PCTEST
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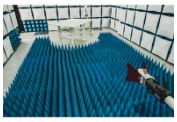

MEASUREMENT REPORT
LTE

Applicant Name:
LG Electronics USA, Inc.
111 Sylvan Avenue, North Building
Englewood Cliffs, NJ 07632
United States

Date of Testing:
6/28 – 9/10/2020
Test Site/Location:
PCTEST Lab. Columbia, MD, USA
Test Report Serial No.:
1M2006150095-03.ZNF

FCC ID:	**ZNFF100TM**
APPLICANT:	**LG Electronics USA, Inc.**

Application Type:	Certification
Model:	LM-F100TM
Additional Model(s):	LMF100TM, F100TM
EUT Type:	Portable Handset
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	22, 24, & 27
Test Procedure(s):	ANSI C63.26-2015, ANSI/TIA-603-E-2016, KDB 971168 D01 v03r01, KDB 648474 D03 v01r04

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.

Randy Ortanez
President

ACCREDITED
CERT #2041.01

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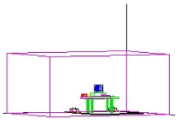
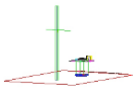


MEASUREMENT REPORT
FCC Part 22, 24, & 27



Mode	FCC Rule Part	Tx Frequency (MHz)	ERP		Emission Designator	Modulation
			Max. Power (W)	Max. Power (dBm)		
LTE Band 71	27	665.5 - 695.5	0.035	15.41	4M53G7D	QPSK
LTE Band 71	27	665.5 - 695.5	0.021	13.28	4M51W7D	16QAM
LTE Band 71	27	665.5 - 695.5	0.018	12.58	4M51W7D	64QAM
LTE Band 71	27	668 - 693	0.036	15.58	9M00G7D	QPSK
LTE Band 71	27	668 - 693	0.022	13.40	9M02W7D	16QAM
LTE Band 71	27	668 - 693	0.019	12.72	9M01W7D	64QAM
LTE Band 71	27	670.5 - 690.5	0.036	15.53	13M5G7D	QPSK
LTE Band 71	27	670.5 - 690.5	0.022	13.39	13M5W7D	16QAM
LTE Band 71	27	670.5 - 690.5	0.018	12.67	13M5W7D	64QAM
LTE Band 71	27	673 - 688	0.036	15.52	17M9G7D	QPSK
LTE Band 71	27	673 - 688	0.022	13.52	17M9W7D	16QAM
LTE Band 71	27	673 - 688	0.019	12.68	17M9W7D	64QAM
LTE Band 12	27	699.7 - 715.3	0.050	17.00	1M09G7D	QPSK
LTE Band 12	27	699.7 - 715.3	0.039	15.89	1M08W7D	16QAM
LTE Band 12	27	699.7 - 715.3	0.027	14.27	1M08W7D	64QAM
LTE Band 12	27	700.5 - 714.5	0.051	17.07	2M71G7D	QPSK
LTE Band 12	27	700.5 - 714.5	0.040	16.00	2M71W7D	16QAM
LTE Band 12	27	700.5 - 714.5	0.027	14.34	2M71W7D	64QAM
LTE Band 12/17	27	701.5 - 713.5	0.051	17.04	4M57G7D	QPSK
LTE Band 12/17	27	701.5 - 713.5	0.040	16.01	4M53W7D	16QAM
LTE Band 12/17	27	701.5 - 713.5	0.028	14.45	4M52W7D	64QAM
LTE Band 12/17	27	704 - 711	0.052	17.19	8M99G7D	QPSK
LTE Band 12/17	27	704 - 711	0.040	16.05	8M98W7D	16QAM
LTE Band 12/17	27	704 - 711	0.027	14.26	8M99W7D	64QAM
LTE Band 13	27	779.5 - 784.5	0.030	14.75	4M54G7D	QPSK
LTE Band 13	27	779.5 - 784.5	0.024	13.72	4M51W7D	16QAM
LTE Band 13	27	779.5 - 784.5	0.019	12.76	4M50W7D	64QAM
LTE Band 13	27	782	0.031	14.85	8M98G7D	QPSK
LTE Band 13	27	782	0.021	13.26	9M00W7D	16QAM
LTE Band 13	27	782	0.017	12.26	8M94W7D	64QAM
LTE Band 26/5	22H	824.7 - 848.3	0.036	15.52	1M08G7D	QPSK
LTE Band 26/5	22H	824.7 - 848.3	0.021	13.29	1M08W7D	16QAM
LTE Band 26/5	22H	824.7 - 848.3	0.018	12.63	1M08W7D	64QAM
LTE Band 26/5	22H	825.5 - 847.5	0.037	15.70	2M71G7D	QPSK
LTE Band 26/5	22H	825.5 - 847.5	0.021	13.28	2M71W7D	16QAM
LTE Band 26/5	22H	825.5 - 847.5	0.019	12.68	2M71W7D	64QAM
LTE Band 26/5	22H	826.5 - 846.5	0.037	15.68	4M54G7D	QPSK
LTE Band 26/5	22H	826.5 - 846.5	0.022	13.40	4M53W7D	16QAM
LTE Band 26/5	22H	826.5 - 846.5	0.018	12.62	4M52W7D	64QAM
LTE Band 26/5	22H	829 - 844	0.035	15.46	9M02G7D	QPSK
LTE Band 26/5	22H	829 - 844	0.022	13.34	9M02W7D	16QAM
LTE Band 26/5	22H	829 - 844	0.018	12.64	8M98W7D	64QAM
LTE Band 26	22H	831.5 - 841.5	0.033	15.15	13M5G7D	QPSK
LTE Band 26	22H	831.5 - 841.5	0.027	14.26	13M5W7D	16QAM
LTE Band 26	22H	831.5 - 841.5	0.016	12.14	13M5W7D	64QAM

EUT Overview (<1 GHz)

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	ERP		Emission Designator
				Max. Power [W]	Max. Power [dBm]	
NR Band n71	20 MHz	π/2 BPSK	673.0 - 688.0	0.039	15.94	18M0G7D
		QPSK	673.0 - 688.0	0.036	15.52	18M9G7D
		16QAM	673.0 - 688.0	0.030	14.71	18M9W7D
		64QAM	673.0 - 688.0	0.030	14.70	19M0W7D
		256QAM	673.0 - 688.0	0.019	12.70	18M9W7D
	15 MHz	π/2 BPSK	670.5 - 690.5	0.036	15.60	13M5G7D
		QPSK	670.5 - 690.5	0.030	14.82	14M2G7D
		16QAM	670.5 - 690.5	0.028	14.49	14M1W7D
		64QAM	670.5 - 690.5	0.024	13.83	14M2W7D
		256QAM	670.5 - 690.5	0.015	11.90	14M1W7D
	10 MHz	π/2 BPSK	668.0 - 693.0	0.036	15.59	8M98G7D
		QPSK	668.0 - 693.0	0.030	14.80	9M33G7D
		16QAM	668.0 - 693.0	0.028	14.47	9M33W7D
		64QAM	668.0 - 693.0	0.024	13.80	9M31W7D
		256QAM	668.0 - 693.0	0.015	11.82	9M32W7D
	5 MHz	π/2 BPSK	665.5 - 695.5	0.035	15.49	4M51G7D
		QPSK	665.5 - 695.5	0.030	14.73	4M51G7D
		16QAM	665.5 - 695.5	0.027	14.29	4M52W7D
		64QAM	665.5 - 695.5	0.024	13.77	4M50W7D
		256QAM	665.5 - 695.5	0.015	11.80	4M51W7D

EUT Overview (<1 GHz)

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	ERP		Emission Designator
				Max. Power [W]	Max. Power [dBm]	
NR Band n5	20 MHz	π/2 BPSK	834.0 - 839.0	0.035	15.45	18M0G7D
		QPSK	834.0 - 839.0	0.032	15.05	19M0G7D
		16QAM	834.0 - 839.0	0.025	13.91	19M0W7D
		64QAM	834.0 - 839.0	0.020	13.09	19M0W7D
		256QAM	834.0 - 839.0	0.013	11.29	19M0W7D
	15 MHz	π/2 BPSK	831.5 - 841.5	0.034	15.27	13M5G7D
		QPSK	831.5 - 841.5	0.028	14.30	14M3G7D
		16QAM	831.5 - 841.5	0.024	13.88	14M2W7D
		64QAM	831.5 - 841.5	0.020	12.98	14M2W7D
		256QAM	831.5 - 841.5	0.013	11.21	14M2W7D
	10 MHz	π/2 BPSK	829.0 - 844.0	0.034	15.29	8M98G7D
		QPSK	829.0 - 844.0	0.027	14.30	9M34G7D
		16QAM	829.0 - 844.0	0.023	13.64	9M33W7D
		64QAM	829.0 - 844.0	0.019	12.68	9M33W7D
		256QAM	829.0 - 844.0	0.012	10.94	9M32W7D
	5 MHz	π/2 BPSK	826.5 - 846.5	0.034	15.35	4M52G7D
		QPSK	826.5 - 846.5	0.027	14.29	4M51G7D
		16QAM	826.5 - 846.5	0.024	13.85	4M51W7D
		64QAM	826.5 - 846.5	0.020	12.99	4M50W7D
		256QAM	826.5 - 846.5	0.013	11.19	4M51W7D

EUT Overview (<1 GHz)

Mode	FCC Rule Part	Tx Frequency (MHz)	EIRP		Emission Designator	Modulation
			Max. Power (W)	Max. Power (dBm)		
LTE Band 66/4	27	1710.7 - 1779.3	0.152	21.82	1M08G7D	QPSK
LTE Band 66/4	27	1710.7 - 1779.3	0.130	21.14	1M08W7D	16QAM
LTE Band 66/4	27	1710.7 - 1779.3	0.116	20.65	1M08W7D	64QAM
LTE Band 66/4	27	1711.5 - 1778.5	0.154	21.88	2M71G7D	QPSK
LTE Band 66/4	27	1711.5 - 1778.5	0.159	22.02	2M72W7D	16QAM
LTE Band 66/4	27	1711.5 - 1778.5	0.159	22.01	2M71W7D	64QAM
LTE Band 66/4	27	1712.5 - 1777.5	0.133	21.23	4M53G7D	QPSK
LTE Band 66/4	27	1712.5 - 1777.5	0.105	20.20	4M51W7D	16QAM
LTE Band 66/4	27	1712.5 - 1777.5	0.094	19.72	4M51W7D	64QAM
LTE Band 66/4	27	1715 - 1775	0.132	21.21	8M98G7D	QPSK
LTE Band 66/4	27	1715 - 1775	0.105	20.19	8M99W7D	16QAM
LTE Band 66/4	27	1715 - 1775	0.094	19.72	9M05W7D	64QAM
LTE Band 66/4	27	1717.5 - 1772.5	0.132	21.19	13M5G7D	QPSK
LTE Band 66/4	27	1717.5 - 1772.5	0.104	20.19	13M5W7D	16QAM
LTE Band 66/4	27	1717.5 - 1772.5	0.094	19.72	13M5W7D	64QAM
LTE Band 66/4	27	1720 - 1770	0.152	21.81	18M0G7D	QPSK
LTE Band 66/4	27	1720 - 1770	0.111	20.44	18M0W7D	16QAM
LTE Band 66/4	27	1720 - 1770	0.088	19.43	18M0W7D	64QAM
LTE Band 25/2	24E	1850.7 - 1914.3	0.167	22.23	1M08G7D	QPSK
LTE Band 25/2	24E	1850.7 - 1914.3	0.131	21.16	1M09W7D	16QAM
LTE Band 25/2	24E	1850.7 - 1914.3	0.100	20.00	1M09W7D	64QAM
LTE Band 25/2	24E	1851.5 - 1913.5	0.167	22.24	2M71G7D	QPSK
LTE Band 25/2	24E	1851.5 - 1913.5	0.126	21.02	2M71W7D	16QAM
LTE Band 25/2	24E	1851.5 - 1913.5	0.097	19.86	2M71W7D	64QAM
LTE Band 25/2	24E	1852.5 - 1912.5	0.168	22.25	4M55G7D	QPSK
LTE Band 25/2	24E	1852.5 - 1912.5	0.132	21.21	4M52W7D	16QAM
LTE Band 25/2	24E	1852.5 - 1912.5	0.099	19.95	4M55W7D	64QAM
LTE Band 25/2	24E	1855 - 1910	0.167	22.22	9M00G7D	QPSK
LTE Band 25/2	24E	1855 - 1910	0.125	20.96	8M98W7D	16QAM
LTE Band 25/2	24E	1855 - 1910	0.093	19.68	8M98W7D	64QAM
LTE Band 25/2	24E	1857.5 - 1907.5	0.165	22.18	13M5G7D	QPSK
LTE Band 25/2	24E	1857.5 - 1907.5	0.119	20.75	13M5W7D	16QAM
LTE Band 25/2	24E	1857.5 - 1907.5	0.094	19.72	13M5W7D	64QAM
LTE Band 25/2	24E	1860 - 1905	0.167	22.23	18M0G7D	QPSK
LTE Band 25/2	24E	1860 - 1905	0.143	21.56	18M0W7D	16QAM
LTE Band 25/2	24E	1860 - 1905	0.115	20.61	17M9W7D	64QAM

EUT Overview (Mid Bands)

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP		Emission Designator
				Max. Power [W]	Max. Power [dBm]	
NR Band n25/2	20 MHz	π/2 BPSK	1860 - 1905	0.147	21.67	18M1G7D
		QPSK	1860 - 1905	0.146	21.64	18M0G7D
		16QAM	1860 - 1905	0.099	19.95	18M0W7D
		64QAM	1860 - 1905	0.067	18.23	18M0W7D
		256QAM	1860 - 1905	0.041	16.13	18M0W7D
	15 MHz	π/2 BPSK	1857.5 - 1907.5	0.155	21.90	13M5G7D
		QPSK	1857.5 - 1907.5	0.174	22.41	13M5G7D
		16QAM	1857.5 - 1907.5	0.080	19.03	13M5W7D
		64QAM	1857.5 - 1907.5	0.065	18.15	13M6W7D
		256QAM	1857.5 - 1907.5	0.040	16.07	13M4W7D
	10 MHz	π/2 BPSK	1855 - 1910	0.157	21.96	9M01G7D
		QPSK	1855 - 1910	0.178	22.51	9M02G7D
		16QAM	1855 - 1910	0.081	19.10	9M01W7D
		64QAM	1855 - 1910	0.067	18.27	9M02W7D
		256QAM	1855 - 1910	0.041	16.16	9M02W7D
	5 MHz	π/2 BPSK	1852.5 - 1912.5	0.156	21.94	4M52G7D
		QPSK	1852.5 - 1912.5	0.174	22.40	4M56G7D
		16QAM	1852.5 - 1912.5	0.080	19.04	4M54W7D
		64QAM	1852.5 - 1912.5	0.066	18.19	4M54W7D
		256QAM	1852.5 - 1912.5	0.040	16.07	4M53W7D

EUT Overview (Mid Bands)

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP		Emission Designator
				Max. Power [W]	Max. Power [dBm]	
NR Band n66	20 MHz	π/2 BPSK	1720 - 1770	0.147	21.68	18M0G7D
		QPSK	1720 - 1770	0.145	21.60	19M1G7D
		16QAM	1720 - 1770	0.112	20.51	19M0W7D
		64QAM	1720 - 1770	0.069	18.41	19M0W7D
		256QAM	1720 - 1770	0.046	16.61	19M0W7D
	15 MHz	π/2 BPSK	1717.5 - 1772.5	0.142	21.53	13M5G7D
		QPSK	1717.5 - 1772.5	0.133	21.24	14M3G7D
		16QAM	1717.5 - 1772.5	0.107	20.28	14M2W7D
		64QAM	1717.5 - 1772.5	0.069	18.41	14M2W7D
		256QAM	1717.5 - 1772.5	0.052	17.18	14M2W7D
	10 MHz	π/2 BPSK	1715 - 1775	0.145	21.60	9M00G7D
		QPSK	1715 - 1775	0.133	21.23	9M33G7D
		16QAM	1715 - 1775	0.101	20.03	9M38W7D
		64QAM	1715 - 1775	0.067	18.28	9M37W7D
		256QAM	1715 - 1775	0.050	16.97	9M33W7D
	5 MHz	π/2 BPSK	1712.5 - 1777.5	0.142	21.51	4M52G7D
		QPSK	1712.5 - 1777.5	0.140	21.45	4M50G7D
		16QAM	1712.5 - 1777.5	0.106	20.25	4M49W7D
		64QAM	1712.5 - 1777.5	0.068	18.35	4M50W7D
		256QAM	1712.5 - 1777.5	0.041	16.11	4M49W7D

EUT Overview (Mid Bands)

Mode	FCC Rule Part	Tx Frequency (MHz)	EIRP		Emission Designator	Modulation
			Max. Power (W)	Max. Power (dBm)		
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.317	25.01	4M52G7D	QPSK
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.092	19.63	4M51W7D	16QAM
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.073	18.61	4M52W7D	64QAM
LTE Band 41 (PC2)	27	2501 - 2685	0.309	24.90	9M03G7D	QPSK
LTE Band 41 (PC2)	27	2501 - 2685	0.082	19.15	8M99W7D	16QAM
LTE Band 41 (PC2)	27	2501 - 2685	0.074	18.68	9M00W7D	64QAM
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.311	24.93	13M5G7D	QPSK
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.082	19.12	13M5W7D	16QAM
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.059	17.71	13M5W7D	64QAM
LTE Band 41 (PC2)	27	2506 - 2680	0.320	25.05	18M0G7D	QPSK
LTE Band 41 (PC2)	27	2506 - 2680	0.095	19.77	17M9W7D	16QAM
LTE Band 41 (PC2)	27	2506 - 2680	0.076	18.82	18M0W7D	64QAM

EUT Overview (High Bands)

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP		Emission Designator
				Max. Power [W]	Max. Power [dBm]	
NR Band n41	100 MHz	π/2 BPSK	2546.0 - 2640.0	0.330	25.18	96M8G7D
		QPSK	2546.0 - 2640.0	0.316	24.99	97M9G7D
		16QAM	2546.0 - 2640.0	0.261	24.17	97M9W7D
		64QAM	2546.0 - 2640.0	0.166	22.19	97M5W7D
		256QAM	2546.0 - 2640.0	0.102	20.10	97M5W7D
	90 MHz	π/2 BPSK	2541.0 - 2645.0	0.356	25.52	87M3G7D
		QPSK	2541.0 - 2645.0	0.340	25.32	87M8G7D
		16QAM	2541.0 - 2645.0	0.292	24.65	87M8W7D
		64QAM	2541.0 - 2645.0	0.125	20.97	88M0W7D
		256QAM	2541.0 - 2645.0	0.081	19.11	88M1W7D
	80 MHz	π/2 BPSK	2536.0 - 2650.0	0.353	25.48	77M5G7D
		QPSK	2536.0 - 2650.0	0.325	25.12	77M8G7D
		16QAM	2536.0 - 2650.0	0.279	24.45	77M8W7D
		64QAM	2536.0 - 2650.0	0.124	20.93	77M8W7D
		256QAM	2536.0 - 2650.0	0.076	18.82	77M7W7D
	60 MHz	π/2 BPSK	2526.0 - 2660.0	0.344	25.36	58M2G7D
		QPSK	2526.0 - 2660.0	0.321	25.07	58M1G7D
		16QAM	2526.0 - 2660.0	0.272	24.35	58M1W7D
		64QAM	2526.0 - 2660.0	0.099	19.94	58M1W7D
		256QAM	2526.0 - 2660.0	0.074	18.69	58M2W7D
	50 MHz	π/2 BPSK	2521.0 - 2665.0	0.338	25.29	46M2G7D
		QPSK	2521.0 - 2665.0	0.313	24.96	48M5G7D
		16QAM	2521.0 - 2665.0	0.263	24.20	48M4W7D
		64QAM	2521.0 - 2665.0	0.123	20.91	48M5W7D
		256QAM	2521.0 - 2665.0	0.078	18.92	48M5W7D
	40 MHz	π/2 BPSK	2516.0 - 2670.0	0.366	25.64	36M1G7D
		QPSK	2516.0 - 2670.0	0.340	25.32	38M7G7D
		16QAM	2516.0 - 2670.0	0.279	24.45	38M7W7D
		64QAM	2516.0 - 2670.0	0.124	20.93	38M7W7D
		256QAM	2516.0 - 2670.0	0.076	18.82	38M8W7D
	20 MHz	π/2 BPSK	2506.0 - 2680.0	0.349	25.43	17M9G7D
		QPSK	2506.0 - 2680.0	0.329	25.17	19M1G7D
		16QAM	2506.0 - 2680.0	0.284	24.53	19M0W7D
		64QAM	2506.0 - 2680.0	0.120	20.80	19M1W7D
		256QAM	2506.0 - 2680.0	0.081	19.11	19M0W7D

EUT Overview (High Bands)

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 PCTEST Test Location

These measurement tests were conducted at the PCTEST facility located at 7185 Oakland Mills Road, Columbia, MD 21046. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014.

1.3 Test Facility / Accreditations

Measurements were performed at PCTEST located in Columbia, MD 21046, U.S.A.

- PCTEST is an ISO 17025-2005 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.01 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.

- PCTEST 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).

- PCTEST facility is a registered (2451B) 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 **LG Portable Handset FCC ID: ZNFF100TM**. The test data contained in this report pertains only to the emissions due to the EUT's LTE function.

Test Device Serial No.: 00151, 00227, 00219, 00277

2.2 Device Capabilities

This device contains the following capabilities:

800/850/1900 CDMA/EvDO Rev0/A, 1x Advanced (BC0, BC1, BC10), 850/1900 GSM/GPRS/EDGE, 850/1700/1900 WCDMA/HSPA, Multi-band LTE, Multi-Band 5G NR, 802.11b/g/n WLAN, 802.11a/n/ac UNII, Bluetooth (1x, EDR, LE), NFC

LTE Band 12 (698 - 716 MHz) overlaps the entire frequency range of LTE Band 17 (704 - 716 MHz). Therefore, test data provided in this report covers Band 17 as well as Band 12.

LTE Band 26 (814.7 – 849 MHz) overlaps the entire frequency range of LTE Band 5 (824 – 849 MHz). Therefore, test data provided in this report covers Band 5 and the portion of Band 26 subject to Part 22.

LTE Band 66 (1710 - 1780 MHz) overlaps the entire frequency range of LTE Band 4 (1710 - 1755 MHz). Therefore, test data provided in this report covers Band 4 as well as Band 66.

LTE Band 25 (1850 - 1915 MHz) overlaps the entire frequency range of LTE Band 2 (1850 - 1910 MHz). Therefore, test data provided in this report covers Band 2 as well as Band 25.

2.3 Test Configuration

The EUT was tested per the guidance of ANSI/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.

The EUT is capable of operating in screen closed and screen open configurations. The worst-case configuration for radiated emissions was determined from open and closed configurations in X, Y, and Z orientations for horizontal and vertical antenna polarizations. The worst case radiated emissions data is shown in this report. Additionally, the EUT is support a camera that mechanically pops up from the device. The worst case configuration was investigated with the camera down and popped up and worst case radiated data is reported herein.

This device supports wireless charging capability and, thus, is subject to the test requirements of KDB 648474 D03 v01r04. Additional radiated spurious emission measurements were performed with the EUT lying flat on an authorized wireless charging pad (WCP) Model: EP-N5100 while operating under normal conditions in a simulated call or data transmission configuration. The worst case radiated emissions data is shown in this report.

2.4 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 Measurement Procedure

The measurement procedures described in the document titled "Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards" (ANSI/TIA-603-E-2016) and "Procedures for Compliance Measurement of the Fundamental Emission Power of Licensed Wideband (> 1 MHz) Digital Transmission Systems" (KDB 971168 D01 v03r01) were used in the measurement of the EUT**.**

3.2 Radiated Power and 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. Radiated power levels are also investigated with the receive antenna horizontally and vertically polarized. The maximized power level is recorded using the spectrum analyzer "Channel Power" function with the integration band set to the emissions' occupied bandwidth, a RMS detector, RBW = 100kHz, VBW = 300kHz, and a 1 second sweep time over a minimum of 10 sweeps, per the guidelines of KDB 971168 D01 v03r01.

Per the guidance of ANSI/TIA-603-E-2016, a half-wave dipole is then substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT. The power of the emission is calculated using the following formula:

$$P_{d\ [dBm]} = P_{g\ [dBm]} - \text{cable loss}_{\ [dB]} + \text{antenna gain}_{\ [dBd/dBi]}$$

Where, P_d is the dipole equivalent power, P_g is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to $P_{g\ [dBm]}$ – cable loss $_{[dB]}$.

The calculated P_d levels are then compared to the absolute spurious emission limit of -13dBm which is equivalent to the required minimum attenuation of 43 + 10 $\log_{10}$(Power $_{[Watts]}$). All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014. Additionally, radiated emissions below 30MHz are also validated on an Open Area Test Site to assert correlation with the chamber measurements per the requirements of KDB 474788 D01.

4.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. 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	1.13
Radiated Disturbance (<1GHz)	4.98
Radiated Disturbance (>1GHz)	5.07
Radiated Disturbance (>18GHz)	5.09

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
-	LTx2	Licensed Transmitter Cable Set	4/9/2020	Annual	4/9/2021	LTx2
Agilent	8648D	(9kHz-4GHz) Signal Generator	6/23/2020	Annual	6/23/2021	3613A00315
Anritsu	MT8821C	Radio Communication Analyzer	3/10/2020	Annual	3/10/2021	6200901190
Com-Power	AL-130	9kHz - 30MHz Loop Antenna	10/10/2019	Biennial	10/10/2021	121034
Emco	3115	Horn Antenna (1-18GHz)	6/18/2020	Biennial	6/18/2022	9704-5182
Espec	ESX-2CA	Environmental Chamber	8/13/2019	Annual	8/13/2020	17620
ETS Lindgren	3164-08	Quad Ridge Horn Antenna	3/12/2020	Biennial	3/12/2022	128337
ETS Lindgren	3164-08	Quad Ridge Horn Antenna	2/22/2019	Biennial	2/22/2021	128338
ETS-Lindgren	3115	Double Ridged Guide Horn 750MHz - 18GHz	3/12/2020	Biennial	3/12/2022	150693
Mini Circuits	TVA-11-422	RF Power Amp	N/A			QA1317001
Rohde & Schwarz	CMU200	Base Station Simulator	N/A			107826
Rohde & Schwarz	CMU200	Base Station Simulator	N/A			836536/0005
Rohde & Schwarz	CMW500	Radio Communication Tester	8/26/2019	Annual	8/26/2020	100976
Rohde & Schwarz	TS-PR26	18-26.5 GHz Pre-Amplifier	11/1/2019	Annual	11/1/2020	100040
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	7/15/2020	Annual	7/15/2021	100342
Rohde & Schwarz	ESU40	EMI Test Receiver (40GHz)	9/23/2019	Annual	9/23/2020	100348
Rohde & Schwarz	TC-TA18	Cross-Pol Antenna 400MHz-18GHz	7/8/2020	Biennial	7/8/2022	101058
Rohde & Schwarz	SFUNIT-Rx	Shielded Filter Unit	2/10/2020	Annual	2/10/2021	102134
Rohde & Schwarz	SFUNIT-Rx	Shielded Filter Unit	2/21/2020	Annual	2/21/2021	102133
Sunol	DRH-118	Horn Antenna (1-18GHz)	10/3/2019	Biennial	10/3/2021	A050307
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	7/27/2020	Biennial	7/27/2022	A051107
Sunol	DRH-118	Horn Antenna (1-18 GHz)	8/27/2019	Biennial	8/27/2021	A042511

Table 5-1. Test Equipment

Notes:

1. 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.

2. Equipment with a calibration date of "N/A" shown in this list was not used to make direct calibrated measurements.

6.0 SAMPLE CALCULATIONS

Emission Designator

QPSK Modulation

Emission Designator = 8M62G7D

LTE BW = 8.62 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Data transmission, telemetry, telecommand

QAM Modulation

Emission Designator = 8M45W7D

LTE BW = 8.45 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data transmission, telemetry, telecommand

Spurious Radiated Emission – LTE Band

Example: Middle Channel LTE Mode 2nd Harmonic (1564 MHz)

The average 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 analzyer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 1564 MHz. So 6.1 dB is added to the signal generator reading of –30.9 dBm yielding –24.80 dBm. The fundamental EIRP was 25.501 dBm so this harmonic was 25.501 dBm – (-24.80).

7.0 TEST RESULTS

7.1 Summary

Company Name: LG Electronics USA, Inc.

FCC ID: ZNFF100TM

FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)

Mode(s): LTE

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
2.1049	Occupied Bandwidth	N/A	CONDUCTED	PASS	Section 7.2
2.1051 22.917(a) 24.238(a) 27.53(c) 27.53(g) 27.53(h)	Out of Band Emissions	> 43 + 10 $\log_{10}$ (P[Watts]) at Band Edge and for all out-of-band emissions			Section 7.3, 7.4
27.53(m)	Out of Band Emissions	Undesirable emissions must meet the limits detailed in 27.53(m)			Section 7.3, 7.4
24.232(d) 27.50	Peak-Average Ratio	< 13 dB			Section 7.5
2.1046	Transmitter Conducted Output Power	N/A			See RF Exposure Report
2.1055 22.355 24.235 27.54	Frequency Stability	< 2.5 ppm (Part 22) and fundamental emissions stay within authorized frequency block (Part 24, 27)			Section 7.12

Table 7-1. Summary of Conducted Test Results

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
22.913(a)(5)	Effective Radiated Power / Equivalent Isotropic Radiated Power (Band 5/26)	< 7 Watts max. ERP	RADIATED	PASS	Section 7.9
27.50(b)(10) 27.50(c)(10)	Effective Radiated Power / Equivalent Isotropic Radiated Power (Band 71, 12, 13)	< 3 Watts max. ERP			Section 7.9
24.232(c) 27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2/25)	< 2 Watts max. EIRP			Section 7.9
27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4/66)	< 1 Watts max. EIRP			Section 7.9
2.1053 22.917(a) 24.238(a) 27.53(c) 27.53(g) 27.53(h)	Undesirable Emissions (Band 12, 13, 26/5, 66/4, 25/2)	> 43 + 10 $\log_{10}$ (P[Watts]) for all out-of-band emissions			Section 7.10
27.53(f)	Undesirable Emissions (Band 13)	< -70 dBW/MHz (for wideband signals) < -80 dBW (for discrete emissions less than 700Hz BW) For all emissions in the band 1559 – 1610 MHz			Section 7.10
27.53(m)	Uplink Carrier Aggregation	Undesirable emissions must meet the limits detailed in 27.53(m)			Section 7.10

Table 7-2. Summary of Radiated 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 (Sections 7.2, 7.3, 7.4, 7.5) 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) For conducted spurious emissions, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is PCTEST "LTE Automation," Version 5.3.

7.2 Occupied Bandwidth

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.

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.

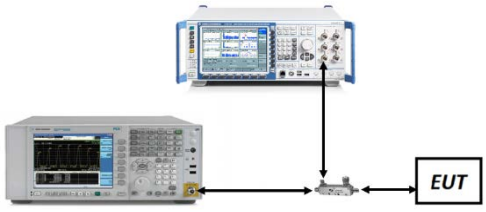
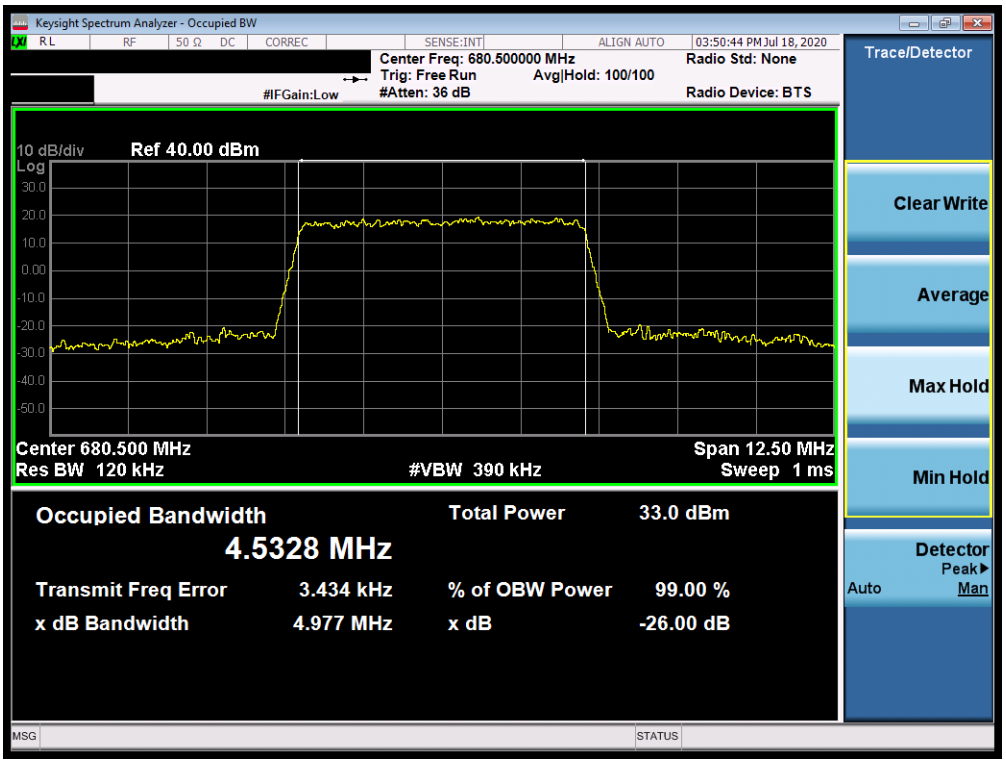


Figure 7-1. Test Instrument & Measurement Setup

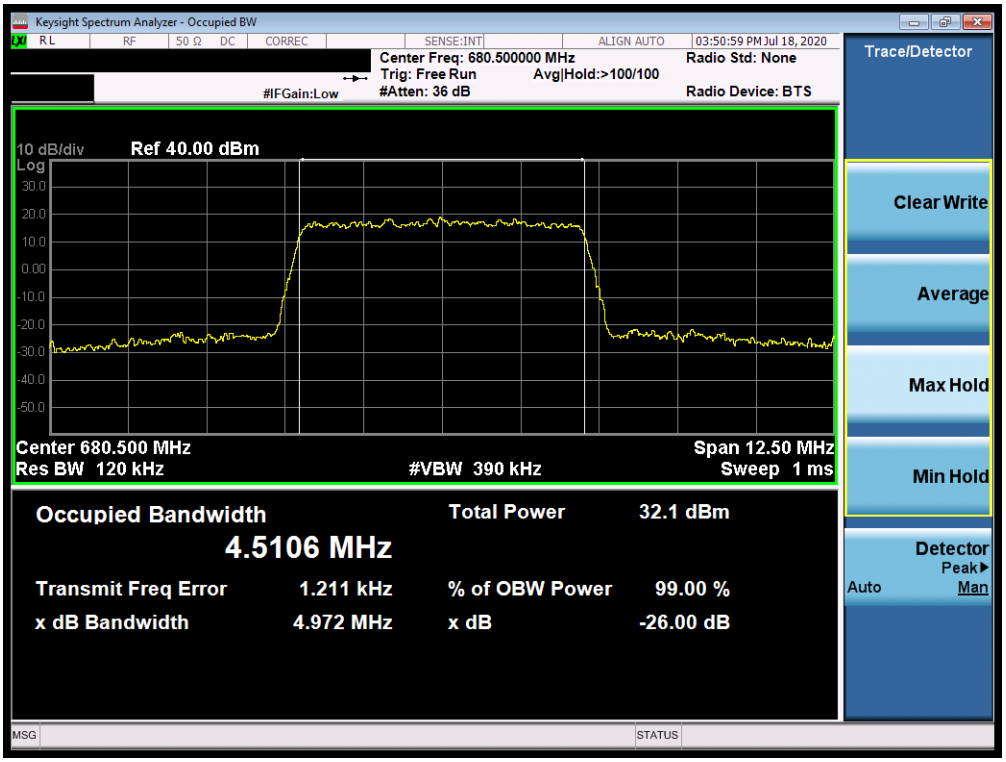
Test Notes

None.

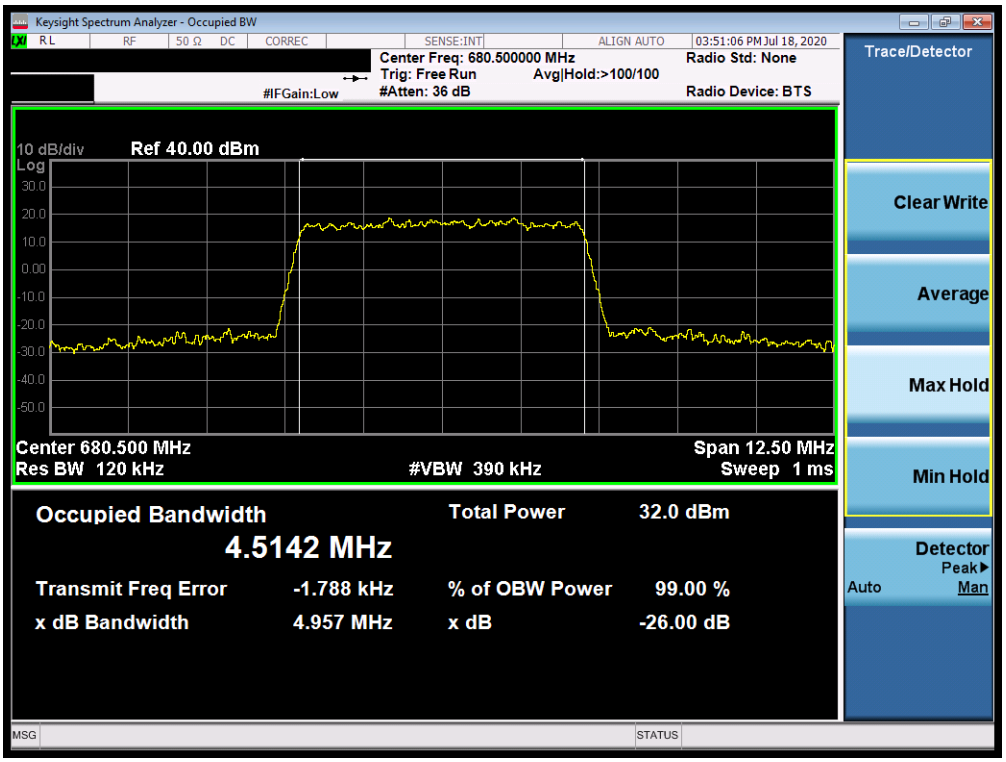
Band 71



Plot 7-1. Occupied Bandwidth Plot (Band 71 – 5.0MHz QPSK - Full RB Configuration)

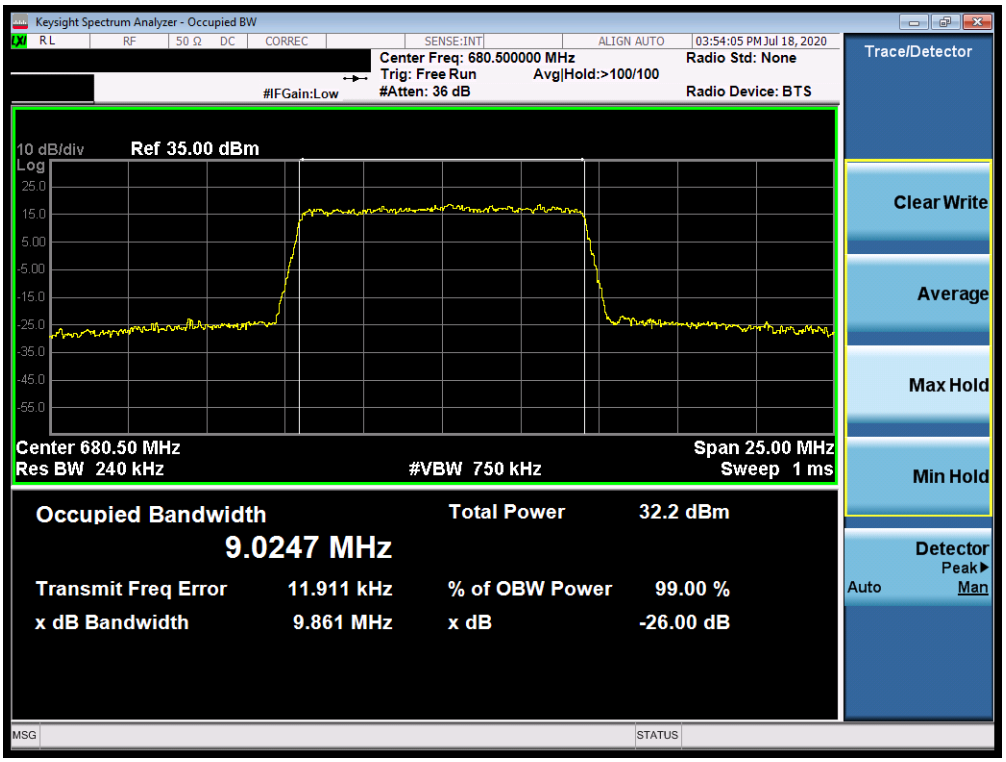


Plot 7-2. Occupied Bandwidth Plot (Band 71 – 5.0MHz 16-QAM - Full RB Configuration)



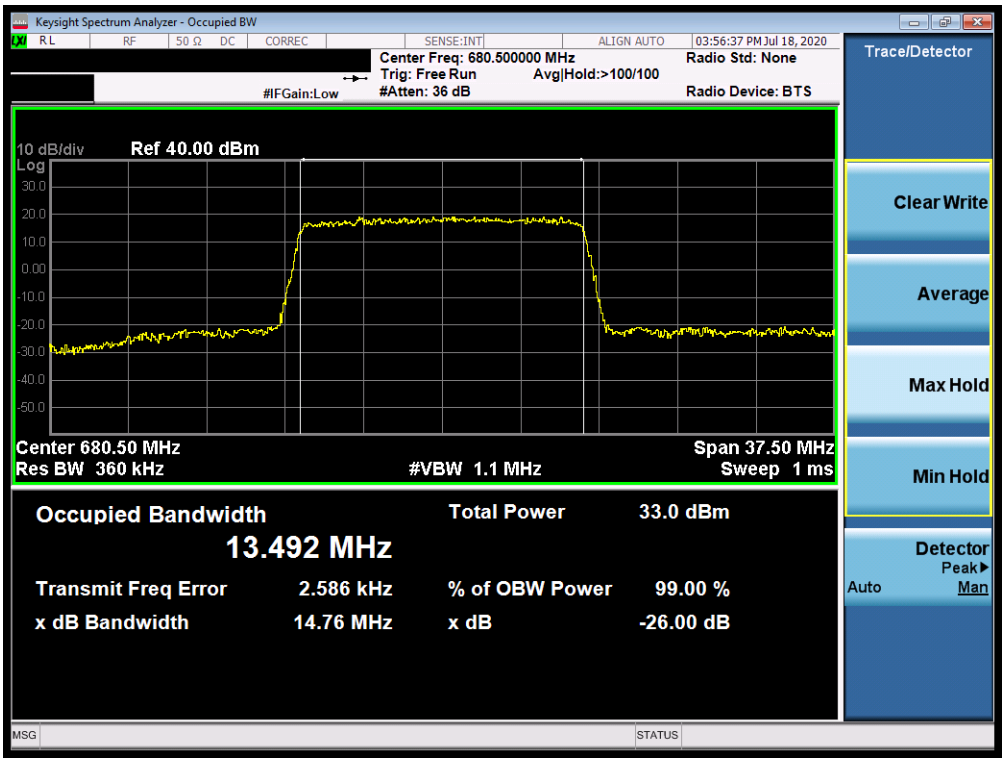
Plot 7-3. Occupied Bandwidth Plot (Band 71 – 5.0MHz 64-QAM - Full RB Configuration)

Plot 7-4. Occupied Bandwidth Plot (Band 71 - 10.0MHz QPSK - Full RB Configuration)

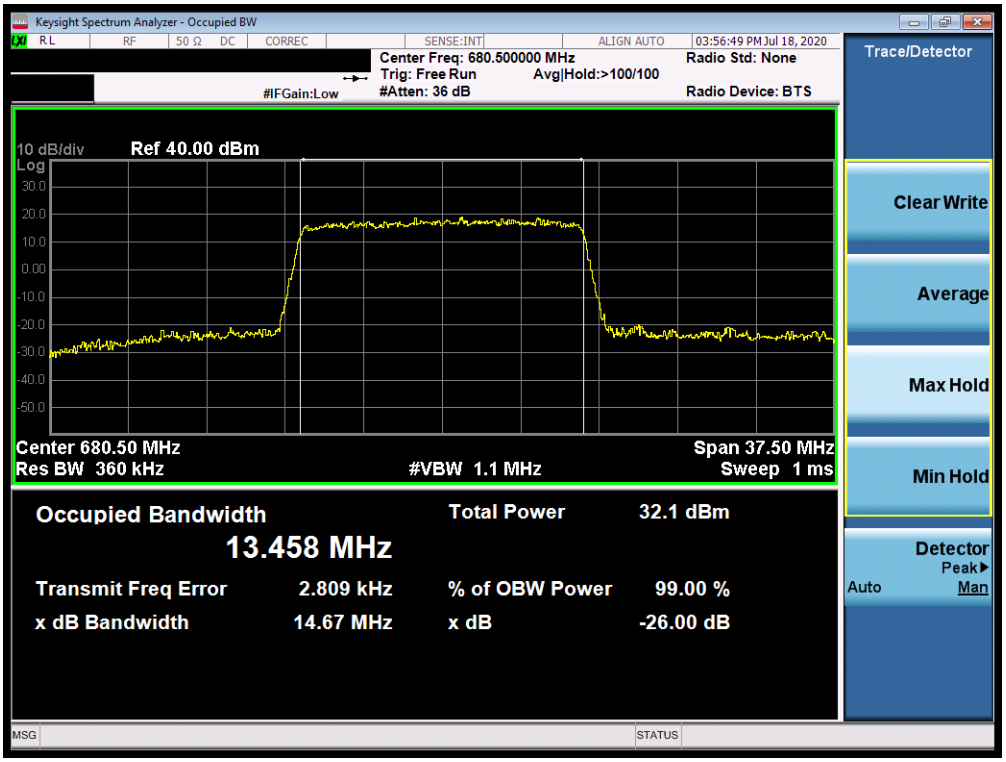


Plot 7-5. Occupied Bandwidth Plot (Band 71 - 10.0MHz 16-QAM - Full RB Configuration)

Plot 7-6. Occupied Bandwidth Plot (Band 71 - 10.0MHz 64-QAM - Full RB Configuration)

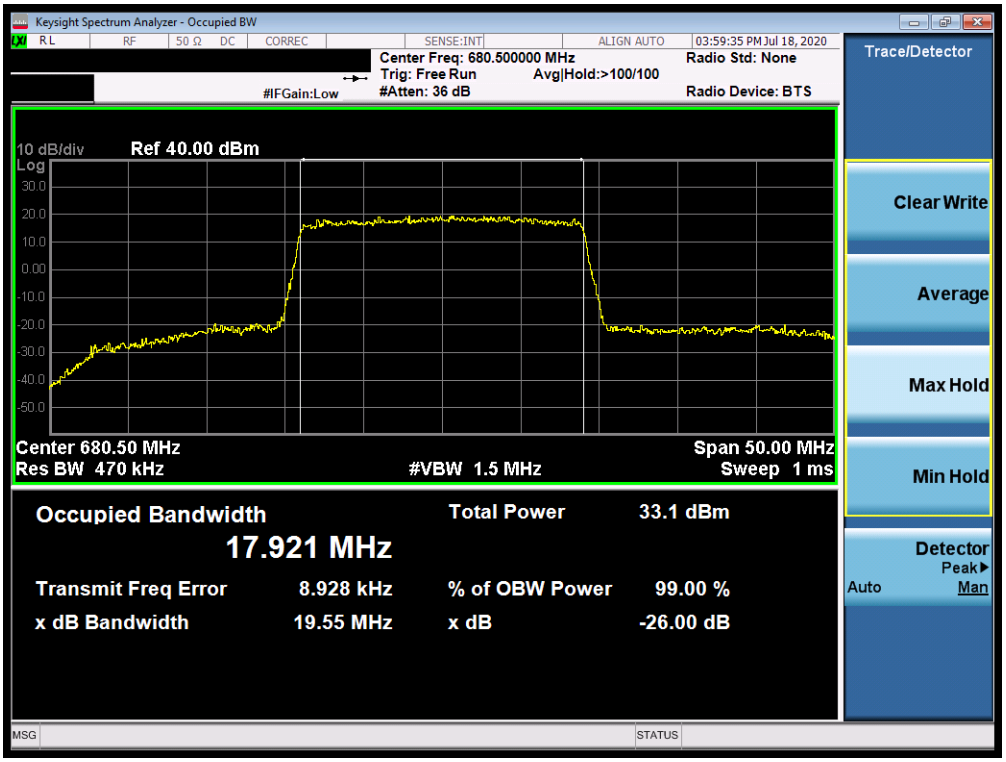


Plot 7-7. Occupied Bandwidth Plot (Band 71 - 15.0MHz QPSK - Full RB Configuration)



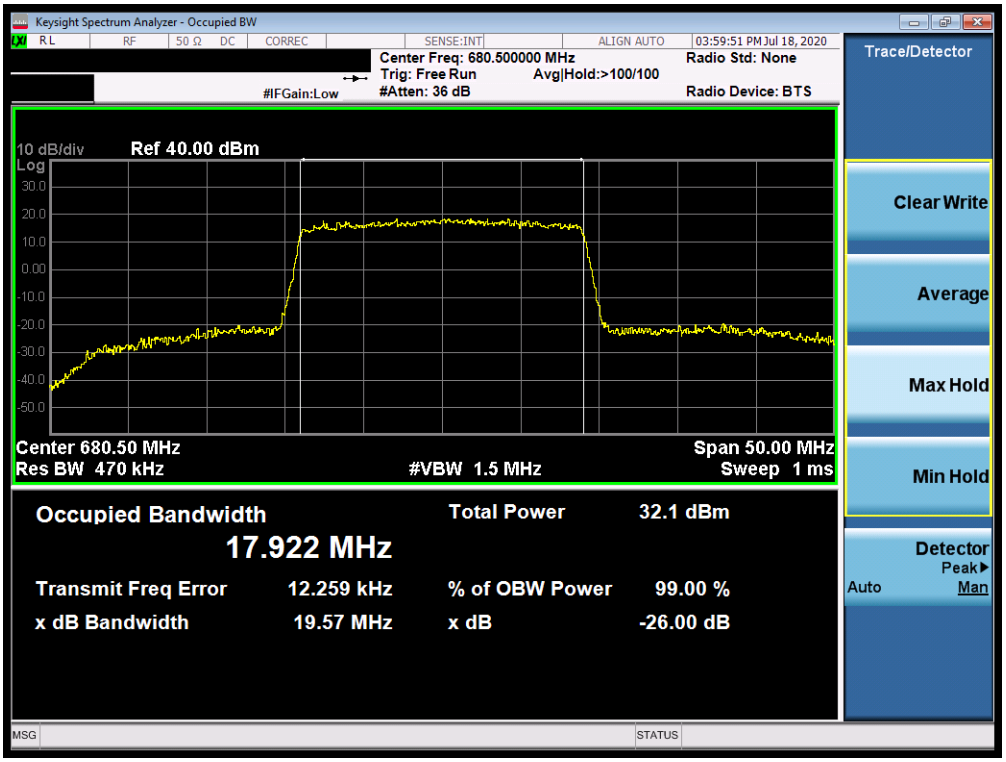
Plot 7-8. Occupied Bandwidth Plot (Band 71 - 15.0MHz 16-QAM - Full RB Configuration)

Plot 7-9. Occupied Bandwidth Plot (Band 71 - 15.0MHz 64-QAM - Full RB Configuration)



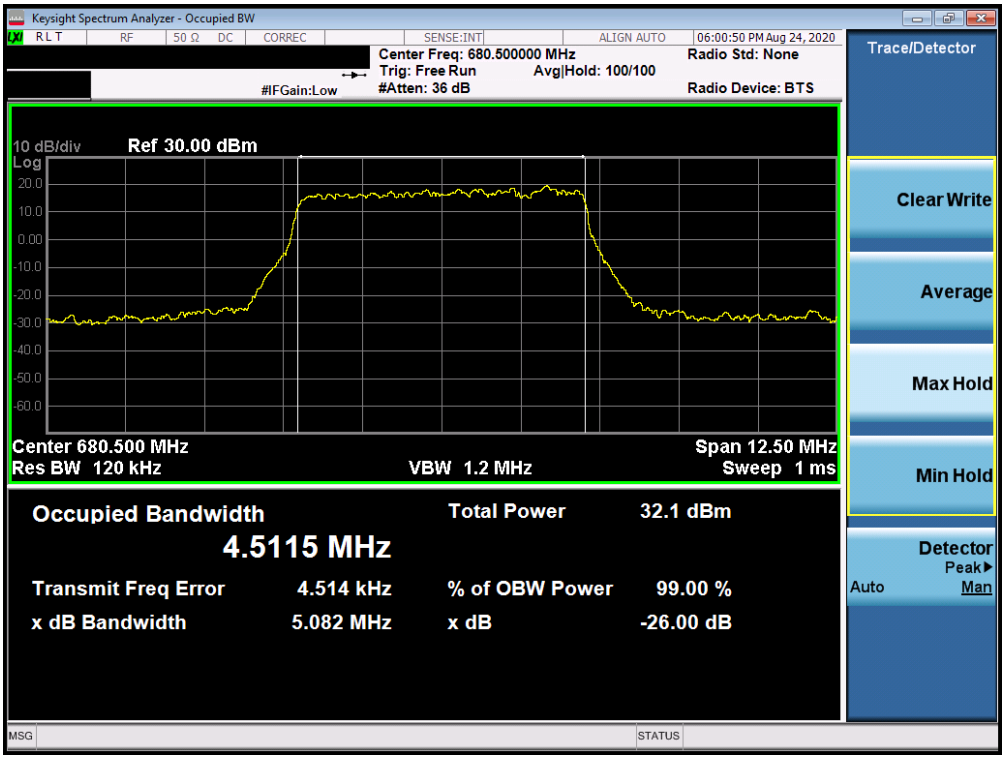
Plot 7-10. Occupied Bandwidth Plot (Band 71 - 20.0MHz QPSK - Full RB Configuration)

Plot 7-11. Occupied Bandwidth Plot (Band 71 - 20.0MHz 16-QAM - Full RB Configuration)

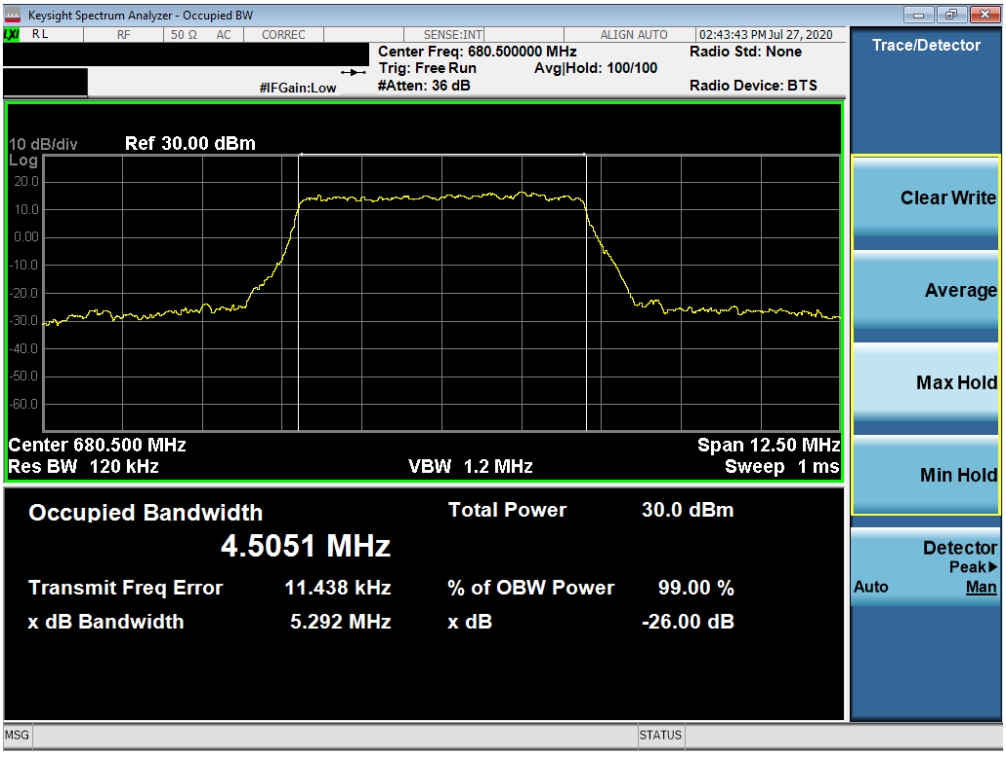


Plot 7-12. Occupied Bandwidth Plot (Band 71 - 20.0MHz 64-QAM - Full RB Configuration)

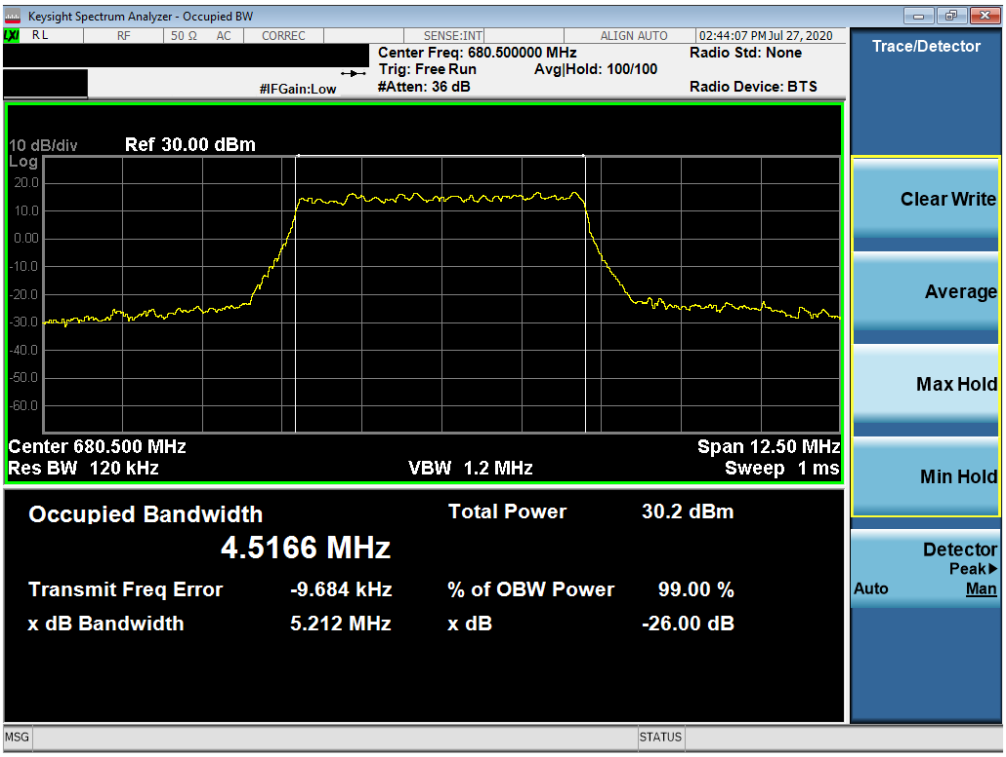
NR Band n71



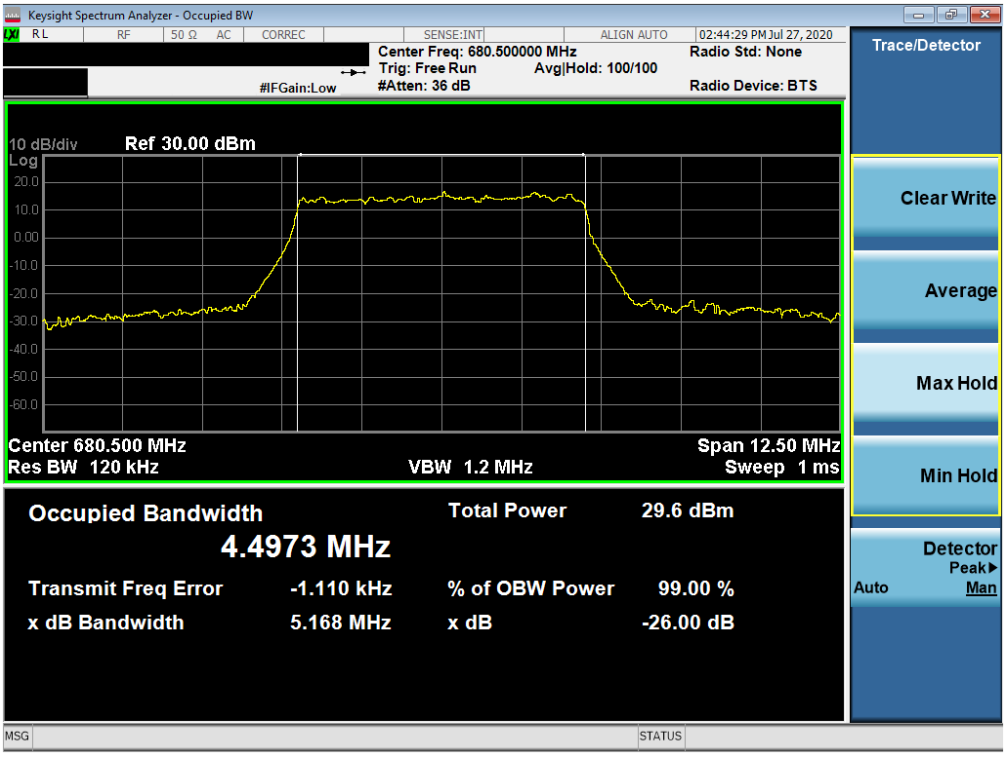
Plot 7-13. Occupied Bandwidth Plot (NR Band n71 - 5.0MHz DFT-s-OFDM BPSK - Full RB)



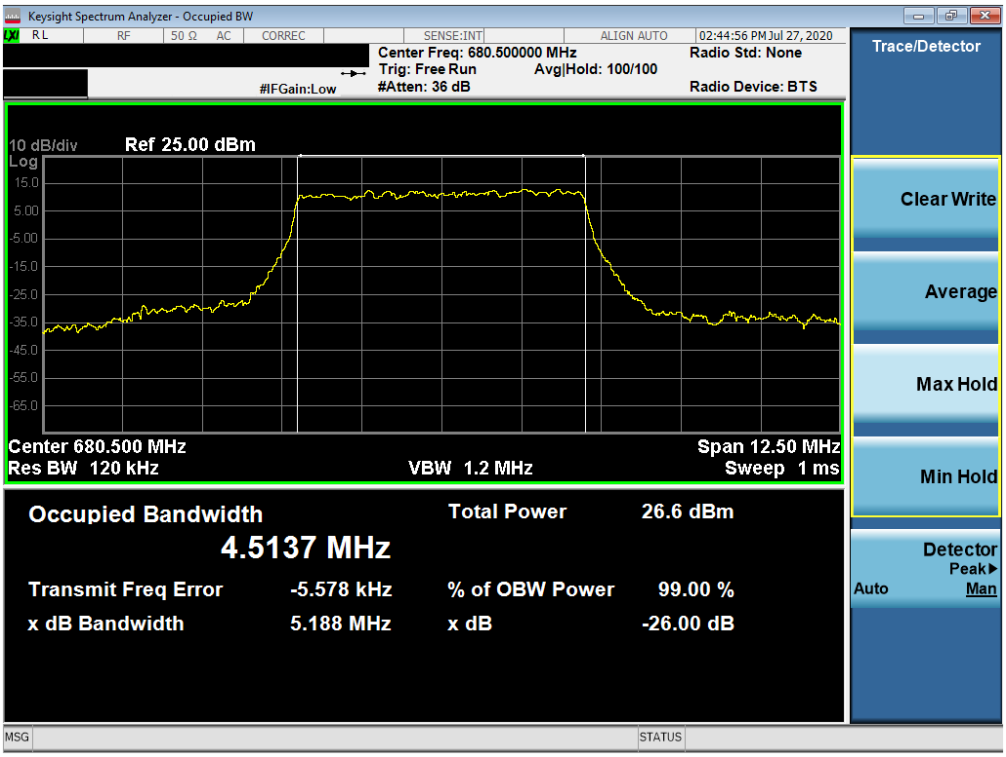
Plot 7-14. Occupied Bandwidth Plot (NR Band n71 - 5.0MHz CP-OFDM QPSK - Full RB)



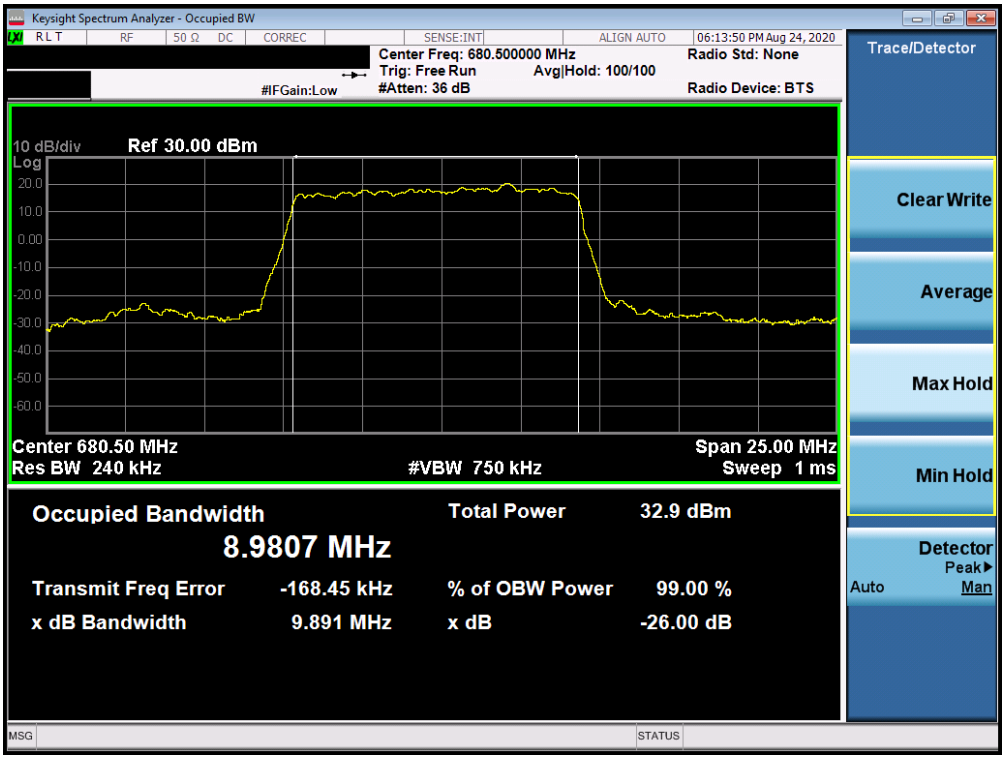
Plot 7-15. Occupied Bandwidth Plot (NR Band n71 - 5MHz CP-OFDM 16-QAM - Full RB)



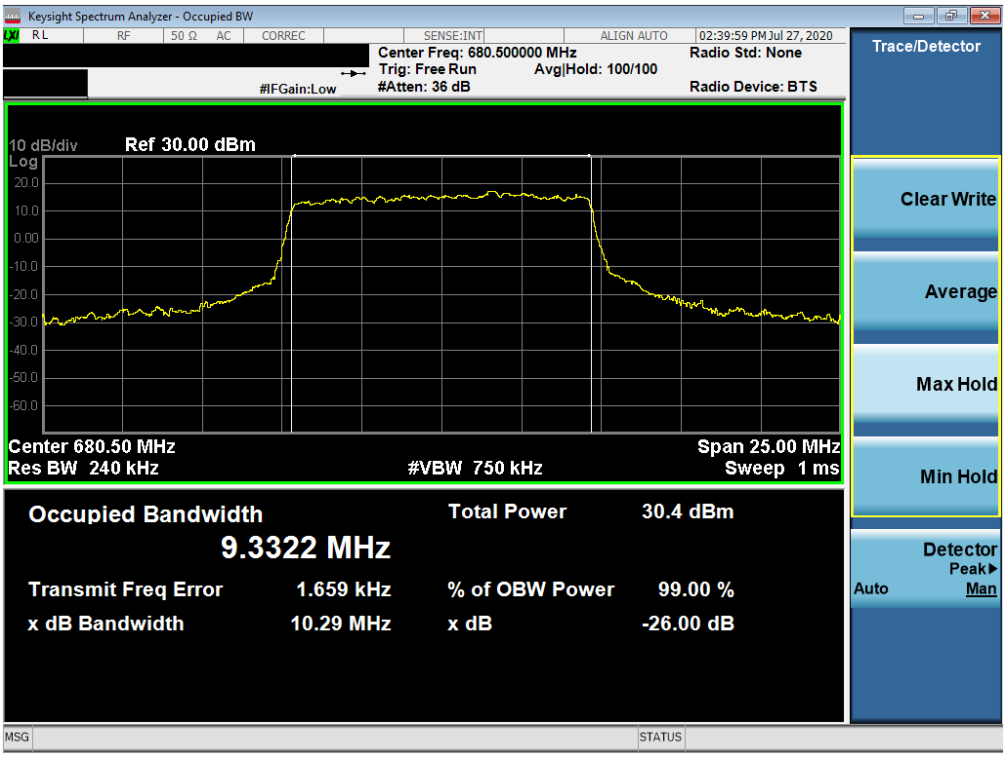
Plot 7-16. Occupied Bandwidth Plot (NR Band n71 - 5MHz CP-OFDM 64-QAM - Full RB)



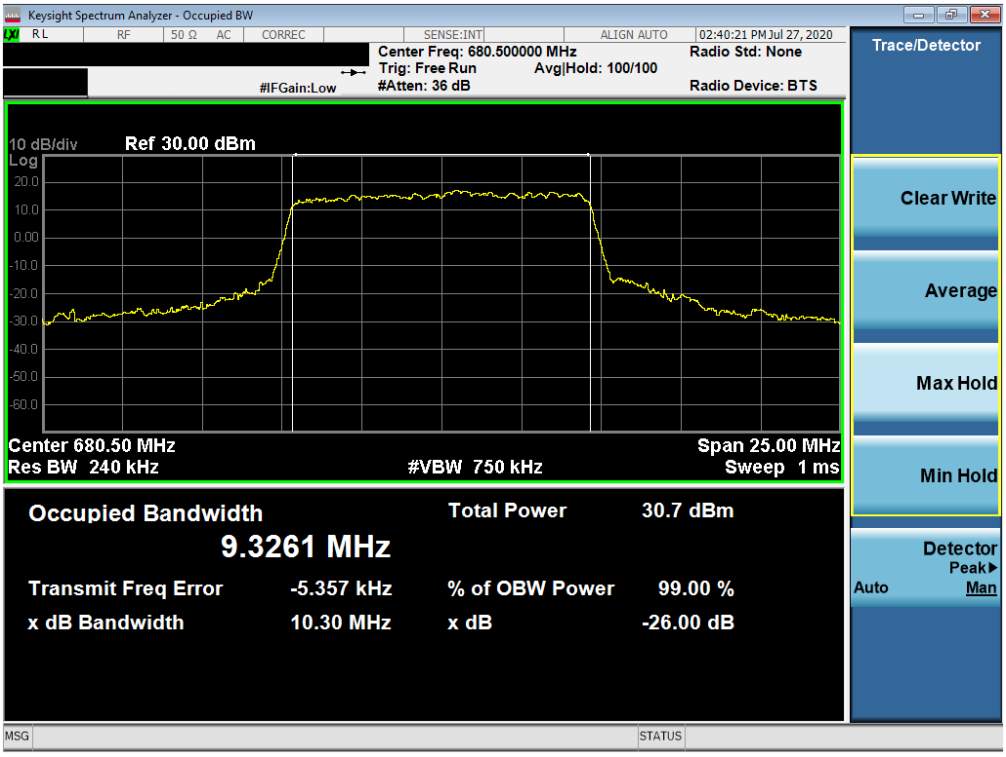
Plot 7-17. Occupied Bandwidth Plot (NR Band n71 - 5MHz CP-OFDM 256-QAM - Full RB)



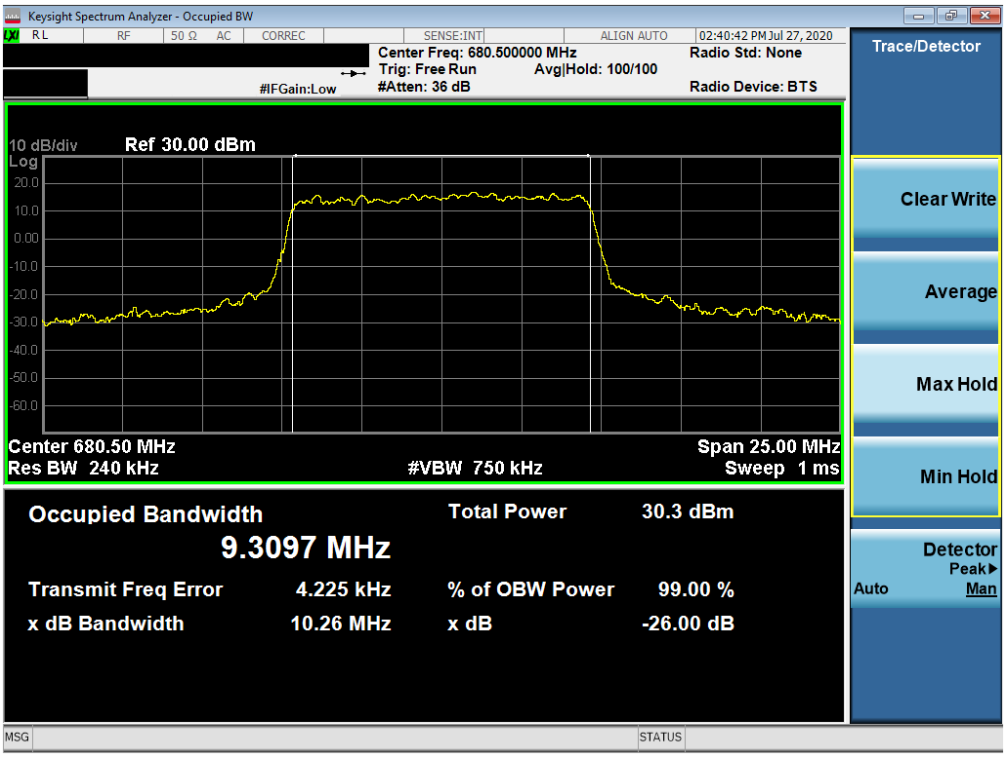
Plot 7-18. Occupied Bandwidth Plot (NR Band n71 - 10.0MHz DFT-s-OFDM BPSK - Full RB)



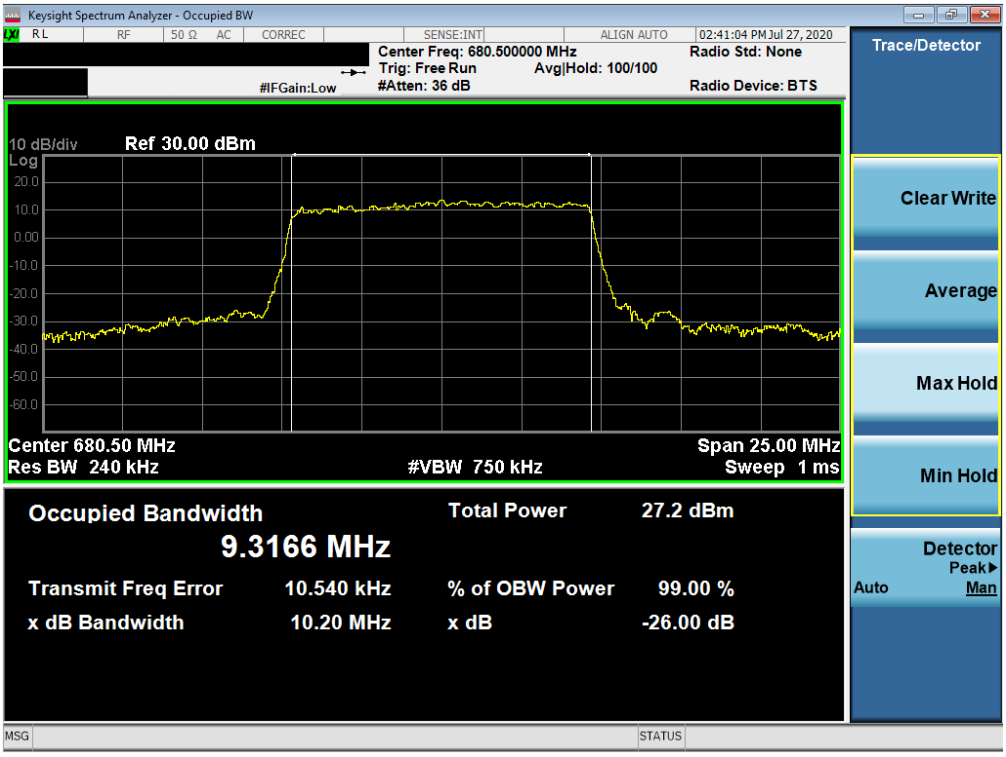
Plot 7-19. Occupied Bandwidth Plot (NR Band n71 - 10MHz CP-OFDM QPSK - Full RB)



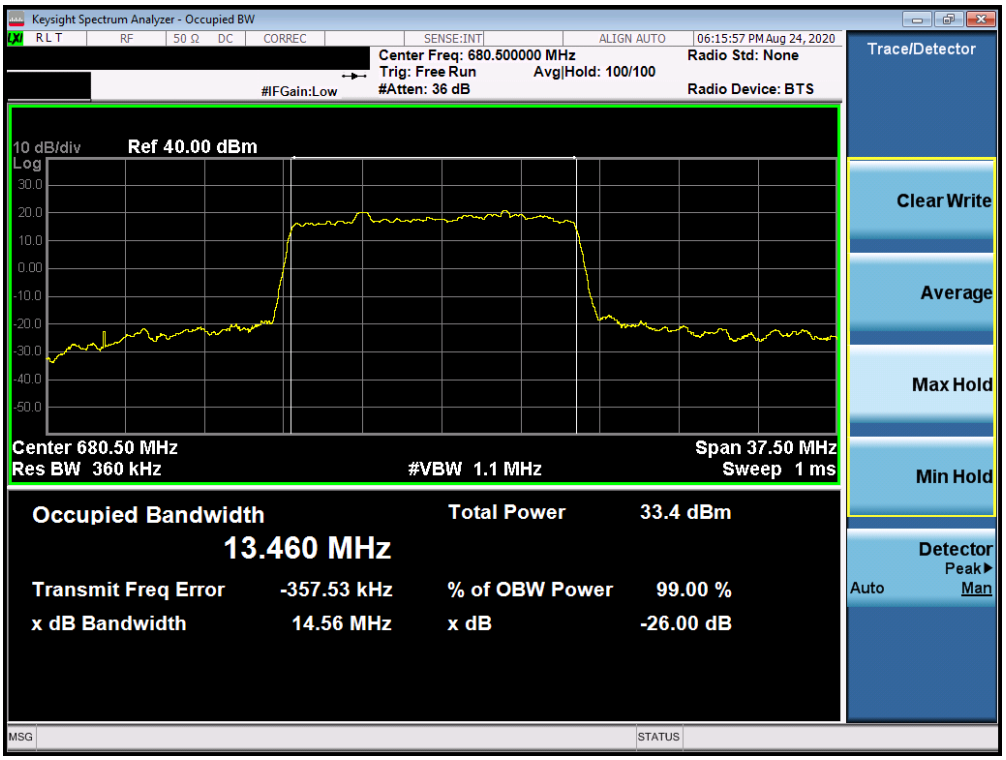
Plot 7-20. Occupied Bandwidth Plot (NR Band n71 - 10MHz CP-OFDM 16-QAM - Full RB)



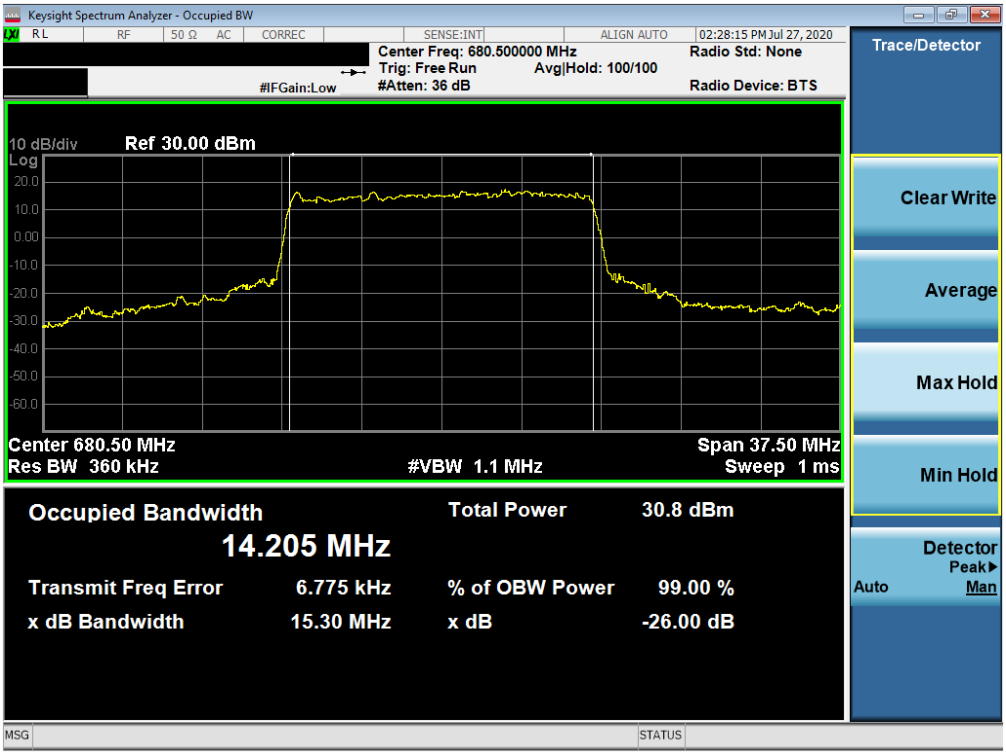
Plot 7-21. Occupied Bandwidth Plot (NR Band n71 - 10MHz CP-OFDM 64-QAM - Full RB)



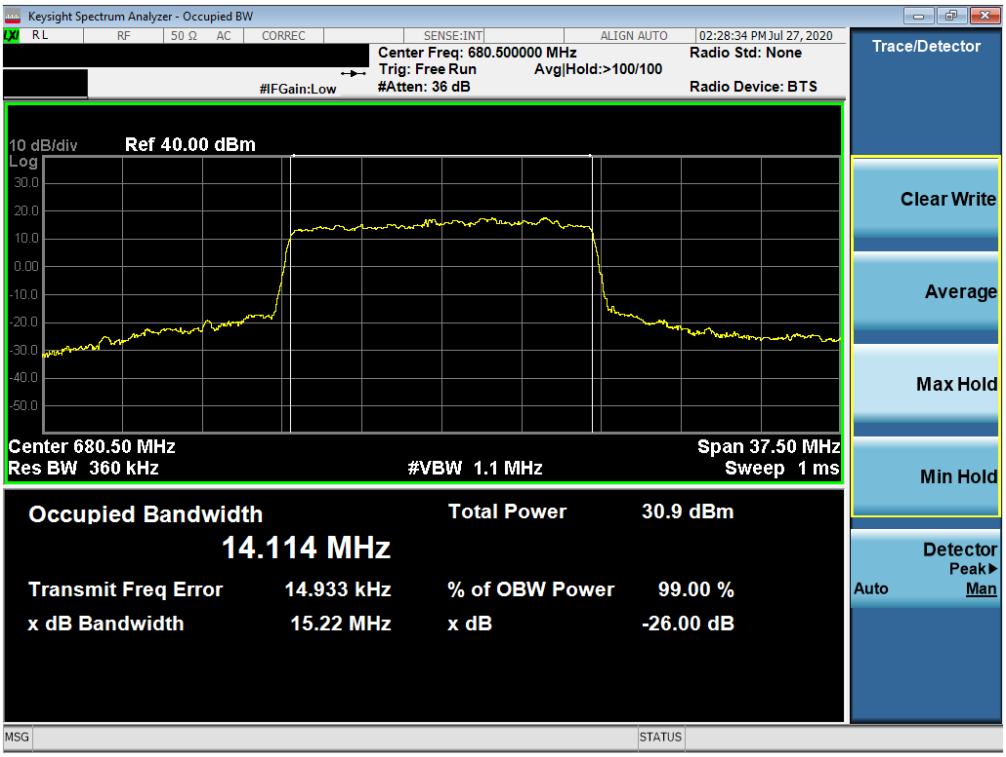
Plot 7-22. Occupied Bandwidth Plot (NR Band n71 - 10MHz CP-OFDM 256-QAM - Full RB)



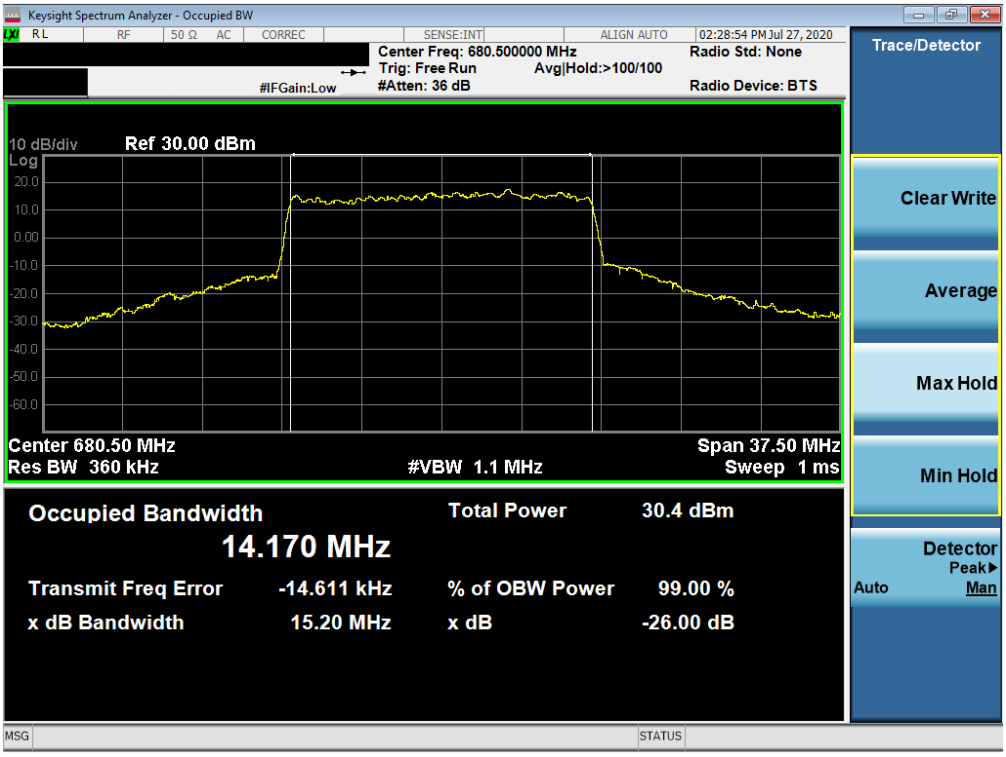
Plot 7-23. Occupied Bandwidth Plot (NR Band n71 - 15.0MHz DFT-s-OFDM BPSK - Full RB)



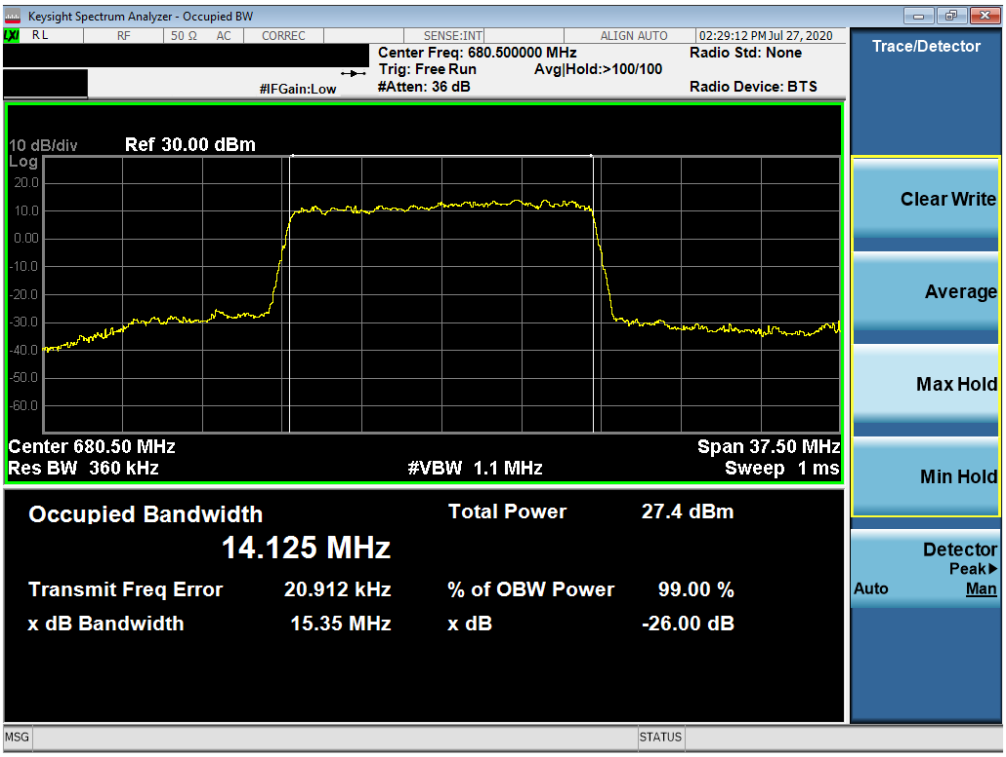
Plot 7-24. Occupied Bandwidth Plot (NR Band n71 - 15MHz CP-OFDM QPSK - Full RB)



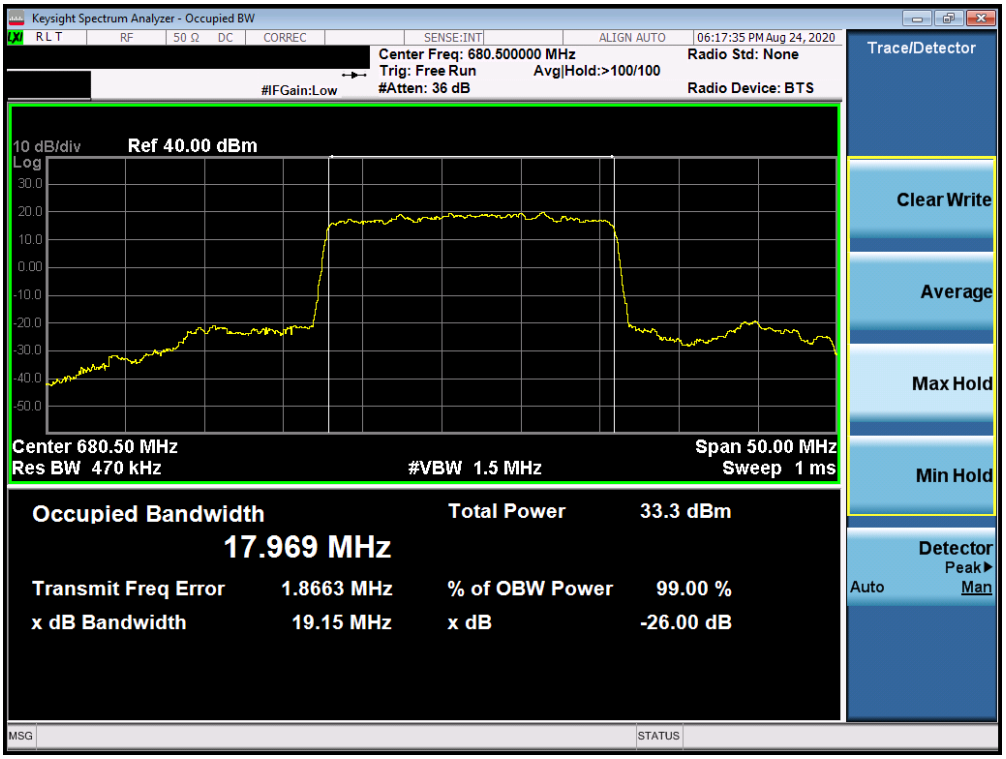
Plot 7-25. Occupied Bandwidth Plot (NR Band n71 - 15MHz CP-OFDM 16-QAM - Full RB)



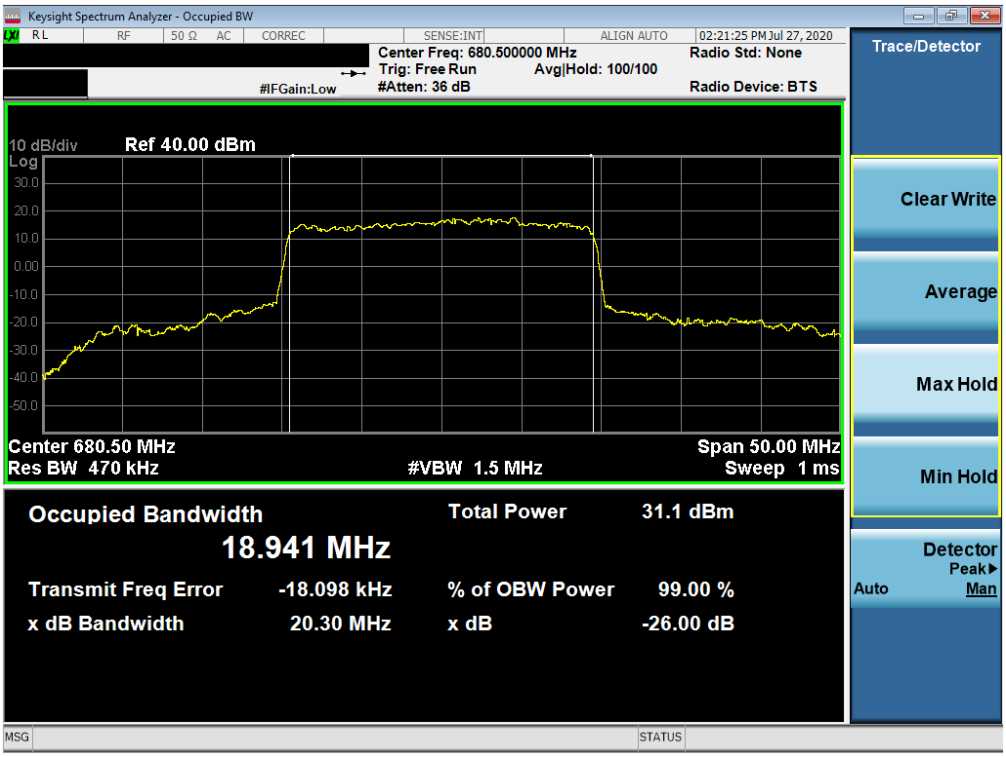
Plot 7-26. Occupied Bandwidth Plot (NR Band n71 - 15MHz CP-OFDM 64-QAM - Full RB)



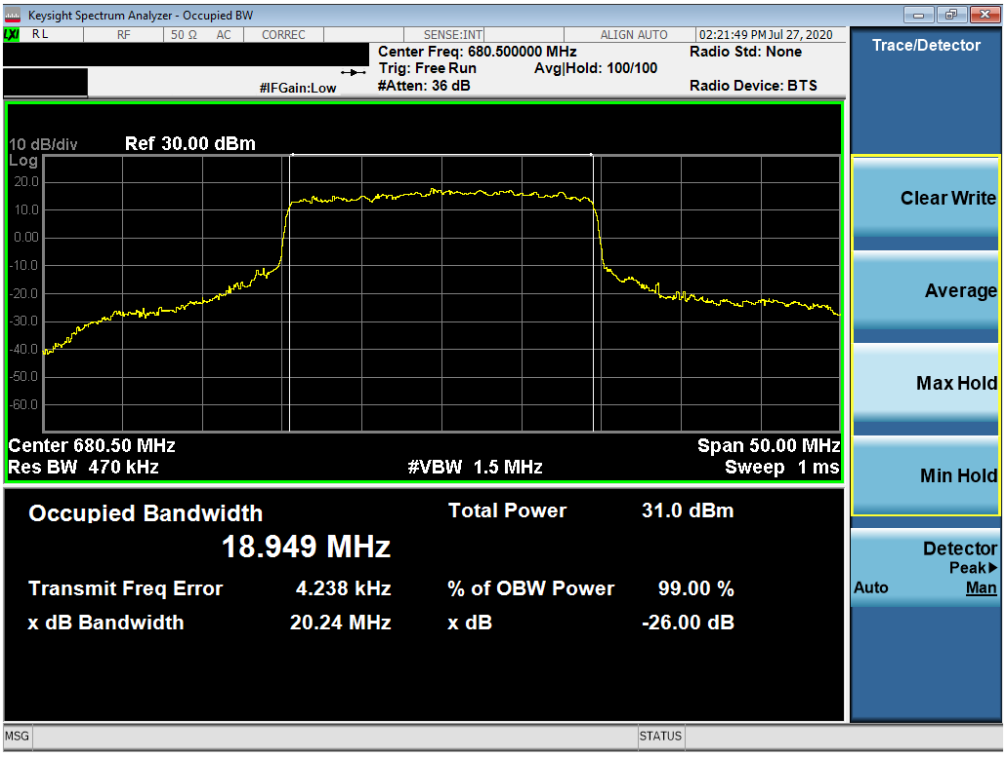
Plot 7-27. Occupied Bandwidth Plot (NR Band n71 - 15MHz CP-OFDM 256-QAM - Full RB)



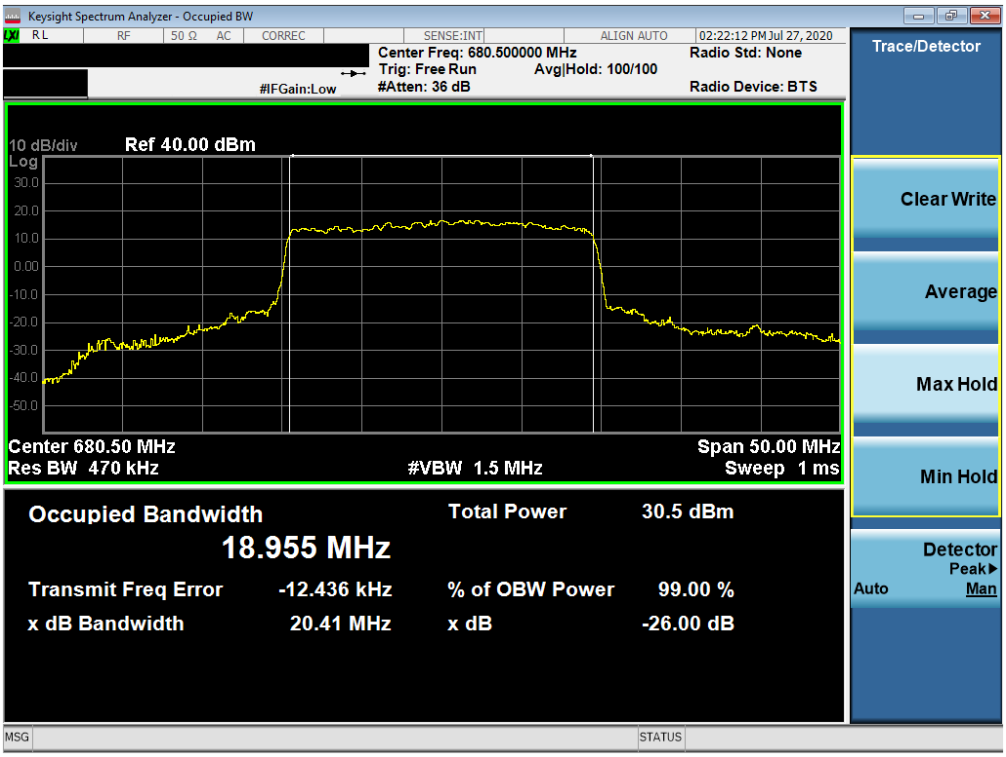
Plot 7-28. Occupied Bandwidth Plot (NR Band n71 - 20.0MHz DFT-s-OFDM BPSK - Full RB)



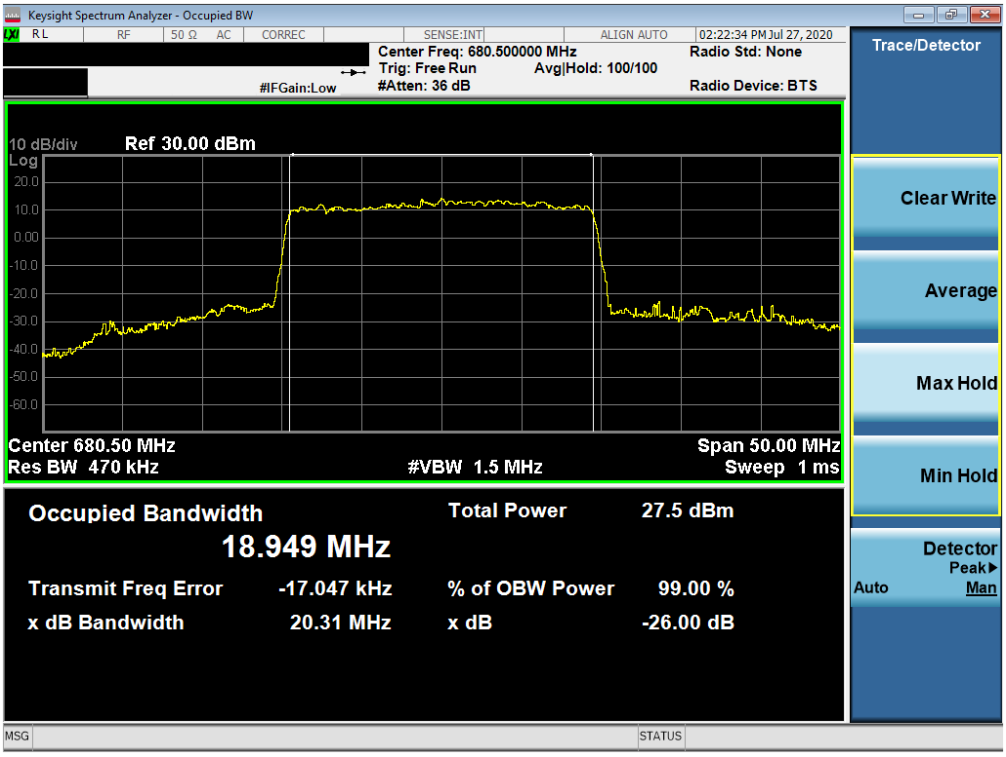
Plot 7-29. Occupied Bandwidth Plot (NR Band n71 - 20MHz CP-OFDM QPSK - Full RB)



Plot 7-30. Occupied Bandwidth Plot (NR Band n71 - 20MHz CP-OFDM 16-QAM - Full RB)



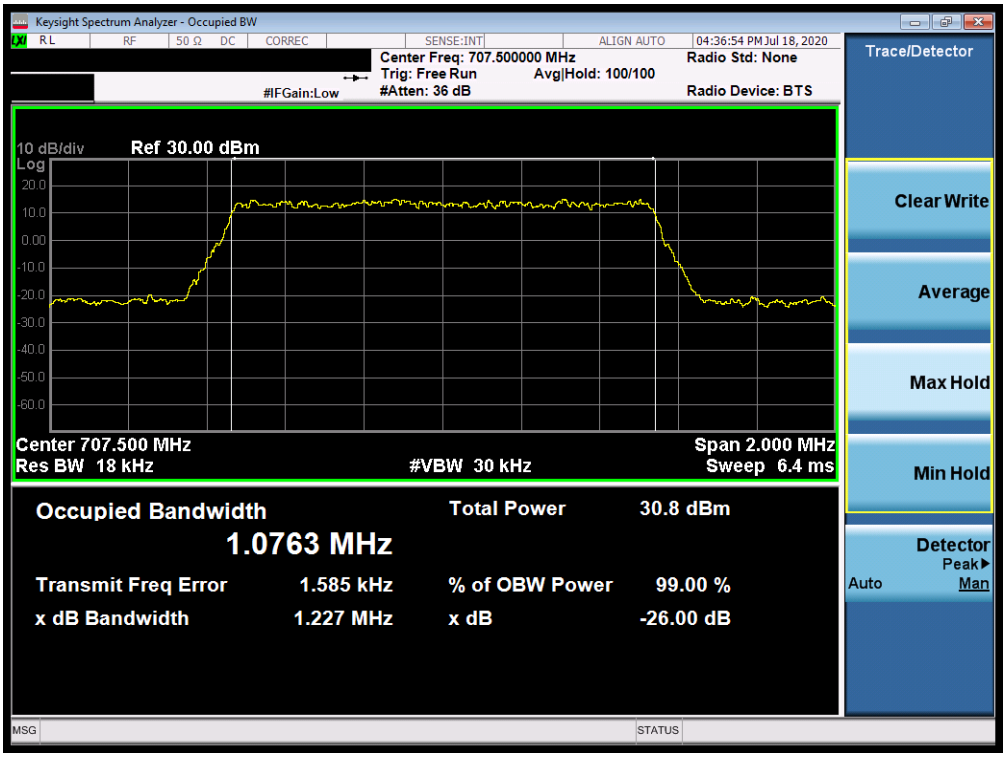
Plot 7-31. Occupied Bandwidth Plot (NR Band n71 - 20MHz CP-OFDM 64-QAM - Full RB)



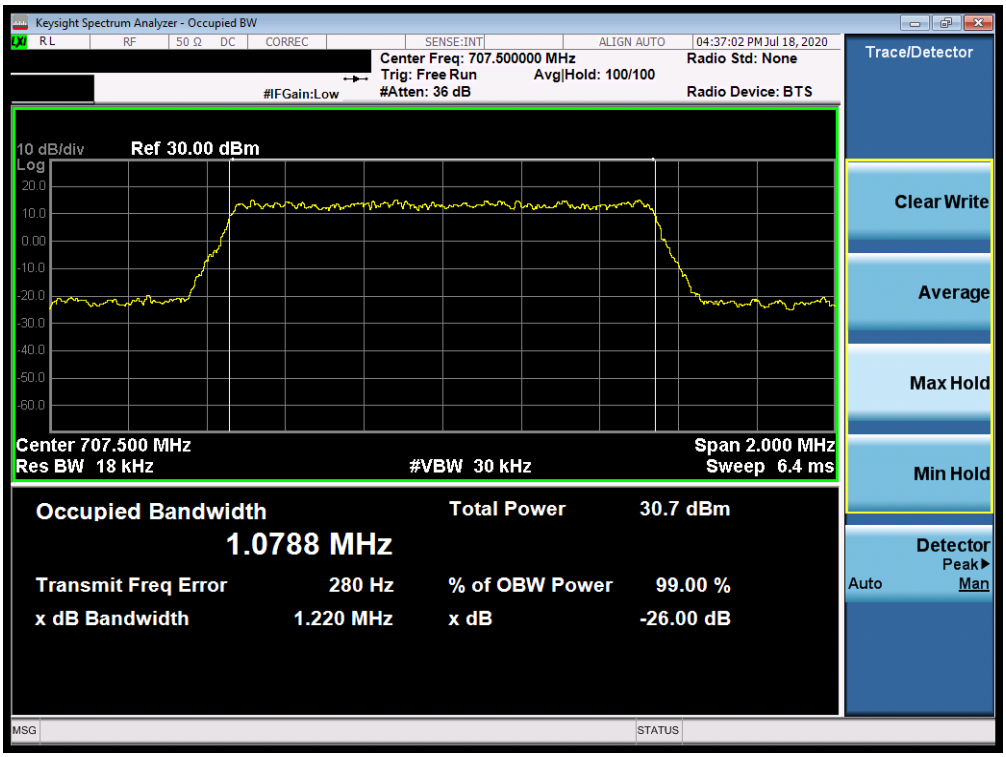
Plot 7-32. Occupied Bandwidth Plot (NR Band n71 - 20MHz CP-OFDM 256-QAM - Full RB)

Band 12/17

Plot 7-33. Occupied Bandwidth Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)

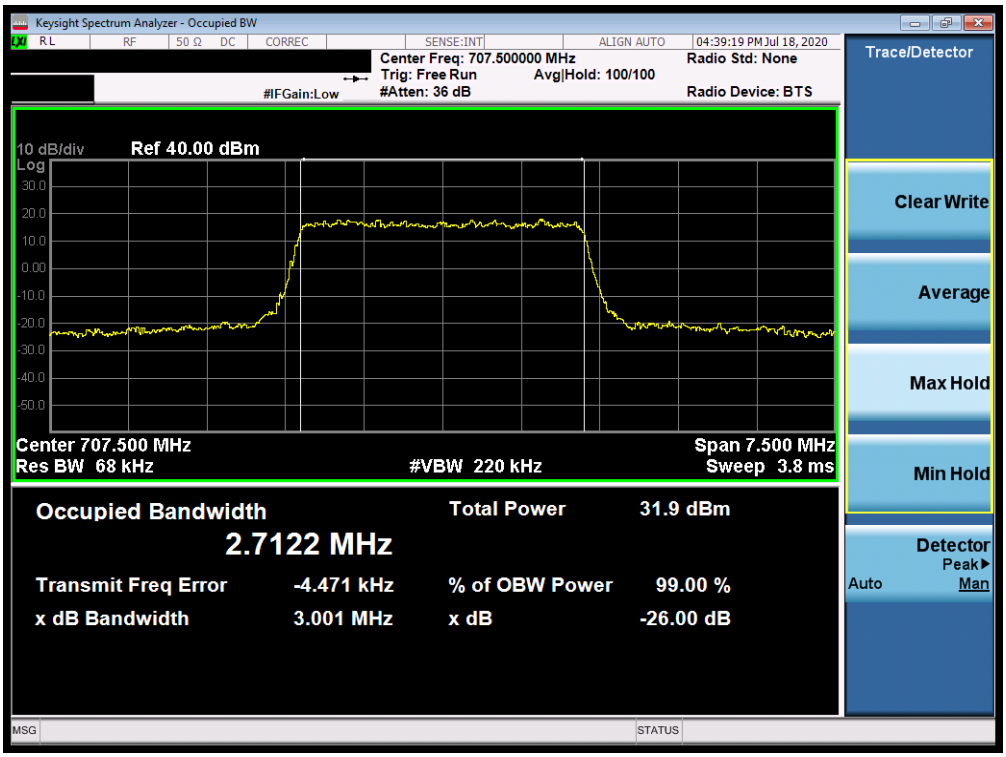


Plot 7-34. Occupied Bandwidth Plot (Band 12 - 1.4MHz 16-QAM - Full RB Configuration)

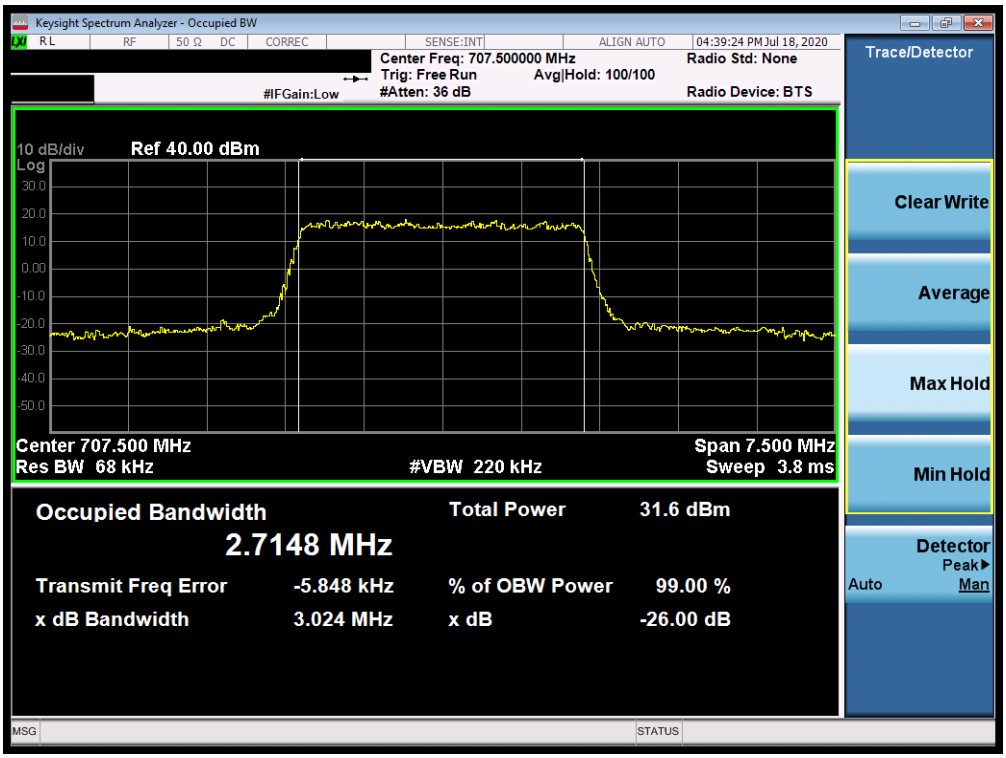


Plot 7-35. Occupied Bandwidth Plot (Band 12 - 1.4MHz 64-QAM - Full RB Configuration)

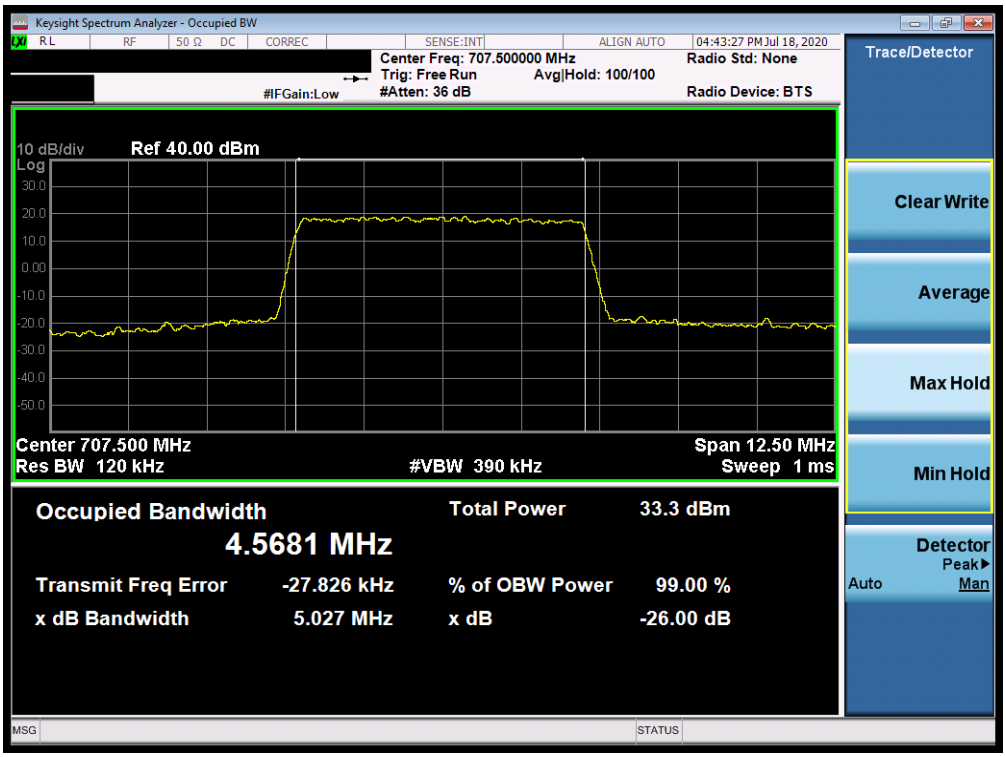
Plot 7-36. Occupied Bandwidth Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)



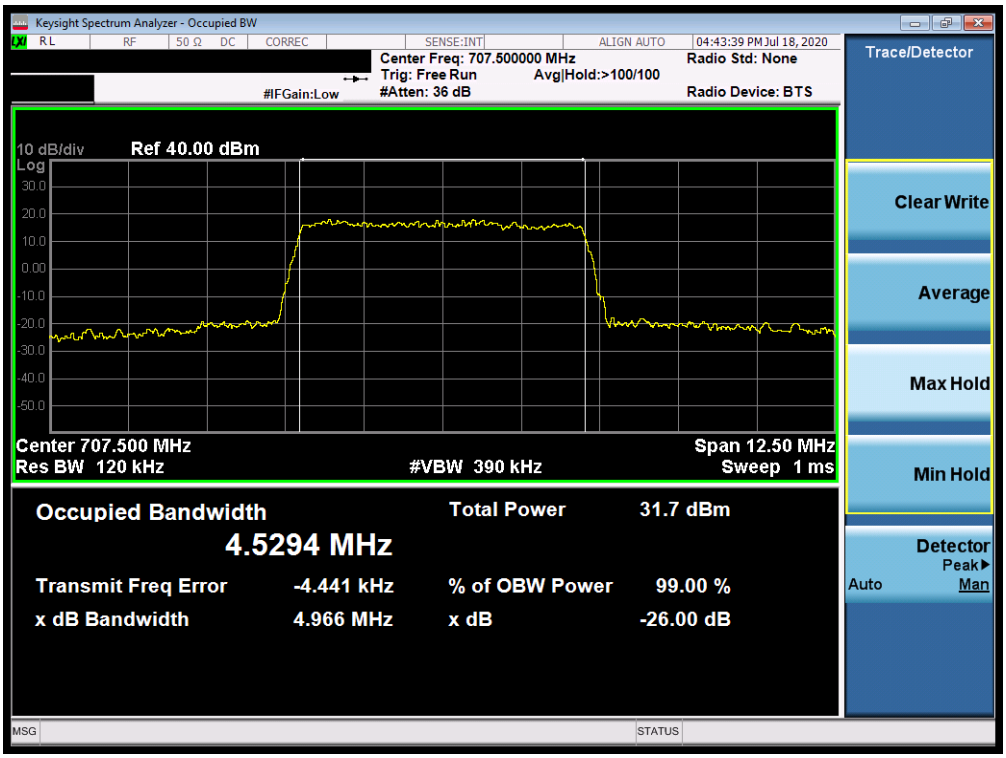
Plot 7-37. Occupied Bandwidth Plot (Band 12 - 3.0MHz 16-QAM - Full RB Configuration)



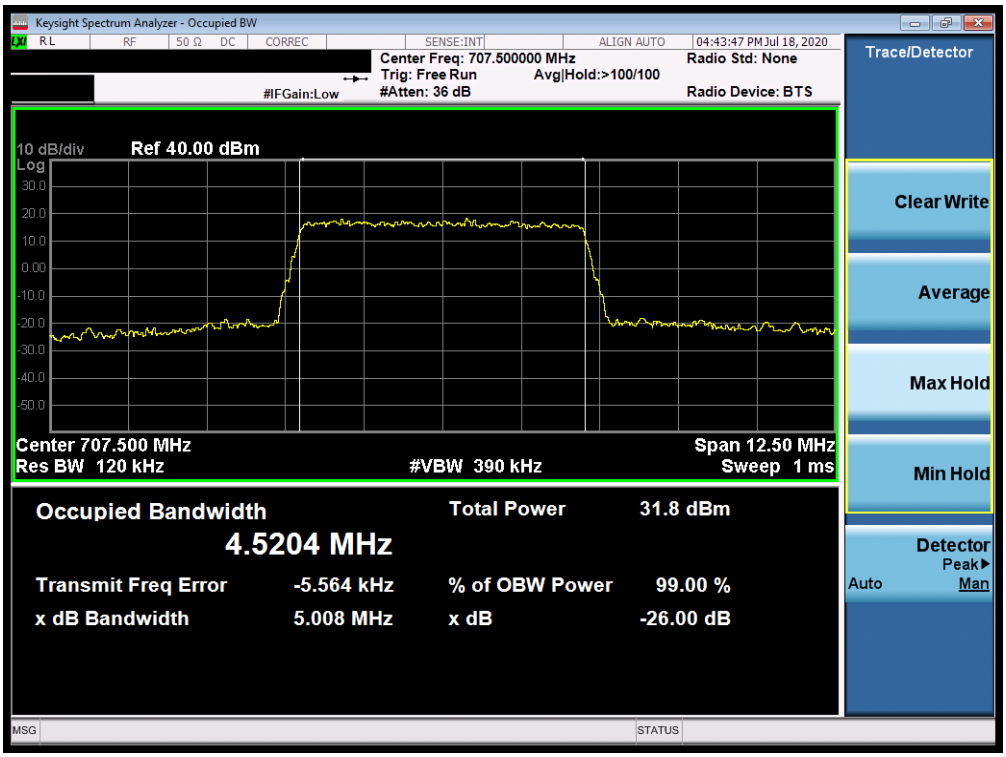
Plot 7-38. Occupied Bandwidth Plot (Band 12 - 3.0MHz 64-QAM - Full RB Configuration)



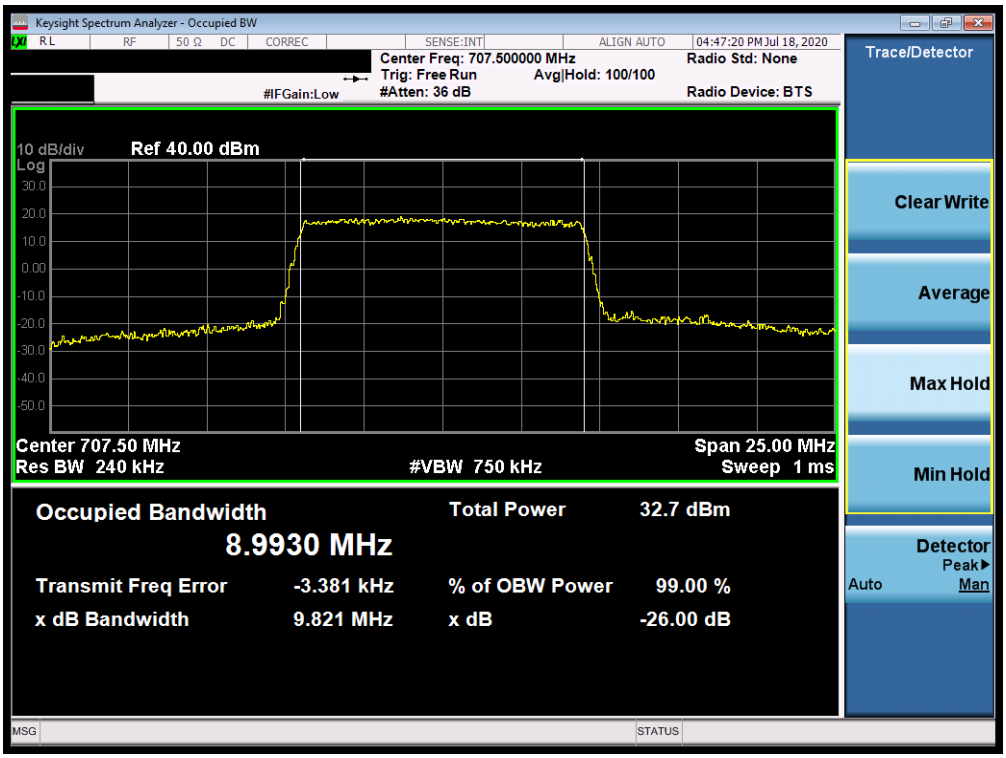
Plot 7-39. Occupied Bandwidth Plot (Band 12/17 - 5.0MHz QPSK - Full RB Configuration)



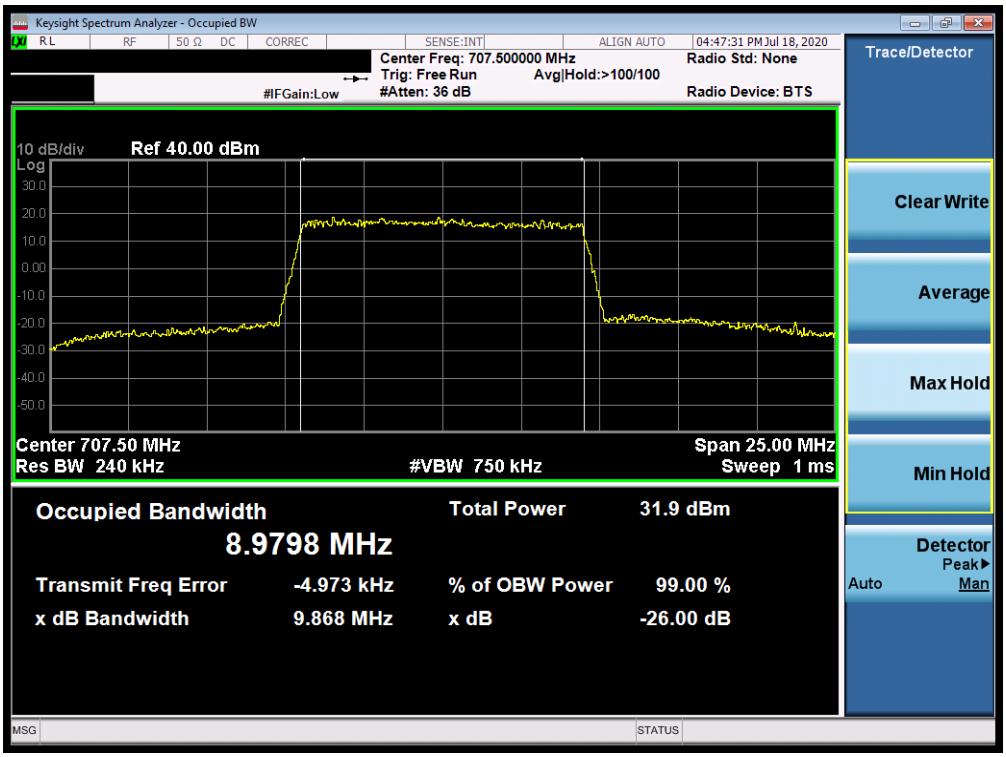
Plot 7-40. Occupied Bandwidth Plot (Band 12/17 - 5.0MHz 16-QAM - Full RB Configuration)



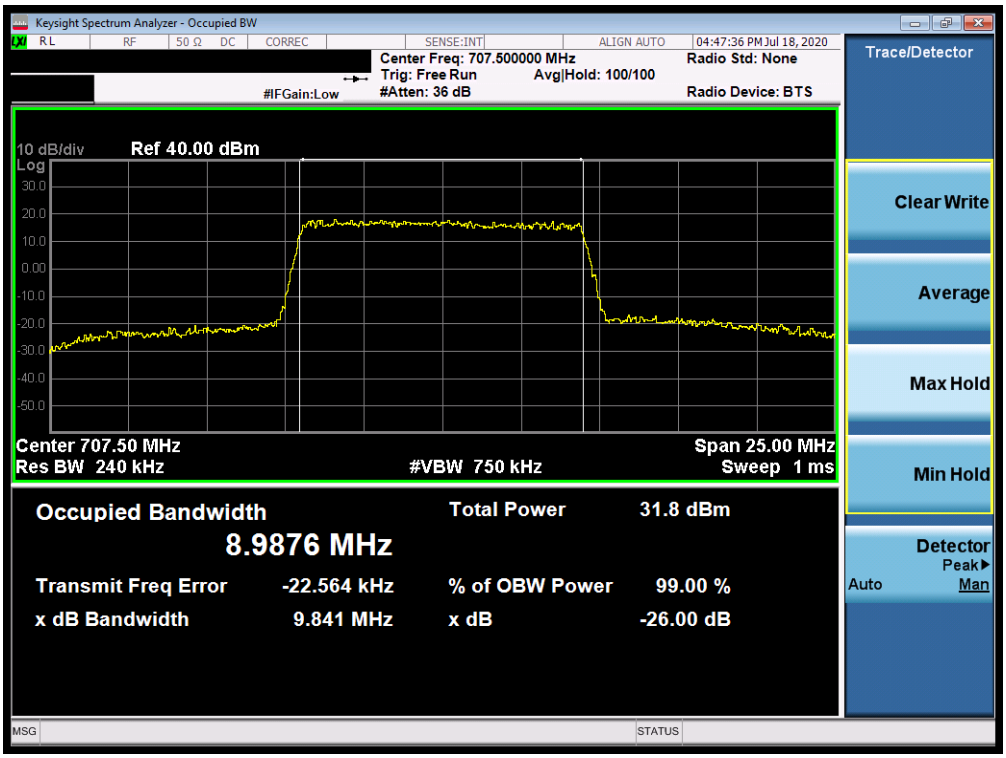
Plot 7-41. Occupied Bandwidth Plot (Band 12/17 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-42. Occupied Bandwidth Plot (Band 12/17 - 10.0MHz QPSK - Full RB Configuration)

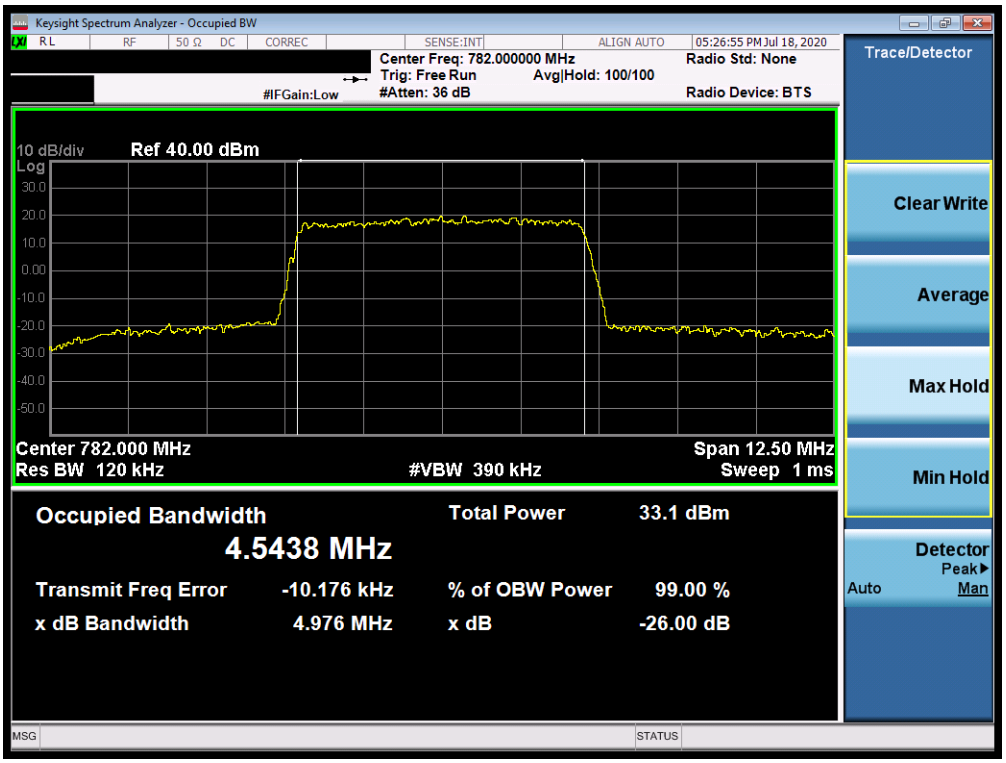


Plot 7-43. Occupied Bandwidth Plot (Band 12/17 - 10.0MHz 16-QAM - Full RB Configuration)

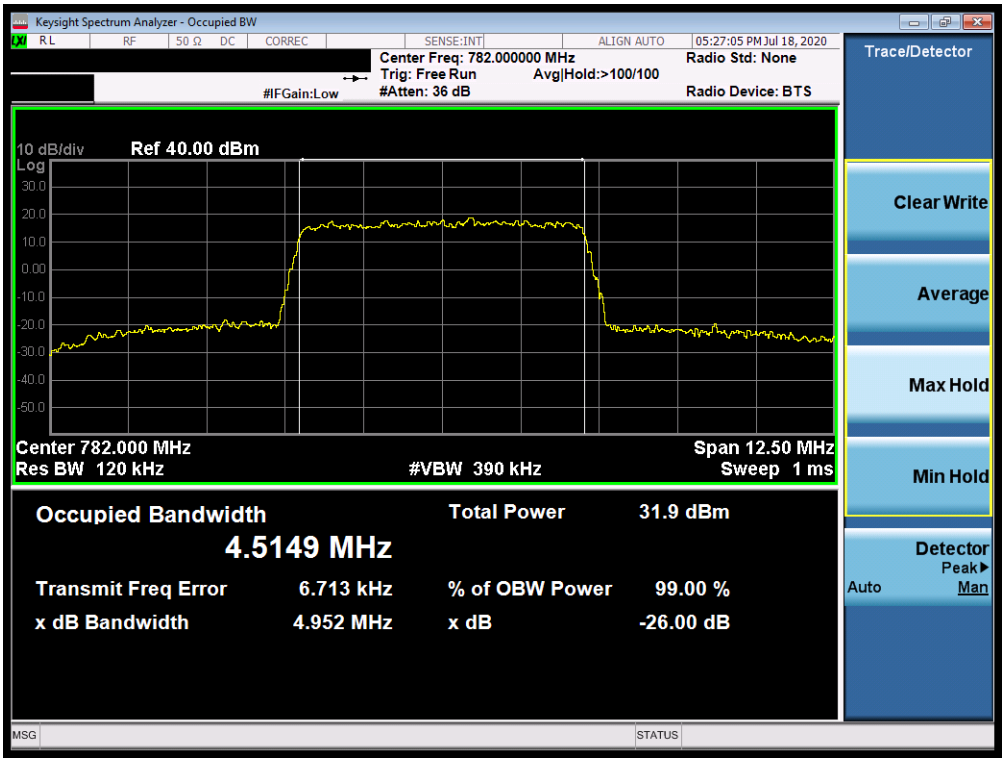


Plot 7-44. Occupied Bandwidth Plot (Band 12/17 - 10.0MHz 64-QAM - Full RB Configuration)

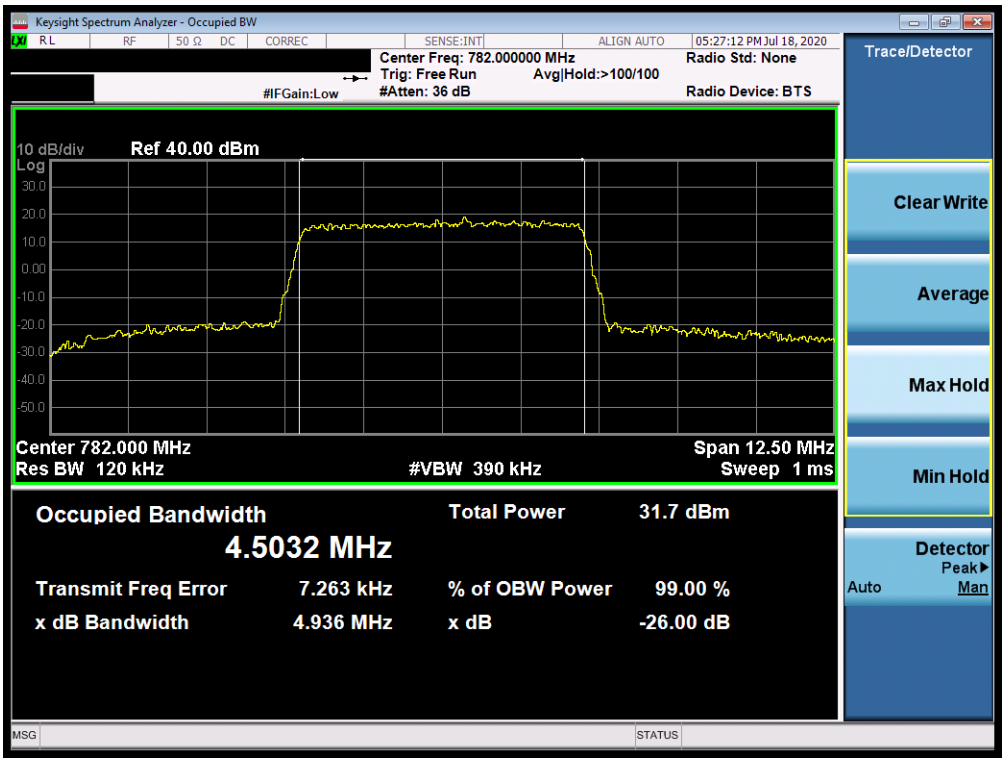
Band 13



Plot 7-45. Occupied Bandwidth Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)



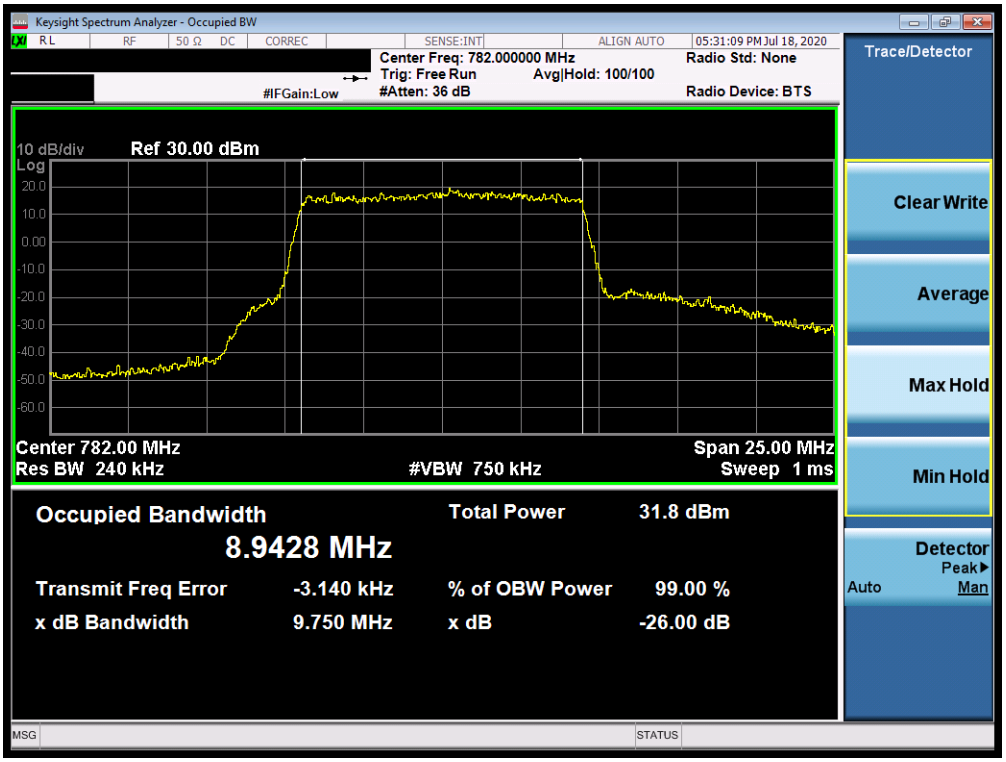
Plot 7-46. Occupied Bandwidth Plot (Band 13 - 5.0MHz 16-QAM - Full RB Configuration)



Plot 7-47. Occupied Bandwidth Plot (Band 13 - 5.0MHz 64-QAM - Full RB Configuration)

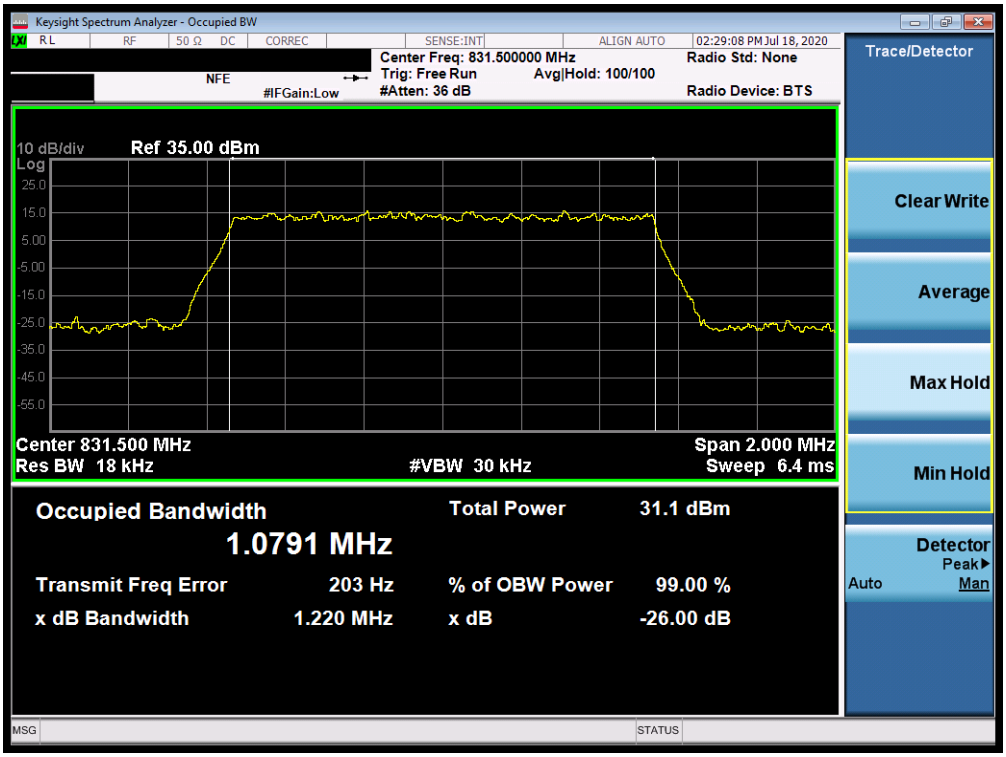
Plot 7-48. Occupied Bandwidth Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)

Plot 7-49. Occupied Bandwidth Plot (Band 13 - 10.0MHz 16-QAM - Full RB Configuration)

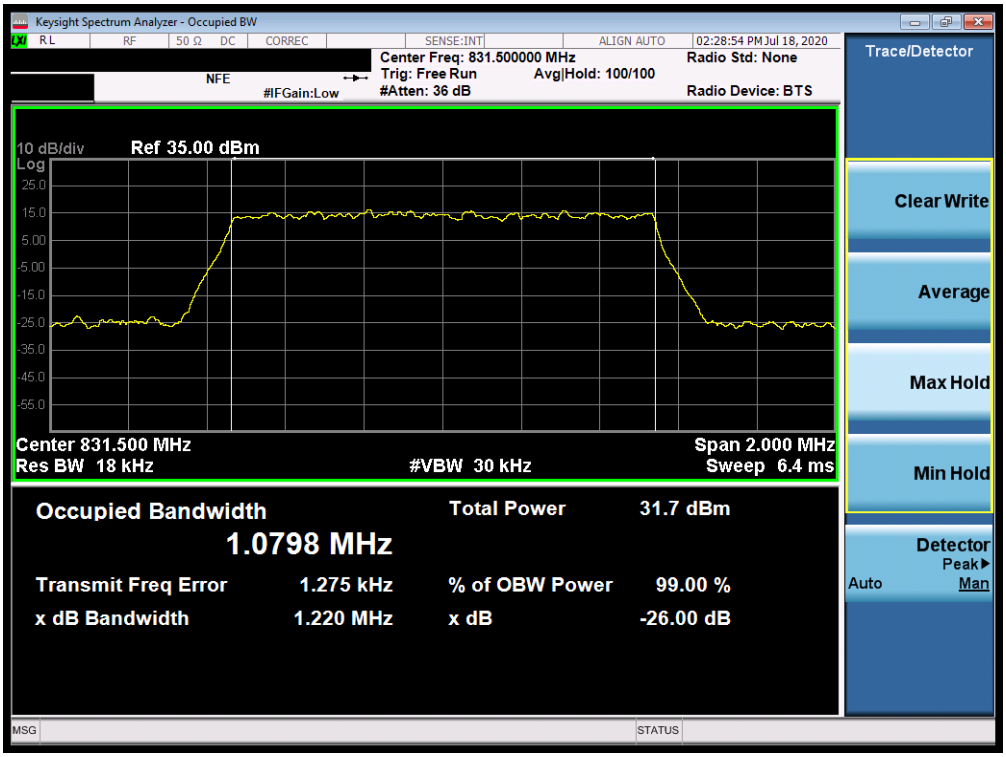


Plot 7-50. Occupied Bandwidth Plot (Band 13 - 10.0MHz 64-QAM - Full RB Configuration)

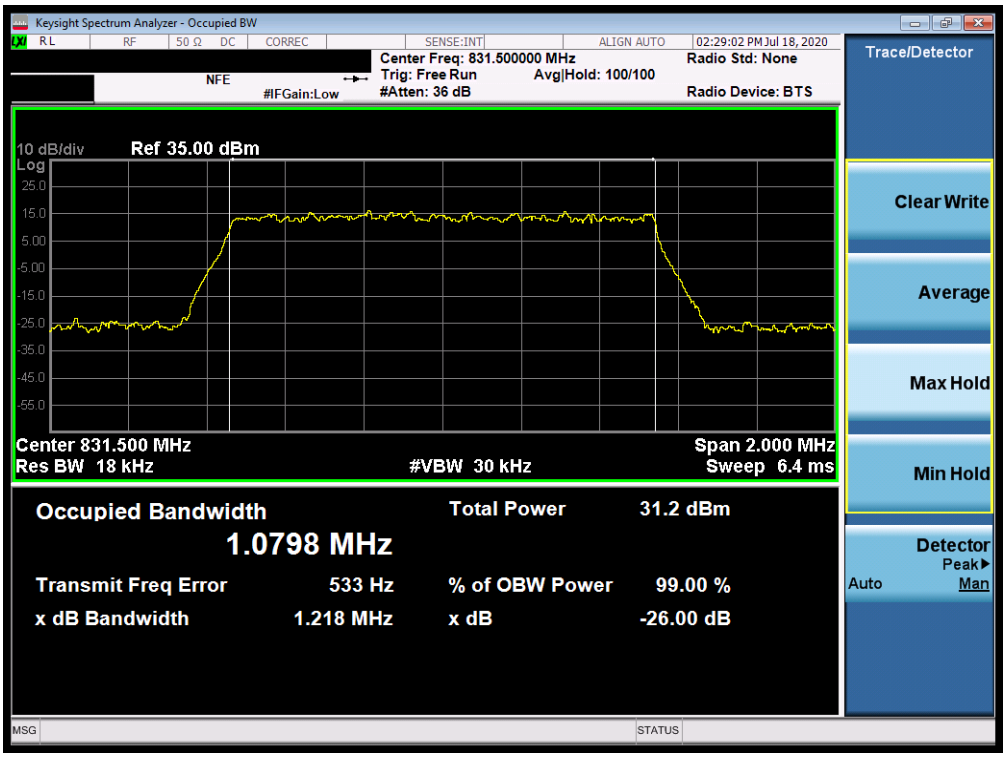
Band 26/5



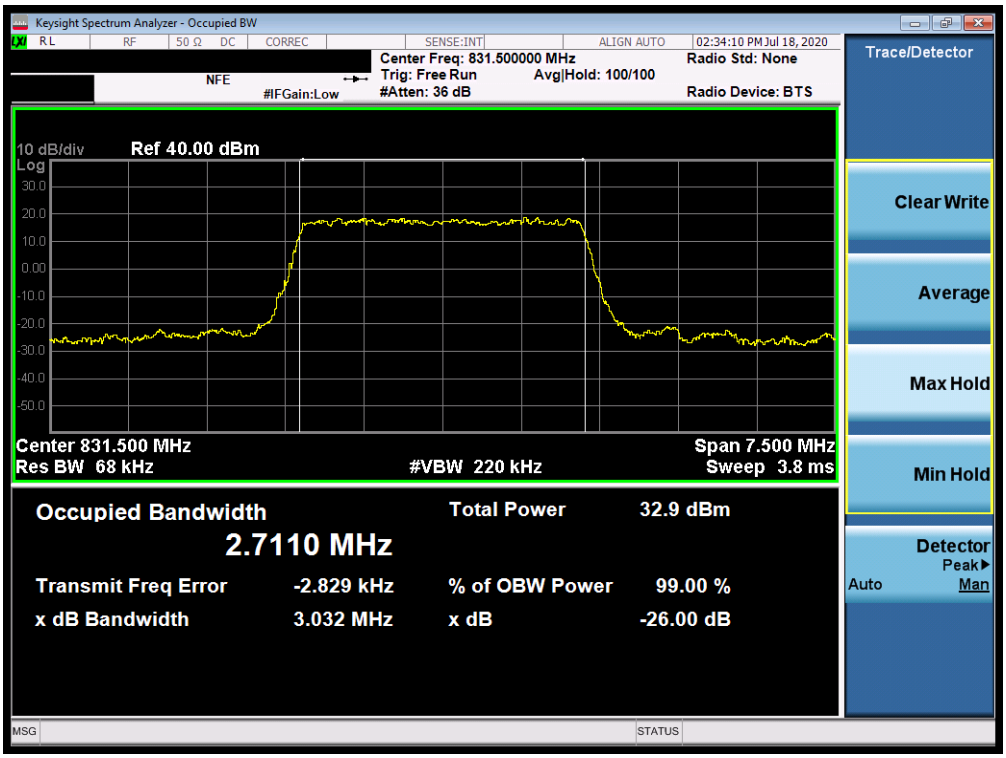
Plot 7-51. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz QPSK - Full RB Configuration)



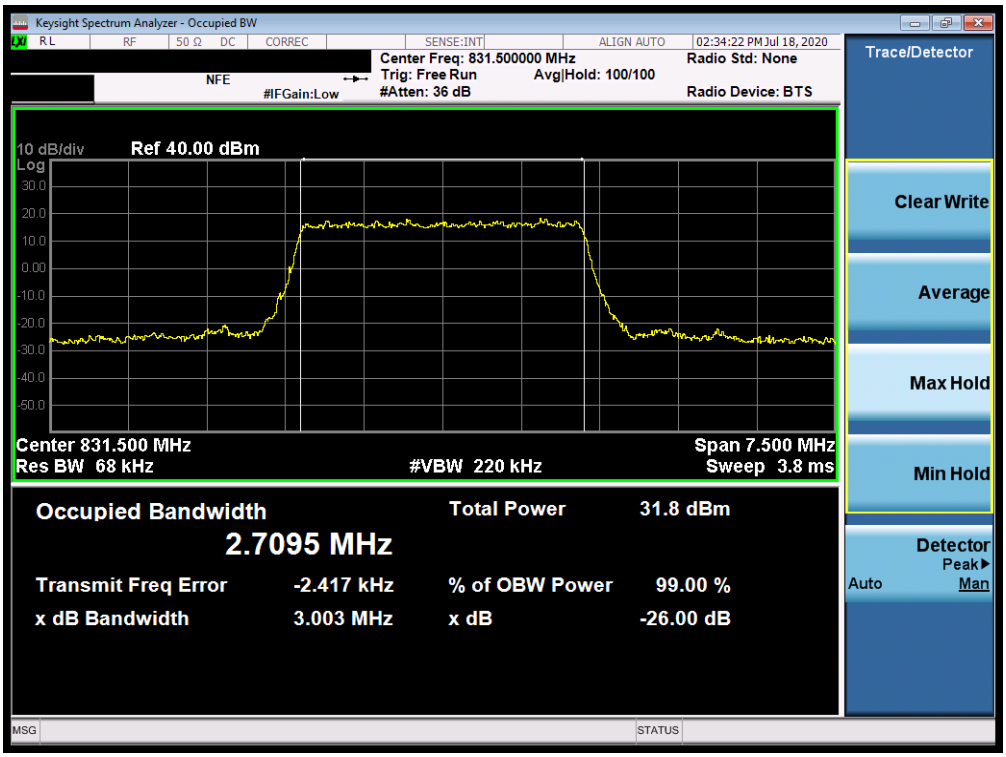
Plot 7-52. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz 16-QAM - Full RB Configuration)



Plot 7-53. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz 64-QAM - Full RB Configuration)

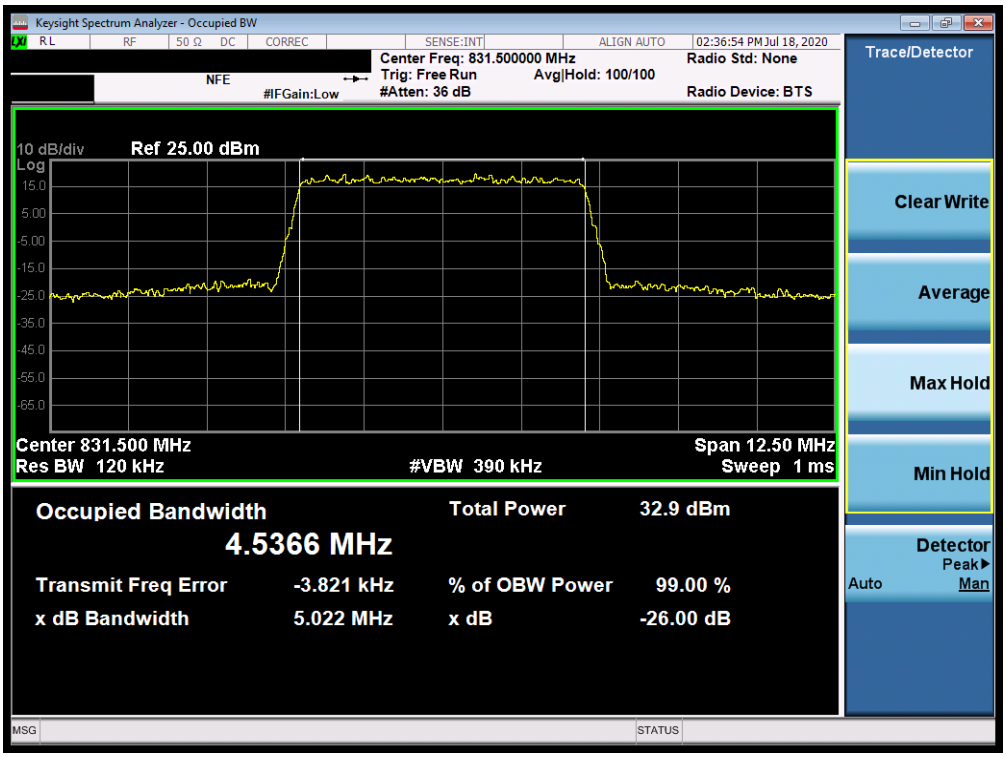


Plot 7-54. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz QPSK - Full RB Configuration)

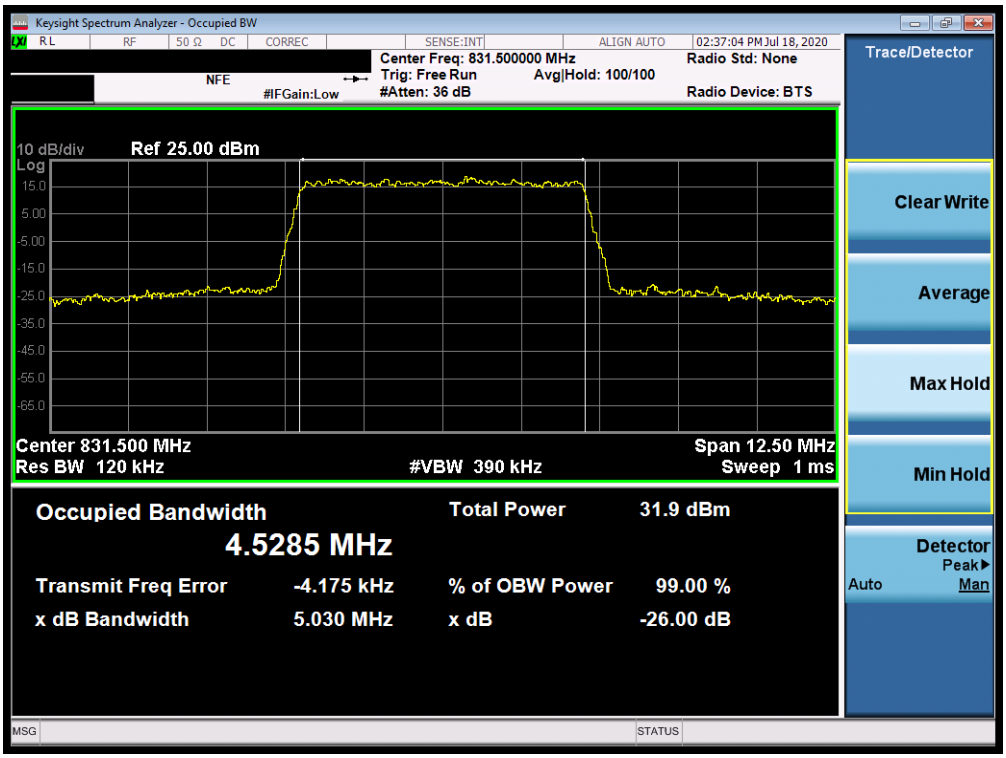


Plot 7-55. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz 16-QAM - Full RB Configuration)

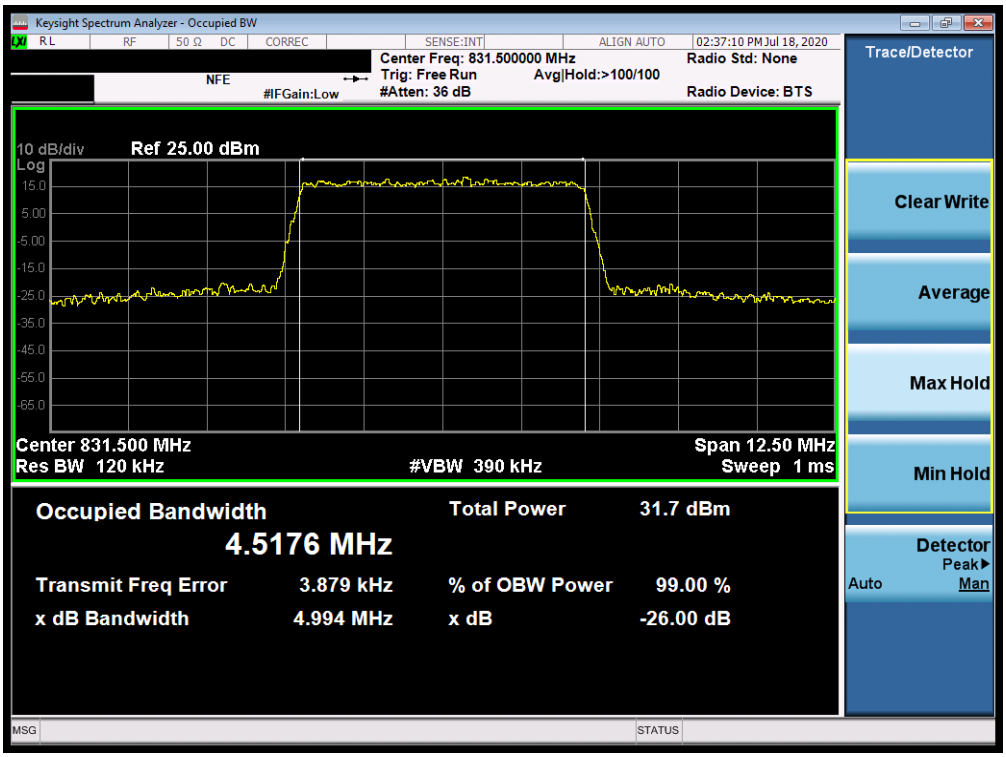
Plot 7-56. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz 64-QAM - Full RB Configuration)



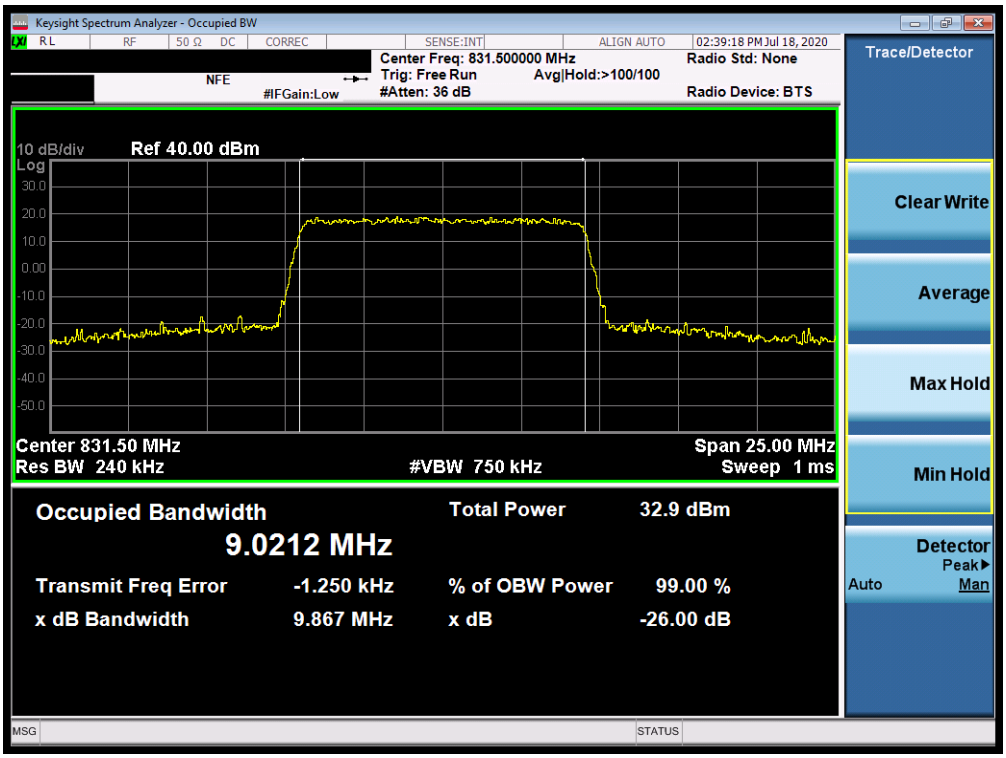
Plot 7-57. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz QPSK - Full RB Configuration)



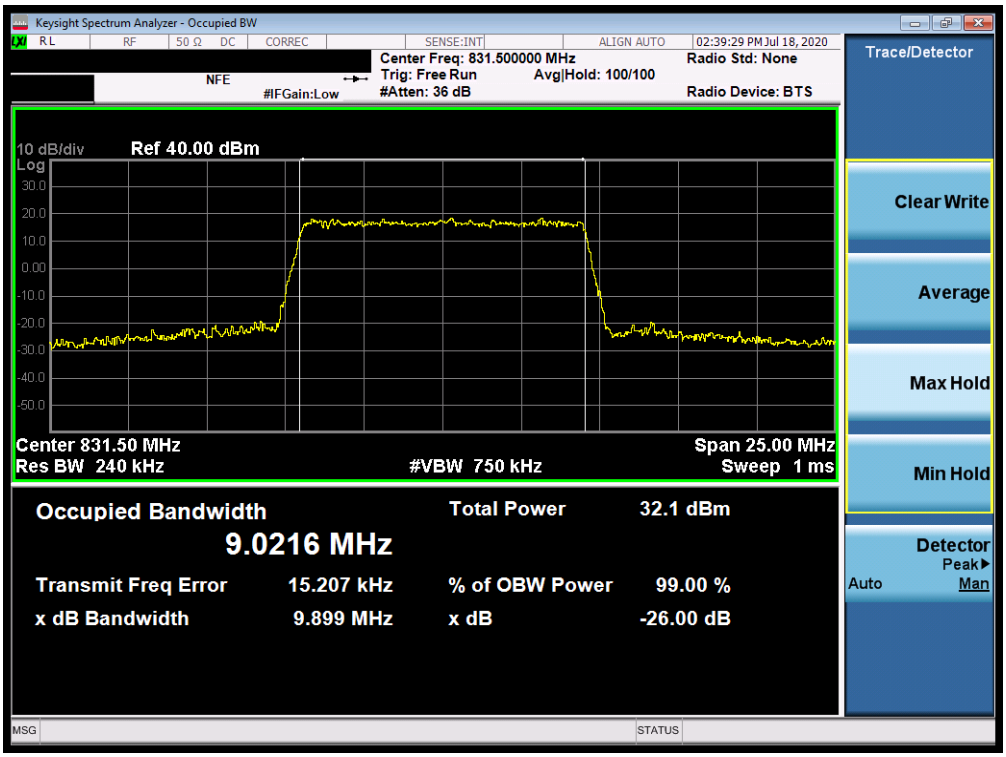
Plot 7-58. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz 16-QAM - Full RB Configuration)



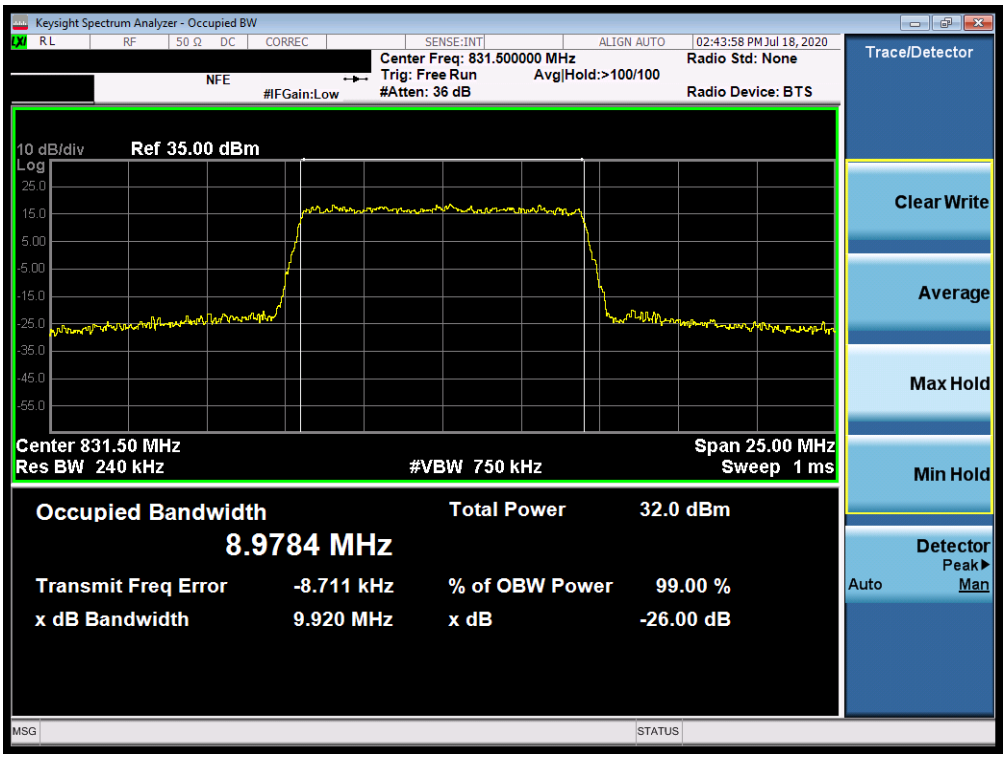
Plot 7-59. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz 64-QAM - Full RB Configuration)



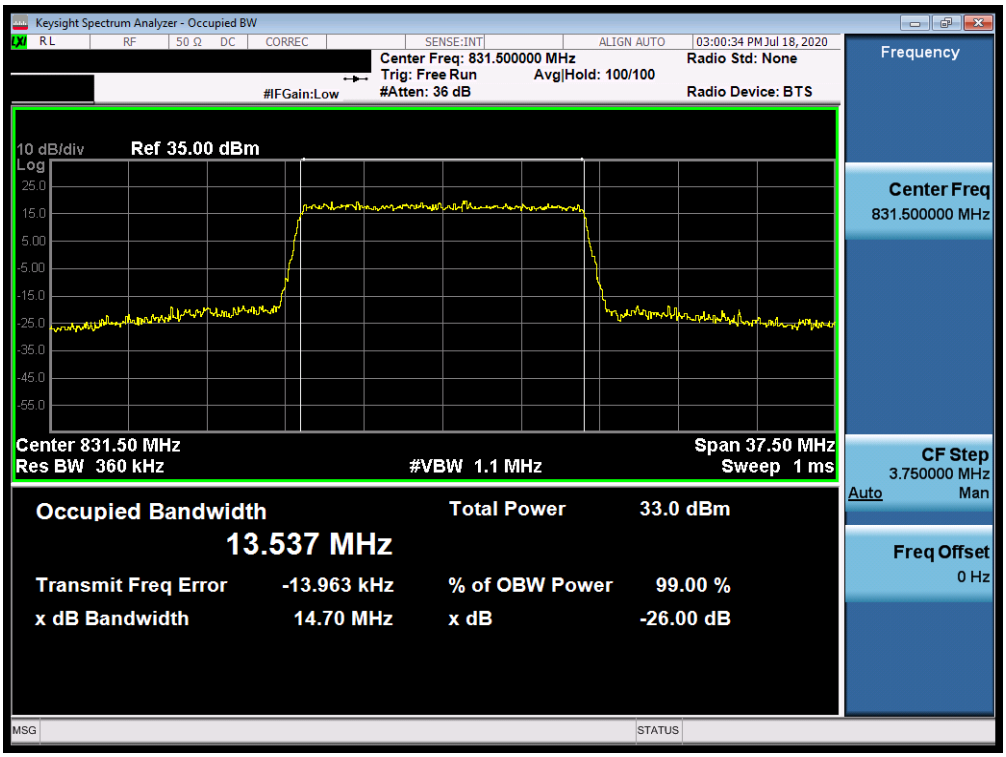
Plot 7-60. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-61. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz 16-QAM - Full RB Configuration)

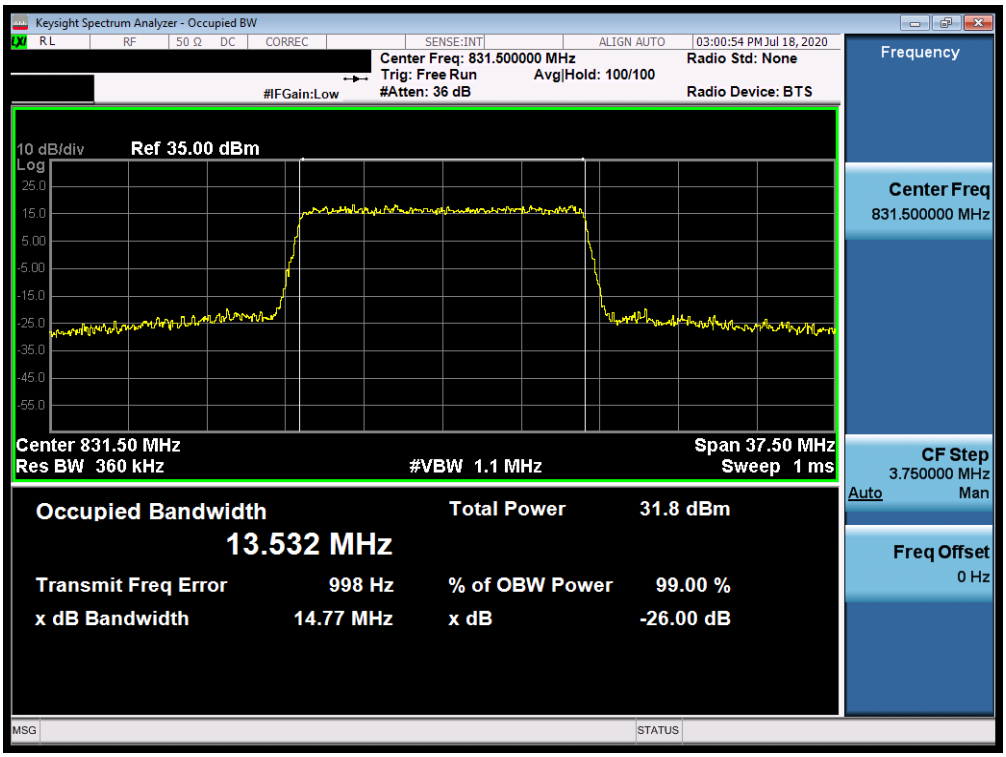


Plot 7-62. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz 64-QAM - Full RB Configuration)



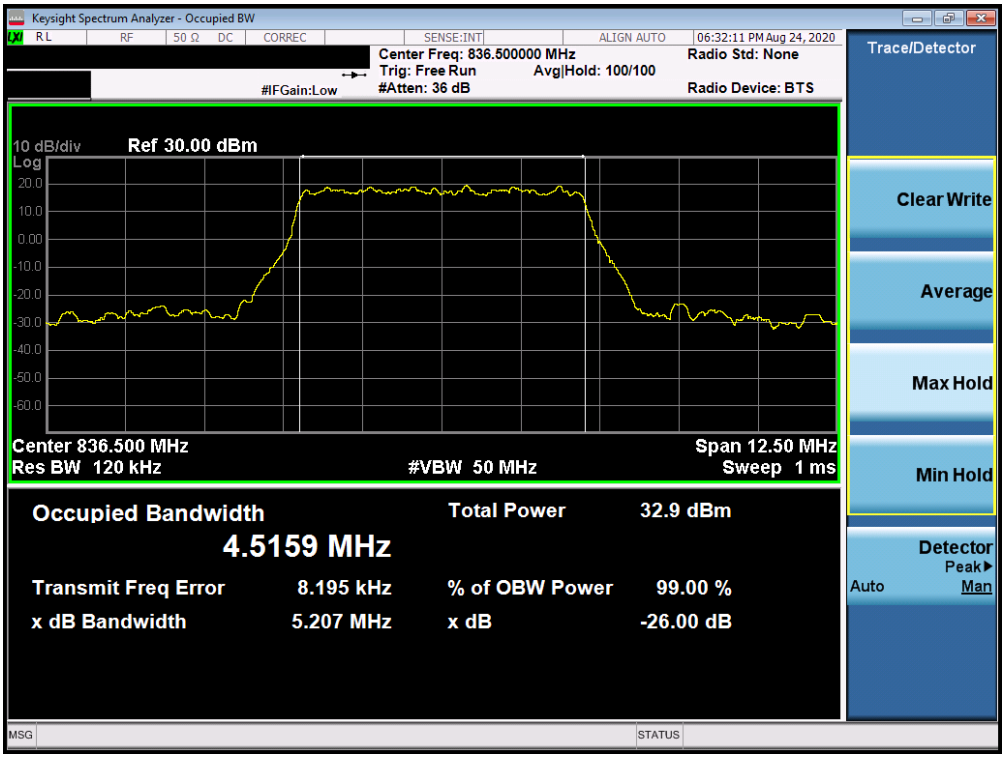
Plot 7-63. Occupied Bandwidth Plot (Band 26 - 15.0MHz QPSK - Full RB Configuration)

Plot 7-64. Occupied Bandwidth Plot (Band 26 - 15.0MHz 16-QAM - Full RB Configuration)

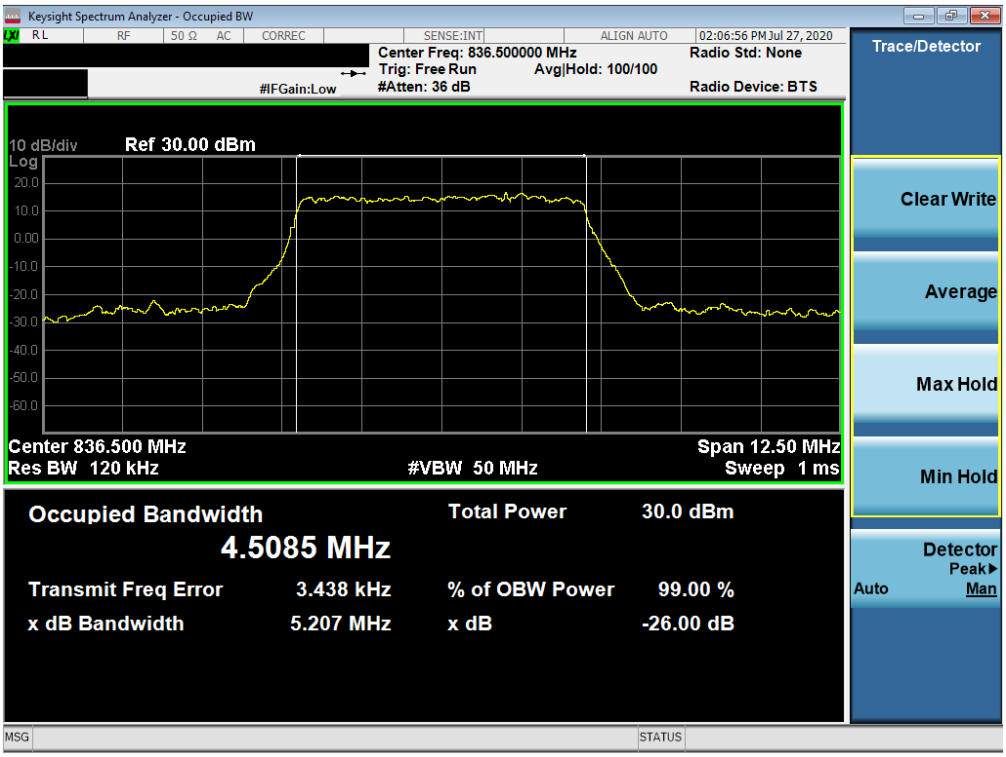


Plot 7-65. Occupied Bandwidth Plot (Band 26 - 15.0MHz 64-QAM - Full RB Configuration)

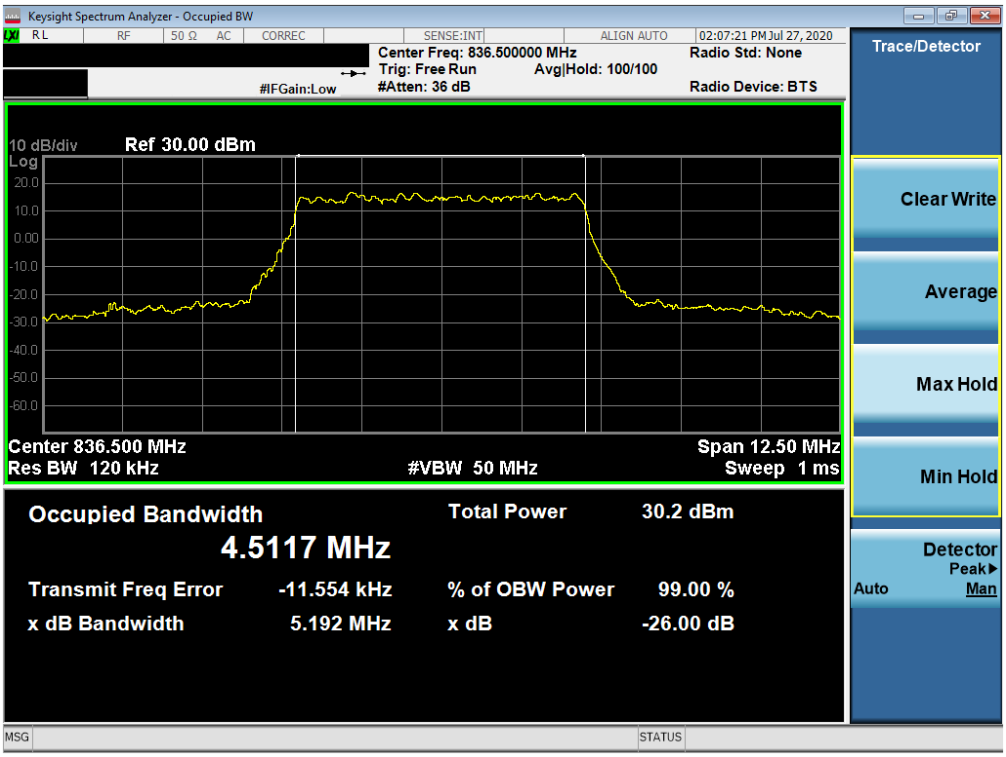
NR Band n5



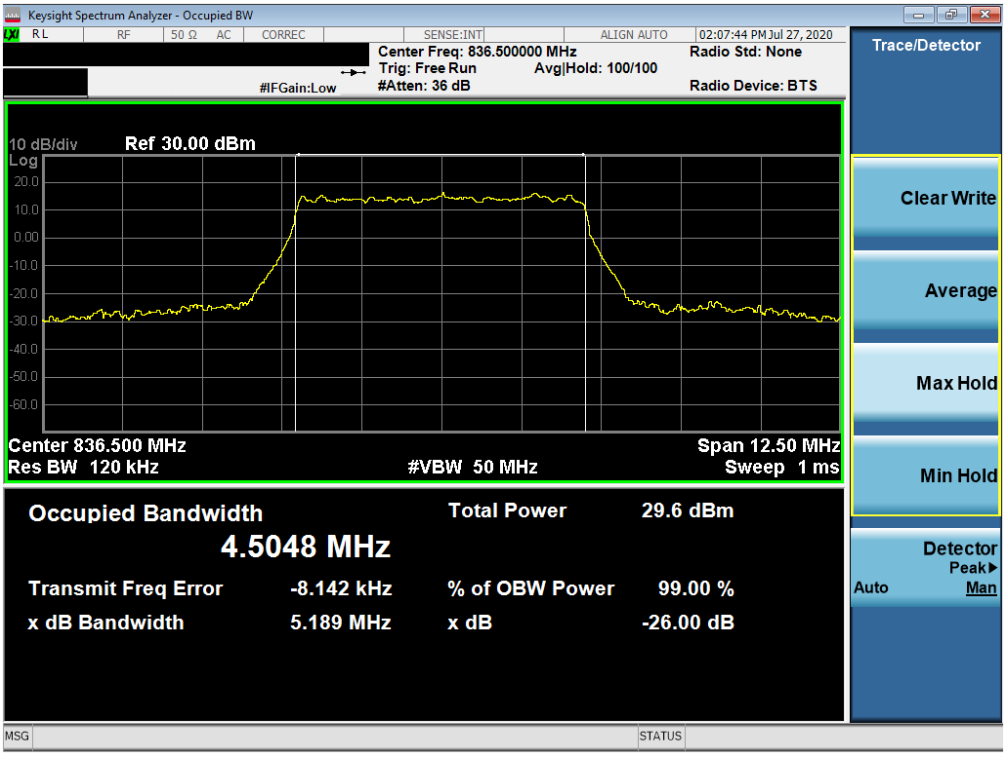
Plot 7-66. Occupied Bandwidth Plot (NR Band n5 - 5.0MHz DFT-s-OFDM BPSK - Full RB)



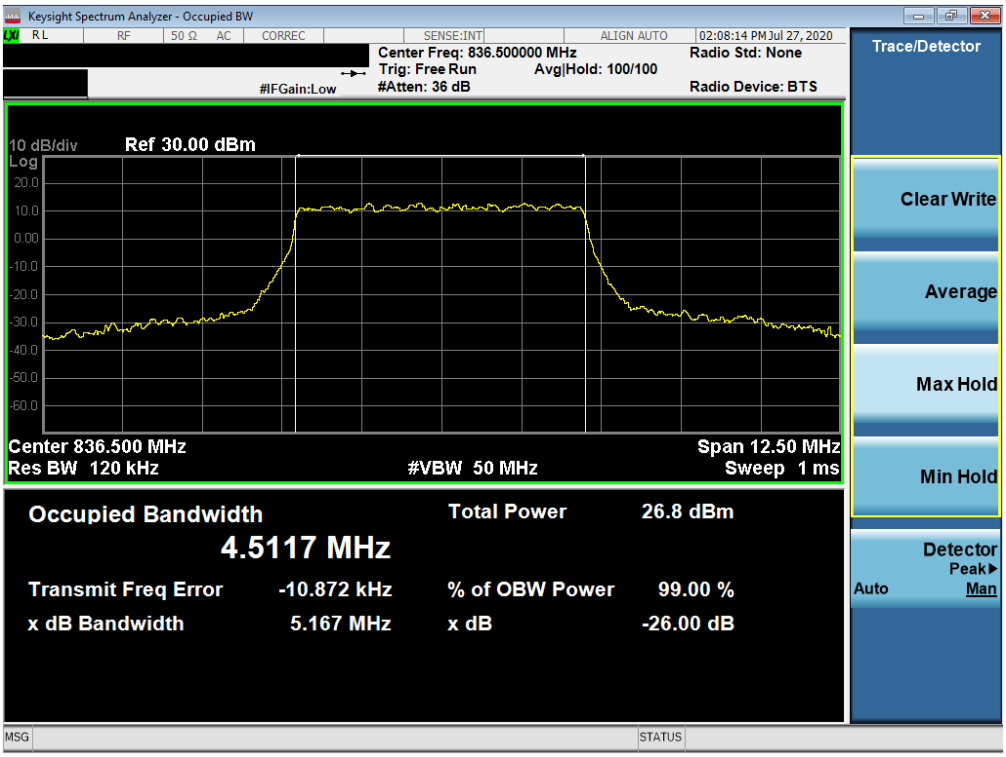
Plot 7-67. Occupied Bandwidth Plot (NR Band n5 - 5.0MHz CP-OFDM QPSK - Full RB)



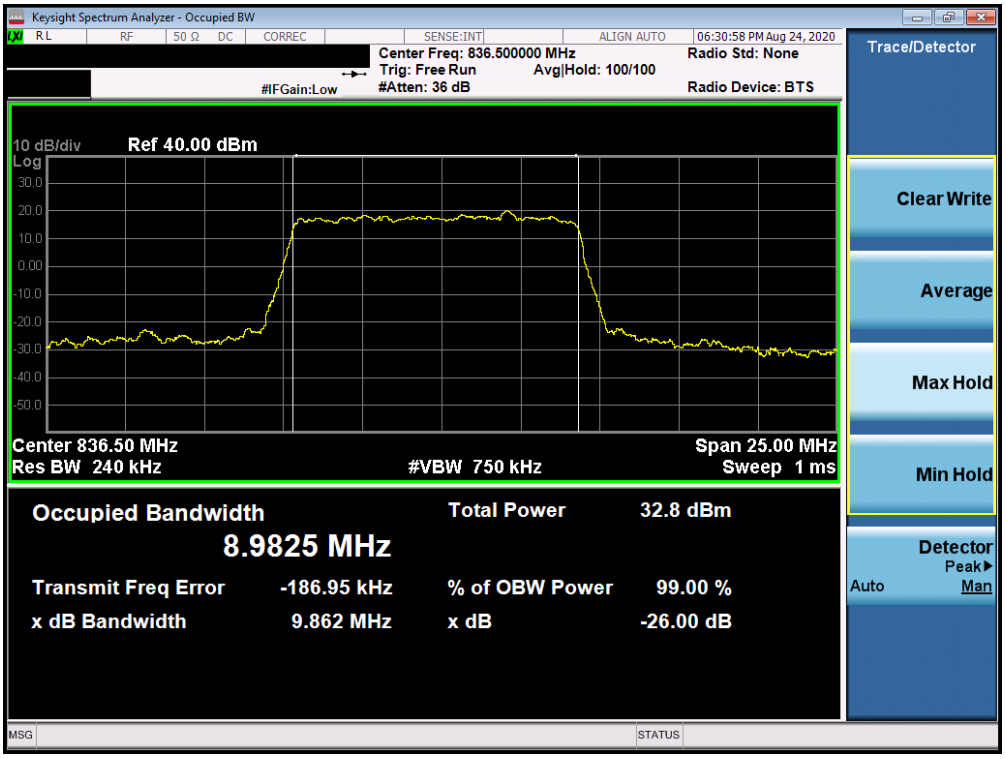
Plot 7-68. Occupied Bandwidth Plot (NR Band n5 - 5.0MHz CP-OFDM 16QAM - Full RB)



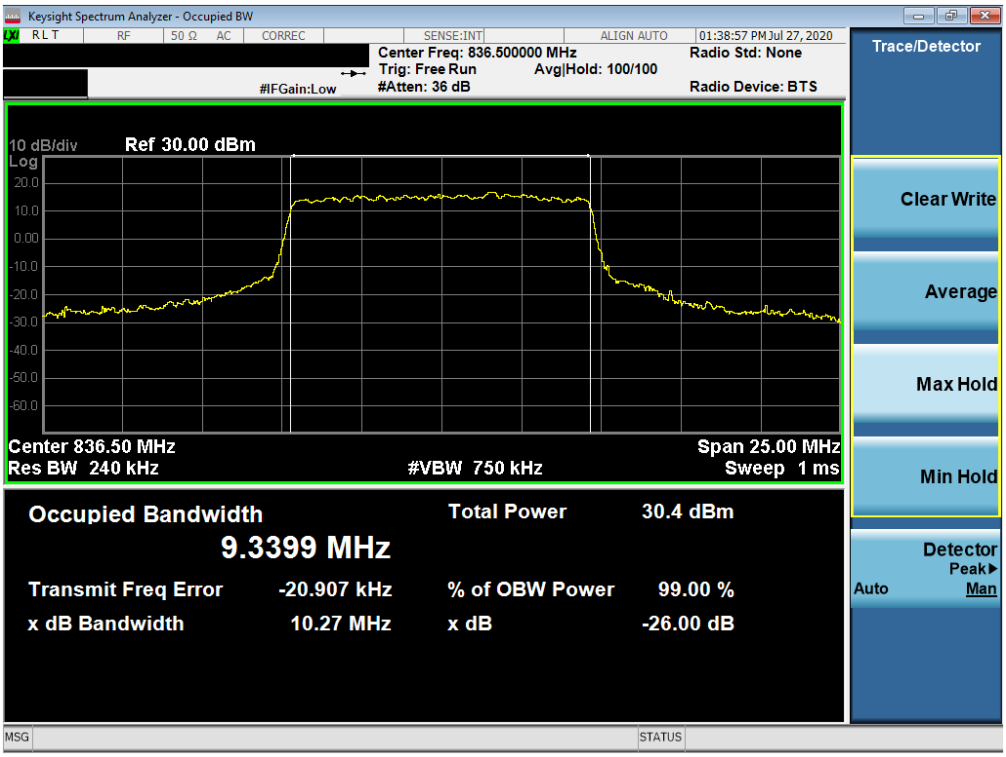
Plot 7-69. Occupied Bandwidth Plot (NR Band n5 - 5.0MHz CP-OFDM 64QAM - Full RB)



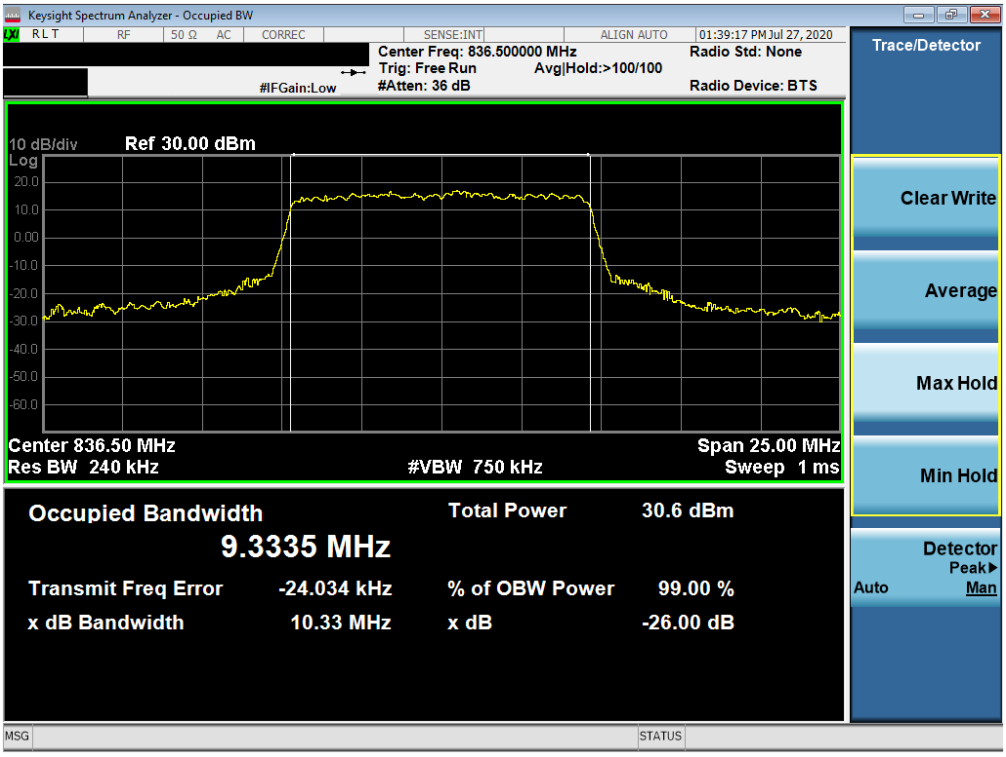
Plot 7-70. Occupied Bandwidth Plot (NR Band n5 - 5.0MHz CP-OFDM 256QAM - Full RB)



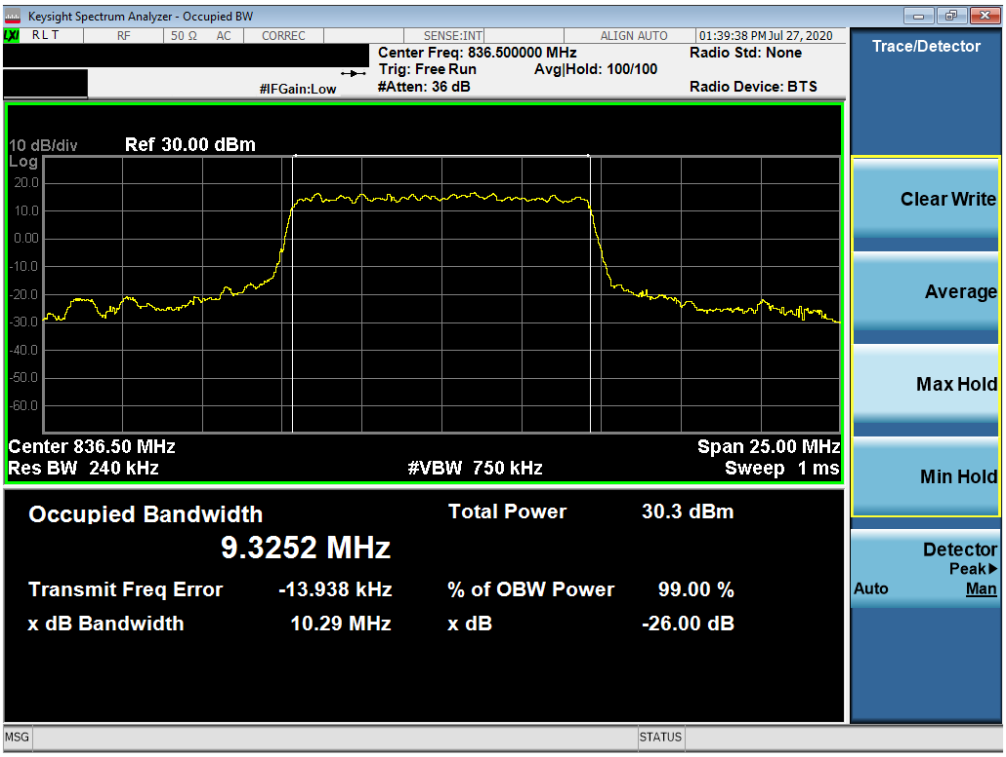
Plot 7-71. Occupied Bandwidth Plot (NR Band n5 - 10.0MHz DFT-s-OFDM BPSK - Full RB)



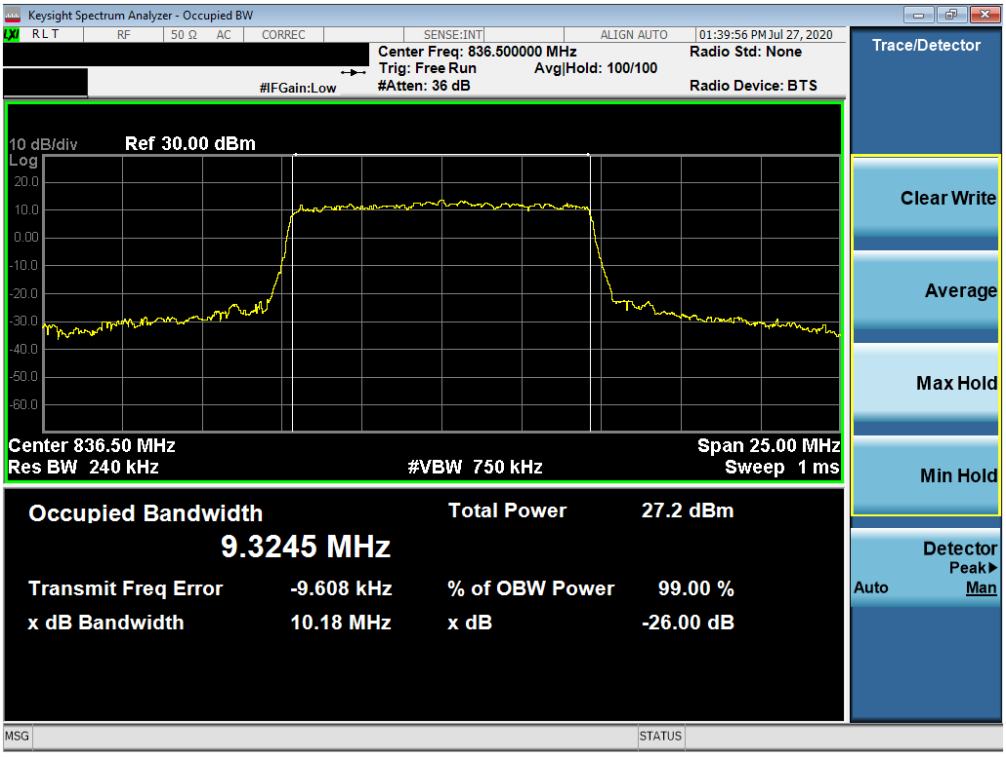
Plot 7-72. Occupied Bandwidth Plot (NR Band n5 - 10.0MHz CP-OFDM QPSK - Full RB)



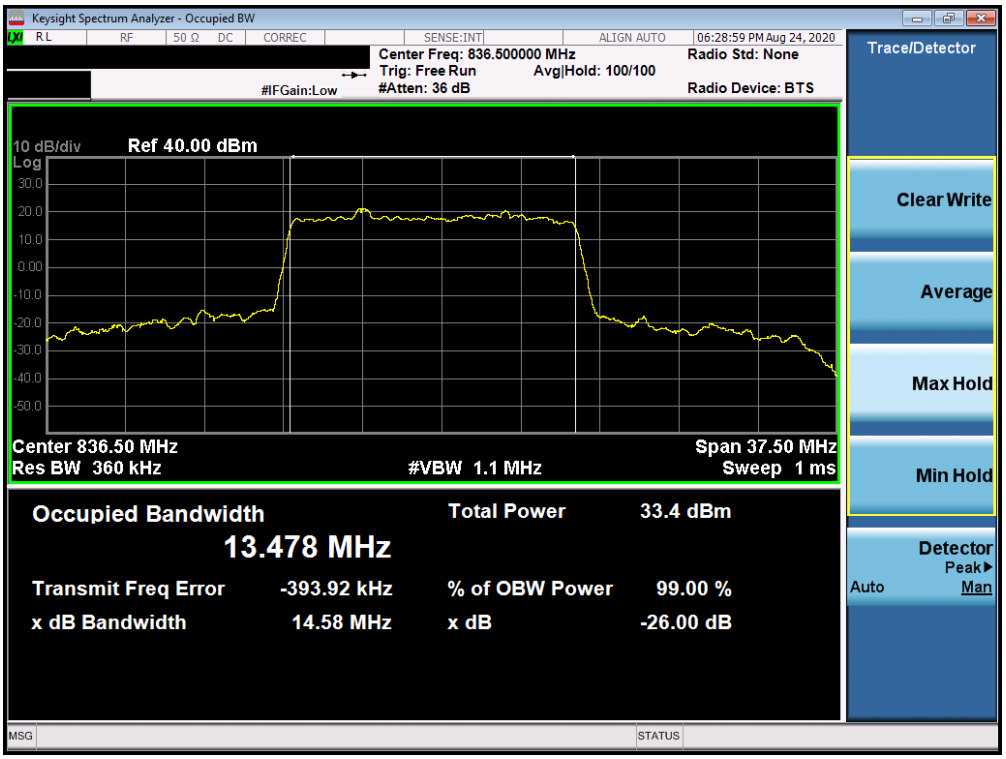
Plot 7-73. Occupied Bandwidth Plot (NR Band n5 - 10.0MHz CP-OFDM 16QAM - Full RB)



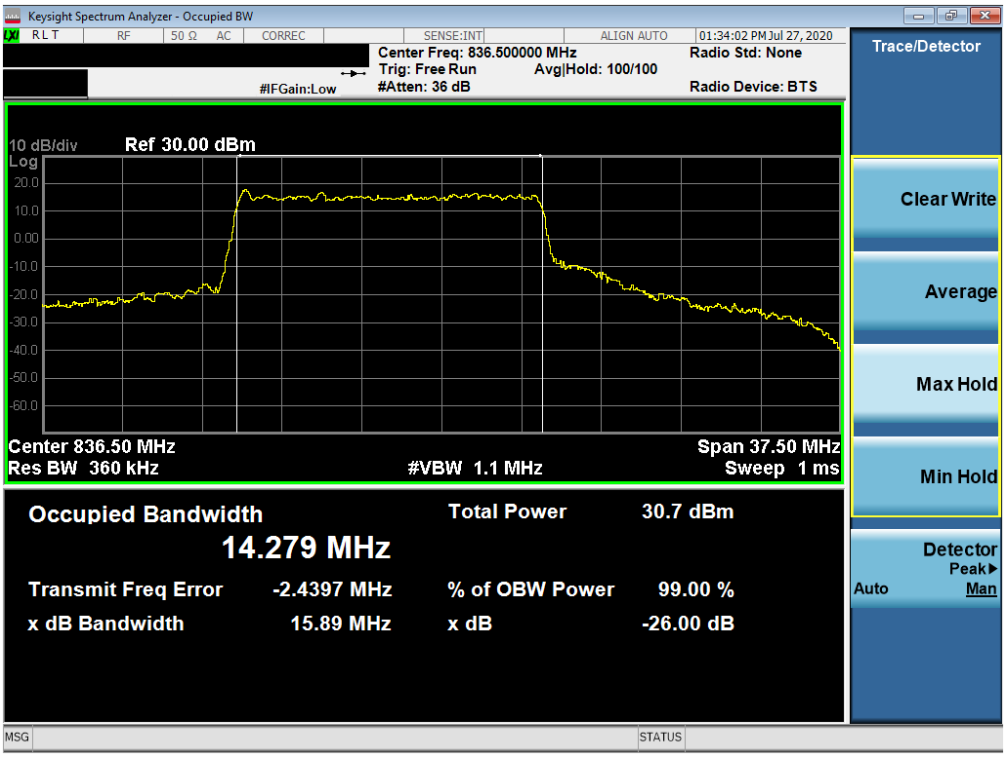
Plot 7-74. Occupied Bandwidth Plot (NR Band n5 - 10.0MHz CP-OFDM 64QAM - Full RB)



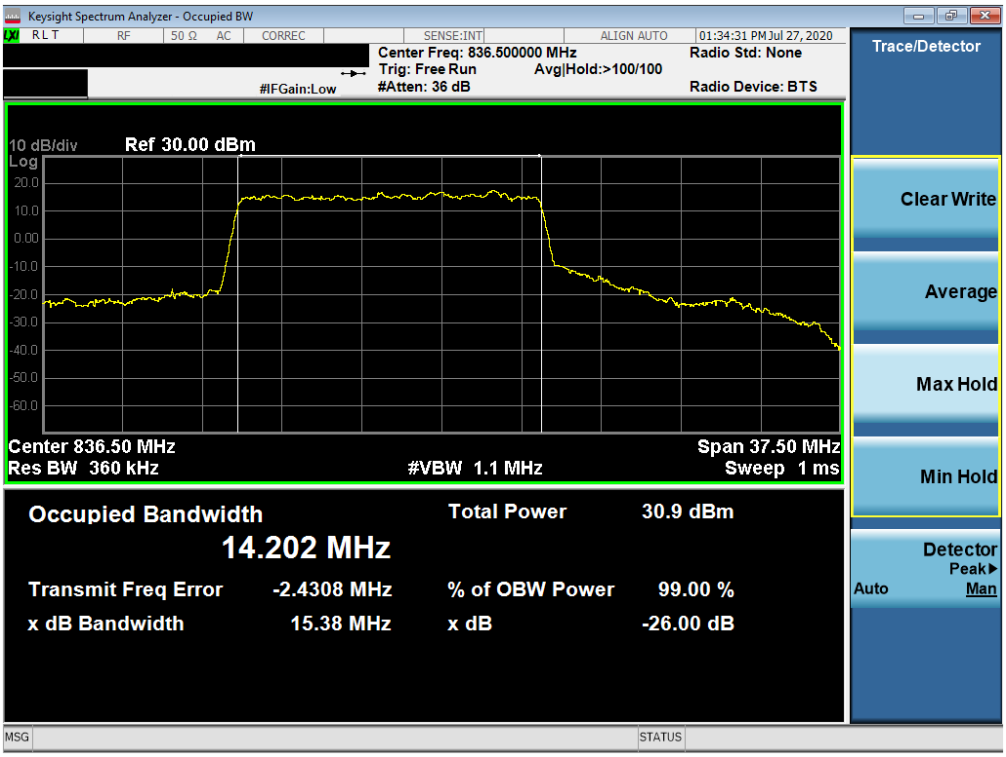
Plot 7-75. Occupied Bandwidth Plot (NR Band n5 - 10.0MHz CP-OFDM 256QAM - Full RB)



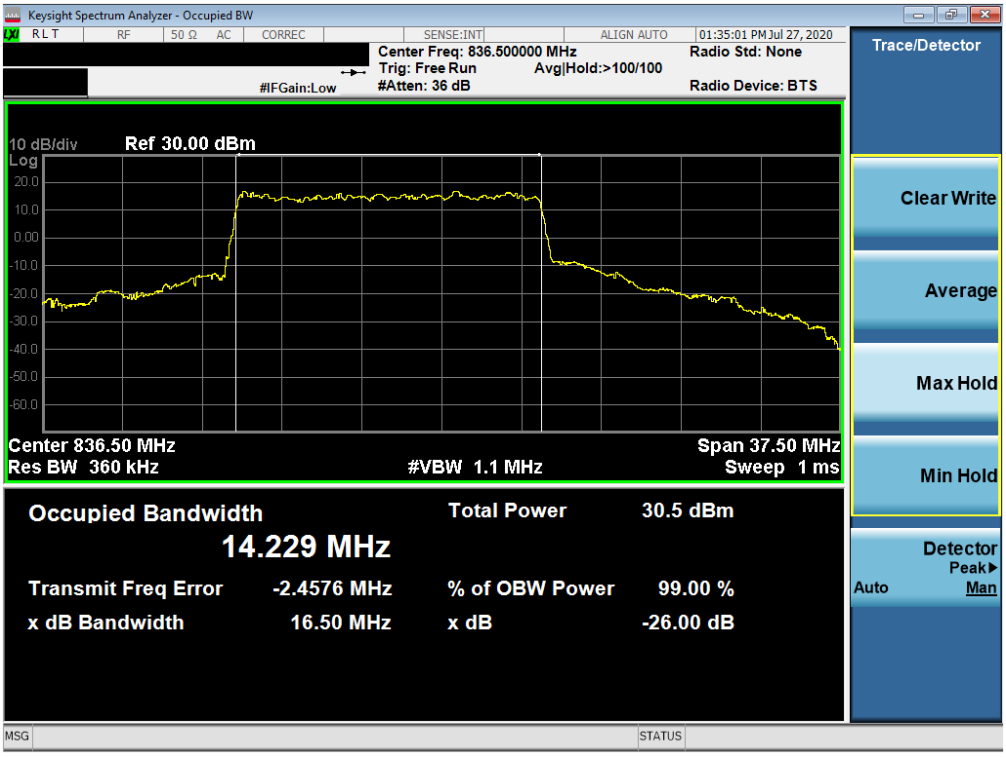
Plot 7-76. Occupied Bandwidth Plot (NR Band n5 – 15.0MHz DFT-s-OFDM BPSK – Full RB)



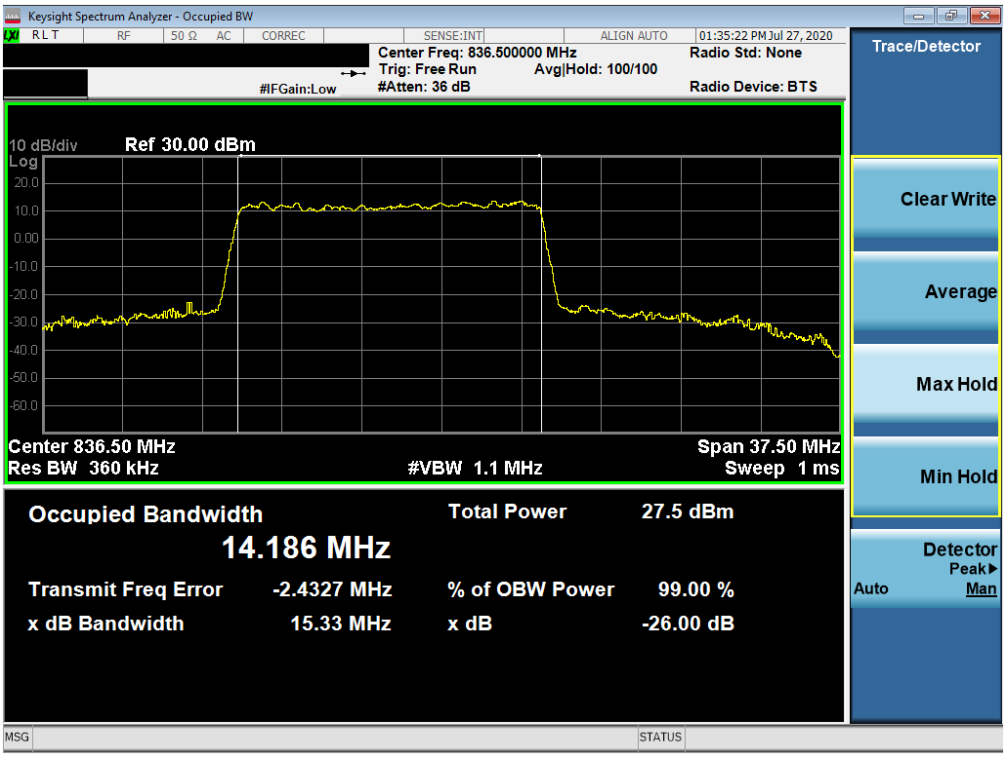
Plot 7-77. Occupied Bandwidth Plot (NR Band n5 - 15.0MHz CP-OFDM QPSK - Full RB)



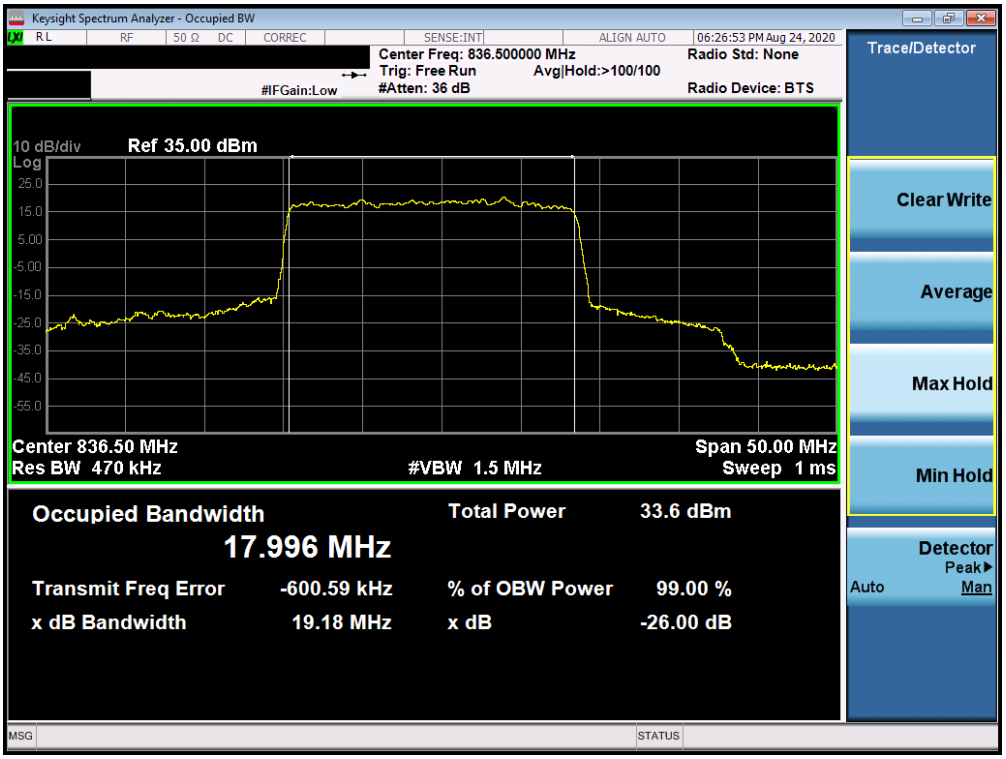
Plot 7-78. Occupied Bandwidth Plot (NR Band n5 - 15.0MHz CP-OFDM 16QAM - Full RB)



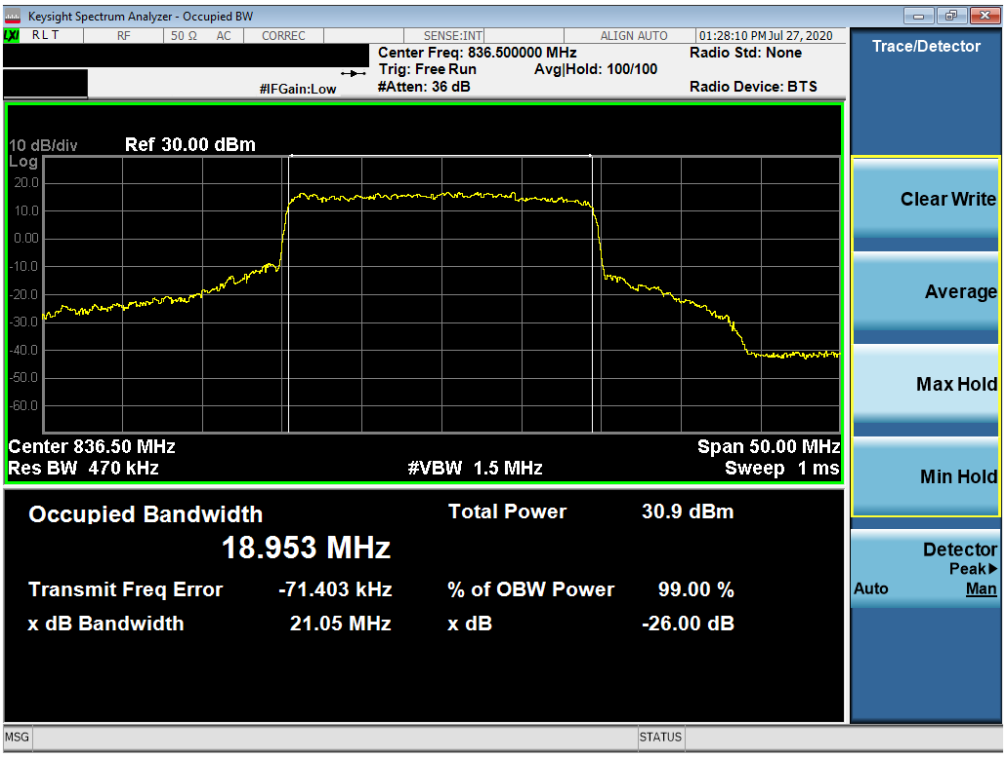
Plot 7-79. Occupied Bandwidth Plot (NR Band n5 - 15.0MHz CP-OFDM 64QAM - Full RB)



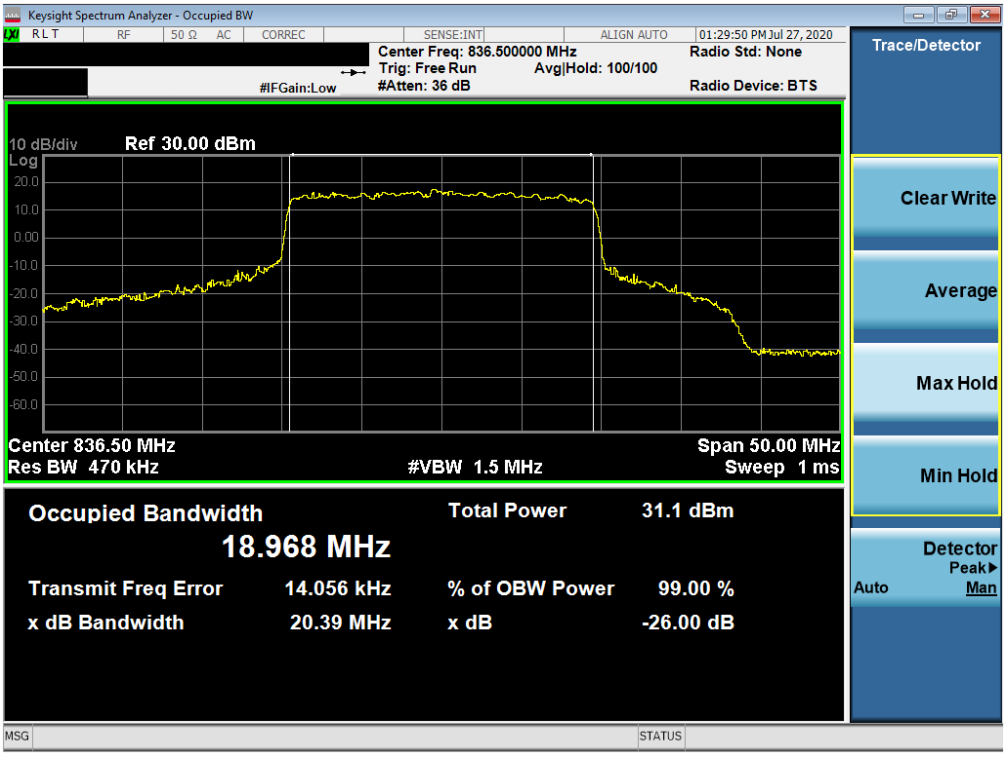
Plot 7-80. Occupied Bandwidth Plot (NR Band n5 - 15.0MHz CP-OFDM 256QAM - Full RB)



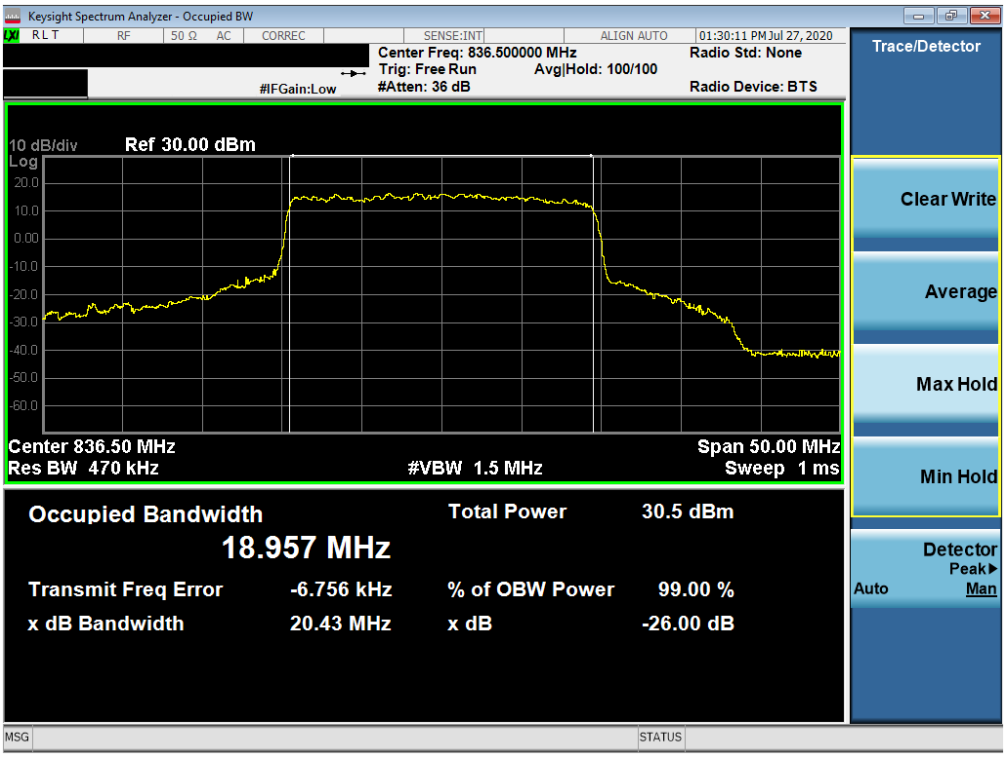
Plot 7-81. Occupied Bandwidth Plot (NR Band n5 - 20.0MHz DFT-s-OFDM BPSK - Full RB)



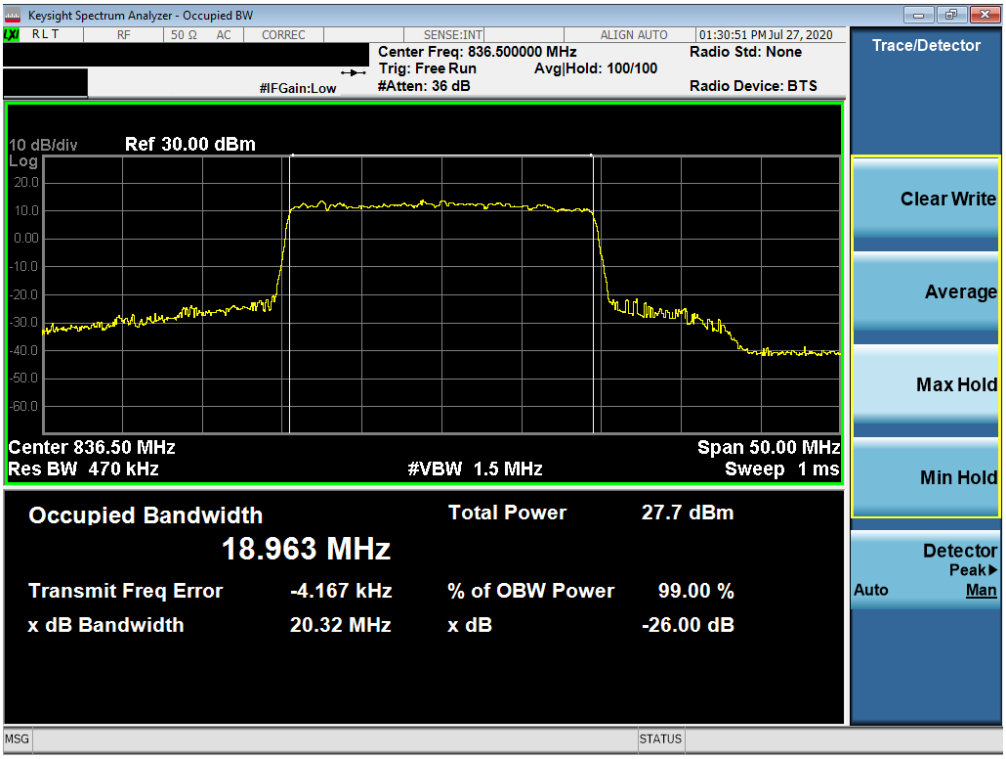
Plot 7-82. Occupied Bandwidth Plot (NR Band n5 - 20.0MHz CP-OFDM QPSK - Full RB)



Plot 7-83. Occupied Bandwidth Plot (NR Band n5 - 20.0MHz CP-OFDM 16QAM - Full RB)

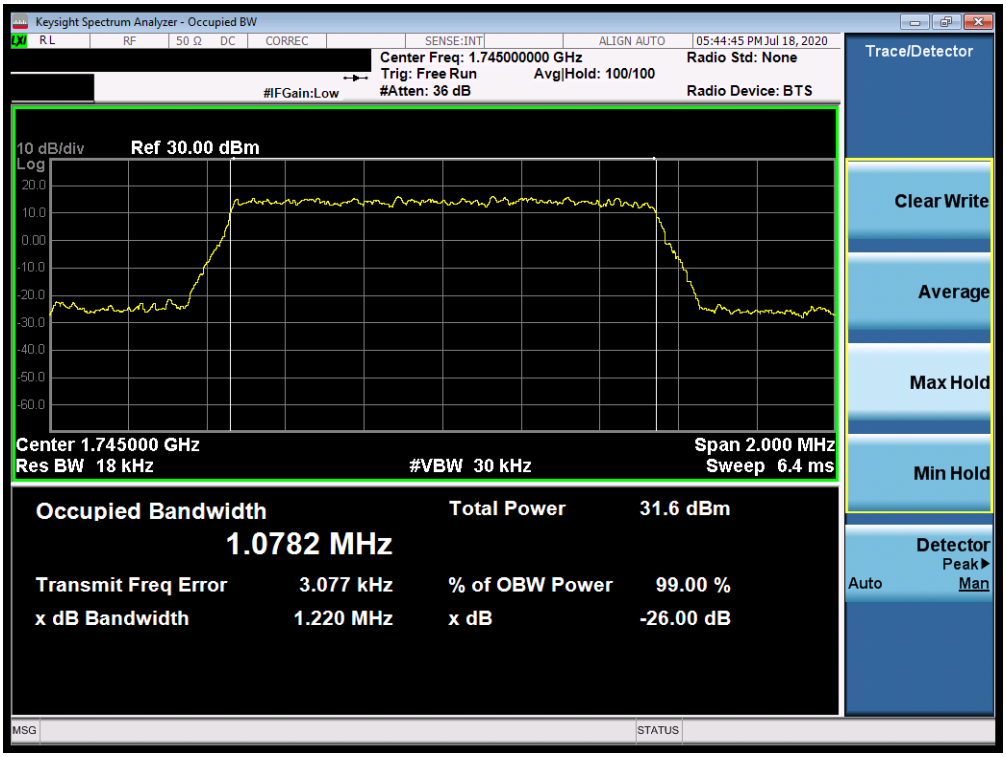


Plot 7-84. Occupied Bandwidth Plot (NR Band n5 - 20.0MHz CP-OFDM 64QAM - Full RB)

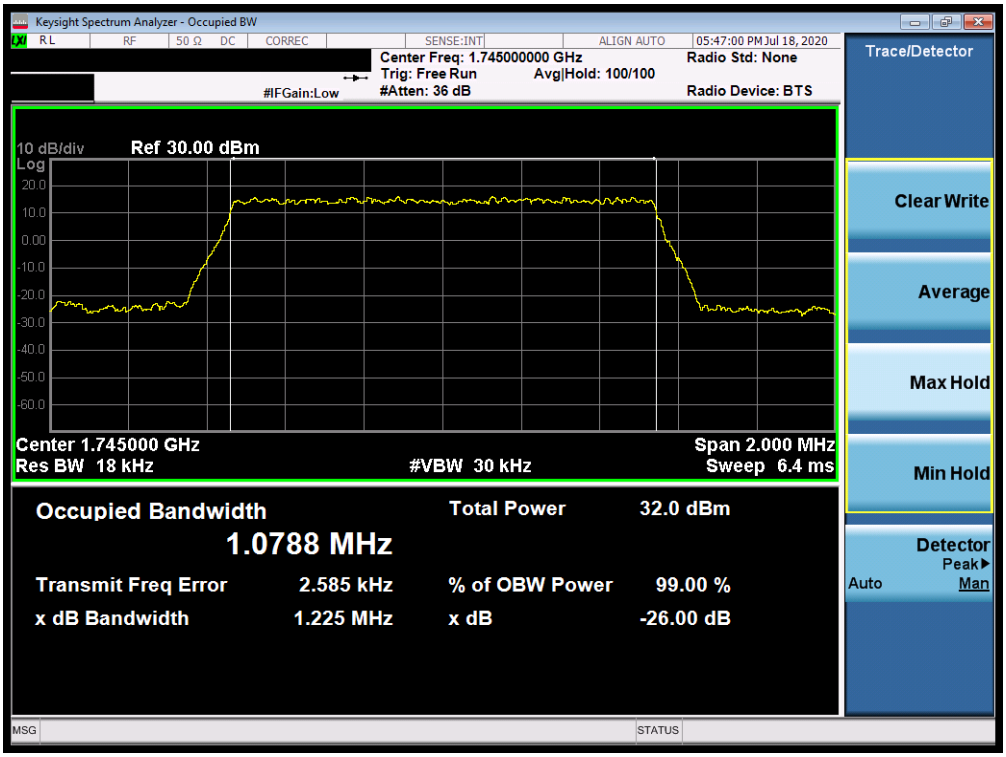


Plot 7-85. Occupied Bandwidth Plot (NR Band n5 - 20.0MHz CP-OFDM 256QAM - Full RB)

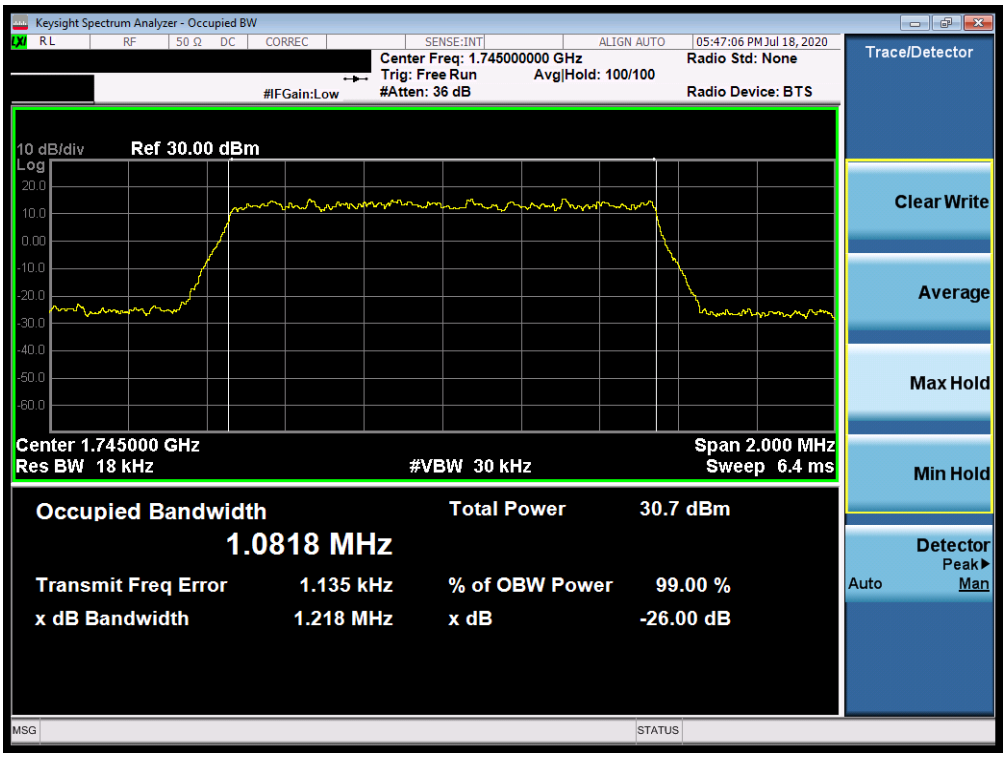
Band 66/4



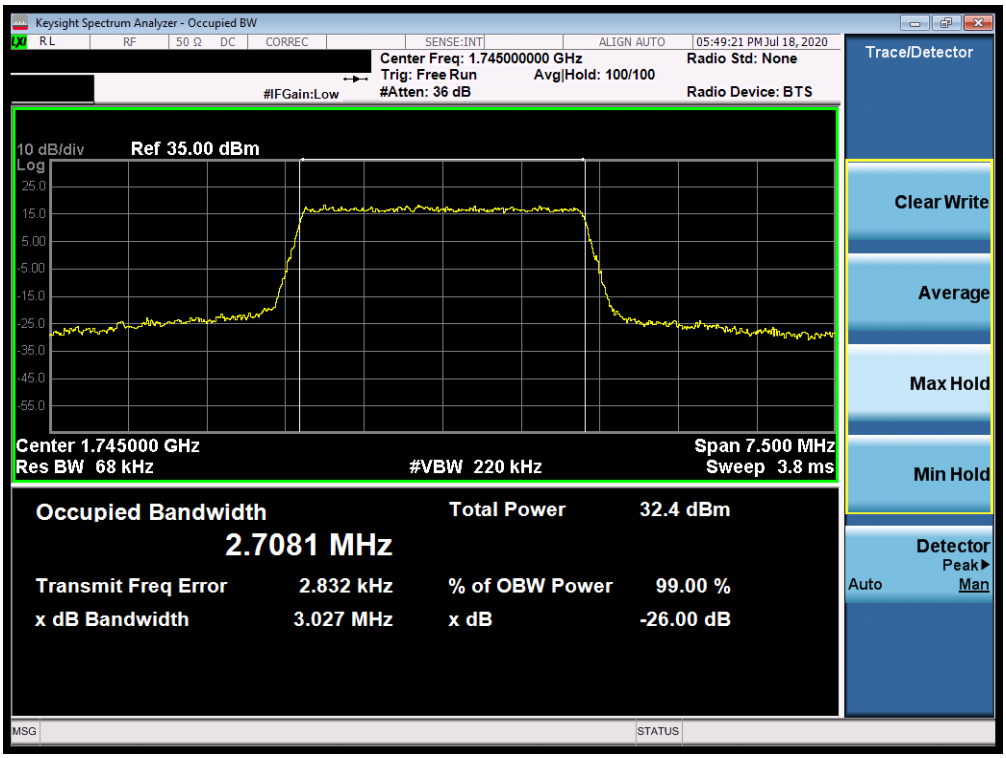
Plot 7-86. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)



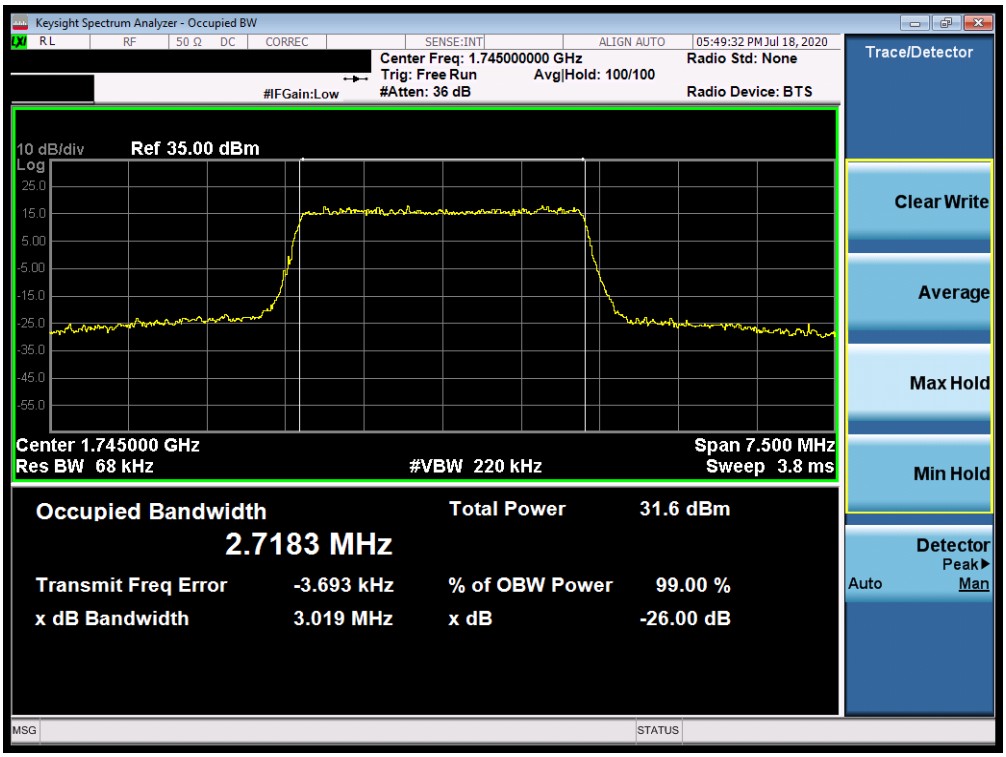
Plot 7-87. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz 16-QAM - Full RB Configuration)



Plot 7-88. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz 64-QAM - Full RB Configuration)

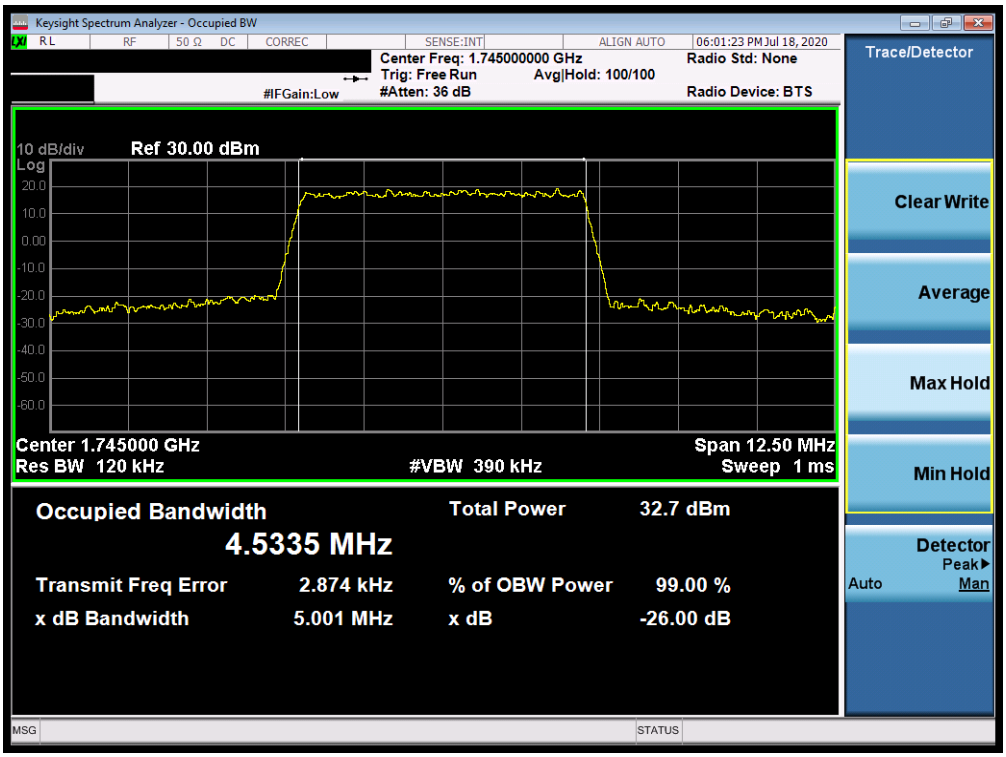


Plot 7-89. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)

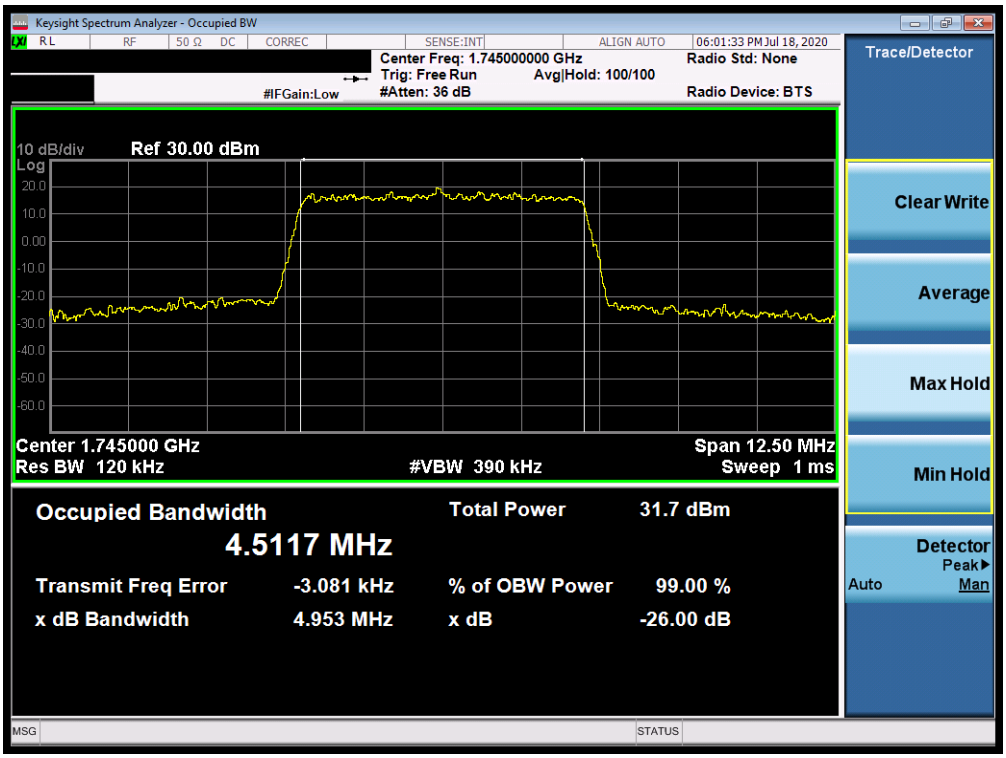


Plot 7-90. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz 16-QAM - Full RB Configuration)

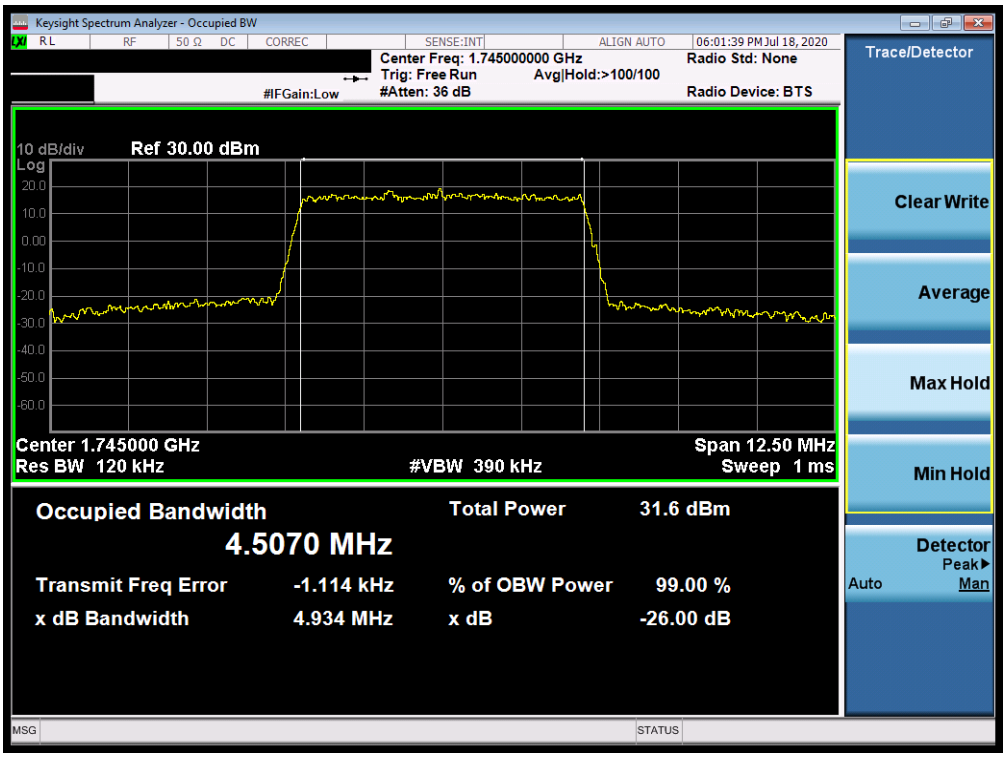
Plot 7-91. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz 64-QAM - Full RB Configuration)



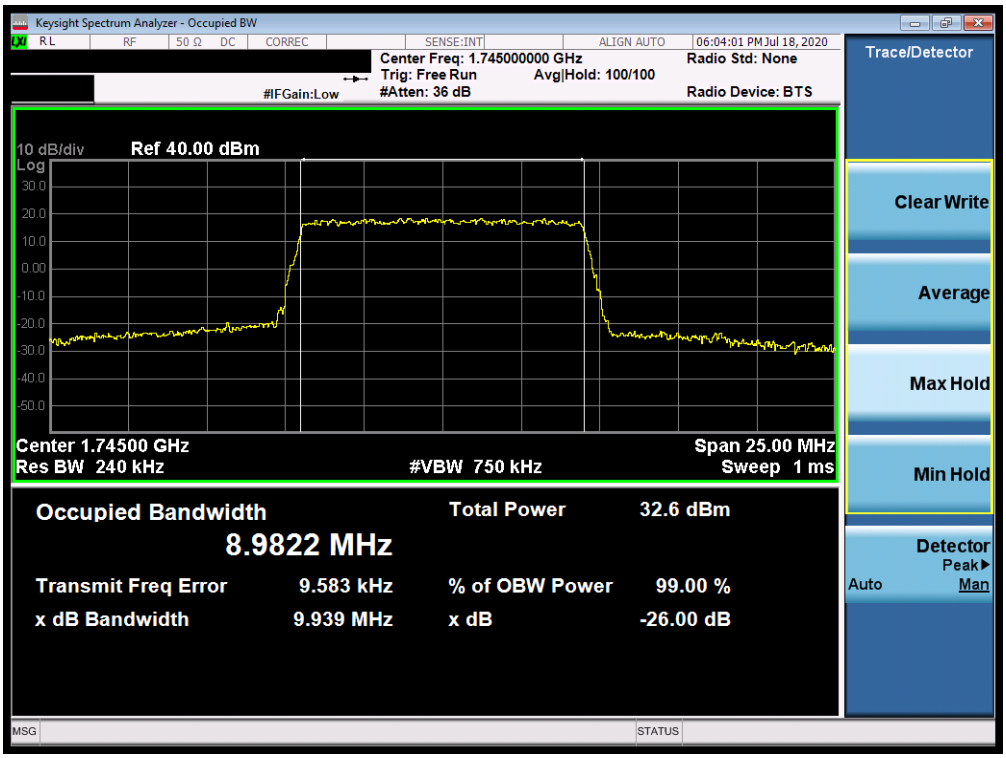
Plot 7-92. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-93. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz 16-QAM - Full RB Configuration)



Plot 7-94. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-95. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)