

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

General Description of EUT	
Product Name:	Illuminato Q4
Test Model:	Illuminato Q4
Sample ID:	RW-C-202209-0005-9-2#
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	55%
Test Voltage:	DC 11.1V
Test Engineer:	Liu Ji Ming
Note: For a more detailed features description, please refer to the report TBR-C-202209-0005-142	

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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	28.57	5.44	2.78
NVNT	1-DH1	2441	Ant1	28.35	5.47	2.78
NVNT	1-DH1	2480	Ant1	29.13	5.36	2.7
NVNT	2-DH1	2402	Ant1	29.69	5.27	2.63
NVNT	2-DH1	2441	Ant1	30.23	5.2	2.56
NVNT	2-DH1	2480	Ant1	29.69	5.27	2.63
NVNT	3-DH1	2402	Ant1	29.46	5.31	2.63
NVNT	3-DH1	2441	Ant1	29.69	5.27	2.63
NVNT	3-DH1	2480	Ant1	29.69	5.27	2.63

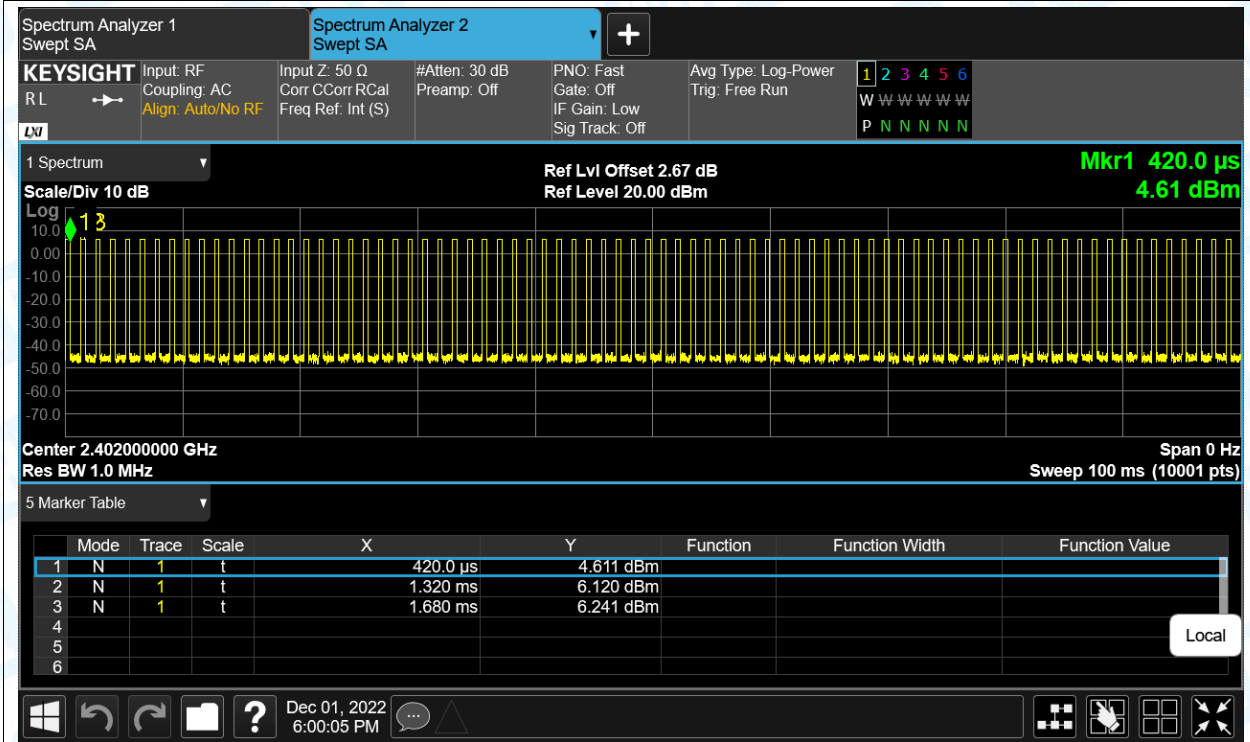
Note: $Duty\ Cycle(\%) = \frac{ON(ms)}{ON(ms)+OFF(ms)}$

$ON(ms) = Maker3 - Maker2$

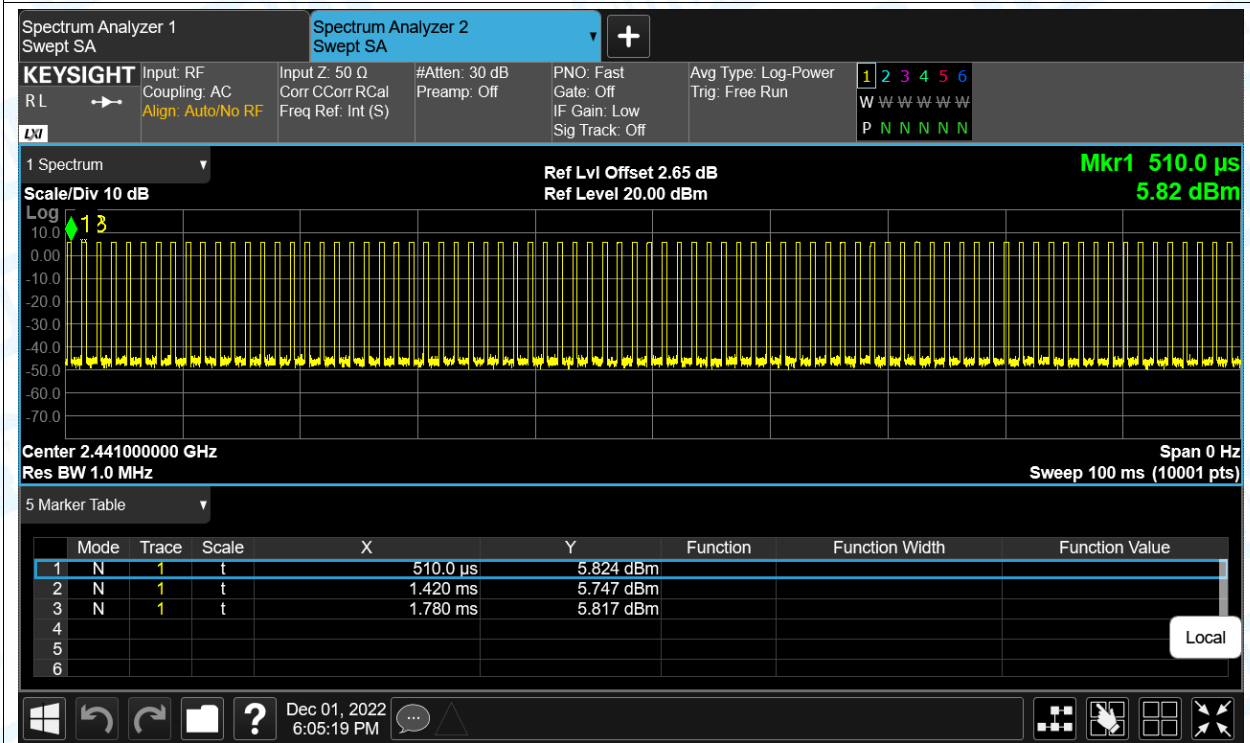
$(ON(ms)+OFF(ms)) = Maker3 - Maker1$

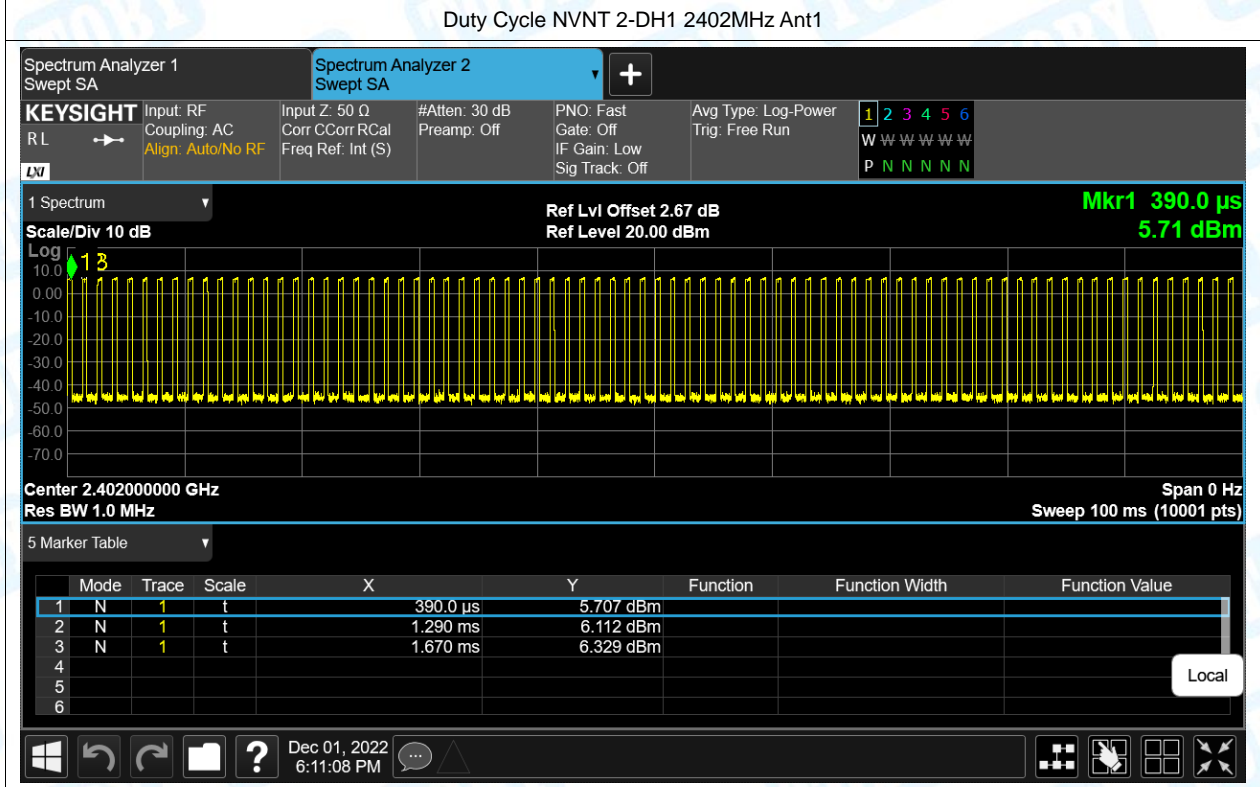
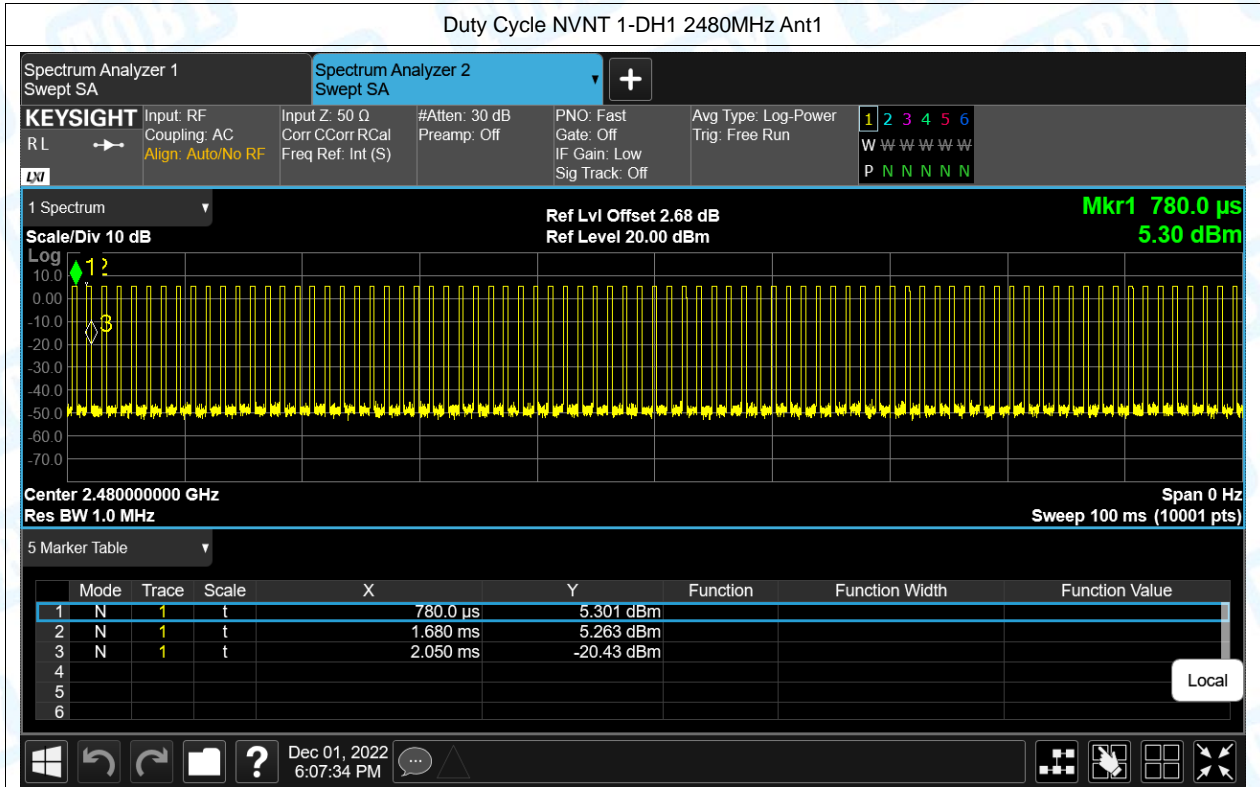
Test Graphs

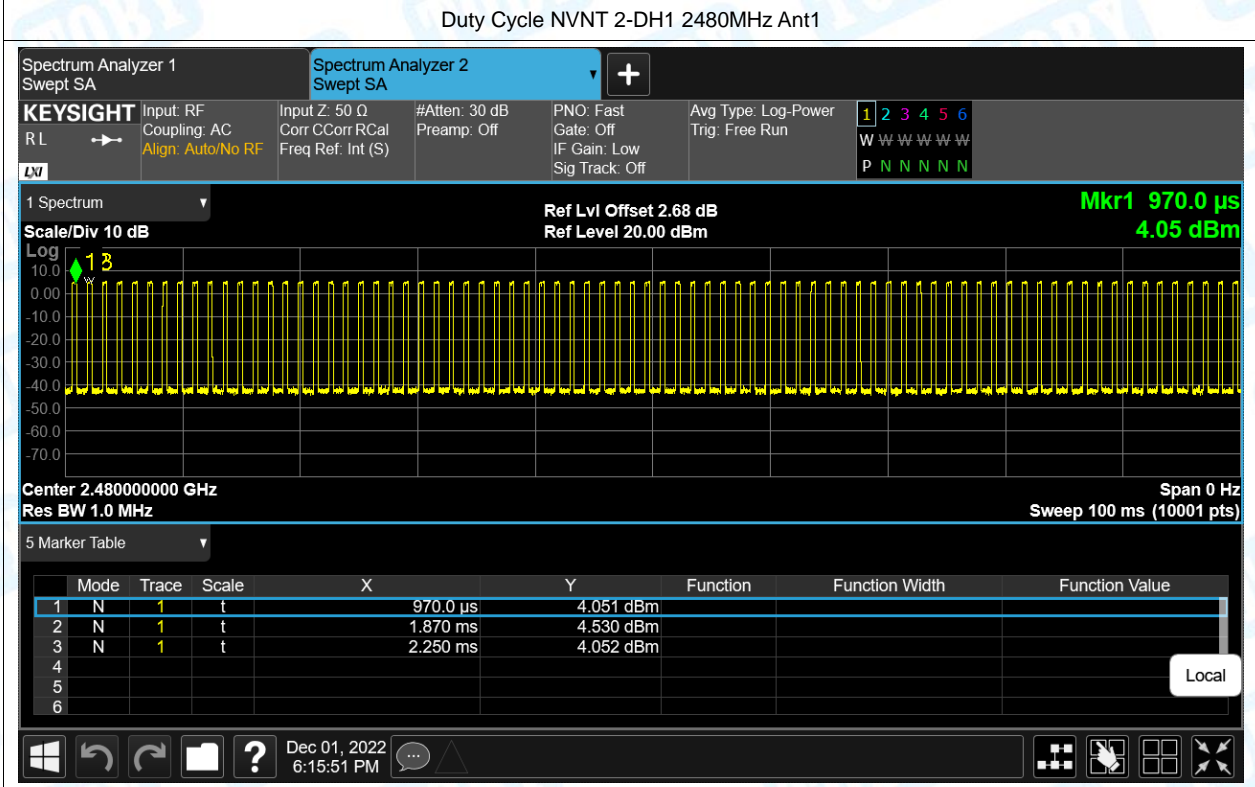
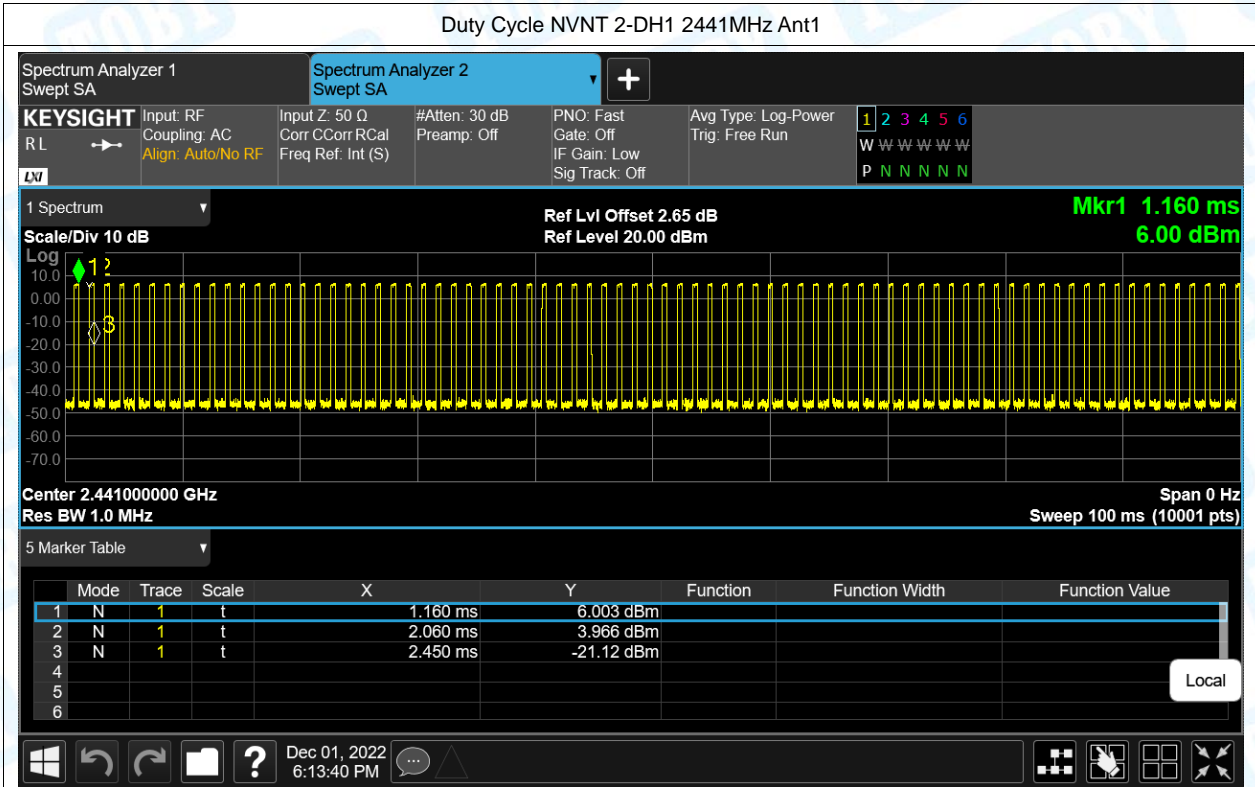
Duty Cycle NVNT 1-DH1 2402MHz Ant1

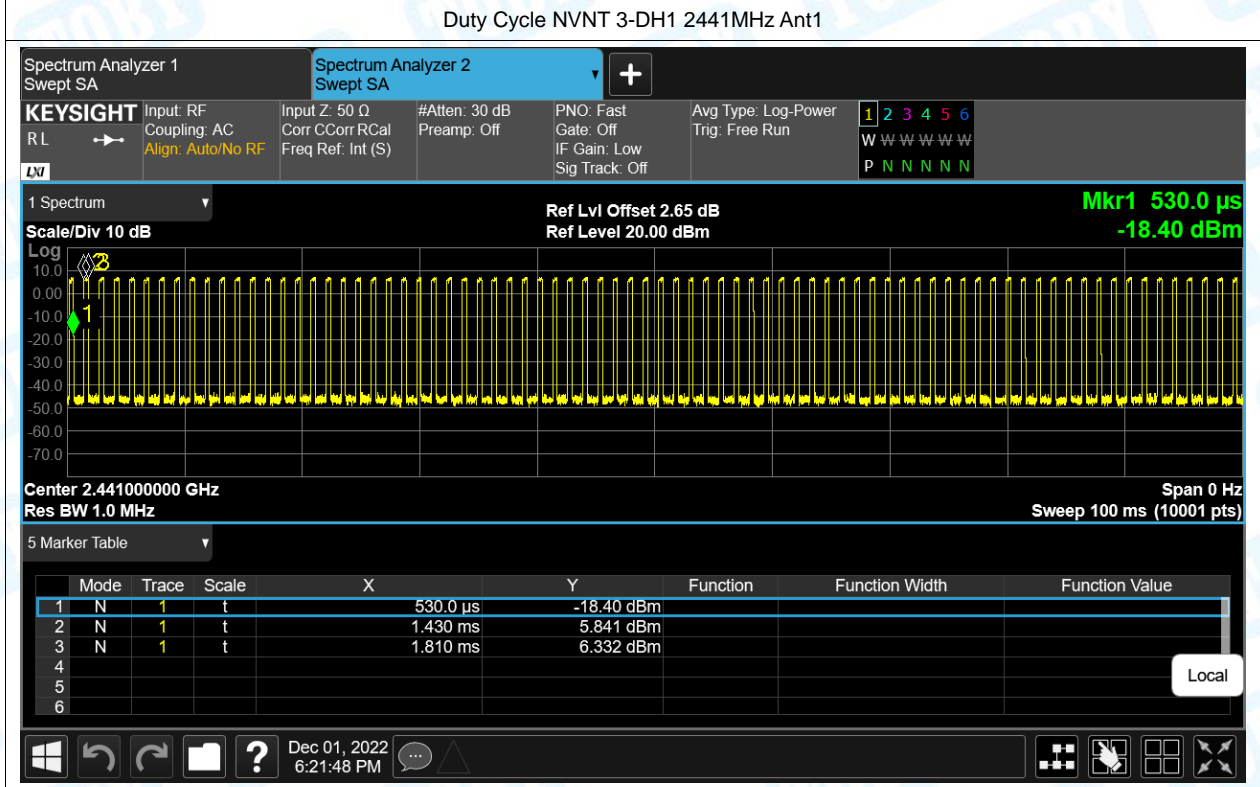
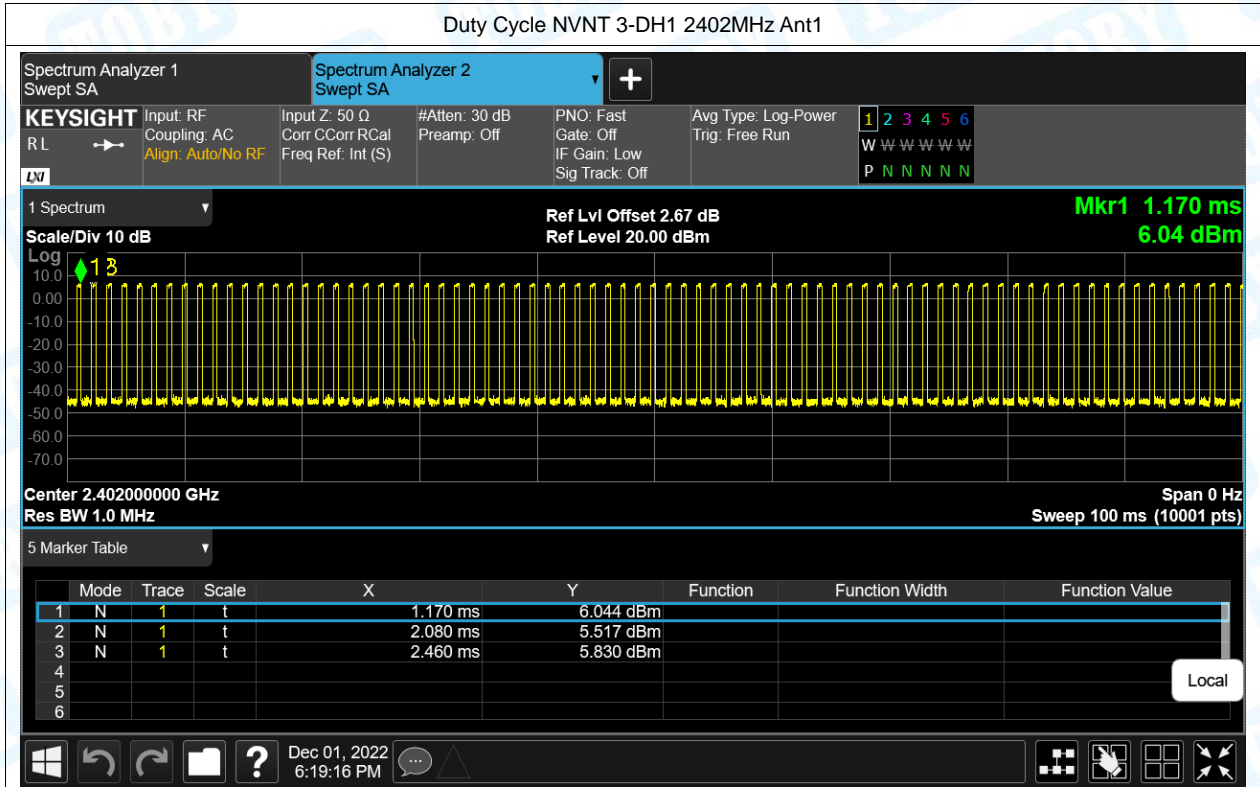


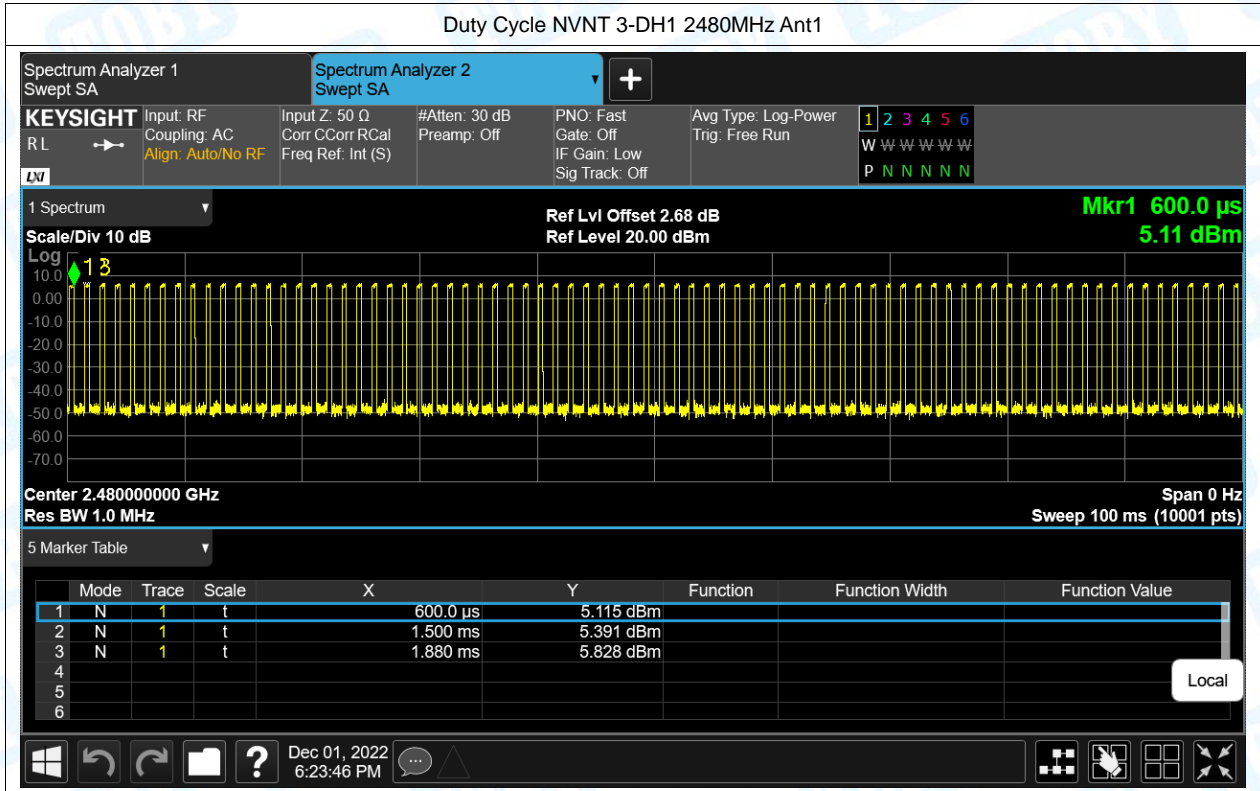
Duty Cycle NVNT 1-DH1 2441MHz Ant1





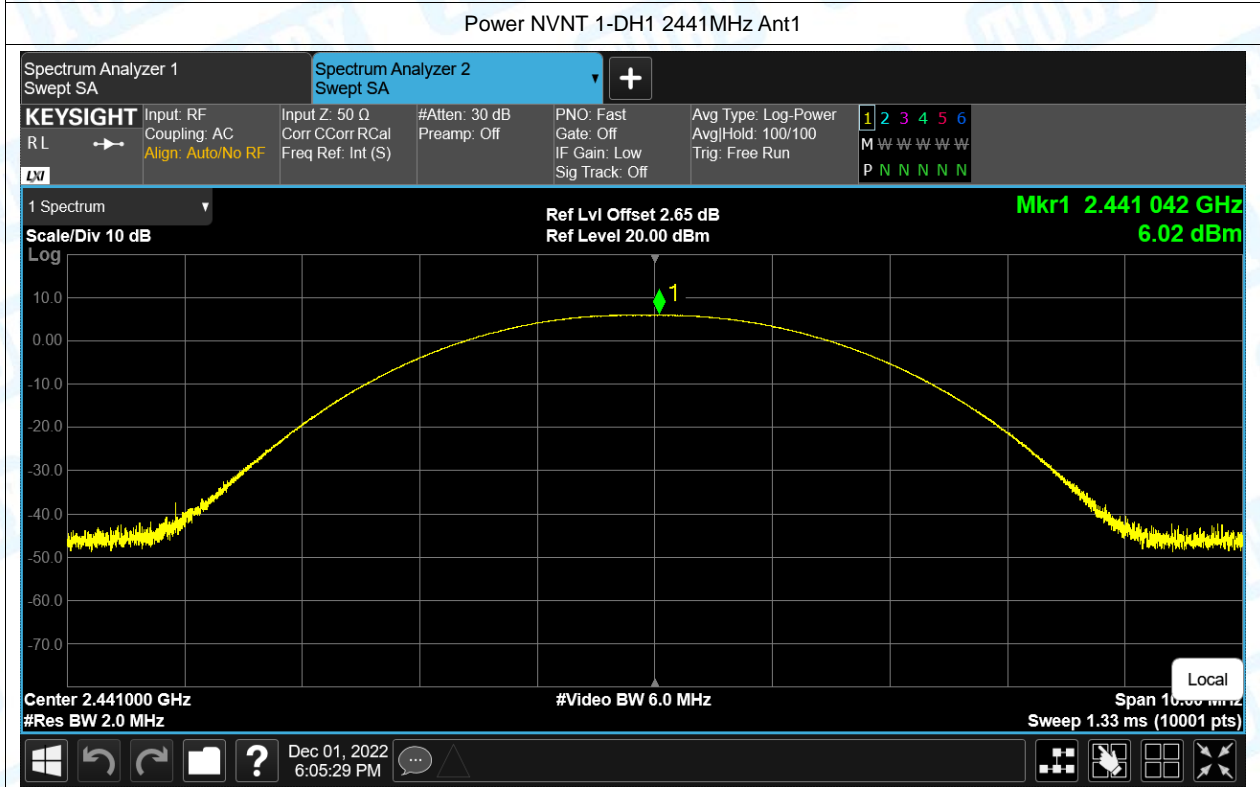
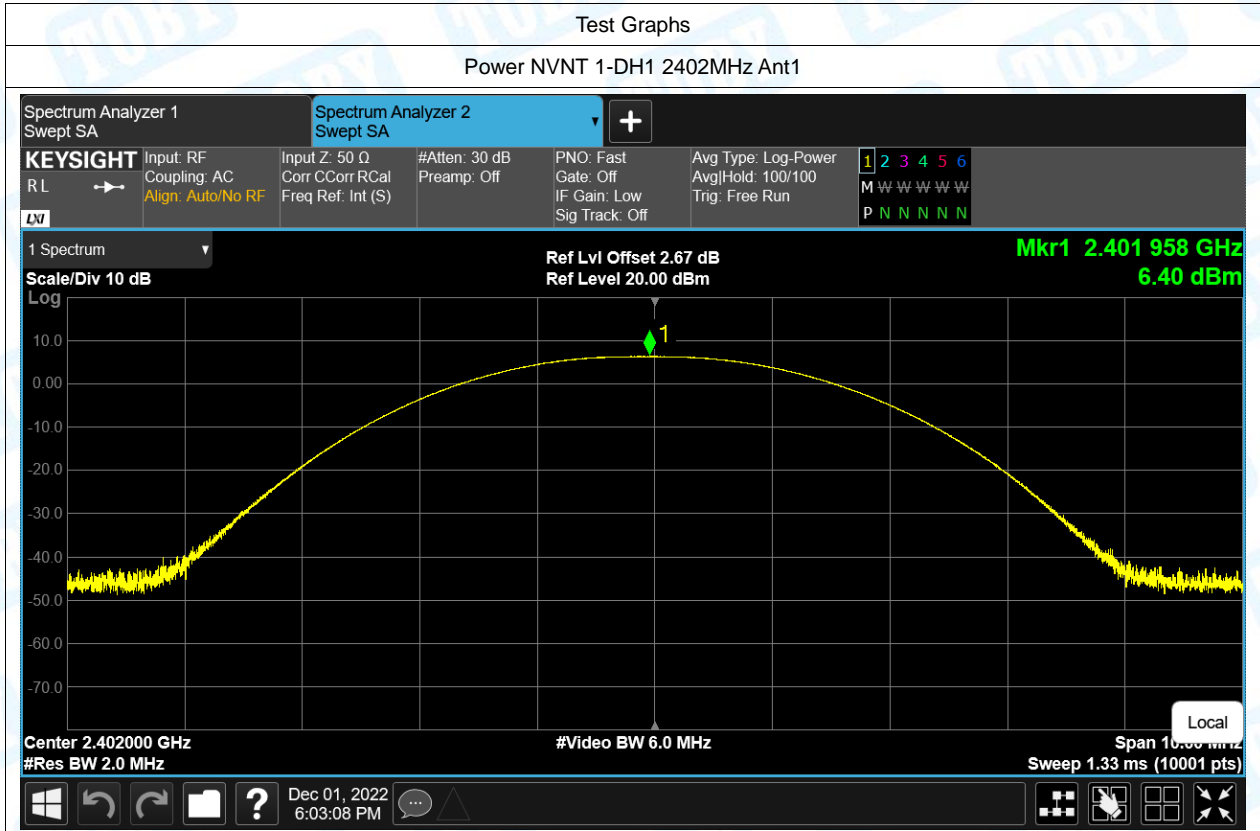


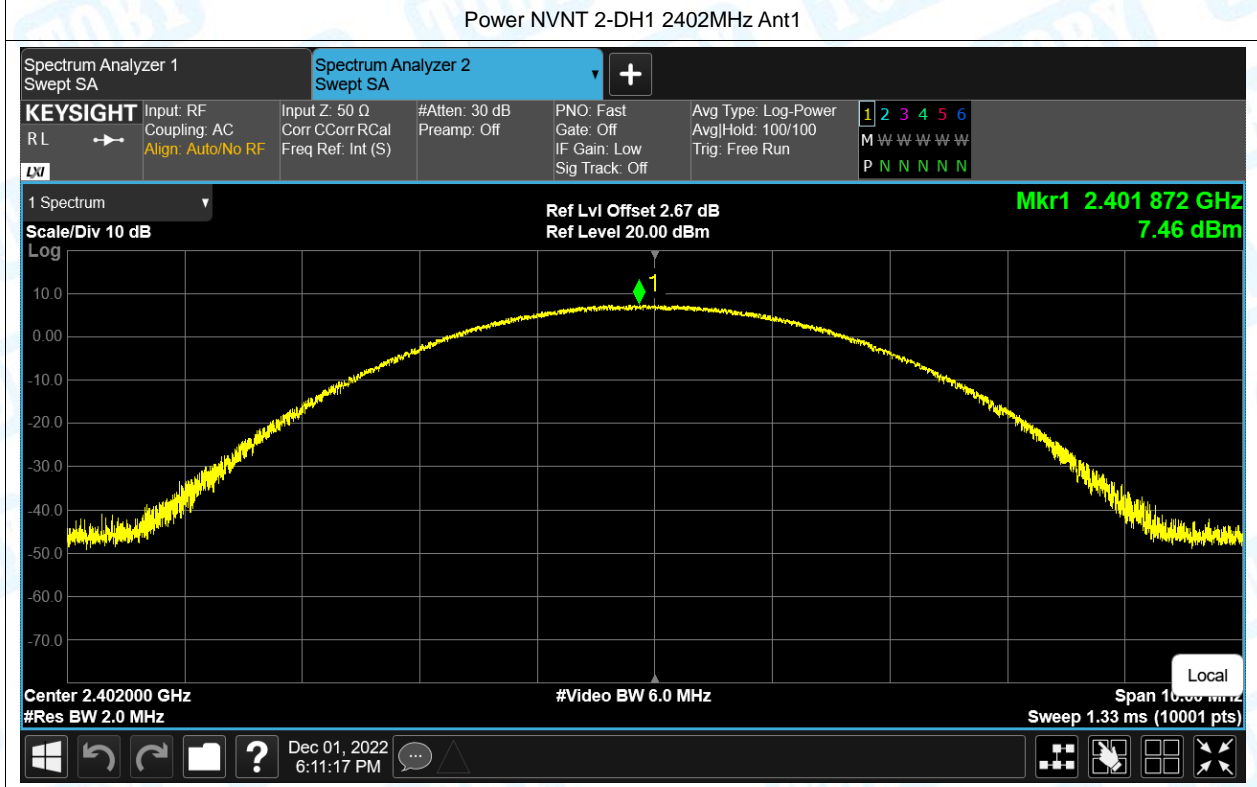
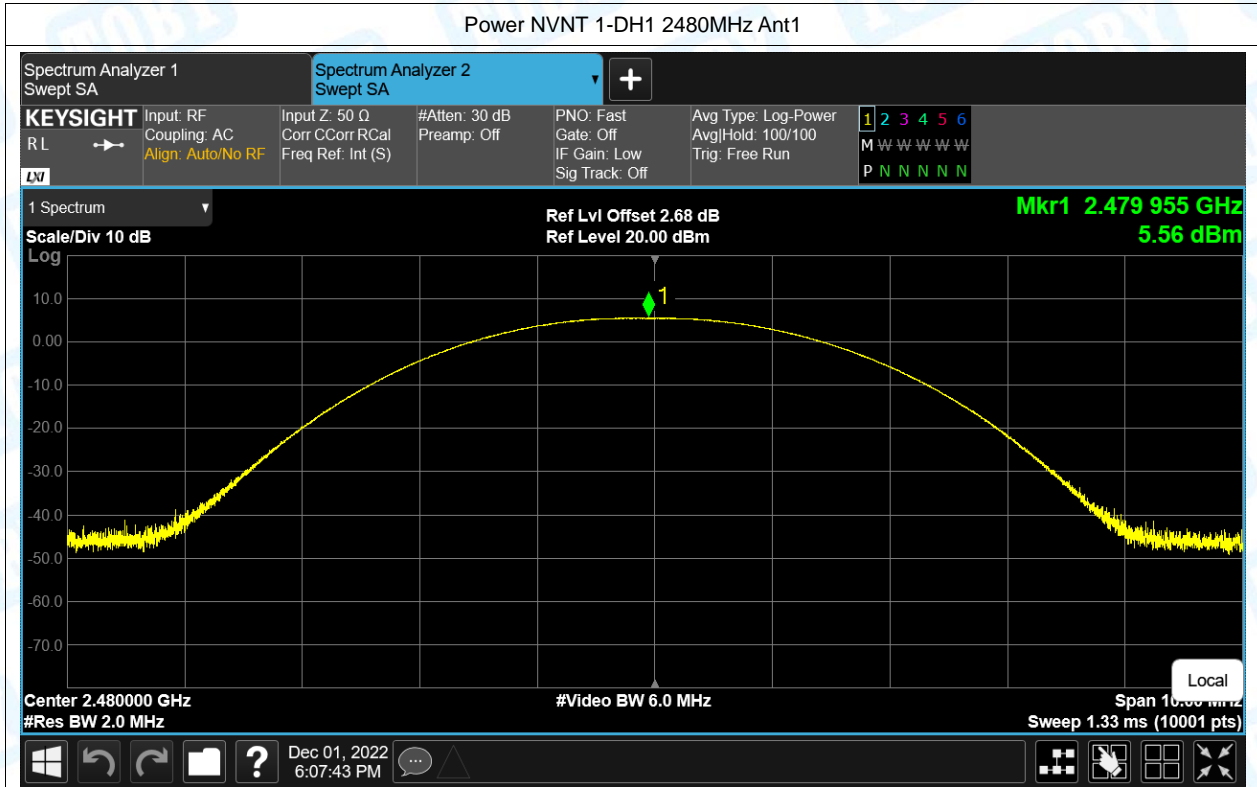


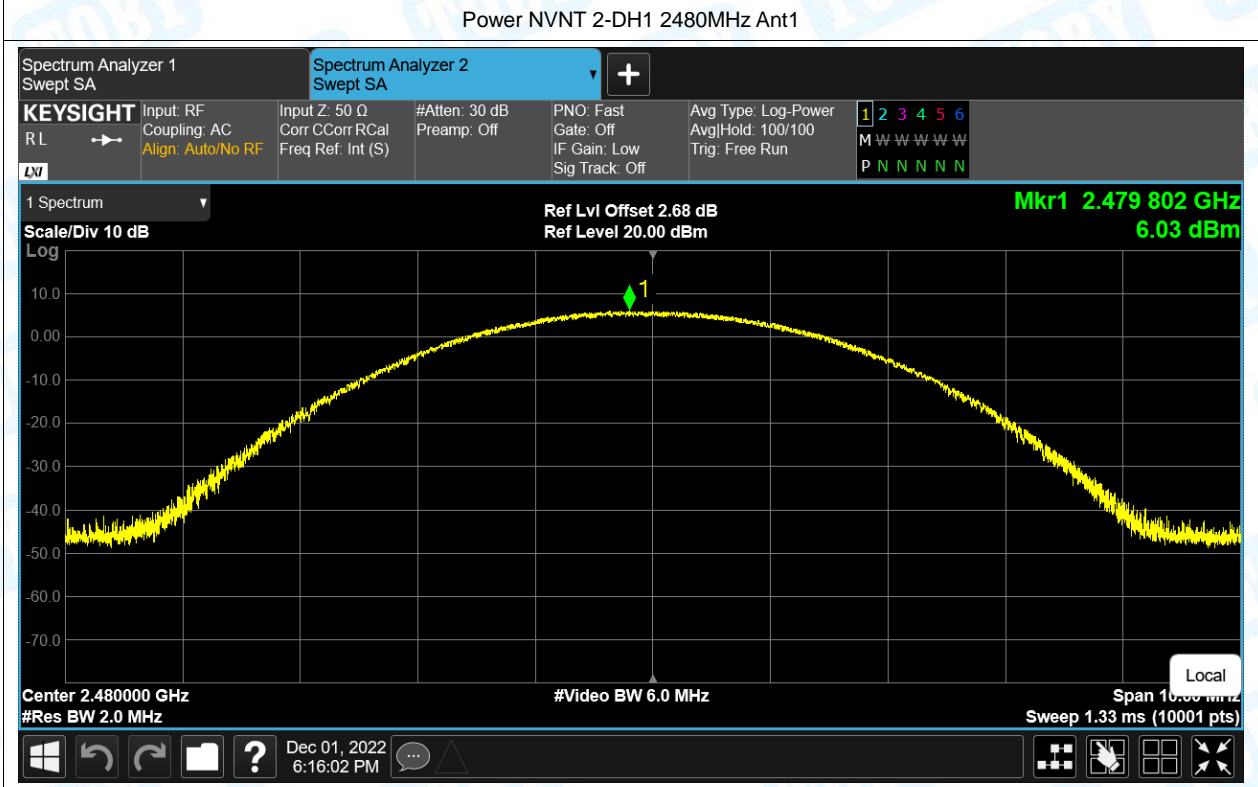
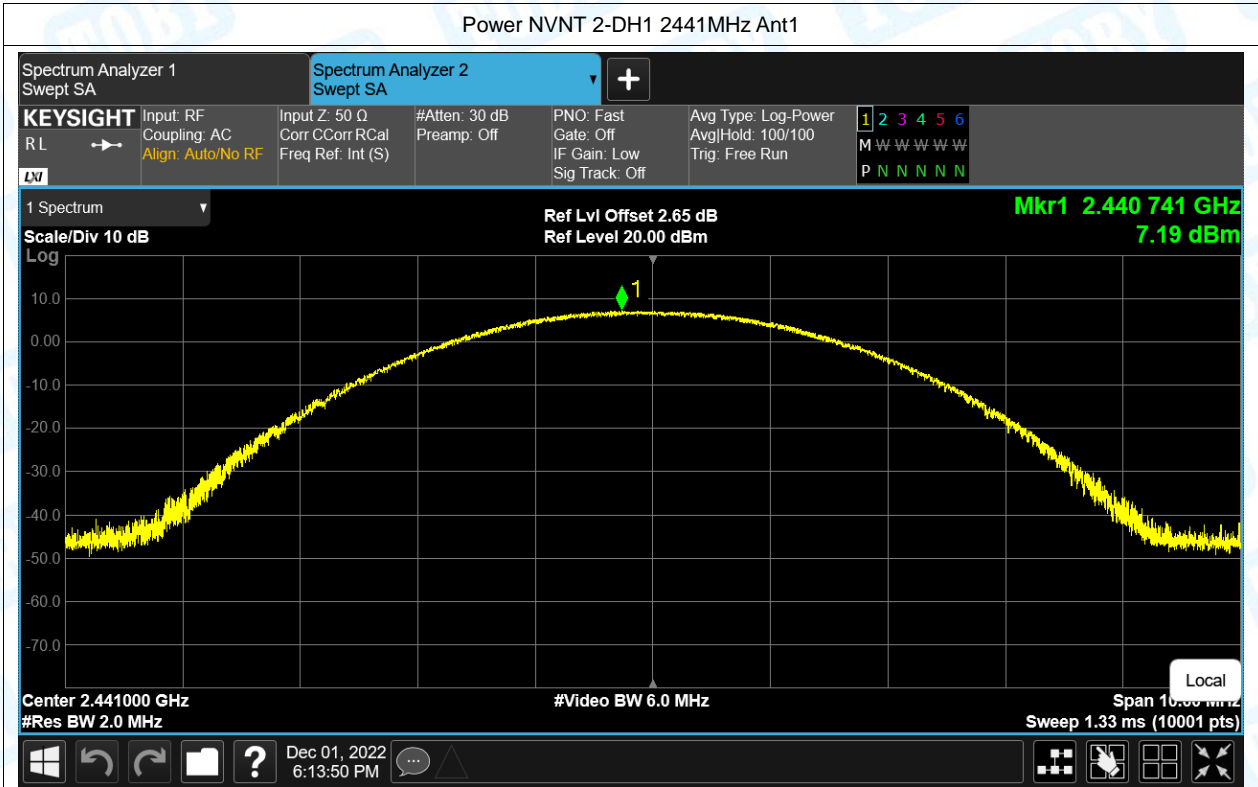


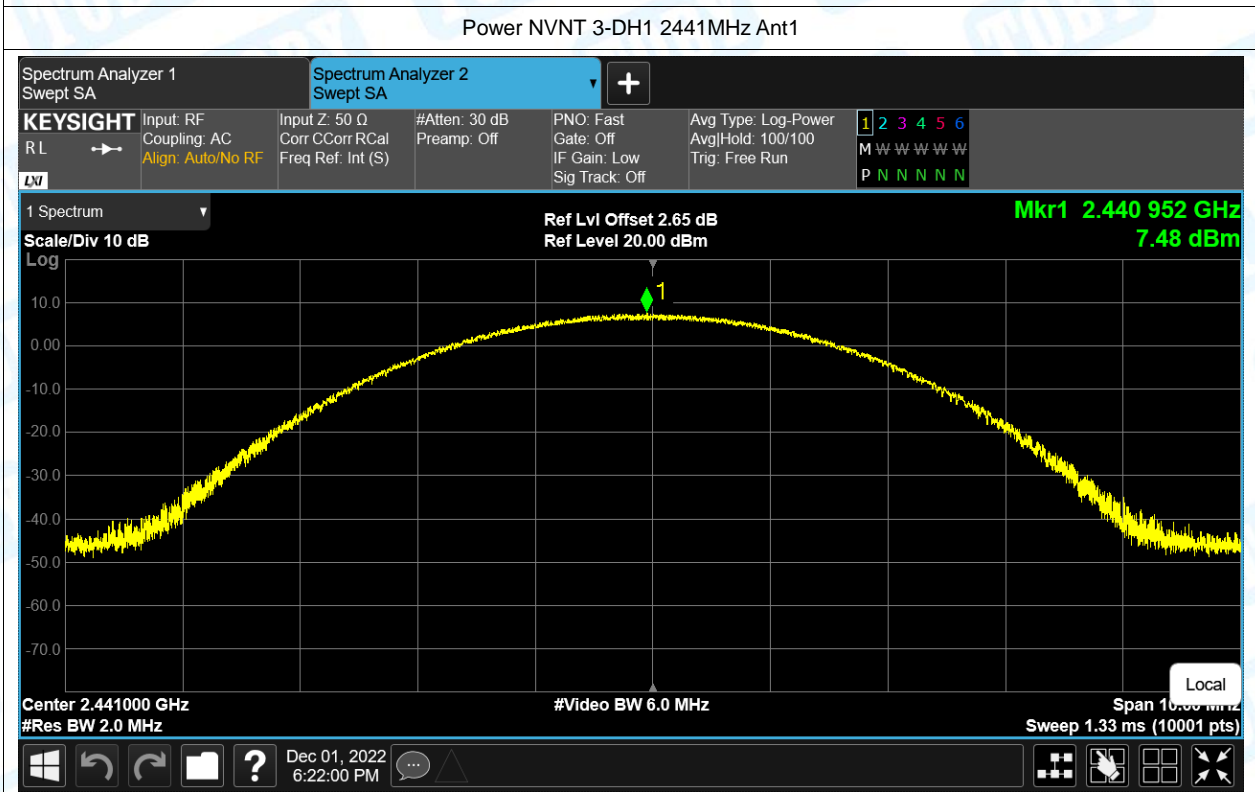
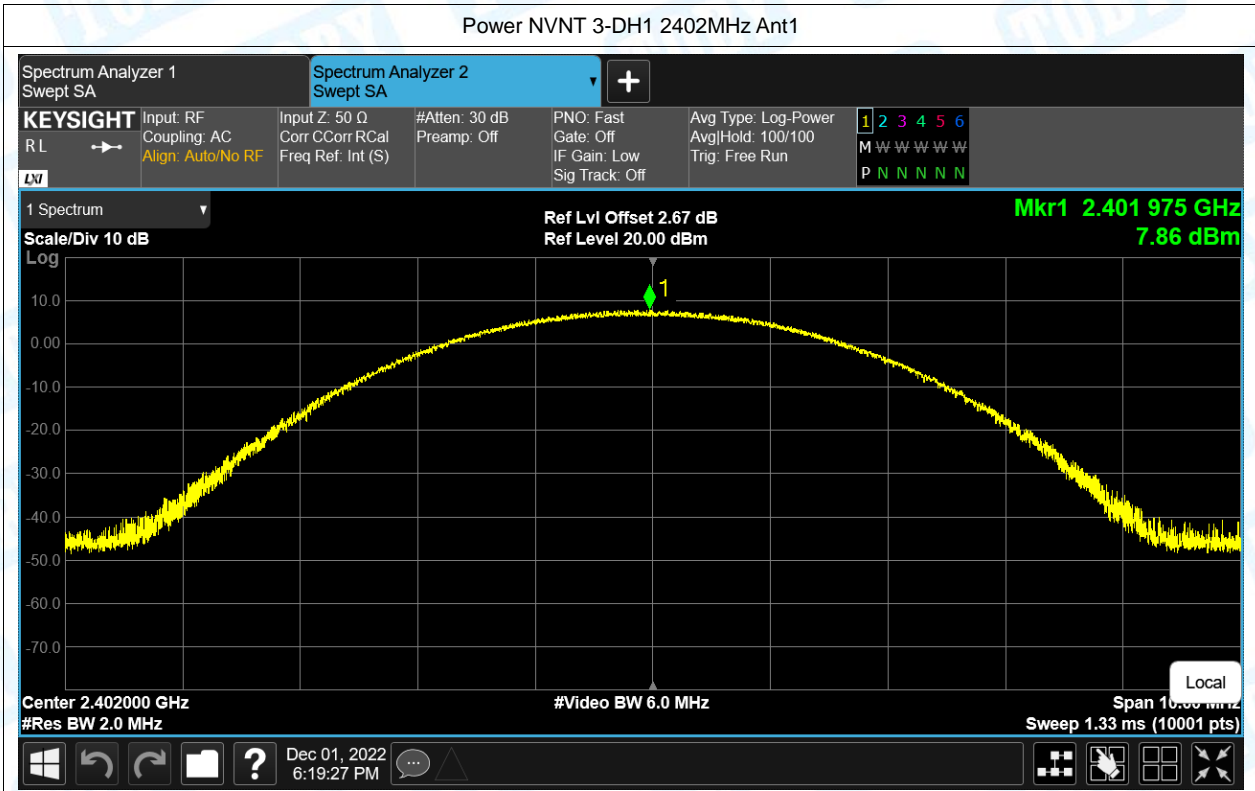
2. Maximum Conducted Output Power

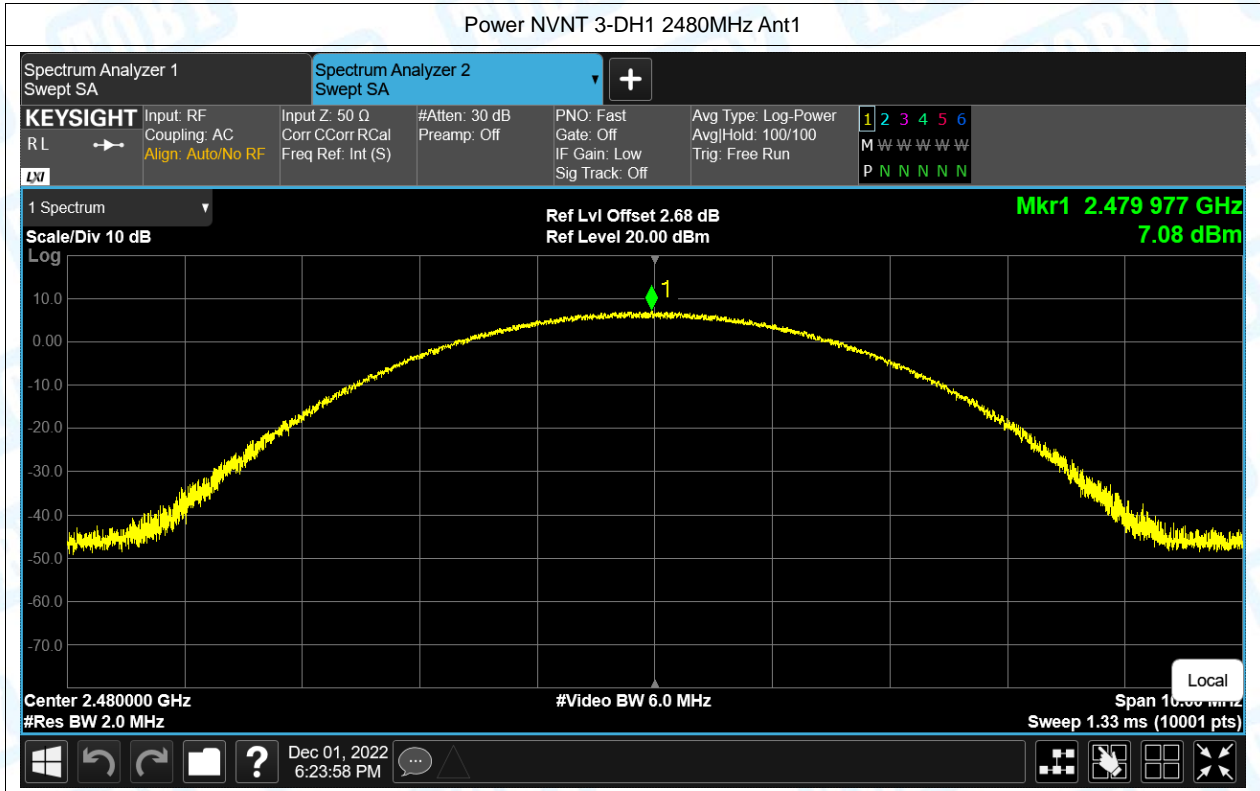
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	6.40	21	Pass
NVNT	1-DH1	2441	Ant1	6.02	21	Pass
NVNT	1-DH1	2480	Ant1	5.56	21	Pass
NVNT	2-DH1	2402	Ant1	7.46	21	Pass
NVNT	2-DH1	2441	Ant1	7.19	21	Pass
NVNT	2-DH1	2480	Ant1	6.03	21	Pass
NVNT	3-DH1	2402	Ant1	7.86	21	Pass
NVNT	3-DH1	2441	Ant1	7.48	21	Pass
NVNT	3-DH1	2480	Ant1	7.08	21	Pass





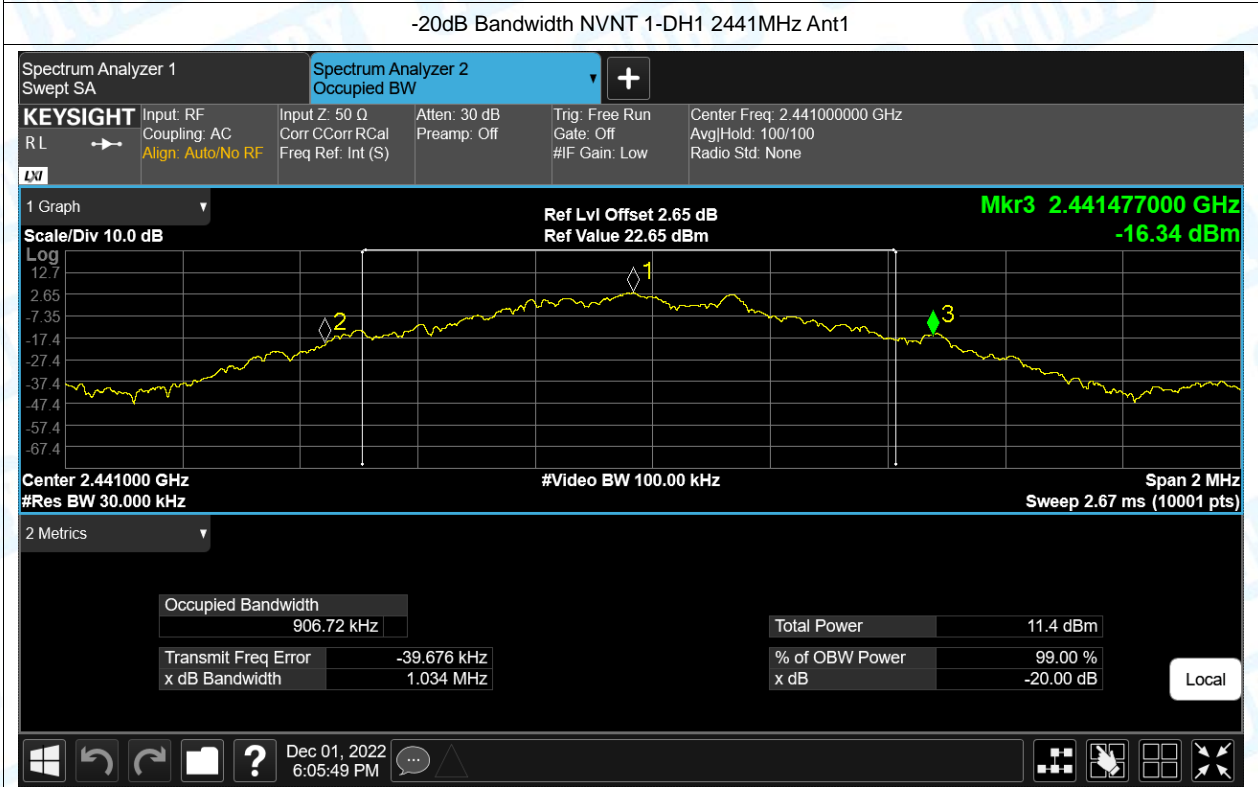
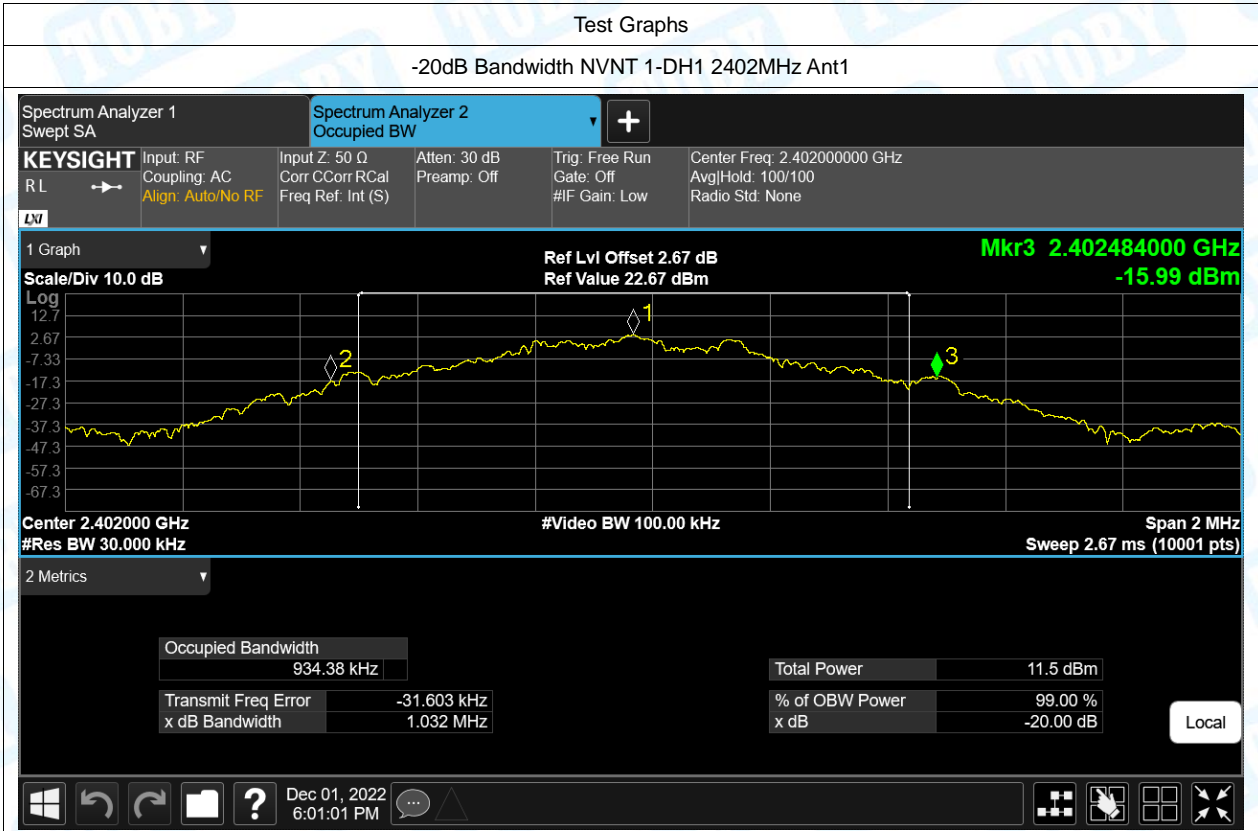


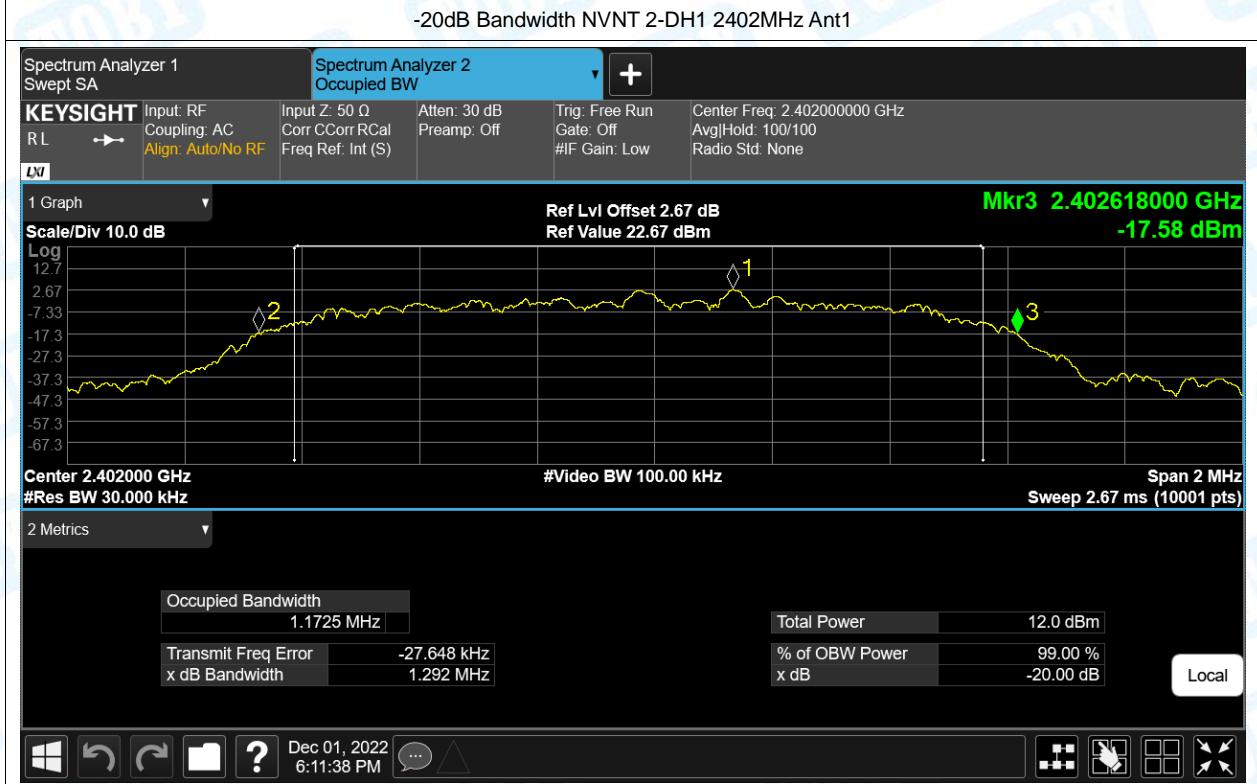
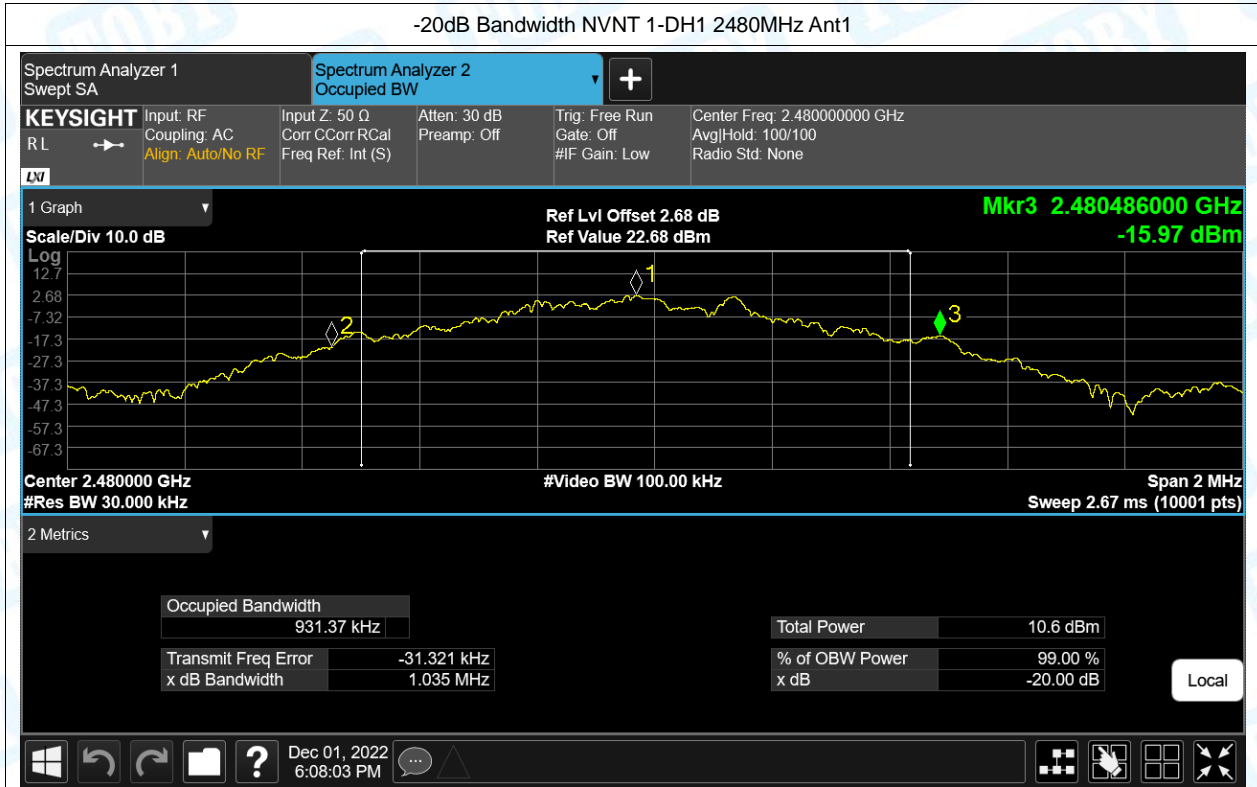


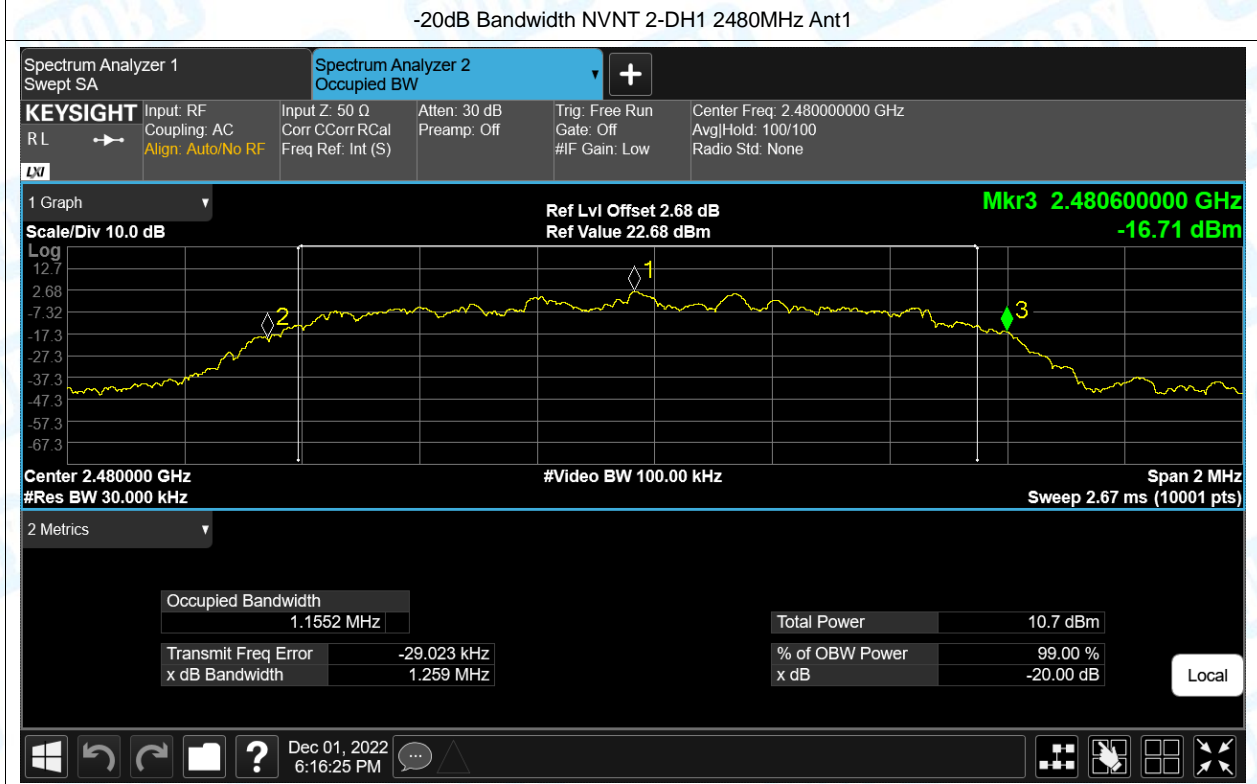
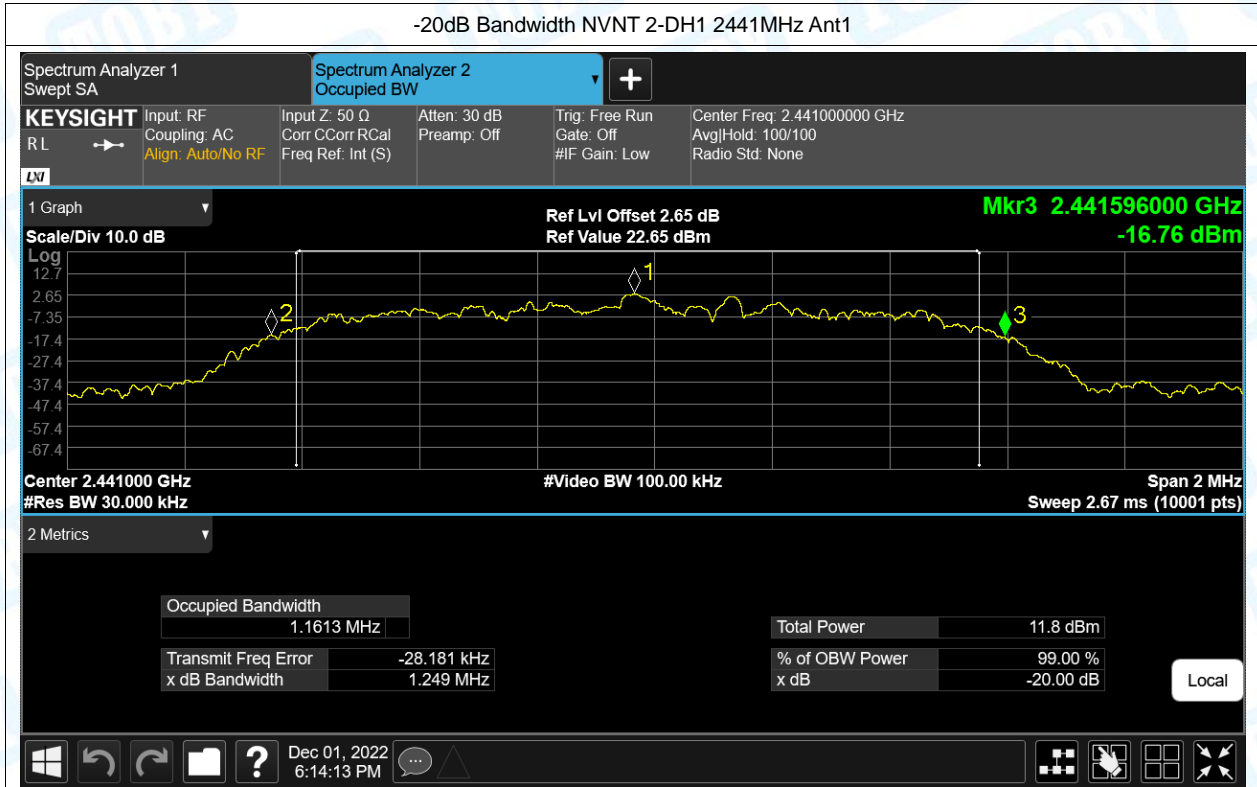


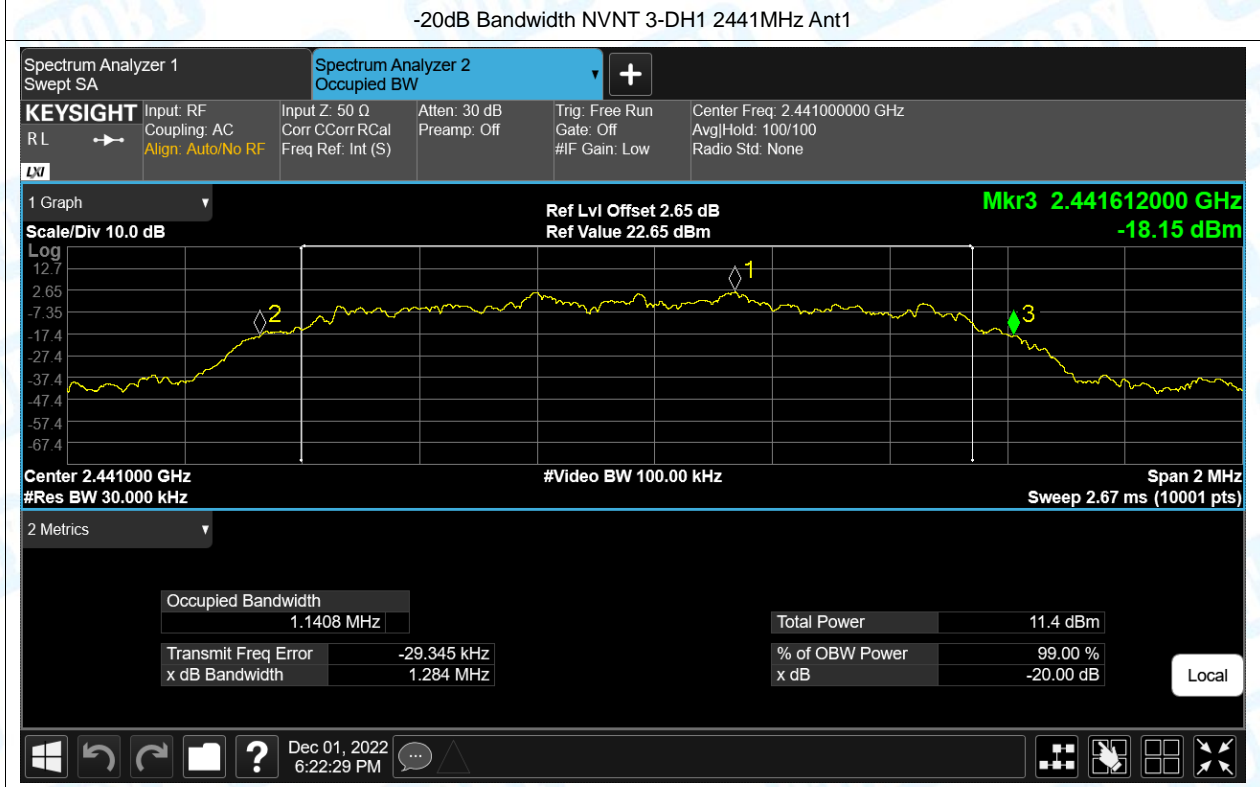
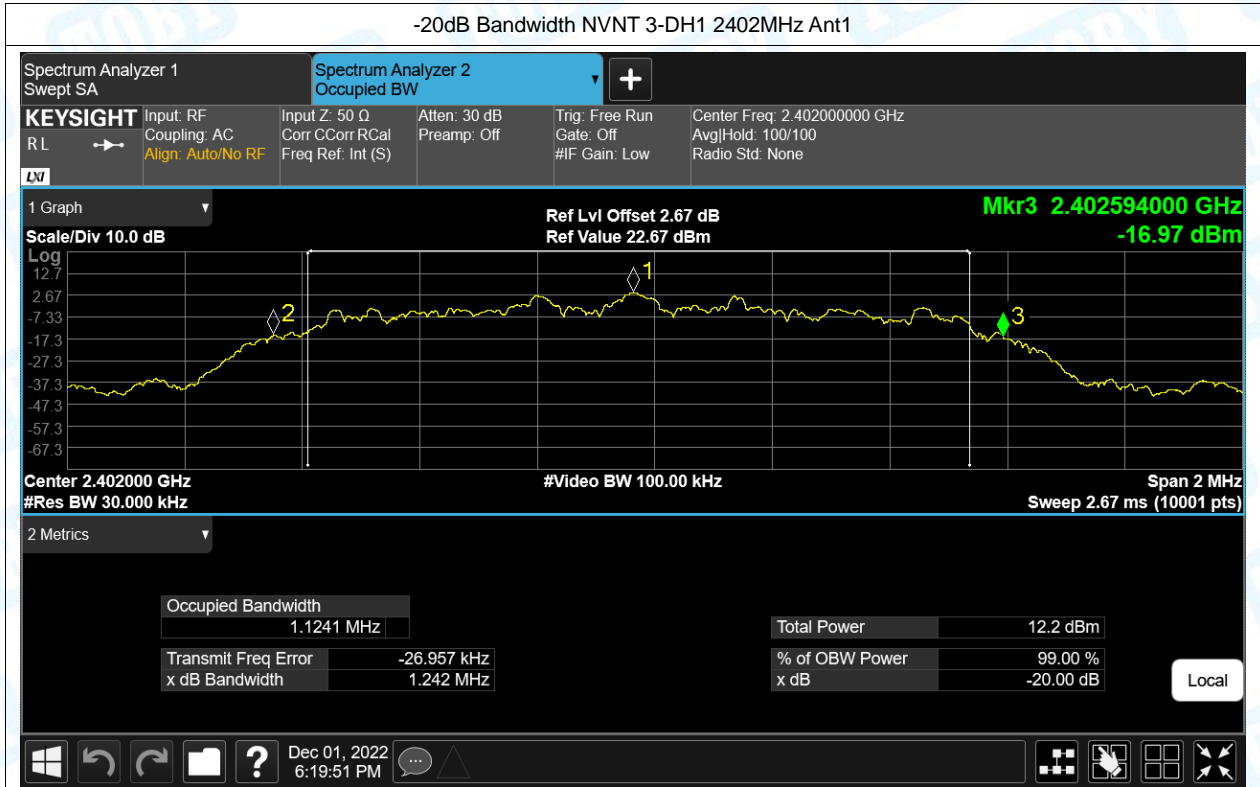
3. -20dB Bandwidth

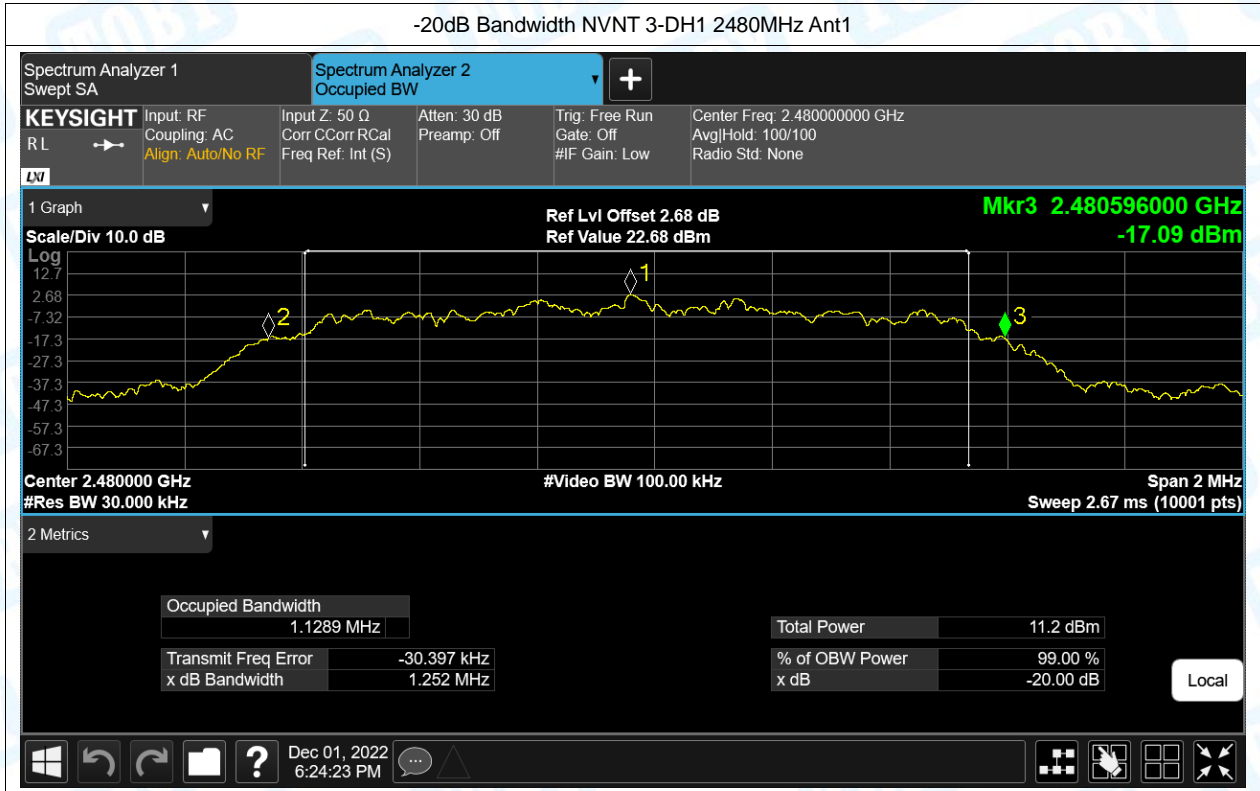
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	1.03	----	Pass
NVNT	1-DH1	2441	Ant1	1.03	----	Pass
NVNT	1-DH1	2480	Ant1	1.04	----	Pass
NVNT	2-DH1	2402	Ant1	1.29	----	Pass
NVNT	2-DH1	2441	Ant1	1.25	----	Pass
NVNT	2-DH1	2480	Ant1	1.26	----	Pass
NVNT	3-DH1	2402	Ant1	1.24	----	Pass
NVNT	3-DH1	2441	Ant1	1.28	----	Pass
NVNT	3-DH1	2480	Ant1	1.25	----	Pass





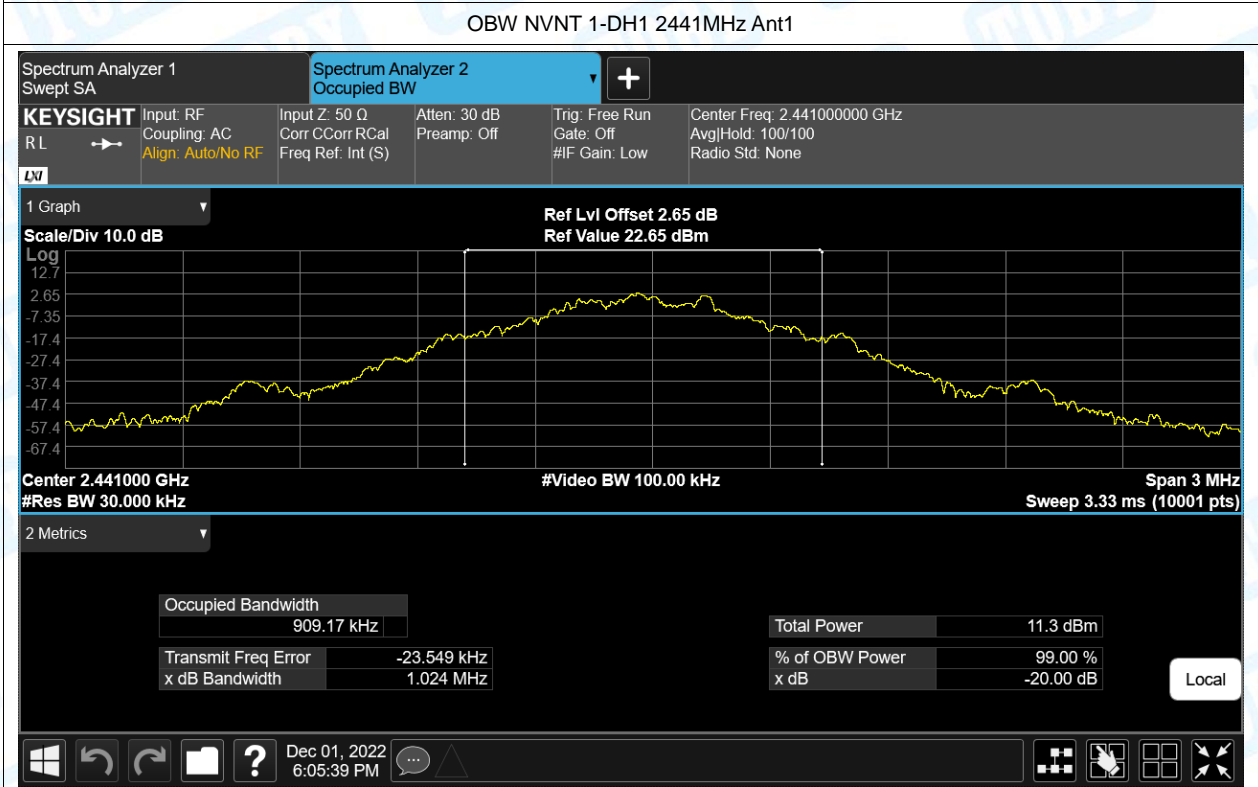
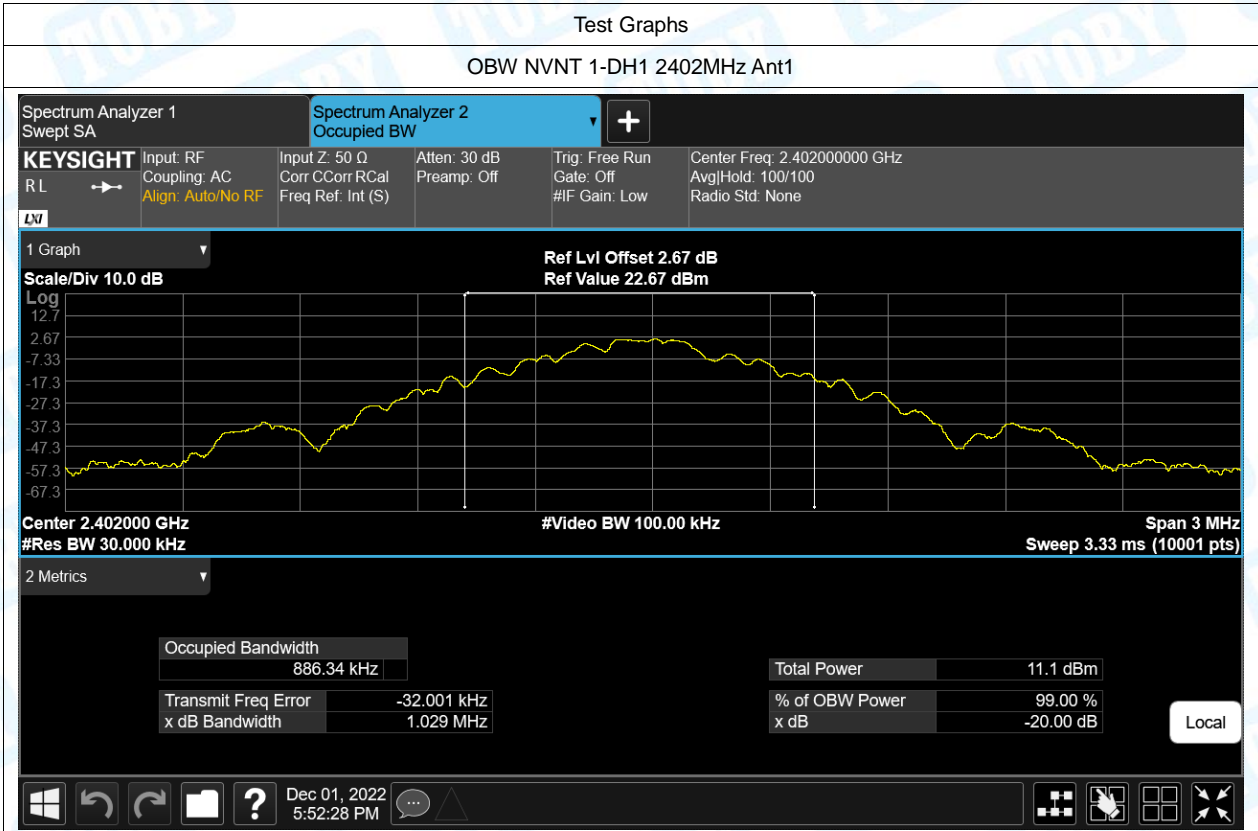


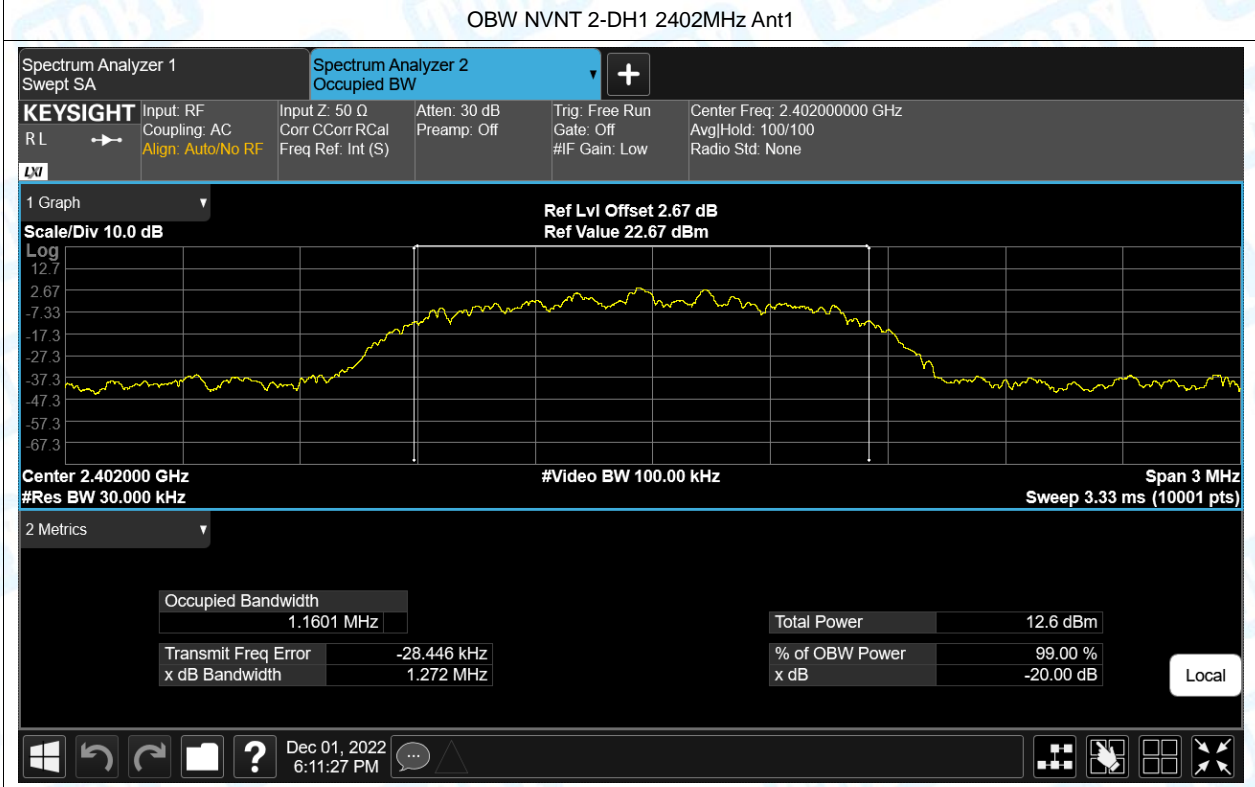
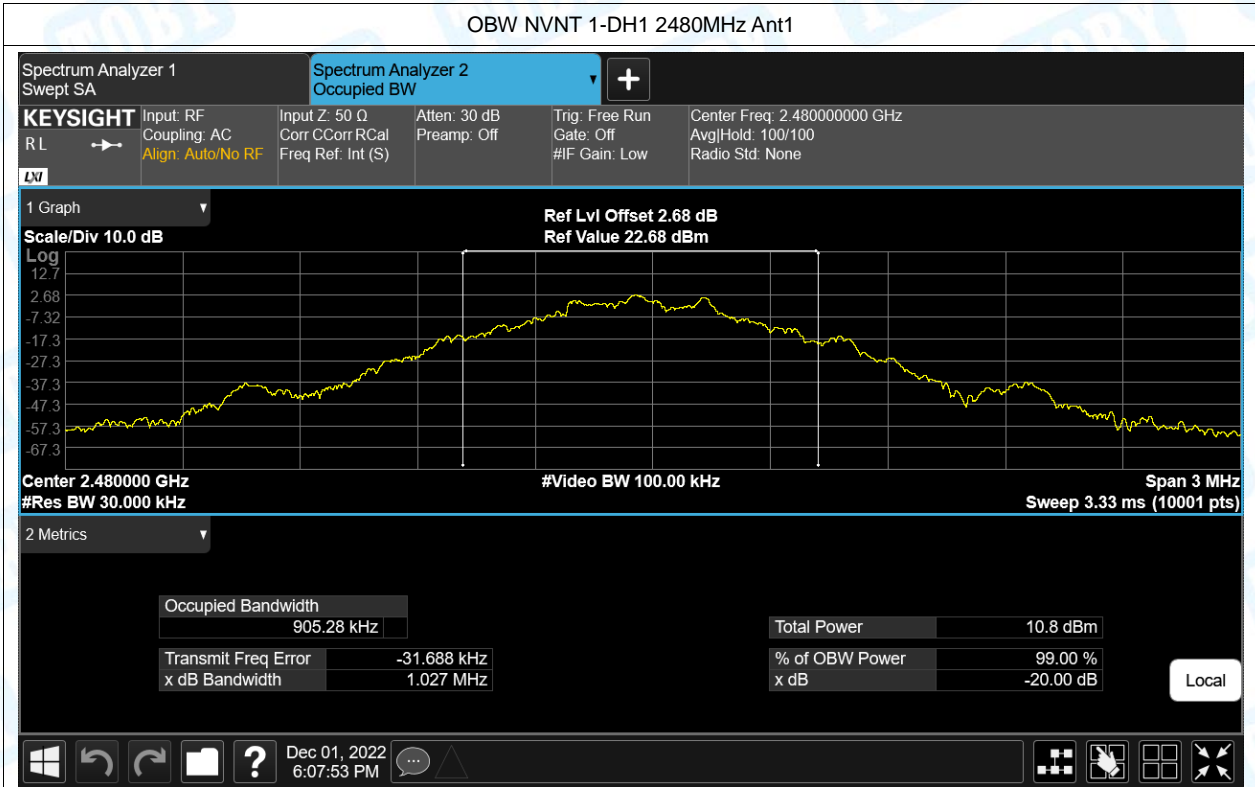


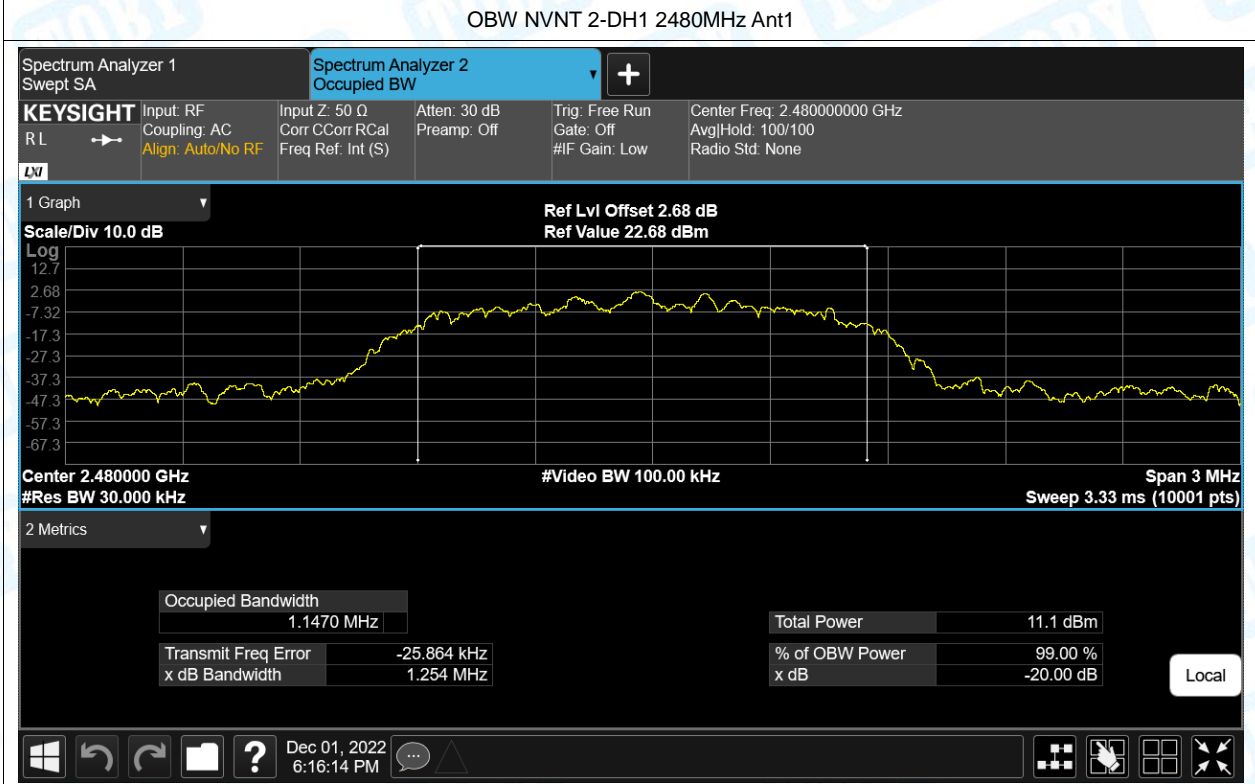
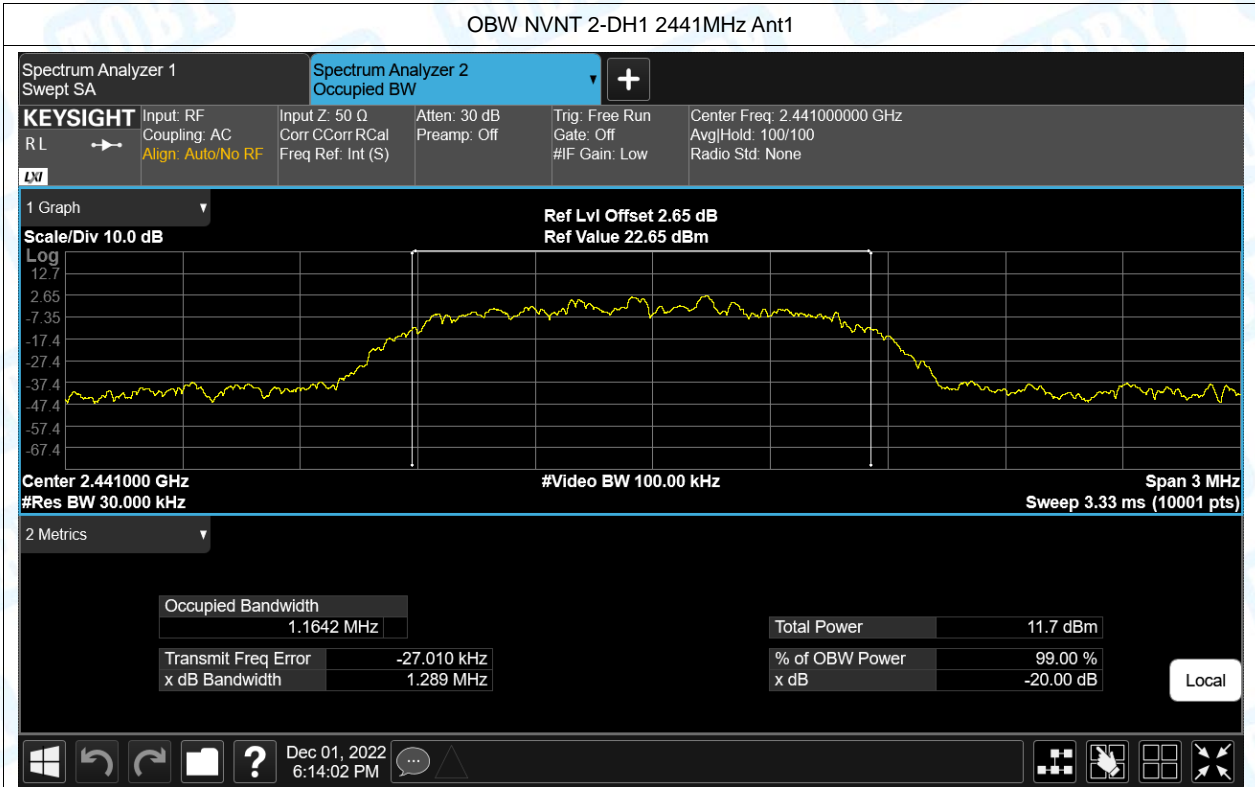


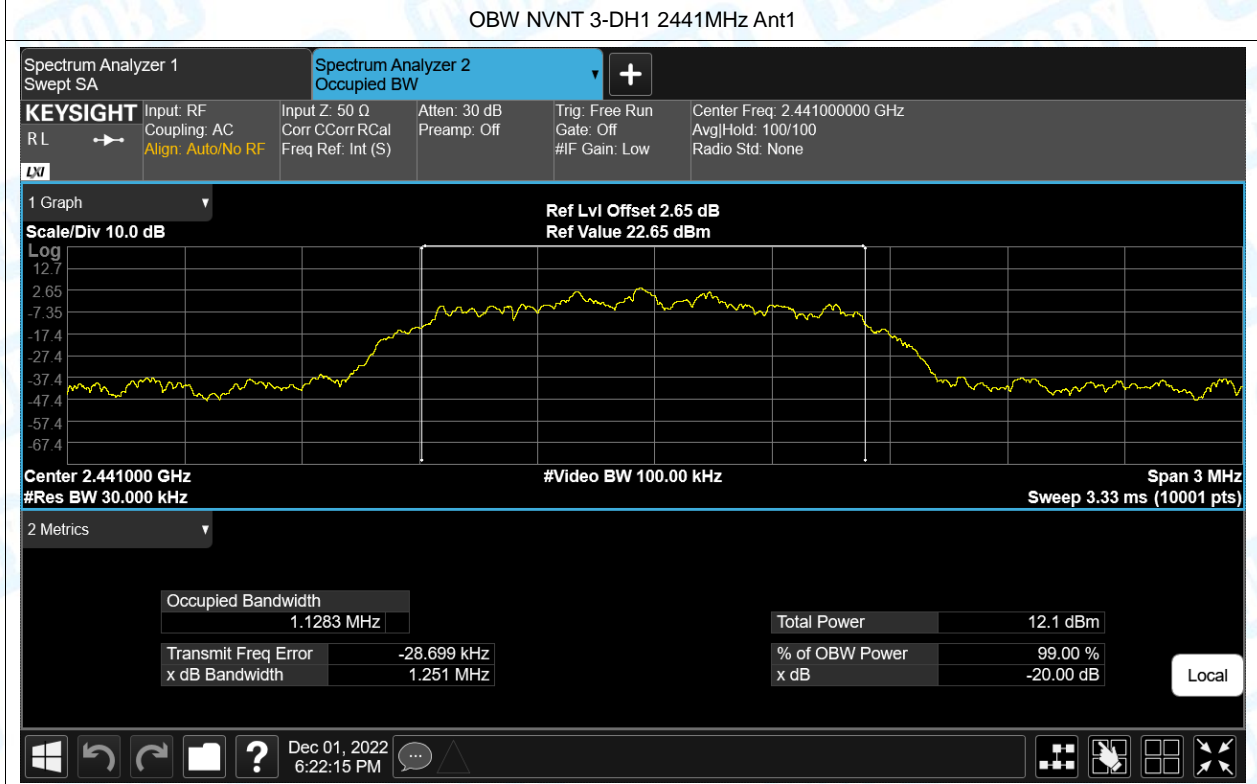
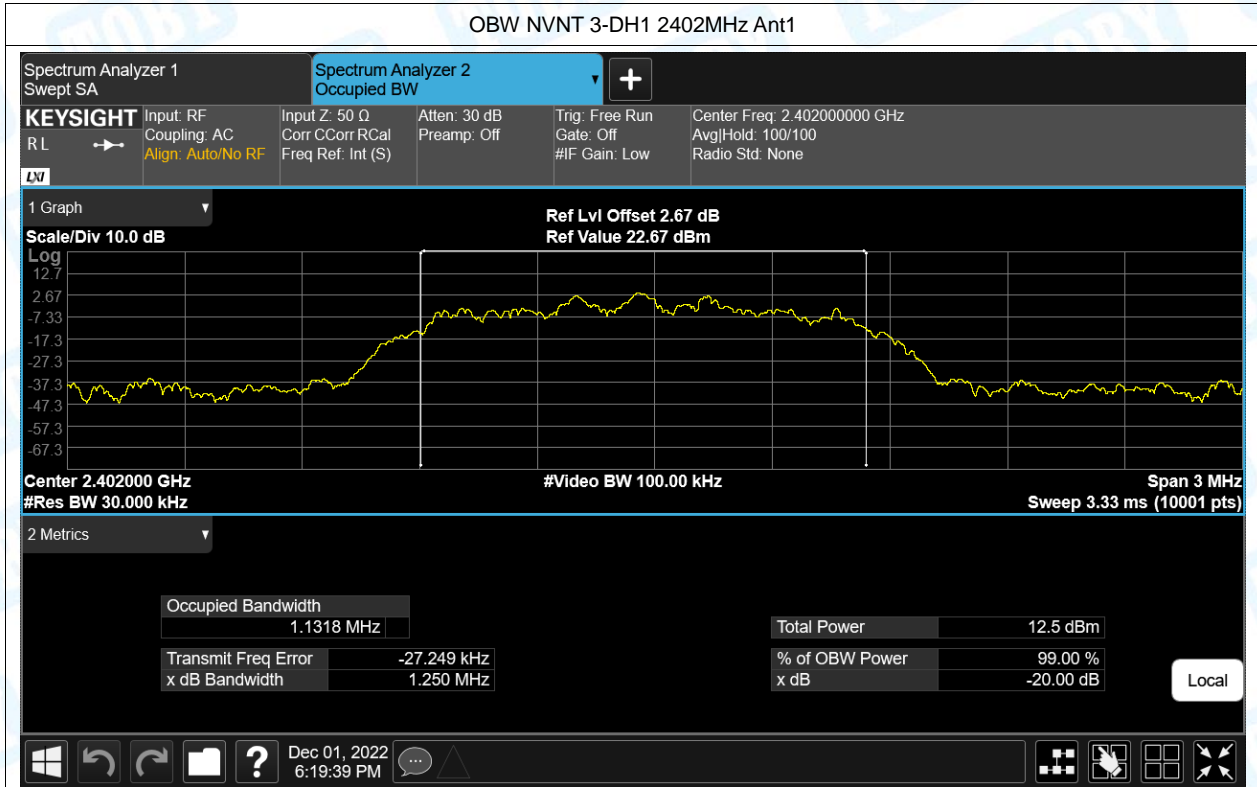
4. Occupied Channel Bandwidth

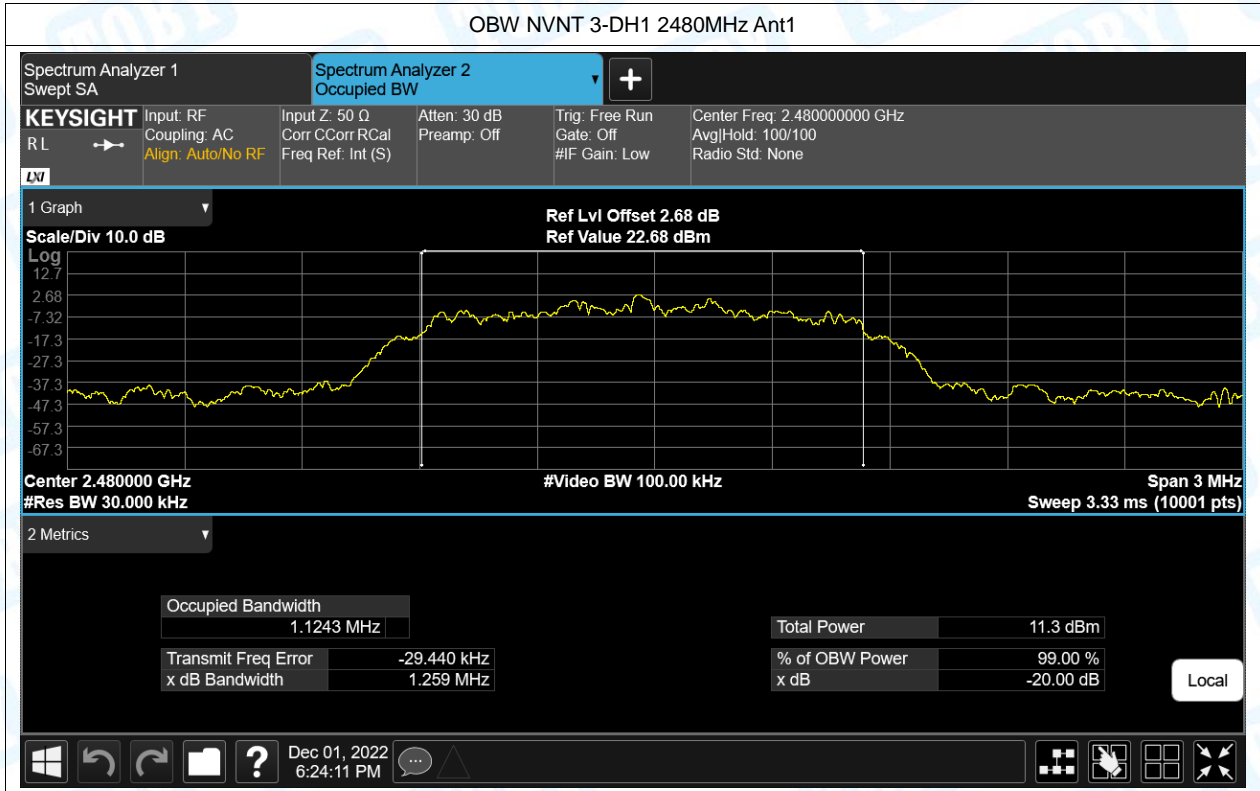
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.886
NVNT	1-DH1	2441	Ant1	0.909
NVNT	1-DH1	2480	Ant1	0.905
NVNT	2-DH1	2402	Ant1	1.16
NVNT	2-DH1	2441	Ant1	1.164
NVNT	2-DH1	2480	Ant1	1.147
NVNT	3-DH1	2402	Ant1	1.132
NVNT	3-DH1	2441	Ant1	1.128
NVNT	3-DH1	2480	Ant1	1.124









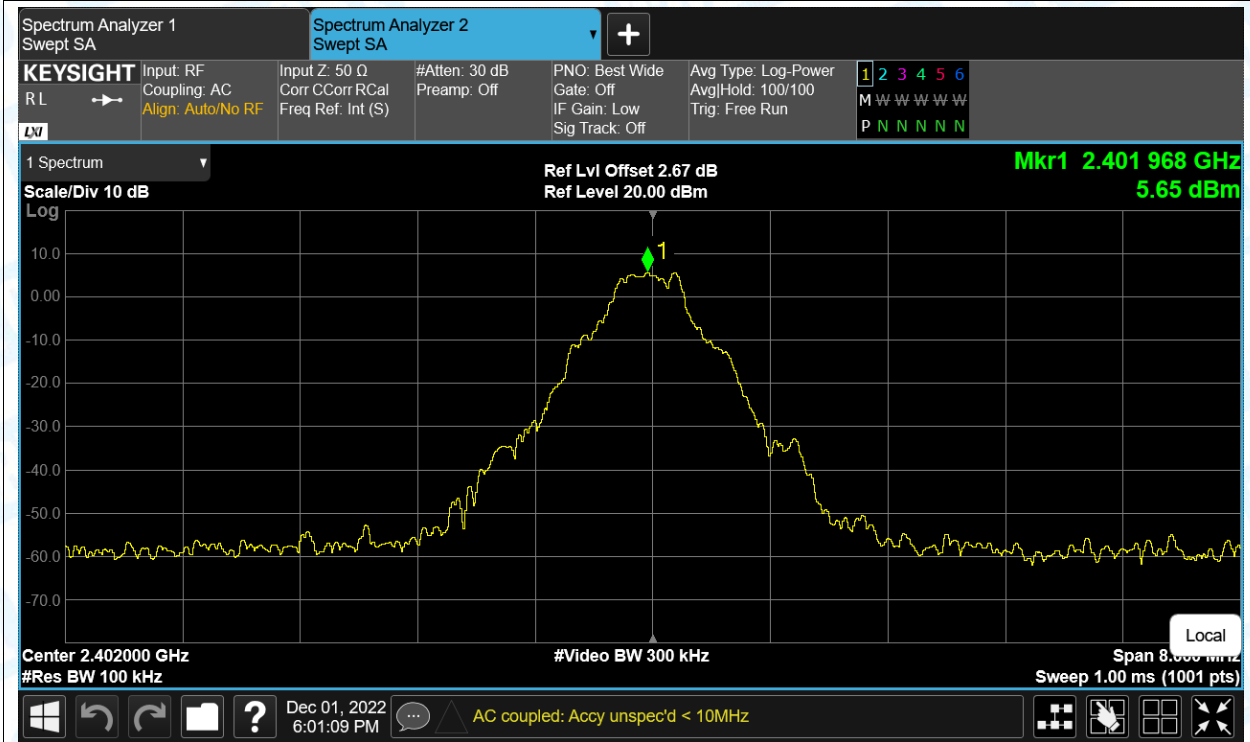


5. Band Edge

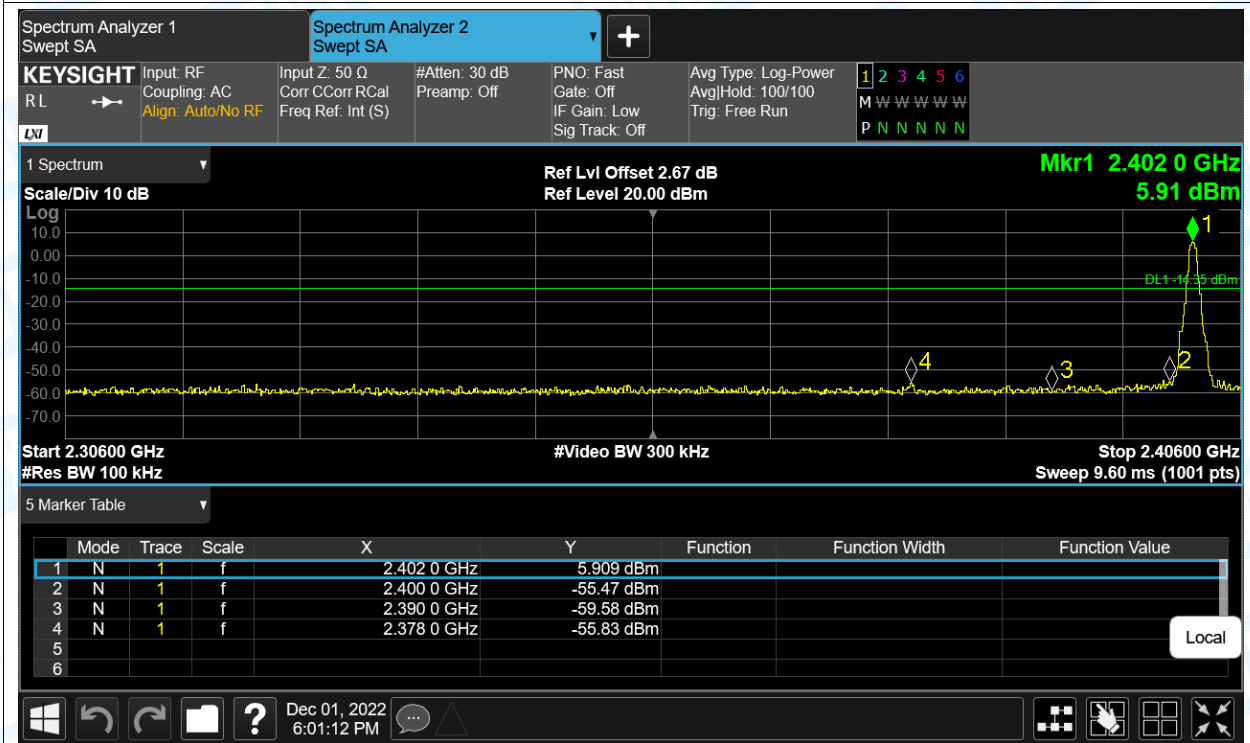
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-61.48	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-61.21	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-61.49	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-60.15	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-62.1	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-60.24	-20	Pass

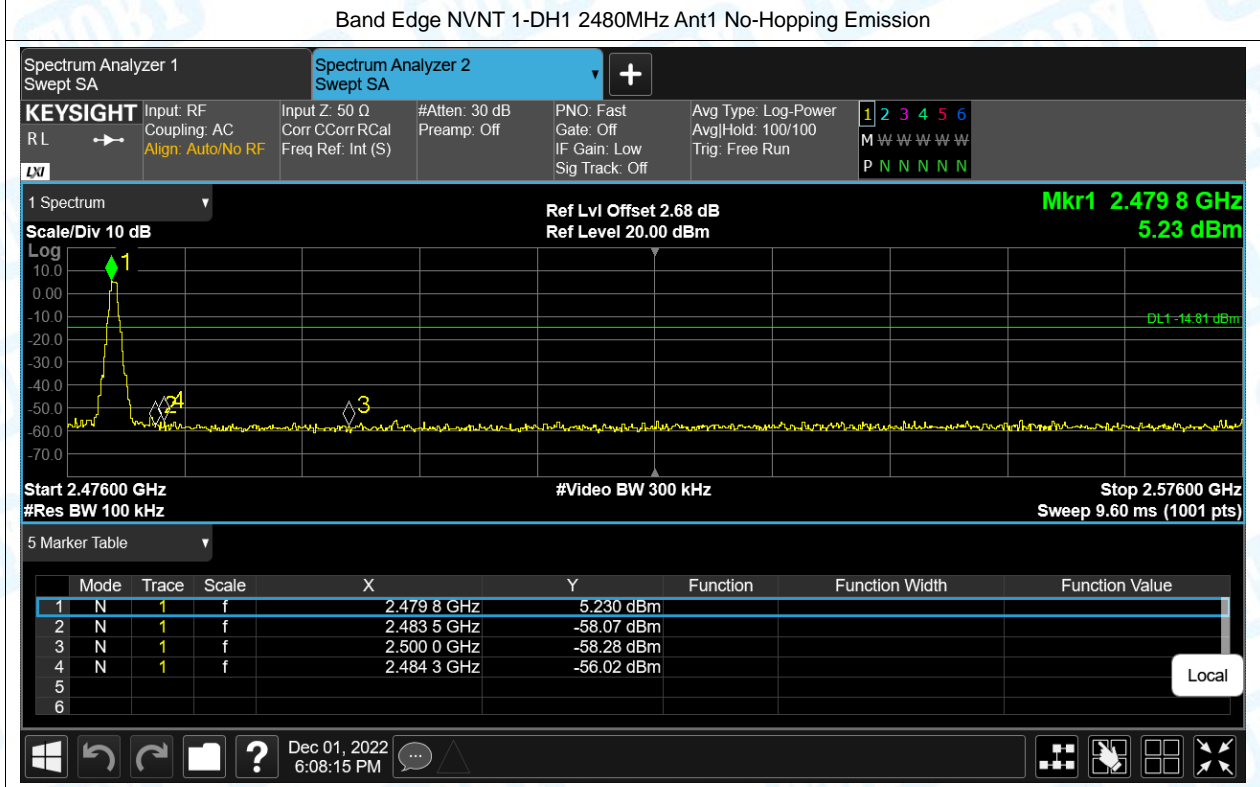
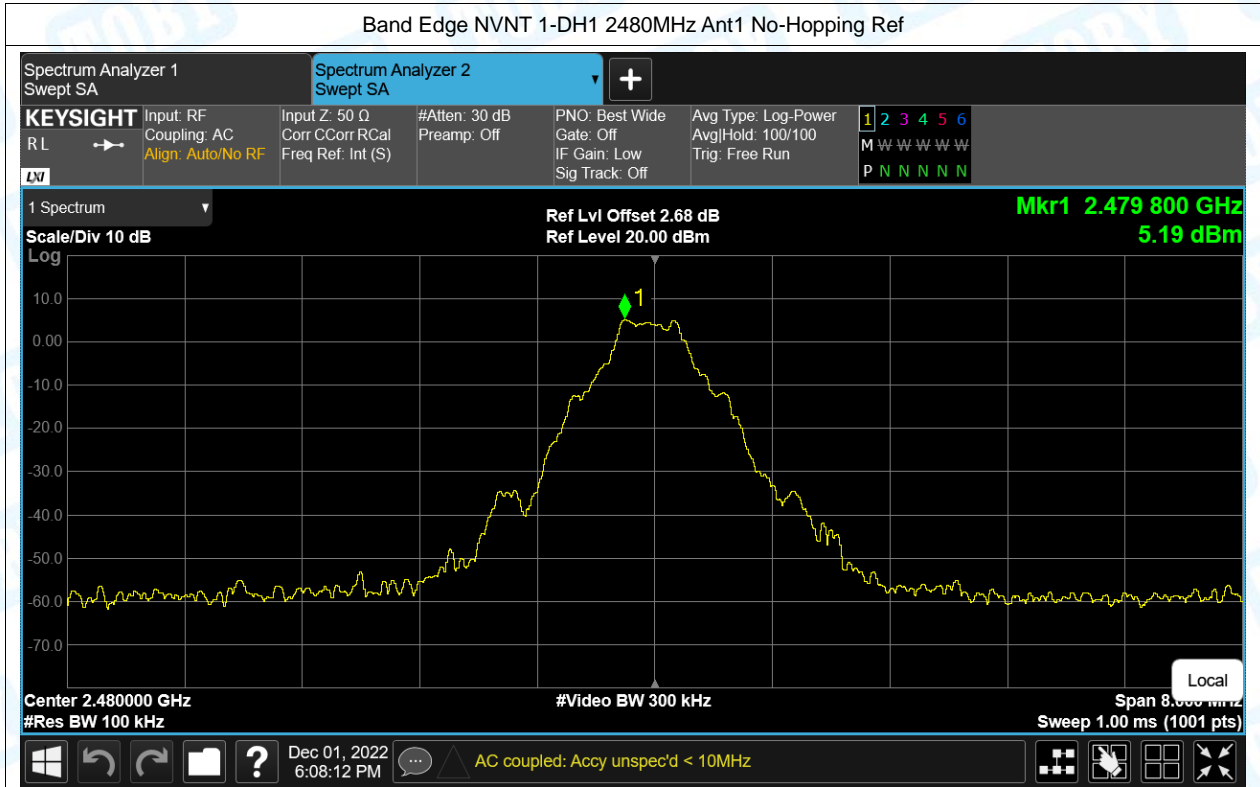
Test Graphs

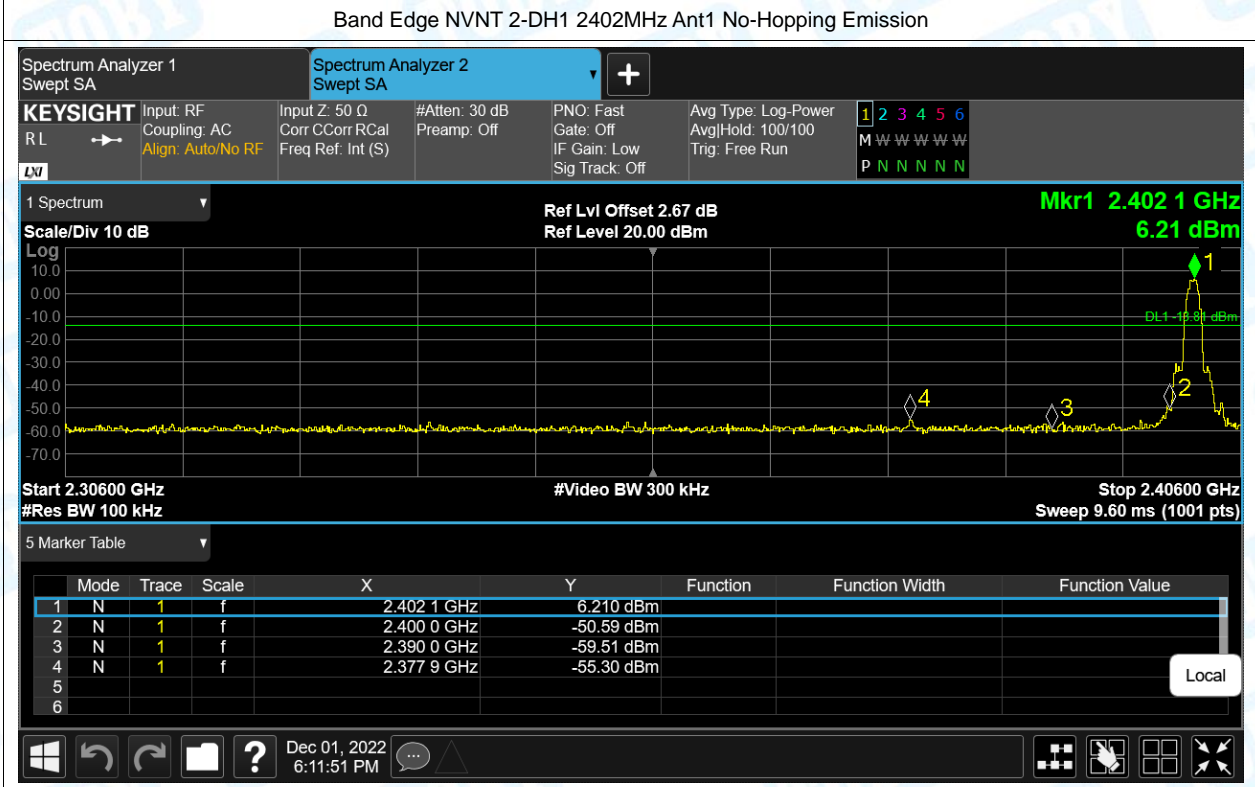
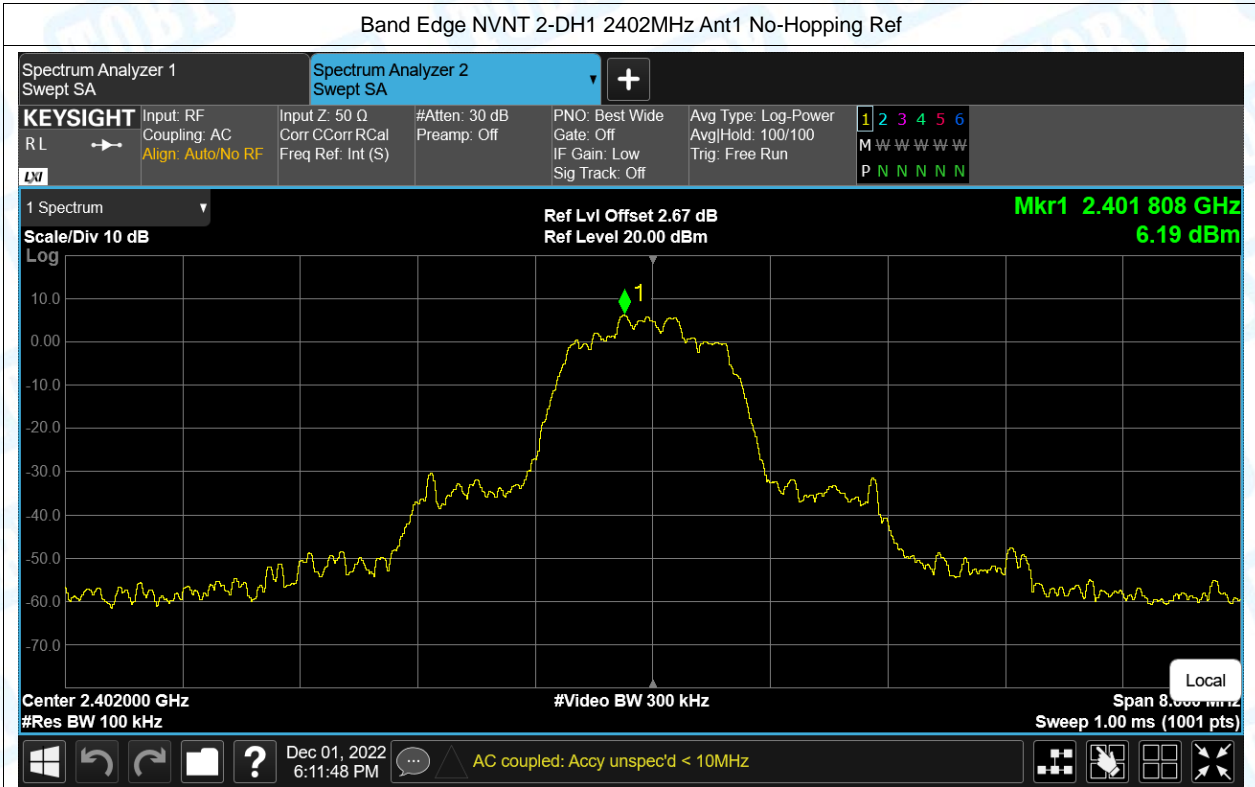
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref

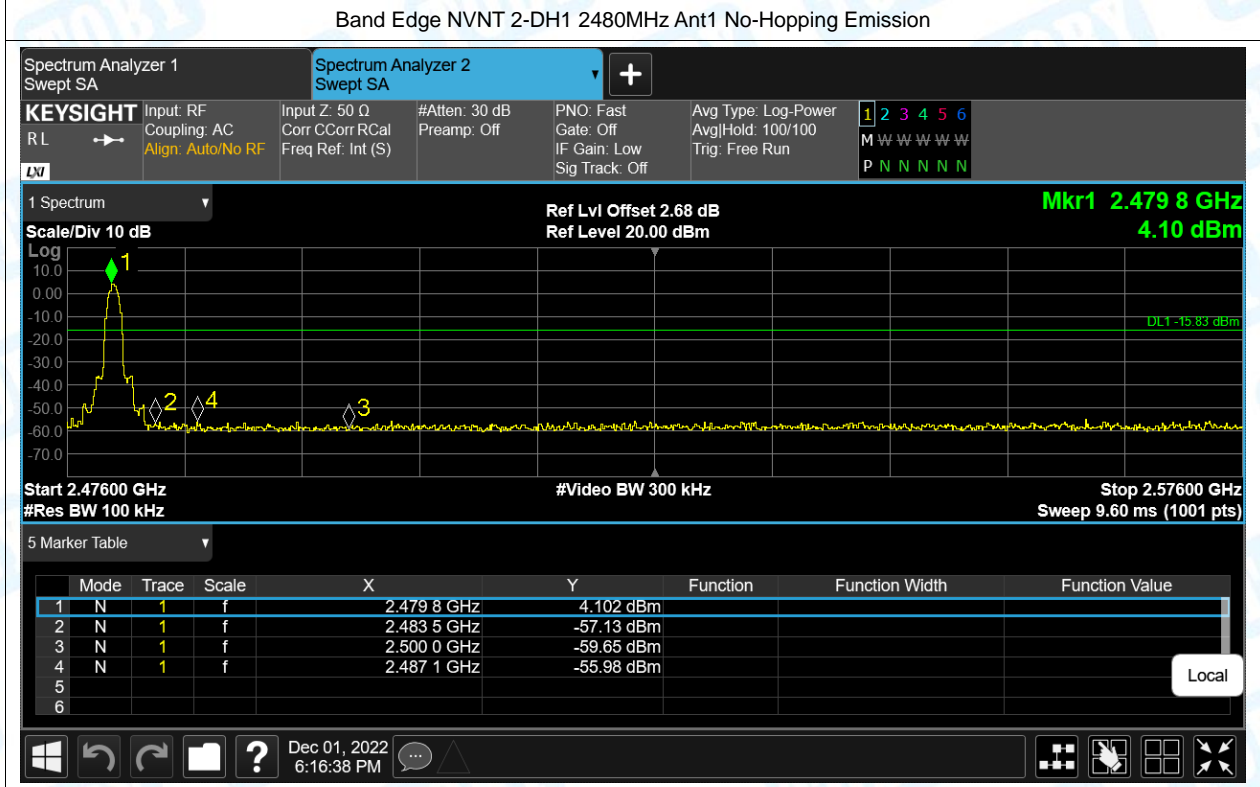
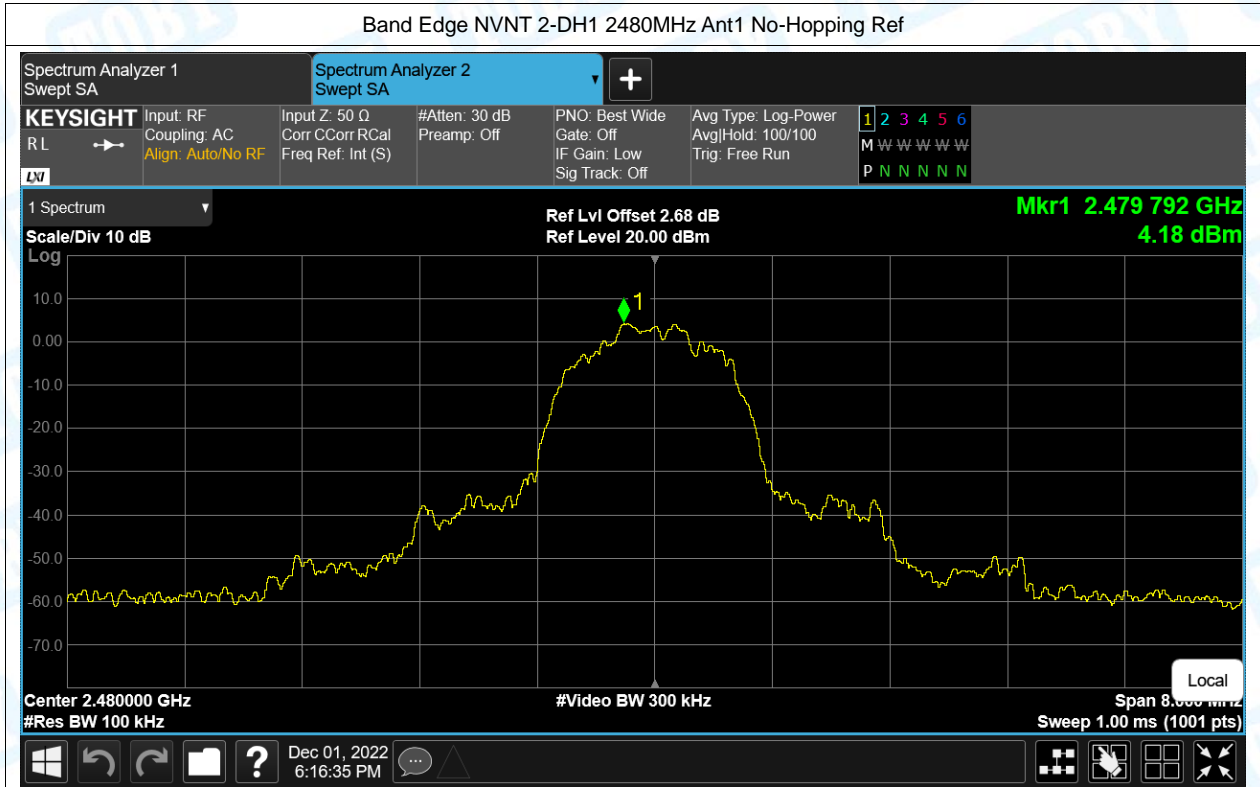


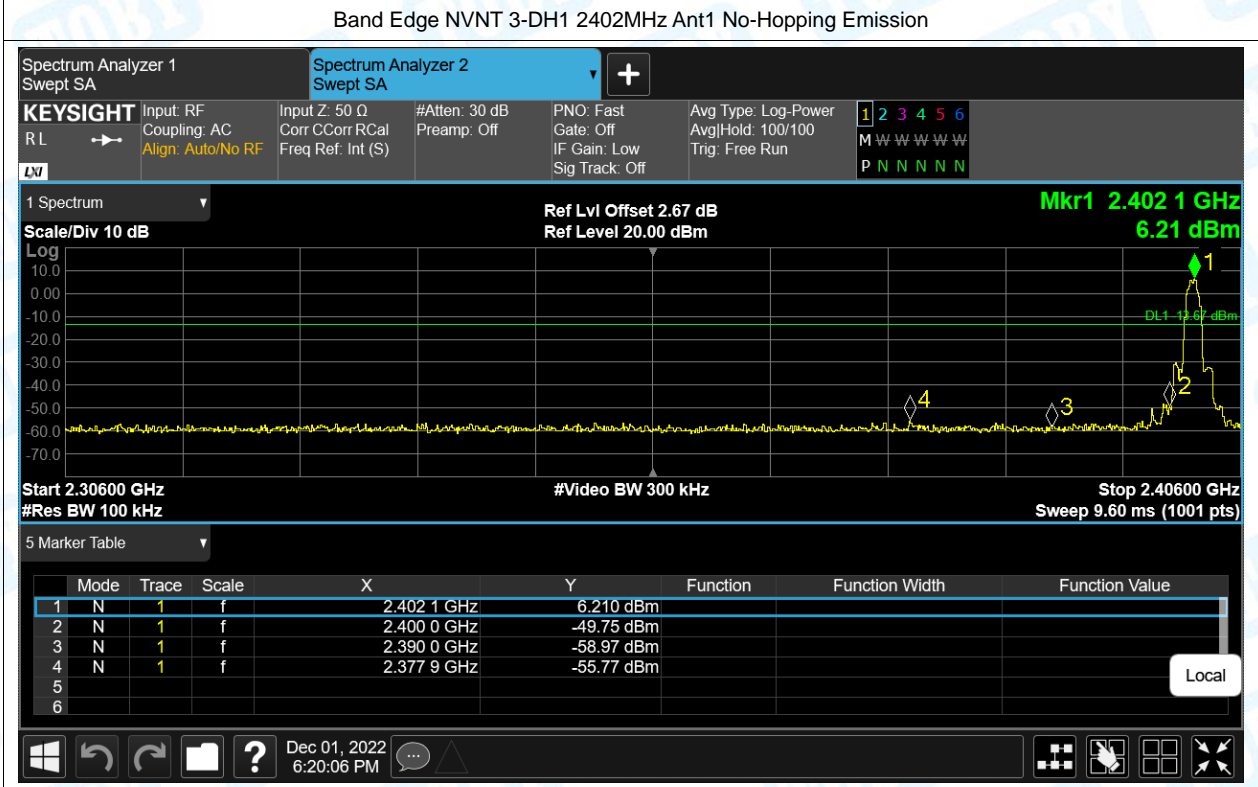
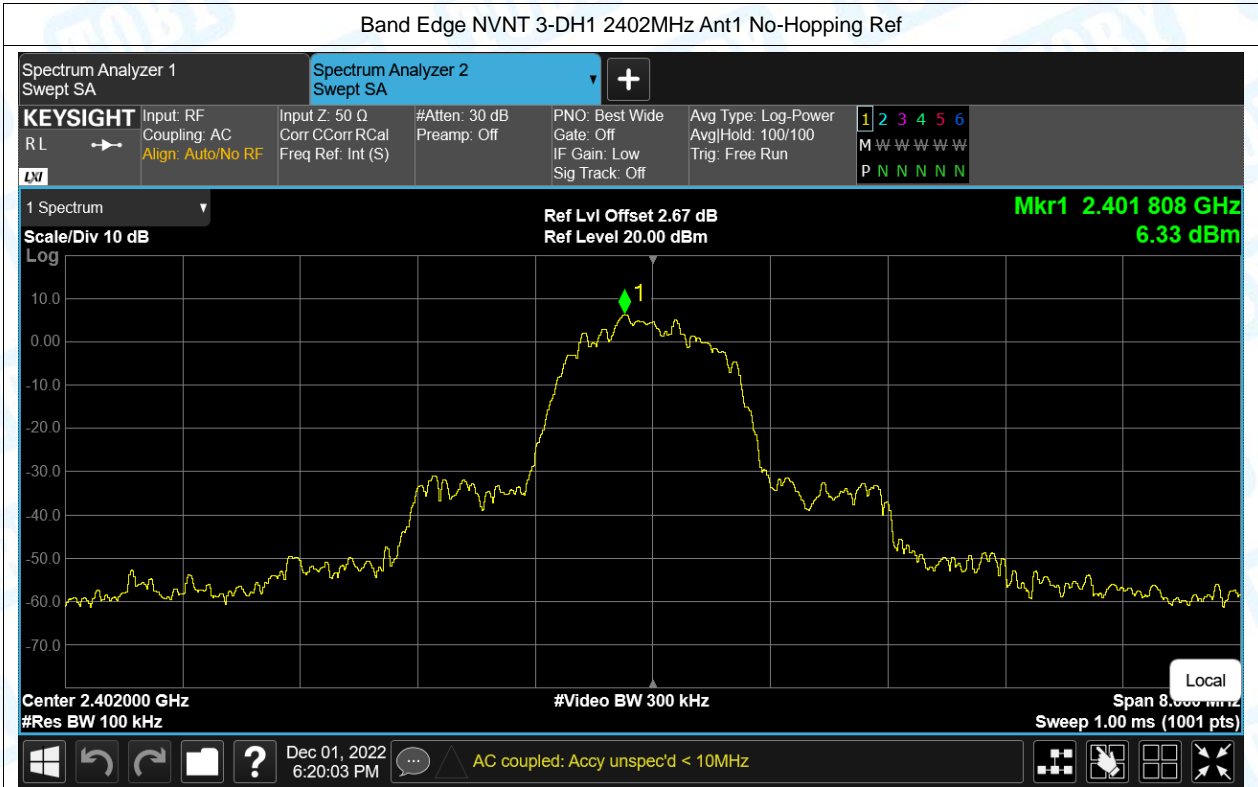
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

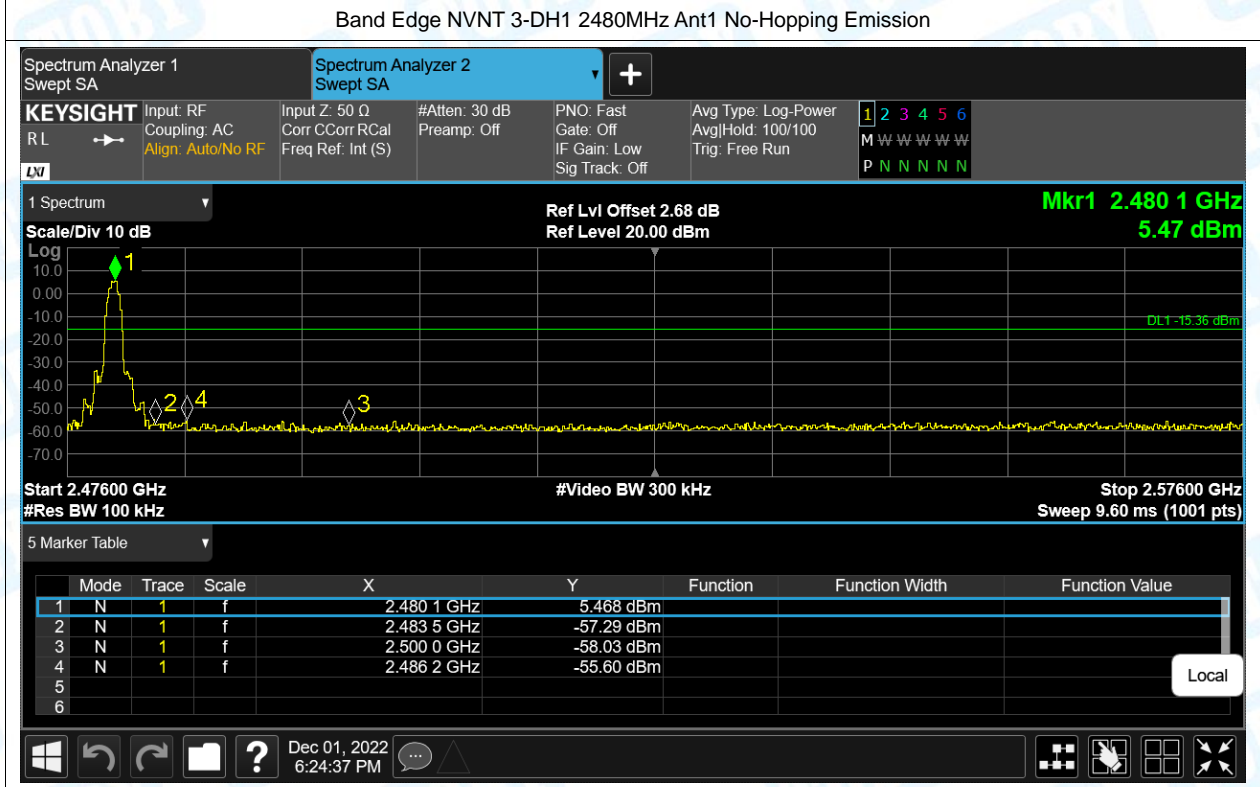
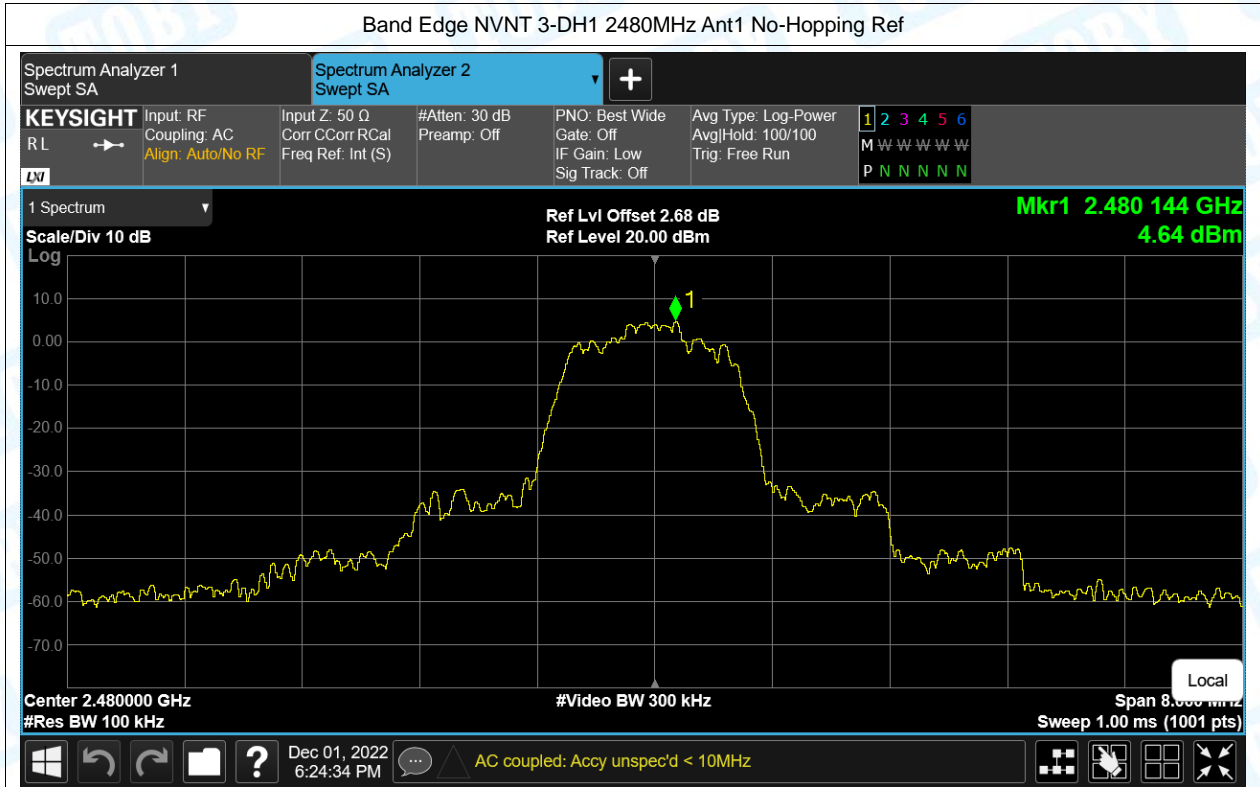










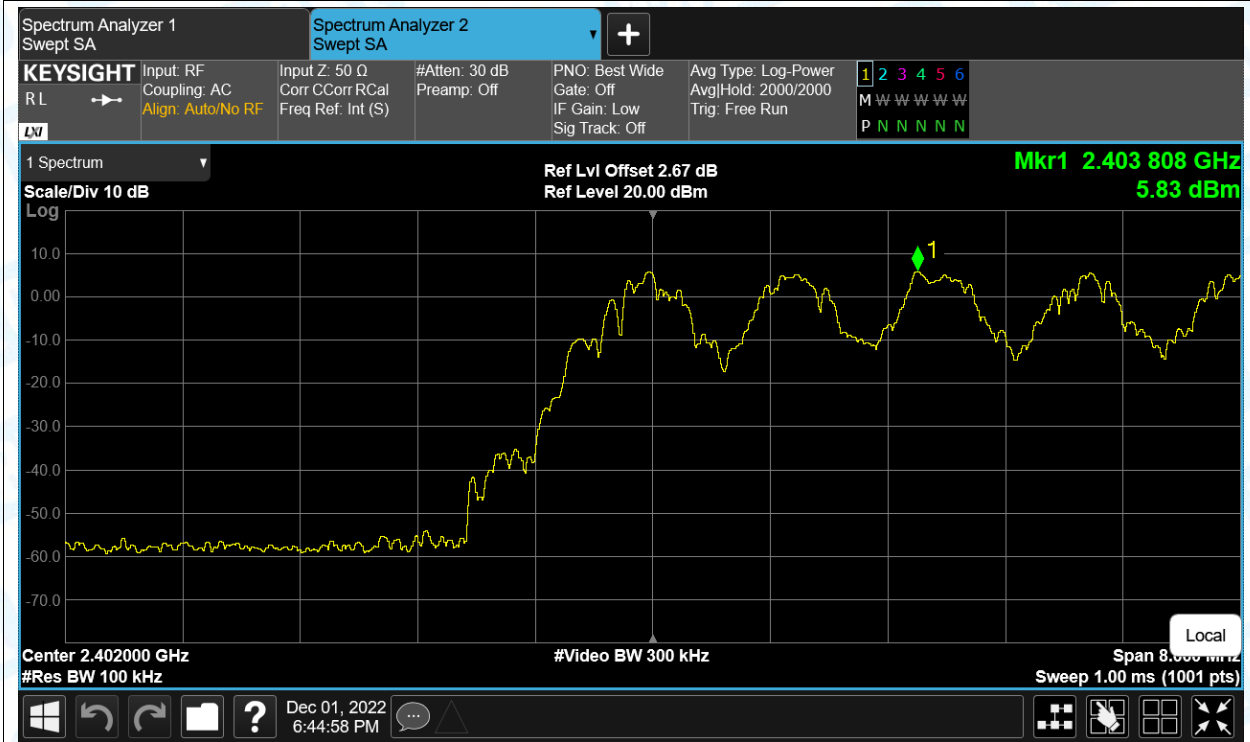


6. Band Edge(Hopping)

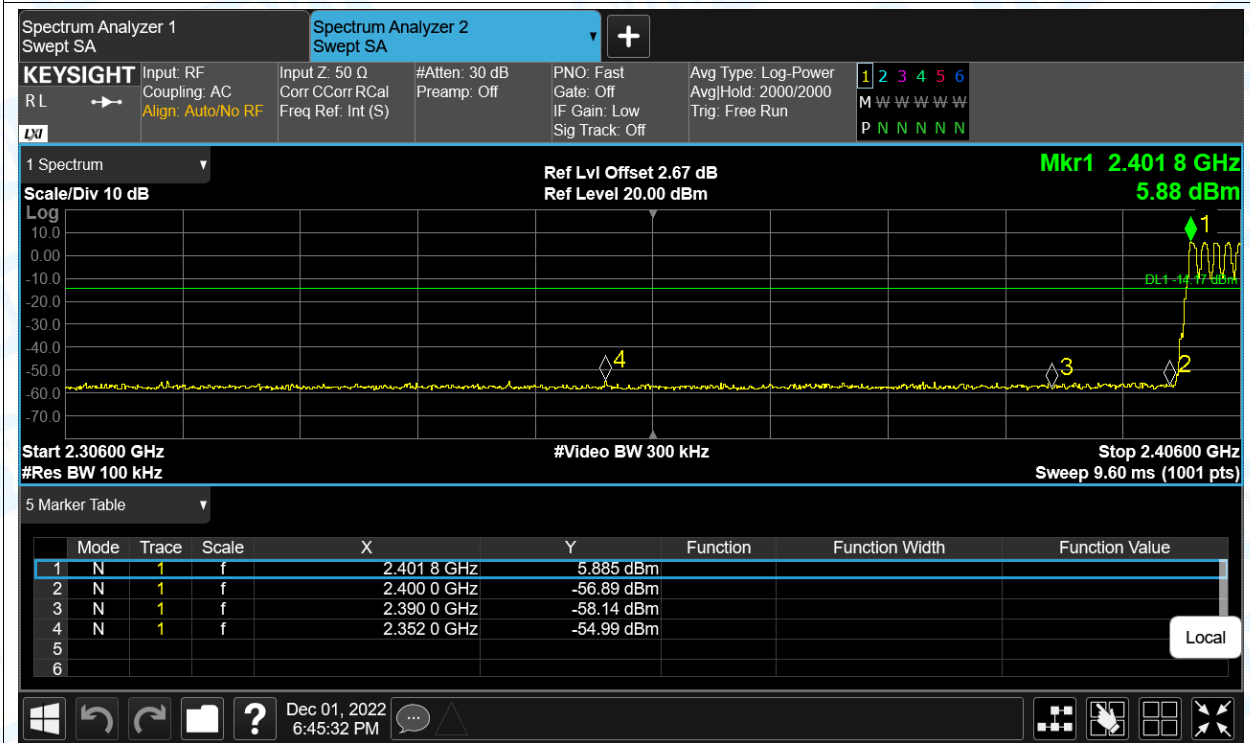
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-60.82	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-60.22	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-60.21	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-59.51	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-60.02	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-60.01	-20	Pass

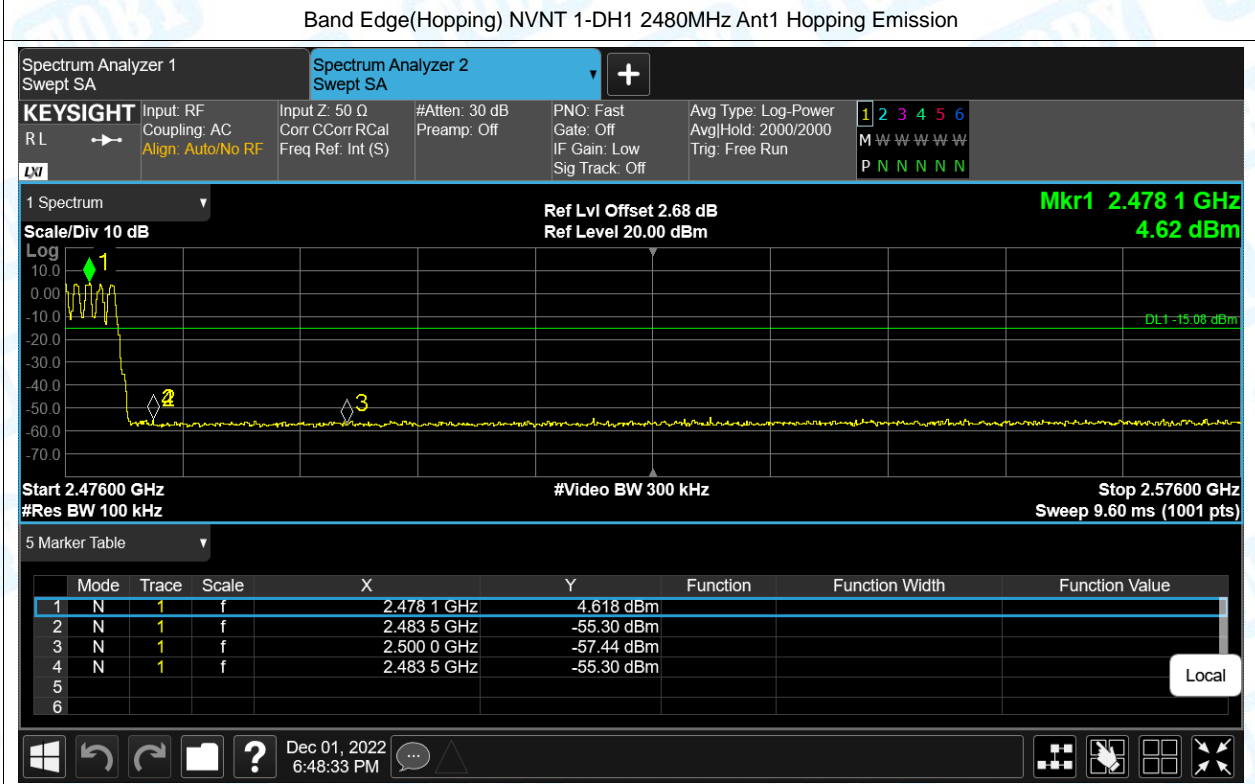
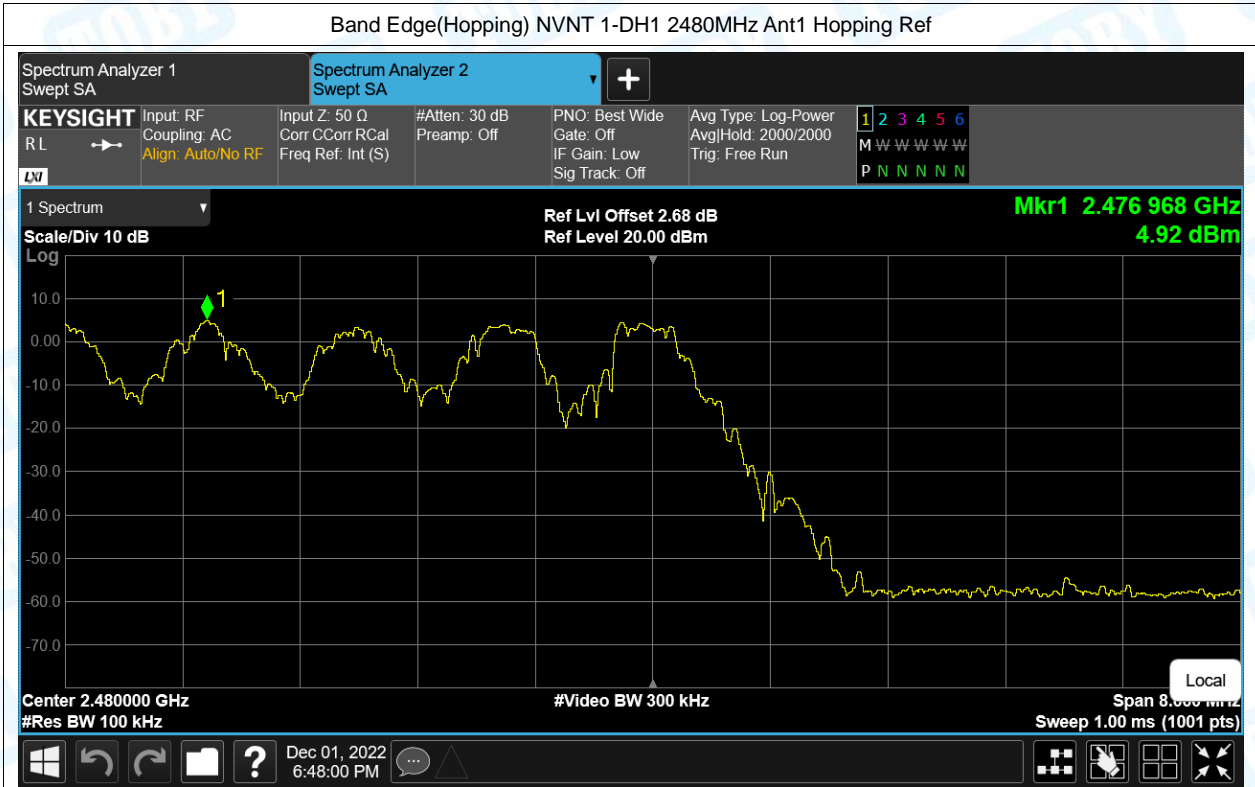
Test Graphs

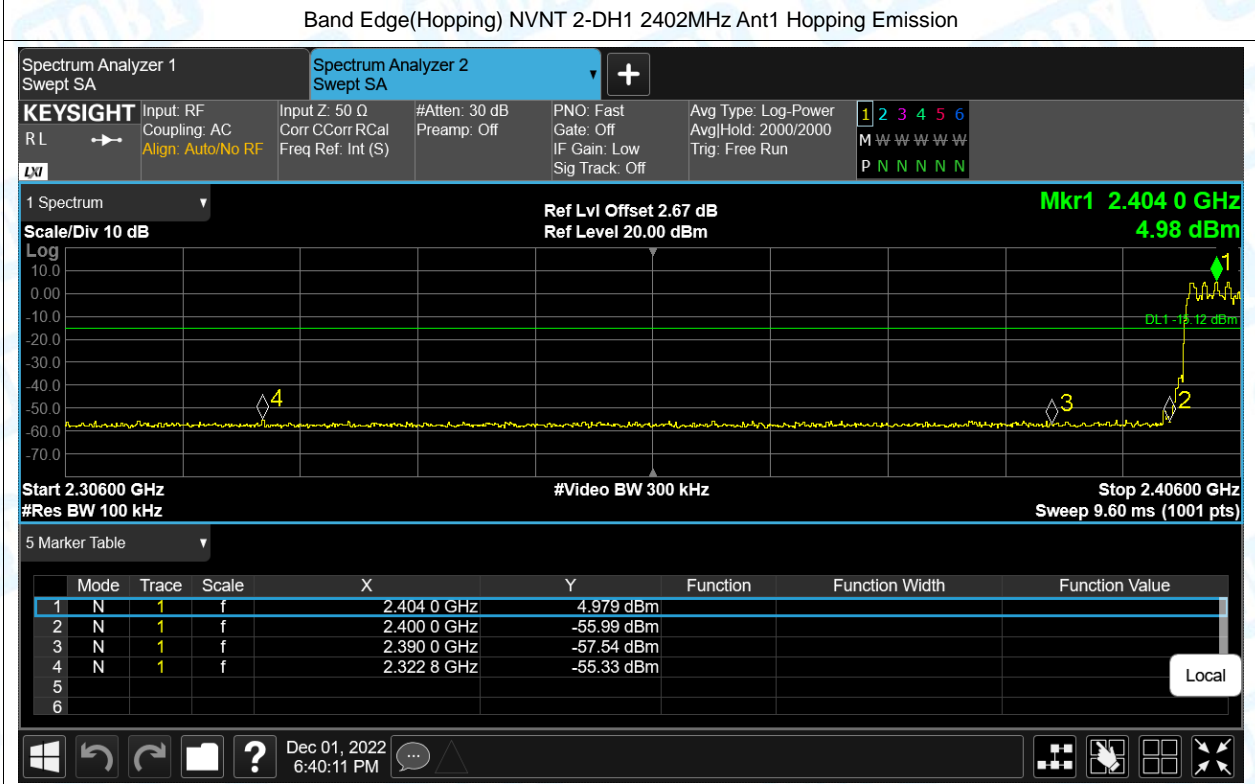
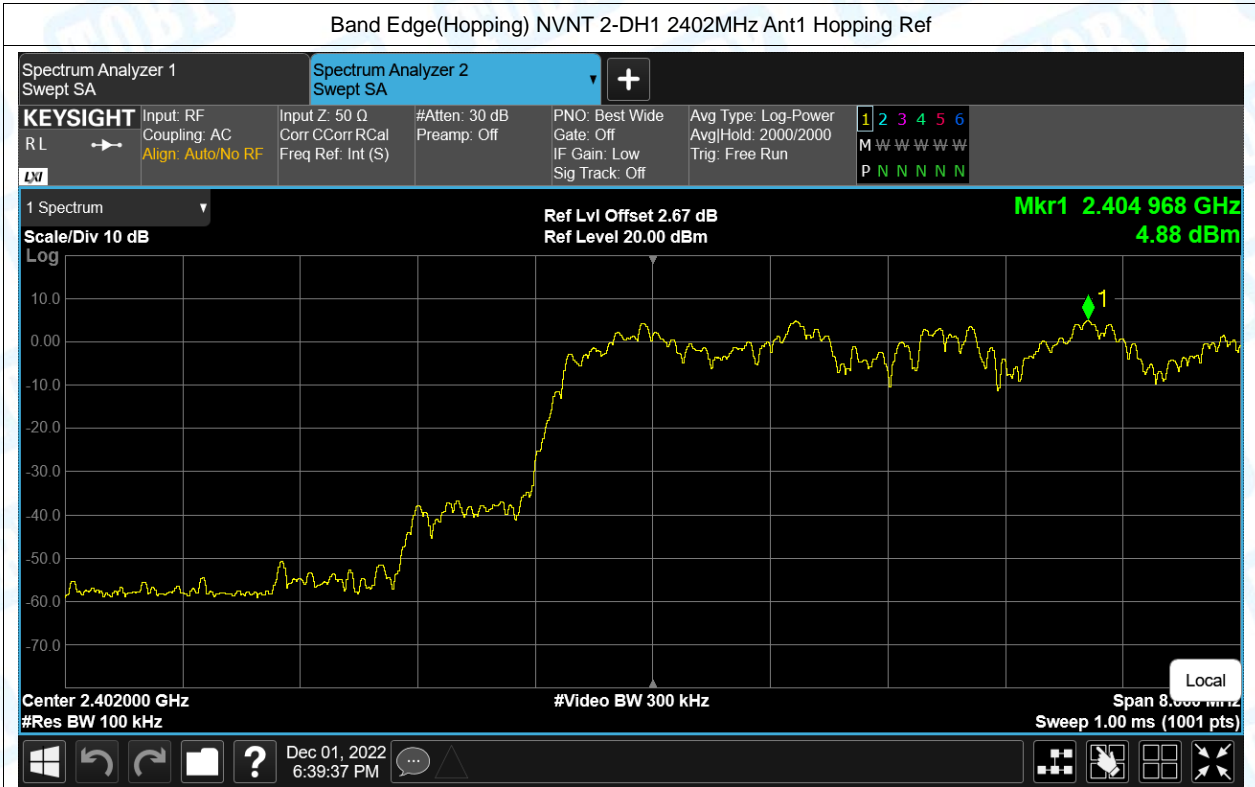
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref

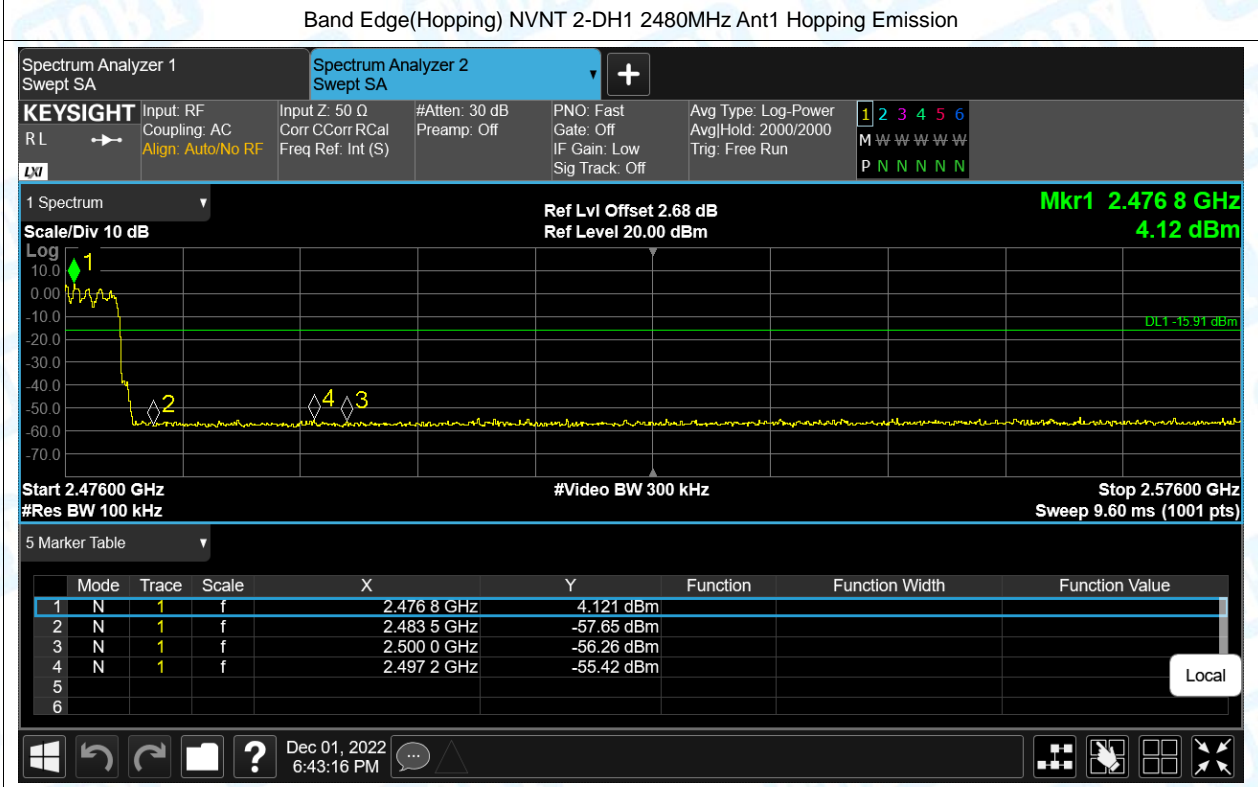
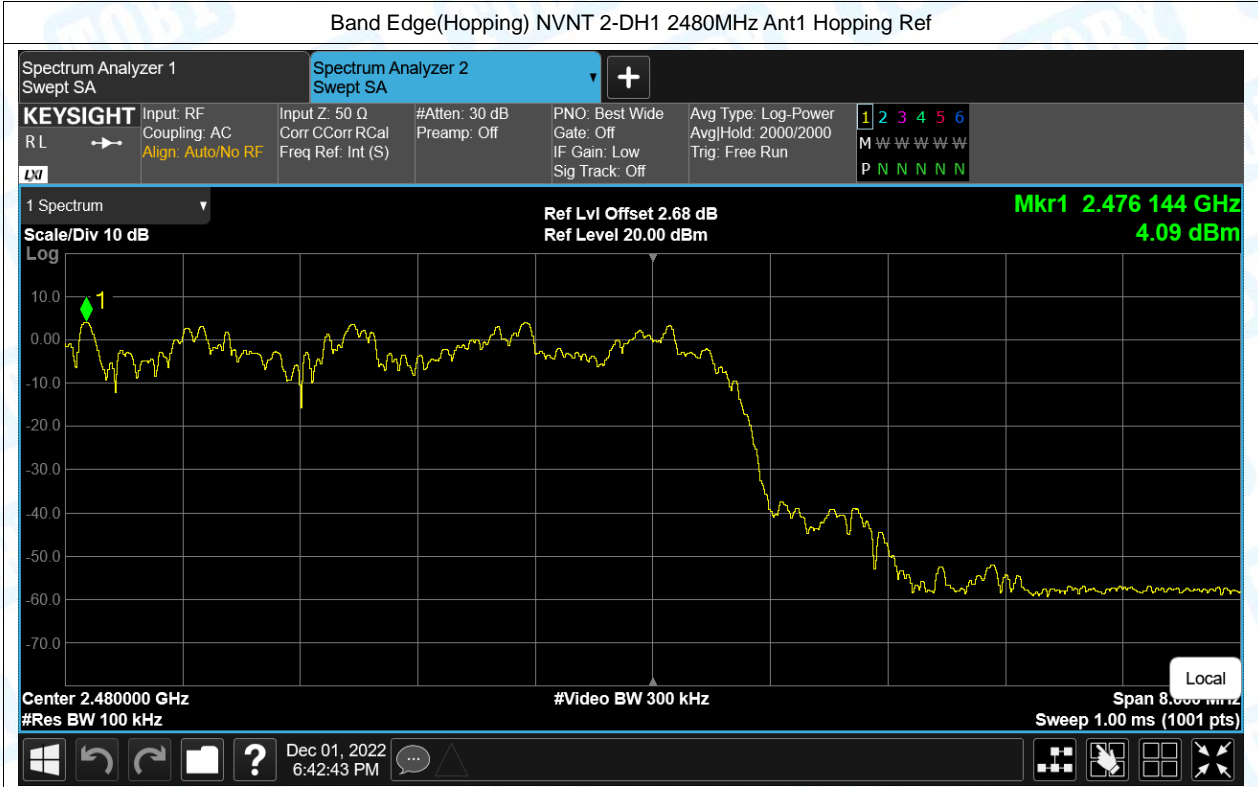


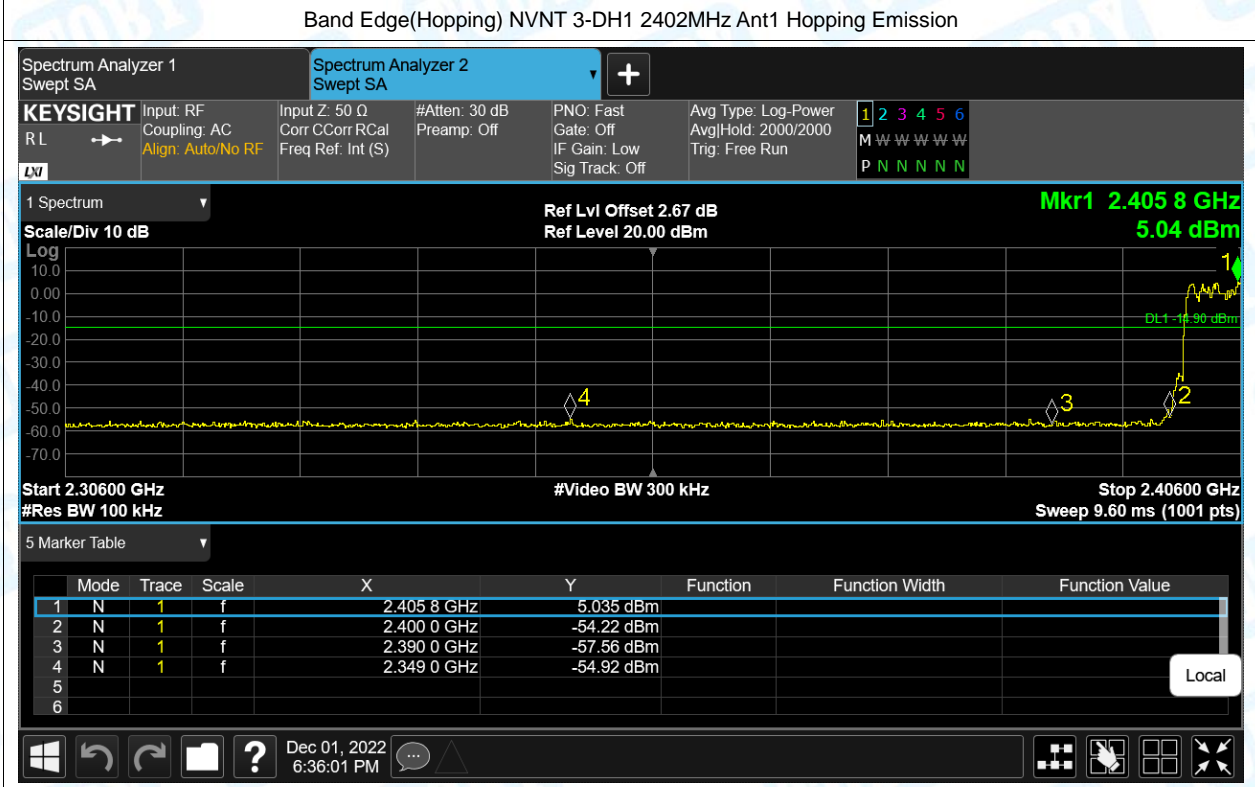
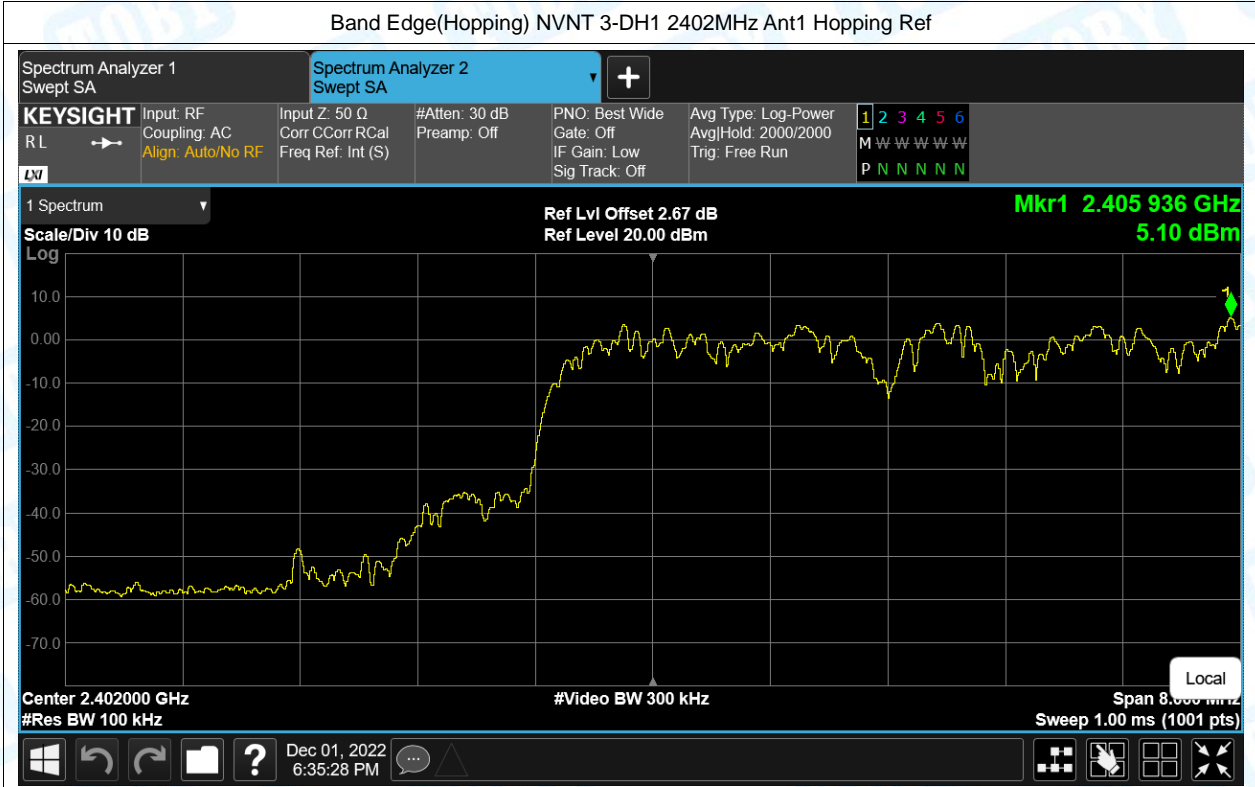
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission

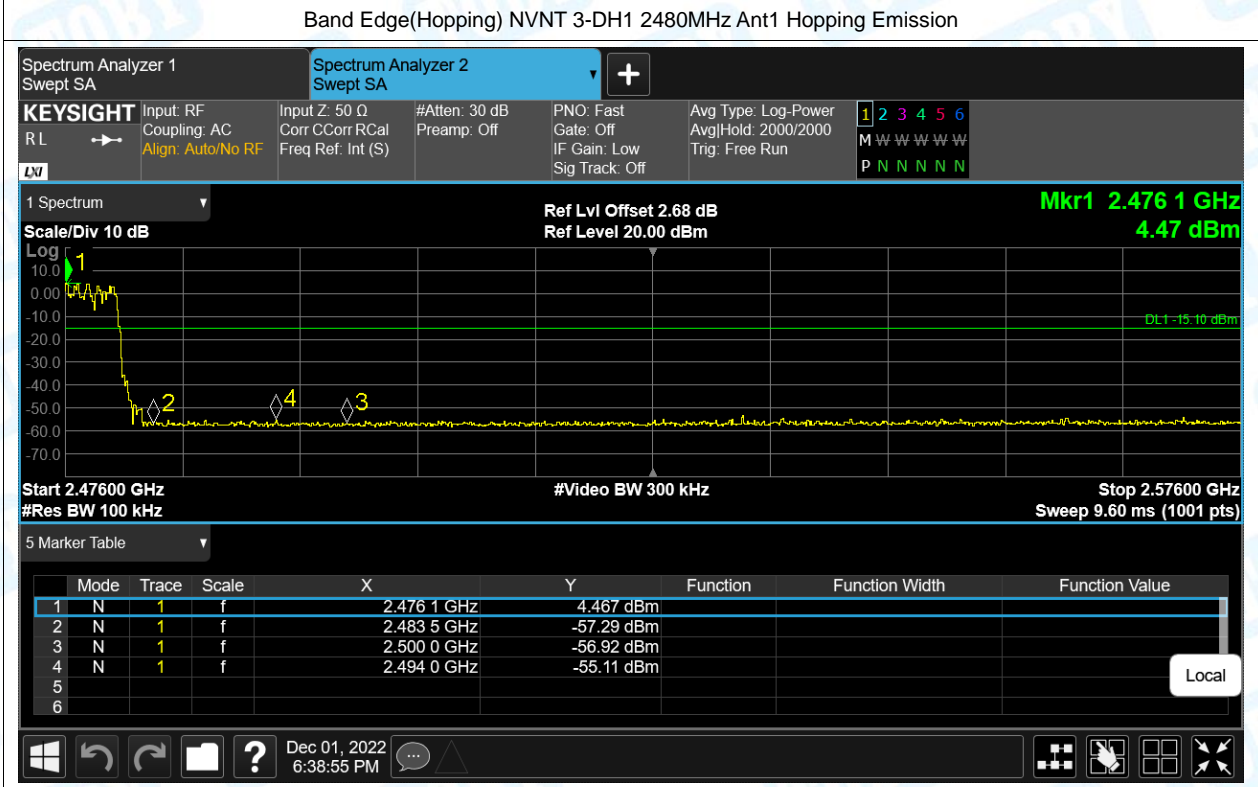
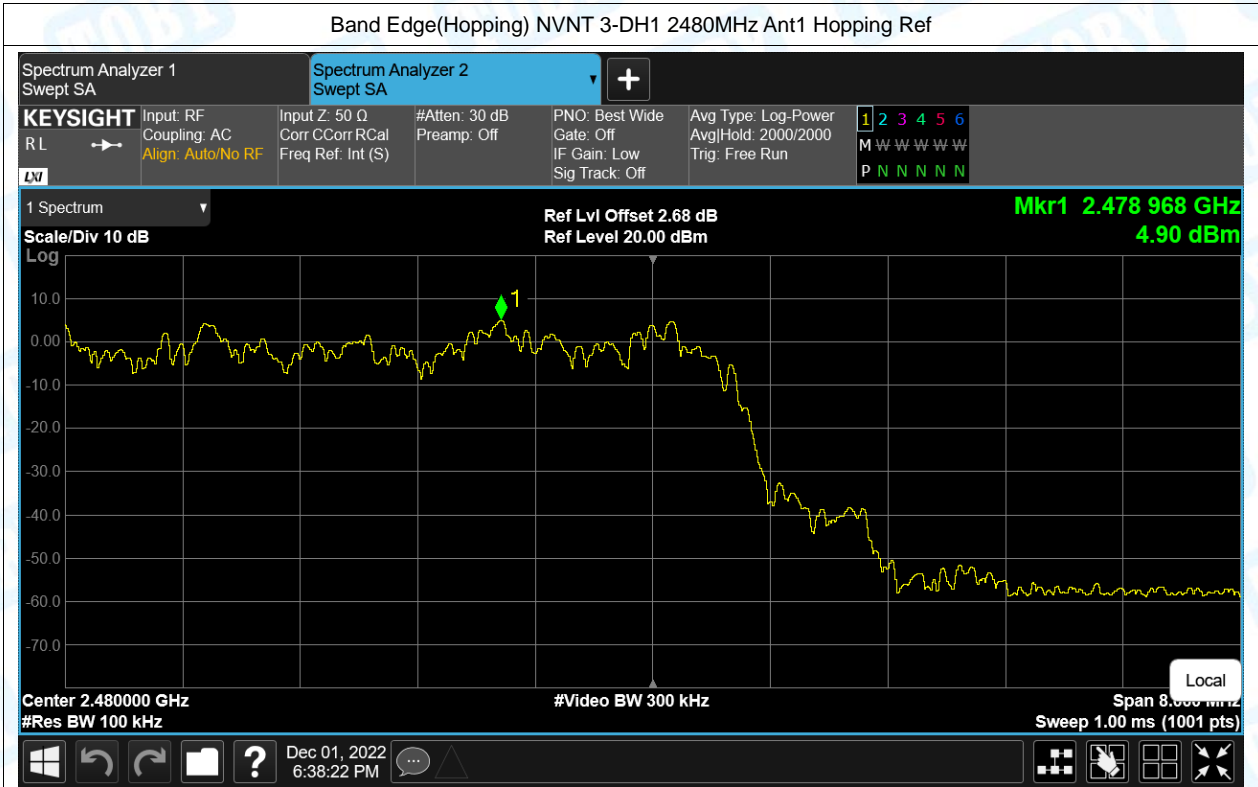










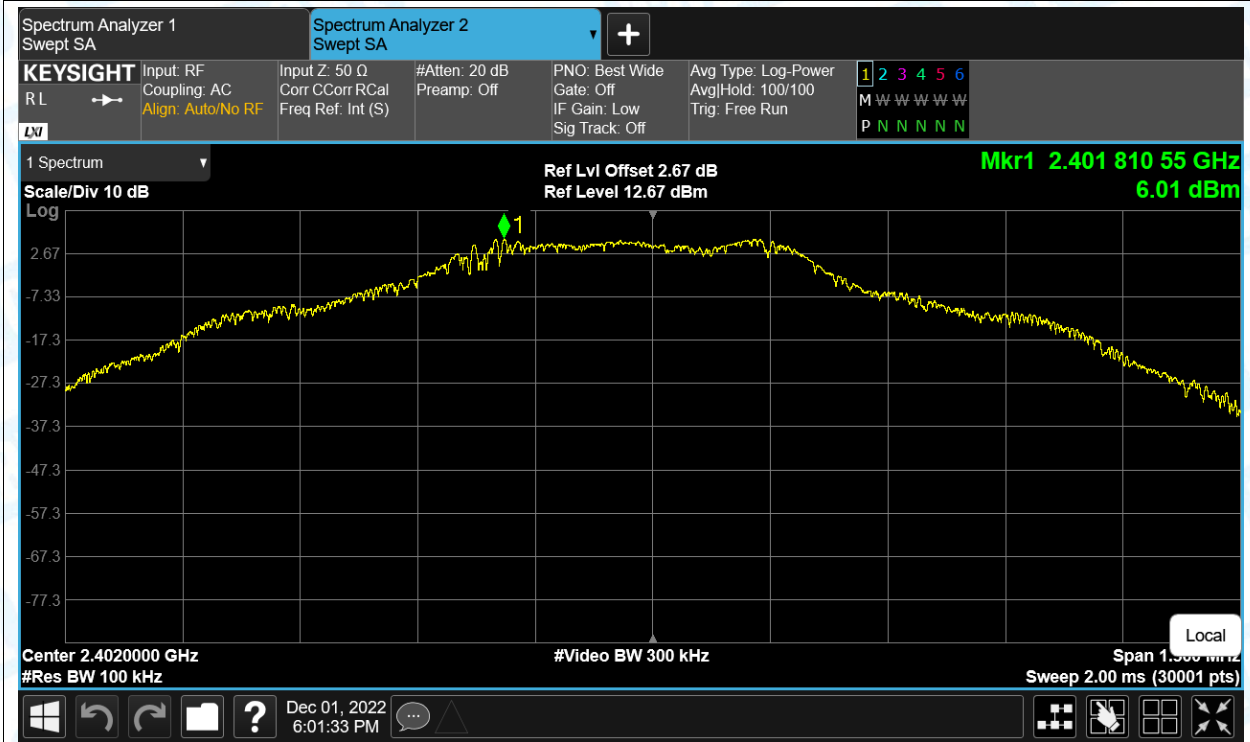


7. Conducted RF Spurious Emission

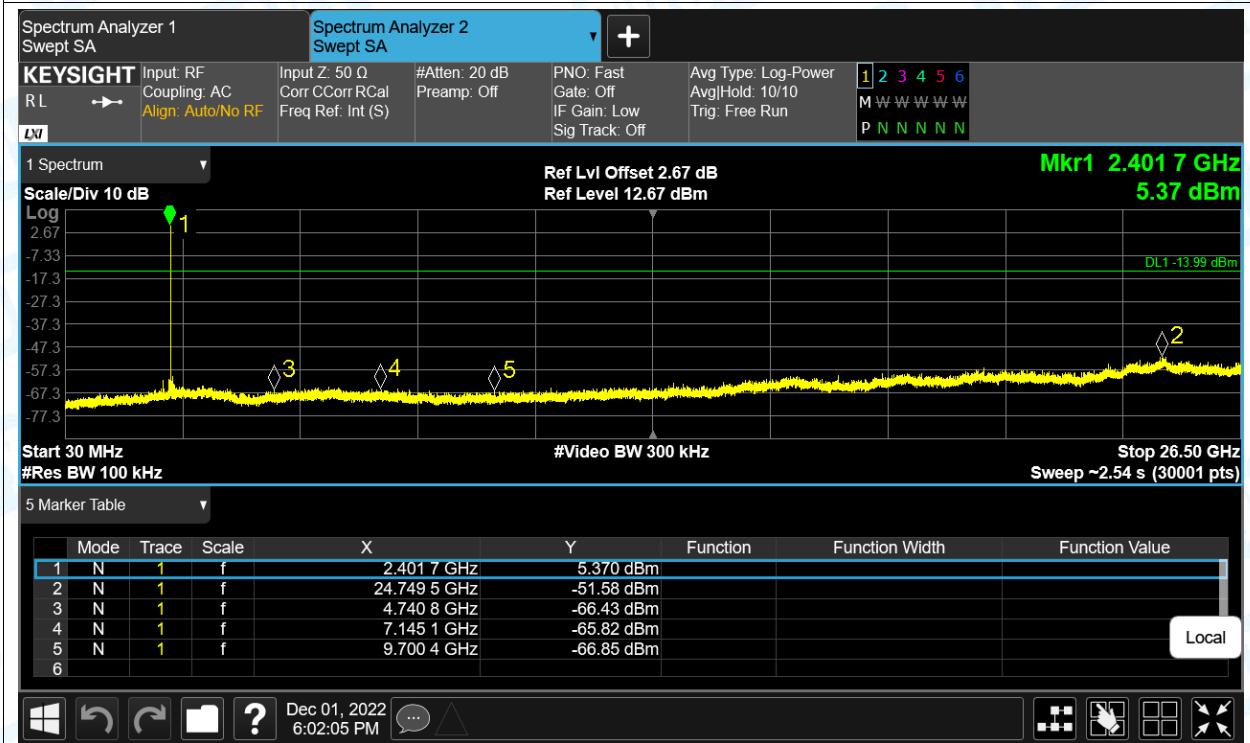
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-57.59	-20	Pass
NVNT	1-DH1	2441	Ant1	-57.45	-20	Pass
NVNT	1-DH1	2480	Ant1	-56.86	-20	Pass
NVNT	2-DH1	2402	Ant1	-58.1	-20	Pass
NVNT	2-DH1	2441	Ant1	-57.87	-20	Pass
NVNT	2-DH1	2480	Ant1	-57.24	-20	Pass
NVNT	3-DH1	2402	Ant1	-57.9	-20	Pass
NVNT	3-DH1	2441	Ant1	-57.66	-20	Pass
NVNT	3-DH1	2480	Ant1	-57.09	-20	Pass

Test Graphs

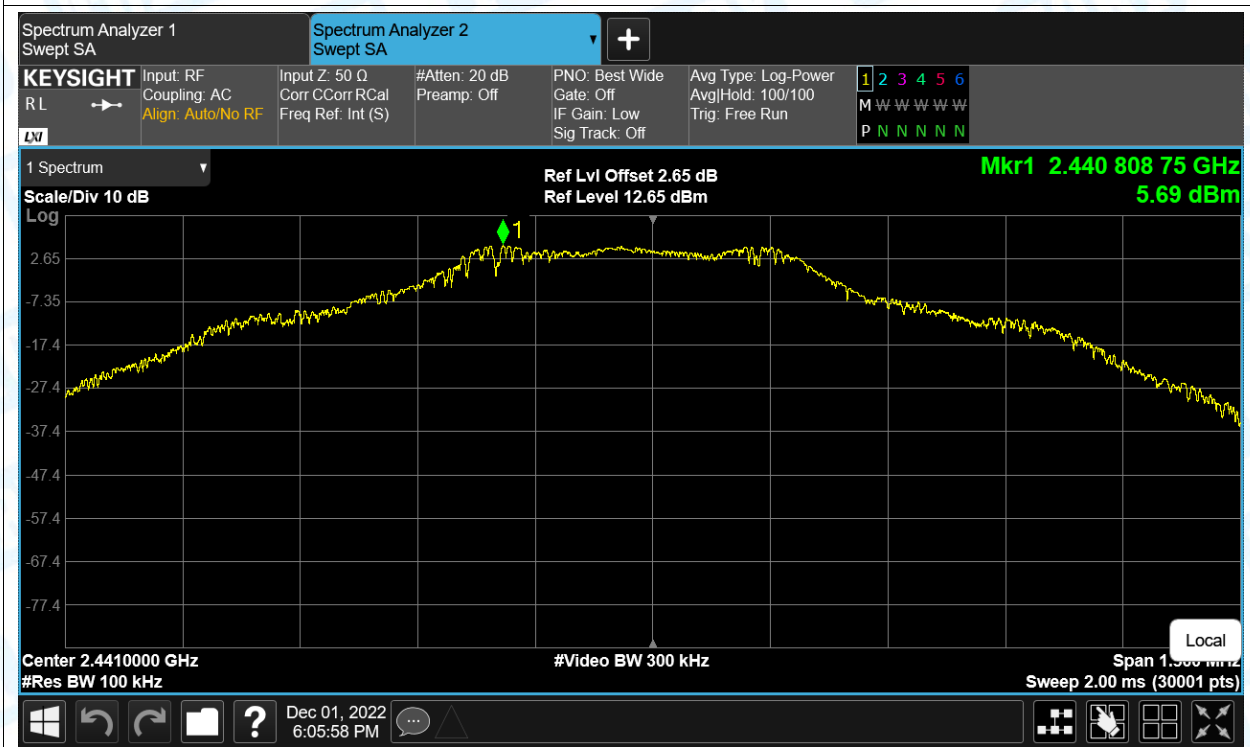
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission

