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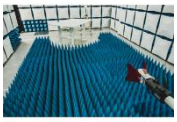

MEASUREMENT REPORT
PART 27

Applicant Name:
Apple Inc.
One Apple Park Way
Cupertino, CA 95014
United States

Date of Testing:
10/1/2023 – 4/1/2024
Test Report Issue Date:
4/3/2024
Test Site/Location:
Element Materials Technology, Morgan Hill, CA, USA
Test Report Serial No.:
1C2311270070-10.BCG

FCC ID:	**BCGA2926**
Applicant Name:	**Apple Inc.**

Application Type:	Certification
Model:	A2926, A3007
EUT Type:	Tablet Device
FCC Classification:	PCS Licensed Transmitter (PCB)
FCC Rule Part:	27
Test Procedure(s):	ANSI C63.26-2015, TIA-603-E-2016, KDB 971168 D01 v03r01

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

RJ Ortanez
Executive Vice President

Prepared by: WKR0000006184

Reviewed by: WKR0000005805

ACCREDITED
CERT #2041.02

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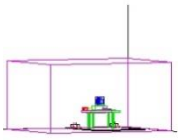
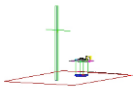


PART 27 MEASUREMENT REPORT



Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	OBW [MHz]	EIRP		Emission Designator
					Max. Power [W]	Max. Power [dBm]	
LTE Band 30	5 MHz	QPSK	2307.5 - 2312.5	4.5313	0.223	23.49	4M53G7W
		16QAM	2307.5 - 2312.5	4.5379	0.177	22.49	4M54D7W
		64QAM	2307.5 - 2312.5	4.5484	0.142	21.51	4M55D7W
		256QAM	2307.5 - 2312.5	4.5195	0.073	18.62	4M52D7W
	10MHz	QPSK	2310	9.0357	0.221	23.45	9M04G7W
		16QAM	2310	9.0315	0.174	22.41	9M03D7W
		64QAM	2310	9.0599	0.141	21.49	9M06D7W
		256QAM	2310	9.0375	0.071	18.50	9M04D7W
LTE Band 7	5 MHz	QPSK	2502.5 - 2567.5	4.5497	0.433	26.36	4M55G7W
		16QAM	2502.5 - 2567.5	4.5308	0.346	25.39	4M53D7W
		64QAM	2502.5 - 2567.5	4.5420	0.272	24.34	4M54D7W
		256QAM	2502.5 - 2567.5	4.5341	0.141	21.50	4M53D7W
	10 MHz	QPSK	2505 - 2565	9.0440	0.436	26.39	9M04G7W
		16QAM	2505 - 2565	9.0489	0.348	25.42	9M05D7W
		64QAM	2505 - 2565	9.0511	0.277	24.42	9M05D7W
		256QAM	2505 - 2565	9.0262	0.143	21.54	9M03D7W
	15 MHz	QPSK	2507.5 - 2562.5	13.5300	0.432	26.35	13M5G7W
		16QAM	2507.5 - 2562.5	13.5480	0.348	25.41	13M5D7W
		64QAM	2507.5 - 2562.5	13.5480	0.271	24.33	13M5D7W
		256QAM	2507.5 - 2562.5	13.5330	0.141	21.48	13M5D7W
	20 MHz	QPSK	2510 - 2560	18.0390	0.437	26.40	18M0G7W
		16QAM	2510 - 2560	18.0730	0.346	25.39	18M1D7W
		64QAM	2510 - 2560	18.0690	0.276	24.41	18M1D7W
		256QAM	2510 - 2560	18.0020	0.141	21.48	18M0D7W
LTE Band 41 (PC2)	5 MHz	QPSK	2498.5 - 2687.5	4.5373	1.069	30.29	4M54G7W
		16QAM	2498.5 - 2687.5	4.5236	0.865	29.37	4M52D7W
		64QAM	2498.5 - 2687.5	4.5201	0.697	28.43	4M52D7W
		256QAM	2498.5 - 2687.5	4.5499	0.352	25.47	4M55D7W
	10 MHz	QPSK	2501 - 2685	9.0417	1.074	30.31	9M04G7W
		16QAM	2501 - 2685	9.0376	0.853	29.31	9M04D7W
		64QAM	2501 - 2685	9.0474	0.693	28.41	9M05D7W
		256QAM	2501 - 2685	9.0371	0.353	25.48	9M04D7W
	15 MHz	QPSK	2503.5 - 2682.5	13.5430	1.064	30.27	13M5G7W
		16QAM	2503.5 - 2682.5	13.5440	0.875	29.42	13M5D7W
		64QAM	2503.5 - 2682.5	13.5350	0.693	28.41	13M5D7W
		256QAM	2503.5 - 2682.5	13.4980	0.345	25.38	13M5D7W
	20 MHz	QPSK	2506 - 2680	18.0480	1.094	30.39	18M0G7W
		16QAM	2506 - 2680	18.0680	0.871	29.40	18M1D7W
		64QAM	2506 - 2680	18.0140	0.681	28.33	18M0D7W
		256QAM	2506 - 2680	18.0210	0.354	25.49	18M0D7W
LTE Band 41(PC3)	5 MHz	QPSK	2498.5 - 2687.5	4.5373	0.542	27.34	4M54G7W
		16QAM	2498.5 - 2687.5	4.5236	0.423	26.26	4M52D7W
		64QAM	2498.5 - 2687.5	4.5201	0.346	25.39	4M52D7W
		256QAM	2498.5 - 2687.5	4.5499	0.179	22.52	4M55D7W
	10 MHz	QPSK	2501 - 2685	9.0417	0.548	27.39	9M04G7W
		16QAM	2501 - 2685	9.0376	0.436	26.39	9M04D7W
		64QAM	2501 - 2685	9.0474	0.348	25.41	9M05D7W
		256QAM	2501 - 2685	9.0371	0.178	22.51	9M04D7W
	15 MHz	QPSK	2503.5 - 2682.5	13.5430	0.550	27.40	13M5G7W
		16QAM	2503.5 - 2682.5	13.5440	0.432	26.35	13M5D7W
		64QAM	2503.5 - 2682.5	13.5350	0.346	25.39	13M5D7W
		256QAM	2503.5 - 2682.5	13.4980	0.178	22.51	13M5D7W
	20 MHz	QPSK	2506 - 2680	18.0480	0.550	27.40	18M0G7W
		16QAM	2506 - 2680	18.0680	0.441	26.44	18M1D7W
		64QAM	2506 - 2680	18.0140	0.350	25.44	18M0D7W
		256QAM	2506 - 2680	18.0210	0.178	22.50	18M0D7W
ULCA LTE Band 7	20 + 20 MHz	QPSK	2520 - 2550	37.5360	0.437	26.40	37M5G7W
		16QAM	2520 - 2550	37.5520	0.248	23.95	37M6D7W
		64QAM	2520 - 2550	37.5370	0.179	22.52	37M5D7W
		256QAM	2520 - 2550	37.5880	0.095	19.80	37M6D7W
ULCA LTE Band 41(PC2)	20 + 20 MHz	QPSK	2516 - 2670	37.5240	1.096	30.40	37M5G7W
		16QAM	2516 - 2670	37.5430	0.615	27.89	37M5D7W
		64QAM	2516 - 2670	37.5600	0.513	27.10	37M6D7W
		256QAM	2516 - 2670	37.5390	0.229	23.60	37M5D7W
ULCA LTE Band 41(PC3)	20 + 20 MHz	QPSK	2516 - 2670	37.5240	0.542	27.34	37M5G7W
		16QAM	2516 - 2670	37.5430	0.321	25.07	37M5D7W
		64QAM	2516 - 2670	37.5600	0.255	24.06	37M6D7W
		256QAM	2516 - 2670	37.5390	0.133	21.25	37M5D7W

EUT Overview

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	OBW [MHz]	EIRP		Emission Designator
					Max. Power [W]	Max. Power [dBm]	
NR Band n30	5 MHz	π/2 BPSK	2307.5 - 2312.5	4.4786	0.224	23.50	4M48G7W
		QPSK	2307.5 - 2312.5	4.4704	0.221	23.45	4M47G7W
		16QAM	2307.5 - 2312.5	4.4968	0.175	22.44	4M50D7W
		64QAM	2307.5 - 2312.5	4.4981	0.141	21.48	4M50D7W
		256QAM	2307.5 - 2312.5	4.4625	0.072	18.60	4M46D7W
	10MHz	π/2 BPSK	2310	8.9979	0.222	23.46	9M00G7W
		QPSK	2310	9.2714	0.219	23.40	9M27G7W
		16QAM	2310	9.2667	0.172	22.36	9M27D7W
		64QAM	2310	9.2531	0.142	21.51	9M25D7W
		256QAM	2310	9.3018	0.071	18.52	9M30D7W
NR Band n7	5 MHz	π/2 BPSK	2502.5 - 2567.5	4.4938	0.433	26.36	4M49G7W
		QPSK	2502.5 - 2567.5	4.4867	0.437	26.40	4M49G7W
		16QAM	2502.5 - 2567.5	4.4965	0.344	25.36	4M50D7W
		64QAM	2502.5 - 2567.5	4.4627	0.275	24.39	4M46D7W
		256QAM	2502.5 - 2567.5	4.4670	0.137	21.36	4M47D7W
	10MHz	π/2 BPSK	2505 - 2565	8.9549	0.435	26.38	8M95G7W
		QPSK	2505 - 2565	9.3179	0.437	26.40	9M32G7W
		16QAM	2505 - 2565	9.3213	0.346	25.39	9M32D7W
		64QAM	2505 - 2565	9.3298	0.275	24.39	9M33D7W
		256QAM	2505 - 2565	9.2862	0.138	21.40	9M29D7W
	15 MHz	π/2 BPSK	2507.5 - 2562.5	13.4930	0.429	26.32	13M5G7W
		QPSK	2507.5 - 2562.5	14.1210	0.437	26.40	14M1G7W
		16QAM	2507.5 - 2562.5	14.1060	0.350	25.44	14M1D7W
		64QAM	2507.5 - 2562.5	14.1050	0.273	24.36	14M1D7W
		256QAM	2507.5 - 2562.5	14.1260	0.144	21.57	14M1D7W
	20MHz	π/2 BPSK	2510 - 2560	17.8890	0.437	26.40	17M9G7W
		QPSK	2510 - 2560	19.0490	0.429	26.32	19M0G7W
		16QAM	2510 - 2560	18.9860	0.344	25.37	19M0D7W
		64QAM	2510 - 2560	19.0150	0.274	24.37	19M0D7W
		256QAM	2510 - 2560	18.9370	0.139	21.44	18M9D7W
	25MHz	π/2 BPSK	2512.5 - 2557.5	22.9820	0.435	26.38	23M0G7W
		QPSK	2512.5 - 2557.5	23.8250	0.437	26.40	23M8G7W
		16QAM	2512.5 - 2557.5	23.8720	0.347	25.40	23M9D7W
		64QAM	2512.5 - 2557.5	23.8460	0.277	24.42	23M8D7W
		256QAM	2512.5 - 2557.5	23.7510	0.141	21.48	23M8D7W
	30MHz	π/2 BPSK	2515 - 2555	28.6410	0.437	26.40	28M6G7W
		QPSK	2515 - 2555	28.6430	0.423	26.26	28M6G7W
		16QAM	2515 - 2555	28.6110	0.348	25.41	28M6D7W
		64QAM	2515 - 2555	28.6430	0.275	24.40	28M6D7W
		256QAM	2515 - 2555	28.5770	0.138	21.41	28M6D7W
	35MHz	π/2 BPSK	2517.5 - 2552.5	32.1870	0.437	26.40	32M2G7W
		QPSK	2517.5 - 2552.6	33.5540	0.437	26.40	33M6G7W
		16QAM	2517.5 - 2552.7	33.7210	0.340	25.32	33M7D7W
		64QAM	2517.5 - 2552.8	33.6880	0.275	24.39	33M7D7W
		256QAM	2517.5 - 2552.9	33.5550	0.142	21.51	33M6D7W
	40MHz	π/2 BPSK	2520 - 2550	38.6640	0.437	26.40	38M7G7W
		QPSK	2520 - 2550	38.6400	0.419	26.22	38M6G7W
		16QAM	2520 - 2550	38.5850	0.348	25.42	38M6D7W
		64QAM	2520 - 2550	38.4950	0.276	24.41	38M5D7W
		256QAM	2520 - 2550	38.6870	0.137	21.36	38M7D7W

EUT Overview

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	OBW [MHz]	EIRP		Emission Designator
					Max. Power [W]	Max. Power [dBm]	
NR Band n41 (PC2)	10 MHz	π/2 BPSK	2501 - 2685	8.5936	1.096	30.40	8M59G7W
		QPSK	2501 - 2685	8.6044	1.074	30.31	8M60G7W
		16QAM	2501 - 2685	8.5366	0.875	29.42	8M54D7W
		64QAM	2501 - 2685	8.6029	0.692	28.40	8M60D7W
		256QAM	2501 - 2685	8.6050	0.353	25.48	8M61D7W
	15 MHz	π/2 BPSK	2503.5 - 2682.5	12.9760	1.091	30.38	13M0G7W
		QPSK	2503.5 - 2682.5	13.6230	1.086	30.36	13M6G7W
		16QAM	2503.5 - 2682.5	13.5600	0.865	29.37	13M6D7W
		64QAM	2503.5 - 2682.5	13.6190	0.695	28.42	13M6D7W
		256QAM	2503.5 - 2682.5	13.5950	0.345	25.38	13M6D7W
	20 MHz	π/2 BPSK	2506 - 2680	17.7880	1.096	30.40	17M8G7W
		QPSK	2506 - 2680	18.2870	1.091	30.38	18M3G7W
		16QAM	2506 - 2680	18.2390	0.873	29.41	18M2D7W
		64QAM	2506 - 2680	18.3520	0.697	28.43	18M4D7W
		256QAM	2506 - 2680	18.2550	0.352	25.47	18M3D7W
	30MHz	π/2 BPSK	2511 - 2675	26.8710	1.096	30.40	26M9G7W
		QPSK	2511 - 2675	27.8110	1.072	30.30	27M8G7W
		16QAM	2511 - 2675	27.9680	0.877	29.43	28M0D7W
		64QAM	2511 - 2675	27.8350	0.684	28.35	27M8D7W
		256QAM	2511 - 2675	27.8740	0.358	25.54	27M9D7W
	40 MHz	π/2 BPSK	2516 - 2670	35.8310	1.096	30.40	35M8G7W
		QPSK	2516 - 2670	37.9540	1.067	30.28	38M0G7W
		16QAM	2516 - 2670	37.9270	0.861	29.35	37M9D7W
		64QAM	2516 - 2670	37.9270	0.685	28.36	37M9D7W
		256QAM	2516 - 2670	37.9230	0.344	25.36	37M9D7W
	50 MHz	π/2 BPSK	2521 - 2665	45.8830	1.081	30.34	45M9G7W
		QPSK	2521 - 2665	47.7290	1.096	30.40	47M7G7W
		16QAM	2521 - 2665	47.5670	0.873	29.41	47M6D7W
		64QAM	2521 - 2665	47.6440	0.692	28.40	47M6D7W
		256QAM	2521 - 2665	47.6020	0.356	25.51	47M6D7W
	60 MHz	π/2 BPSK	2526 - 2660	57.8830	1.096	30.40	57M9G7W
		QPSK	2526 - 2660	57.9110	1.081	30.34	57M9G7W
		16QAM	2526 - 2660	57.9930	0.869	29.39	58M0D7W
		64QAM	2526 - 2660	57.9190	0.684	28.35	57M9D7W
		256QAM	2526 - 2660	57.9160	0.356	25.52	57M9D7W
	70 MHz	π/2 BPSK	2531 - 2655	64.3190	1.086	30.36	64M3G7W
		QPSK	2531 - 2655	67.6460	1.096	30.40	67M6G7W
		16QAM	2531 - 2655	67.6230	0.863	29.36	67M6D7W
		64QAM	2531 - 2655	67.4680	0.690	28.39	67M5D7W
		256QAM	2531 - 2655	67.6500	0.355	25.50	67M7D7W
	80 MHz	π/2 BPSK	2536 - 2650	77.2170	1.096	30.40	77M2G7W
		QPSK	2536 - 2650	77.6150	1.091	30.38	77M6G7W
		16QAM	2536 - 2650	77.5470	0.859	29.34	77M5D7W
		64QAM	2536 - 2650	77.6510	0.695	28.42	77M7D7W
		256QAM	2536 - 2650	77.7970	0.356	25.52	77M8D7W
	90 MHz	π/2 BPSK	2541 - 2645	87.0040	1.074	30.31	87M0G7W
		QPSK	2541 - 2645	87.7130	1.096	30.40	87M7G7W
		16QAM	2541 - 2645	87.7410	0.861	29.35	87M7D7W
		64QAM	2541 - 2645	87.6340	0.692	28.40	87M6D7W
		256QAM	2541 - 2645	87.6250	0.344	25.37	87M6D7W
	100 MHz	π/2 BPSK	2546 - 2640	96.5570	1.096	30.40	96M6G7W
		QPSK	2546 - 2640	97.5780	1.096	30.40	97M6G7W
		16QAM	2546 - 2640	97.7500	0.857	29.33	97M8D7W
		64QAM	2546 - 2640	97.6140	0.701	28.46	97M6D7W
		256QAM	2546 - 2640	97.6660	0.358	25.54	97M7D7W

EUT Overview

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	OBW [MHz]	EIRP		Emission Designator
					Max. Power [W]	Max. Power [dBm]	
NR Band n41 (PC3)	10 MHz	π/2 BPSK	2505 - 2685	8.5936	0.550	27.40	8M59G7W
		QPSK	2505 - 2685	8.6044	0.540	27.32	8M60G7W
		16QAM	2505 - 2685	8.5366	0.432	26.35	8M54D7W
		64QAM	2505 - 2685	8.6029	0.346	25.39	8M60D7W
		256QAM	2505 - 2685	8.6050	0.177	22.48	8M61D7W
	15 MHz	π/2 BPSK	2507.5 - 2682.5	12.9760	0.550	27.40	13M0G7W
		QPSK	2507.5 - 2682.5	13.6230	0.550	27.40	13M6G7W
		16QAM	2507.5 - 2682.5	13.5600	0.440	26.43	13M6D7W
		64QAM	2507.5 - 2682.5	13.6190	0.344	25.36	13M6D7W
		256QAM	2507.5 - 2682.5	13.5950	0.175	22.44	13M6D7W
	20 MHz	π/2 BPSK	2506 - 2680	17.7880	0.535	27.28	17M8G7W
		QPSK	2506 - 2680	18.2870	0.550	27.40	18M3G7W
		16QAM	2506 - 2680	18.2390	0.423	26.26	18M2D7W
		64QAM	2506 - 2680	18.3520	0.348	25.41	18M4D7W
		256QAM	2506 - 2680	18.2550	0.177	22.49	18M3D7W
	30MHz	π/2 BPSK	2511 - 2675	26.8710	0.548	27.39	26M9G7W
		QPSK	2511 - 2675	27.8110	0.550	27.40	27M8G7W
		16QAM	2511 - 2675	27.9680	0.438	26.41	28M0D7W
		64QAM	2511 - 2675	27.8350	0.340	25.31	27M8D7W
		256QAM	2511 - 2675	27.8740	0.178	22.50	27M9D7W
	40 MHz	π/2 BPSK	2516 - 2670	35.8310	0.547	27.38	35M8G7W
		QPSK	2516 - 2670	37.9540	0.550	27.40	38M0G7W
		16QAM	2516 - 2670	37.9270	0.434	26.37	37M9D7W
		64QAM	2516 - 2670	37.9270	0.345	25.38	37M9D7W
		256QAM	2516 - 2670	37.9230	0.179	22.52	37M9D7W
	50 MHz	π/2 BPSK	2521 - 2665	45.8830	0.550	27.40	45M9G7W
		QPSK	2521 - 2665	47.7290	0.550	27.40	47M7G7W
		16QAM	2521 - 2665	47.5670	0.437	26.40	47M6D7W
		64QAM	2521 - 2665	47.6440	0.349	25.43	47M6D7W
		256QAM	2521 - 2665	47.6020	0.177	22.49	47M6D7W
	60 MHz	π/2 BPSK	2526 - 2660	57.8830	0.546	27.37	57M9G7W
		QPSK	2526 - 2660	57.9110	0.545	27.36	57M9G7W
		16QAM	2526 - 2660	57.9930	0.434	26.37	58M0D7W
		64QAM	2526 - 2660	57.9190	0.346	25.39	57M9D7W
		256QAM	2526 - 2660	57.9160	0.174	22.40	57M9D7W
	70 MHz	π/2 BPSK	2531 - 2655	64.3190	0.550	27.40	64M3G7W
		QPSK	2531 - 2655	67.6460	0.550	27.40	67M6G7W
		16QAM	2531 - 2655	67.6230	0.435	26.38	67M6D7W
		64QAM	2531 - 2655	67.4680	0.346	25.39	67M5D7W
		256QAM	2531 - 2655	67.6500	0.175	22.44	67M7D7W
	80 MHz	π/2 BPSK	2536 - 2650	77.2170	0.548	27.39	77M2G7W
		QPSK	2536 - 2650	77.6150	0.550	27.40	77M6G7W
		16QAM	2536 - 2650	77.5470	0.438	26.41	77M5D7W
		64QAM	2536 - 2650	77.6510	0.337	25.28	77M7D7W
		256QAM	2536 - 2650	77.7970	0.176	22.45	77M8D7W
	90 MHz	π/2 BPSK	2541 - 2645	87.0040	0.545	27.36	87M0G7W
		QPSK	2541 - 2645	87.7130	0.550	27.40	87M7G7W
		16QAM	2541 - 2645	87.7410	0.446	26.49	87M7D7W
		64QAM	2541 - 2645	87.6340	0.348	25.41	87M6D7W
		256QAM	2541 - 2645	87.6250	0.177	22.49	87M6D7W
	100 MHz	π/2 BPSK	2546 - 2640	96.5570	0.545	27.36	96M6G7W
		QPSK	2546 - 2640	97.5780	0.546	27.37	97M6G7W
		16QAM	2546 - 2640	97.7500	0.431	26.34	97M8D7W
		64QAM	2546 - 2640	97.6140	0.346	25.39	97M6D7W
		256QAM	2546 - 2640	97.6660	0.179	22.52	97M7D7W

EUT Overview

1.0 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada.

1.2 Element Materials Technology Test Location

These measurement tests were conducted at the Element Materials Technology facility located at 18855 Adams Court, Morgan Hill, CA 95037. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014 and KDB 414788 D01 v01r01.

1.3 Test Facility / Accreditations

Measurements were performed at Element Materials Technology located in Morgan Hill, CA 95037, U.S.A.

- Element Materials Technology is an ISO 17025-2017 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.02 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.

- Element Washington DC LLC TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC 17065-2012 by A2LA (Certificate number 2041.03) in all scopes of FCC Rules and ISED Standards (RSS).

- Element Materials Technology facility is a registered (22831) test laboratory with the site description on file with ISED.

- Element Washington DC LLC is a Recognized U.S. Certification Assessment Body (CAB # US0110) for ISED Canada as designated by NIST under the U.S. and Canada Mutual Agreements (MRAs).

2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Apple Tablet Device FCC ID:BCGA2926**. The test data contained in this report pertains only to the emissions due to the EUT's licensed transmitters that operate under the provisions of Part 27.

Test Device Serial No.: H440XJV4X5, W2G6PFDHG7, P7TX0QQKCQ, DLXH190002M000063A

2.2 Device Capabilities

This device contains the following capabilities:

850/1700/1900 WCDMA/HSPA, Multi-band LTE, 5G NR (FR1), 802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII, 802.11a/ax WIFI 6E, 802.15.4, Bluetooth (1x, EDR, LE1M, LE2M, HDR4, HDR8), NB UNII (1x, HDR4, HDR8), WPT

This device supports BT Beamforming

LTE Band 30 and FR1 Band n30 support NS21 and LTE Band 41 and FR1 Band n41 support NS04 for Antenna 4b, Antenna 1, Antenna 3, and Antenna 2b.

This device supports simultaneous transmission operations, which allows for multiple transmitters to transmit simultaneously on the same antenna. The table below shows all configurations possible.

Antenna	Simultaneous Tx Config	Wifi 2GHz	Bluetooth	Thread	Wifi 5GHz	Wifi 6GHz	NB UNII	LTE/FR1 NR	
		802.11 b/g/n/ax	BDR, EDR, HDR4/8, LE1/2M	802.15.4	802.11 a/n/ac/ax	802.11 a/ax	BDR, HDR4/8	MB/HB	UHB
2a	Config 1	✗	✓	✗	✓	✗	✗	✗	✗
2a	Config 2	✗	✓	✗	✗	✓	✗	✗	✗
2a	Config 3	✓	✗	✗	✗	✗	✓	✗	✗
2a	Config 4	✗	✗	✓	✓	✗	✗	✗	✗
2a	Config 5	✗	✗	✓	✗	✓	✗	✗	✗
4a	Config 6	✗	✓	✗	✓	✗	✗	✗	✗
4a	Config 7	✗	✓	✗	✗	✓	✗	✗	✗
4a	Config 8	✓	✗	✗	✗	✗	✓	✗	✗
4a	Config 9	✗	✗	✓	✓	✗	✗	✗	✗
4a	Config 10	✗	✗	✓	✗	✓	✗	✗	✗

Table 2-1. Simultaneous Transmission Configurations

✓ = Support; × = Not Support

Note:

1. All the above simultaneous transmission configurations have been tested and the worst case configuration was found to be Config 1 and reported in RF UNII OFDM and RF Bluetooth reports.

2. Specific 2.4GHz Wi-Fi antenna that can only transmit simultaneously with 2.4GHz Bluetooth antenna is listed in the SAR test report. For BT (2.4GHz) in connected mode and Wi-Fi (2.4GHz) - Wi-Fi max power will not exceed minimum of (13.5dBm, SAR max cap, Reg max cap) power. For BT (2.4GHz) in disconnected mode and Wi-Fi (2.4GHz) – BT will be using iPA only and Wi-Fi max power will not exceed minimum of (SAR max cap, Reg max cap) power. Bluetooth can simultaneously transmit with IEEE 802.11a/n/ac/ax 5/6 GHz on separate antenna.

2.3 Antenna Description

Following antenna gains provided by manufacturer were used for testing.

Band	Antenna Gain [dBi]			
	Antenna 4b	Antenna 1	Antenna 3	Antenna 2b
LTE Band 30	-0.30	0.40	-0.80	0.60
NR Band n30				
LTE Band 7	-1.30	0.50	1.20	-0.50
NR Band n7				
LTE Band 41	-1.70	1.70	1.30	-1.10
NR Band n41				

Table 2-2. Highest Antenna Gain

2.4 Test Support Equipment

1	Apple MacBook Pro	Model:	A2141	S/N:	C02H604EQ05D
	w/AC/DC Adapter	Model:	A2166	S/N:	C4H042705ZNPM0WA6
2	Apple USB-C Cable	Model:	Spartan	S/N:	GXK1336018XKTR024
3	USB-C Cable	Model:	A246C	S/N:	DWH80115BK826GV19
	w/ AC Adapter	Model:	A2305	S/N:	C4H95160004PF4F4V
4	DC Power Supply	Model:	KPS3010D	S/N:	N/A
5	Apple Pencil	Model:	A2538	S/N:	KJ26TCFXJW

Table 2-3. Test Support Equipment

2.5 Test Configuration

The EUT was tested per the guidance of ANSI C63.26 2015, TIA-603-E-2016 and KDB 971168 D01 v03r01. See Section 7.0 of this test report for a description of the radiated and antenna port conducted emissions tests.

For emissions from 1GHz – 18GHz, low, mid, and high channels were tested with highest power and worst case configuration. The emissions below 1GHz and above 18GHz were tested with the highest transmitting power and the worst case channel.

The EUT was manipulated through three orthogonal planes of X-orientation (flatbed), Y-orientation (landscape), and Z-orientation (portrait) during the testing. Only the worst case emissions were reported in this test report.

All possible simultaneous transmission configurations have been investigated and the worst case config has been reported.

2.6 Software and Firmware

The test was conducted with firmware version 21E8197 installed on the EUT.

2.7 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

3.0 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

The measurement procedures described in the documents titled “American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services” (ANSI C63.26-2015 and TIA-603-E-2016) and “Procedures for Compliance Measurement of the Fundamental Emission Power of Licensed Wideband (> 1 MHz) Digital Transmission Systems” (KDB 971168 D01 v03r01) were used in the measurement of the EUT.

Deviation from Measurement Procedure……..……None

3.2 Radiated Spurious Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. The test site inside the chamber is a 6m x 5.2m elliptical, obstruction-free area in accordance with Figure 5.7 of Clause 5 in ANSI C63.4-2014. Absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections for measurements above 1GHz. For measurements below 1GHz, the absorbers are removed. A raised turntable is used for radiated measurement. The turn table is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm tall test table made of Styrodur is placed on top of the turn table. A Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m.

The equipment under test was transmitting while connected to its integral antenna and is placed on a turntable 3 meters from the receive antenna. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer.

For radiated spurious emissions measurements and calculations, conversion method is used per the formulas in KDB 971168 Section 5.8.4. Field Strength (EIRP) is calculated using the following formulas:

$$E_{[dB\mu V/m]} = \text{Measured amplitude level}_{[dBm]} + 107 + \text{Cable Loss}_{[dB]} + \text{Antenna Factor}_{[dB/m]}$$

And

$$EIRP_{[dBm]} = E_{[dB\mu V/m]} + 20\log D - 104.8;\ \text{where D is the measurement distance in meters.}$$

All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014.

Per KDB 414788 D01 v01r01, radiated emission test sites other than open-field test sites (e.g., shielded anechoic chambers), may be employed for emission measurements below 30MHz if characterized so that the measurements correspond to those obtained at an open-field test site. To determine test site equivalency, a reference sample transmitting at 149kHz was measured on an open field test site (asphalt with no ground plane) and then measured in the 3m semi-anechoic chamber. A calibrated 60cm loop antenna was used while the reference device was rotated through the X, Y and Z axis in order to capture the worst case level. A maximum deviation of 2.77dB at 149kHz was measured when comparing the 3 meter semi-anechoic chamber to the open field site.

Radiated spurious emission levels are investigated with the receive antenna horizontally and vertically polarized per ANSI C63.26-2015 and TIA-603-E-2016.

4.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.23-2012. All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Contribution	Expanded Uncertainty (±dB)
Conducted Bench Top Measurements	2.07
Radiated Disturbance (<30MHz)	4.12
Radiated Disturbance (30MHz-1GHz)	4.85
Radiated Disturbance (1-18GHz)	5.08
Radiated Disturbance (>18GHz)	4.59

5.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST). Measurements antennas used during testing were calibrated in accordance to the requirements of ANSI C63.5-2017.

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent Technologies	N9030A	3Hz-44GHz PXA Signal Analyzer	6/21/2023	Annual	6/21/2024	MY49430244
ESPEC	SU-241	Tabletop Temperature Chamber	11/17/2023	Annual	11/17/2024	92009574
ETS-Lindgren	3117	Double Ridged Guide Antenna (1-18 GHz)	3/30/2023	Annual	3/30/2024	00218555
Keysight Technology	N9040B	UXA Signal Analyzer	11/5/2023	Annual	11/5/2024	MY57213068
Rohde & Schwarz	TS-PR18	Pre-Amplifier (1GHz - 18GHz)	8/31/2023	Annual	8/31/2024	100052
Rohde & Schwarz	FSV40	Signal Analyzer (10Hz-40GHz)	5/11/2023	Annual	5/11/2024	101619
Rohde & Schwarz	ESW44	EMI Test Receiver	6/6/2023	Annual	6/6/2024	101668
Rohde & Schwarz	TS-PR8	Pre-Amplifier (30MHz - 8GHz)	6/22/2023	Annual	6/22/2024	102356
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	11/30/2023	Annual	11/30/2024	161616
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	12/27/2023	Annual	12/27/2024	164715
Rohde & Schwarz	TS-PR1840	Pre-Amplifier (18GHz - 40GHz)	6/2/2023	Annual	6/2/2024	100050
Rohde & Schwarz	HFH2-Z2	Loop Antenna	5/1/2023	Annual	5/1/2024	100519
Rohde & Schwarz	FSW43	Signal Analyzer (2Hz-43.5GHz)	7/13/2023	Annual	7/13/2024	101261
Schwarzbeck	VULB 9162	Bilog Antenna (30MHz - 6GHz)	4/17/2023	Annual	4/17/2024	00304

Table 5-1. Test Equipment

Notes:

For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.

6.0 SAMPLE CALCULATIONS

Emission Designator

π/2 BPSK / QPSK Modulation

Emission Designator = 8M62G7W
BW = 8.62 MHz
G = Phase Modulation
7 = Quantized/Digital Info
W = Combination of Any

QAM Modulation

Emission Designator = 8M45D7W
BW = 8.45 MHz
D = Amplitude/Angle Modulated
7 = Quantized/Digital Info
W = Combination of Any

Spurious Radiated Emission

Example: Spurious emission at 3700.40 MHz

The receive spectrum analyzer reading at 3 meters with the EUT on the turntable was –81.0 dBm. The gain of the substituted antenna is 8.1 dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of –81.0 dBm on the spectrum analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 3700.40 MHz. So 6.1 dB is added to the signal generator reading of –30.9 dBm yielding –24.80 dBm. The fundamental EIRP was 25.50 dBm so this harmonic was 25.50 dBm – (-24.80) = 50.3 dBc.

7.0 TEST RESULTS

7.1 Summary

Company Name: Apple Inc.

FCC ID: BCGA2926

FCC Classification: PCS Licensed Transmitter (PCB)

Mode(s): LTE/NR/ULCA

Test Condition	Test Description	FCC Part Section(s)	Test Limit	Test Result	Reference
CONDUCTED	Occupied Bandwidth	2.1049	N/A	N/A	Section 7.2
	Conducted Band Edge / Spurious Emissions (LTE Band 30)	2.1051, 27.53(a)	Undesirable emissions must meet the limits detailed in 27.53(a)	PASS	Sections 7.3, 7.4
	Conducted Band Edge / Spurious Emissions (LTE Band 7)	2.1051, 27.53(m)	Undesirable emissions must meet the limits detailed in 27.53(m)	PASS	Sections 7.3, 7.4
	Conducted Band Edge / Spurious Emissions (LTE Band 41)			PASS	Sections 7.3, 7.4
	Conducted Band Edge / Spurious Emissions (NR Band n41)			PASS	Sections 7.3, 7.4
	Transmitter Conducted Output Power	2.1046	N/A	N/A	See RF Exposure Report
	Additional Maximum Power Reduction (A-MPR)	2.1046	N/A	N/A	Section 7.5
	Effective Radiated Power / Equivalent Isotropic Radiated Power (LTE Band 30)	27.50(a)(3)	< 0.25 Watts max. EIRP	PASS	Section 7.6
	Effective Radiated Power / Equivalent Isotropic Radiated Power (LTE Band 7)	27.50(h)(2)	< 2 Watts max. EIRP	PASS	Section 7.6
	Effective Radiated Power / Equivalent Isotropic Radiated Power (LTE Band 41)			PASS	Section 7.6
	Effective Radiated Power / Equivalent Isotropic Radiated Power (NR Band n41)			PASS	Section 7.6
	Frequency Stability	2.1055, 27.54	Fundamental emissions stay within authorized frequency block over the temperature and voltage range as tested	PASS	Section 7.8
RADIATED	Radiated Spurious Emissions (LTE Band 30)	2.1053, 27.53(a)	> 70 + 10log10(P[Watts])	PASS	Section 7.7
	Radiated Spurious Emissions (LTE Band 7)	2.1053, 27.53(m)	Undesirable emissions must meet the limits detailed in 27.53(m)	PASS	Section 7.7
	Radiated Spurious Emissions (LTE Band 41)			PASS	Section 7.7
	Radiated Spurious Emissions (NR Band n41)			PASS	Section 7.7

Table 7-1. Summary of Test Results

Notes:

1. All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.

2. The analyzer plots were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.

3. All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.

4. All conducted emissions measurements are performed with automated test software to capture the corresponding plots necessary to show compliance. The measurement software utilized was Element EMC Software Tool v1.2.

7.2 Occupied Bandwidth

§2.1049

Test Overview

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. All modes of operation were investigated and the worst case configuration results are reported in this section. All ports were tested and only the worst case data were reported.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 4.2

Test Settings

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5% of the expected OBW
3. VBW ≥ 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the 99% occupied bandwidth observed in Step 7

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

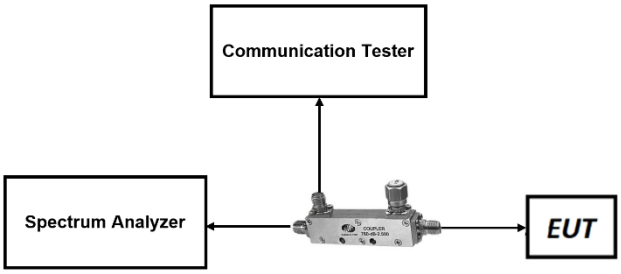
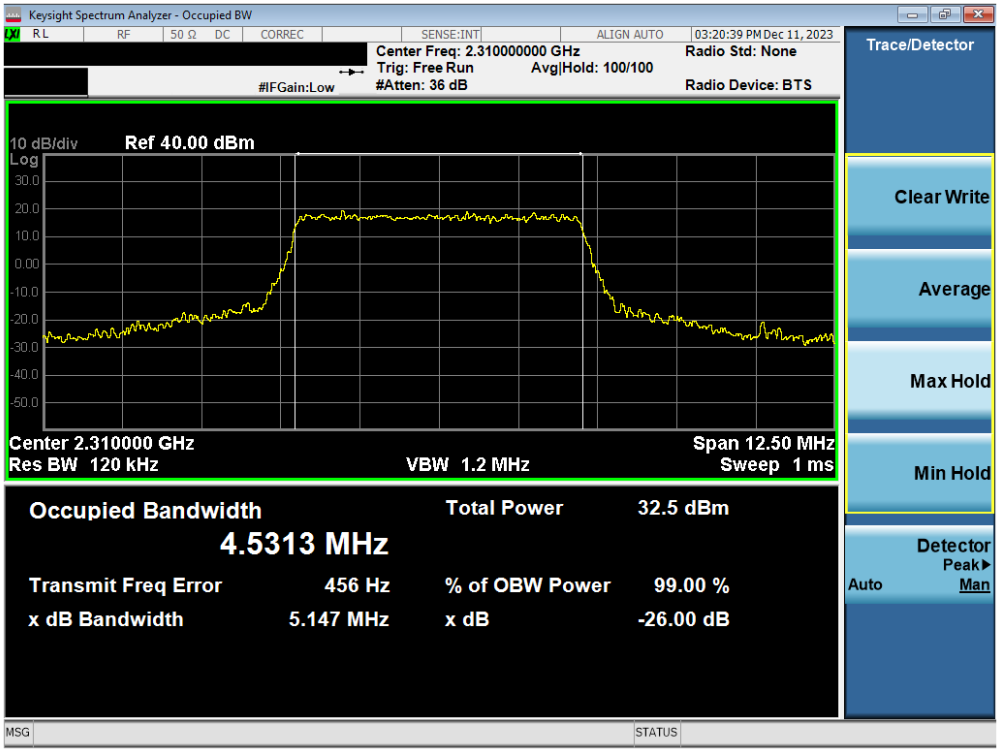


Figure 7-1. Test Instrument & Measurement Setup

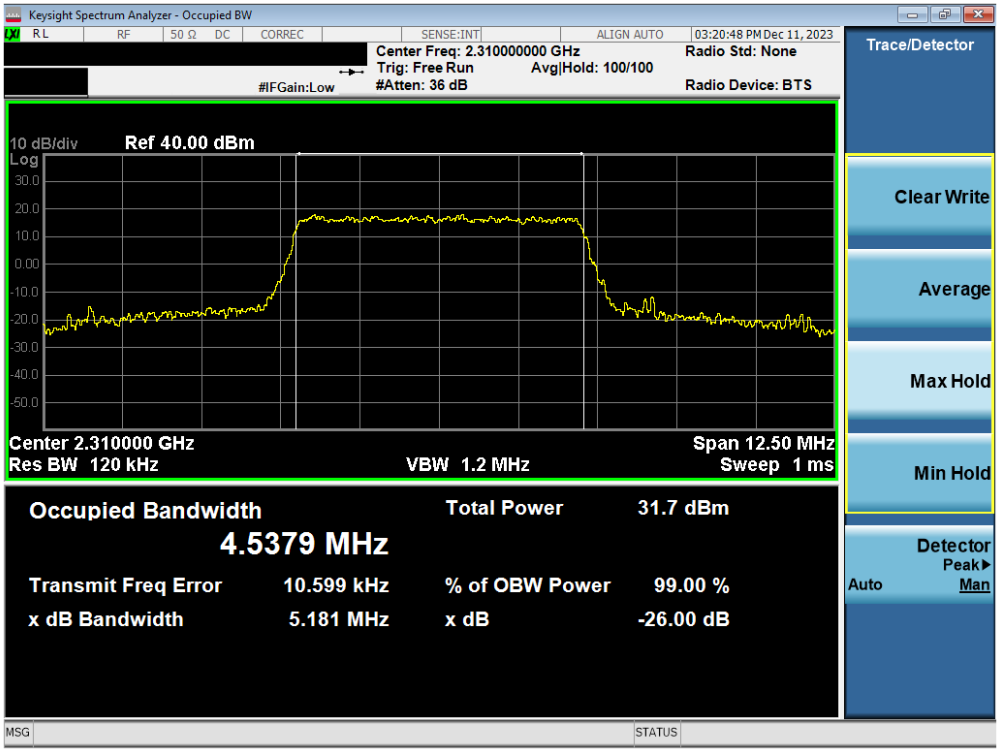
Test Notes

None.

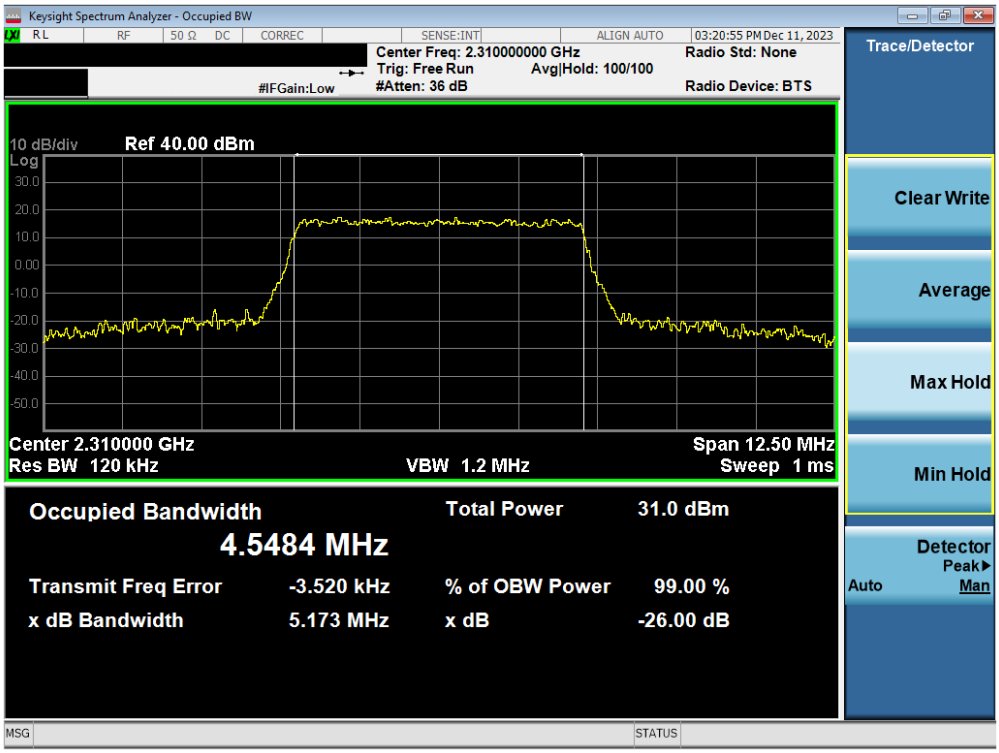
LTE Band 30



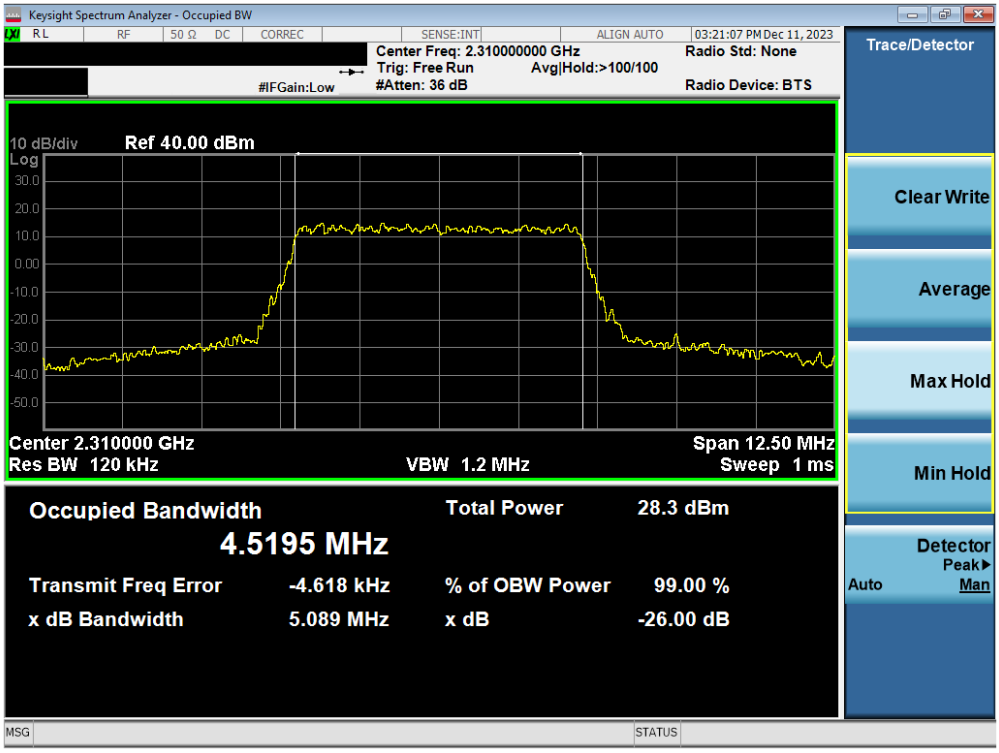
Plot 7-1. Occupied Bandwidth Plot (LTE Band 30 - 5MHz QPSK - Full RB)



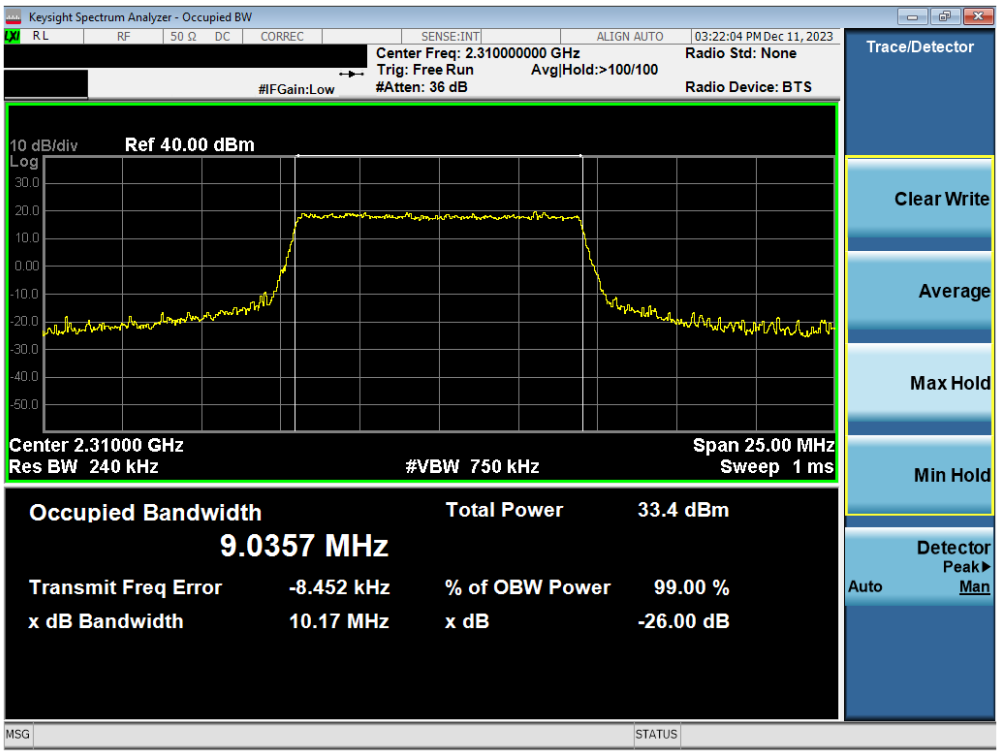
Plot 7-2. Occupied Bandwidth Plot (LTE Band 30 - 5MHz 16-QAM - Full RB)



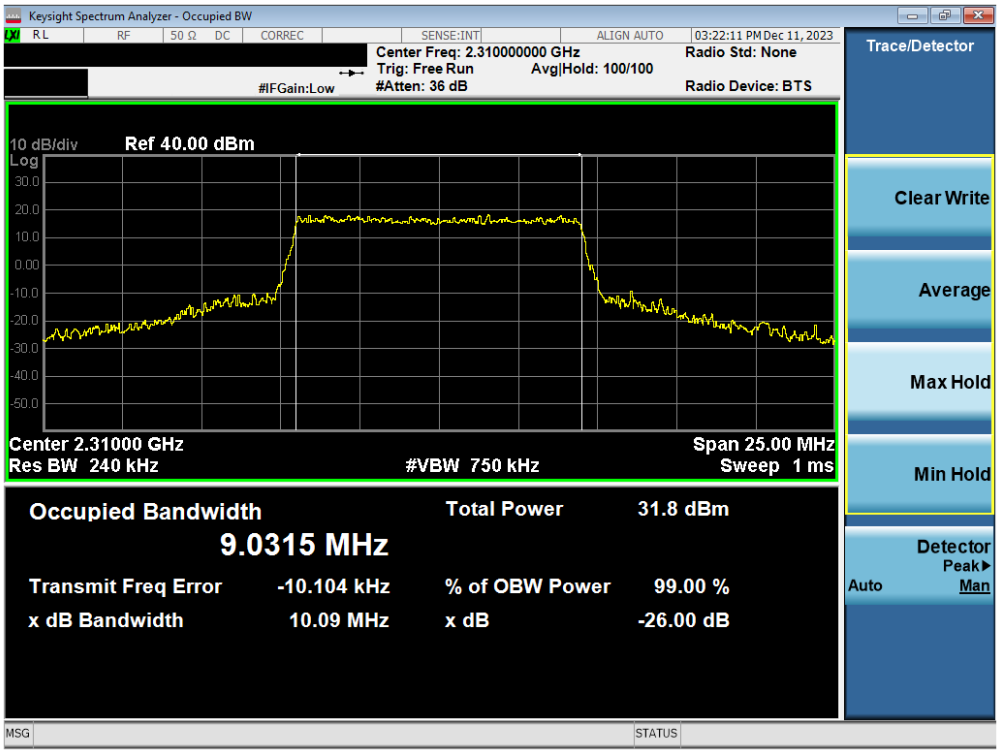
Plot 7-3. Occupied Bandwidth Plot (LTE Band 30 - 5MHz 64-QAM - Full RB)



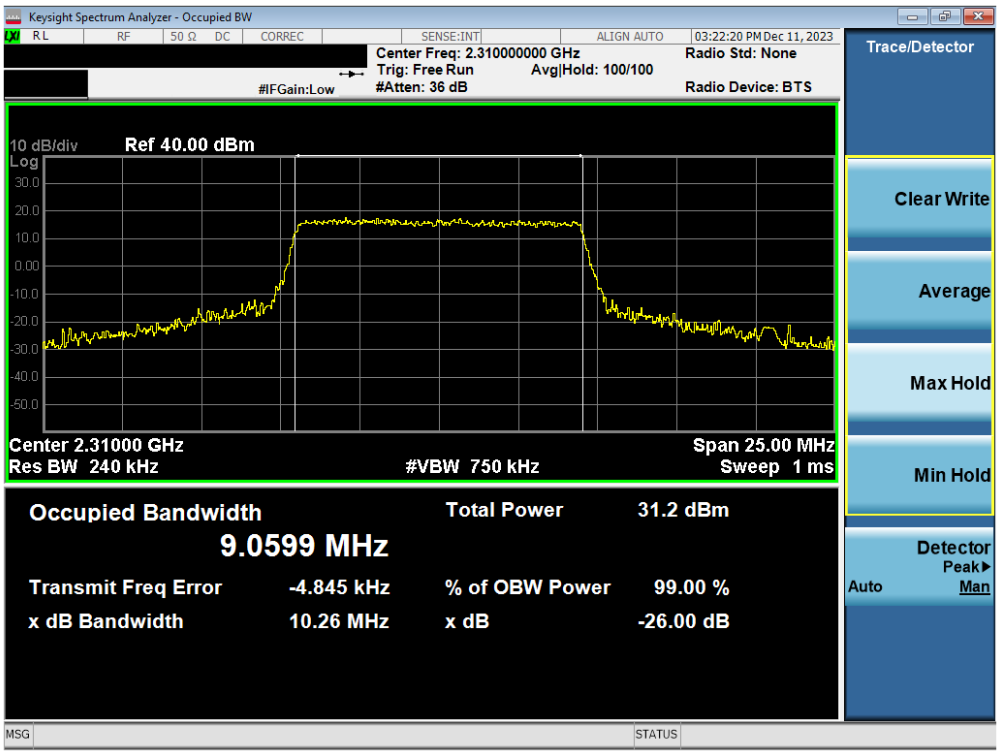
Plot 7-4. Occupied Bandwidth Plot (LTE Band 30 - 5MHz 256-QAM - Full RB)



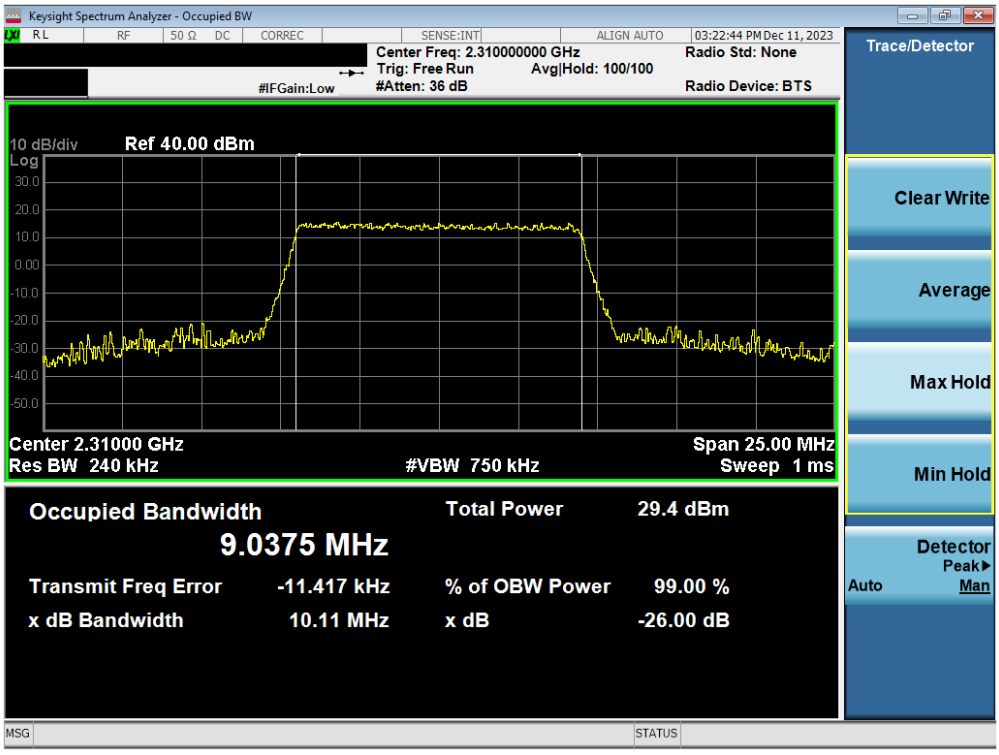
Plot 7-5. Occupied Bandwidth Plot (LTE Band 30 - 10MHz QPSK - Full RB)



Plot 7-6. Occupied Bandwidth Plot (LTE Band 30 - 10MHz 16-QAM - Full RB)

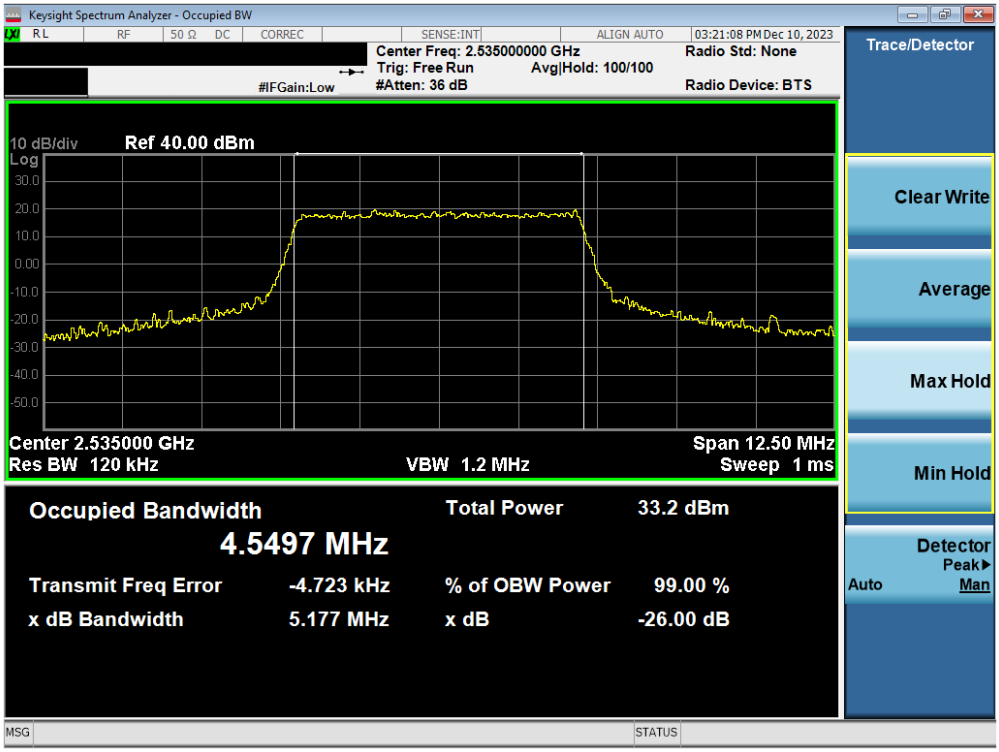


Plot 7-7. Occupied Bandwidth Plot (LTE Band 30 - 10MHz 64-QAM - Full RB)

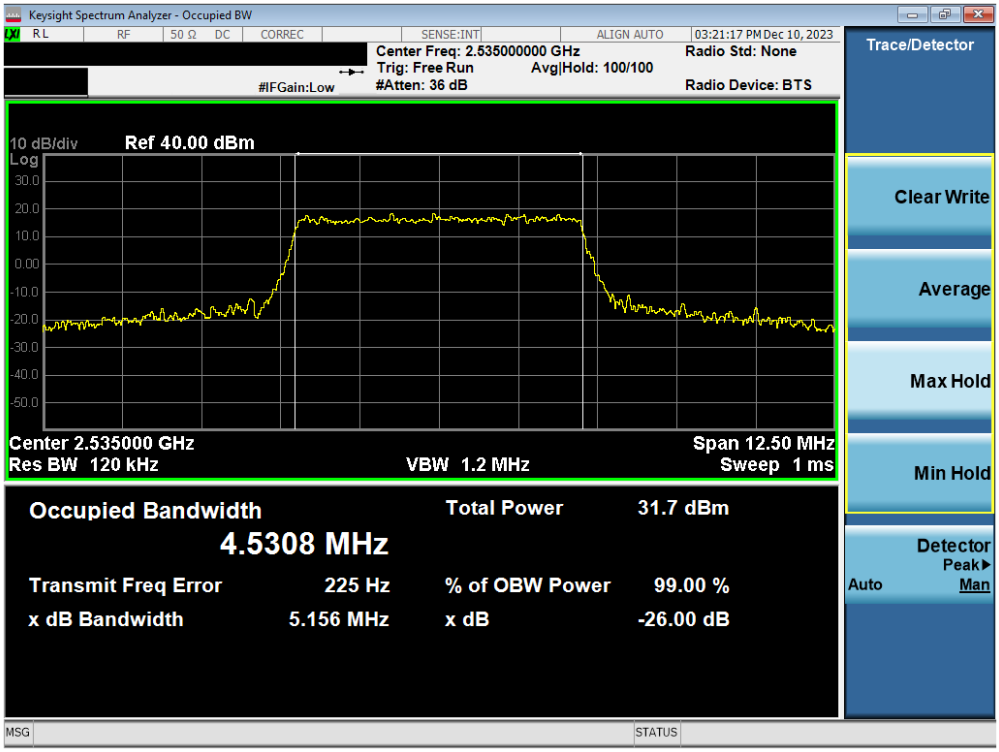


Plot 7-8. Occupied Bandwidth Plot (LTE Band 30 - 10MHz 256-QAM - Full RB)

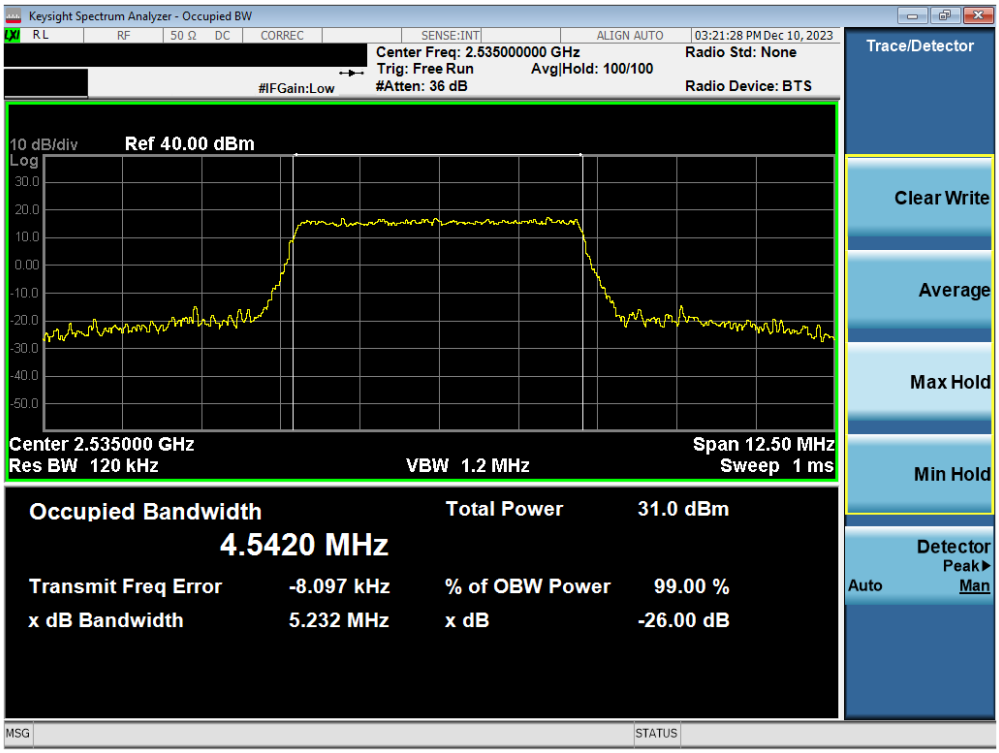
LTE Band 7



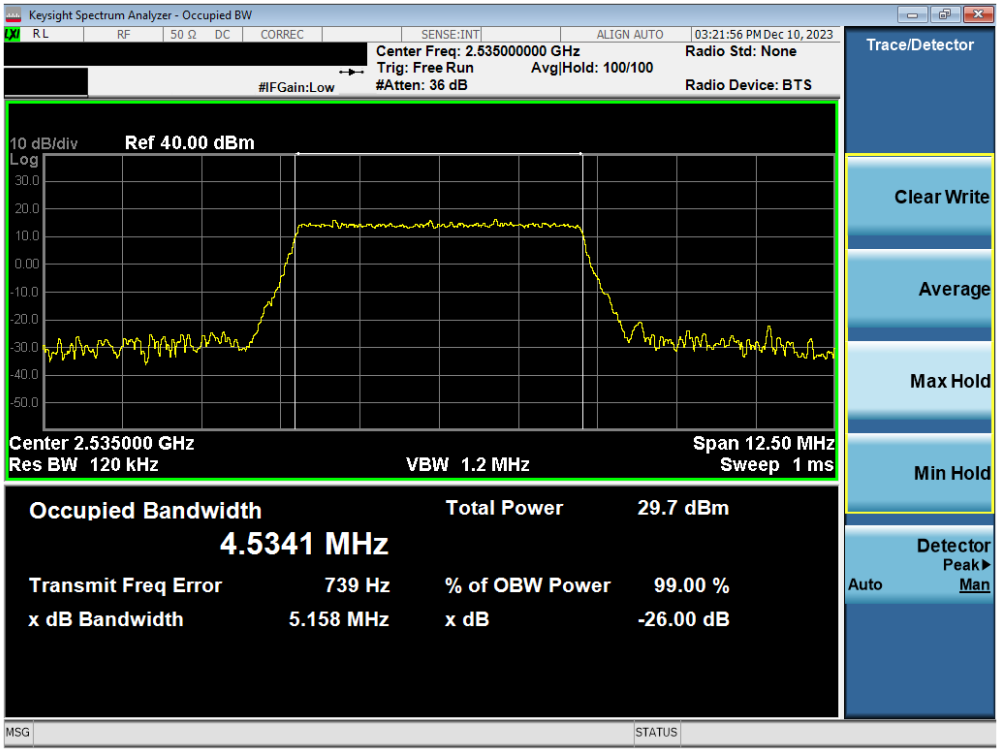
Plot 7-9. Occupied Bandwidth Plot (LTE Band 7 - 5MHz QPSK - Full RB)



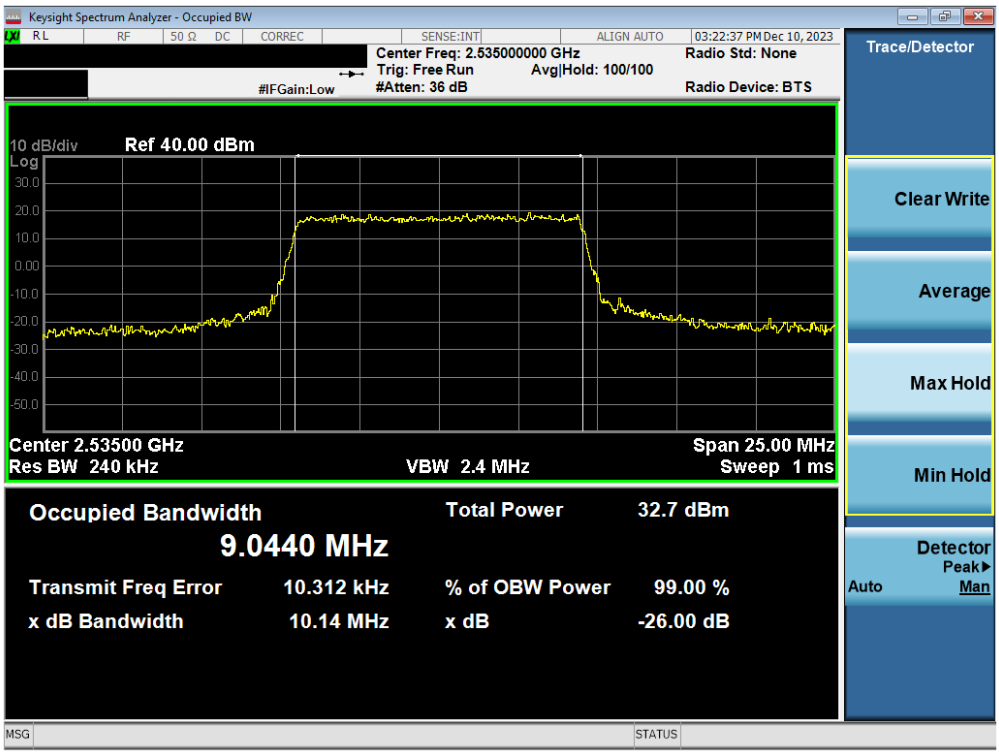
Plot 7-10. Occupied Bandwidth Plot (LTE Band 7 - 5MHz 16-QAM - Full RB)



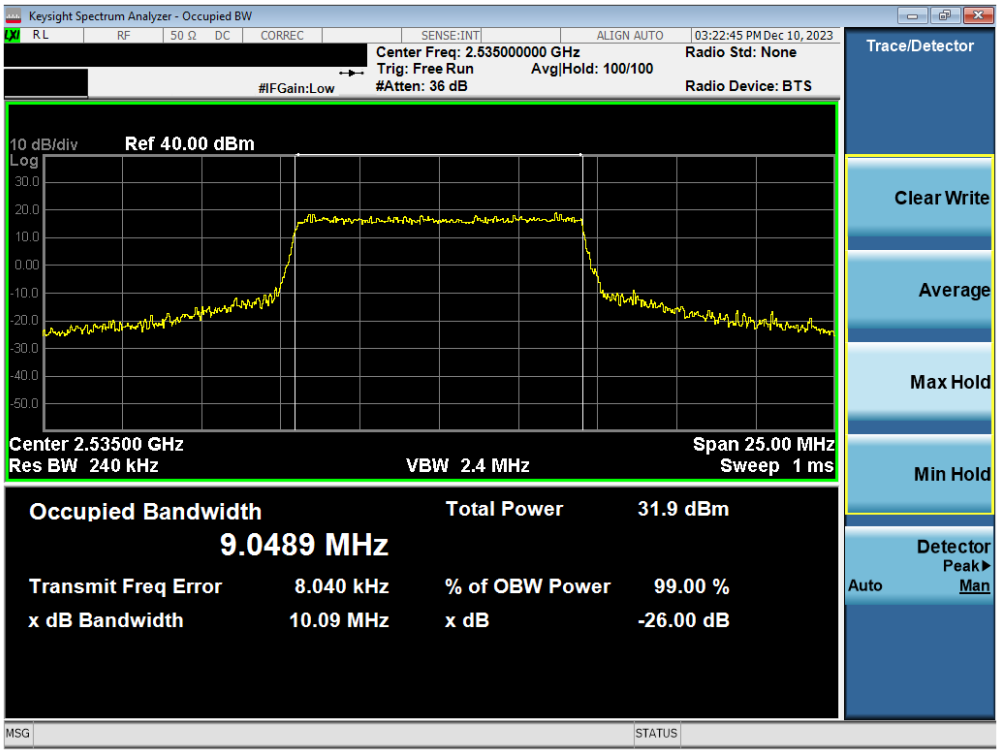
Plot 7-11. Occupied Bandwidth Plot (LTE Band 7 - 5MHz 64-QAM - Full RB)



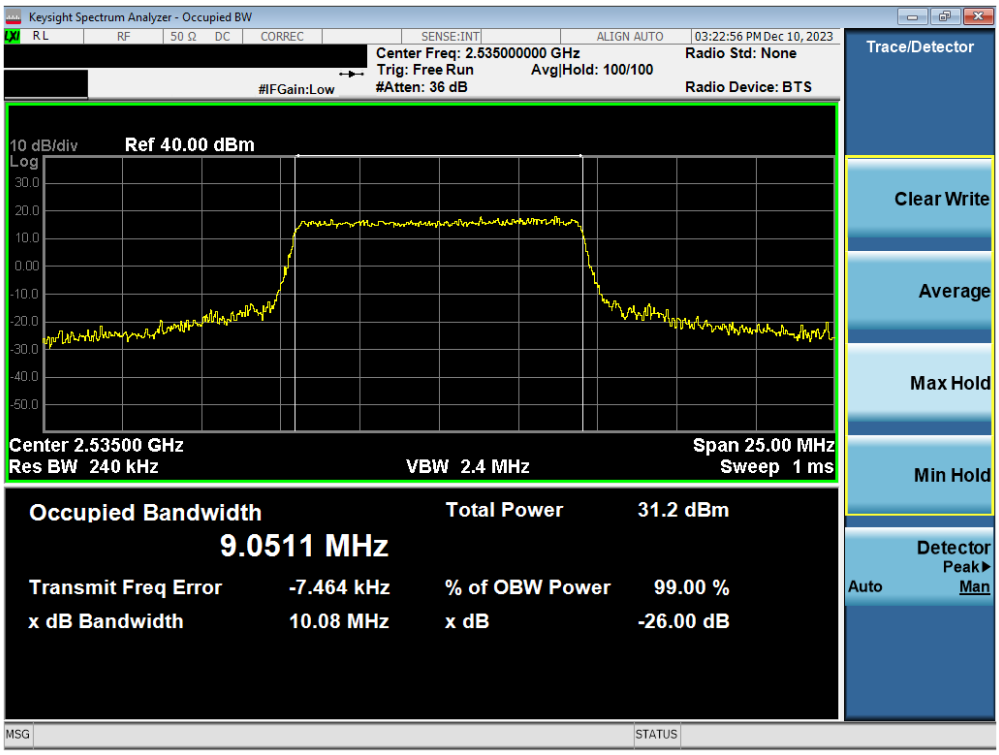
Plot 7-12. Occupied Bandwidth Plot (LTE Band 7 - 5MHz 256-QAM - Full RB)



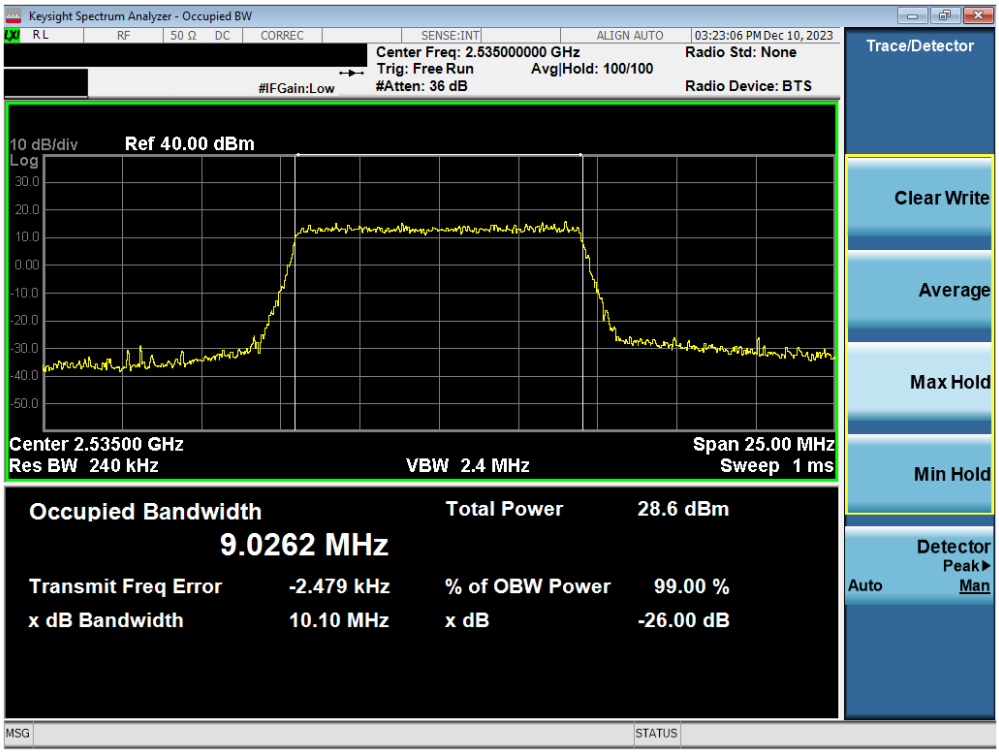
Plot 7-13. Occupied Bandwidth Plot (LTE Band 7 - 10MHz QPSK - Full RB)



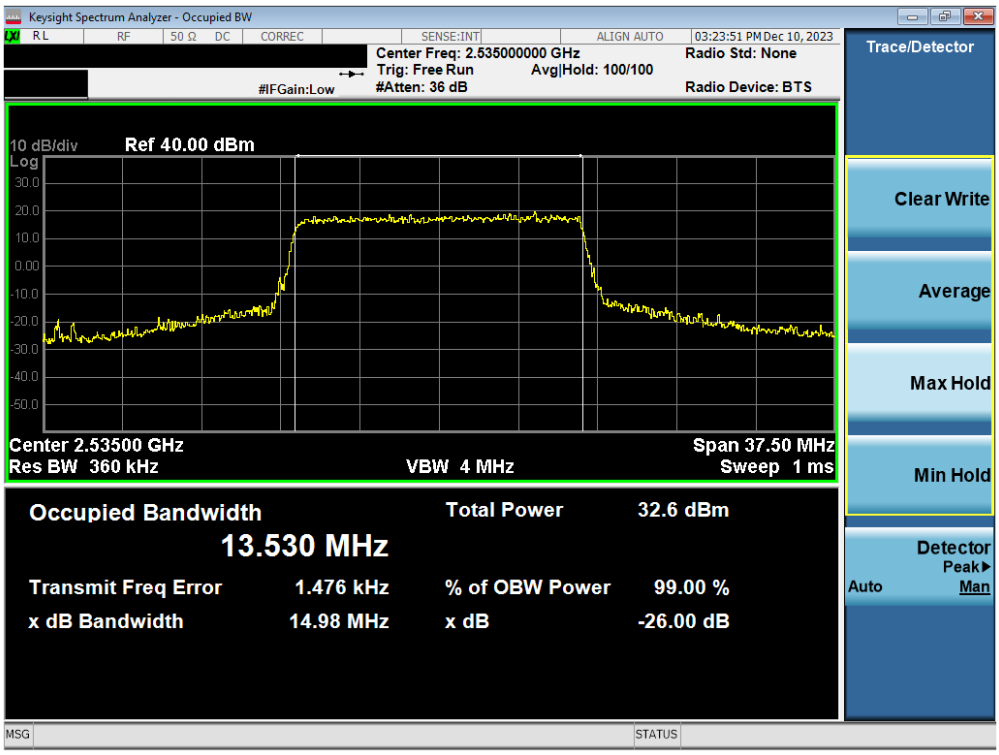
Plot 7-14. Occupied Bandwidth Plot (LTE Band 7 - 10MHz 16-QAM - Full RB)



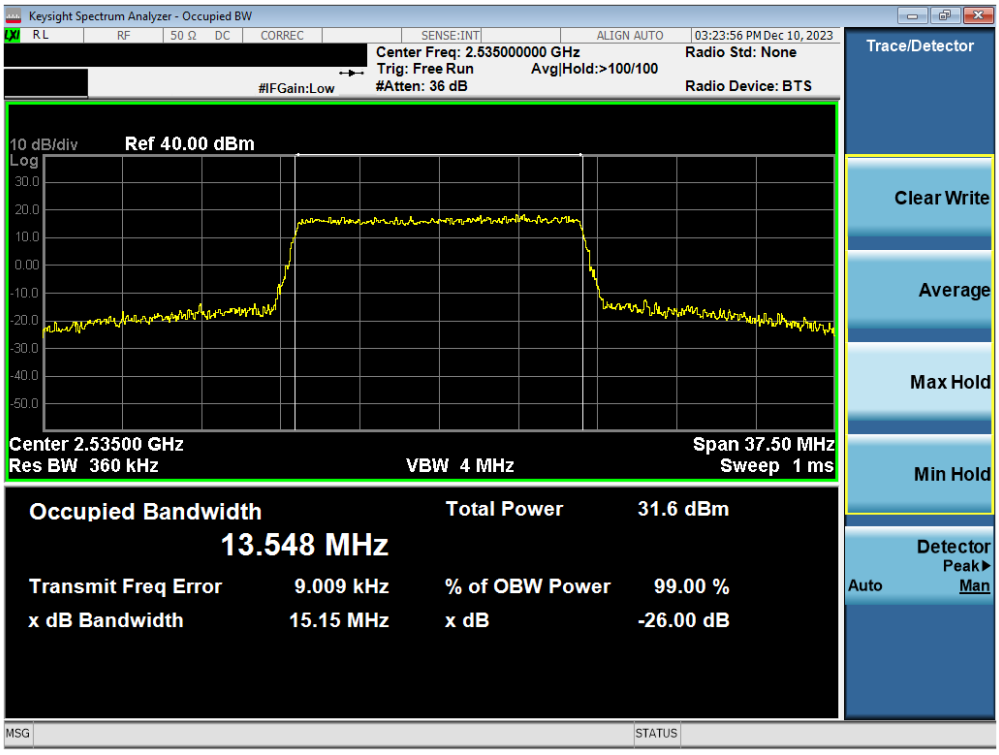
Plot 7-15. Occupied Bandwidth Plot (LTE Band 7 - 10MHz 64-QAM - Full RB)



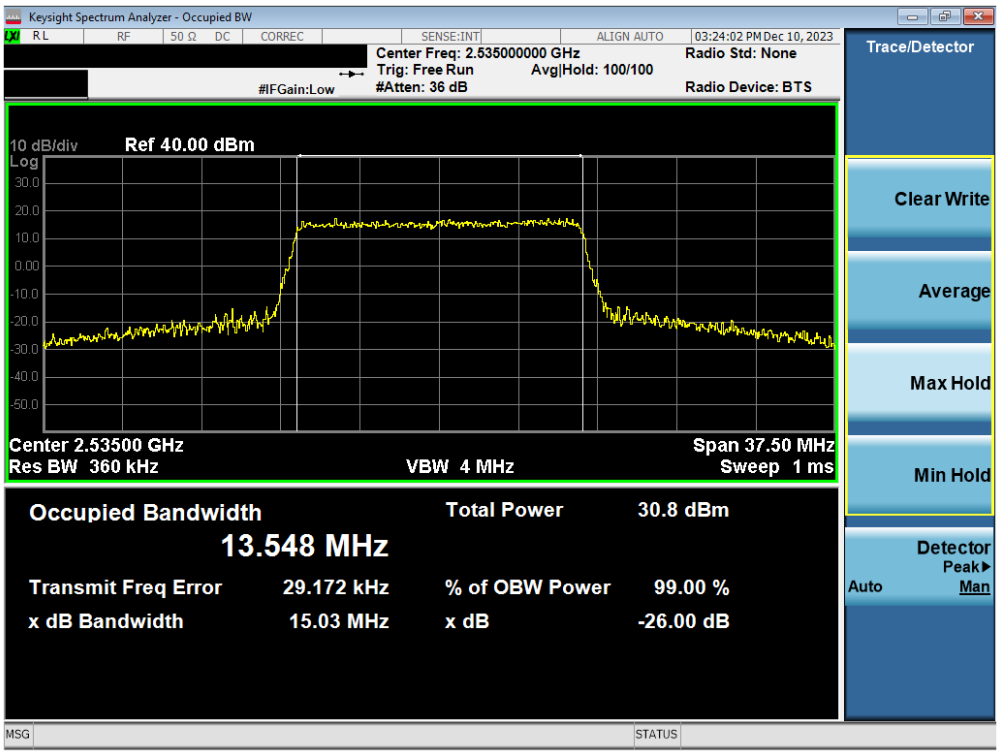
Plot 7-16. Occupied Bandwidth Plot (LTE Band 7 - 10MHz 256-QAM - Full RB)



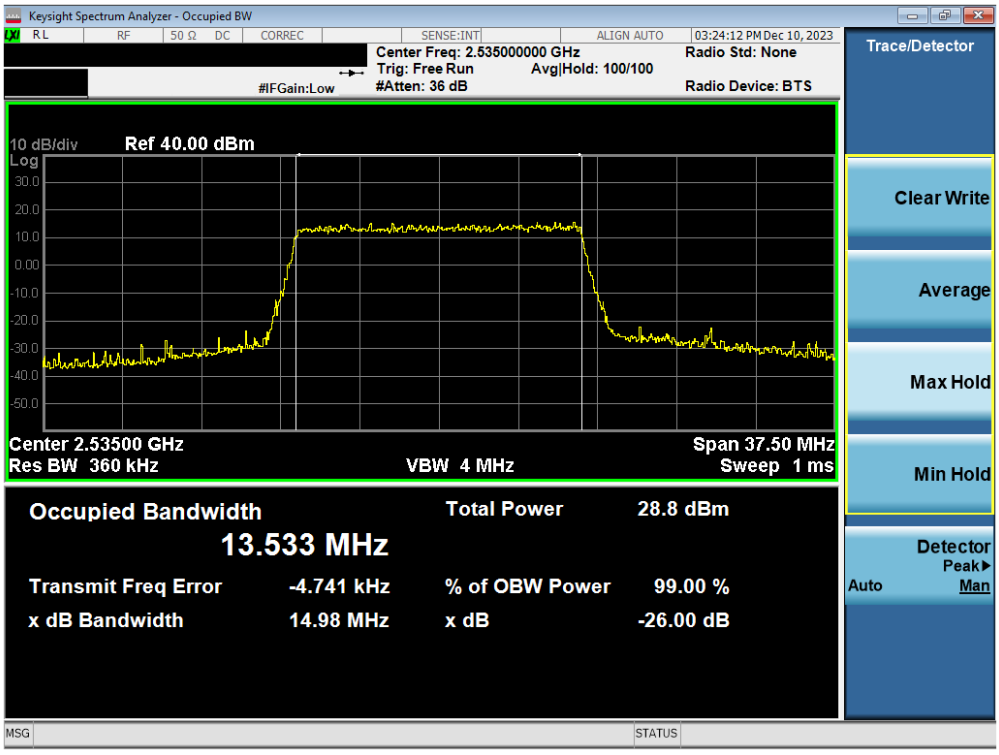
Plot 7-17. Occupied Bandwidth Plot (LTE Band 7 - 15MHz QPSK - Full RB)



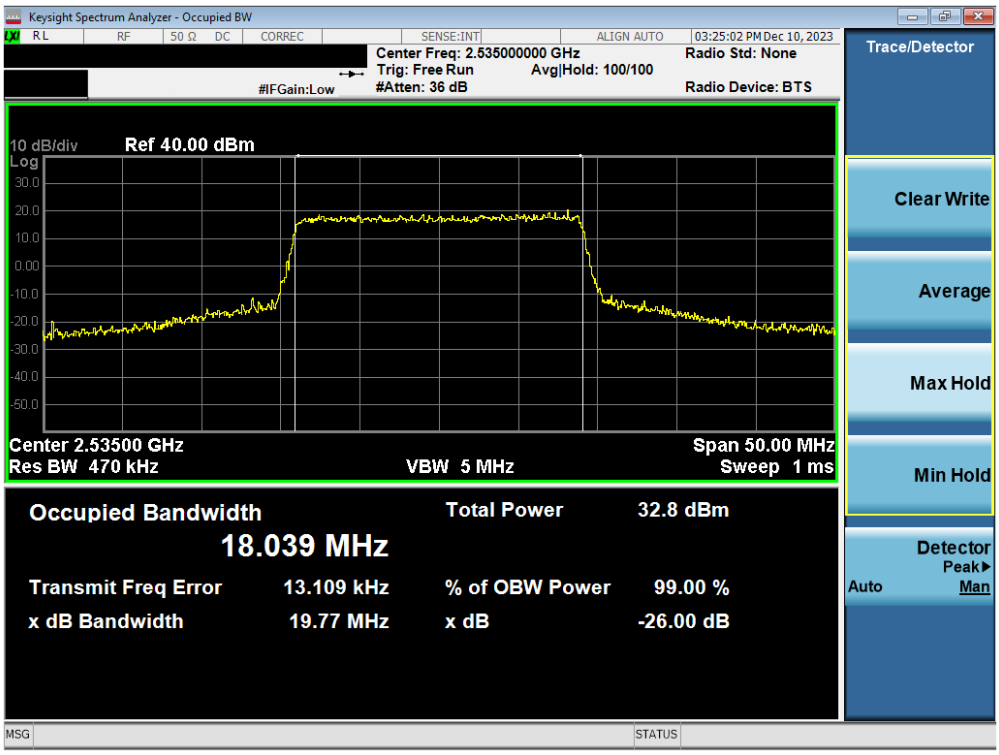
Plot 7-18. Occupied Bandwidth Plot (LTE Band 7 - 15MHz 16-QAM - Full RB)



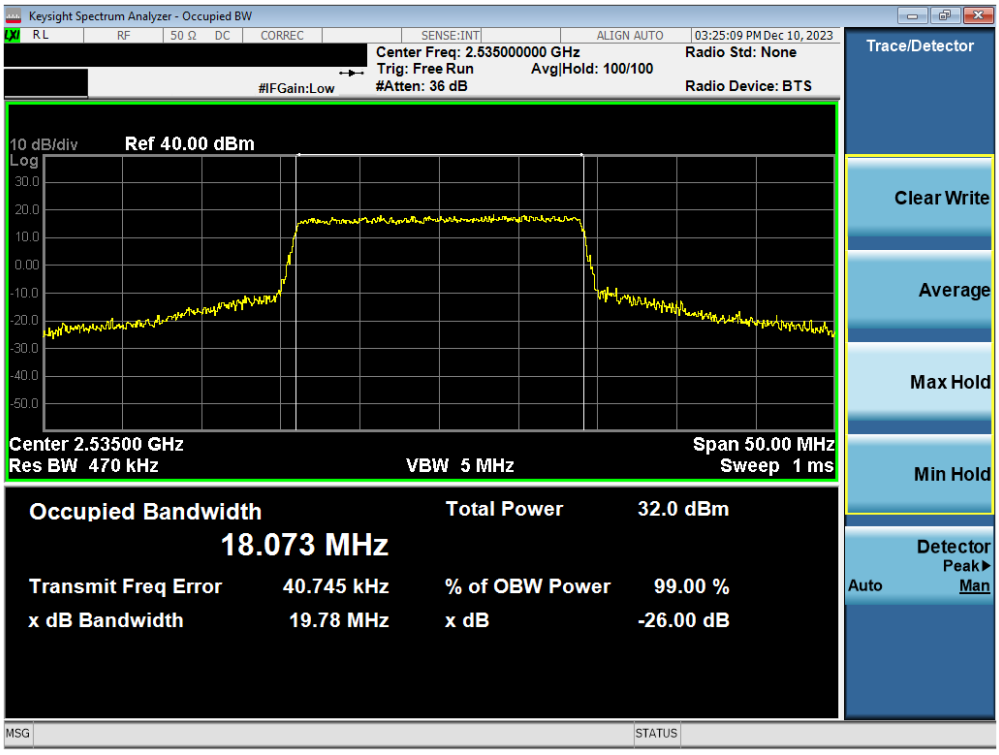
Plot 7-19. Occupied Bandwidth Plot (LTE Band 7 - 15MHz 64-QAM - Full RB)



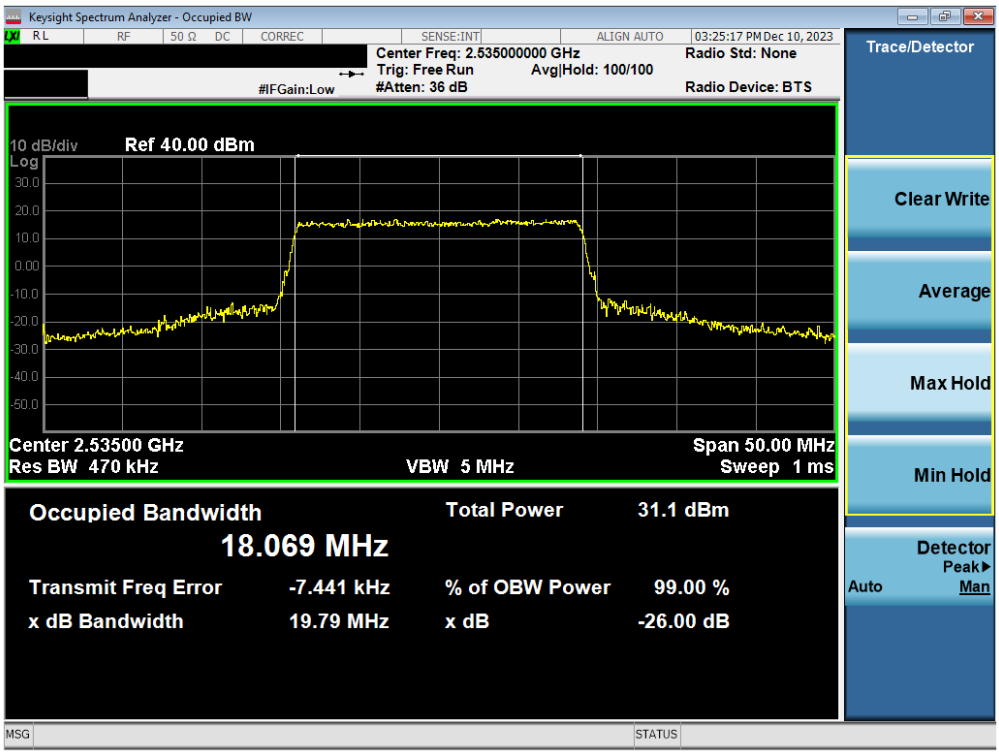
Plot 7-20. Occupied Bandwidth Plot (LTE Band 7 - 15MHz 256-QAM - Full RB)



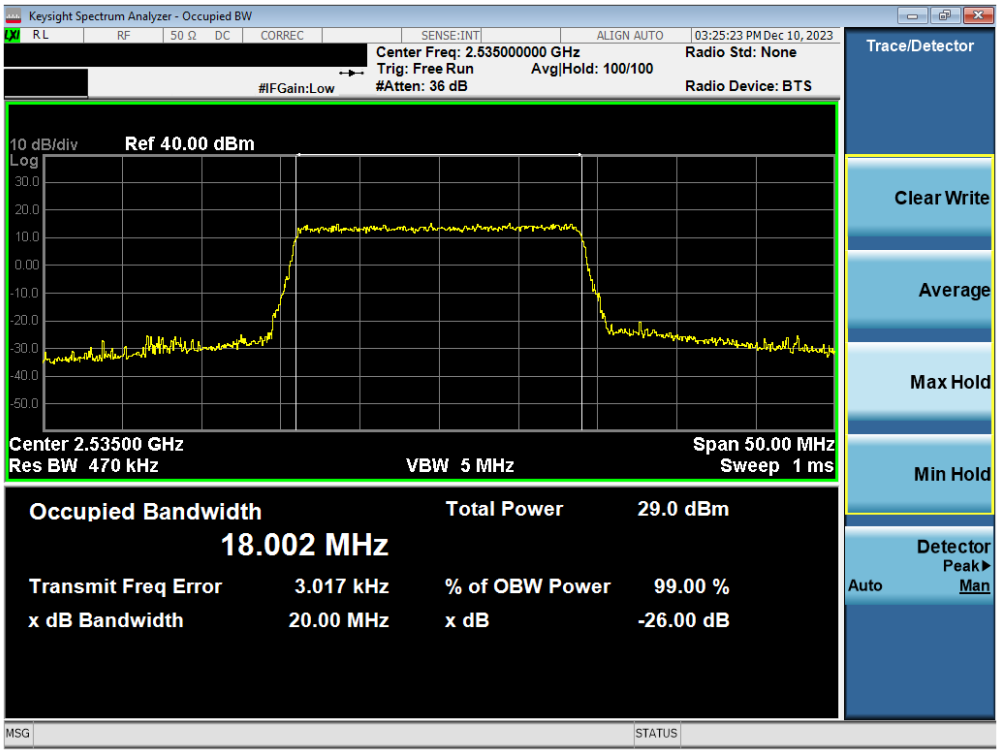
Plot 7-21. Occupied Bandwidth Plot (LTE Band 7 - 20MHz QPSK - Full RB)



Plot 7-22. Occupied Bandwidth Plot (LTE Band 7 - 20MHz 16-QAM - Full RB)

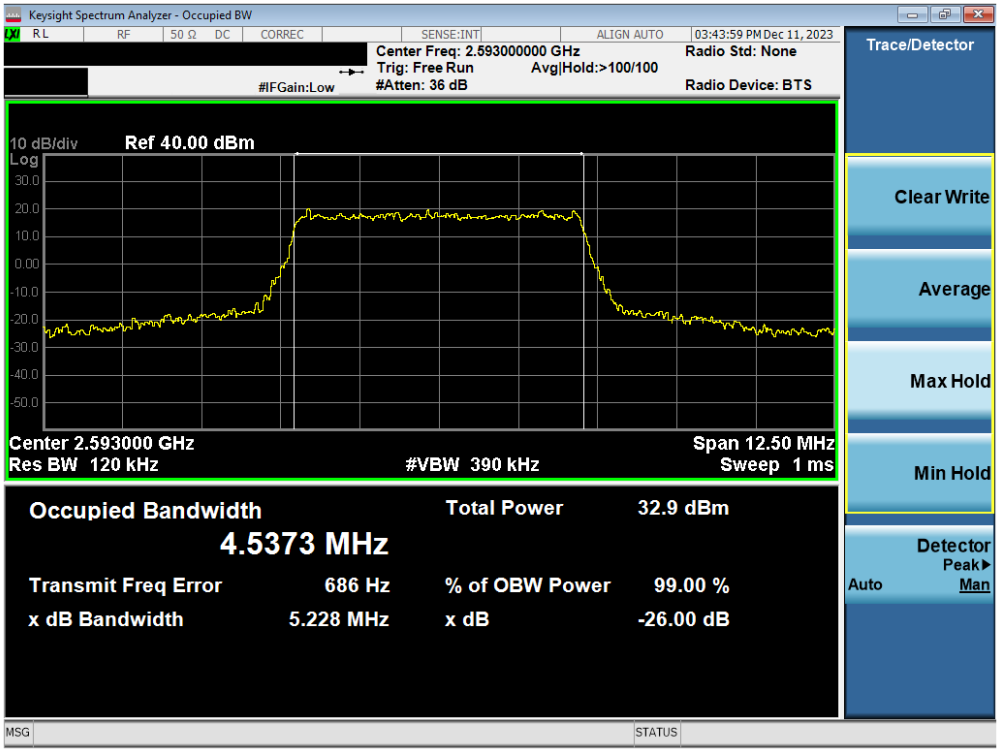


Plot 7-23. Occupied Bandwidth Plot (LTE Band 7 - 20MHz 64-QAM - Full RB)

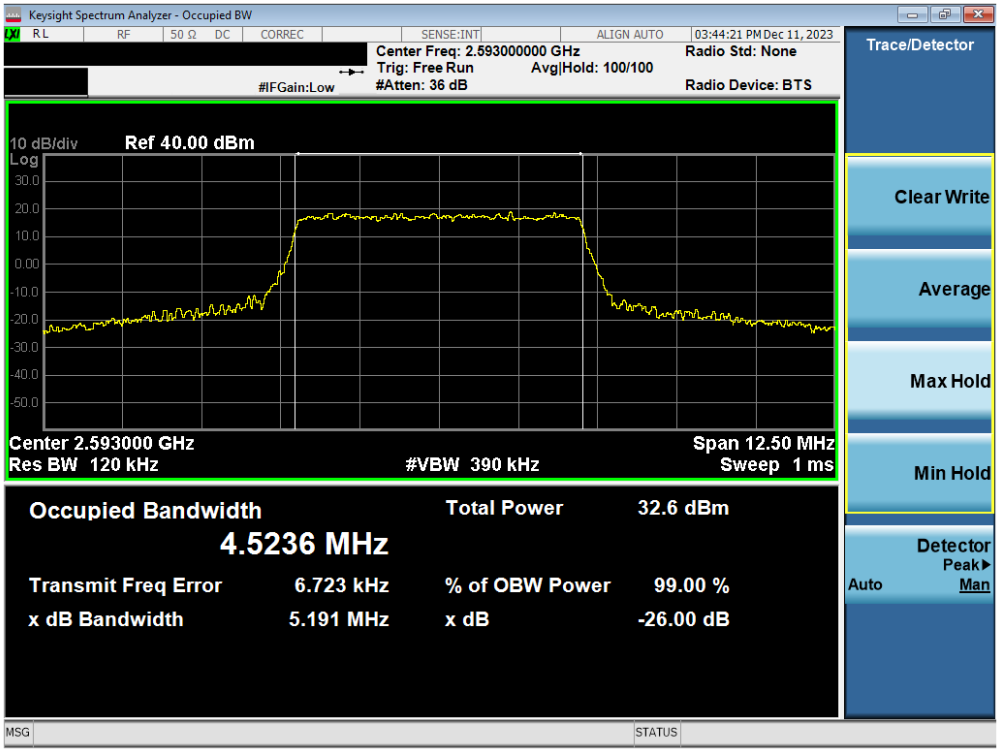


Plot 7-24. Occupied Bandwidth Plot (LTE Band 7 - 20MHz 256-QAM - Full RB)

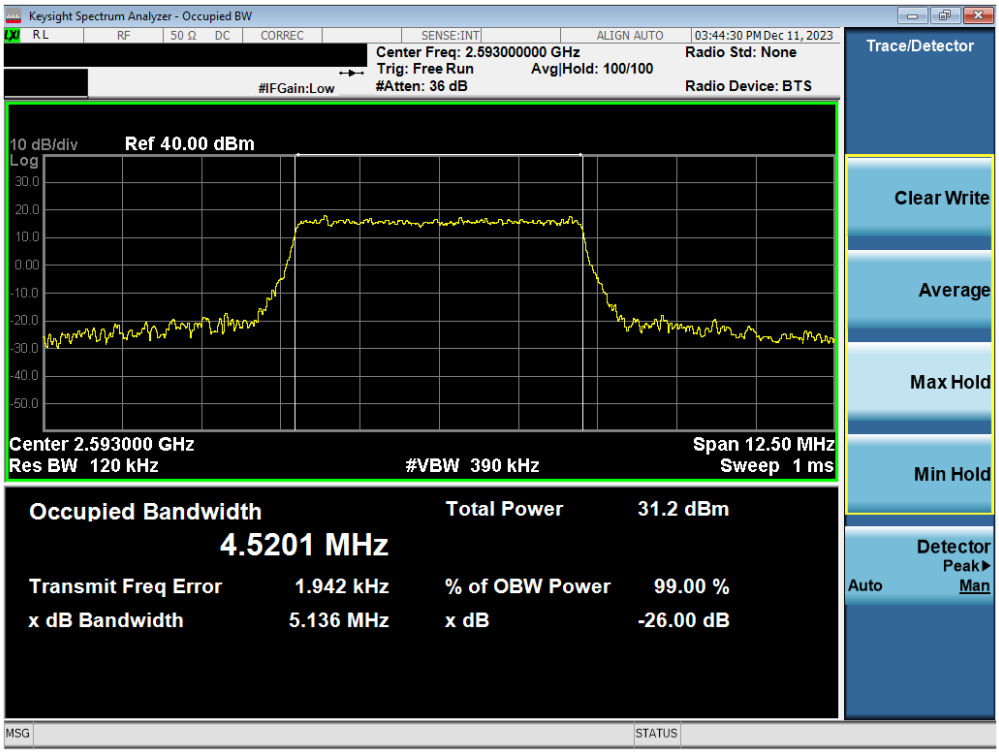
LTE Band 41



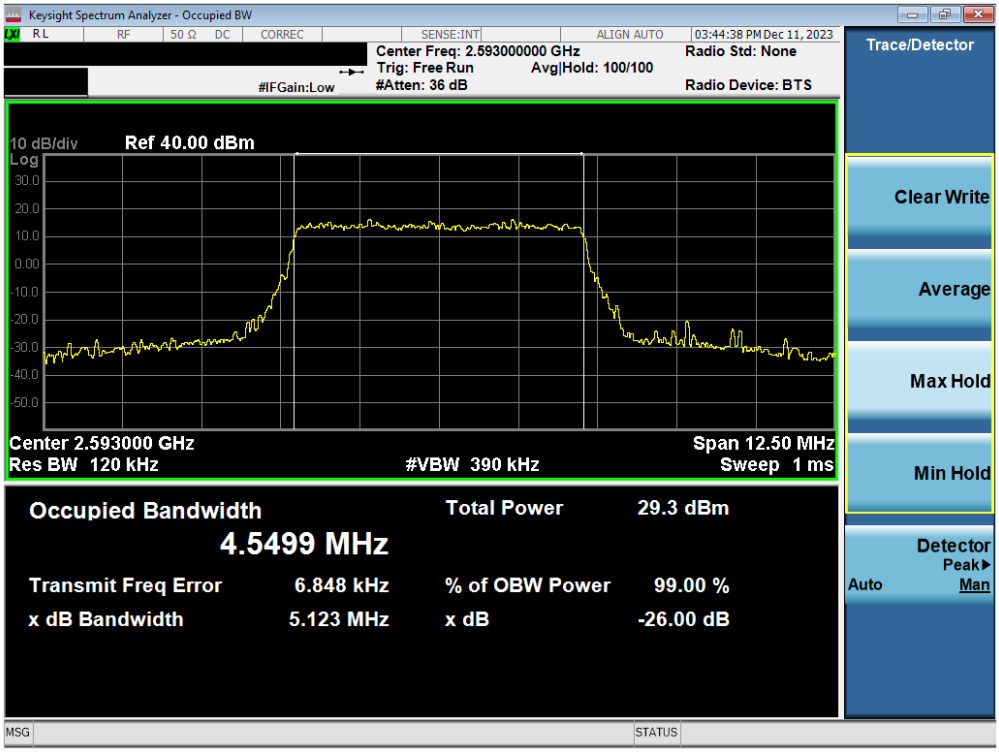
Plot 7-25. Occupied Bandwidth Plot (LTE Band 41 - 5MHz QPSK - Full RB)



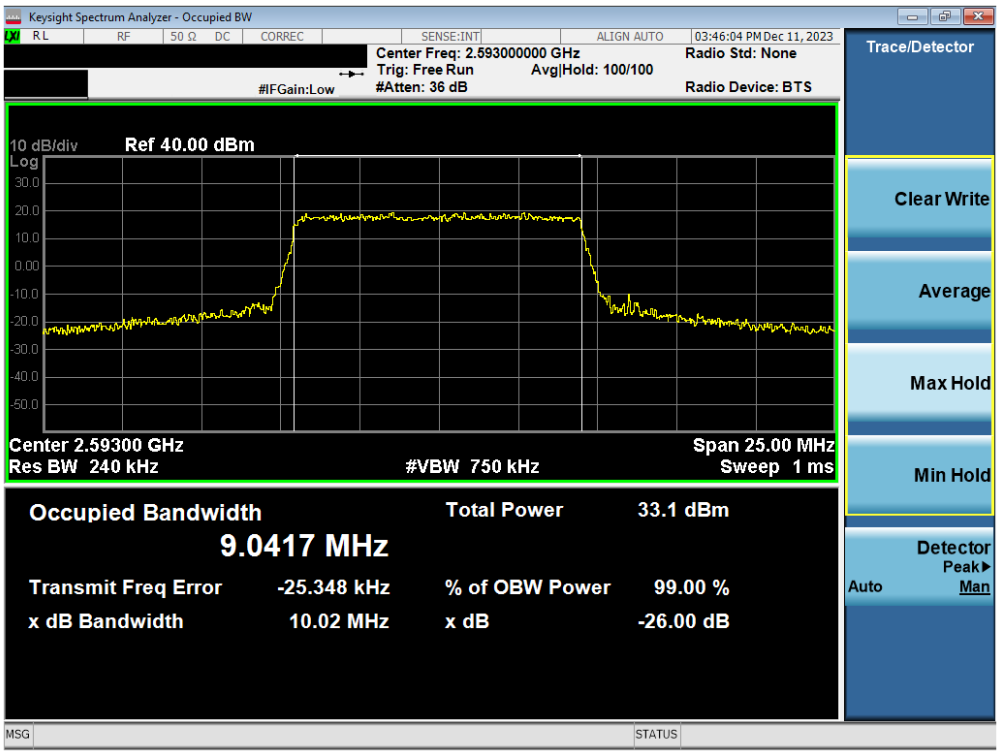
Plot 7-26. Occupied Bandwidth Plot (LTE Band 41 - 5MHz 16-QAM - Full RB)



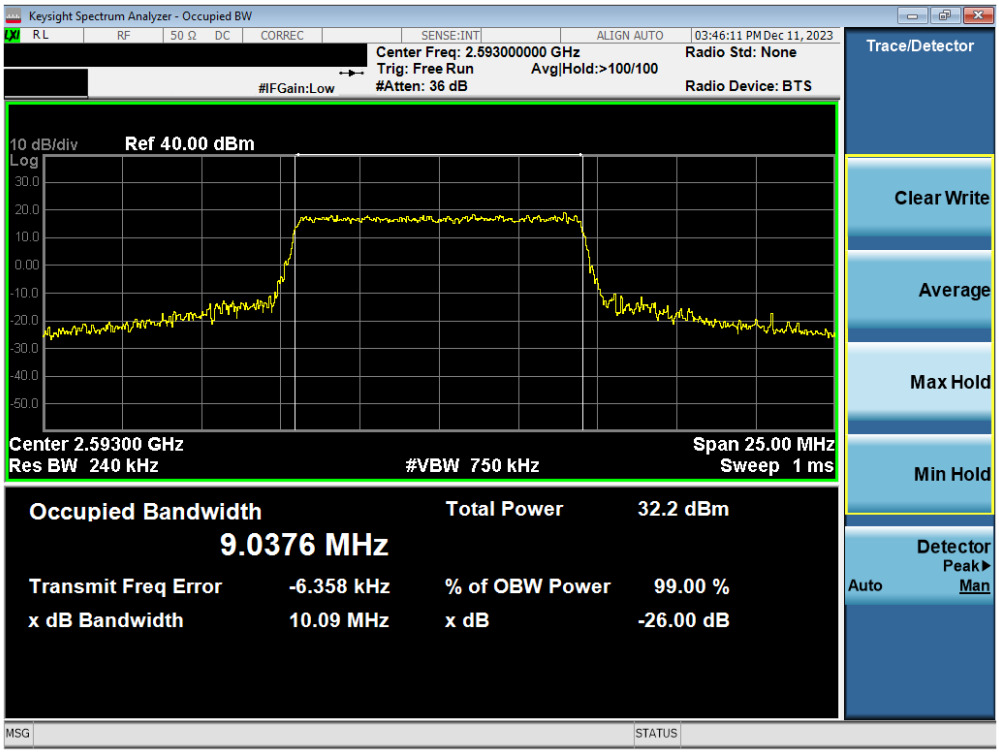
Plot 7-27. Occupied Bandwidth Plot (LTE Band 41 - 5MHz 64-QAM - Full RB)



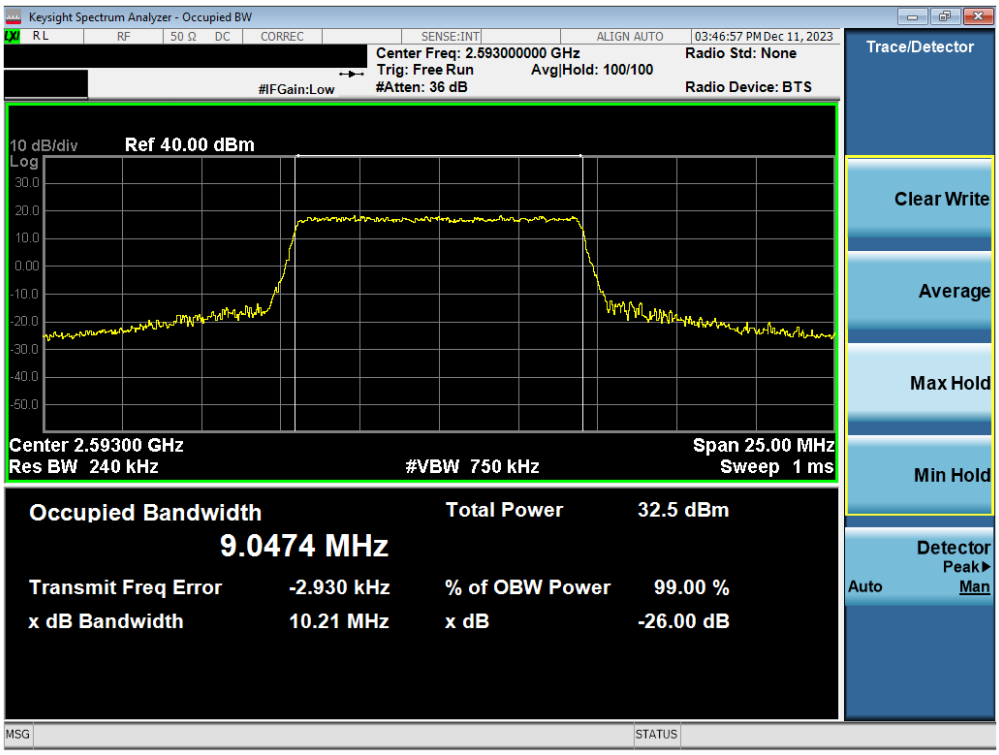
Plot 7-28. Occupied Bandwidth Plot (LTE Band 41 - 5MHz 256-QAM - Full RB)



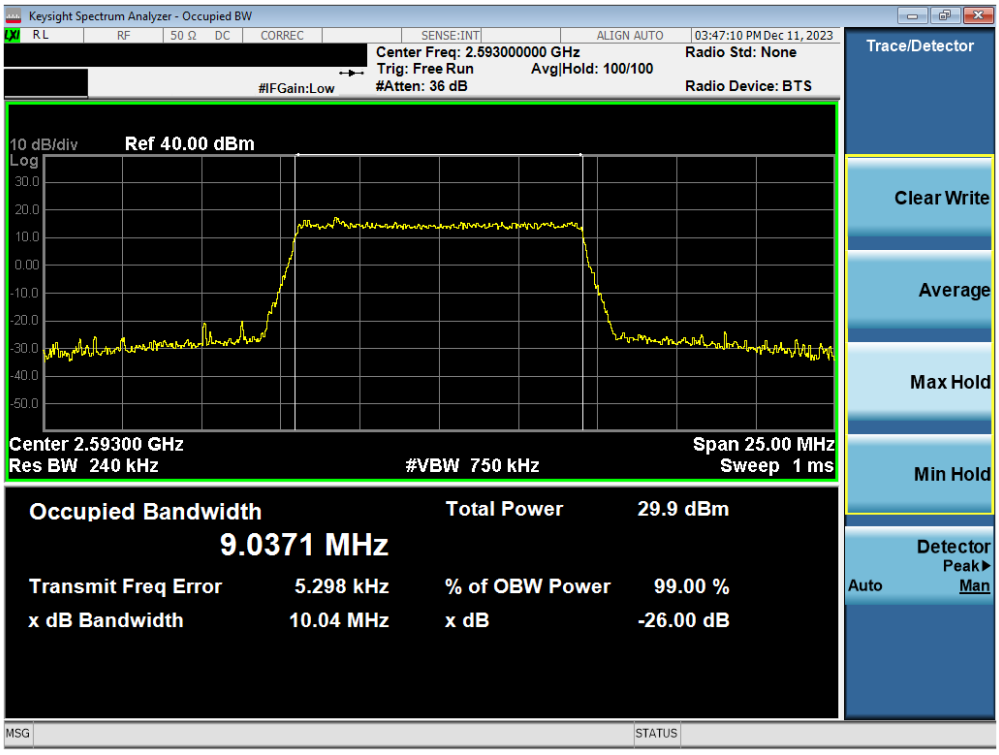
Plot 7-29. Occupied Bandwidth Plot (LTE Band 41 - 10MHz QPSK - Full RB)



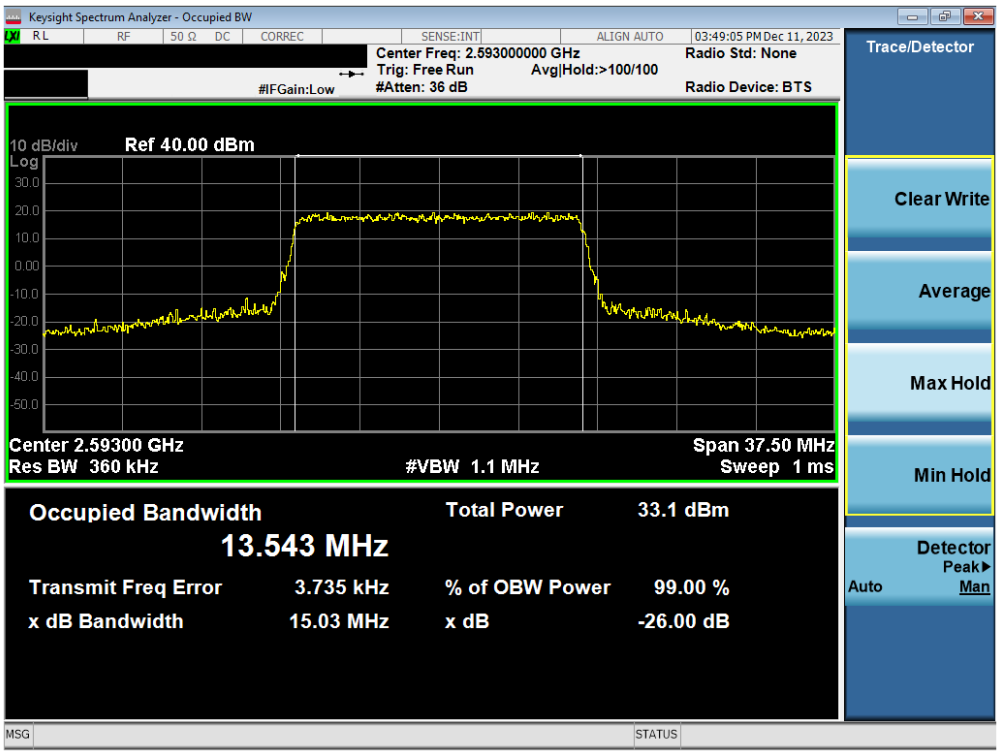
Plot 7-30. Occupied Bandwidth Plot (LTE Band 41 - 10MHz 16-QAM - Full RB)



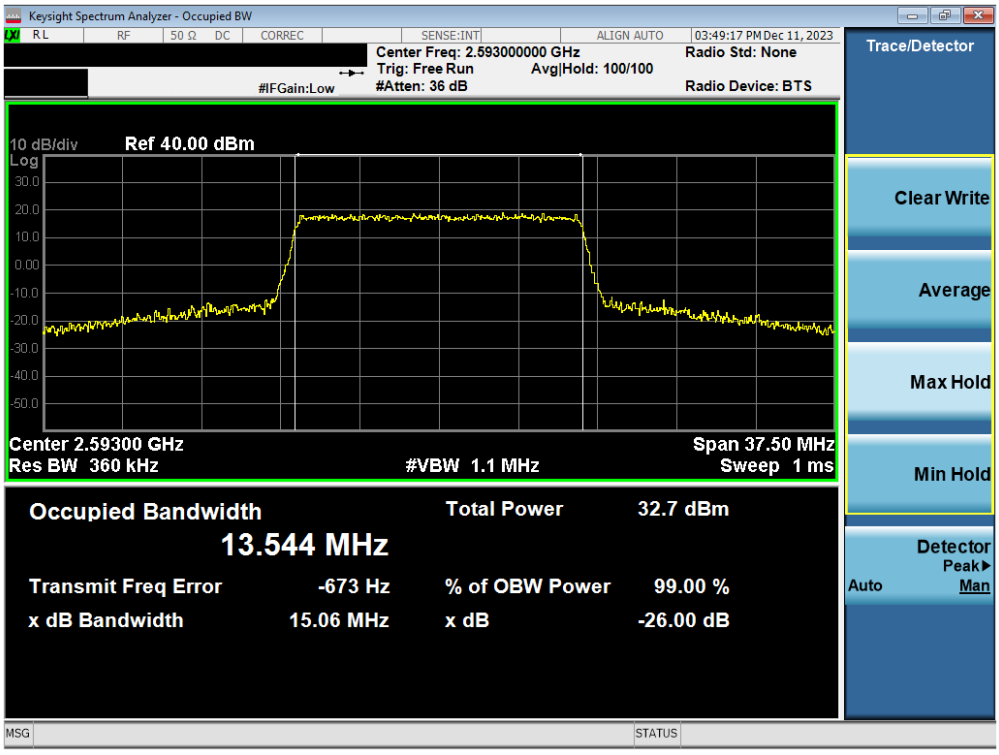
Plot 7-31. Occupied Bandwidth Plot (LTE Band 41 - 10MHz 64-QAM - Full RB)



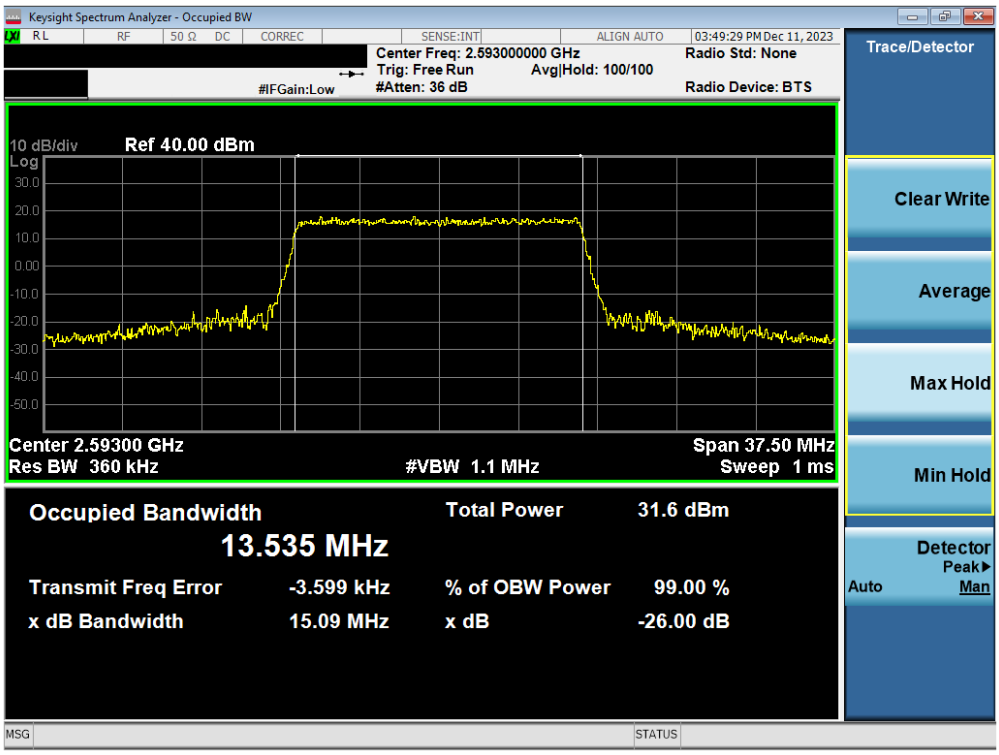
Plot 7-32. Occupied Bandwidth Plot (LTE Band 41 - 10MHz 256-QAM - Full RB)



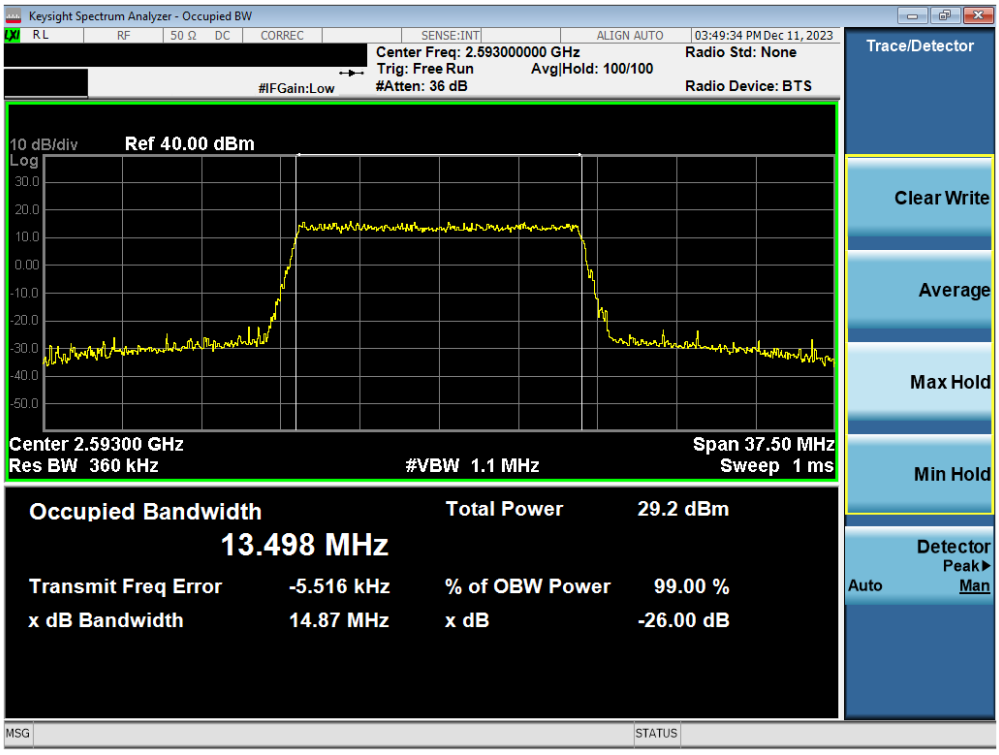
Plot 7-33. Occupied Bandwidth Plot (LTE Band 41 - 15MHz QPSK - Full RB)



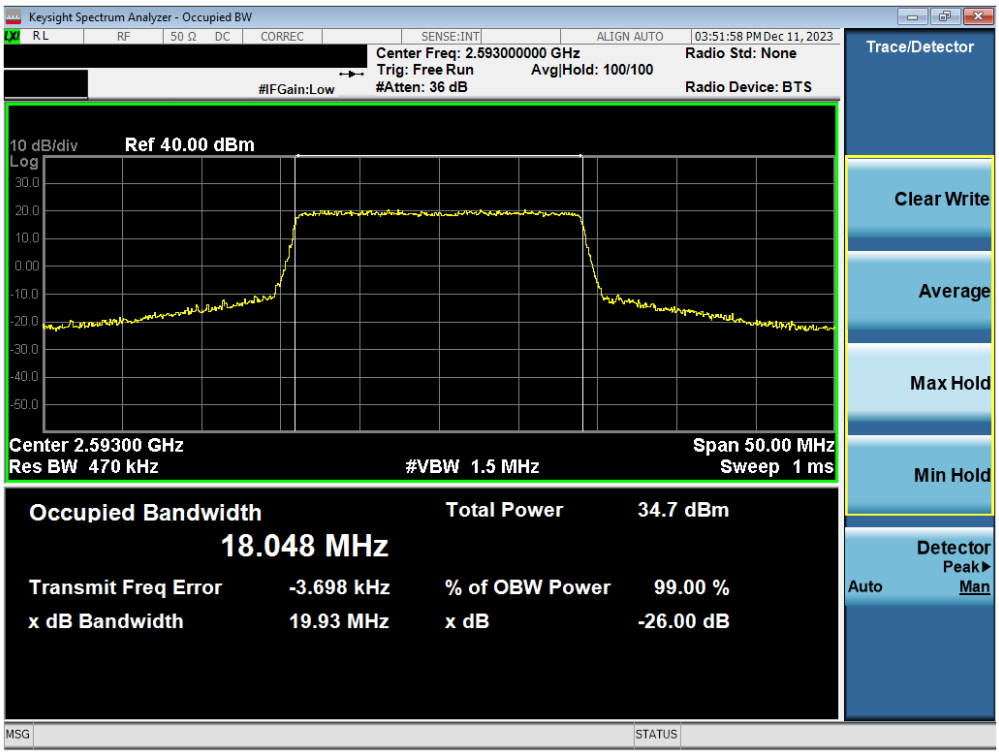
Plot 7-34. Occupied Bandwidth Plot (LTE Band 41 - 15MHz 16-QAM - Full RB)



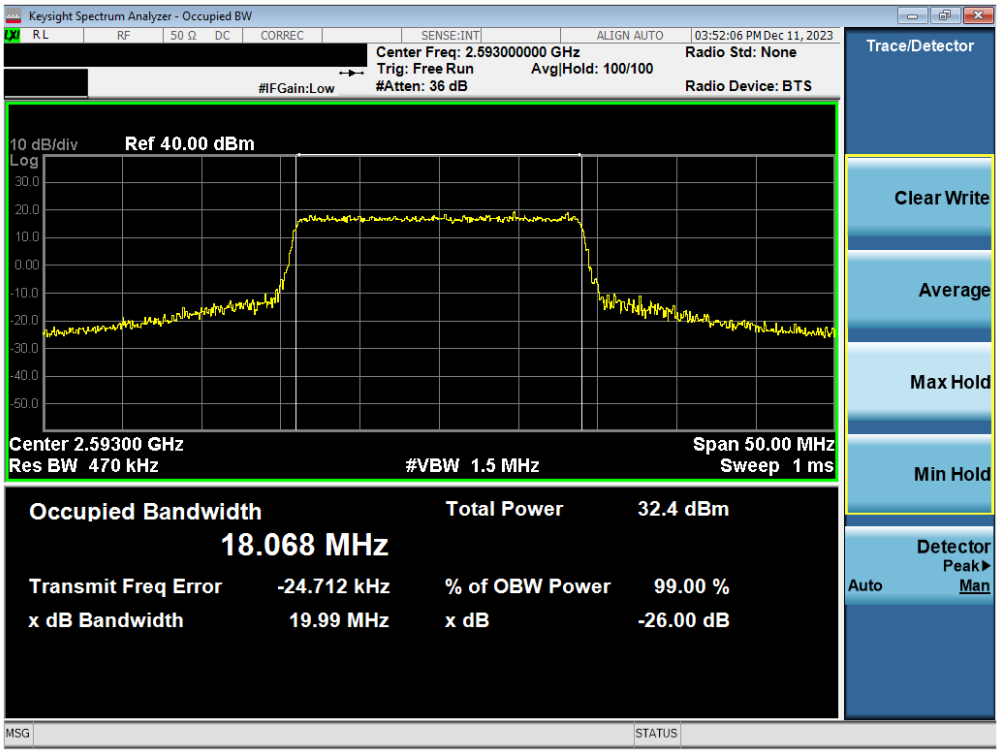
Plot 7-35. Occupied Bandwidth Plot (LTE Band 41 - 15MHz 64-QAM - Full RB)



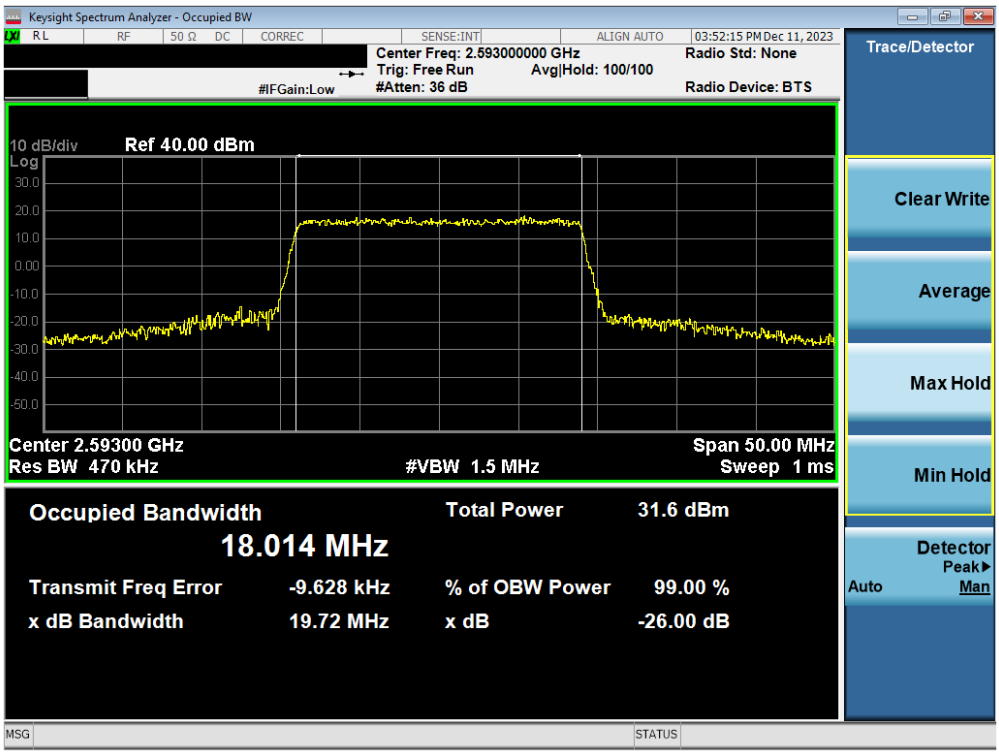
Plot 7-36. Occupied Bandwidth Plot (LTE Band 41 - 15MHz 256-QAM - Full RB)



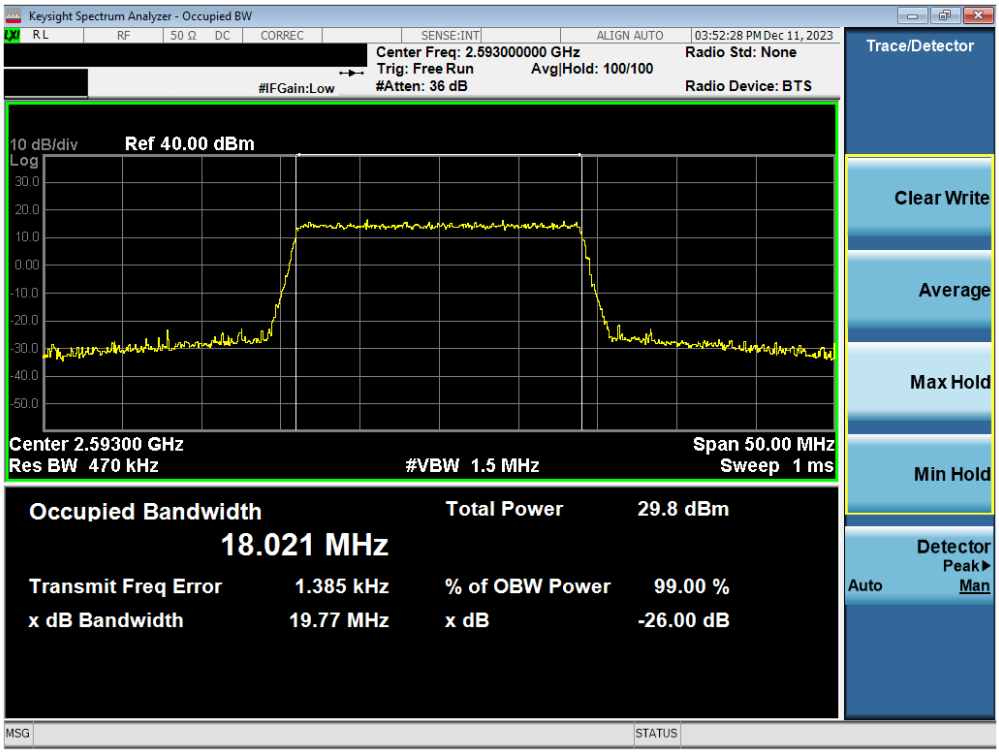
Plot 7-37. Occupied Bandwidth Plot (LTE Band 41 - 20MHz QPSK - Full RB)



Plot 7-38. Occupied Bandwidth Plot (LTE Band 41 - 20MHz 16-QAM - Full RB)



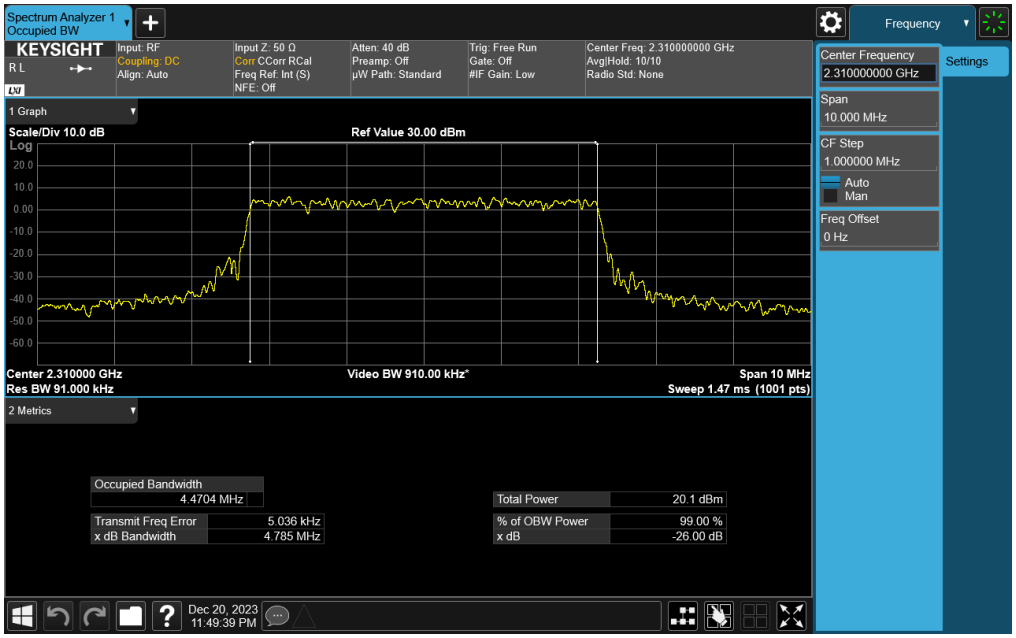
Plot 7-39. Occupied Bandwidth Plot (LTE Band 41 - 20MHz 64-QAM - Full RB)



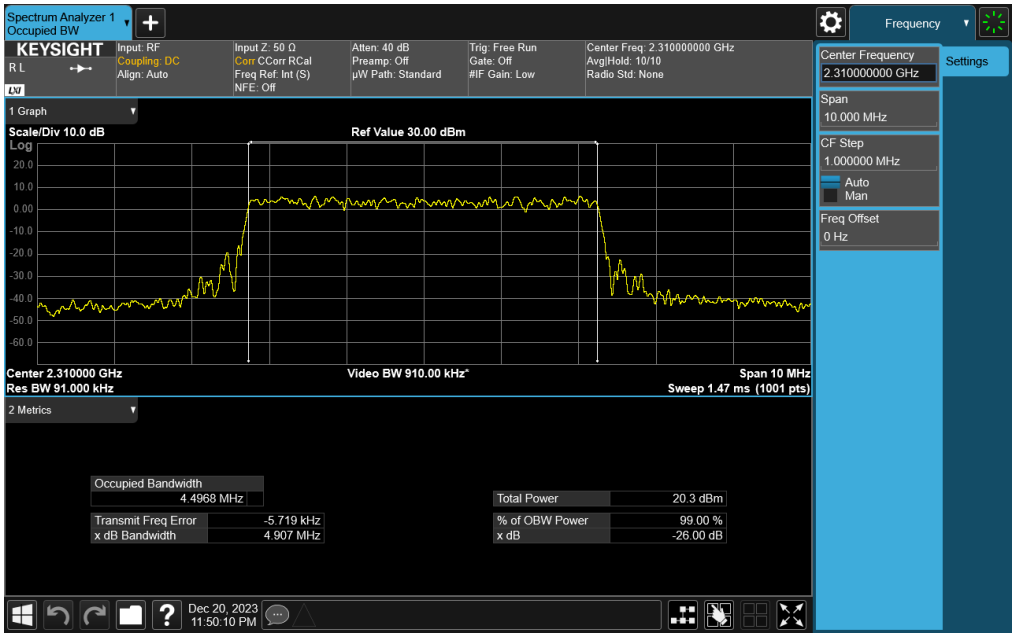
Plot 7-40. Occupied Bandwidth Plot (LTE Band 41 - 20MHz 256-QAM - Full RB)

NR Band n30

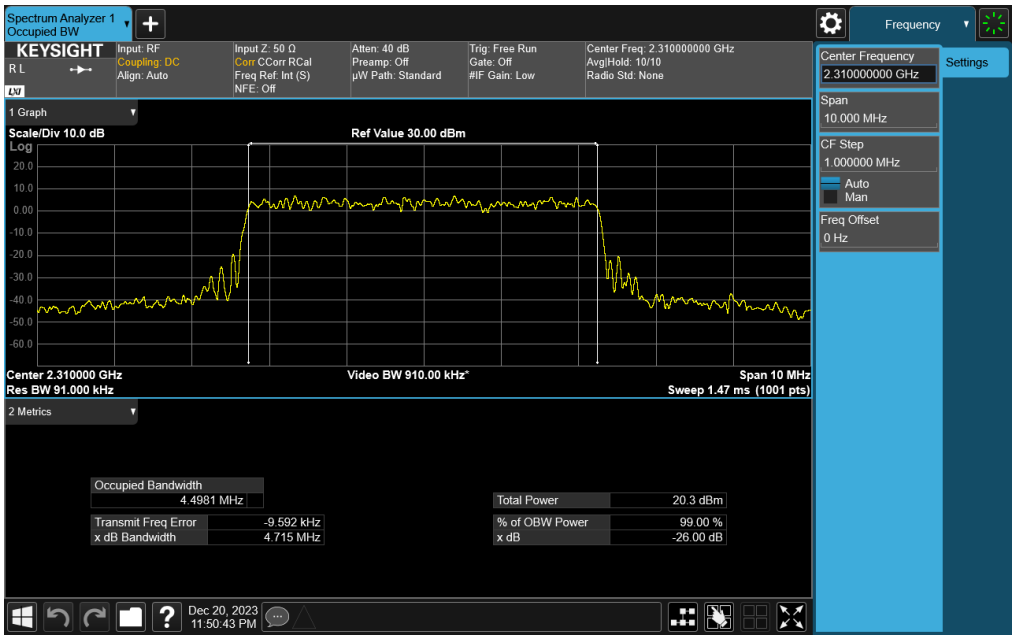
Plot 7-41. Occupied Bandwidth Plot (NR Band n30 - 5MHz DFT-s-OFDM π/2 BPSK - Full RB)



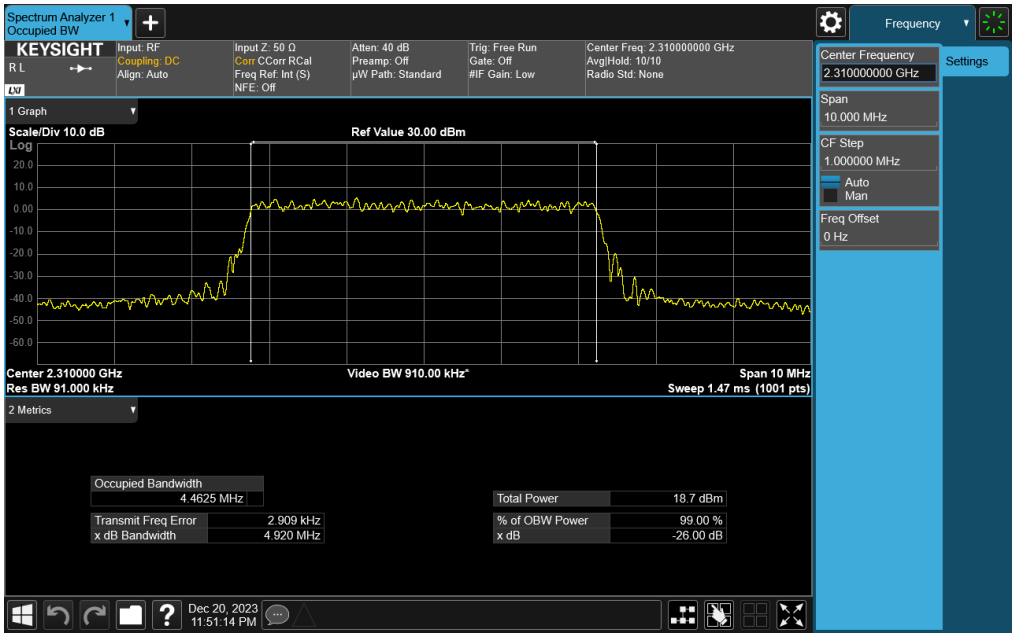
Plot 7-42. Occupied Bandwidth Plot (NR Band n30 - 5MHz CP-OFDM QPSK - Full RB)



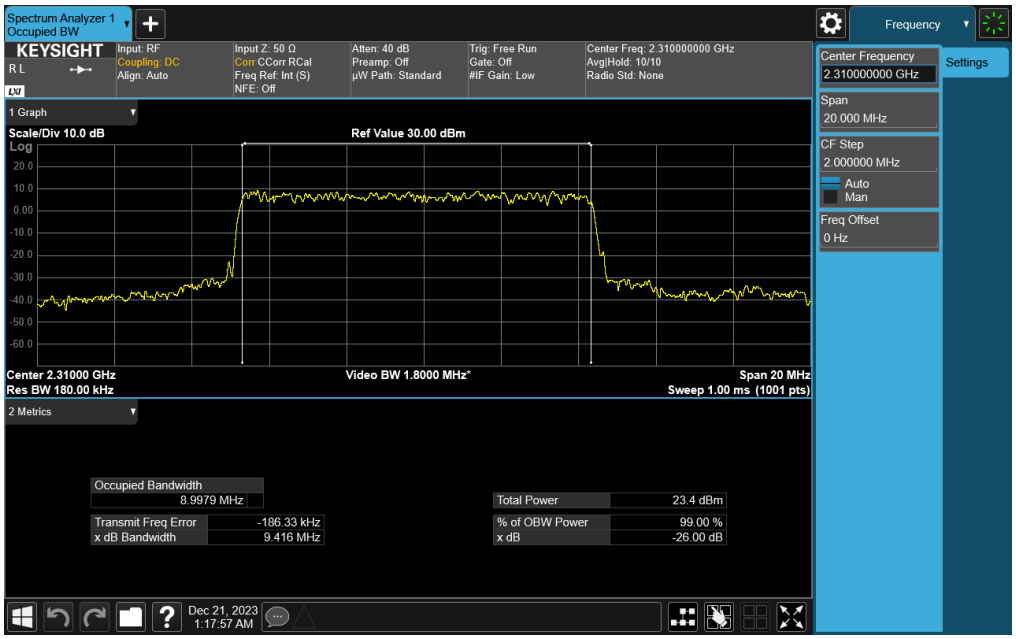
Plot 7-43. Occupied Bandwidth Plot (NR Band n30 - 5MHz DFT-s-OFDM 16-QAM - Full RB)



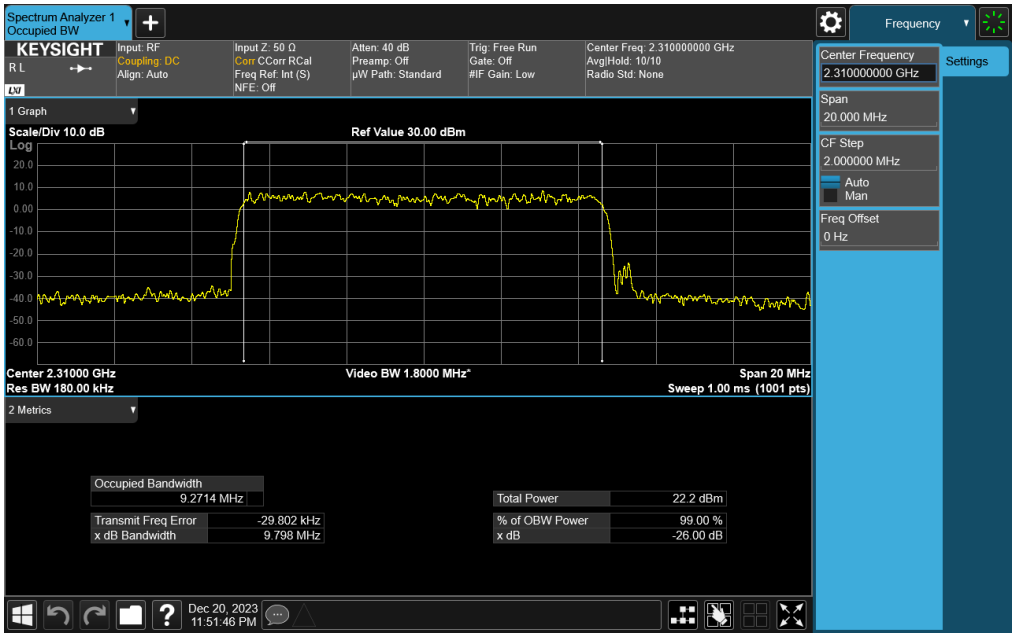
Plot 7-44. Occupied Bandwidth Plot (NR Band n30 - 5MHz DFT-s-OFDM 64-QAM - Full RB)



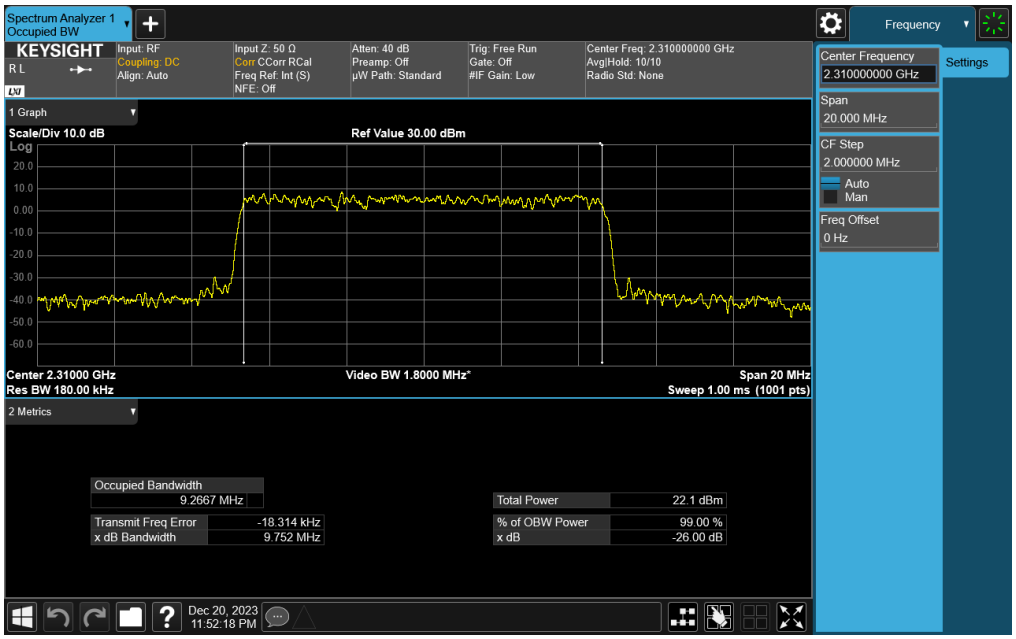
Plot 7-45. Occupied Bandwidth Plot (NR Band n30 - 5MHz CP-OFDM 256-QAM - Full RB)



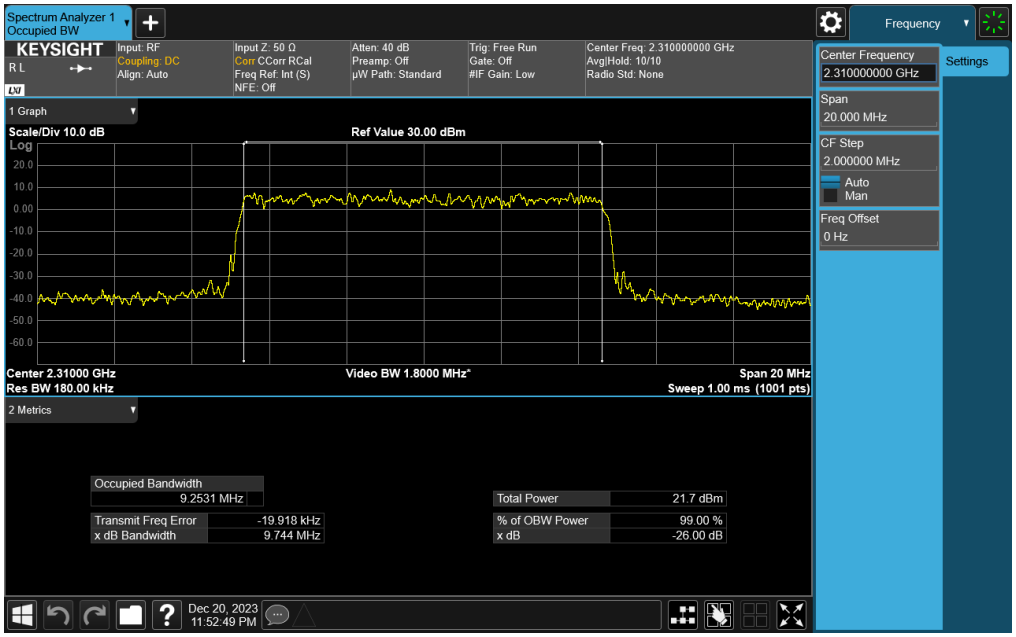
Plot 7-46. Occupied Bandwidth Plot (NR Band n30 - 10MHz DFT-s-OFDM π/2 BPSK - Full RB)



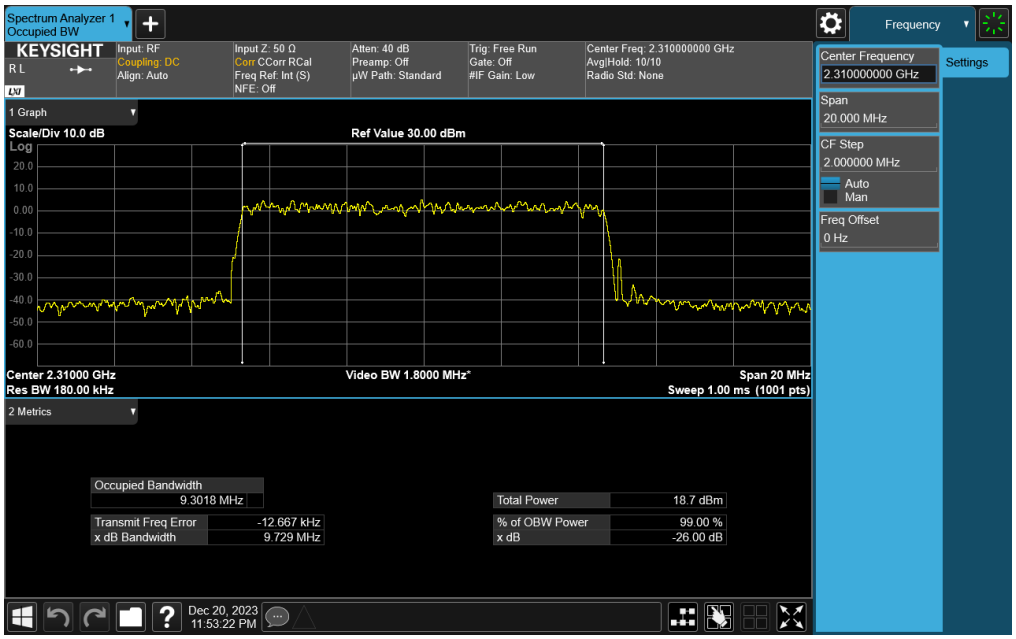
Plot 7-47. Occupied Bandwidth Plot (NR Band n30 - 10MHz CP-OFDM QPSK - Full RB)



Plot 7-48. Occupied Bandwidth Plot (NR Band n30 - 10MHz CP-OFDM 16-QAM - Full RB)

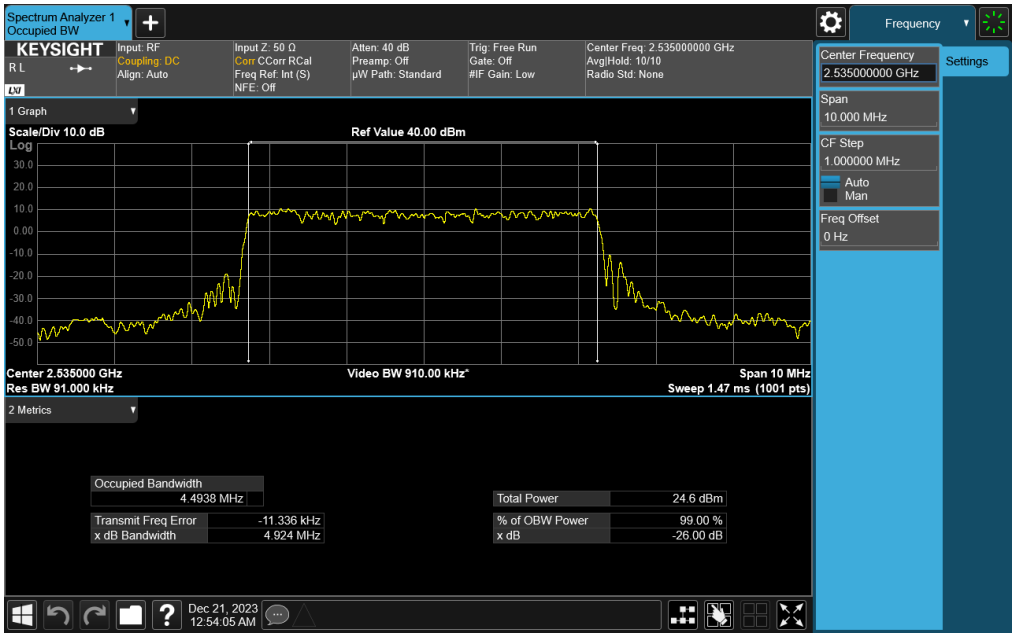


Plot 7-49. Occupied Bandwidth Plot (NR Band n30 - 10MHz CP-OFDM 64-QAM - Full RB)

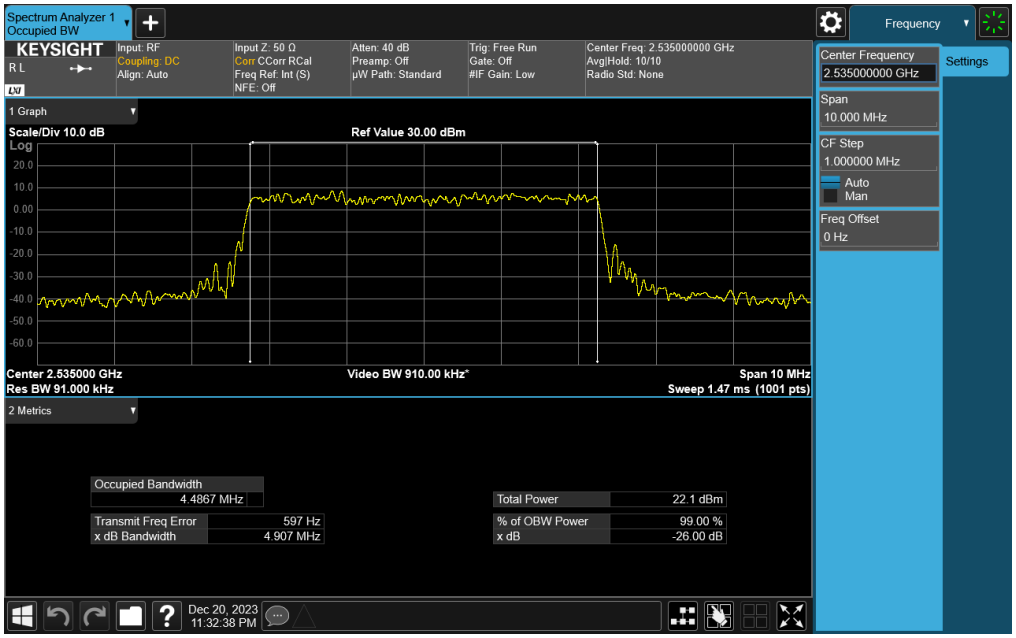


Plot 7-50. Occupied Bandwidth Plot (NR Band n30 - 10MHz CP-OFDM 256-QAM - Full RB)

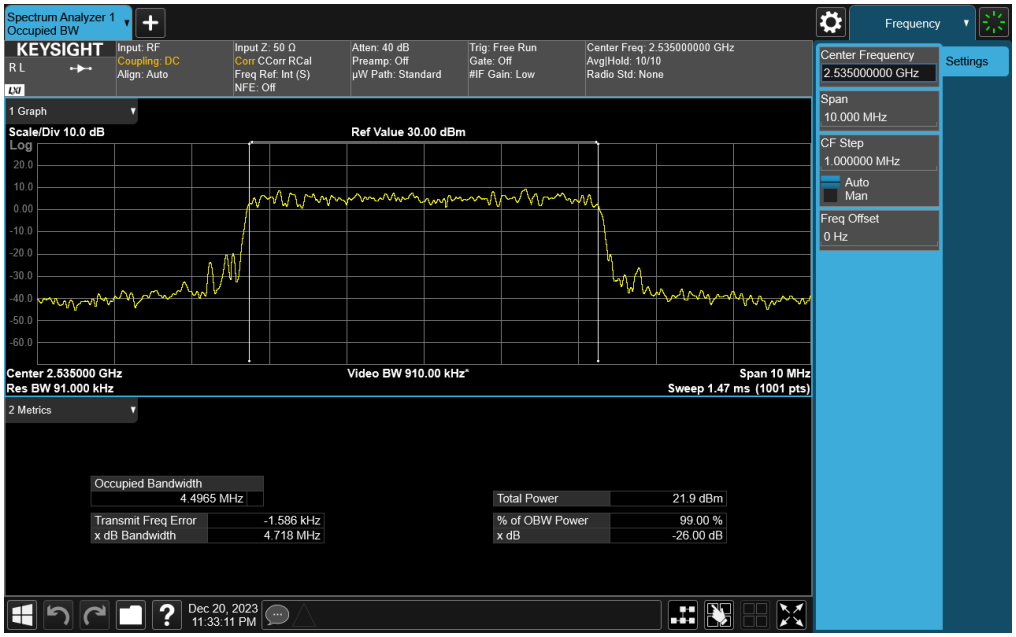
NR Band n7



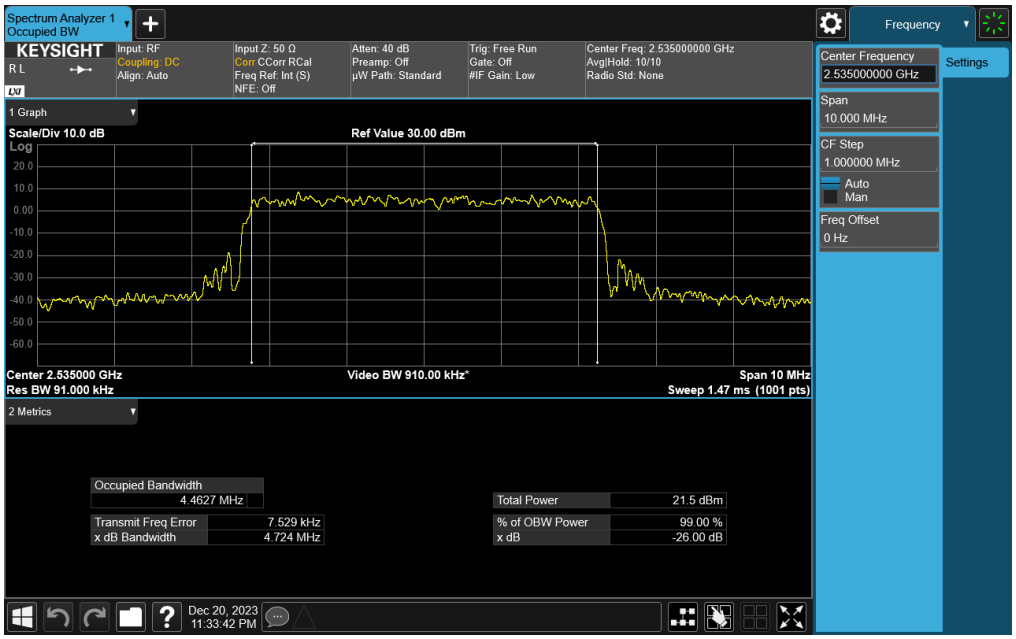
Plot 7-51. Occupied Bandwidth Plot (NR Band n7 - 5MHz DFT-s-OFDM π/2 BPSK - Full RB)



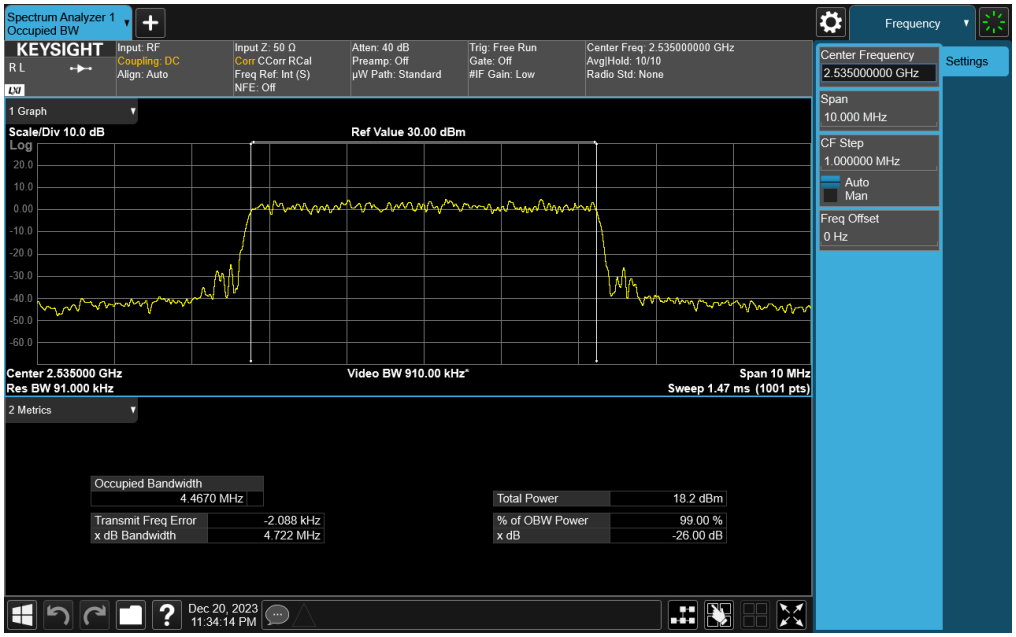
Plot 7-52. Occupied Bandwidth Plot (NR Band n7 - 5MHz DFT-s-OFDM QPSK - Full RB)



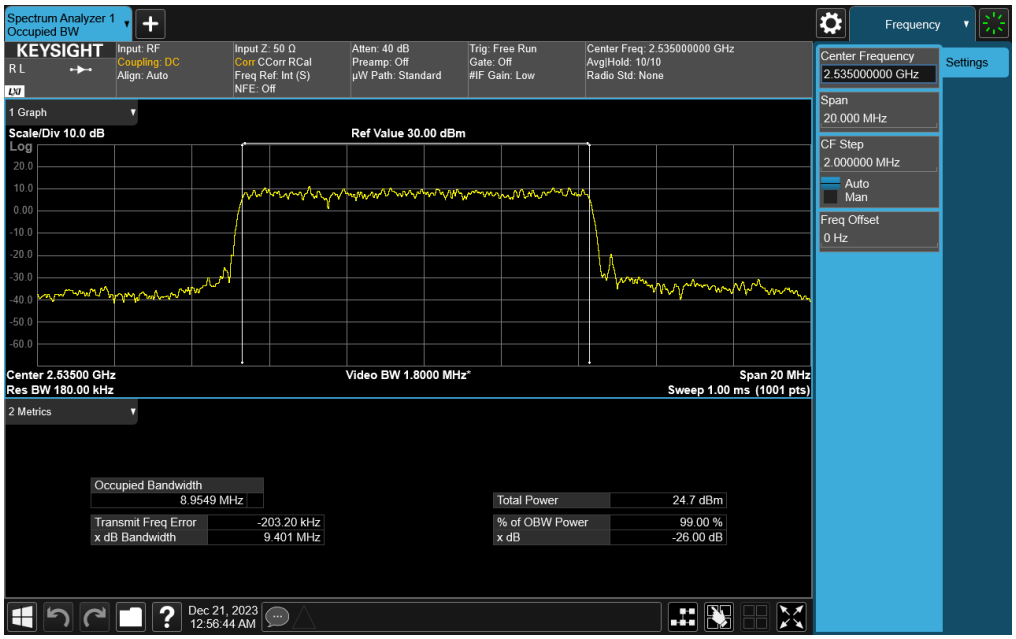
Plot 7-53. Occupied Bandwidth Plot (NR Band n7 - 5MHz DFT-s-OFDM 16-QAM - Full RB)



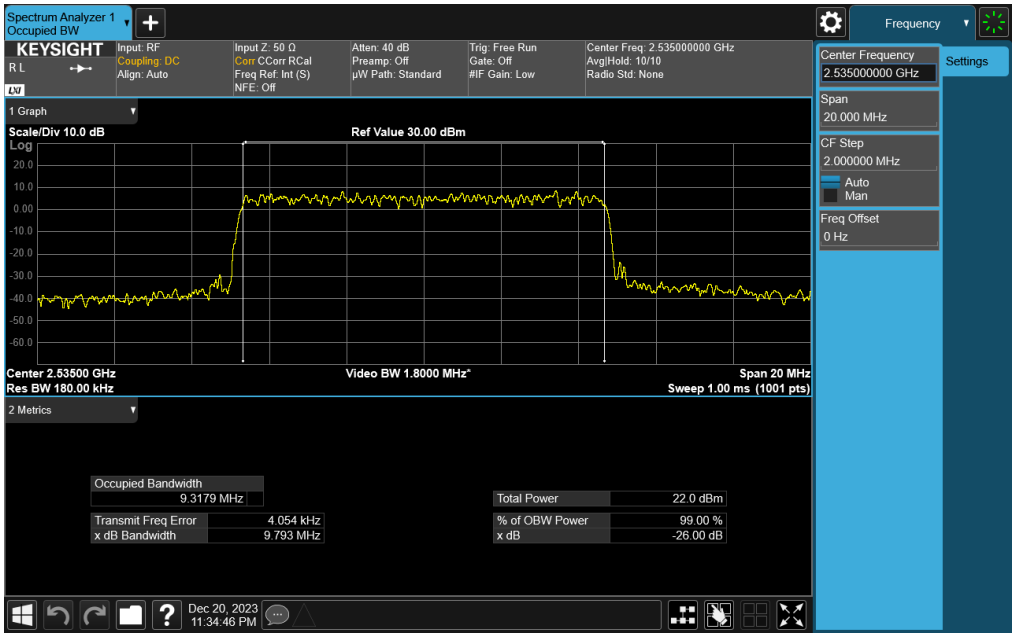
Plot 7-54. Occupied Bandwidth Plot (NR Band n7 - 5MHz CP-OFDM 64-QAM - Full RB)



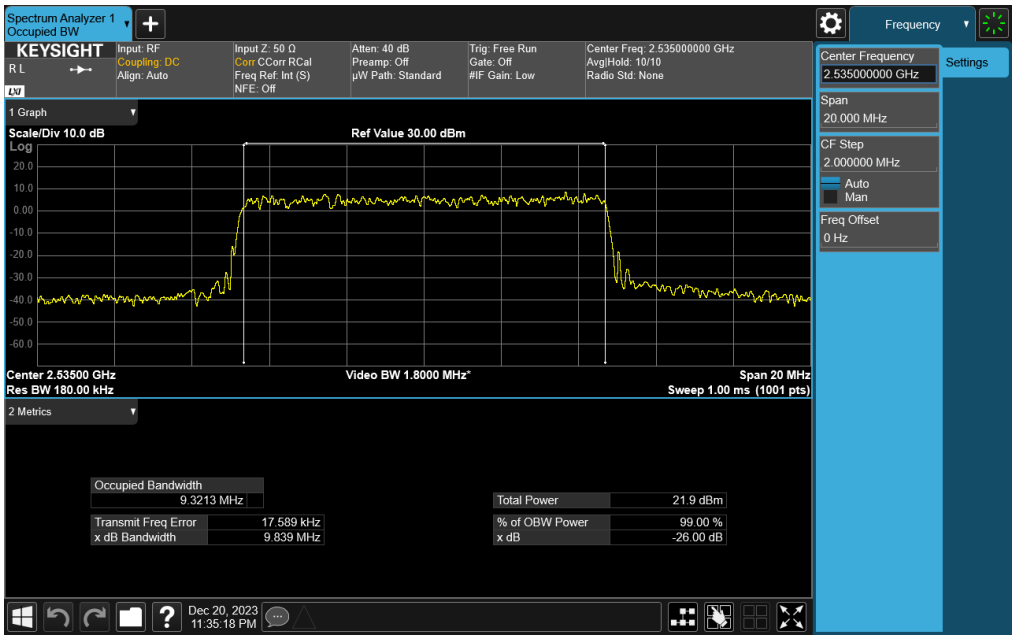
Plot 7-55. Occupied Bandwidth Plot (NR Band n7 - 5MHz DFT-s-OFDM 256-QAM - Full RB)



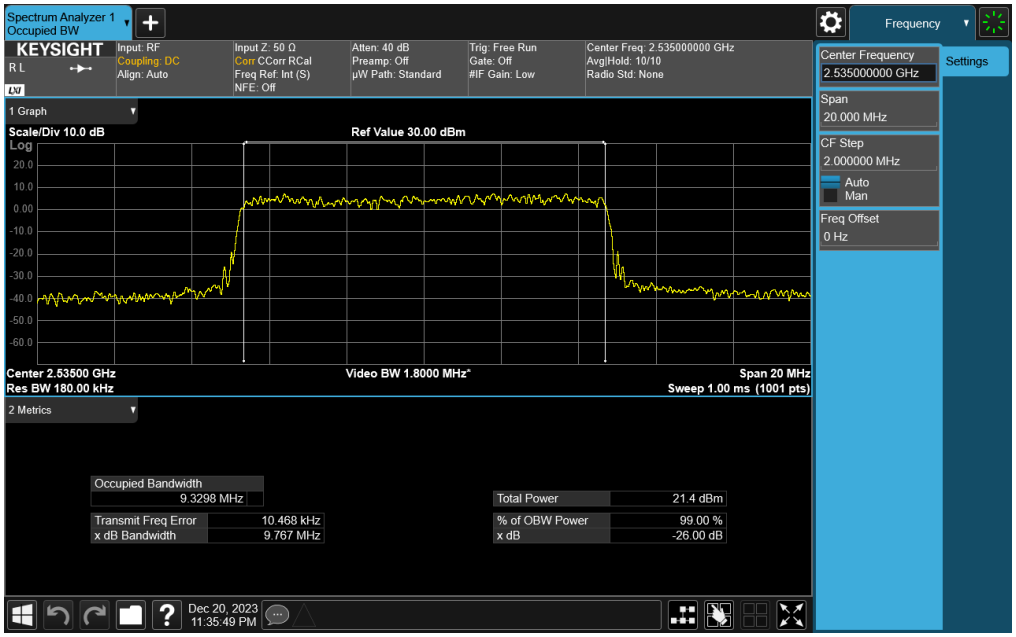
Plot 7-56. Occupied Bandwidth Plot (NR Band n7 - 10MHz DFT-s-OFDM π/2 BPSK - Full RB)



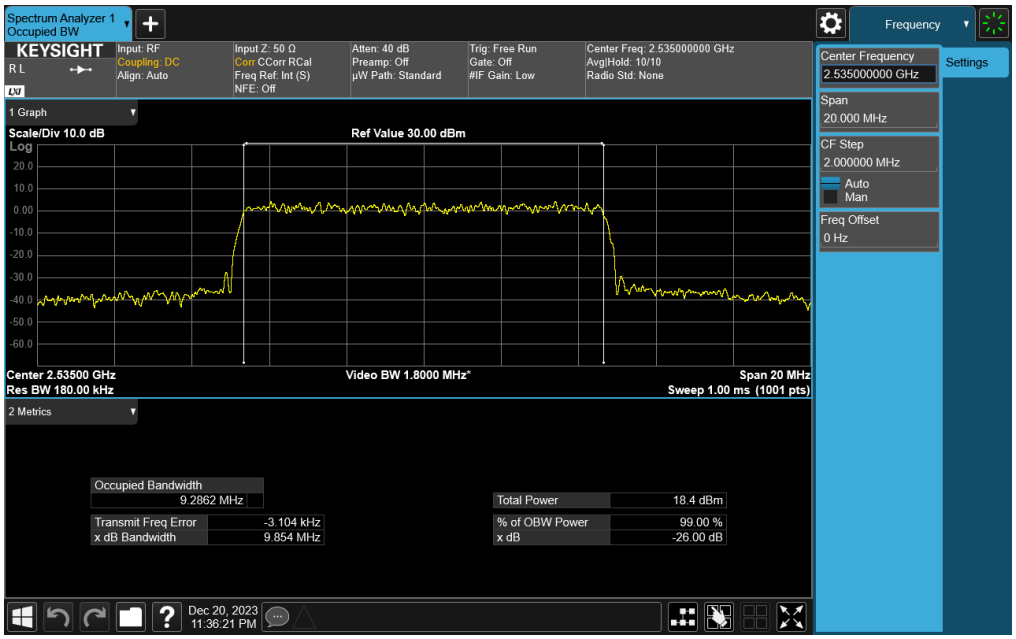
Plot 7-57. Occupied Bandwidth Plot (NR Band n7 - 10MHz CP-OFDM QPSK - Full RB)



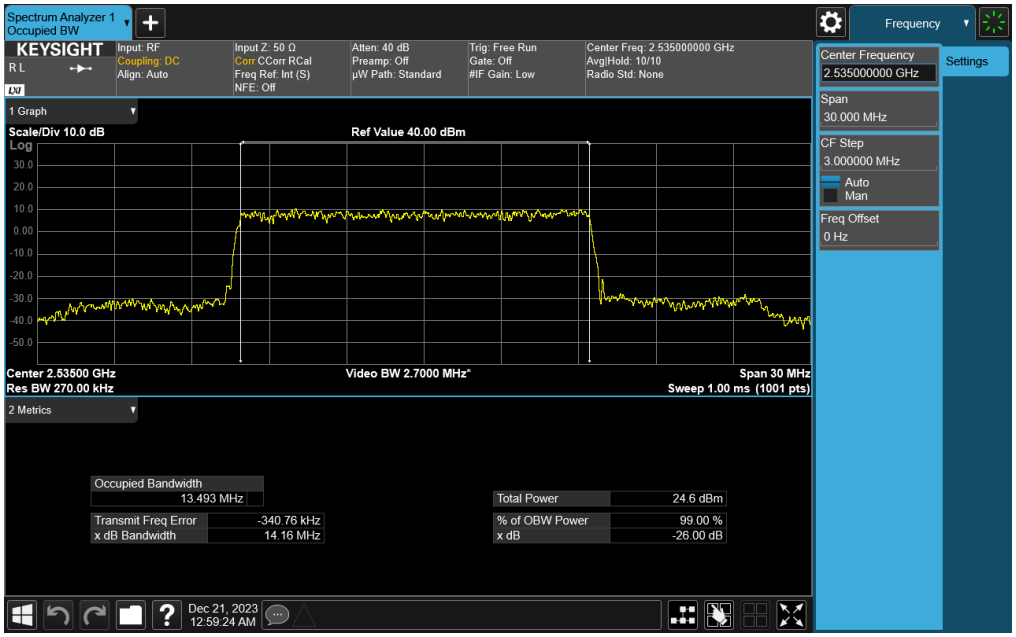
Plot 7-58. Occupied Bandwidth Plot (NR Band n7 - 10MHz CP-OFDM 16-QAM - Full RB)



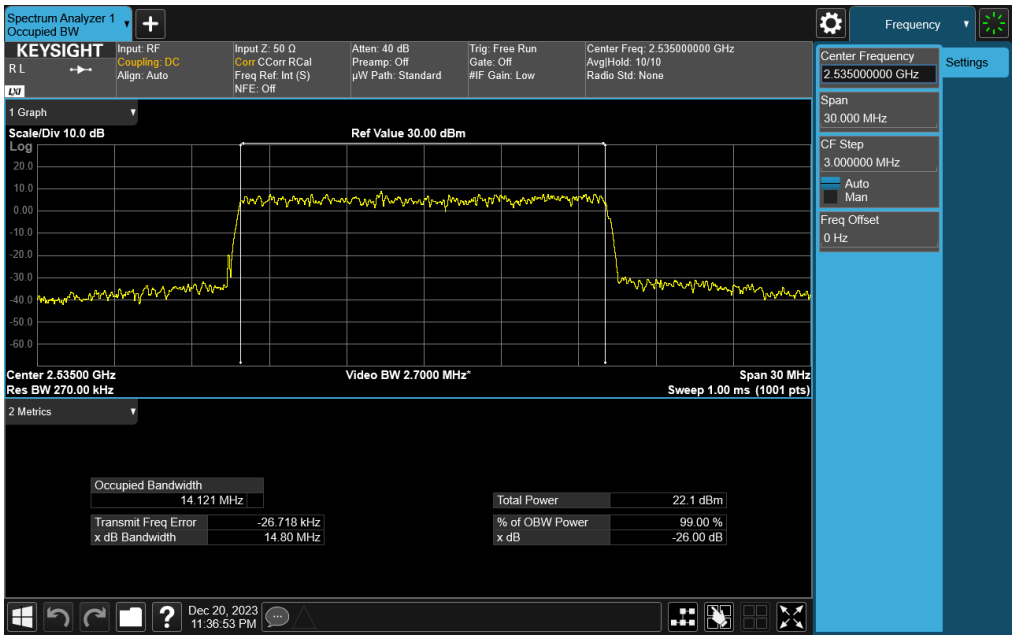
Plot 7-59. Occupied Bandwidth Plot (NR Band n7 - 10MHz CP-OFDM 64-QAM - Full RB)



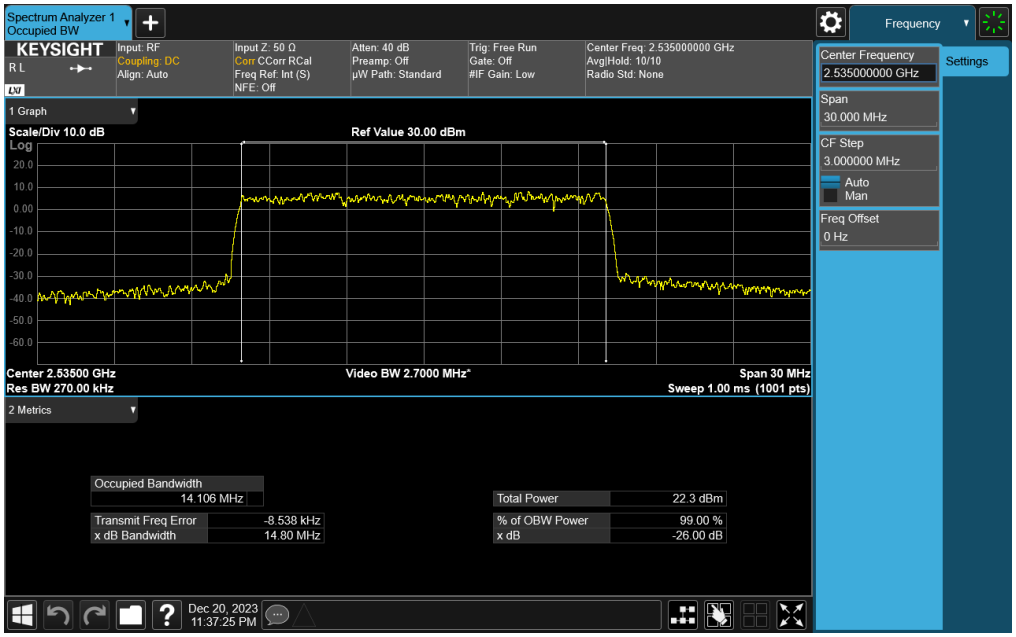
Plot 7-60. Occupied Bandwidth Plot (NR Band n7 - 10MHz CP-OFDM 256-QAM - Full RB)



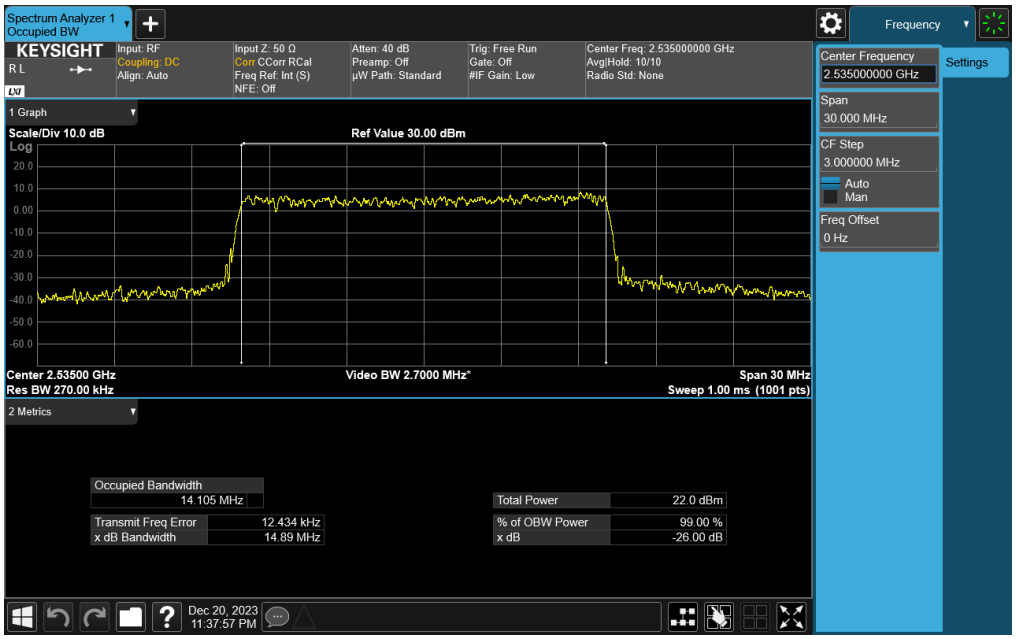
Plot 7-61. Occupied Bandwidth Plot (NR Band n7 - 15MHz DFT-s-OFDM π/2 BPSK - Full RB)



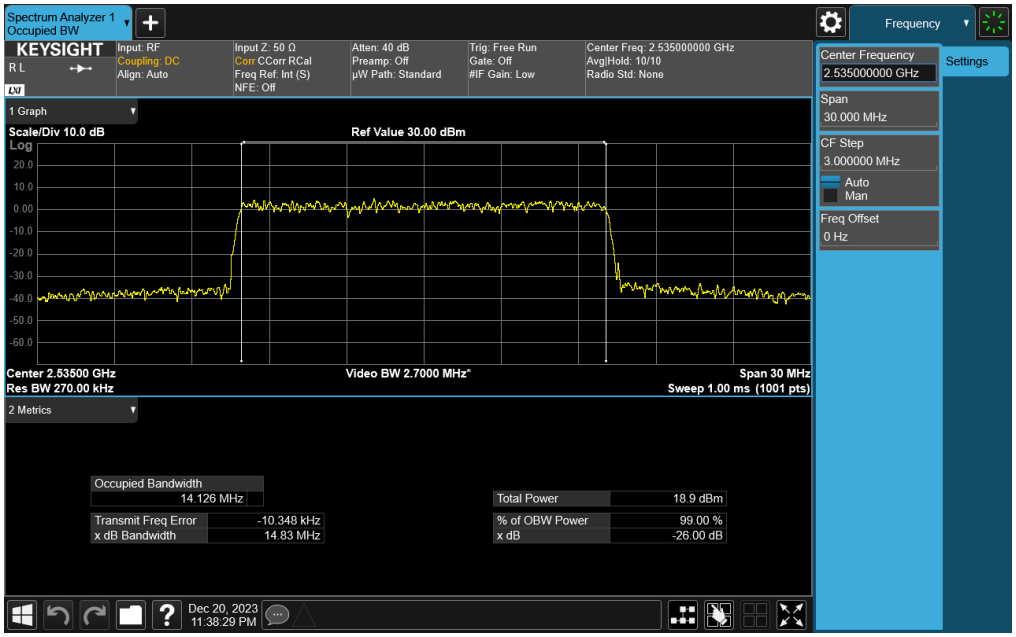
Plot 7-62. Occupied Bandwidth Plot (NR Band n7 - 15MHz CP-OFDM QPSK - Full RB)



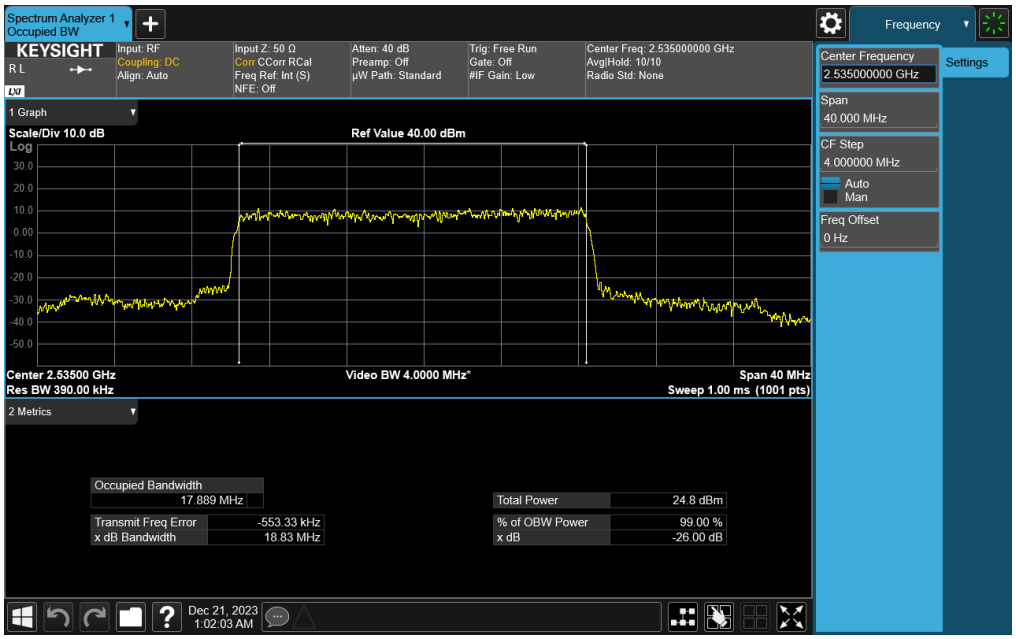
Plot 7-63. Occupied Bandwidth Plot (NR Band n7 - 15MHz CP-OFDM 16-QAM - Full RB)



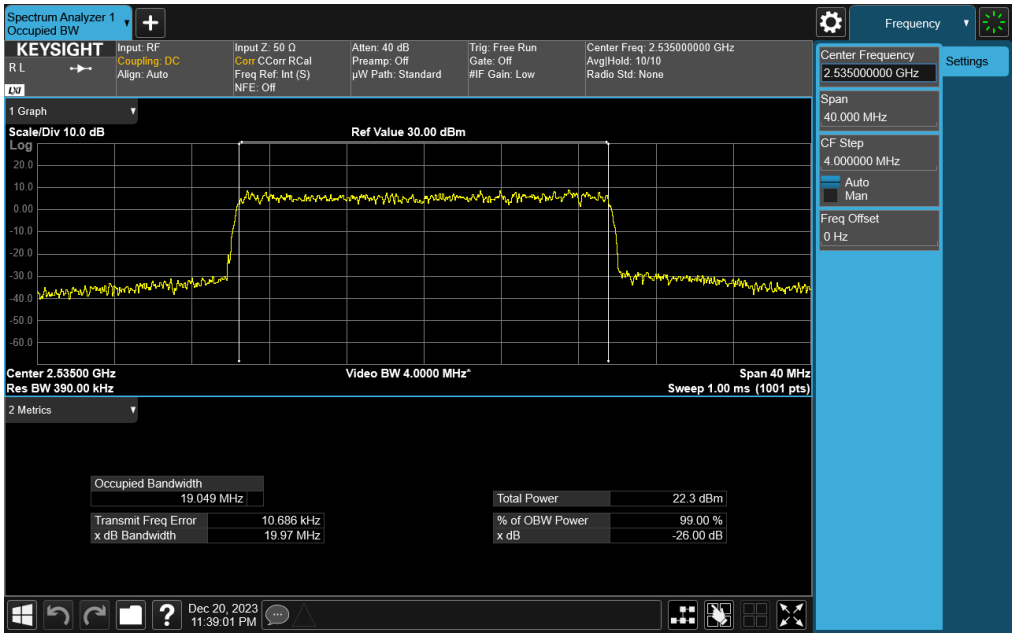
Plot 7-64. Occupied Bandwidth Plot (NR Band n7 - 15MHz CP-OFDM 64-QAM - Full RB)



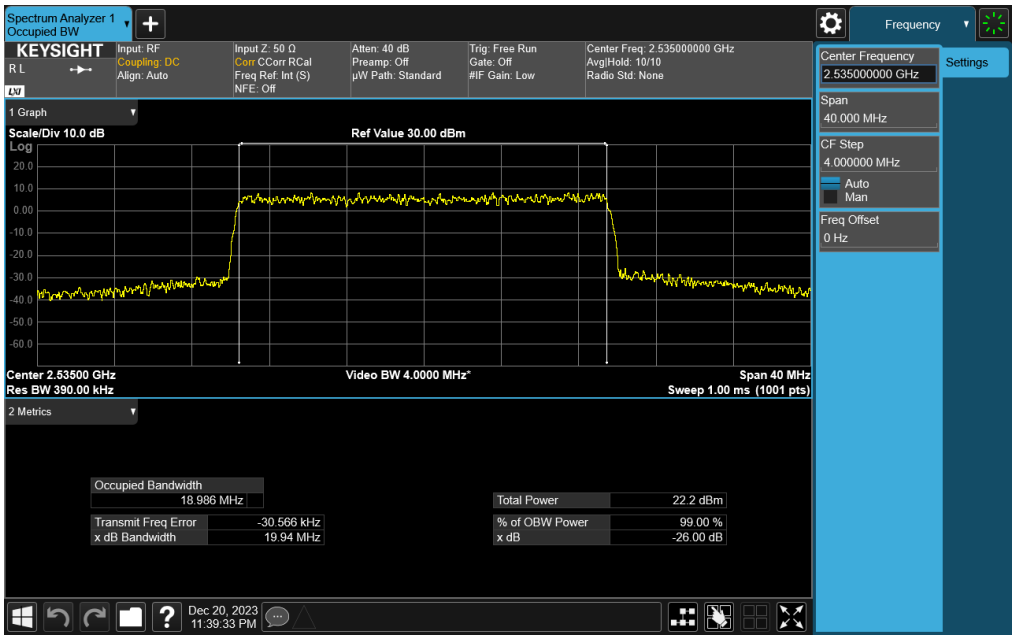
Plot 7-65. Occupied Bandwidth Plot (NR Band n7 - 15MHz CP-OFDM 256-QAM - Full RB)



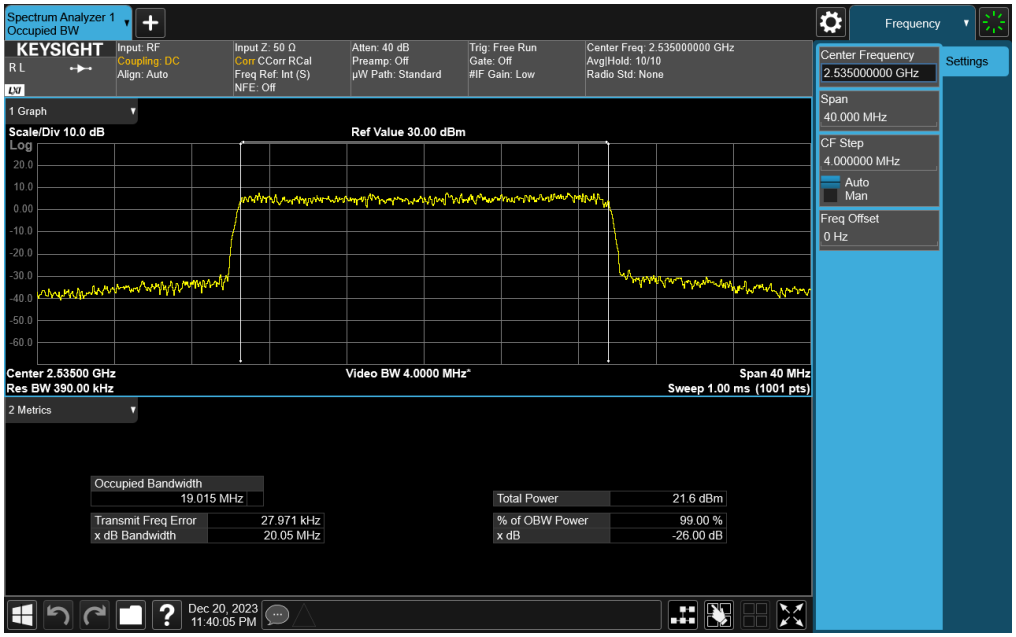
Plot 7-66. Occupied Bandwidth Plot (NR Band n7 - 20MHz DFT-s-OFDM π/2 BPSK - Full RB)



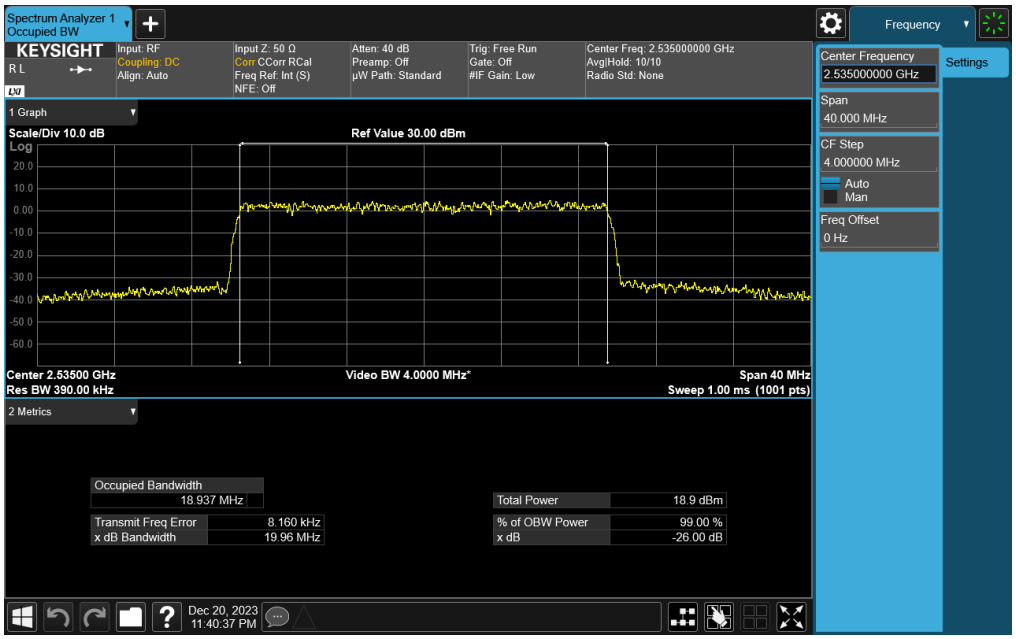
Plot 7-67. Occupied Bandwidth Plot (NR Band n7 - 20MHz CP-OFDM QPSK - Full RB)



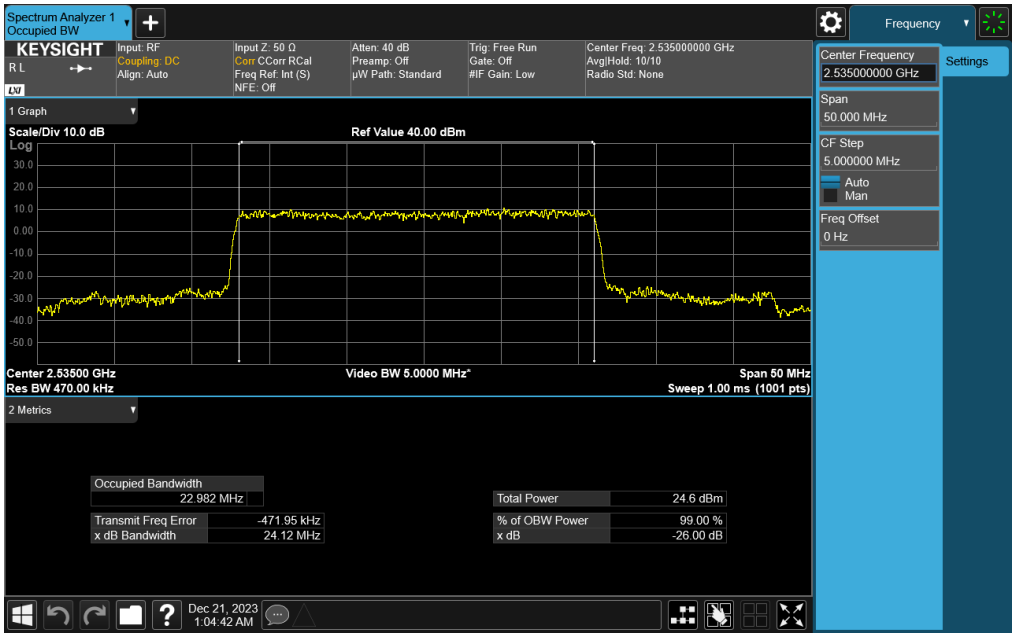
Plot 7-68. Occupied Bandwidth Plot (NR Band n7 - 20MHz CP-OFDM 16-QAM - Full RB)



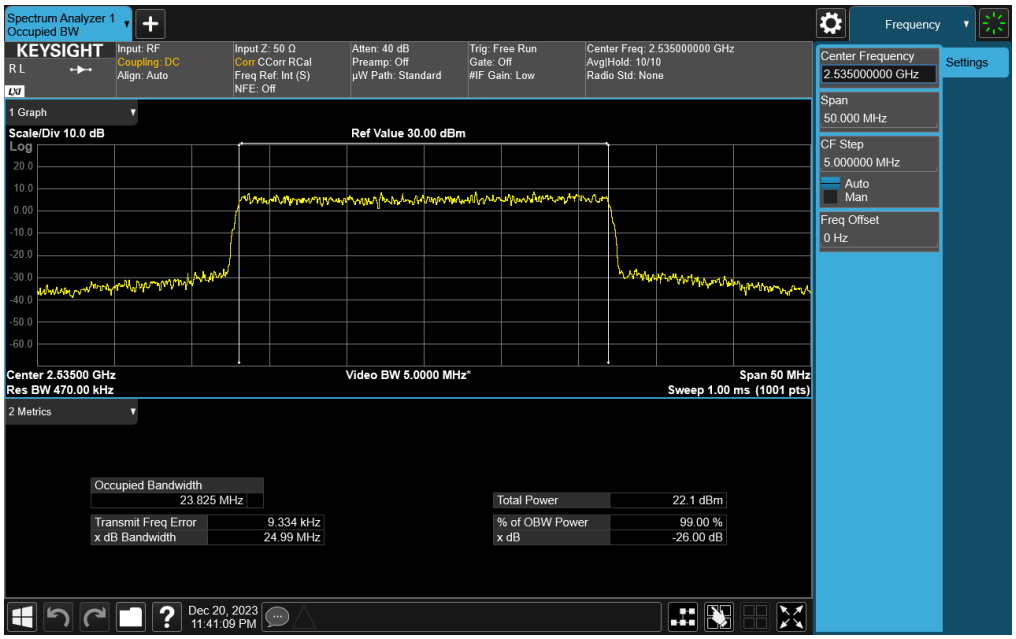
Plot 7-69. Occupied Bandwidth Plot (NR Band n7 - 20MHz CP-OFDM 64-QAM - Full RB)



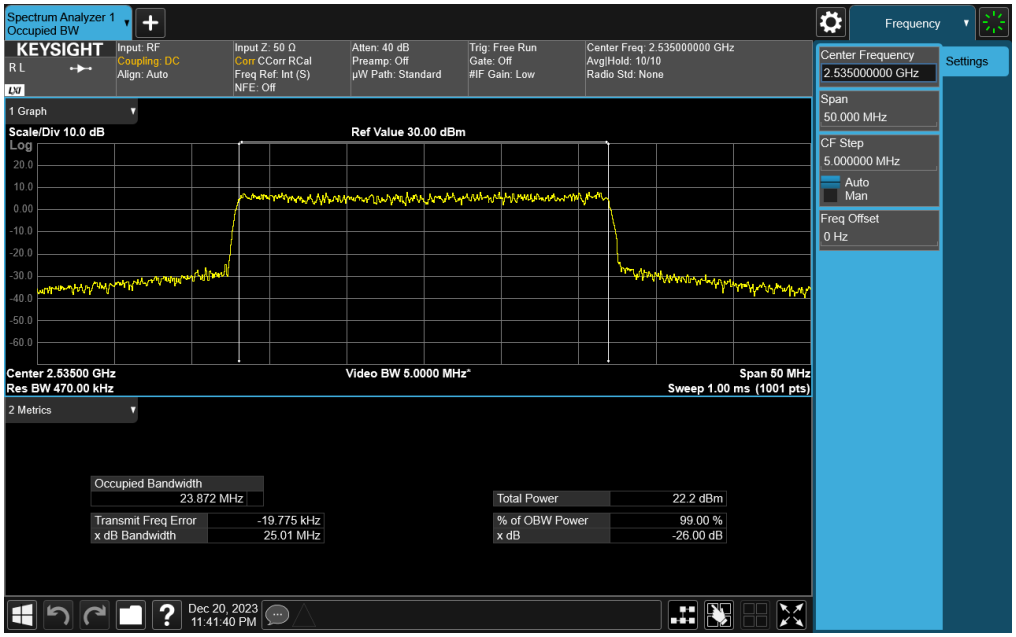
Plot 7-70. Occupied Bandwidth Plot (NR Band n7 - 20MHz CP-OFDM 256-QAM - Full RB)



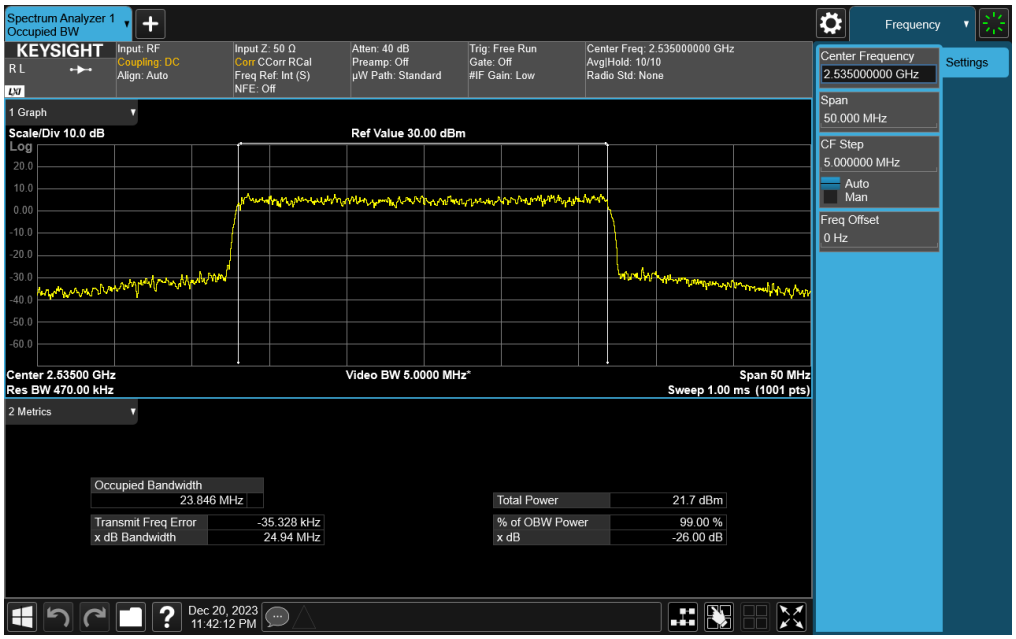
Plot 7-71. Occupied Bandwidth Plot (NR Band n7 - 25MHz DFT-s-OFDM π/2 BPSK - Full RB)



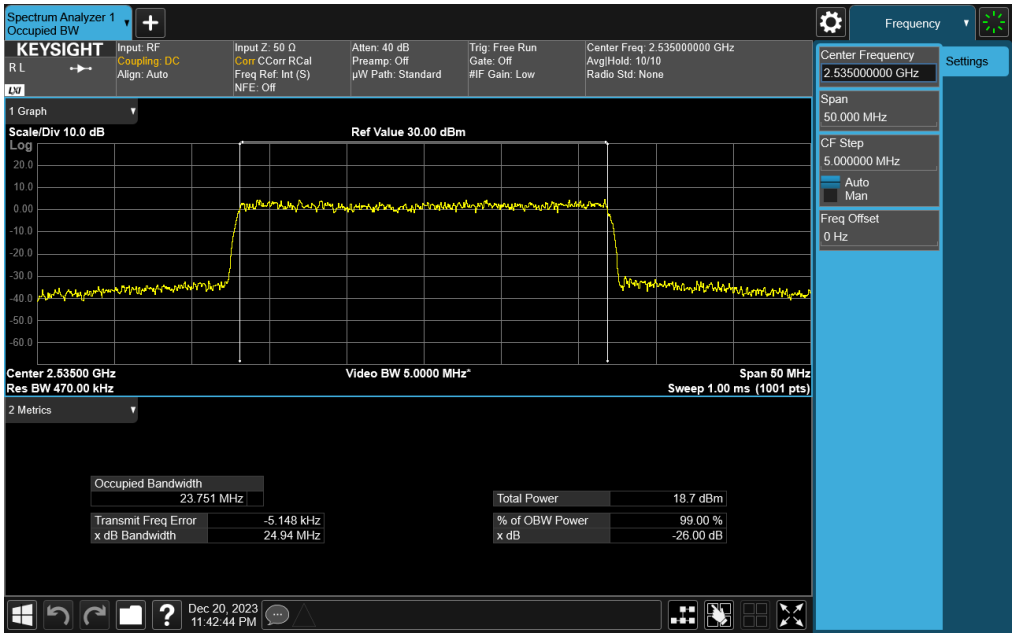
Plot 7-72. Occupied Bandwidth Plot (NR Band n7 - 25MHz CP-OFDM QPSK - Full RB)



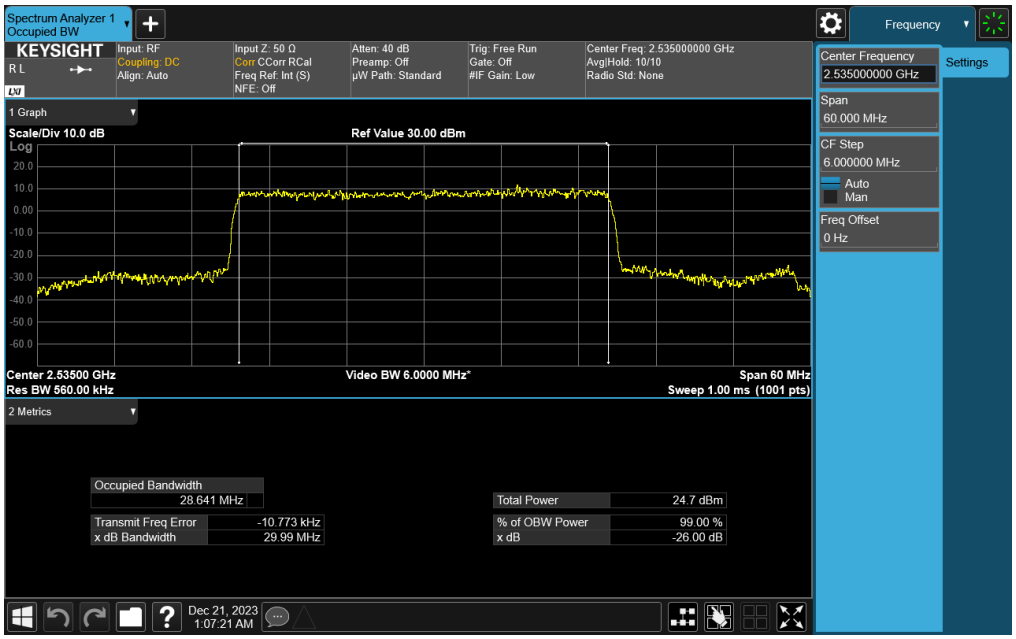
Plot 7-73. Occupied Bandwidth Plot (NR Band n7 - 25MHz CP-OFDM 16-QAM - Full RB)



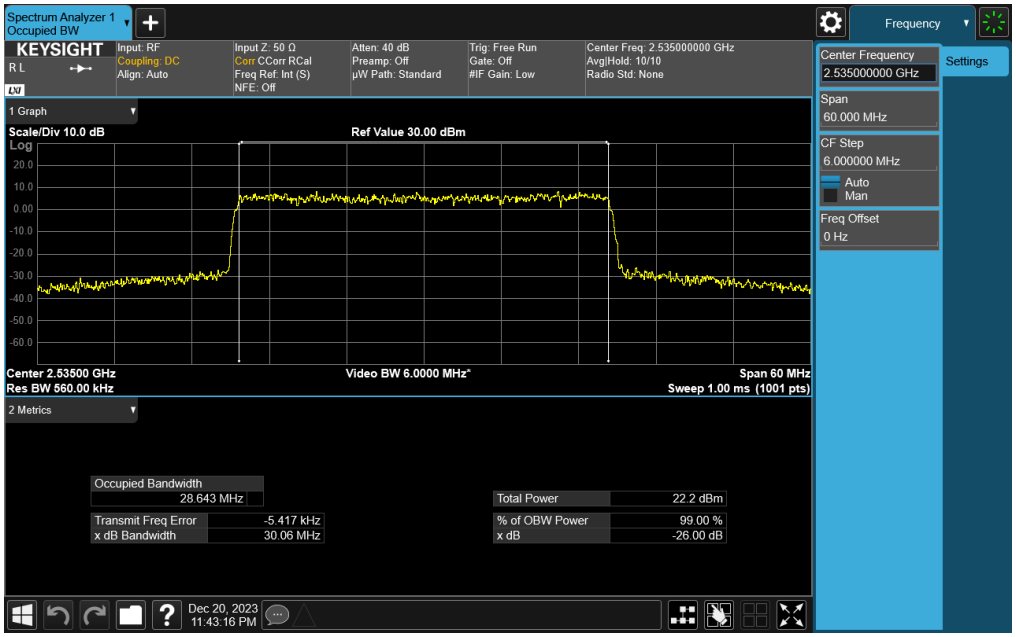
Plot 7-74. Occupied Bandwidth Plot (NR Band n7 - 25MHz CP-OFDM 64-QAM - Full RB)



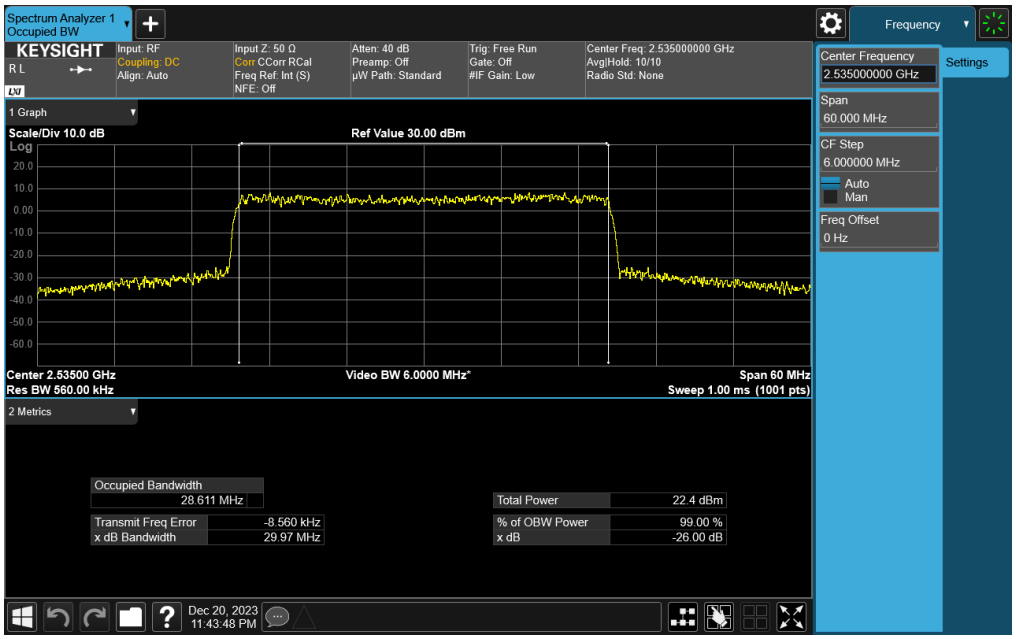
Plot 7-75. Occupied Bandwidth Plot (NR Band n7 - 25MHz CP-OFDM 256-QAM - Full RB)



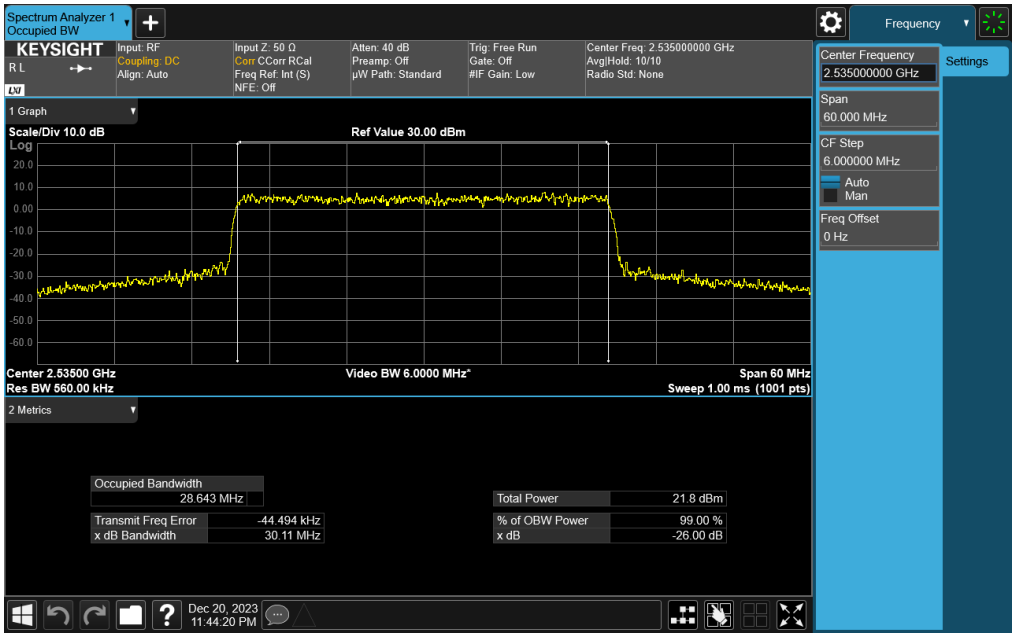
Plot 7-76. Occupied Bandwidth Plot (NR Band n7 - 30MHz DFT-s-OFDM π/2 BPSK - Full RB)



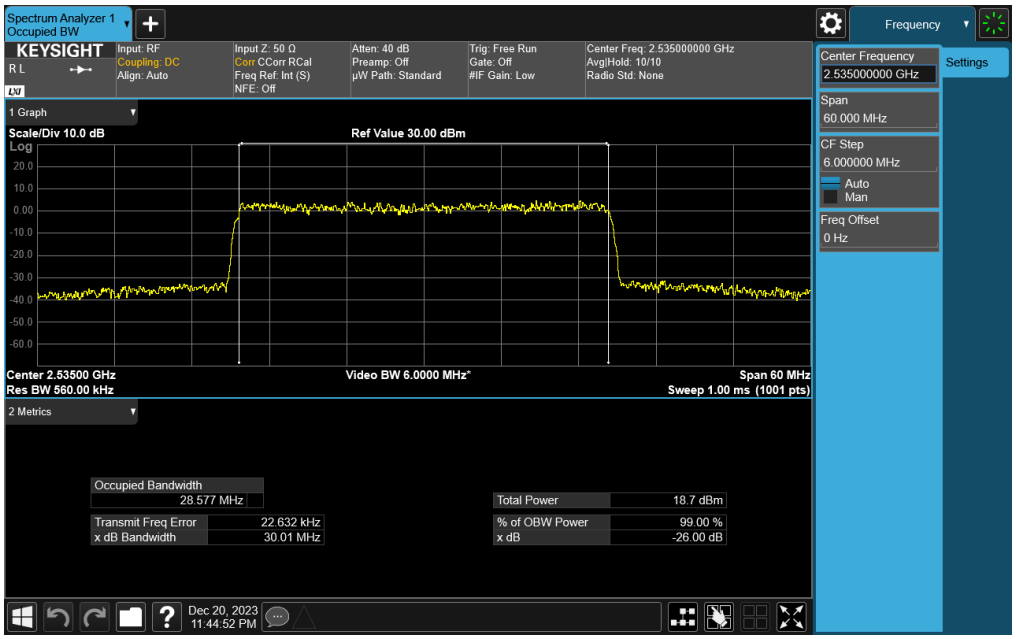
Plot 7-77. Occupied Bandwidth Plot (NR Band n7 - 30MHz CP-OFDM QPSK - Full RB)



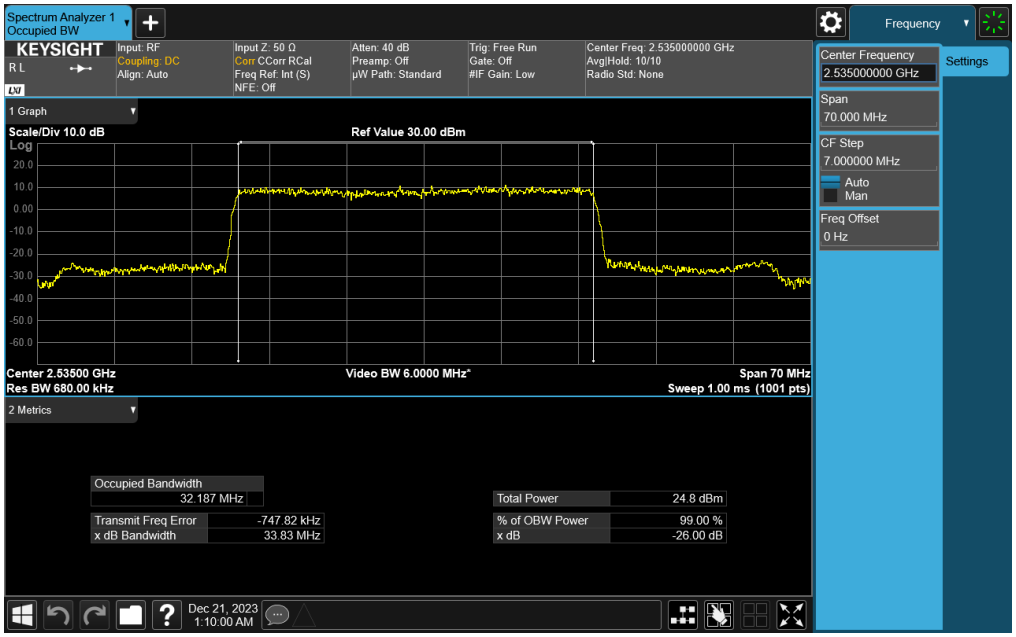
Plot 7-78. Occupied Bandwidth Plot (NR Band n7 - 30MHz CP-OFDM 16-QAM - Full RB)



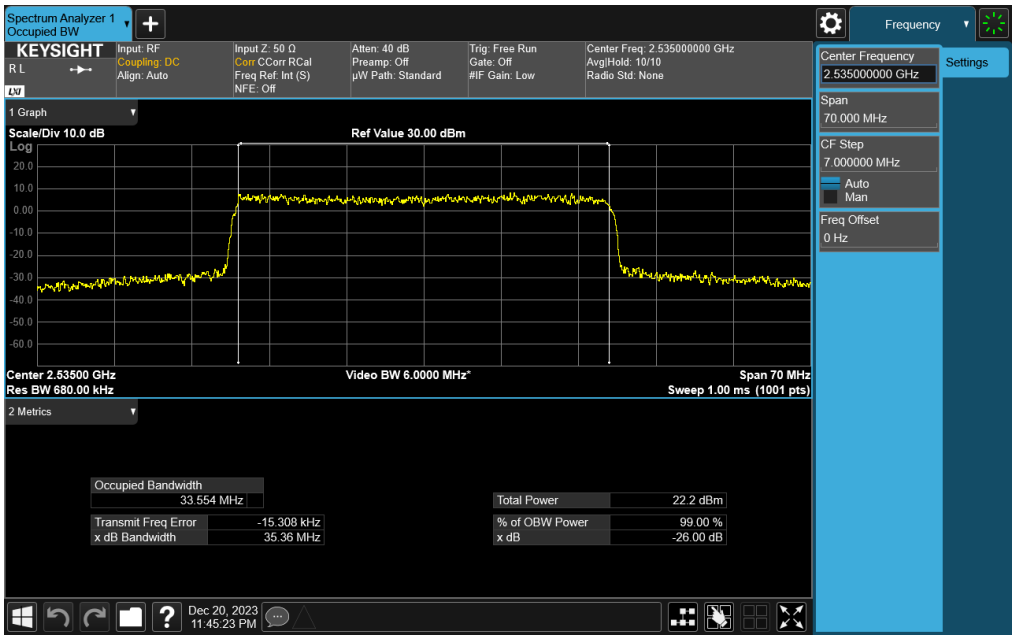
Plot 7-79. Occupied Bandwidth Plot (NR Band n7 - 30MHz CP-OFDM 64-QAM - Full RB)



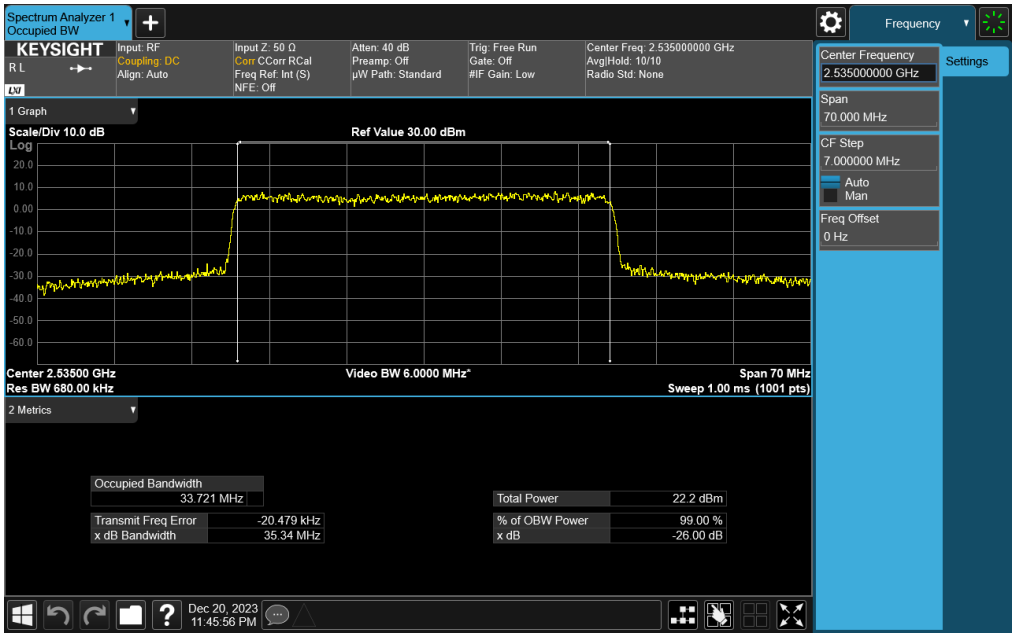
Plot 7-80. Occupied Bandwidth Plot (NR Band n7 - 30MHz CP-OFDM 256-QAM - Full RB)



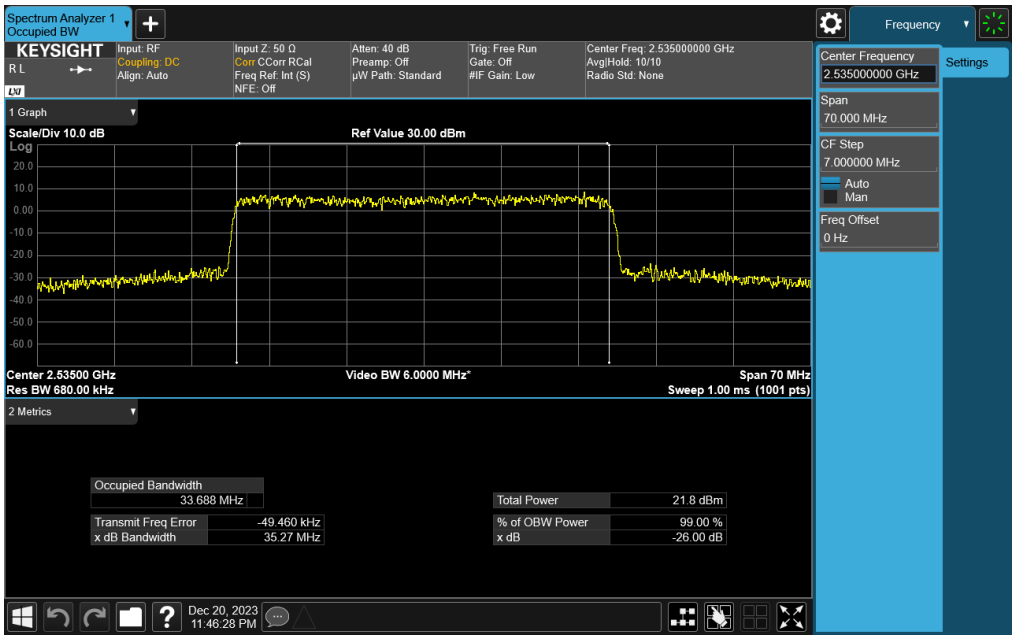
Plot 7-81. Occupied Bandwidth Plot (NR Band n7 - 35MHz DFT-s-OFDM π/2 BPSK - Full RB)



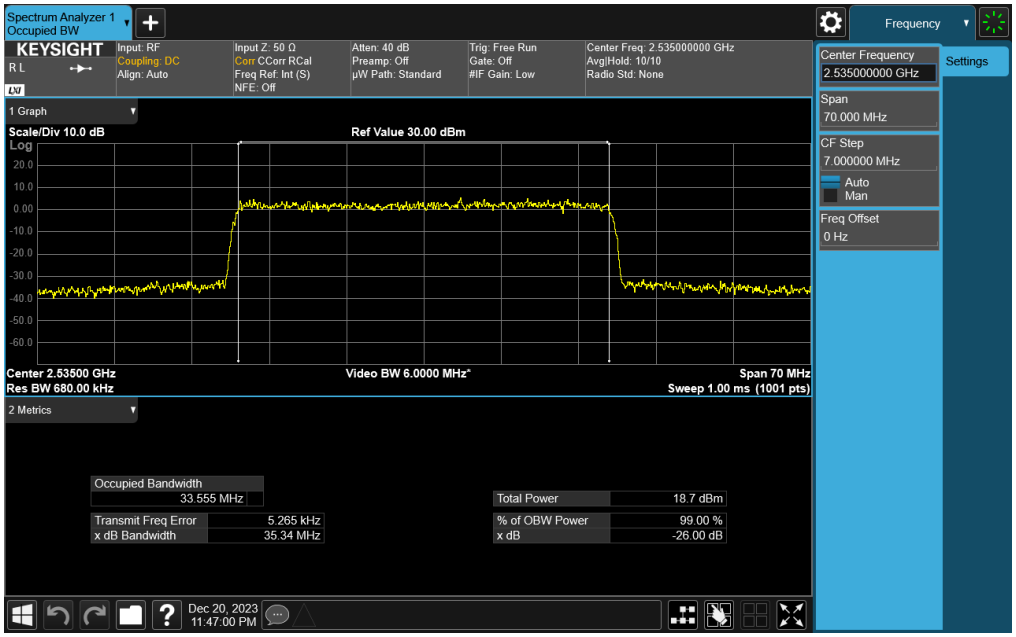
Plot 7-82. Occupied Bandwidth Plot (NR Band n7 - 35MHz CP-OFDM QPSK - Full RB)



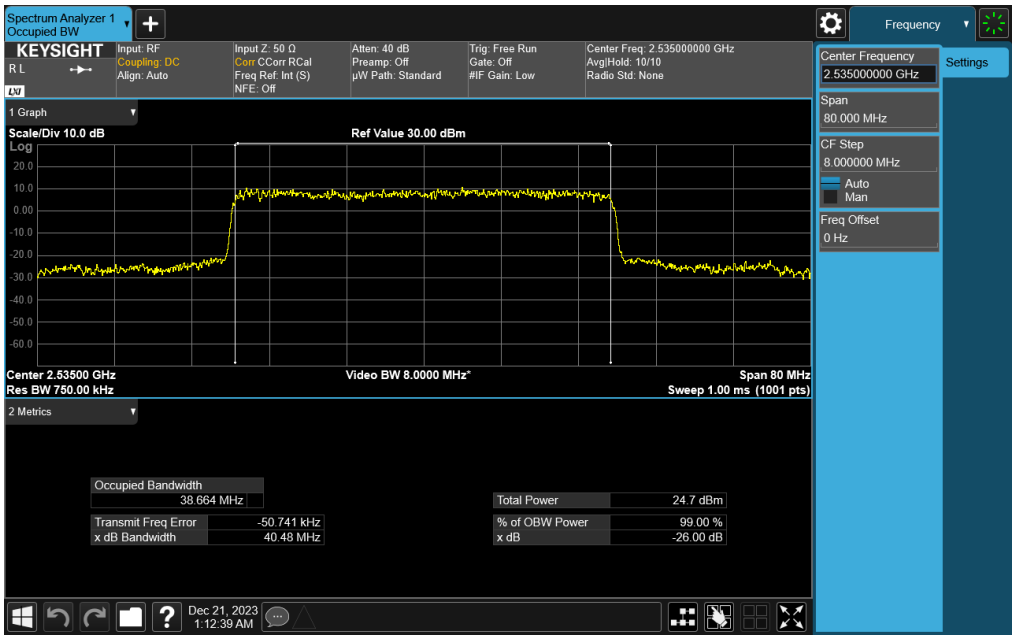
Plot 7-83. Occupied Bandwidth Plot (NR Band n7 - 35MHz CP-OFDM 16-QAM - Full RB)



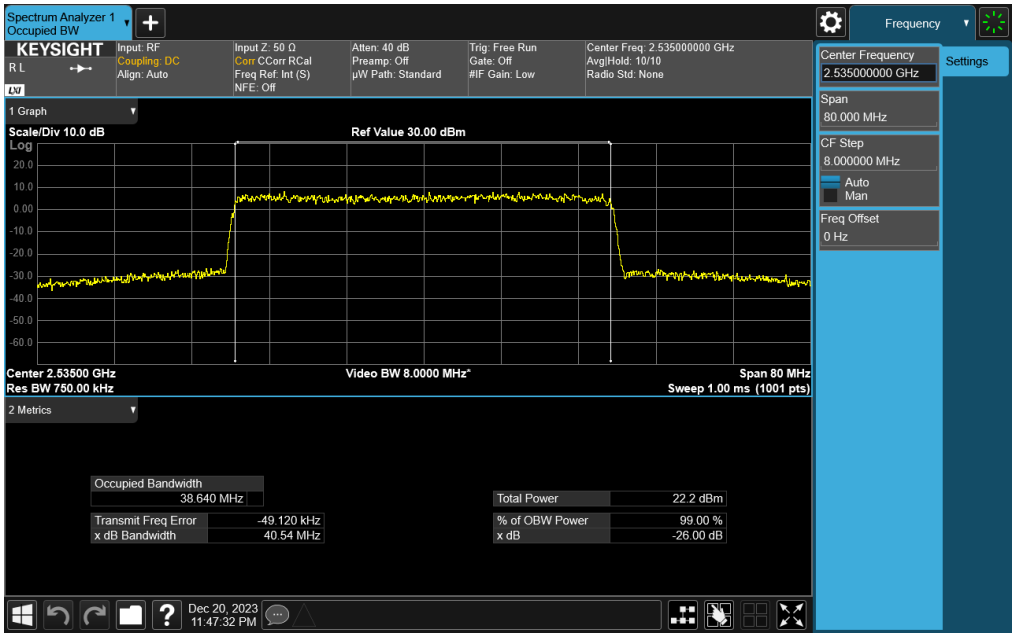
Plot 7-84. Occupied Bandwidth Plot (NR Band n7 - 35MHz CP-OFDM 64-QAM - Full RB)



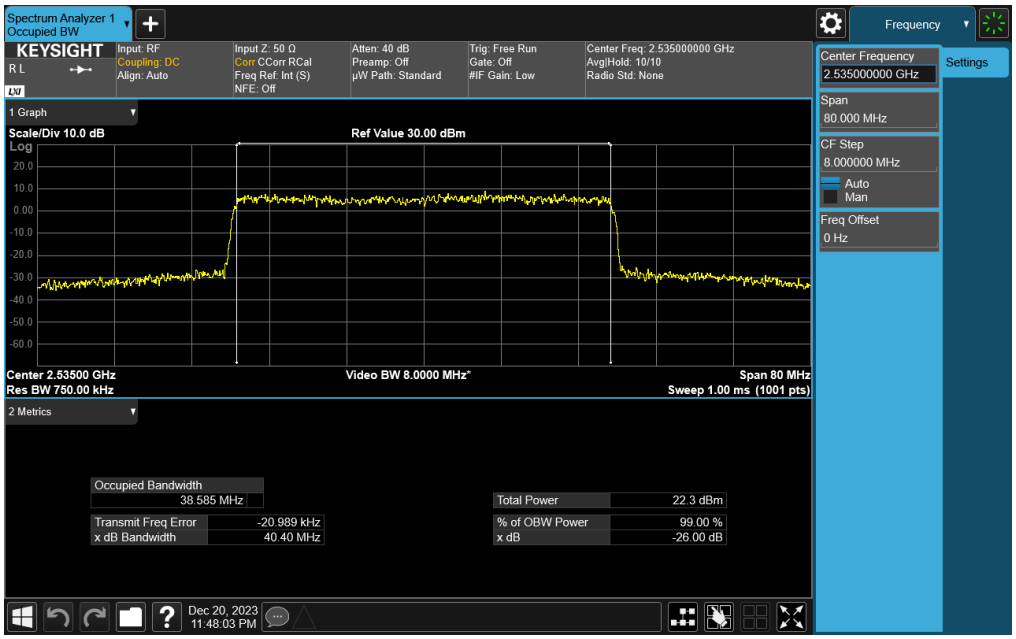
Plot 7-85. Occupied Bandwidth Plot (NR Band n7 - 35MHz CP-OFDM 256-QAM - Full RB)



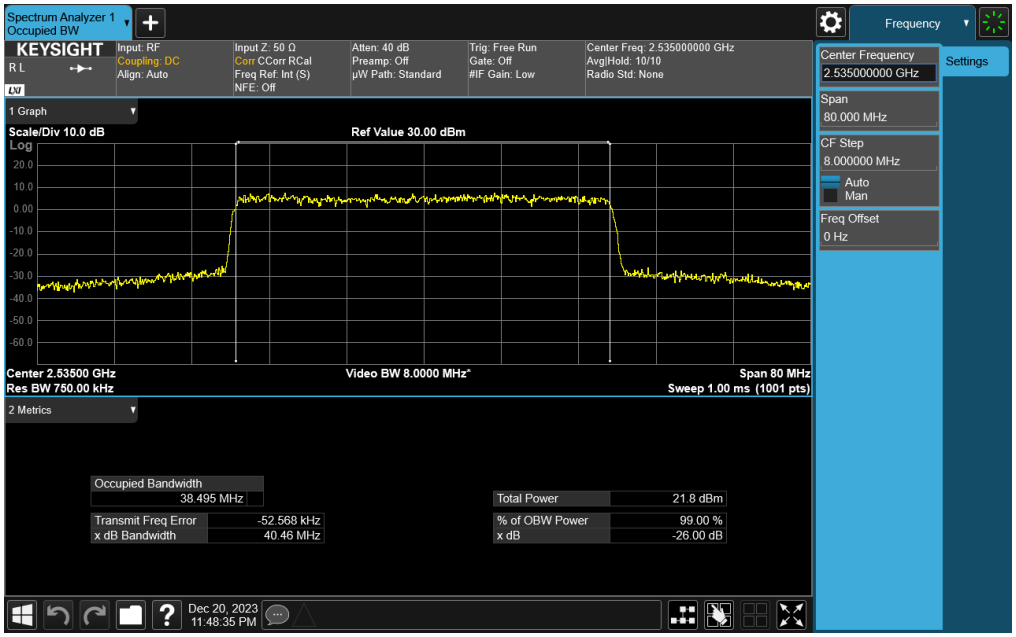
Plot 7-86. Occupied Bandwidth Plot (NR Band n7 - 40MHz DFT-s-OFDM π/2 BPSK - Full RB)



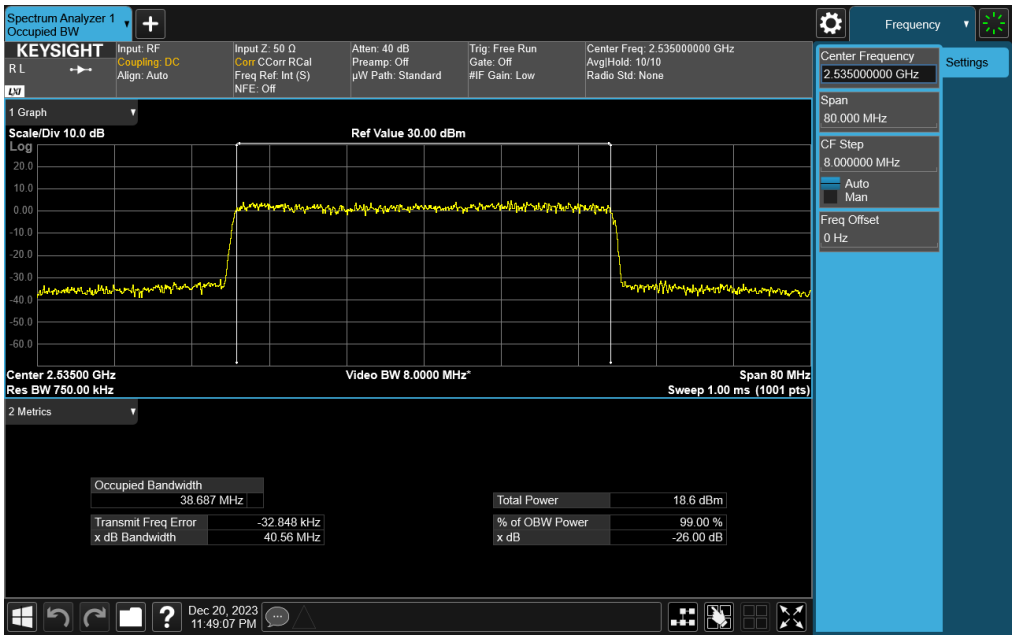
Plot 7-87. Occupied Bandwidth Plot (NR Band n7 - 40MHz CP-OFDM QPSK - Full RB)



Plot 7-88. Occupied Bandwidth Plot (NR Band n7 - 40MHz CP-OFDM 16-QAM - Full RB)

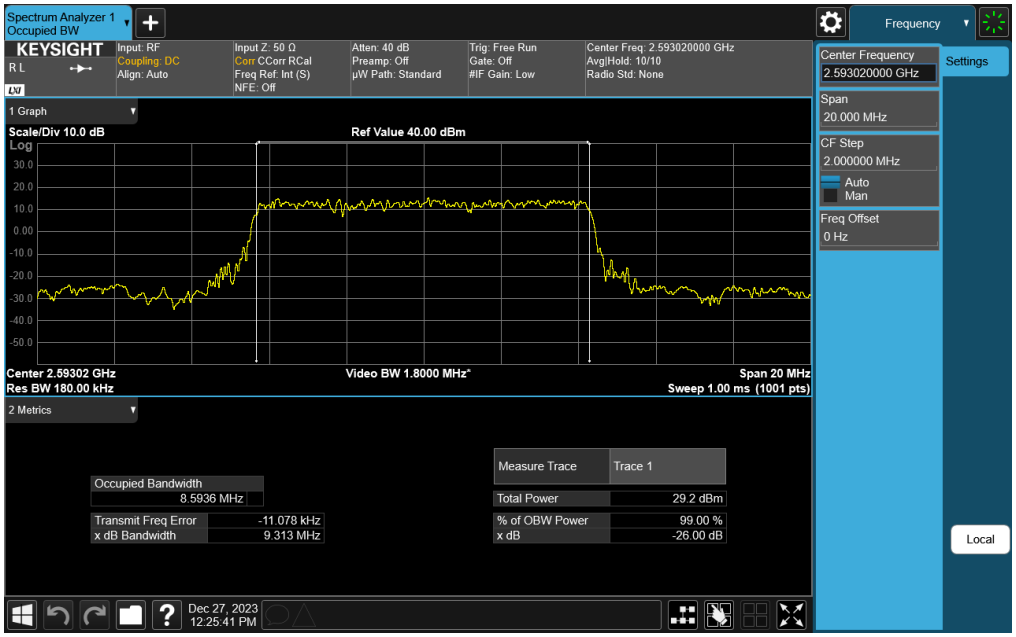


Plot 7-89. Occupied Bandwidth Plot (NR Band n7 - 40MHz CP-OFDM 64-QAM - Full RB)

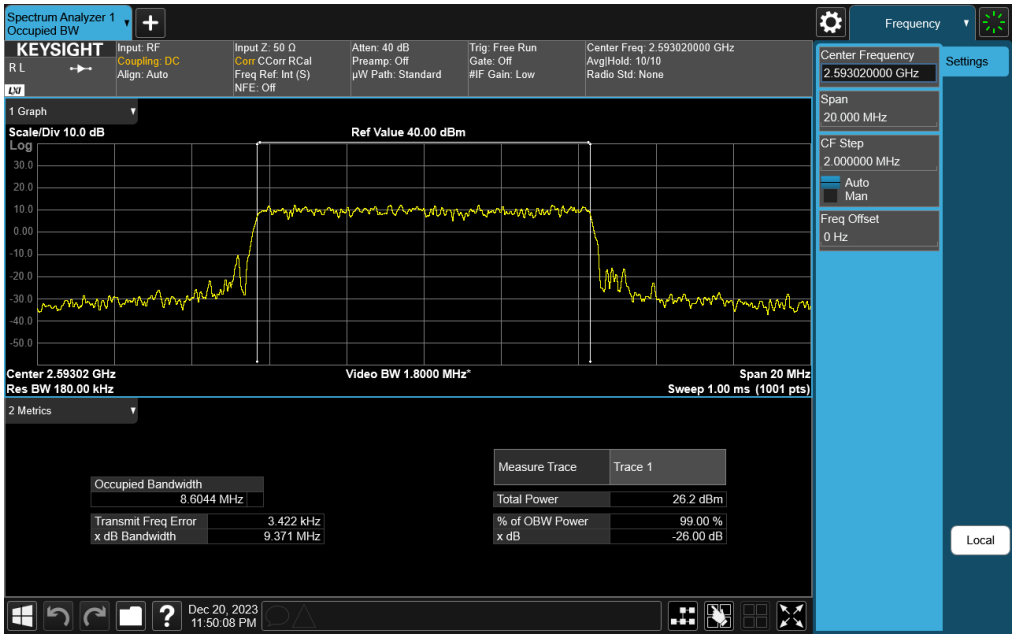


Plot 7-90. Occupied Bandwidth Plot (NR Band n7 - 40MHz CP-OFDM 256-QAM - Full RB)

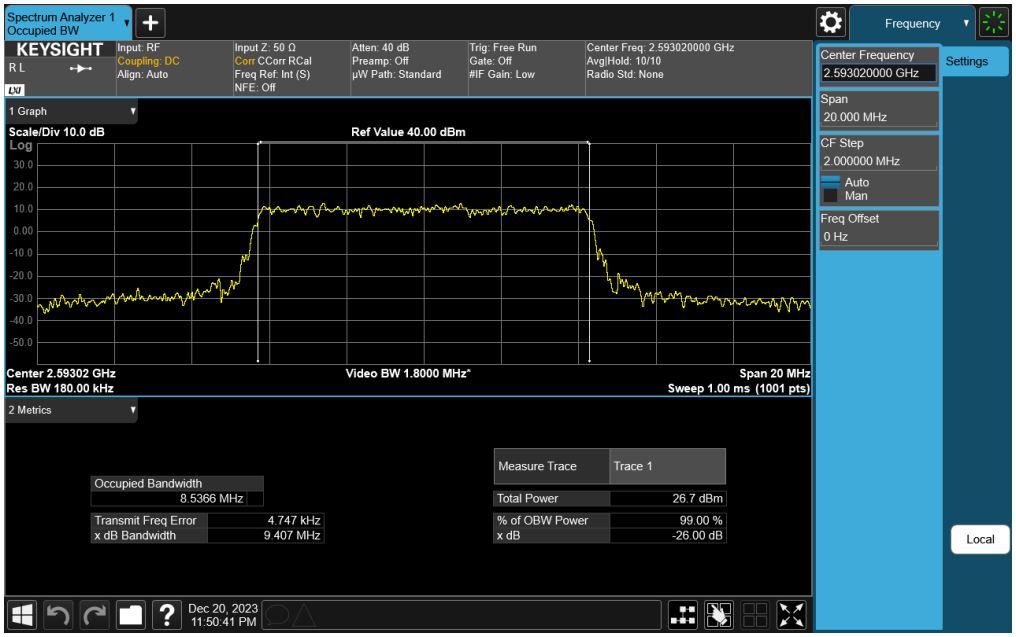
NR Band n41



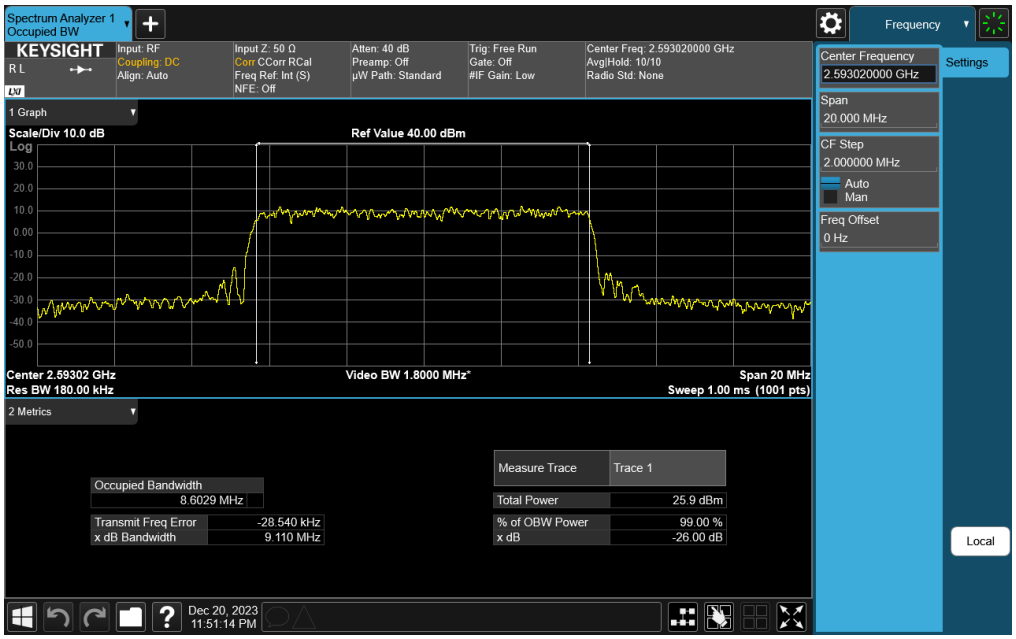
Plot 7-91. Occupied Bandwidth Plot (NR Band n41 - 10MHz DFT-s-OFDM π/2 BPSK - Full RB)



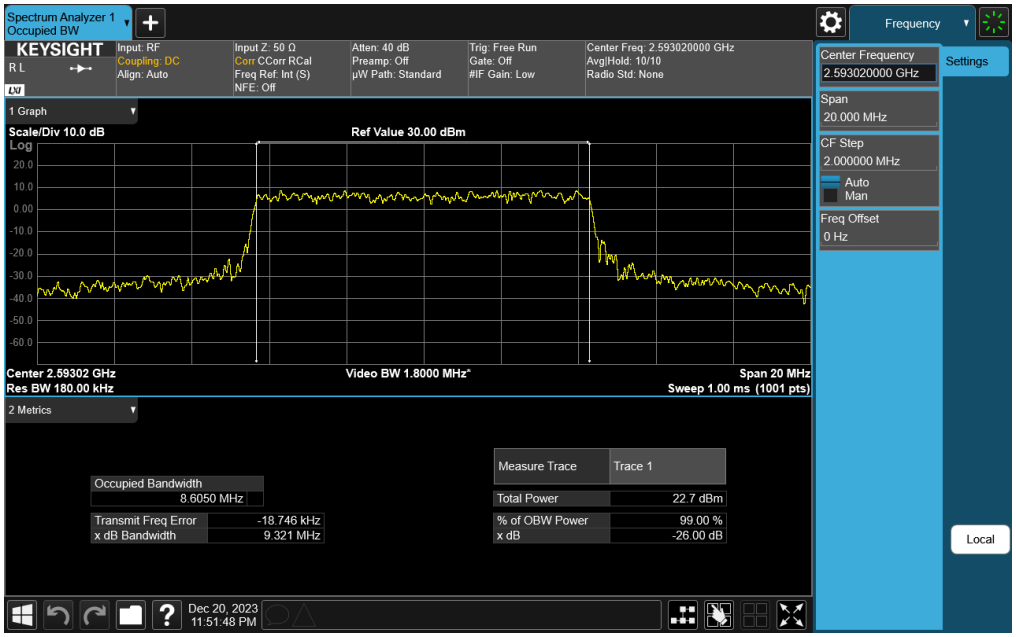
Plot 7-92. Occupied Bandwidth Plot (NR Band n41 - 10MHz CP-OFDM QPSK - Full RB)



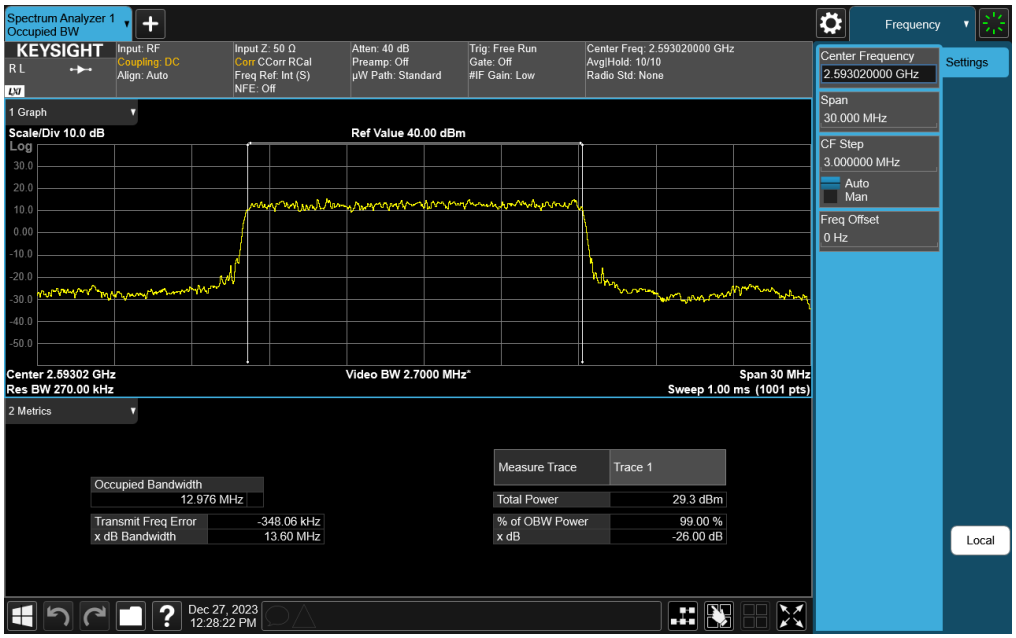
Plot 7-93. Occupied Bandwidth Plot (NR Band n41 - 10MHz CP-OFDM 16-QAM - Full RB)



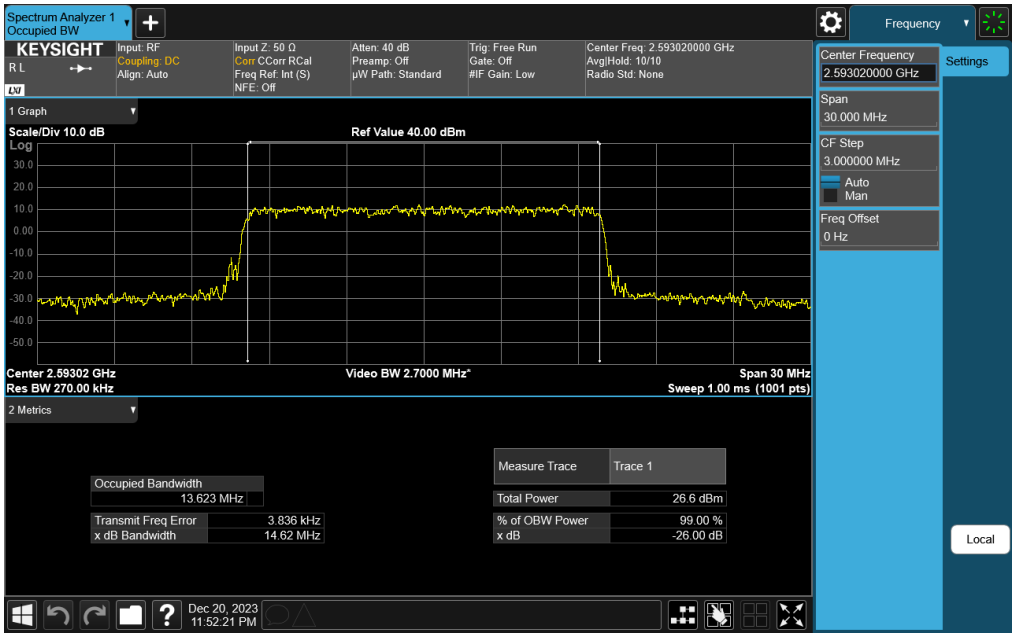
Plot 7-94. Occupied Bandwidth Plot (NR Band n41 - 10MHz CP-OFDM 64-QAM - Full RB)



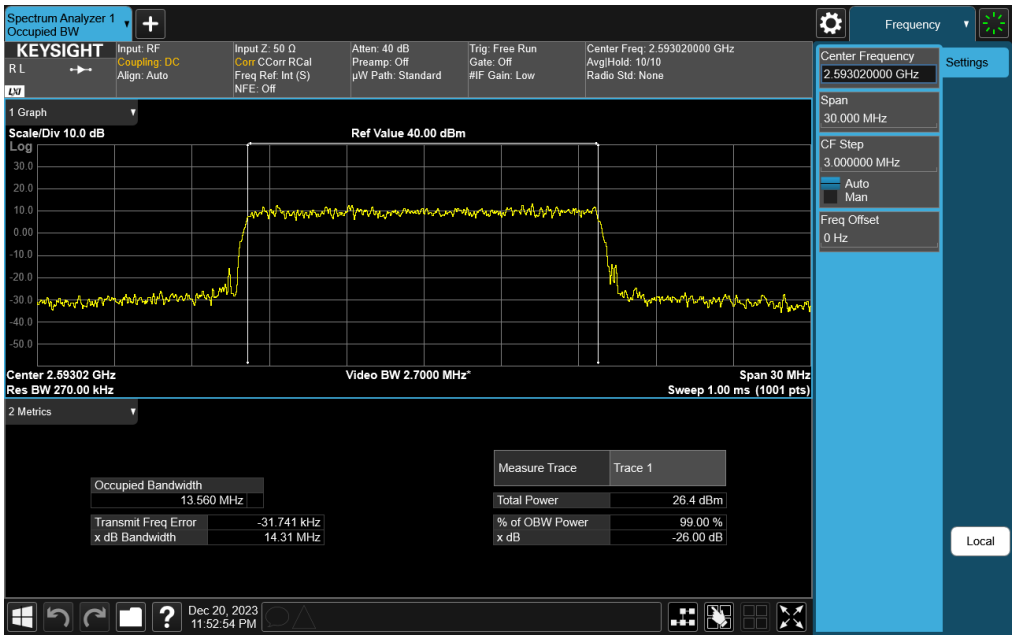
Plot 7-95. Occupied Bandwidth Plot (NR Band n41 - 10MHz CP-OFDM 256-QAM - Full RB)



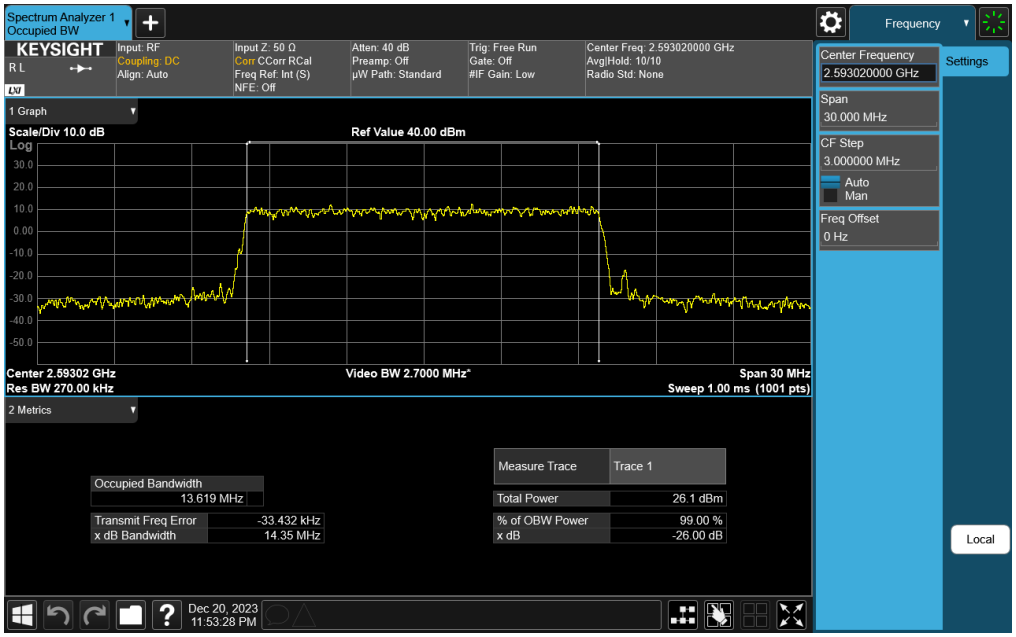
Plot 7-96. Occupied Bandwidth Plot (NR Band n41 - 15MHz DFT-s-OFDM π/2 BPSK - Full RB)



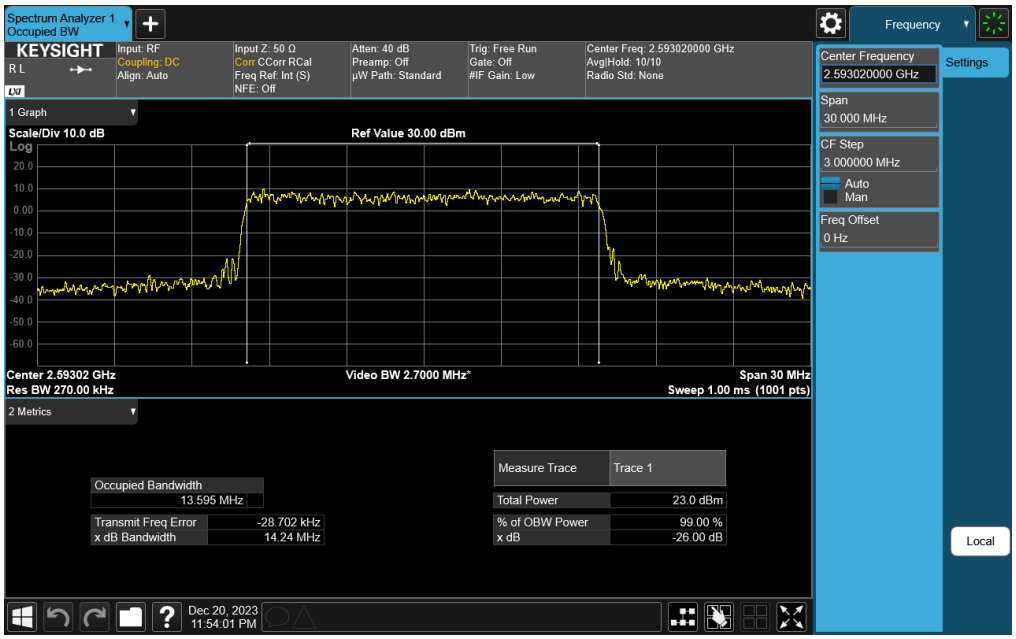
Plot 7-97. Occupied Bandwidth Plot (NR Band n41 - 15MHz CP-OFDM QPSK - Full RB)



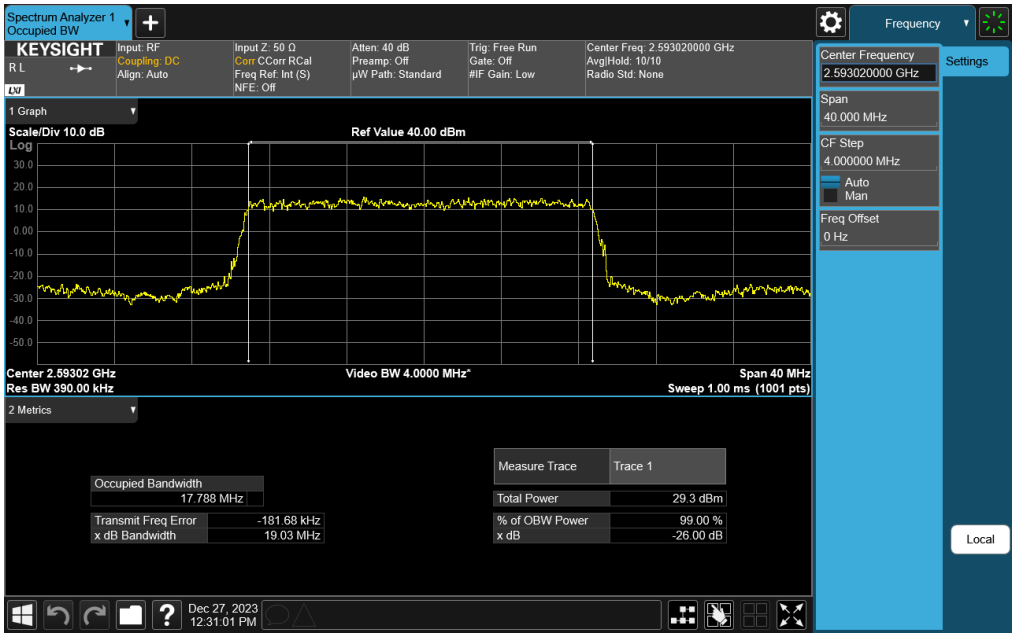
Plot 7-98. Occupied Bandwidth Plot (NR Band n41 - 15MHz CP-OFDM 16-QAM - Full RB)



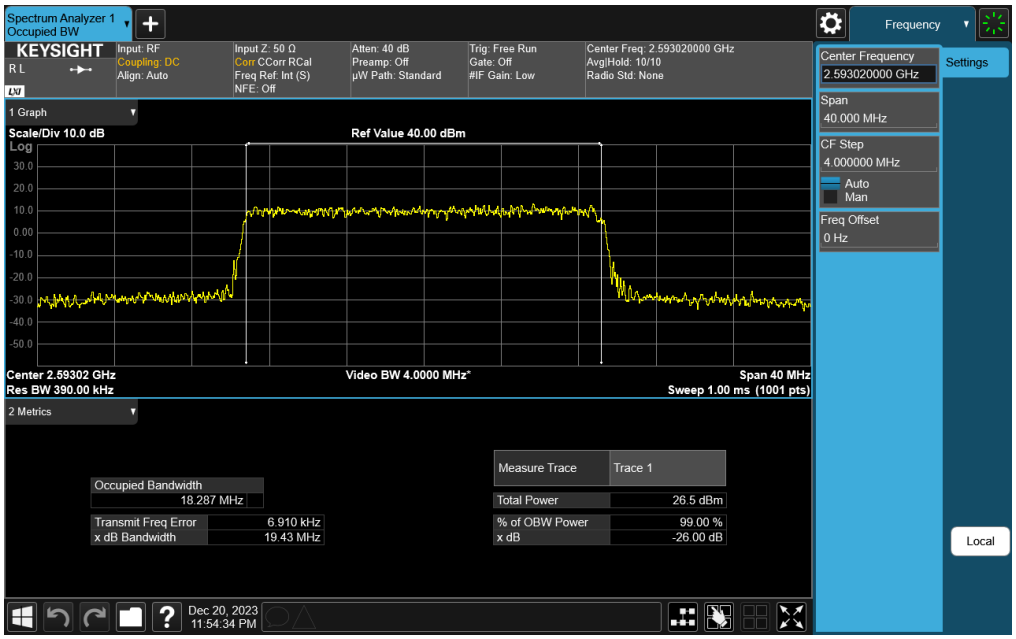
Plot 7-99. Occupied Bandwidth Plot (NR Band n41 - 15MHz CP-OFDM 64-QAM - Full RB)



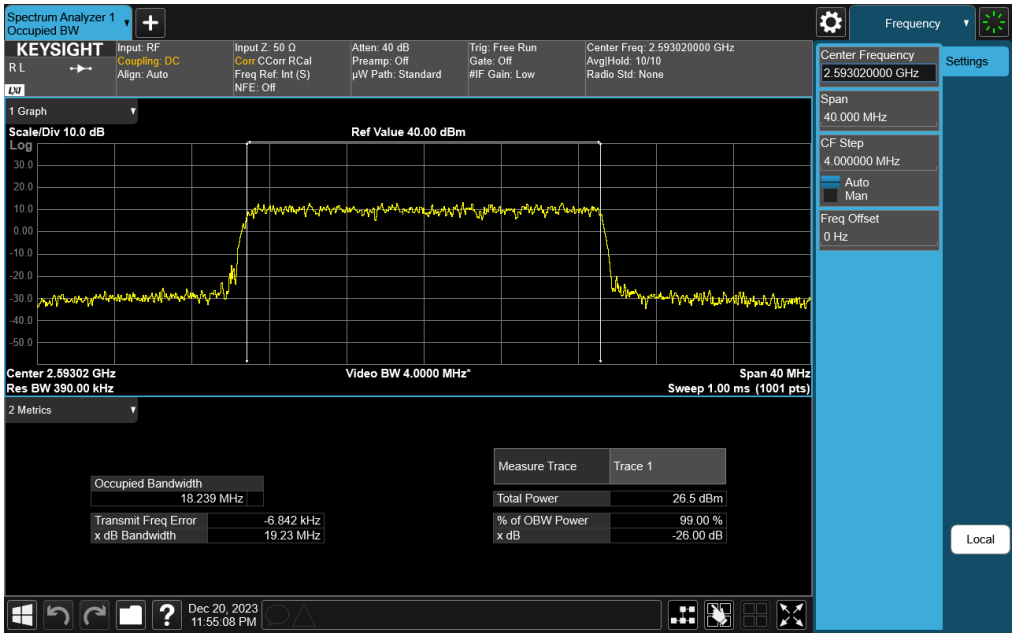
Plot 7-100. Occupied Bandwidth Plot (NR Band n41 - 15MHz CP-OFDM 256-QAM - Full RB)



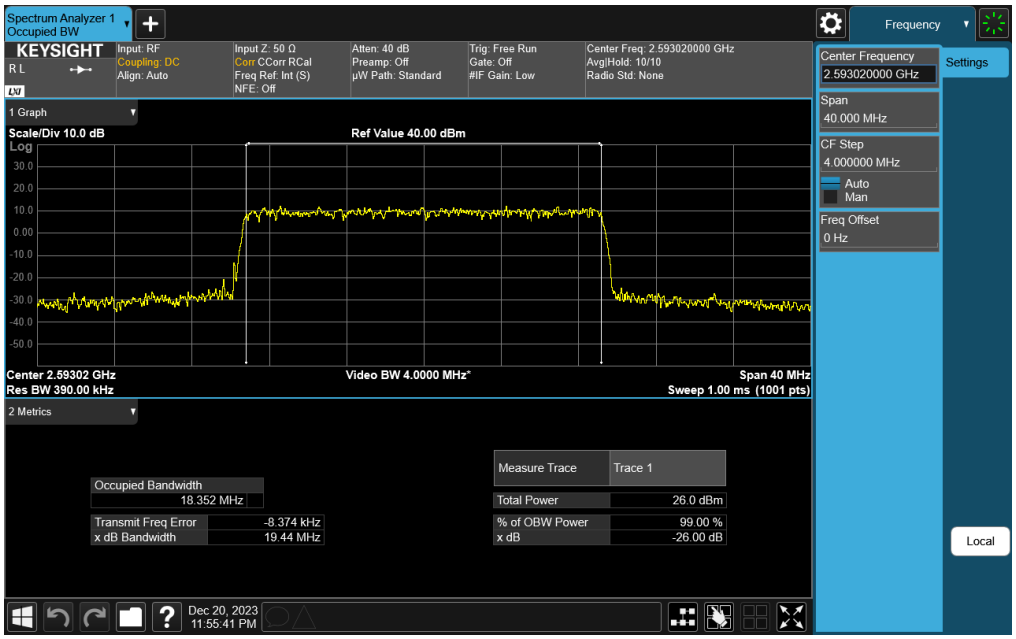
Plot 7-101. Occupied Bandwidth Plot (NR Band n41 - 20MHz DFT-s-OFDM π/2 BPSK - Full RB)



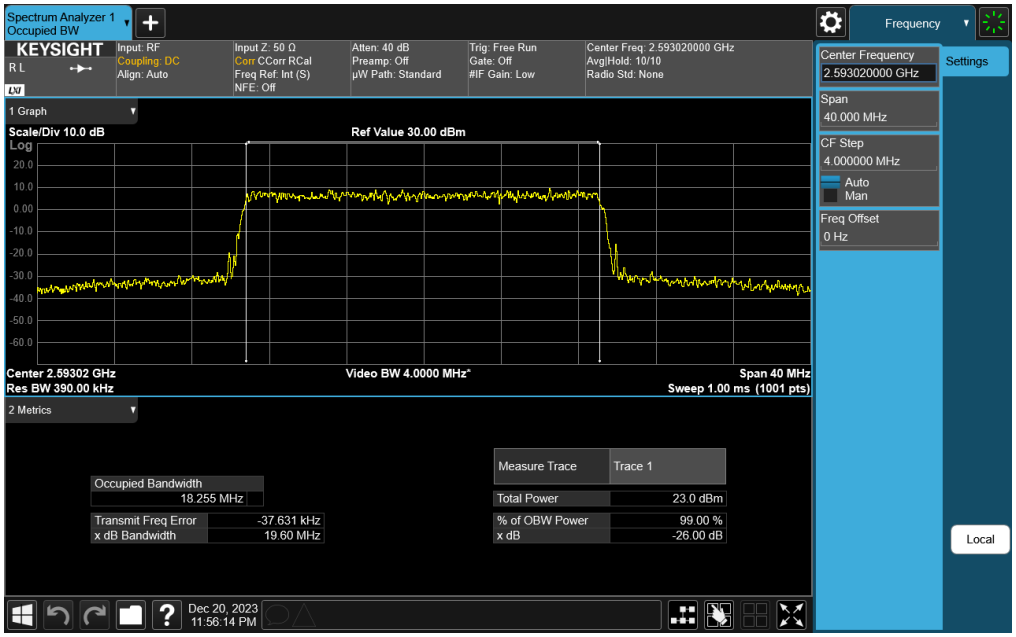
Plot 7-102. Occupied Bandwidth Plot (NR Band n41 - 20MHz CP-OFDM QPSK - Full RB)



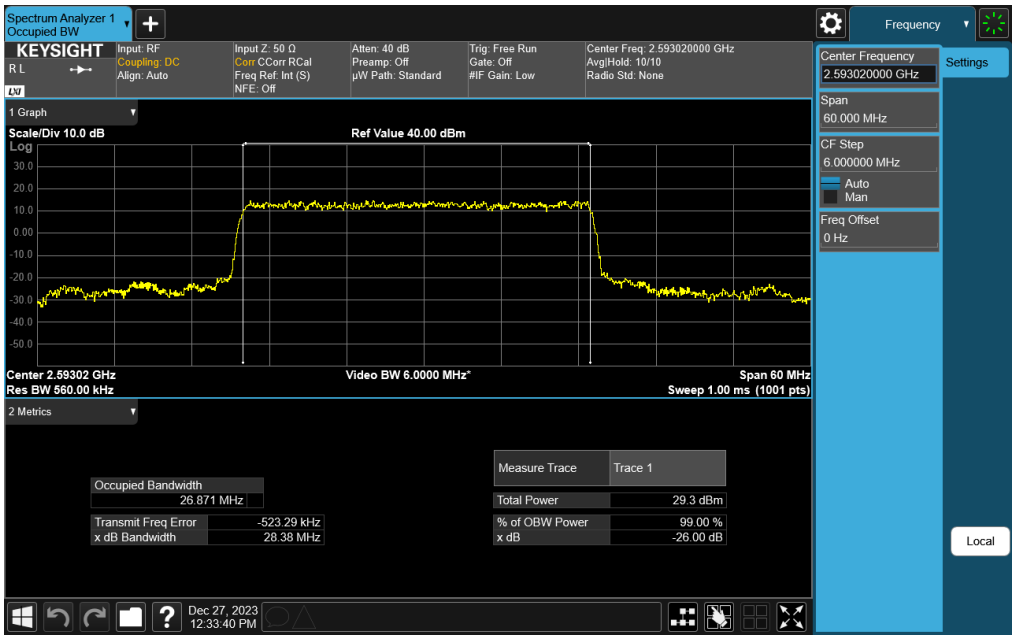
Plot 7-103. Occupied Bandwidth Plot (NR Band n41 - 20MHz CP-OFDM 16-QAM - Full RB)



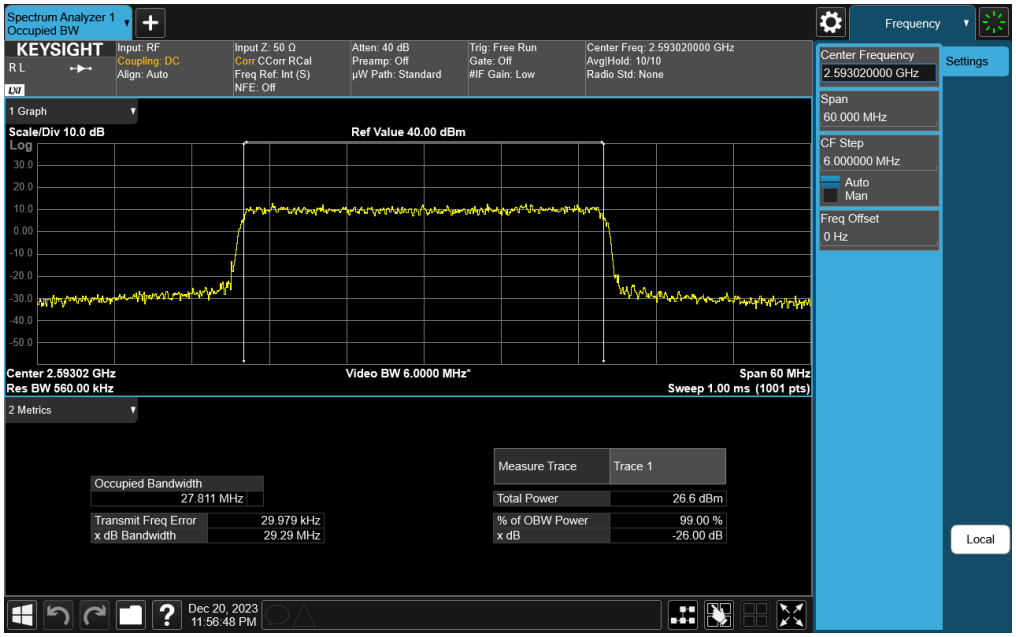
Plot 7-104. Occupied Bandwidth Plot (NR Band n41 - 20MHz CP-OFDM 64-QAM - Full RB)



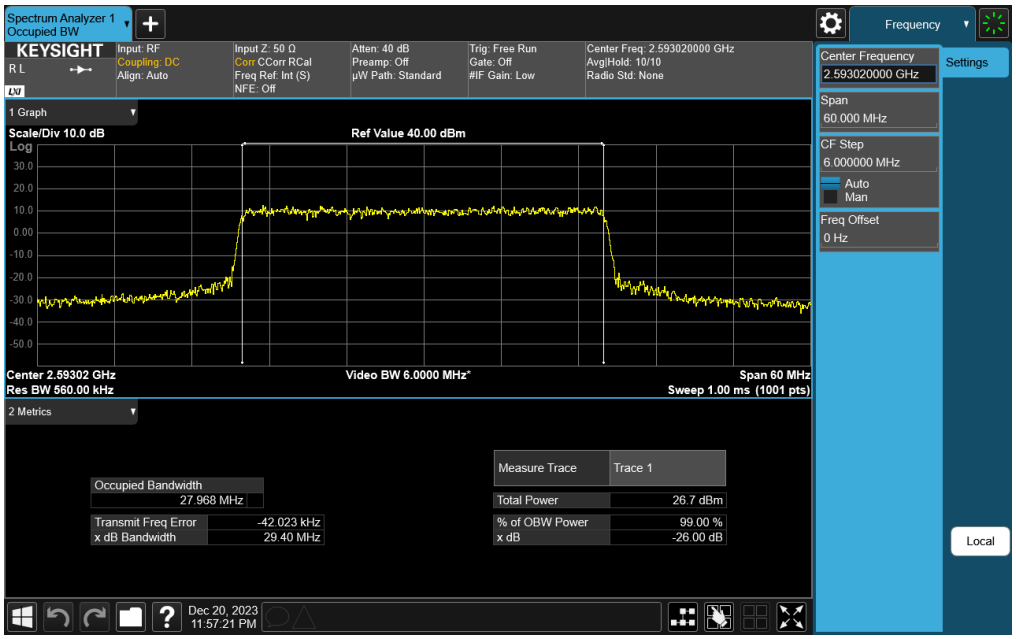
Plot 7-105. Occupied Bandwidth Plot (NR Band n41 - 20MHz CP-OFDM 256-QAM - Full RB)



Plot 7-106. Occupied Bandwidth Plot (NR Band n41 - 30MHz DFT-s-OFDM π/2 BPSK - Full RB)



Plot 7-107. Occupied Bandwidth Plot (NR Band n41 - 30MHz CP-OFDM QPSK - Full RB)



Plot 7-108. Occupied Bandwidth Plot (NR Band n41 - 30MHz CP-OFDM 16-QAM - Full RB)