

## RF Test Data for 2.4G WiFi (Conducted Measurements)

General Description of EUT	
<b>Product Name:</b>	Illuminato Q4
<b>Test Model:</b>	Illuminato Q4
<b>Sample ID:</b>	RW-C-202209-0005-9-2#
Environmental Conditions	
<b>Temperature:</b>	25°C
<b>Relative Humidity:</b>	55%
<b>Test Voltage:</b>	DC 11.1V
<b>Test Engineer:</b>	Liu Ji Ming
Note: For a more detailed features description, please refer to the report TBR-C-202209-0005-143	

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## 1. Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	98.34	0.07	0.08
NVNT	b	2437	Ant1	98.89	0.05	0.08
NVNT	b	2462	Ant1	99.12	0.04	0.08
NVNT	g	2412	Ant1	99.2	0.03	0.08
NVNT	g	2437	Ant1	97.87	0.09	0.08
NVNT	g	2462	Ant1	99.28	0.03	0.08
NVNT	n(HT20)	2412	Ant1	95.05	0.22	0.52
NVNT	n(HT20)	2437	Ant1	84.96	0.71	0.52
NVNT	n(HT20)	2462	Ant1	89.72	0.47	0.52
NVNT	n(HT40)	2422	Ant1	92.16	0.35	1.06
NVNT	n(HT40)	2437	Ant1	88.68	0.52	1.06
NVNT	n(HT40)	2452	Ant1	81.9	0.87	1.05

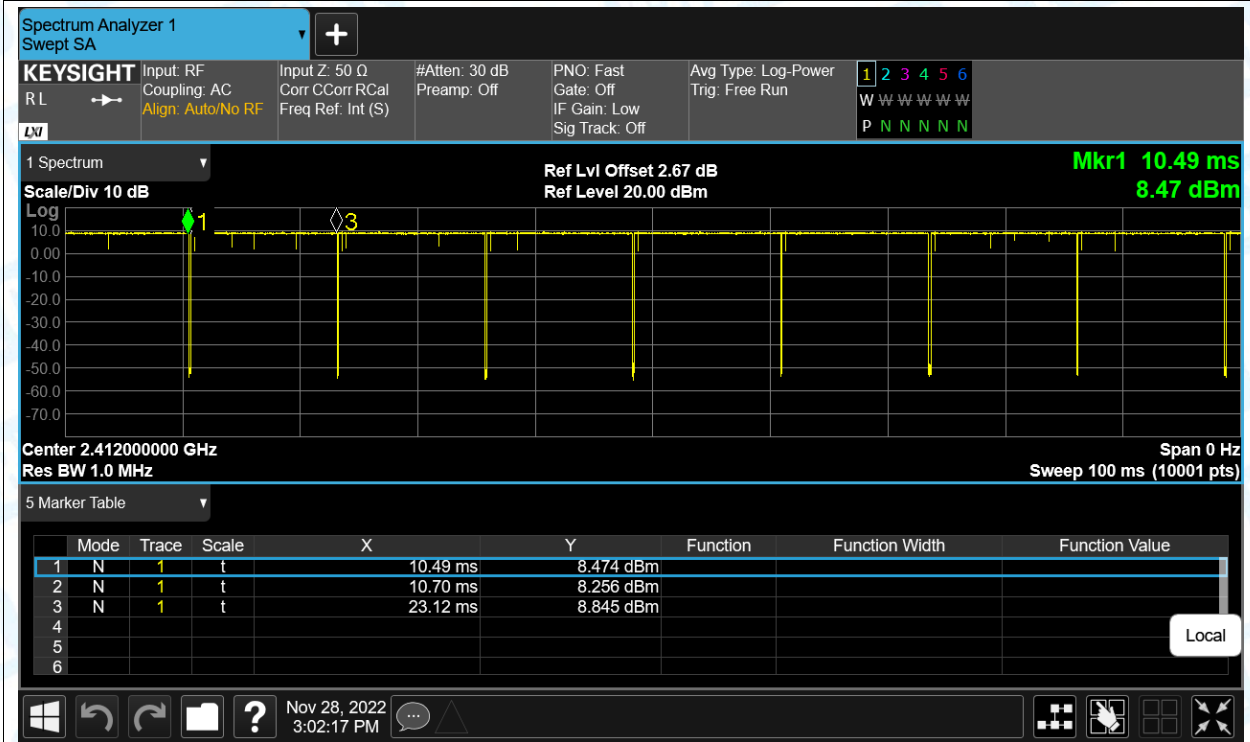
**Note:** Duty Cycle(%)=ON(ms)/(ON(ms)+OFF(ms))

ON(ms)=Maker3-Maker2

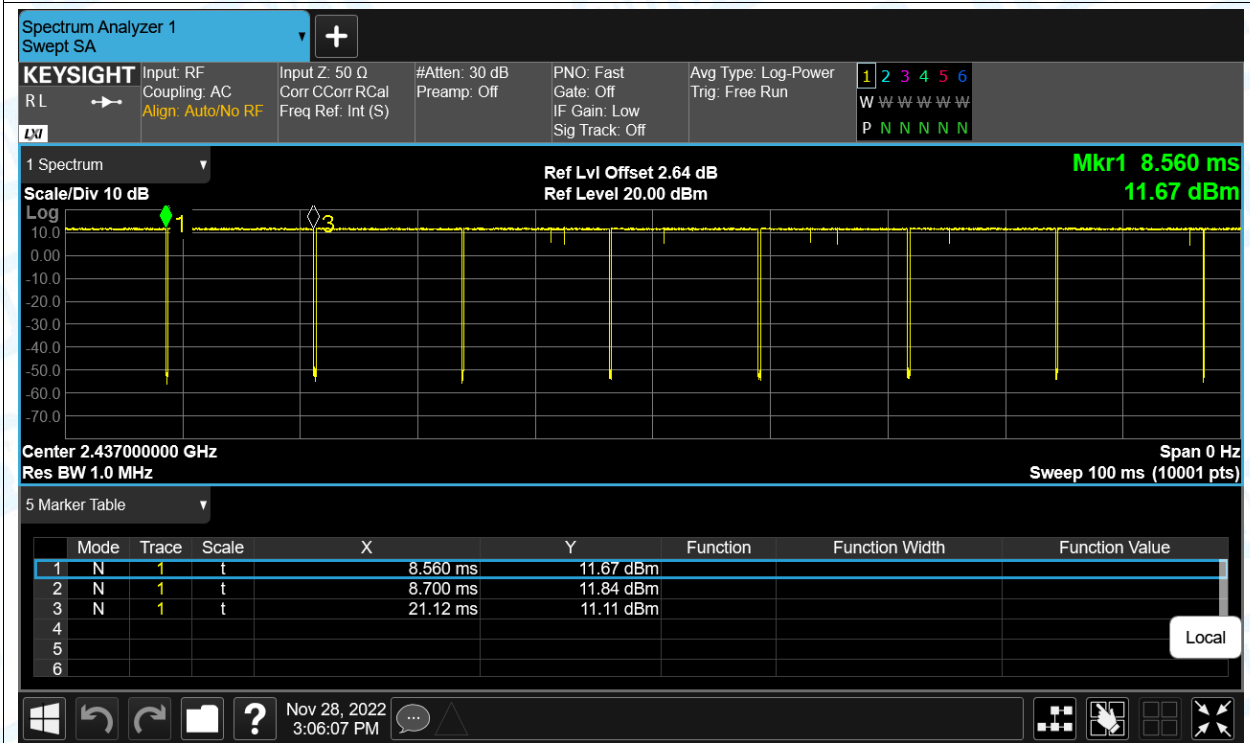
(ON(ms)+OFF(ms))=Maker3-Maker1

Test Graphs

Duty Cycle NVNT b 2412MHz Ant1

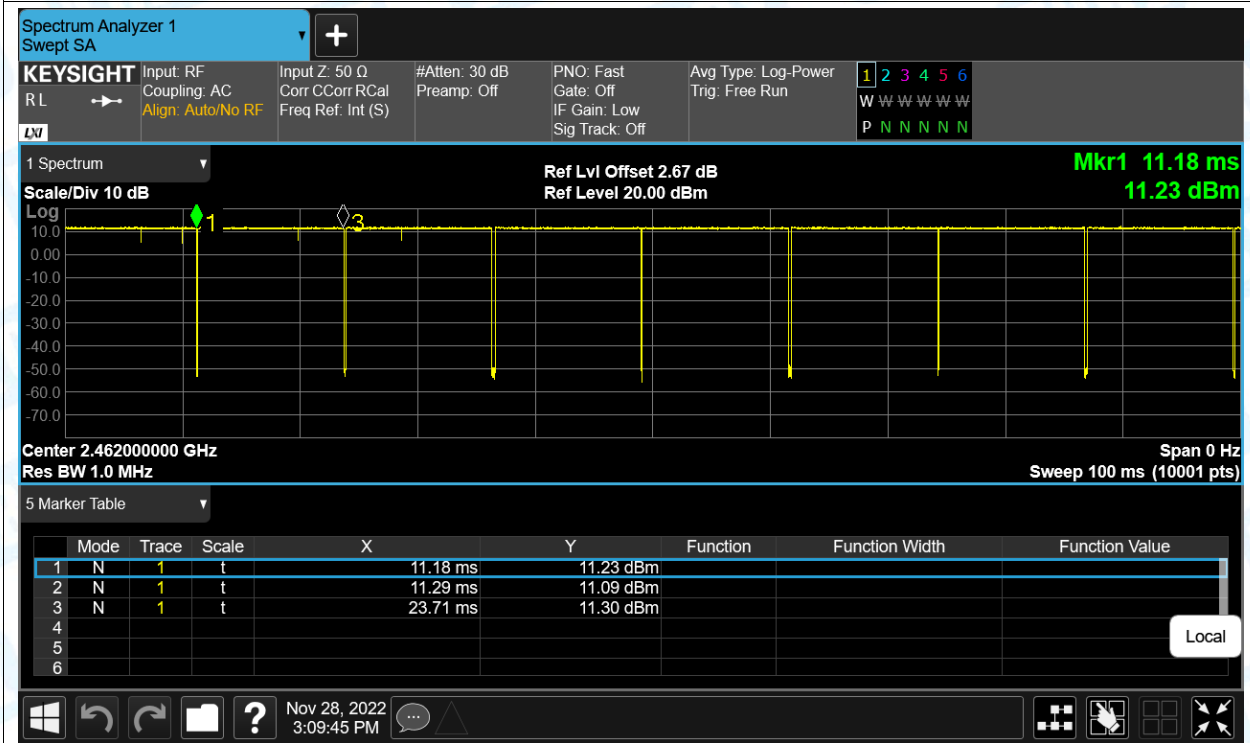


Duty Cycle NVNT b 2437MHz Ant1

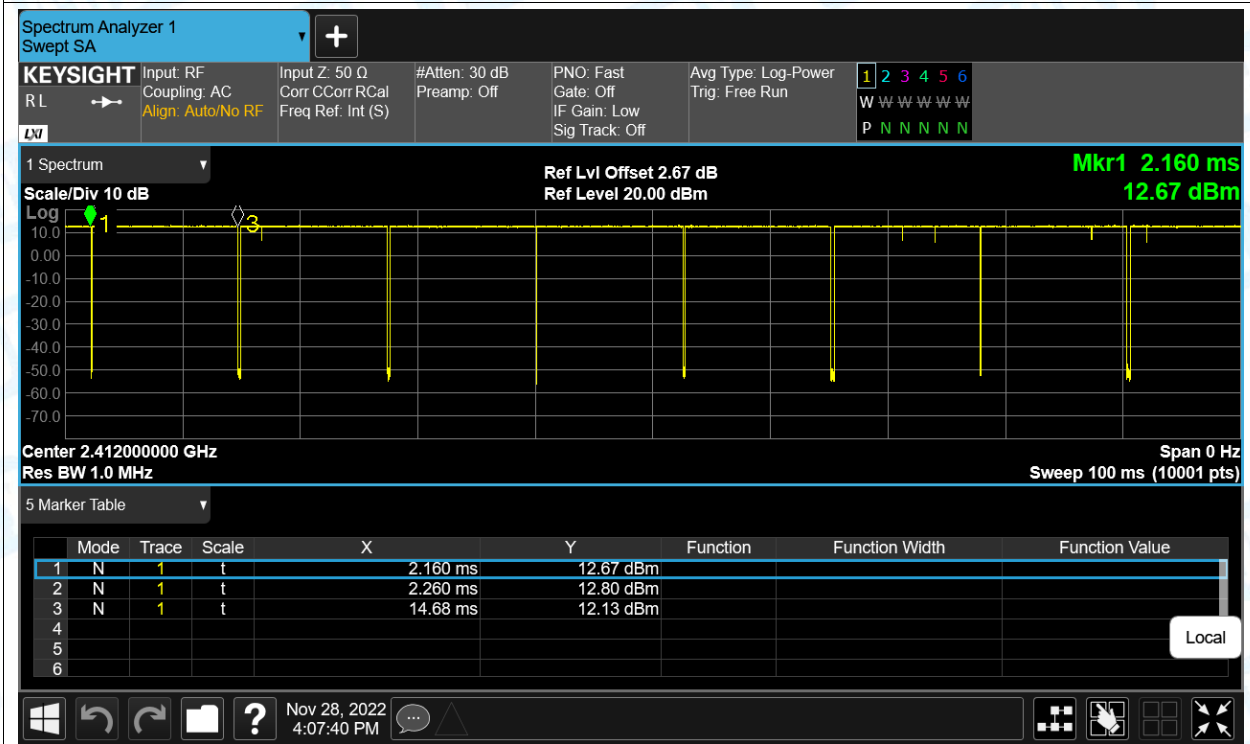




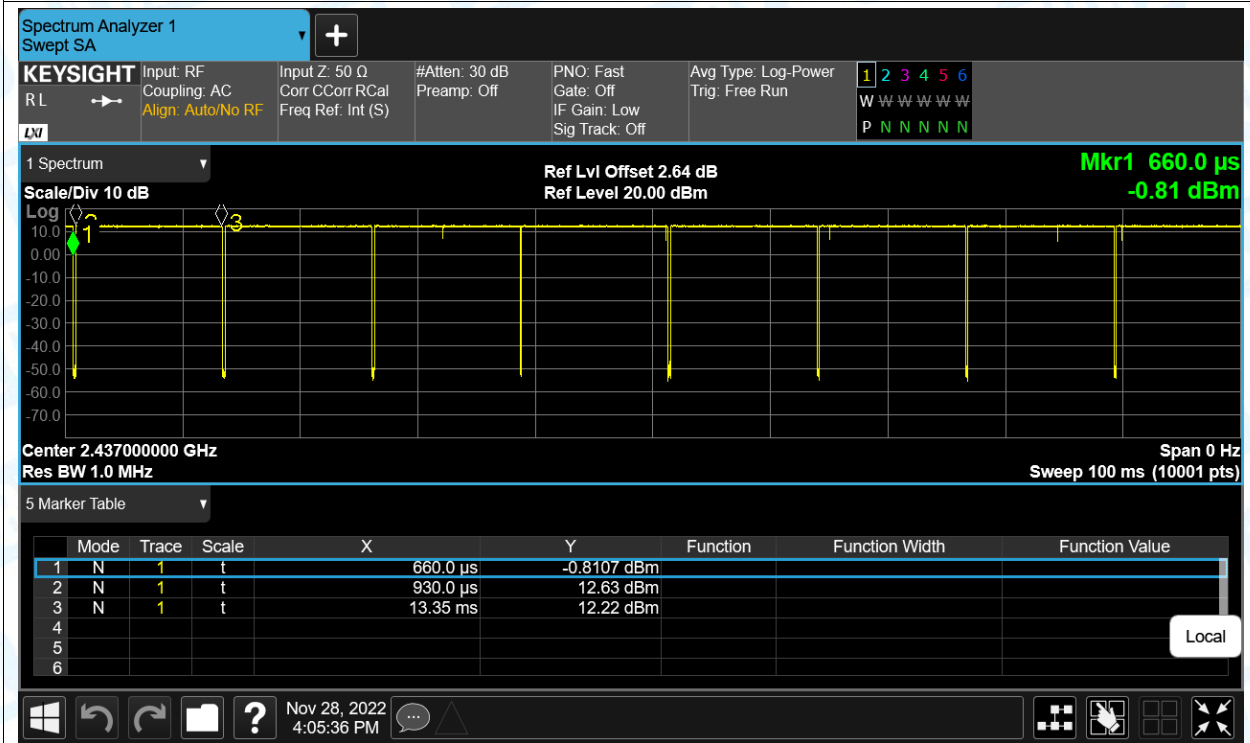
Duty Cycle NVNT b 2462MHz Ant1



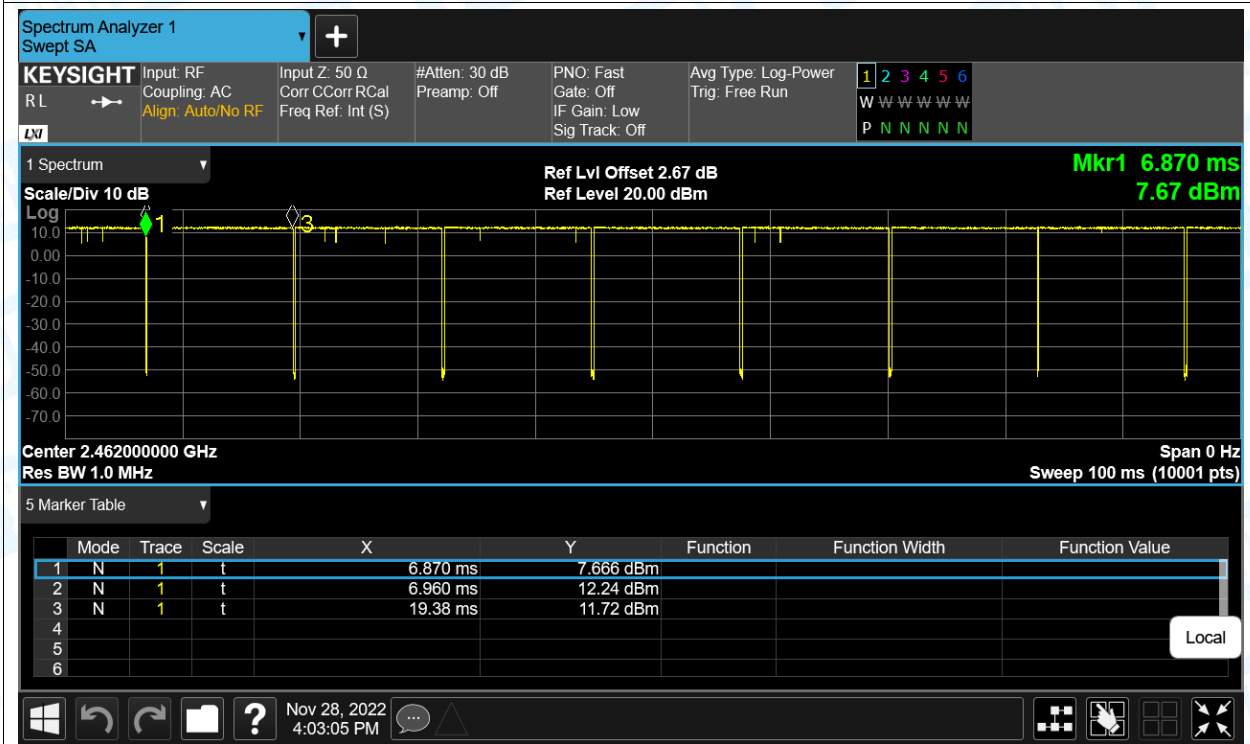
Duty Cycle NVNT g 2412MHz Ant1

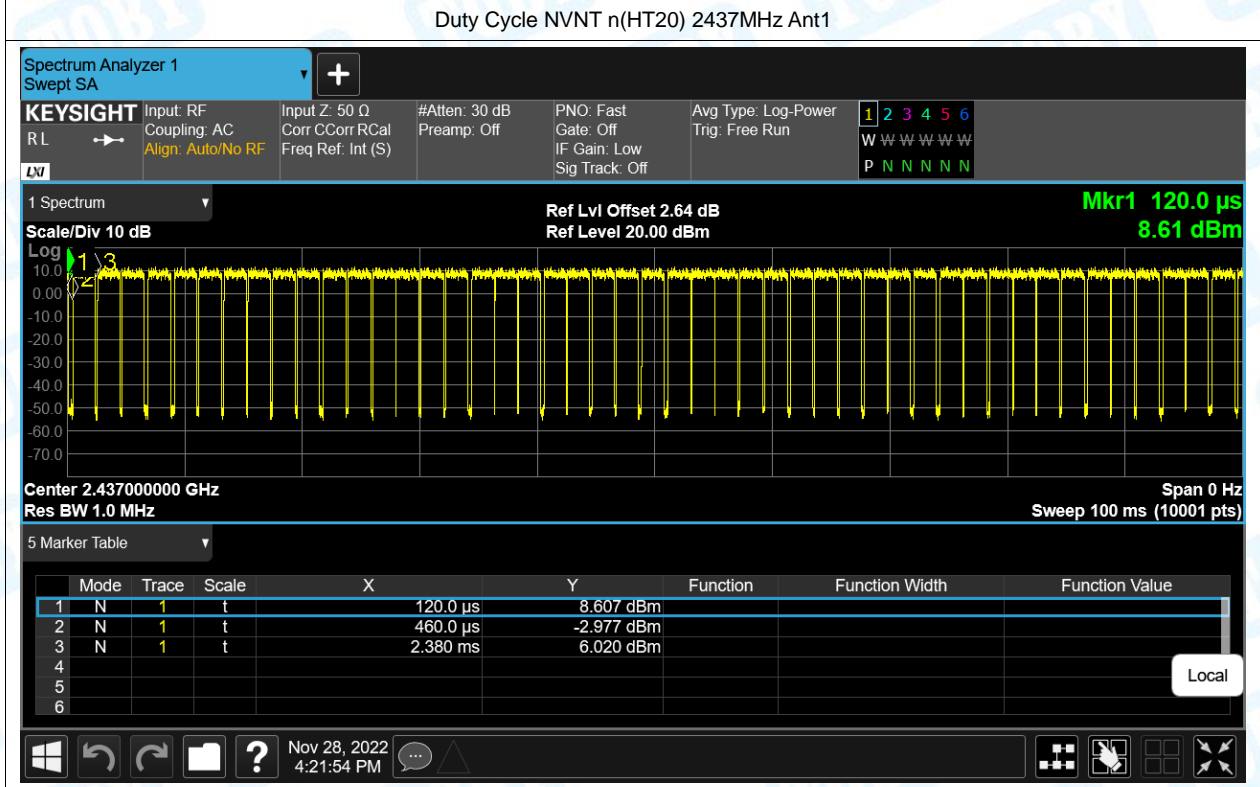
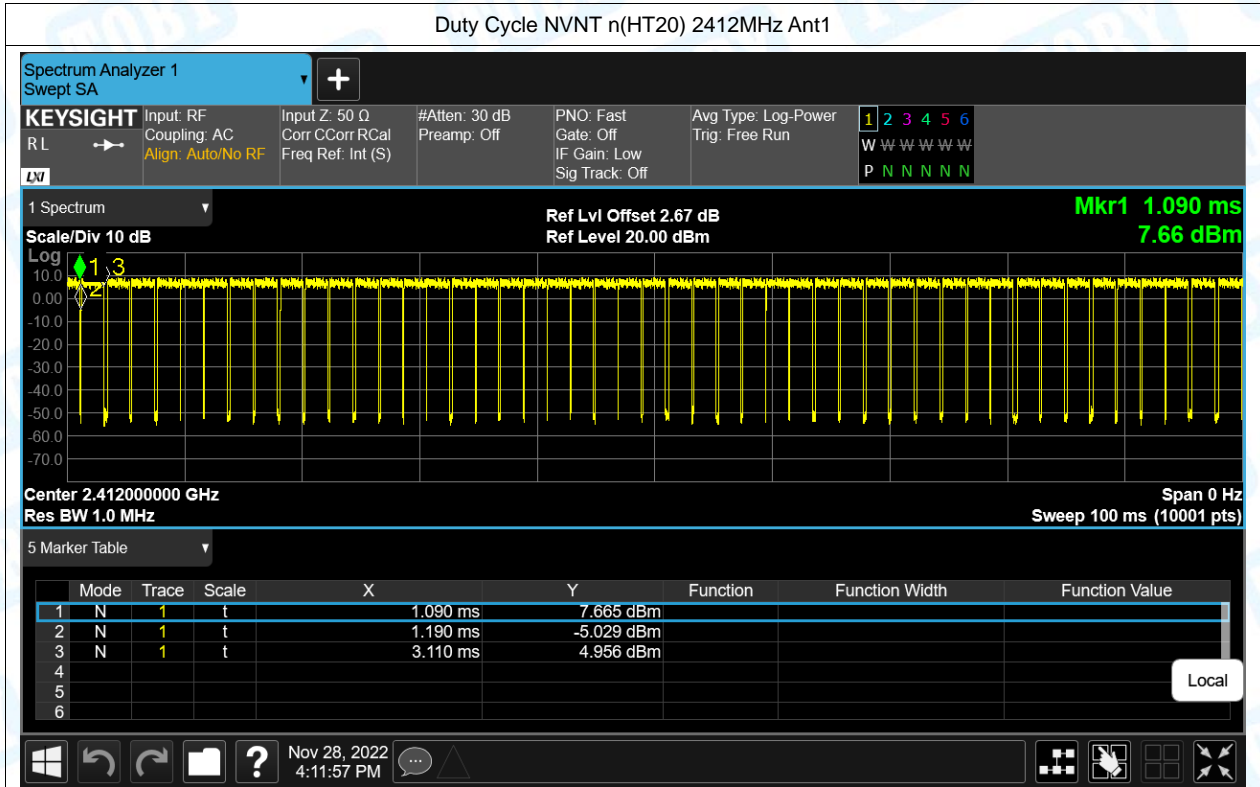


Duty Cycle NVNT g 2437MHz Ant1

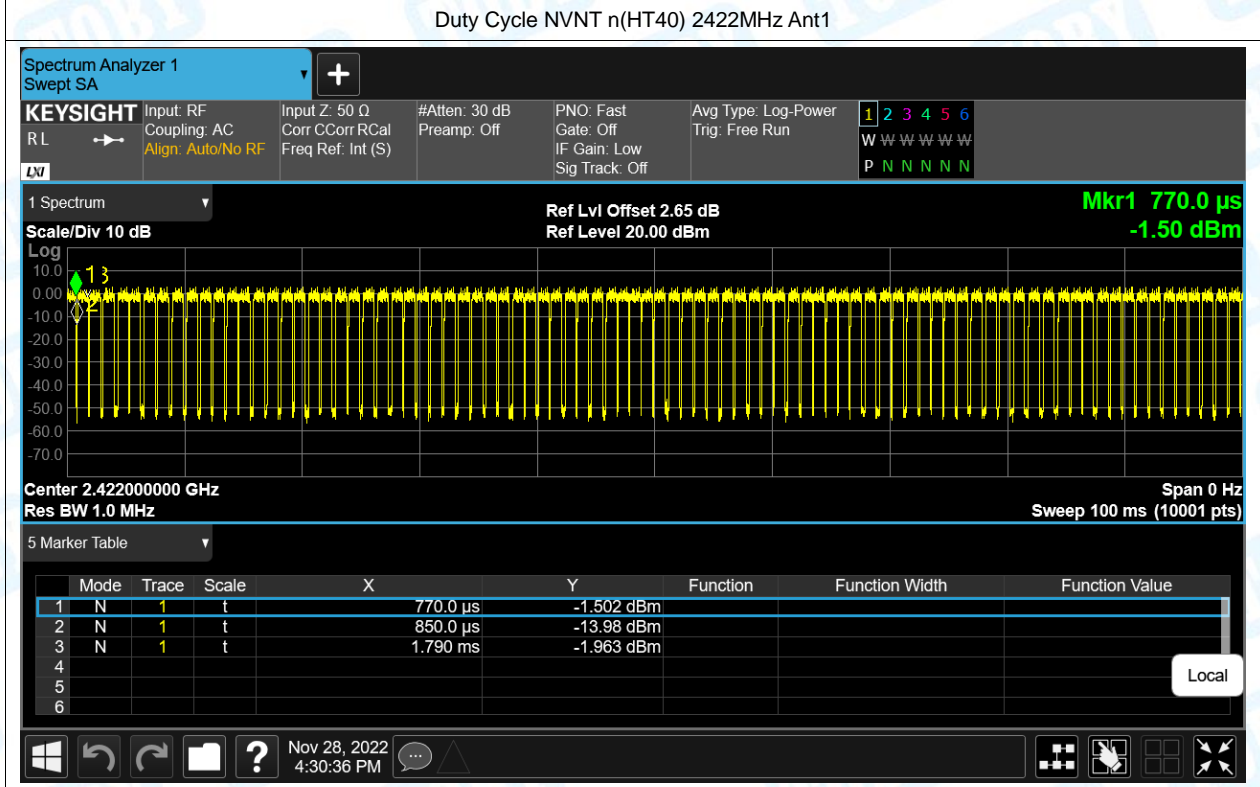
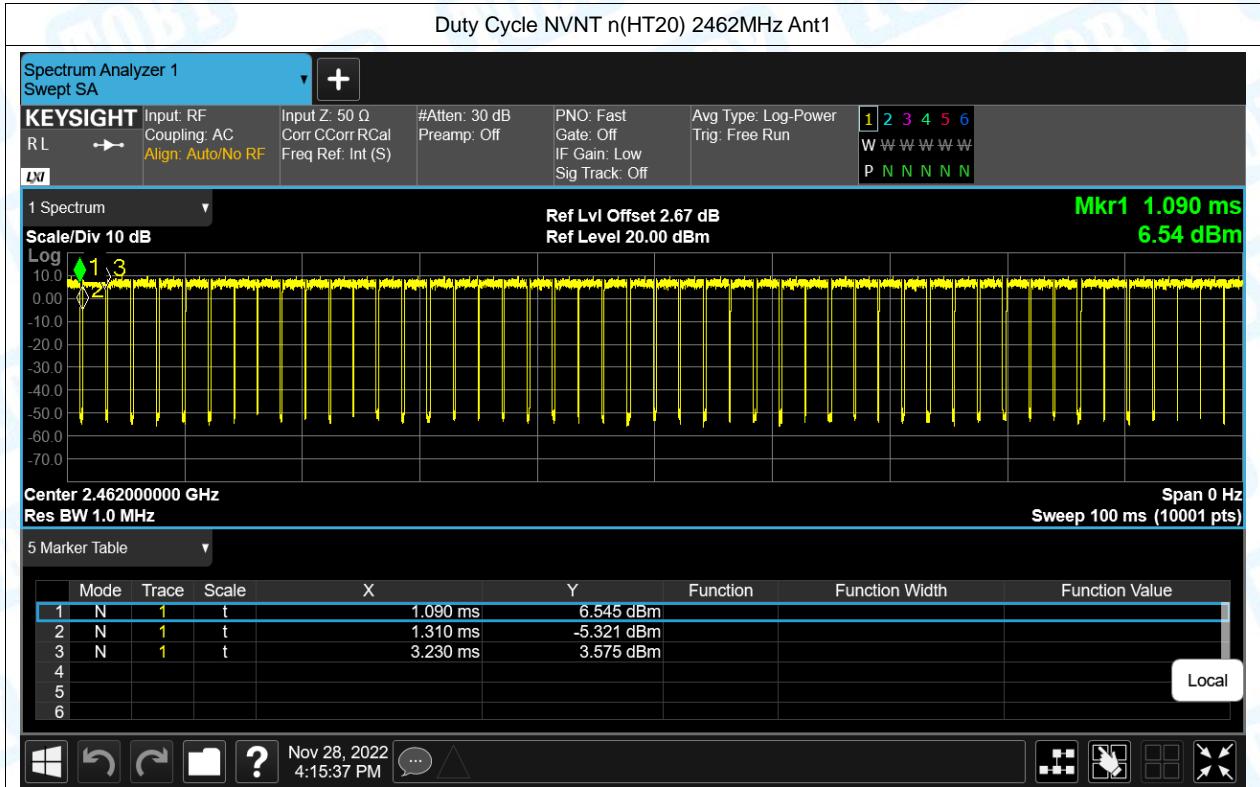


Duty Cycle NVNT g 2462MHz Ant1

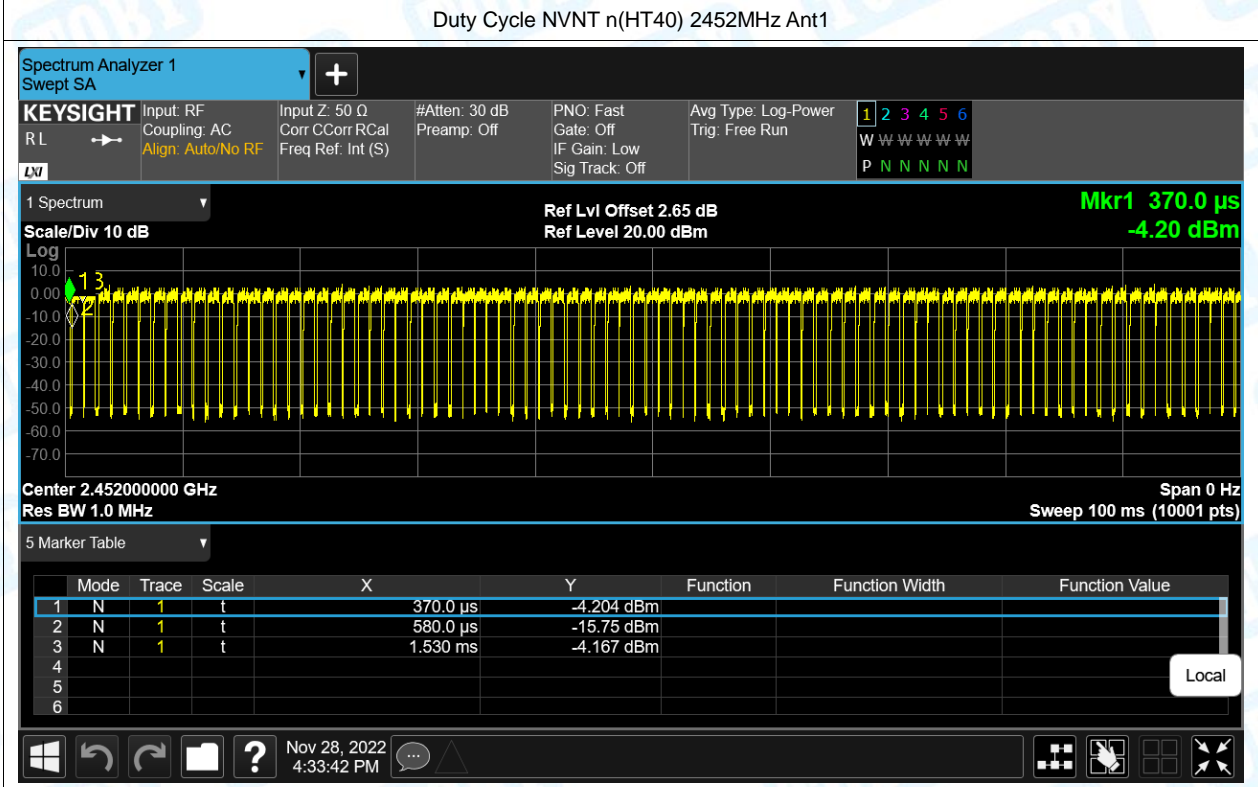
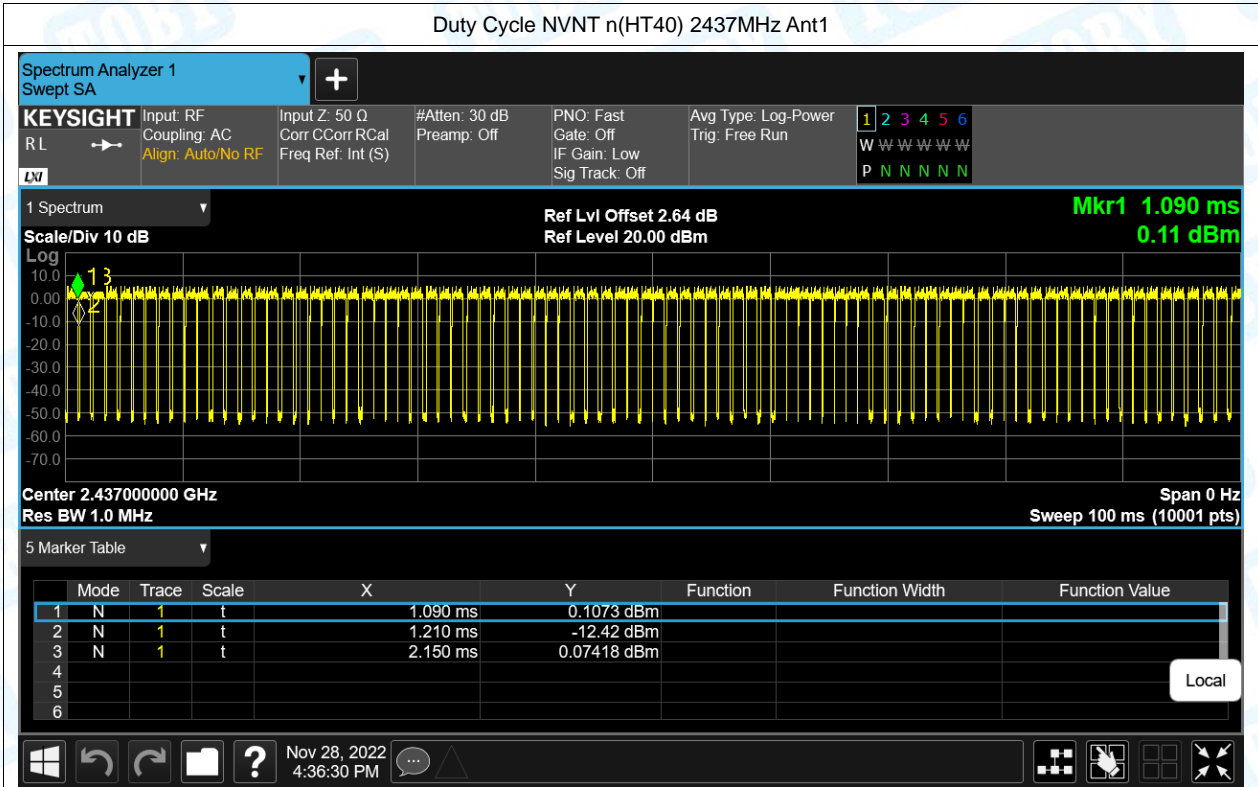












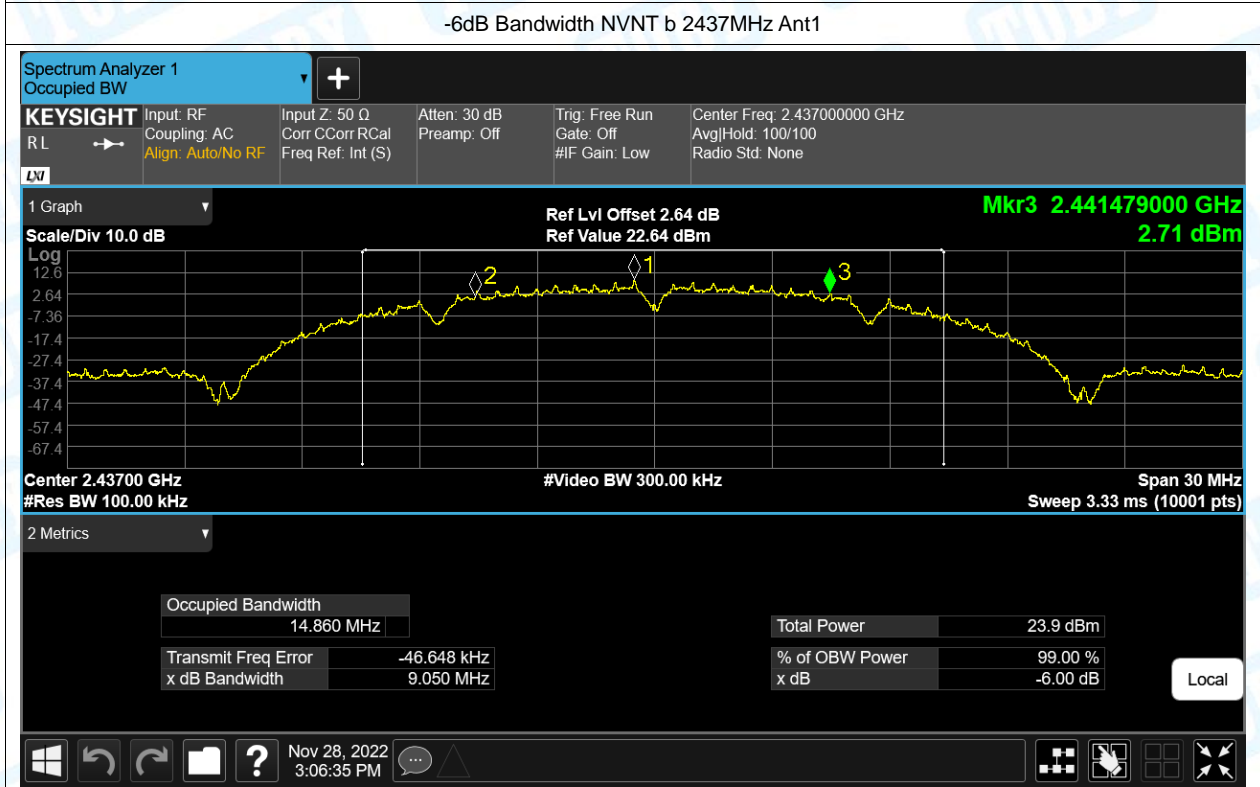
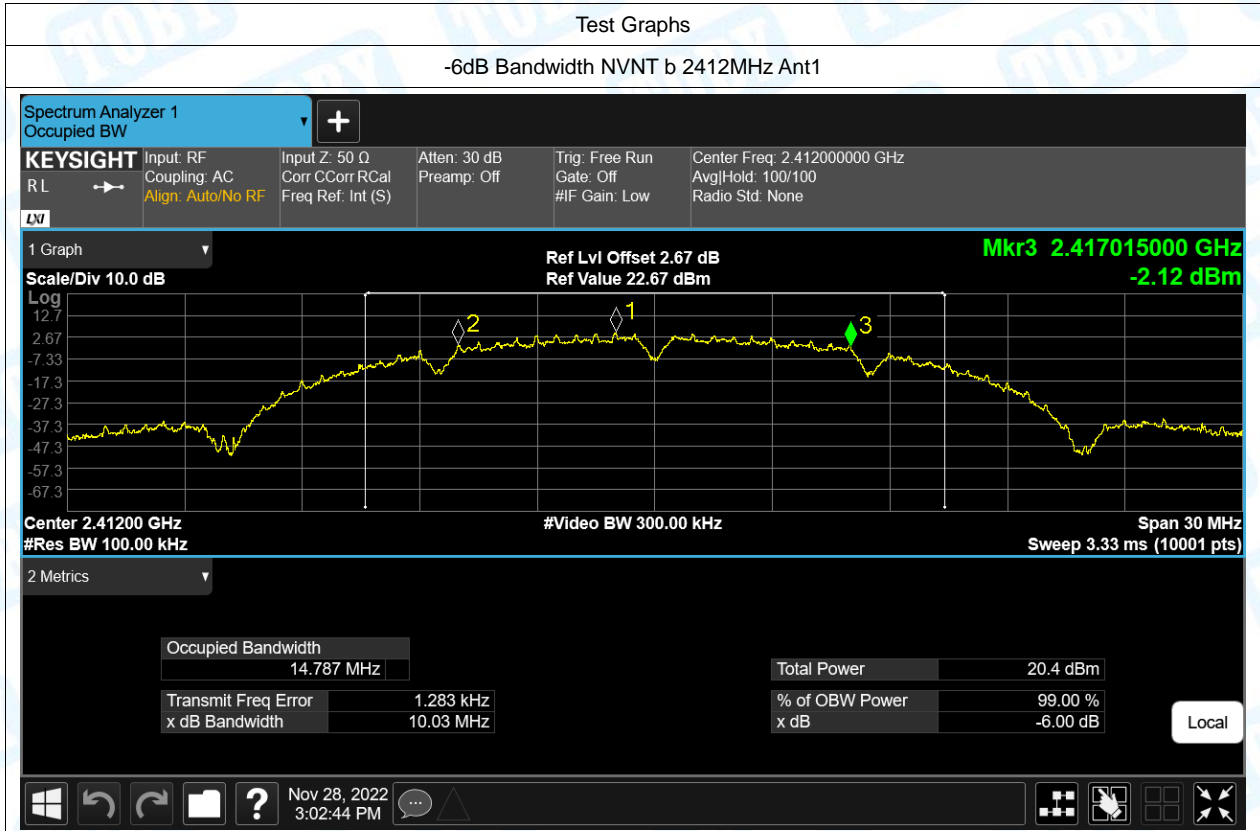
## 2. Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	17.70	30	Pass
NVNT	b	2437	Ant1	17.47	30	Pass
NVNT	b	2462	Ant1	17.45	30	Pass
NVNT	g	2412	Ant1	17.40	30	Pass
NVNT	g	2437	Ant1	17.78	30	Pass
NVNT	g	2462	Ant1	18.03	30	Pass
NVNT	n(HT20)	2412	Ant1	14.58	30	Pass
NVNT	n(HT20)	2437	Ant1	17.37	30	Pass
NVNT	n(HT20)	2462	Ant1	14.11	30	Pass
NVNT	n(HT40)	2422	Ant1	12.79	30	Pass
NVNT	n(HT40)	2437	Ant1	17.06	30	Pass
NVNT	n(HT40)	2452	Ant1	12.41	30	Pass

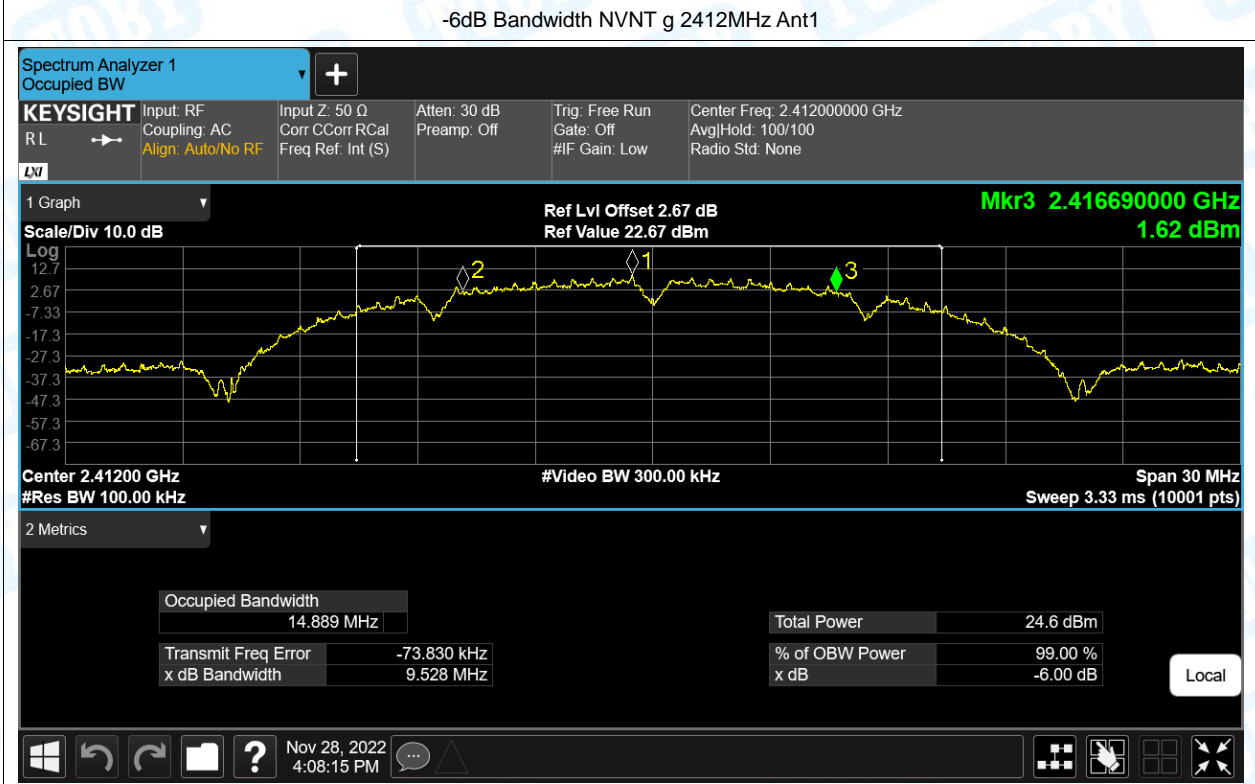
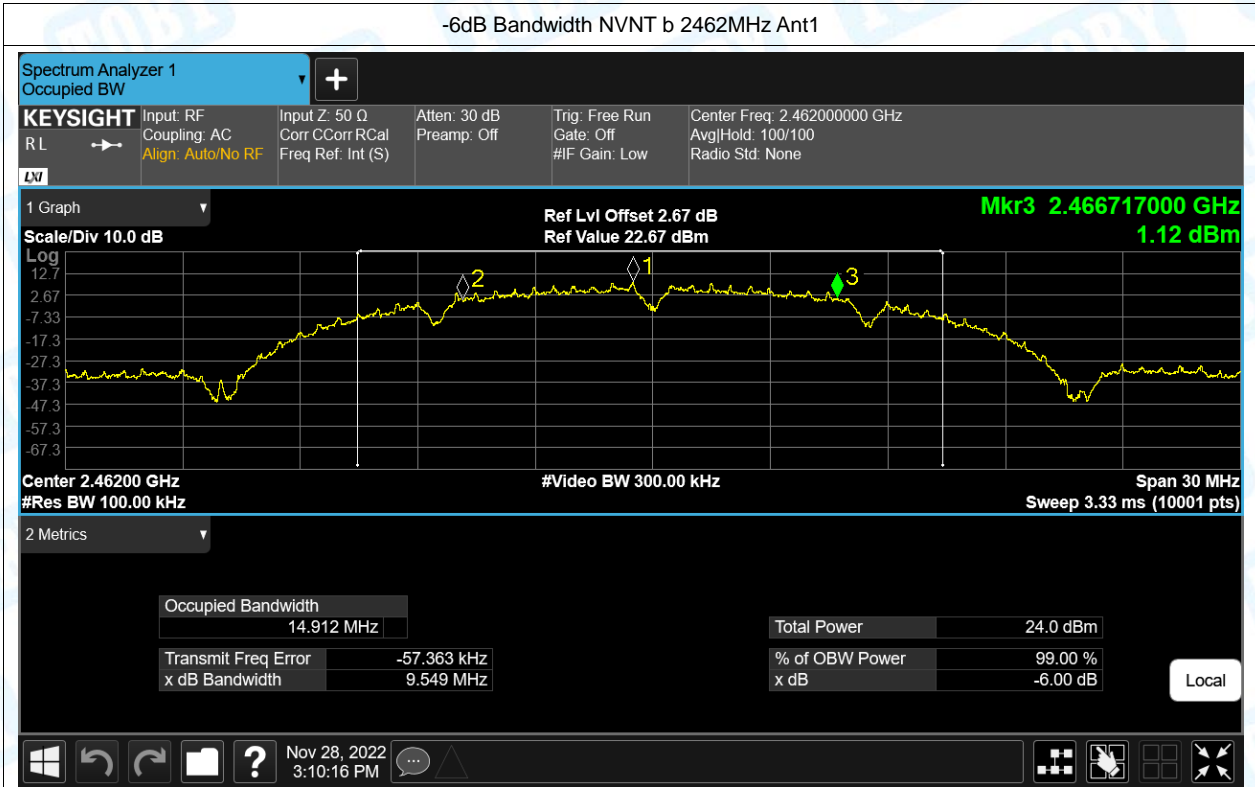


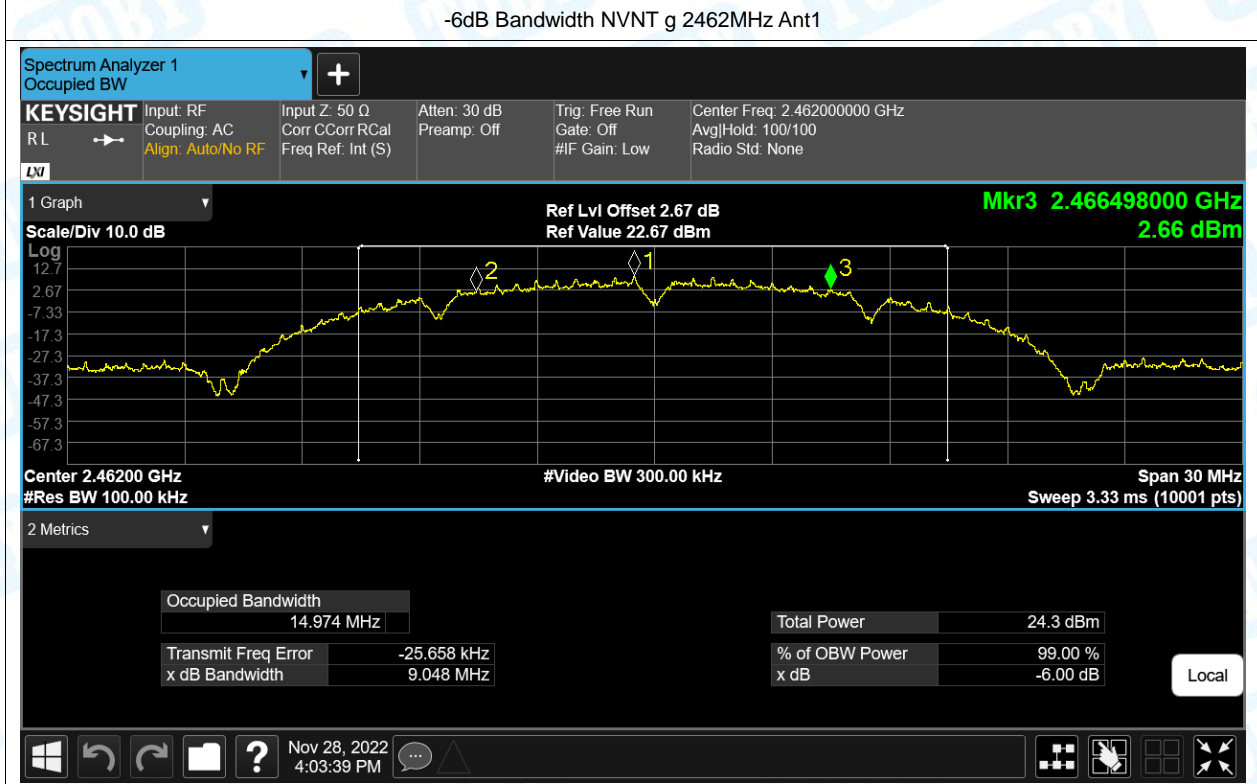
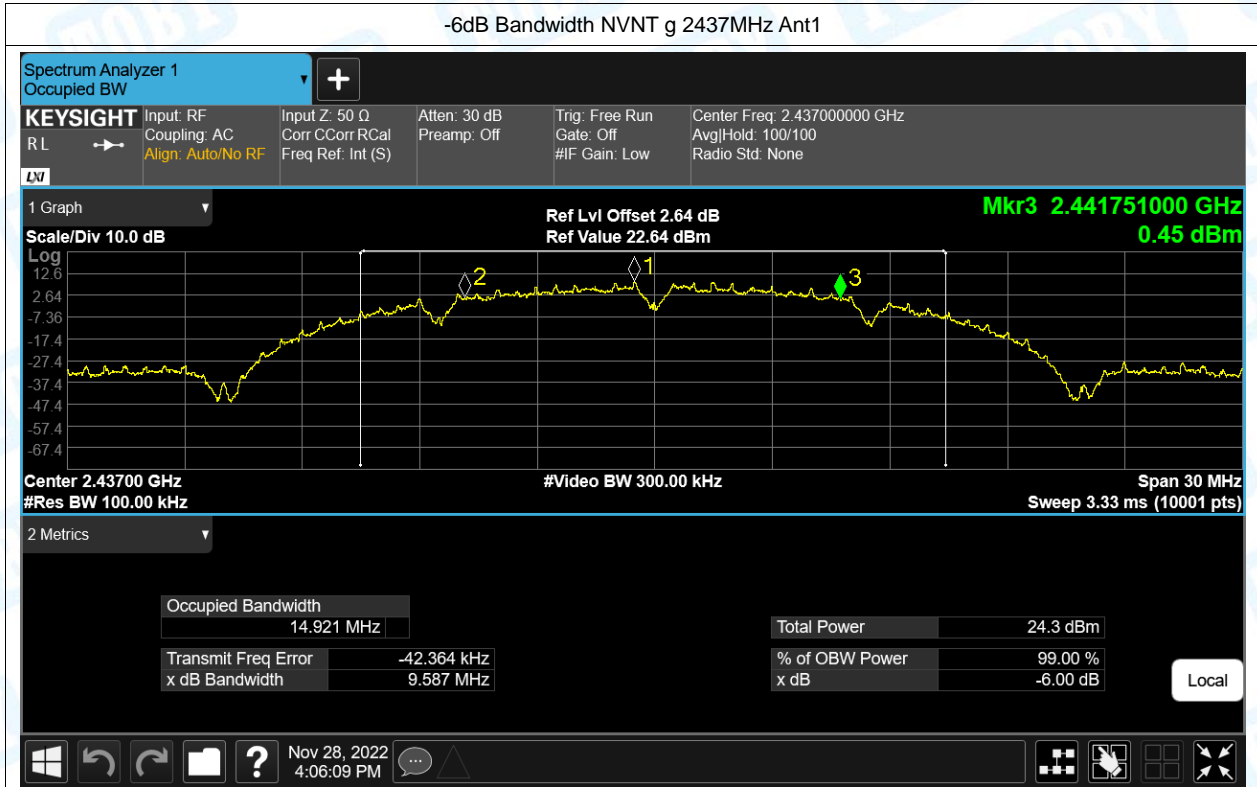
### 3. -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	10.03	0.5	Pass
NVNT	b	2437	Ant1	9.05	0.5	Pass
NVNT	b	2462	Ant1	9.55	0.5	Pass
NVNT	g	2412	Ant1	9.53	0.5	Pass
NVNT	g	2437	Ant1	9.59	0.5	Pass
NVNT	g	2462	Ant1	9.05	0.5	Pass
NVNT	n(HT20)	2412	Ant1	17.19	0.5	Pass
NVNT	n(HT20)	2437	Ant1	17.54	0.5	Pass
NVNT	n(HT20)	2462	Ant1	17.29	0.5	Pass
NVNT	n(HT40)	2422	Ant1	35.27	0.5	Pass
NVNT	n(HT40)	2437	Ant1	34.98	0.5	Pass
NVNT	n(HT40)	2452	Ant1	34.9	0.5	Pass



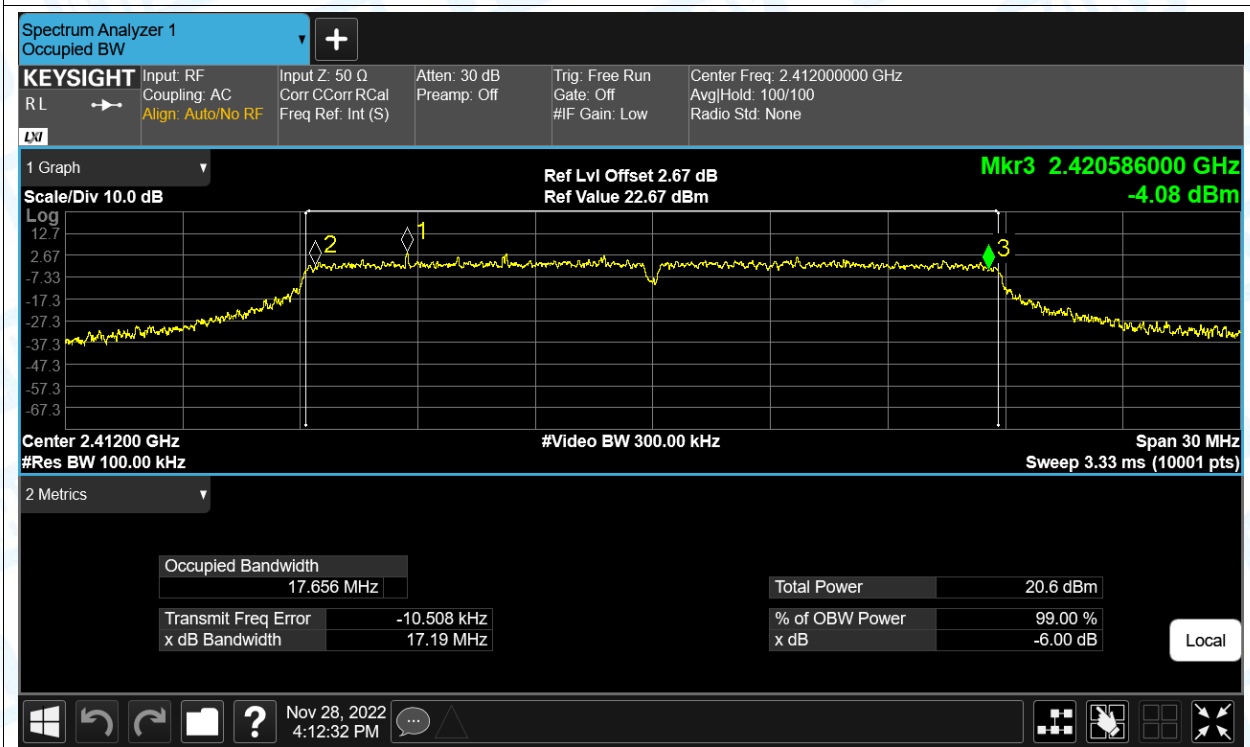




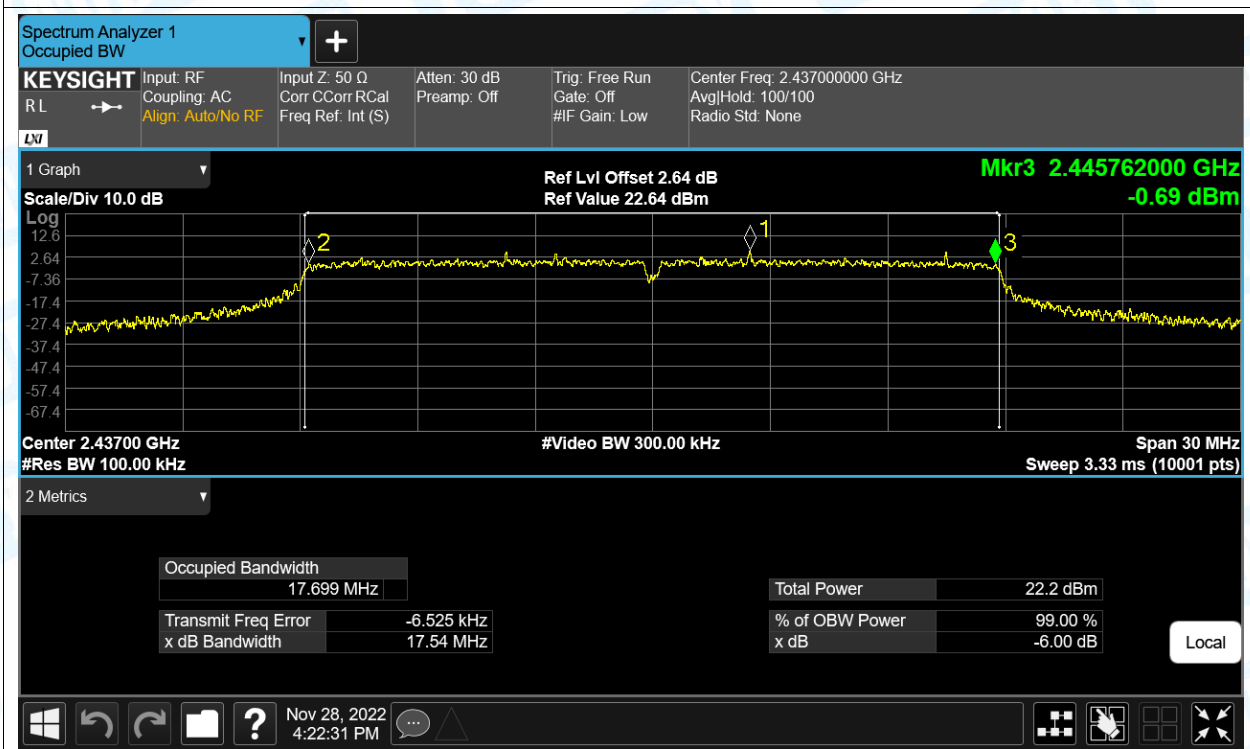


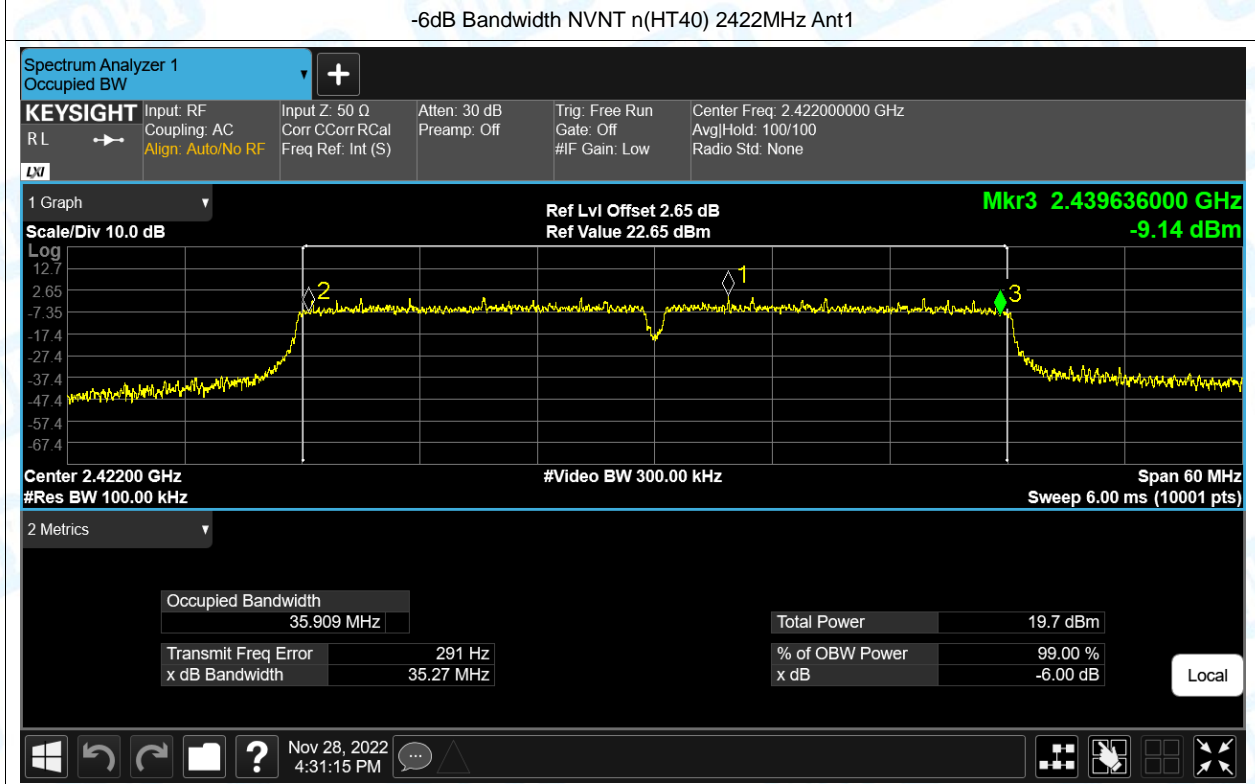
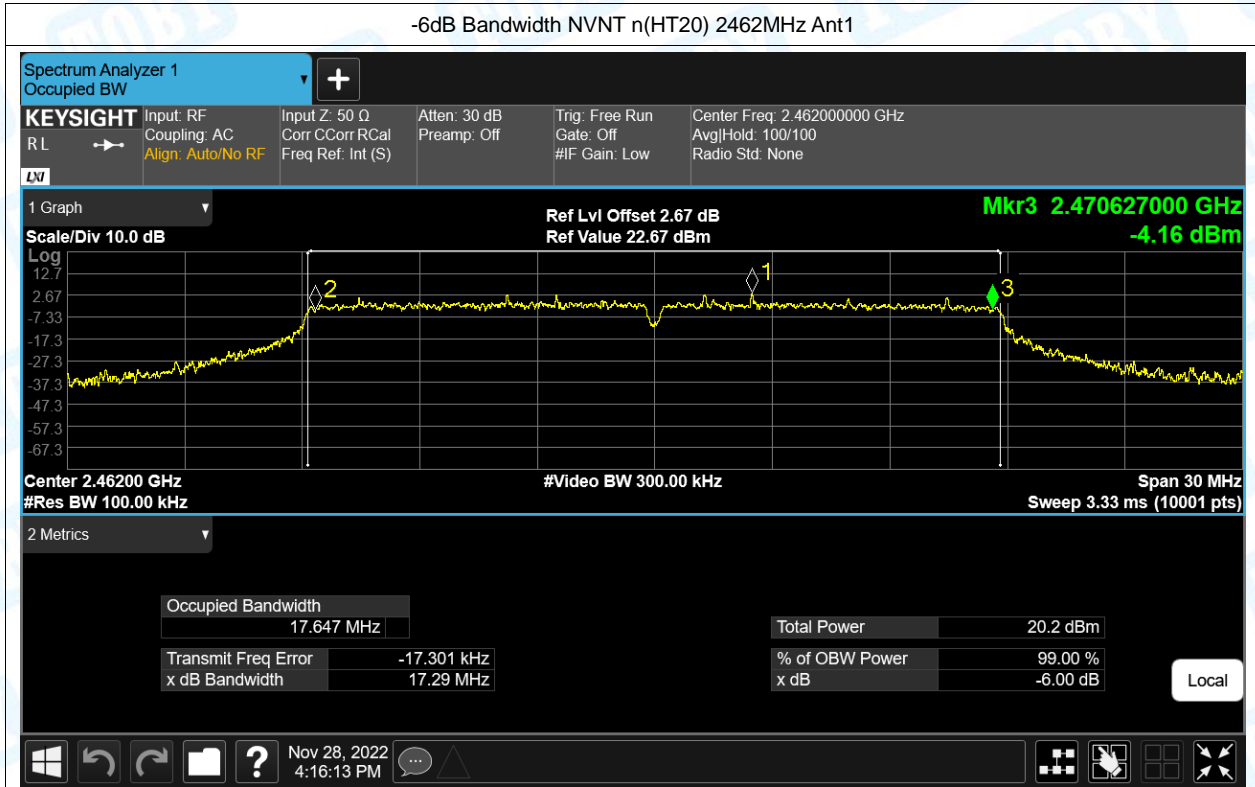


-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



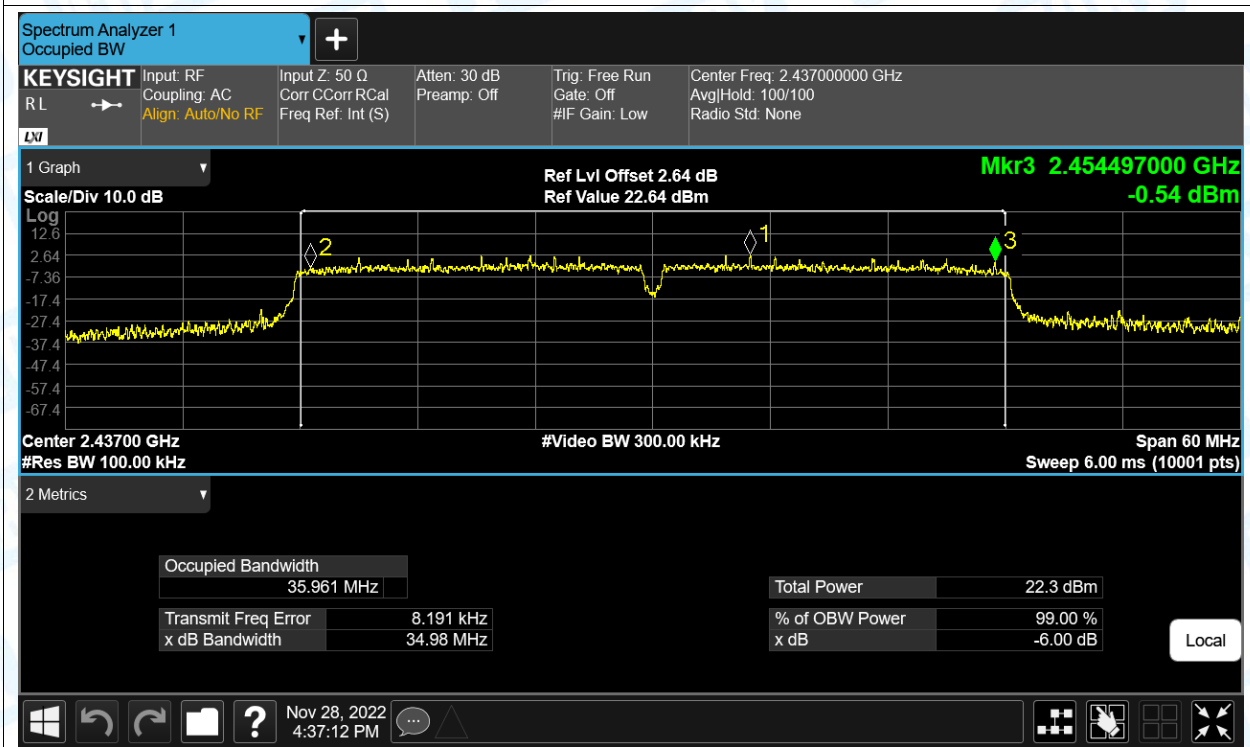
-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1



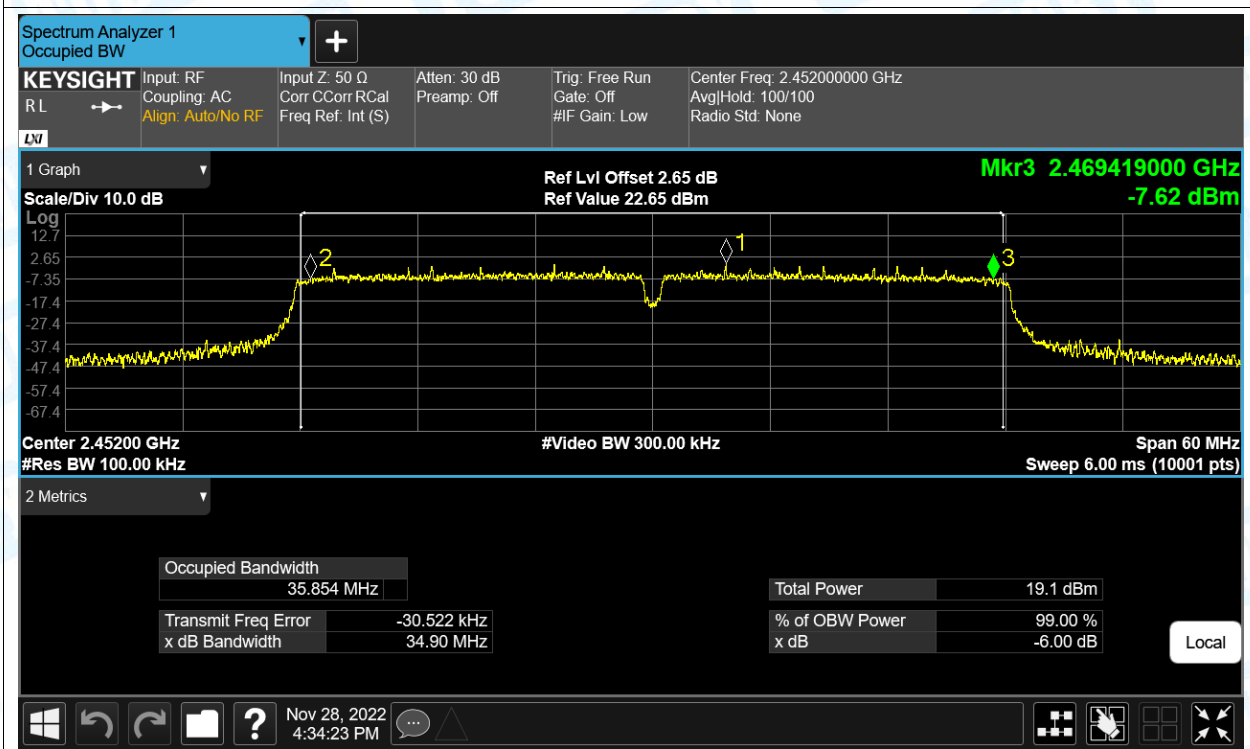




-6dB Bandwidth NVNT n(HT40) 2437MHz Ant1



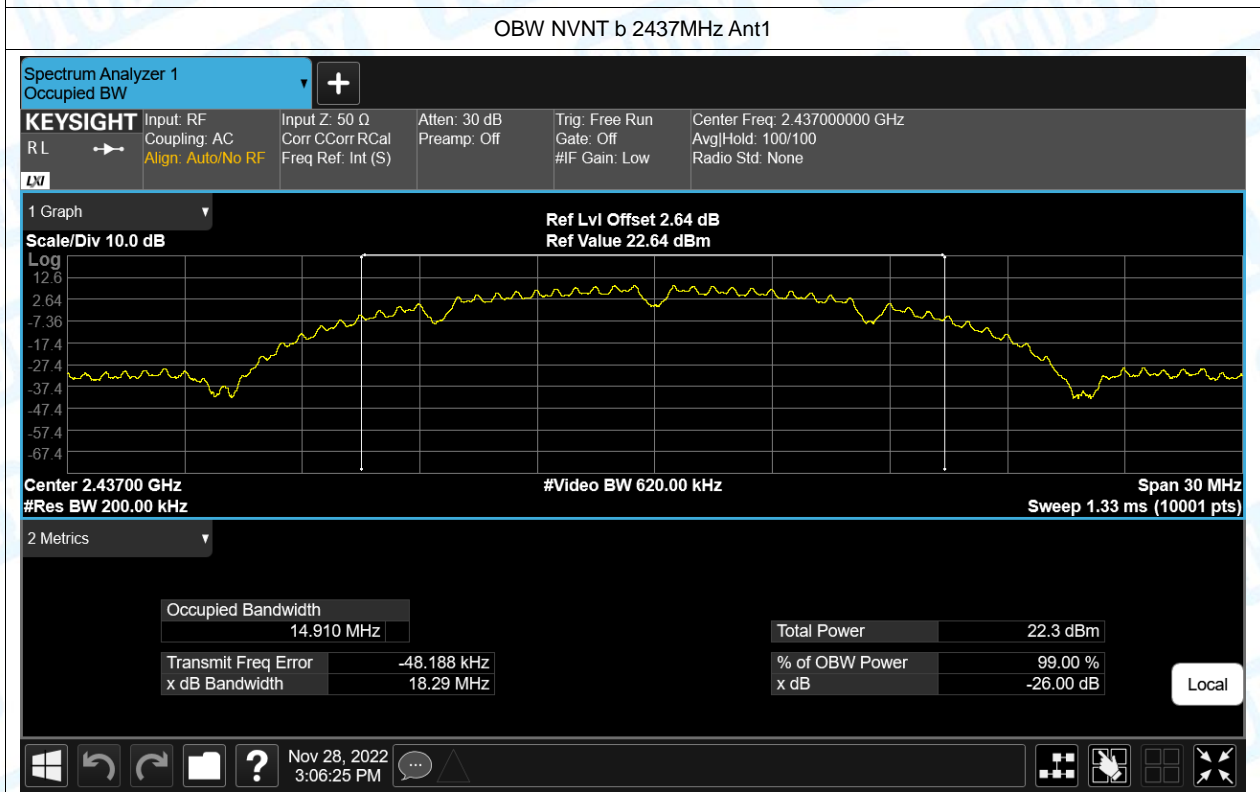
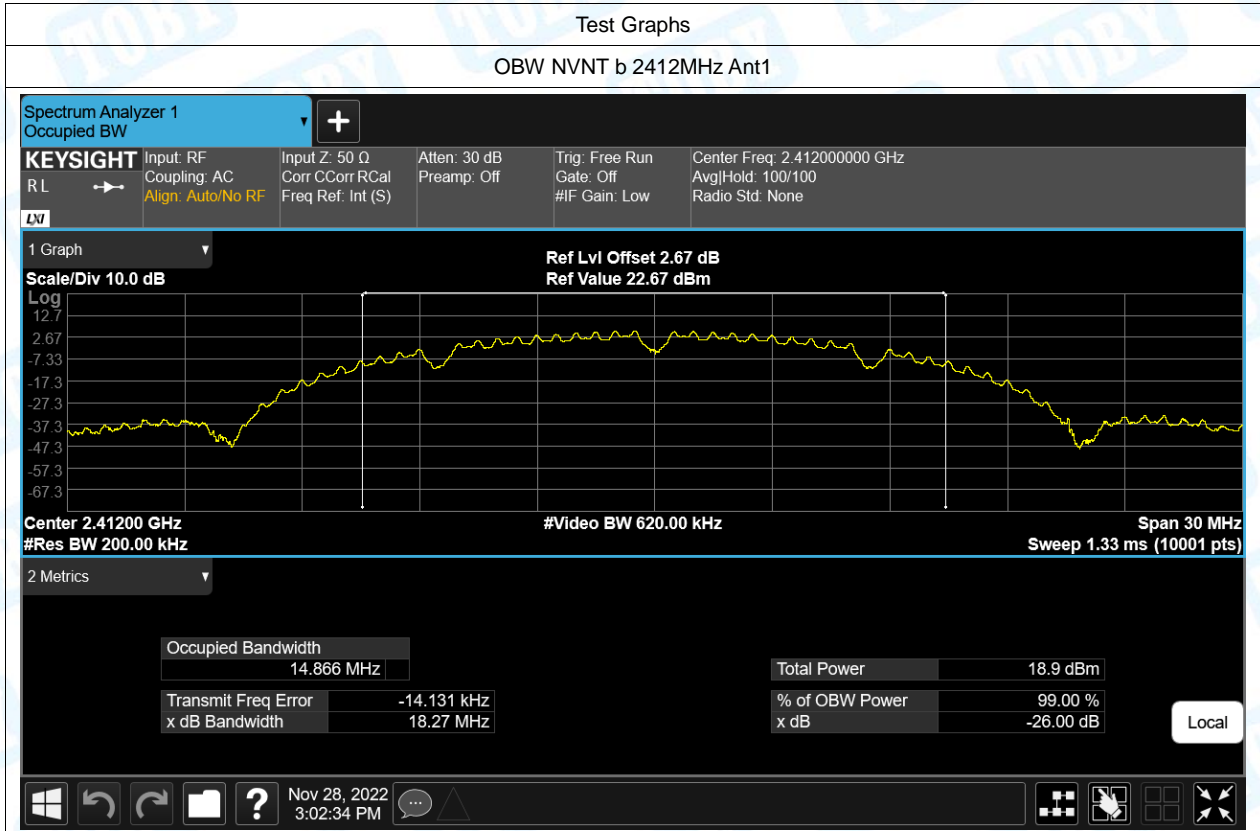
-6dB Bandwidth NVNT n(HT40) 2452MHz Ant1

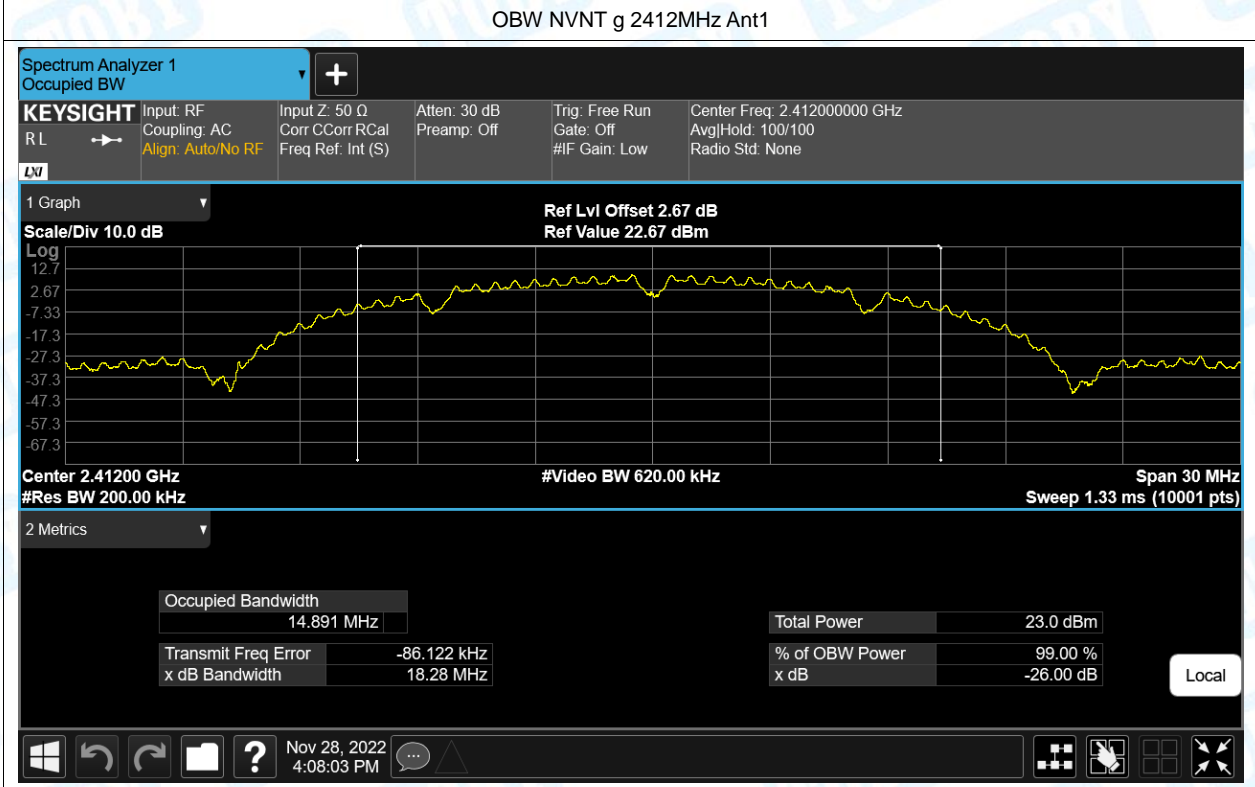


## 4. Occupied Channel Bandwidth

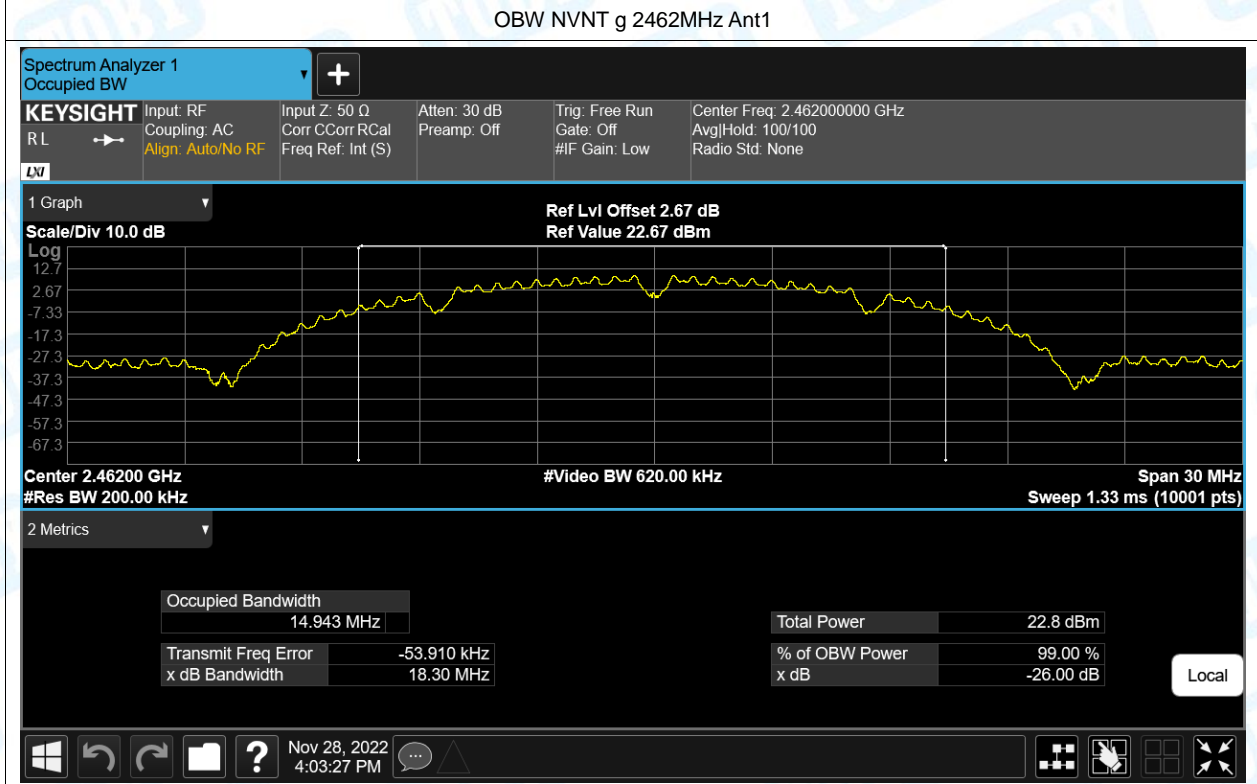
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	14.866
NVNT	b	2437	Ant1	14.91
NVNT	b	2462	Ant1	14.928
NVNT	g	2412	Ant1	14.891
NVNT	g	2437	Ant1	14.96
NVNT	g	2462	Ant1	14.943
NVNT	n(HT20)	2412	Ant1	17.755
NVNT	n(HT20)	2437	Ant1	17.831
NVNT	n(HT20)	2462	Ant1	17.754
NVNT	n(HT40)	2422	Ant1	35.907
NVNT	n(HT40)	2437	Ant1	35.999
NVNT	n(HT40)	2452	Ant1	35.868

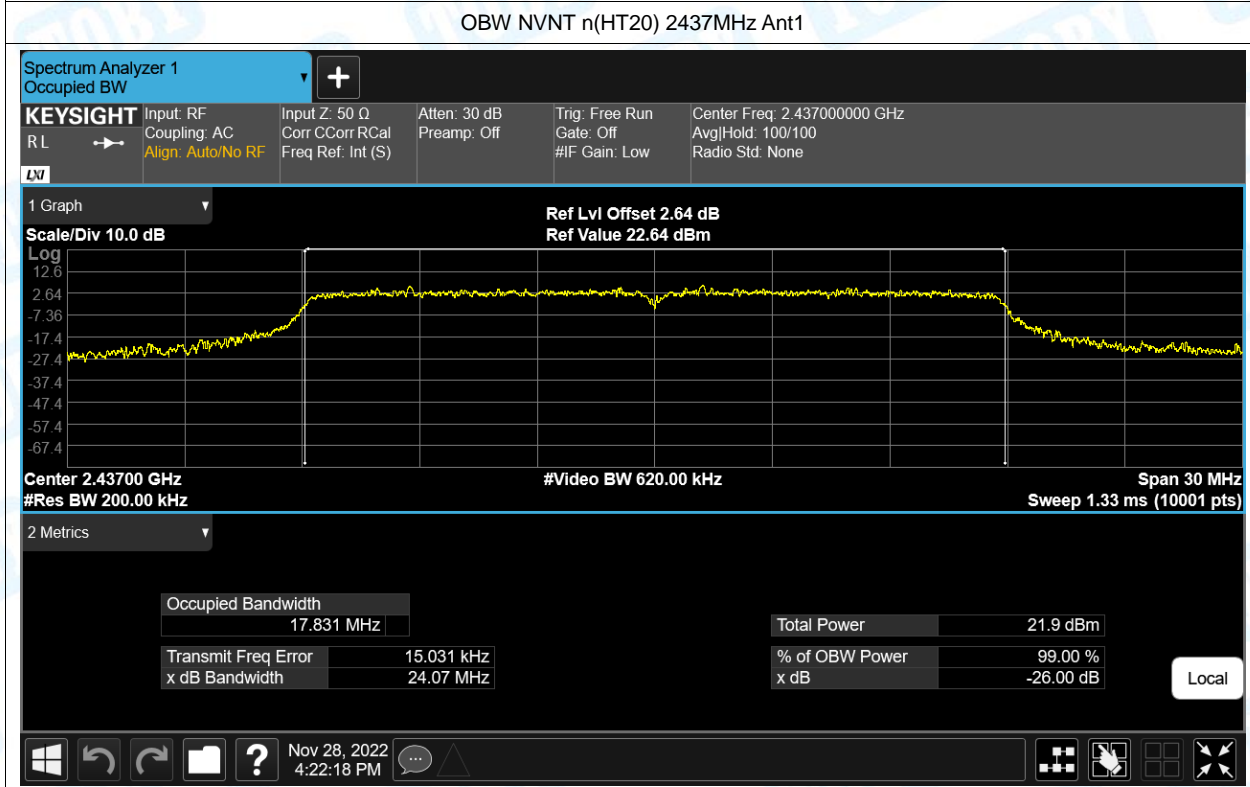
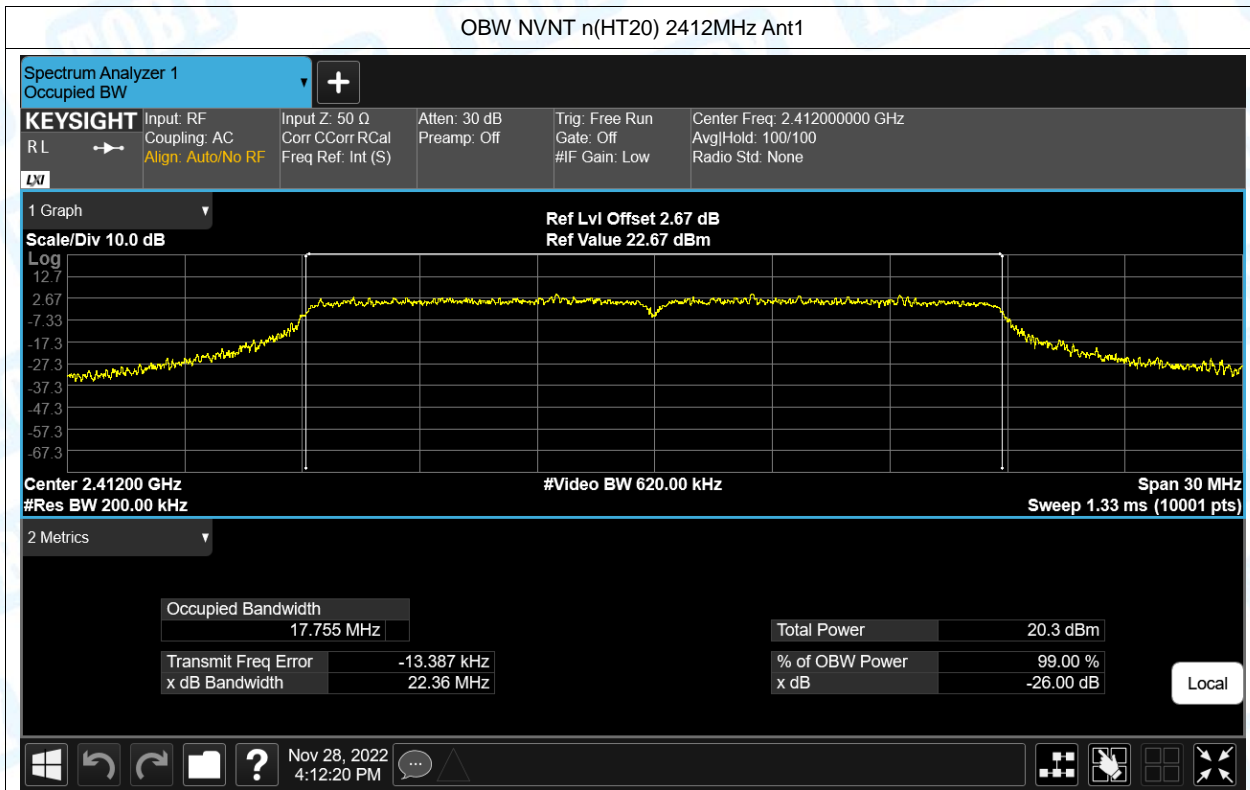




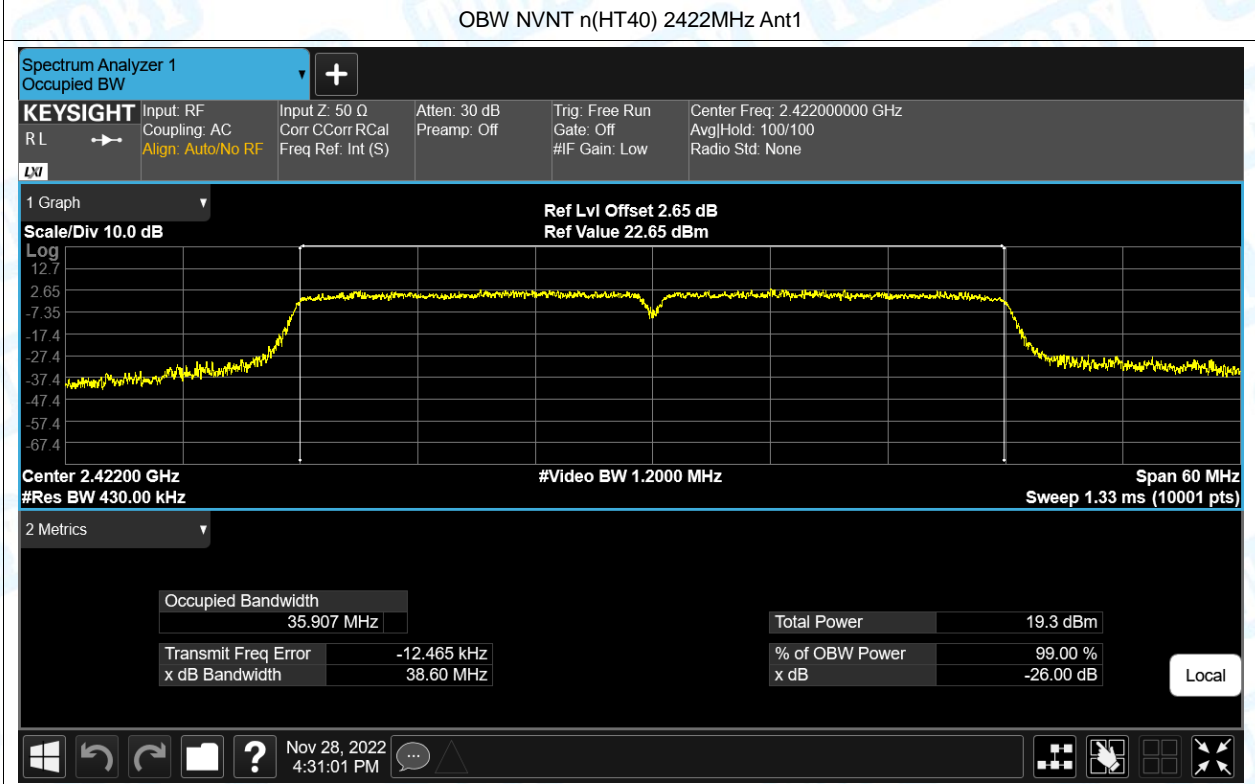
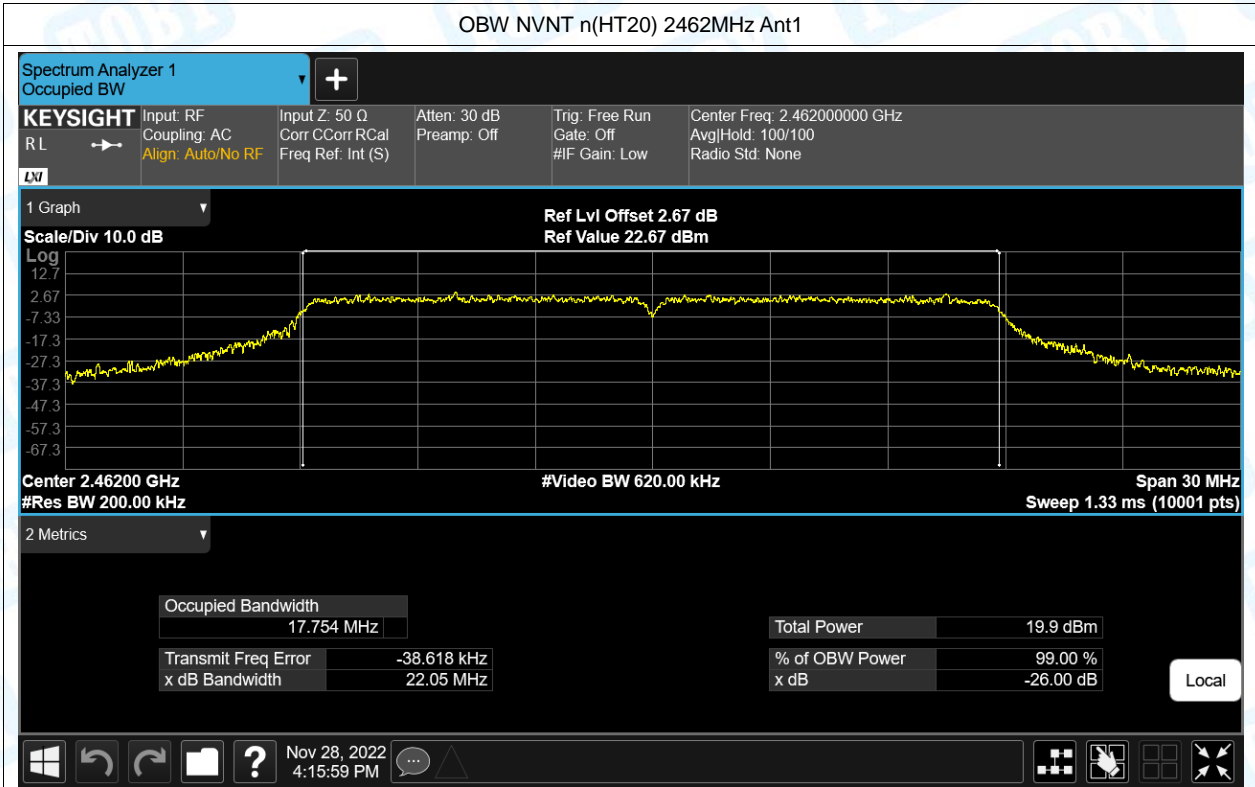


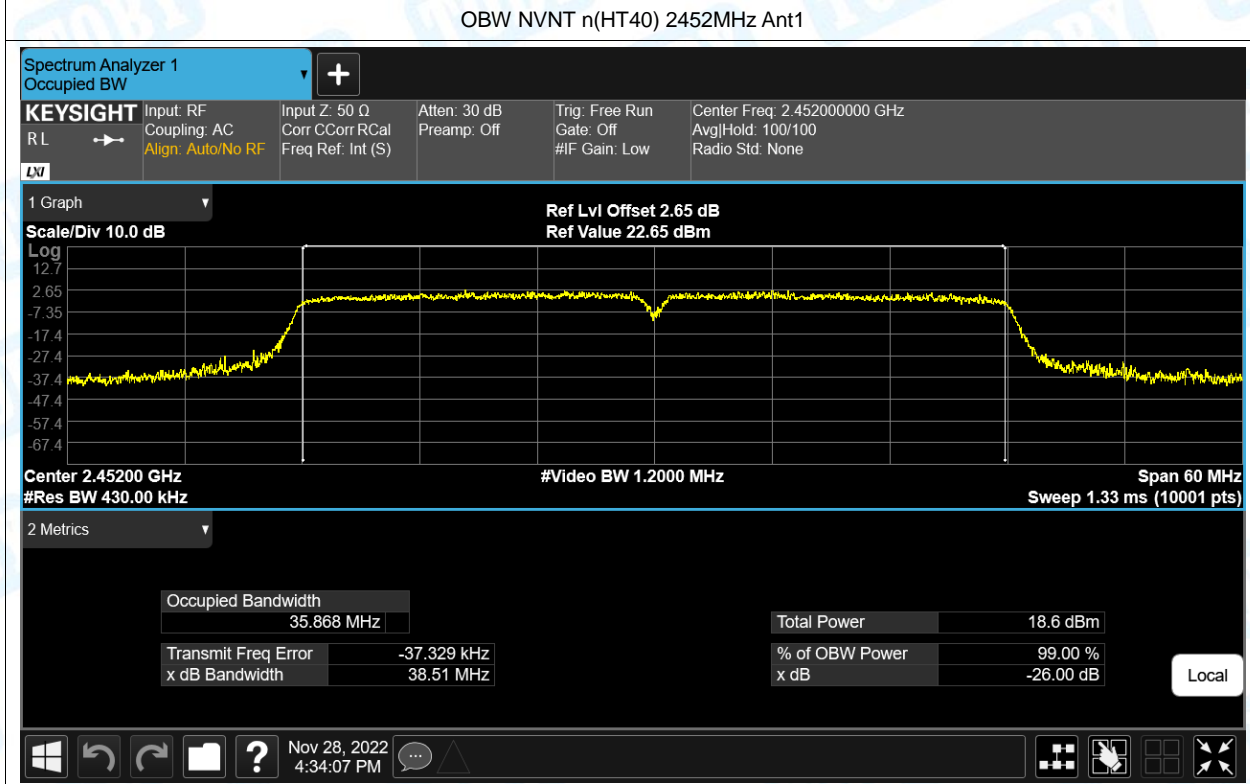
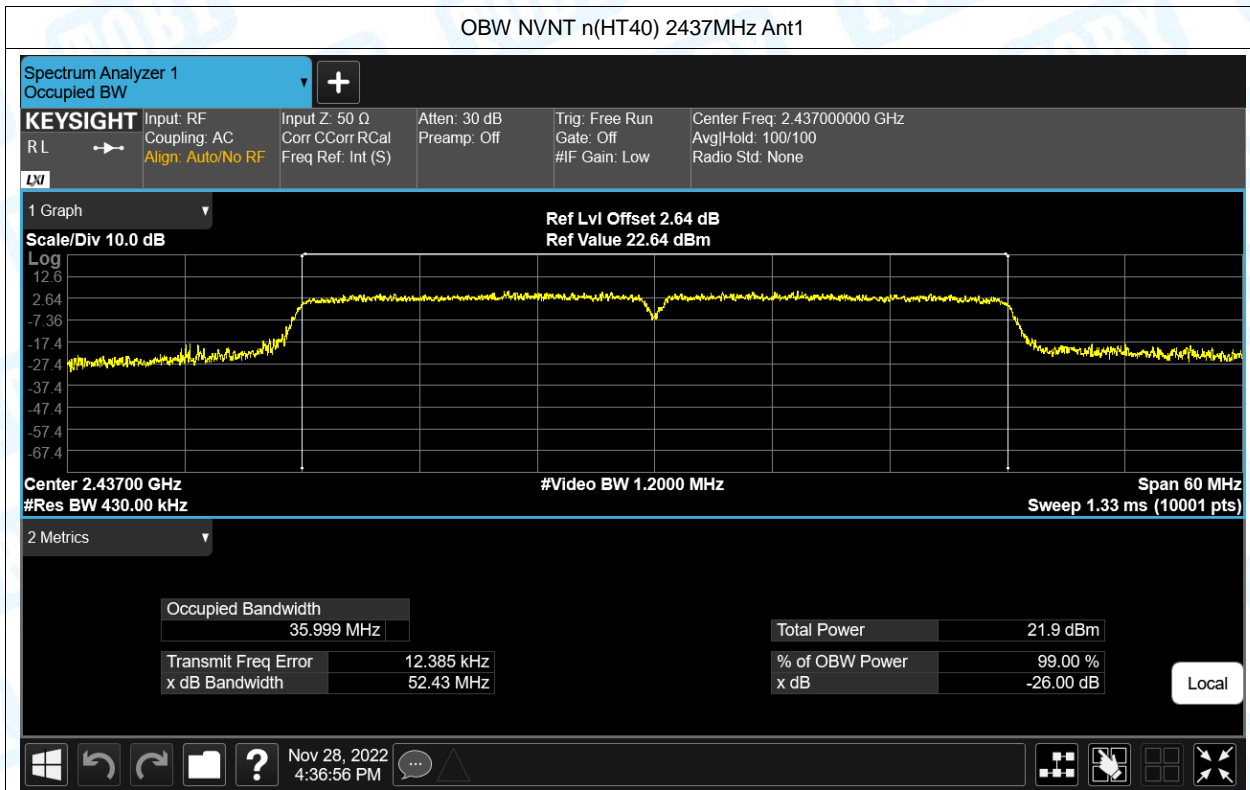












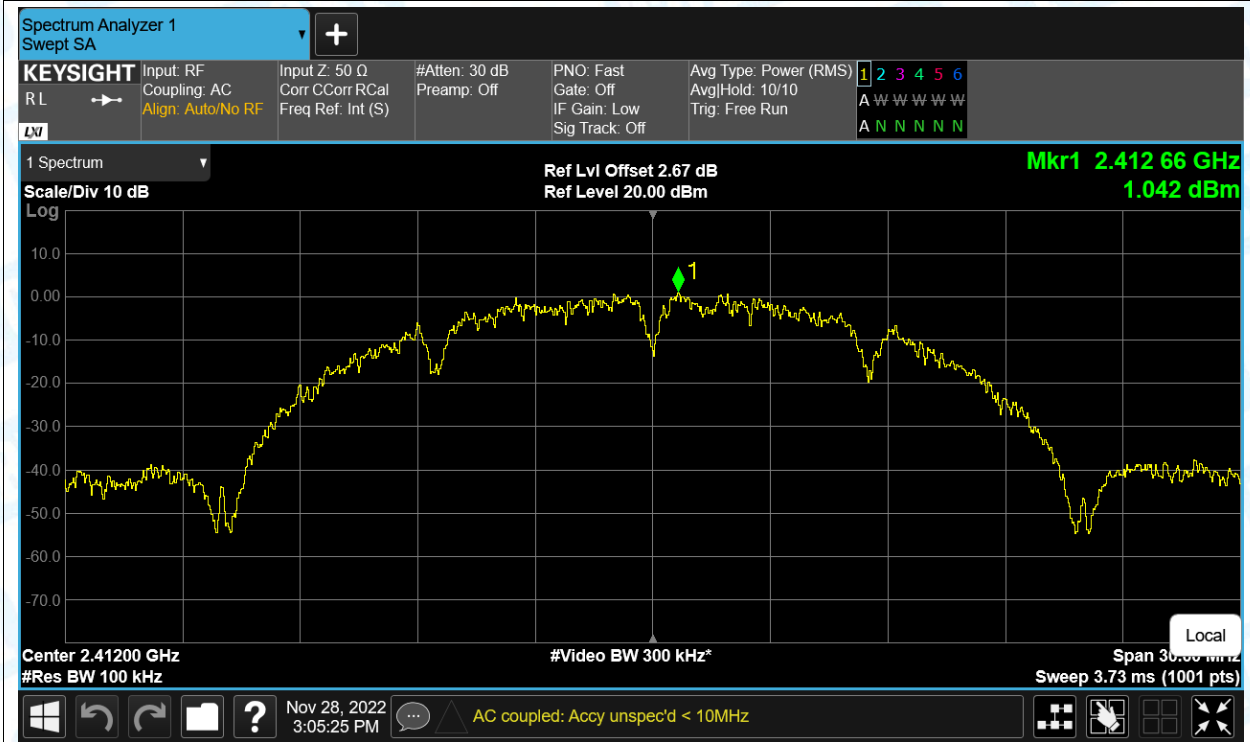


## 5. Maximum Power Spectral Density Level

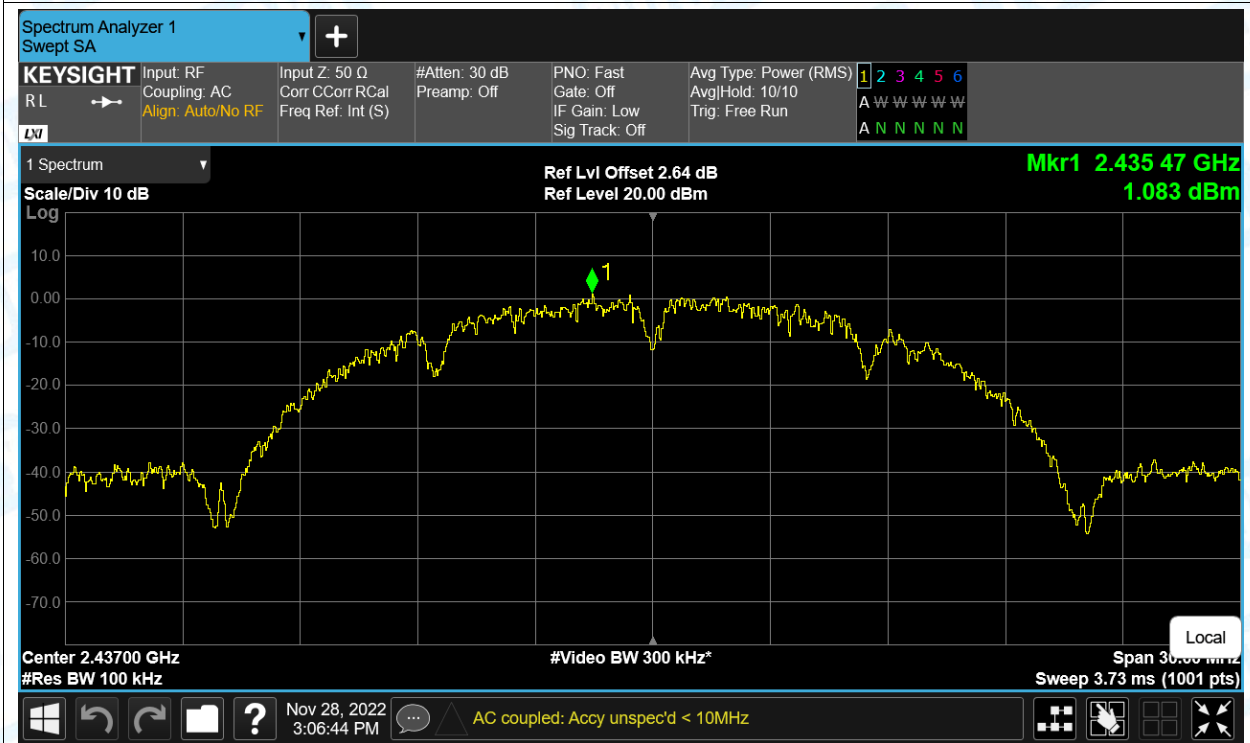
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/3-100kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	1.042	8	Pass
NVNT	b	2437	Ant1	1.083	8	Pass
NVNT	b	2462	Ant1	1.64	8	Pass
NVNT	g	2412	Ant1	1.701	8	Pass
NVNT	g	2437	Ant1	1.374	8	Pass
NVNT	g	2462	Ant1	2.164	8	Pass
NVNT	n(HT20)	2412	Ant1	-4.647	8	Pass
NVNT	n(HT20)	2437	Ant1	-0.817	8	Pass
NVNT	n(HT20)	2462	Ant1	-4.947	8	Pass
NVNT	n(HT40)	2422	Ant1	-8.934	8	Pass
NVNT	n(HT40)	2437	Ant1	-4.244	8	Pass
NVNT	n(HT40)	2452	Ant1	-9.242	8	Pass

Test Graphs

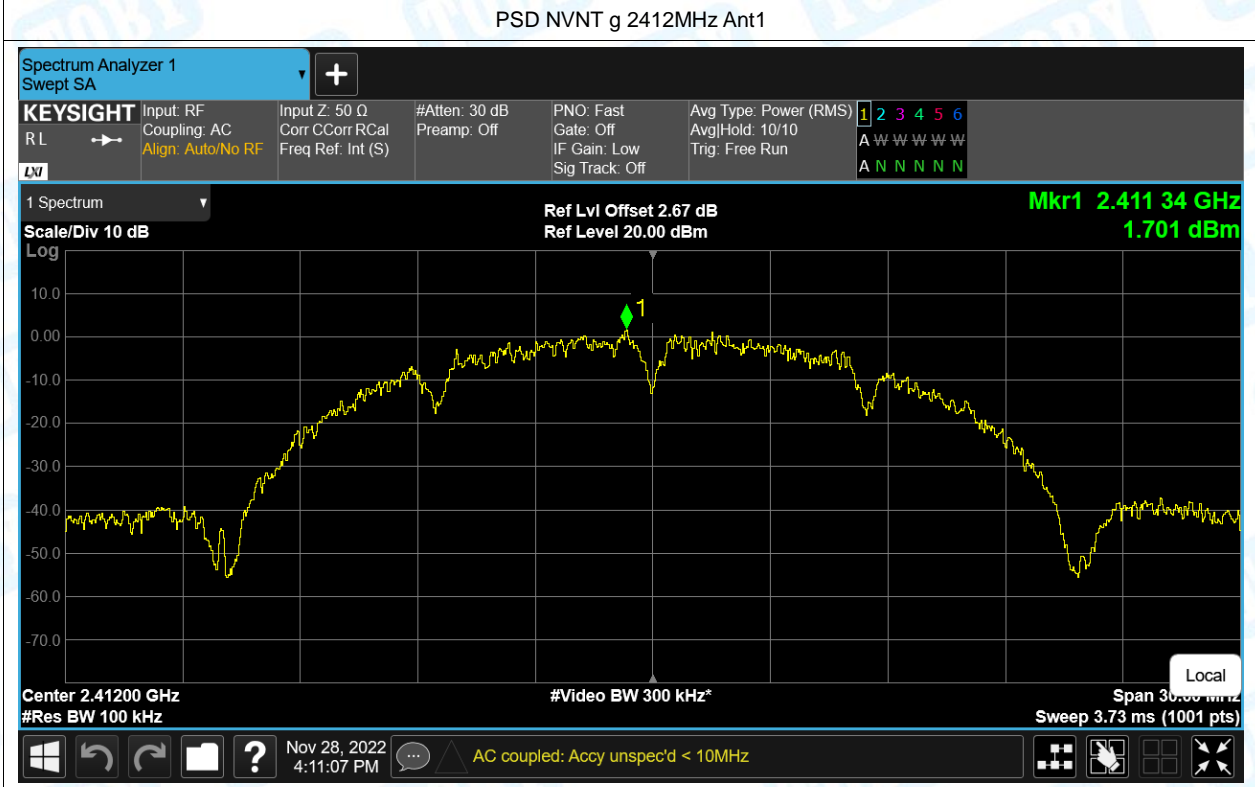
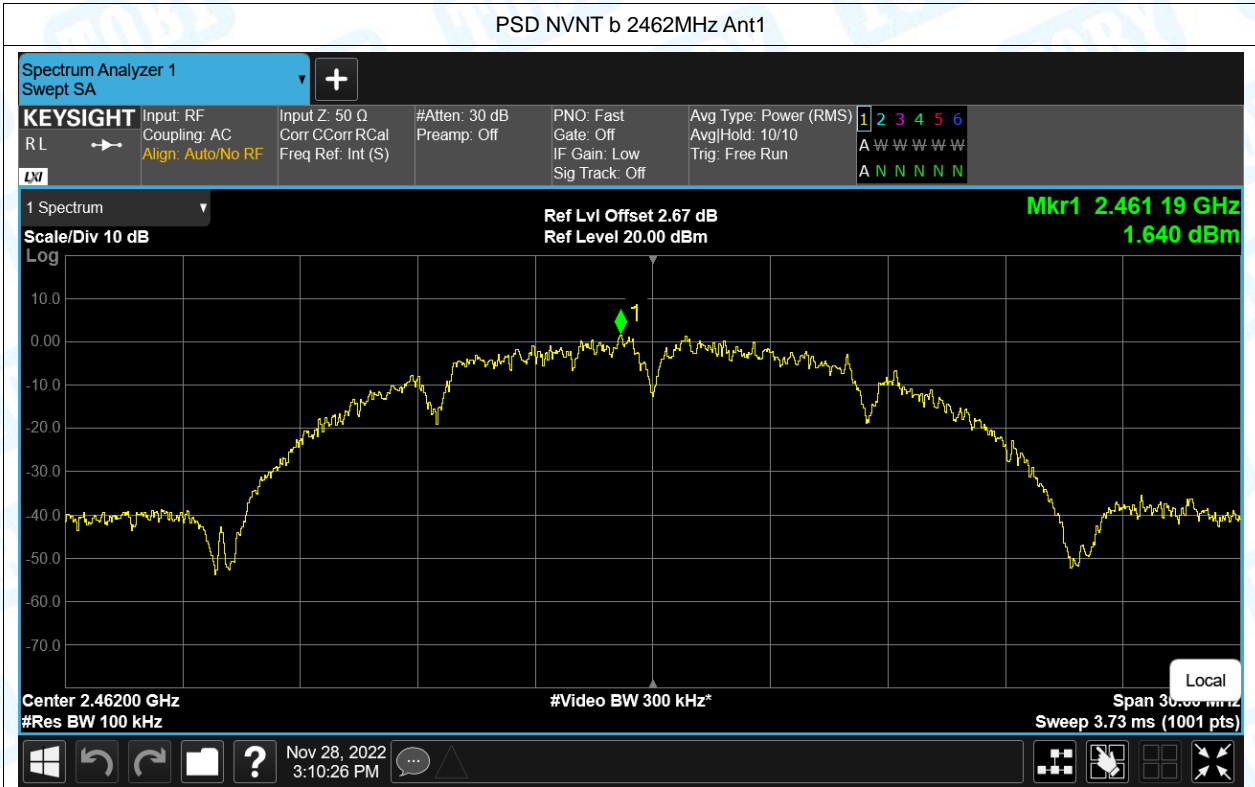
PSD NVNT b 2412MHz Ant1

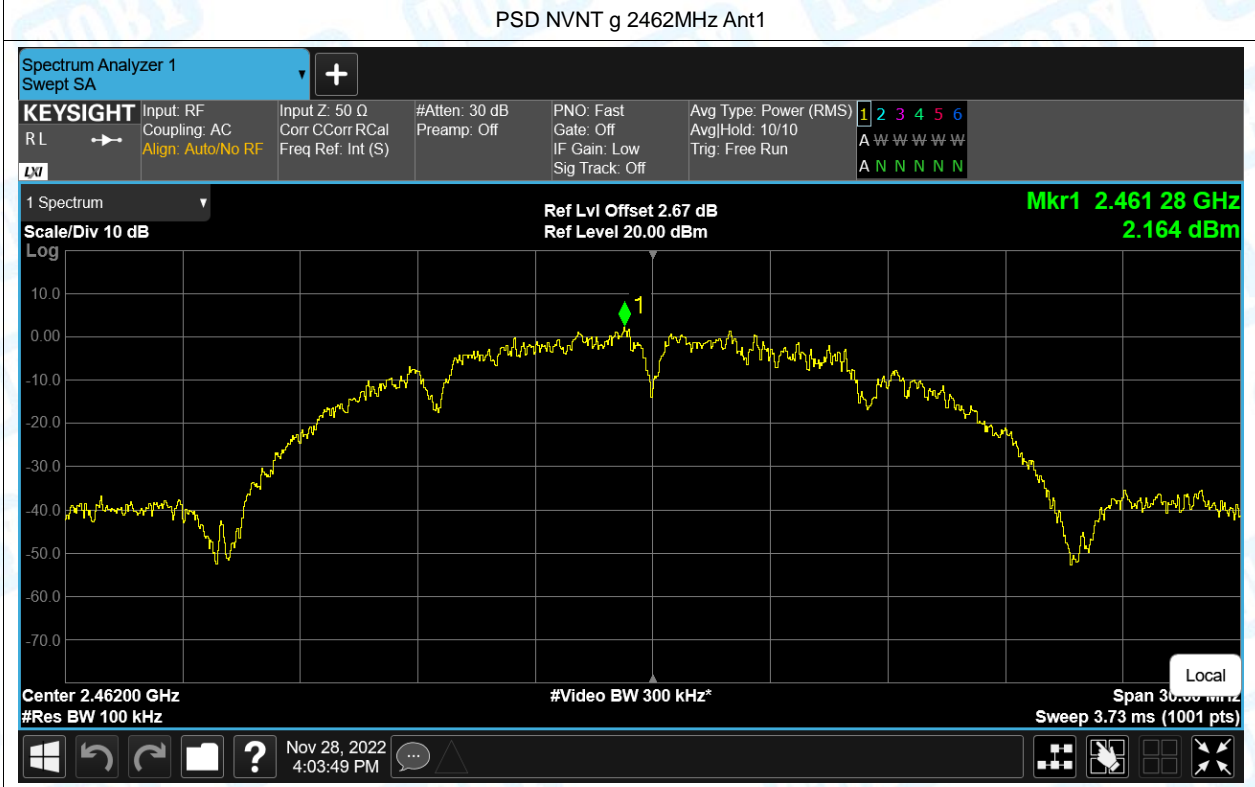
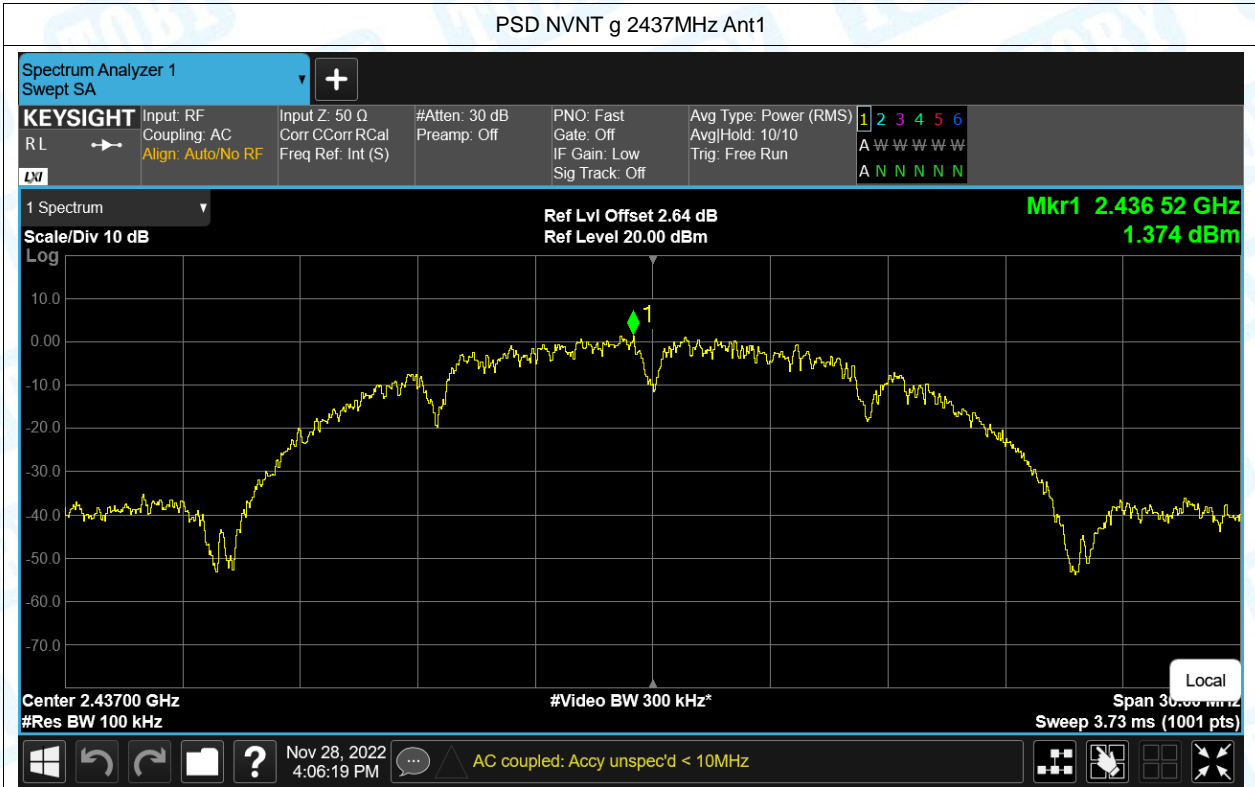


PSD NVNT b 2437MHz Ant1

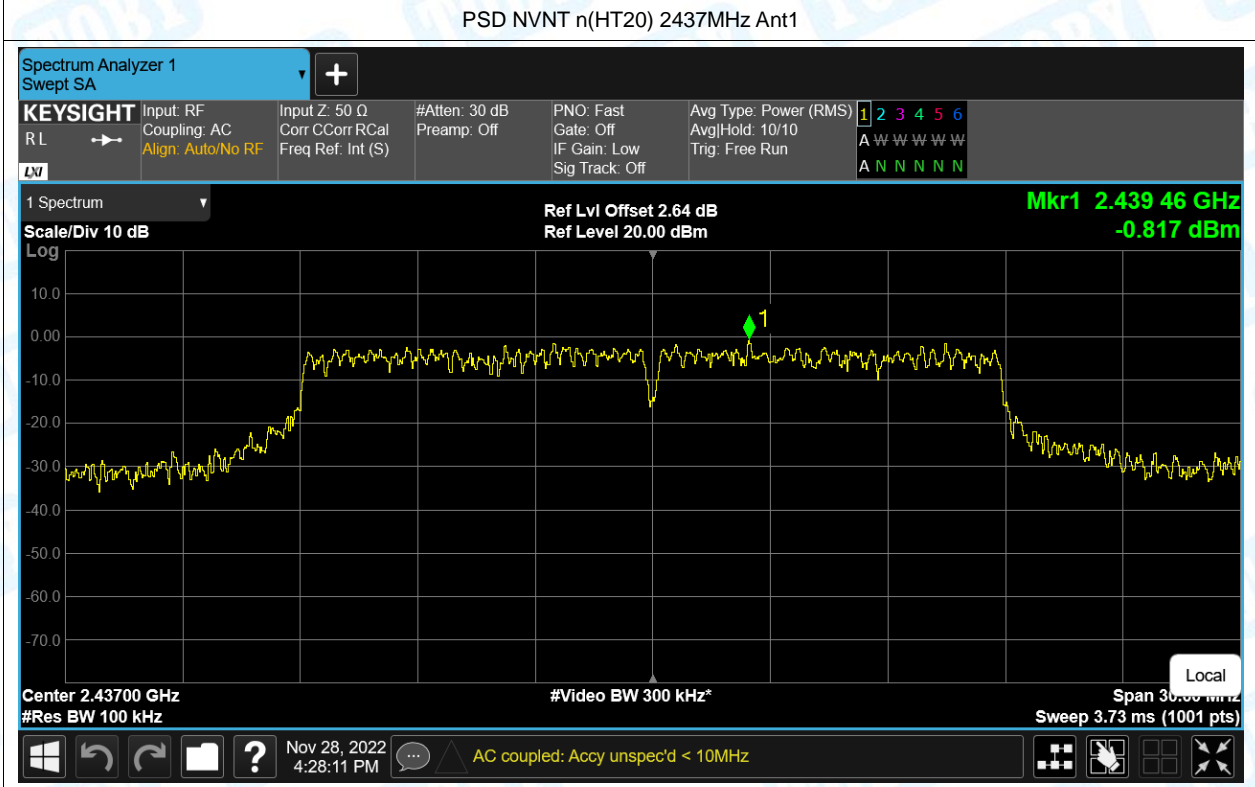
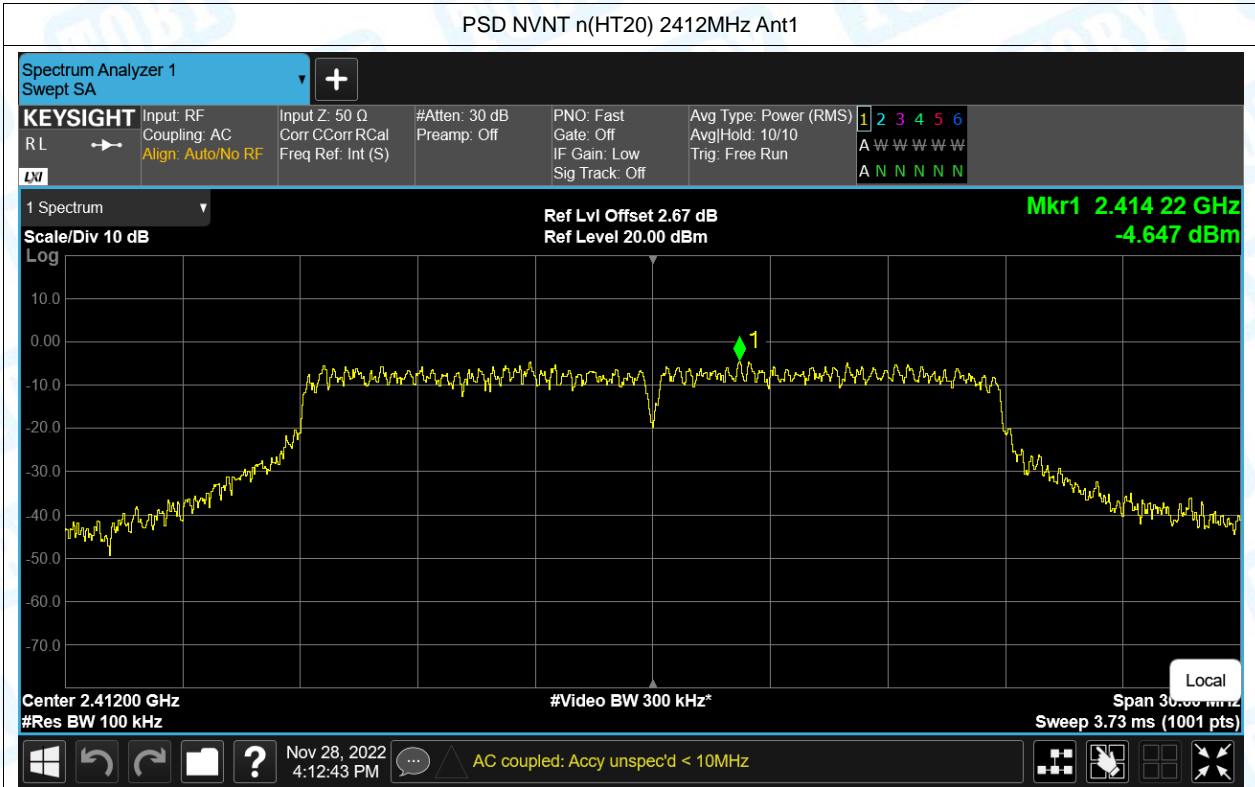


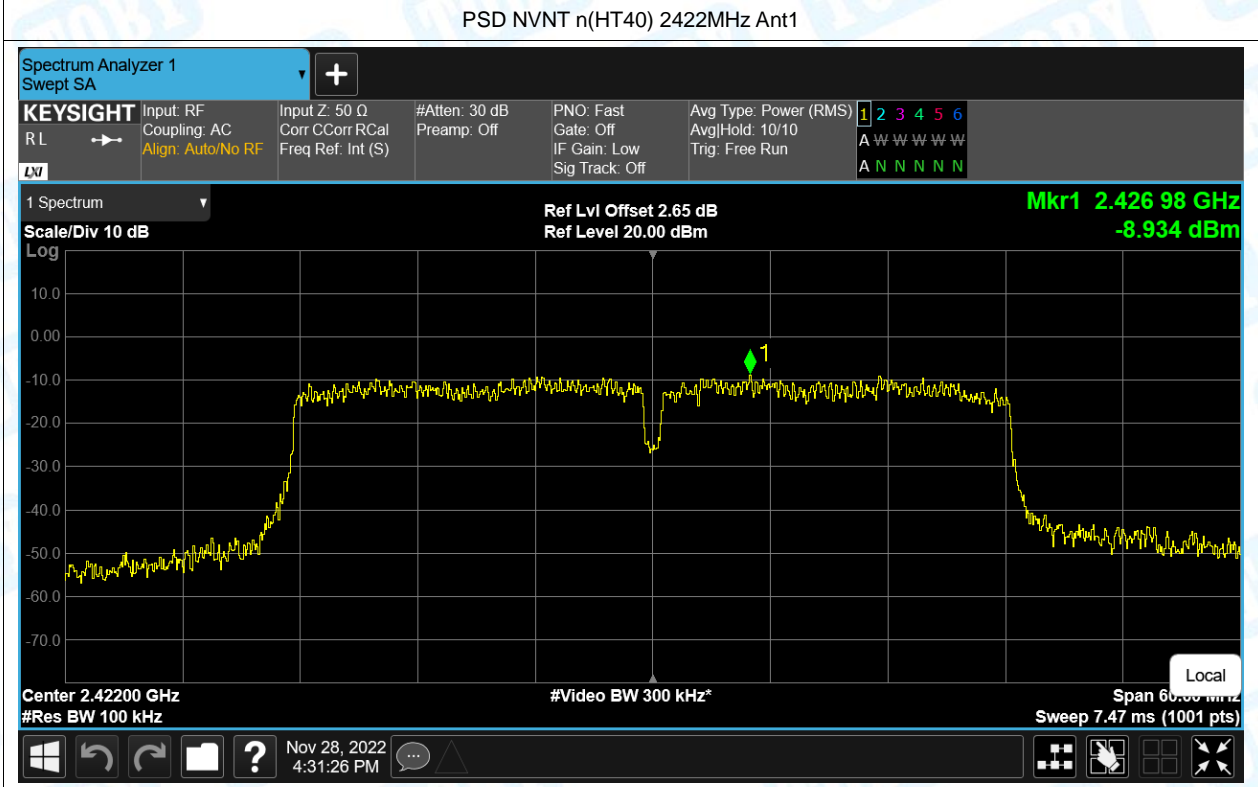
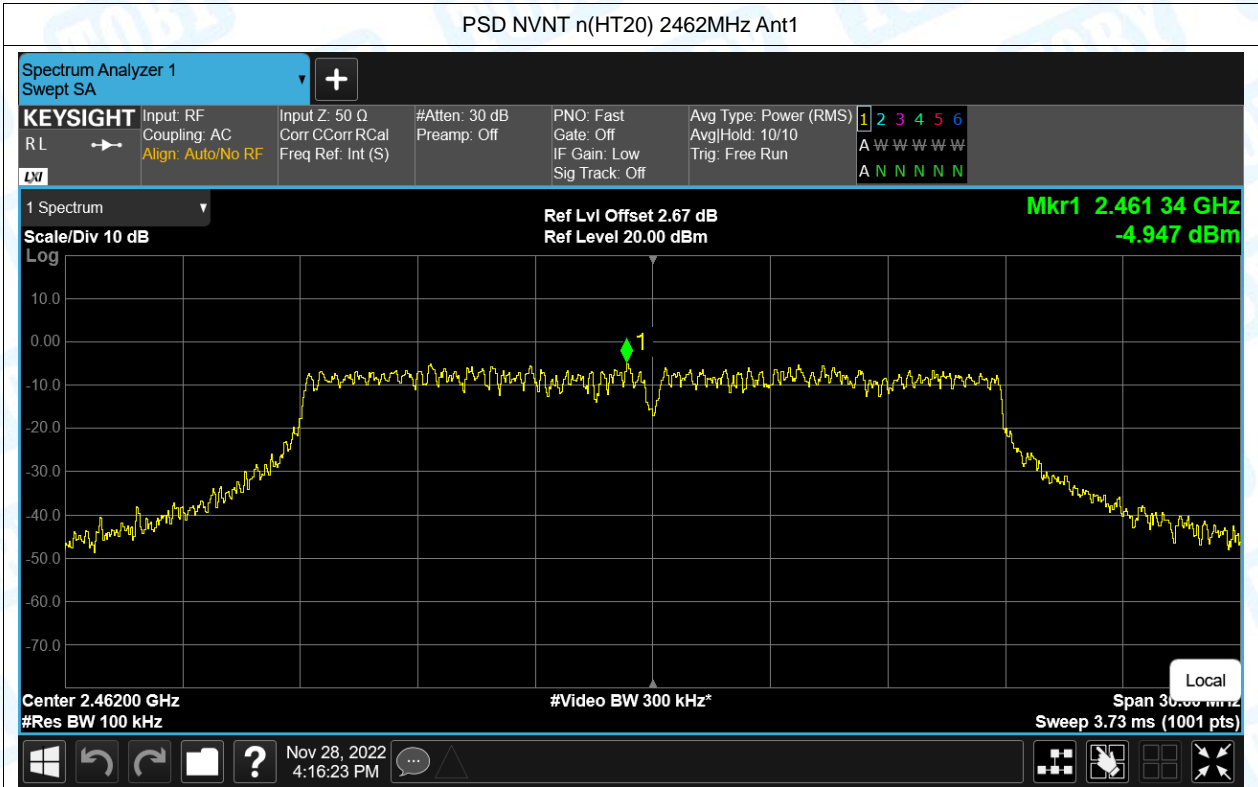




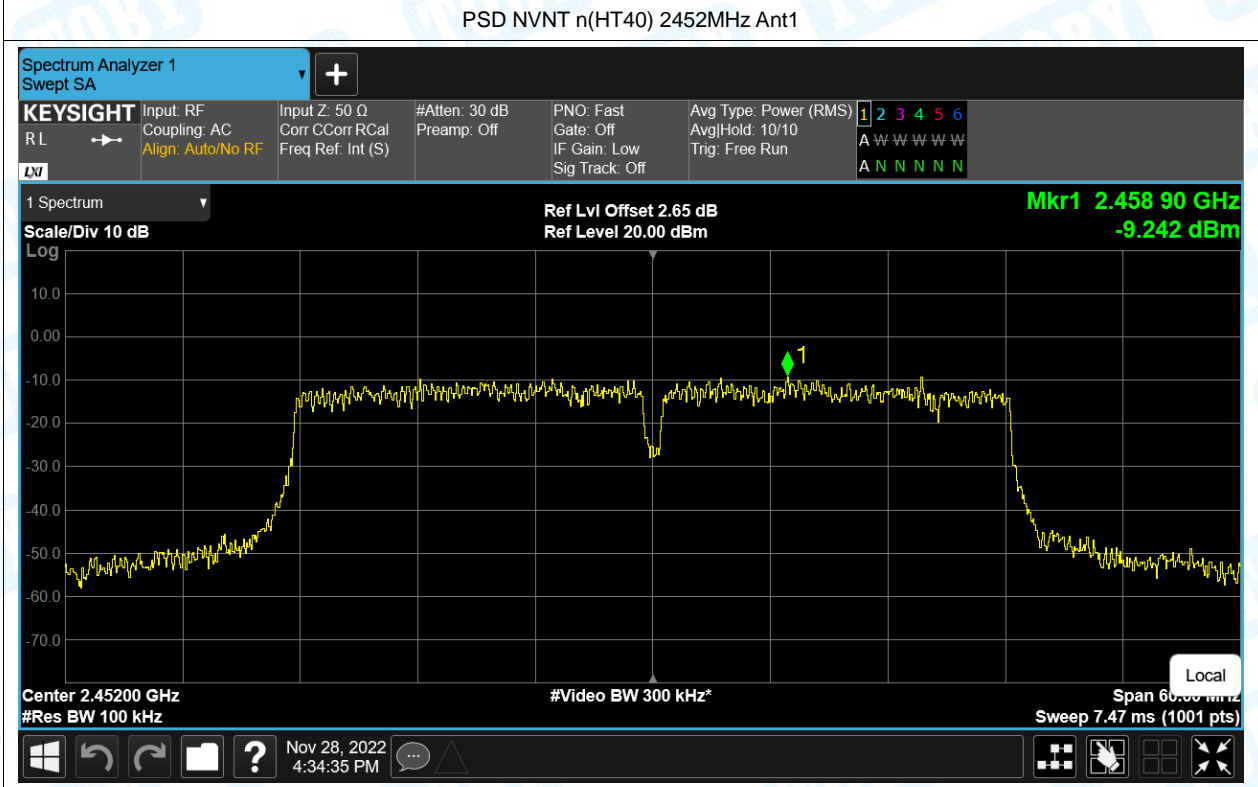
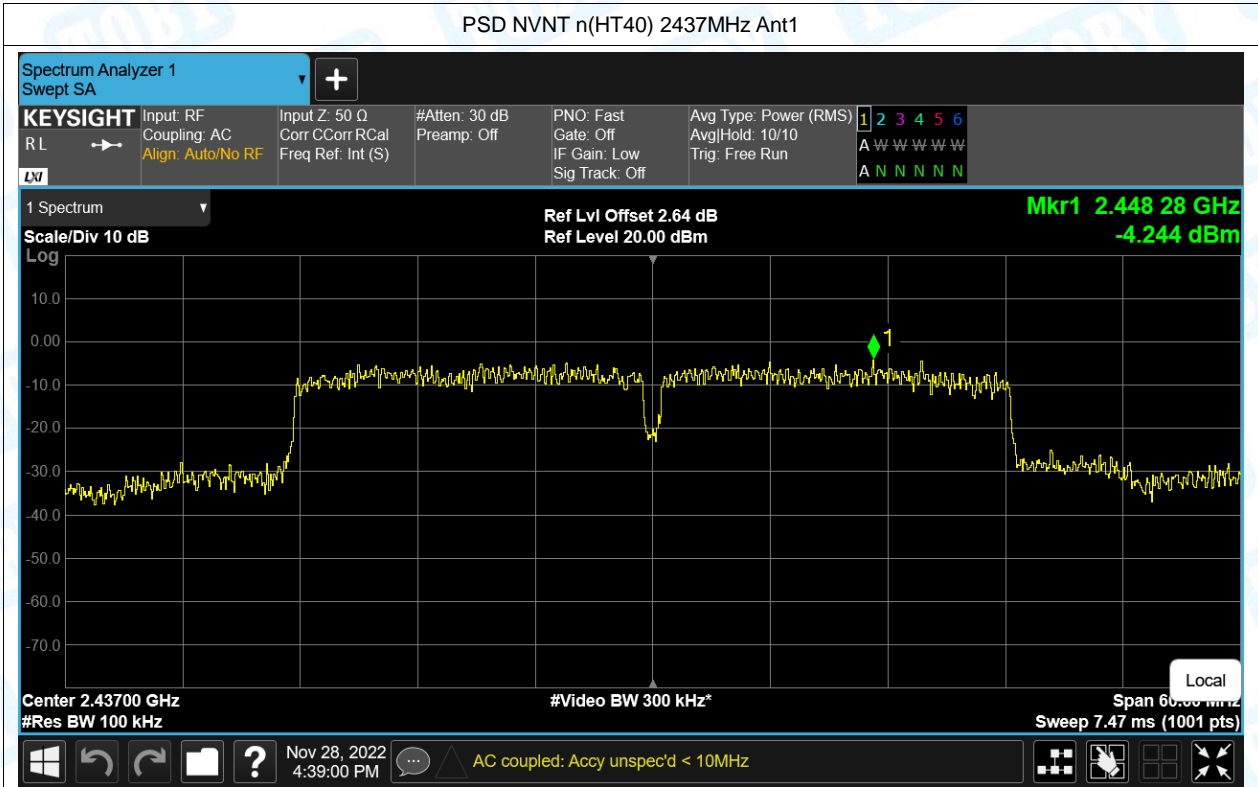












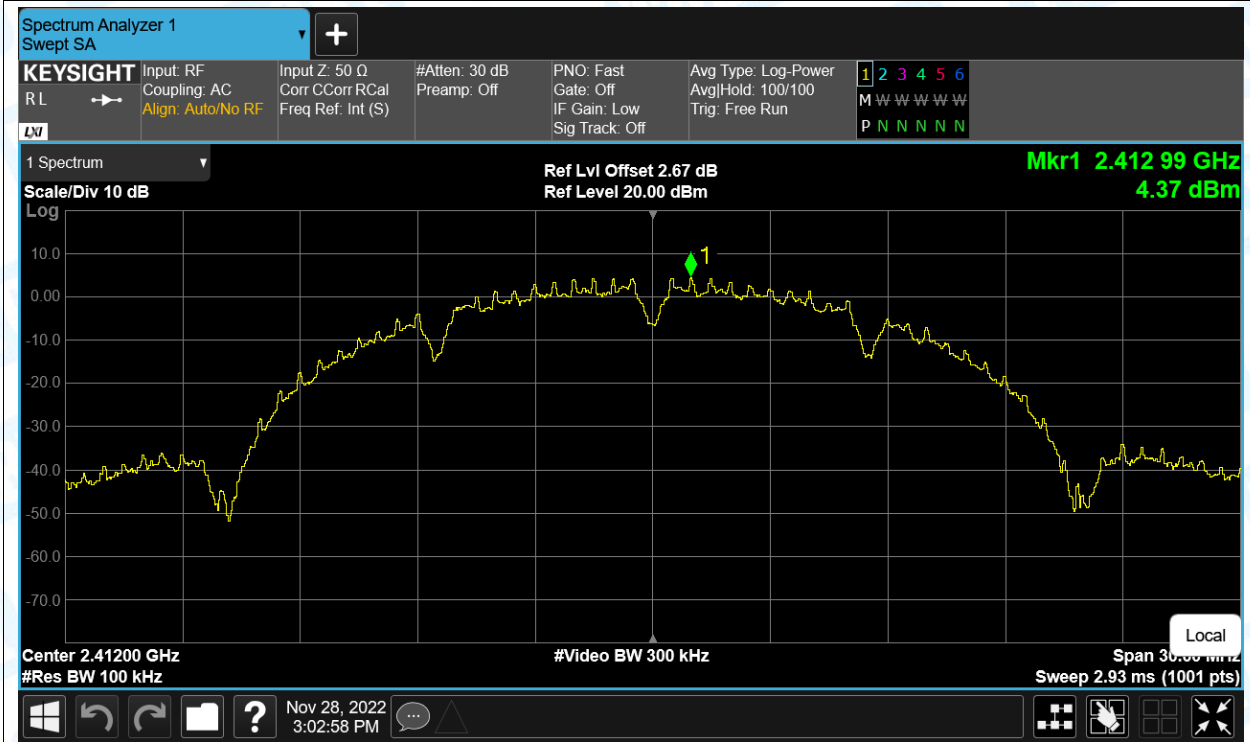
## 6. Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-57.01	-30	Pass
NVNT	b	2462	Ant1	-55.15	-30	Pass
NVNT	g	2412	Ant1	-53.53	-30	Pass
NVNT	g	2462	Ant1	-55.25	-30	Pass
NVNT	n(HT20)	2412	Ant1	-42.5	-30	Pass
NVNT	n(HT20)	2462	Ant1	-44.87	-30	Pass
NVNT	n(HT40)	2422	Ant1	-40.4	-30	Pass
NVNT	n(HT40)	2452	Ant1	-41.22	-30	Pass

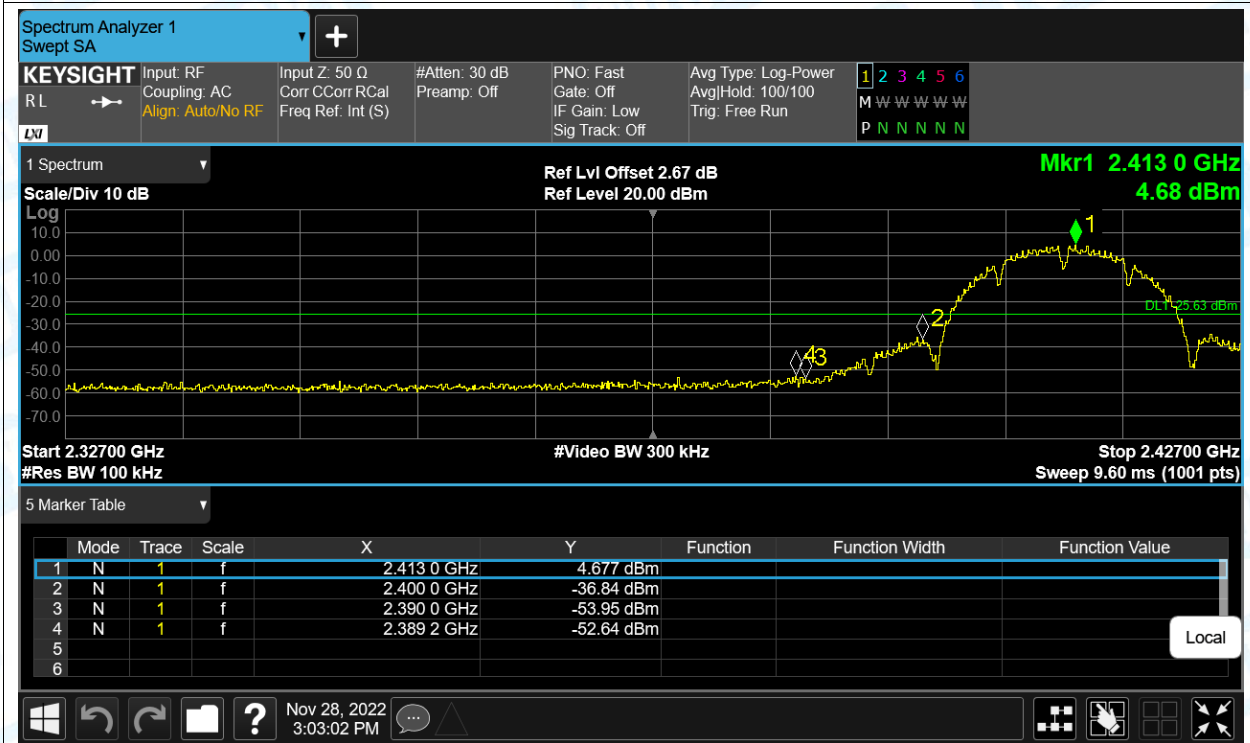


Test Graphs

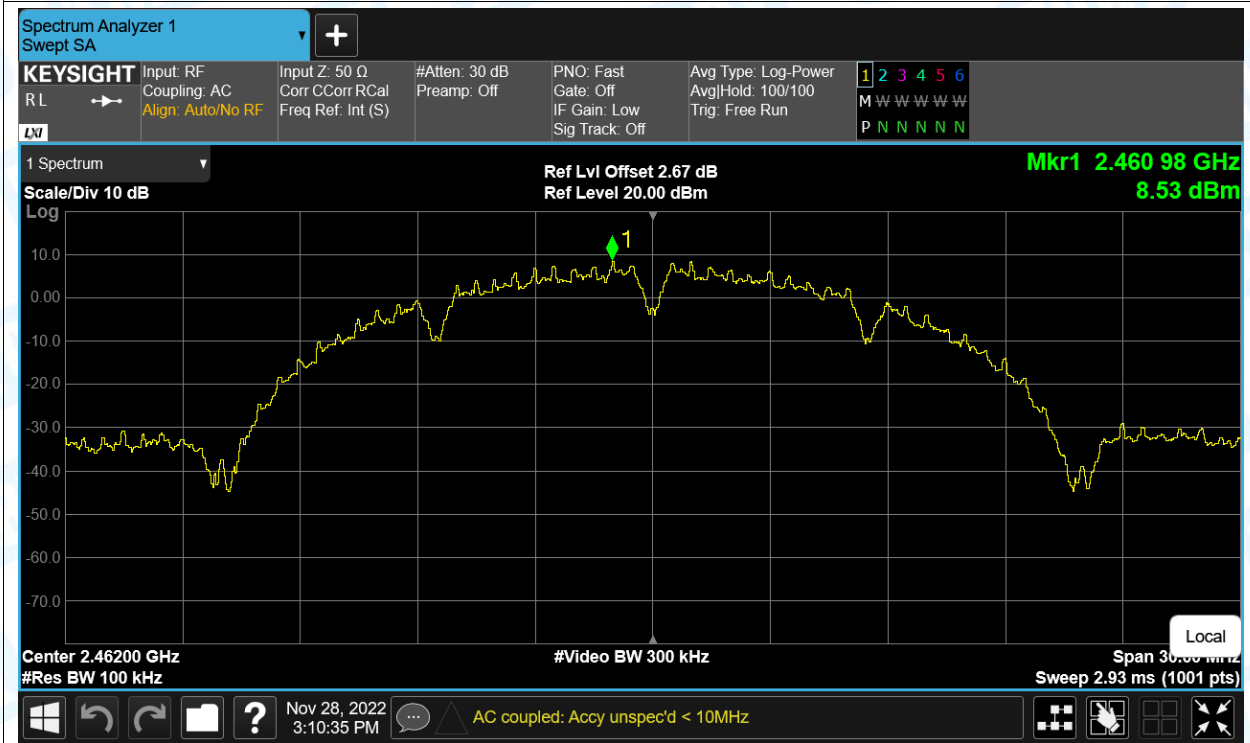
Band Edge NVNT b 2412MHz Ant1 Ref



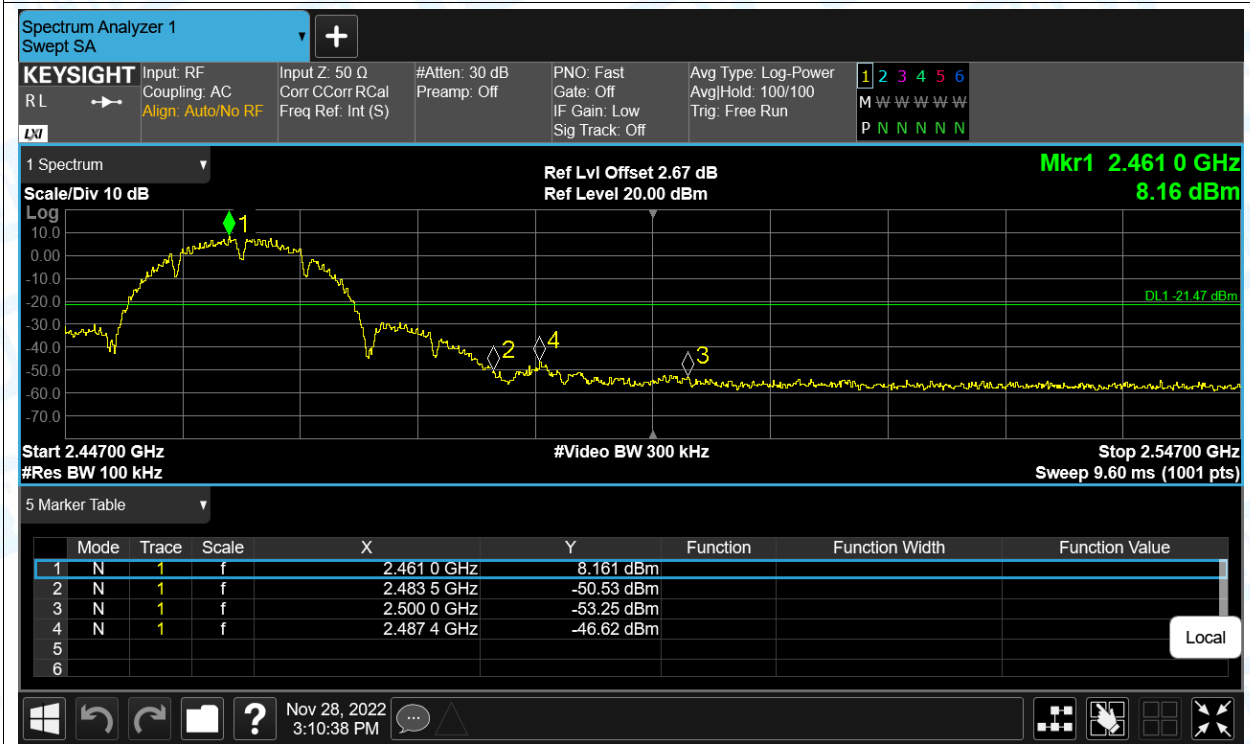
Band Edge NVNT b 2412MHz Ant1 Emission



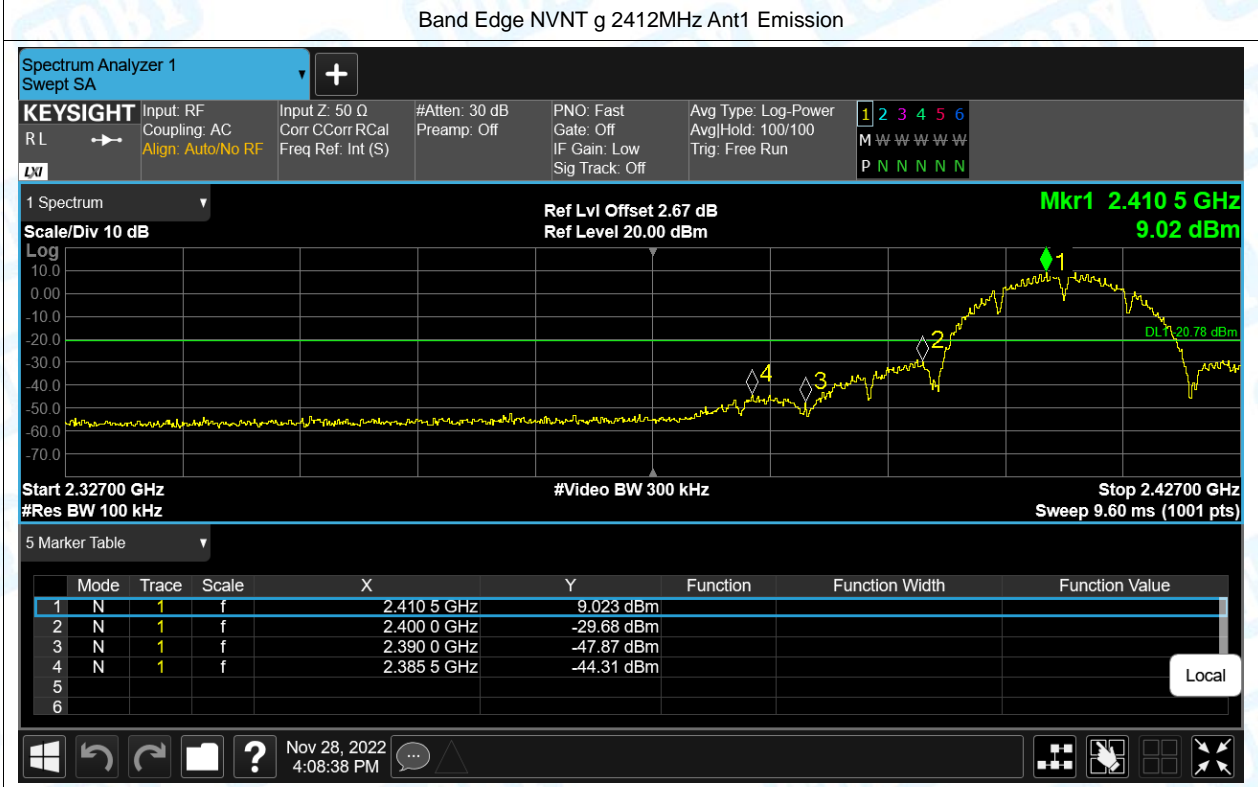
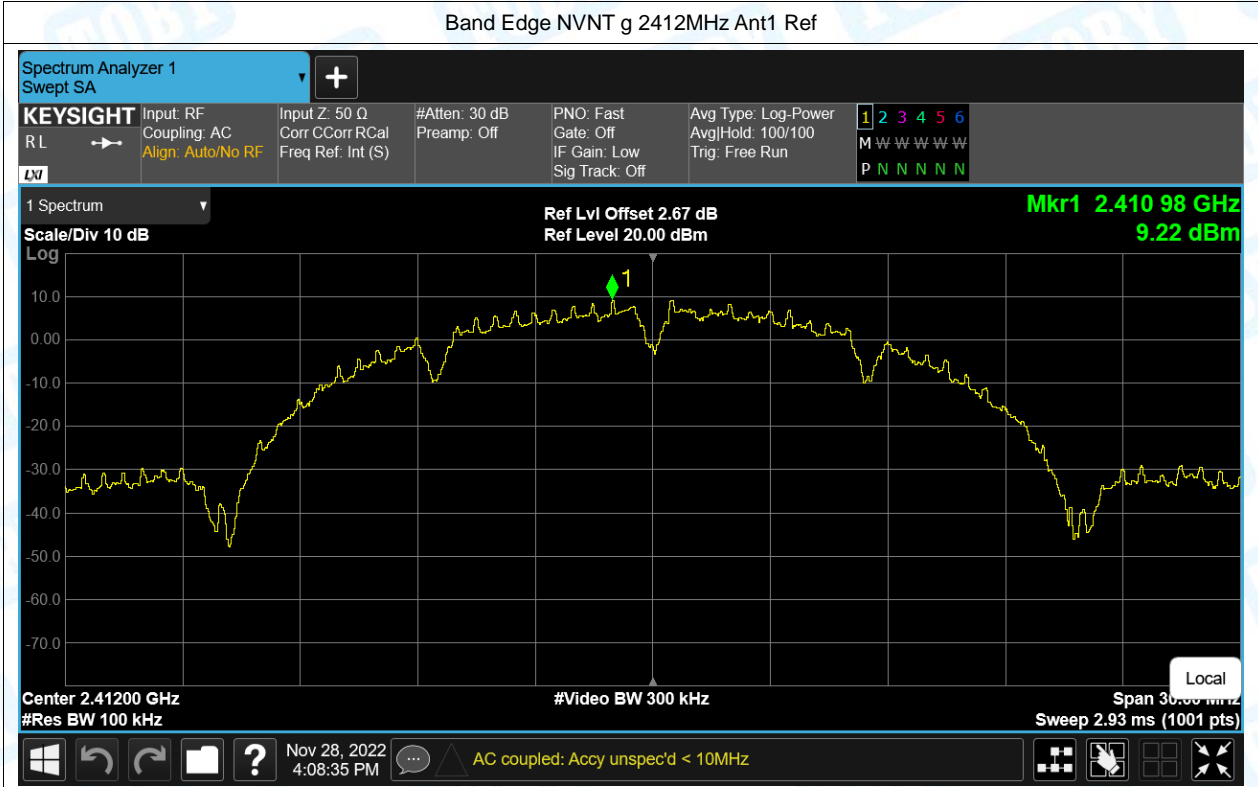
Band Edge NVNT b 2462MHz Ant1 Ref

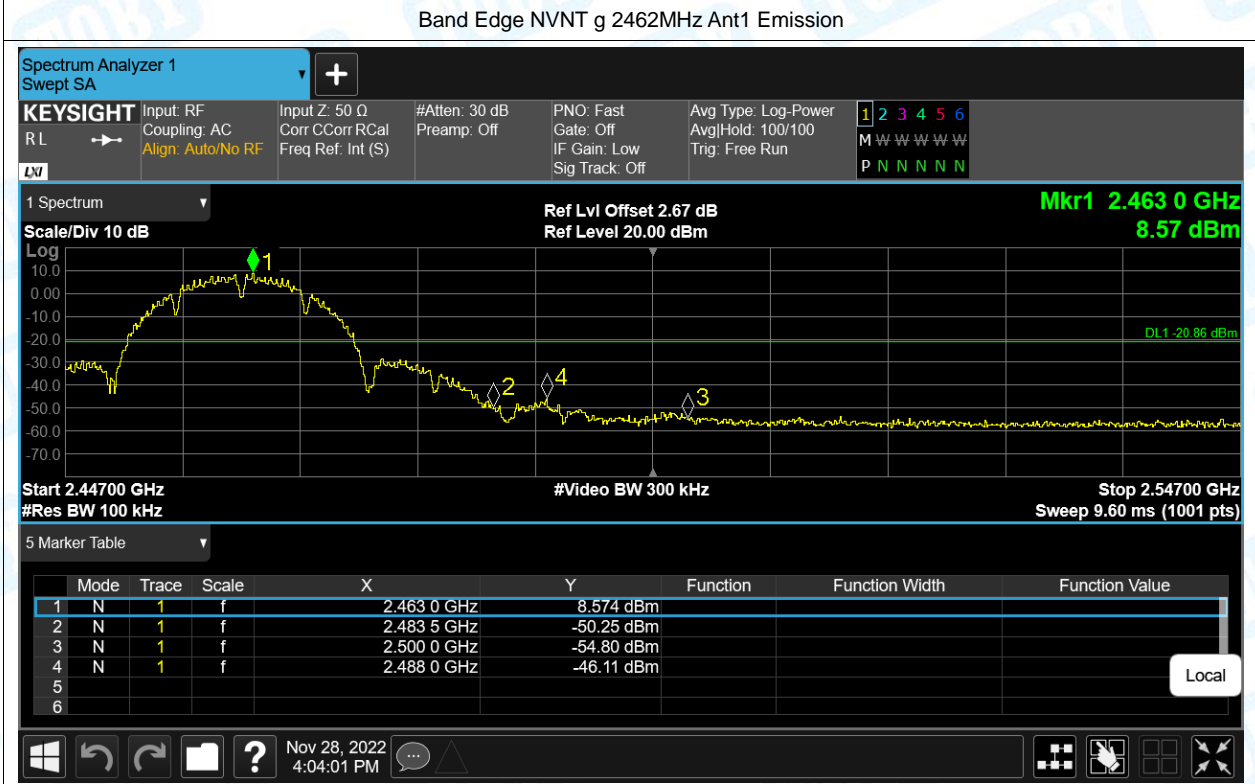
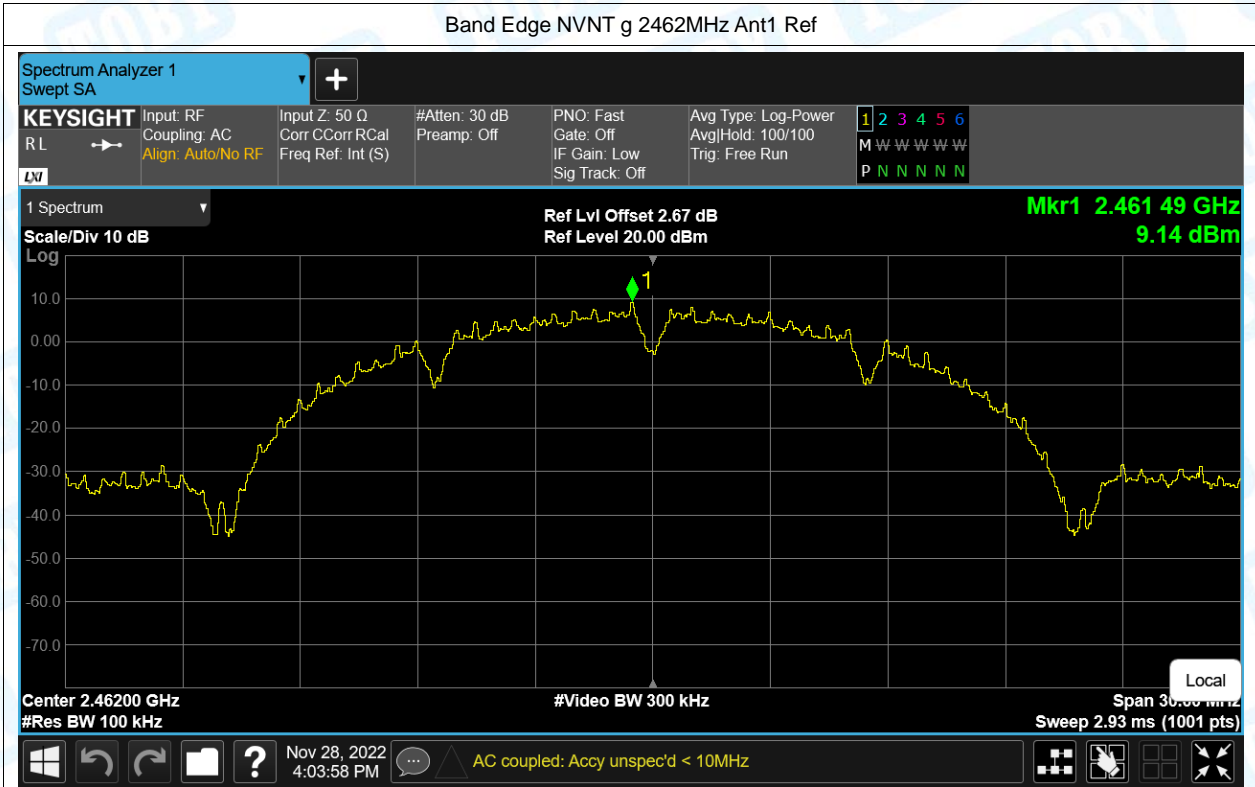


Band Edge NVNT b 2462MHz Ant1 Emission

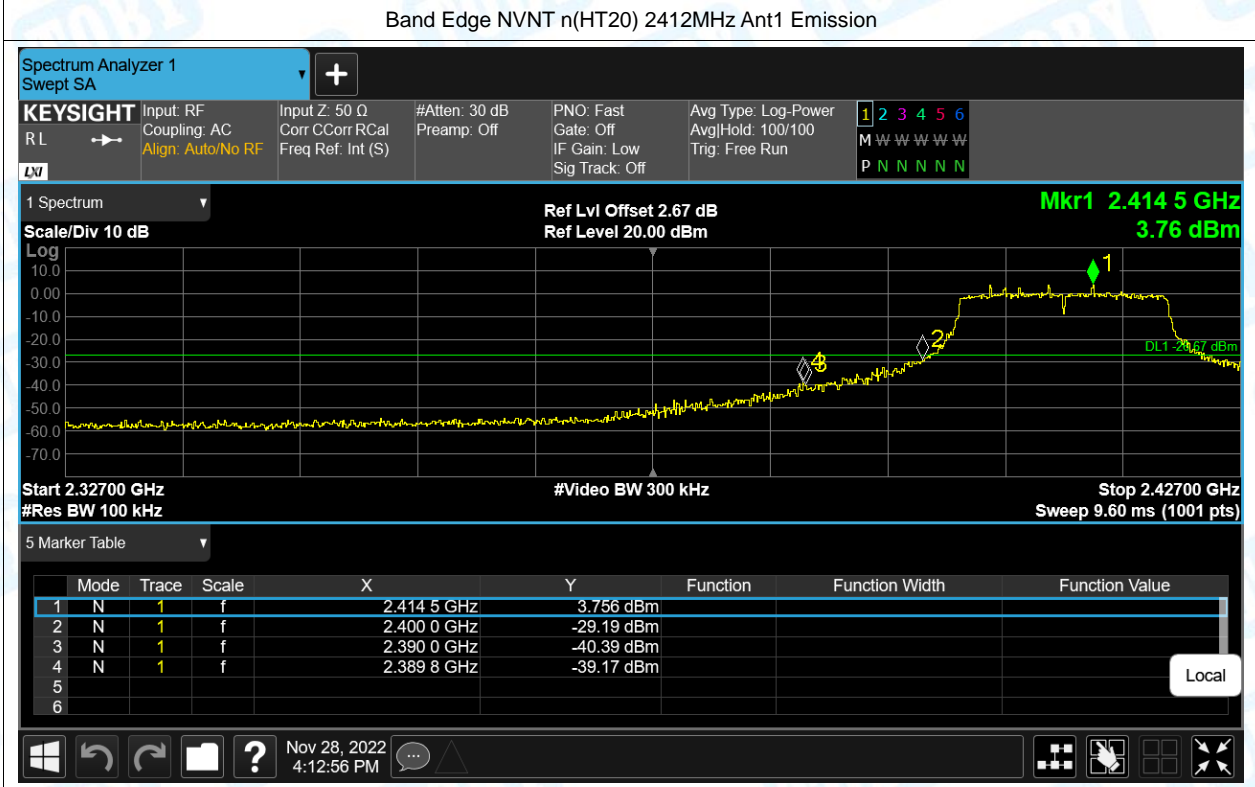
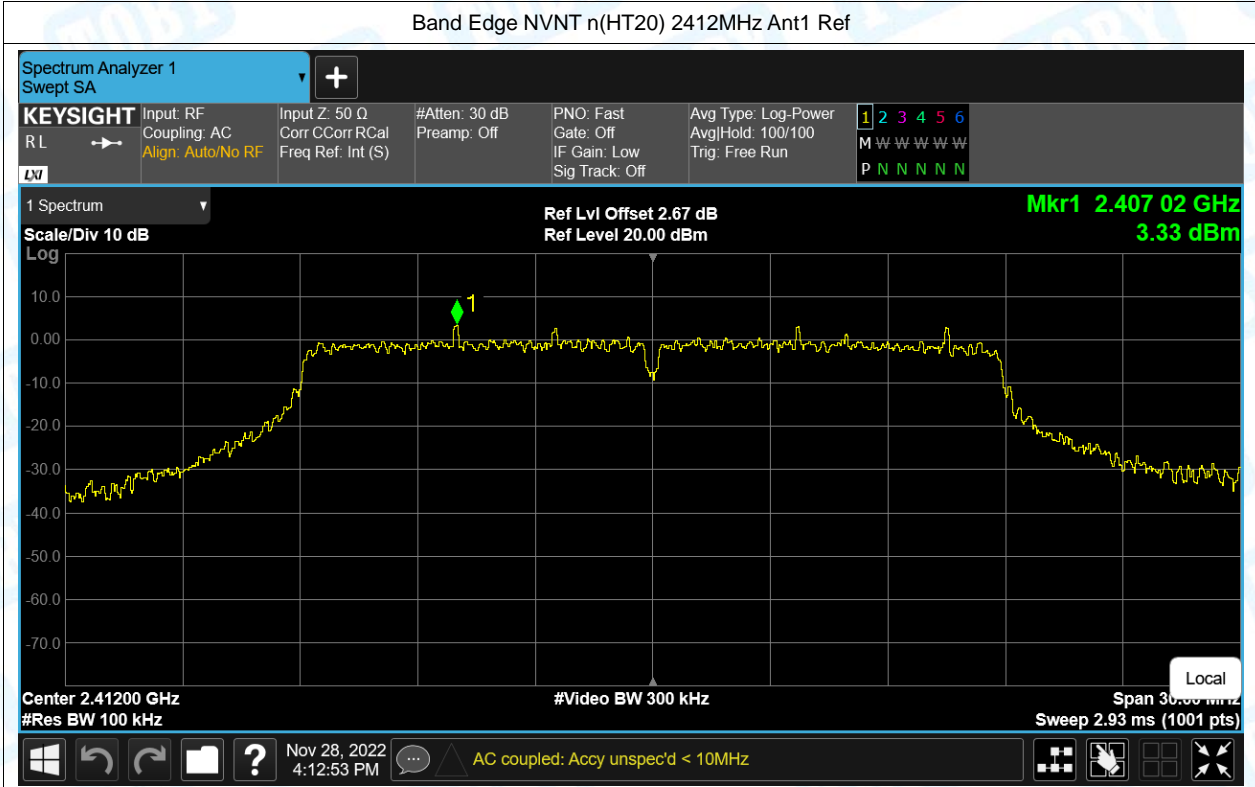




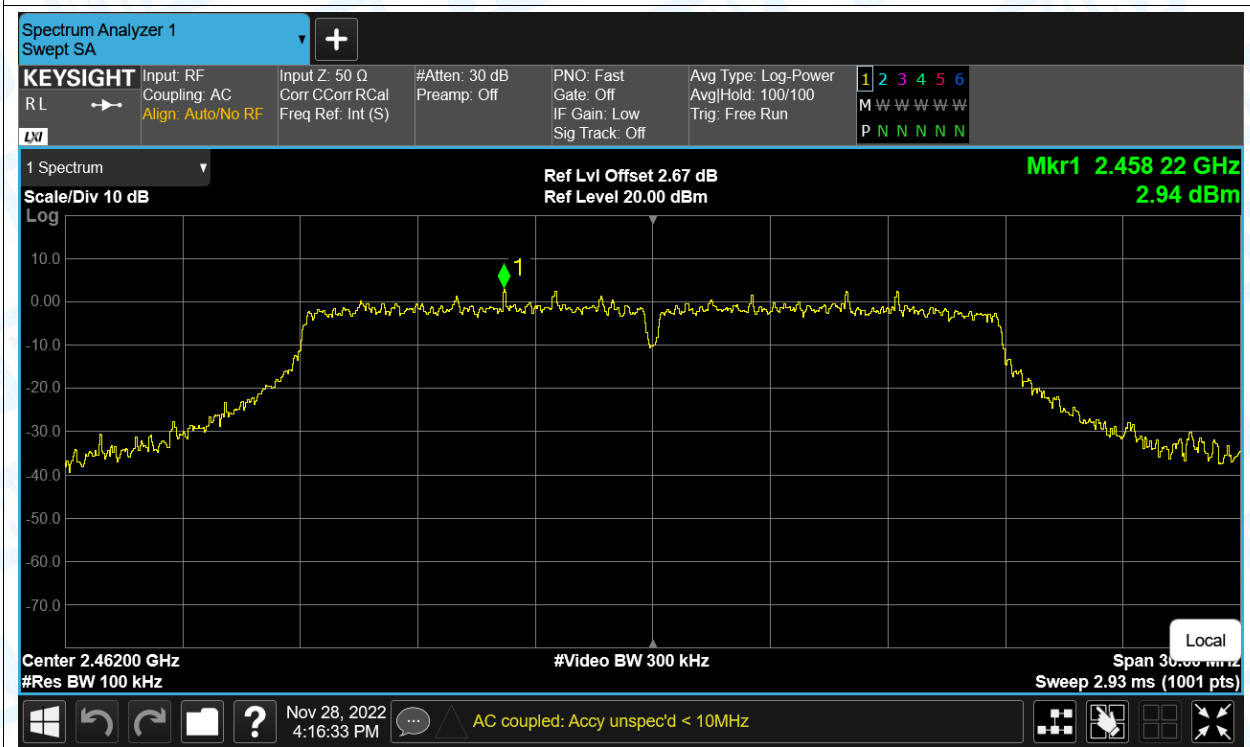




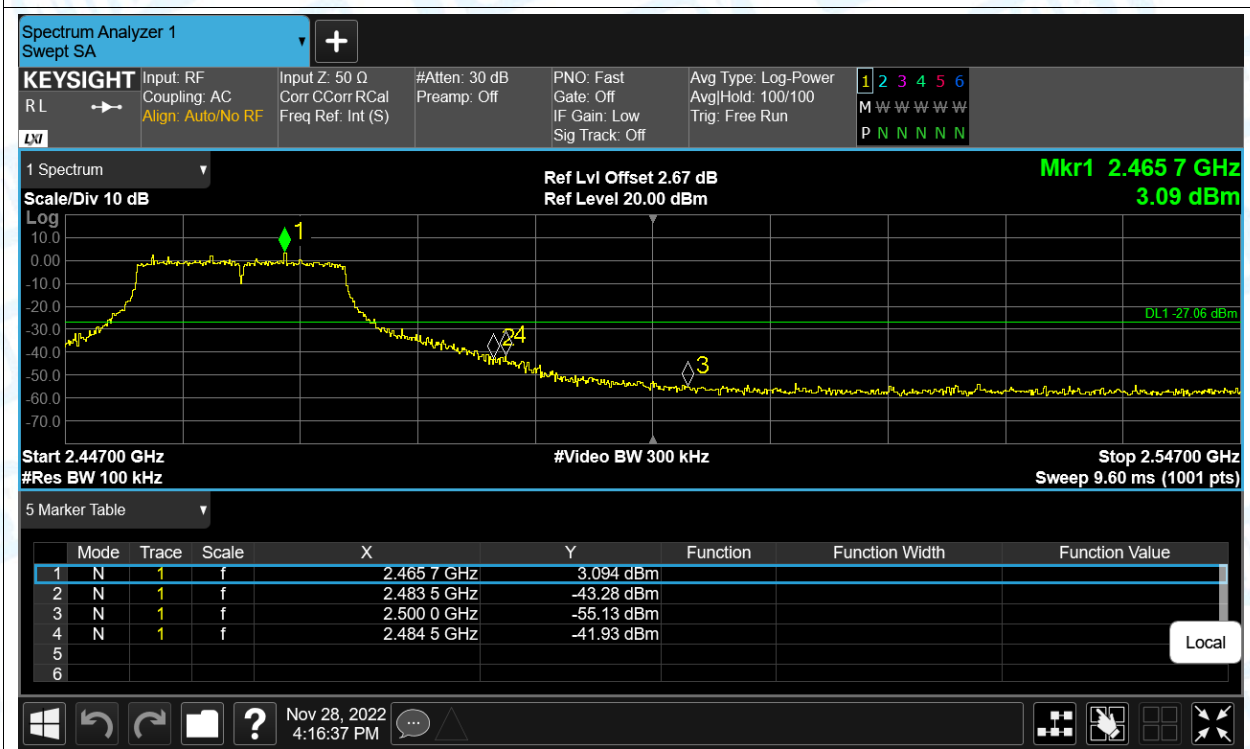




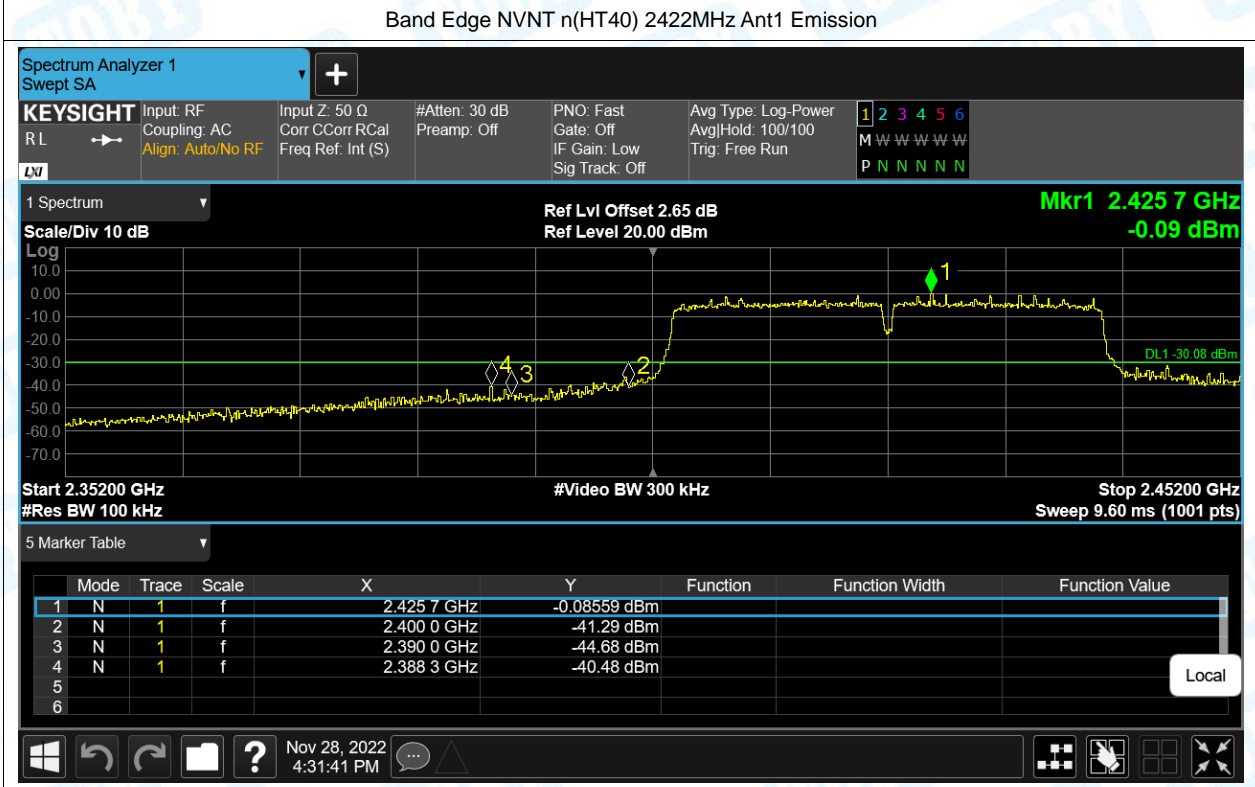
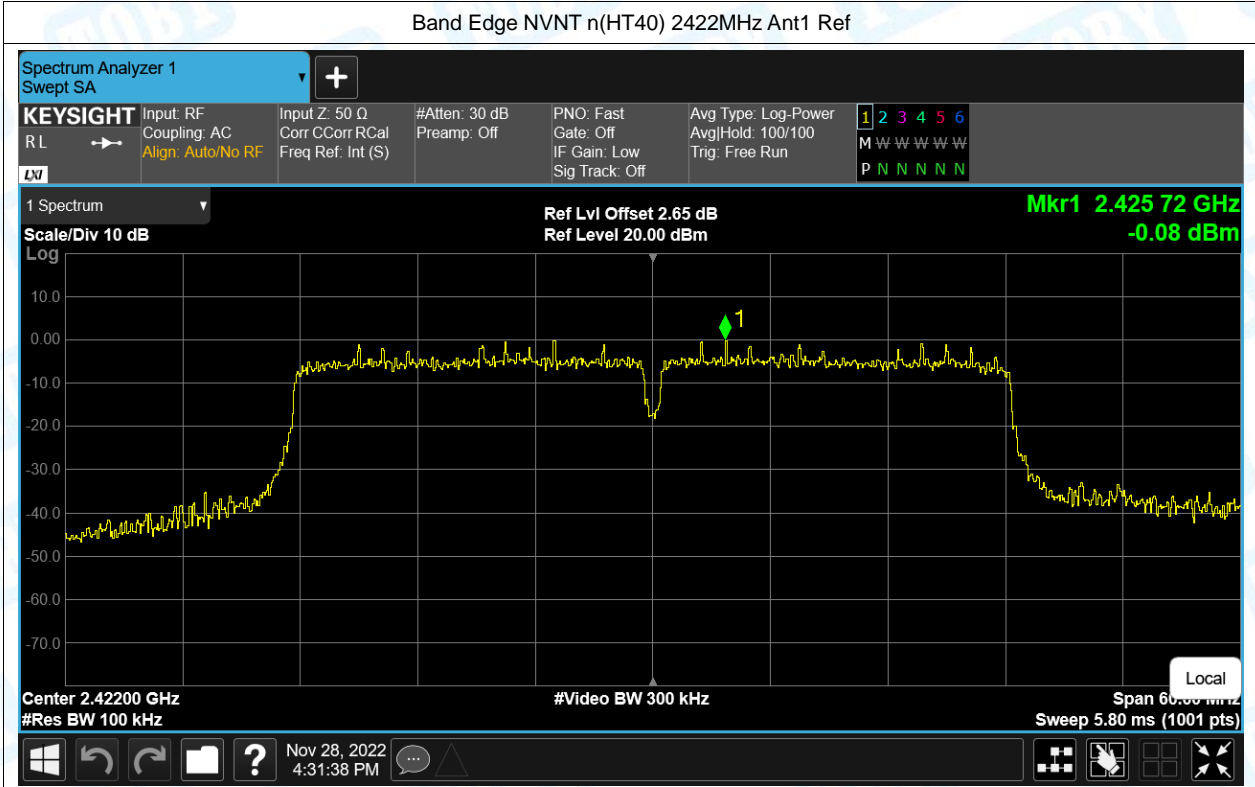
Band Edge NVNT n(HT20) 2462MHz Ant1 Ref



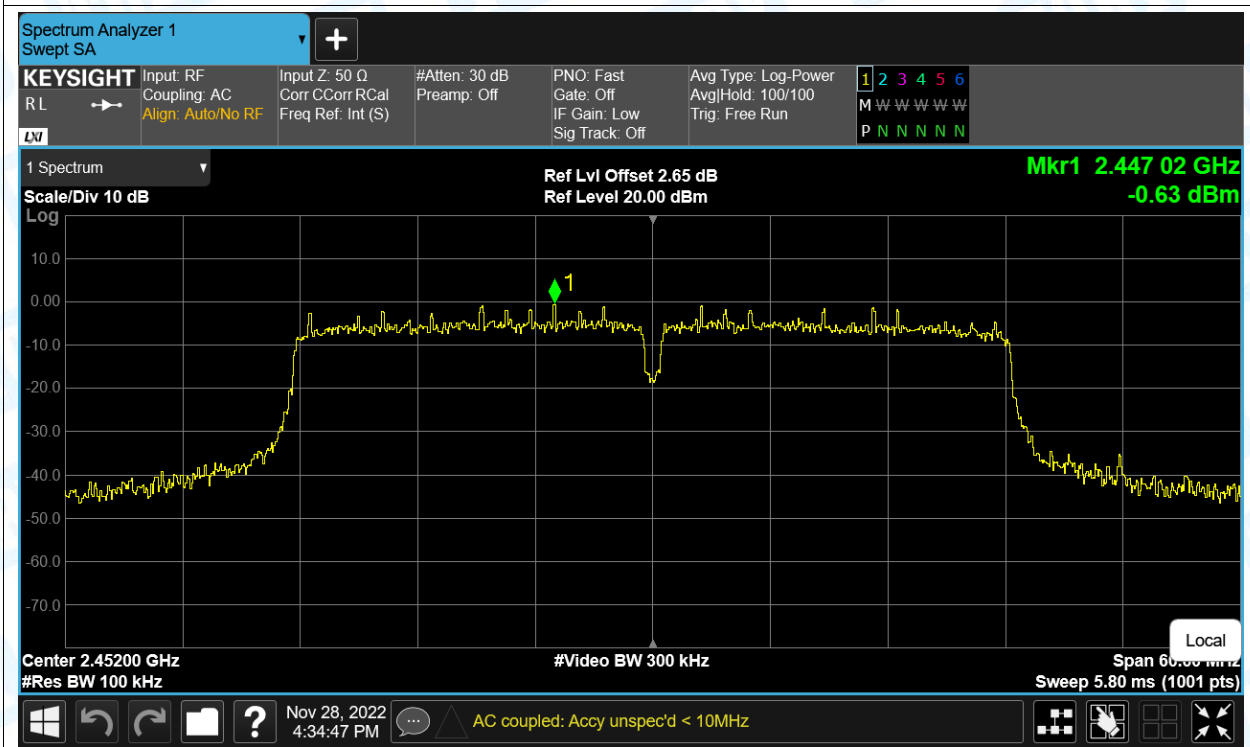
Band Edge NVNT n(HT20) 2462MHz Ant1 Emission



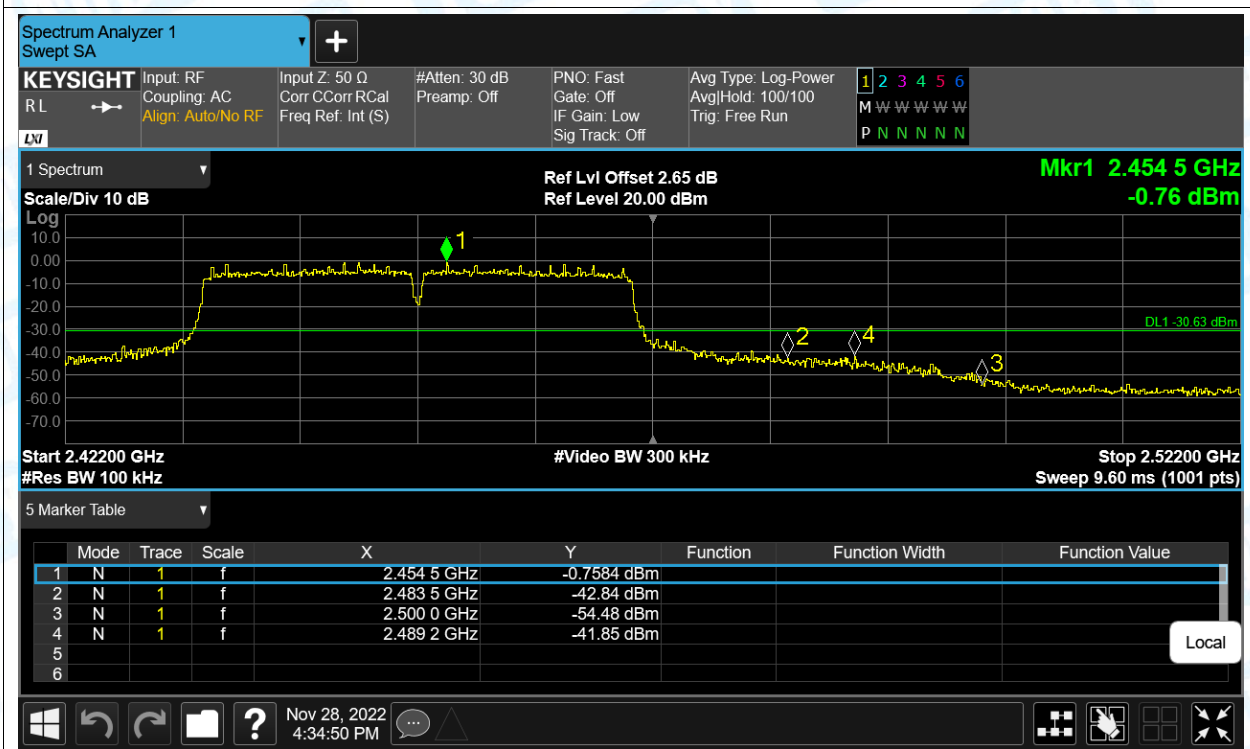




Band Edge NVNT n(HT40) 2452MHz Ant1 Ref



Band Edge NVNT n(HT40) 2452MHz Ant1 Emission



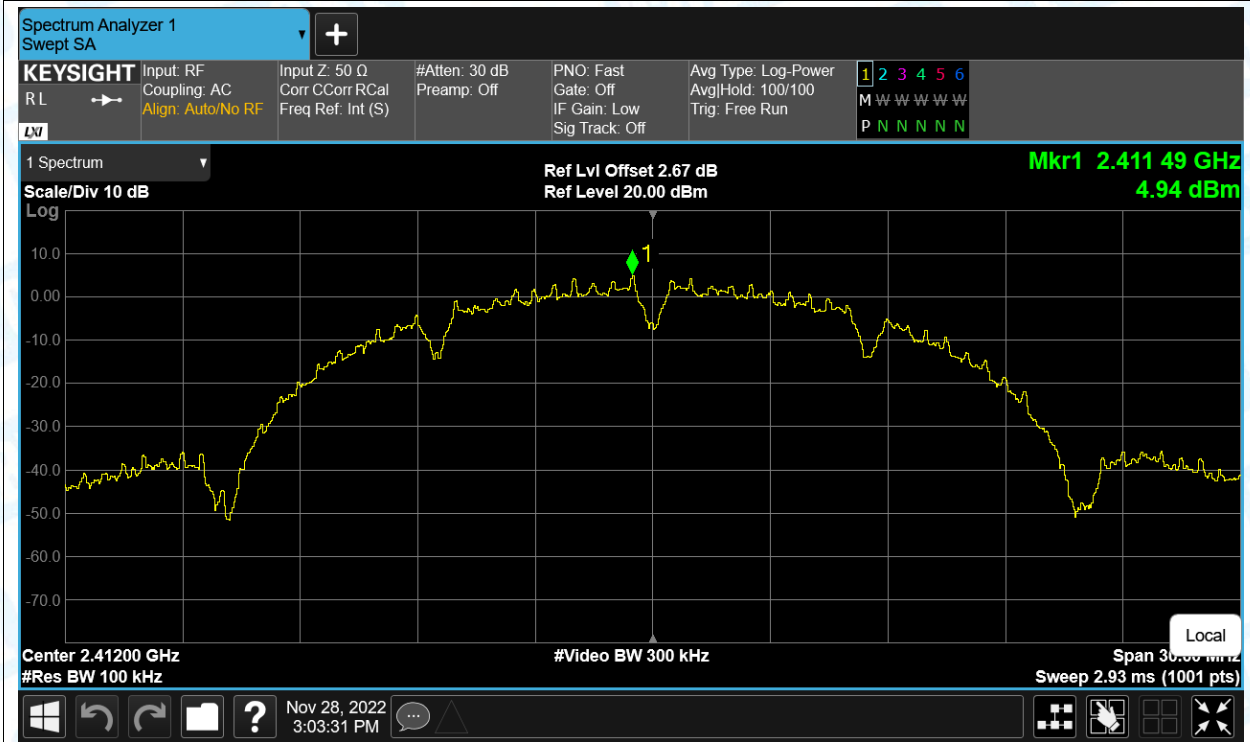


## 7. Conducted RF Spurious Emission

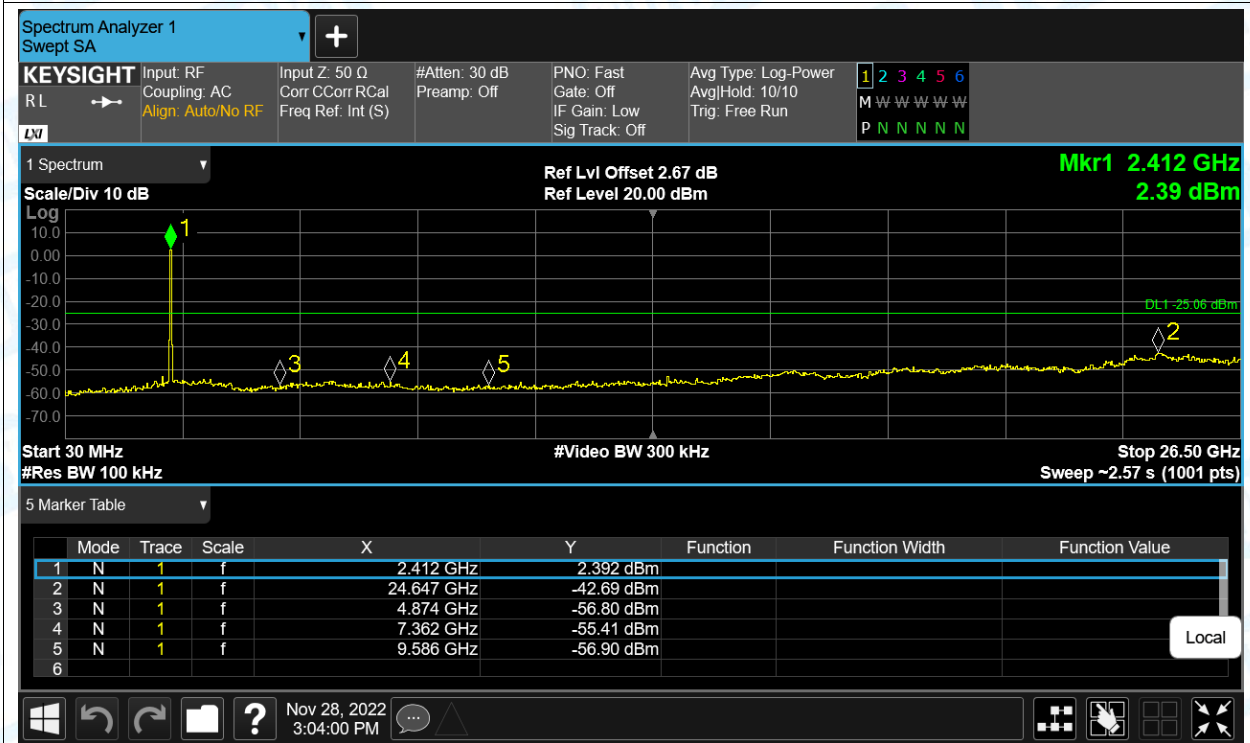
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-47.63	-30	Pass
NVNT	b	2437	Ant1	-50.76	-30	Pass
NVNT	b	2462	Ant1	-50.73	-30	Pass
NVNT	g	2412	Ant1	-51.43	-30	Pass
NVNT	g	2437	Ant1	-49.79	-30	Pass
NVNT	g	2462	Ant1	-50.54	-30	Pass
NVNT	n(HT20)	2412	Ant1	-46.76	-30	Pass
NVNT	n(HT20)	2437	Ant1	-47.83	-30	Pass
NVNT	n(HT20)	2462	Ant1	-44.87	-30	Pass
NVNT	n(HT40)	2422	Ant1	-42.04	-30	Pass
NVNT	n(HT40)	2437	Ant1	-39.79	-30	Pass
NVNT	n(HT40)	2452	Ant1	-41.75	-30	Pass

Test Graphs

Tx. Spurious NVNT b 2412MHz Ant1 Ref

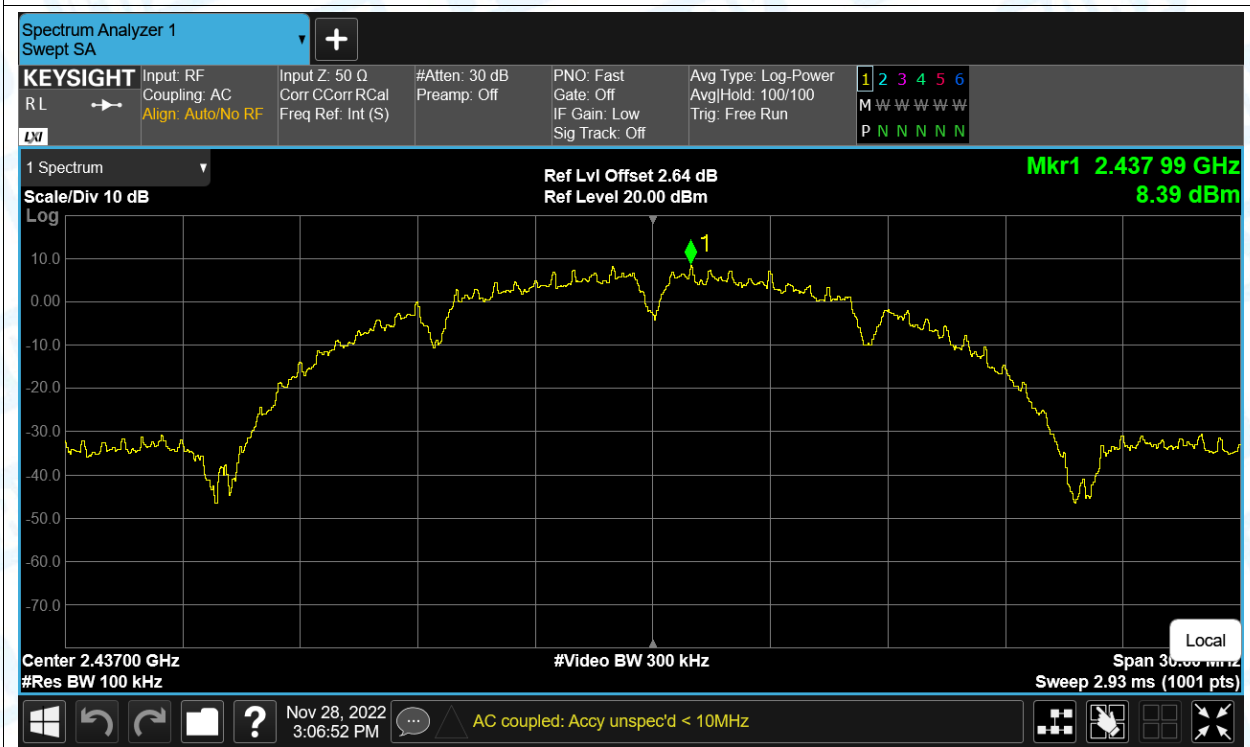


Tx. Spurious NVNT b 2412MHz Ant1 Emission





Tx. Spurious NVNT b 2437MHz Ant1 Ref



Tx. Spurious NVNT b 2437MHz Ant1 Emission

