Element Washington DC LLC
18855 Adams Court, Morgan Hill, CA 95037 USA
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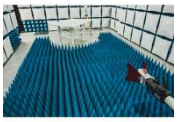

PART 27 MEASUREMENT REPORT

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

Date of Testing:
6/1/2022 – 9/12/2022
Test Site/Location:
Element Washington DC LLC, Morgan Hill, CA, USA
Test Report Serial No.:
1C2205090025-04-R2.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.

This revised Test Report (S/N: 1C2205090025-04-R2.BCG) supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

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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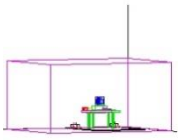
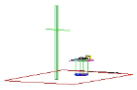


PART 27 MEASUREMENT REPORT



Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	OBW [MHz]	EIRP		Emission Designator
					Max. Power [W]	Max. Power [dBm]	
LTE Band 30	5 MHz	QPSK	2307.5 - 2312.5	4.5463	0.200	23.00	4M55G7W
		16QAM	2307.5 - 2312.5	4.5481	0.160	22.04	4M55D7W
		64QAM	2307.5 - 2312.5	4.5414	0.132	21.22	4M54D7W
		256QAM	2307.5 - 2312.5	4.5358	0.064	18.06	4M54D7W
	10MHz	QPSK	2310	9.0386	0.200	23.00	9M04G7W
		16QAM	2310	9.0418	0.168	22.26	9M04D7W
		64QAM	2310	9.0609	0.142	21.53	9M06D7W
		256QAM	2310	9.0567	0.068	18.30	9M06D7W
LTE Band 7	5 MHz	QPSK	2502.5 - 2567.5	4.5388	0.389	25.90	4M54G7W
		16QAM	2502.5 - 2567.5	4.5615	0.308	24.89	4M56D7W
		64QAM	2502.5 - 2567.5	4.5473	0.261	24.17	4M55D7W
		256QAM	2502.5 - 2567.5	4.5465	0.129	21.11	4M55D7W
	10 MHz	QPSK	2505 - 2565	9.0375	0.389	25.90	9M04G7W
		16QAM	2505 - 2565	9.0742	0.313	24.95	9M07D7W
		64QAM	2505 - 2565	9.0399	0.252	24.01	9M04D7W
		256QAM	2505 - 2565	9.0381	0.125	20.97	9M04D7W
	15 MHz	QPSK	2507.5 - 2562.5	13.5595	0.389	25.90	13M6G7W
		16QAM	2507.5 - 2562.5	13.5473	0.316	24.99	13M5D7W
		64QAM	2507.5 - 2562.5	13.5594	0.259	24.14	13M6D7W
		256QAM	2507.5 - 2562.5	13.5727	0.138	21.41	13M6D7W
	20 MHz	QPSK	2510 - 2560	18.0539	0.389	25.90	18M1G7W
		16QAM	2510 - 2560	18.0582	0.324	25.10	18M1D7W
		64QAM	2510 - 2560	18.0622	0.254	24.04	18M1D7W
		256QAM	2510 - 2560	18.0385	0.127	21.05	18M0D7W
LTE Band 41 (PC2)	5 MHz	QPSK	2498.5 - 2687.5	4.5504	0.676	28.30	4M55G7W
		16QAM	2498.5 - 2687.5	4.5352	0.661	28.20	4M54D7W
		64QAM	2498.5 - 2687.5	4.5263	0.552	27.42	4M53D7W
		256QAM	2498.5 - 2687.5	4.5402	0.262	24.19	4M54D7W
	10 MHz	QPSK	2501 - 2685	9.0552	0.676	28.30	9M06G7W
		16QAM	2501 - 2685	9.0428	0.637	28.04	9M04D7W
		64QAM	2501 - 2685	9.0240	0.551	27.41	9M02D7W
		256QAM	2501 - 2685	9.0333	0.263	24.20	9M03D7W
	15 MHz	QPSK	2503.5 - 2682.5	13.5321	0.676	28.30	13M5G7W
		16QAM	2503.5 - 2682.5	13.5587	0.634	28.02	13M6D7W
		64QAM	2503.5 - 2682.5	13.5323	0.571	27.57	13M5D7W
		256QAM	2503.5 - 2682.5	13.5088	0.272	24.35	13M5D7W
	20 MHz	QPSK	2506 - 2680	18.0394	0.676	28.30	18M0G7W
		16QAM	2506 - 2680	18.0691	0.695	28.42	18M1D7W
		64QAM	2506 - 2680	18.0163	0.527	27.22	18M0D7W
		256QAM	2506 - 2680	18.0135	0.268	24.28	18M0D7W
LTE Band 41(PC3)	5 MHz	QPSK	2498.5 - 2687.5	4.5504	0.347	25.40	4M55G7W
		16QAM	2498.5 - 2687.5	4.5352	0.305	24.85	4M54D7W
		64QAM	2498.5 - 2687.5	4.5263	0.247	23.93	4M53D7W
		256QAM	2498.5 - 2687.5	4.5402	0.125	20.96	4M54D7W
	10 MHz	QPSK	2501 - 2685	9.0552	0.347	25.40	9M06G7W
		16QAM	2501 - 2685	9.0428	0.301	24.78	9M04D7W
		64QAM	2501 - 2685	9.0240	0.233	23.67	9M02D7W
		256QAM	2501 - 2685	9.0333	0.124	20.93	9M03D7W
	15 MHz	QPSK	2503.5 - 2682.5	13.5321	0.345	25.38	13M5G7W
		16QAM	2503.5 - 2682.5	13.5587	0.304	24.83	13M6D7W
		64QAM	2503.5 - 2682.5	13.5323	0.231	23.63	13M5D7W
		256QAM	2503.5 - 2682.5	13.5088	0.123	20.90	13M5D7W
	20 MHz	QPSK	2506 - 2680	18.0394	0.347	25.40	18M0G7W
		16QAM	2506 - 2680	18.0691	0.306	24.86	18M1D7W
		64QAM	2506 - 2680	18.0163	0.228	23.58	18M0D7W
		256QAM	2506 - 2680	18.0135	0.121	20.84	18M0D7W
ULCA LTE Band 7	20 + 20 MHz	QPSK	2520 - 2550	37.5534	0.386	25.87	37M6G7W
		16QAM	2520 - 2550	37.5217	0.202	23.05	37M5D7W
		64QAM	2520 - 2550	37.5011	0.196	22.93	37M5D7W
		256QAM	2520 - 2550	37.4920	0.124	20.93	37M5D7W
ULCA LTE Band 41(PC2)	20 + 20 MHz	QPSK	2516 - 2670	37.5873	0.670	28.26	37M6G7W
		16QAM	2516 - 2670	37.5344	0.346	25.39	37M5D7W
		64QAM	2516 - 2670	37.4137	0.350	25.44	37M4D7W
		256QAM	2516 - 2670	37.5497	0.223	23.49	37M5D7W
ULCA LTE Band 41(PC3)	20 + 20 MHz	QPSK	2516 - 2670	37.5873	0.345	25.38	37M6G7W
		16QAM	2516 - 2670	37.5344	0.176	22.46	37M5D7W
		64QAM	2516 - 2670	37.4137	0.181	22.57	37M4D7W
		256QAM	2516 - 2670	37.5497	0.111	20.46	37M5D7W

EUT Overview

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	OBW [MHz]	EIRP		Emission Designator
					Max. Power [W]	Max. Power [dBm]	
NR Band n30	5 MHz	π/2 BPSK	2307.5 - 2312.5	4.5906	0.200	23.00	4M59G7W
		QPSK	2307.5 - 2312.5	4.5825	0.195	22.90	4M58G7W
		16QAM	2307.5 - 2312.5	4.5407	0.174	22.40	4M54D7W
		64QAM	2307.5 - 2312.5	4.5183	0.119	20.74	4M52D7W
		256QAM	2307.5 - 2312.5	4.5672	0.071	18.53	4M57D7W
	10MHz	π/2 BPSK	2310	9.0495	0.200	23.00	9M05G7W
		QPSK	2310	9.3552	0.199	23.00	9M36G7W
		16QAM	2310	9.3915	0.174	22.39	9M39D7W
		64QAM	2310	9.3961	0.110	20.42	9M40D7W
		256QAM	2310	9.4139	0.070	18.45	9M41D7W
NR Band n7	5 MHz	π/2 BPSK	2502.5 - 2567.5	4.5915	0.364	25.61	4M59G7W
		QPSK	2502.5 - 2567.5	4.5862	0.389	25.90	4M59G7W
		16QAM	2502.5 - 2567.5	4.5269	0.344	25.37	4M53D7W
		64QAM	2502.5 - 2567.5	4.5349	0.221	23.44	4M53D7W
		256QAM	2502.5 - 2567.5	4.5068	0.131	21.17	4M51D7W
	10MHz	π/2 BPSK	2505 - 2565	9.0519	0.389	25.90	9M05G7W
		QPSK	2505 - 2565	9.3638	0.378	25.77	9M36G7W
		16QAM	2505 - 2565	9.3829	0.327	25.15	9M38D7W
		64QAM	2505 - 2565	9.3998	0.232	23.66	9M40D7W
		256QAM	2505 - 2565	9.3780	0.144	21.58	9M38D7W
	15 MHz	π/2 BPSK	2507.5 - 2562.5	13.5402	0.389	25.90	13M5G7W
		QPSK	2507.5 - 2562.5	14.1942	0.382	25.82	14M2G7W
		16QAM	2507.5 - 2562.5	14.1963	0.329	25.17	14M2D7W
		64QAM	2507.5 - 2562.5	14.1963	0.219	23.40	14M2D7W
		256QAM	2507.5 - 2562.5	14.1862	0.138	21.40	14M2D7W
	20MHz	π/2 BPSK	2510 - 2560	18.0349	0.372	25.71	18M0G7W
		QPSK	2510 - 2560	19.0508	0.389	25.90	19M1G7W
		16QAM	2510 - 2560	19.0399	0.320	25.05	19M0D7W
		64QAM	2510 - 2560	19.0500	0.218	23.39	19M1D7W
		256QAM	2510 - 2560	19.0281	0.128	21.07	19M0D7W
	25MHz	π/2 BPSK	2512.5 - 2557.5	23.0669	0.389	25.90	23M1G7W
		QPSK	2512.5 - 2557.5	23.8915	0.377	25.76	23M9G7W
		16QAM	2512.5 - 2557.5	23.9585	0.330	25.19	24M0D7W
		64QAM	2512.5 - 2557.5	23.9301	0.221	23.44	23M9D7W
		256QAM	2512.5 - 2557.5	23.9046	0.128	21.07	23M9D7W
	30MHz	π/2 BPSK	2515 - 2555	28.8829	0.389	25.90	28M9G7W
		QPSK	2515 - 2555	28.7844	0.388	25.88	28M8G7W
		16QAM	2515 - 2555	28.8172	0.324	25.11	28M8D7W
		64QAM	2515 - 2555	28.8042	0.230	23.62	28M8D7W
		256QAM	2515 - 2555	28.8245	0.138	21.41	28M8D7W
	40MHz	π/2 BPSK	2520 - 2550	38.6929	0.389	25.90	38M7G7W
		QPSK	2520 - 2550	38.8053	0.389	25.90	38M8G7W
		16QAM	2520 - 2550	38.6801	0.329	25.17	38M7D7W
		64QAM	2520 - 2550	38.7732	0.207	23.16	38M8D7W
		256QAM	2520 - 2550	38.7111	0.132	21.19	38M7D7W

EUT Overview

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	OBW [MHz]	EIRP		Emission Designator
					Max. Power [W]	Max. Power [dBm]	
NR Band n41 (PC2)	20 MHz	π/2 BPSK	2506 - 2680	18.0921	0.620	27.93	18M1G7W
		QPSK	2506 - 2680	18.4369	0.670	28.26	18M4G7W
		16QAM	2506 - 2680	18.4174	0.600	27.78	18M4D7W
		64QAM	2506 - 2680	18.4190	0.458	26.61	18M4D7W
		256QAM	2506 - 2680	18.4162	0.266	24.25	18M4D7W
	30MHz	π/2 BPSK	2511 - 2675	27.1514	0.676	28.30	27M2G7W
		QPSK	2511 - 2675	28.0527	0.652	28.14	28M1G7W
		16QAM	2511 - 2675	28.0786	0.535	27.28	28M1D7W
		64QAM	2511 - 2675	28.0470	0.426	26.29	28M0D7W
		256QAM	2511 - 2675	27.9865	0.252	24.01	28M0D7W
	40 MHz	π/2 BPSK	2516 - 2670	36.1224	0.654	28.15	36M1G7W
		QPSK	2516 - 2670	38.0754	0.676	28.30	38M1G7W
		16QAM	2516 - 2670	38.0673	0.588	27.69	38M1D7W
		64QAM	2516 - 2670	38.0900	0.455	26.58	38M1D7W
		256QAM	2516 - 2670	38.0611	0.278	24.45	38M1D7W
	50 MHz	π/2 BPSK	2521 - 2665	46.1908	0.675	28.29	46M2G7W
		QPSK	2521 - 2665	47.8018	0.676	28.30	47M8G7W
		16QAM	2521 - 2665	47.8409	0.630	27.99	47M8D7W
		64QAM	2521 - 2665	47.7810	0.448	26.52	47M8D7W
		256QAM	2521 - 2665	47.5737	0.296	24.72	47M6D7W
	60 MHz	π/2 BPSK	2526 - 2660	58.3331	0.676	28.30	58M3G7W
		QPSK	2526 - 2660	58.3928	0.633	28.02	58M4G7W
		16QAM	2526 - 2660	58.3545	0.629	27.98	58M4D7W
		64QAM	2526 - 2660	58.4164	0.427	26.30	58M4D7W
		256QAM	2526 - 2660	58.1994	0.261	24.17	58M2D7W
	70 MHz	π/2 BPSK	2531 - 2655	65.1240	0.673	28.28	65M1G7W
		QPSK	2531 - 2655	67.9670	0.676	28.30	68M0G7W
		16QAM	2531 - 2655	68.1600	0.625	27.96	68M2D7W
		64QAM	2531 - 2655	68.0670	0.448	26.51	68M1D7W
		256QAM	2531 - 2655	67.9230	0.273	24.36	67M9D7W
	80 MHz	π/2 BPSK	2536 - 2650	77.4425	0.603	27.80	77M4G7W
		QPSK	2536 - 2650	77.8257	0.676	28.30	77M8G7W
		16QAM	2536 - 2650	77.8782	0.573	27.58	77M9D7W
		64QAM	2536 - 2650	77.9364	0.423	26.27	77M9D7W
		256QAM	2536 - 2650	77.8471	0.259	24.13	77M8D7W
	90 MHz	π/2 BPSK	2541 - 2645	87.6319	0.676	28.30	87M6G7W
		QPSK	2541 - 2645	87.9433	0.672	28.27	87M9G7W
		16QAM	2541 - 2645	87.9874	0.612	27.87	88M0D7W
		64QAM	2541 - 2645	88.1117	0.458	26.61	88M1D7W
		256QAM	2541 - 2645	87.9958	0.277	24.42	88M0D7W
	100 MHz	π/2 BPSK	2546 - 2640	97.1479	0.655	28.16	97M1G7W
		QPSK	2546 - 2640	98.0348	0.676	28.30	98M0G7W
		16QAM	2546 - 2640	98.0538	0.596	27.75	98M1D7W
		64QAM	2546 - 2640	98.3358	0.452	26.55	98M3D7W
		256QAM	2546 - 2640	98.2768	0.275	24.40	98M3D7W
NR Band n41 (PC3)	20 MHz	π/2 BPSK	2506 - 2680	18.0921	0.339	25.30	18M1G7W
		QPSK	2506 - 2680	18.4369	0.347	25.40	18M4G7W
		16QAM	2506 - 2680	18.4174	0.288	24.60	18M4D7W
		64QAM	2506 - 2680	18.4190	0.198	22.96	18M4D7W
		256QAM	2506 - 2680	18.4162	0.123	20.90	18M4D7W
	30MHz	π/2 BPSK	2511 - 2675	27.1514	0.339	25.30	27M2G7W
		QPSK	2511 - 2675	28.0527	0.347	25.40	28M1G7W
		16QAM	2511 - 2675	28.0786	0.278	24.45	28M1D7W
		64QAM	2511 - 2675	28.0470	0.204	23.09	28M0D7W
		256QAM	2511 - 2675	27.9865	0.120	20.79	28M0D7W
	40 MHz	π/2 BPSK	2516 - 2670	36.1224	0.347	25.40	36M1G7W
		QPSK	2516 - 2670	38.0754	0.336	25.27	38M1G7W
		16QAM	2516 - 2670	38.0673	0.291	24.63	38M1D7W
		64QAM	2516 - 2670	38.0900	0.201	23.02	38M1D7W
		256QAM	2516 - 2670	38.0611	0.122	20.88	38M1D7W
	50 MHz	π/2 BPSK	2521 - 2665	46.1908	0.347	25.40	46M2G7W
		QPSK	2521 - 2665	47.8018	0.341	25.33	47M8G7W
		16QAM	2521 - 2665	47.8409	0.283	24.52	47M8D7W
		64QAM	2521 - 2665	47.7810	0.195	22.90	47M8D7W
		256QAM	2521 - 2665	47.5737	0.124	20.93	47M6D7W
	60 MHz	π/2 BPSK	2526 - 2660	58.3331	0.347	25.40	58M3G7W
		QPSK	2526 - 2660	58.3928	0.342	25.34	58M4G7W
		16QAM	2526 - 2660	58.3545	0.306	24.86	58M4D7W
		64QAM	2526 - 2660	58.4164	0.199	22.99	58M4D7W
		256QAM	2526 - 2660	58.1994	0.121	20.82	58M2D7W
	70 MHz	π/2 BPSK	2536 - 2650	65.1240	0.344	25.37	65M1G7W
		QPSK	2536 - 2650	67.9670	0.347	25.40	68M0G7W
		16QAM	2536 - 2650	68.1600	0.288	24.59	68M2D7W
		64QAM	2536 - 2650	68.0670	0.205	23.12	68M1D7W
		256QAM	2536 - 2650	67.9230	0.124	20.92	67M9D7W
	80 MHz	π/2 BPSK	2536 - 2650	77.4425	0.347	25.40	77M4G7W
		QPSK	2536 - 2650	77.8257	0.342	25.34	77M8G7W
		16QAM	2536 - 2650	77.8782	0.288	24.59	77M9D7W
		64QAM	2536 - 2650	77.9364	0.198	22.96	77M9D7W
		256QAM	2536 - 2650	77.8471	0.127	21.04	77M8D7W
	90 MHz	π/2 BPSK	2541 - 2645	87.6319	0.345	25.37	87M6G7W
		QPSK	2541 - 2645	87.9433	0.347	25.40	87M9G7W
		16QAM	2541 - 2645	87.9874	0.293	24.67	88M0D7W
		64QAM	2541 - 2645	88.1117	0.194	22.89	88M1D7W
		256QAM	2541 - 2645	87.9958	0.122	20.88	88M0D7W
	100 MHz	π/2 BPSK	2546 - 2640	97.1479	0.346	25.39	97M1G7W
		QPSK	2546 - 2640	98.0348	0.331	25.20	98M0G7W
		16QAM	2546 - 2640	98.0538	0.304	24.83	98M1D7W
		64QAM	2546 - 2640	98.3358	0.200	23.02	98M3D7W
		256QAM	2546 - 2640	98.2768	0.274	24.37	98M3D7W

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 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.

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

Measurements for LTE-Band41/N41 and ULCA CA_41C were performed with NS04 for all antennas.
Measurements for LTE-Band30 were performed with NS21 for all antennas

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.

2.3 Antenna Description

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

Band	Antenna Gain (dBi)			
	Antenna 1	Antenna 3	Antenna 4b	Antenna 2b
LTE Band 30	-2.1	-3.8	-0.3	0.7
LTE Band n30				
LTE Band 7	-0.3	-2.7	0.2	0.0
LTE Band n7				
LTE Band 41	-0.4	-2.7	-0.4	-0.3
LTE Band n41				

Table 2-2. Highest Antenna Gain

Note: Antenna Specifications has 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

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.

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

$$EIRP_{[dBm]} = E_{[dB\mu V/m]} + 20\log D - 104.8;$$ 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	1.77
Radiated Disturbance (<30MHz)	4.38
Radiated Disturbance (30MHz-1GHz)	4.75
Radiated Disturbance (1-18GHz)	5.20
Radiated Disturbance (>18GHz)	4.72

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.

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: BCGA2435

FCC Classification: PCS Licensed Transmitter (PCB)

Mode(s): LTE/NR/ULCA

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

Table 7-1. Summary of Test Results

Notes:

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

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

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

4. All conducted emissions measurements are performed with automated test software to capture the corresponding plots necessary to show compliance. The measurement software utilized was Element EMC Software Tool v1.1.

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.

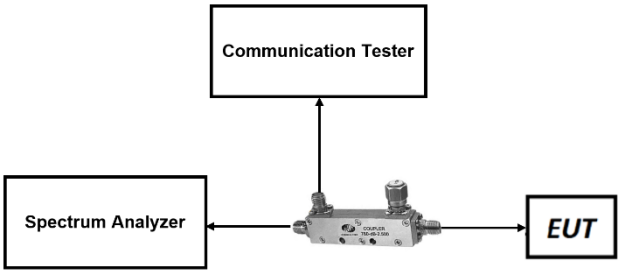
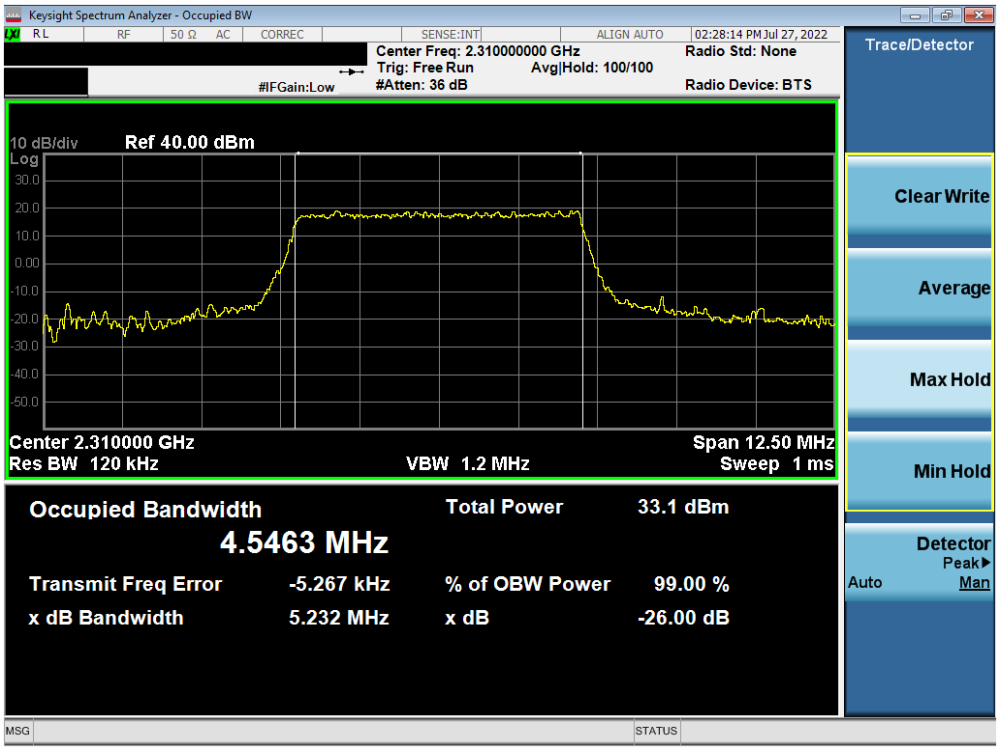


Figure 7-1. Test Instrument & Measurement Setup

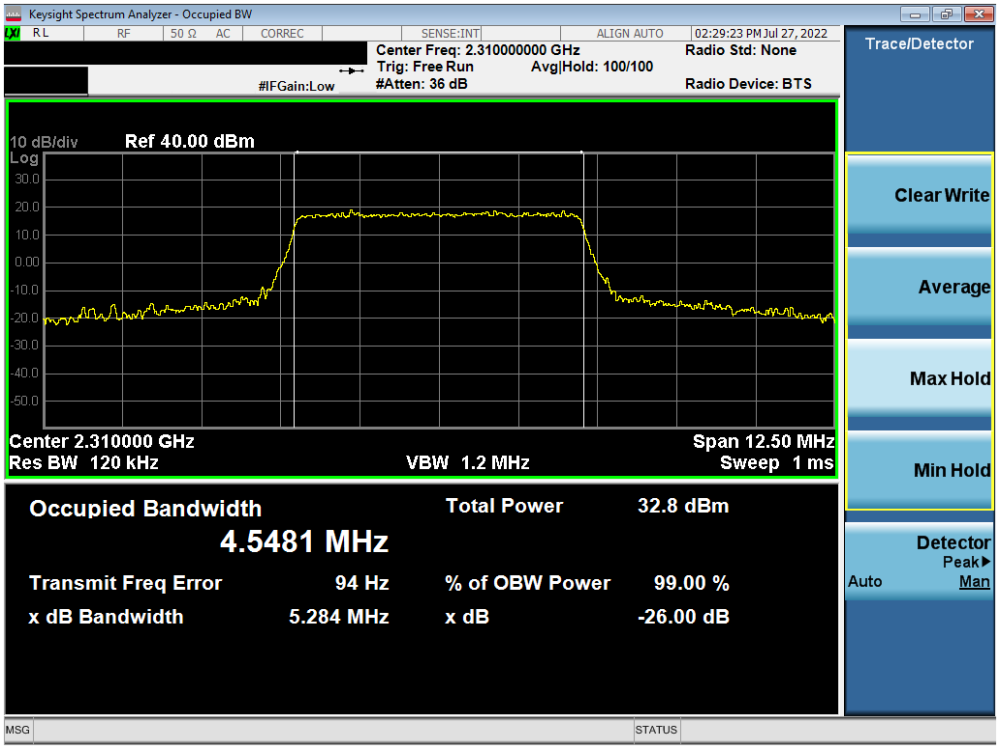
Test Notes

None.

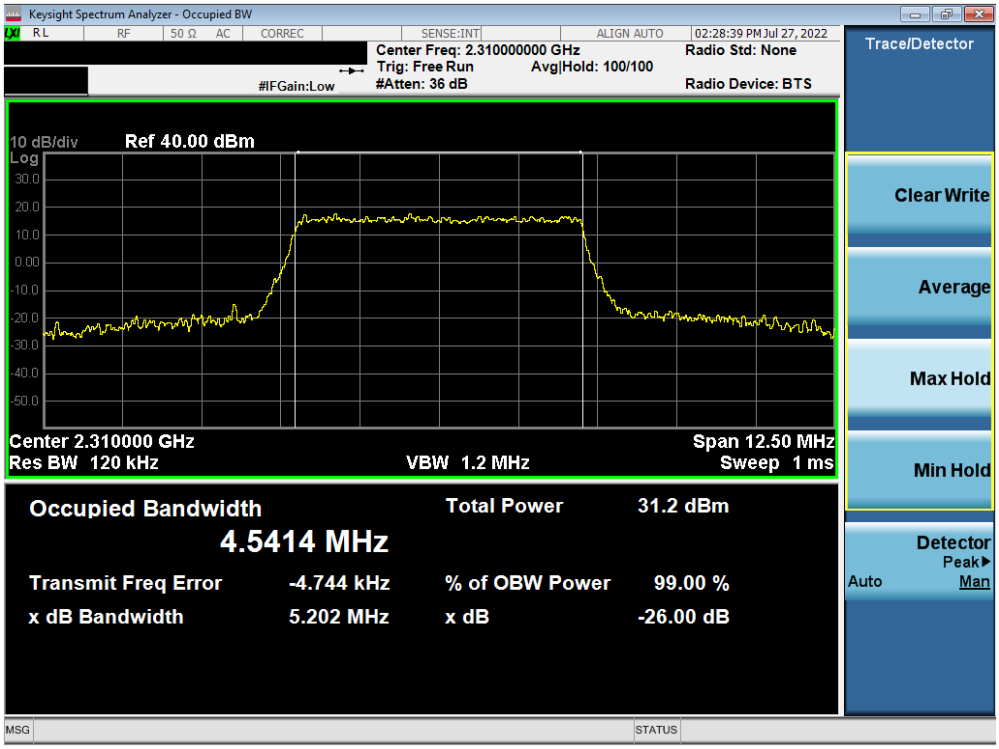
LTE Band 30



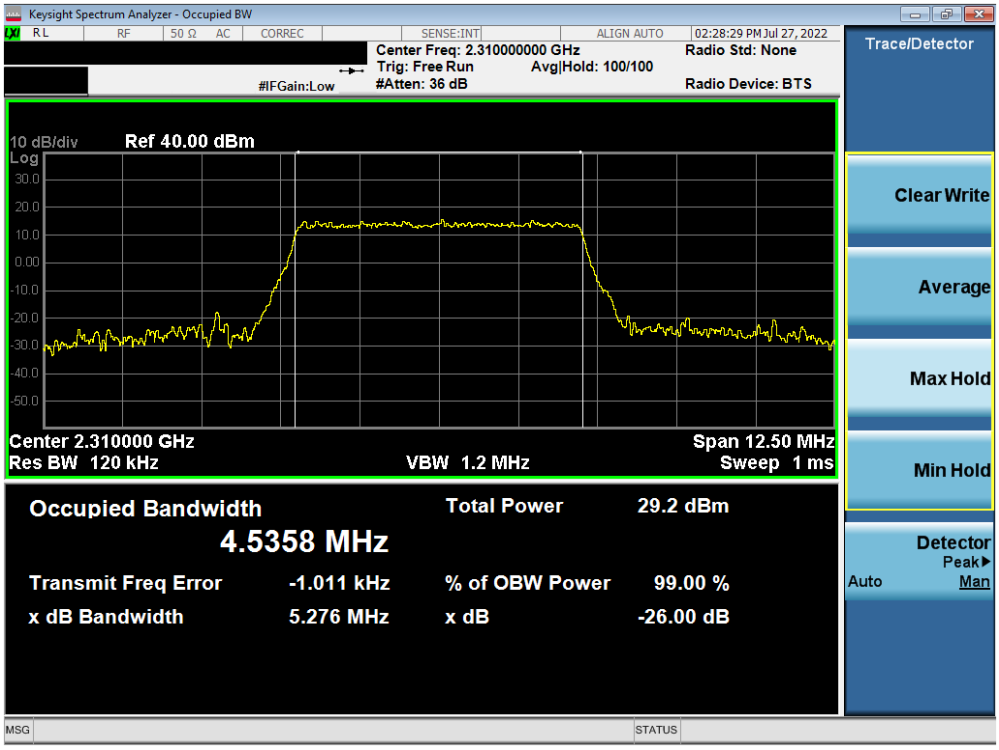
Plot 7-1. Occupied Bandwidth Plot (LTE Band 30 - 5MHz QPSK - Full RB)



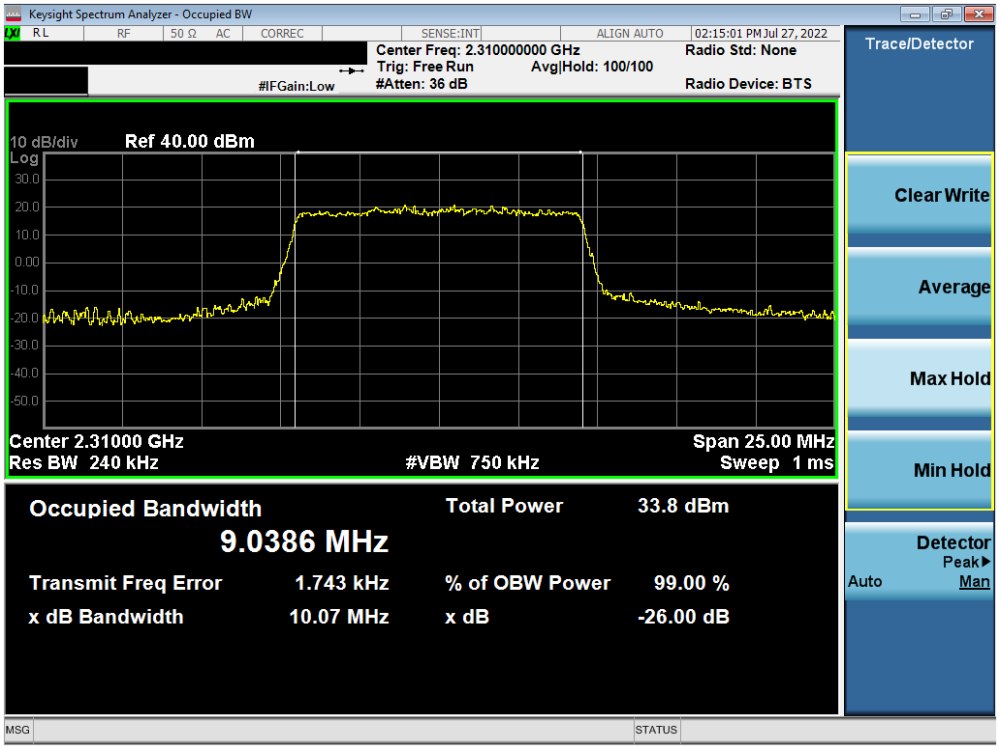
Plot 7-2. Occupied Bandwidth Plot (LTE Band 30 - 5MHz 16-QAM - Full RB)



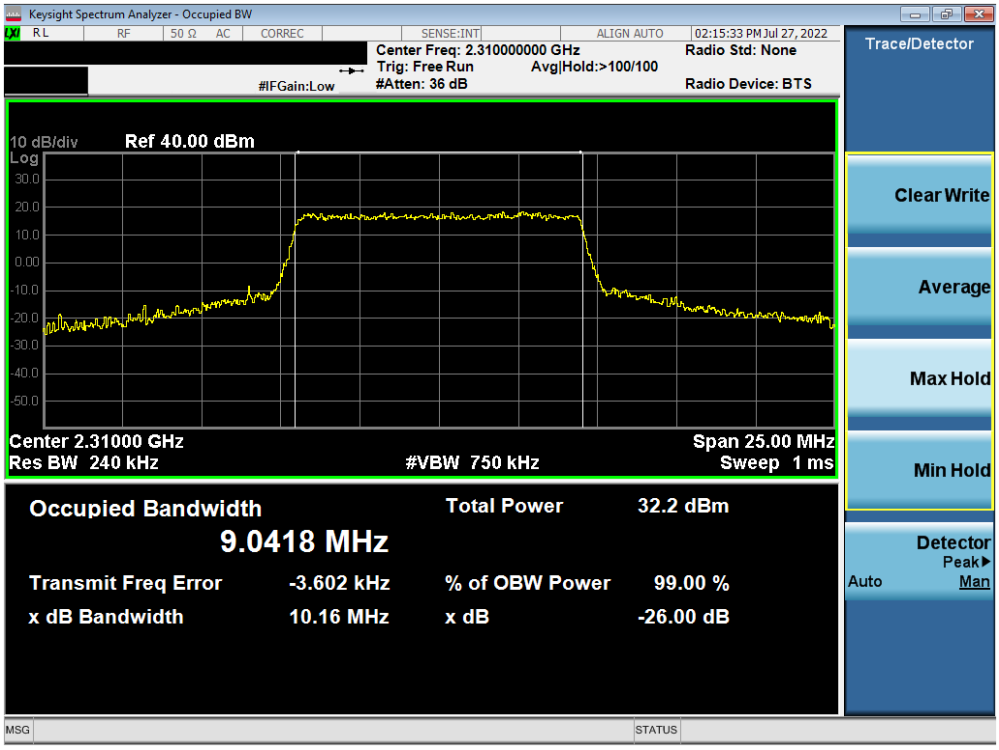
Plot 7-3. Occupied Bandwidth Plot (LTE Band 30 - 5MHz 64-QAM - Full RB)



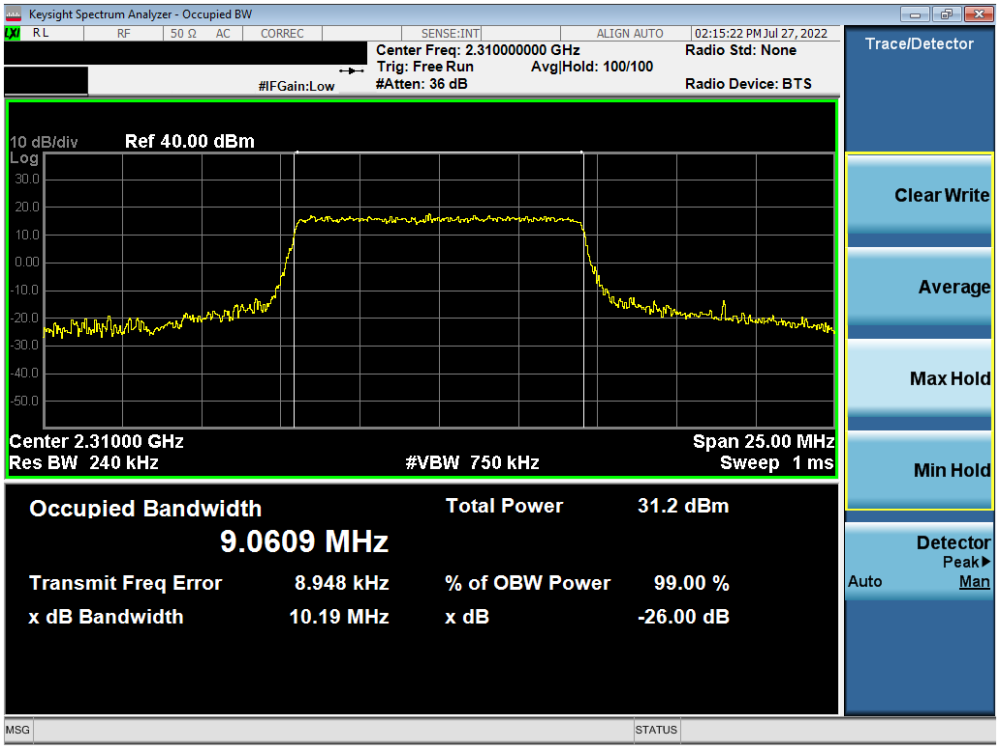
Plot 7-4. Occupied Bandwidth Plot (LTE Band 30 - 5MHz 256-QAM - Full RB)



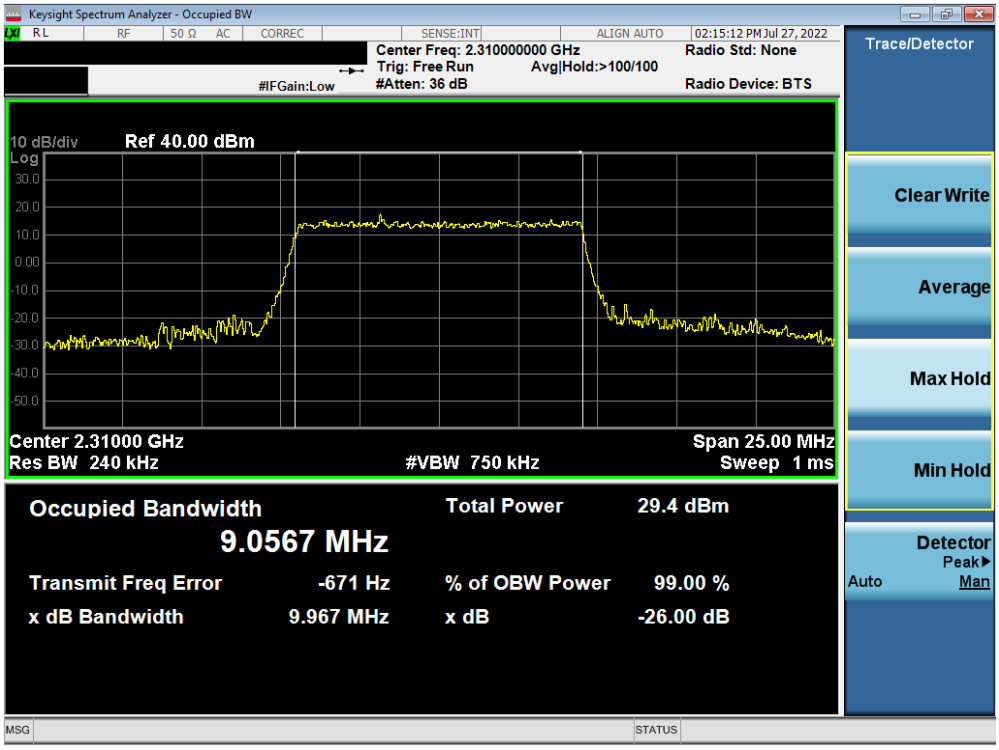
Plot 7-5. Occupied Bandwidth Plot (LTE Band 30 - 10MHz QPSK - Full RB)



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

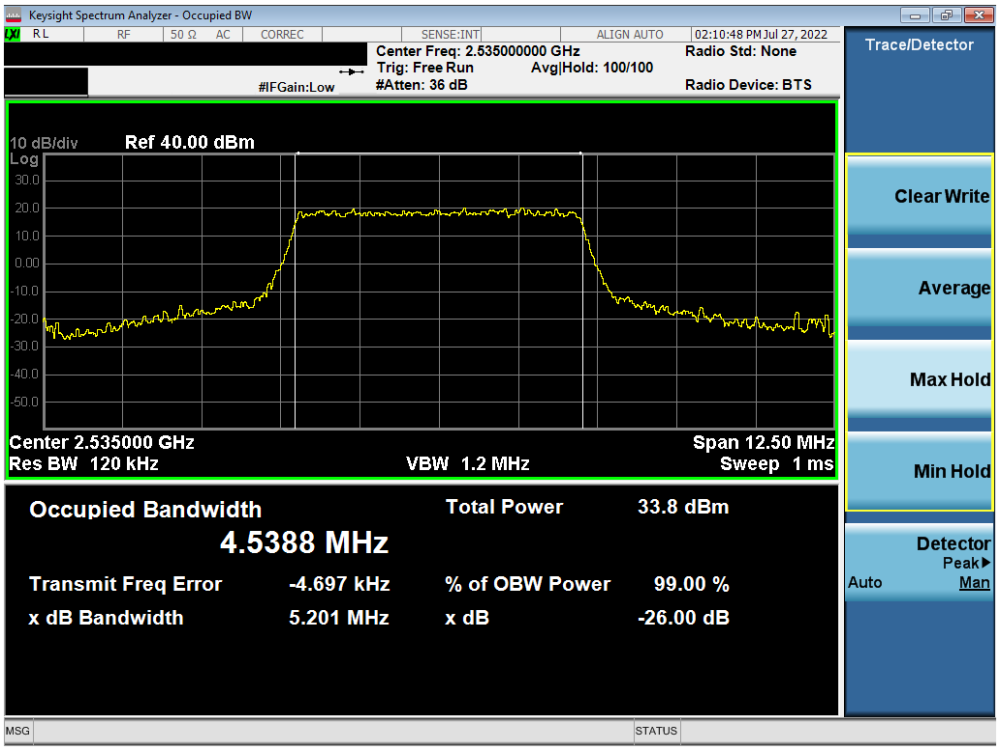


Plot 7-7. Occupied Bandwidth Plot (LTE Band 30 - 10MHz 64-QAM - Full RB)

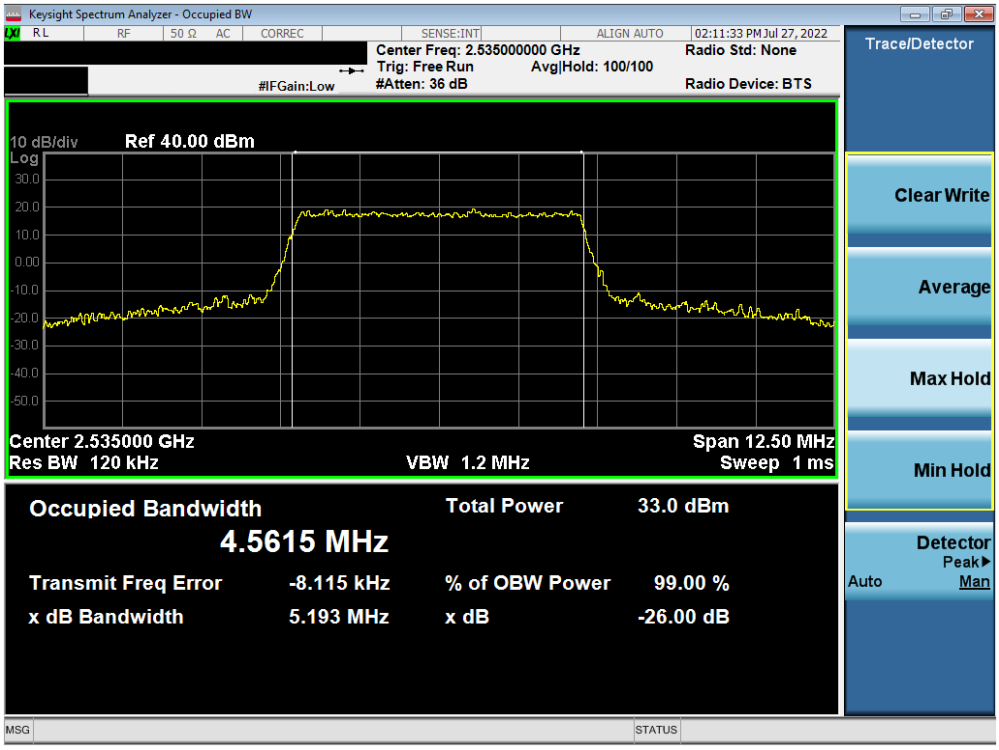


Plot 7-8. Occupied Bandwidth Plot (LTE Band 30 - 10MHz 256-QAM - Full RB)

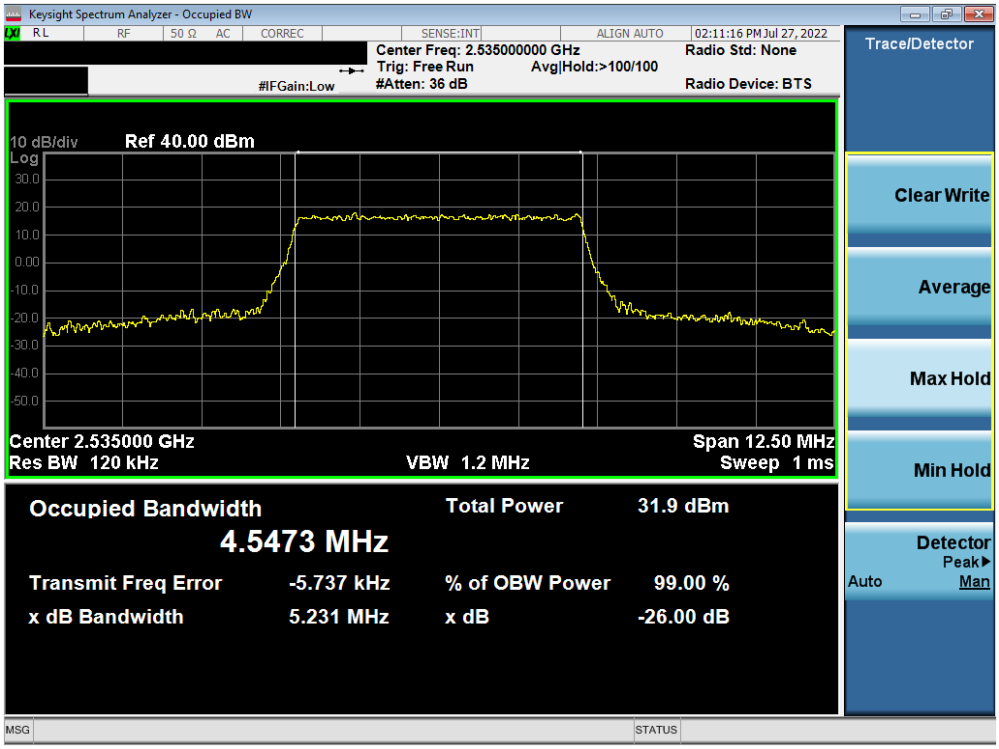
LTE Band 7



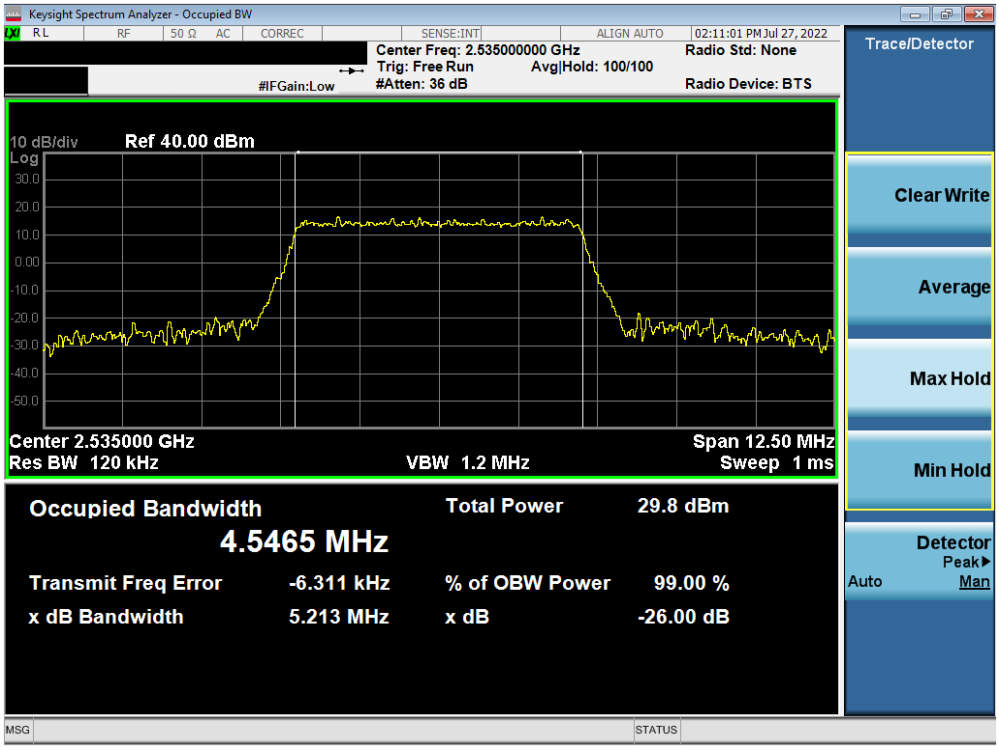
Plot 7-9. Occupied Bandwidth Plot (LTE Band 7 - 5MHz QPSK - Full RB)



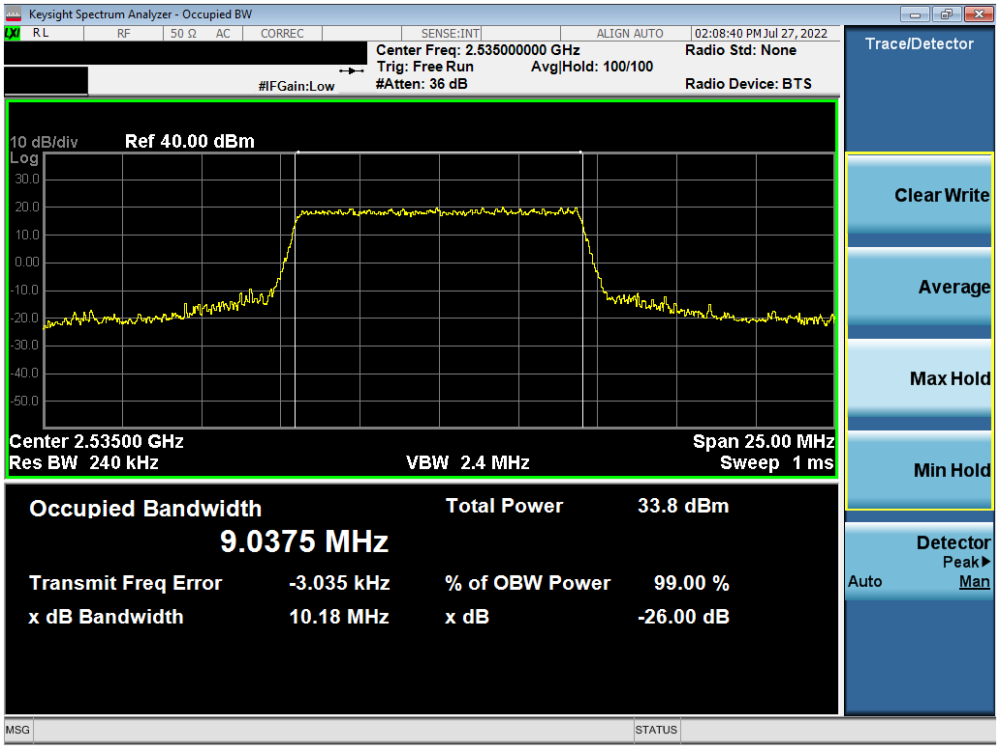
Plot 7-10. Occupied Bandwidth Plot (LTE Band 7 - 5MHz 16-QAM - Full RB)



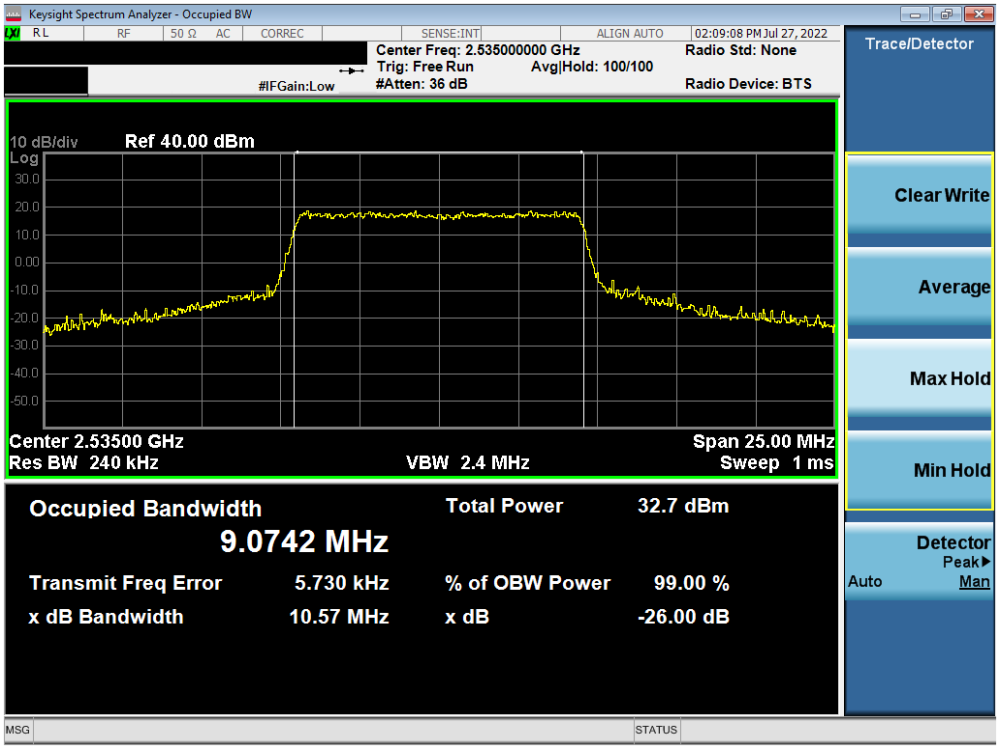
Plot 7-11. Occupied Bandwidth Plot (LTE Band 7 - 5MHz 64-QAM - Full RB)



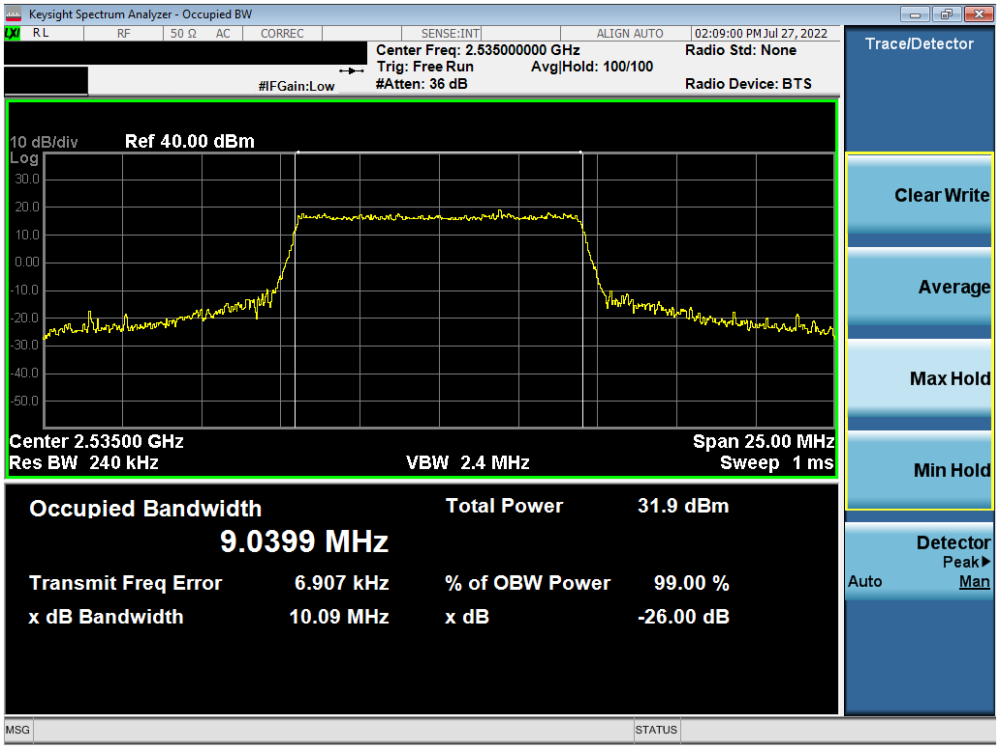
Plot 7-12. Occupied Bandwidth Plot (LTE Band 7 - 5MHz 256-QAM - Full RB)



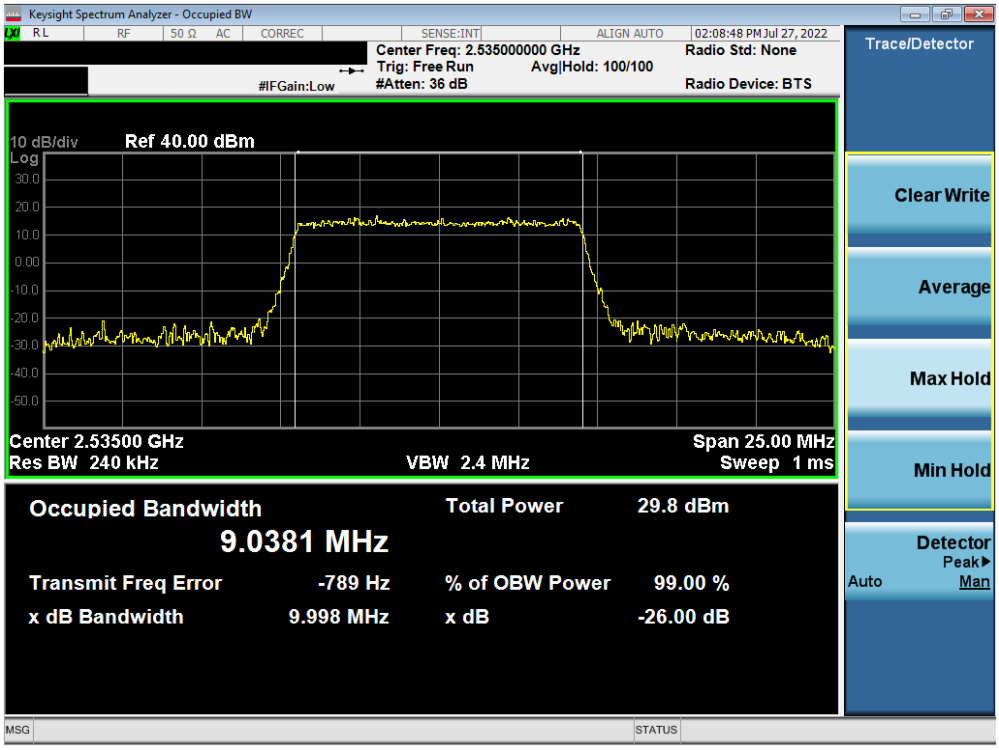
Plot 7-13. Occupied Bandwidth Plot (LTE Band 7 - 10MHz QPSK - Full RB)



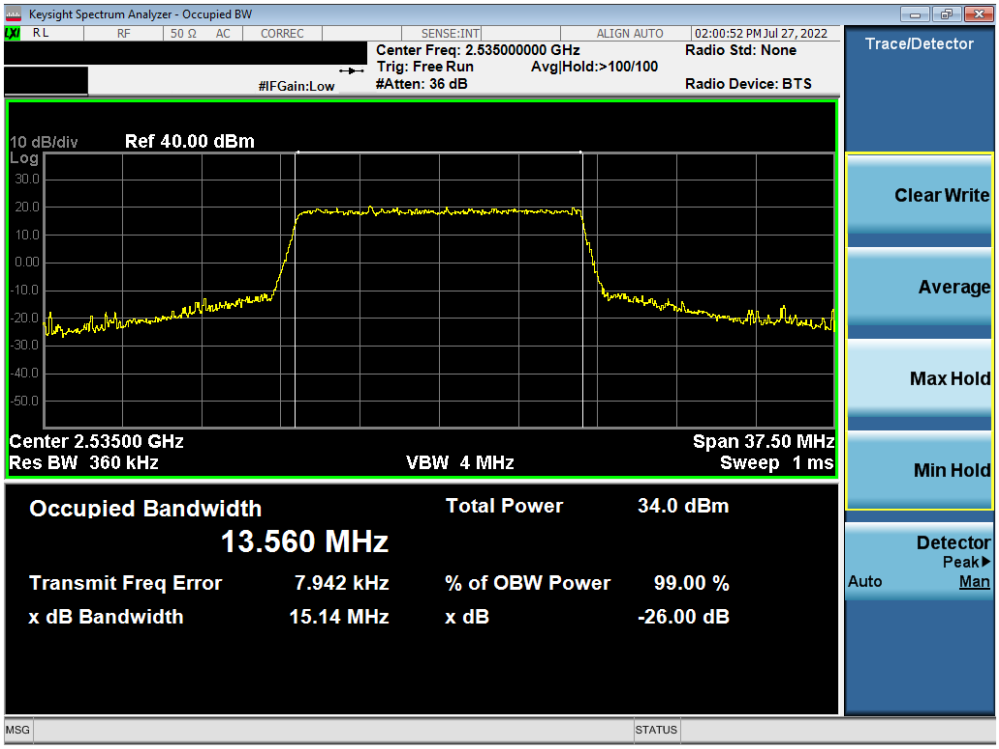
Plot 7-14. Occupied Bandwidth Plot (LTE Band 7 - 10MHz 16-QAM - Full RB)



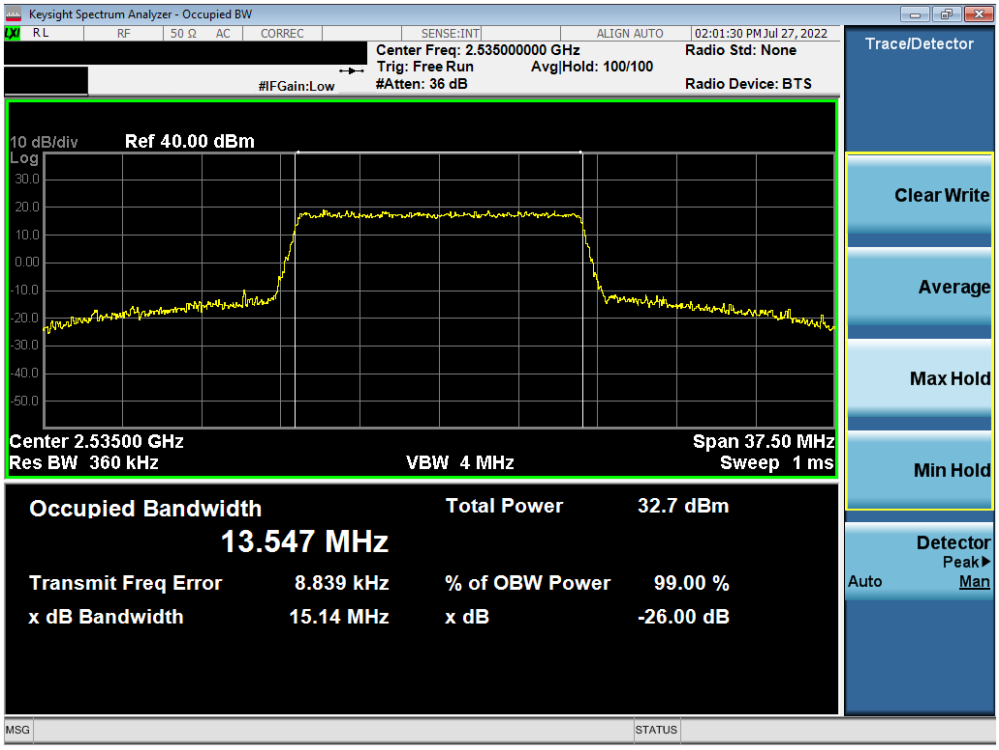
Plot 7-15. Occupied Bandwidth Plot (LTE Band 7 - 10MHz 64-QAM - Full RB)



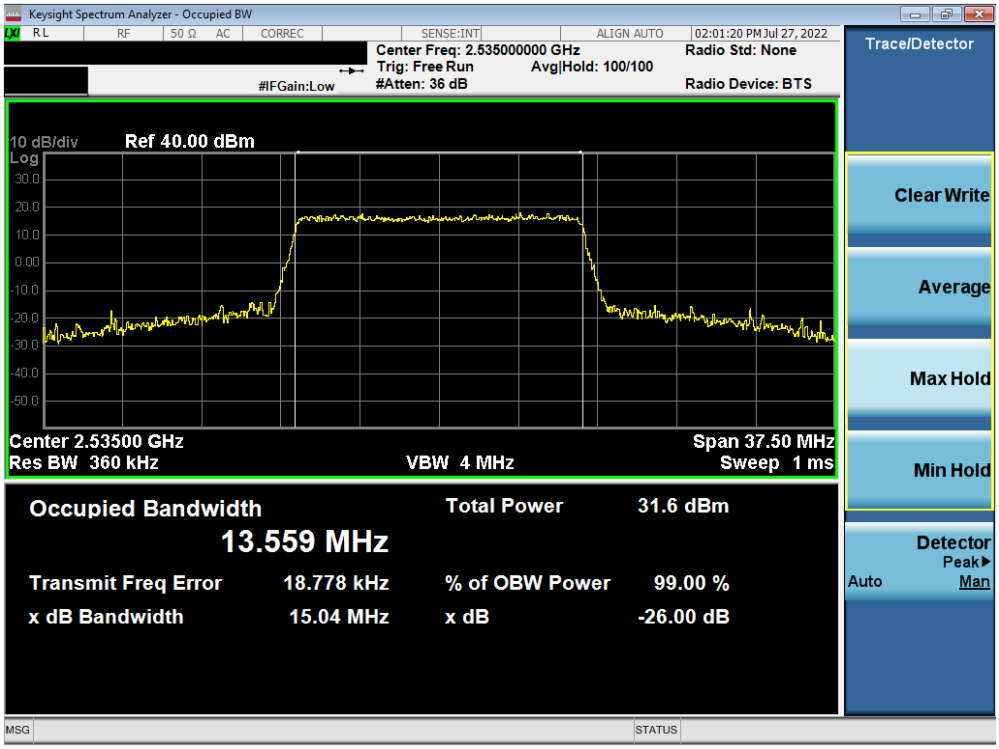
Plot 7-16. Occupied Bandwidth Plot (LTE Band 7 - 10MHz 256-QAM - Full RB)



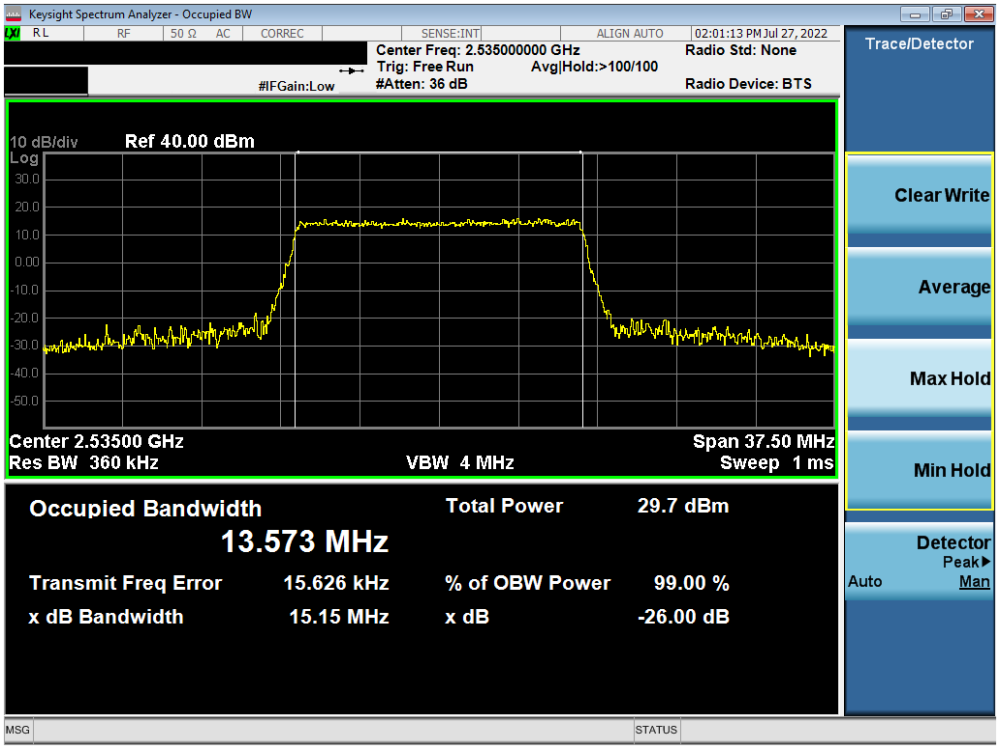
Plot 7-17. Occupied Bandwidth Plot (LTE Band 7 - 15MHz QPSK - Full RB)



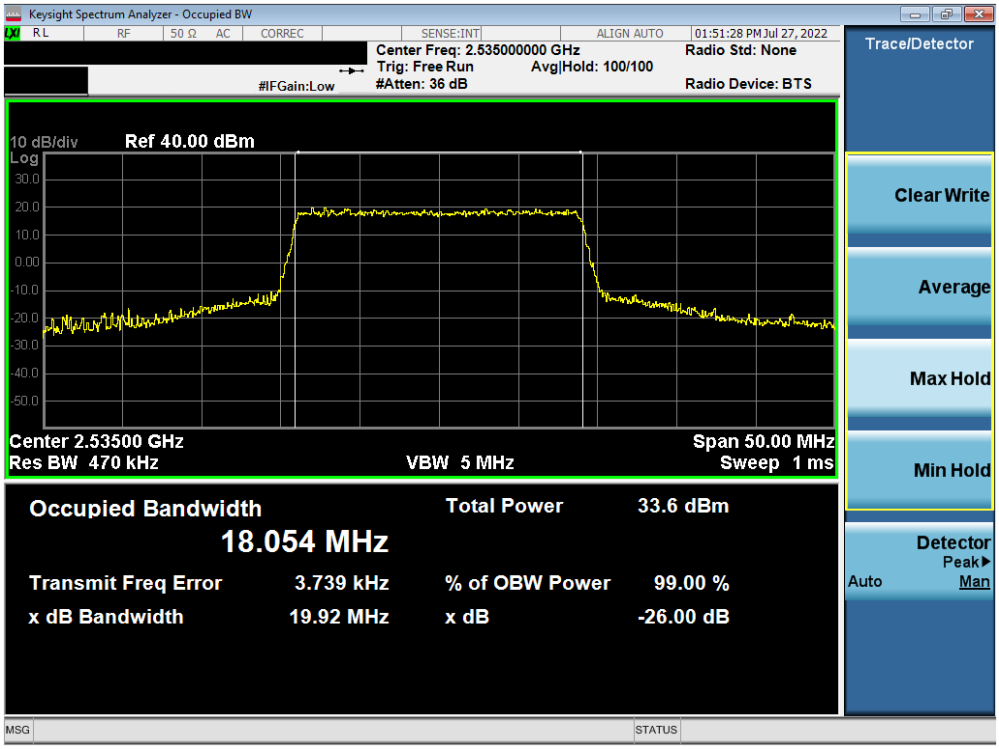
Plot 7-18. Occupied Bandwidth Plot (LTE Band 7 - 15MHz 16-QAM - Full RB)



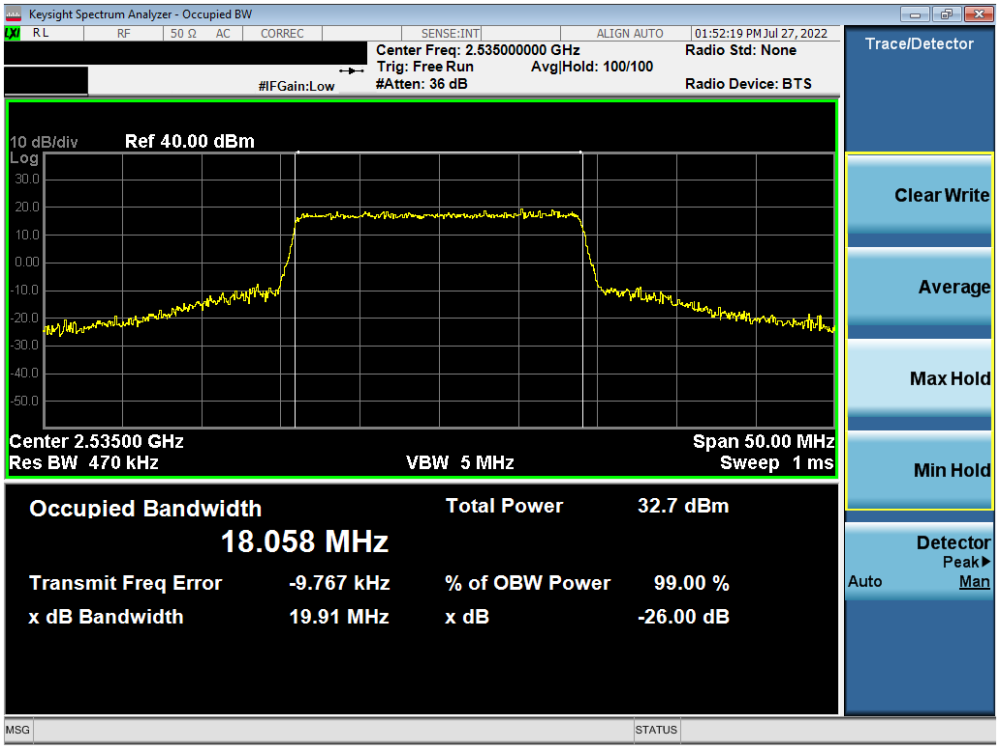
Plot 7-19. Occupied Bandwidth Plot (LTE Band 7 - 15MHz 64-QAM - Full RB)



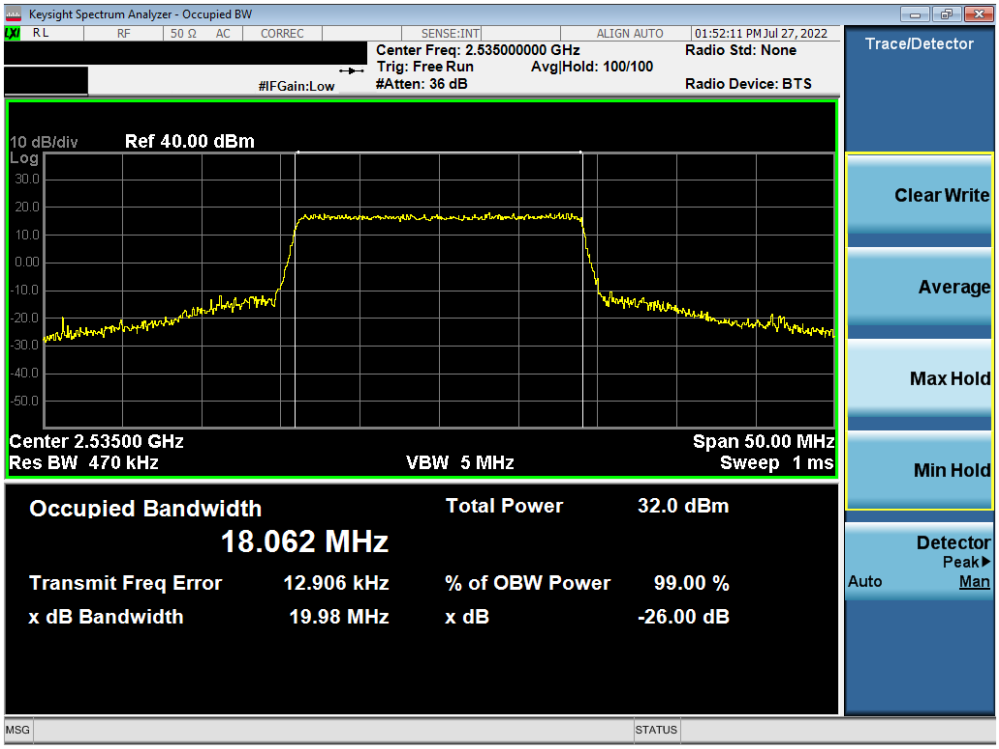
Plot 7-20. Occupied Bandwidth Plot (LTE Band 7 - 15MHz 256-QAM - Full RB)



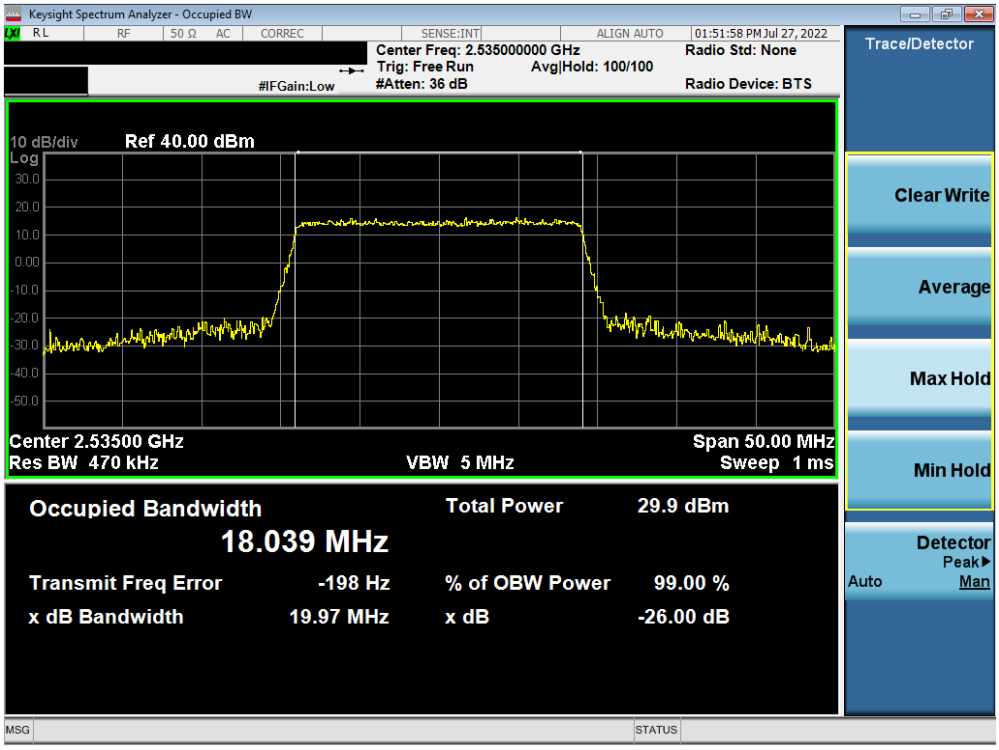
Plot 7-21. Occupied Bandwidth Plot (LTE Band 7 - 20MHz QPSK - Full RB)



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

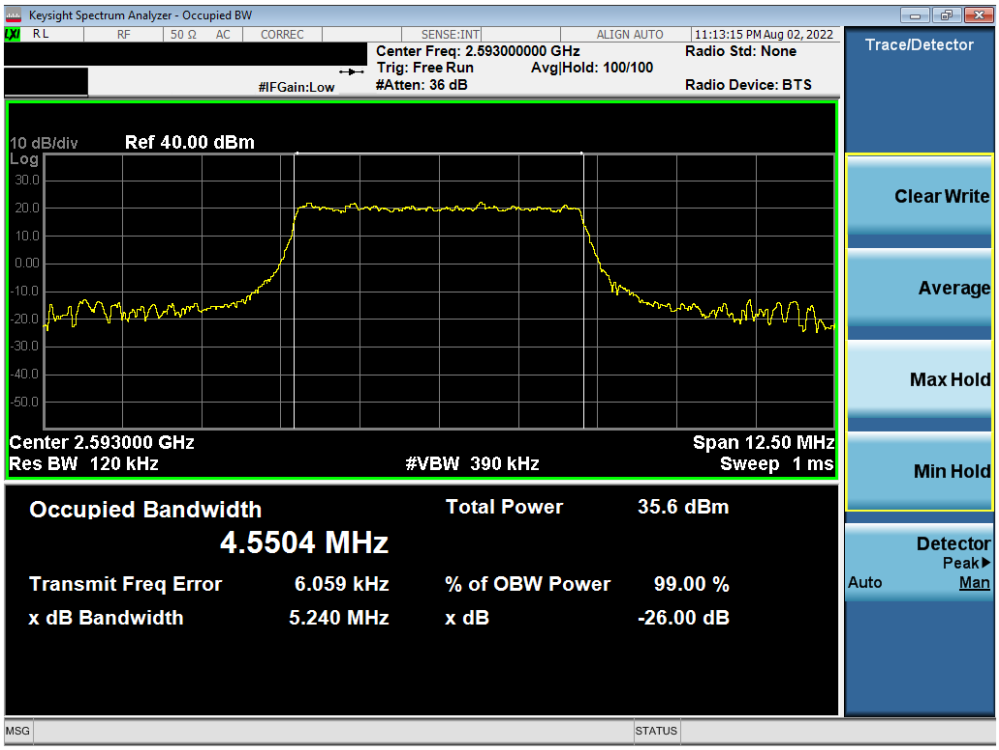


Plot 7-23. Occupied Bandwidth Plot (LTE Band 7 - 20MHz 64-QAM - Full RB)



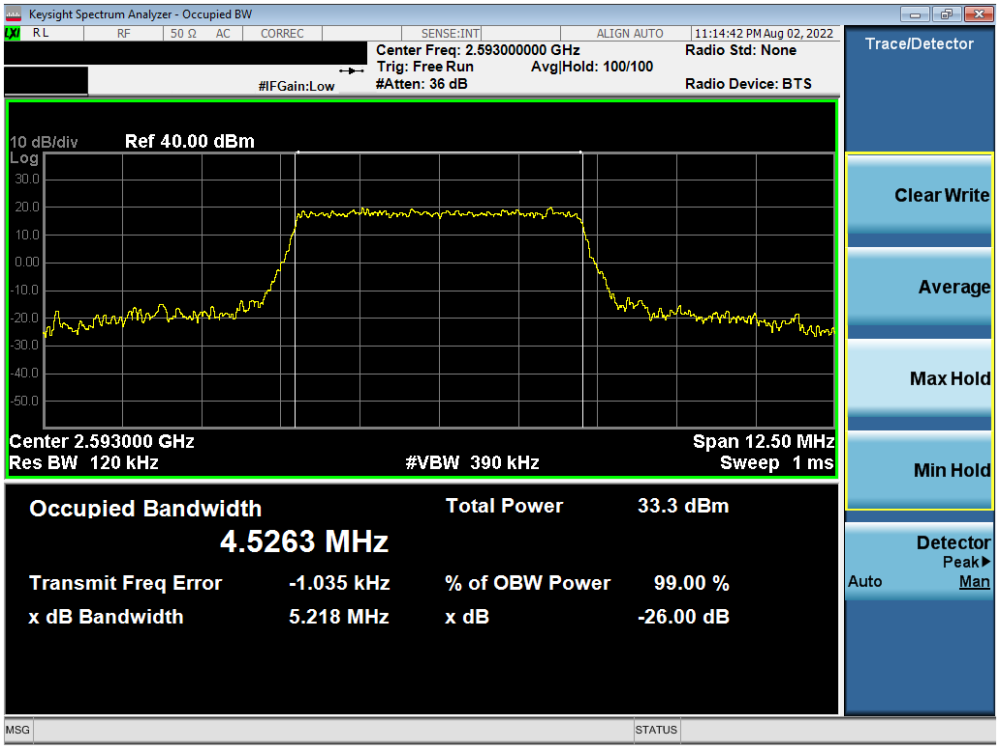
Plot 7-24. Occupied Bandwidth Plot (LTE Band 7 - 20MHz 256-QAM - Full RB)

LTE Band 41

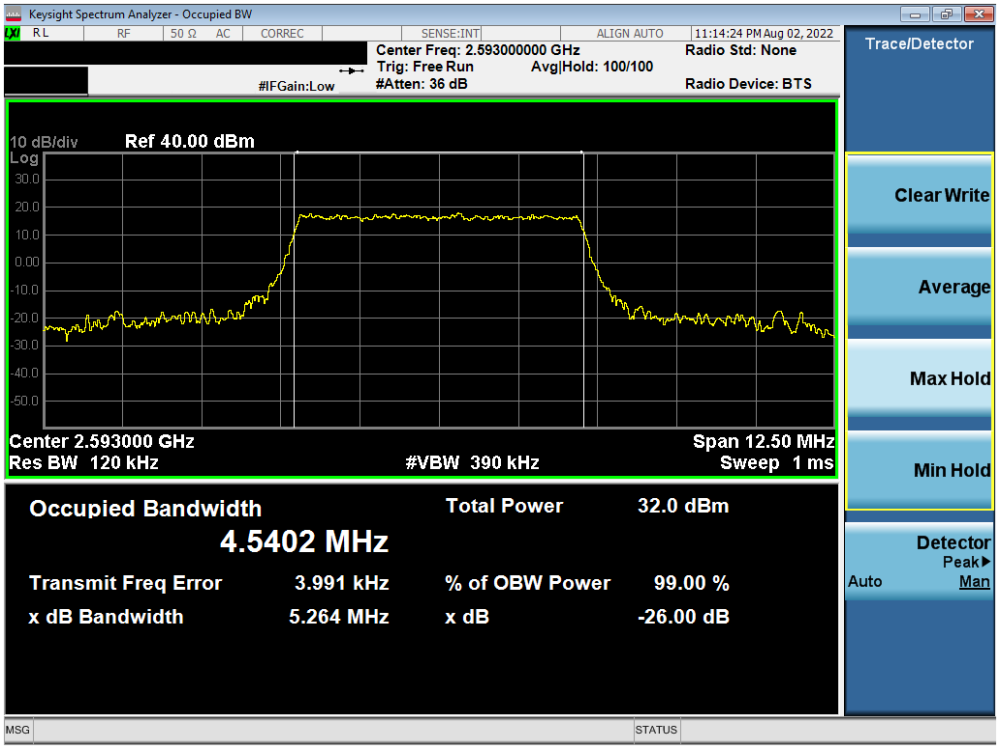


Plot 7-25. Occupied Bandwidth Plot (LTE Band 41 - 5MHz QPSK - Full RB)

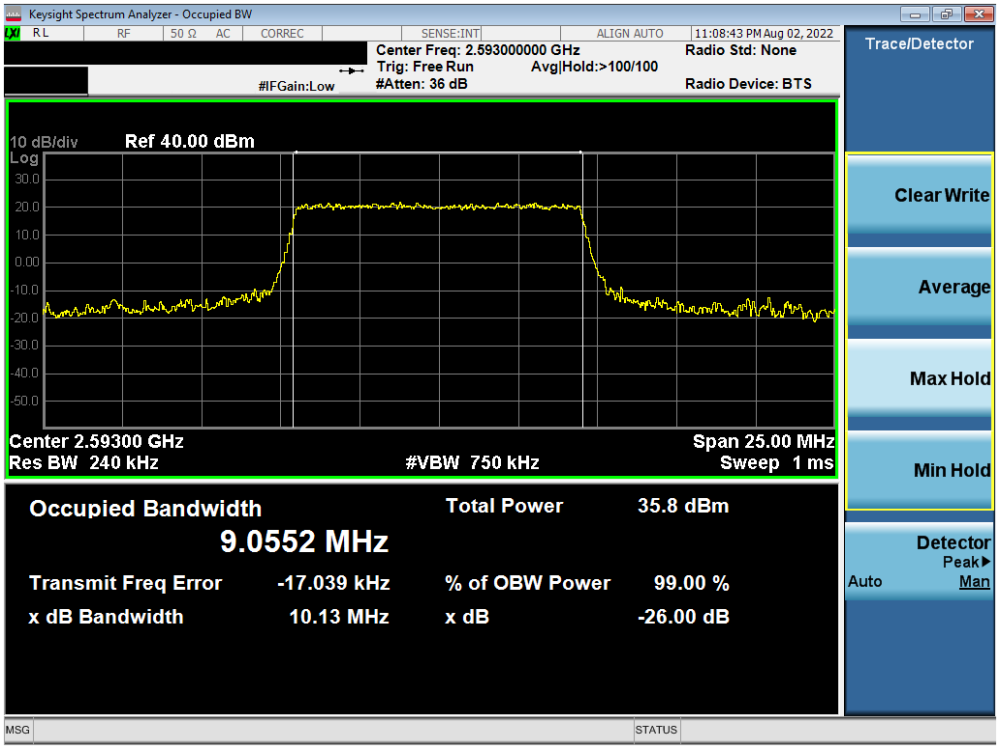
Plot 7-26. Occupied Bandwidth Plot (LTE Band 41 - 5MHz 16-QAM - Full RB)



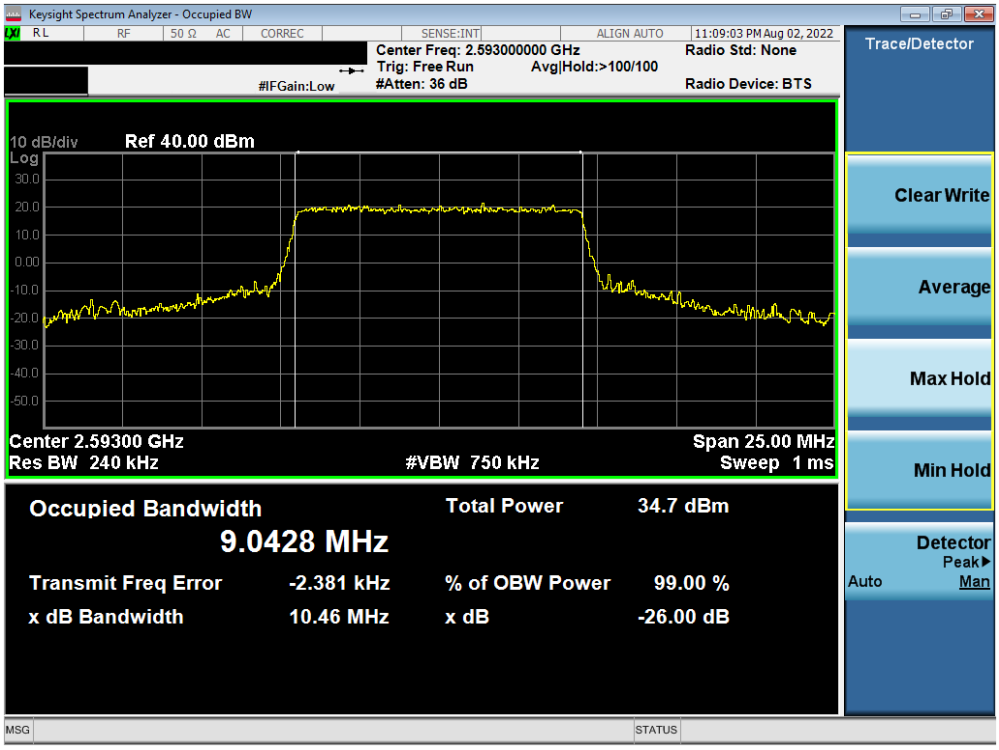
Plot 7-27. Occupied Bandwidth Plot (LTE Band 41 - 5MHz 64-QAM - Full RB)



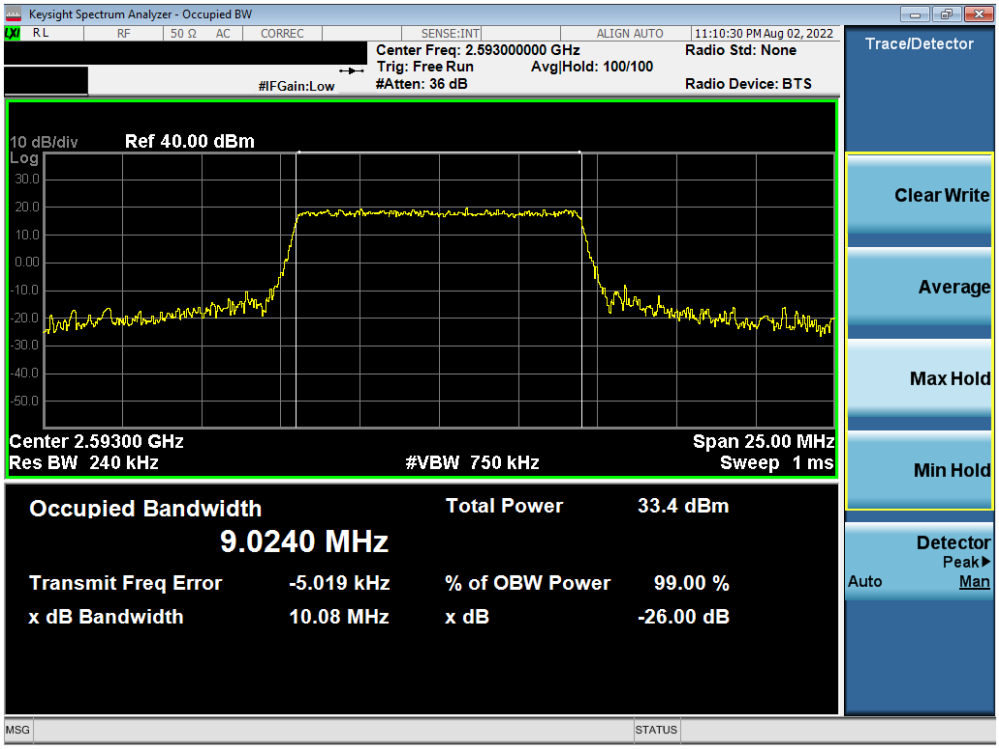
Plot 7-28. Occupied Bandwidth Plot (LTE Band 41 - 5MHz 256-QAM - Full RB)



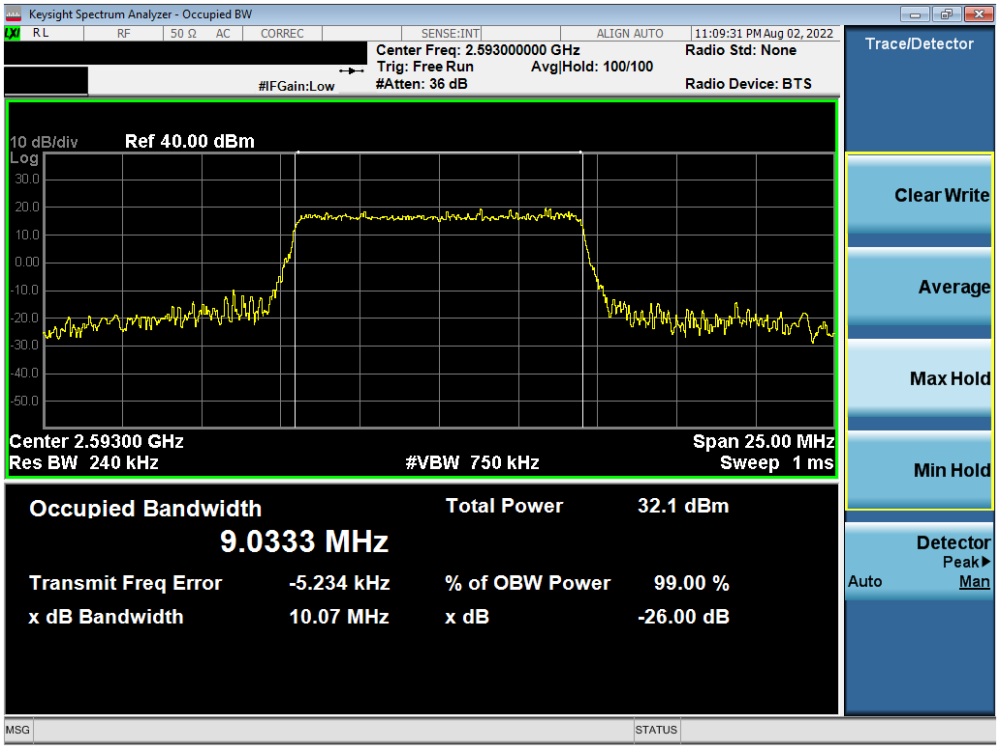
Plot 7-29. Occupied Bandwidth Plot (LTE Band 41 - 10MHz QPSK - Full RB)



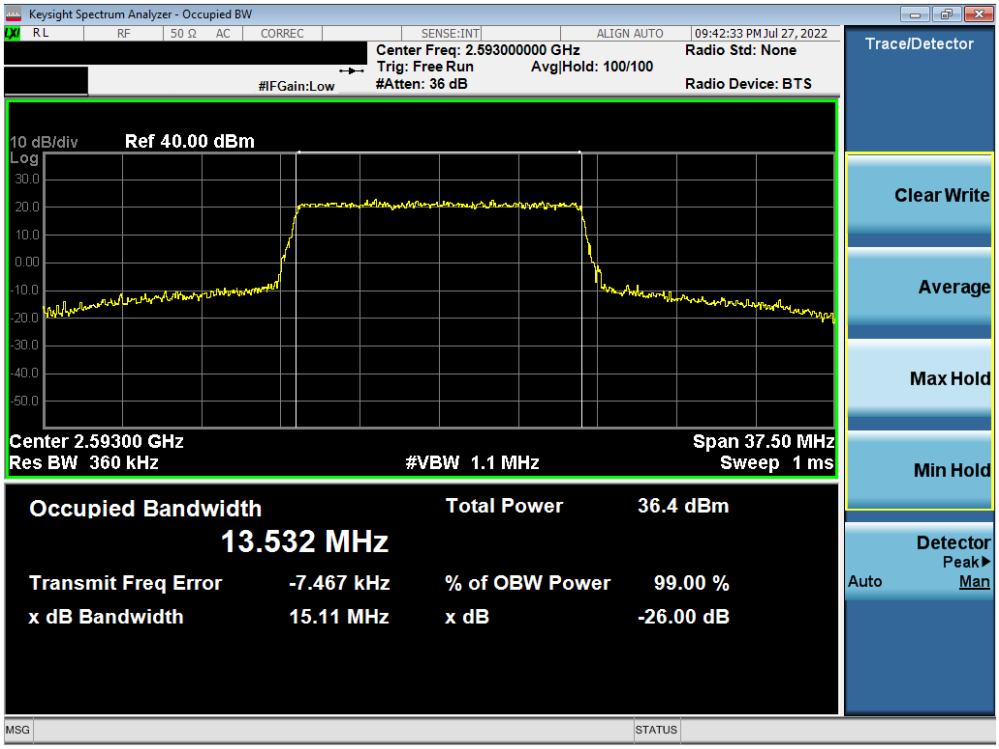
Plot 7-30. Occupied Bandwidth Plot (LTE Band 41 - 10MHz 16-QAM - Full RB)



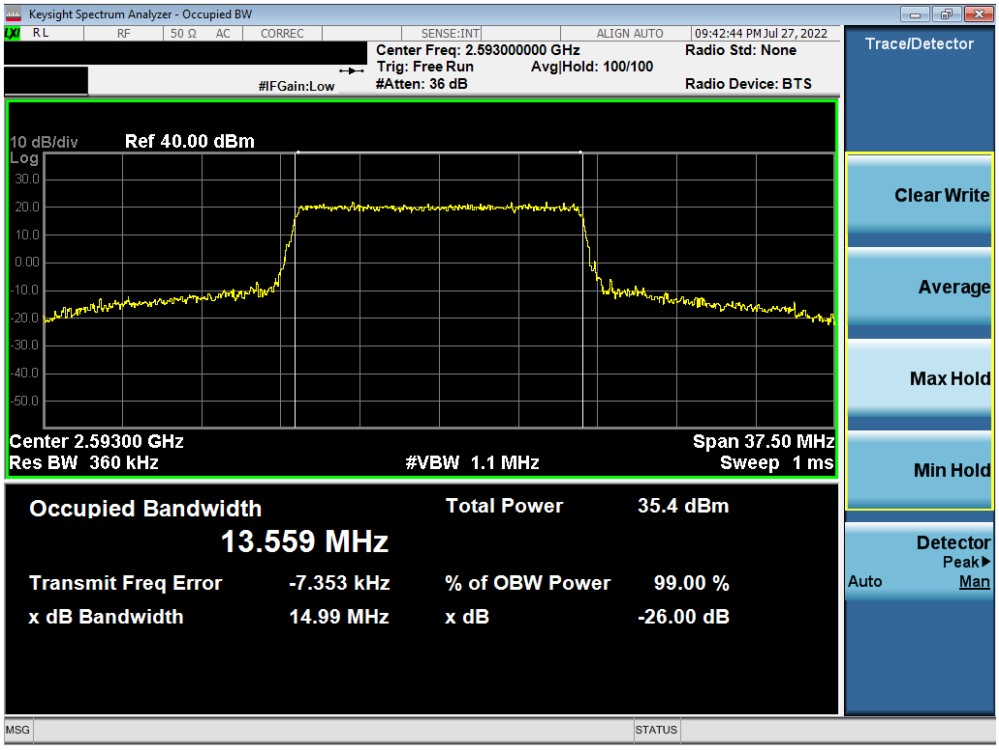
Plot 7-31. Occupied Bandwidth Plot (LTE Band 41 - 10MHz 64-QAM - Full RB)



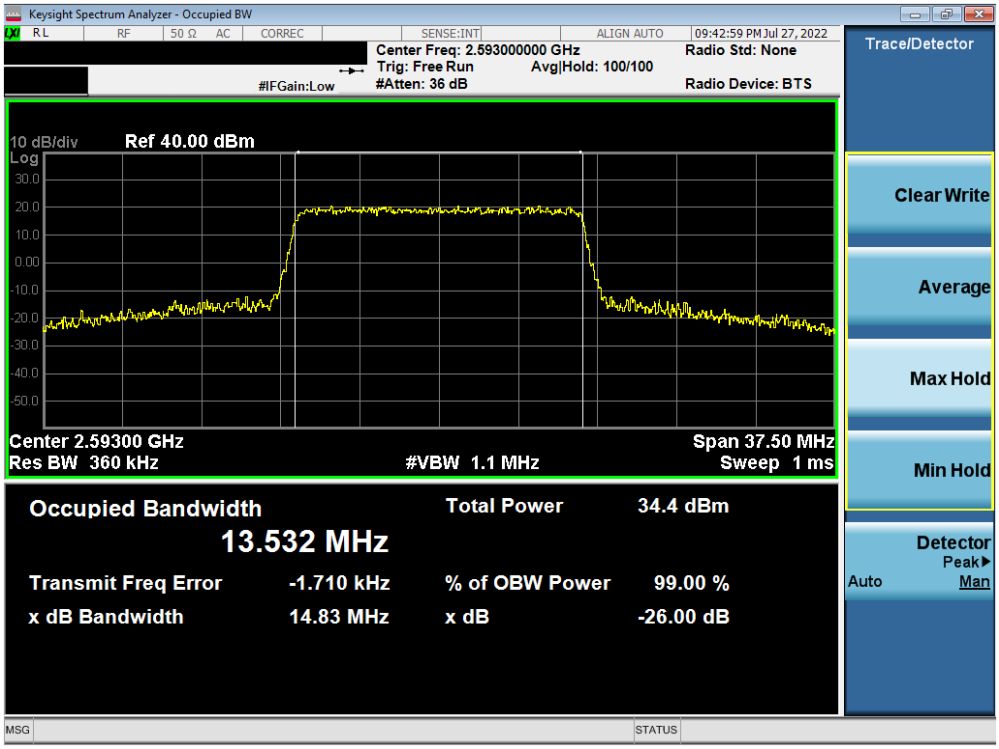
Plot 7-32. Occupied Bandwidth Plot (LTE Band 41 - 10MHz 256-QAM - Full RB)



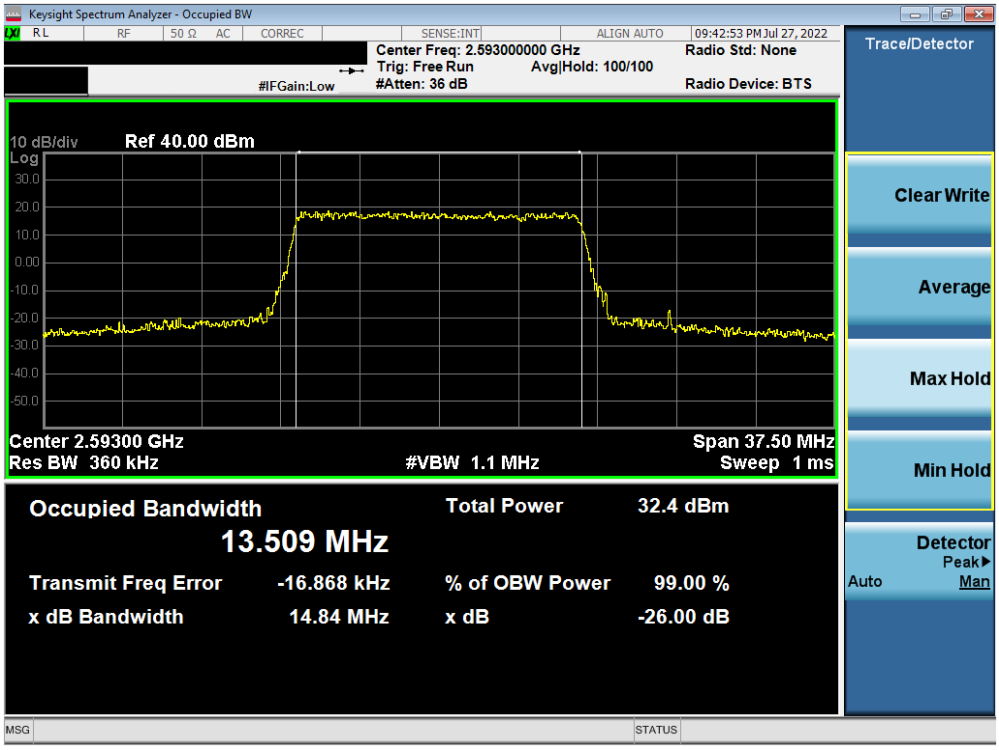
Plot 7-33. Occupied Bandwidth Plot (LTE Band 41 - 15MHz QPSK - Full RB)



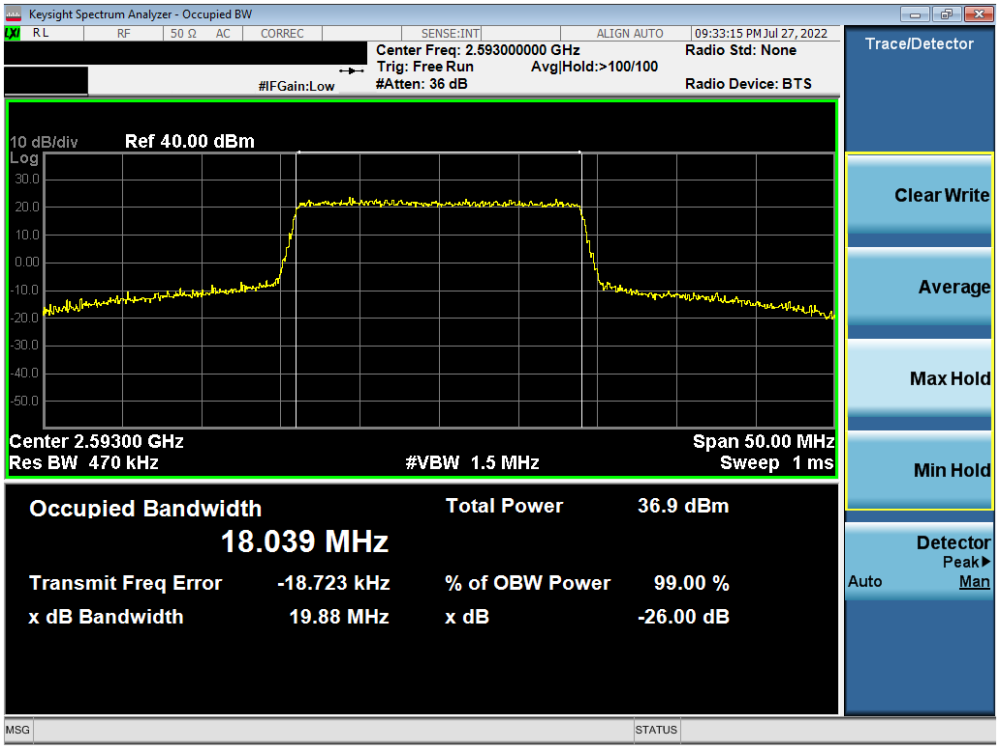
Plot 7-34. Occupied Bandwidth Plot (LTE Band 41 - 15MHz 16-QAM - Full RB)



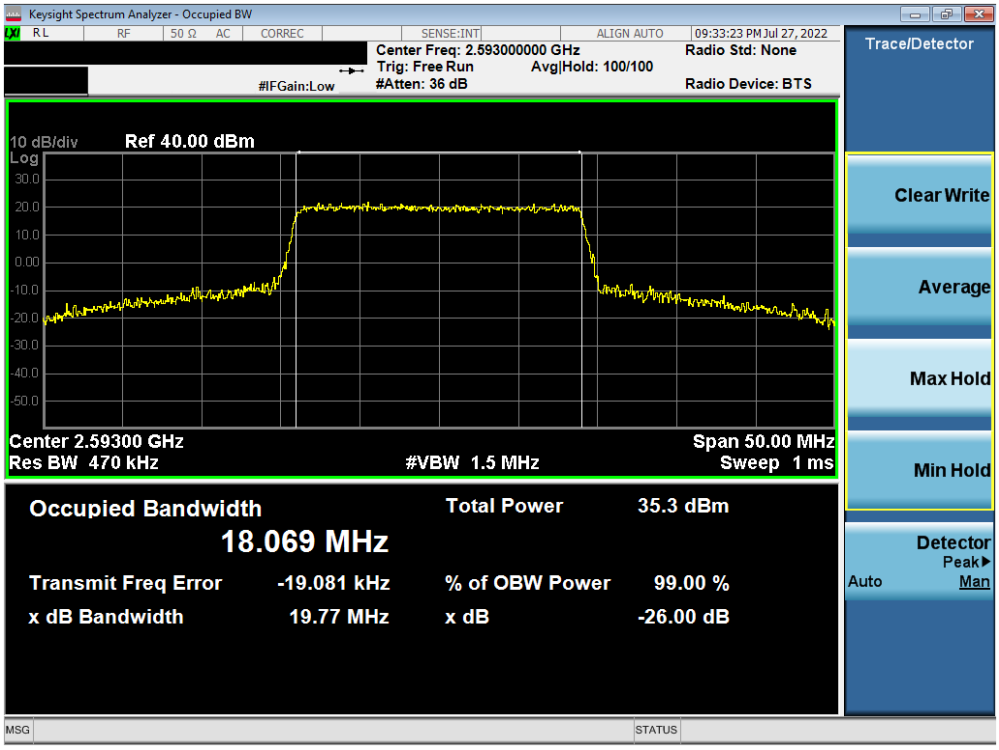
Plot 7-35. Occupied Bandwidth Plot (LTE Band 41 - 15MHz 64-QAM - Full RB)



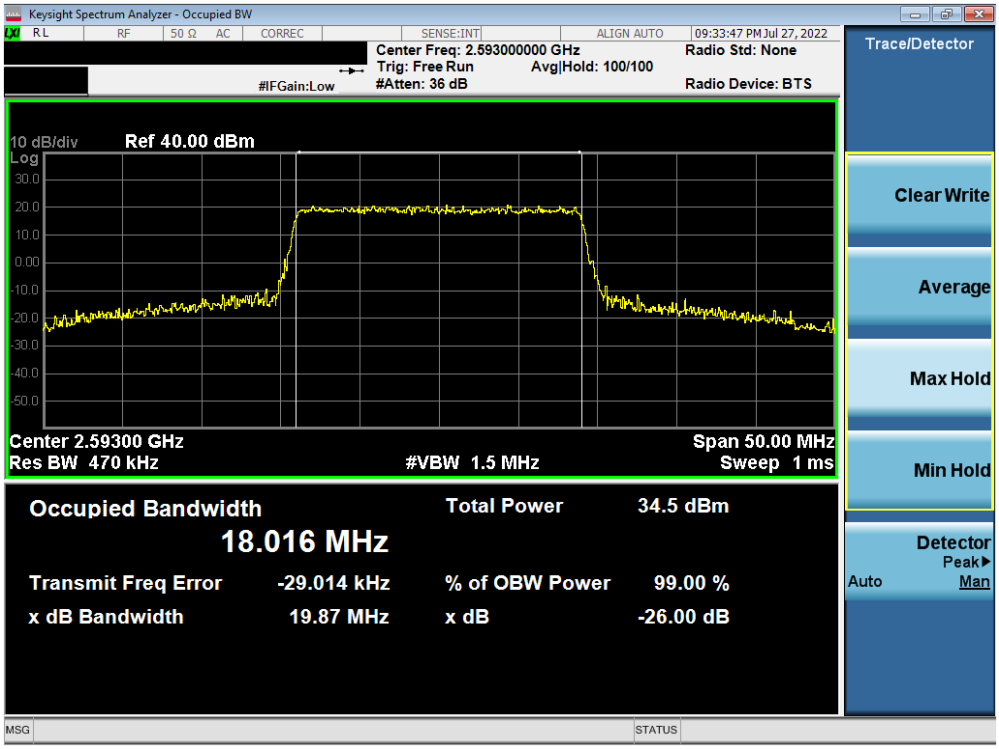
Plot 7-36. Occupied Bandwidth Plot (LTE Band 41 - 15MHz 256-QAM - Full RB)



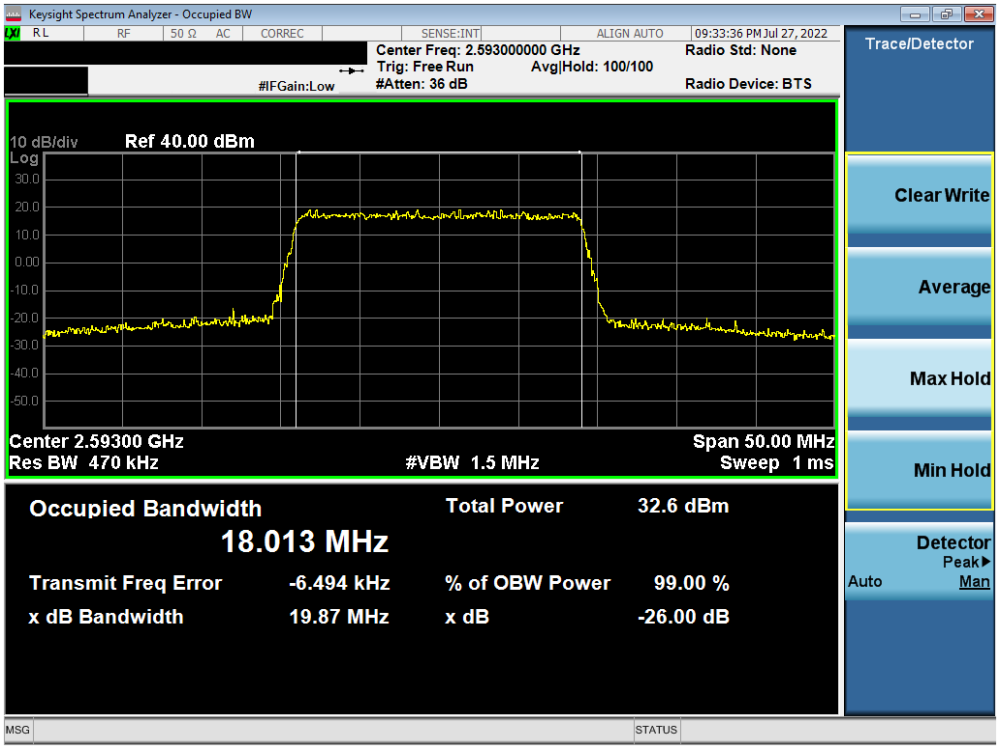
Plot 7-37. Occupied Bandwidth Plot (LTE Band 41 - 20MHz QPSK - Full RB)



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

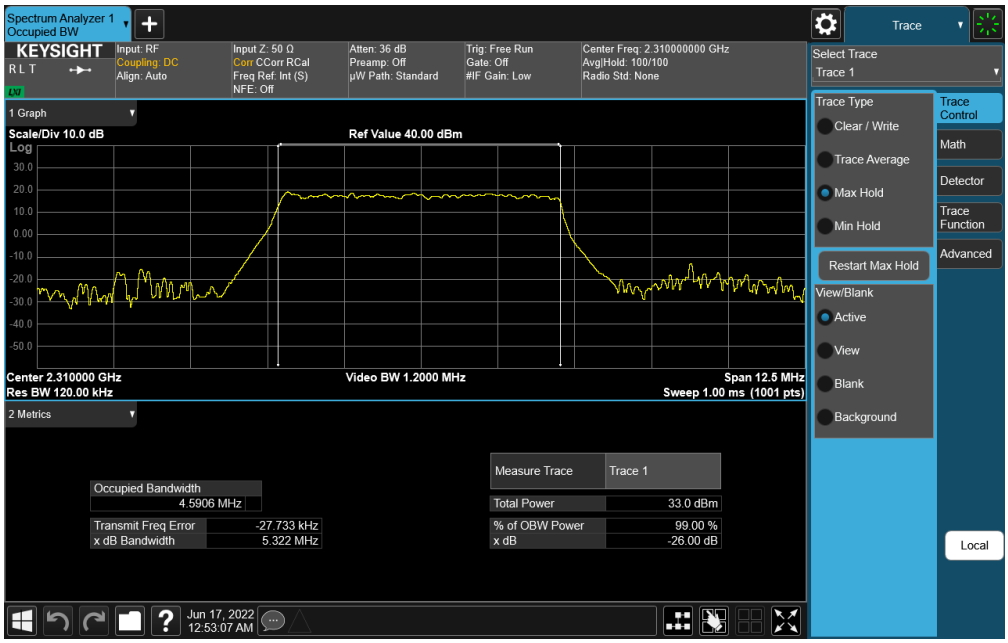


Plot 7-39. Occupied Bandwidth Plot (LTE Band 41 - 20MHz 64-QAM - Full RB)

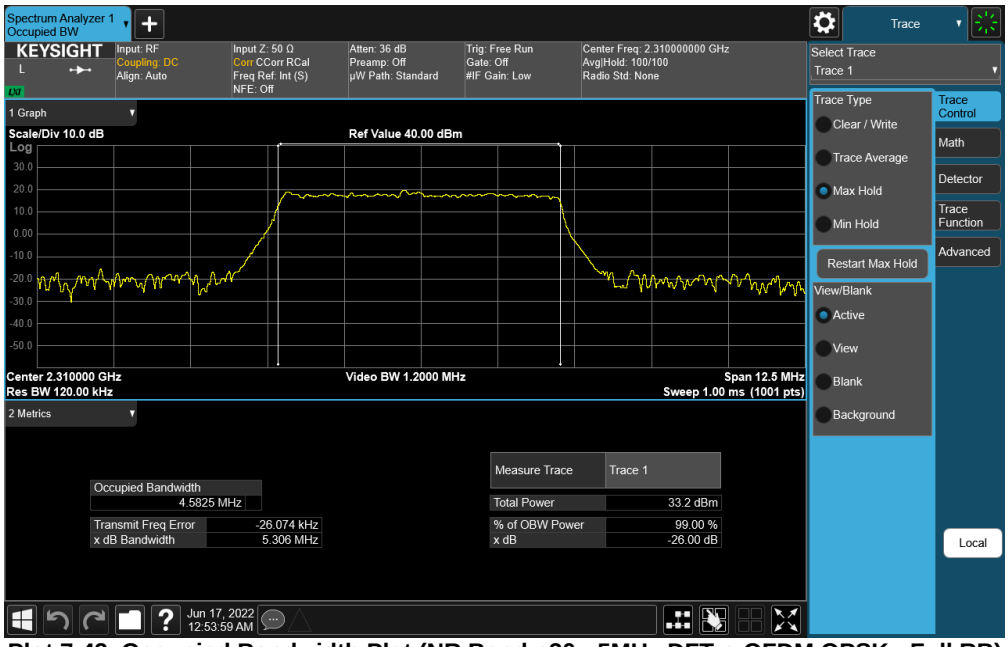


Plot 7-40. Occupied Bandwidth Plot (LTE Band 41 - 20MHz 256-QAM - Full RB)

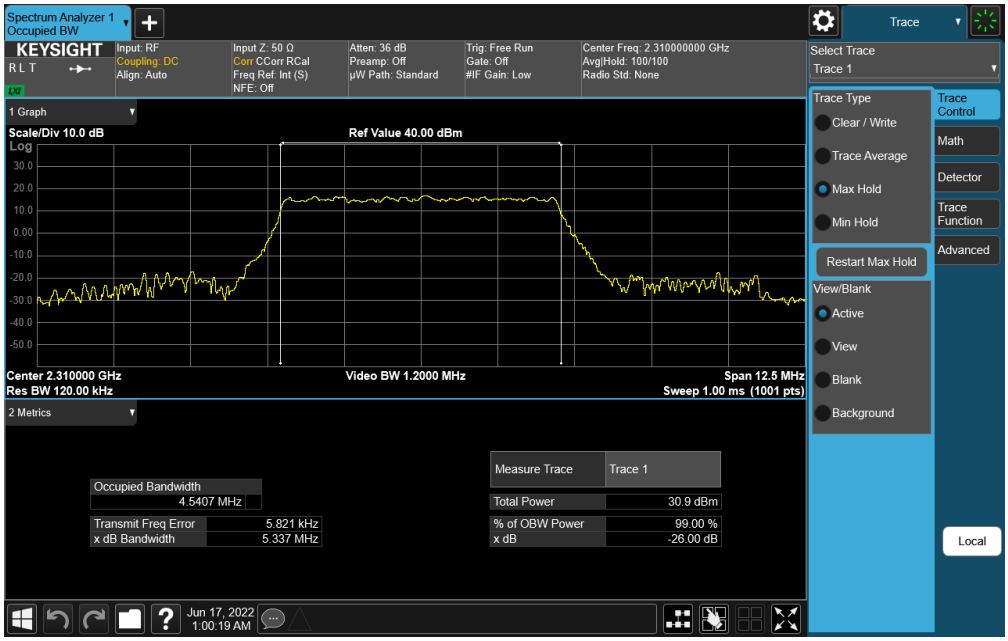
NR Band n30



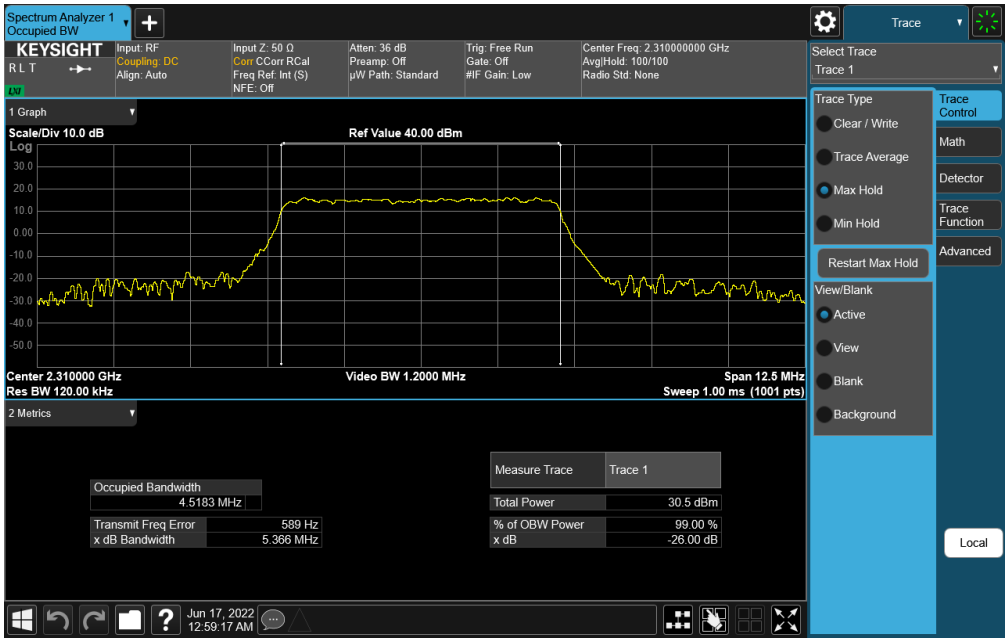
Plot 7-41. Occupied Bandwidth Plot (NR Band n30 - 5MHz DFT-s-OFDM π/2 BPSK - Full RB)



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

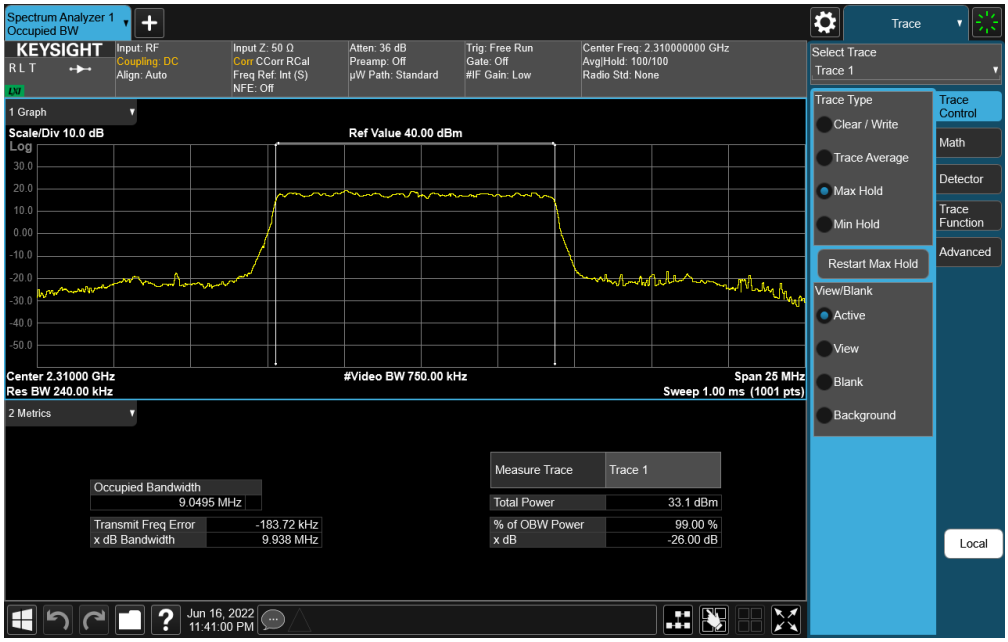


Plot 7-43. Occupied Bandwidth Plot (NR Band n30 - 5MHz CP-OFDM 16-QAM - Full RB)

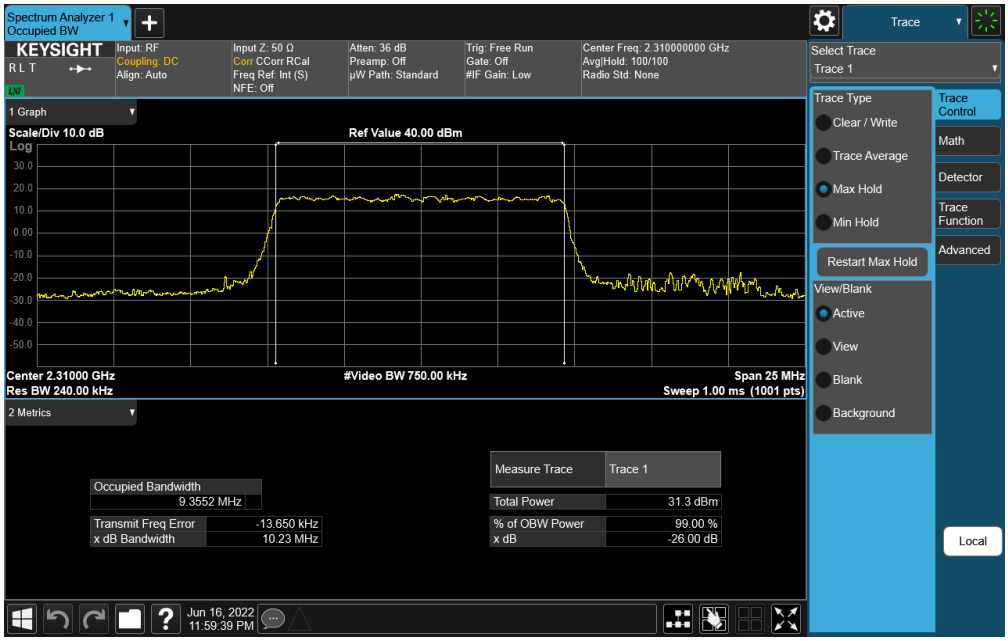


Plot 7-44. Occupied Bandwidth Plot (NR Band n30 - 5MHz DFT-s-OFDM 64-QAM - Full RB)

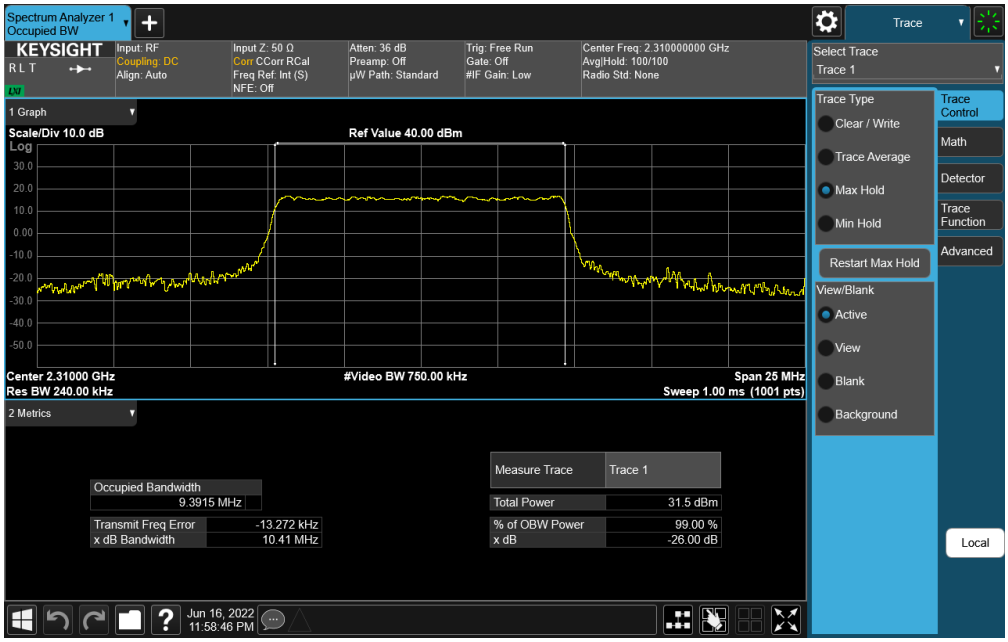
Plot 7-45. Occupied Bandwidth Plot (NR Band n30 - 5MHz DFT-s-OFDM 256-QAM - Full RB)



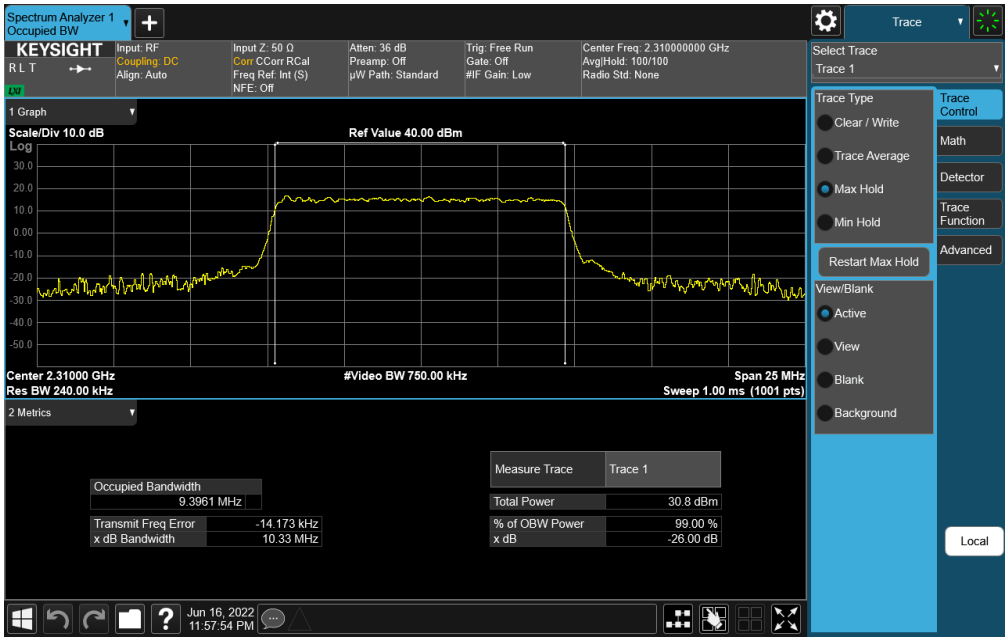
Plot 7-46. Occupied Bandwidth Plot (NR Band n30 - 10MHz DFT-s-OFDM π/2 BPSK - Full RB)



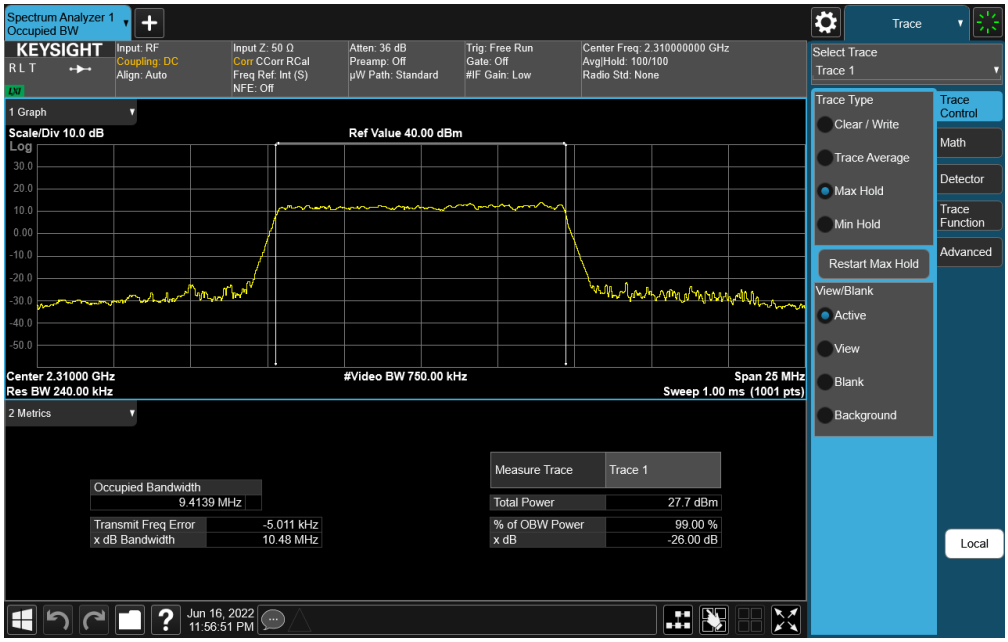
Plot 7-47. Occupied Bandwidth Plot (NR Band n30 - 10MHz CP-OFDM QPSK - Full RB)



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

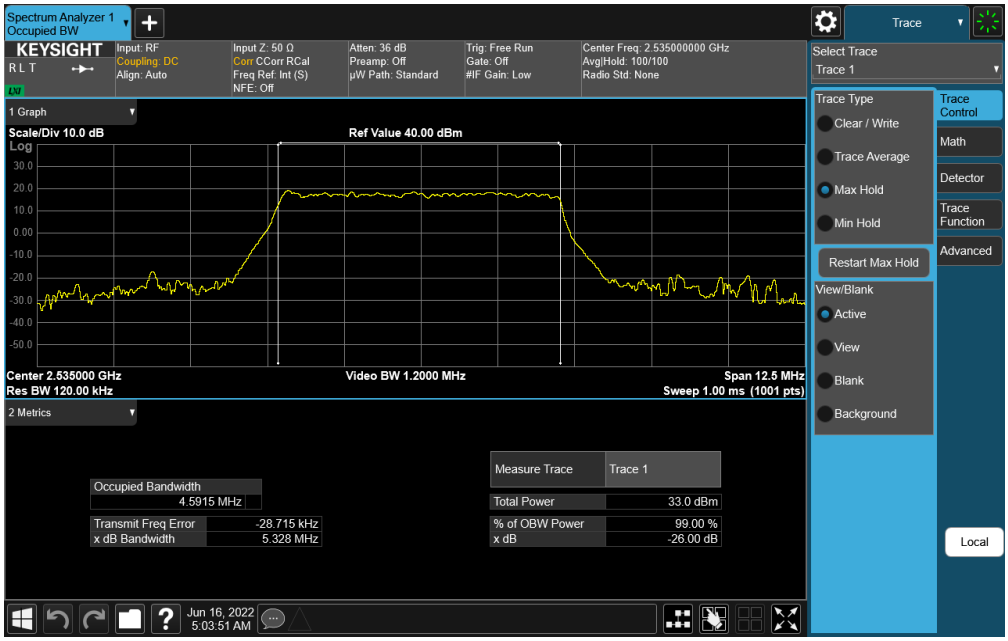


Plot 7-49. Occupied Bandwidth Plot (NR Band n30 - 10MHz CP-OFDM 64-QAM - Full RB)



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

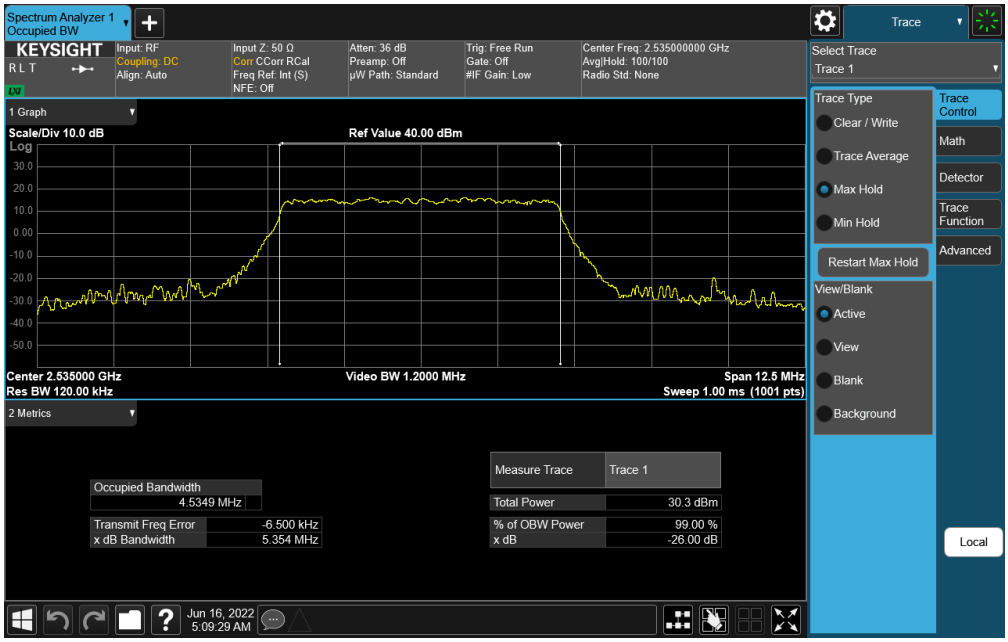
NR Band n7



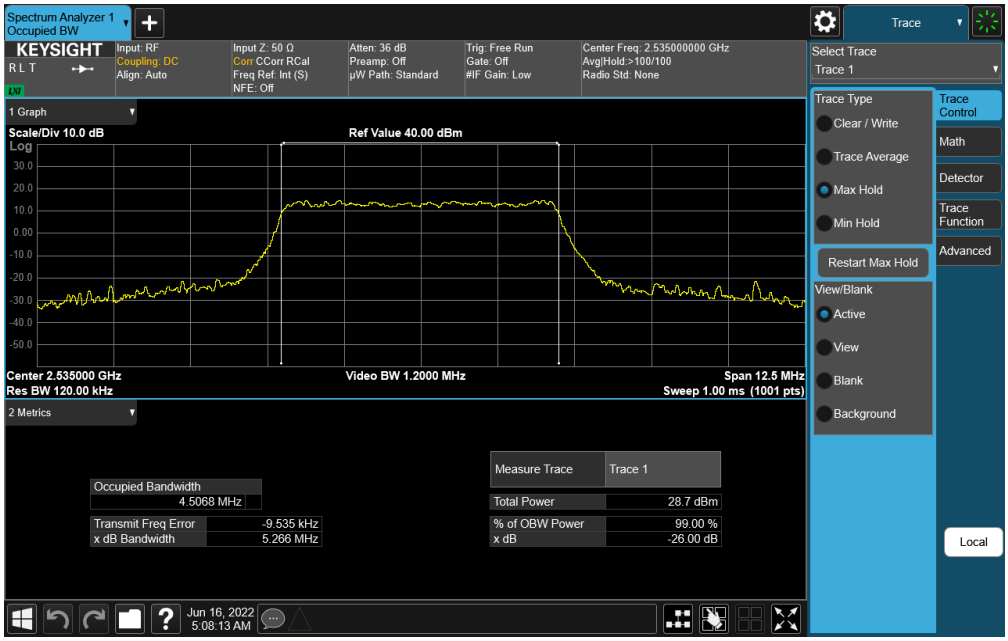
Plot 7-51. Occupied Bandwidth Plot (NR Band n7 - 5MHz DFT-s-OFDM π/2 BPSK - Full RB)

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

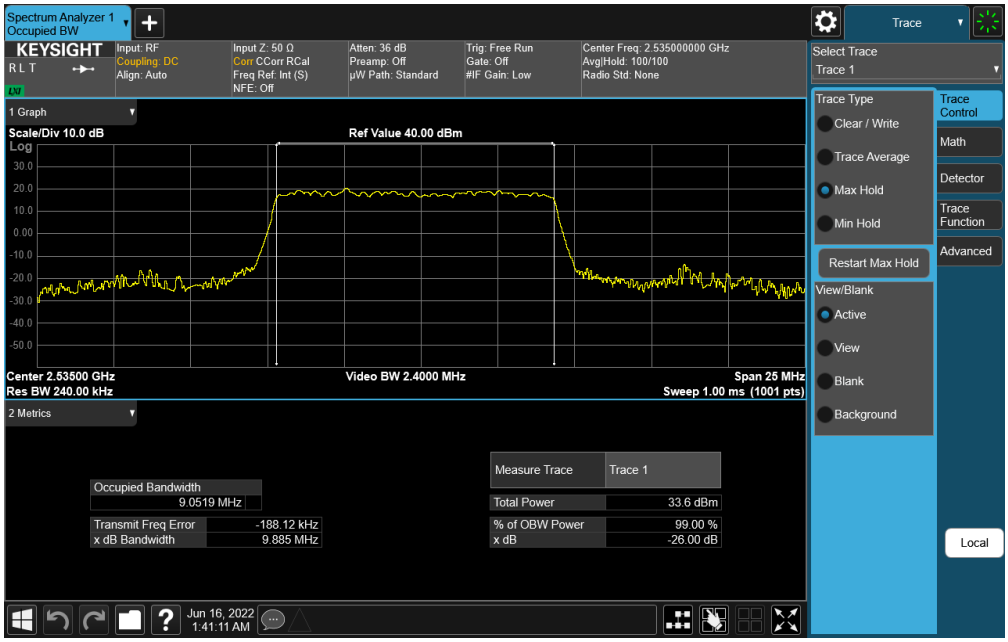
Plot 7-53. Occupied Bandwidth Plot (NR Band n7 - 5MHz DFT-s-OFDM 16-QAM - Full RB)



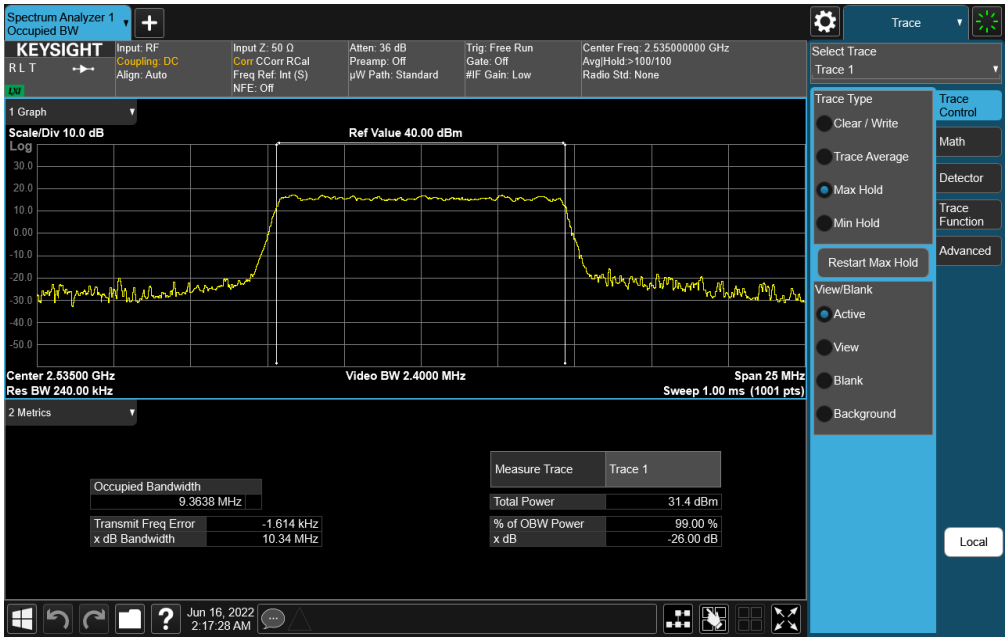
Plot 7-54. Occupied Bandwidth Plot (NR Band n7 - 5MHz DFT-s-OFDM 64-QAM - Full RB)



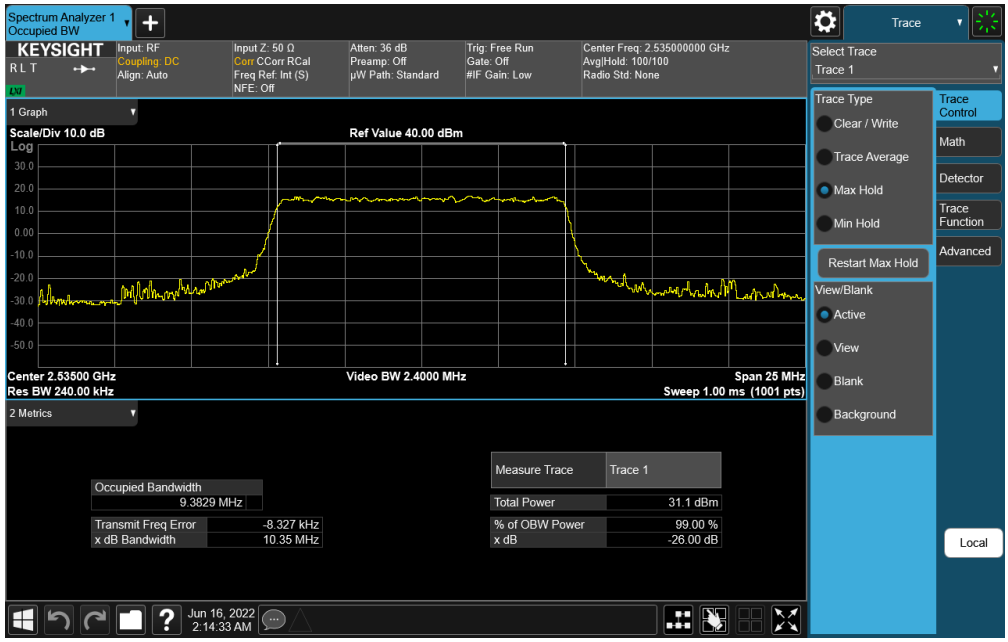
Plot 7-55. Occupied Bandwidth Plot (NR Band n7 - 5MHz 256-QAM - Full RB)



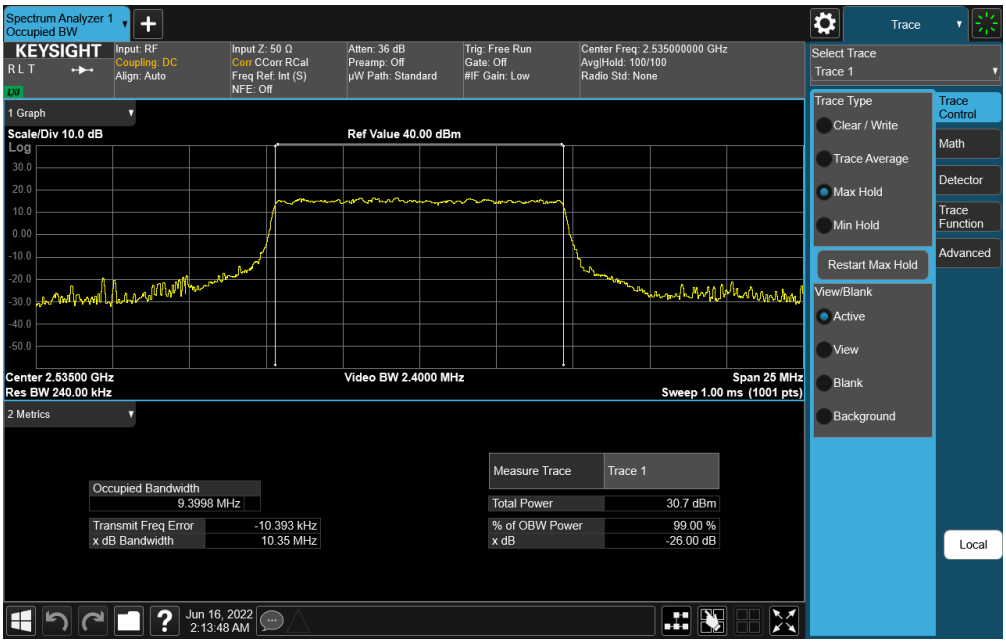
Plot 7-56. Occupied Bandwidth Plot (NR Band n7 - 10MHz DFT-s-OFDM π/2 BPSK - Full RB)



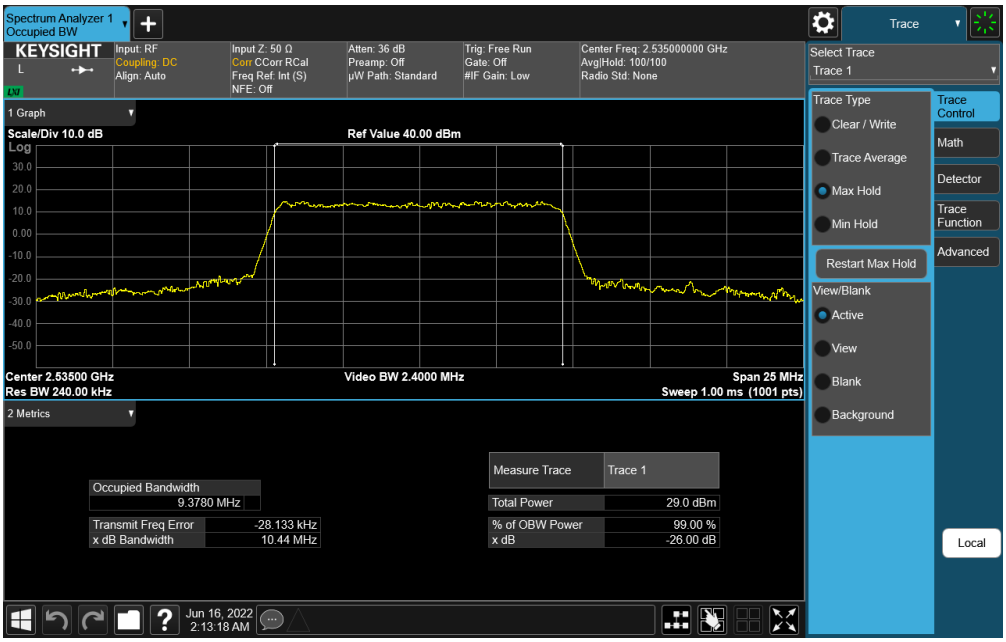
Plot 7-57. Occupied Bandwidth Plot (NR Band n7 - 10MHz CP-OFDM QPSK - Full RB)



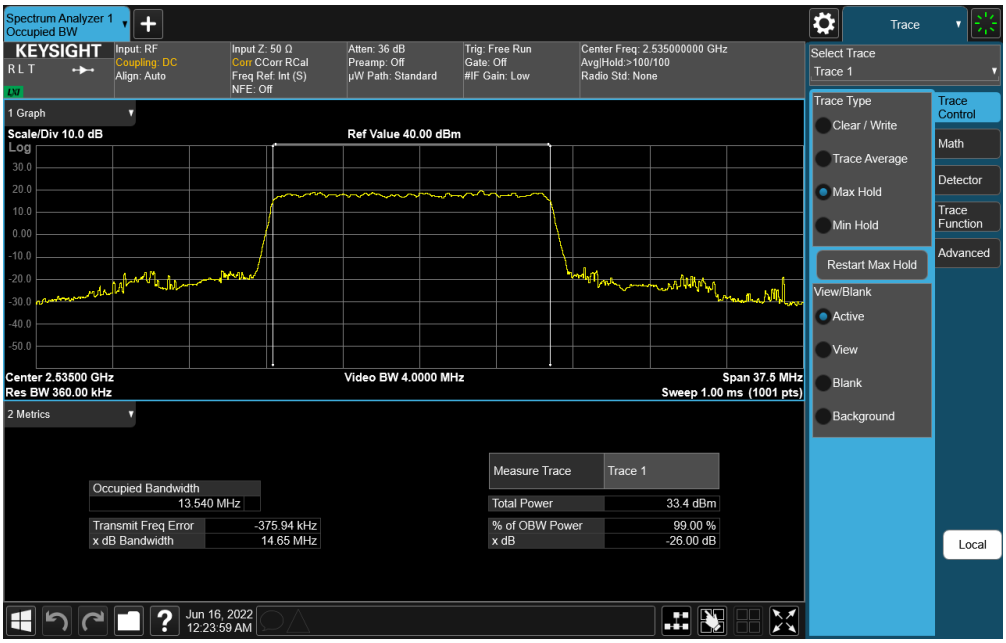
Plot 7-58. Occupied Bandwidth Plot (NR Band n7 - 10MHz CP-OFDM 16-QAM - Full RB)



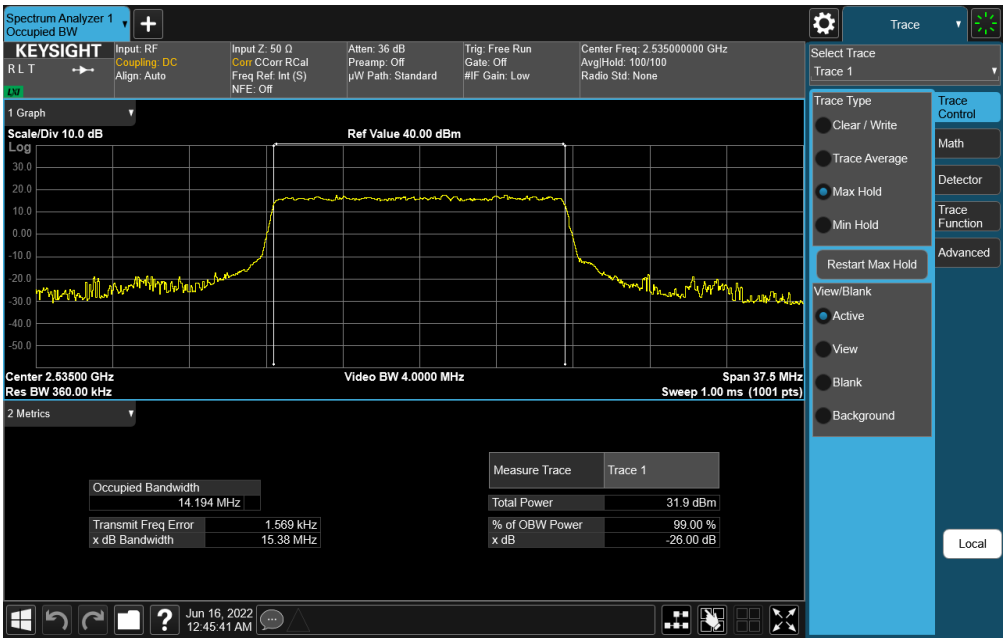
Plot 7-59. Occupied Bandwidth Plot (NR Band n7 - 10MHz CP-OFDM 64-QAM - Full RB)



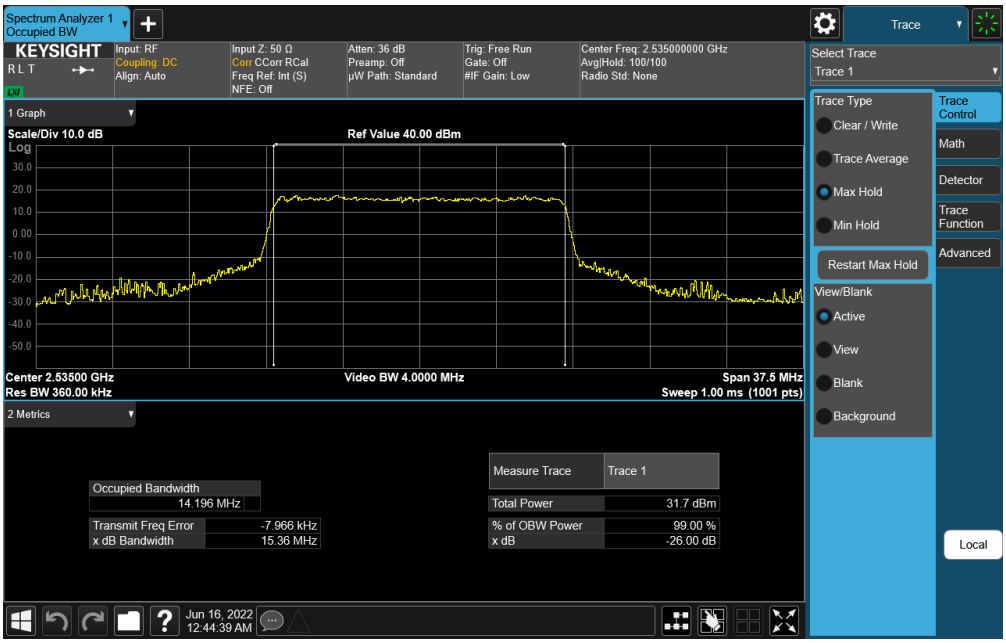
Plot 7-60. Occupied Bandwidth Plot (NR Band n7 - 10MHz CP-OFDM 256-QAM - Full RB)



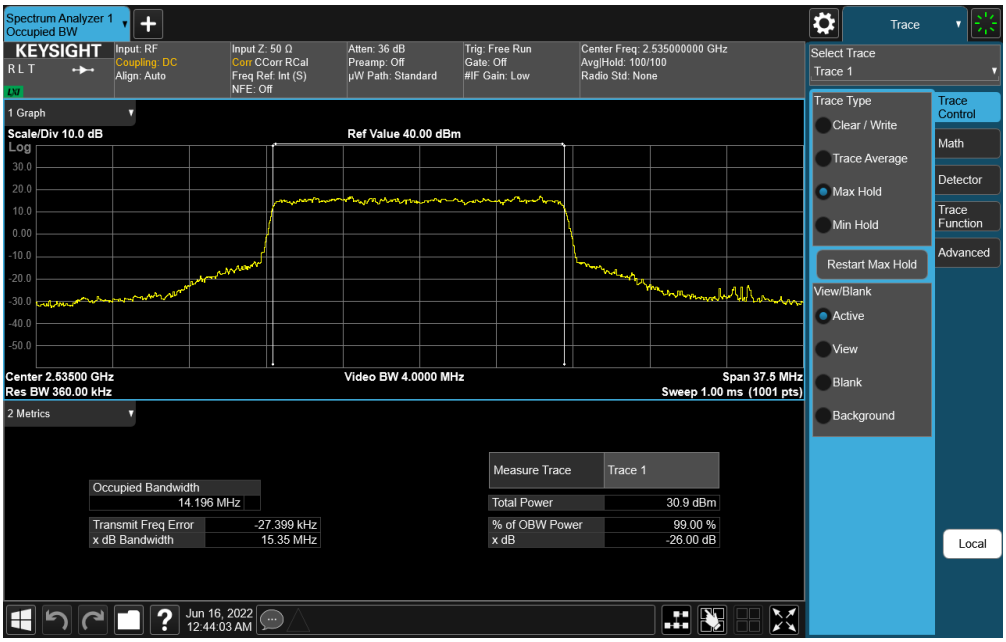
Plot 7-61. Occupied Bandwidth Plot (NR Band n7 - 15MHz DFT-s-OFDM π/2 BPSK - Full RB)



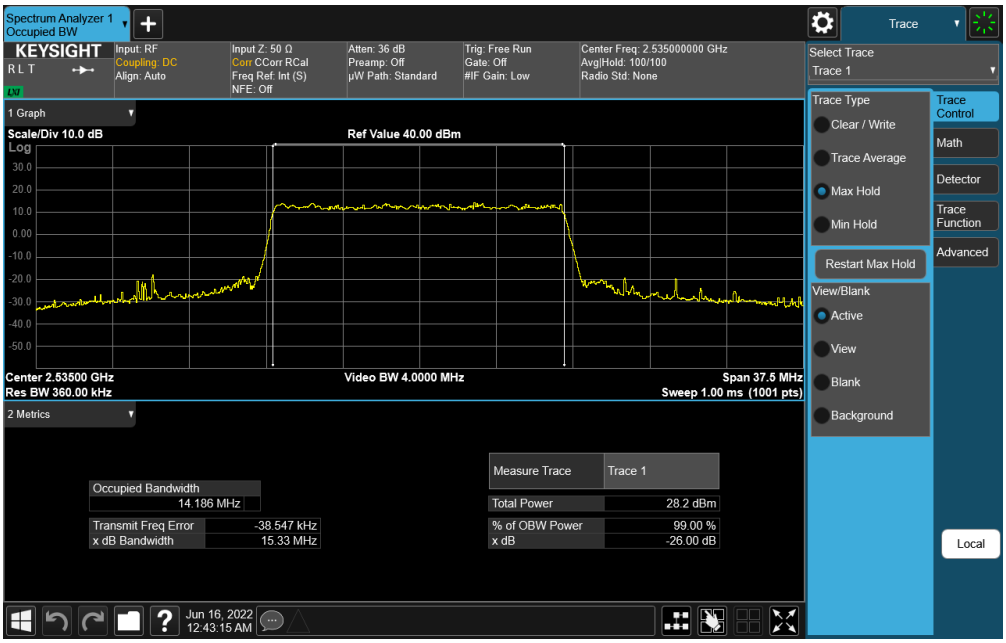
Plot 7-62. Occupied Bandwidth Plot (NR Band n7 - 15MHz CP-OFDM QPSK - Full RB)



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

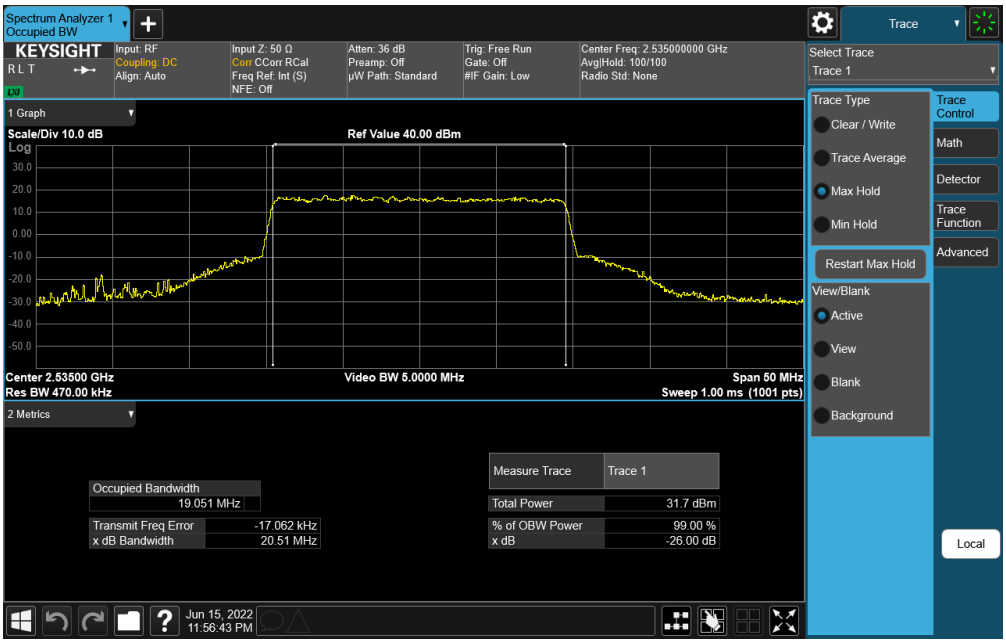


Plot 7-64. Occupied Bandwidth Plot (NR Band n7 - 15MHz CP-OFDM 64-QAM - Full RB)

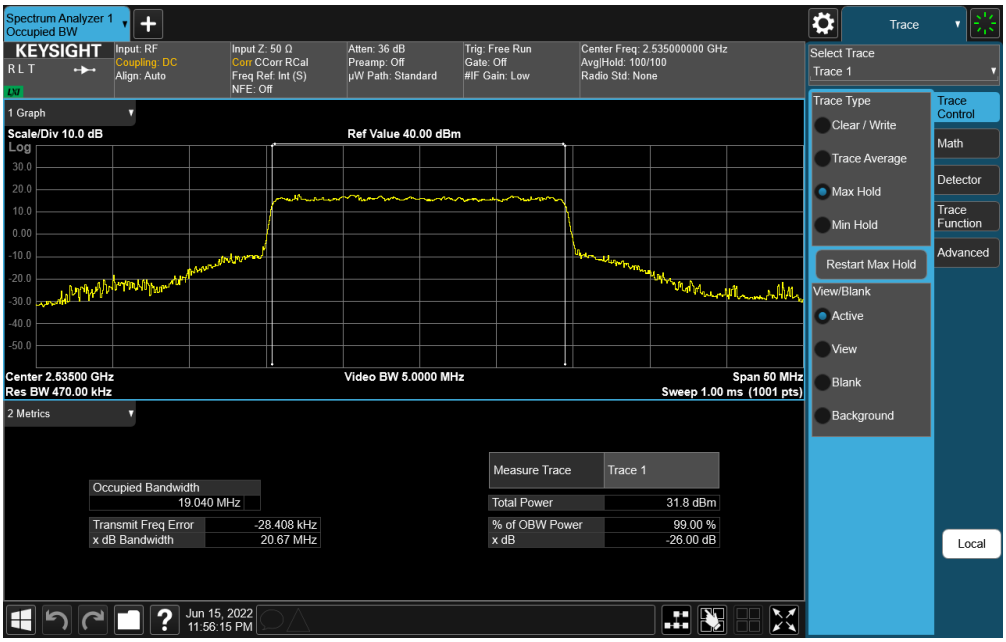


Plot 7-65. Occupied Bandwidth Plot (NR Band n7 - 15MHz CP-OFDM 256-QAM - Full RB)

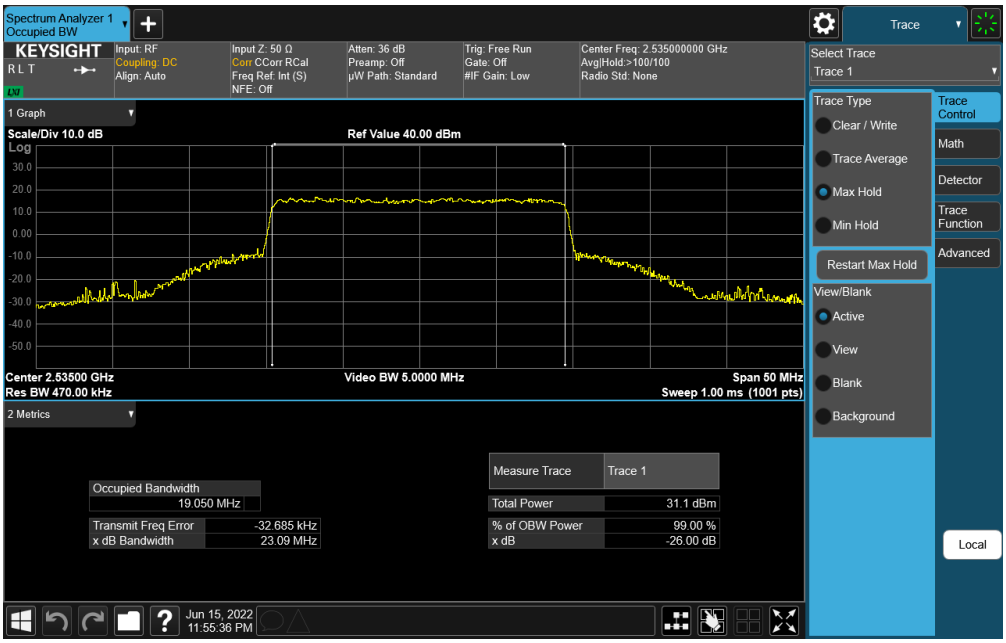
Plot 7-66. Occupied Bandwidth Plot (NR Band n7 - 20MHz DFT-s-OFDM π/2 BPSK - Full RB)



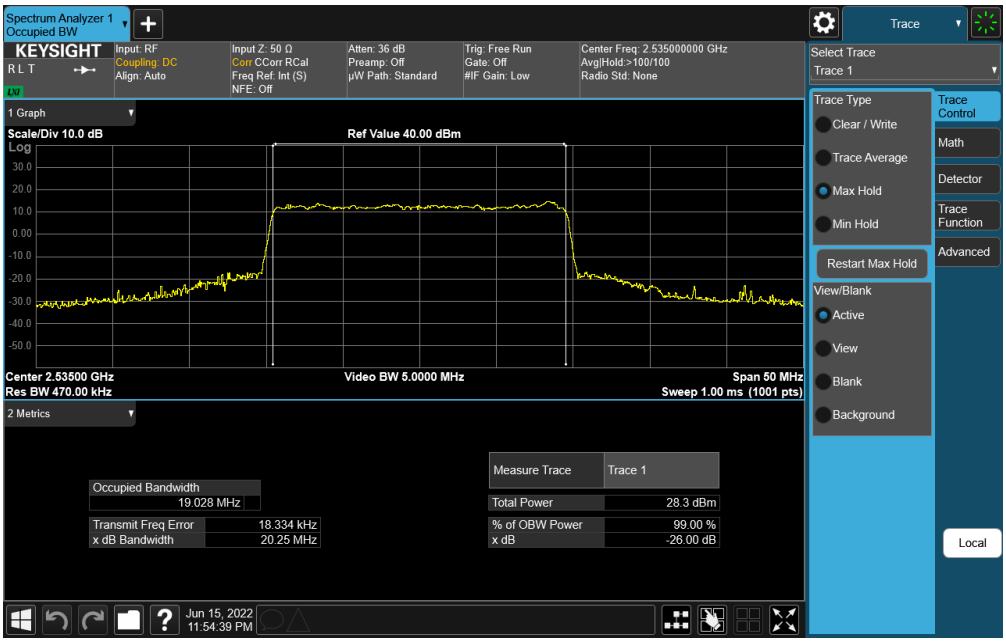
Plot 7-67. Occupied Bandwidth Plot (NR Band n7 - 20MHz CP-OFDM QPSK - Full RB)



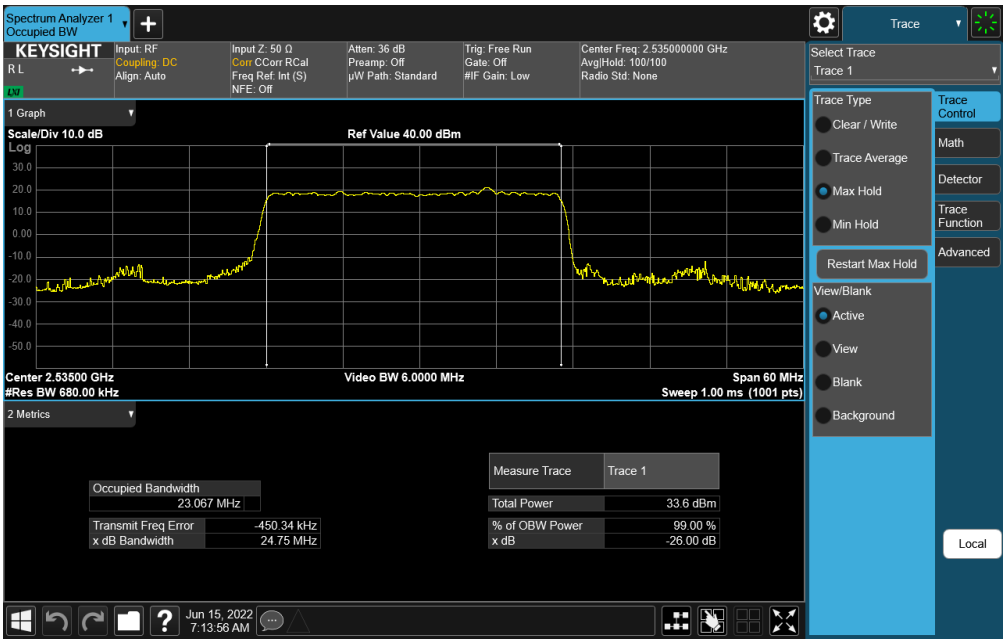
Plot 7-68. Occupied Bandwidth Plot (NR Band n7 - 20MHz CP-OFDM 16-QAM - Full RB)



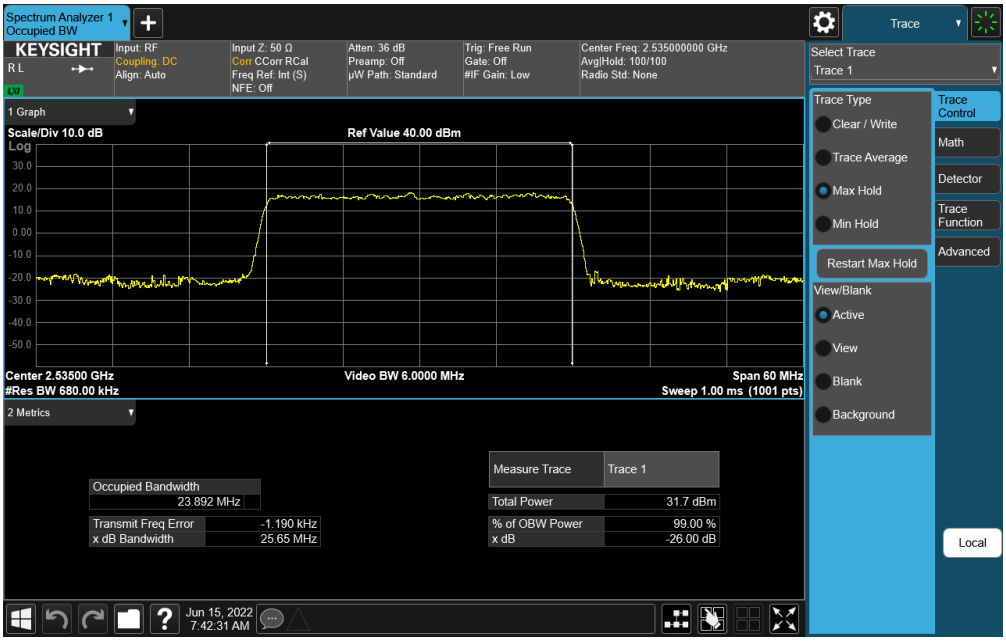
Plot 7-69. Occupied Bandwidth Plot (NR Band n7 - 20MHz CP-OFDM 64-QAM - Full RB)



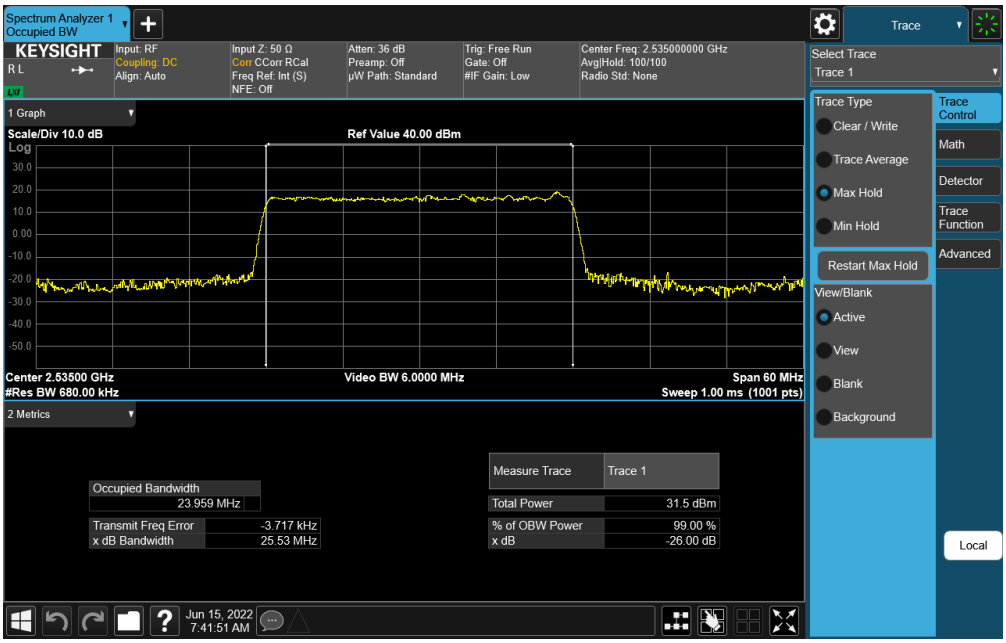
Plot 7-70. Occupied Bandwidth Plot (NR Band n7 - 20MHz CP-OFDM 256-QAM - Full RB)



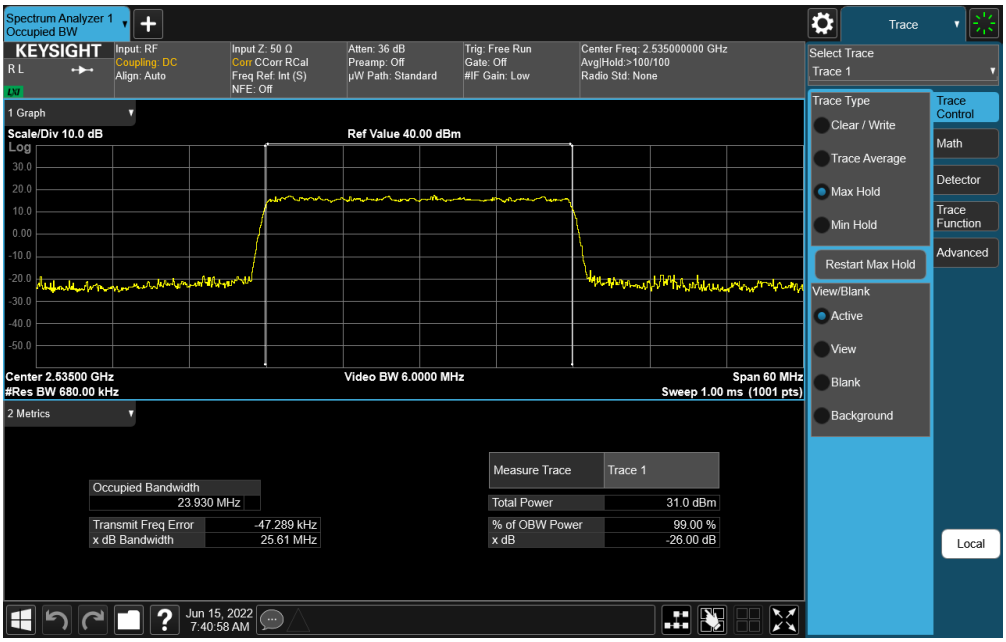
Plot 7-71. Occupied Bandwidth Plot (NR Band n7 - 25MHz DFT-s-OFDM π/2 BPSK - Full RB)



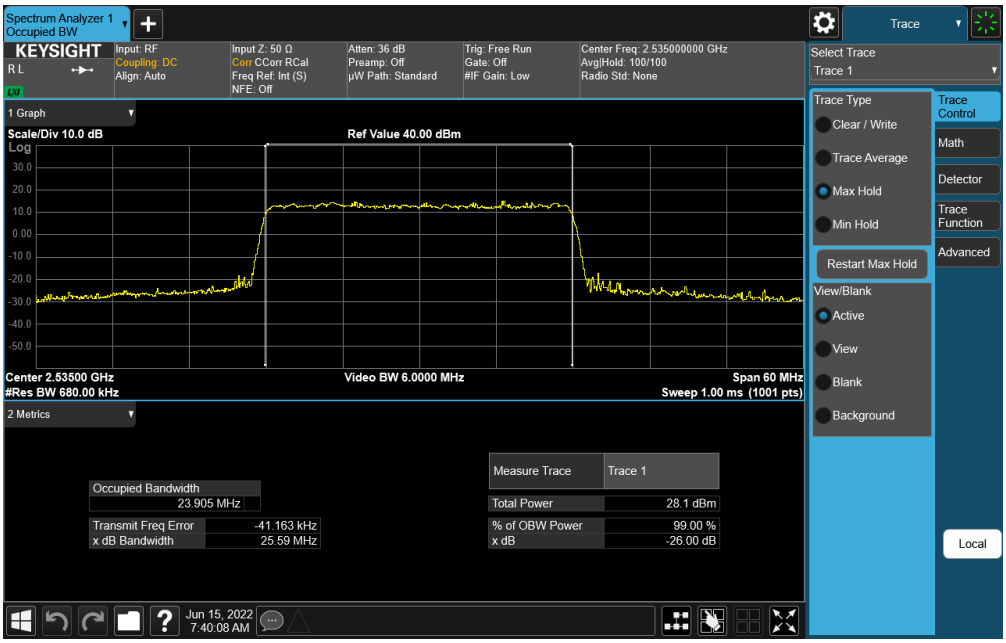
Plot 7-72. Occupied Bandwidth Plot (NR Band n7 - 25MHz CP-OFDM QPSK - Full RB)



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



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



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

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