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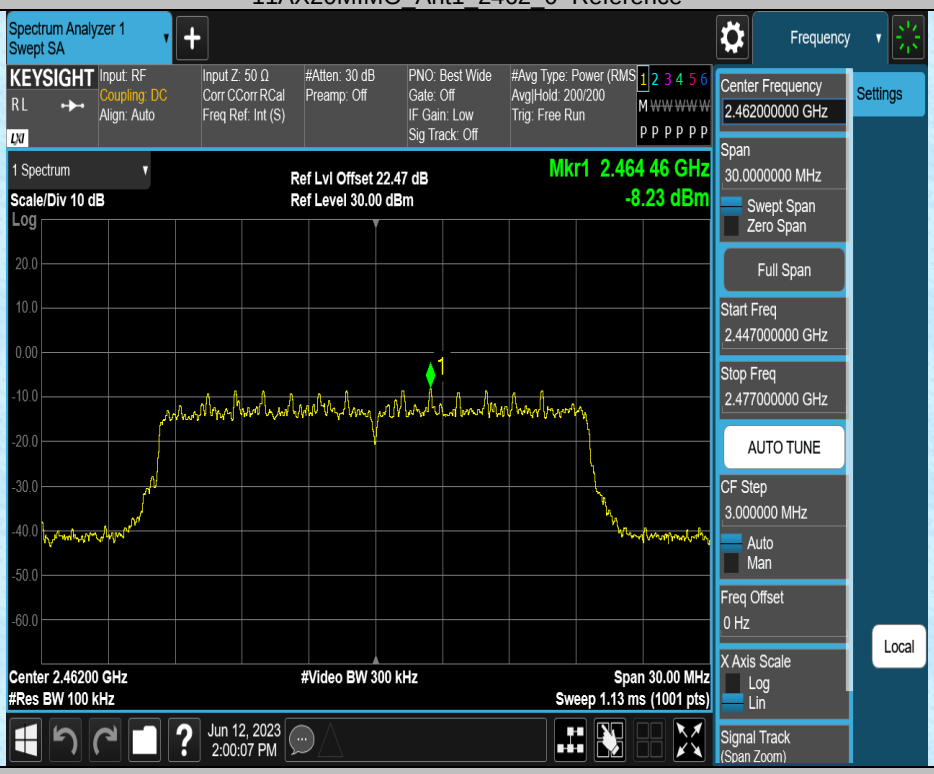

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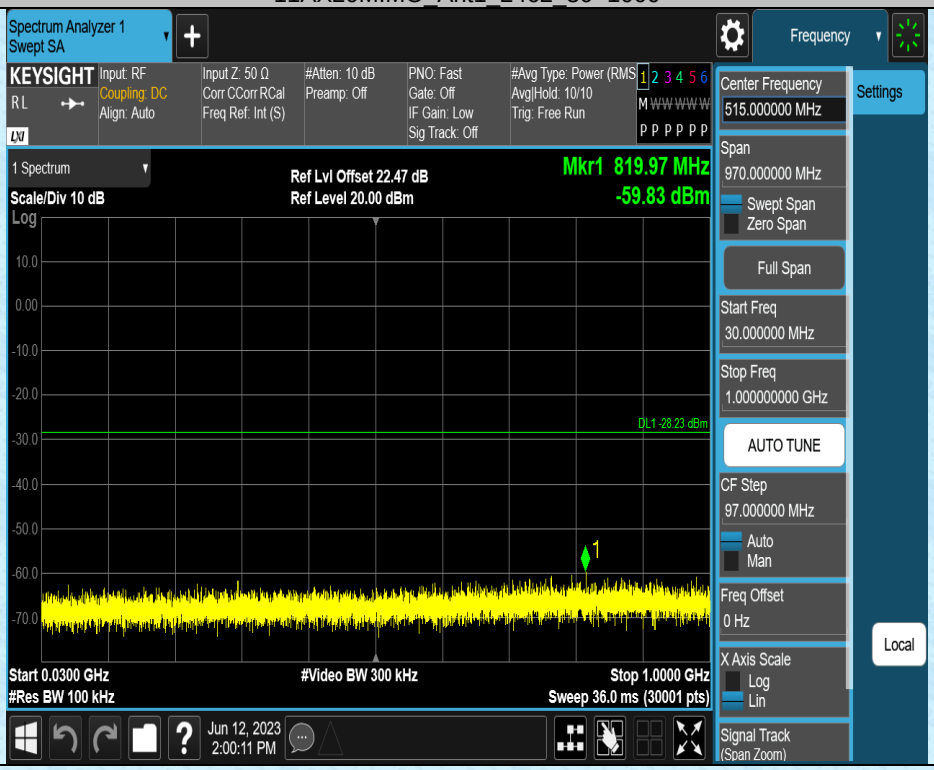

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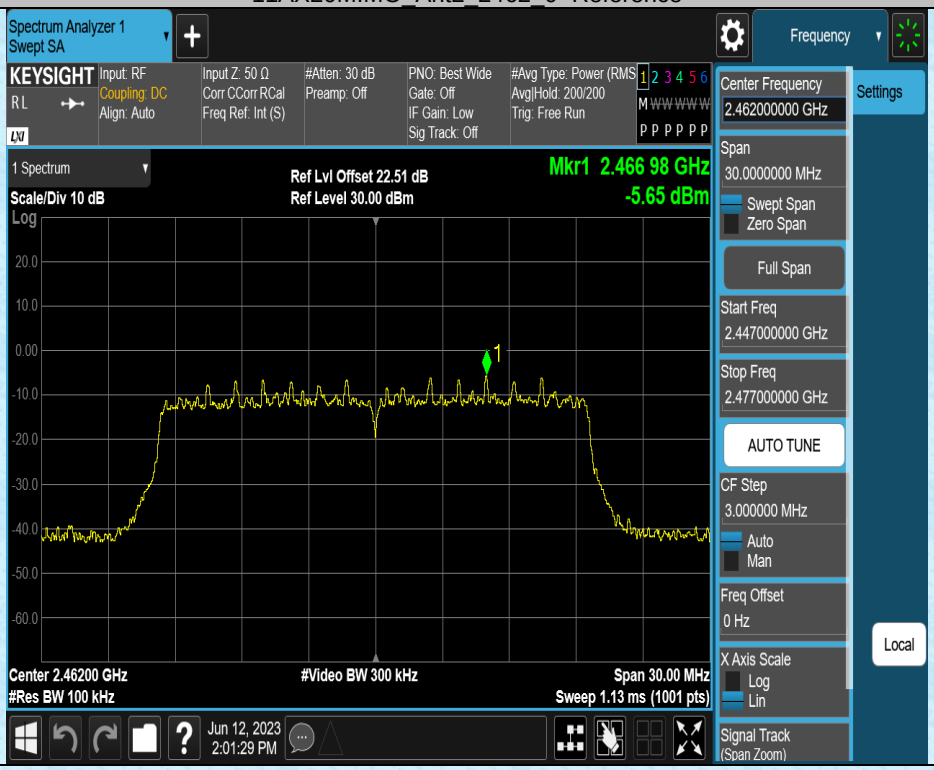

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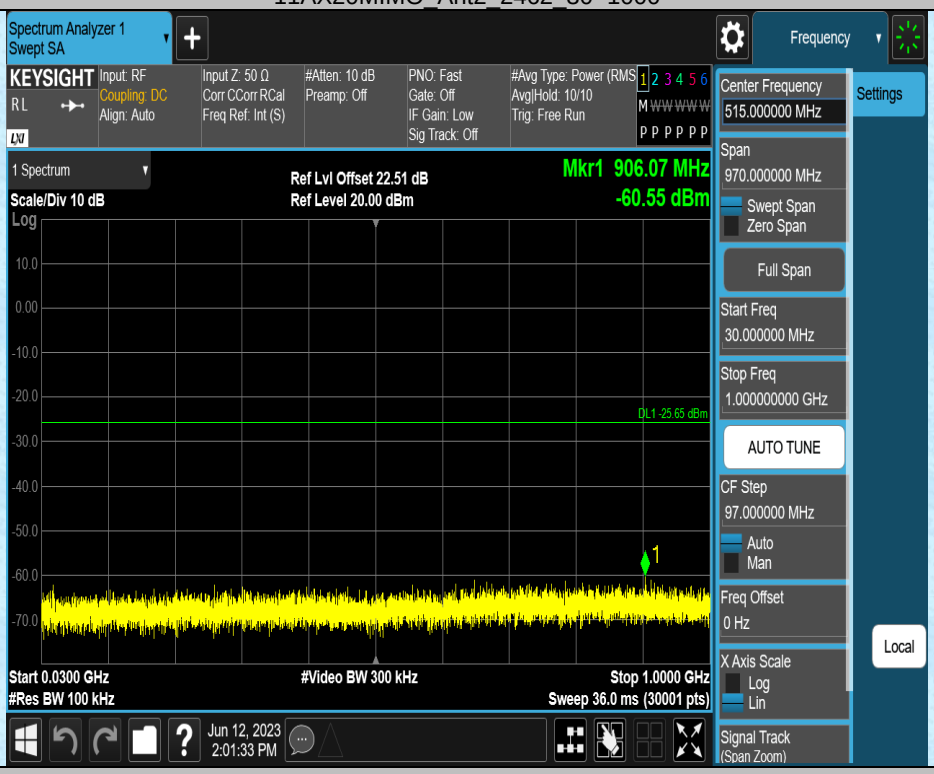

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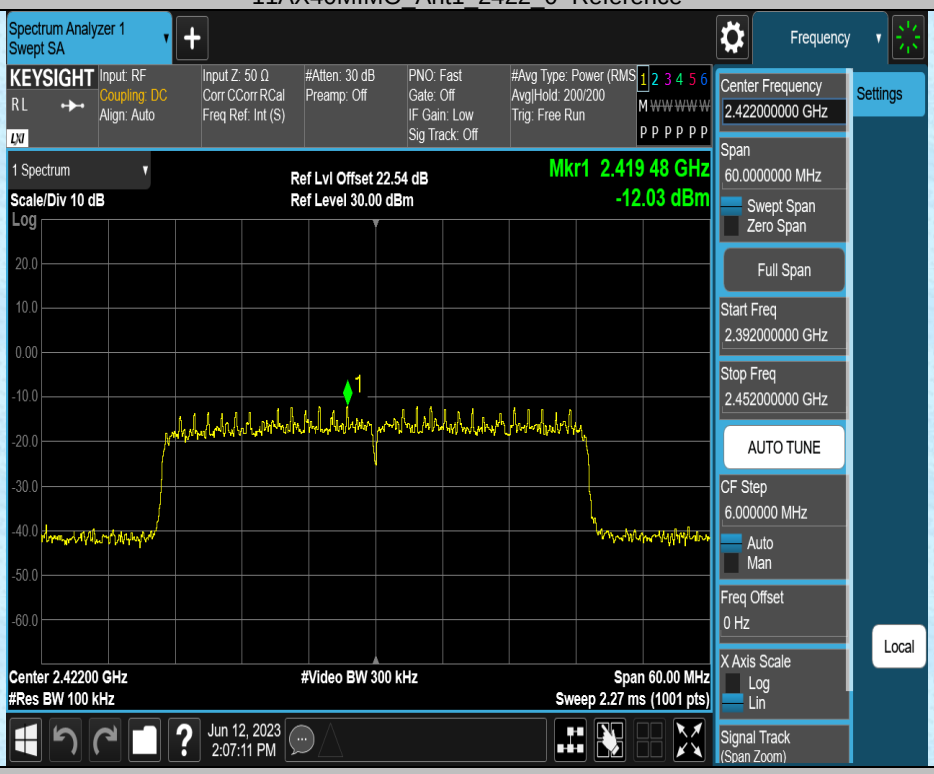

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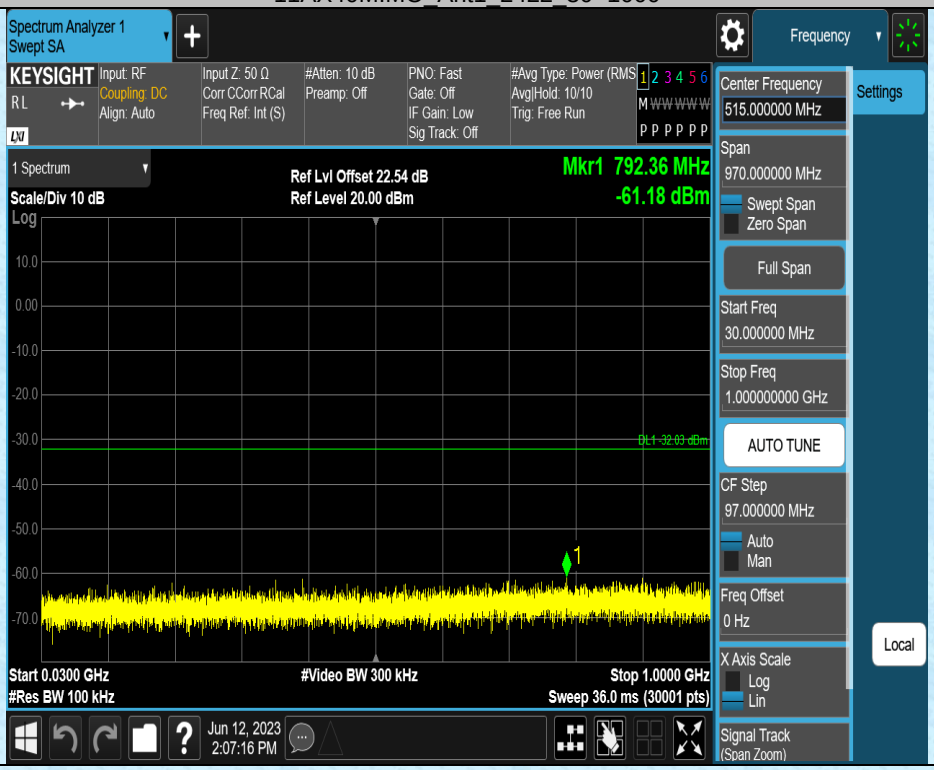

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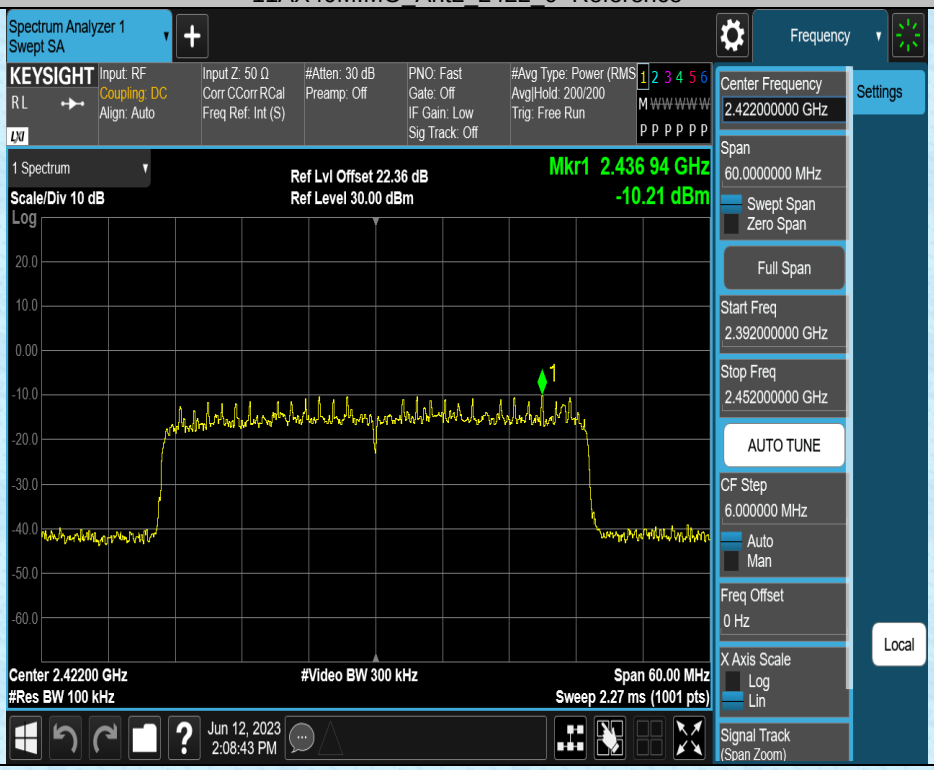

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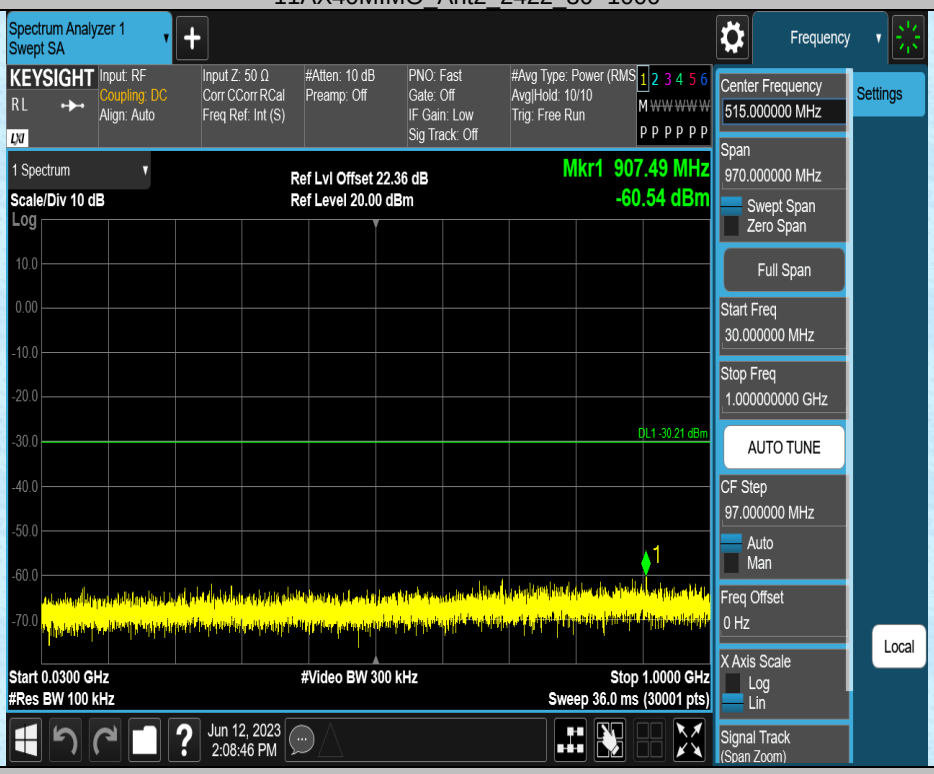

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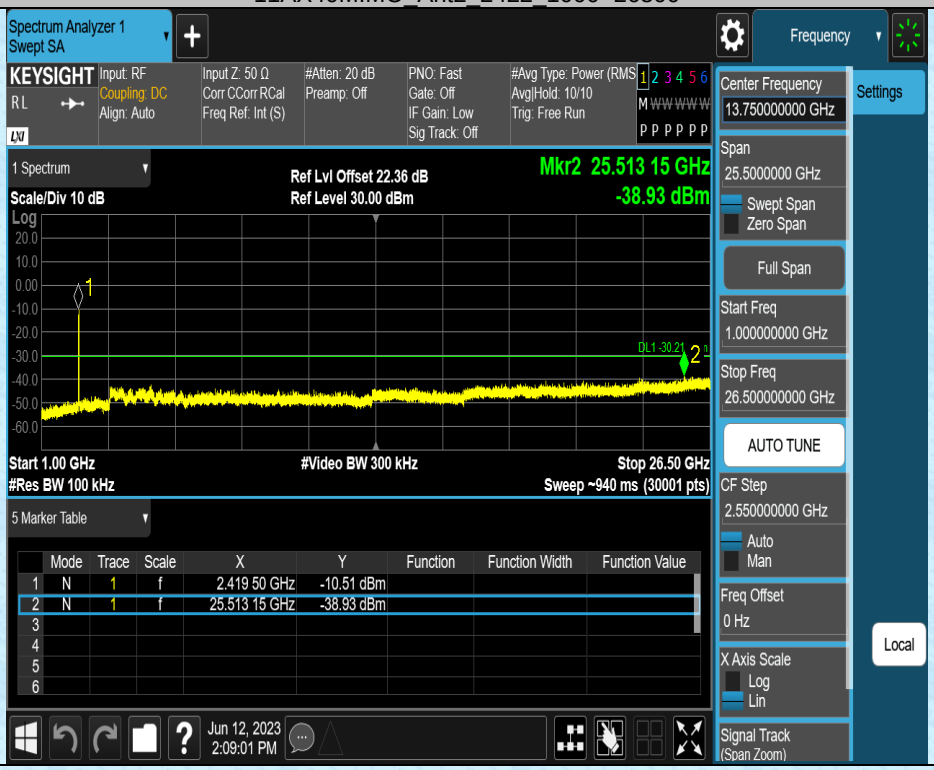

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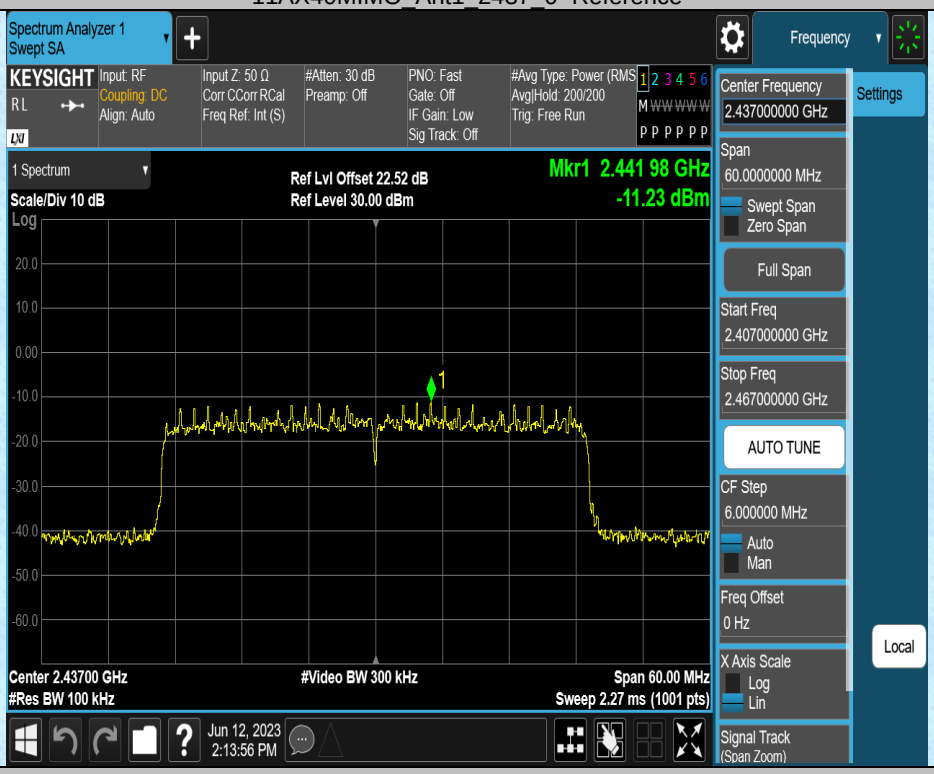

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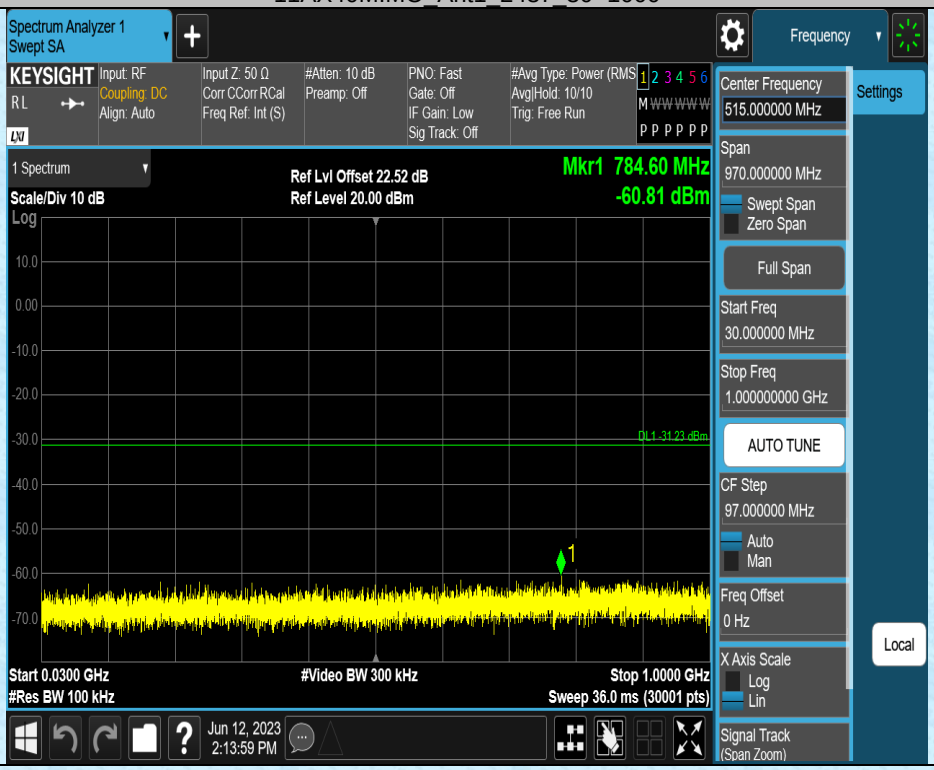

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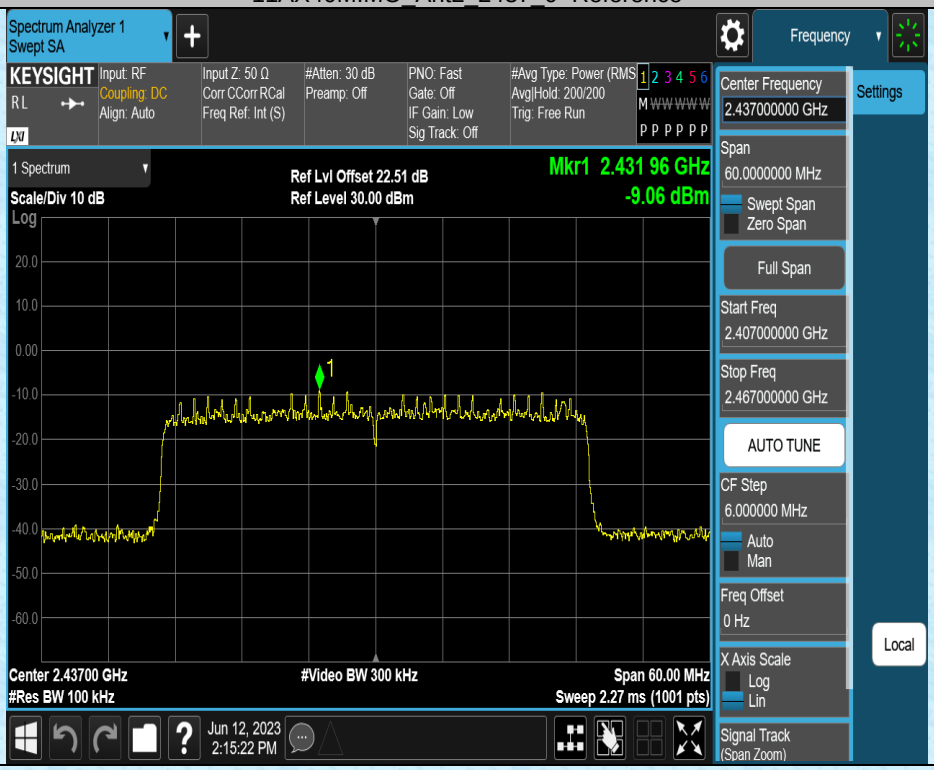

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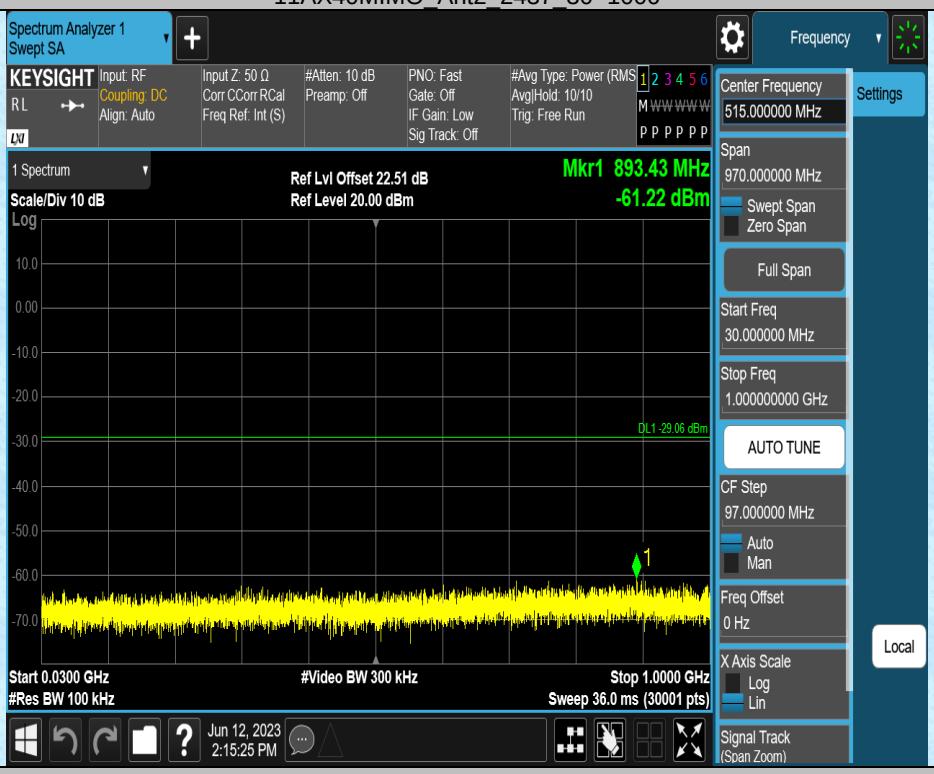

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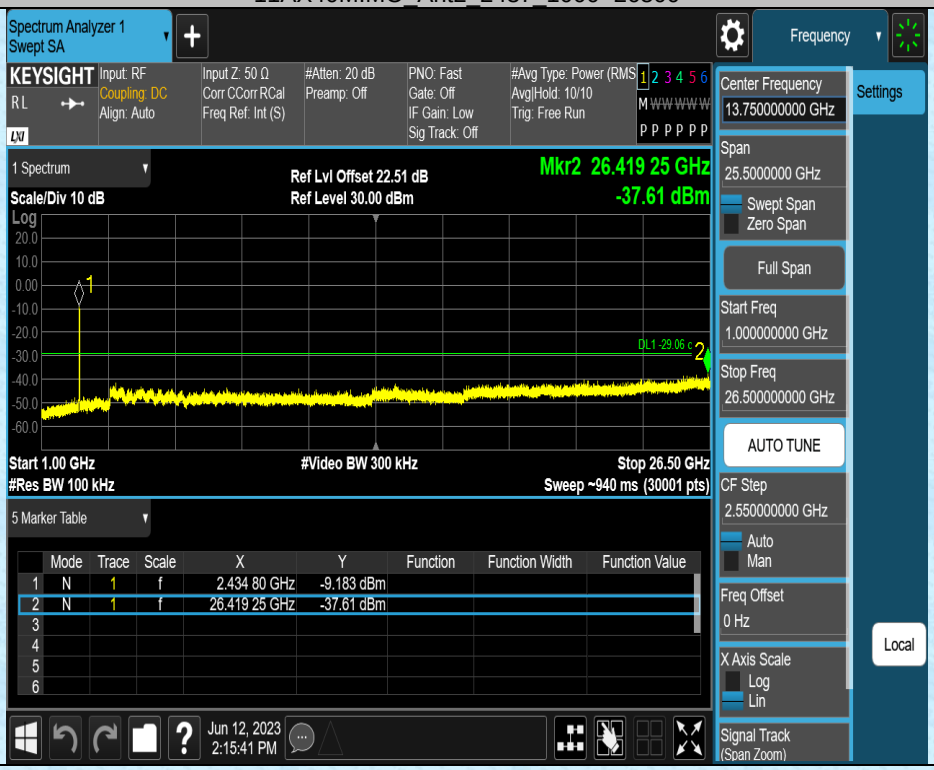

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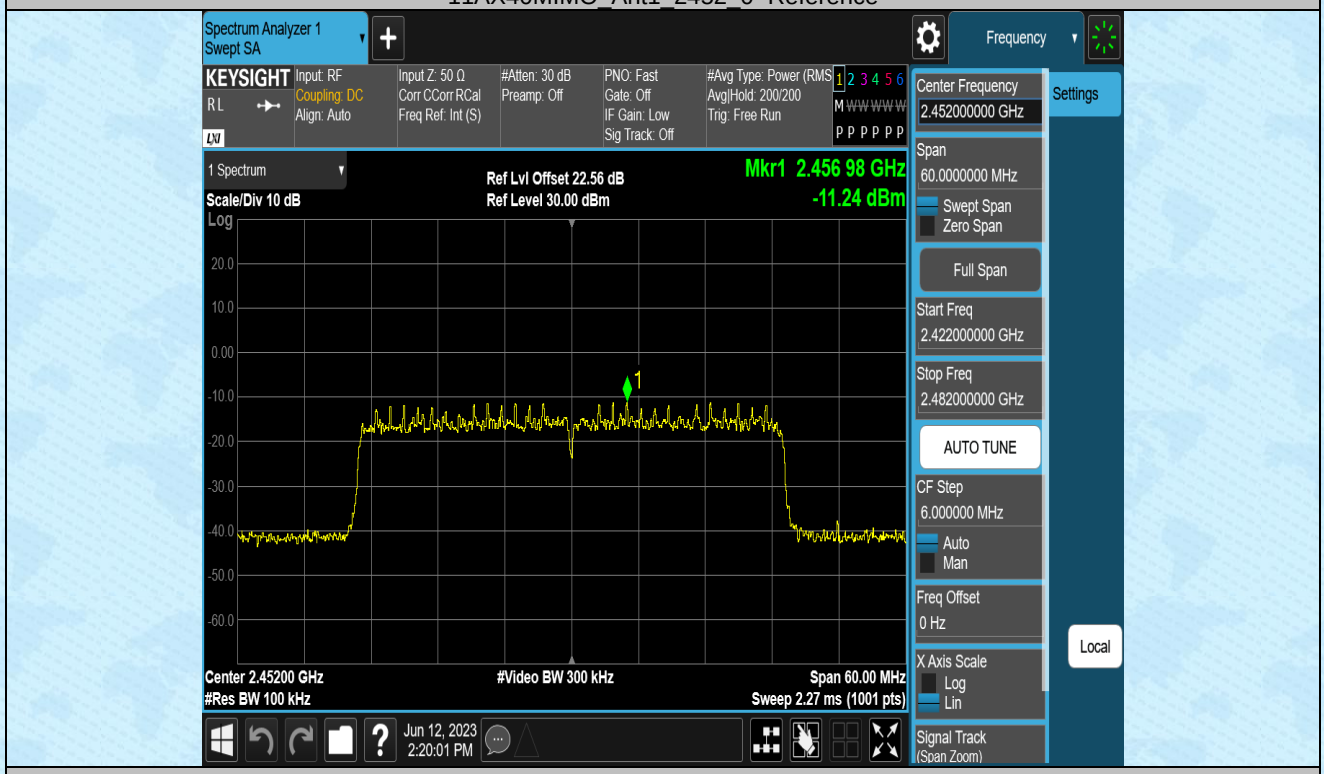

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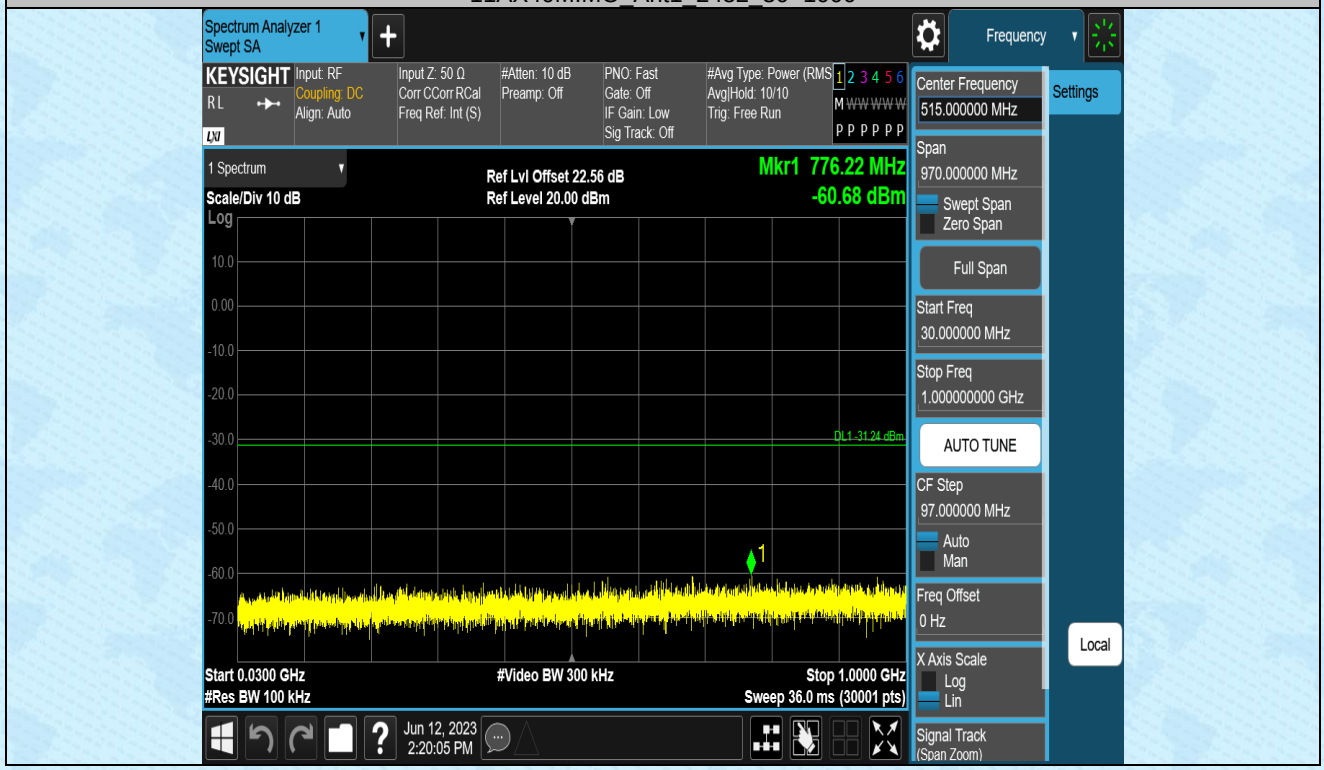

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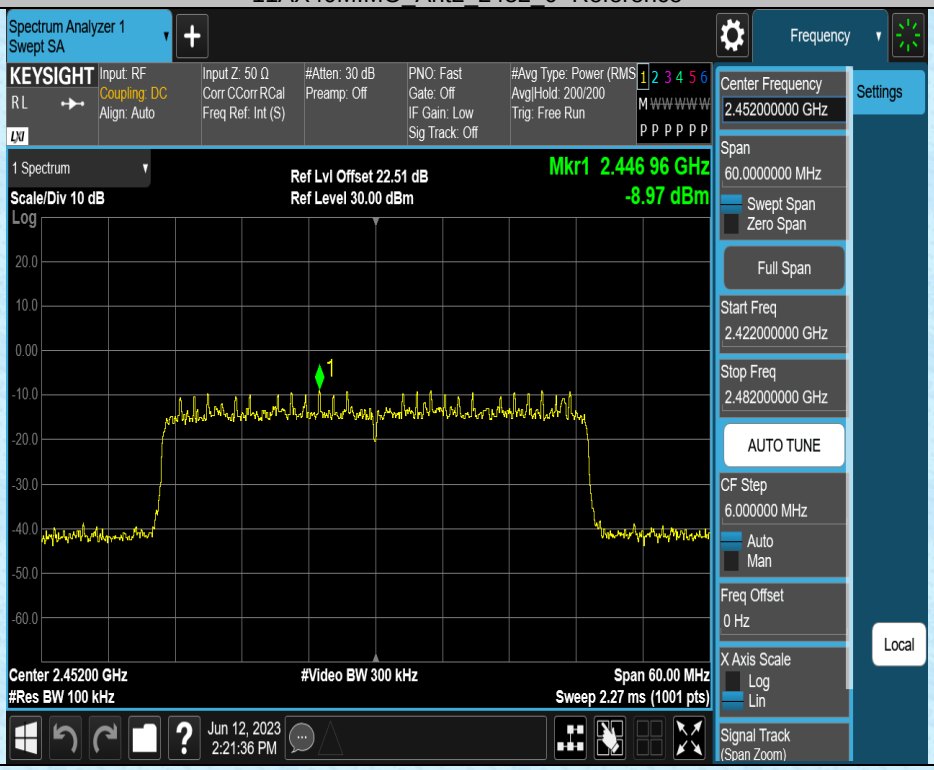

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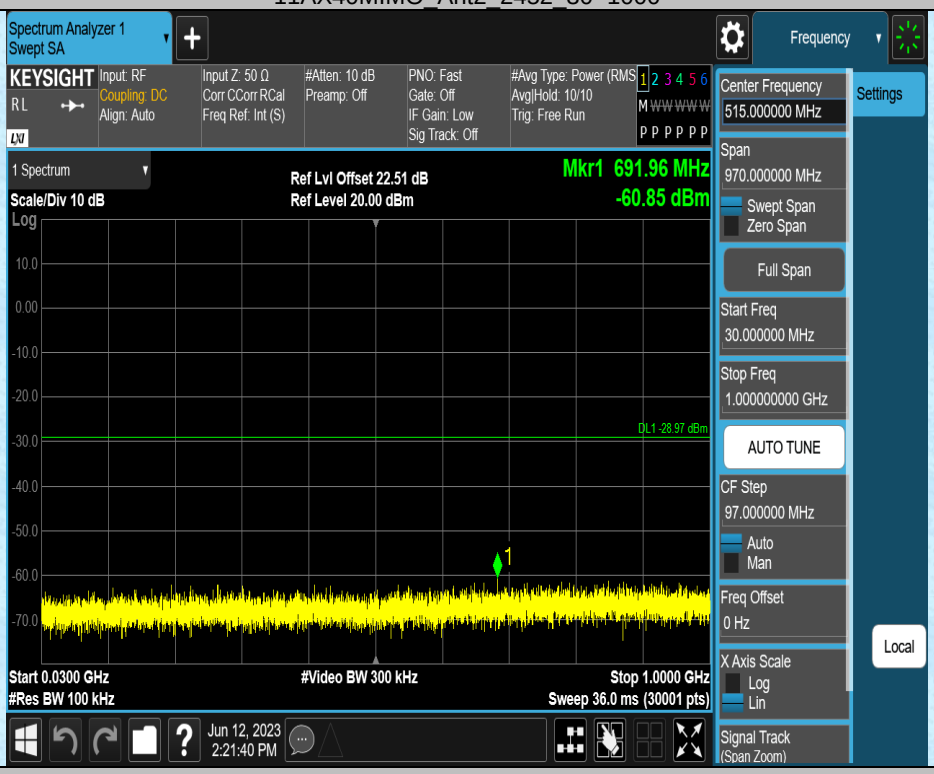
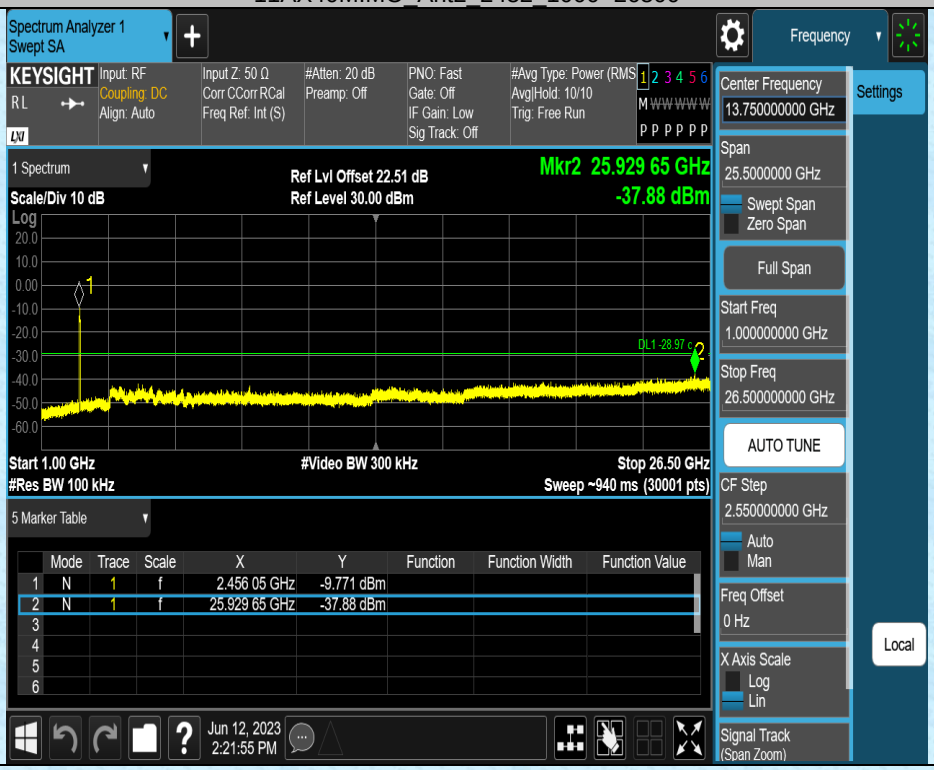
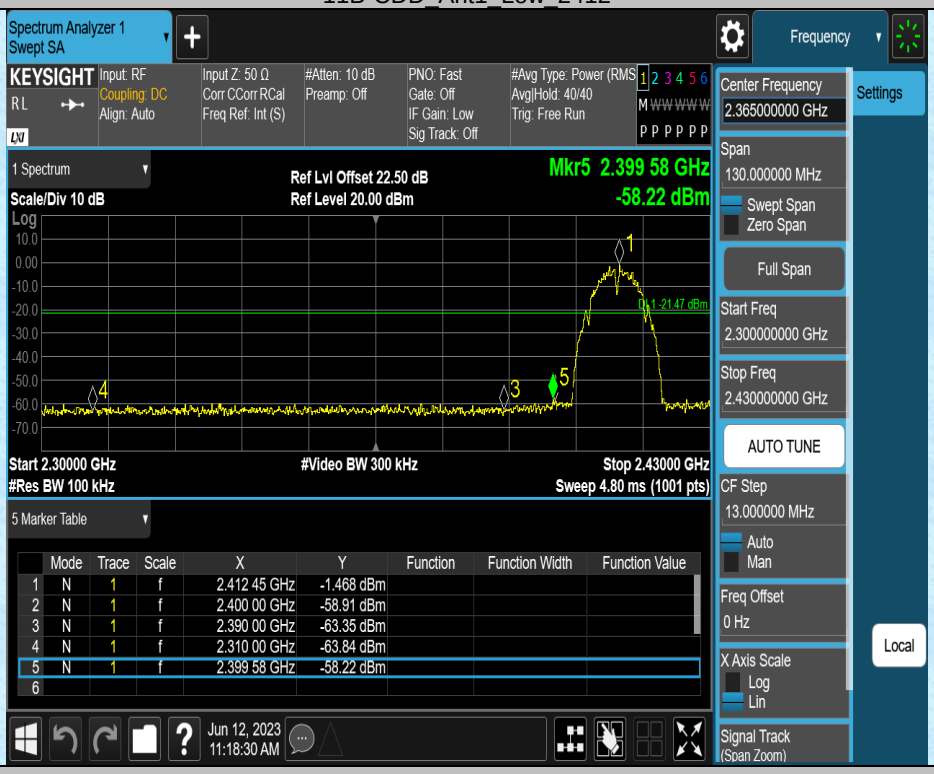


11AX40MIMO_Ant2_2452_1000~26500



Band edge

11B-CDD_Ant1_Low_2412



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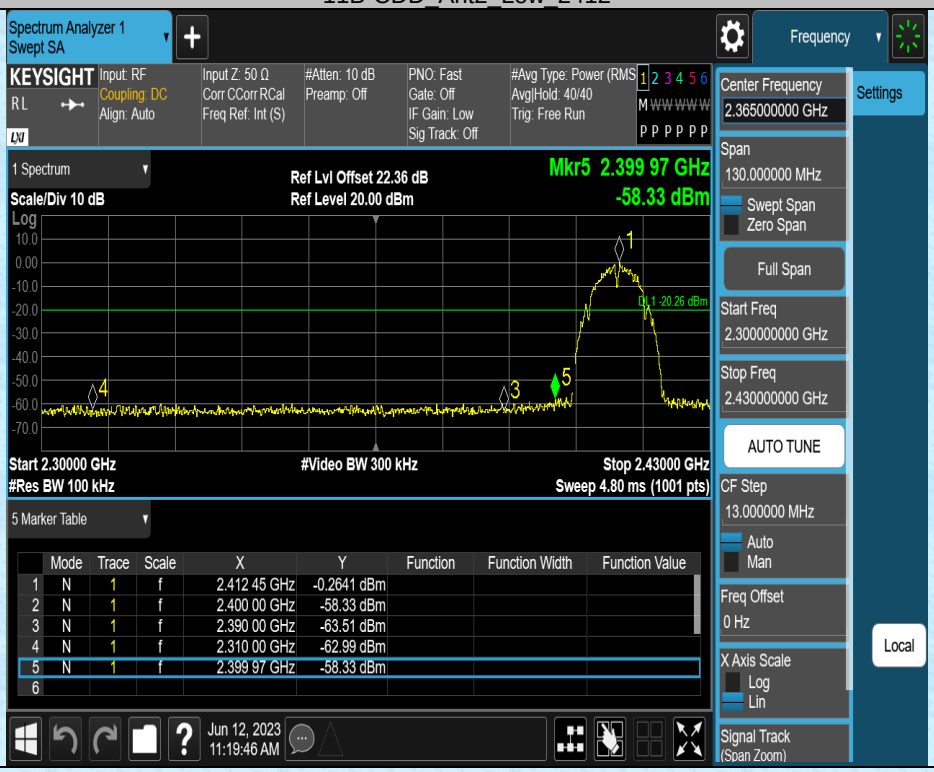

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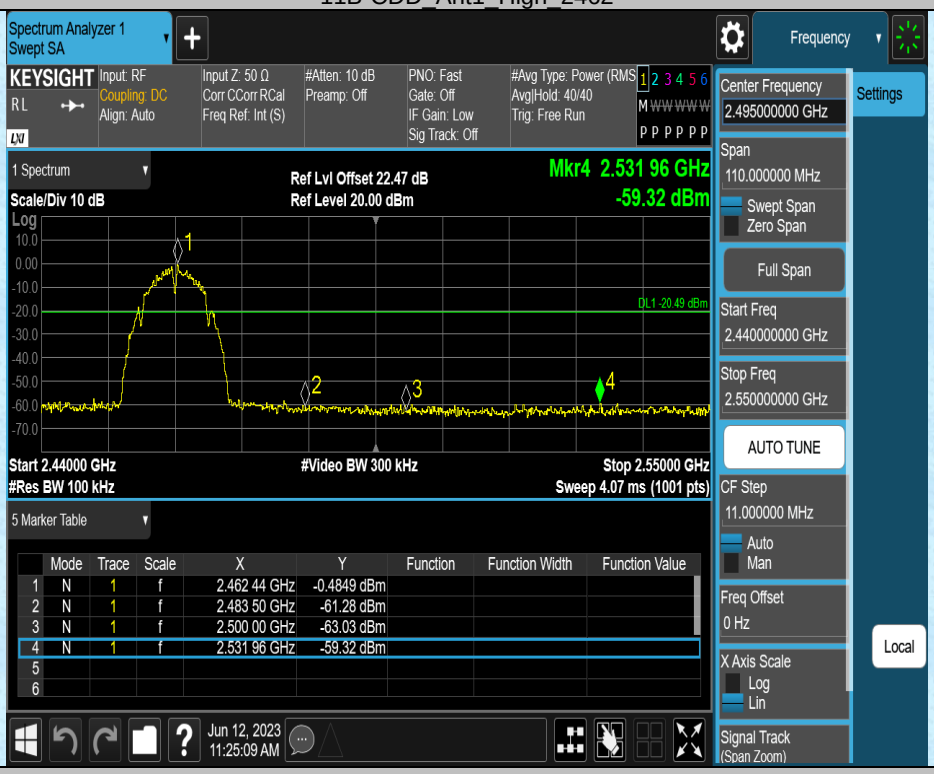

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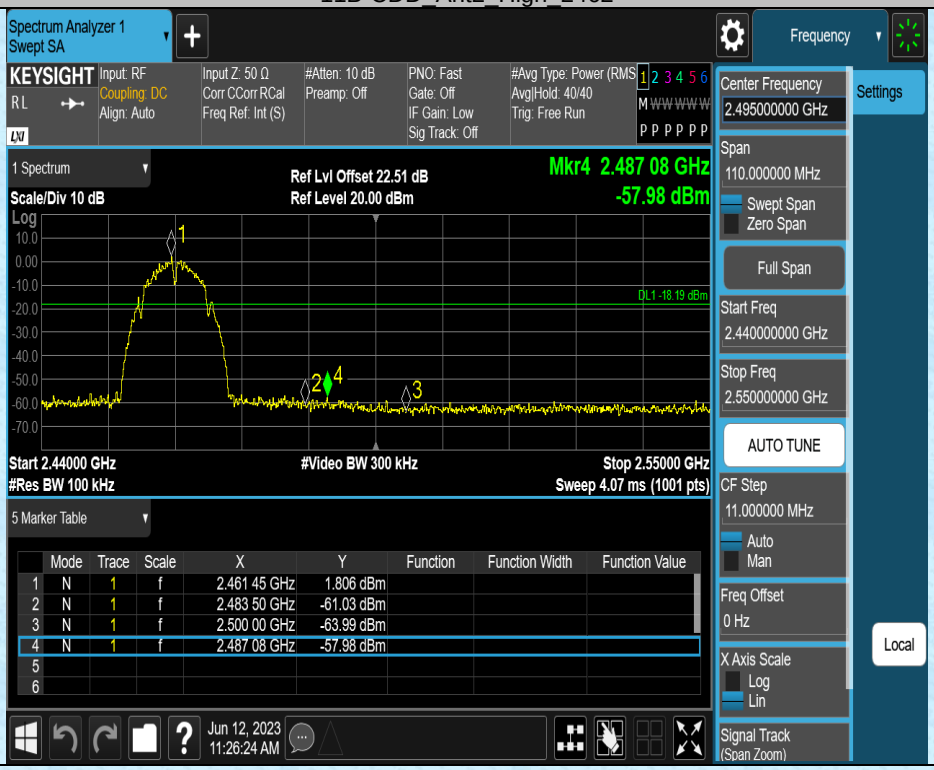

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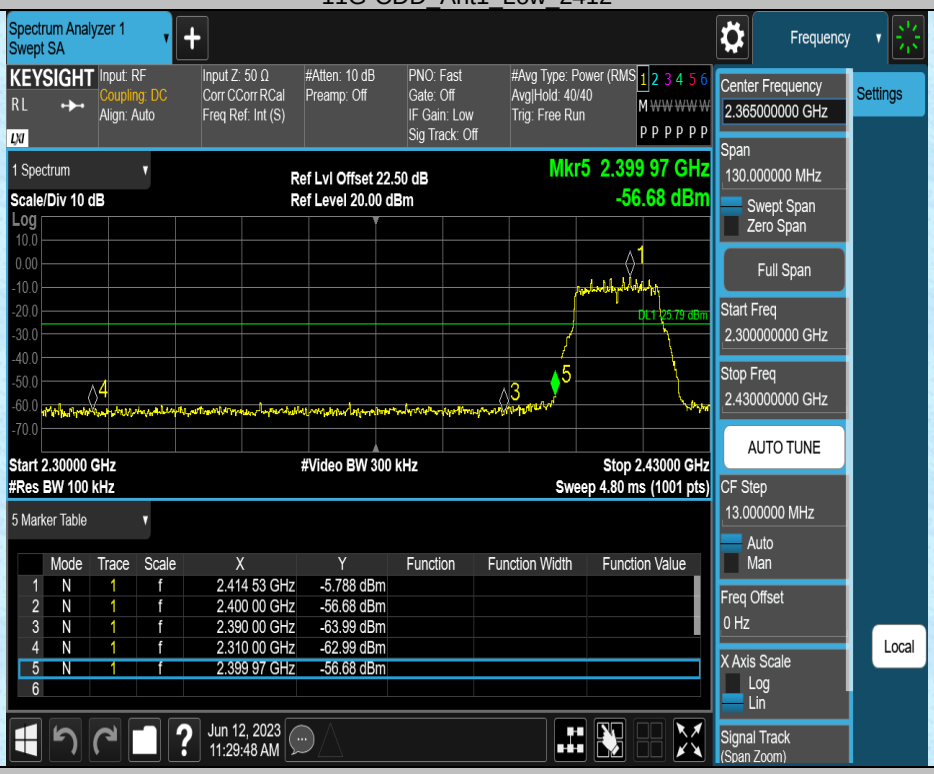

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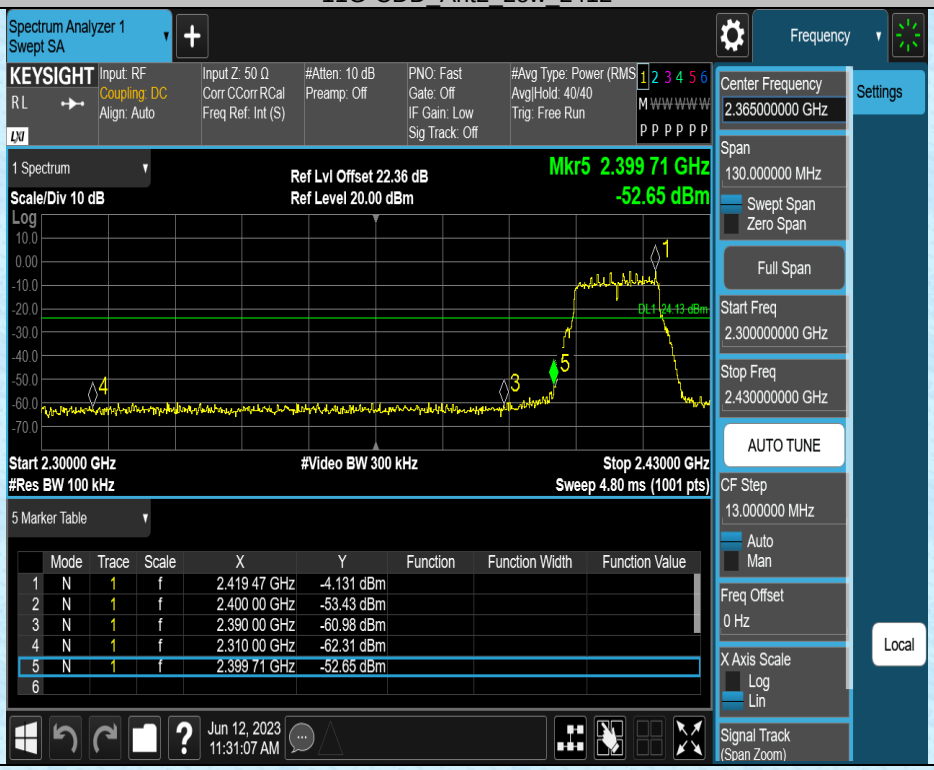

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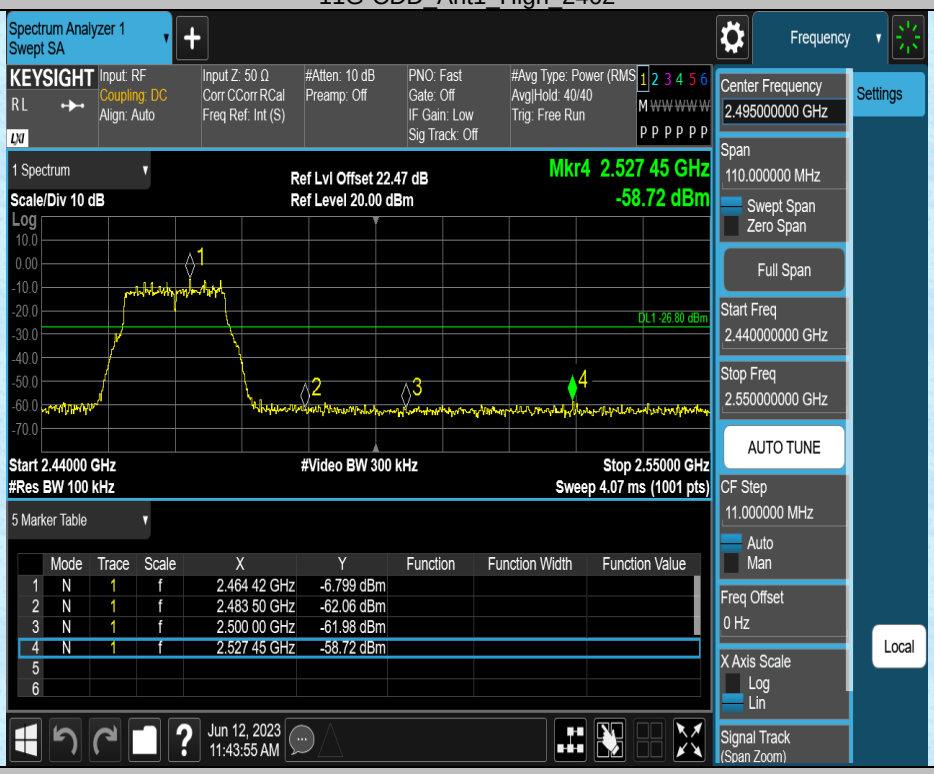

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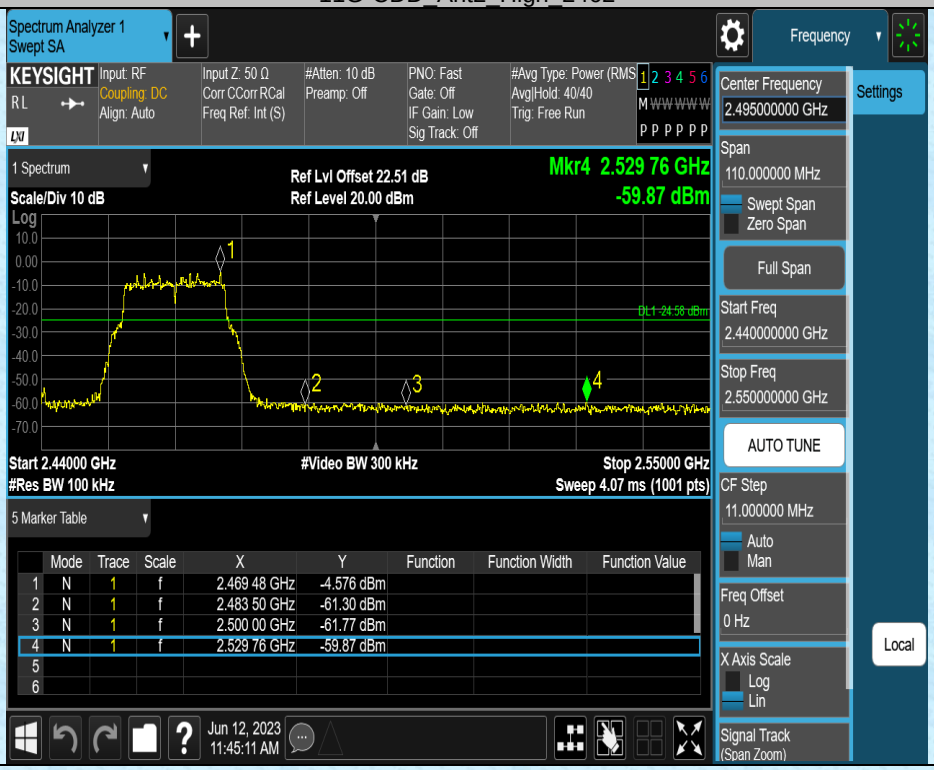

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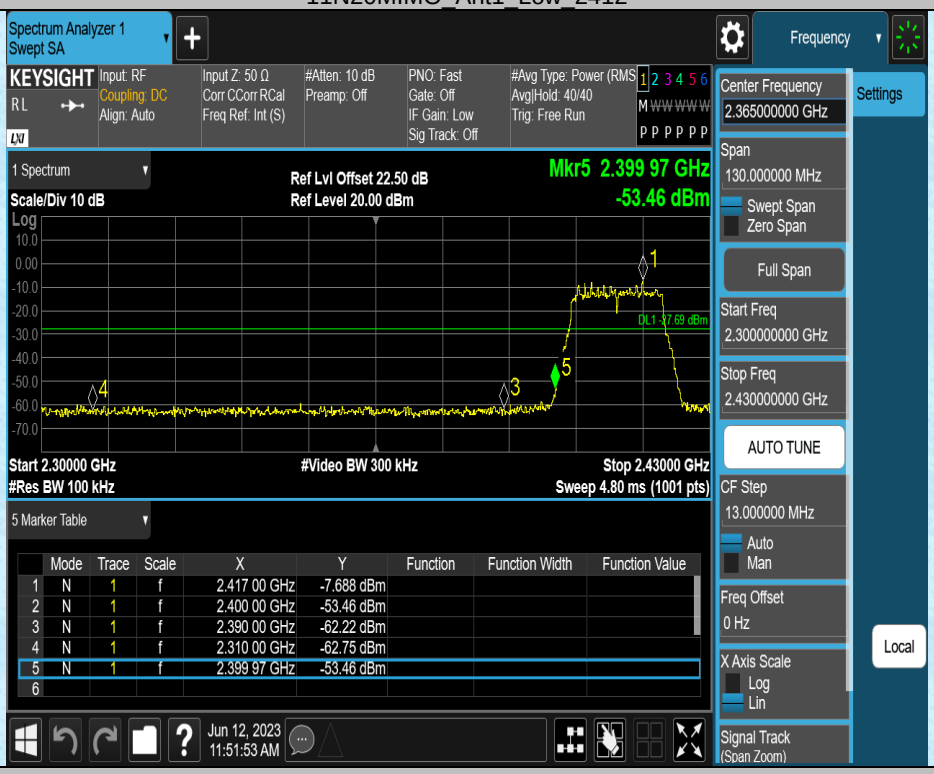

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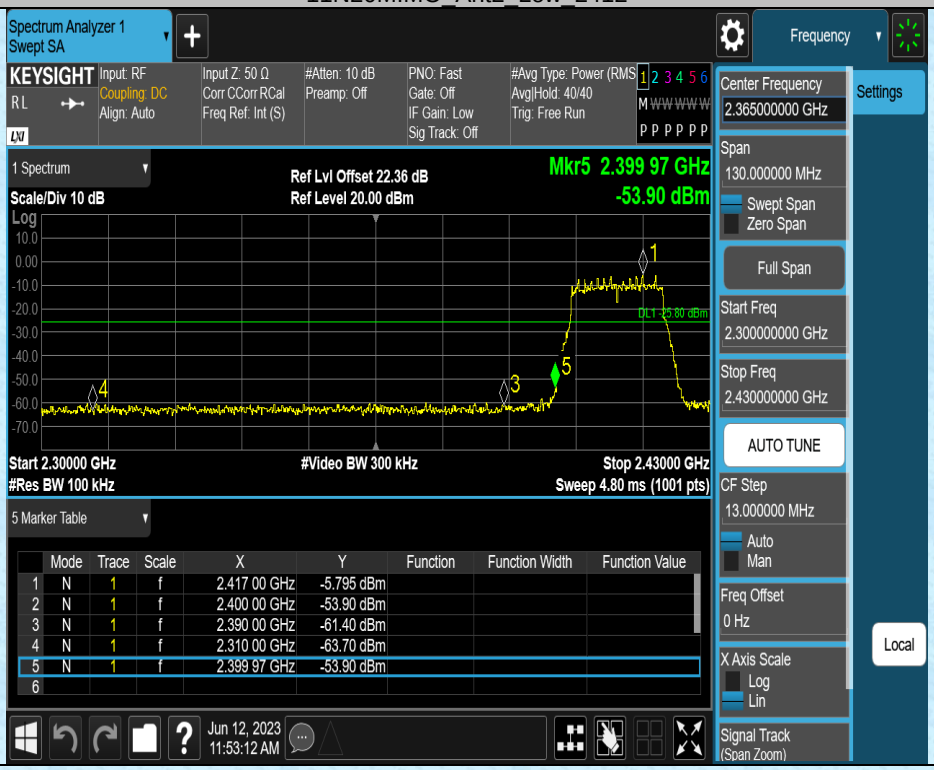

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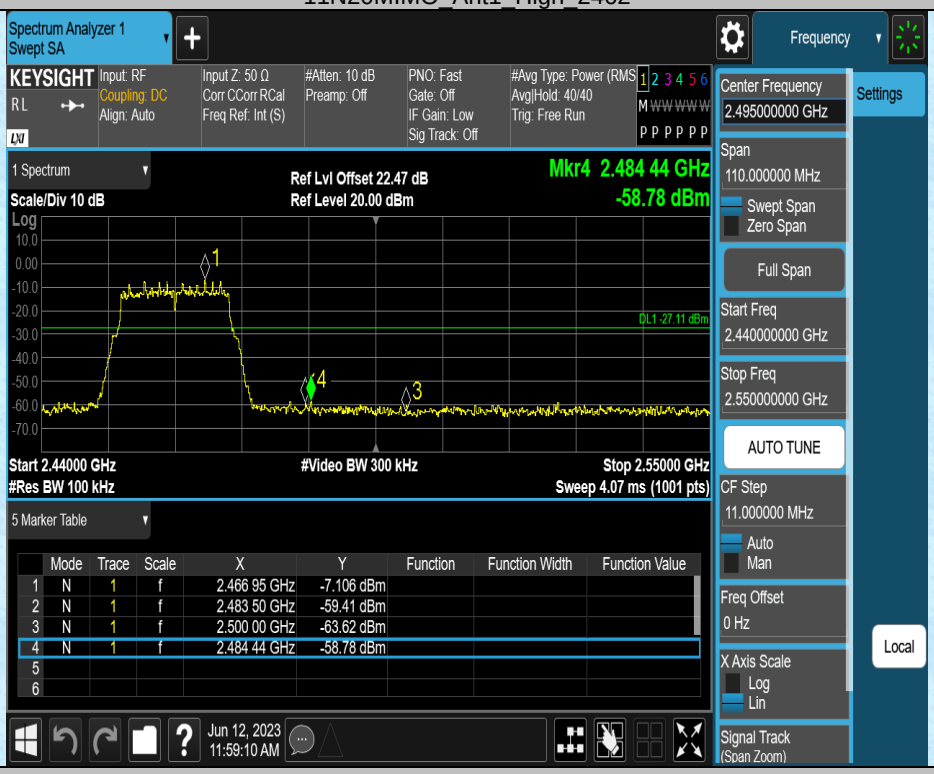

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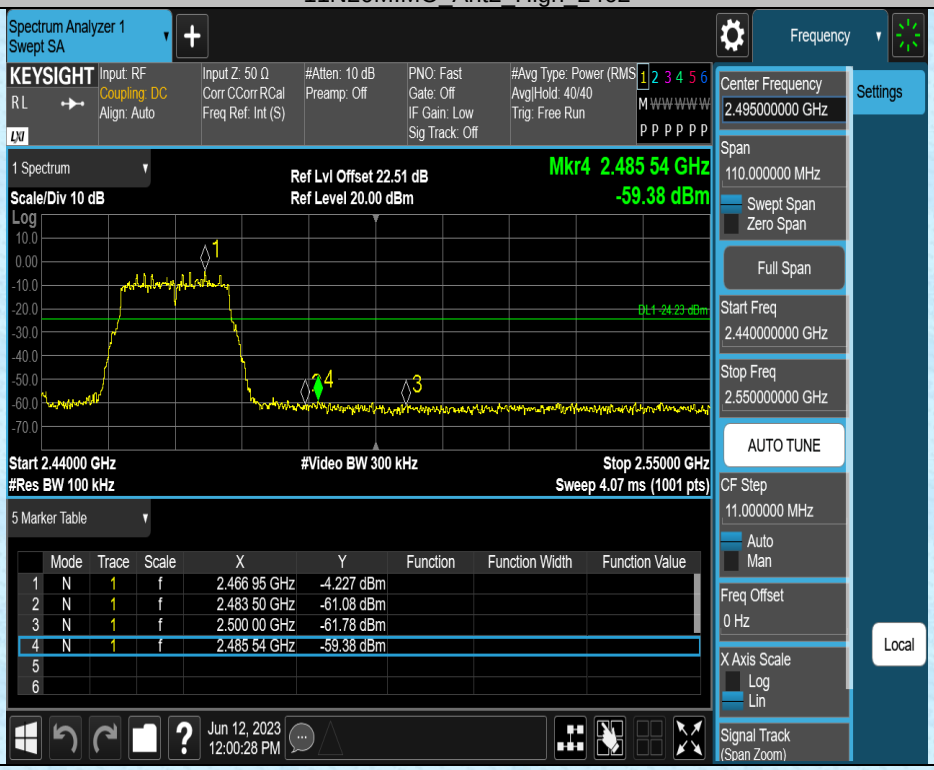

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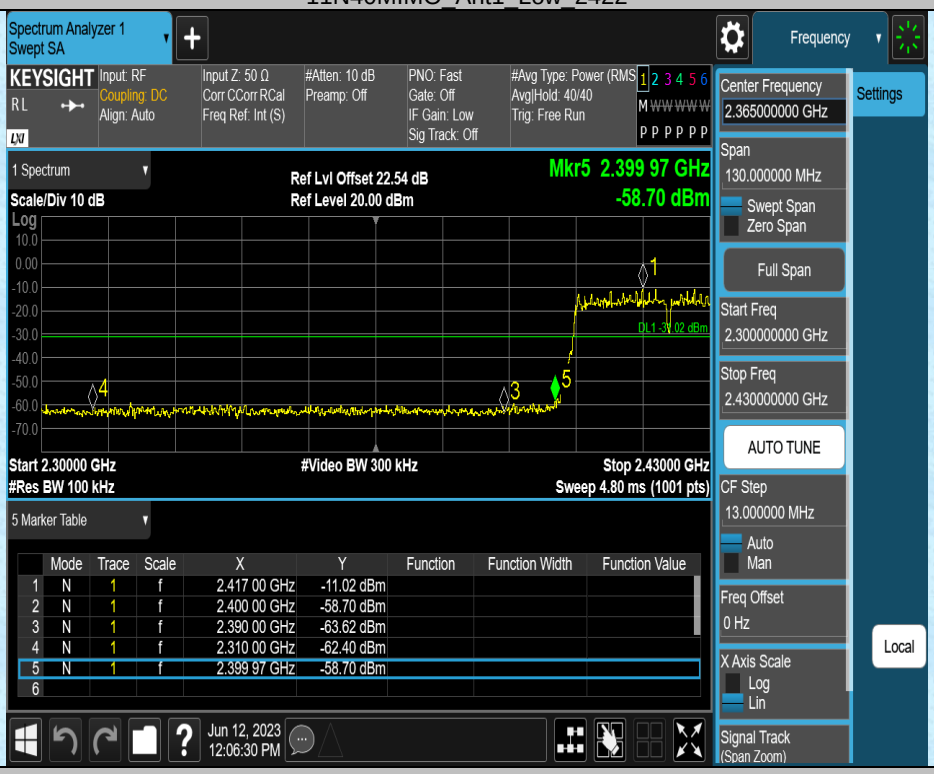

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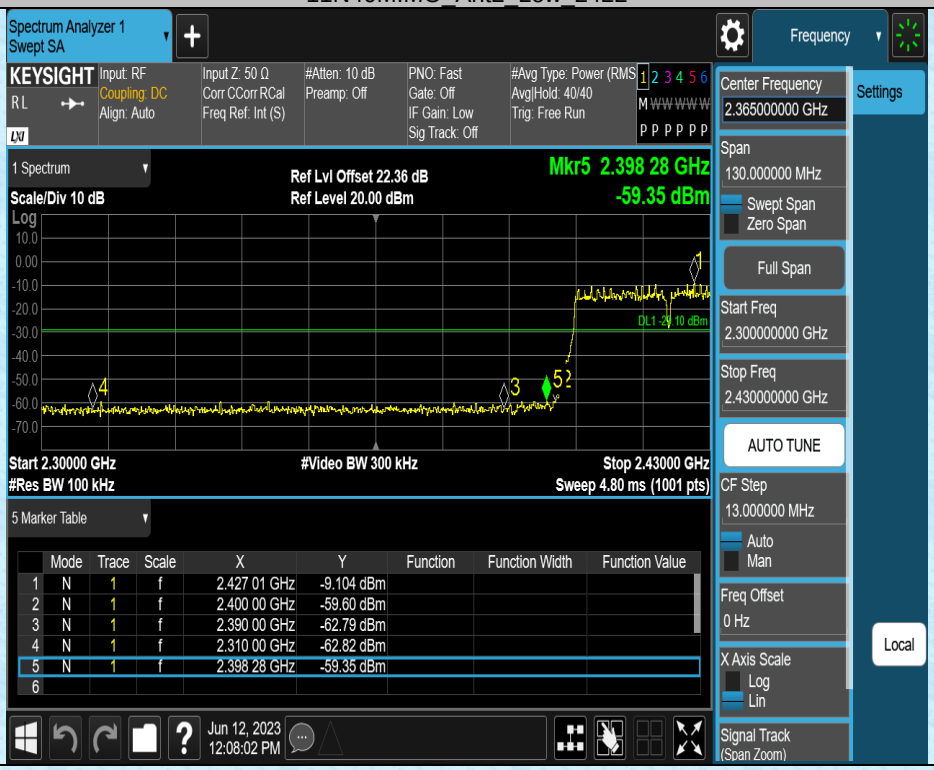

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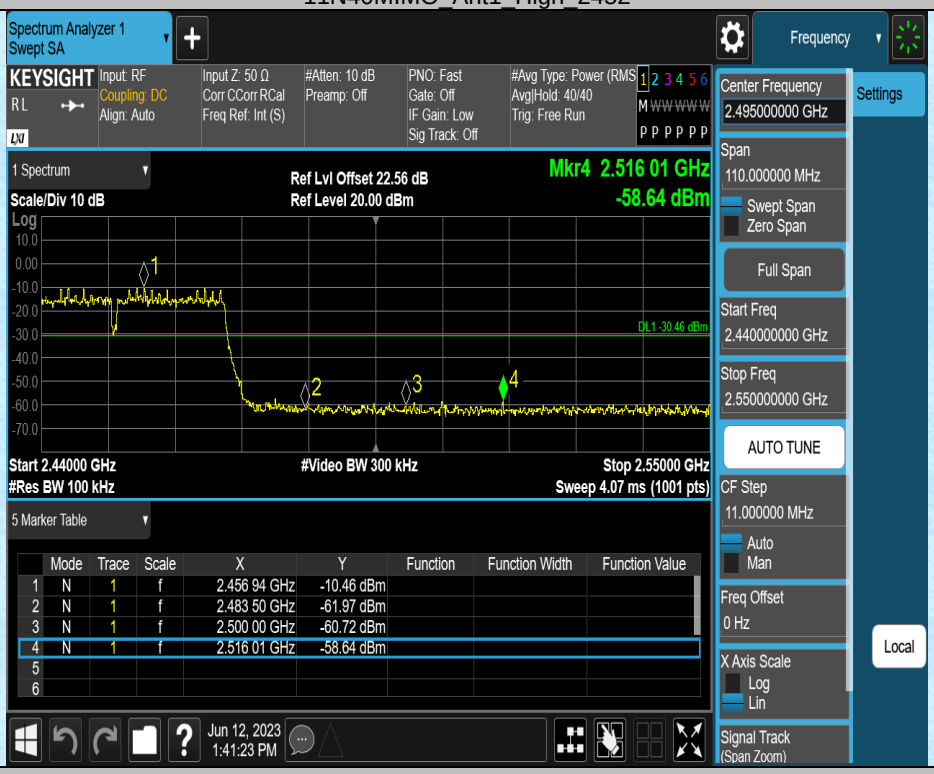

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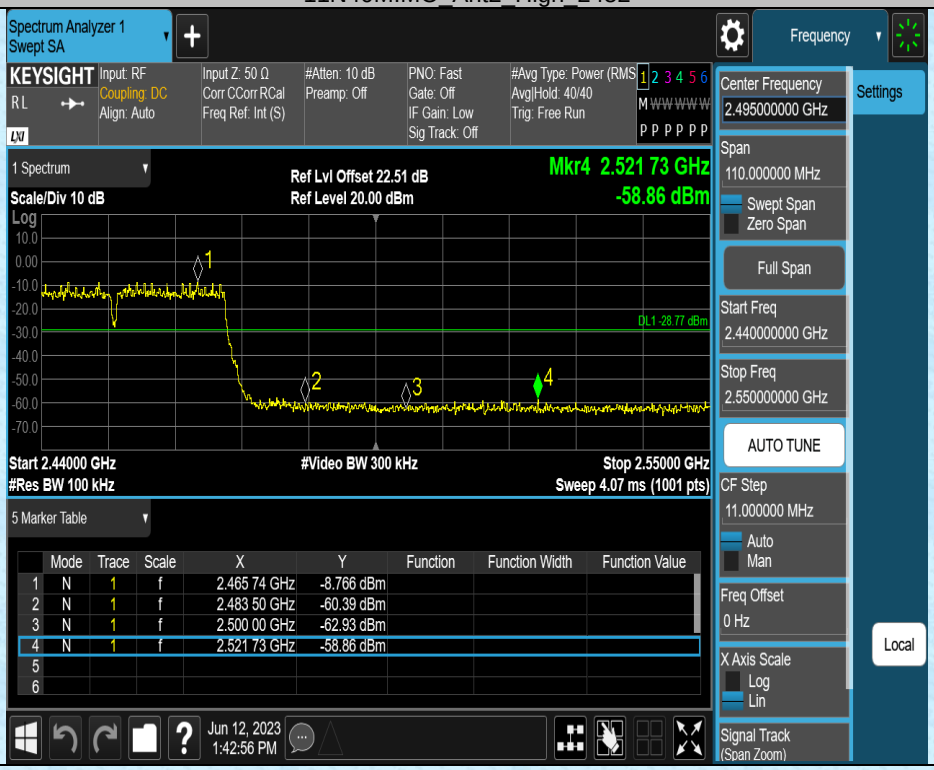

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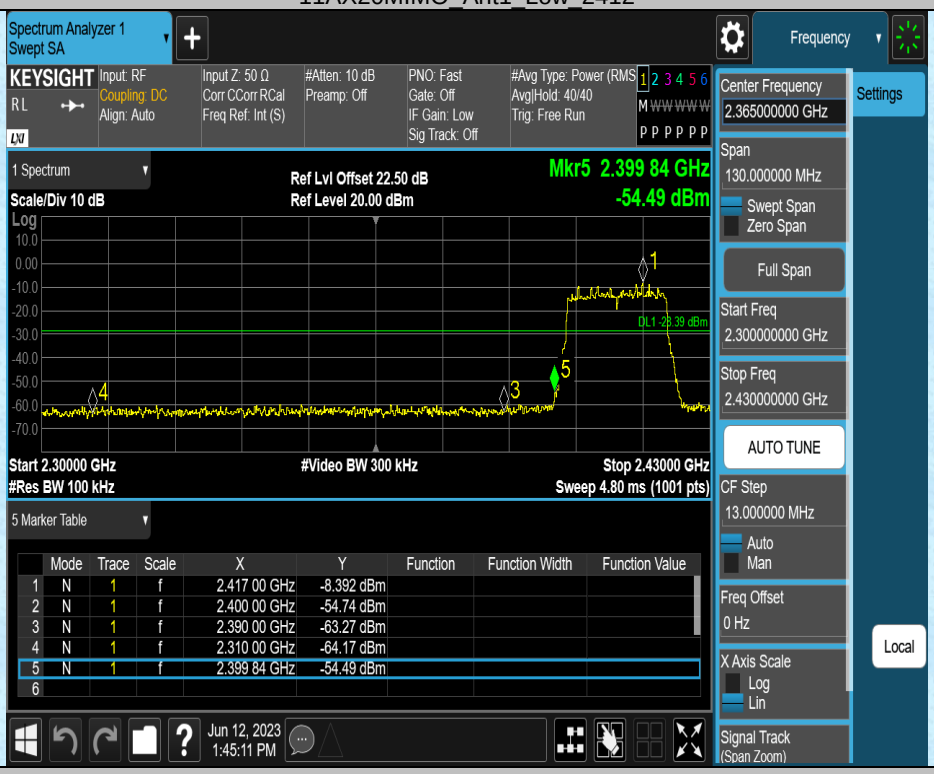

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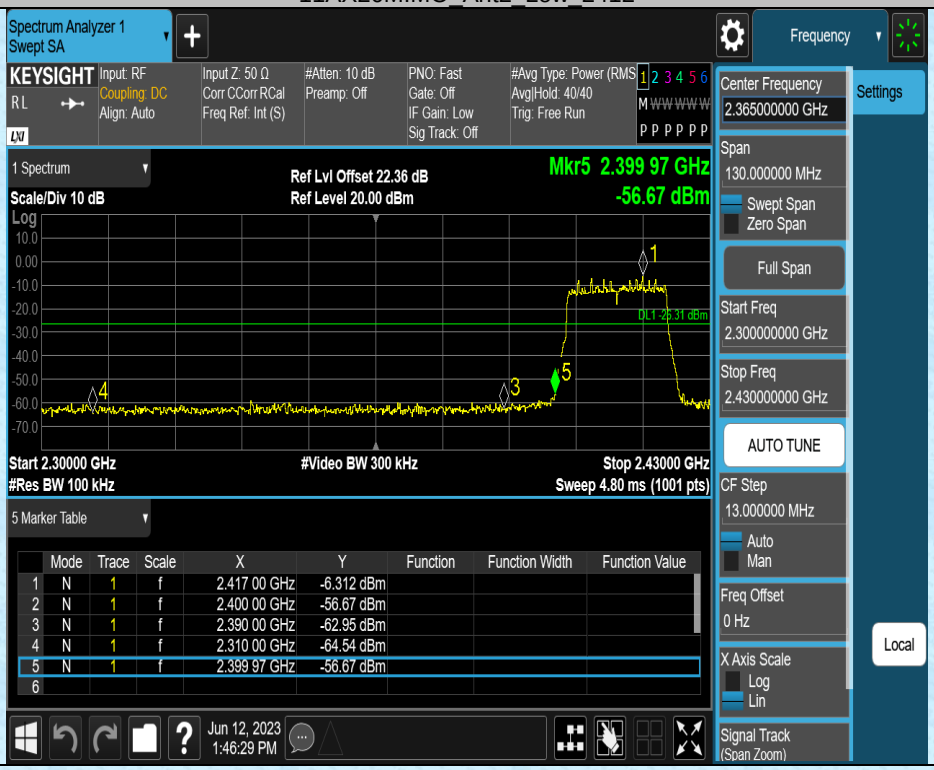

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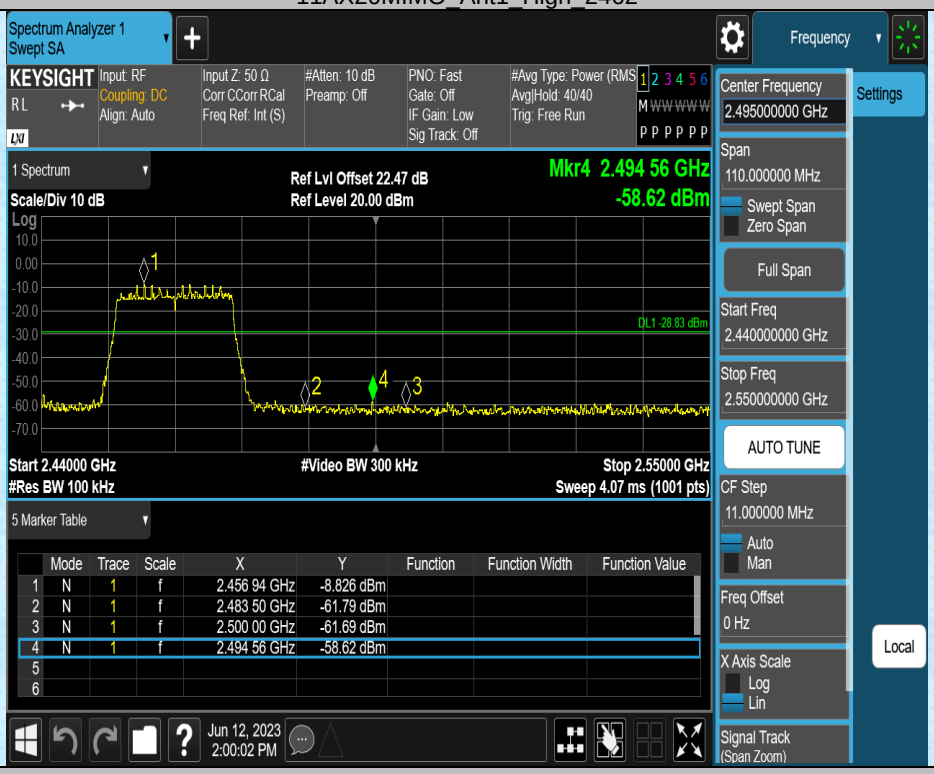

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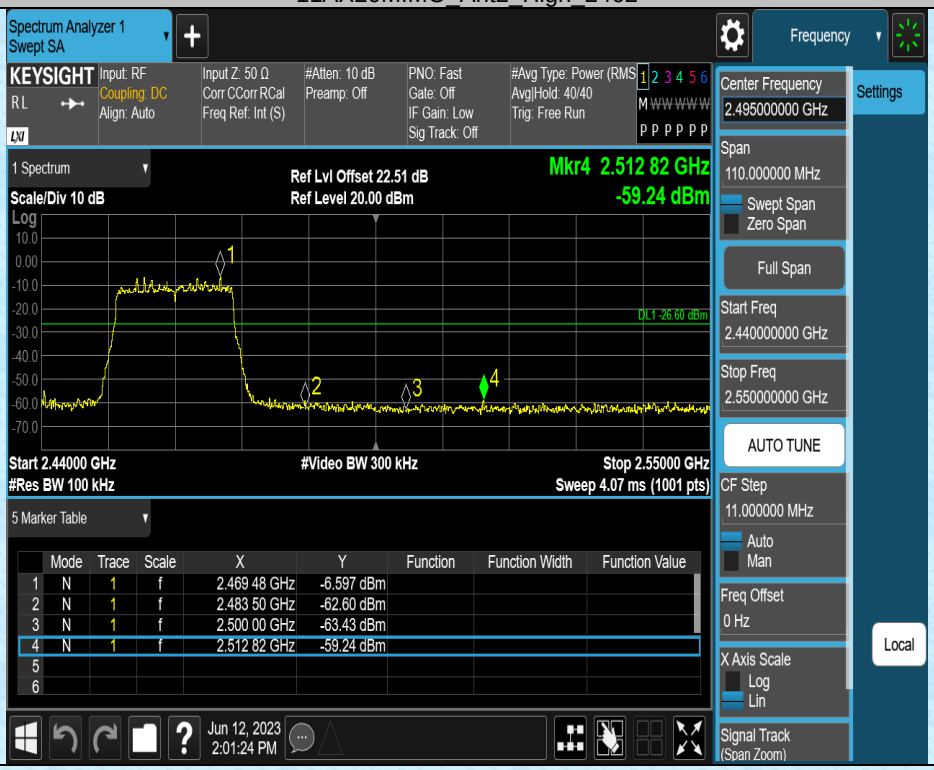

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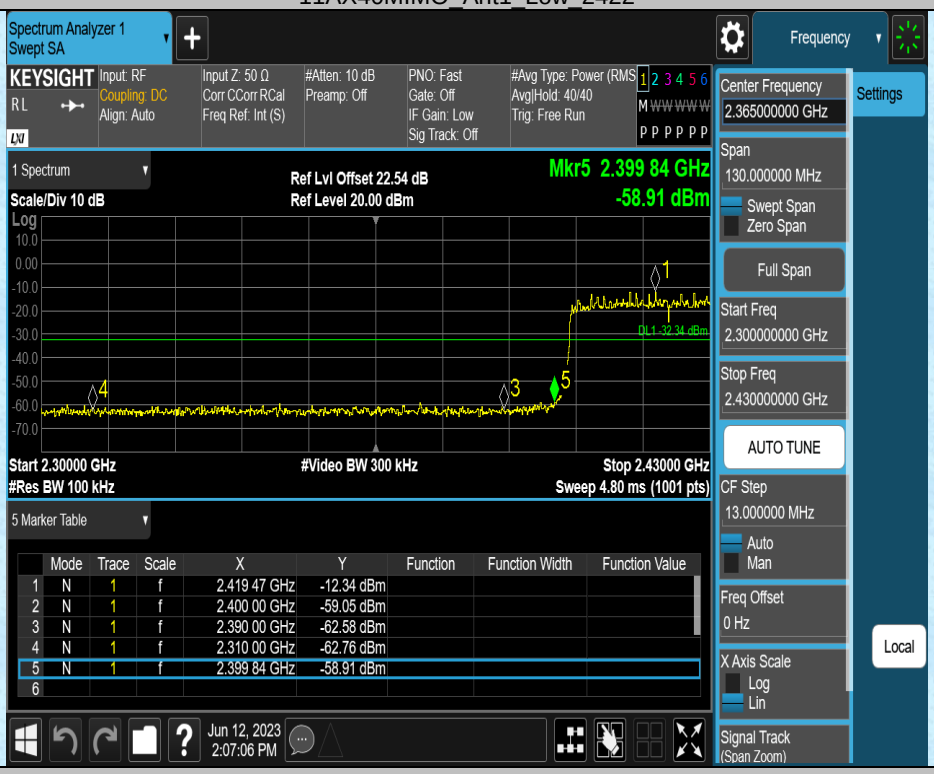

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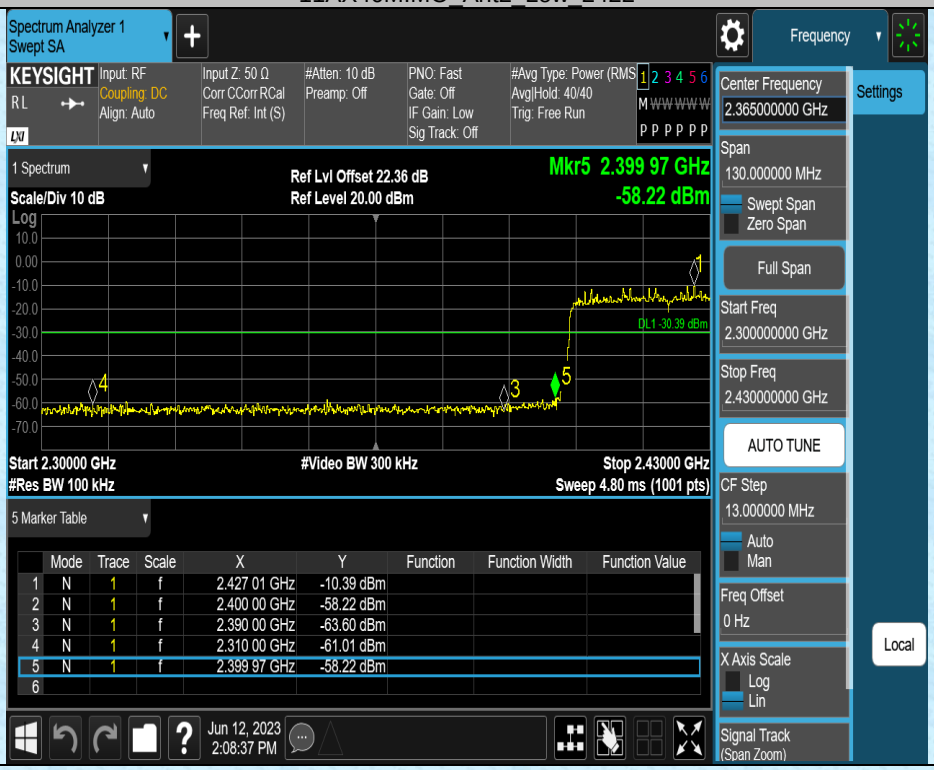

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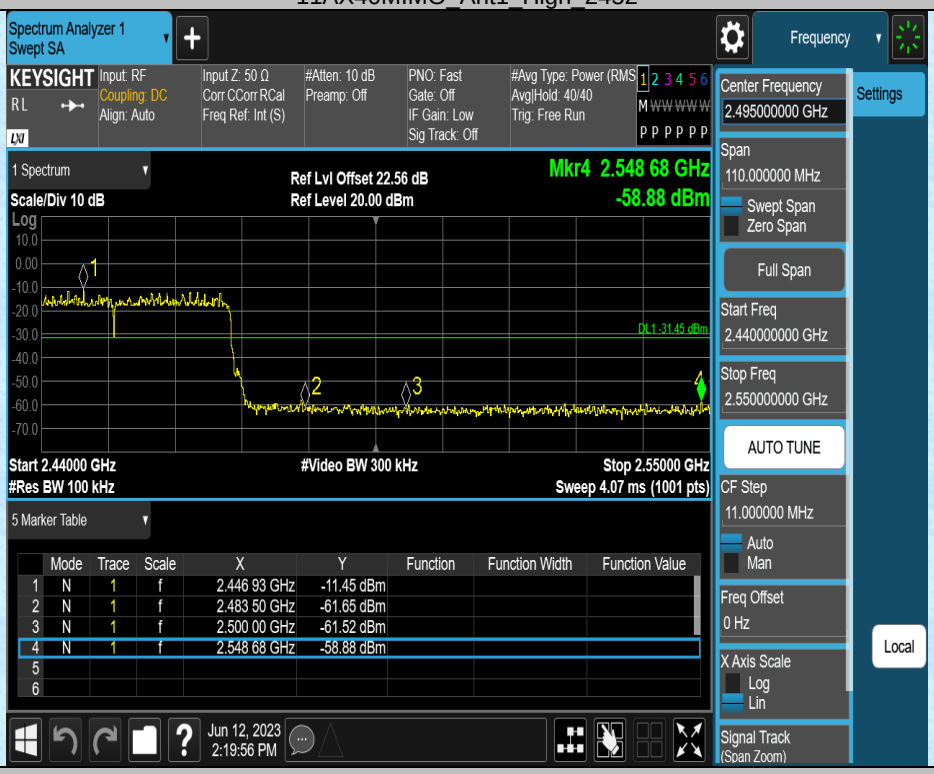

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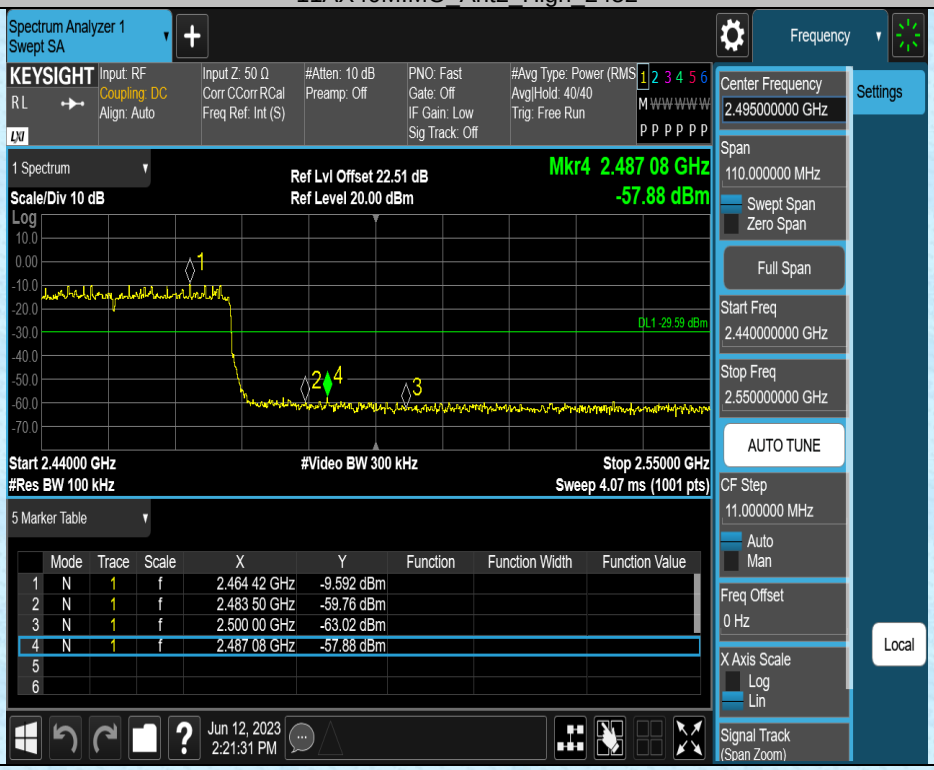


7.6.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209
Test Method:	ANSI C63.10:2013
Test Frequency Range:	9kHz to 25GHz
Test site:	Measurement Distance: 3m

Receiver setup:

Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

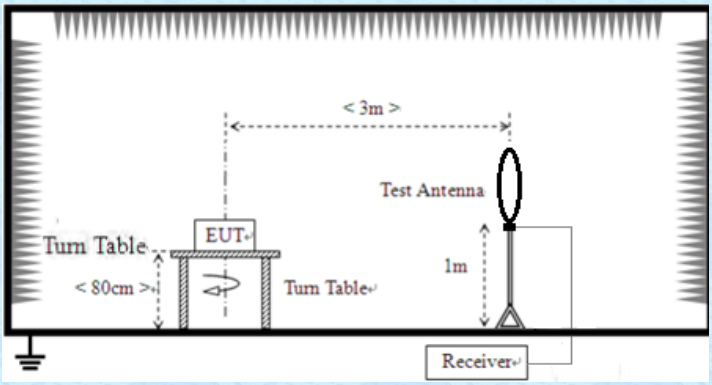
Note: For Duty cycle ≥ 98%, average detector set as above For Duty cycle < 98%, average detector set as below: VBW ≥ 1 / T

Limit:

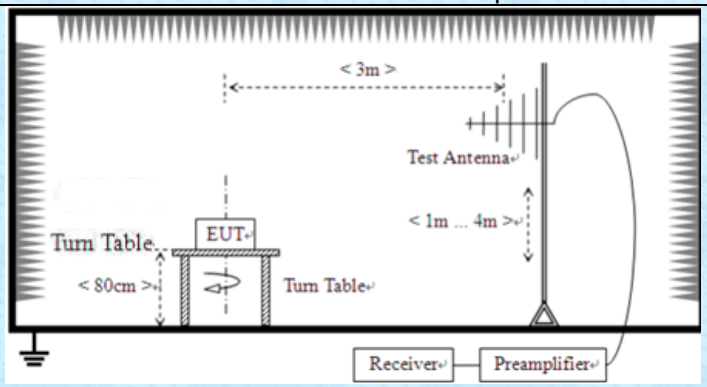
Frequency	Limit (uV/m)	Value	Measurement Distance
0.009MHz-0.490MHz	2400/F(KHz)	PK/QP/AV	300m
0.490MHz-1.705MHz	24000/F(KHz)	QP	30m
1.705MHz-30MHz	30	QP	30m
30MHz-88MHz	100	QP	3m
88MHz-216MHz	150	QP	
216MHz-960MHz	200	QP	
960MHz-1GHz	500	QP	
Above 1GHz	500	Average	
	5000	Peak	

Test setup:

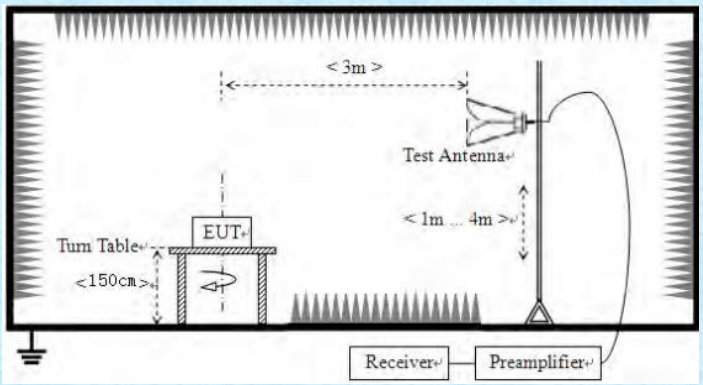
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



Test Procedure:	1. The EUT was placed on the top of a rotating table (0.8m for below 1G and 1.5m for above 1G) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test Instruments:	Refer to section 6.0 for details

Test mode:	Refer to section 5.2 for details					
Test environment:	Temp.:	24.1 °C	Humid.:	52%	Press.:	1012mbar
Test voltage:	AC 120V, 60Hz					
Test results:	Pass					

Remarks:

1. *Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.*
2. *Pre-scan beamform mode and non-beamform mode, worst case for non-beamform mode is recorded.*

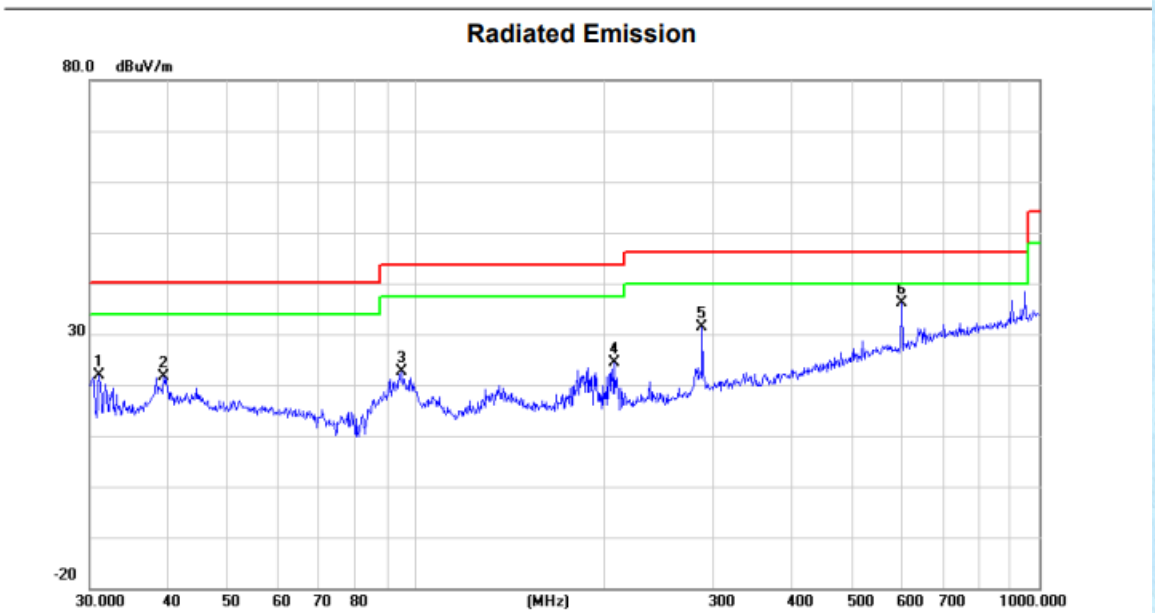
Measurement data:

■ **9kHz~30MHz**

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not recorded in this report.

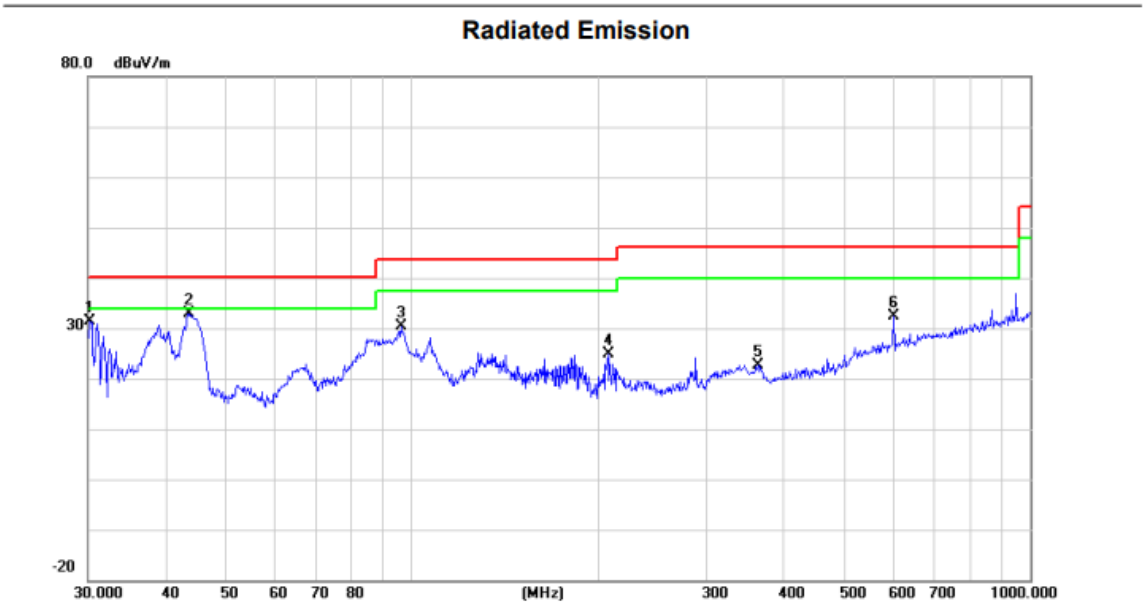
■ **Below 1GHz**

We only recorded the data of the worst mode. Please see the following:
Horizontal:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.0704	33.96	-12.08	21.88	40.00	-18.12	peak			
2		39.4371	32.45	-10.70	21.75	40.00	-18.25	peak			
3		95.0930	36.35	-13.73	22.62	43.50	-20.88	peak			
4		207.8500	35.81	-11.31	24.50	43.50	-19.00	peak			
5		287.9904	40.03	-8.55	31.48	46.00	-14.52	peak			
6	*	601.4265	36.58	-0.57	36.01	46.00	-9.99	peak			

Vertical:



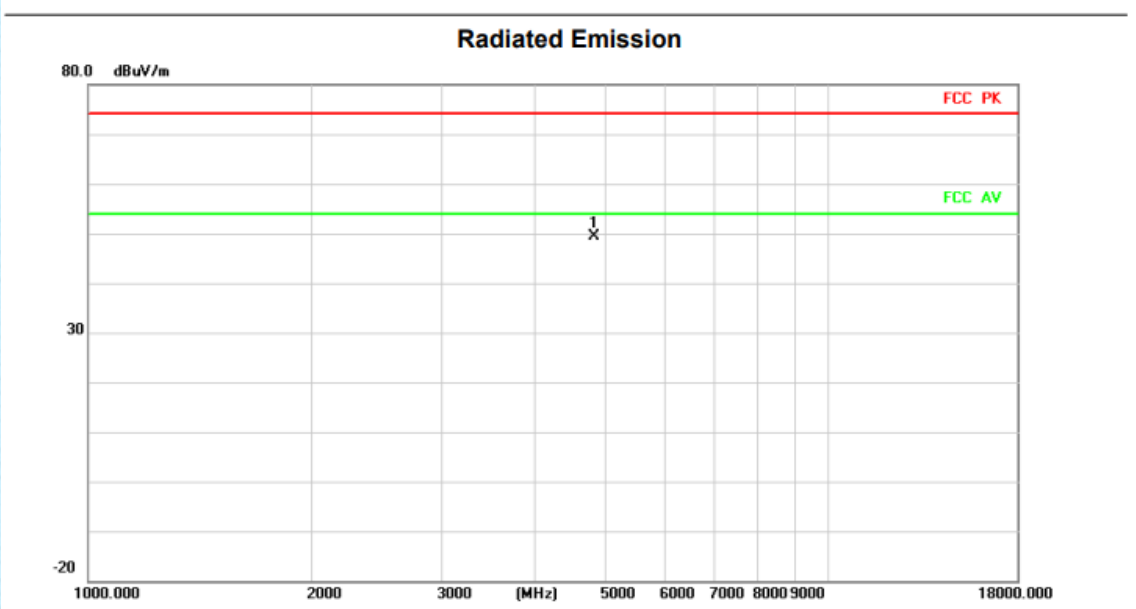
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		30.2110	43.47	-12.19	31.28	40.00	-8.72	peak			
2	*	43.6584	43.57	-10.67	32.90	40.00	-7.10	peak			
3		96.0985	44.07	-13.58	30.49	43.50	-13.01	peak			
4		207.8500	36.07	-11.31	24.76	43.50	-18.74	peak			
5		362.9843	29.40	-6.65	22.75	46.00	-23.25	peak			
6		601.4265	32.93	-0.57	32.36	46.00	-13.64	peak			

1. Measurement = Reading + Correct Factor.
2. Over = Measurement – Limit
3. Simultaneous transmitting: 2.4G Wifi transmitting + 5G Wifi transmitting+BLE transmitting
4. Worst Case Operating Mode: Simultaneous transmitting

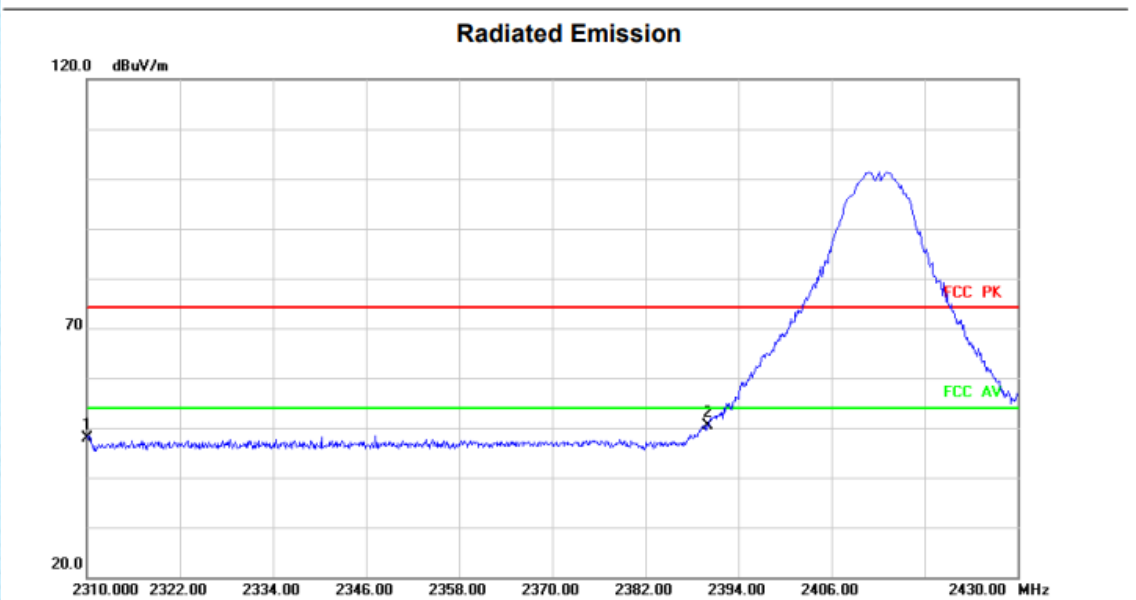
Above 1GHz: worst case for MIMO mode

Test mode:	802.11b	Test channel:	1

VERTICAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4824.000	51.37	-1.88	49.49	74.00	-24.51	peak			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	47.63	0.19	47.82	74.00	-26.18	peak			
2	*	2390.000	49.96	0.41	50.37	74.00	-23.63	peak			