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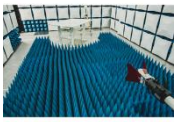

PART 27 MEASUREMENT REPORT

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

Date of Testing:
10/01/2023 - 03/07/2024
Test Report Issue Date:
3/22/2024
Test Site/Location:
Element Materials Technology, Morgan Hill, CA, USA
Test Report Serial No.:
1C2311270066-11.BCG

FCC ID:	**BCGA2899**
Applicant Name:	**Apple Inc.**

Application Type:	Certification
Model:	A2899, A2900
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: WKR0000006193

Reviewed by: WKR0000005805

ACCREDITED
CERT #2041.02

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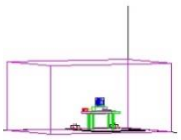
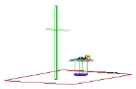


PART 27 MEASUREMENT REPORT



Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	OBW [MHz]	PAR at 0.1% [dB]	EIRP		Emission Designator
						Max. Power [W]	Max. Power [dBm]	
NR Band n77 (PC2) (3450 - 3550MHz)	10 MHz	π/2 BPSK	3455.0 - 3545.0	8.616	4.14	0.776	28.90	8M62G7W
		QPSK	3455.0 - 3545.0	8.926	5.60	0.750	28.75	8M93G7W
		16QAM	3455.0 - 3545.0	8.953	6.23	0.621	27.93	8M95D7W
		64QAM	3455.0 - 3545.0	8.965	6.82	0.493	26.93	8M96D7W
		256QAM	3455.0 - 3545.0	8.981	6.60	0.313	24.96	8M98D7W
	15 MHz	π/2 BPSK	3457.5 - 3542.5	12.945	4.15	0.774	28.89	12M9G7W
		QPSK	3457.5 - 3542.5	13.603	5.54	0.776	28.90	13M6G7W
		16QAM	3457.5 - 3542.5	13.642	6.25	0.630	27.99	13M6D7W
		64QAM	3457.5 - 3542.5	13.597	6.48	0.490	26.90	13M6D7W
		256QAM	3457.5 - 3542.5	13.579	6.72	0.312	24.94	13M6D7W
	20 MHz	π/2 BPSK	3460.0 - 3540.0	17.941	4.02	0.776	28.90	17M9G7W
		QPSK	3460.0 - 3540.0	18.267	5.52	0.776	28.90	18M3G7W
		16QAM	3460.0 - 3540.0	18.238	6.37	0.629	27.99	18M2D7W
		64QAM	3460.0 - 3540.0	18.256	6.46	0.521	27.16	18M3D7W
		256QAM	3460.0 - 3540.0	18.266	6.79	0.320	25.05	18M3D7W
	30MHz	π/2 BPSK	3465.0 - 3535.0	26.839	4.15	0.773	28.88	26M8G7W
		QPSK	3465.0 - 3535.0	27.967	5.56	0.776	28.90	28M0G7W
		16QAM	3465.0 - 3535.0	27.902	6.40	0.625	27.96	27M9D7W
		64QAM	3465.0 - 3535.0	27.941	6.61	0.527	27.22	27M9D7W
		256QAM	3465.0 - 3535.0	27.977	6.68	0.334	25.23	28M0D7W
	40 MHz	π/2 BPSK	3470.0 - 3530.0	35.810	4.15	0.776	28.90	35M8G7W
		QPSK	3470.0 - 3530.0	37.943	5.53	0.773	28.88	37M9G7W
		16QAM	3470.0 - 3530.0	38.046	6.35	0.627	27.98	38M0D7W
		64QAM	3470.0 - 3530.0	38.003	6.58	0.497	26.96	38M0D7W
		256QAM	3470.0 - 3530.0	37.891	6.74	0.312	24.94	37M9D7W
	50 MHz	π/2 BPSK	3475.0 - 3525.0	45.851	3.86	0.776	28.90	45M9G7W
		QPSK	3475.0 - 3525.0	47.577	5.35	0.776	28.90	47M6G7W
		16QAM	3475.0 - 3525.0	47.547	6.10	0.608	27.84	47M5D7W
		64QAM	3475.0 - 3525.0	47.583	6.52	0.515	27.12	47M6D7W
		256QAM	3475.0 - 3525.0	47.638	6.68	0.325	25.12	47M6D7W
	60 MHz	π/2 BPSK	3480.0 - 3520.0	57.876	3.97	0.759	28.80	57M9G7W
		QPSK	3480.0 - 3520.0	57.812	5.38	0.776	28.90	57M8G7W
		16QAM	3480.0 - 3520.0	57.781	6.21	0.639	28.06	57M8D7W
		64QAM	3480.0 - 3520.0	57.899	6.62	0.491	26.91	57M9D7W
		256QAM	3480.0 - 3520.0	57.903	6.67	0.315	24.98	57M9D7W
	70 MHz	π/2 BPSK	3485.0 - 3515.0	64.555	4.39	0.776	28.90	64M6G7W
		QPSK	3485.0 - 3515.0	67.552	5.68	0.760	28.81	67M6G7W
		16QAM	3485.0 - 3515.0	67.670	6.34	0.645	28.09	67M7D7W
		64QAM	3485.0 - 3515.0	67.607	6.59	0.490	26.90	67M6D7W
		256QAM	3485.0 - 3515.0	67.594	6.69	0.313	24.95	67M6D7W
	80 MHz	π/2 BPSK	3490.0 - 3510.0	77.435	4.01	0.760	28.81	77M4G7W
		QPSK	3490.0 - 3510.0	77.635	5.41	0.776	28.90	77M6G7W
		16QAM	3490.0 - 3510.0	77.649	6.25	0.618	27.91	77M6D7W
		64QAM	3490.0 - 3510.0	77.686	6.63	0.488	26.88	77M7D7W
		256QAM	3490.0 - 3510.0	77.741	6.76	0.321	25.07	77M7D7W
	90 MHz	π/2 BPSK	3495.0 - 3505.0	87.142	3.99	0.776	28.90	87M1G7W
		QPSK	3495.0 - 3505.0	87.739	5.41	0.771	28.87	87M7G7W
		16QAM	3495.0 - 3505.0	87.769	6.26	0.617	27.90	87M8D7W
		64QAM	3495.0 - 3505.0	87.691	6.53	0.491	26.91	87M7D7W
		256QAM	3495.0 - 3505.0	87.624	6.73	0.315	24.98	87M6D7W
	100 MHz	π/2 BPSK	3500	96.606	4.02	0.759	28.80	96M6G7W
		QPSK	3500	97.352	5.43	0.762	28.82	97M4G7W
		16QAM	3500	97.549	6.34	0.585	27.67	97M5D7W
		64QAM	3500	97.684	6.55	0.480	26.81	97M7D7W
		256QAM	3500	97.322	6.63	0.291	24.64	97M3D7W

EUT Overview

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	OBW [MHz]	PAR at 0.1% [dB]	EIRP		Emission Designator
						Max. Power [W]	Max. Power [dBm]	
NR Band n77 (PC3) (3450 - 3550MHz)	10 MHz	π/2 BPSK	3455.0 - 3545.0	8.616	4.14	0.557	27.46	8M62G7W
		QPSK	3455.0 - 3545.0	8.926	5.60	0.562	27.50	8M93G7W
		16QAM	3455.0 - 3545.0	8.953	6.23	0.483	26.84	8M95D7W
		64QAM	3455.0 - 3545.0	8.965	6.82	0.351	25.46	8M96D7W
		256QAM	3455.0 - 3545.0	8.981	6.60	0.221	23.45	8M98D7W
	15 MHz	π/2 BPSK	3457.5 - 3542.5	12.945	4.15	0.562	27.50	12M9G7W
		QPSK	3457.5 - 3542.5	13.603	5.54	0.560	27.49	13M6G7W
		16QAM	3457.5 - 3542.5	13.642	6.25	0.467	26.70	13M6D7W
		64QAM	3457.5 - 3542.5	13.597	6.48	0.366	25.63	13M6D7W
		256QAM	3457.5 - 3542.5	13.579	6.72	0.228	23.58	13M6D7W
	20 MHz	π/2 BPSK	3460.0 - 3540.0	17.941	4.02	0.562	27.50	17M9G7W
		QPSK	3460.0 - 3540.0	18.267	5.52	0.557	27.46	18M3G7W
		16QAM	3460.0 - 3540.0	18.238	6.37	0.448	26.51	18M2D7W
		64QAM	3460.0 - 3540.0	18.256	6.46	0.364	25.61	18M3D7W
		256QAM	3460.0 - 3540.0	18.266	6.79	0.228	23.59	18M3D7W
	30MHz	π/2 BPSK	3465.0 - 3535.0	26.839	4.15	0.559	27.47	26M8G7W
		QPSK	3465.0 - 3535.0	27.967	5.56	0.562	27.50	28M0G7W
		16QAM	3465.0 - 3535.0	27.902	6.40	0.459	26.62	27M9D7W
		64QAM	3465.0 - 3535.0	27.941	6.61	0.359	25.55	27M9D7W
		256QAM	3465.0 - 3535.0	27.977	6.68	0.229	23.60	28M0D7W
	40 MHz	π/2 BPSK	3470.0 - 3530.0	35.810	4.15	0.561	27.49	35M8G7W
		QPSK	3470.0 - 3530.0	37.943	5.53	0.562	27.50	37M9G7W
		16QAM	3470.0 - 3530.0	38.046	6.35	0.466	26.68	38M0D7W
		64QAM	3470.0 - 3530.0	38.003	6.58	0.353	25.48	38M0D7W
		256QAM	3470.0 - 3530.0	37.891	6.74	0.224	23.51	37M9D7W
	50 MHz	π/2 BPSK	3475.0 - 3525.0	45.851	3.86	0.562	27.50	45M9G7W
		QPSK	3475.0 - 3525.0	47.577	5.35	0.561	27.49	47M6G7W
		16QAM	3475.0 - 3525.0	47.547	6.10	0.474	26.76	47M5D7W
		64QAM	3475.0 - 3525.0	47.583	6.52	0.372	25.70	47M6D7W
		256QAM	3475.0 - 3525.0	47.638	6.68	0.232	23.66	47M6D7W
	60 MHz	π/2 BPSK	3480.0 - 3520.0	57.876	3.97	0.550	27.41	57M9G7W
		QPSK	3480.0 - 3520.0	57.812	5.38	0.562	27.50	57M8G7W
		16QAM	3480.0 - 3520.0	57.781	6.21	0.451	26.54	57M8D7W
		64QAM	3480.0 - 3520.0	57.899	6.62	0.346	25.39	57M9D7W
		256QAM	3480.0 - 3520.0	57.903	6.67	0.217	23.37	57M9D7W
	70 MHz	π/2 BPSK	3485.0 - 3515.0	64.555	4.39	0.560	27.48	64M6G7W
		QPSK	3485.0 - 3515.0	67.552	5.68	0.562	27.50	67M6G7W
		16QAM	3485.0 - 3515.0	67.670	6.34	0.468	26.70	67M7D7W
		64QAM	3485.0 - 3515.0	67.607	6.59	0.353	25.48	67M6D7W
		256QAM	3485.0 - 3515.0	67.594	6.69	0.234	23.69	67M6D7W
	80 MHz	π/2 BPSK	3490.0 - 3510.0	77.435	4.01	0.562	27.50	77M4G7W
		QPSK	3490.0 - 3510.0	77.635	5.41	0.556	27.45	77M6G7W
		16QAM	3490.0 - 3510.0	77.649	6.25	0.449	26.52	77M6D7W
		64QAM	3490.0 - 3510.0	77.686	6.63	0.364	25.61	77M7D7W
		256QAM	3490.0 - 3510.0	77.741	6.76	0.222	23.47	77M7D7W
	90 MHz	π/2 BPSK	3495.0 - 3505.0	87.142	3.99	0.550	27.41	87M1G7W
		QPSK	3495.0 - 3505.0	87.739	5.41	0.562	27.50	87M7G7W
		16QAM	3495.0 - 3505.0	87.769	6.26	0.435	26.39	87M8D7W
		64QAM	3495.0 - 3505.0	87.691	6.53	0.354	25.49	87M7D7W
		256QAM	3495.0 - 3505.0	87.624	6.73	0.231	23.64	87M6D7W
	100 MHz	π/2 BPSK	3500	96.606	4.02	0.562	27.50	96M6G7W
		QPSK	3500	97.352	5.43	0.537	27.30	97M4G7W
		16QAM	3500	97.549	6.34	0.524	27.19	97M5D7W
		64QAM	3500	97.684	6.55	0.357	25.53	97M7D7W
		256QAM	3500	97.322	6.63	0.219	23.41	97M3D7W

EUT Overview

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	OBW [MHz]	PAR at 0.1% [dB]	EIRP		Emission Designator
						Max. Power [W]	Max. Power [dBm]	
NR Band n77 (PC2) (3700 - 3980MHz)	10 MHz	π/2 BPSK	3705.0 - 3975.0	8.596	4.16	0.683	28.34	8M60G7W
		QPSK	3705.0 - 3975.0	8.613	5.45	0.692	28.40	8M61G7W
		16QAM	3705.0 - 3975.0	8.602	6.29	0.564	27.52	8M60D7W
		64QAM	3705.0 - 3975.0	8.644	6.46	0.413	26.15	8M64D7W
		256QAM	3705.0 - 3975.0	8.544	6.83	0.266	24.25	8M54D7W
	15 MHz	π/2 BPSK	3707.5 - 3972.5	12.913	4.13	0.692	28.40	12M9G7W
		QPSK	3707.5 - 3972.5	13.577	5.34	0.689	28.38	13M6G7W
		16QAM	3707.5 - 3972.5	13.611	6.07	0.599	27.78	13M6D7W
		64QAM	3707.5 - 3972.5	13.601	6.36	0.417	26.20	13M6D7W
		256QAM	3707.5 - 3972.5	13.539	6.68	0.271	24.33	13M5D7W
	20 MHz	π/2 BPSK	3710.0 - 3970.0	17.907	4.06	0.688	28.38	17M9G7W
		QPSK	3710.0 - 3970.0	18.234	5.19	0.692	28.40	18M2G7W
		16QAM	3710.0 - 3970.0	18.314	6.14	0.563	27.51	18M3D7W
		64QAM	3710.0 - 3970.0	18.255	6.43	0.427	26.30	18M3D7W
		256QAM	3710.0 - 3970.0	18.234	6.48	0.259	24.13	18M2D7W
	30MHz	π/2 BPSK	3715.0 - 3965.0	26.949	4.27	0.692	28.40	26M9G7W
		QPSK	3715.0 - 3965.0	27.933	5.15	0.689	28.38	27M9G7W
		16QAM	3715.0 - 3965.0	27.907	6.14	0.559	27.48	27M9D7W
		64QAM	3715.0 - 3965.0	27.860	6.41	0.417	26.21	27M9D7W
		256QAM	3715.0 - 3965.0	27.958	6.37	0.257	24.10	28M0D7W
	40 MHz	π/2 BPSK	3720.0 - 3960.0	35.897	4.14	0.692	28.40	35M9G7W
		QPSK	3720.0 - 3960.0	37.932	5.07	0.691	28.39	37M9G7W
		16QAM	3720.0 - 3960.0	37.910	6.00	0.576	27.60	37M9D7W
		64QAM	3720.0 - 3960.0	37.905	6.32	0.433	26.36	37M9D7W
		256QAM	3720.0 - 3960.0	37.945	6.41	0.256	24.08	37M9D7W
	50 MHz	π/2 BPSK	3725.0 - 3955.0	45.701	3.81	0.692	28.40	45M7G7W
		QPSK	3725.0 - 3955.0	47.566	5.25	0.684	28.35	47M6G7W
		16QAM	3725.0 - 3955.0	47.545	6.10	0.560	27.48	47M5D7W
		64QAM	3725.0 - 3955.0	47.677	6.45	0.413	26.16	47M7D7W
		256QAM	3725.0 - 3955.0	47.731	6.58	0.263	24.20	47M7D7W
	60 MHz	π/2 BPSK	3730.0 - 3950.0	58.098	3.92	0.692	28.40	58M1G7W
		QPSK	3730.0 - 3950.0	57.880	5.30	0.692	28.40	57M9G7W
		16QAM	3730.0 - 3950.0	57.976	6.20	0.582	27.65	58M0D7W
		64QAM	3730.0 - 3950.0	57.839	6.51	0.426	26.29	57M8D7W
		256QAM	3730.0 - 3950.0	57.957	6.74	0.252	24.01	58M0D7W
	70 MHz	π/2 BPSK	3735.0 - 3945.0	64.591	4.31	0.692	28.40	64M6G7W
		QPSK	3735.0 - 3945.0	67.814	5.55	0.680	28.32	67M8G7W
		16QAM	3735.0 - 3945.0	67.707	6.28	0.572	27.57	67M7D7W
		64QAM	3735.0 - 3945.0	67.765	6.53	0.411	26.14	67M8D7W
		256QAM	3735.0 - 3945.0	67.618	6.67	0.257	24.11	67M6D7W
	80 MHz	π/2 BPSK	3740.0 - 3940.0	77.392	3.95	0.692	28.40	77M4G7W
		QPSK	3740.0 - 3940.0	77.734	5.32	0.688	28.38	77M7G7W
		16QAM	3740.0 - 3940.0	77.716	6.14	0.582	27.65	77M7D7W
		64QAM	3740.0 - 3940.0	77.770	6.48	0.409	26.12	77M8D7W
		256QAM	3740.0 - 3940.0	77.576	6.74	0.282	24.51	77M6D7W
	90 MHz	π/2 BPSK	3745.0 - 3935.0	87.067	3.95	0.692	28.40	87M1G7W
		QPSK	3745.0 - 3935.0	87.832	5.36	0.688	28.38	87M8G7W
		16QAM	3745.0 - 3935.0	87.647	6.12	0.553	27.43	87M6D7W
		64QAM	3745.0 - 3935.0	87.853	6.47	0.426	26.30	87M9D7W
		256QAM	3745.0 - 3935.0	87.748	6.60	0.261	24.17	87M7D7W
	100 MHz	π/2 BPSK	3750.0 - 3930.0	96.466	4.05	0.692	28.40	96M5G7W
		QPSK	3750.0 - 3930.0	97.776	5.36	0.676	28.30	97M8G7W
		16QAM	3750.0 - 3930.0	97.751	6.20	0.546	27.38	97M8D7W
		64QAM	3750.0 - 3930.0	97.756	6.49	0.411	26.14	97M8D7W
		256QAM	3750.0 - 3930.0	97.751	6.64	0.257	24.10	97M8D7W

EUT Overview

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	OBW [MHz]	PAR at 0.1% [dB]	EIRP		Emission Designator
						Max. Power [W]	Max. Power [dBm]	
NR Band n77 (PC3) (3700 - 3980MHz)	10 MHz	π/2 BPSK	3705.0 - 3975.0	8.596	4.16	0.513	27.10	8M60G7W
		QPSK	3705.0 - 3975.0	8.613	5.45	0.512	27.09	8M61G7W
		16QAM	3705.0 - 3975.0	8.602	6.29	0.429	26.32	8M60D7W
		64QAM	3705.0 - 3975.0	8.644	6.46	0.288	24.59	8M64D7W
		256QAM	3705.0 - 3975.0	8.544	6.83	0.182	22.60	8M54D7W
	15 MHz	π/2 BPSK	3707.5 - 3972.5	12.913	4.13	0.512	27.09	12M9G7W
		QPSK	3707.5 - 3972.5	13.577	5.34	0.513	27.10	13M6G7W
		16QAM	3707.5 - 3972.5	13.611	6.07	0.418	26.21	13M6D7W
		64QAM	3707.5 - 3972.5	13.601	6.36	0.315	24.98	13M6D7W
		256QAM	3707.5 - 3972.5	13.539	6.68	0.195	22.90	13M5D7W
	20 MHz	π/2 BPSK	3710.0 - 3970.0	17.907	4.06	0.513	27.10	17M9G7W
		QPSK	3710.0 - 3970.0	18.234	5.19	0.506	27.04	18M2G7W
		16QAM	3710.0 - 3970.0	18.314	6.14	0.424	26.27	18M3D7W
		64QAM	3710.0 - 3970.0	18.255	6.43	0.315	24.99	18M3D7W
		256QAM	3710.0 - 3970.0	18.234	6.48	0.198	22.97	18M2D7W
	30MHz	π/2 BPSK	3715.0 - 3965.0	26.949	4.27	0.513	27.10	26M9G7W
		QPSK	3715.0 - 3965.0	27.933	5.15	0.508	27.06	27M9G7W
		16QAM	3715.0 - 3965.0	27.907	6.14	0.417	26.20	27M9D7W
		64QAM	3715.0 - 3965.0	27.860	6.41	0.308	24.89	27M9D7W
		256QAM	3715.0 - 3965.0	27.958	6.37	0.197	22.95	28M0D7W
	40 MHz	π/2 BPSK	3720.0 - 3960.0	35.897	4.14	0.509	27.06	35M9G7W
		QPSK	3720.0 - 3960.0	37.932	5.07	0.513	27.10	37M9G7W
		16QAM	3720.0 - 3960.0	37.910	6.00	0.424	26.27	37M9D7W
		64QAM	3720.0 - 3960.0	37.905	6.32	0.336	25.27	37M9D7W
		256QAM	3720.0 - 3960.0	37.945	6.41	0.202	23.06	37M9D7W
	50 MHz	π/2 BPSK	3725.0 - 3955.0	45.701	3.81	0.511	27.09	45M7G7W
		QPSK	3725.0 - 3955.0	47.566	5.25	0.513	27.10	47M6G7W
		16QAM	3725.0 - 3955.0	47.545	6.10	0.430	26.34	47M5D7W
		64QAM	3725.0 - 3955.0	47.677	6.45	0.308	24.89	47M7D7W
		256QAM	3725.0 - 3955.0	47.731	6.58	0.199	22.99	47M7D7W
	60 MHz	π/2 BPSK	3730.0 - 3950.0	58.098	3.92	0.513	27.10	58M1G7W
		QPSK	3730.0 - 3950.0	57.880	5.30	0.495	26.95	57M9G7W
		16QAM	3730.0 - 3950.0	57.976	6.20	0.396	25.98	58M0D7W
		64QAM	3730.0 - 3950.0	57.839	6.51	0.295	24.70	57M8D7W
		256QAM	3730.0 - 3950.0	57.957	6.74	0.189	22.76	58M0D7W
	70 MHz	π/2 BPSK	3735.0 - 3945.0	64.591	4.31	0.513	27.10	64M6G7W
		QPSK	3735.0 - 3945.0	67.814	5.55	0.510	27.08	67M8G7W
		16QAM	3735.0 - 3945.0	67.707	6.28	0.421	26.24	67M7D7W
		64QAM	3735.0 - 3945.0	67.765	6.53	0.302	24.80	67M8D7W
		256QAM	3735.0 - 3945.0	67.618	6.67	0.191	22.81	67M6D7W
	80 MHz	π/2 BPSK	3740.0 - 3940.0	77.392	3.95	0.508	27.06	77M4G7W
		QPSK	3740.0 - 3940.0	77.734	5.32	0.513	27.10	77M7G7W
		16QAM	3740.0 - 3940.0	77.716	6.14	0.422	26.25	77M7D7W
		64QAM	3740.0 - 3940.0	77.770	6.48	0.312	24.94	77M8D7W
		256QAM	3740.0 - 3940.0	77.576	6.74	0.193	22.86	77M6D7W
	90 MHz	π/2 BPSK	3745.0 - 3935.0	87.067	3.95	0.509	27.07	87M1G7W
		QPSK	3745.0 - 3935.0	87.832	5.36	0.513	27.10	87M8G7W
		16QAM	3745.0 - 3935.0	87.647	6.12	0.420	26.23	87M6D7W
		64QAM	3745.0 - 3935.0	87.853	6.47	0.299	24.76	87M9D7W
		256QAM	3745.0 - 3935.0	87.748	6.60	0.194	22.88	87M7D7W
	100 MHz	π/2 BPSK	3750.0 - 3930.0	96.466	4.05	0.507	27.05	96M5G7W
		QPSK	3750.0 - 3930.0	97.776	5.36	0.513	27.10	97M8G7W
		16QAM	3750.0 - 3930.0	97.751	6.20	0.427	26.30	97M8D7W
		64QAM	3750.0 - 3930.0	97.756	6.49	0.303	24.82	97M8D7W
		256QAM	3750.0 - 3930.0	97.751	6.64	0.196	22.93	97M8D7W

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

- 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 Materials Technology 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:BCGA2899**. 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.: MV3WTWWGT4, VGTVQGM9J9, RX5LQRFQ9Q, DLXGYV0005D0000FH3, DLXGYV0002L0000FH3

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

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	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
Antenna 3b	Config 1	✗	✗	✗	✓	✗	✗	✓	✗
Antenna 3b	Config 2	✗	✗	✗	✗	✓	✗	✓	✗
Antenna 3b	Config 3	✗	✗	✗	✗	✗	✓	✓	✗
Antenna 3a	Config 4	✓	✗	✗	✗	✗	✗	✗	✓
Antenna 3a	Config 5	✗	✓	✗	✗	✗	✗	✗	✓
Antenna 3a	Config 6	✗	✗	✓	✗	✗	✗	✗	✓
Antenna 1a	Config 7	✓	✗	✗	✗	✗	✗	✗	✓
Antenna 1a	Config 8	✗	✓	✗	✗	✗	✗	✗	✓
Antenna 1a	Config 9	✗	✗	✓	✗	✗	✗	✗	✓
Antenna 1b	Config 10	✗	✗	✗	✓	✗	✗	✓	✗
Antenna 1b	Config 11	✗	✗	✗	✗	✓	✗	✓	✗
Antenna 1b	Config 12	✗	✗	✗	✗	✗	✓	✓	✗

Table 2-1. Simultaneous Transmission Configurations

✓ = Support; ✗ = Not Support

Note:

All the above simultaneous transmission configurations have been tested and the worst case configuration was found to be Config 8 and reported in RF Bluetooth and RF FCC Part 96 test reports.

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

The following antenna gains provided by manufacturer were used for testing.

Band	Antenna Gain [dBi]			
	Antenna 3a	Antenna 2	Antenna 4	Antenna 1a
NR Band n77 (Sub 1)	1.4	1.8	1.8	-1.0
NR Band n77 (Sub 2)	0.4	2.2	1.4	-0.8

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.

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: BCGA2899

FCC Classification: PCS Licensed Transmitter (PCB)

Mode(s): NR

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 (NR Band n77 - 3450-3550MHz)	2.1051, 27.53(n)(2)	-13 dBm at Band Edge and for all out-of-band emissions	PASS	Sections 7.3, 7.4
	Conducted Band Edge / Spurious Emissions (NR Band n77 - 3700-3980MHz)	2.1051, 27.53(l)(2)		PASS	Sections 7.3, 7.4
	Peak-Average Ratio (NR Band n77 - 3450-3550MHz)	27.50(k)(4)	< 13 dB	PASS	Sections 7.5
	Peak-Average Ratio (NR Band n77 - 3700-3980MHz)	27.50(j)(4)		PASS	Sections 7.5
	Transmitter Conducted Output Power	2.1046	N/A	N/A	See RF Exposure Report
	Effective Radiated Power / Equivalent Isotropic Radiated Power (NR Band n77 - 3450-3550MHz)	27.50(k)(3)	< 1 Watts max. EIRP	PASS	Section 7.6
	Effective Radiated Power / Equivalent Isotropic Radiated Power (NR Band n77 - 3700-3980MHz)	27.50(j)(3)		PASS	Section 7.6
	Frequency Stability	2.1055, 27.54	Fundamental emissions stay within authorized frequency block	PASS	Section 7.8
RADIATED	Radiated Spurious Emissions (NR Band n77 - 3450-3550MHz)	2.1051, 27.53(n)(2)	-13 dBm for all out-of-band emissions	PASS	Section 7.7
	Radiated Spurious Emissions (NR Band n77 - 3700-3980MHz)	2.1051, 27.53(l)(2)		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 EMC Software Tool v1.1.

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.

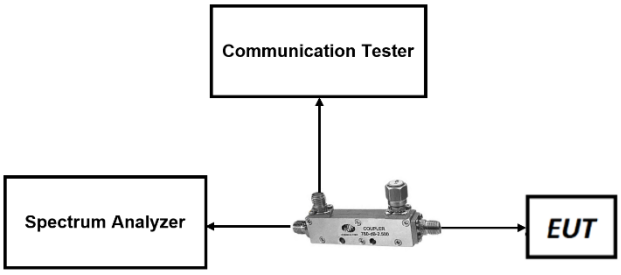
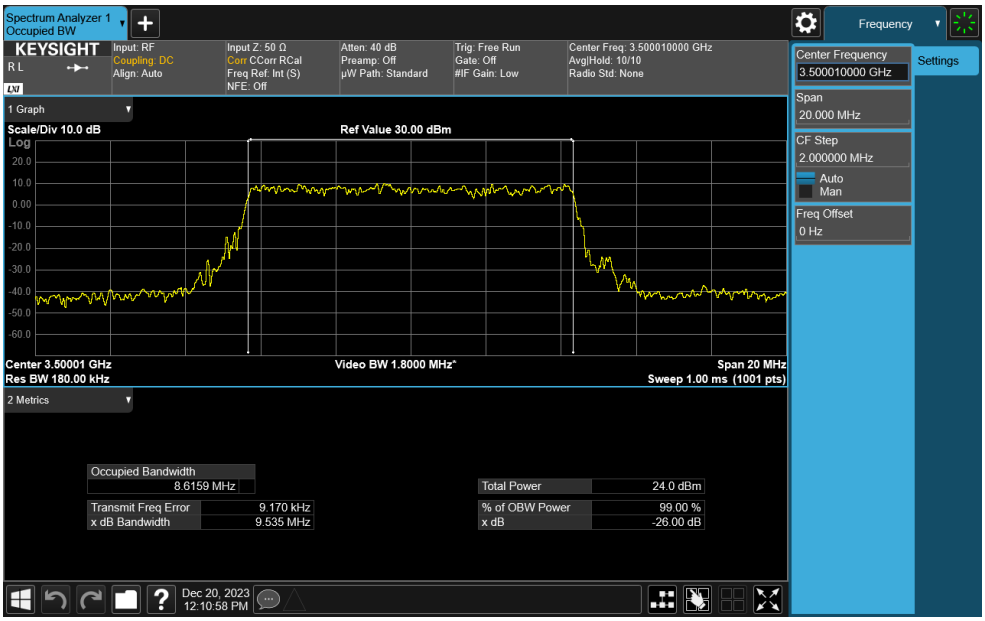


Figure 7-1. Test Instrument & Measurement Setup

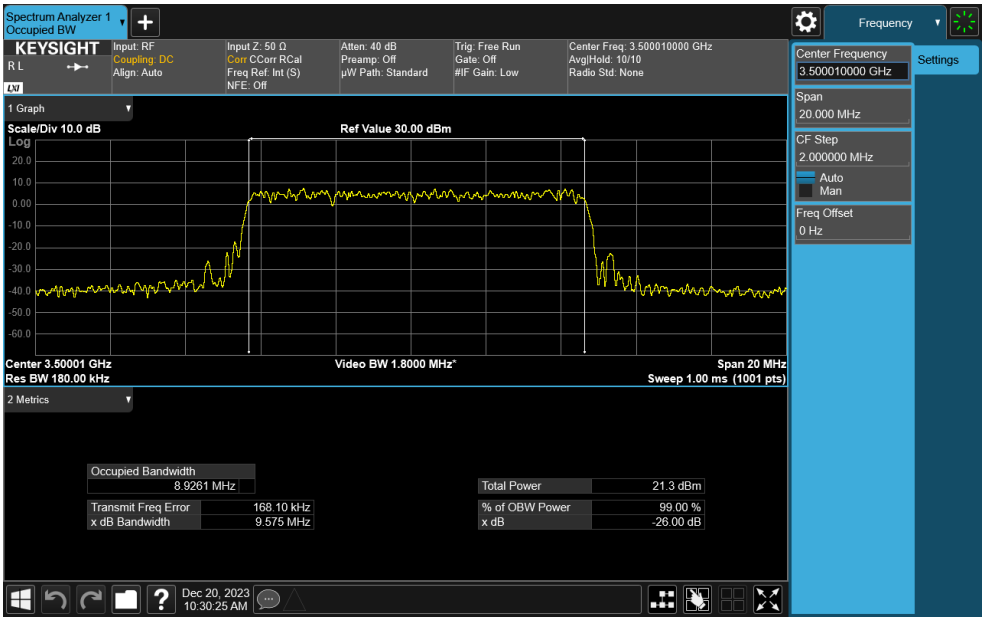
Test Notes

None.

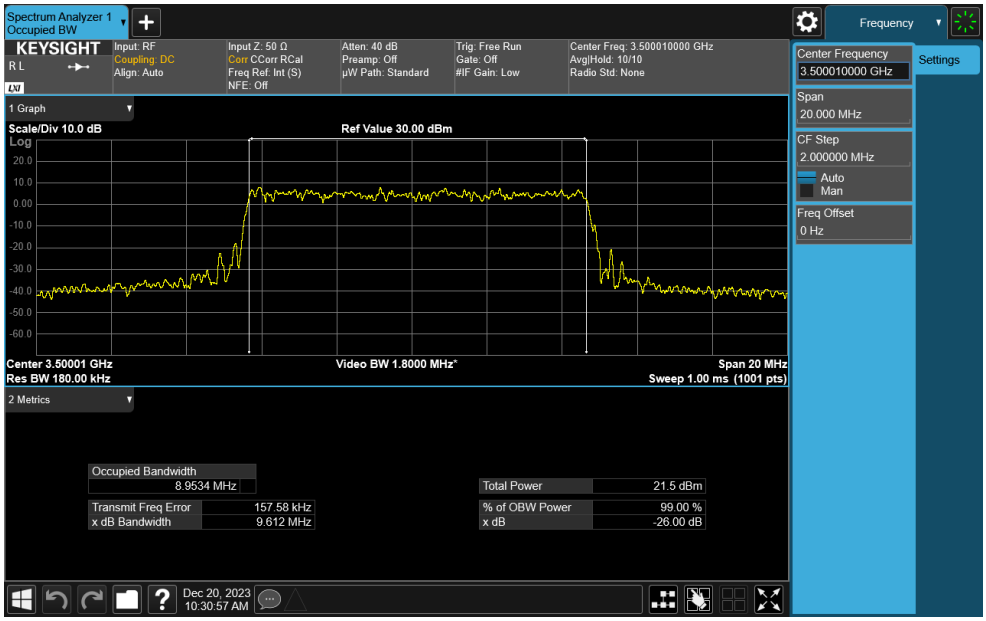
NR Band n77 DoD-Band



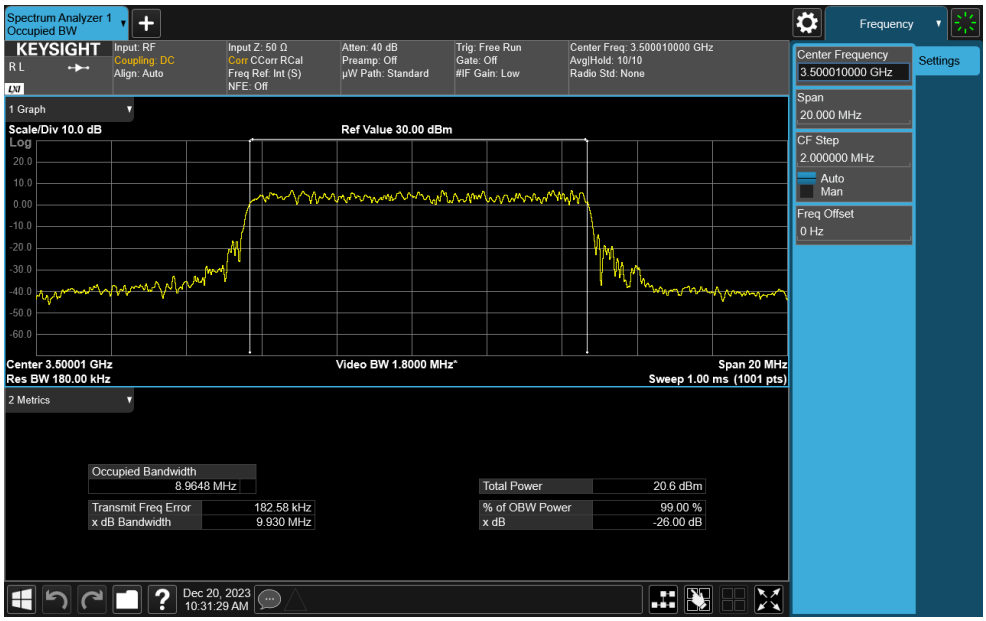
Plot 7-1. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 10MHz DFT-s-OFDM π/2 BPSK - Full RB)



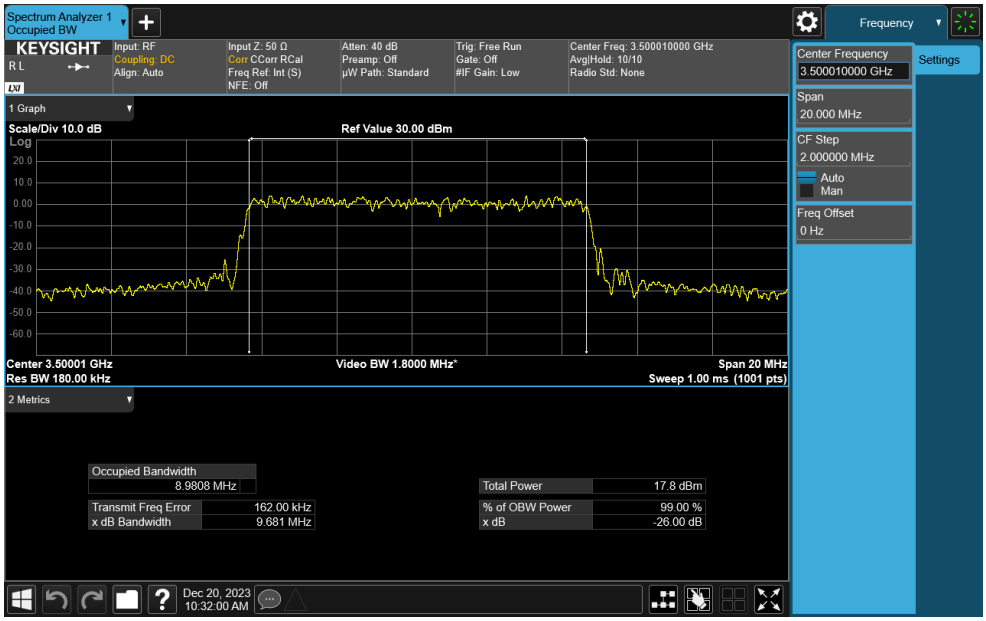
Plot 7-2. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 10MHz CP-OFDM QPSK - Full RB)



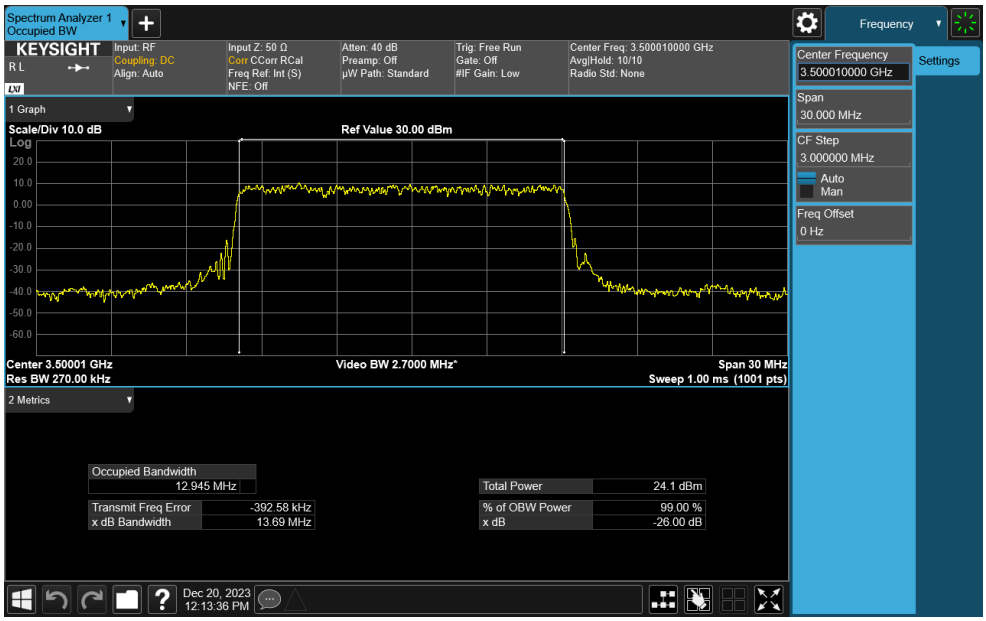
Plot 7-3. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 10MHz CP-OFDM 16-QAM - Full RB)



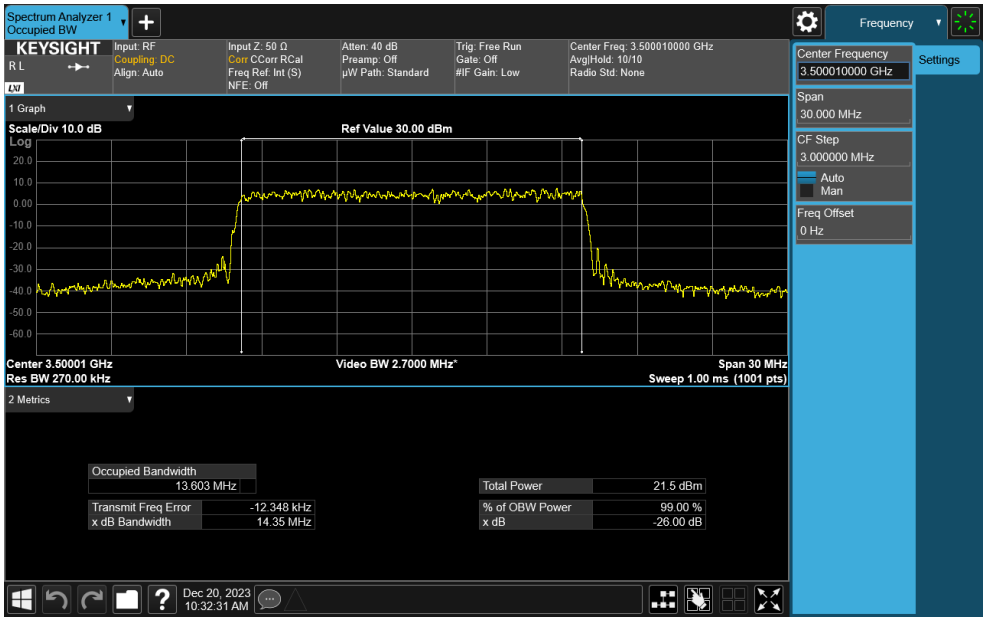
Plot 7-4. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 10MHz CP-OFDM 64-QAM - Full RB)



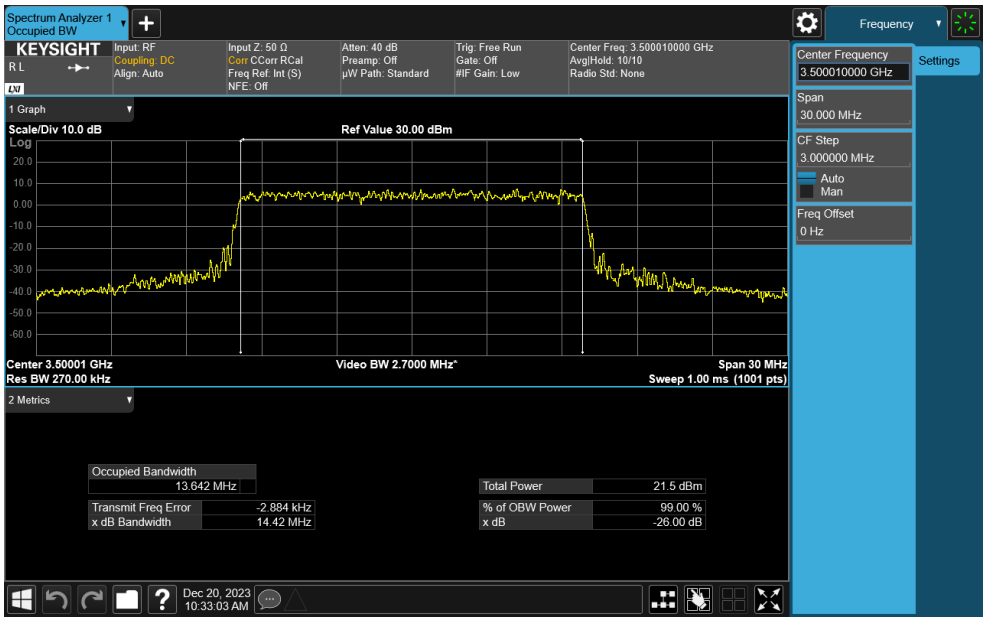
Plot 7-5. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 10MHz CP-OFDM 256-QAM - Full RB)



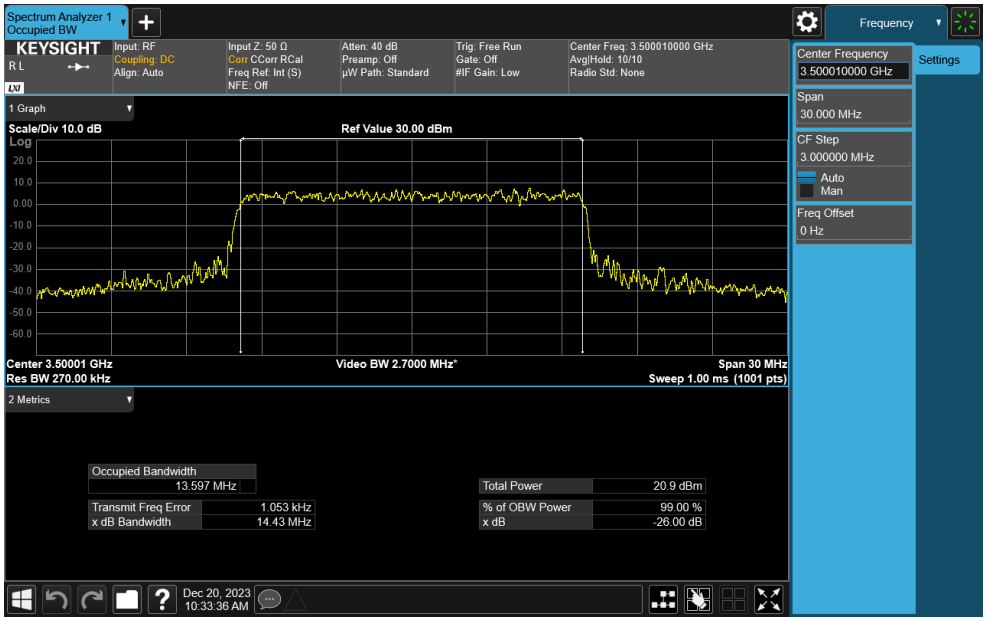
Plot 7-6. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 15MHz DFT-s-OFDM π/2 BPSK - Full RB)



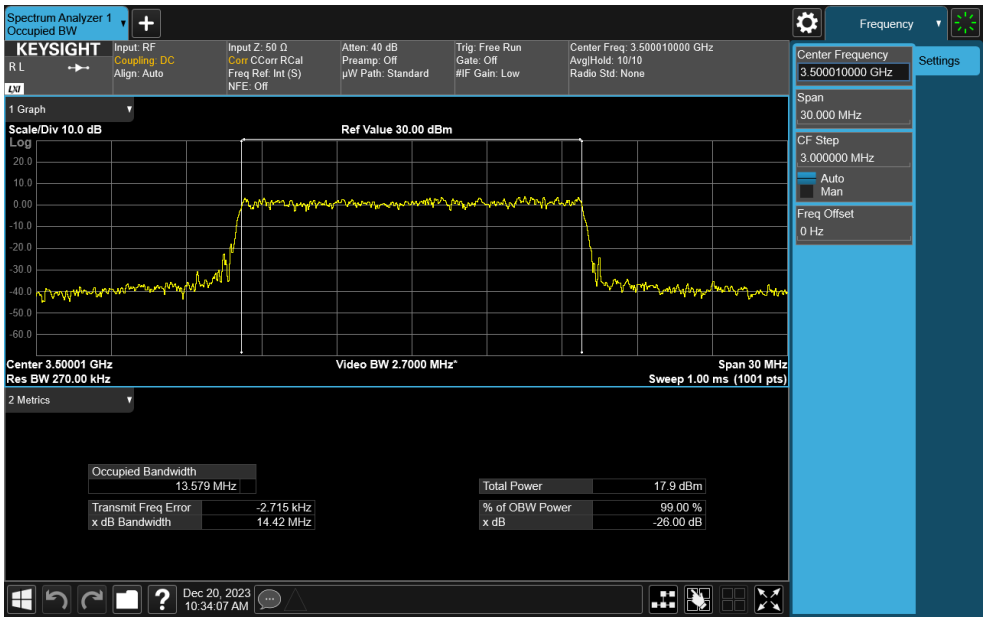
Plot 7-7. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 15MHz CP-OFDM QPSK - Full RB)



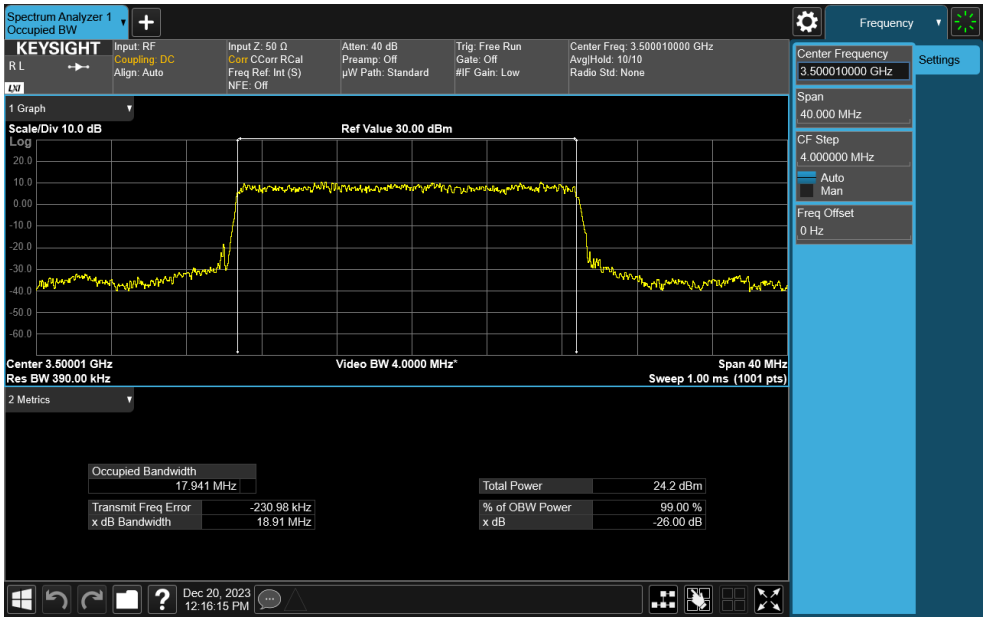
Plot 7-8. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 15MHz CP-OFDM 16-QAM - Full RB)



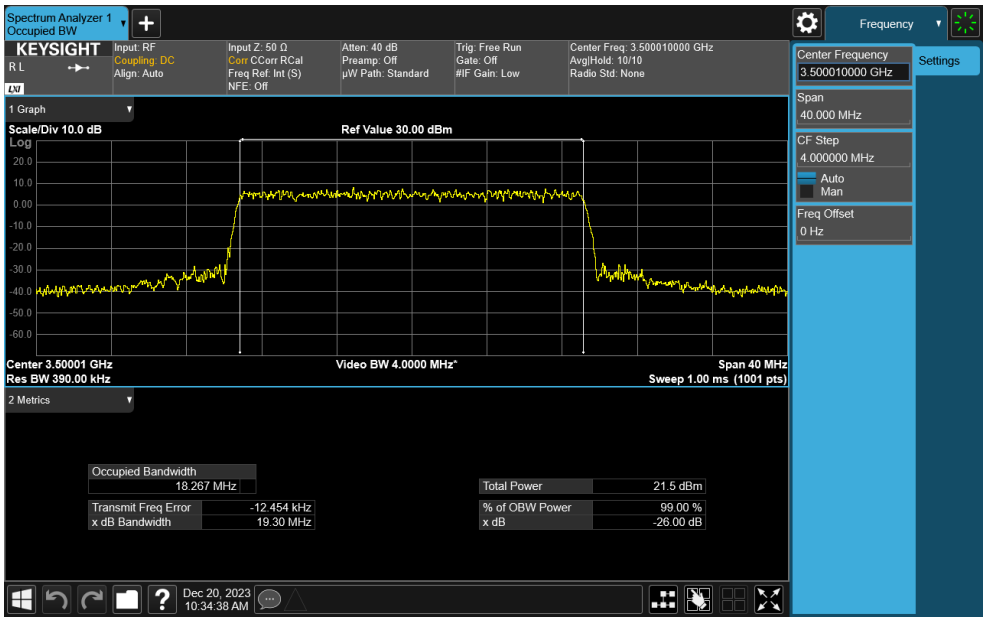
Plot 7-9. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 15MHz CP-OFDM 64-QAM - Full RB)



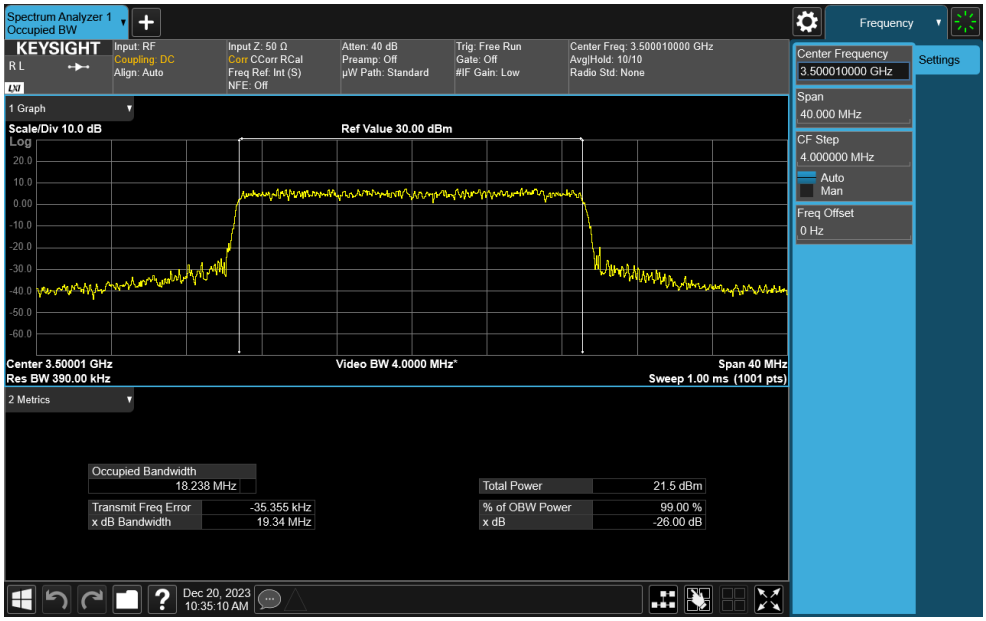
Plot 7-10. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 15MHz CP-OFDM 256-QAM - Full RB)



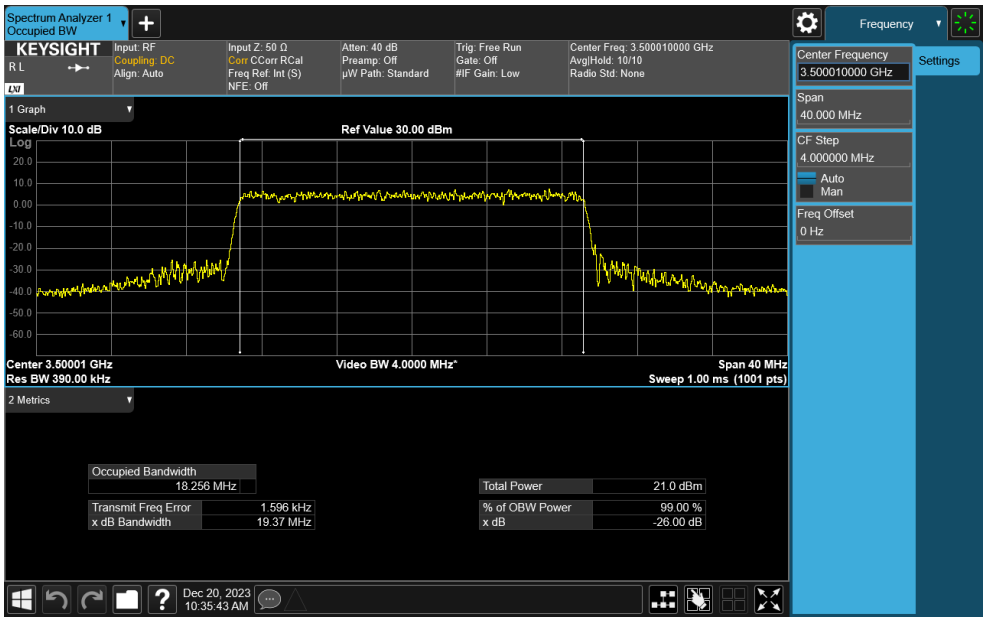
Plot 7-11. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 20MHz DFT-s-OFDM π/2 BPSK - Full RB)



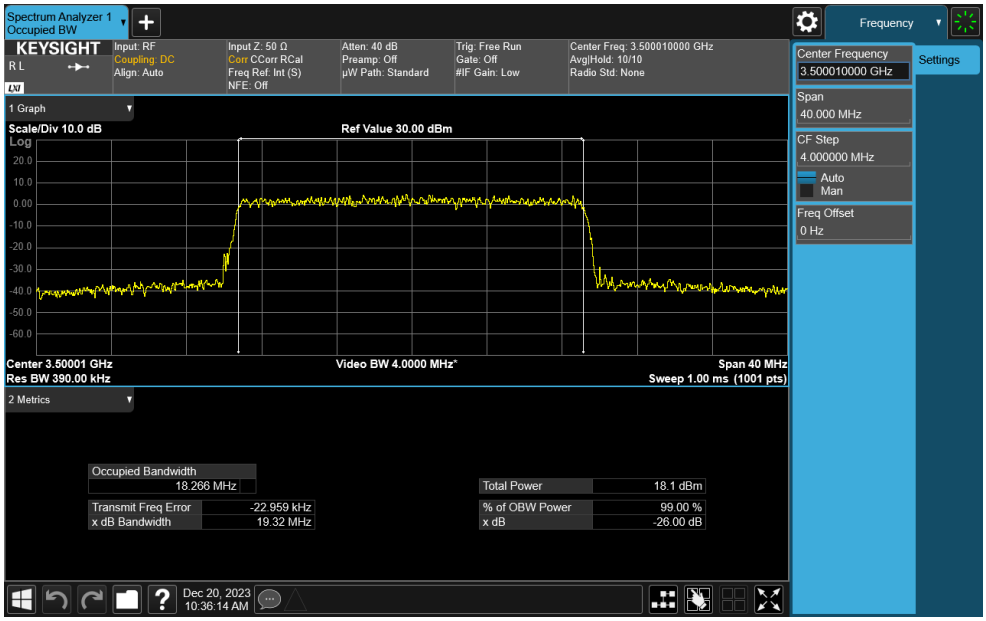
Plot 7-12. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 20MHz CP-OFDM QPSK - Full RB)



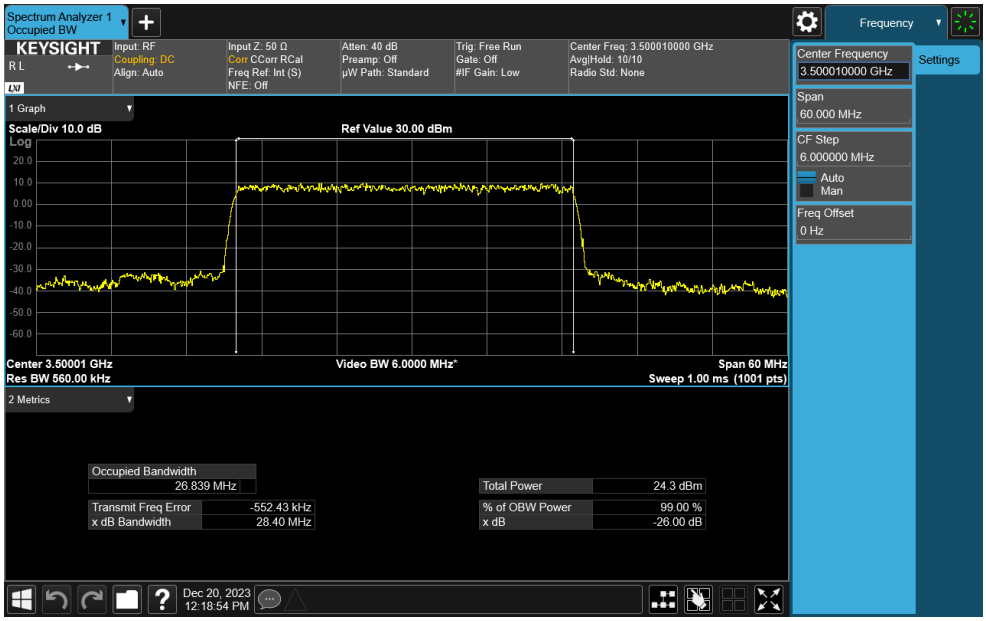
Plot 7-13. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 20MHz CP-OFDM 16-QAM - Full RB)



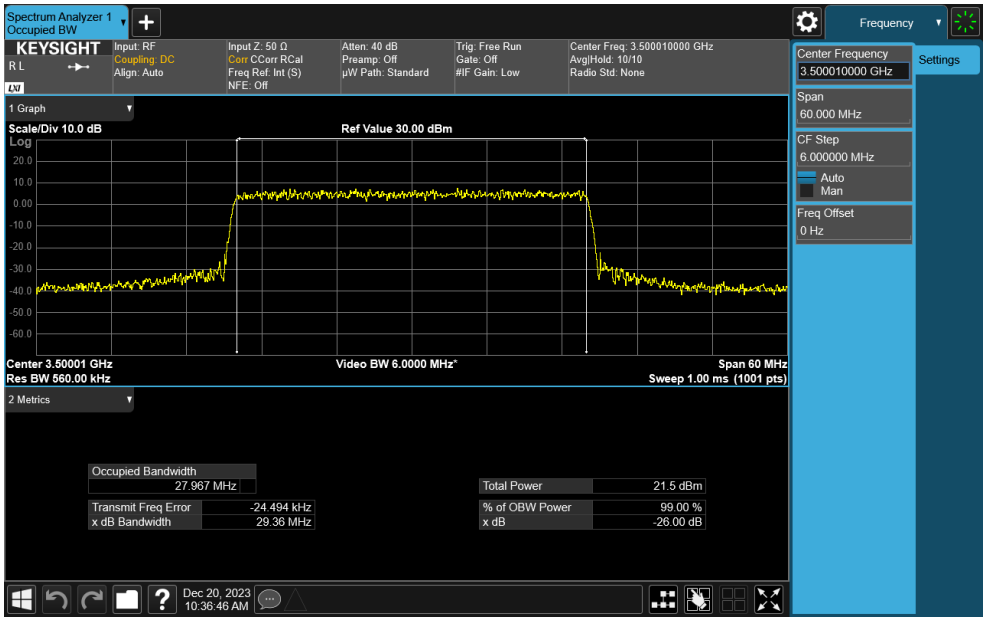
Plot 7-14. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 20MHz CP-OFDM 64-QAM - Full RB)



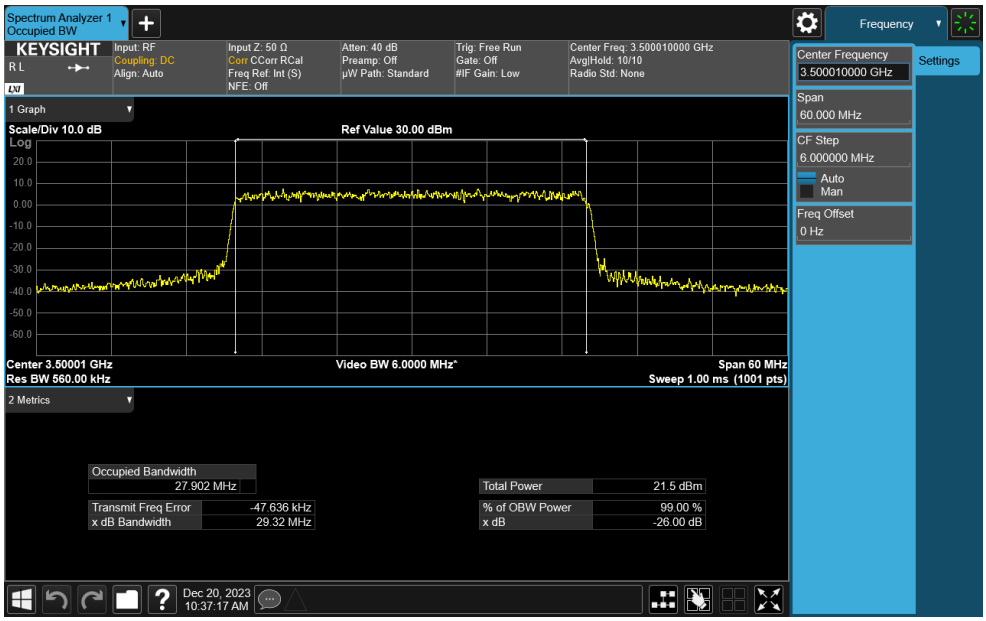
Plot 7-15. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 20MHz CP-OFDM 256-QAM - Full RB)



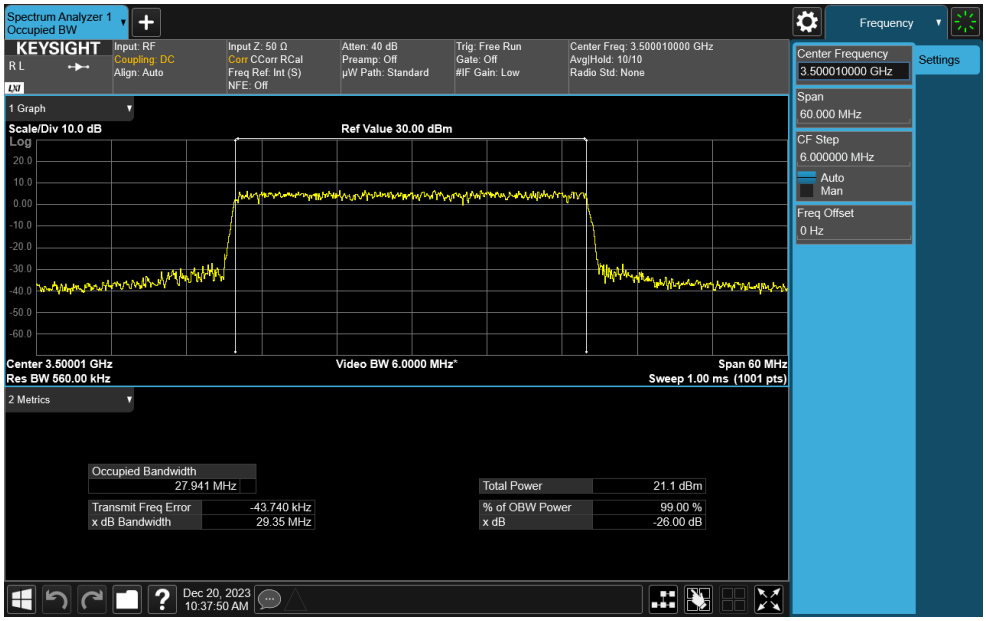
Plot 7-16. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 30MHz DFT-s-OFDM π/2 BPSK - Full RB)



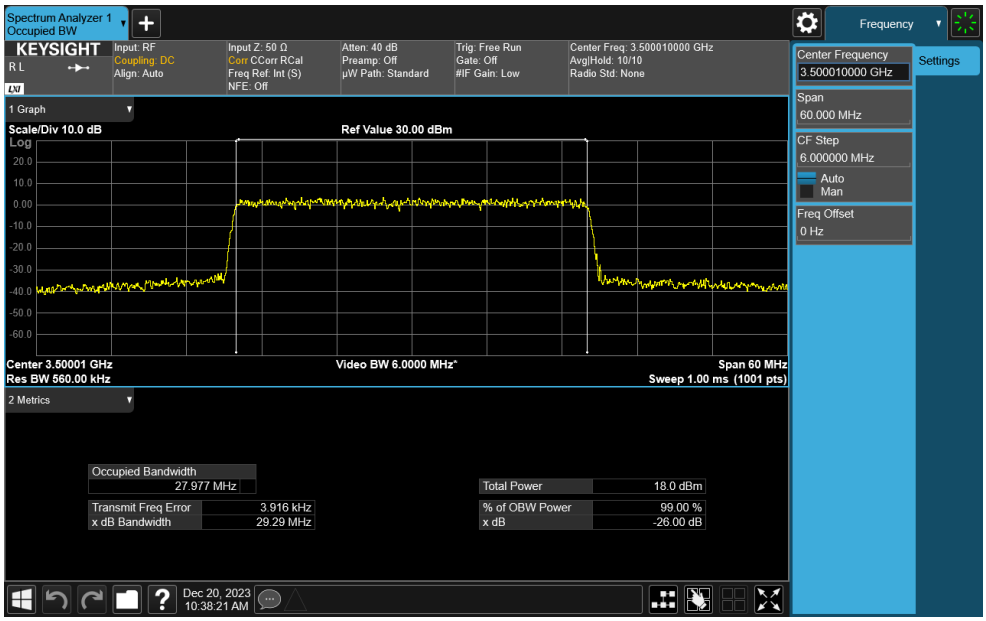
Plot 7-17. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 30MHz CP-OFDM QPSK - Full RB)



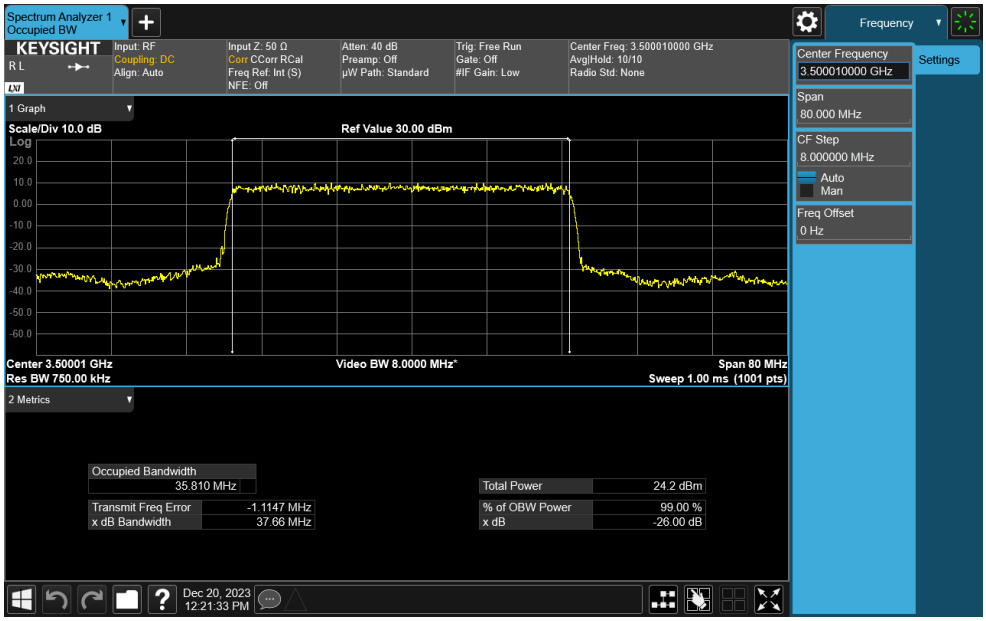
Plot 7-18. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 30MHz CP-OFDM 16-QAM - Full RB)



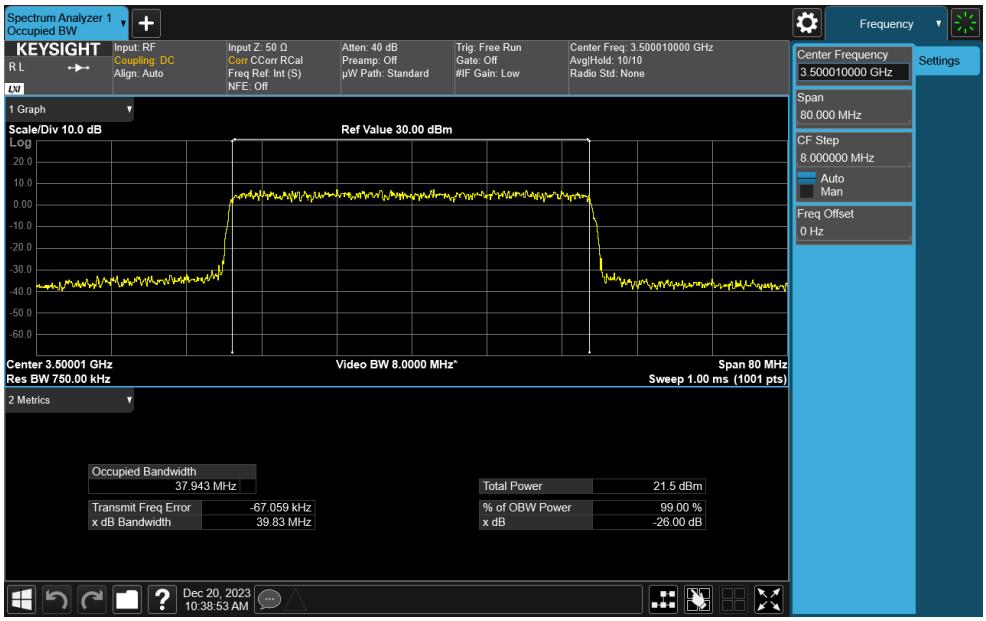
Plot 7-19. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 30MHz CP-OFDM 64-QAM - Full RB)



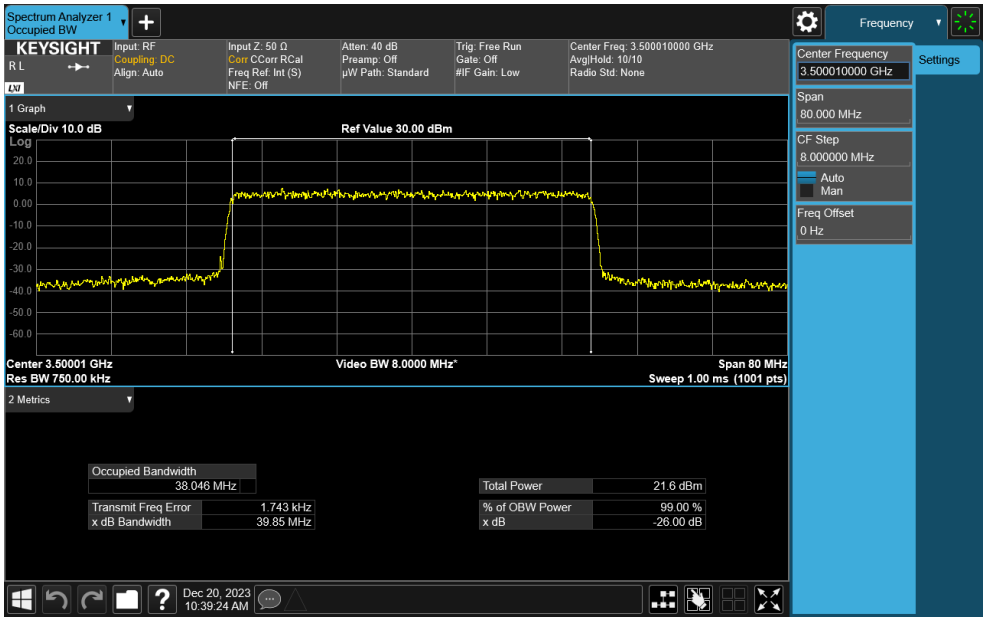
Plot 7-20. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 30MHz CP-OFDM 256-QAM - Full RB)



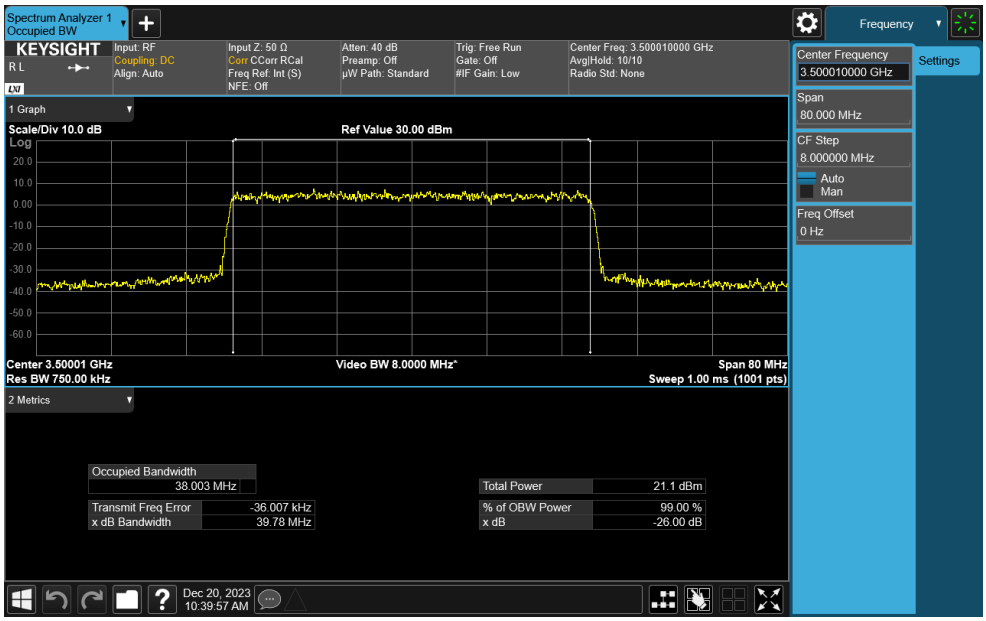
Plot 7-21. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 40MHz DFT-s-OFDM π/2 BPSK - Full RB)



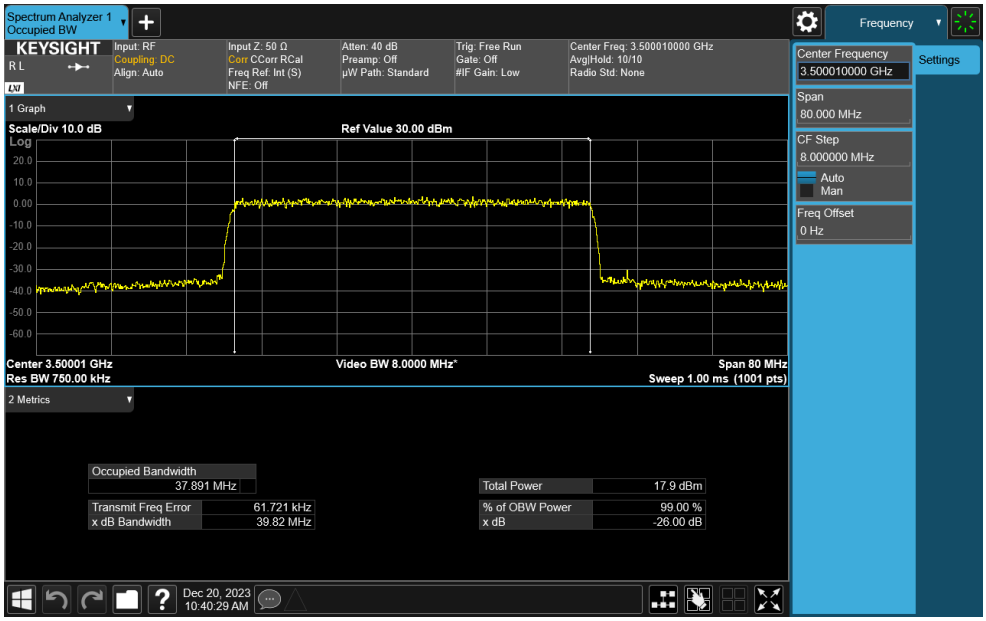
Plot 7-22. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 40MHz CP-OFDM QPSK - Full RB)



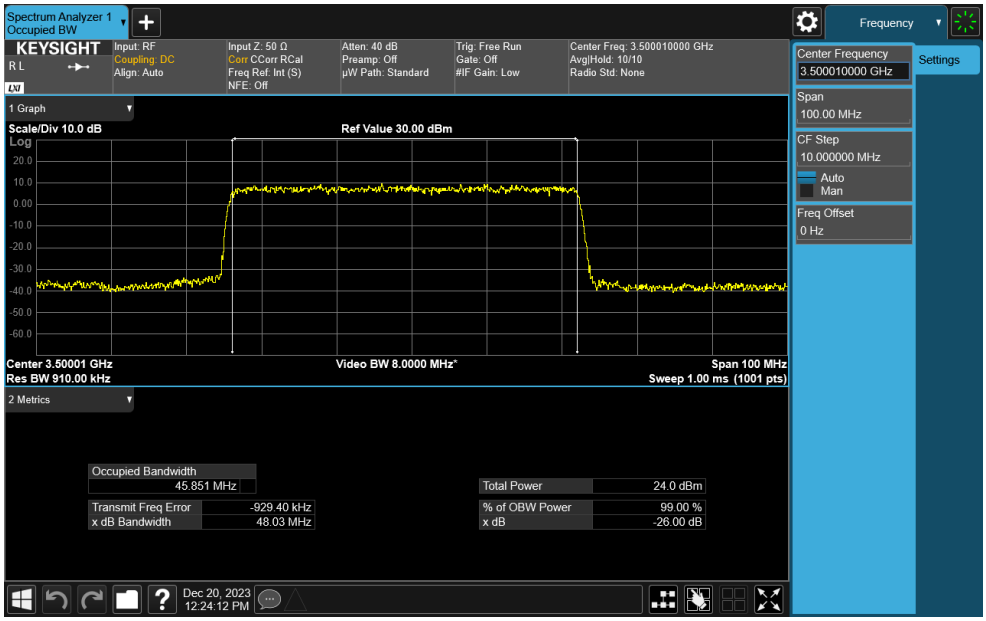
Plot 7-23. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 40MHz CP-OFDM 16-QAM - Full RB)



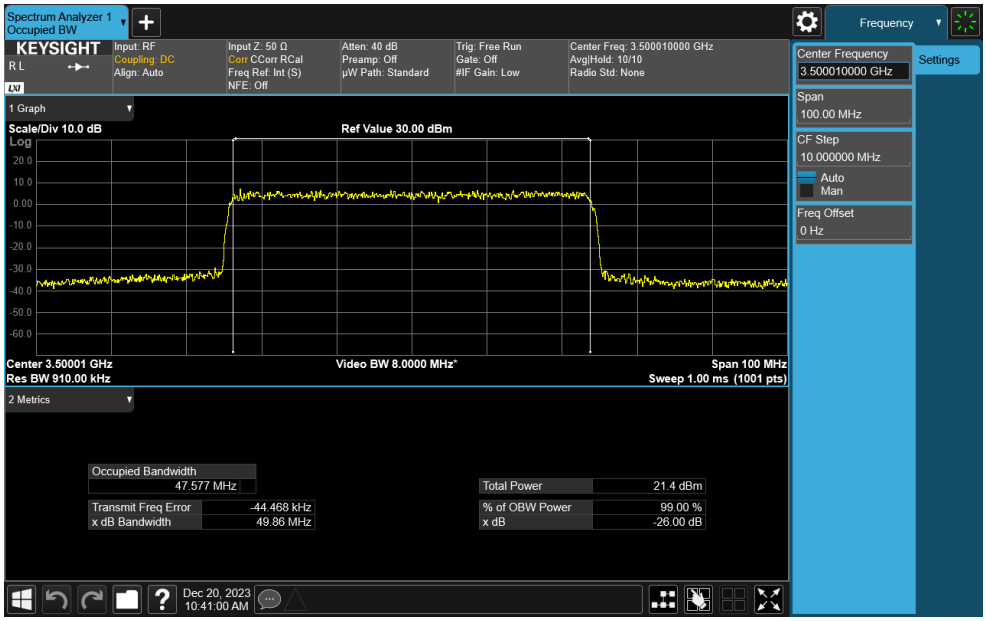
Plot 7-24. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 40MHz CP-OFDM 64-QAM - Full RB)



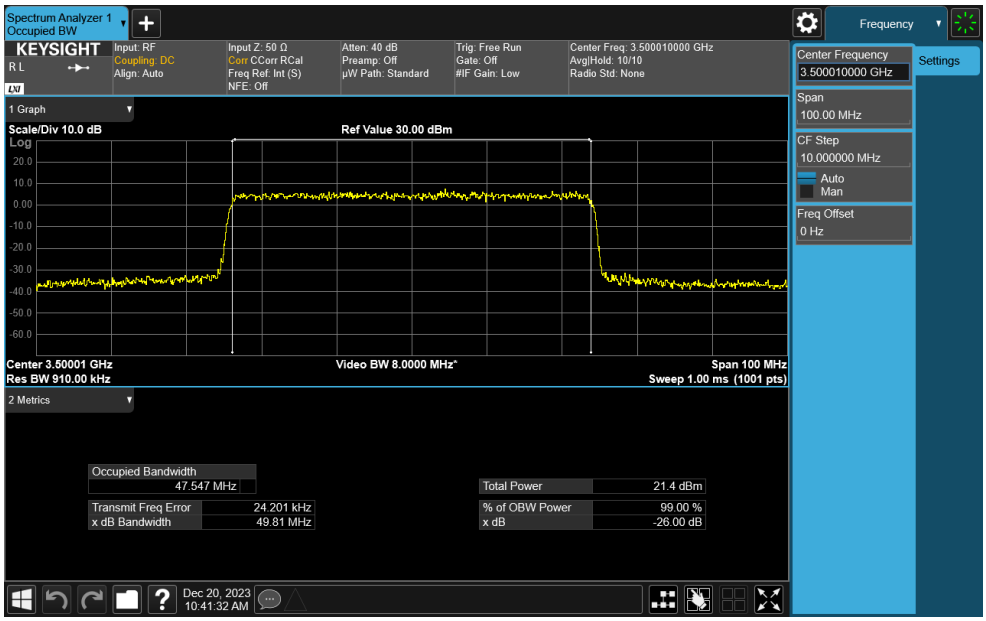
Plot 7-25. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 40MHz CP-OFDM 256-QAM - Full RB)



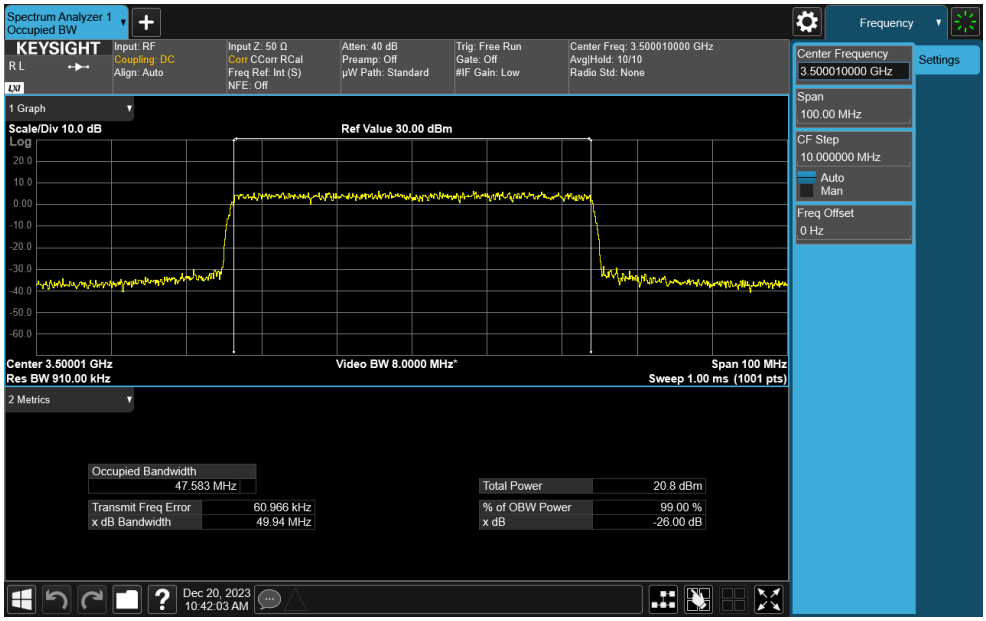
Plot 7-26. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 50MHz DFT-s-OFDM π/2 BPSK - Full RB)



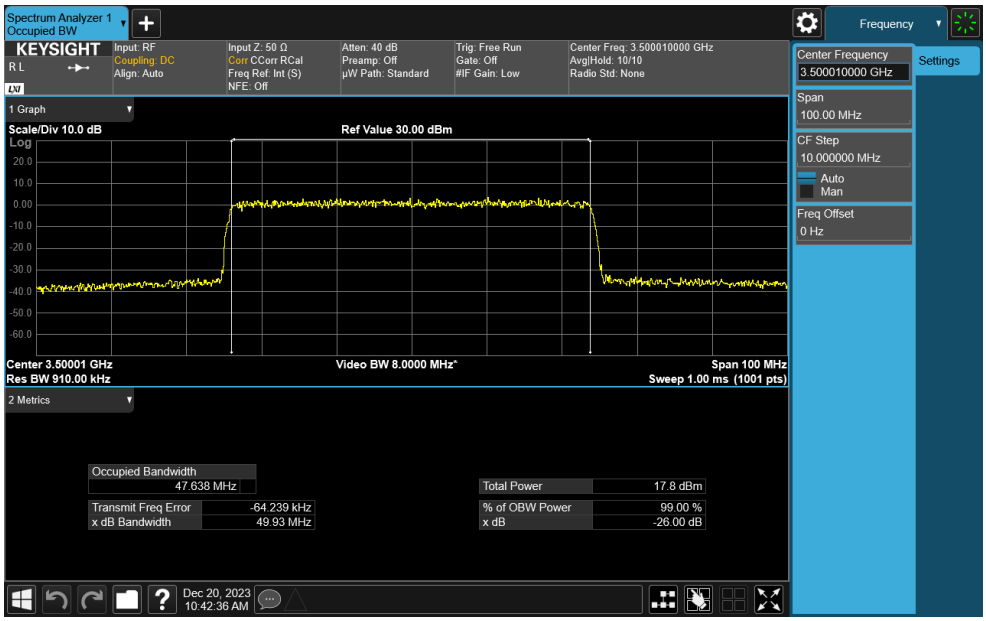
Plot 7-27. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 50MHz CP-OFDM QPSK - Full RB)



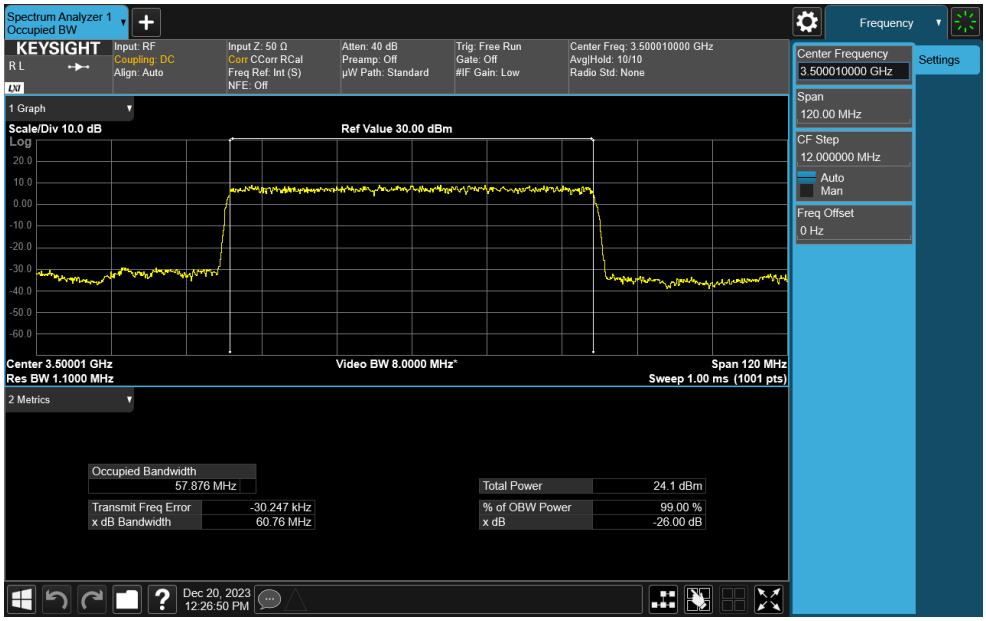
Plot 7-28. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 50MHz CP-OFDM 16-QAM - Full RB)



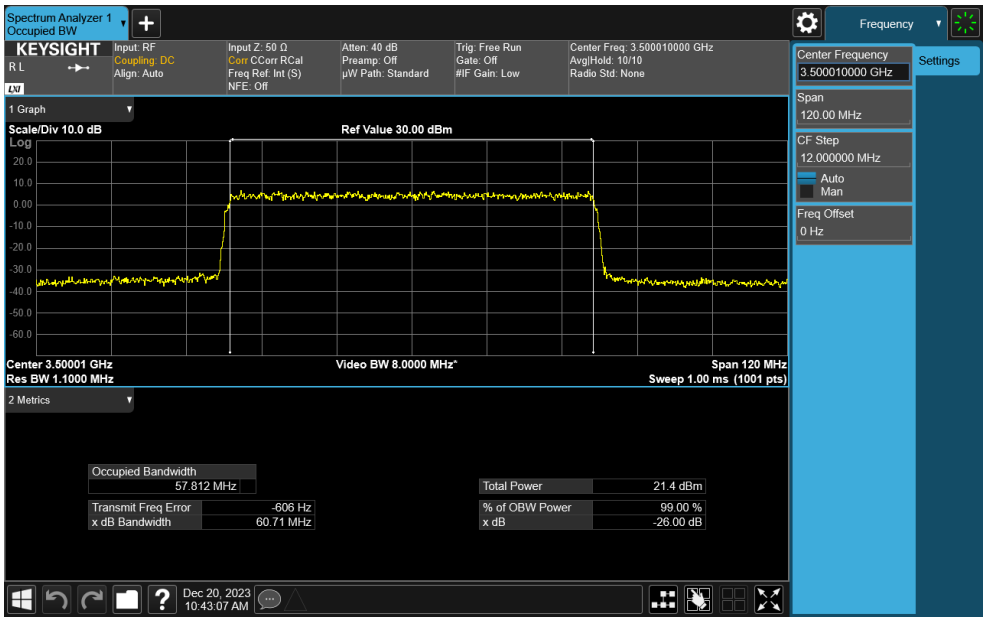
Plot 7-29. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 50MHz CP-OFDM 64-QAM - Full RB)



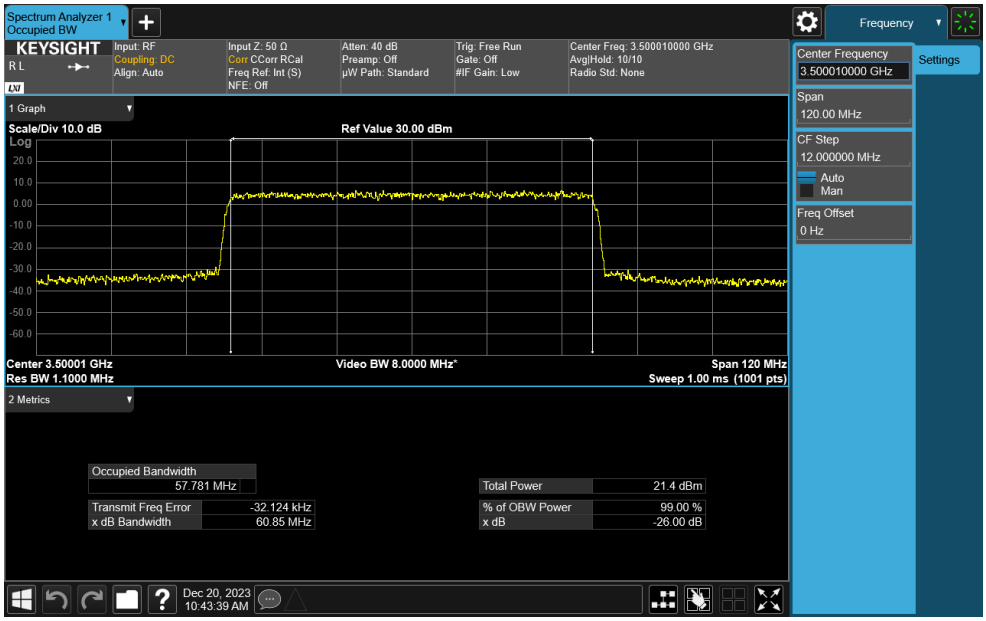
Plot 7-30. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 50MHz CP-OFDM 256-QAM - Full RB)



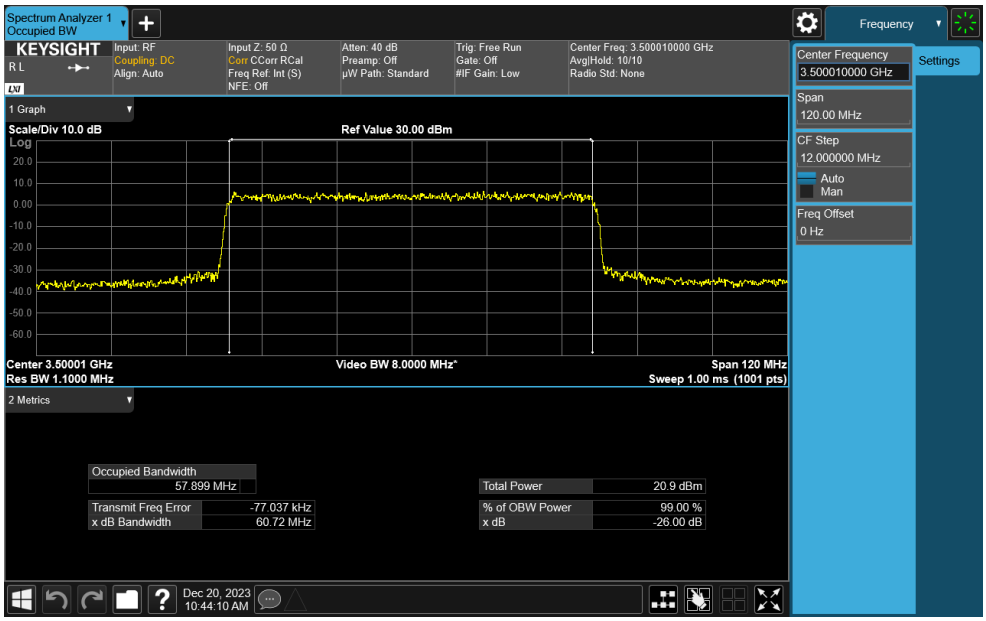
Plot 7-31. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 60MHz DFT-s-OFDM π/2 BPSK - Full RB)



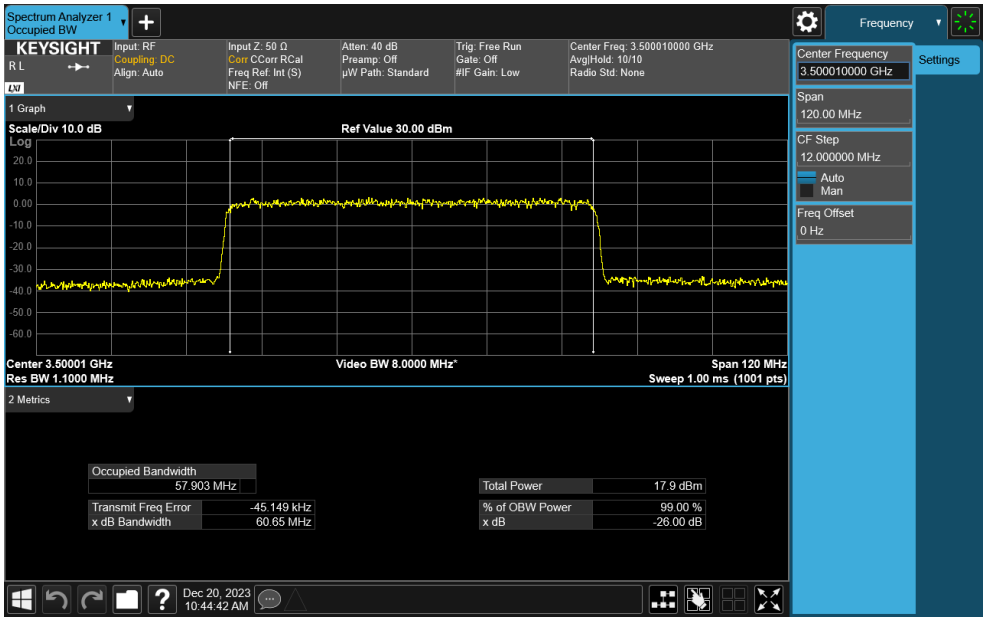
Plot 7-32. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 60MHz CP-OFDM QPSK - Full RB)



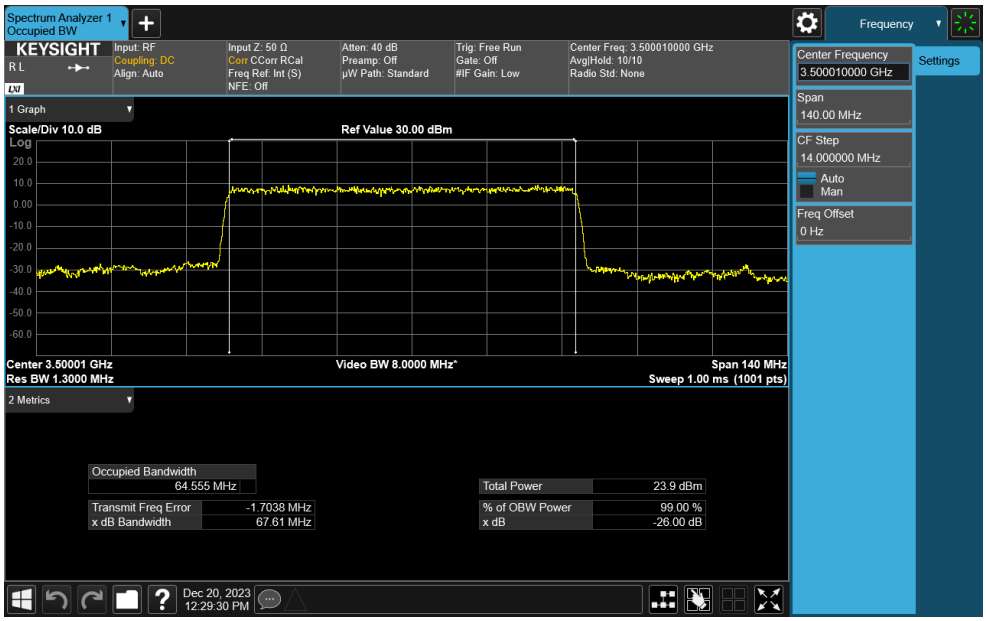
Plot 7-33. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 60MHz CP-OFDM 16-QAM - Full RB)



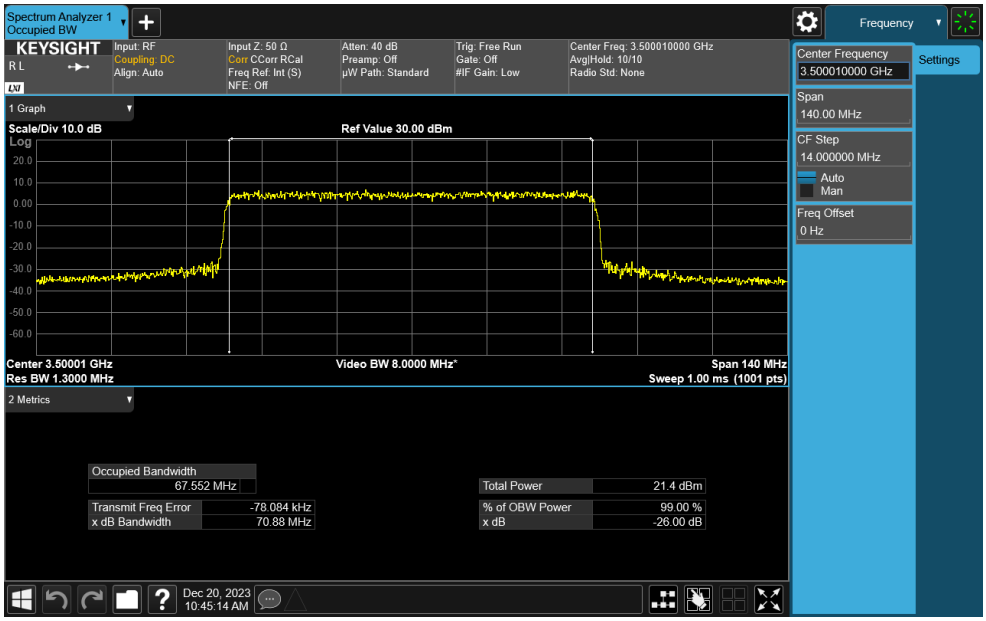
Plot 7-34. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 60MHz CP-OFDM 64-QAM - Full RB)



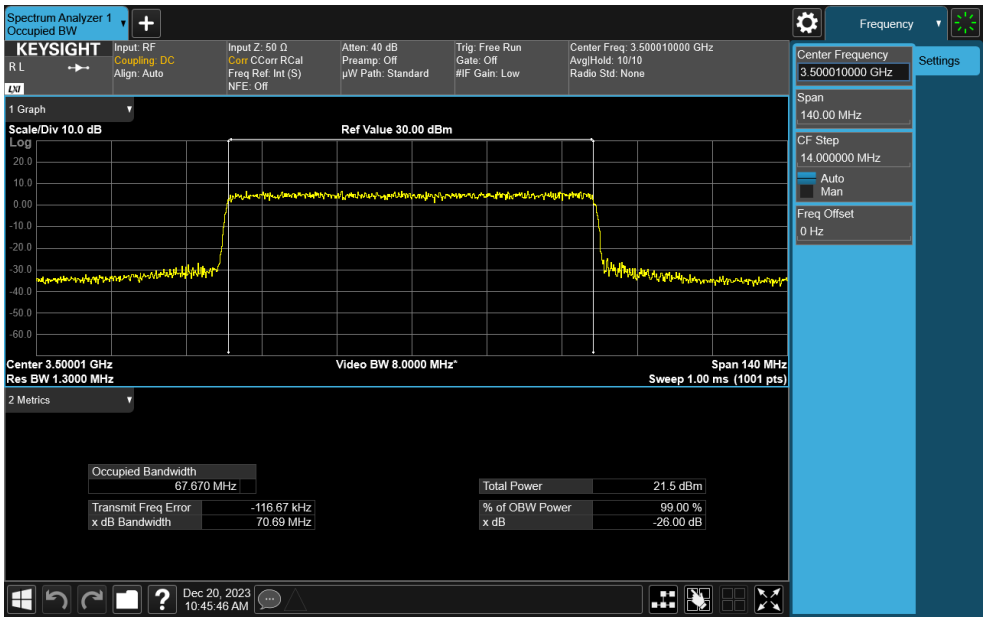
Plot 7-35. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 60MHz CP-OFDM 256-QAM - Full RB)



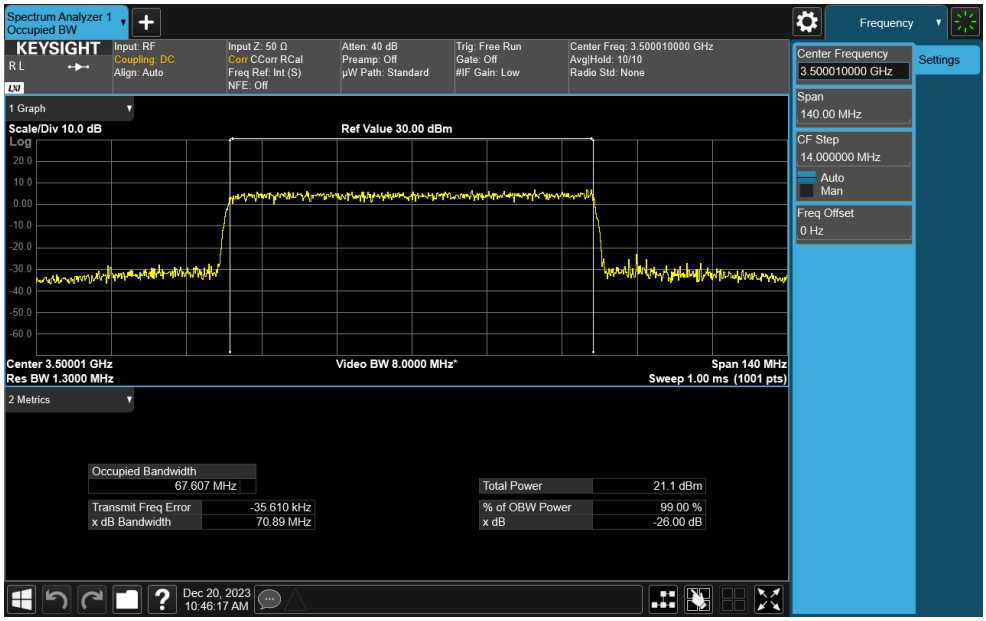
Plot 7-36. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 70MHz DFT-s-OFDM π/2 BPSK - Full RB)



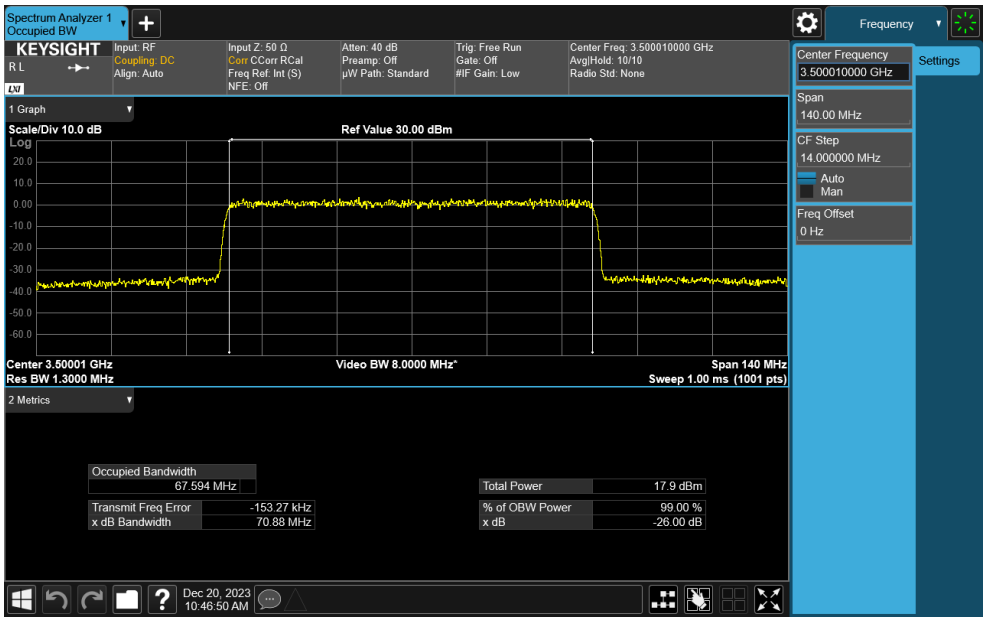
Plot 7-37. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 70MHz CP-OFDM QPSK - Full RB)



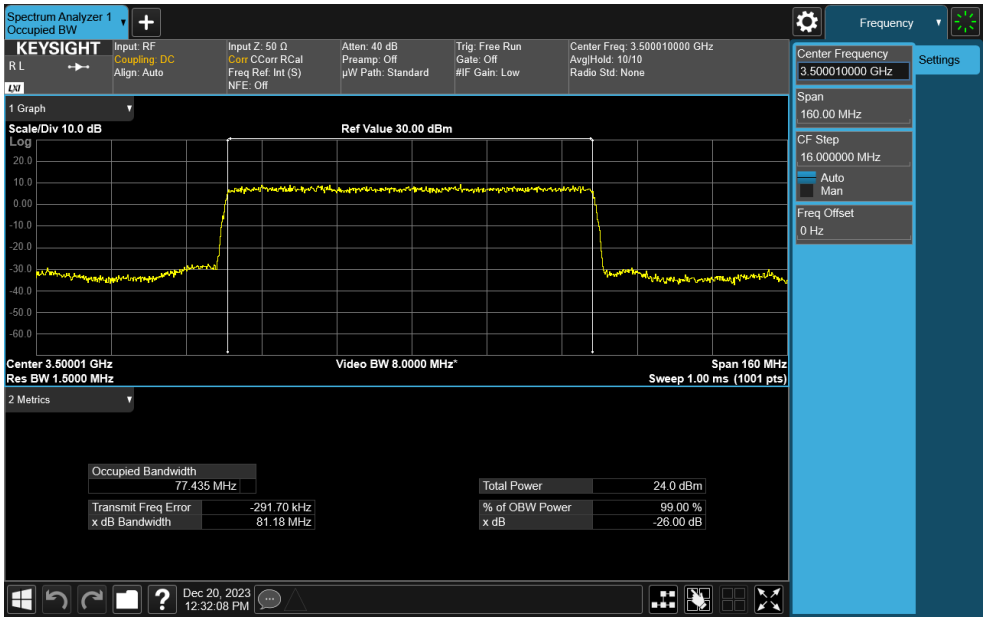
Plot 7-38. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 70MHz CP-OFDM 16-QAM - Full RB)



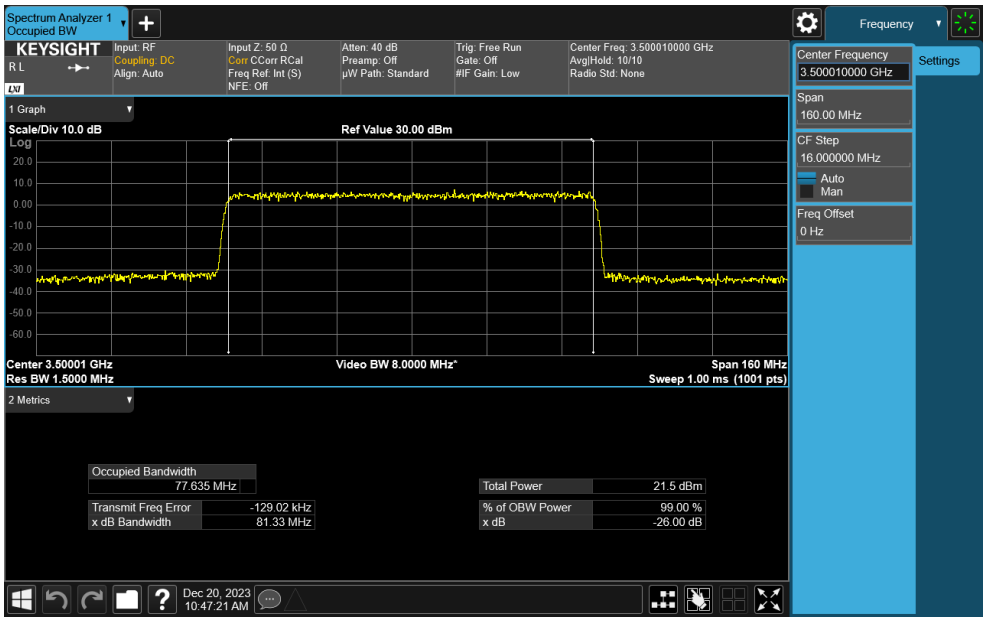
Plot 7-39. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 70MHz CP-OFDM 64-QAM - Full RB)



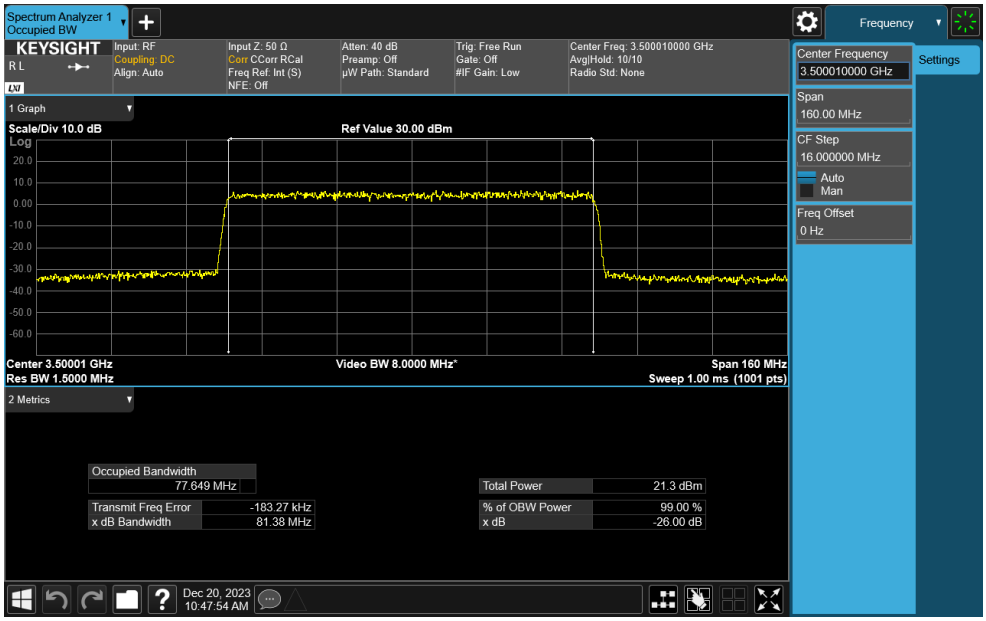
Plot 7-40. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 70MHz CP-OFDM 256-QAM - Full RB)



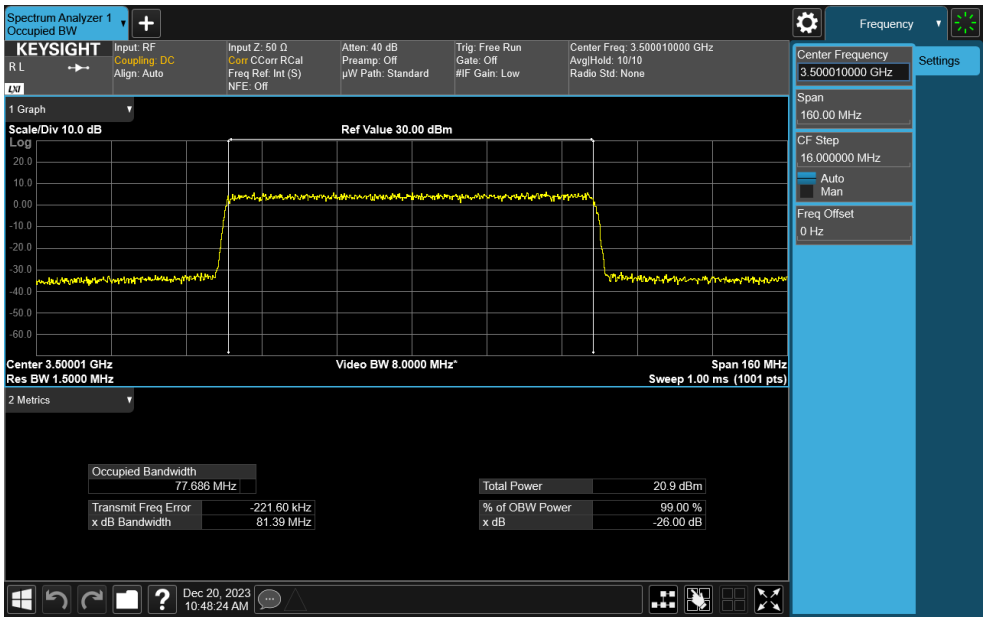
Plot 7-41. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 80MHz DFT-s-OFDM π/2 BPSK - Full RB)



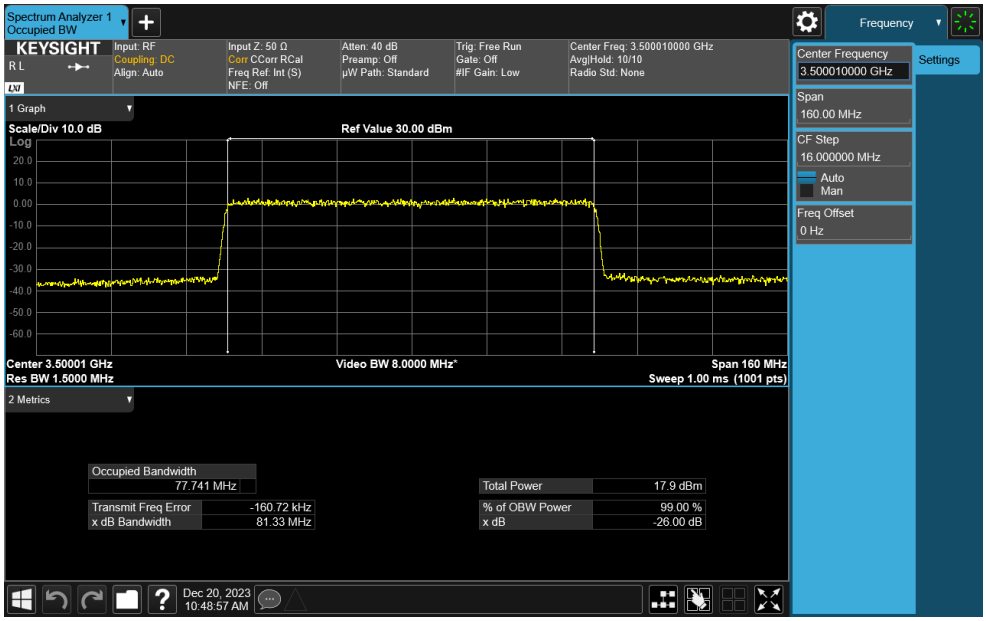
Plot 7-42. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 80MHz CP-OFDM QPSK - Full RB)



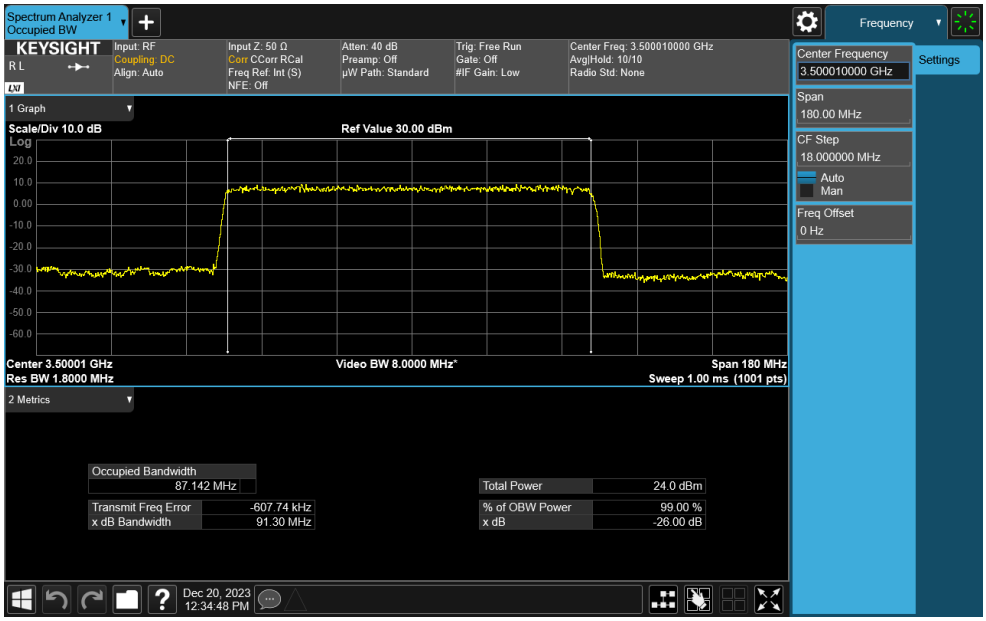
Plot 7-43. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 80MHz CP-OFDM 16-QAM - Full RB)



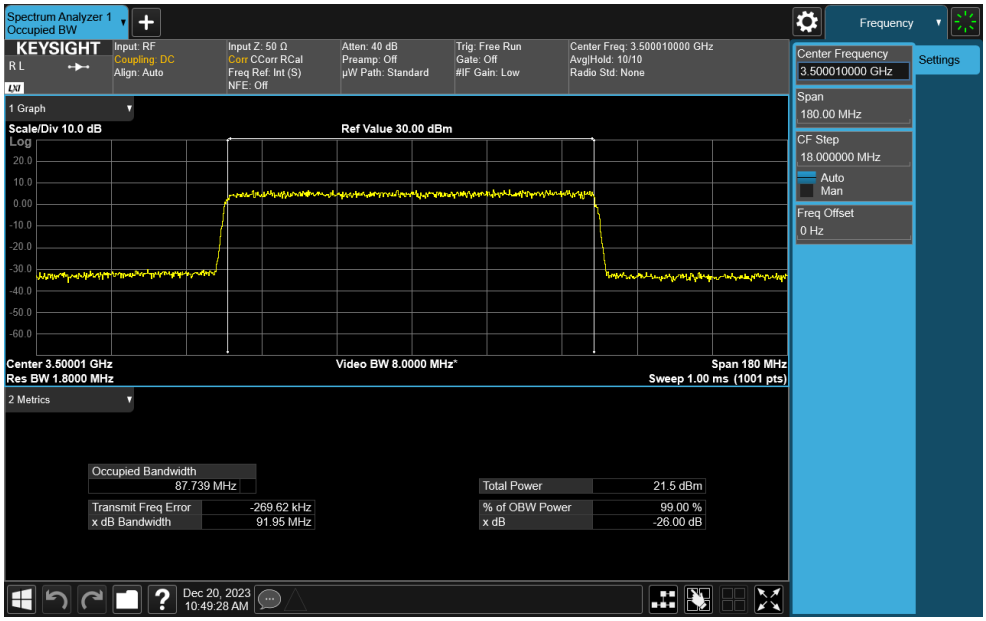
Plot 7-44. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 80MHz CP-OFDM 64-QAM - Full RB)



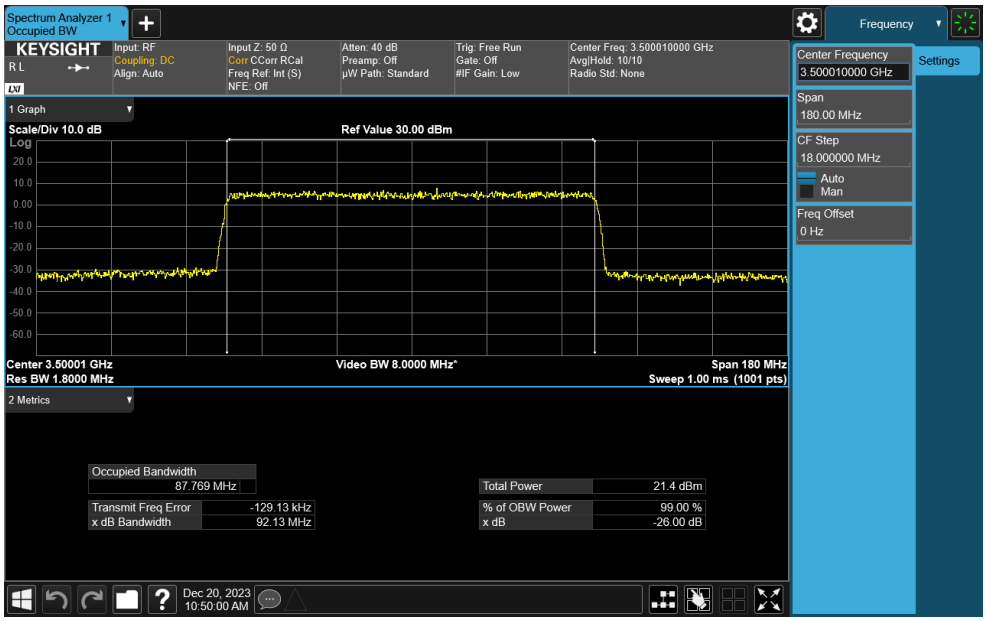
Plot 7-45. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 80MHz CP-OFDM 256-QAM - Full RB)



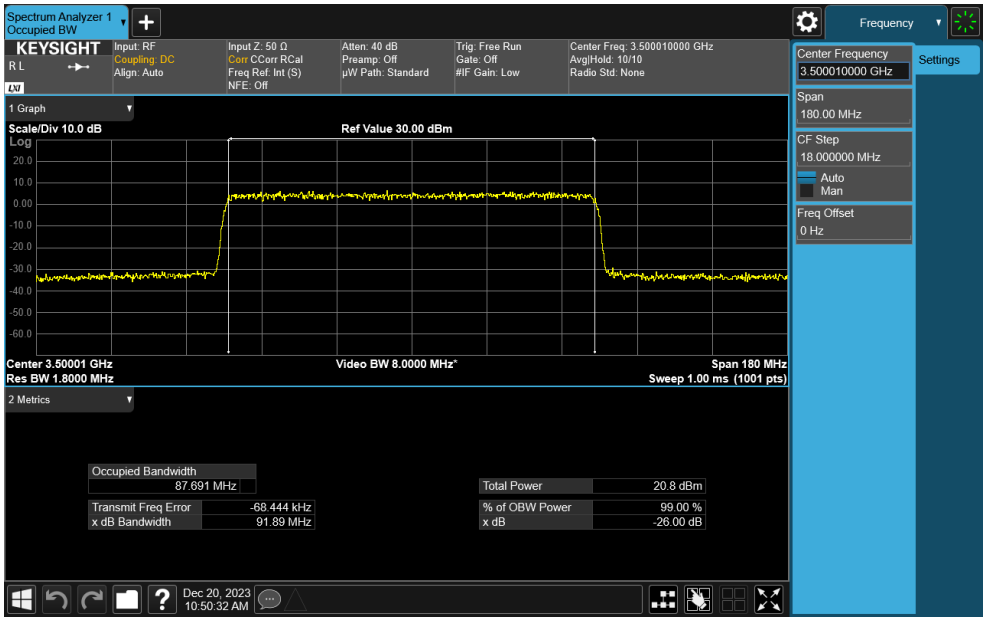
Plot 7-46. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 90MHz DFT-s-OFDM π/2 BPSK - Full RB)



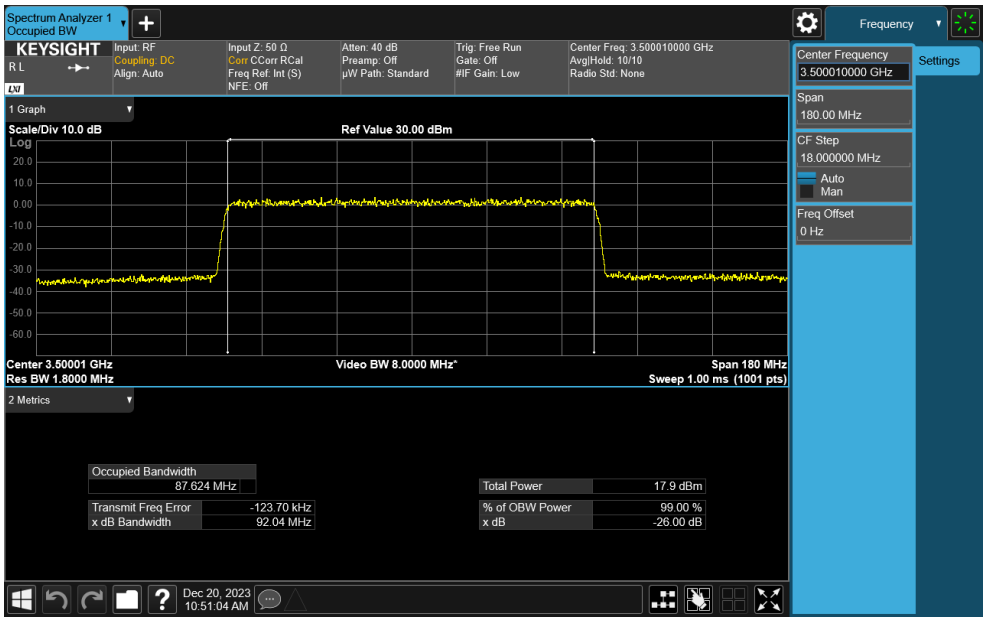
Plot 7-47. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 90MHz CP-OFDM QPSK - Full RB)



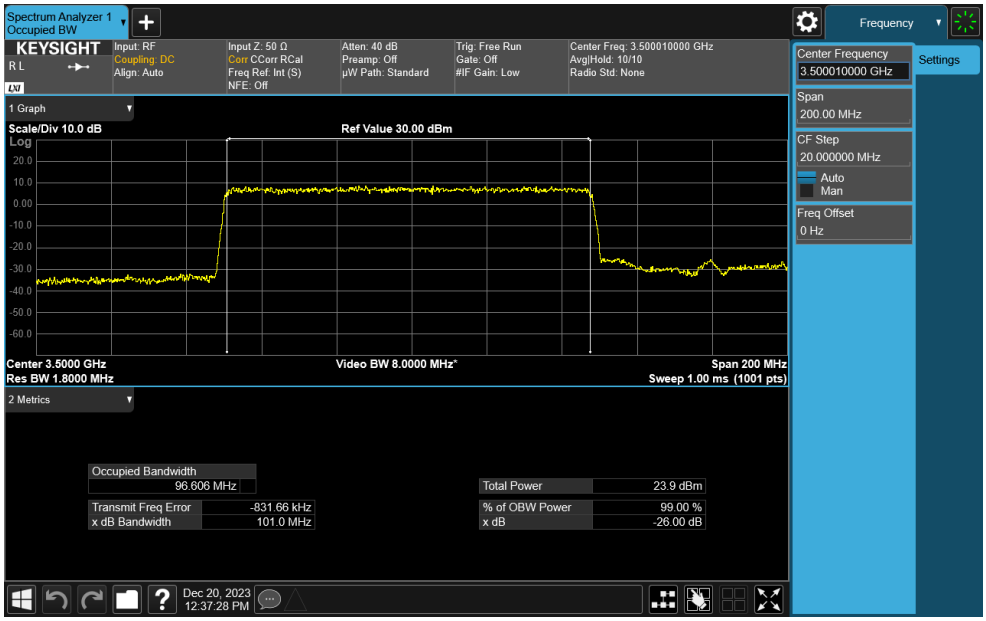
Plot 7-48. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 90MHz CP-OFDM 16-QAM - Full RB)



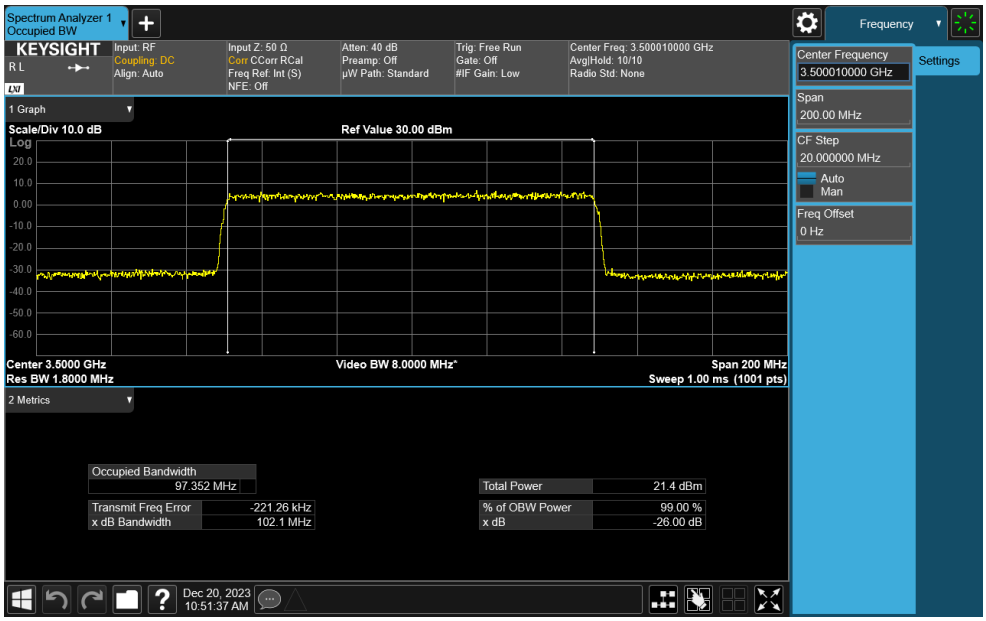
Plot 7-49. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 90MHz CP-OFDM 64-QAM - Full RB)



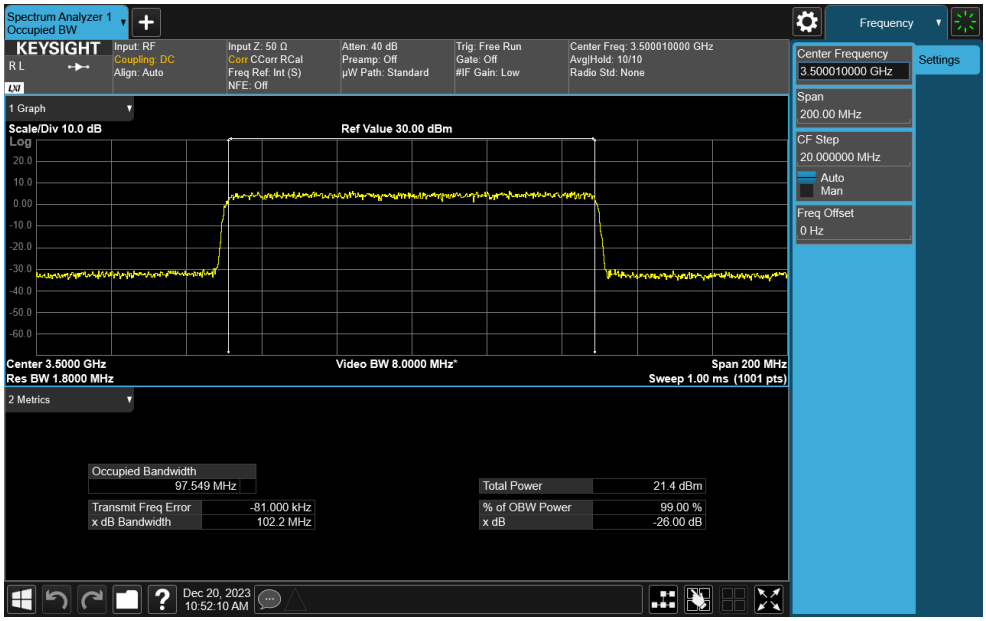
Plot 7-50. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 90MHz CP-OFDM 256-QAM - Full RB)



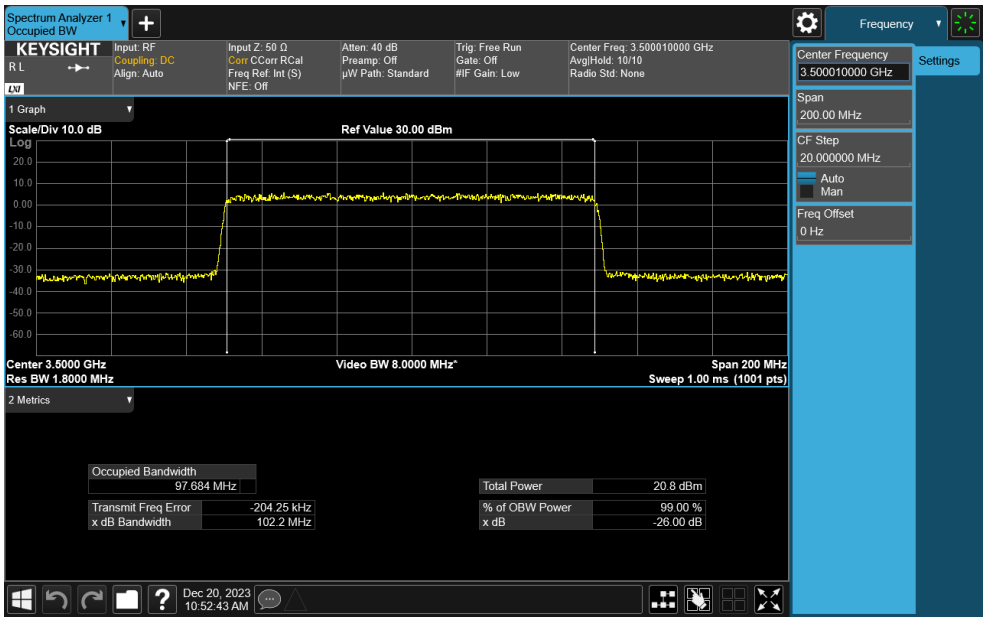
Plot 7-51. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 100MHz DFT-s-OFDM π/2 BPSK - Full RB)



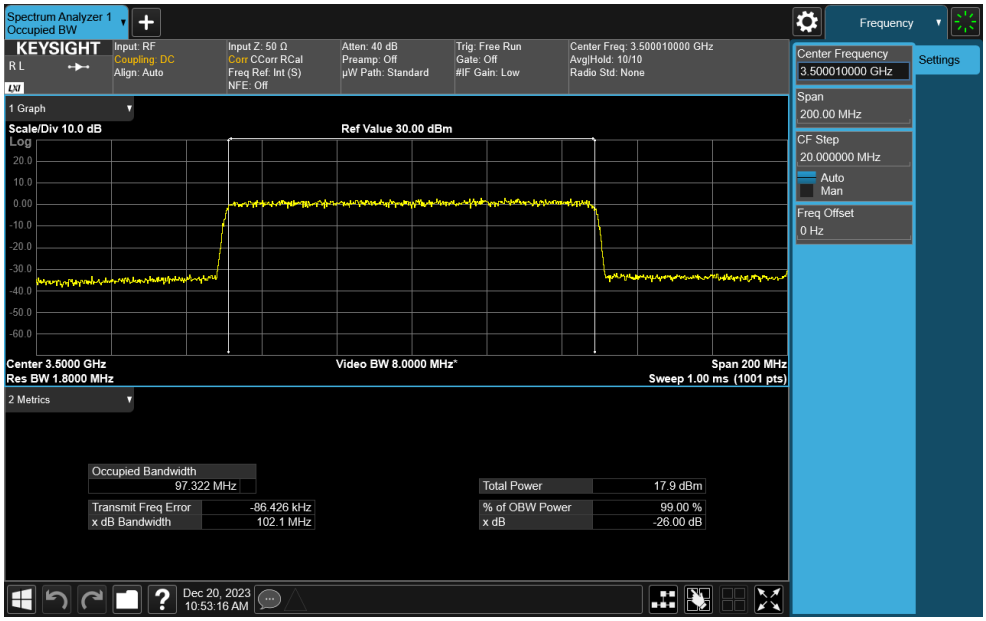
Plot 7-52. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 100MHz CP-OFDM QPSK - Full RB)



Plot 7-53. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 100MHz CP-OFDM 16-QAM - Full RB)

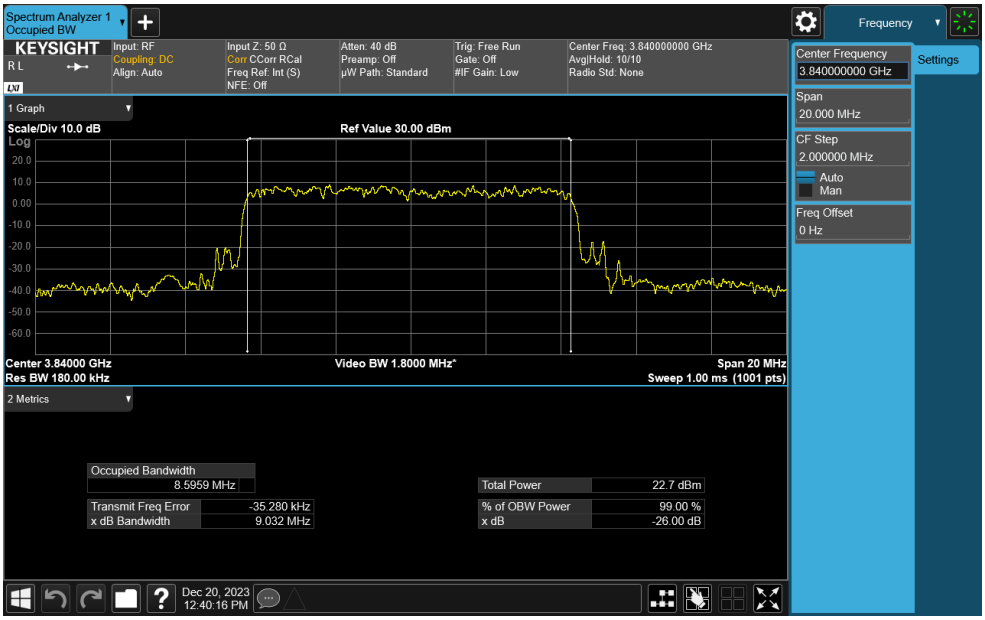


Plot 7-54. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 100MHz CP-OFDM 64-QAM - Full RB)

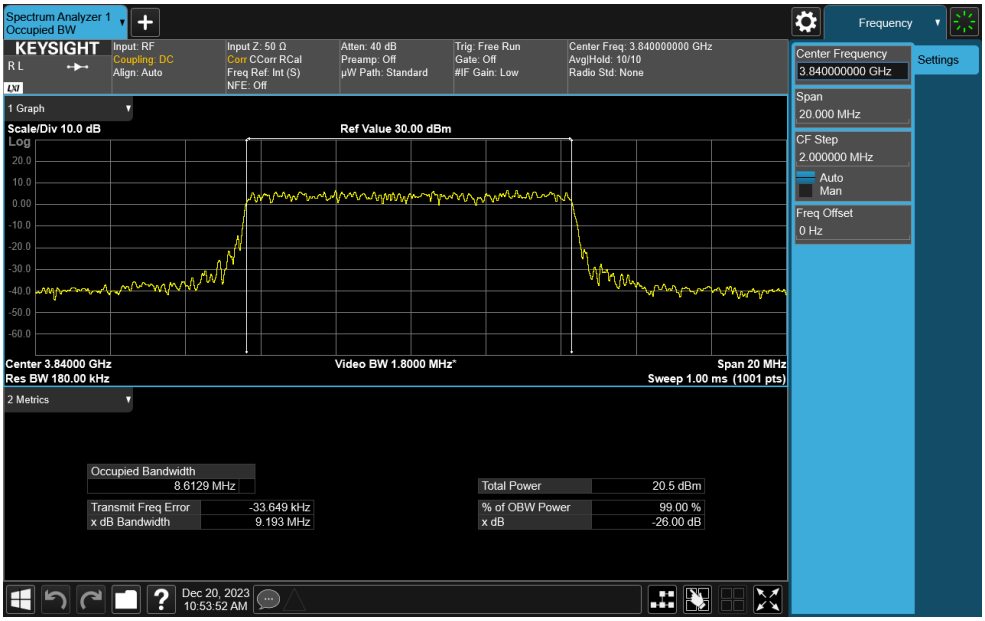


Plot 7-55. Occupied Bandwidth Plot (NR Band n77 DoD-Band - 100MHz CP-OFDM 256-QAM - Full RB)

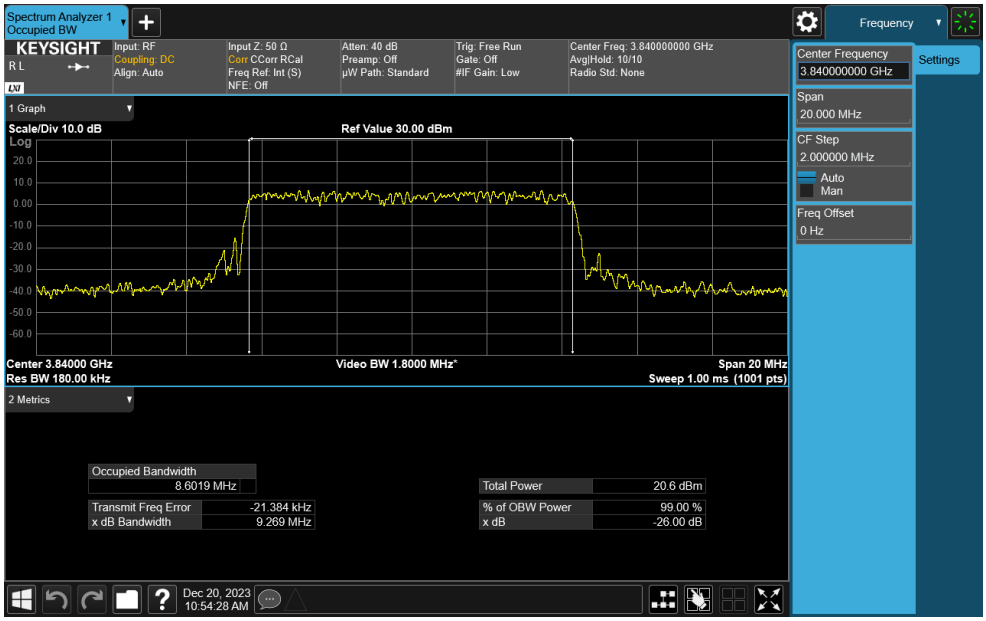
NR Band n77 C-Band



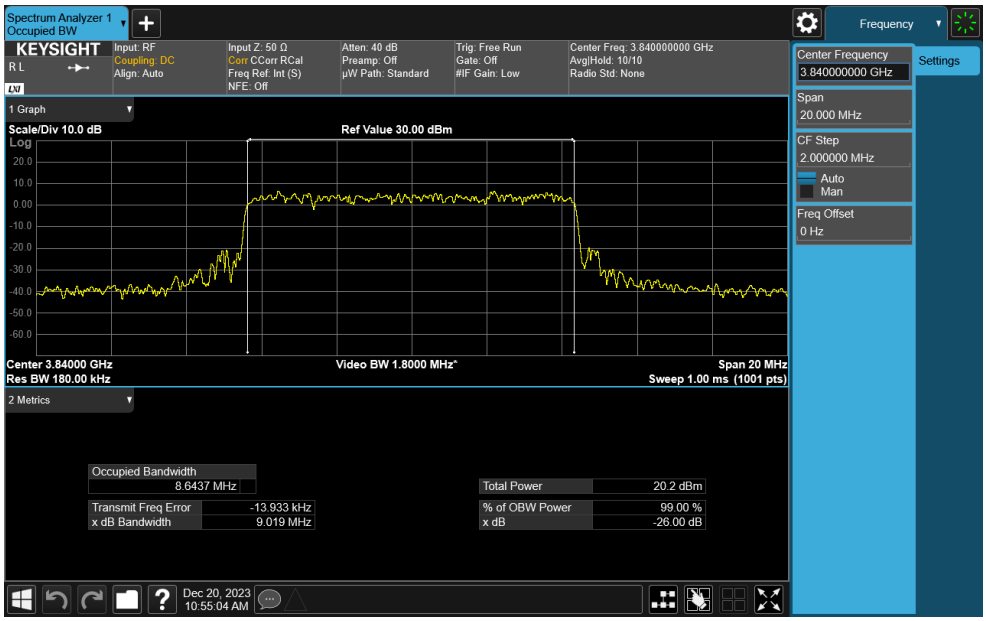
Plot 7-56. Occupied Bandwidth Plot (NR Band n77 C-Band - 10MHz DFT-s-OFDM π/2 BPSK - Full RB)



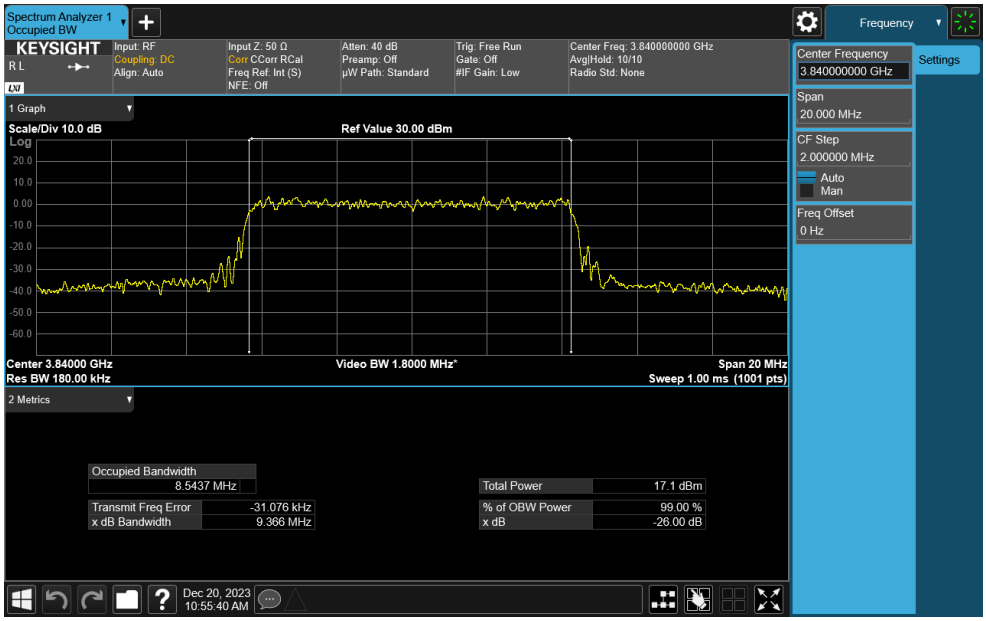
Plot 7-57. Occupied Bandwidth Plot (NR Band n77 C-Band - 10MHz CP-OFDM QPSK - Full RB)



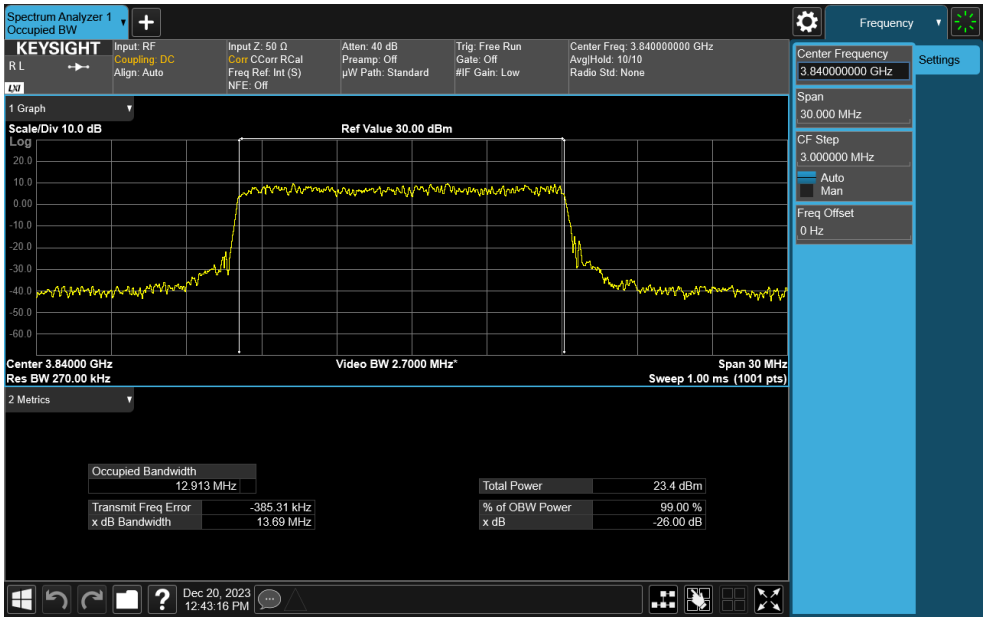
Plot 7-58. Occupied Bandwidth Plot (NR Band n77 C-Band - 10MHz CP-OFDM 16-QAM - Full RB)



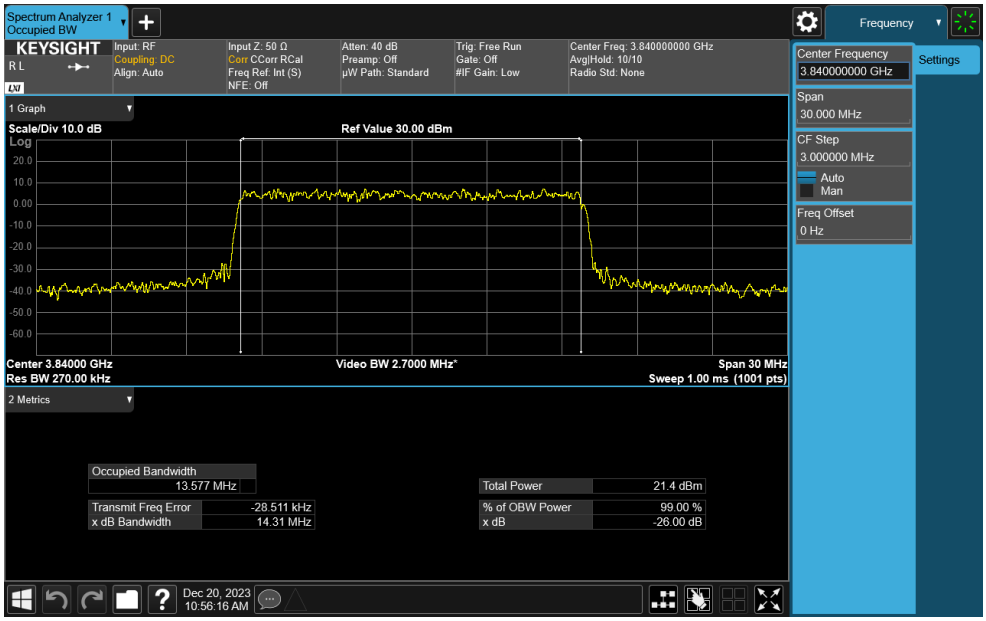
Plot 7-59. Occupied Bandwidth Plot (NR Band n77 C-Band - 10MHz CP-OFDM 64-QAM - Full RB)



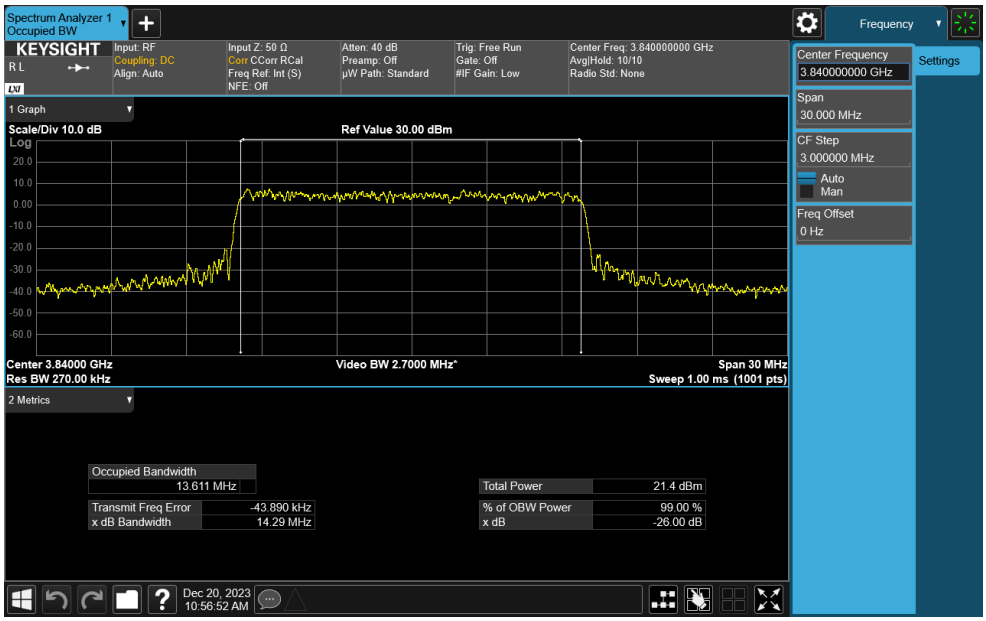
Plot 7-60. Occupied Bandwidth Plot (NR Band n77 C-Band - 10MHz CP-OFDM 256-QAM - Full RB)



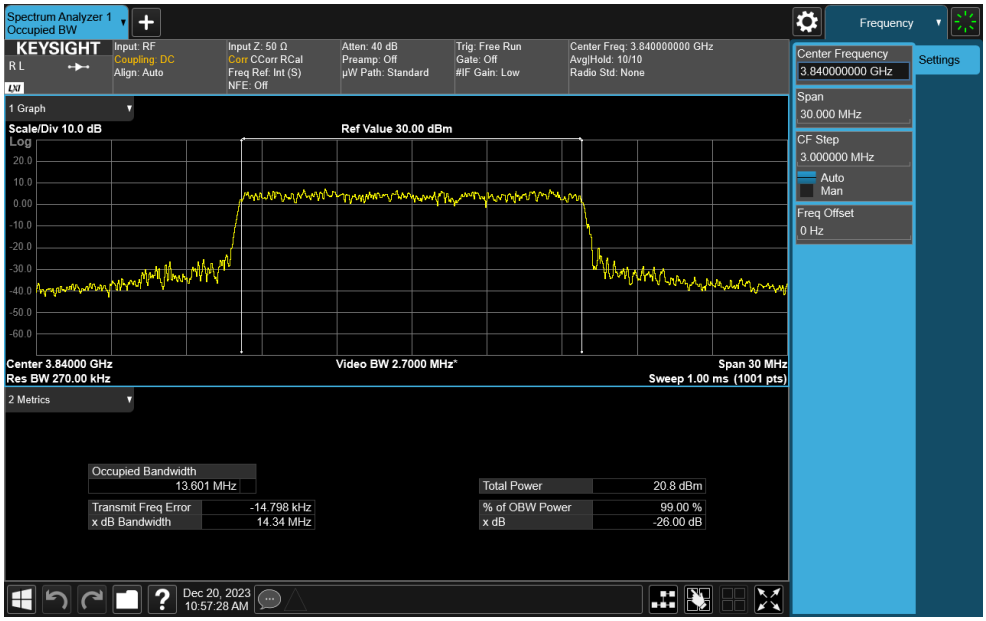
Plot 7-61. Occupied Bandwidth Plot (NR Band n77 C-Band - 15MHz DFT-s-OFDM π/2 BPSK - Full RB)



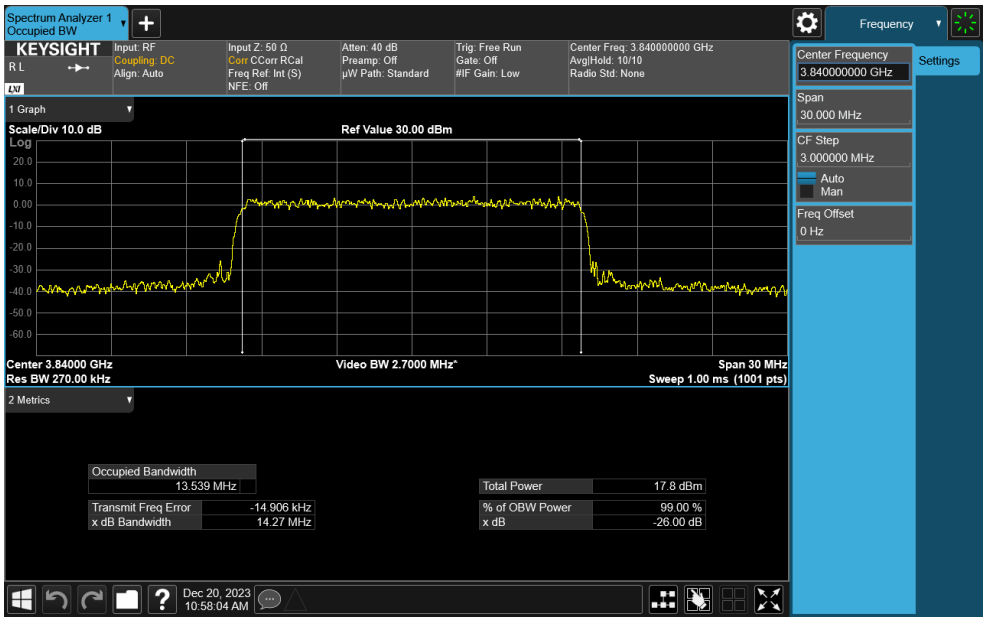
Plot 7-62. Occupied Bandwidth Plot (NR Band n77 C-Band - 15MHz CP-OFDM QPSK - Full RB)



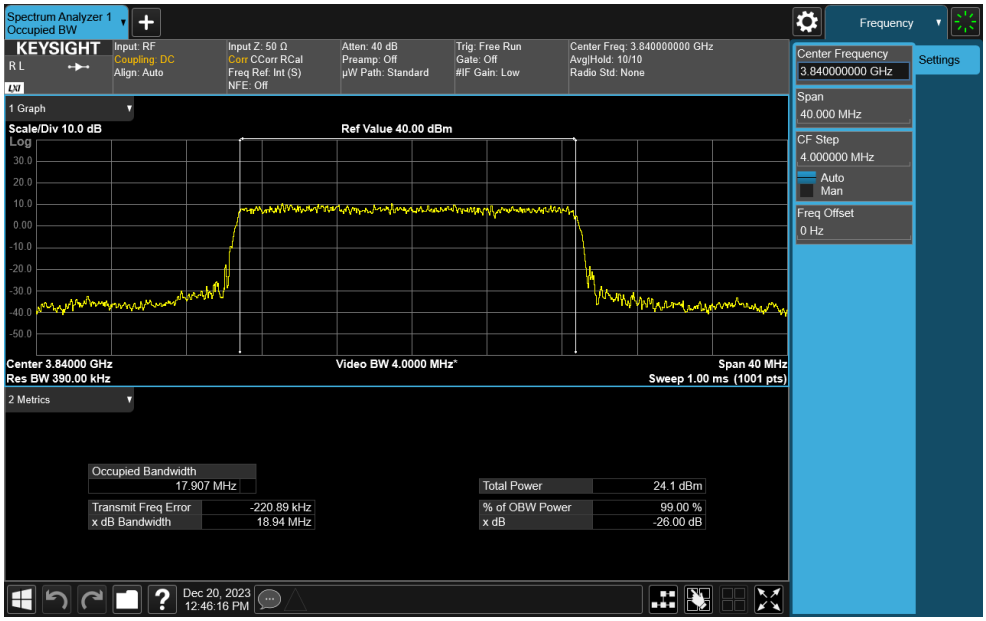
Plot 7-63. Occupied Bandwidth Plot (NR Band n77 C-Band - 15MHz CP-OFDM 16-QAM - Full RB)



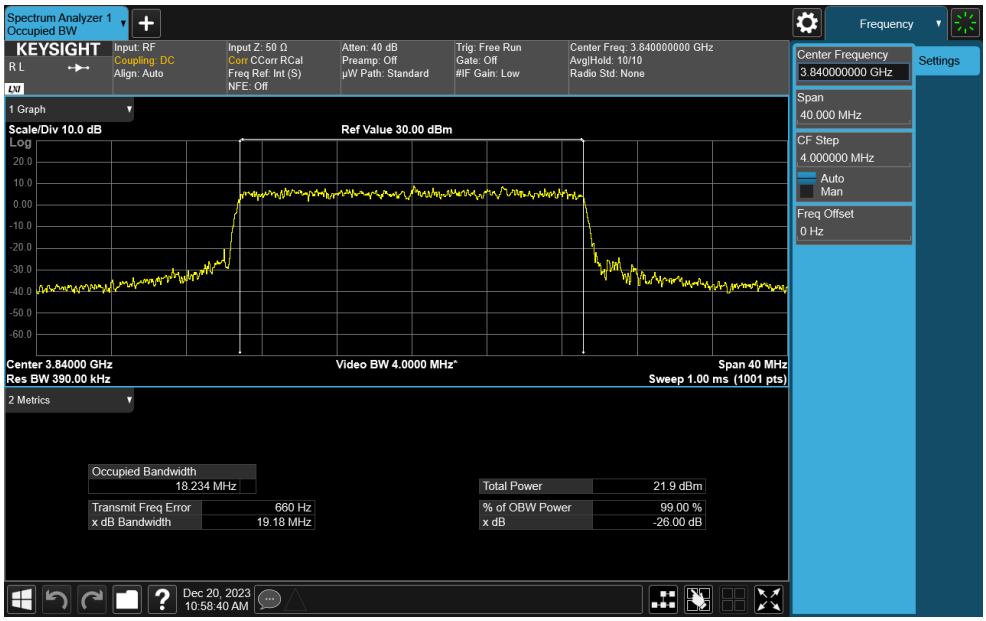
Plot 7-64. Occupied Bandwidth Plot (NR Band n77 C-Band - 15MHz CP-OFDM 64-QAM - Full RB)



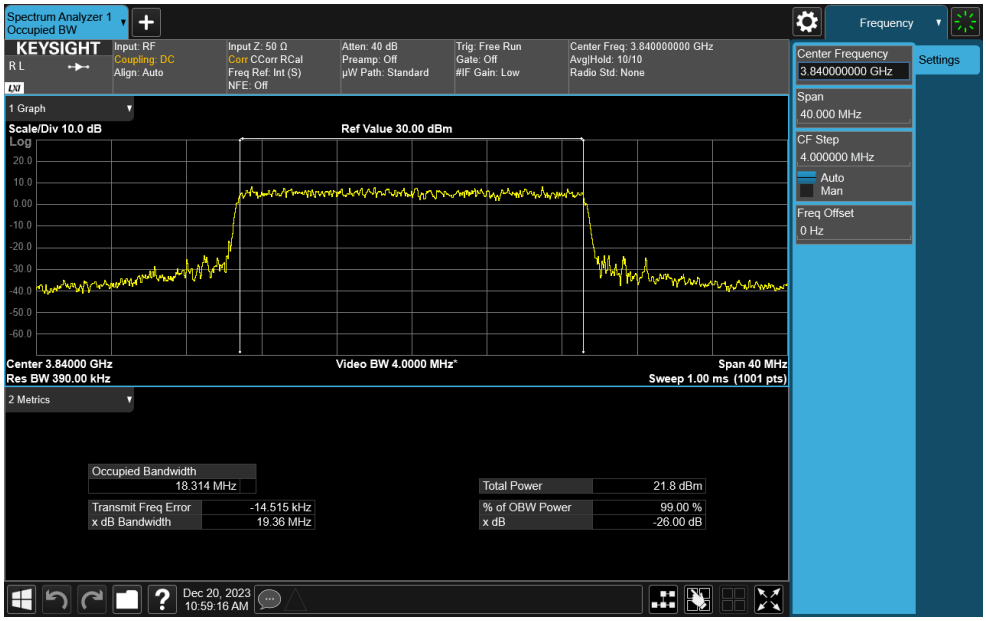
Plot 7-65. Occupied Bandwidth Plot (NR Band n77 C-Band - 15MHz CP-OFDM 256-QAM - Full RB)



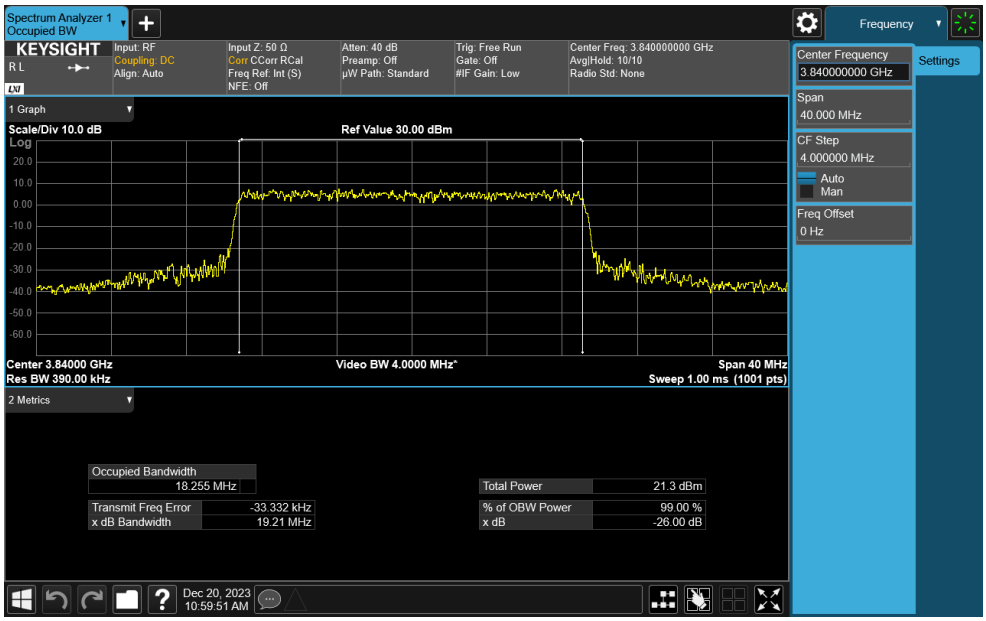
Plot 7-66. Occupied Bandwidth Plot (NR Band n77 C-Band - 20MHz DFT-s-OFDM π/2 BPSK - Full RB)



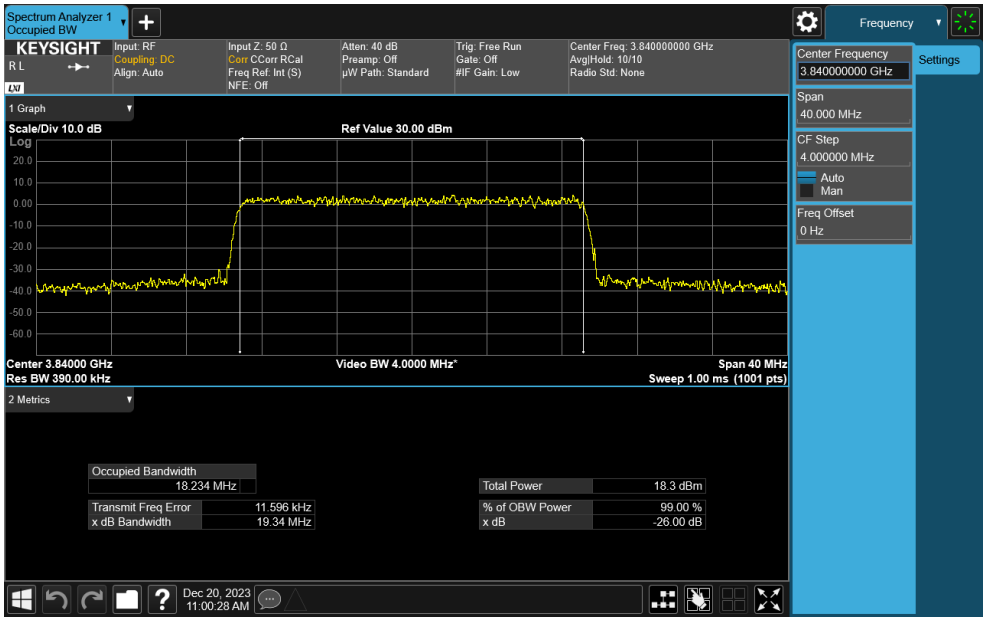
Plot 7-67. Occupied Bandwidth Plot (NR Band n77 C-Band - 20MHz CP-OFDM QPSK - Full RB)



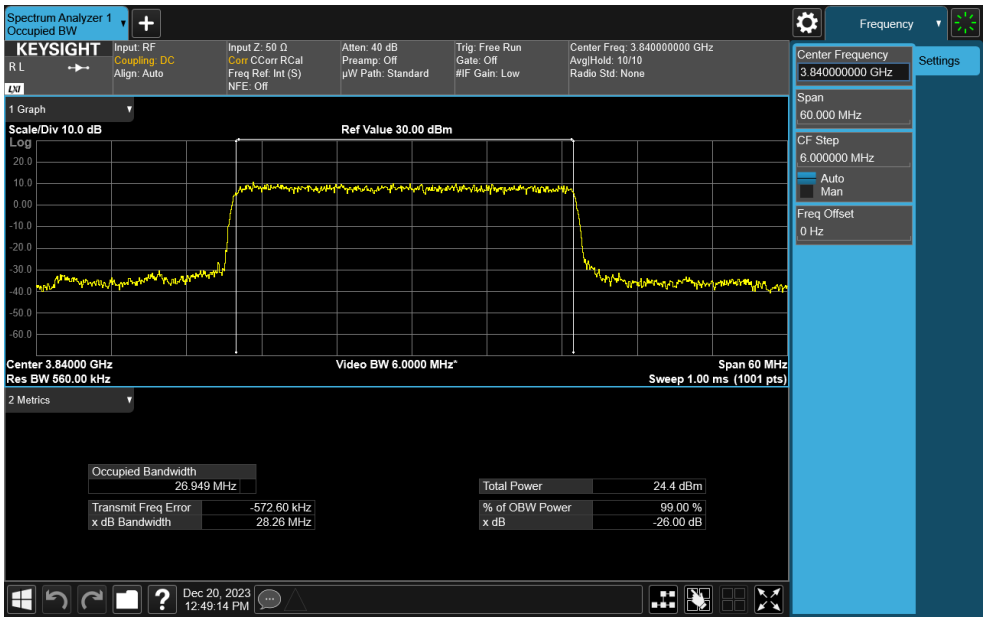
Plot 7-68. Occupied Bandwidth Plot (NR Band n77 C-Band - 20MHz CP-OFDM 16-QAM - Full RB)



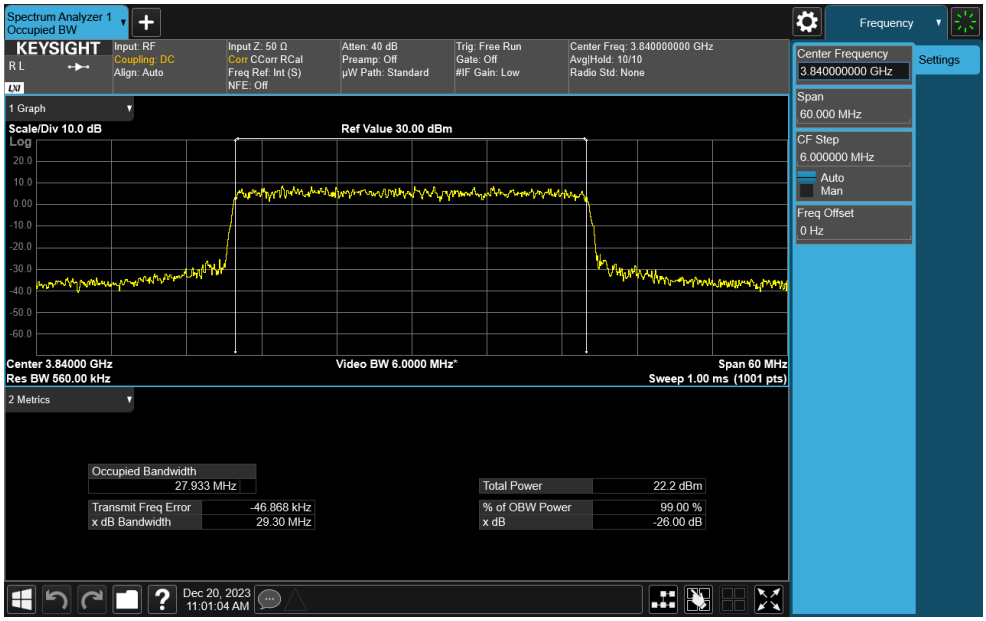
Plot 7-69. Occupied Bandwidth Plot (NR Band n77 C-Band - 20MHz CP-OFDM 64-QAM - Full RB)



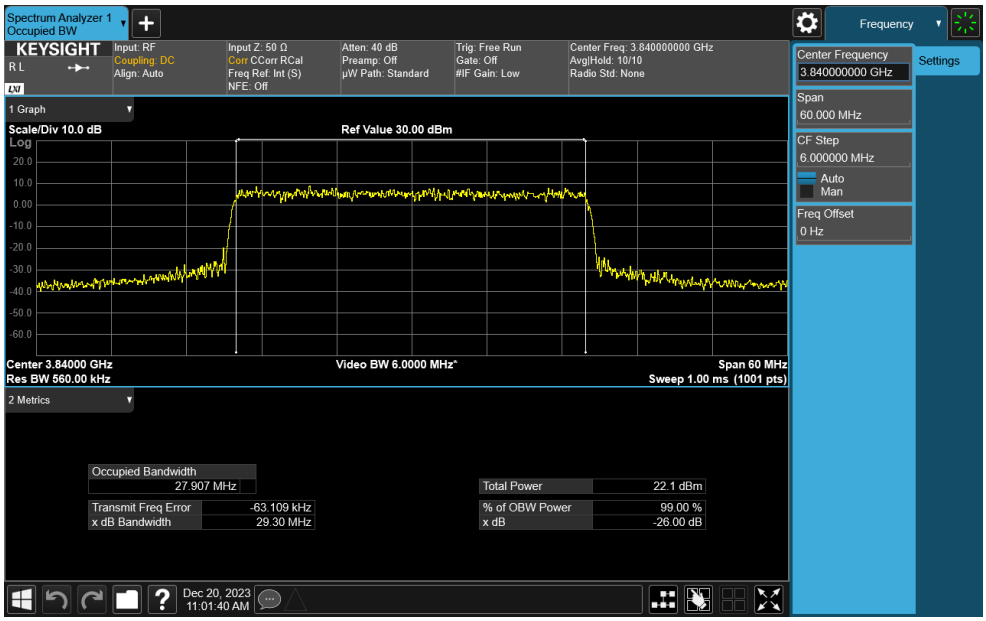
Plot 7-70. Occupied Bandwidth Plot (NR Band n77 C-Band - 20MHz CP-OFDM 256-QAM - Full RB)



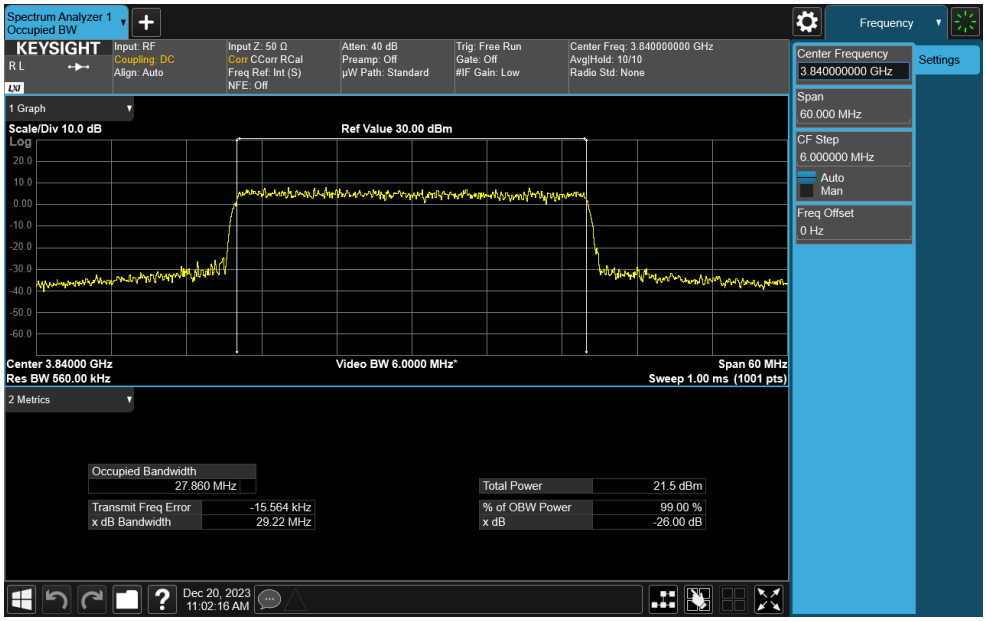
Plot 7-71. Occupied Bandwidth Plot (NR Band n77 C-Band - 30MHz DFT-s-OFDM π/2 BPSK - Full RB)



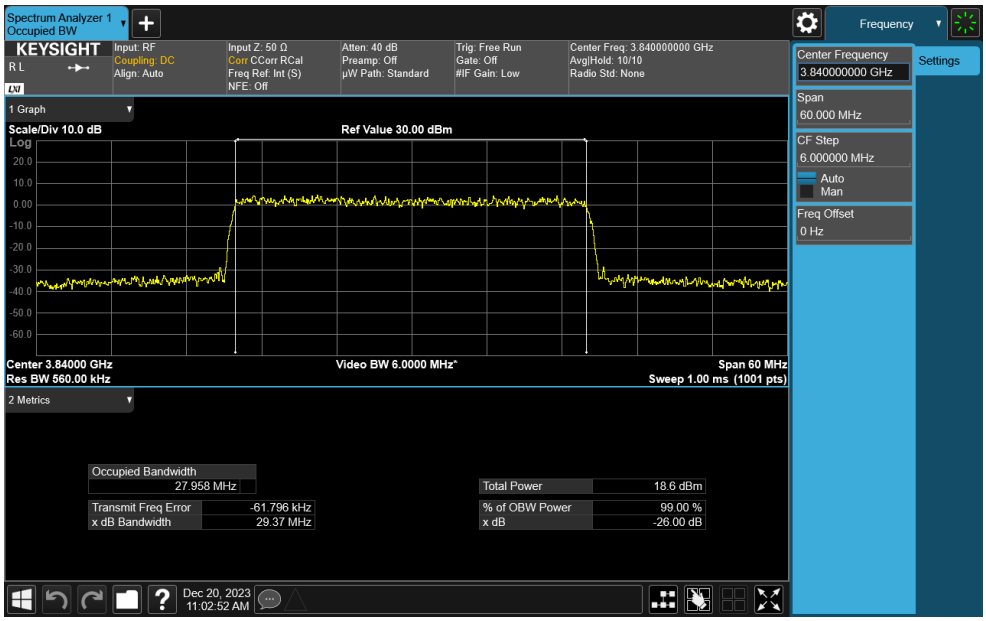
Plot 7-72. Occupied Bandwidth Plot (NR Band n77 C-Band - 30MHz CP-OFDM QPSK - Full RB)



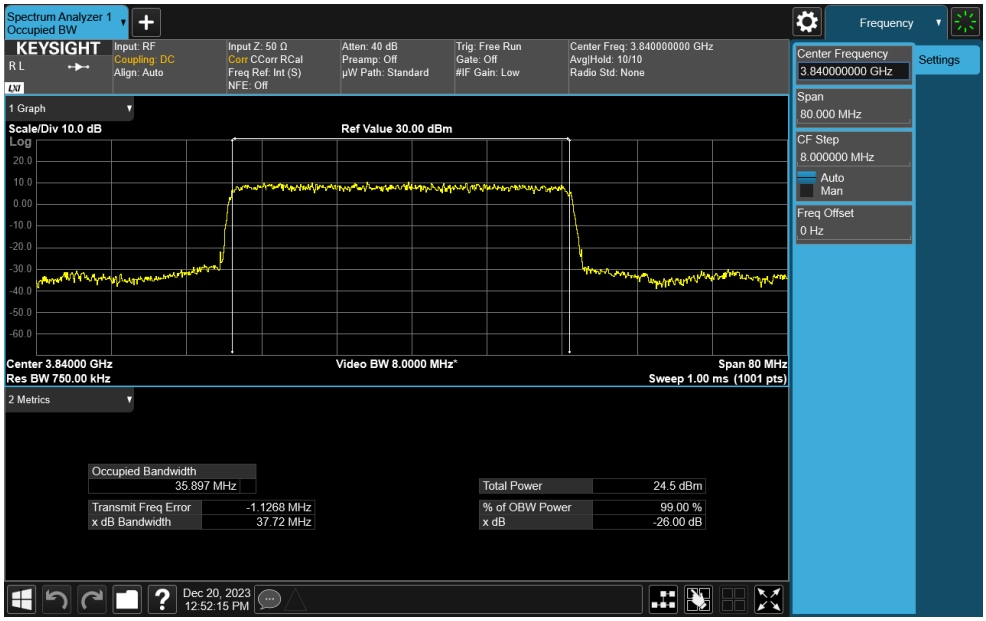
Plot 7-73. Occupied Bandwidth Plot (NR Band n77 C-Band - 30MHz CP-OFDM 16-QAM - Full RB)



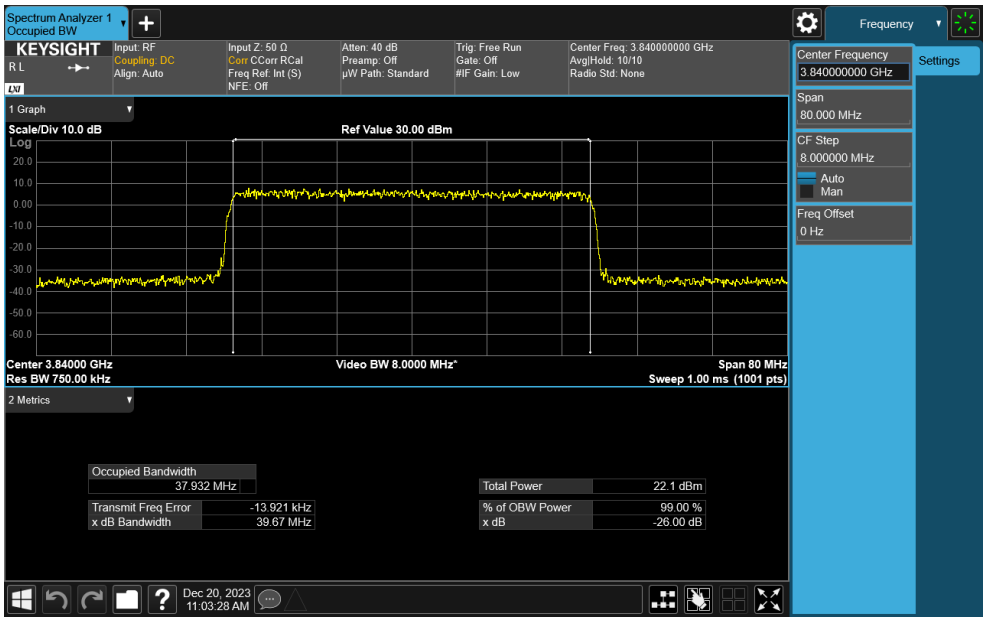
Plot 7-74. Occupied Bandwidth Plot (NR Band n77 C-Band - 30MHz CP-OFDM 64-QAM - Full RB)



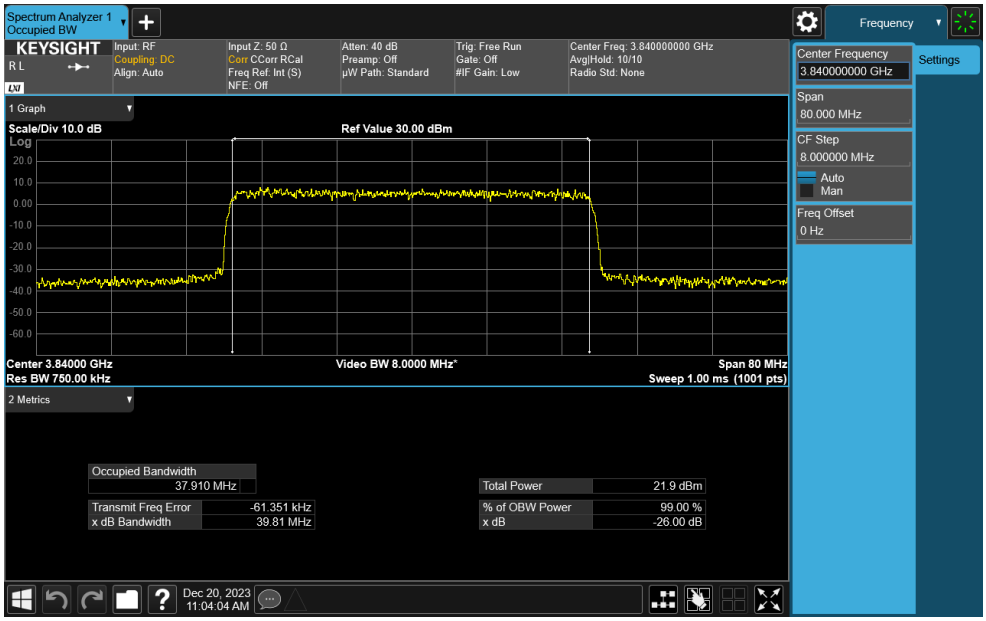
Plot 7-75. Occupied Bandwidth Plot (NR Band n77 C-Band - 30MHz CP-OFDM 256-QAM - Full RB)



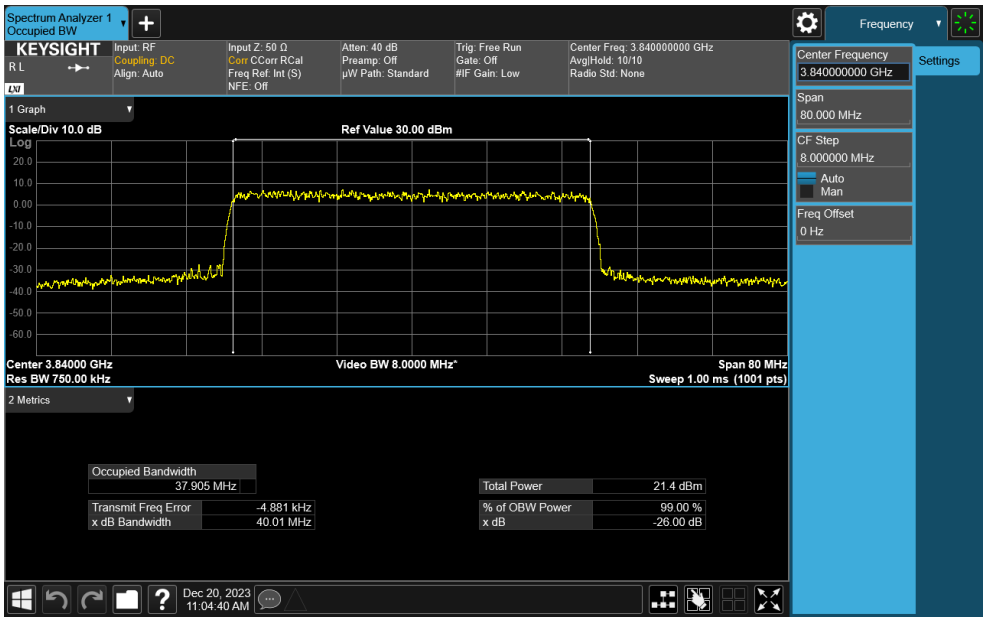
Plot 7-76. Occupied Bandwidth Plot (NR Band n77 C-Band - 40MHz DFT-s-OFDM π/2 BPSK - Full RB)



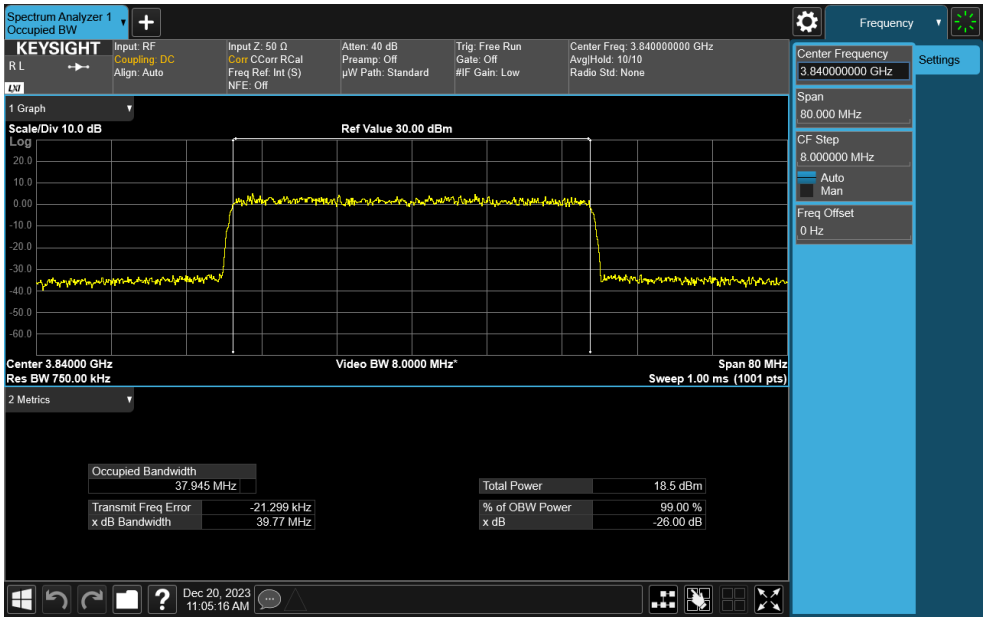
Plot 7-77. Occupied Bandwidth Plot (NR Band n77 C-Band - 40MHz CP-OFDM QPSK - Full RB)



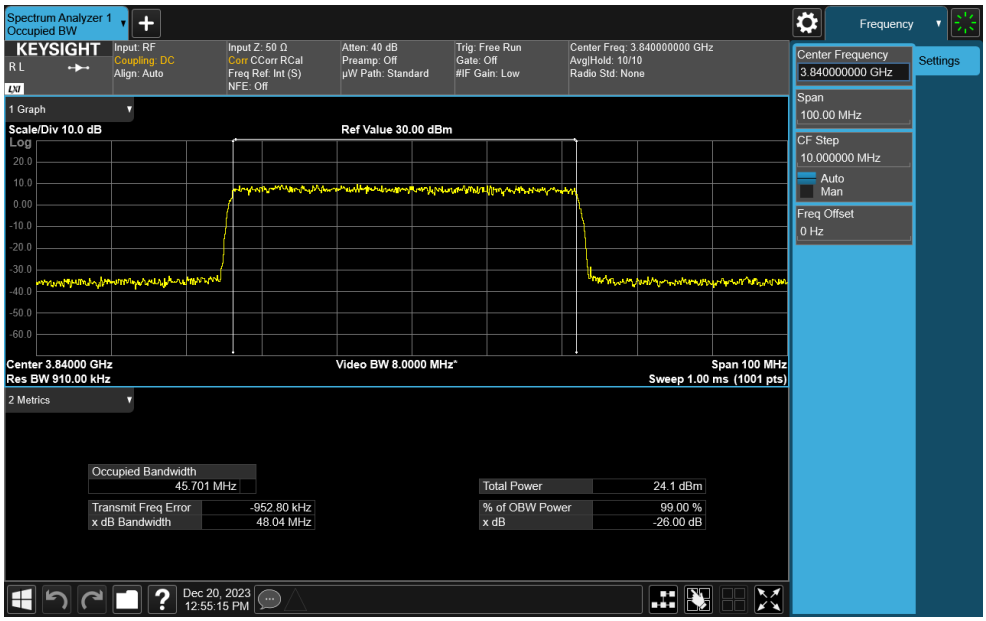
Plot 7-78. Occupied Bandwidth Plot (NR Band n77 C-Band - 40MHz CP-OFDM 16-QAM - Full RB)



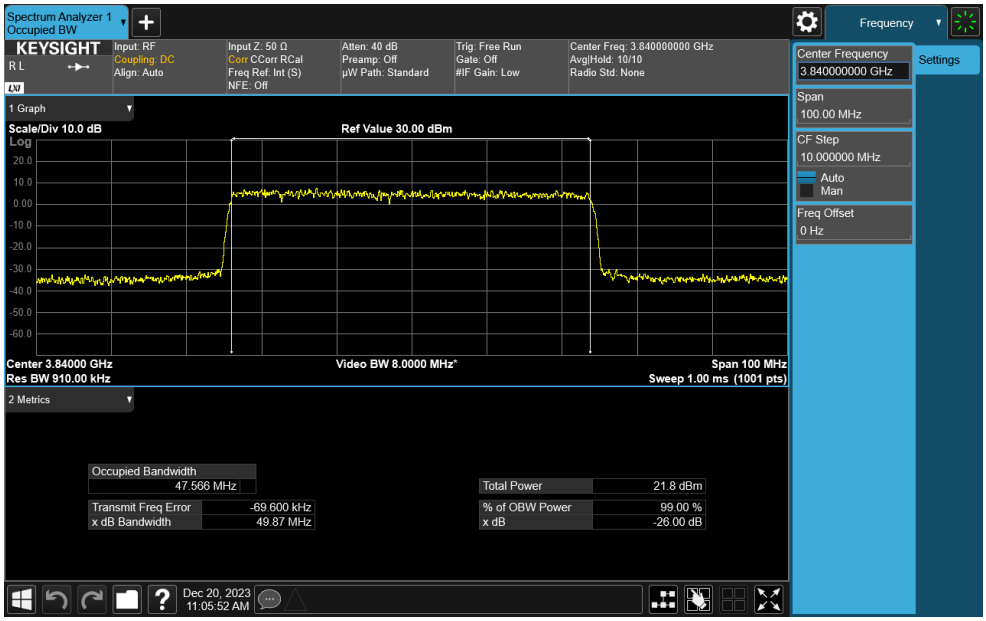
Plot 7-79. Occupied Bandwidth Plot (NR Band n77 C-Band - 40MHz CP-OFDM 64-QAM - Full RB)



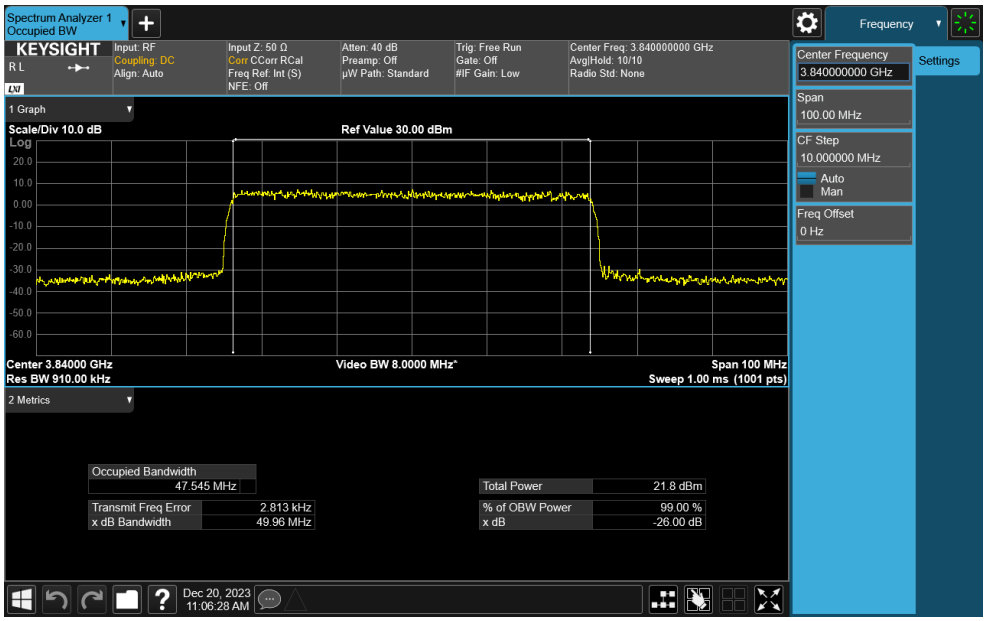
Plot 7-80. Occupied Bandwidth Plot (NR Band n77 C-Band - 40MHz CP-OFDM 256-QAM - Full RB)



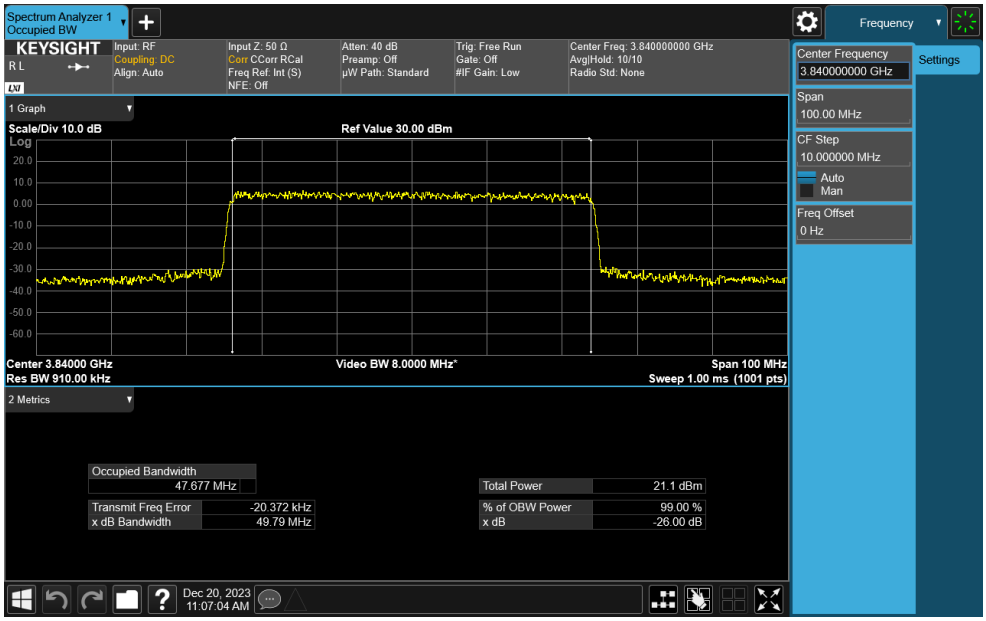
Plot 7-81. Occupied Bandwidth Plot (NR Band n77 C-Band - 50MHz DFT-s-OFDM π/2 BPSK - Full RB)



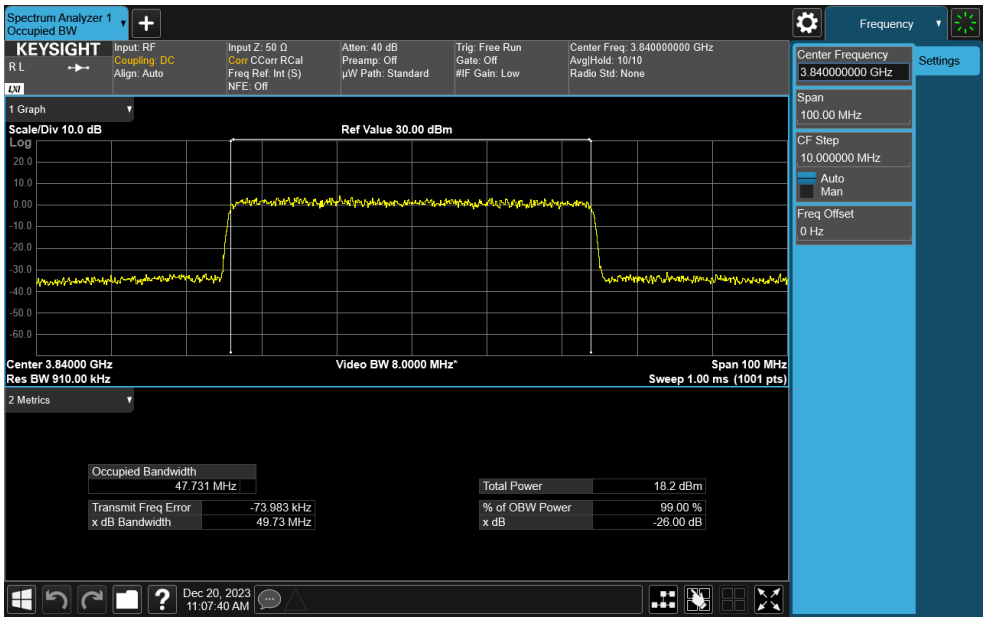
Plot 7-82. Occupied Bandwidth Plot (NR Band n77 C-Band - 50MHz CP-OFDM QPSK - Full RB)



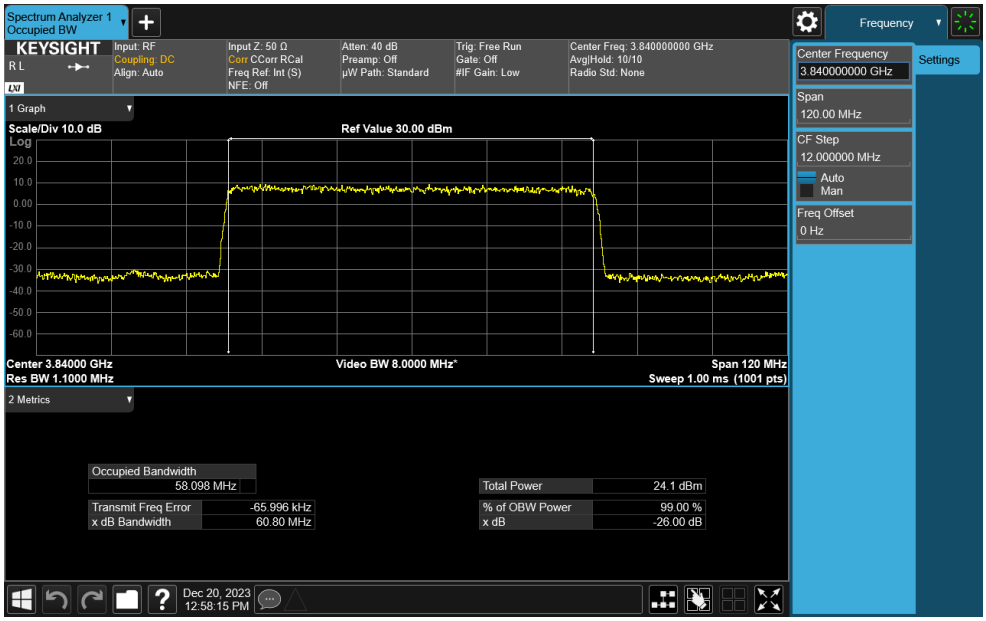
Plot 7-83. Occupied Bandwidth Plot (NR Band n77 C-Band - 50MHz CP-OFDM 16-QAM - Full RB)



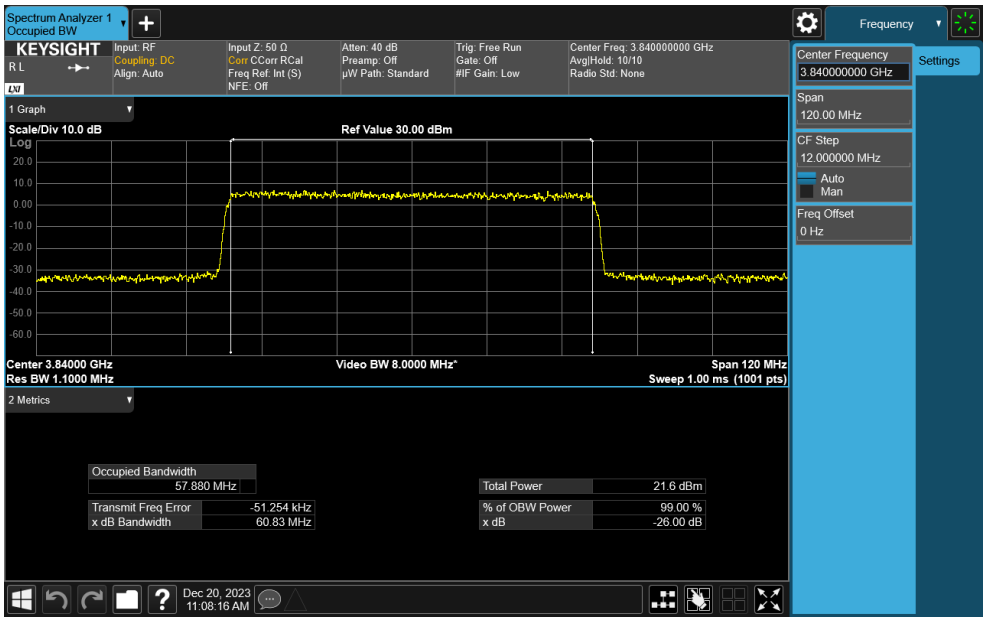
Plot 7-84. Occupied Bandwidth Plot (NR Band n77 C-Band - 50MHz CP-OFDM 64-QAM - Full RB)



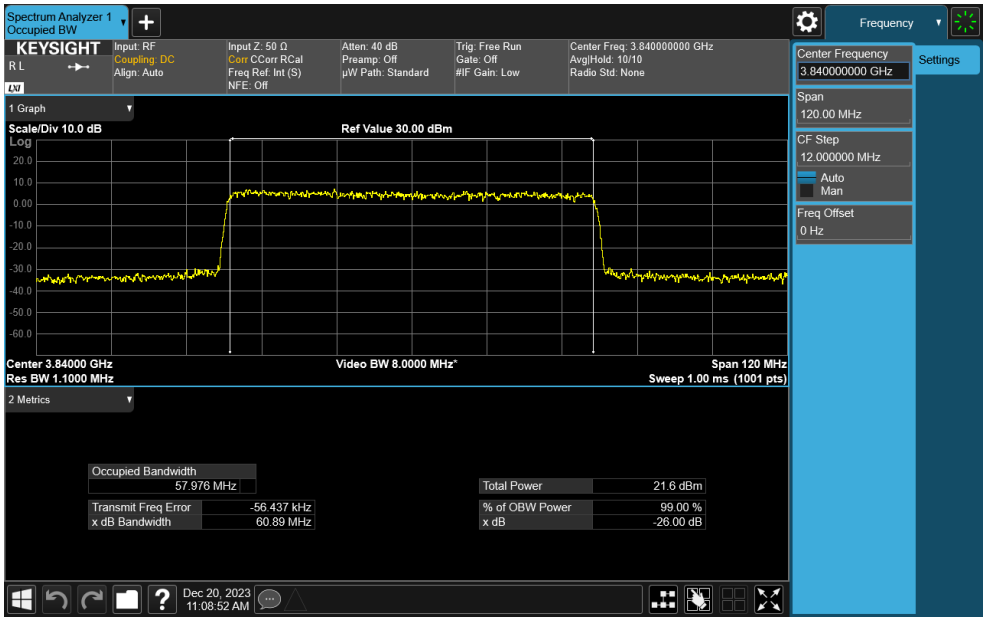
Plot 7-85. Occupied Bandwidth Plot (NR Band n77 C-Band - 50MHz CP-OFDM 256-QAM - Full RB)



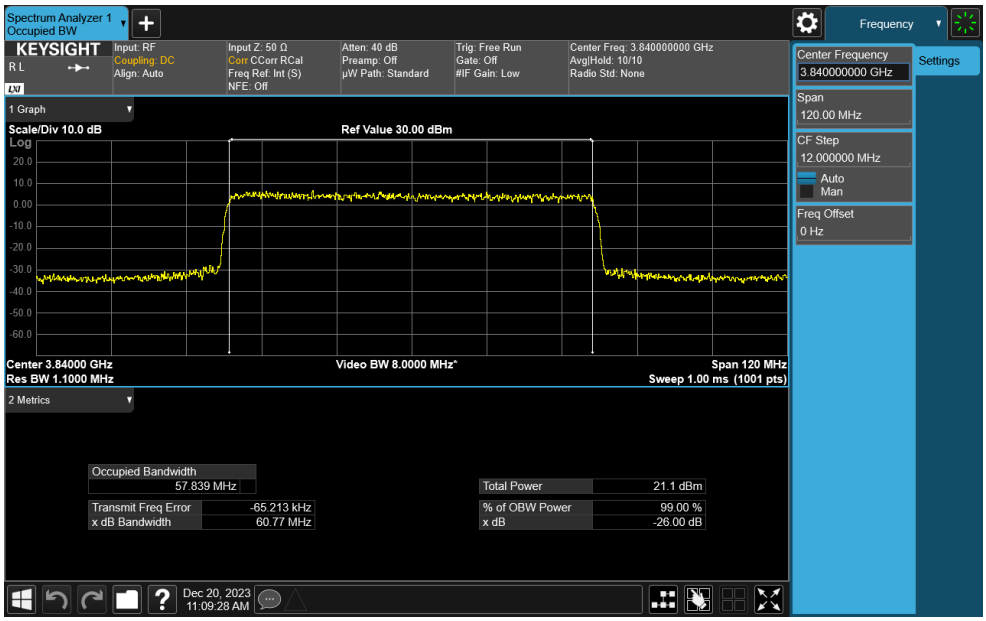
Plot 7-86. Occupied Bandwidth Plot (NR Band n77 C-Band - 60MHz DFT-s-OFDM π/2 BPSK - Full RB)



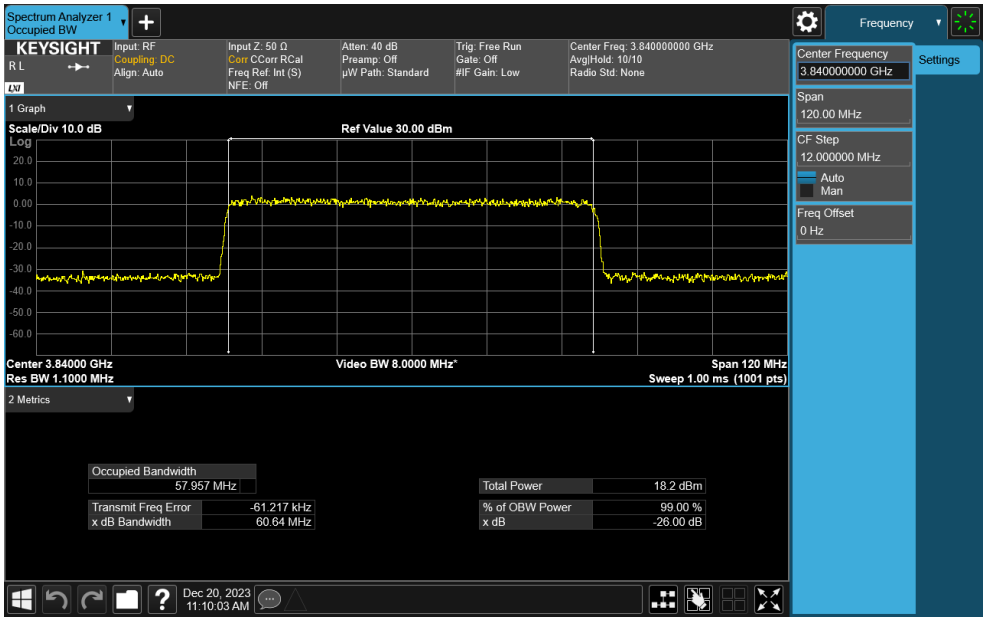
Plot 7-87. Occupied Bandwidth Plot (NR Band n77 C-Band - 60MHz CP-OFDM QPSK - Full RB)



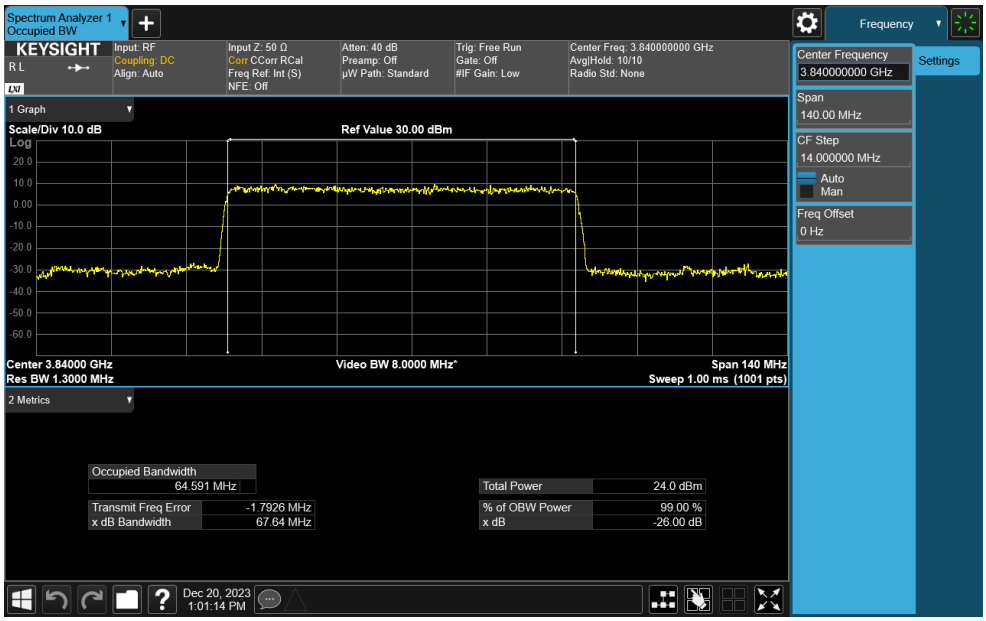
Plot 7-88. Occupied Bandwidth Plot (NR Band n77 C-Band - 60MHz CP-OFDM 16-QAM - Full RB)



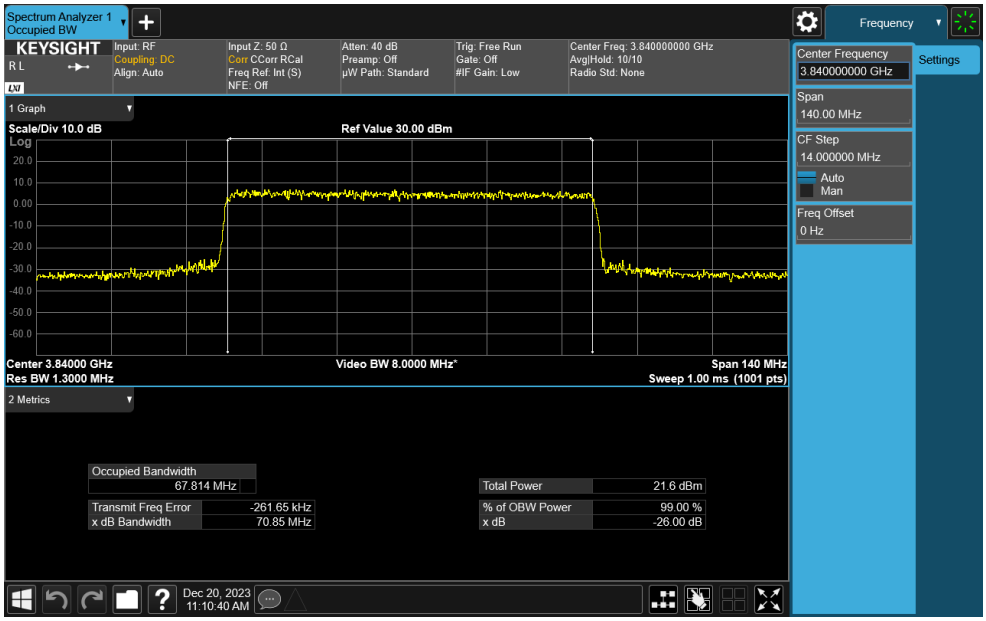
Plot 7-89. Occupied Bandwidth Plot (NR Band n77 C-Band - 60MHz CP-OFDM 64-QAM - Full RB)



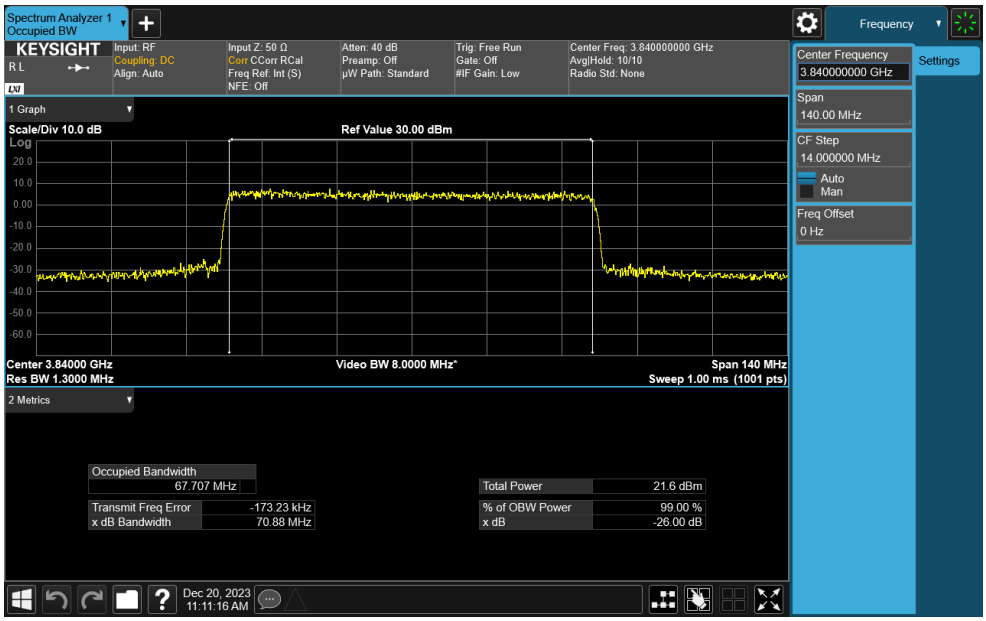
Plot 7-90. Occupied Bandwidth Plot (NR Band n77 C-Band - 60MHz CP-OFDM 256-QAM - Full RB)



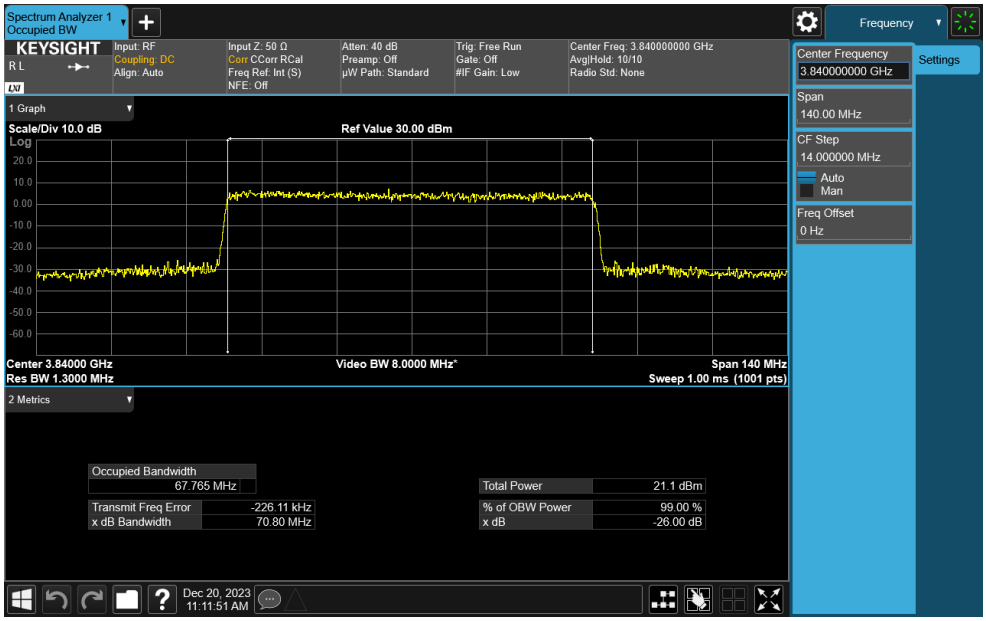
Plot 7-91. Occupied Bandwidth Plot (NR Band n77 C-Band - 70MHz DFT-s-OFDM π/2 BPSK - Full RB)



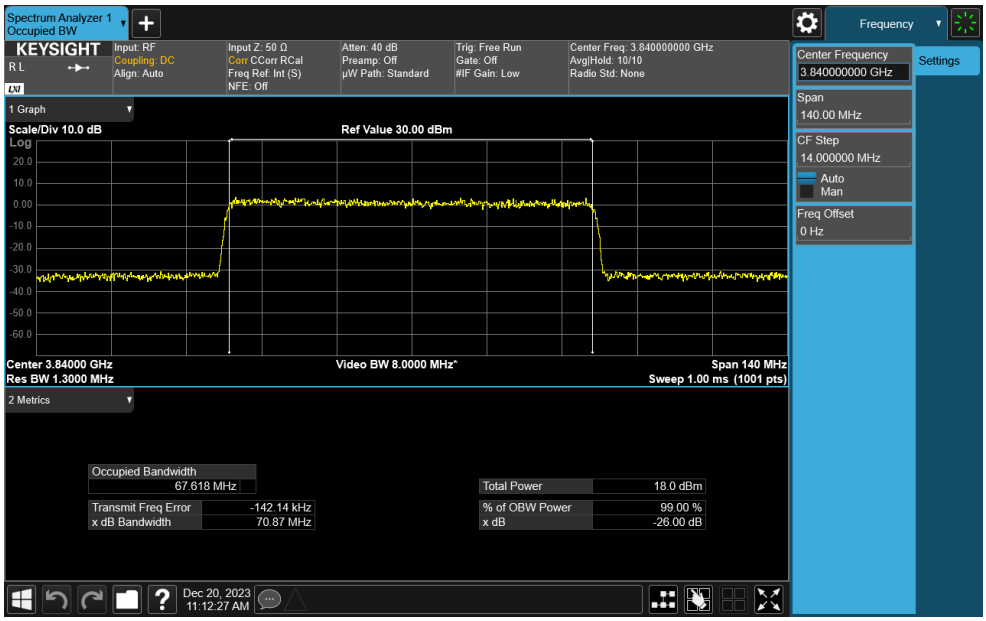
Plot 7-92. Occupied Bandwidth Plot (NR Band n77 C-Band - 70MHz CP-OFDM QPSK - Full RB)



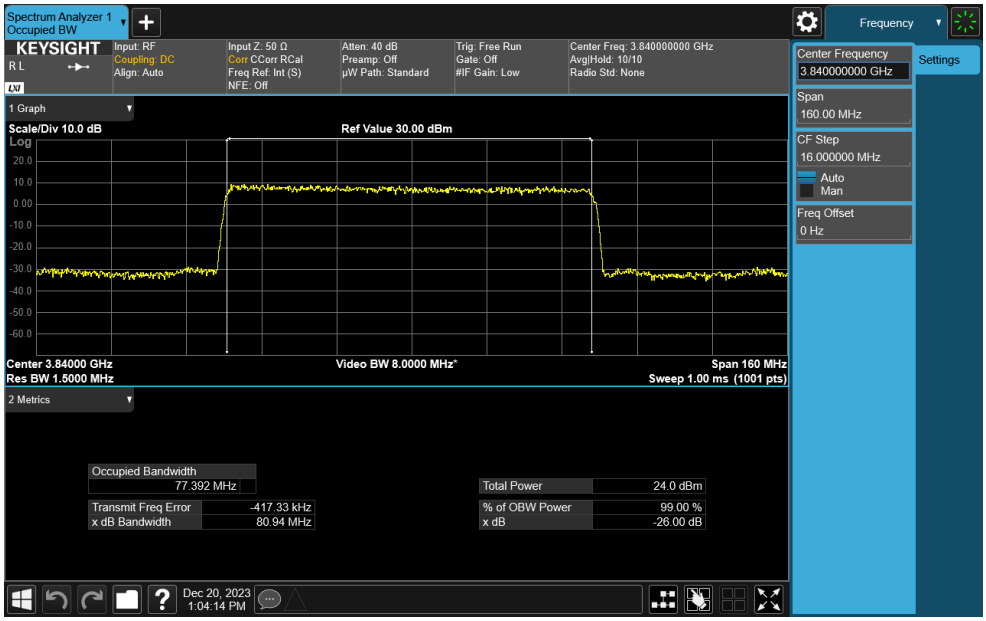
Plot 7-93. Occupied Bandwidth Plot (NR Band n77 C-Band - 70MHz CP-OFDM 16-QAM - Full RB)



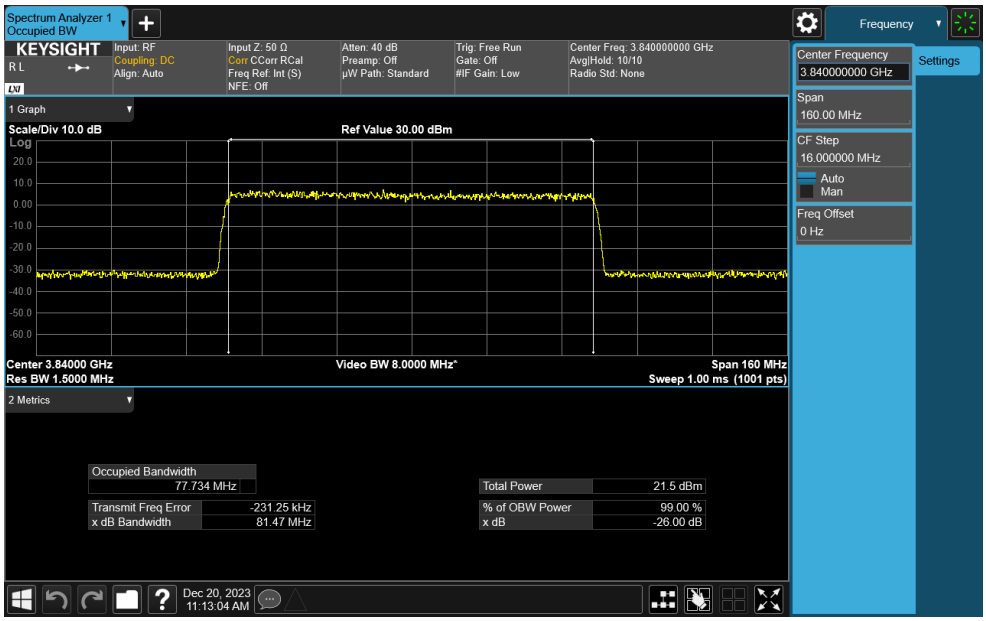
Plot 7-94. Occupied Bandwidth Plot (NR Band n77 C-Band - 70MHz CP-OFDM 64-QAM - Full RB)



Plot 7-95. Occupied Bandwidth Plot (NR Band n77 C-Band - 70MHz CP-OFDM 256-QAM - Full RB)



Plot 7-96. Occupied Bandwidth Plot (NR Band n77 C-Band - 80MHz DFT-s-OFDM π/2 BPSK - Full RB)



Plot 7-97. Occupied Bandwidth Plot (NR Band n77 C-Band - 80MHz CP-OFDM QPSK - Full RB)