

RF Test Data for 2.4G WiFi (Conducted Measurements)

General Description of EUT	
Product Name:	Laser Engraver
Test Model:	G10
Sample ID:	202208_0350-01-2
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	55%
Test Voltage:	AC 120V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202208-0350-2	

Contents

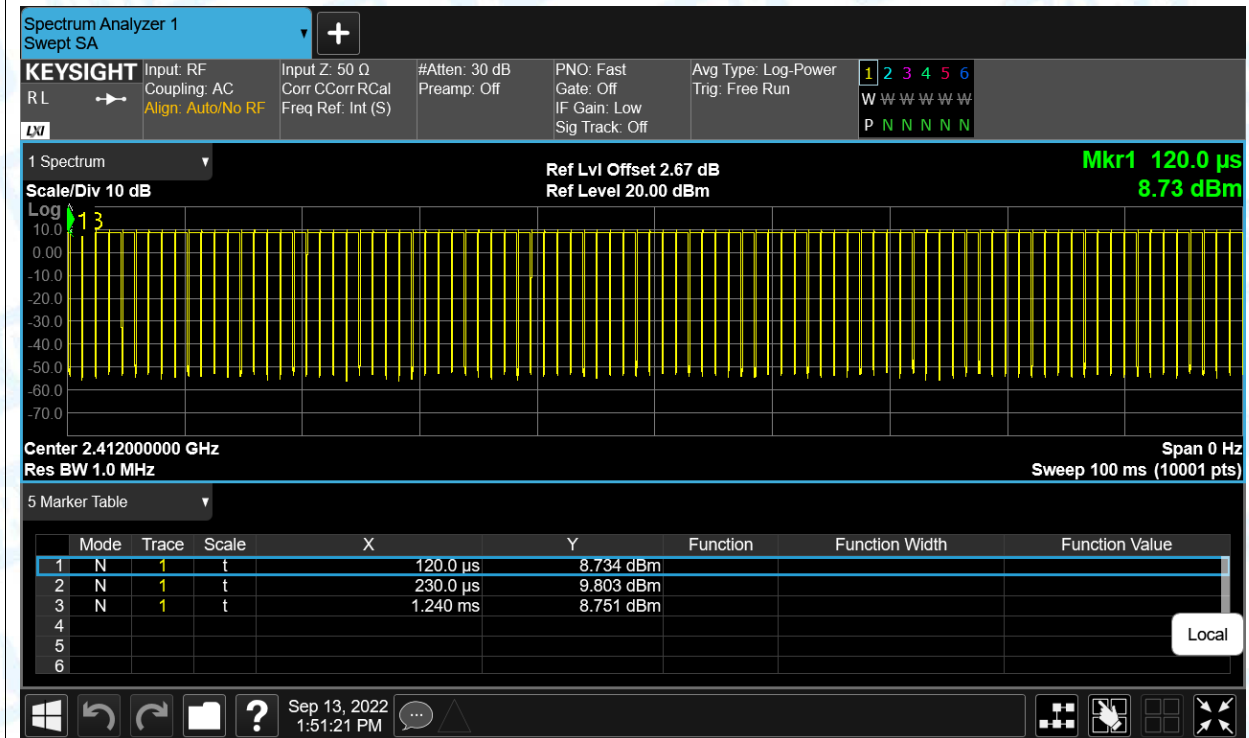
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1. Duty Cycle

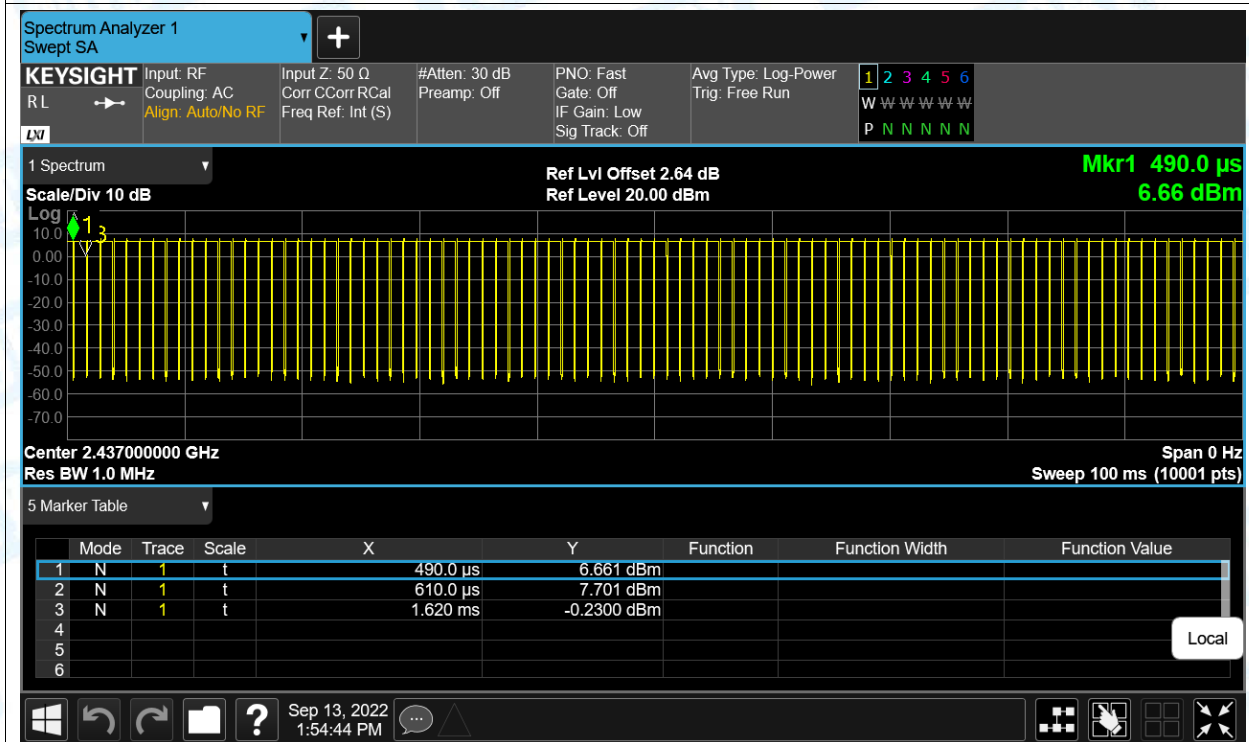
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	90.18	0.45	0.99
NVNT	b	2437	Ant1	89.38	0.49	0.99
NVNT	b	2462	Ant1	90.18	0.45	0.99
NVNT	g	2412	Ant1	89.86	0.46	1.61
NVNT	g	2437	Ant1	89.86	0.46	1.61
NVNT	g	2462	Ant1	89.86	0.46	1.61
NVNT	n(HT20)	2412	Ant1	89.71	0.47	1.64
NVNT	n(HT20)	2437	Ant1	89.71	0.47	1.64
NVNT	n(HT20)	2462	Ant1	89.86	0.46	1.61

Test Graphs

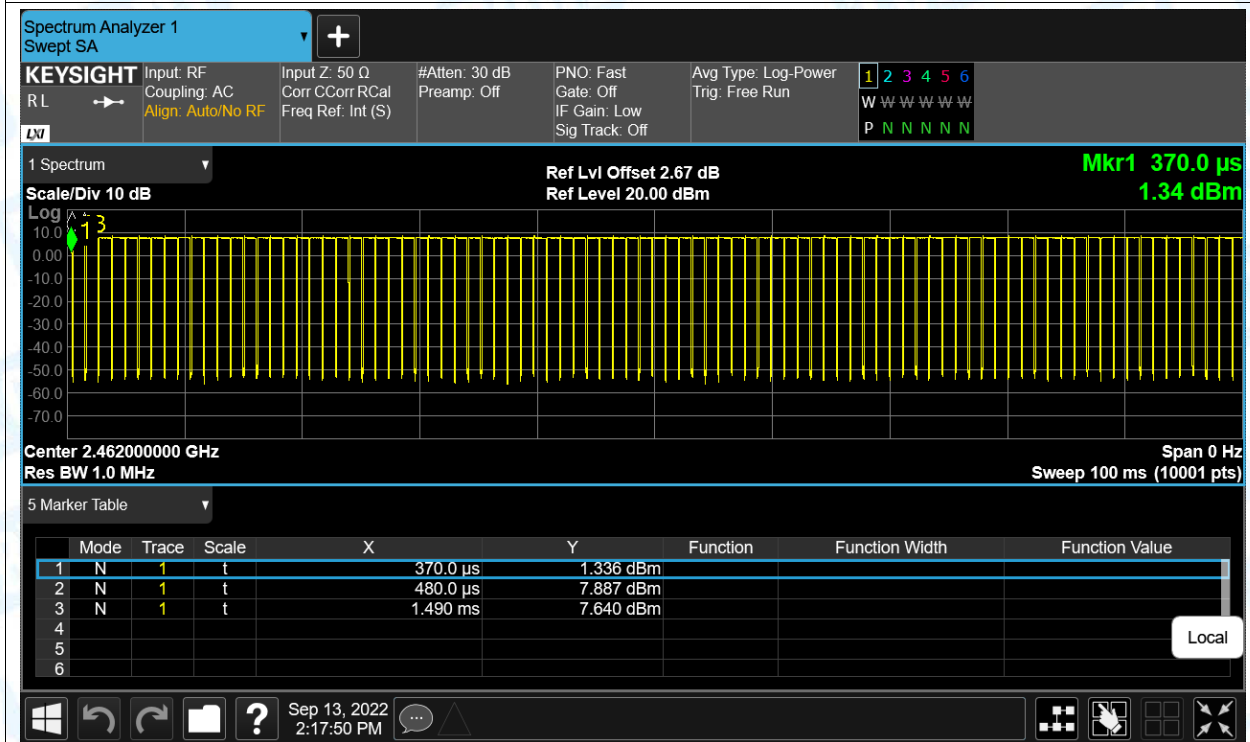
Duty Cycle NVNT b 2412MHz Ant1



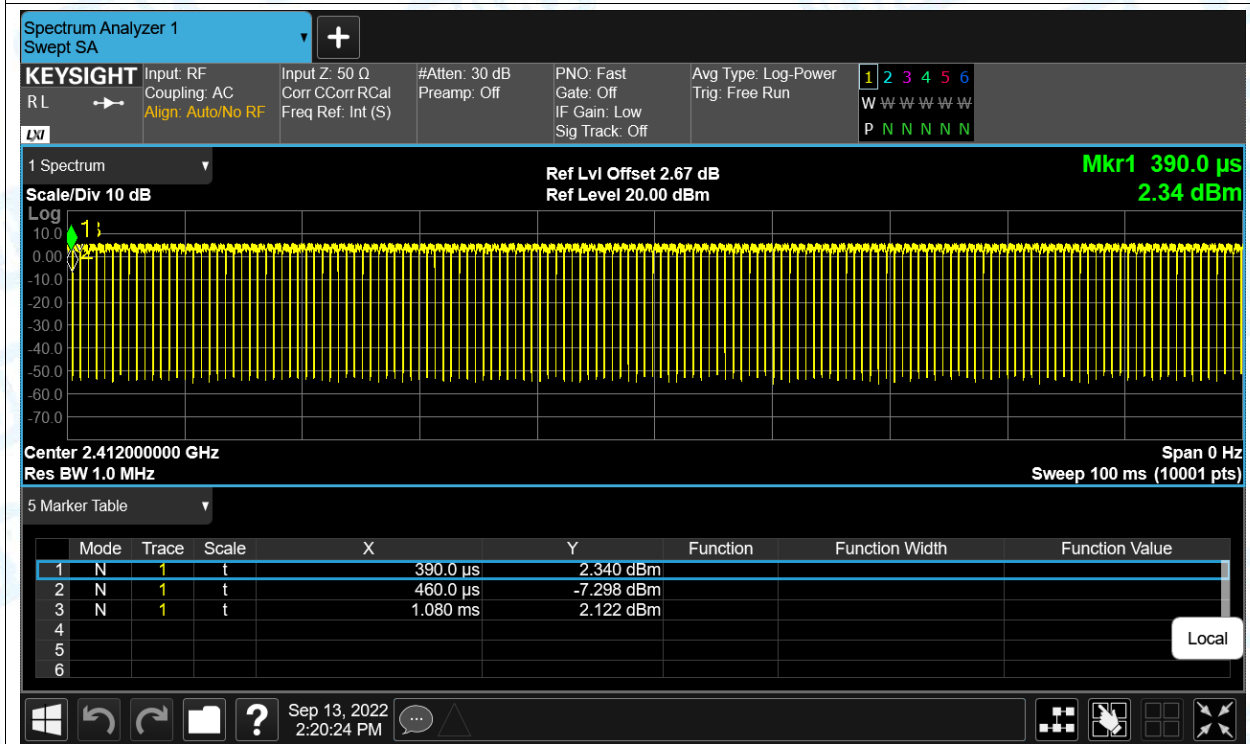
Duty Cycle NVNT b 2437MHz Ant1



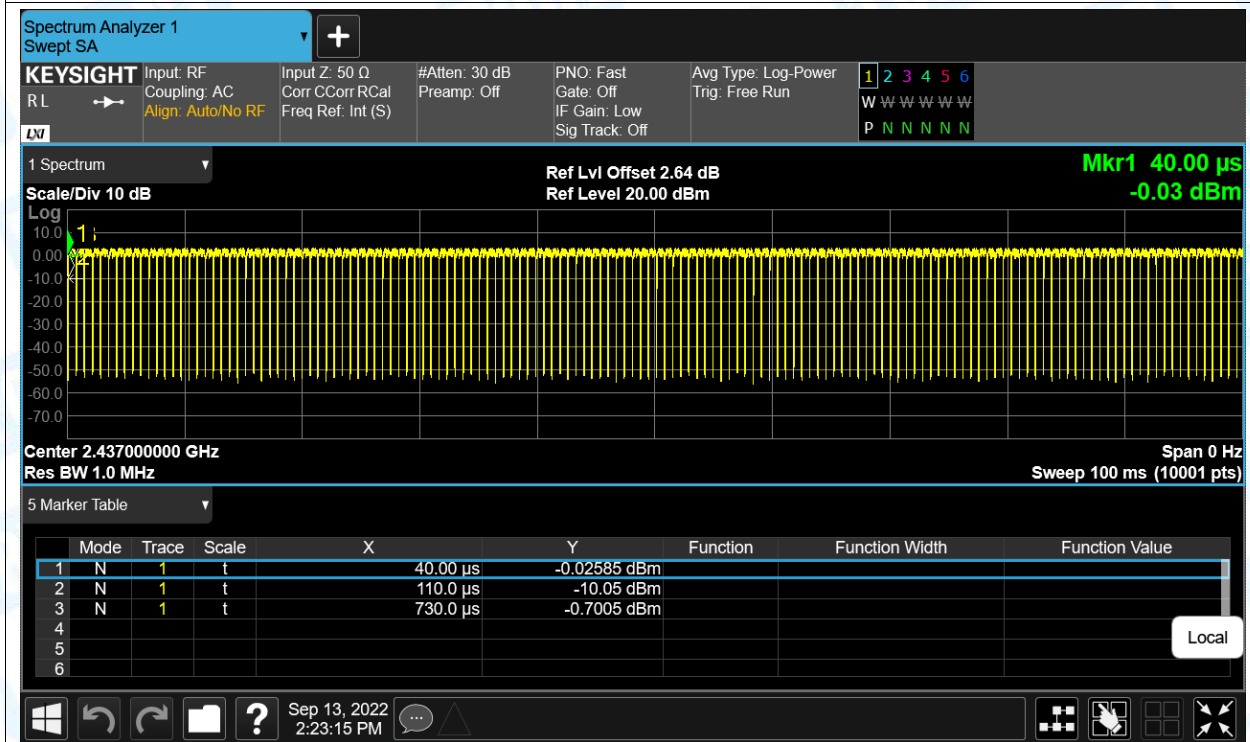
Duty Cycle NVNT b 2462MHz Ant1



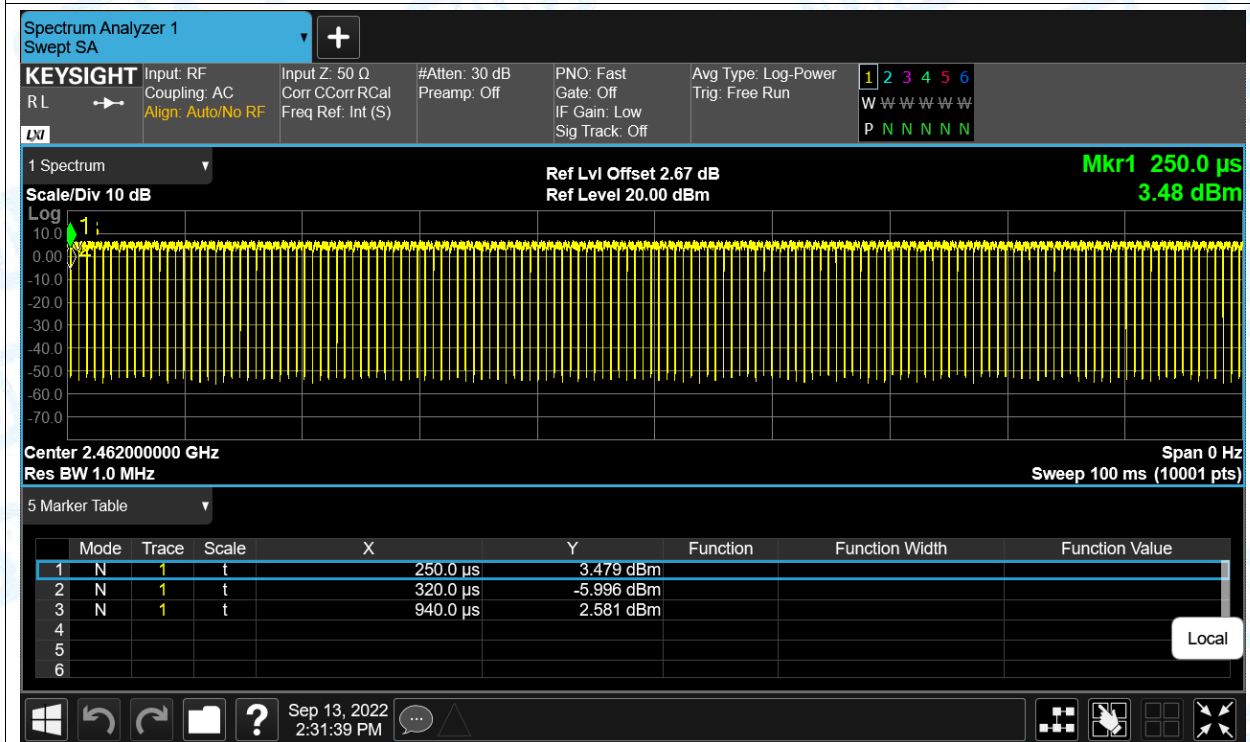
Duty Cycle NVNT g 2412MHz Ant1



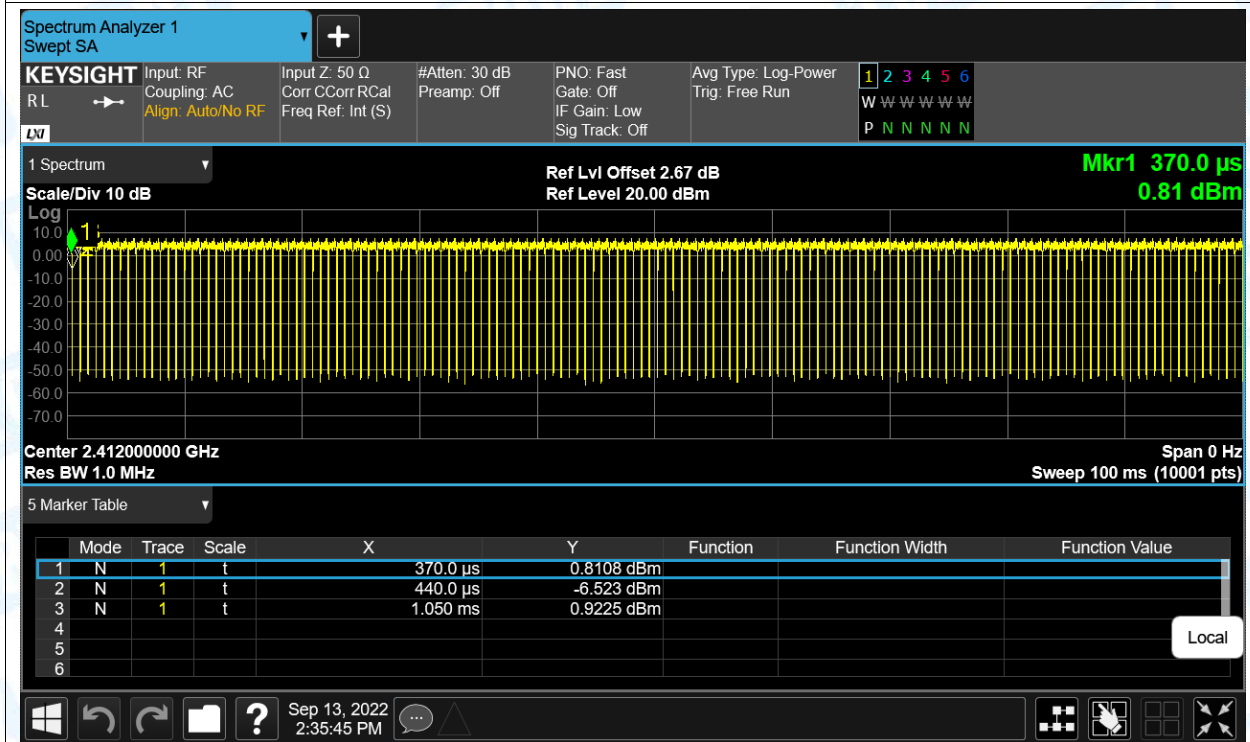
Duty Cycle NVNT g 2437MHz Ant1



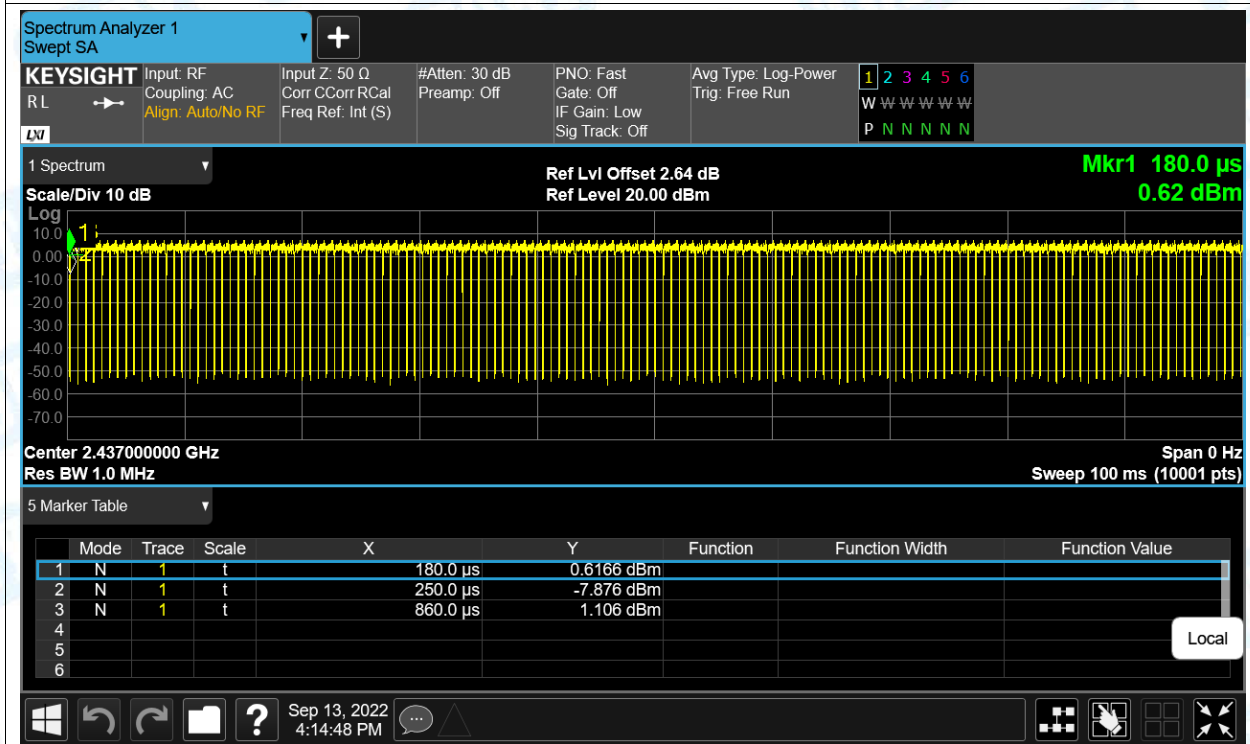
Duty Cycle NVNT g 2462MHz Ant1

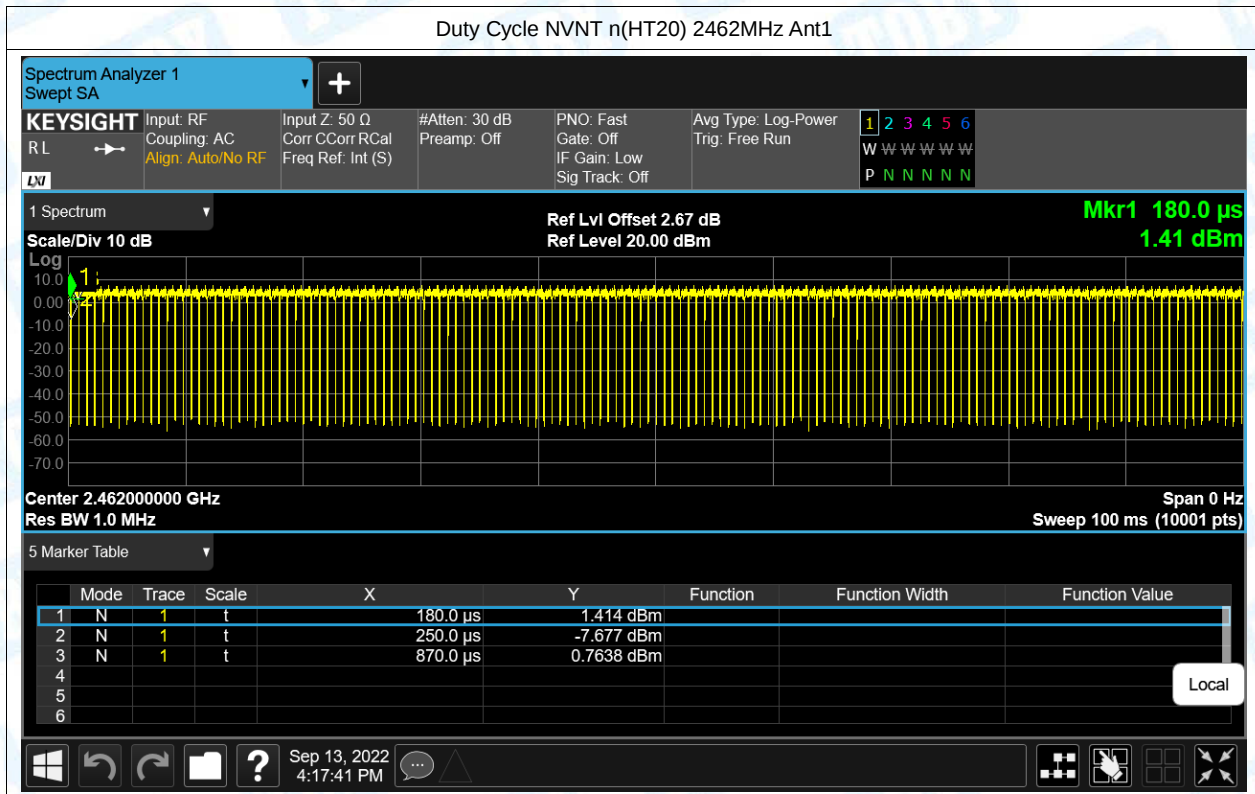


Duty Cycle NVNT n(HT20) 2412MHz Ant1



Duty Cycle NVNT n(HT20) 2437MHz Ant1





2. Maximum Conducted Output Power

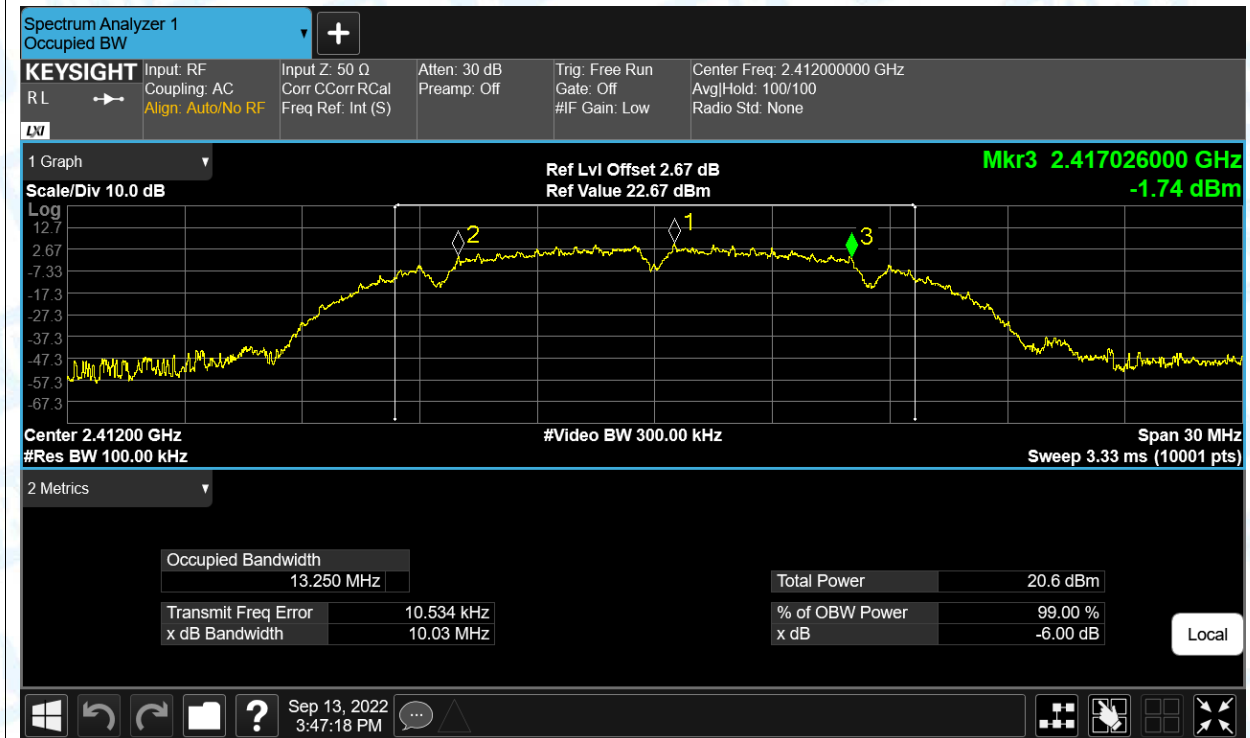
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	13.869	30	Pass
NVNT	b	2437	Ant1	13.812	30	Pass
NVNT	b	2462	Ant1	14.739	30	Pass
NVNT	g	2412	Ant1	15.326	30	Pass
NVNT	g	2437	Ant1	14.743	30	Pass
NVNT	g	2462	Ant1	15.966	30	Pass
NVNT	n(HT20)	2412	Ant1	15.613	30	Pass
NVNT	n(HT20)	2437	Ant1	16.243	30	Pass
NVNT	n(HT20)	2462	Ant1	16.495	30	Pass

3. -6dB Bandwidth

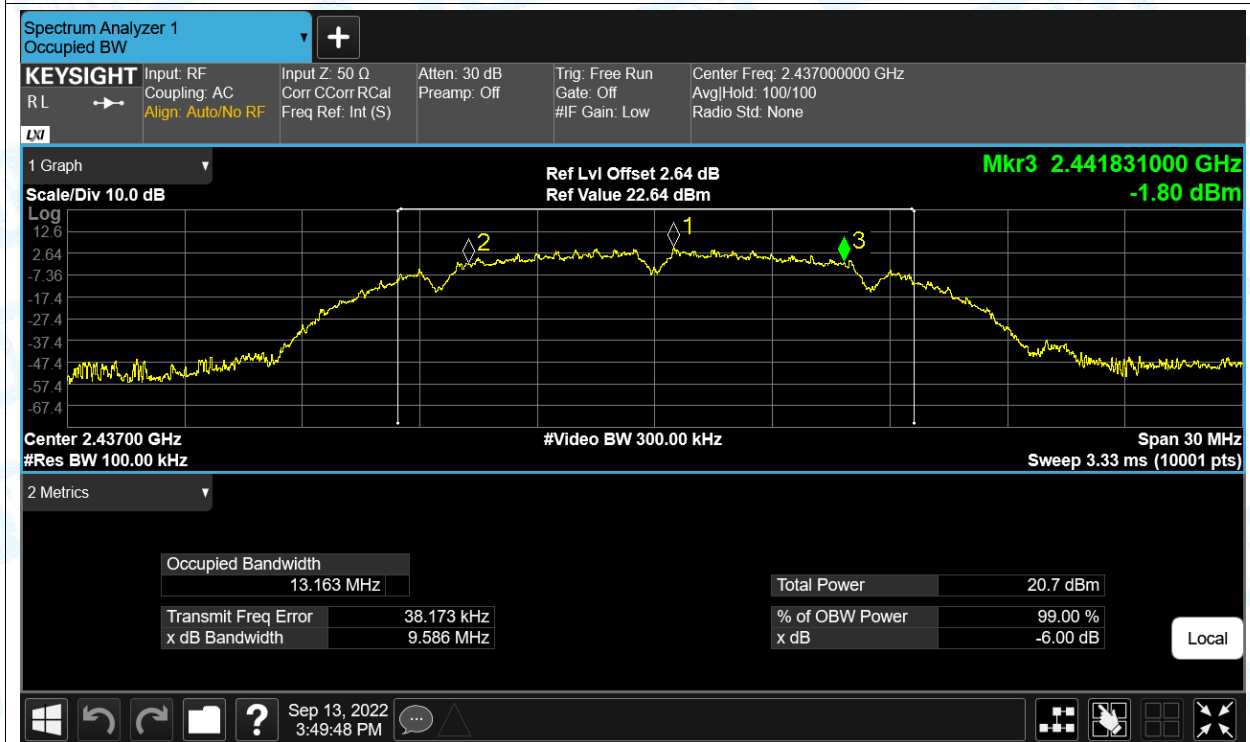
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	10.03	0.5	Pass
NVNT	b	2437	Ant1	9.59	0.5	Pass
NVNT	b	2462	Ant1	9.53	0.5	Pass
NVNT	g	2412	Ant1	16.37	0.5	Pass
NVNT	g	2437	Ant1	16.33	0.5	Pass
NVNT	g	2462	Ant1	16.37	0.5	Pass
NVNT	n(HT20)	2412	Ant1	17.59	0.5	Pass
NVNT	n(HT20)	2437	Ant1	17.58	0.5	Pass
NVNT	n(HT20)	2462	Ant1	17.58	0.5	Pass

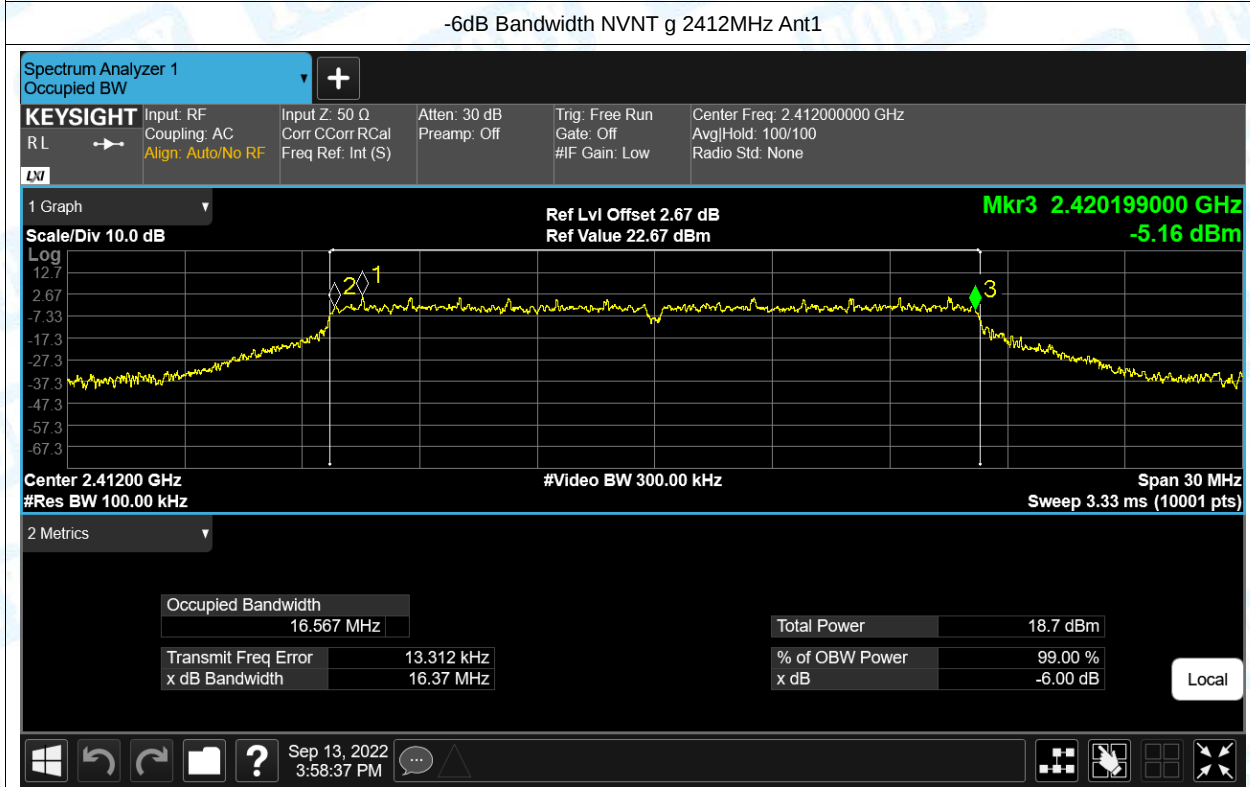
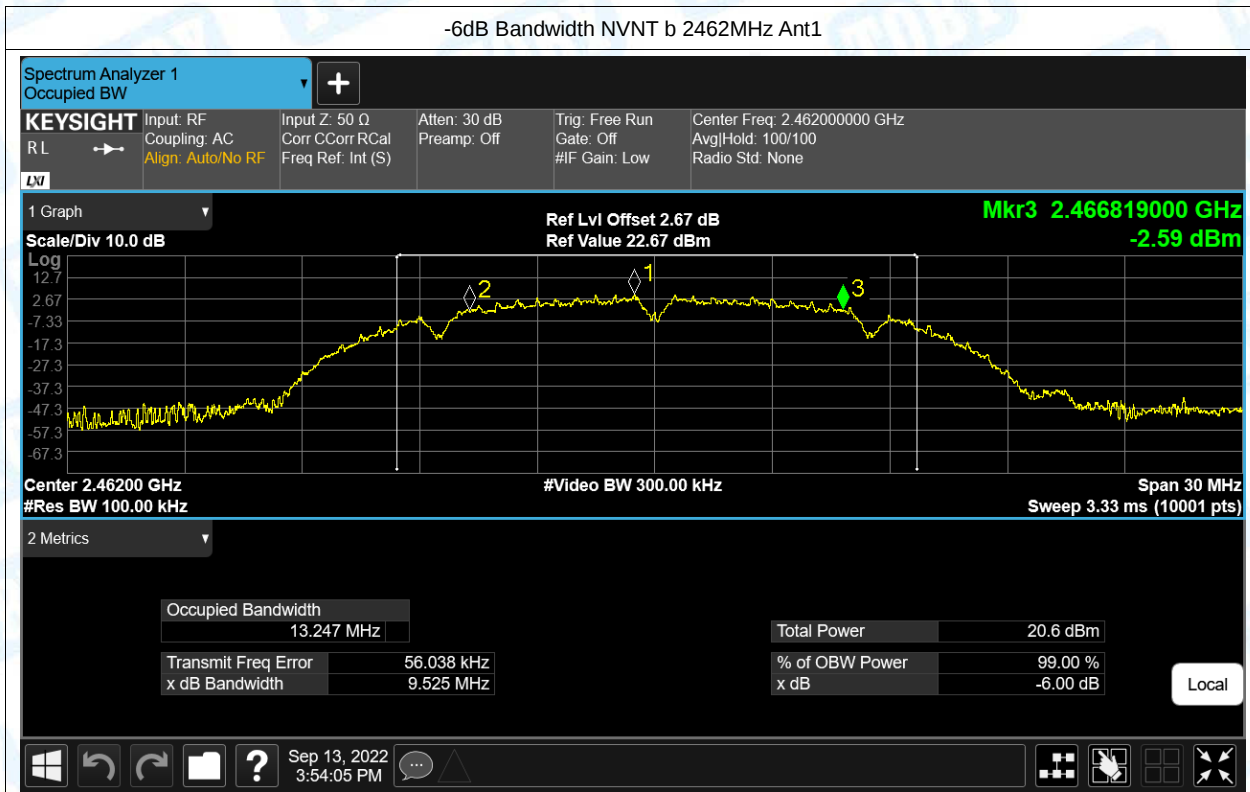
Test Graphs

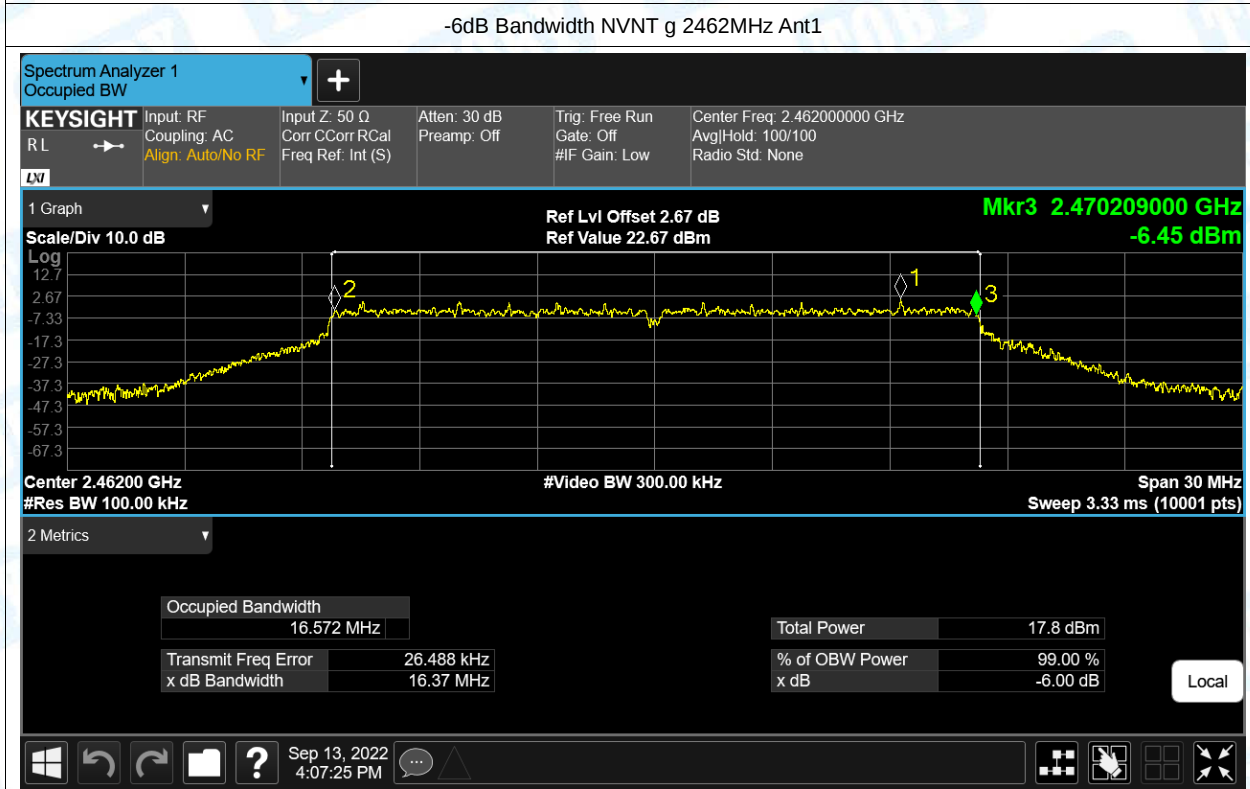
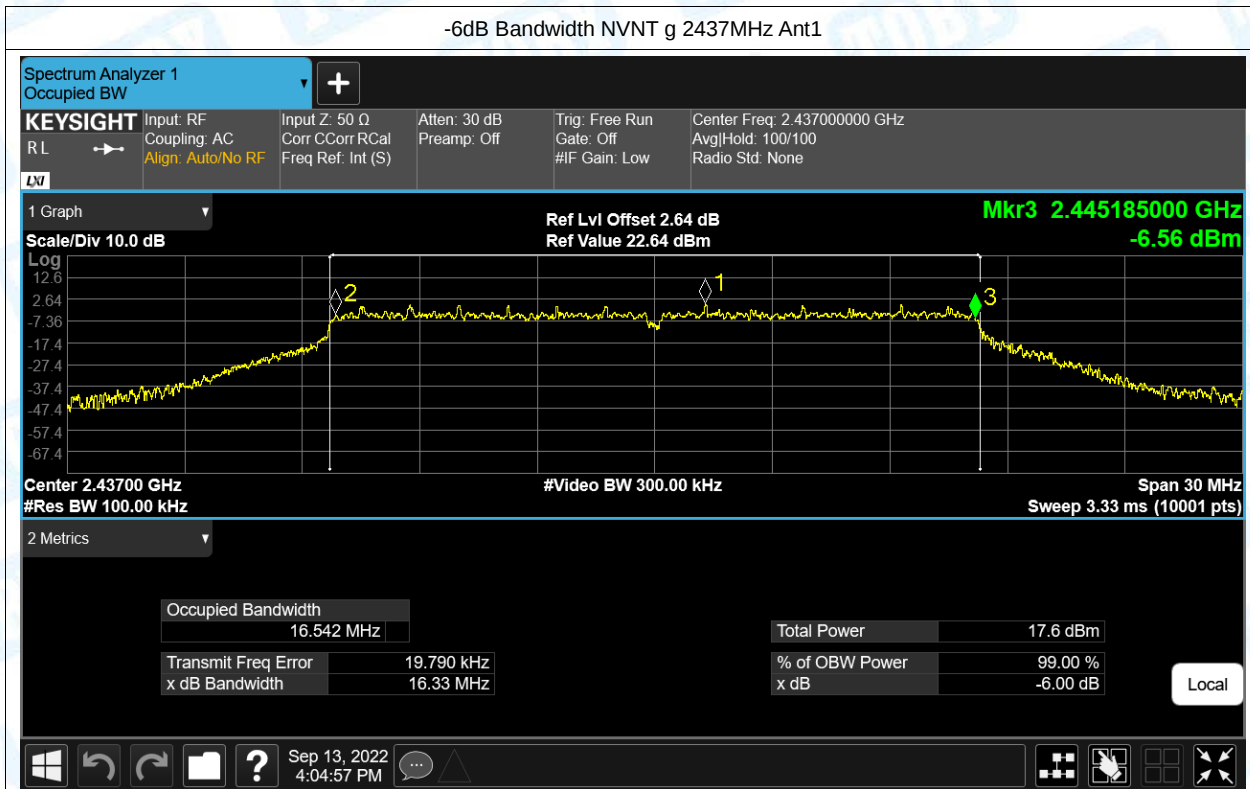
-6dB Bandwidth NVNT b 2412MHz Ant1

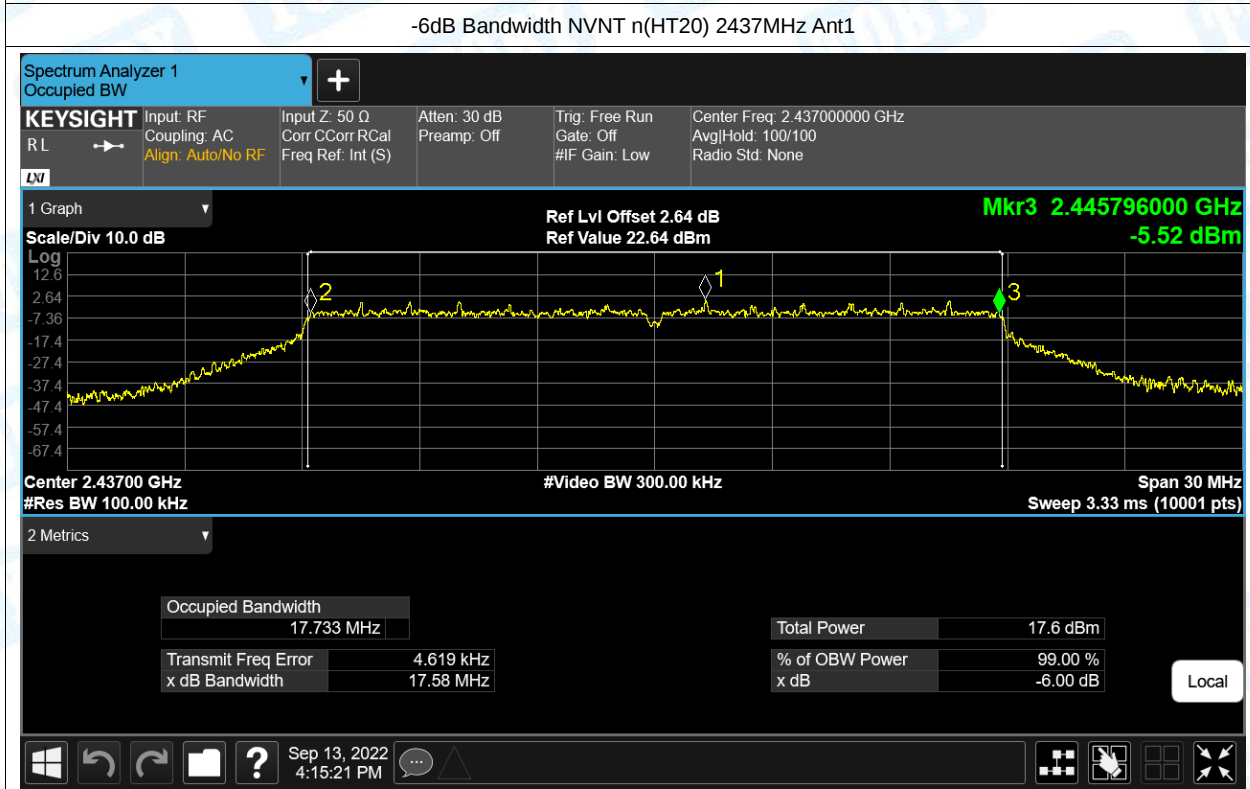
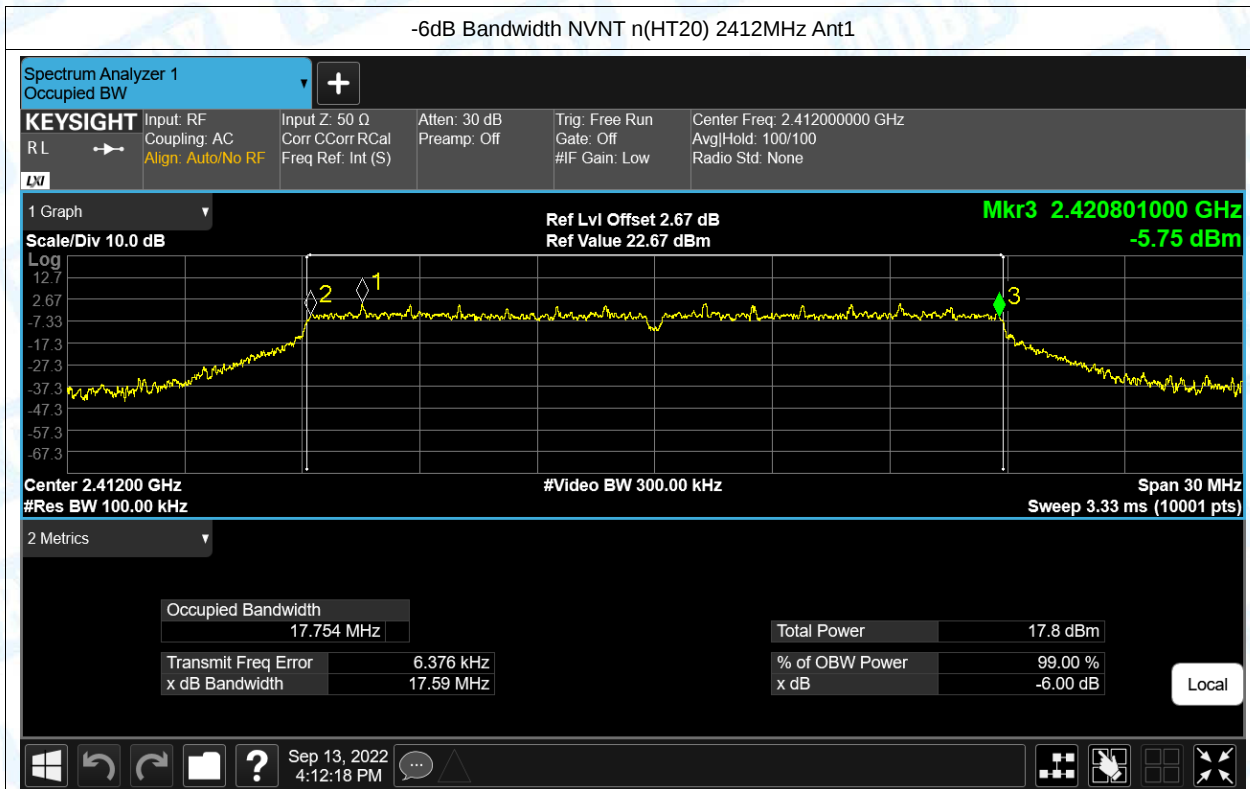


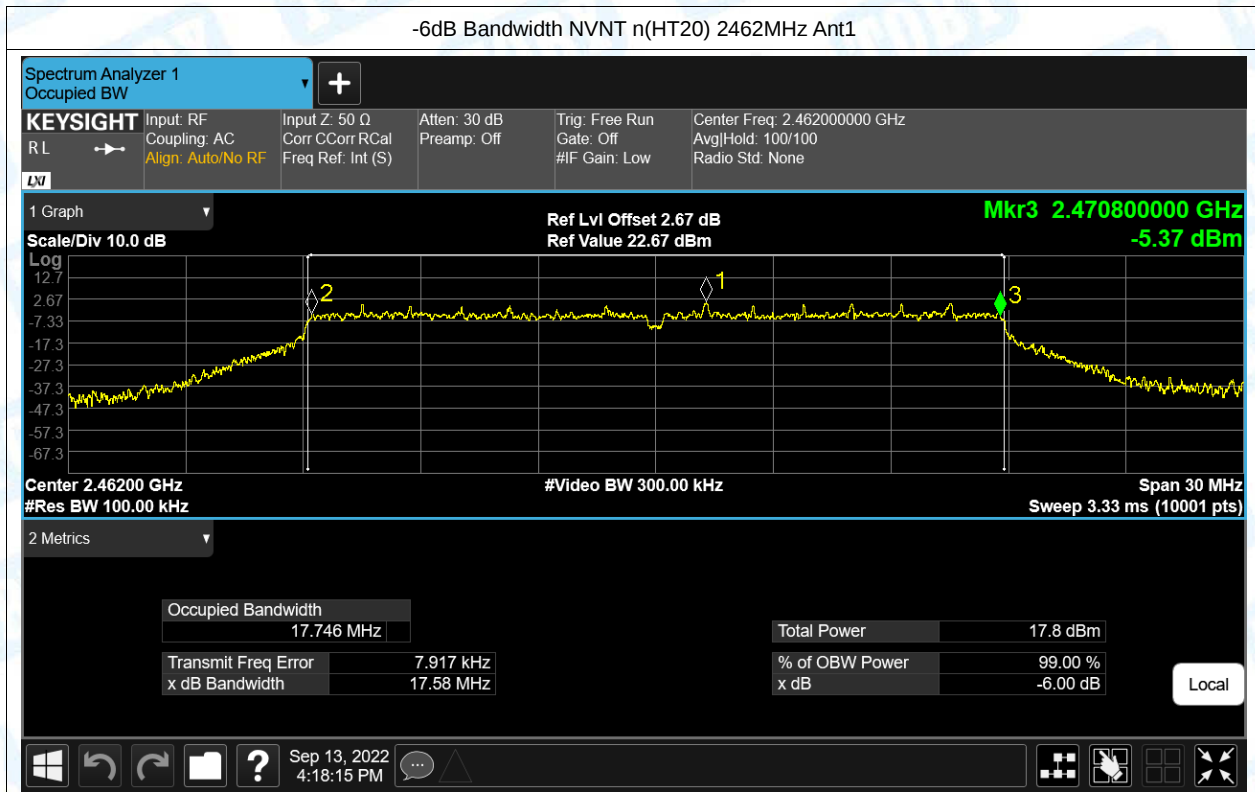
-6dB Bandwidth NVNT b 2437MHz Ant1









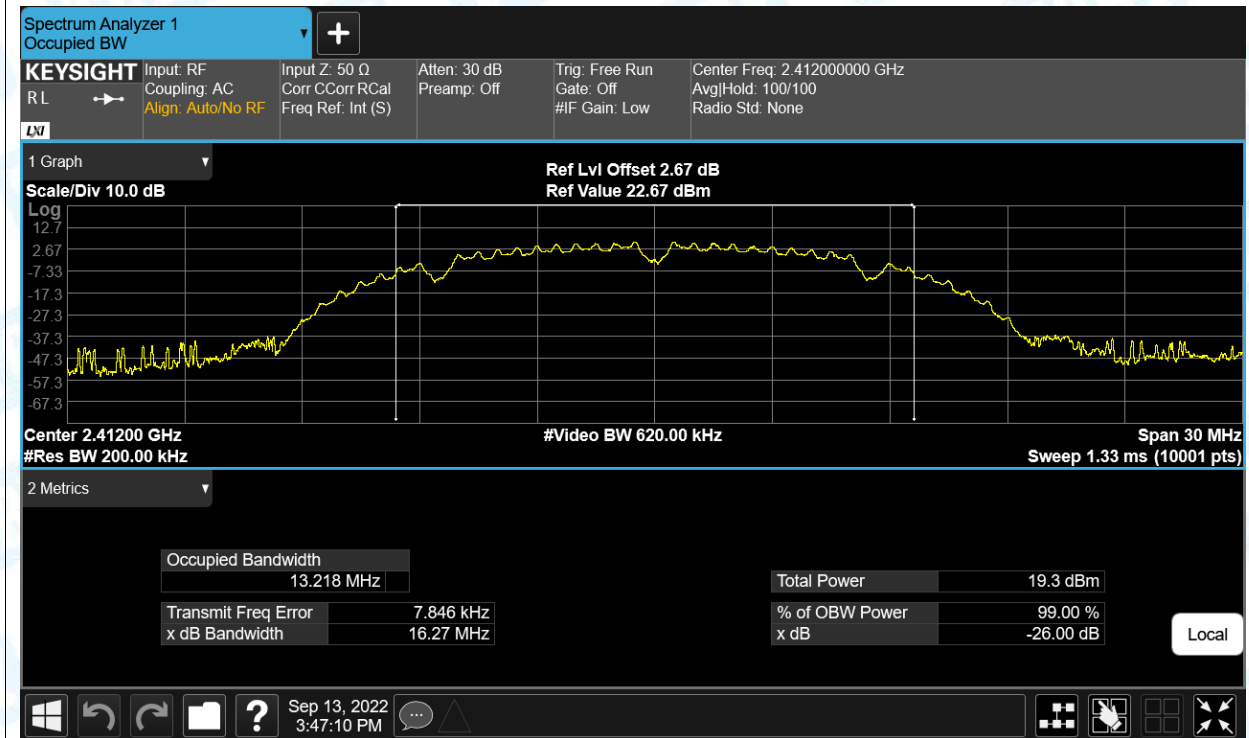


4. Occupied Channel Bandwidth

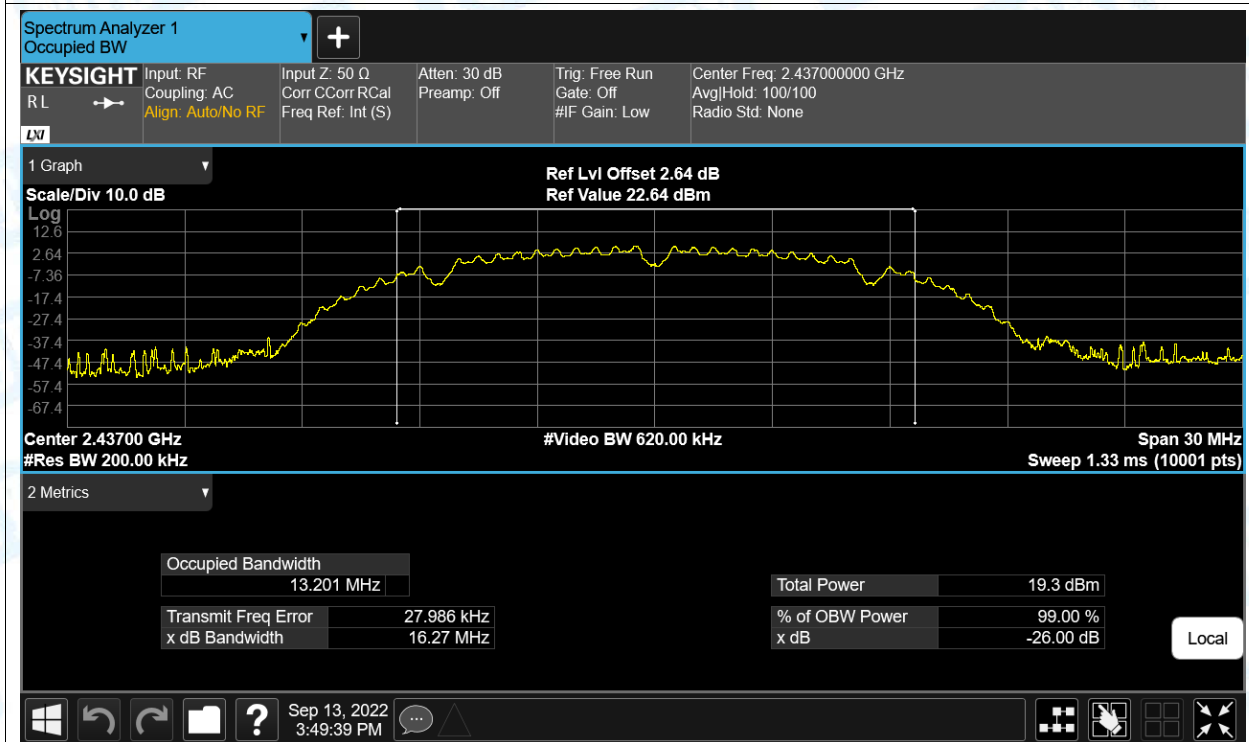
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	13.218
NVNT	b	2437	Ant1	13.201
NVNT	b	2462	Ant1	13.241
NVNT	g	2412	Ant1	16.815
NVNT	g	2437	Ant1	16.779
NVNT	g	2462	Ant1	16.789
NVNT	n(HT20)	2412	Ant1	17.936
NVNT	n(HT20)	2437	Ant1	17.894
NVNT	n(HT20)	2462	Ant1	17.941

Test Graphs

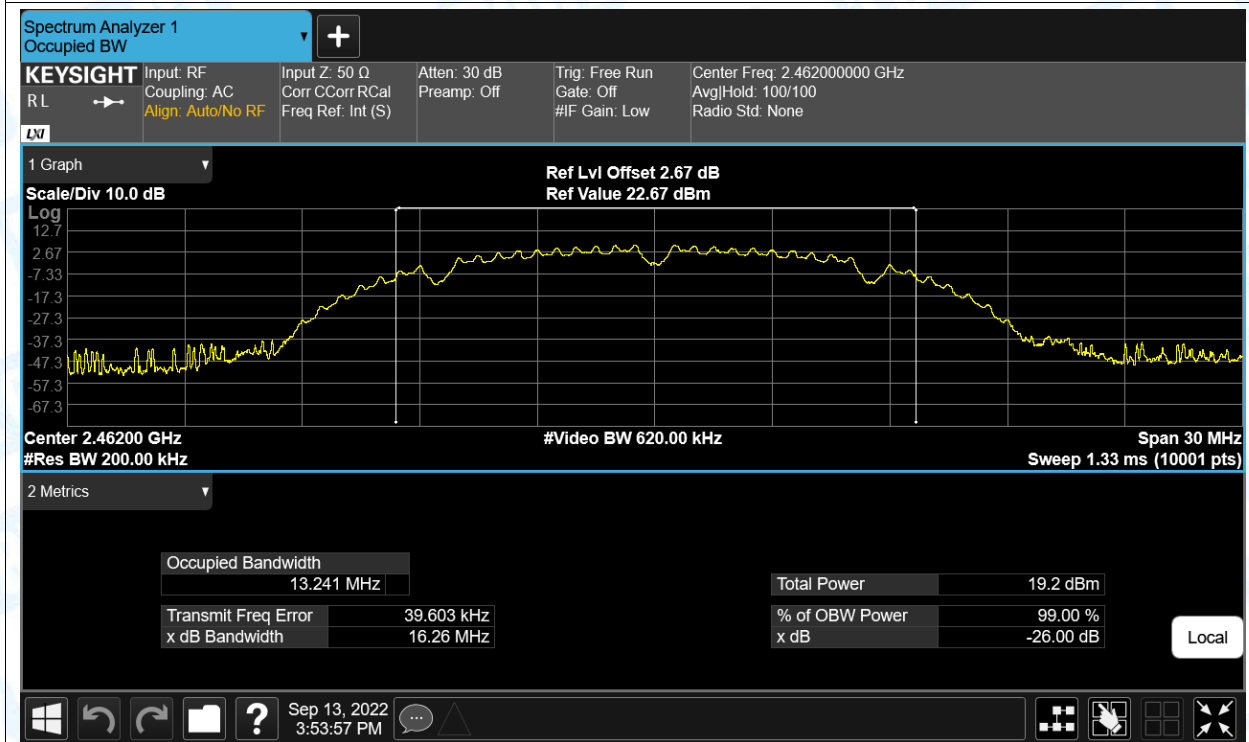
OBW NVNT b 2412MHz Ant1



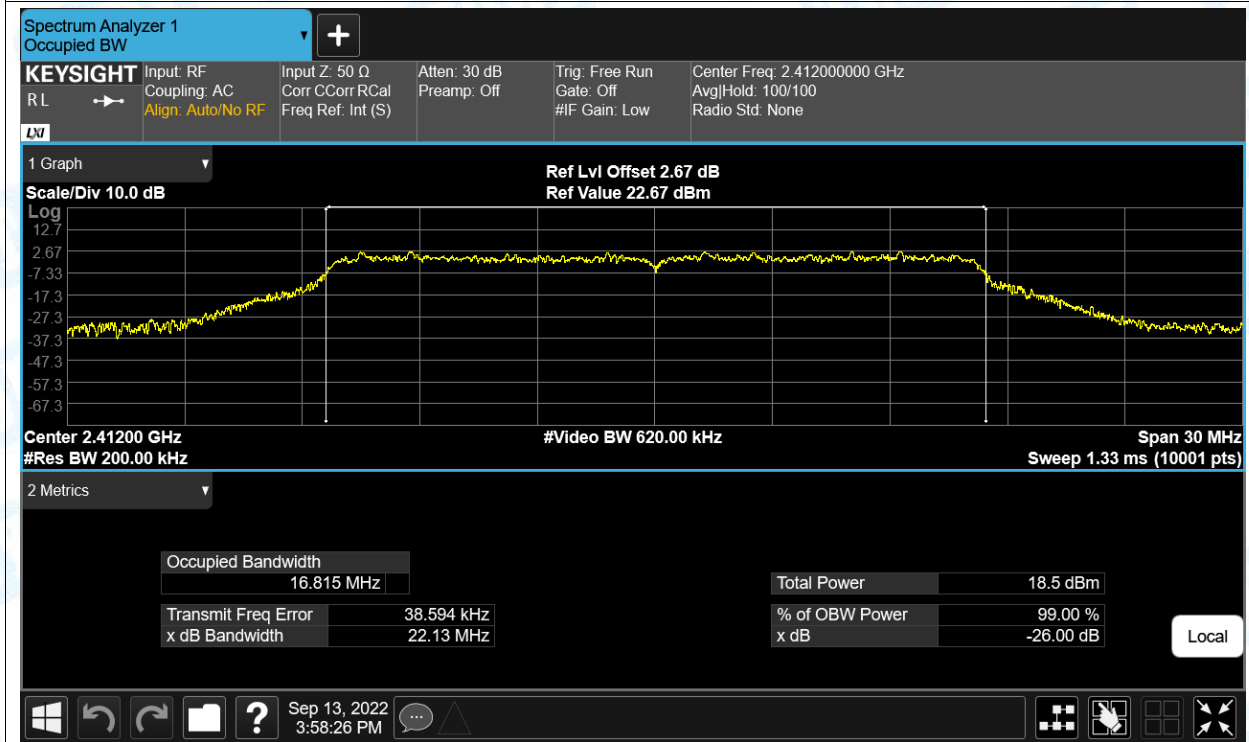
OBW NVNT b 2437MHz Ant1



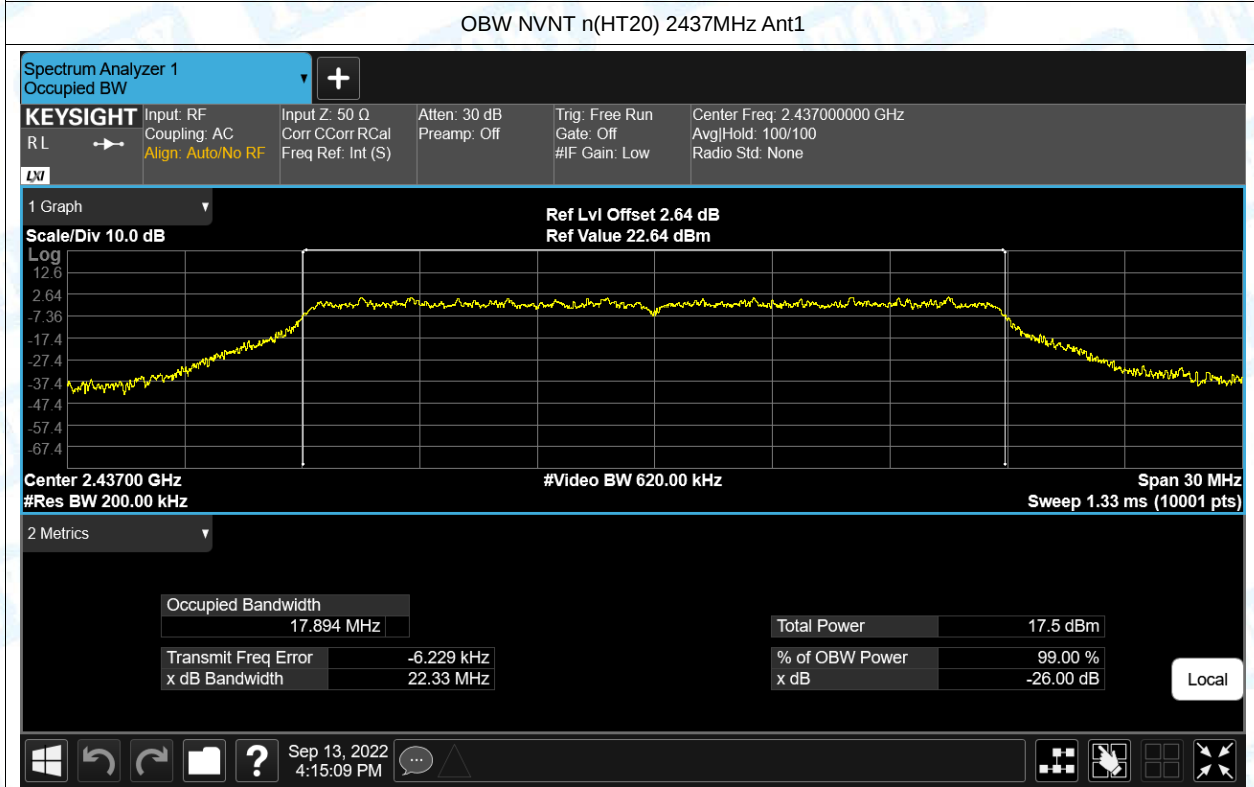
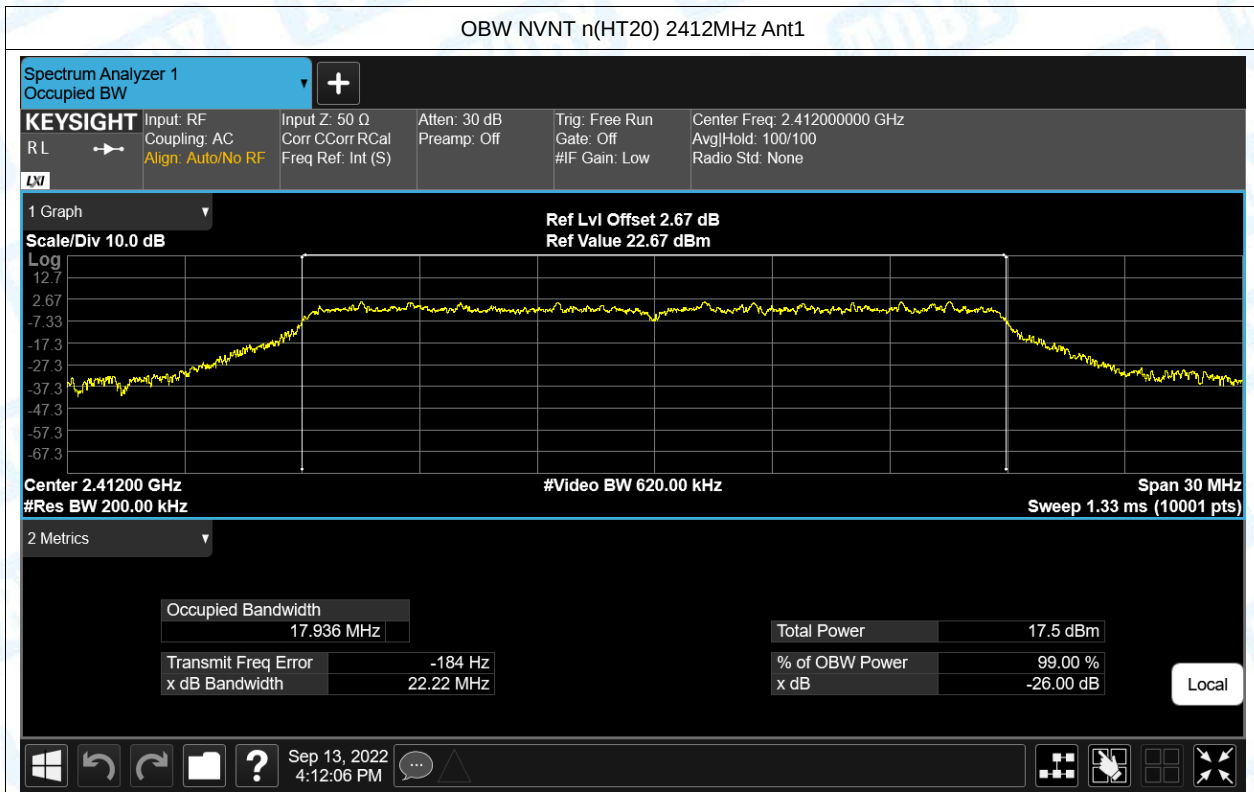
OBW NVNT b 2462MHz Ant1

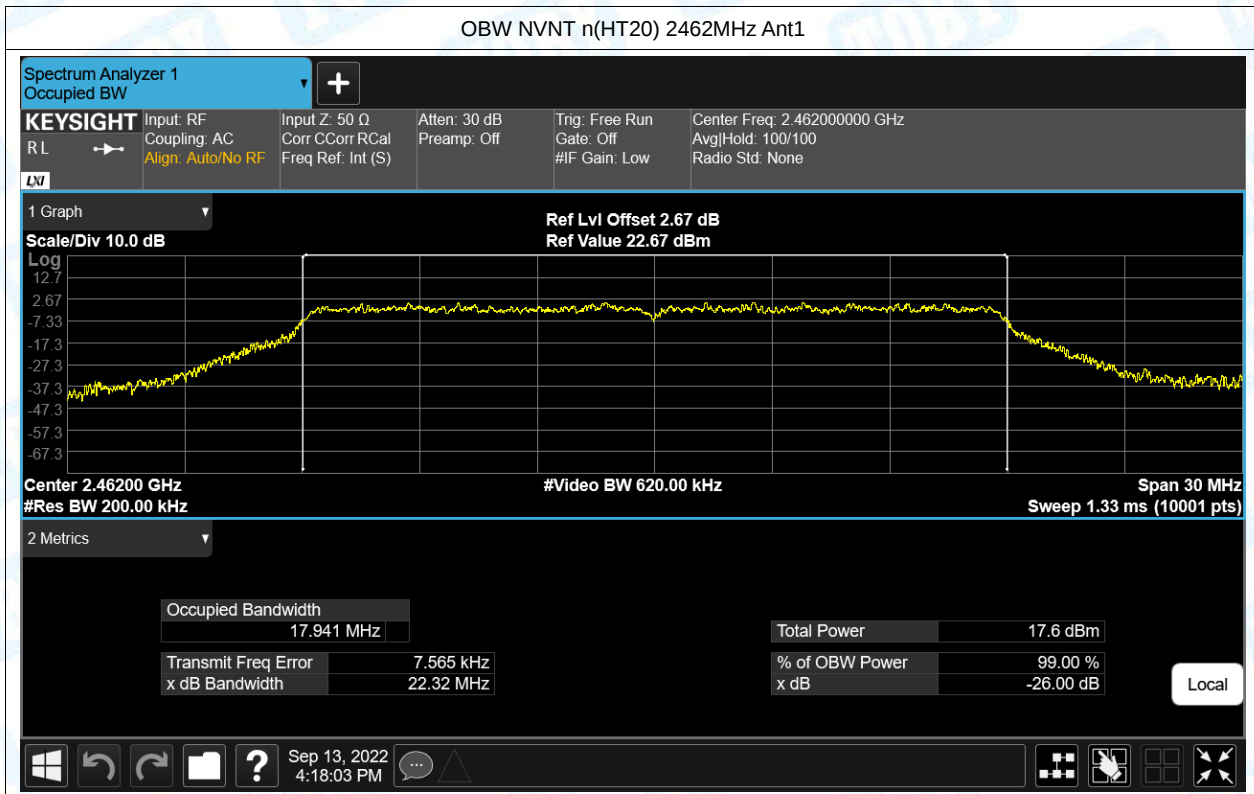


OBW NVNT g 2412MHz Ant1







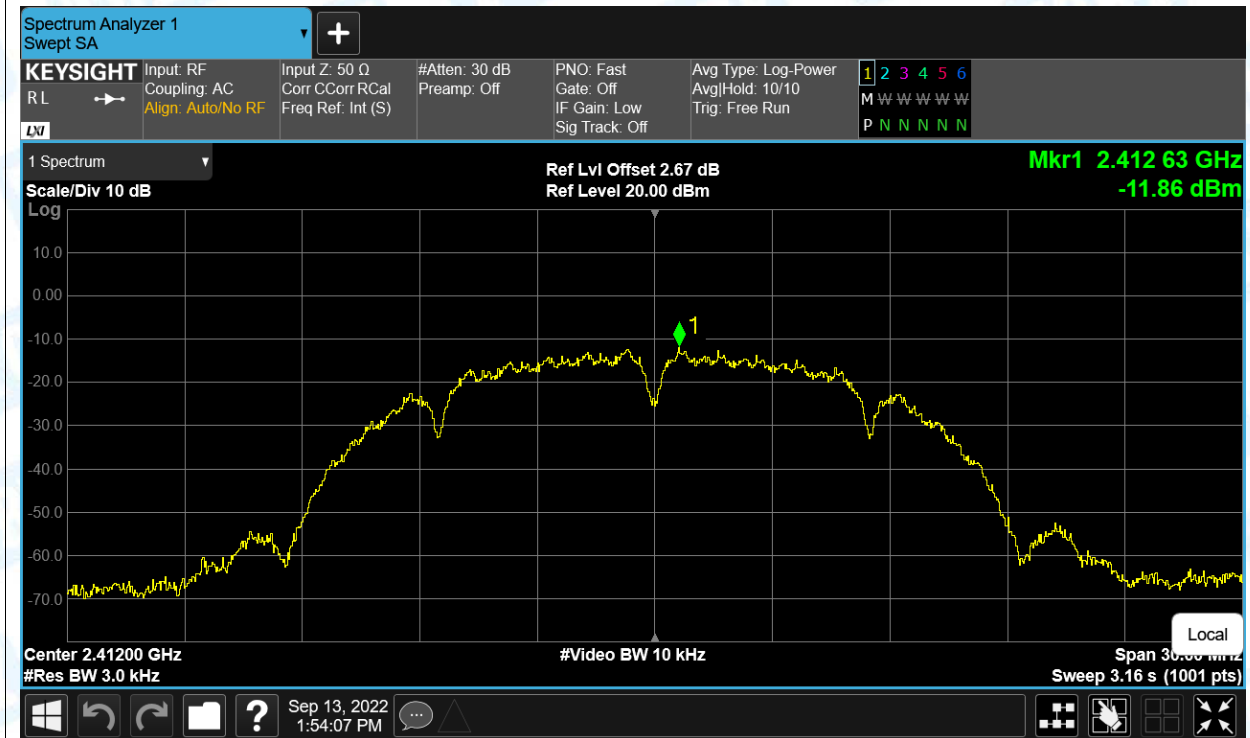


5. Maximum Power Spectral Density Level

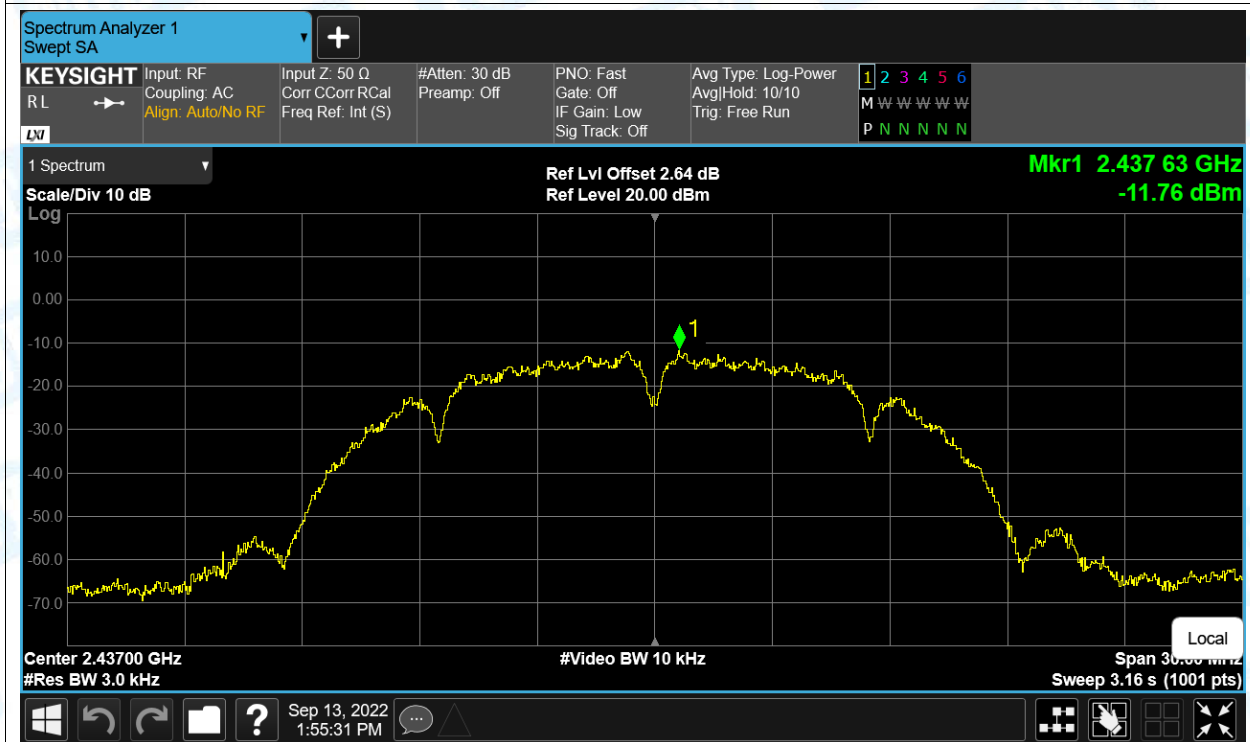
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-11.859	8	Pass
NVNT	b	2437	Ant1	-11.763	8	Pass
NVNT	b	2462	Ant1	-10.823	8	Pass
NVNT	g	2412	Ant1	-15.034	8	Pass
NVNT	g	2437	Ant1	-15.541	8	Pass
NVNT	g	2462	Ant1	-13.852	8	Pass
NVNT	n(HT20)	2412	Ant1	-14.633	8	Pass
NVNT	n(HT20)	2437	Ant1	-13.874	8	Pass
NVNT	n(HT20)	2462	Ant1	-13.744	8	Pass

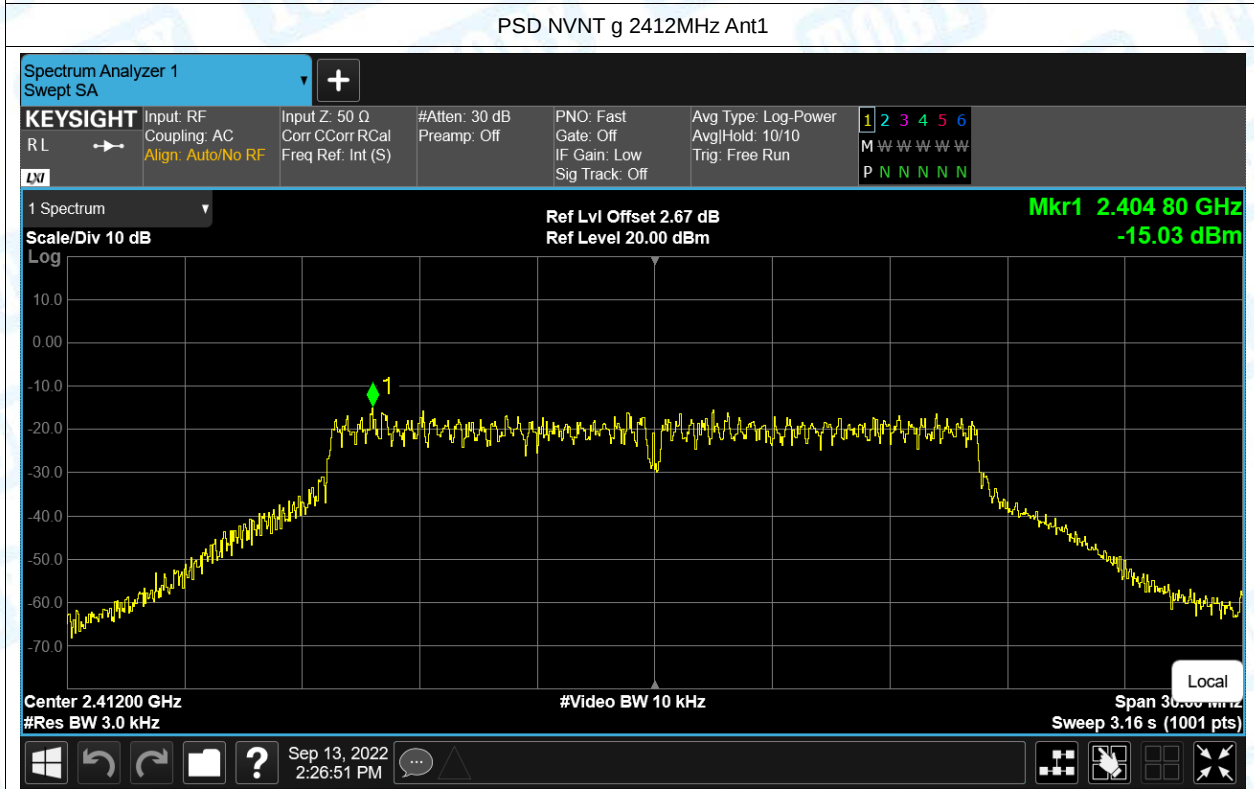
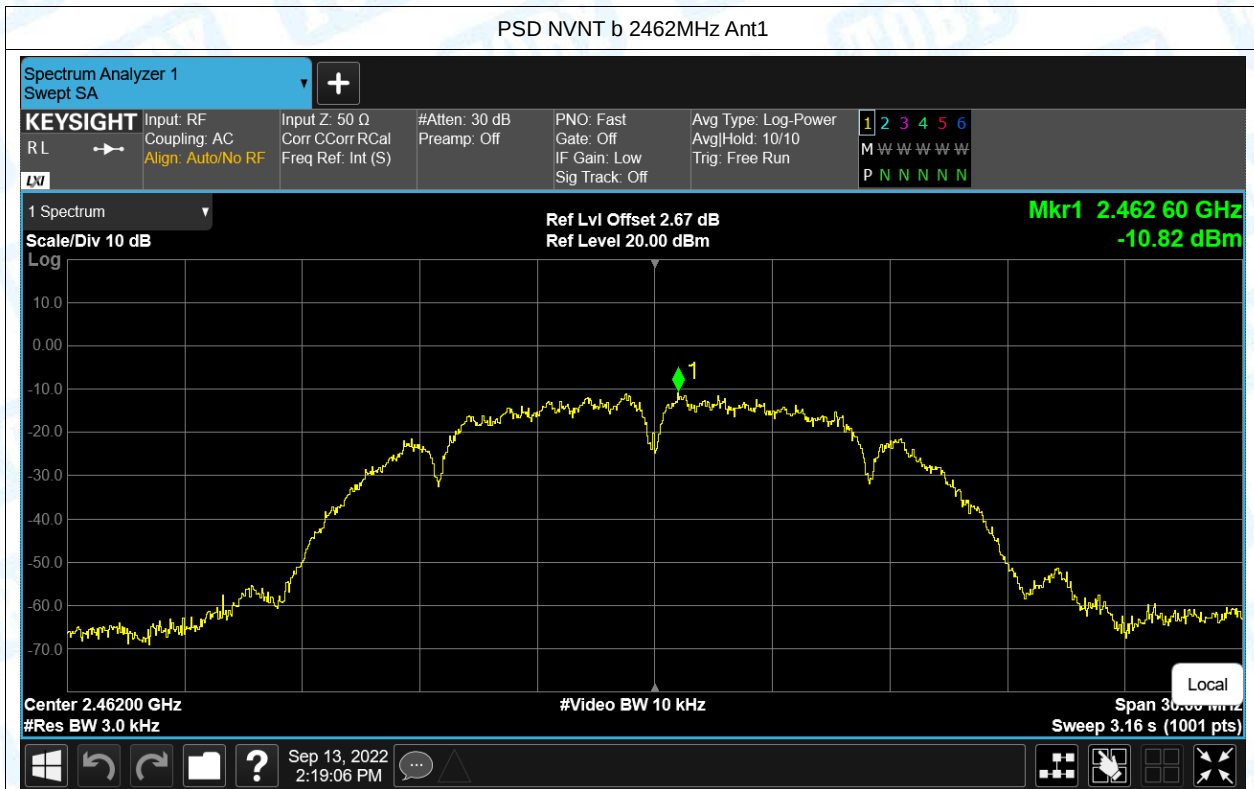
Test Graphs

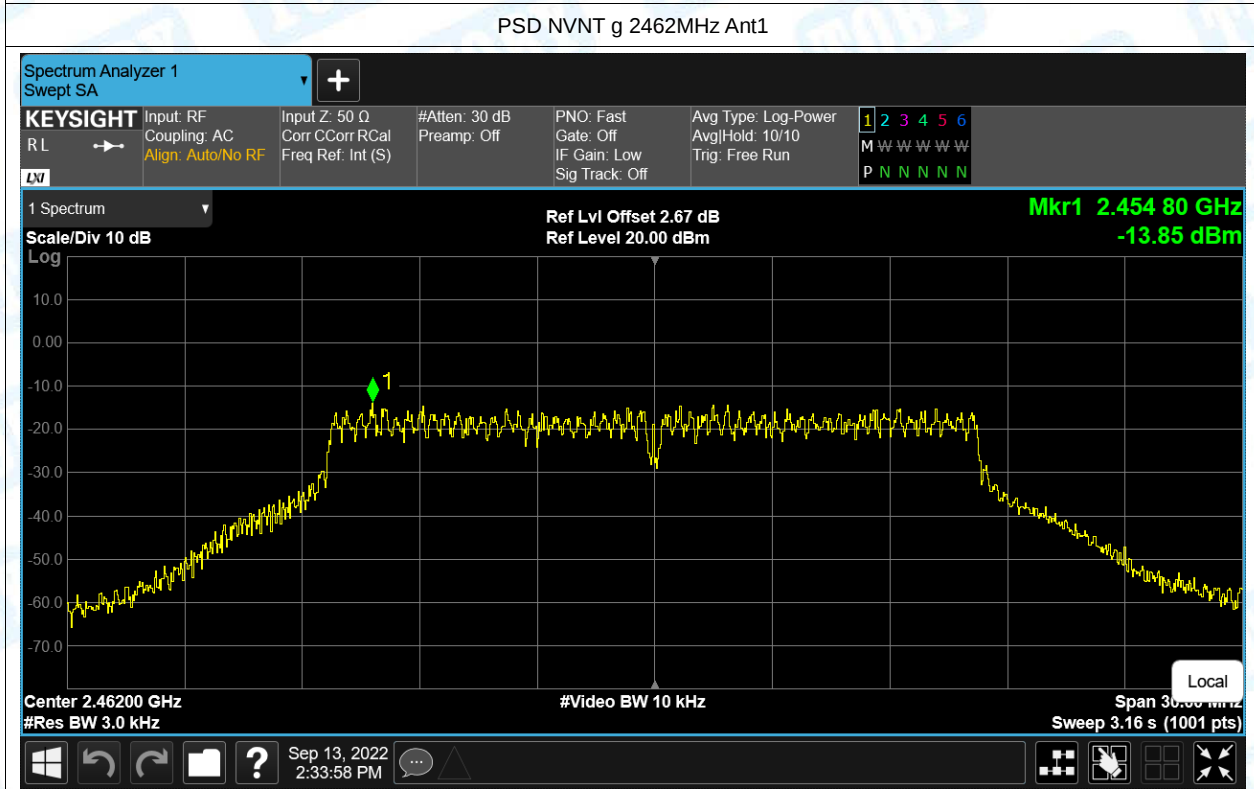
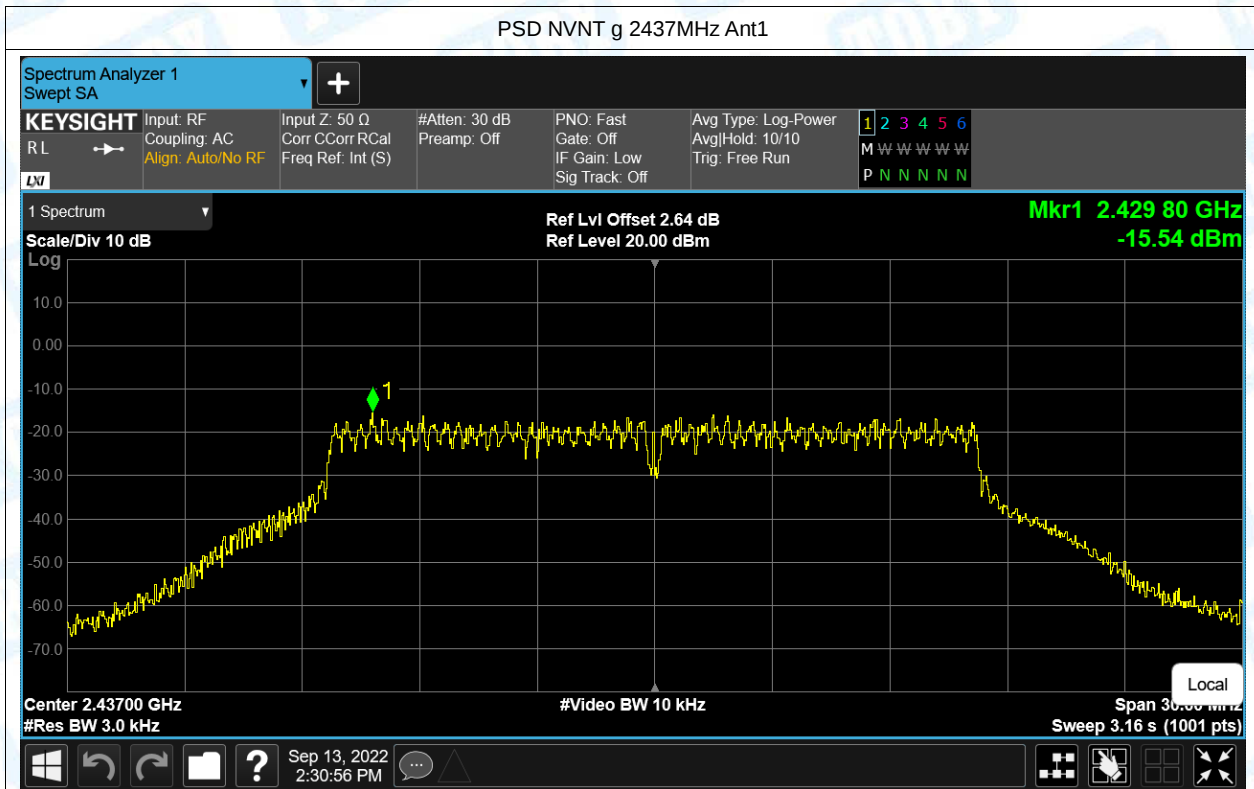
PSD NVNT b 2412MHz Ant1

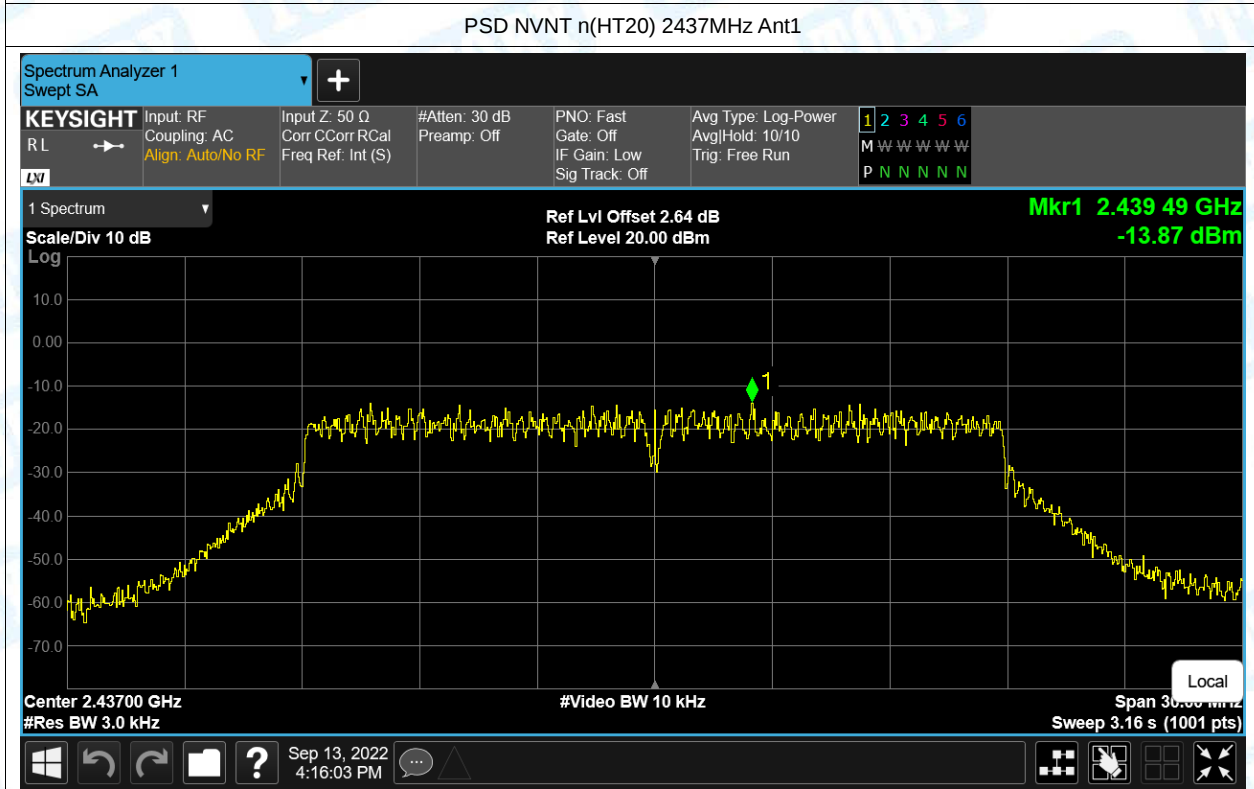
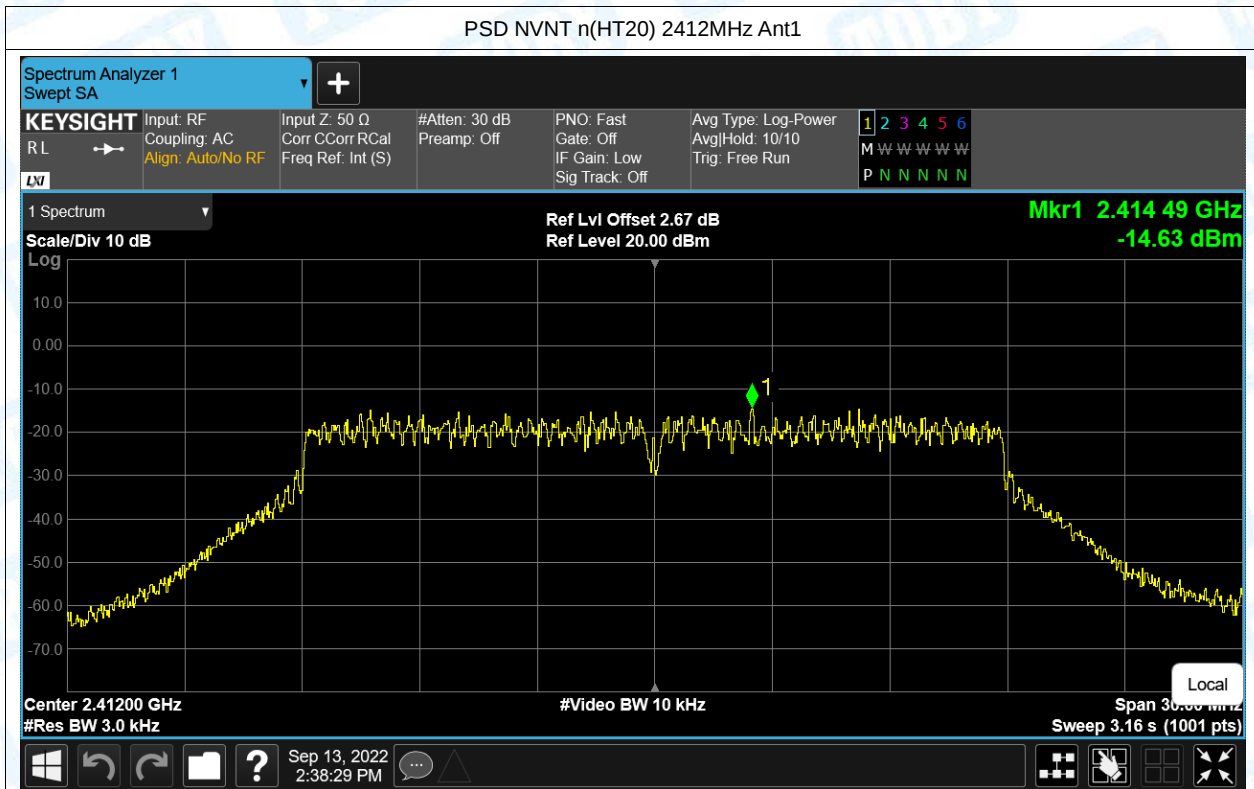


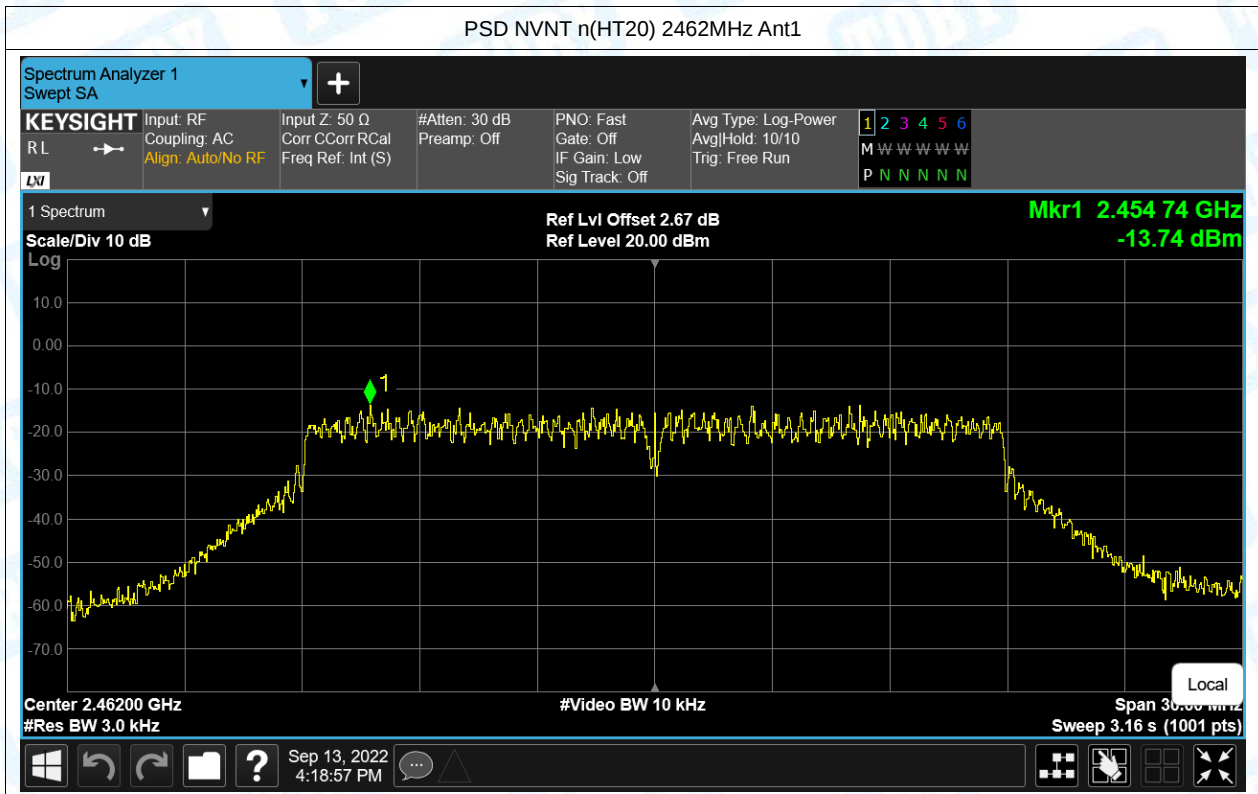
PSD NVNT b 2437MHz Ant1







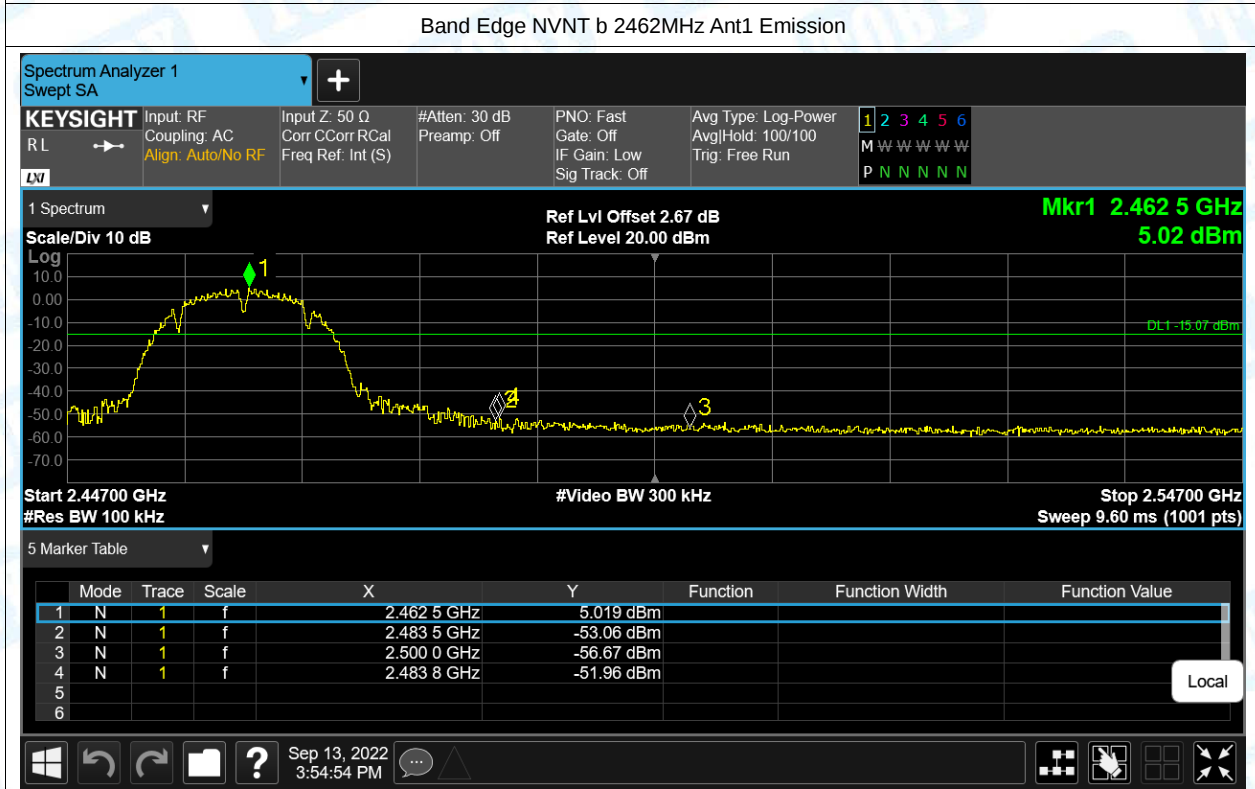
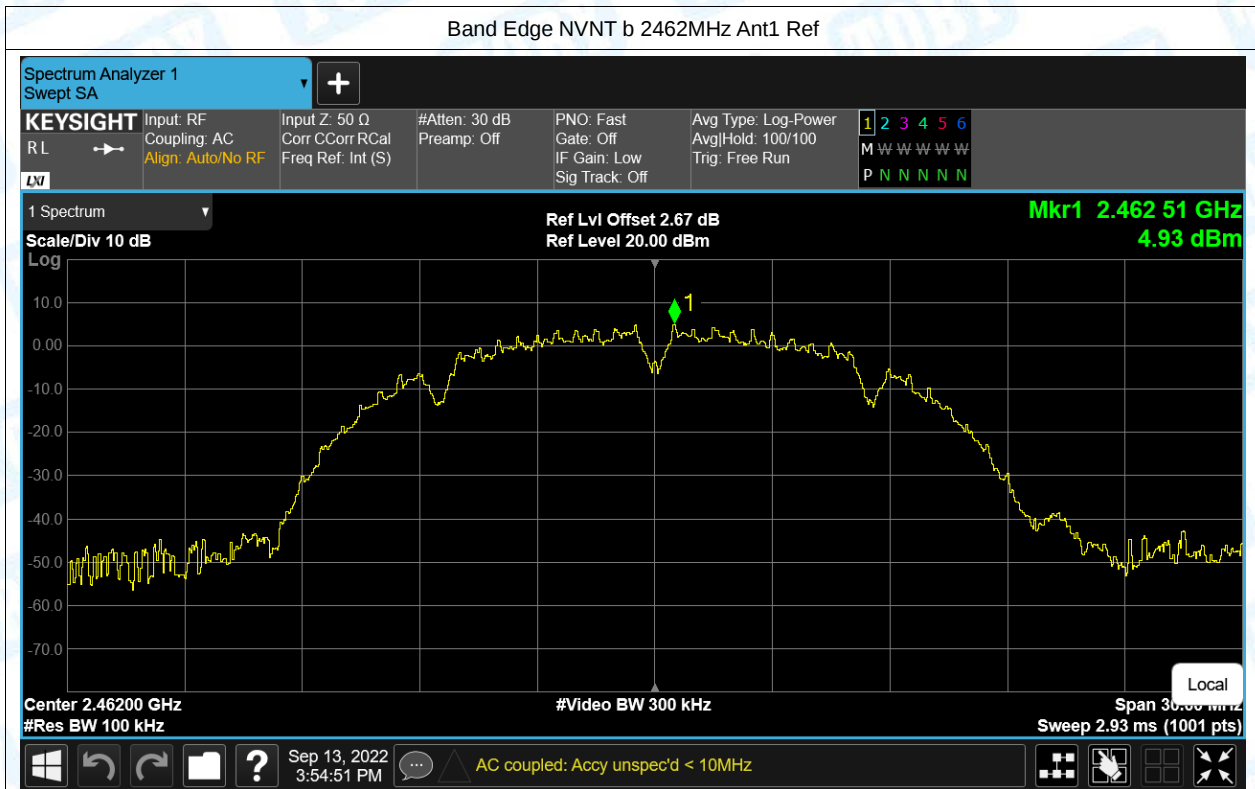




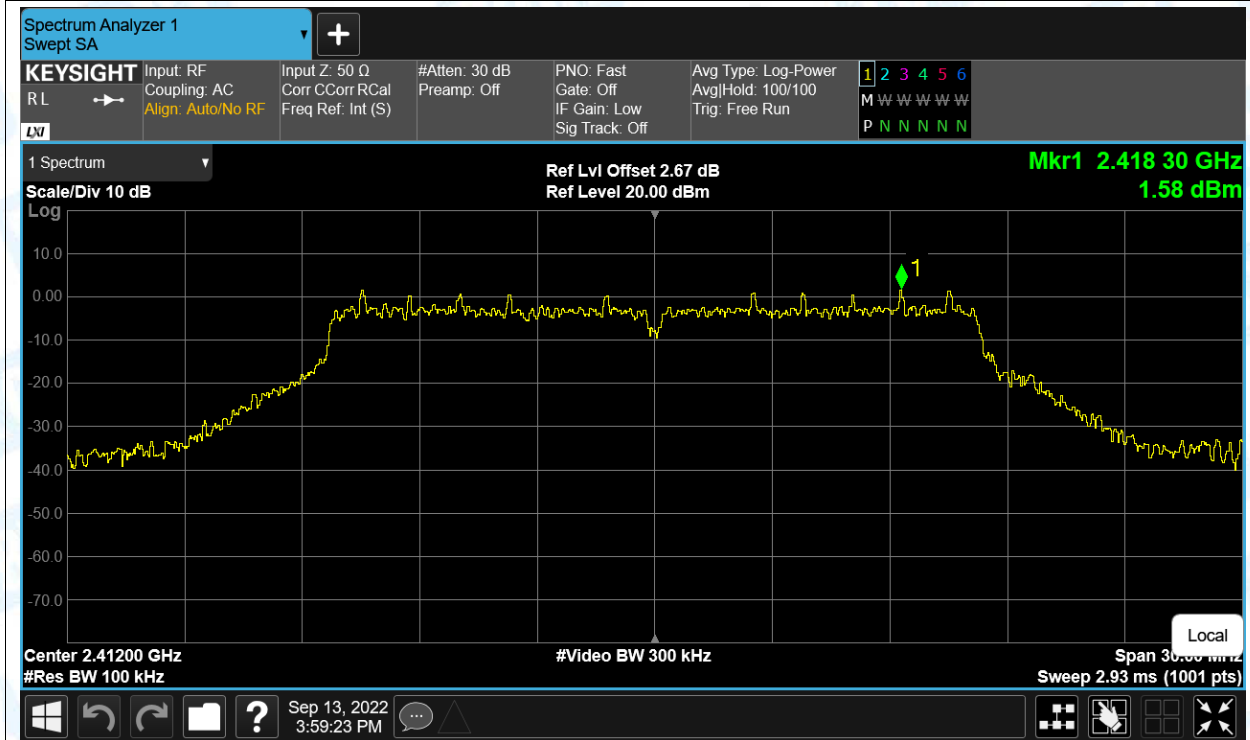
6. Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-56.52	-20	Pass
NVNT	b	2462	Ant1	-56.89	-20	Pass
NVNT	g	2412	Ant1	-43.6	-20	Pass
NVNT	g	2462	Ant1	-47.46	-20	Pass
NVNT	n(HT20)	2412	Ant1	-41.1	-20	Pass
NVNT	n(HT20)	2462	Ant1	-42.08	-20	Pass

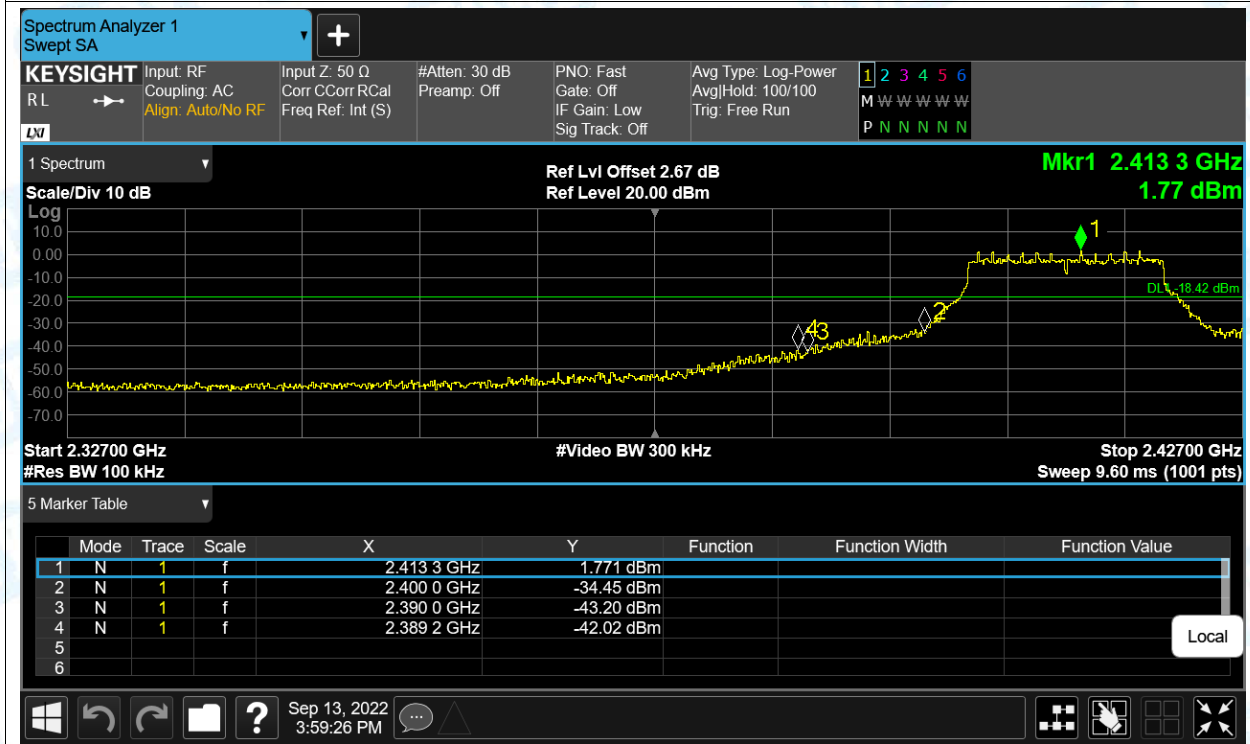




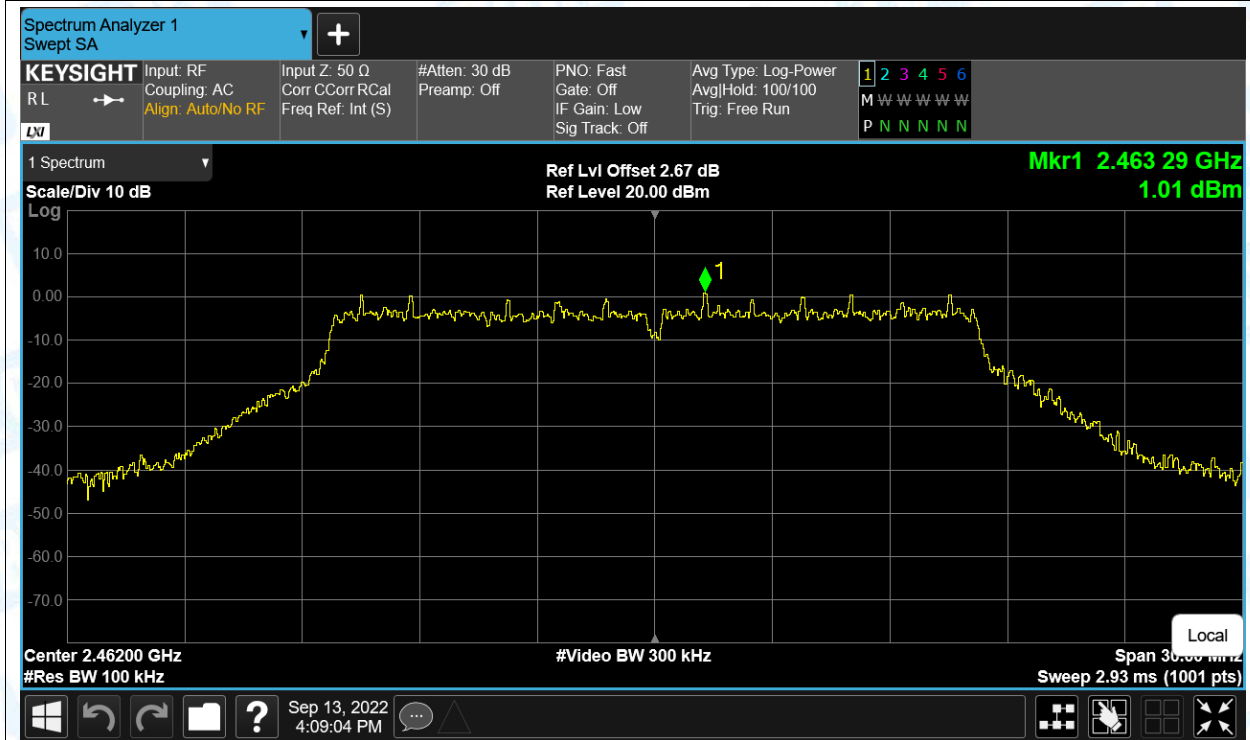
Band Edge NVNT g 2412MHz Ant1 Ref



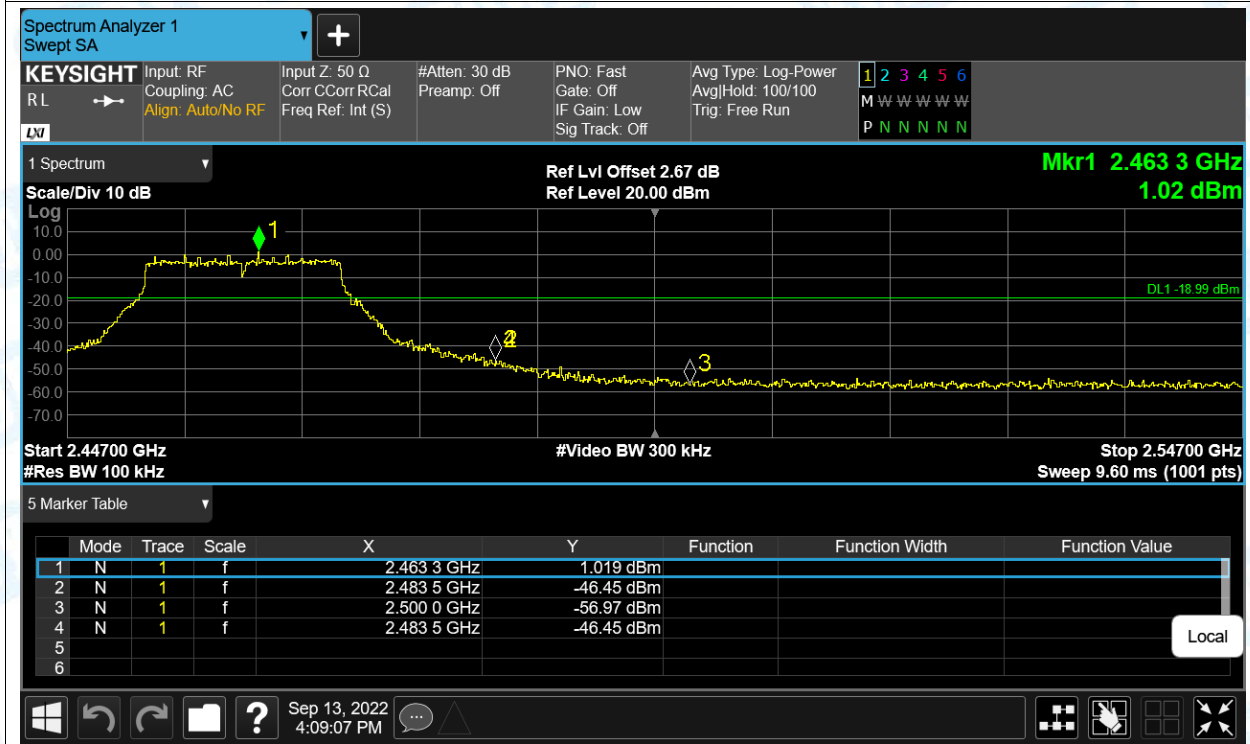
Band Edge NVNT g 2412MHz Ant1 Emission

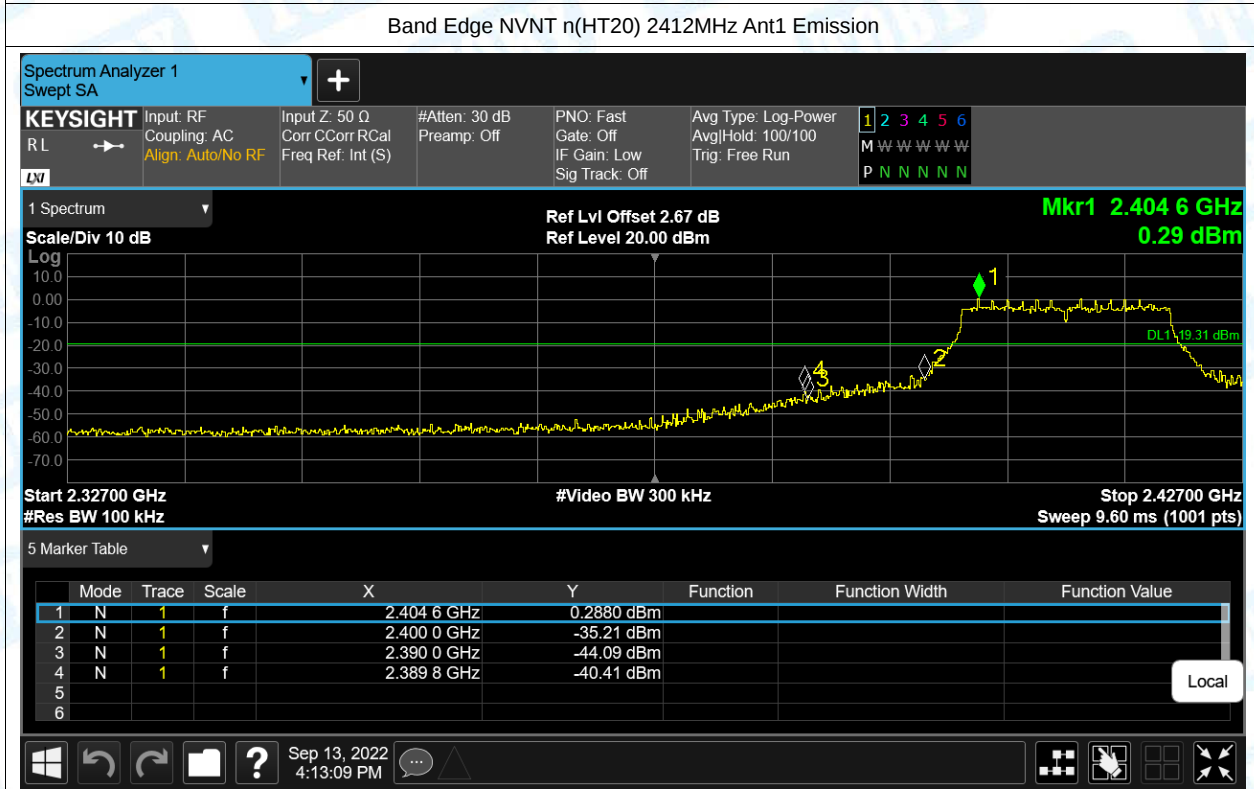
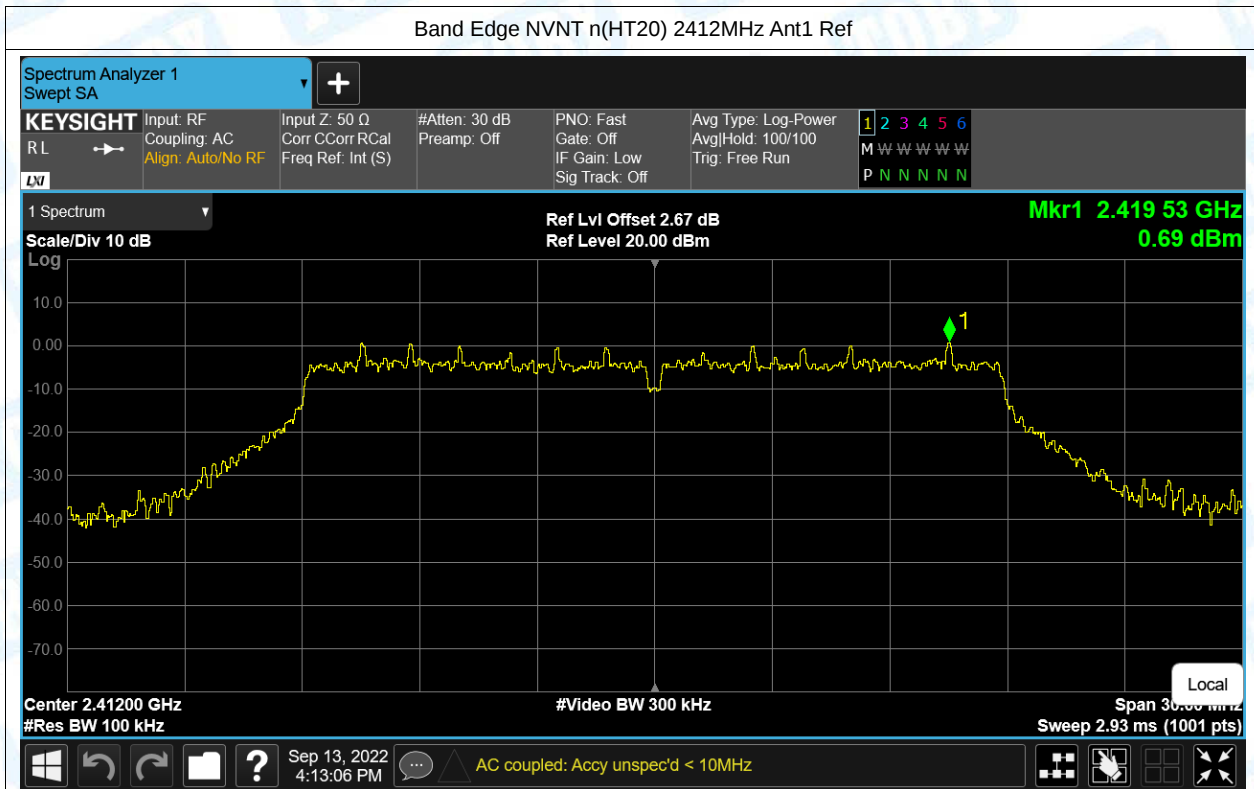


Band Edge NVNT g 2462MHz Ant1 Ref

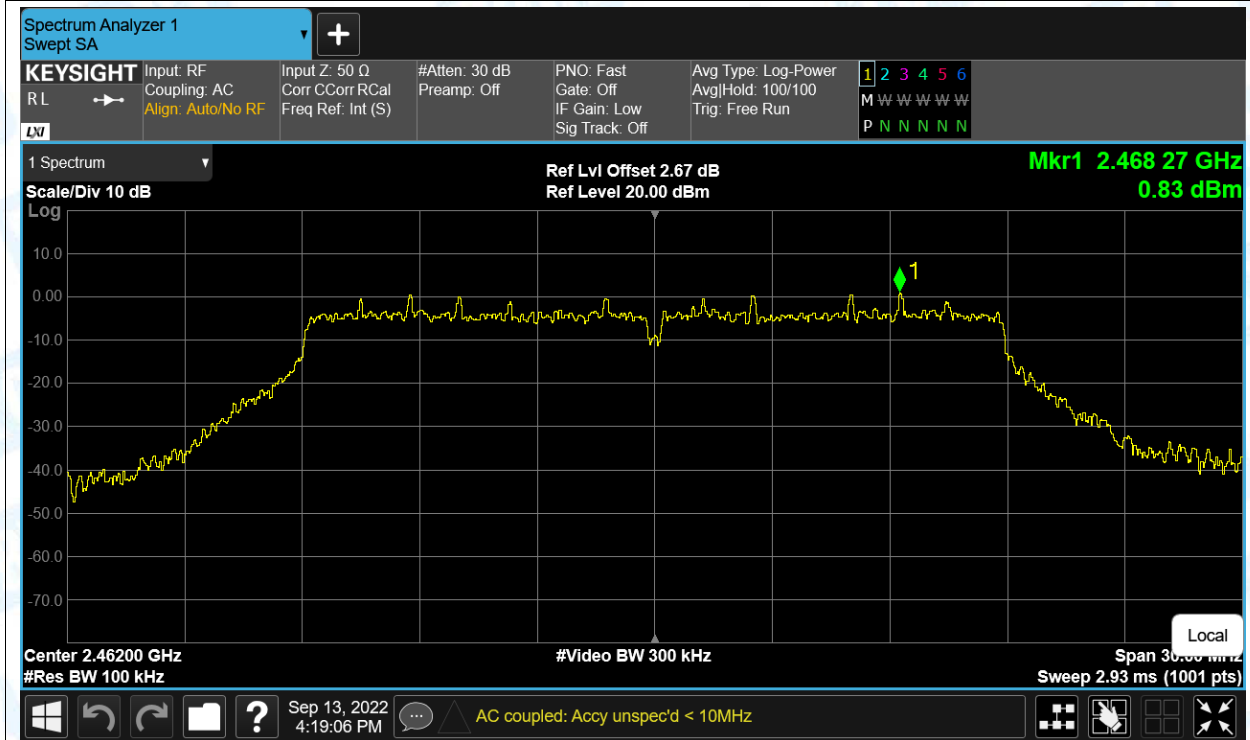


Band Edge NVNT g 2462MHz Ant1 Emission

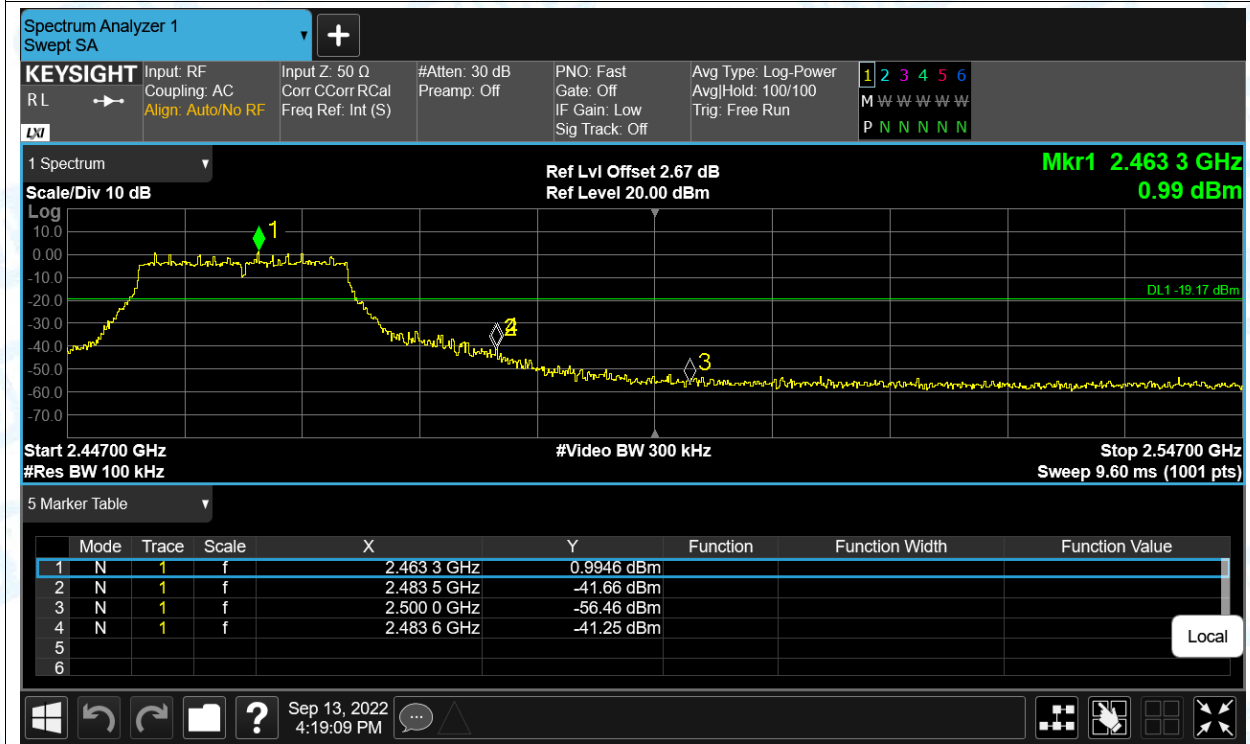




Band Edge NVNT n(HT20) 2462MHz Ant1 Ref



Band Edge NVNT n(HT20) 2462MHz Ant1 Emission

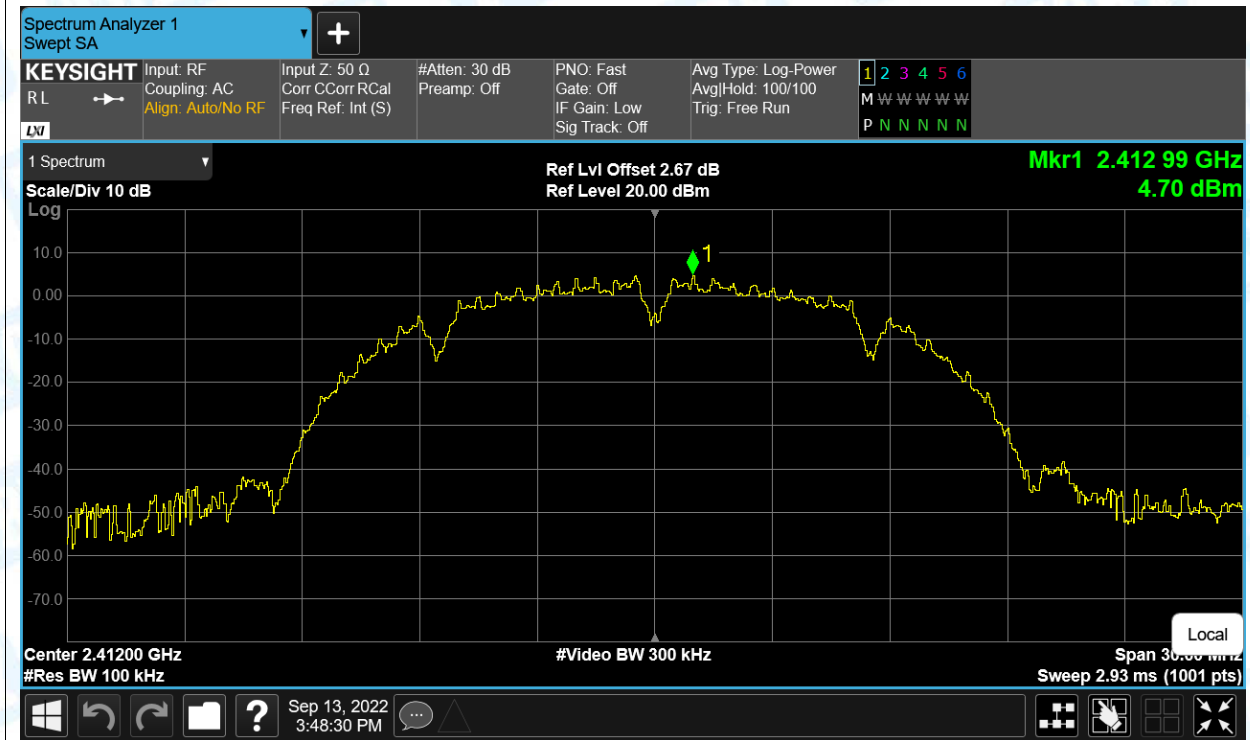


7. Conducted RF Spurious Emission

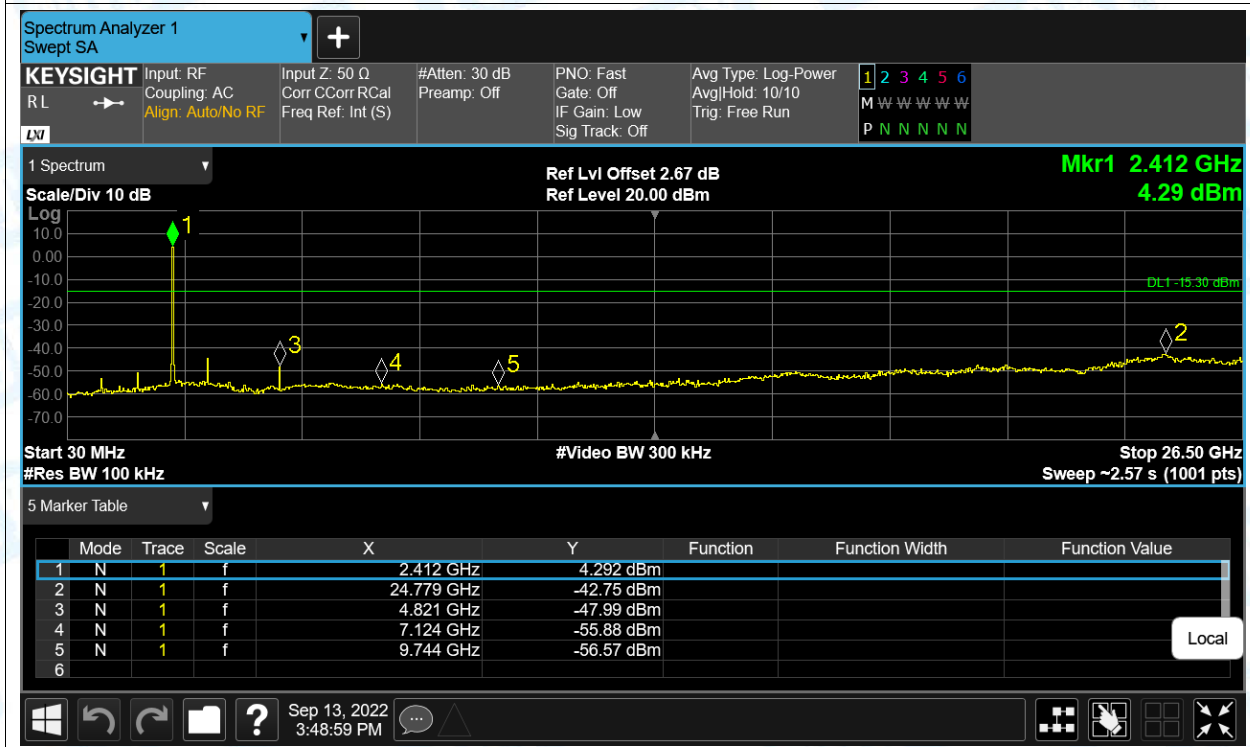
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-47.45	-20	Pass
NVNT	b	2437	Ant1	-47.98	-20	Pass
NVNT	b	2462	Ant1	-47.15	-20	Pass
NVNT	g	2412	Ant1	-43.64	-20	Pass
NVNT	g	2437	Ant1	-43.23	-20	Pass
NVNT	g	2462	Ant1	-43.56	-20	Pass
NVNT	n(HT20)	2412	Ant1	-42.55	-20	Pass
NVNT	n(HT20)	2437	Ant1	-42.03	-20	Pass
NVNT	n(HT20)	2462	Ant1	-42.97	-20	Pass

Test Graphs

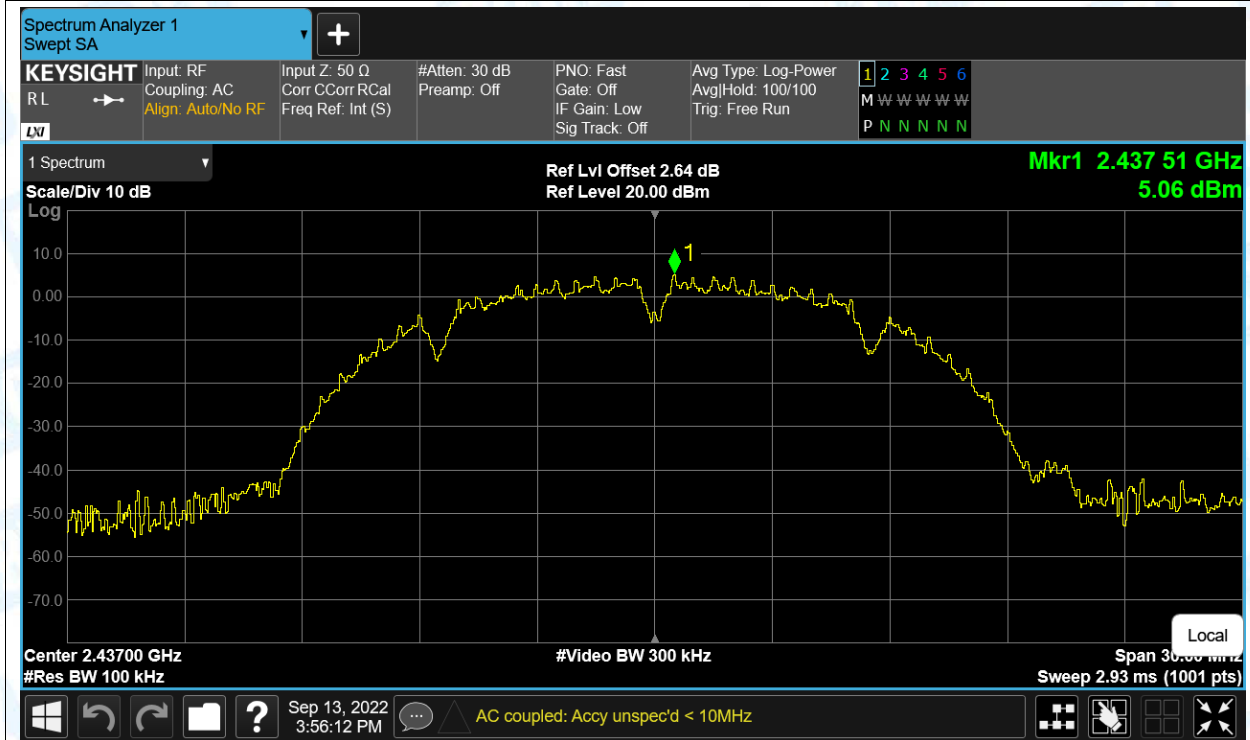
Tx. Spurious NVNT b 2412MHz Ant1 Ref



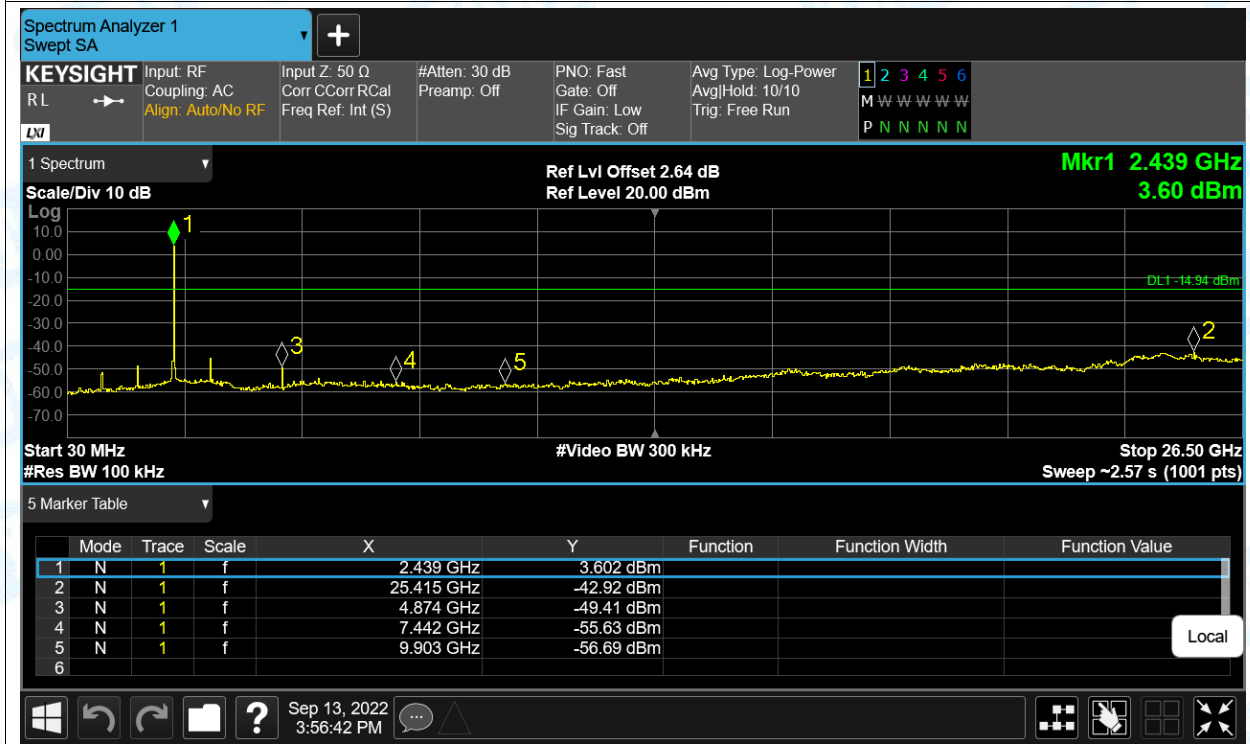
Tx. Spurious NVNT b 2412MHz Ant1 Emission



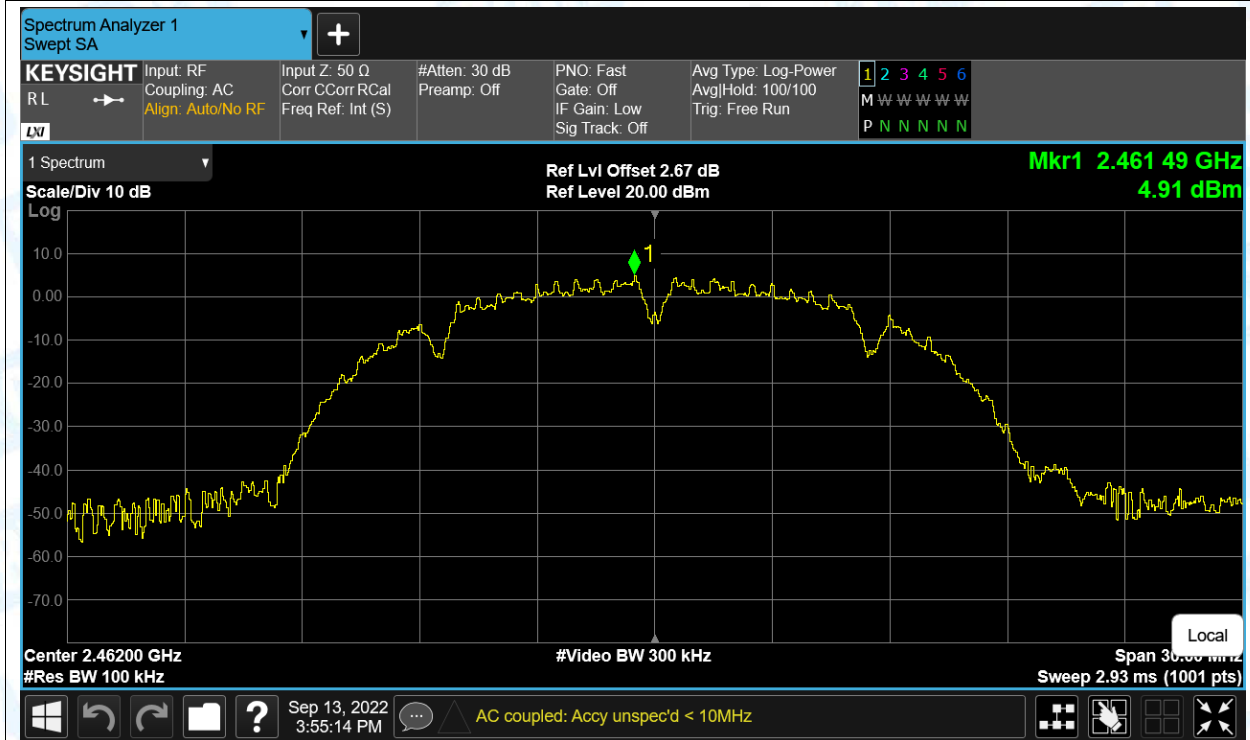
Tx. Spurious NVNT b 2437MHz Ant1 Ref



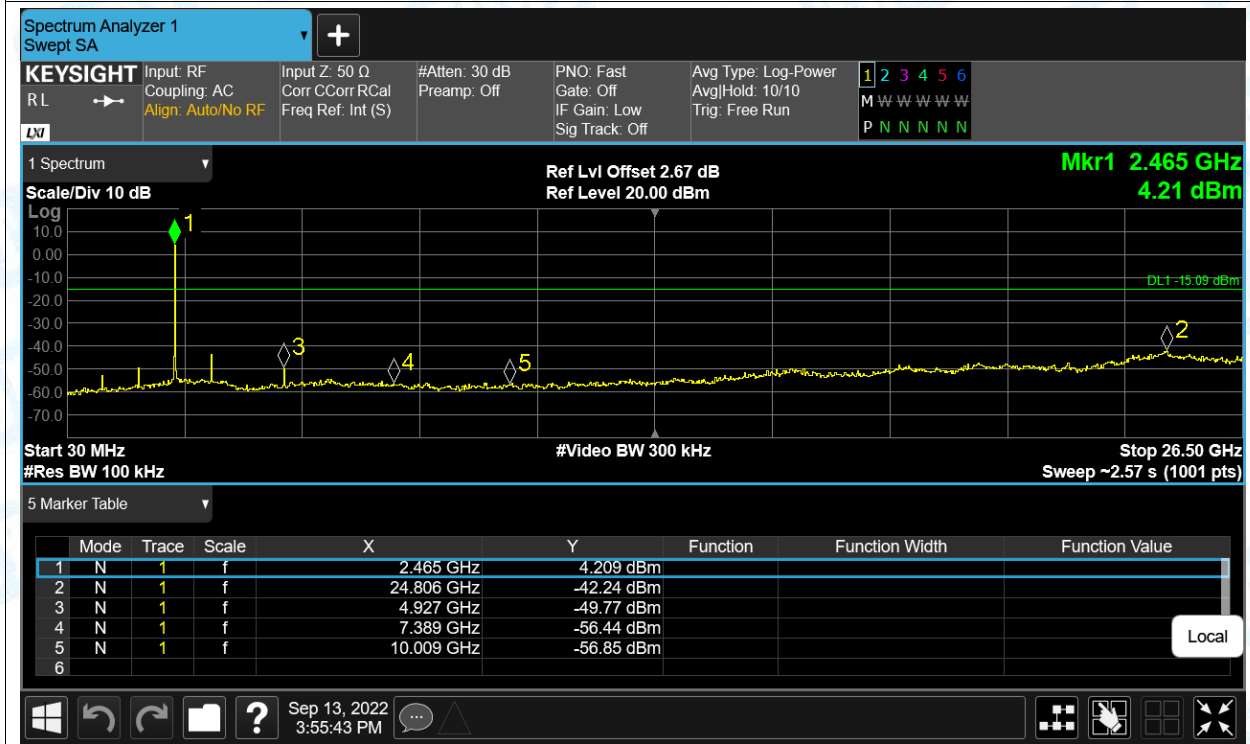
Tx. Spurious NVNT b 2437MHz Ant1 Emission



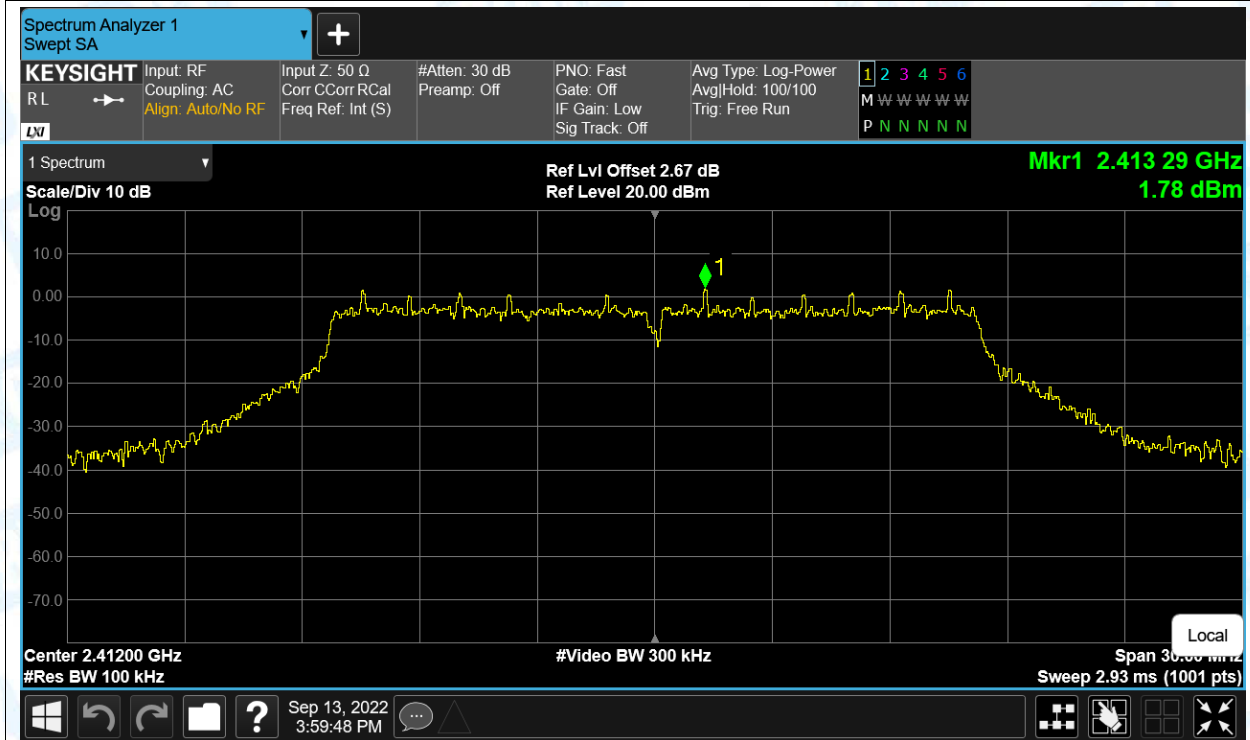
Tx. Spurious NVNT b 2462MHz Ant1 Ref



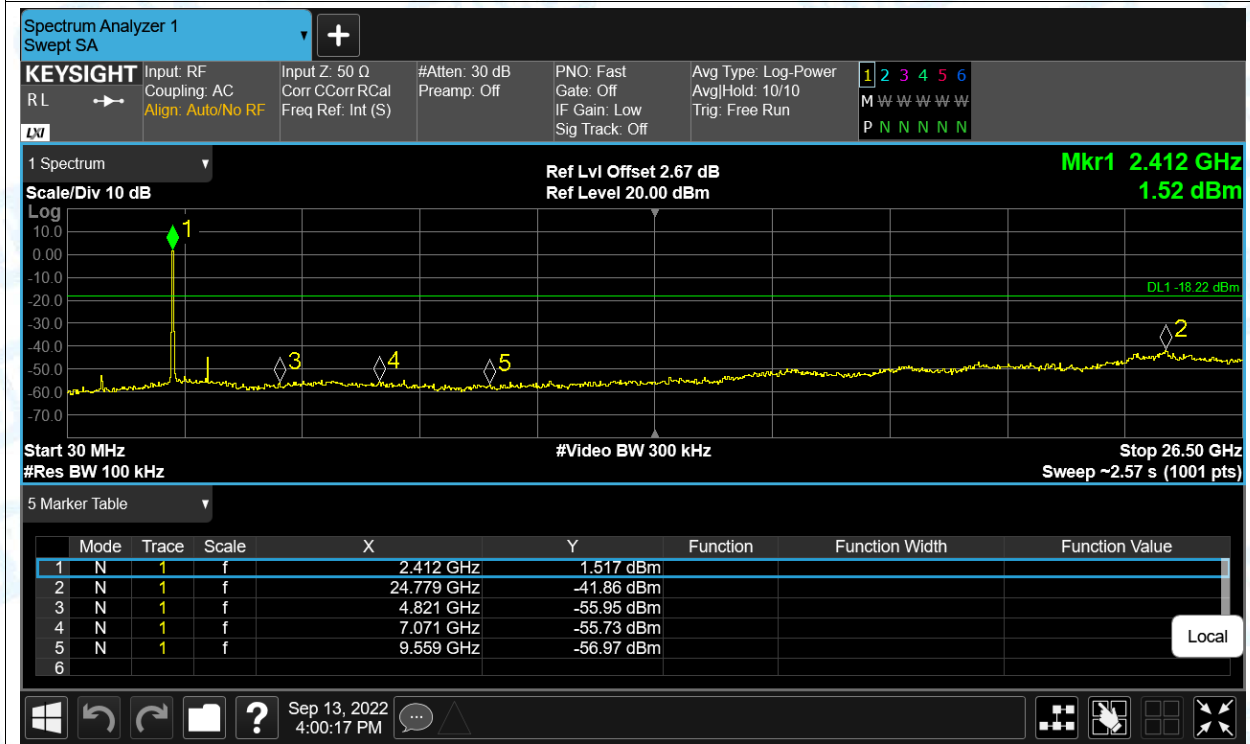
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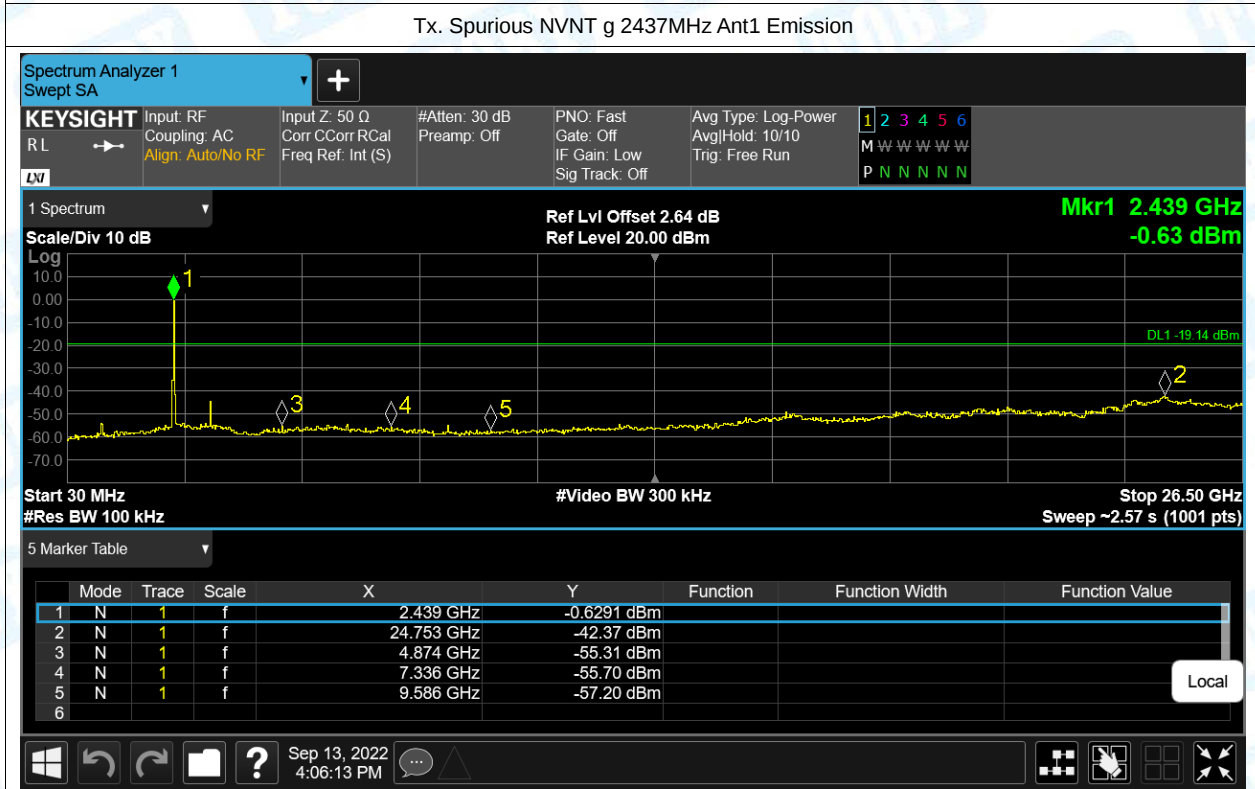
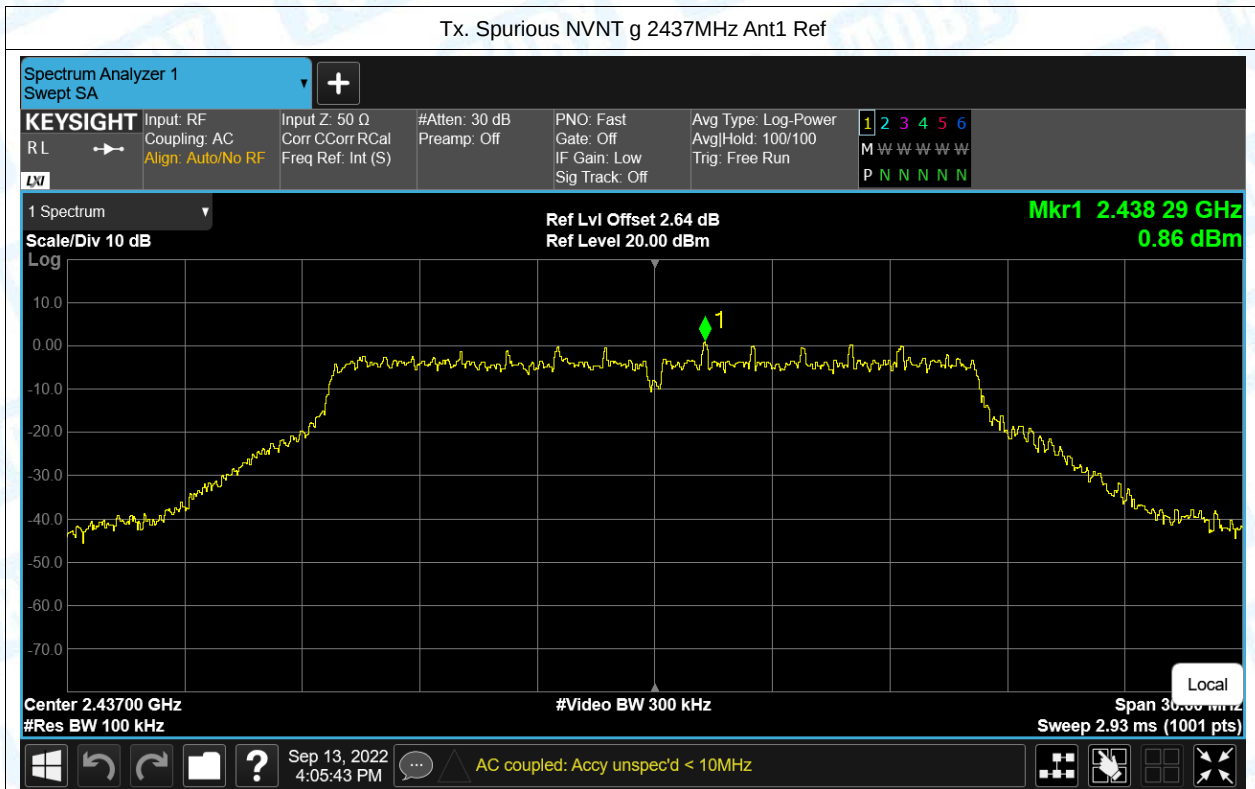


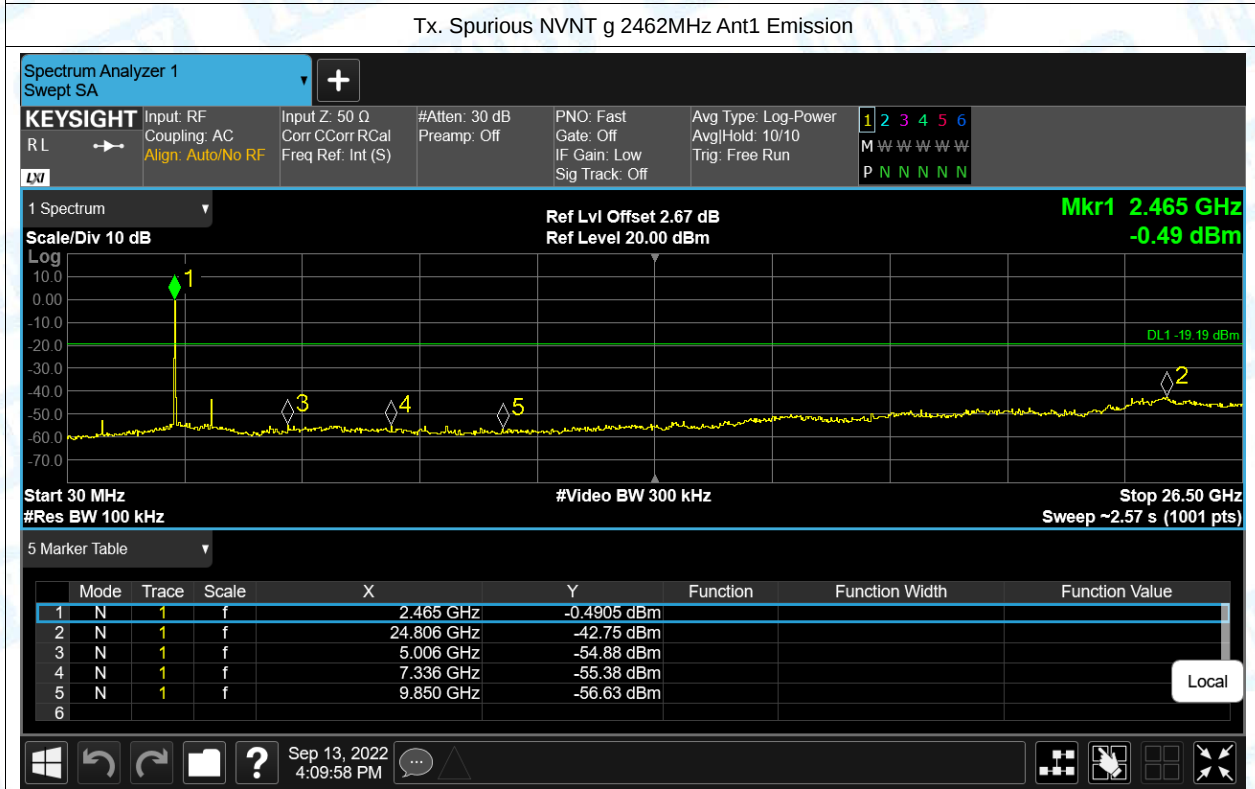
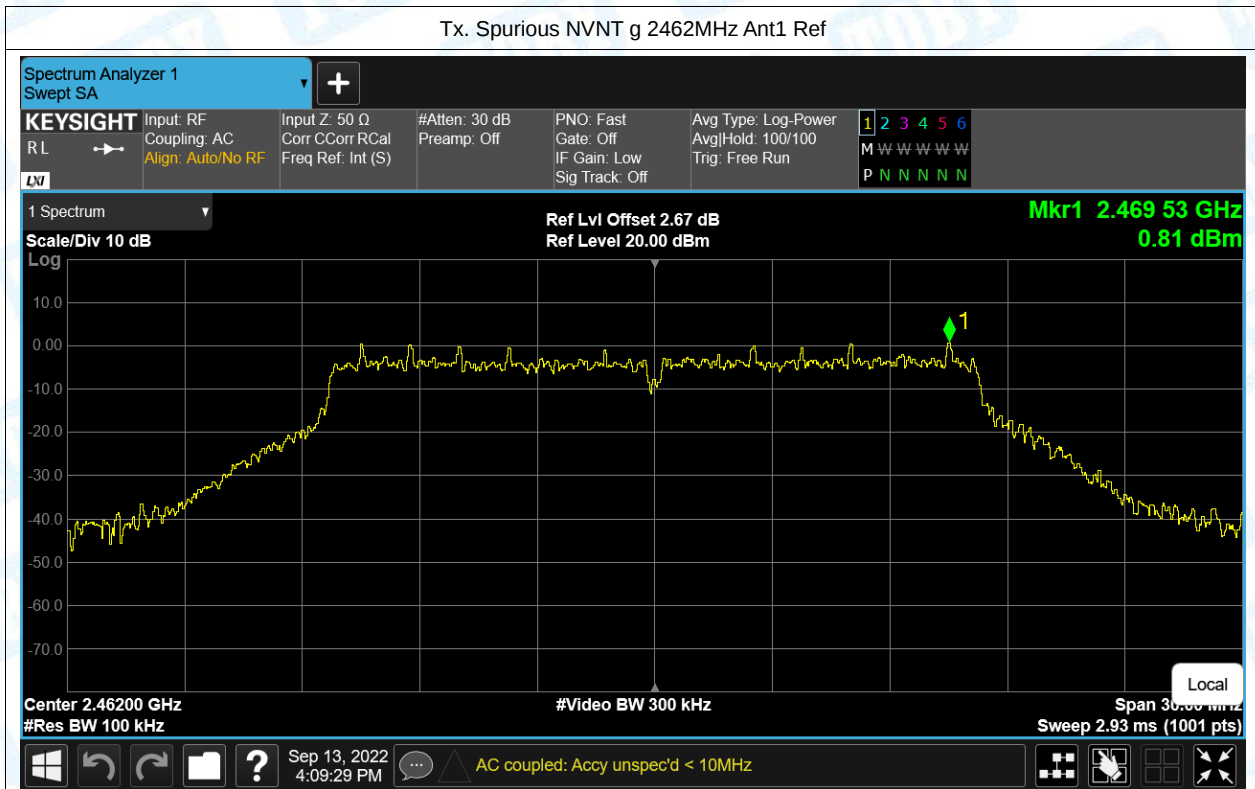
Tx. Spurious NVNT g 2412MHz Ant1 Ref



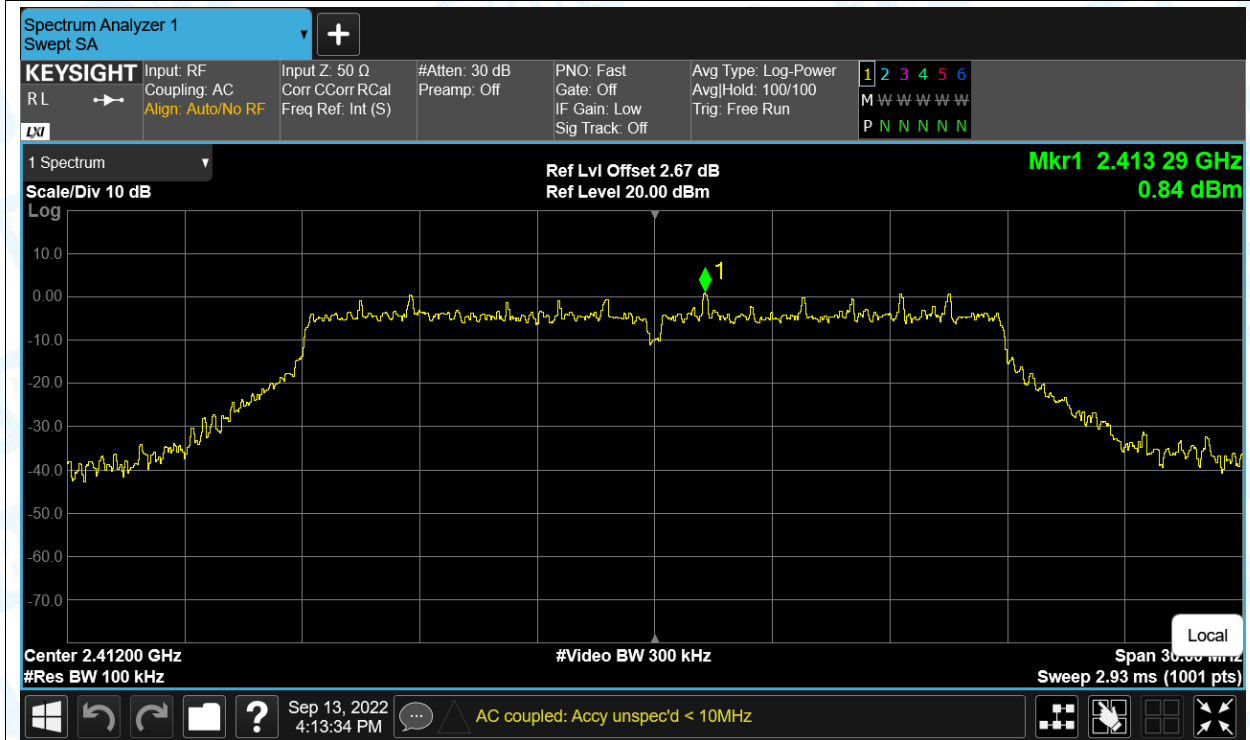
Tx. Spurious NVNT g 2412MHz Ant1 Emission



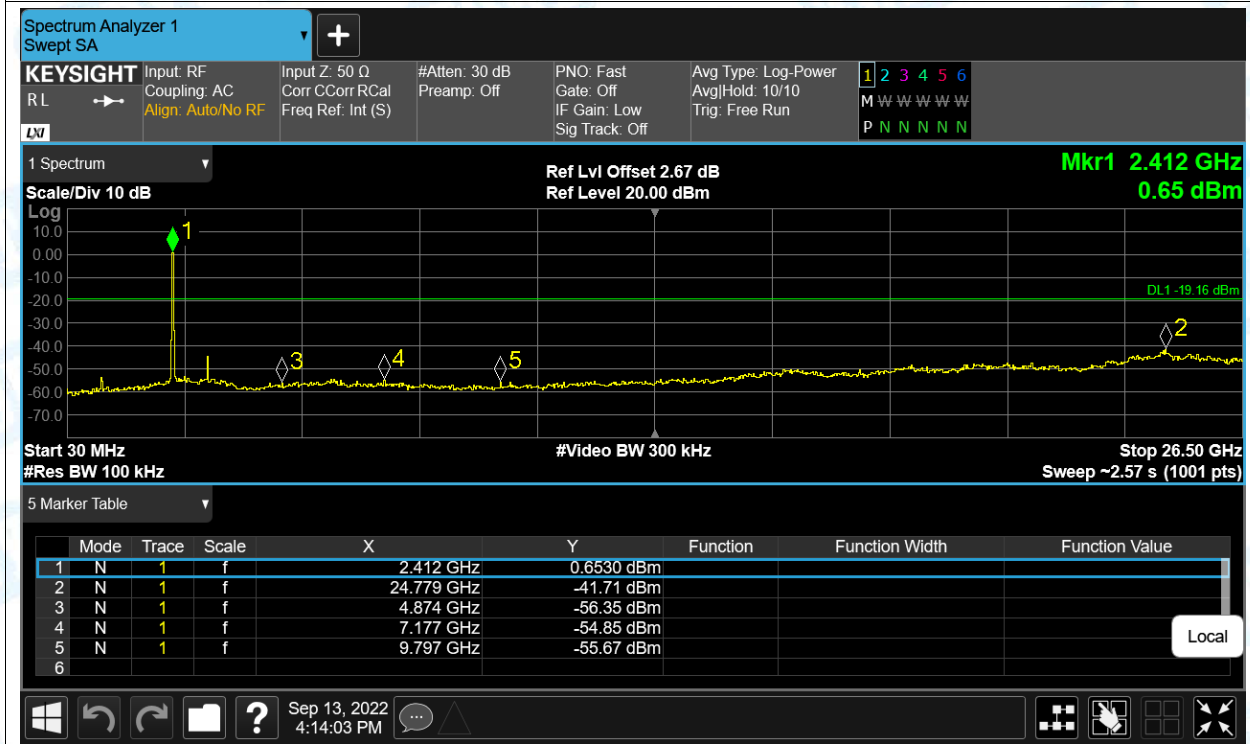




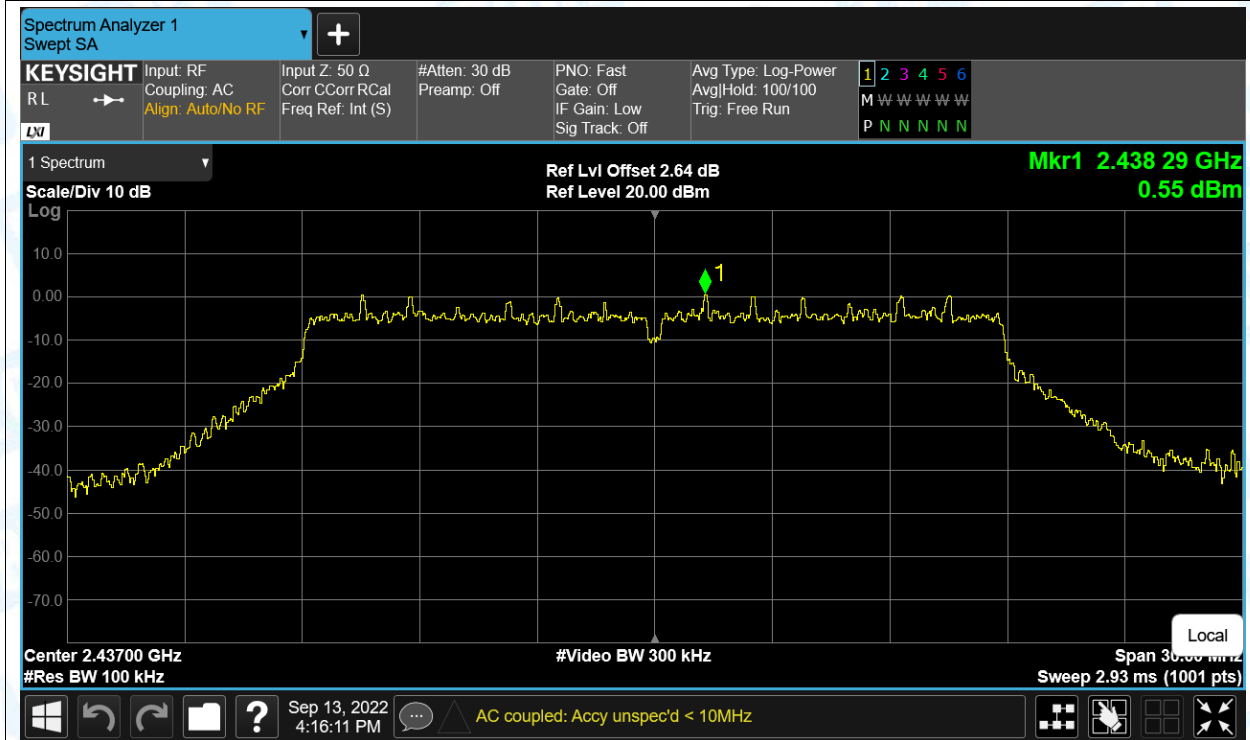
Tx. Spurious NVNT n(HT20) 2412MHz Ant1 Ref



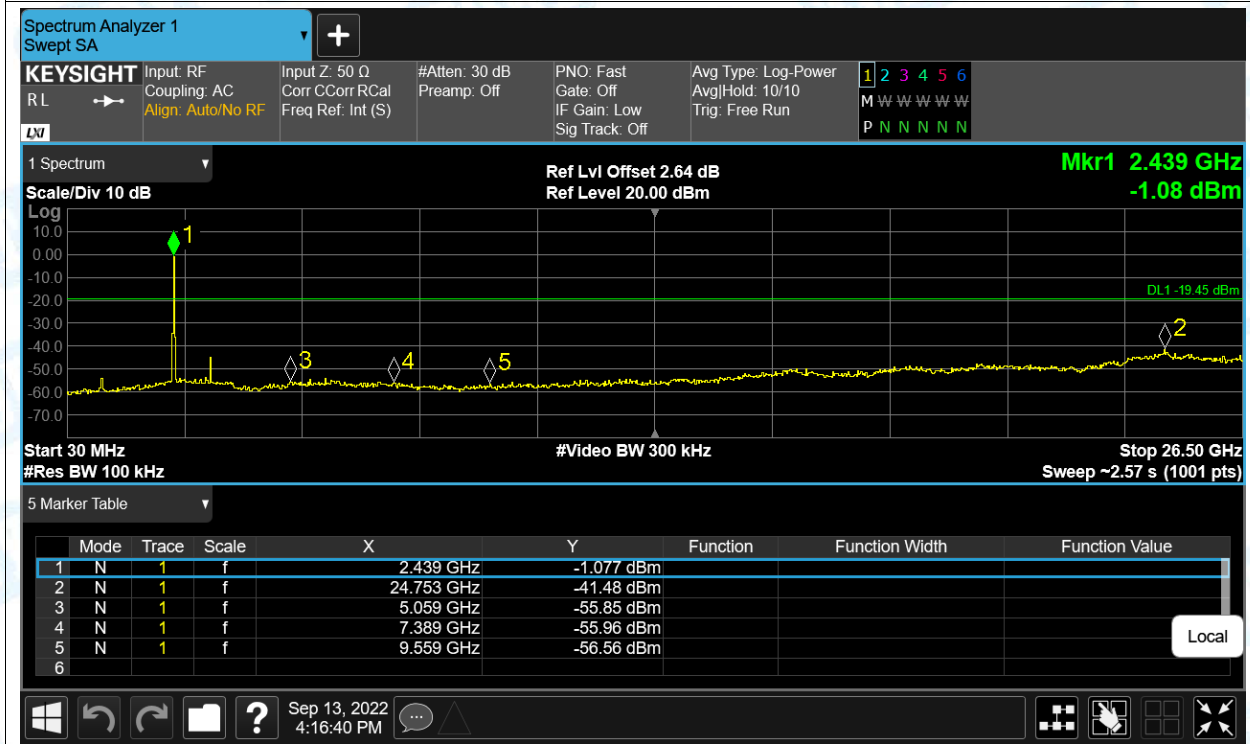
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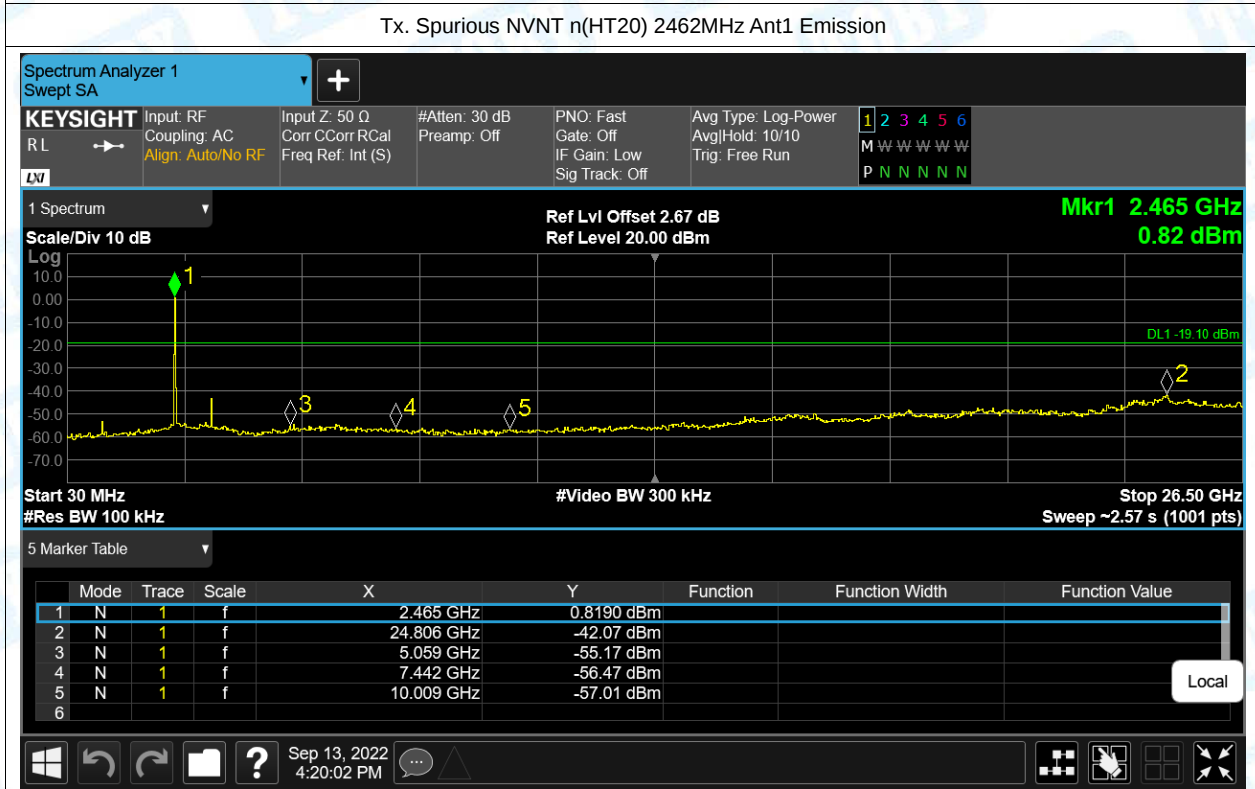
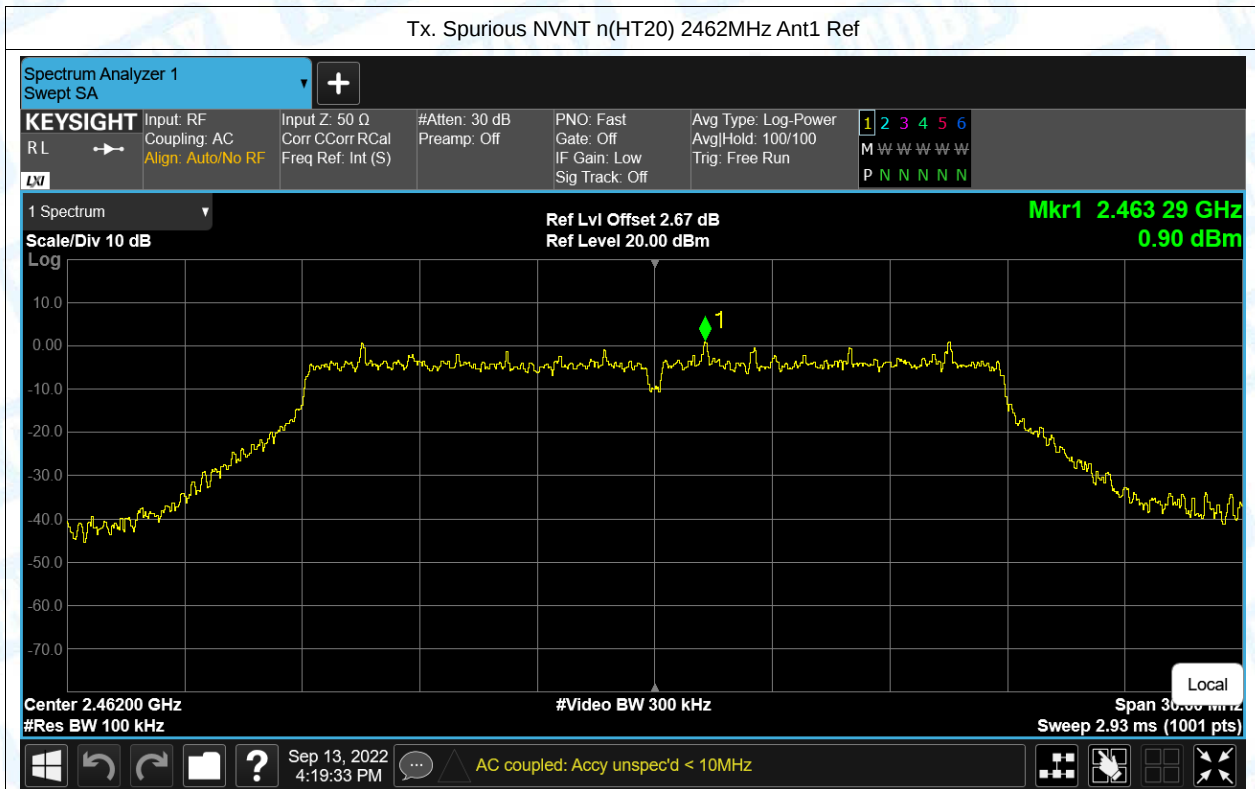


Tx. Spurious NVNT n(HT20) 2437MHz Ant1 Ref



Tx. Spurious NVNT n(HT20) 2437MHz Ant1 Emission



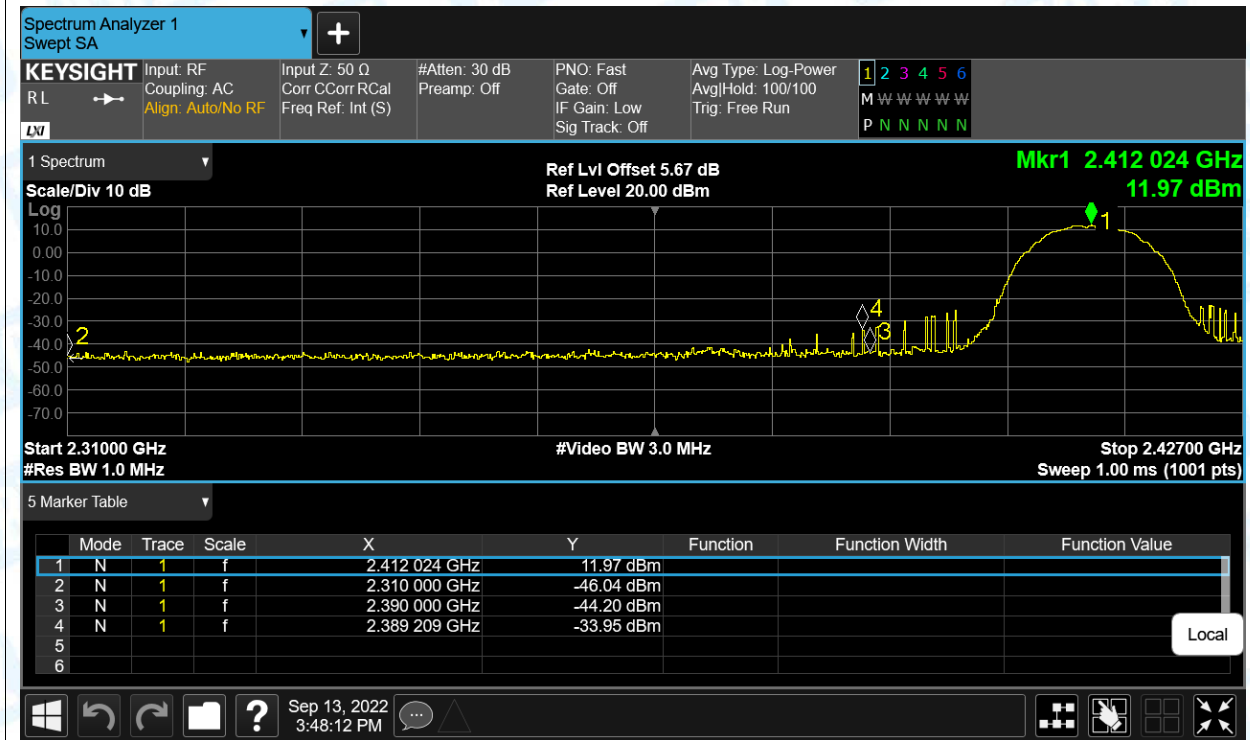


8. Restrict Band

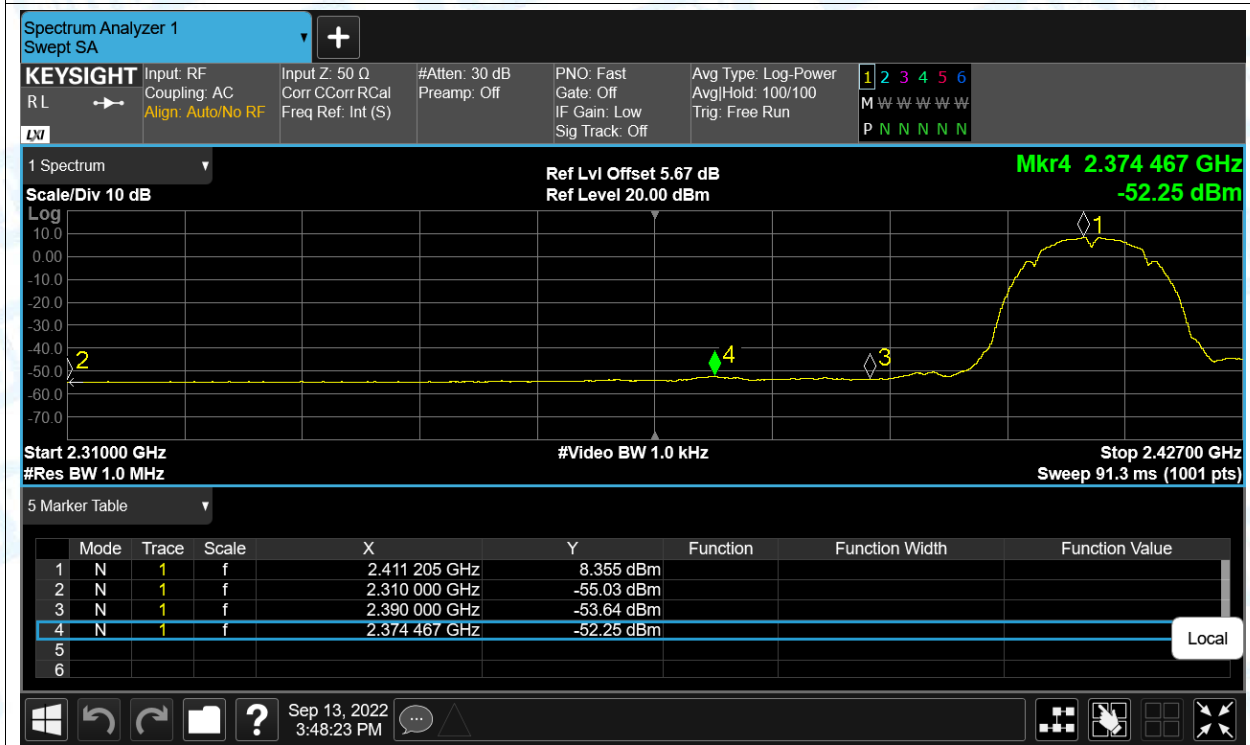
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	b	2412	Ant1	2310	-46.04	3	52.22	Peak	74	Pass
NVNT	b	2412	Ant1	2310	-55.03	3	43.23	Average	54	Pass
NVNT	b	2412	Ant1	2389.209	-33.95	3	64.31	Peak	74	Pass
NVNT	b	2412	Ant1	2374.467	-52.25	3	46.01	Average	54	Pass
NVNT	b	2412	Ant1	2390	-44.2	3	54.06	Peak	74	Pass
NVNT	b	2412	Ant1	2390	-53.64	3	44.62	Average	54	Pass
NVNT	b	2462	Ant1	2483.5	-44.16	3	54.1	Peak	74	Pass
NVNT	b	2462	Ant1	2483.5	-53.29	3	44.97	Average	54	Pass
NVNT	b	2462	Ant1	2484.259	-32.11	3	66.15	Peak	74	Pass
NVNT	b	2462	Ant1	2488.128	-50.95	3	47.31	Average	54	Pass
NVNT	b	2462	Ant1	2500	-44	3	54.26	Peak	74	Pass
NVNT	b	2462	Ant1	2500	-52.37	3	45.89	Average	54	Pass
NVNT	g	2412	Ant1	2310	-43.11	3	55.15	Peak	74	Pass
NVNT	g	2412	Ant1	2310	-54.85	3	43.41	Average	54	Pass
NVNT	g	2412	Ant1	2389.56	-24.61	3	73.65	Peak	74	Pass
NVNT	g	2412	Ant1	2389.911	-48.99	3	49.27	Average	54	Pass
NVNT	g	2412	Ant1	2390	-36.76	3	61.5	Peak	74	Pass
NVNT	g	2412	Ant1	2390	-49.35	3	48.91	Average	54	Pass
NVNT	g	2462	Ant1	2483.5	-26.28	3	71.98	Peak	74	Pass
NVNT	g	2462	Ant1	2483.5	-47.59	3	50.67	Average	54	Pass
NVNT	g	2462	Ant1	2483.57	-25.84	3	72.42	Peak	74	Pass
NVNT	g	2462	Ant1	2483.517	-47.59	3	50.67	Average	54	Pass
NVNT	g	2462	Ant1	2500	-44.62	3	53.64	Peak	74	Pass
NVNT	g	2462	Ant1	2500	-53.05	3	45.21	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2310	-46.01	3	52.25	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2310	-54.67	3	43.59	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2389.794	-25.53	3	72.73	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2389.209	-47.55	3	50.71	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2390	-29.2	3	69.06	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2390	-47.51	3	50.75	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-27.81	3	70.45	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-45.22	3	53.04	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2483.729	-26.25	3	72.01	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2483.517	-45.22	3	53.04	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2500	-43.99	3	54.27	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2500	-52.74	3	45.52	Average	54	Pass

Test Graphs

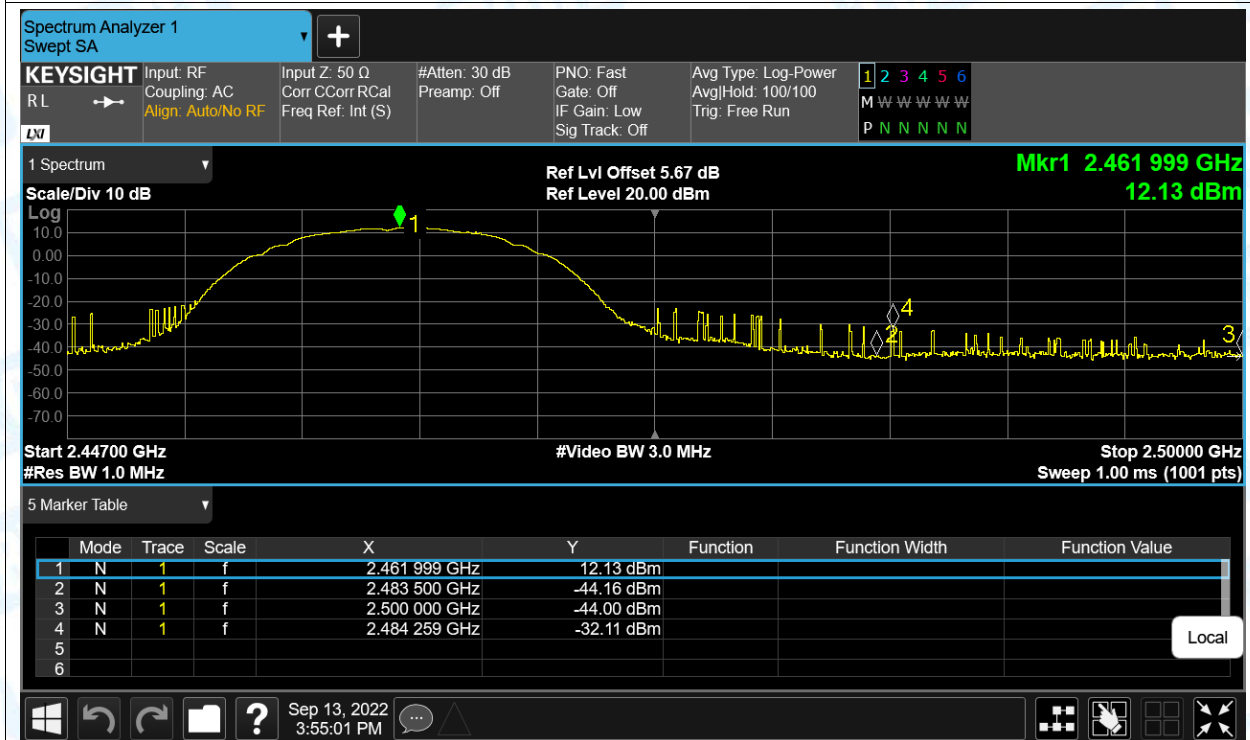
Restrict Band NVNT b 2412MHz Ant1 Peak



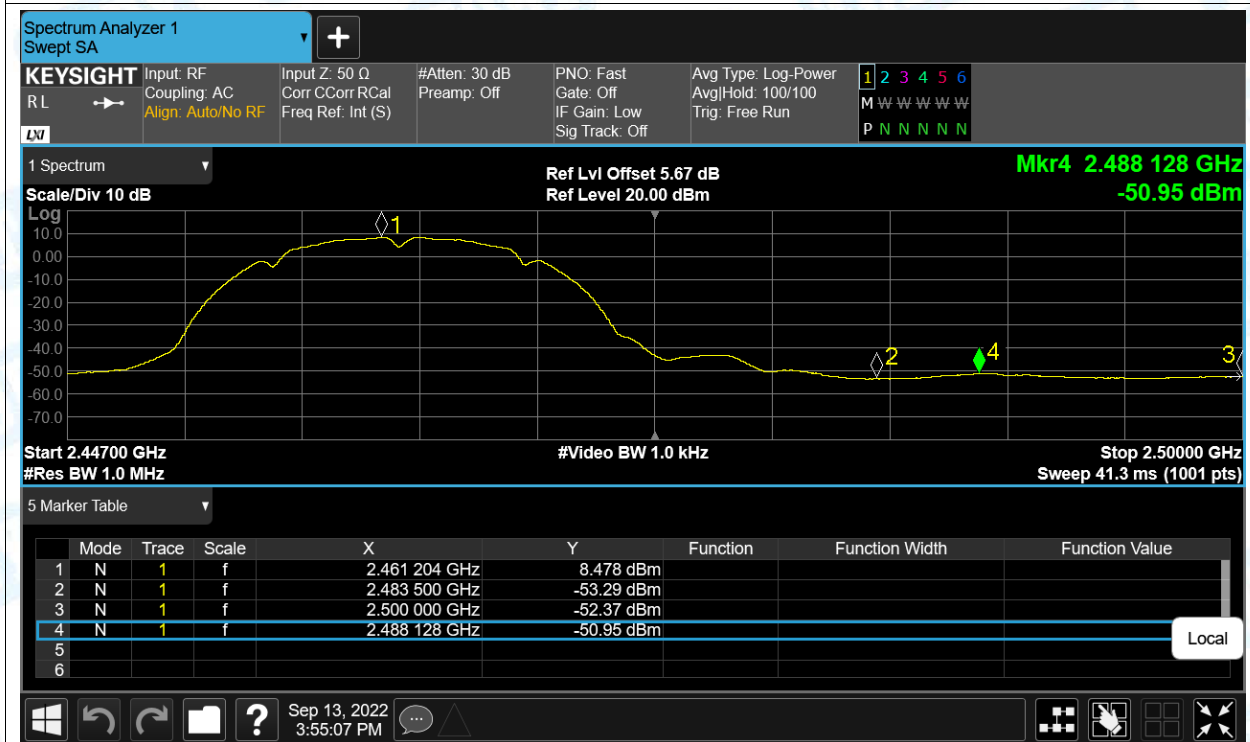
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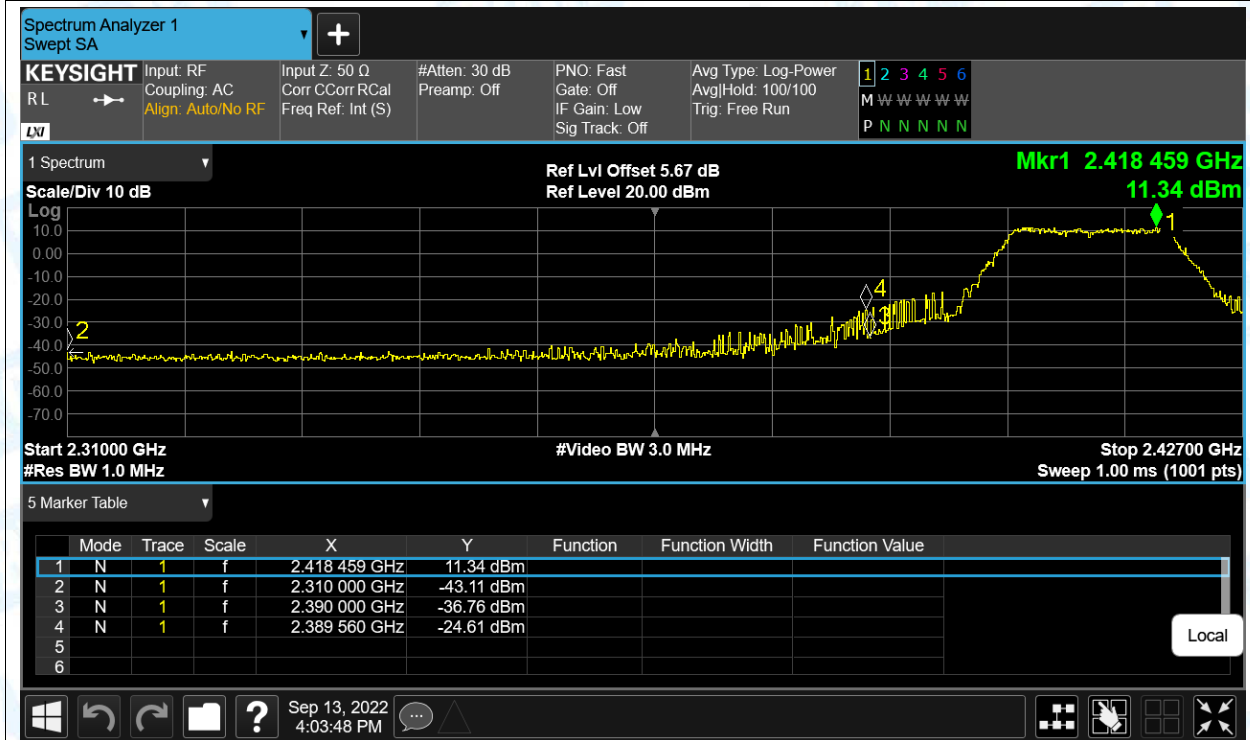
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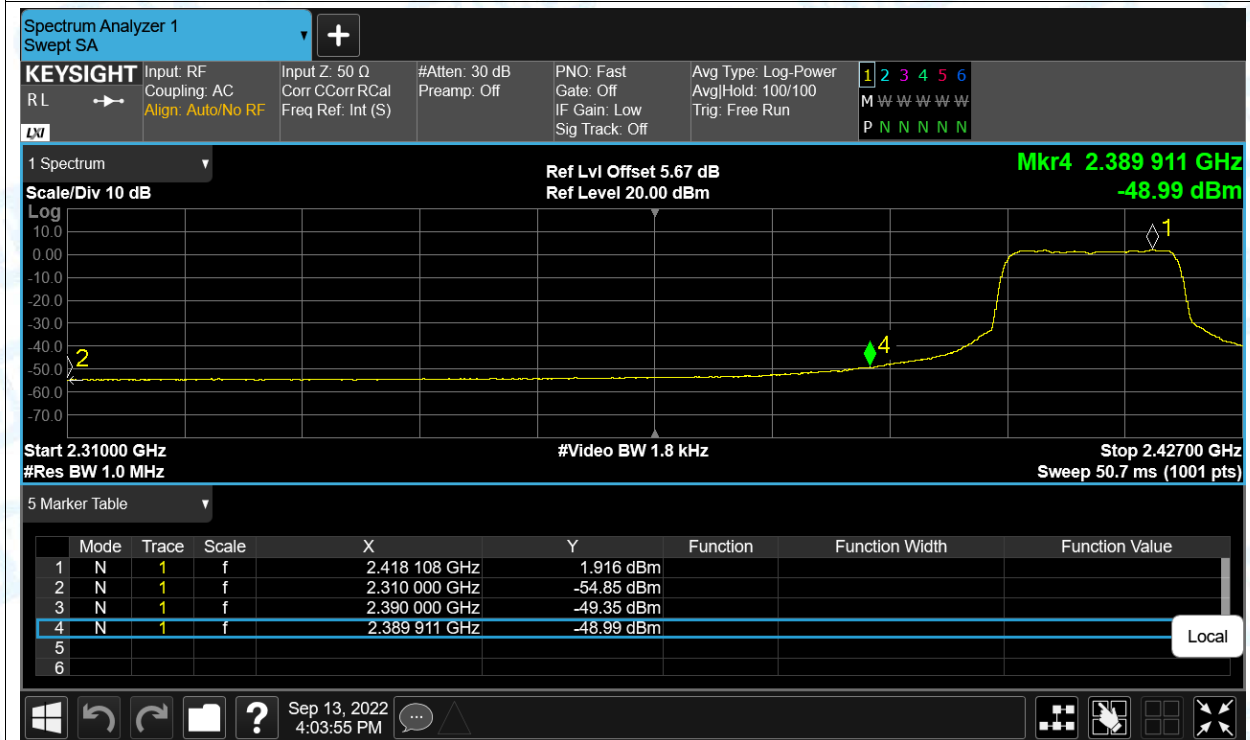
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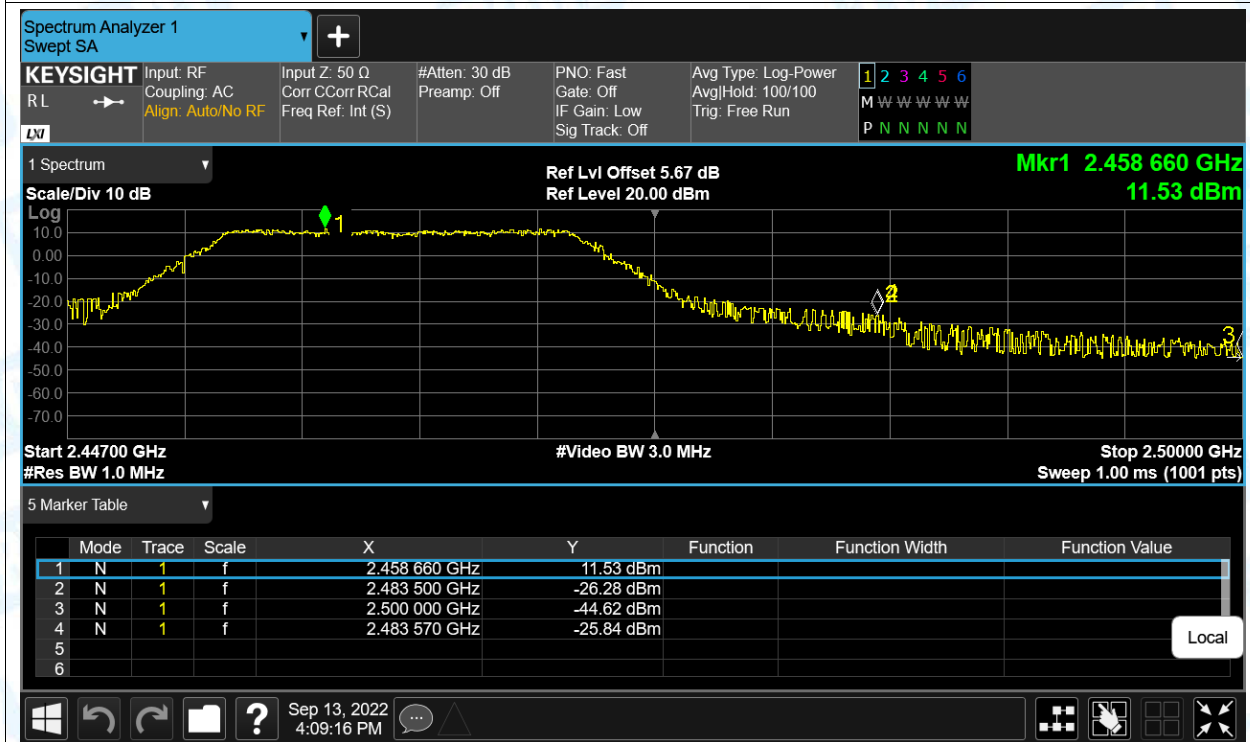
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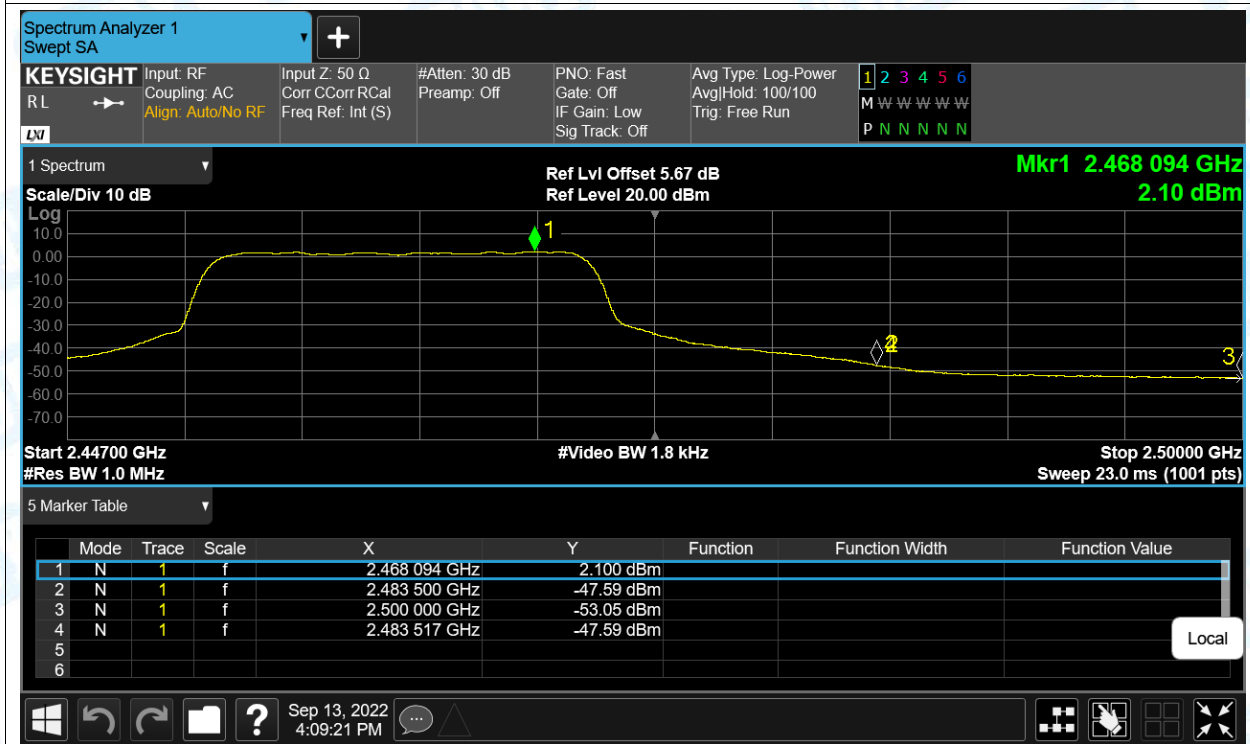
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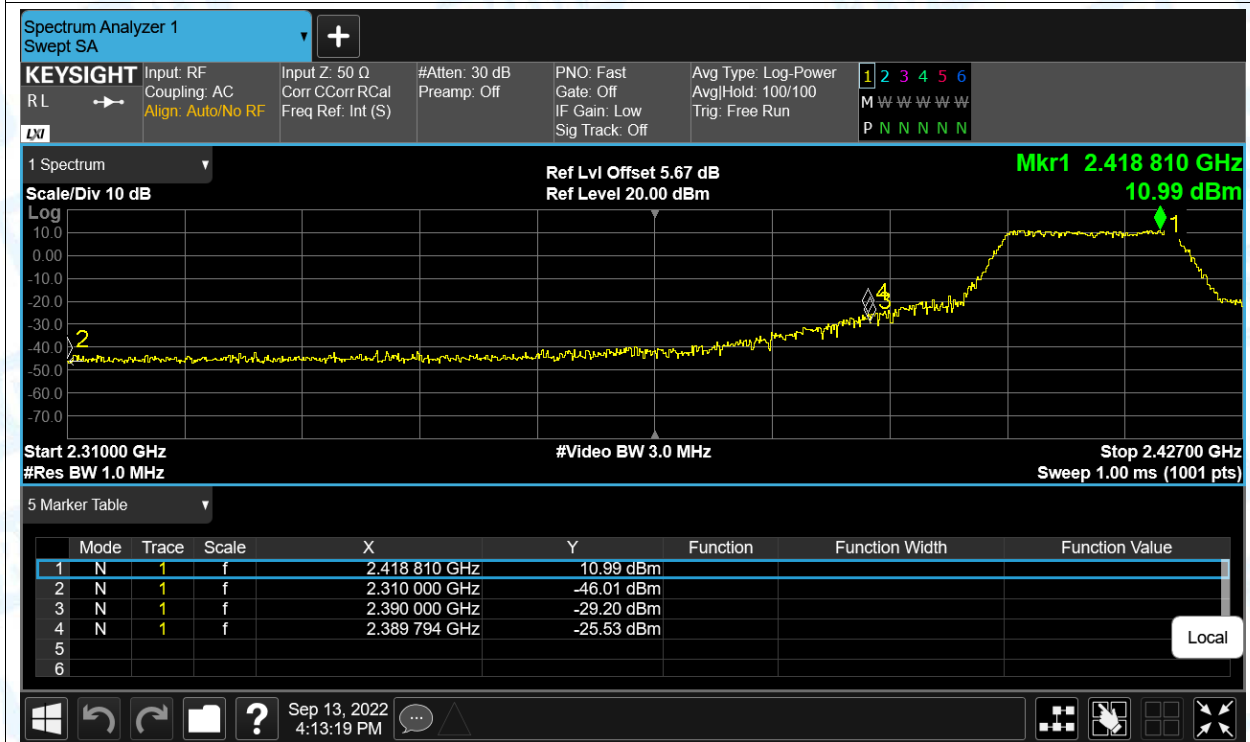
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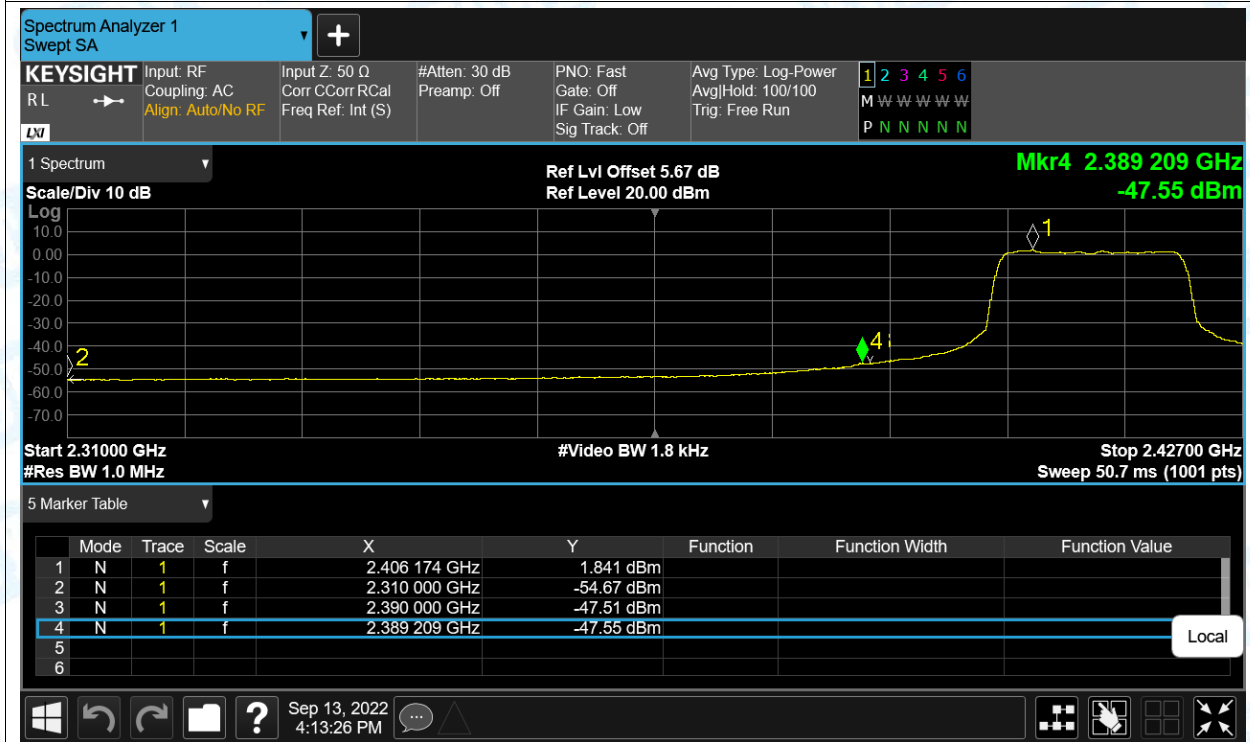
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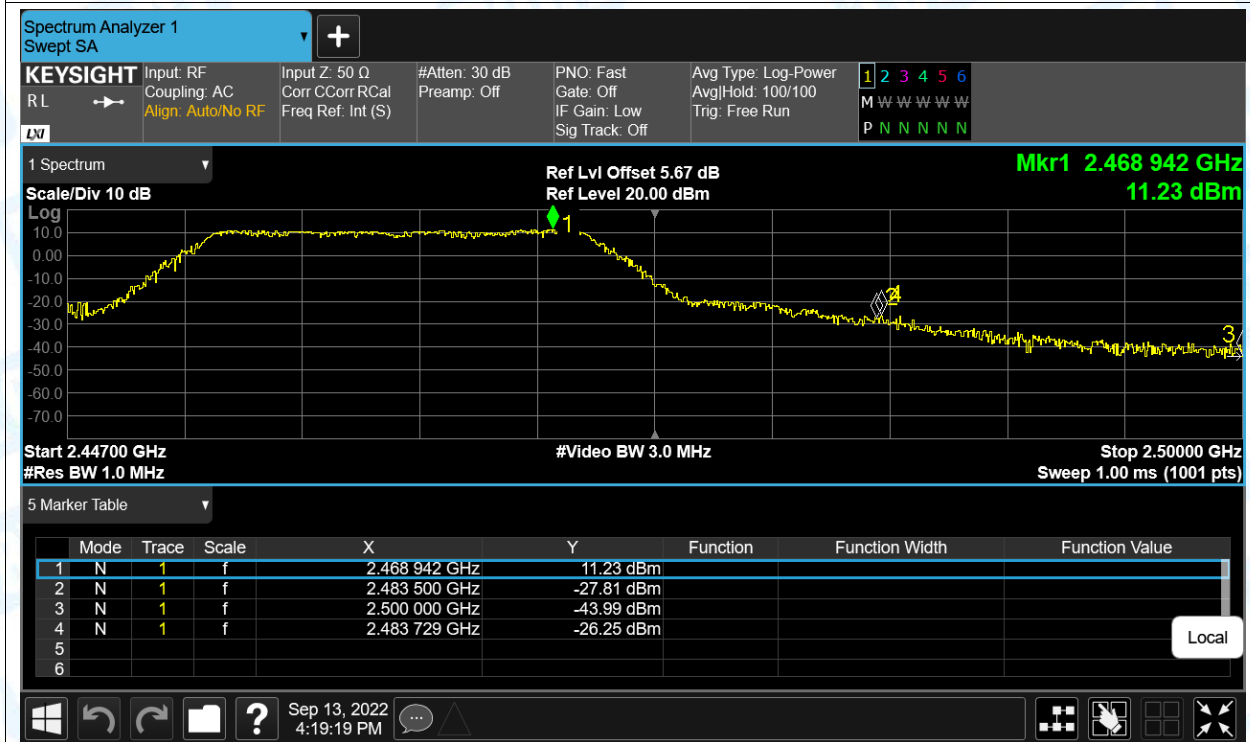
Restrict Band NVNT n(HT20) 2412MHz Ant1 Peak



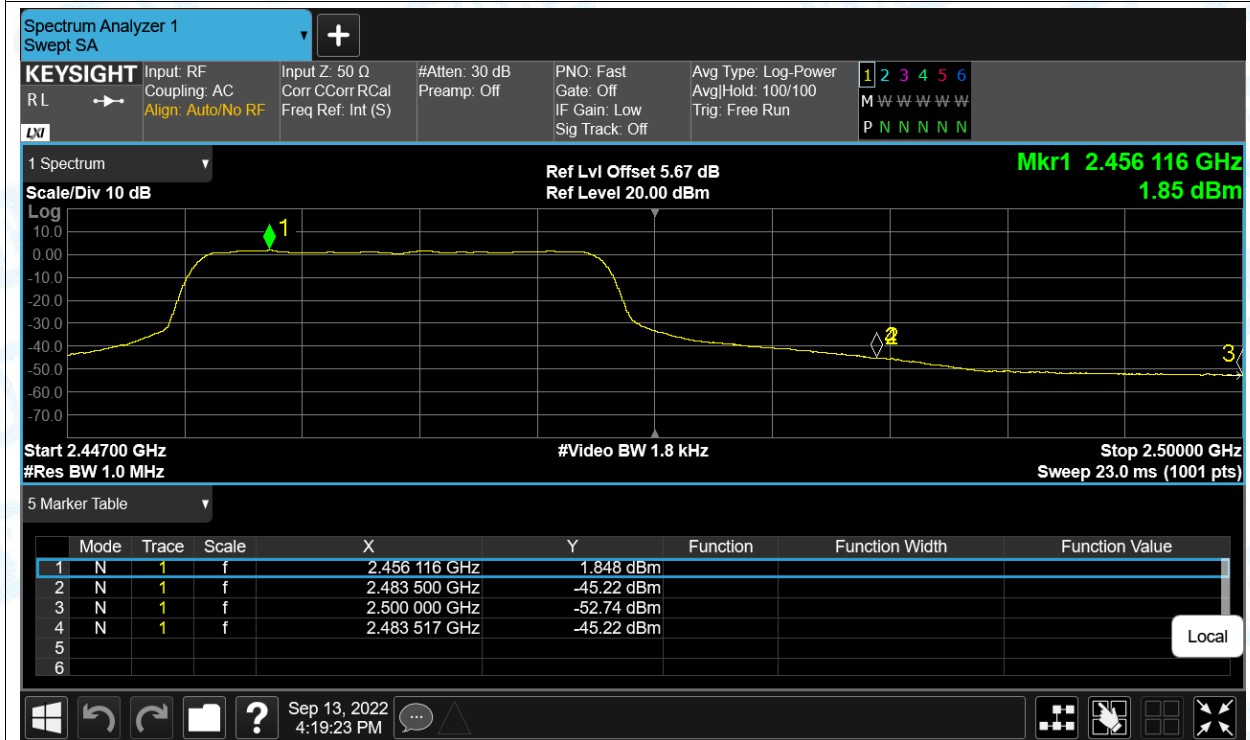
Restrict Band NVNT n(HT20) 2412MHz Ant1 Average



Restrict Band NVNT n(HT20) 2462MHz Ant1 Peak



Restrict Band NVNT n(HT20) 2462MHz Ant1 Average



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