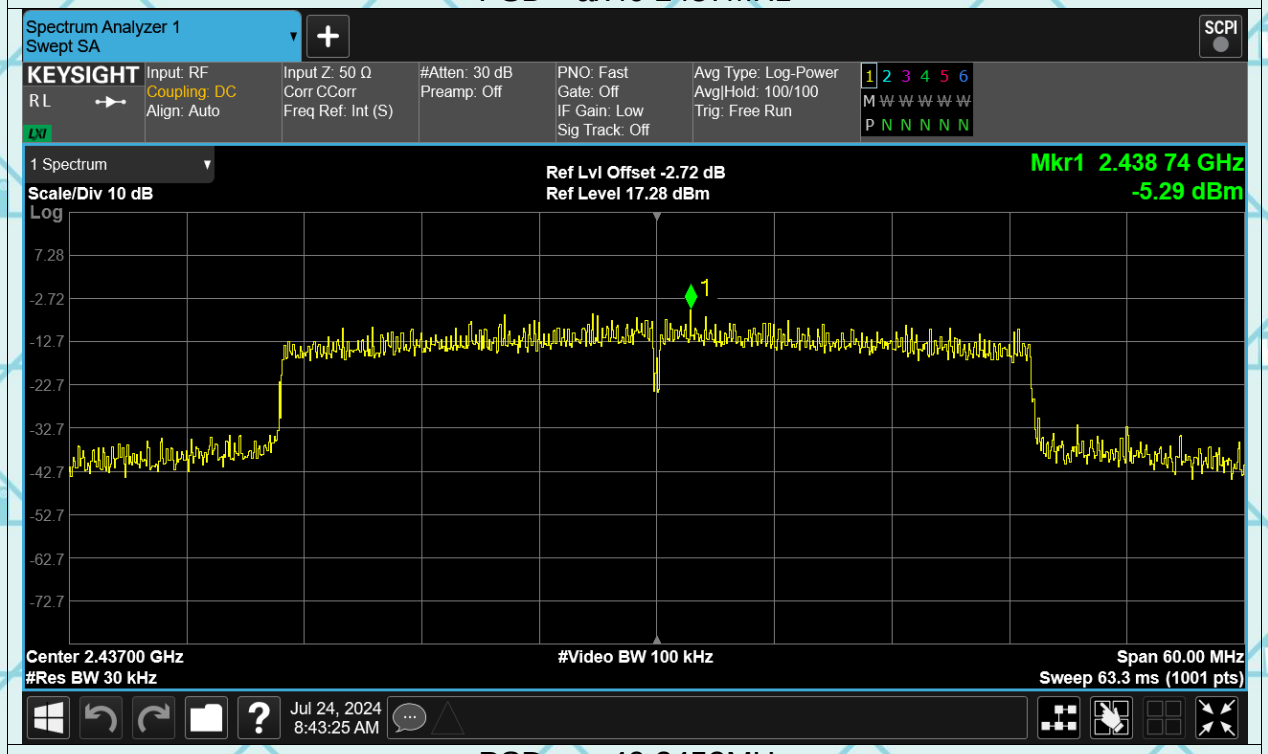
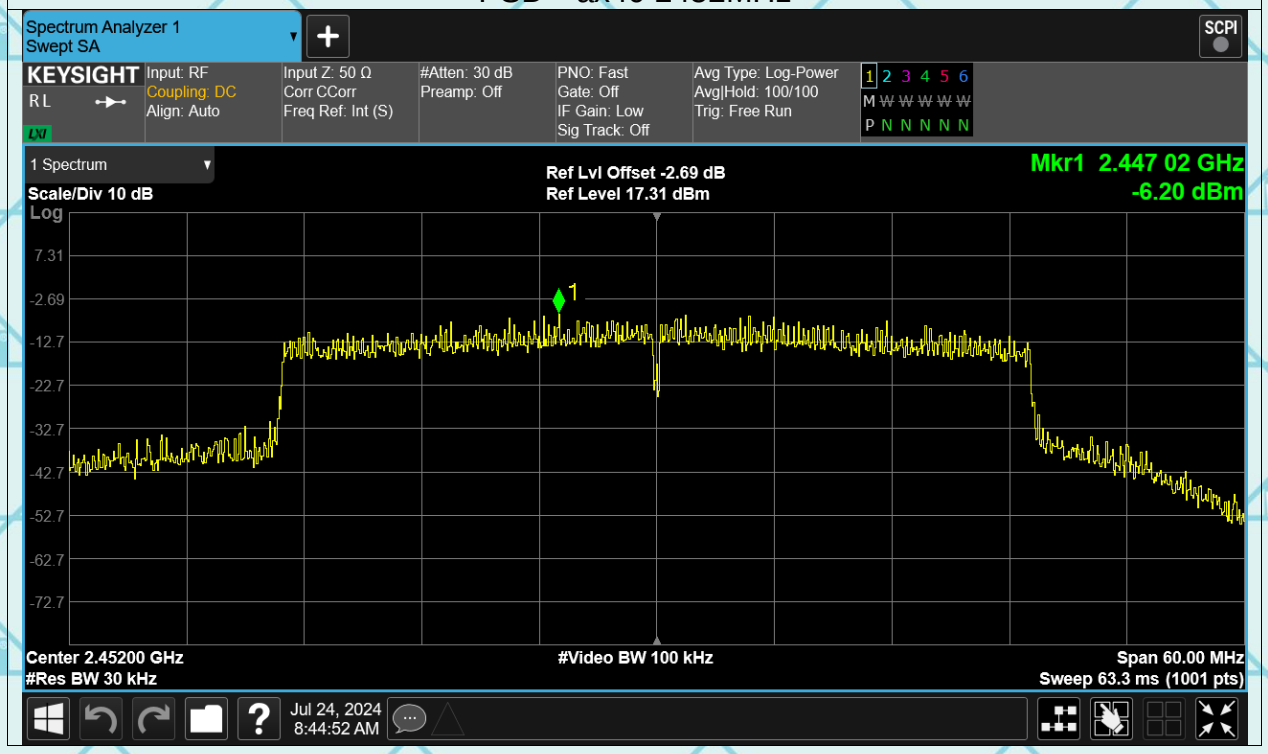
PSD ax40 2437MHz

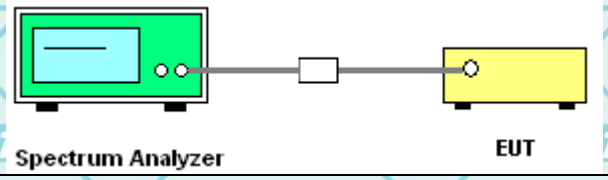


PSD ax40 2452MHz



6.5. Conducted Band Edge and Spurious Emission Measurement

6.5.1. Test Specification

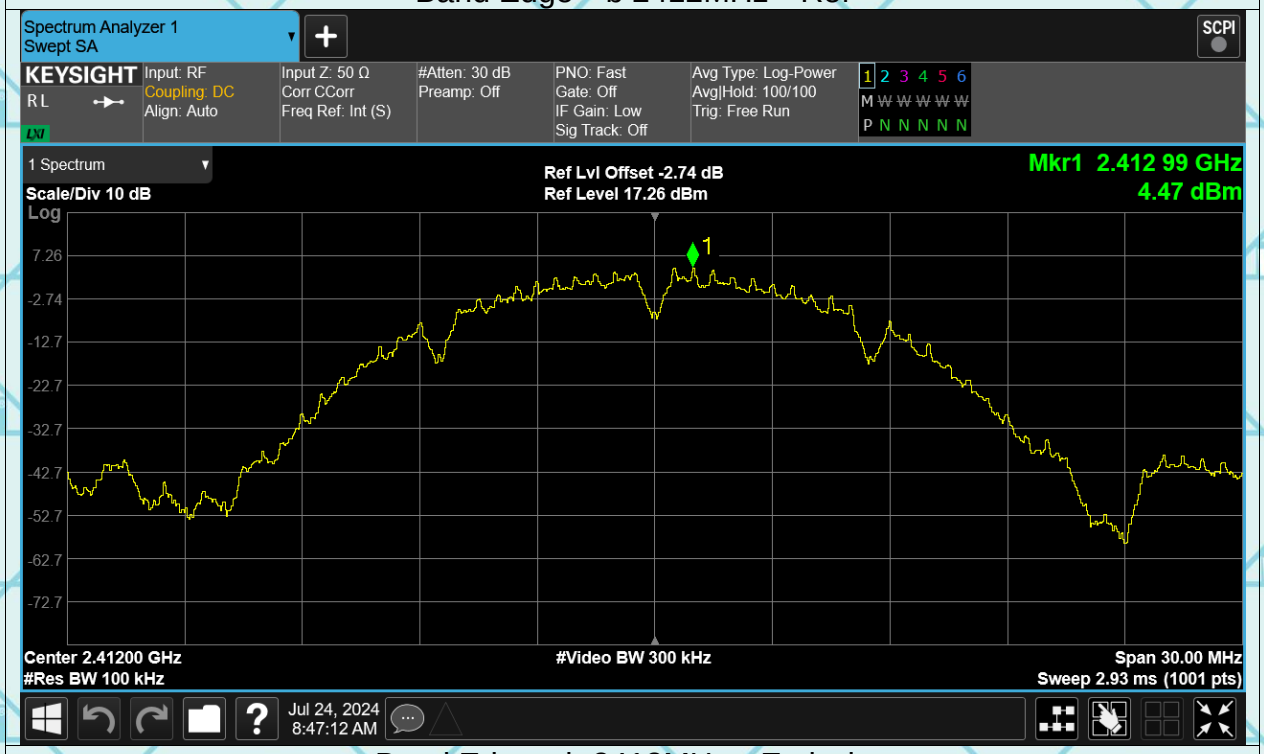
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	KDB558074
Limit:	In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted 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

6.5.2. Test Data(worst)

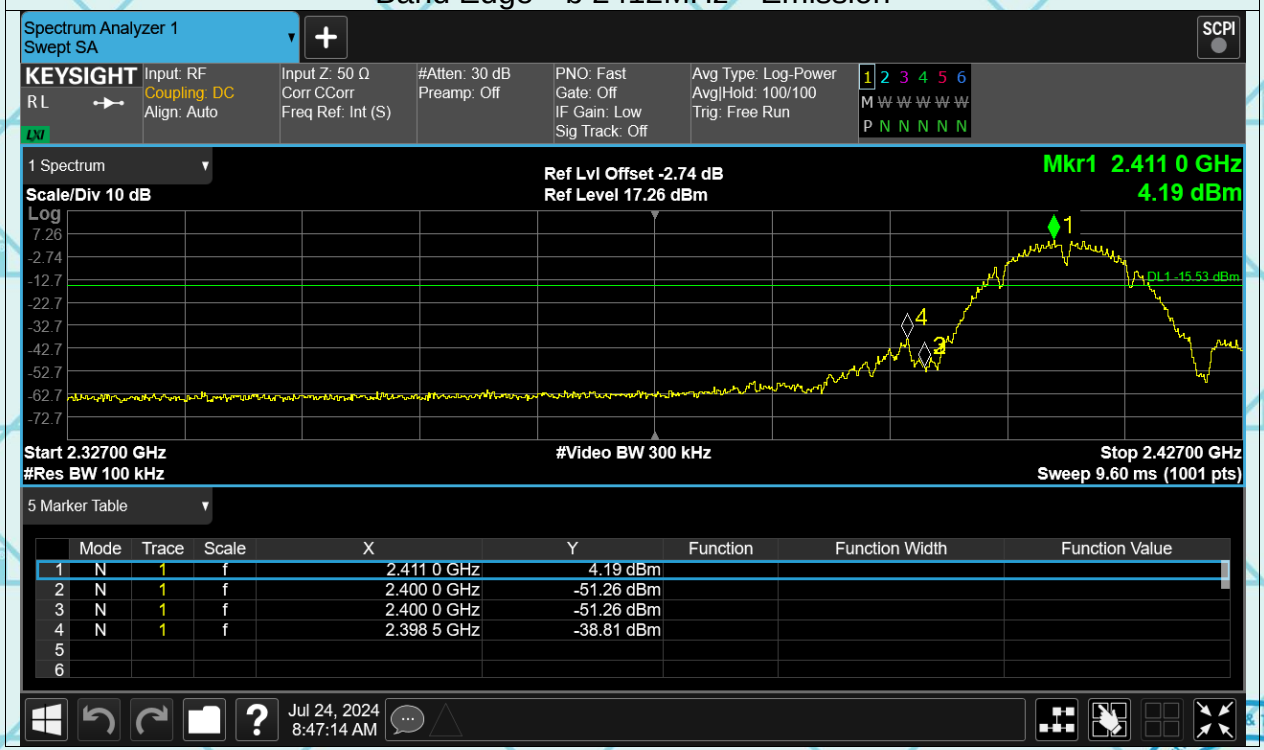
Band Edge

Test Graphs

Band Edge b 2412MHz Ref

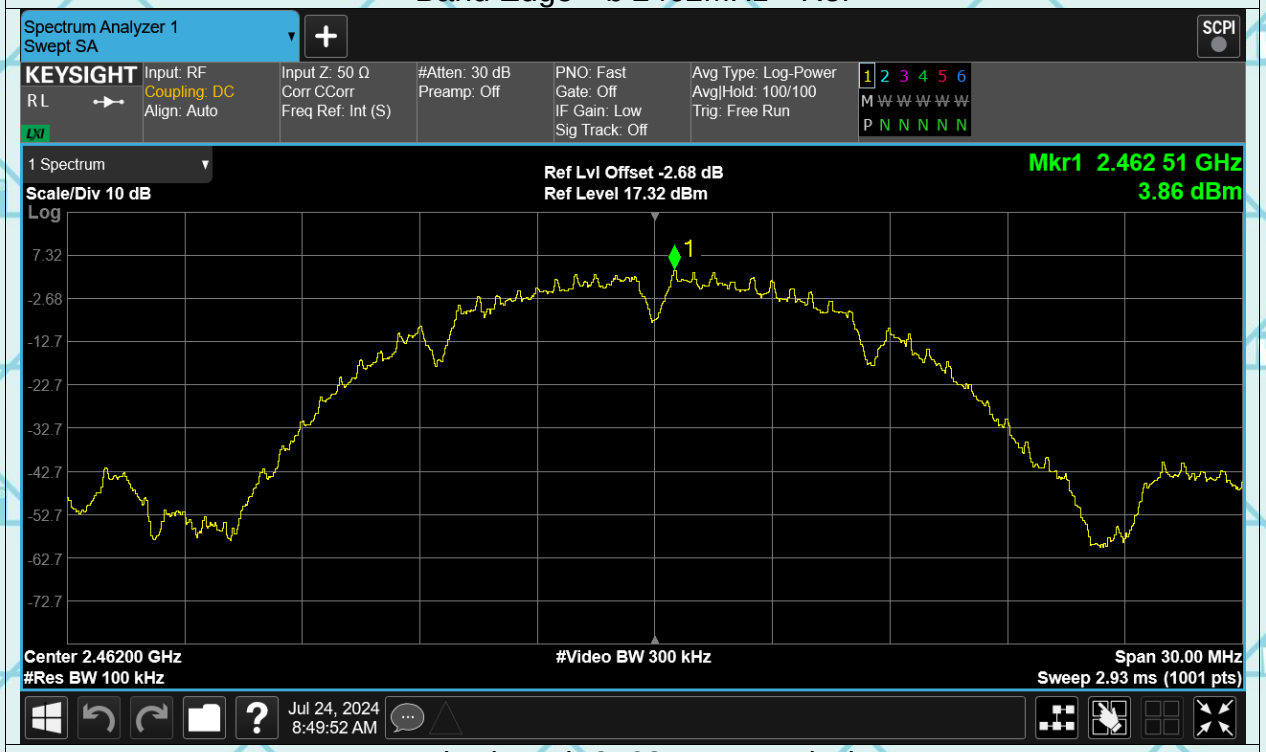


Band Edge b 2412MHz Emission

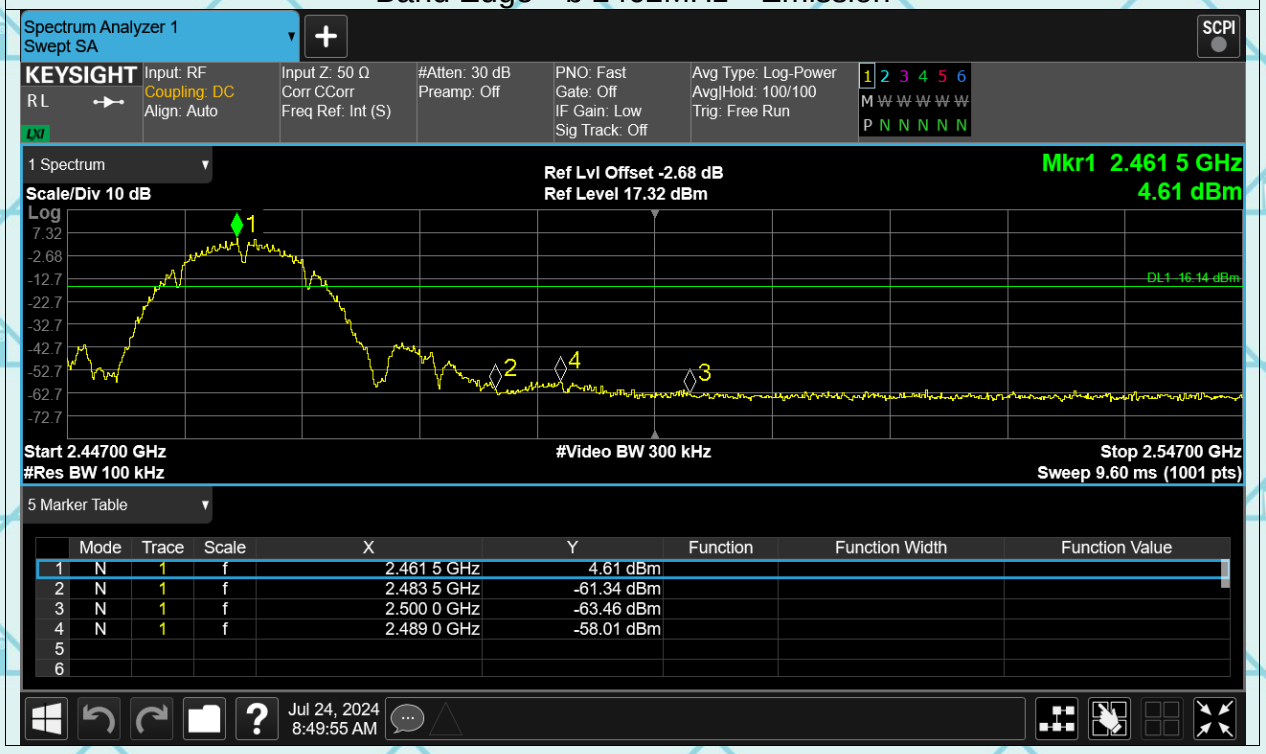


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.411 0 GHz	4.19 dBm			
2	N	1	f	2.400 0 GHz	-51.26 dBm			
3	N	1	f	2.400 0 GHz	-51.26 dBm			
4	N	1	f	2.398 5 GHz	-38.81 dBm			
5								
6								

Band Edge b 2462MHz Ref

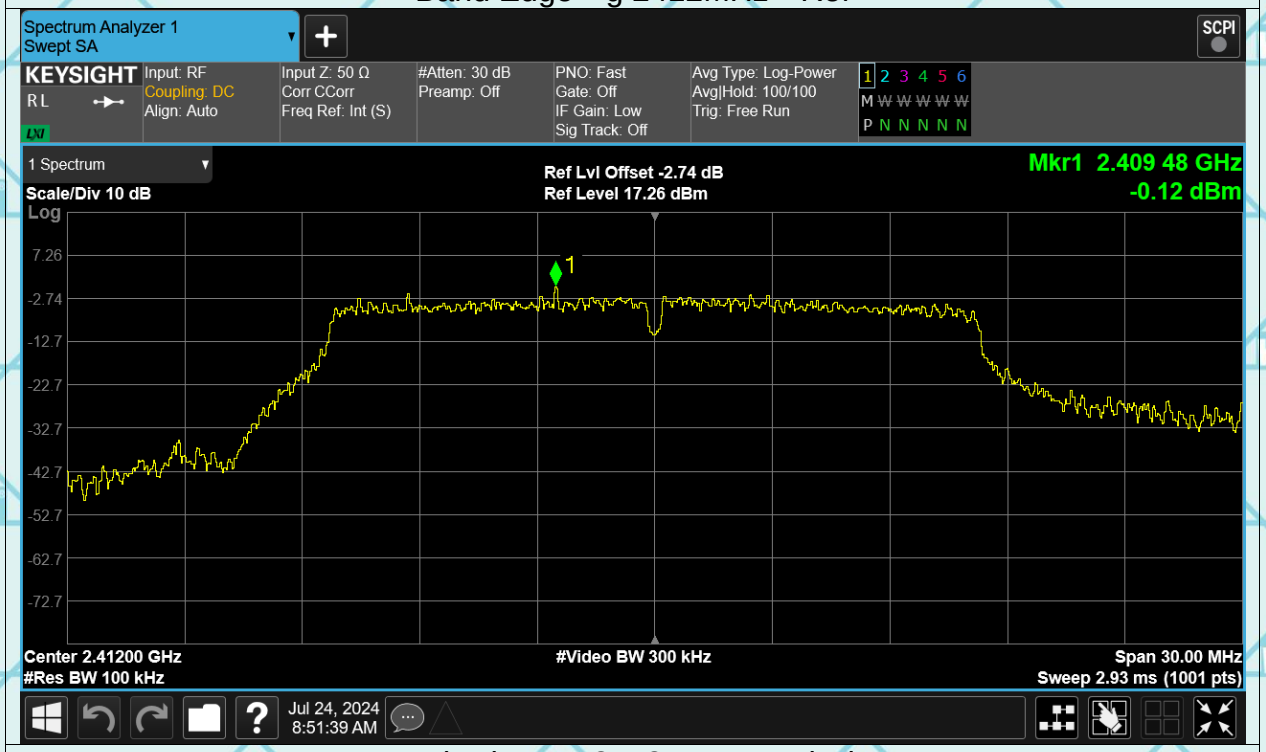


Band Edge b 2462MHz Emission

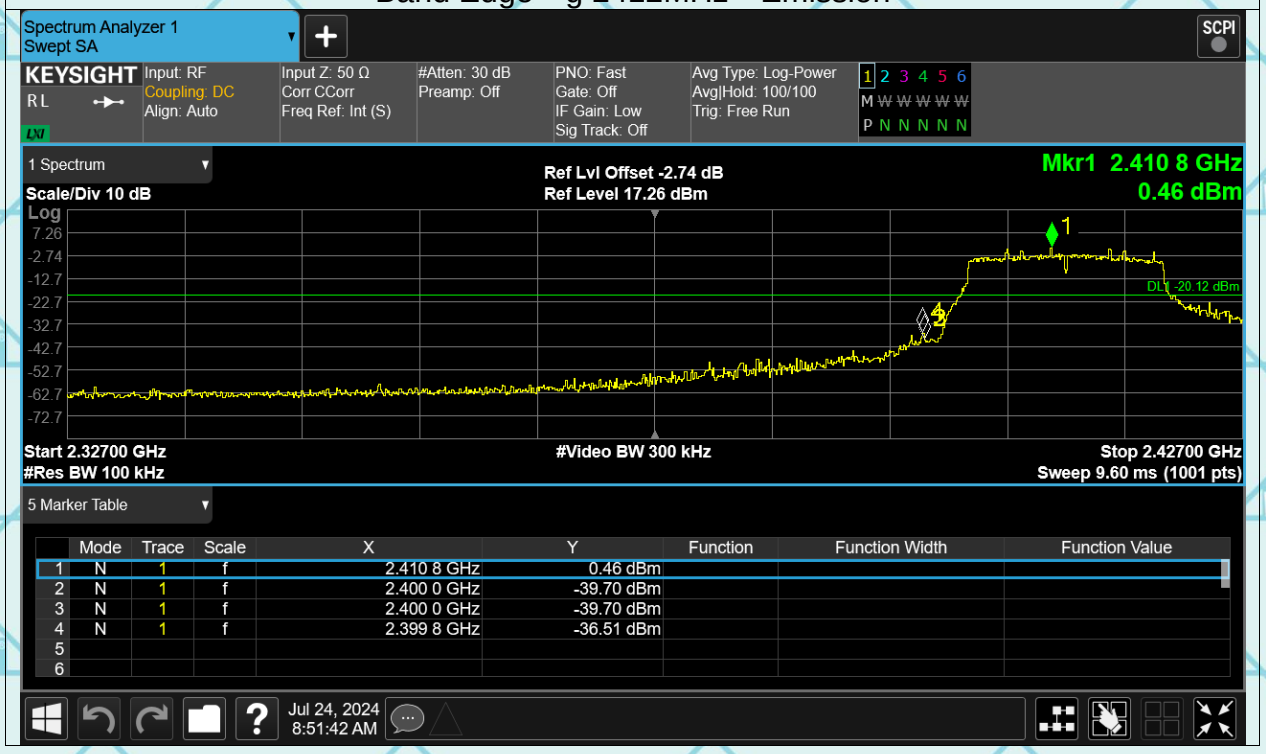


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.461 5 GHz	4.61 dBm			
2	N	1	f	2.483 5 GHz	-61.34 dBm			
3	N	1	f	2.500 0 GHz	-63.46 dBm			
4	N	1	f	2.489 0 GHz	-58.01 dBm			
5								
6								

Band Edge g 2412MHz Ref

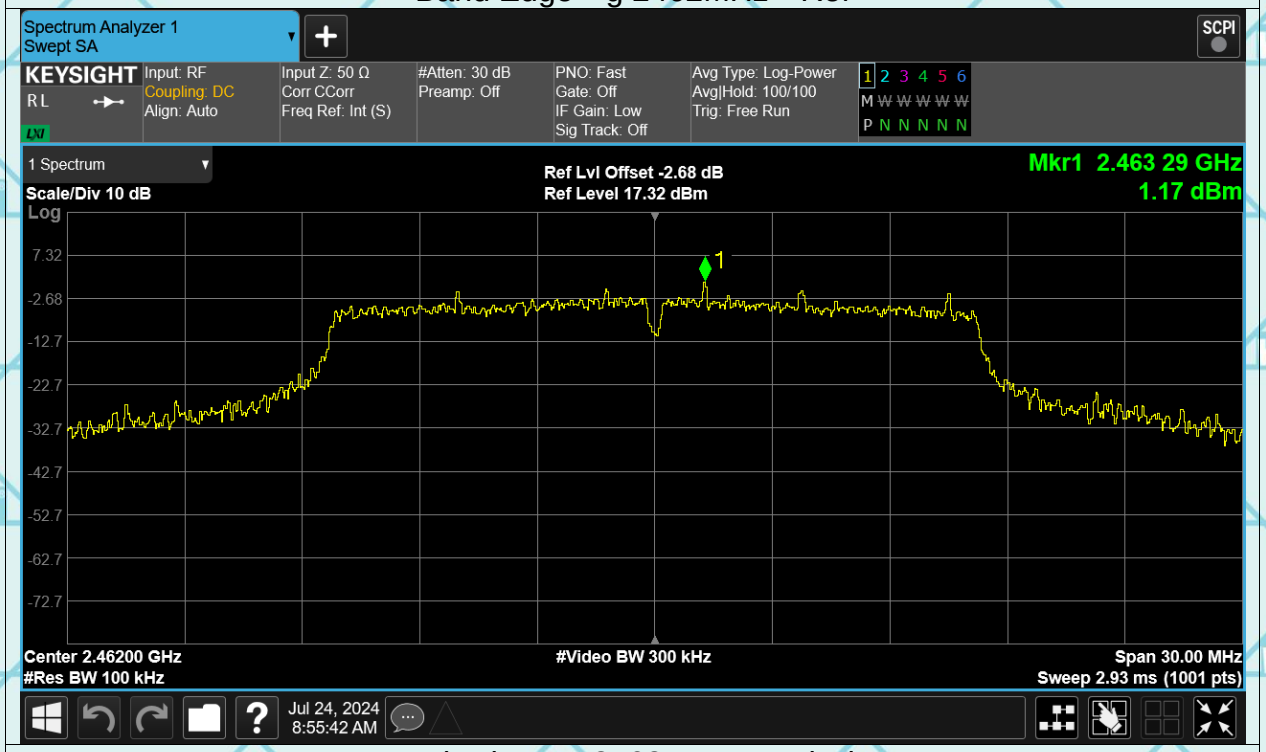


Band Edge g 2412MHz Emission

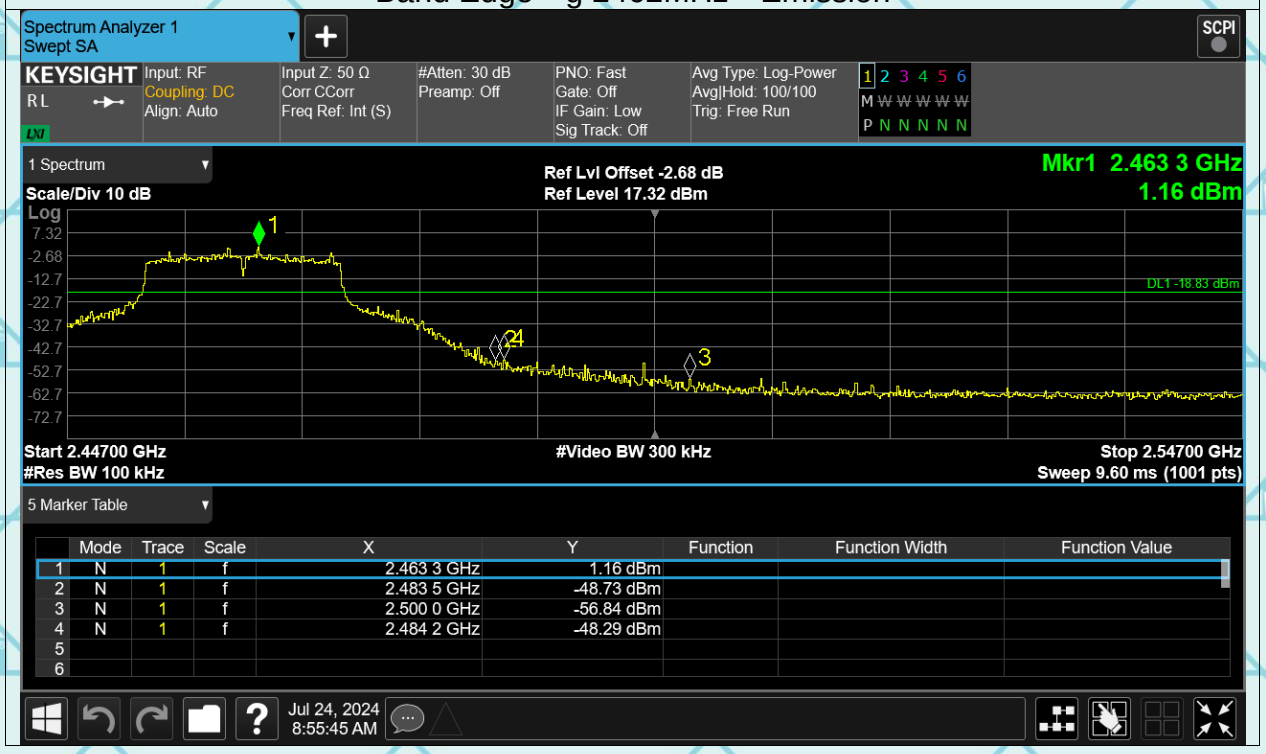


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.410 8 GHz	0.46 dBm			
2	N	1	f	2.400 0 GHz	-39.70 dBm			
3	N	1	f	2.400 0 GHz	-39.70 dBm			
4	N	1	f	2.399 8 GHz	-36.51 dBm			
5								
6								

Band Edge g 2462MHz Ref

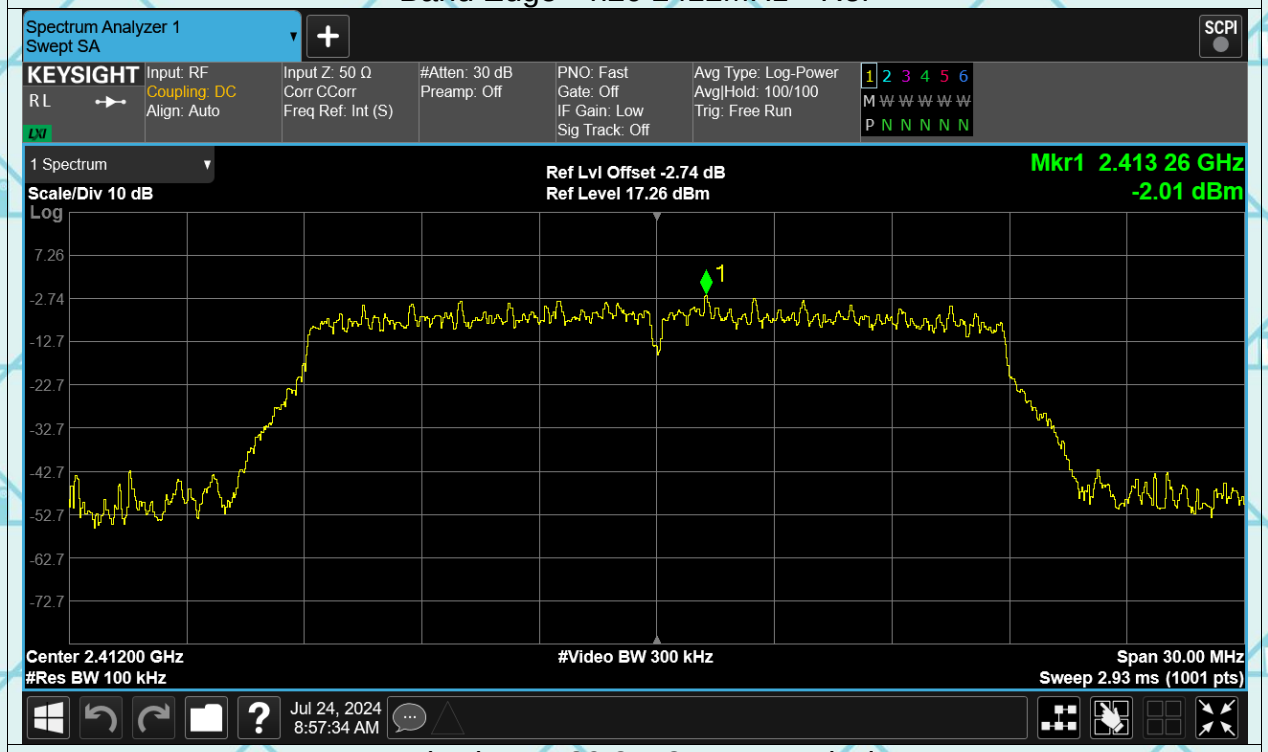


Band Edge g 2462MHz Emission

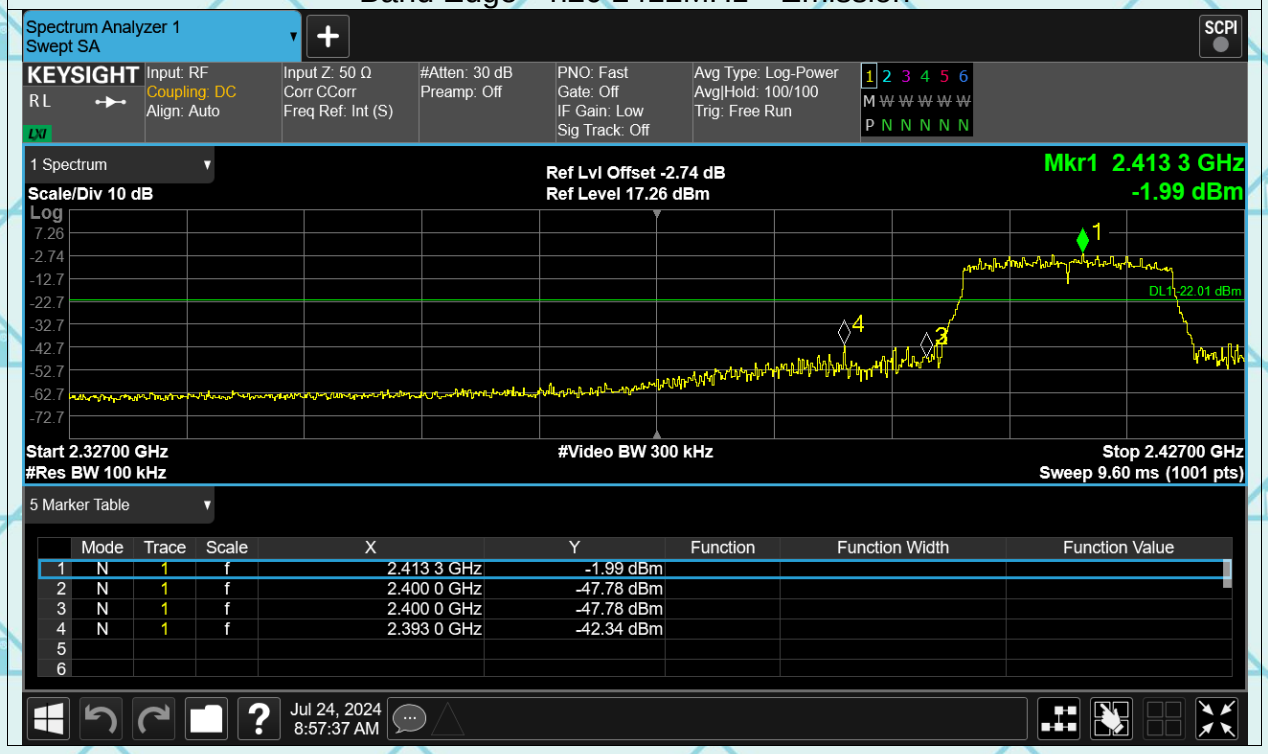


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.463 3 GHz	1.16 dBm			
2	N	1	f	2.483 5 GHz	-48.73 dBm			
3	N	1	f	2.500 0 GHz	-56.84 dBm			
4	N	1	f	2.484 2 GHz	-48.29 dBm			
5								
6								

Band Edge n20 2412MHz Ref

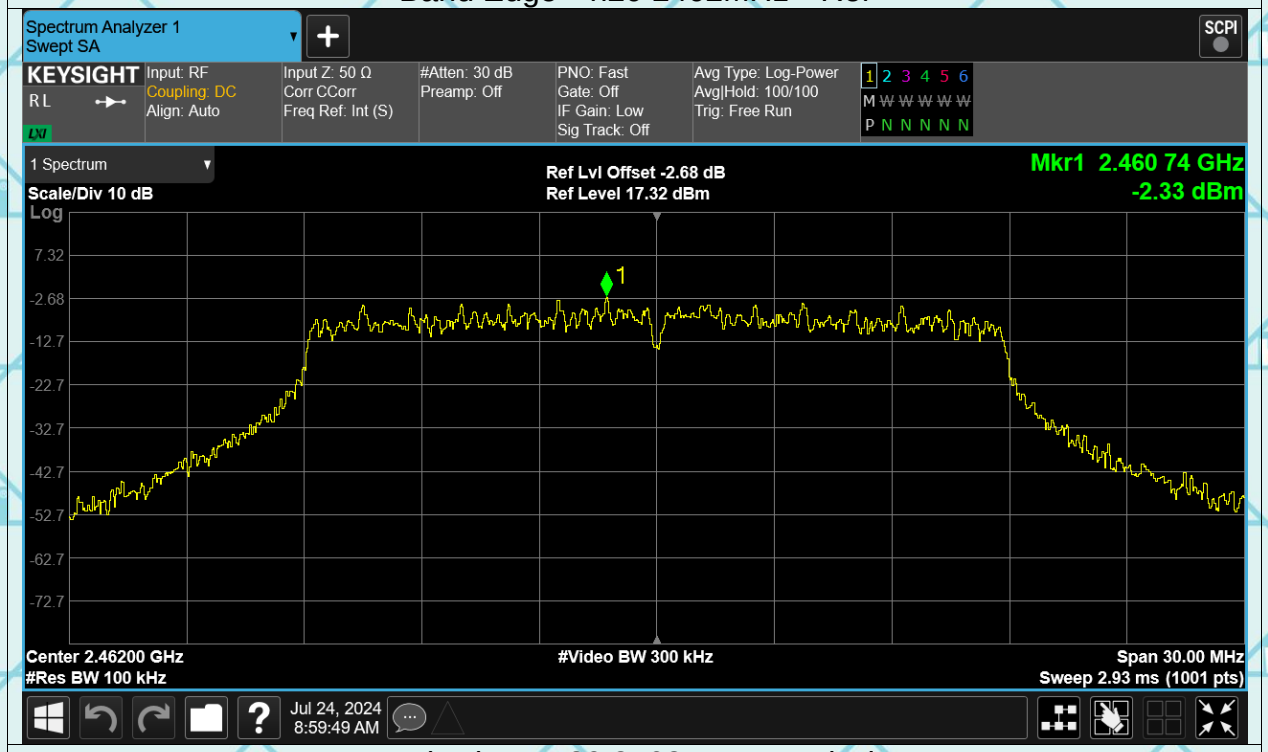


Band Edge n20 2412MHz Emission

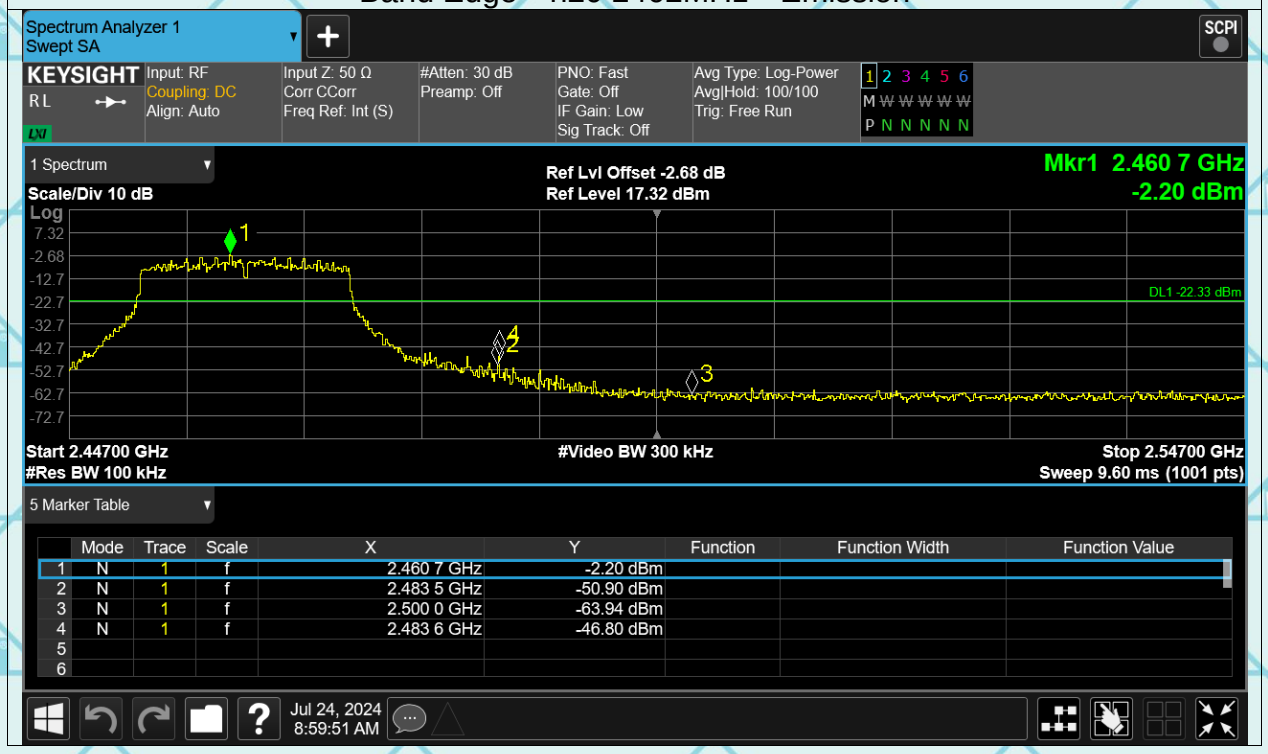


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.413 3 GHz	-1.99 dBm			
2	N	1	f	2.400 0 GHz	-47.78 dBm			
3	N	1	f	2.400 0 GHz	-47.78 dBm			
4	N	1	f	2.393 0 GHz	-42.34 dBm			
5								
6								

Band Edge n20 2462MHz Ref

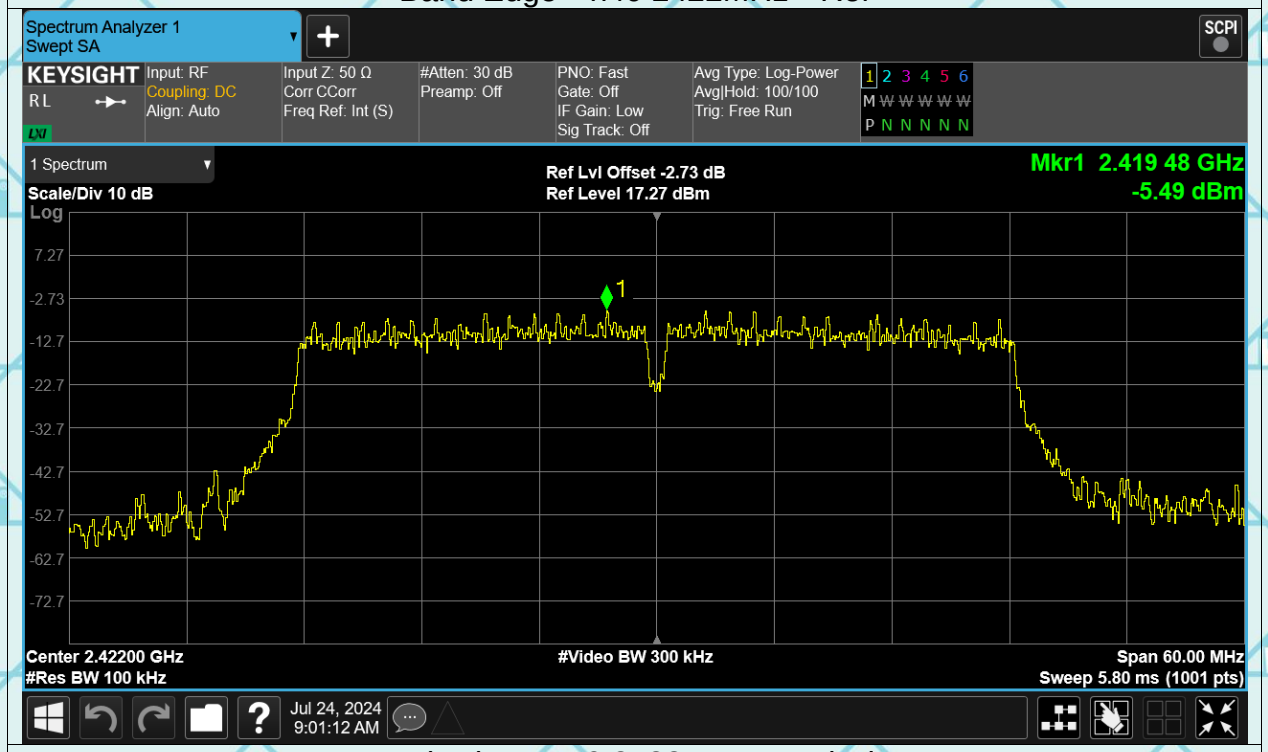


Band Edge n20 2462MHz Emission

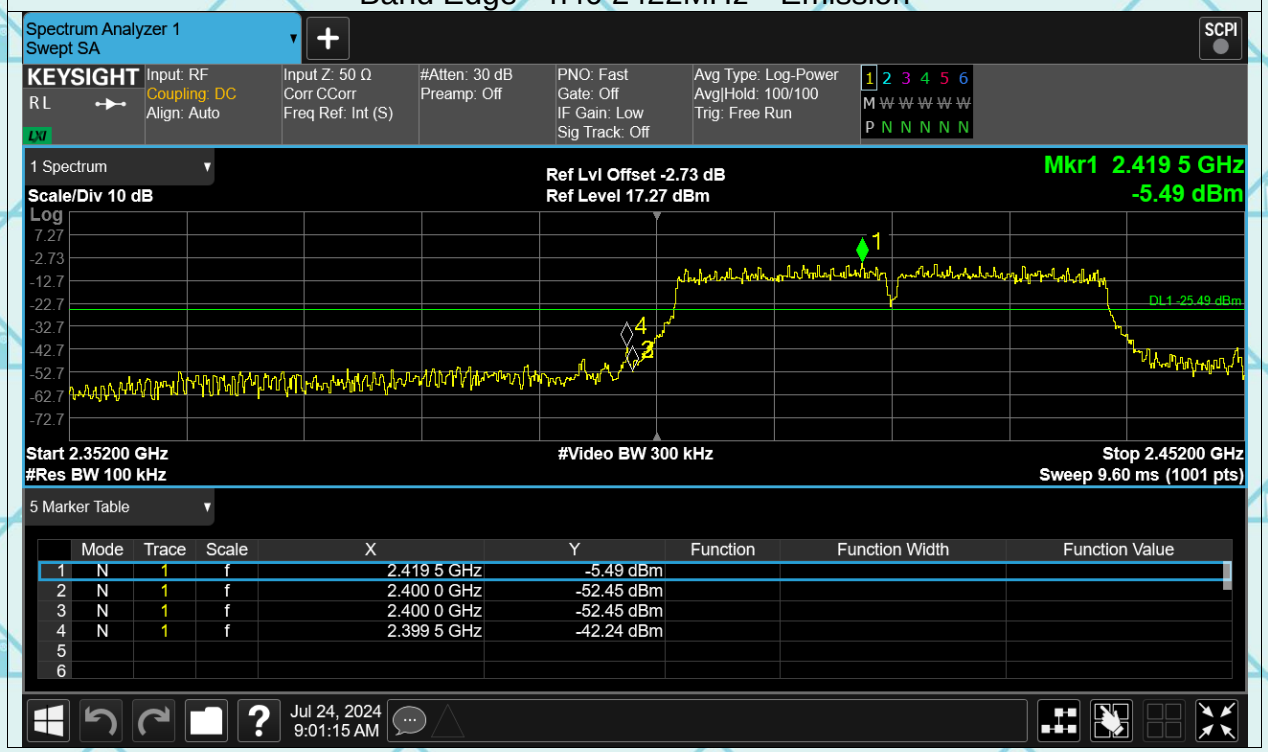


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.460 7 GHz	-2.20 dBm			
2	N	1	f	2.483 5 GHz	-50.90 dBm			
3	N	1	f	2.500 0 GHz	-63.94 dBm			
4	N	1	f	2.483 6 GHz	-46.80 dBm			
5								
6								

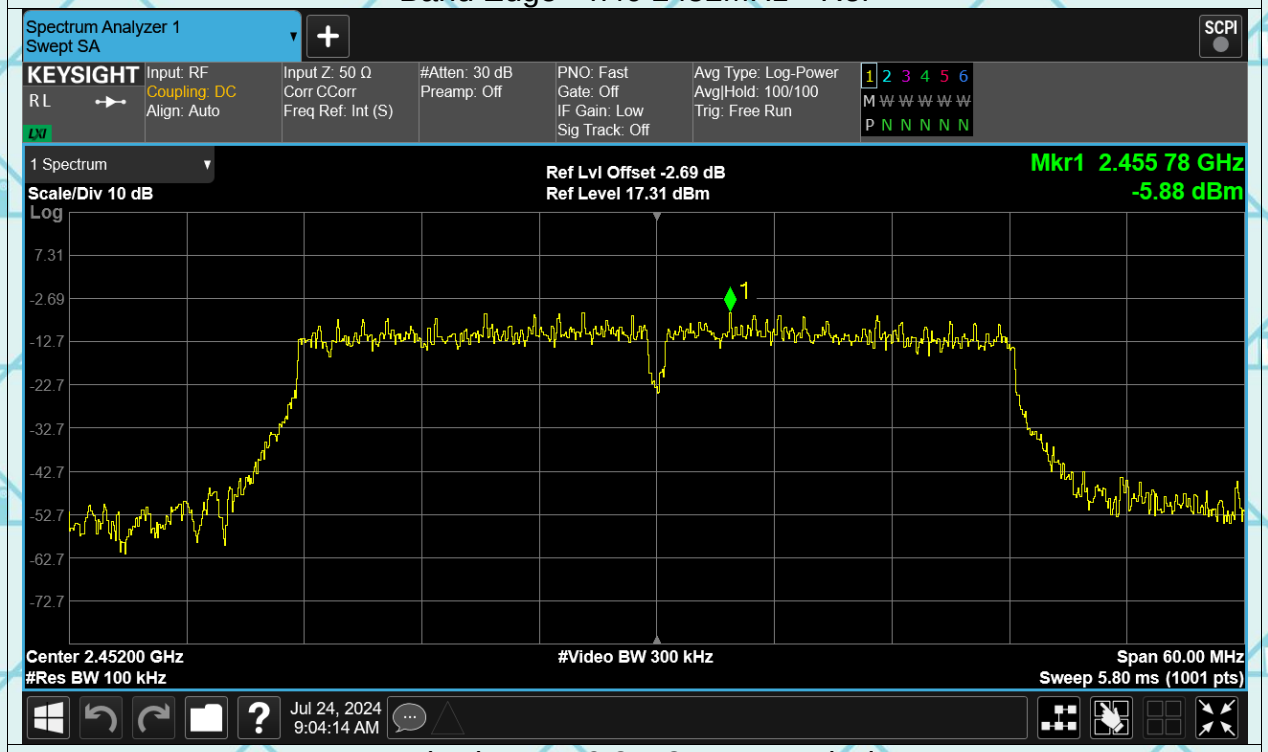
Band Edge n40 2422MHz Ref



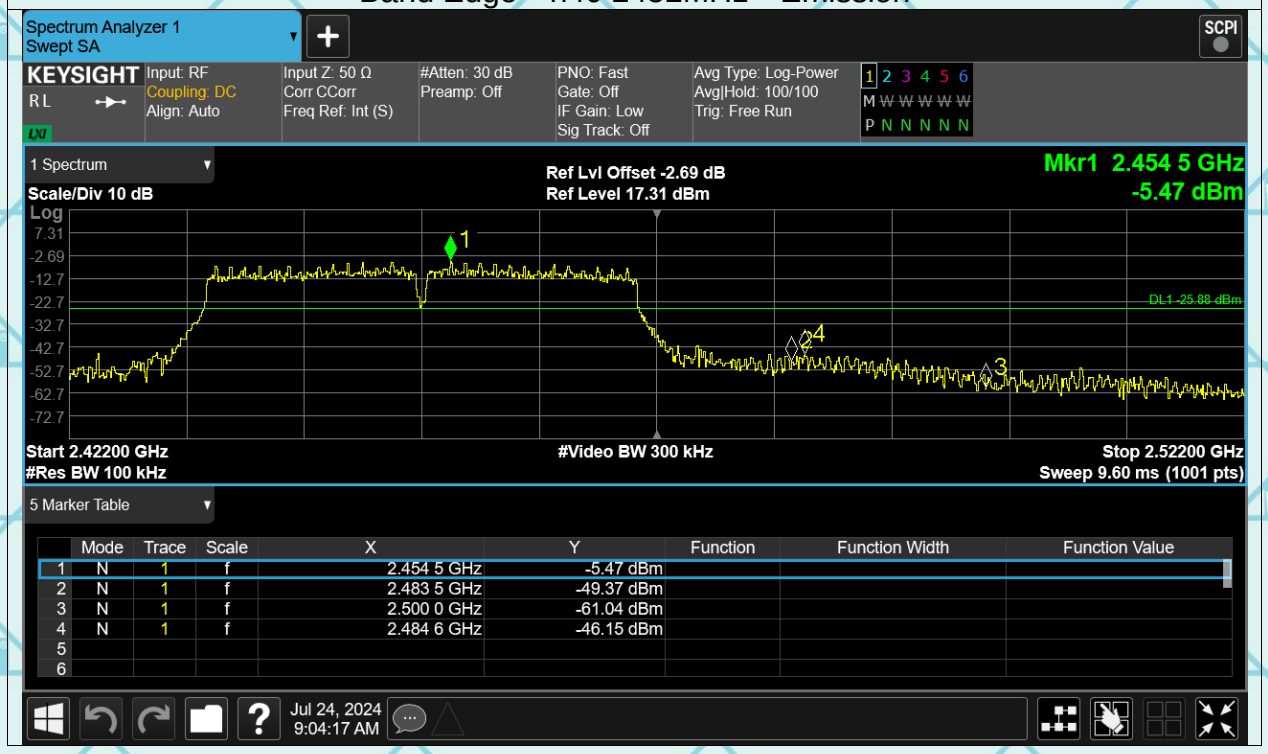
Band Edge n40 2422MHz Emission



Band Edge n40 2452MHz Ref

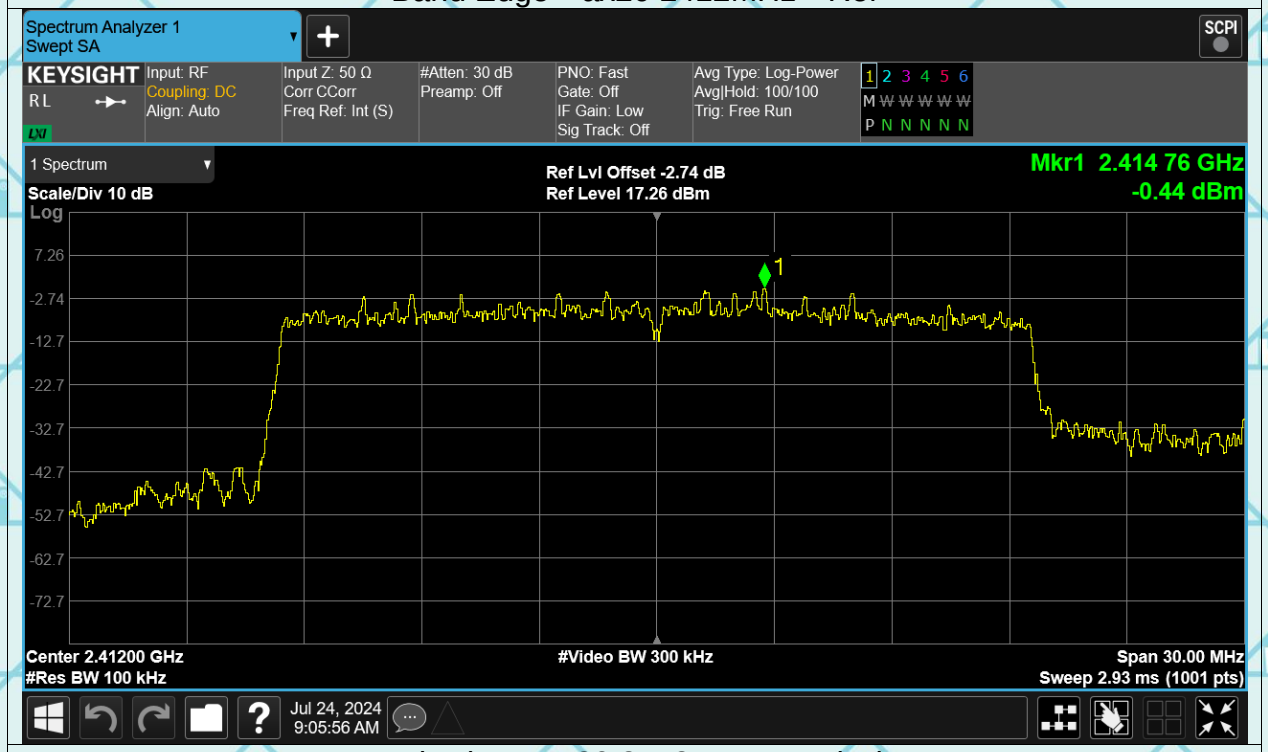


Band Edge n40 2452MHz Emission

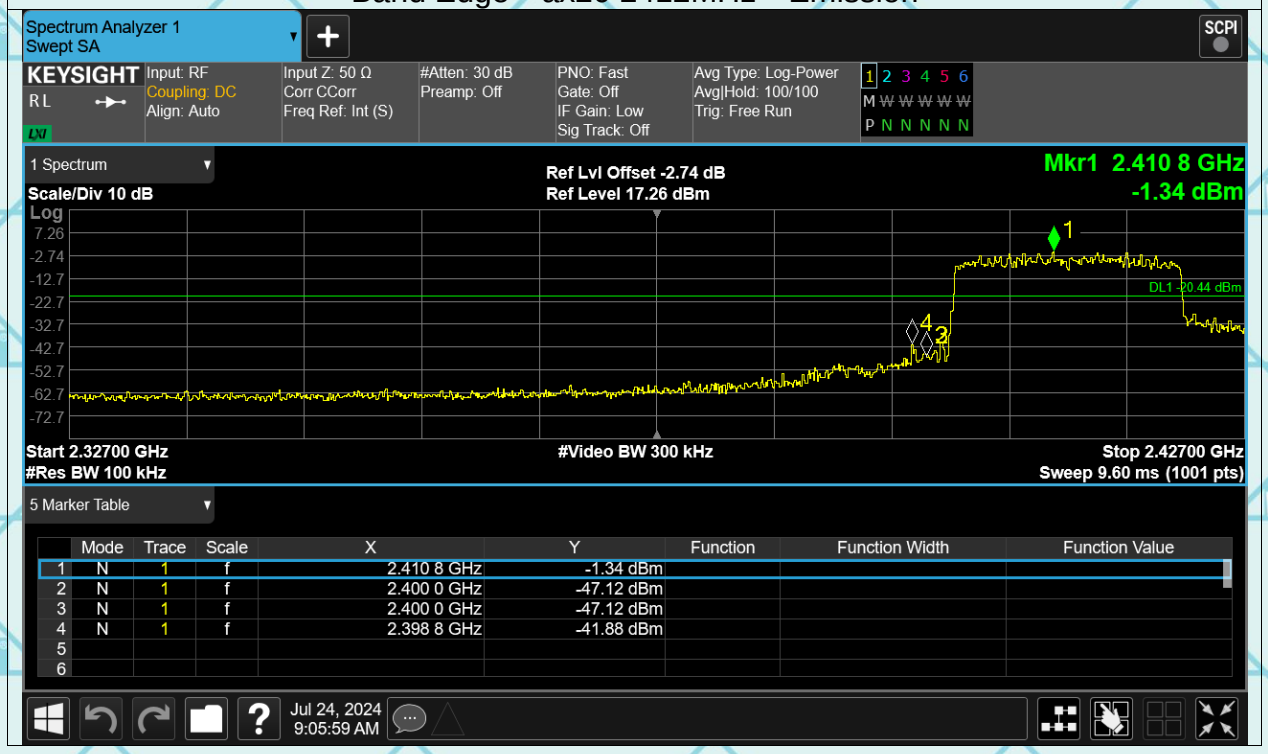


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.454 5 GHz	-5.47 dBm			
2	N	1	f	2.483 5 GHz	-49.37 dBm			
3	N	1	f	2.500 0 GHz	-61.04 dBm			
4	N	1	f	2.484 6 GHz	-46.15 dBm			
5								
6								

Band Edge ax20 2412MHz Ref

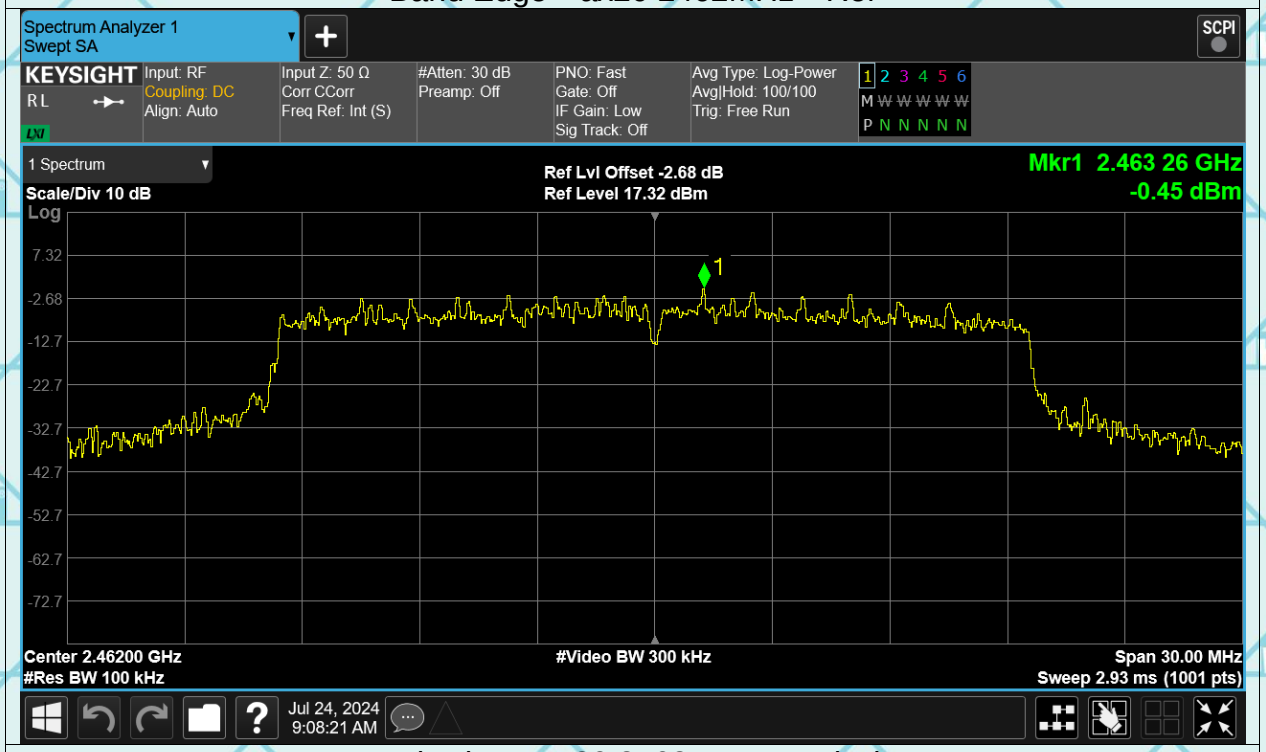


Band Edge ax20 2412MHz Emission

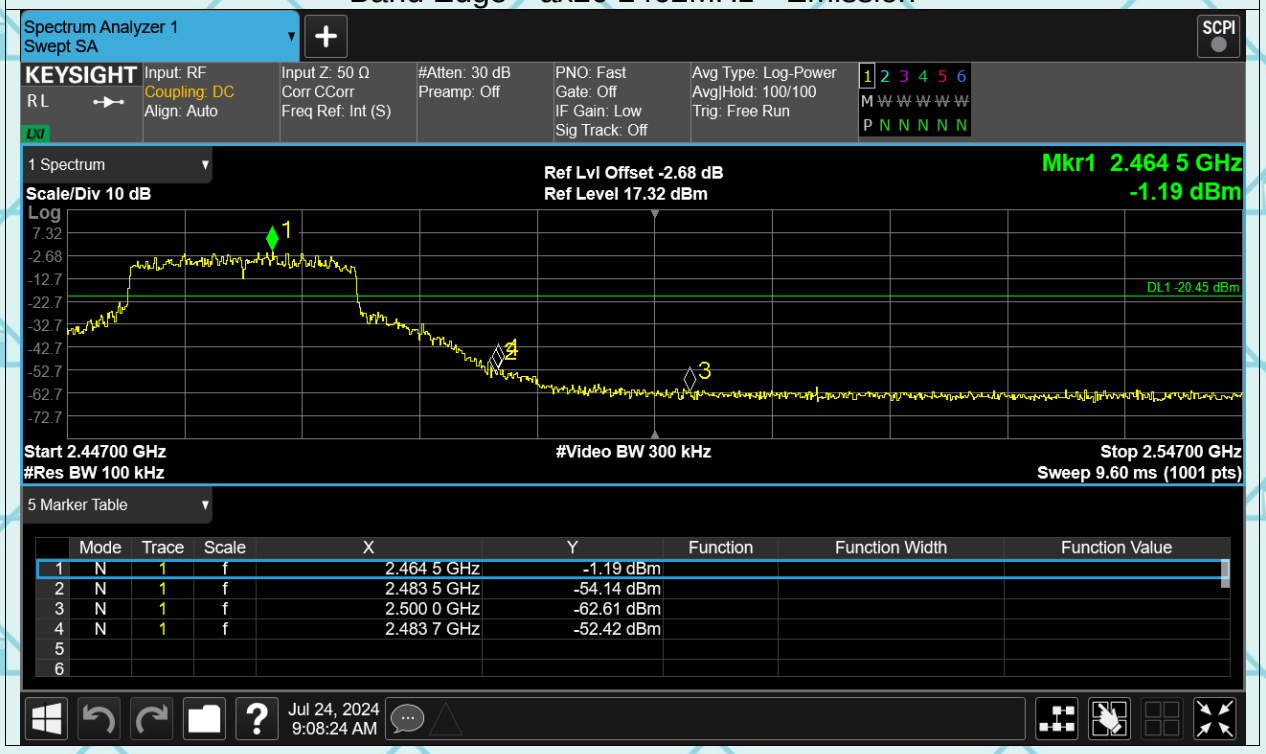


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.410 8 GHz	-1.34 dBm			
2	N	1	f	2.400 0 GHz	-47.12 dBm			
3	N	1	f	2.400 0 GHz	-47.12 dBm			
4	N	1	f	2.398 8 GHz	-41.88 dBm			
5								
6								

Band Edge ax20 2462MHz Ref

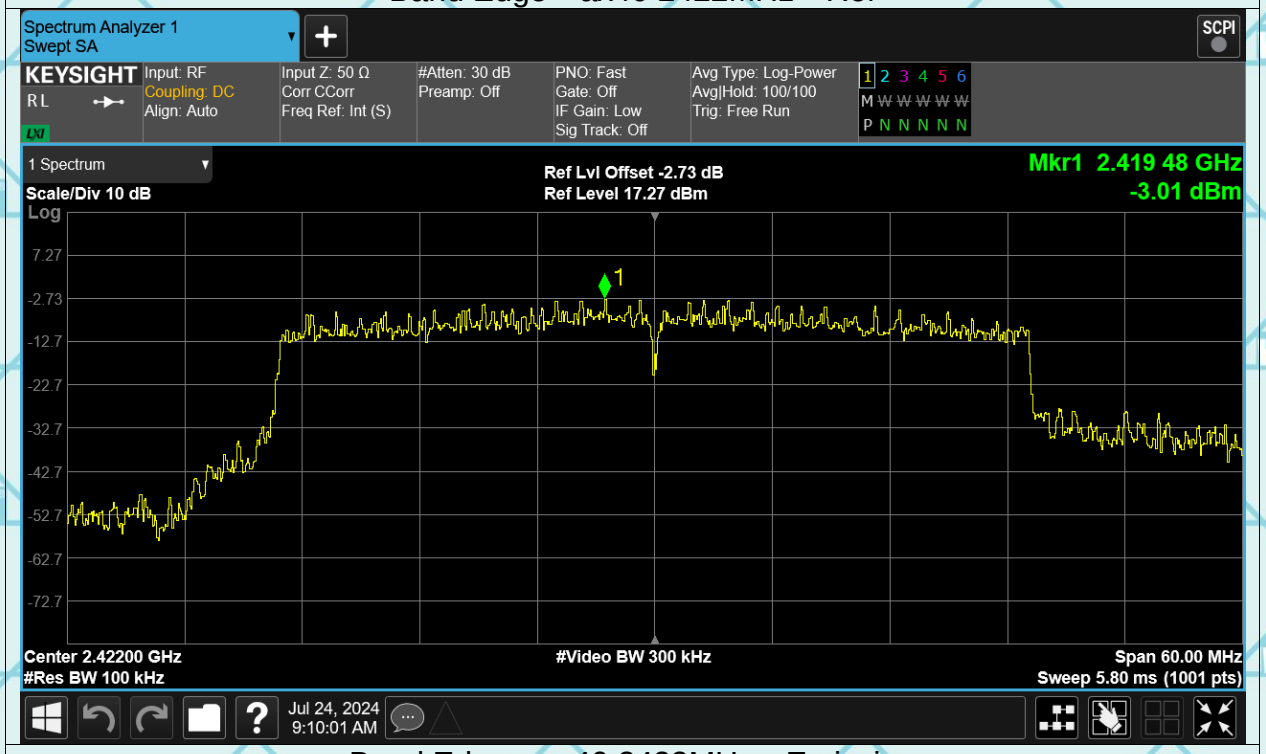


Band Edge ax20 2462MHz Emission

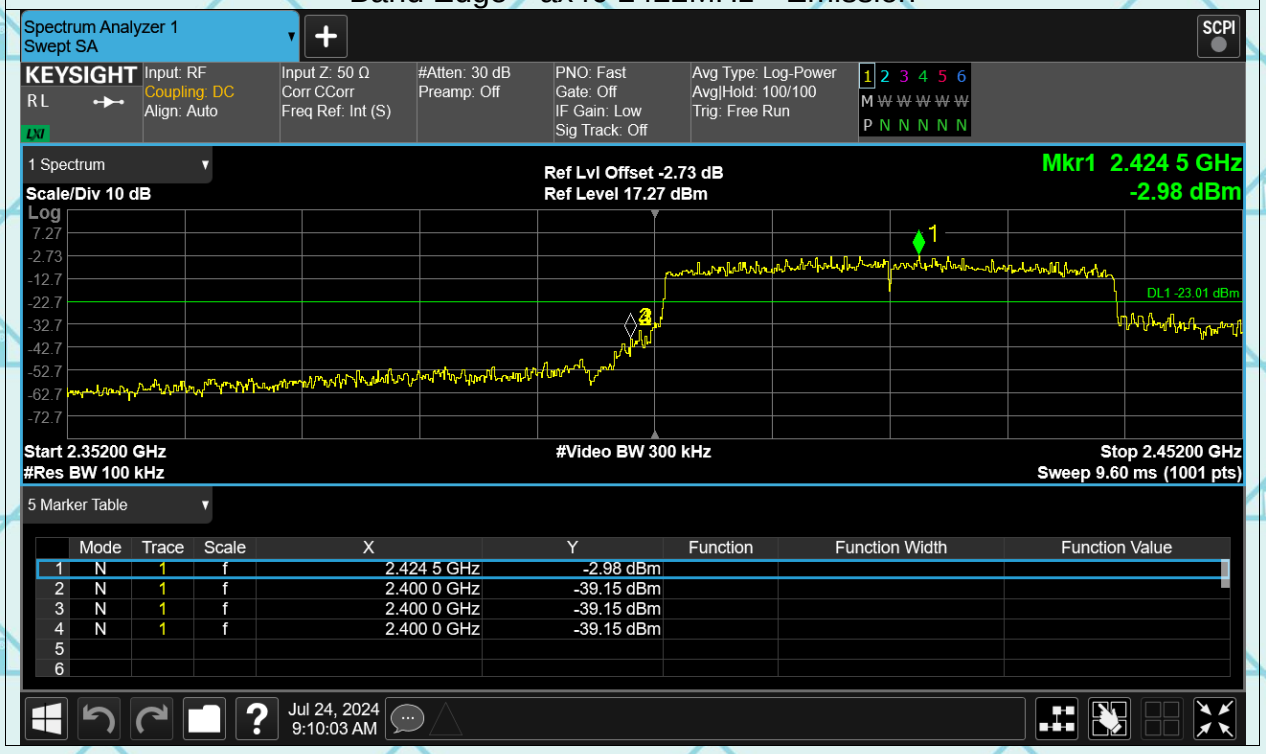


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.464 5 GHz	-1.19 dBm			
2	N	1	f	2.483 5 GHz	-54.14 dBm			
3	N	1	f	2.500 0 GHz	-62.61 dBm			
4	N	1	f	2.483 7 GHz	-52.42 dBm			
5								
6								

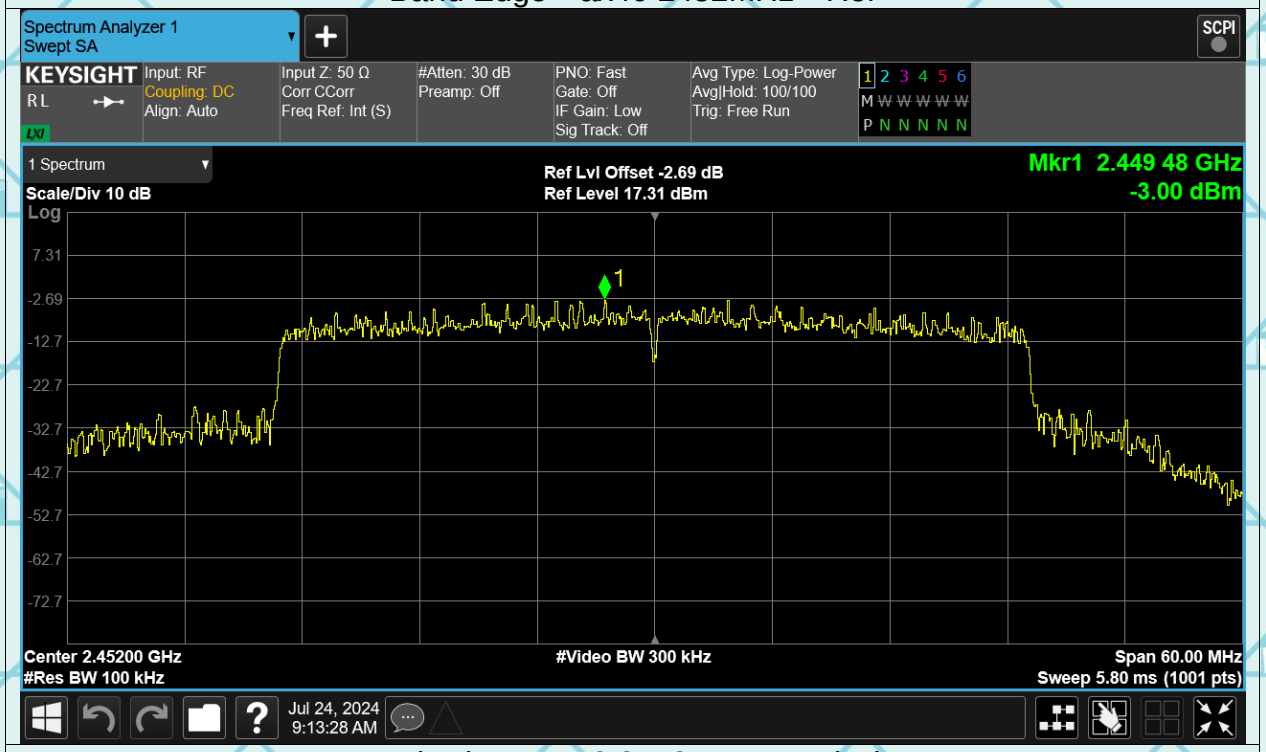
Band Edge ax40 2422MHz Ref



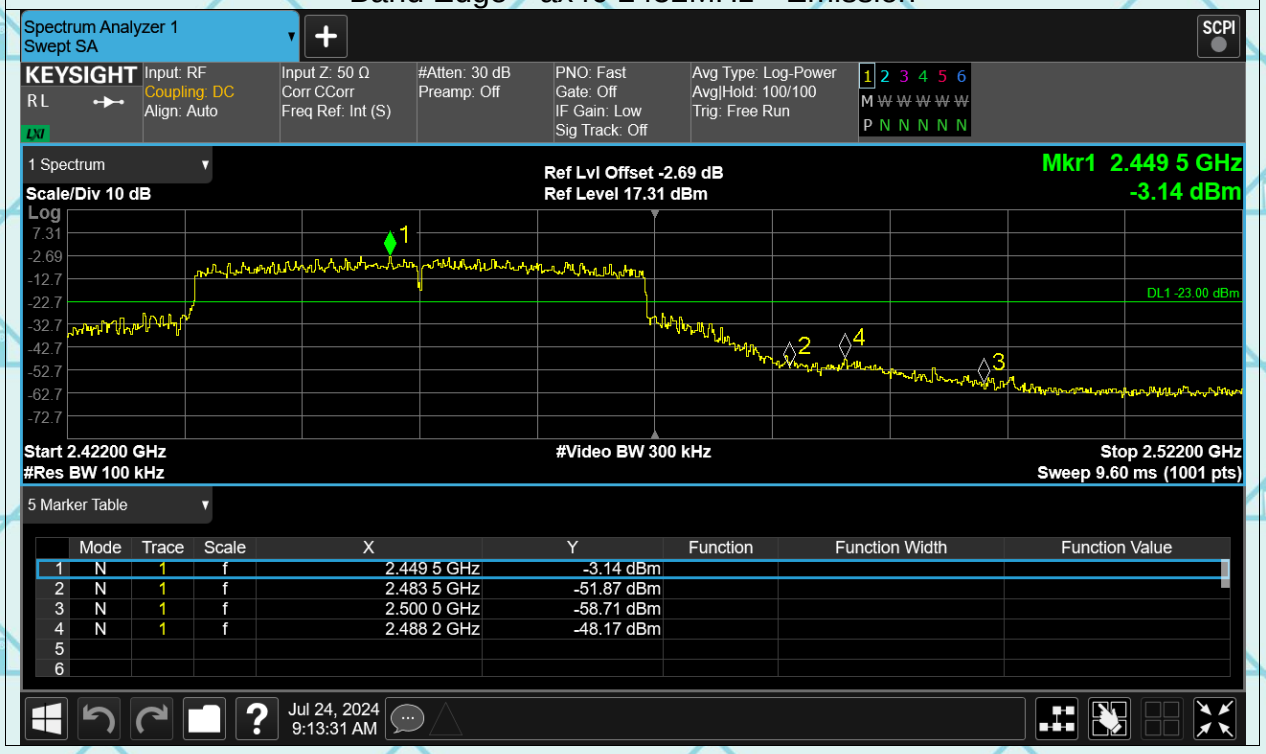
Band Edge ax40 2422MHz Emission



Band Edge ax40 2452MHz Ref



Band Edge ax40 2452MHz Emission

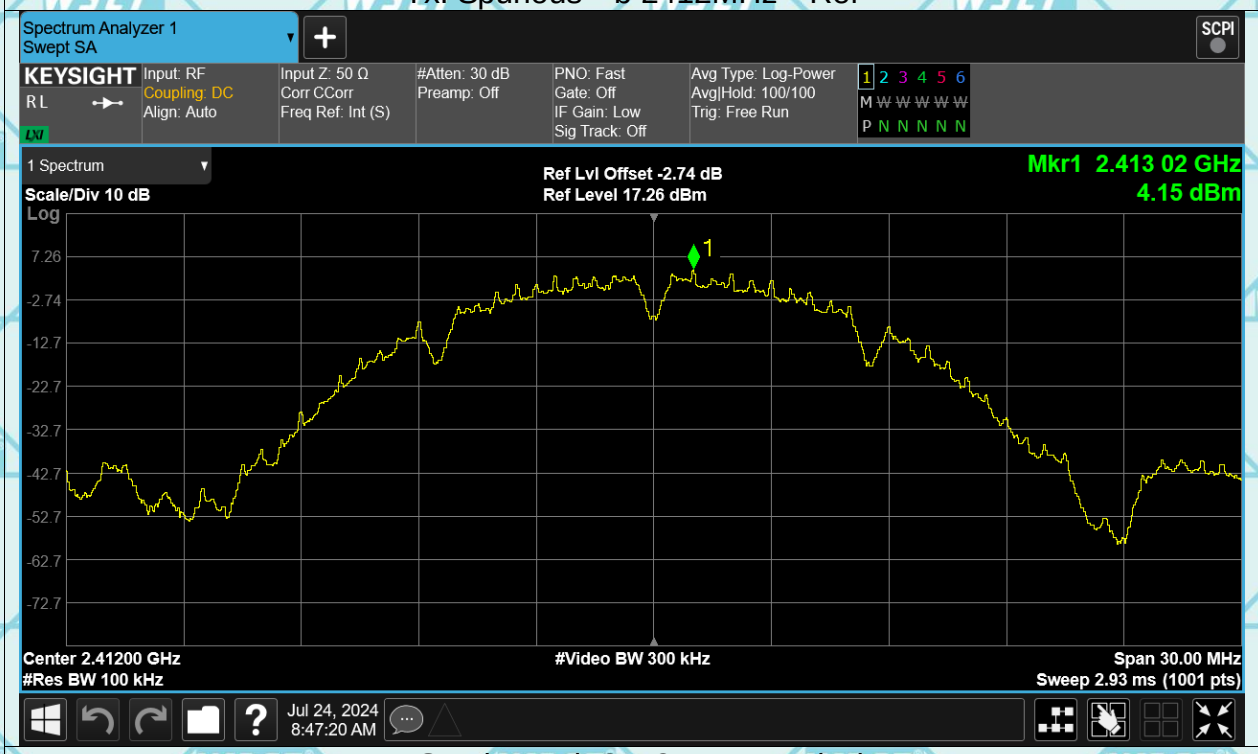


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.449 5 GHz	-3.14 dBm			
2	N	1	f	2.483 5 GHz	-51.87 dBm			
3	N	1	f	2.500 0 GHz	-58.71 dBm			
4	N	1	f	2.488 2 GHz	-48.17 dBm			
5								
6								

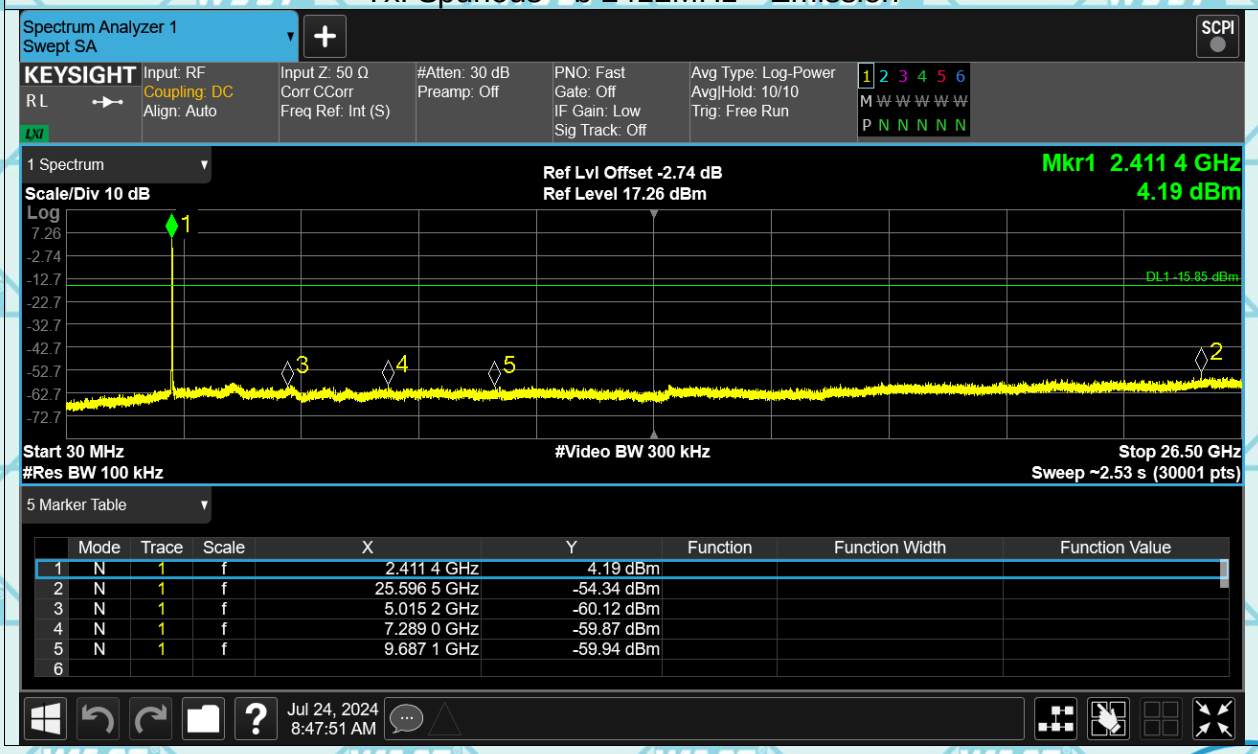
Conducted RF Spurious Emission

Test Graphs

Tx. Spurious b 2412MHz Ref

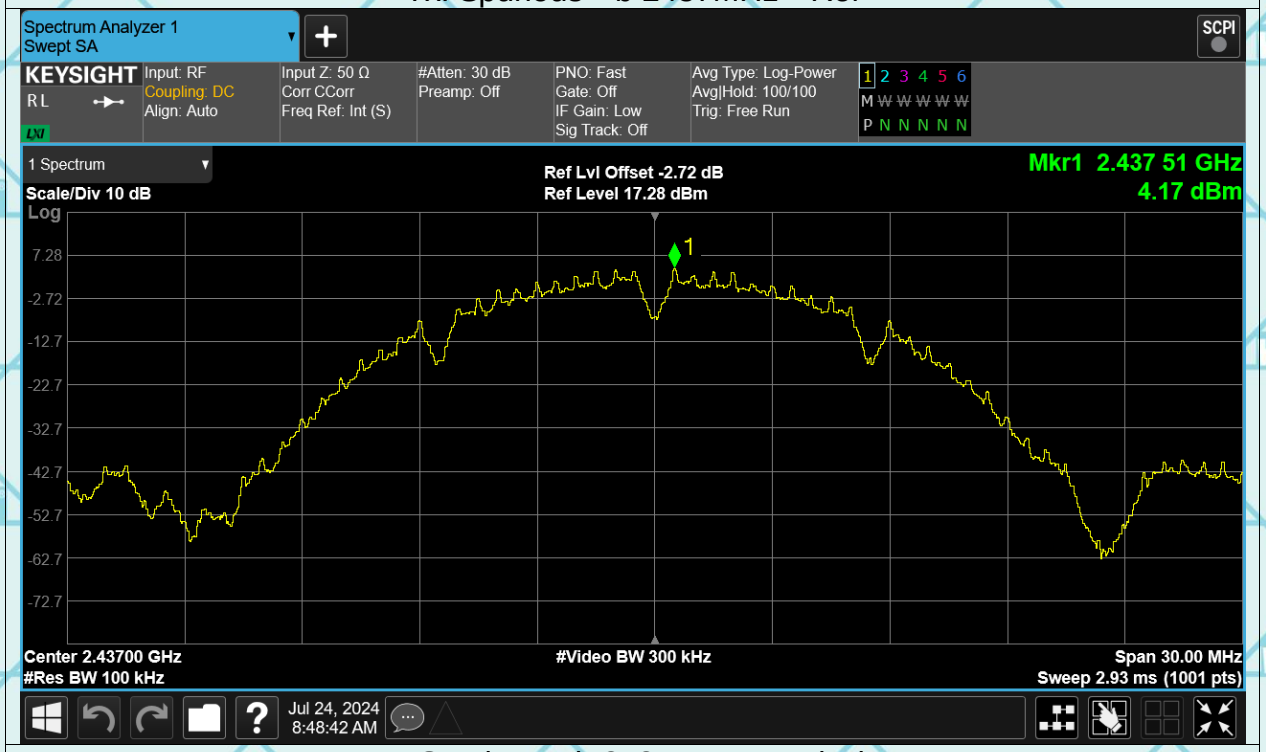


Tx. Spurious b 2412MHz Emission

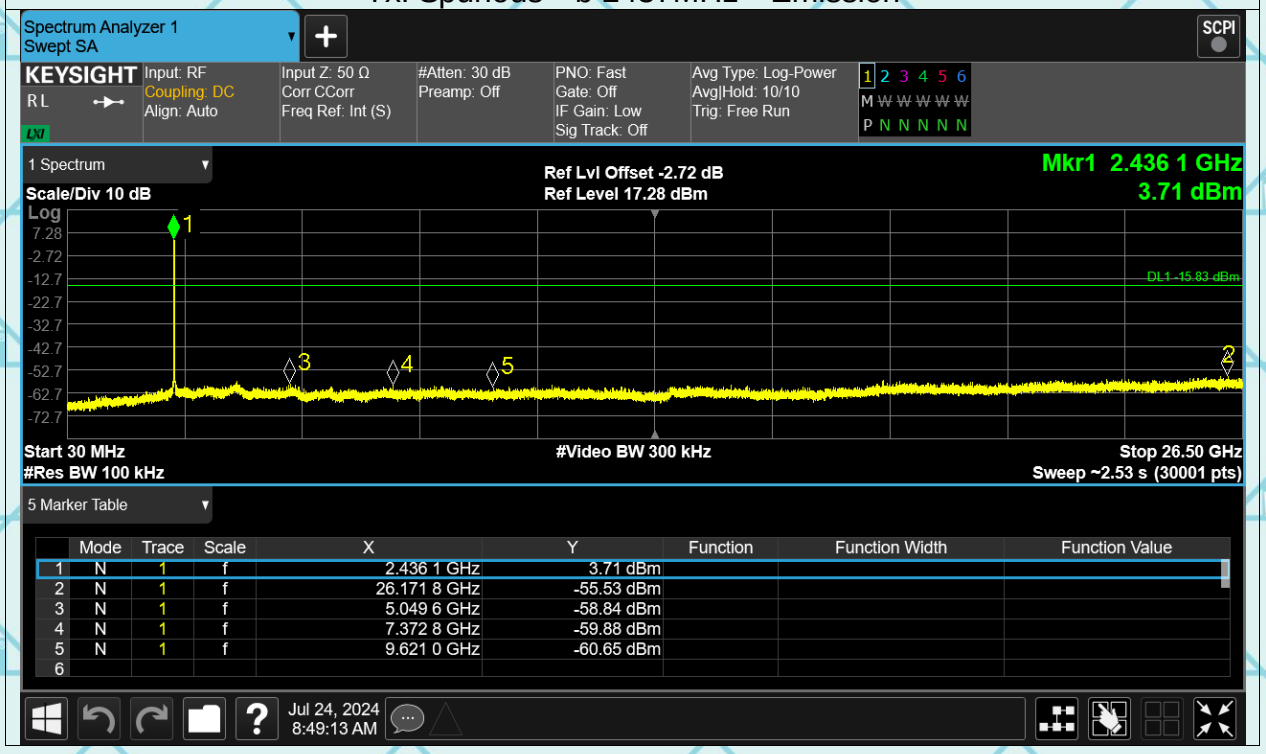


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.411 4 GHz	4.19 dBm			
2	N	1	f	25.596 5 GHz	-54.34 dBm			
3	N	1	f	5.015 2 GHz	-60.12 dBm			
4	N	1	f	7.289 0 GHz	-59.87 dBm			
5	N	1	f	9.687 1 GHz	-59.94 dBm			
6								

Tx. Spurious b 2437MHz Ref

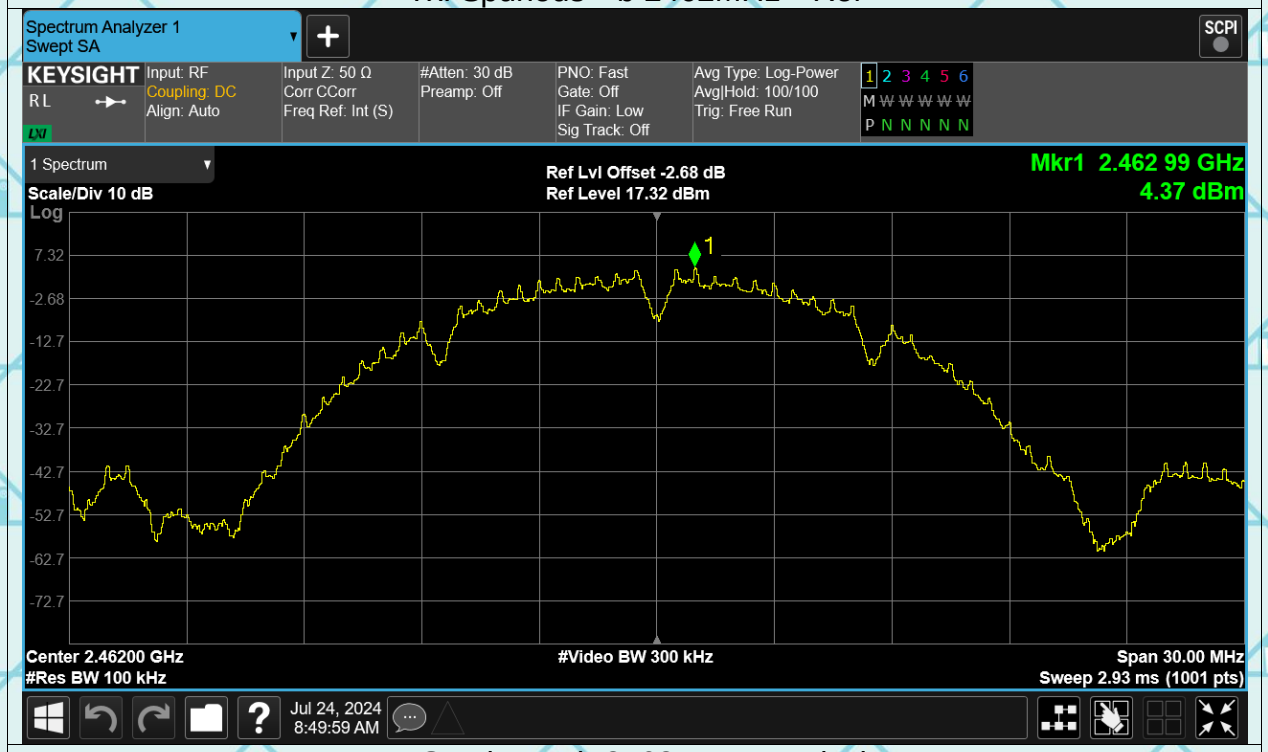


Tx. Spurious b 2437MHz Emission

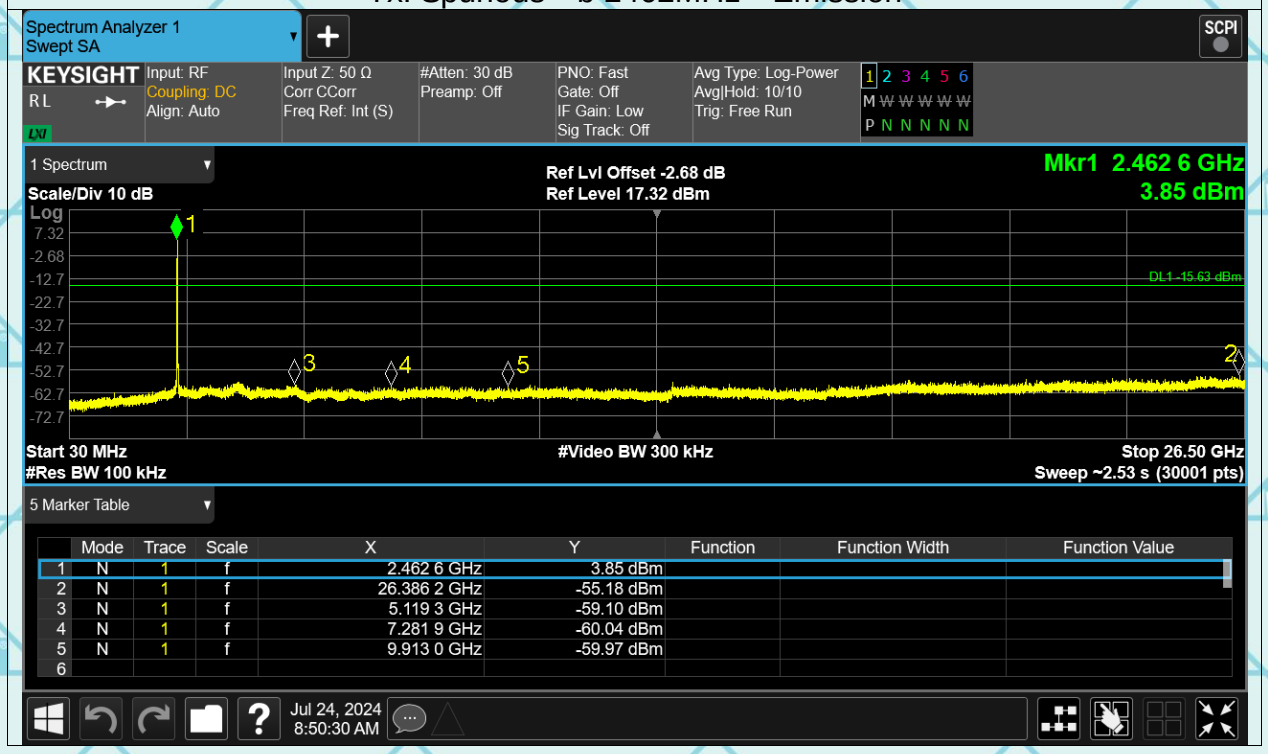


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.436 1 GHz	3.71 dBm			
2	N	1	f	26.171 8 GHz	-55.53 dBm			
3	N	1	f	5.049 6 GHz	-58.84 dBm			
4	N	1	f	7.372 8 GHz	-59.88 dBm			
5	N	1	f	9.621 0 GHz	-60.65 dBm			
6								

Tx. Spurious b 2462MHz Ref

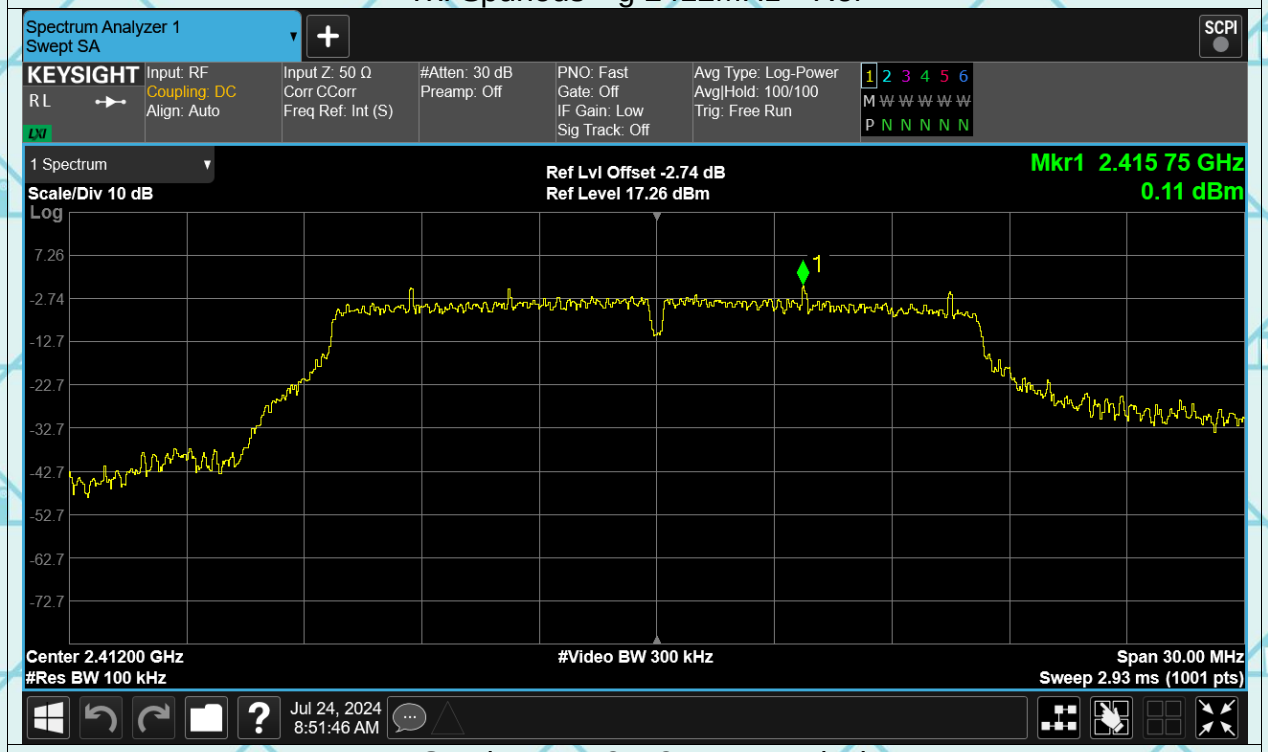


Tx. Spurious b 2462MHz Emission

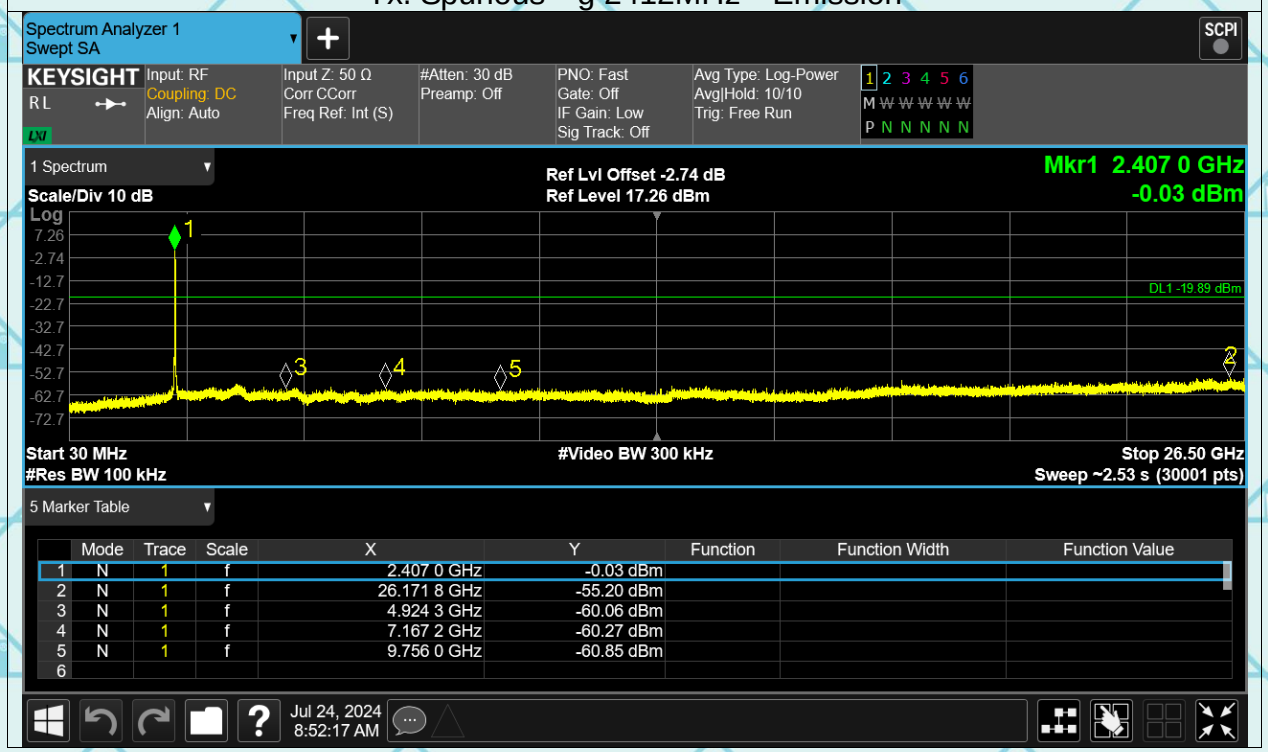


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.462 6 GHz	3.85 dBm			
2	N	1	f	26.386 2 GHz	-55.18 dBm			
3	N	1	f	5.119 3 GHz	-59.10 dBm			
4	N	1	f	7.281 9 GHz	-60.04 dBm			
5	N	1	f	9.913 0 GHz	-59.97 dBm			
6								

Tx. Spurious g 2412MHz Ref

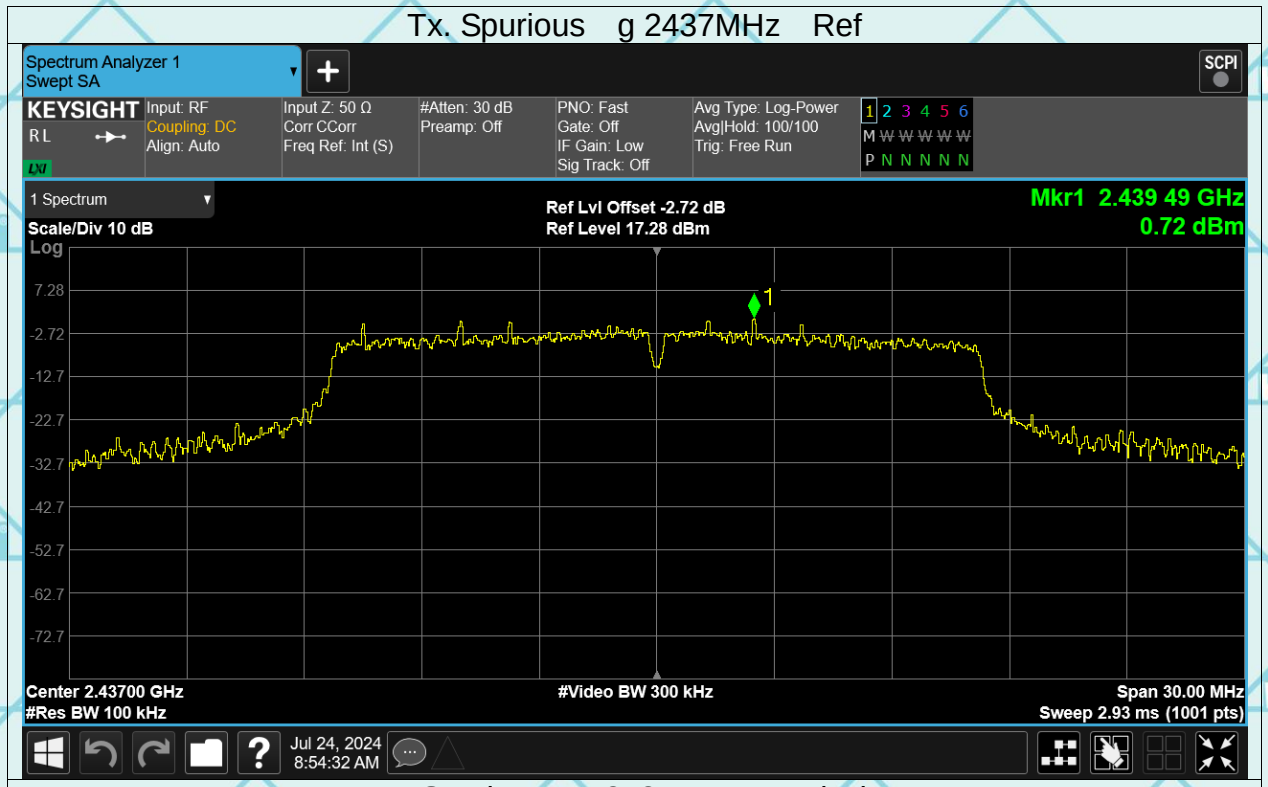


Tx. Spurious g 2412MHz Emission

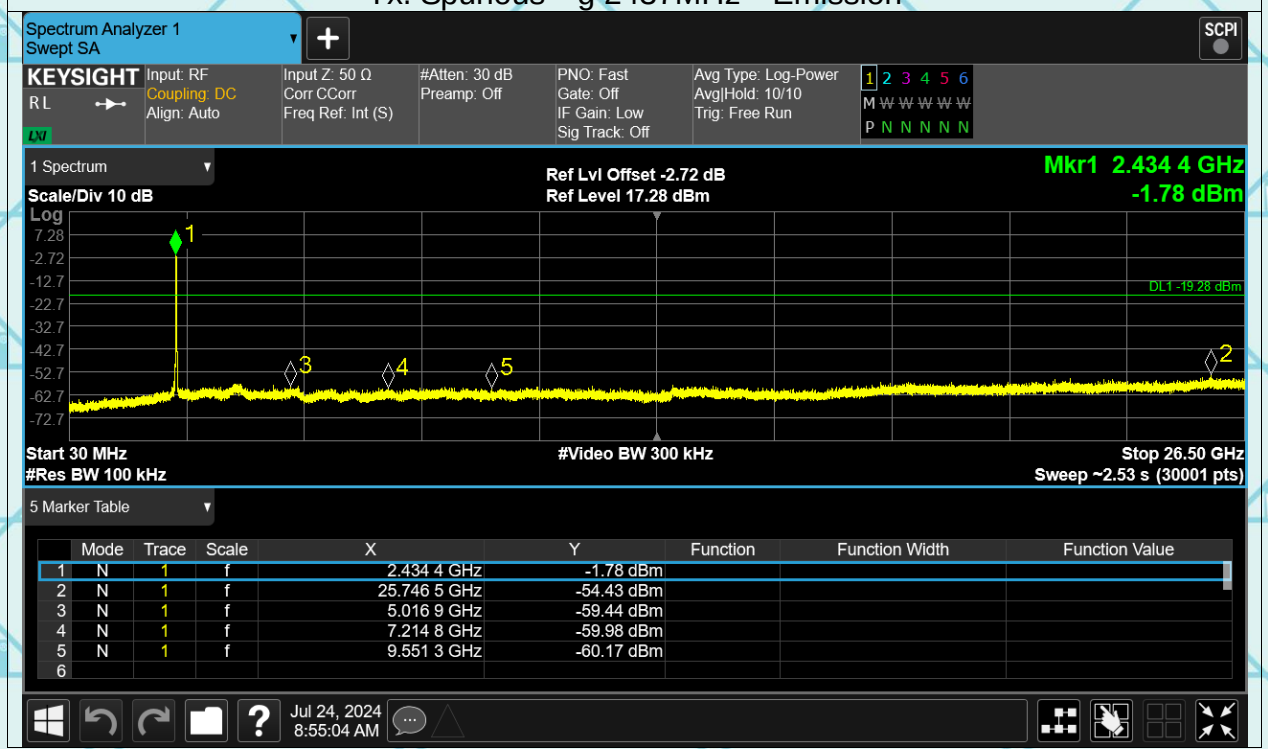


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.407 0 GHz	-0.03 dBm			
2	N	1	f	26.171 8 GHz	-55.20 dBm			
3	N	1	f	4.924 3 GHz	-60.06 dBm			
4	N	1	f	7.167 2 GHz	-60.27 dBm			
5	N	1	f	9.756 0 GHz	-60.85 dBm			
6								

Tx. Spurious g 2437MHz Ref

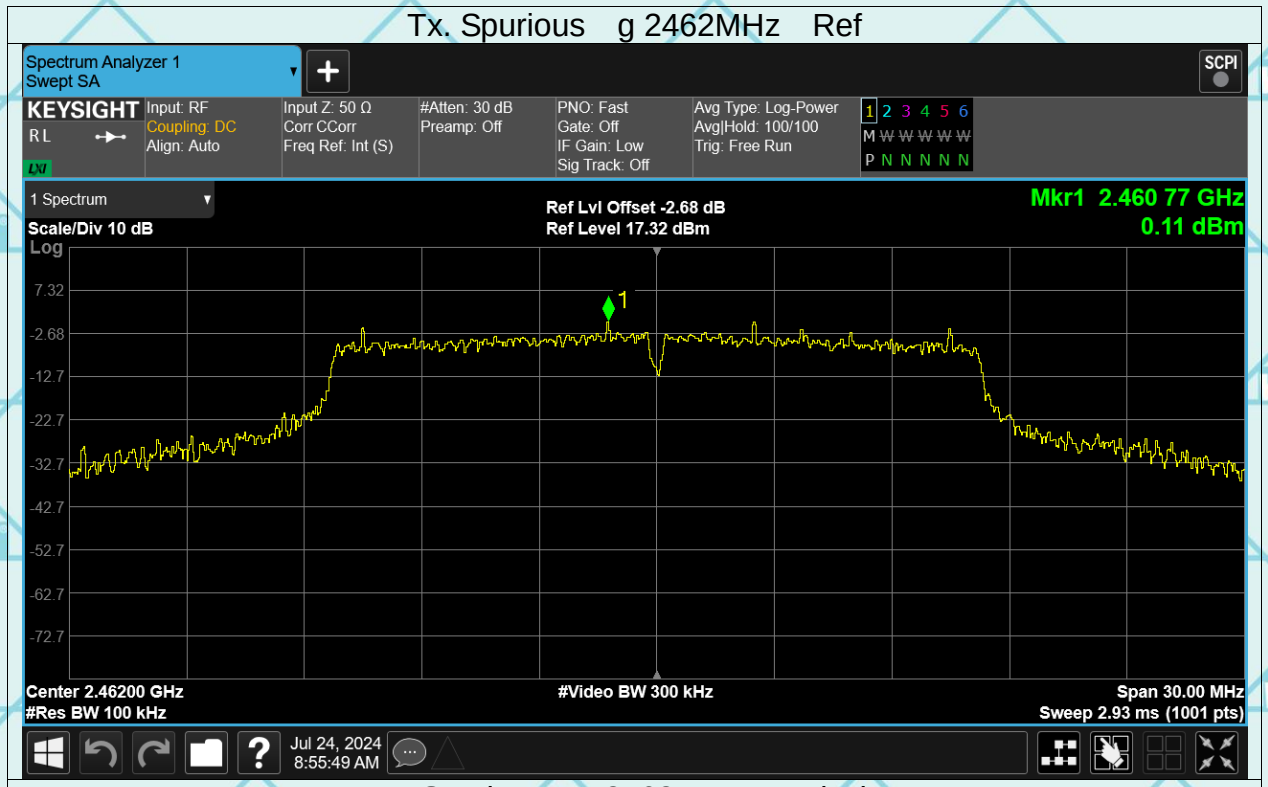


Tx. Spurious g 2437MHz Emission

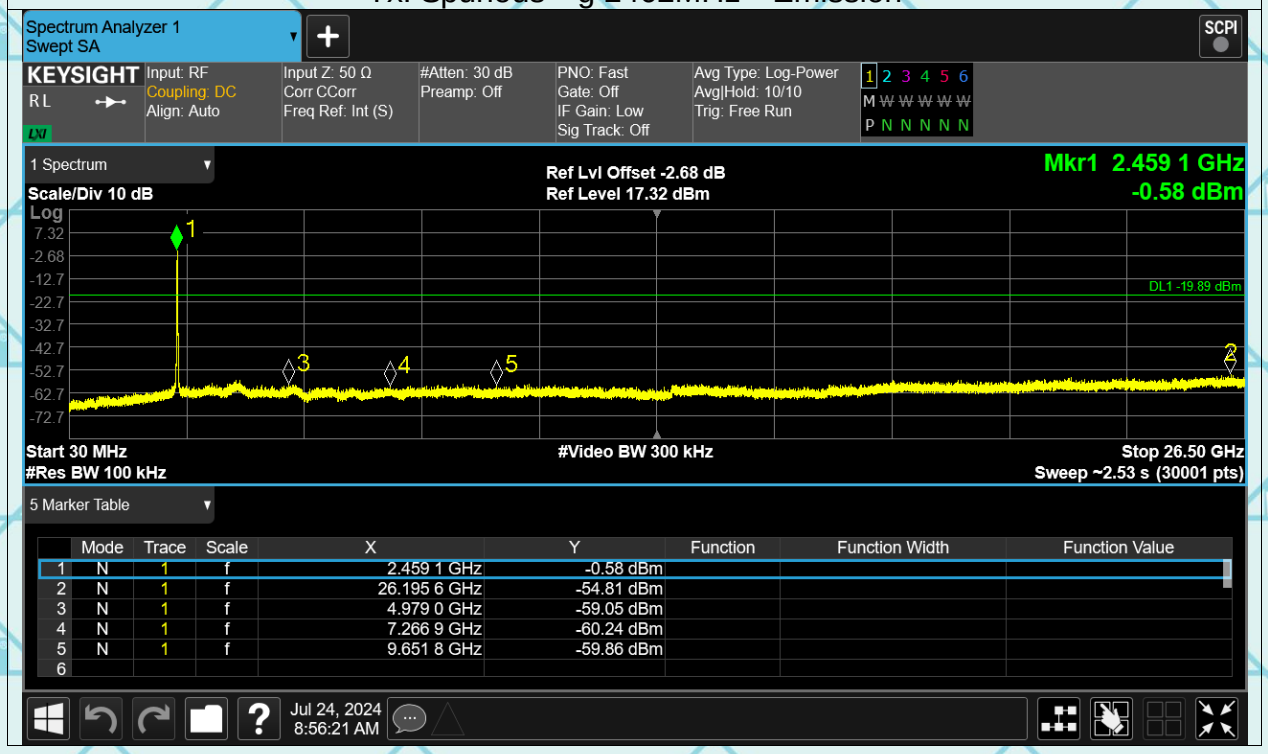


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.434 4 GHz	-1.78 dBm			
2	N	1	f	25.746 5 GHz	-54.43 dBm			
3	N	1	f	5.016 9 GHz	-59.44 dBm			
4	N	1	f	7.214 8 GHz	-59.98 dBm			
5	N	1	f	9.551 3 GHz	-60.17 dBm			
6								

Tx. Spurious g 2462MHz Ref

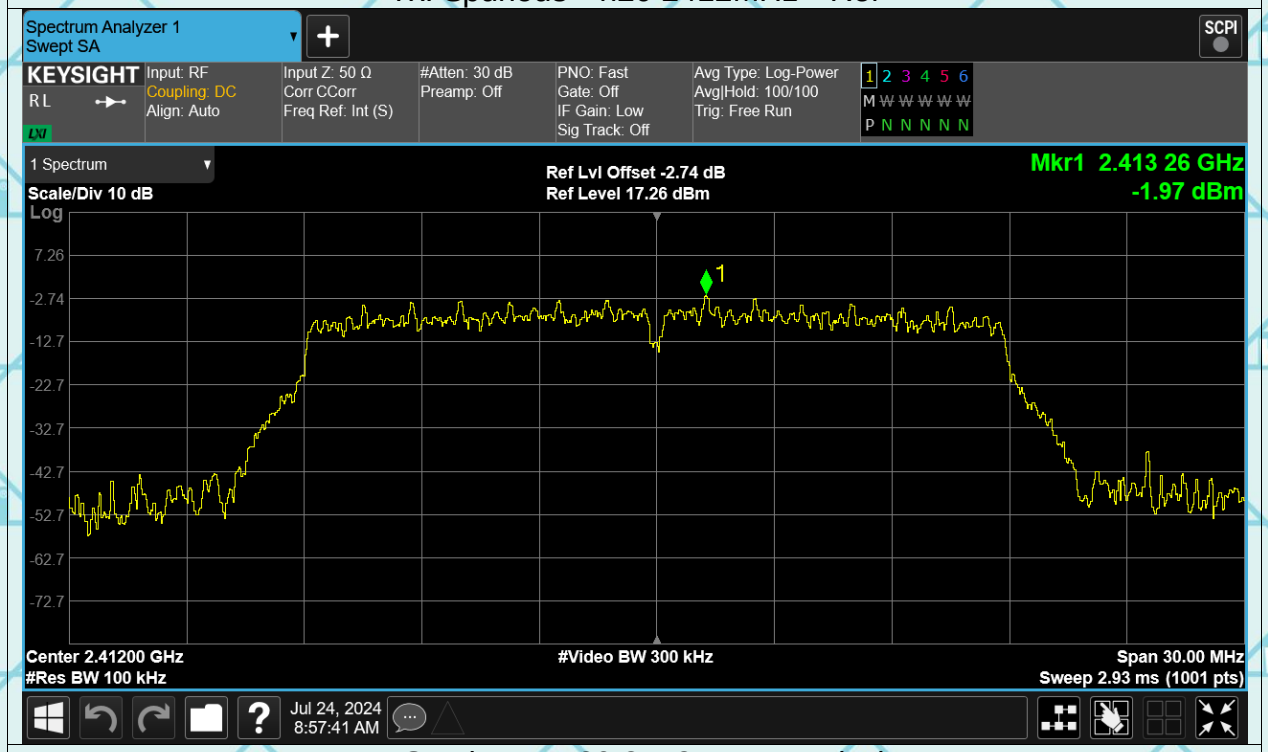


Tx. Spurious g 2462MHz Emission

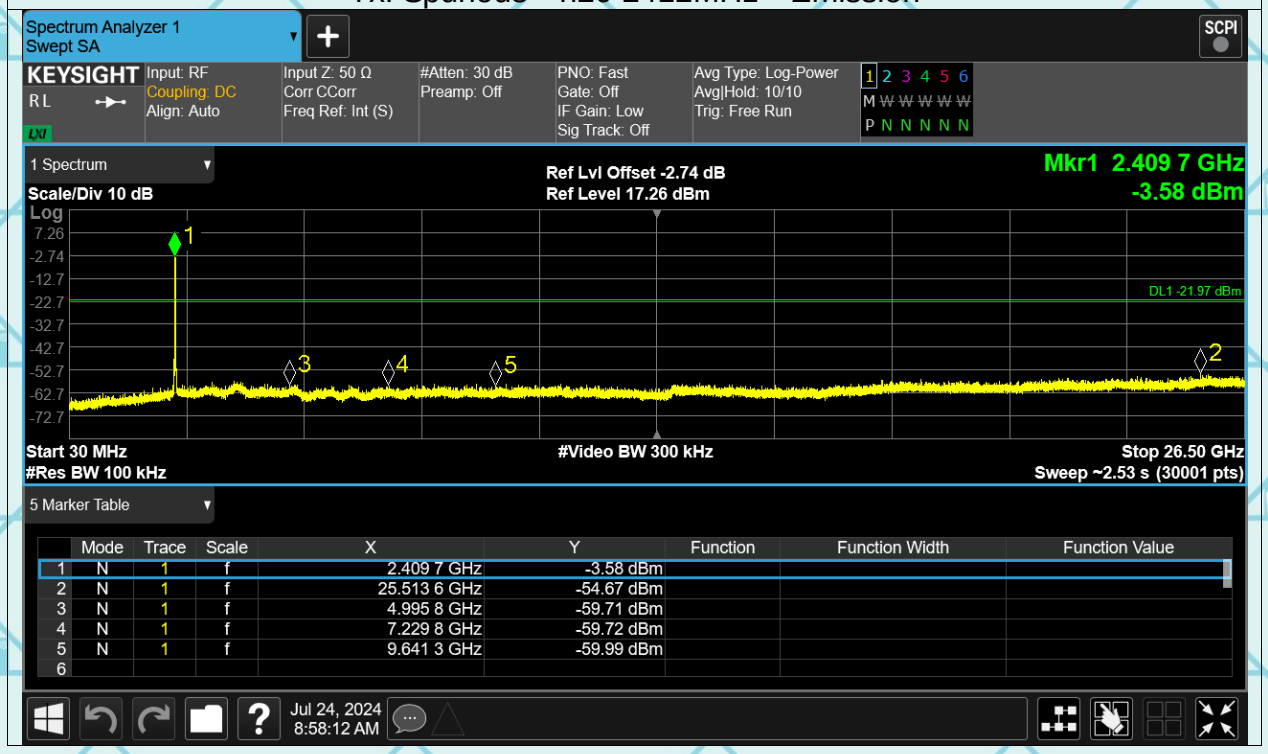


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.459 1 GHz	-0.58 dBm			
2	N	1	f	26.195 6 GHz	-54.81 dBm			
3	N	1	f	4.979 0 GHz	-59.05 dBm			
4	N	1	f	7.266 9 GHz	-60.24 dBm			
5	N	1	f	9.651 8 GHz	-59.86 dBm			
6								

Tx. Spurious n20 2412MHz Ref

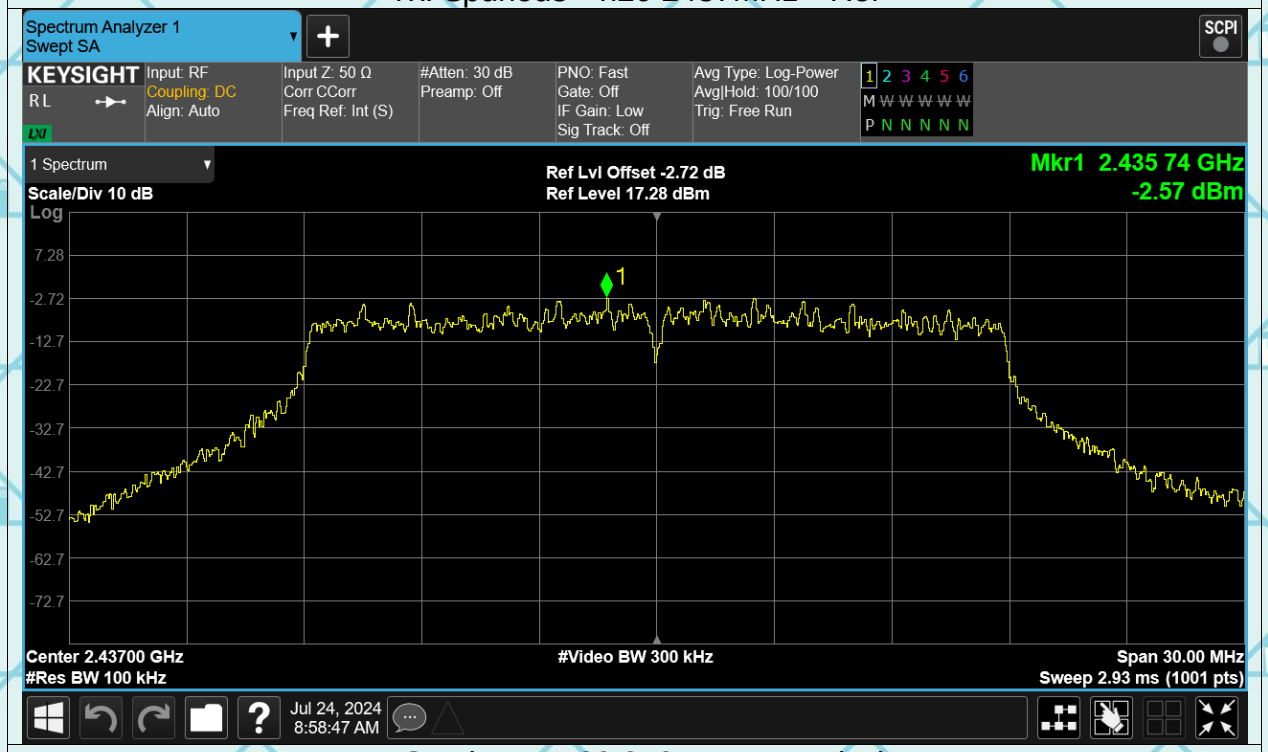


Tx. Spurious n20 2412MHz Emission

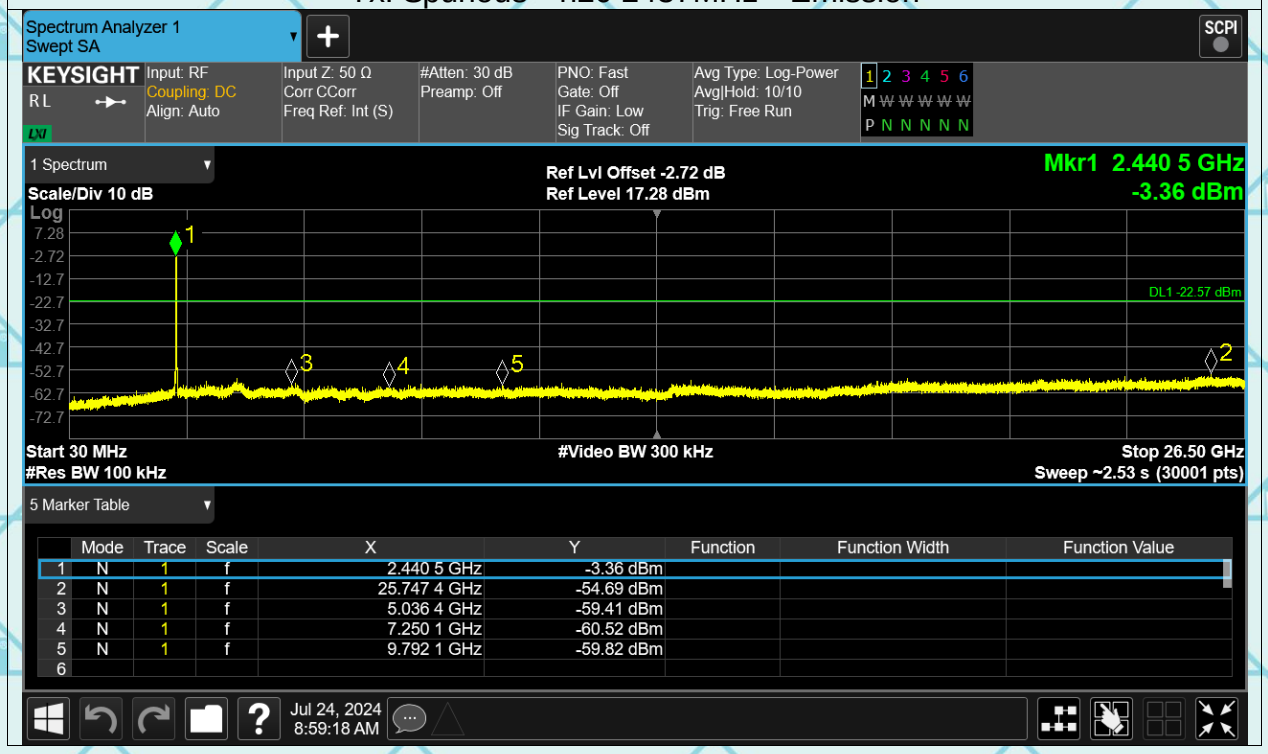


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.409 7 GHz	-3.58 dBm			
2	N	1	f	25.513 6 GHz	-54.67 dBm			
3	N	1	f	4.995 8 GHz	-59.71 dBm			
4	N	1	f	7.229 8 GHz	-59.72 dBm			
5	N	1	f	9.641 3 GHz	-59.99 dBm			
6								

Tx. Spurious n20 2437MHz Ref

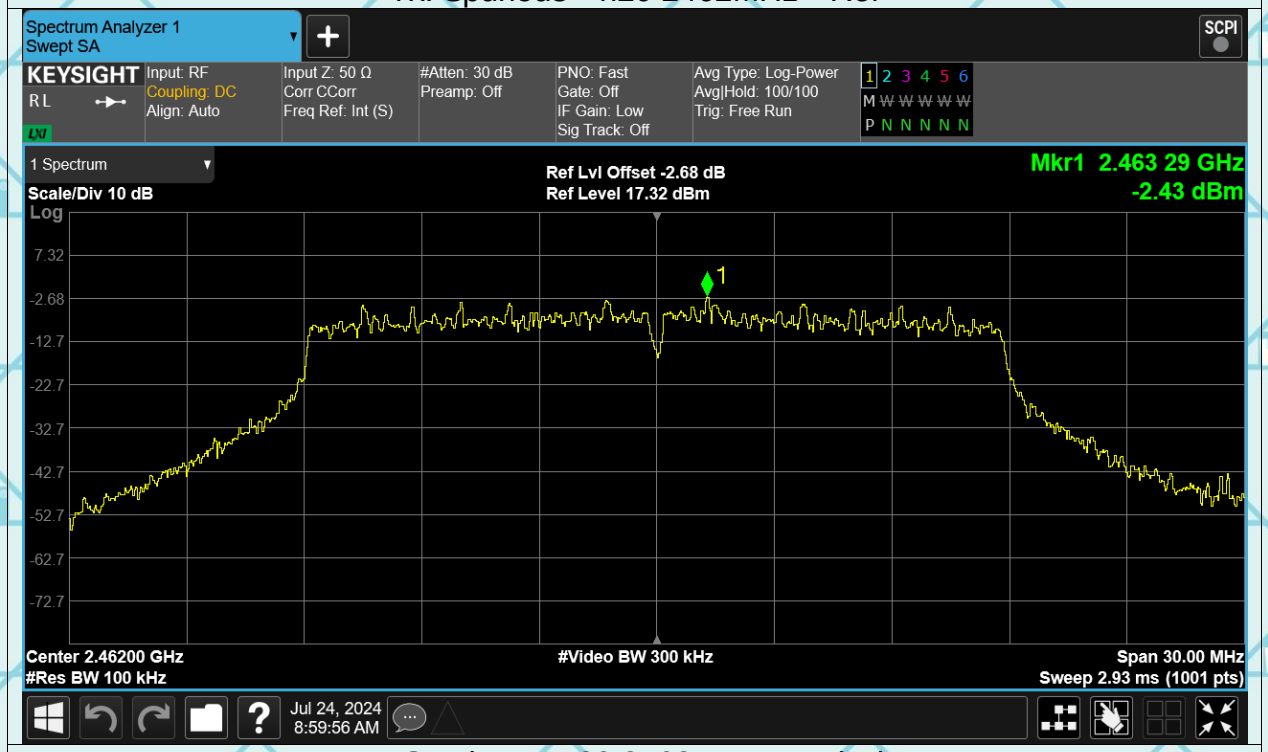


Tx. Spurious n20 2437MHz Emission

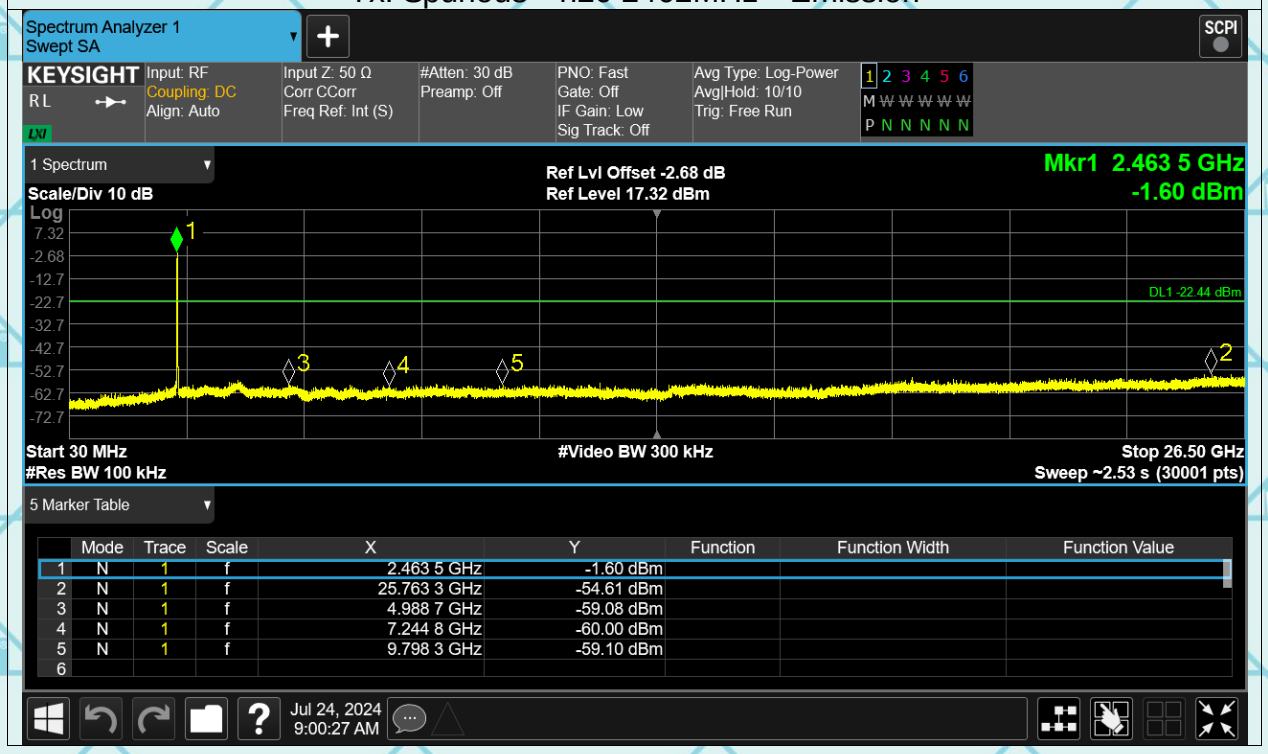


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.440 5 GHz	-3.36 dBm			
2	N	1	f	25.747 4 GHz	-54.69 dBm			
3	N	1	f	5.036 4 GHz	-59.41 dBm			
4	N	1	f	7.250 1 GHz	-60.52 dBm			
5	N	1	f	9.792 1 GHz	-59.82 dBm			
6								

Tx. Spurious n20 2462MHz Ref

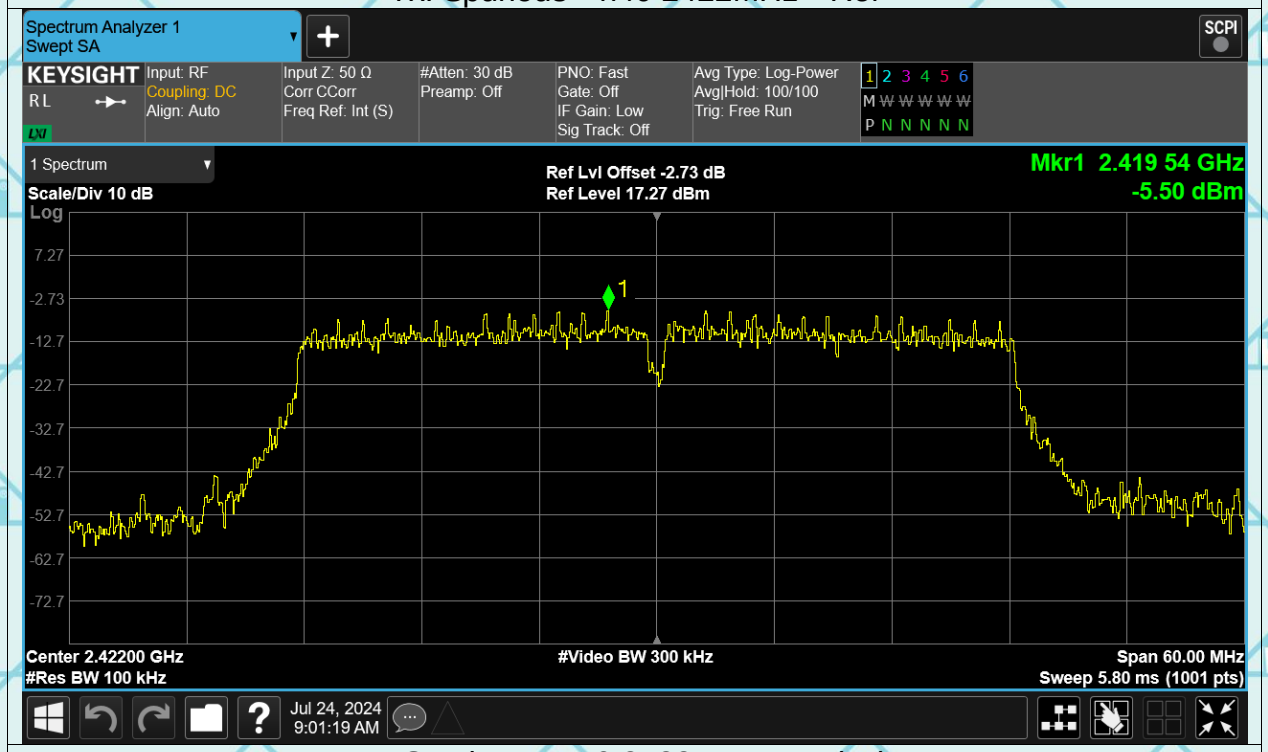


Tx. Spurious n20 2462MHz Emission

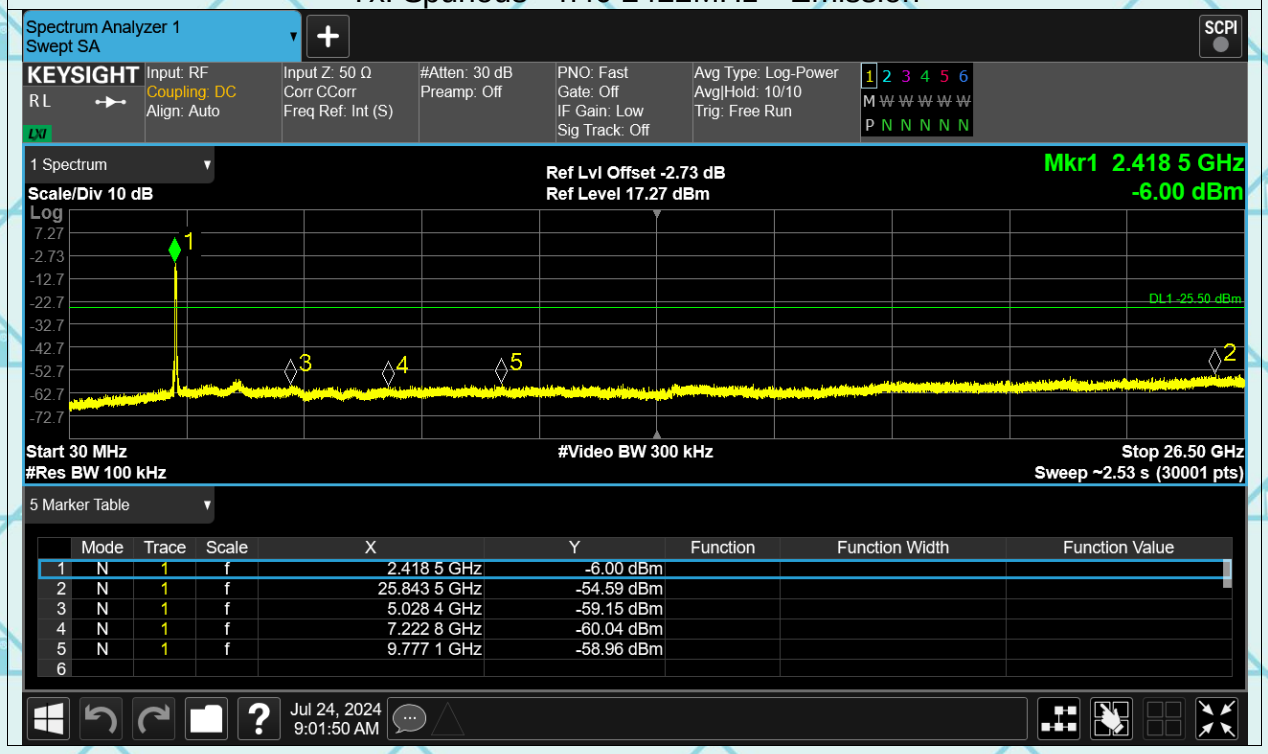


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.463 5 GHz	-1.60 dBm			
2	N	1	f	25.763 3 GHz	-54.61 dBm			
3	N	1	f	4.988 7 GHz	-59.08 dBm			
4	N	1	f	7.244 8 GHz	-60.00 dBm			
5	N	1	f	9.798 3 GHz	-59.10 dBm			
6								

Tx. Spurious n40 2422MHz Ref

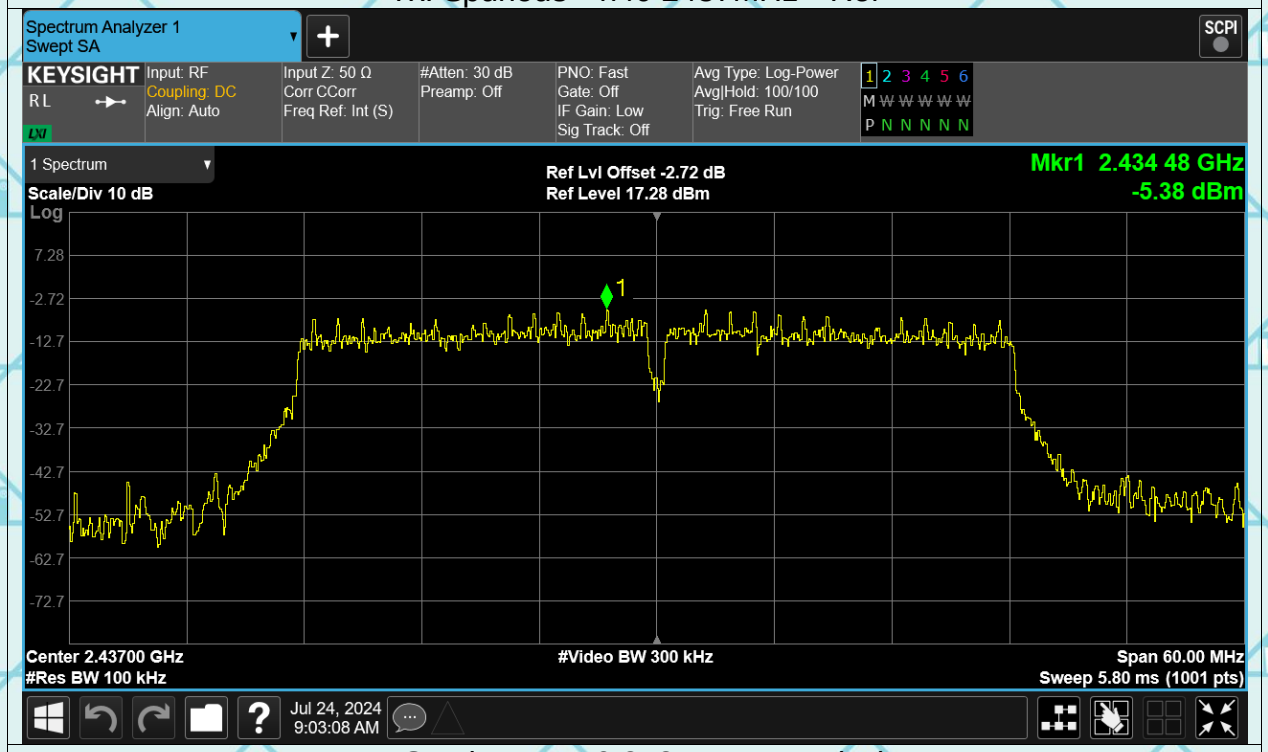


Tx. Spurious n40 2422MHz Emission

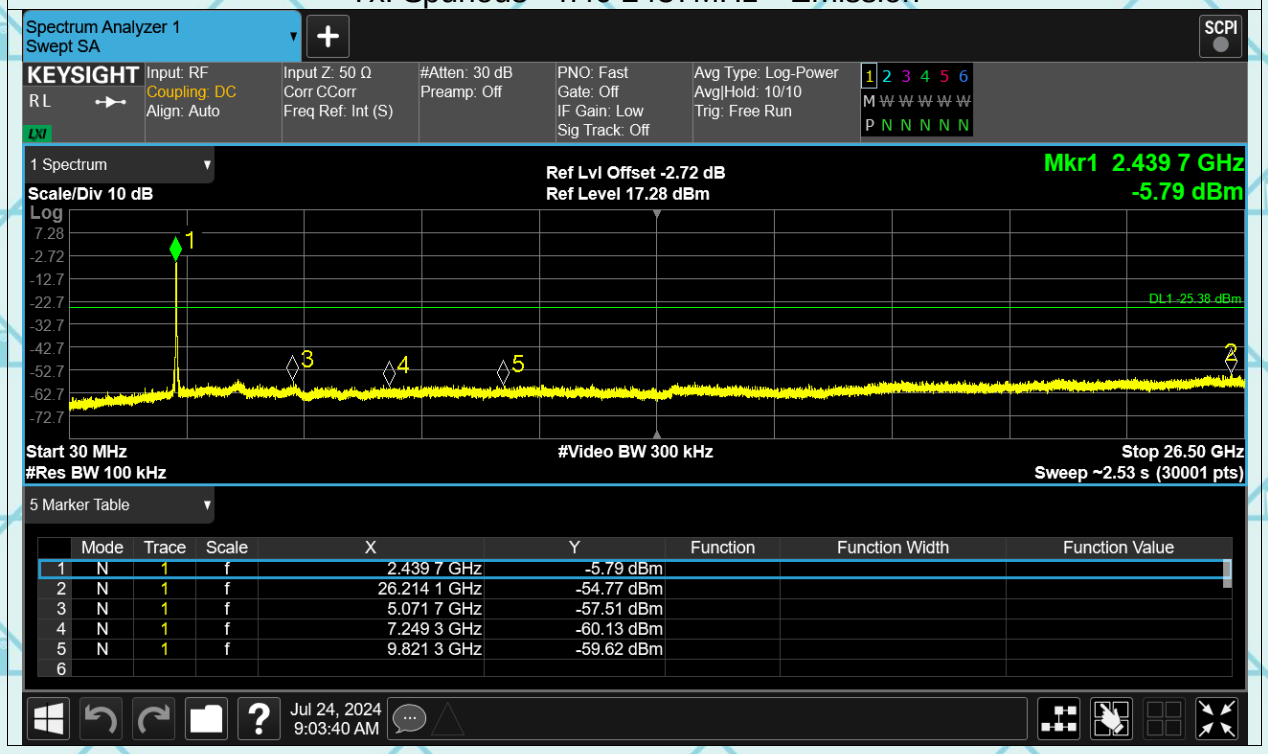


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.418 5 GHz	-6.00 dBm			
2	N	1	f	25.843 5 GHz	-54.59 dBm			
3	N	1	f	5.028 4 GHz	-59.15 dBm			
4	N	1	f	7.222 8 GHz	-60.04 dBm			
5	N	1	f	9.777 1 GHz	-58.96 dBm			
6								

Tx. Spurious n40 2437MHz Ref



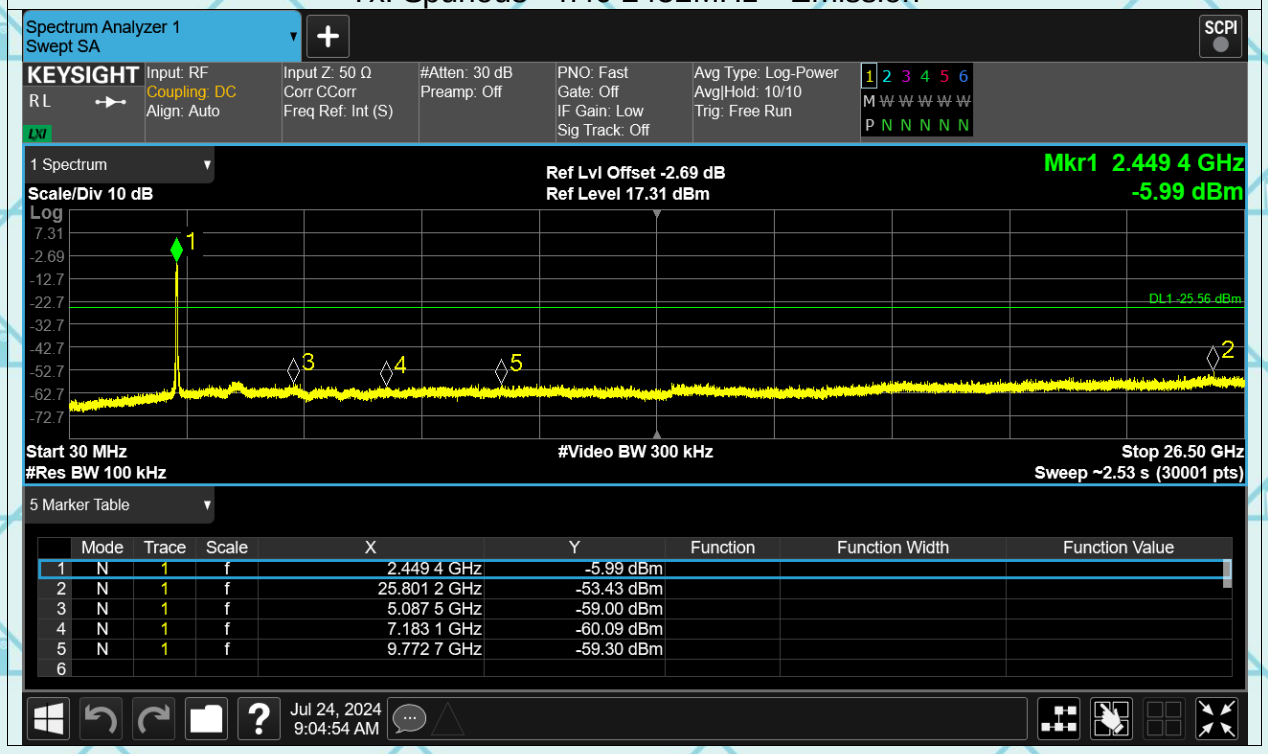
Tx. Spurious n40 2437MHz Emission



	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.439 7 GHz	-5.79 dBm			
2	N	1	f	26.214 1 GHz	-54.77 dBm			
3	N	1	f	5.071 7 GHz	-57.51 dBm			
4	N	1	f	7.249 3 GHz	-60.13 dBm			
5	N	1	f	9.821 3 GHz	-59.62 dBm			
6								

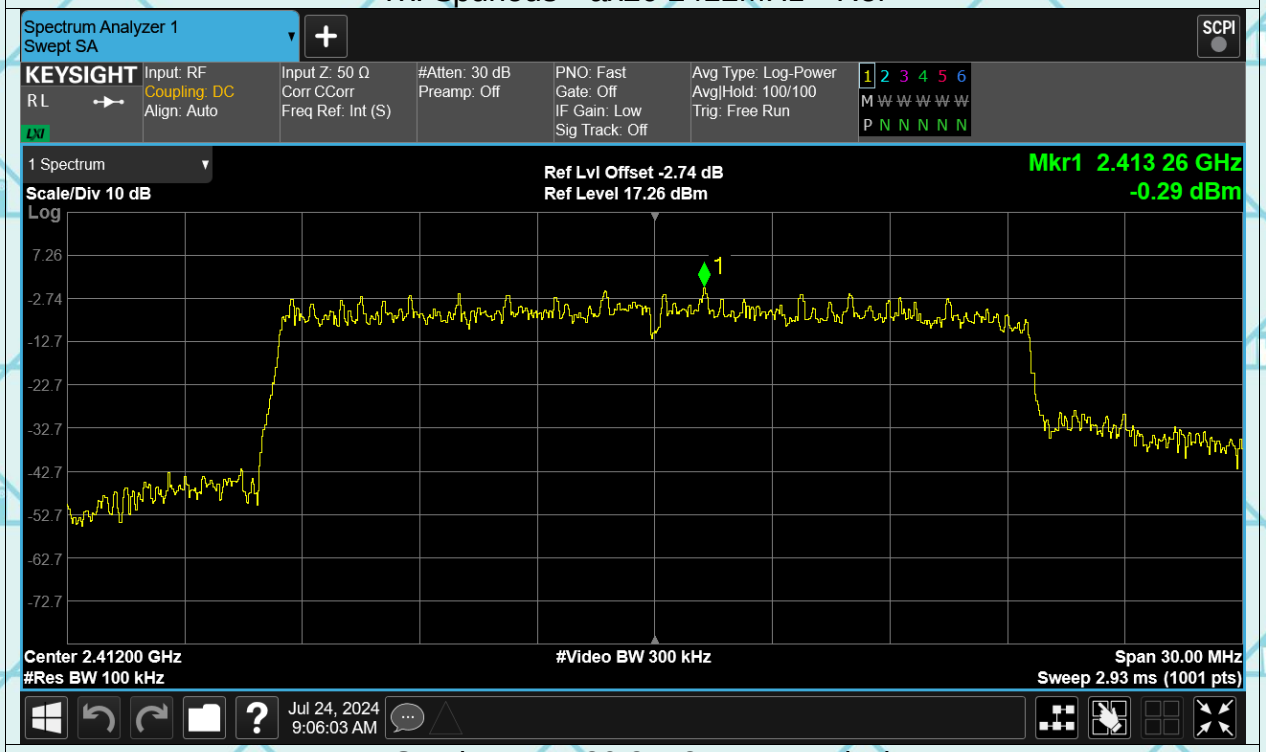
Tx. Spurious n40 2452MHz Ref

Tx. Spurious n40 2452MHz Emission

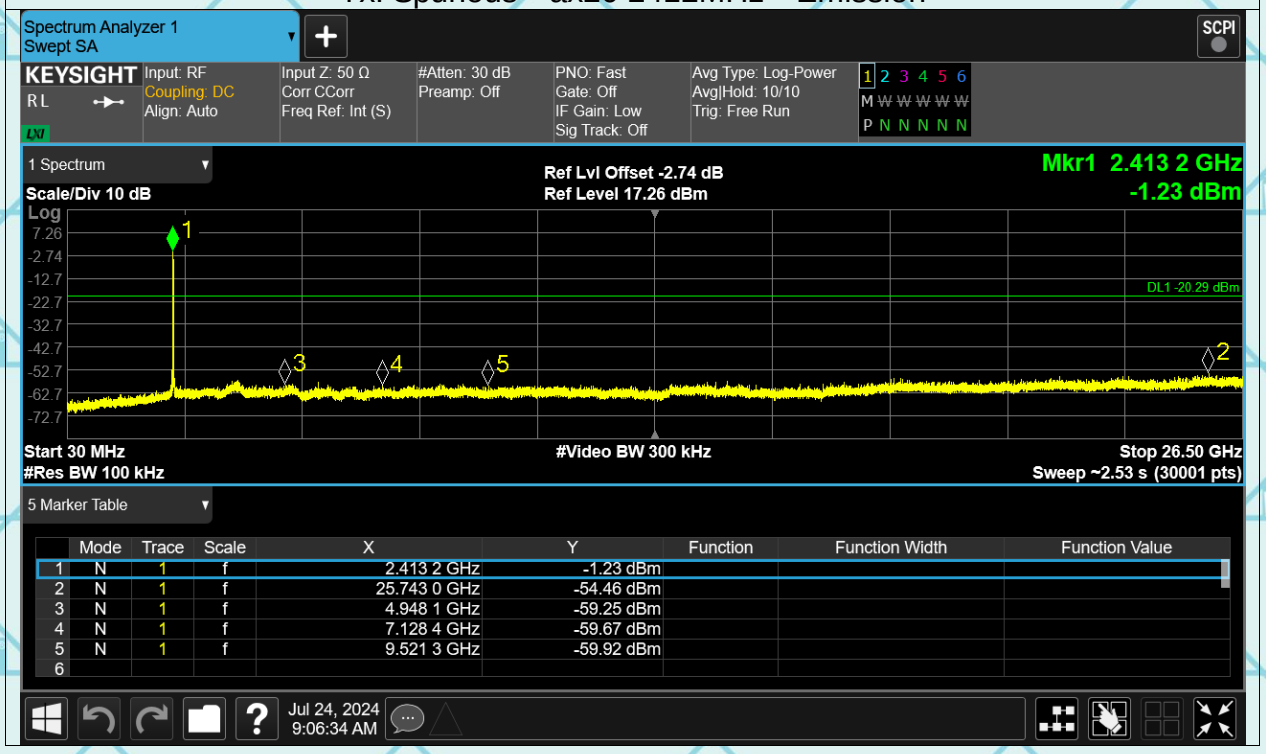


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.449 4 GHz	-5.99 dBm			
2	N	1	f	25.801 2 GHz	-53.43 dBm			
3	N	1	f	5.087 5 GHz	-59.00 dBm			
4	N	1	f	7.183 1 GHz	-60.09 dBm			
5	N	1	f	9.772 7 GHz	-59.30 dBm			
6								

Tx. Spurious ax20 2412MHz Ref

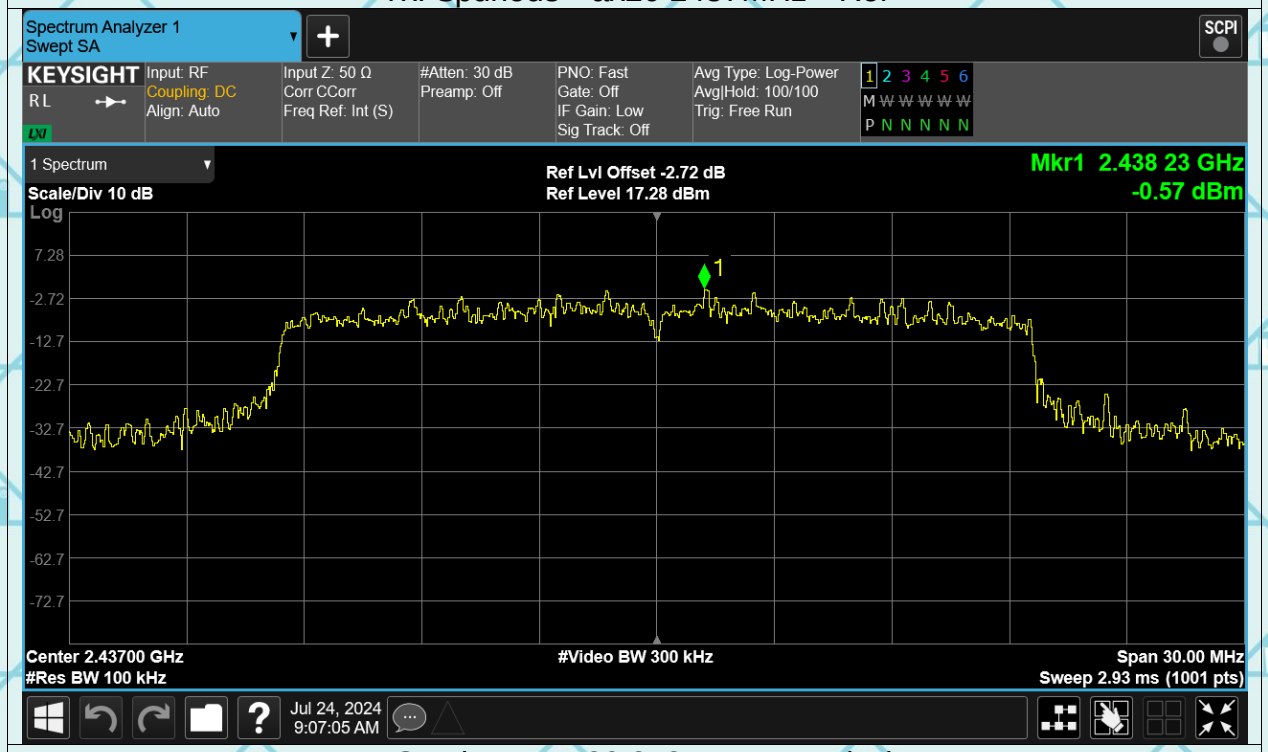


Tx. Spurious ax20 2412MHz Emission

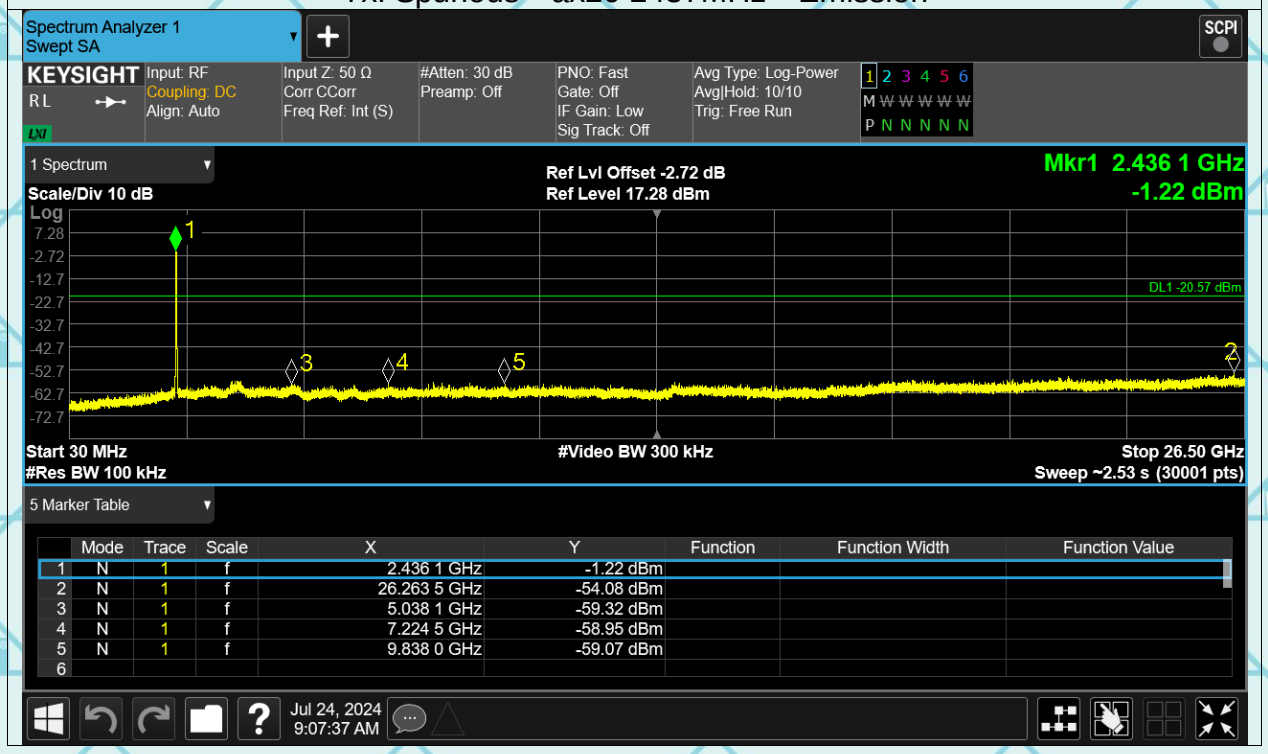


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.413 2 GHz	-1.23 dBm			
2	N	1	f	25.743 0 GHz	-54.46 dBm			
3	N	1	f	4.948 1 GHz	-59.25 dBm			
4	N	1	f	7.128 4 GHz	-59.67 dBm			
5	N	1	f	9.521 3 GHz	-59.92 dBm			
6								

Tx. Spurious ax20 2437MHz Ref

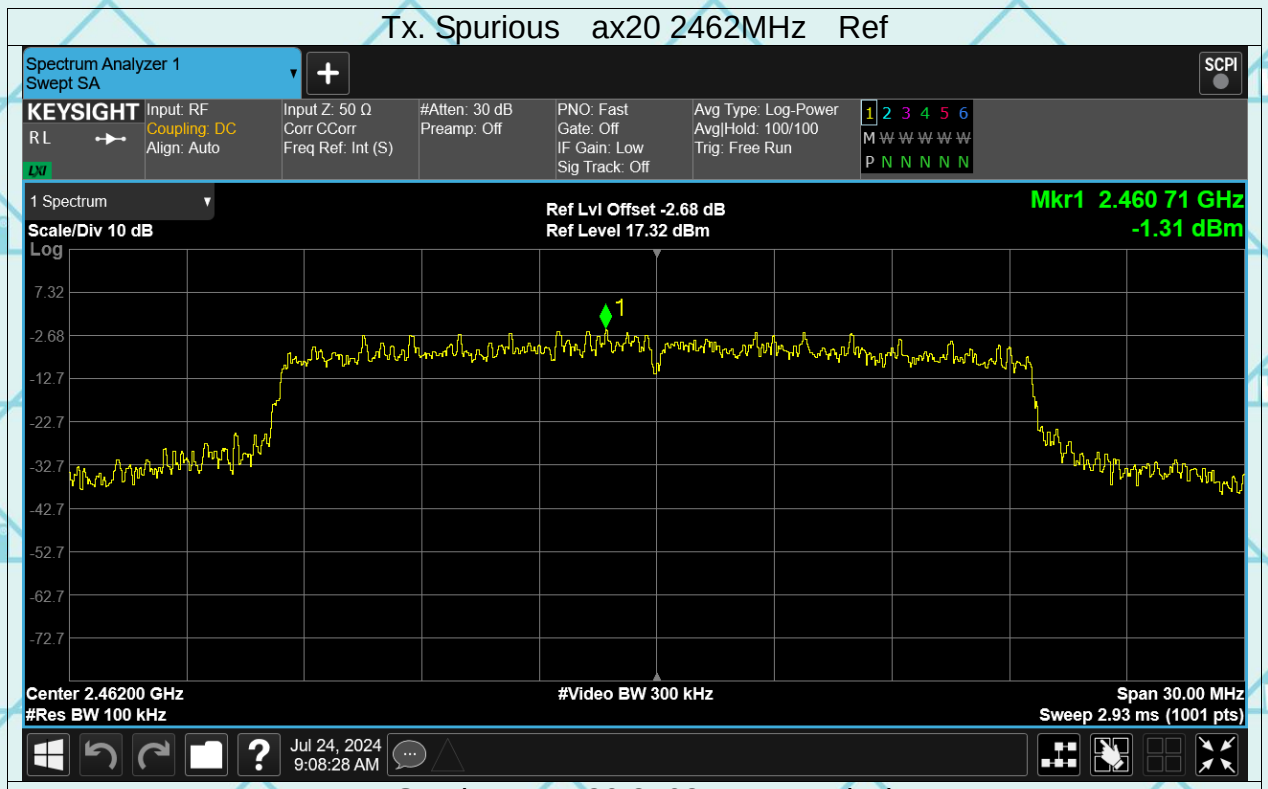


Tx. Spurious ax20 2437MHz Emission

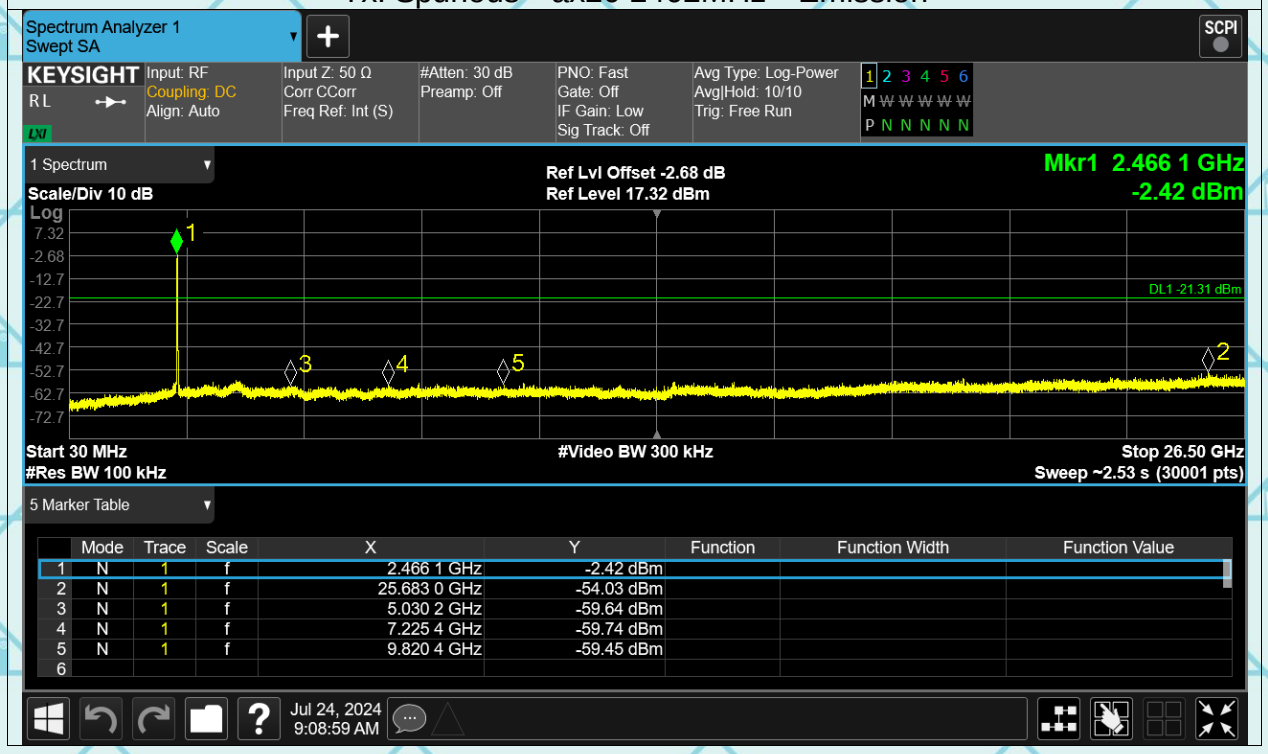


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.436 1 GHz	-1.22 dBm			
2	N	1	f	26.263 5 GHz	-54.08 dBm			
3	N	1	f	5.038 1 GHz	-59.32 dBm			
4	N	1	f	7.224 5 GHz	-58.95 dBm			
5	N	1	f	9.838 0 GHz	-59.07 dBm			
6								

Tx. Spurious ax20 2462MHz Ref

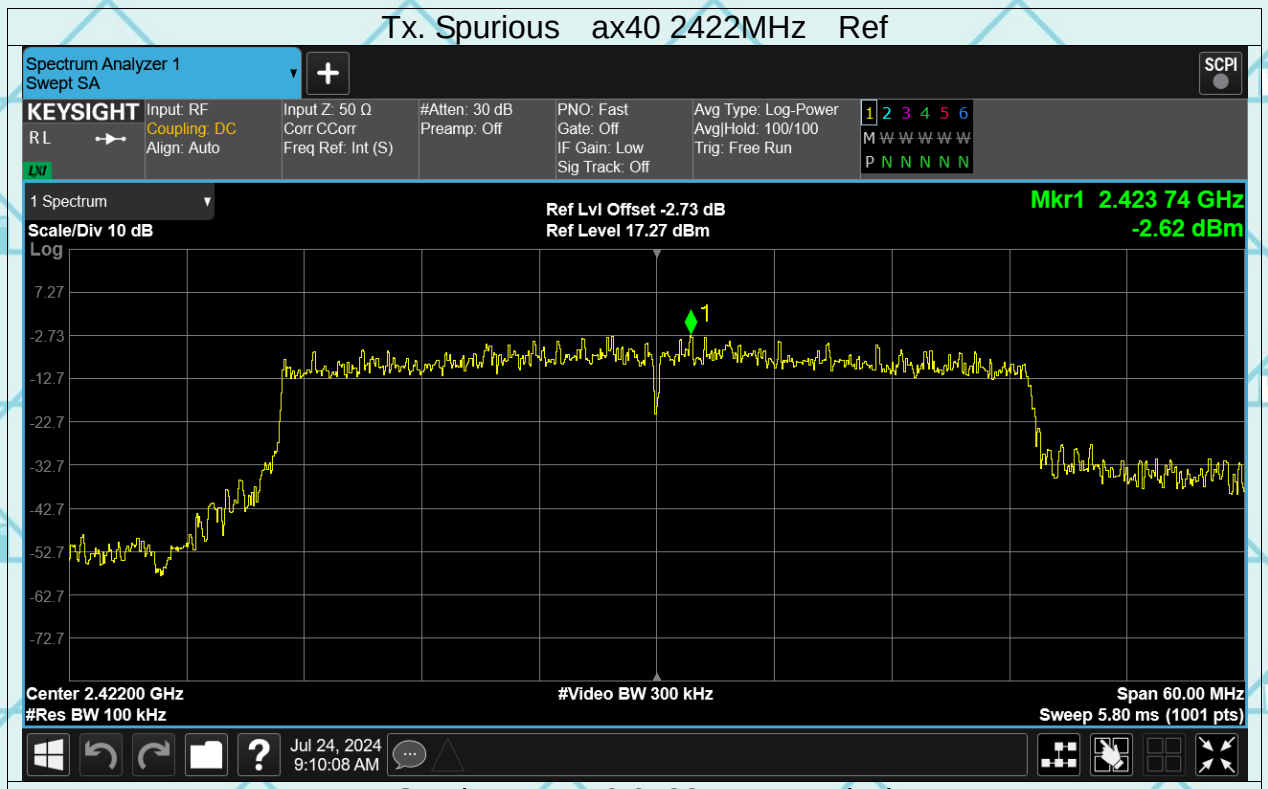


Tx. Spurious ax20 2462MHz Emission

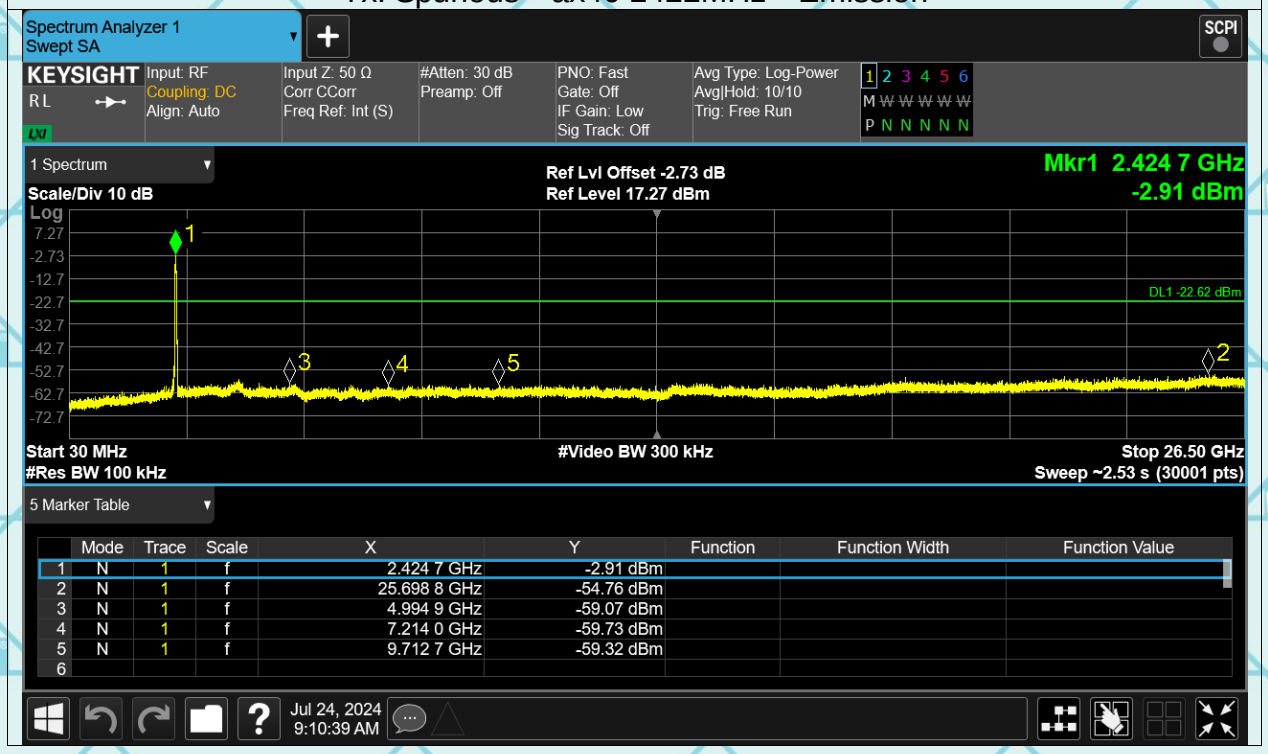


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.466 1 GHz	-2.42 dBm			
2	N	1	f	25.683 0 GHz	-54.03 dBm			
3	N	1	f	5.030 2 GHz	-59.64 dBm			
4	N	1	f	7.225 4 GHz	-59.74 dBm			
5	N	1	f	9.820 4 GHz	-59.45 dBm			
6								

Tx. Spurious ax40 2422MHz Ref

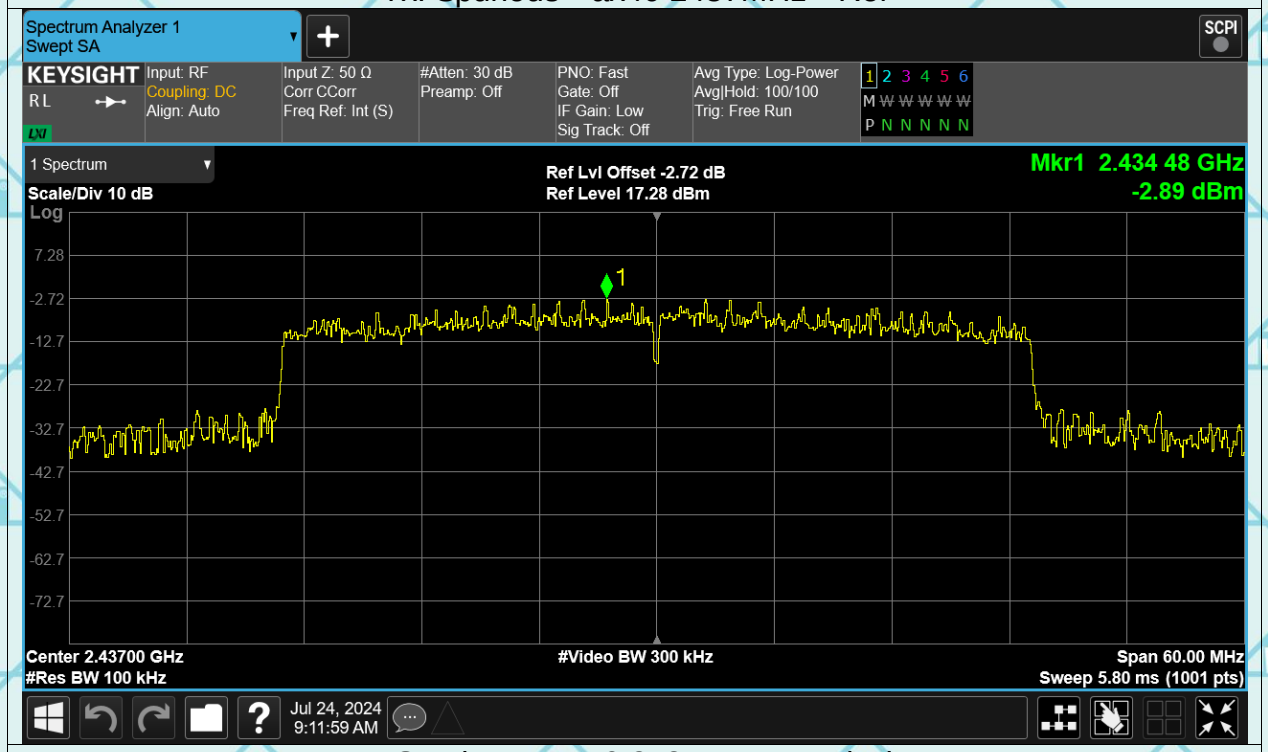


Tx. Spurious ax40 2422MHz Emission

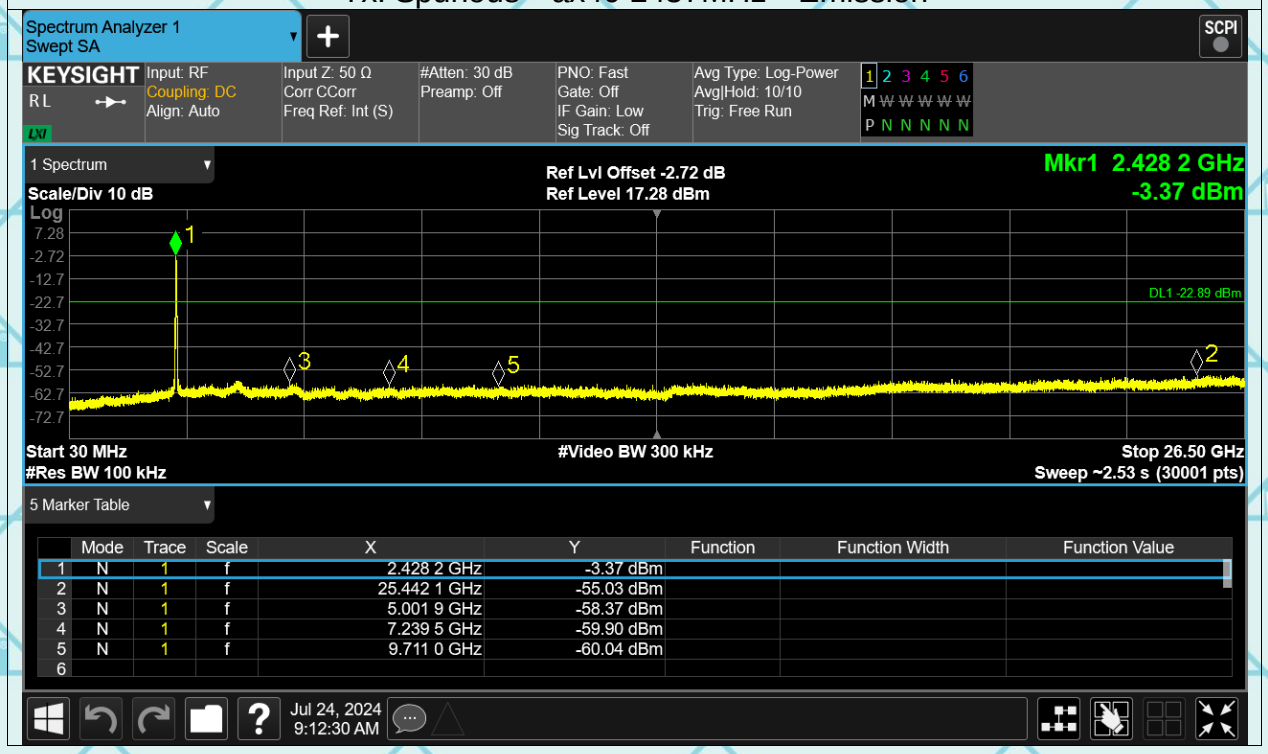


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.424 7 GHz	-2.91 dBm			
2	N	1	f	25.698 8 GHz	-54.76 dBm			
3	N	1	f	4.994 9 GHz	-59.07 dBm			
4	N	1	f	7.214 0 GHz	-59.73 dBm			
5	N	1	f	9.712 7 GHz	-59.32 dBm			
6								

Tx. Spurious ax40 2437MHz Ref

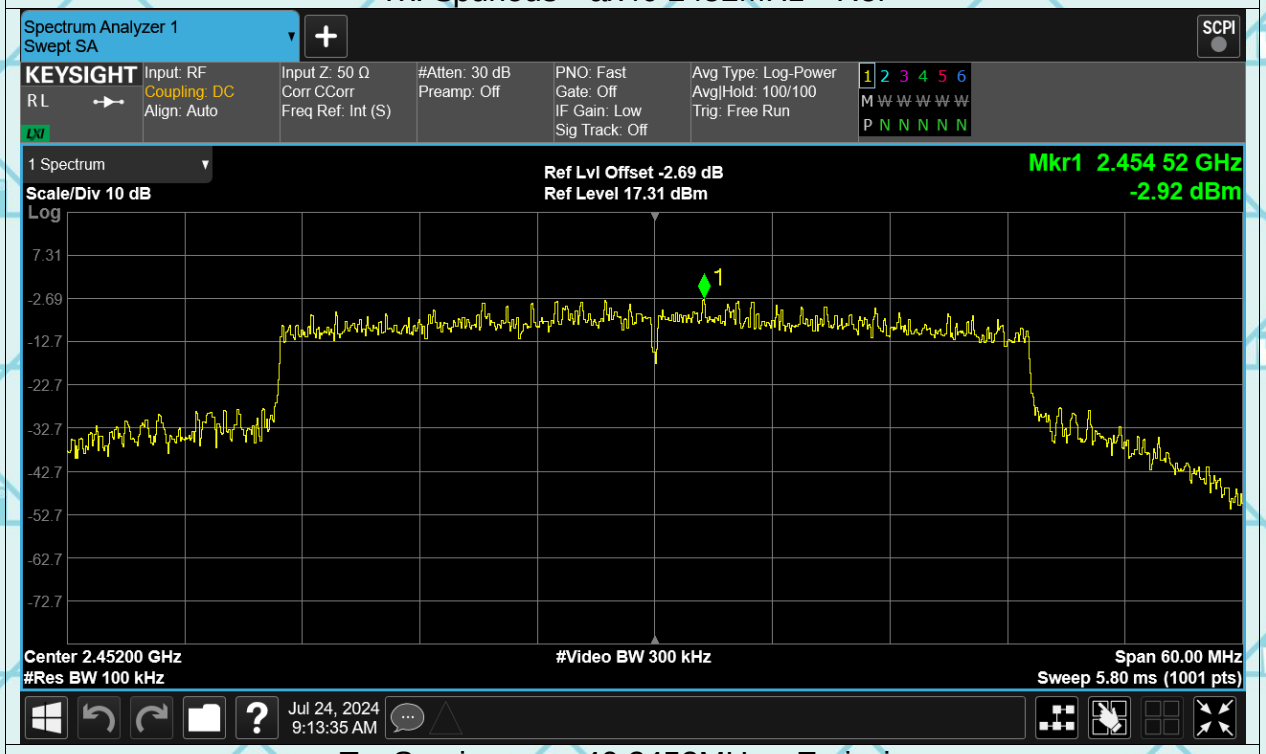


Tx. Spurious ax40 2437MHz Emission

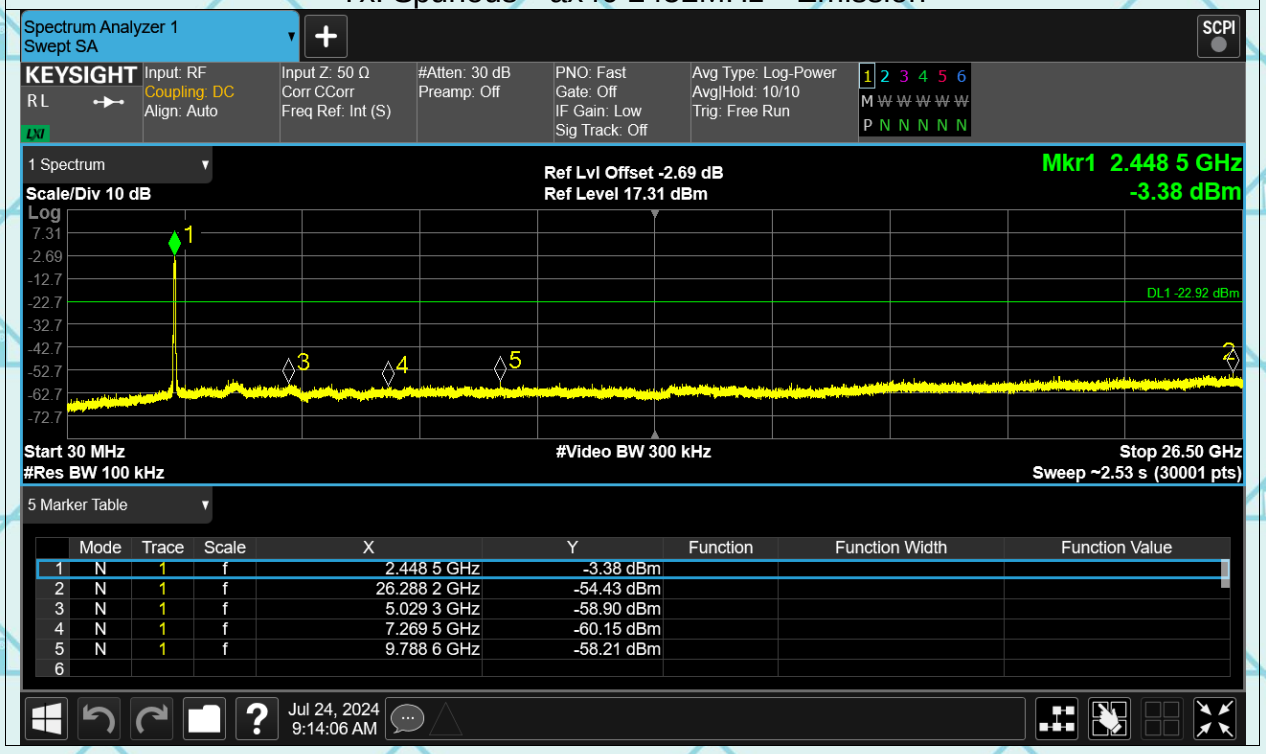


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.428 2 GHz	-3.37 dBm			
2	N	1	f	25.442 1 GHz	-55.03 dBm			
3	N	1	f	5.001 9 GHz	-58.37 dBm			
4	N	1	f	7.239 5 GHz	-59.90 dBm			
5	N	1	f	9.711 0 GHz	-60.04 dBm			
6								

Tx. Spurious ax40 2452MHz Ref



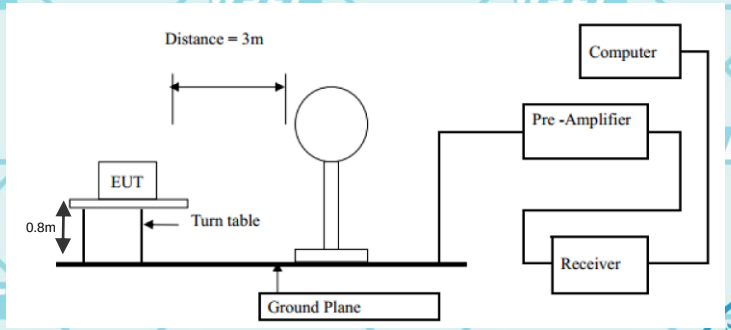
Tx. Spurious ax40 2452MHz Emission



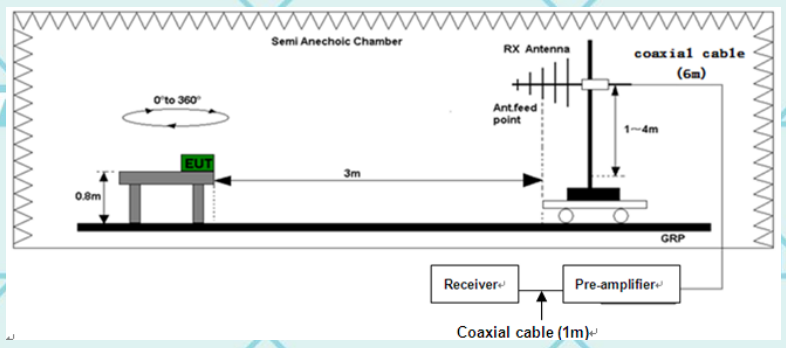
	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.448 5 GHz	-3.38 dBm			
2	N	1	f	26.288 2 GHz	-54.43 dBm			
3	N	1	f	5.029 3 GHz	-58.90 dBm			
4	N	1	f	7.269 5 GHz	-60.15 dBm			
5	N	1	f	9.788 6 GHz	-58.21 dBm			
6								

6.6. Radiated Spurious Emission Measurement

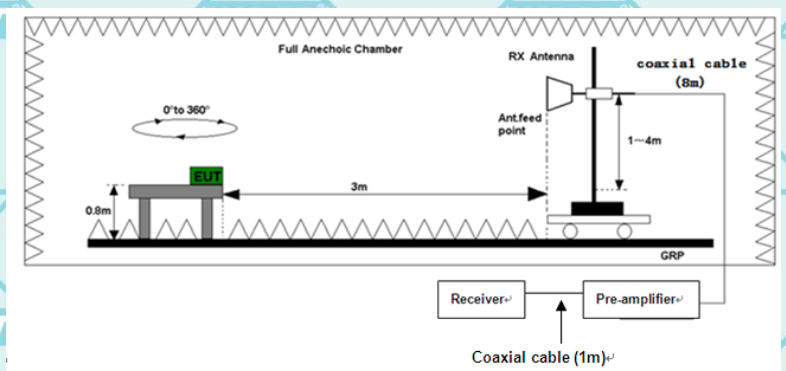
6.6.1. Test Specification

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.209</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.10: 2014</td></tr>
<tr><td>Frequency Range:</td><td>9 kHz to 25 GHz</td></tr>
<tr><td>Measurement Distance:</td><td>3 m</td></tr>
<tr><td>Antenna Polarization:</td><td>Horizontal & Vertical</td></tr>
<tr><td>Operation mode:</td><td>Transmitting mode with modulation</td></tr>
<tr><td>Receiver Setup:</td><td>
<table>
<tr><th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Remark</th></tr>
<tr><td>9kHz- 150kHz</td><td>Quasi-peak</td><td>200Hz</td><td>1kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>150kHz-30MHz</td><td>Quasi-peak</td><td>9kHz</td><td>30kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><th>Frequency</th><th>Field Strength (microvolts/meter)</th><th>Measurement Distance (meters)</th></tr>
<tr><td>0.009-0.490</td><td>2400/F(KHz)</td><td>300</td></tr>
<tr><td>0.490-1.705</td><td>24000/F(KHz)</td><td>30</td></tr>
<tr><td>1.705-30</td><td>30</td><td>30</td></tr>
<tr><td>30-88</td><td>100</td><td>3</td></tr>
<tr><td>88-216</td><td>150</td><td>3</td></tr>
<tr><td>216-960</td><td>200</td><td>3</td></tr>
<tr><td>Above 960</td><td>500</td><td>3</td></tr>
</table>
<table>
<tr><th>Frequency</th><th>Field Strength (microvolts/meter)</th><th>Measurement Distance (meters)</th><th>Detector</th></tr>
<tr><td rowspan="2">Above 1GHz</td><td>500</td><td>3</td><td>Average</td></tr>
<tr><td>5000</td><td>3</td><td>Peak</td></tr>
</table>
</td></tr>
<tr><td>Test setup:</td><td>For radiated emissions below 30MHz
 

30MHz to 1GHz</td></tr>
</table>



Above 1GHz



Test Procedure:

1. For the radiated emission test below 1GHz:
The EUT was placed on a turntable with 0.8 meter above ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high PASS filter are used for the test in order to get better signal level.
For the radiated emission test above 1GHz:
Place the measurement antenna on a turntable with 1.5 meter above ground, which is away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

	3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level 4. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported. 5. Use the following spectrum analyzer settings: (1) Span shall wide enough to fully capture the emission being measured; (2) Set RBW=100 kHz for f < 1 GHz; VBW ≥RBW; Sweep = auto; Detector function = peak; Trace = max hold; (3) Set RBW = 1 MHz, VBW= 3MHz for f 1 GHz for peak measurement. For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Test results:	PASS

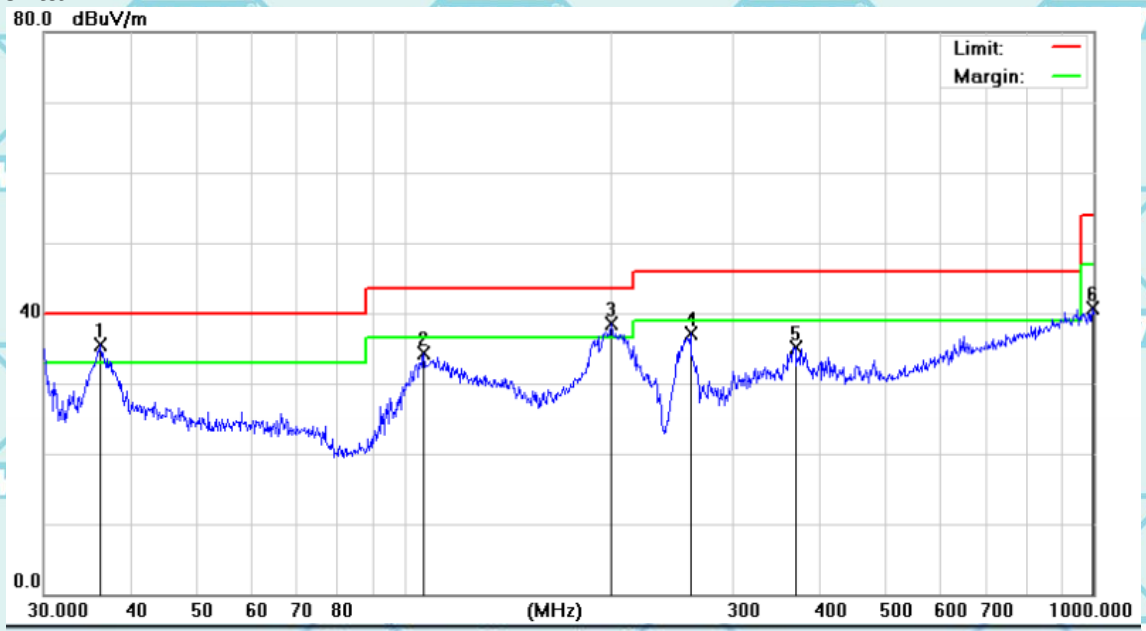
6.6.2. Test Data(worst case)

Please refer to following diagram for individual

The worst mode is 11b

Below 1GHz

Horizontal:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	*	36.2541	36.59	-1.08	35.51	40.00	-4.49	QP
2		106.7587	37.64	-3.37	34.27	43.50	-9.23	QP
3	!	199.2855	42.46	-3.87	38.59	43.50	-4.91	QP
4		260.1444	38.61	-1.42	37.19	46.00	-8.81	QP
5		369.4047	33.14	1.96	35.10	46.00	-10.90	QP
6		996.4996	26.32	14.44	40.76	54.00	-13.24	QP

Vertical:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	!	30.0000	36.86	-1.73	35.13	40.00	-4.87	QP
2	!	36.5092	35.09	-1.04	34.05	40.00	-5.95	QP
3	*	106.3850	42.09	-3.37	38.72	43.50	-4.78	QP
4		210.0482	37.04	-3.52	33.52	43.50	-9.98	QP
5		431.0316	29.51	3.72	33.23	46.00	-12.77	QP
6	!	958.7943	26.33	13.92	40.25	46.00	-5.75	QP

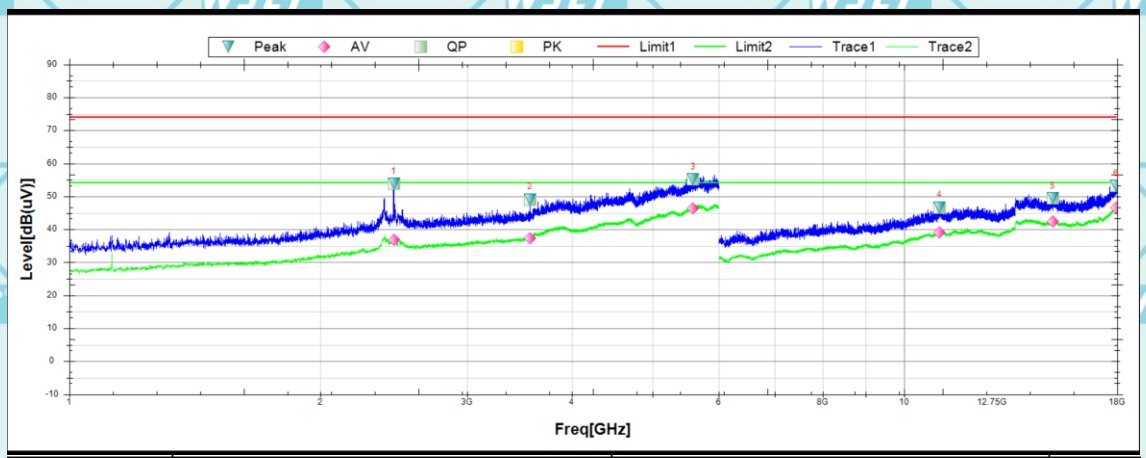
Note1:
Freq. = Emission frequency in MHz
Reading level (dBµV) = Receiver reading
Corr. Factor (dB) = Antenna factor + Cable loss - Amplifier factor.
Measurement (dBµV) = Reading level (dBµV) + Corr. Factor (dB)
Limit (dBµV) = Limit stated in standard
Margin (dB) = Measurement (dBµV) – Limits (dBµV)

Above 1GHz

Note 1: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental signal.
Note 2: The spurious above 18G is noise only, do not show on the report.
Note 3: Report and only recorded the worst-case scenario “MIMO Mode 802.11b”.

1 GHz to 18 GHz, MIMO Mode 802.11b Low Channel

Horizontal：



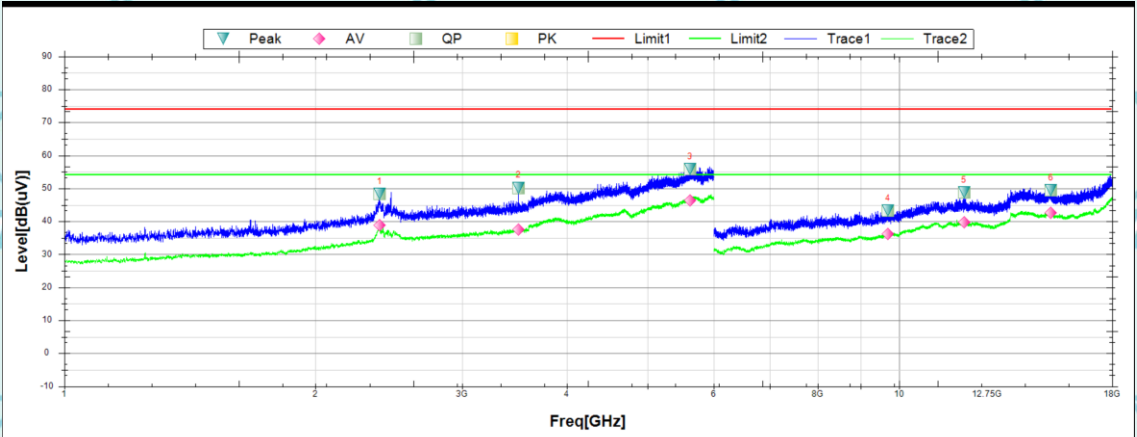
Susputed Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2448.1250	53.79	7.73	46.06	74	-20.21	330.3	Horizontal	PK	Pass
2	3566.2500	49.09	9.96	39.13	74	-24.91	153.4	Horizontal	PK	Pass
3	5592.5000	55.27	20.76	34.51	74	-18.73	50.6	Horizontal	PK	Pass
4	11032.5000	46.66	39.47	7.19	74	-27.34	103.8	Horizontal	PK	Pass
5	15073.5000	49.33	39.97	9.36	74	-24.67	64.2	Horizontal	PK	Pass
6	17952.0000	53.22	46.18	7.04	74	-20.78	0	Horizontal	PK	Pass

Final Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB (uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2448.1250	36.85	7.73	29.12	54	-17.15	330.3	Horizontal	AV	Pass
1	2448.1250	53.79	7.73	46.06	74	-20.21	330.3	Horizontal	QP	Pass
2	3566.2500	37.23	9.96	27.27	54	-16.77	153.4	Horizontal	AV	Pass
2	3566.2500	49.09	9.96	39.13	74	-24.91	153.4	Horizontal	QP	Pass
3	5592.5000	46.29	20.76	25.53	54	-7.71	50.6	Horizontal	AV	Pass
3	5592.5000	55.27	20.76	34.51	74	-18.73	50.6	Horizontal	QP	Pass
4	11032.5000	38.97	39.47	-0.5	54	-15.03	103.8	Horizontal	AV	Pass
4	11032.5000	46.66	39.47	7.19	74	-27.34	103.8	Horizontal	QP	Pass
5	15073.5000	42.44	39.97	2.47	54	-11.56	64.2	Horizontal	AV	Pass
5	15073.5000	49.33	39.97	9.36	74	-24.67	64.2	Horizontal	QP	Pass
6	17952.0000	46.49	46.18	0.31	54	-7.51	0	Horizontal	AV	Pass
6	17952.0000	53.22	46.18	7.04	74	-20.78	0	Horizontal	QP	Pass

Vertical：



Susputed Data List

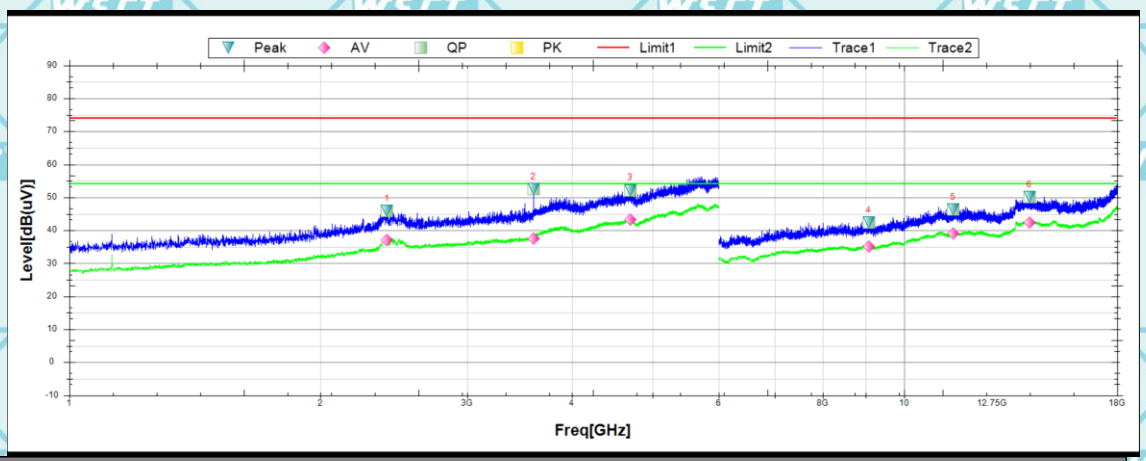
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2387.5000	48.33	7.4	40.93	74	-25.67	176.2	Vertical	PK	Pass
2	3502.5000	50.2	9.67	40.53	74	-23.8	360.1	Vertical	PK	Pass
3	5623.7500	55.8	20.92	34.88	74	-18.2	178.6	Vertical	PK	Pass
4	9702.0000	43.19	37.89	5.3	74	-30.81	75	Vertical	PK	Pass
5	11965.5000	48.78	38.63	10.15	74	-25.22	157.5	Vertical	PK	Pass
6	15210.0000	49.41	39.55	9.86	74	-24.59	-0.1	Vertical	PK	Pass

Final Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB (uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2387.5000	38.94	7.4	31.54	54	-15.06	176.2	Vertical	AV	Pass
1	2387.5000	48.33	7.4	40.93	74	-25.67	176.2	Vertical	QP	Pass
2	3502.5000	37.49	9.67	27.82	54	-16.51	360.1	Vertical	AV	Pass
2	3502.5000	50.2	9.67	40.53	74	-23.8	360.1	Vertical	QP	Pass
3	5623.7500	46.42	20.92	25.5	54	-7.58	178.6	Vertical	AV	Pass
3	5623.7500	55.8	20.92	34.88	74	-18.2	178.6	Vertical	QP	Pass
4	9702.0000	36.13	37.89	-1.76	54	-17.87	75	Vertical	AV	Pass
4	9702.0000	43.19	37.89	5.3	74	-30.81	75	Vertical	QP	Pass
5	11965.5000	39.79	38.63	1.16	54	-14.21	157.5	Vertical	AV	Pass
5	11965.5000	48.78	38.63	10.15	74	-25.22	157.5	Vertical	QP	Pass
6	15210.0000	42.6	39.55	3.05	54	-11.4	-0.1	Vertical	AV	Pass
6	15210.0000	49.41	39.55	9.86	74	-24.59	-0.1	Vertical	QP	Pass

1 GHz to 18 GHz, MIMO Mode 802.11b Middle Channel

Horizontal :



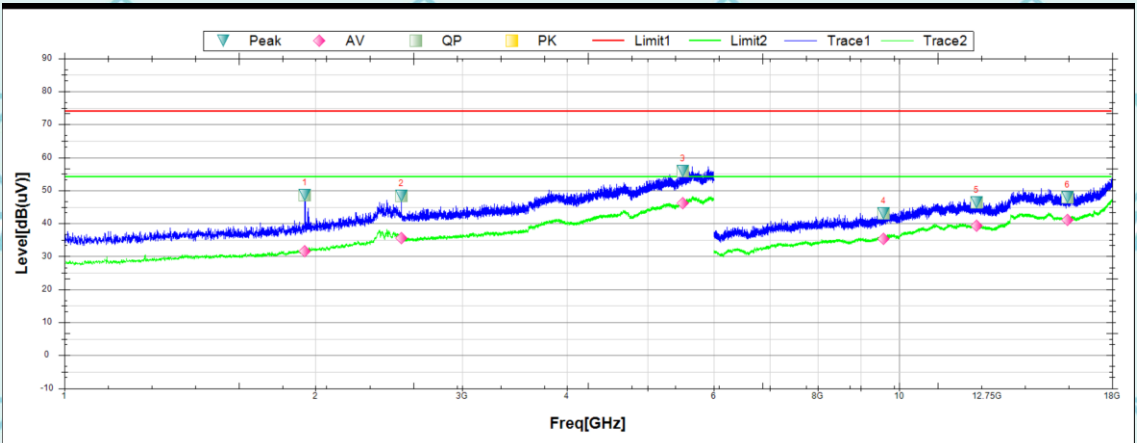
Susputed Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2403.1250	45.95	7.58	38.37	74	-28.05	9.8	Horizontal	PK	Pass
2	3598.7500	52.58	10.06	42.52	74	-21.42	13	Horizontal	PK	Pass
3	4700.6250	52.19	15.15	37.04	74	-21.81	-0.1	Horizontal	PK	Pass
4	9073.5000	42.3	37.45	4.85	74	-31.7	146.3	Horizontal	PK	Pass
5	11449.5000	46.24	39.1	7.14	74	-27.76	165.5	Horizontal	PK	Pass
6	14133.0000	50.06	41.33	8.73	74	-23.94	1	Horizontal	PK	Pass

Final Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB (uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2403.1250	37.12	7.58	29.54	54	-16.88	9.8	Horizontal	AV	Pass
1	2403.1250	45.95	7.58	38.37	74	-28.05	9.8	Horizontal	QP	Pass
2	3598.7500	37.56	10.06	27.5	54	-16.44	13	Horizontal	AV	Pass
2	3598.7500	52.58	10.06	42.52	74	-21.42	13	Horizontal	QP	Pass
3	4700.6250	43.18	15.15	28.03	54	-10.82	-0.1	Horizontal	AV	Pass
3	4700.6250	52.19	15.15	37.04	74	-21.81	-0.1	Horizontal	QP	Pass
4	9073.5000	35.07	37.45	-2.38	54	-18.93	146.3	Horizontal	AV	Pass
4	9073.5000	42.3	37.45	4.85	74	-31.7	146.3	Horizontal	QP	Pass
5	11449.5000	39.08	39.1	-0.02	54	-14.92	165.5	Horizontal	AV	Pass
5	11449.5000	46.24	39.1	7.14	74	-27.76	165.5	Horizontal	QP	Pass
6	14133.0000	42.36	41.33	1.03	54	-11.64	1	Horizontal	AV	Pass
6	14133.0000	50.06	41.33	8.73	74	-23.94	1	Horizontal	QP	Pass

Vertical：



Susputed Data List

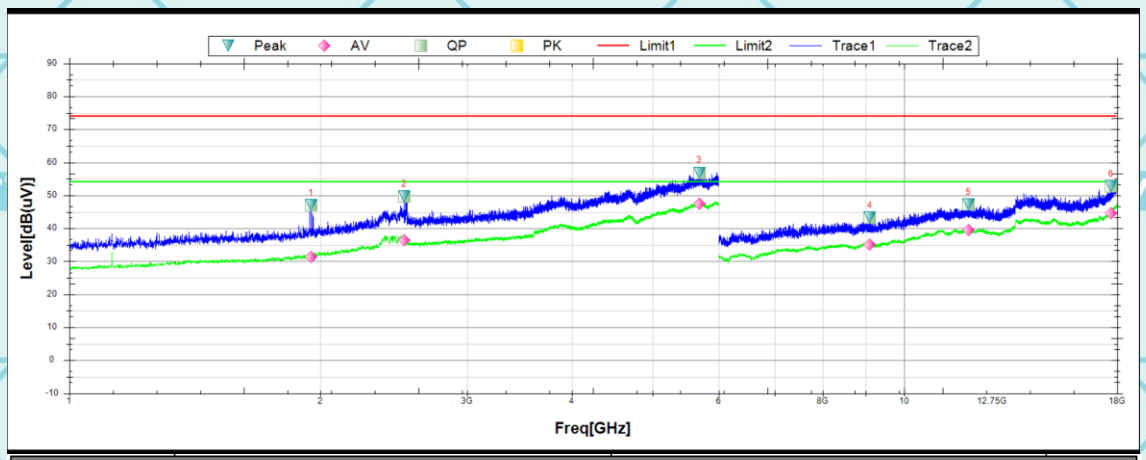
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1942.5000	48.6	2	46.6	74	-25.4	141.9	Vertical	PK	Pass
2	2535.6250	48.34	5.99	42.35	74	-25.66	357.6	Vertical	PK	Pass
3	5511.8750	55.74	20.26	35.48	74	-18.26	113.3	Vertical	PK	Pass
4	9586.5000	43.06	37.81	5.25	74	-30.94	360	Vertical	PK	Pass
5	12384.0000	46.35	38.72	7.63	74	-27.65	0.5	Vertical	PK	Pass
6	15915.0000	47.93	37.36	10.57	74	-26.07	84.1	Vertical	PK	Pass

Final Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB (uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1942.5000	31.58	2	29.58	54	-22.42	141.9	Vertical	AV	Pass
1	1942.5000	48.6	2	46.6	74	-25.4	141.9	Vertical	QP	Pass
2	2535.6250	35.42	5.99	29.43	54	-18.58	357.6	Vertical	AV	Pass
2	2535.6250	48.34	5.99	42.35	74	-25.66	357.6	Vertical	QP	Pass
3	5511.8750	46.04	20.26	25.78	54	-7.96	113.3	Vertical	AV	Pass
3	5511.8750	55.74	20.26	35.48	74	-18.26	113.3	Vertical	QP	Pass
4	9586.5000	35.38	37.81	-2.43	54	-18.62	360	Vertical	AV	Pass
4	9586.5000	43.06	37.81	5.25	74	-30.94	360	Vertical	QP	Pass
5	12384.0000	39.27	38.72	0.55	54	-14.73	0.5	Vertical	AV	Pass
5	12384.0000	46.35	38.72	7.63	74	-27.65	0.5	Vertical	QP	Pass
6	15915.0000	41.15	37.36	3.79	54	-12.85	84.1	Vertical	AV	Pass
6	15915.0000	47.93	37.36	10.57	74	-26.07	84.1	Vertical	QP	Pass

1 GHz to 18 GHz, MIMO Mode 802.11b High Channel

Horizontal：



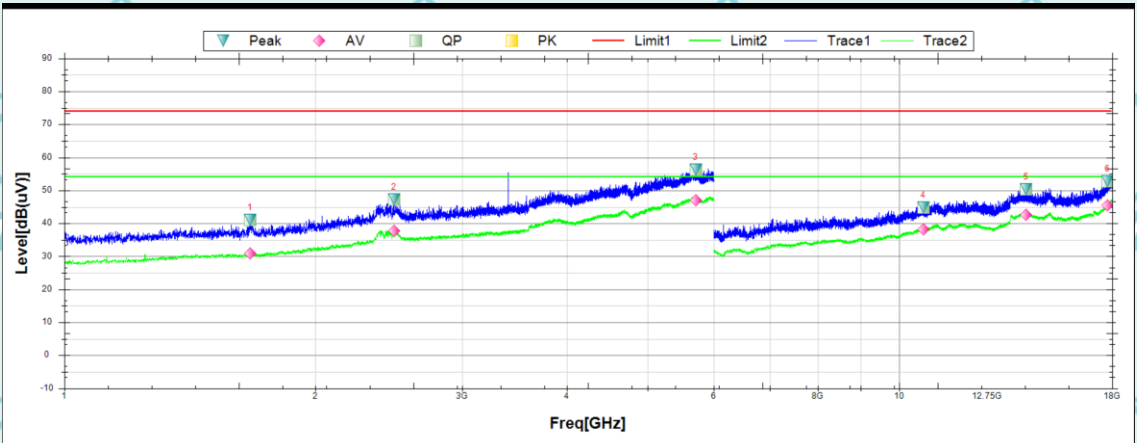
Susputed Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1948.7500	47.09	2.04	45.05	74	-26.91	326.2	Horizontal	PK	Pass
2	2520.0000	49.64	6.59	43.05	74	-24.36	285.6	Horizontal	PK	Pass
3	5685.6250	56.82	21.22	35.6	74	-17.18	181.6	Horizontal	PK	Pass
4	9102.0000	43.16	37.47	5.69	74	-30.84	97.4	Horizontal	PK	Pass
5	11947.5000	47.14	38.65	8.49	74	-26.86	251.5	Horizontal	PK	Pass
6	17701.5000	52.74	44.5	8.24	74	-21.26	244.4	Horizontal	PK	Pass

Final Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB (uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1948.7500	31.4	2.04	29.36	54	-22.6	326.2	Horizontal	AV	Pass
1	1948.7500	47.09	2.04	45.05	74	-26.91	326.2	Horizontal	QP	Pass
2	2520.0000	36.34	6.59	29.75	54	-17.66	285.6	Horizontal	AV	Pass
2	2520.0000	49.64	6.59	43.05	74	-24.36	285.6	Horizontal	QP	Pass
3	5685.6250	47.4	21.22	26.18	54	-6.6	181.6	Horizontal	AV	Pass
3	5685.6250	56.82	21.22	35.6	74	-17.18	181.6	Horizontal	QP	Pass
4	9102.0000	34.97	37.47	-2.5	54	-19.03	97.4	Horizontal	AV	Pass
4	9102.0000	43.16	37.47	5.69	74	-30.84	97.4	Horizontal	QP	Pass
5	11947.5000	39.59	38.65	0.94	54	-14.41	251.5	Horizontal	AV	Pass
5	11947.5000	47.14	38.65	8.49	74	-26.86	251.5	Horizontal	QP	Pass
6	17701.5000	44.68	44.5	0.18	54	-9.32	244.4	Horizontal	AV	Pass
6	17701.5000	52.74	44.5	8.24	74	-21.26	244.4	Horizontal	QP	Pass

Vertical：



Susputed Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1669.3750	41.12	0.21	40.91	74	-32.88	0	Vertical	PK	Pass
2	2484.3750	47.17	7.86	39.31	74	-26.83	358.3	Vertical	PK	Pass
3	5708.7500	56.23	21.32	34.91	74	-17.77	305.8	Vertical	PK	Pass
4	10693.5000	44.73	39.07	5.66	74	-29.27	57.9	Vertical	PK	Pass
5	14203.5000	50.31	41.24	9.07	74	-23.69	233.7	Vertical	PK	Pass
6	17773.5000	52.77	44.98	7.79	74	-21.23	0.4	Vertical	PK	Pass

Final Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB (uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1669.3750	30.97	0.21	30.76	54	-23.03	0	Vertical	AV	Pass
1	1669.3750	41.12	0.21	40.91	74	-32.88	0	Vertical	QP	Pass
2	2484.3750	37.64	7.86	29.78	54	-16.36	358.3	Vertical	AV	Pass
2	2484.3750	47.17	7.86	39.31	74	-26.83	358.3	Vertical	QP	Pass
3	5708.7500	47.11	21.32	25.79	54	-6.89	305.8	Vertical	AV	Pass
3	5708.7500	56.23	21.32	34.91	74	-17.77	305.8	Vertical	QP	Pass
4	10693.5000	38.25	39.07	-0.82	54	-15.75	57.9	Vertical	AV	Pass
4	10693.5000	44.73	39.07	5.66	74	-29.27	57.9	Vertical	QP	Pass
5	14203.5000	42.54	41.24	1.3	54	-11.46	233.7	Vertical	AV	Pass
5	14203.5000	50.31	41.24	9.07	74	-23.69	233.7	Vertical	QP	Pass
6	17773.5000	45.43	44.98	0.45	54	-8.57	0.4	Vertical	AV	Pass
6	17773.5000	52.77	44.98	7.79	74	-21.23	0.4	Vertical	QP	Pass

Note:
1. All emissions not reported were more than 20dB below the specified limit or in the noise floor.
2. Emission Level= Reading Level+ Probe Factor +Cable Loss.
3. Data of measurement within this frequency range shown “--” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

“Please refer to Annex "Set Up Photos-15C" for test setup photos”

*******END OF REPORT*******