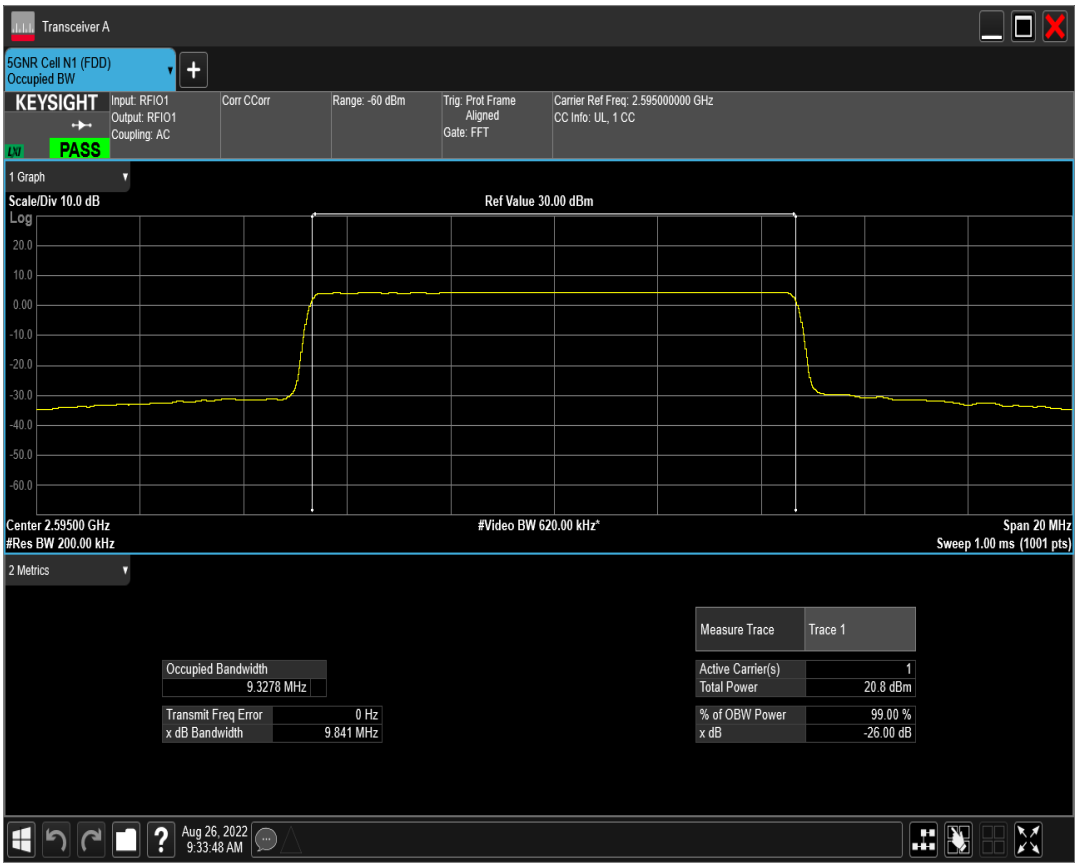
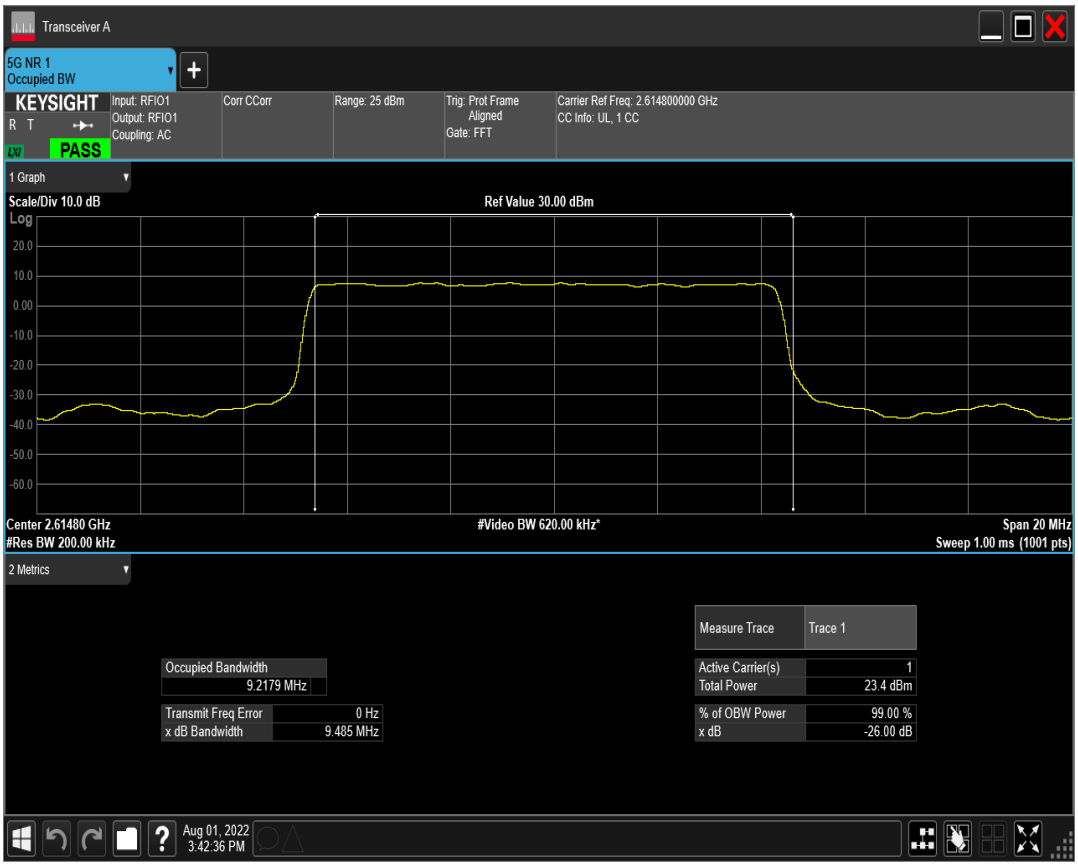
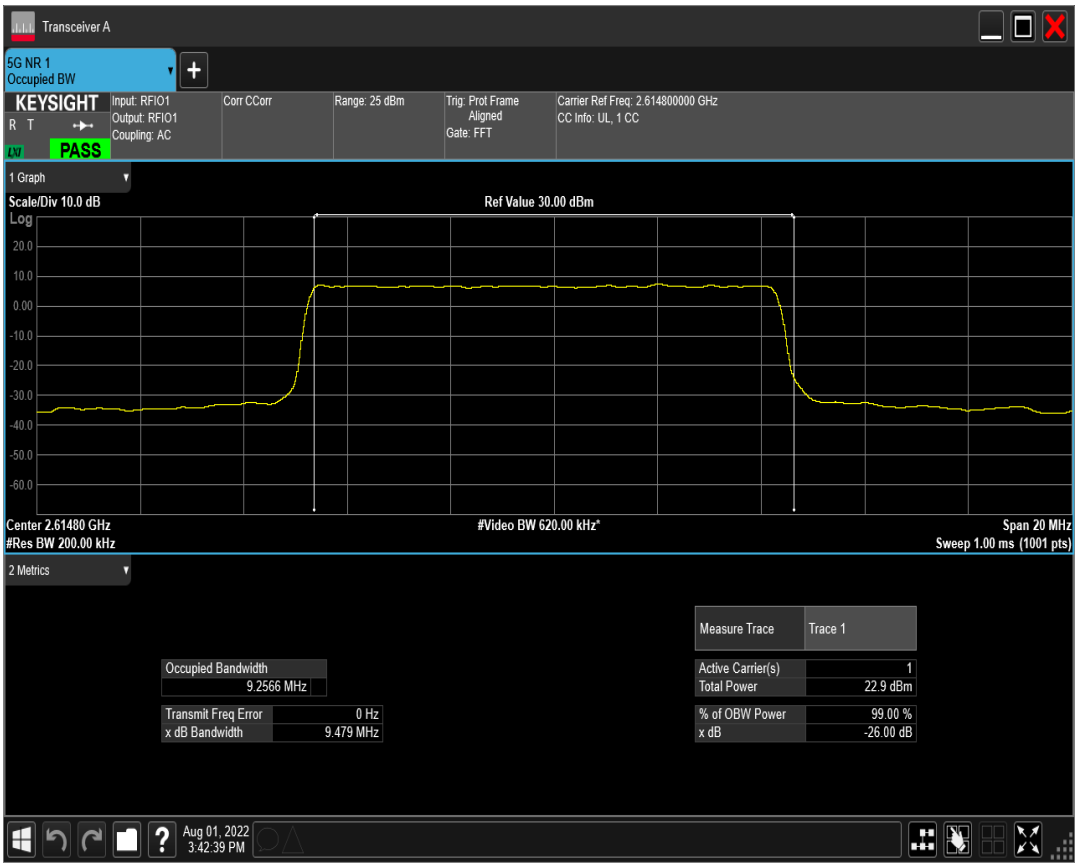


n38 SCS=15kHz DFT_BPSK BW=10MHz Channel=523000 RB=50@0



n38 SCS=15kHz DFT_QPSK BW=10MHz Channel=523000 RB=50@0



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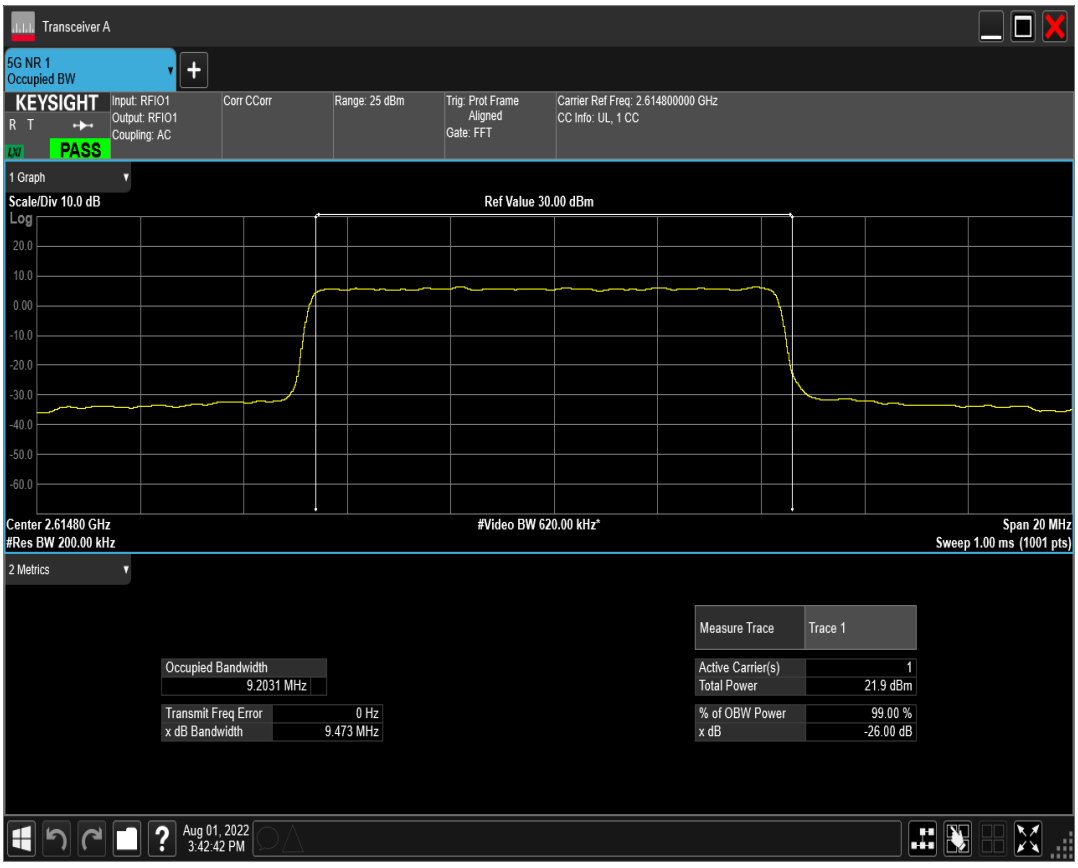

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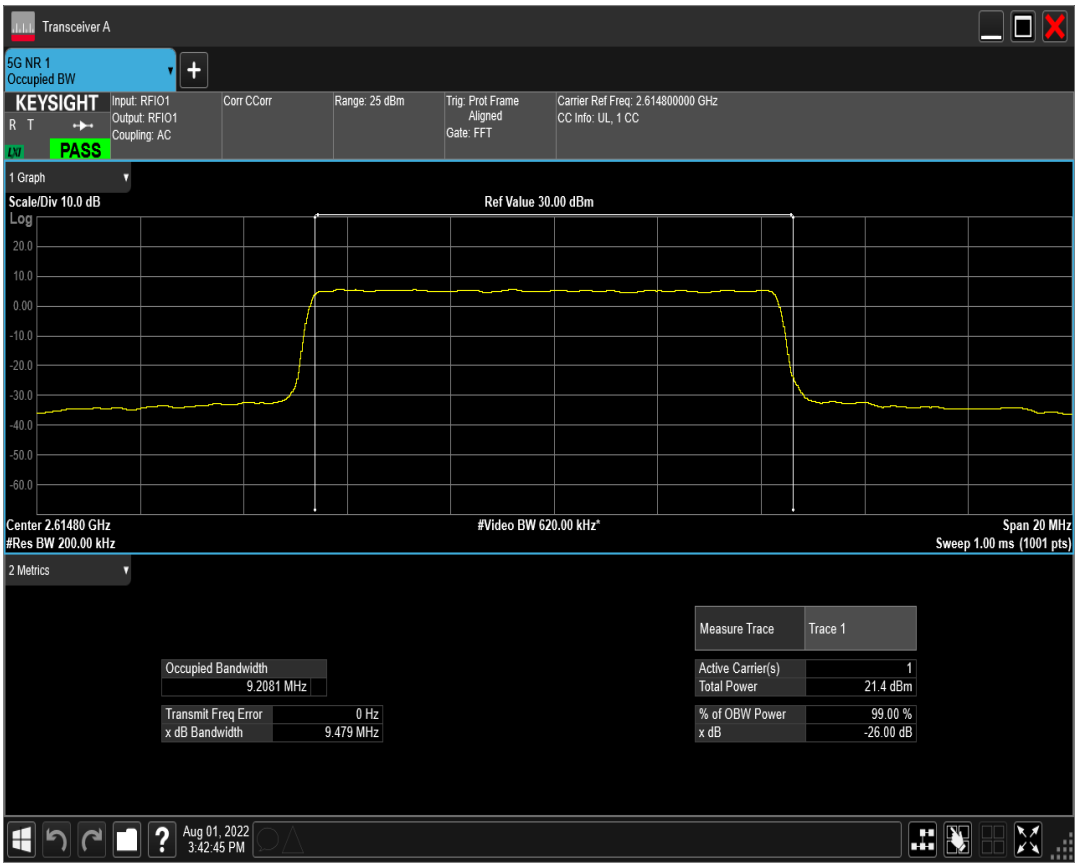

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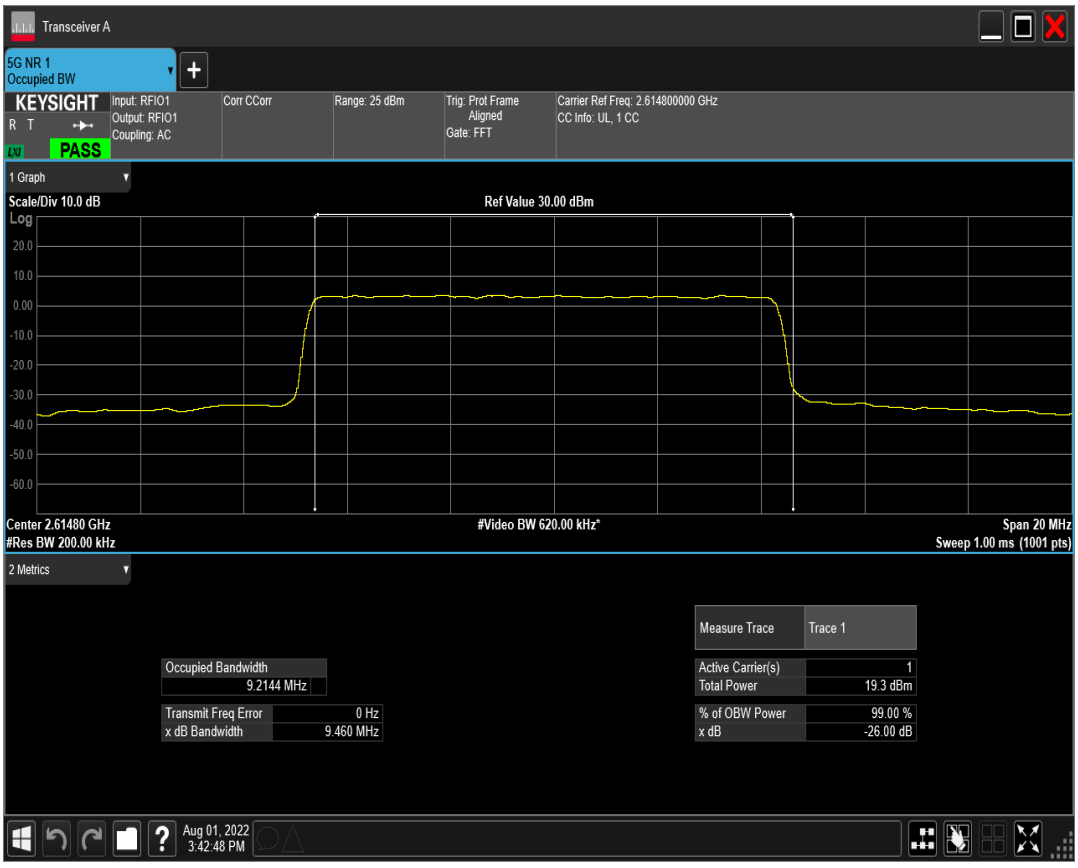

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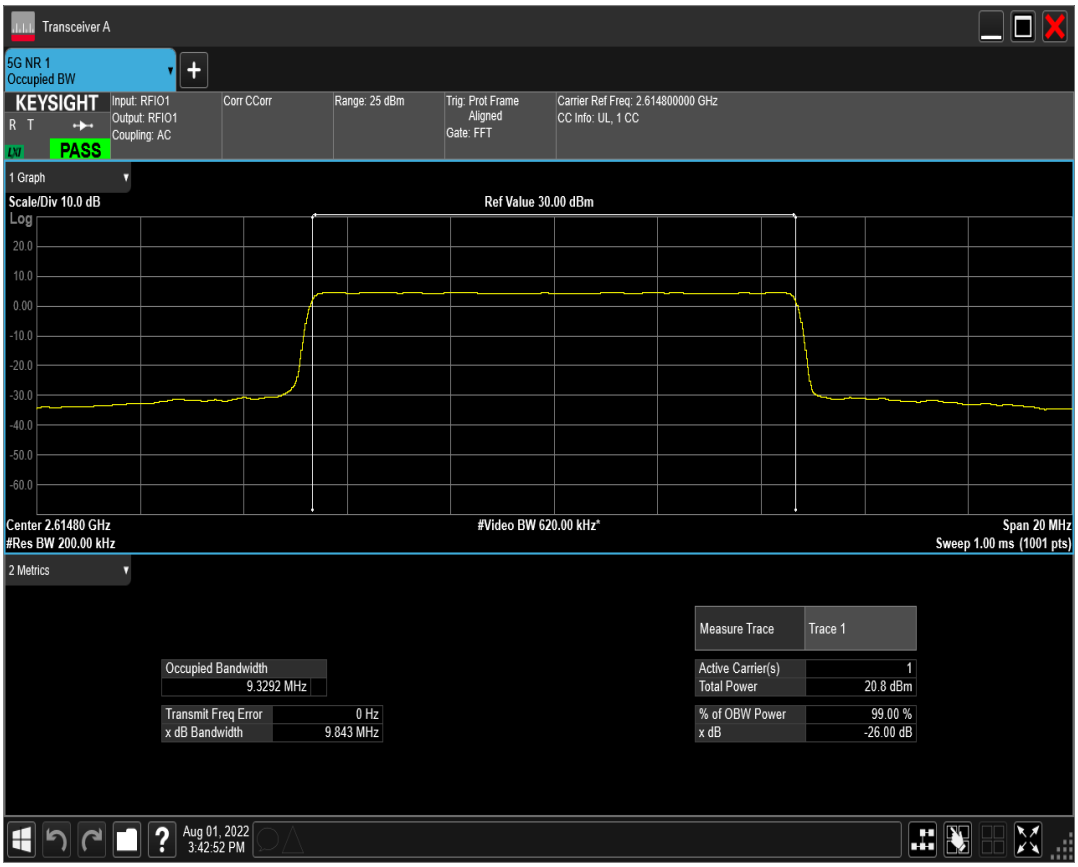

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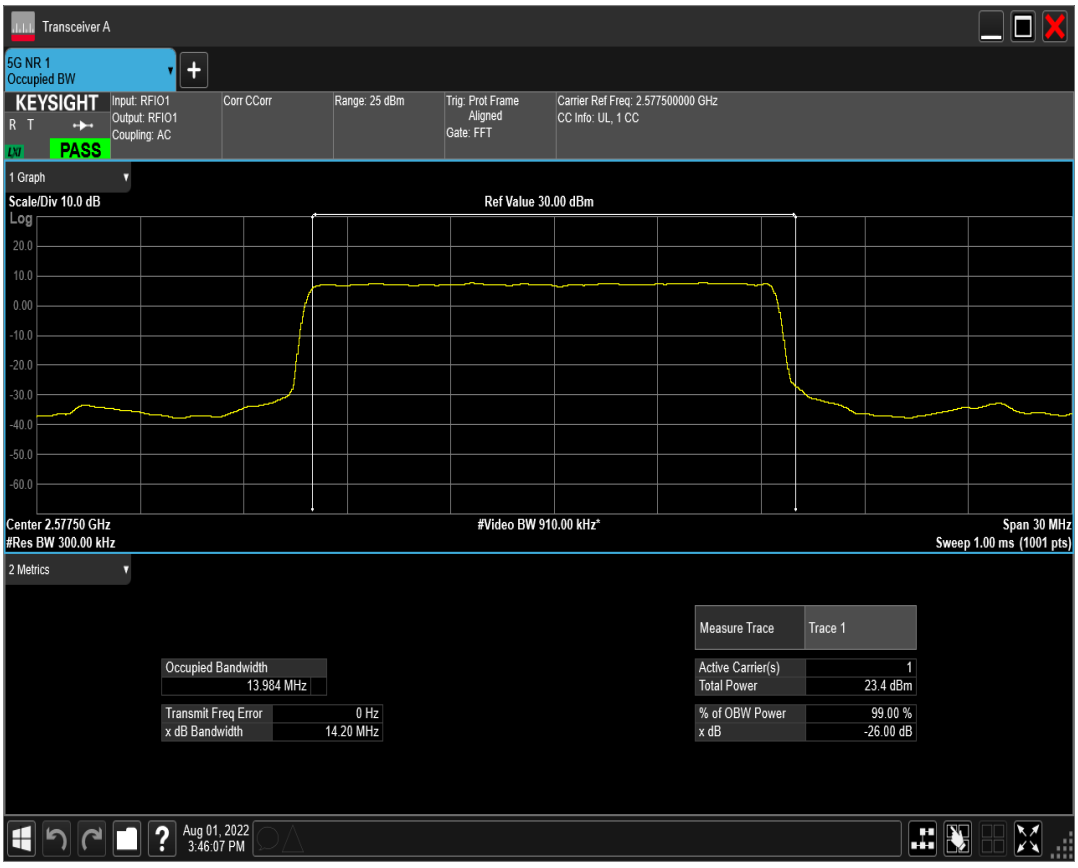

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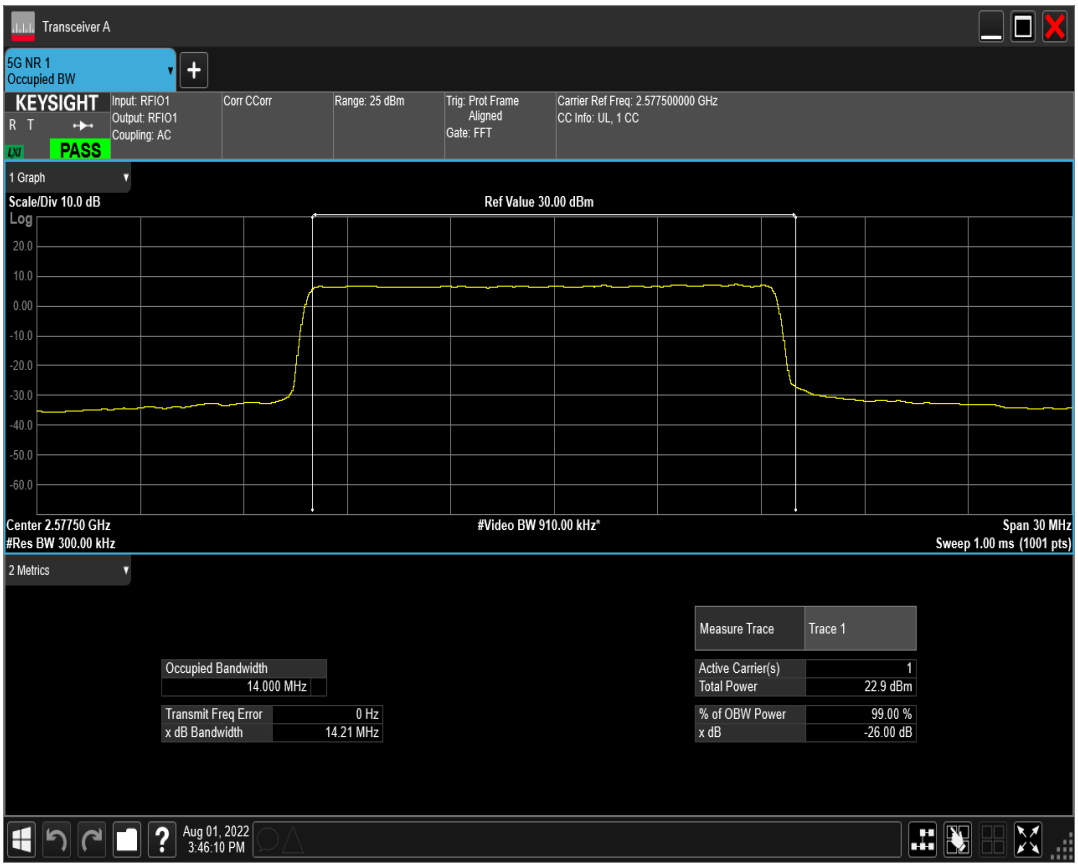

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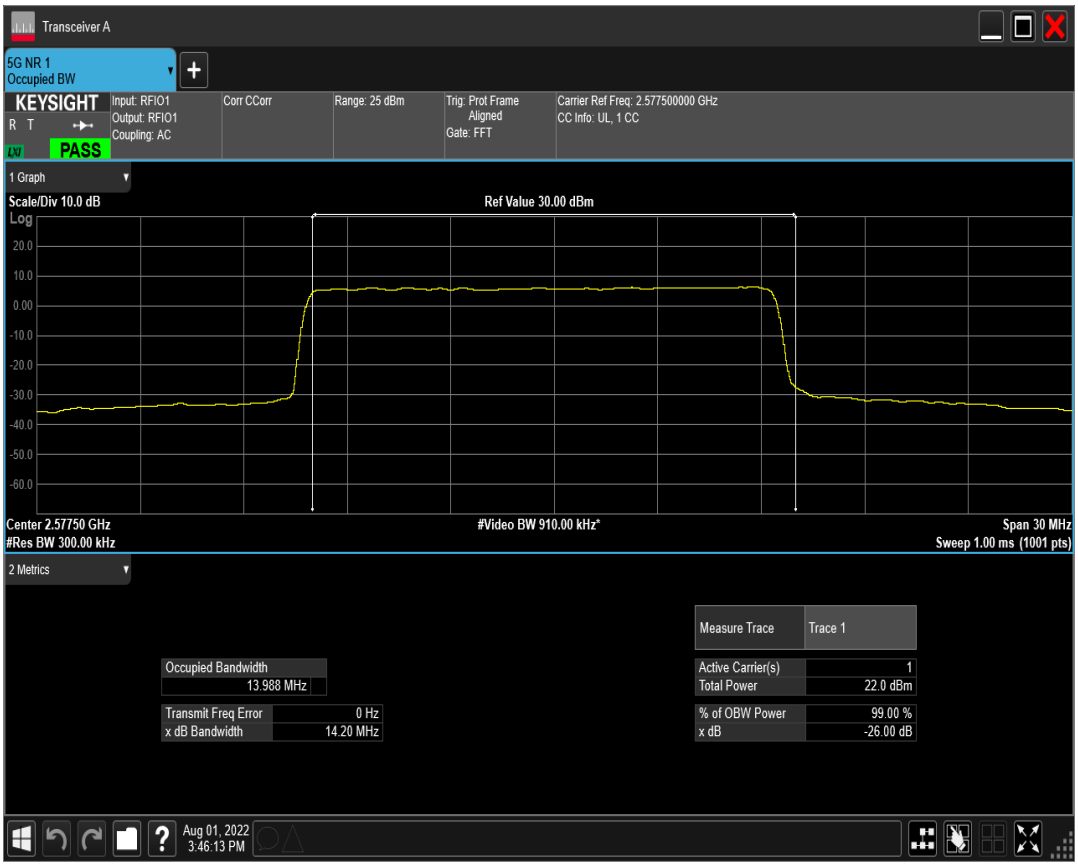

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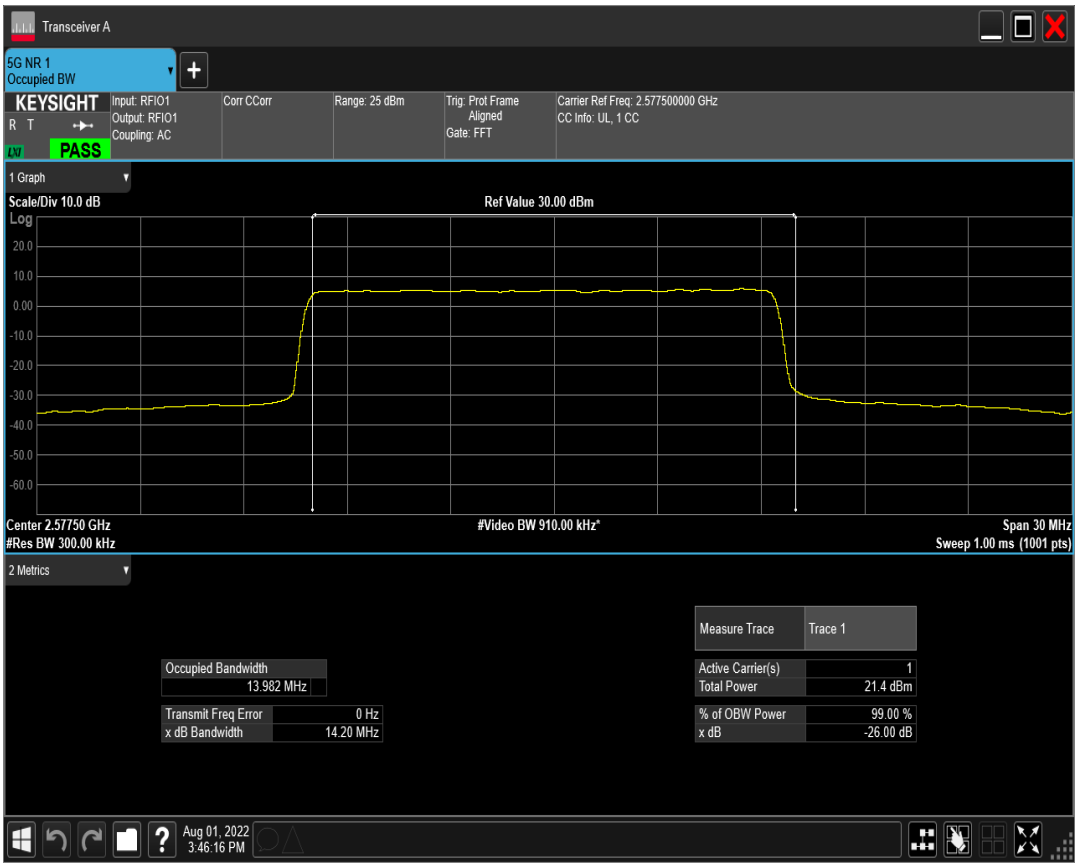

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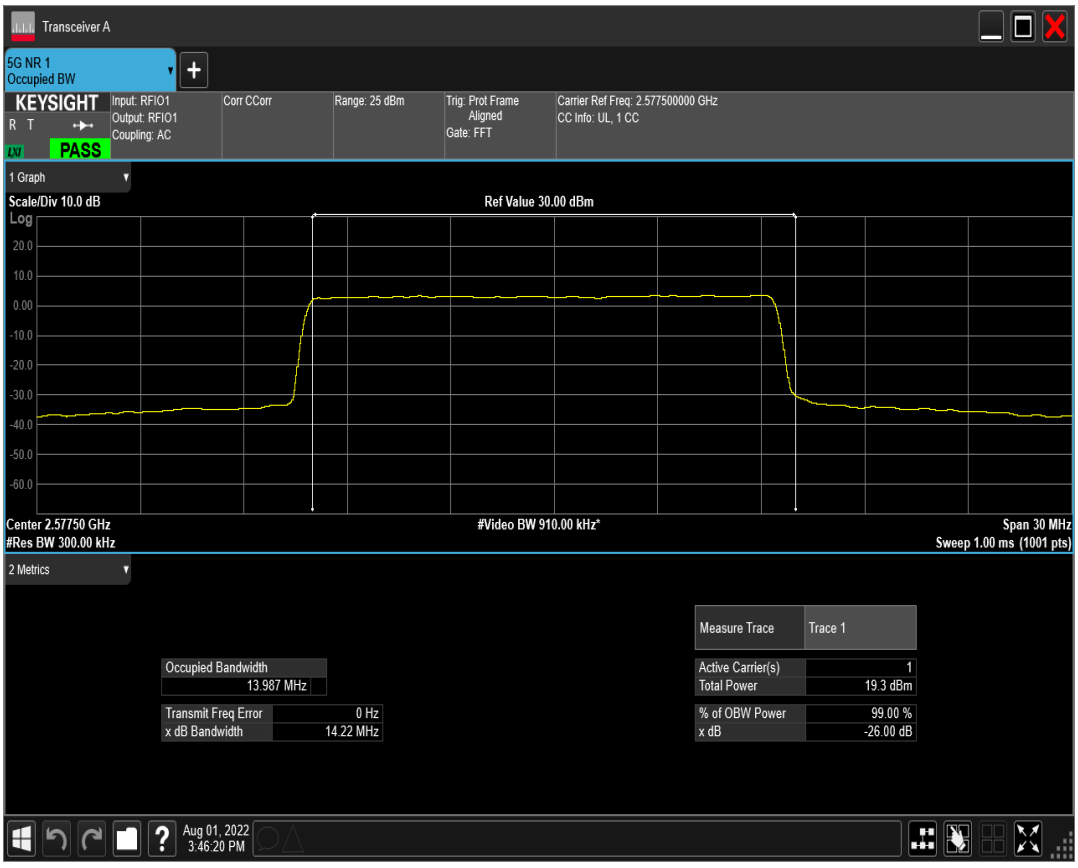

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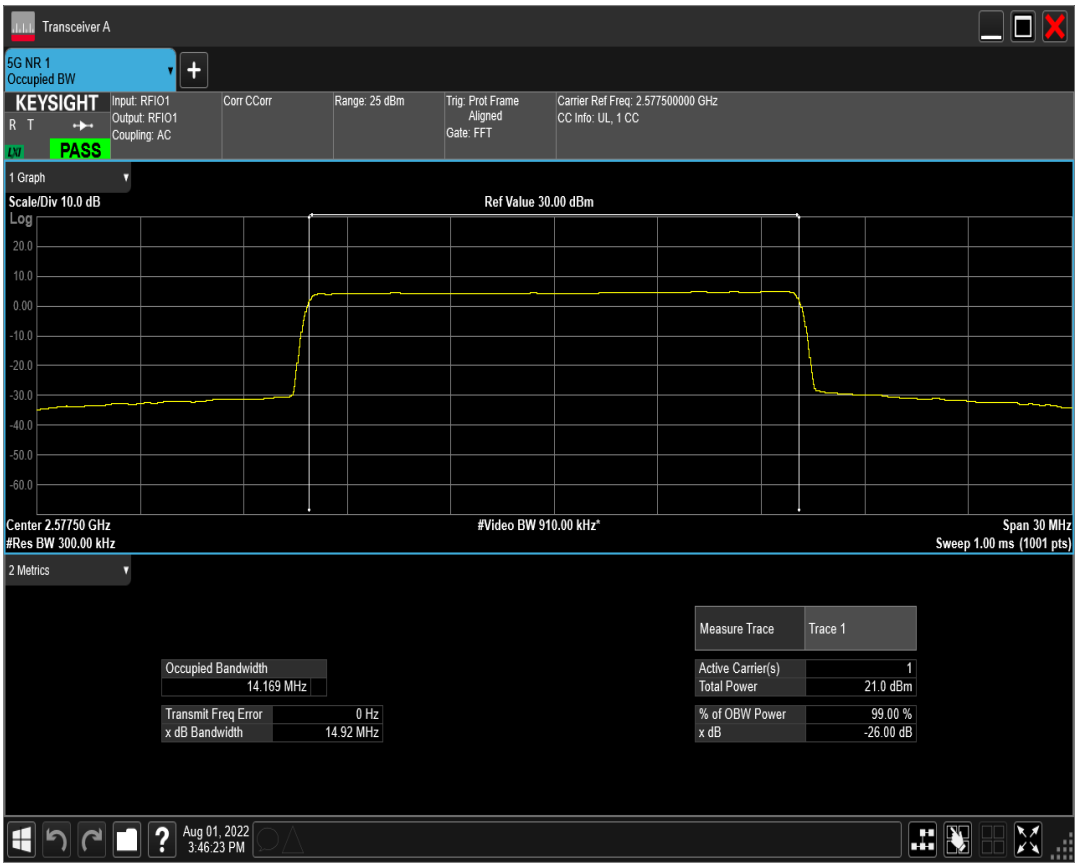

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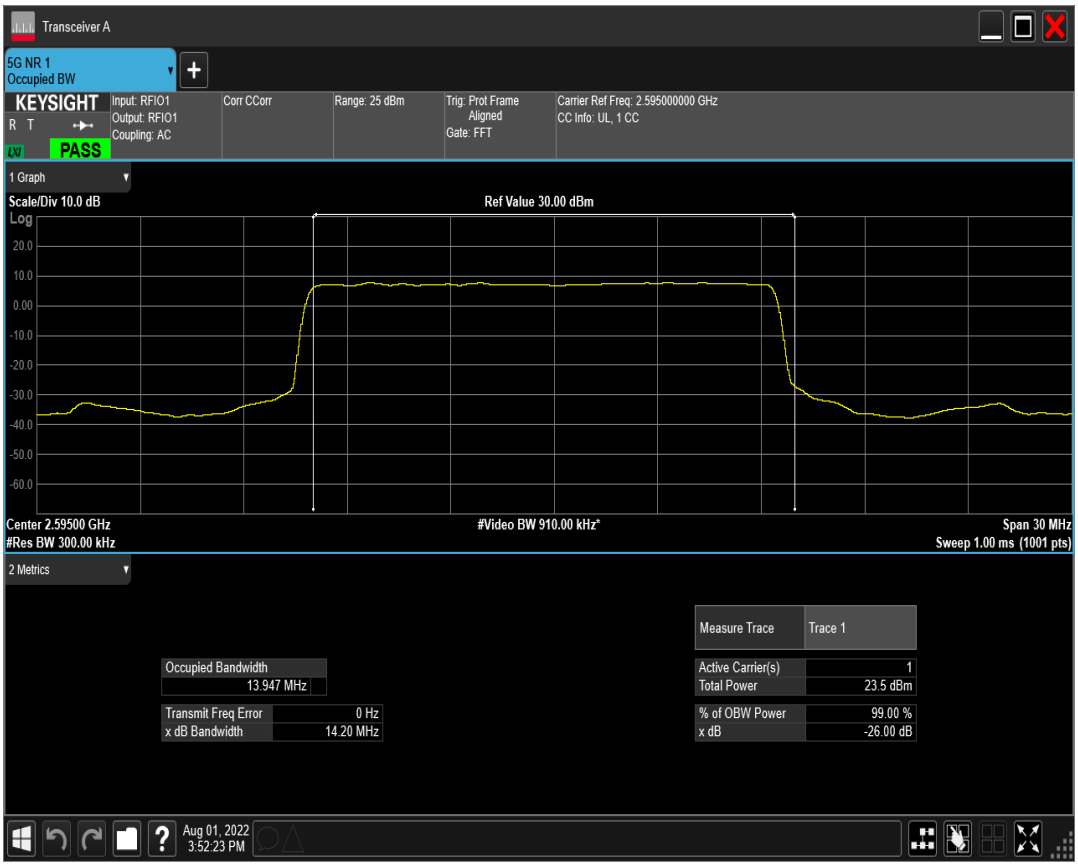

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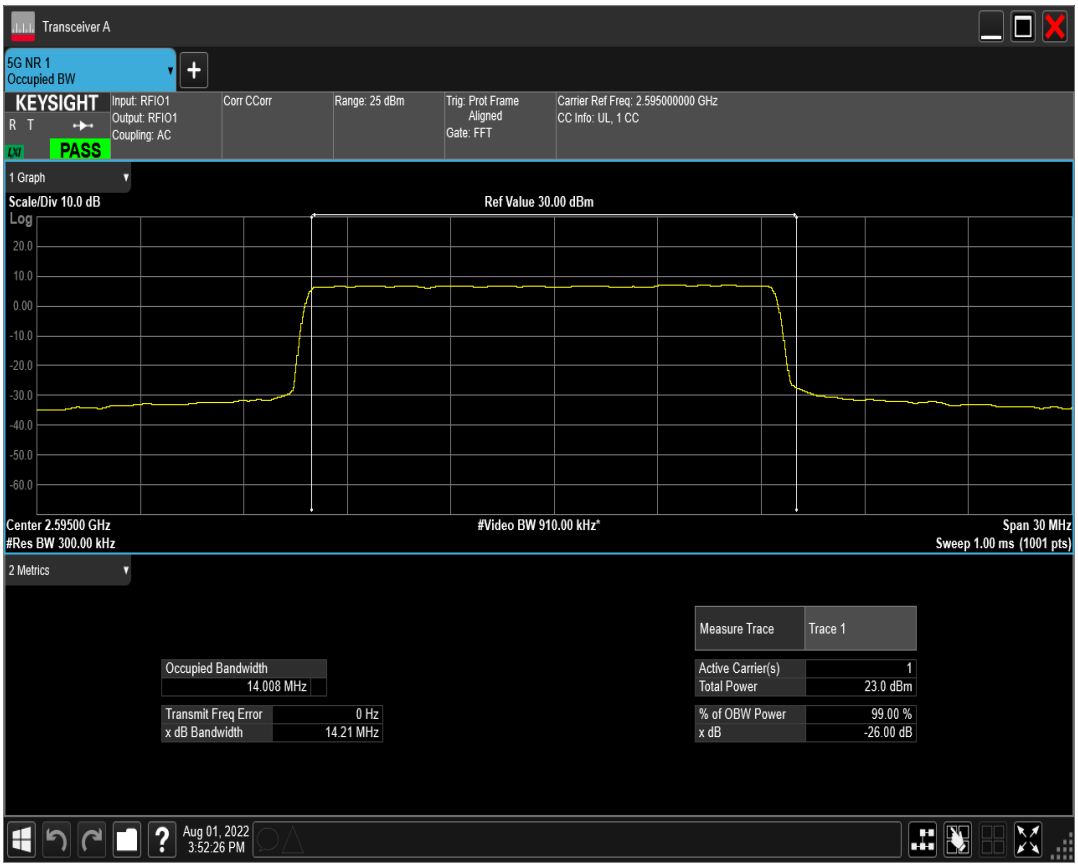

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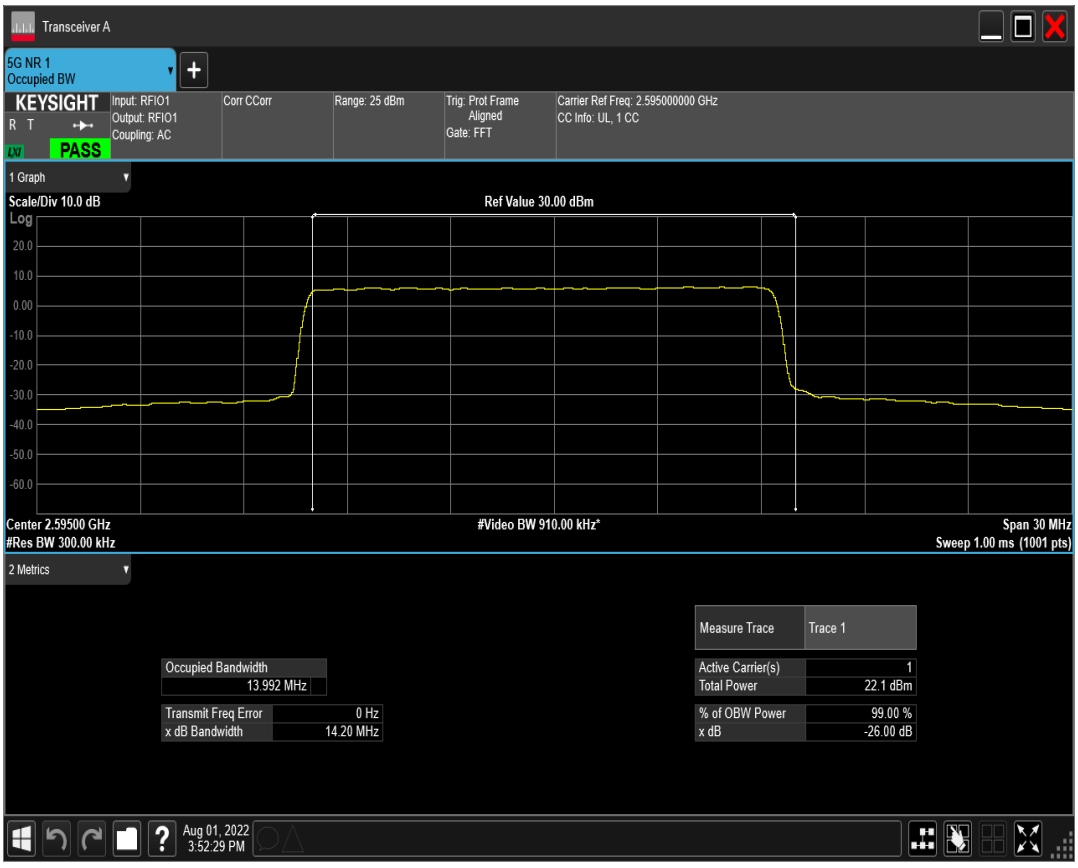

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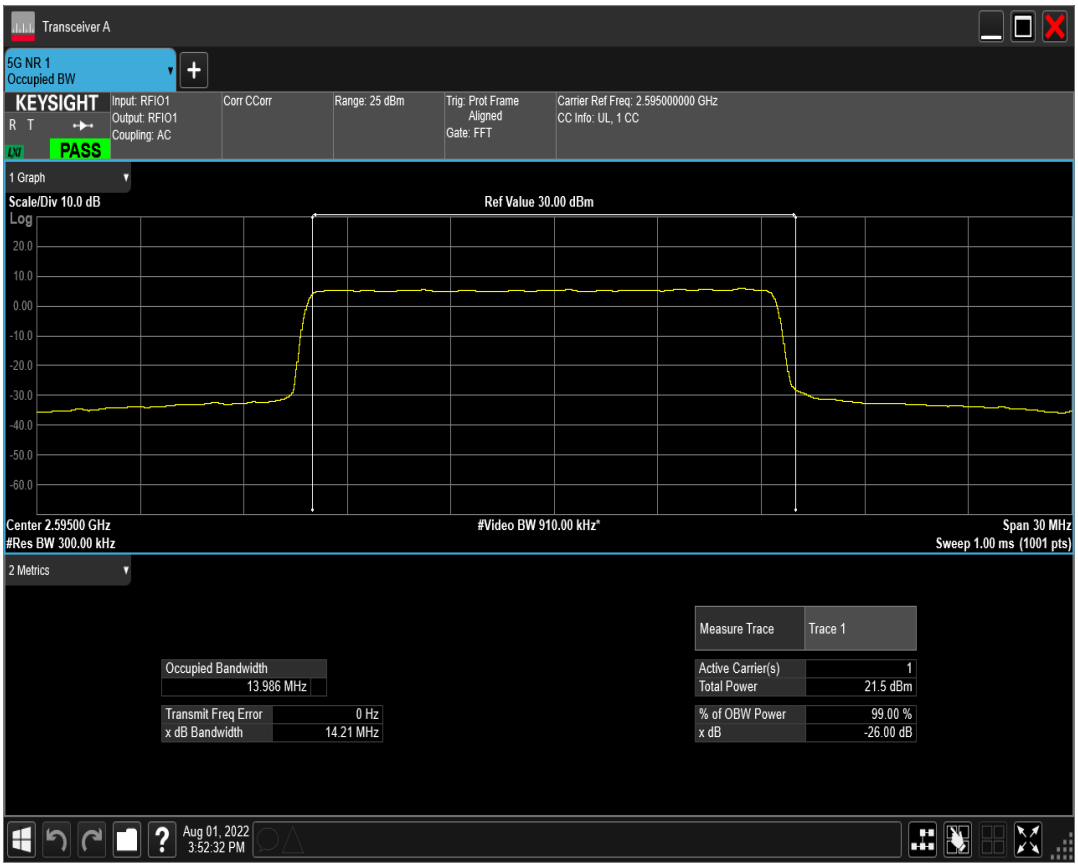

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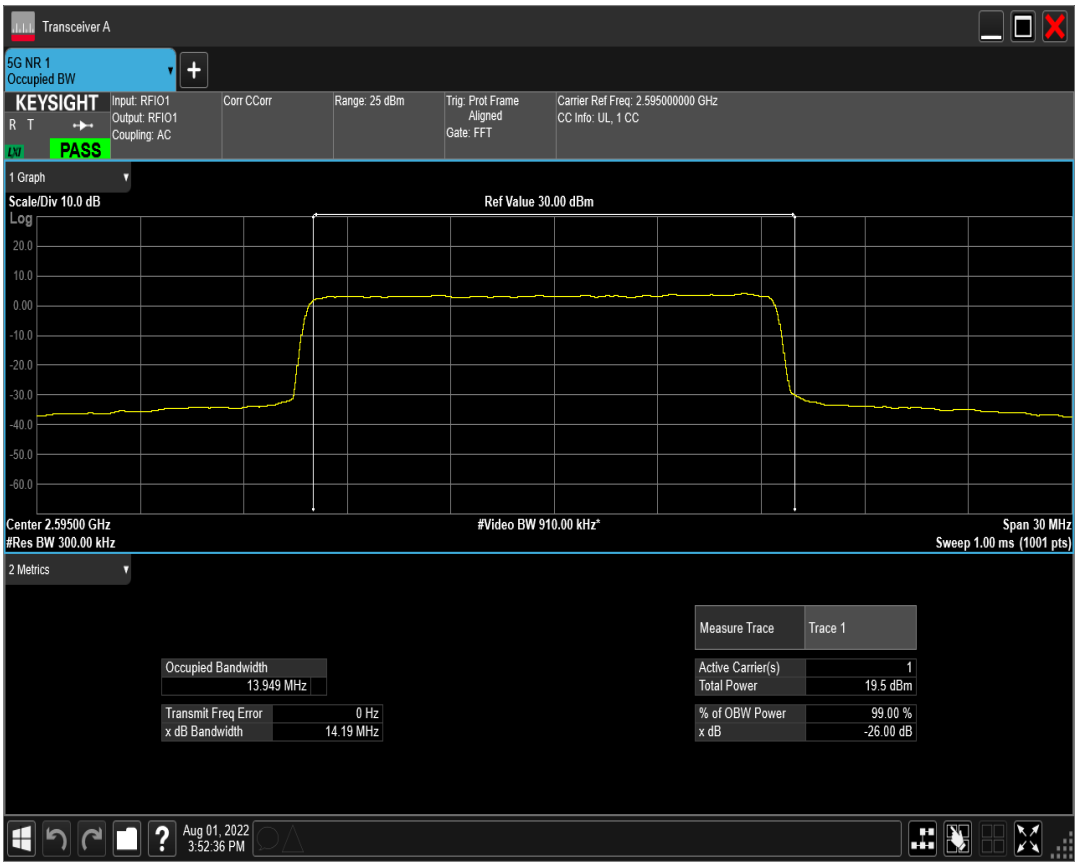
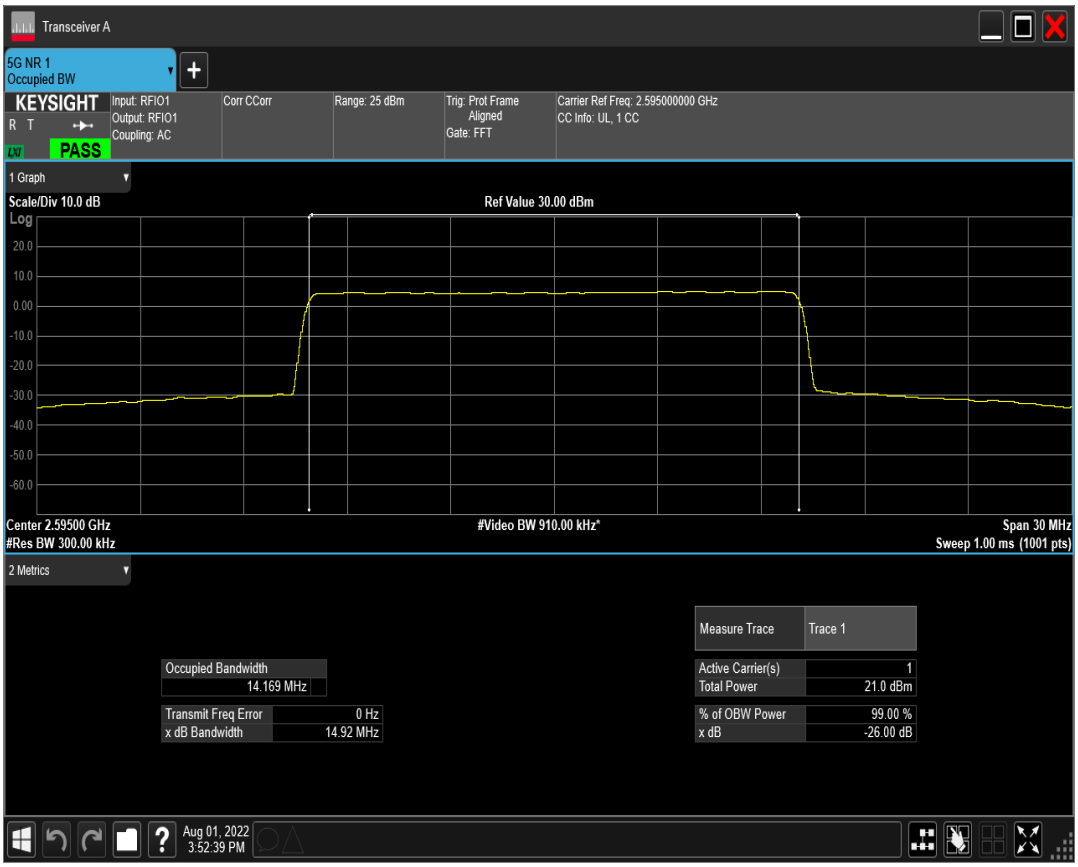


n38 SCS=15kHz CP_QPSK BW=15MHz Channel=519000 RB=79@0



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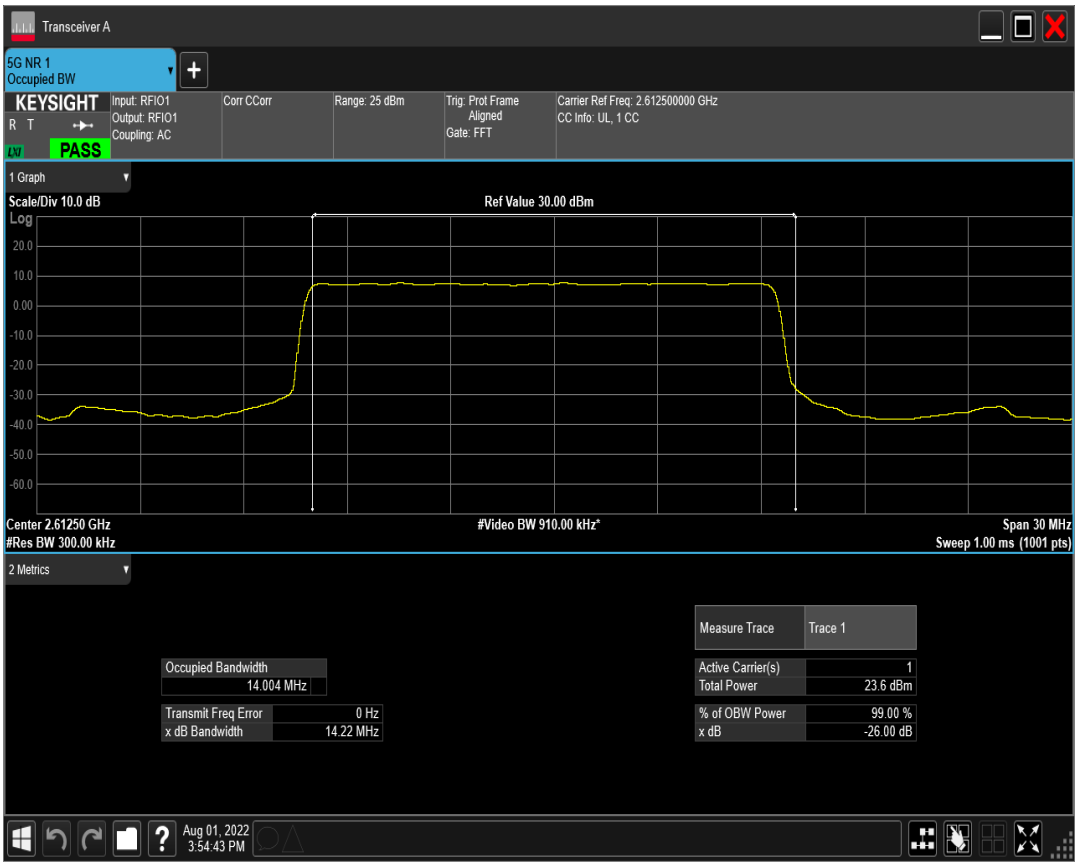

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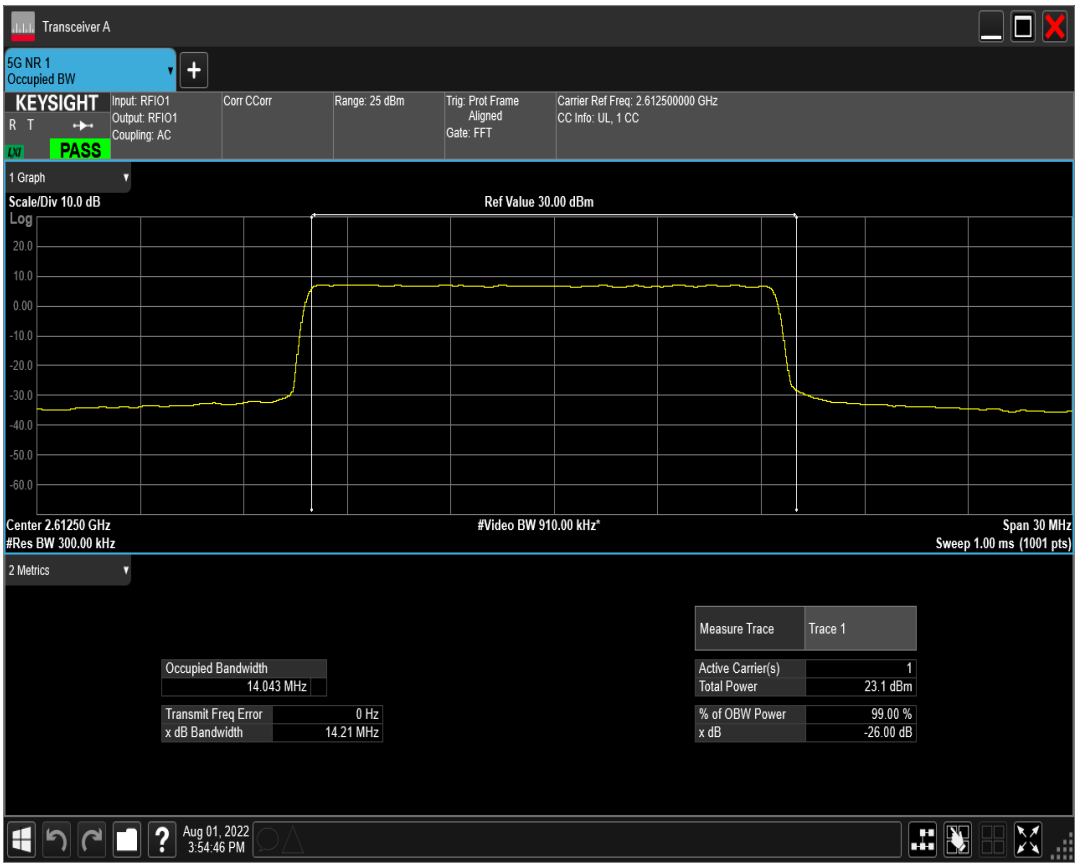

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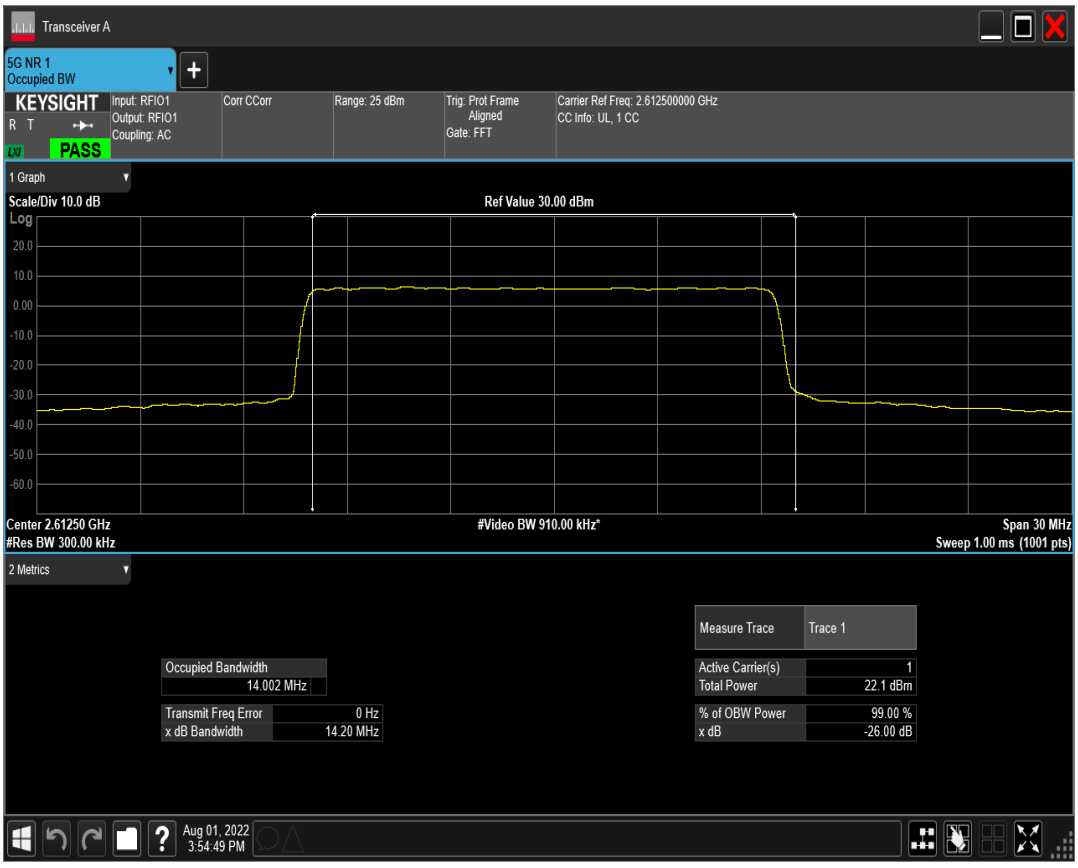

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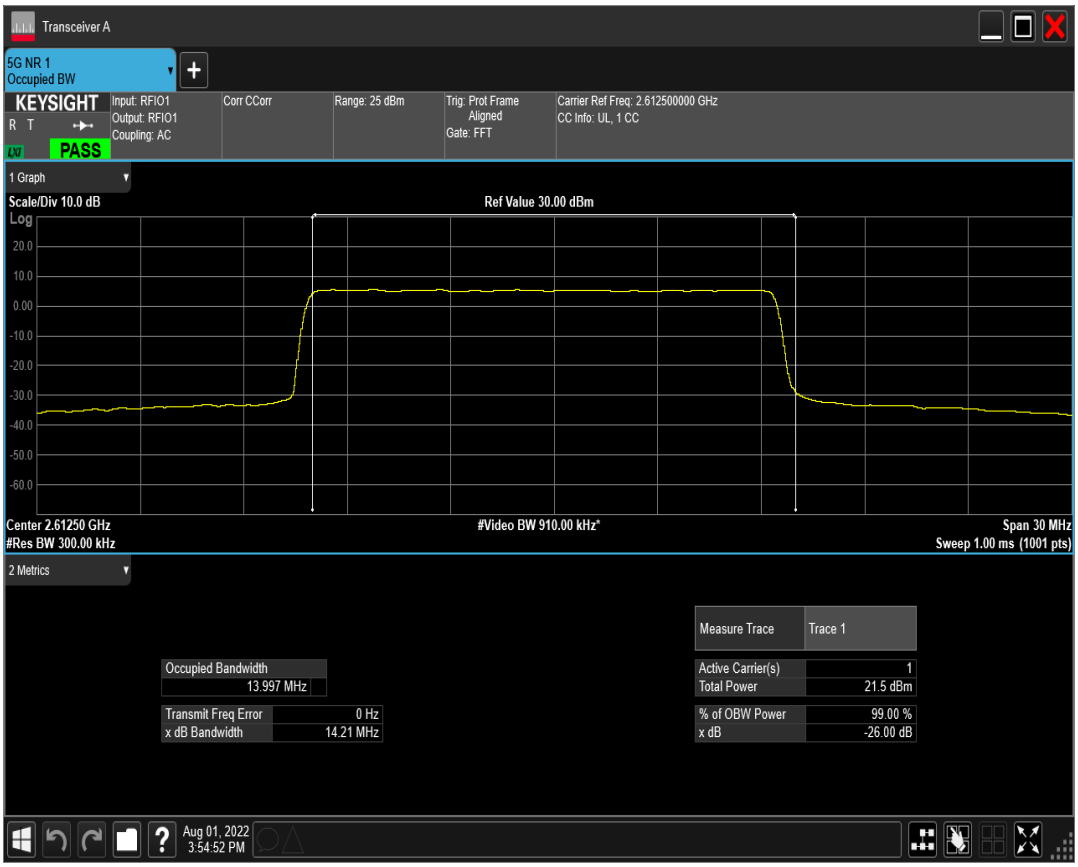

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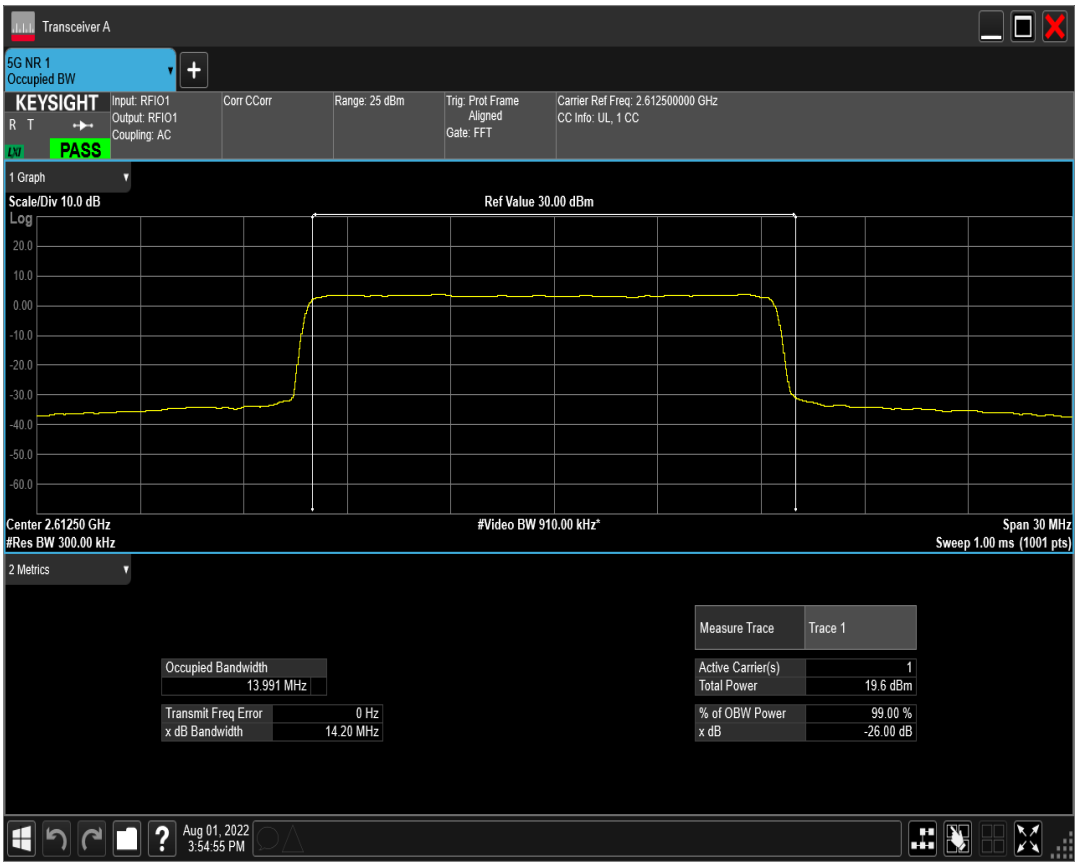

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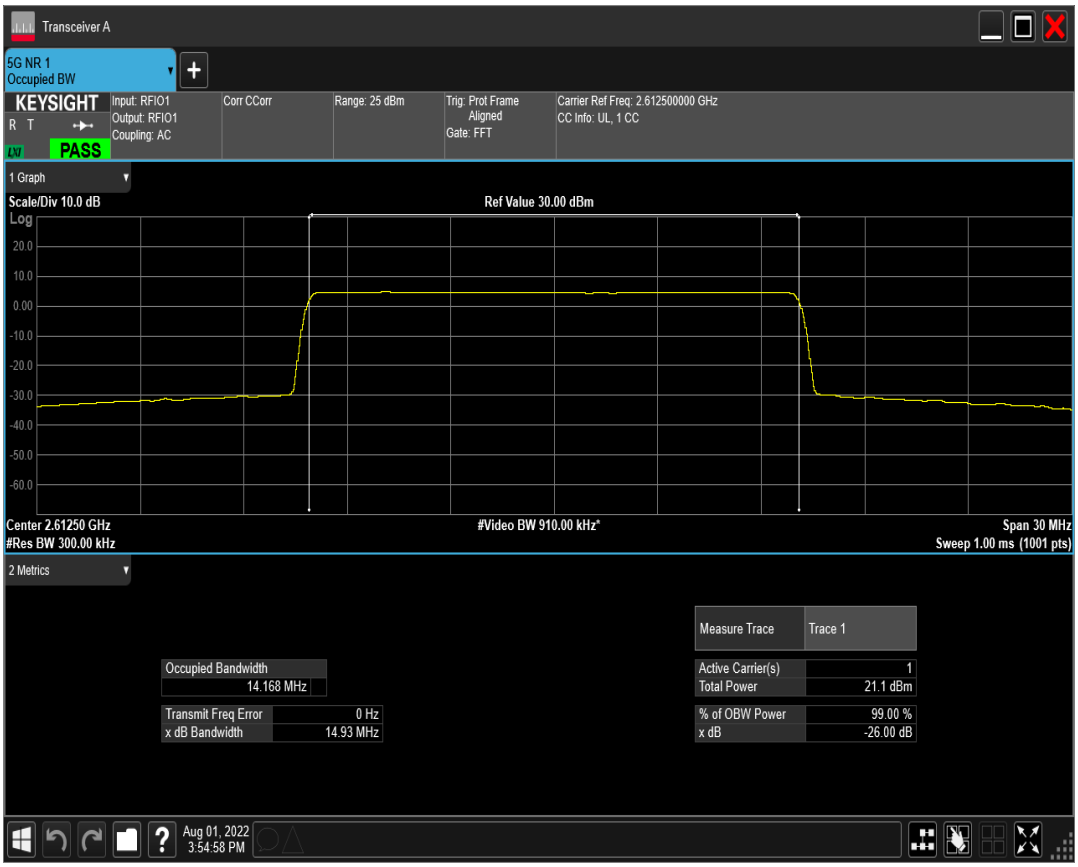

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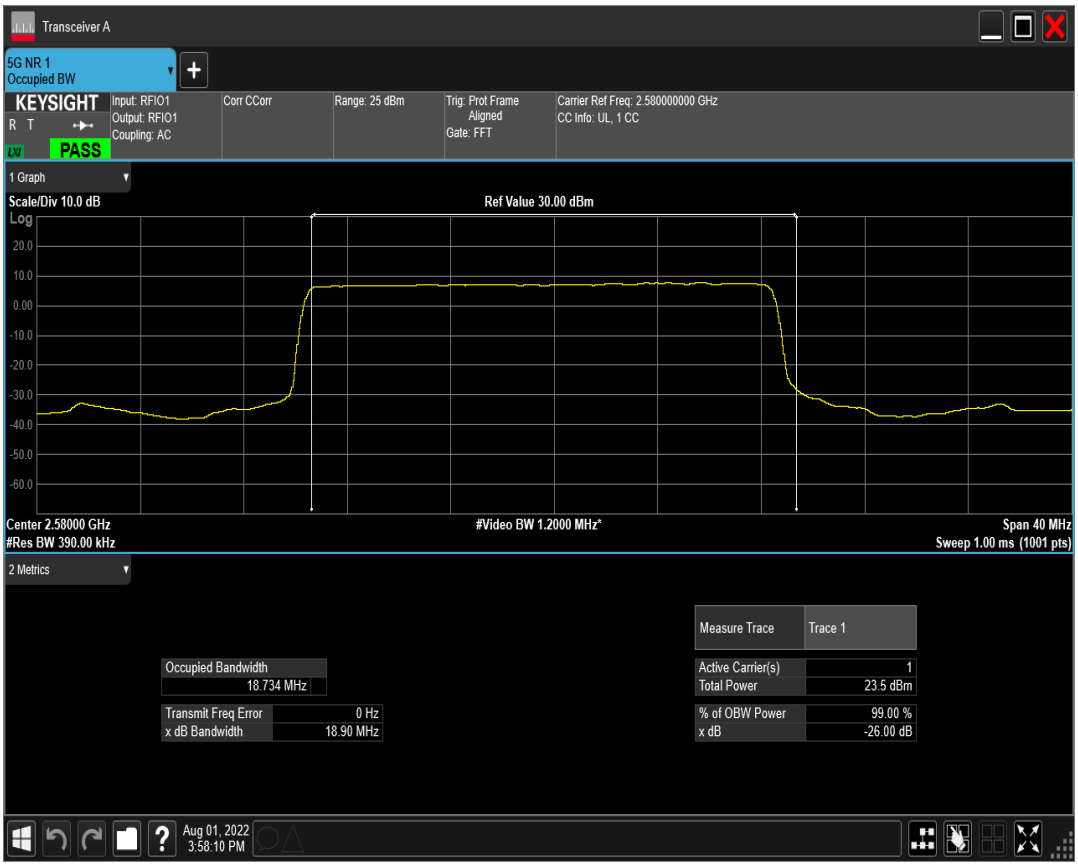

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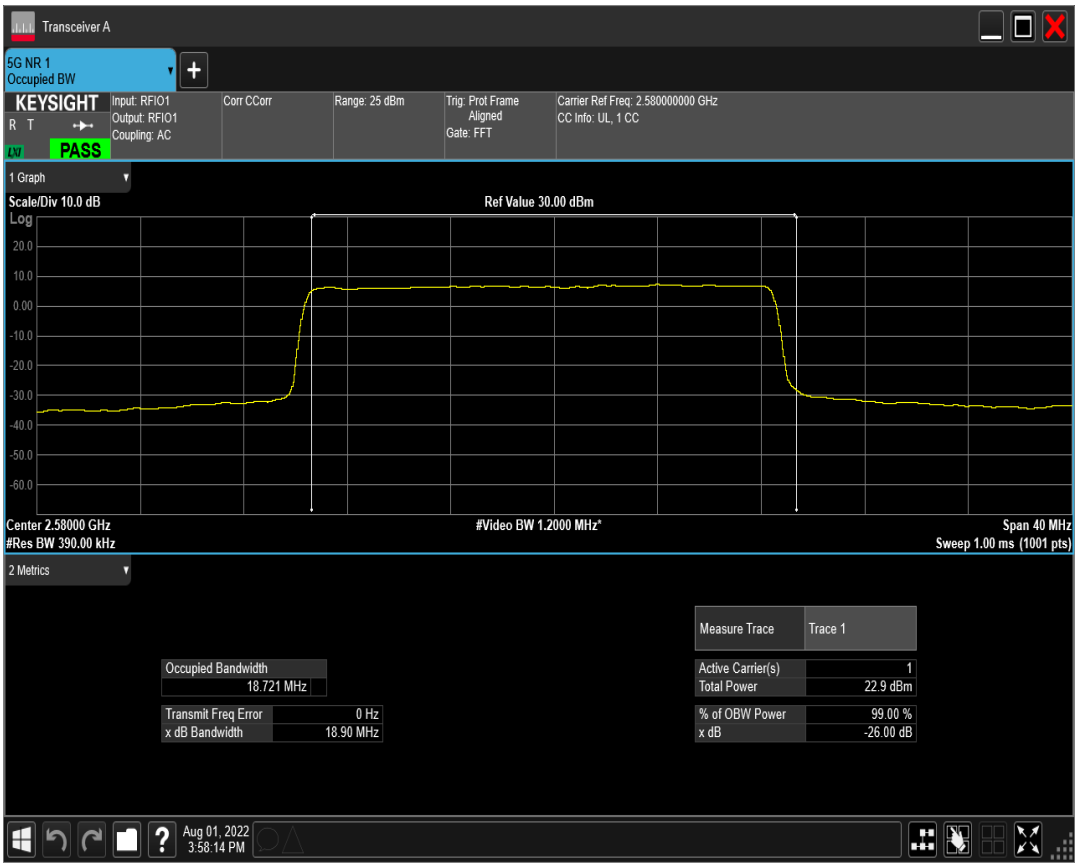

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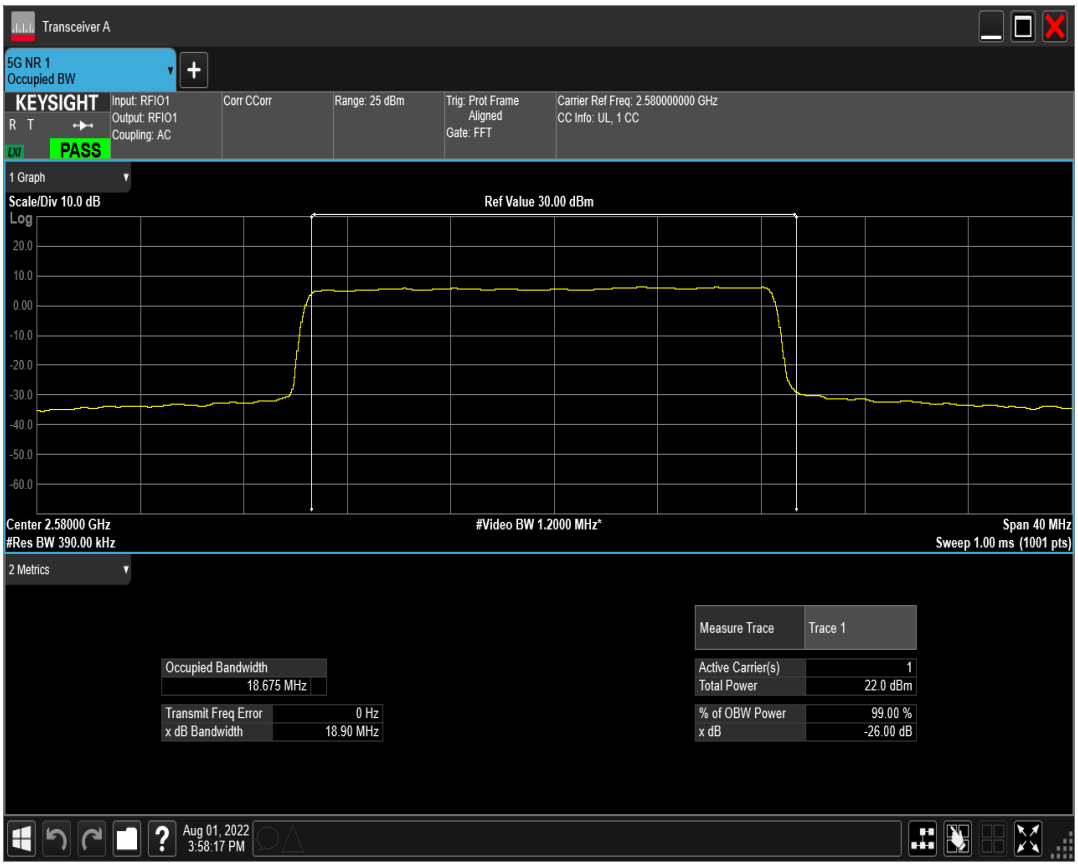

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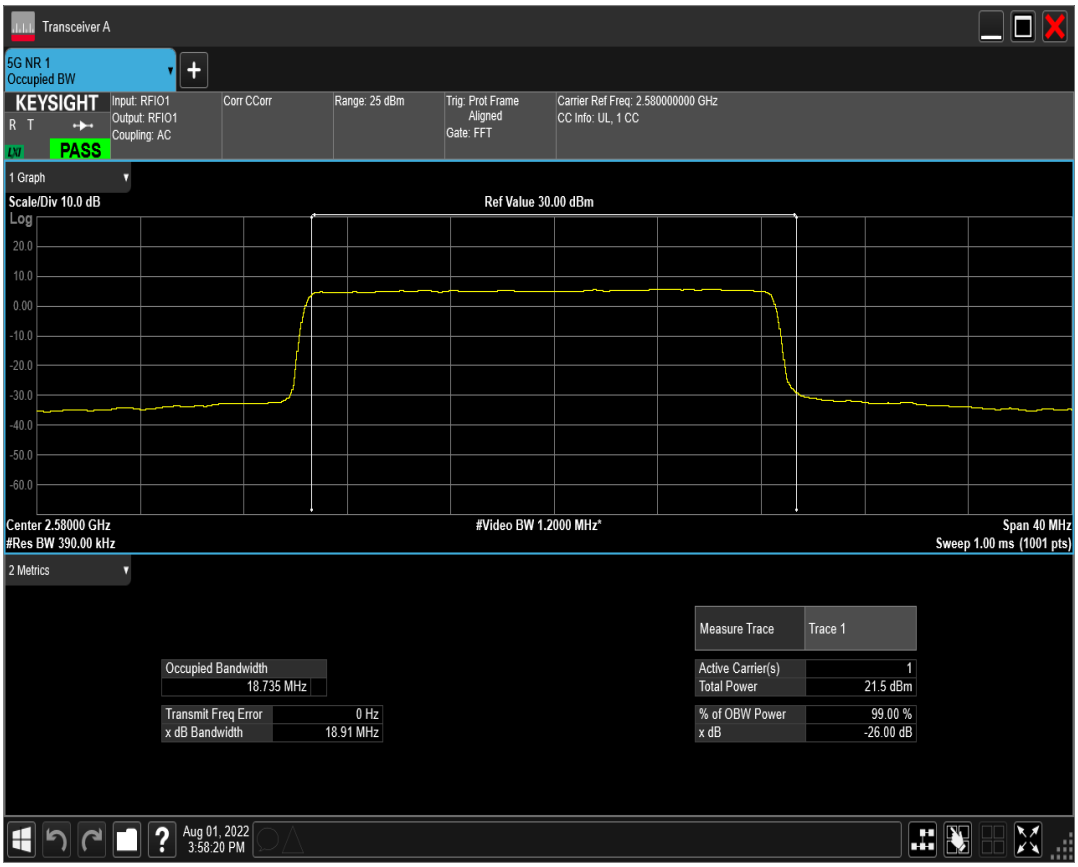

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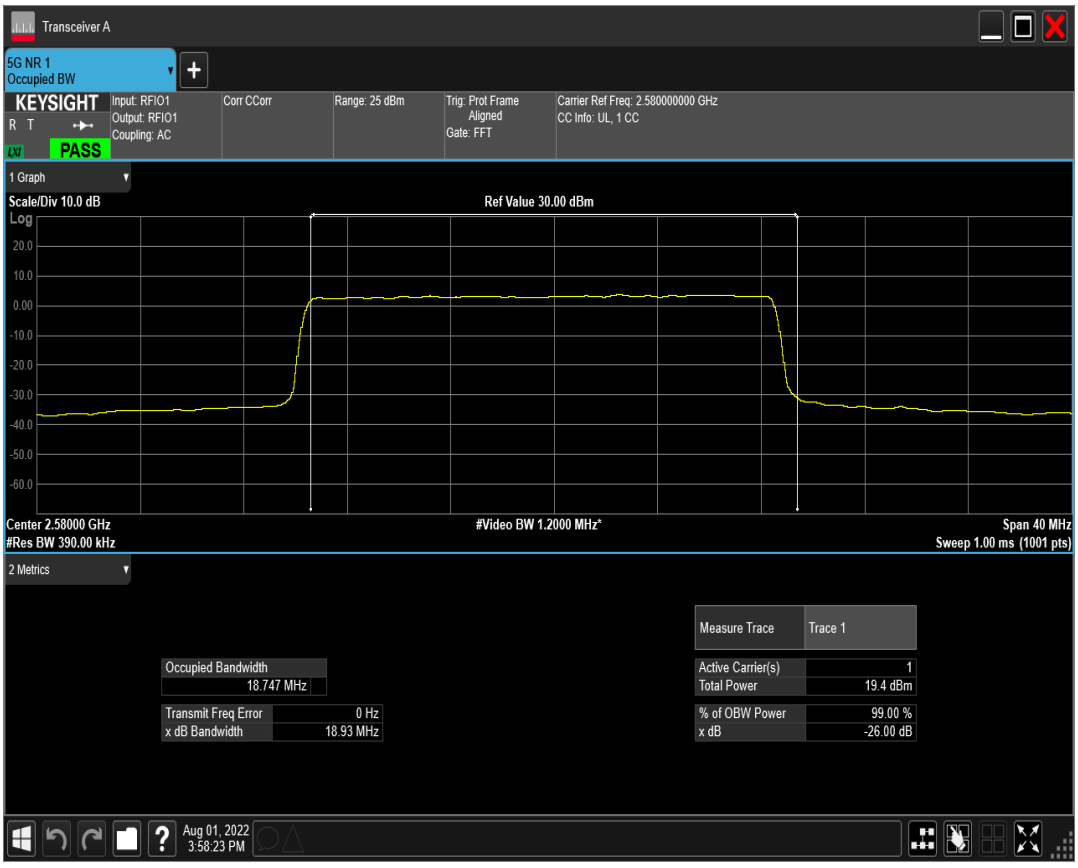

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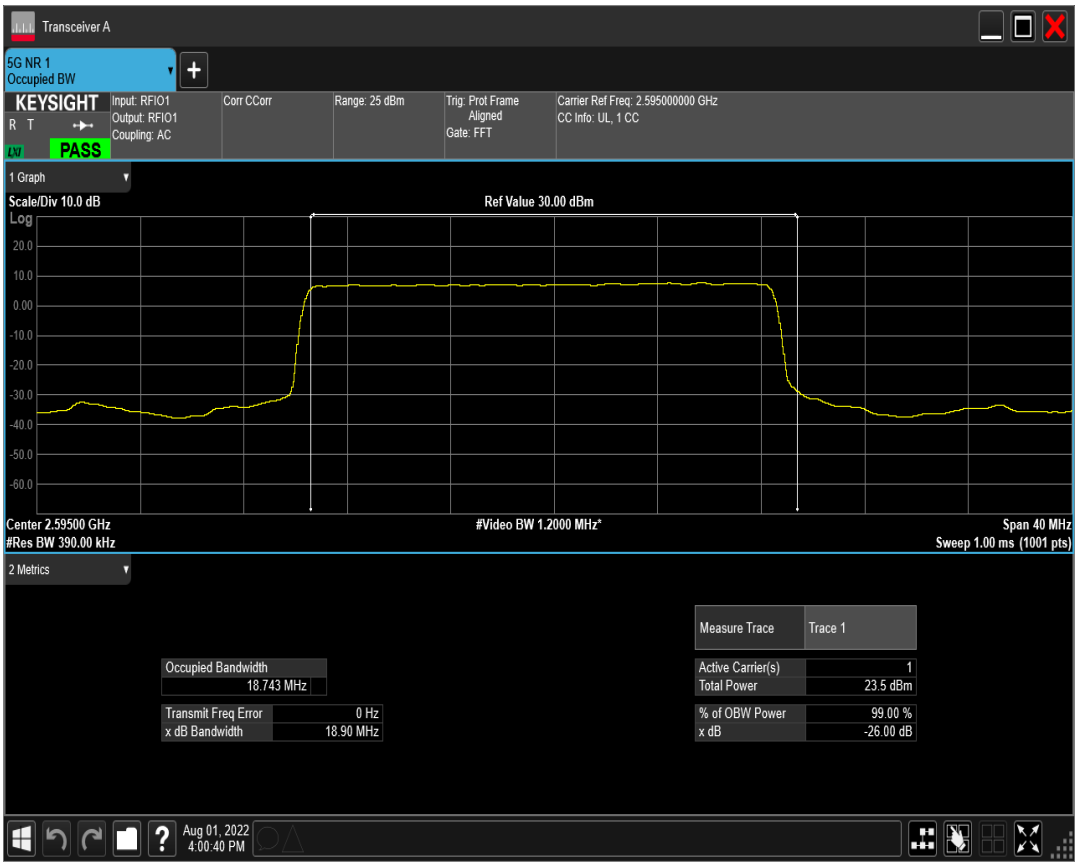
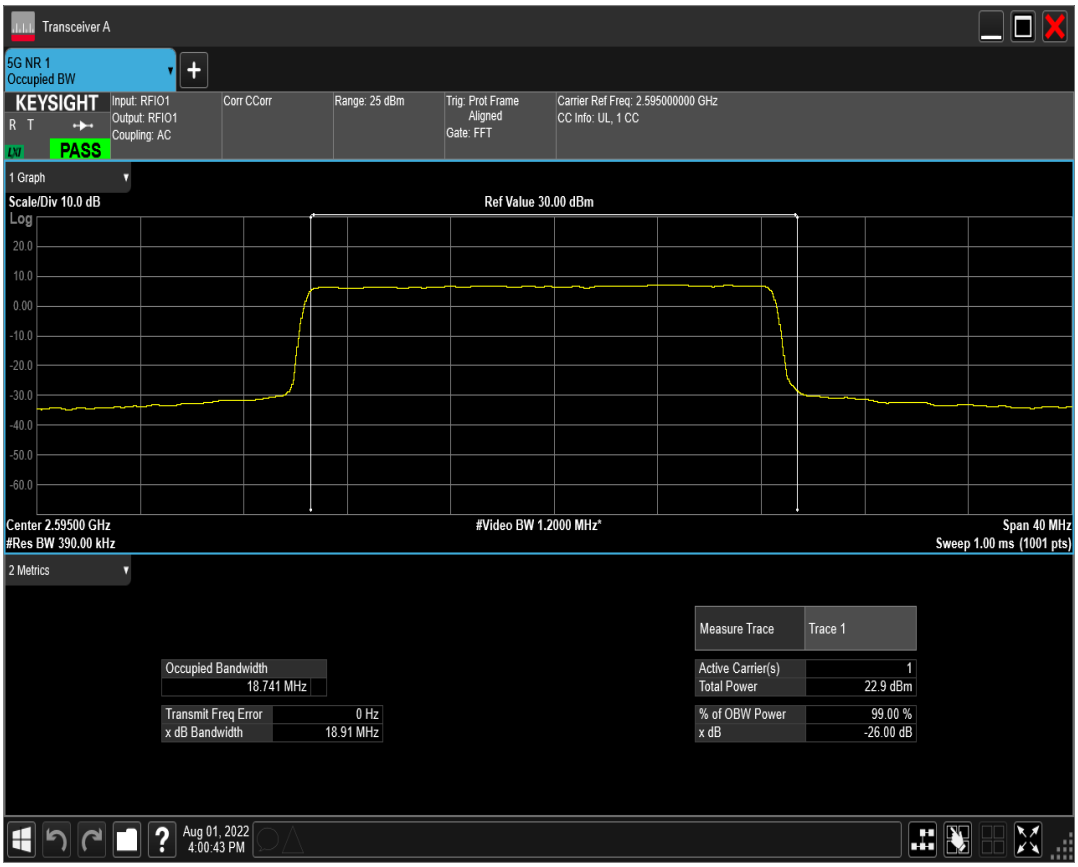


n38 SCS=15kHz DFT_QPSK BW=20MHz Channel=519000 RB=100@0



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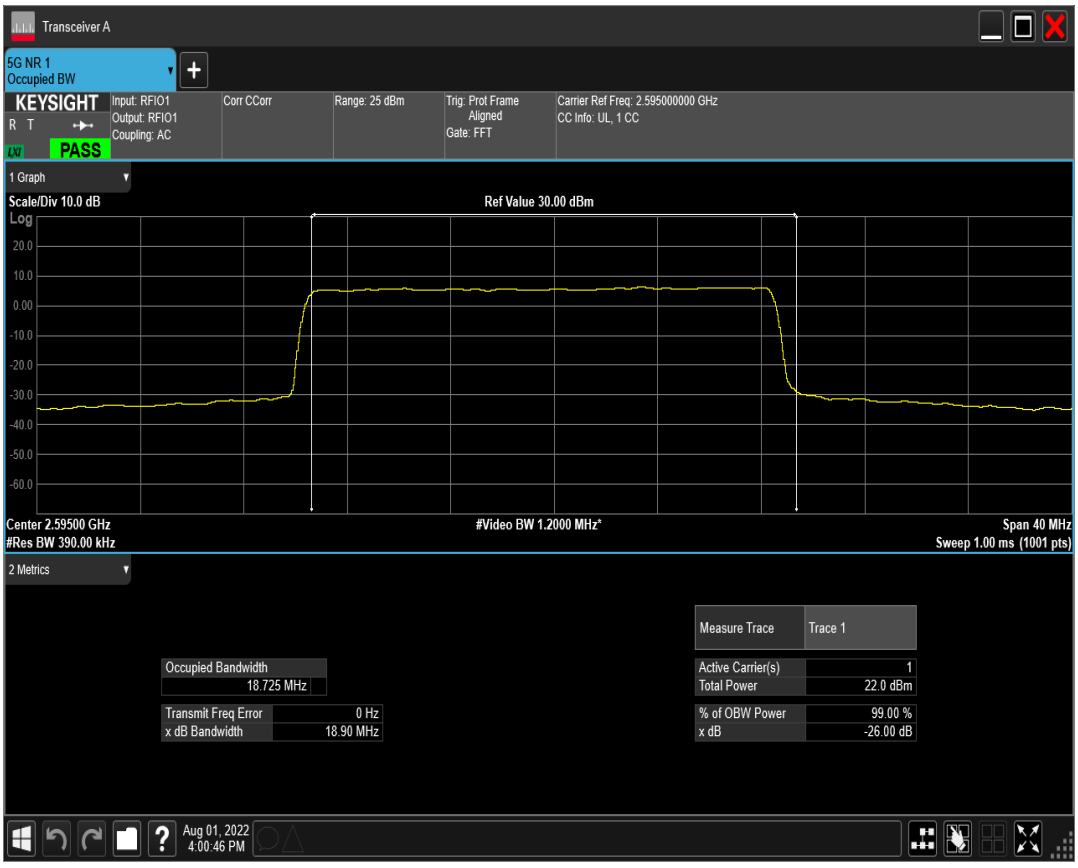

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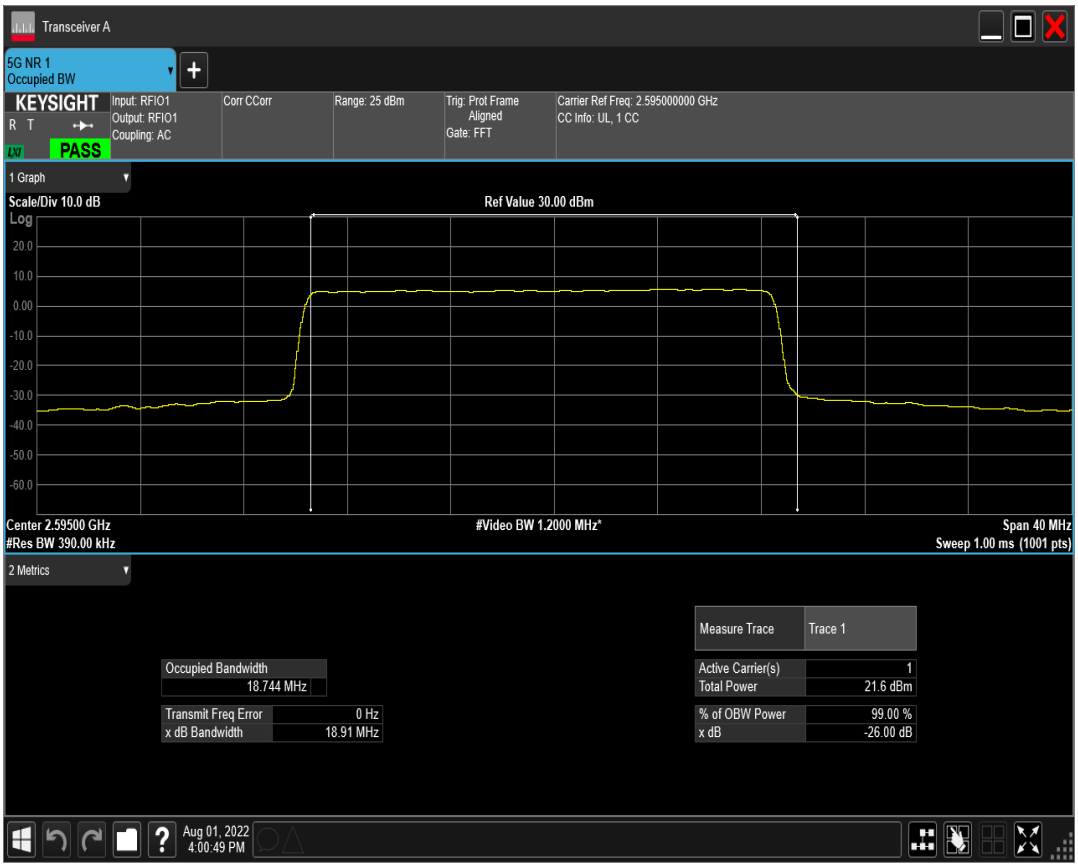

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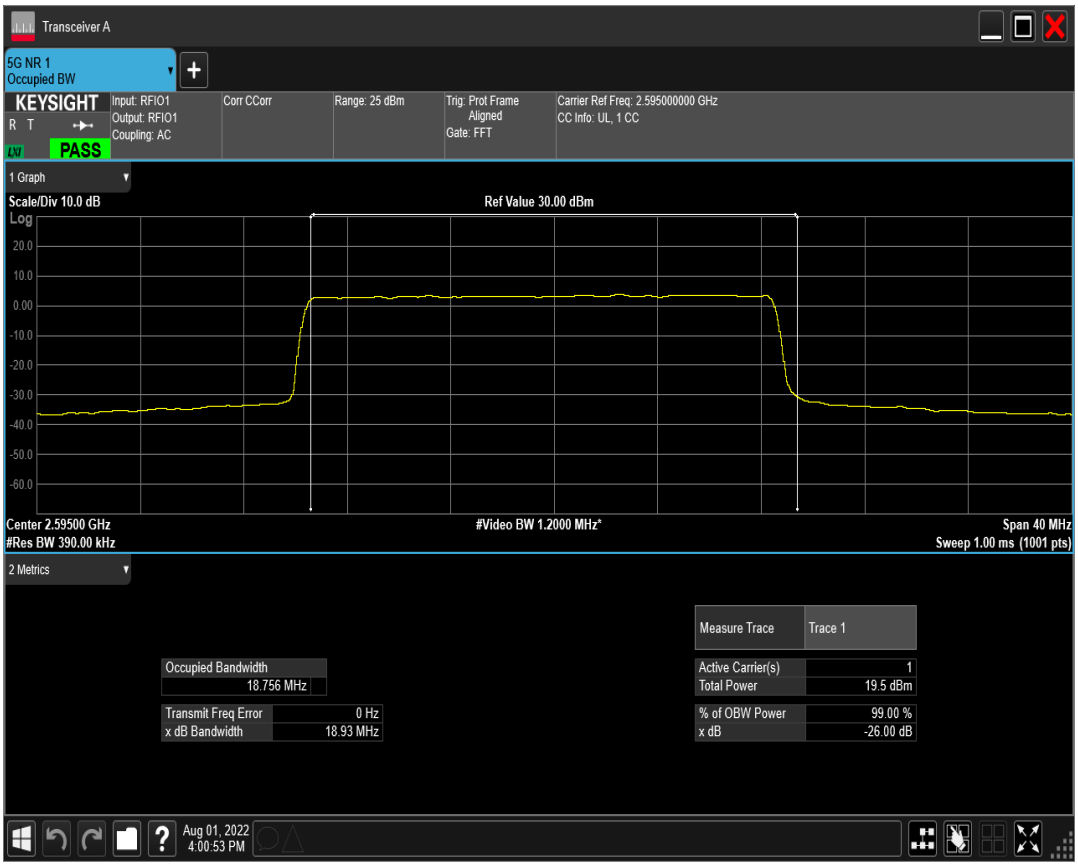
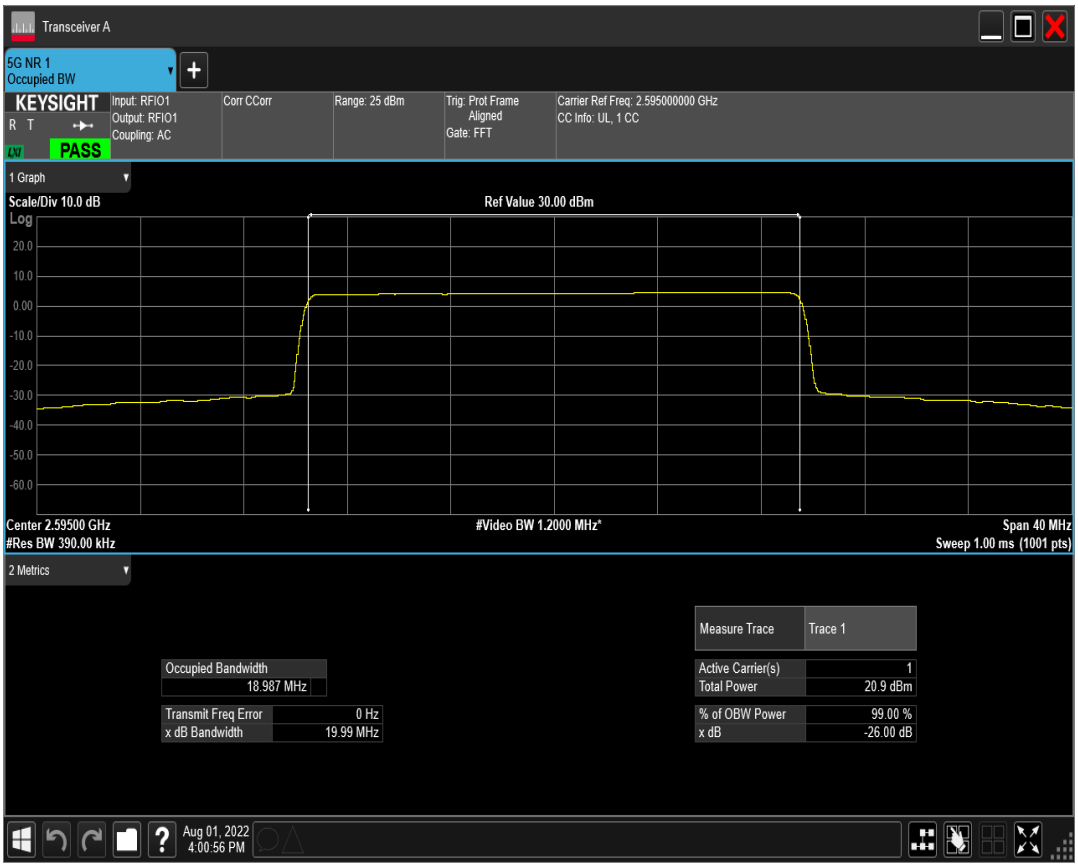


n38 SCS=15kHz CP_QPSK BW=20MHz Channel=519000 RB=106@0



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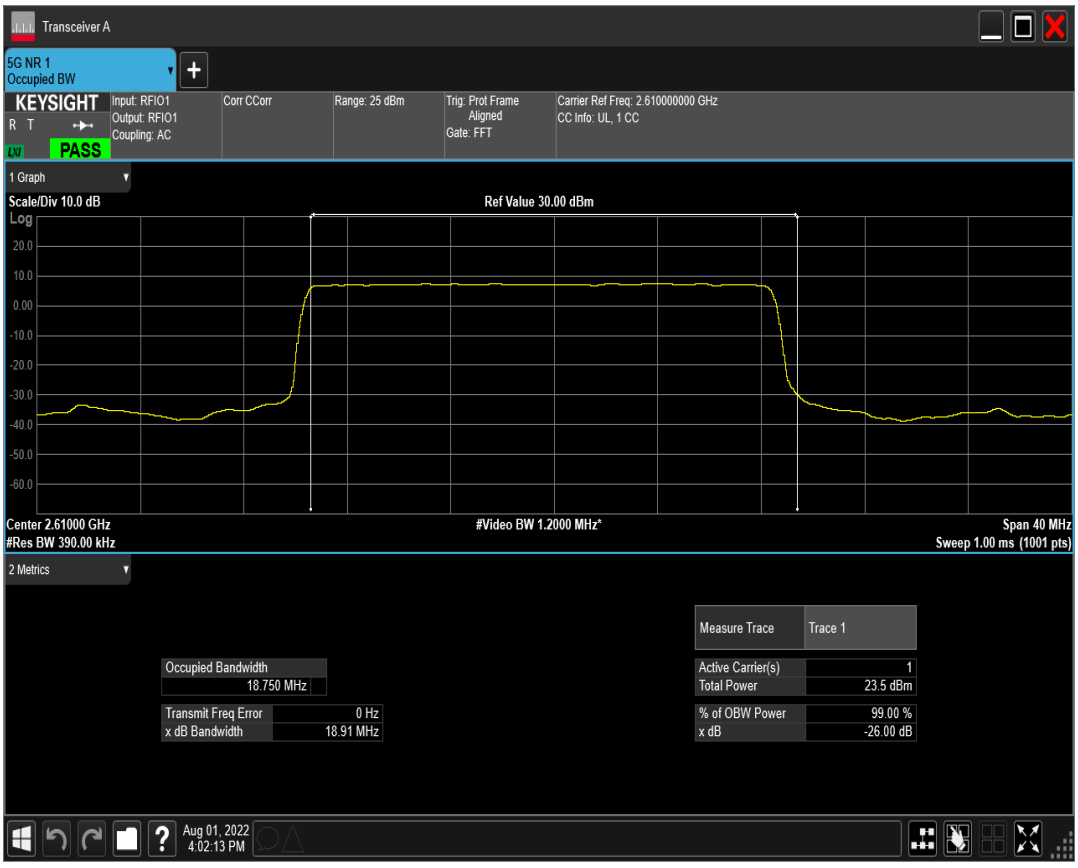
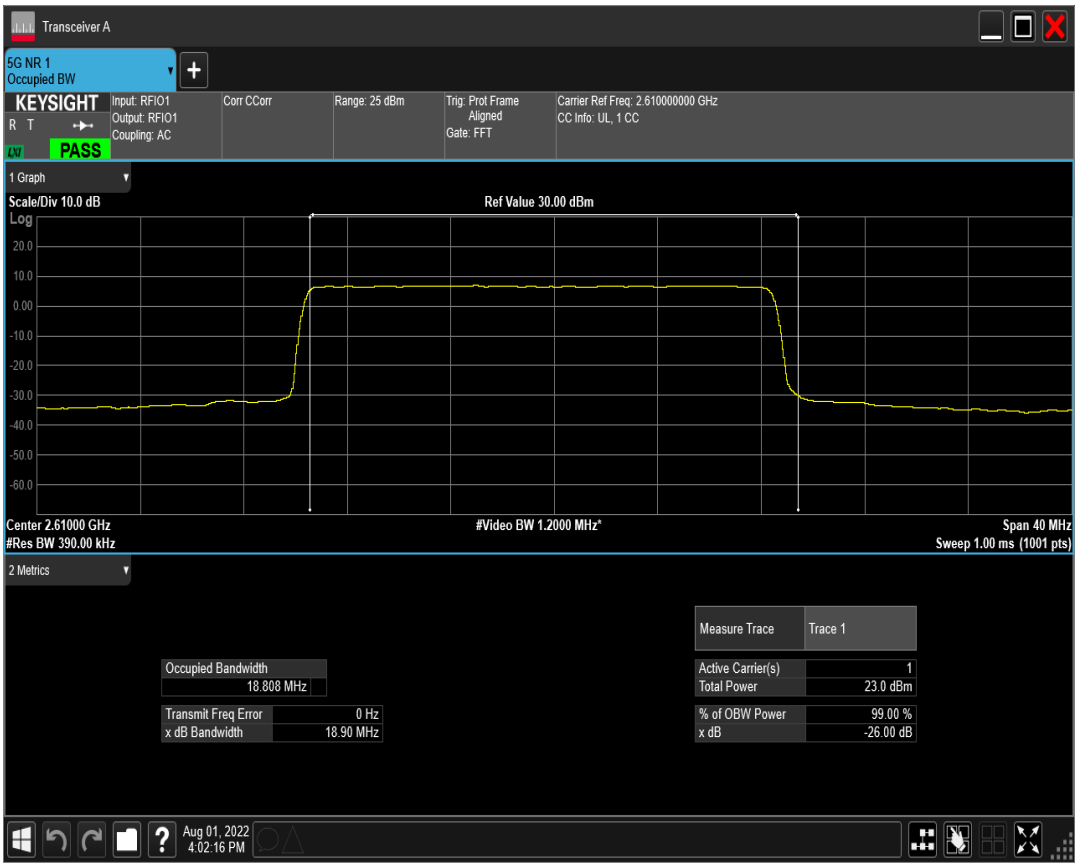


n38 SCS=15kHz DFT_QPSK BW=20MHz Channel=522000 RB=100@0



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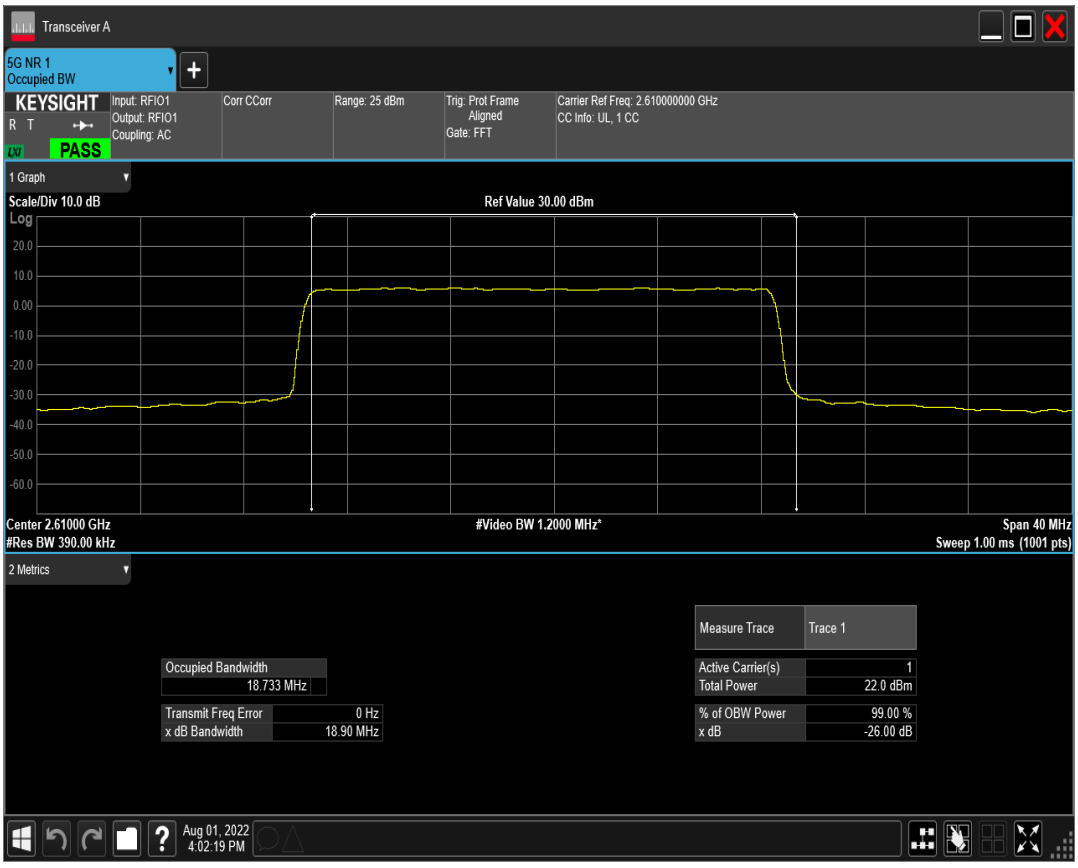

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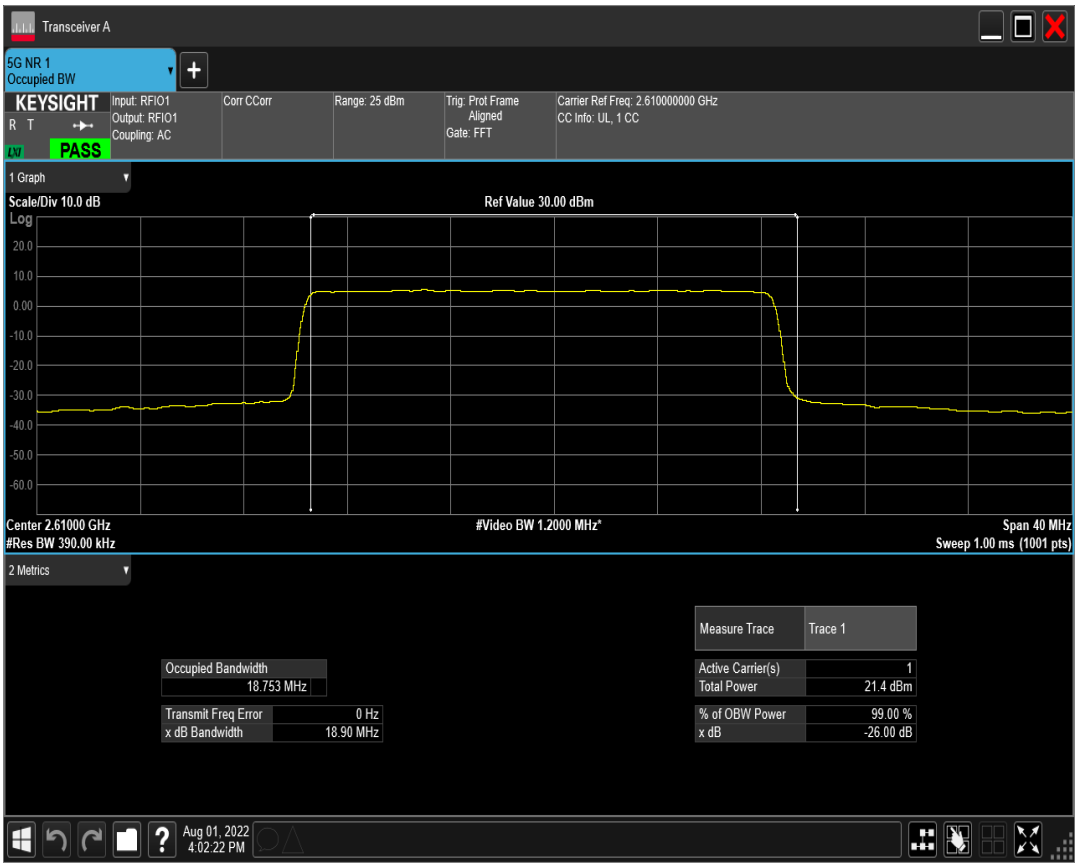

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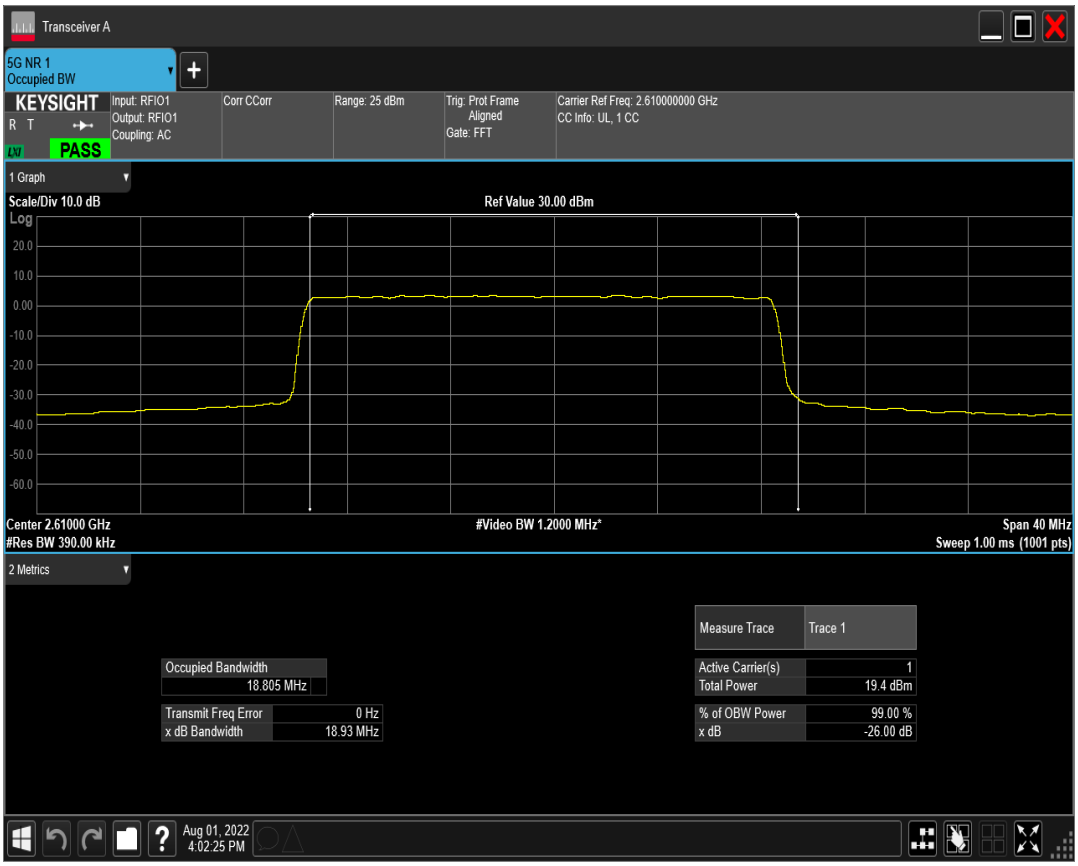
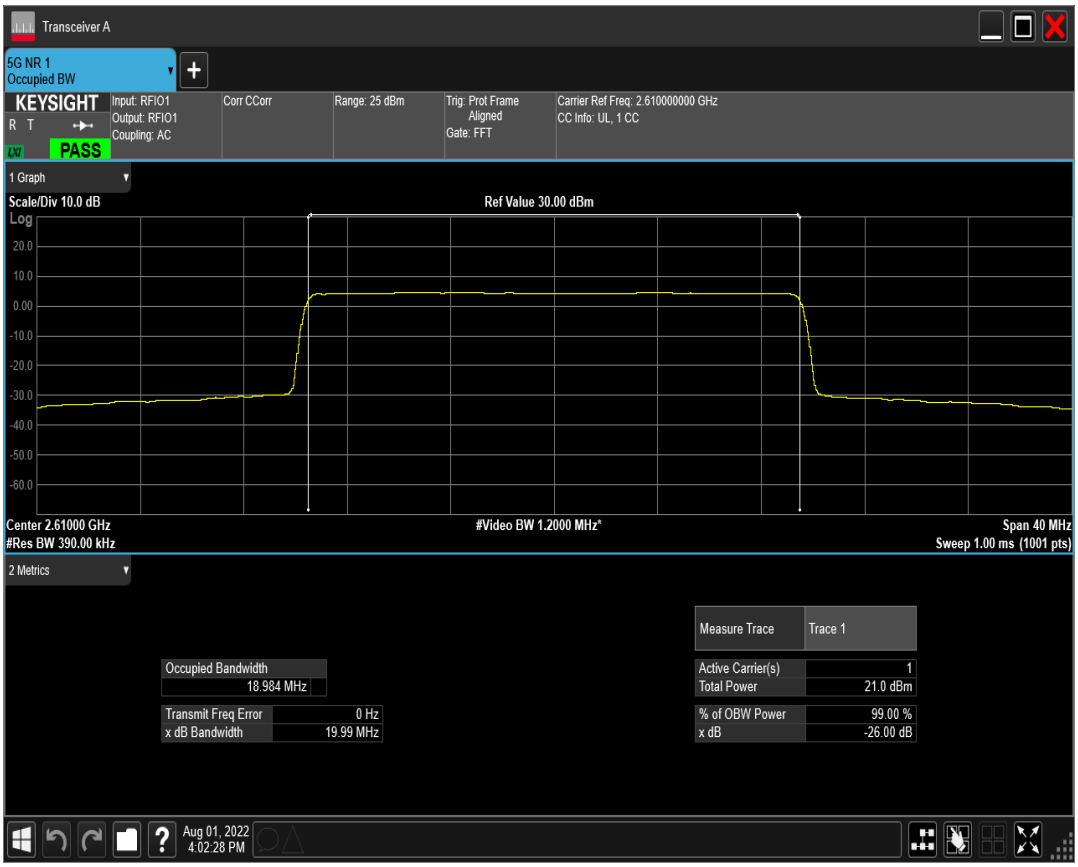


n38 SCS=15kHz CP_QPSK BW=20MHz Channel=522000 RB=106@0



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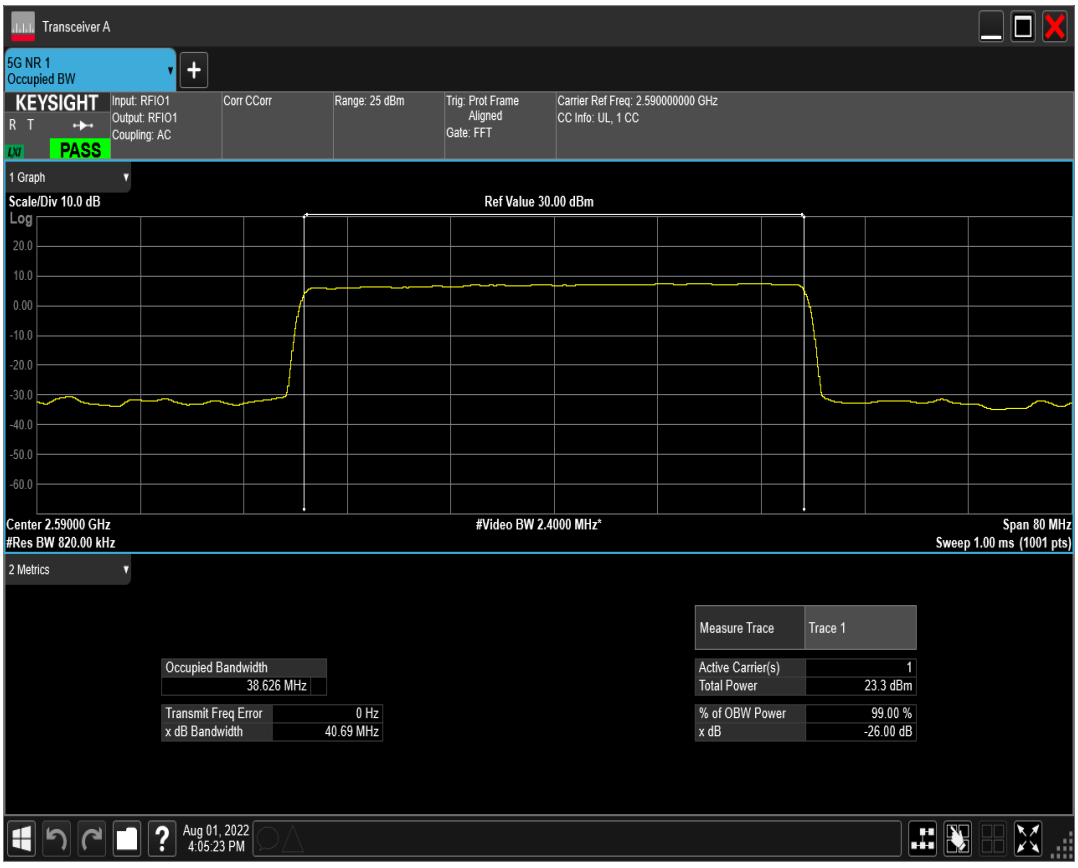
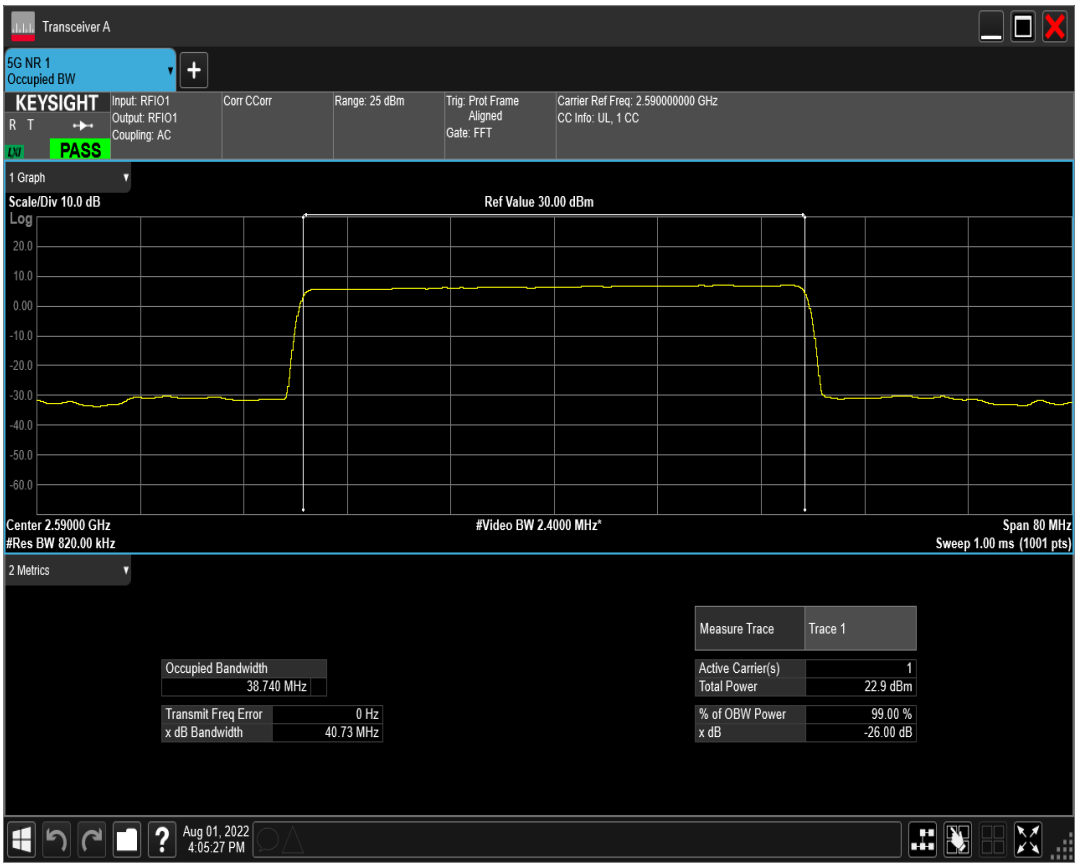


n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=518000 RB=216@0



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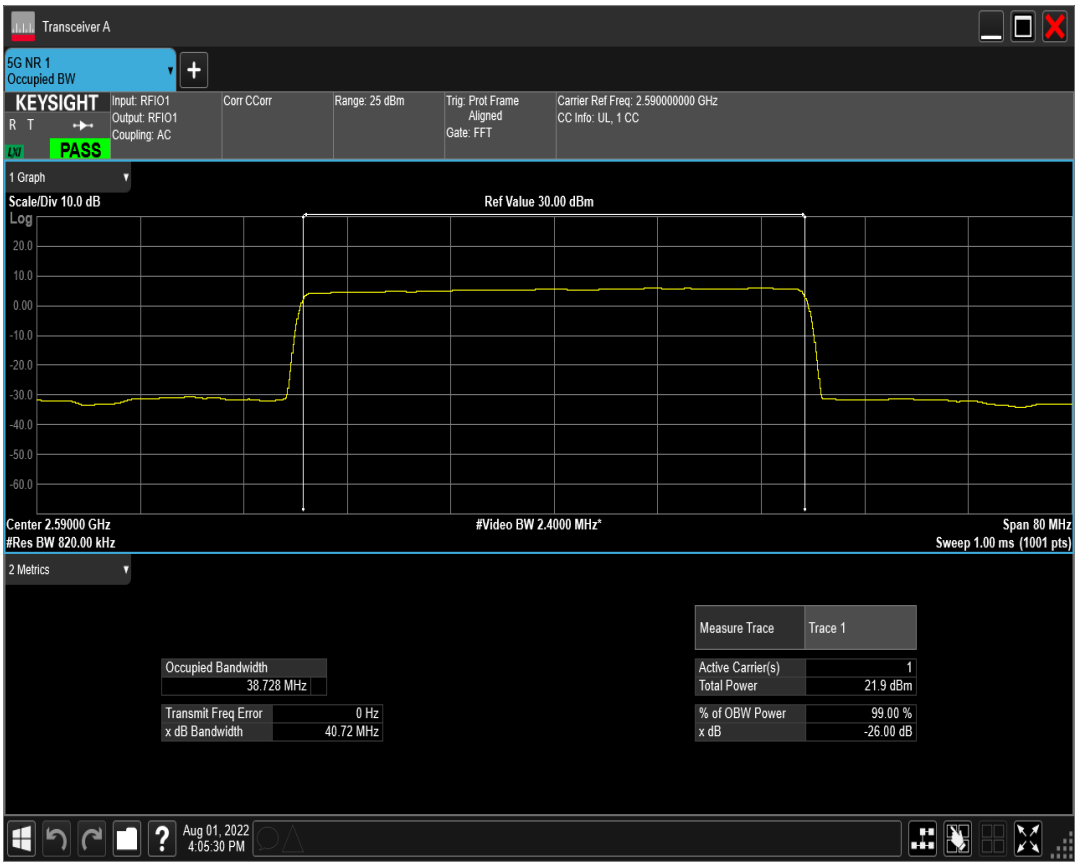

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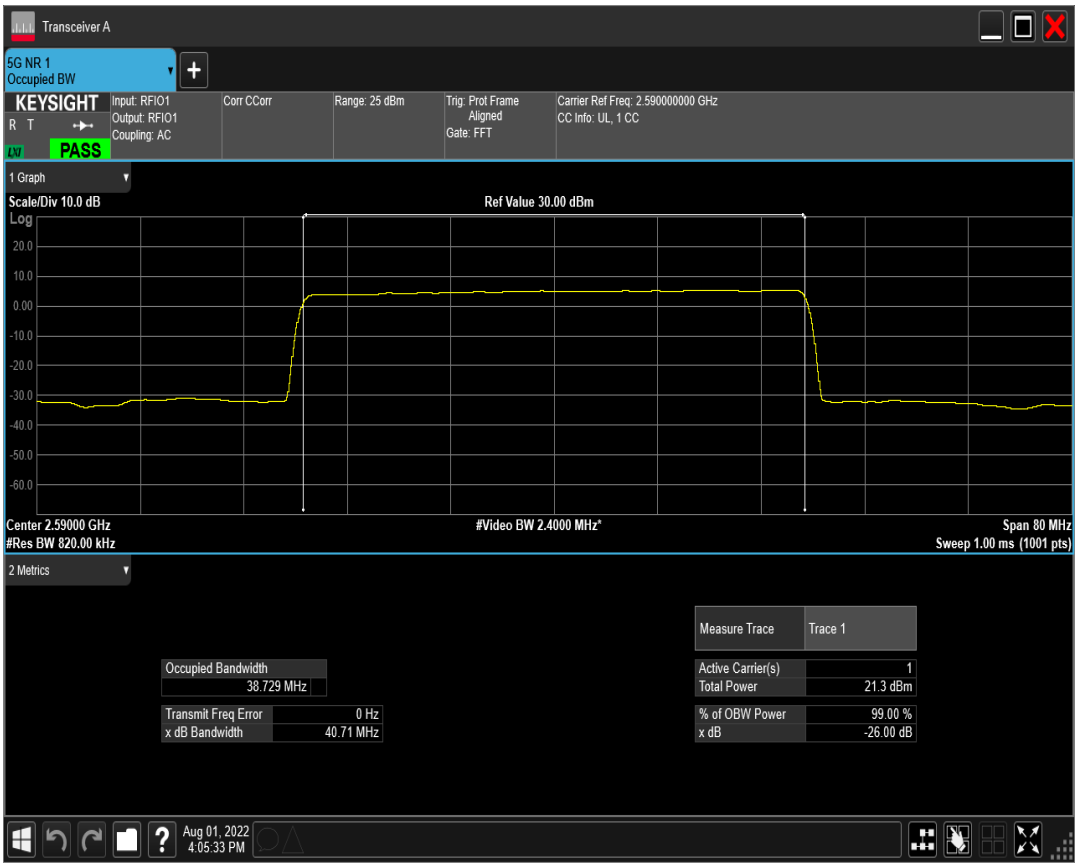

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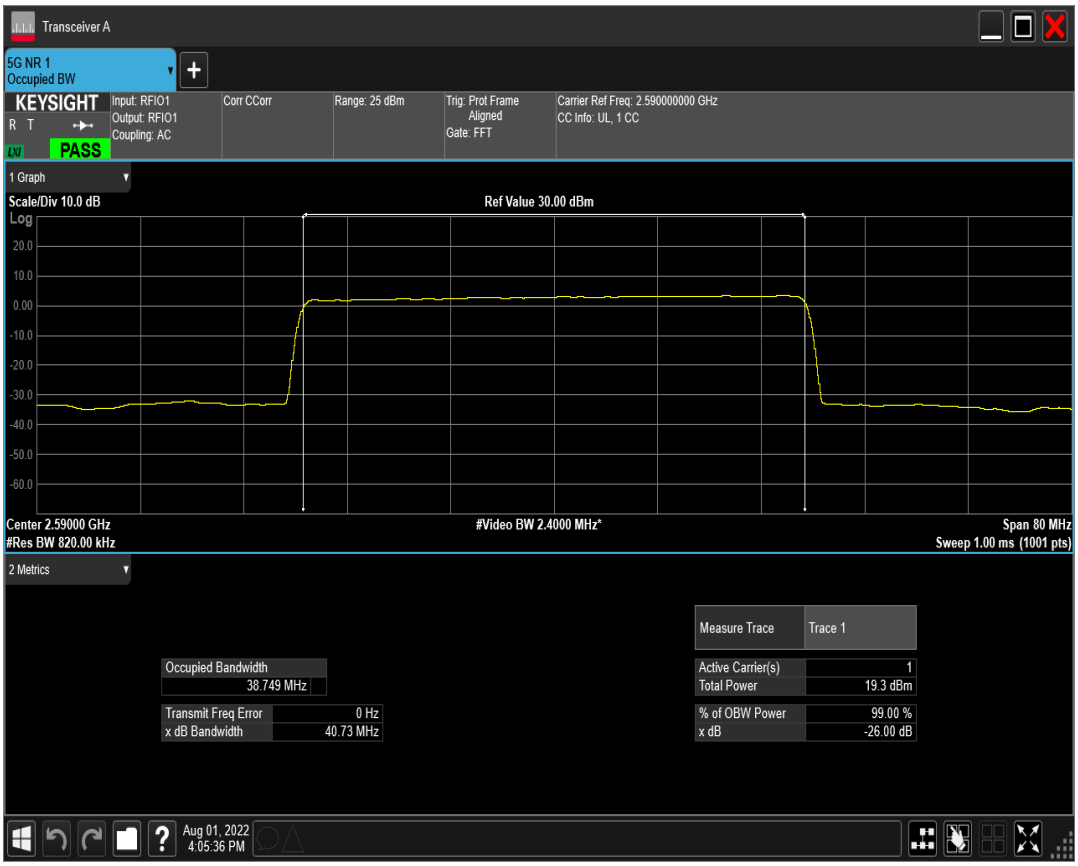

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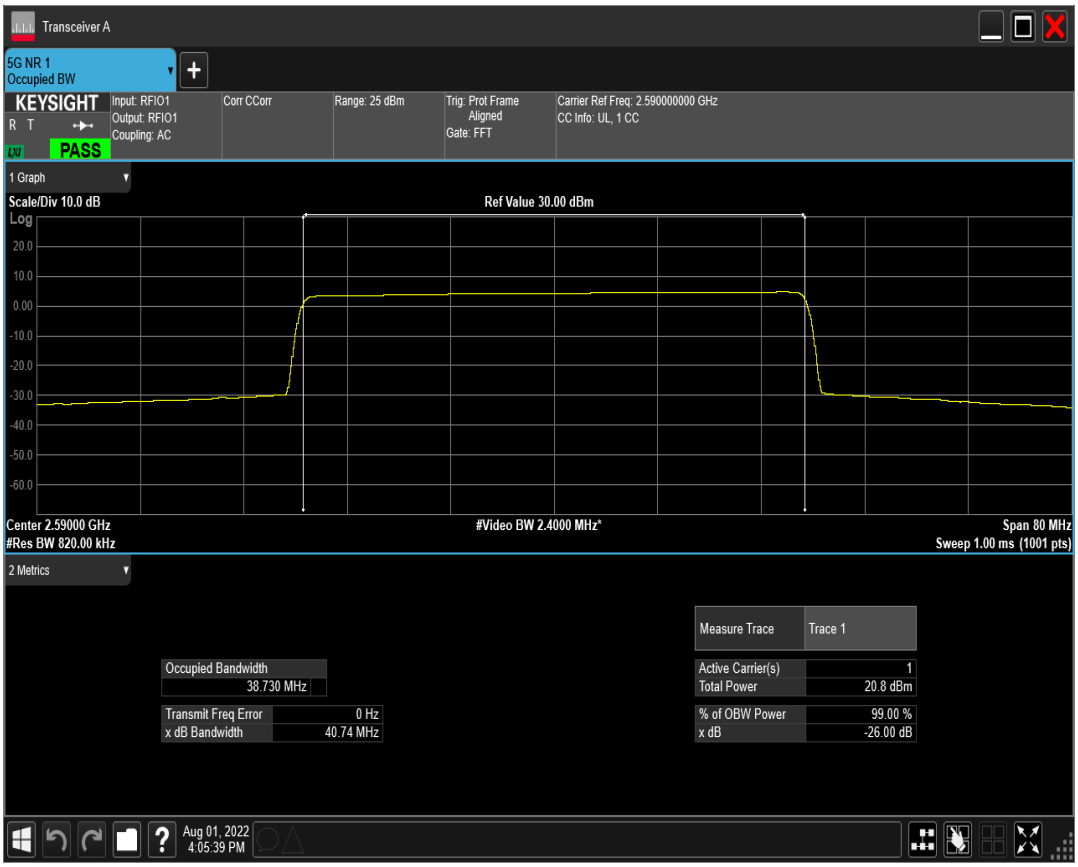
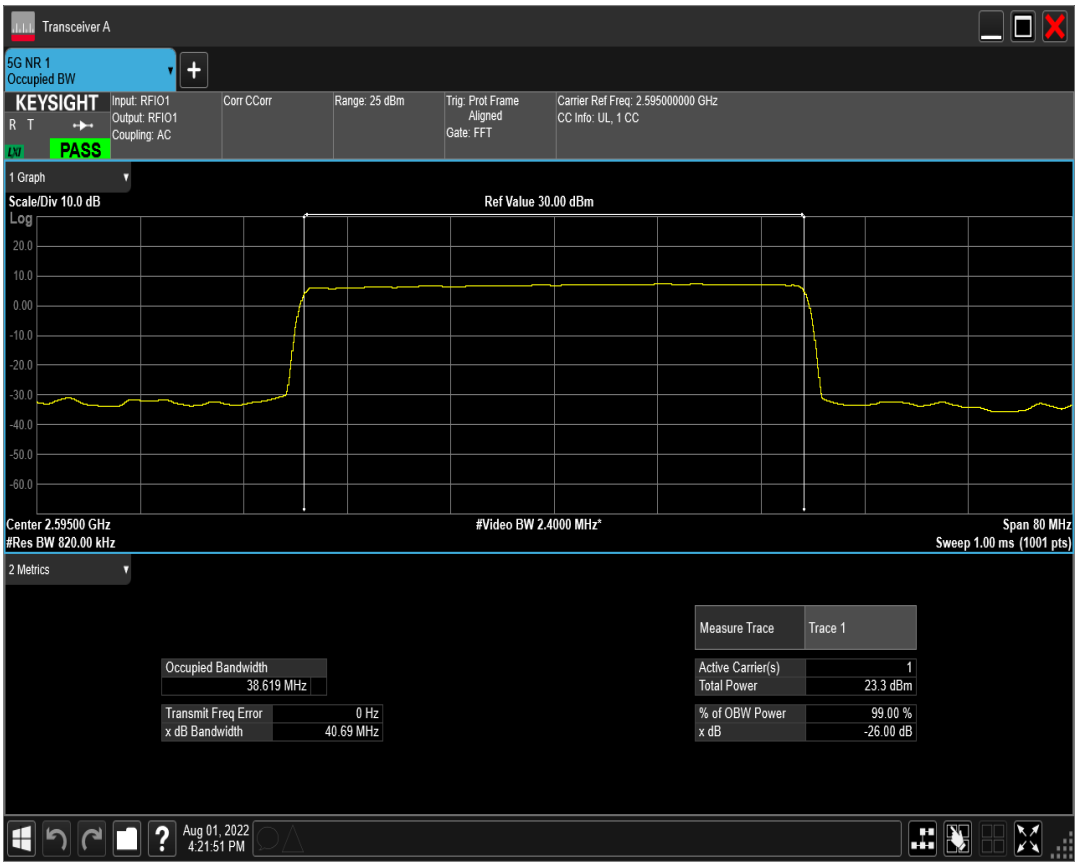
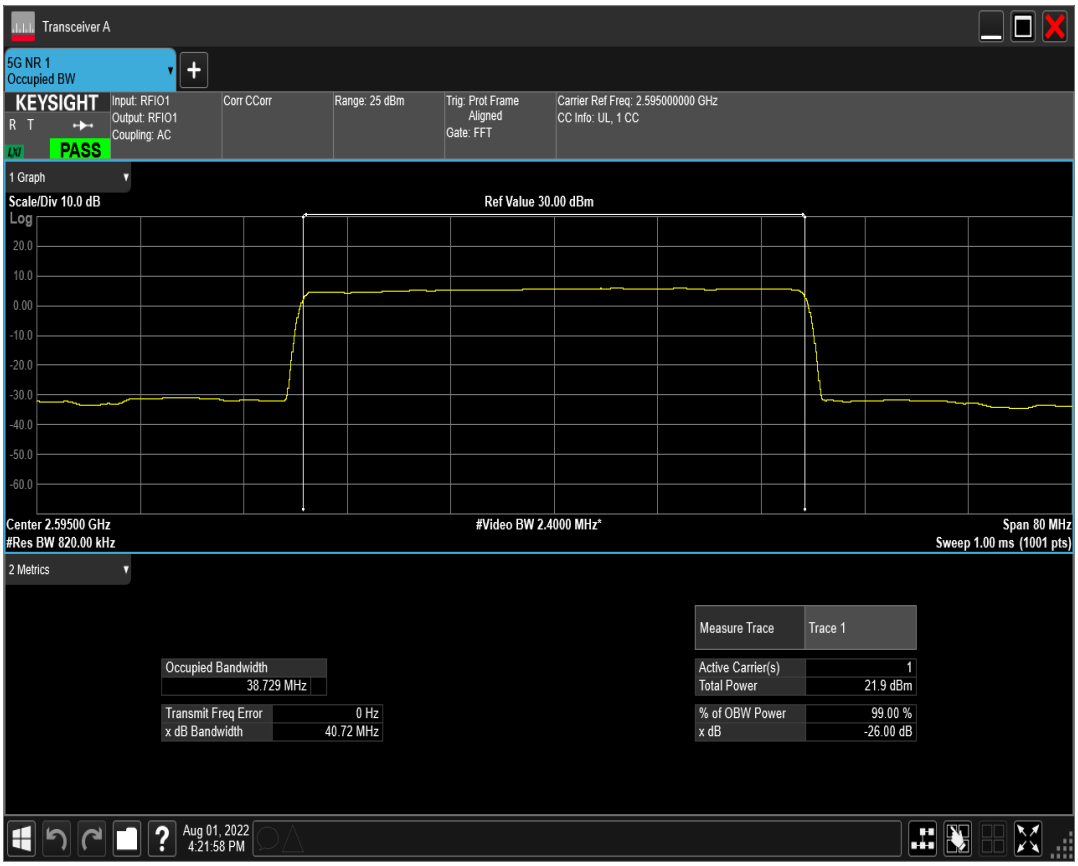


n38 SCS=15kHz DFT_BPSK BW=40MHz Channel=519000 RB=216@0

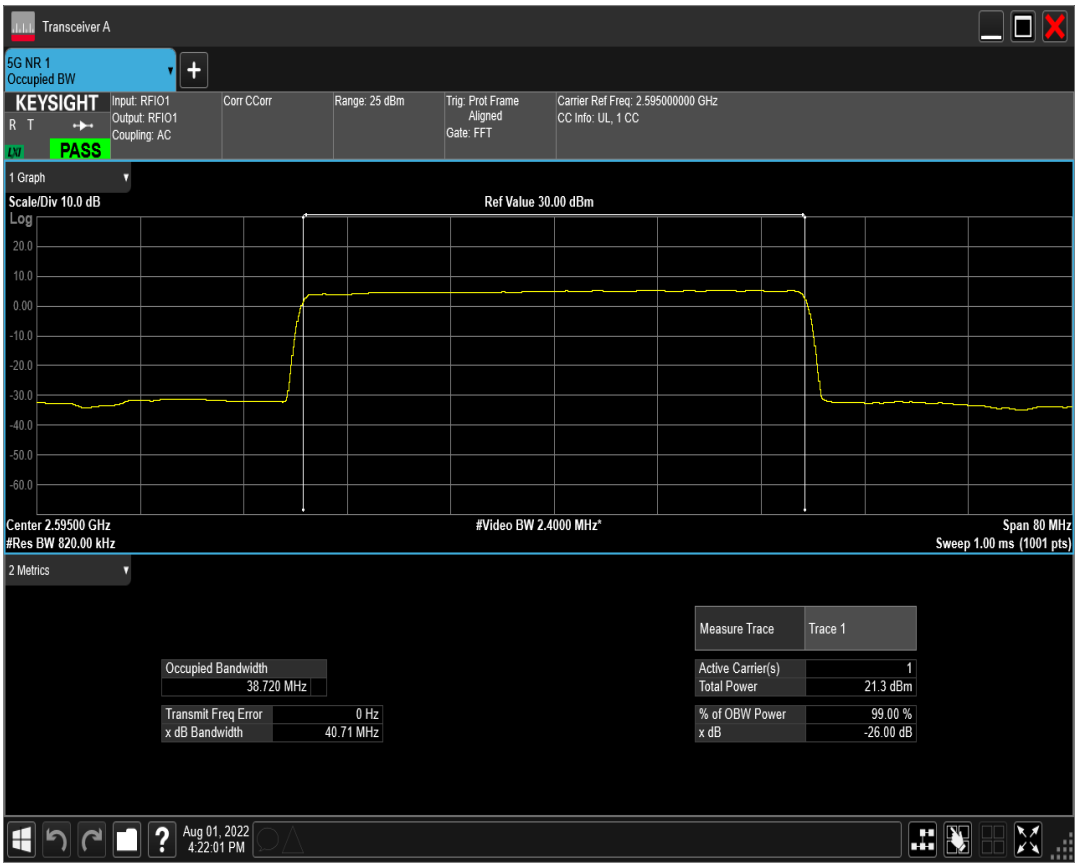


n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=519000 RB=216@0

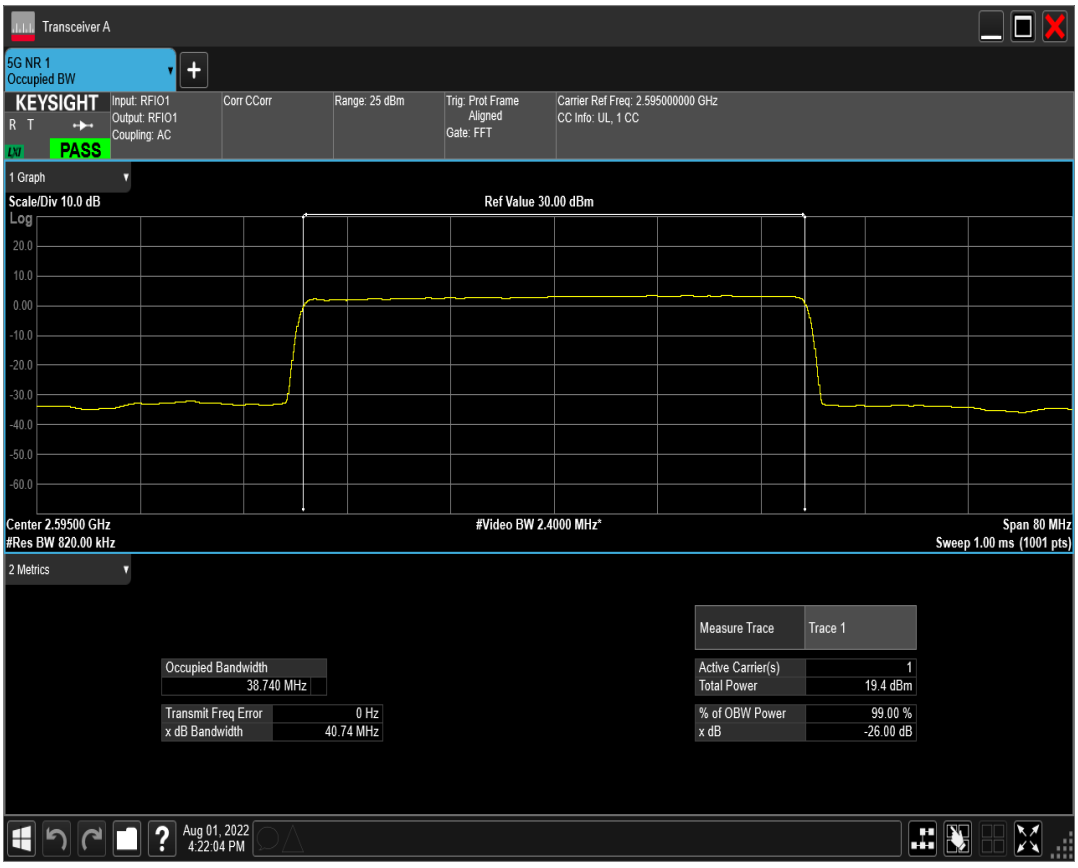
n38 SCS=15kHz DFT_QAM16 BW=40MHz Channel=519000 RB=216@0



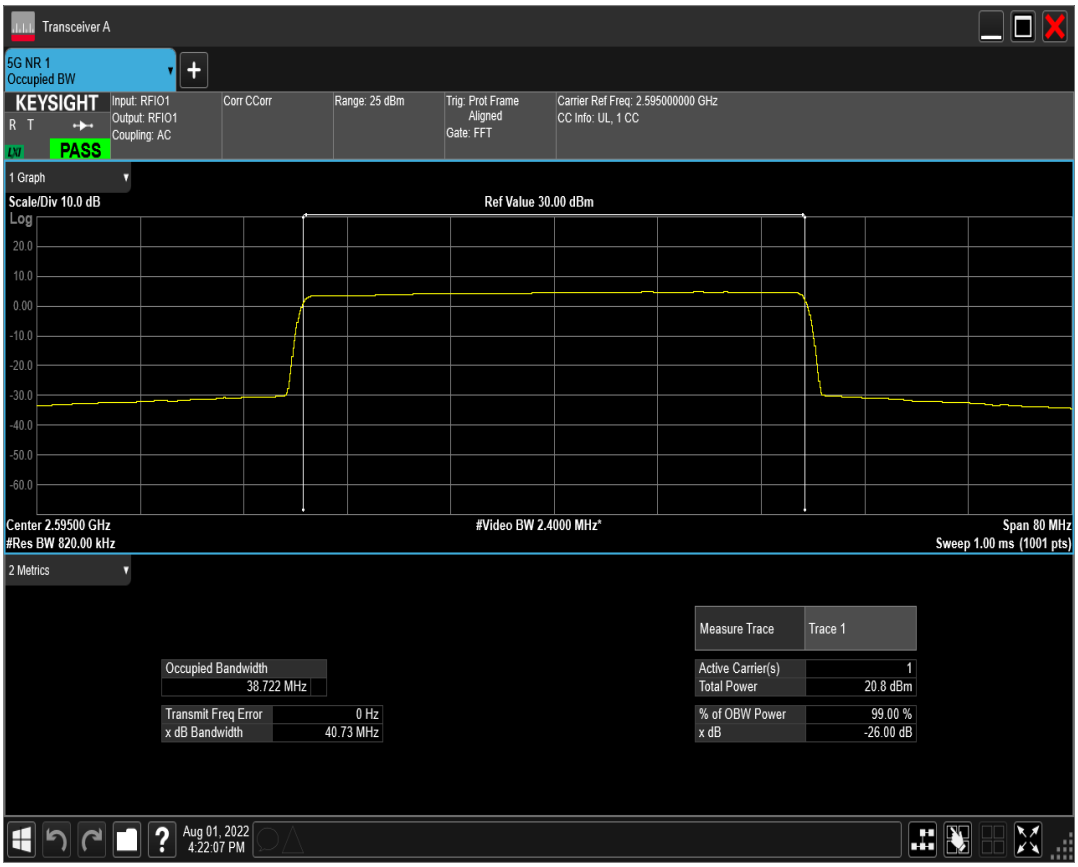
n38 SCS=15kHz DFT_QAM64 BW=40MHz Channel=519000 RB=216@0



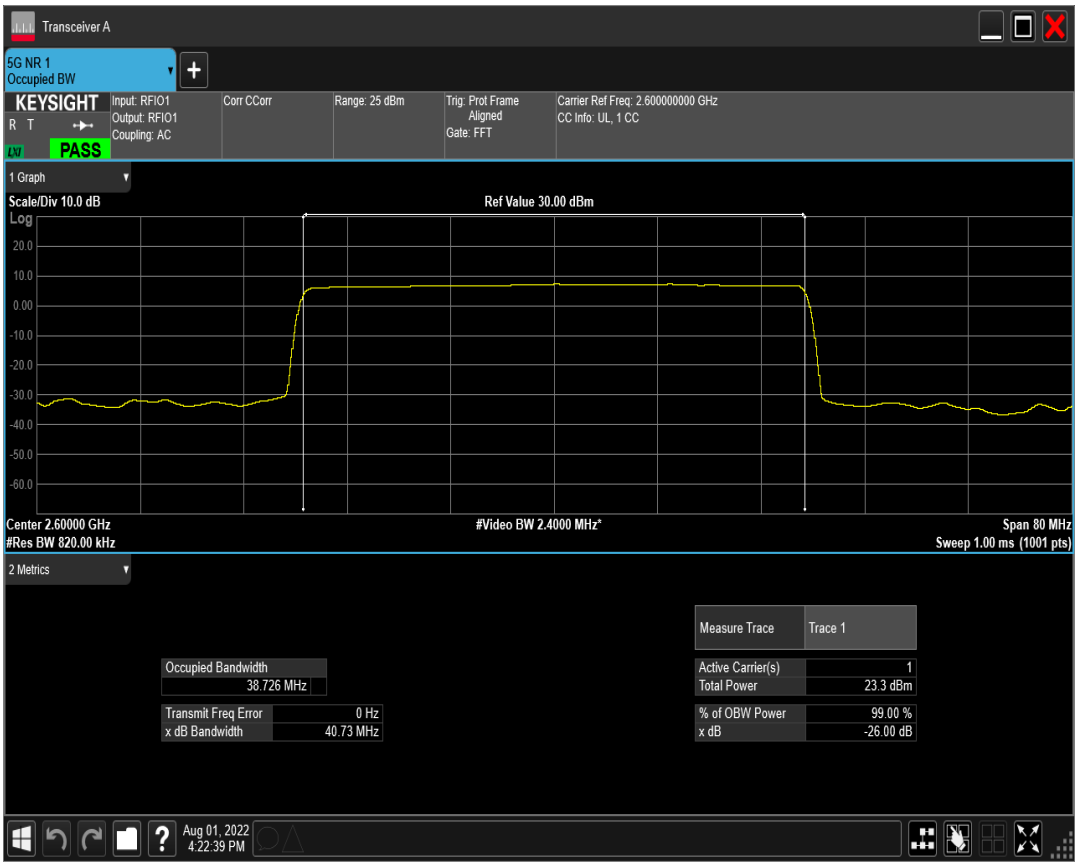
n38 SCS=15kHz DFT_QAM256 BW=40MHz Channel=519000 RB=216@0



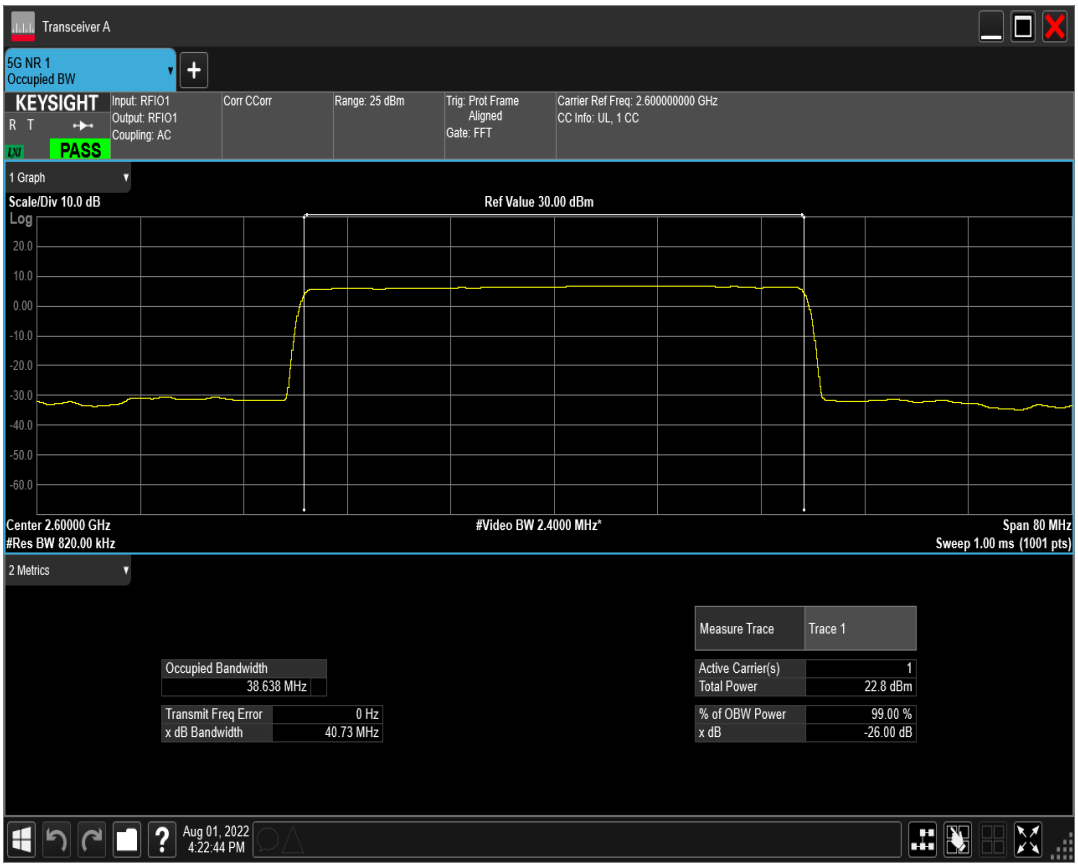
n38 SCS=15kHz CP_QPSK BW=40MHz Channel=519000 RB=216@0



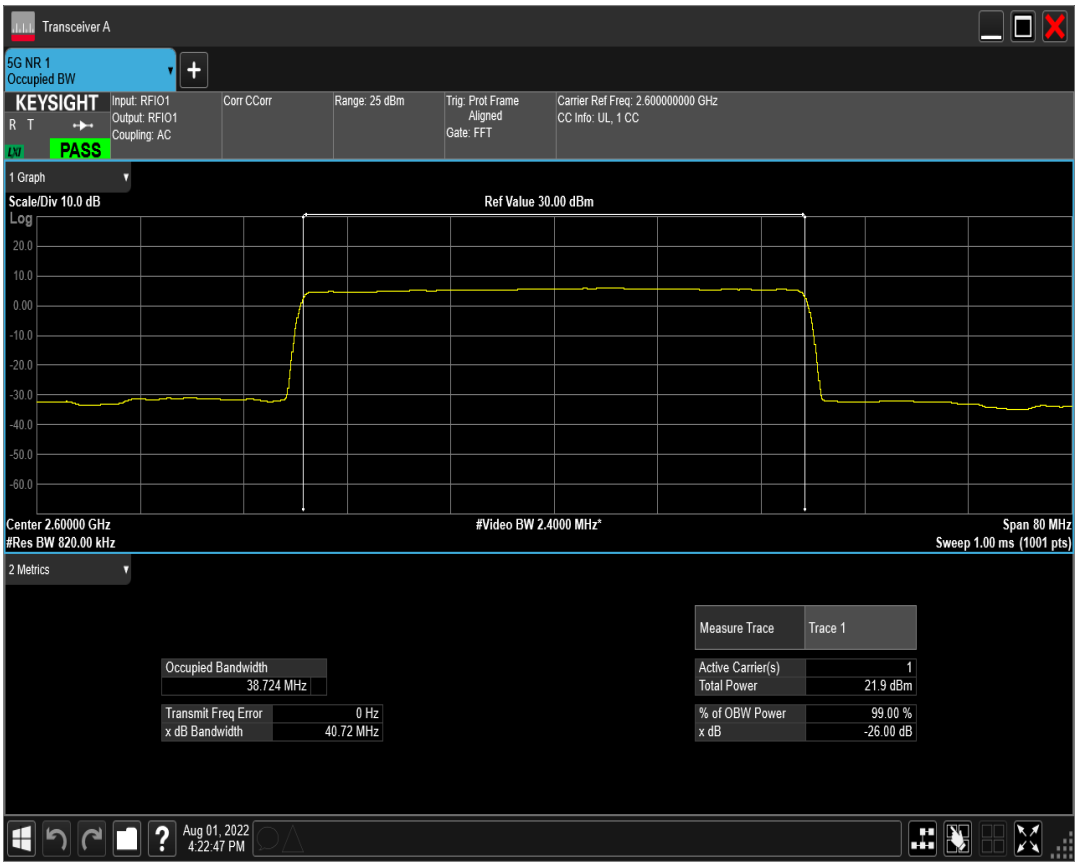
n38 SCS=15kHz DFT_BPSK BW=40MHz Channel=520000 RB=216@0



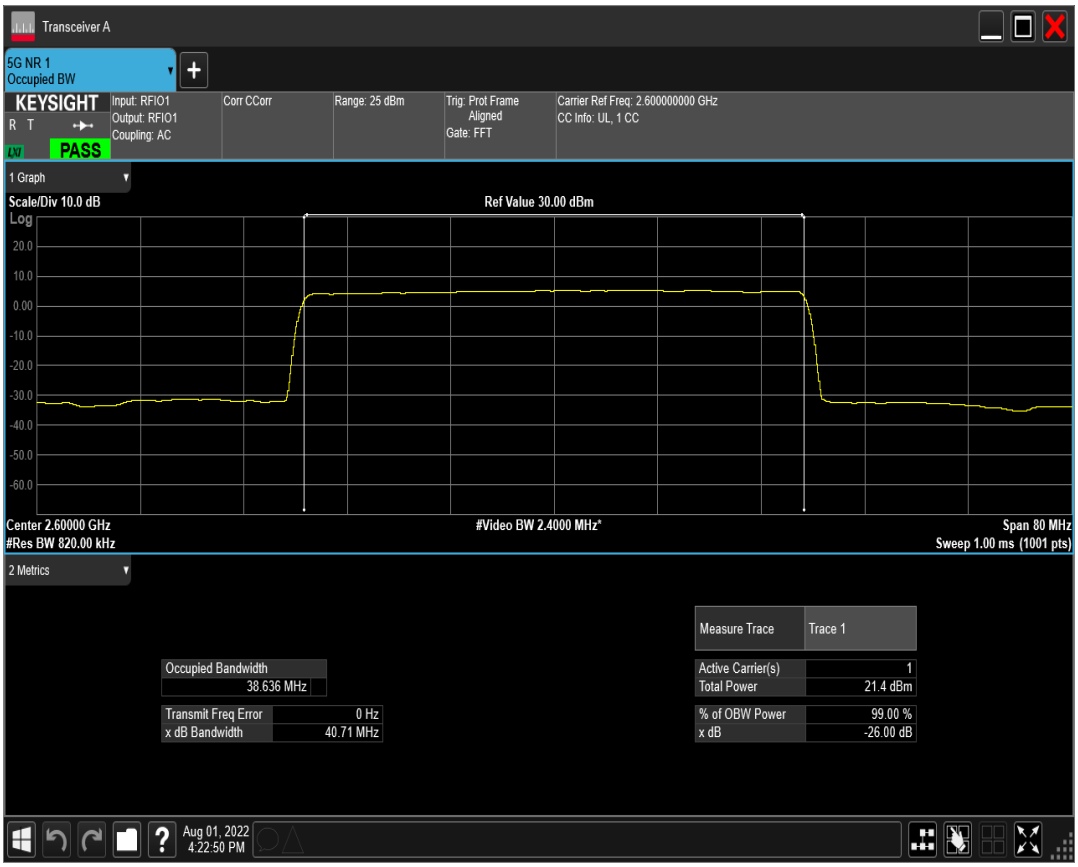
n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=520000 RB=216@0



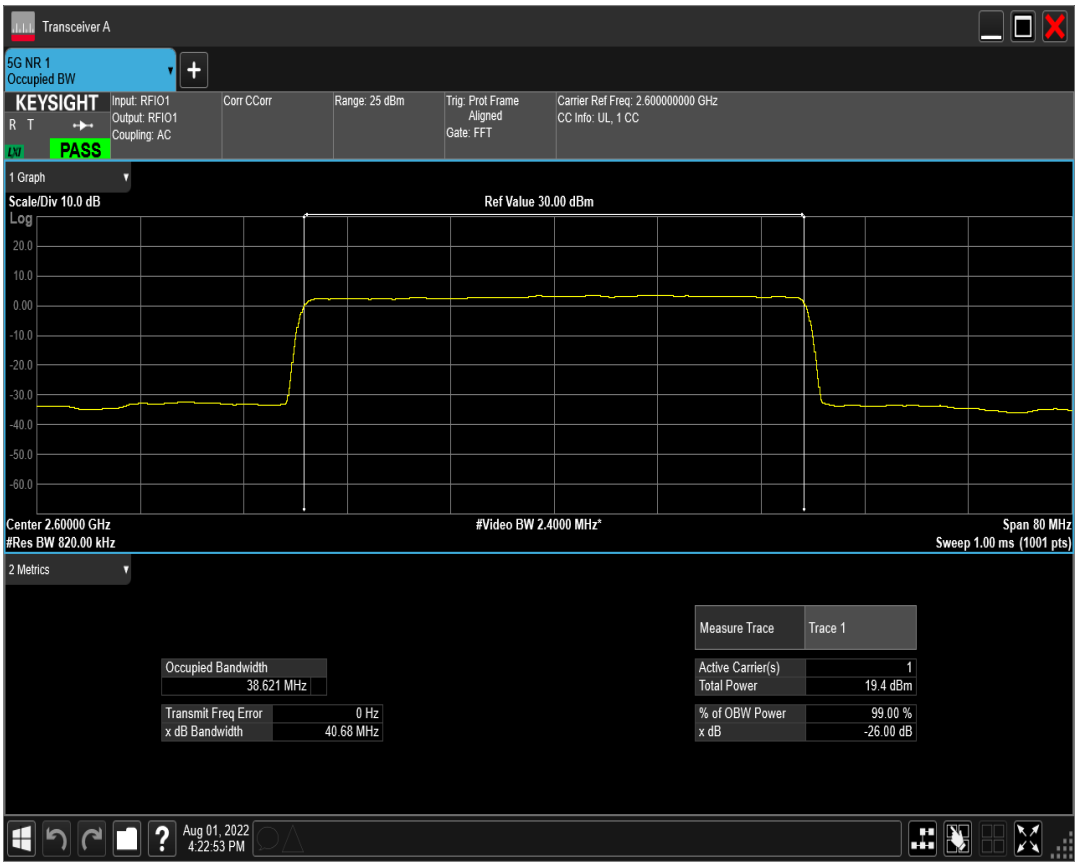
n38 SCS=15kHz DFT_QAM16 BW=40MHz Channel=520000 RB=216@0



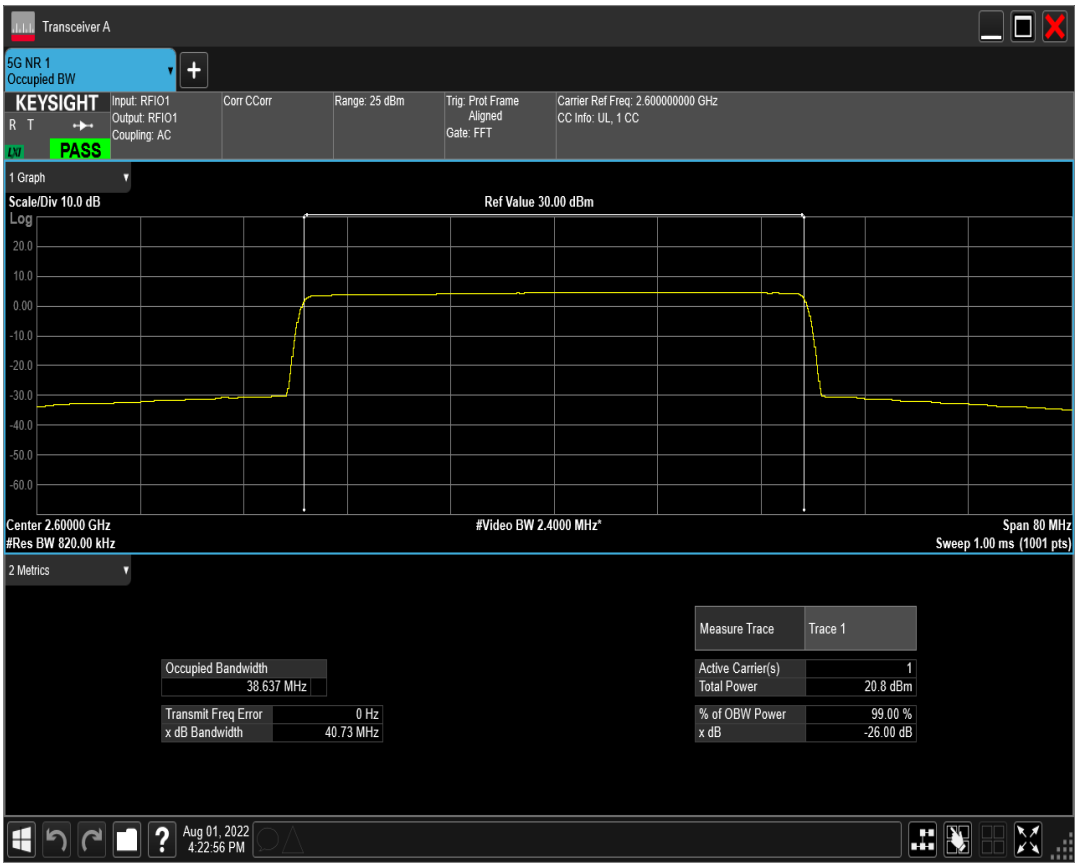
n38 SCS=15kHz DFT_QAM64 BW=40MHz Channel=520000 RB=216@0



n38 SCS=15kHz DFT_QAM256 BW=40MHz Channel=520000 RB=216@0



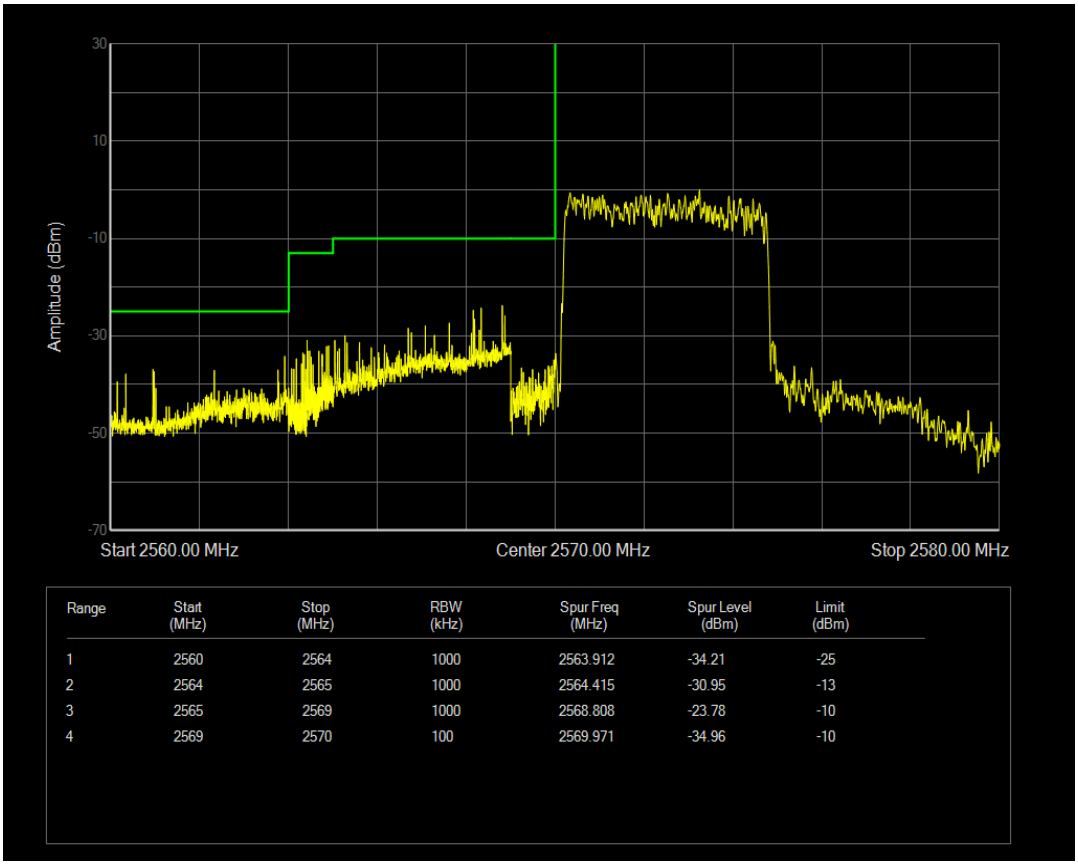
n38 SCS=15kHz CP_QPSK BW=40MHz Channel=520000 RB=216@0


Transceiver A
5G NR 1
Occupied BW
KEYSIGHT
Input: RFIO1
Output: RFIO1
Coupling: AC
Corr CCorr
Range: 25 dBm
Trig: Prot Frame
Aligned
Gate: FFT
Carrier Ref Freq: 2.600000000 GHz
CC Info: UL, 1 CC
PASS
1 Graph
Scale/Div 10.0 dB
Ref Value 30.00 dBm
Log
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center 2.60000 GHz
#Res BW 820.00 kHz
#Video BW 2.4000 MHz*
Span 80 MHz
Sweep 1.00 ms (1001 pts)
2 Metrics
Measure Trace
Trace 1
Occupied Bandwidth
38.637 MHz
Transmit Freq Error
0 Hz
x dB Bandwidth
40.73 MHz
Active Carrier(s)
1
Total Power
20.8 dBm
% of OBW Power
99.00 %
x dB
-26.00 dB
Aug 01, 2022
4:22:56 PM

5 Band edge for NR FR1

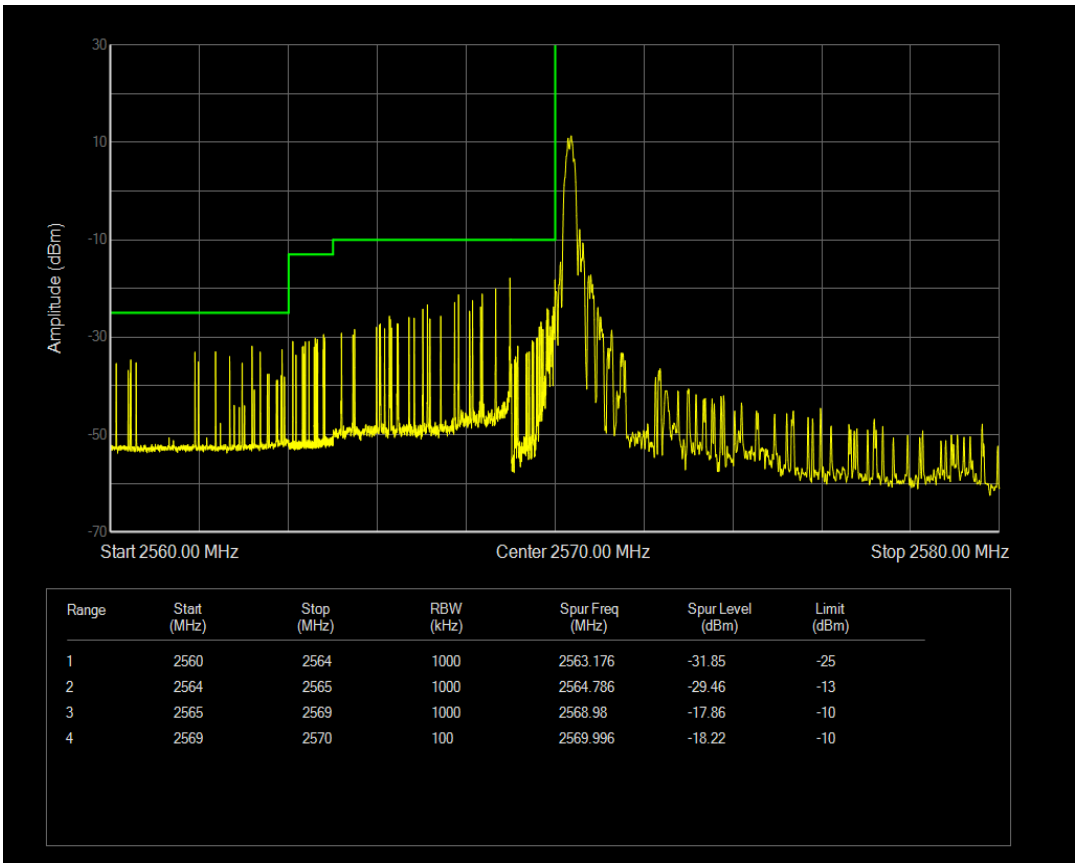
Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n38	15	5	514500	25@0	DFT_QPSK	2563.91	-34.21	-25	PASS
n38	15	5	514500	1@0	DFT_QPSK	2563.18	-31.85	-25	PASS
n38	15	5	523500	25@0	DFT_QPSK	2626.22	-36.00	-25	PASS
n38	15	5	523500	1@24	DFT_QPSK	2627.26	-32.11	-25	PASS
n38	15	40	518000	216@0	DFT_QPSK	2569.97	-14.71	-10	PASS
n38	15	40	518000	1@0	DFT_QPSK	2568.74	-21.04	-10	PASS
n38	15	40	520000	216@0	DFT_QPSK	2620.00	-14.86	-10	PASS
n38	15	40	520000	1@215	DFT_QPSK	2621.37	-21.75	-10	PASS

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=514500 RB=25@0



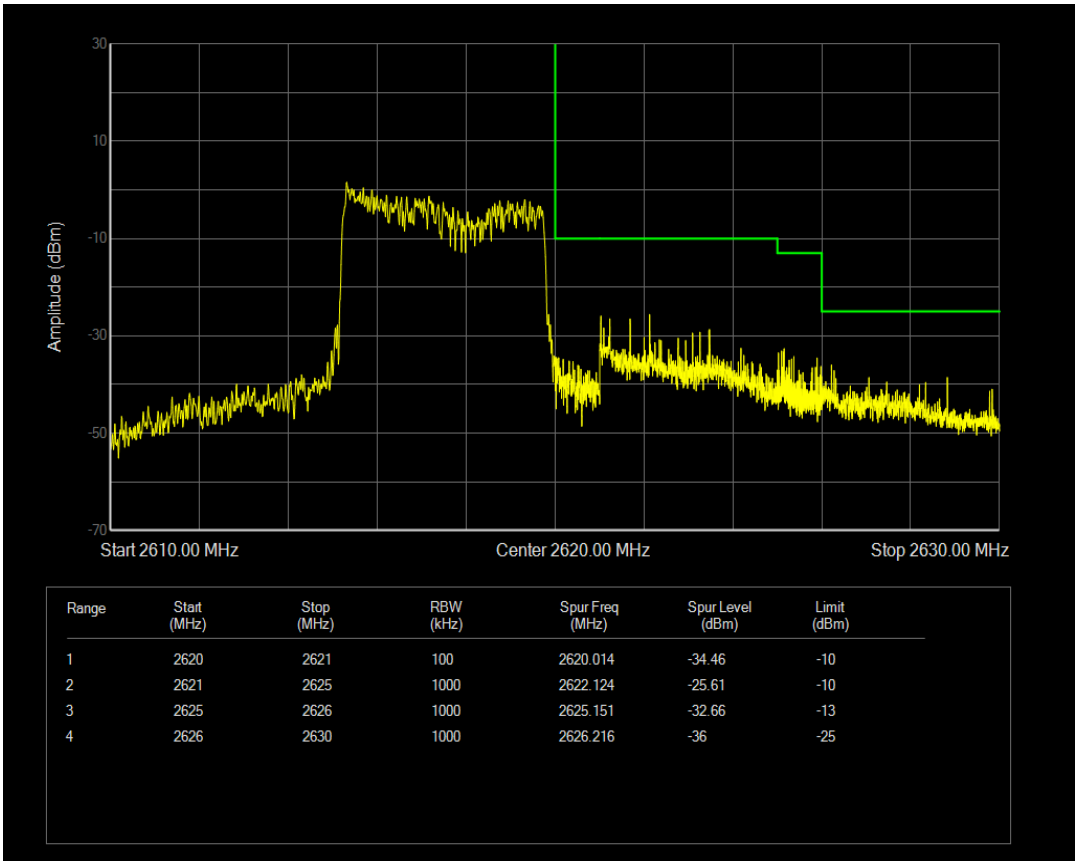
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2560	2564	1000	2563.912	-34.21	-25
2	2564	2565	1000	2564.415	-30.95	-13
3	2565	2569	1000	2568.808	-23.78	-10
4	2569	2570	100	2569.971	-34.96	-10

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=514500 RB=1@0



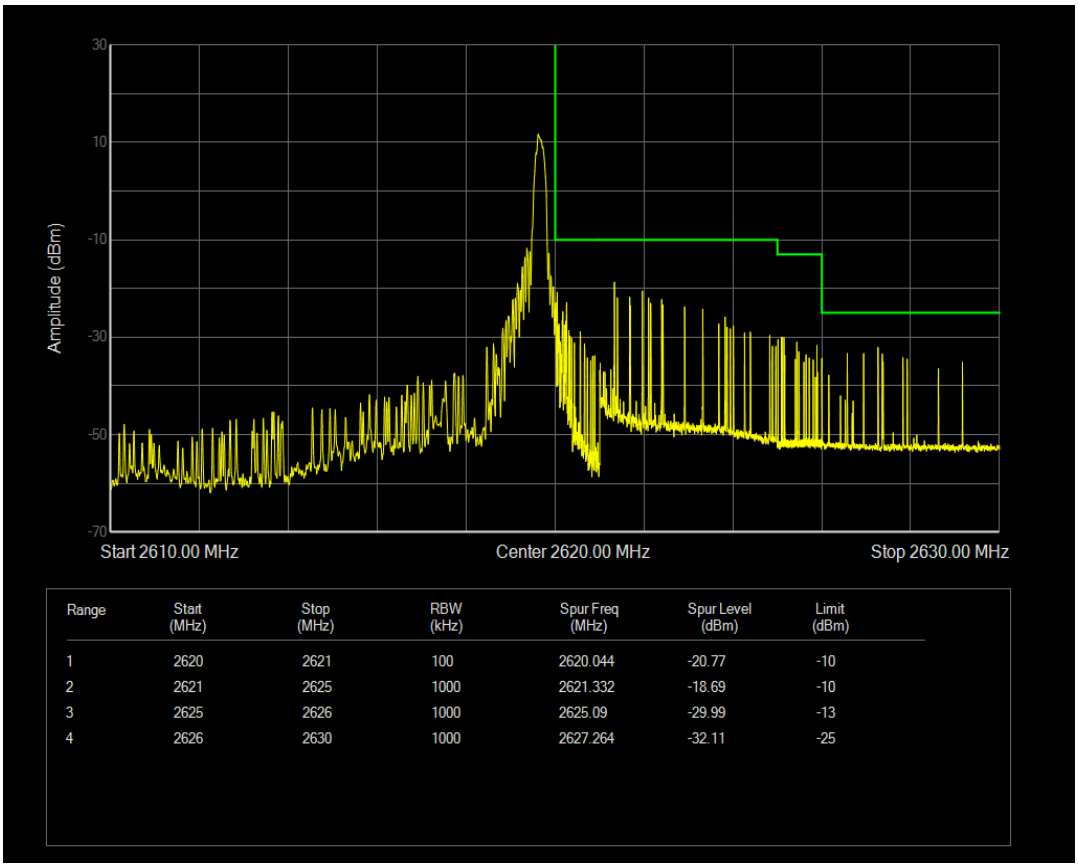
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2560	2564	1000	2563.176	-31.85	-25
2	2564	2565	1000	2564.786	-29.46	-13
3	2565	2569	1000	2568.98	-17.86	-10
4	2569	2570	100	2569.996	-18.22	-10

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=523500 RB=25@0



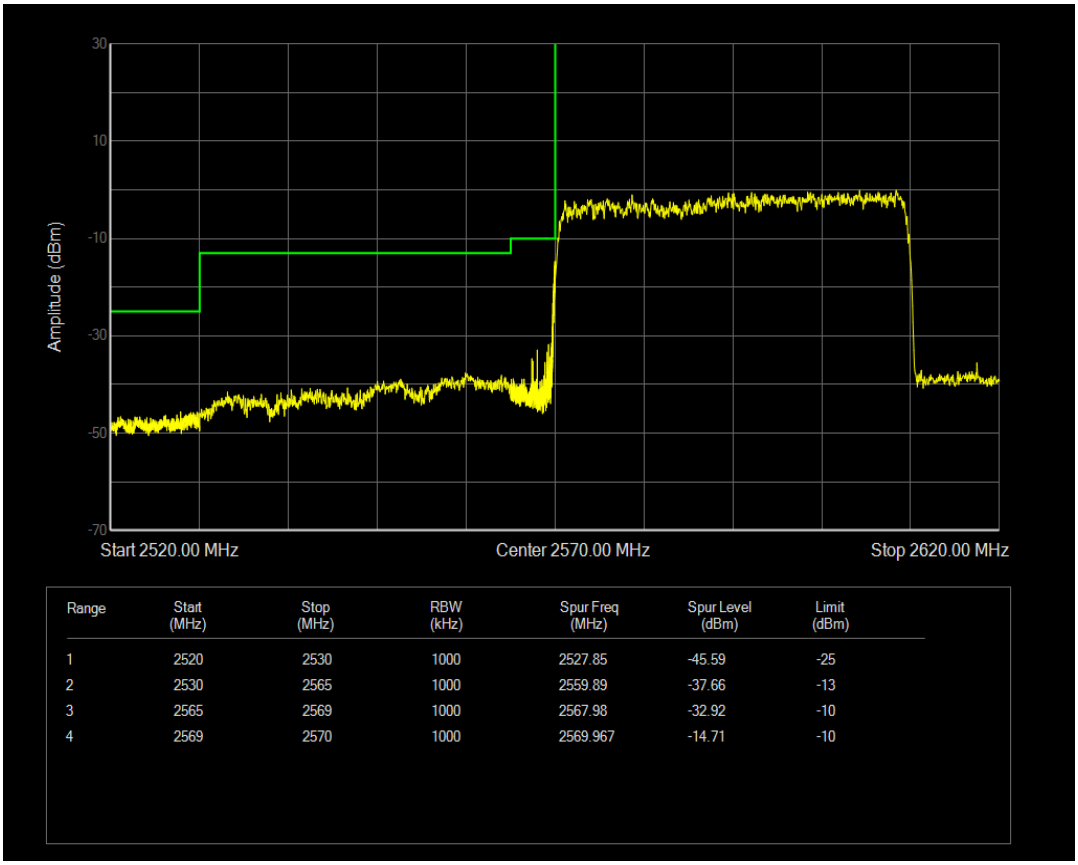
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2620	2621	100	2620.014	-34.46	-10
2	2621	2625	1000	2622.124	-25.61	-10
3	2625	2626	1000	2625.151	-32.66	-13
4	2626	2630	1000	2626.216	-36	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=523500 RB=1@24



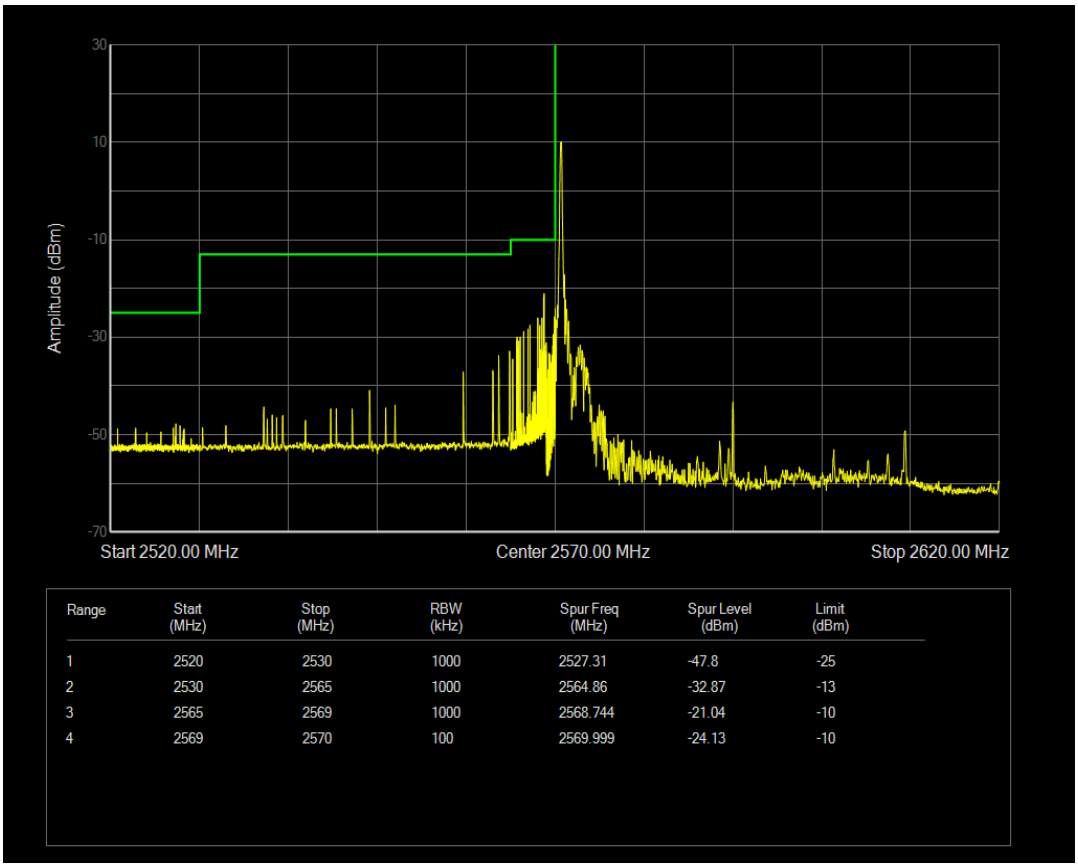
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2620	2621	100	2620.044	-20.77	-10
2	2621	2625	1000	2621.332	-18.69	-10
3	2625	2626	1000	2625.09	-29.99	-13
4	2626	2630	1000	2627.264	-32.11	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=518000 RB=216@0



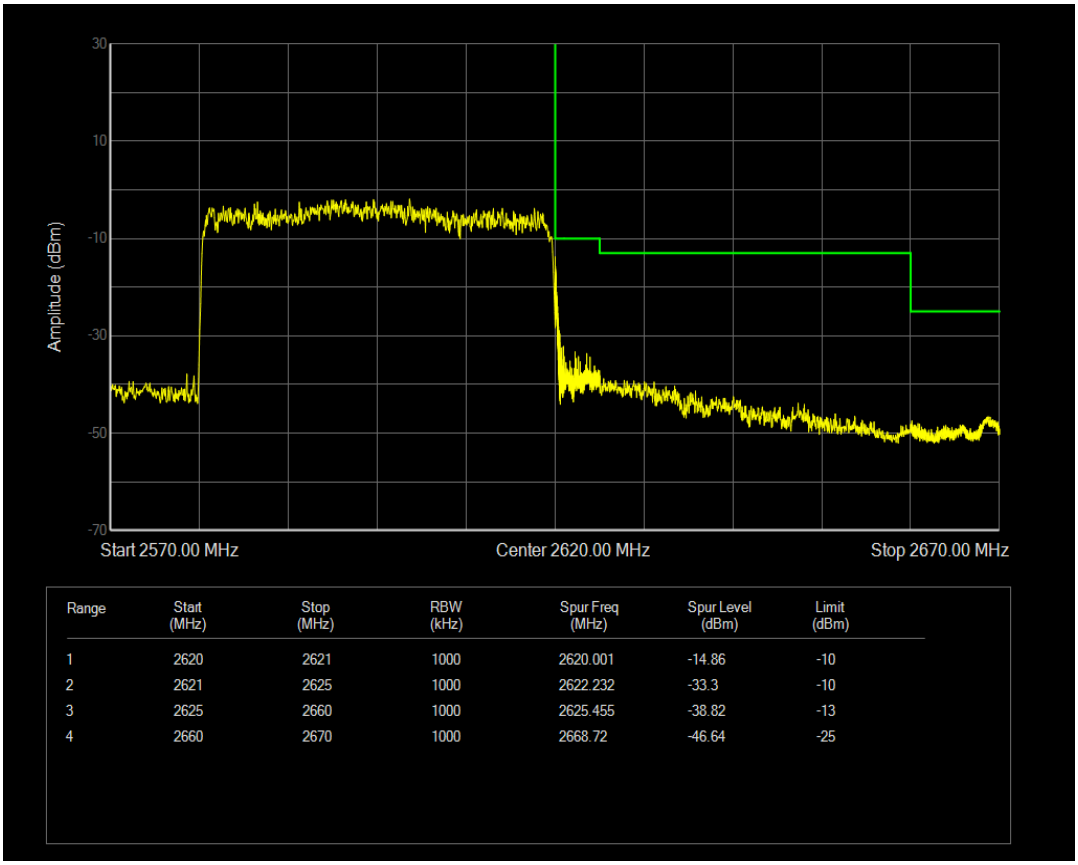
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2520	2530	1000	2527.85	-45.59	-25
2	2530	2565	1000	2559.89	-37.66	-13
3	2565	2569	1000	2567.98	-32.92	-10
4	2569	2570	1000	2569.967	-14.71	-10

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=518000 RB=1@0



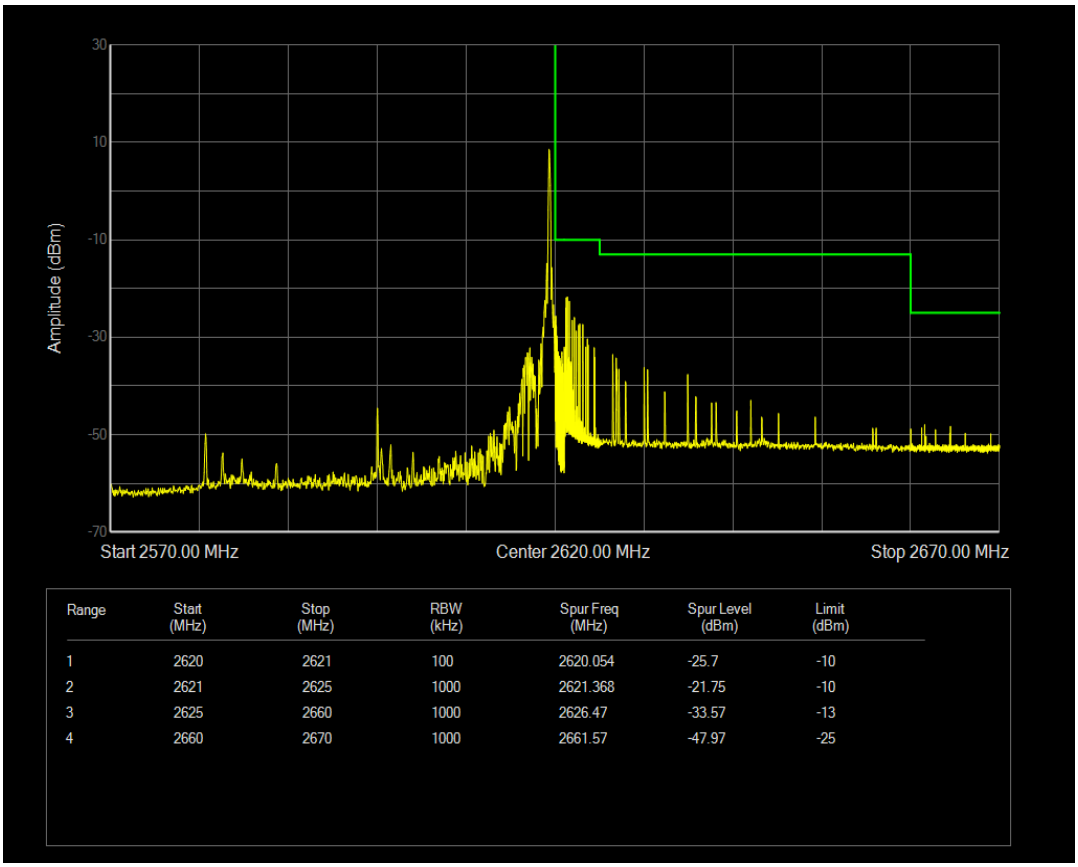
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2520	2530	1000	2527.31	-47.8	-25
2	2530	2565	1000	2564.86	-32.87	-13
3	2565	2569	1000	2568.744	-21.04	-10
4	2569	2570	100	2569.999	-24.13	-10

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=520000 RB=216@0



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2620	2621	1000	2620.001	-14.86	-10
2	2621	2625	1000	2622.232	-33.3	-10
3	2625	2660	1000	2625.455	-38.82	-13
4	2660	2670	1000	2668.72	-46.64	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=520000 RB=1@215

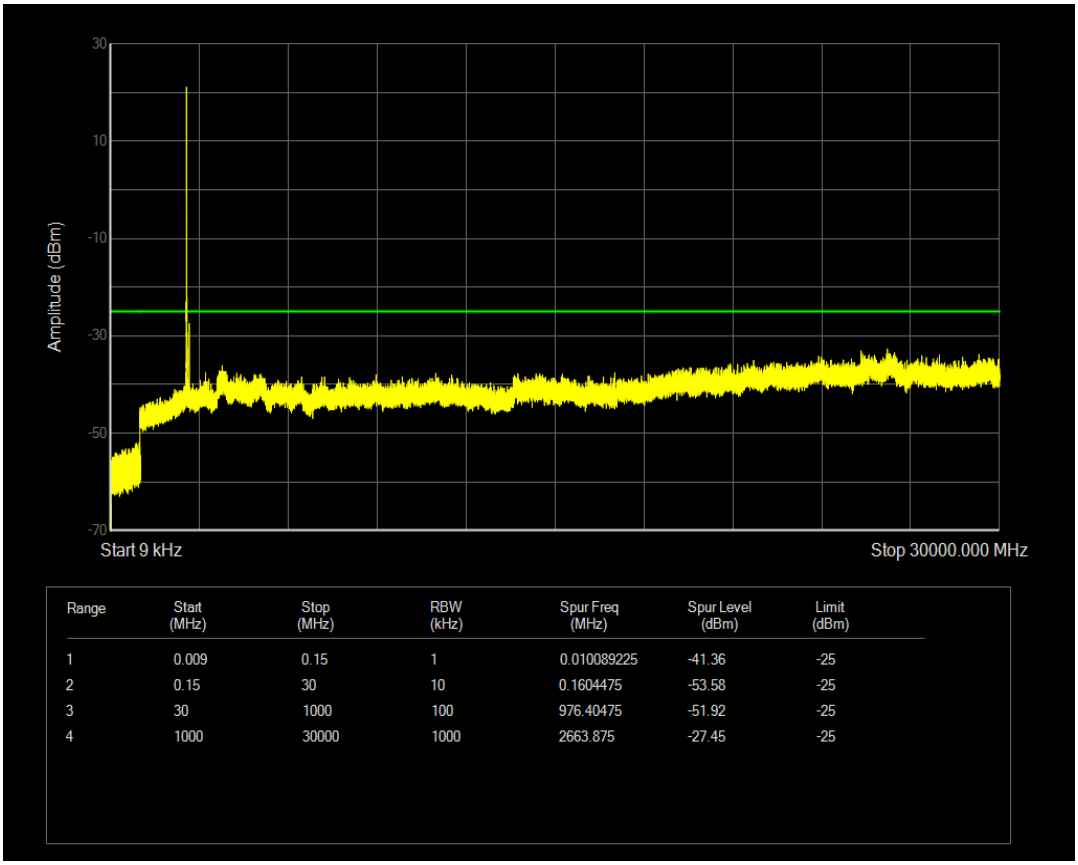


Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2620	2621	100	2620.054	-25.7	-10
2	2621	2625	1000	2621.368	-21.75	-10
3	2625	2660	1000	2626.47	-33.57	-13
4	2660	2670	1000	2661.57	-47.97	-25

6 Out-of-band emissions for NR FR1

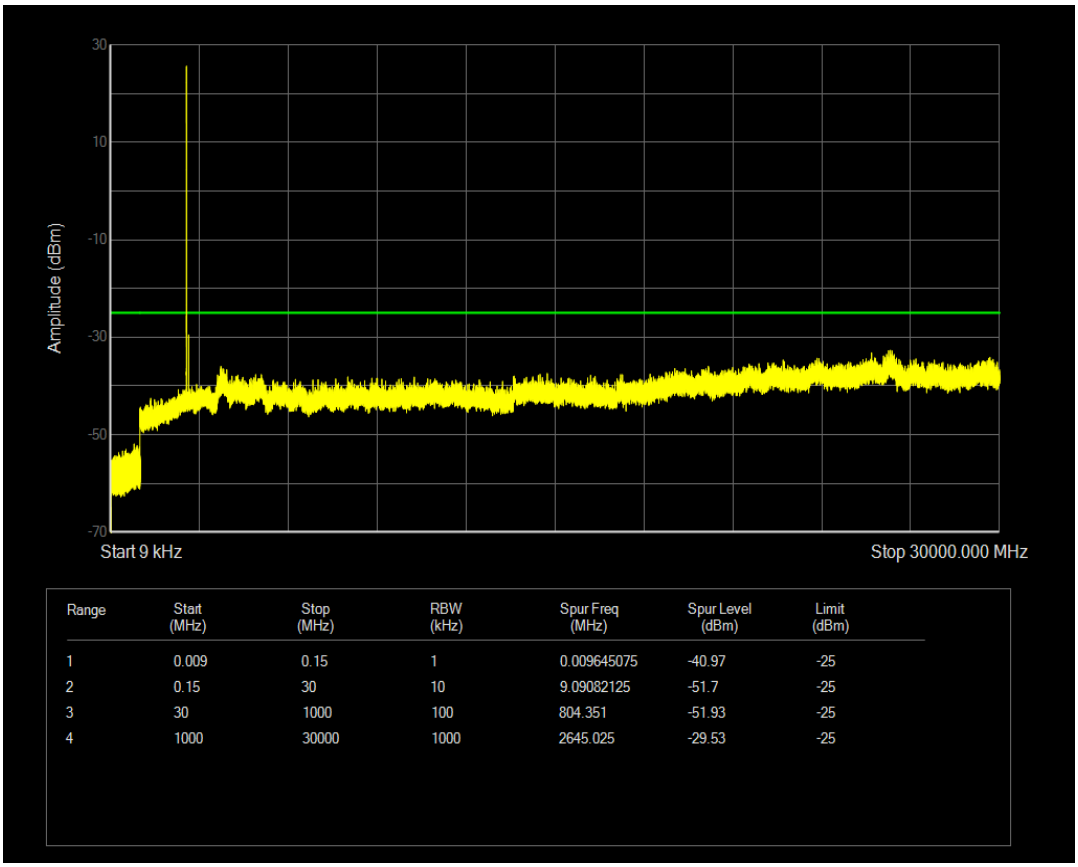
Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n38	15	5	514500	25@0	DFT_QPSK	2663.88	-27.45	-25	PASS
n38	15	5	514500	1@0	DFT_QPSK	2645.03	-29.53	-25	PASS
n38	15	5	514500	1@24	DFT_QPSK	26348.9	-32.9	-25	PASS
n38	15	5	518500	25@0	DFT_QPSK	2522.5	-28.22	-25	PASS
n38	15	5	518500	1@0	DFT_QPSK	2537	-25.89	-25	PASS
n38	15	5	518500	1@24	DFT_QPSK	2682.73	-30.52	-25	PASS
n38	15	5	523500	25@0	DFT_QPSK	25739.18	-33.11	-25	PASS
n38	15	5	523500	1@0	DFT_QPSK	26318.45	-32.96	-25	PASS
n38	15	5	523500	1@24	DFT_QPSK	26538.85	-32.99	-25	PASS
n38	15	40	518000	216@0	DFT_QPSK	26277.13	-33.08	-25	PASS
n38	15	40	518000	1@0	DFT_QPSK	29441.03	-33.61	-25	PASS
n38	15	40	518000	1@215	DFT_QPSK	26339.48	-33.02	-25	PASS
n38	15	40	519000	216@0	DFT_QPSK	26290.18	-33.28	-25	PASS
n38	15	40	519000	1@0	DFT_QPSK	25516.6	-33.65	-25	PASS
n38	15	40	519000	1@215	DFT_QPSK	26456.2	-33.25	-25	PASS
n38	15	40	520000	216@0	DFT_QPSK	26171.28	-33.11	-25	PASS
n38	15	40	520000	1@0	DFT_QPSK	25766	-32.62	-25	PASS
n38	15	40	520000	1@215	DFT_QPSK	26256.1	-32.83	-25	PASS

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=514500 RB=25@0



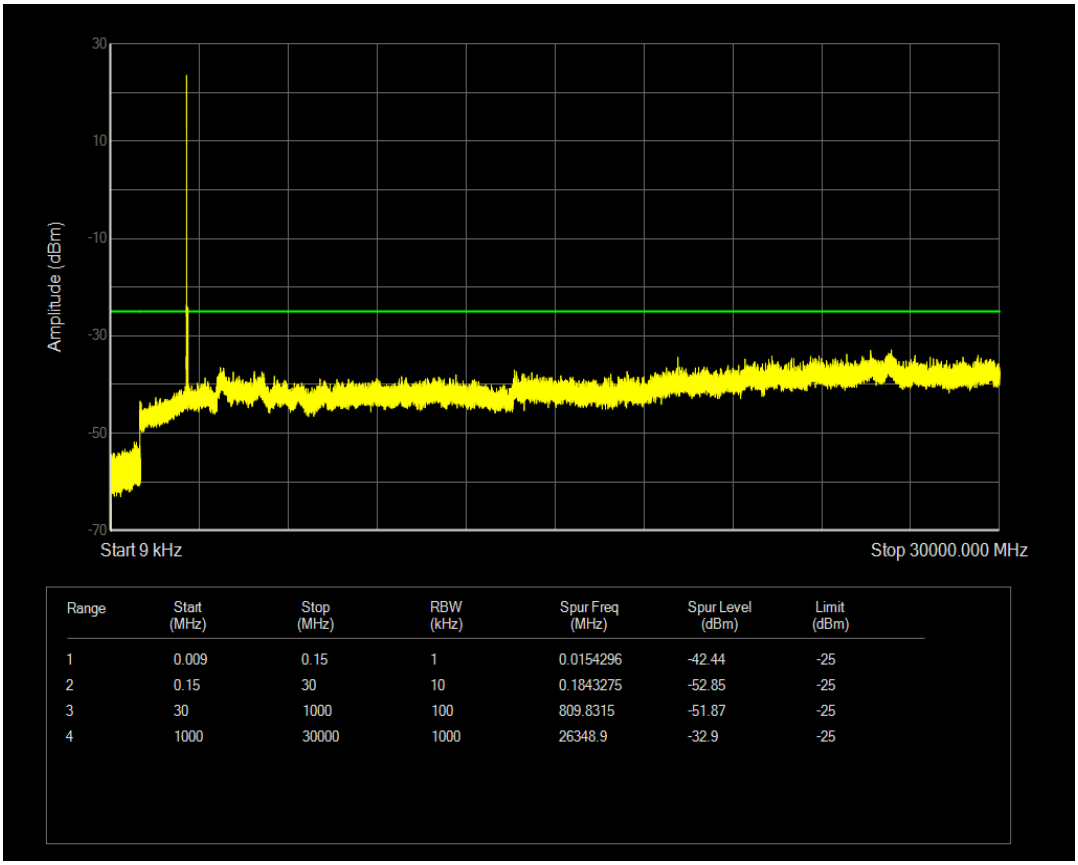
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.010089225	-41.36	-25
2	0.15	30	10	0.1604475	-53.58	-25
3	30	1000	100	976.40475	-51.92	-25
4	1000	30000	1000	2663.875	-27.45	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=514500 RB=1@0



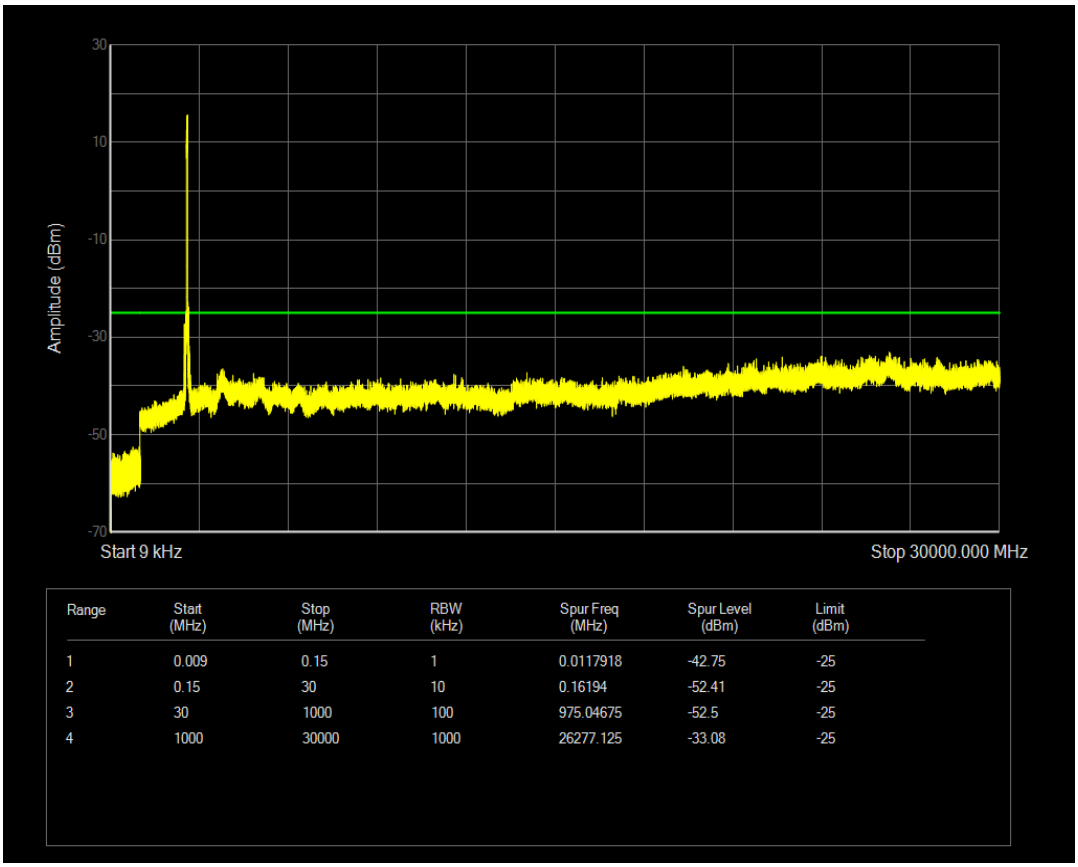
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009645075	-40.97	-25
2	0.15	30	10	9.09082125	-51.7	-25
3	30	1000	100	804.351	-51.93	-25
4	1000	30000	1000	2645.025	-29.53	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=514500 RB=1@24



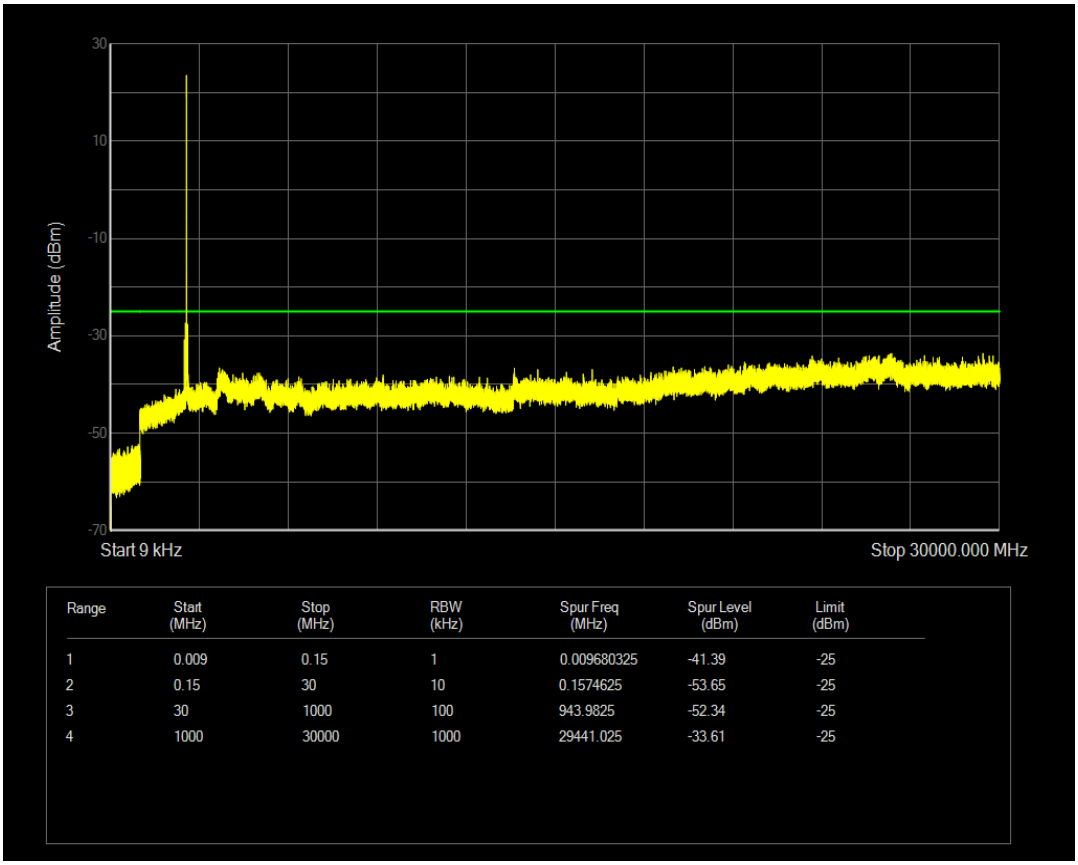
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0154296	-42.44	-25
2	0.15	30	10	0.1843275	-52.85	-25
3	30	1000	100	809.8315	-51.87	-25
4	1000	30000	1000	26348.9	-32.9	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=518000 RB=216@0



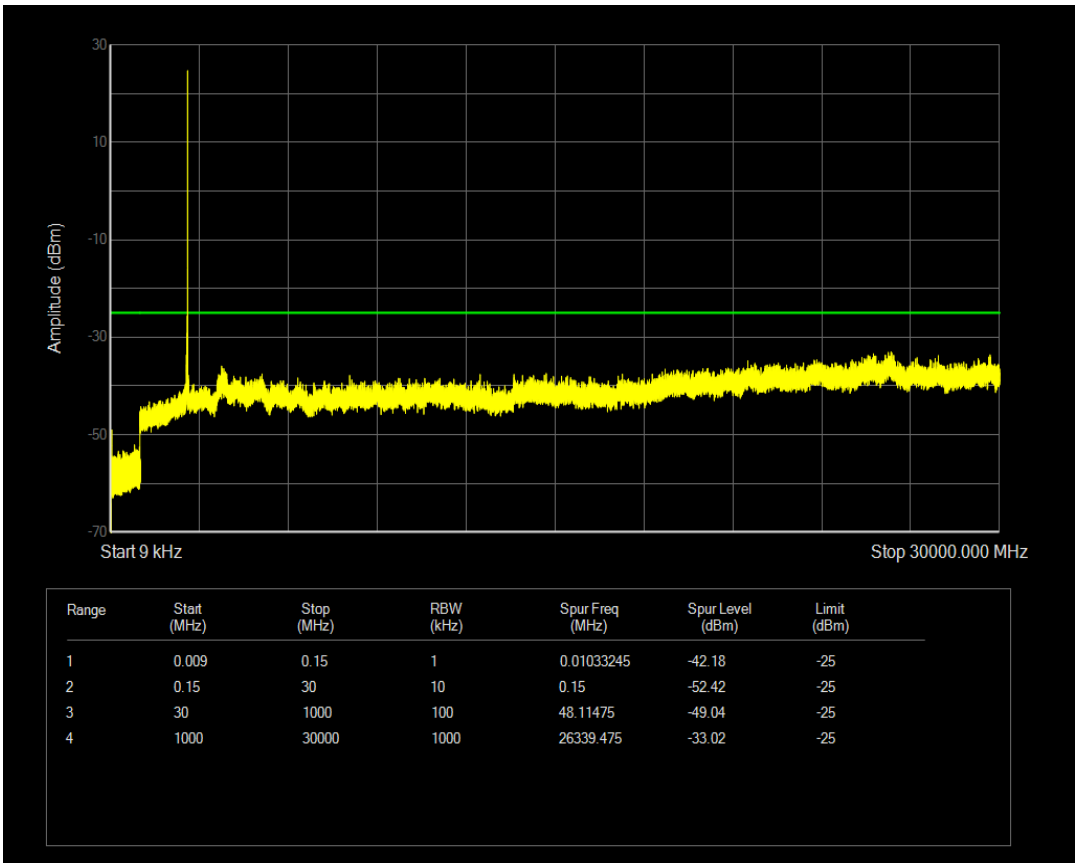
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0117918	-42.75	-25
2	0.15	30	10	0.16194	-52.41	-25
3	30	1000	100	975.04675	-52.5	-25
4	1000	30000	1000	26277.125	-33.08	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=518000 RB=1@0



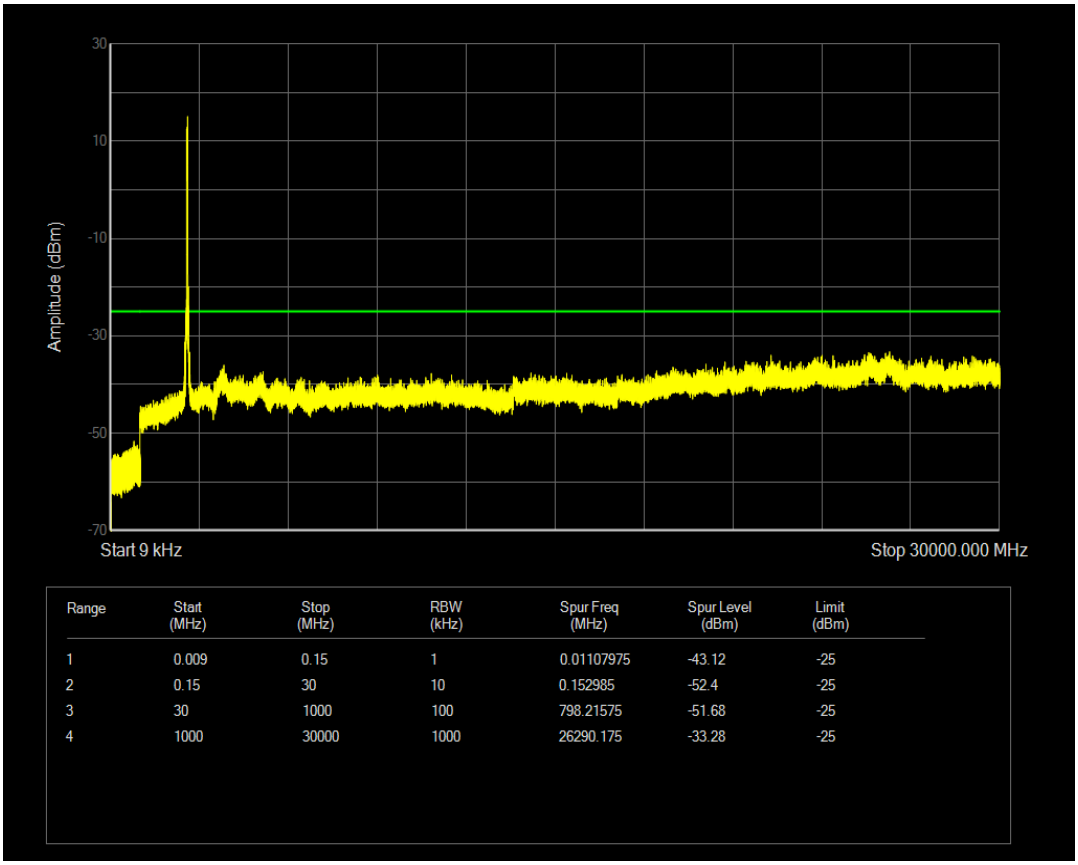
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009680325	-41.39	-25
2	0.15	30	10	0.1574625	-53.65	-25
3	30	1000	100	943.9825	-52.34	-25
4	1000	30000	1000	29441.025	-33.61	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=518000 RB=1@215



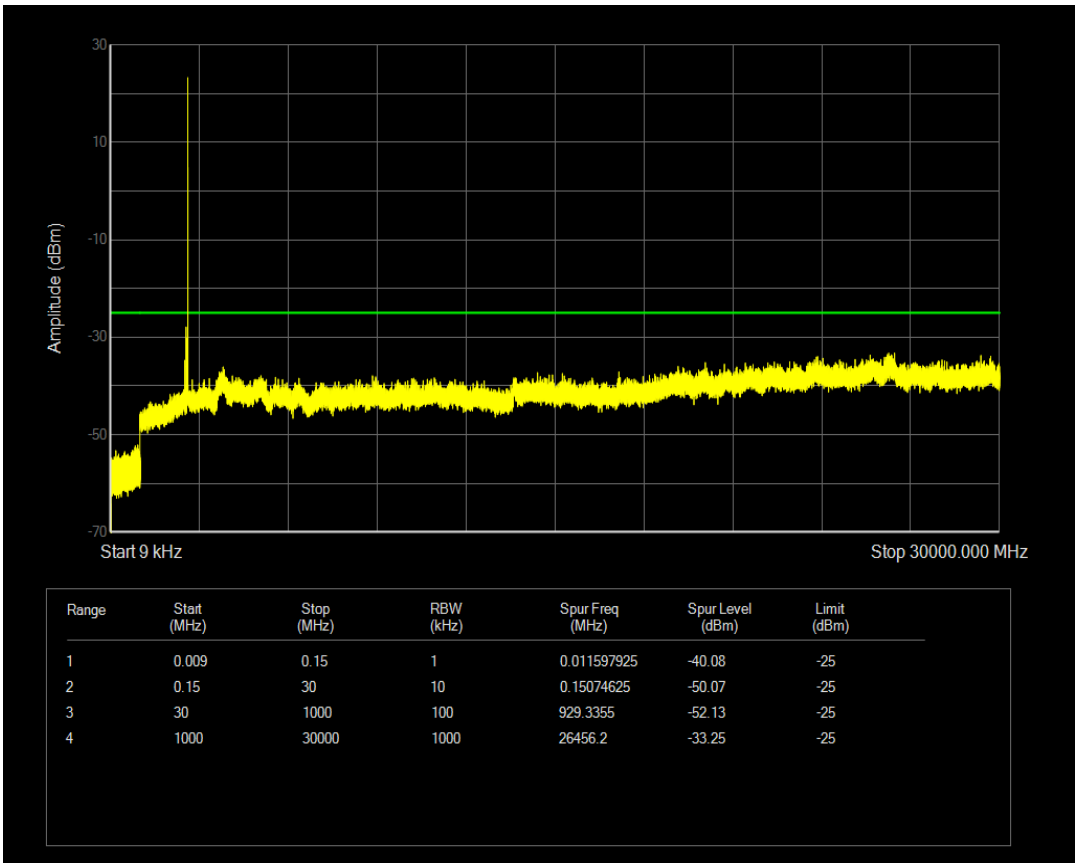
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01033245	-42.18	-25
2	0.15	30	10	0.15	-52.42	-25
3	30	1000	100	48.11475	-49.04	-25
4	1000	30000	1000	26339.475	-33.02	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=519000 RB=216@0



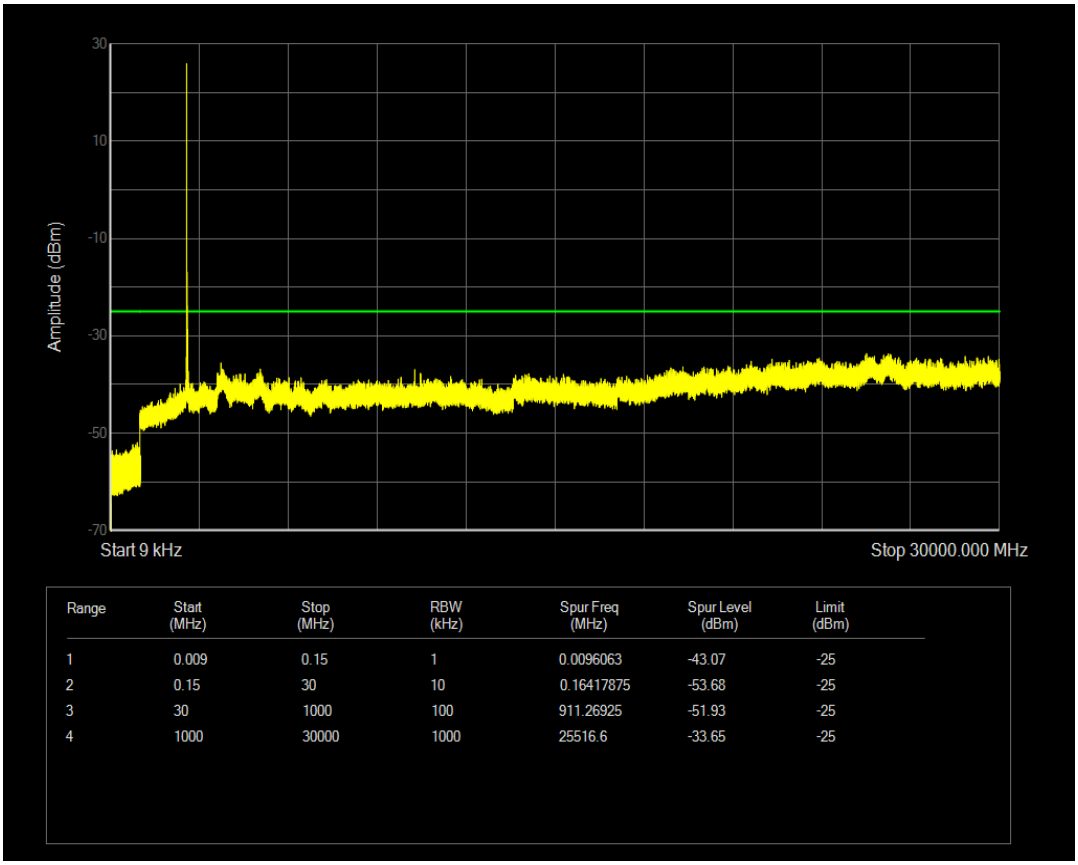
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01107975	-43.12	-25
2	0.15	30	10	0.152985	-52.4	-25
3	30	1000	100	798.21575	-51.68	-25
4	1000	30000	1000	26290.175	-33.28	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=519000 RB=1@215



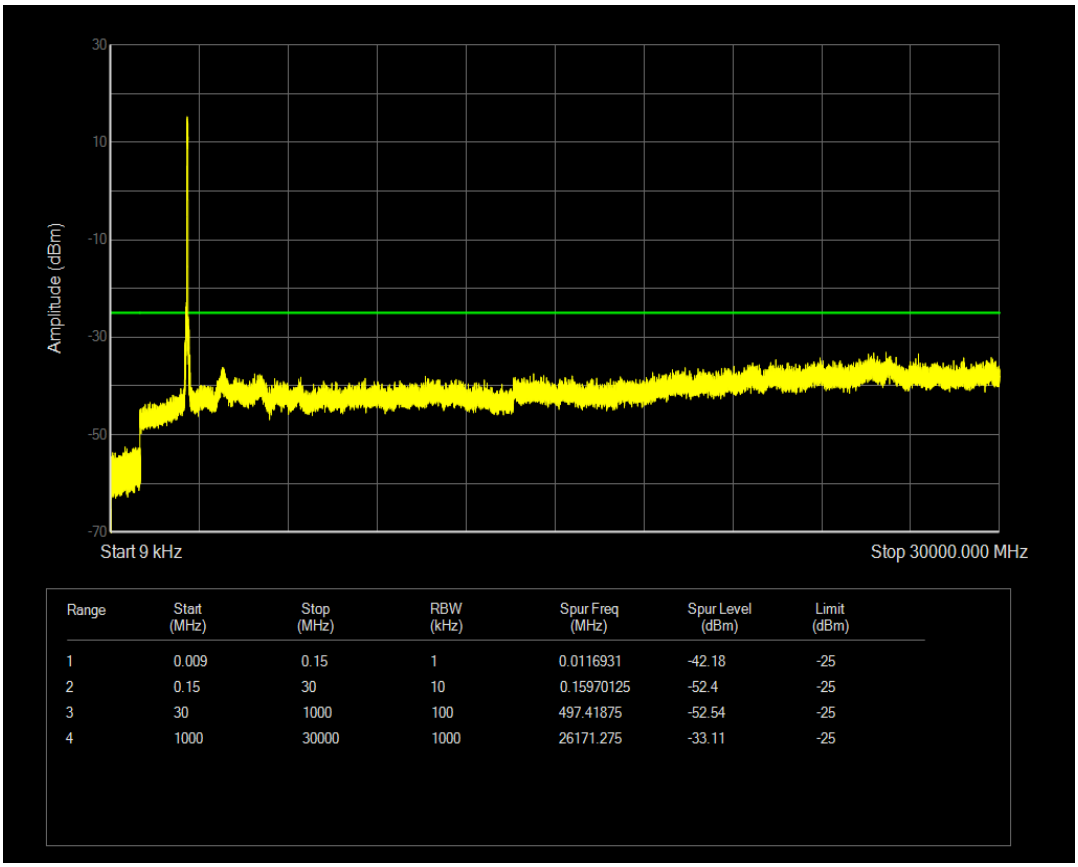
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.011597925	-40.08	-25
2	0.15	30	10	0.15074625	-50.07	-25
3	30	1000	100	929.3355	-52.13	-25
4	1000	30000	1000	26456.2	-33.25	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=519000 RB=1@0



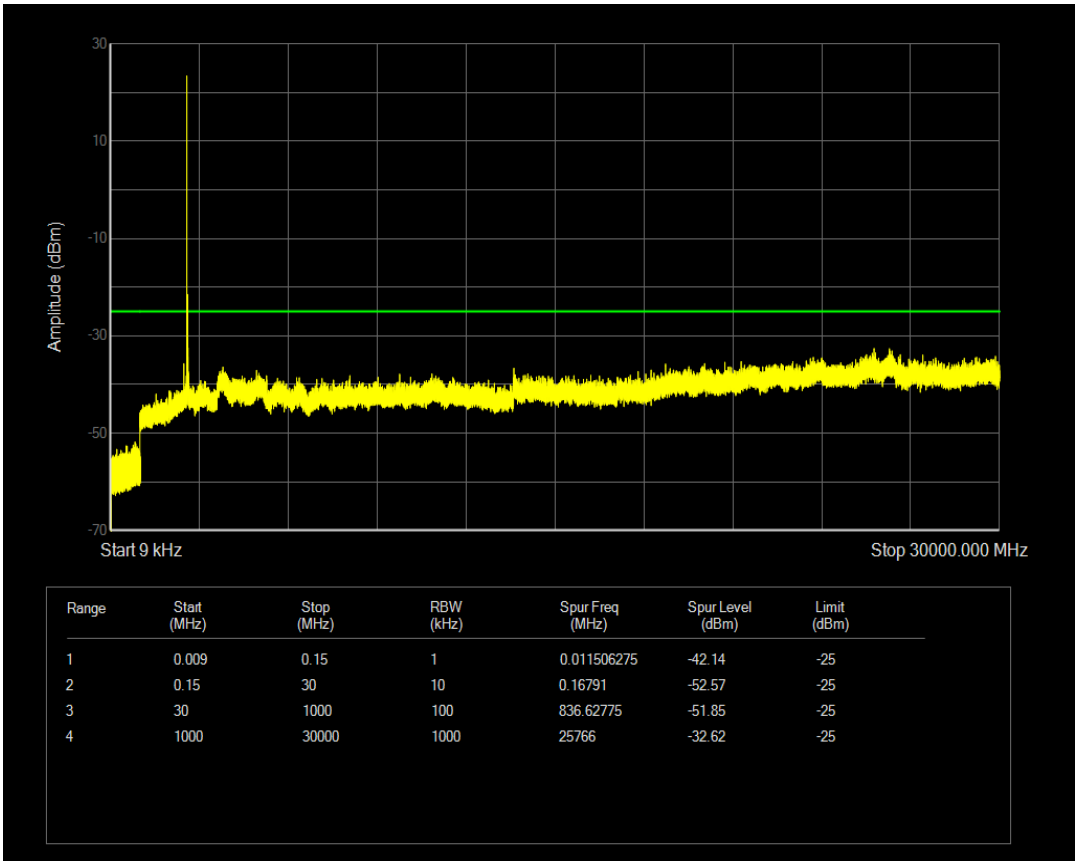
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0096063	-43.07	-25
2	0.15	30	10	0.16417875	-53.68	-25
3	30	1000	100	911.26925	-51.93	-25
4	1000	30000	1000	25516.6	-33.65	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=520000 RB=216@0



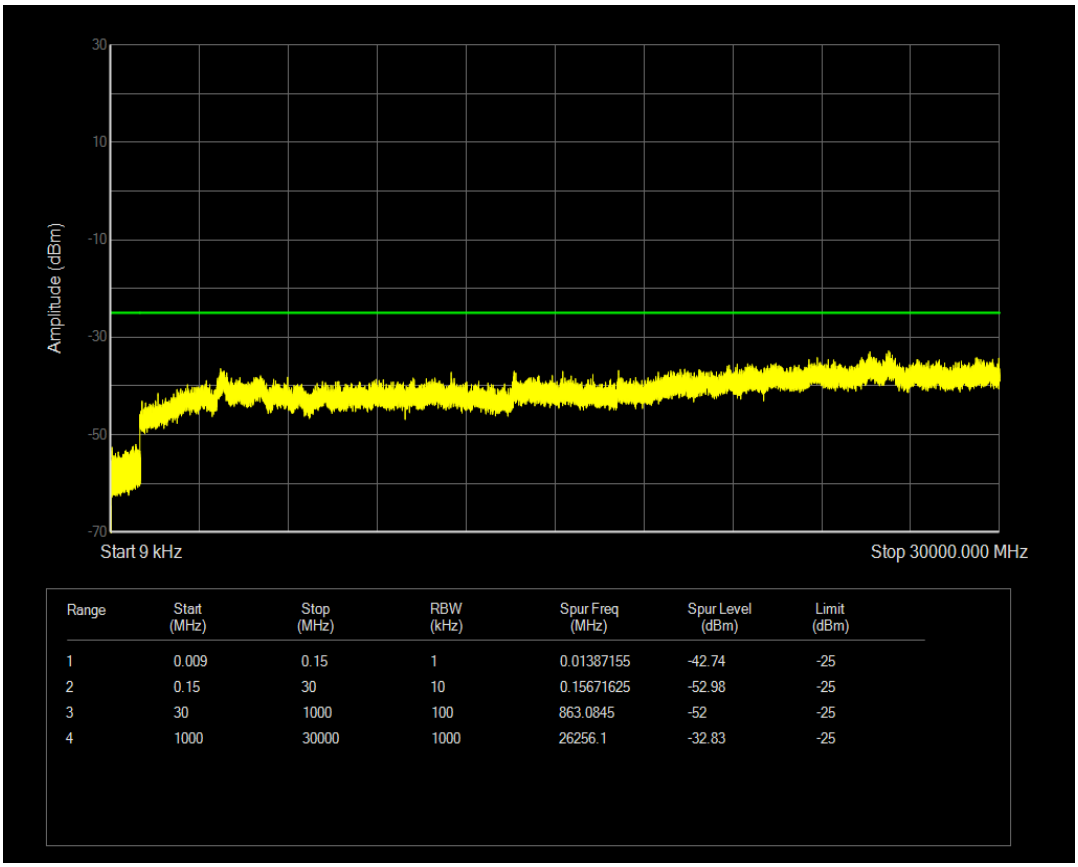
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0116931	-42.18	-25
2	0.15	30	10	0.15970125	-52.4	-25
3	30	1000	100	497.41875	-52.54	-25
4	1000	30000	1000	26171.275	-33.11	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=520000 RB=1@0



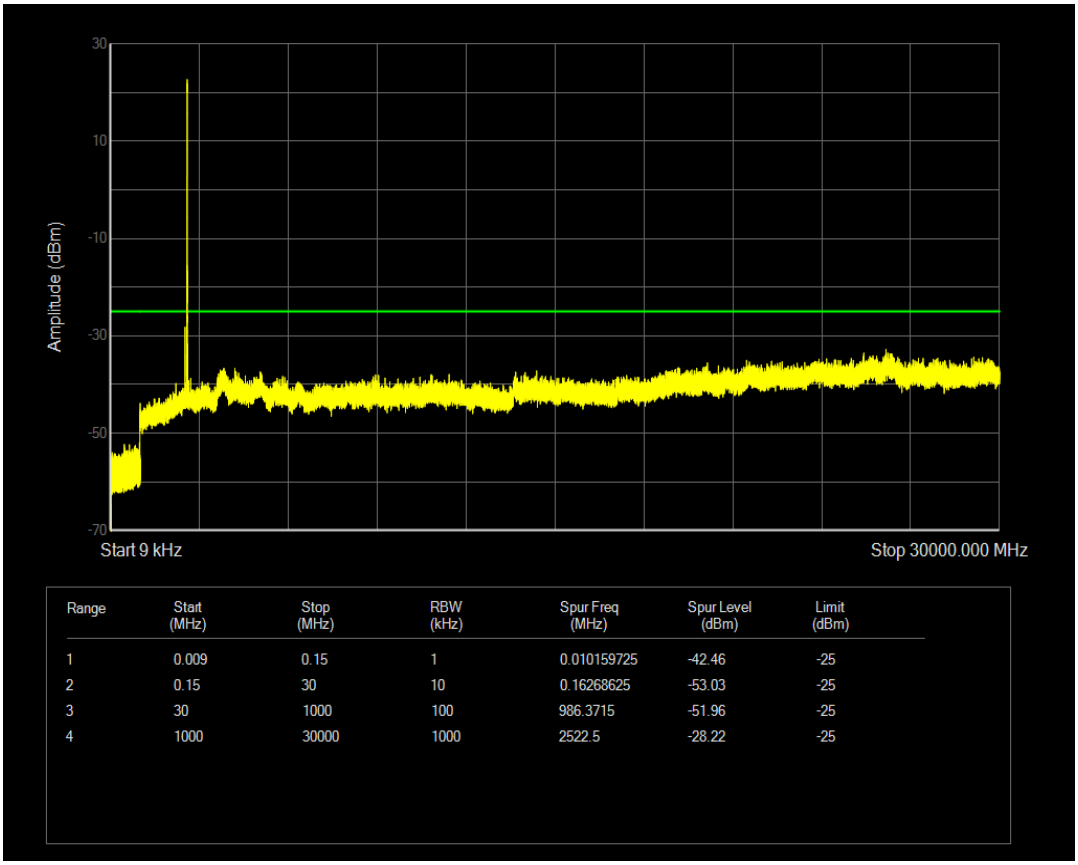
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.011506275	-42.14	-25
2	0.15	30	10	0.16791	-52.57	-25
3	30	1000	100	836.62775	-51.85	-25
4	1000	30000	1000	25766	-32.62	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=520000 RB=1@215



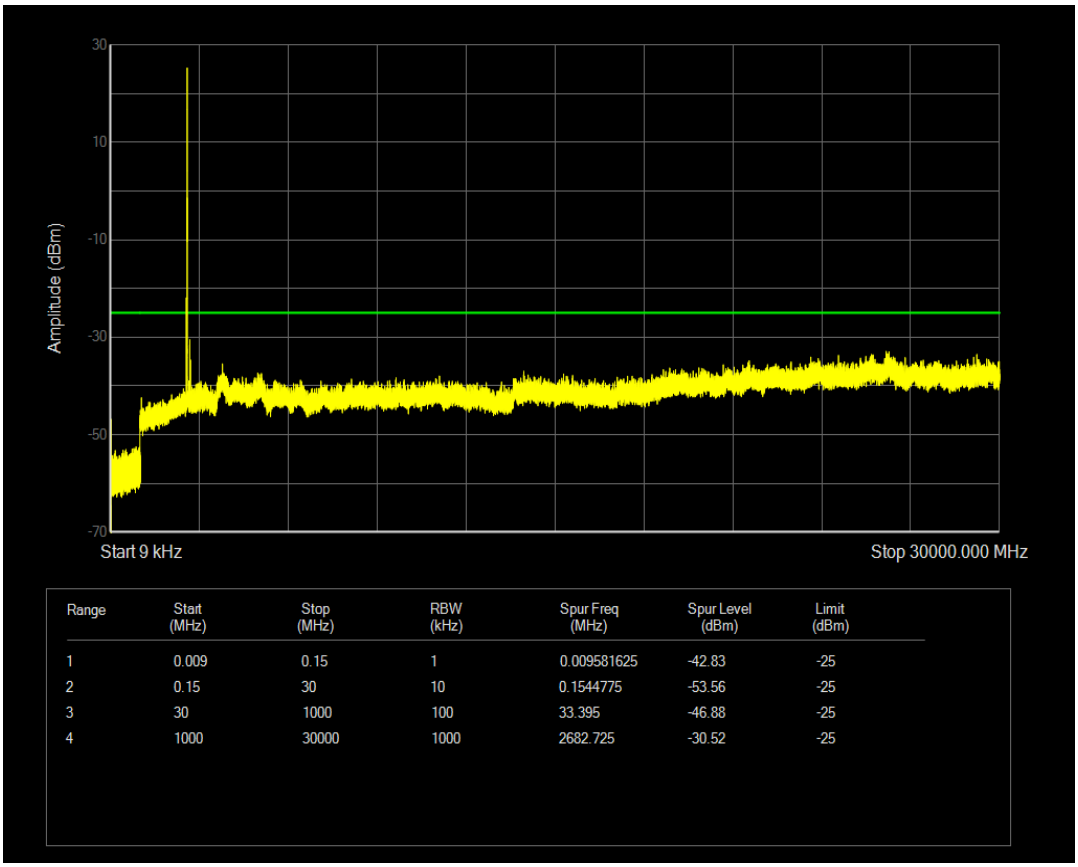
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01387155	-42.74	-25
2	0.15	30	10	0.15671625	-52.98	-25
3	30	1000	100	863.0845	-52	-25
4	1000	30000	1000	26256.1	-32.83	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=518500 RB=25@0



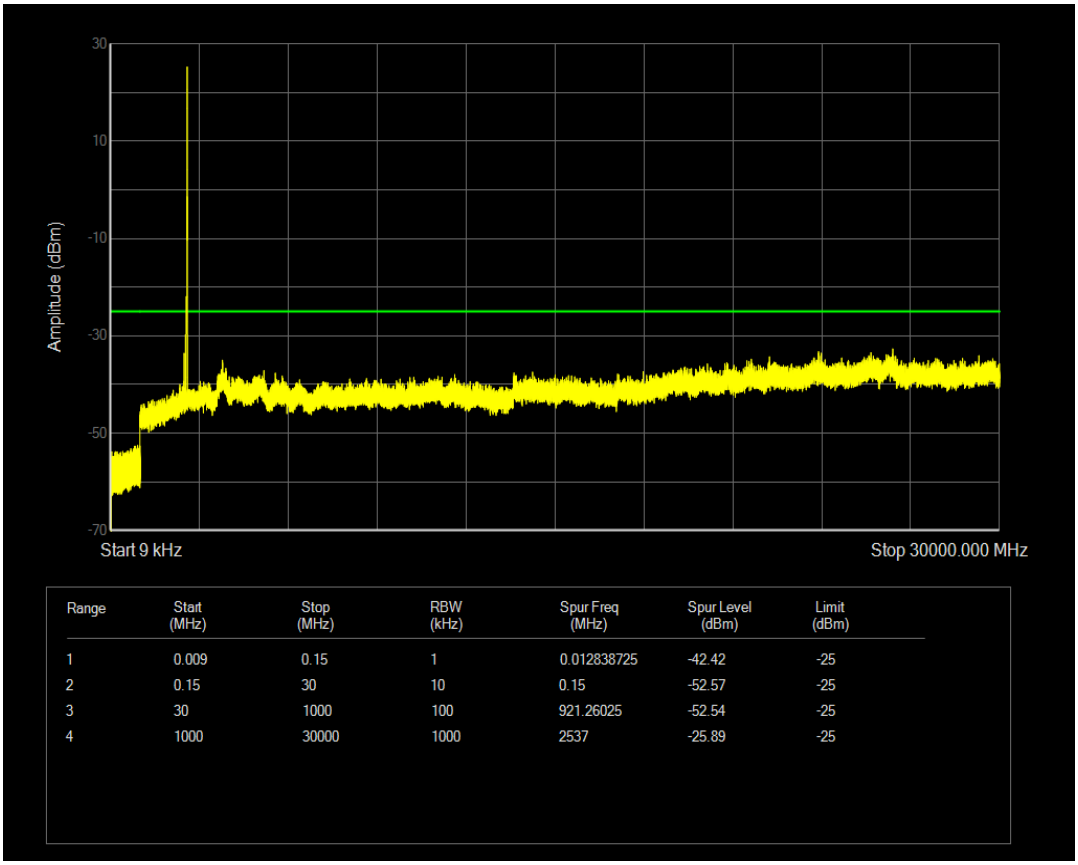
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.010159725	-42.46	-25
2	0.15	30	10	0.16268625	-53.03	-25
3	30	1000	100	986.3715	-51.96	-25
4	1000	30000	1000	2522.5	-28.22	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=518500 RB=1@24



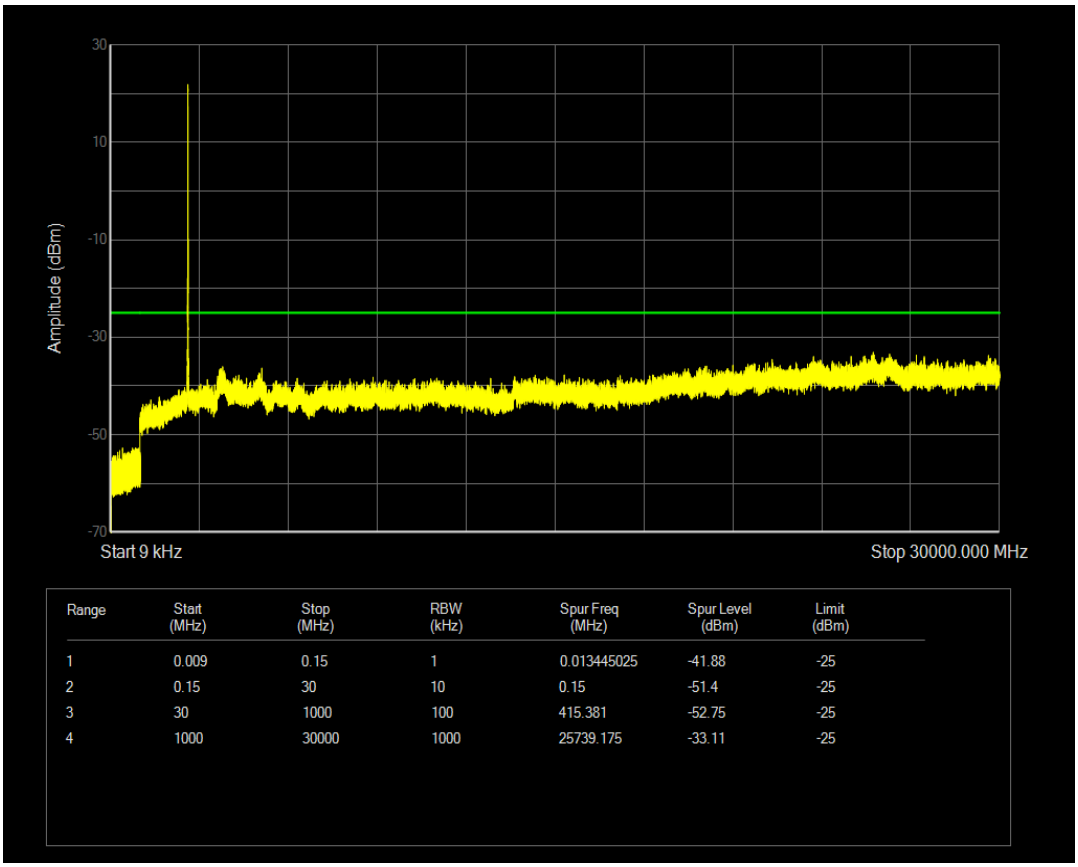
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009581625	-42.83	-25
2	0.15	30	10	0.1544775	-53.56	-25
3	30	1000	100	33.395	-46.88	-25
4	1000	30000	1000	2682.725	-30.52	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=518500 RB=1@0



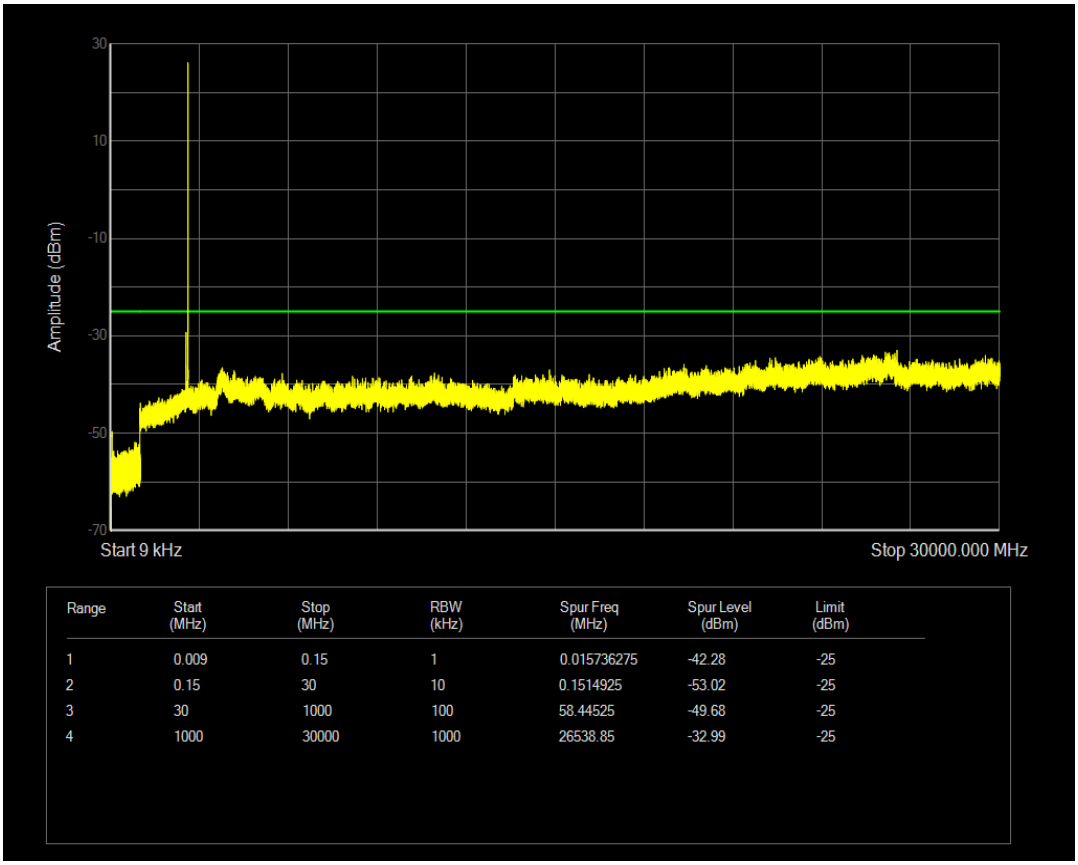
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.012838725	-42.42	-25
2	0.15	30	10	0.15	-52.57	-25
3	30	1000	100	921.26025	-52.54	-25
4	1000	30000	1000	2537	-25.89	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=523500 RB=25@0



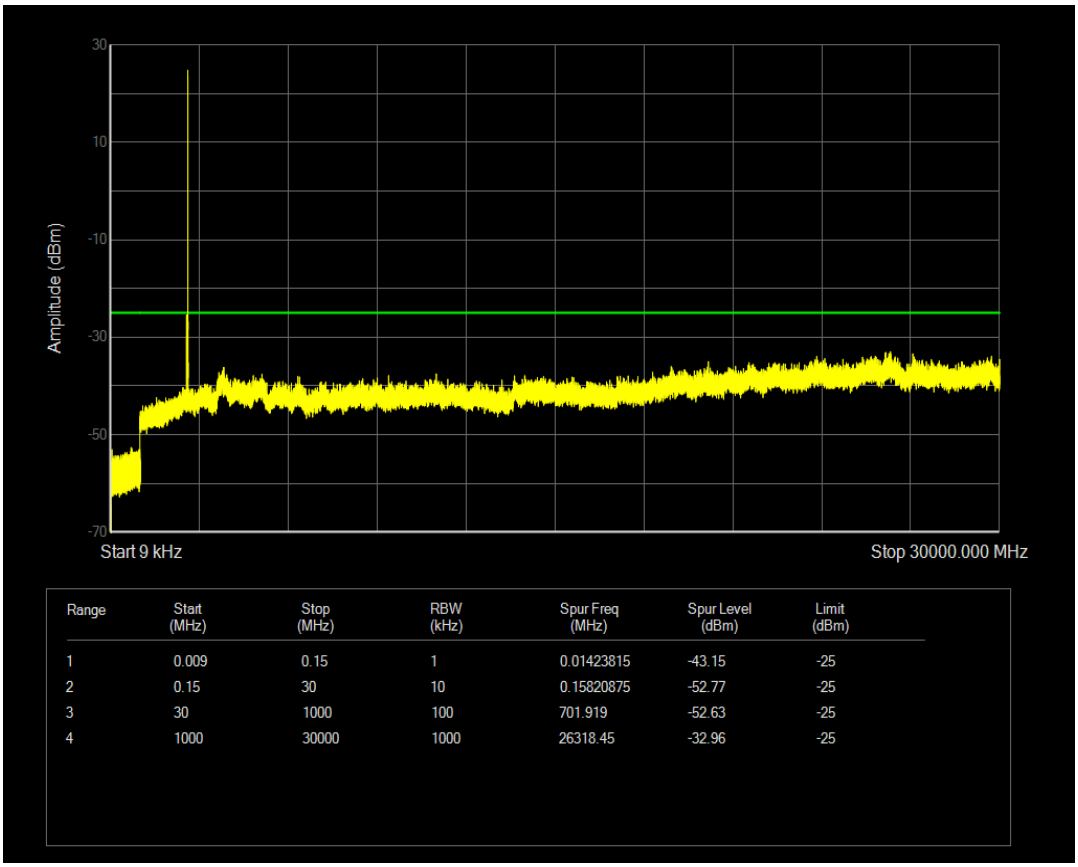
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.013445025	-41.88	-25
2	0.15	30	10	0.15	-51.4	-25
3	30	1000	100	415.381	-52.75	-25
4	1000	30000	1000	25739.175	-33.11	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=523500 RB=1@24



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.015736275	-42.28	-25
2	0.15	30	10	0.1514925	-53.02	-25
3	30	1000	100	58.44525	-49.68	-25
4	1000	30000	1000	26538.85	-32.99	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=523500 RB=1@0



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01423815	-43.15	-25
2	0.15	30	10	0.15820875	-52.77	-25
3	30	1000	100	701.919	-52.63	-25
4	1000	30000	1000	26318.45	-32.96	-25