

RF Test Data for 2.4G WiFi (Conducted Measurements)

General Description of EUT	
Product Name:	Smart Battery Camera
Test Model:	X88
Sample ID:	202211-0028-19-2#
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	55%
Test Voltage:	DC 3.7V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202211-0028-30	

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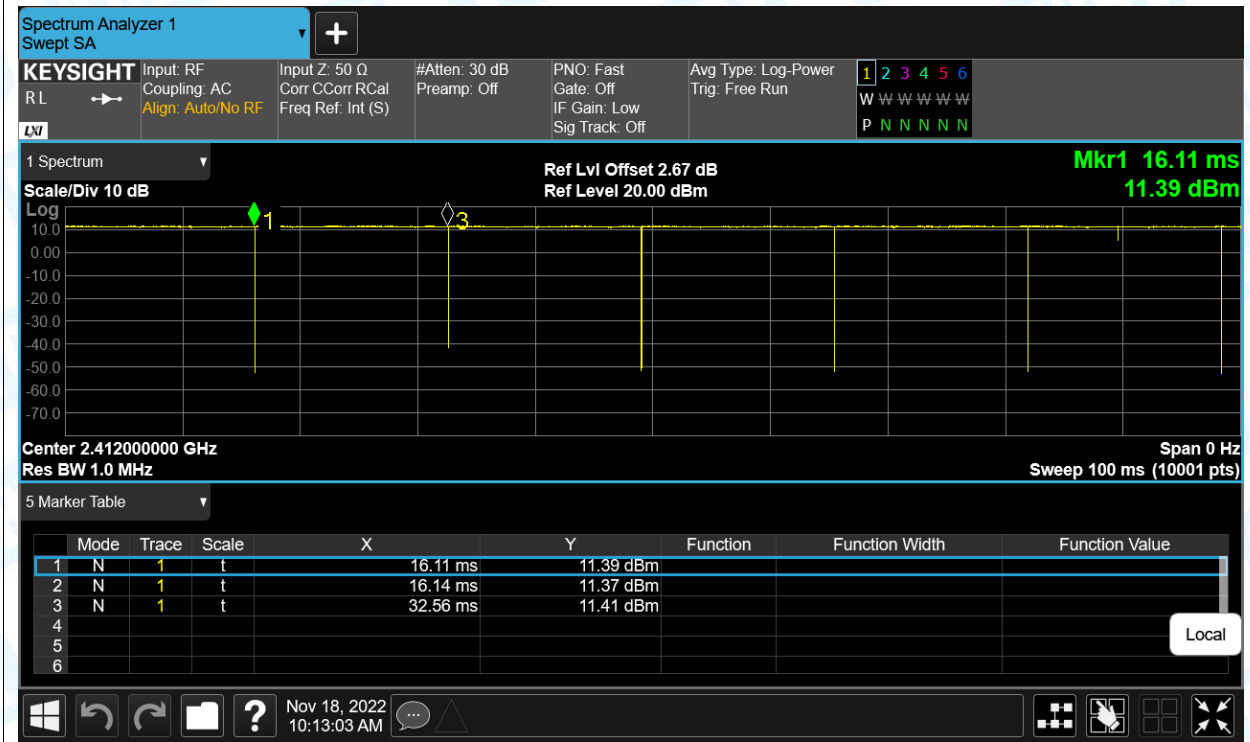
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1. Duty Cycle

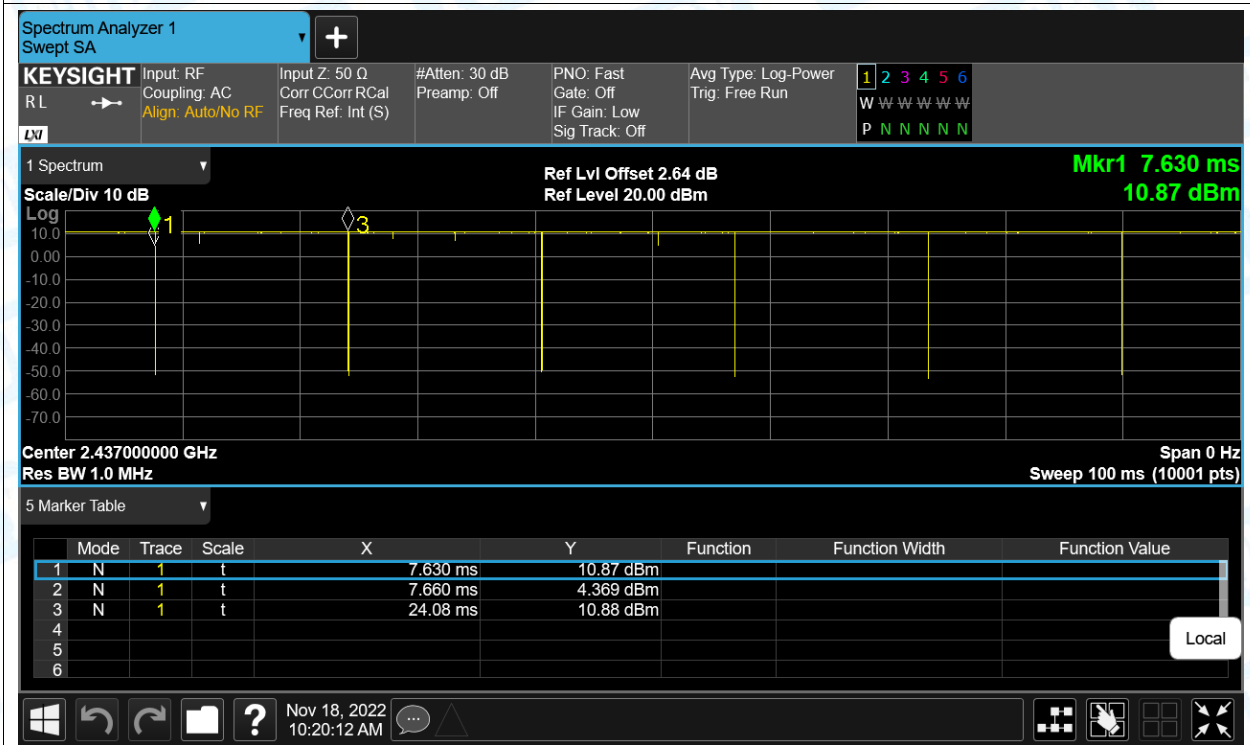
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	99.82	0.01	0.06
NVNT	b	2437	Ant1	99.82	0.01	0.06
NVNT	b	2462	Ant1	99.82	0.01	0.06
NVNT	g	2412	Ant1	98.91	0.05	0.37
NVNT	g	2437	Ant1	98.56	0.06	0.37
NVNT	g	2462	Ant1	98.56	0.06	0.37
NVNT	n(HT20)	2412	Ant1	98.83	0.05	0.39
NVNT	n(HT20)	2437	Ant1	98.83	0.05	0.39
NVNT	n(HT20)	2462	Ant1	98.83	0.05	0.39

Test Graphs

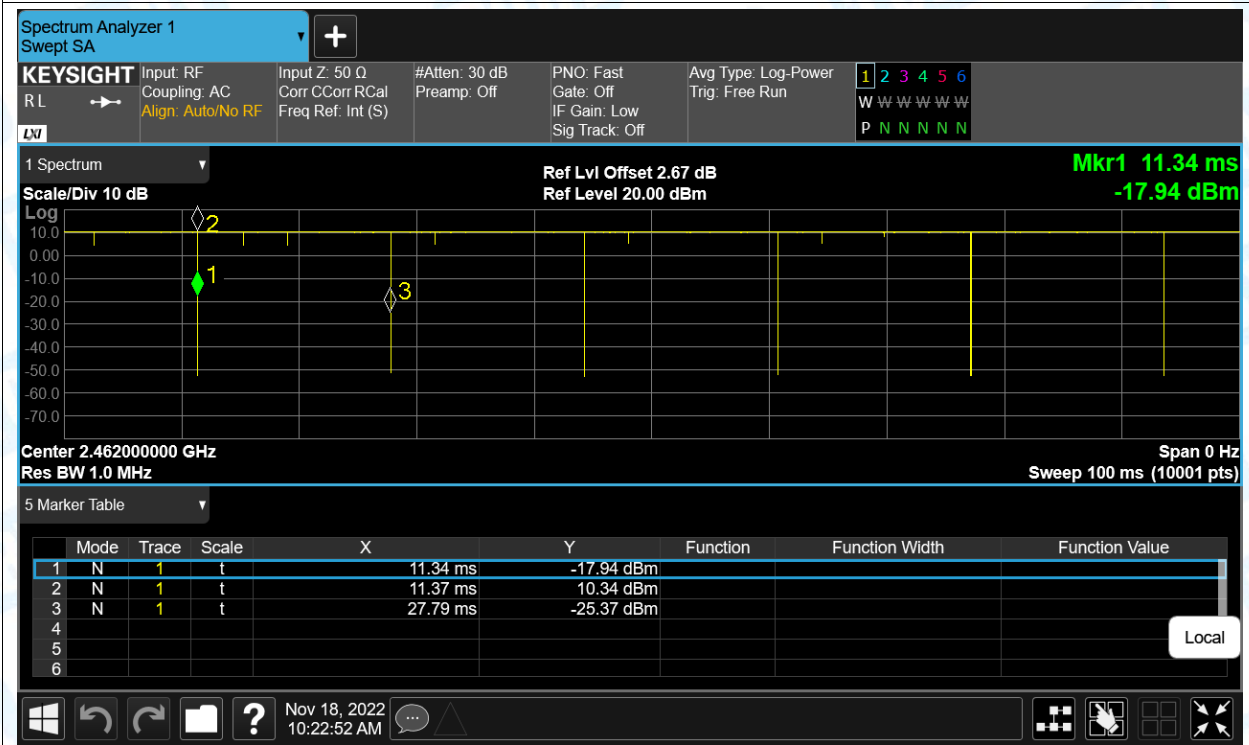
Duty Cycle NVNT b 2412MHz Ant1



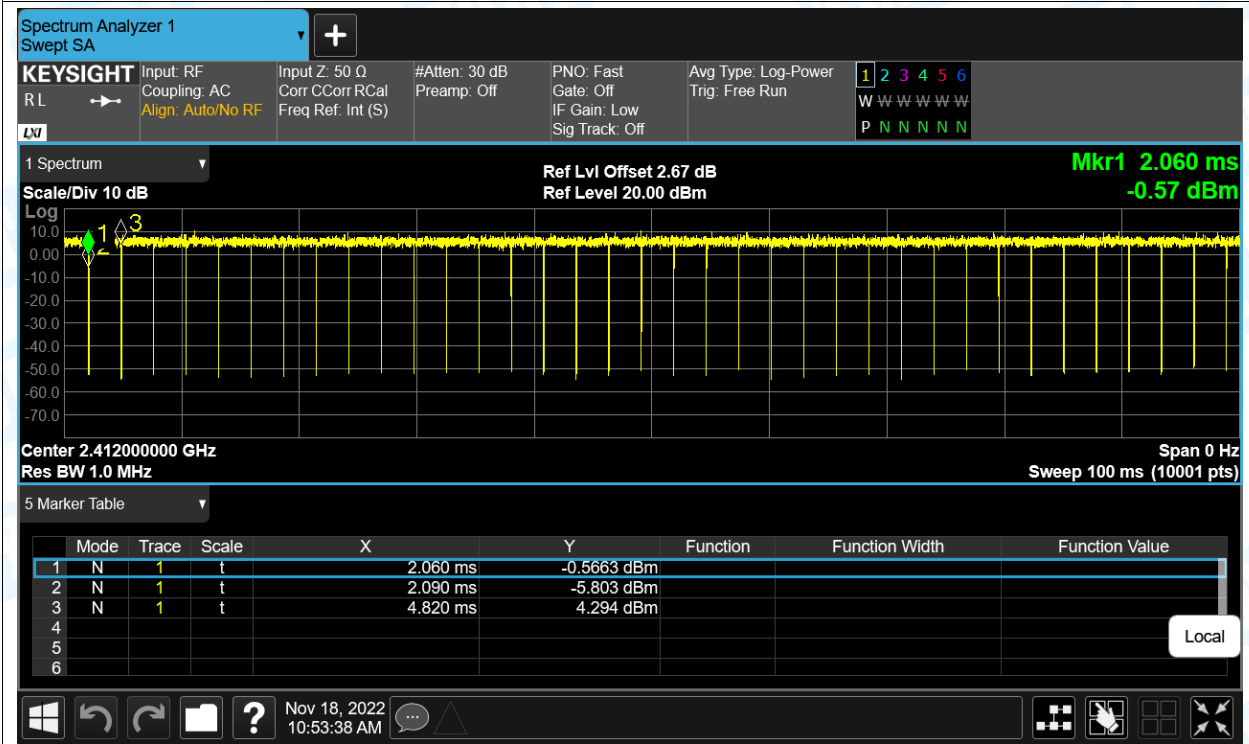
Duty Cycle NVNT b 2437MHz Ant1



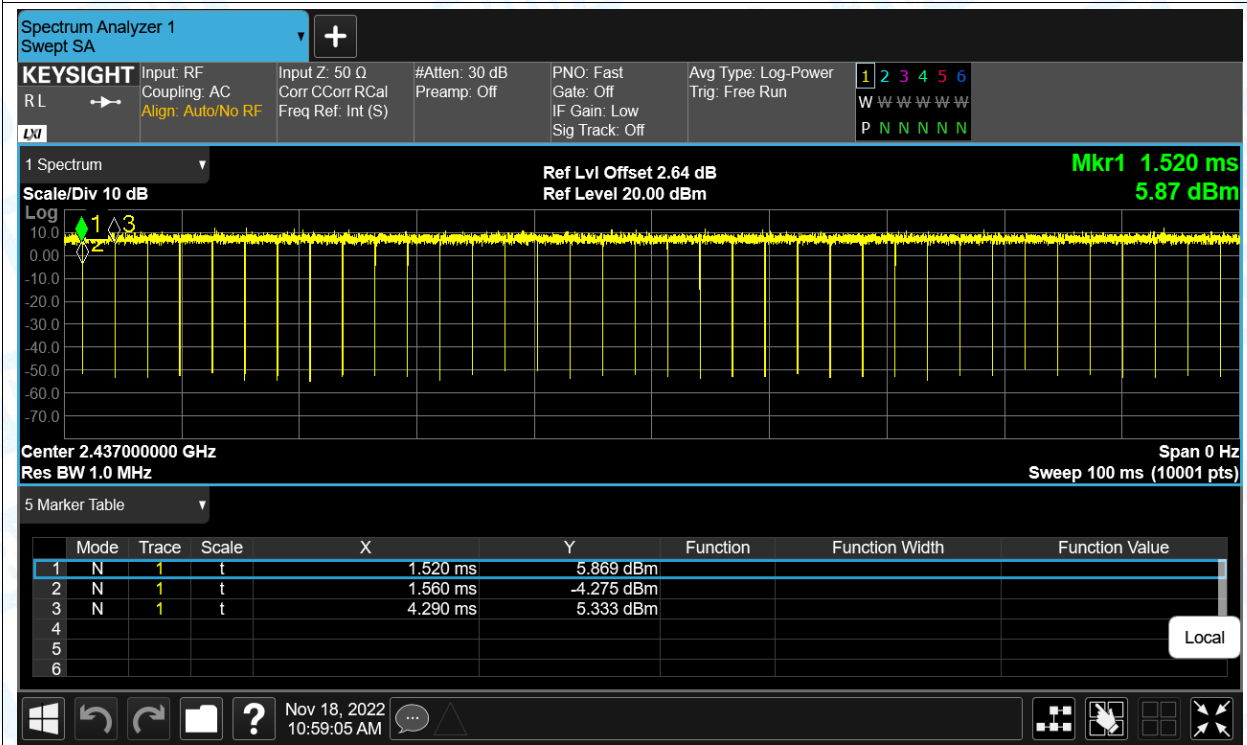
Duty Cycle NVNT b 2462MHz Ant1



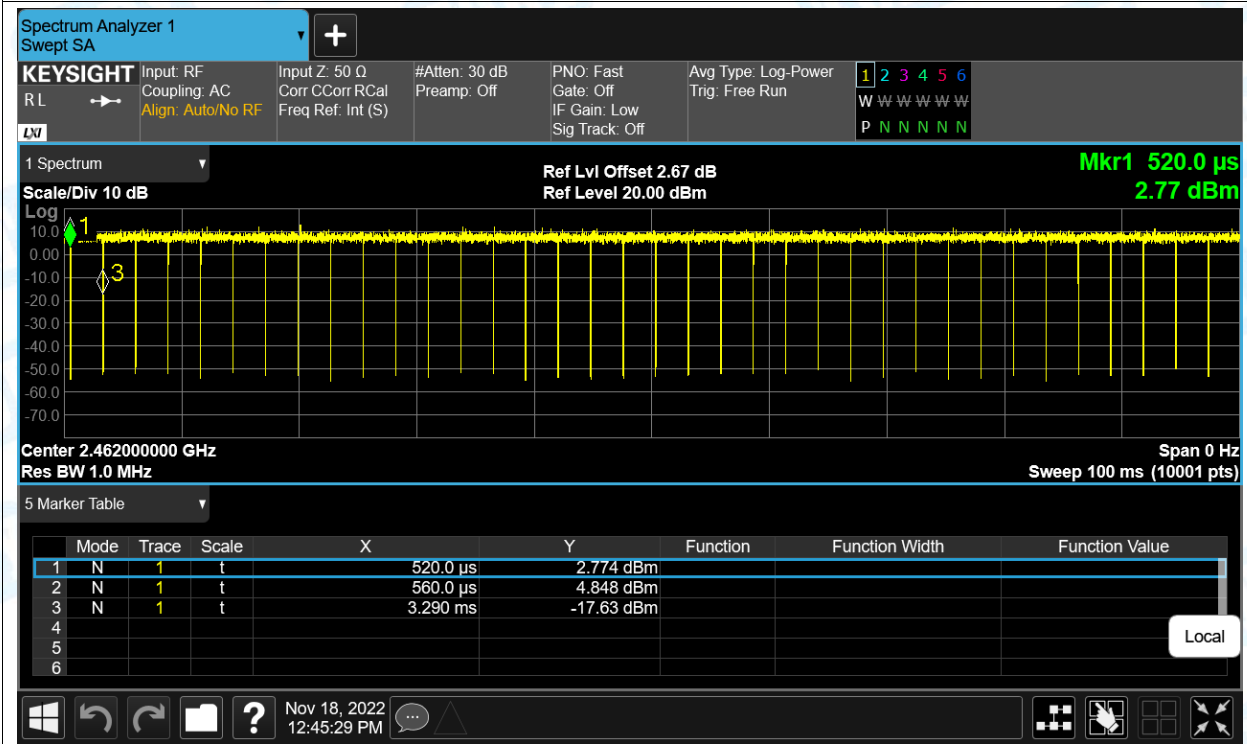
Duty Cycle NVNT g 2412MHz Ant1



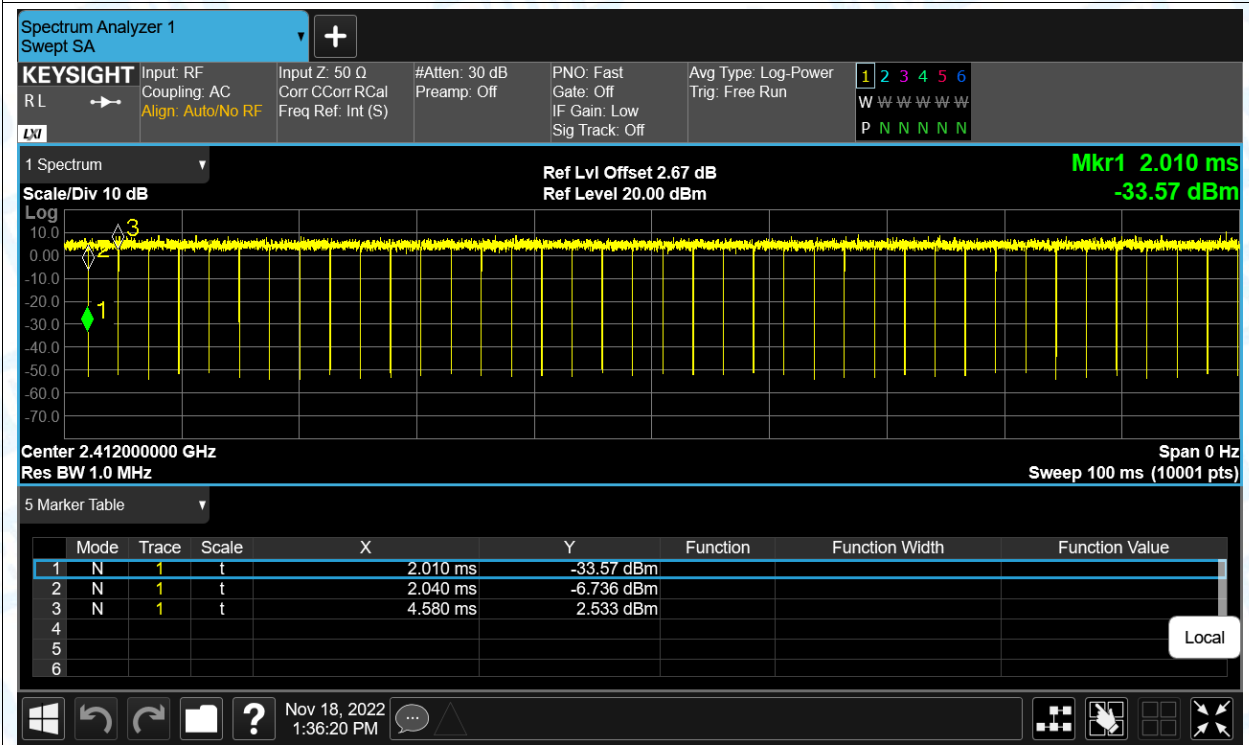
Duty Cycle NVNT g 2437MHz Ant1



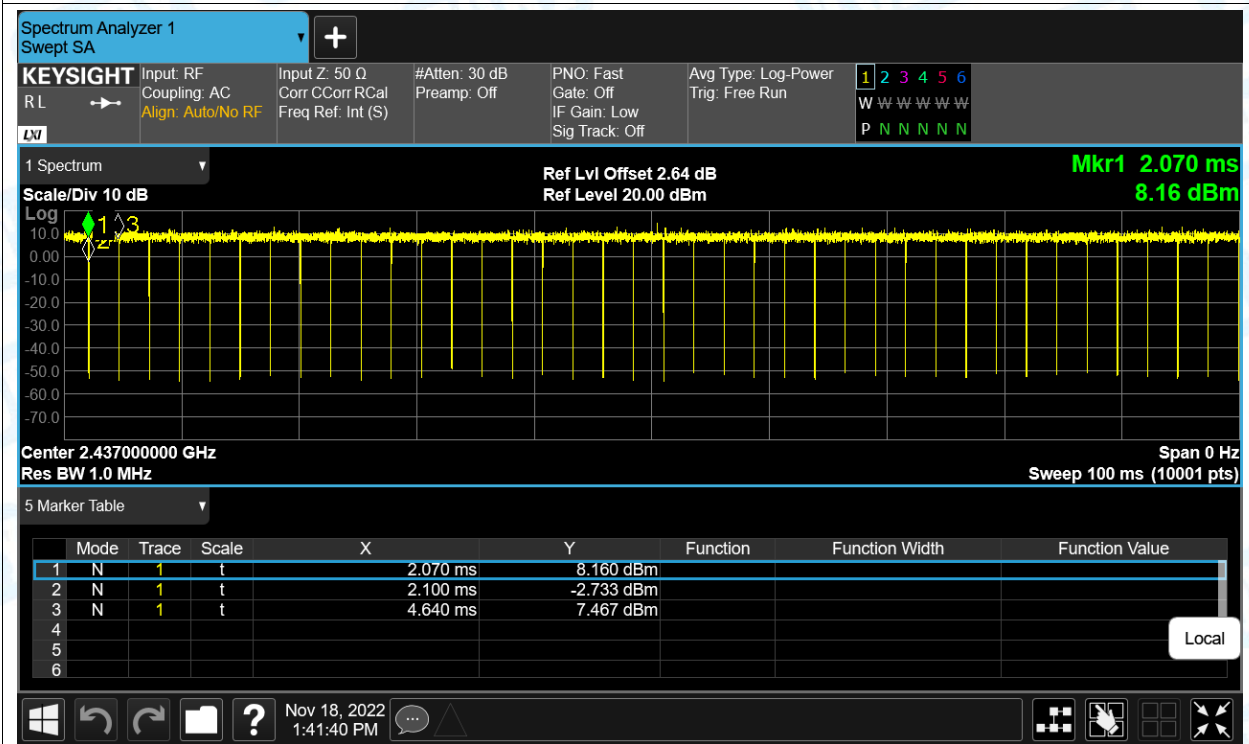
Duty Cycle NVNT g 2462MHz Ant1

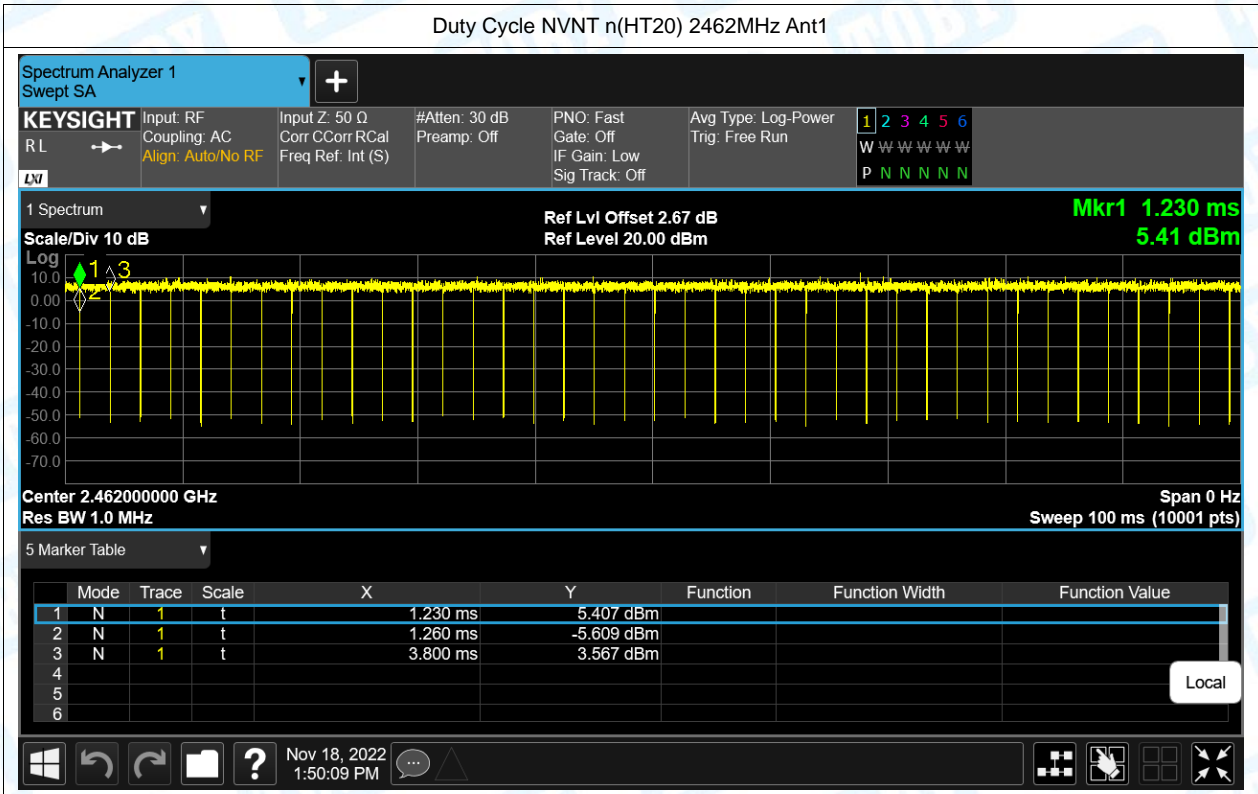


Duty Cycle NVNT n(HT20) 2412MHz Ant1



Duty Cycle NVNT n(HT20) 2437MHz Ant1





2. Maximum Conducted Output Power

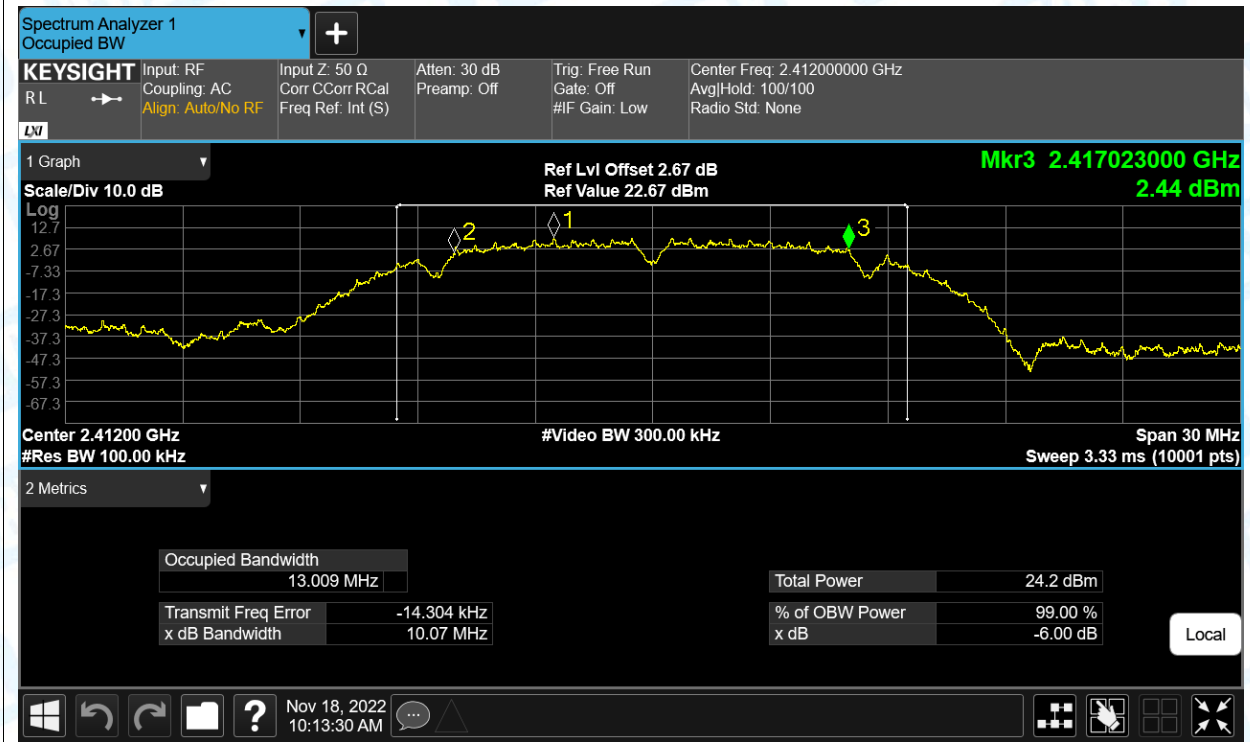
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	17.807	0.01	17.817	30	Pass
NVNT	b	2437	Ant1	17.292	0.01	17.302	30	Pass
NVNT	b	2462	Ant1	16.978	0.01	16.988	30	Pass
NVNT	g	2412	Ant1	13.445	0.05	13.495	30	Pass
NVNT	g	2437	Ant1	16.705	0.06	16.765	30	Pass
NVNT	g	2462	Ant1	15.229	0.06	15.289	30	Pass
NVNT	n(HT20)	2412	Ant1	12.764	0.05	12.814	30	Pass
NVNT	n(HT20)	2437	Ant1	16.578	0.05	16.628	30	Pass
NVNT	n(HT20)	2462	Ant1	14.27	0.05	14.32	30	Pass

3. -6dB Bandwidth

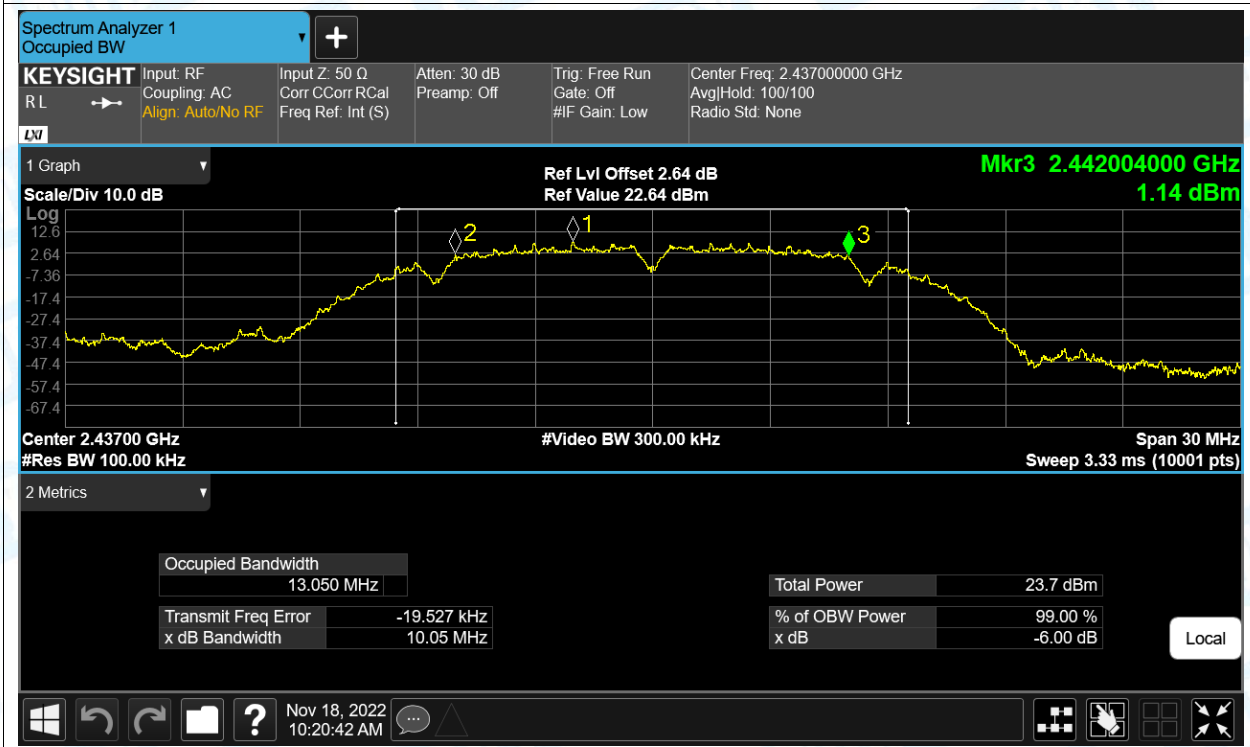
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	10.07	0.5	Pass
NVNT	b	2437	Ant1	10.05	0.5	Pass
NVNT	b	2462	Ant1	10.01	0.5	Pass
NVNT	g	2412	Ant1	16.39	0.5	Pass
NVNT	g	2437	Ant1	16.37	0.5	Pass
NVNT	g	2462	Ant1	16.38	0.5	Pass
NVNT	n(HT20)	2412	Ant1	17.62	0.5	Pass
NVNT	n(HT20)	2437	Ant1	17.59	0.5	Pass
NVNT	n(HT20)	2462	Ant1	17.6	0.5	Pass

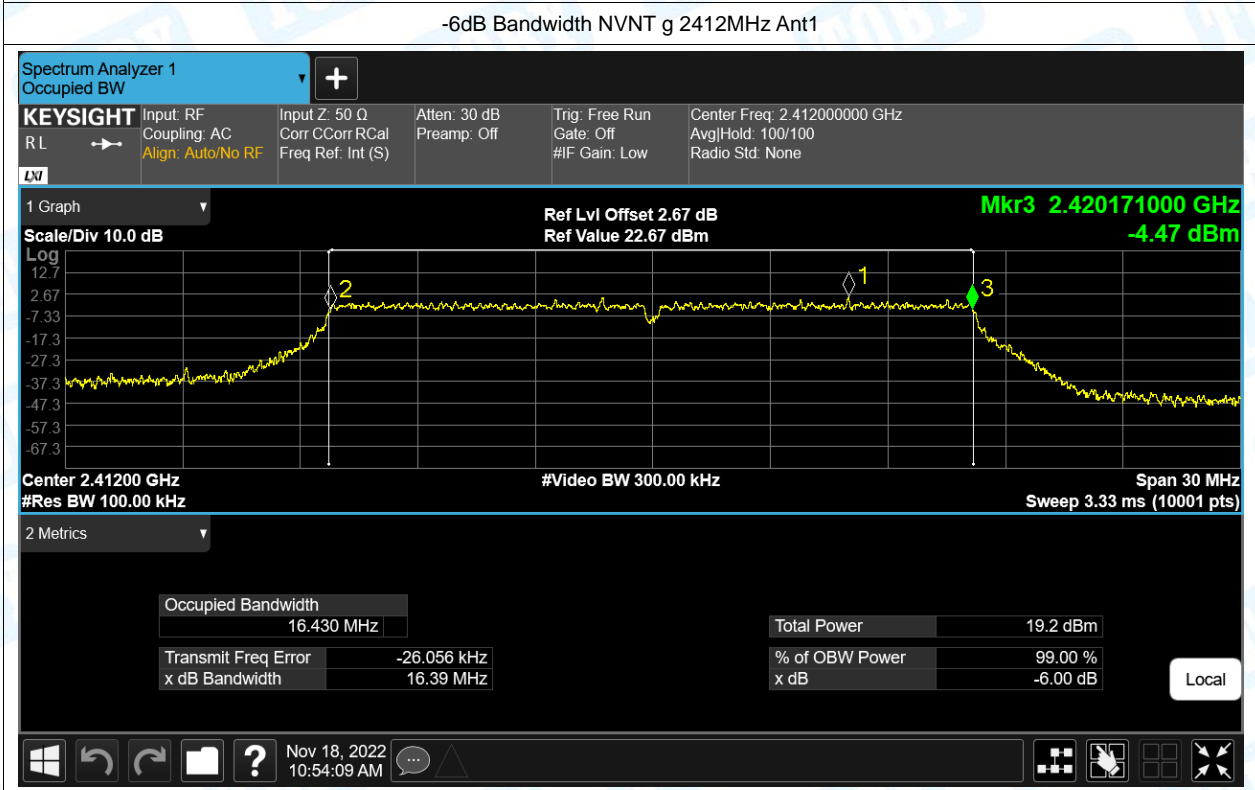
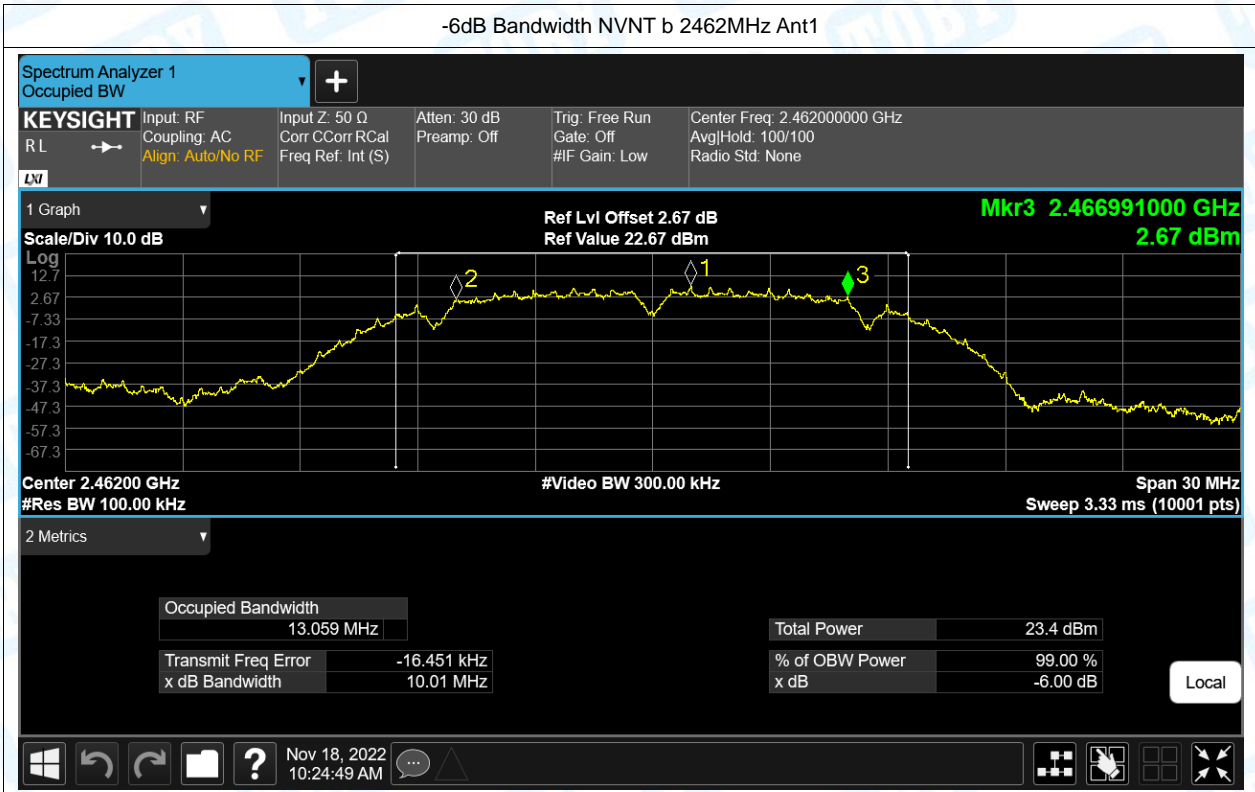
Test Graphs

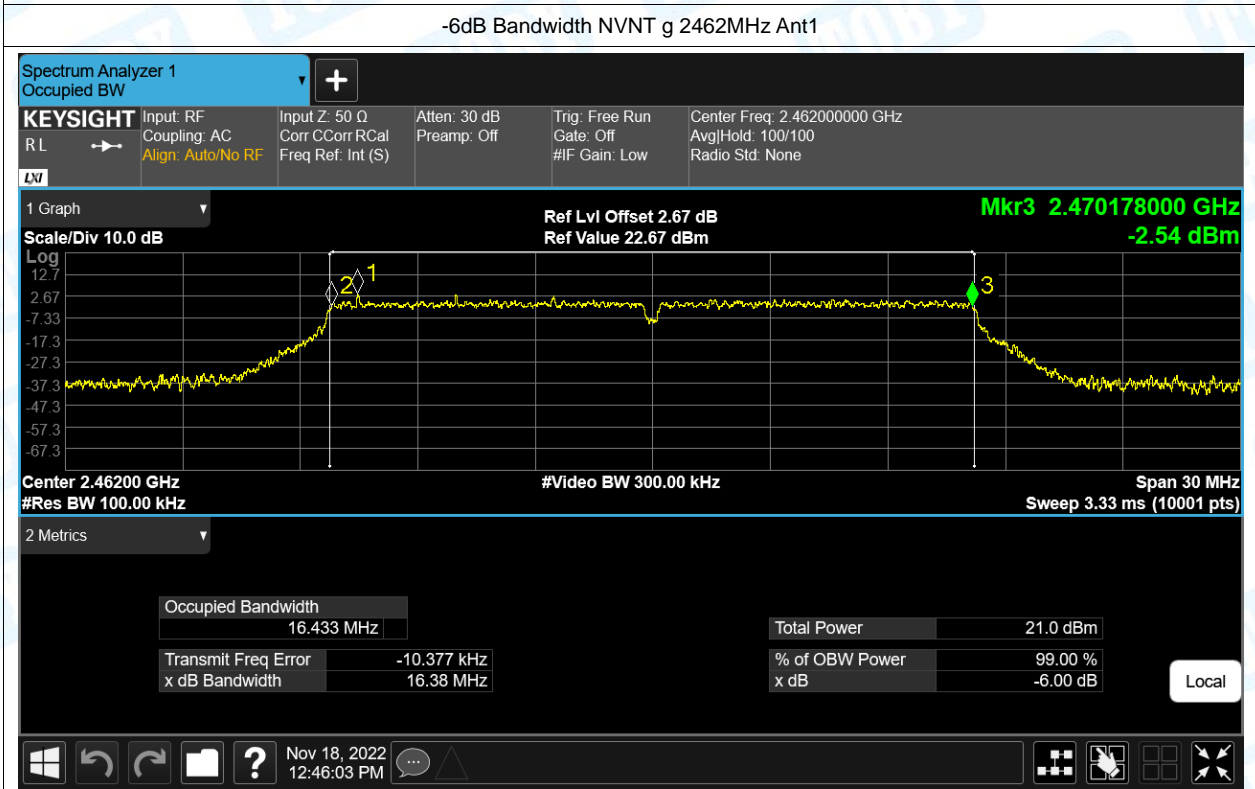
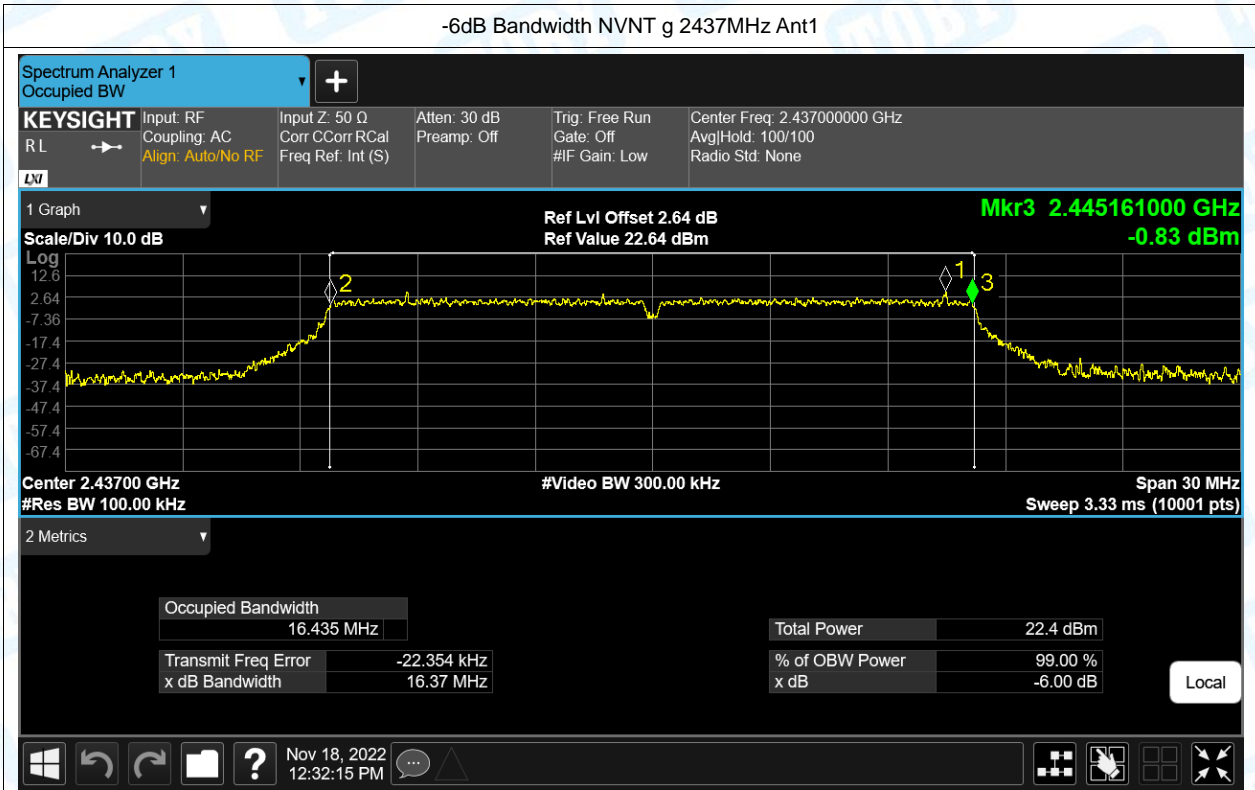
-6dB Bandwidth NVNT b 2412MHz Ant1

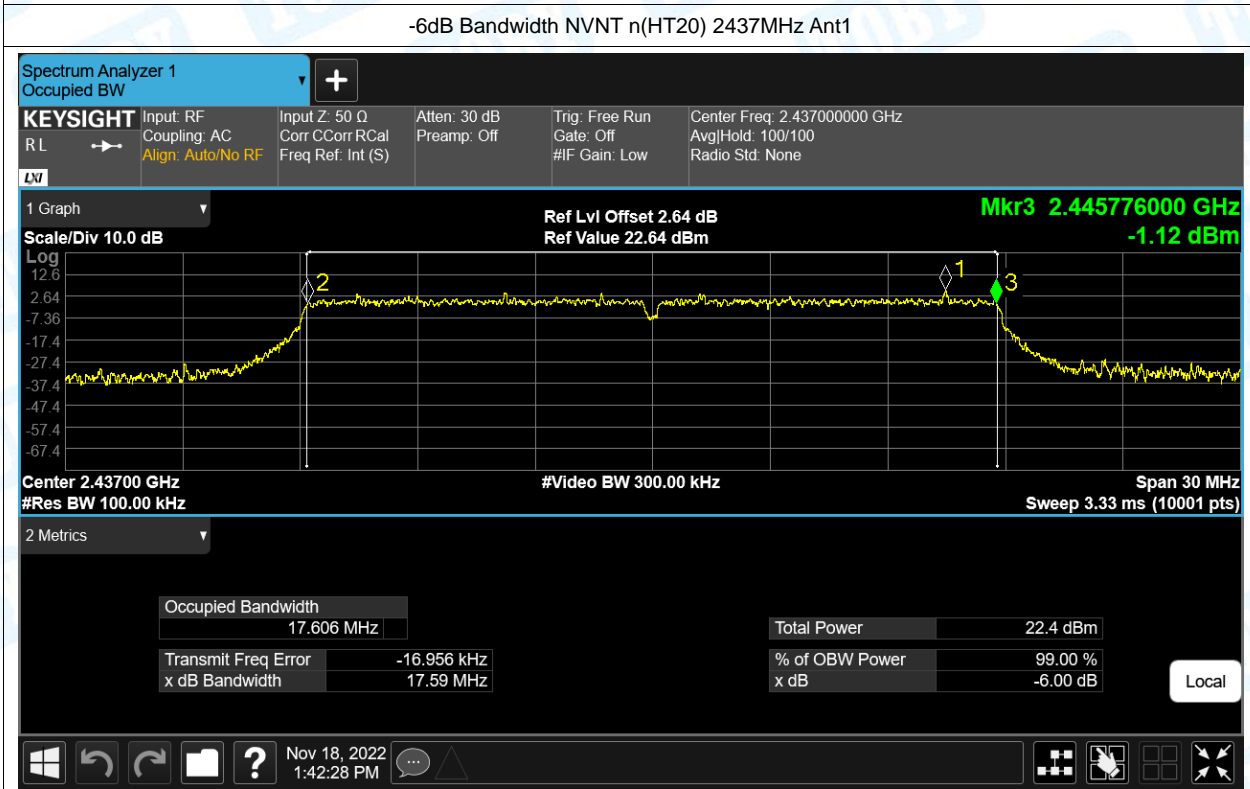
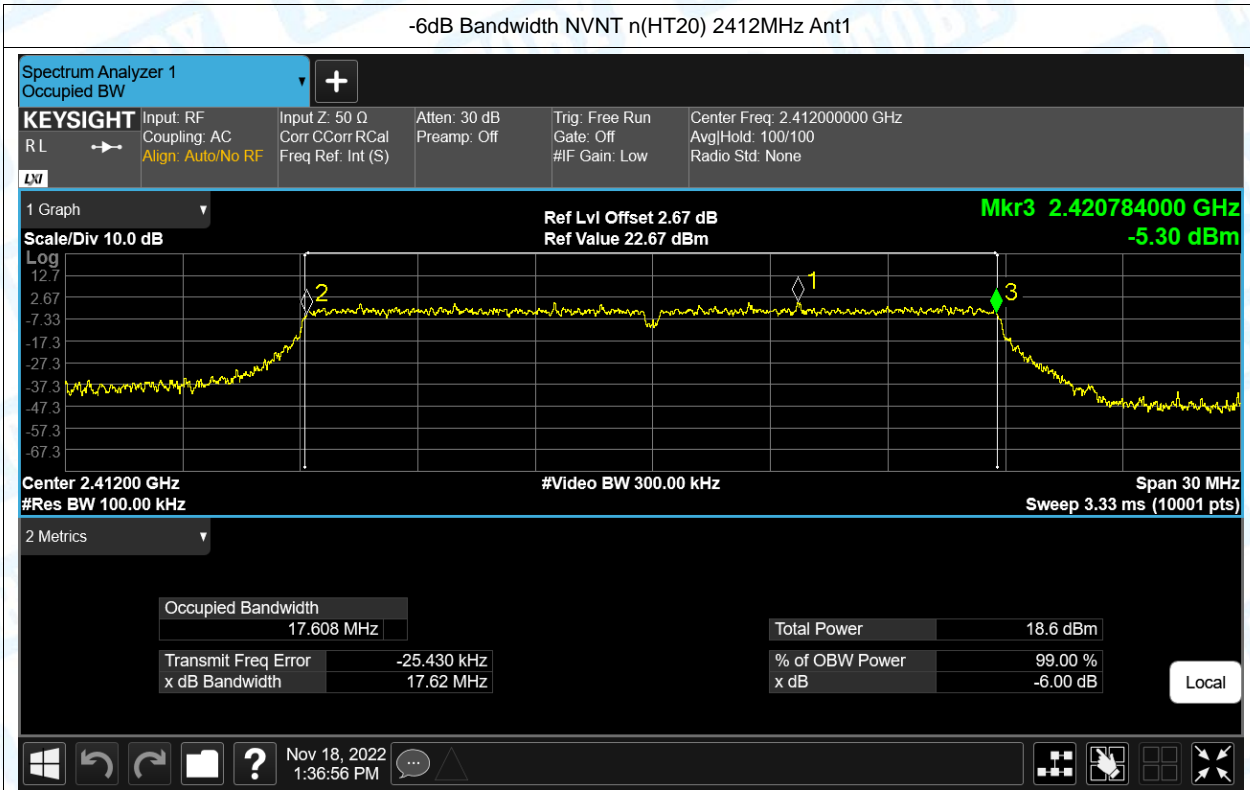


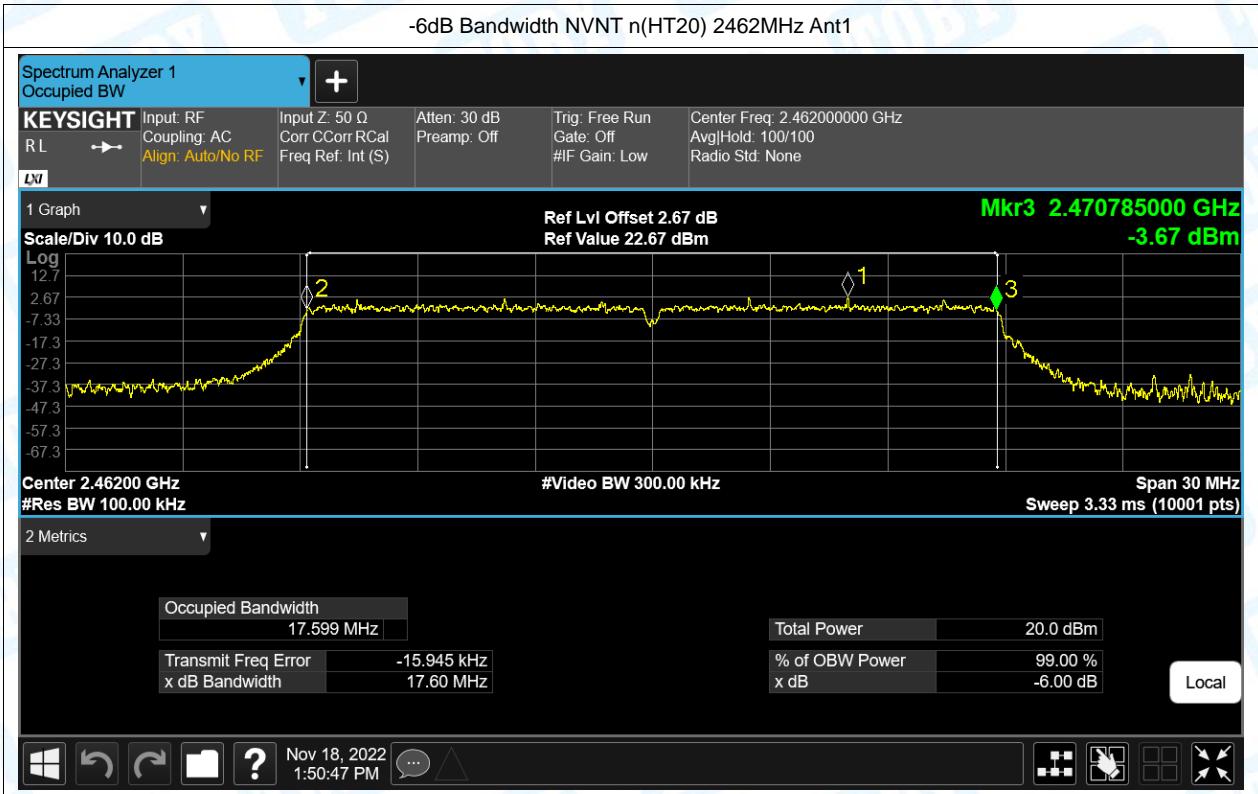
-6dB Bandwidth NVNT b 2437MHz Ant1









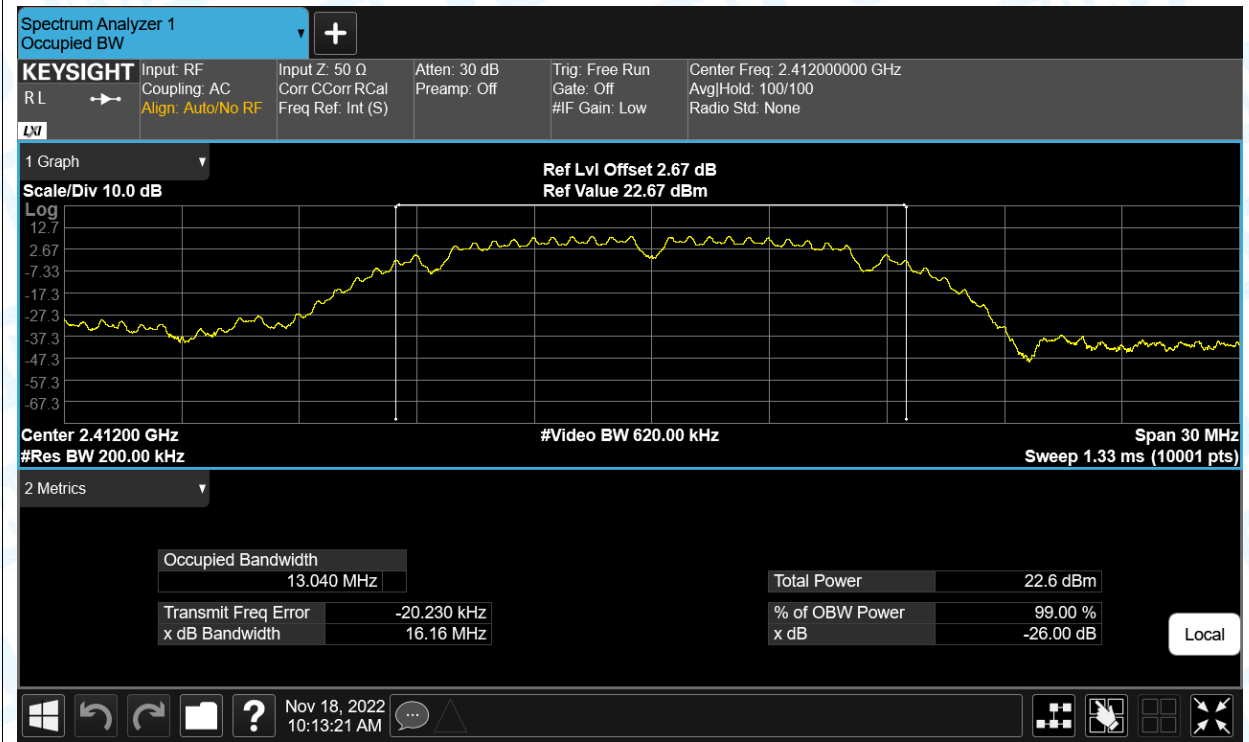


4. Occupied Channel Bandwidth

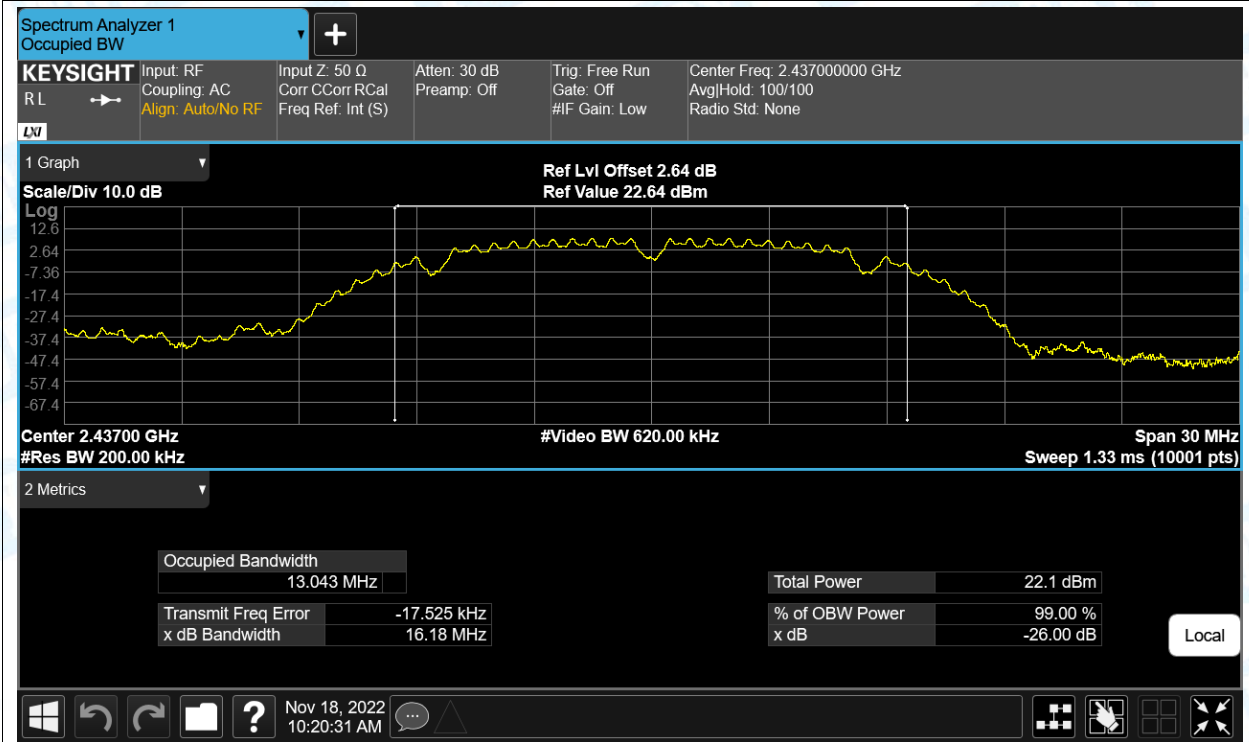
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	13.04
NVNT	b	2437	Ant1	13.043
NVNT	b	2462	Ant1	13.061
NVNT	g	2412	Ant1	16.519
NVNT	g	2437	Ant1	16.503
NVNT	g	2462	Ant1	16.467
NVNT	n(HT20)	2412	Ant1	17.626
NVNT	n(HT20)	2437	Ant1	17.609
NVNT	n(HT20)	2462	Ant1	17.609

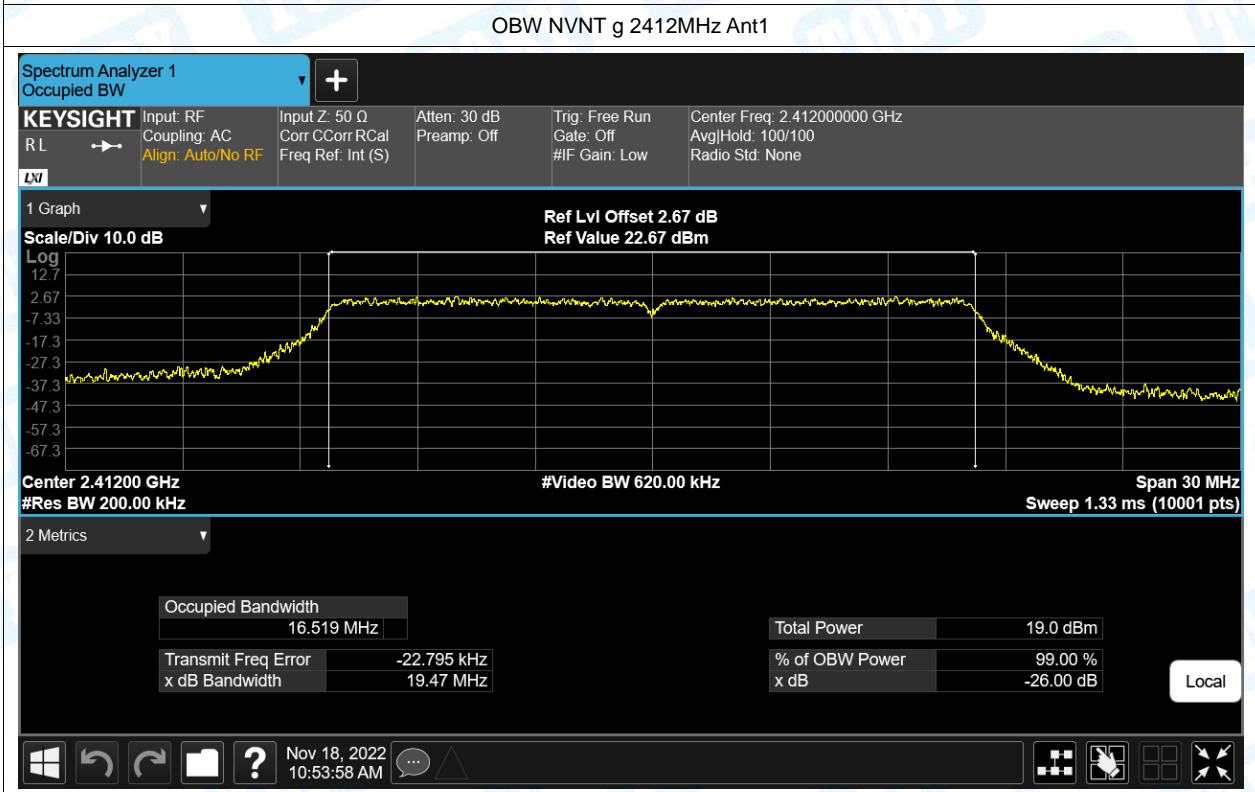
Test Graphs

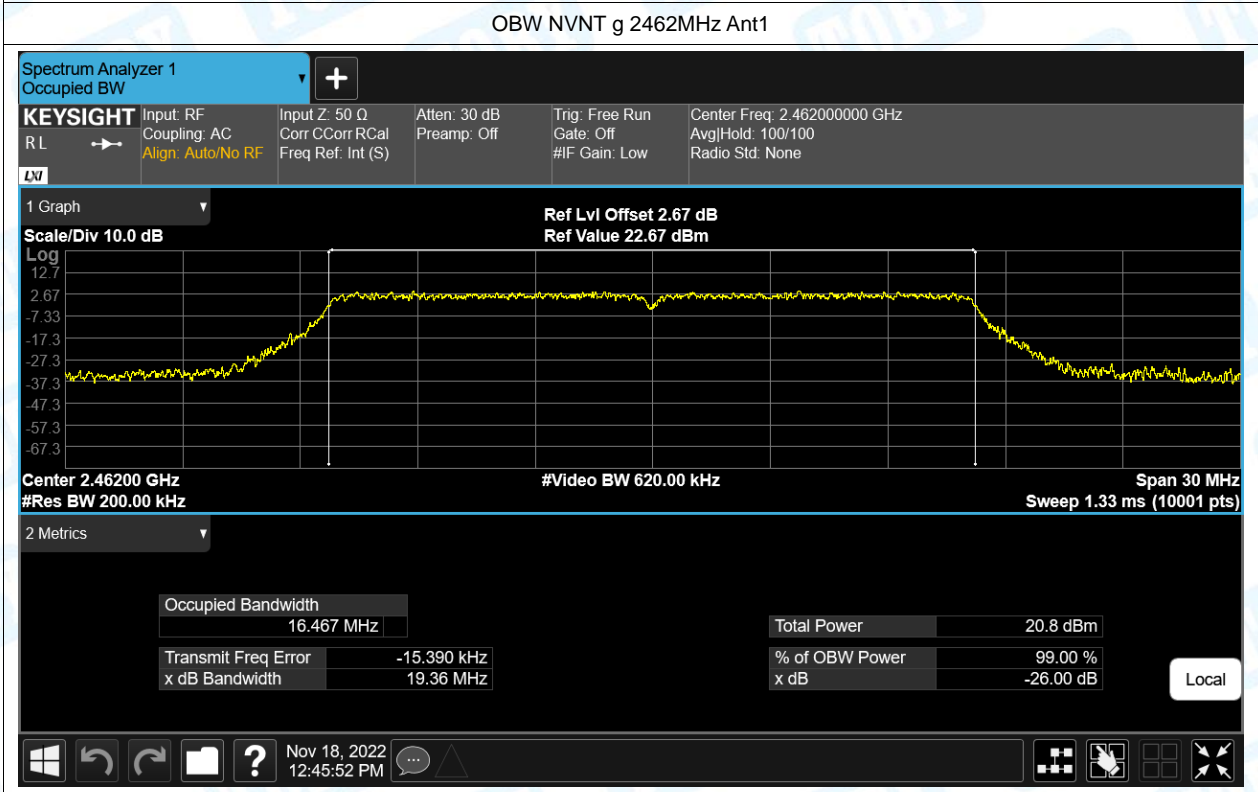
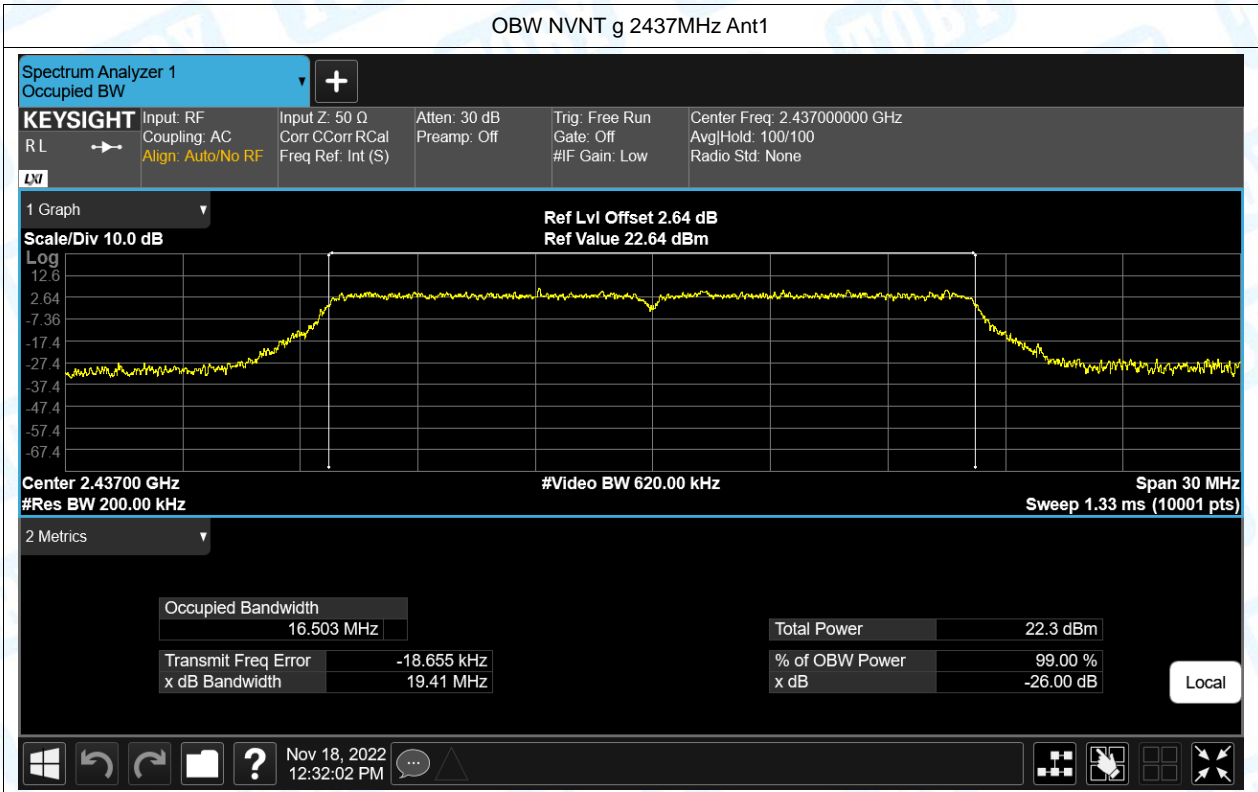
OBW NVNT b 2412MHz Ant1

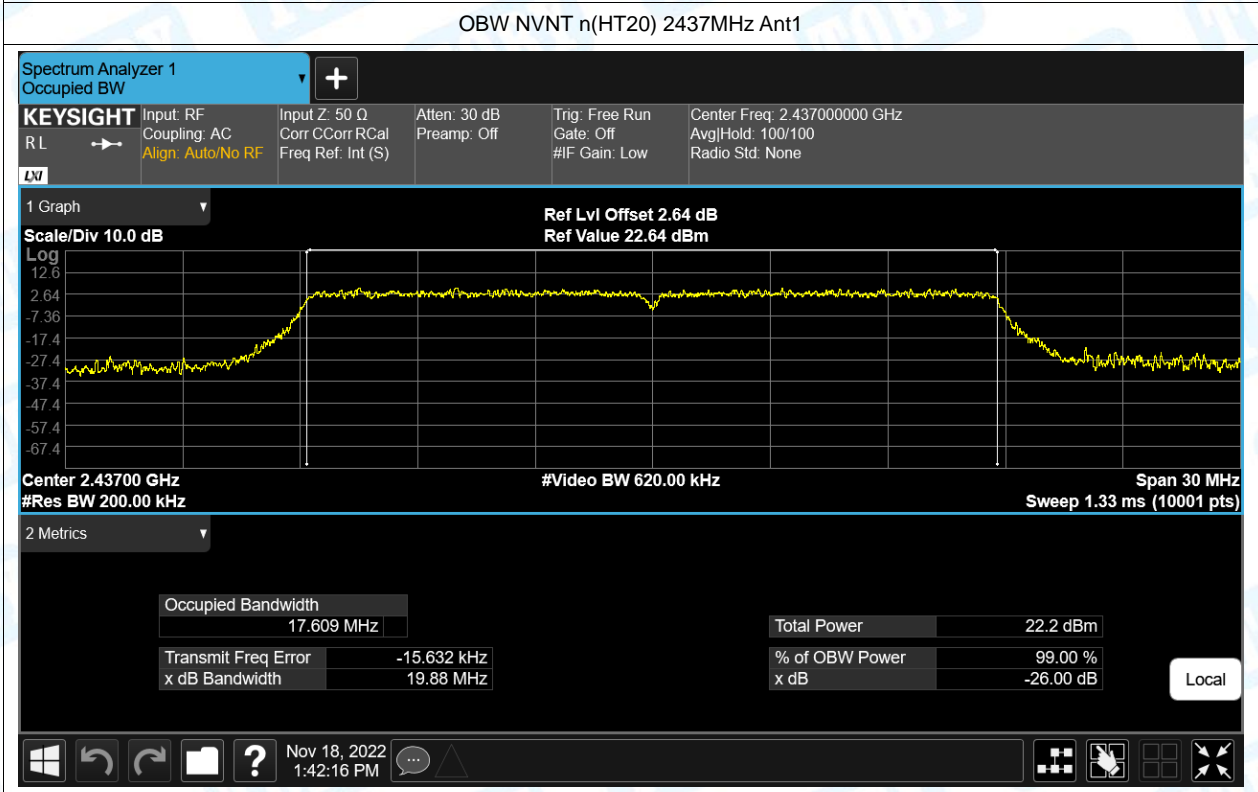
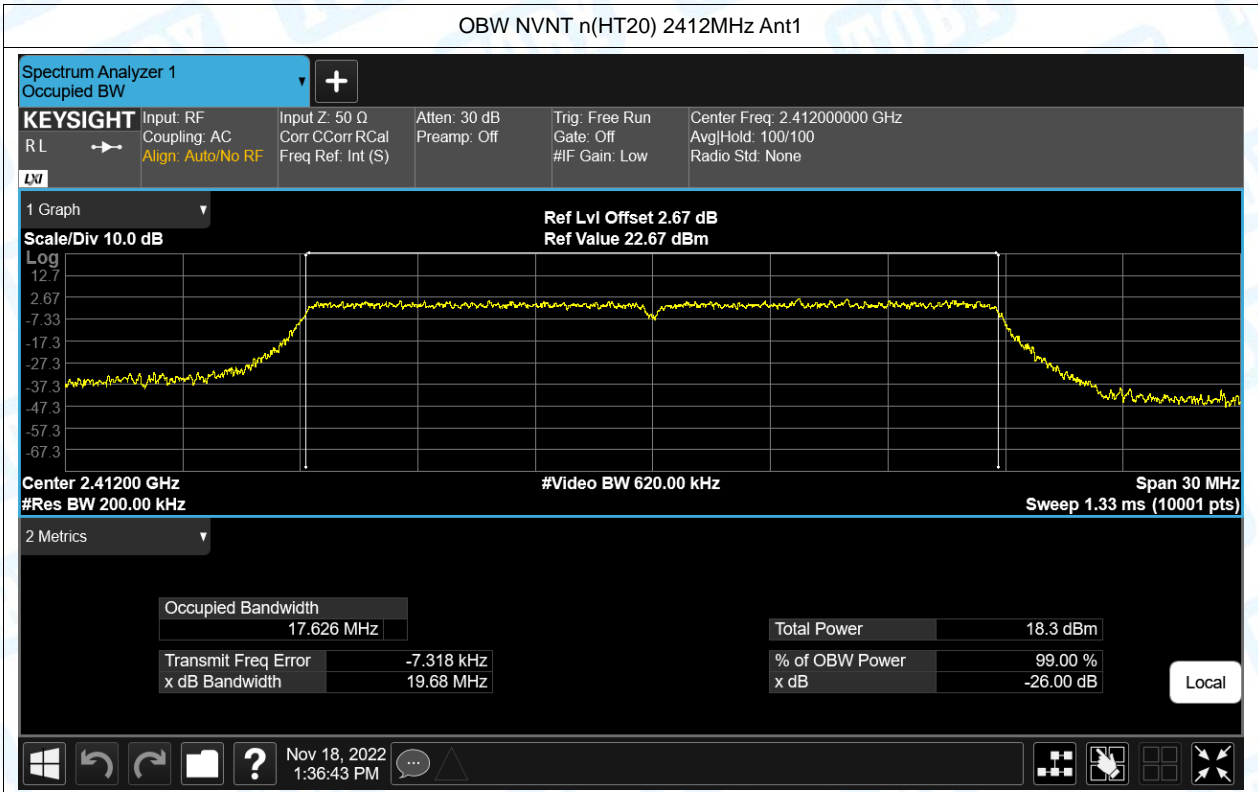


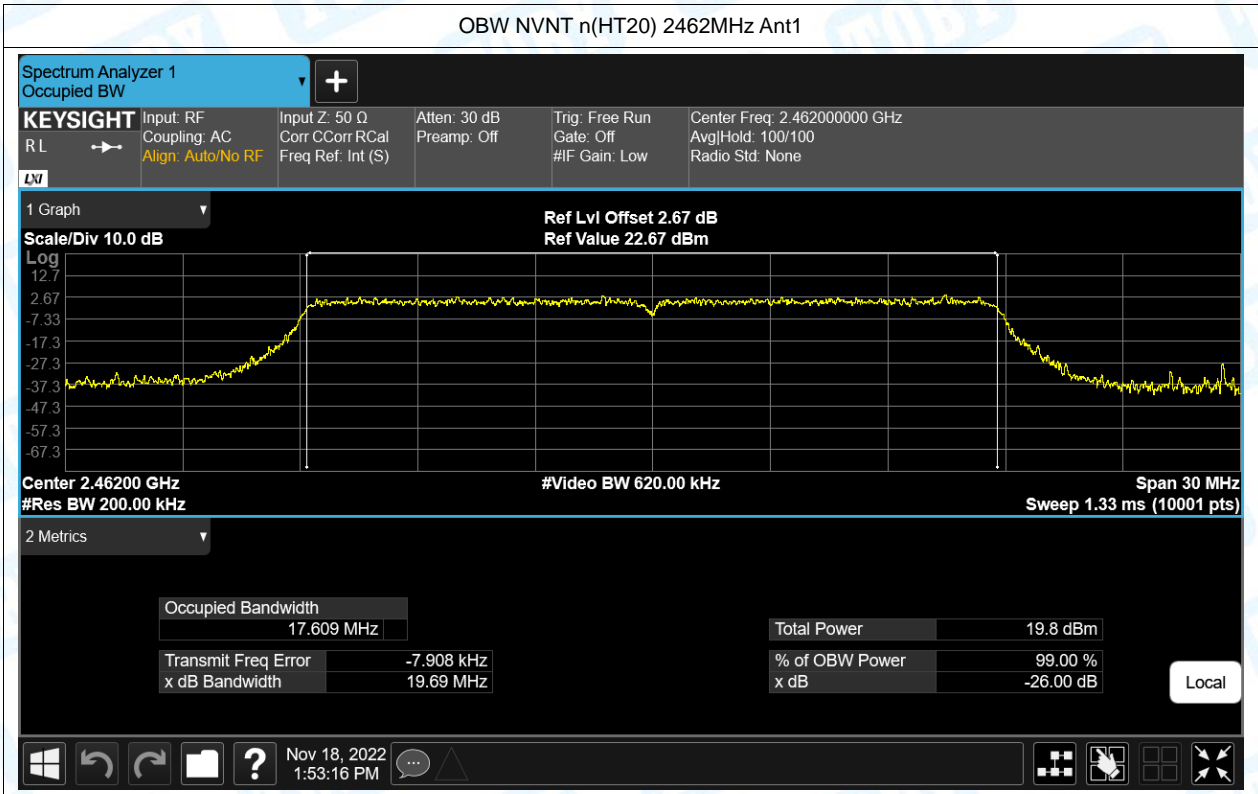
OBW NVNT b 2437MHz Ant1









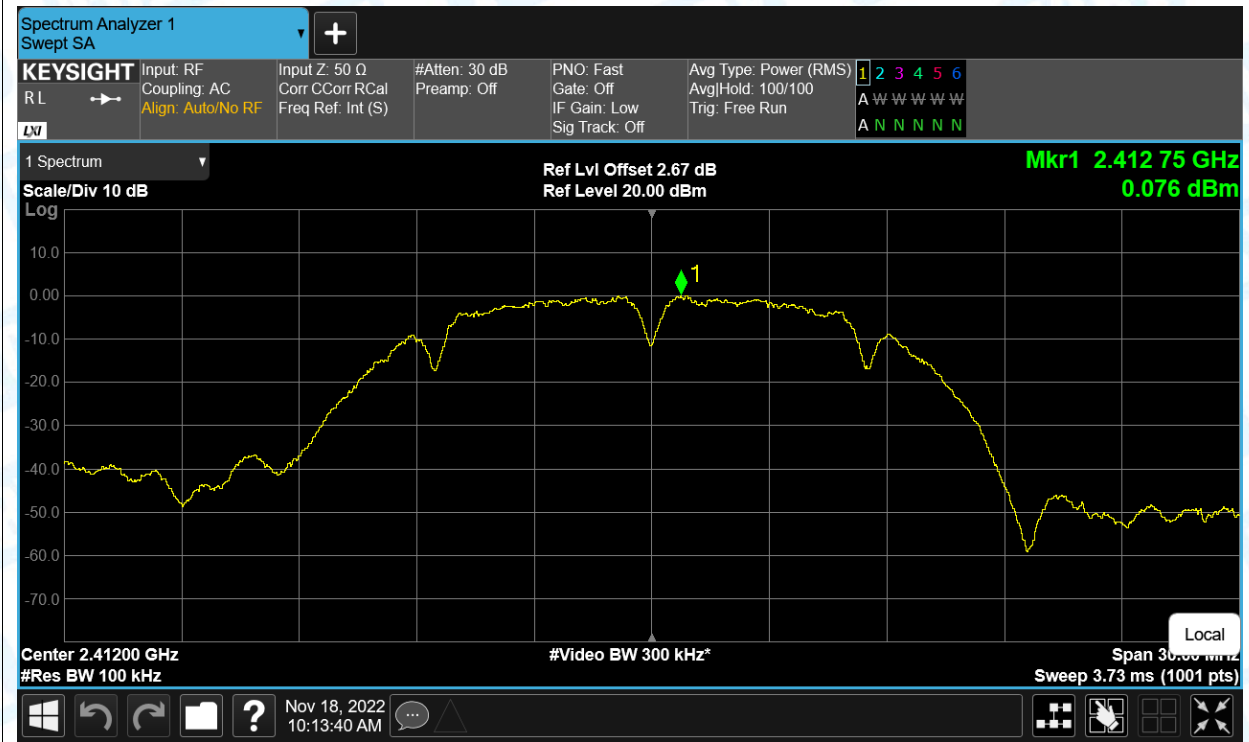


5. Maximum Power Spectral Density Level

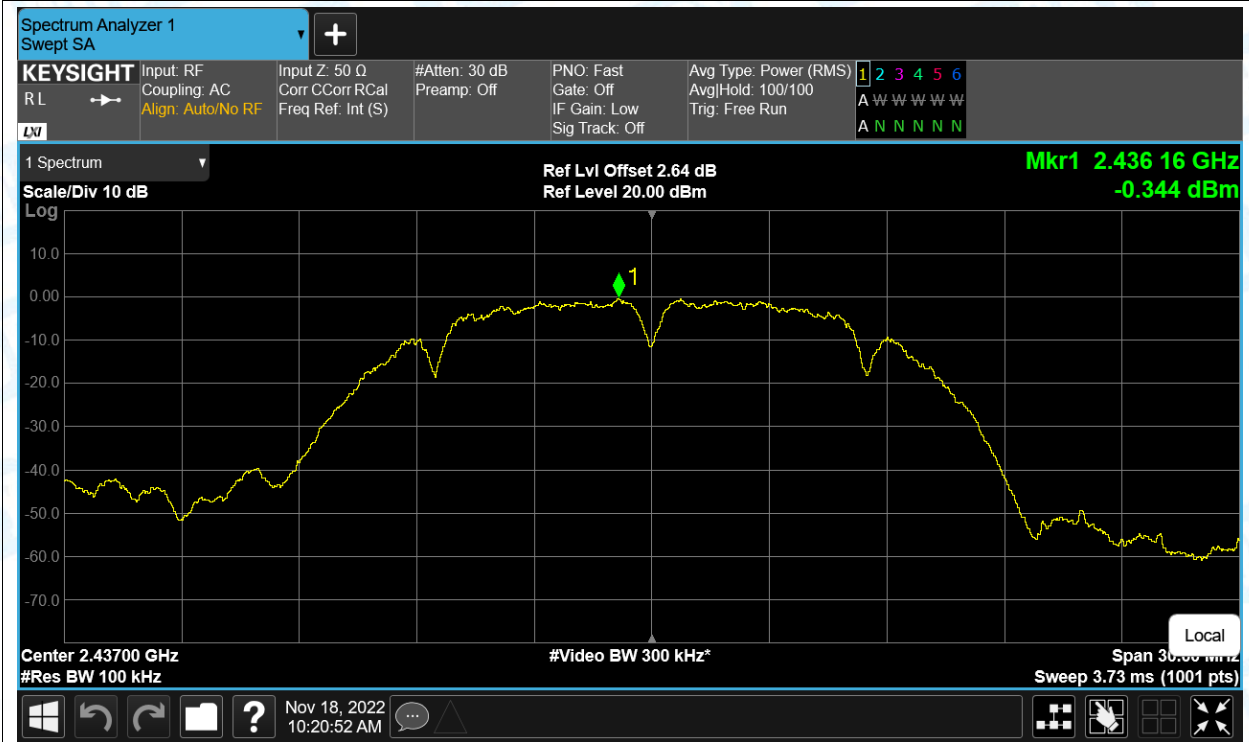
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	0.076	8	Pass
NVNT	b	2437	Ant1	-0.344	8	Pass
NVNT	b	2462	Ant1	-0.291	8	Pass
NVNT	g	2412	Ant1	-6.758	8	Pass
NVNT	g	2437	Ant1	-3.472	8	Pass
NVNT	g	2462	Ant1	-4.997	8	Pass
NVNT	n(HT20)	2412	Ant1	-7.617	8	Pass
NVNT	n(HT20)	2437	Ant1	-4.031	8	Pass
NVNT	n(HT20)	2462	Ant1	-6.307	8	Pass

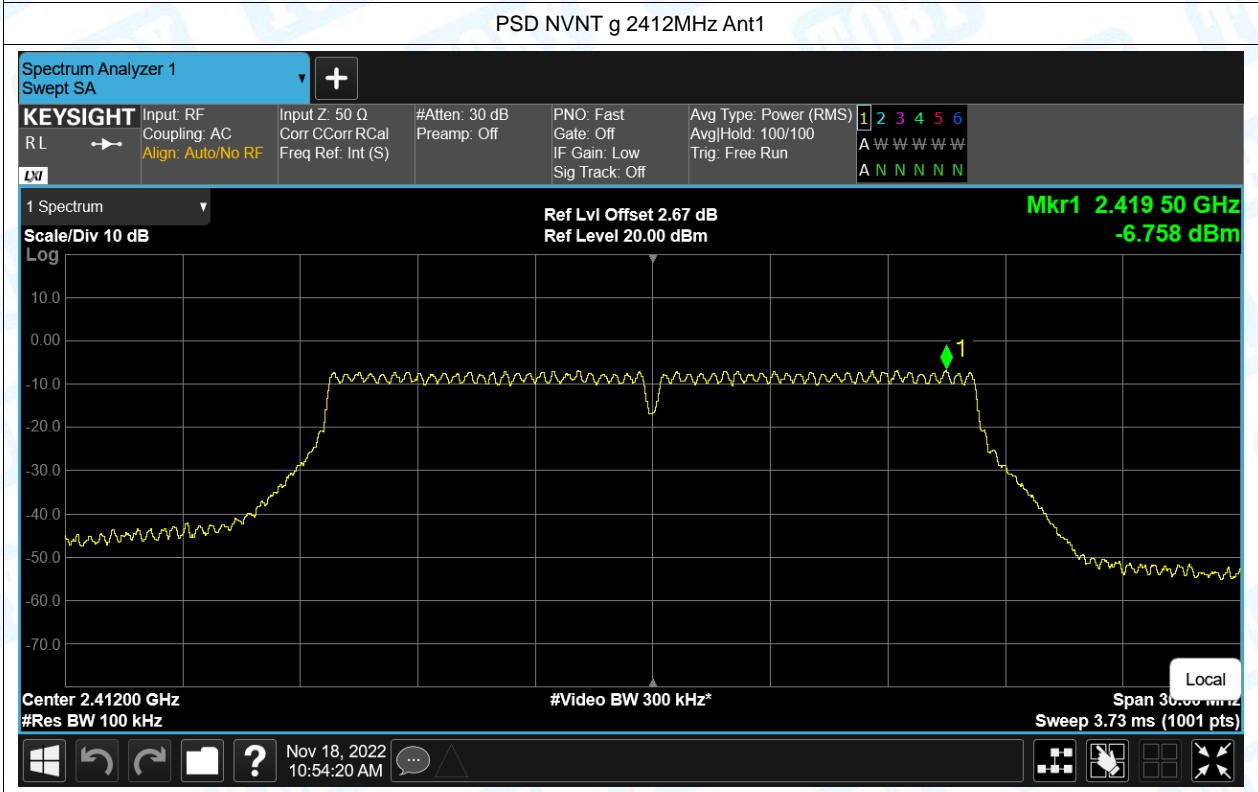
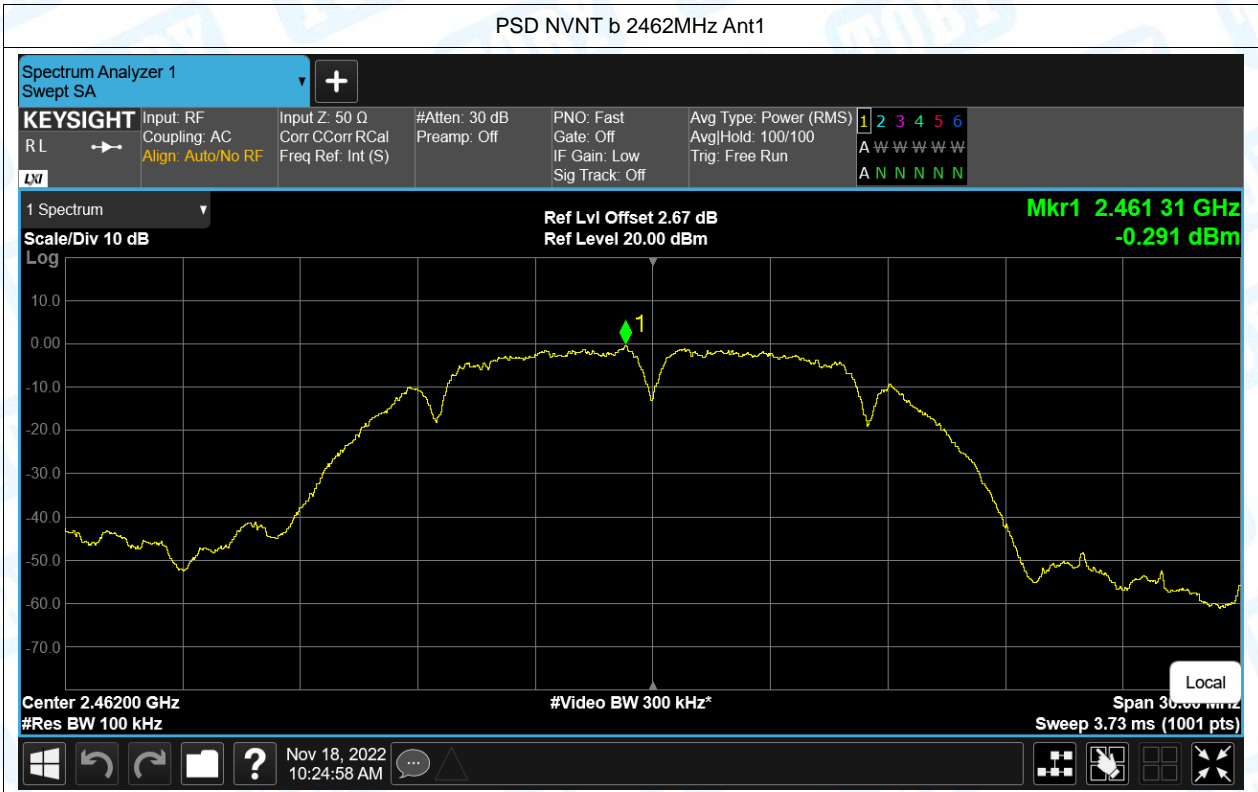
Test Graphs

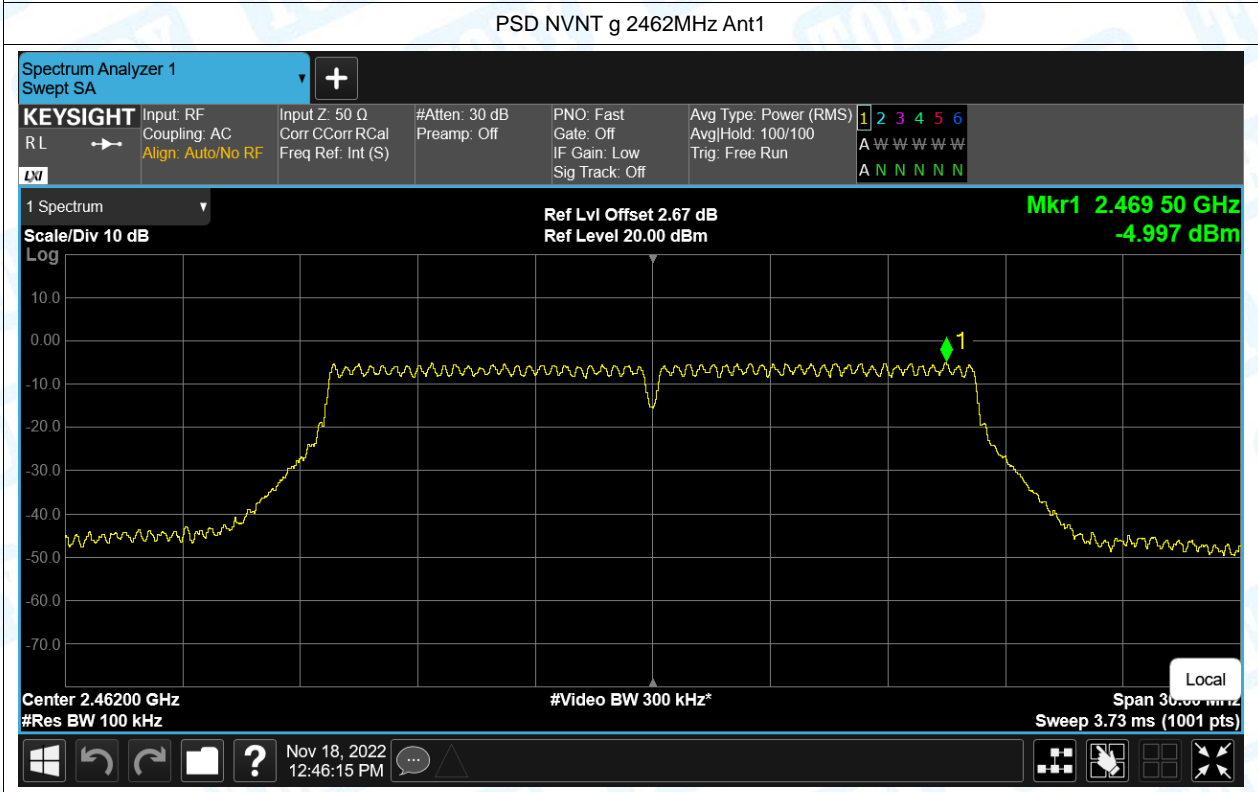
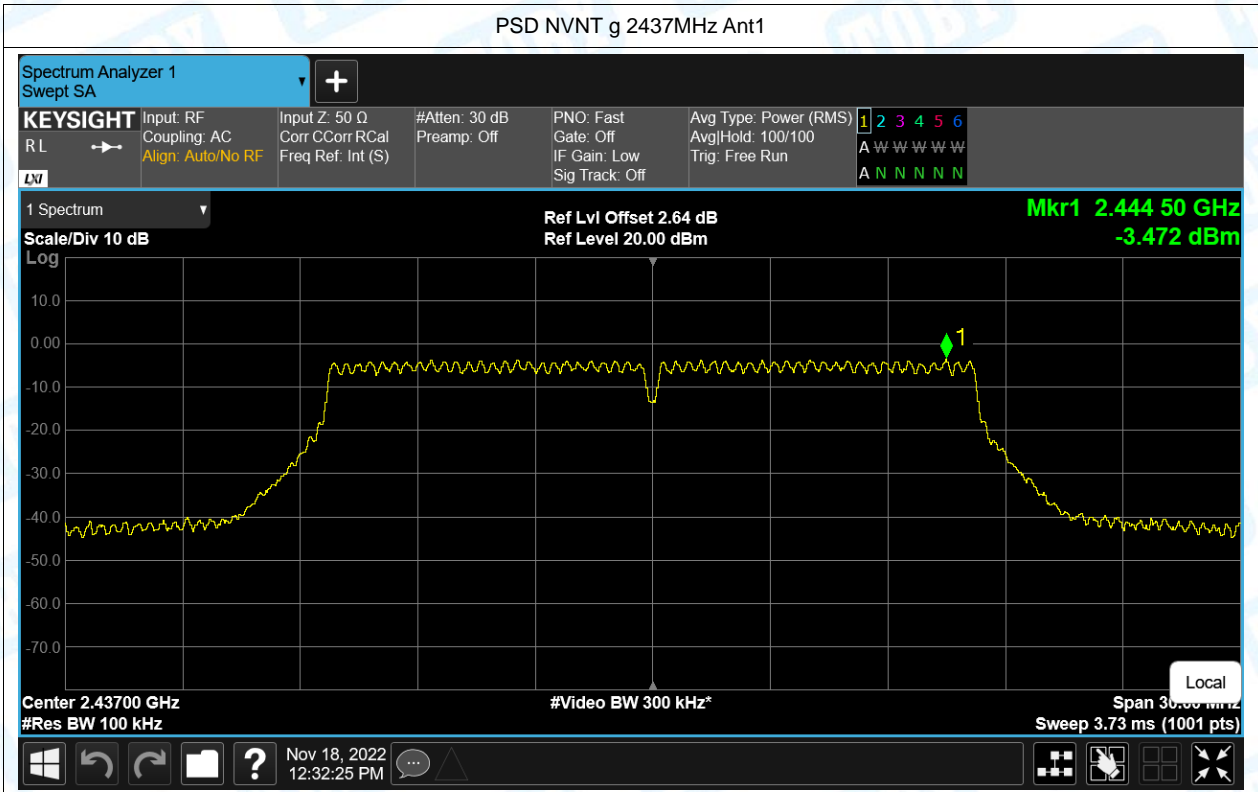
PSD NVNT b 2412MHz Ant1

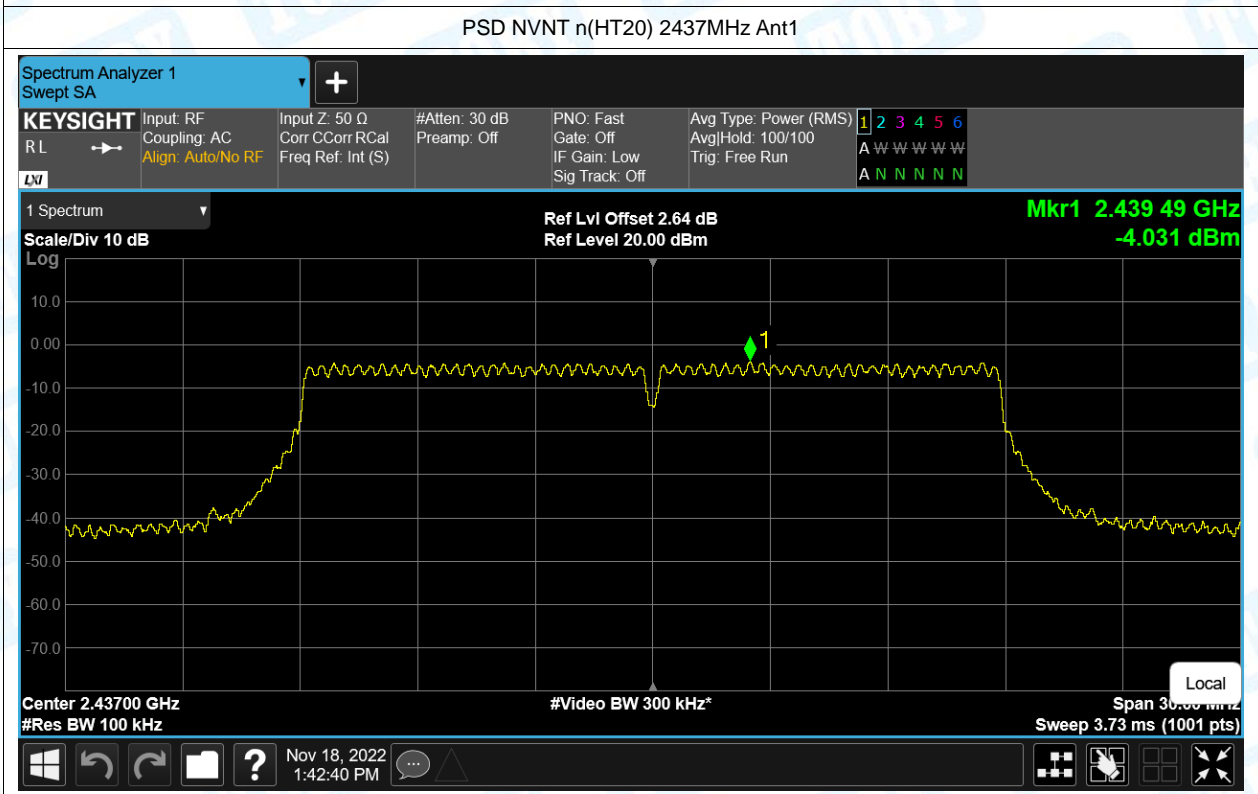
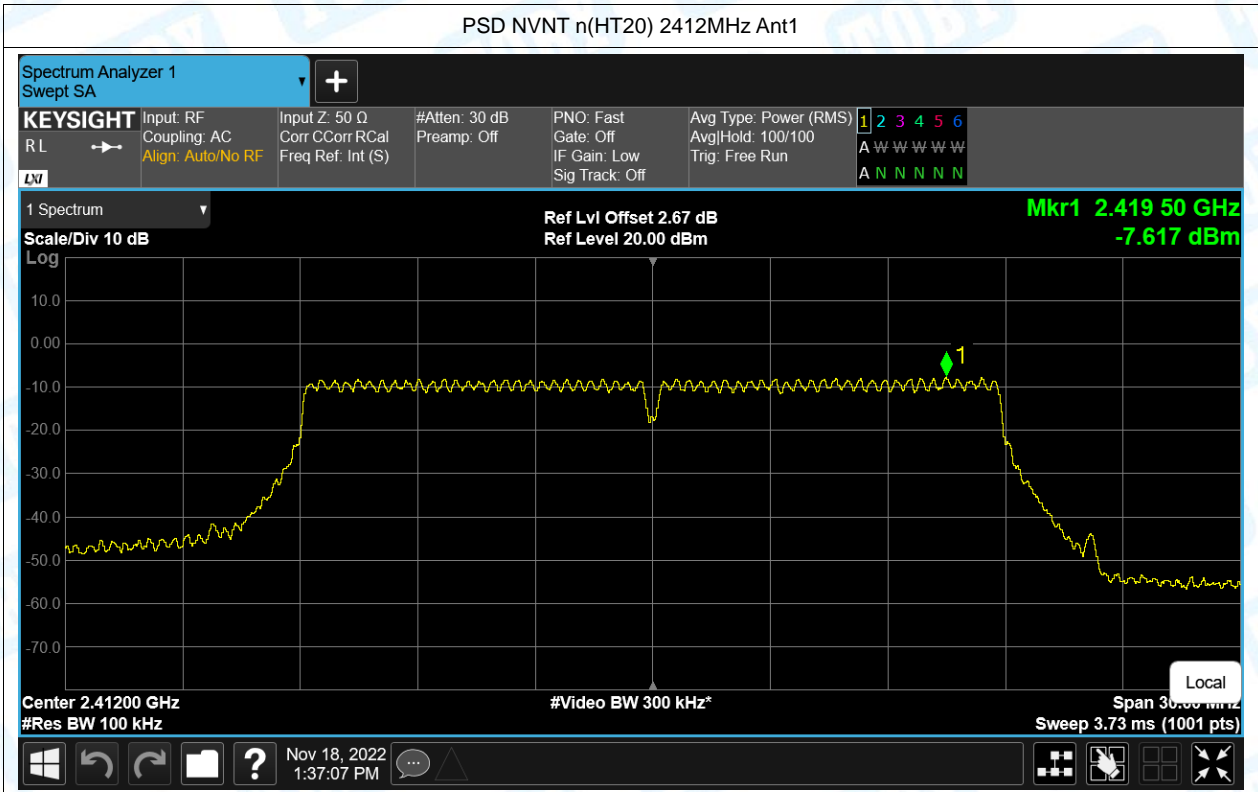


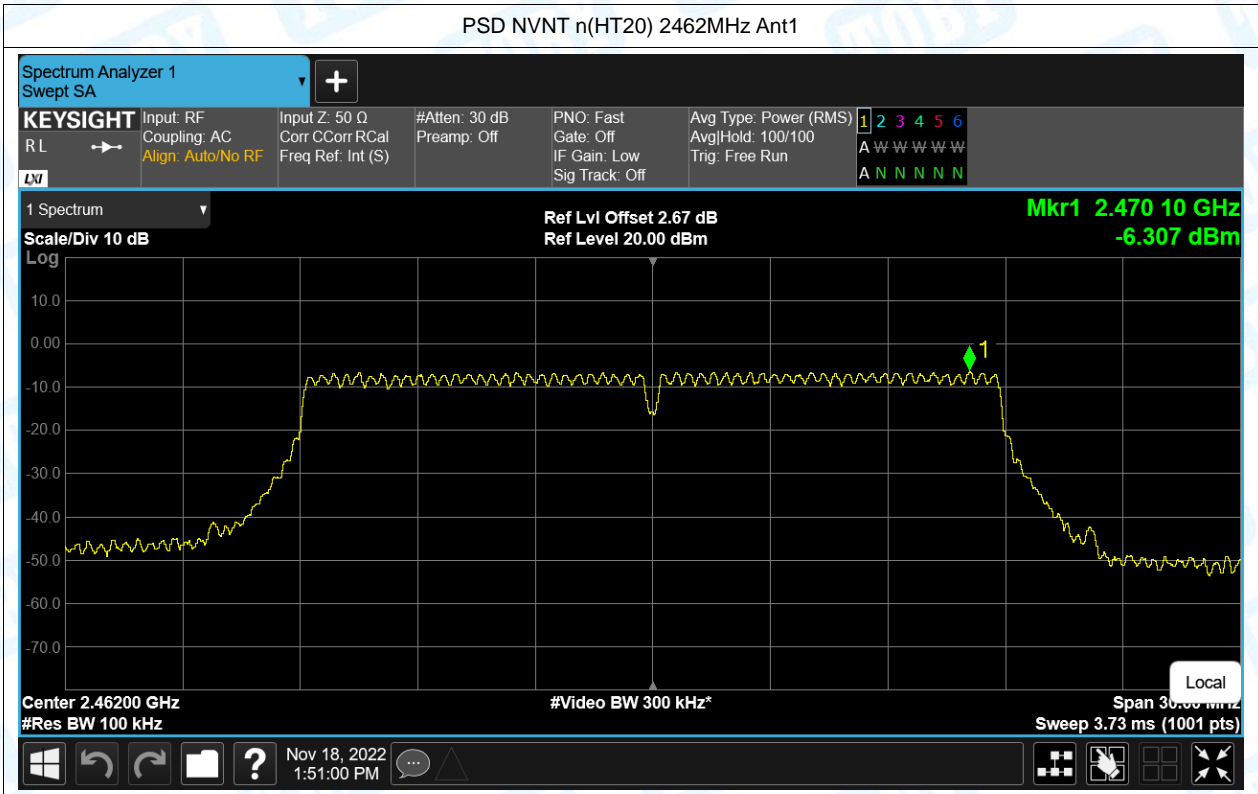
PSD NVNT b 2437MHz Ant1









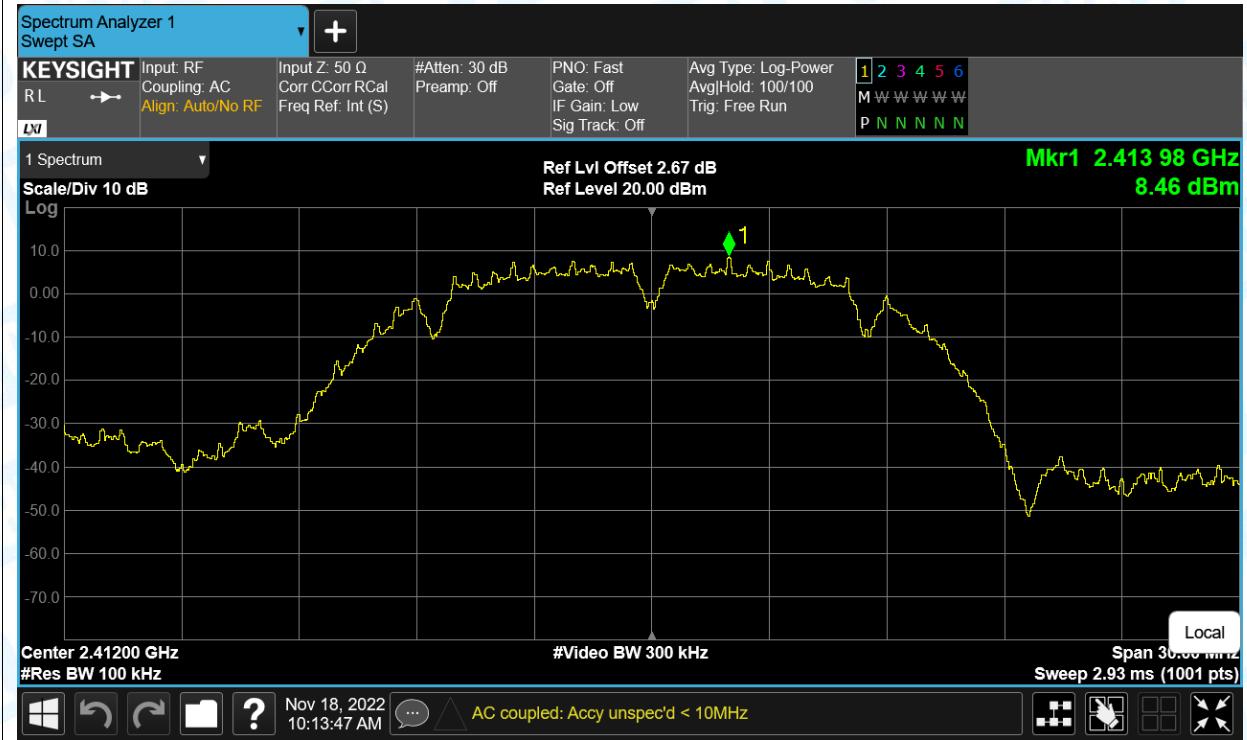


6. Band Edge

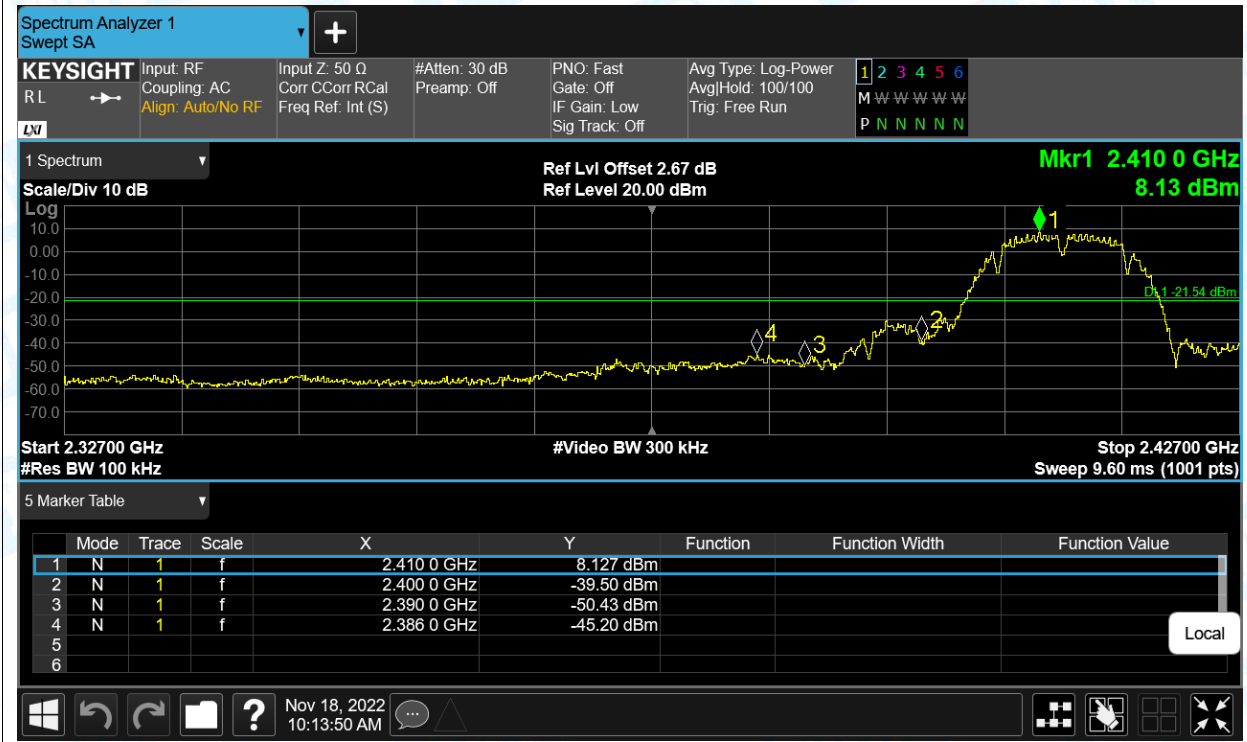
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-53.66	-30	Pass
NVNT	b	2462	Ant1	-54.55	-30	Pass
NVNT	g	2412	Ant1	-45.87	-30	Pass
NVNT	g	2462	Ant1	-46.26	-30	Pass
NVNT	n(HT20)	2412	Ant1	-44.41	-30	Pass
NVNT	n(HT20)	2462	Ant1	-44.84	-30	Pass

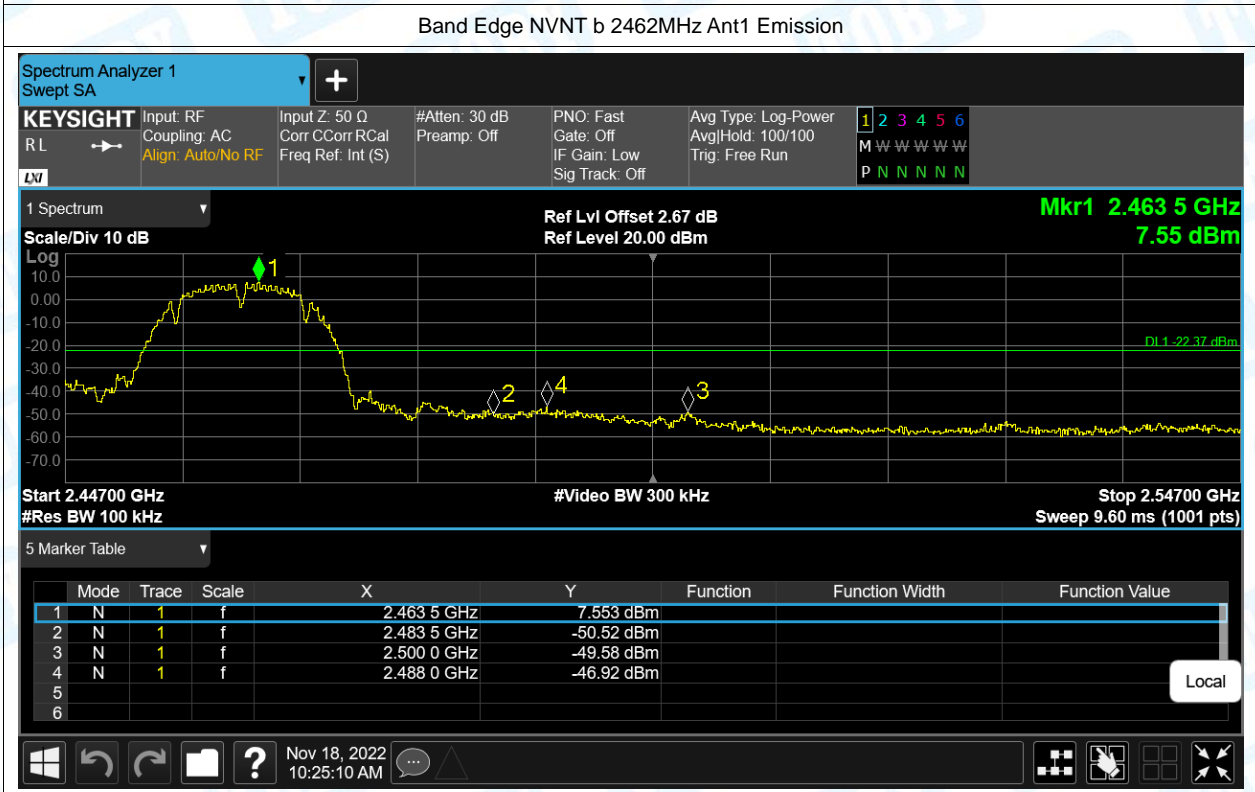
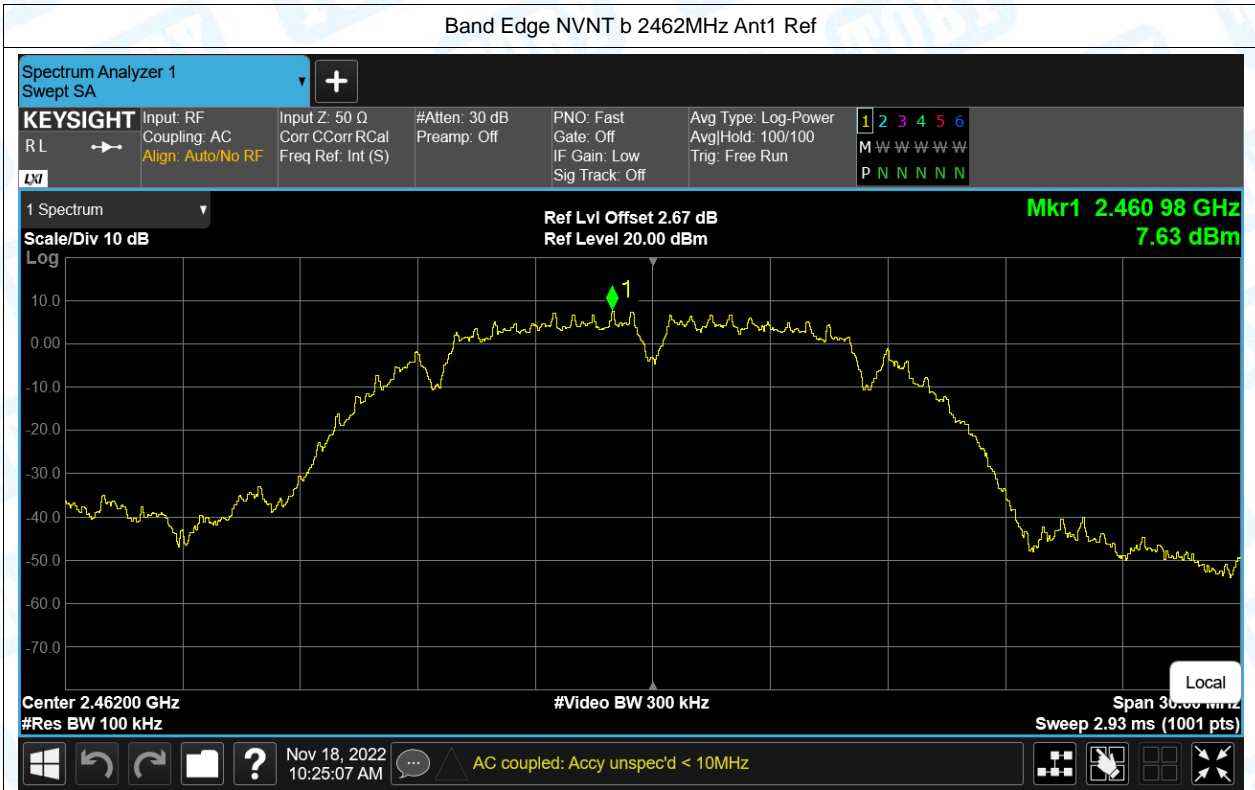
Test Graphs

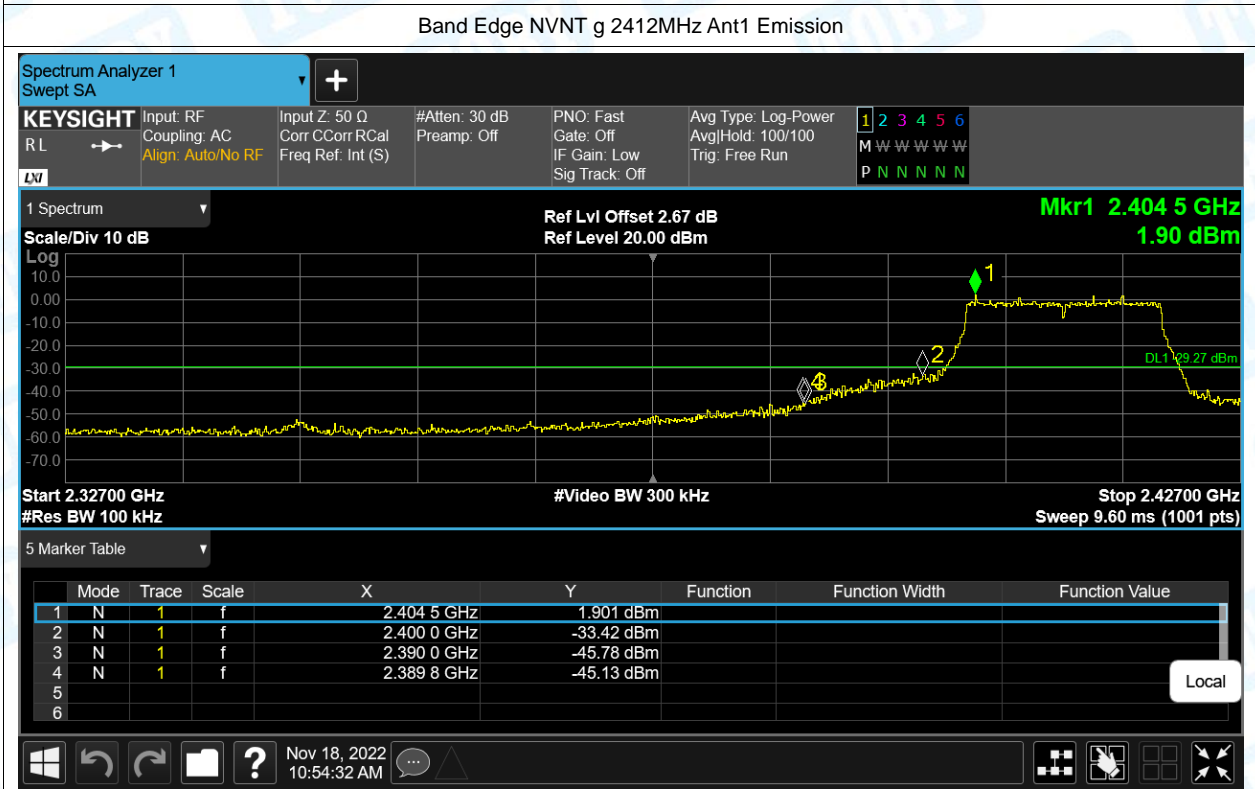
Band Edge NVNT b 2412MHz Ant1 Ref

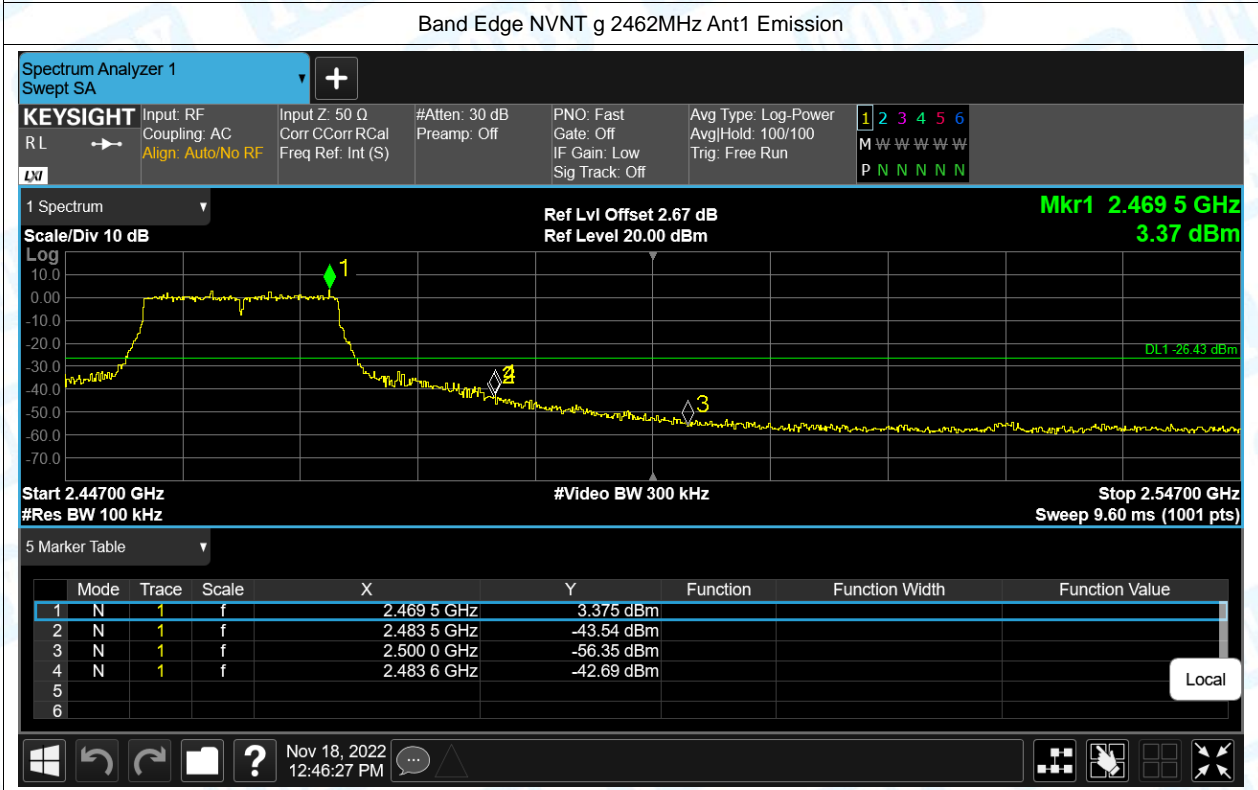
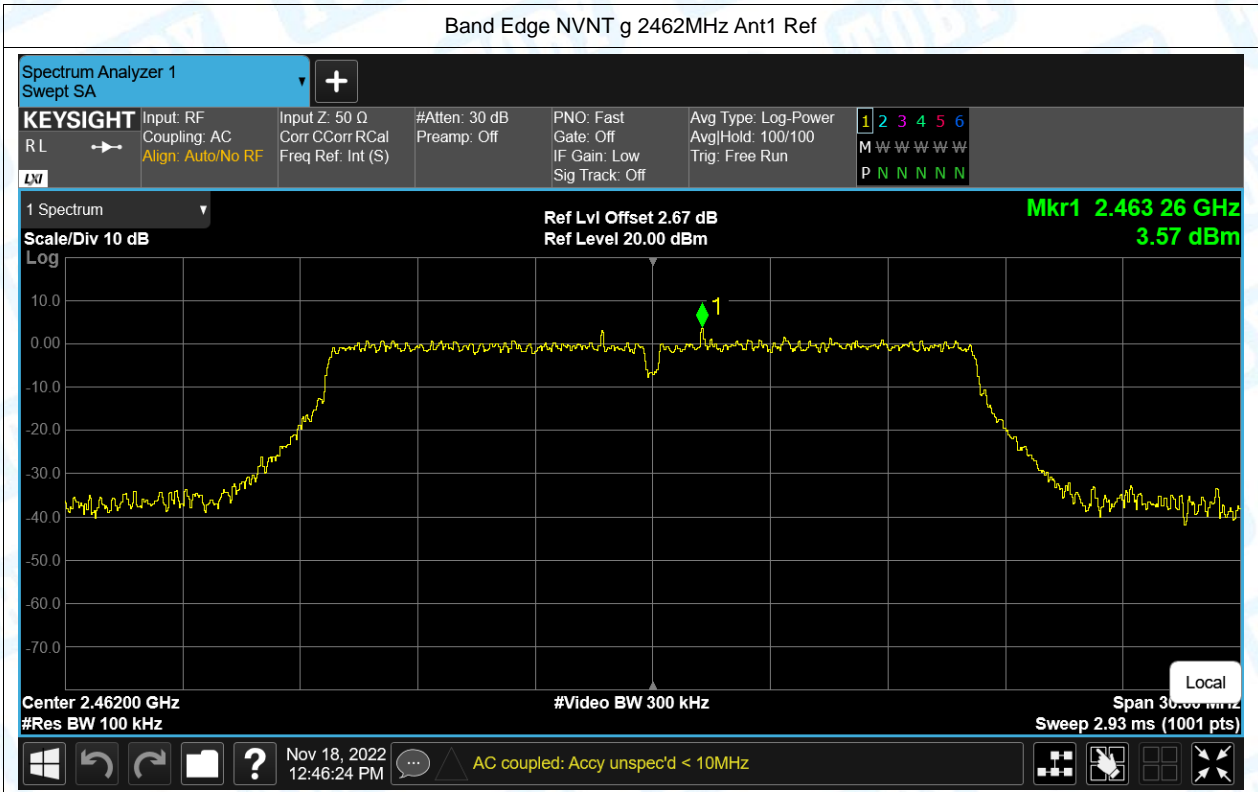


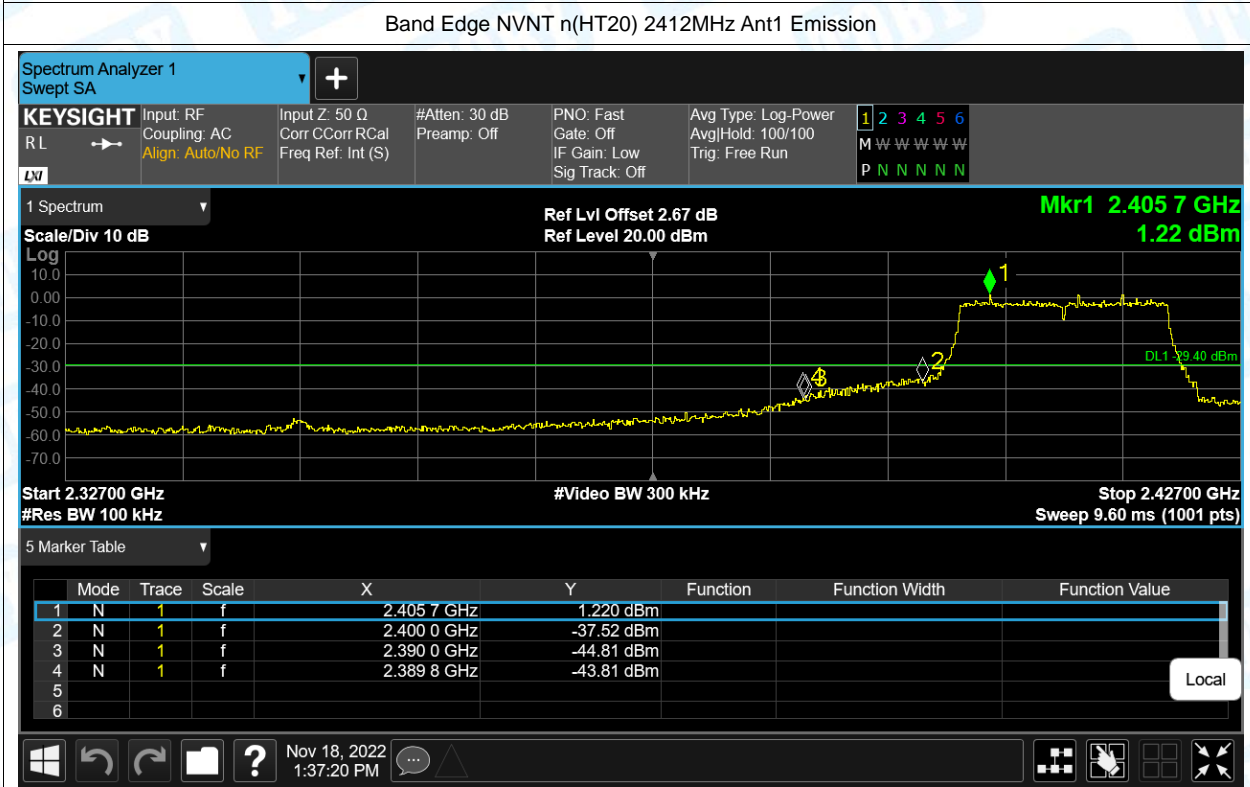
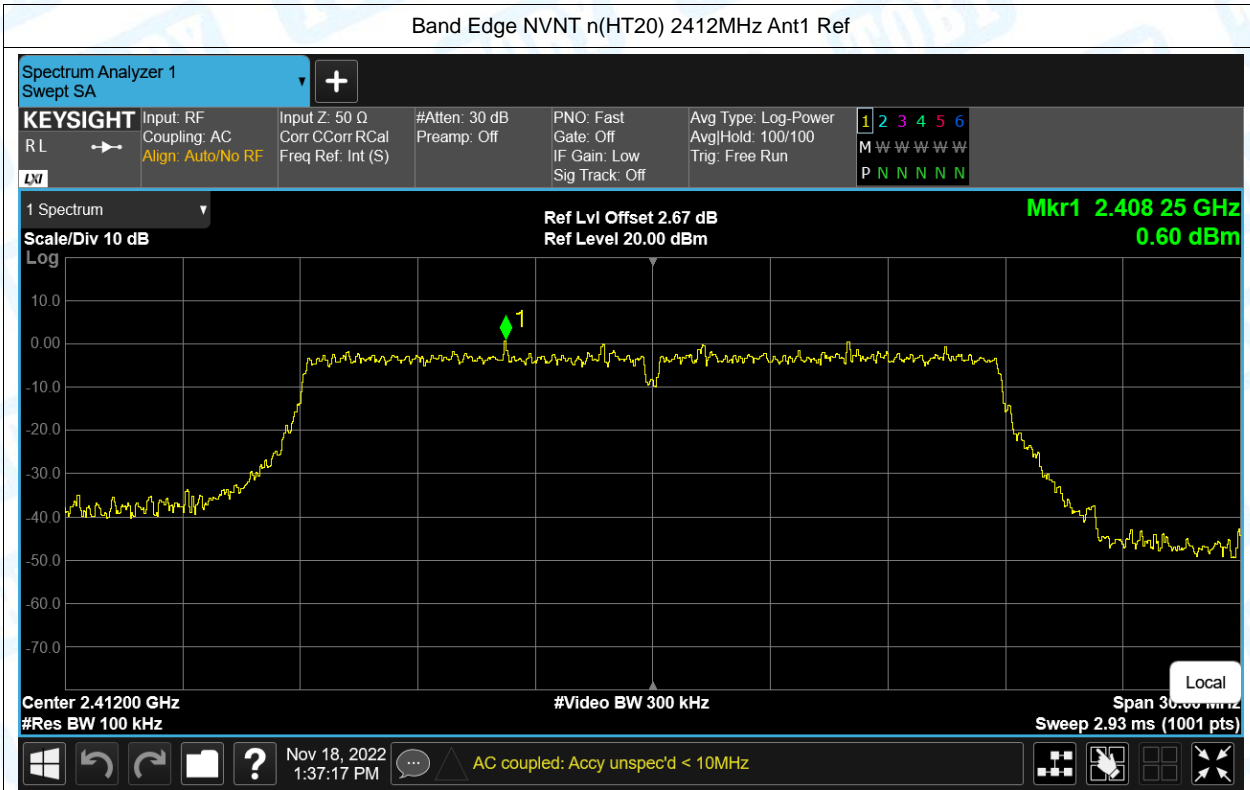
Band Edge NVNT b 2412MHz Ant1 Emission

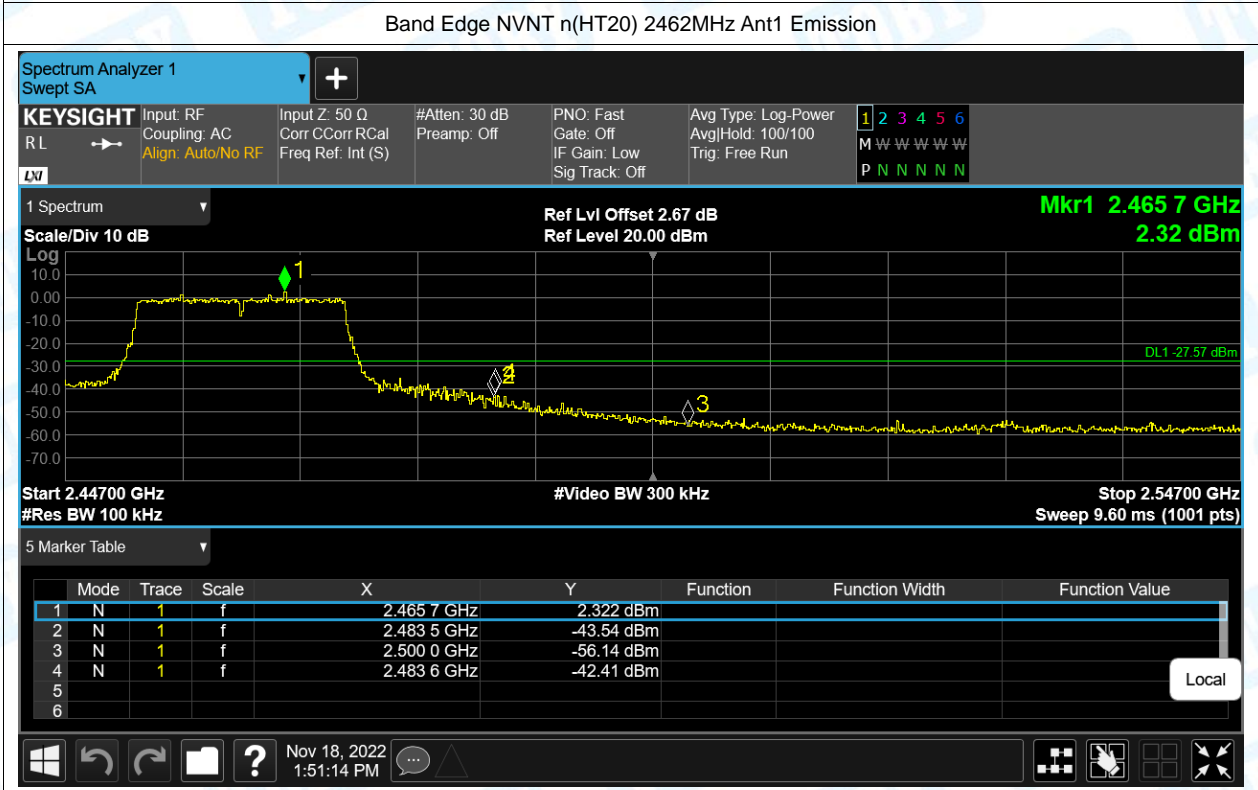
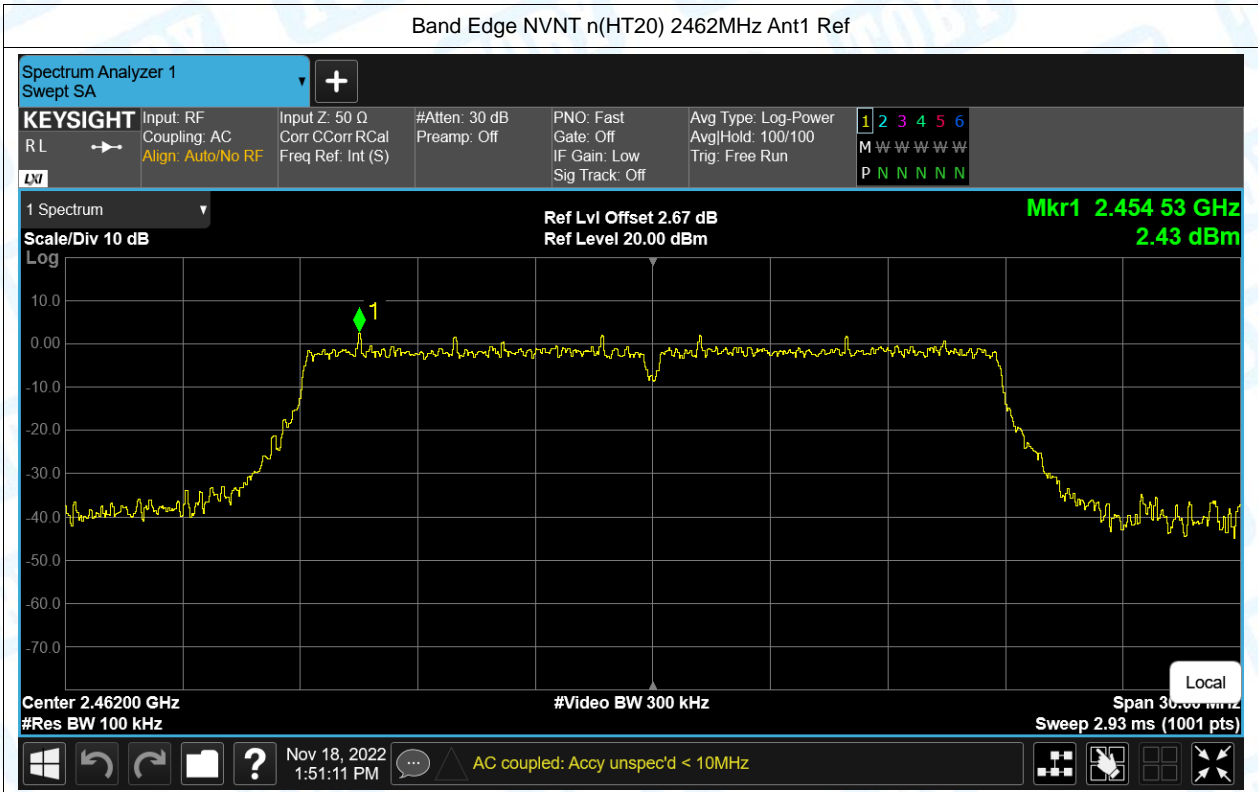










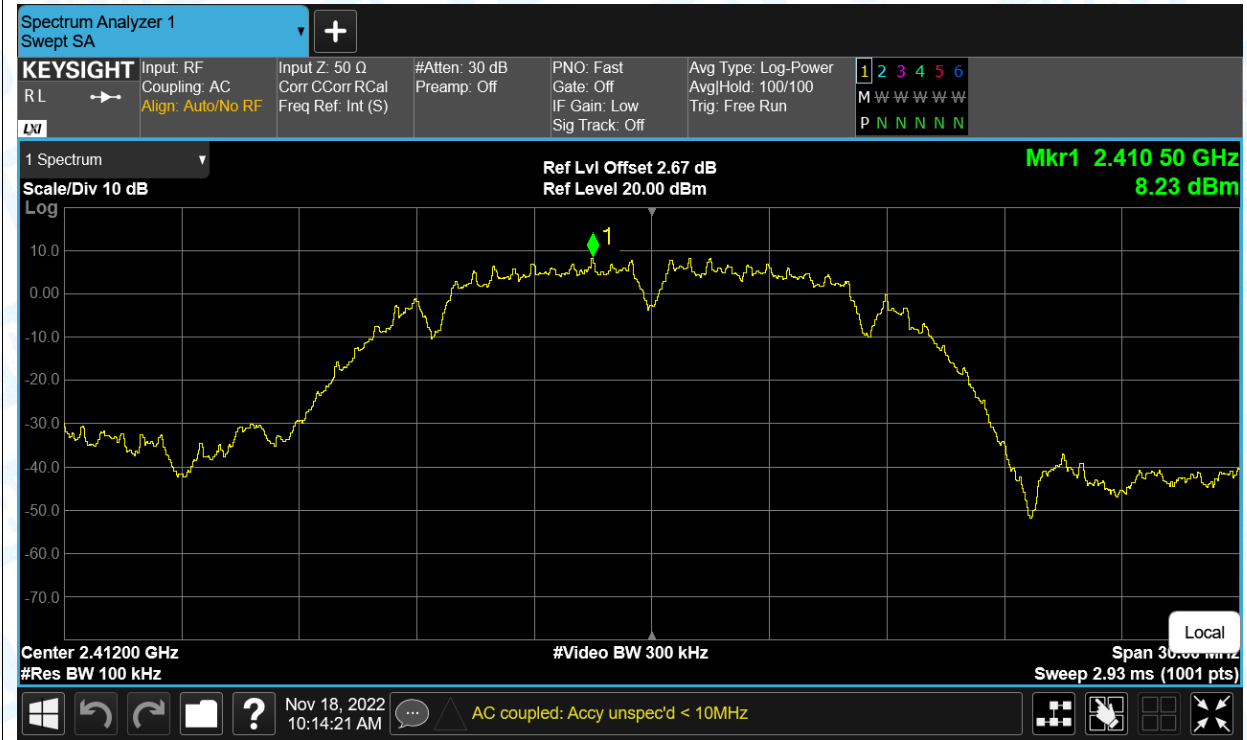


7. Conducted RF Spurious Emission

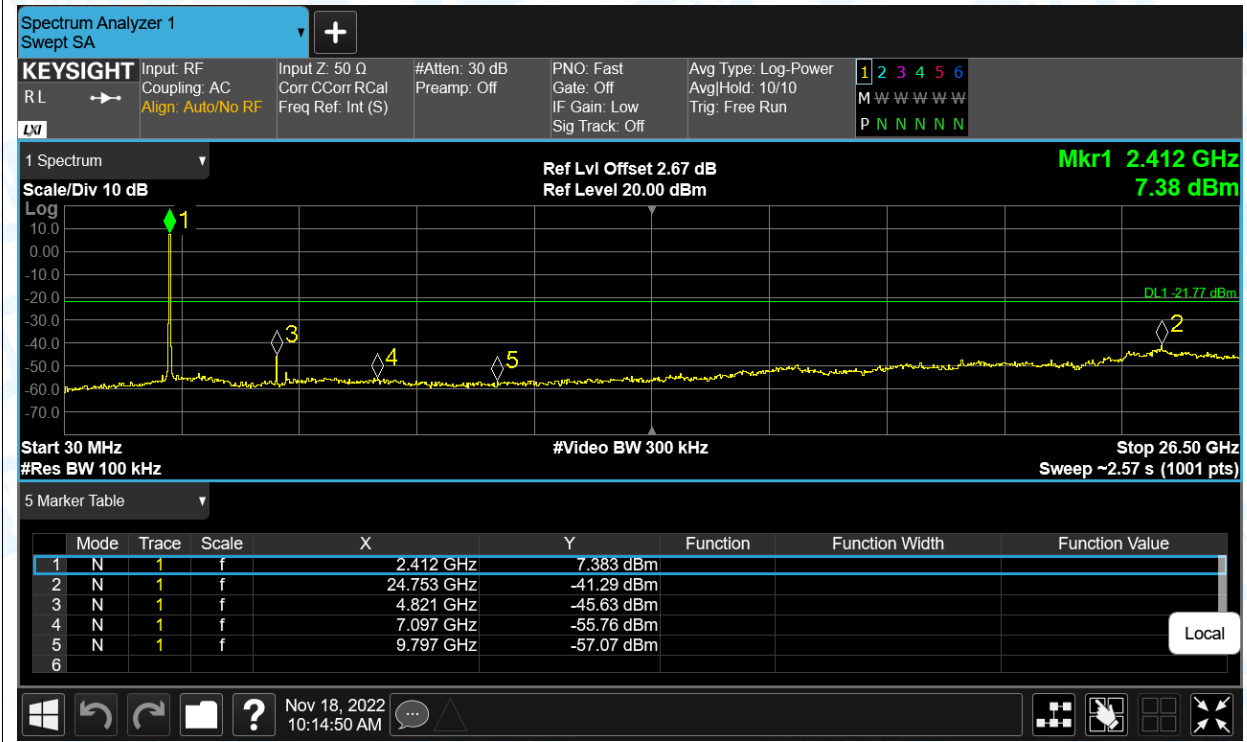
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-49.52	-30	Pass
NVNT	b	2437	Ant1	-48.27	-30	Pass
NVNT	b	2462	Ant1	-49.25	-30	Pass
NVNT	g	2412	Ant1	-44.17	-30	Pass
NVNT	g	2437	Ant1	-46.21	-30	Pass
NVNT	g	2462	Ant1	-44.75	-30	Pass
NVNT	n(HT20)	2412	Ant1	-42.58	-30	Pass
NVNT	n(HT20)	2437	Ant1	-47.22	-30	Pass
NVNT	n(HT20)	2462	Ant1	-44.76	-30	Pass

Test Graphs

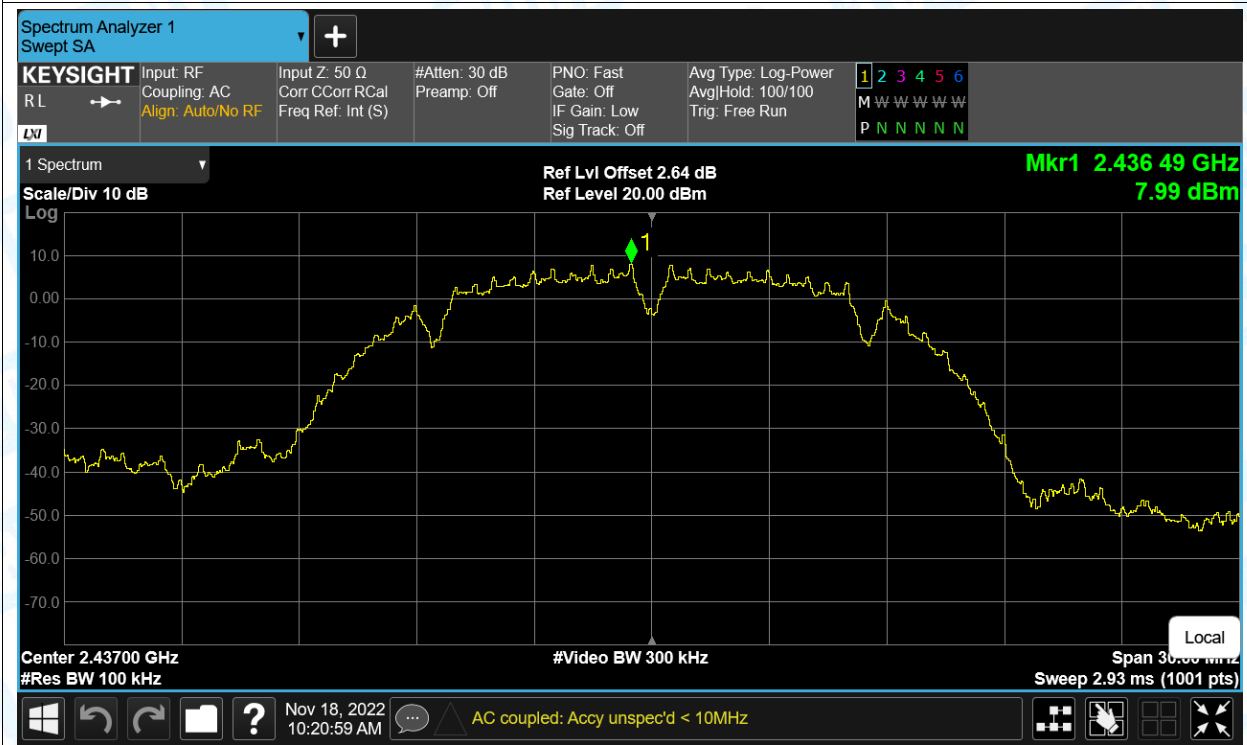
Tx. Spurious NVNT b 2412MHz Ant1 Ref



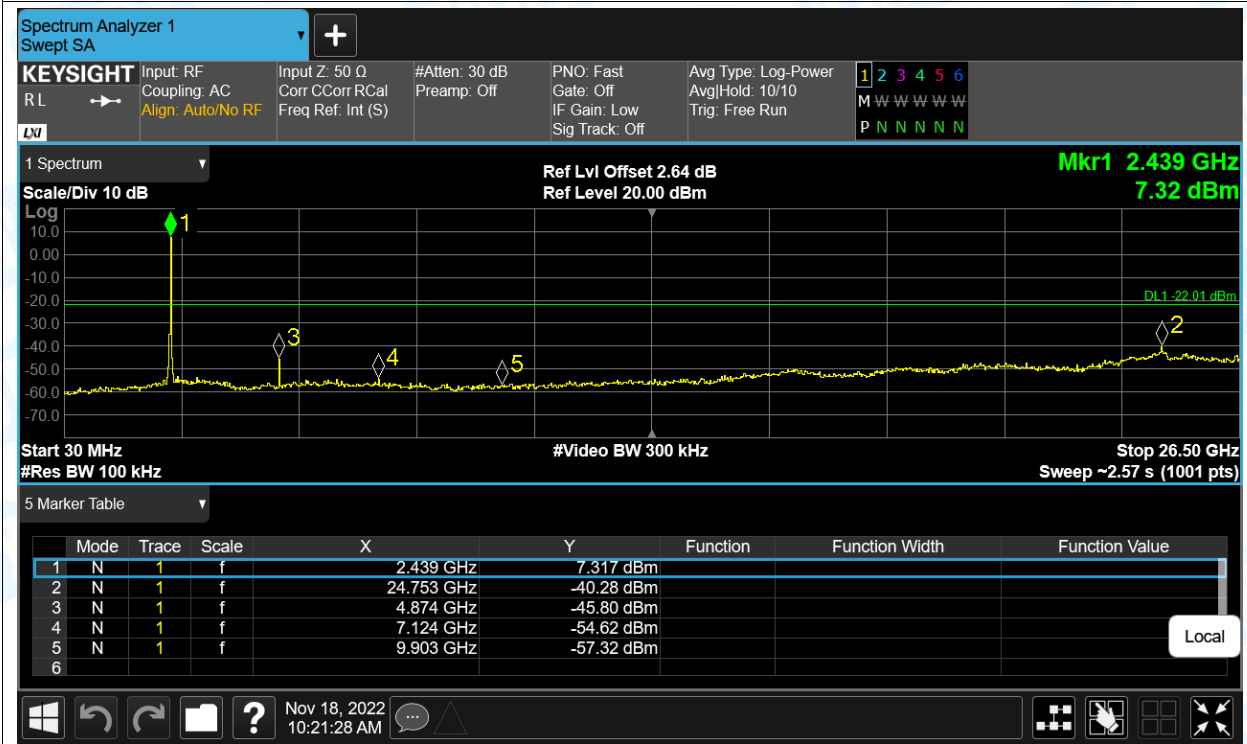
Tx. Spurious NVNT b 2412MHz Ant1 Emission



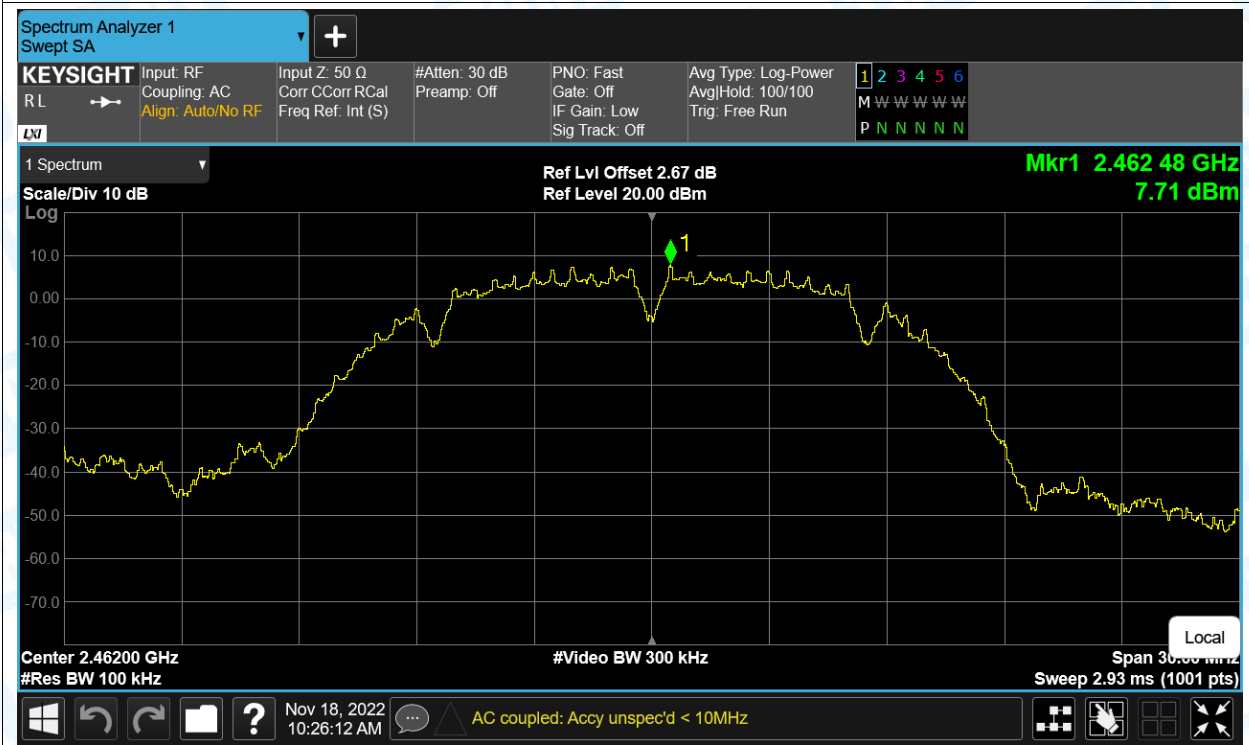
Tx. Spurious NVNT b 2437MHz Ant1 Ref



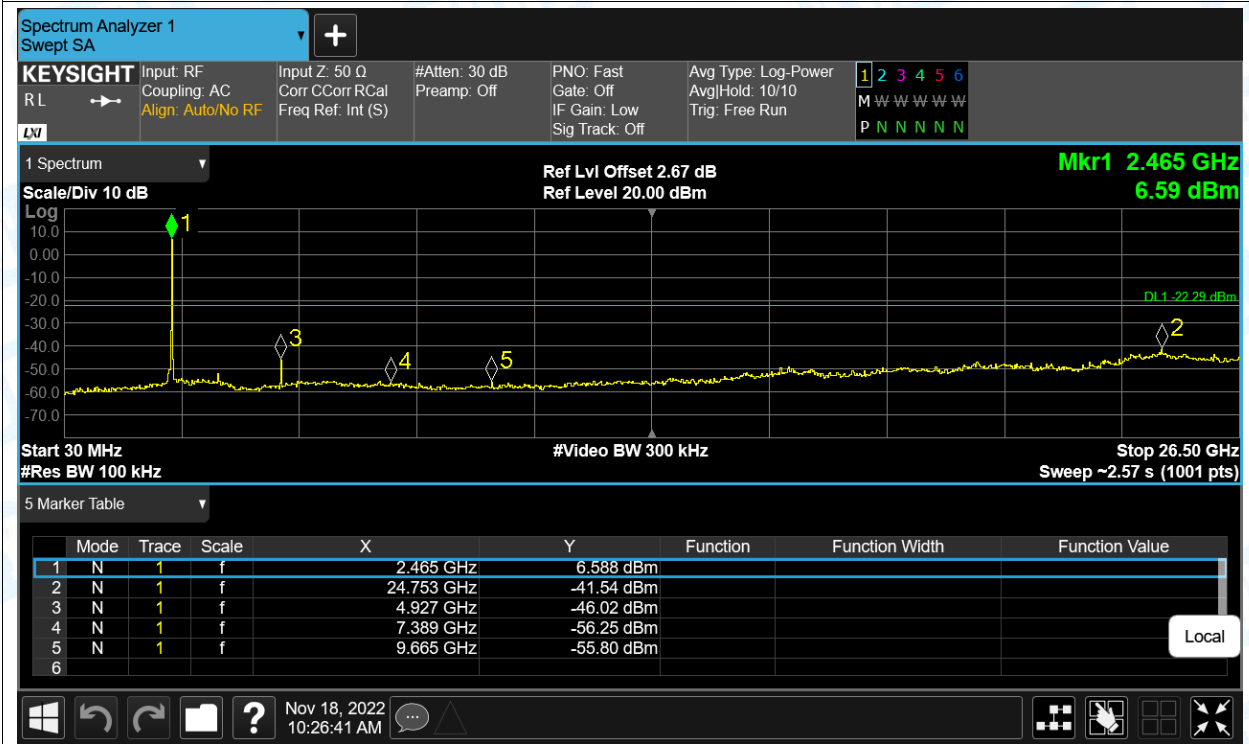
Tx. Spurious NVNT b 2437MHz Ant1 Emission



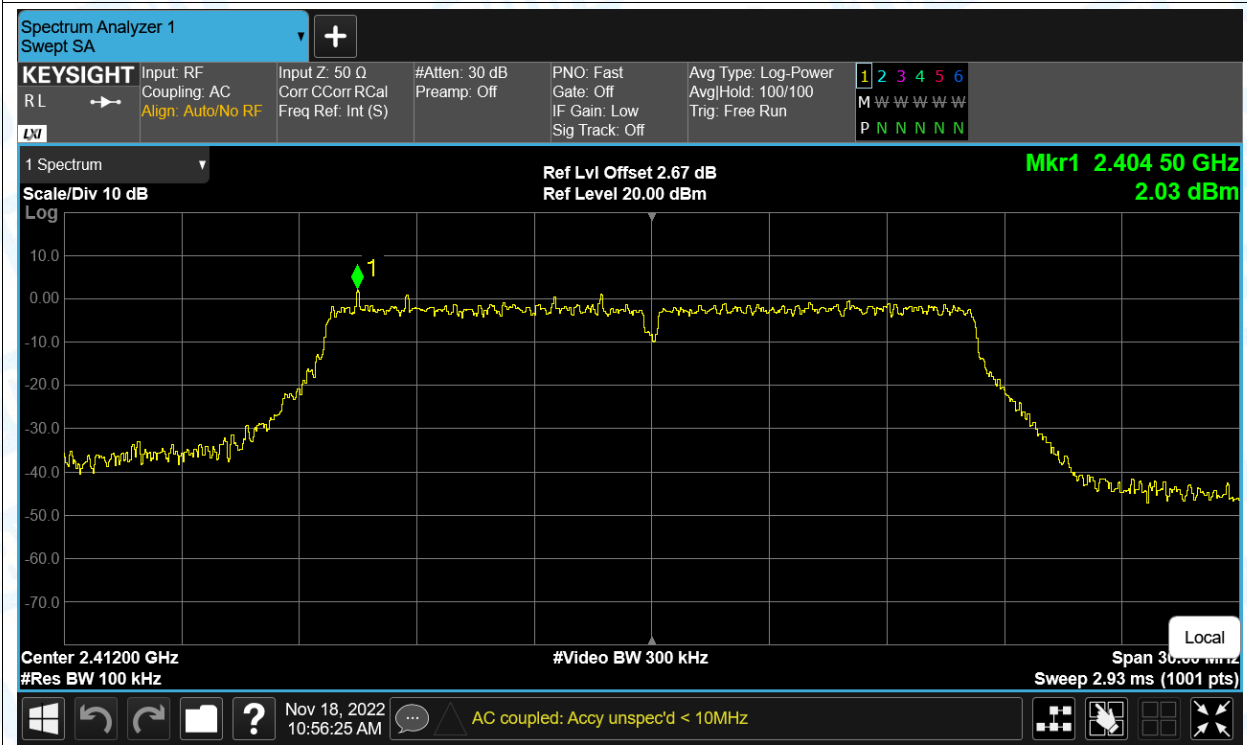
Tx. Spurious NVNT b 2462MHz Ant1 Ref



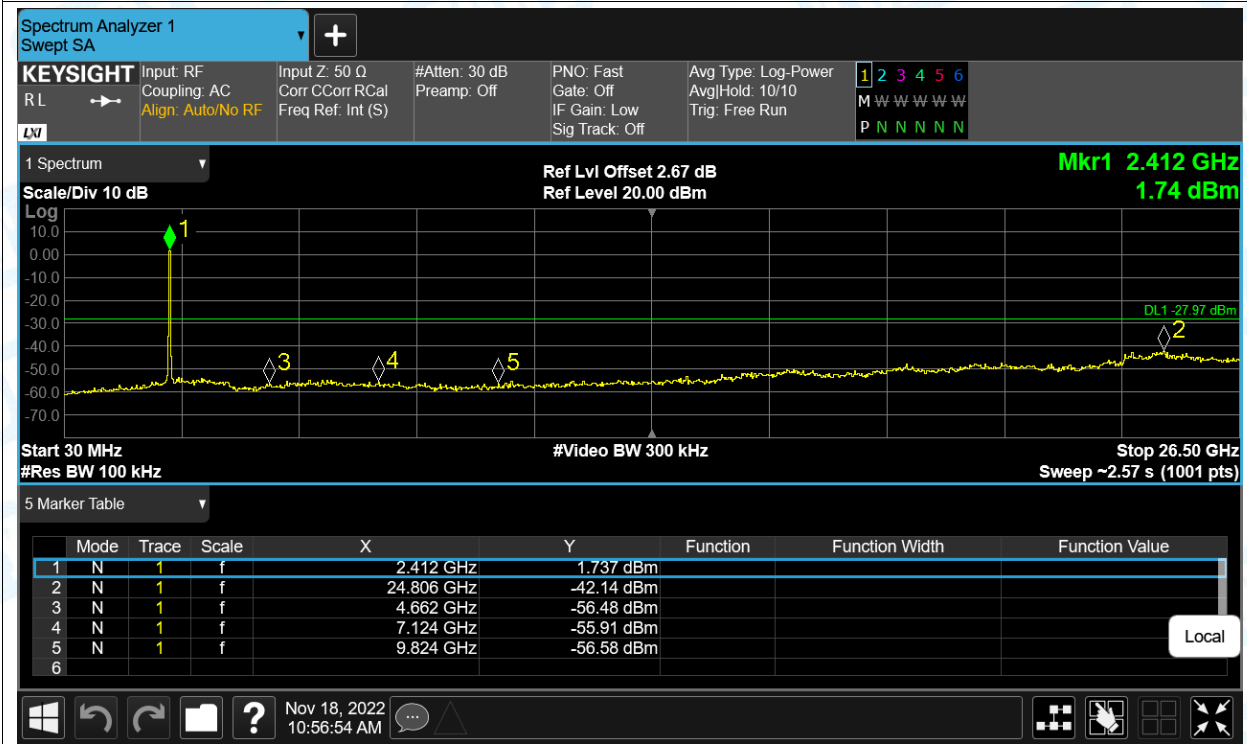
Tx. Spurious NVNT b 2462MHz Ant1 Emission



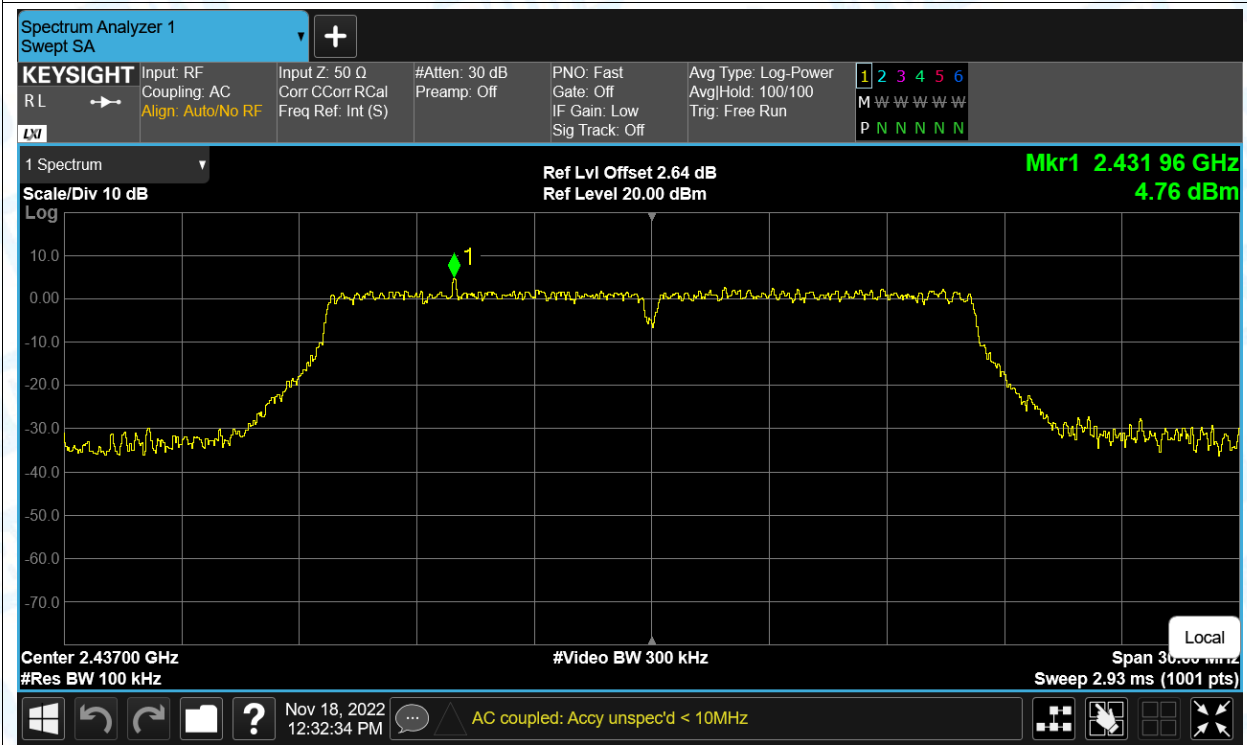
Tx. Spurious NVNT g 2412MHz Ant1 Ref



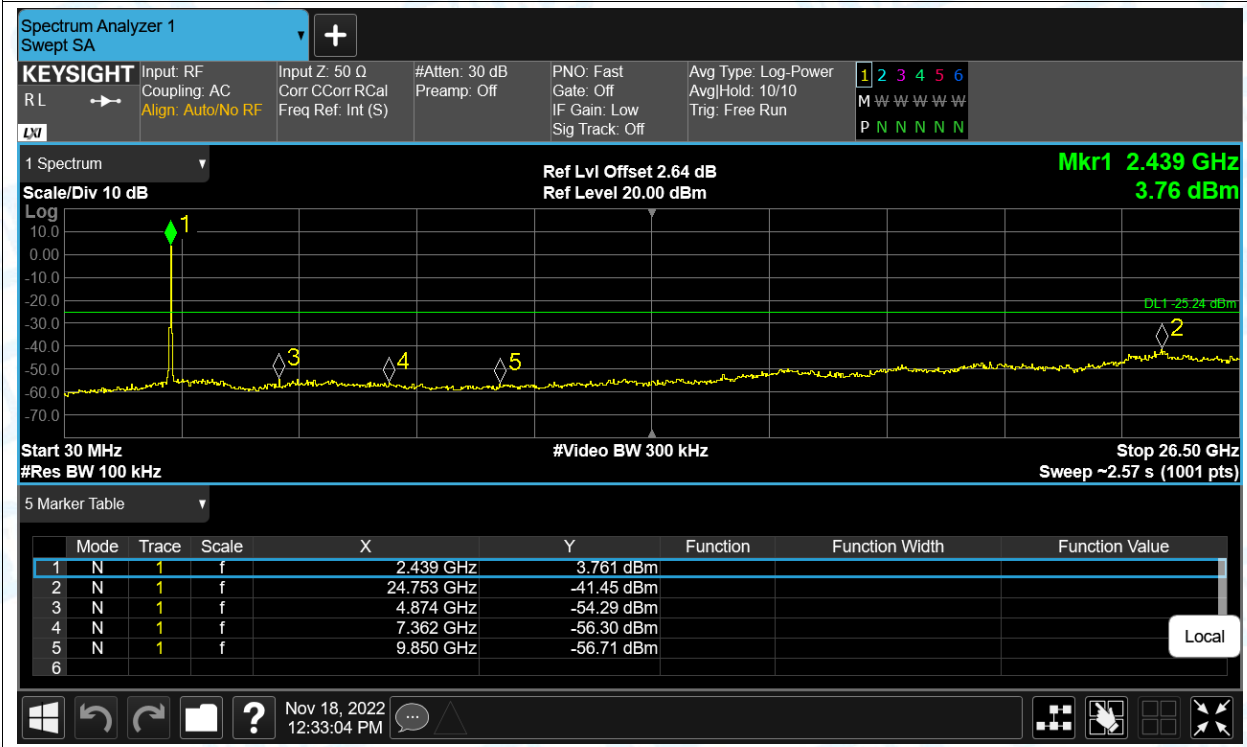
Tx. Spurious NVNT g 2412MHz Ant1 Emission



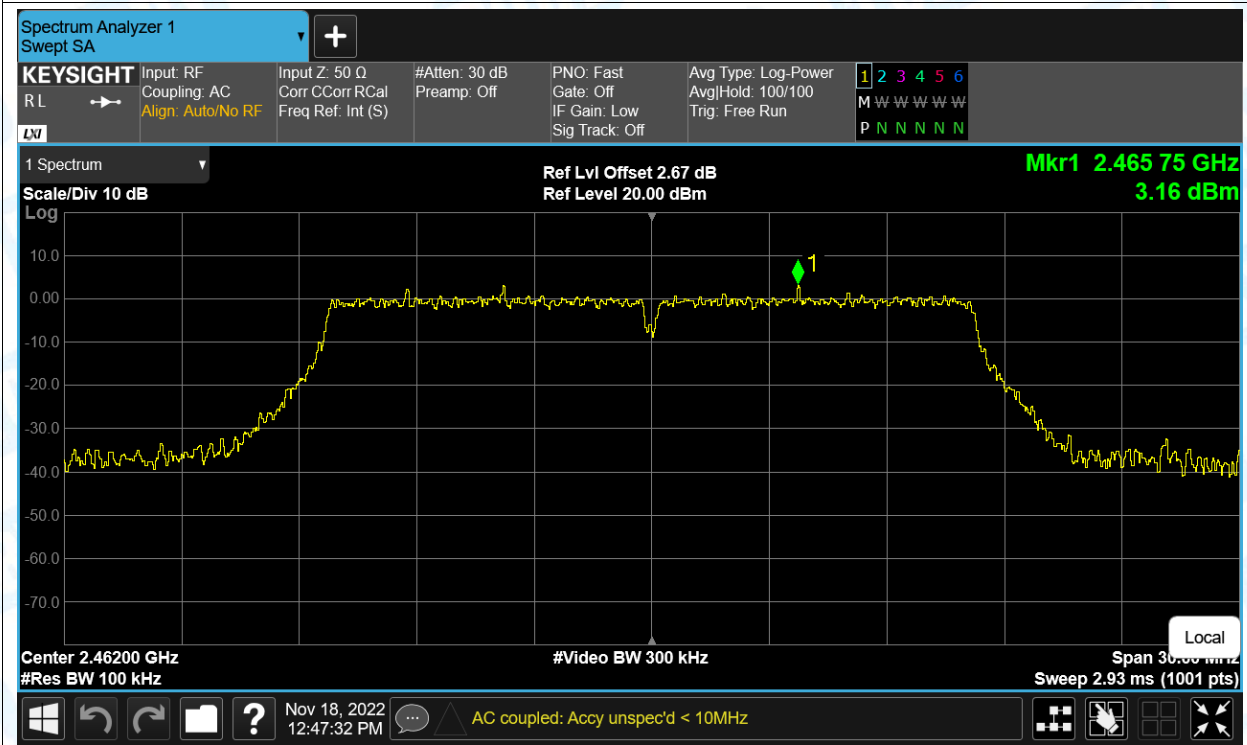
Tx. Spurious NVNT g 2437MHz Ant1 Ref



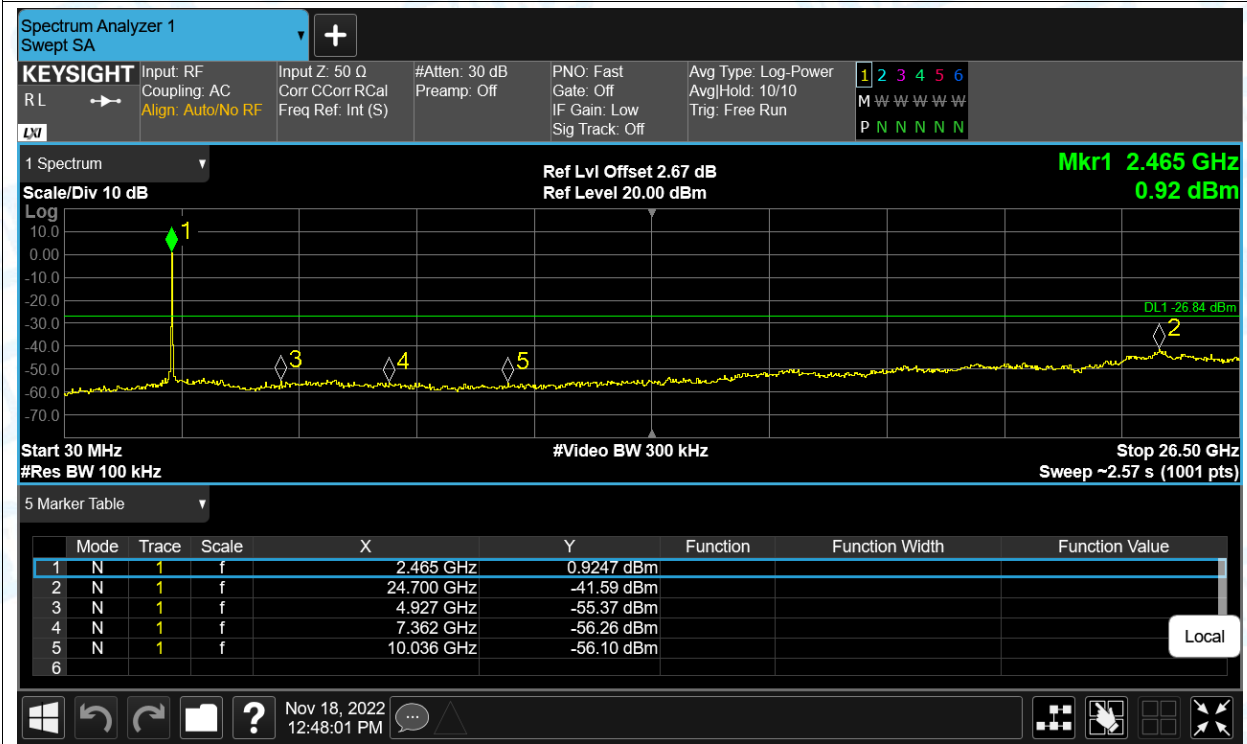
Tx. Spurious NVNT g 2437MHz Ant1 Emission

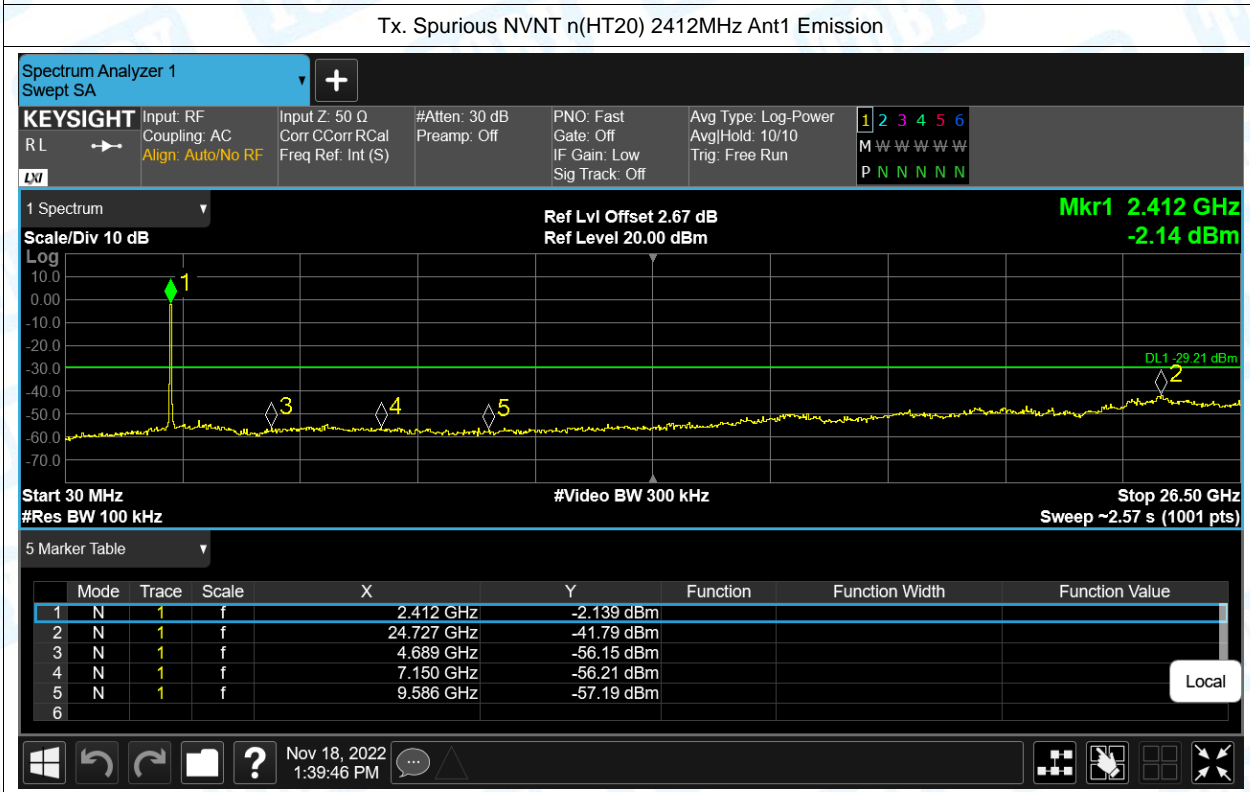
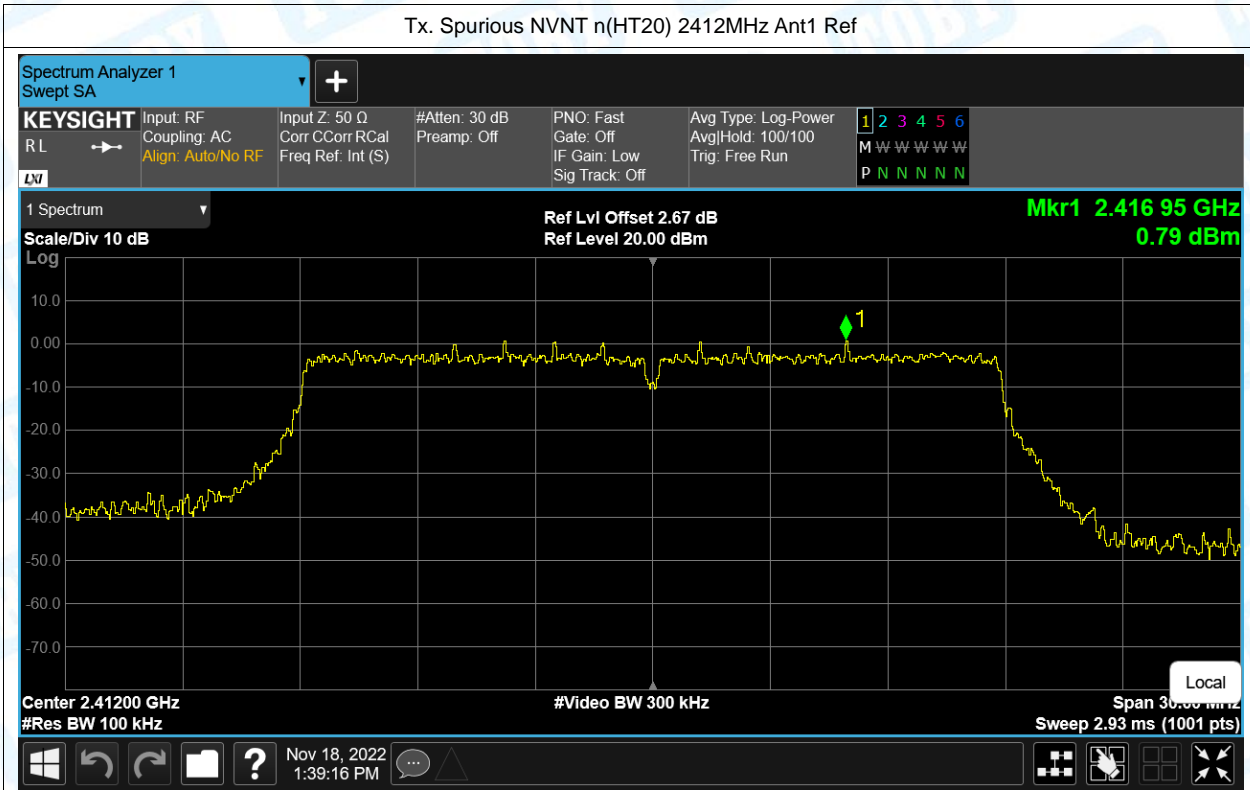


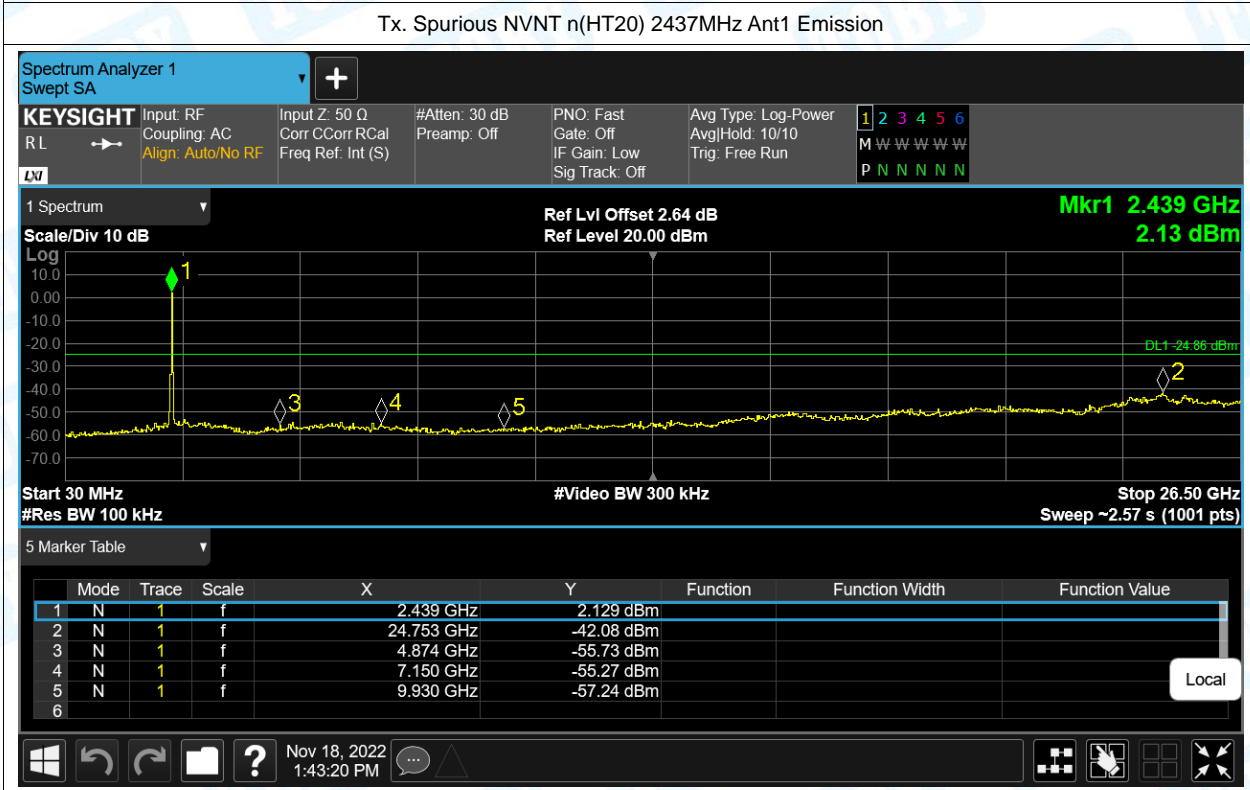
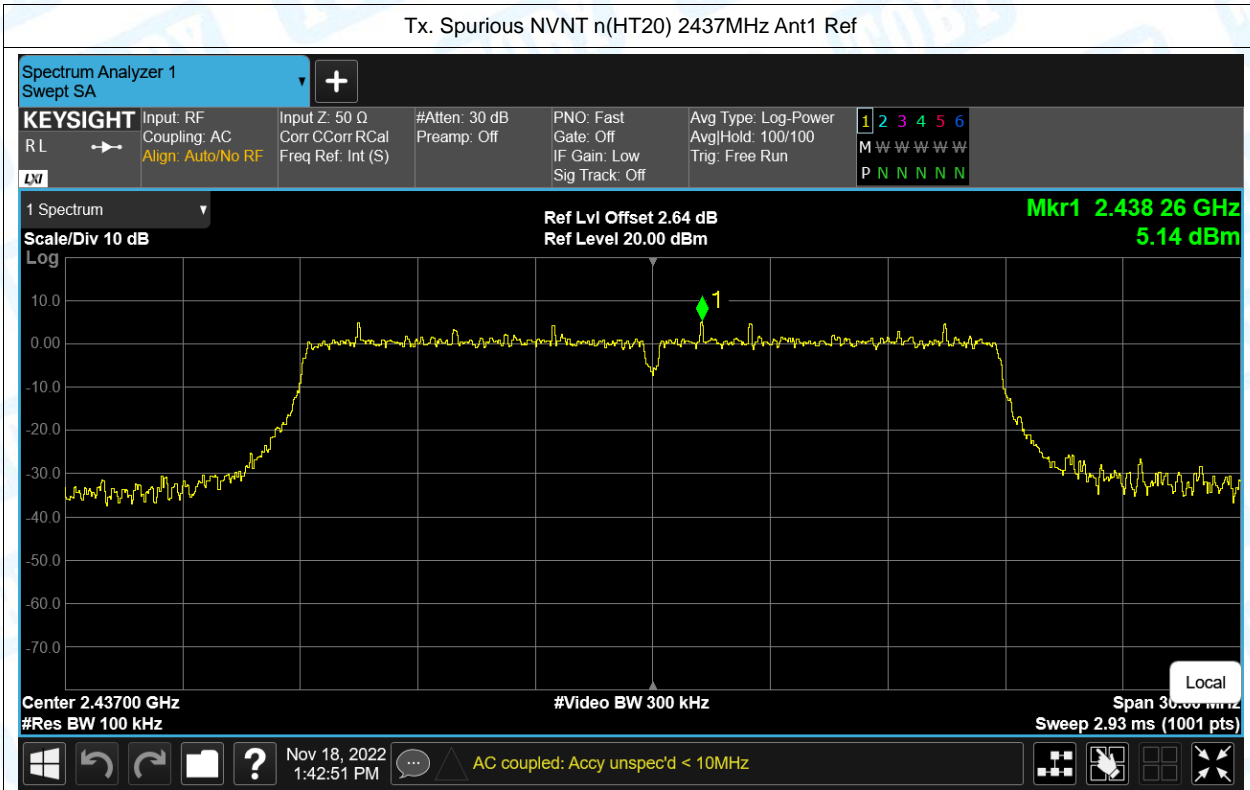
Tx. Spurious NVNT g 2462MHz Ant1 Ref

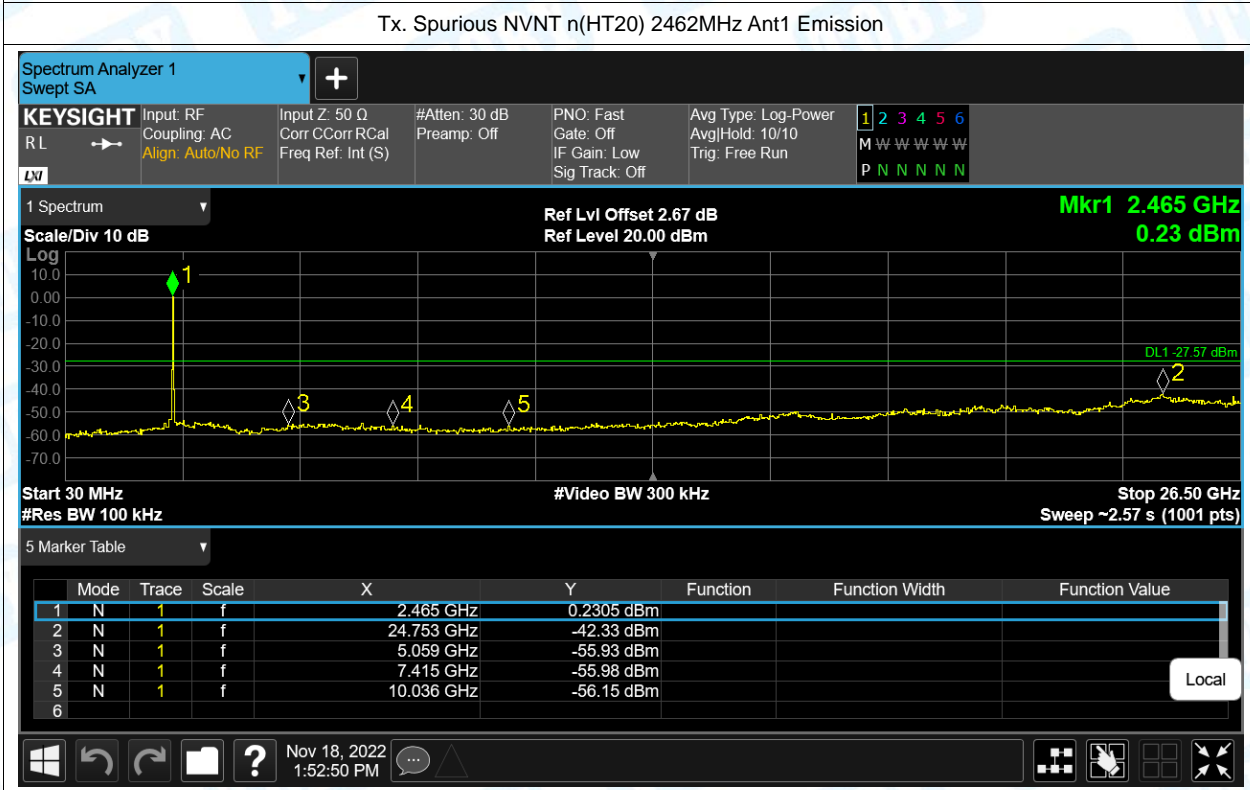
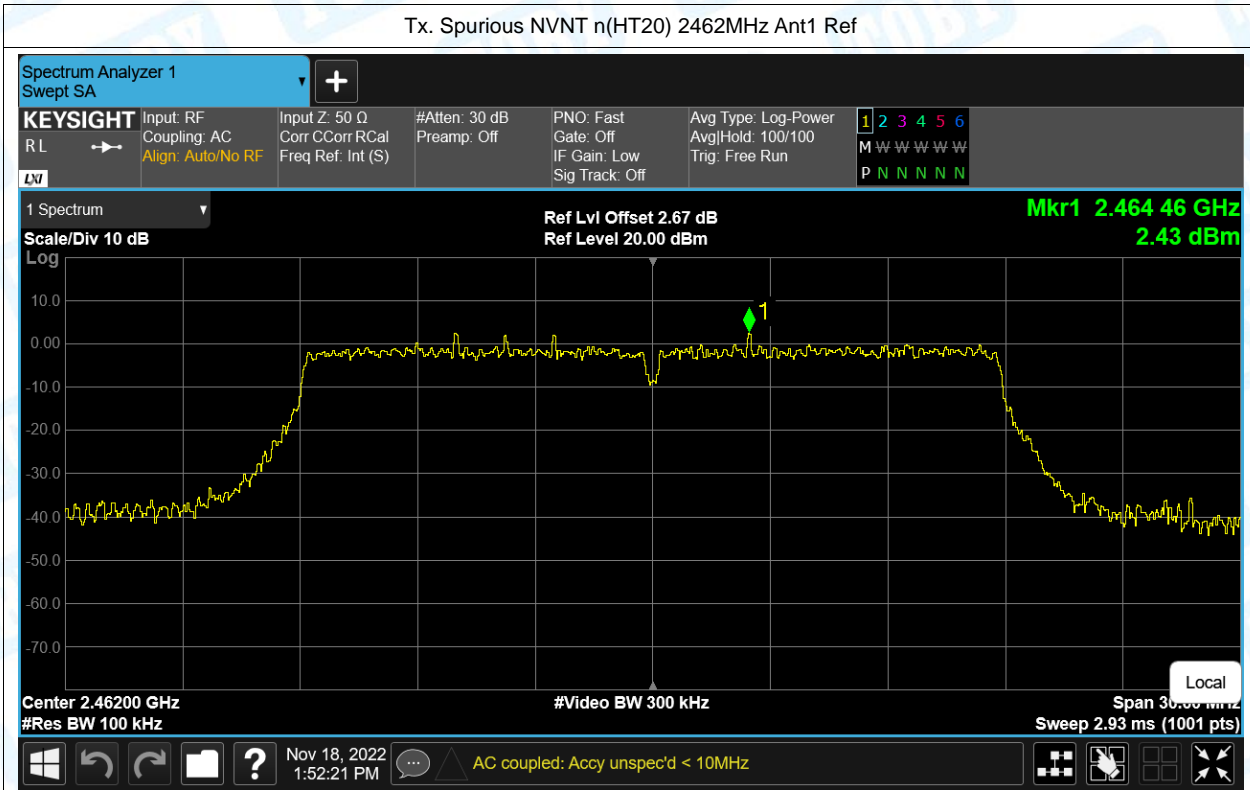


Tx. Spurious NVNT g 2462MHz Ant1 Emission







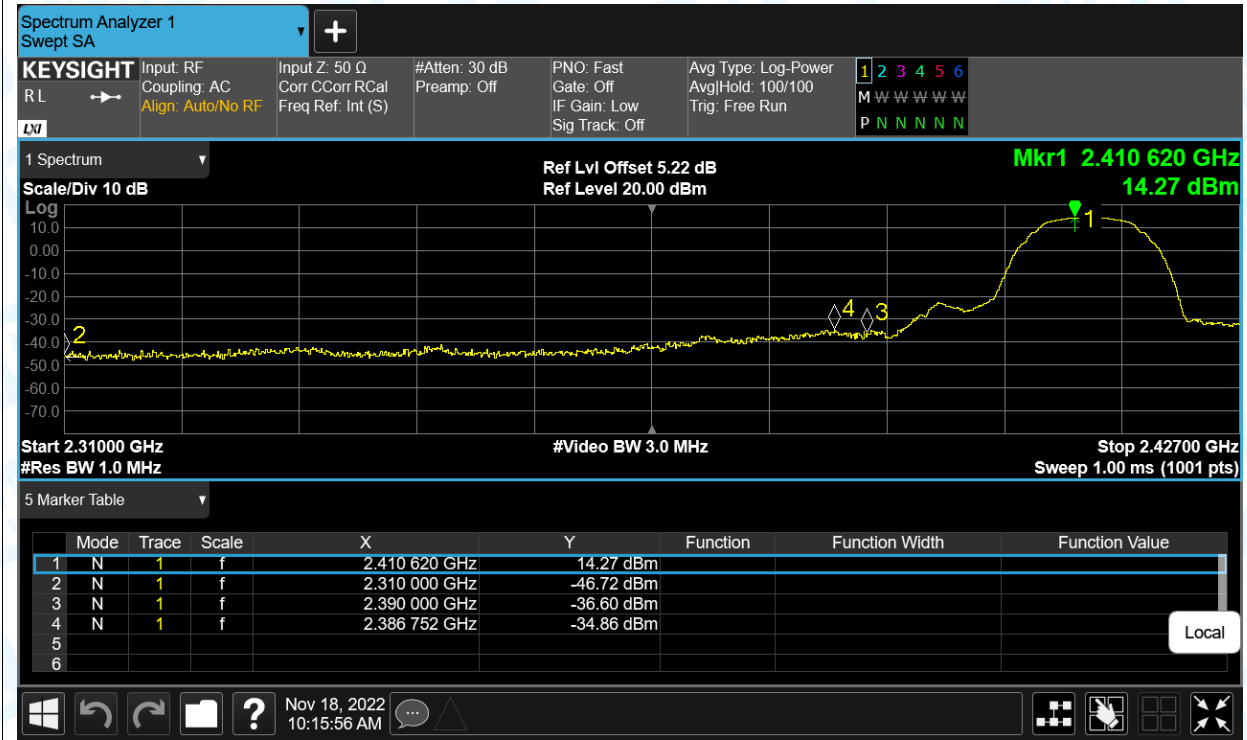


8. Restrict Band

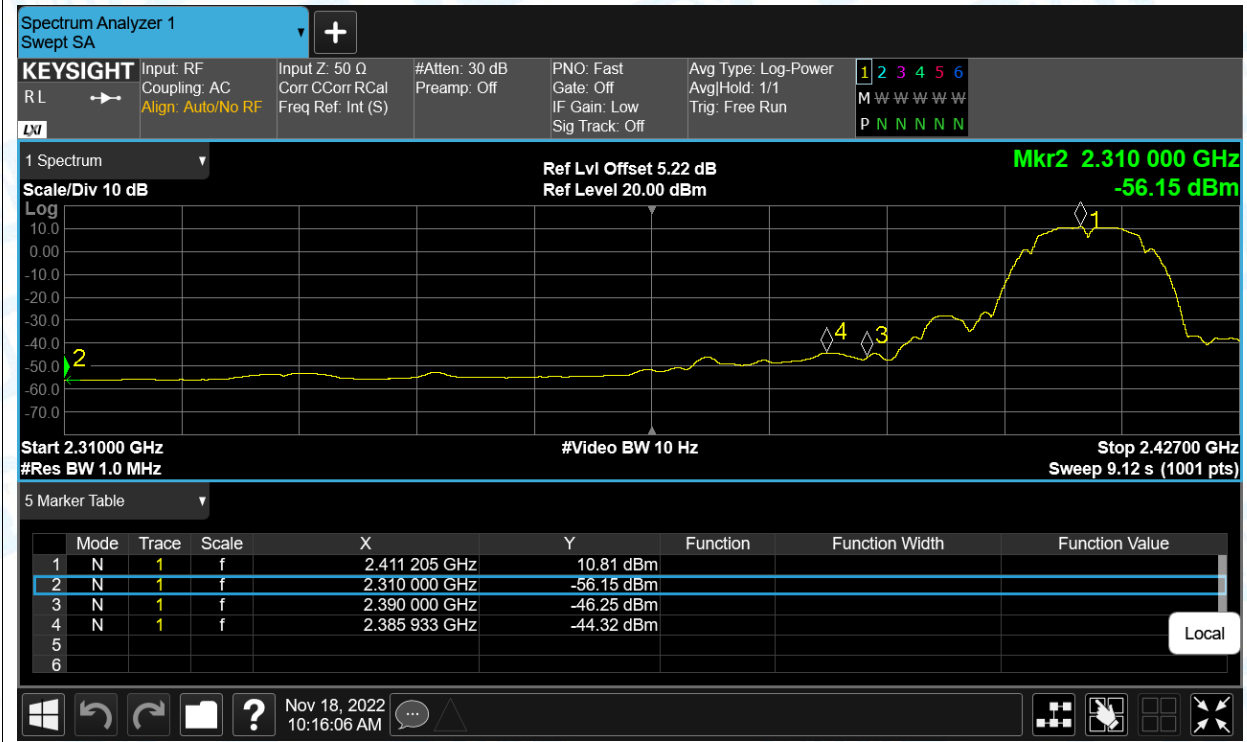
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	b	2412	Ant1	2310	-46.72	2.55	51.09	Peak	74	Pass
NVNT	b	2412	Ant1	2310	-56.15	2.55	41.66	Average	54	Pass
NVNT	b	2412	Ant1	2386.752	-34.86	2.55	62.95	Peak	74	Pass
NVNT	b	2412	Ant1	2385.933	-44.32	2.55	53.49	Average	54	Pass
NVNT	b	2412	Ant1	2390	-36.6	2.55	61.21	Peak	74	Pass
NVNT	b	2412	Ant1	2390	-46.25	2.55	51.56	Average	54	Pass
NVNT	b	2462	Ant1	2483.5	-37.63	2.55	60.18	Peak	74	Pass
NVNT	b	2462	Ant1	2483.5	-47.19	2.55	50.62	Average	54	Pass
NVNT	b	2462	Ant1	2487.227	-35.68	2.55	62.13	Peak	74	Pass
NVNT	b	2462	Ant1	2487.651	-46.64	2.55	51.17	Average	54	Pass
NVNT	b	2462	Ant1	2500	-40.29	2.55	57.52	Peak	74	Pass
NVNT	b	2462	Ant1	2500	-48.27	2.55	49.54	Average	54	Pass
NVNT	g	2412	Ant1	2310	-47.86	2.55	49.95	Peak	74	Pass
NVNT	g	2412	Ant1	2310	-56.54	2.55	41.27	Average	54	Pass
NVNT	g	2412	Ant1	2388.858	-29.57	2.55	68.24	Peak	74	Pass
NVNT	g	2412	Ant1	2389.911	-44.55	2.55	53.26	Average	54	Pass
NVNT	g	2412	Ant1	2390	-30.98	2.55	66.83	Peak	74	Pass
NVNT	g	2412	Ant1	2390	-44.39	2.55	53.42	Average	54	Pass
NVNT	g	2462	Ant1	2483.5	-27.08	2.55	70.73	Peak	74	Pass
NVNT	g	2462	Ant1	2483.5	-44.78	2.55	53.03	Average	54	Pass
NVNT	g	2462	Ant1	2485.001	-26.83	2.55	70.98	Peak	74	Pass
NVNT	g	2462	Ant1	2483.517	-44.78	2.55	53.03	Average	54	Pass
NVNT	g	2462	Ant1	2500	-41.45	2.55	56.36	Peak	74	Pass
NVNT	g	2462	Ant1	2500	-52.59	2.55	45.22	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2310	-46.26	2.55	51.55	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2310	-56.62	2.55	41.19	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2389.443	-27.99	2.55	69.82	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2389.911	-44	2.55	53.81	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2390	-30.12	2.55	67.69	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2390	-43.86	2.55	53.95	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-29.76	2.55	68.05	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-46.21	2.55	51.6	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2485.001	-26.07	2.55	71.74	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2483.517	-46.21	2.55	51.6	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2500	-42.26	2.55	55.55	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2500	-52.86	2.55	44.95	Average	54	Pass

Test Graphs

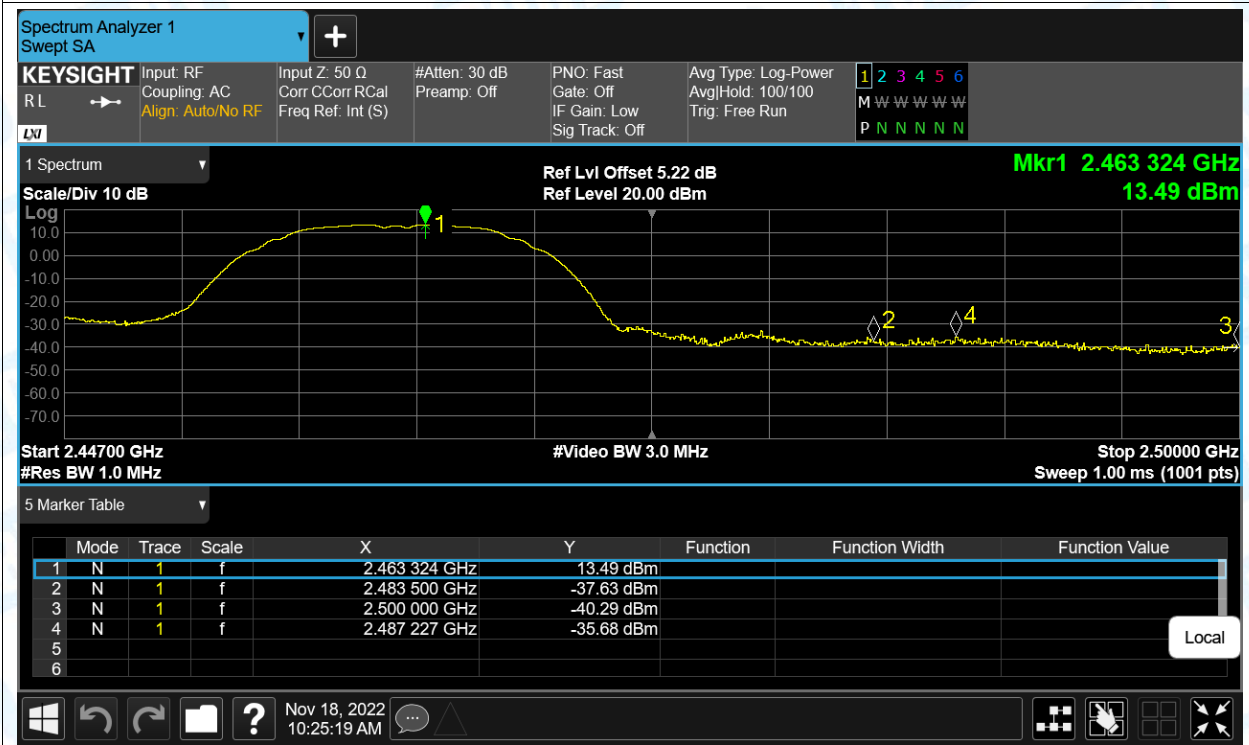
Restrict Band NVNT b 2412MHz Ant1 Peak



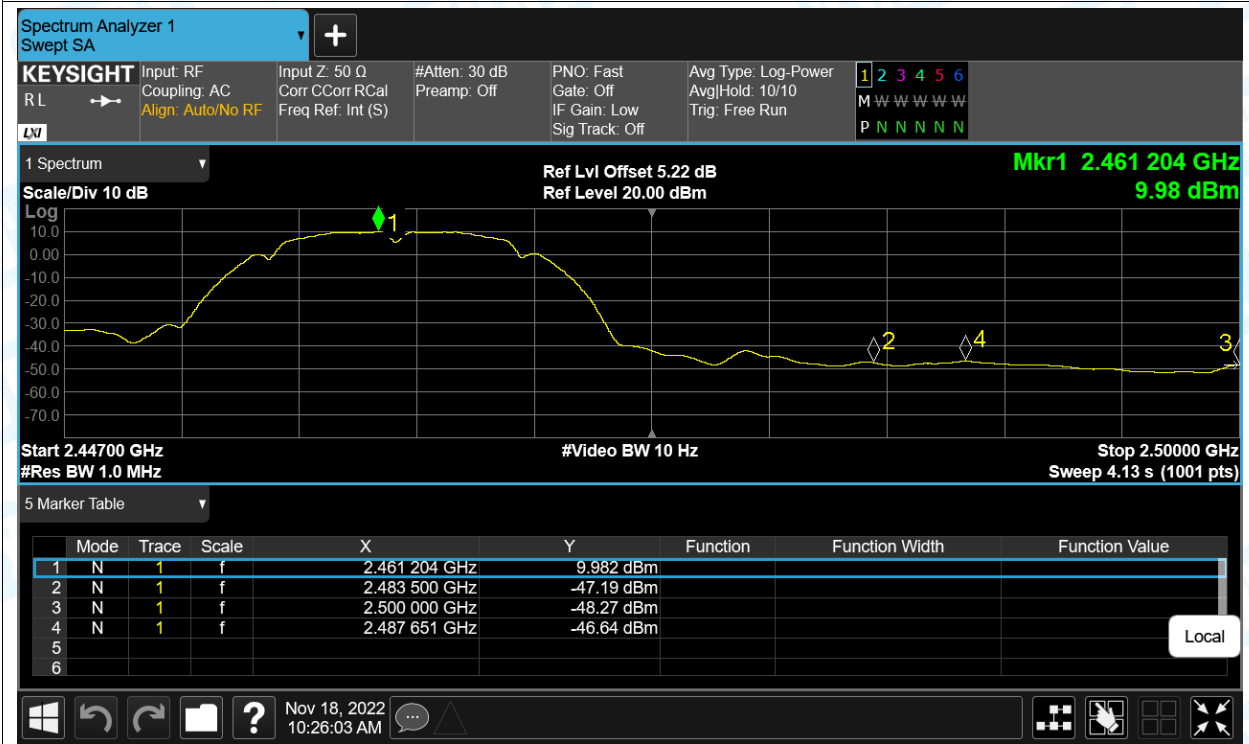
Restrict Band NVNT b 2412MHz Ant1 Average



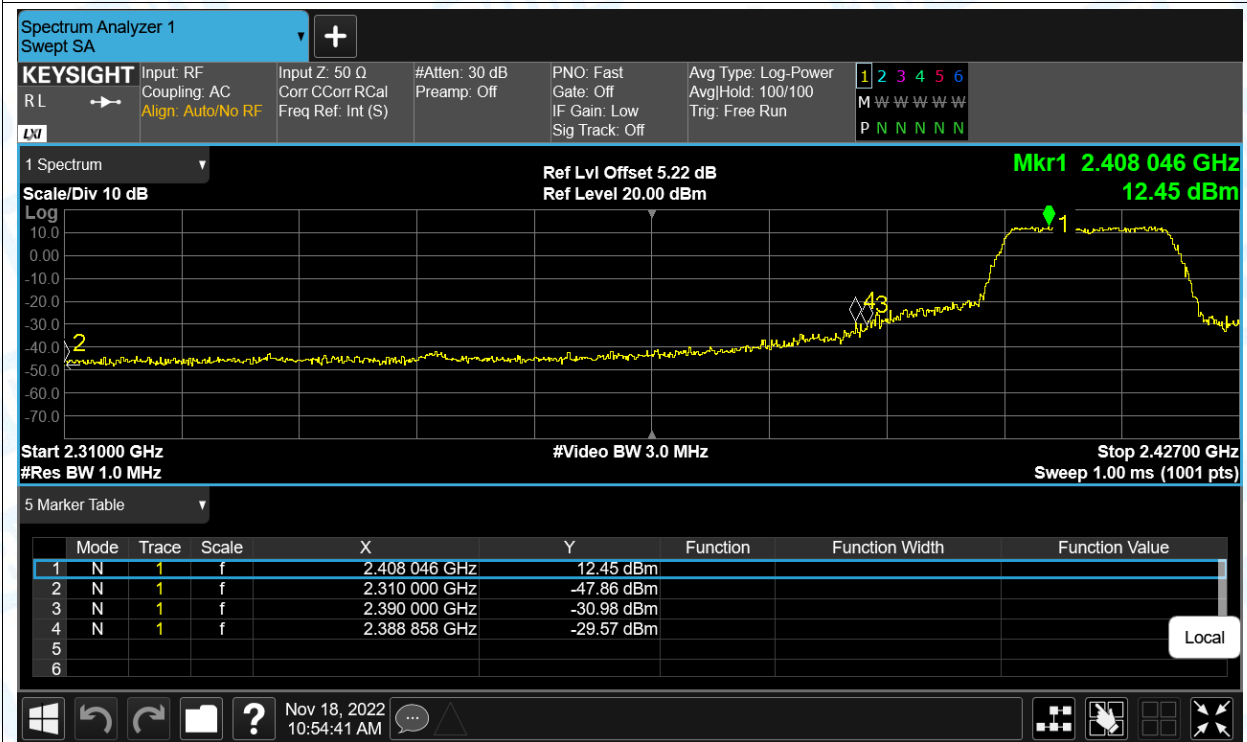
Restrict Band NVNT b 2462MHz Ant1 Peak



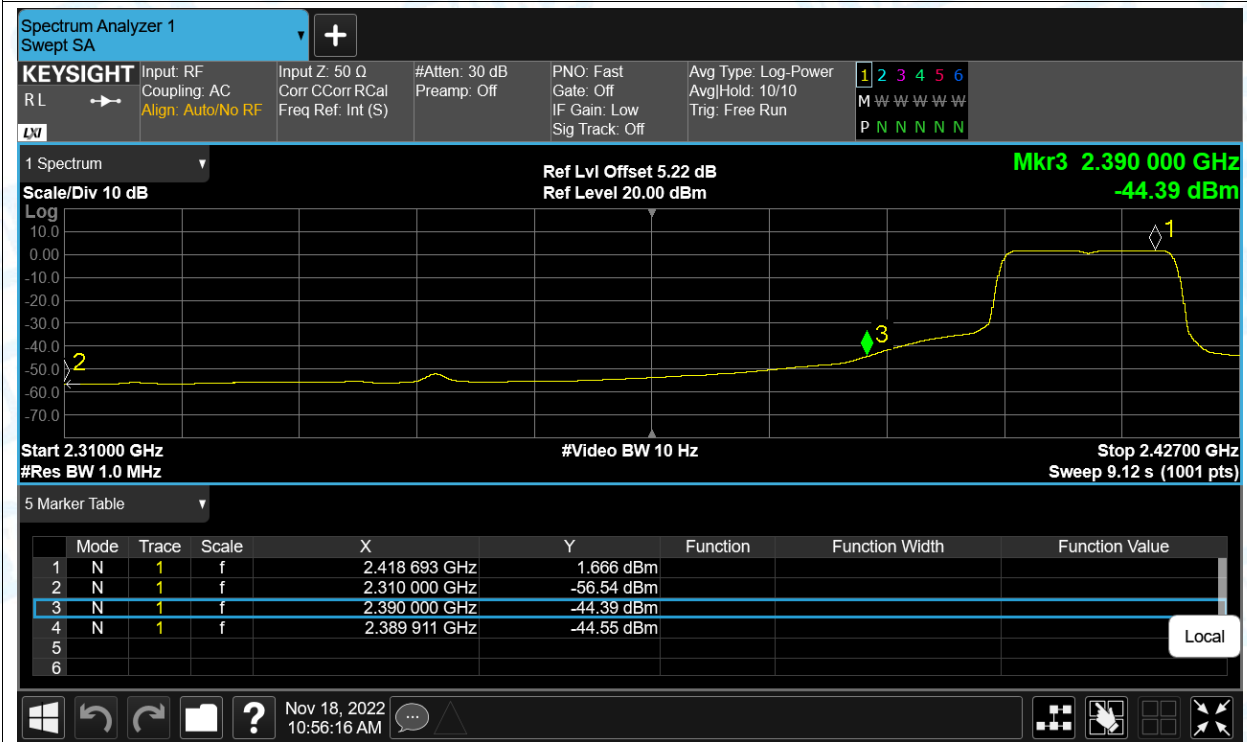
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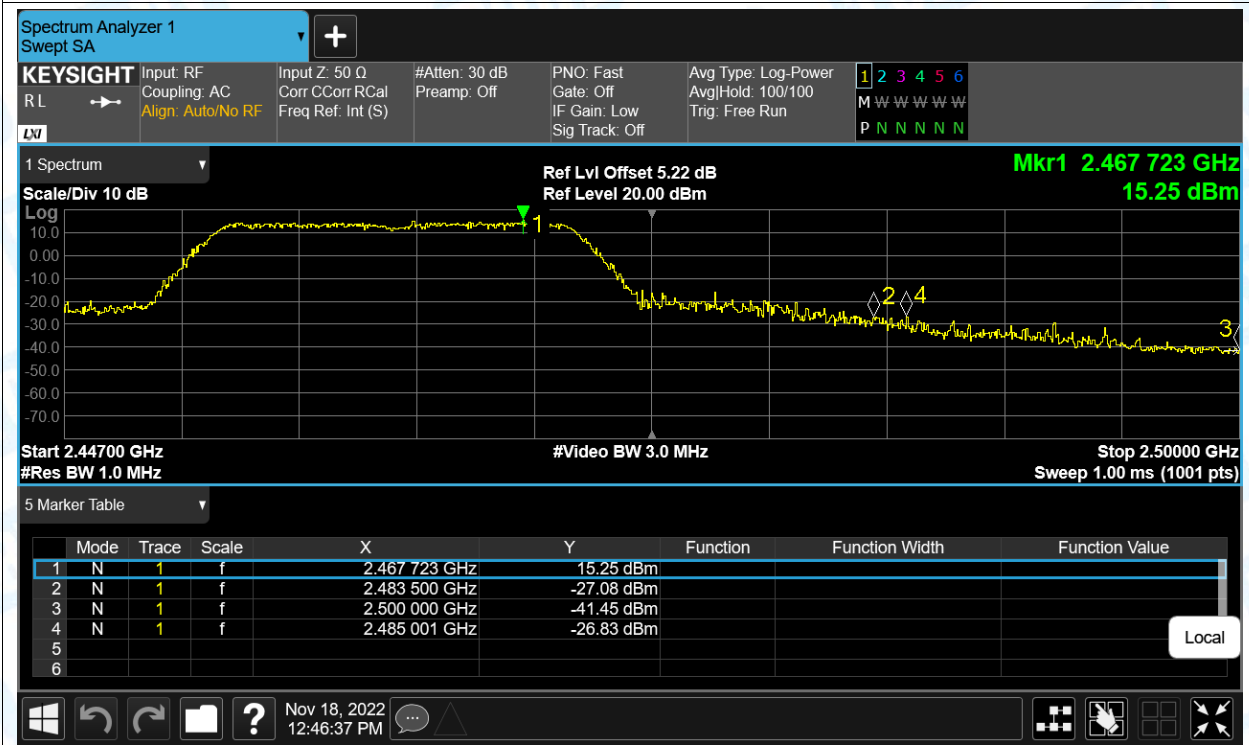
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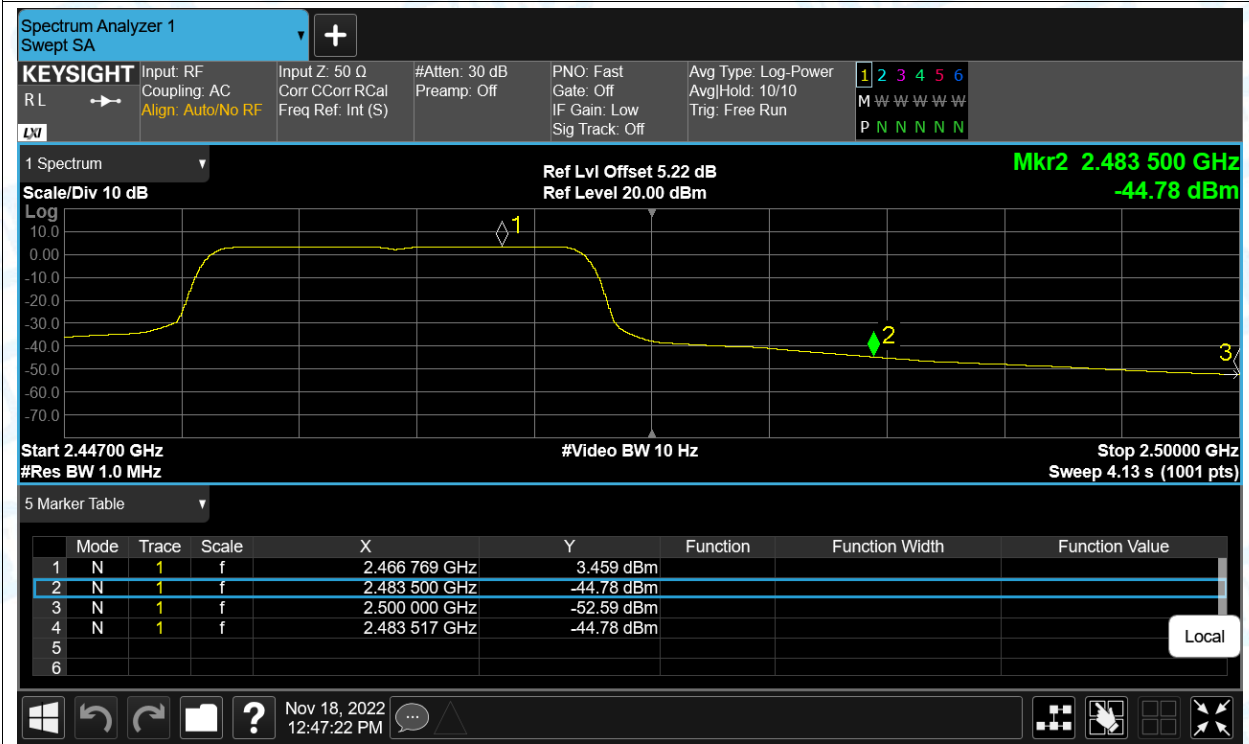
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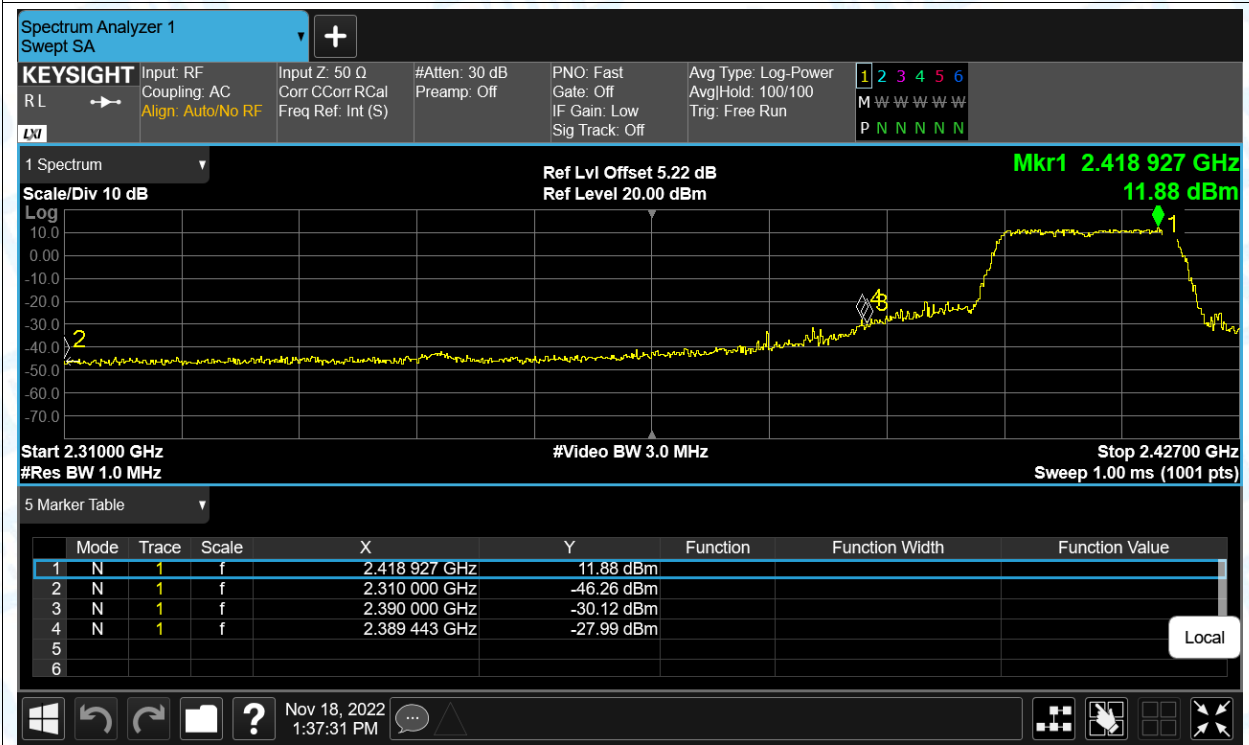
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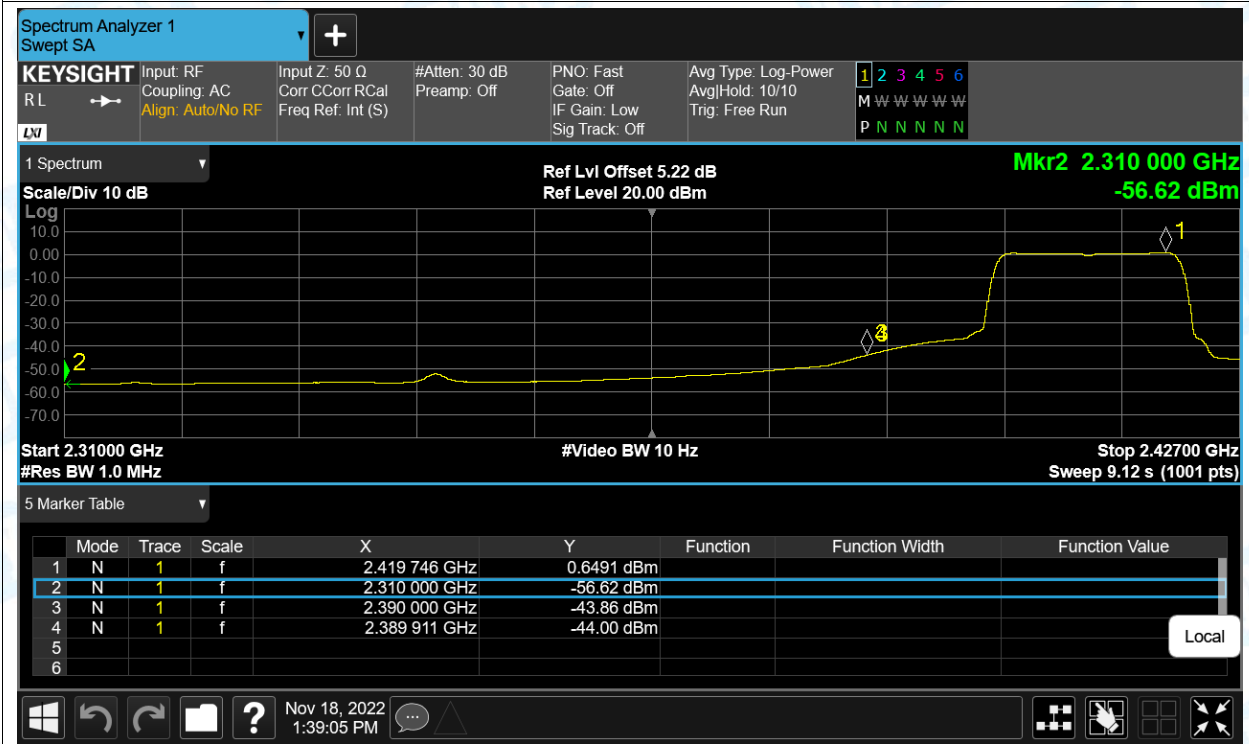
Restrict Band NVNT g 2462MHz Ant1 Average



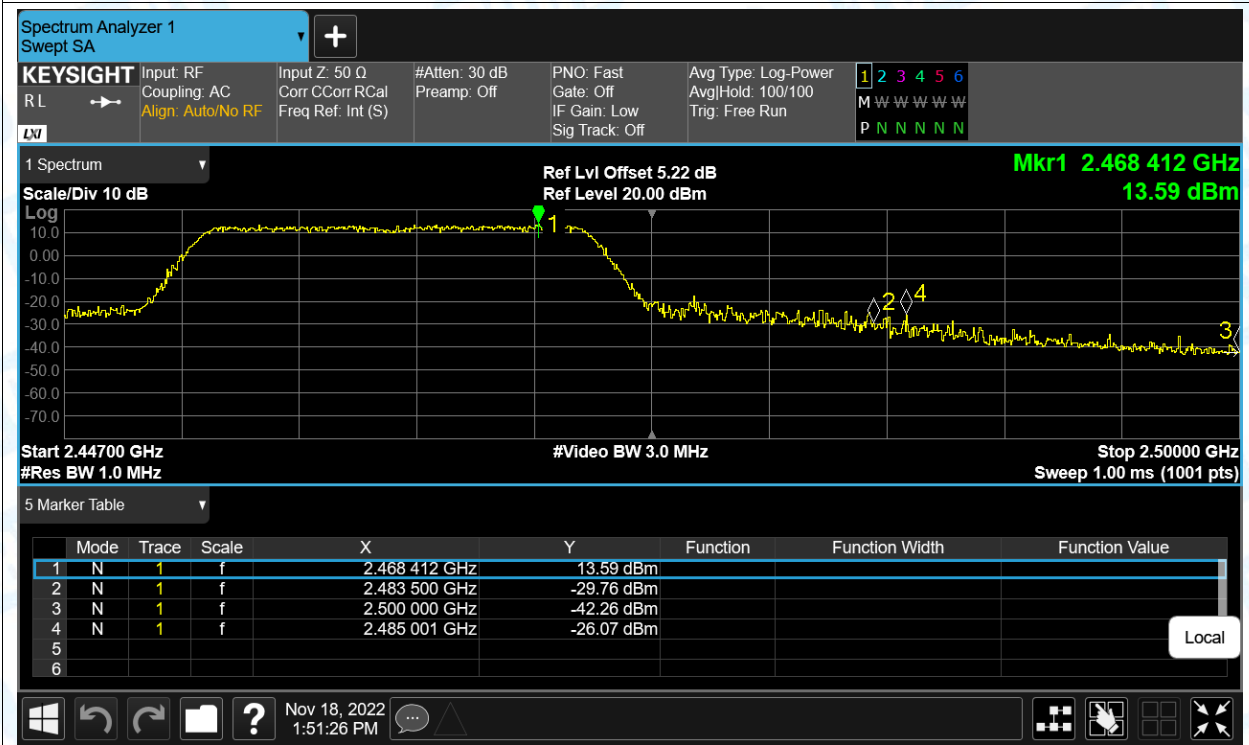
Restrict Band NVNT n(HT20) 2412MHz Ant1 Peak



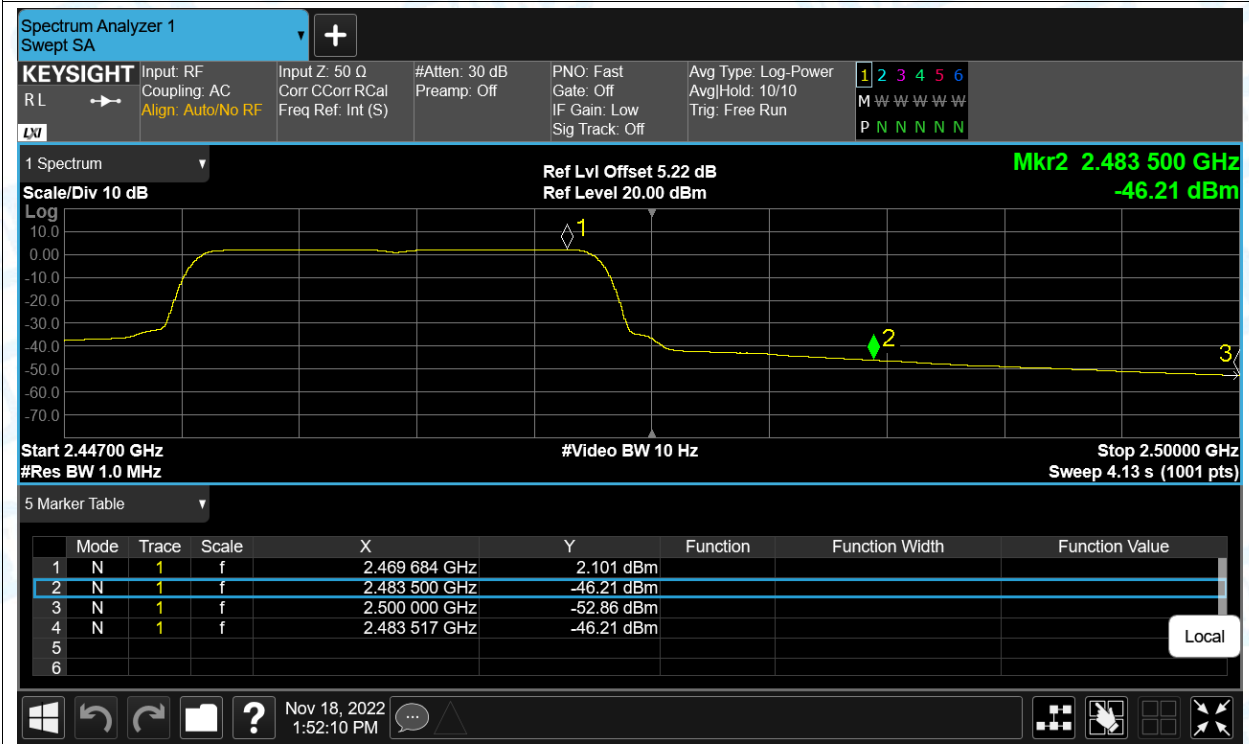
Restrict Band NVNT n(HT20) 2412MHz Ant1 Average



Restrict Band NVNT n(HT20) 2462MHz Ant1 Peak



Restrict Band NVNT n(HT20) 2462MHz Ant1 Average



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