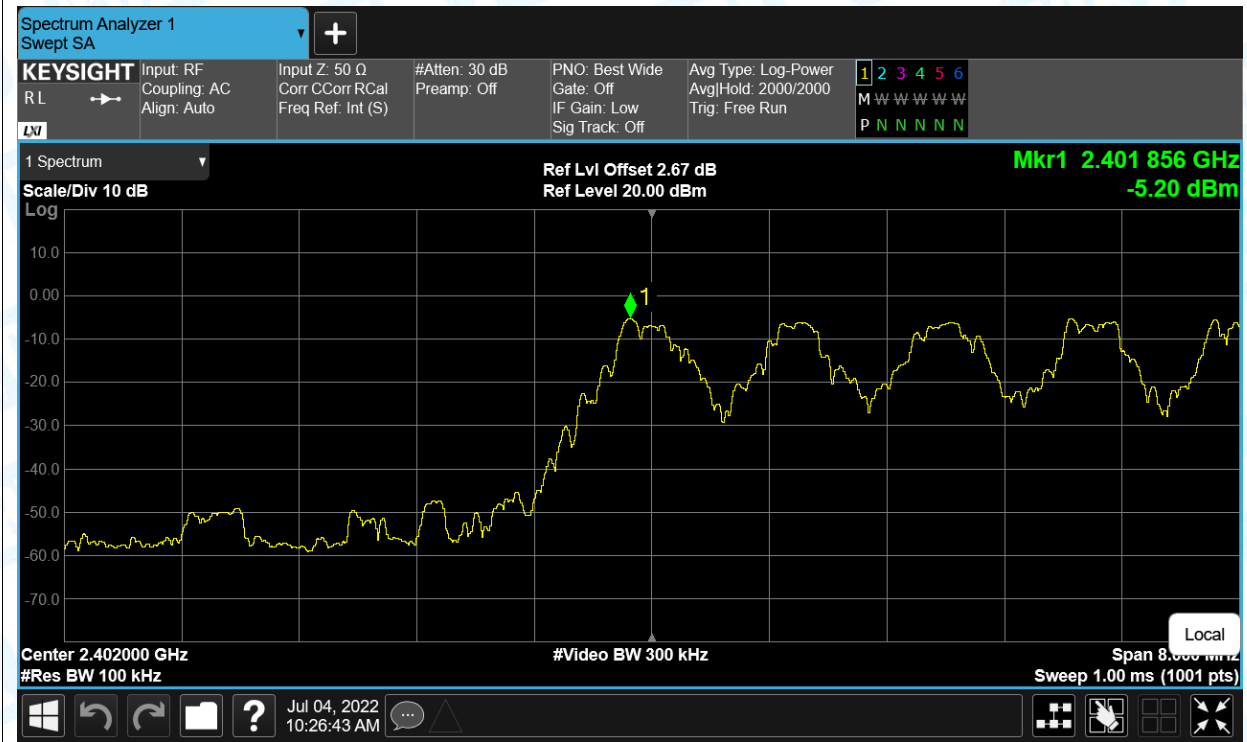


6. Band Edge(Hopping)

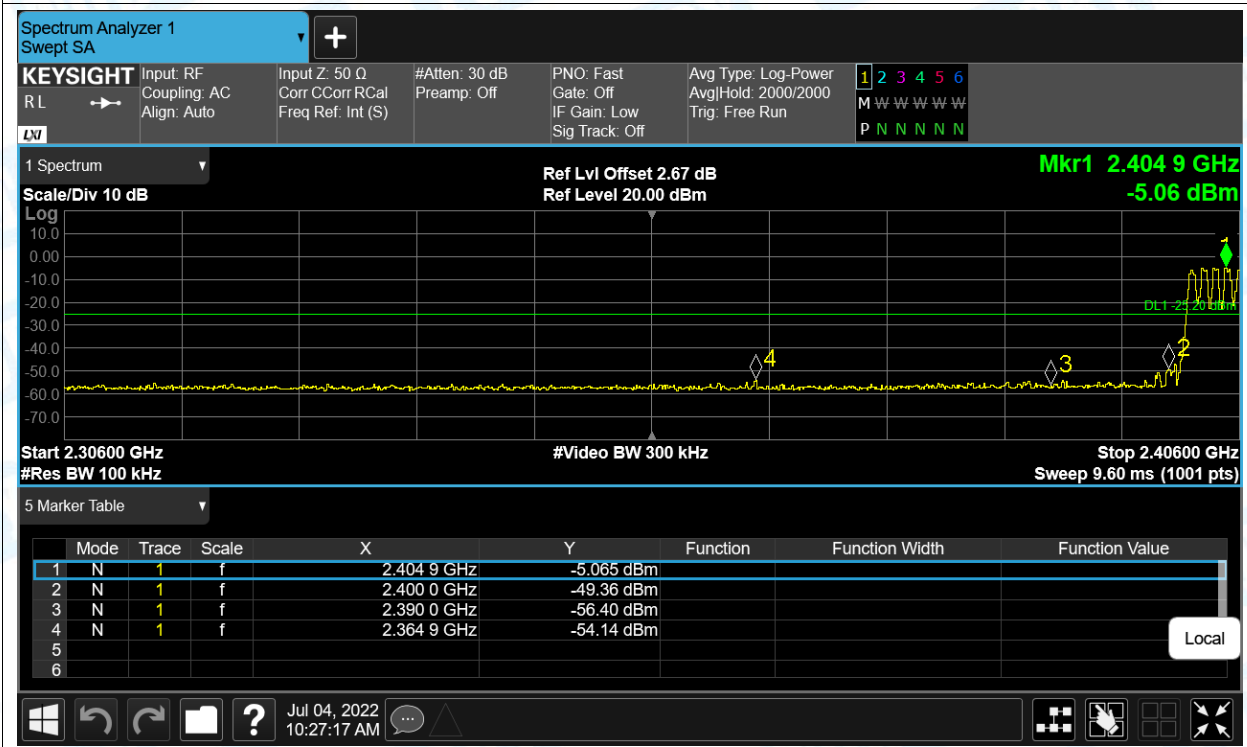
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-48.94	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-48.36	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-49.21	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-50.07	-20	Pass

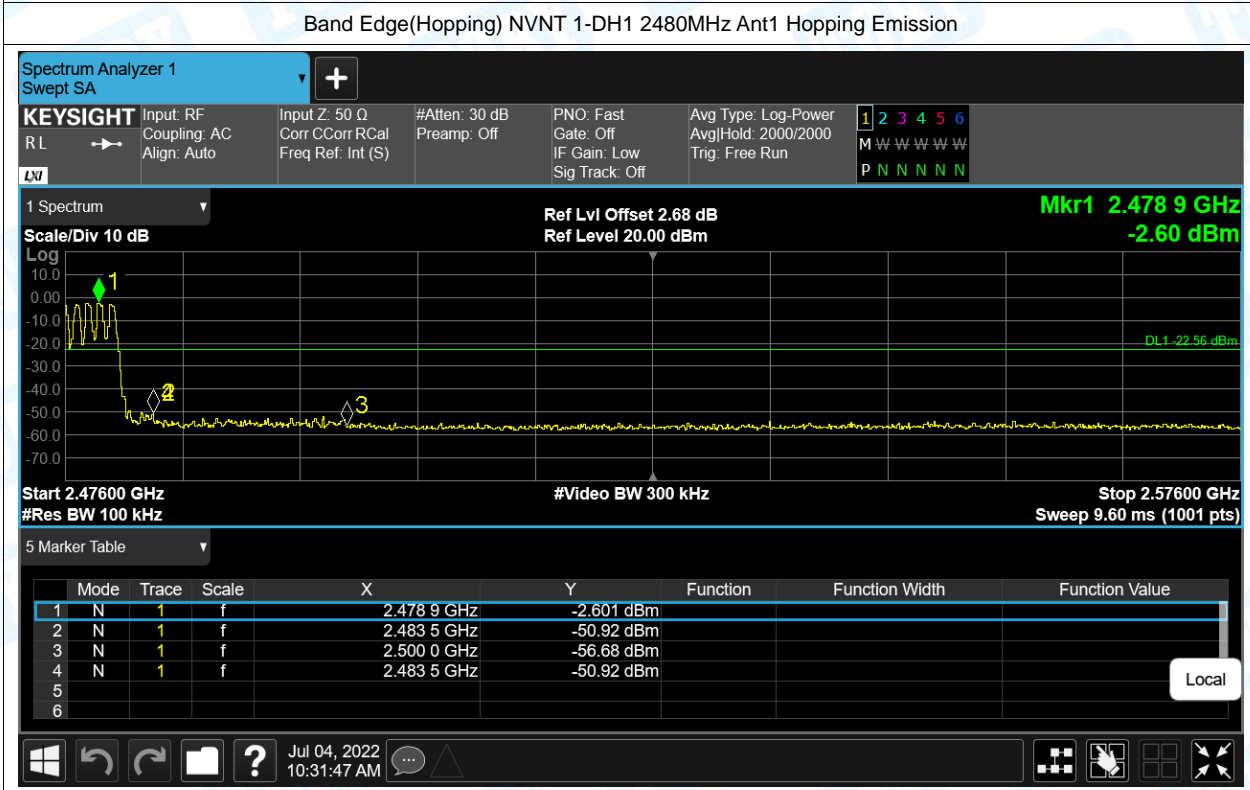
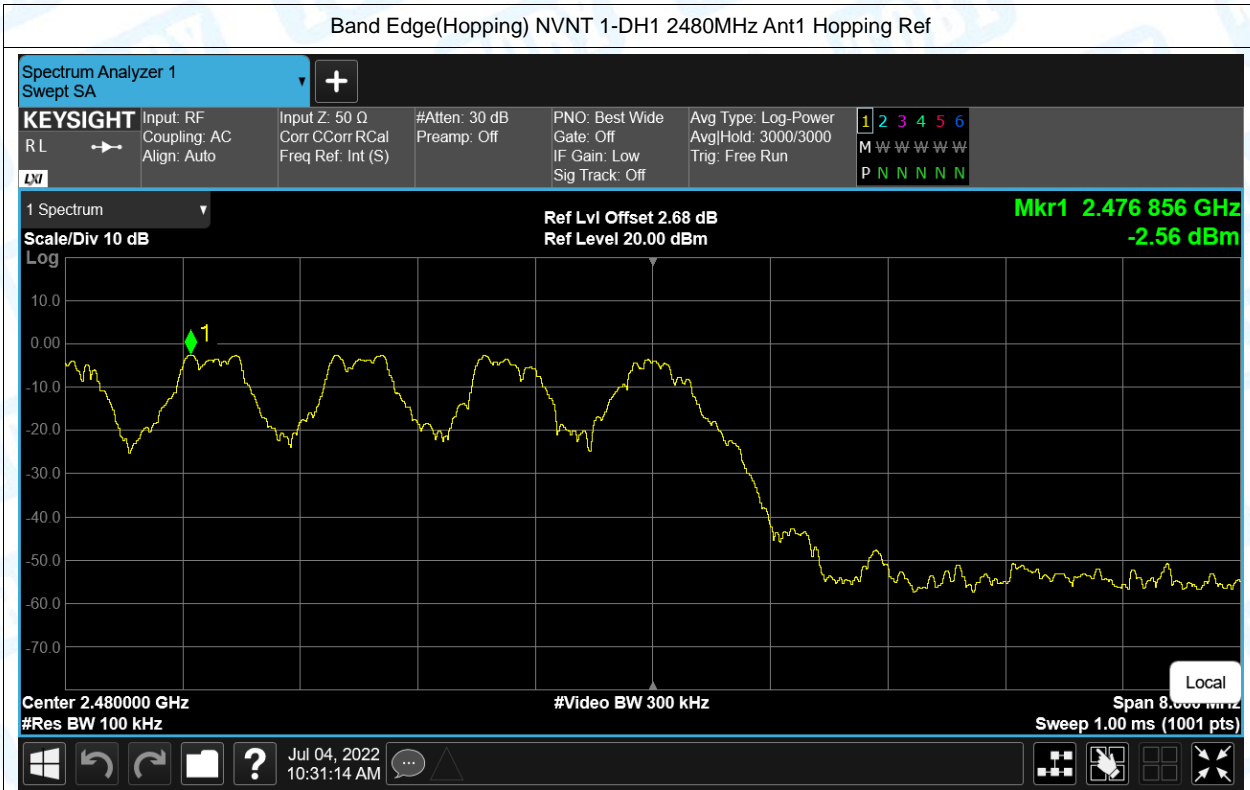
Test Graphs

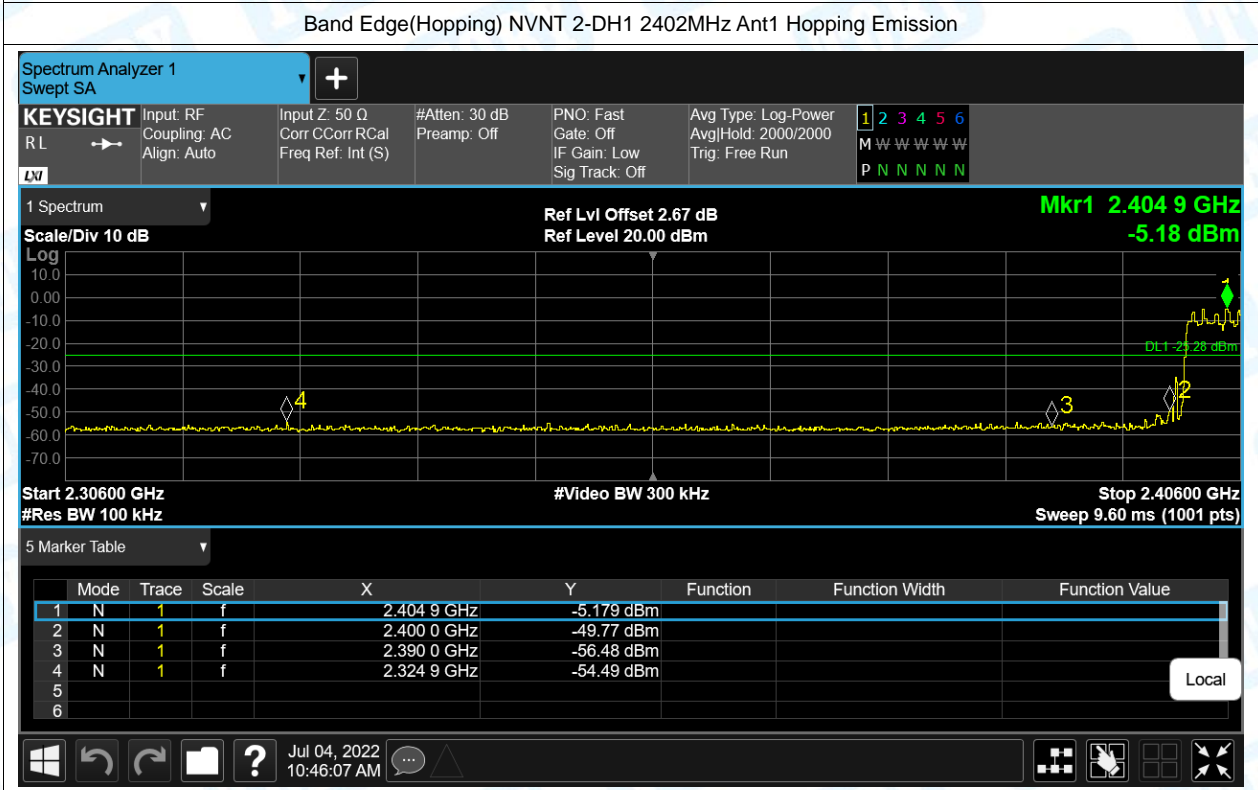
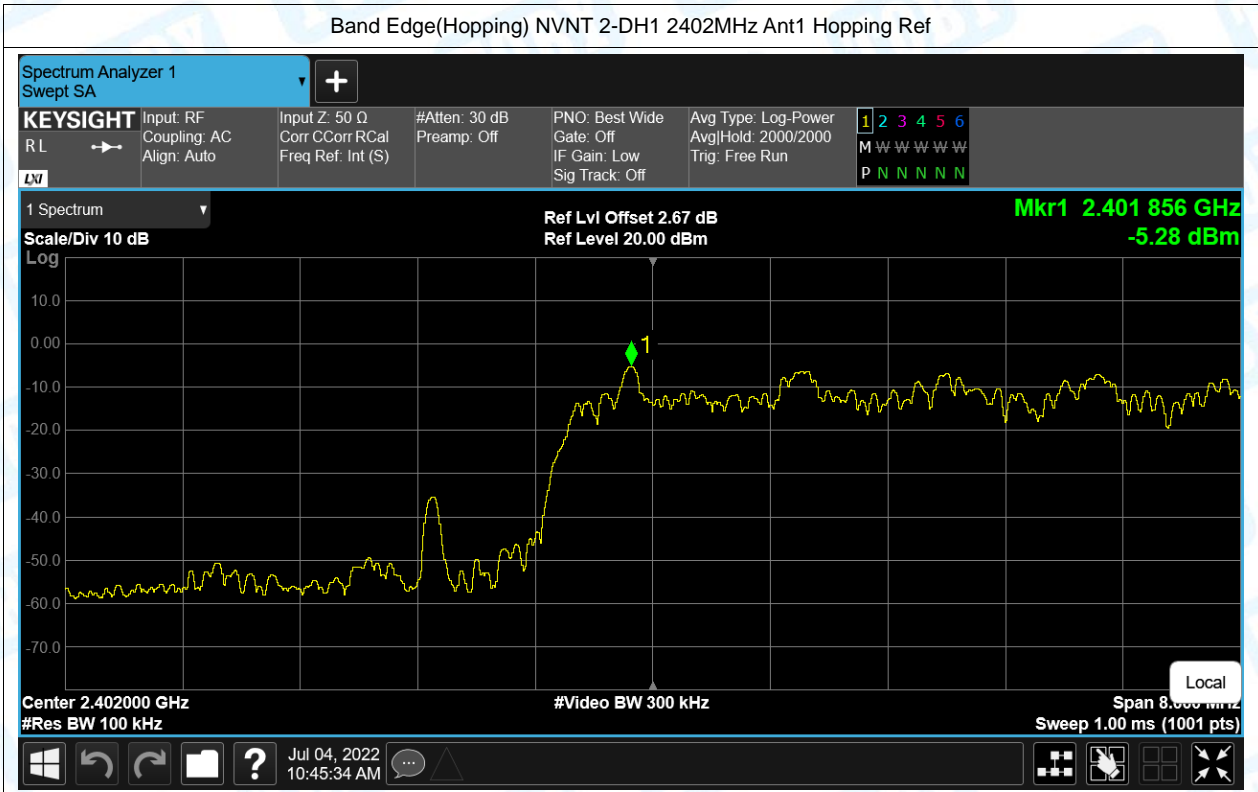
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref

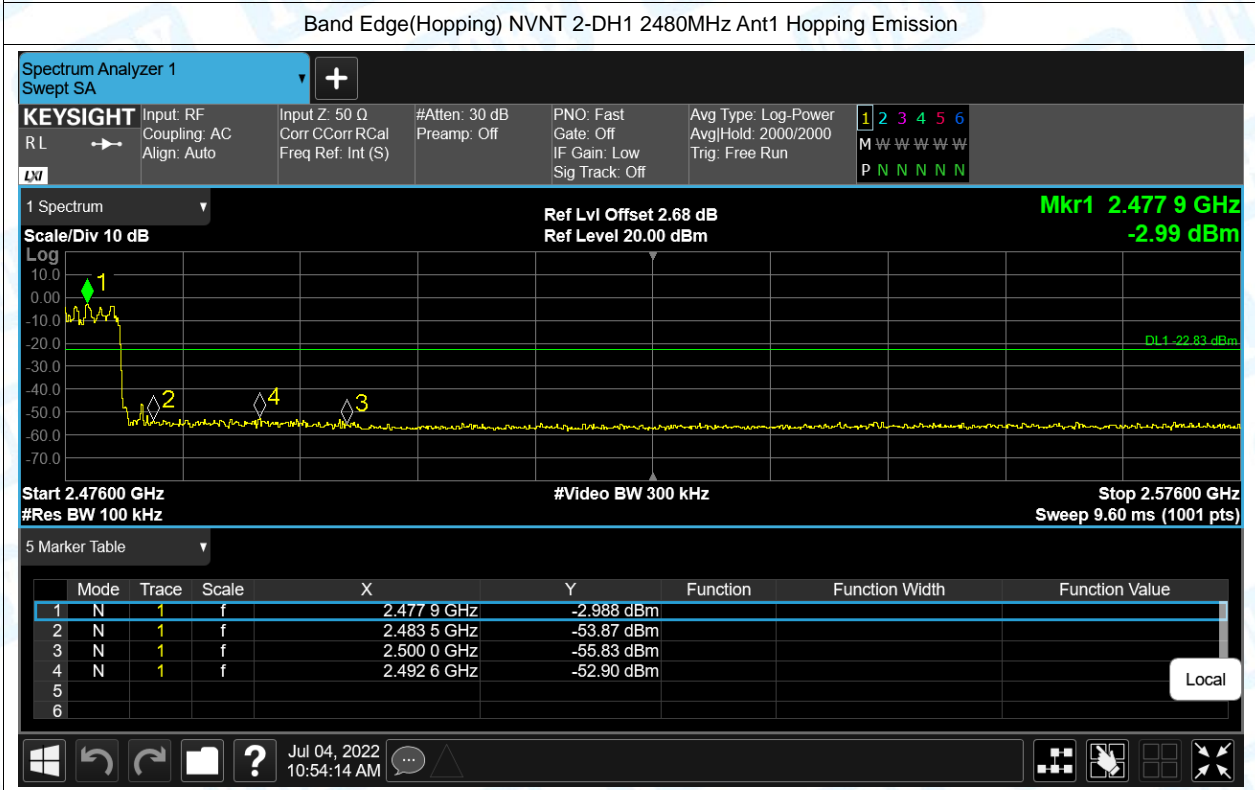
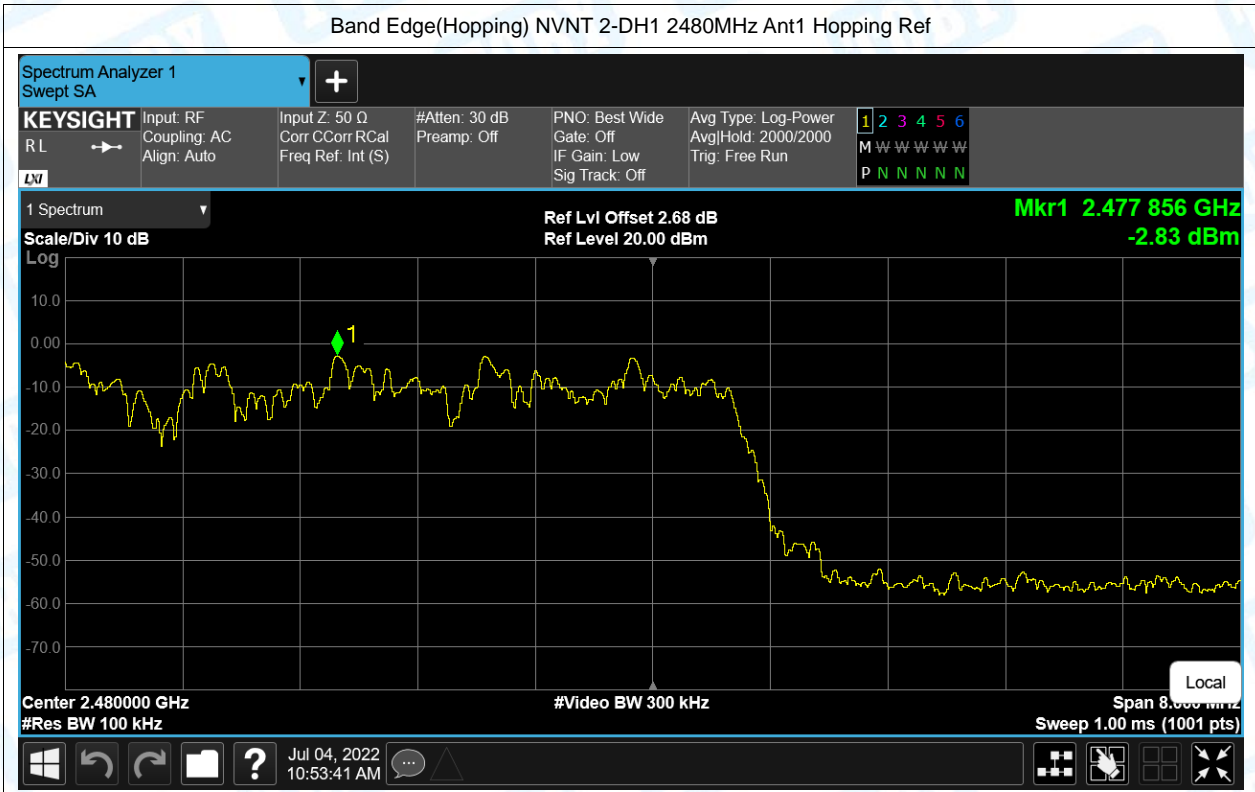


Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission







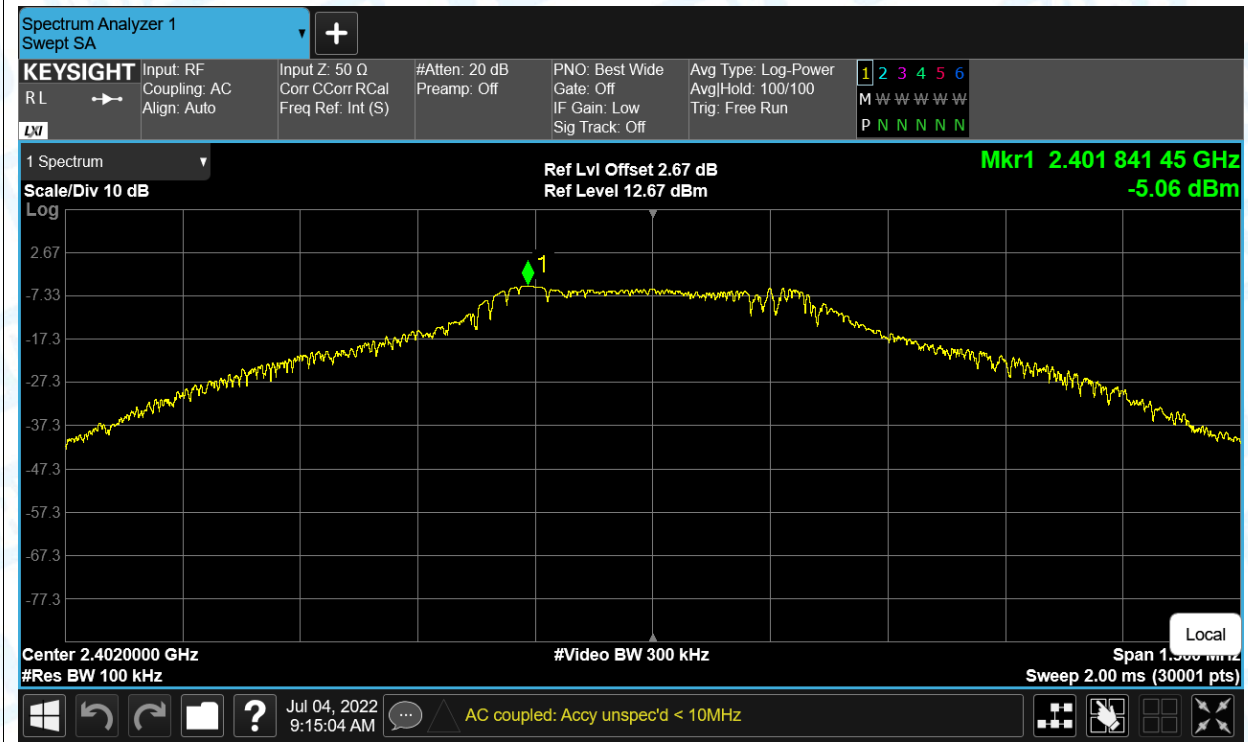


7. Conducted RF Spurious Emission

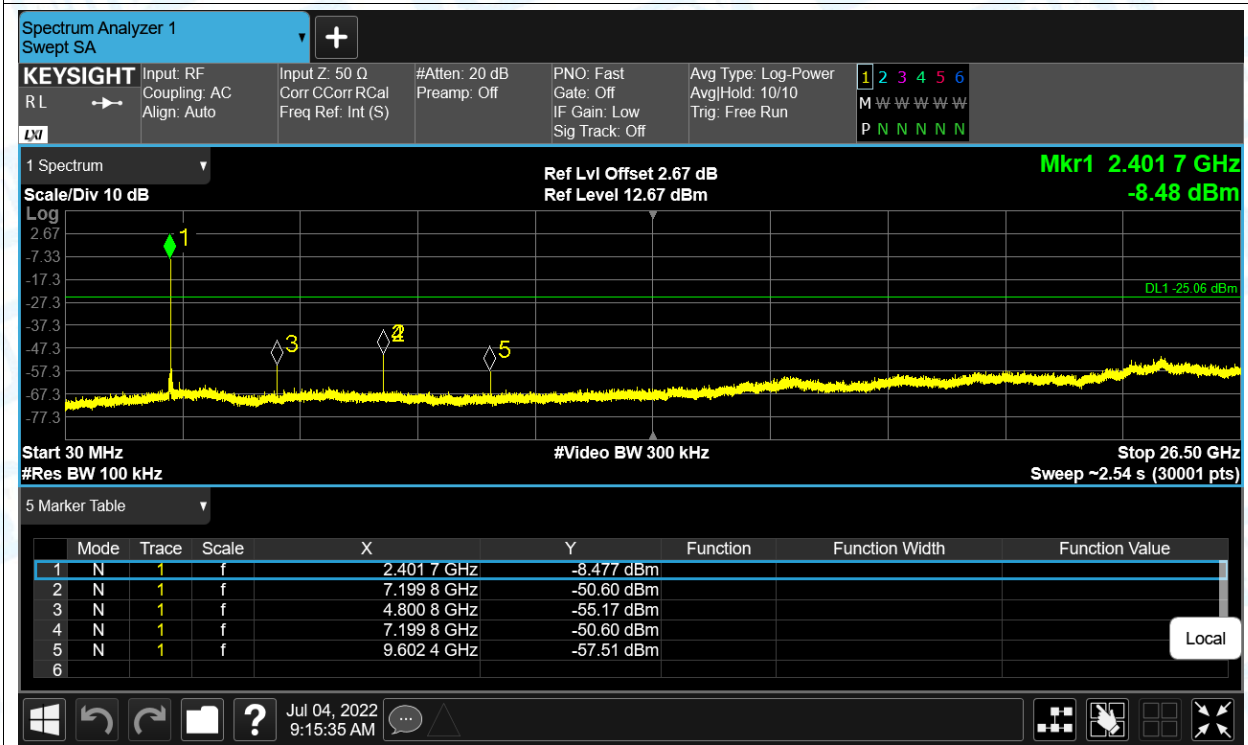
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-45.54	-20	Pass
NVNT	1-DH1	2441	Ant1	-45.89	-20	Pass
NVNT	1-DH1	2480	Ant1	-47.22	-20	Pass
NVNT	2-DH1	2402	Ant1	-45	-20	Pass
NVNT	2-DH1	2441	Ant1	-46.27	-20	Pass
NVNT	2-DH1	2480	Ant1	-48.22	-20	Pass

Test Graphs

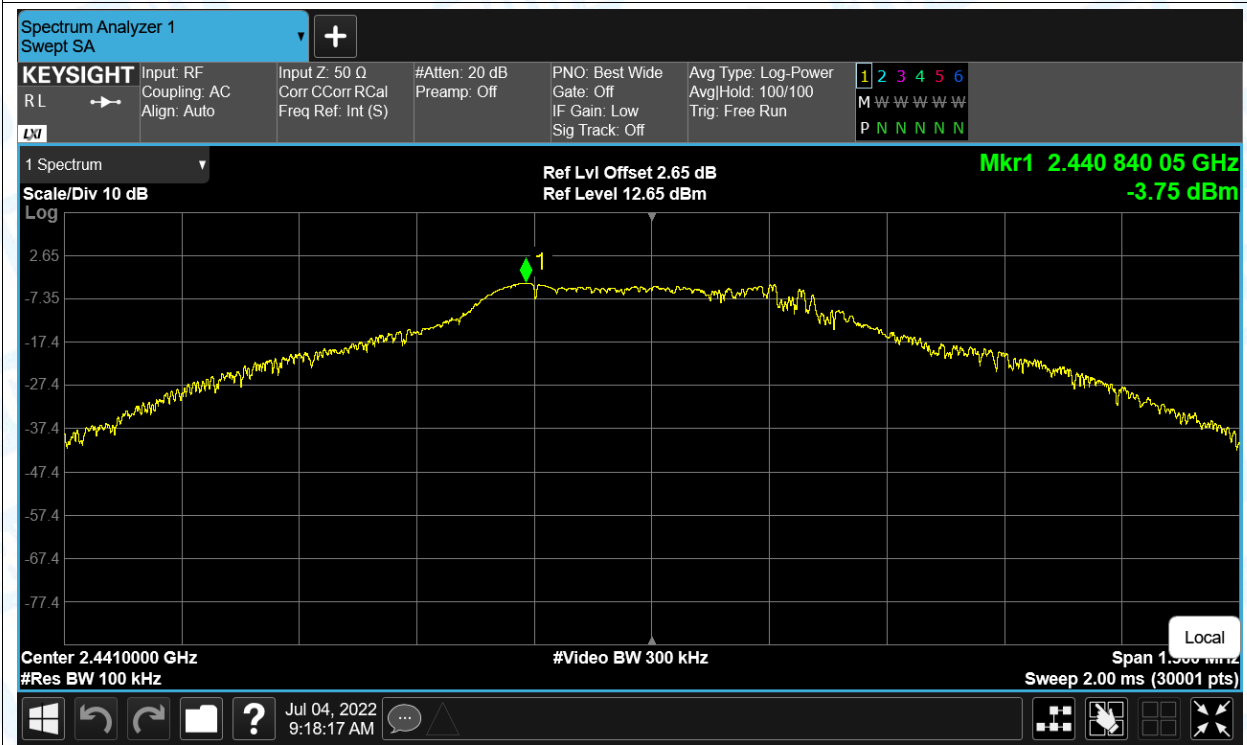
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



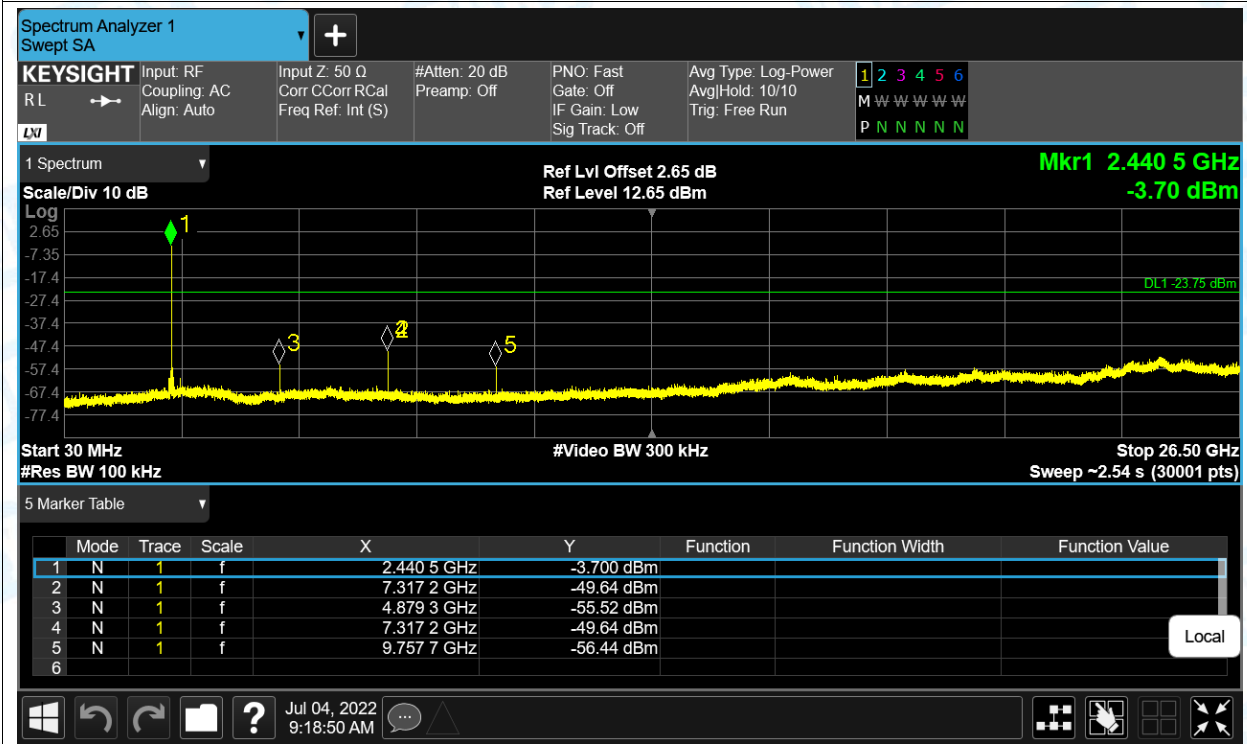
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



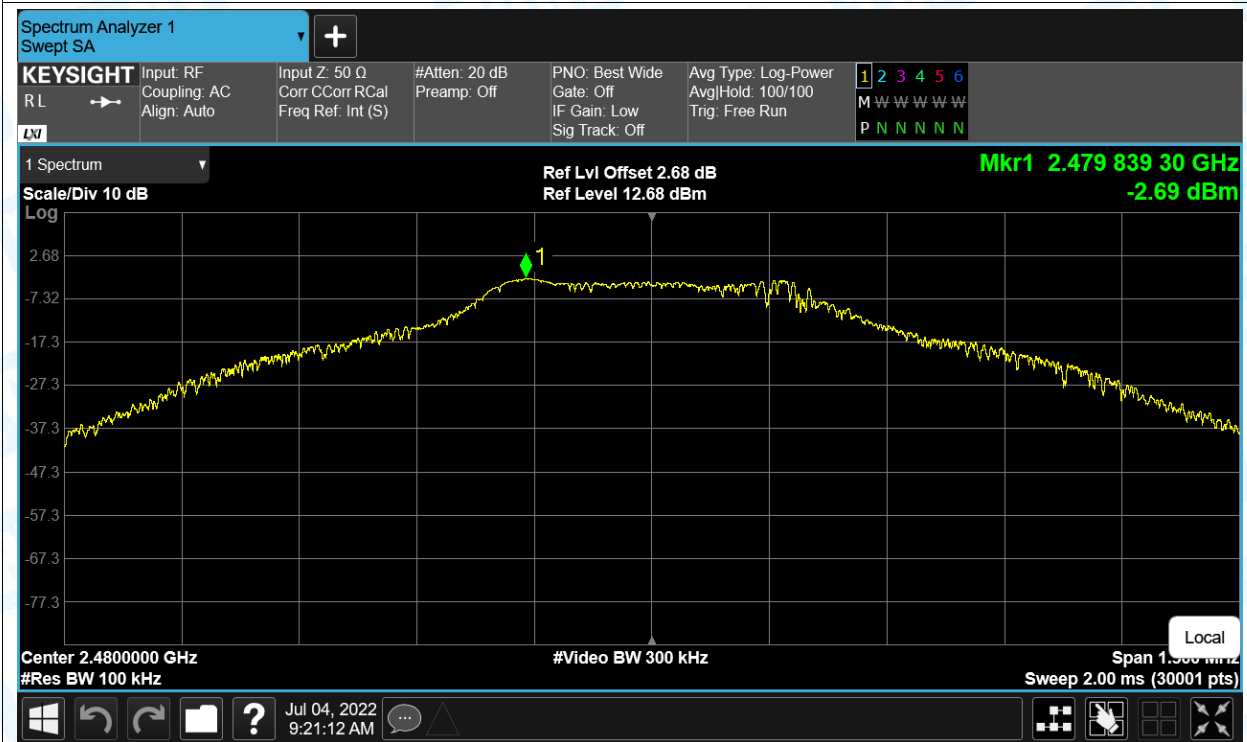
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



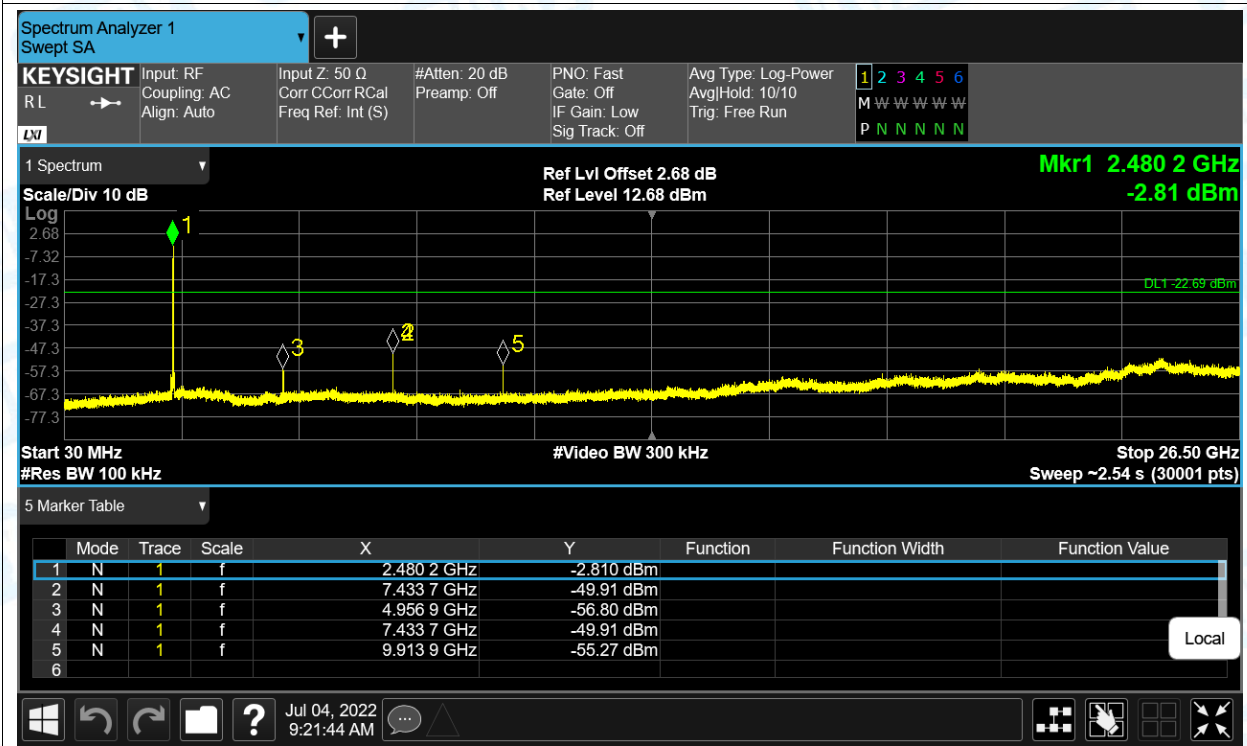
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



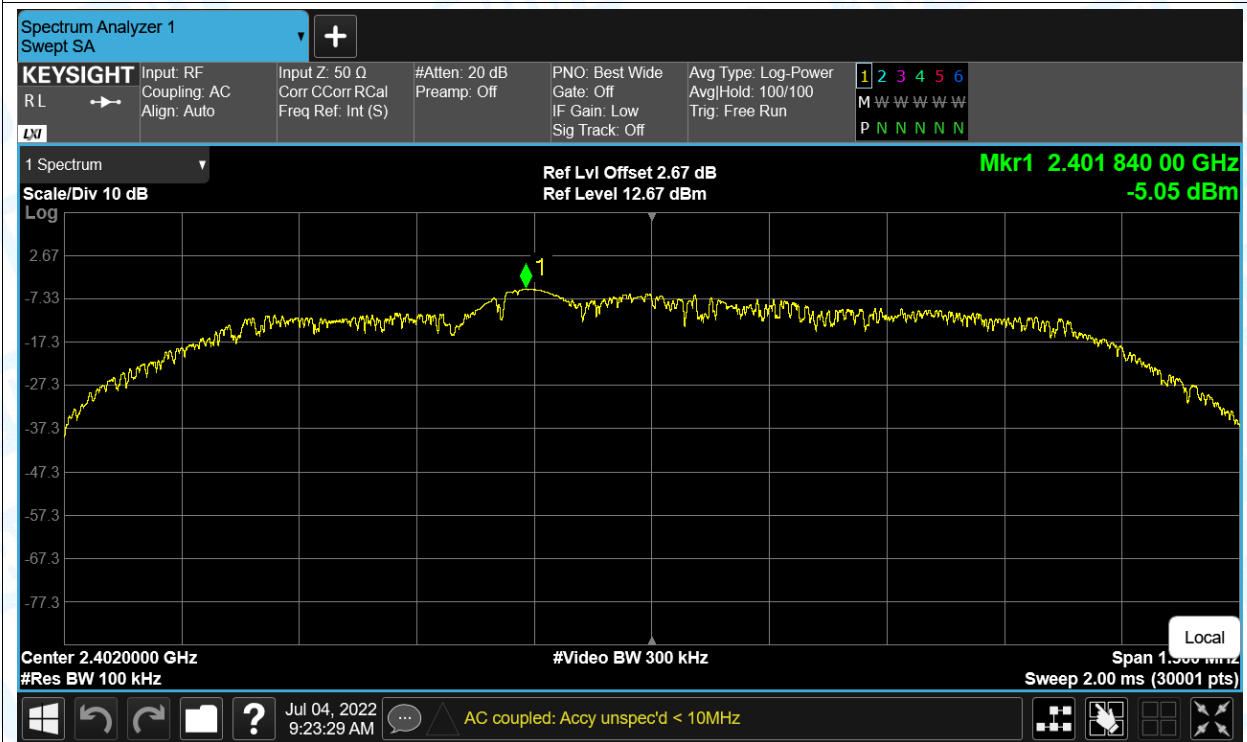
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



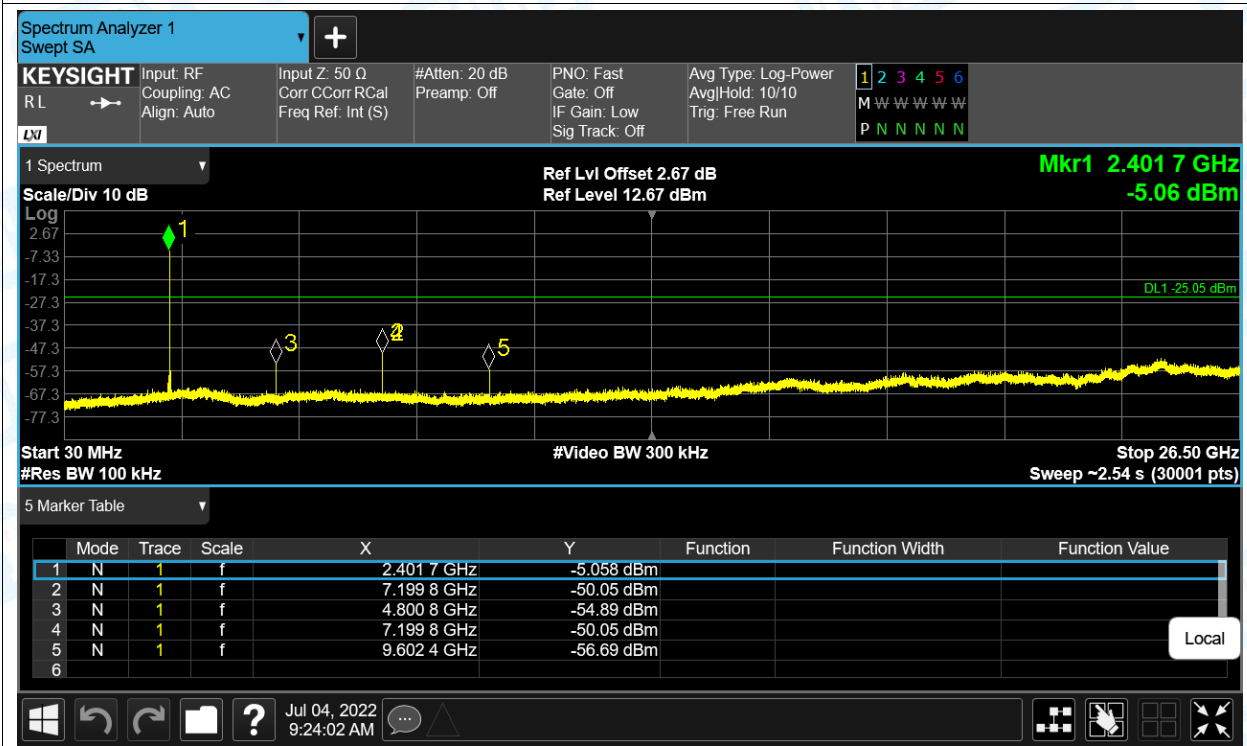
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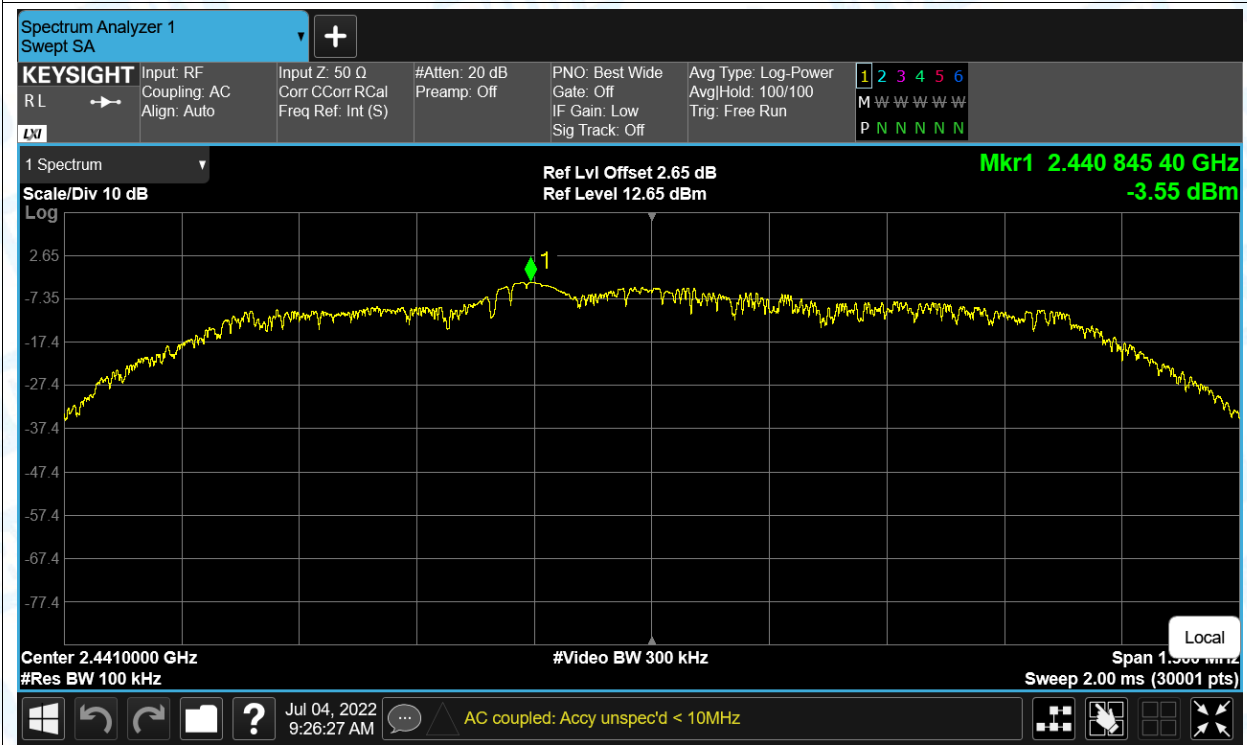
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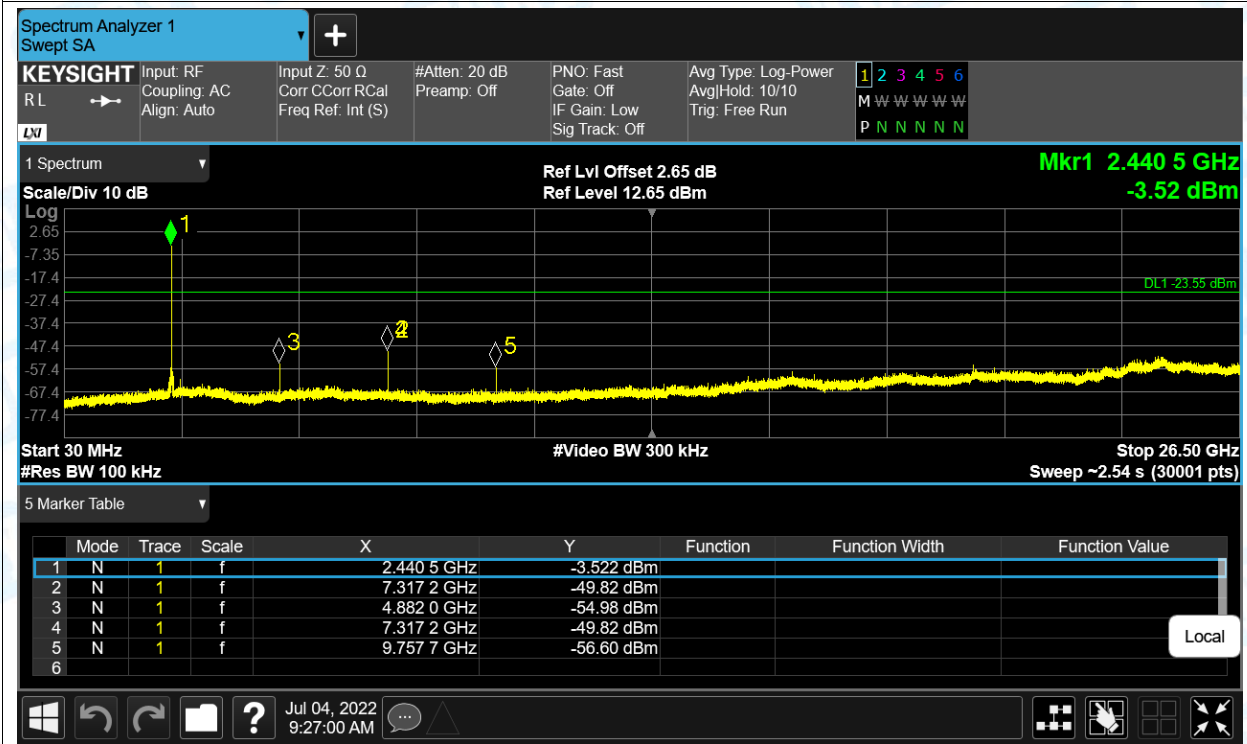
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



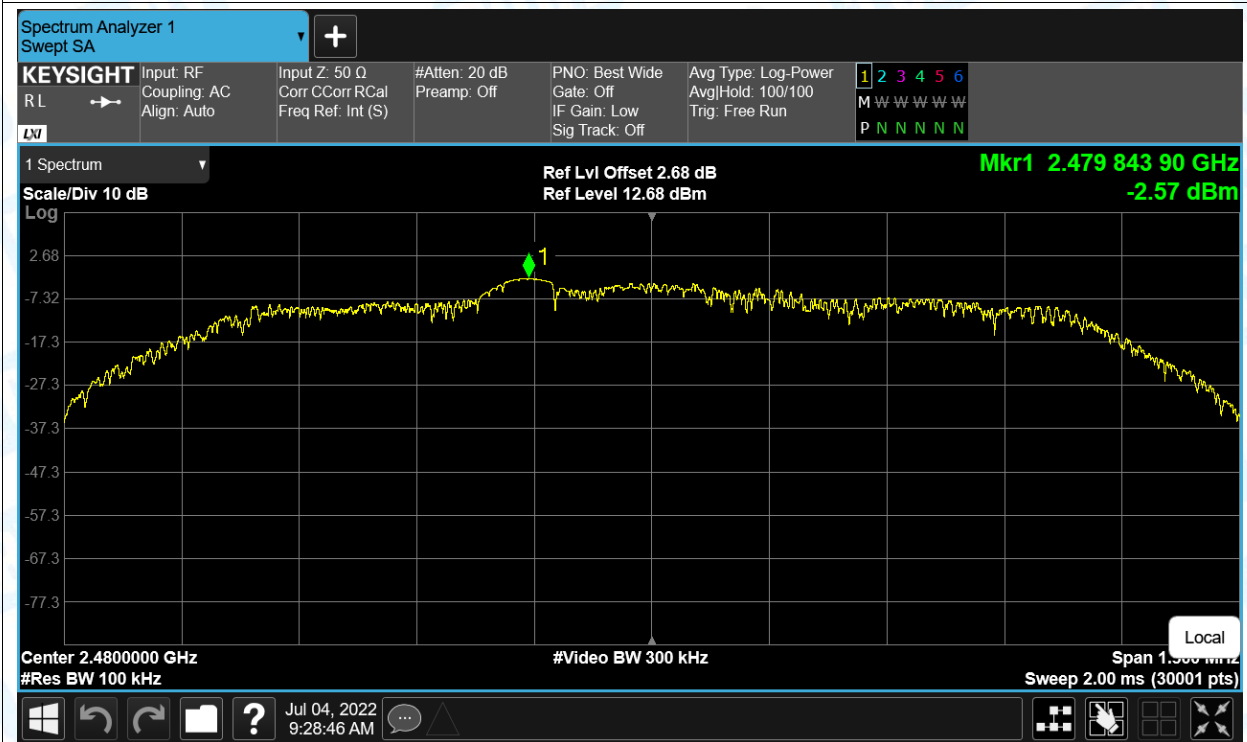
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



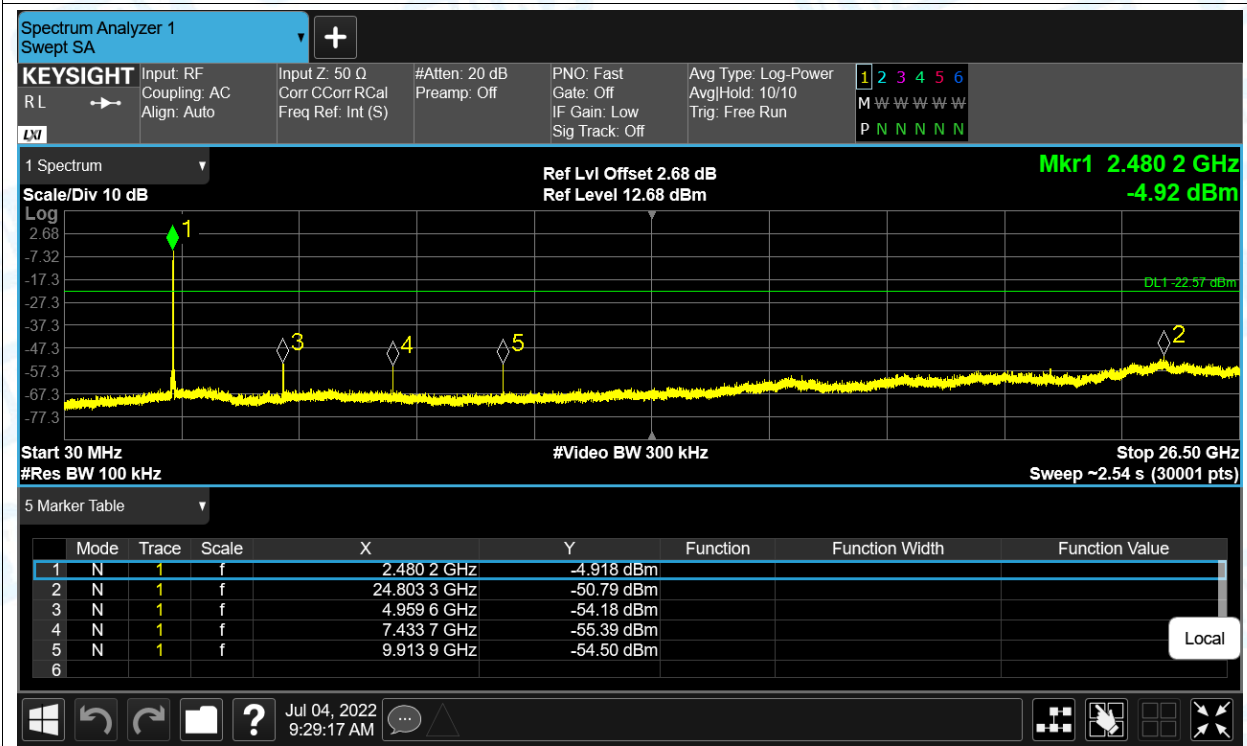
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission

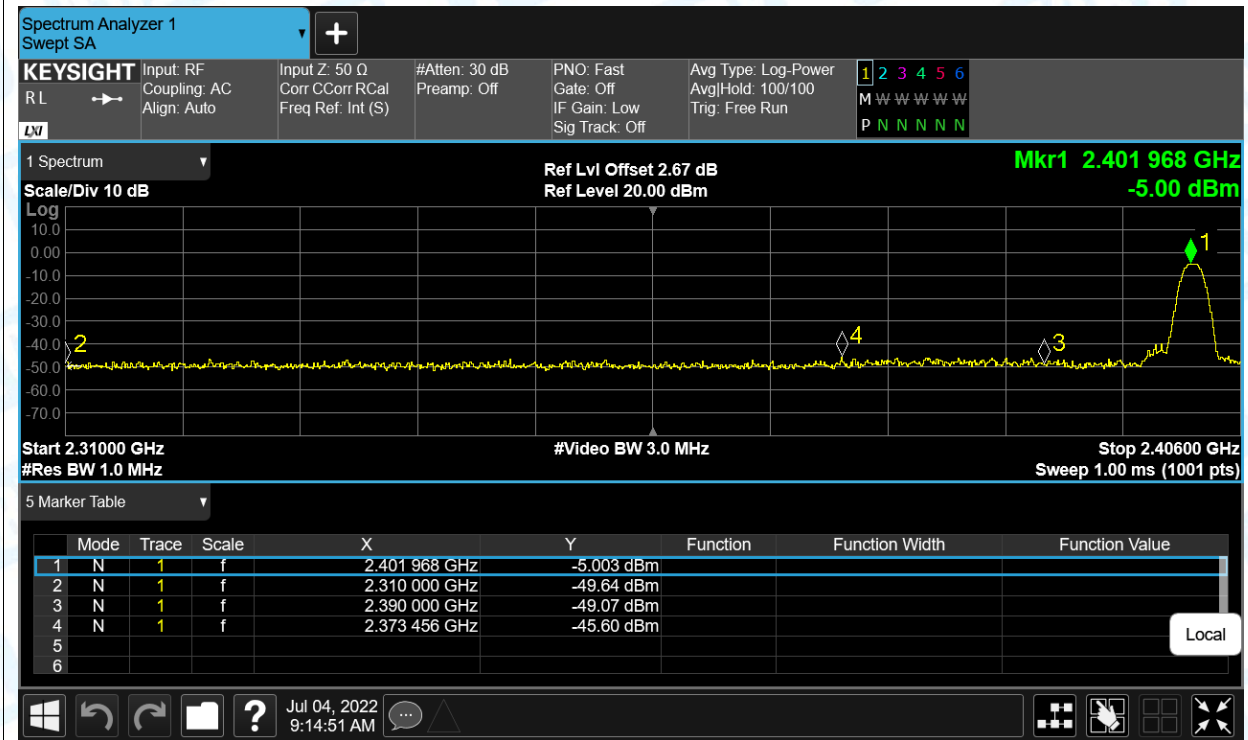


8. Restrict Band

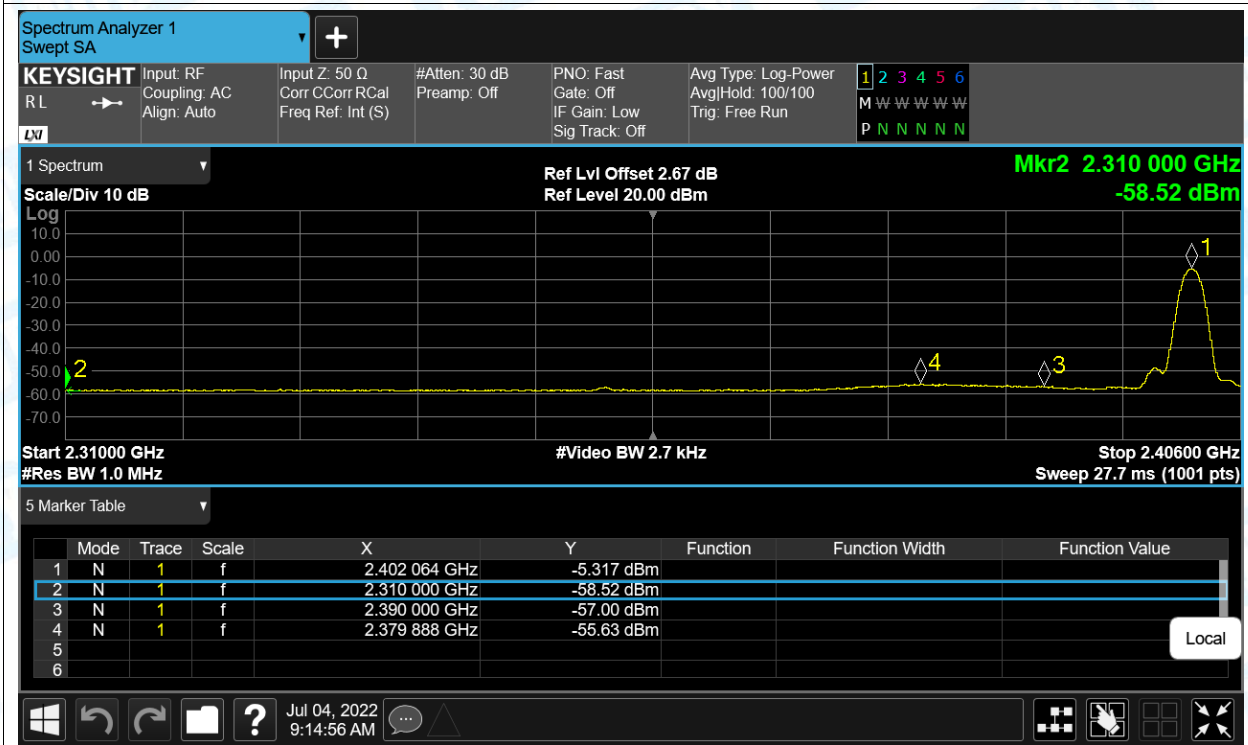
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBUV/m)	Detector	Limit (dBUV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-49.64	2	47.62	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-58.52	2	38.74	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2373.456	-45.6	2	51.66	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2379.888	-55.63	2	41.63	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-49.1	2	48.16	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.89	2	40.37	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-43.7	2	53.56	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-51.59	2	45.67	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2495.032	-42.56	2	54.7	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.512	-51.59	2	45.67	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-45.93	2	51.33	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-54.22	2	43.04	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-49.19	2	48.07	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-58.59	2	38.67	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2388.816	-45.98	2	51.28	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2379.024	-55.64	2	41.62	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-48.53	2	48.73	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-56.95	2	40.31	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-45.28	2	51.98	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-53.67	2	43.59	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2493.832	-42.69	2	54.57	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.656	-53.13	2	44.13	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-45.3	2	51.96	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-54.19	2	43.07	Average	54	Pass

Test Graphs

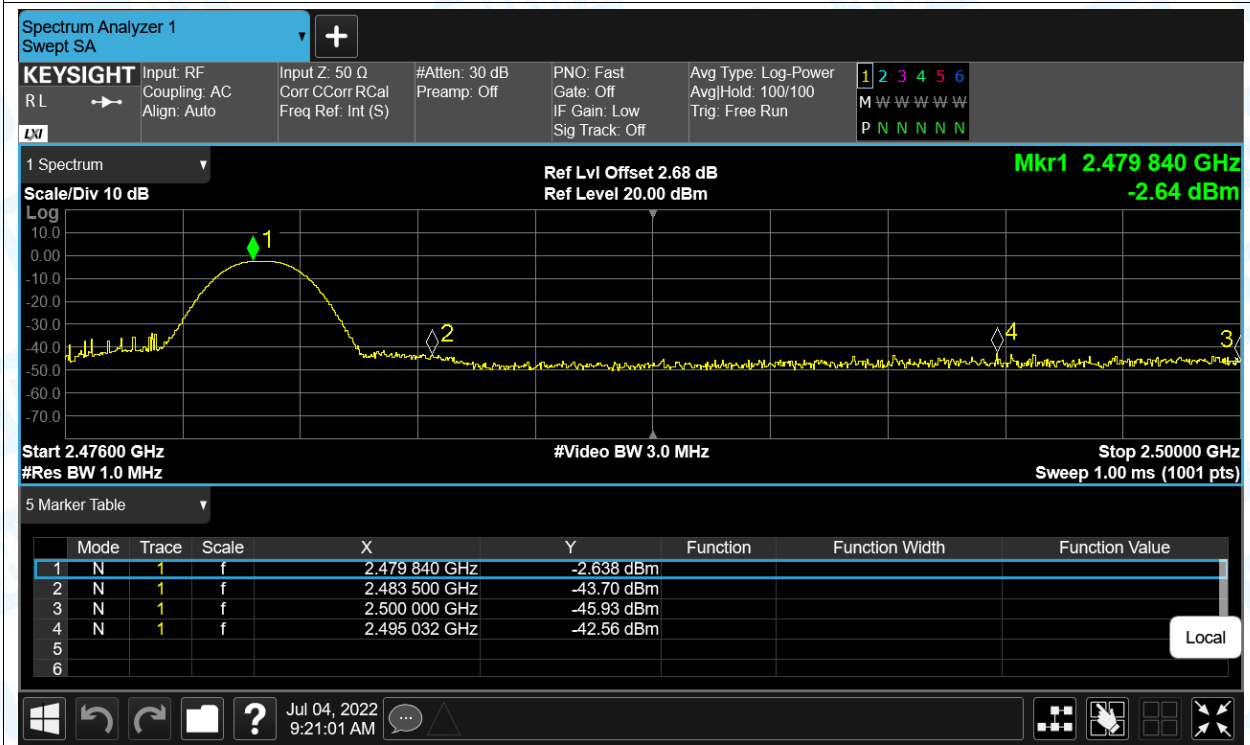
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



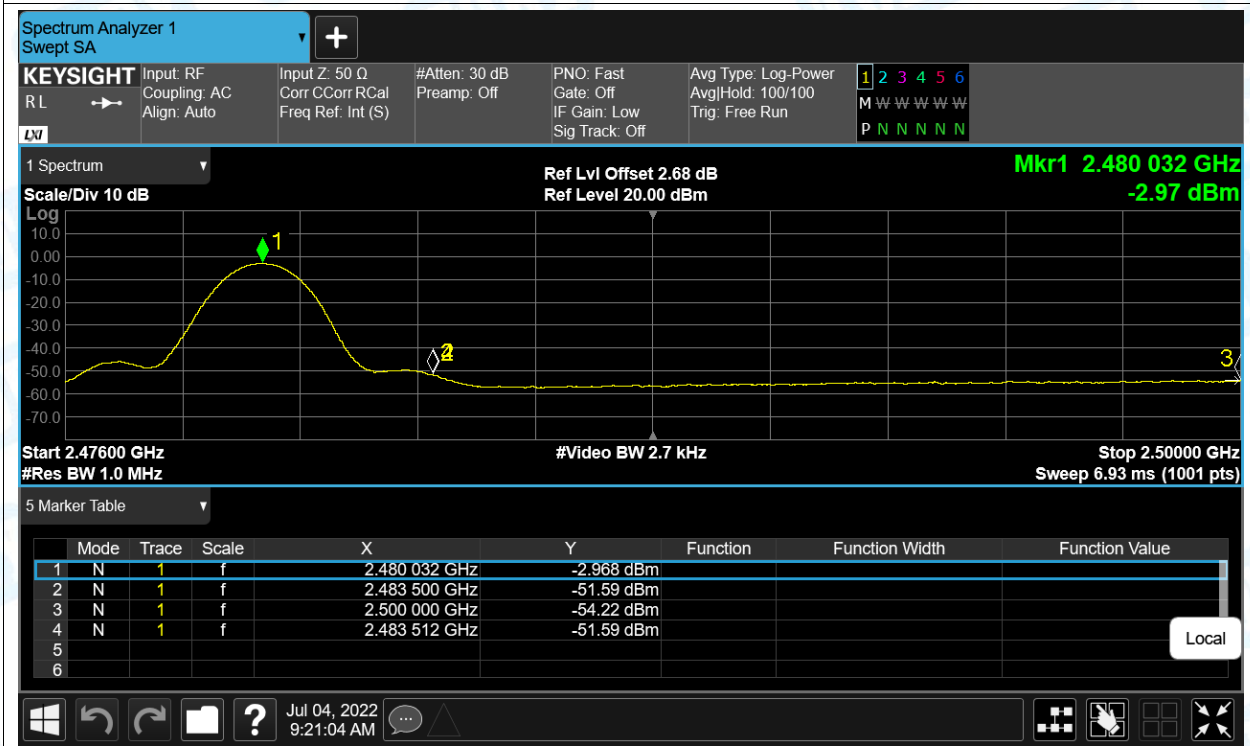
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



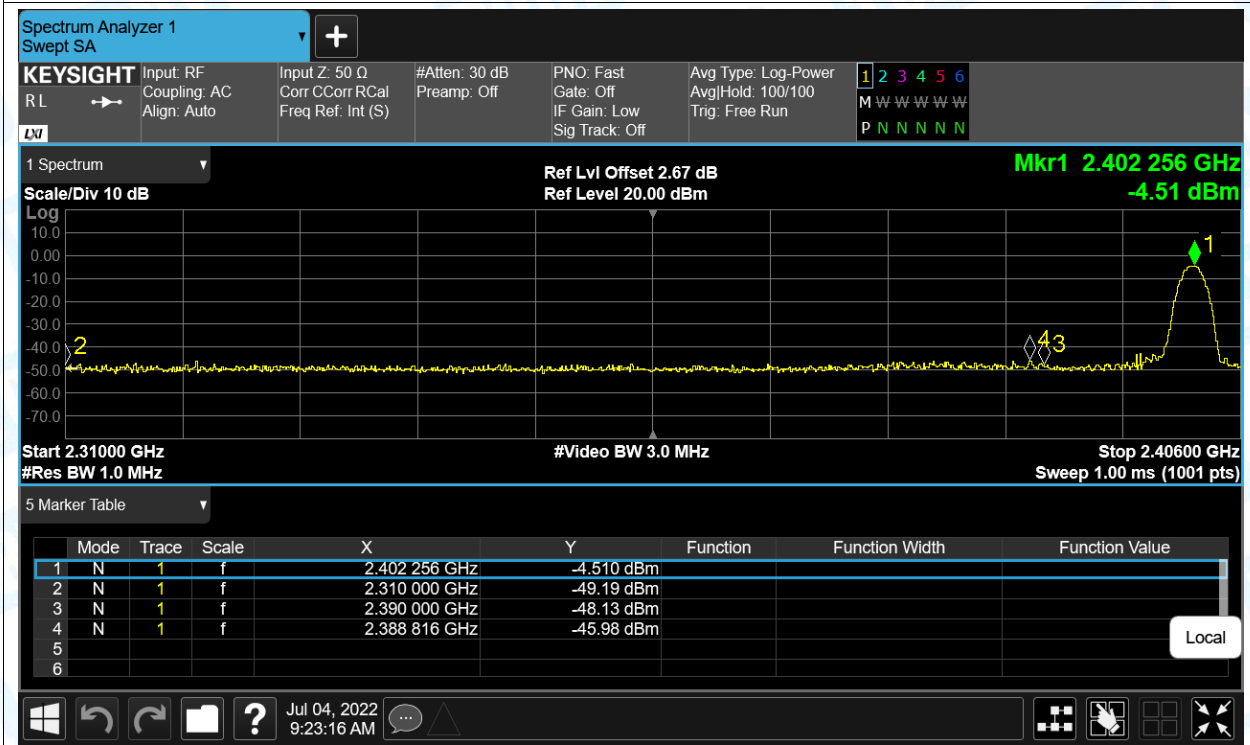
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



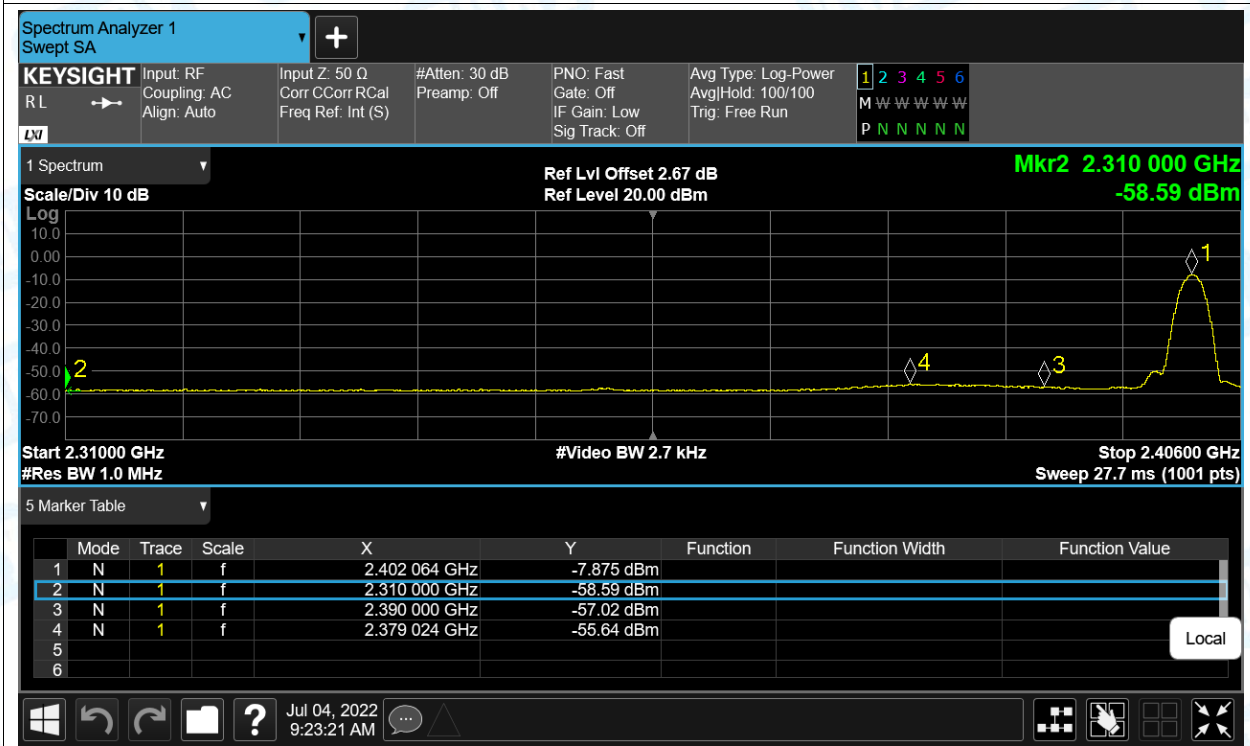
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



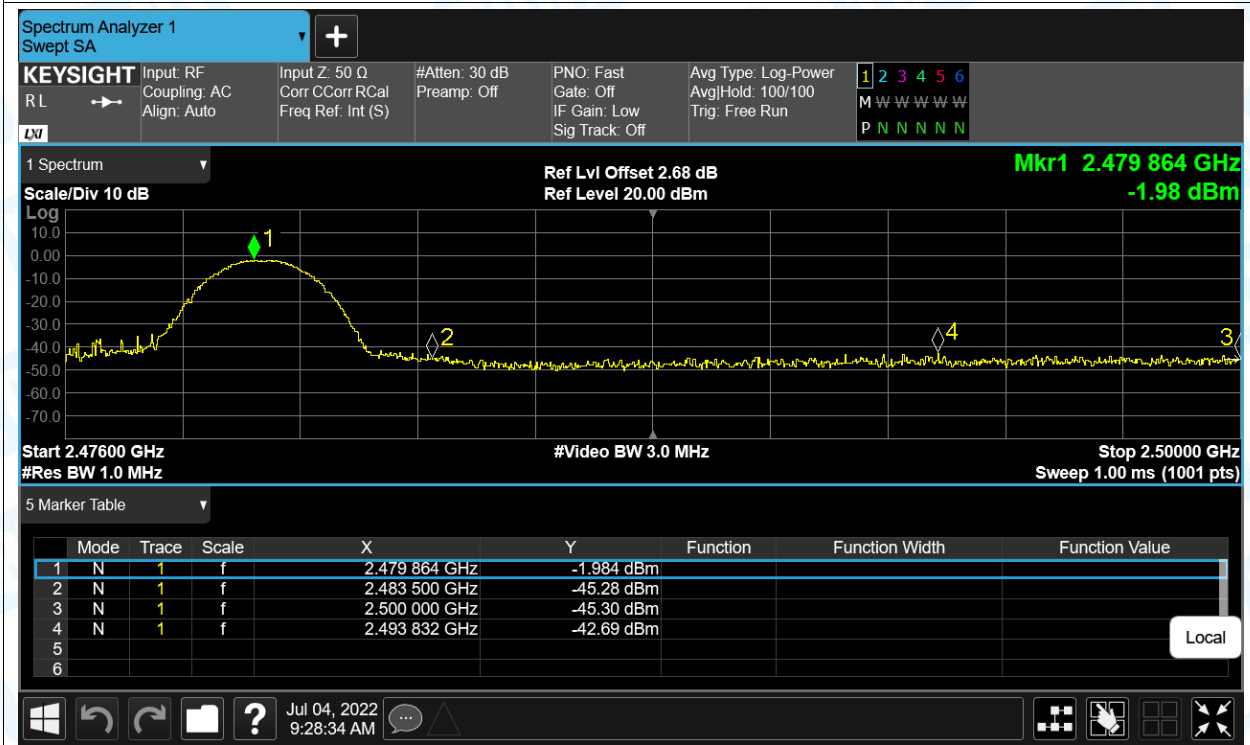
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



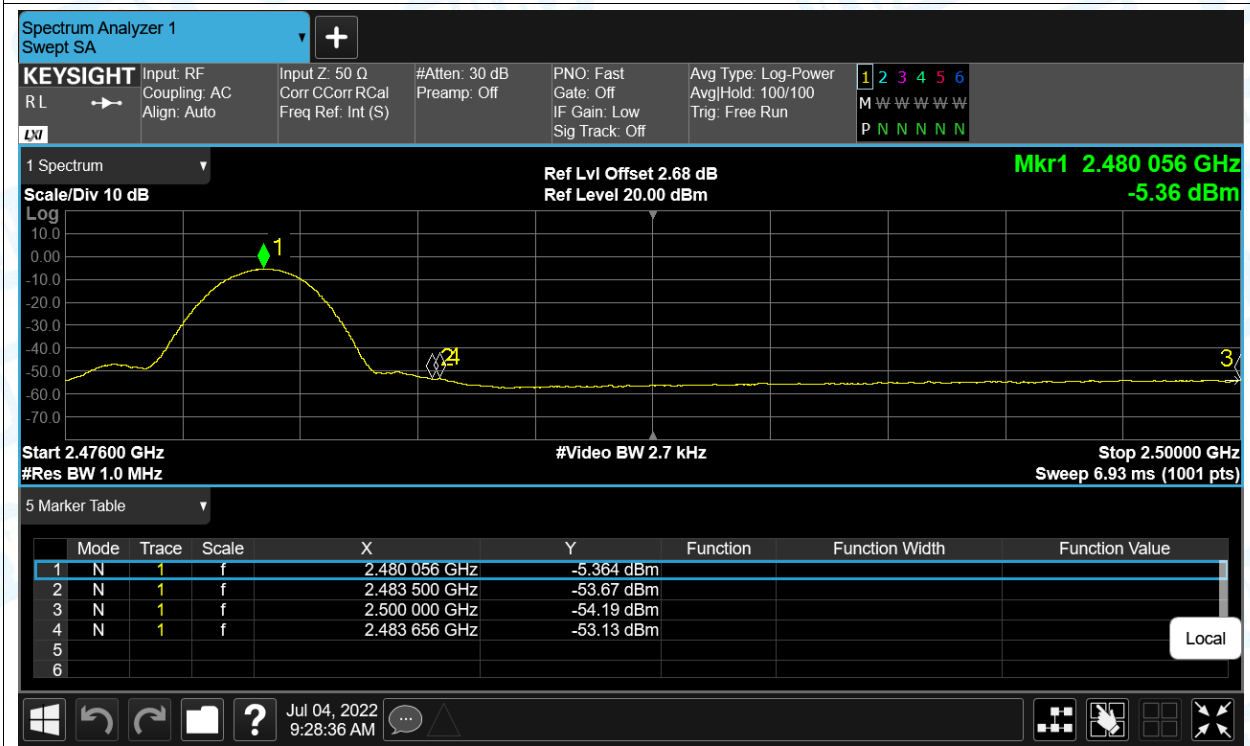
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



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

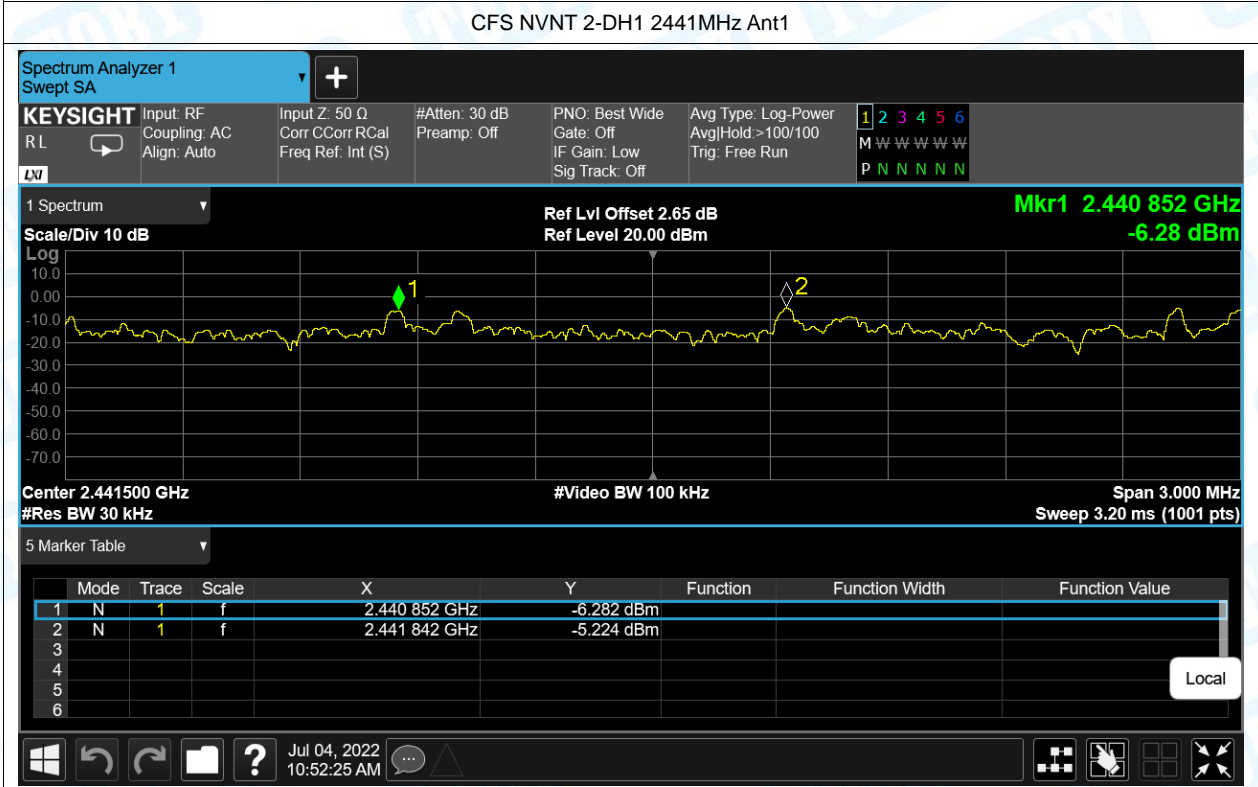
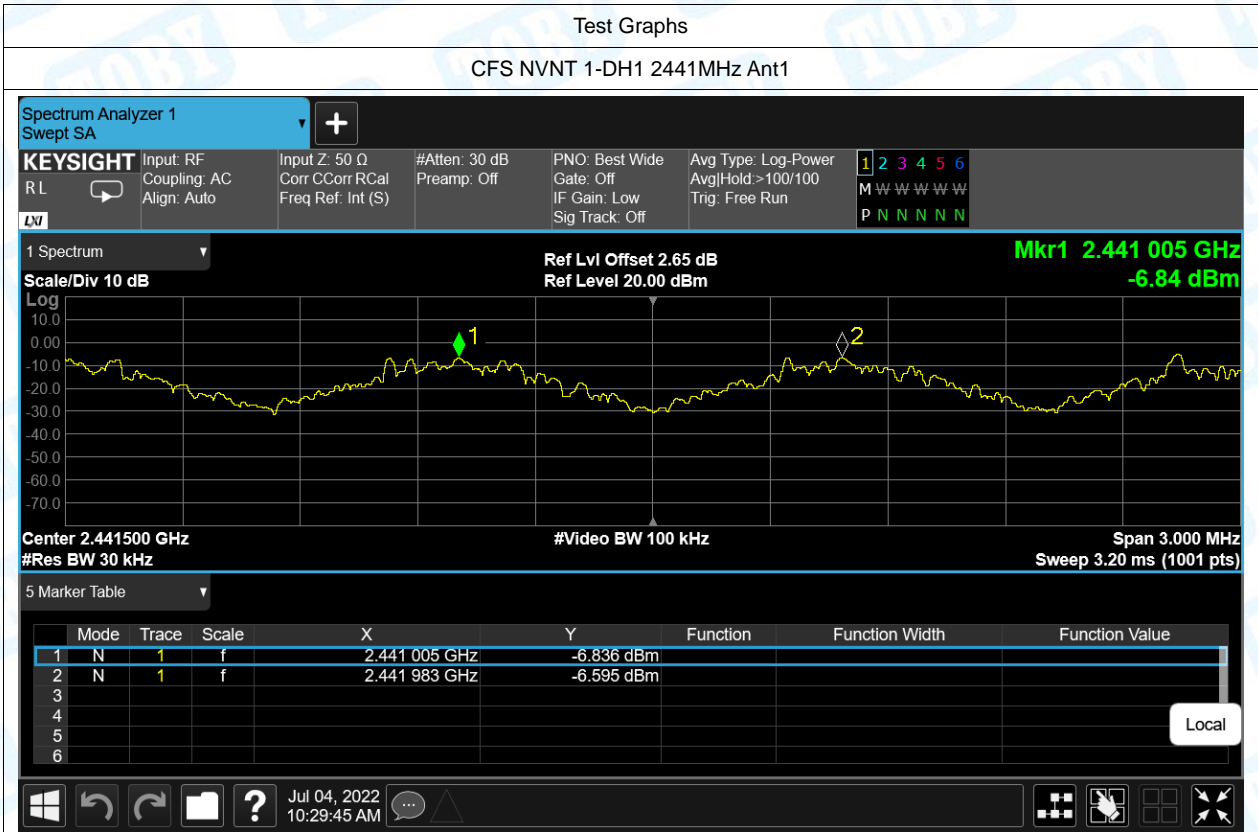


Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



9. Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2441.005	2441.983	0.978	0.57	Pass
NVNT	2-DH1	Ant1	2440.852	2441.842	0.99	0.82	Pass

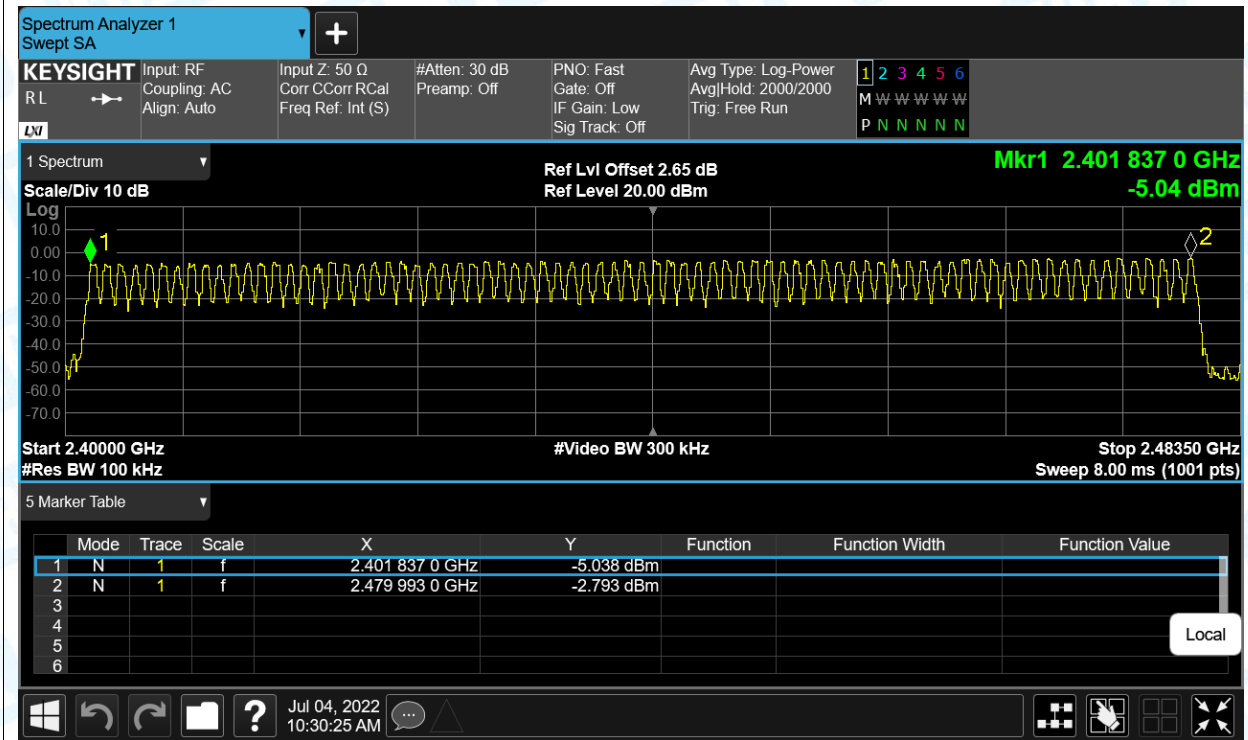


10. Number of Hopping Channel

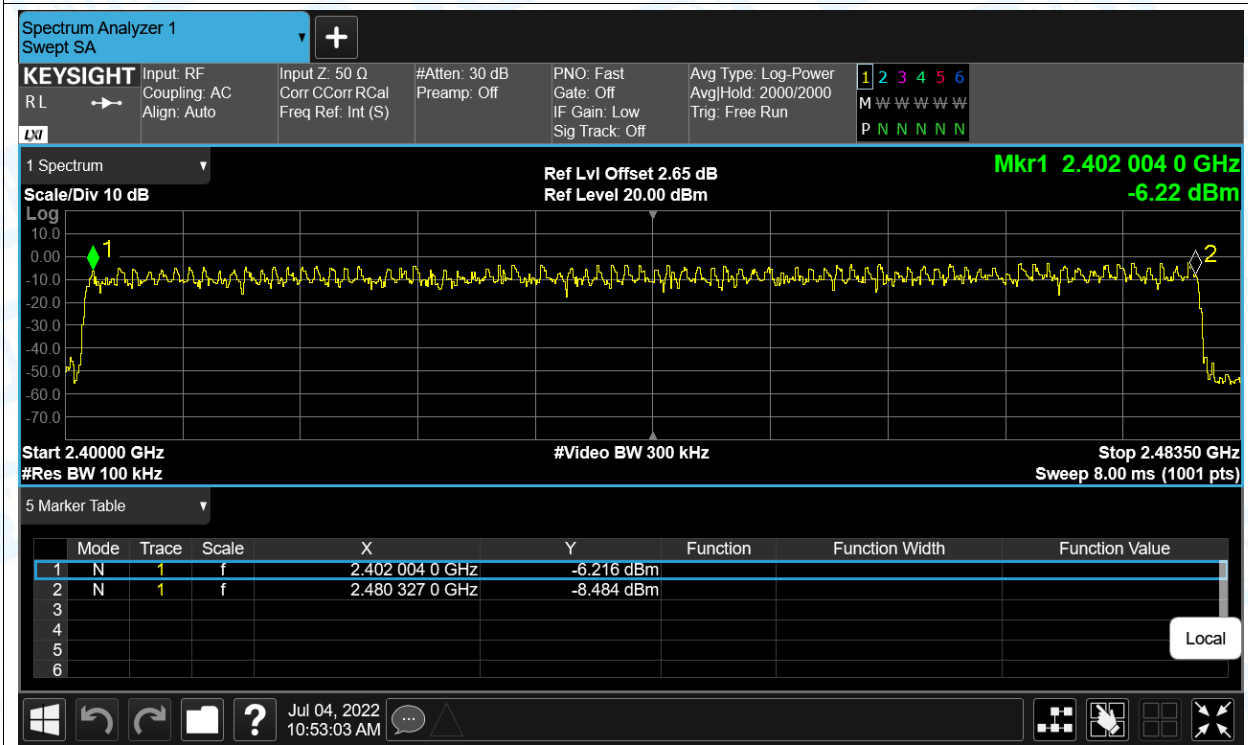
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass

Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1

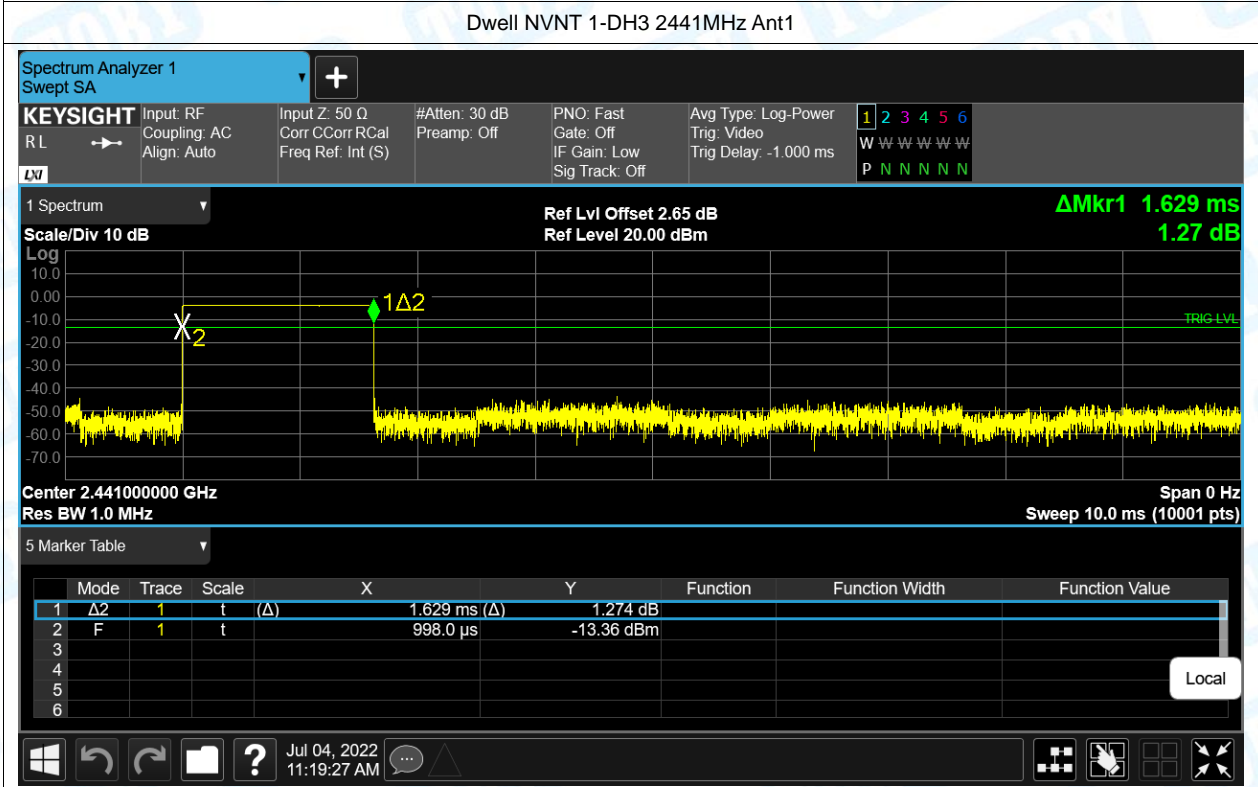
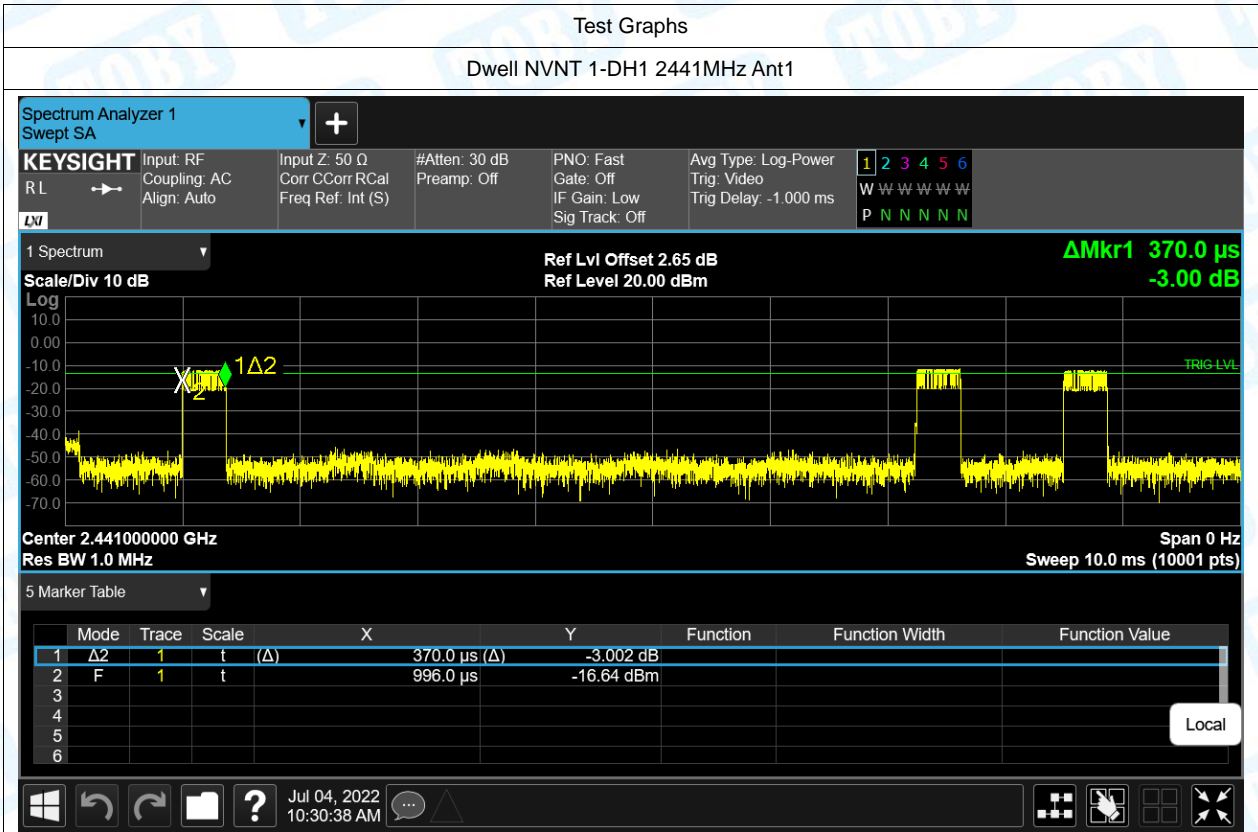


Hopping No. NVNT 2-DH1 2441MHz Ant1

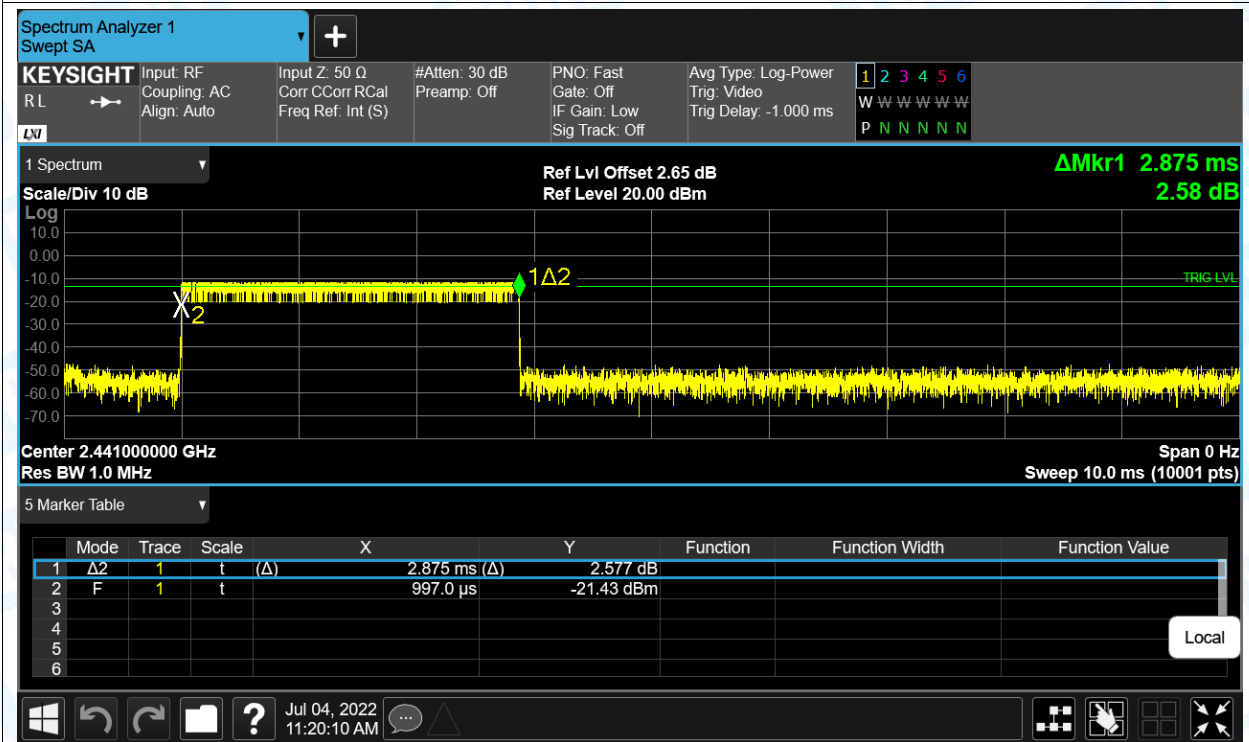


11. Dwell Time

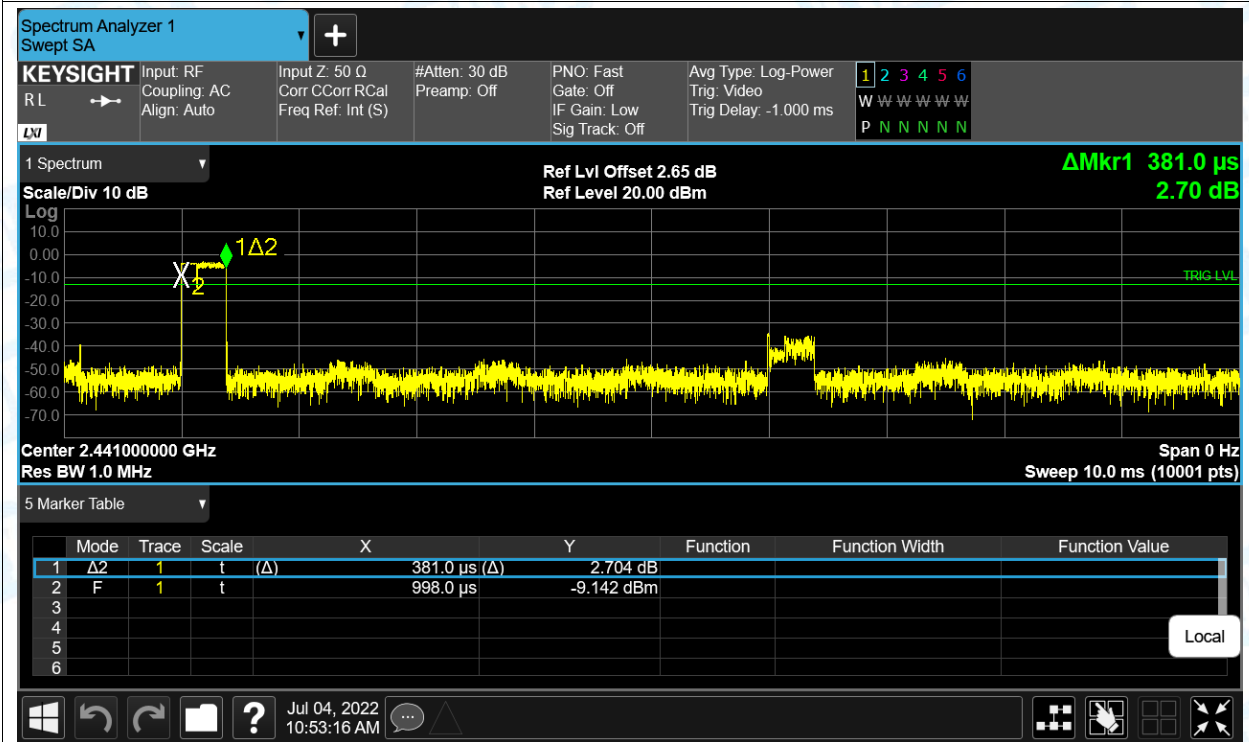
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.37	118.4	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.629	260.64	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.875	306.667	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.381	121.92	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.626	260.16	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.88	307.2	31600	400	Pass



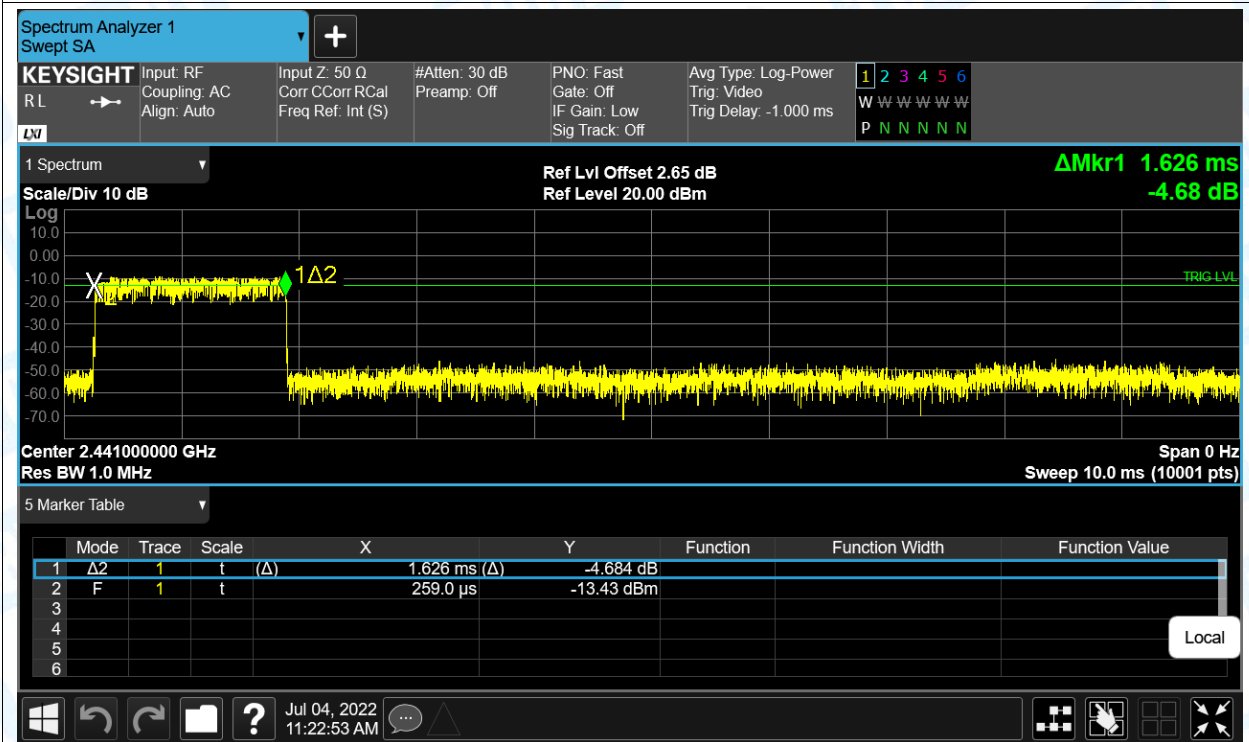
Dwell NVNT 1-DH5 2441MHz Ant1



Dwell NVNT 2-DH1 2441MHz Ant1



Dwell NVNT 2-DH3 2441MHz Ant1



Dwell NVNT 2-DH5 2441MHz Ant1

