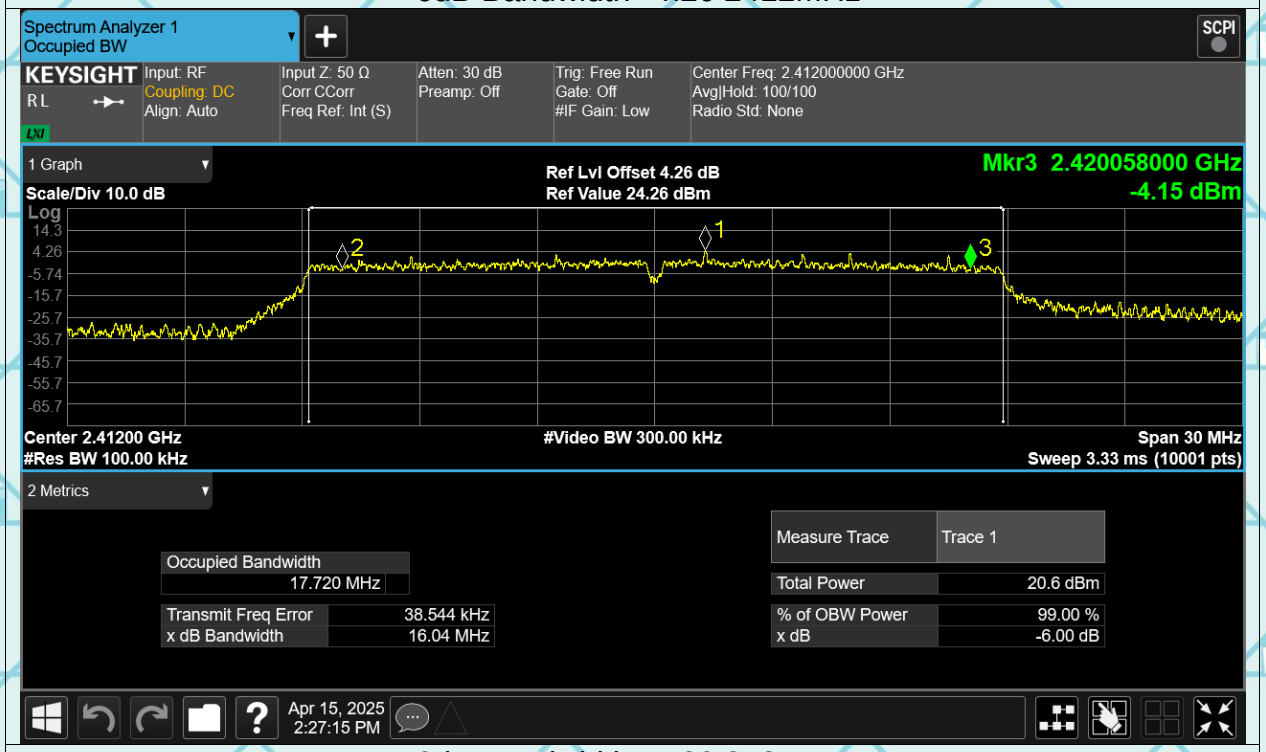
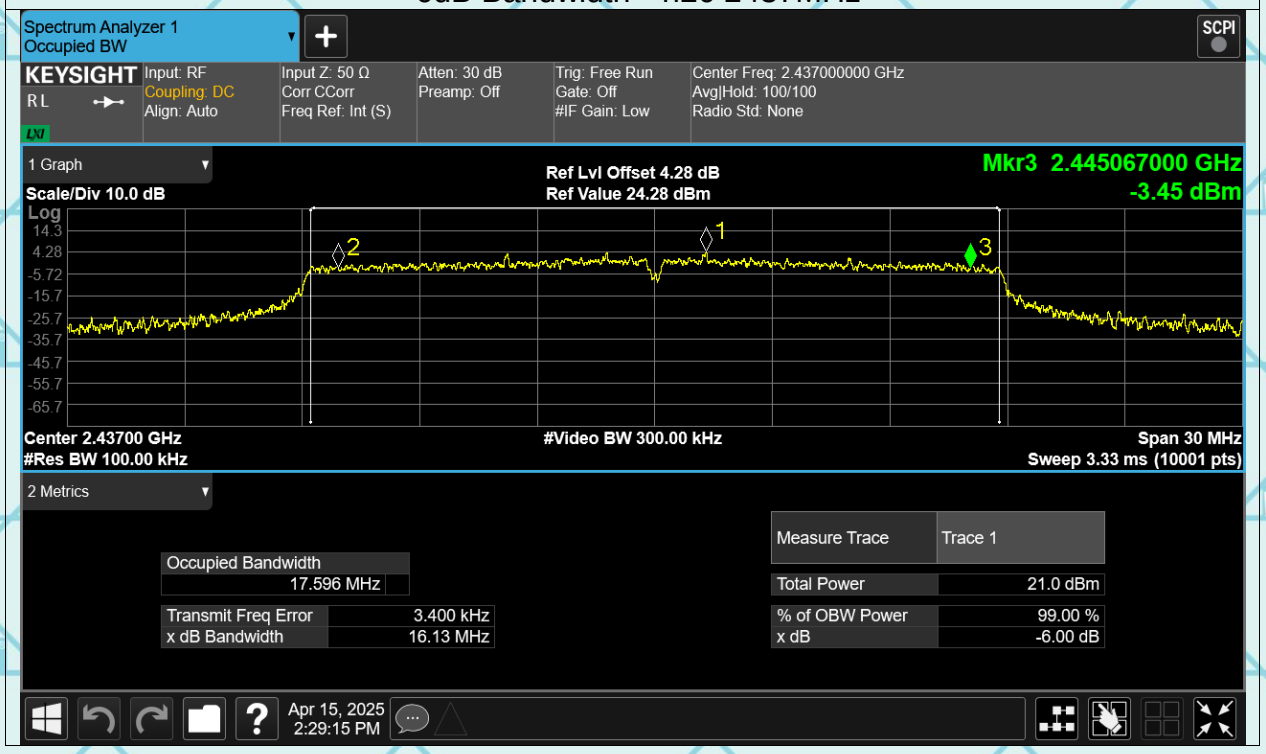
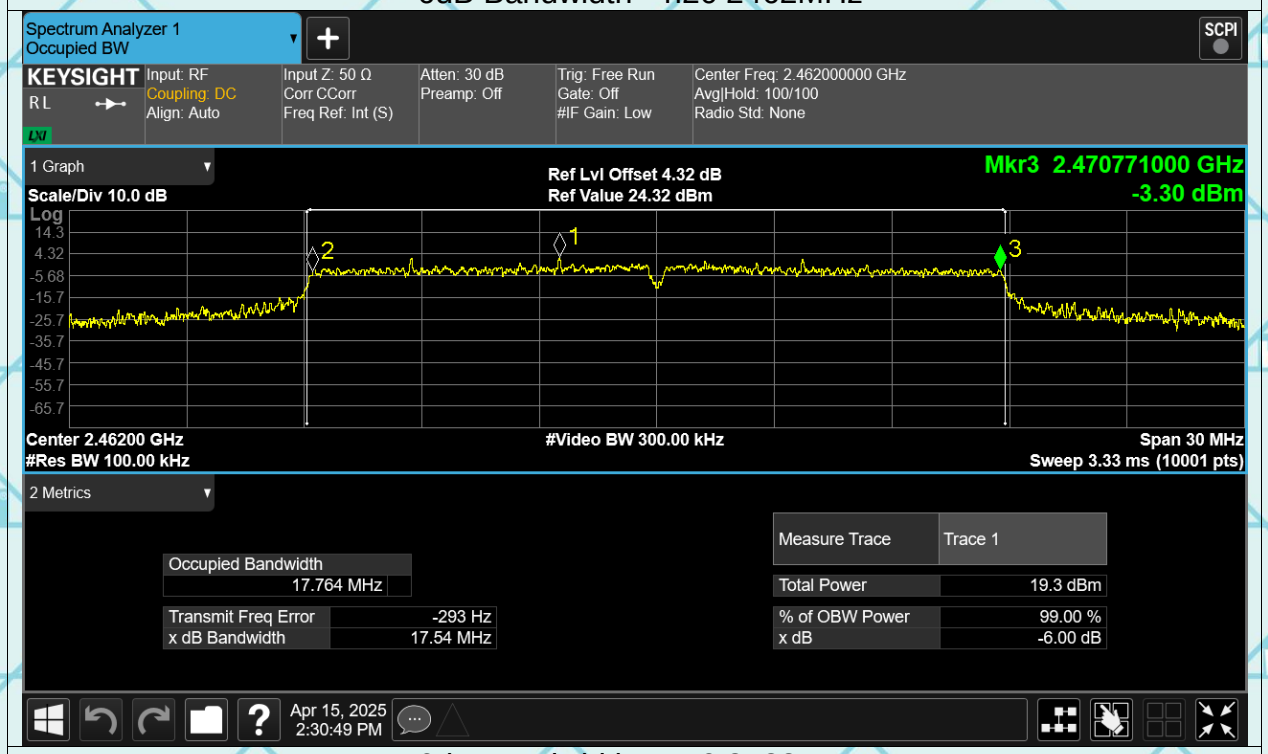
-6dB Bandwidth n20 2412MHz



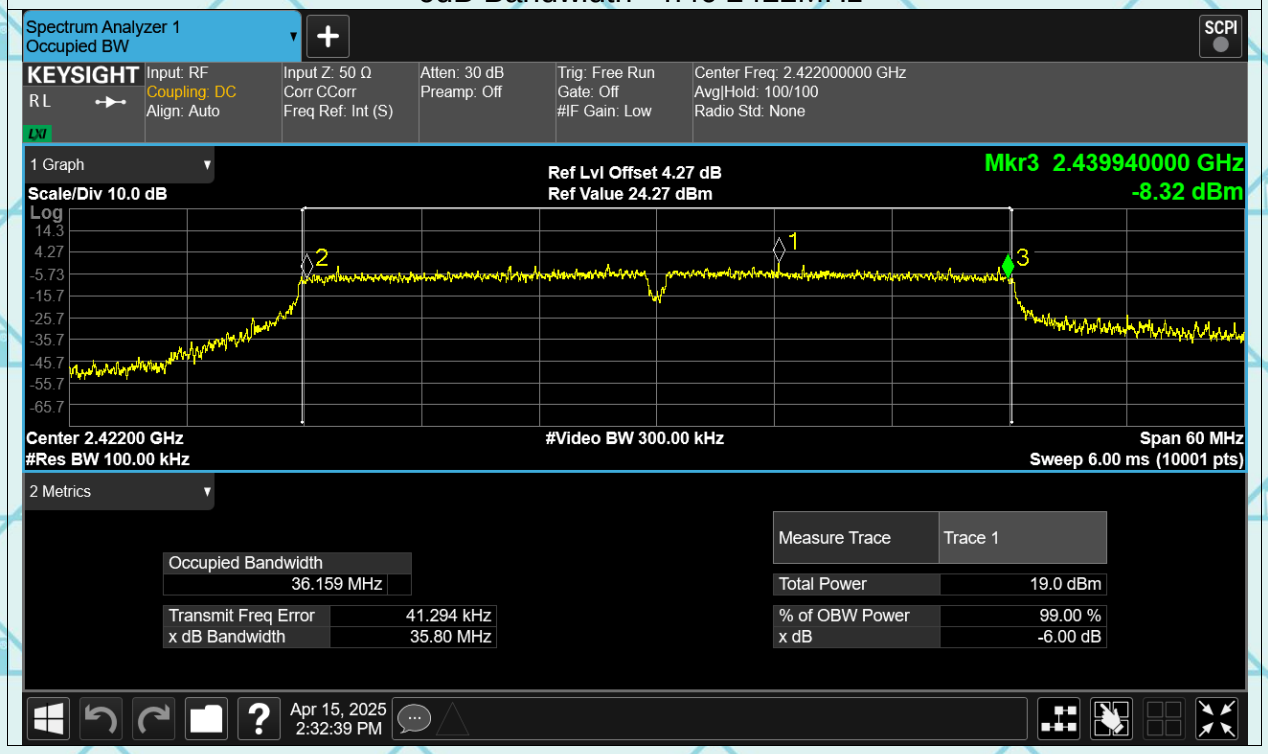
-6dB Bandwidth n20 2437MHz



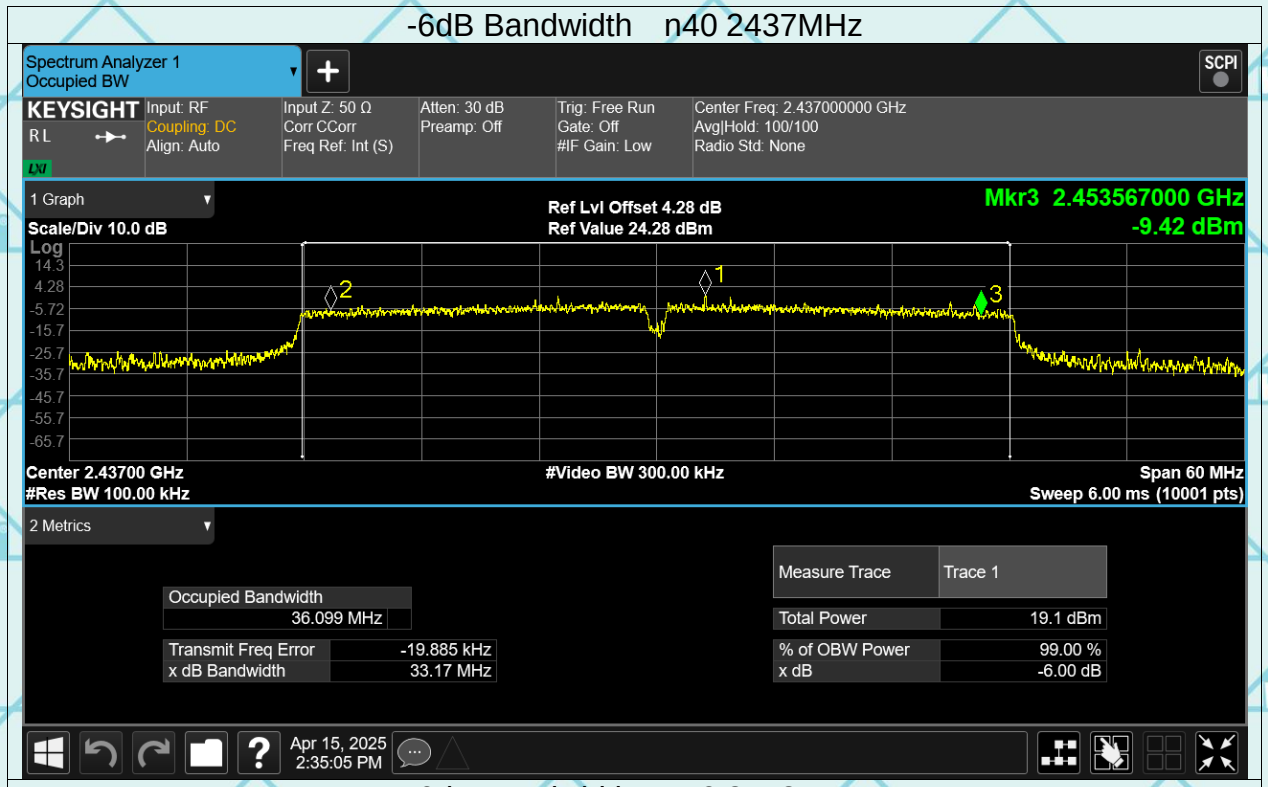
-6dB Bandwidth n20 2462MHz



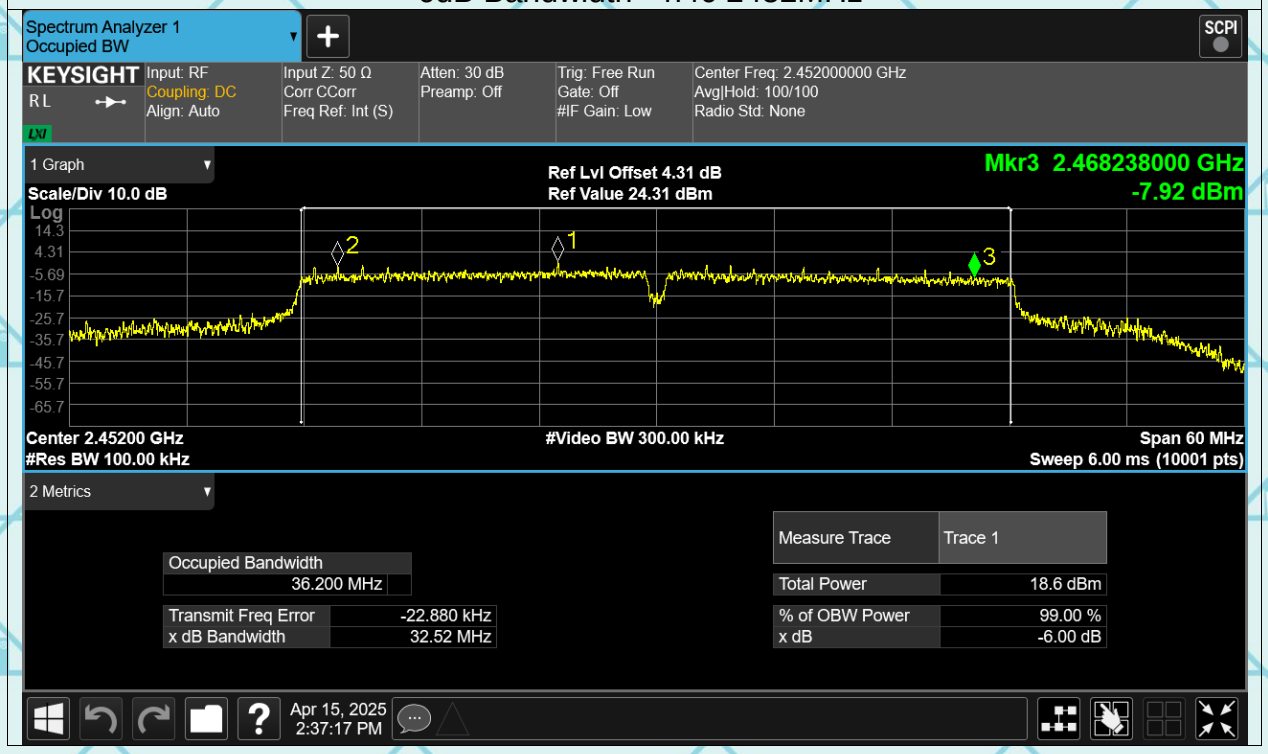
-6dB Bandwidth n40 2422MHz



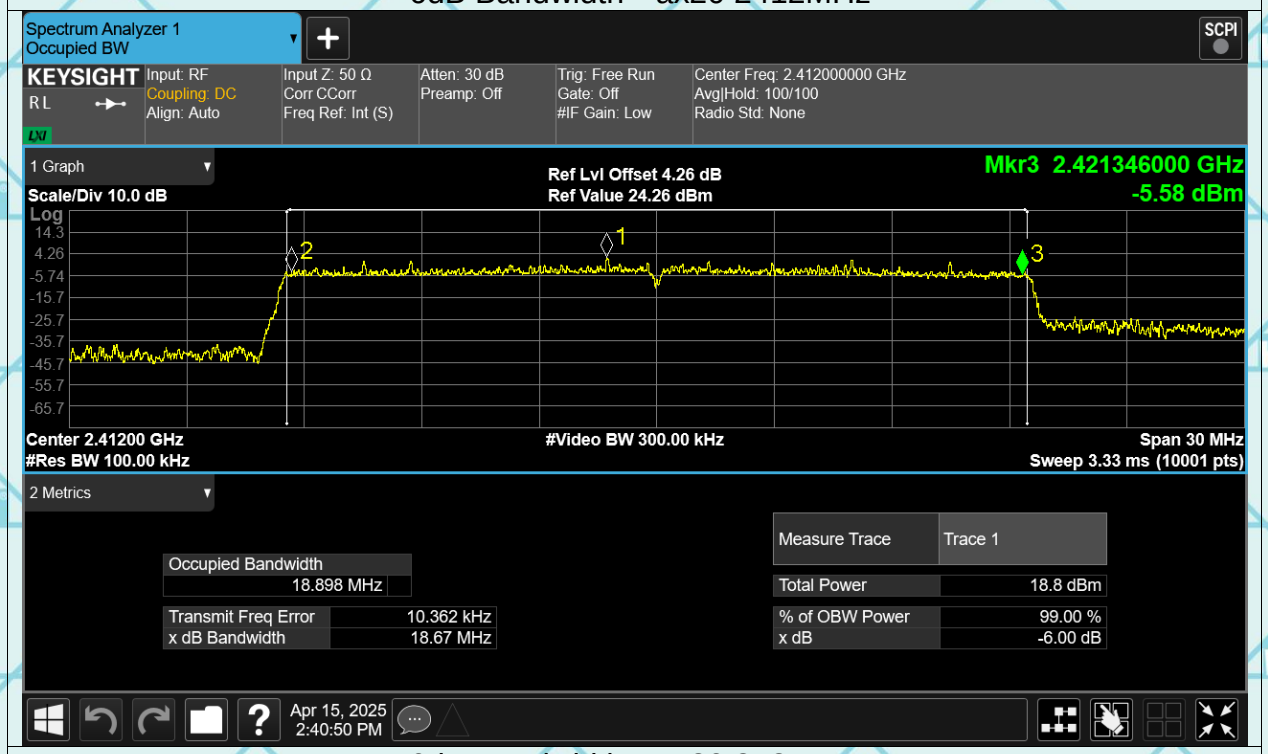
-6dB Bandwidth n40 2437MHz



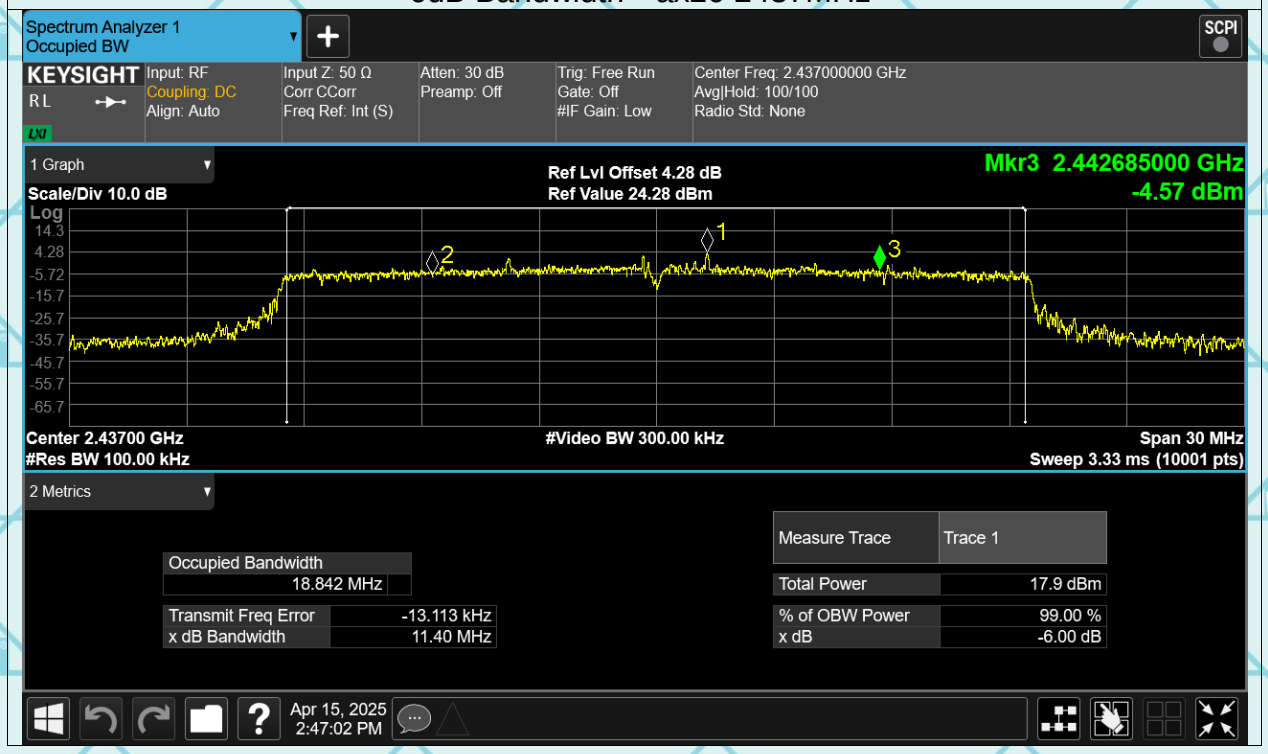
-6dB Bandwidth n40 2452MHz



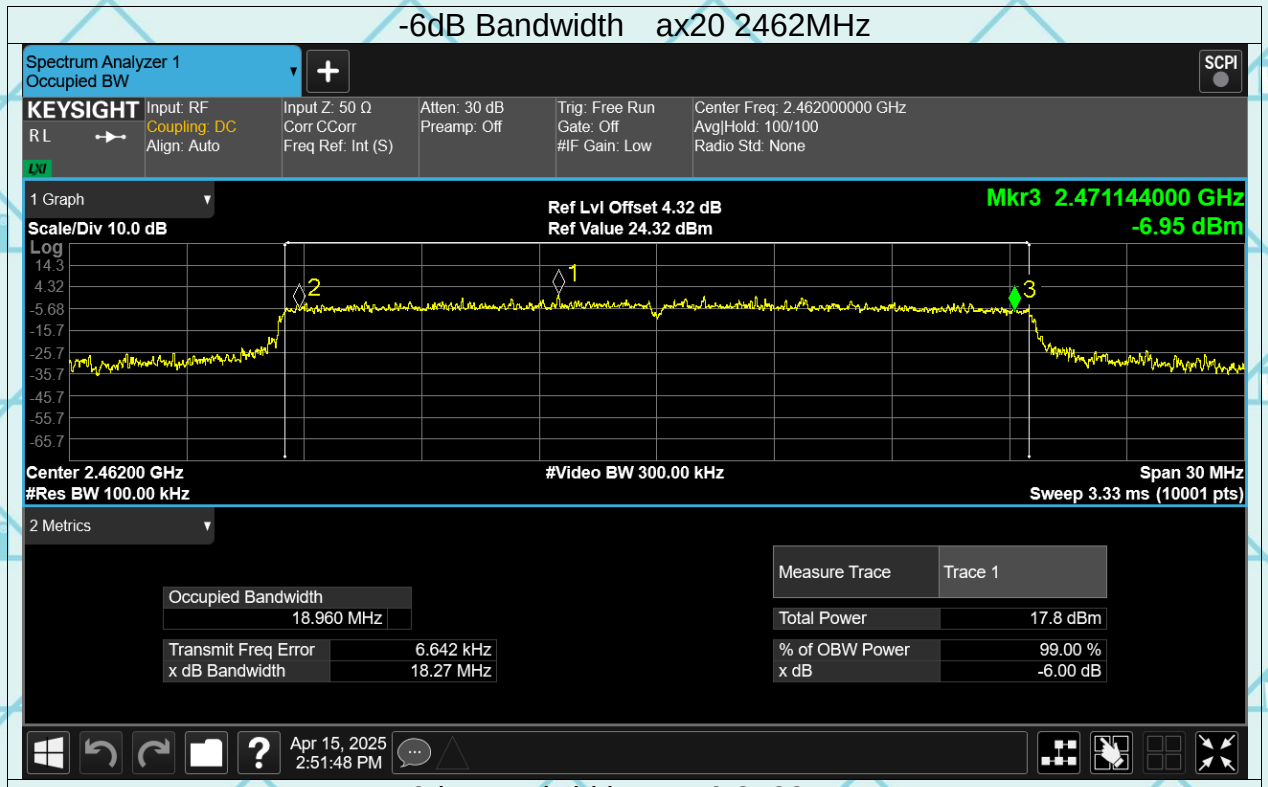
-6dB Bandwidth ax20 2412MHz



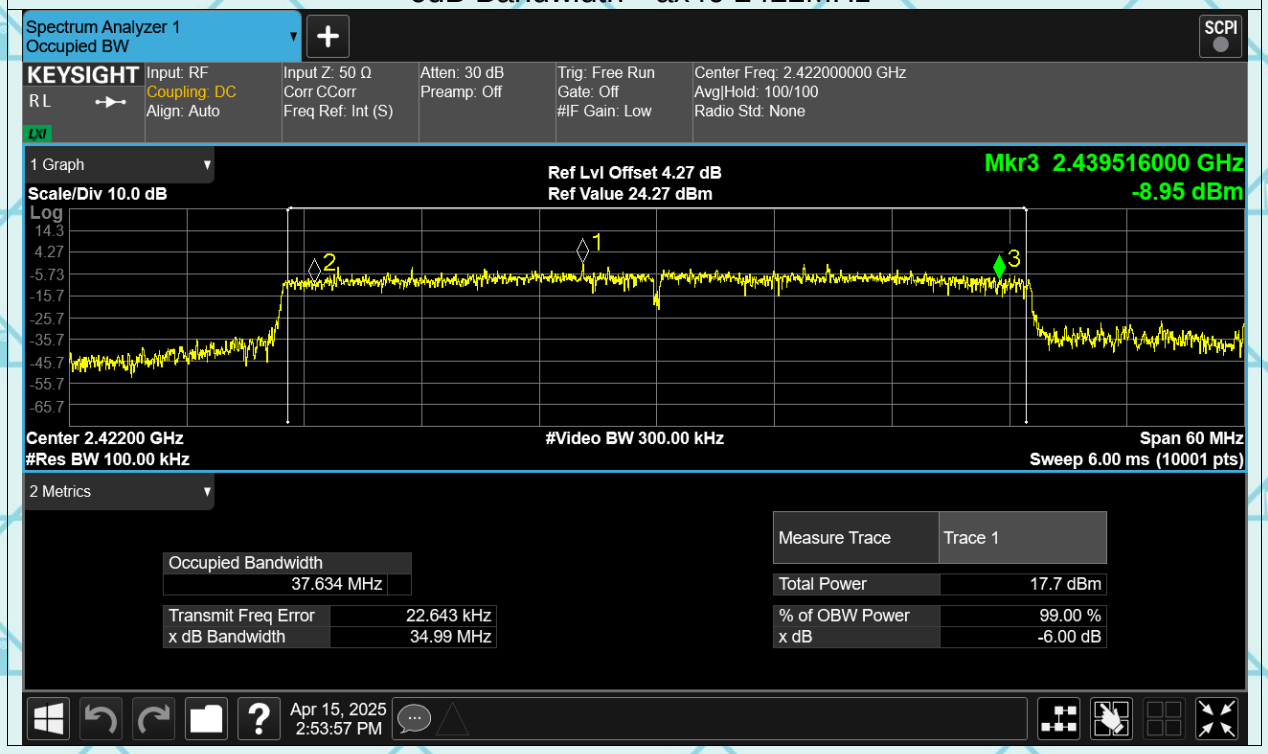
-6dB Bandwidth ax20 2437MHz



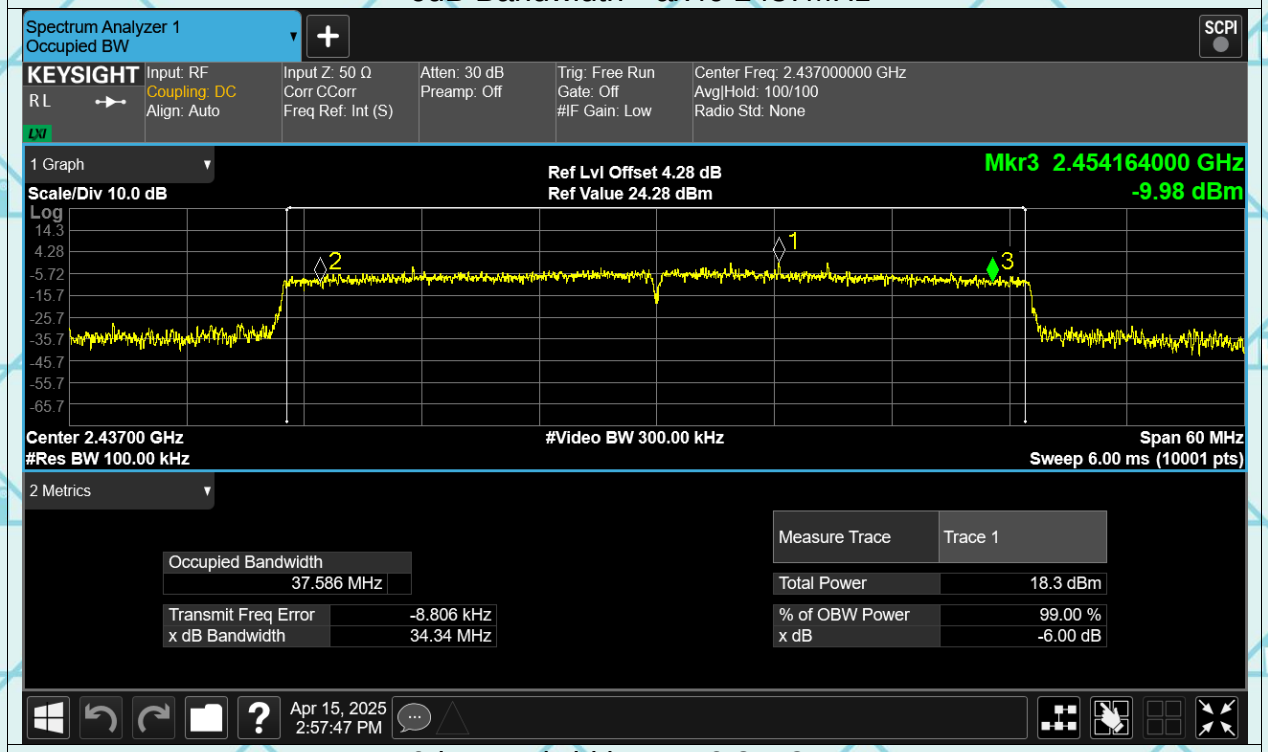
-6dB Bandwidth ax20 2462MHz



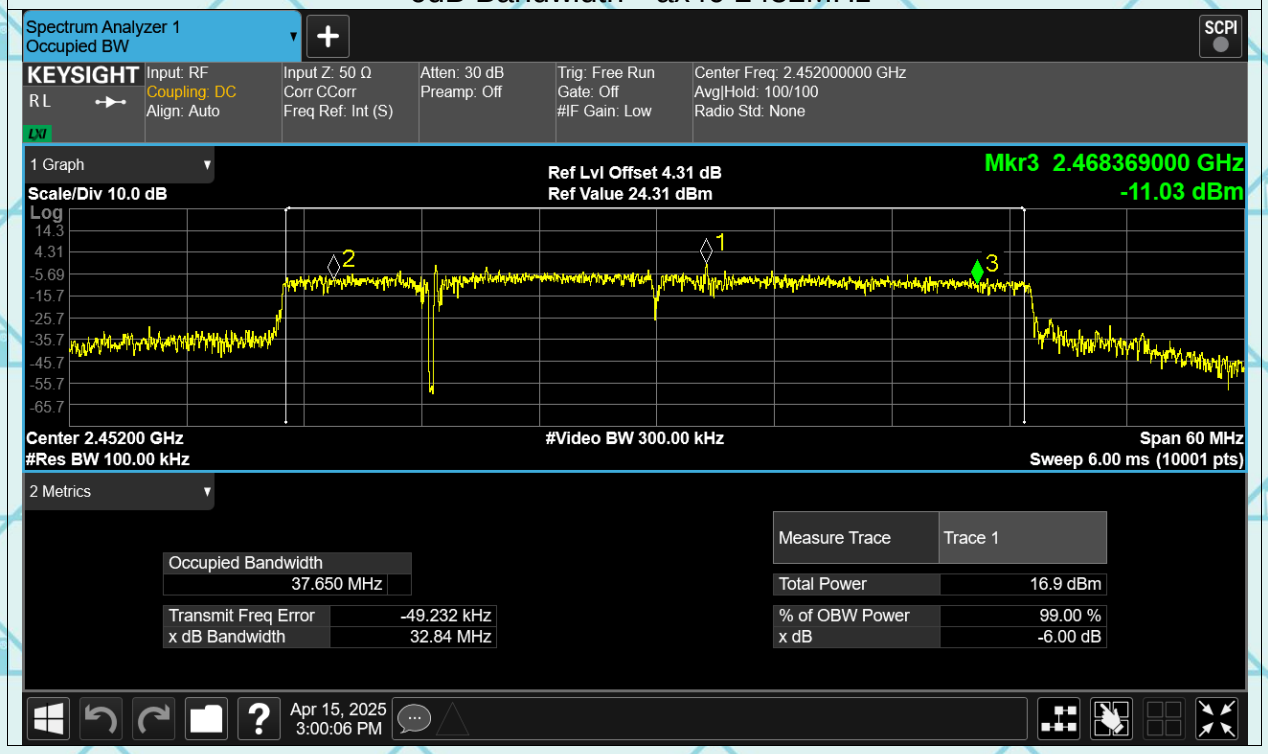
-6dB Bandwidth ax40 2422MHz



-6dB Bandwidth ax40 2437MHz

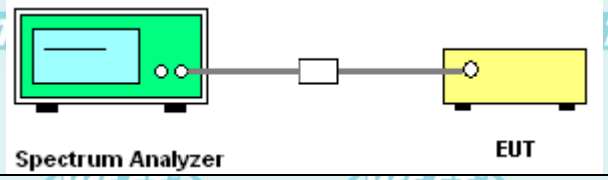


-6dB Bandwidth ax40 2452MHz



6.5. Power Spectral Density

6.5.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	KDB 558074
Limit:	The average power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. The testing follows Measurement Procedure 10.3 Method AVGPSD of FCC KDB Publication No.558074 D01 DTS Meas. Guidance v04 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW): 3 kHz ≤ RBW ≤ 100 kHz. Video bandwidth VBW ≥ 3 x RBW. Set the span to at least 1.5 times the OBW. 5. Detector = RMS, Sweep time = auto couple. 6. Employ trace averaging (RMS) mode over a minimum of 100 traces. Use the peak marker function to determine the maximum power level. 6. Measure and record the results in the test report.
Test Result:	PASS

6.5.2. Test data(worst)

Ant1

Mode	Frequency (MHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
b	2412	-8.26	8	Pass
b	2437	-7.34	8	Pass
b	2462	-6.94	8	Pass
g	2412	-10.71	8	Pass
g	2437	-10.74	8	Pass
g	2462	-11.50	8	Pass
n20	2412	-8.85	8	Pass
n20	2437	-9.25	8	Pass
n20	2462	-11.00	8	Pass
n40	2422	-13.83	8	Pass
n40	2437	-13.81	8	Pass
n40	2452	-13.95	8	Pass
ax20	2412	-12.26	8	Pass
ax20	2437	-12.20	8	Pass
ax20	2462	-13.68	8	Pass
ax40	2422	-13.48	8	Pass
ax40	2437	-14.83	8	Pass
ax40	2452	-15.41	8	Pass

Ant2

Mode	Frequency (MHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
b	2412	-12.80	8	Pass
b	2437	-15.96	8	Pass
b	2462	-13.45	8	Pass
g	2412	-16.29	8	Pass
g	2437	-18.64	8	Pass
g	2462	-17.07	8	Pass
n20	2412	-15.98	8	Pass
n20	2437	-19.33	8	Pass
n20	2462	-17.35	8	Pass
n40	2422	-22.05	8	Pass
n40	2437	-23.03	8	Pass
n40	2452	-20.85	8	Pass
ax20	2412	-11.62	8	Pass
ax20	2437	-14.64	8	Pass
ax20	2462	-12.48	8	Pass
ax40	2422	-15.64	8	Pass
ax40	2437	-24.52	8	Pass
ax40	2452	-31.41	8	Pass

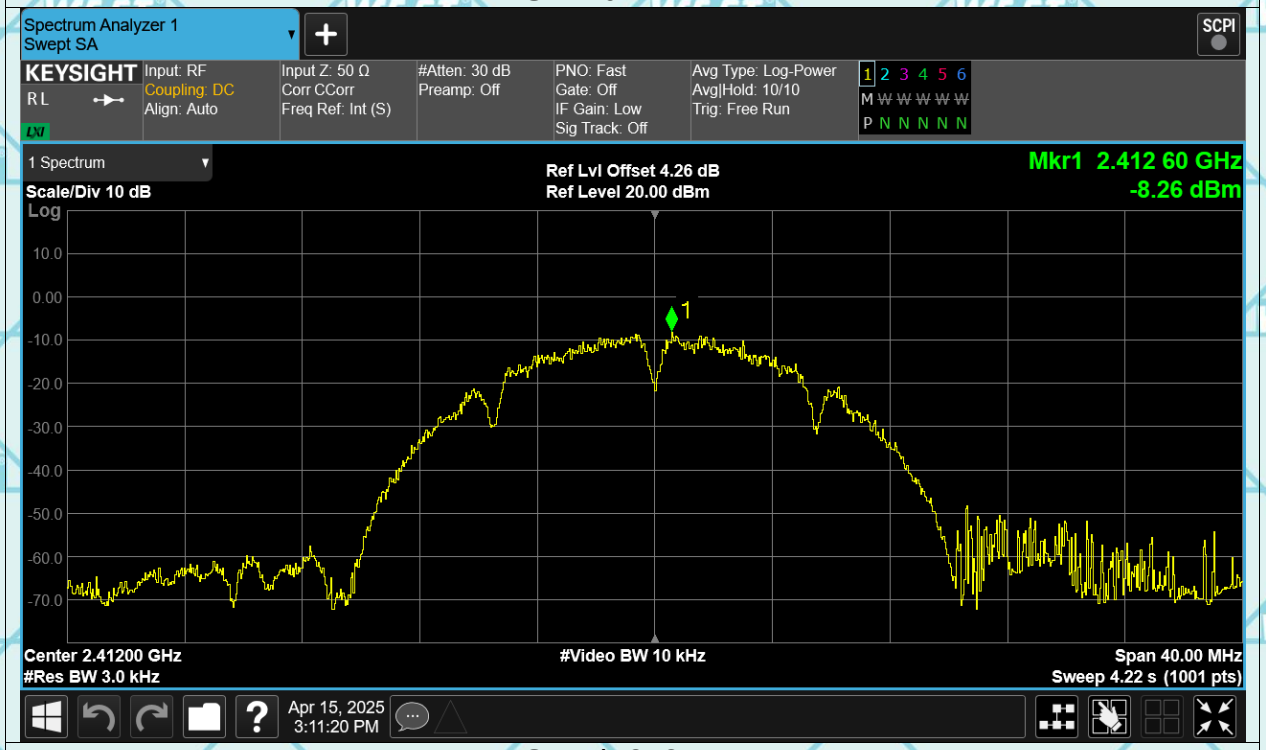
MIMO

Mode	Frequency (MHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
n20	2412	-8.08	8	Pass
n20	2437	-8.84	8	Pass
n20	2462	-10.09	8	Pass
n40	2422	-13.22	8	Pass
n40	2437	-13.32	8	Pass
n40	2452	-13.14	8	Pass
ax20	2412	-8.92	8	Pass
ax20	2437	-10.24	8	Pass
ax20	2462	-10.03	8	Pass
ax40	2422	-11.42	8	Pass
ax40	2437	-14.39	8	Pass
ax40	2452	-15.30	8	Pass

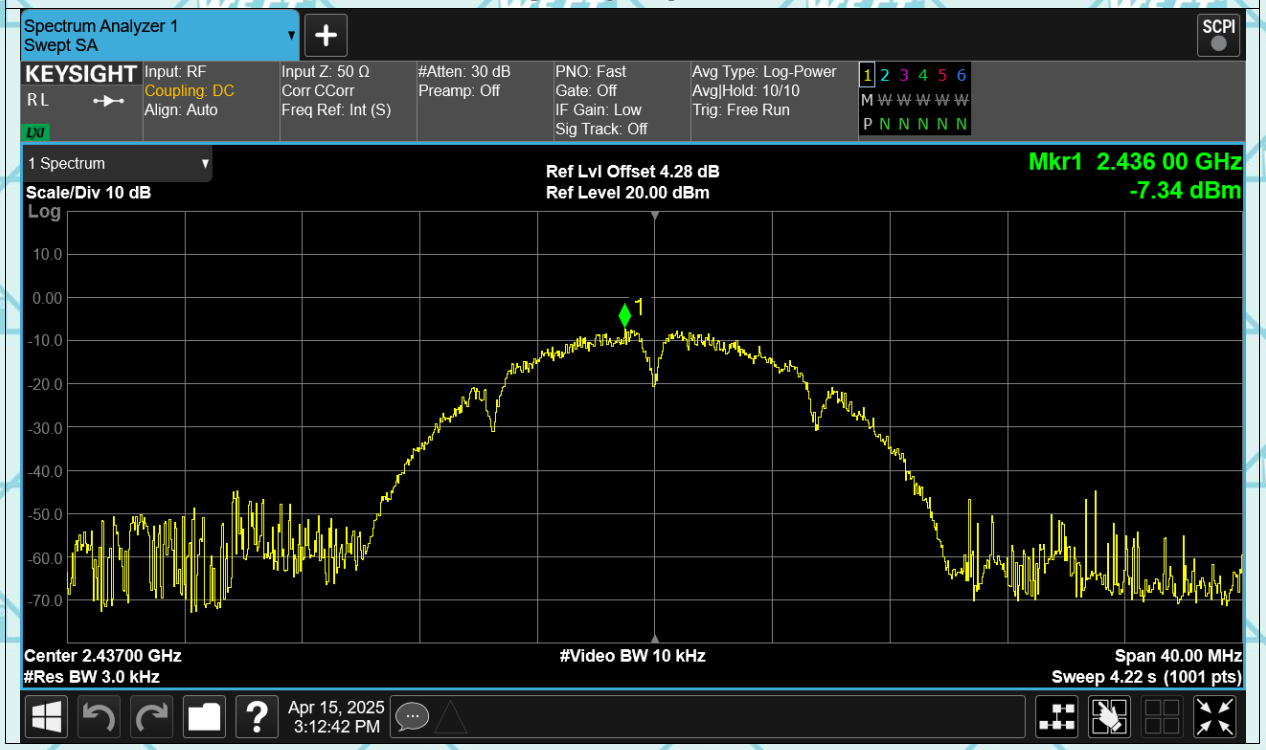
ANT1

Test Graphs

PSD b 2412MHz

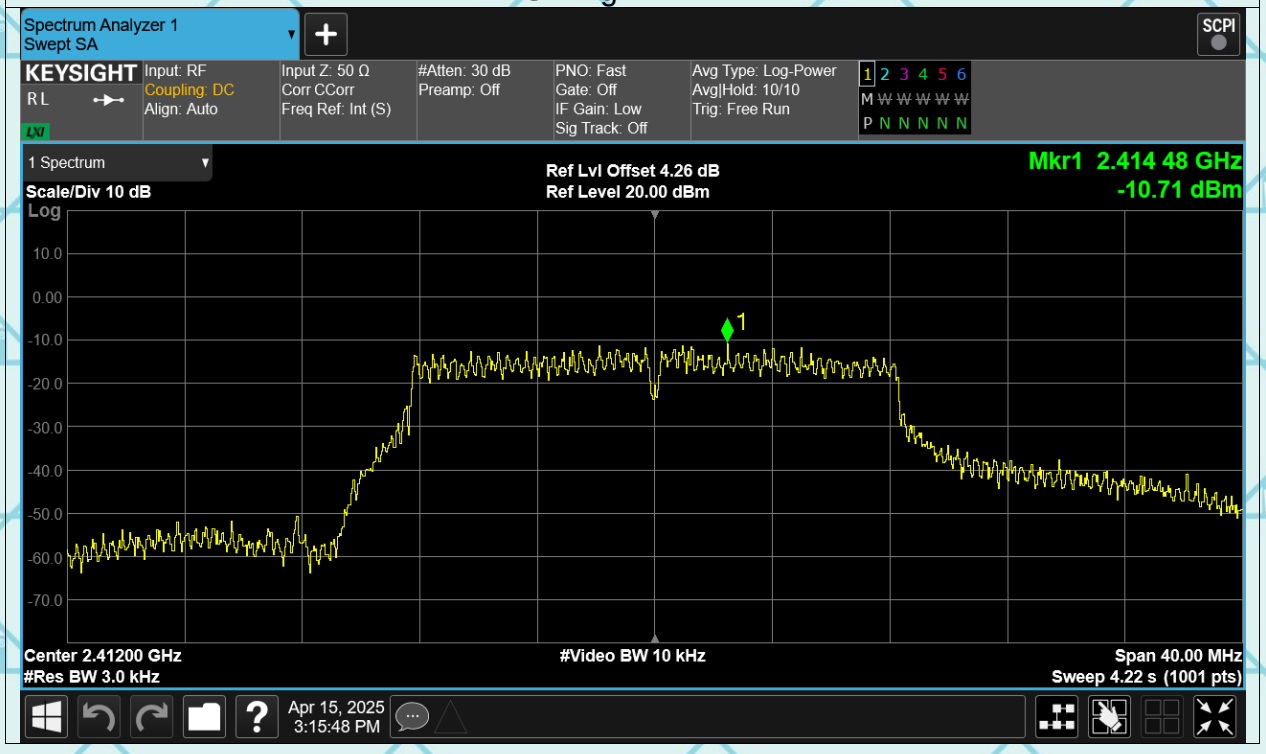


PSD b 2437MHz

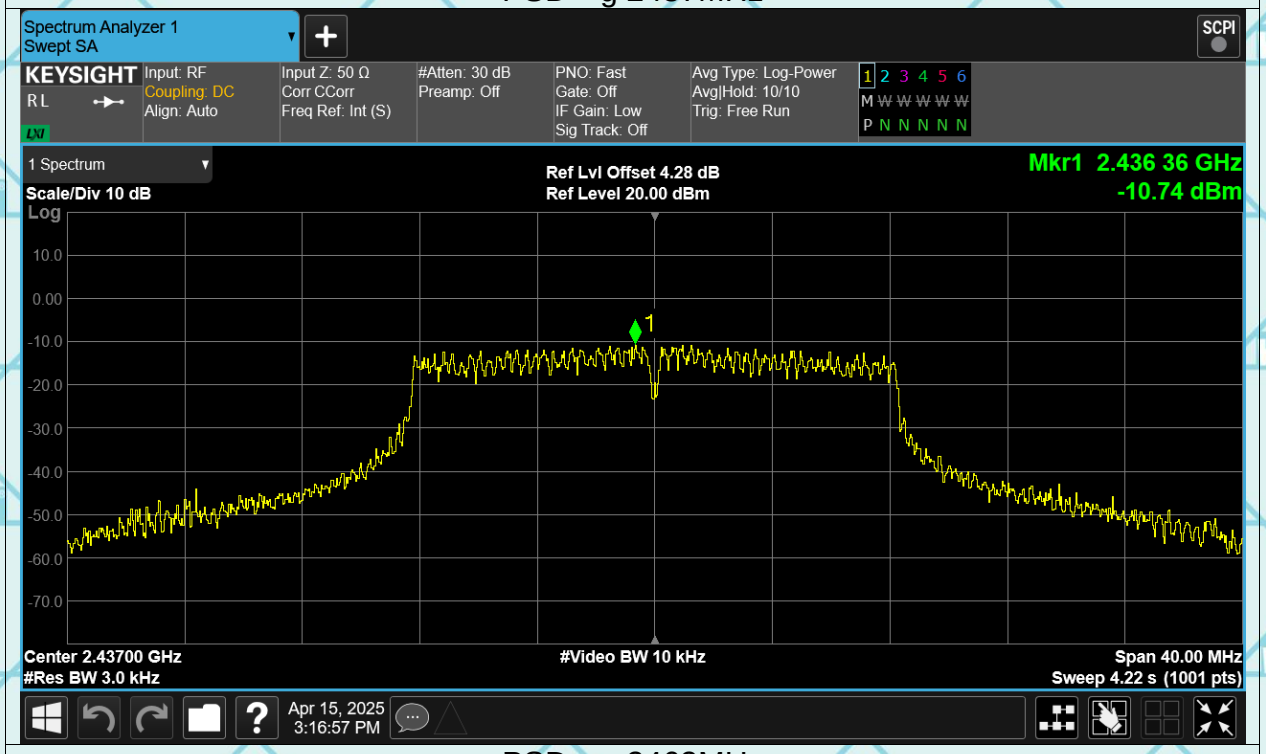


PSD b 2462MHz

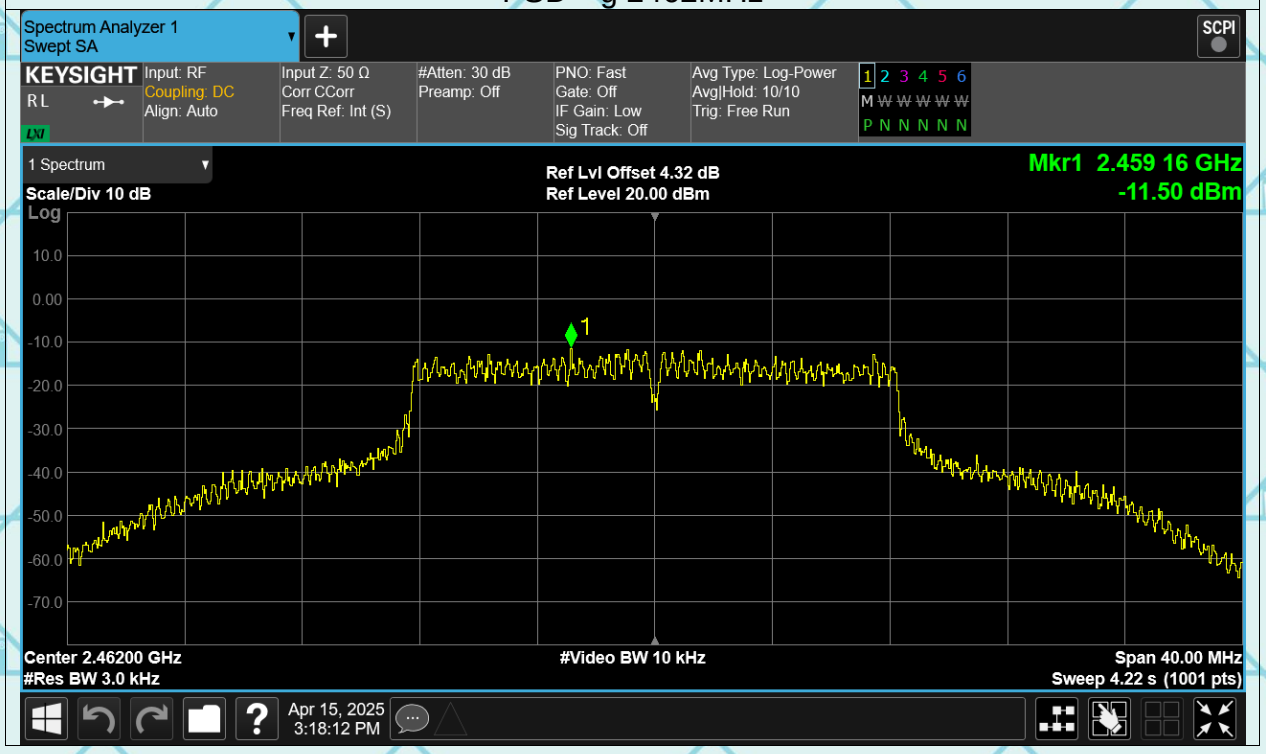
PSD g 2412MHz



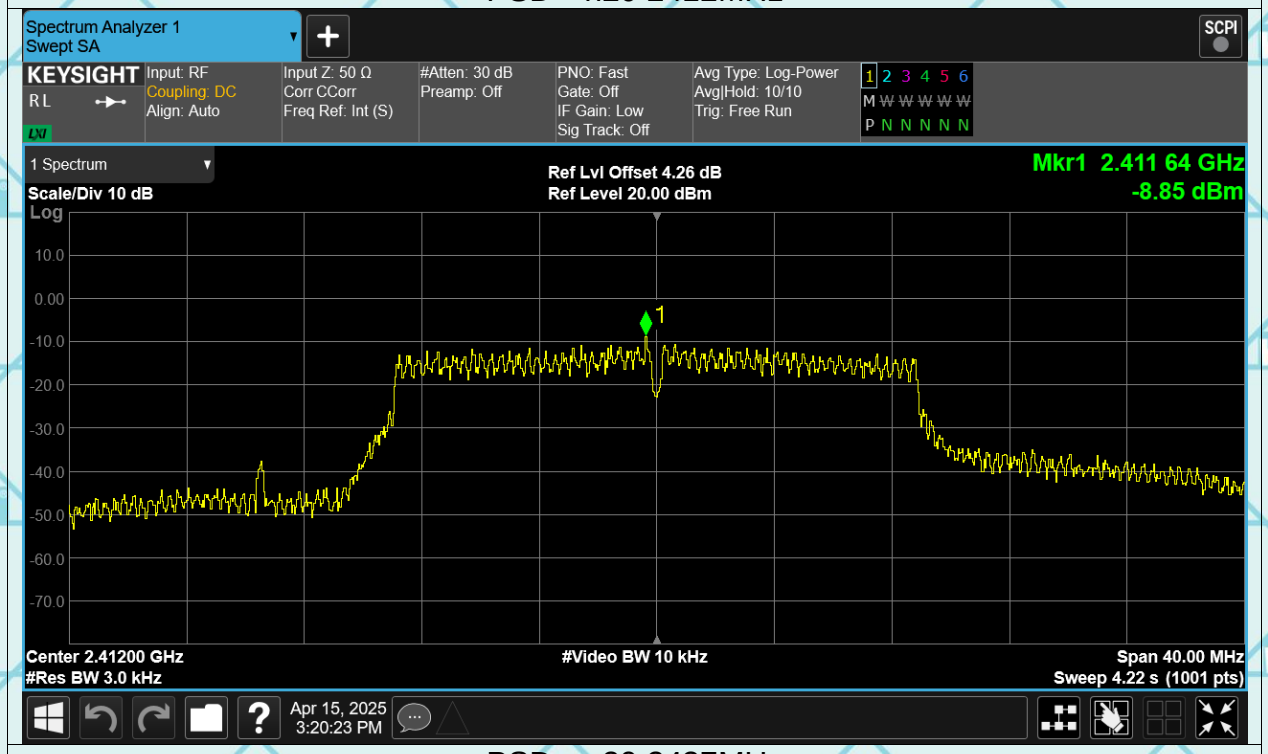
PSD g 2437MHz



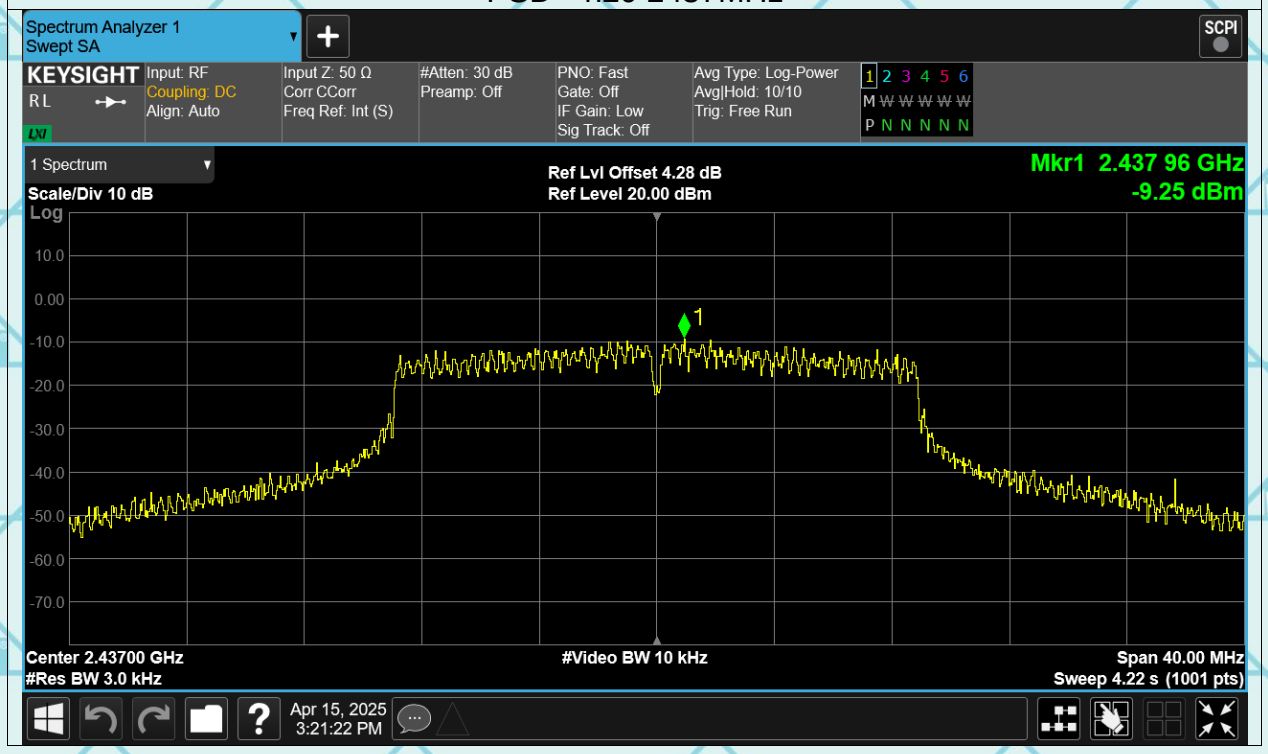
PSD g 2462MHz



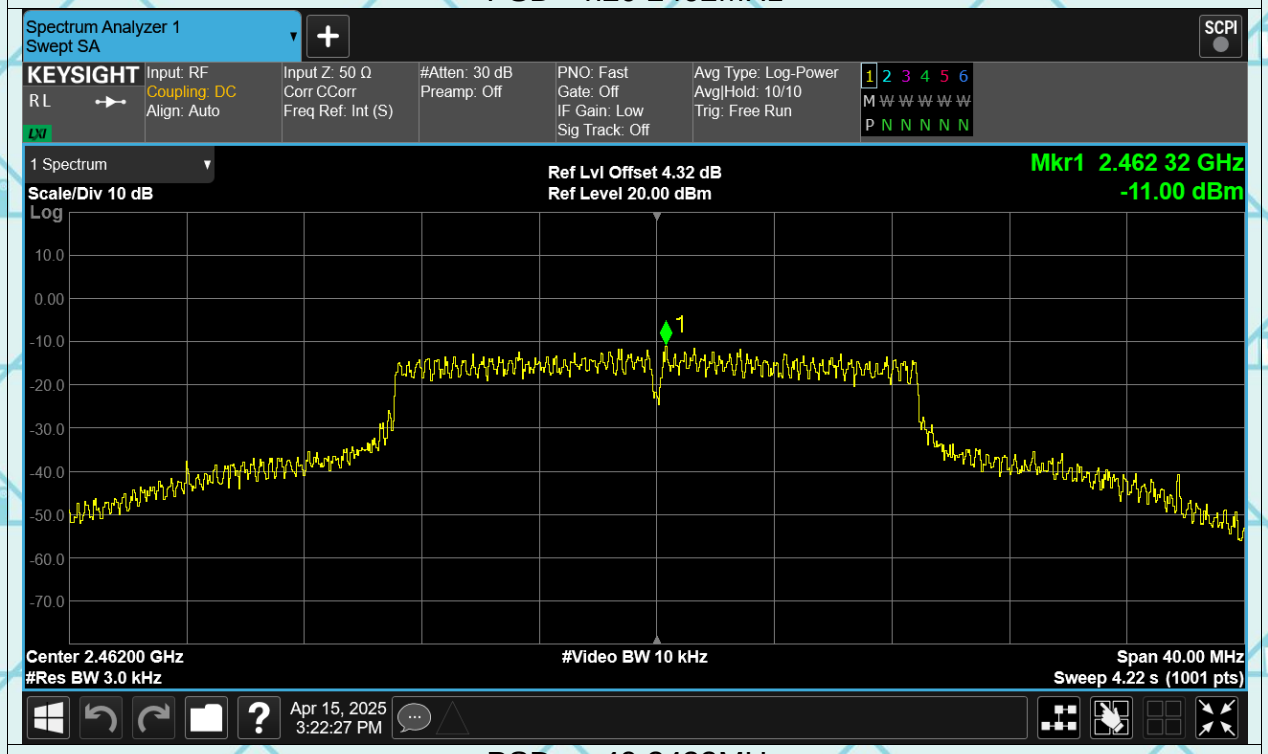
PSD n20 2412MHz



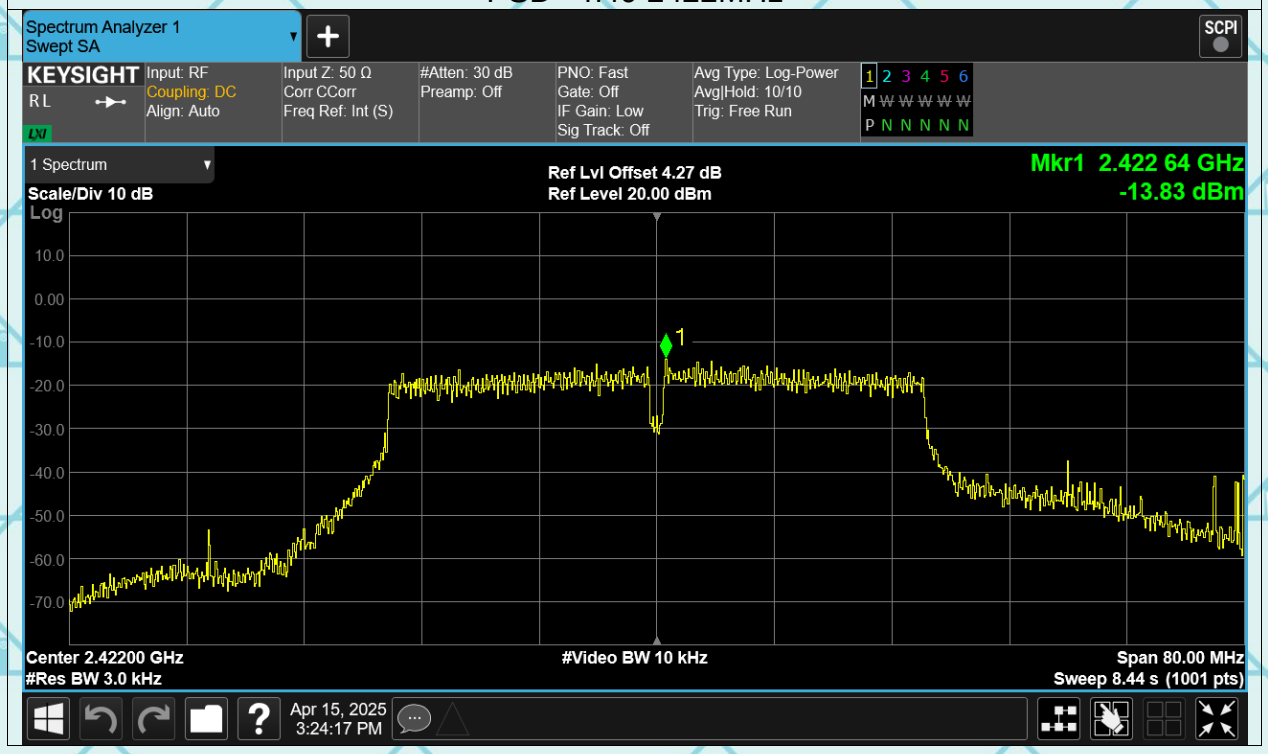
PSD n20 2437MHz



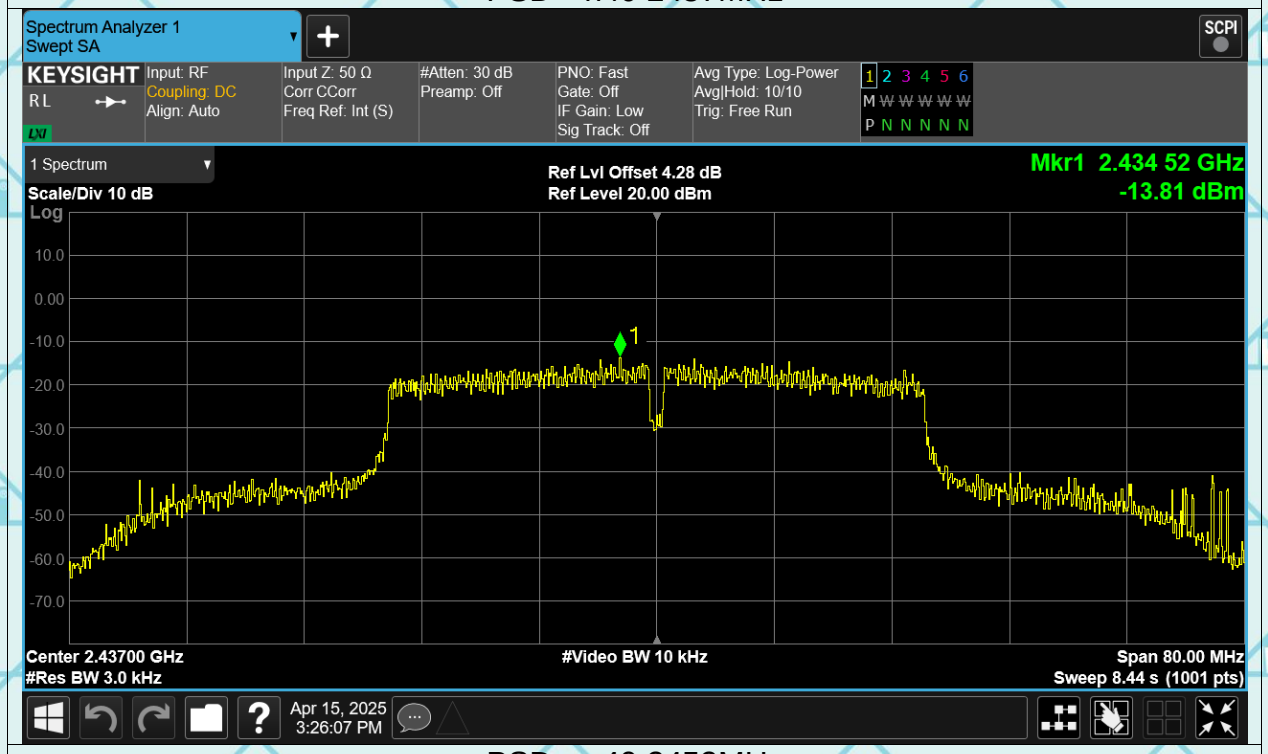
PSD n20 2462MHz



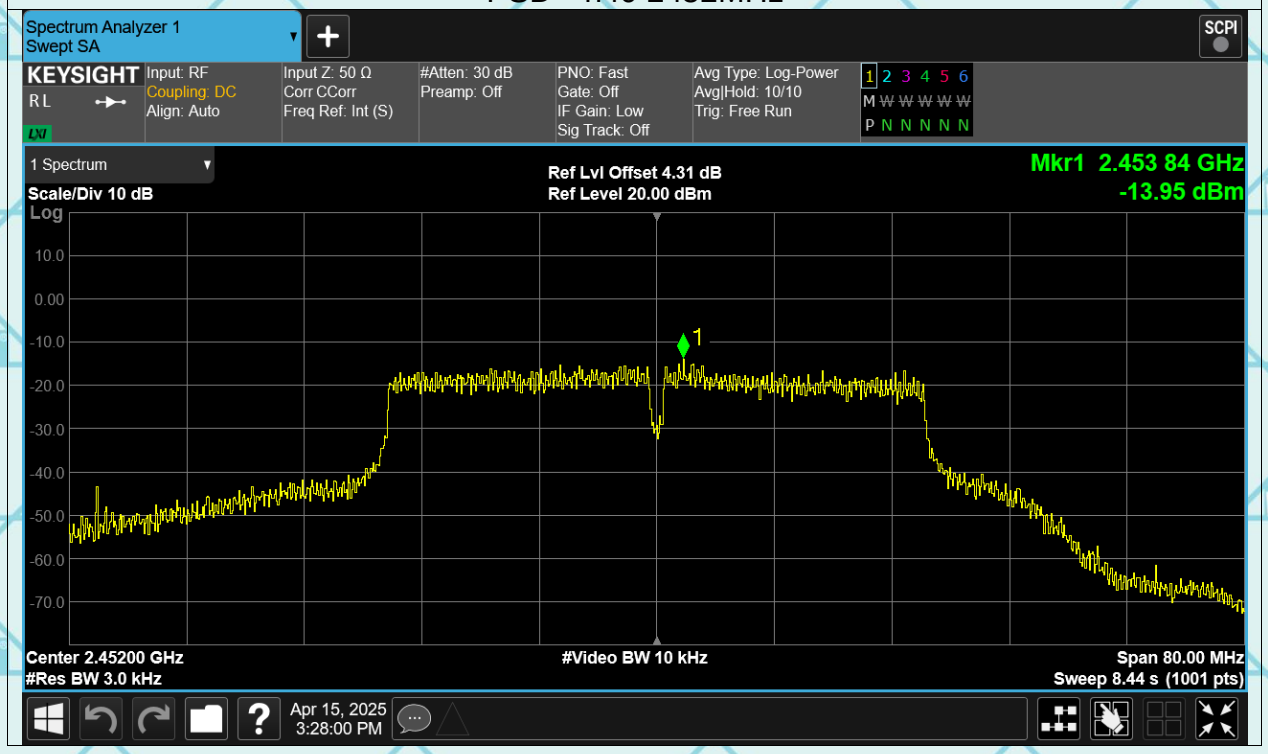
PSD n40 2422MHz



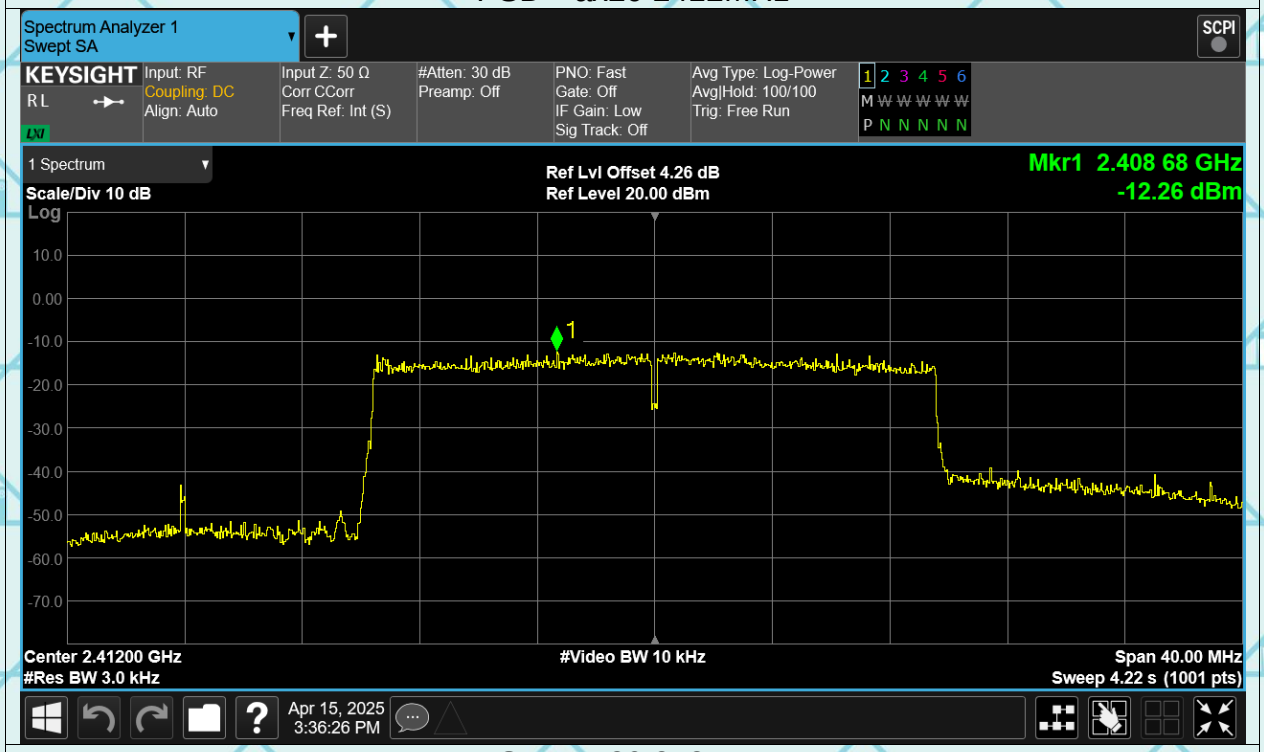
PSD n40 2437MHz



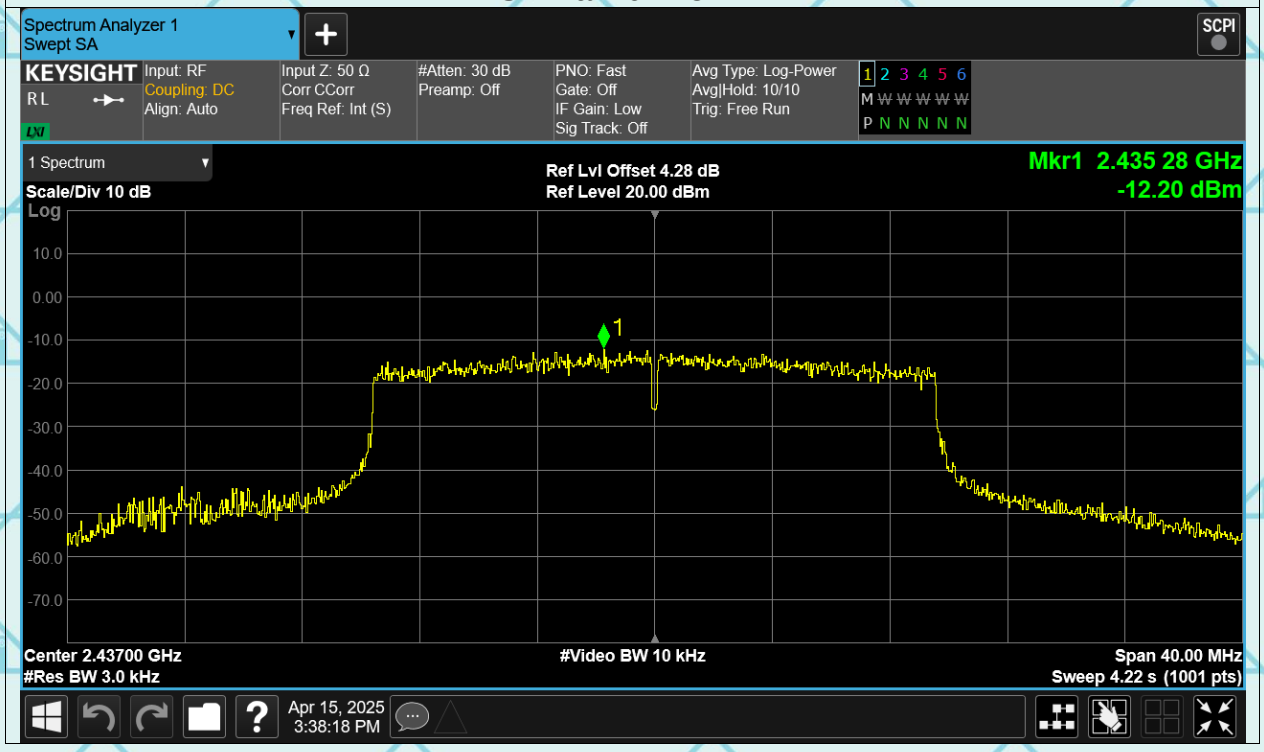
PSD n40 2452MHz



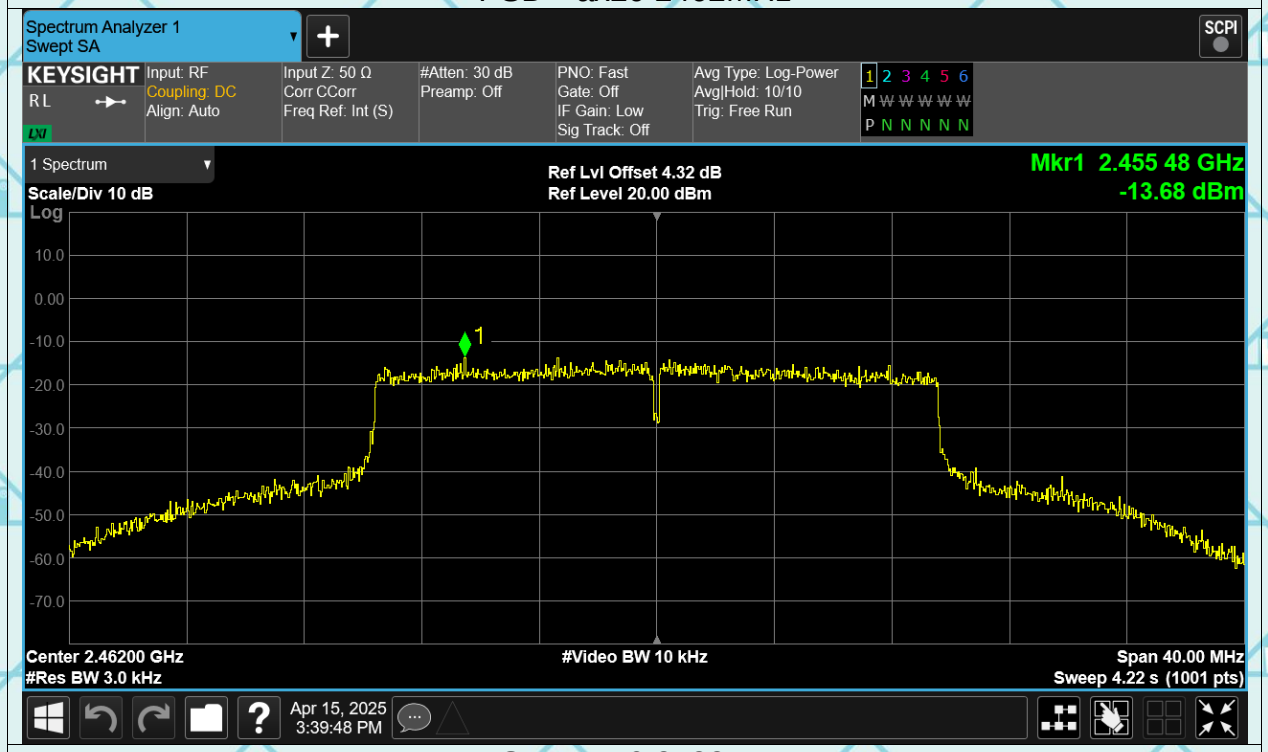
PSD ax20 2412MHz



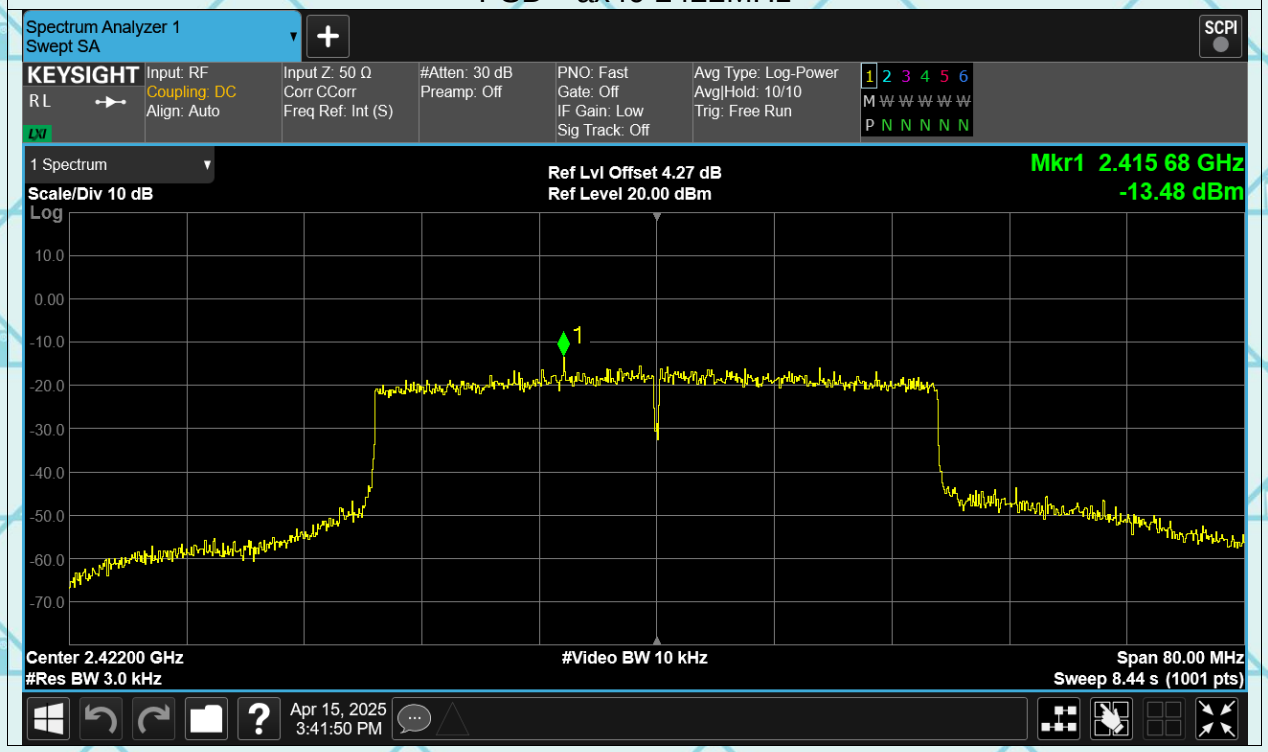
PSD ax20 2437MHz



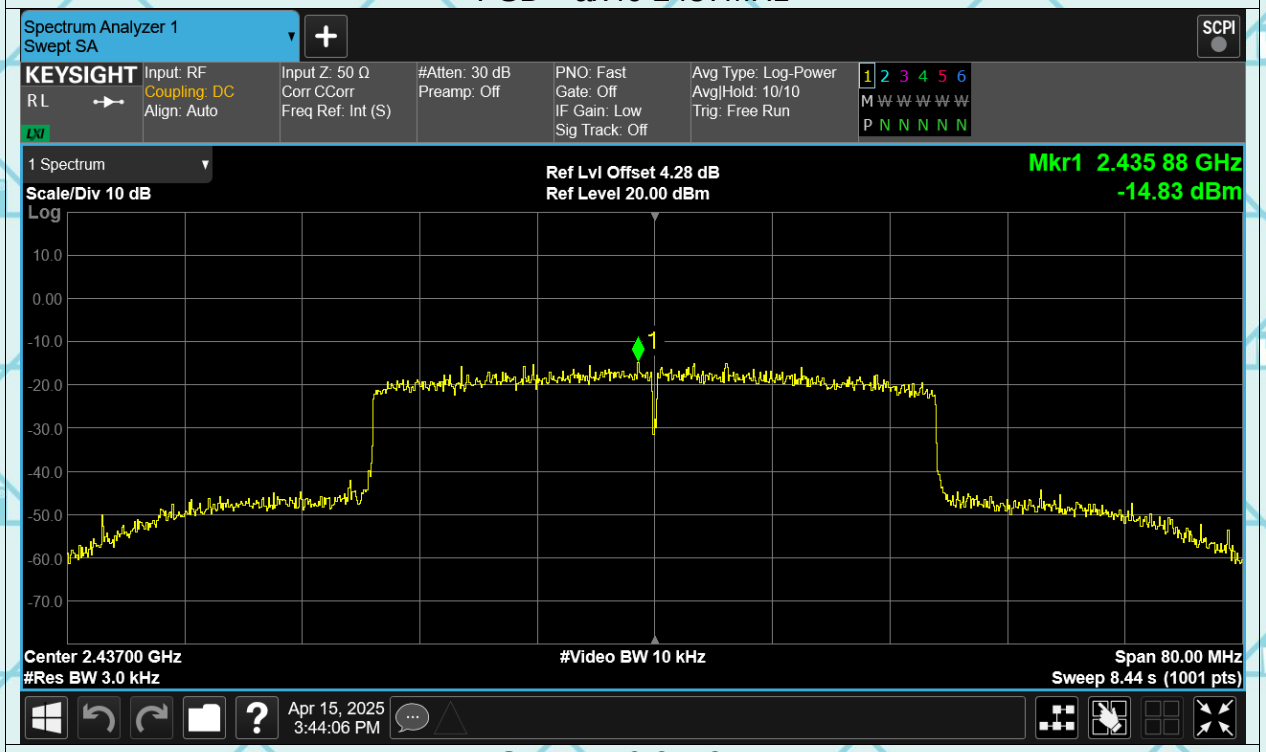
PSD ax20 2462MHz



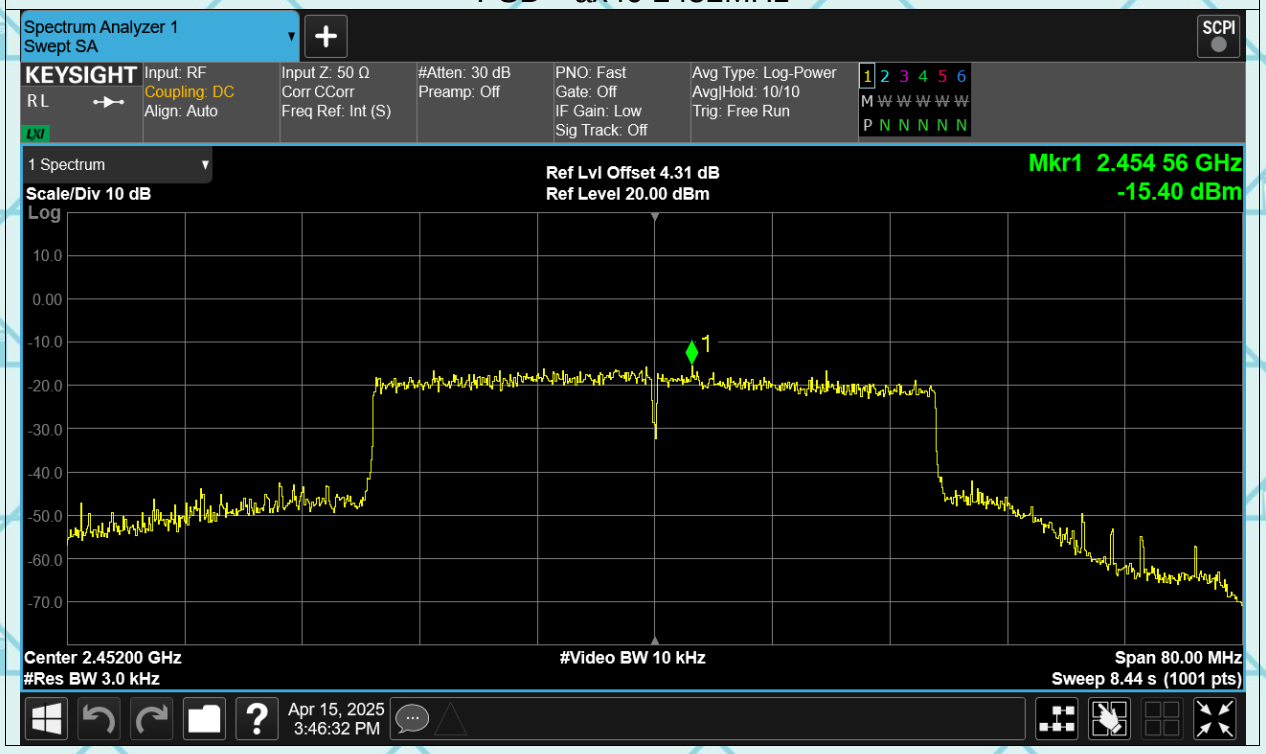
PSD ax40 2422MHz



PSD ax40 2437MHz



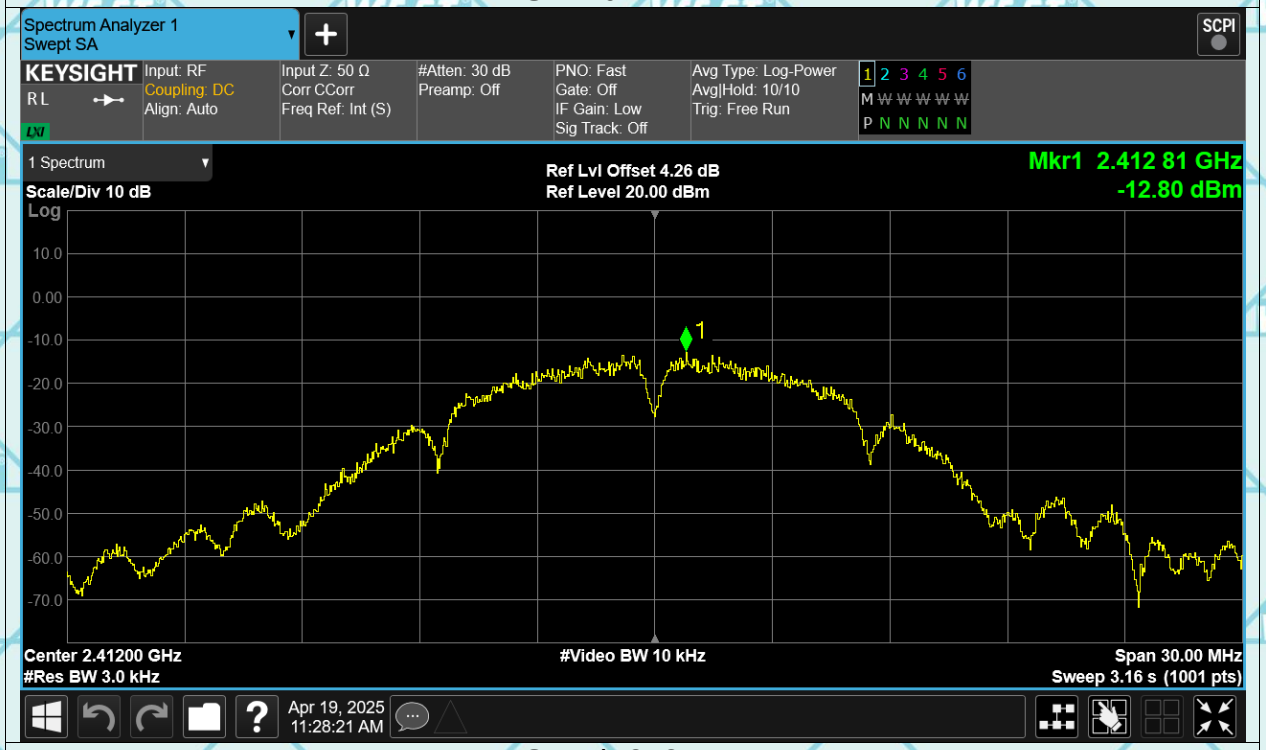
PSD ax40 2452MHz



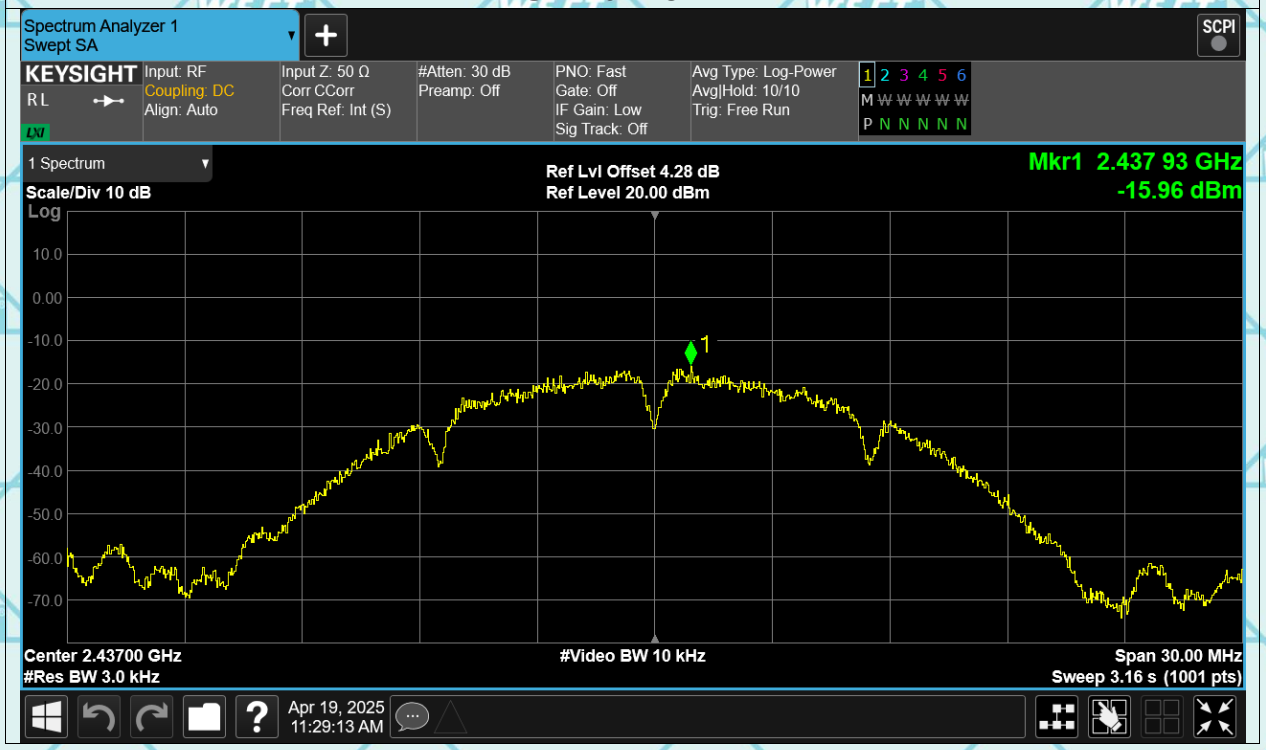
ANT2

Test Graphs

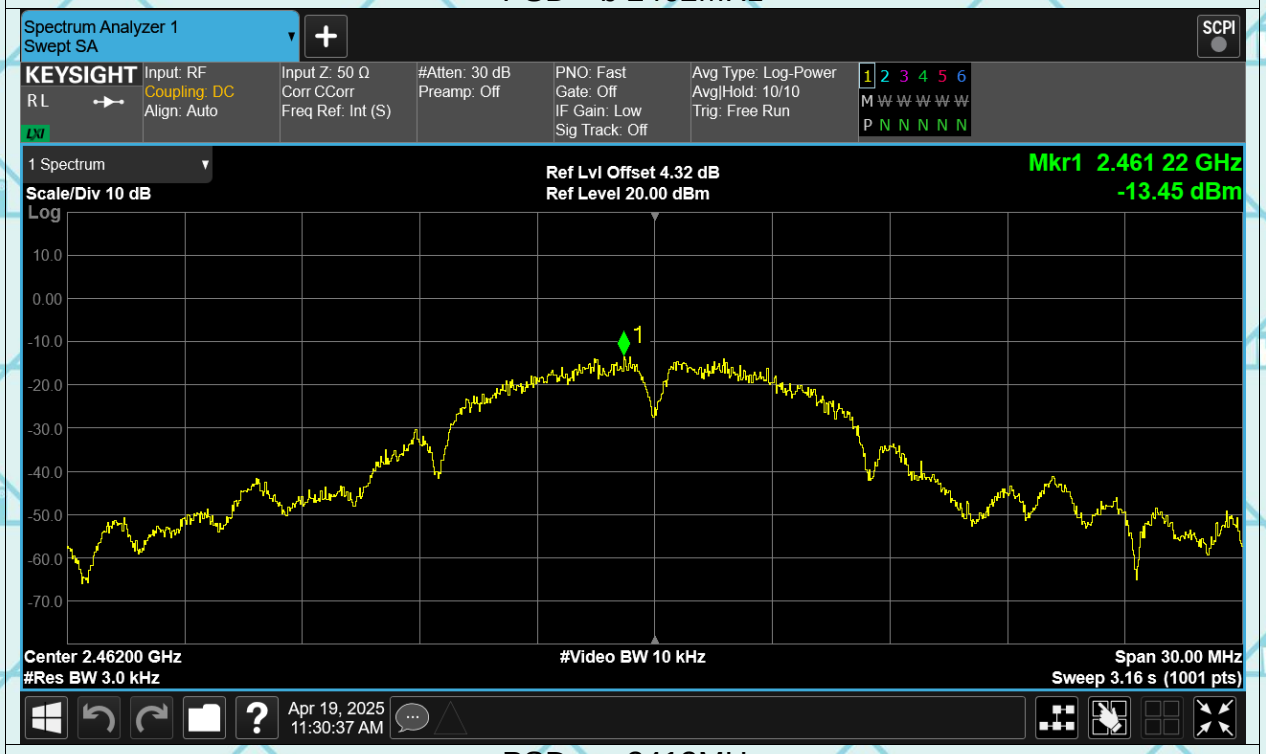
PSD b 2412MHz



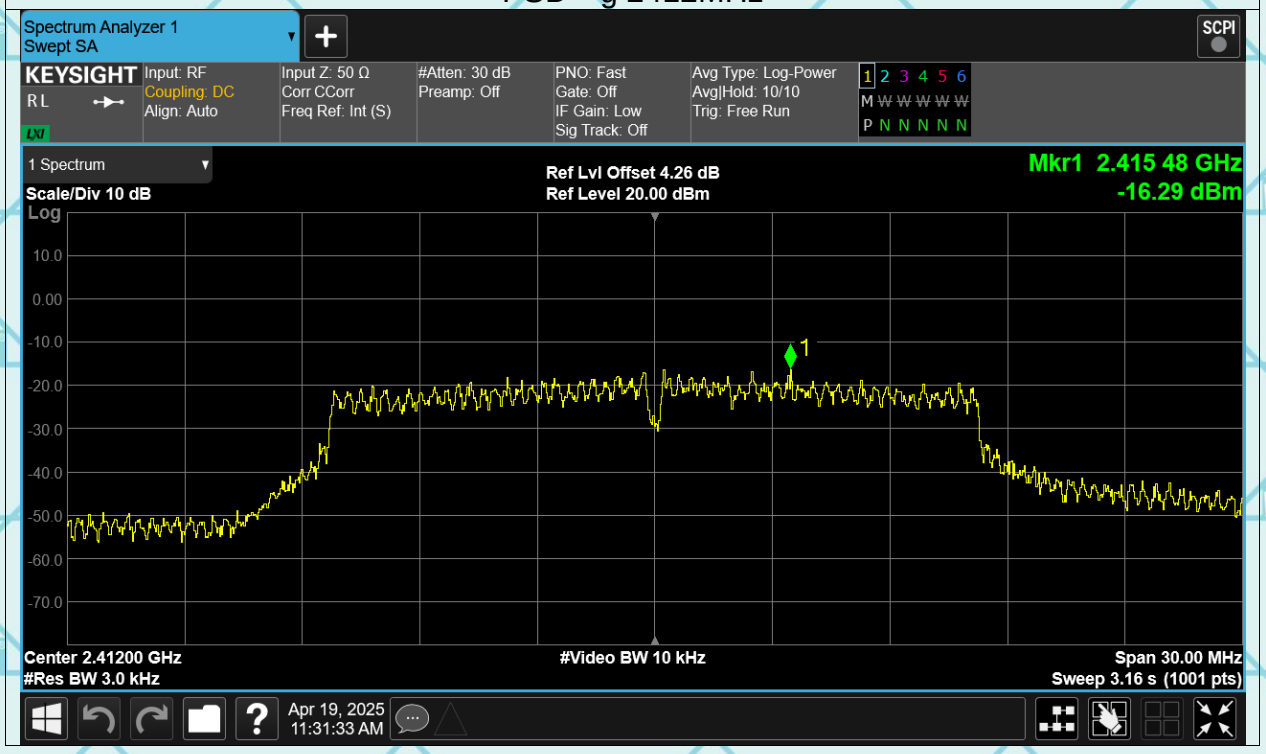
PSD b 2437MHz



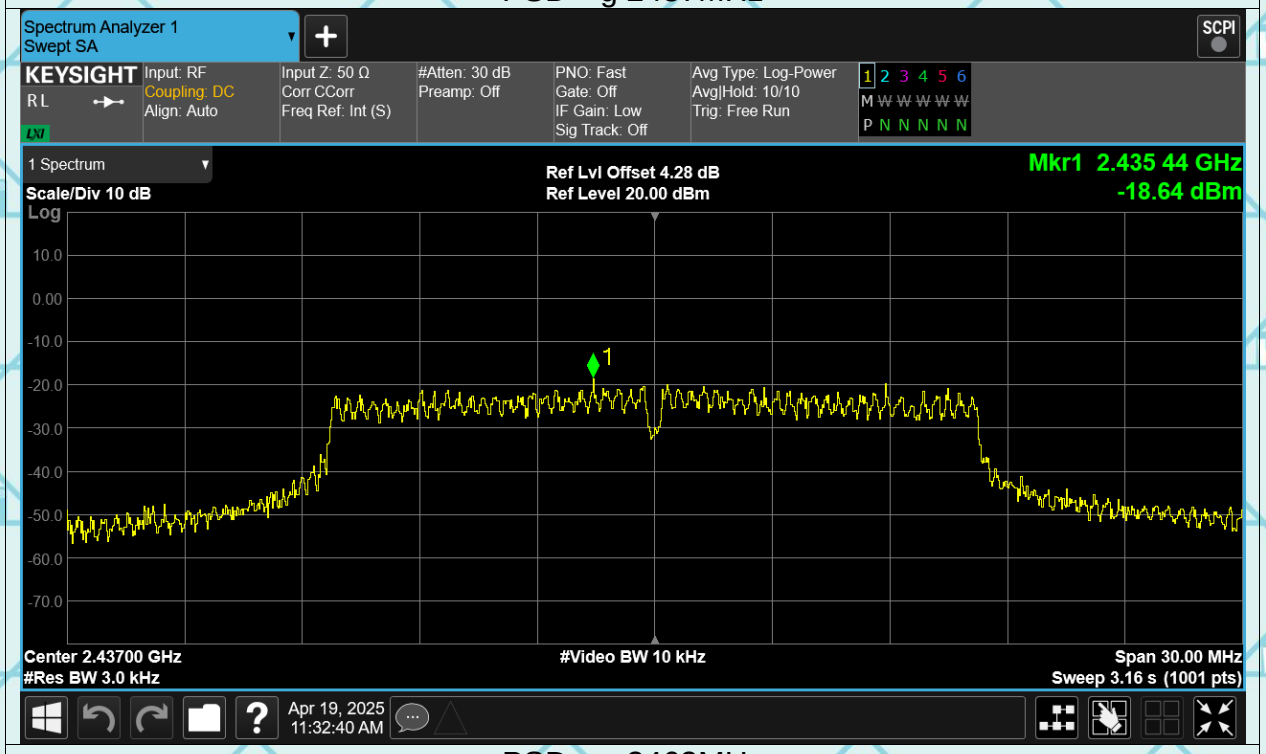
PSD b 2462MHz



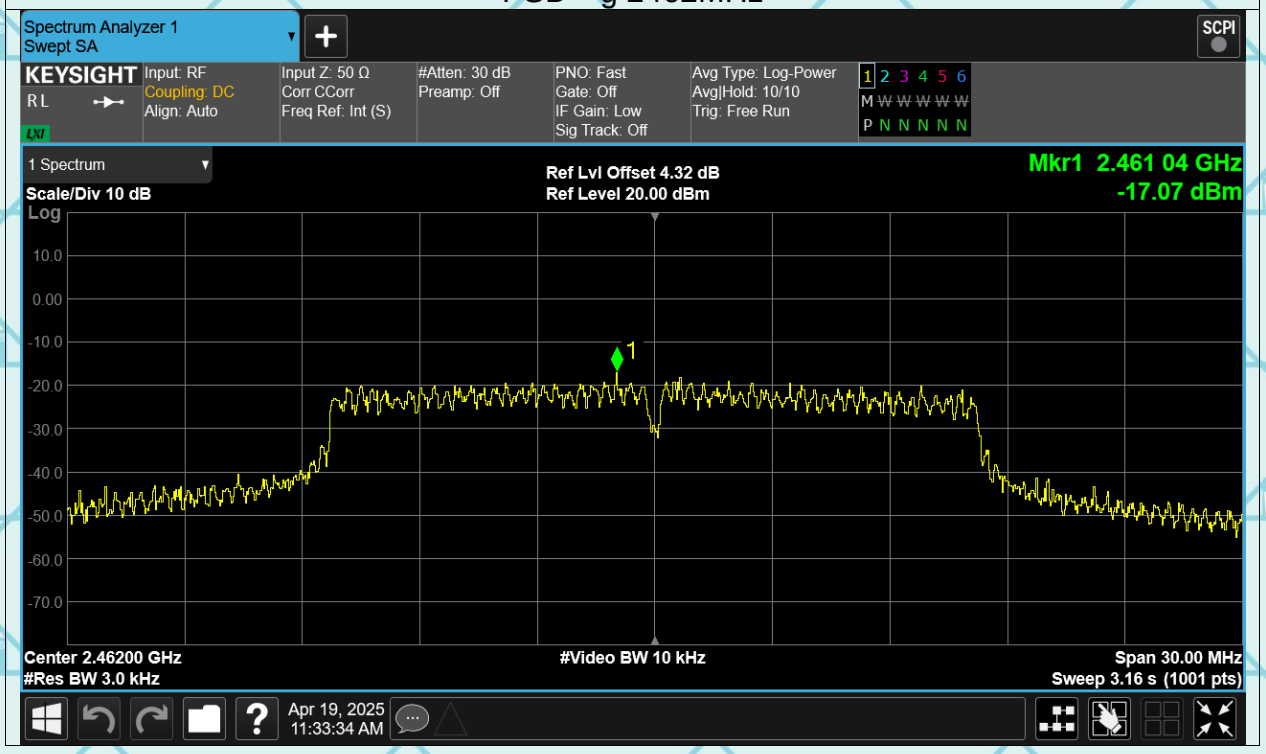
PSD g 2412MHz



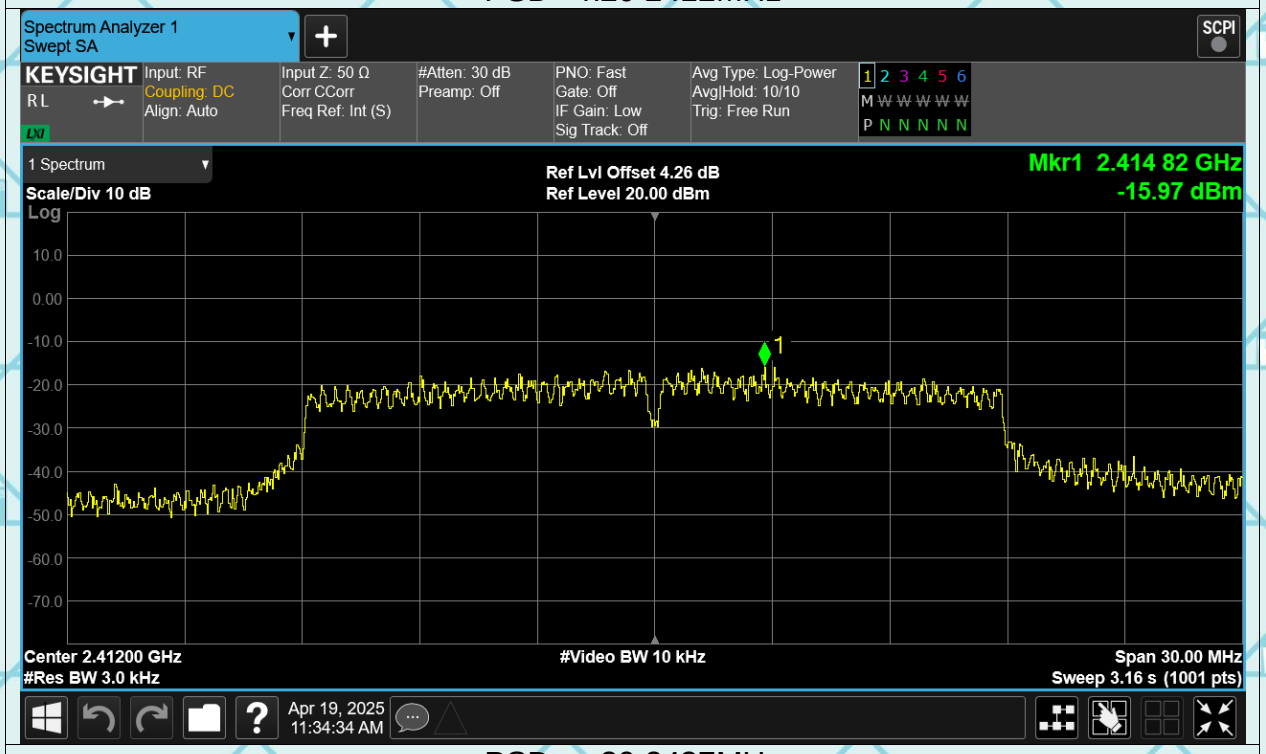
PSD g 2437MHz



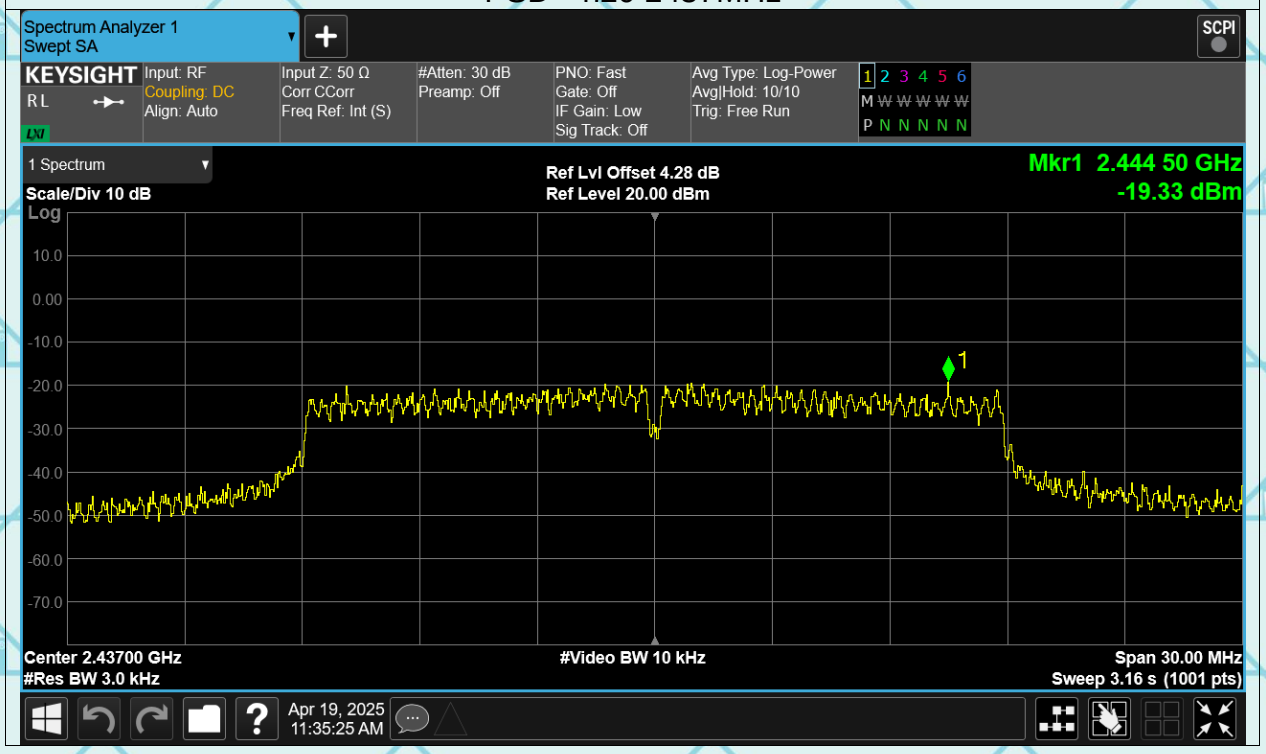
PSD g 2462MHz



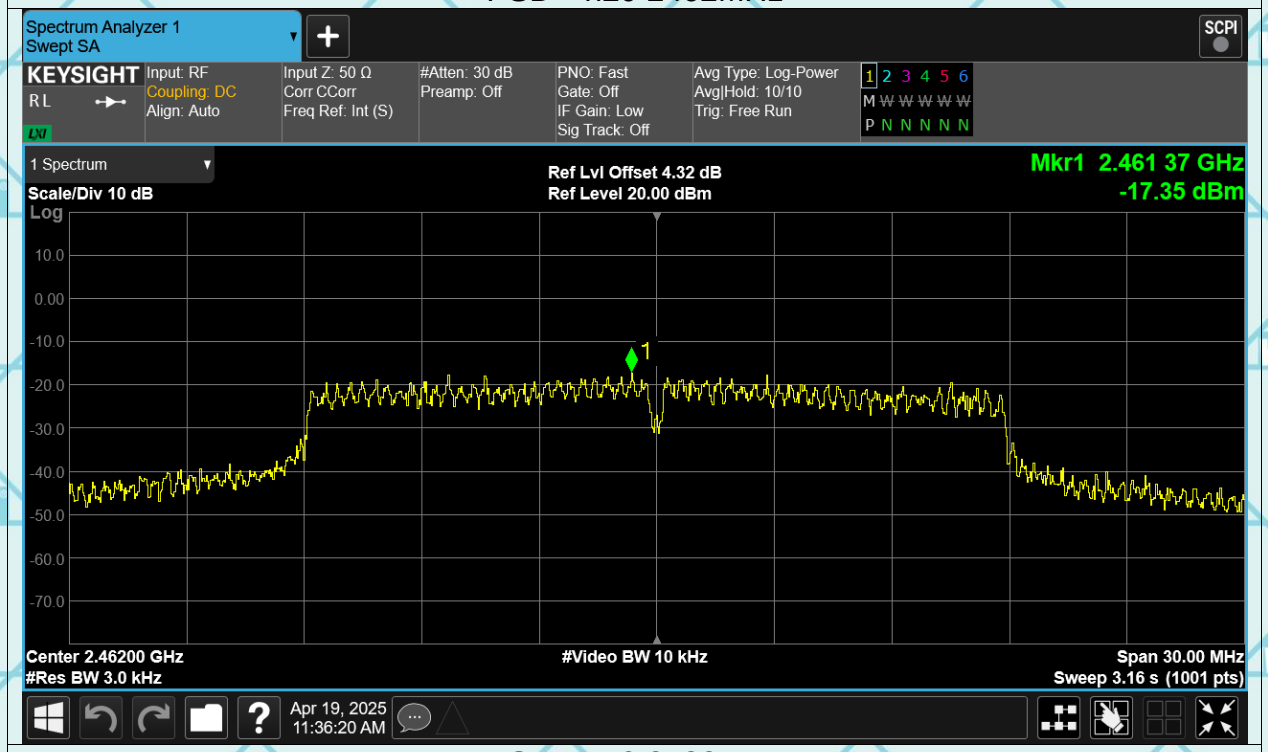
PSD n20 2412MHz



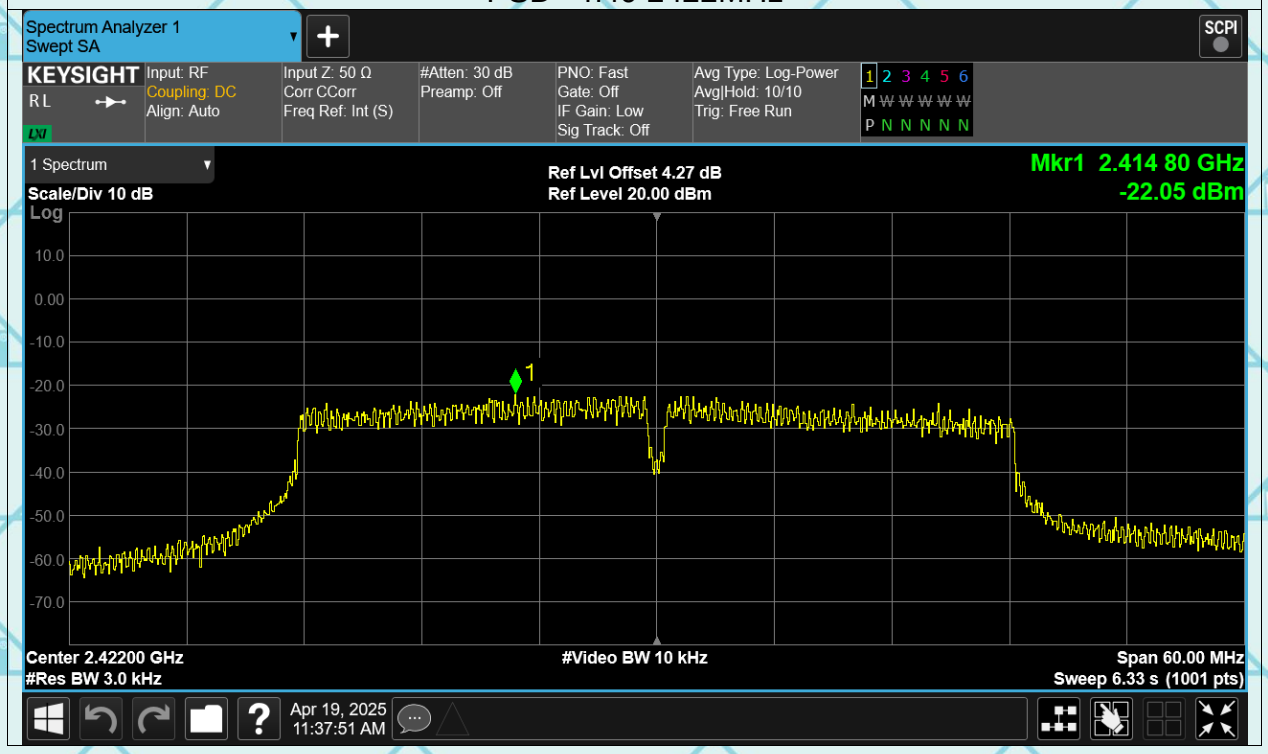
PSD n20 2437MHz



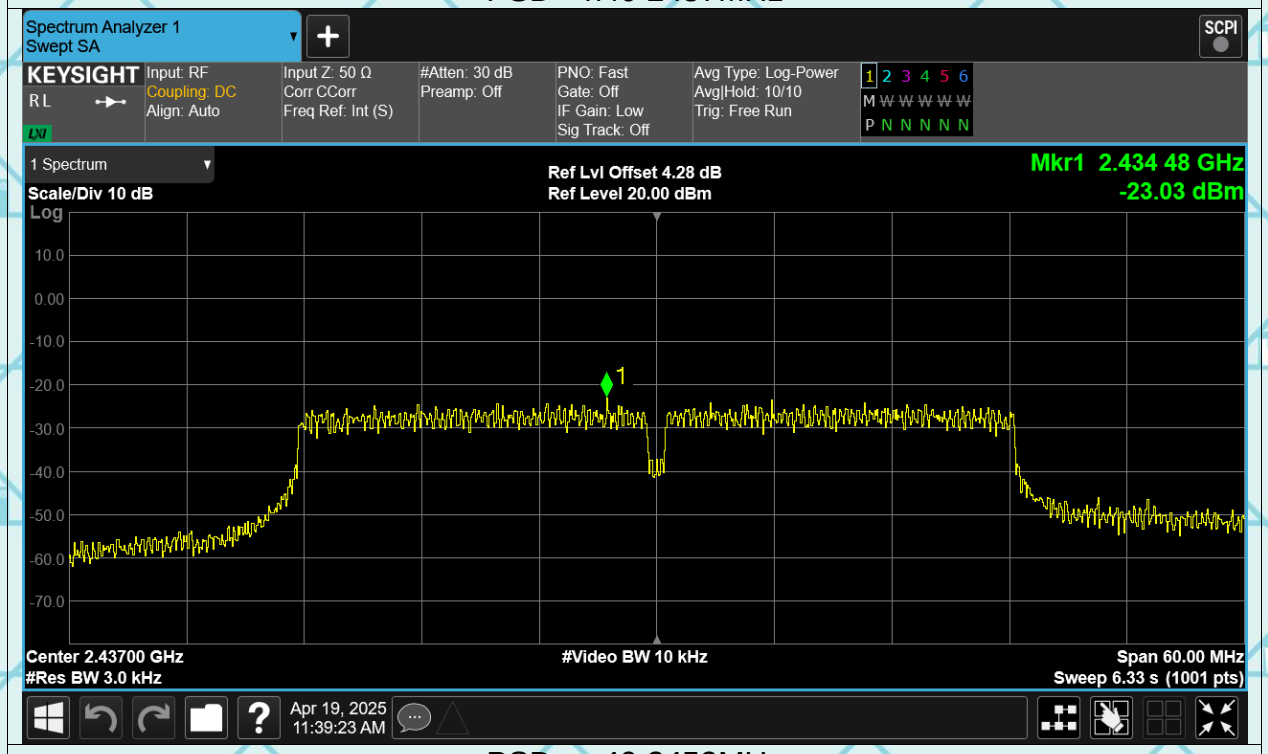
PSD n20 2462MHz



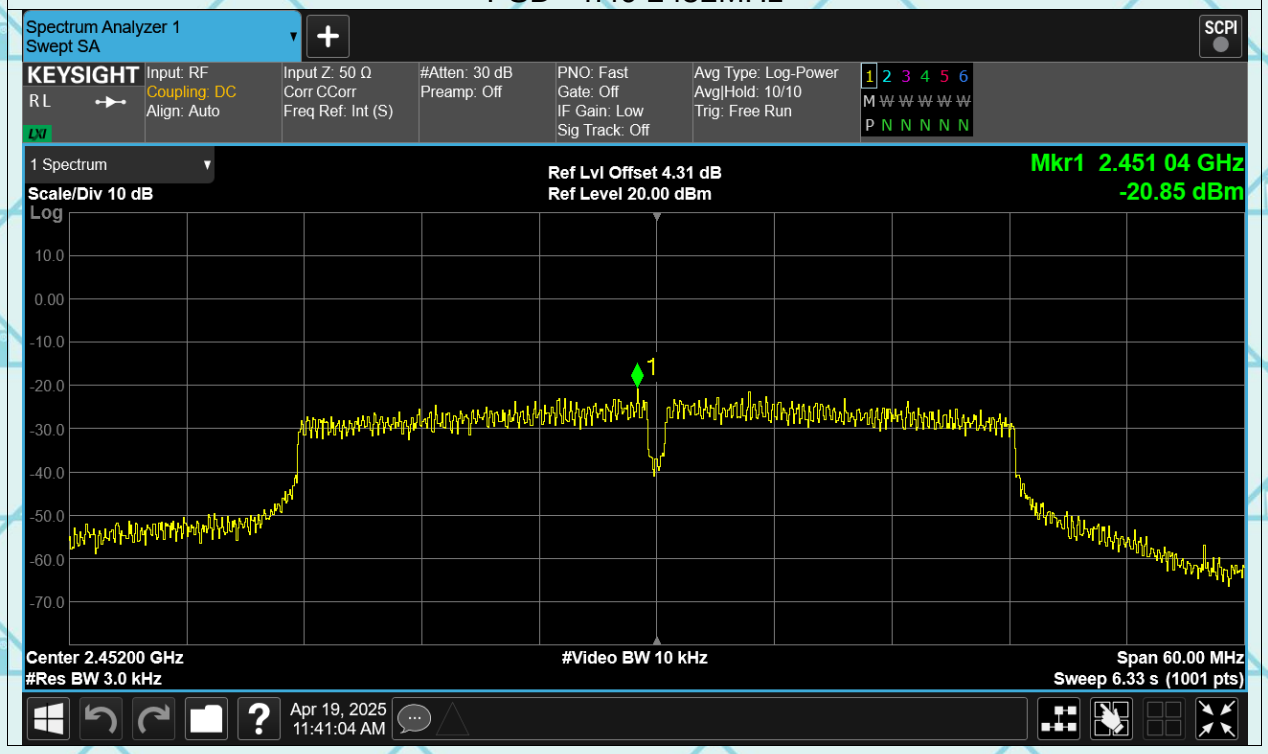
PSD n40 2422MHz



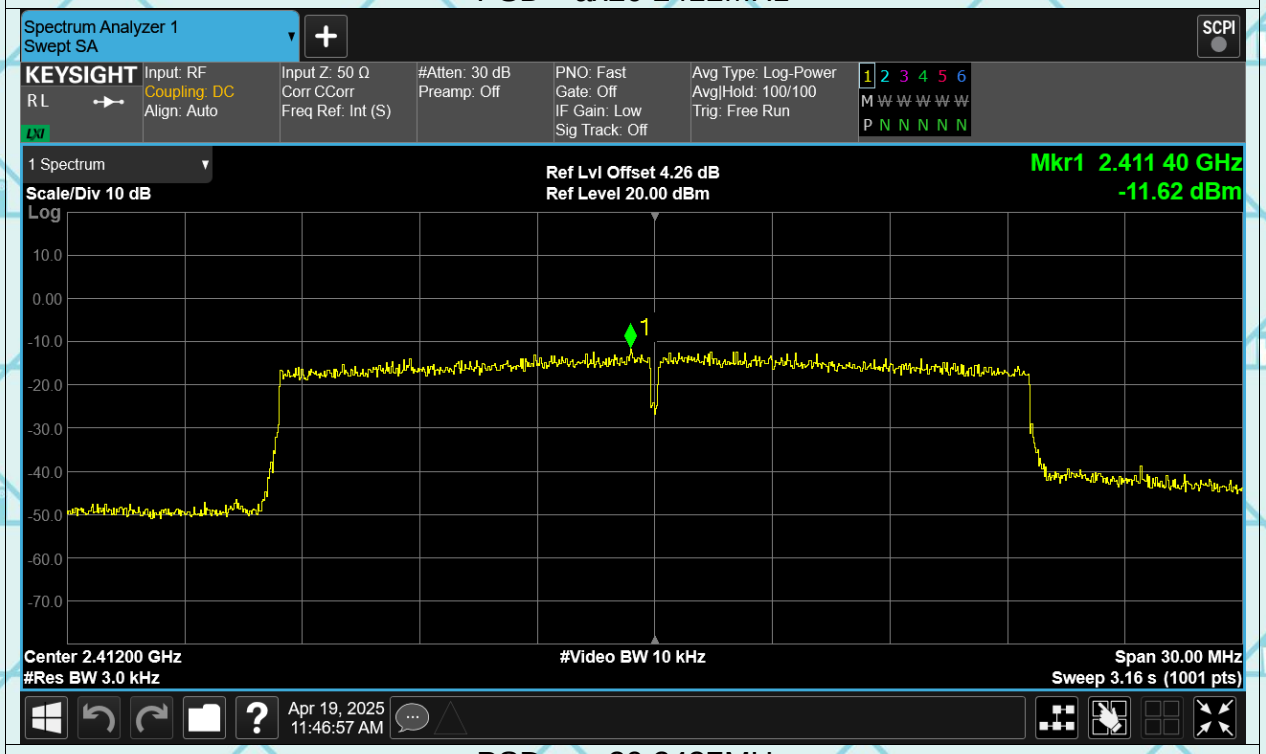
PSD n40 2437MHz



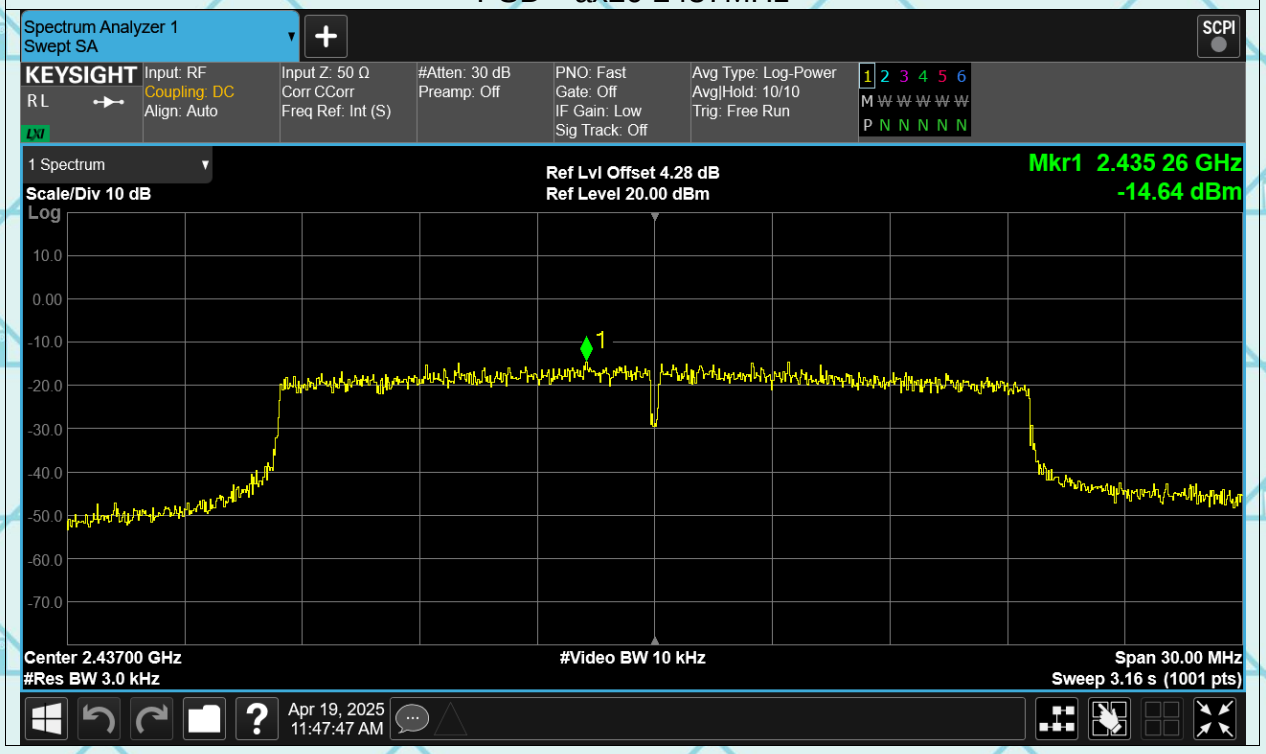
PSD n40 2452MHz



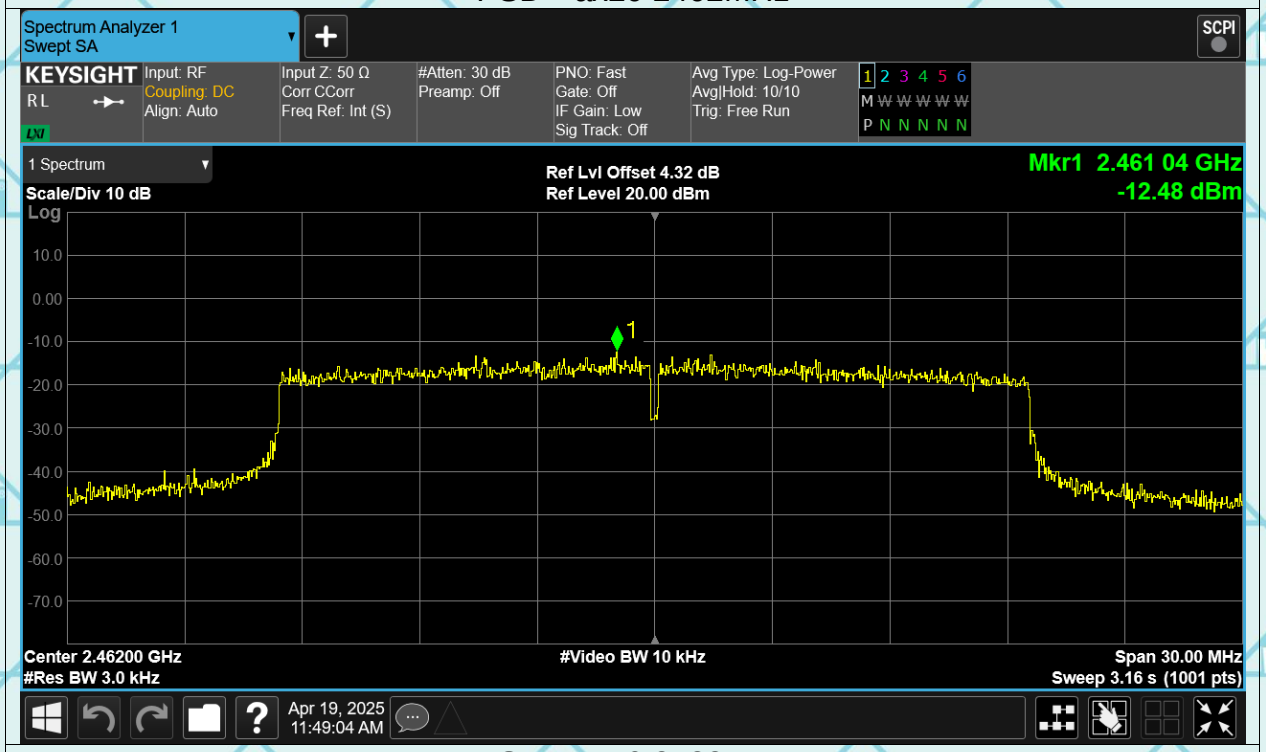
PSD ax20 2412MHz



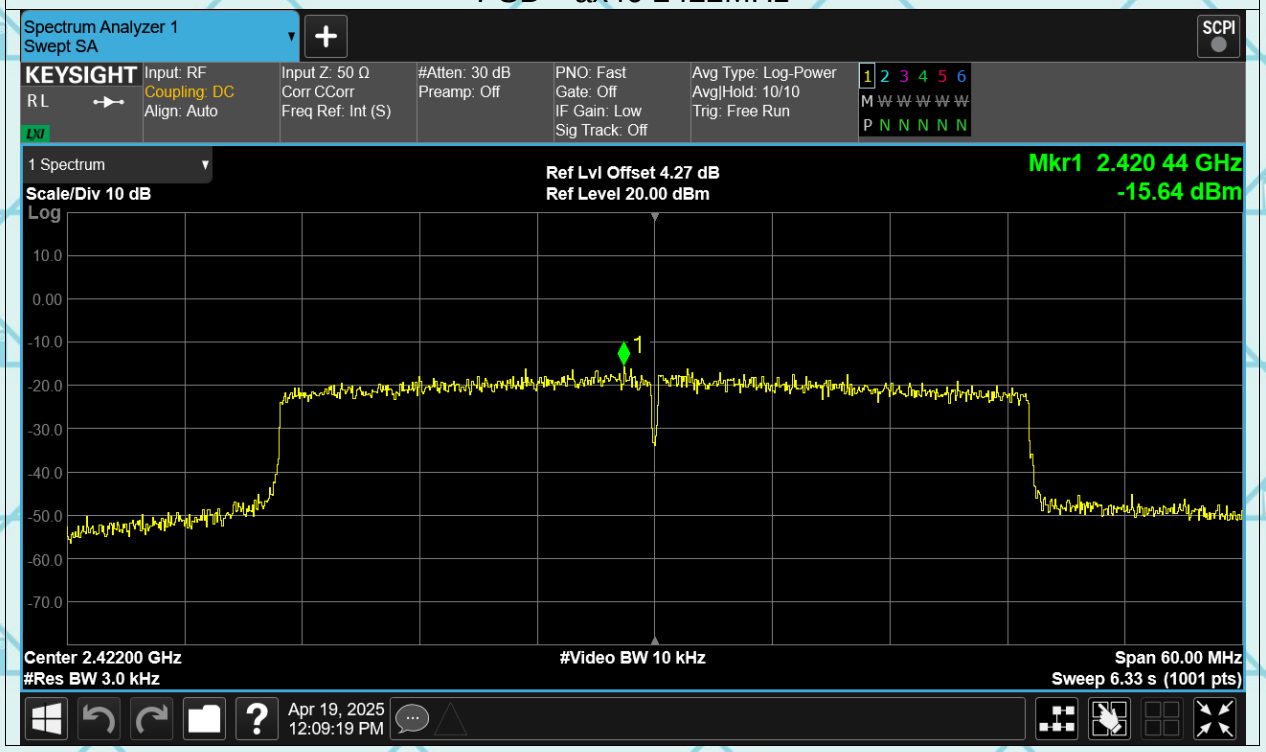
PSD ax20 2437MHz



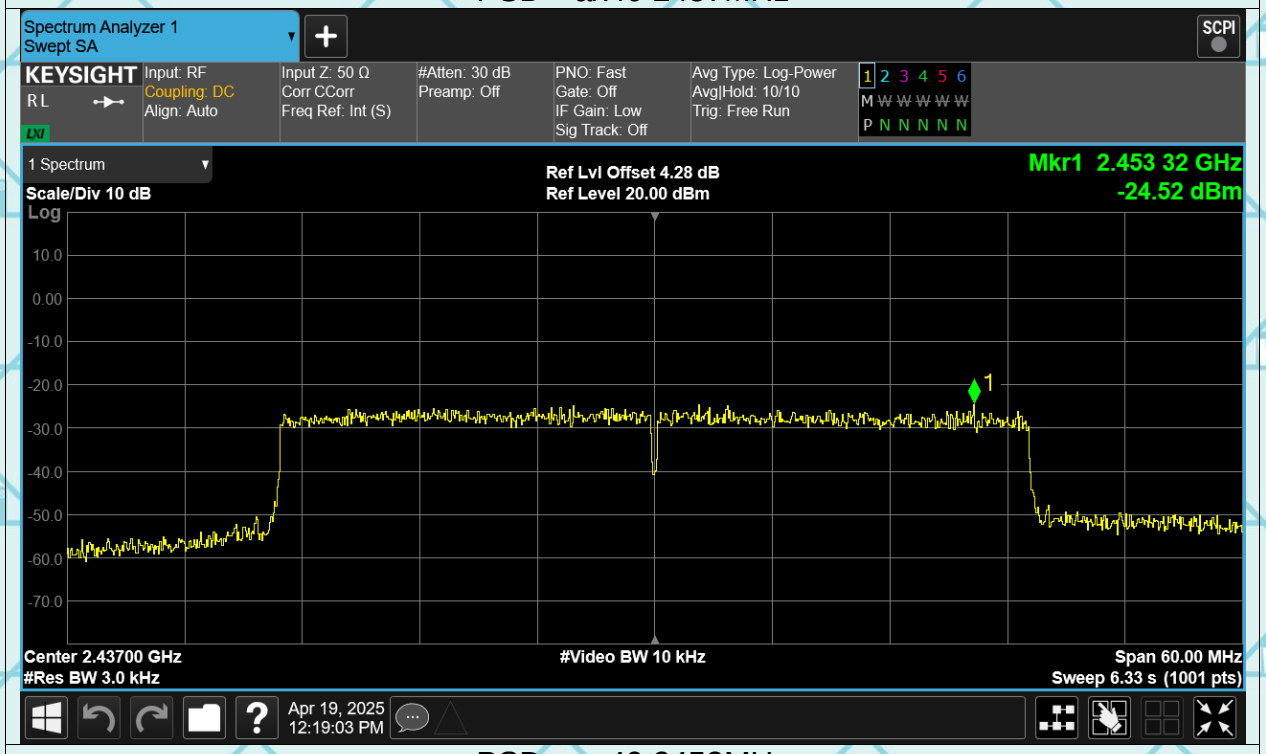
PSD ax20 2462MHz



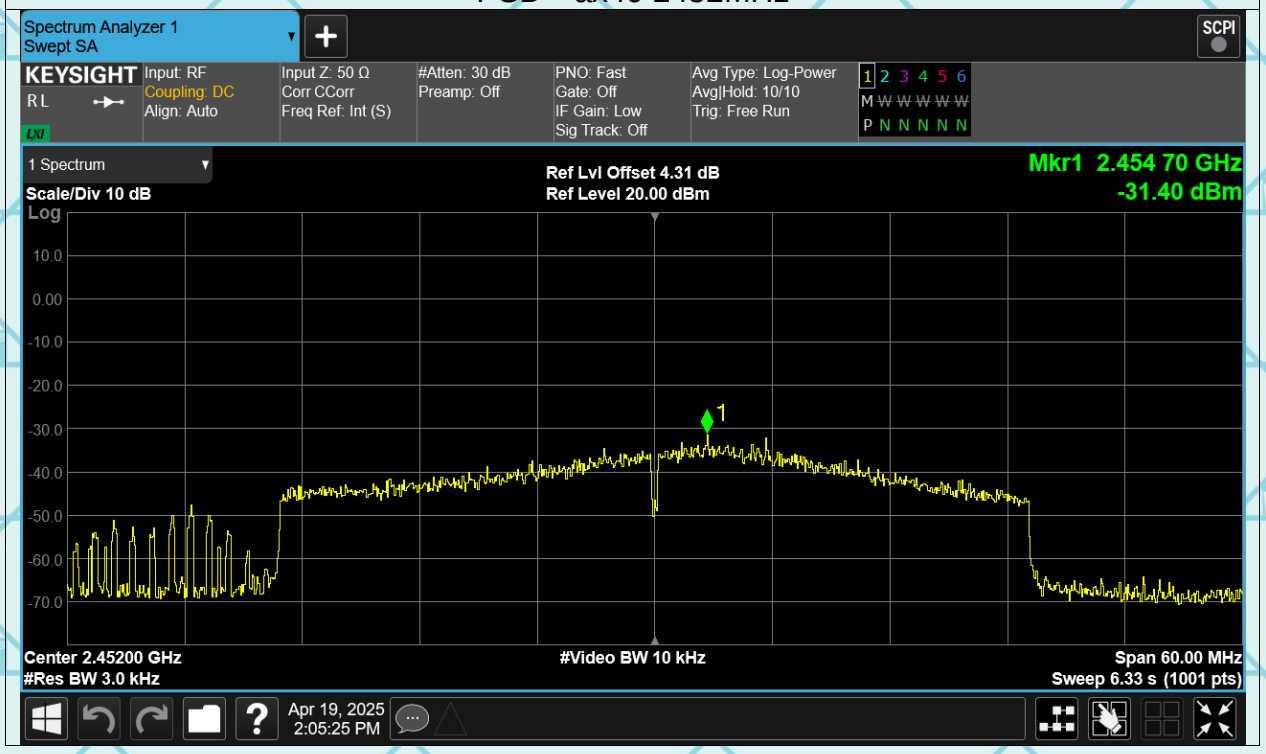
PSD ax40 2422MHz



PSD ax40 2437MHz

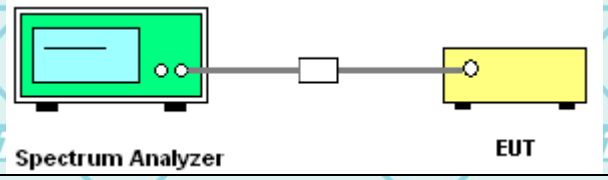


PSD ax40 2452MHz



6.6. Conducted Band Edge and Spurious Emission Measurement

6.6.1. Test Specification

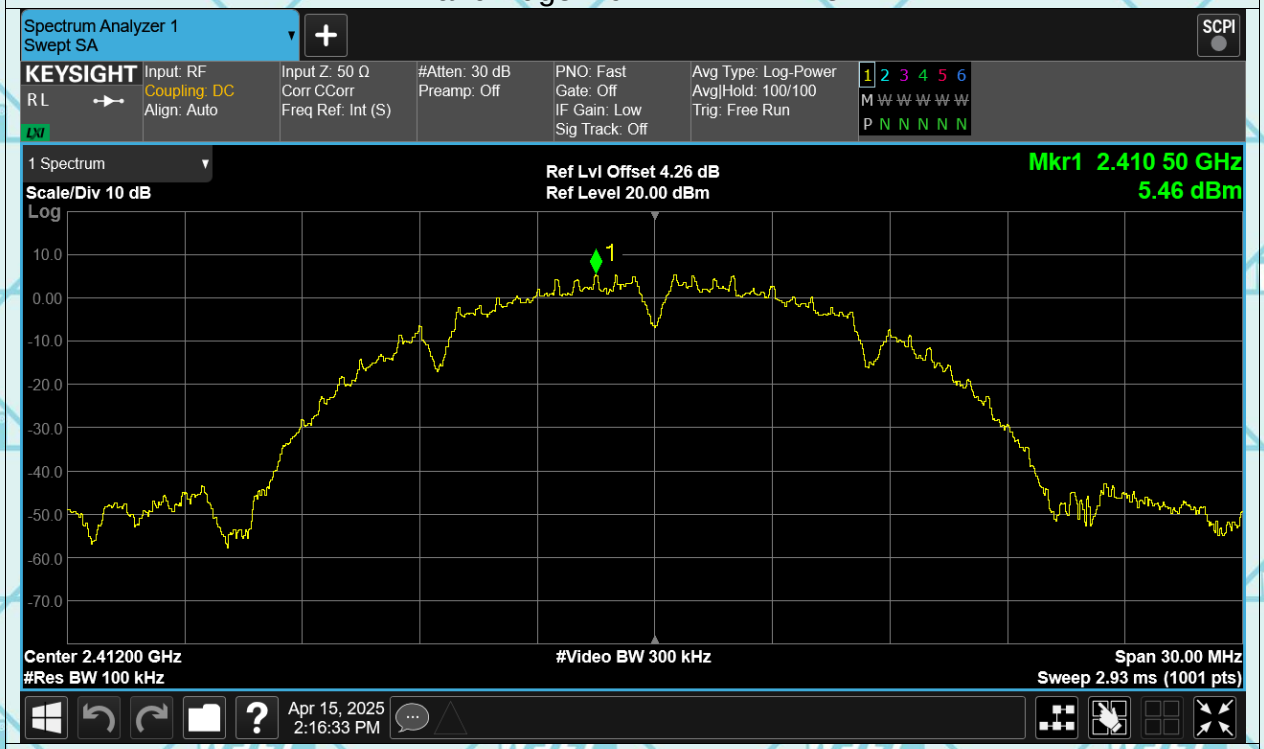
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	KDB558074
Limit:	In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04. 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d). 5. Measure and record the results in the test report. 6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
Test Result:	PASS

Test Data

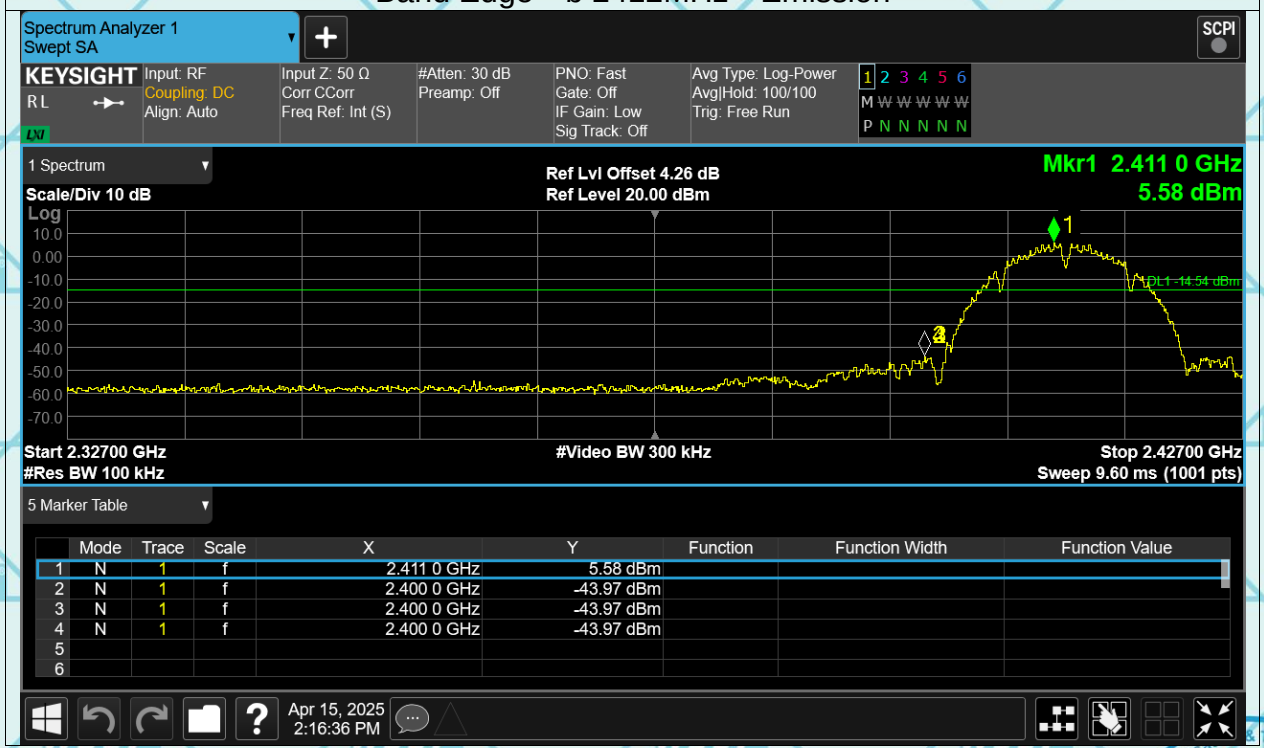
Band Edge

Test Graphs

Band Edge b 2412MHz Ref

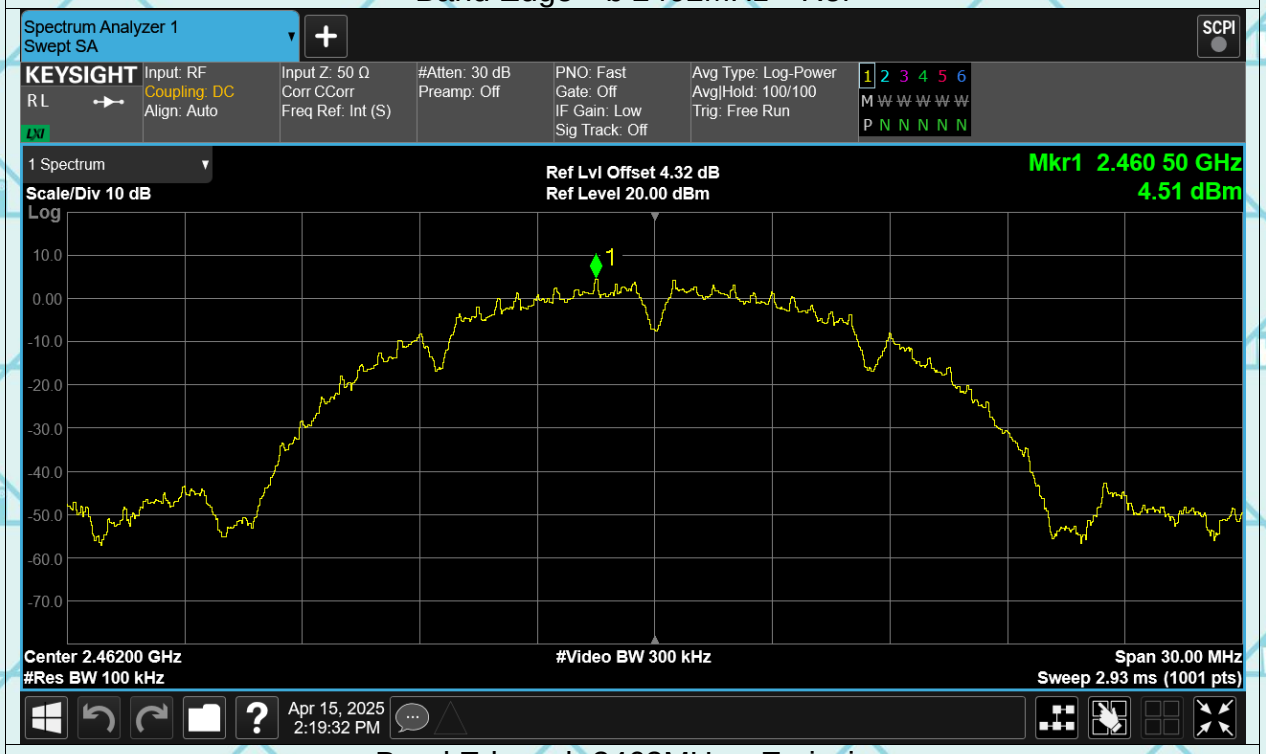


Band Edge b 2412MHz Emission

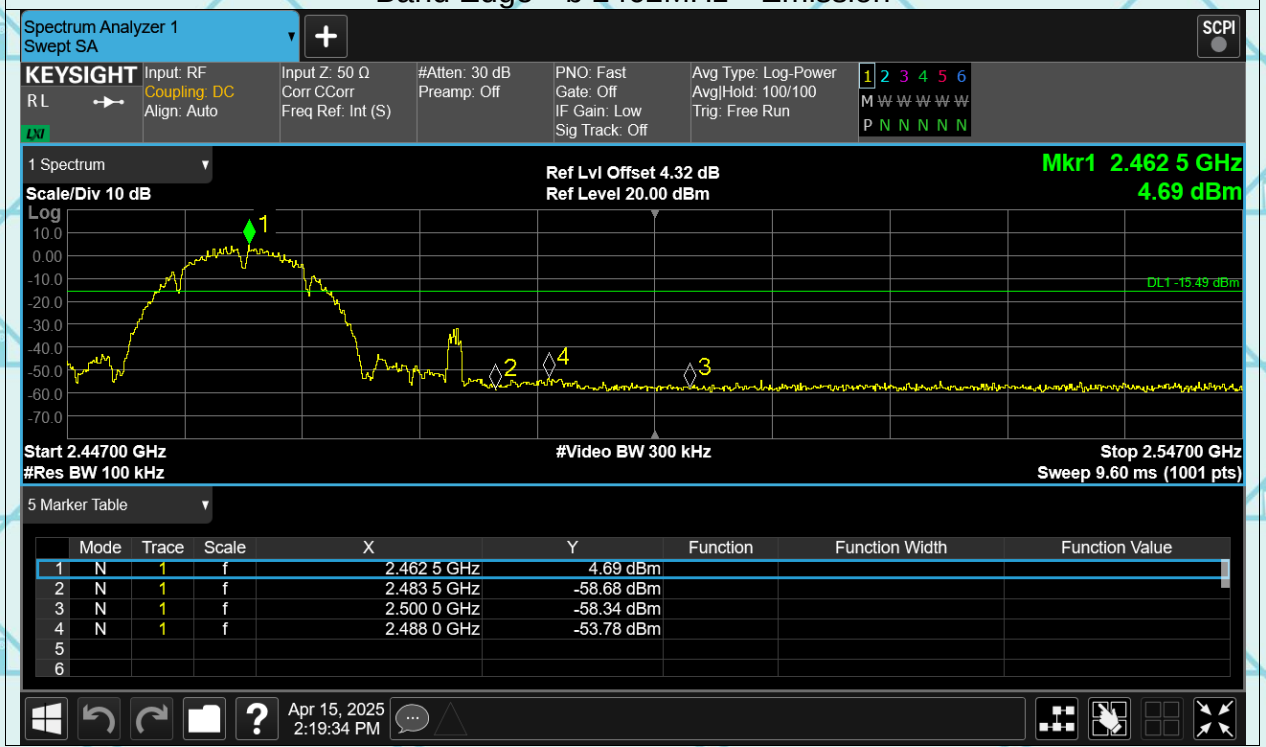


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.411 0 GHz	5.58 dBm			
2	N	1	f	2.400 0 GHz	-43.97 dBm			
3	N	1	f	2.400 0 GHz	-43.97 dBm			
4	N	1	f	2.400 0 GHz	-43.97 dBm			
5								
6								

Band Edge b 2462MHz Ref

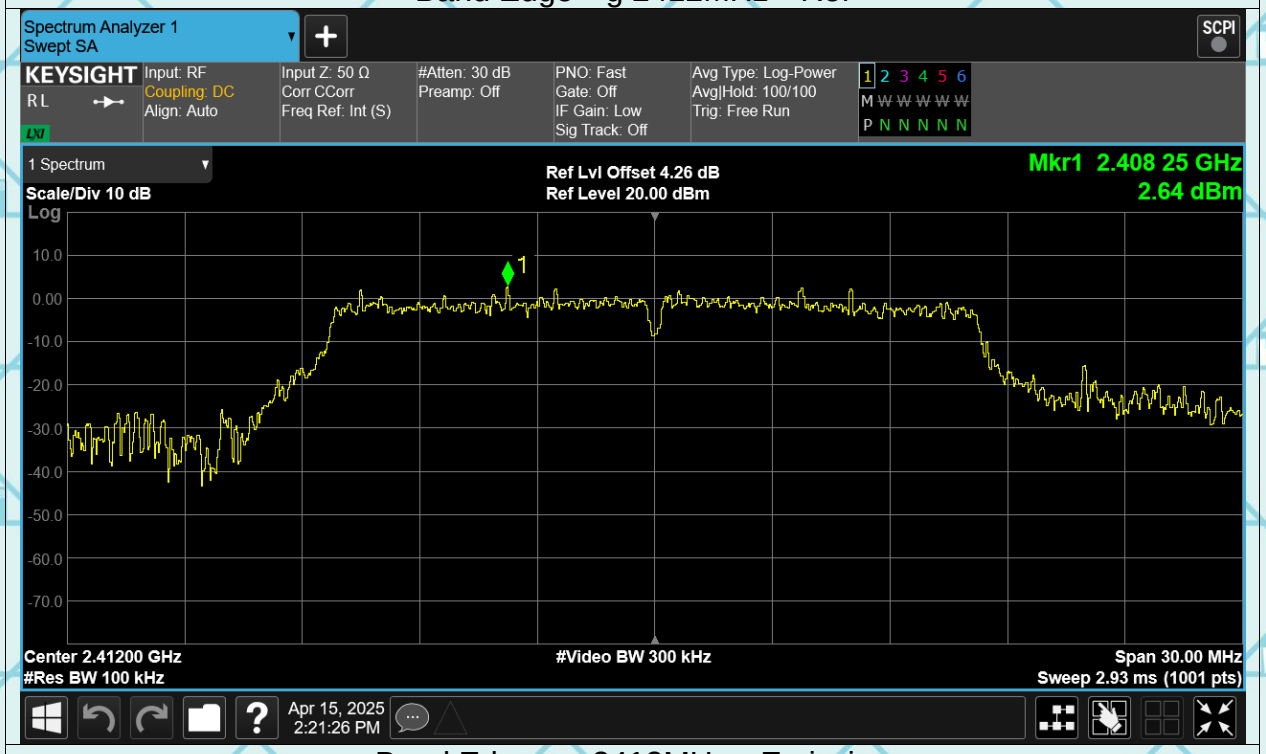


Band Edge b 2462MHz Emission

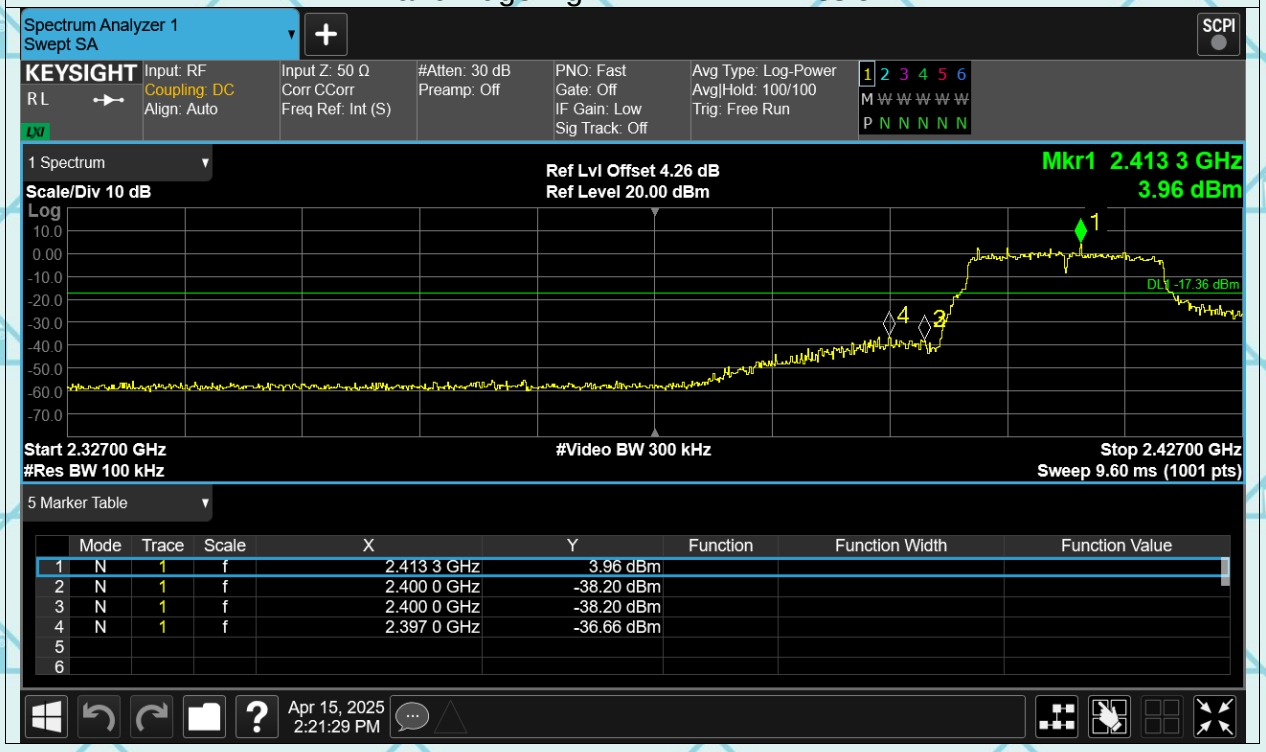


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.462 5 GHz	4.69 dBm			
2	N	1	f	2.483 5 GHz	-58.68 dBm			
3	N	1	f	2.500 0 GHz	-58.34 dBm			
4	N	1	f	2.488 0 GHz	-53.78 dBm			
5								
6								

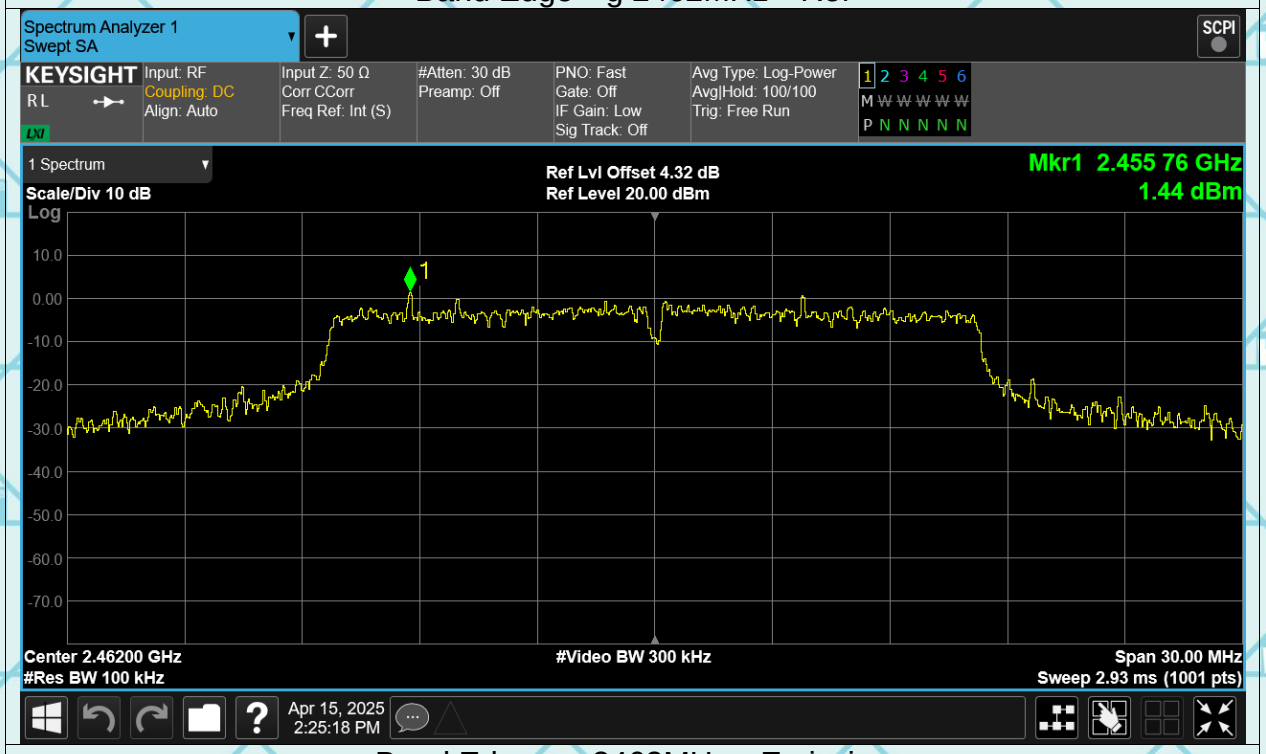
Band Edge g 2412MHz Ref



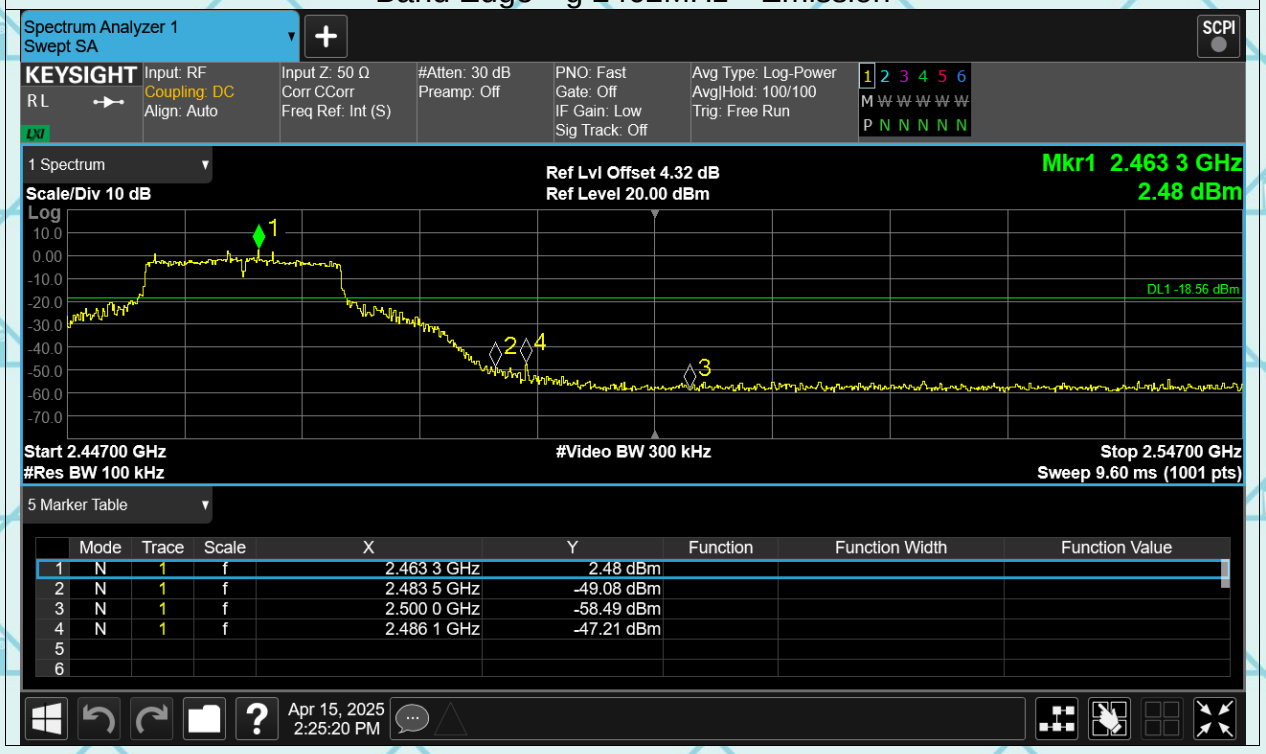
Band Edge g 2412MHz Emission



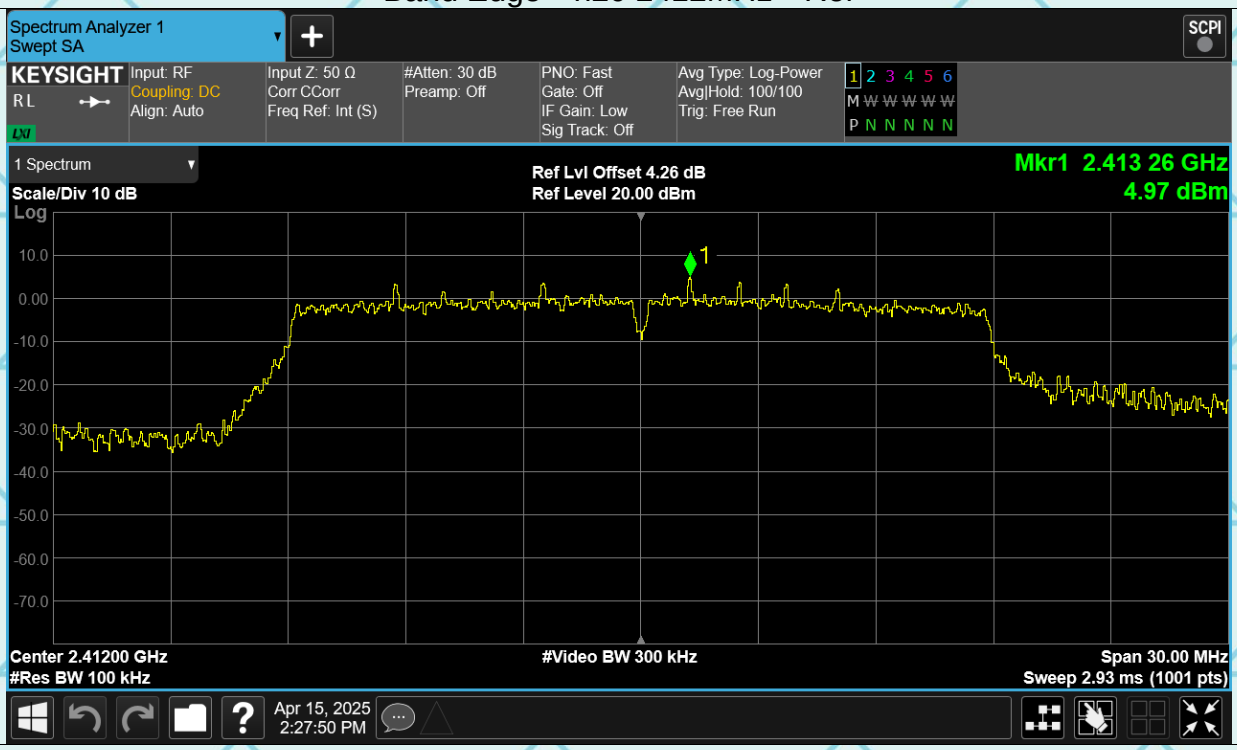
Band Edge g 2462MHz Ref



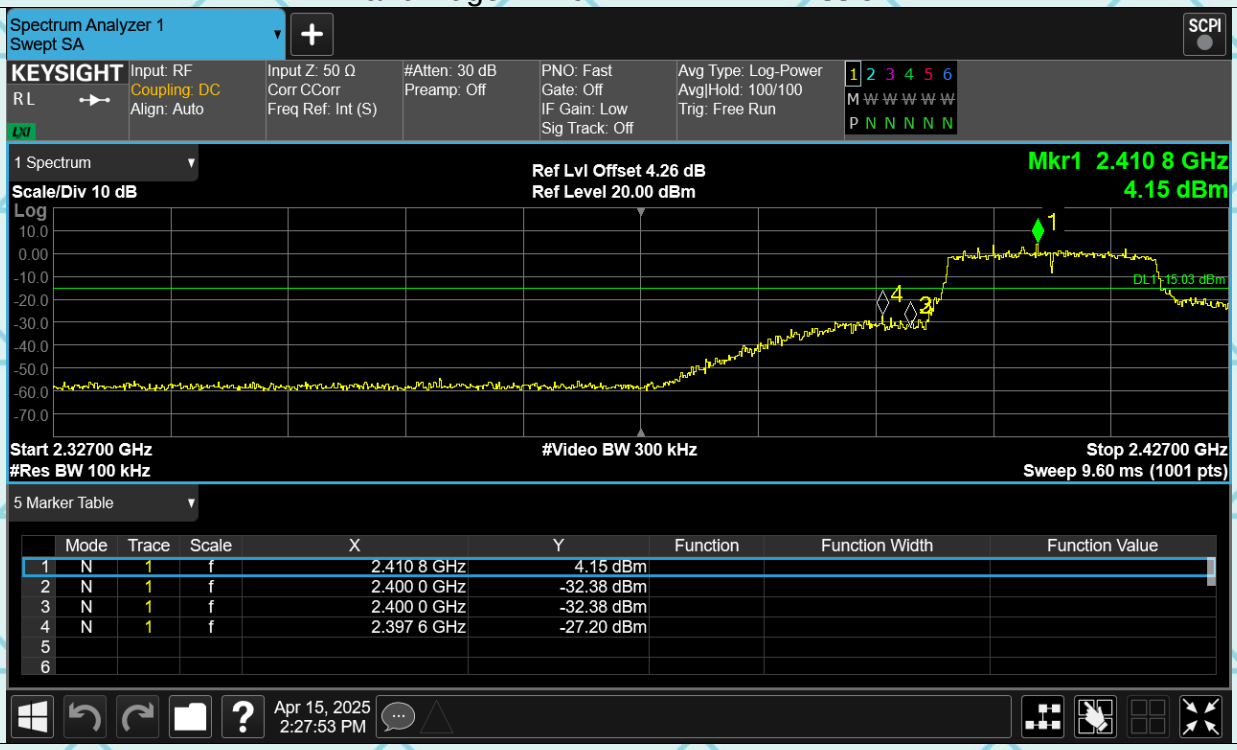
Band Edge g 2462MHz Emission



Band Edge n20 2412MHz Ref

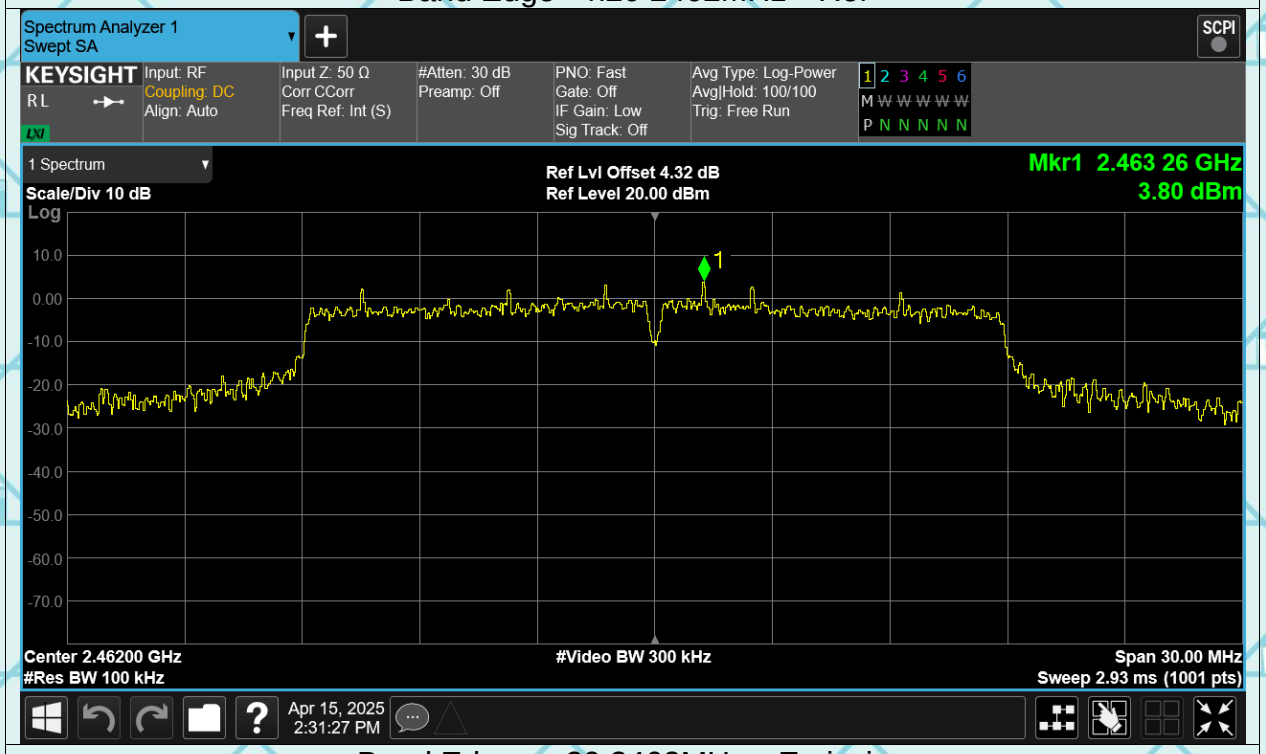


Band Edge n20 2412MHz Emission

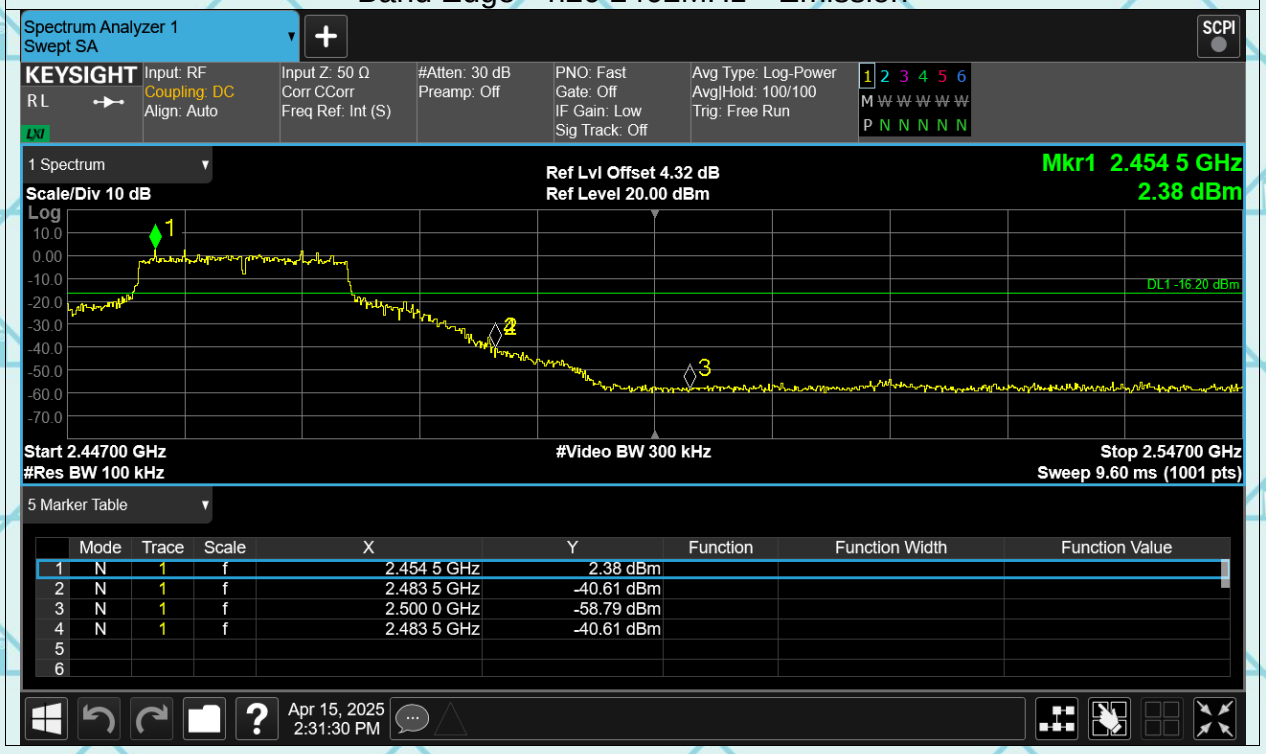


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.410 8 GHz	4.15 dBm			
2	N	1	f	2.400 0 GHz	-32.38 dBm			
3	N	1	f	2.400 0 GHz	-32.38 dBm			
4	N	1	f	2.397 6 GHz	-27.20 dBm			
5								
6								

Band Edge n20 2462MHz Ref

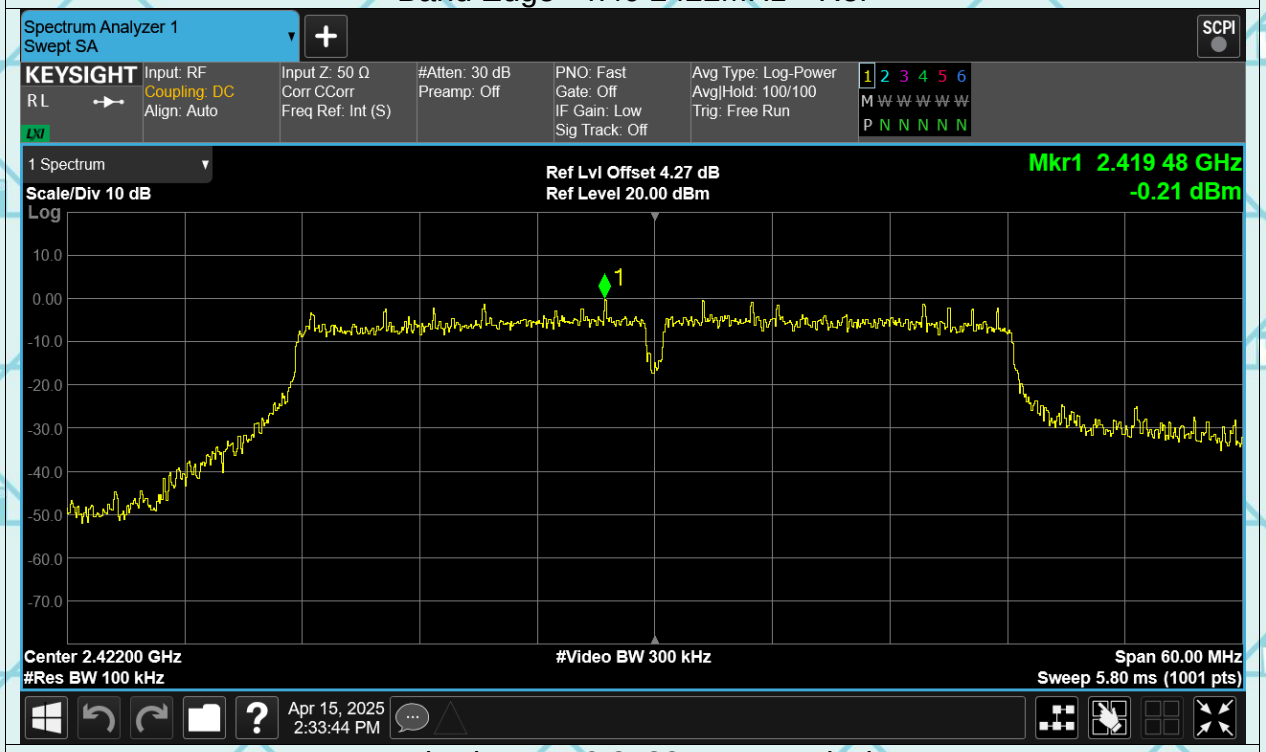


Band Edge n20 2462MHz Emission

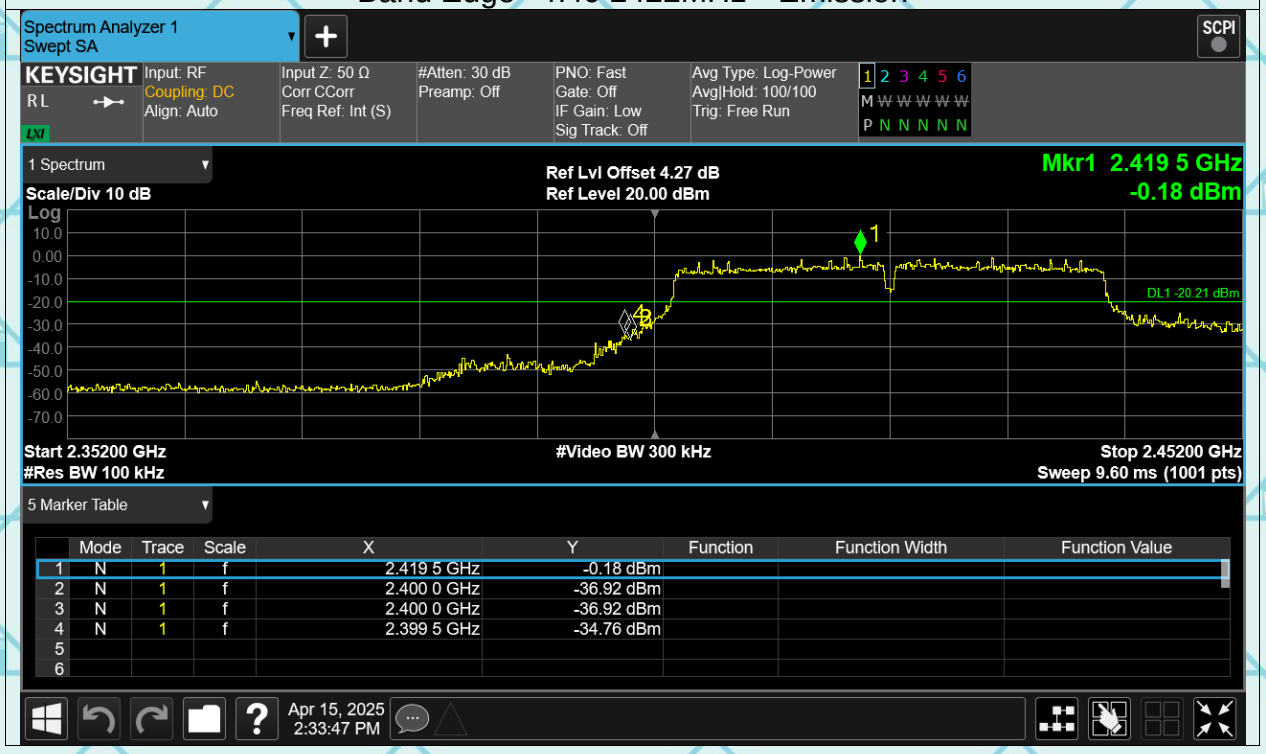


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.454 5 GHz	2.38 dBm			
2	N	1	f	2.483 5 GHz	-40.61 dBm			
3	N	1	f	2.500 0 GHz	-58.79 dBm			
4	N	1	f	2.483 5 GHz	-40.61 dBm			
5								
6								

Band Edge n40 2422MHz Ref

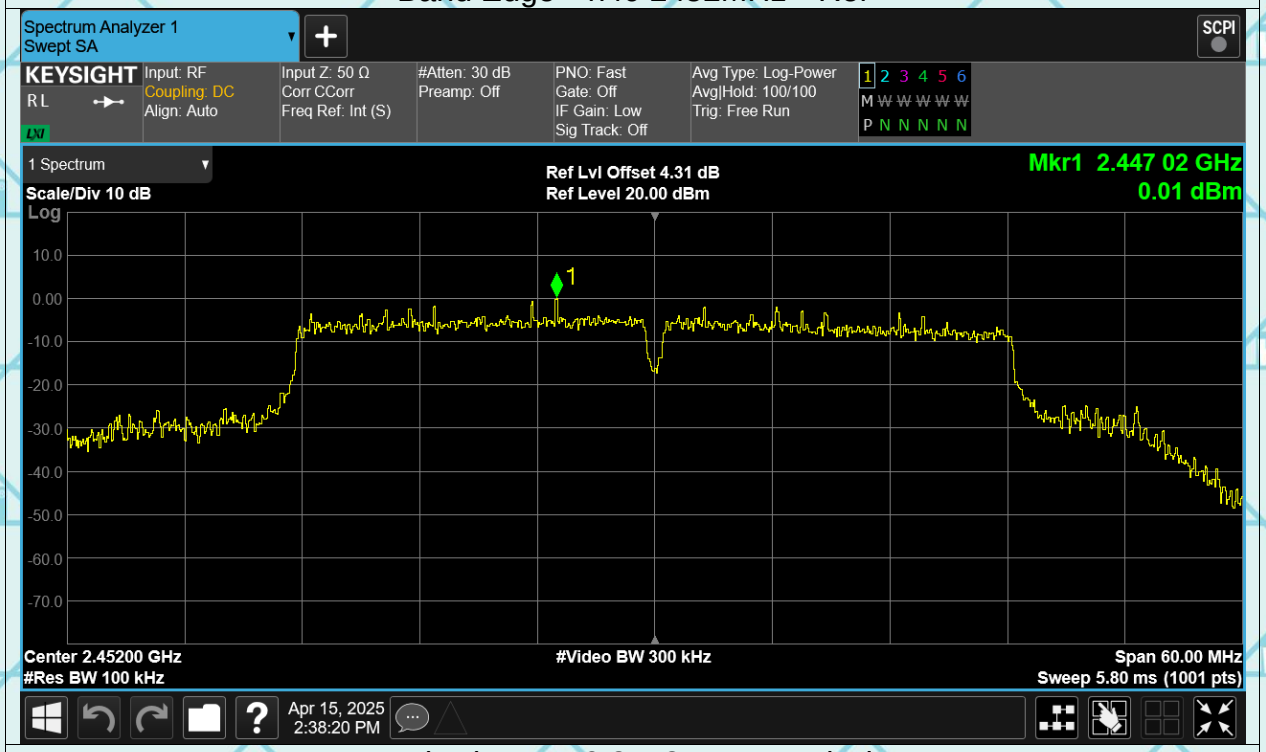


Band Edge n40 2422MHz Emission

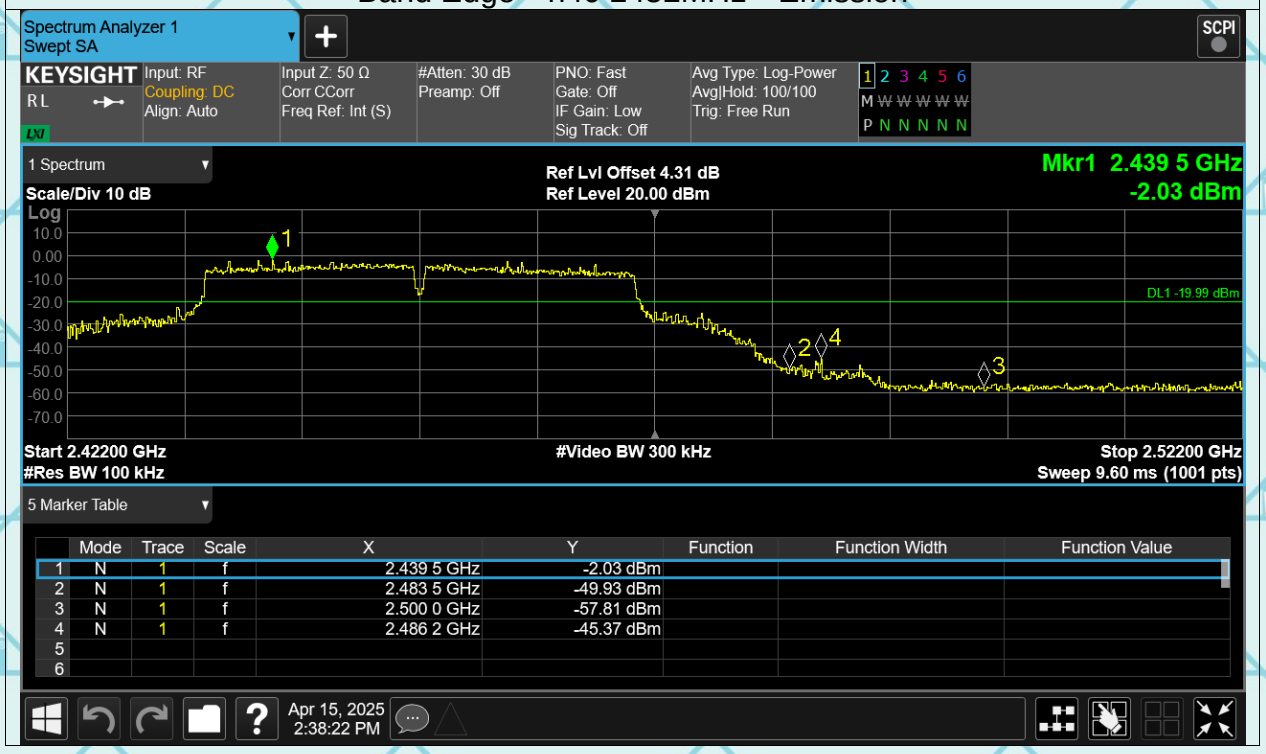


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.419 5 GHz	-0.18 dBm			
2	N	1	f	2.400 0 GHz	-36.92 dBm			
3	N	1	f	2.400 0 GHz	-36.92 dBm			
4	N	1	f	2.399 5 GHz	-34.76 dBm			
5								
6								

Band Edge n40 2452MHz Ref

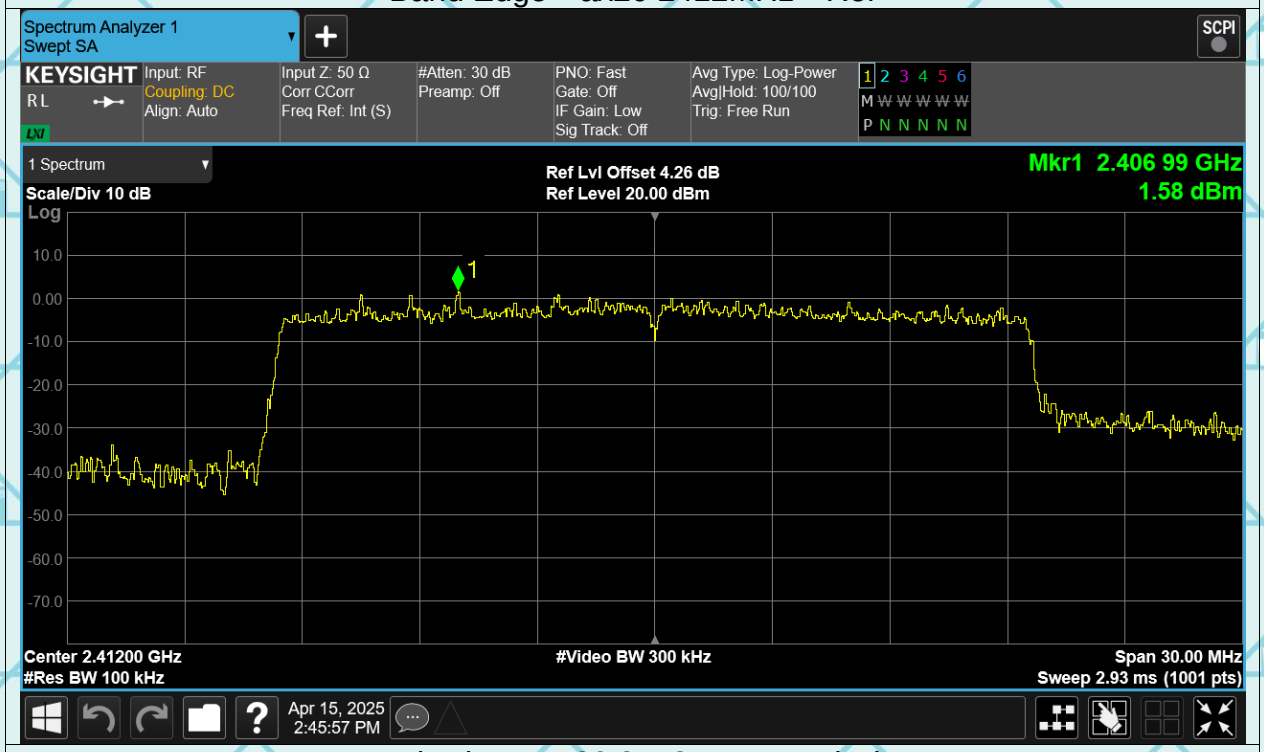


Band Edge n40 2452MHz Emission

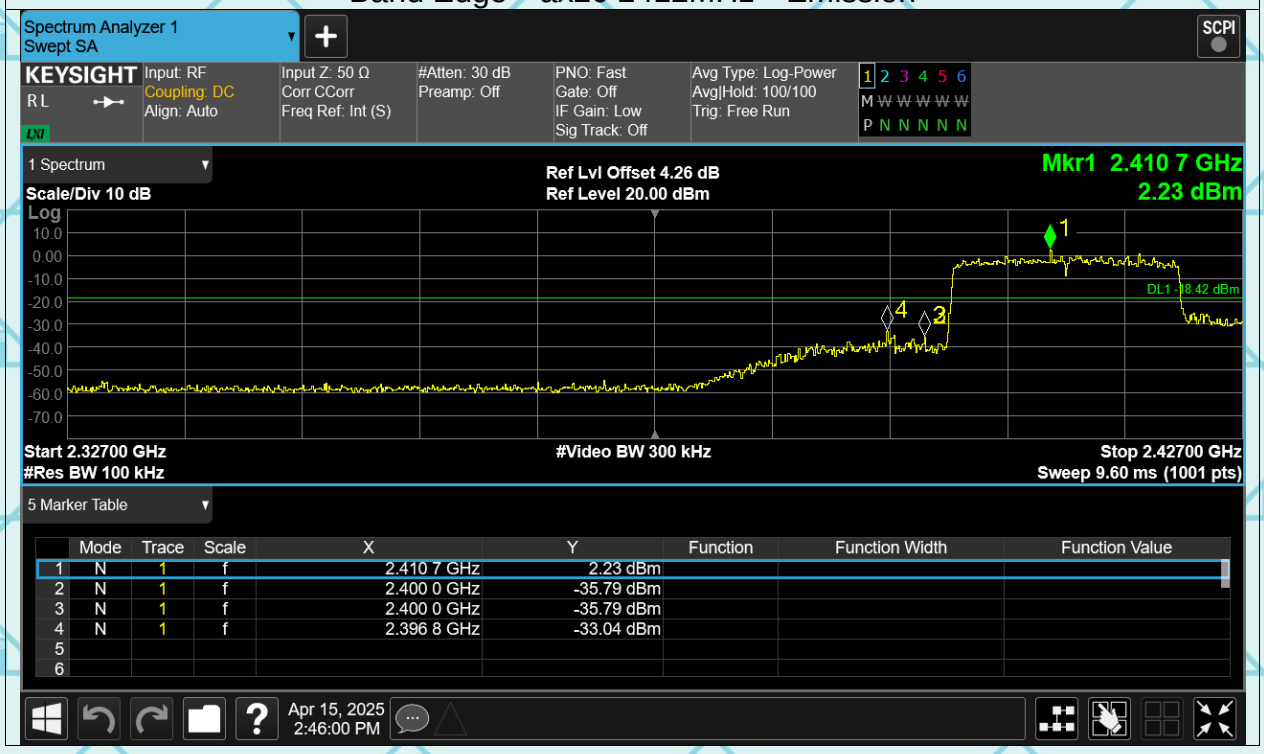


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.439 5 GHz	-2.03 dBm			
2	N	1	f	2.483 5 GHz	-49.93 dBm			
3	N	1	f	2.500 0 GHz	-57.81 dBm			
4	N	1	f	2.486 2 GHz	-45.37 dBm			
5								
6								

Band Edge ax20 2412MHz Ref

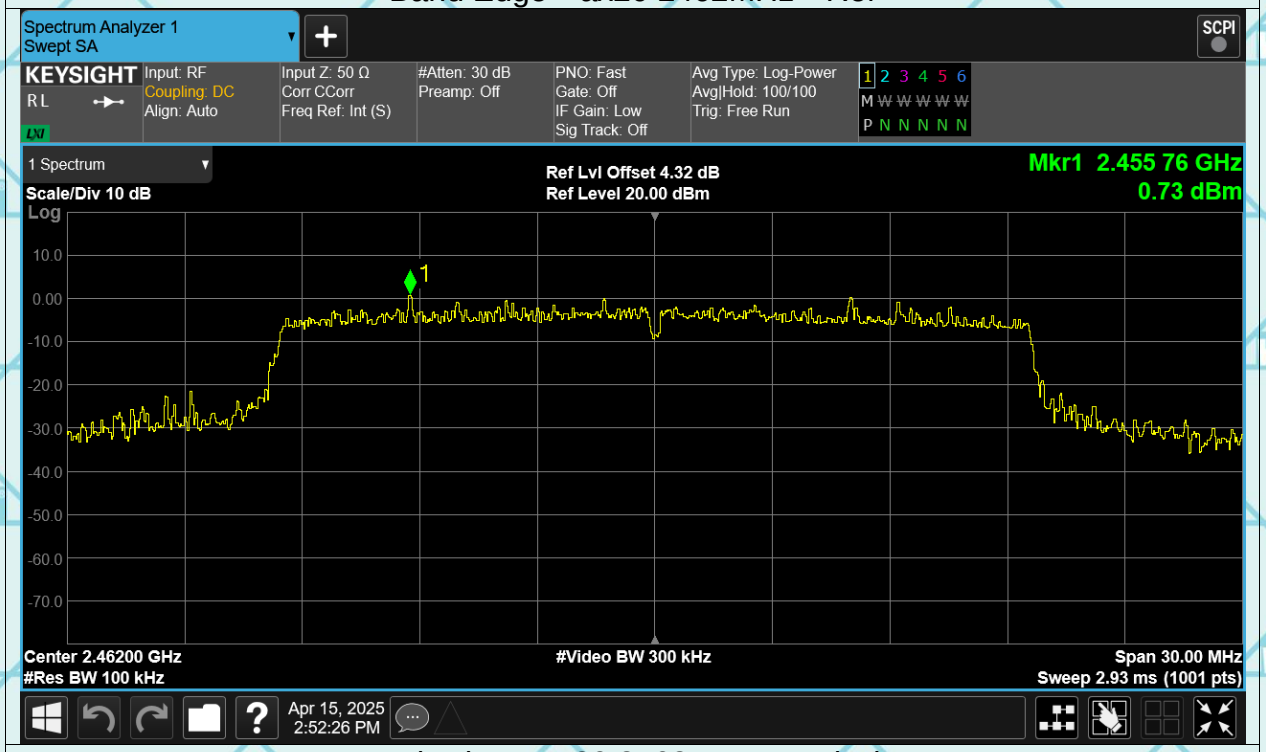


Band Edge ax20 2412MHz Emission

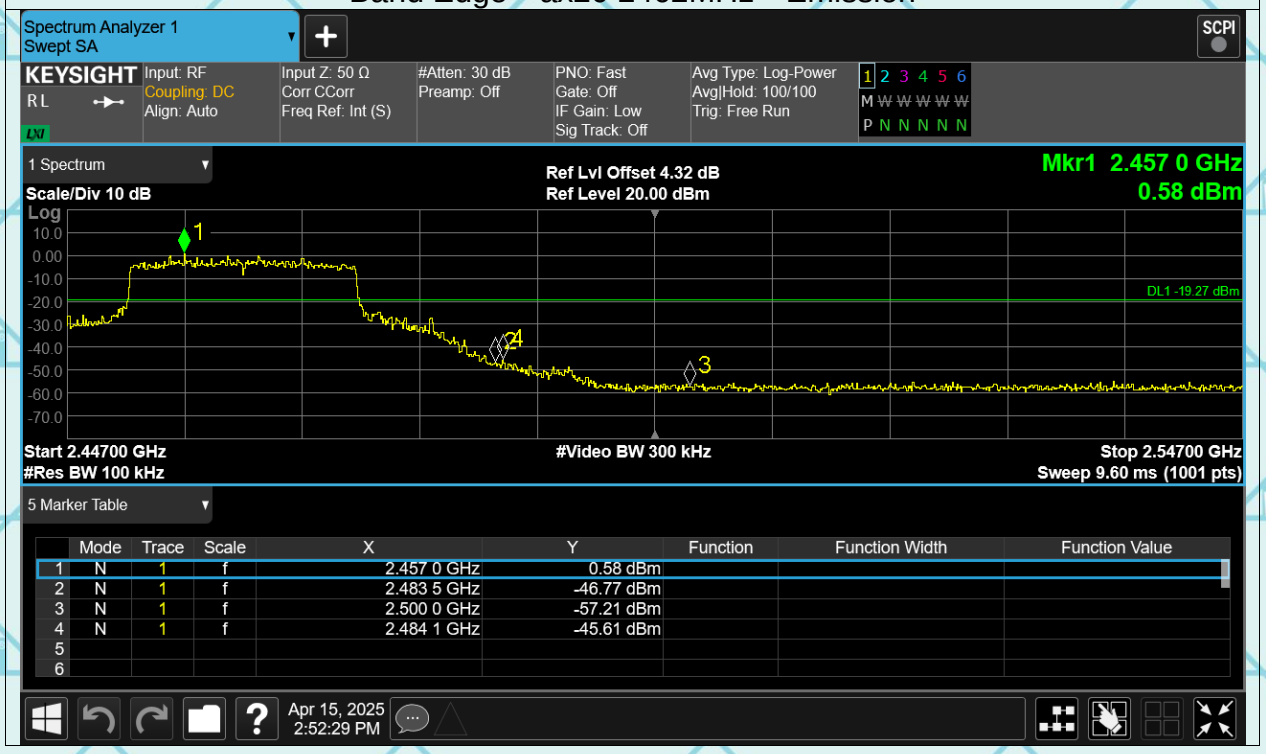


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.410 7 GHz	2.23 dBm			
2	N	1	f	2.400 0 GHz	-35.79 dBm			
3	N	1	f	2.400 0 GHz	-35.79 dBm			
4	N	1	f	2.396 8 GHz	-33.04 dBm			
5								
6								

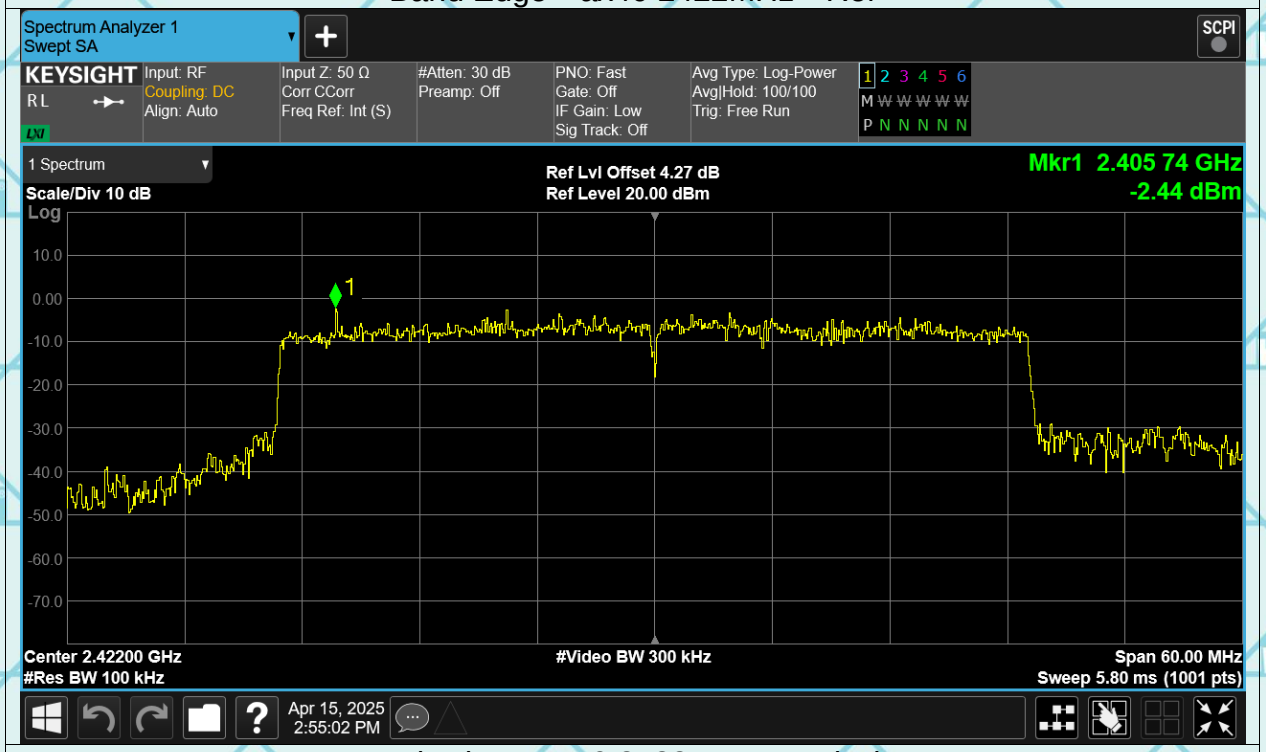
Band Edge ax20 2462MHz Ref



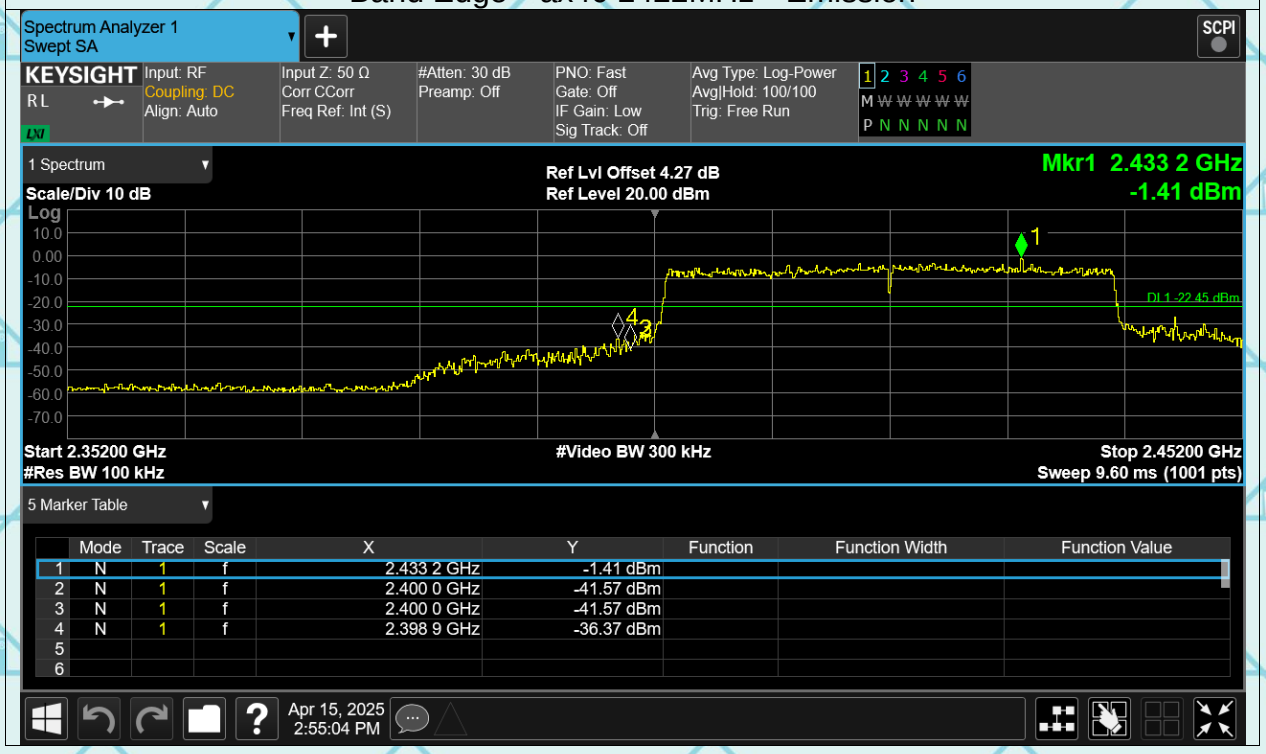
Band Edge ax20 2462MHz Emission



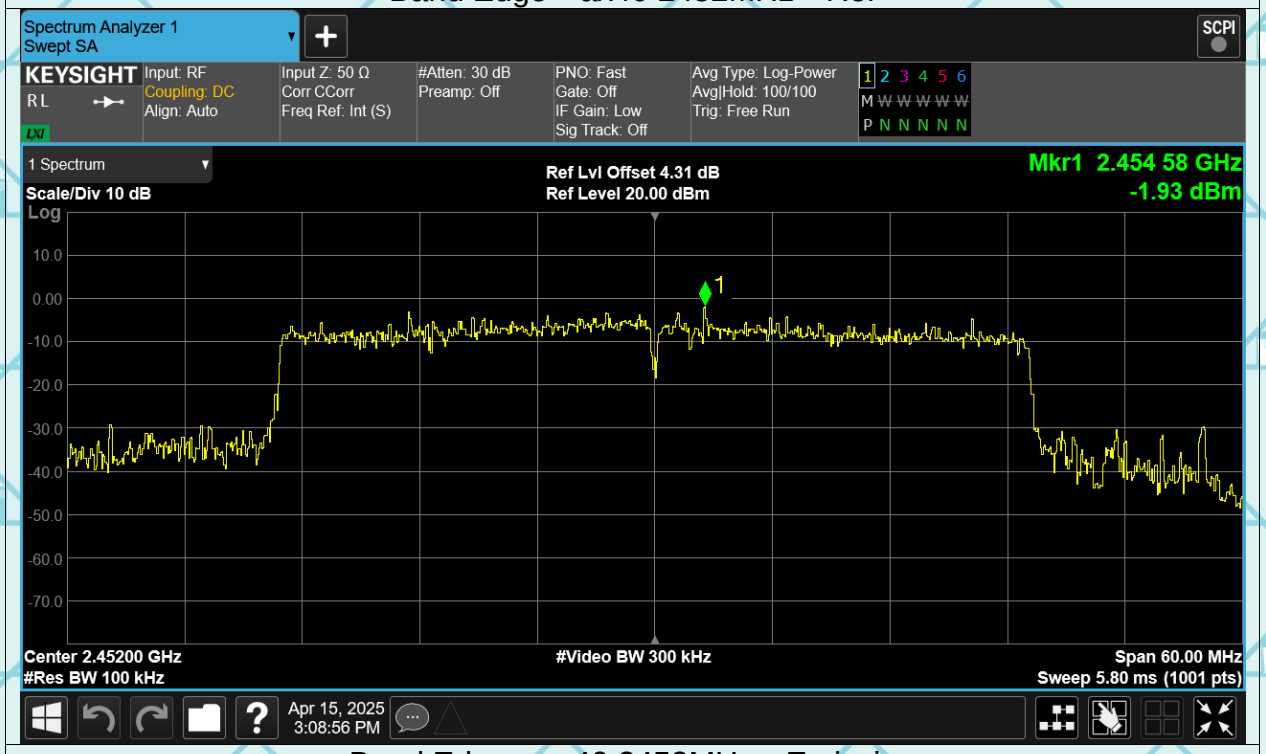
Band Edge ax40 2422MHz Ref



Band Edge ax40 2422MHz Emission



Band Edge ax40 2452MHz Ref



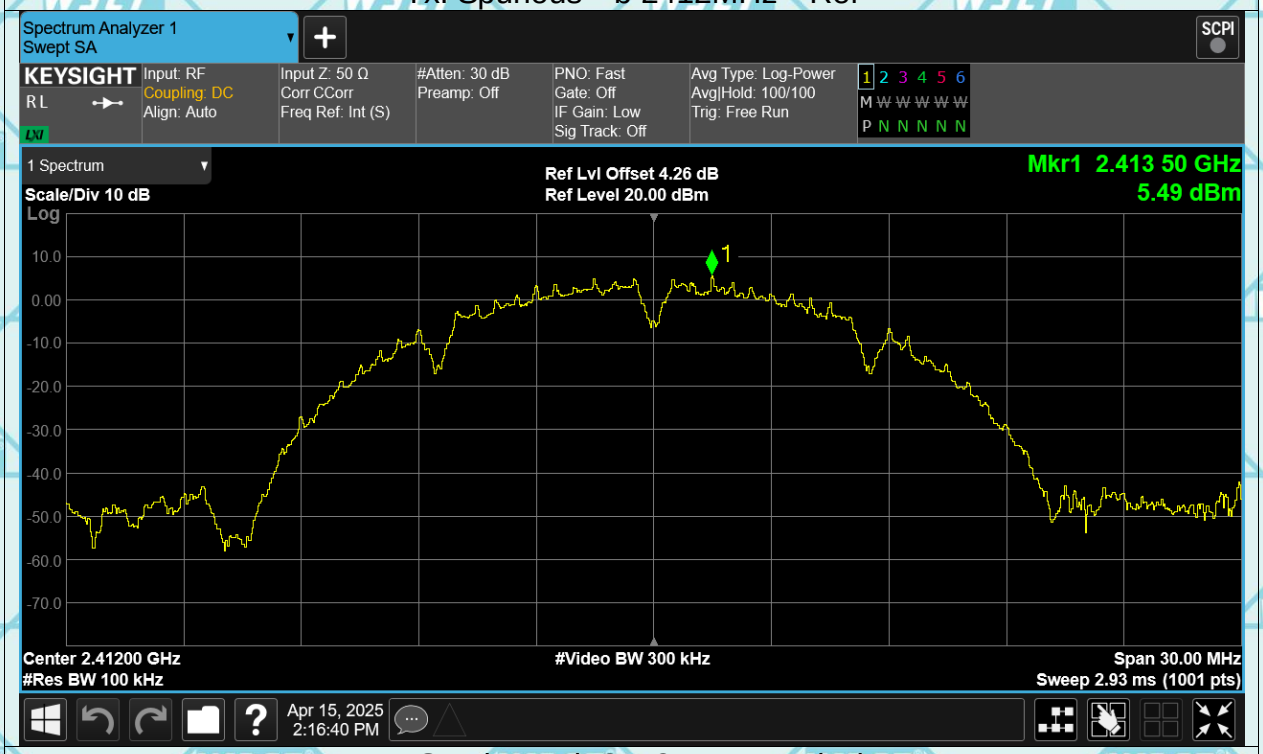
Band Edge ax40 2452MHz Emission

	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.440 7 GHz	-1.70 dBm			
2	N	1	f	2.483 5 GHz	-49.45 dBm			
3	N	1	f	2.500 0 GHz	-56.55 dBm			
4	N	1	f	2.484 0 GHz	-44.91 dBm			
5								
6								

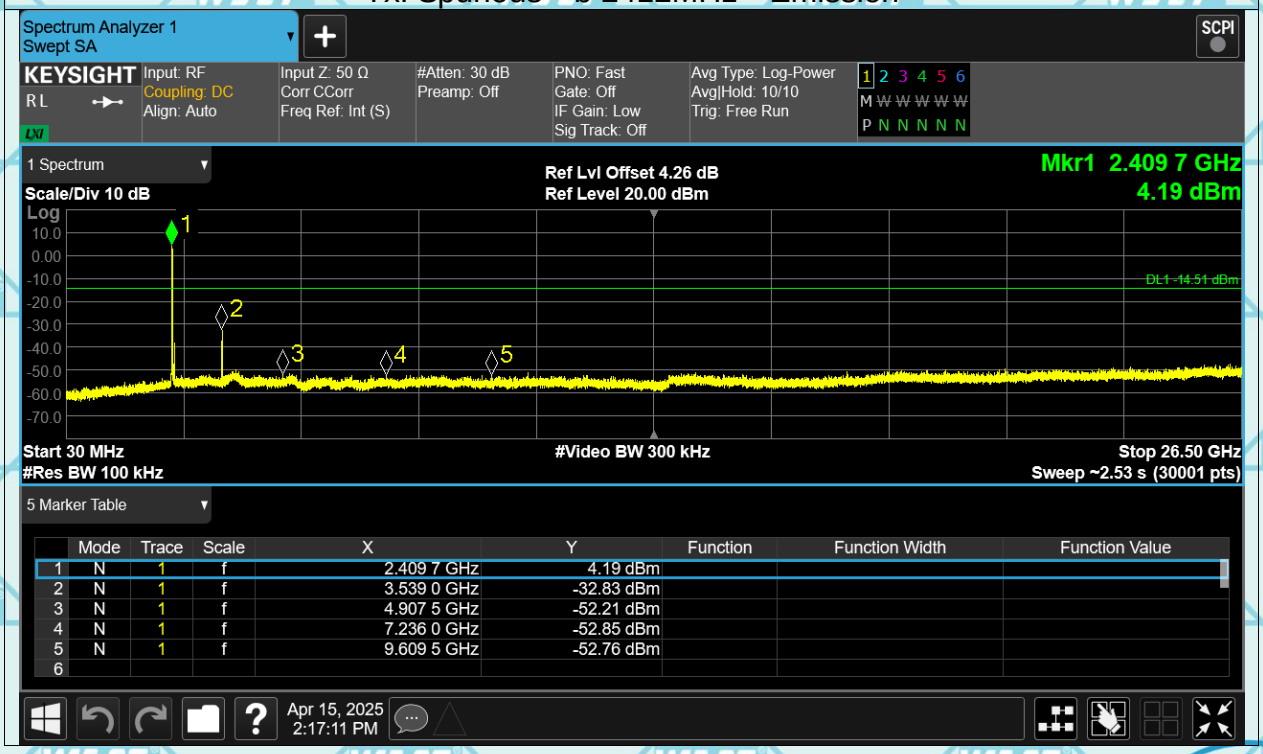
Conducted RF Spurious Emission

Test Graphs

Tx. Spurious b 2412MHz Ref

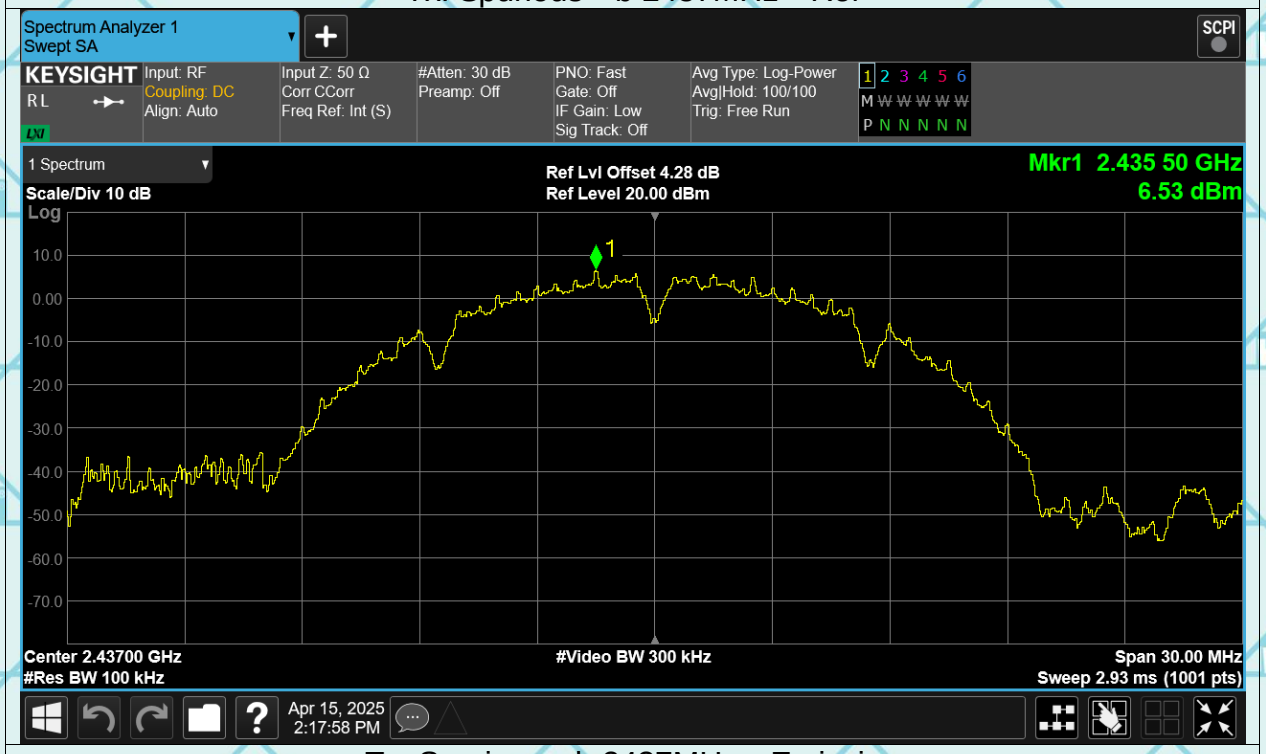


Tx. Spurious b 2412MHz Emission



	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.409 7 GHz	4.19 dBm			
2	N	1	f	3.539 0 GHz	-32.83 dBm			
3	N	1	f	4.907 5 GHz	-52.21 dBm			
4	N	1	f	7.236 0 GHz	-52.85 dBm			
5	N	1	f	9.609 5 GHz	-52.76 dBm			
6								

Tx. Spurious b 2437MHz Ref



Tx. Spurious b 2437MHz Emission

	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.434 4 GHz	4.70 dBm			
2	N	1	f	26.275 9 GHz	-47.65 dBm			
3	N	1	f	5.052 2 GHz	-51.99 dBm			
4	N	1	f	7.249 3 GHz	-52.48 dBm			
5	N	1	f	9.778 0 GHz	-52.46 dBm			
6								