Element Washington DC LLC
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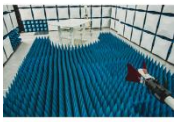

PART 27 MEASUREMENT REPORT

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

Date of Testing:
6/7/2022 - 9/1/2022
Test Site/Location:
Element Lab Morgan Hill, CA, USA
Test Report Serial No.:
1C2205090025-05.BCG

FCC ID:	**BCGA2435**
Applicant Name:	**Apple Inc.**

Application Type:	Certification
Model:	A2435
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

ACCREDITED
CERT #2041.02

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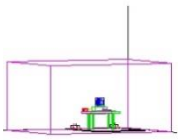
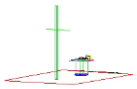


PART 27 MEASUREMENT REPORT



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	8.728	4.00	0.542	27.34	8M73G7W
		QPSK	3455.0 - 3545.0	8.730	5.35	0.550	27.40	8M73G7W
		16QAM	3455.0 - 3545.0	8.703	6.23	0.427	26.30	8M70D7W
		64QAM	3455.0 - 3545.0	8.701	6.39	0.345	25.38	8M70D7W
		256QAM	3455.0 - 3545.0	8.778	6.61	0.173	22.37	8M78D7W
	15 MHz	π/2 BPSK	3457.5 - 3542.5	13.103	3.92	0.550	27.40	13M1G7W
		QPSK	3457.5 - 3542.5	13.758	5.28	0.545	27.36	13M8G7W
		16QAM	3457.5 - 3542.5	13.741	6.04	0.430	26.33	13M7D7W
		64QAM	3457.5 - 3542.5	13.693	6.38	0.347	25.40	13M7D7W
		256QAM	3457.5 - 3542.5	13.716	6.38	0.174	22.40	13M7D7W
	20 MHz	π/2 BPSK	3460.0 - 3540.0	18.063	3.83	0.550	27.40	18M1G7W
		QPSK	3460.0 - 3540.0	18.395	5.22	0.550	27.40	18M4G7W
		16QAM	3460.0 - 3540.0	18.345	6.01	0.439	26.42	18M3D7W
		64QAM	3460.0 - 3540.0	18.340	6.32	0.346	25.39	18M3D7W
		256QAM	3460.0 - 3540.0	18.383	6.37	0.169	22.28	18M4D7W
	30MHz	π/2 BPSK	3465.0 - 3535.0	27.086	3.99	0.550	27.40	27M1G7W
		QPSK	3465.0 - 3535.0	28.092	5.35	0.550	27.40	28M1G7W
		16QAM	3465.0 - 3535.0	28.049	6.08	0.430	26.33	28M0D7W
		64QAM	3465.0 - 3535.0	28.036	6.36	0.349	25.43	28M0D7W
		256QAM	3465.0 - 3535.0	28.089	6.38	0.174	22.40	28M1D7W
	40 MHz	π/2 BPSK	3470.0 - 3530.0	36.074	3.87	0.550	27.40	36M1G7W
		QPSK	3470.0 - 3530.0	38.125	5.40	0.548	27.39	38M1G7W
		16QAM	3470.0 - 3530.0	37.991	6.14	0.430	26.33	38M0D7W
		64QAM	3470.0 - 3530.0	38.260	6.39	0.344	25.37	38M3D7W
		256QAM	3470.0 - 3530.0	38.106	6.54	0.166	22.21	38M1D7W
	50 MHz	π/2 BPSK	3475.0 - 3525.0	45.983	3.79	0.550	27.40	46M0G7W
		QPSK	3475.0 - 3525.0	47.775	5.23	0.548	27.39	47M8G7W
		16QAM	3475.0 - 3525.0	47.787	5.99	0.432	26.35	47M8D7W
		64QAM	3475.0 - 3525.0	47.931	6.34	0.341	25.33	47M9D7W
		256QAM	3475.0 - 3525.0	47.856	6.45	0.174	22.41	47M9D7W
	60 MHz	π/2 BPSK	3480.0 - 3520.0	58.241	3.90	0.550	27.40	58M2G7W
		QPSK	3480.0 - 3520.0	58.222	5.25	0.546	27.37	58M2G7W
		16QAM	3480.0 - 3520.0	58.171	6.17	0.425	26.28	58M2D7W
		64QAM	3480.0 - 3520.0	58.143	6.45	0.348	25.41	58M1D7W
		256QAM	3480.0 - 3520.0	58.006	6.38	0.173	22.38	58M0D7W
	70 MHz	π/2 BPSK	3485.0 - 3515.0	64.637	4.16	0.537	27.30	64M6G7W
		QPSK	3485.0 - 3515.0	67.778	5.52	0.550	27.40	67M8G7W
		16QAM	3485.0 - 3515.0	67.828	6.28	0.435	26.38	67M8D7W
		64QAM	3485.0 - 3515.0	67.795	6.46	0.339	25.30	67M8D7W
		256QAM	3485.0 - 3515.0	67.607	6.60	0.172	22.35	67M6D7W
	80 MHz	π/2 BPSK	3490.0 - 3510.0	77.353	3.88	0.550	27.40	77M4G7W
		QPSK	3490.0 - 3510.0	77.820	5.26	0.546	27.37	77M8G7W
		16QAM	3490.0 - 3510.0	77.831	6.13	0.440	26.43	77M8D7W
		64QAM	3490.0 - 3510.0	77.833	6.39	0.346	25.39	77M8D7W
		256QAM	3490.0 - 3510.0	77.824	6.51	0.172	22.36	77M8D7W
	90 MHz	π/2 BPSK	3495.0 - 3505.0	86.182	3.85	0.548	27.39	86M2G7W
		QPSK	3495.0 - 3505.0	87.787	5.29	0.550	27.40	87M8G7W
		16QAM	3495.0 - 3505.0	87.829	6.12	0.432	26.35	87M8D7W
		64QAM	3495.0 - 3505.0	87.751	6.42	0.347	25.40	87M8D7W
		256QAM	3495.0 - 3505.0	87.735	6.43	0.173	22.38	87M7D7W
	100 MHz	π/2 BPSK	3500	96.734	4.07	0.550	27.40	96M7G7W
		QPSK	3500	97.792	5.36	0.542	27.34	97M8G7W
		16QAM	3500	97.824	6.14	0.435	26.38	97M8D7W
		64QAM	3500	97.760	6.36	0.344	25.36	97M8D7W
		256QAM	3500	97.682	6.45	0.171	22.34	97M7D7W

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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	8.728	4.00	0.363	25.60	8M73G7W
		QPSK	3455.0 - 3545.0	8.730	5.35	0.354	25.49	8M73G7W
		16QAM	3455.0 - 3545.0	8.703	6.23	0.288	24.60	8M70D7W
		64QAM	3455.0 - 3545.0	8.701	6.39	0.229	23.59	8M70D7W
		256QAM	3455.0 - 3545.0	8.778	6.61	0.112	20.51	8M78D7W
	15 MHz	π/2 BPSK	3457.5 - 3542.5	13.103	3.92	0.363	25.60	13M1G7W
		QPSK	3457.5 - 3542.5	13.758	5.28	0.347	25.40	13M8G7W
		16QAM	3457.5 - 3542.5	13.741	6.04	0.288	24.59	13M7D7W
		64QAM	3457.5 - 3542.5	13.693	6.38	0.221	23.45	13M7D7W
		256QAM	3457.5 - 3542.5	13.716	6.38	0.114	20.58	13M7D7W
	20 MHz	π/2 BPSK	3460.0 - 3540.0	18.063	3.83	0.363	25.60	18M1G7W
		QPSK	3460.0 - 3540.0	18.395	5.22	0.358	25.54	18M4G7W
		16QAM	3460.0 - 3540.0	18.345	6.01	0.284	24.53	18M3D7W
		64QAM	3460.0 - 3540.0	18.340	6.32	0.224	23.50	18M3D7W
		256QAM	3460.0 - 3540.0	18.383	6.37	0.112	20.49	18M4D7W
	30MHz	π/2 BPSK	3465.0 - 3535.0	27.086	3.99	0.363	25.60	27M1G7W
		QPSK	3465.0 - 3535.0	28.092	5.35	0.353	25.48	28M1G7W
		16QAM	3465.0 - 3535.0	28.049	6.08	0.288	24.60	28M0D7W
		64QAM	3465.0 - 3535.0	28.036	6.36	0.218	23.38	28M0D7W
		256QAM	3465.0 - 3535.0	28.089	6.38	0.114	20.56	28M1D7W
	40 MHz	π/2 BPSK	3470.0 - 3530.0	36.074	3.87	0.361	25.58	36M1G7W
		QPSK	3470.0 - 3530.0	38.125	5.40	0.363	25.60	38M1G7W
		16QAM	3470.0 - 3530.0	37.991	6.14	0.282	24.51	38M0D7W
		64QAM	3470.0 - 3530.0	38.260	6.39	0.228	23.57	38M3D7W
		256QAM	3470.0 - 3530.0	38.106	6.54	0.114	20.58	38M1D7W
	50 MHz	π/2 BPSK	3475.0 - 3525.0	45.983	3.79	0.360	25.56	46M0G7W
		QPSK	3475.0 - 3525.0	47.775	5.23	0.363	25.60	47M8G7W
		16QAM	3475.0 - 3525.0	47.787	5.99	0.284	24.53	47M8D7W
		64QAM	3475.0 - 3525.0	47.931	6.34	0.229	23.59	47M9D7W
		256QAM	3475.0 - 3525.0	47.856	6.45	0.111	20.47	47M9D7W
	60 MHz	π/2 BPSK	3480.0 - 3520.0	58.241	3.90	0.363	25.60	58M2G7W
		QPSK	3480.0 - 3520.0	58.222	5.25	0.356	25.52	58M2G7W
		16QAM	3480.0 - 3520.0	58.171	6.17	0.293	24.67	58M1D7W
		64QAM	3480.0 - 3520.0	58.143	6.45	0.234	23.69	58M1D7W
		256QAM	3480.0 - 3520.0	58.006	6.38	0.116	20.66	58M0D7W
	70 MHz	π/2 BPSK	3485.0 - 3515.0	64.637	4.16	0.363	25.60	64M6G7W
		QPSK	3485.0 - 3515.0	67.778	5.52	0.350	25.44	67M8G7W
		16QAM	3485.0 - 3515.0	67.828	6.28	0.286	24.56	67M8D7W
		64QAM	3485.0 - 3515.0	67.795	6.46	0.228	23.58	67M8D7W
		256QAM	3485.0 - 3515.0	67.607	6.60	0.115	20.61	67M6D7W
	80 MHz	π/2 BPSK	3490.0 - 3510.0	77.353	3.88	0.363	25.60	77M4G7W
		QPSK	3490.0 - 3510.0	77.820	5.26	0.344	25.37	77M8G7W
		16QAM	3490.0 - 3510.0	77.831	6.13	0.280	24.47	77M8D7W
		64QAM	3490.0 - 3510.0	77.833	6.39	0.228	23.58	77M8D7W
		256QAM	3490.0 - 3510.0	77.824	6.51	0.115	20.59	77M8D7W
	90 MHz	π/2 BPSK	3495.0 - 3505.0	86.182	3.85	0.360	25.56	86M2G7W
		QPSK	3495.0 - 3505.0	87.787	5.29	0.363	25.60	87M8G7W
		16QAM	3495.0 - 3505.0	87.829	6.12	0.281	24.49	87M8D7W
		64QAM	3495.0 - 3505.0	87.751	6.42	0.228	23.57	87M8D7W
		256QAM	3495.0 - 3505.0	87.735	6.43	0.116	20.64	87M7D7W
	100 MHz	π/2 BPSK	3500	96.734	4.07	0.363	25.60	96M7G7W
		QPSK	3500	97.792	5.36	0.357	25.53	97M8G7W
		16QAM	3500	97.824	6.14	0.287	24.58	97M8D7W
		64QAM	3500	97.760	6.36	0.223	23.48	97M8D7W
		256QAM	3500	97.682	6.45	0.114	20.58	97M7D7W

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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	8.728	4.03	0.550	27.40	8M73G7W
		QPSK	3705.0 - 3975.0	8.715	5.36	0.550	27.40	8M72G7W
		16QAM	3705.0 - 3975.0	8.697	6.12	0.436	26.39	8M70D7W
		64QAM	3705.0 - 3975.0	8.739	6.37	0.348	25.41	8M74D7W
		256QAM	3705.0 - 3975.0	8.771	6.75	0.174	22.41	8M77D7W
	15 MHz	π/2 BPSK	3707.5 - 3972.5	13.020	3.96	0.550	27.40	13M0G7W
		QPSK	3707.5 - 3972.5	13.705	5.27	0.546	27.37	13M7G7W
		16QAM	3707.5 - 3972.5	13.800	5.91	0.424	26.27	13M8D7W
		64QAM	3707.5 - 3972.5	13.688	6.26	0.337	25.27	13M7D7W
		256QAM	3707.5 - 3972.5	13.785	6.49	0.173	22.39	13M8D7W
	20 MHz	π/2 BPSK	3710.0 - 3970.0	19.050	3.83	0.532	27.26	19M1G7W
		QPSK	3710.0 - 3970.0	19.414	5.24	0.550	27.40	19M4G7W
		16QAM	3710.0 - 3970.0	19.355	6.05	0.437	26.40	19M4D7W
		64QAM	3710.0 - 3970.0	19.433	6.34	0.345	25.38	19M4D7W
		256QAM	3710.0 - 3970.0	19.257	6.57	0.171	22.32	19M3D7W
	30MHz	π/2 BPSK	3715.0 - 3965.0	27.689	3.95	0.550	27.40	27M7G7W
		QPSK	3715.0 - 3965.0	28.696	5.31	0.545	27.36	28M7G7W
		16QAM	3715.0 - 3965.0	28.701	5.99	0.441	26.44	28M7D7W
		64QAM	3715.0 - 3965.0	28.653	6.30	0.348	25.42	28M7D7W
		256QAM	3715.0 - 3965.0	28.539	6.59	0.174	22.41	28M5D7W
	40 MHz	π/2 BPSK	3720.0 - 3960.0	36.413	3.96	0.550	27.40	36M4G7W
		QPSK	3720.0 - 3960.0	38.445	5.40	0.547	27.38	38M4G7W
		16QAM	3720.0 - 3960.0	38.357	6.19	0.435	26.38	38M4D7W
		64QAM	3720.0 - 3960.0	38.517	6.49	0.340	25.32	38M5D7W
		256QAM	3720.0 - 3960.0	38.443	6.58	0.173	22.38	38M4D7W
	50 MHz	π/2 BPSK	3725.0 - 3955.0	45.926	3.86	0.550	27.40	45M9G7W
		QPSK	3725.0 - 3955.0	47.828	5.28	0.546	27.37	47M8G7W
		16QAM	3725.0 - 3955.0	47.674	6.07	0.432	26.35	47M7D7W
		64QAM	3725.0 - 3955.0	47.583	6.48	0.346	25.39	47M6D7W
		256QAM	3725.0 - 3955.0	47.605	6.67	0.173	22.39	47M6D7W
	60 MHz	π/2 BPSK	3730.0 - 3950.0	58.218	3.92	0.550	27.40	58M2G7W
		QPSK	3730.0 - 3950.0	58.308	5.34	0.540	27.32	58M3G7W
		16QAM	3730.0 - 3950.0	58.098	6.26	0.435	26.38	58M1D7W
		64QAM	3730.0 - 3950.0	58.081	6.49	0.339	25.30	58M1D7W
		256QAM	3730.0 - 3950.0	58.011	6.67	0.173	22.37	58M0D7W
	70 MHz	π/2 BPSK	3735.0 - 3945.0	64.499	4.37	0.550	27.40	64M5G7W
		QPSK	3735.0 - 3945.0	67.731	5.64	0.547	27.38	67M7G7W
		16QAM	3735.0 - 3945.0	67.669	6.43	0.441	26.44	67M7D7W
		64QAM	3735.0 - 3945.0	67.804	6.54	0.351	25.45	67M8D7W
		256QAM	3735.0 - 3945.0	67.586	6.66	0.173	22.38	67M6D7W
	80 MHz	π/2 BPSK	3740.0 - 3940.0	77.375	3.91	0.550	27.40	77M4G7W
		QPSK	3740.0 - 3940.0	77.576	5.36	0.531	27.25	77M6G7W
		16QAM	3740.0 - 3940.0	77.856	6.21	0.436	26.39	77M9D7W
		64QAM	3740.0 - 3940.0	77.744	6.46	0.341	25.33	77M7D7W
		256QAM	3740.0 - 3940.0	77.538	6.67	0.173	22.39	77M5D7W
	90 MHz	π/2 BPSK	3745.0 - 3935.0	86.142	3.87	0.546	27.37	86M1G7W
		QPSK	3745.0 - 3935.0	87.725	5.38	0.550	27.40	87M7G7W
		16QAM	3745.0 - 3935.0	87.668	6.19	0.437	26.40	87M7D7W
		64QAM	3745.0 - 3935.0	87.601	6.54	0.347	25.40	87M6D7W
		256QAM	3745.0 - 3935.0	87.423	6.60	0.169	22.29	87M4D7W
	100 MHz	π/2 BPSK	3750.0 - 3930.0	96.745	4.05	0.550	27.40	96M7G7W
		QPSK	3750.0 - 3930.0	97.622	5.41	0.532	27.26	97M6G7W
		16QAM	3750.0 - 3930.0	97.602	6.28	0.428	26.31	97M6D7W
		64QAM	3750.0 - 3930.0	97.629	6.52	0.340	25.32	97M6D7W
		256QAM	3750.0 - 3930.0	97.438	6.62	0.152	21.82	97M4D7W

EUT Overview

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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	8.728	4.03	0.363	25.60	8M73G7W
		QPSK	3705.0 - 3975.0	8.715	5.36	0.361	25.58	8M72G7W
		16QAM	3705.0 - 3975.0	8.697	6.12	0.277	24.43	8M70D7W
		64QAM	3705.0 - 3975.0	8.739	6.37	0.225	23.53	8M74D7W
		256QAM	3705.0 - 3975.0	8.771	6.75	0.114	20.58	8M77D7W
	15 MHz	π/2 BPSK	3707.5 - 3972.5	13.020	3.96	0.362	25.59	13M0G7W
		QPSK	3707.5 - 3972.5	13.705	5.27	0.363	25.60	13M7G7W
		16QAM	3707.5 - 3972.5	13.800	5.91	0.281	24.49	13M8D7W
		64QAM	3707.5 - 3972.5	13.688	6.26	0.228	23.57	13M7D7W
		256QAM	3707.5 - 3972.5	13.785	6.49	0.115	20.60	13M8D7W
	20 MHz	π/2 BPSK	3710.0 - 3970.0	19.050	3.83	0.363	25.60	19M1G7W
		QPSK	3710.0 - 3970.0	19.414	5.24	0.353	25.48	19M4G7W
		16QAM	3710.0 - 3970.0	19.355	6.05	0.283	24.52	19M4D7W
		64QAM	3710.0 - 3970.0	19.433	6.34	0.226	23.54	19M4D7W
		256QAM	3710.0 - 3970.0	19.257	6.57	0.115	20.60	19M3D7W
	30MHz	π/2 BPSK	3715.0 - 3965.0	27.689	3.95	0.360	25.56	27M7G7W
		QPSK	3715.0 - 3965.0	28.696	5.31	0.363	25.60	28M7G7W
		16QAM	3715.0 - 3965.0	28.701	5.99	0.290	24.62	28M7D7W
		64QAM	3715.0 - 3965.0	28.653	6.30	0.231	23.63	28M7D7W
		256QAM	3715.0 - 3965.0	28.539	6.59	0.113	20.54	28M5D7W
	40 MHz	π/2 BPSK	3720.0 - 3960.0	36.413	3.96	0.363	25.60	36M4G7W
		QPSK	3720.0 - 3960.0	38.445	5.40	0.361	25.57	38M4G7W
		16QAM	3720.0 - 3960.0	38.357	6.19	0.281	24.49	38M4D7W
		64QAM	3720.0 - 3960.0	38.517	6.49	0.230	23.61	38M5D7W
		256QAM	3720.0 - 3960.0	38.443	6.58	0.116	20.64	38M4D7W
	50 MHz	π/2 BPSK	3725.0 - 3955.0	45.926	3.86	0.363	25.60	45M9G7W
		QPSK	3725.0 - 3955.0	47.828	5.28	0.360	25.56	47M8G7W
		16QAM	3725.0 - 3955.0	47.674	6.07	0.284	24.54	47M7D7W
		64QAM	3725.0 - 3955.0	47.583	6.48	0.227	23.56	47M6D7W
		256QAM	3725.0 - 3955.0	47.605	6.67	0.113	20.54	47M6D7W
	60 MHz	π/2 BPSK	3730.0 - 3950.0	58.218	3.92	0.363	25.60	58M2G7W
		QPSK	3730.0 - 3950.0	58.308	5.34	0.361	25.58	58M3G7W
		16QAM	3730.0 - 3950.0	58.098	6.26	0.290	24.62	58M0D7W
		64QAM	3730.0 - 3950.0	58.081	6.49	0.230	23.61	58M0D7W
		256QAM	3730.0 - 3950.0	58.011	6.67	0.115	20.60	57M9D7W
	70 MHz	π/2 BPSK	3735.0 - 3945.0	64.499	4.37	0.363	25.60	64M5G7W
		QPSK	3735.0 - 3945.0	67.731	5.64	0.360	25.56	67M7G7W
		16QAM	3735.0 - 3945.0	67.669	6.43	0.289	24.61	67M7D7W
		64QAM	3735.0 - 3945.0	67.804	6.54	0.229	23.59	67M8D7W
		256QAM	3735.0 - 3945.0	67.586	6.66	0.114	20.58	67M6D7W
	80 MHz	π/2 BPSK	3740.0 - 3940.0	77.375	3.91	0.363	25.60	77M4G7W
		QPSK	3740.0 - 3940.0	77.576	5.36	0.363	25.60	77M6G7W
		16QAM	3740.0 - 3940.0	77.856	6.21	0.288	24.60	77M9D7W
		64QAM	3740.0 - 3940.0	77.744	6.46	0.231	23.64	77M7D7W
		256QAM	3740.0 - 3940.0	77.538	6.67	0.115	20.60	77M5D7W
	90 MHz	π/2 BPSK	3745.0 - 3935.0	86.142	3.87	0.349	25.43	86M1G7W
		QPSK	3745.0 - 3935.0	87.725	5.38	0.363	25.60	87M7G7W
		16QAM	3745.0 - 3935.0	87.668	6.19	0.285	24.55	87M7D7W
		64QAM	3745.0 - 3935.0	87.601	6.54	0.228	23.58	87M6D7W
		256QAM	3745.0 - 3935.0	87.423	6.60	0.113	20.54	87M4D7W
	100 MHz	π/2 BPSK	3750.0 - 3930.0	96.745	4.05	0.359	25.55	96M7G7W
		QPSK	3750.0 - 3930.0	97.622	5.41	0.363	25.60	97M6G7W
		16QAM	3750.0 - 3930.0	97.602	6.28	0.286	24.57	97M6D7W
		64QAM	3750.0 - 3930.0	97.629	6.52	0.222	23.47	97M6D7W
		256QAM	3750.0 - 3930.0	97.438	6.62	0.102	20.10	97M4D7W

EUT Overview

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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 Washington DC LLC Test Location

These measurement tests were conducted at the Element Washington DC LLC 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 Washington DC LLC located in Morgan Hill, CA 95037, U.S.A.

- Element Washington DC LLC 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 Washington DC LLC facility is a registered (22831) test laboratory with the site description on file with ISED.

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Apple Tablet Device FCC ID:BCGA2435**. 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.: Q994673JFG, N6FT9Q03C0, V68MLB20069, X7H222J4R3

2.2 Device Capabilities

This device contains the following capabilities:

850/1700/1900 WCDMA/HSPA, Multi-band LTE, Multi-band 5G NR (FR1, FR2), 802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII, 802.11a/ax WIFI 6E, 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 2.4GHz	Bluetooth	NB UNII	WiFi 5GHz	WiFi 6GHz	LTE / FR1 NR
		802.11 b/g/n/ax	BDR, EDR, HDR4/8, LE1/2M	BDR, HDR4/8	802.11 a/n/ac/ax	802.11 a/ax	Ultra High Band
2a	Config 1	✓	×	×	×	×	✓
2a	Config 2	×	✓	×	×	×	✓
4a	Config 3	✓	×	✓	×	×	×
4a	Config 4	×	✓	×	✓	×	×

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 Bluetooth and LTE B48. Results can be found on RF Bluetooth and RF Part 96 Test Reports.
2. Wi-Fi 2.4GHz and Bluetooth 2.4 GHz can transmit simultaneously on separate antennas. For BT (2.4 GHz) in connected mode and Wi-Fi (2.4 GHz) – Wi-Fi max power will not exceed minimum of (13.5dBm, SAR max cap, Reg max cap) power. For BT (2.4 GHz) in disconnected mode and Wi-Fi (2.4 GHz) – BT will be using iPA only and Wi-Fi max power will not exceed minimum of (SAR max cap, Reg max cap) power.

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2.3 Antenna Description

Following antenna gains provided by manufacturer were used for testing.

Band	Antenna Gain [dBi]			
	Antenna 1	Antenna 3	Antenna 4b	Antenna 2a
NR Band n77	-0.6	-0.1	-1.5	1.4

Table 2-2. Highest Antenna Gain

Note: Antenna Specifications have been attached to Appendix A

2.4 Test Support Equipment

1	Apple MacBook Pro	Model:	A2141	S/N:	C02DV7VKMD6T
	w/AC/DC Adapter	Model:	A2166	S/N:	N/A
2	Apple USB-C Cable	Model:	Spartan	S/N:	000MKTR02U
3	USB-C Cable	Model:	A246	S/N:	N/A
	w/ AC Adapter	Model:	A2305	S/N:	N/A
4	Apple Pencil	Model:	N/A	S/N:	GQXGSXBJKM9
5	DC Power Supply	Model:	KPS3010D	S/N:	N/A

Table 2-3. Test Support Equipment

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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 20A8359 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.

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3.0 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

The measurement procedures described in the "Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards" (ANSI C63.26 2015, TIA-603-E-2016) and "Measurement Guidance for Certification of Licensed Digital Transmitters" (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.

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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	1.77
Radiated Disturbance (<30MHz)	4.38
Radiated Disturbance (30MHz-1GHz)	4.75
Radiated Disturbance (1-18GHz)	5.20
Radiated Disturbance (>18GHz)	4.72

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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	6/10/2022	Annual	6/10/2023	MY49430244
ATM	180-442A-KF	20dB Nominal Gain Horn Antenna	1/19/2022	Annual	1/19/2023	T058701-02
ETS-Lindgren	3142E	Biconilog Antenna (26-6000MHz)	10/21/2021	Annual	10/21/2022	208204
ETS-Lindgren	3117	Double Ridged Guide Horn Antenna (1-18GHz)	10/25/2021	Annual	10/25/2022	227597
ETS-Lindgren	SU-241	Table Top Temperature Chamber	10/6/2021	Annual	10/6/2022	92009574
Keysight Technology	N9040B	UXA Signal Analyzer	2/8/2022	Annual	2/8/2023	MY57212015
Rohde & Schwarz	TS-PR8	Pre-Amplifier (30MHz-6GHz)	1/6/2022	Annual	1/6/2023	102328
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	10/11/2021	Annual	10/11/2022	161616
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	11/4/2021	Annual	11/4/2022	151888
Rohde & Schwarz	ESW26	EMI Test Receiver	5/19/2022	Annual	5/19/2023	101299
Rohde & Schwarz	ESW44	EMI Test Receiver	12/2/2021	Annual	12/2/2022	101570
Rohde & Schwarz	FSV40	Signal Analyzer (10Hz-40GHz)	3/4/2022	Annual	3/4/2023	101619
Rohde & Schwarz	FSVA3044	Signal Analyzer (up to 44 GHz)	5/12/2022	Annual	5/12/2023	101098
Rohde & Schwarz	HFH2-Z2	Loop Antenna	4/3/2022	Annual	4/3/2023	100546
Rohde & Schwarz	TC-TA18	Cross-Polarized Antenna 400MHz-18GHz	1/25/2022	Annual	1/25/2023	101063
Rohde & Schwarz	TS-PR18	Pre-Amplifier (1GHz-18GHz)	1/6/2022	Annual	1/6/2023	101639
Rohde & Schwarz	TS-PR1840	Pre-Amplifier (18GHz-40GHz)	4/18/2022	Annual	4/18/2023	100050

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.

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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.

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7.0 TEST RESULTS

7.1 Summary

Company Name: Apple Inc.

FCC ID: BCGA2435

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 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

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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 v1.1.

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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.

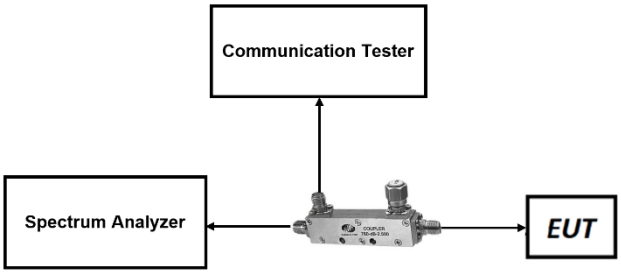

Figure 7-1. Test Instrument & Measurement Setup

Test Notes

None.

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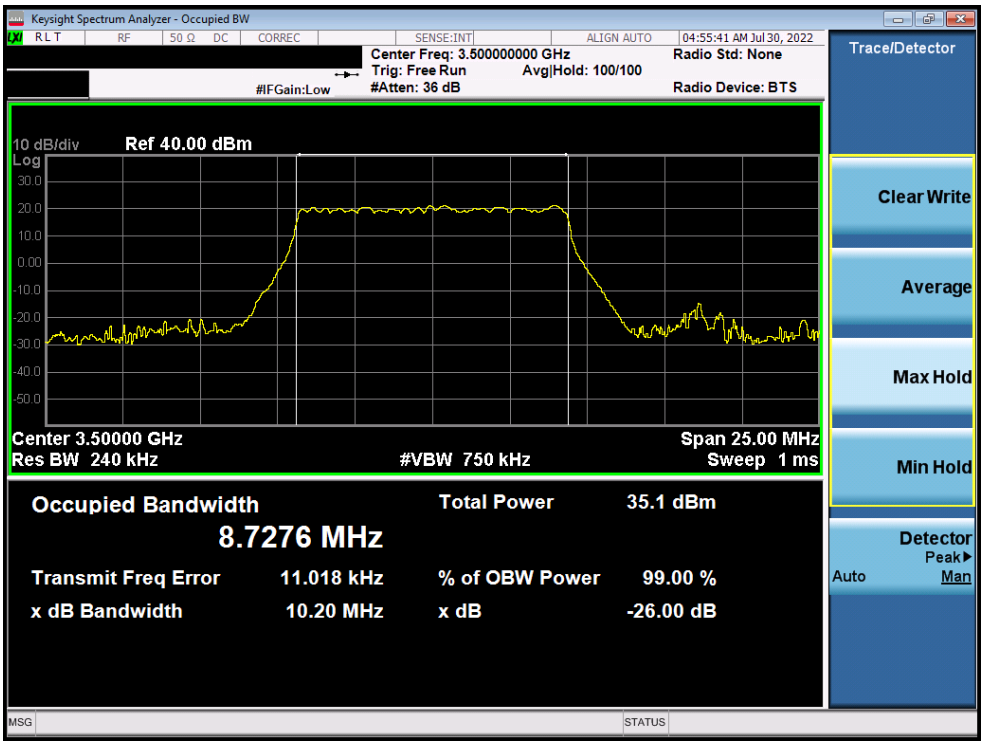
NR Band n77 DoD-Band



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)

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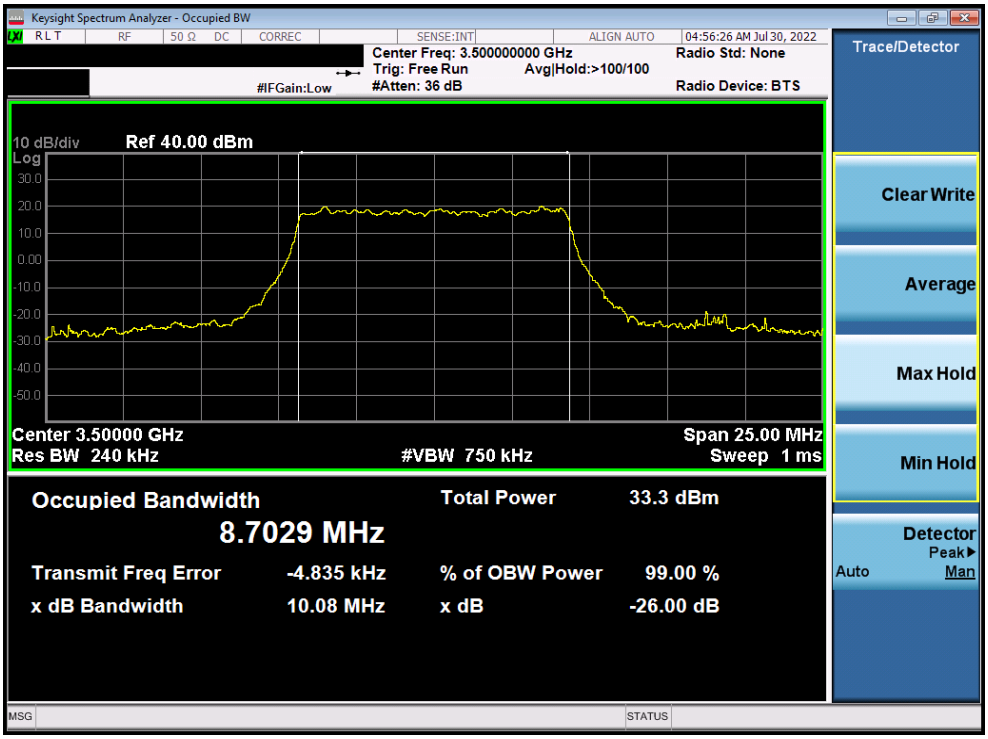
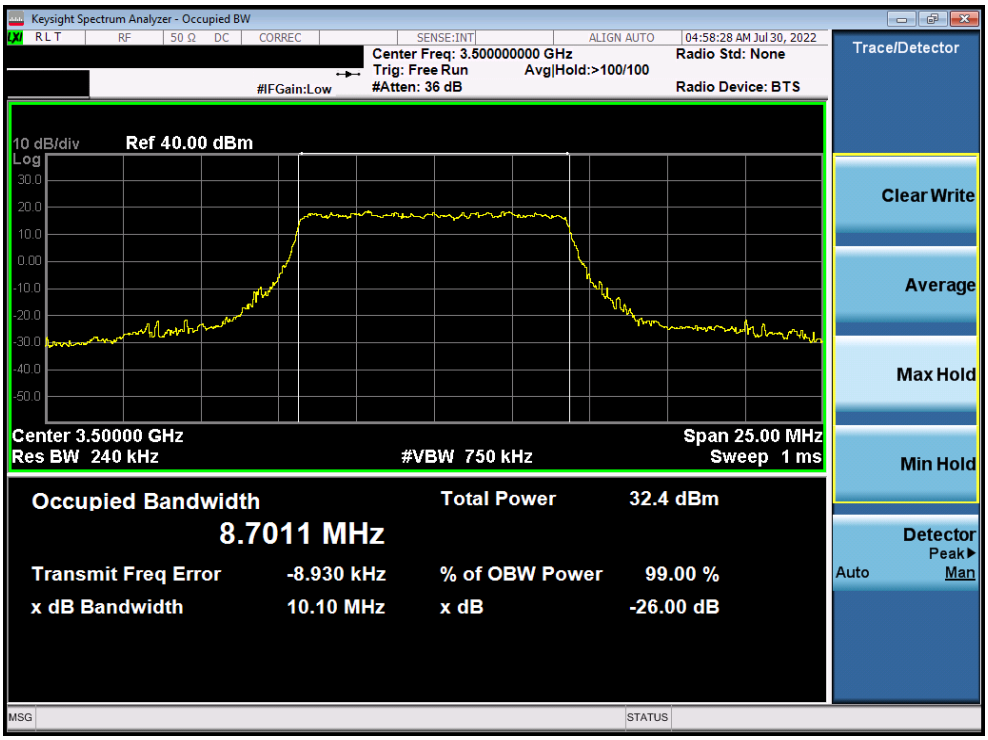


Plot 7-3. Occupied Bandwidth Plot (NR Band n77 DoD Band - 10MHz CP-OFDM 16-QAM - Full RB)



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

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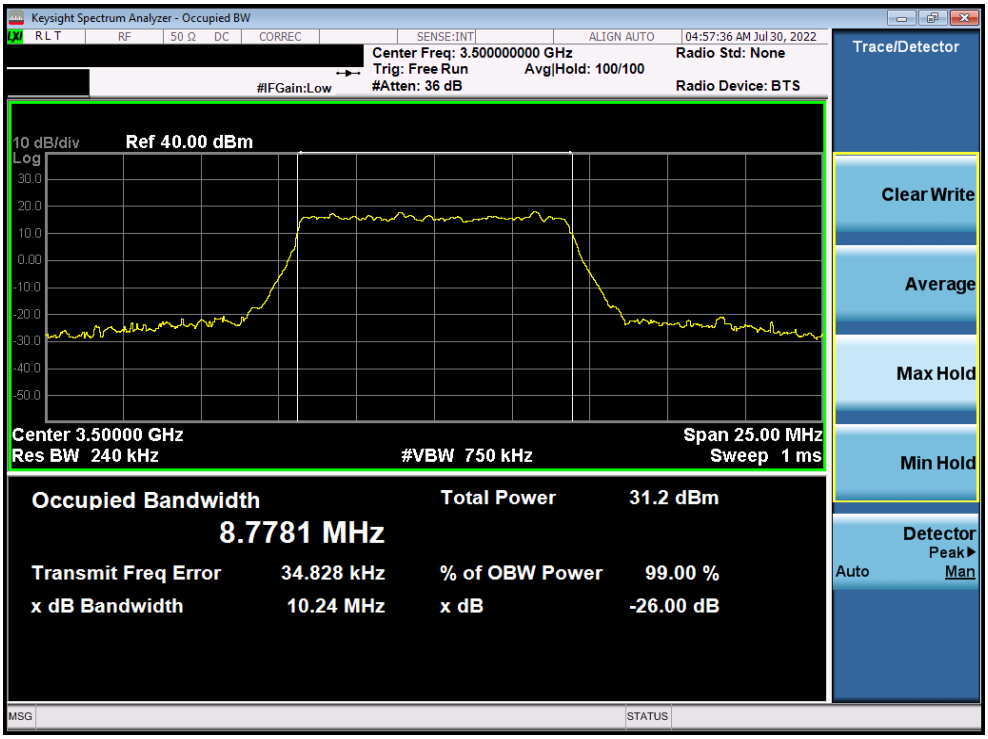
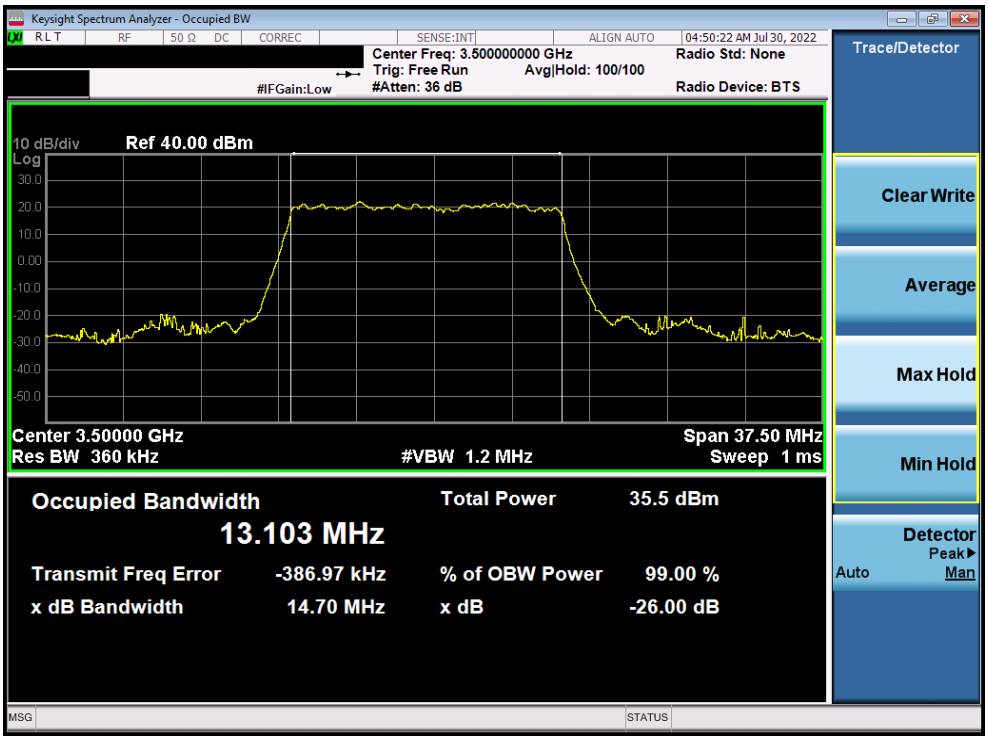


Plot 7-5. Occupied Bandwidth Plot (NR Band n77 DoD Band - 10MHz CP-OFDM 256-QAM - Full RB)



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

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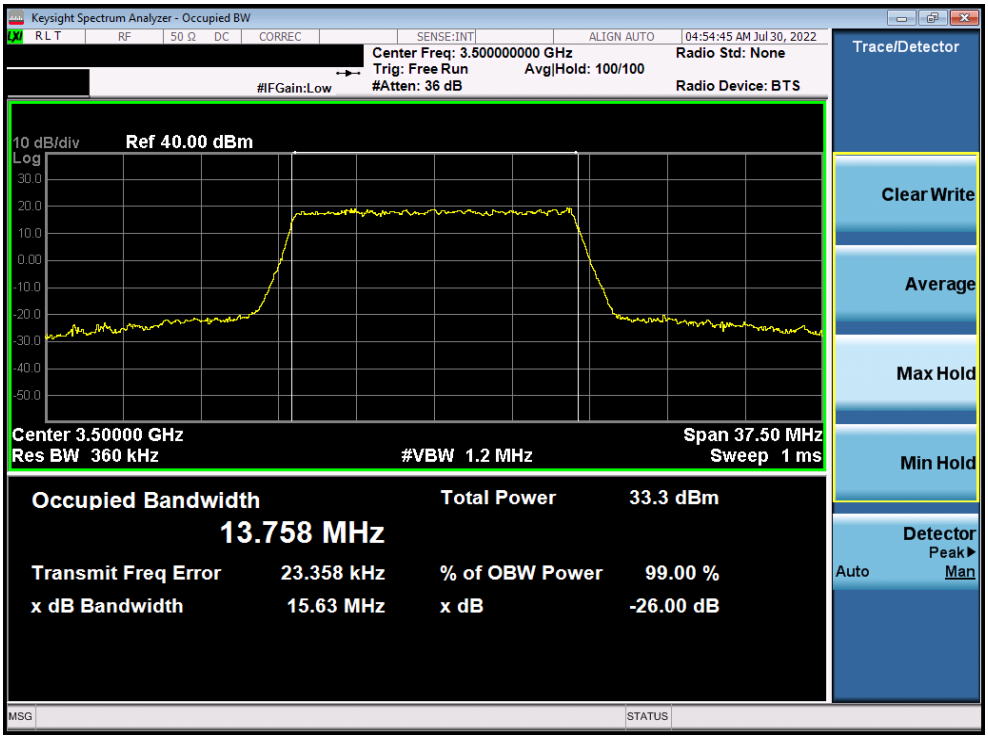
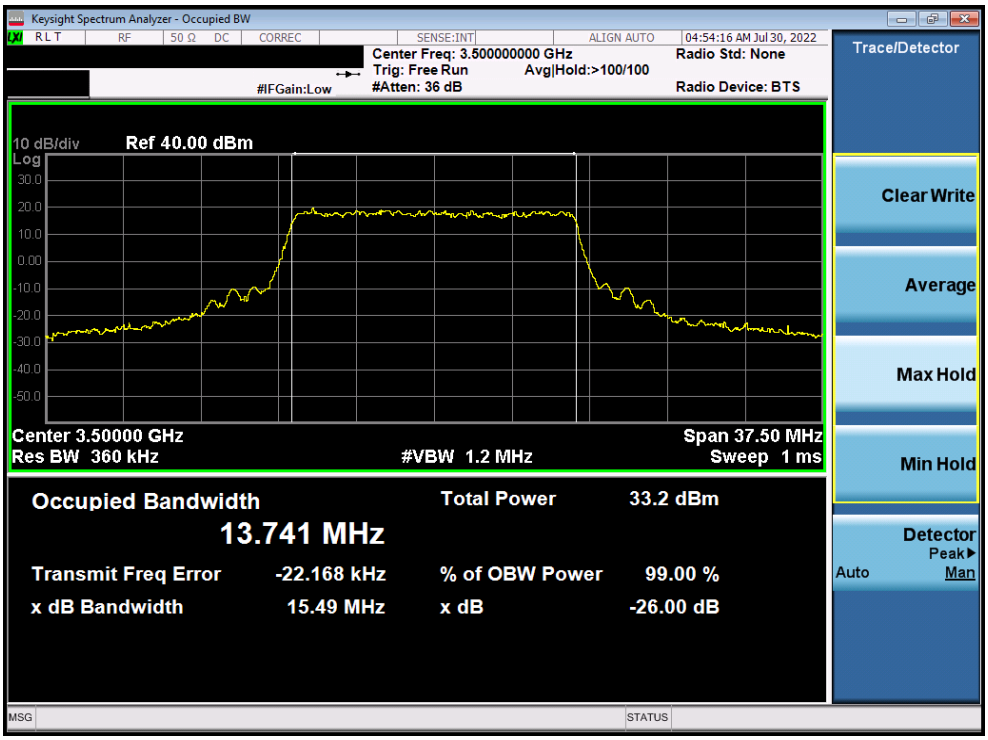


Plot 7-7. Occupied Bandwidth Plot (NR Band n77 DoD Band - 15MHz CP-OFDM QPSK - Full RB)



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

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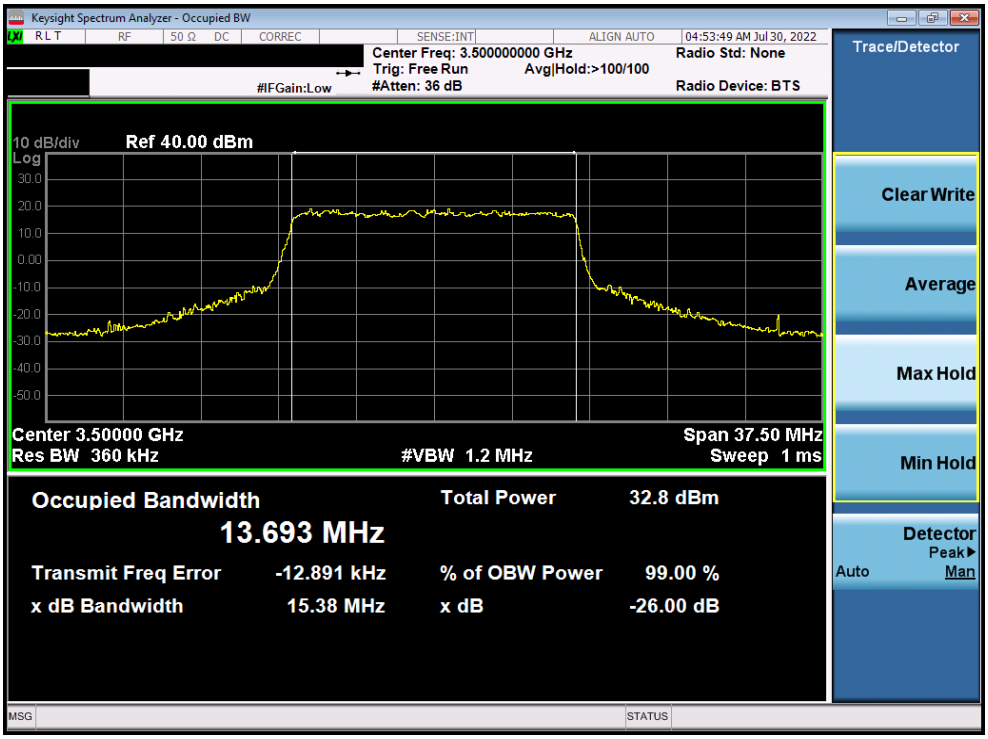
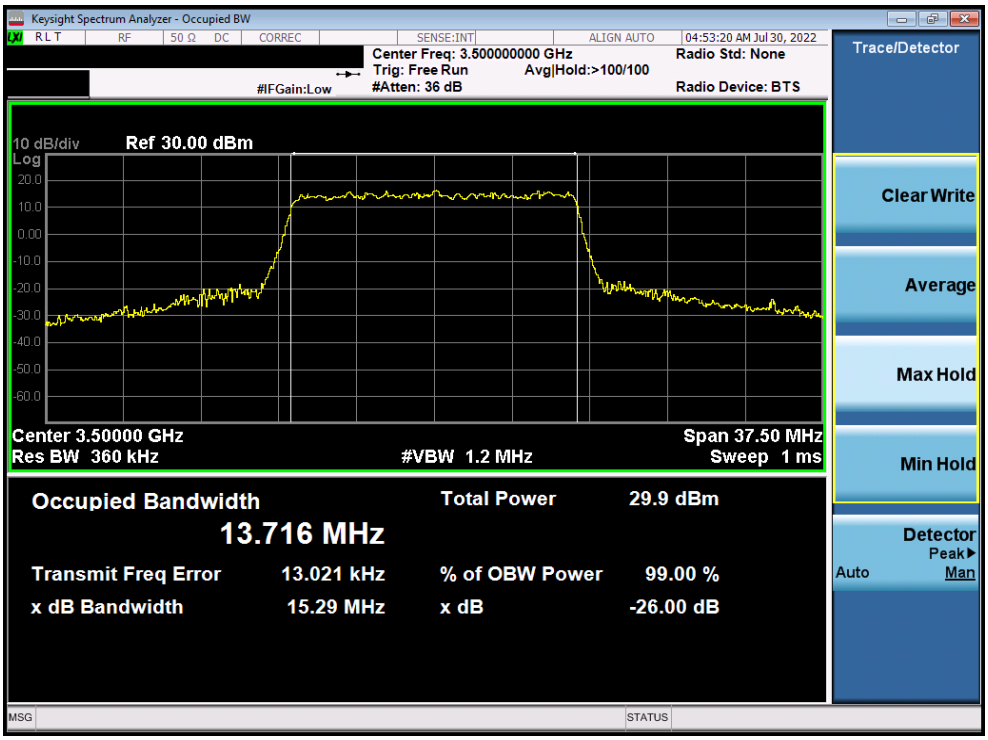


Plot 7-9. Occupied Bandwidth Plot (NR Band n77 DoD Band - 15MHz CP-OFDM 64-QAM - Full RB)



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

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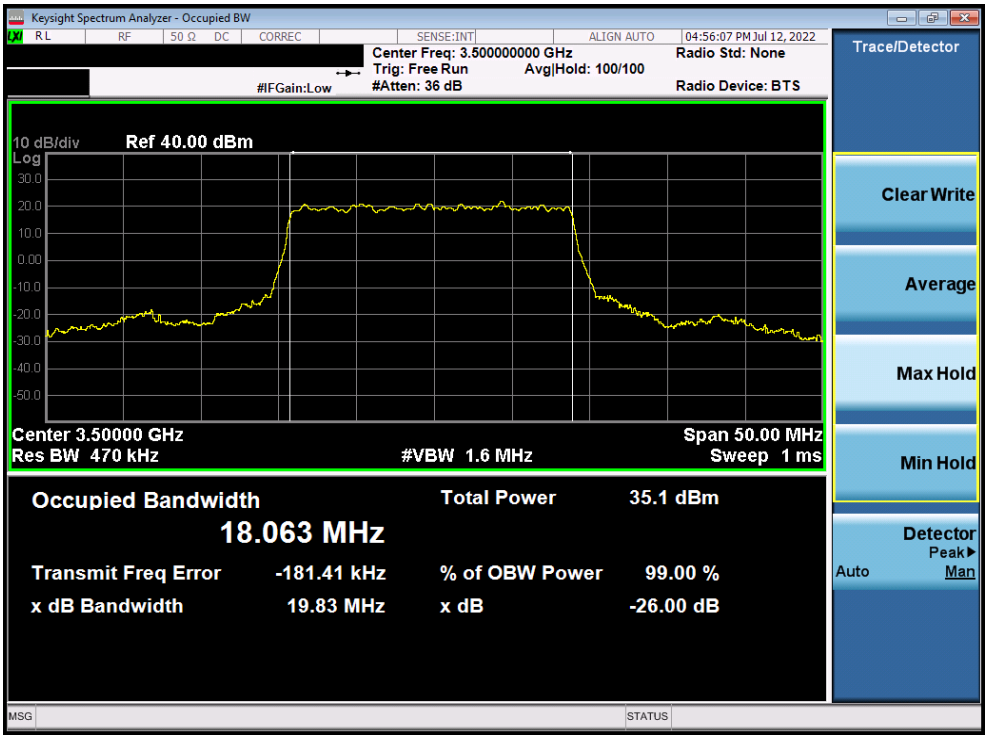
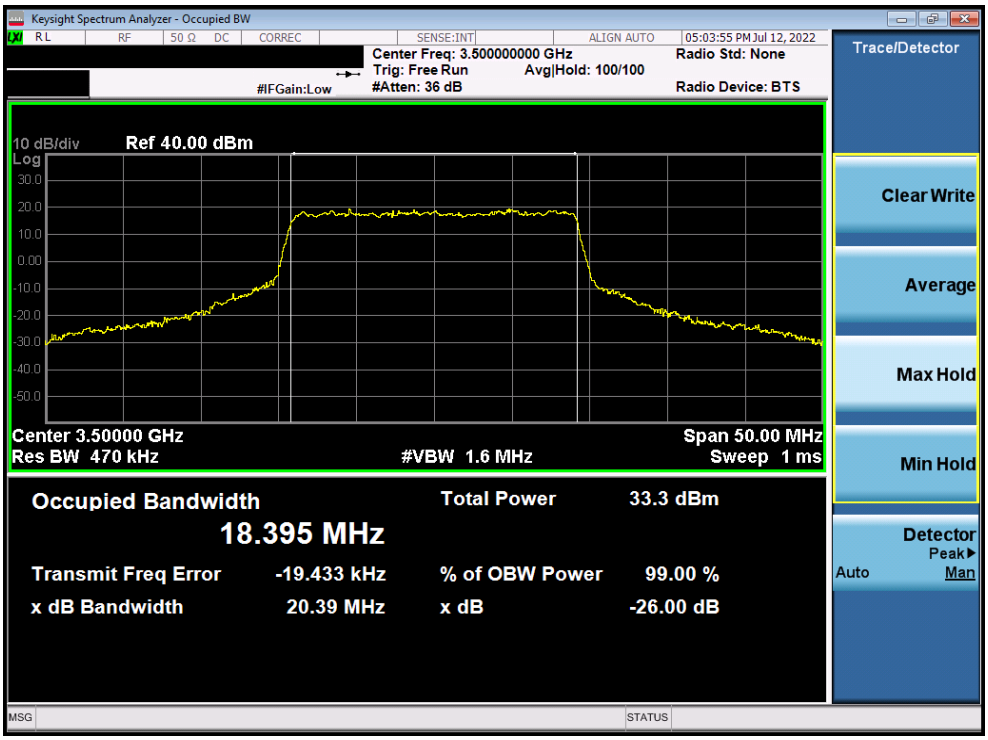


Plot 7-11. Occupied Bandwidth Plot (NR Band n77 DoD Band - 20MHz DFT-s-OFDM π/2 BPSK - Full RB)



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

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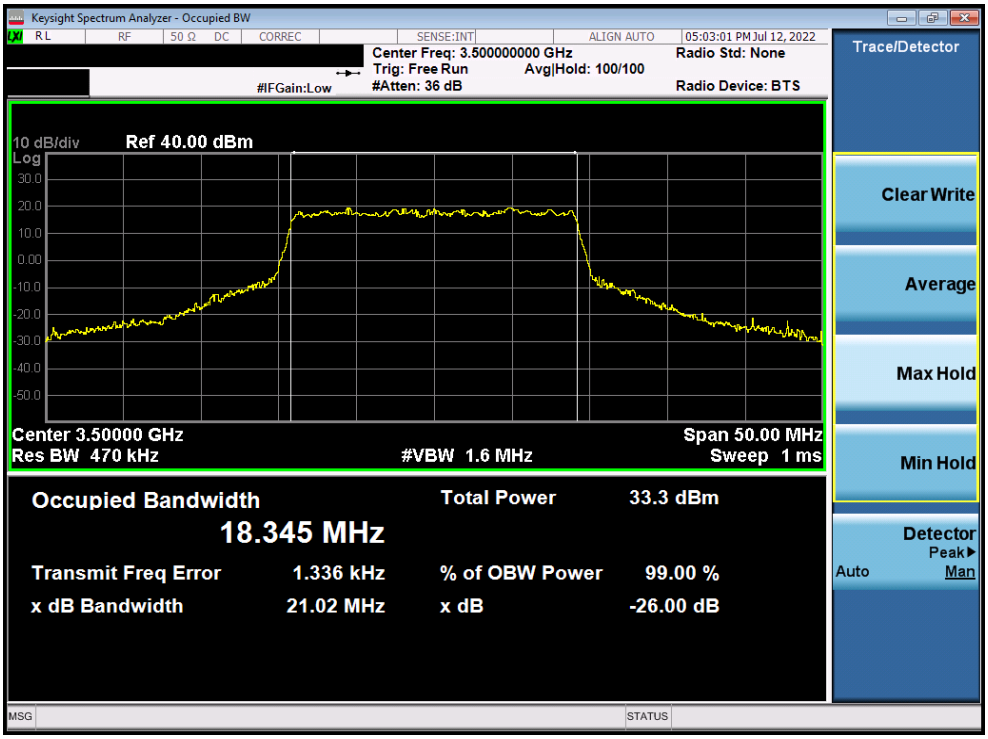
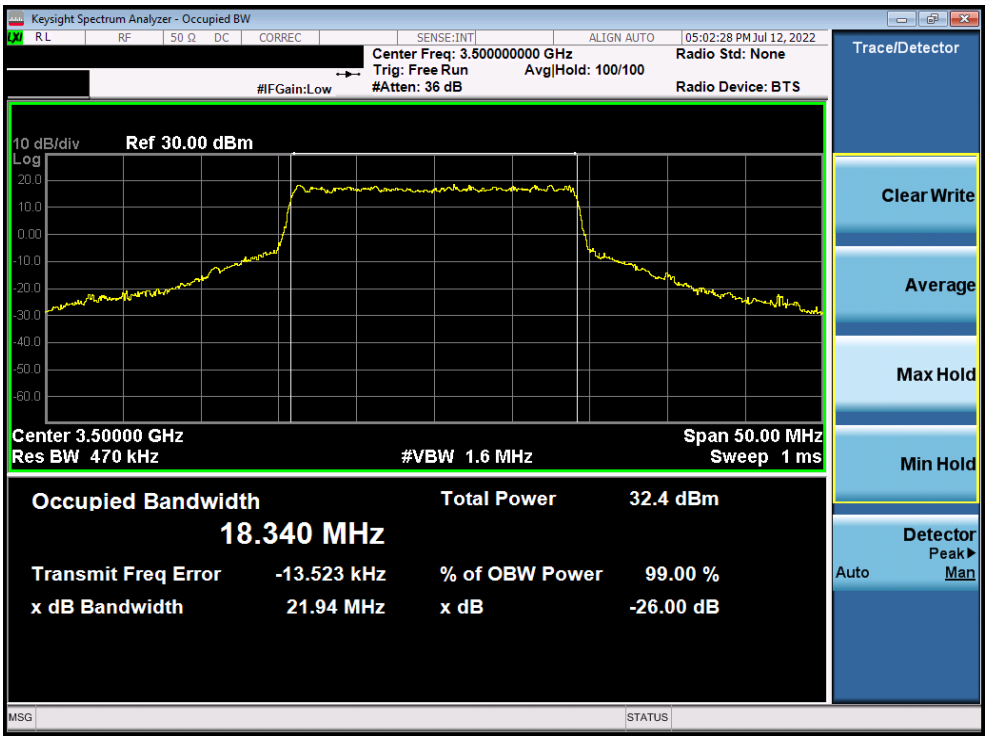


Plot 7-13. Occupied Bandwidth Plot (NR Band n77 DoD Band - 20MHz CP-OFDM 16-QAM - Full RB)



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

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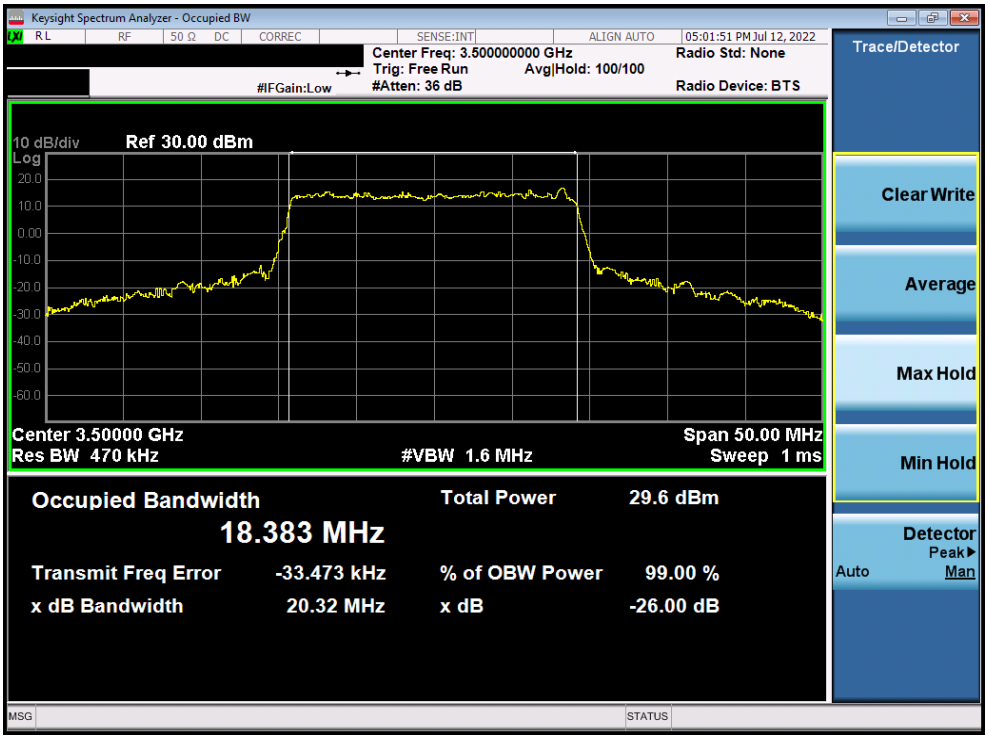
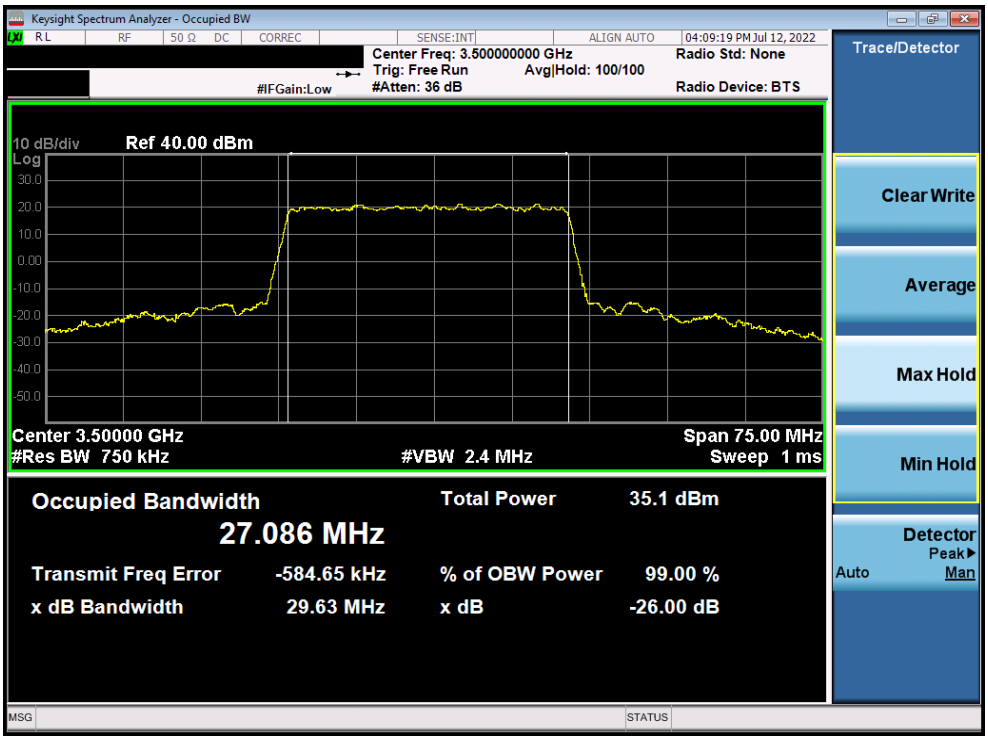


Plot 7-15. Occupied Bandwidth Plot (NR Band n77 DoD Band - 20MHz CP-OFDM 256-QAM - Full RB)



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

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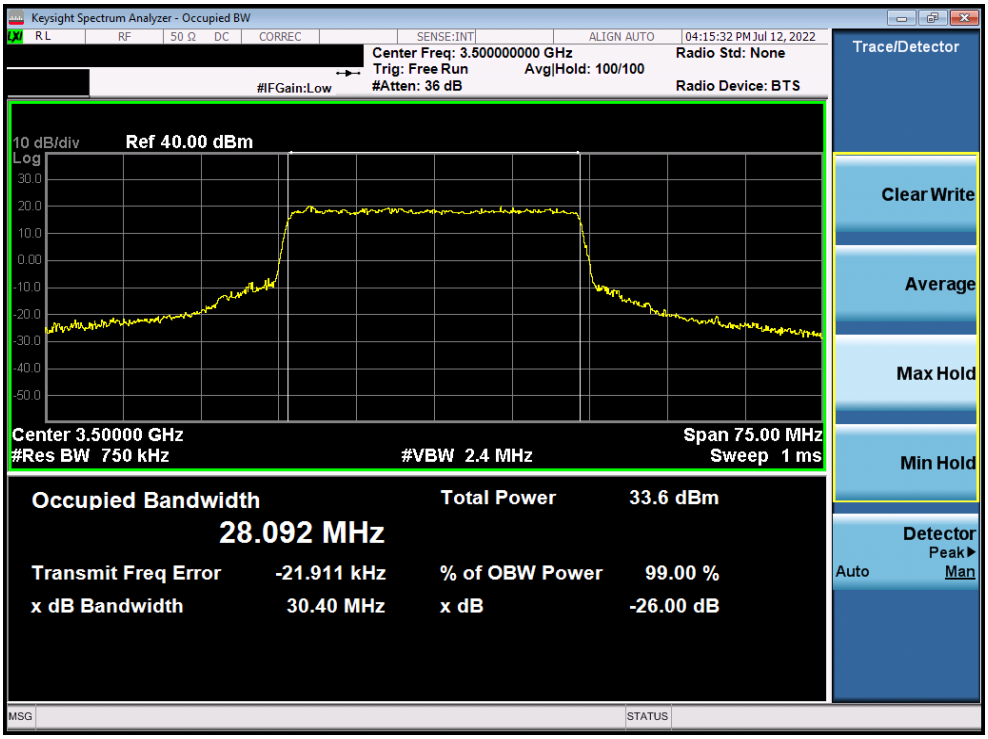
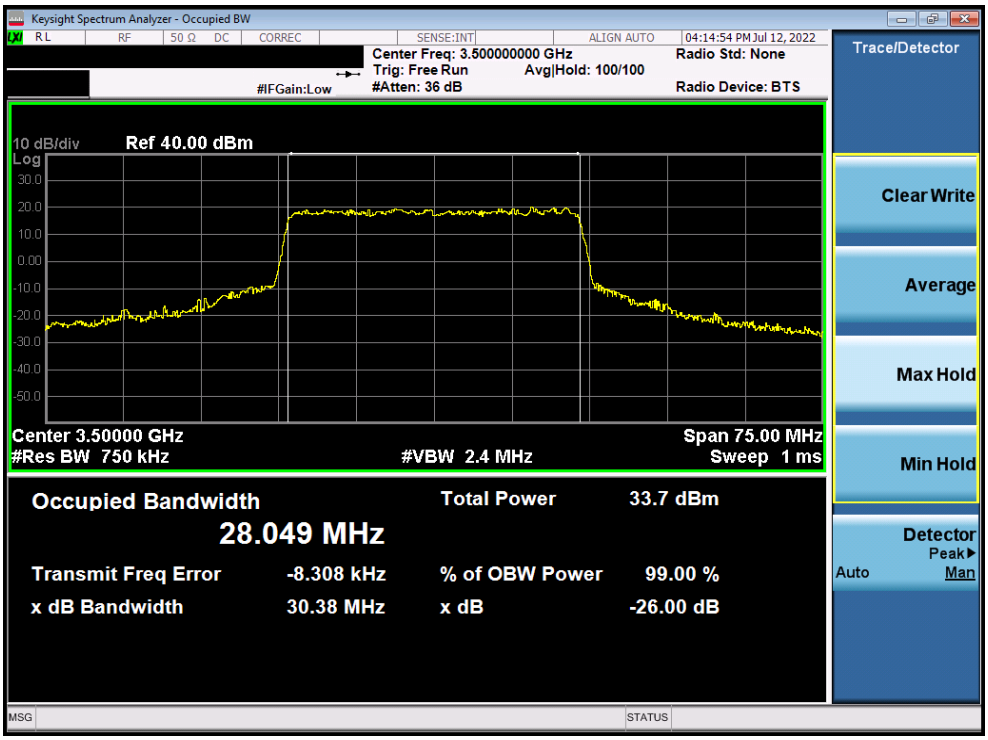


Plot 7-17. Occupied Bandwidth Plot (NR Band n77 DoD Band - 30MHz CP-OFDM QPSK - Full RB)



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

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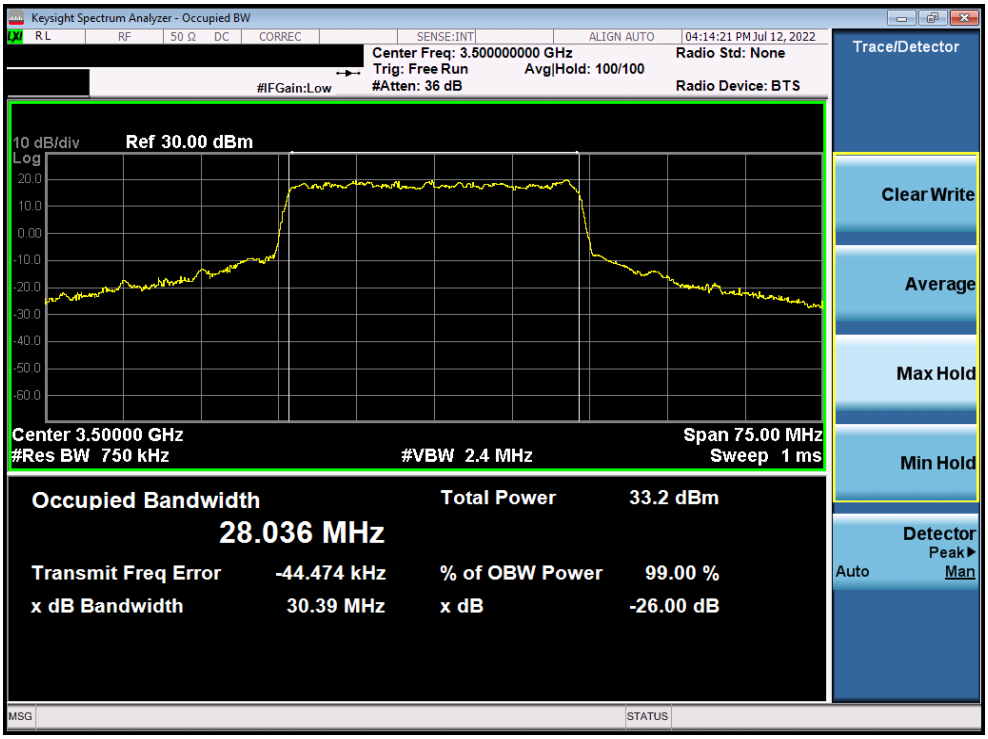
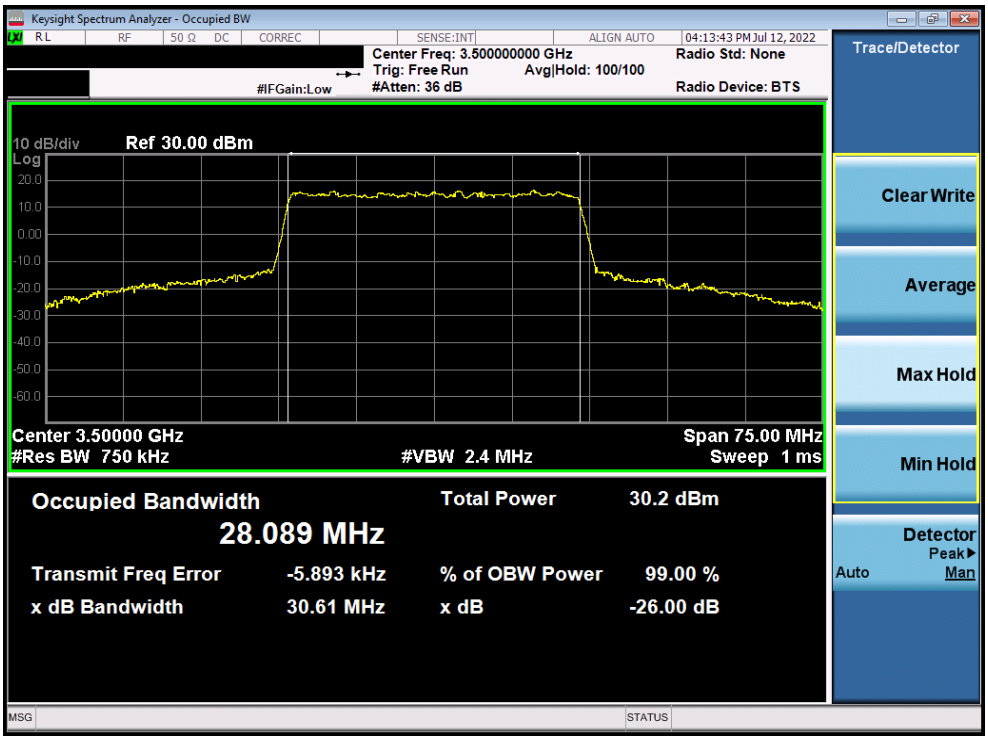


Plot 7-19. Occupied Bandwidth Plot (NR Band n77 DoD Band - 30MHz CP-OFDM 64-QAM - Full RB)



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

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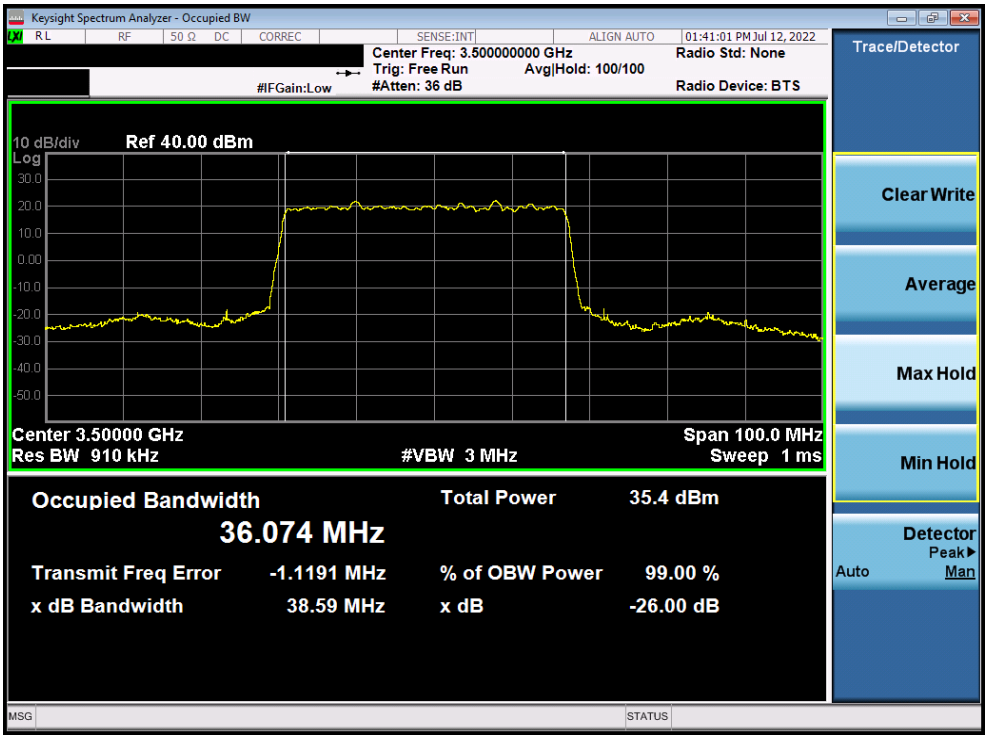
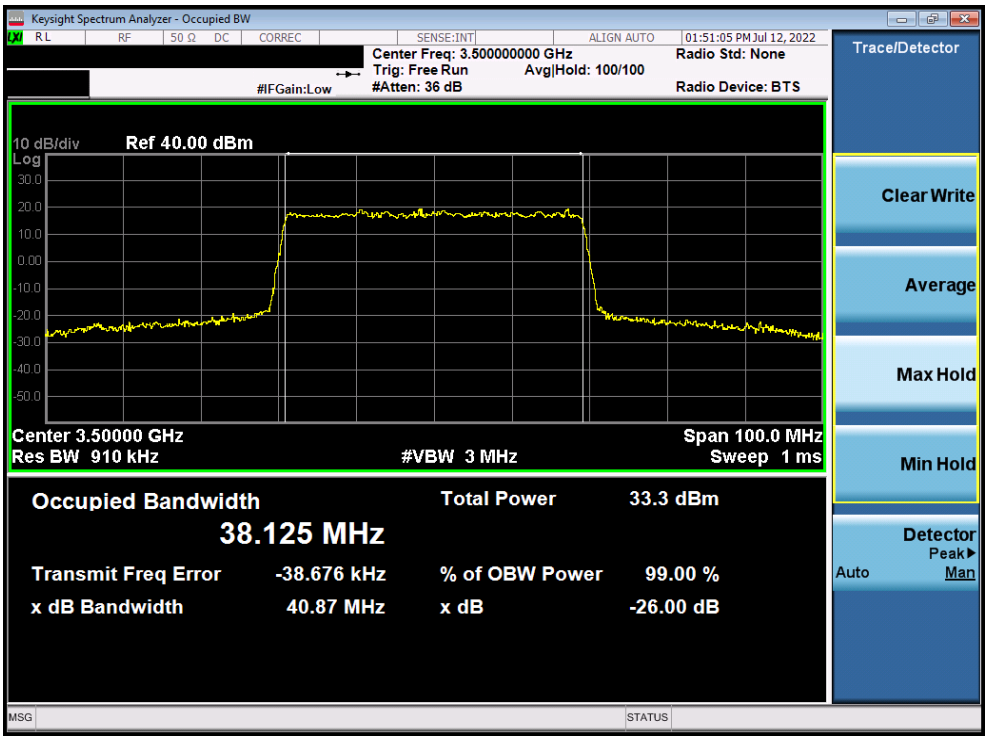


Plot 7-21. Occupied Bandwidth Plot (NR Band n77 DoD Band - 40MHz DFT-s-OFDM π/2 BPSK - Full RB)



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

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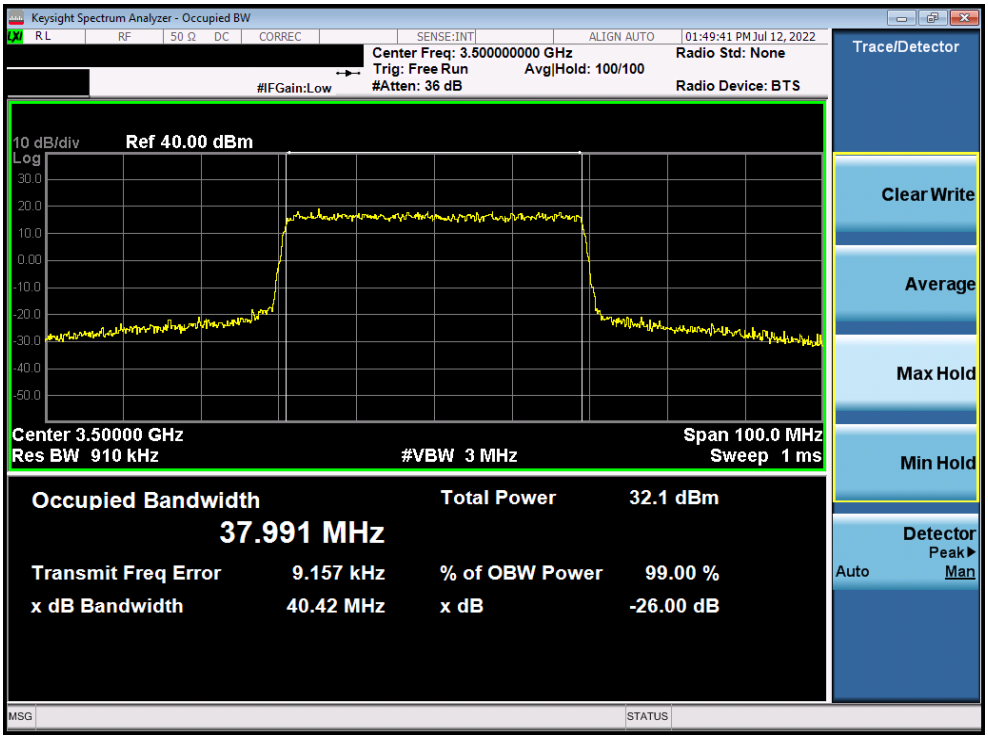
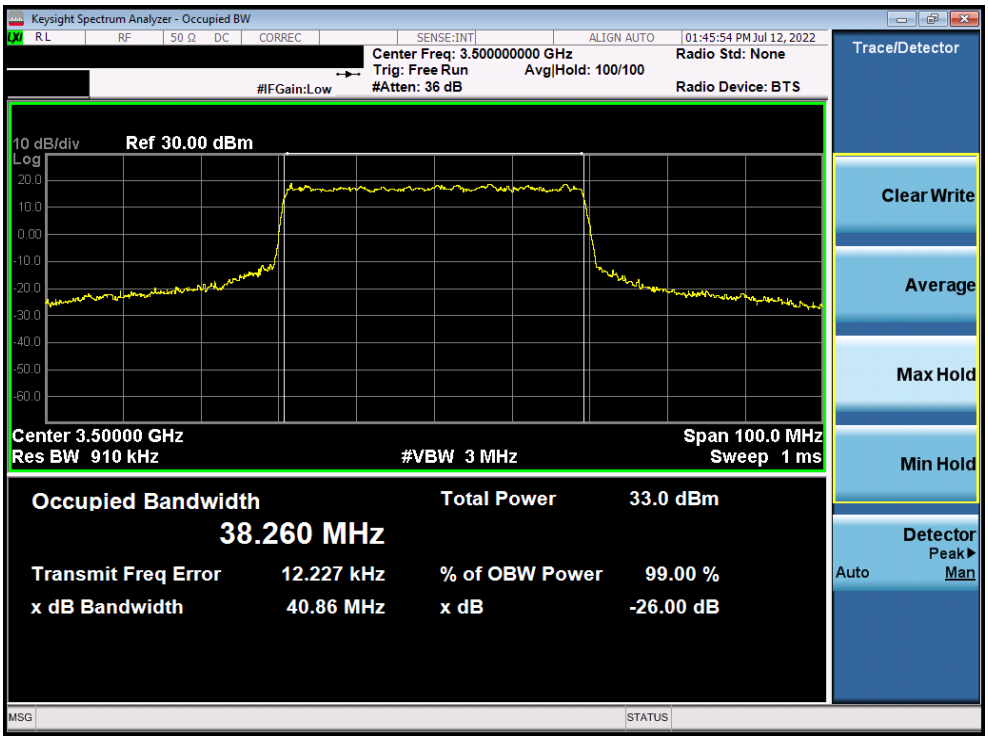


Plot 7-23. Occupied Bandwidth Plot (NR Band n77 DoD Band - 40MHz CP-OFDM 16-QAM - Full RB)



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

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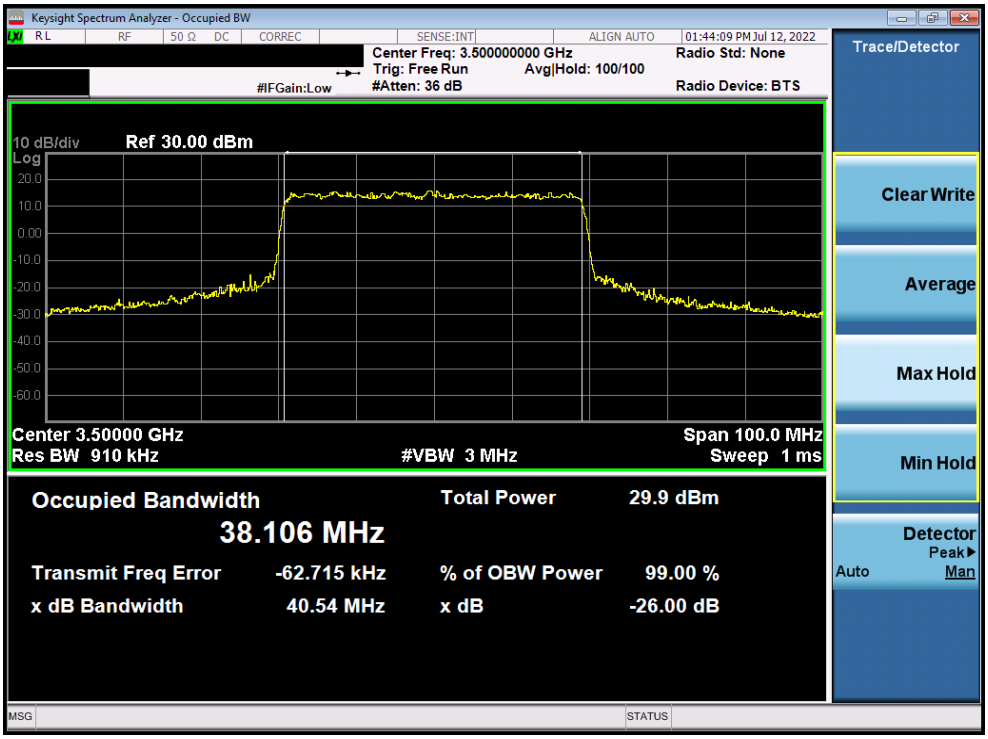
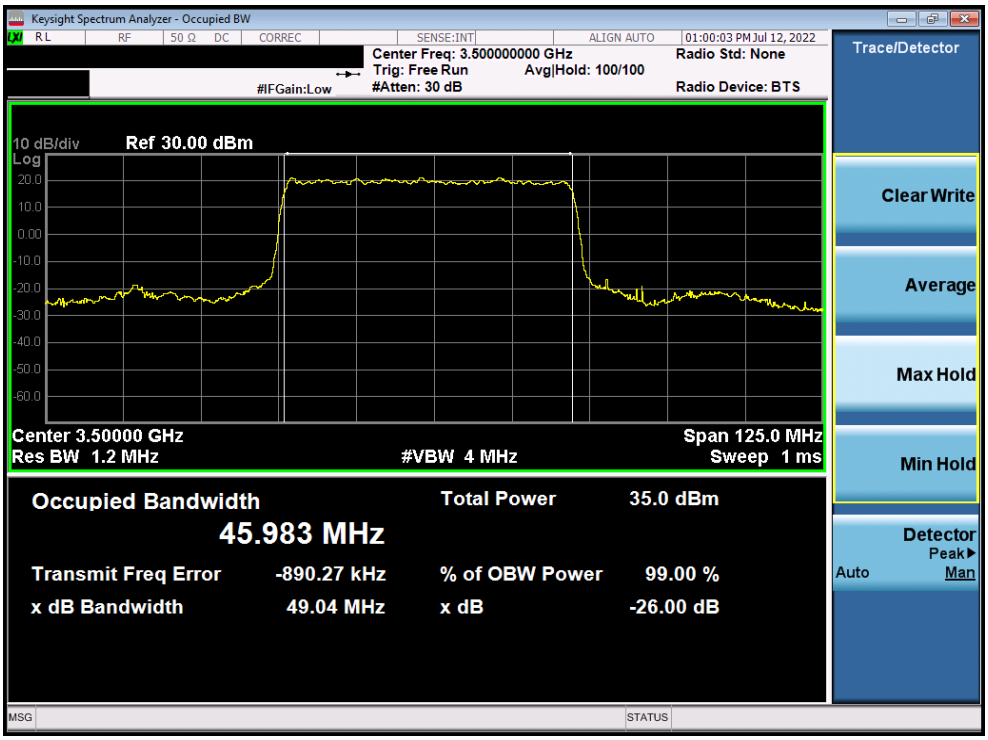


Plot 7-25. Occupied Bandwidth Plot (NR Band n77 DoD Band - 40MHz CP-OFDM 256-QAM - Full RB)



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

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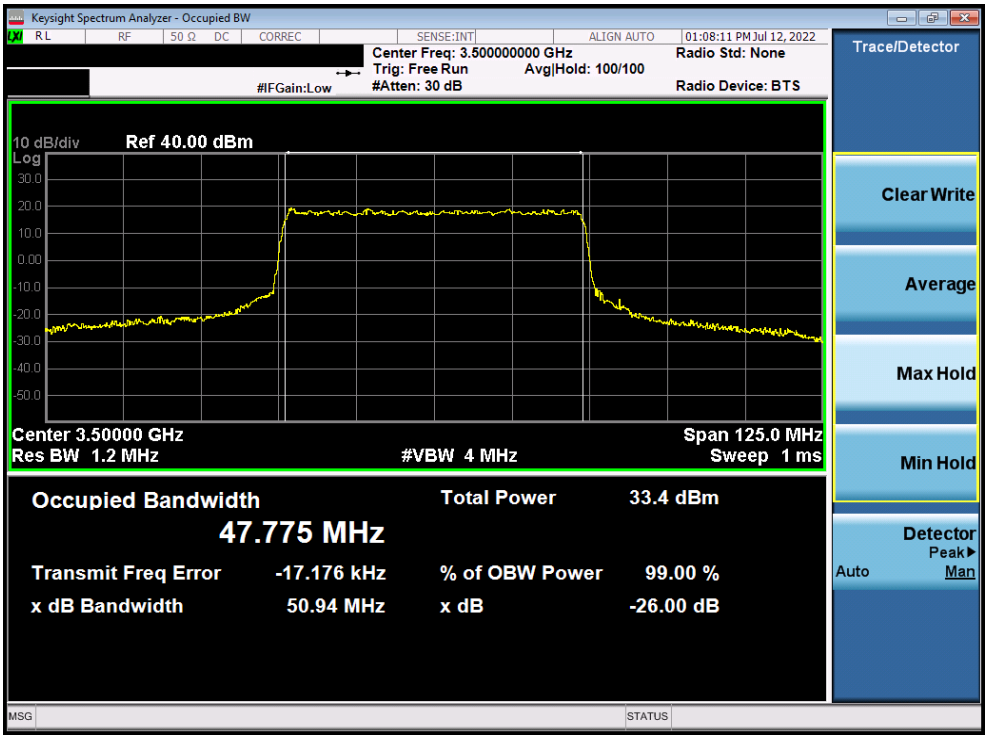
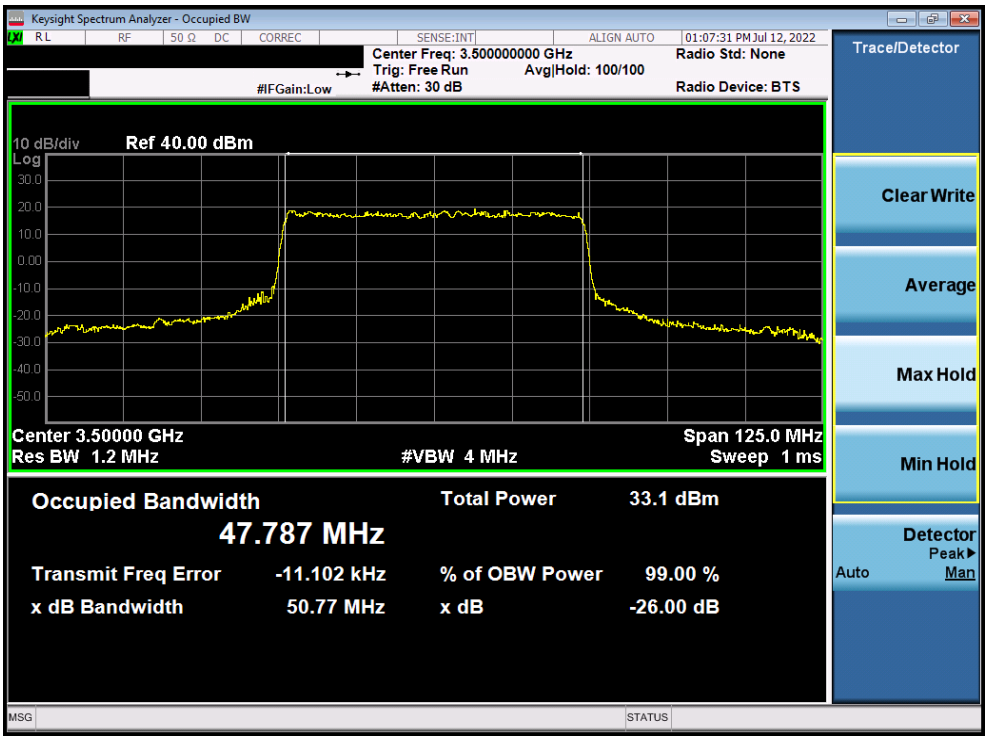


Plot 7-27. Occupied Bandwidth Plot (NR Band n77 DoD Band - 50MHz CP-OFDM QPSK - Full RB)



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

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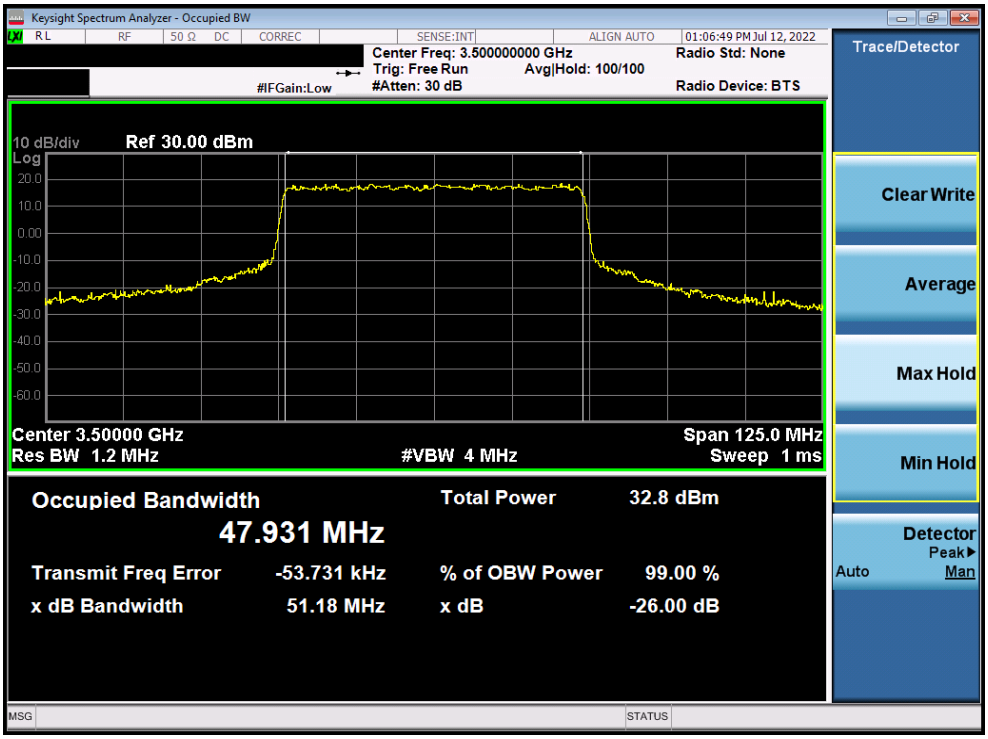
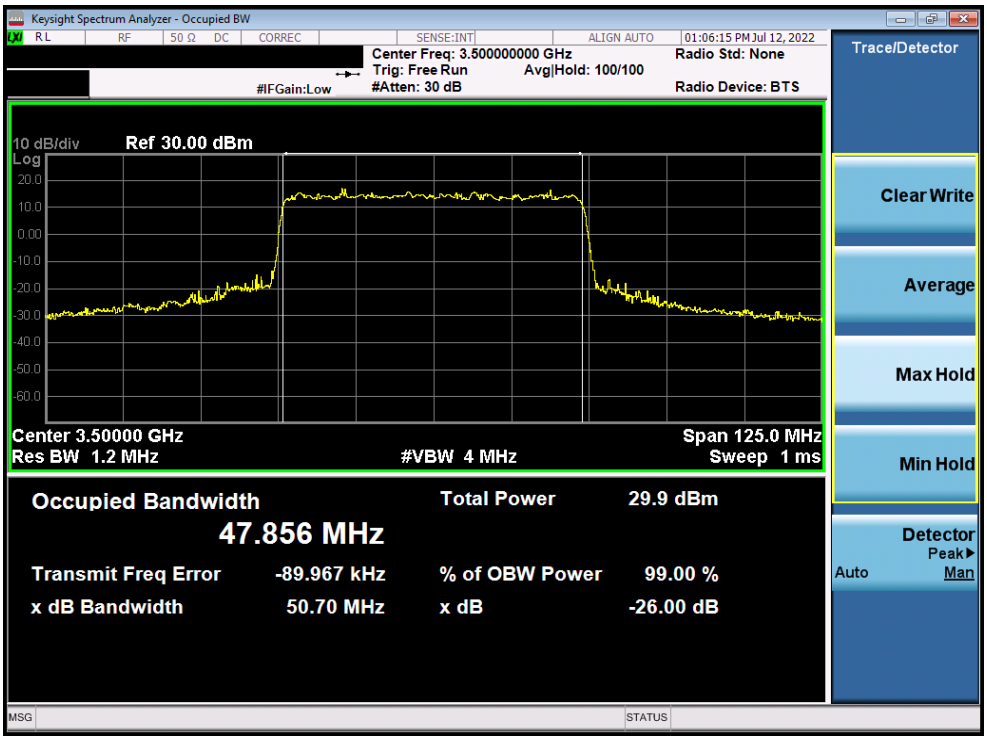


Plot 7-29. Occupied Bandwidth Plot (NR Band n77 DoD Band - 50MHz CP-OFDM 64-QAM - Full RB)



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

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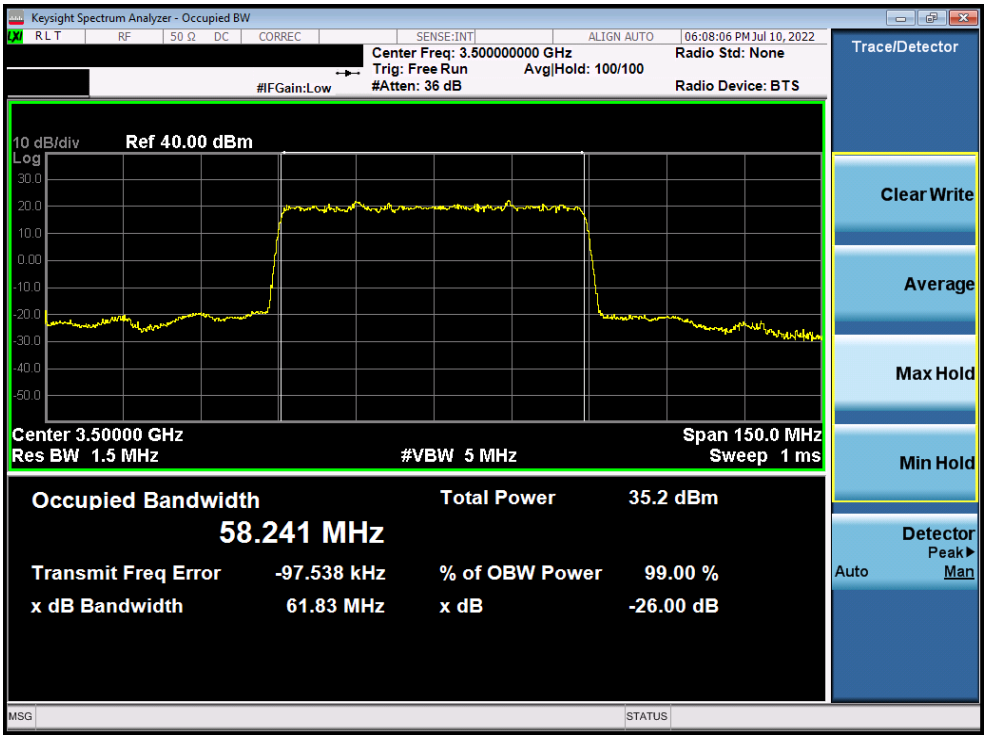
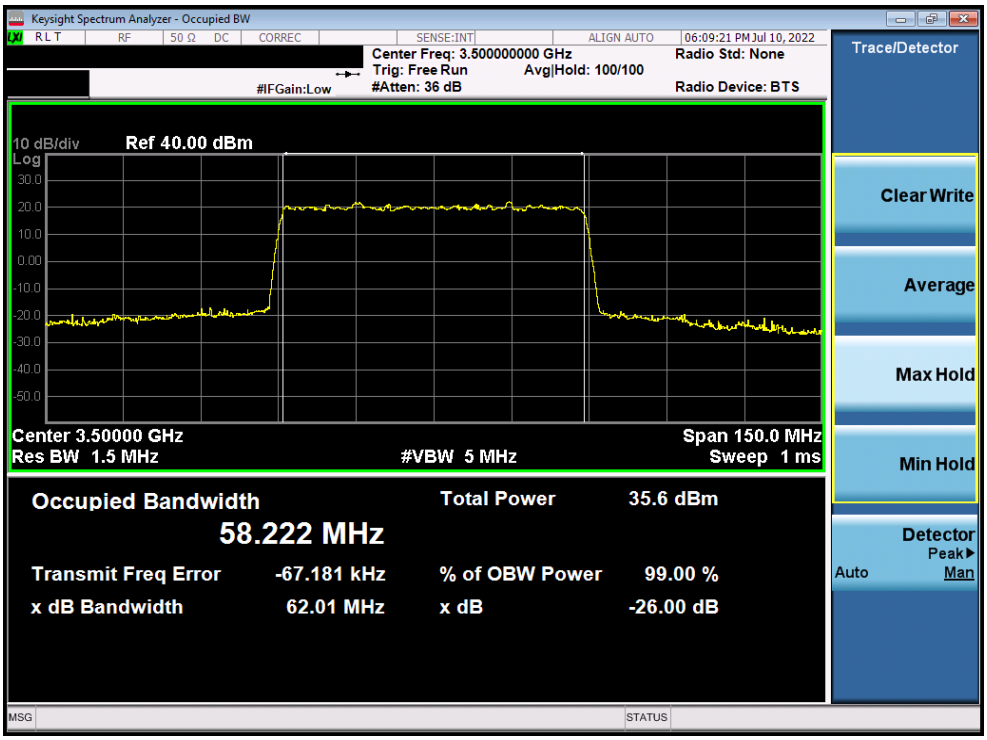


Plot 7-31. Occupied Bandwidth Plot (NR Band n77 DoD Band - 60MHz DFT-s-OFDM π/2 BPSK - Full RB)



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

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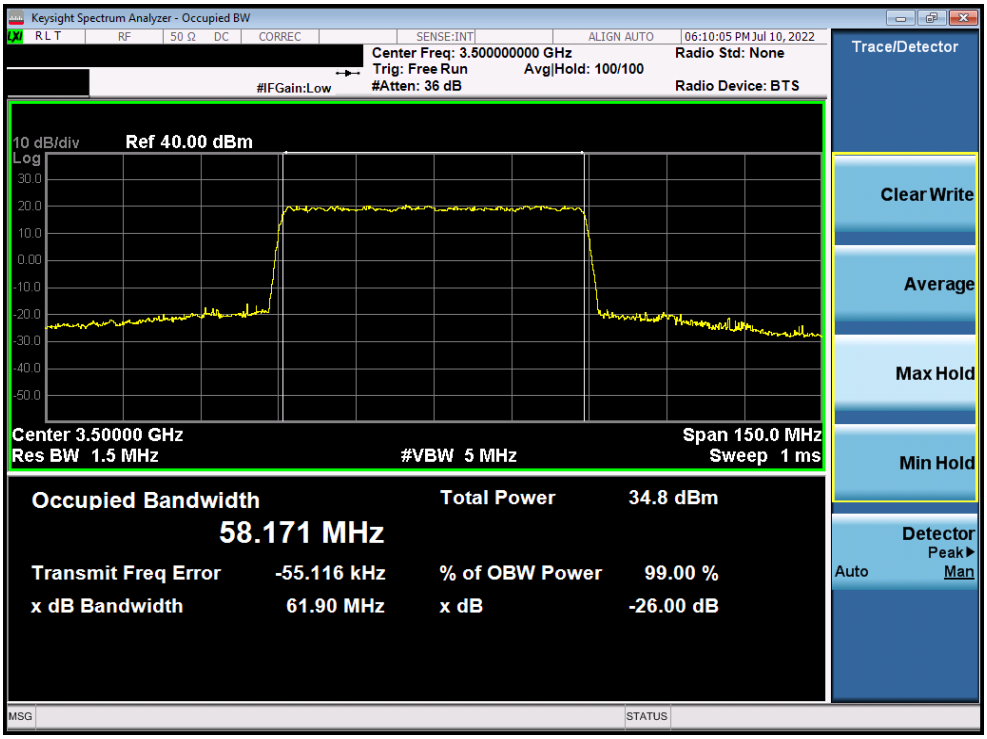
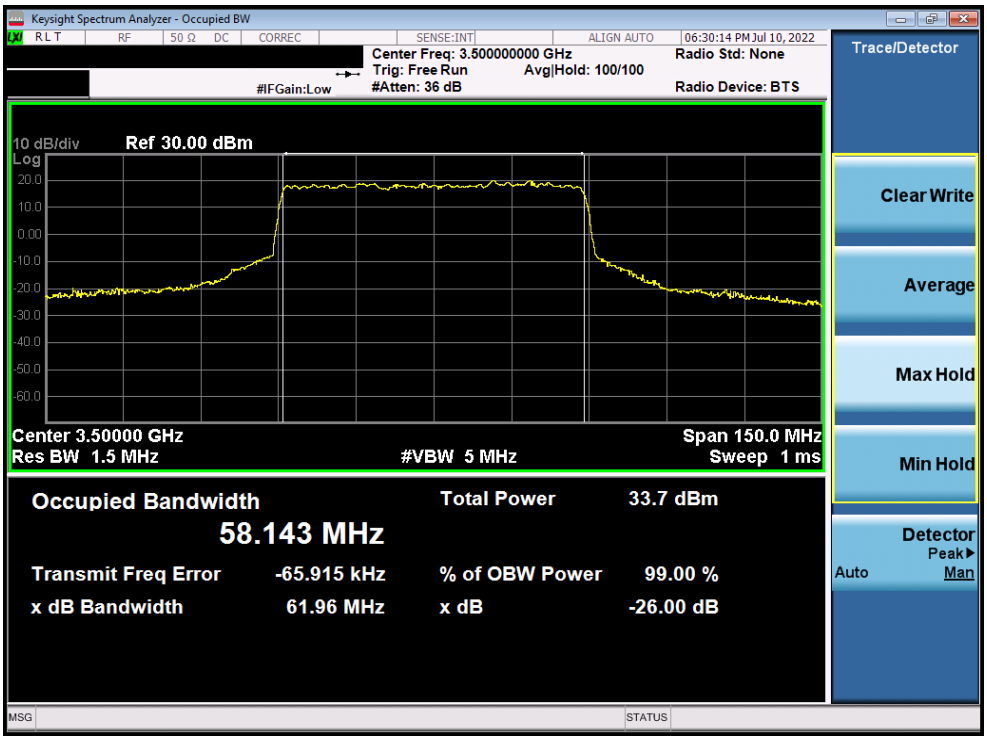


Plot 7-33. Occupied Bandwidth Plot (NR Band n77 DoD Band - 60MHz CP-OFDM 16-QAM - Full RB)



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

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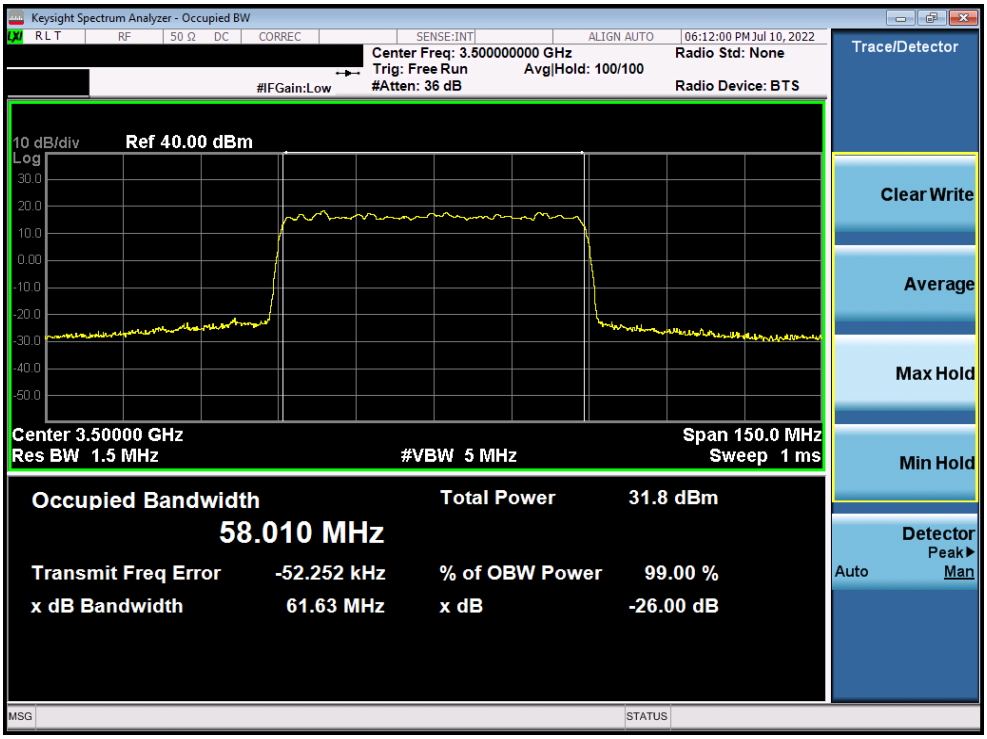
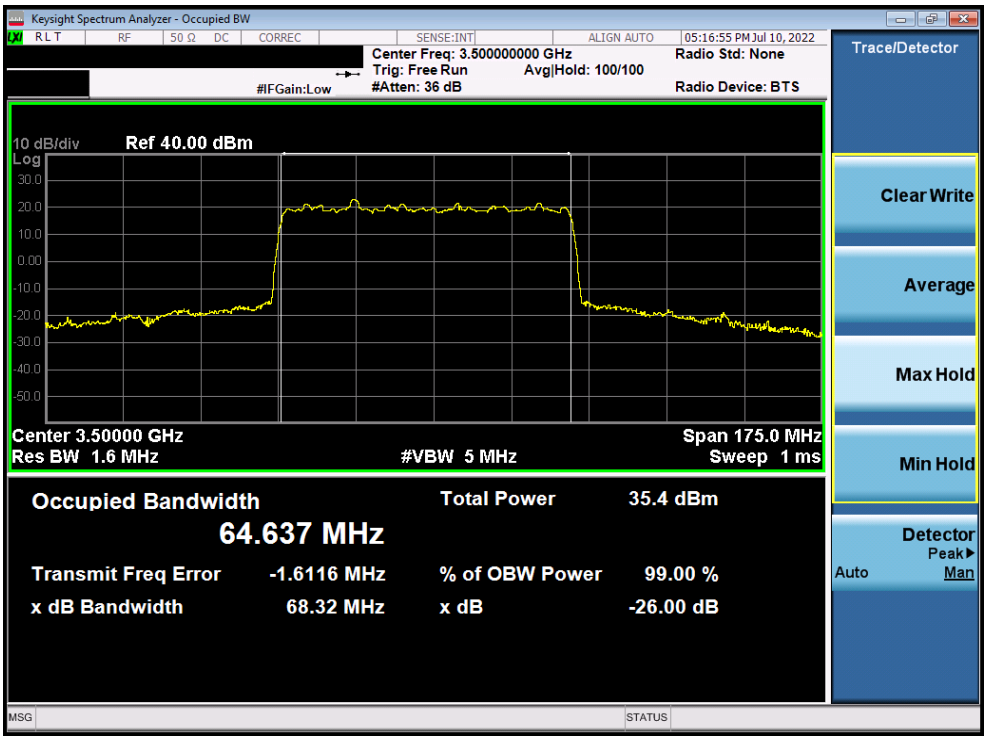


Plot 7-35. Occupied Bandwidth Plot (NR Band n77 DoD Band - 60MHz CP-OFDM 256-QAM - Full RB)



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

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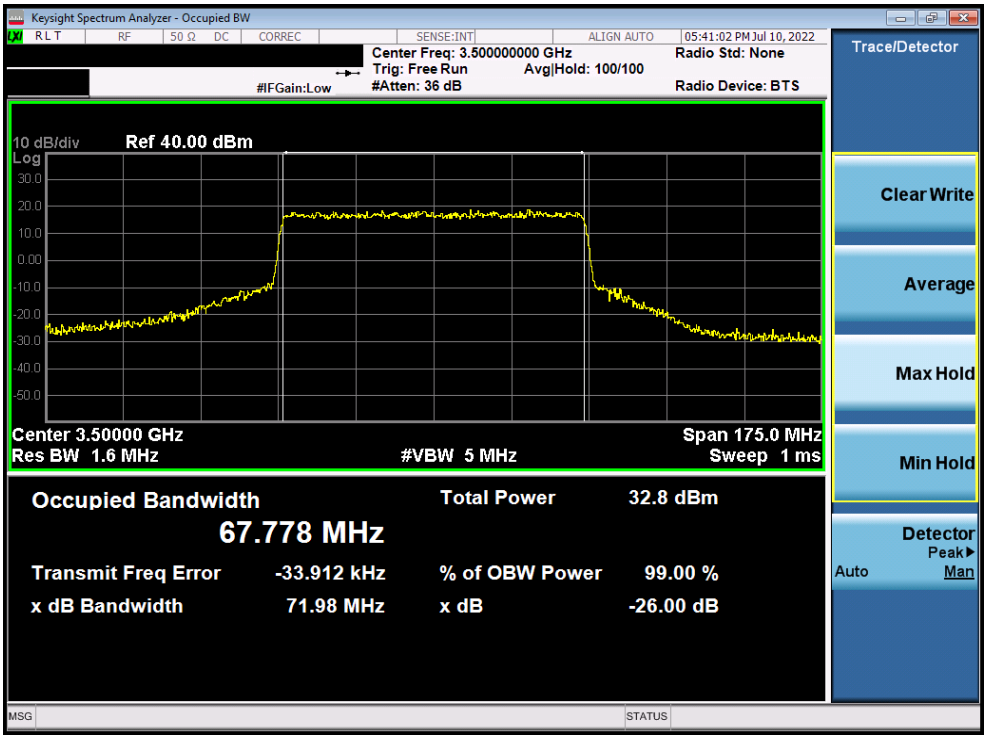
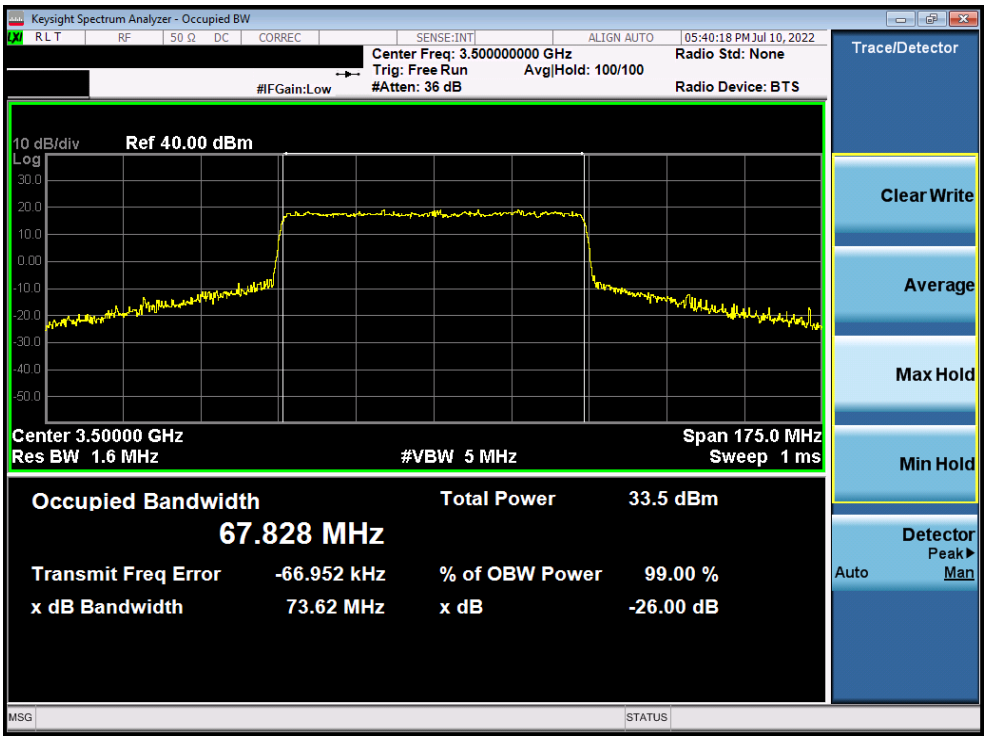


Plot 7-37. Occupied Bandwidth Plot (NR Band n77 DoD Band - 70MHz CP-OFDM QPSK - Full RB)



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

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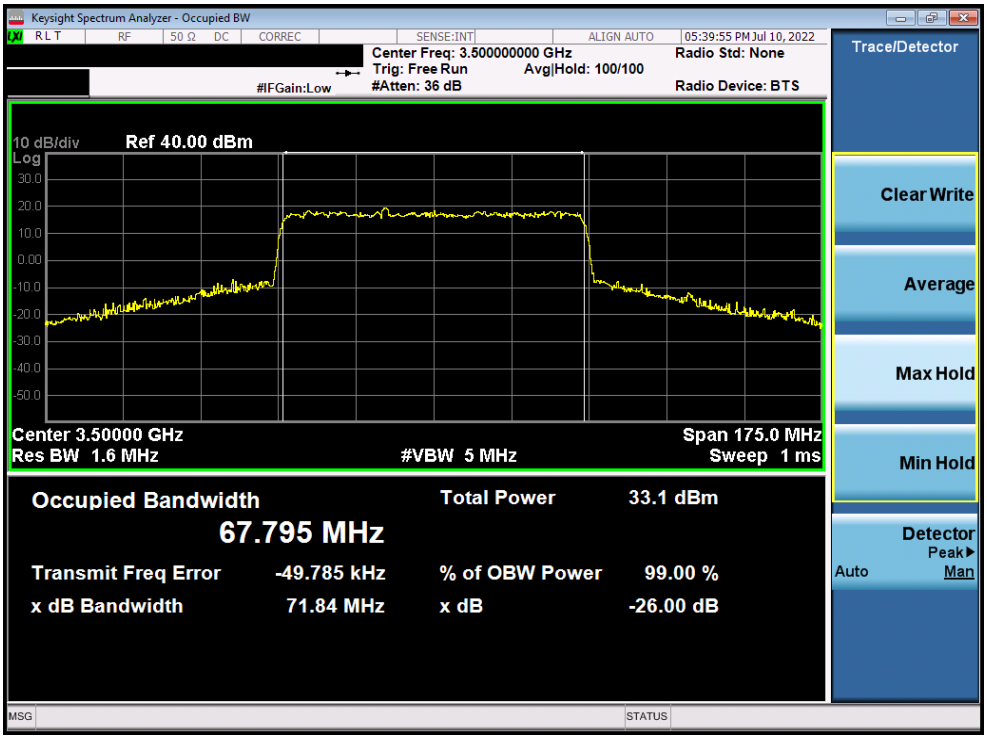
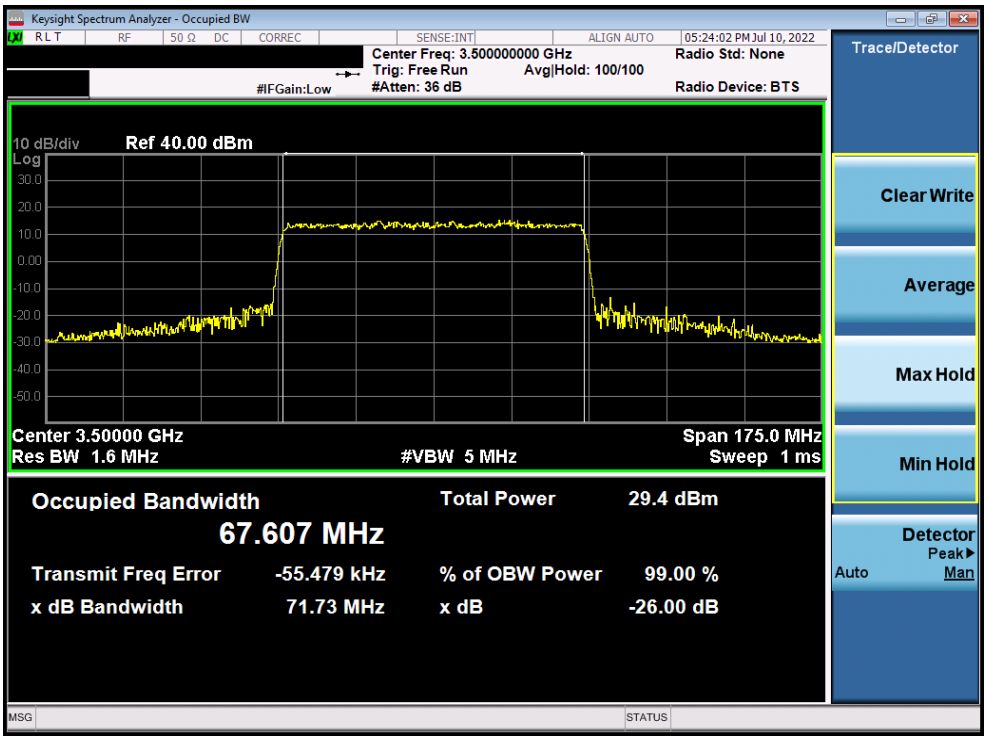


Plot 7-39. Occupied Bandwidth Plot (NR Band n77 DoD Band - 70MHz CP-OFDM 64-QAM - Full RB)



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

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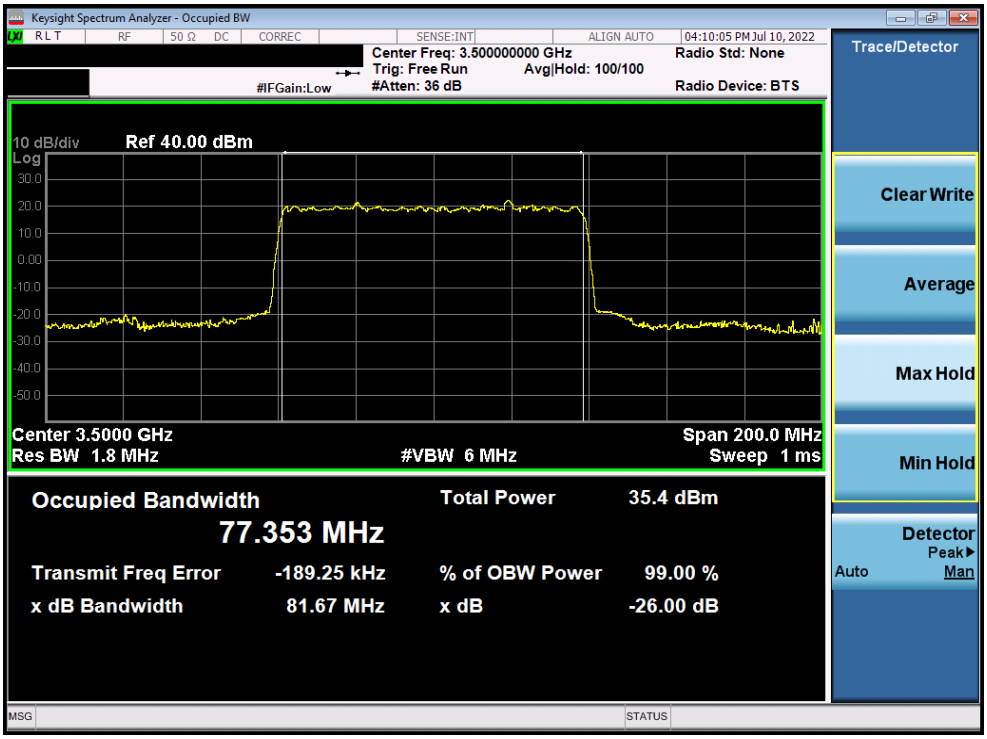
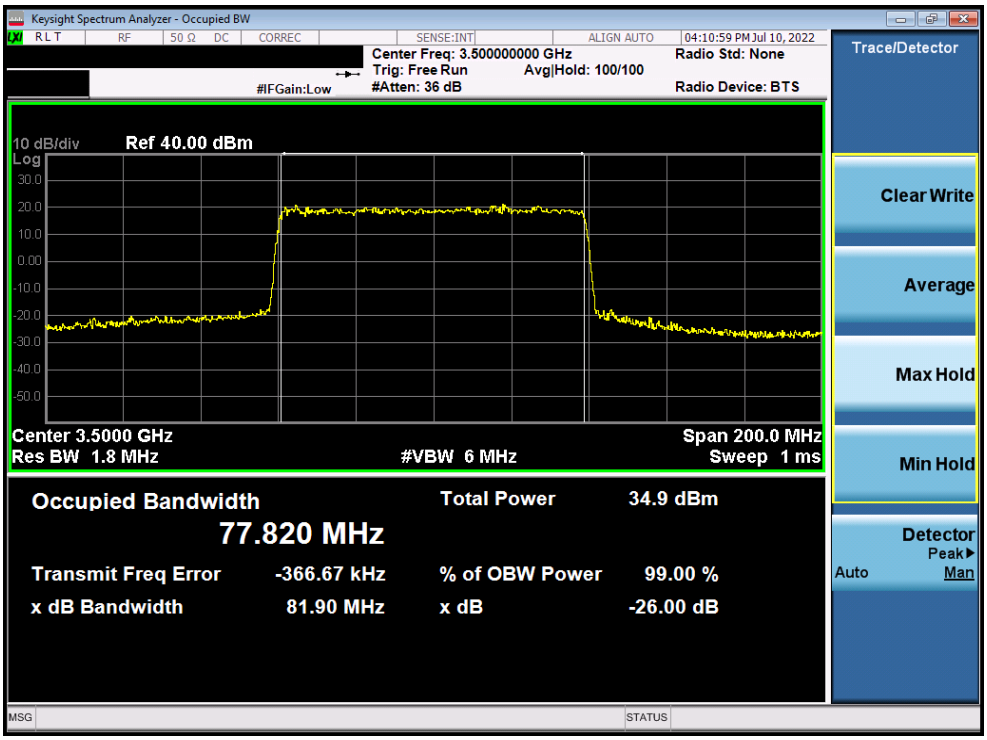


Plot 7-41. Occupied Bandwidth Plot (NR Band n77 DoD Band - 80MHz DFT-s-OFDM π/2 BPSK - Full RB)



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

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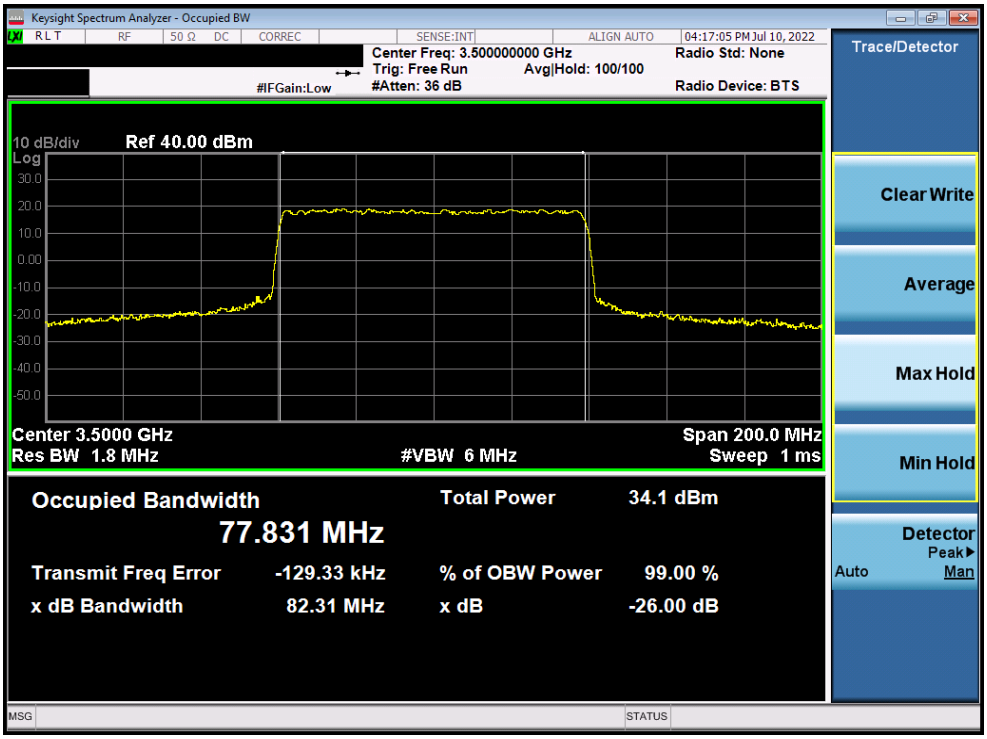
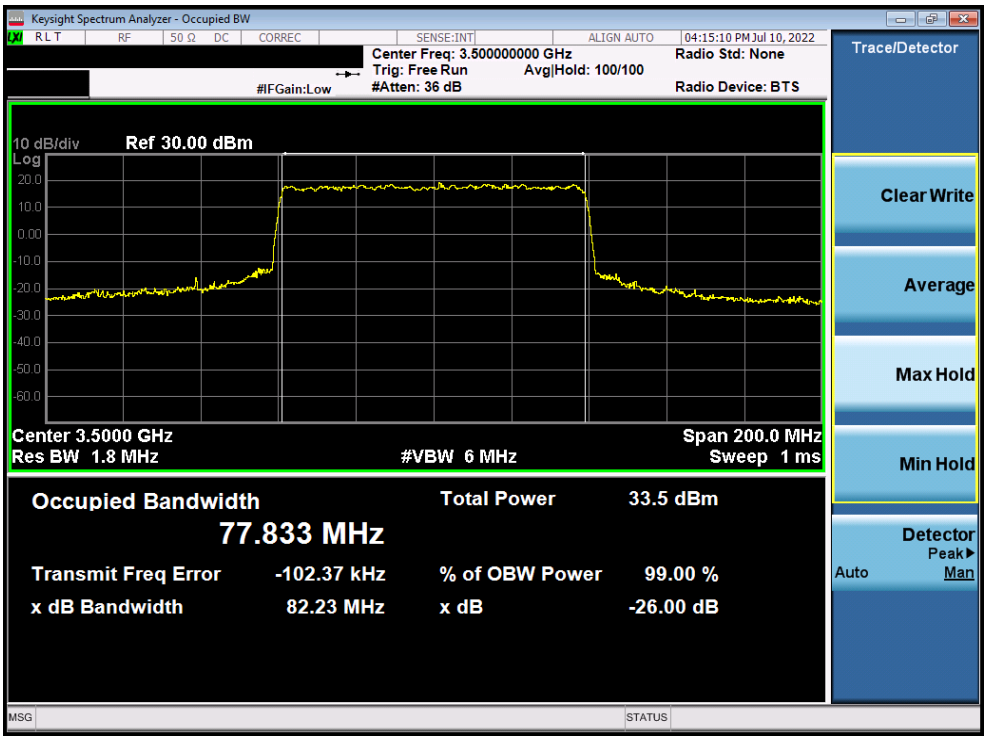


Plot 7-43. Occupied Bandwidth Plot (NR Band n77 DoD Band - 80MHz CP-OFDM 16-QAM - Full RB)



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

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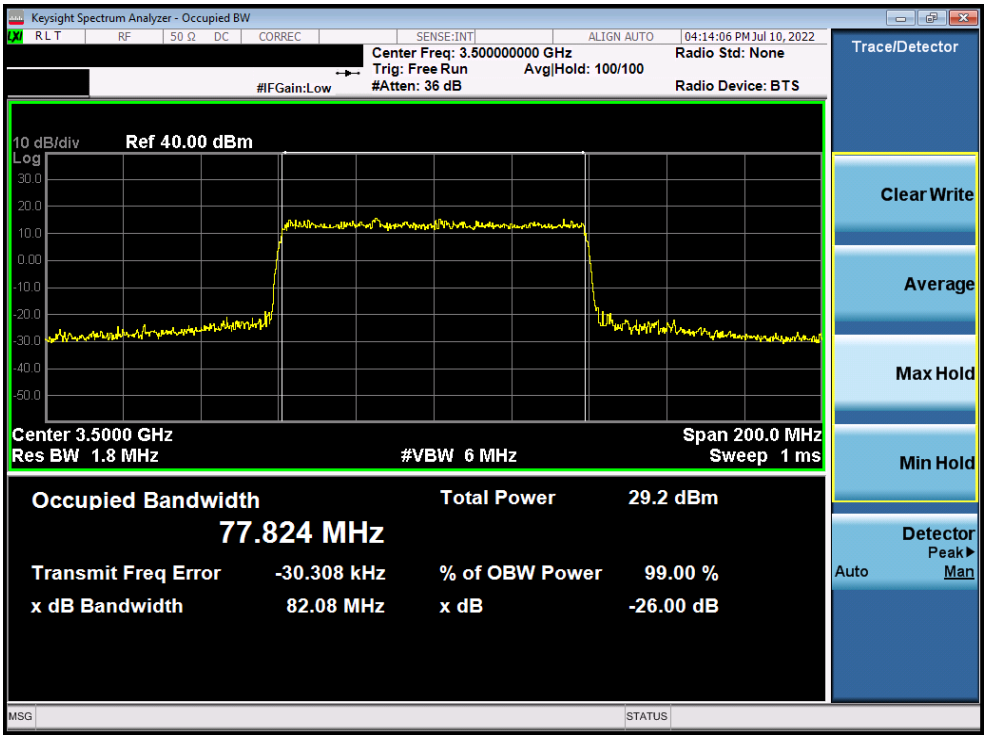
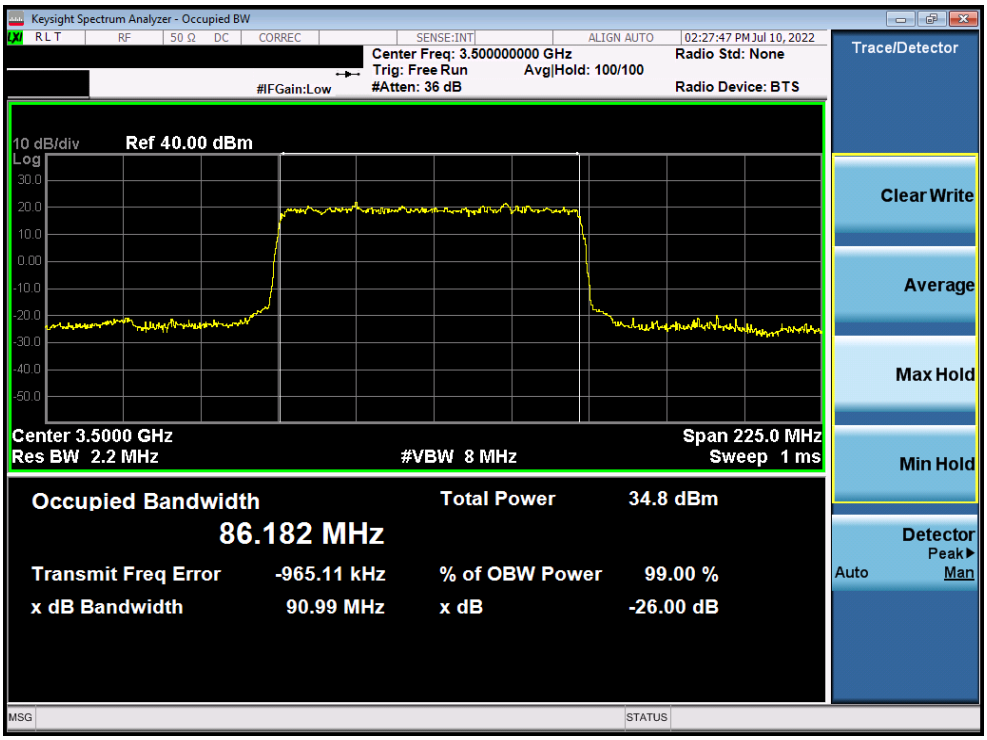


Plot 7-45. Occupied Bandwidth Plot (NR Band n77 DoD Band - 80MHz CP-OFDM 256-QAM - Full RB)



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

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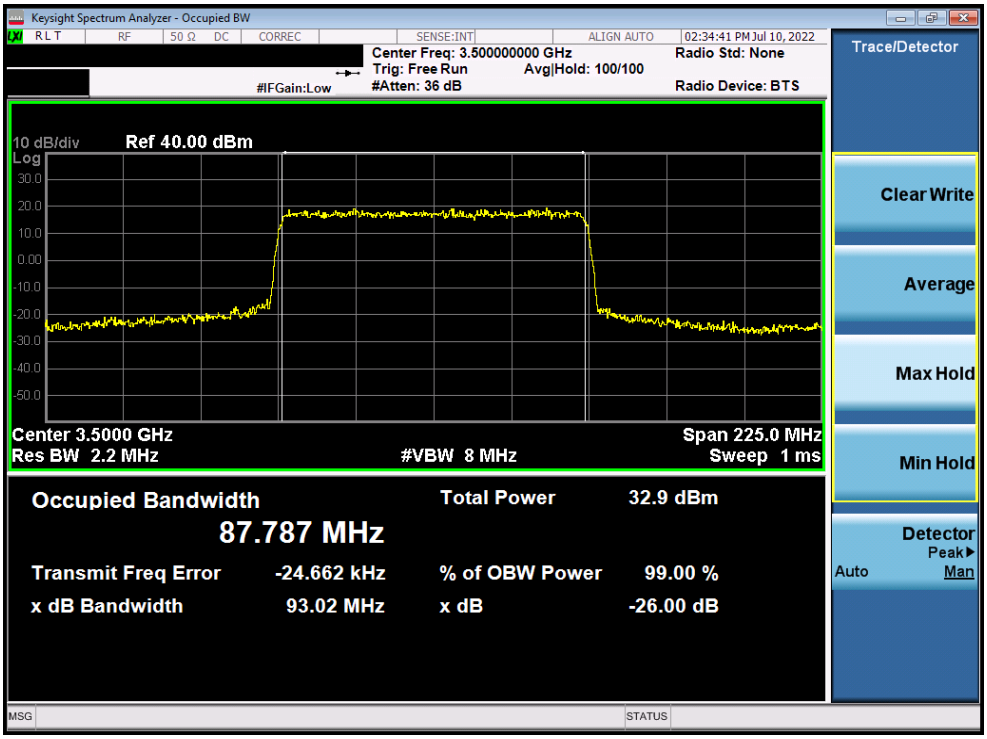
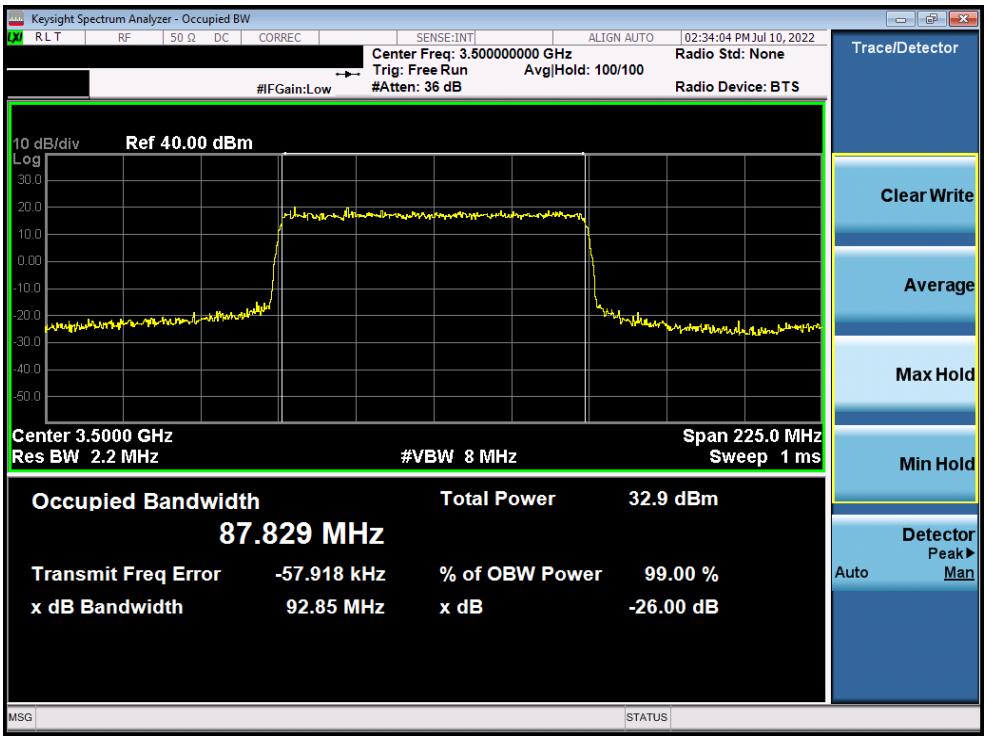


Plot 7-47. Occupied Bandwidth Plot (NR Band n77 DoD Band - 90MHz CP-OFDM QPSK - Full RB)



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

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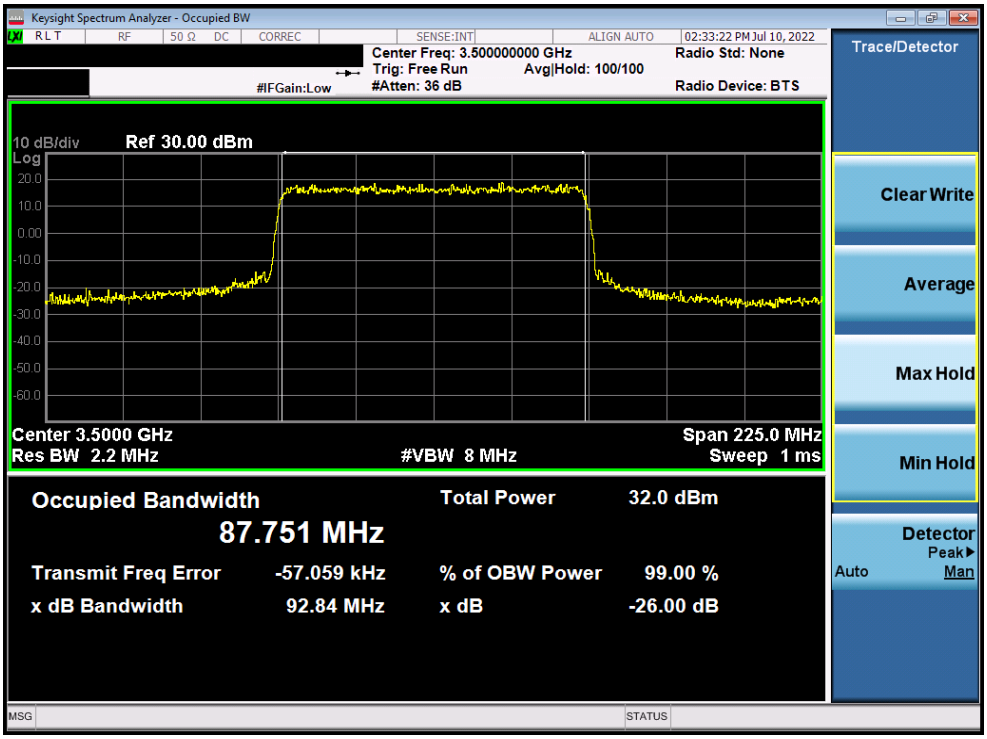
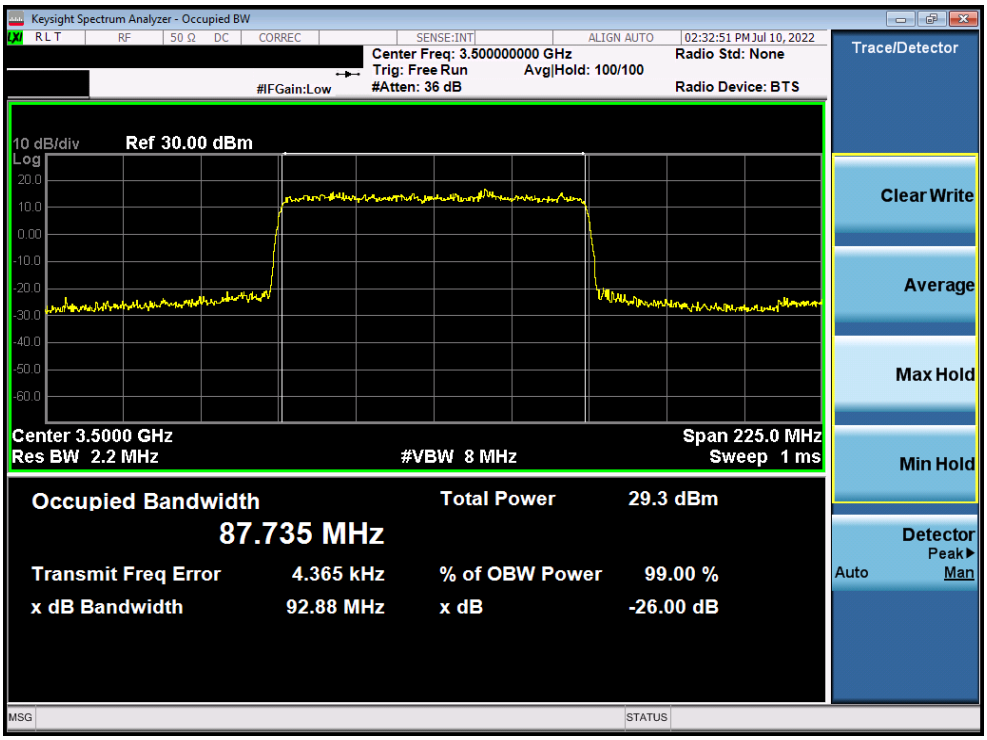


Plot 7-49. Occupied Bandwidth Plot (NR Band n77 DoD Band - 90MHz CP-OFDM 64-QAM - Full RB)



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

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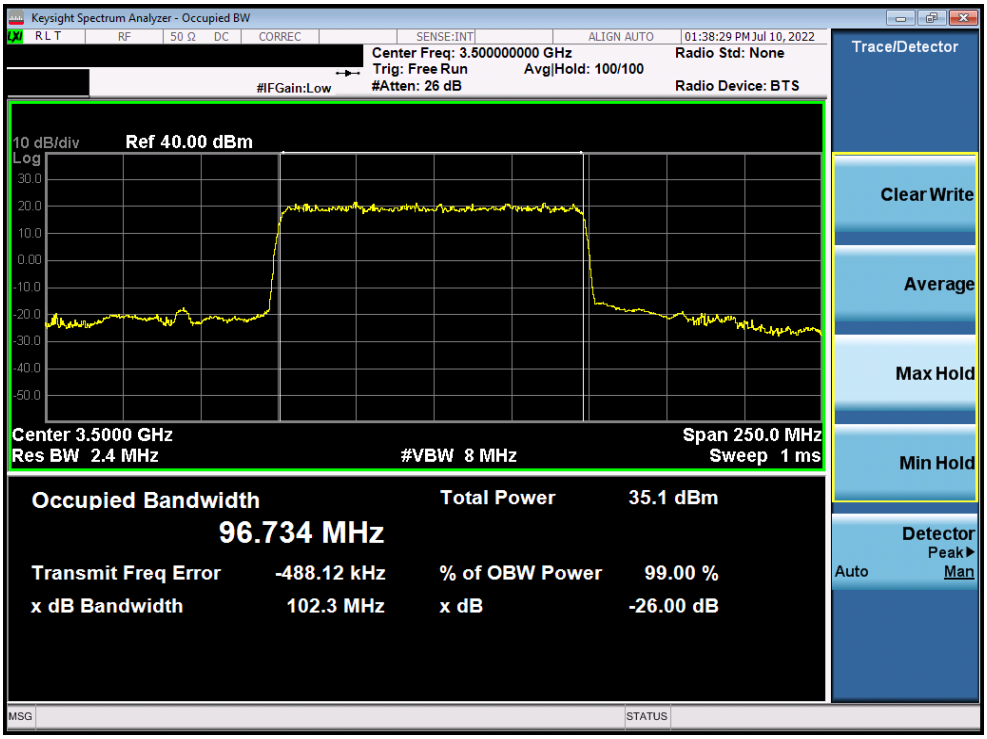
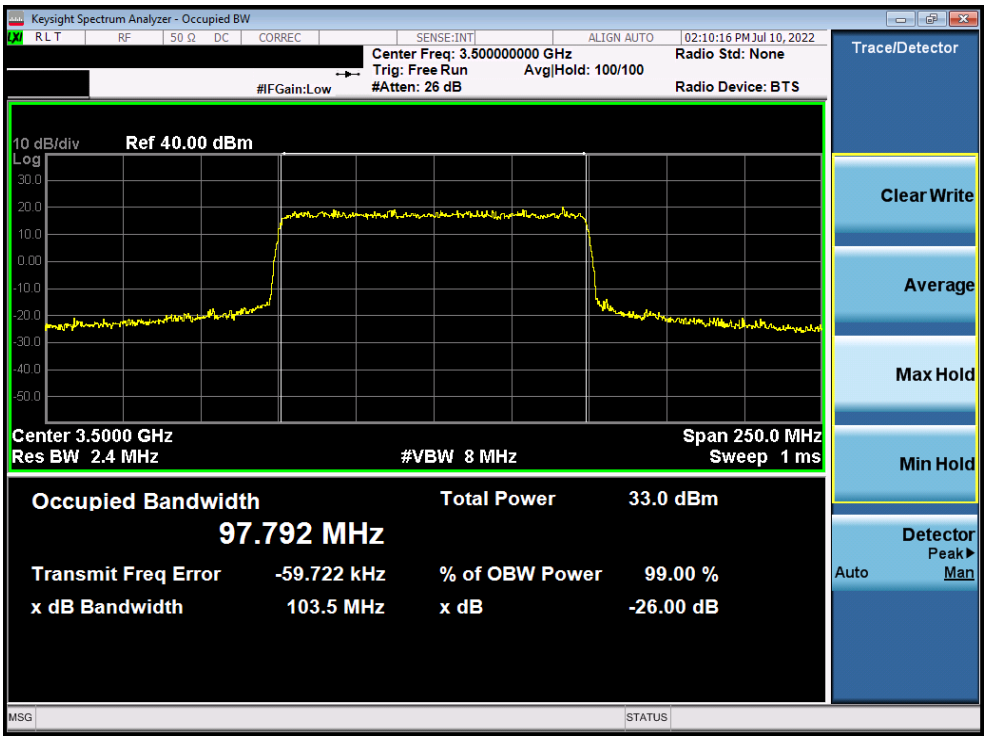


Plot 7-51. Occupied Bandwidth Plot (NR Band n77 DoD Band - 100MHz DFT-s-OFDM π/2 BPSK - Full RB)



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

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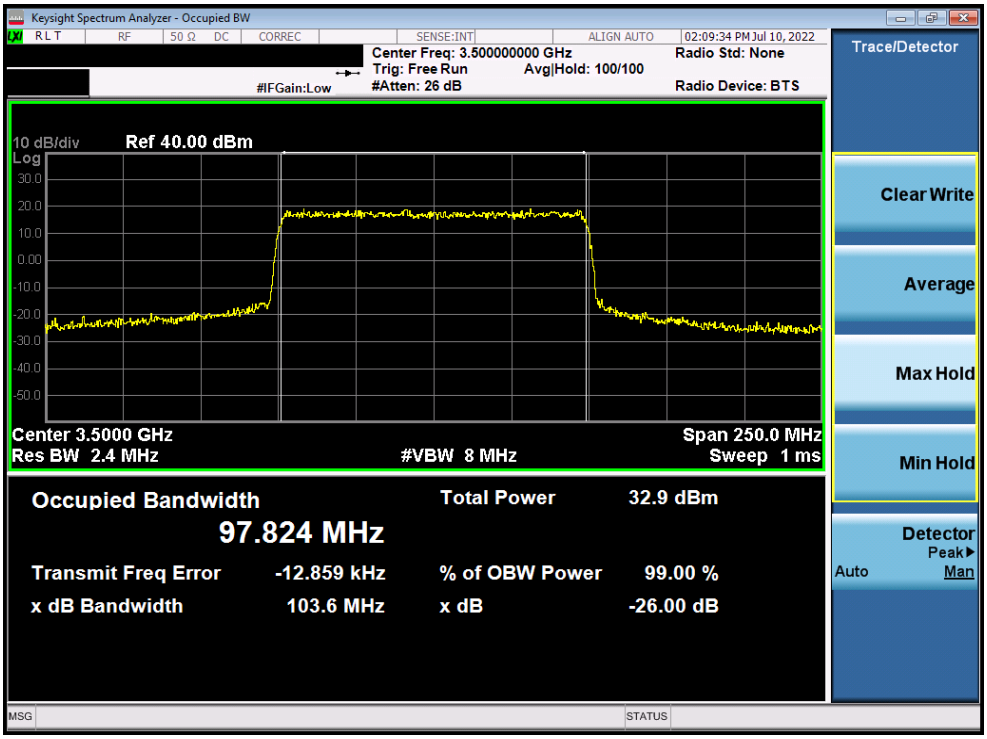
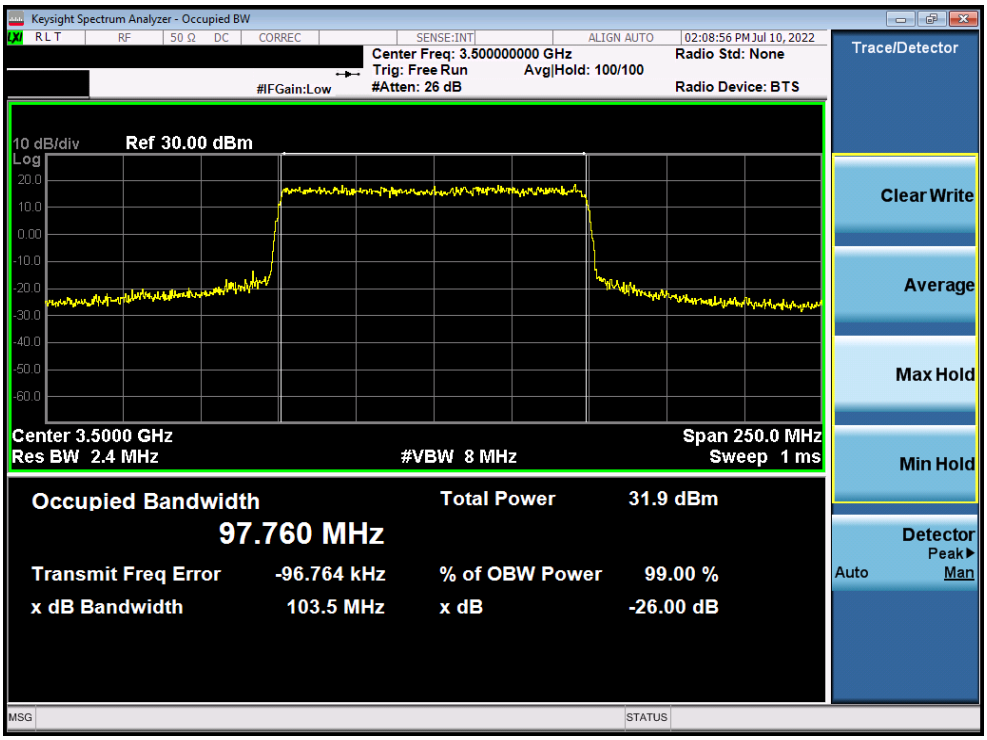


Plot 7-53. Occupied Bandwidth Plot (NR Band n77 DoD Band - 100MHz CP-OFDM 16-QAM - Full RB)



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

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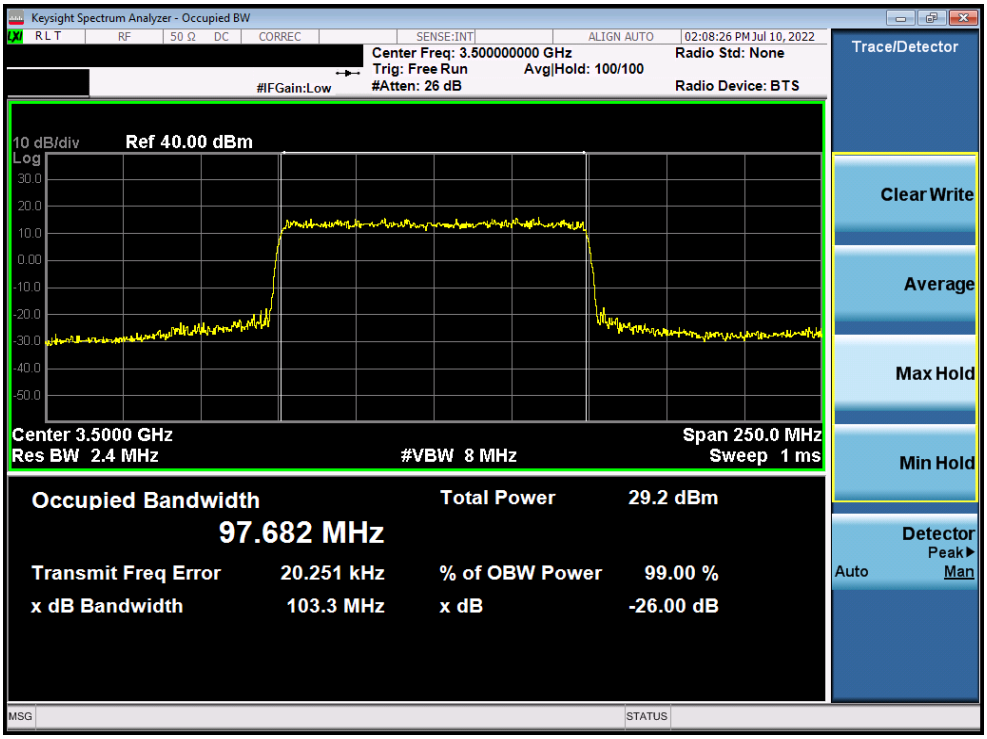

Plot 7-55. Occupied Bandwidth Plot (NR Band n77 DoD Band - 100MHz CP-OFDM 256-QAM - Full RB)

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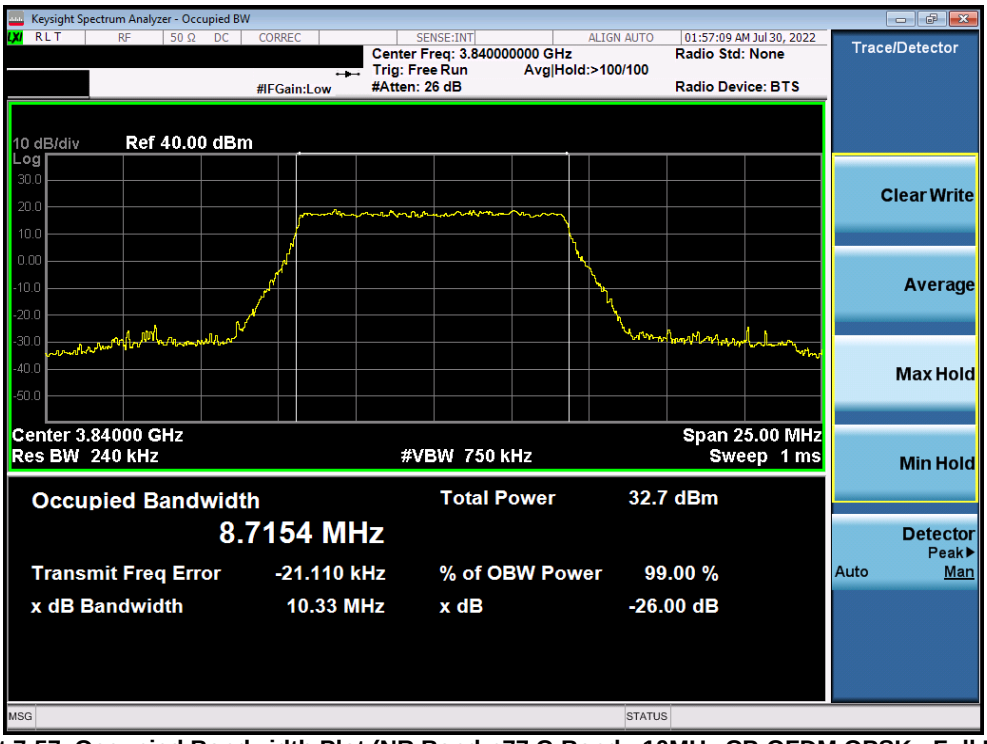
Plot 7-56. Occupied Bandwidth Plot (NR Band n77 C-Band - 10MHz DFT-s-OFDM π/2 BPSK - Full RB)



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

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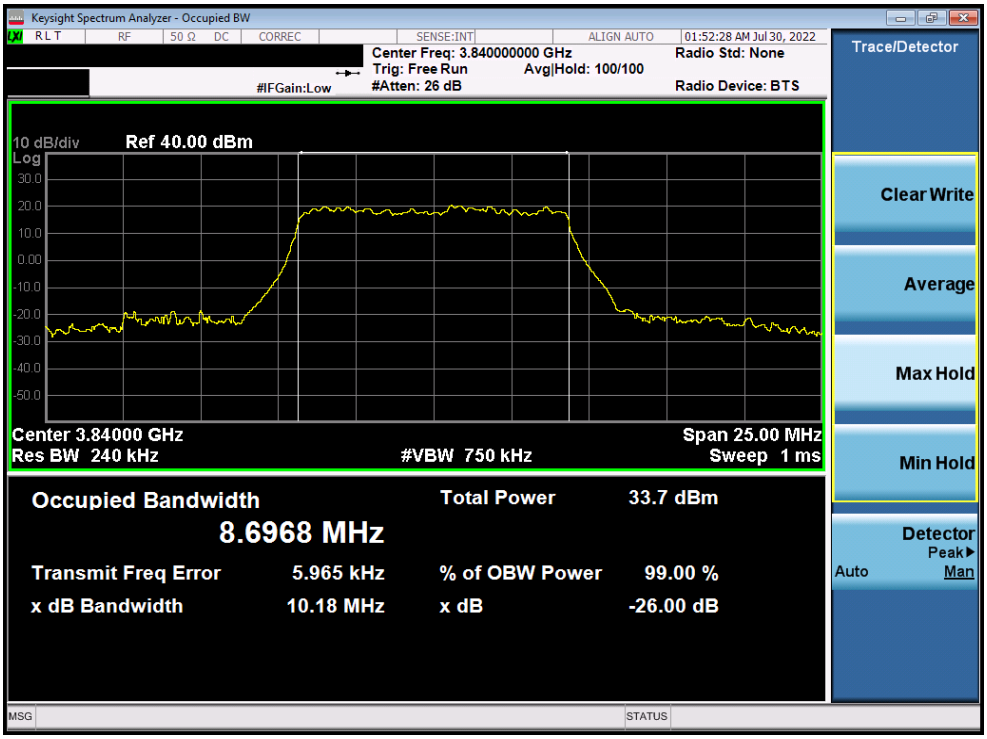
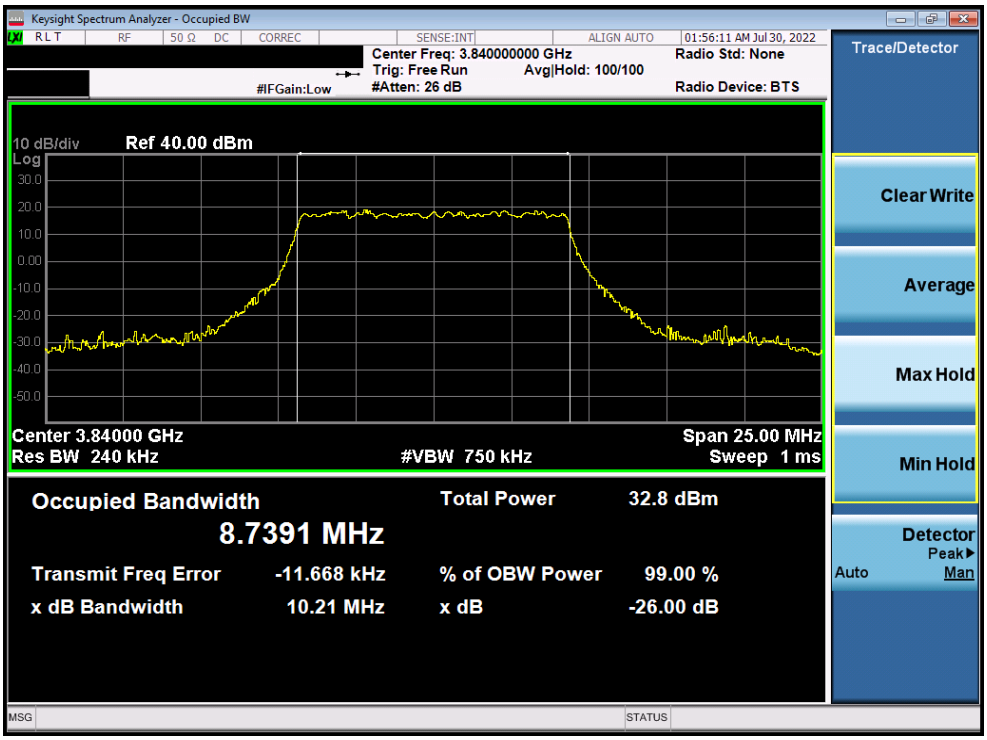


Plot 7-58. Occupied Bandwidth Plot (NR Band n77 C-Band - 10MHz CP-OFDM 16-QAM - Full RB)



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

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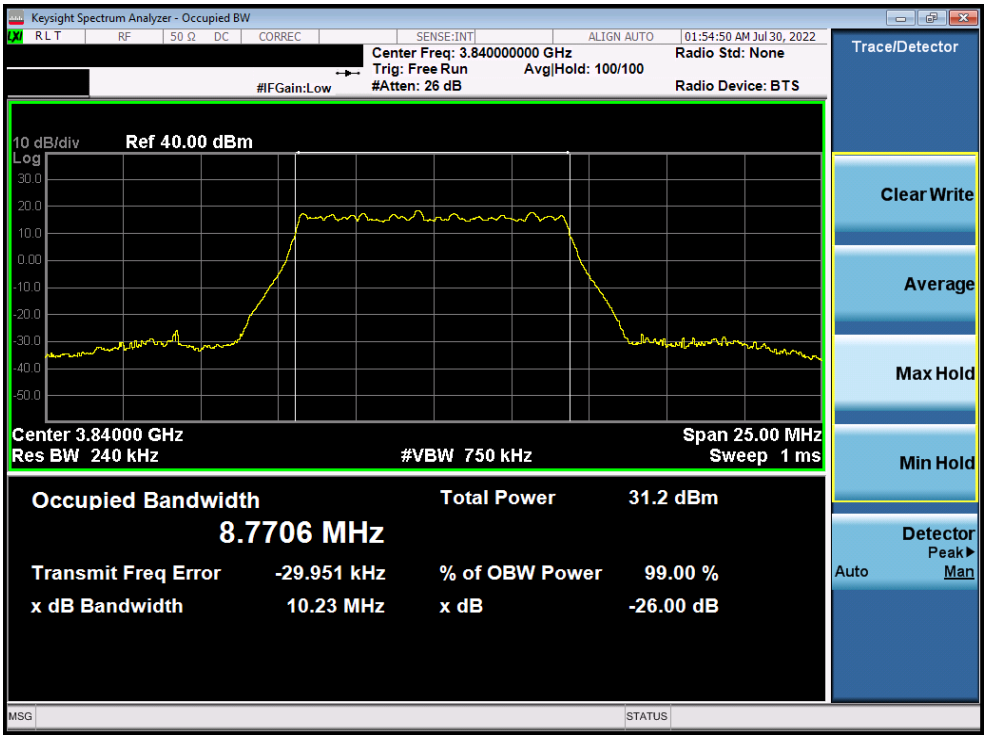
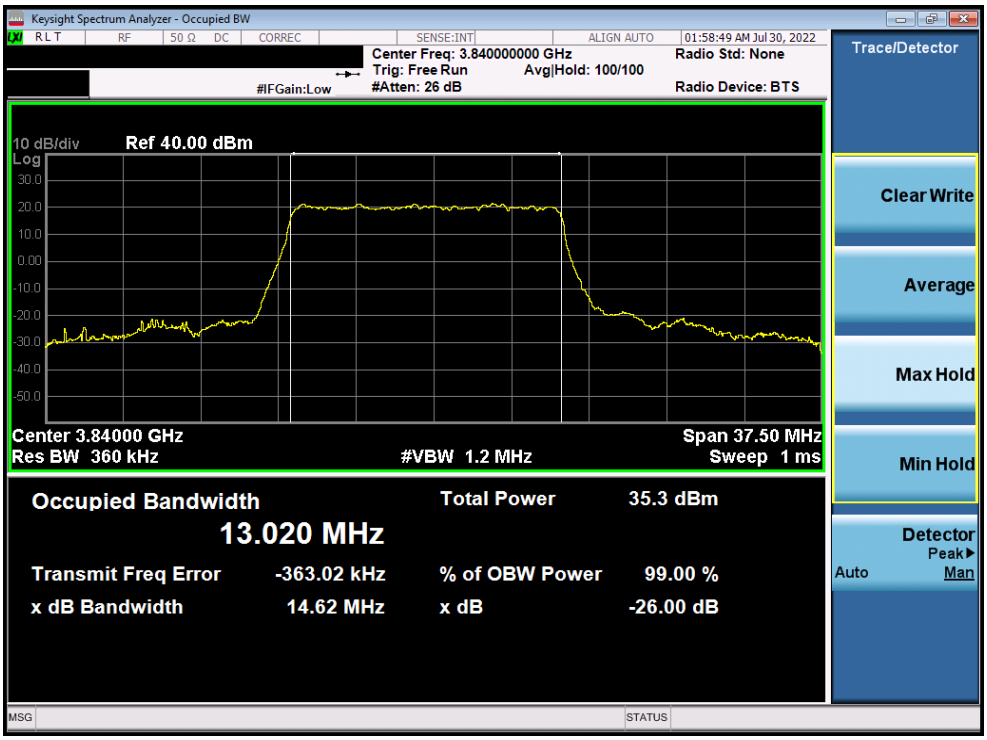


Plot 7-60. Occupied Bandwidth Plot (NR Band n77 C-Band - 10MHz CP-OFDM 256-QAM - Full RB)



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

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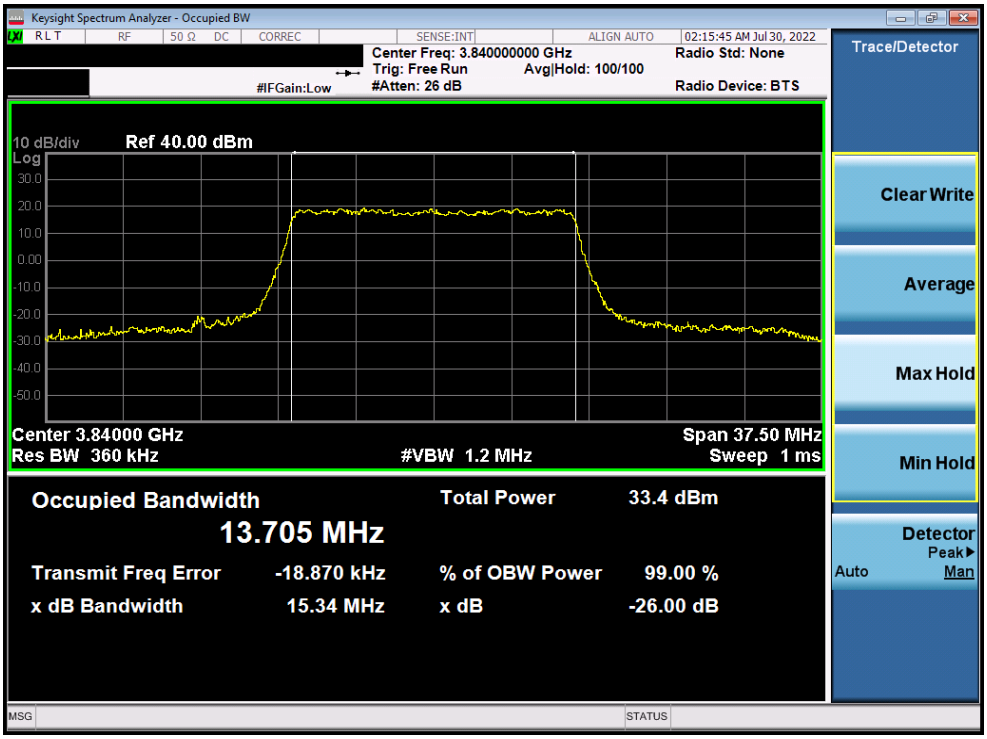
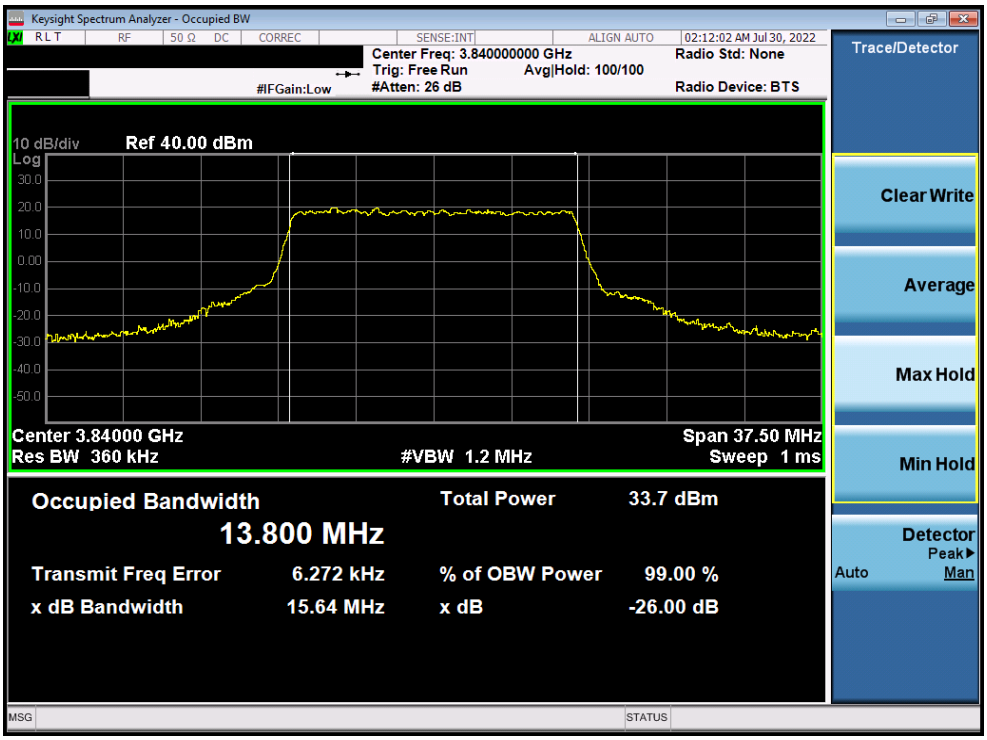


Plot 7-62. Occupied Bandwidth Plot (NR Band n77 C-Band - 15MHz CP-OFDM QPSK - Full RB)



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

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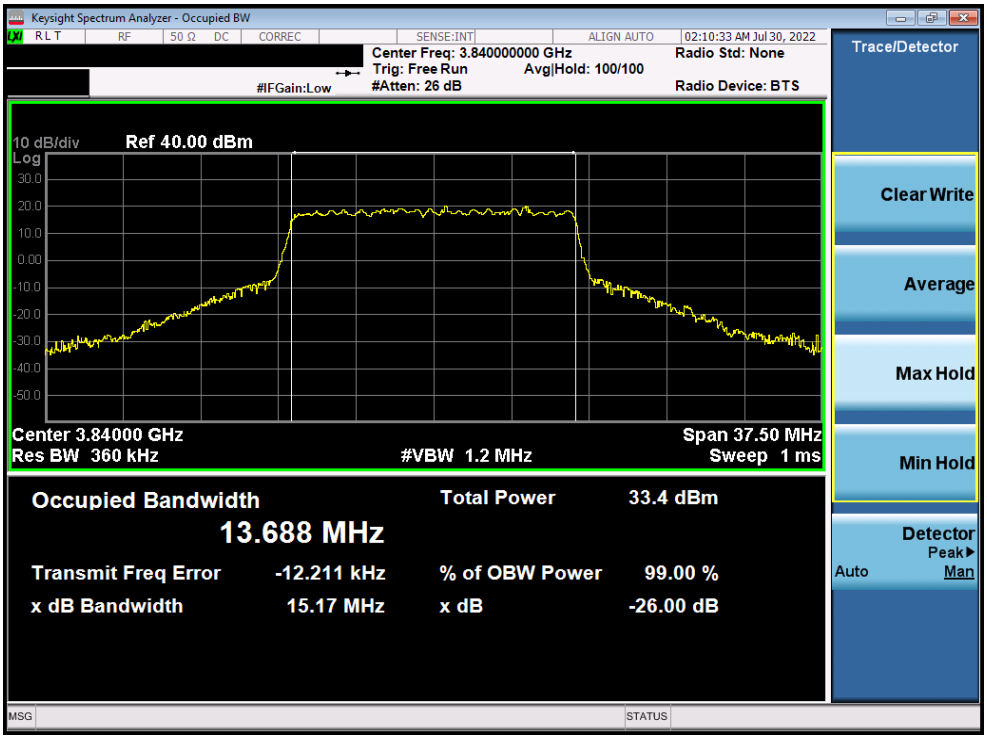
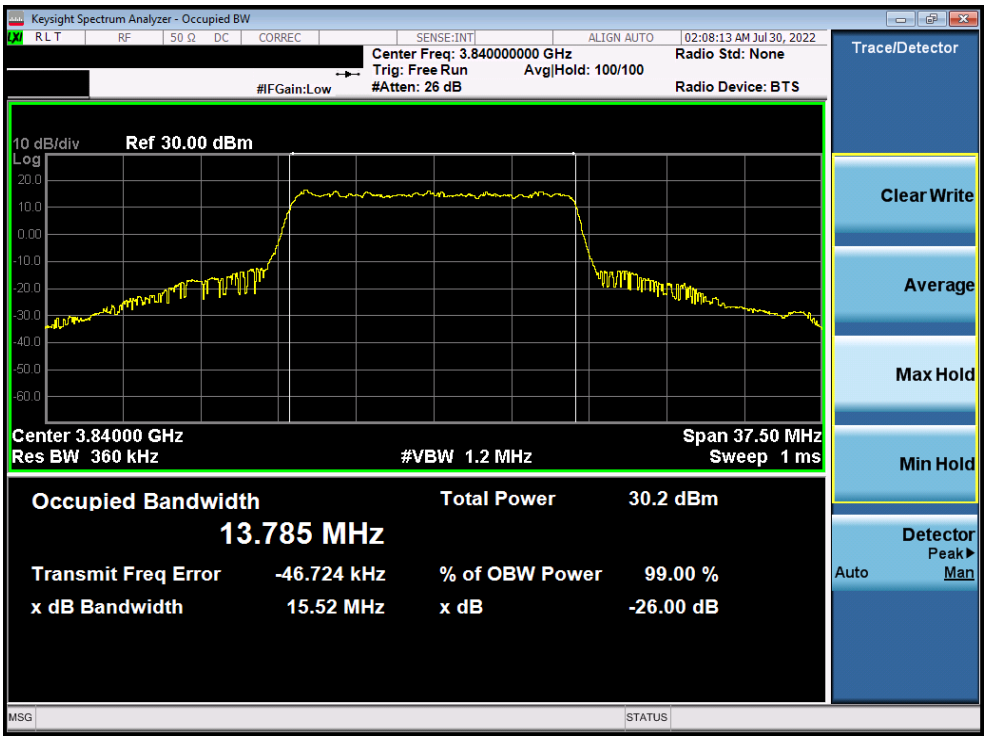


Plot 7-64. Occupied Bandwidth Plot (NR Band n77 C-Band - 15MHz CP-OFDM 64-QAM - Full RB)



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

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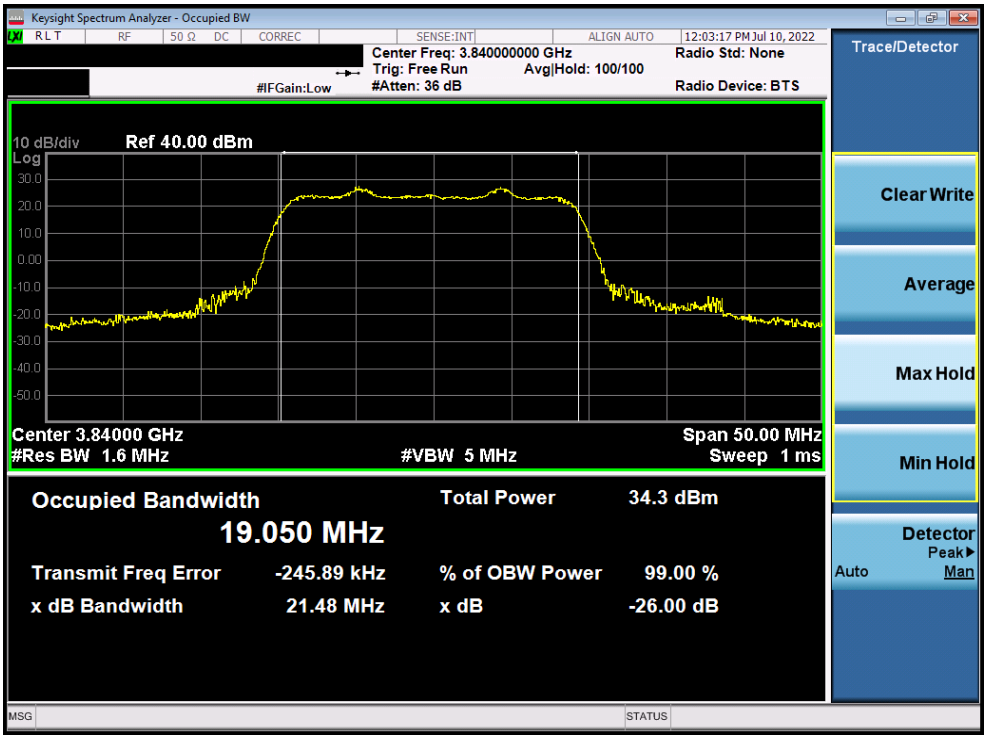
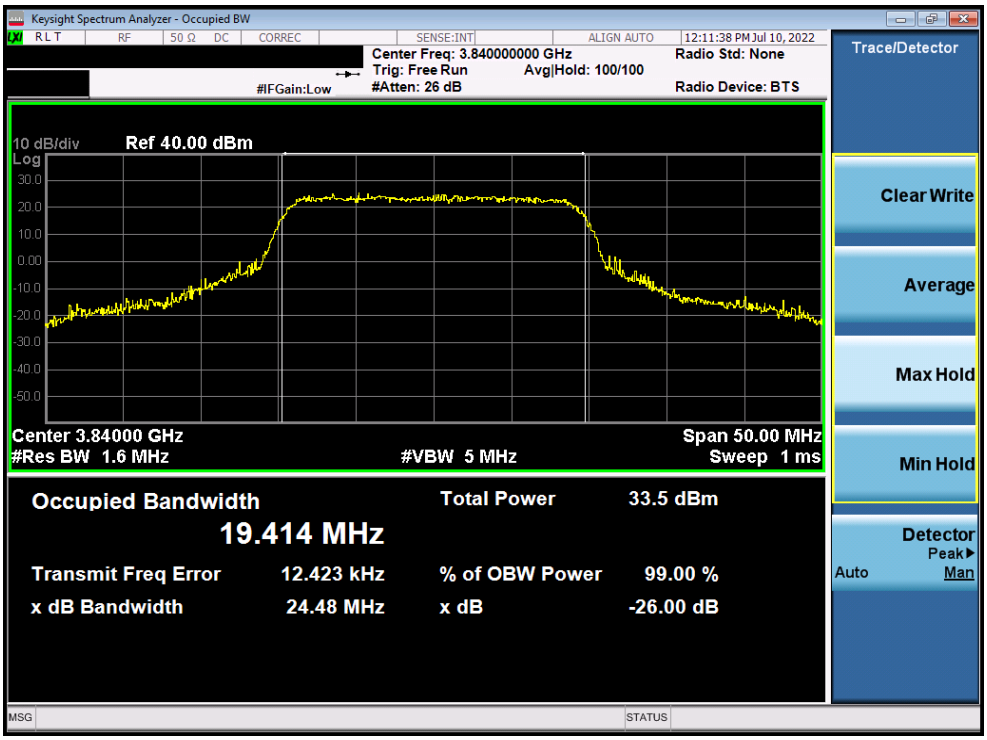


Plot 7-66. Occupied Bandwidth Plot (NR Band n77 C-Band - 20MHz DFT-s-OFDM π/2 BPSK - Full RB)



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

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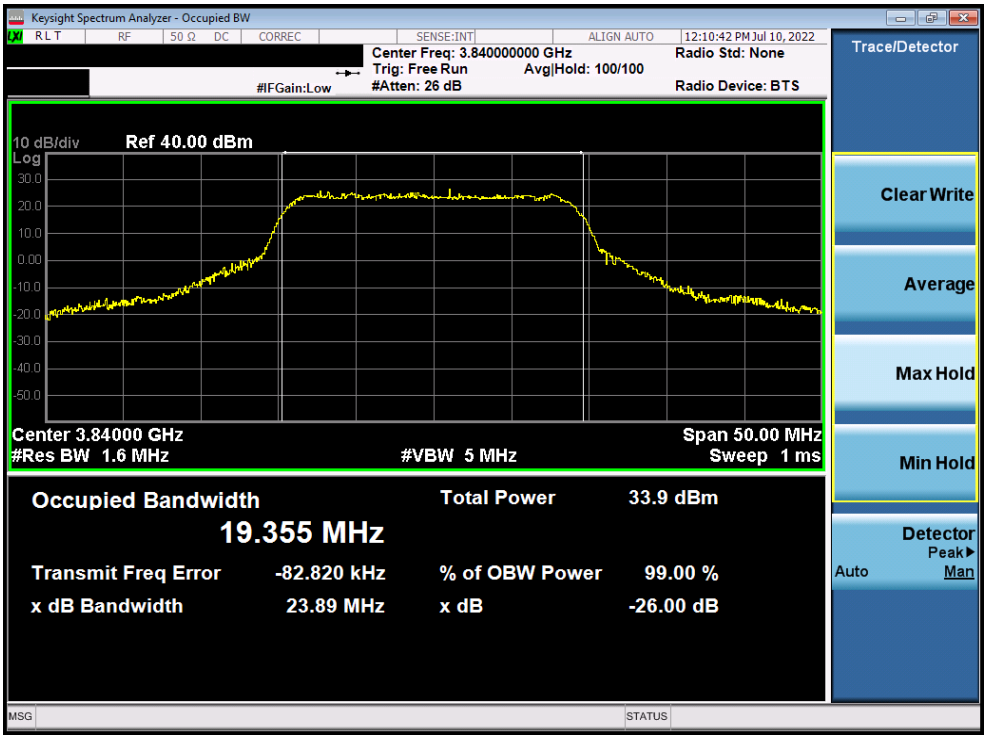
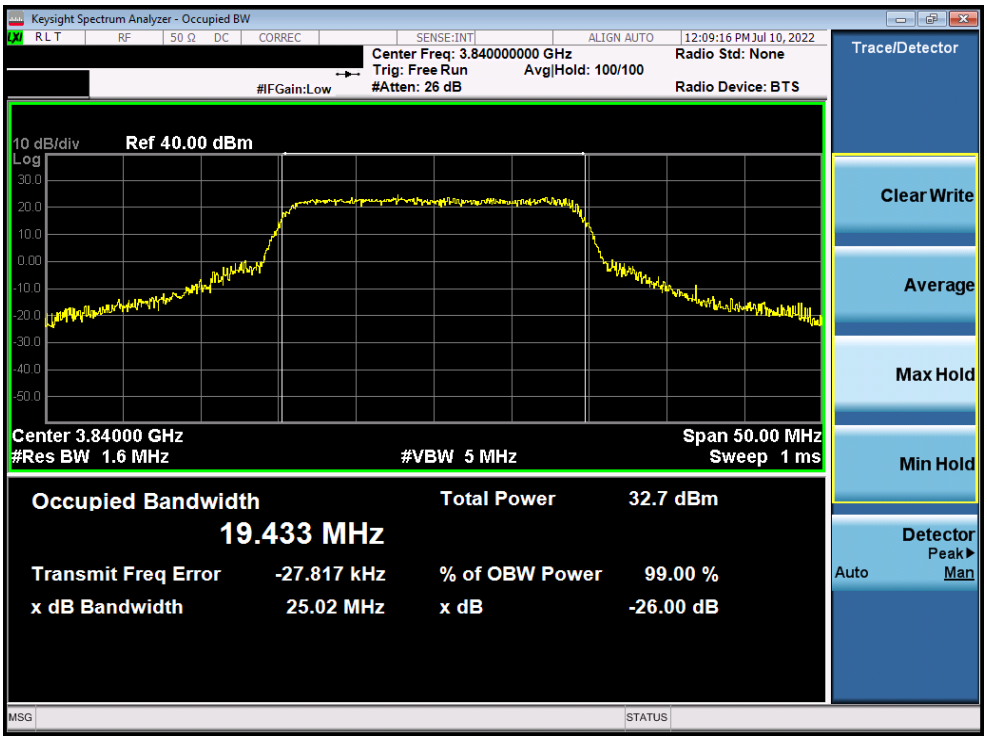


Plot 7-68. Occupied Bandwidth Plot (NR Band n77 C-Band - 20MHz CP-OFDM 16-QAM - Full RB)



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

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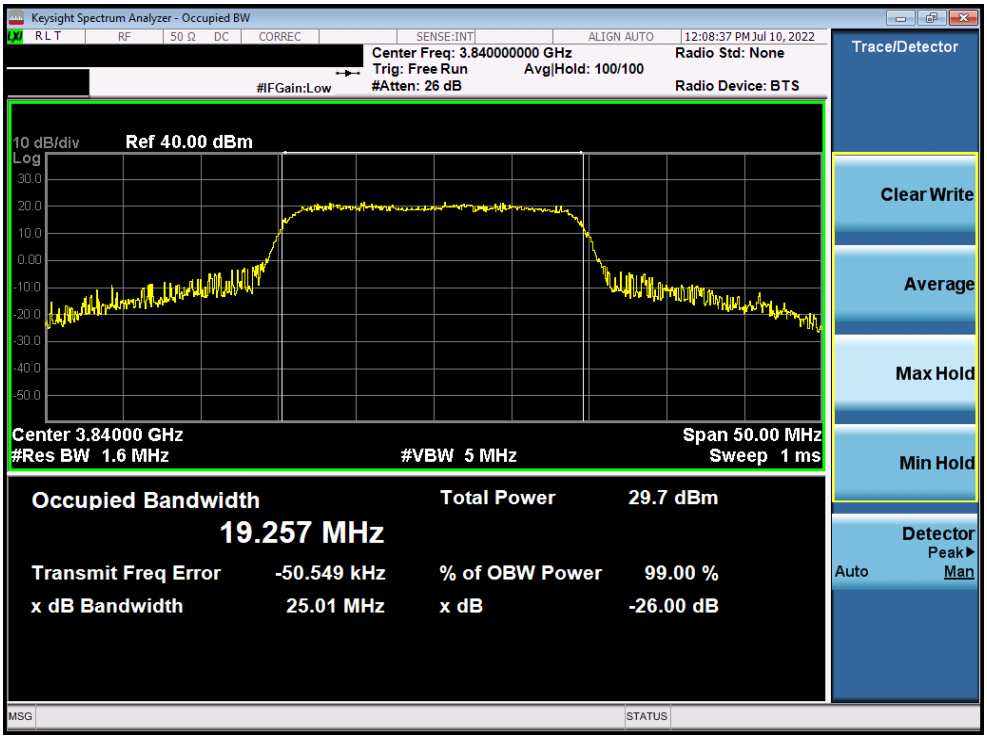
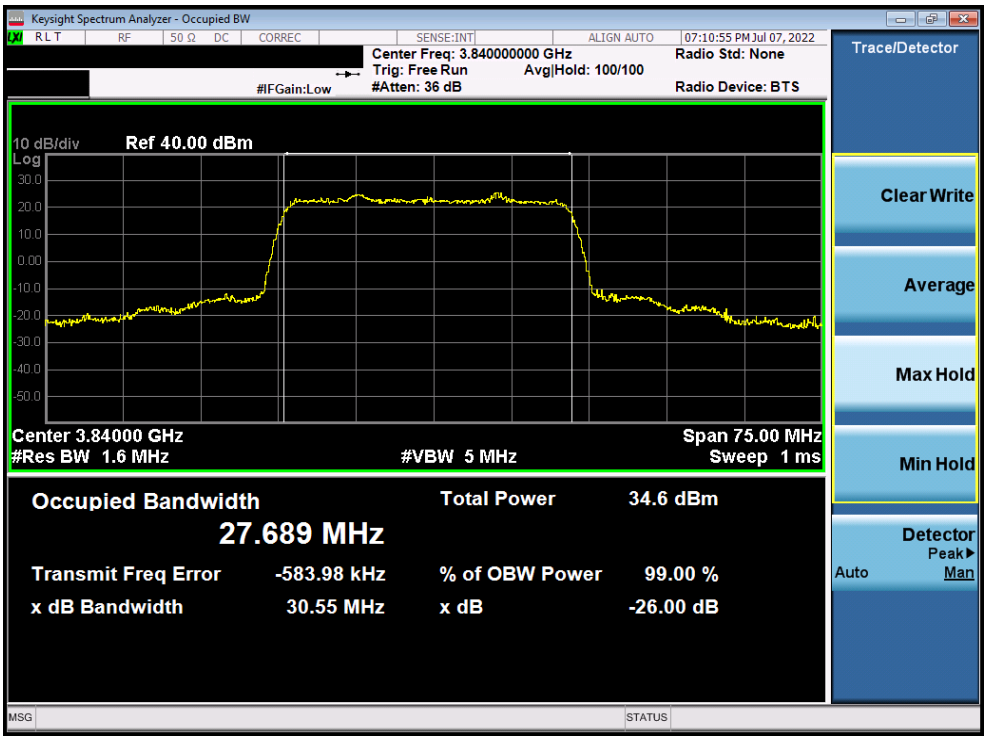


Plot 7-70. Occupied Bandwidth Plot (NR Band n77 C-Band - 20MHz CP-OFDM 256-QAM - Full RB)



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

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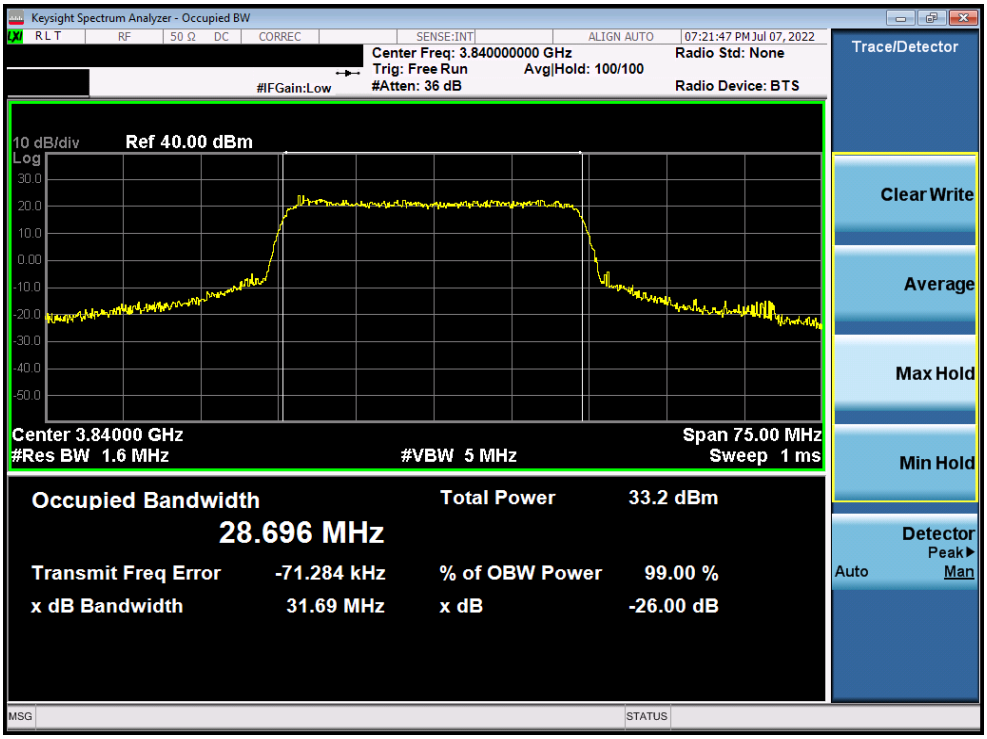
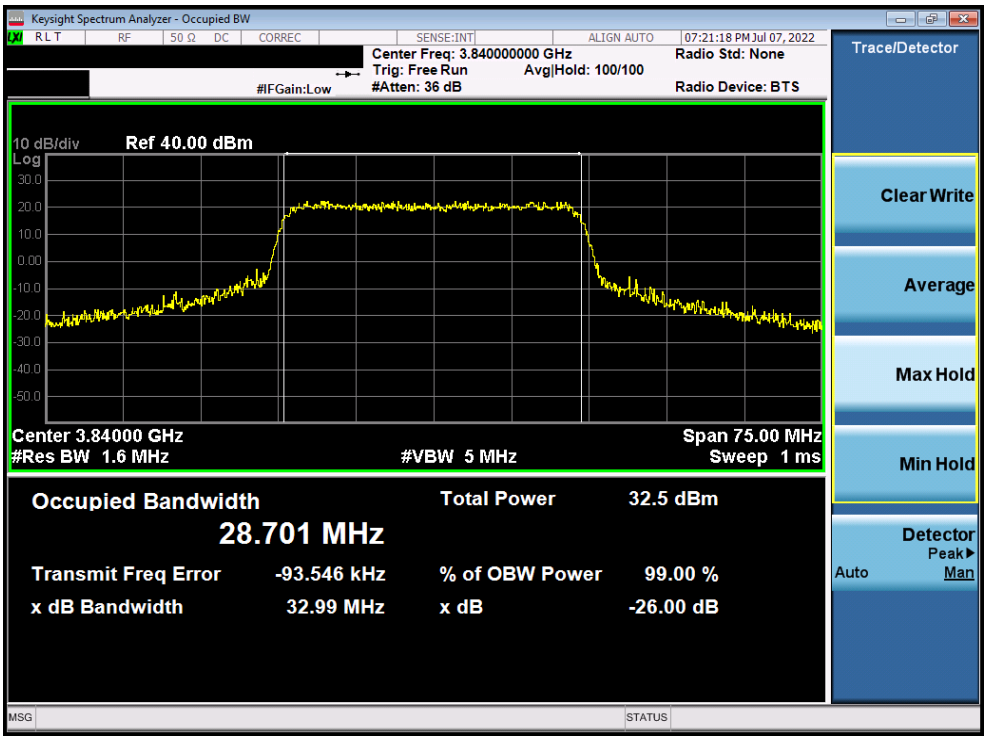


Plot 7-72. Occupied Bandwidth Plot (NR Band n77 C-Band - 30MHz CP-OFDM QPSK - Full RB)



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

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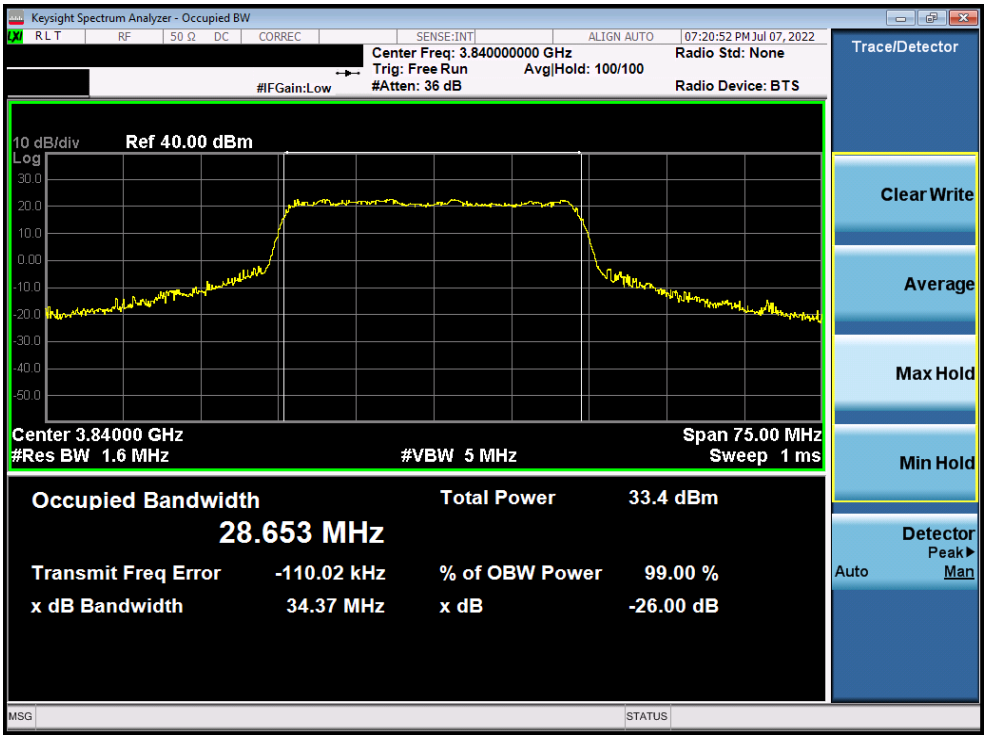
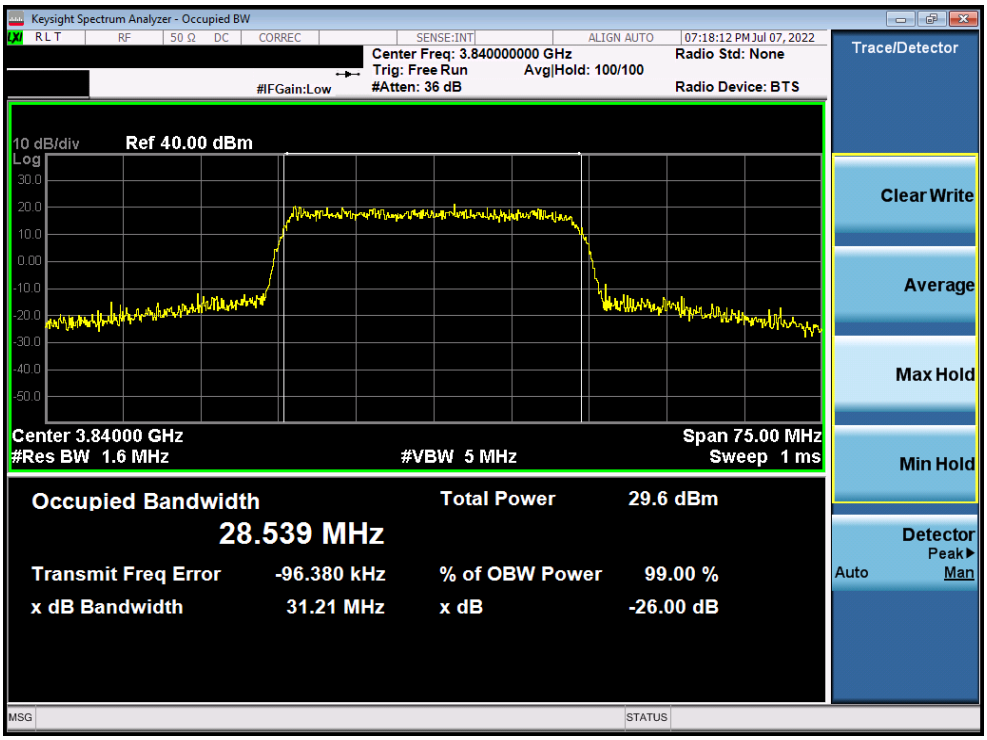


Plot 7-74. Occupied Bandwidth Plot (NR Band n77 C-Band - 30MHz CP-OFDM 64-QAM - Full RB)



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

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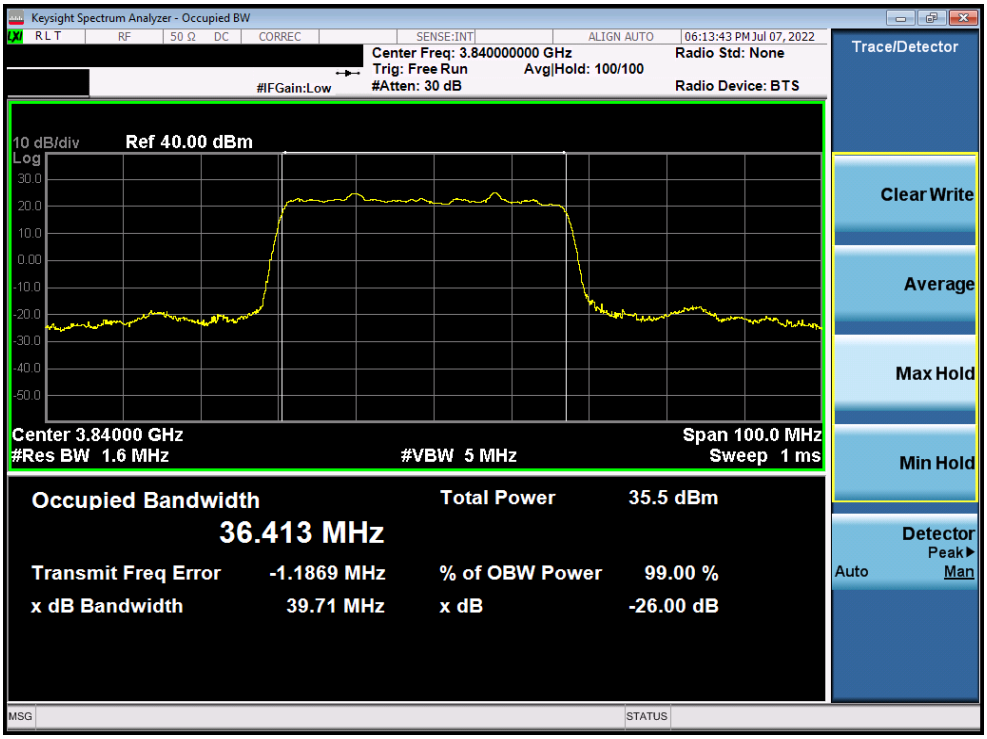
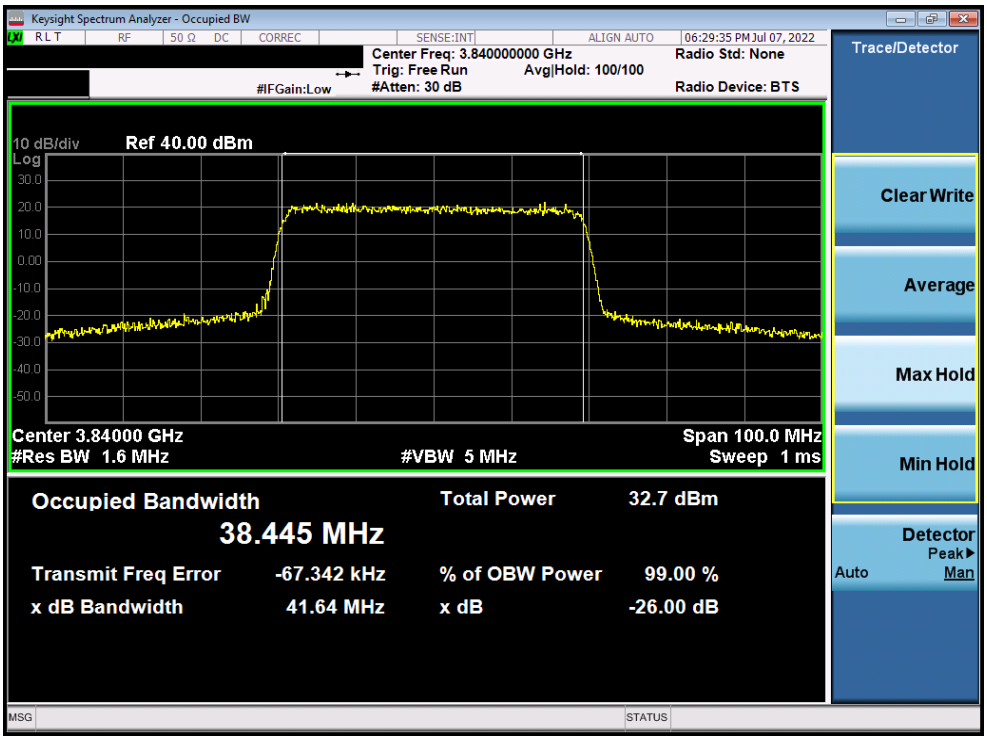


Plot 7-76. Occupied Bandwidth Plot (NR Band n77 C-Band - 40MHz DFT-s-OFDM π/2 BPSK - Full RB)



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

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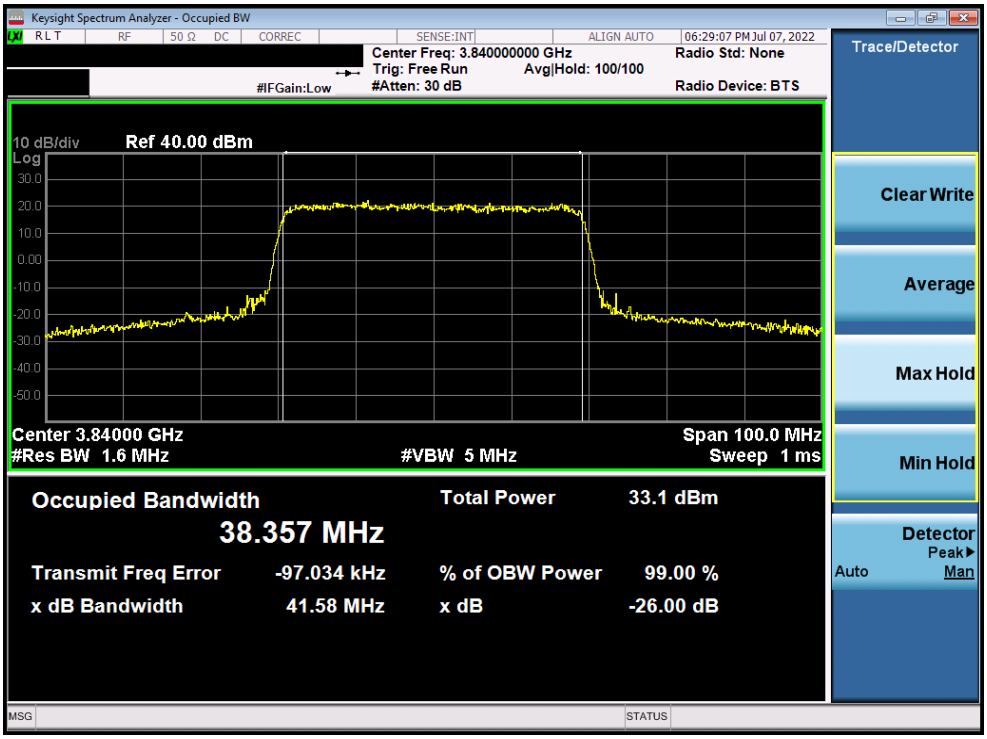
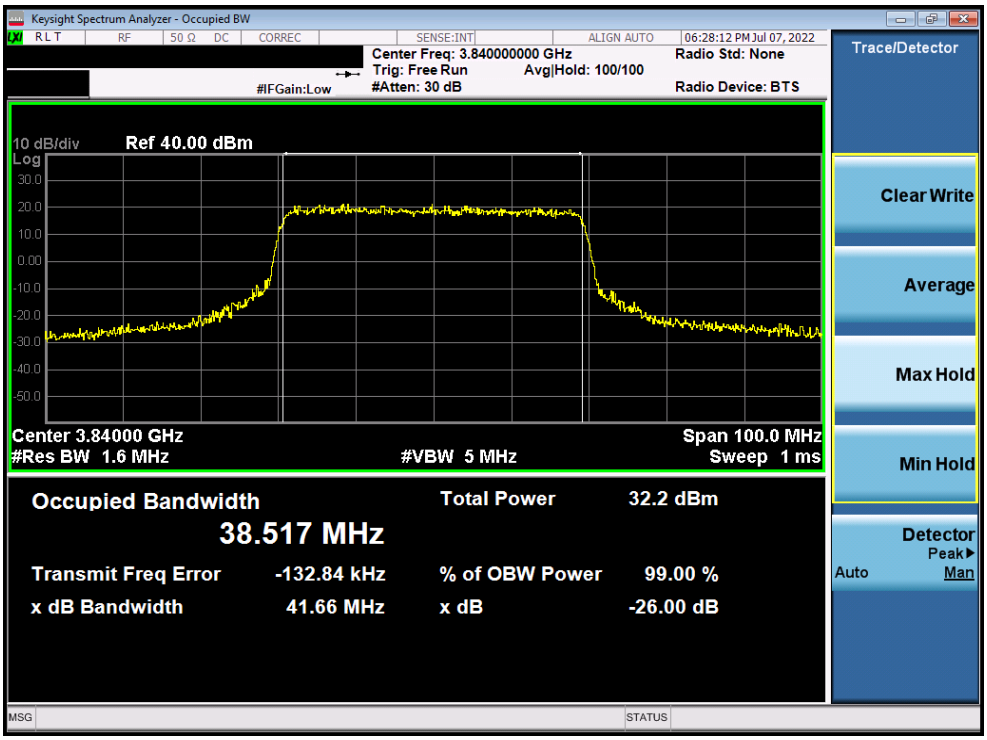


Plot 7-78. Occupied Bandwidth Plot (NR Band n77 C-Band - 40MHz CP-OFDM 16-QAM - Full RB)



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

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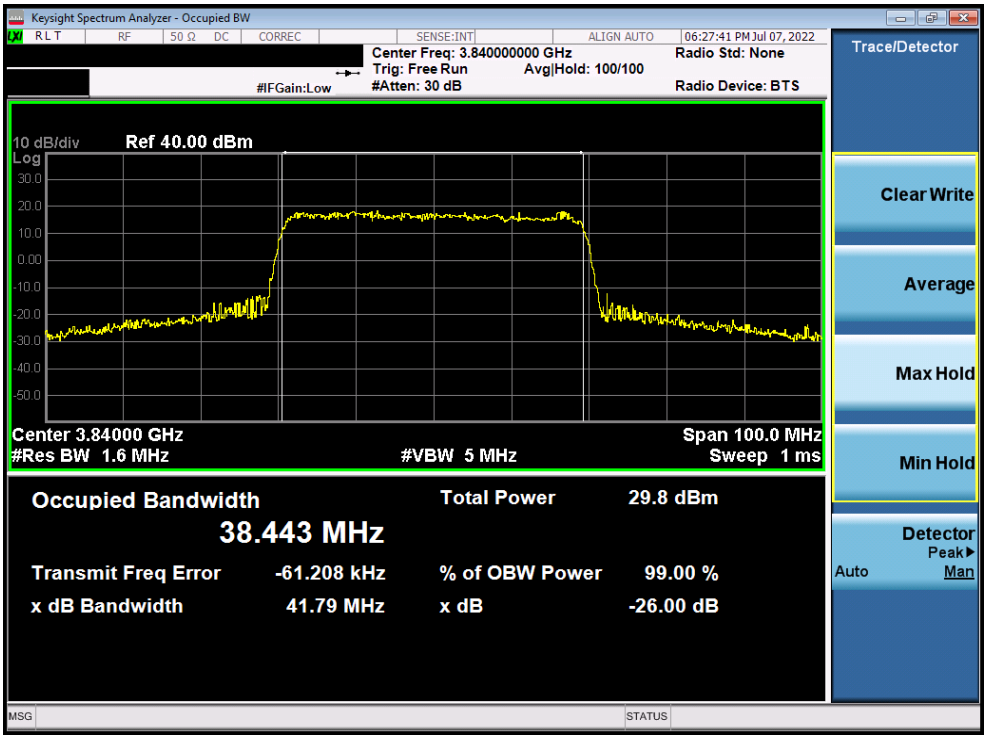
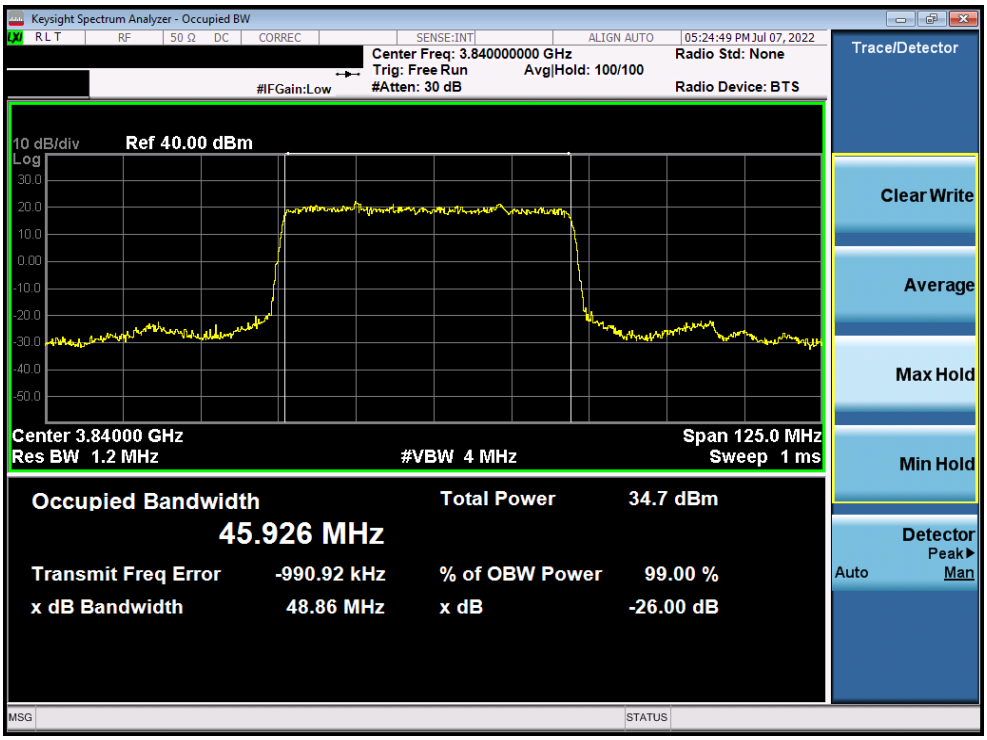


Plot 7-80. Occupied Bandwidth Plot (NR Band n77 C-Band - 40MHz CP-OFDM 256-QAM - Full RB)



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

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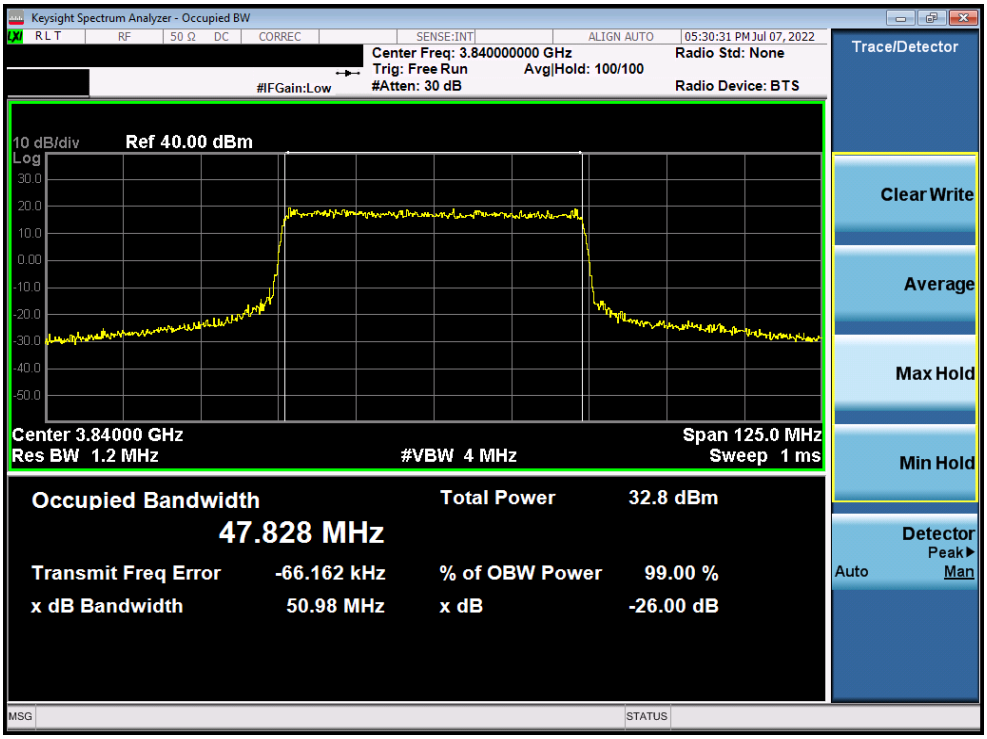
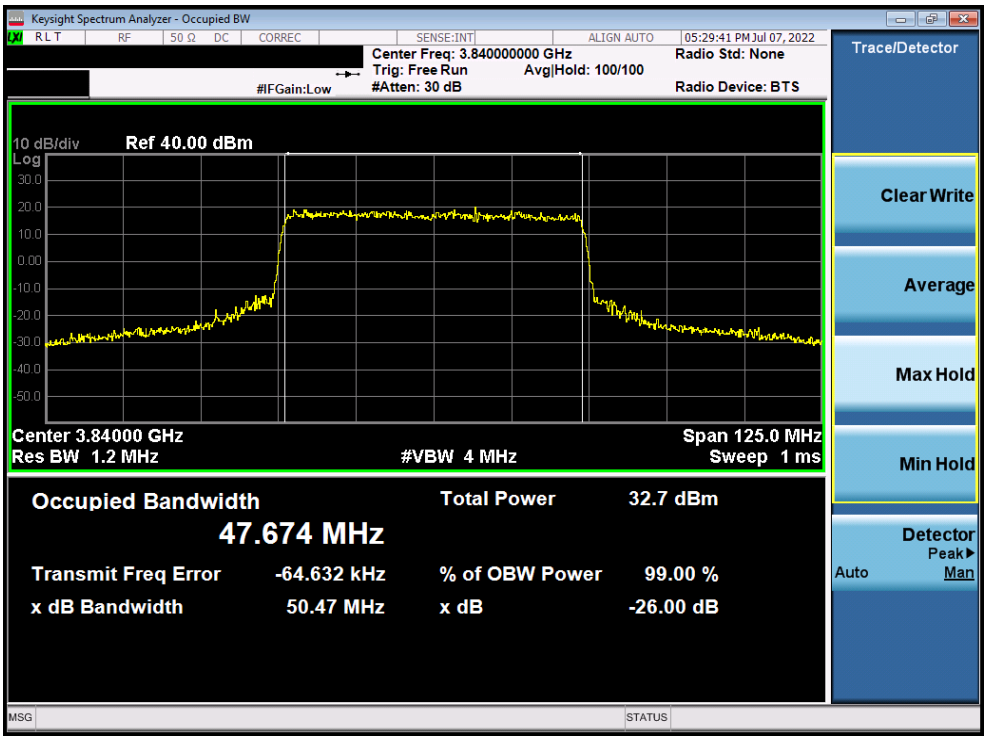


Plot 7-82. Occupied Bandwidth Plot (NR Band n77 C-Band - 50MHz CP-OFDM QPSK - Full RB)



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

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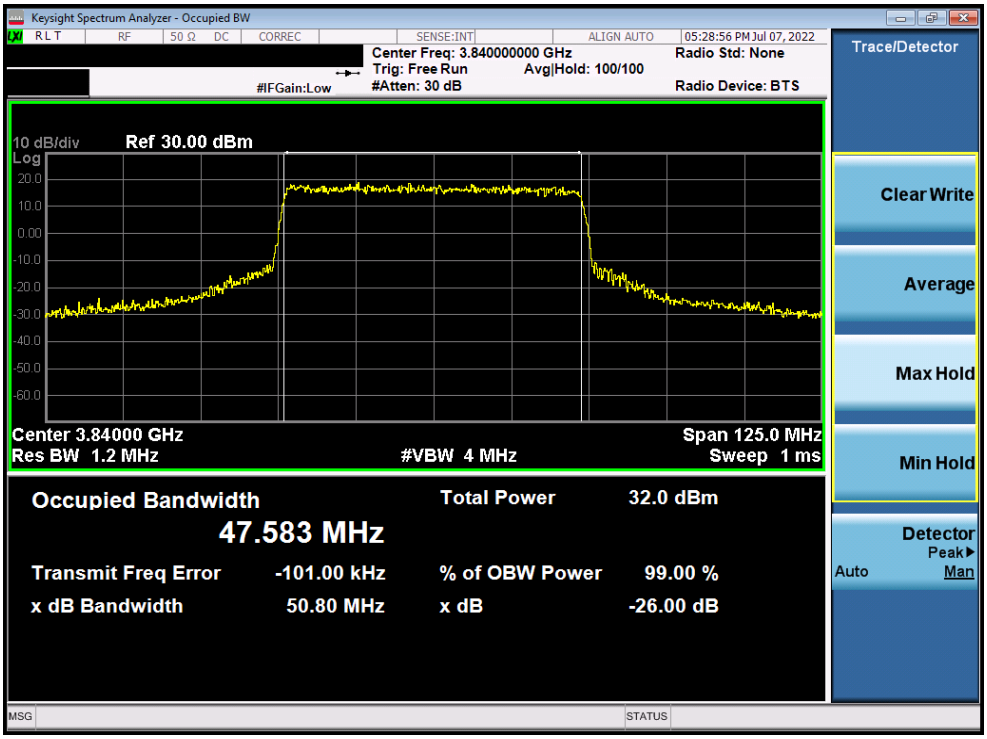
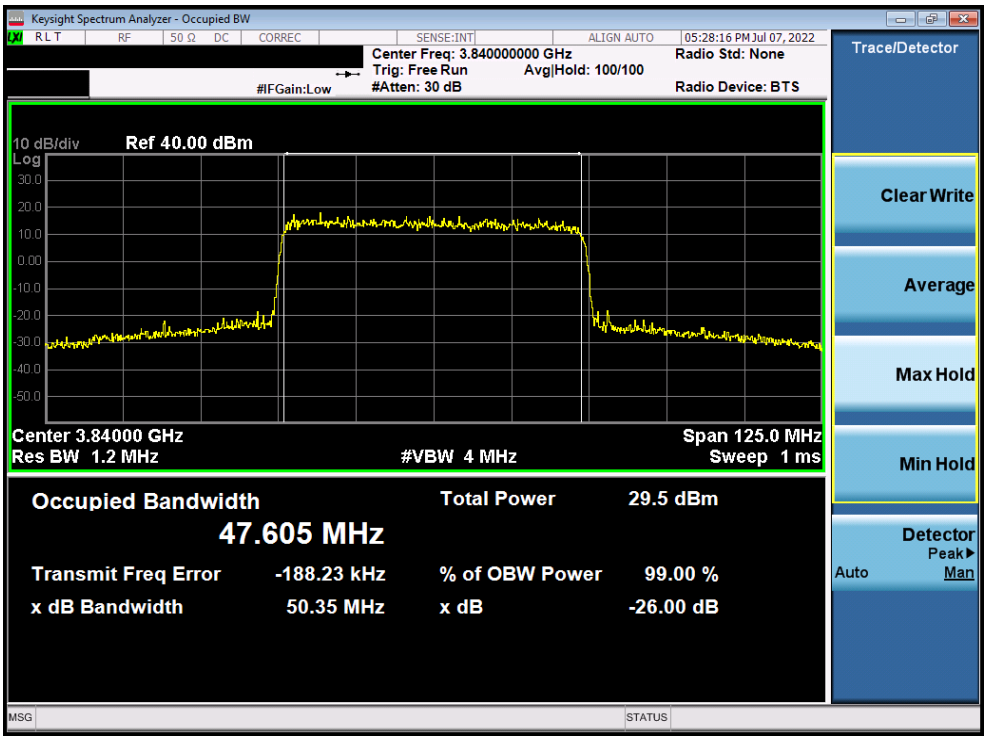


Plot 7-84. Occupied Bandwidth Plot (NR Band n77 C-Band - 50MHz CP-OFDM 64-QAM - Full RB)



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

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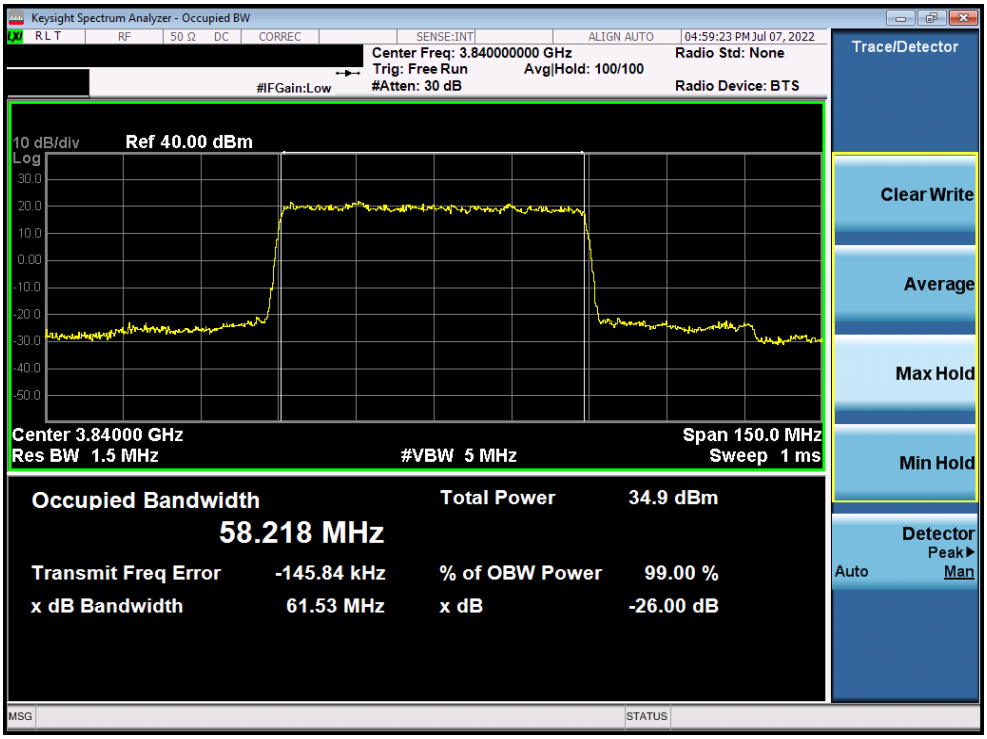
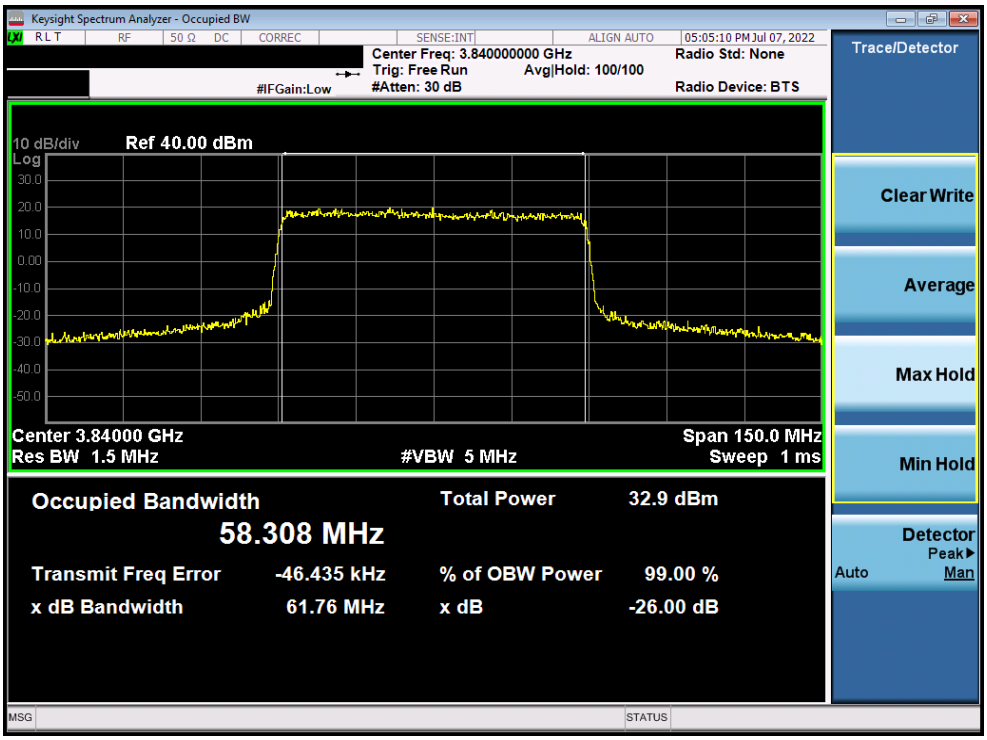


Plot 7-86. Occupied Bandwidth Plot (NR Band n77 C-Band - 60MHz DFT-s-OFDM π/2 BPSK - Full RB)



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

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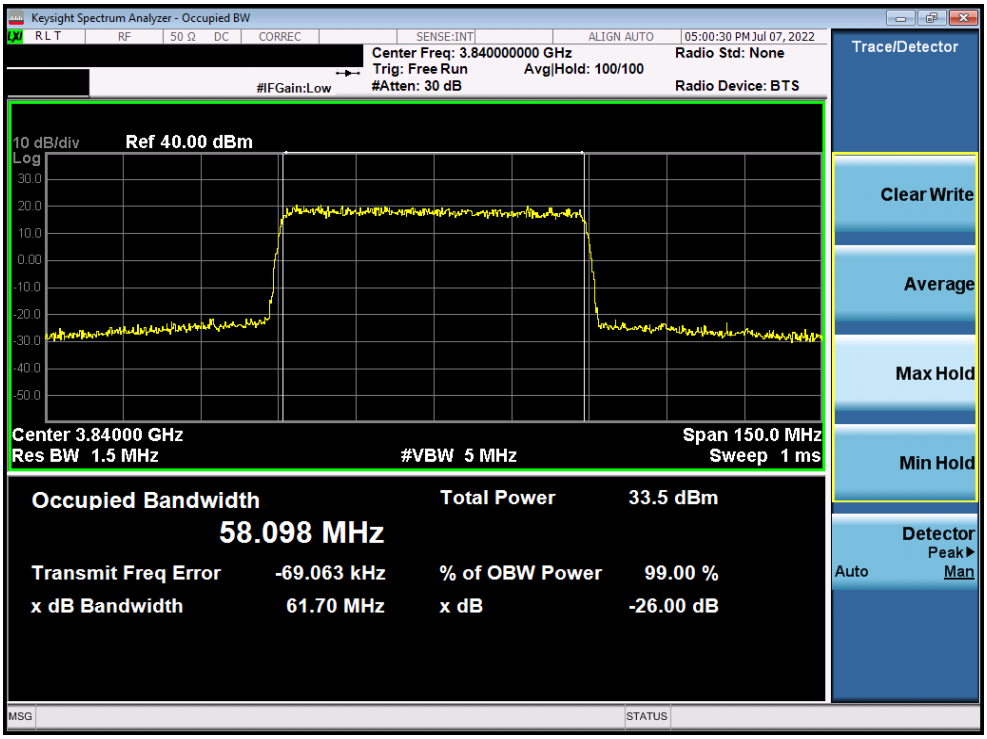
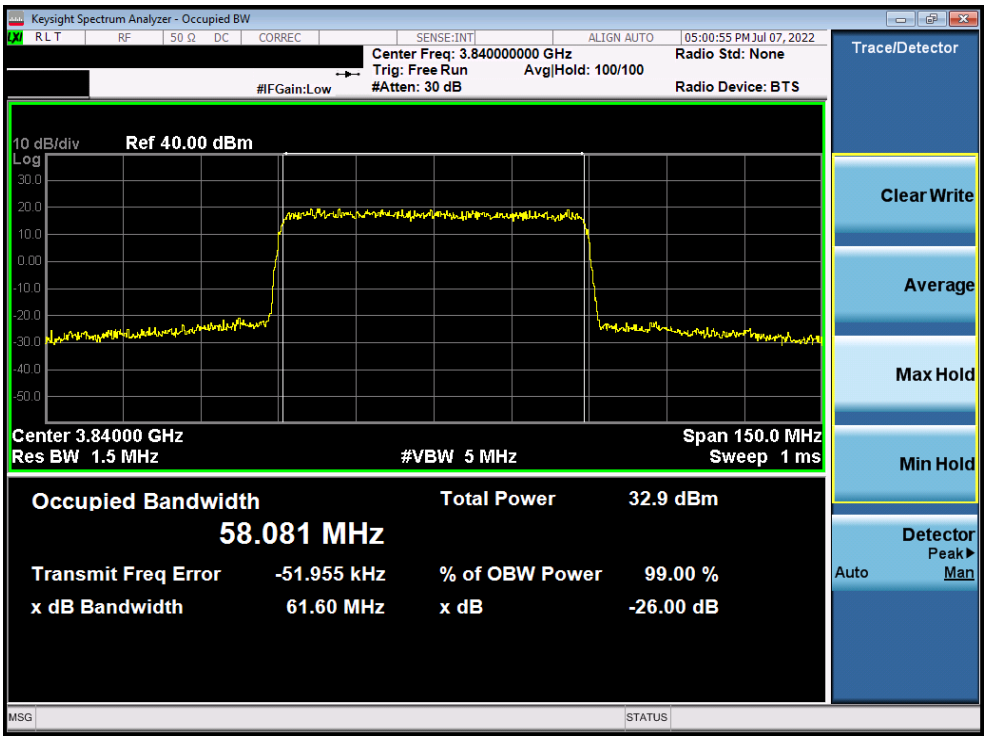


Plot 7-88. Occupied Bandwidth Plot (NR Band n77 C-Band - 60MHz CP-OFDM 16-QAM - Full RB)



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

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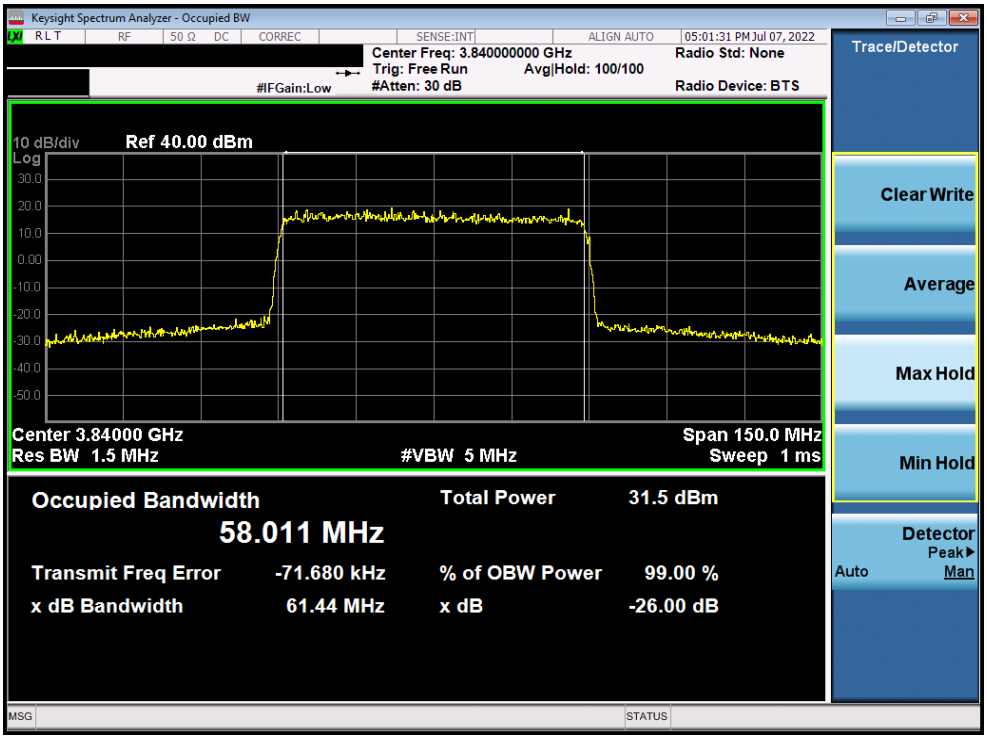
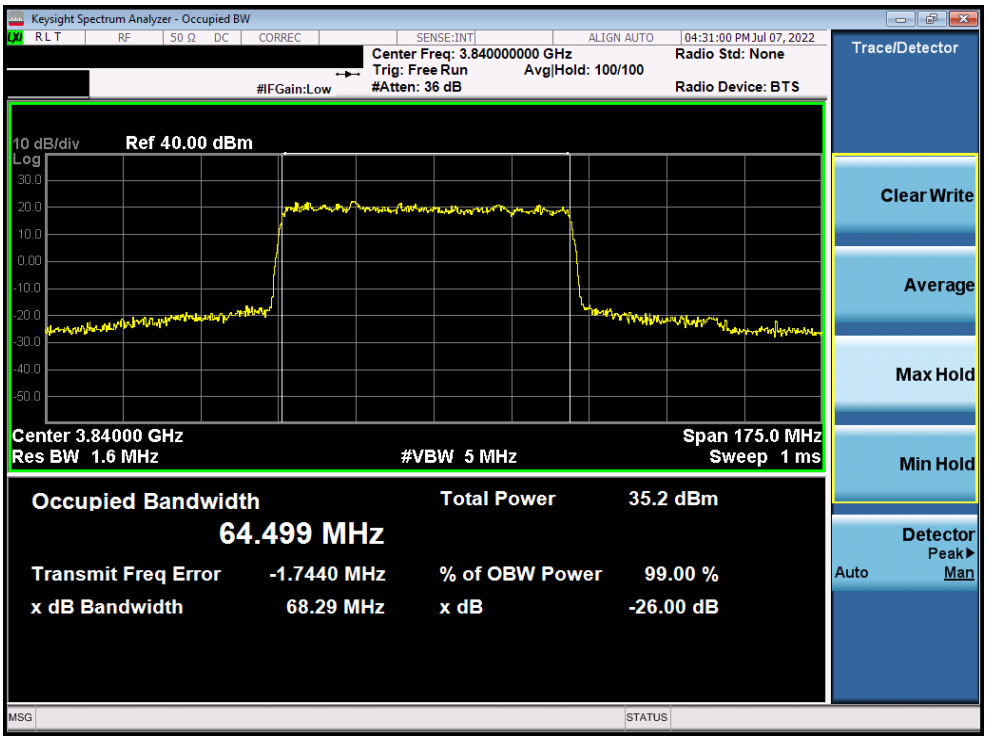


Plot 7-90. Occupied Bandwidth Plot (NR Band n77 C-Band - 60MHz CP-OFDM 256-QAM - Full RB)



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

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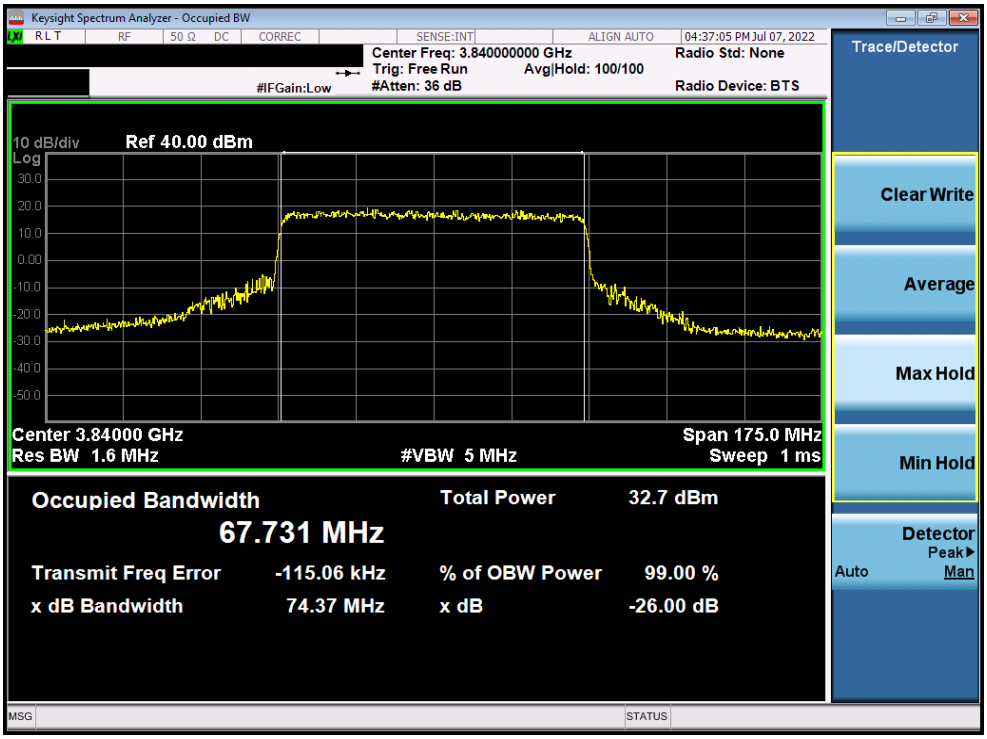
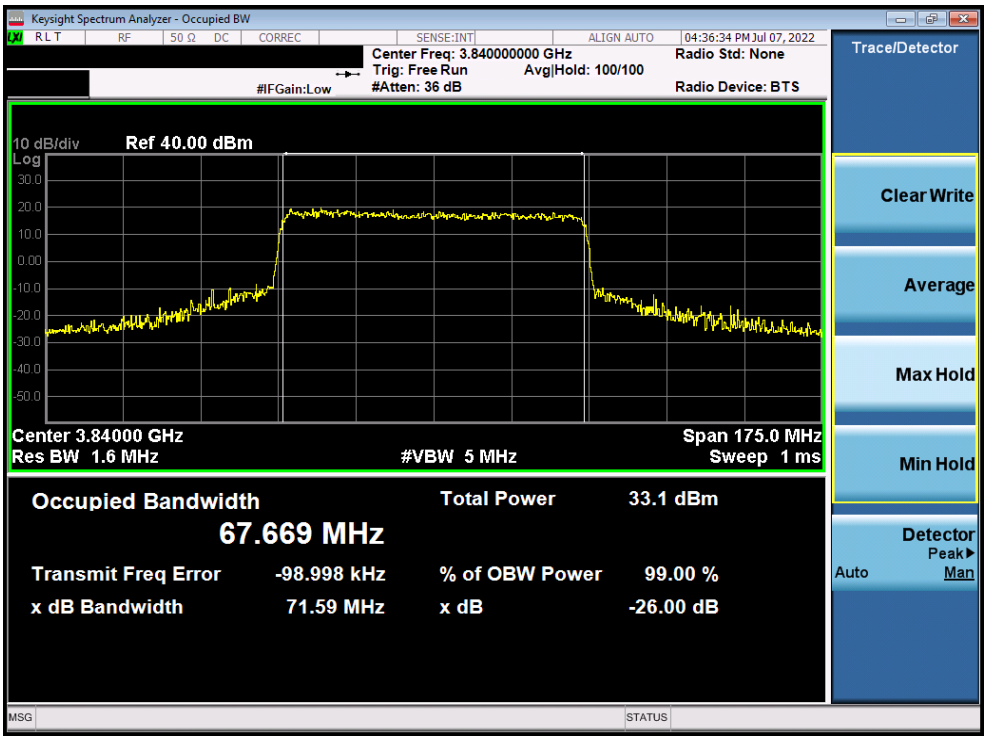


Plot 7-92. Occupied Bandwidth Plot (NR Band n77 C-Band - 70MHz CP-OFDM QPSK - Full RB)



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

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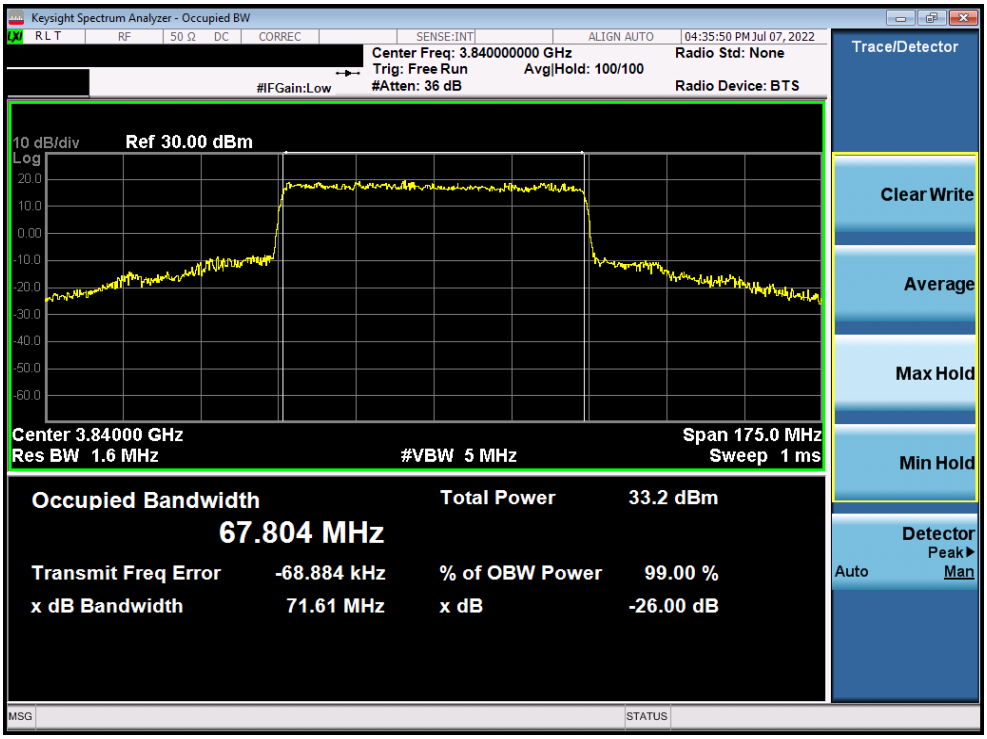
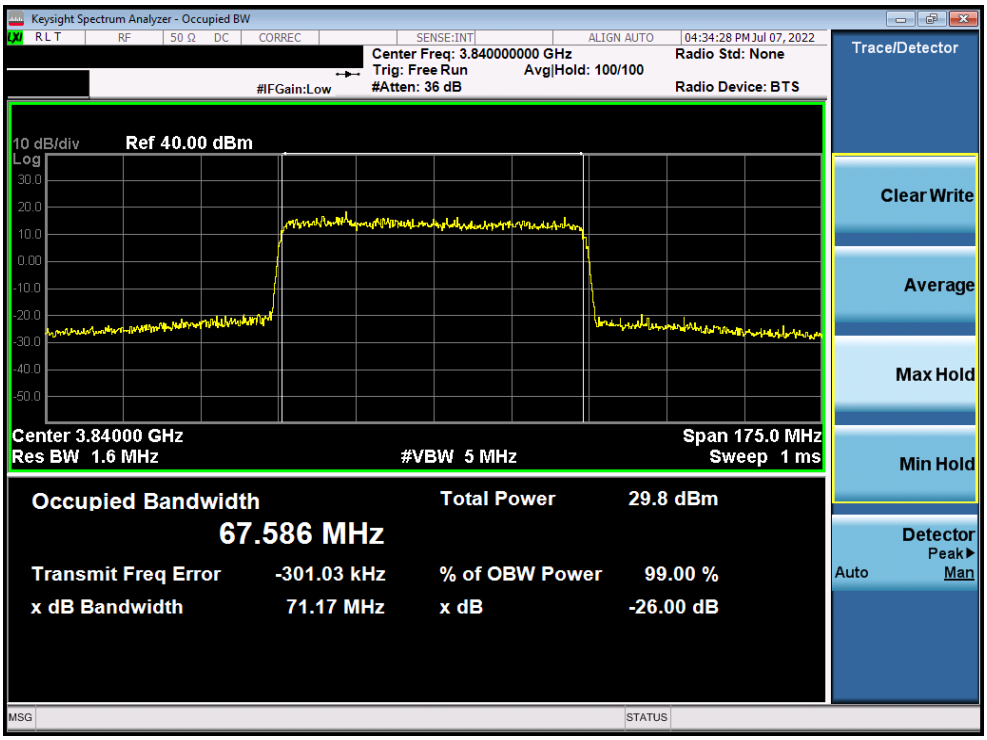


Plot 7-94. Occupied Bandwidth Plot (NR Band n77 C-Band - 70MHz CP-OFDM 64-QAM - Full RB)



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

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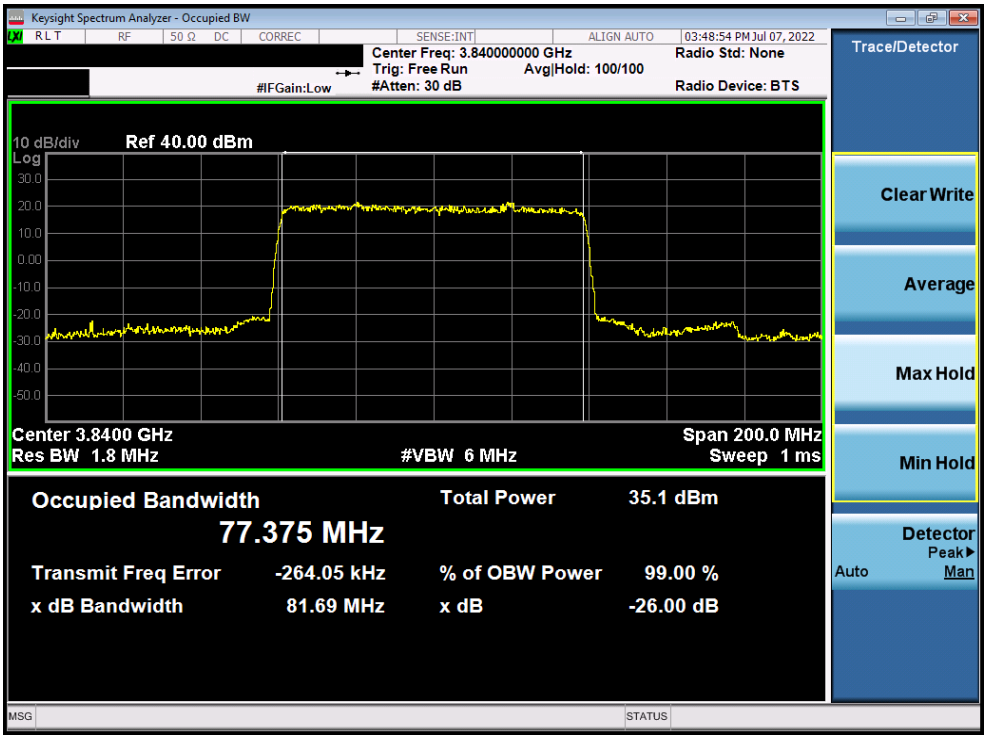
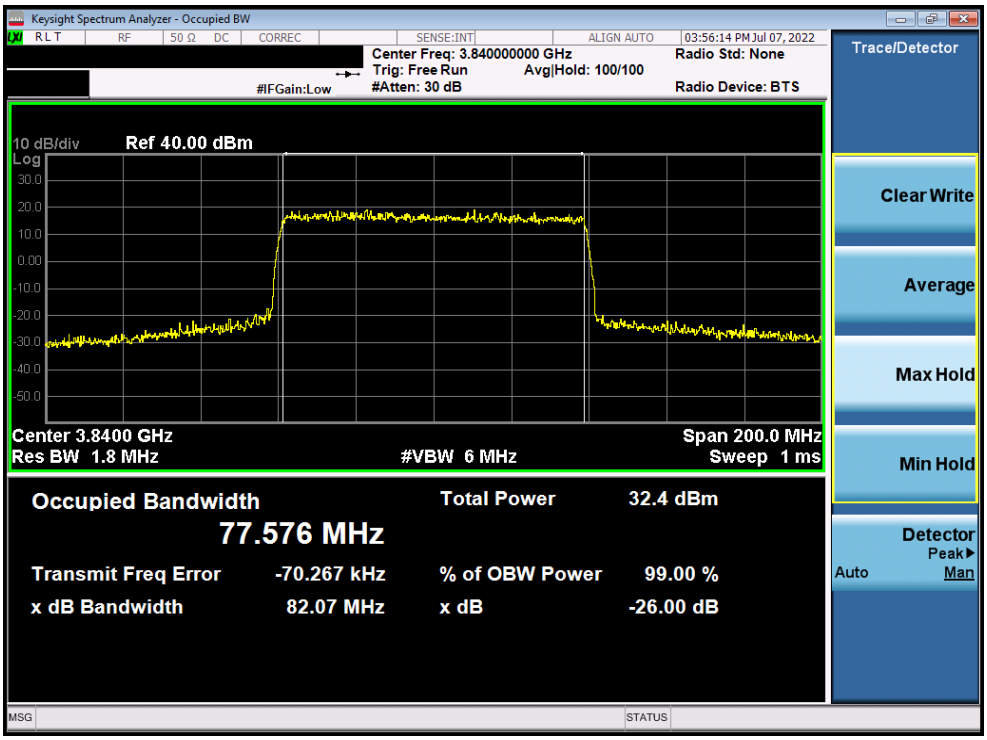


Plot 7-96. Occupied Bandwidth Plot (NR Band n77 C-Band - 80MHz DFT-s-OFDM π/2 BPSK - Full RB)



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

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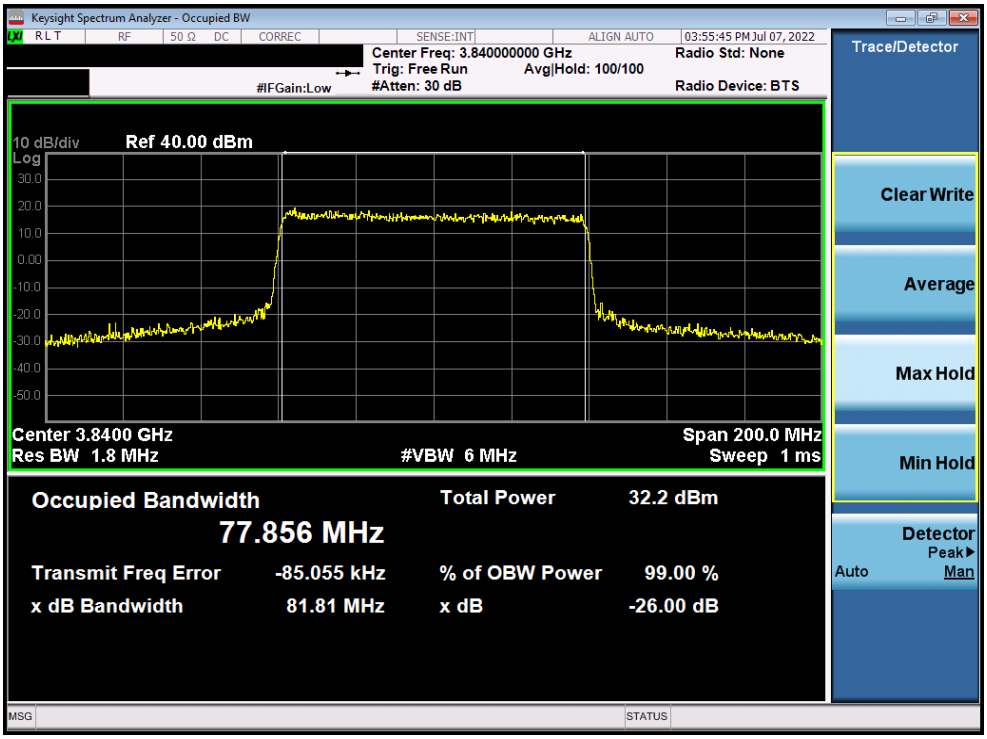
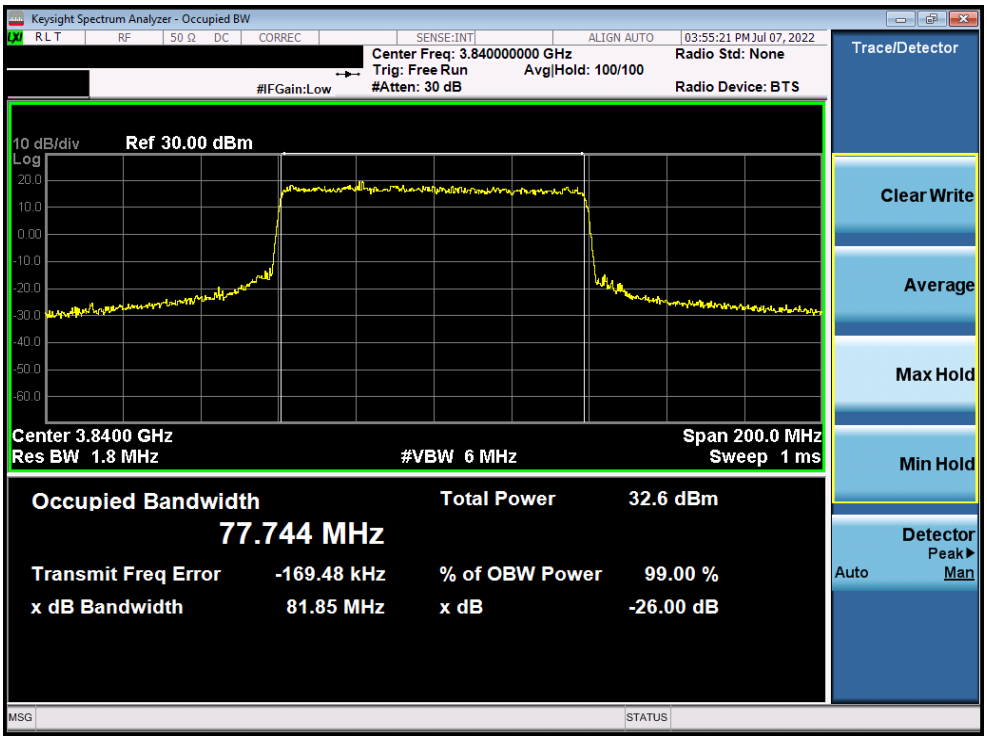


Plot 7-98. Occupied Bandwidth Plot (NR Band n77 C-Band - 80MHz CP-OFDM 16-QAM - Full RB)



Plot 7-99. Occupied Bandwidth Plot (NR Band n77 C-Band - 80MHz CP-OFDM 64-QAM - Full RB)

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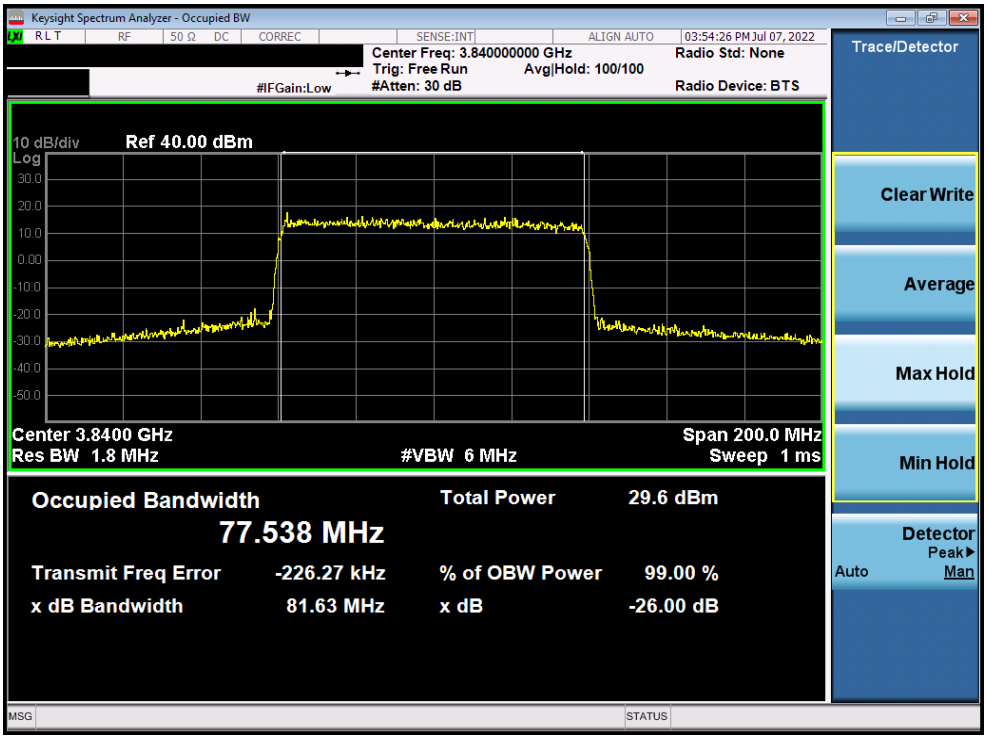
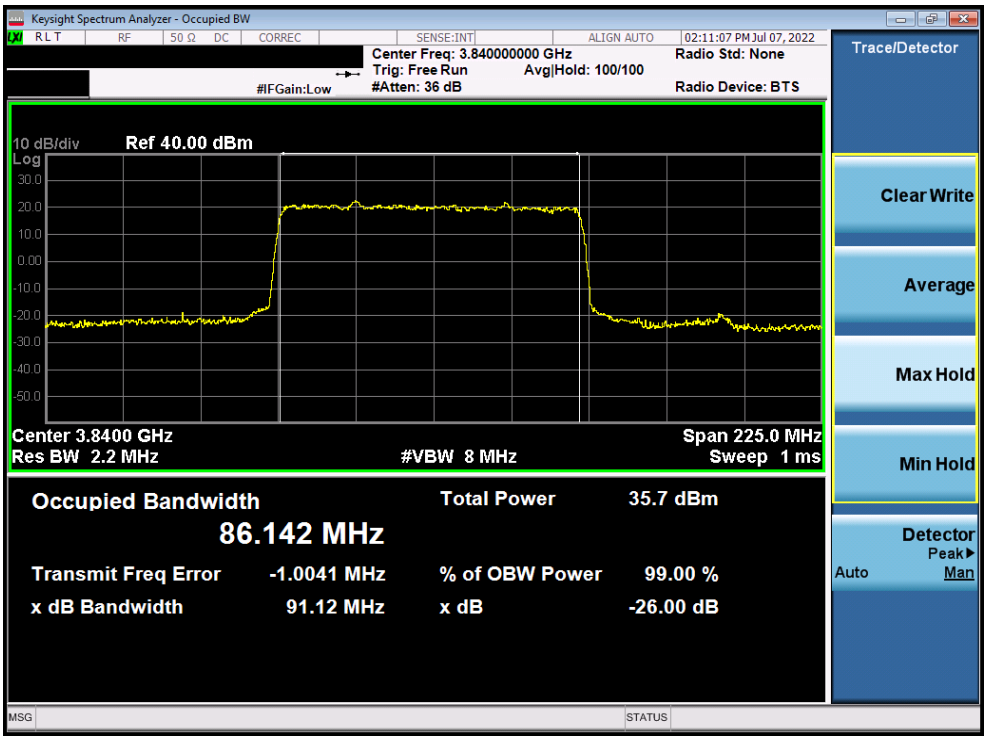


Plot 7-100. Occupied Bandwidth Plot (NR Band n77 C-Band - 80MHz CP-OFDM 256-QAM - Full RB)



Plot 7-101. Occupied Bandwidth Plot (NR Band n77 C-Band - 90MHz DFT-s-OFDM π/2 BPSK - Full RB)

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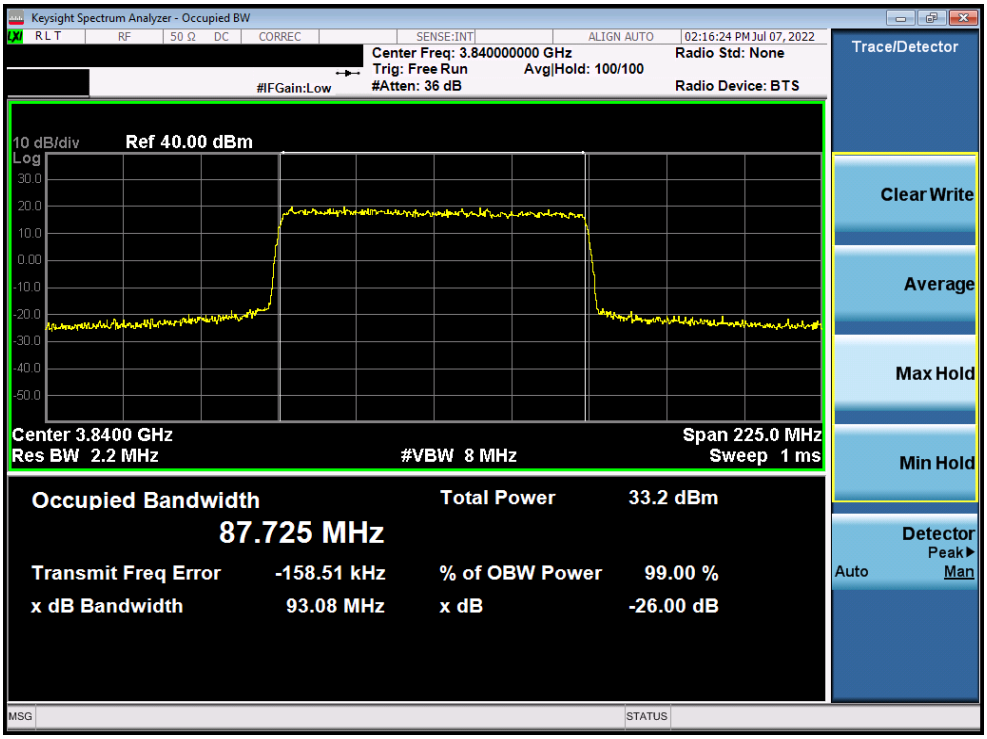
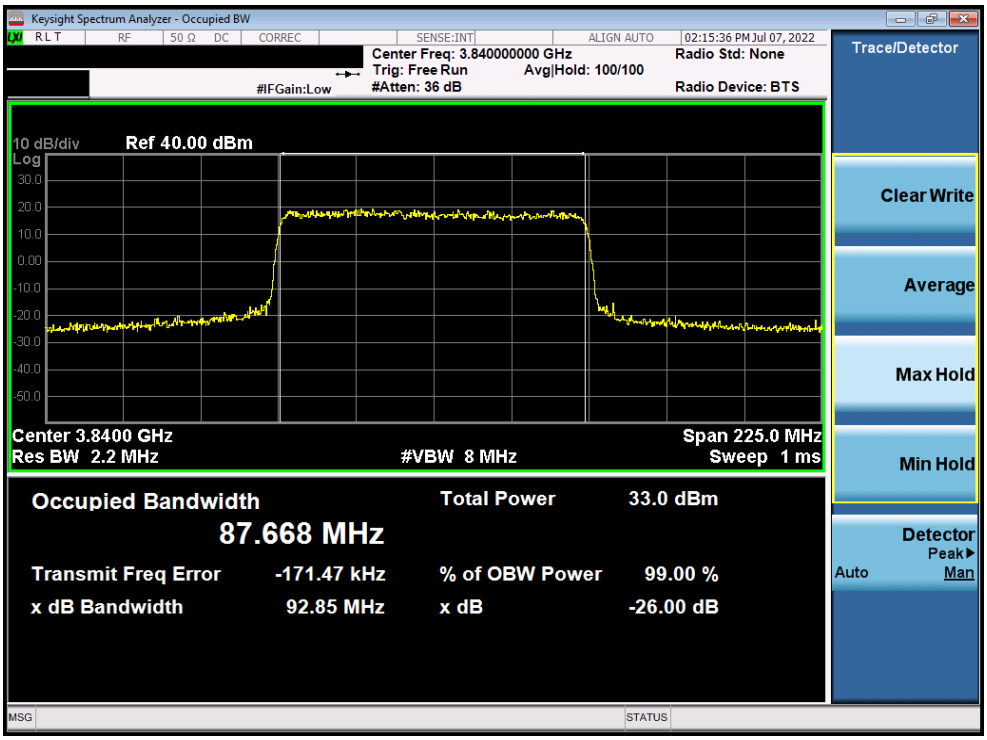


Plot 7-102. Occupied Bandwidth Plot (NR Band n77 C-Band - 90MHz CP-OFDM QPSK - Full RB)



Plot 7-103. Occupied Bandwidth Plot (NR Band n77 C-Band - 90MHz CP-OFDM 16-QAM - Full RB)

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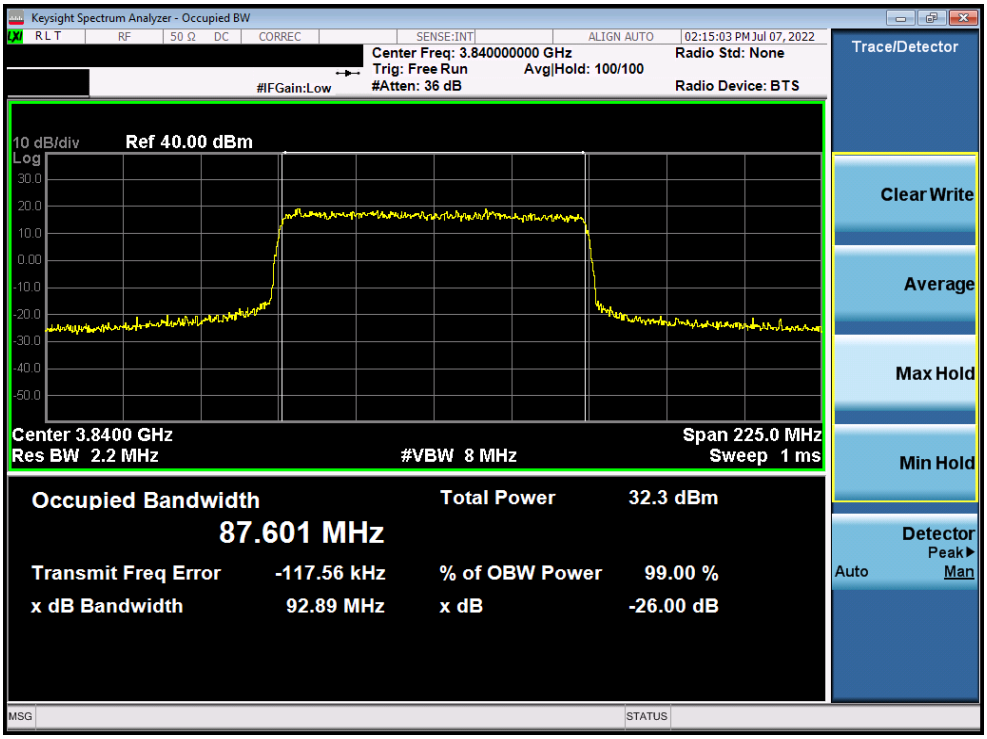
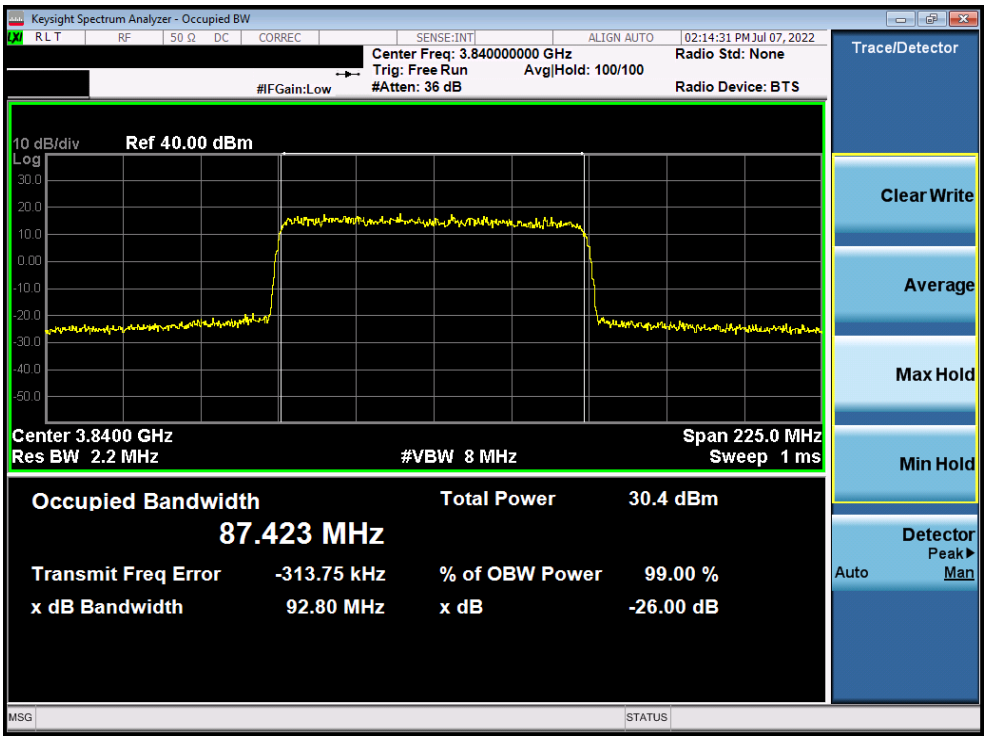


Plot 7-104. Occupied Bandwidth Plot (NR Band n77 C-Band - 90MHz CP-OFDM 64-QAM - Full RB)



Plot 7-105. Occupied Bandwidth Plot (NR Band n77 C-Band - 90MHz CP-OFDM 256-QAM - Full RB)

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