

RF Test Data for 2.4G WiFi
(Conducted Measurements)

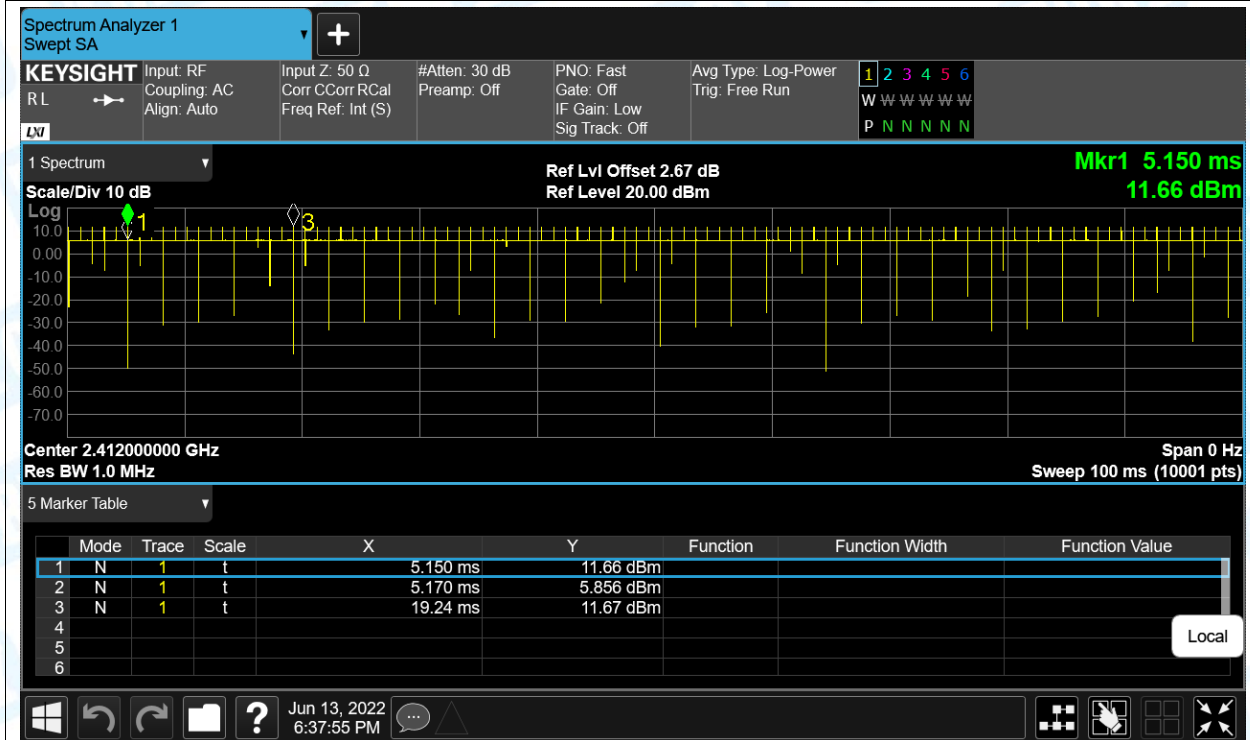
General Description of EUT	
Product Name:	Smart AC Controller
Test Model:	S16Pro
Sample ID:	RW-C-202205-0291-4-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 5V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202205-0291-81.	

1. Duty Cycle

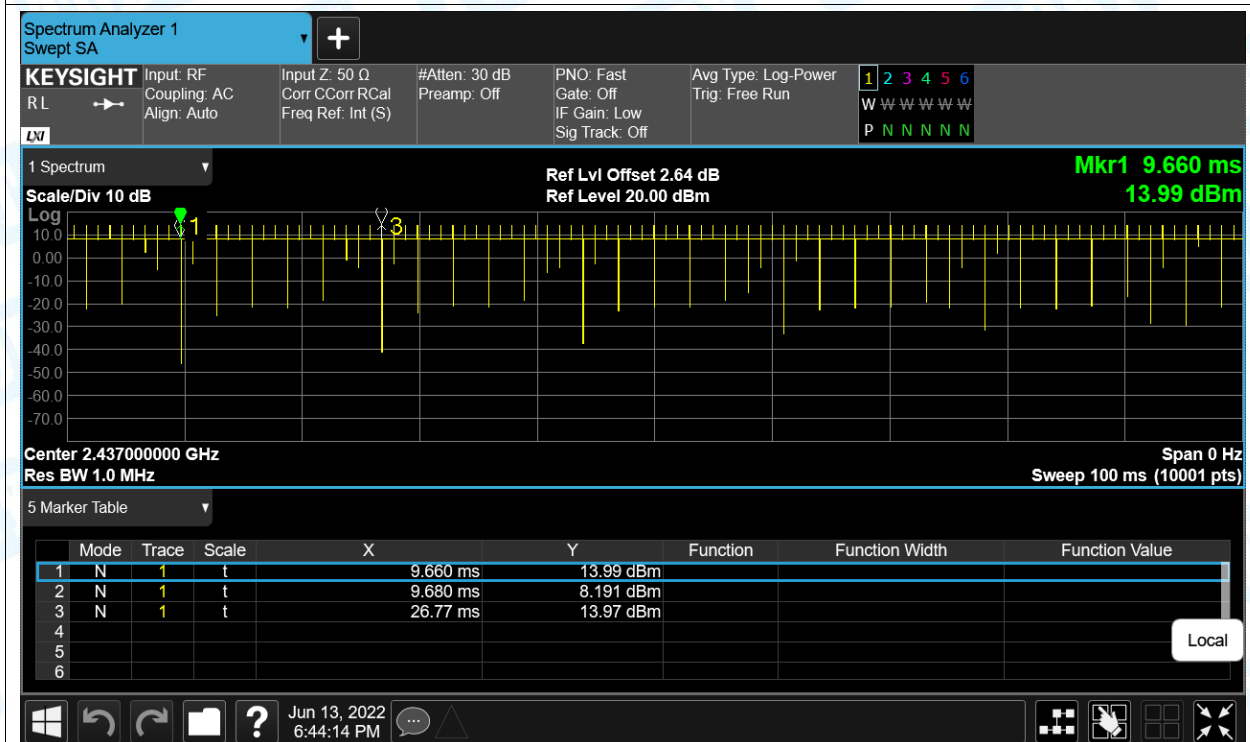
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	99.96	0	0.07
NVNT	b	2437	Ant1	99.98	0	0.06
NVNT	b	2462	Ant1	99.99	0	0
NVNT	g	2412	Ant1	100	0	0
NVNT	g	2437	Ant1	100	0	0
NVNT	g	2462	Ant1	100	0	0
NVNT	n(HT20)	2412	Ant1	100	0	0
NVNT	n(HT20)	2437	Ant1	100	0	0
NVNT	n(HT20)	2462	Ant1	100	0	0
NVNT	n(HT40)	2422	Ant1	100	0	0
NVNT	n(HT40)	2437	Ant1	100	0	0
NVNT	n(HT40)	2452	Ant1	100	0	0

Test Graphs

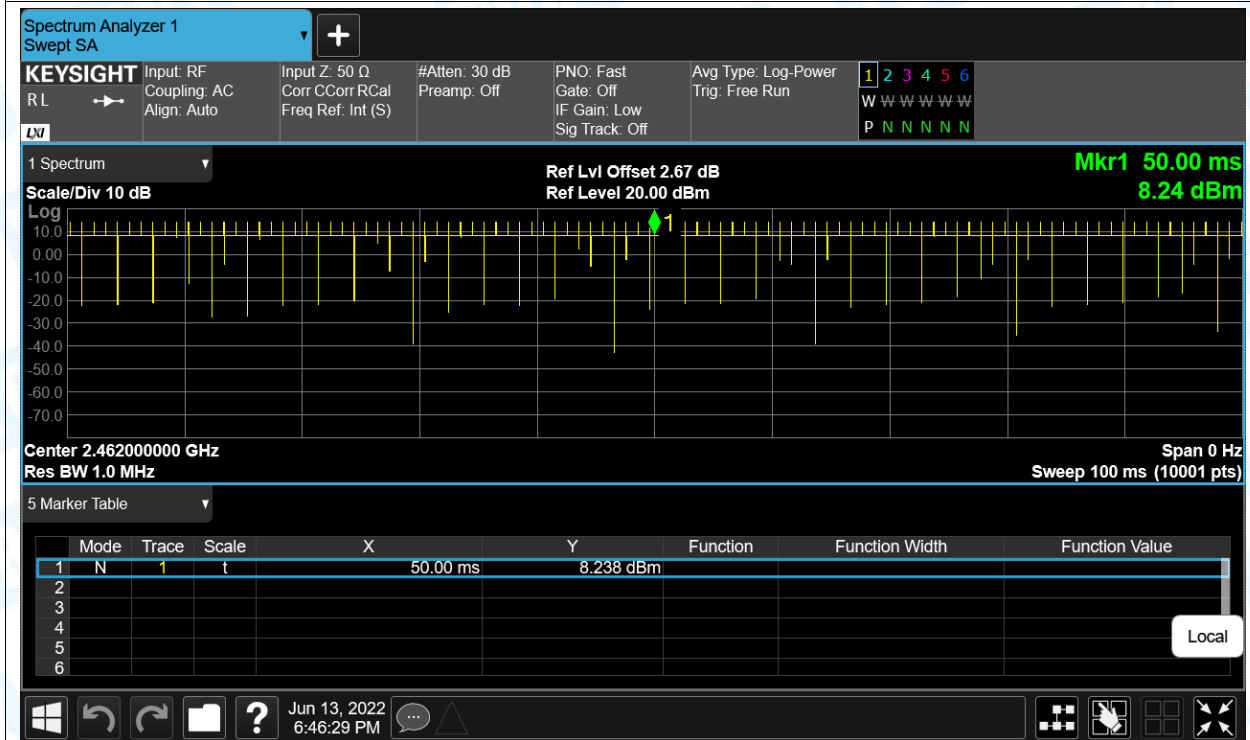
Duty Cycle NVNT b 2412MHz Ant1



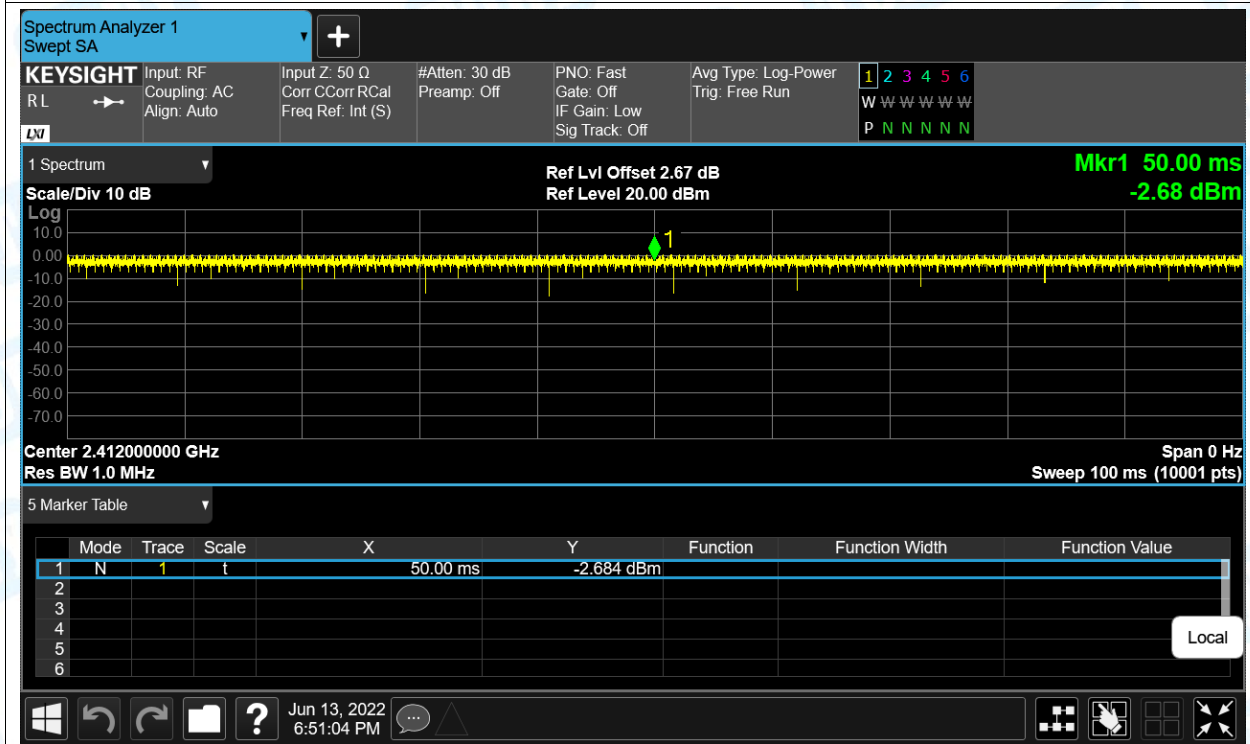
Duty Cycle NVNT b 2437MHz Ant1



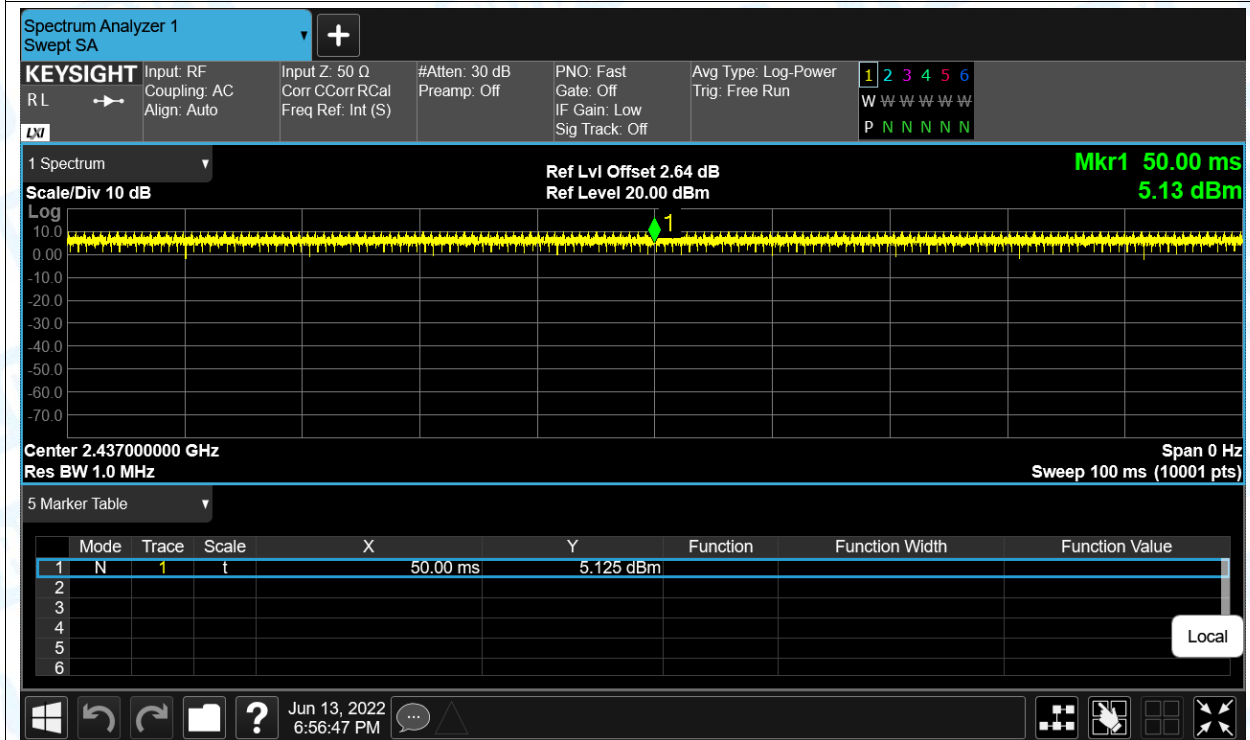
Duty Cycle NVNT b 2462MHz Ant1



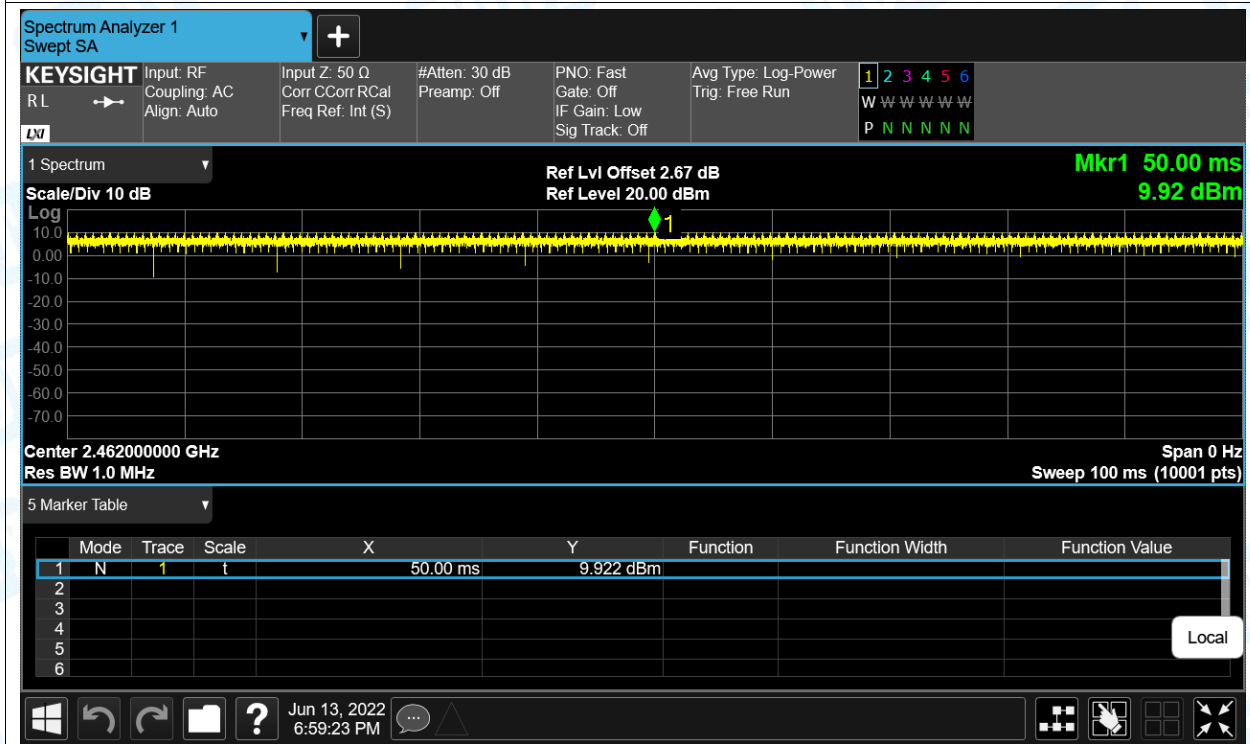
Duty Cycle NVNT g 2412MHz Ant1

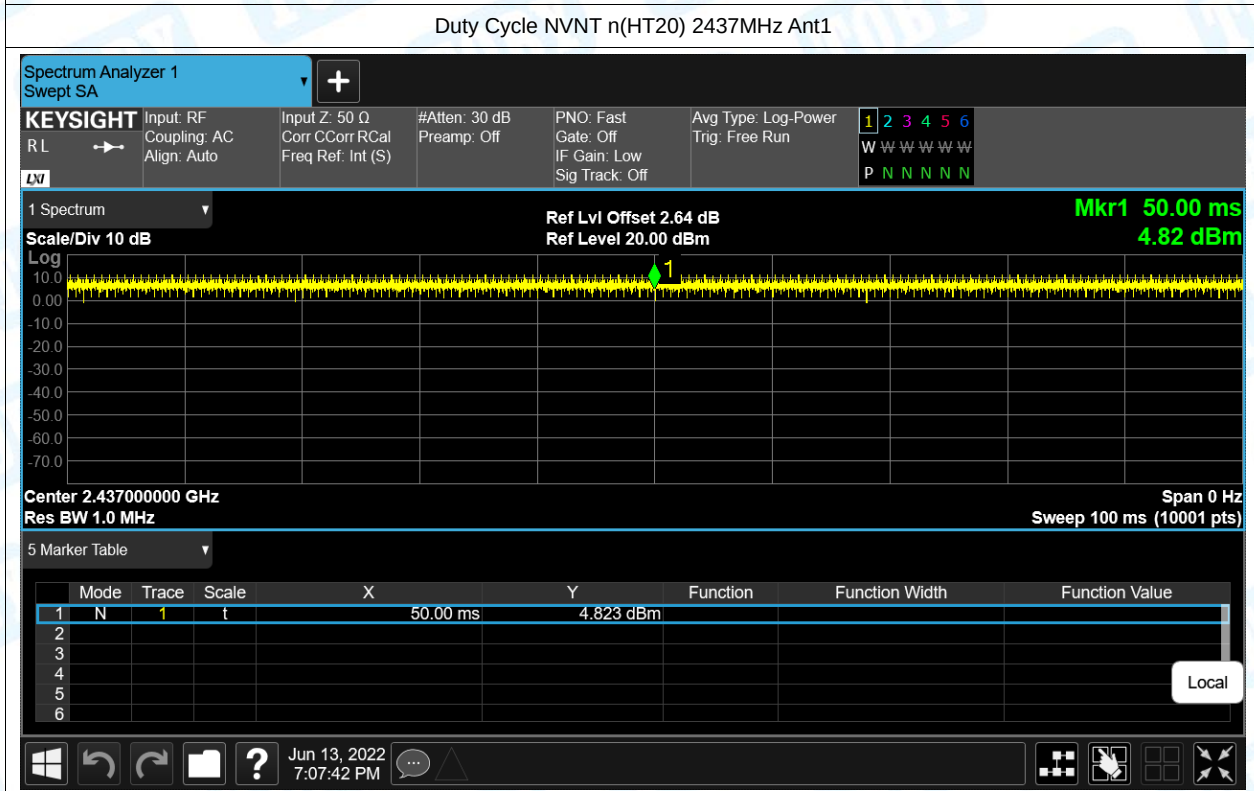
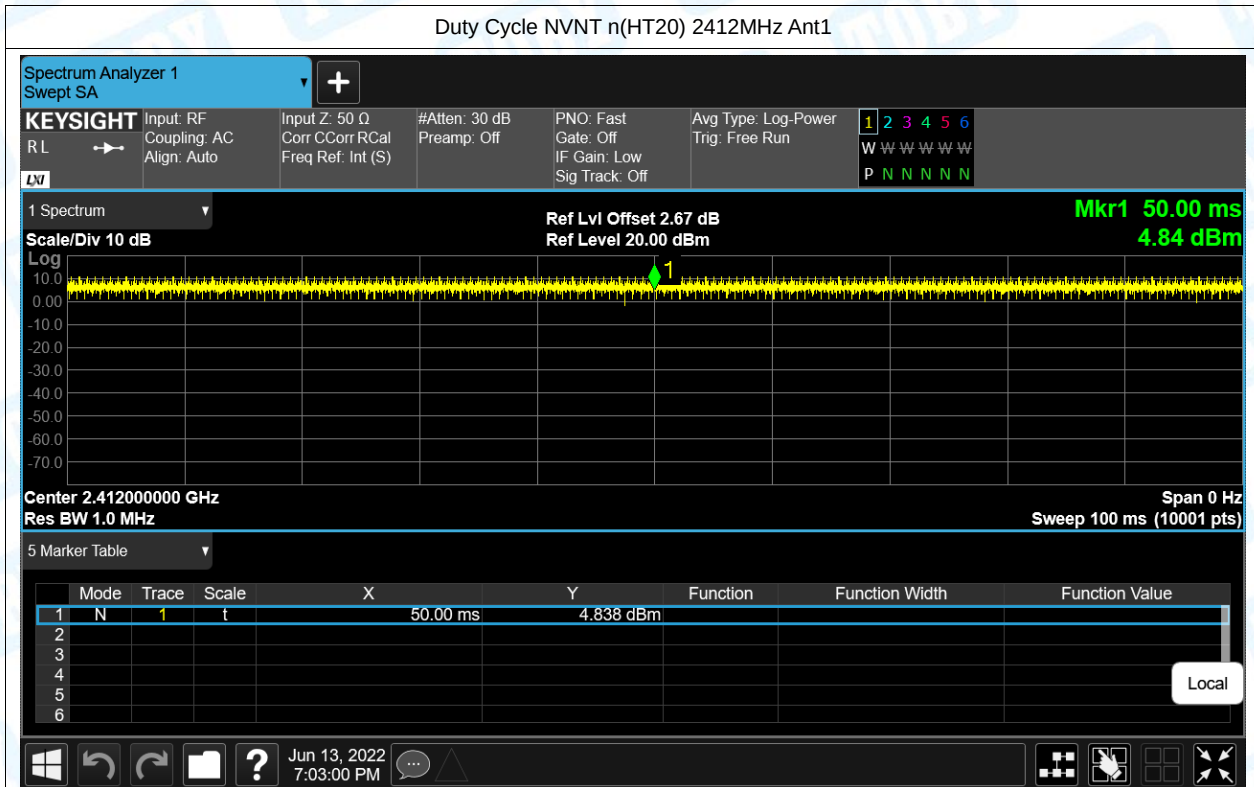


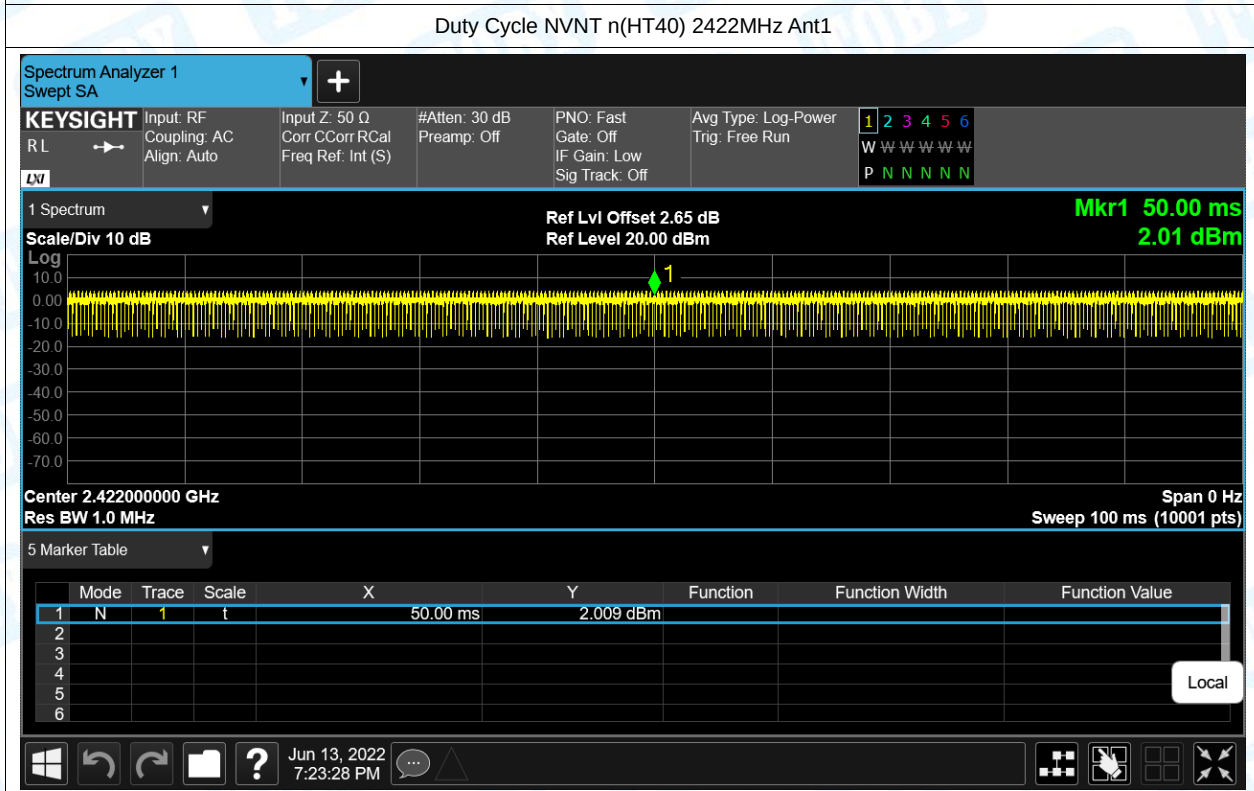
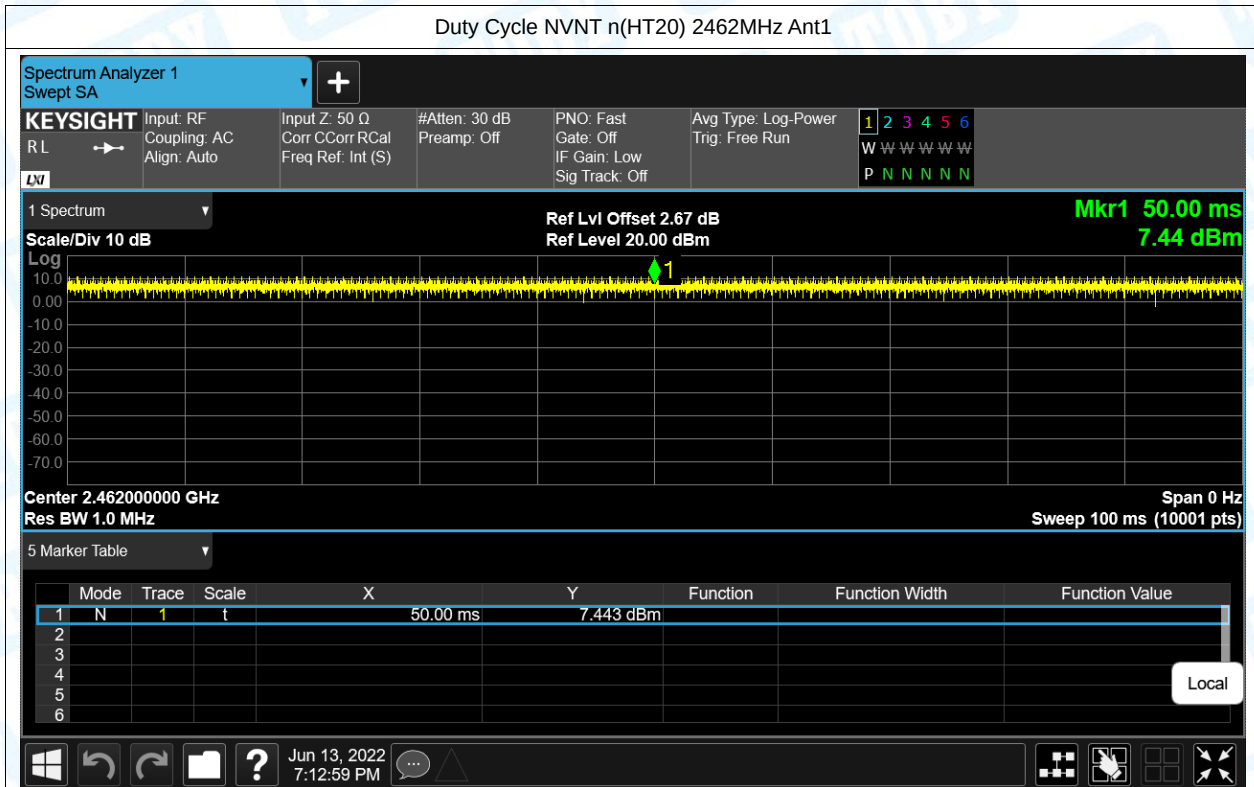
Duty Cycle NVNT g 2437MHz Ant1

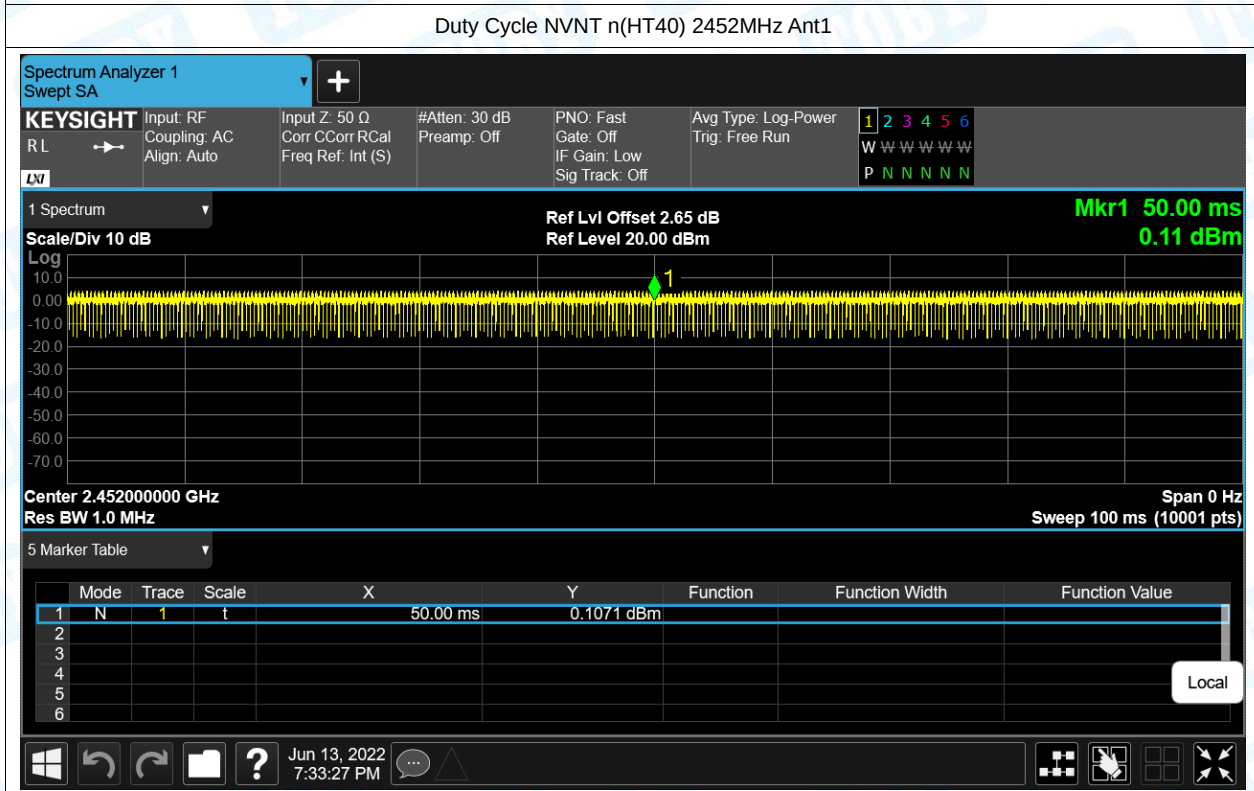
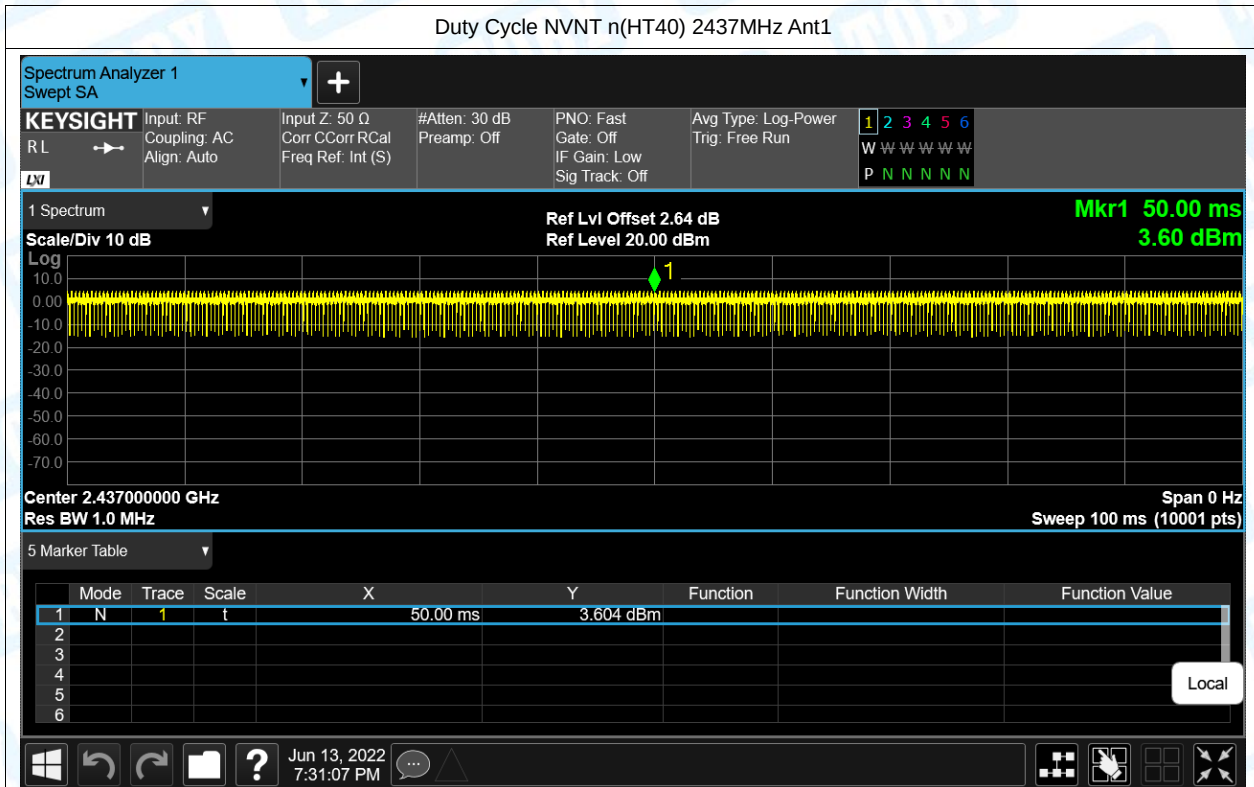


Duty Cycle NVNT g 2462MHz Ant1









2. Maximum Conducted Output Power

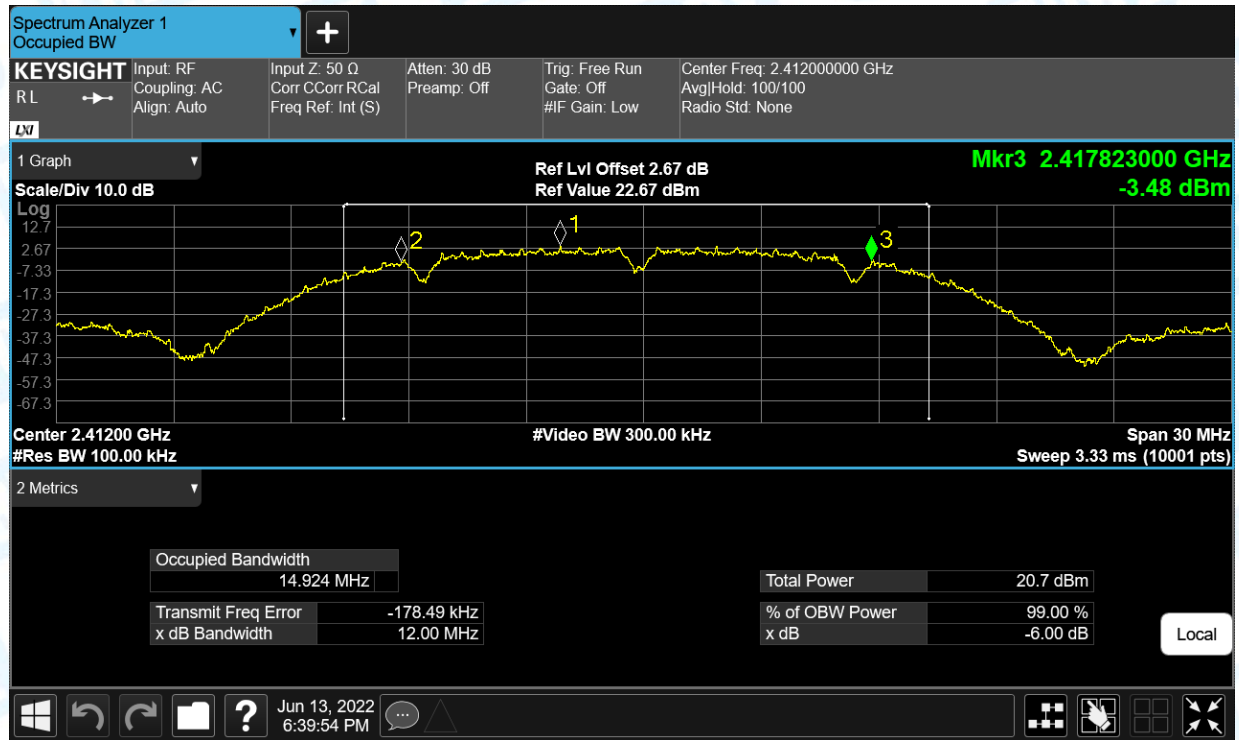
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	16.17	30	Pass
NVNT	b	2437	Ant1	16.31	30	Pass
NVNT	b	2462	Ant1	16.36	30	Pass
NVNT	g	2412	Ant1	17.01	30	Pass
NVNT	g	2437	Ant1	17.10	30	Pass
NVNT	g	2462	Ant1	17.11	30	Pass
NVNT	n(HT20)	2412	Ant1	16.78	30	Pass
NVNT	n(HT20)	2437	Ant1	17.04	30	Pass
NVNT	n(HT20)	2462	Ant1	17.05	30	Pass
NVNT	n(HT40)	2422	Ant1	17.55	30	Pass
NVNT	n(HT40)	2437	Ant1	17.71	30	Pass
NVNT	n(HT40)	2452	Ant1	17.43	30	Pass

3. -6dB Bandwidth

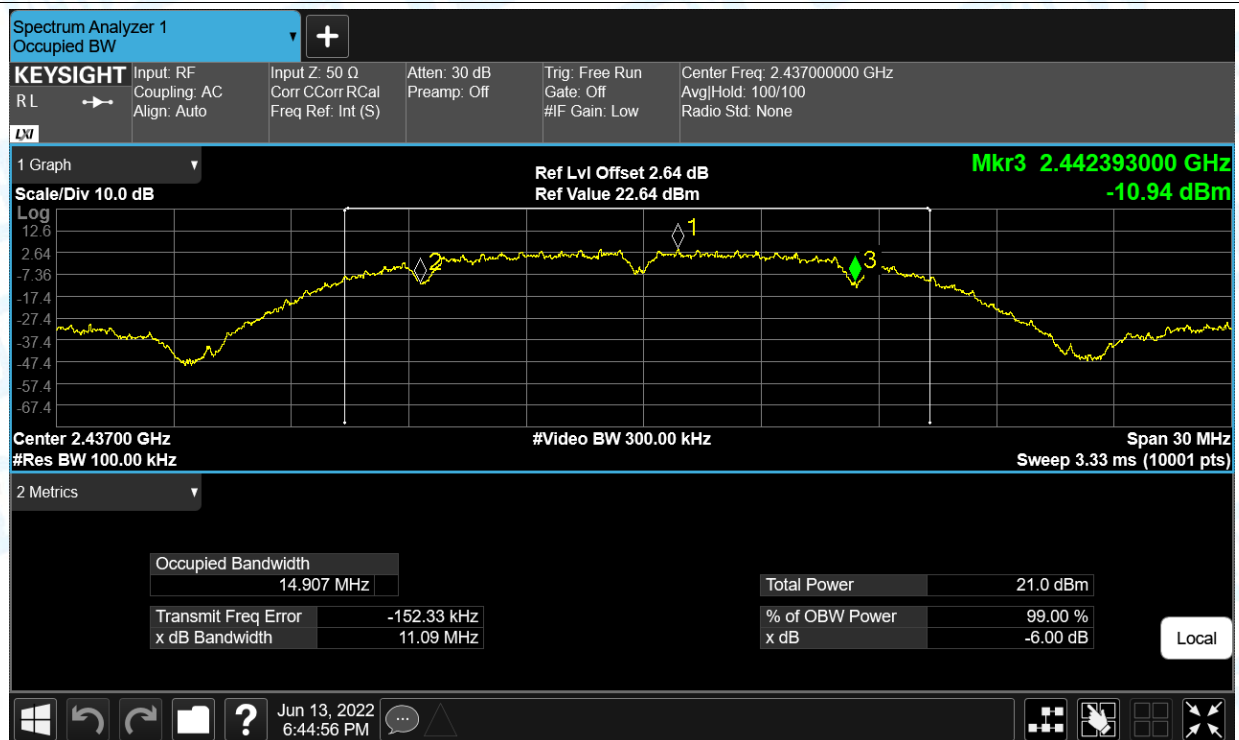
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	12	0.5	Pass
NVNT	b	2437	Ant1	11.09	0.5	Pass
NVNT	b	2462	Ant1	11.99	0.5	Pass
NVNT	g	2412	Ant1	15.1	0.5	Pass
NVNT	g	2437	Ant1	15	0.5	Pass
NVNT	g	2462	Ant1	15.1	0.5	Pass
NVNT	n(HT20)	2412	Ant1	15.02	0.5	Pass
NVNT	n(HT20)	2437	Ant1	15.1	0.5	Pass
NVNT	n(HT20)	2462	Ant1	15.06	0.5	Pass
NVNT	n(HT40)	2422	Ant1	33.83	0.5	Pass
NVNT	n(HT40)	2437	Ant1	31.34	0.5	Pass
NVNT	n(HT40)	2452	Ant1	33.77	0.5	Pass

Test Graphs

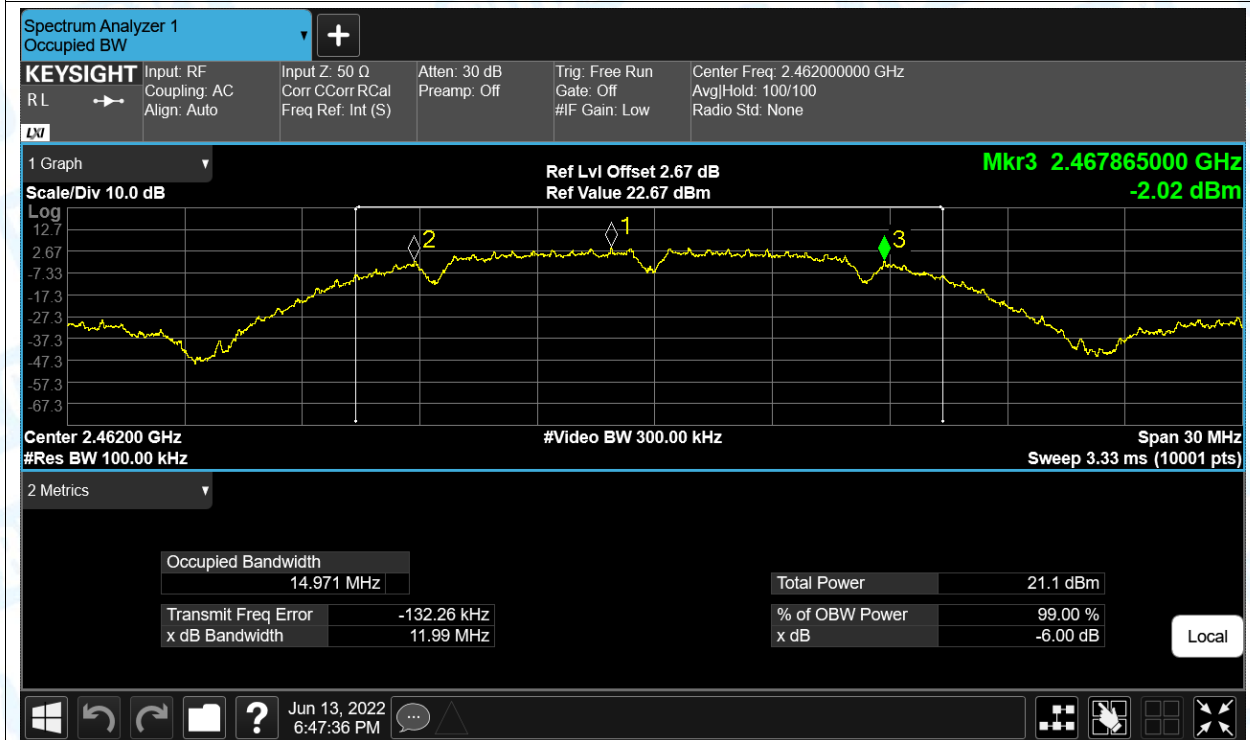
-6dB Bandwidth NVNT b 2412MHz Ant1



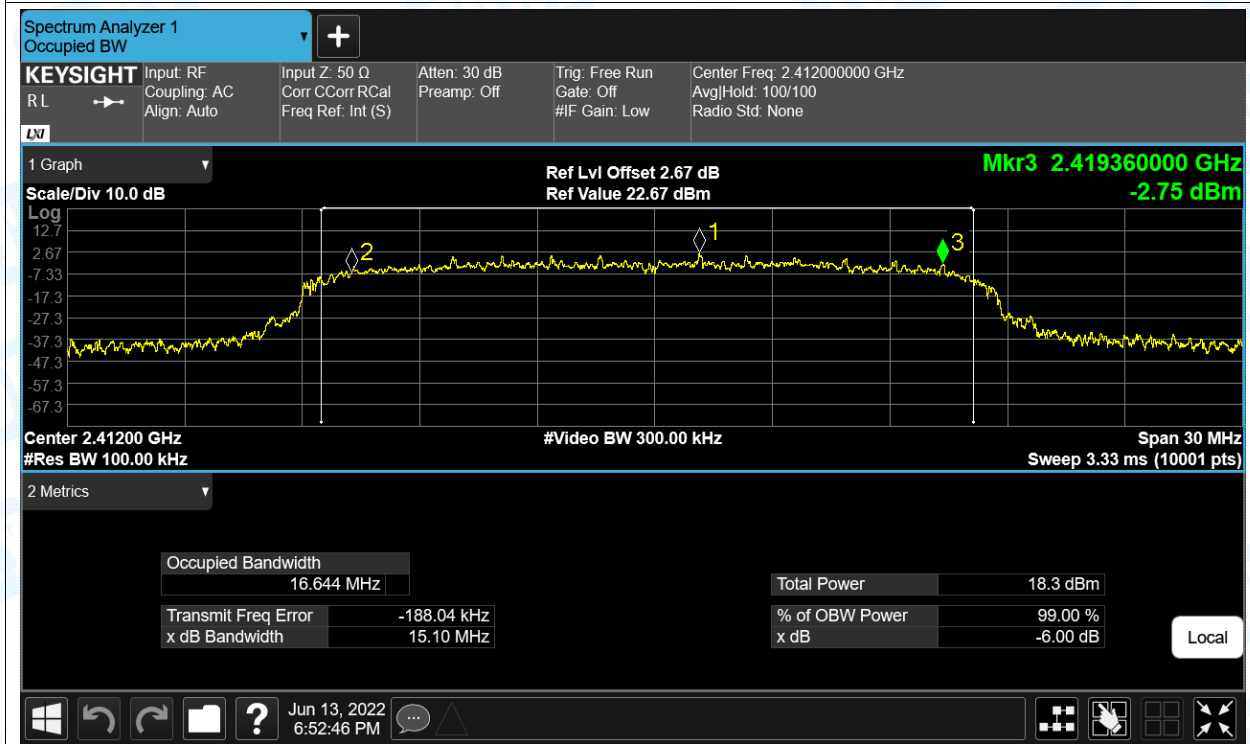
-6dB Bandwidth NVNT b 2437MHz Ant1

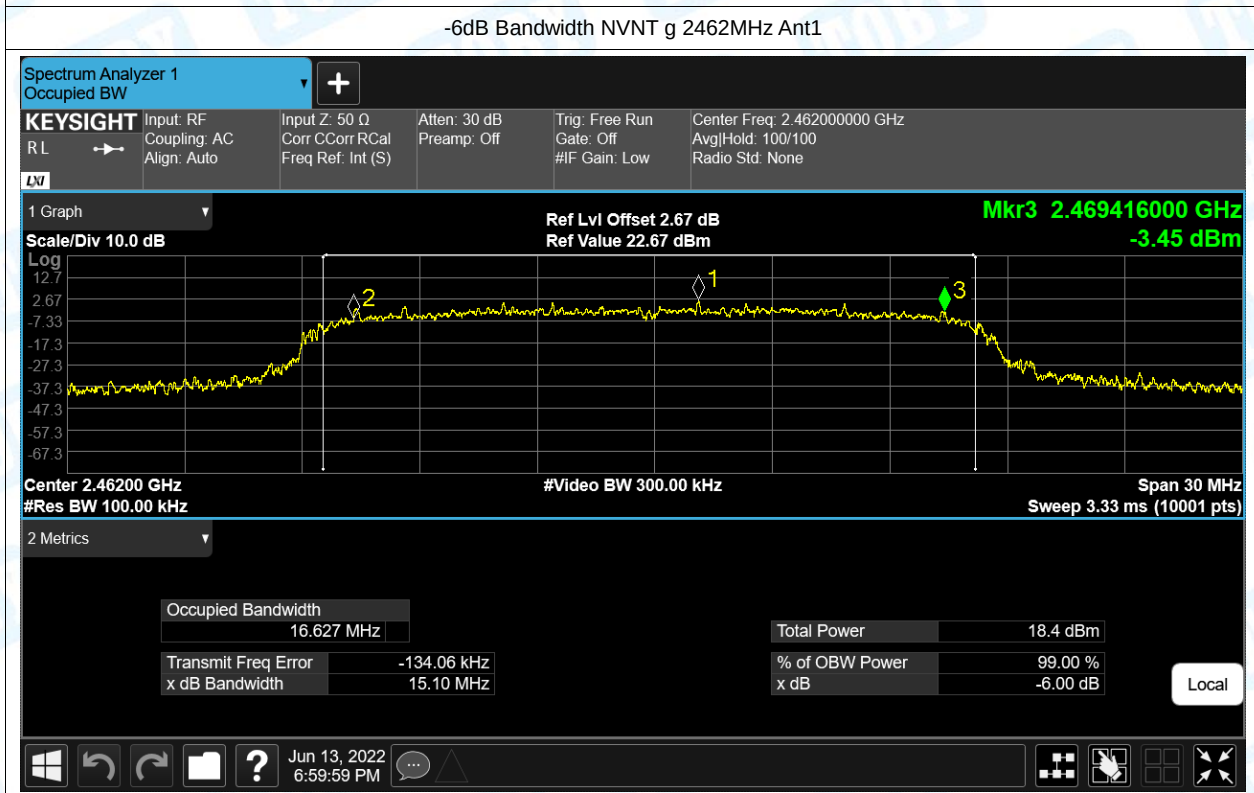
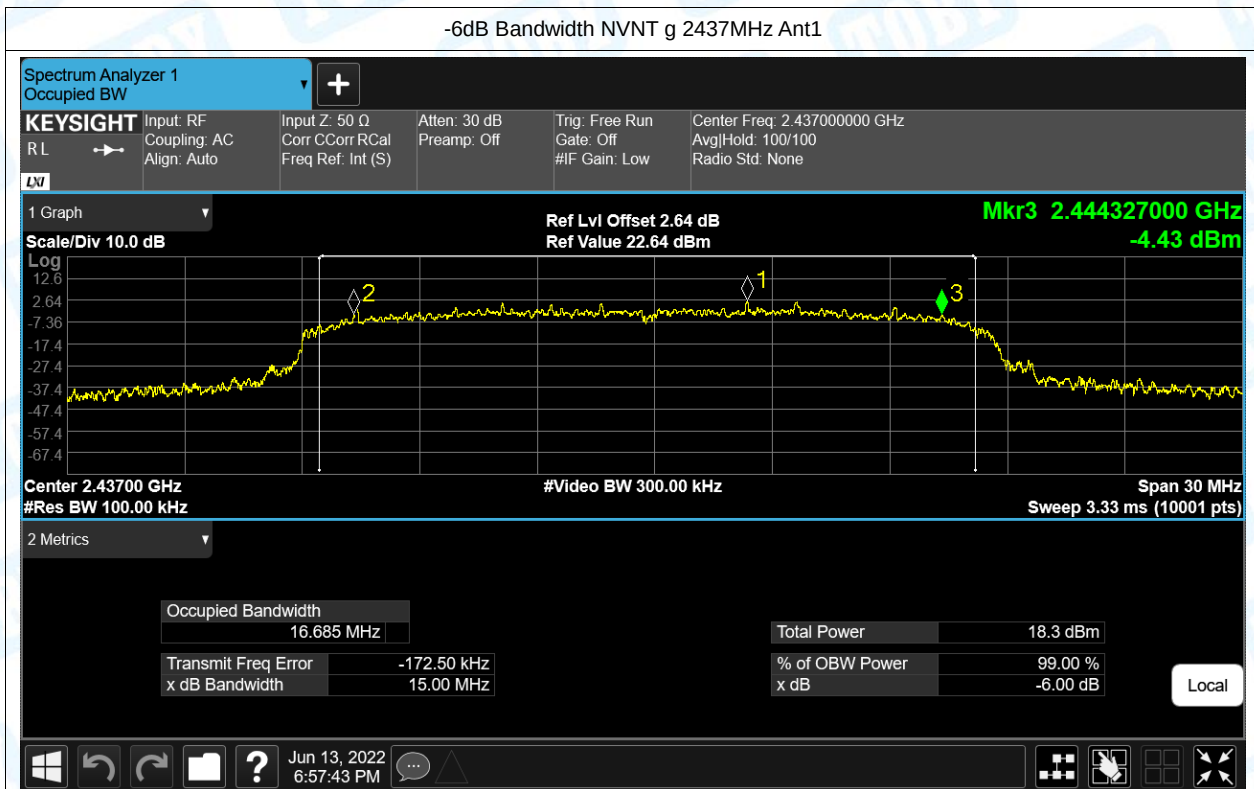


-6dB Bandwidth NVNT b 2462MHz Ant1

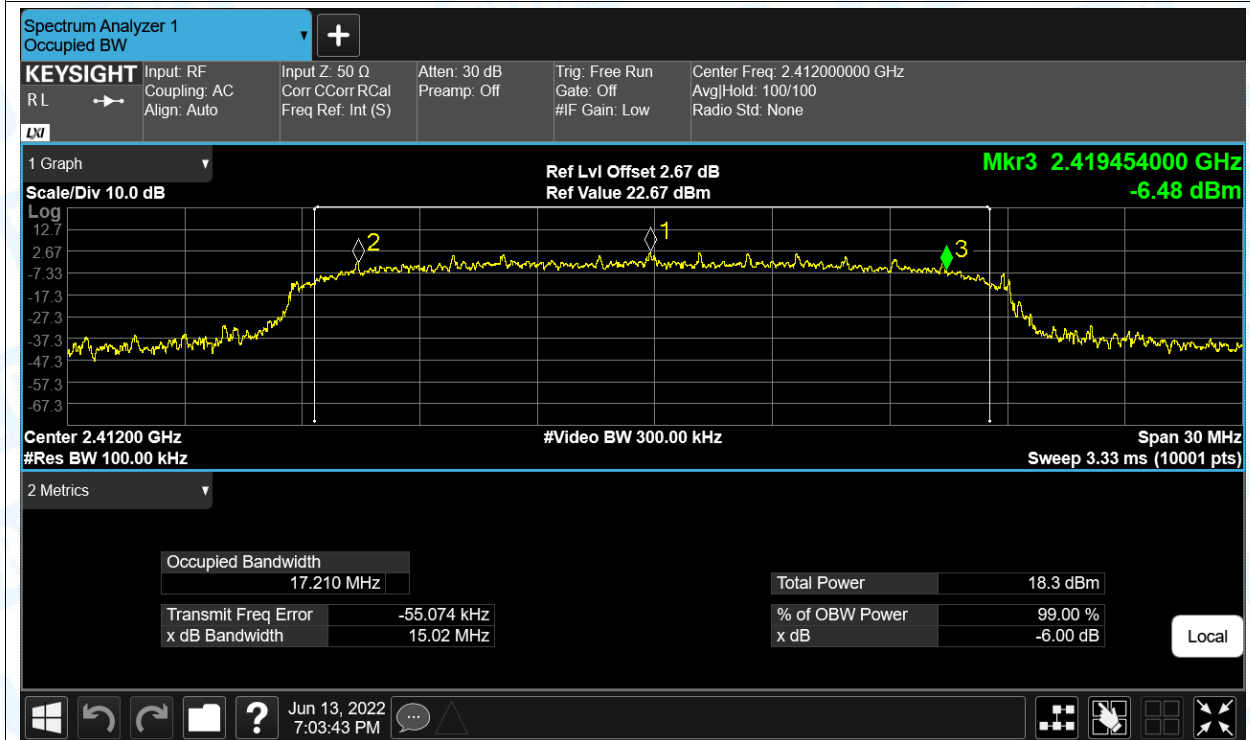


-6dB Bandwidth NVNT g 2412MHz Ant1

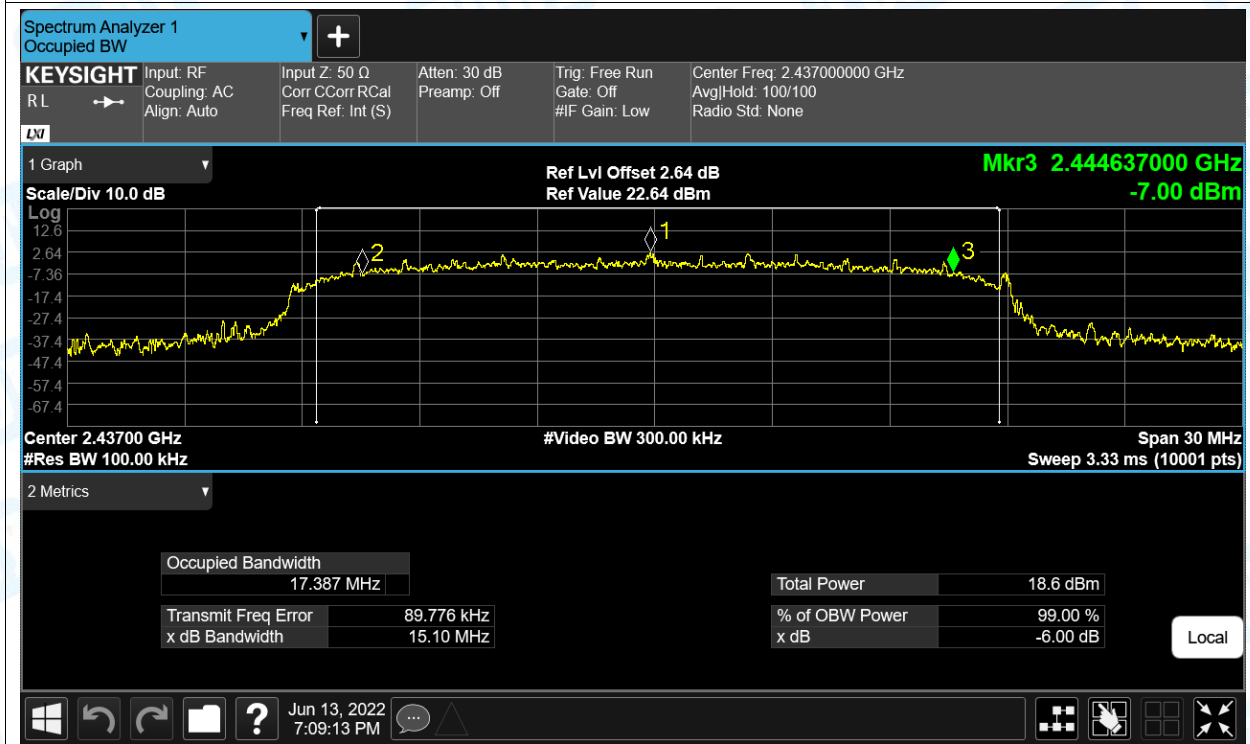




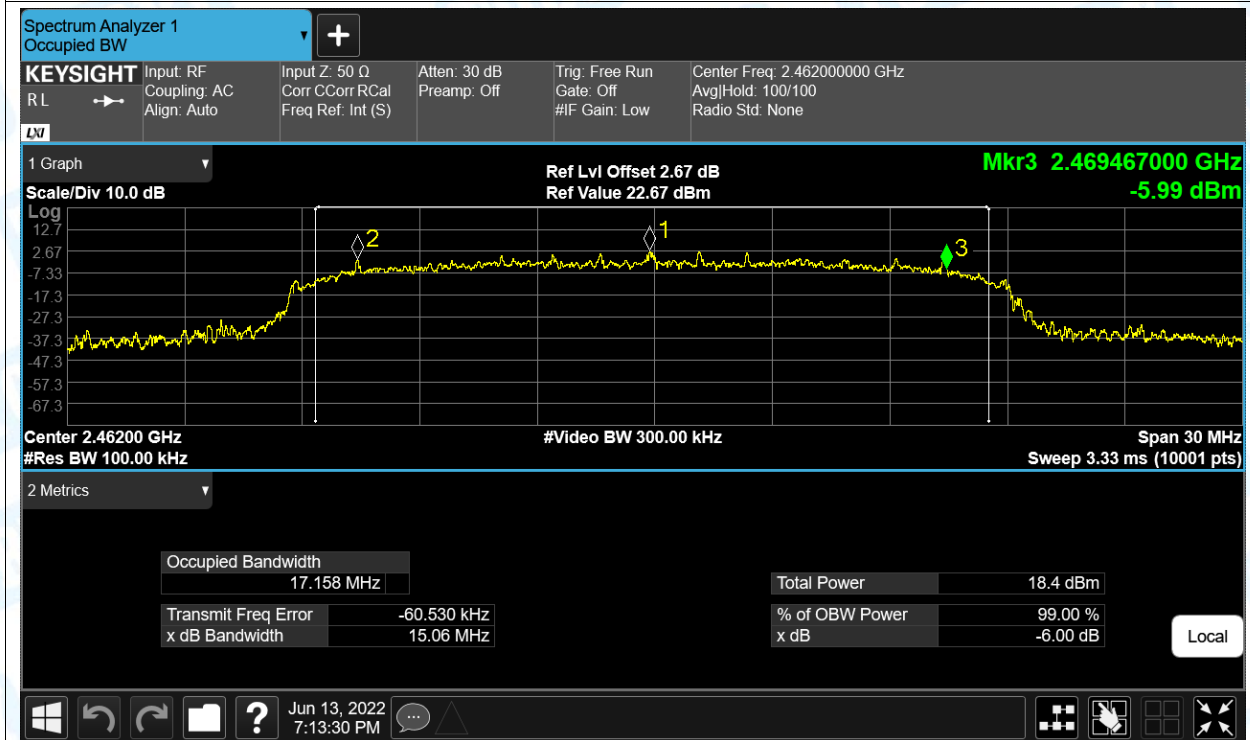
-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



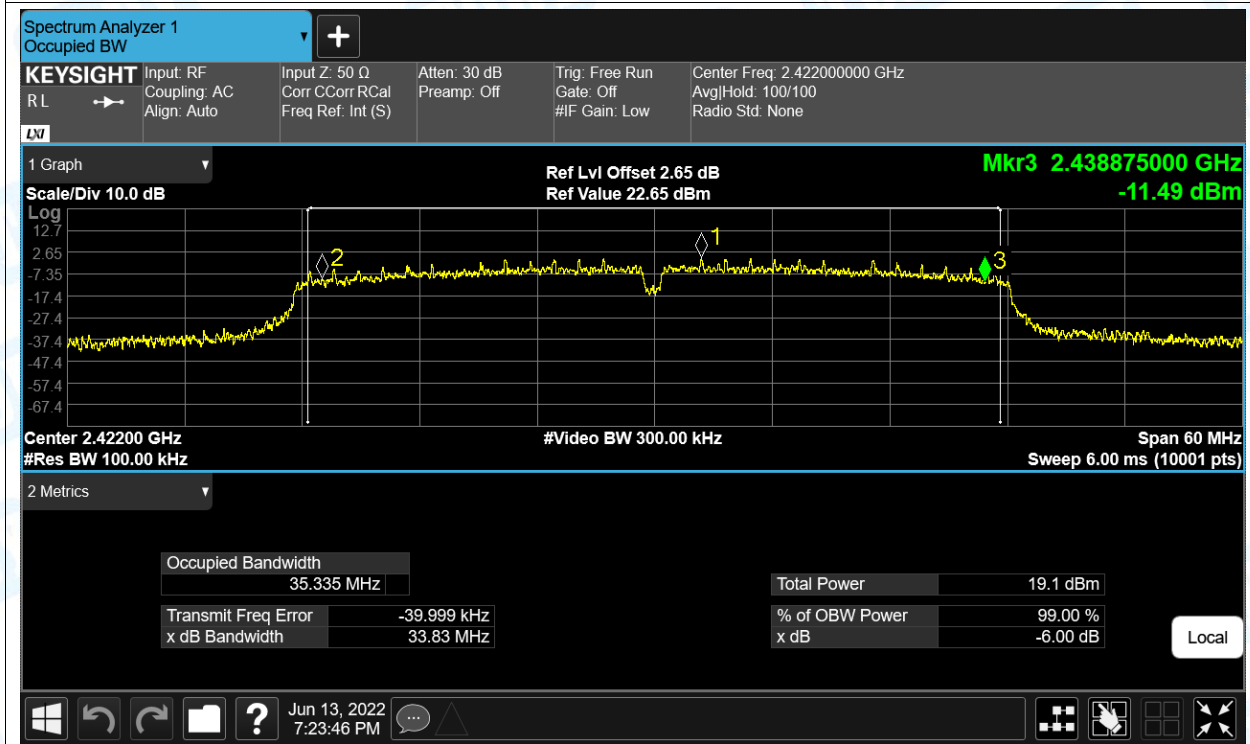
-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1



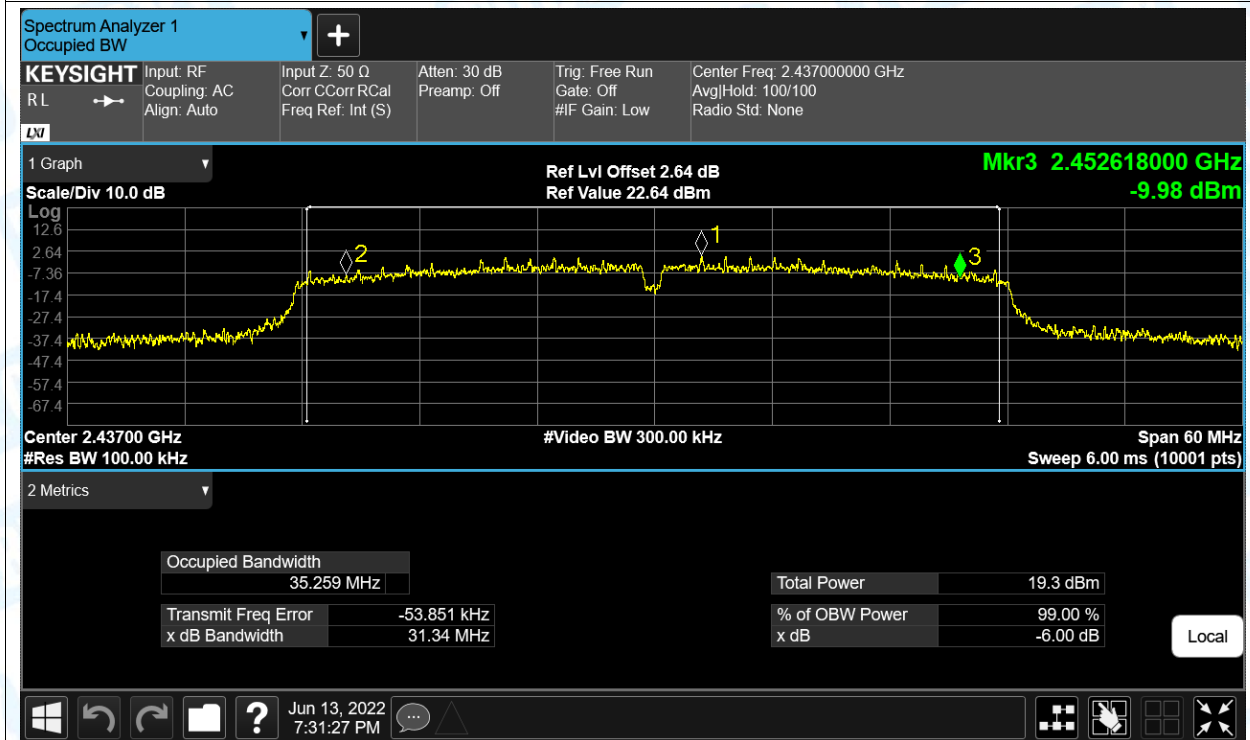
-6dB Bandwidth NVNT n(HT20) 2462MHz Ant1



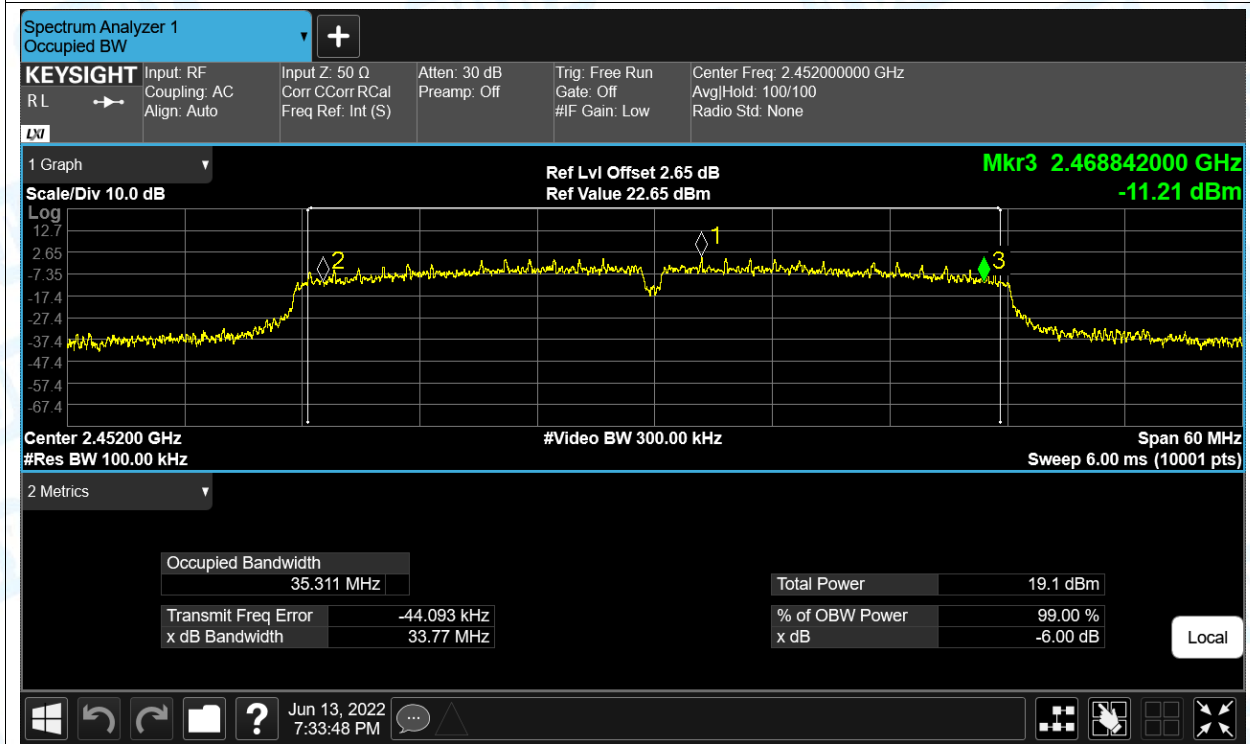
-6dB Bandwidth NVNT n(HT40) 2422MHz Ant1



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

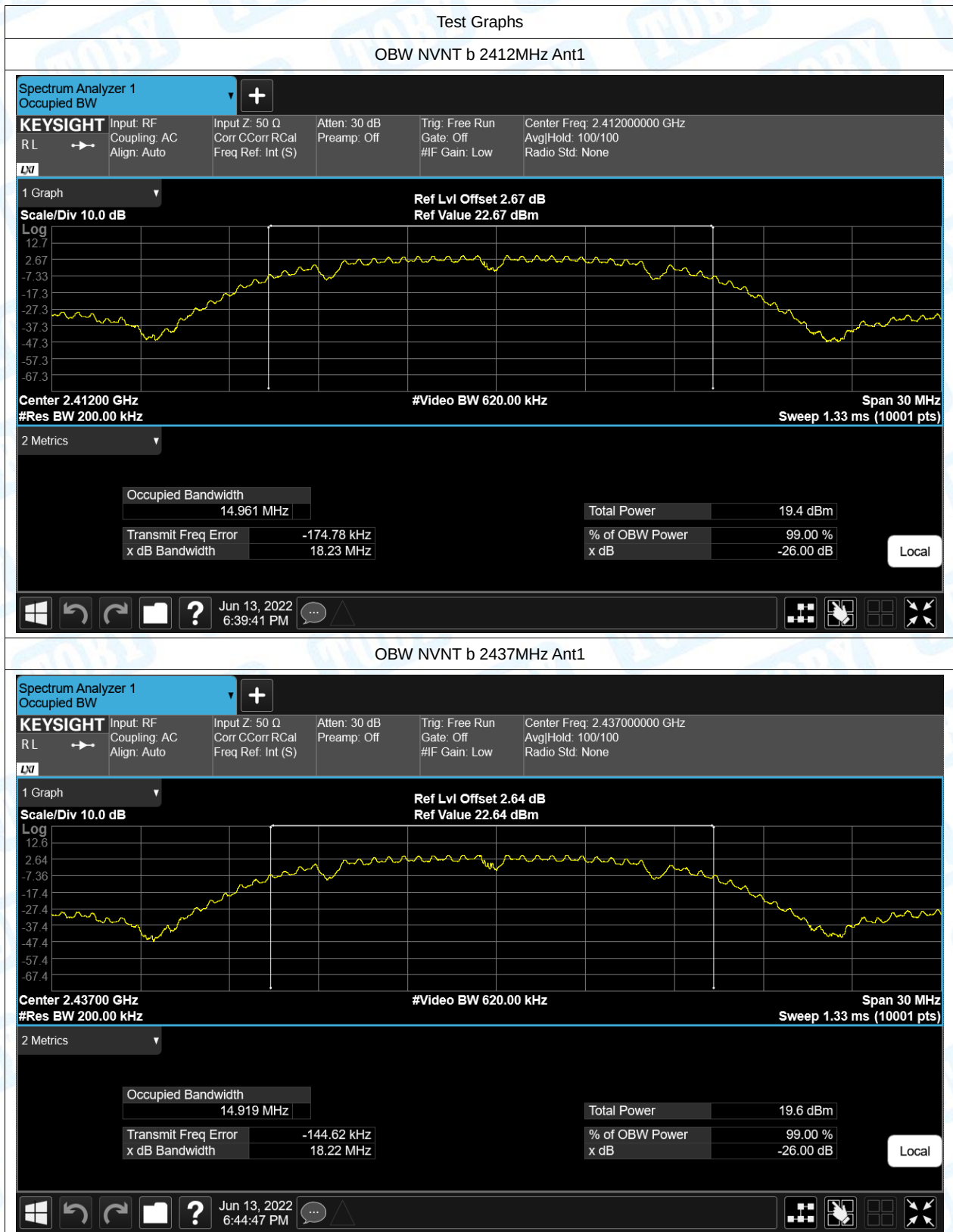


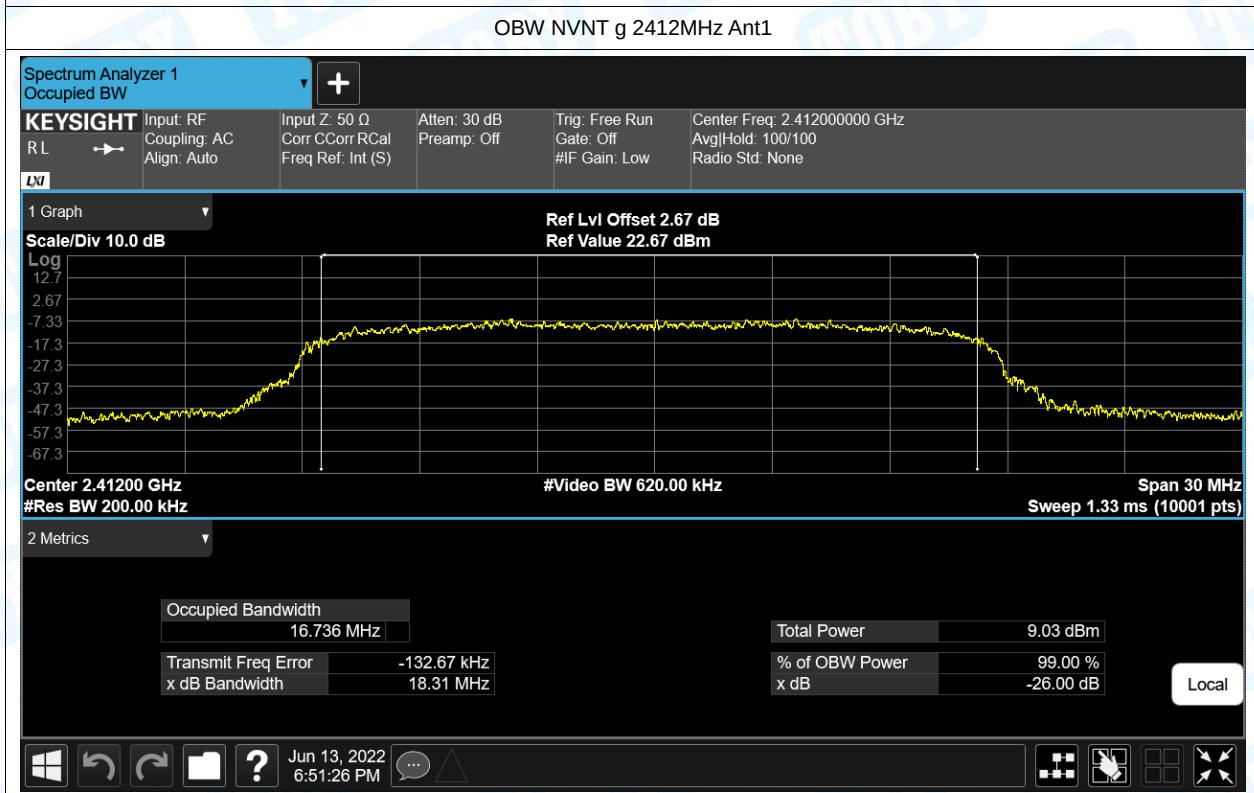
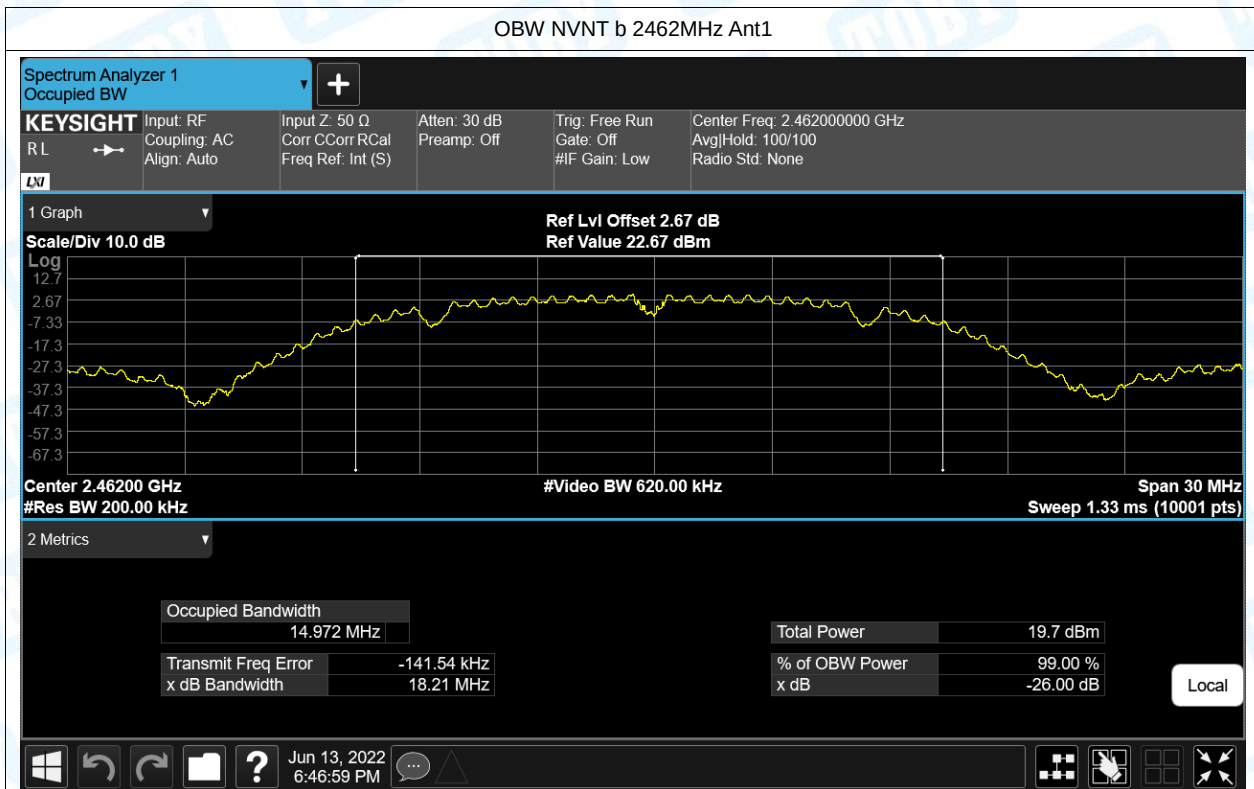
-6dB Bandwidth NVNT n(HT40) 2452MHz Ant1



4. Occupied Channel Bandwidth

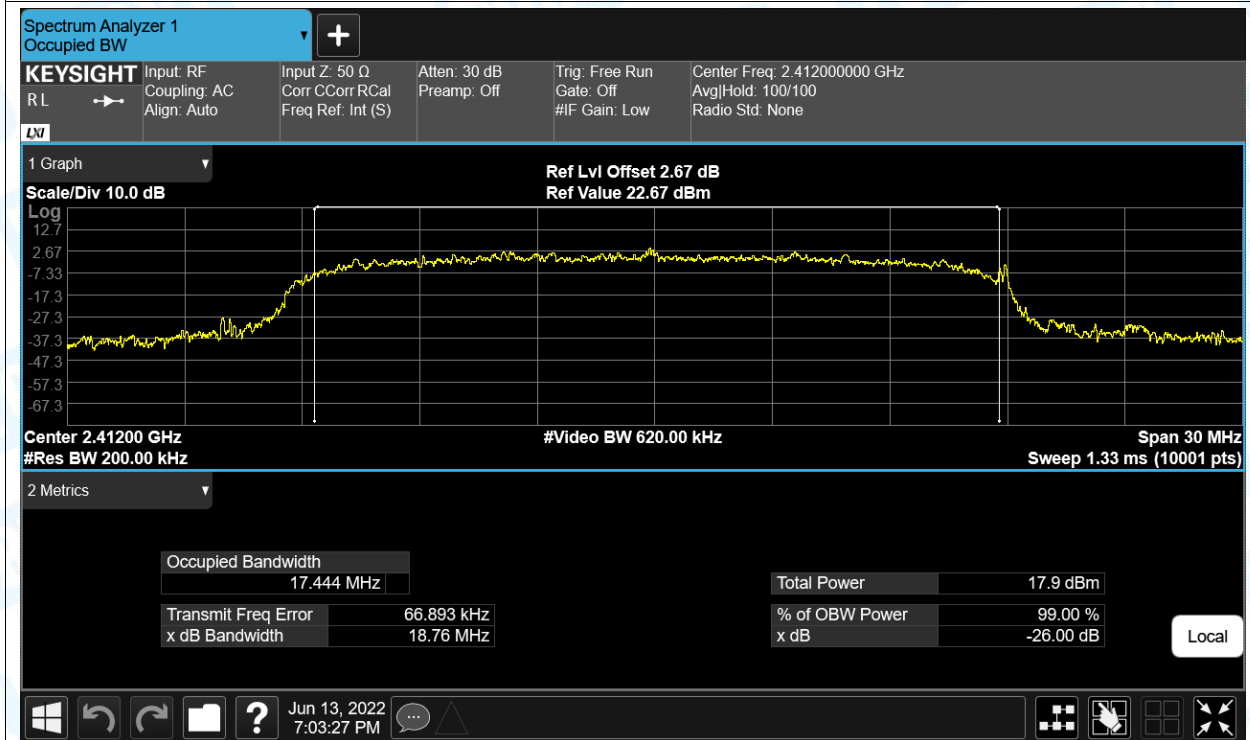
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	14.961
NVNT	b	2437	Ant1	14.919
NVNT	b	2462	Ant1	14.972
NVNT	g	2412	Ant1	16.736
NVNT	g	2437	Ant1	16.718
NVNT	g	2462	Ant1	16.682
NVNT	n(HT20)	2412	Ant1	17.444
NVNT	n(HT20)	2437	Ant1	17.505
NVNT	n(HT20)	2462	Ant1	17.22
NVNT	n(HT40)	2422	Ant1	35.527
NVNT	n(HT40)	2437	Ant1	35.466
NVNT	n(HT40)	2452	Ant1	35.51



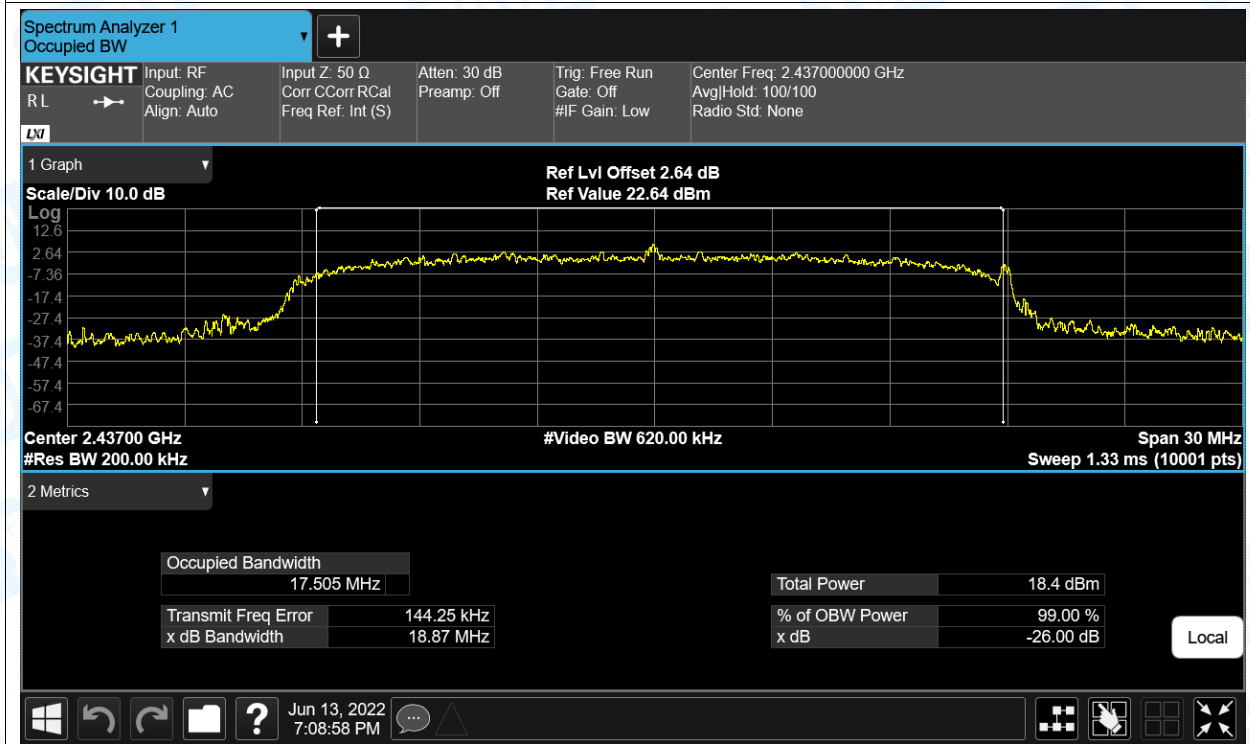




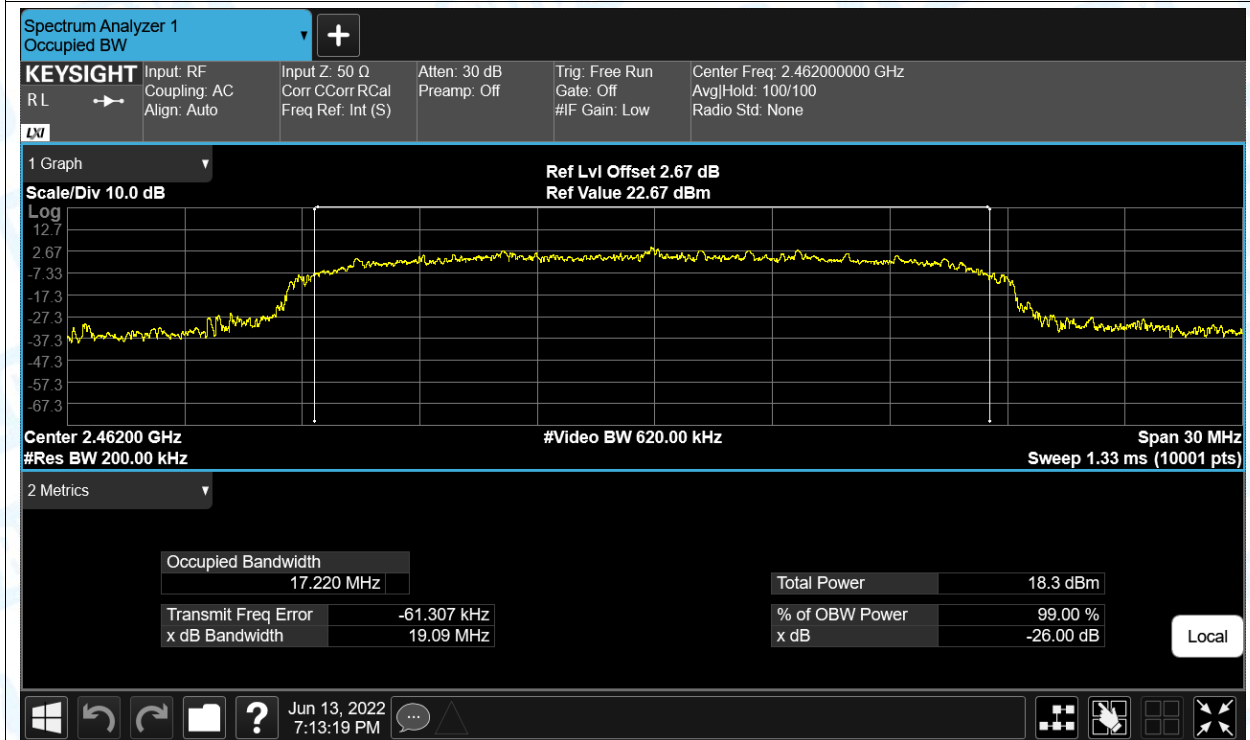
OBW NVNT n(HT20) 2412MHz Ant1



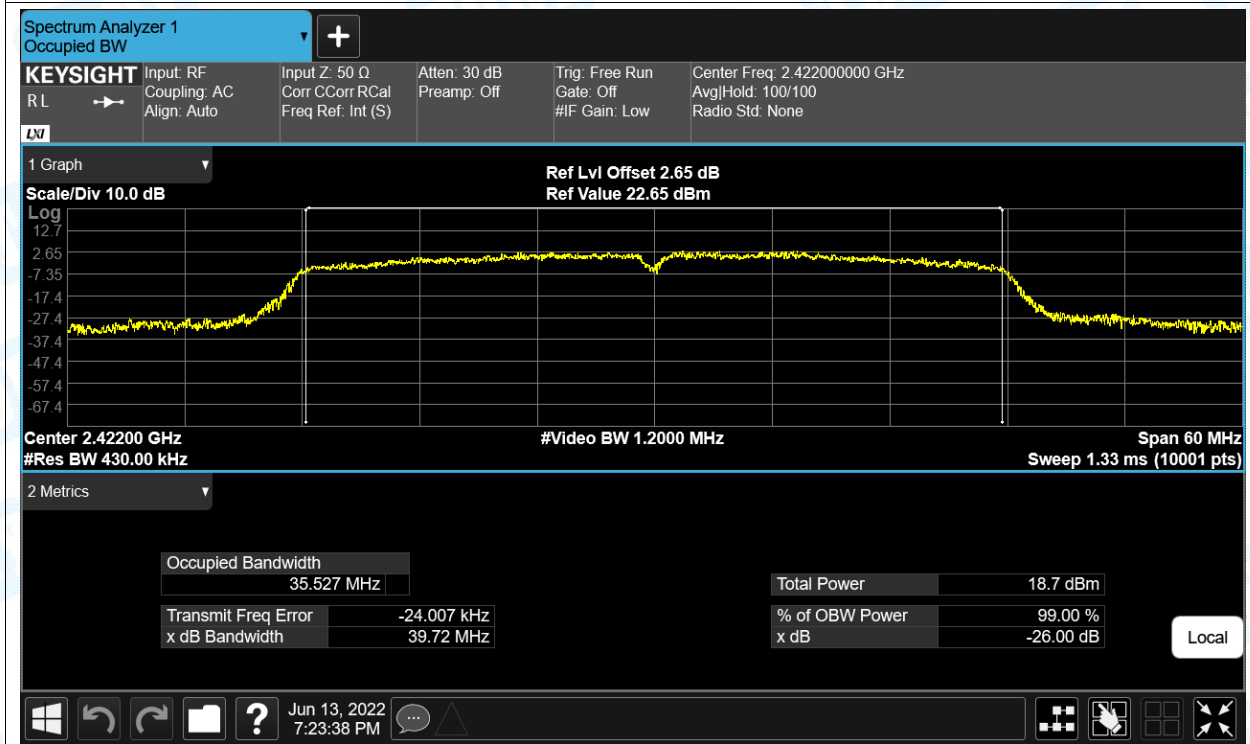
OBW NVNT n(HT20) 2437MHz Ant1



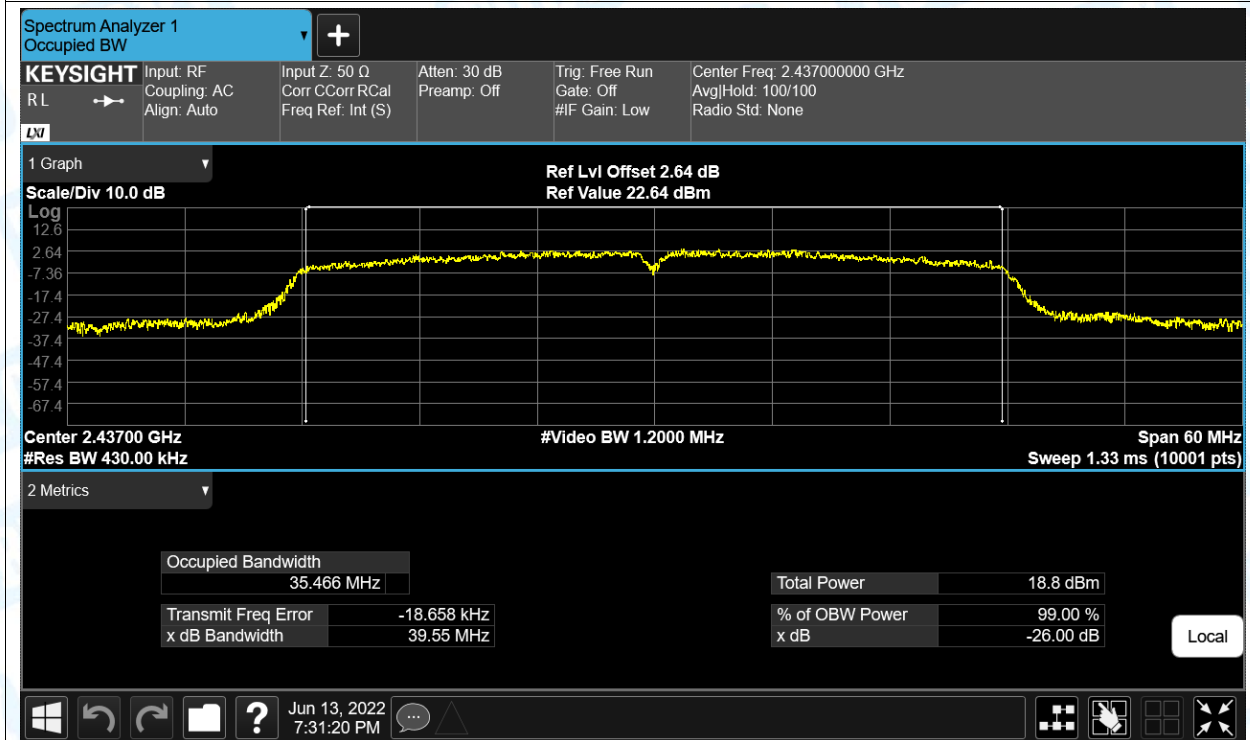
OBW NVNT n(HT20) 2462MHz Ant1



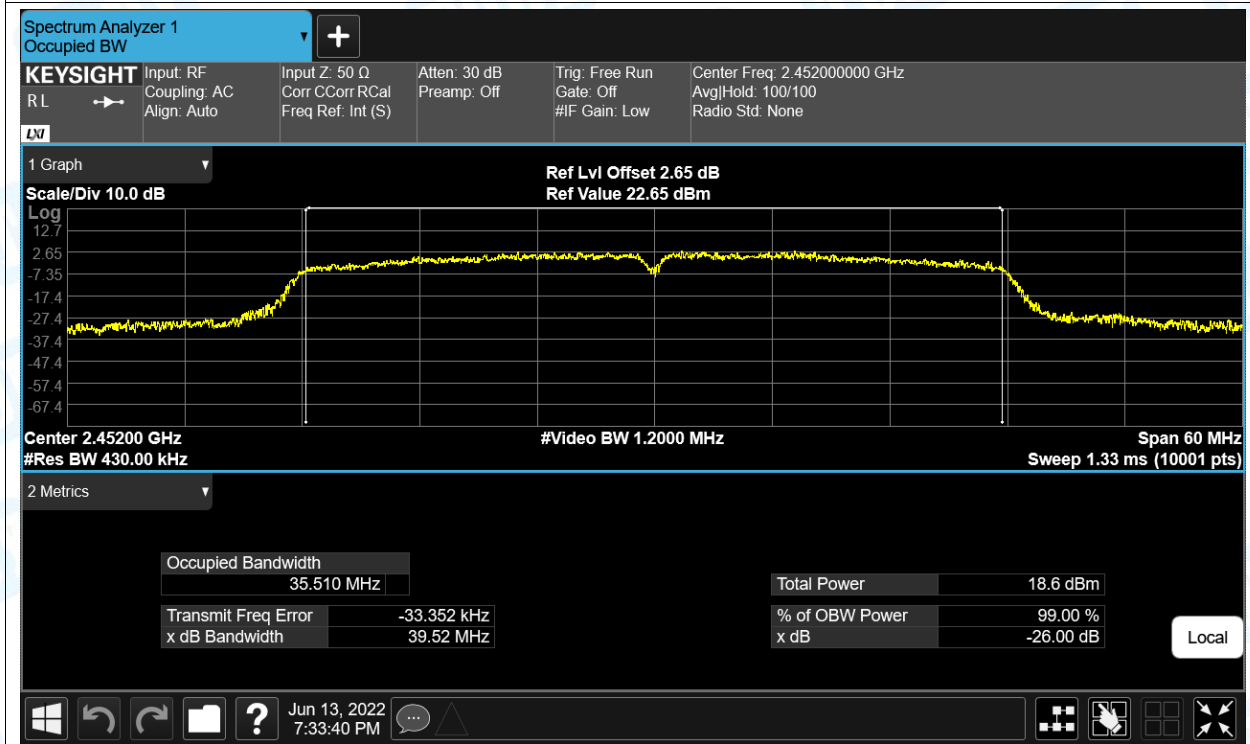
OBW NVNT n(HT40) 2422MHz Ant1



OBW NVNT n(HT40) 2437MHz Ant1



OBW NVNT n(HT40) 2452MHz Ant1

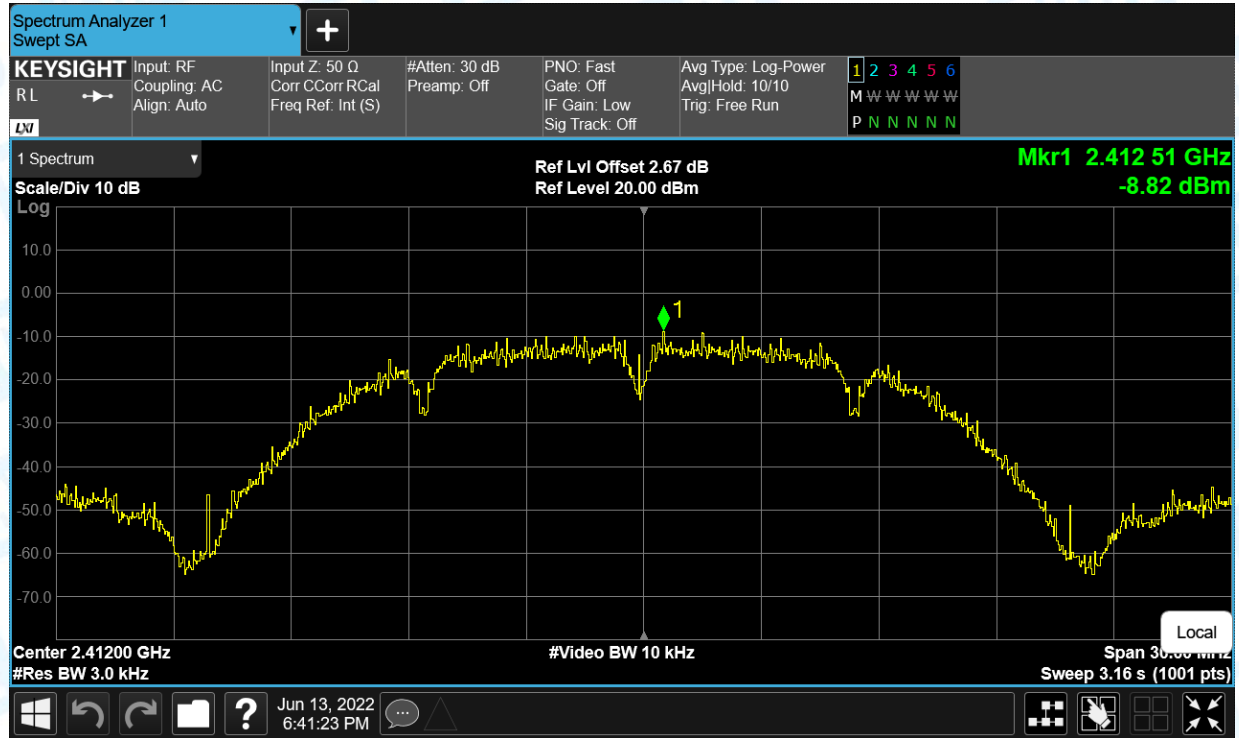


5. Maximum Power Spectral Density Level

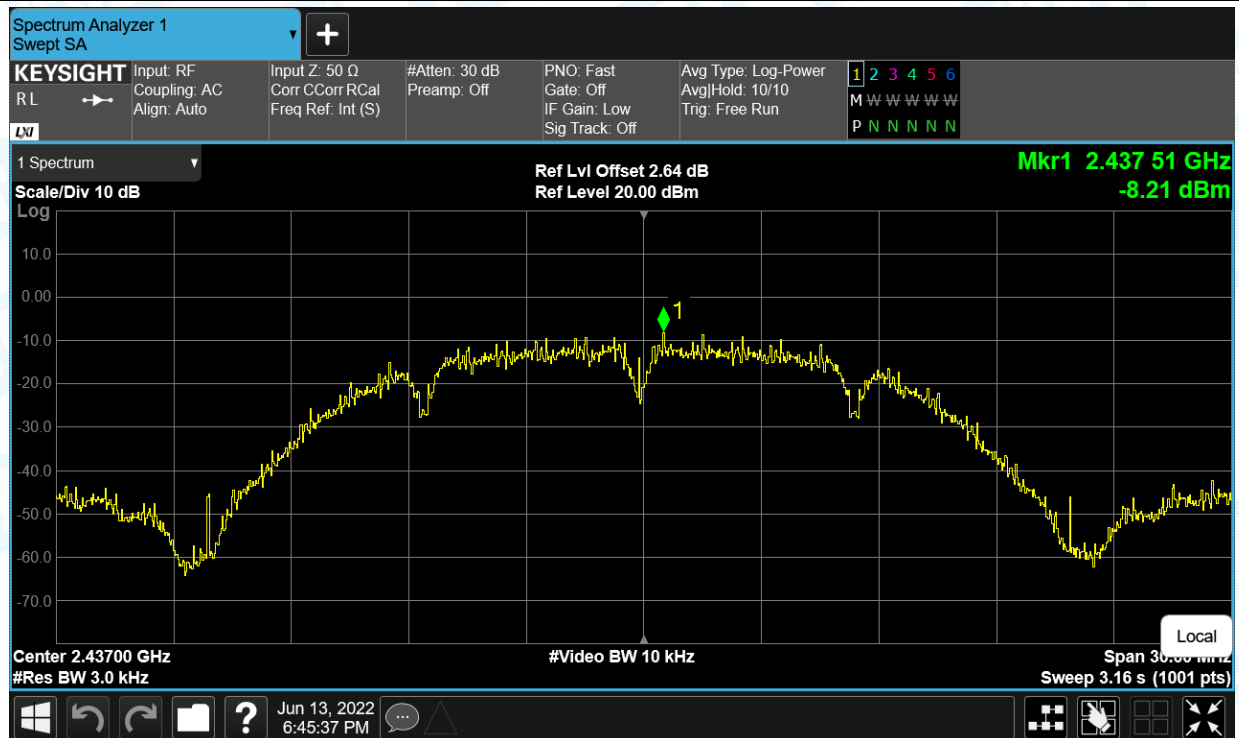
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-8.823	8	Pass
NVNT	b	2437	Ant1	-8.212	8	Pass
NVNT	b	2462	Ant1	-8.694	8	Pass
NVNT	g	2412	Ant1	-11.627	8	Pass
NVNT	g	2437	Ant1	-11.689	8	Pass
NVNT	g	2462	Ant1	-11.58	8	Pass
NVNT	n(HT20)	2412	Ant1	-13.184	8	Pass
NVNT	n(HT20)	2437	Ant1	-12.725	8	Pass
NVNT	n(HT20)	2462	Ant1	-12.879	8	Pass
NVNT	n(HT40)	2422	Ant1	-13.435	8	Pass
NVNT	n(HT40)	2437	Ant1	-13.108	8	Pass
NVNT	n(HT40)	2452	Ant1	-13.444	8	Pass

Test Graphs

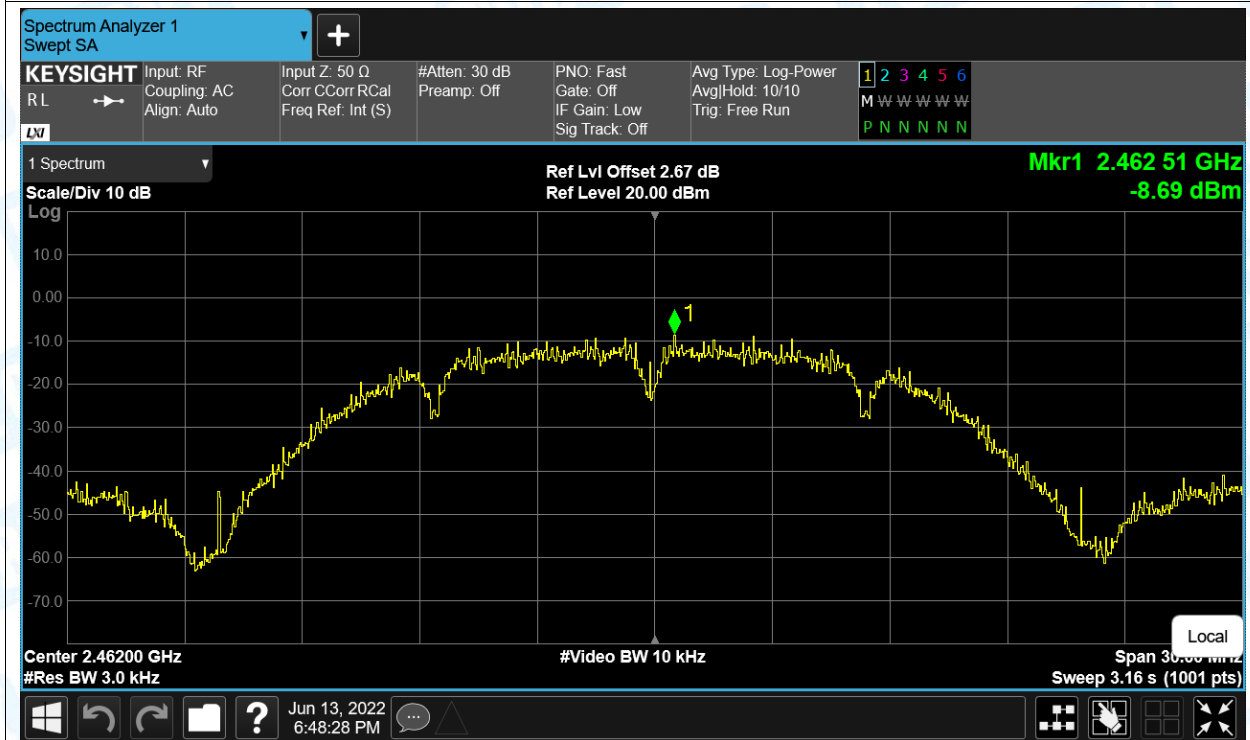
PSD NVNT b 2412MHz Ant1



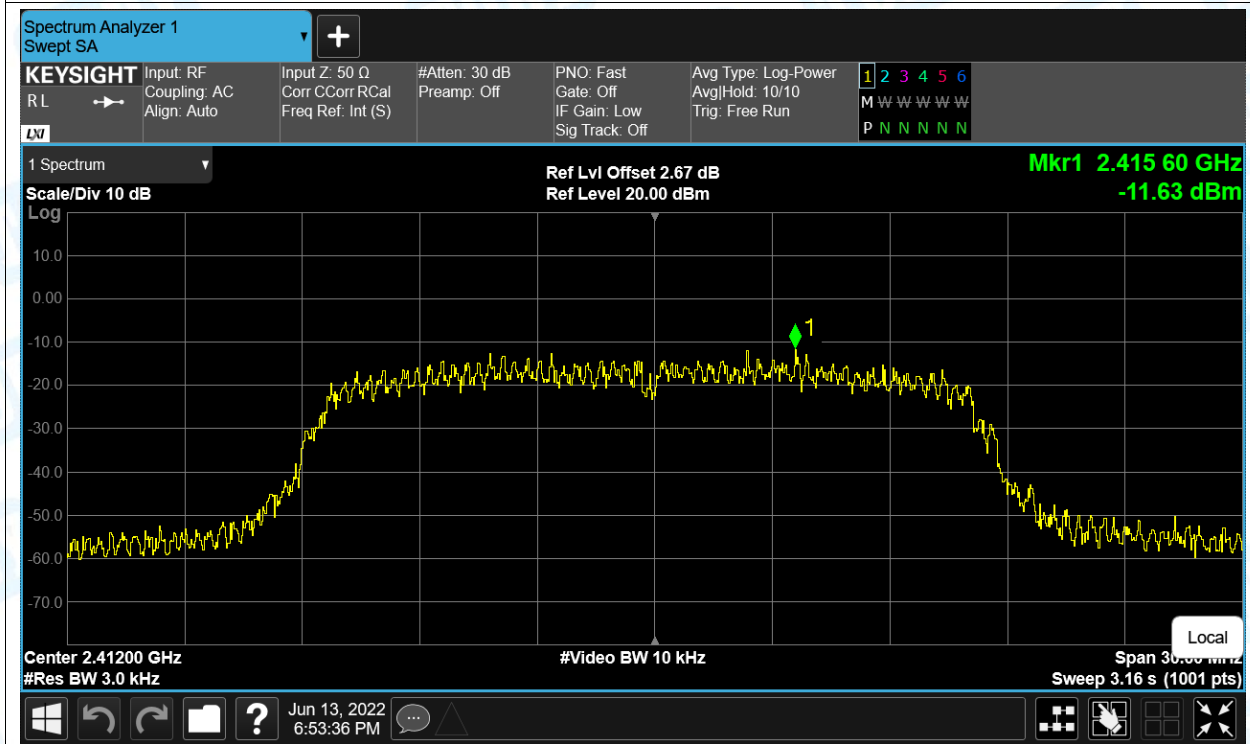
PSD NVNT b 2437MHz Ant1

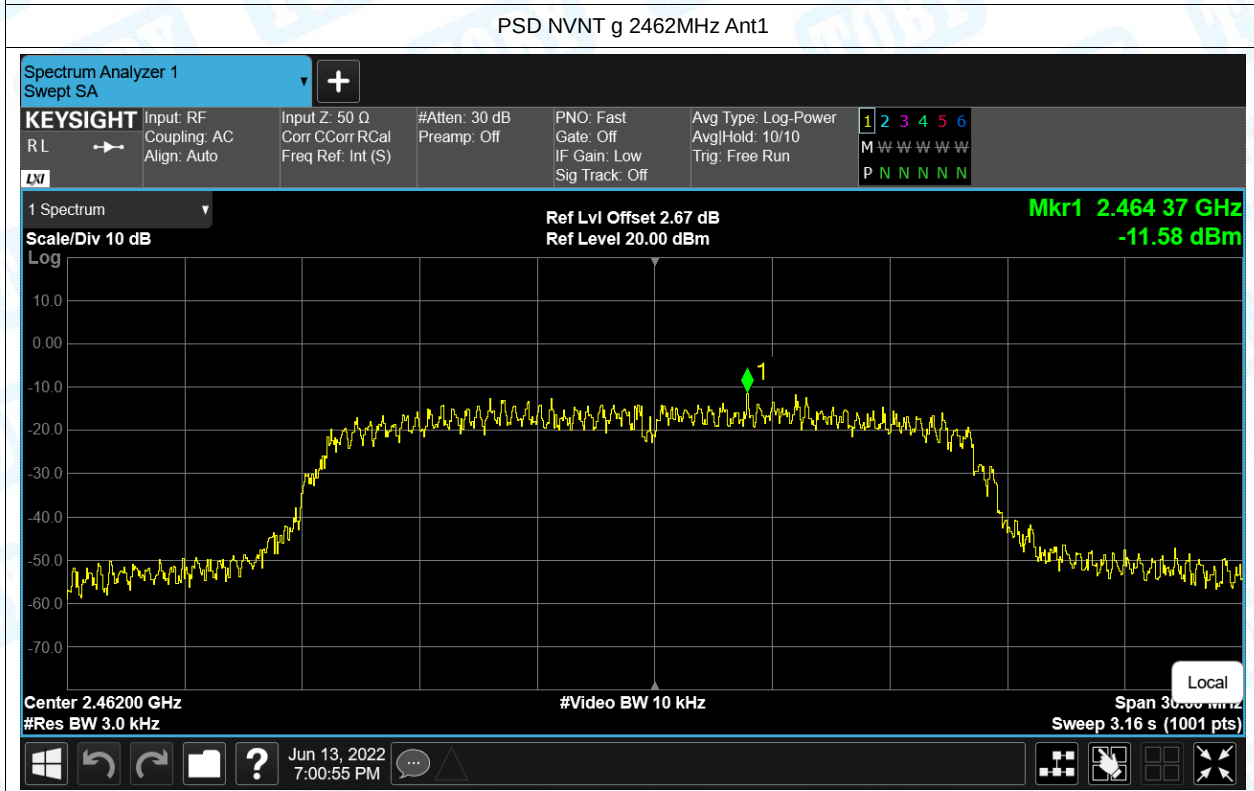
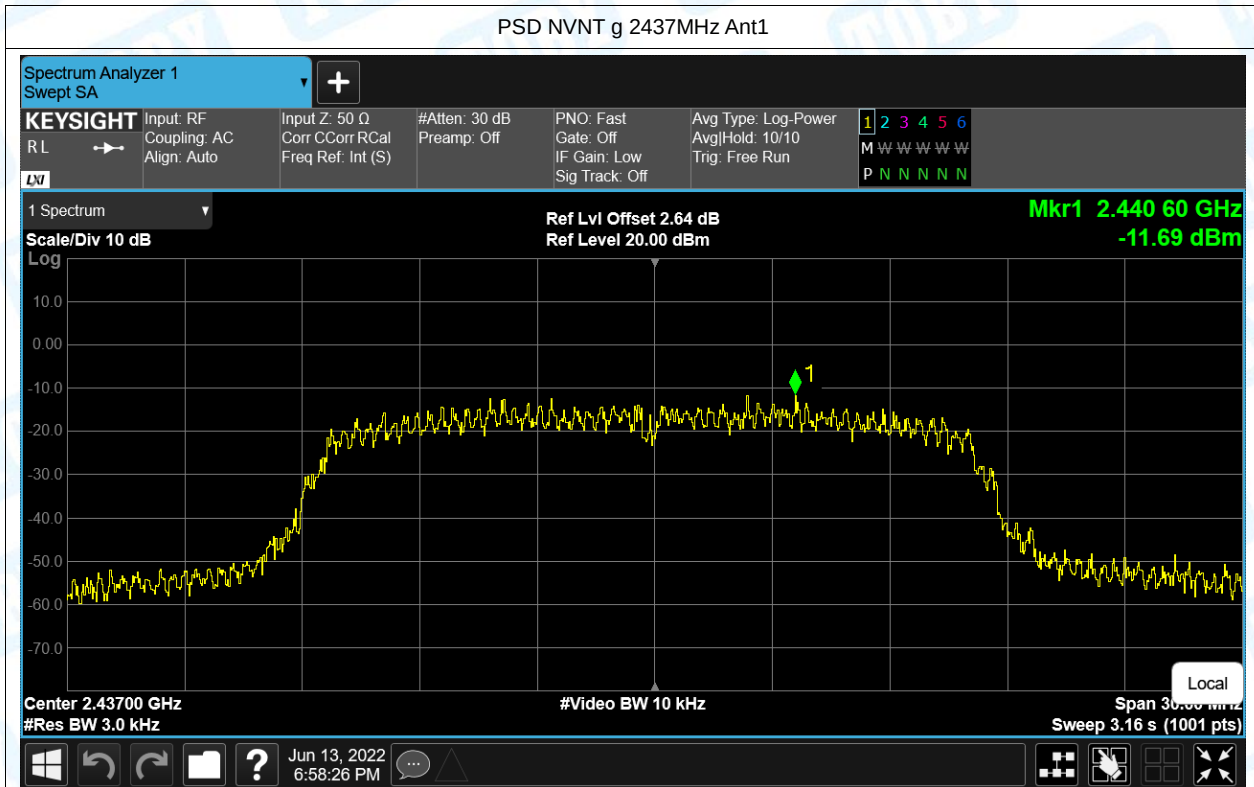


PSD NVNT b 2462MHz Ant1

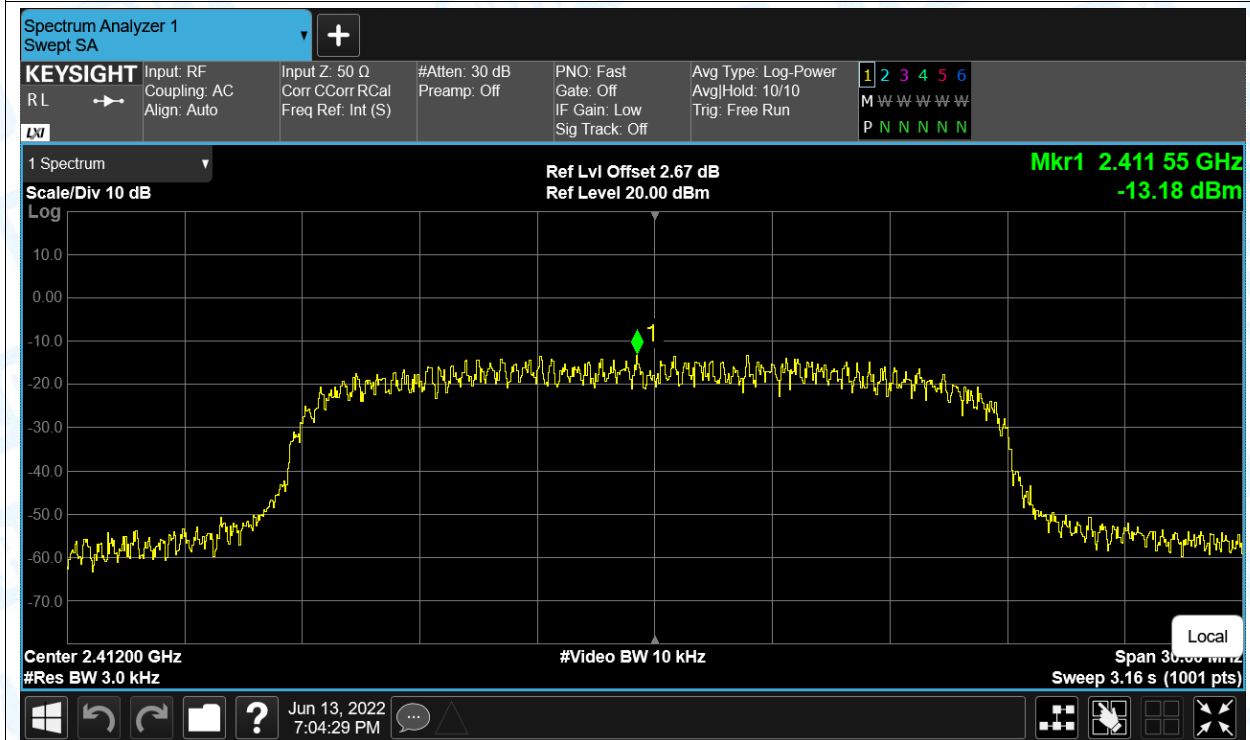


PSD NVNT g 2412MHz Ant1

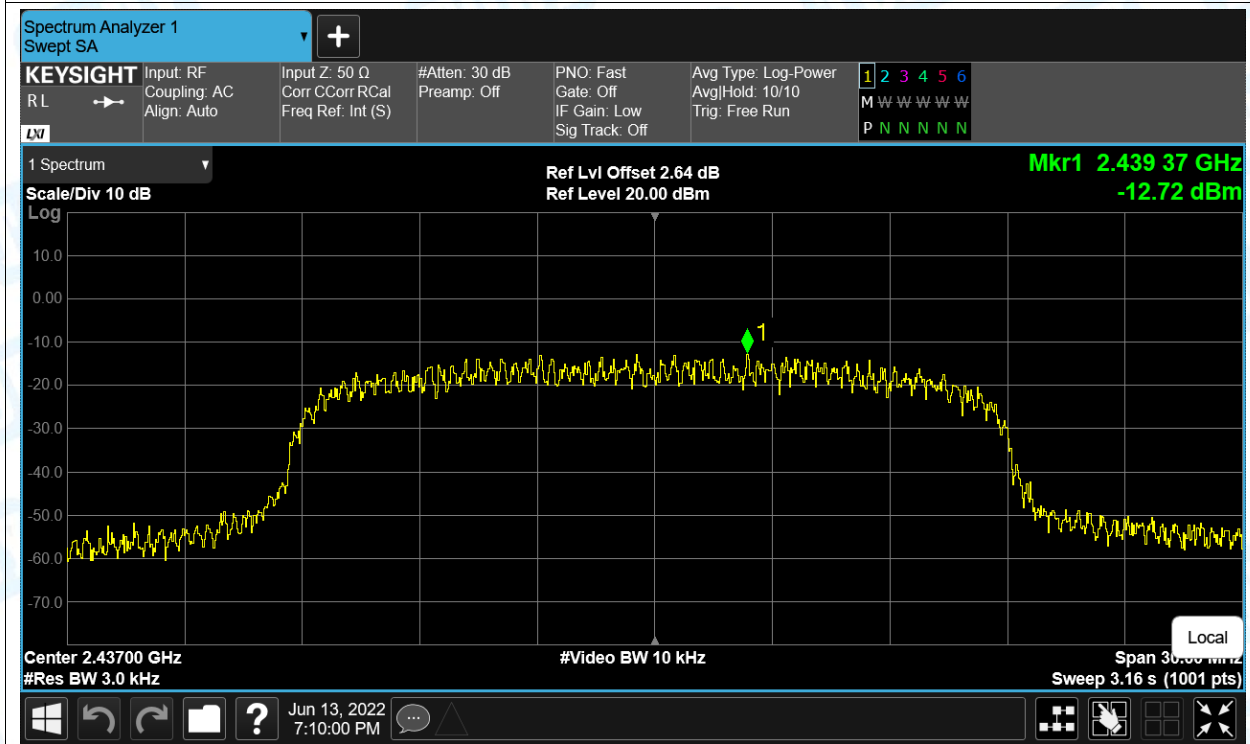




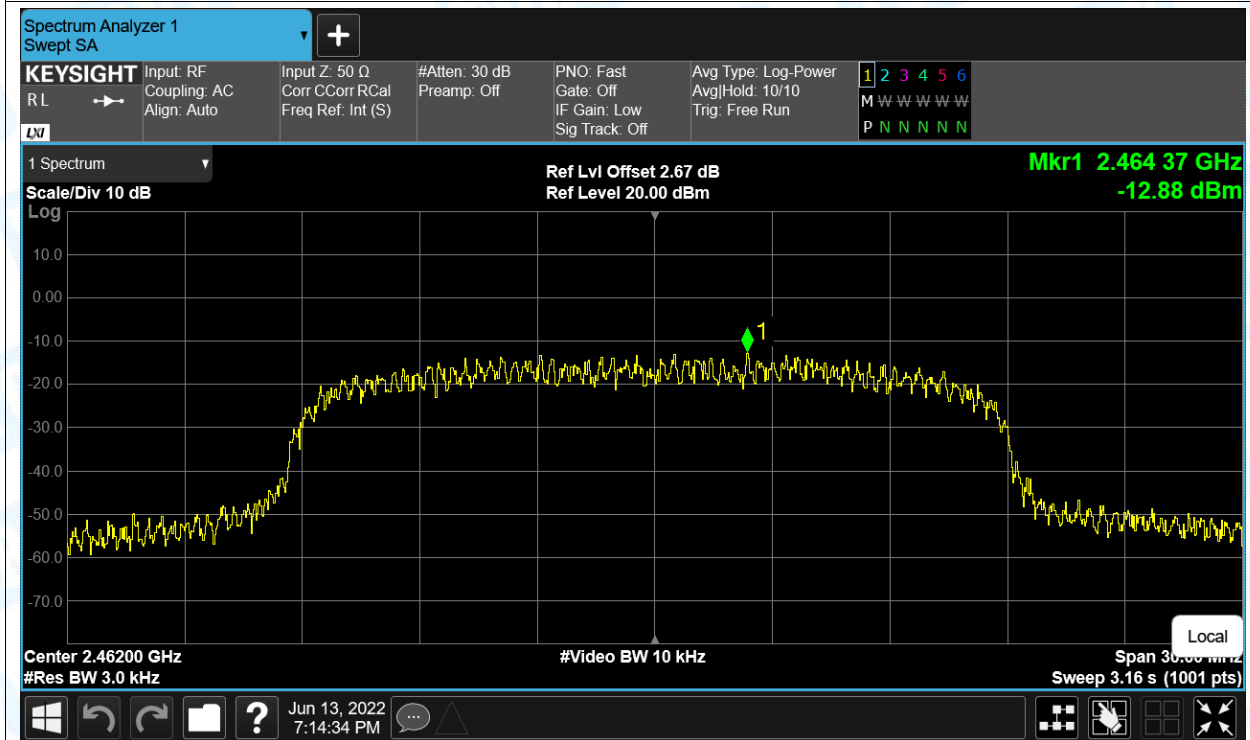
PSD NVNT n(HT20) 2412MHz Ant1



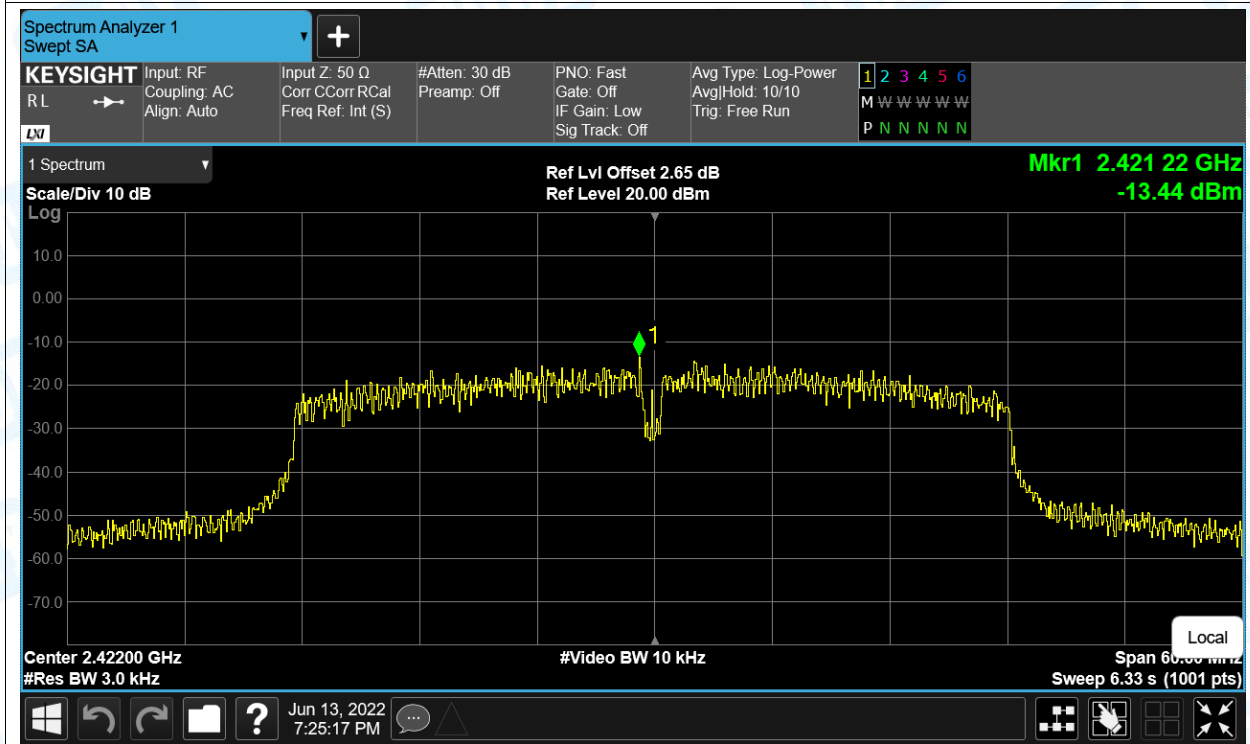
PSD NVNT n(HT20) 2437MHz Ant1



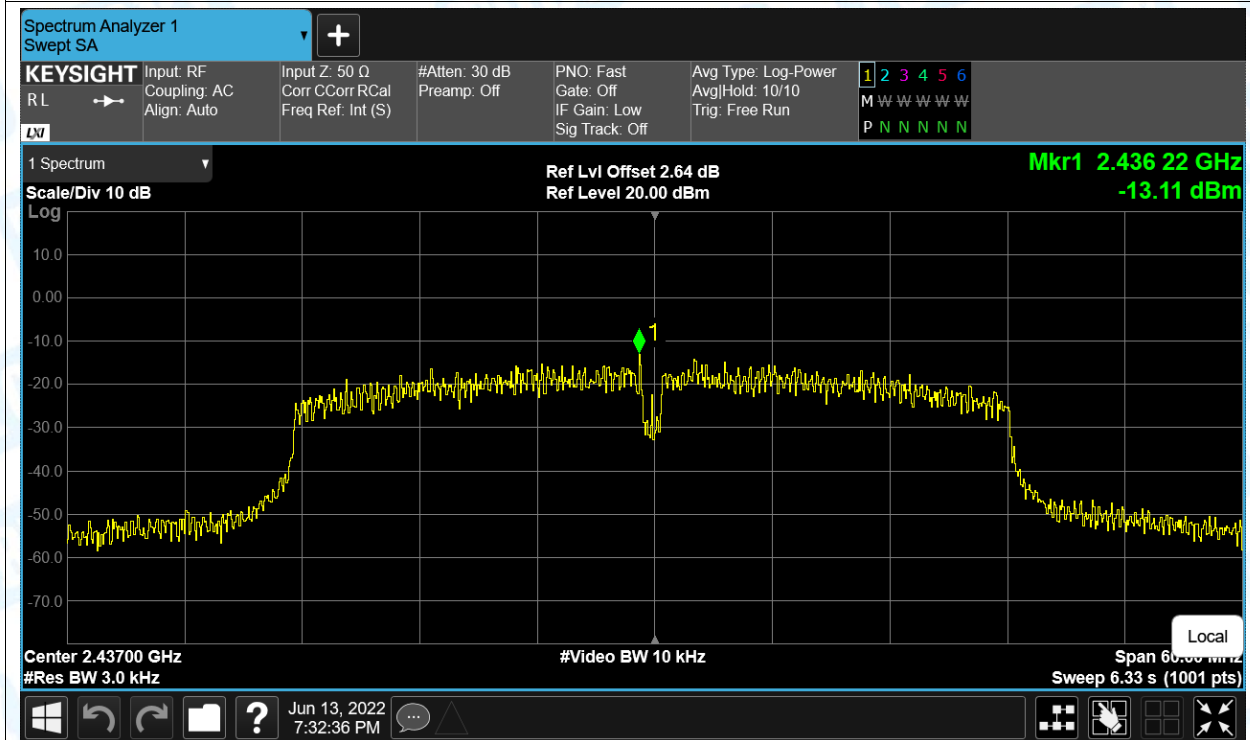
PSD NVNT n(HT20) 2462MHz Ant1



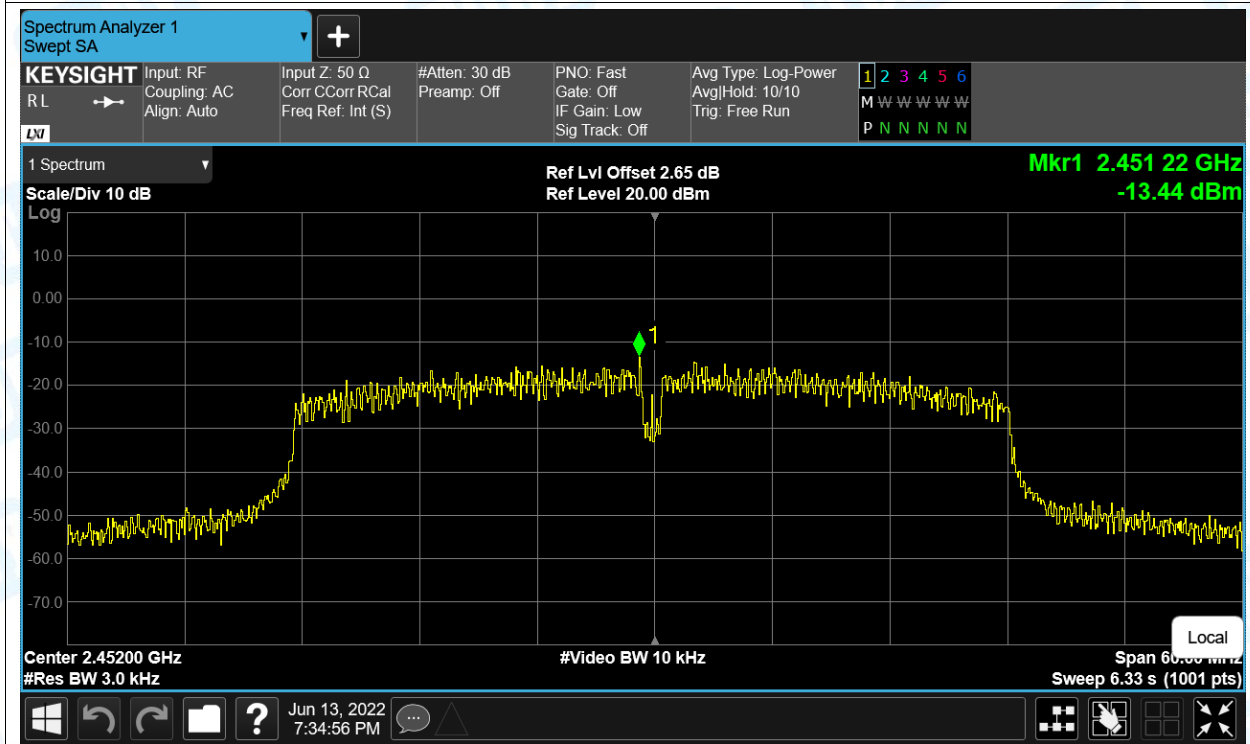
PSD NVNT n(HT40) 2422MHz Ant1



PSD NVNT n(HT40) 2437MHz Ant1



PSD NVNT n(HT40) 2452MHz Ant1

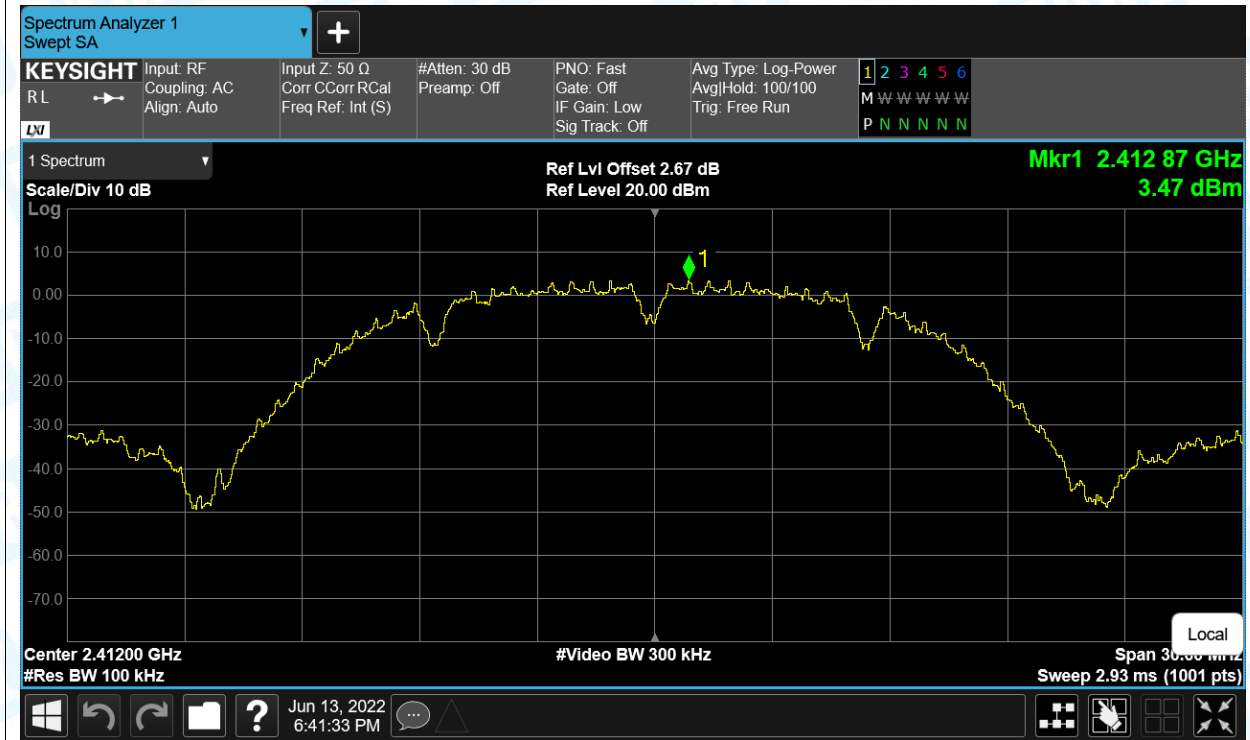


6. Band Edge

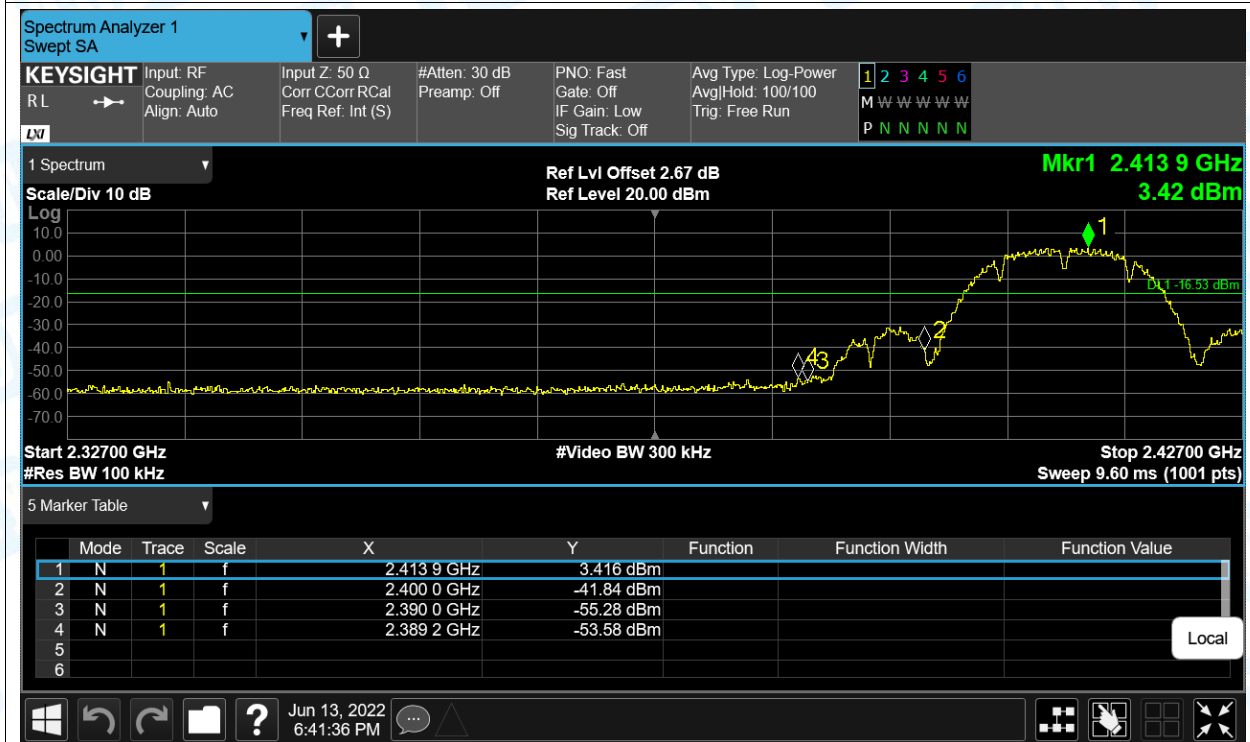
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-57.05	-20	Pass
NVNT	b	2462	Ant1	-53.23	-20	Pass
NVNT	g	2412	Ant1	-49.46	-20	Pass
NVNT	g	2462	Ant1	-45.5	-20	Pass
NVNT	n(HT20)	2412	Ant1	-50.15	-20	Pass
NVNT	n(HT20)	2462	Ant1	-45.94	-20	Pass
NVNT	n(HT40)	2422	Ant1	-38.72	-20	Pass
NVNT	n(HT40)	2452	Ant1	-36.46	-20	Pass

Test Graphs

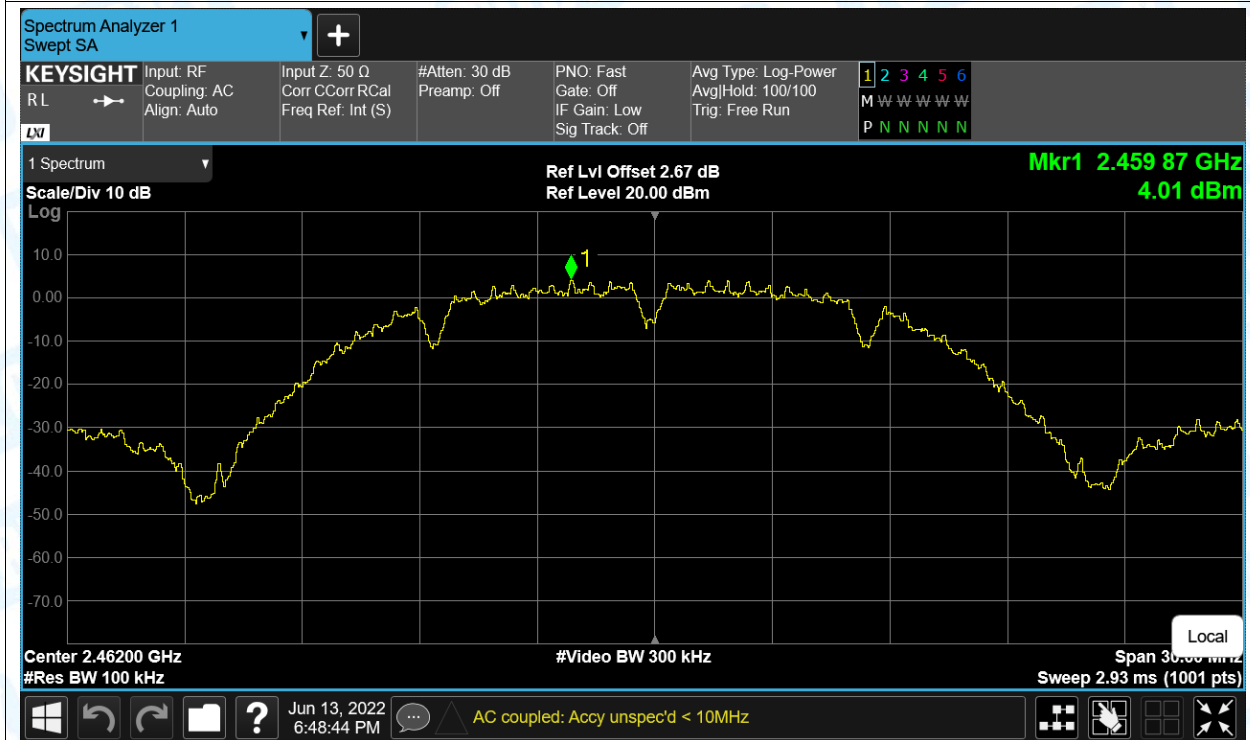
Band Edge NVNT b 2412MHz Ant1 Ref



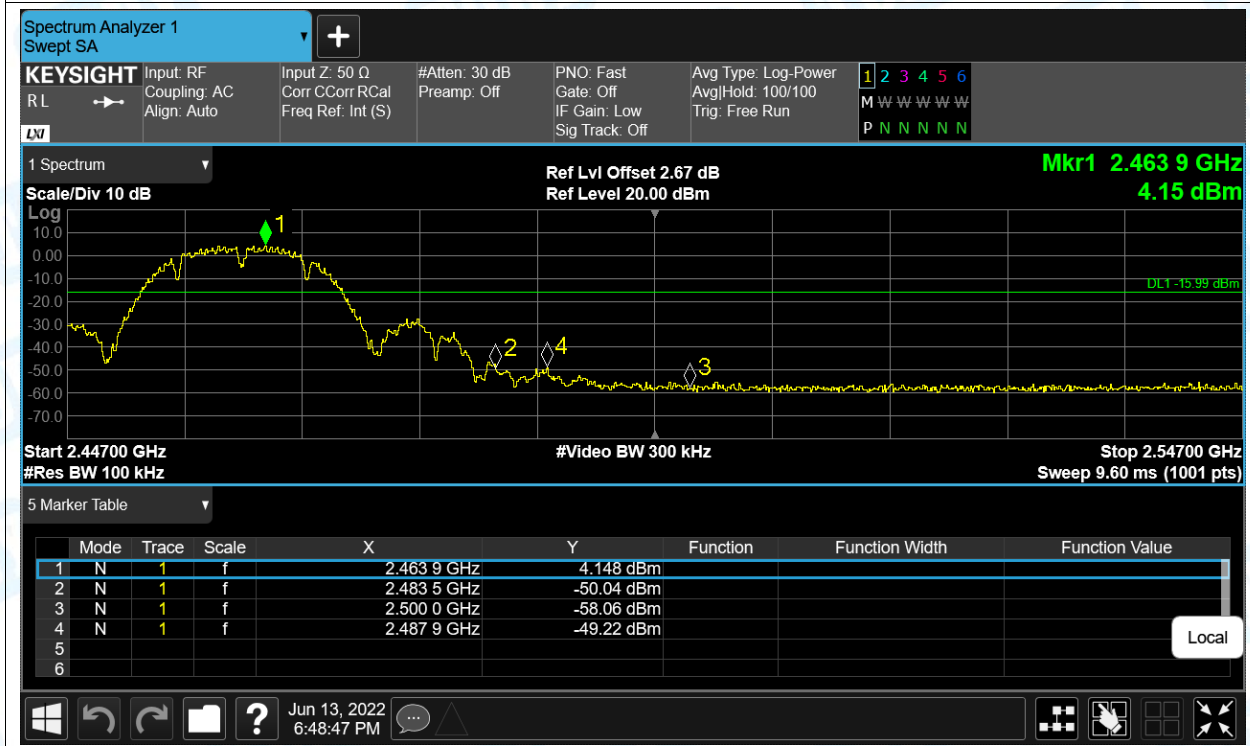
Band Edge NVNT b 2412MHz Ant1 Emission



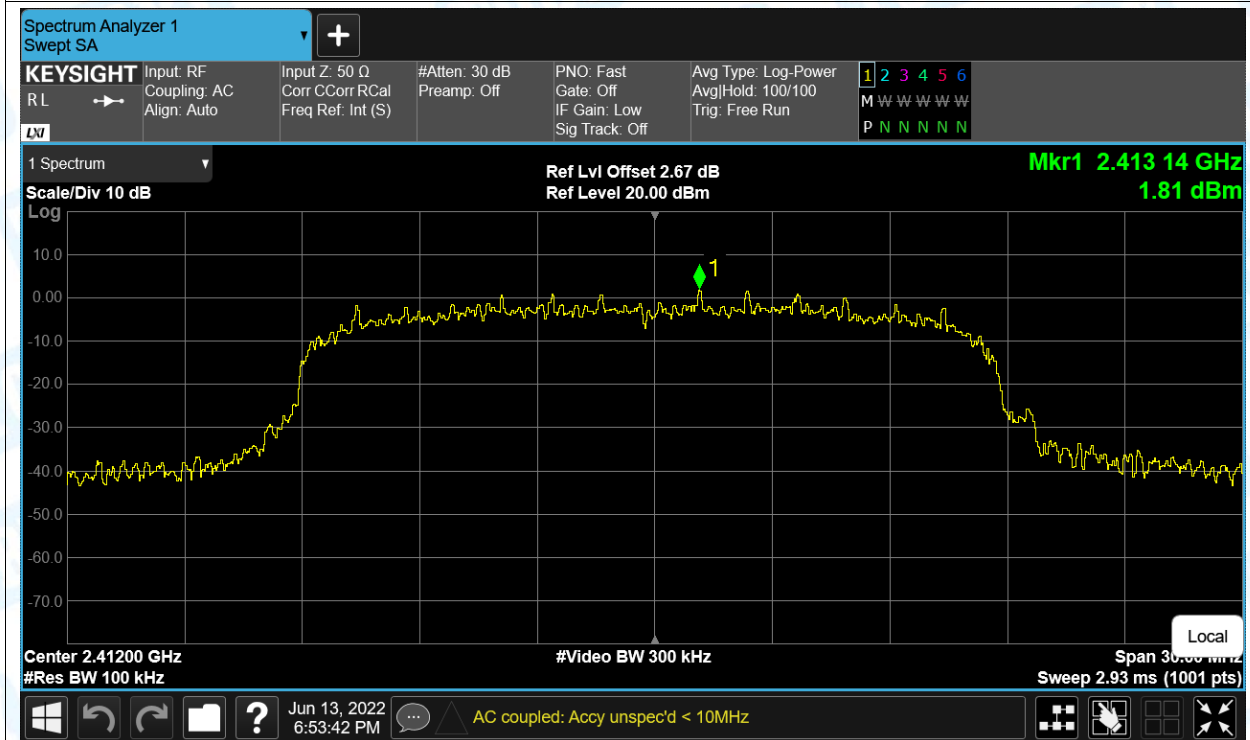
Band Edge NVNT b 2462MHz Ant1 Ref



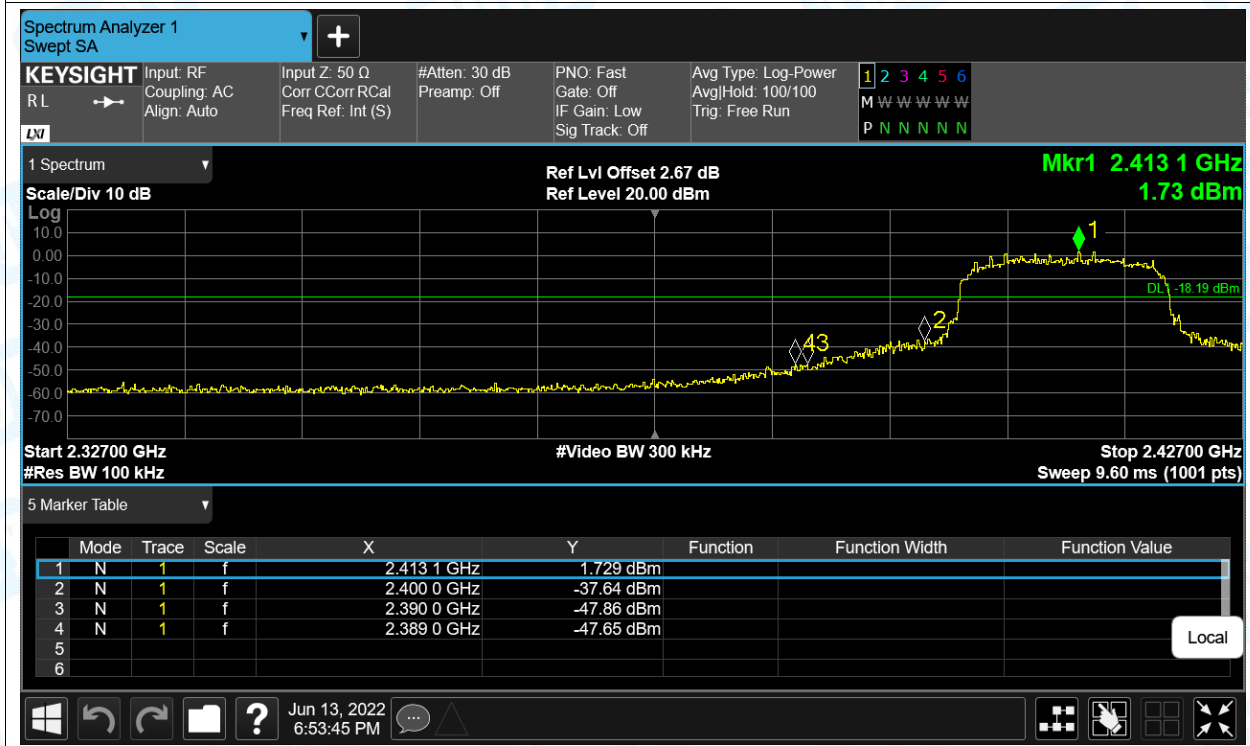
Band Edge NVNT b 2462MHz Ant1 Emission



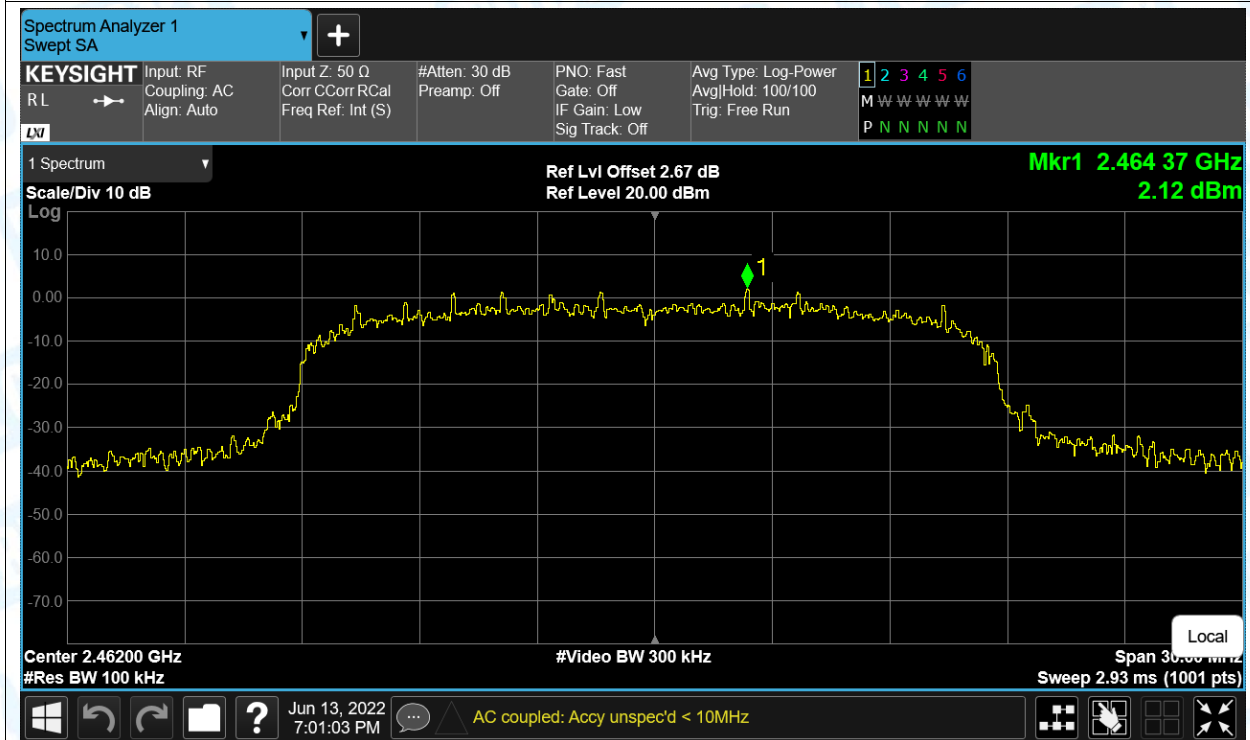
Band Edge NVNT g 2412MHz Ant1 Ref



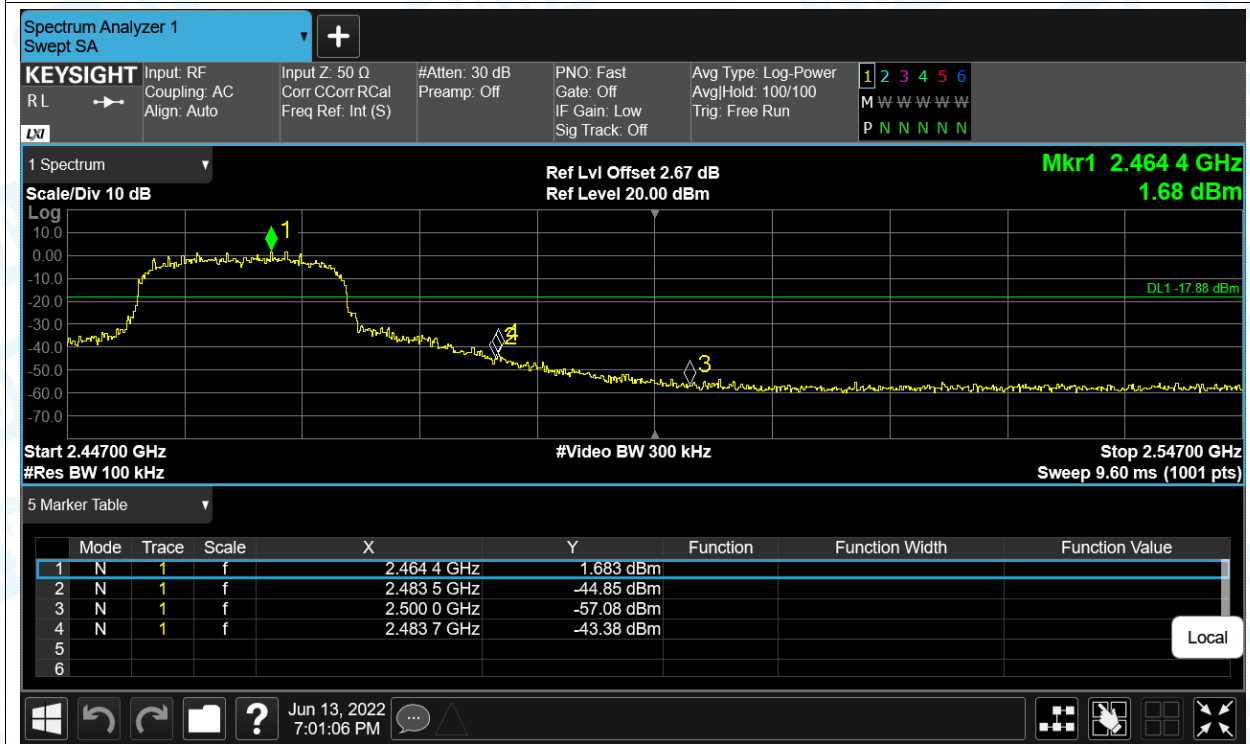
Band Edge NVNT g 2412MHz Ant1 Emission



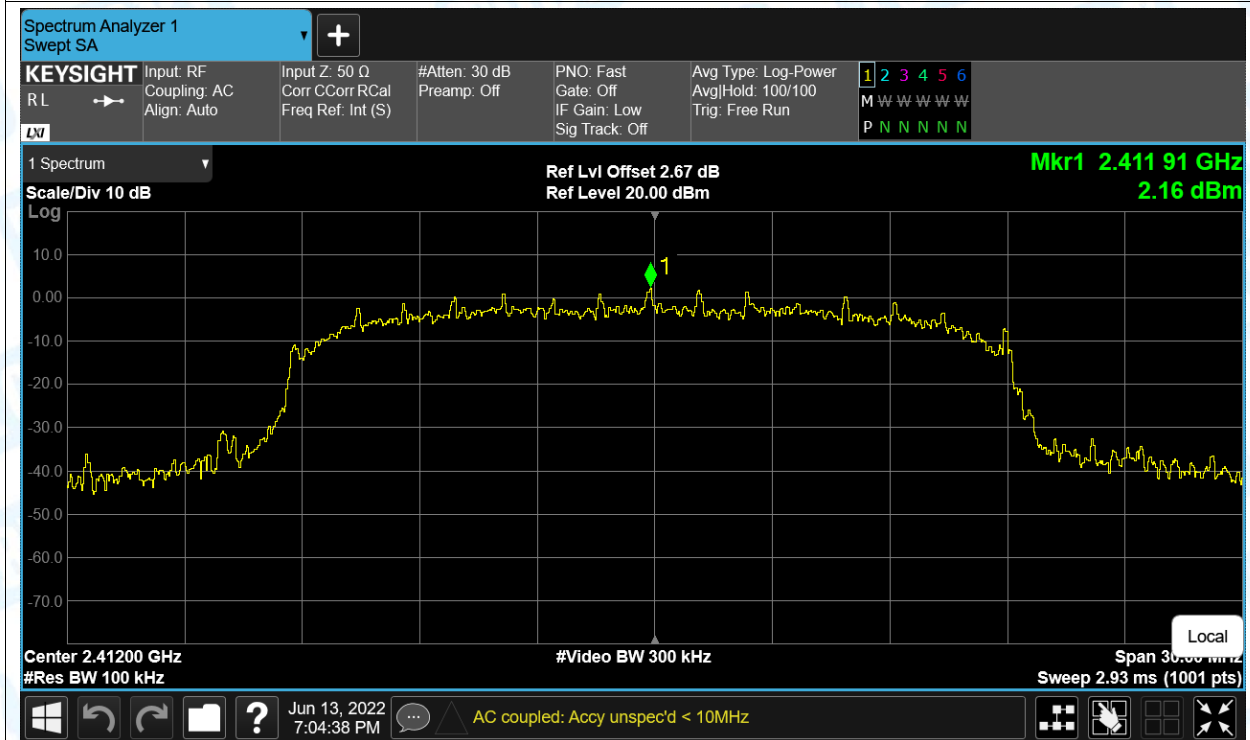
Band Edge NVNT g 2462MHz Ant1 Ref



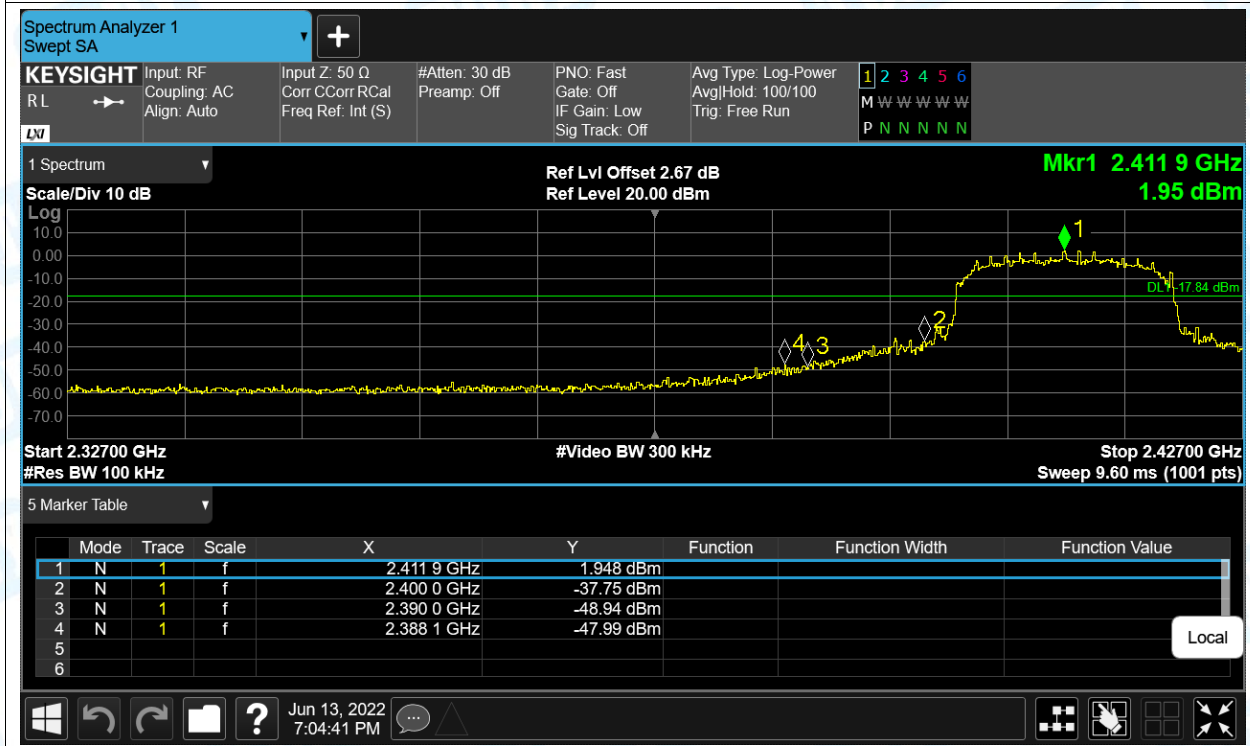
Band Edge NVNT g 2462MHz Ant1 Emission



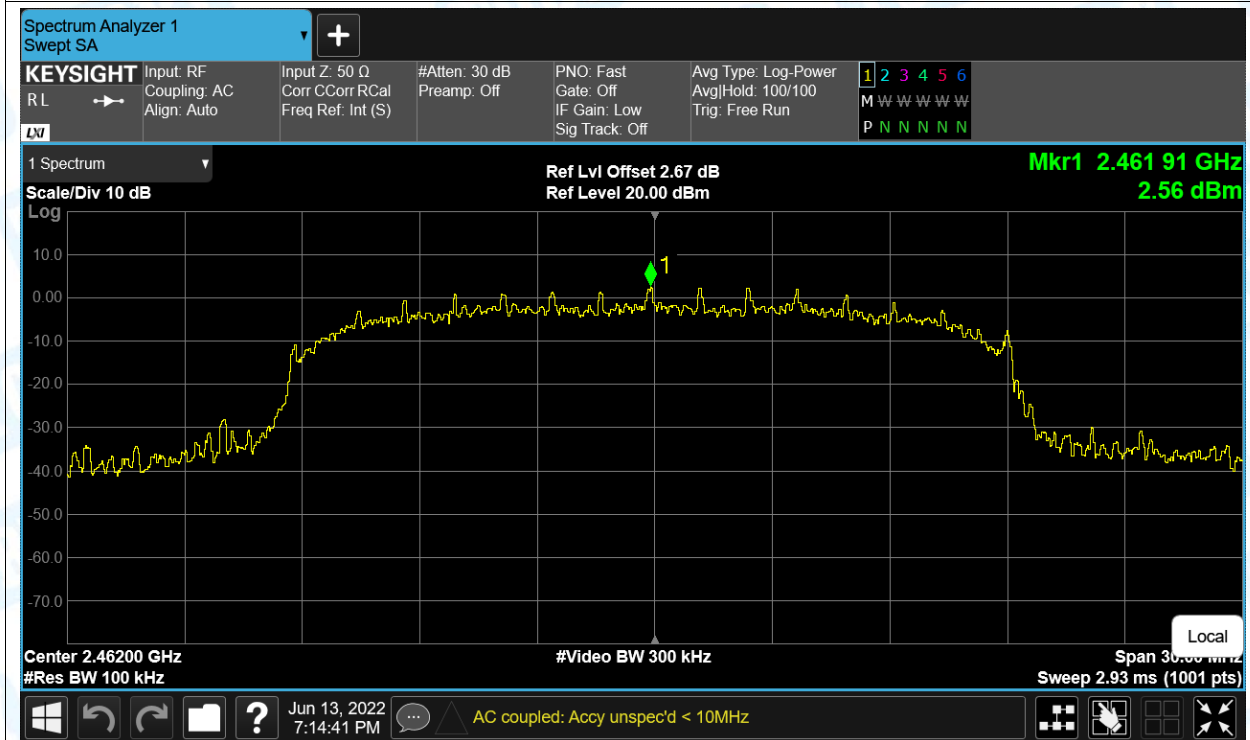
Band Edge NVNT n(HT20) 2412MHz Ant1 Ref



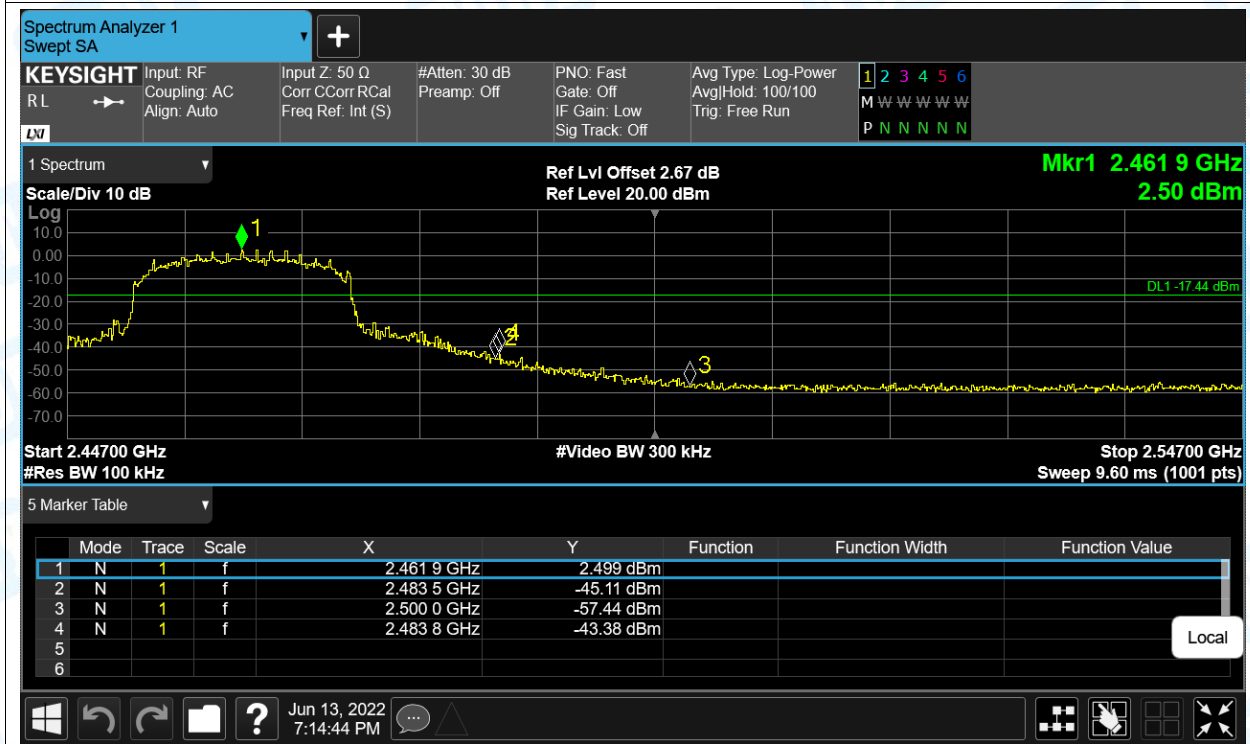
Band Edge NVNT n(HT20) 2412MHz Ant1 Emission



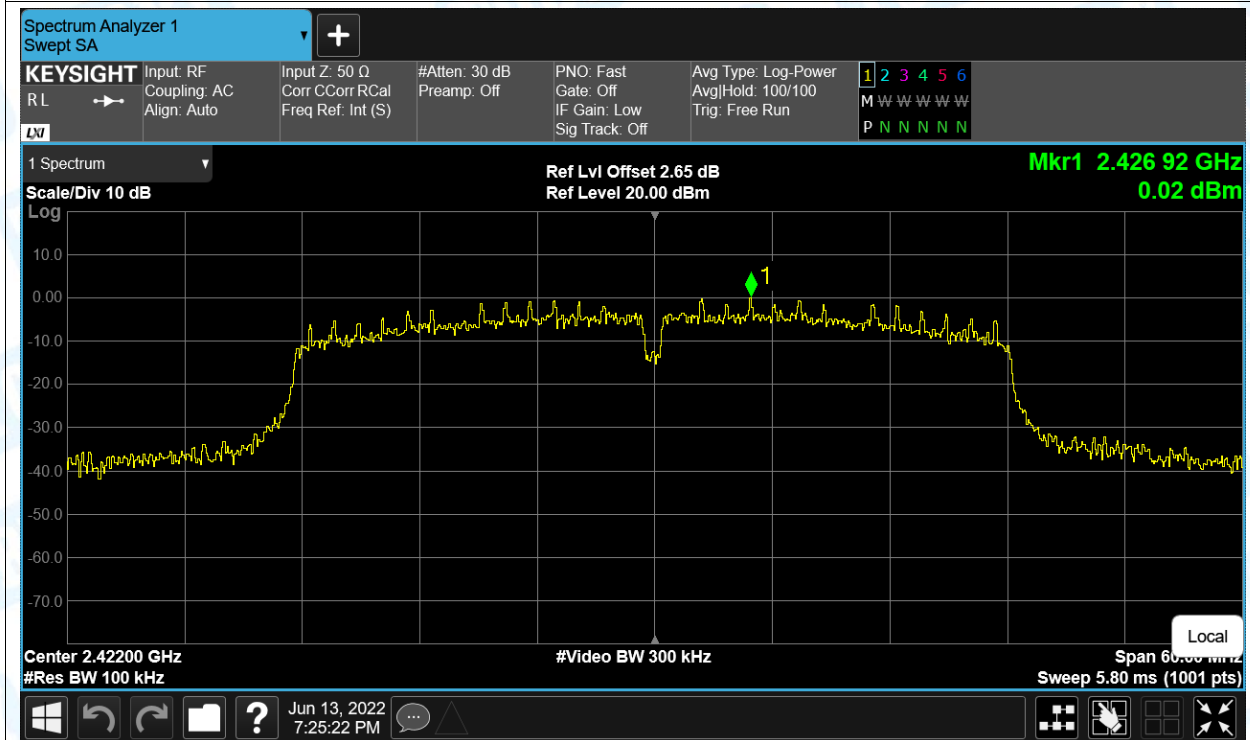
Band Edge NVNT n(HT20) 2462MHz Ant1 Ref



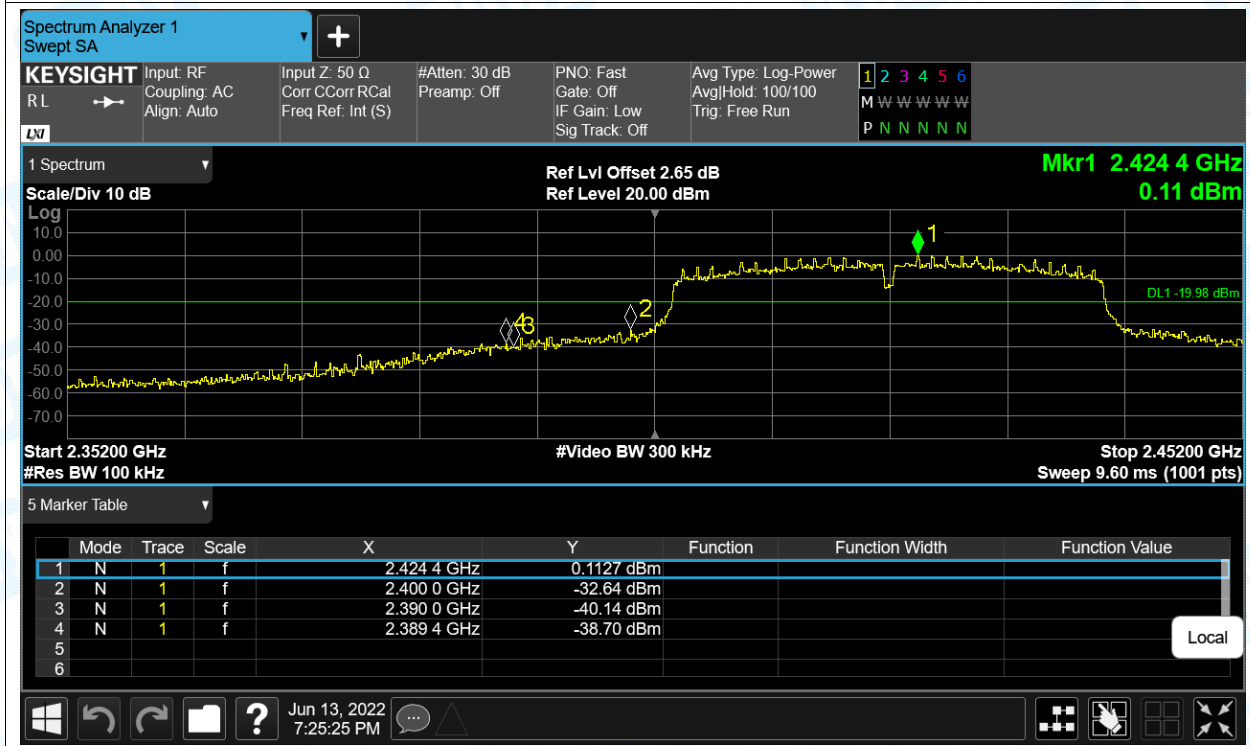
Band Edge NVNT n(HT20) 2462MHz Ant1 Emission



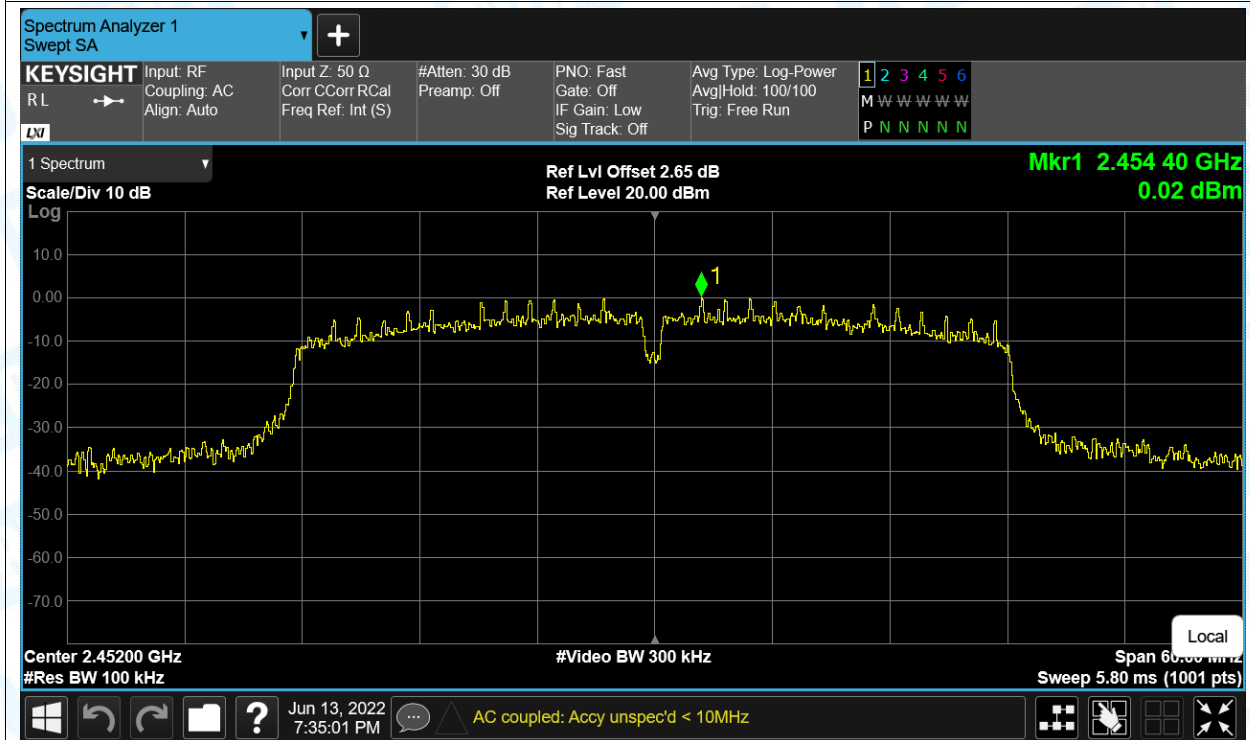
Band Edge NVNT n(HT40) 2422MHz Ant1 Ref



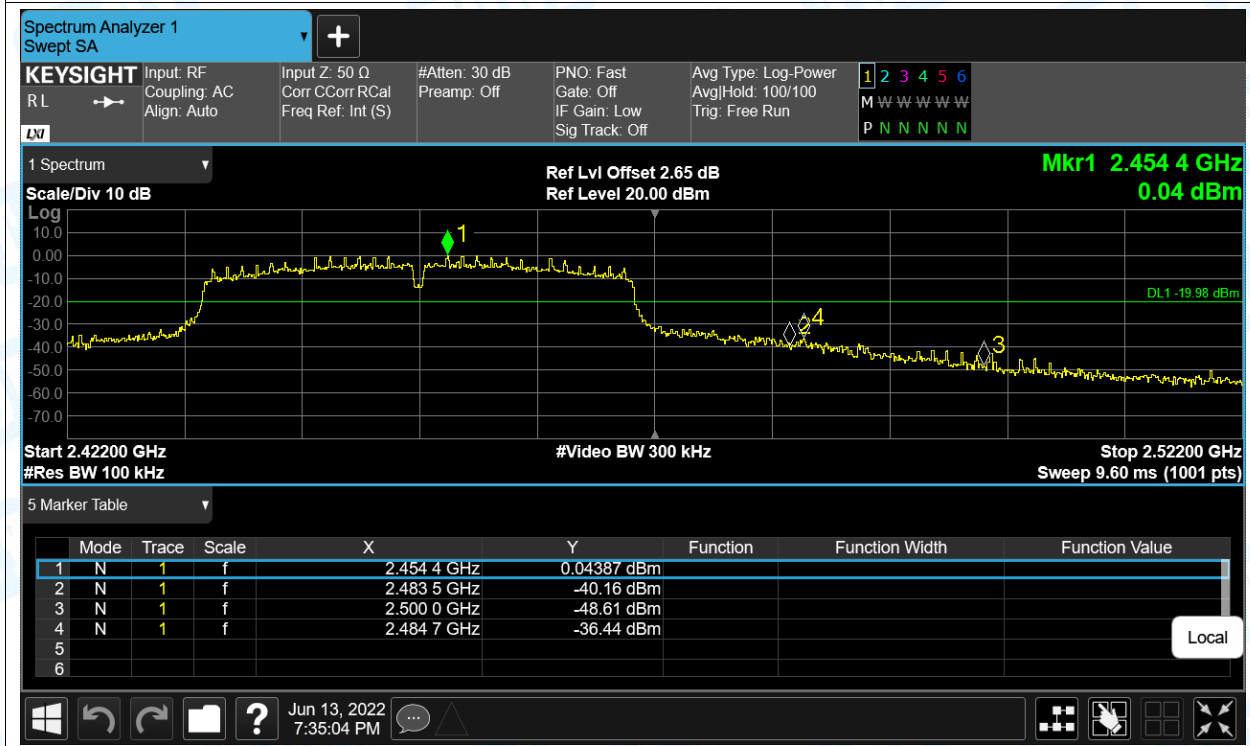
Band Edge NVNT n(HT40) 2422MHz Ant1 Emission



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	-45.6	-20	Pass
NVNT	b	2437	Ant1	-46.24	-20	Pass
NVNT	b	2462	Ant1	-46.07	-20	Pass
NVNT	g	2412	Ant1	-43.5	-20	Pass
NVNT	g	2437	Ant1	-44.02	-20	Pass
NVNT	g	2462	Ant1	-44.47	-20	Pass
NVNT	n(HT20)	2412	Ant1	-43.74	-20	Pass
NVNT	n(HT20)	2437	Ant1	-45.04	-20	Pass
NVNT	n(HT20)	2462	Ant1	-44.86	-20	Pass
NVNT	n(HT40)	2422	Ant1	-42.32	-20	Pass
NVNT	n(HT40)	2437	Ant1	-43.14	-20	Pass
NVNT	n(HT40)	2452	Ant1	-41.02	-20	Pass