

Japan Radio Test Report

for

Tablet

Model: G140L

Series Models:

G140, G141, G141L, G141PRO, G142, G142L, G143, G143L, G145, G145L

Trade Mark: NA

Test Report Number: WSCT-R&E251000669A-Wi-Fi5G

Issued Date: 27 October 2025

Issued for

Shenzhen Efercro Electronic Technology Co., Ltd.

Room 901, Block E, Building 1, Section 1, Chuangzhi Yuncheng, Liuxian Avenue,
Xili Community, Xili Street, Nanshan District, Shenzhen

Issued By

World Standardization Certification & Testing Group (Shenzhen) Co., Ltd.

Building J-7F and Building D, Dongjiang Science & Technology Park,
Tangjia Community, Fenghuang Street, Guangming District, Shenzhen
City, Guangdong Province, China

TEL: +86-755-23695561

FAX: +86-755-86376605



Note: This report shall not be reproduced except in full, without the written approval of World Standardization Certification & Testing Group(Shenzhen) Co., Ltd. This document may be altered or revised by World Standardization Certification & Testing Group(Shenzhen) Co., Ltd. personnel only, and shall be noted in the revision section of the document. The test results in the report only apply to the tested sample.



Report No.: WSCT-R&E251000669A-Wi-Fi5G Issued: 27 October 2025 Revised: None

Revision History Of Report

Rev.	Issue No.	Revisions	Effect Page	Revised By
00	WSCT-R&E251000669A-Wi-Fi5G	Initial Issue	ALL	Li Huaibi



TABLE OF CONTENTS

1	TEST CERTIFICATION	4
2	TEST SUMMARY	5
3	GENERAL INFORMATION.....	6
4.	FREQUENCY TOLERANCE TEST	11
5.	OCCUPIED BANDWIDTH (99%) TEST.....	43
6.	SPURIOUS AND UNWANTED EMISSIONS	76
7.	ANTENNA POWER TEST	223
8.	ADJACENT CHANNEL LEAKAGE POWER.....	230
9.	BURST TRANSMISSION DURATION.....	265
10.	SECONDARY RADIATED EMISSIONS.....	298
11.	CARRIER SENSE	358
12.	INTERFERENCE PREVENTION FUNCTION.....	360
13	TEST SETUP PHOTOGRAPHS	361
14	PHOTOGRAPHS OF EUT	362



Report No.: WSCT-R&E251000669A-Wi-Fi5G Issued: 27 October 2025 Revised: None

1 TEST CERTIFICATION

Product: Tablet

Model: G140L

Series Models: G140, G141, G141L, G141PRO, G142, G142L, G143, G143L, G145, G145L

Trade Mark: NA

Applicant: Shenzhen Efercro Electronic Technology Co., Ltd.
Room 901, Block E, Building 1, Section 1, Chuangzhi Yuncheng, Liuxian Avenue, Xili Community, Xili Street, Nanshan District, Shenzhen

Manufacturer: Shenzhen Efercro Electronic Technology Co., Ltd.
Room 901, Block E, Building 1, Section 1, Chuangzhi Yuncheng, Liuxian Avenue, Xili Community, Xili Street, Nanshan District, Shenzhen

Tested: 10 September 2025 ~ 24 October 2025

Applicable Standards: MIC Public Notice 88:2004, Annex 45
Certification Ordinance, Article 2, Paragraph 1, Item 19-3

TRF No.:

Deviation from Applicable Standard

None

The above equipment has been tested by World Standardization Certification & Testing Group (Shenzhen) Co., Ltd., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By:

(Wang Xiang)

Checked By:

(Qin Shuiquan)

Approved By:

(Li Huaibi)

Date:

27 October 2025

2 Test Summary

Test Standard	Description of Test	Result
Article 2, Paragraph 1, Item 19-3	Frequency Tolerance	Compliance
	Antenna Power& Output Power Tolerance	Compliance
	Occupied Bandwidth	Compliance
	Unwanted Emission Strength/Spurious Area	Compliance
	Adjacent Channel Leakage Power	Compliance
	Outband Leakage Power	Compliance
	Secondary Radiated Emission Strength	Compliance
	Transmission Burst Length	Compliance
	Carrier Sensing Function	Compliance
	Interference prevention function	Compliance
	EIRP	Compliance



3 General Information

3.1 General Description of E.U.T.

Product	Tablet
Model	G140L
Series Models	G140,G141,G141L,G141PRO,G142,G142L,G143,G143L,G145,G145L
Trade Mark	NA
Software Version	Android
Hardware Version	G9_MB_V2.1
Antenna gain	1.12dBi
EUT Type	☒ Engineering Sample. ☐ Product Sample, ☐ Mass Product Sample.
Antenna Type	Integral Antenna
Test Power	AC ADAPTOR Model: PD0332JC-0301 Input:100-240V~50/60Hz 0.8A Max Output:5.0V---3.0A, 9.0V---3.0A 12.0V---2.5A, 15.0V---2.0A, 20.0V---1.5A(30.0W Max) Product Name: Lithium Rechargeable Battery Produktname: Lithium-Akku Model No/Modell: 2998125 Capacity: 7.6V 5000mAh
Type of the Equipment	Portable Equipment
Frequency Range	WIFI: Band 1: 5150-5250 MHz(TX/RX) Band 2: 5250-5350 MHz(TX/RX) Band 3: 5470-5725 MHz(TX/RX)
Modulation type	DSSS (DBPSK, DQPSK, CCK) for IEEE 802.11b IEEE 802.11a/n/ac: OFDM IEEE 802.11ax: OFDM /OFDMA (BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM)

Note: N/A stands for no applicable.

Models difference

No.	Main test model	Series Models
1	G140L	G140,G141,G141L,G141PRO,G142,G142L,G143,G143L,G145,G145L
2	All models differ only in their model names; their physical structures are identical. All tests were conducted on the G140L.	

Report No.: WSCT-R&E251000669A-Wi-Fi5G Issued: 27 October 2025 Revised: None

3.2 General condition

Ambient Condition: 25 °C 56 %RH

3.3 Environmental condition of test site

	Normal Test Conditions	Extreme Test Conditions
Temperature	25°C	LT:-5°C ;HT: 45°C
Relative Humidity	56%	N/A
Supply Voltage	DC 7.6V	LV:DC 6.9V; HV:8.4V

NT: Normal Temperature; LV:Low Voltage 6.9V;NV: Normal Voltage 7.6V;HV:High Voltage 8.4V.

Note: The EUT has voltage regulator chips, so Conduct the test with the rated voltage only.

Test Voltage Information		
Power supply voltage 7.6VDC(Normal)	Power supply voltage 6.9V DC(-10%)	Power supply voltage 8.4V DC(+10%)
RF module voltage DC 7.6V	RF module voltage DC 7.6V	RF module voltage DC 7.6V
When EUT be operated at 10% from the normal supply voltage, the supply voltage of RF part was varied within 1%. All test cased were done under the normal supply voltage.		
Note: For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.		

3.4 Channel List

Channel	Center Frequency (MHz)	Frequency Range (MHz)	Bandwidth (MHz)
36	5180	5170-5190	20
40	5200	5190-5210	20
44	5220	5210-5230	20
48	5240	5230-5250	20
52	5260	5250-5270	20
56	5280	5270-5290	20
60	5300	5290-5310	20
64	5320	5310-5330	20
100	5500	5490-5510	20
104	5520	5510-5530	20
108	5540	5530-5550	20
112	5560	5550-5570	20
116	5580	5570-5590	20
120	5600	5590-5610	20
124	5620	5610-5630	20
128	5640	5630-5650	20
132	5660	5650-5670	20
136	5680	5670-5690	20
144	5720	5710-5730	20
38	5190	5170-5210	40
46	5230	5210-5250	40
54	5270	5250-5290	40
62	5310	5290-5330	40
102	5510	5490-5530	40
110	5550	5530-5570	40
118	5590	5570-5610	40
126	5630	5610-5650	40
134	5670	5650-5690	40
142	5710	5690-5730	40
42	5210	5170-5250	80
58	5290	5250-5330	80
106	5530	5490-5560	80
122	5610	5570-5650	80



Report No.: WSCT-R&E251000669A-Wi-Fi5G Issued: 27 October 2025 Revised: None

3.5 Test Mode

The EUT has been tested under operating condition.

Software used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

802.11a/ 802.11n(20MHz)/ac(20MHz)/ax(20MHz) (W52 & W53):

Test Mode	Channel	Frequency(MHz)
Transmitter/Receiver	36	5180
	48	5240
	52	5260
	64	5320

802.11n(40MHz)/ac(40MHz) /ax(40MHz) (W52 & W53):

Test Mode	Channel	Frequency(MHz)
Transmitter/Receiver	38	5190
	46	5230
	54	5270
	62	5310

802.11a/ 802.11n(20MHz)/ac(20MHz)/ax(20MHz) (W56):

Test Mode	Channel	Frequency(MHz)
Transmitter/Receiver	100	5500
	120	5600
	144	5720

802.11n(40MHz)/ac(40MHz) /ax(40MHz) (W56):

Test Mode	Channel	Frequency(MHz)
Transmitter/Receiver	102	5510
	118	5590
	134	5670
	142	5710

802.11ac(80MHz) /ax(80MHz) (W56):

Test Mode	Channel	Frequency(MHz)
Transmitter/Receiver	42	5210
	58	5290
	106	5530
	122	5610

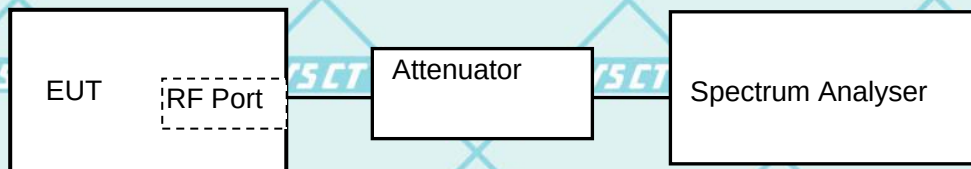
Note: Worst data rate (worst case) are chosen for the final testing.

Report No.: WSCT-R&E251000669A-Wi-Fi5G Issued: 27 October 2025 Revised: None

3.6 Test Equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibrated	Calibrated until	Use or Not
EMI Test Receiver	R&S	ESR7	102817	2025-04-18	2026-04-17	☒
Bi-log Antenna	SCHWARZBECK	VULB9168	01664	2025-04-20	2026-04-19	☒
Horn Antenna	R&S	BBHA 9120D	01801	2025-04-19	2026-04-18	☒
pre-amplifier	SCHWARZBECK	CC-AMP-N-6G	231023-6GHZ	2025-04-18	2026-04-17	☒
Spectrum analyzer	Agilent Technologies	N9020A	MY53371004	2025-03-06	2026-03-05	☒
Spectrum analyzer	Agilent Technologies	N9010B	MY63390117	2025-04-18	2026-04-17	☒
Vector Signal Source	Agilent Technologies	N5182A	MY48180819	2025-03-06	2026-03-05	☒
Analog signal source	R&S	E8257D	MY49280264	2025-03-06	2026-03-05	☒
Power meter	Agilent Technologies	E9340A	US39400100	2025-03-06	2026-03-05	☒
Anechoic chamber	mr-emc	966	-	2023-05-30	2026-05-29	☒
Universal Radio Communication Tester	R&S	CMW500	139123	2025-03-06	2026-03-05	☒

3.7 Test Configuration



4. FREQUENCY TOLERANCE TEST

4.1. Test Limit

Test Limit	±20 ppm
------------	---------

4.2. Test Equipment

Same as 3.6.

4.3. Test Configuration

Same as 3.7.

4.4. Test Procedure

1. For unmodulated wave (continuous wave or continuing burst wave), measure the frequency using a frequency meter.
2. For burst wave, continue the measurement through enough long period (20 or more of burst waves for example) to secure the accurate value and obtain the mean value to be used as the measured value.
3. For the test mode to generate peculiar spectrum, measure frequency of the spectrum using a spectrum analyzer.
4. If above measuring method does not measure the frequency corresponding to the test frequency in principle, obtain the frequency by reasonable calculation.
5. When EUT has plural antenna terminals, measure the frequency at each terminal.



Report No.: WSCT-R&E251000669A-Wi-Fi5G Issued: 27 October 2025 Revised: None

4.5. Test Data**PASS**

Please refer to the following data.

Normal Voltage

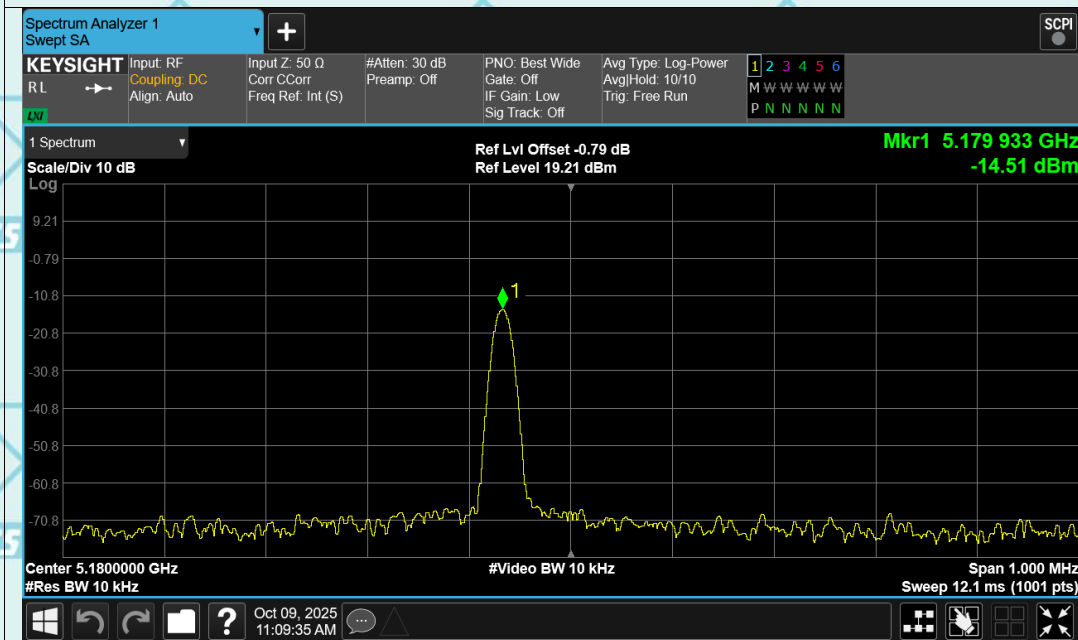
Condition	Mode	Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5180	5179.933	-67000	-12.93	20	Pass
NVNT	a	5240	5239.93	-70000	-13.36	20	Pass
NVNT	a	5260	5259.925	-75000	-14.26	20	Pass
NVNT	a	5320	5319.931	-69000	-12.97	20	Pass
NVNT	a	5500	5499.93	-70000	-12.73	20	Pass
NVNT	a	5600	5599.931	-69000	-12.32	20	Pass
NVNT	a	5720	5719.924	-76000	-13.29	20	Pass
NVNT	n20	5180	5179.93	-70000	-13.51	20	Pass
NVNT	n20	5240	5239.932	-68000	-12.98	20	Pass
NVNT	n20	5260	5259.934	-66000	-12.55	20	Pass
NVNT	n20	5320	5319.931	-69000	-12.97	20	Pass
NVNT	n20	5500	5499.928	-72000	-13.09	20	Pass
NVNT	n20	5600	5599.924	-76000	-13.57	20	Pass
NVNT	n20	5720	5719.926	-74000	-12.94	20	Pass
NVNT	n40	5190	5189.931	-69000	-13.29	20	Pass
NVNT	n40	5230	5229.936	-64000	-12.24	20	Pass
NVNT	n40	5270	5269.933	-67000	-12.71	20	Pass
NVNT	n40	5310	5309.929	-71000	-13.37	20	Pass
NVNT	n40	5510	5509.928	-72000	-13.07	20	Pass
NVNT	n40	5670	5669.927	-73000	-12.87	20	Pass
NVNT	n40	5710	5709.922	-78000	-13.66	20	Pass
NVNT	ac20	5180	5179.93	-70000	-13.51	20	Pass
NVNT	ac20	5240	5239.938	-62000	-11.83	20	Pass
NVNT	ac20	5260	5259.929	-71000	-13.5	20	Pass
NVNT	ac20	5320	5319.932	-68000	-12.78	20	Pass
NVNT	ac20	5500	5499.928	-72000	-13.09	20	Pass
NVNT	ac20	5600	5599.932	-68000	-12.14	20	Pass
NVNT	ac20	5720	5719.931	-69000	-12.06	20	Pass
NVNT	ac40	5190	5189.931	-69000	-13.29	20	Pass
NVNT	ac40	5230	5229.936	-64000	-12.24	20	Pass
NVNT	ac40	5270	5269.929	-71000	-13.47	20	Pass
NVNT	ac40	5310	5309.932	-68000	-12.81	20	Pass
NVNT	ac40	5510	5509.925	-75000	-13.61	20	Pass
NVNT	ac40	5670	5669.927	-73000	-12.87	20	Pass
NVNT	ac40	5710	5709.927	-73000	-12.78	20	Pass
NVNT	ac80	5210	5209.935	-65000	-12.48	20	Pass
NVNT	ac80	5290	5289.935	-65000	-12.29	20	Pass
NVNT	ac80	5530	5529.933	-67000	-12.12	20	Pass
NVNT	ac80	5610	5609.933	-67000	-11.94	20	Pass
NVNT	ac80	5690	5689.926	-74000	-13.01	20	Pass
NVNT	ax20	5180	5179.93	-70000	-13.51	20	Pass
NVNT	ax20	5240	5239.932	-68000	-12.98	20	Pass
NVNT	ax20	5260	5259.932	-68000	-12.93	20	Pass
NVNT	ax20	5320	5319.927	-73000	-13.72	20	Pass
NVNT	ax20	5500	5499.928	-72000	-13.09	20	Pass
NVNT	ax20	5600	5599.931	-69000	-12.32	20	Pass
NVNT	ax20	5720	5719.925	-75000	-13.11	20	Pass
NVNT	ax40	5190	5189.933	-67000	-12.91	20	Pass
NVNT	ax40	5230	5229.928	-72000	-13.77	20	Pass
NVNT	ax40	5270	5269.931	-69000	-13.09	20	Pass
NVNT	ax40	5310	5309.929	-71000	-13.37	20	Pass
NVNT	ax40	5510	5509.937	-63000	-11.43	20	Pass
NVNT	ax40	5670	5669.93	-70000	-12.35	20	Pass
NVNT	ax40	5710	5709.925	-75000	-13.13	20	Pass
NVNT	ax80	5210	5209.938	-62000	-11.9	20	Pass
NVNT	ax80	5290	5289.933	-67000	-12.67	20	Pass
NVNT	ax80	5530	5529.931	-69000	-12.48	20	Pass
NVNT	ax80	5610	5609.928	-72000	-12.83	20	Pass
NVNT	ax80	5690	5689.93	-70000	-12.3	20	Pass

Note: Testing was performed using the peak found in the middle of the modulation envelope with lower res

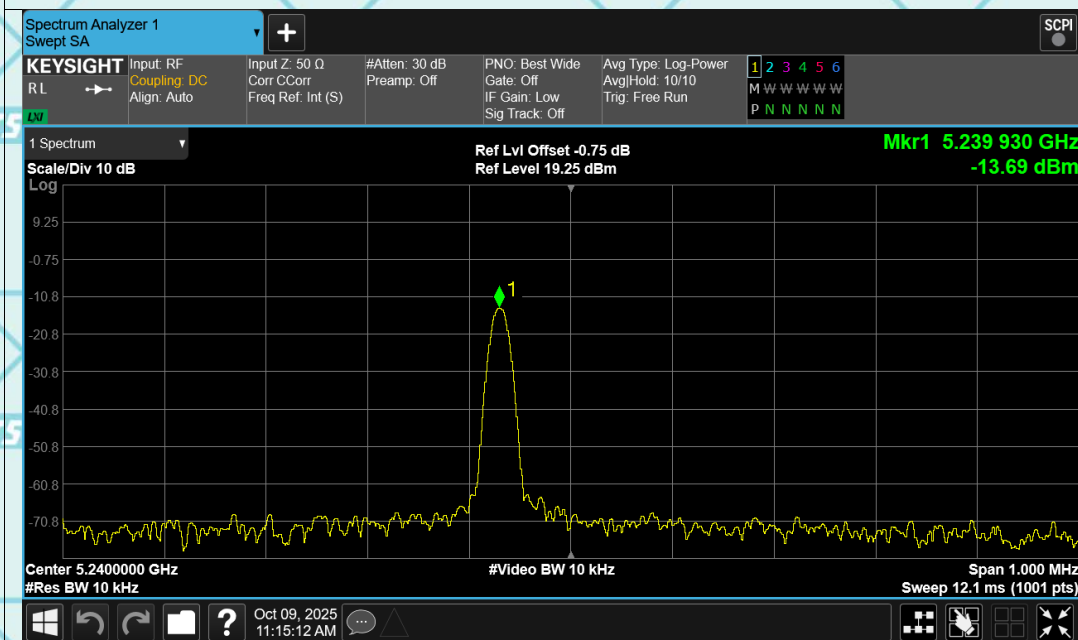
BW.

Test Graphs

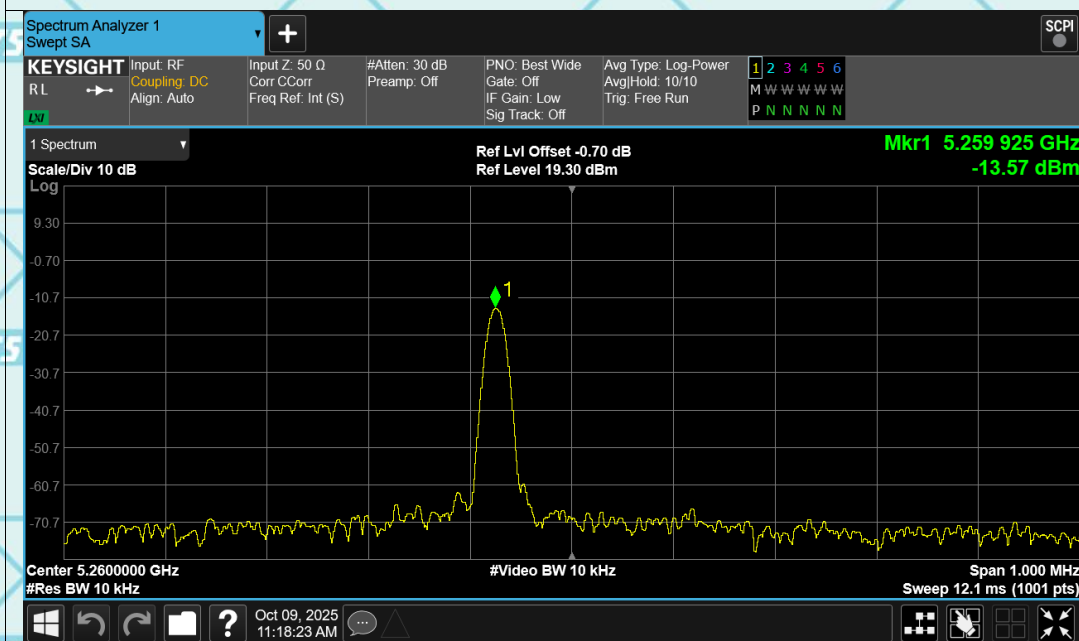
Freq. Error NVNT a 5180MHz Ant1



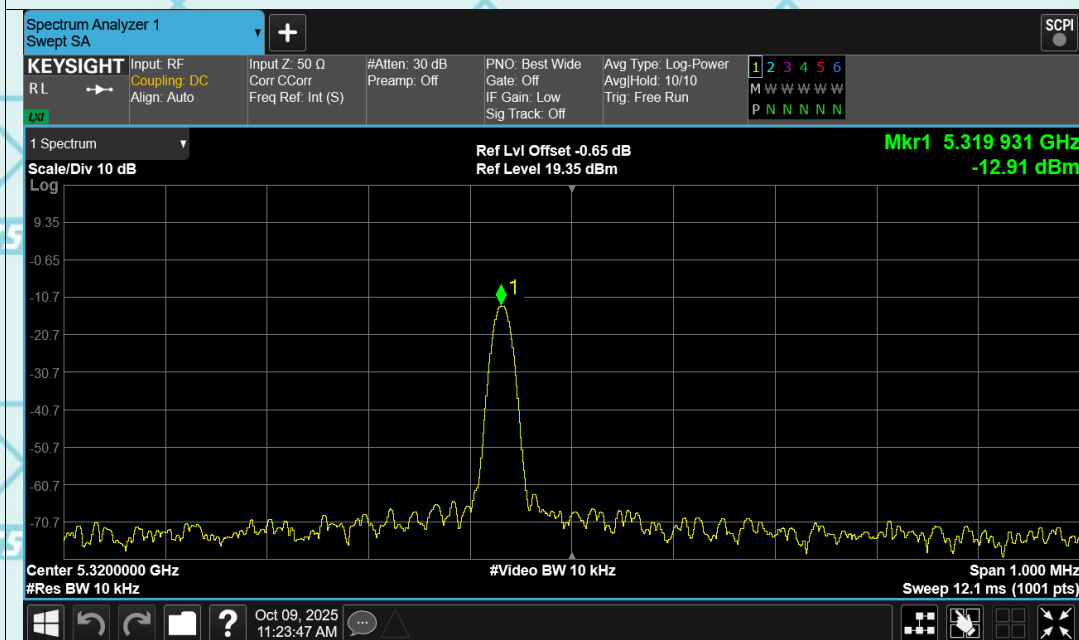
Freq. Error NVNT a 5240MHz Ant1



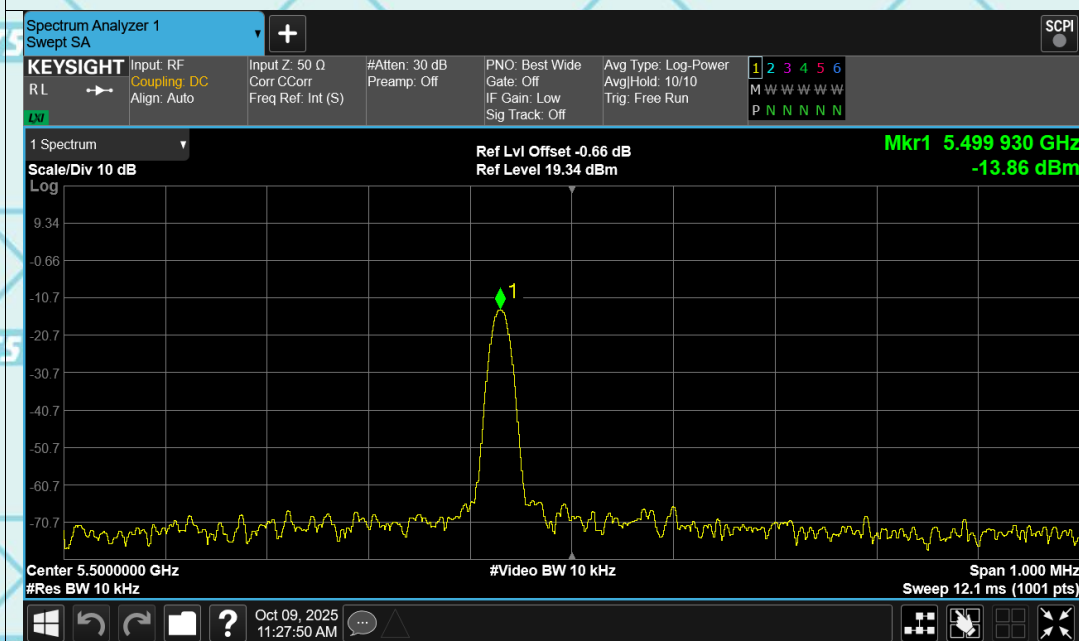
Freq. Error NVNT a 5260MHz Ant1



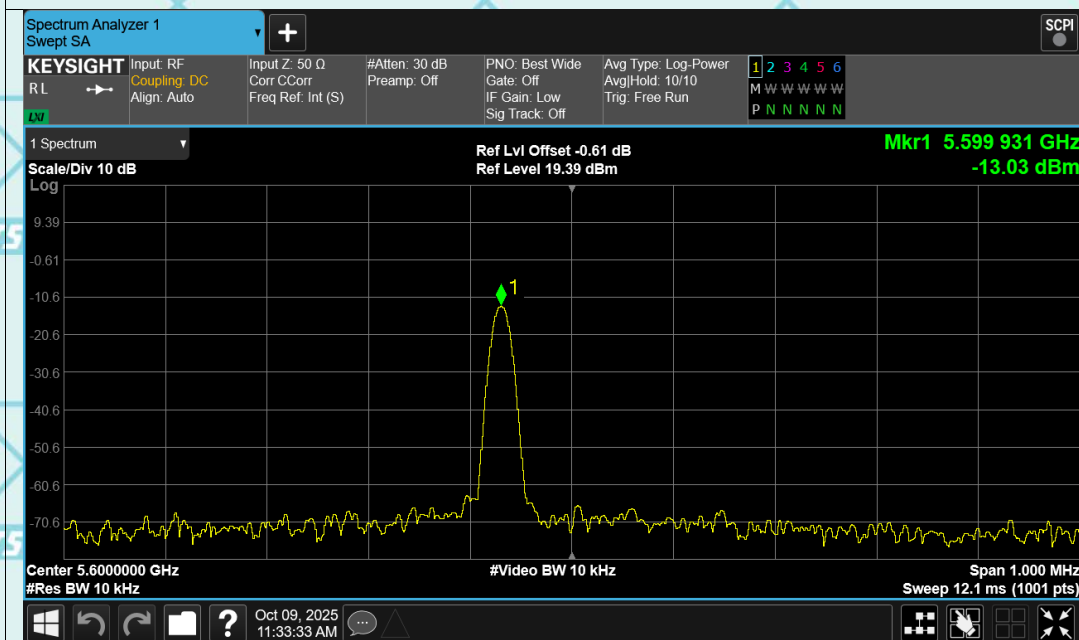
Freq. Error NVNT a 5320MHz Ant1



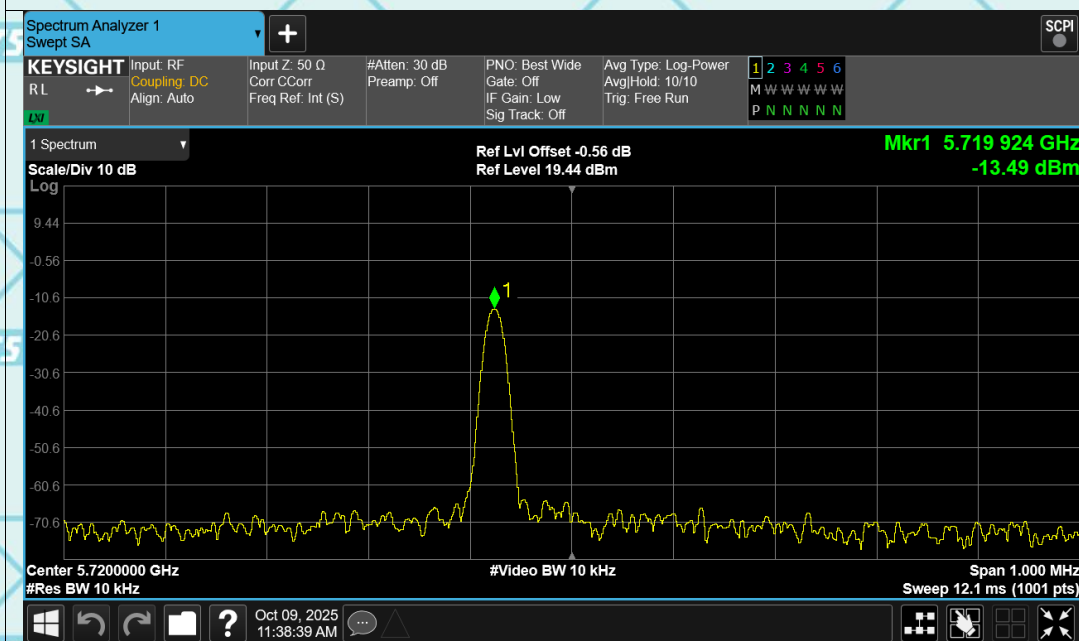
Freq. Error NVNT a 5500MHz Ant1



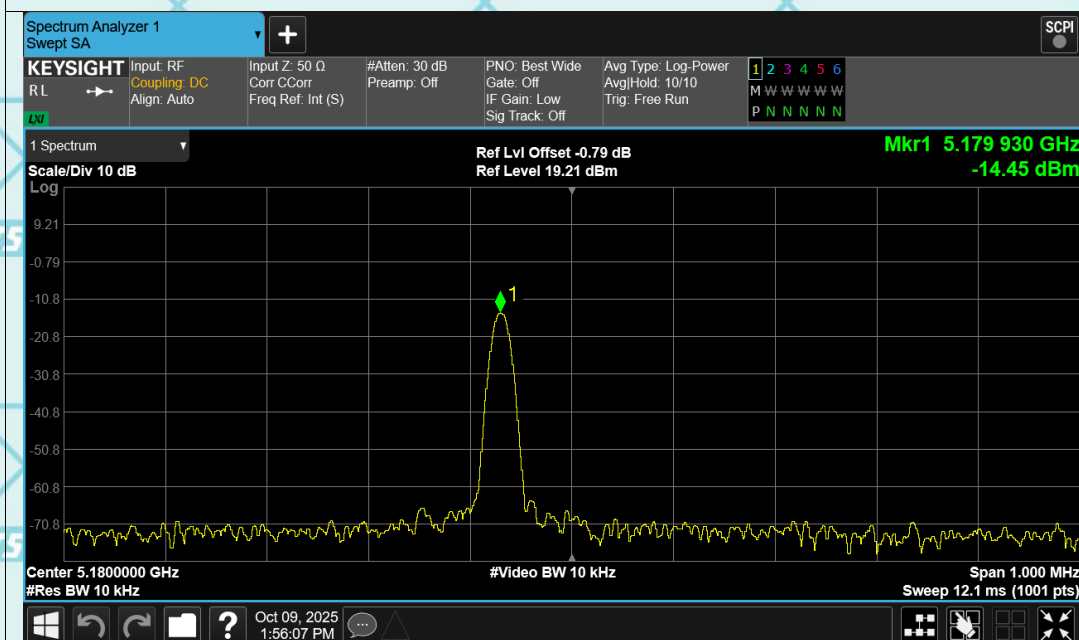
Freq. Error NVNT a 5600MHz Ant1



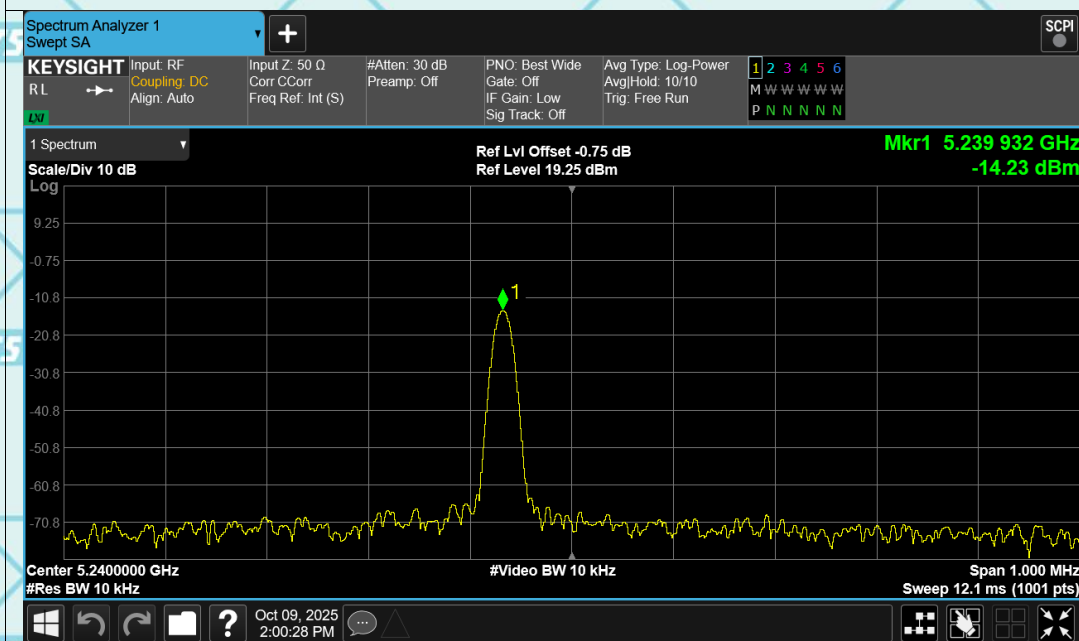
Freq. Error NVNT a 5720MHz Ant1



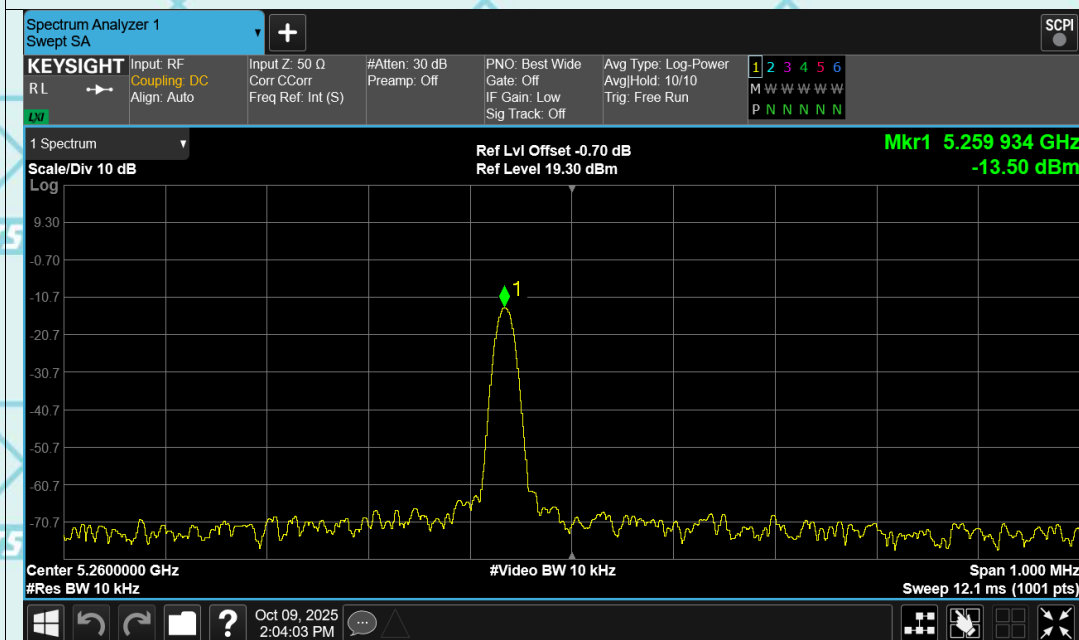
Freq. Error NVNT n20 5180MHz Ant1



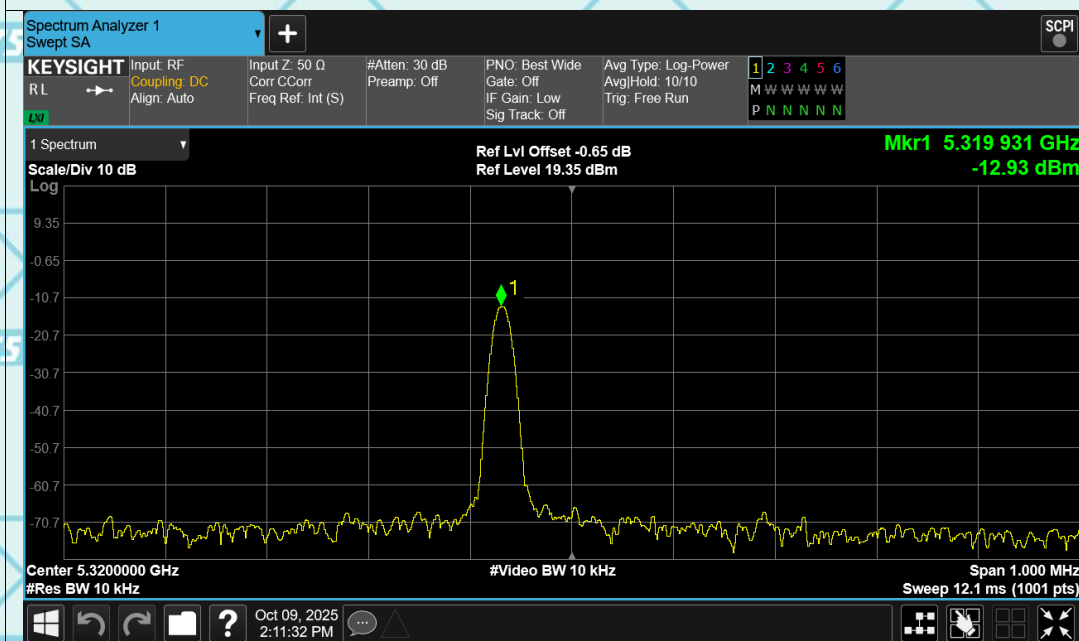
Freq. Error NVNT n20 5240MHz Ant1



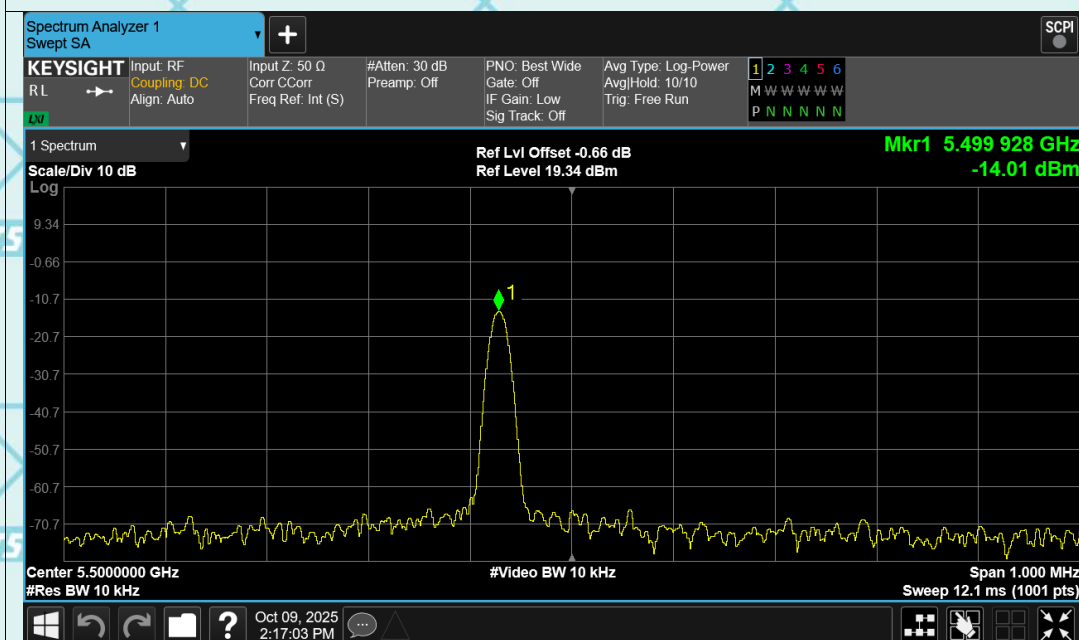
Freq. Error NVNT n20 5260MHz Ant1



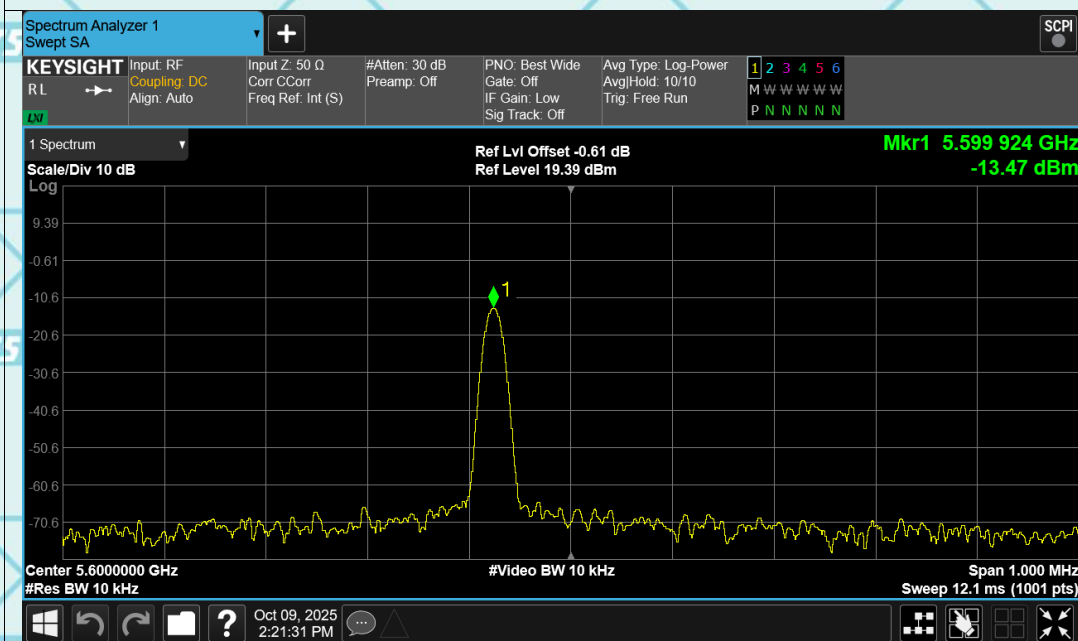
Freq. Error NVNT n20 5320MHz Ant1



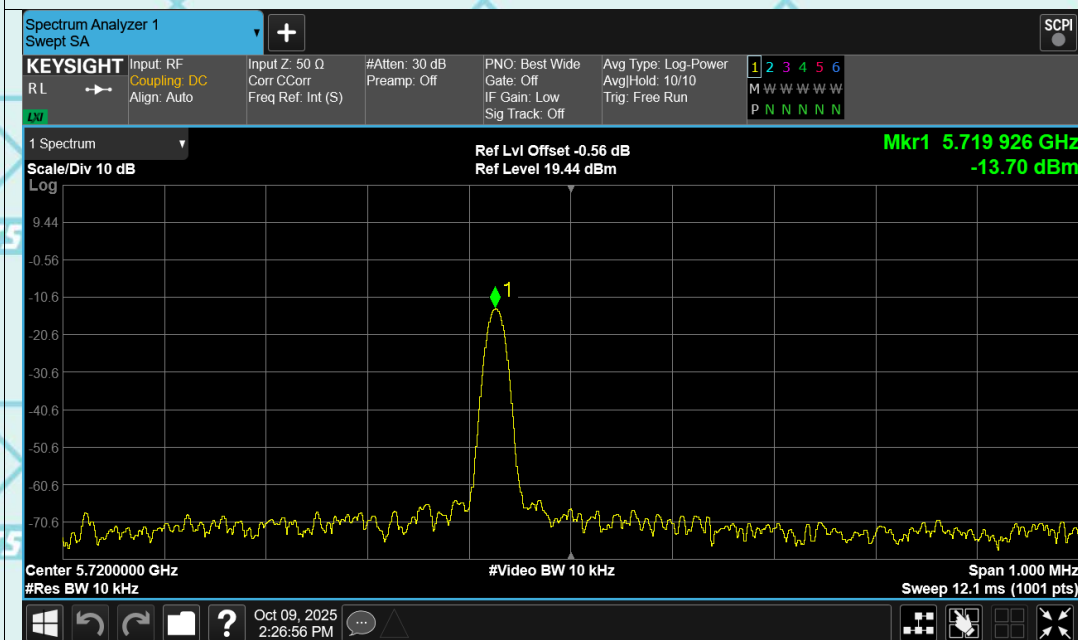
Freq. Error NVNT n20 5500MHz Ant1



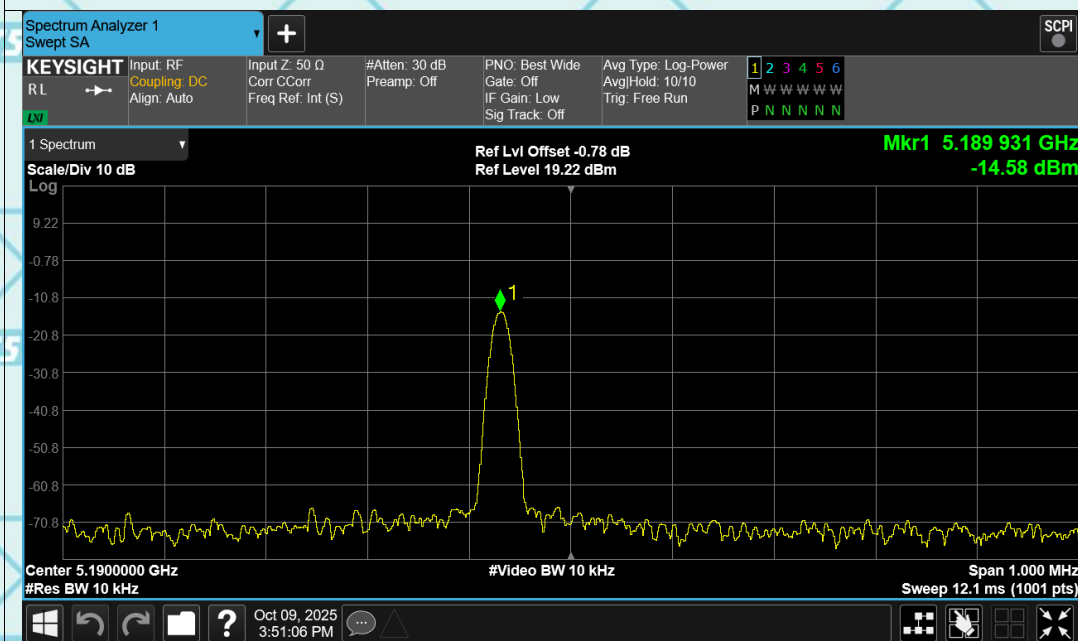
Freq. Error NVNT n20 5600MHz Ant1



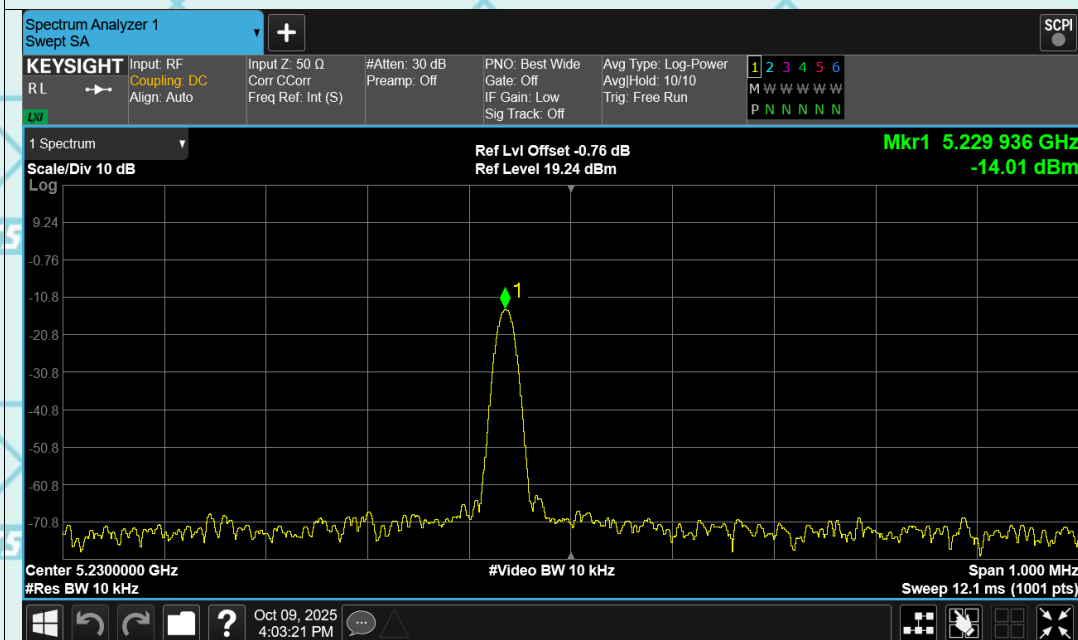
Freq. Error NVNT n20 5720MHz Ant1



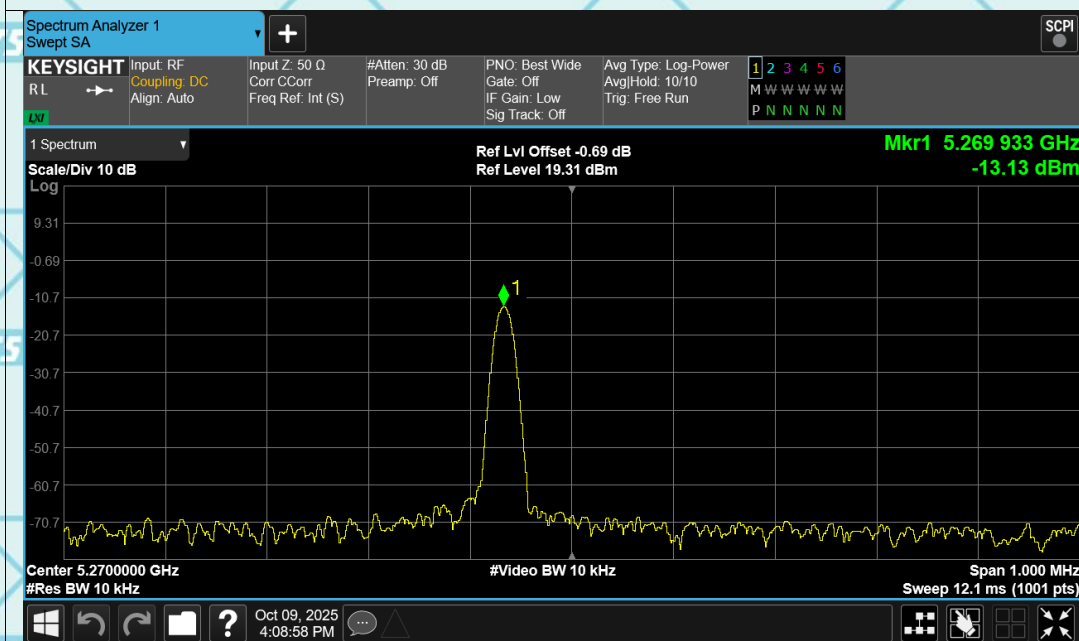
Freq. Error NVNT n40 5190MHz Ant1



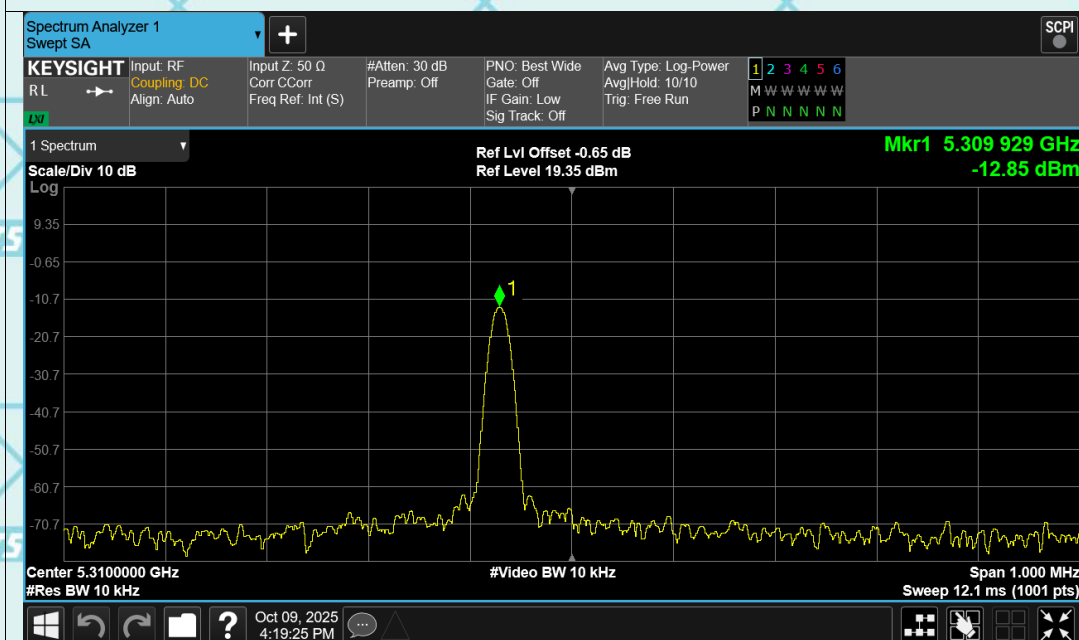
Freq. Error NVNT n40 5230MHz Ant1



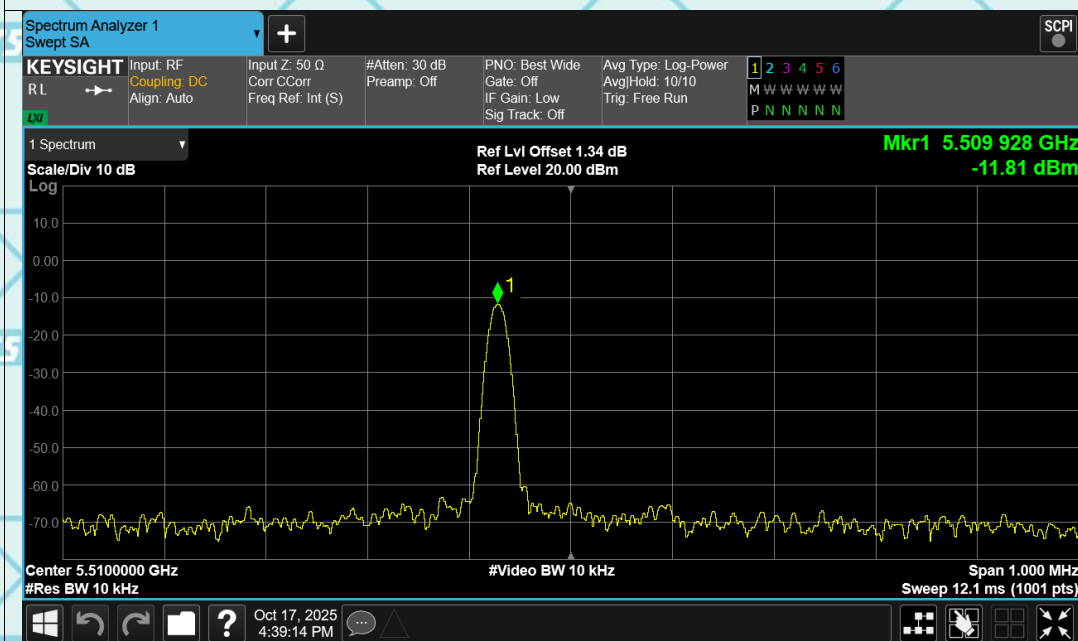
Freq. Error NVNT n40 5270MHz Ant1



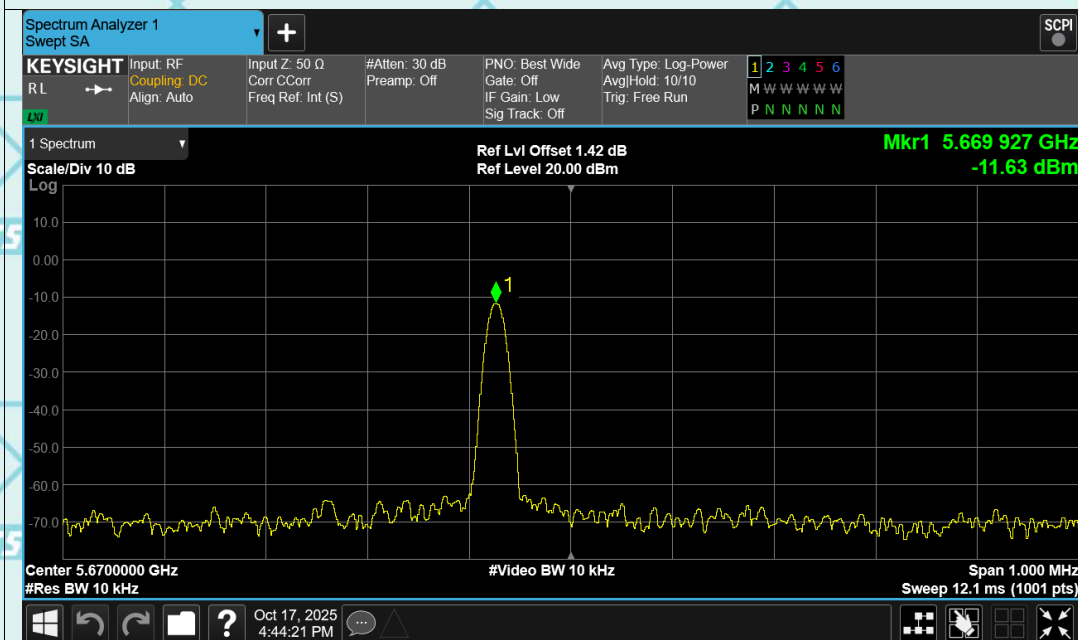
Freq. Error NVNT n40 5310MHz Ant1



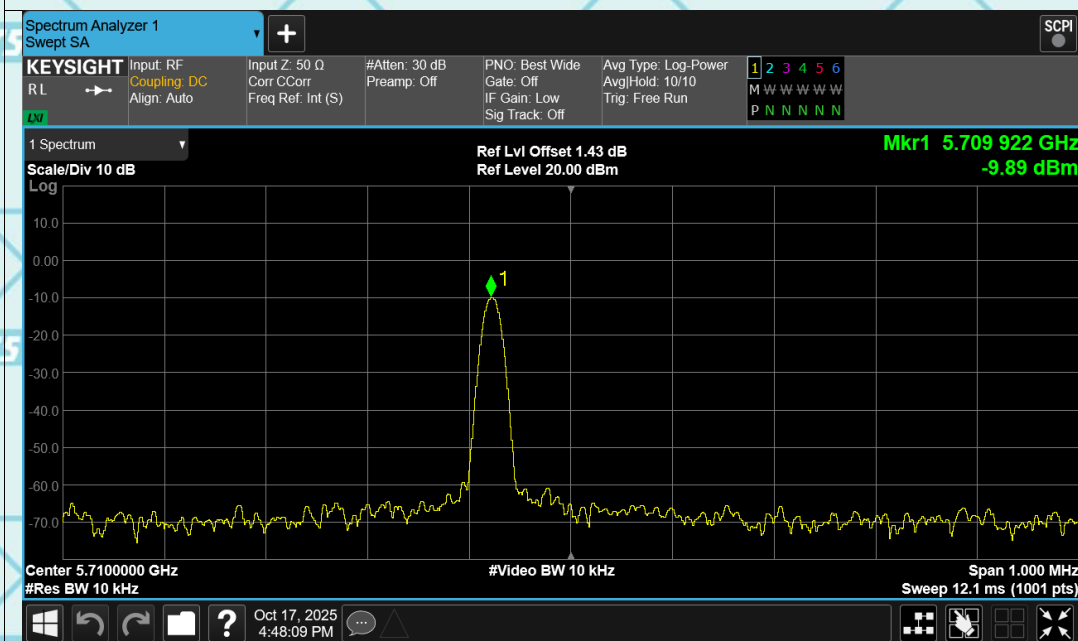
Freq. Error NVNT n40 5510MHz Ant1



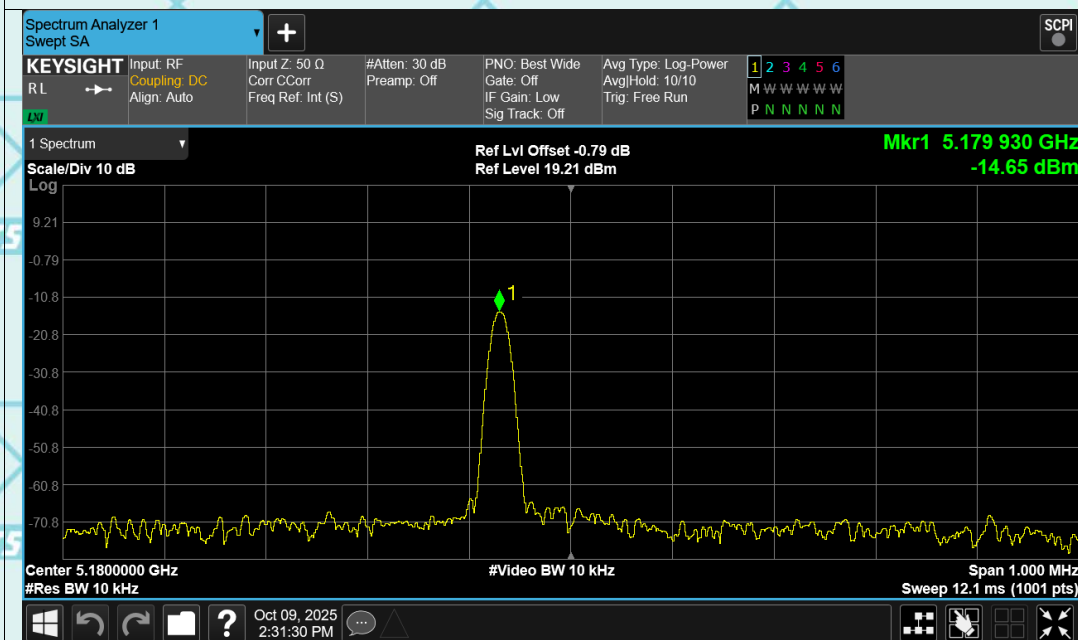
Freq. Error NVNT n40 5670MHz Ant1



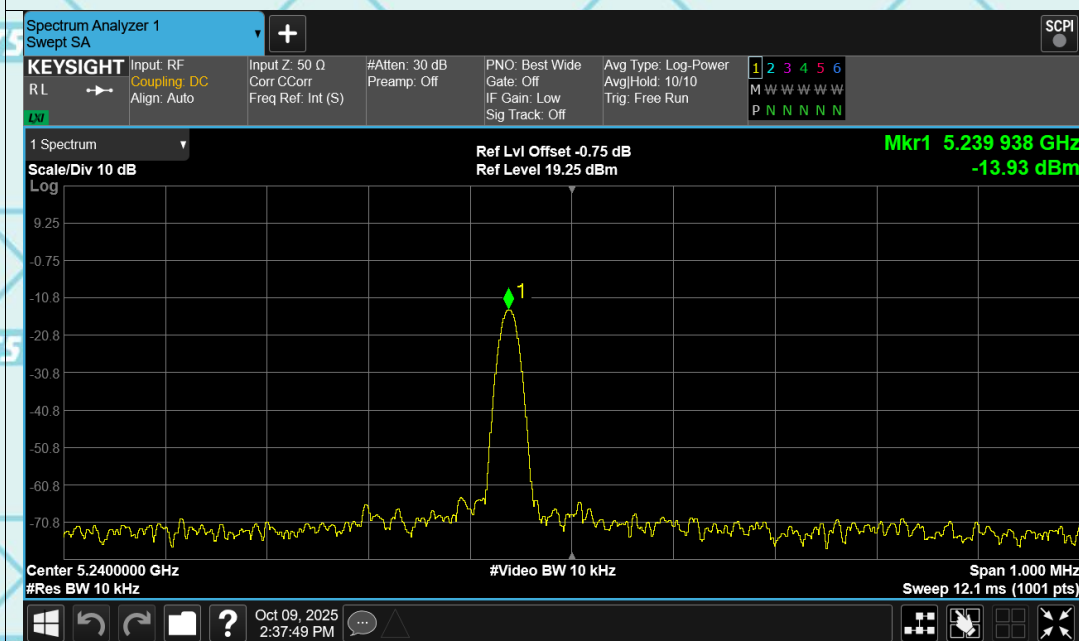
Freq. Error NVNT n40 5710MHz Ant1



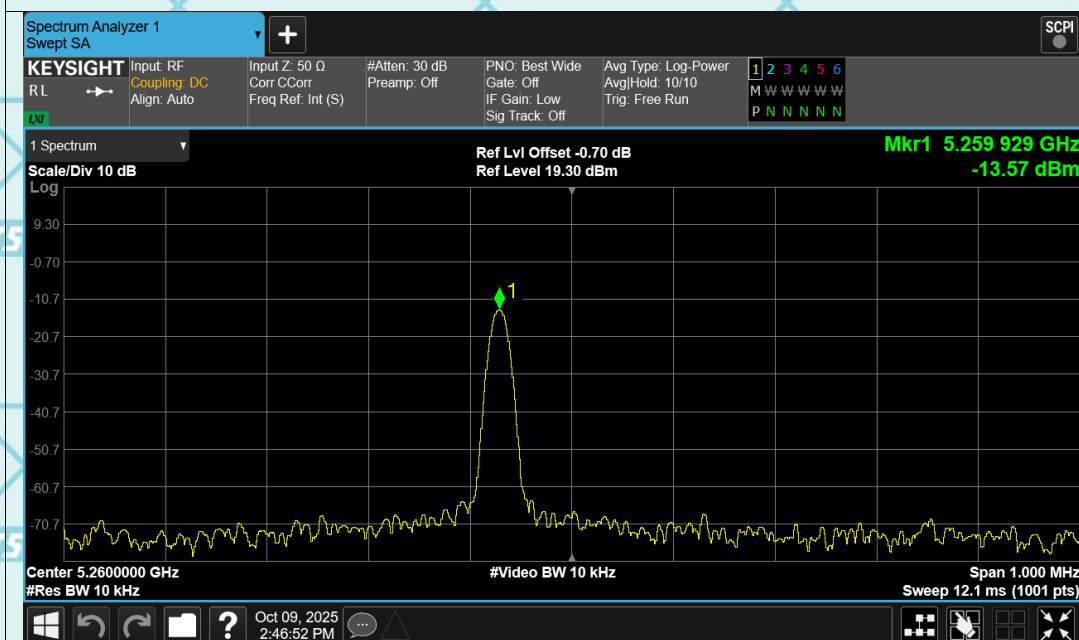
Freq. Error NVNT ac20 5180MHz Ant1



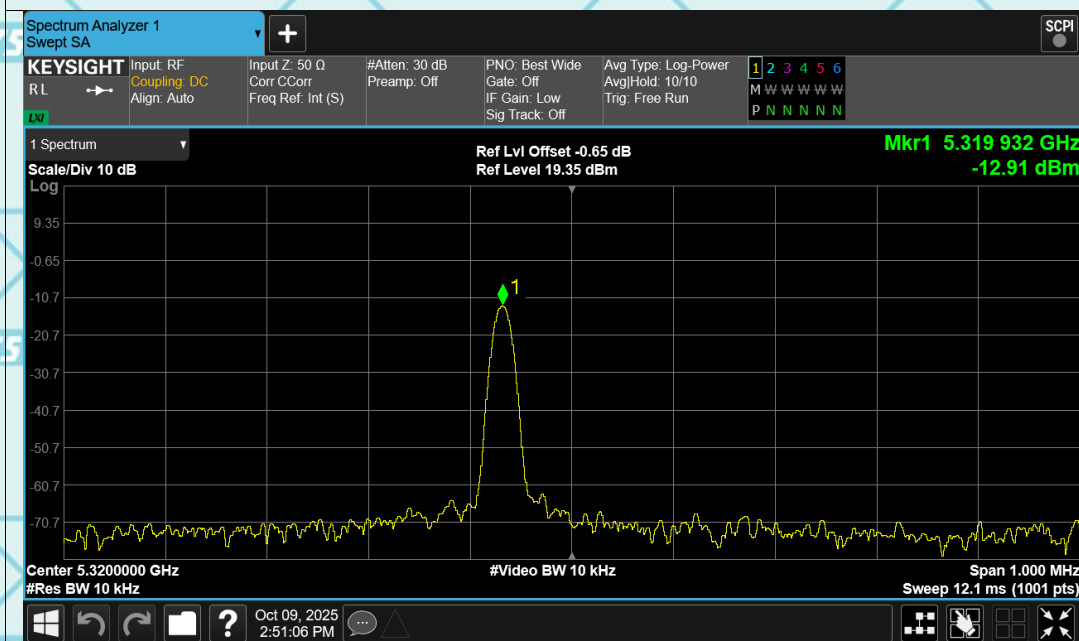
Freq. Error NVNT ac20 5240MHz Ant1



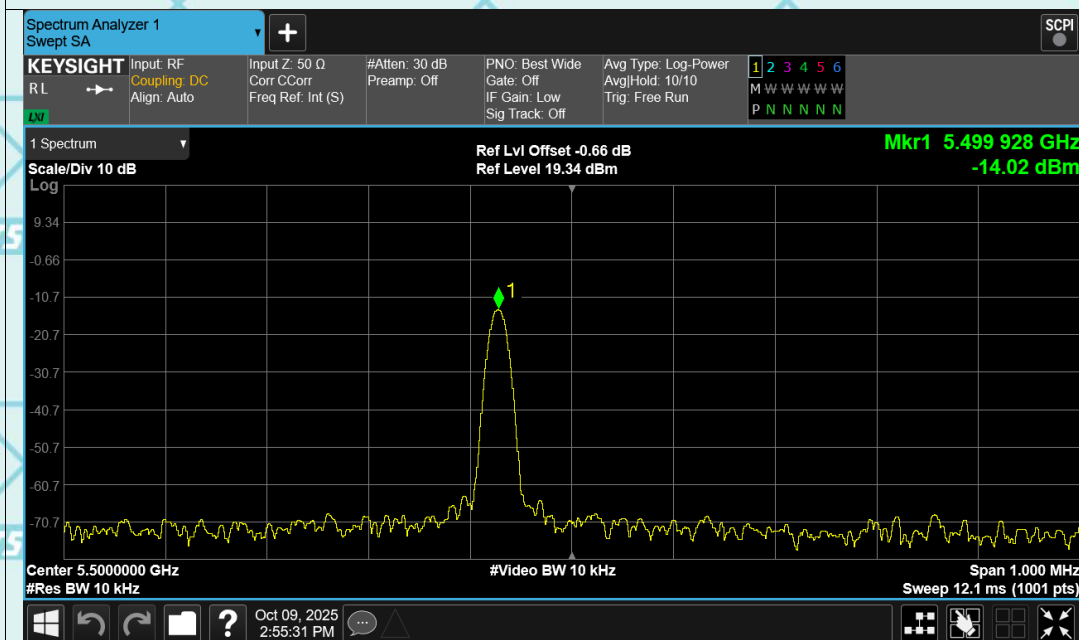
Freq. Error NVNT ac20 5260MHz Ant1



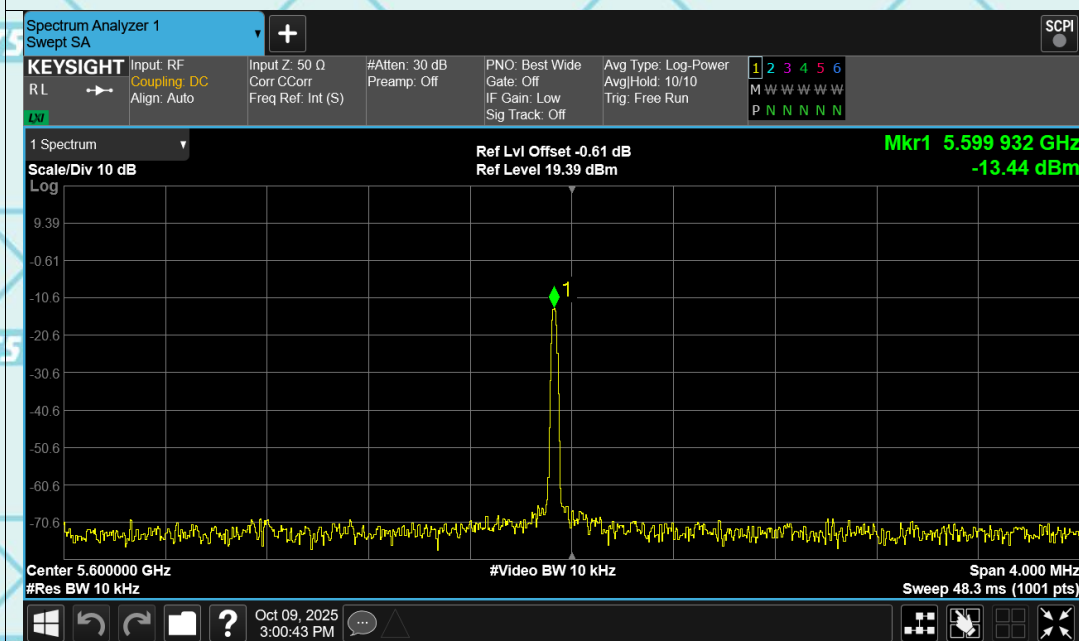
Freq. Error NVNT ac20 5320MHz Ant1



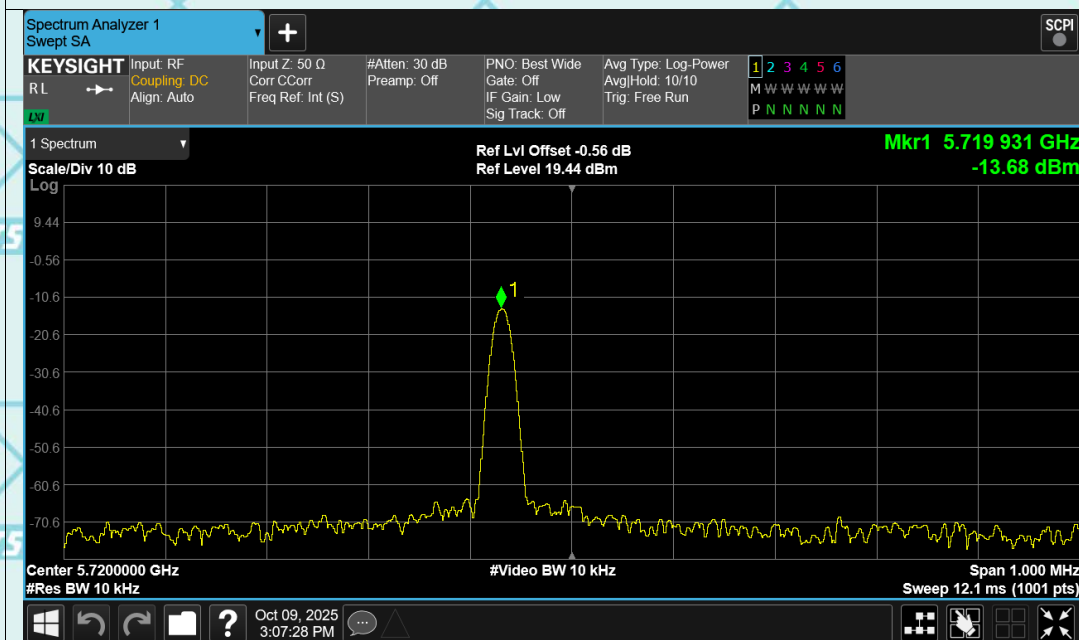
Freq. Error NVNT ac20 5500MHz Ant1



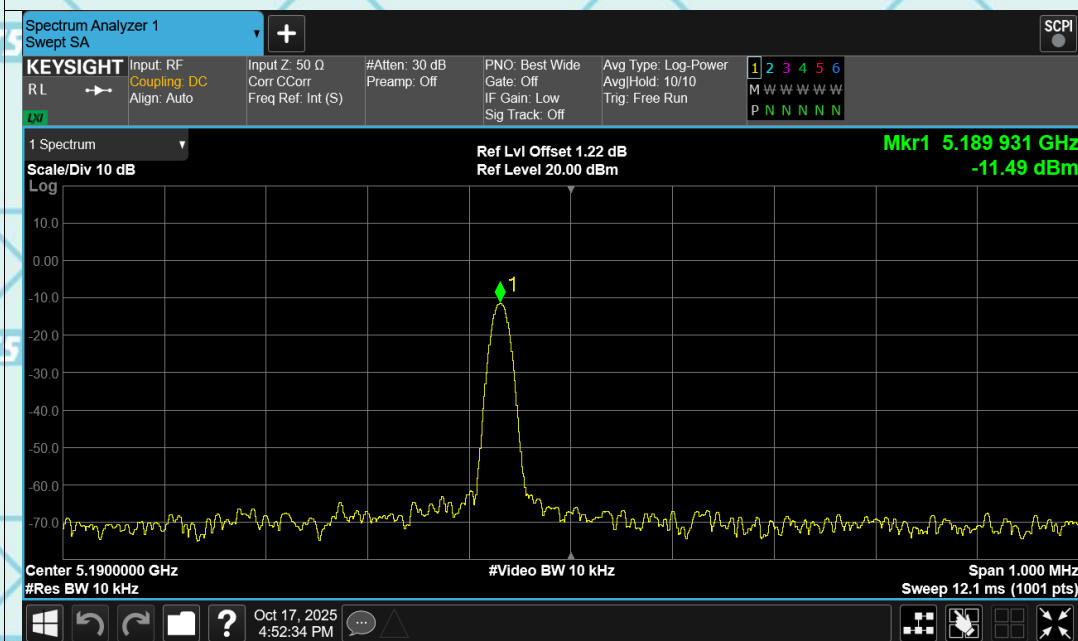
Freq. Error NVNT ac20 5600MHz Ant1



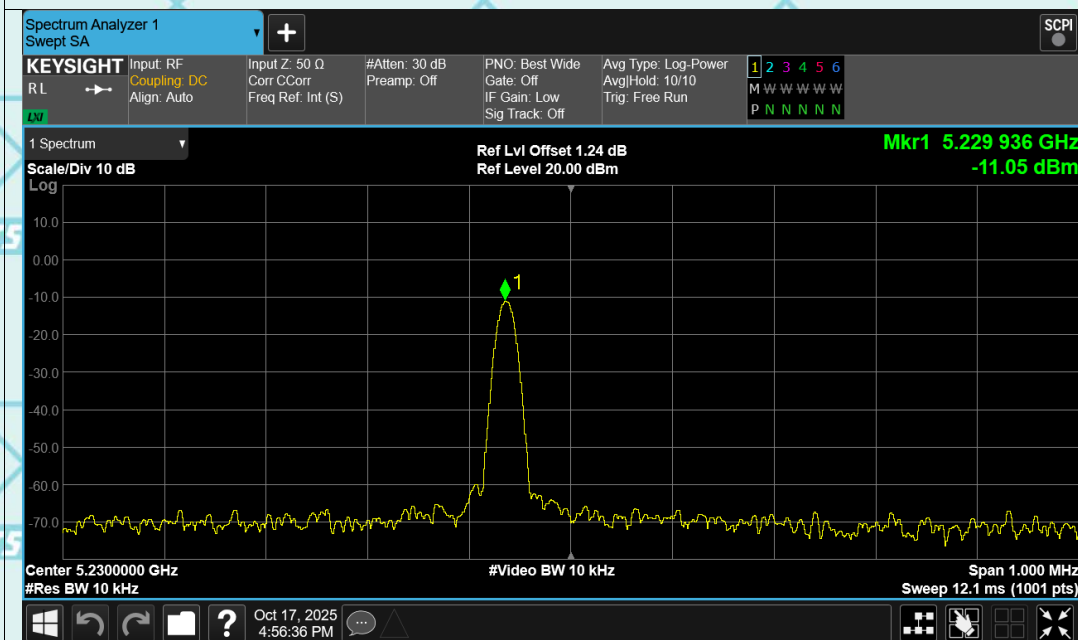
Freq. Error NVNT ac20 5720MHz Ant1



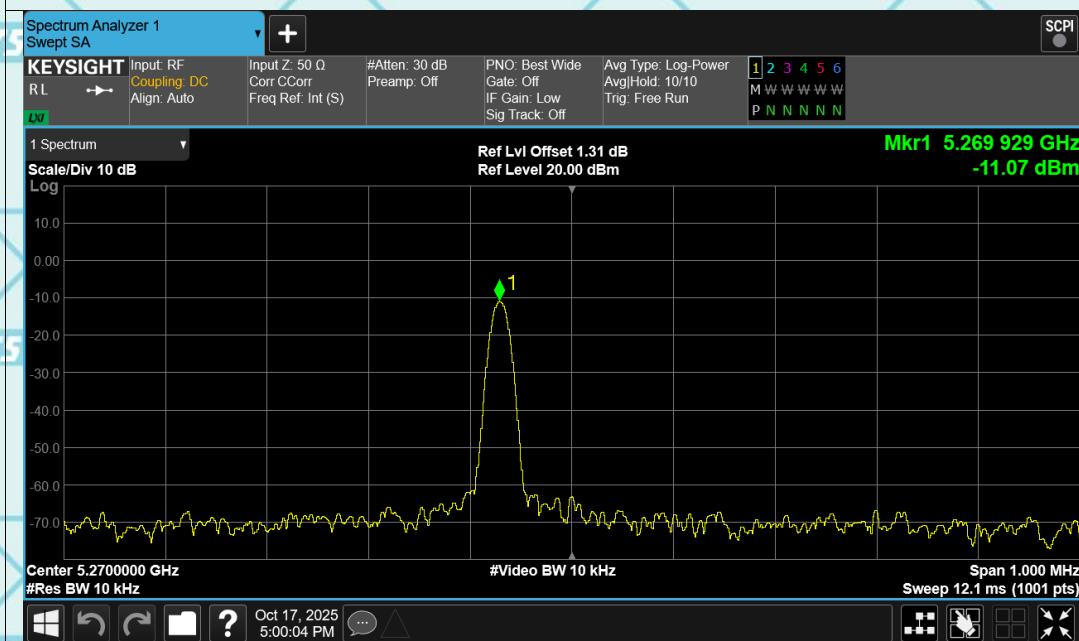
Freq. Error NVNT ac40 5190MHz Ant1



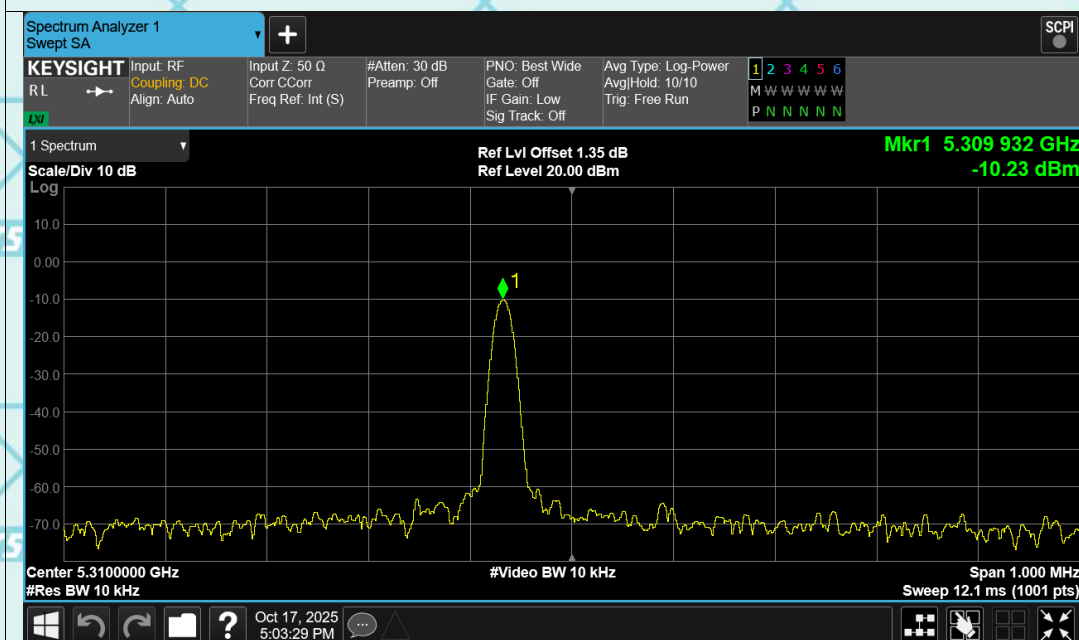
Freq. Error NVNT ac40 5230MHz Ant1



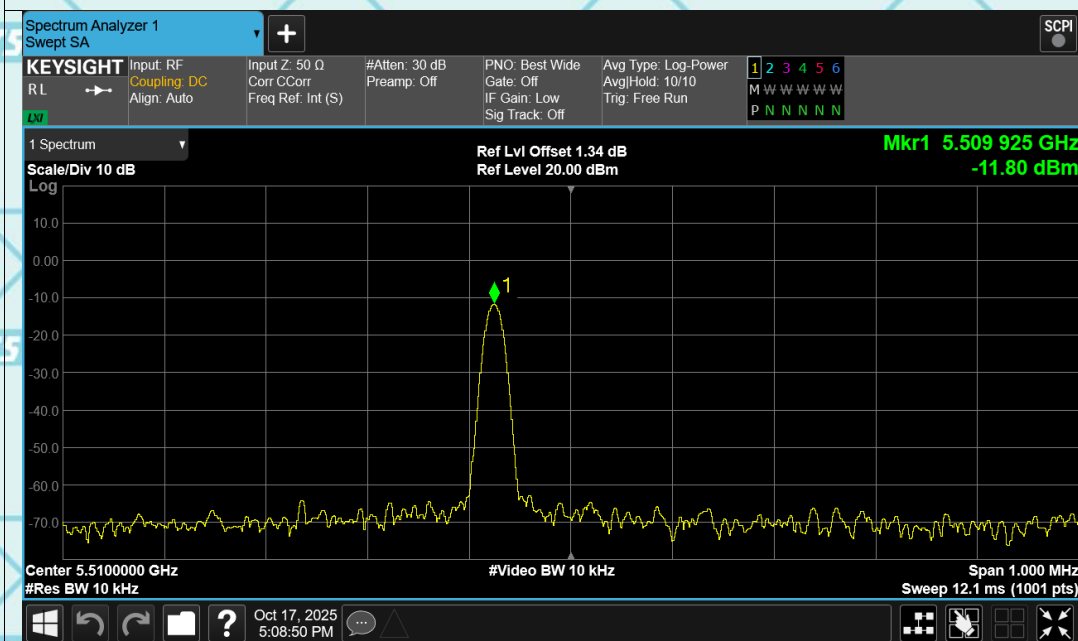
Freq. Error NVNT ac40 5270MHz Ant1



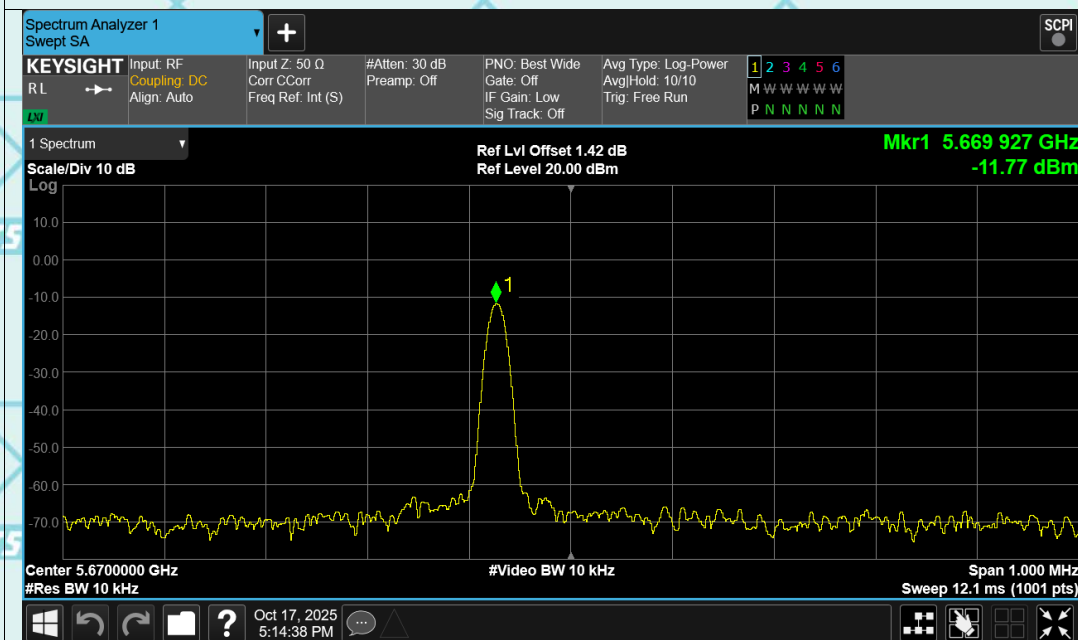
Freq. Error NVNT ac40 5310MHz Ant1



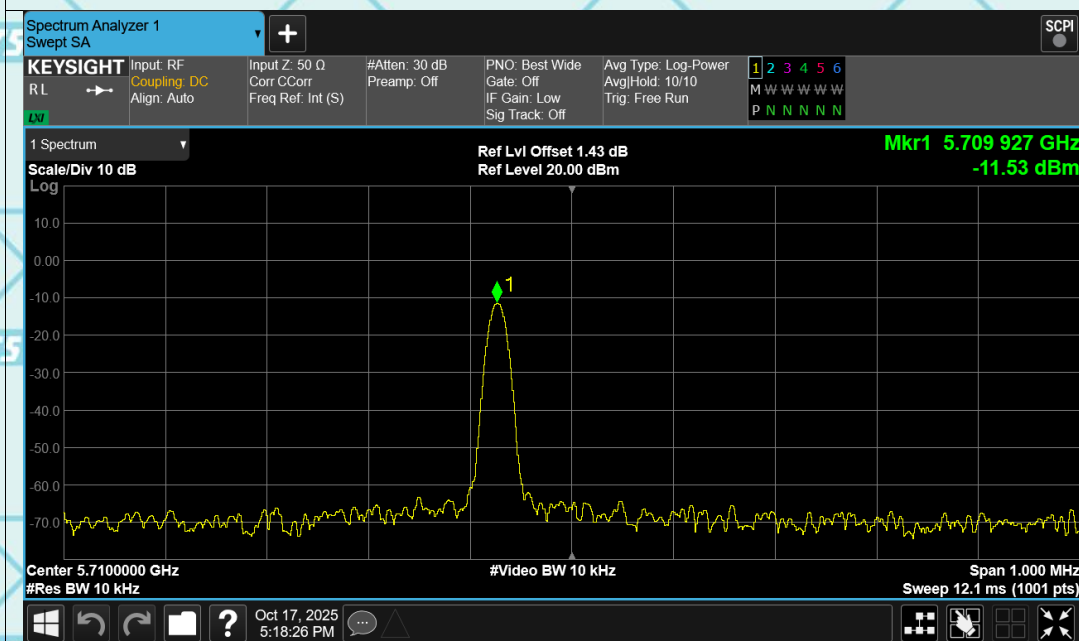
Freq. Error NVNT ac40 5510MHz Ant1



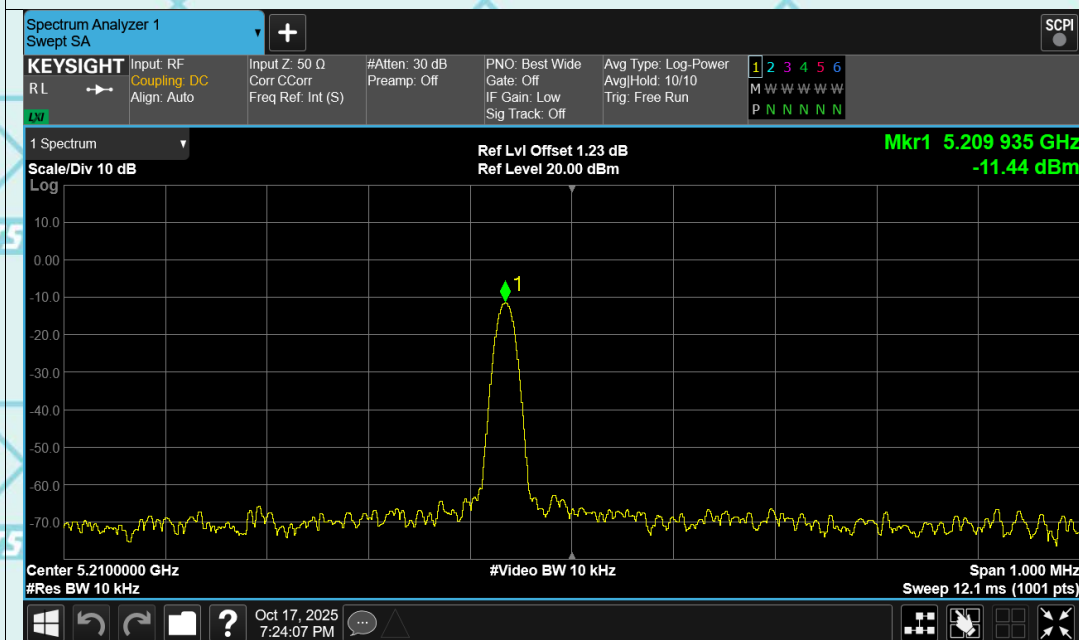
Freq. Error NVNT ac40 5670MHz Ant1



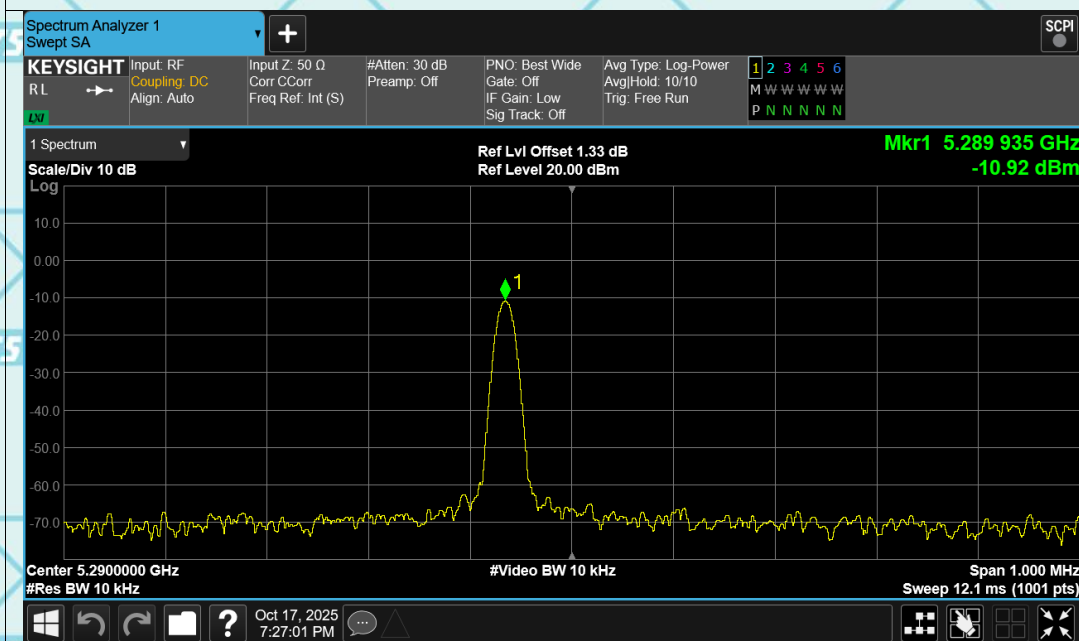
Freq. Error NVNT ac40 5710MHz Ant1



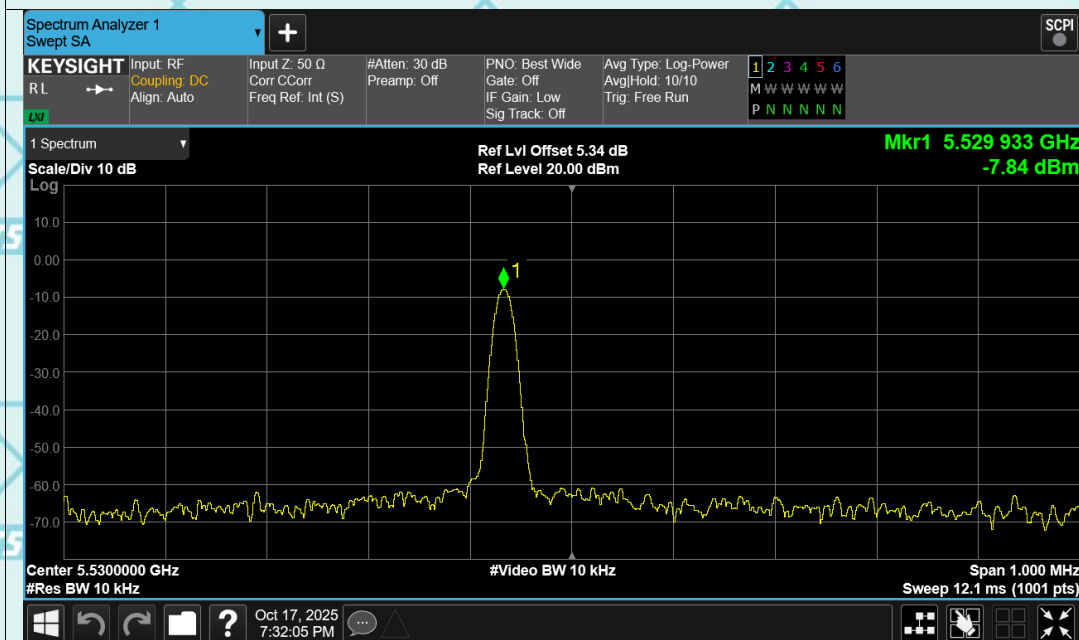
Freq. Error NVNT ac80 5210MHz Ant1



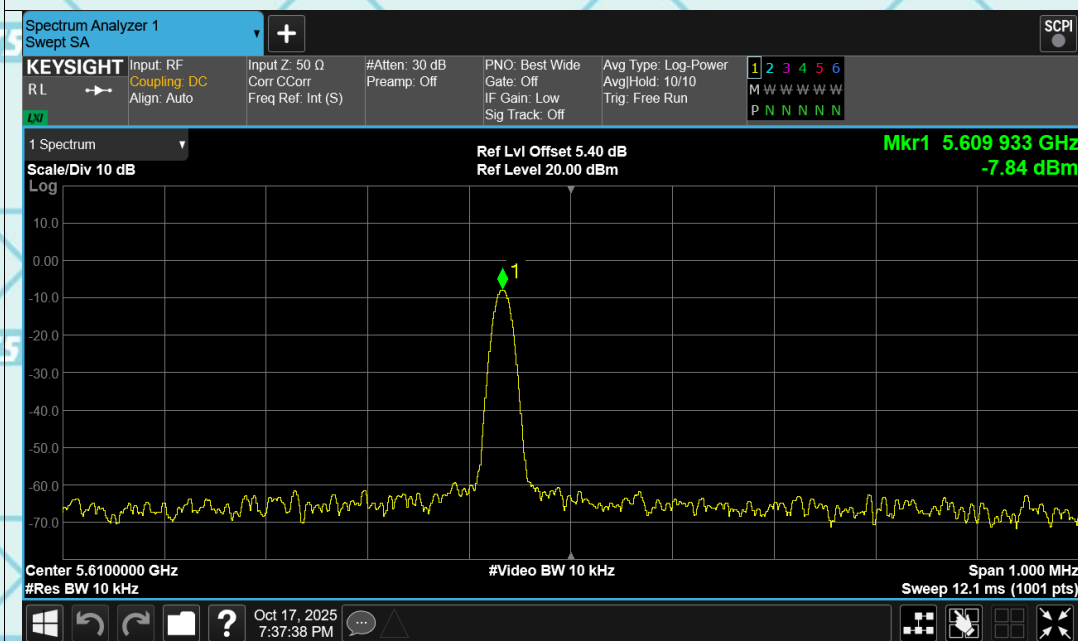
Freq. Error NVNT ac80 5290MHz Ant1



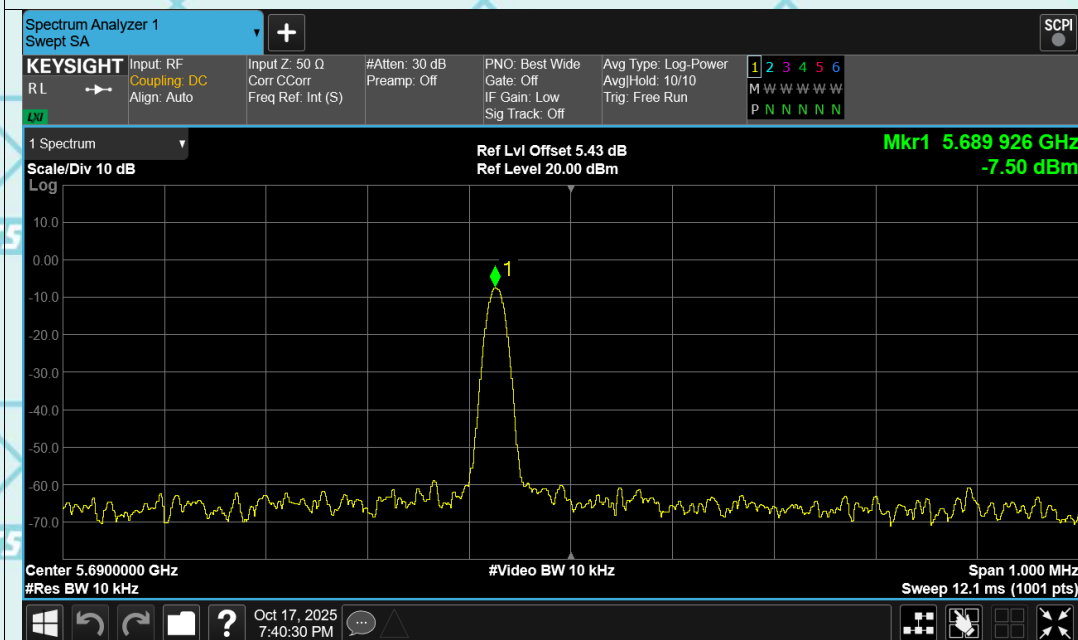
Freq. Error NVNT ac80 5530MHz Ant1



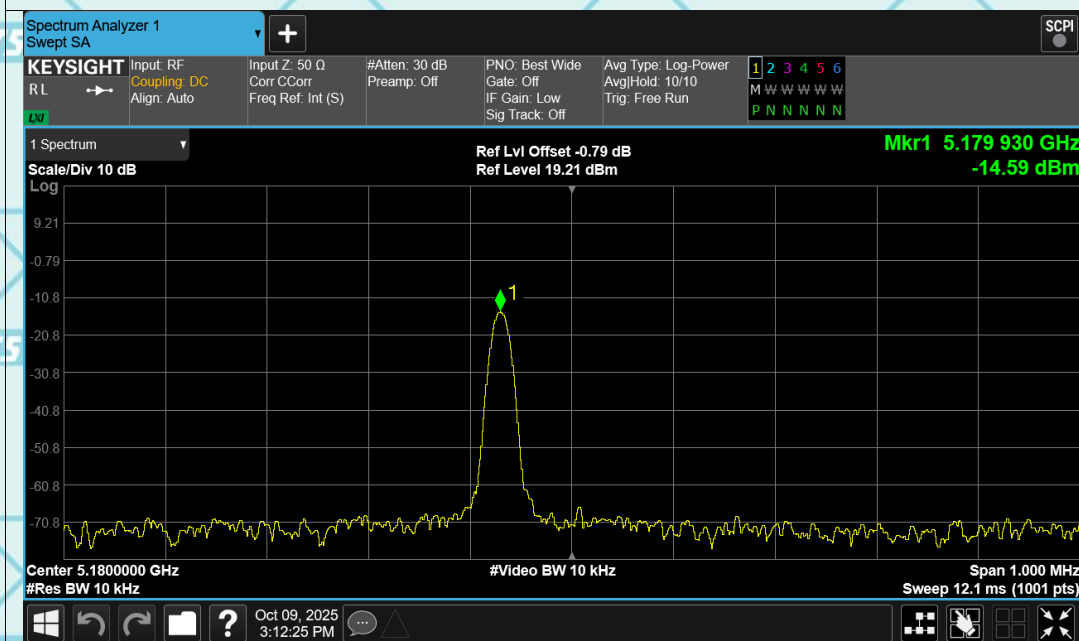
Freq. Error NVNT ac80 5610MHz Ant1



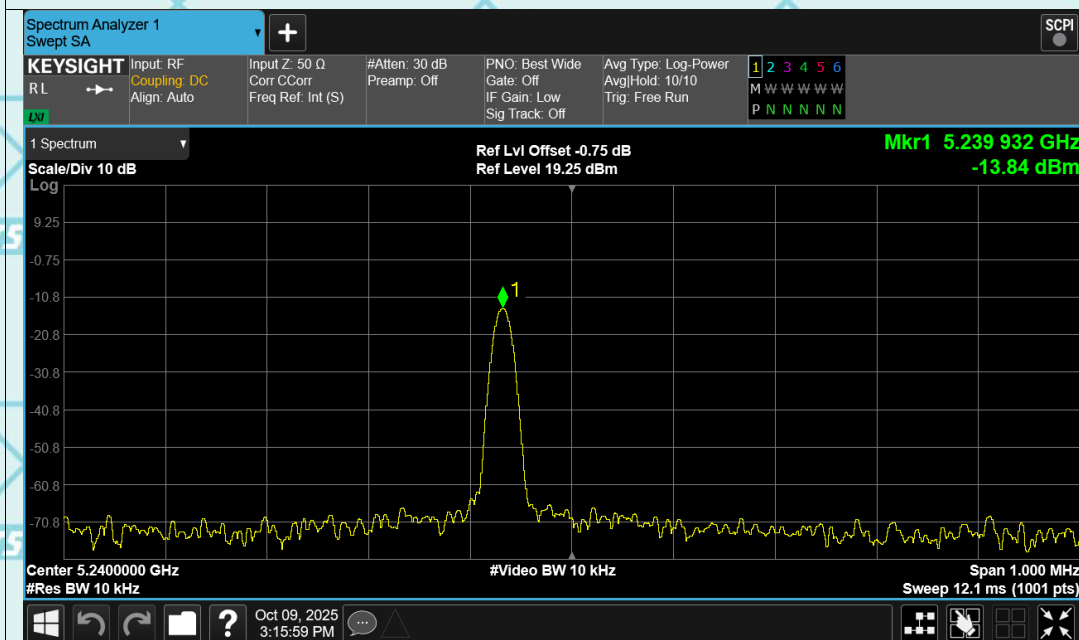
Freq. Error NVNT ac80 5690MHz Ant1



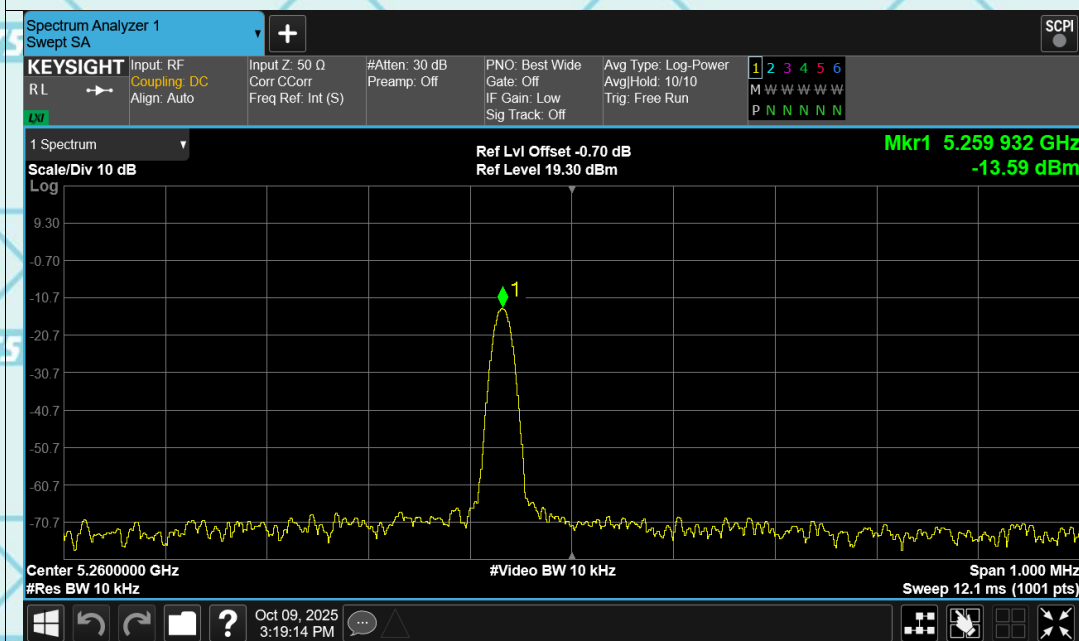
Freq. Error NVNT ax20 5180MHz Ant1



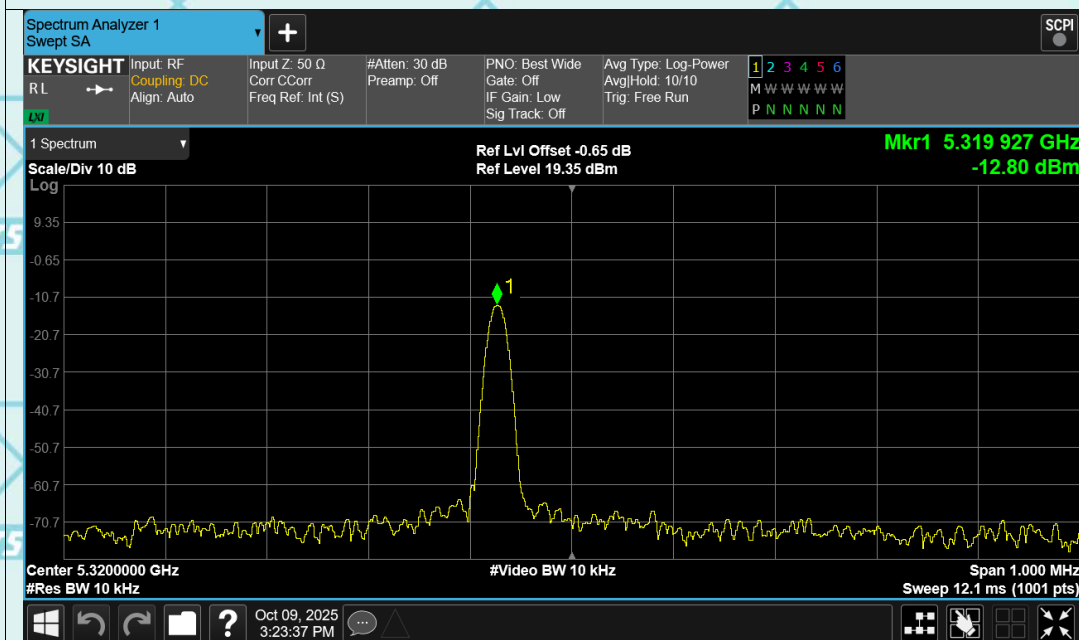
Freq. Error NVNT ax20 5240MHz Ant1



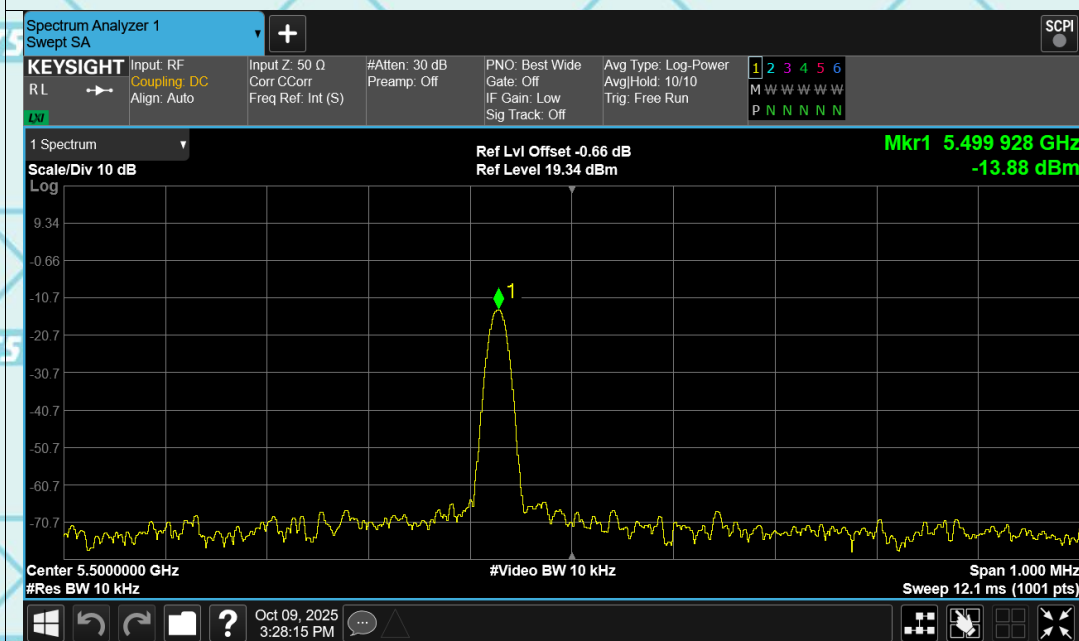
Freq. Error NVNT ax20 5260MHz Ant1



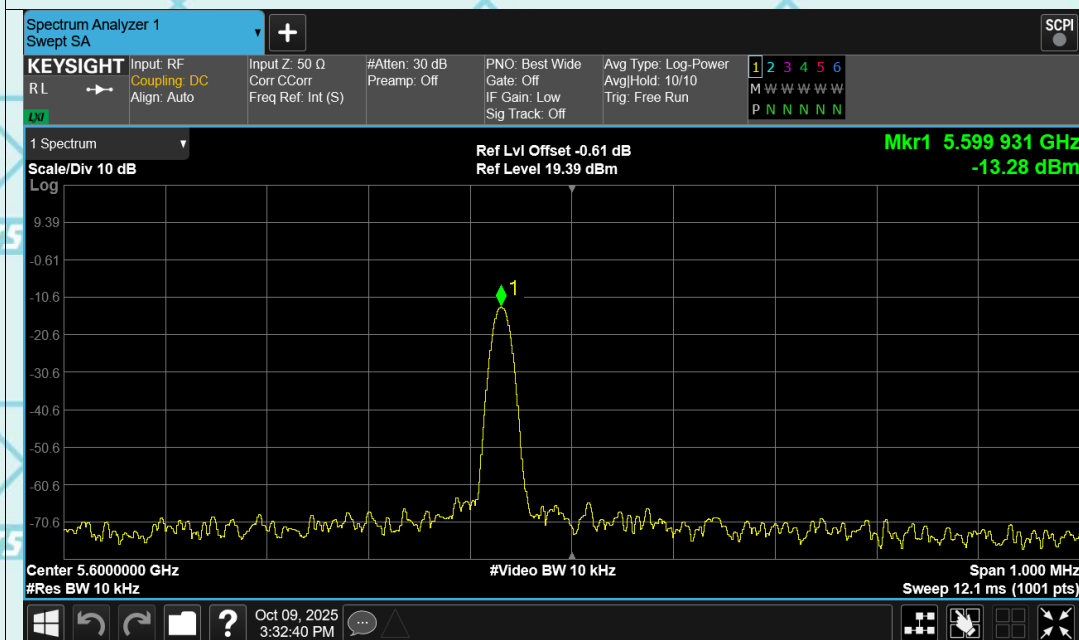
Freq. Error NVNT ax20 5320MHz Ant1



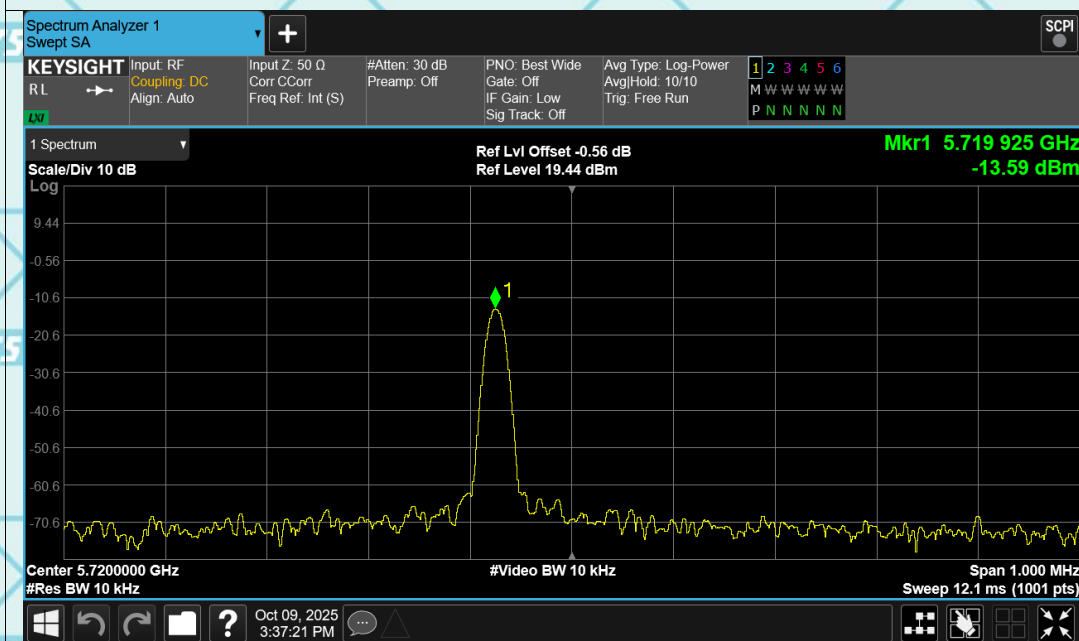
Freq. Error NVNT ax20 5500MHz Ant1



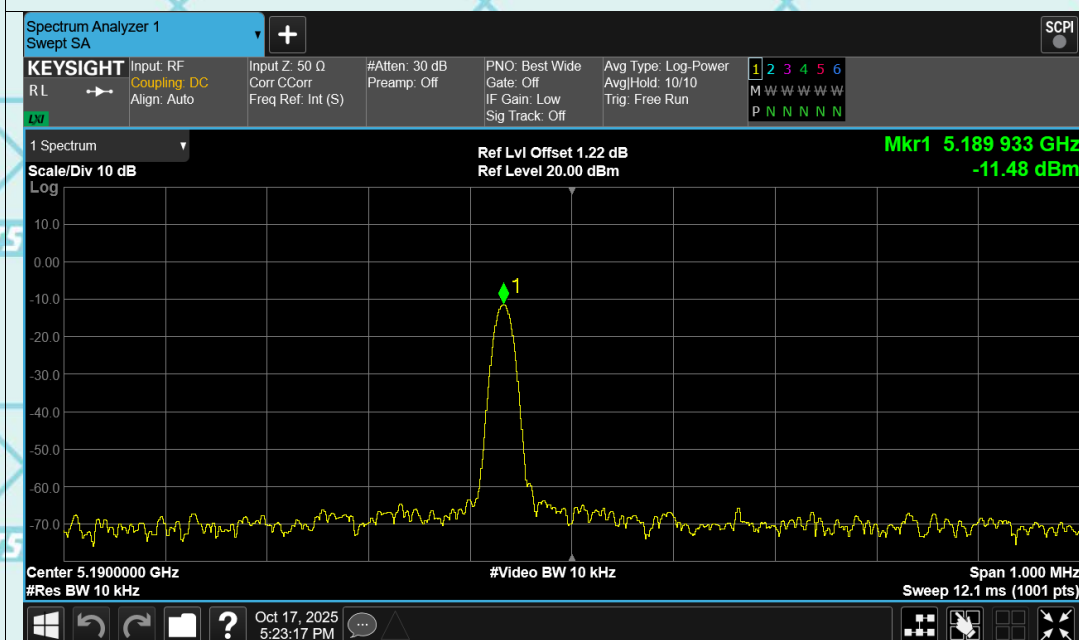
Freq. Error NVNT ax20 5600MHz Ant1



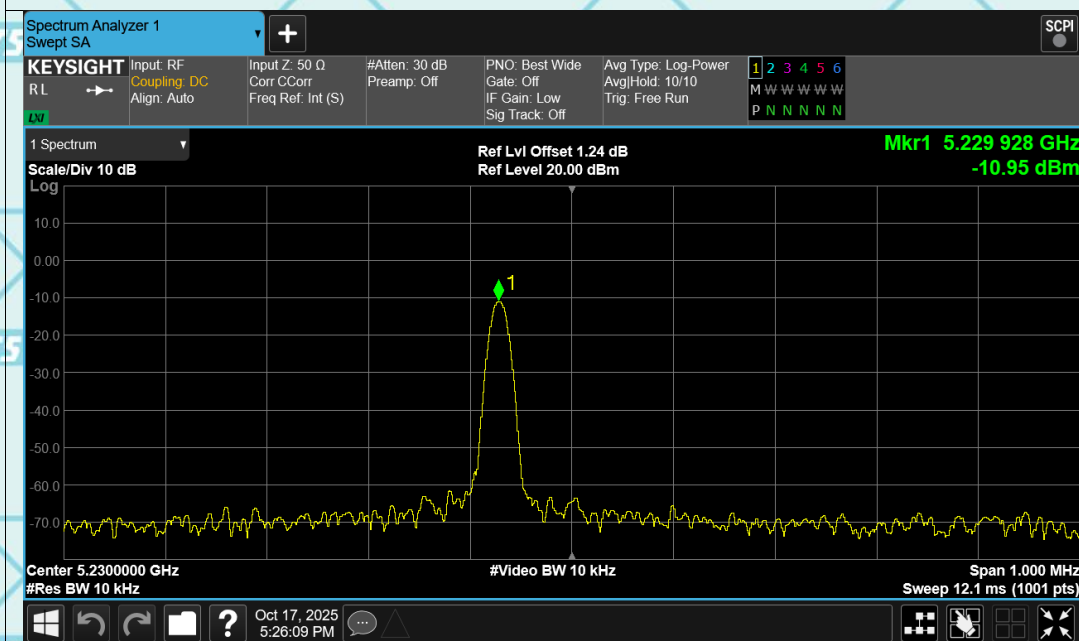
Freq. Error NVNT ax20 5720MHz Ant1



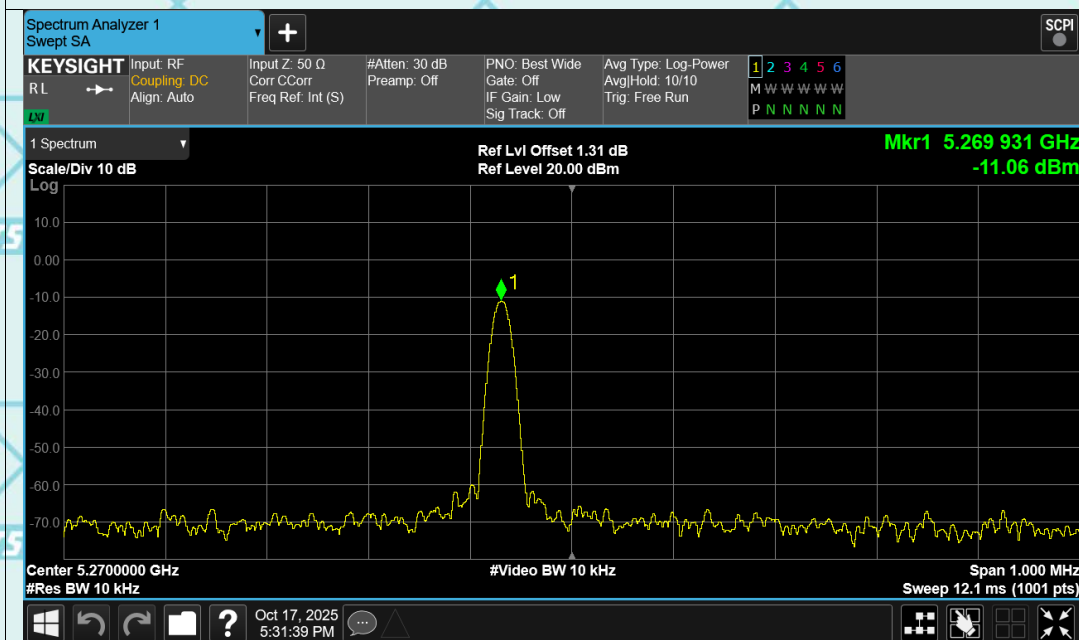
Freq. Error NVNT ax40 5190MHz Ant1



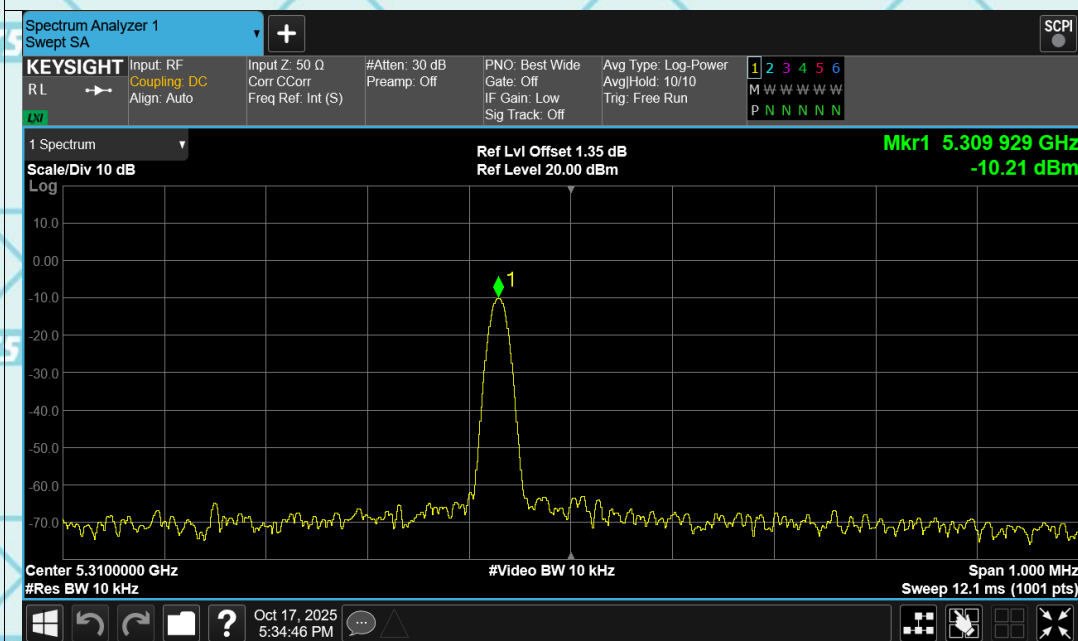
Freq. Error NVNT ax40 5230MHz Ant1



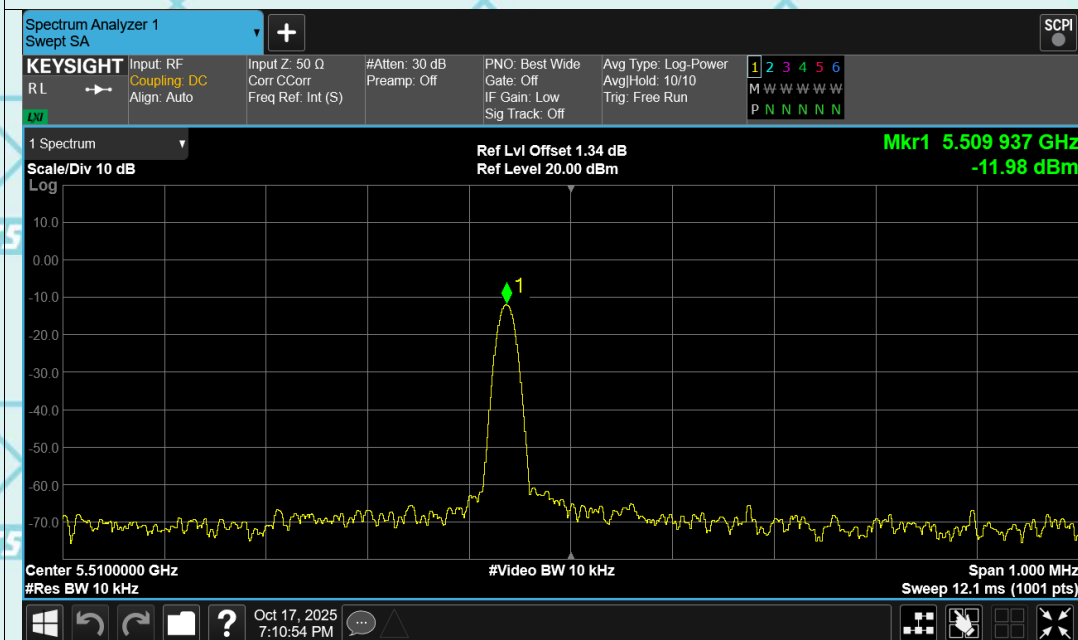
Freq. Error NVNT ax40 5270MHz Ant1



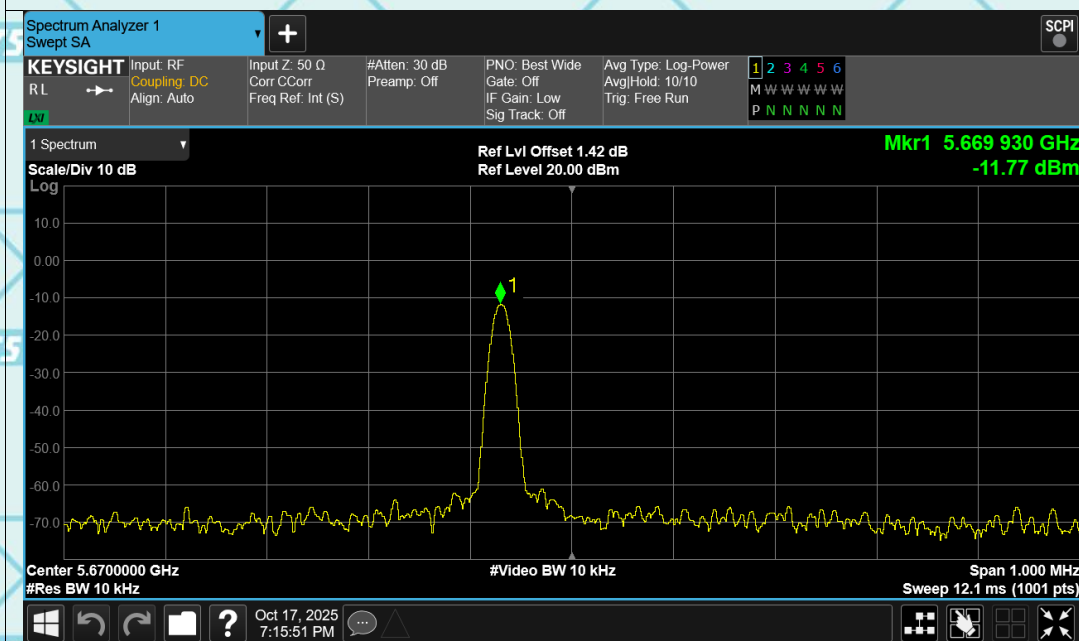
Freq. Error NVNT ax40 5310MHz Ant1



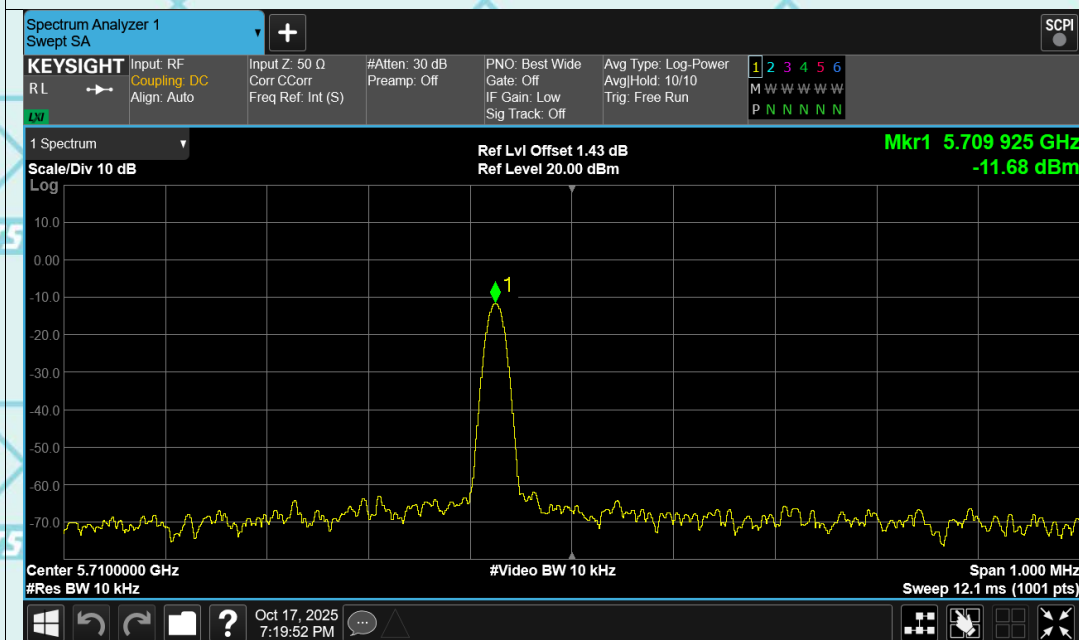
Freq. Error NVNT ax40 5510MHz Ant1



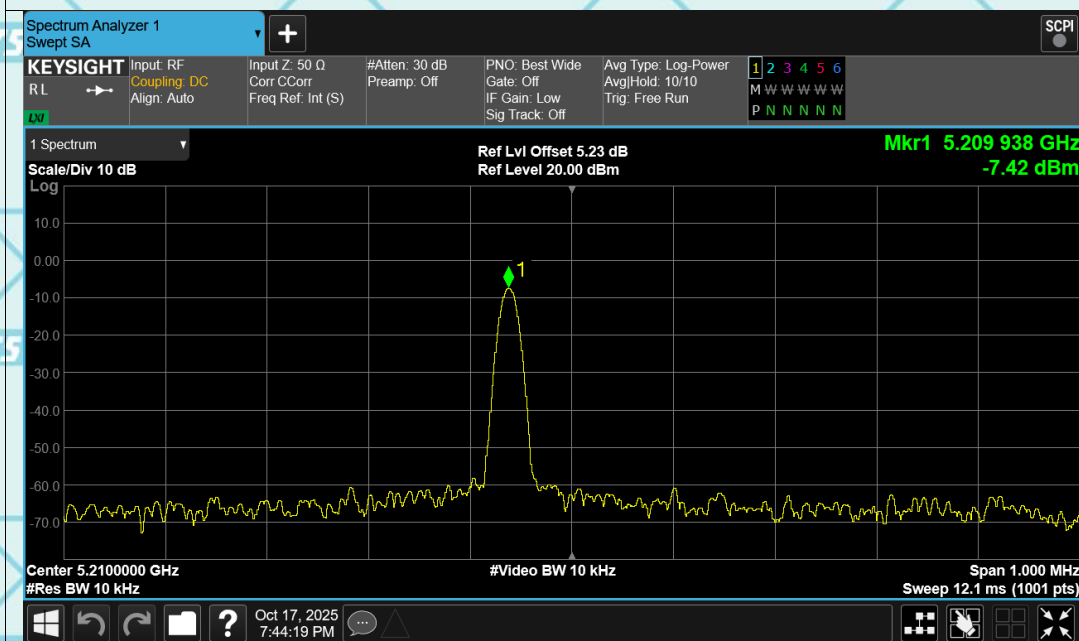
Freq. Error NVNT ax40 5670MHz Ant1



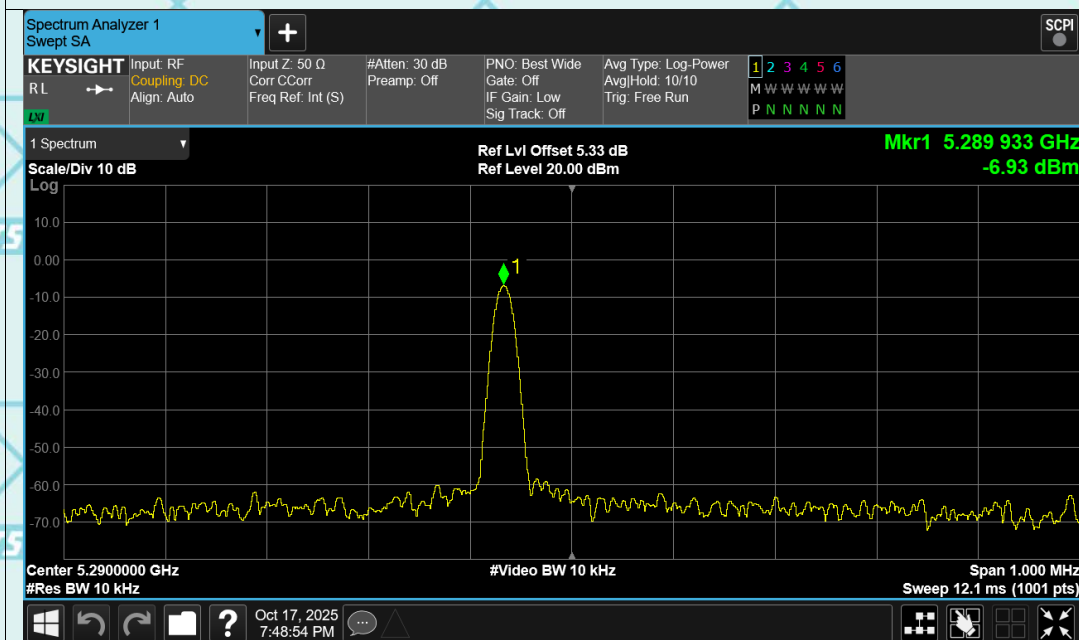
Freq. Error NVNT ax40 5710MHz Ant1



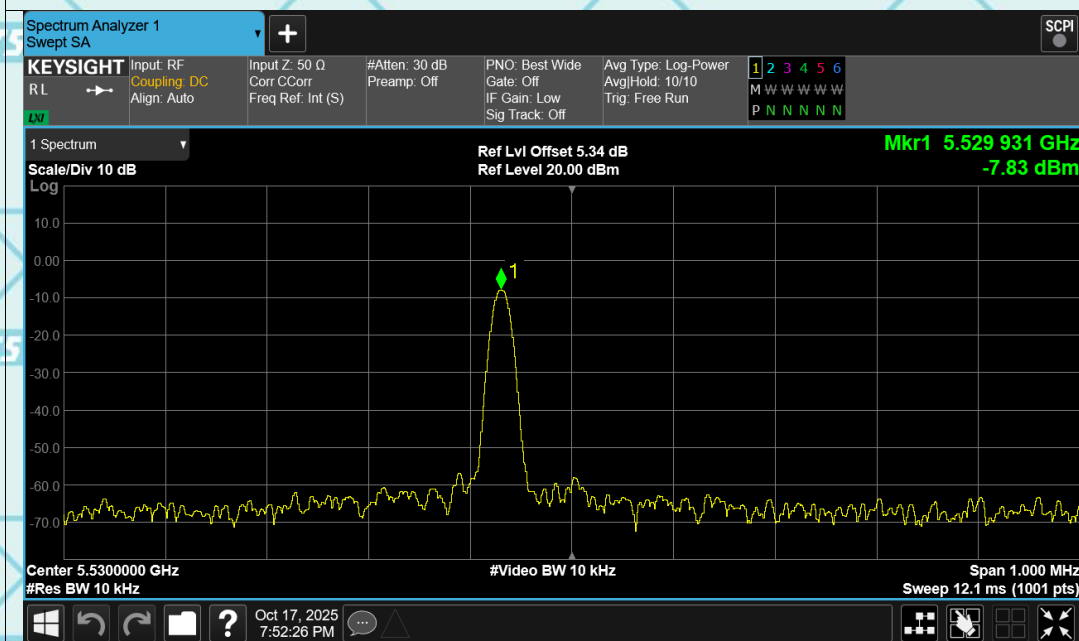
Freq. Error NVNT ax80 5210MHz Ant1



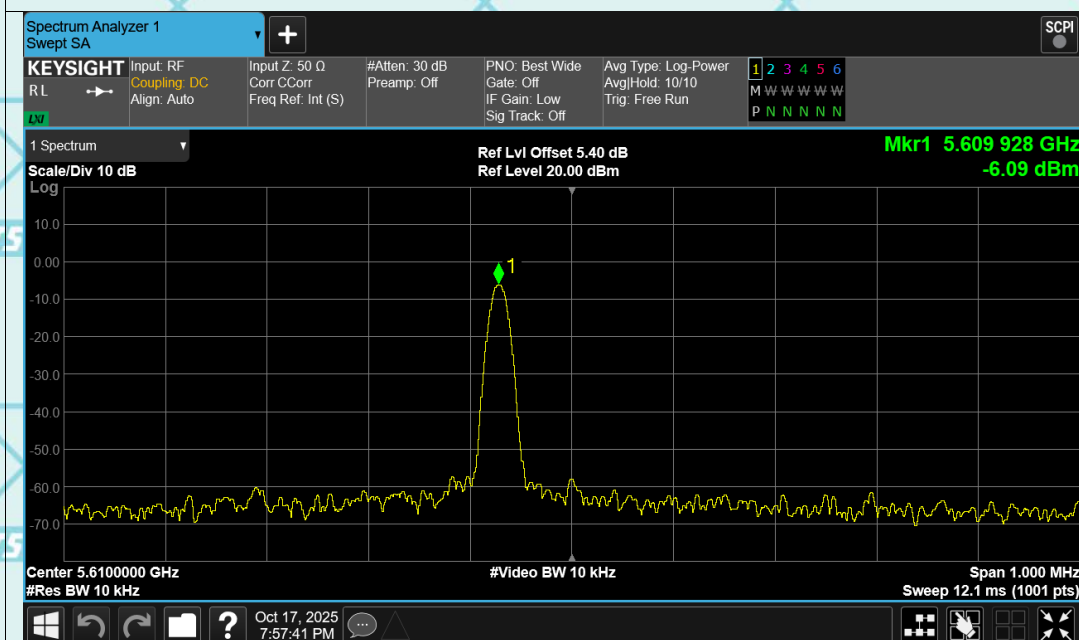
Freq. Error NVNT ax80 5290MHz Ant1



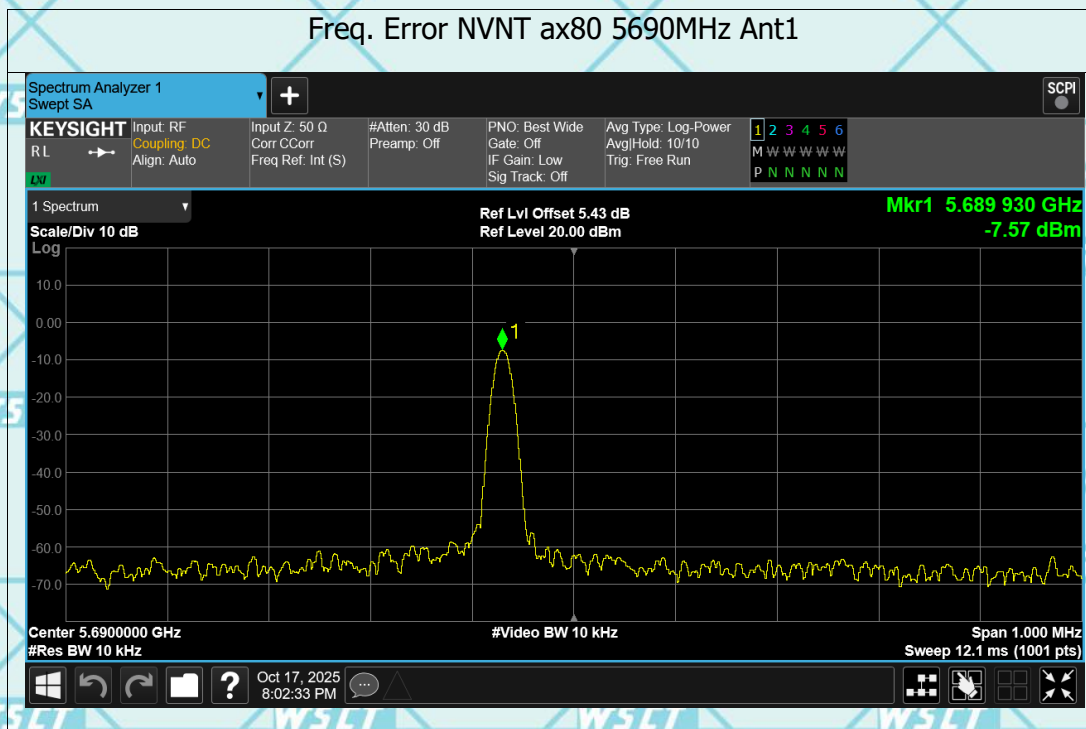
Freq. Error NVNT ax80 5530MHz Ant1



Freq. Error NVNT ax80 5610MHz Ant1



Freq. Error NVNT ax80 5690MHz Ant1



5. OCCUPIED BANDWIDTH (99%) TEST

5.1. Test Equipment

Same as 3.6

5.2. Test Configuration

One antenna position was evaluated based on verification that changing the diversity switch position did not affect the occupied bandwidth of the center channel at nominal voltage.

The occupied bandwidth was measured with the spectrum analyzer configured according to the table below. The occupied bandwidth was determined from the 99% power bandwidth by determining the highest and lowest frequencies at which 99.5% of the power was captured and then subtracting the two numbers.

The limits are as follows:

Modulation Type	Occupied Band Width
20MHz system for 5.2/5.3GHz (OFDM)	< 20 MHz
20MHz system for 5.2/5.3GHz (Other)	< 20 MHz
40MHz system for 5.2/5.3GHz (OFDM)	< 40 MHz
20MHz system for 5.5/5.6GHz (OFDM)	< 20 MHz
40MHz system for 5.5/5.6GHz (OFDM)	< 40 MHz
80MHz system for 5.21/5.29GHz (OFDM)	< 80 MHz

The calculation was done by either the analyzer directly or via the software used to capture the plot.

Instrument Settings and Test Requirements				
Modulation Type	Analyzer Settings			
	Span	RB	VB	Other
OFDM (eg 802.11an)	36-163 MHz	≤540kHz	300kHz	Sample detector, averaging (10 sweeps)2, sweep time auto1)

Note 1: For burst transmissions sweep time set to ensure dwell time in each bandwidth > transmission cycle time (sweep time = transmit cycle time x span/ measurement bandwidth)

Note 2: For burst transmissions trace set for max hold and detector set to positive peak.



Report No.: WSCT-R&E251000669A-Wi-Fi5G Issued: 27 October 2025 Revised: None

5.3. Test Procedure

Set the spectrum analyzer as follows:

Center frequency: Test frequency (e.g. 5180 MHz);

Frequency sweep width: 2 to 3.5 times wider than the tolerance (e.g. 40 MHz);

Resolution bandwidth: 3% or less of the tolerance (e.g. 300 kHz);

Video bandwidth: Approximately same as the resolution bandwidth;

Y-axis scale: 10 dB/div;

Input level: Carrier level shall be enough higher than noise level of the spectrum analyzer;

Sweep time: Minimum time to ensure the measuring accuracy (In case of burst wave, one burst shall be include in one sample at least.);

Number of data points: 400 points or more (e.g. 1001 points);

Sweep mode: Continuous sweep;

Number of times for averaging: 10 times or more;

Detection mode: Sample (Positive peak for burst wave). Values measured with a spectrum analyzer shall be processed using an external or a built-in computer.



5.3. Test Results

Normal Voltage

Condition	Mode	Frequency (MHz)	99% OBW (MHz)	Limit (MHz)	Verdict
NVNT	a	5180	16.546	≤20	Pass
NVNT	a	5240	16.549	≤20	Pass
NVNT	a	5260	16.585	≤20	Pass
NVNT	a	5320	16.586	≤20	Pass
NVNT	a	5500	16.732	≤20	Pass
NVNT	a	5600	16.8	≤20	Pass
NVNT	a	5720	16.708	≤20	Pass
NVNT	n20	5180	17.732	≤20	Pass
NVNT	n20	5240	17.738	≤20	Pass
NVNT	n20	5260	17.769	≤20	Pass
NVNT	n20	5320	17.767	≤20	Pass
NVNT	n20	5500	17.865	≤20	Pass
NVNT	n20	5600	17.917	≤20	Pass
NVNT	n20	5720	17.878	≤20	Pass
NVNT	n40	5190	36.173	40	Pass
NVNT	n40	5230	36.182	40	Pass
NVNT	n40	5270	36.196	≤40	Pass
NVNT	n40	5310	36.166	≤40	Pass
NVNT	n40	5510	36.332	≤40	Pass
NVNT	n40	5670	36.338	≤40	Pass
NVNT	n40	5710	36.297	≤40	Pass
NVNT	ac20	5180	17.73	≤20	Pass
NVNT	ac20	5240	17.746	≤20	Pass
NVNT	ac20	5260	17.77	≤20	Pass
NVNT	ac20	5320	17.766	≤20	Pass
NVNT	ac20	5500	17.868	≤20	Pass
NVNT	ac20	5600	17.918	≤20	Pass
NVNT	ac20	5720	17.874	≤20	Pass
NVNT	ac40	5190	36.188	≤40	Pass
NVNT	ac40	5230	36.205	≤40	Pass
NVNT	ac40	5270	36.218	≤40	Pass
NVNT	ac40	5310	36.228	≤40	Pass
NVNT	ac40	5510	36.348	≤40	Pass
NVNT	ac40	5670	36.349	≤40	Pass
NVNT	ac40	5710	36.309	≤40	Pass
NVNT	ac80	5210	77.07	≤80	Pass
NVNT	ac80	5290	77.283	≤80	Pass
NVNT	ac80	5530	77.586	≤80	Pass
NVNT	ac80	5610	77.668	≤80	Pass
NVNT	ac80	5690	77.445	≤80	Pass
NVNT	ax20	5180	18.991	≤20	Pass
NVNT	ax20	5240	19.003	≤20	Pass
NVNT	ax20	5260	19.034	≤20	Pass
NVNT	ax20	5320	19.011	≤20	Pass
NVNT	ax20	5500	19.146	≤20	Pass
NVNT	ax20	5600	19.13	≤20	Pass
NVNT	ax20	5720	19.131	≤20	Pass
NVNT	ax40	5190	37.797	≤40	Pass
NVNT	ax40	5230	37.769	≤40	Pass
NVNT	ax40	5270	37.802	≤40	Pass
NVNT	ax40	5310	37.79	≤40	Pass
NVNT	ax40	5510	37.947	≤40	Pass
NVNT	ax40	5670	37.965	≤40	Pass
NVNT	ax40	5710	37.946	≤40	Pass
NVNT	ax80	5210	77.08	≤80	Pass
NVNT	ax80	5290	77.205	≤80	Pass
NVNT	ax80	5530	77.618	≤80	Pass
NVNT	ax80	5610	77.585	≤80	Pass
NVNT	ax80	5690	77.527	≤80	Pass



Test Graphs

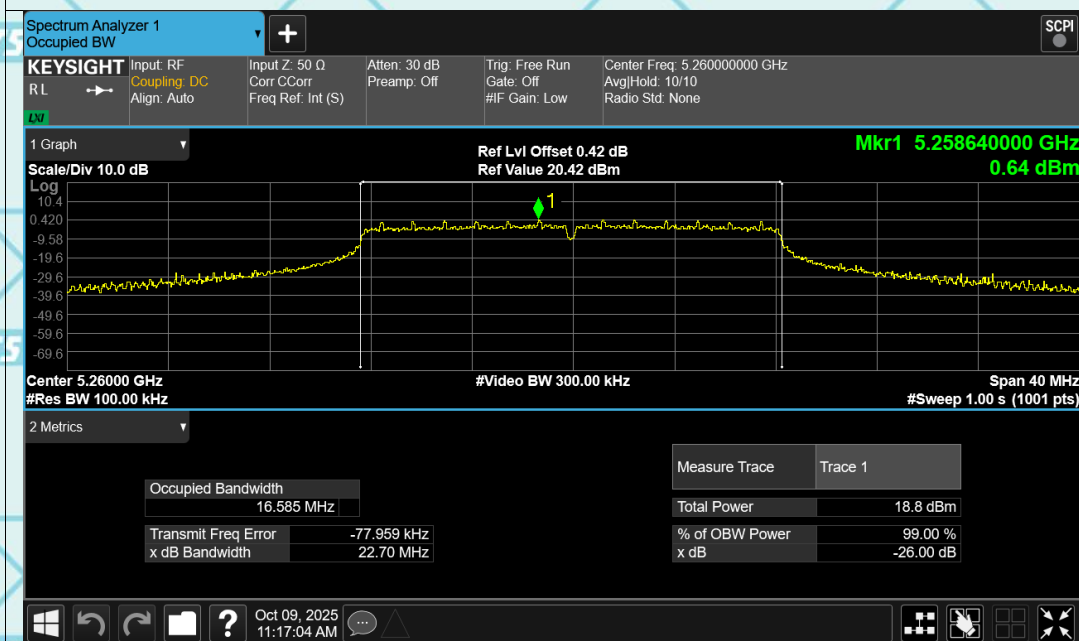
OBW NVNT a 5180MHz Ant1



OBW NVNT a 5240MHz Ant1



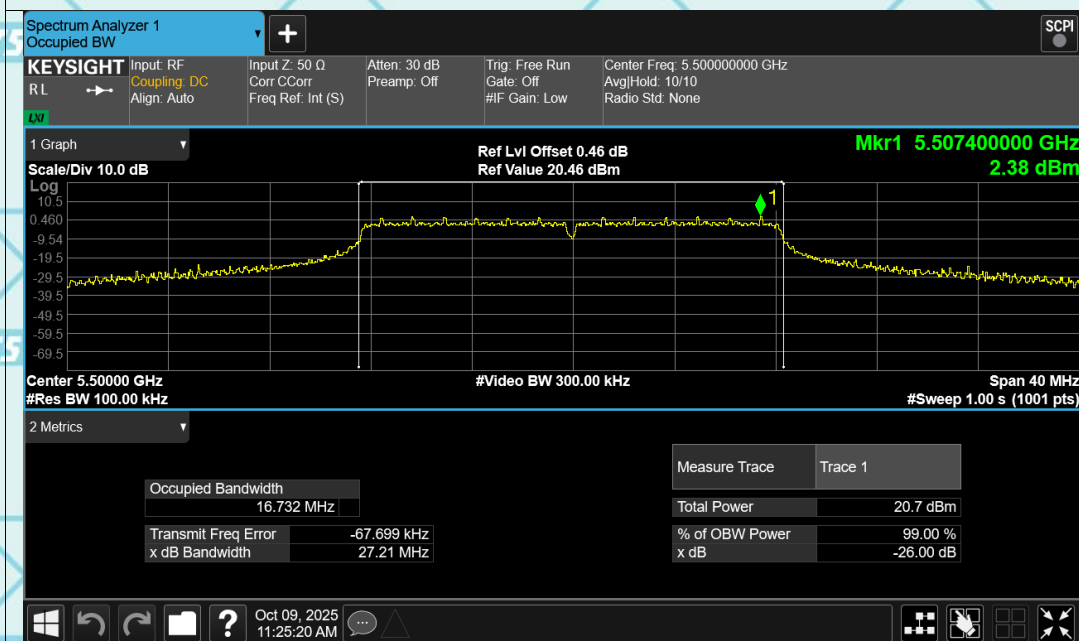
OBW NVNT a 5260MHz Ant1



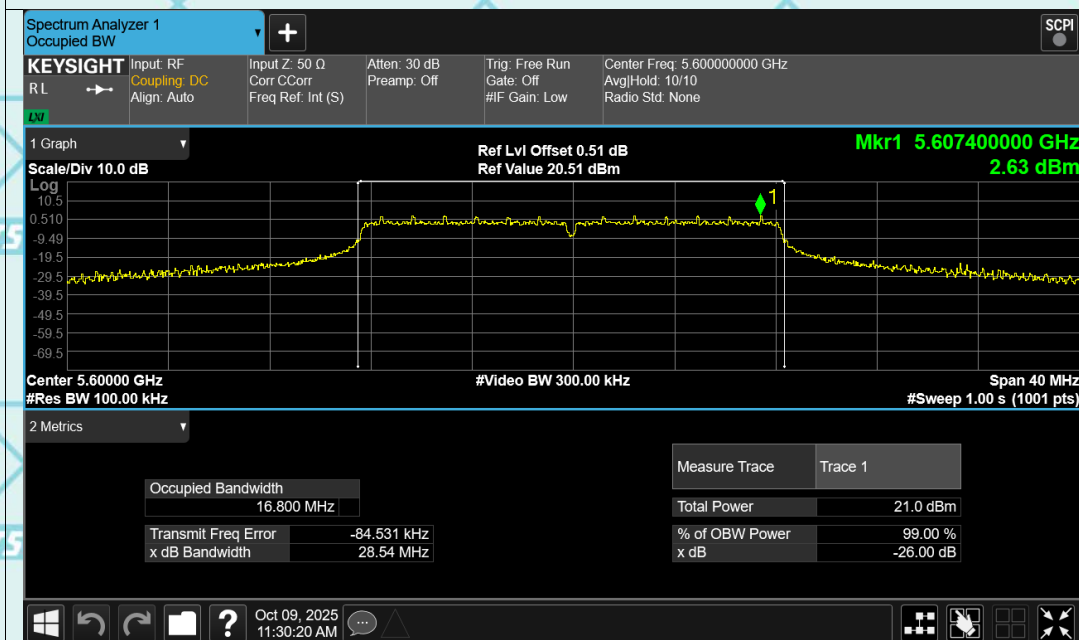
OBW NVNT a 5320MHz Ant1



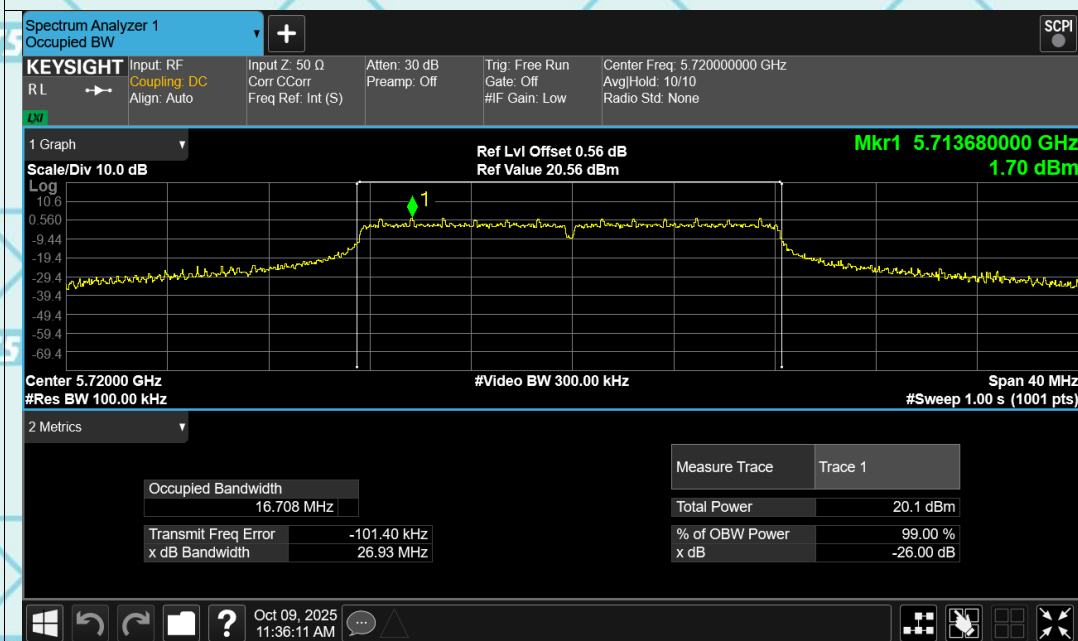
OBW NVNT a 5500MHz Ant1



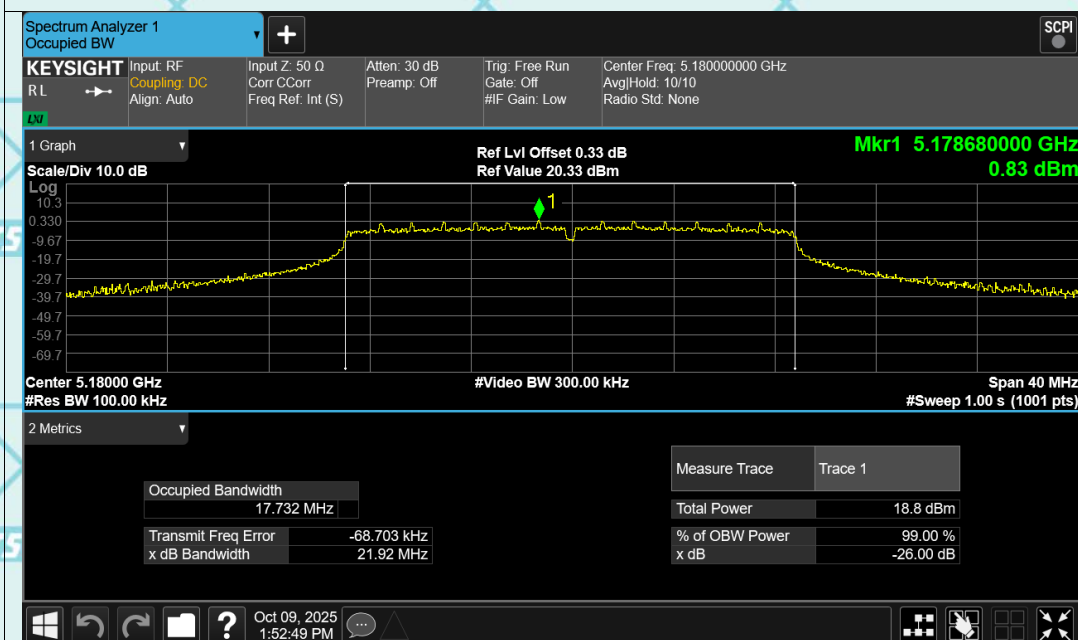
OBW NVNT a 5600MHz Ant1



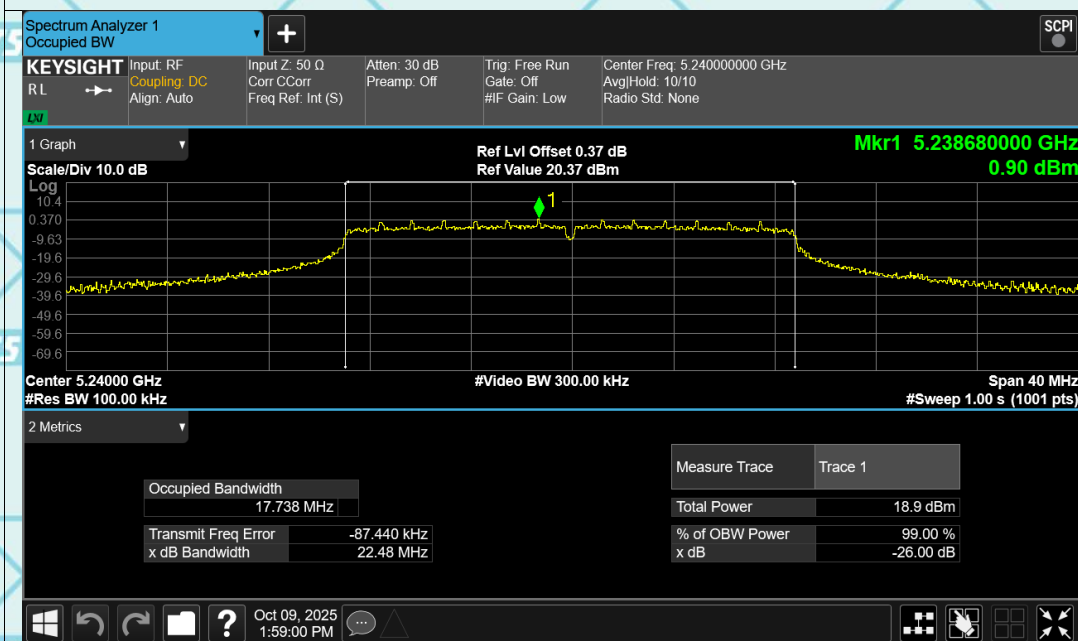
OBW NVNT a 5720MHz Ant1



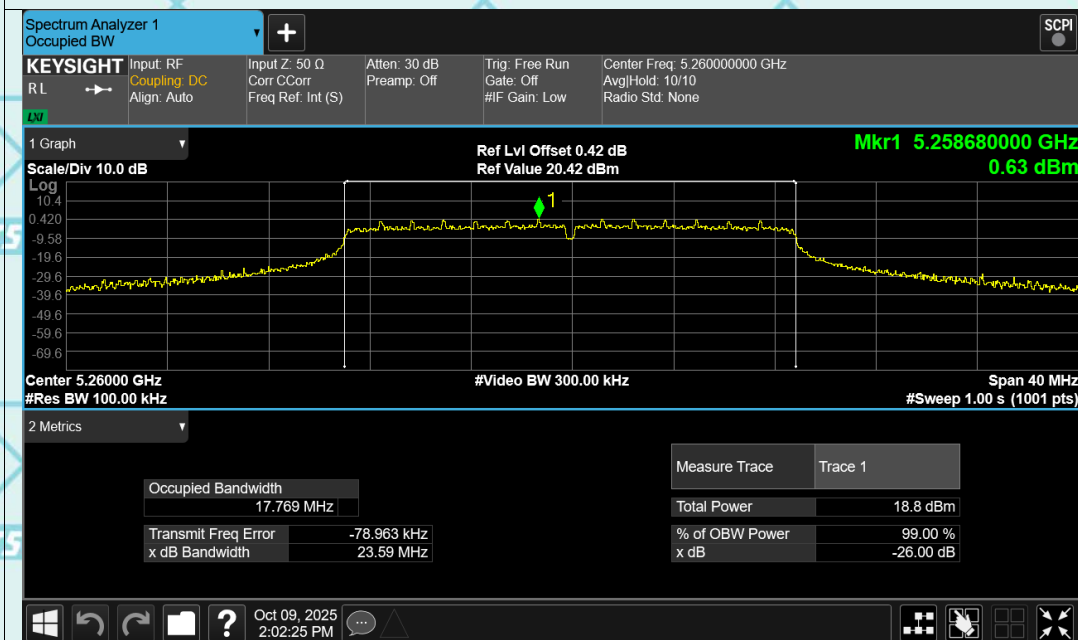
OBW NVNT n20 5180MHz Ant1



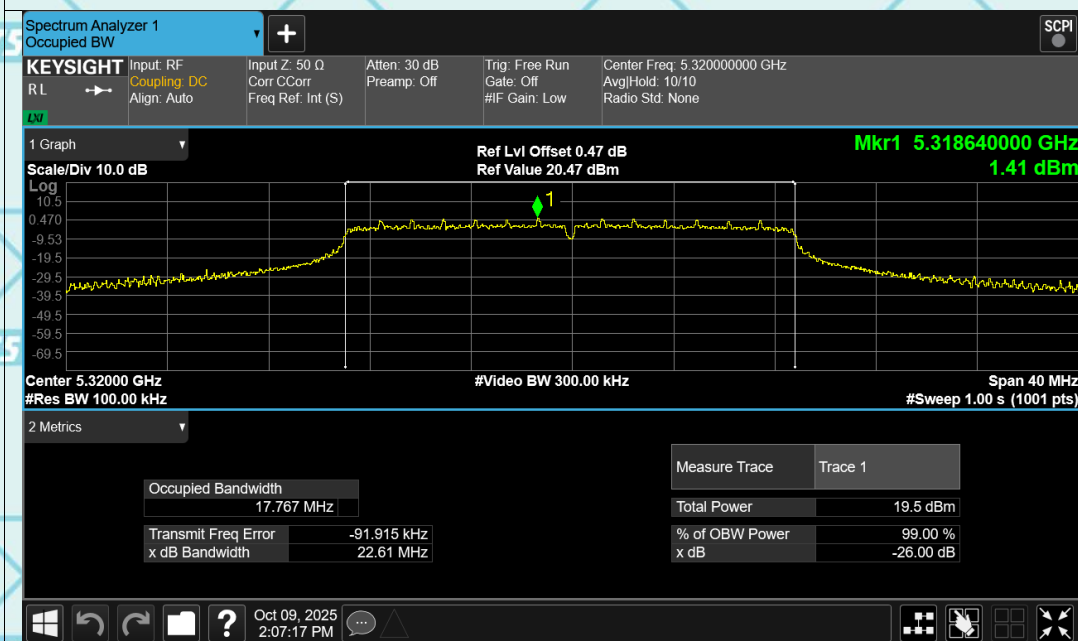
OBW NVNT n20 5240MHz Ant1



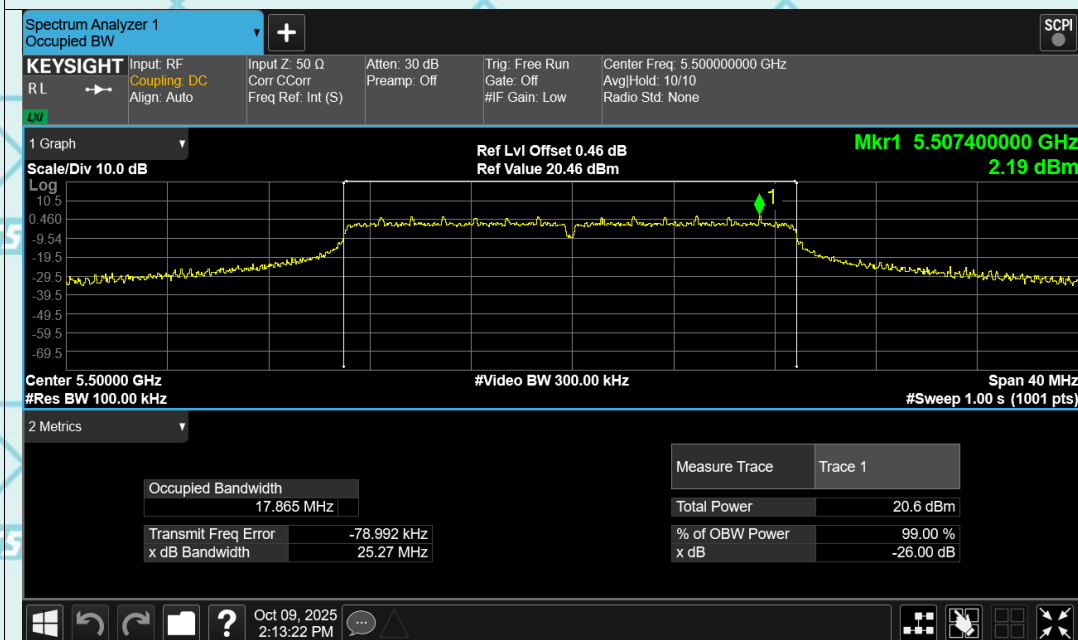
OBW NVNT n20 5260MHz Ant1



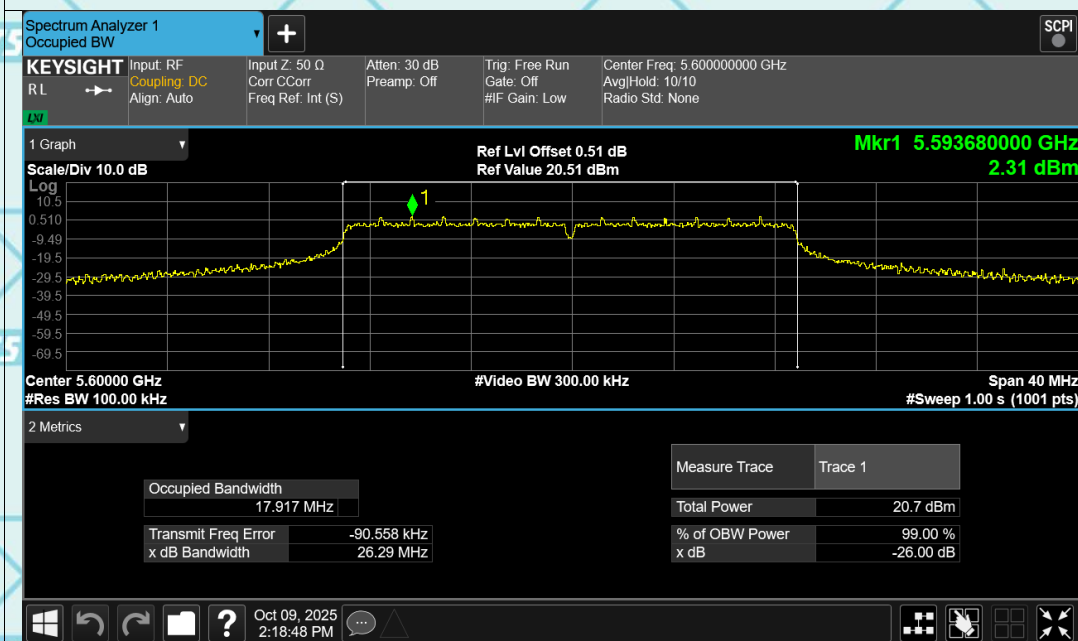
OBW NVNT n20 5320MHz Ant1



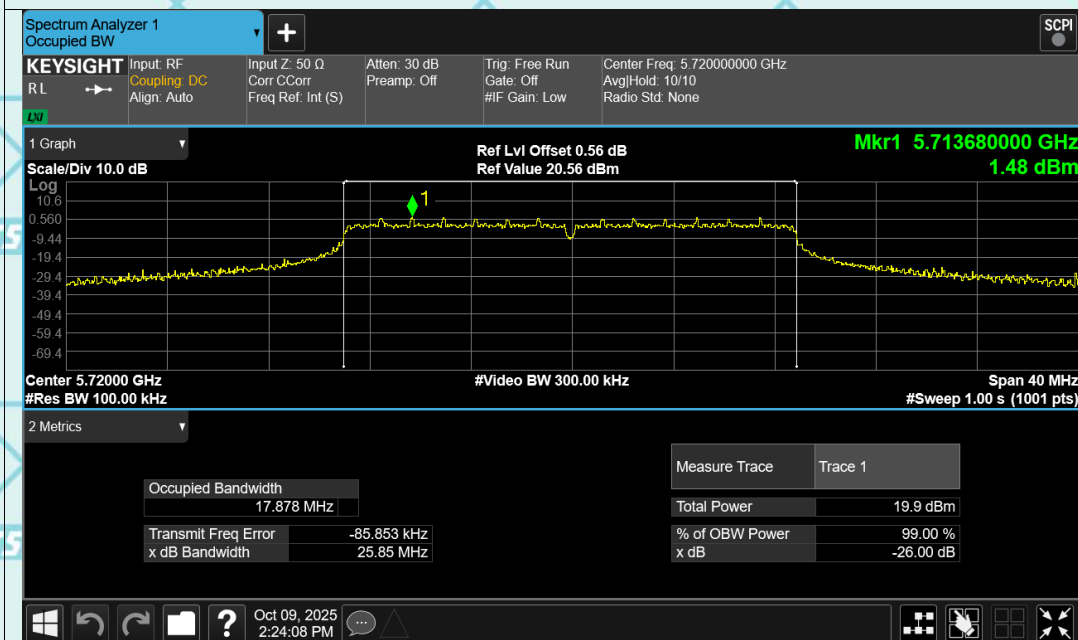
OBW NVNT n20 5500MHz Ant1



OBW NVNT n20 5600MHz Ant1



OBW NVNT n20 5720MHz Ant1



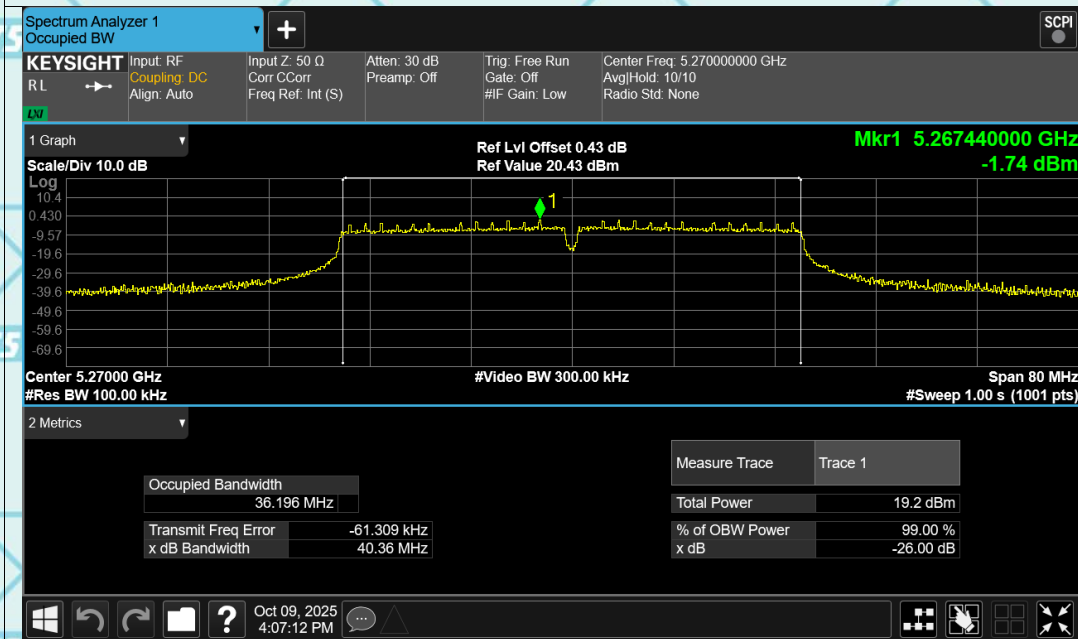
OBW NVNT n40 5190MHz Ant1



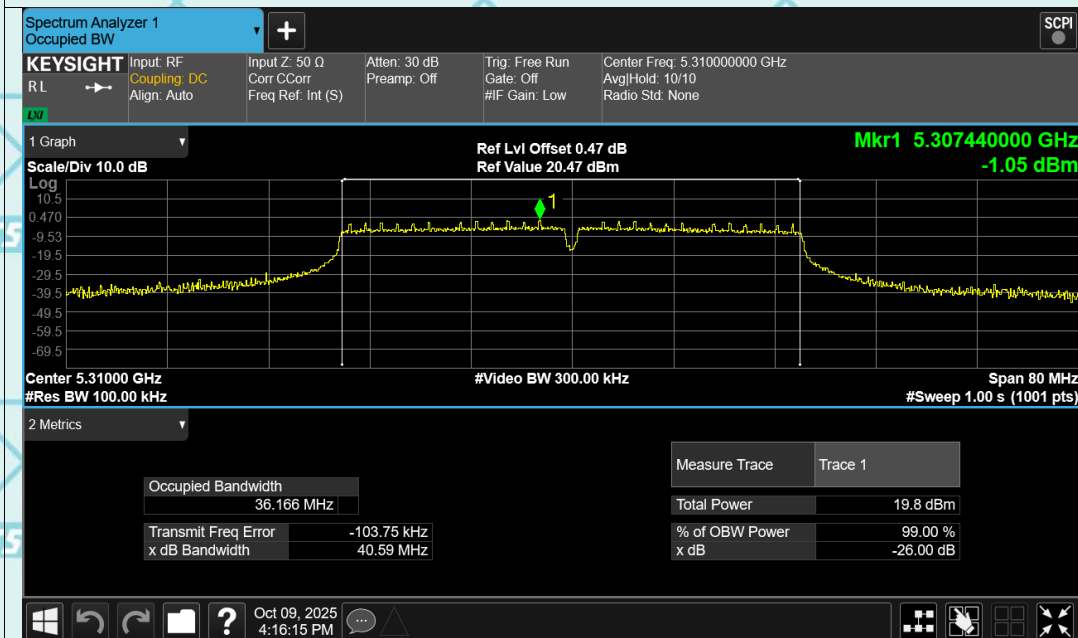
OBW NVNT n40 5230MHz Ant1



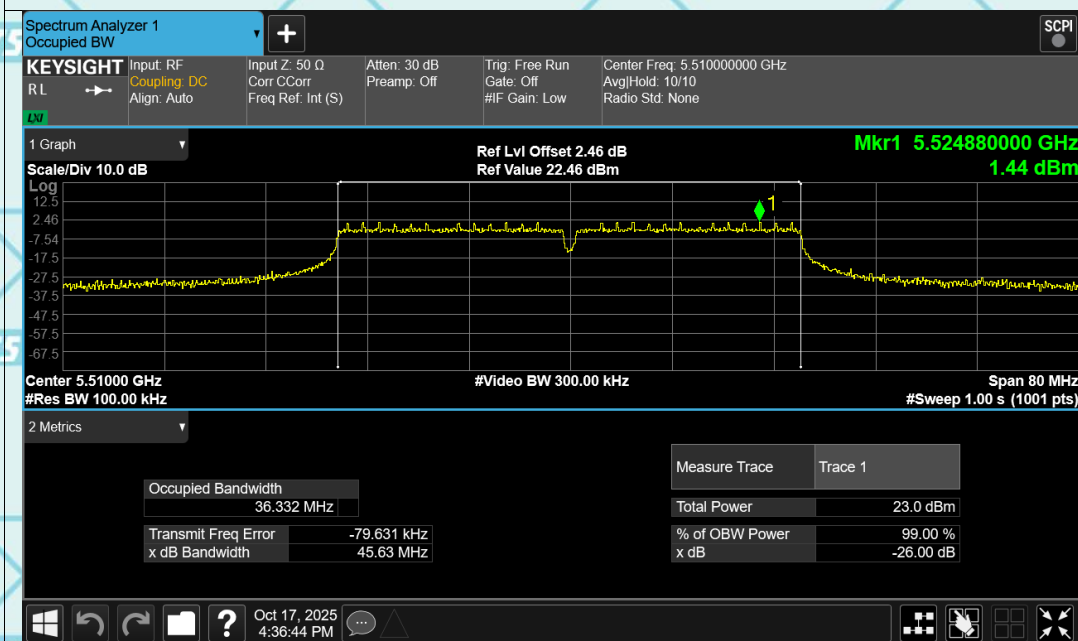
OBW NVNT n40 5270MHz Ant1



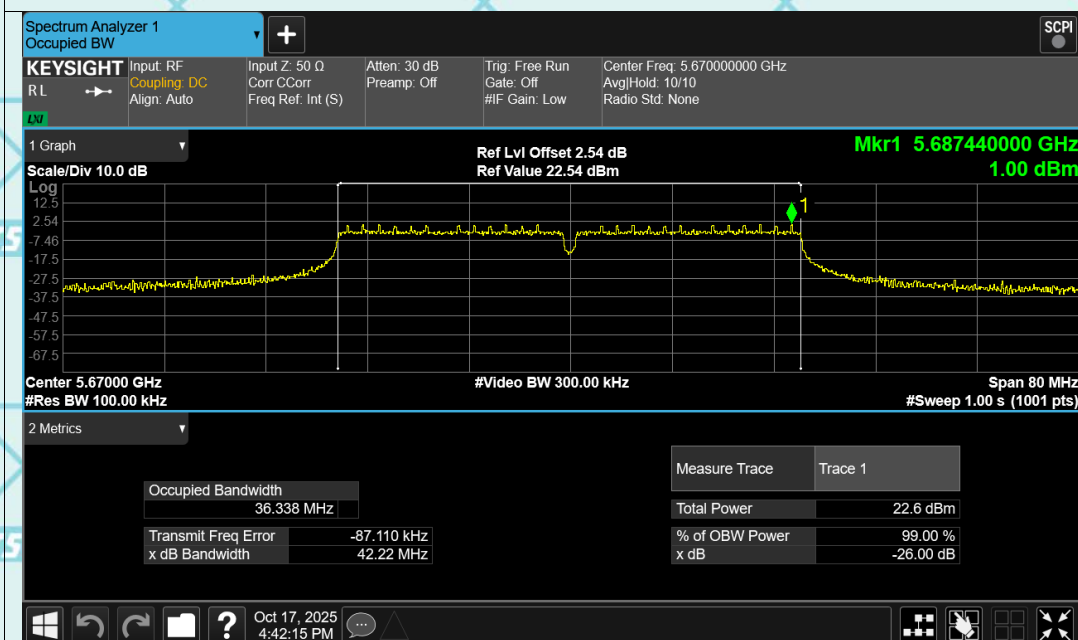
OBW NVNT n40 5310MHz Ant1



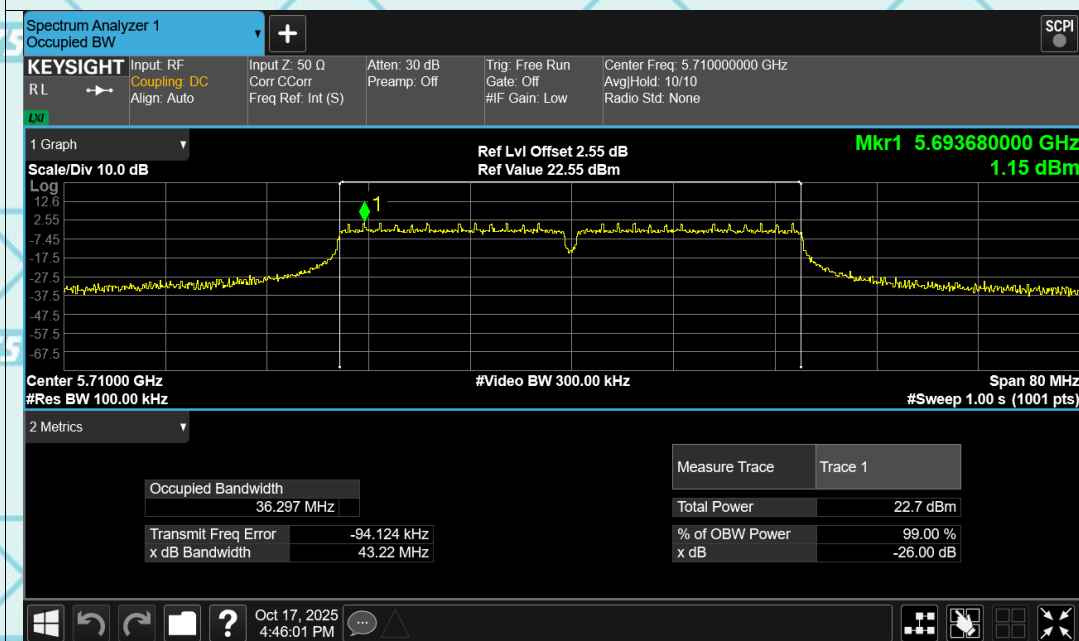
OBW NVNT n40 5510MHz Ant1



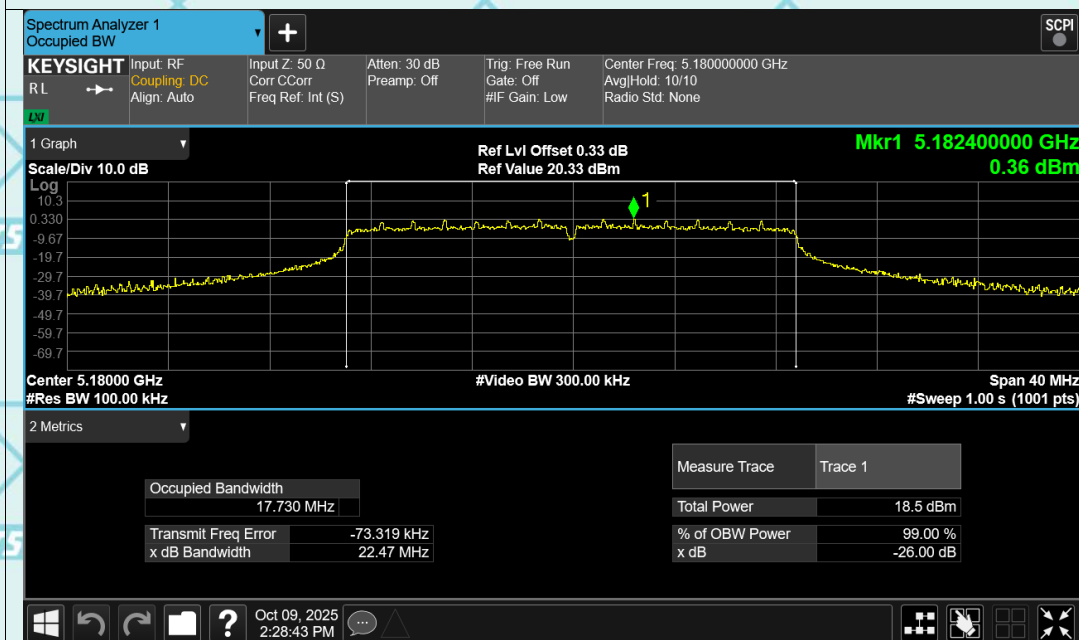
OBW NVNT n40 5670MHz Ant1



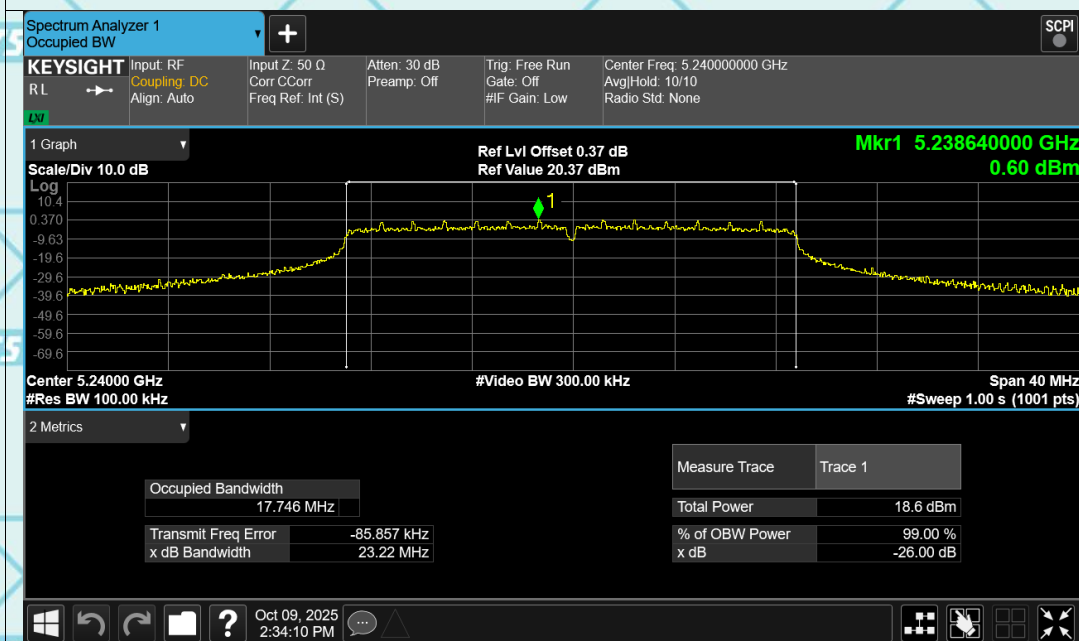
OBW NVNT n40 5710MHz Ant1



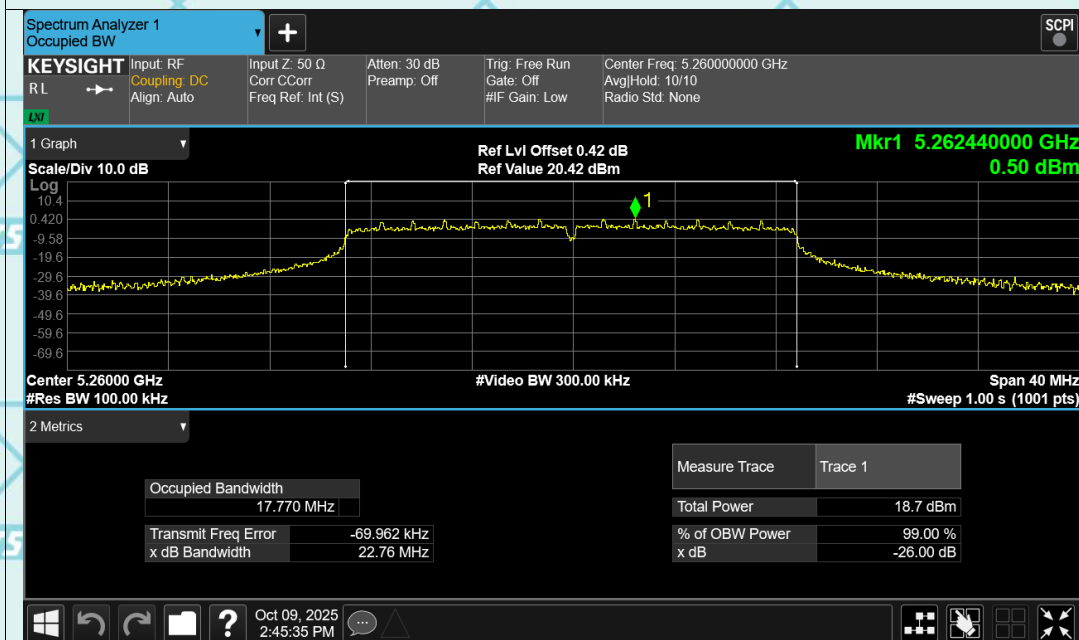
OBW NVNT ac20 5180MHz Ant1



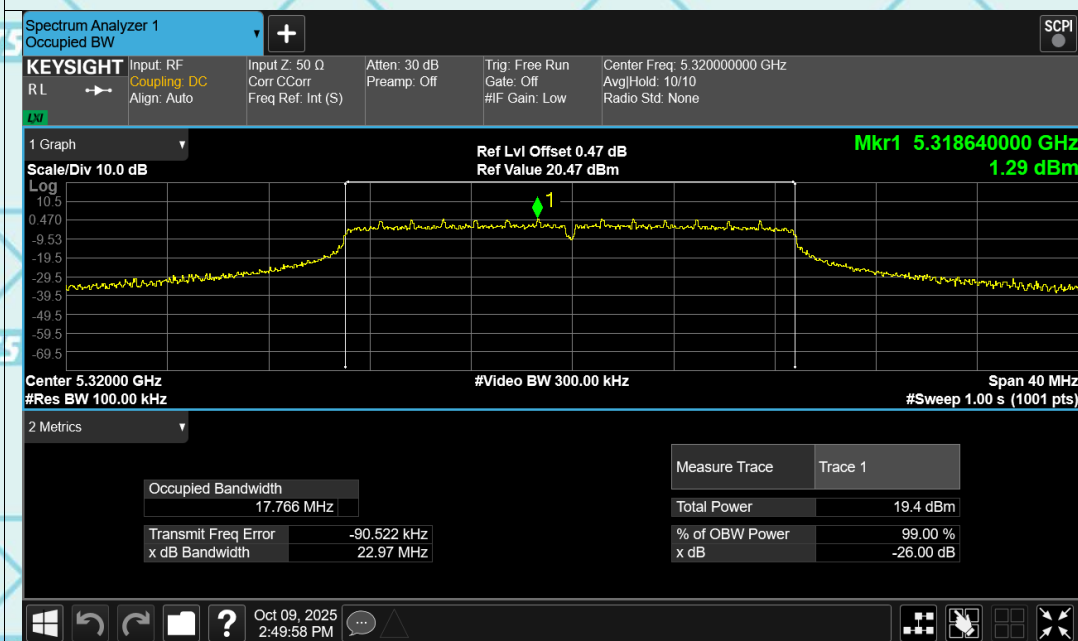
OBW NVNT ac20 5240MHz Ant1



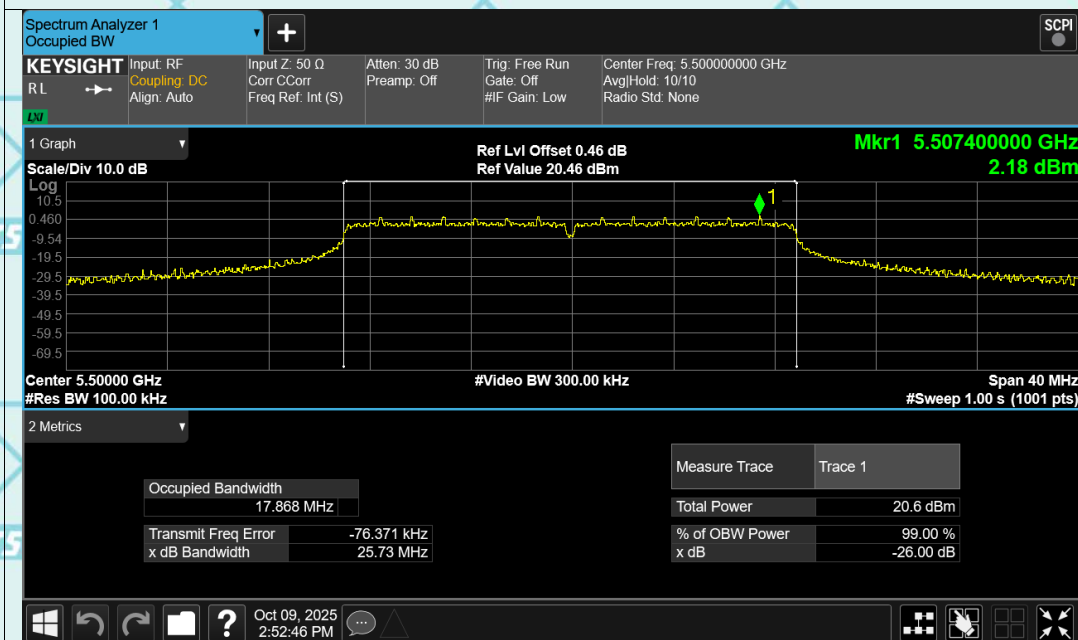
OBW NVNT ac20 5260MHz Ant1



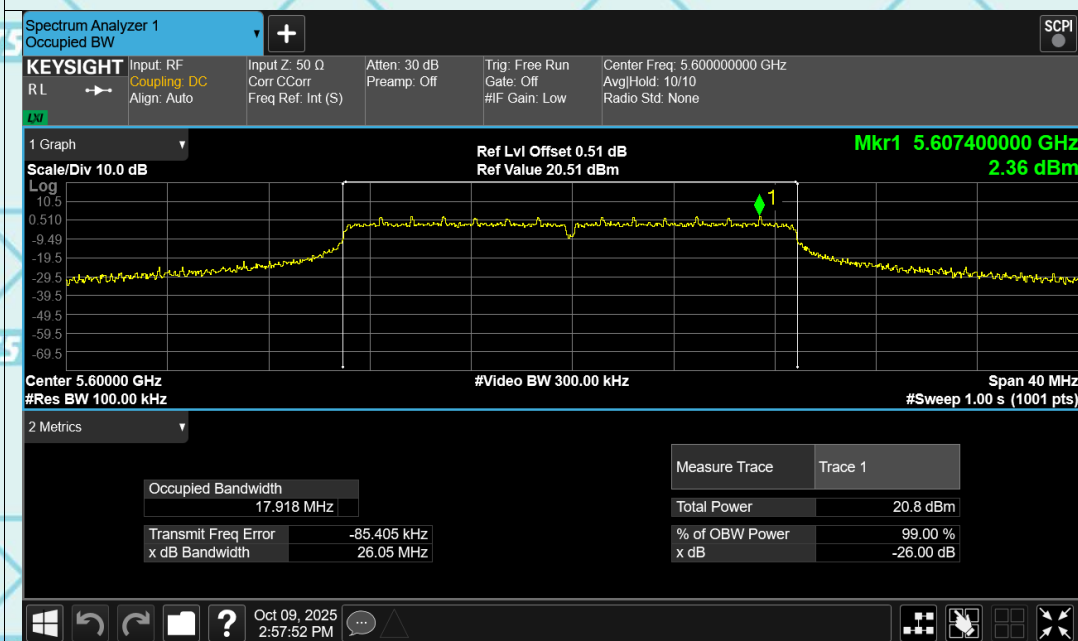
OBW NVNT ac20 5320MHz Ant1



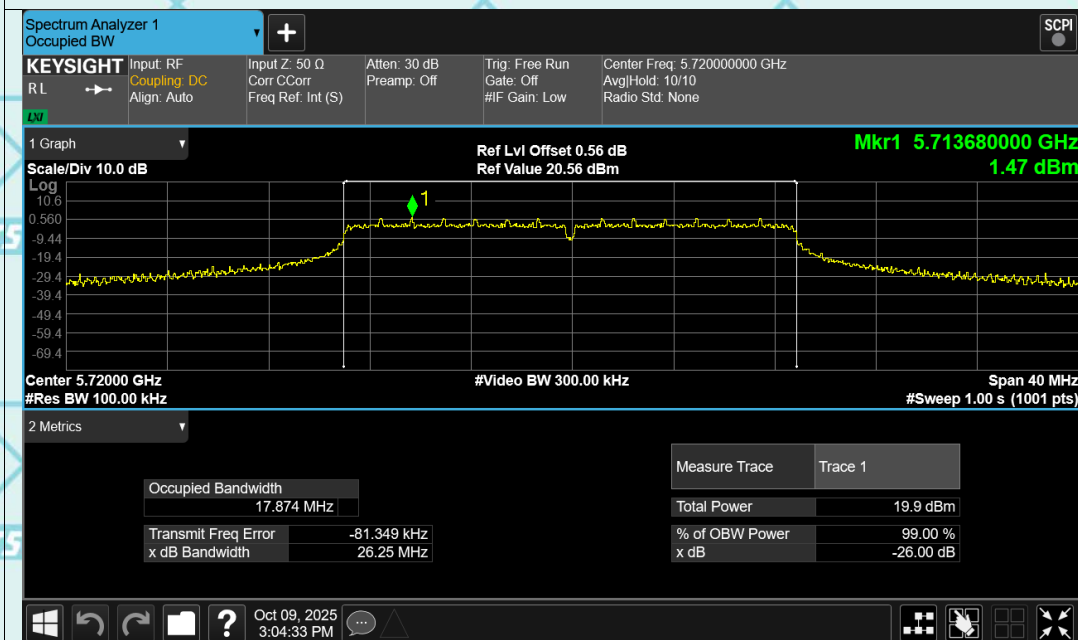
OBW NVNT ac20 5500MHz Ant1



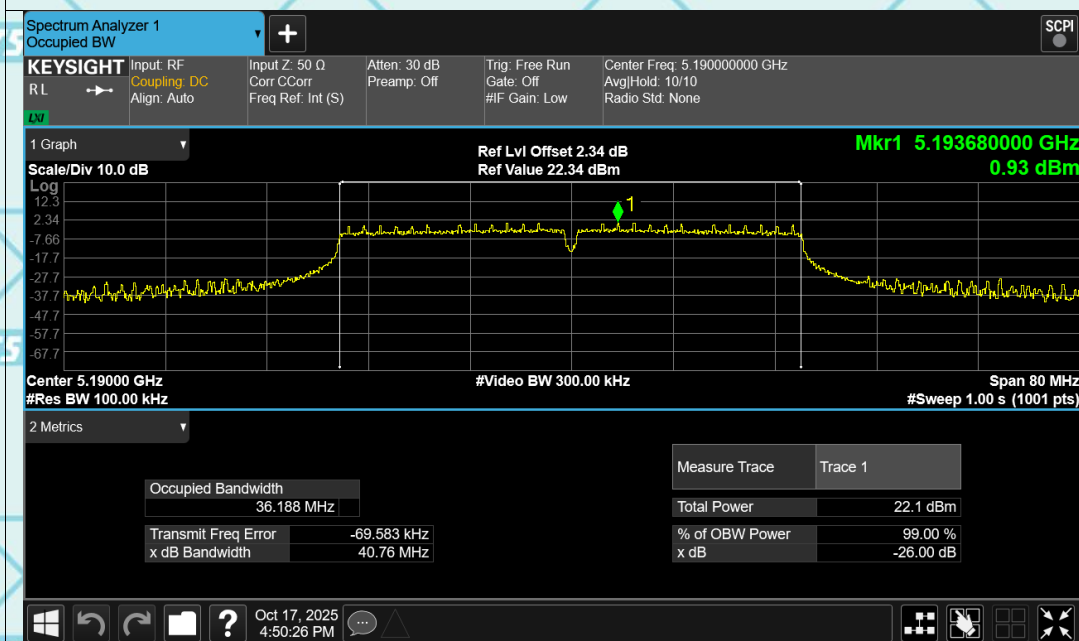
OBW NVNT ac20 5600MHz Ant1



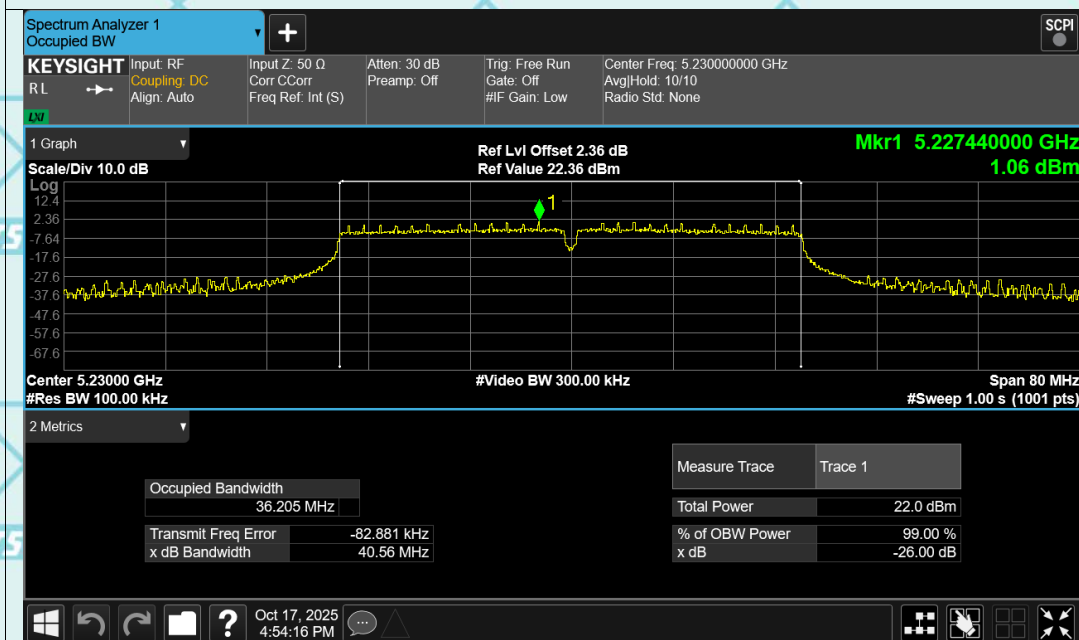
OBW NVNT ac20 5720MHz Ant1



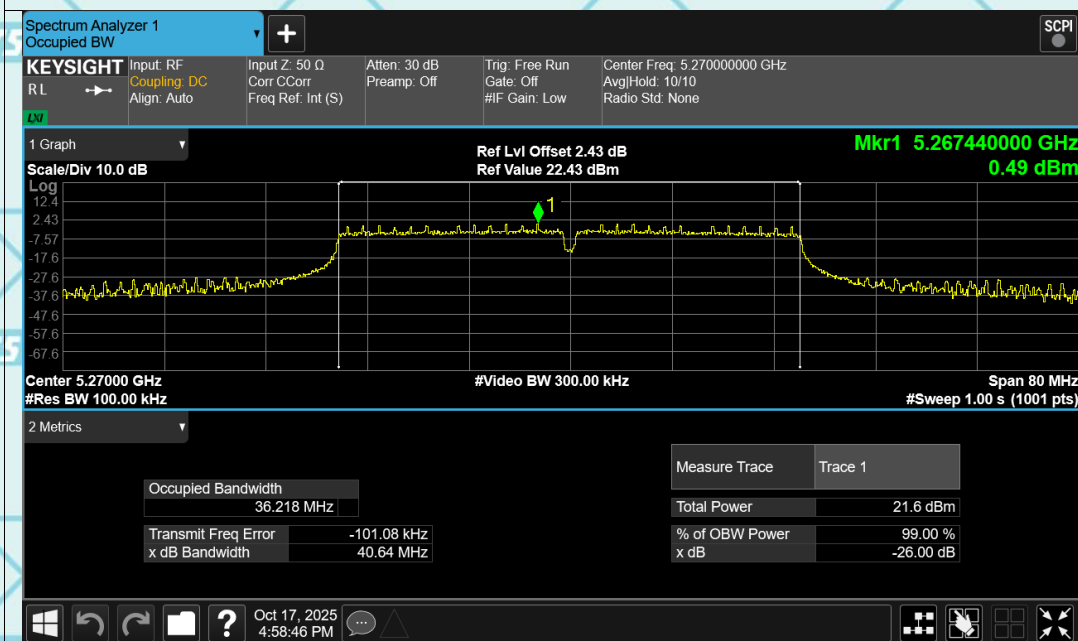
OBW NVNT ac40 5190MHz Ant1



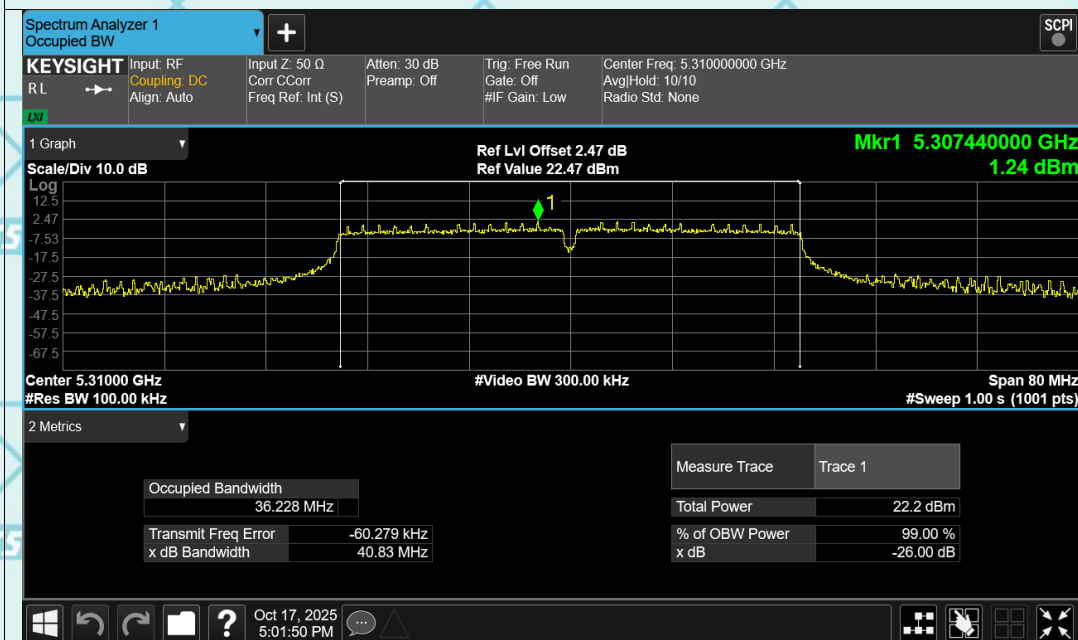
OBW NVNT ac40 5230MHz Ant1



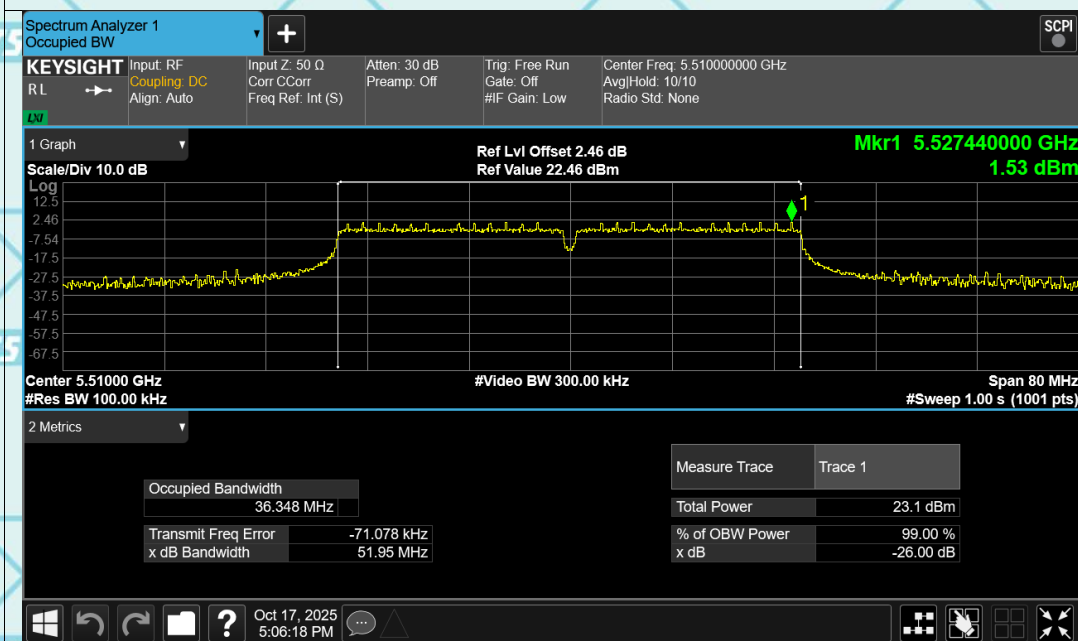
OBW NVNT ac40 5270MHz Ant1



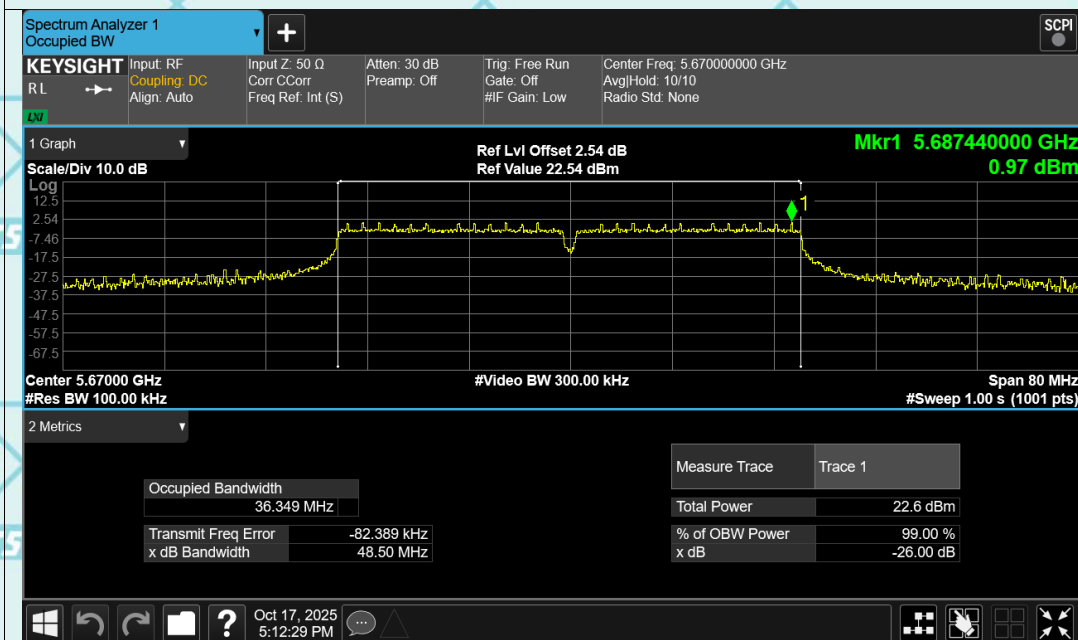
OBW NVNT ac40 5310MHz Ant1



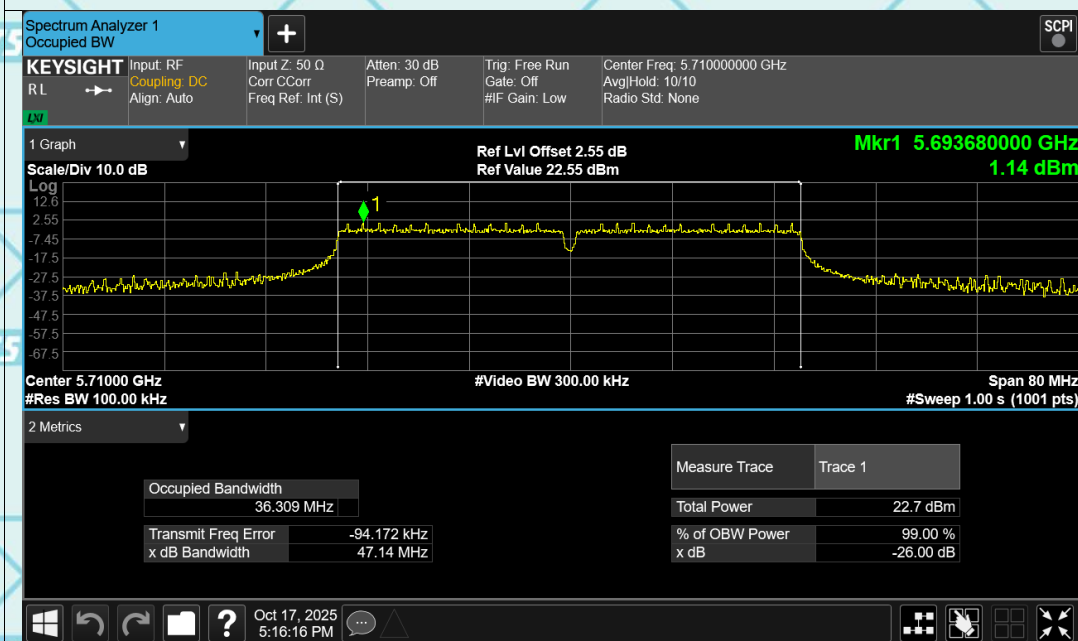
OBW NVNT ac40 5510MHz Ant1



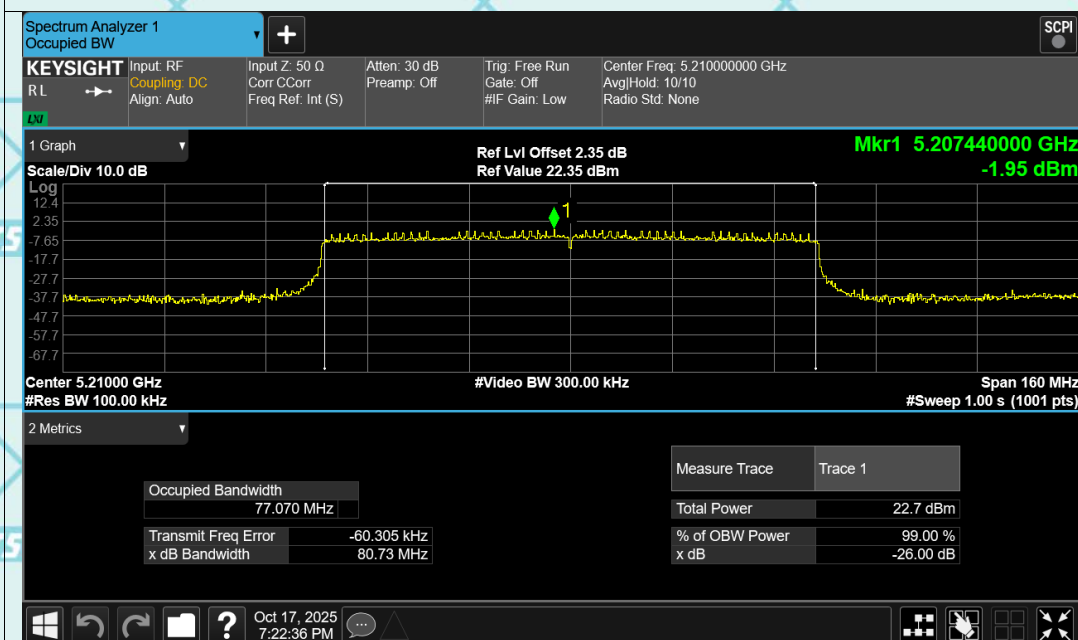
OBW NVNT ac40 5670MHz Ant1



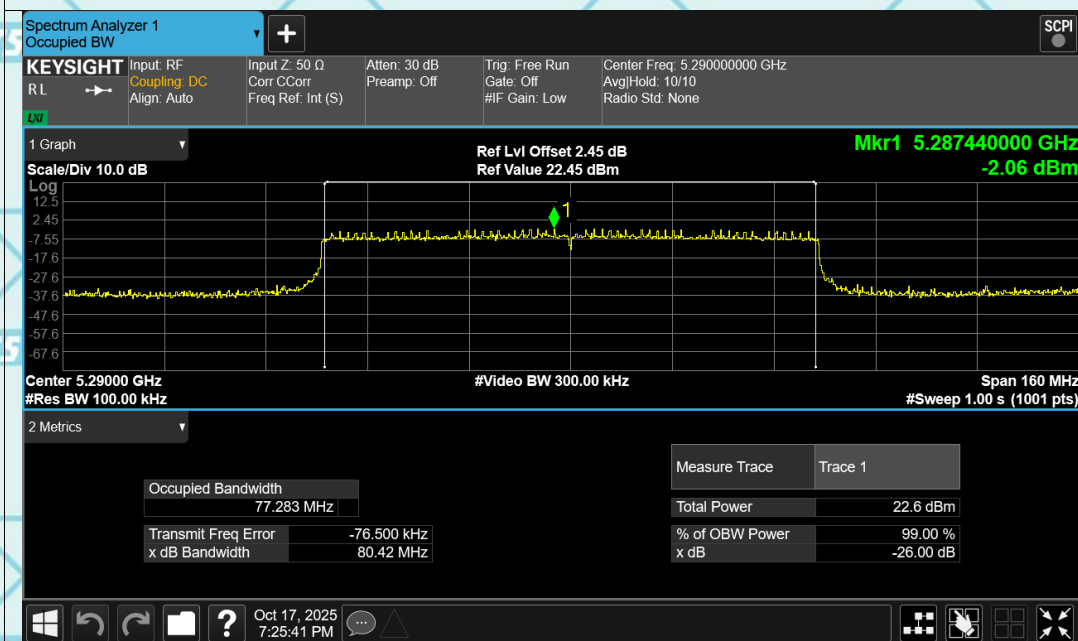
OBW NVNT ac40 5710MHz Ant1



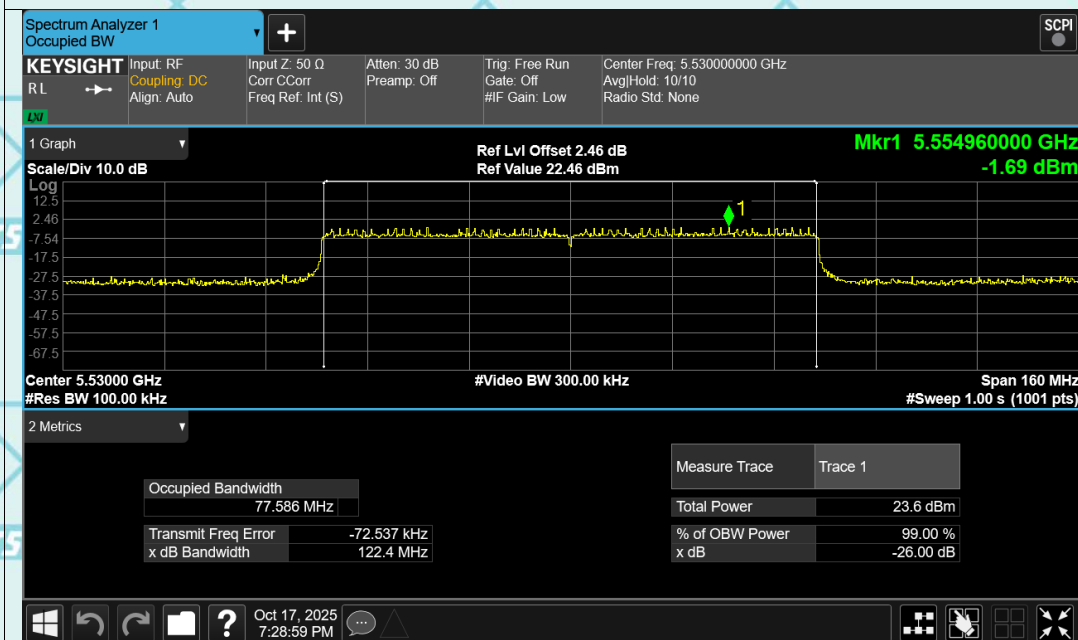
OBW NVNT ac80 5210MHz Ant1



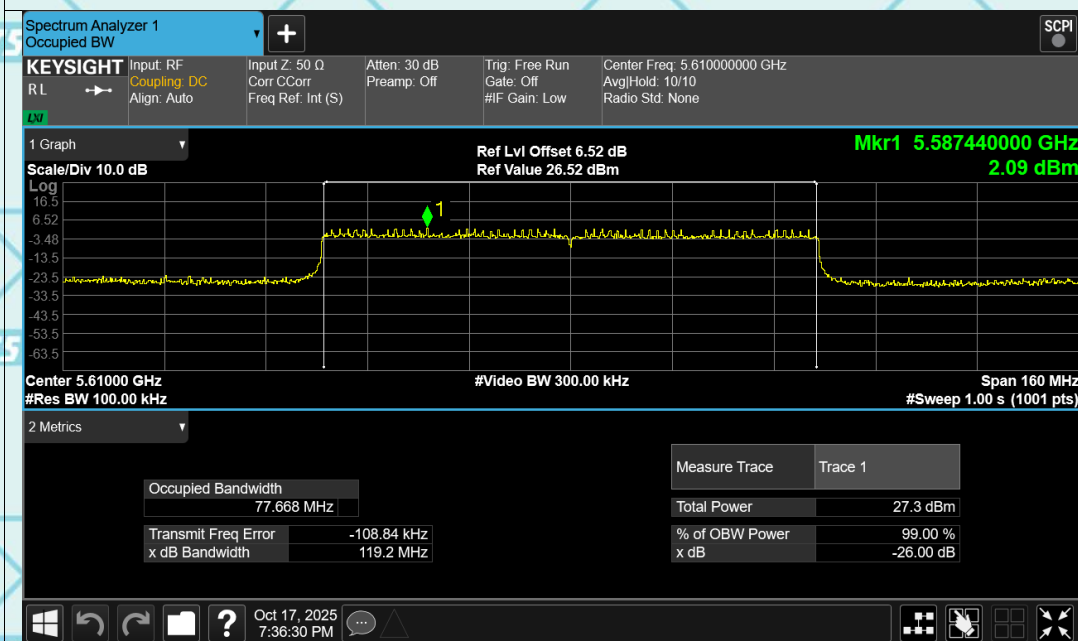
OBW NVNT ac80 5290MHz Ant1



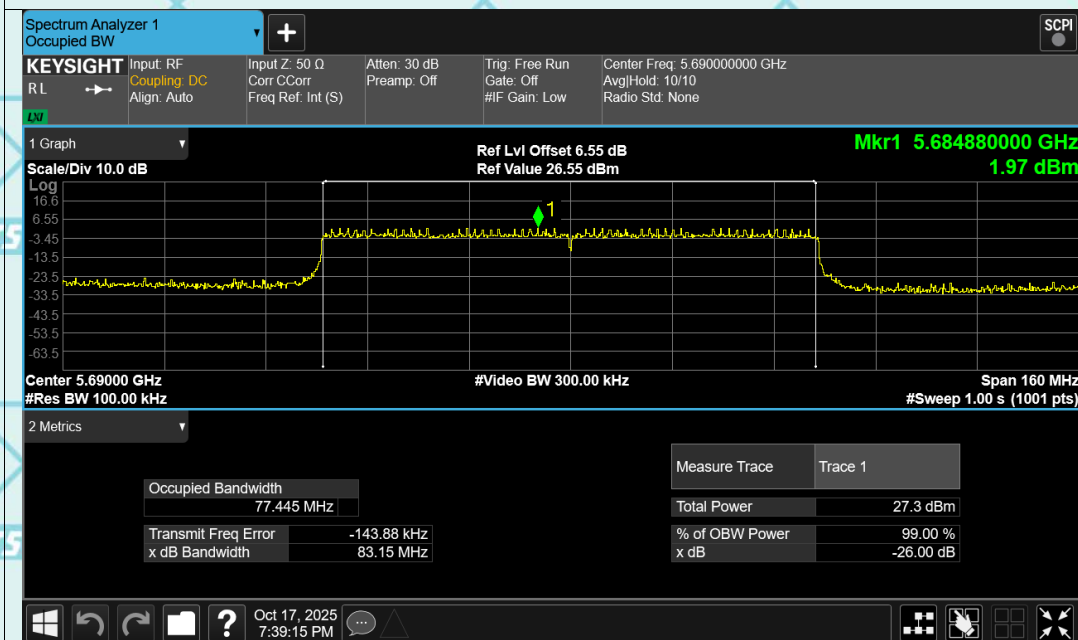
OBW NVNT ac80 5530MHz Ant1



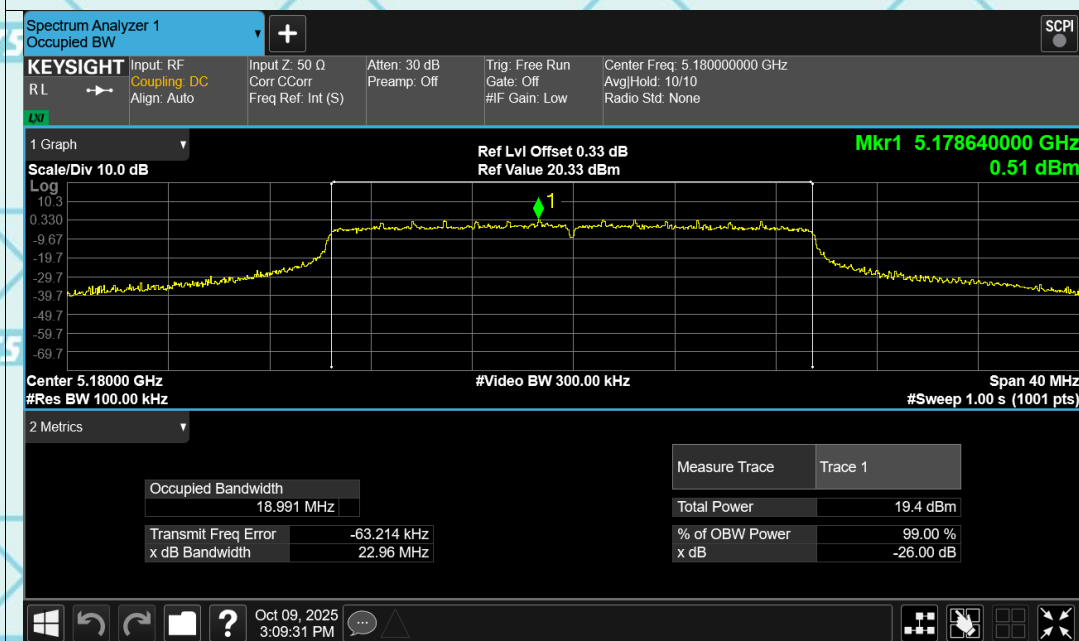
OBW NVNT ac80 5610MHz Ant1



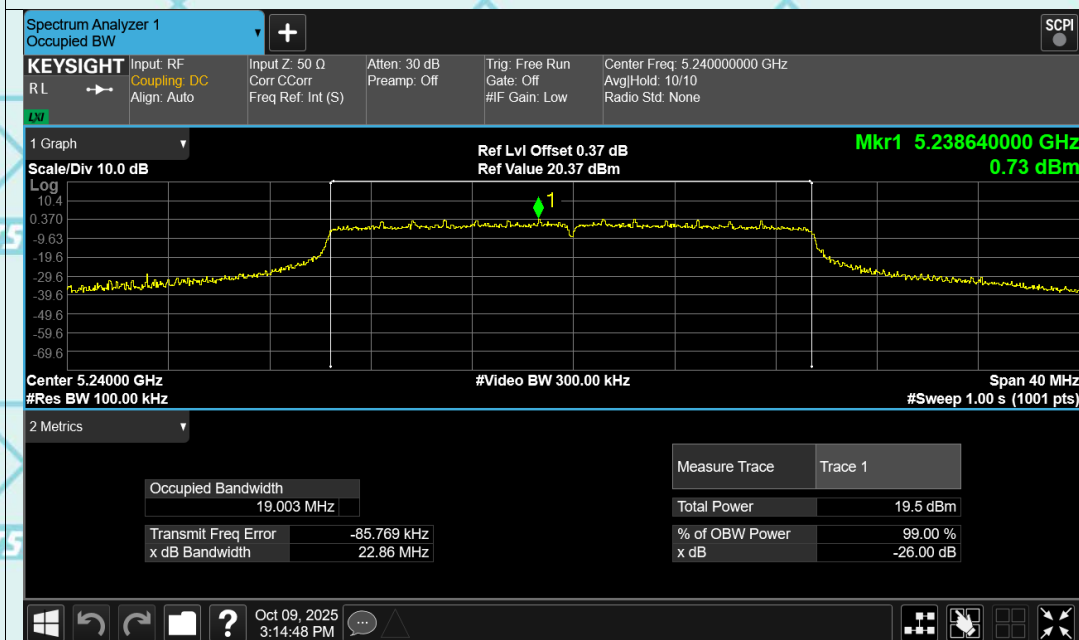
OBW NVNT ac80 5690MHz Ant1



OBW NVNT ax20 5180MHz Ant1



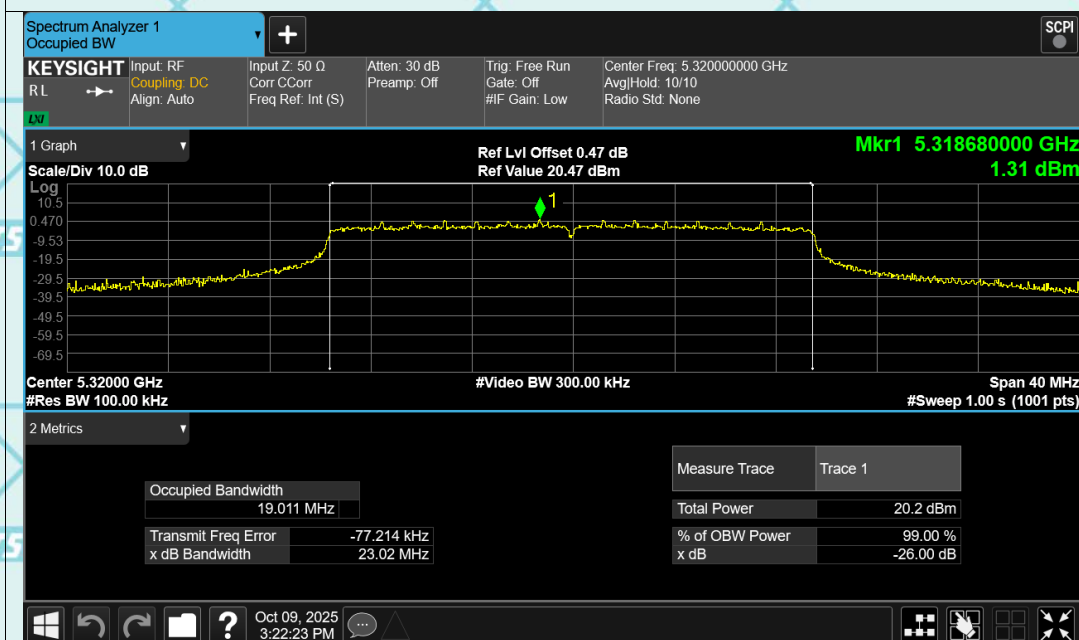
OBW NVNT ax20 5240MHz Ant1



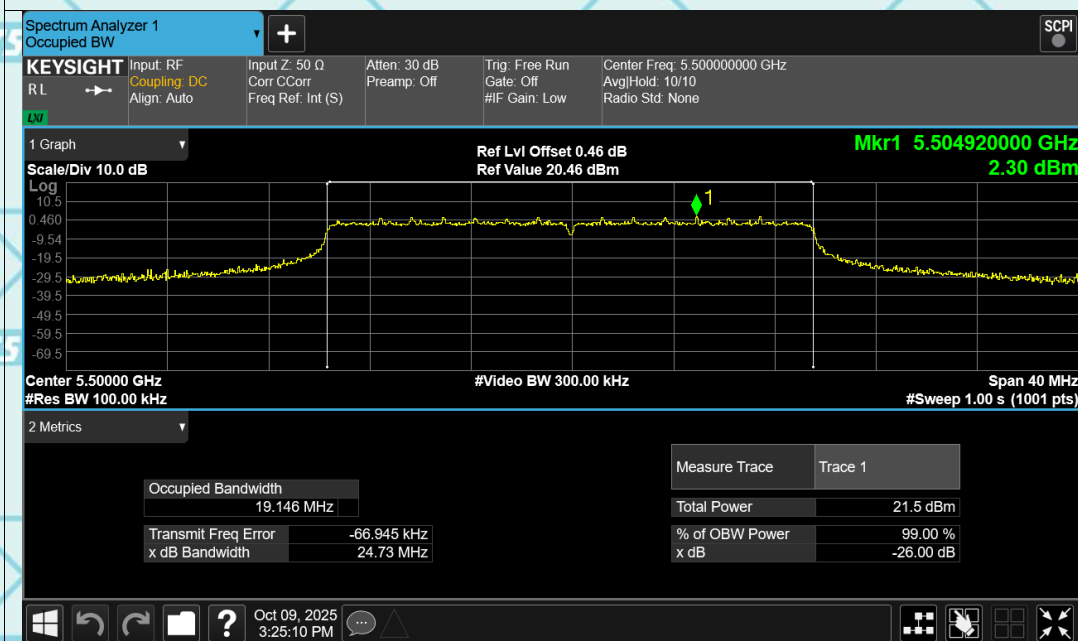
OBW NVNT ax20 5260MHz Ant1



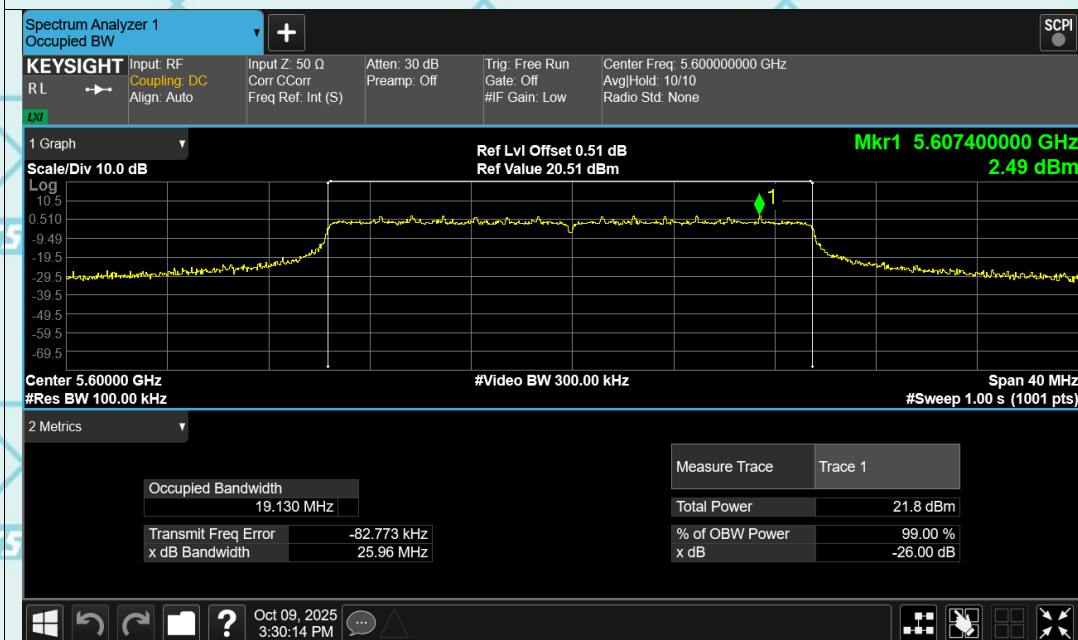
OBW NVNT ax20 5320MHz Ant1



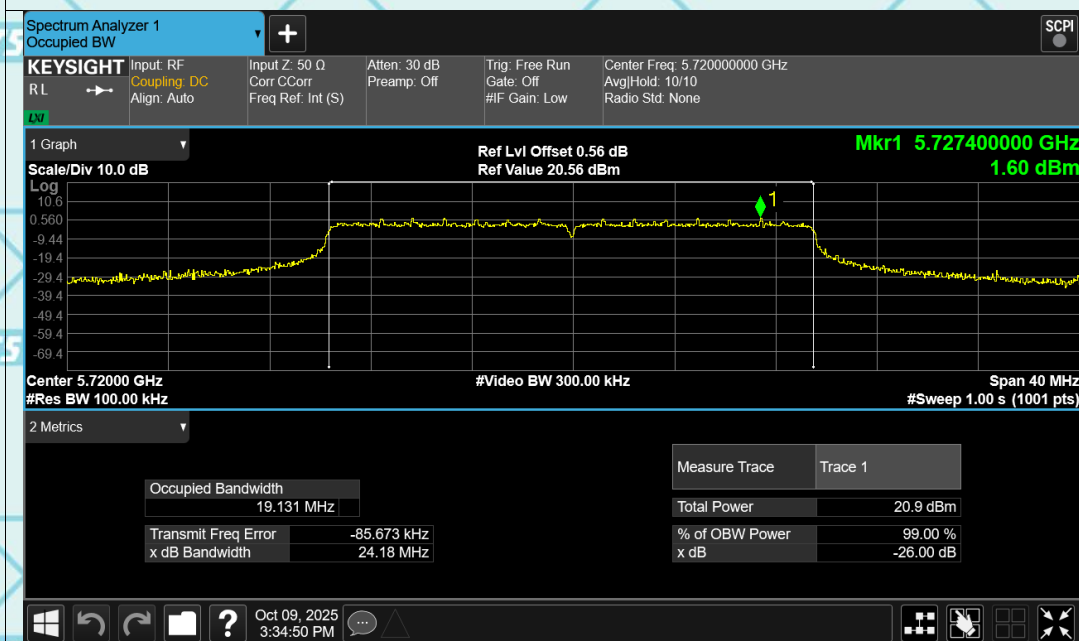
OBW NVNT ax20 5500MHz Ant1



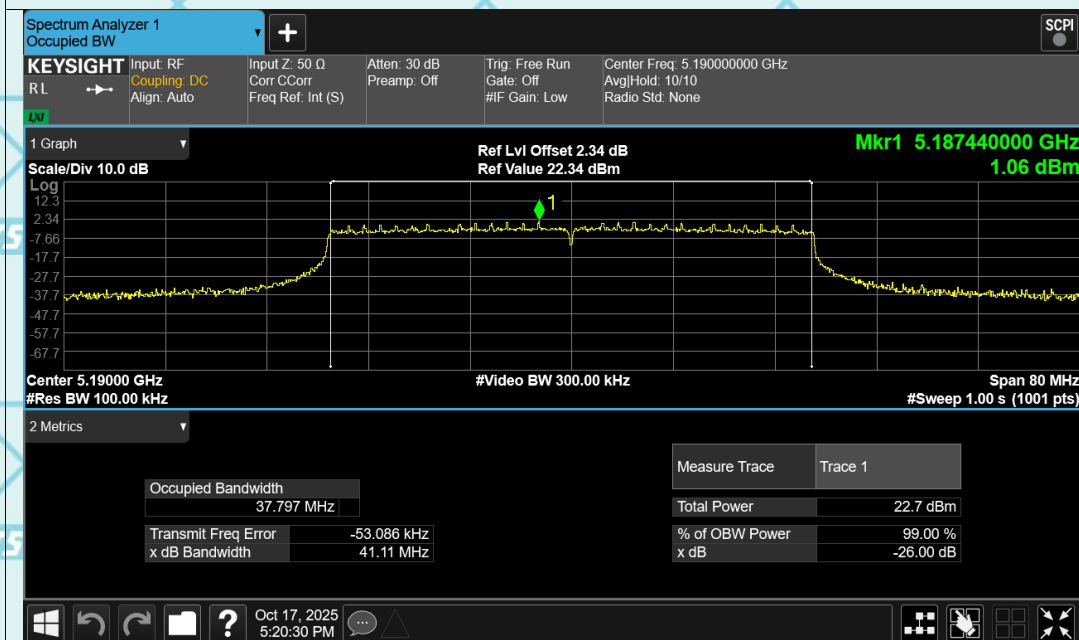
OBW NVNT ax20 5600MHz Ant1



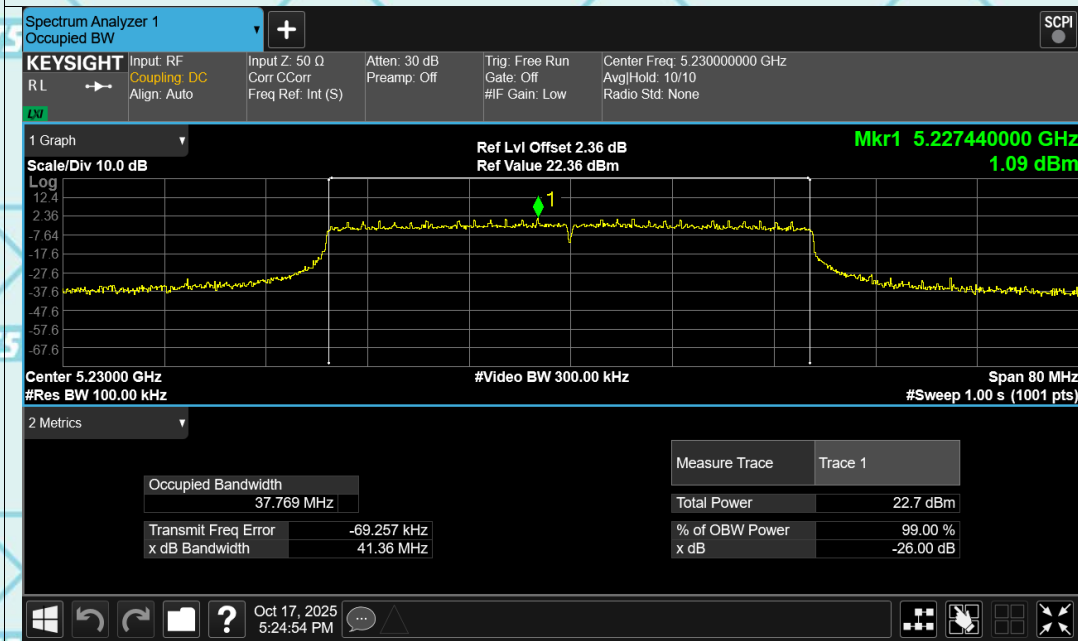
OBW NVNT ax20 5720MHz Ant1



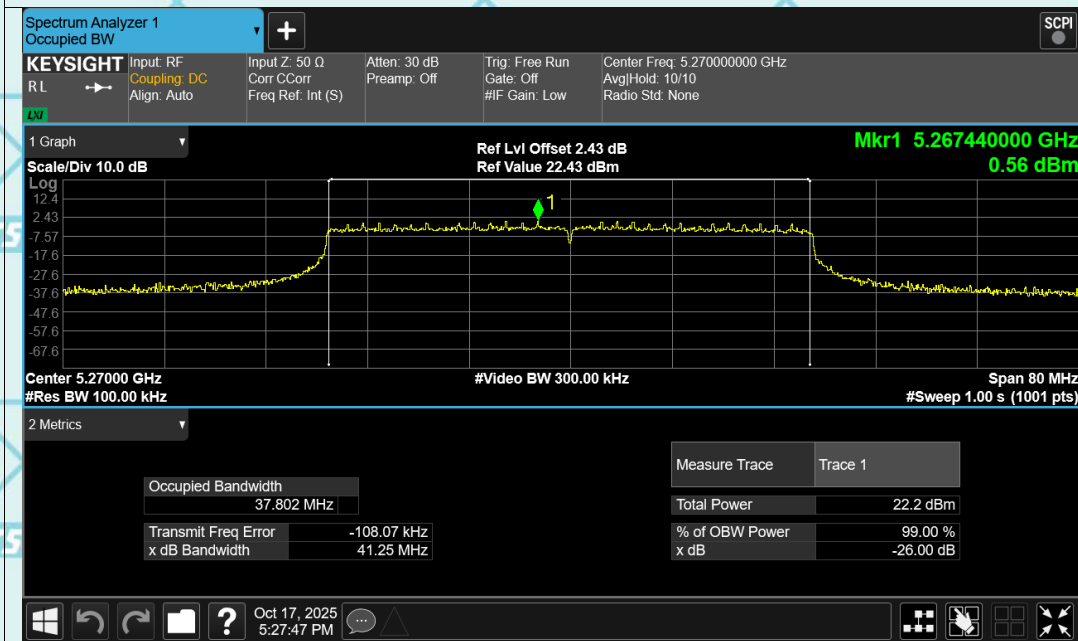
OBW NVNT ax40 5190MHz Ant1



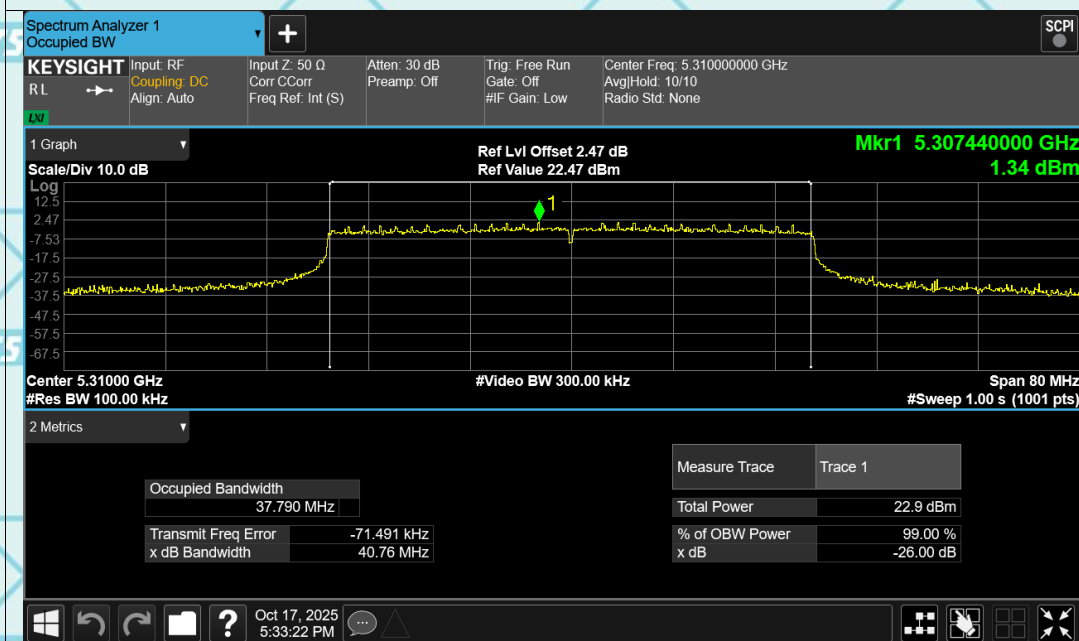
OBW NVNT ax40 5230MHz Ant1



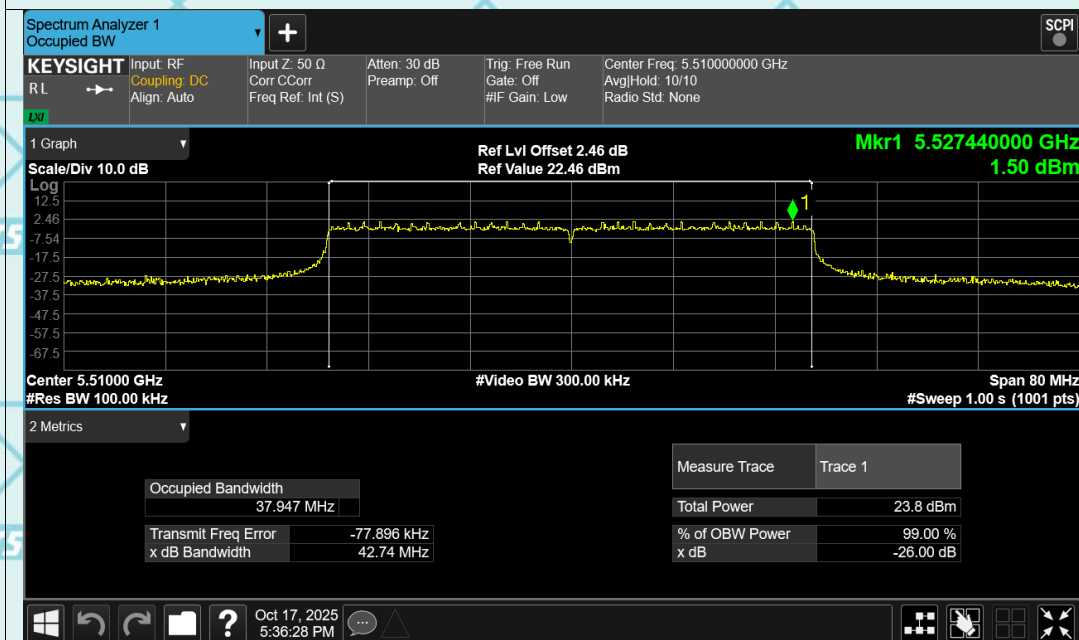
OBW NVNT ax40 5270MHz Ant1



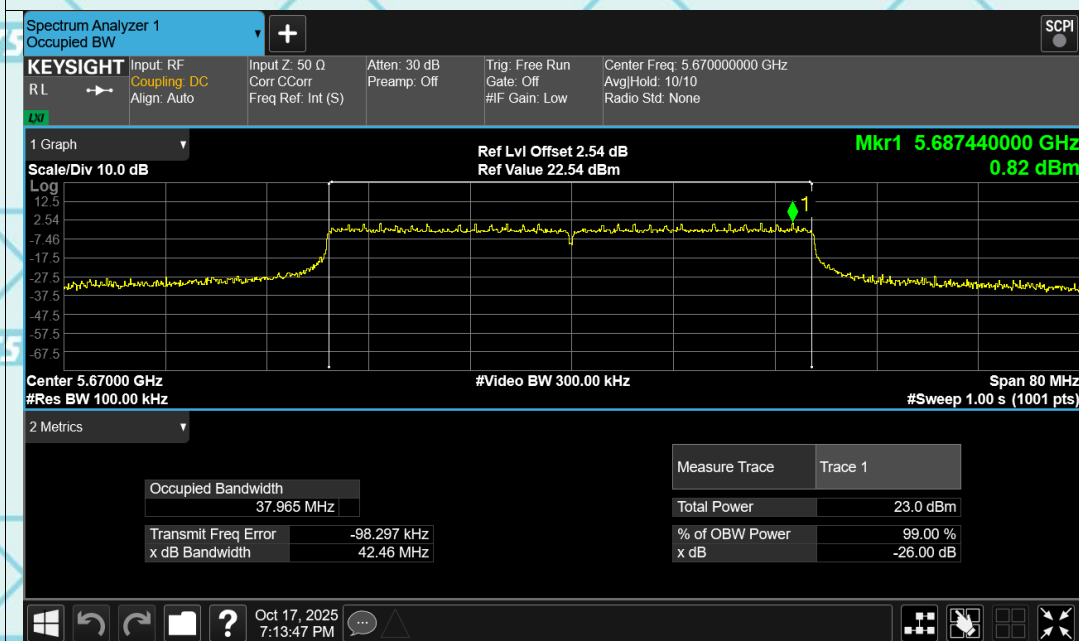
OBW NVNT ax40 5310MHz Ant1



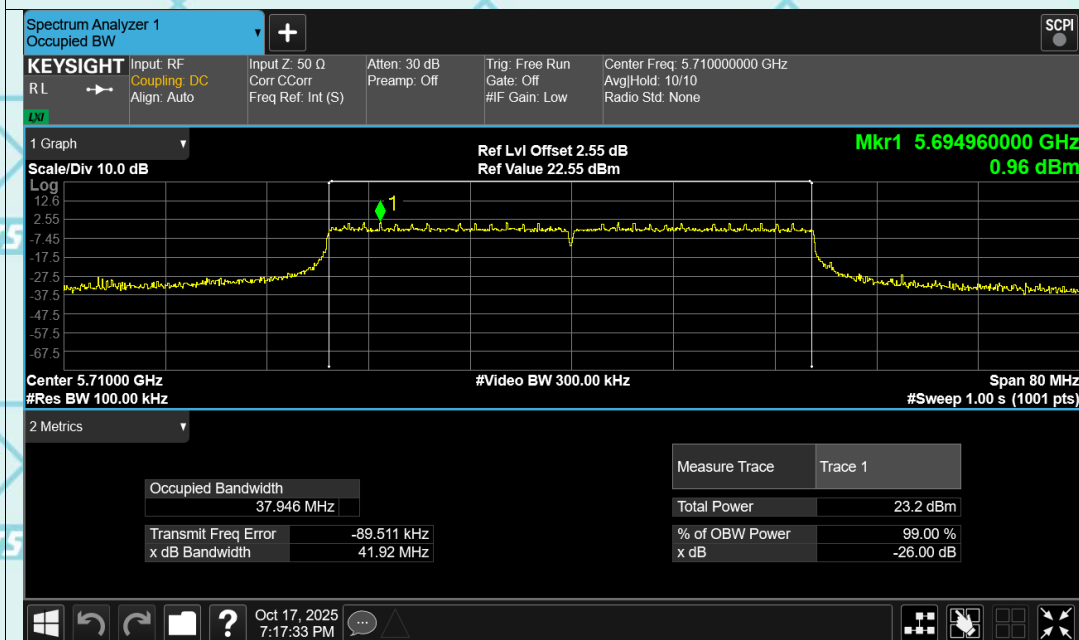
OBW NVNT ax40 5510MHz Ant1



OBW NVNT ax40 5670MHz Ant1



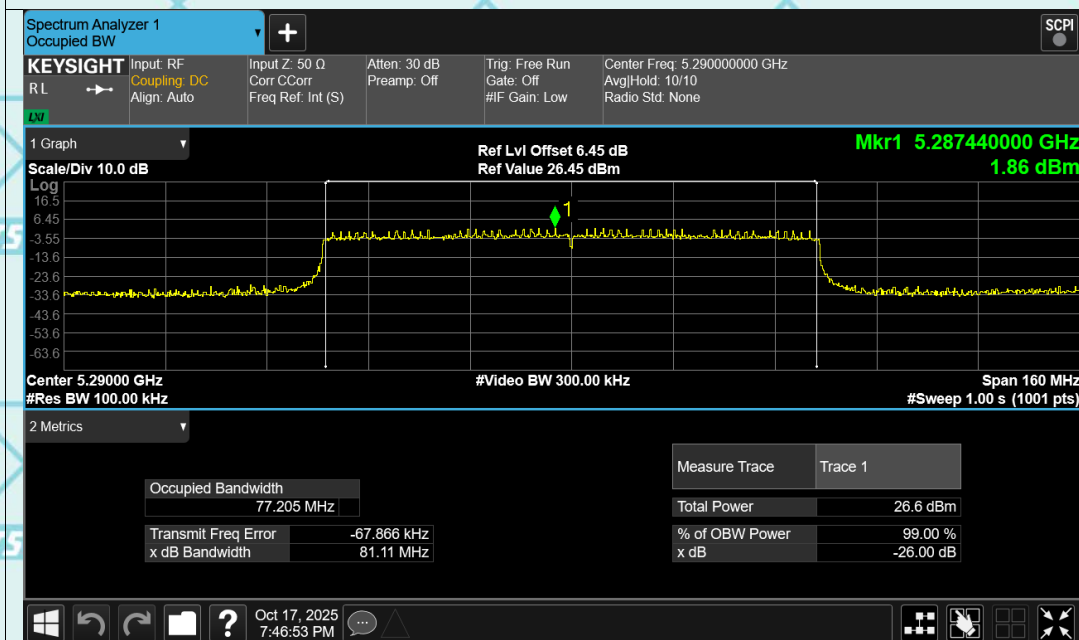
OBW NVNT ax40 5710MHz Ant1



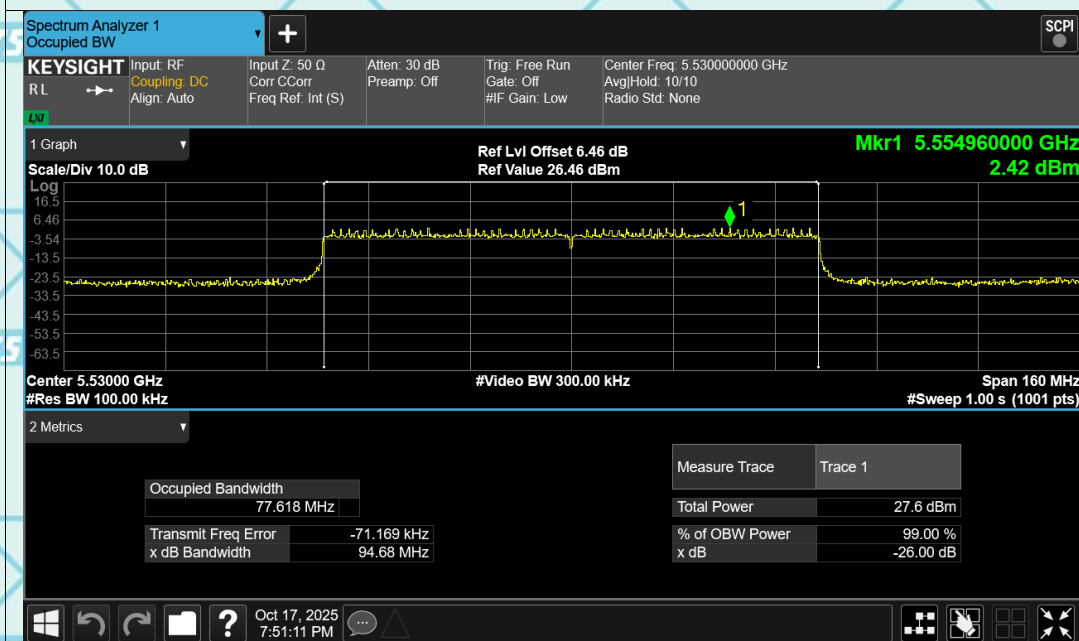
OBW NVNT ax80 5210MHz Ant1



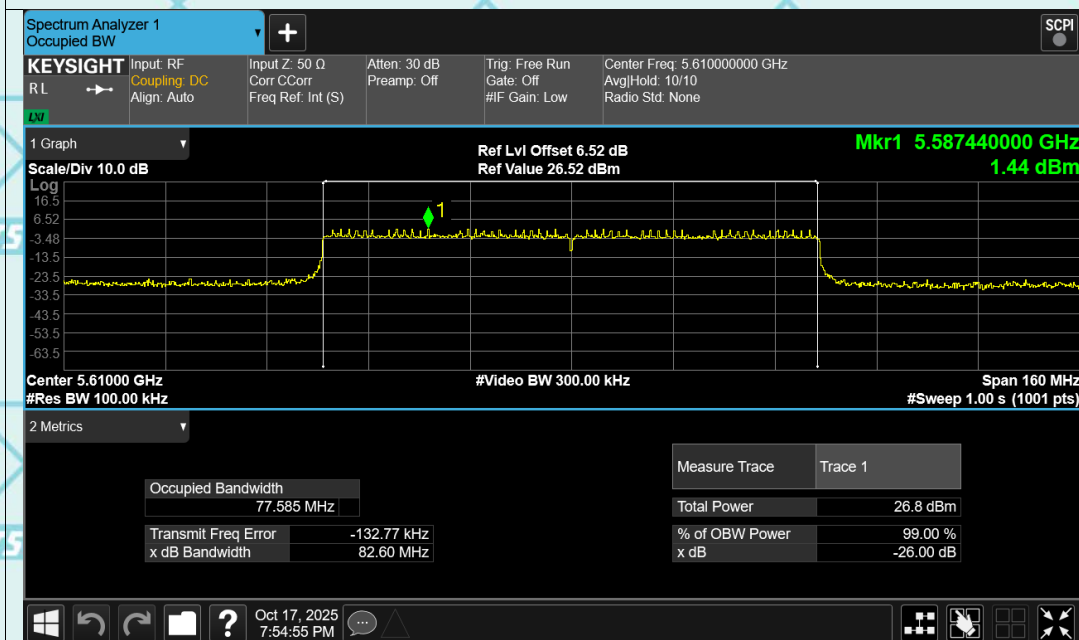
OBW NVNT ax80 5290MHz Ant1



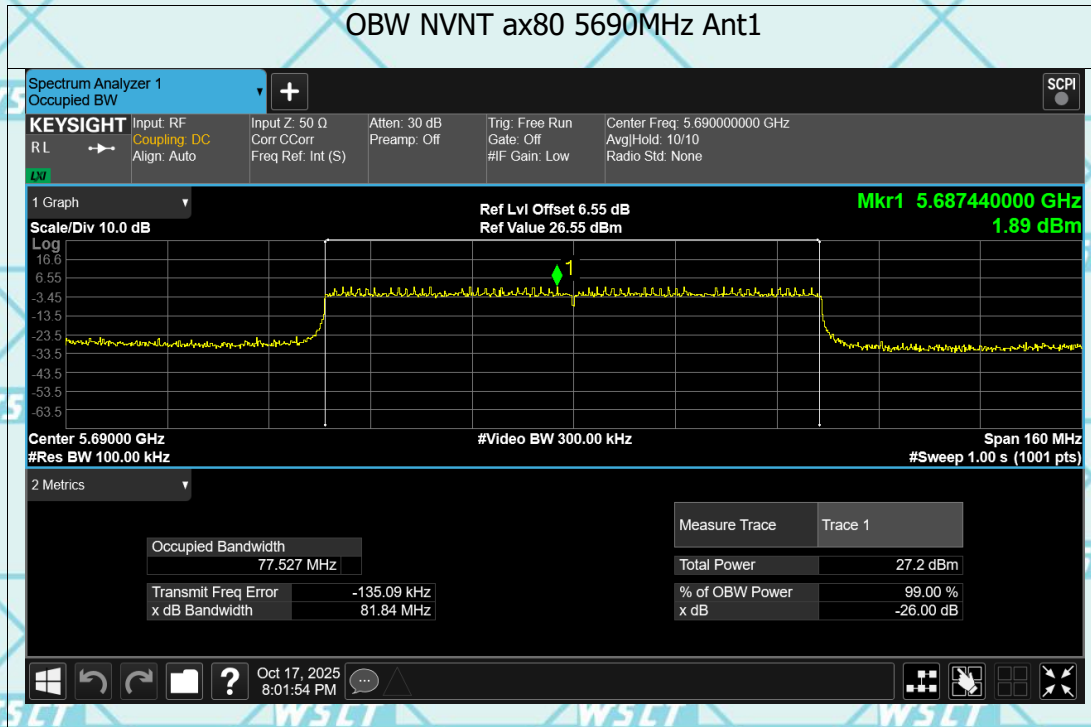
OBW NVNT ax80 5530MHz Ant1



OBW NVNT ax80 5610MHz Ant1



OBW NVNT ax80 5690MHz Ant1



6. SPURIOUS AND UNWANTED EMISSIONS

6.1. Test Equipment

Same as 3.6

6.2. Limit

5.2 GHz Band			
20 MHz		40 MHz	80 MHz
OBW: 18 MHz or less	OBW: 18-20 MHz		
5142 MHz or less: 2.5 μ W/MHz	5142 MHz or less: 2.5 μ W/MHz	5141.6 MHz or less: 2.5 μ W/MHz	5123.2 MHz or less: 2.5 μ W/MHz
5142-5150 MHz: 15 μ W/MHz	5142-5150 MHz: 15 μ W/MHz	5141.6-5150 MHz: 15 μ W/MHz	5123.2-5150 MHz: 15 μ W/MHz
--	5250-5250.2 MHz: $10^{1-(8/3)(f-9.75)}$ mW/MHz	--	--
5250-5251 MHz: $10^{1-(f-9)}$ mW/MHz	5250.2-5251 MHz: $10^{1-(f-9)}$ mW/MHz	5250-5251MHz: $10^{-(f-20)+\log(1/2)}$ mW/MHz	5150-5251MHz: $10^{-(f-40)+\log(1/4)}$ mW/MHz
5251-5260 MHz: $10^{1-(8/90)(f-11)}$ mW/MHz	5251-5260 MHz: $10^{1-(8/90)(f-11)}$ mW/MHz	5251-5270 MHz: $10^{(8/190)(f-21)-1+\log(1/2)}$ mW/MHz	5251-5290 MHz: $10^{(8/390)(f-41)-1+\log(1/4)}$ mW/MHz
5260-5266.7 MHz: $10^{1.8-(6/50)(f-20)}$ mW/MHz	5260-5266.7 MHz: $10^{1.8-(6/50)(f-20)}$ mW/MHz	5270-5278.4 MHz: $10^{-(3/50)(f-40)+1.8+\log(1/2)}$ mW/MHz	5290-5296.7 MHz: $10^{(3/100)(f-80)+1.8+\log(1/4)}$ mW/MHz
5266.7 MHz or more: 2.5 μ W/MHz	5266.7 MHz or more: 2.5 μ W/MHz	5278.4 MHz or more: 2.5 mW/MHz	5296.7 MHz or more: 2.5 mW/MHz
F=MHz, difference from 5240(MHz)	F=MHz, difference from 5240(MHz)	F=MHz, difference from 5230(MHz)	F=MHz, difference from 5210(MHz)

5.3 GHz Band			
20 MHz		40 MHz	80 MHz
OBW: 18 MHz or less	OBW: 18-20 MHz		
5233.3 MHz or less: 2.5 μ W/MHz	5233.3 MHz or less: 2.5 μ W/MHz	5221.6 MHz or less: 2.5 μ W/MHz	5203.3 MHz or less: 2.5 μ W/MHz
5233.3-5240 MHz: $10^{-1.8-(6/50)(f-20)}$ mW/MHz	5233.3-5240 MHz: $10^{-1.8-(6/50)(f-20)}$ mW/MHz	5221.6-5230 MHz: $10^{-(3/50)(f-40)-1.8+\log(1/2)}$ mW/MHz	5203.3-5210 MHz: $10^{-(3/100)(f-80)-1.8+\log(1/4)}$ mW/MHz
5240-5249 MHz: $10^{-1-(8/90)(f-11)}$ mW/MHz	5240-5249MHz: $10^{-1-(8/90)(f-11)}$ mW/MHz	5230-5249 MHz: $10^{-(8/190)(f-21)-1+\log(1/2)}$ mW/MHz	5210-5249 MHz: $10^{-(8/390)(f-41)-1+\log(1/4)}$ mW/MHz
5249-5250 MHz: $10^{-1-(f-9)}$ mW/MHz	5249-5249.8MHz: $10^{-1-(f-9)}$ mW/MHz	5249-5250 MHz: $10^{-(f-20)+\log(1/2)}$ mW/MHz	5249-5250 MHz: $10^{-(f-40)+\log(1/4)}$ mW/MHz
5350 MHz or more: 2.5 μ W/MHz	5249.8-5250 MHz: $10^{-1-(8/3)(f-9.75)}$ mW/MHz 5350 MHz or more: 2.5 μ W/MHz	5350-5358.4 MHz: 15 μ W/MHz 5358.4 MHz or more: 2.5 μ W/MHz	5350-5376.8 MHz: 15 μ W/MHz 5376.8 MHz or more: 2.5 μ W/MHz
F=MHz, difference from 5260(MHz)	F=MHz,difference from 5260(MHz)	F=MHz, difference from 5270(MHz)	F=MHz, difference from 5290(MHz)

5.6 GHz Band			
20 MHz		40 MHz	80 MHz
DSSS	OFDM		
5470 MHz or less: 12.5 μ W/MHz	5460 MHz or less: 2.5 μ W/MHz	5460 MHz or less: 12.5 μ W/MHz 5460-5470 MHz: 50 μ W/MHz	5460 MHz or less: 12.5 μ W/MHz
	5460-5470 MHz: 12.5 μ W/MHz		5460-5469.5 MHz: 50 μ W/MHz
5730 MHz or more: 12.5 μ W/MHz	5745-5765 MHz: 12.5 μ W/MHz	5770 MHz or more: 12.5 μ W/MHz	5469.5-5470 MHz: 51.2 μ W/MHz
	Over 5765 MHz: 2.5 μ W/MHz		5770 MHz or more: 12.5 μ W/MHz



6.3. Test Configuration

Any emissions above the limit from the initial peak scan (RB=VB=1MHz, peak detector) are measured by tuning to that signal, setting RB=VB=1MHz, span=0Hz and using a sample detector. The average power over a transmission burst is calculated if the highest signal level still exceeds the limit. If the system uses burst transmissions during testing the threshold for requiring individual measurements becomes limit -3dB relative to the limit.

The device transmits in a burst mode, sweep time is calculated for each band tested as shown below. The plots are composite plots of the individual frequency bands.

Frequency (MHz)		Bandwidth (MHz)	
Start	Stop	RB	VB
30	5142	1	1
5142	5150	1	1
5250	5251	1	1
5251	5260	1	1
5260	5266.7	1	1
5266.7	26000	1	1

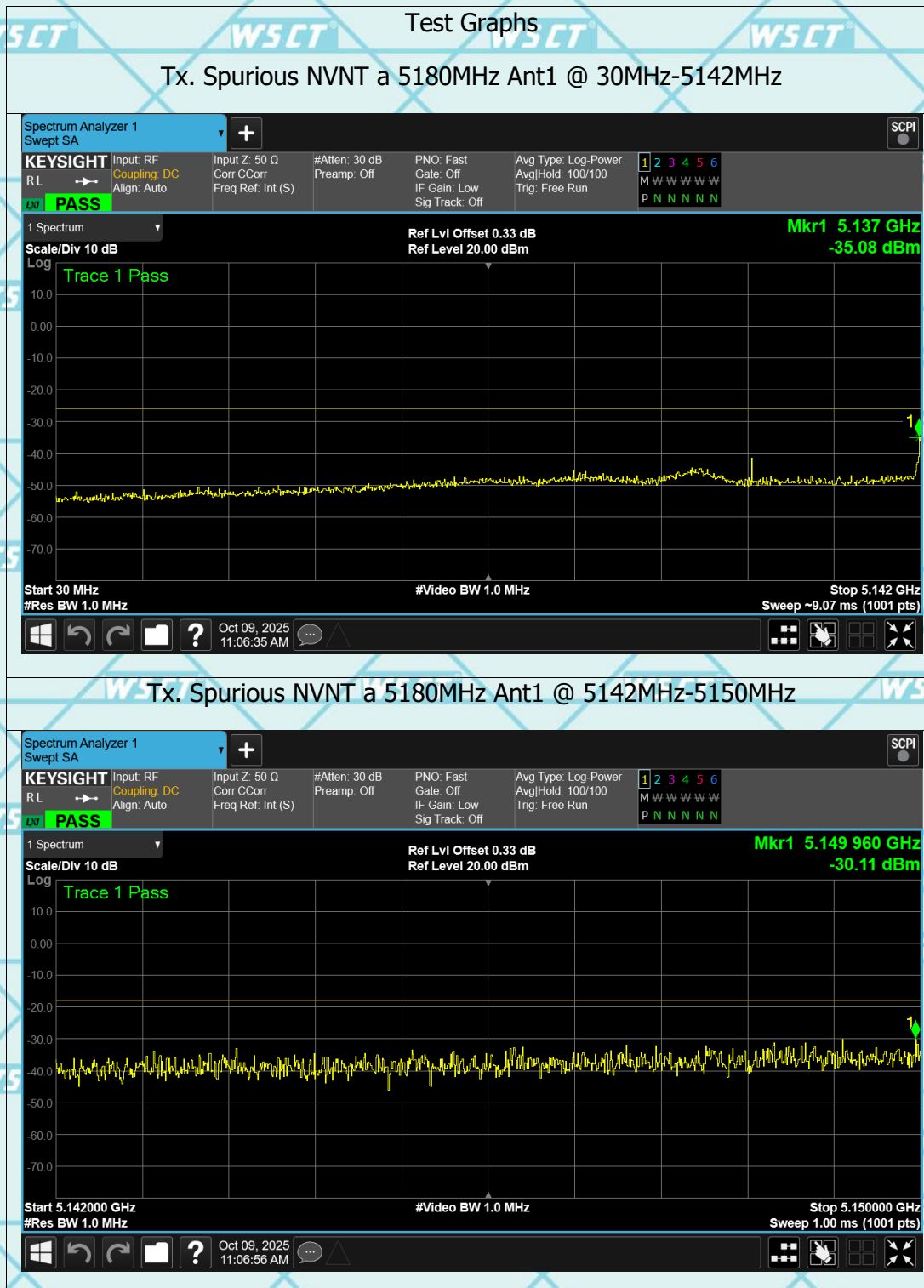
The device transmits continuously so the analyzer sweep time is auto-coupled.

6.4. Test Procedure

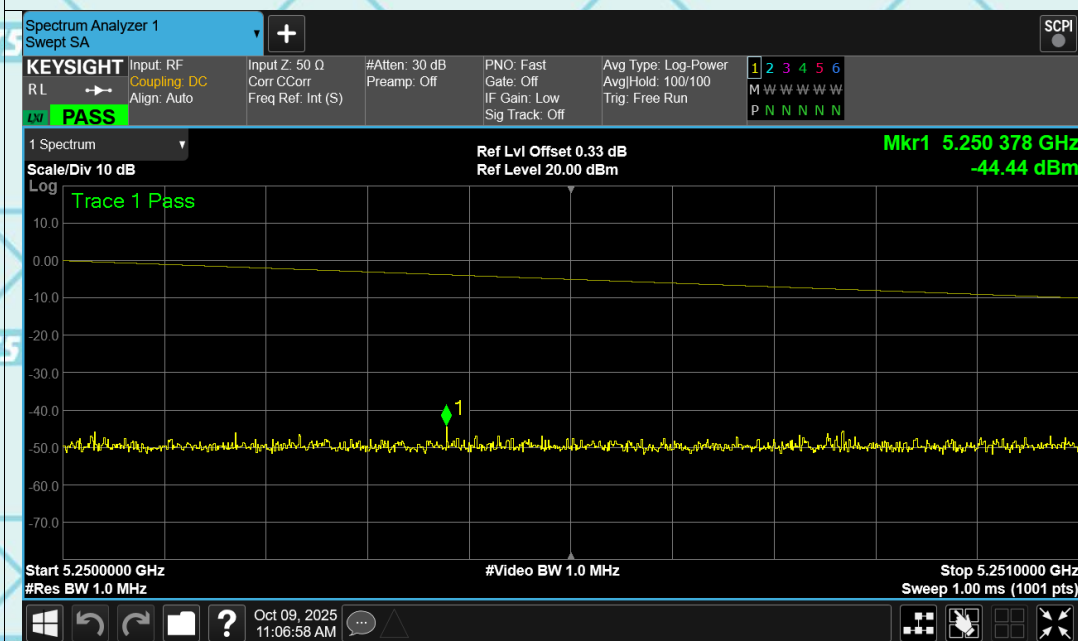
1. Set the spectrum analyzer according to spectrum analyzer settings and search for unwanted emissions by sweeping. When amplitude level of the searched emission is within the tolerance ("tolerance - 3 dB" in case of Note 3 in analyzer settings), the amplitude level is used as the measured value and the measurement in spectrum analyzer settings is not necessary.
2. When amplitude level of the searched emission exceeds the tolerance ("tolerance - 3 dB" in case of Note 3 in analyzer settings), narrow down the frequency sweep width sequentially from 100 MHz in order to raise frequency accuracy of the spectrum analyzer and measure frequency of the unwanted emission precisely. Set the spectrum analyzer according to spectrum analyzer settings and obtain the mean value of amplitude levels of the unwanted emission. In case of burst wave, obtain the mean value within each burst.
3. When EUT has plural antenna terminals, perform above measurement for each antenna terminal.



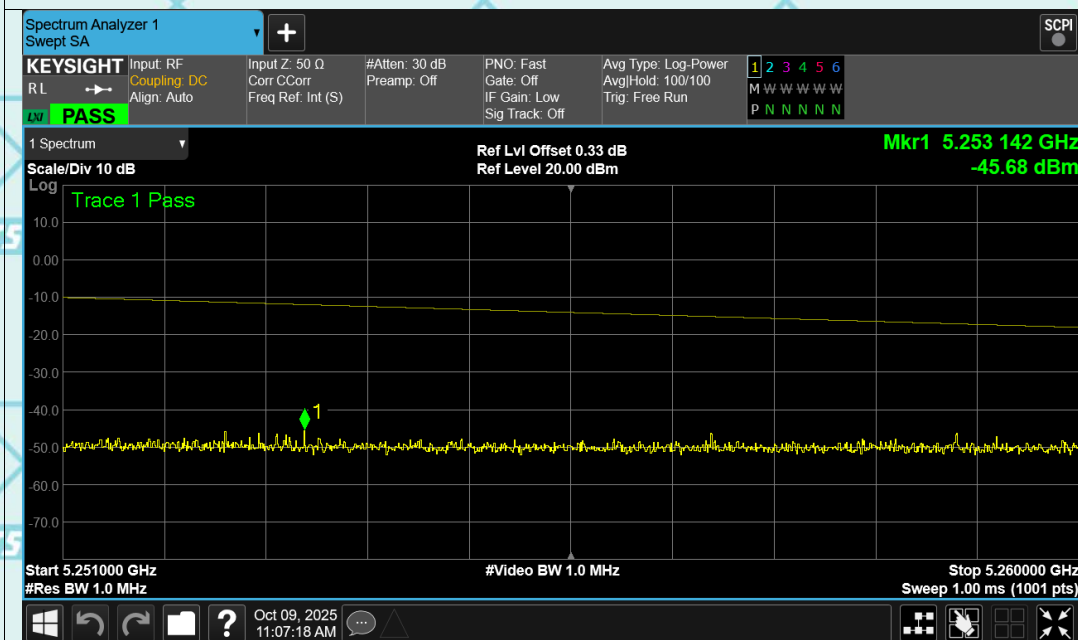
6.5. Test Results



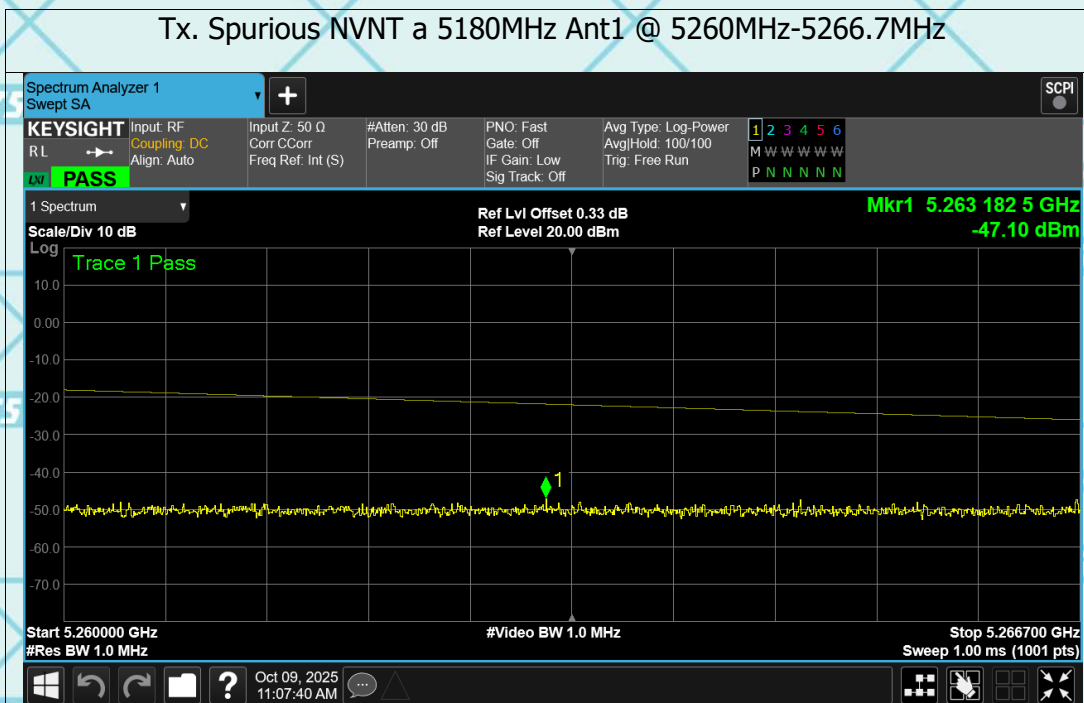
Tx. Spurious NVNT a 5180MHz Ant1 @ 5250MHz-5251MHz



Tx. Spurious NVNT a 5180MHz Ant1 @ 5251MHz-5260MHz



Tx. Spurious NVNT a 5180MHz Ant1 @ 5260MHz-5266.7MHz



Tx. Spurious NVNT a 5180MHz Ant1 @ 5266.7MHz-26000MHz

