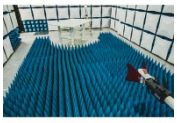
PCTEST ENGINEERING LABORATORY, INC.
7185 Oakland Mills Road, Columbia, MD 21046 USA
Tel. 410.290.6652 / Fax 410.290.6654
http://www.pctest.com



MEASUREMENT REPORT
LTE / EN-DC

Applicant Name:
Samsung Electronics Co., Ltd.
129, Samsung-ro,
Yeongtong-gu, Suwon-si
Gyeonggi-do, 16677, Korea

Date of Testing:
9/09 – 11/05/2019
Test Site/Location:
PCTEST Lab. Columbia, MD, USA
Test Report Serial No.:
1M1909040147-03.A3L

FCC ID:	**A3LSMN976U**
APPLICANT:	**Samsung Electronics Co., Ltd.**

Application Type:	Certification
Model:	SM-N976U
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
TESTING CERT#2041.01

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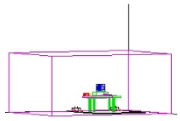
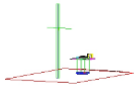


MEASUREMENT REPORT
FCC Part 22, 24, & 27



Mode	FCC Rule Part	Tx Frequency (MHz)	ERP		EIRP		Emission Designator	Modulation
			Max. Power (W)	Max. Power (dBm)	Max. Power (W)	Max. Power (dBm)		
LTE Band 71	27	665.5 - 695.5	0.067	18.28			4M55G7D	QPSK
LTE Band 71	27	665.5 - 695.5	0.057	17.59			4M52W7D	16QAM
LTE Band 71	27	665.5 - 695.5	0.040	16.04			4M53W7D	64QAM
LTE Band 71	27	665.5 - 695.5	0.023	13.66			4M50W7D	256QAM
LTE Band 71	27	668 - 693	0.065	18.10			9M01G7D	QPSK
LTE Band 71	27	668 - 693	0.048	16.78			9M01W7D	16QAM
LTE Band 71	27	668 - 693	0.041	16.13			8M98W7D	64QAM
LTE Band 71	27	668 - 693	0.024	13.75			8M98W7D	256QAM
LTE Band 71	27	670.5 - 690.5	0.063	18.00			13M5G7D	QPSK
LTE Band 71	27	670.5 - 690.5	0.053	17.23			13M5W7D	16QAM
LTE Band 71	27	670.5 - 690.5	0.041	16.12			13M5W7D	64QAM
LTE Band 71	27	670.5 - 690.5	0.024	13.74			13M5W7D	256QAM
LTE Band 71	27	673 - 688	0.060	17.77			18M0G7D	QPSK
LTE Band 71	27	673 - 688	0.047	16.72			18M0W7D	16QAM
LTE Band 71	27	673 - 688	0.033	15.24			18M0W7D	64QAM
LTE Band 71	27	673 - 688	0.012	10.71			17M9W7D	256QAM
LTE Band 12	27	699.7 - 715.3	0.040	16.06	0.066	18.21	1M10G7D	QPSK
LTE Band 12	27	699.7 - 715.3	0.033	15.19	0.054	17.34	1M10W7D	16QAM
LTE Band 12	27	699.7 - 715.3	0.025	14.04	0.042	16.19	1M09W7D	64QAM
LTE Band 12	27	699.7 - 715.3	0.013	11.15	0.021	13.30	1M09W7D	256QAM
LTE Band 12	27	700.5 - 714.5	0.041	16.16	0.068	18.31	2M72G7D	QPSK
LTE Band 12	27	700.5 - 714.5	0.035	15.44	0.057	17.59	2M70W7D	16QAM
LTE Band 12	27	700.5 - 714.5	0.024	13.85	0.040	16.00	2M71W7D	64QAM
LTE Band 12	27	700.5 - 714.5	0.013	11.11	0.021	13.26	2M70W7D	256QAM
LTE Band 12	27	701.5 - 713.5	0.044	16.45	0.072	18.60	4M56G7D	QPSK
LTE Band 12	27	701.5 - 713.5	0.034	15.30	0.056	17.45	4M52W7D	16QAM
LTE Band 12	27	701.5 - 713.5	0.027	14.30	0.044	16.45	4M55W7D	64QAM
LTE Band 12	27	701.5 - 713.5	0.014	11.41	0.023	13.56	4M50W7D	256QAM
LTE Band 12	27	704 - 711	0.042	16.27	0.070	18.42	9M00G7D	QPSK
LTE Band 12	27	704 - 711	0.036	15.54	0.059	17.69	8M97W7D	16QAM
LTE Band 12	27	704 - 711	0.024	13.85	0.040	16.00	8M99W7D	64QAM
LTE Band 12	27	704 - 711	0.008	8.96	0.013	11.11	9M02W7D	256QAM
LTE Band 13	27	779.5 - 784.5	0.075	18.74	0.123	20.89	4M53G7D	QPSK
LTE Band 13	27	779.5 - 784.5	0.063	18.02	0.104	20.17	4M51W7D	16QAM
LTE Band 13	27	779.5 - 784.5	0.050	16.97	0.082	19.12	4M53W7D	64QAM
LTE Band 13	27	779.5 - 784.5	0.012	10.66	0.019	12.81	4M49W7D	256QAM
LTE Band 13	27	782	0.073	18.64	0.120	20.79	8M97G7D	QPSK
LTE Band 13	27	782	0.039	15.89	0.064	18.04	8M95W7D	16QAM
LTE Band 13	27	782	0.031	14.94	0.051	17.09	8M97W7D	64QAM
LTE Band 13	27	782	0.010	10.04	0.017	12.19	8M94W7D	256QAM
LTE Band 26/5	22H	824.7 - 848.3	0.053	17.28	0.088	19.43	1M10G7D	QPSK
LTE Band 26/5	22H	824.7 - 848.3	0.043	16.32	0.070	18.47	1M10W7D	16QAM
LTE Band 26/5	22H	824.7 - 848.3	0.033	15.23	0.055	17.38	1M10W7D	64QAM
LTE Band 26/5	22H	824.7 - 848.3	0.017	12.29	0.028	14.44	1M09W7D	256QAM
LTE Band 26/5	22H	825.5 - 847.5	0.053	17.26	0.087	19.41	2M72G7D	QPSK
LTE Band 26/5	22H	825.5 - 847.5	0.041	16.14	0.067	18.29	2M71W7D	16QAM
LTE Band 26/5	22H	825.5 - 847.5	0.032	15.03	0.052	17.18	2M71W7D	64QAM
LTE Band 26/5	22H	825.5 - 847.5	0.017	12.27	0.028	14.42	2M71W7D	256QAM
LTE Band 26/5	22H	826.5 - 846.5	0.051	17.06	0.083	19.21	4M53G7D	QPSK
LTE Band 26/5	22H	826.5 - 846.5	0.039	15.94	0.064	18.09	4M53W7D	16QAM
LTE Band 26/5	22H	826.5 - 846.5	0.028	14.48	0.046	16.63	4M51W7D	64QAM
LTE Band 26/5	22H	826.5 - 846.5	0.016	12.07	0.026	14.22	4M51W7D	256QAM
LTE Band 26/5	22H	829 - 844	0.053	17.24	0.087	19.39	9M01G7D	QPSK
LTE Band 26/5	22H	829 - 844	0.045	16.51	0.073	18.66	9M05W7D	16QAM
LTE Band 26/5	22H	829 - 844	0.030	14.83	0.050	16.98	9M00W7D	64QAM
LTE Band 26/5	22H	829 - 844	0.017	12.25	0.028	14.40	8M97W7D	256QAM
LTE Band 26	22H	831.5 - 841.5	0.065	18.16	0.107	20.31	13M5G7D	QPSK
LTE Band 26	22H	831.5 - 841.5	0.061	17.85	0.100	20.00	13M5W7D	16QAM
LTE Band 26	22H	831.5 - 841.5	0.039	15.94	0.064	18.09	13M5W7D	64QAM
LTE Band 26	22H	831.5 - 841.5	0.011	10.35	0.018	12.50	13M5W7D	256QAM

EUT Overview (<1 GHz)

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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	0.213	23.29	1M08G7D	QPSK
LTE Band 66/4	27	1710.7 - 1779.3	0.166	22.21	1M07W7D	16QAM
LTE Band 66/4	27	1710.7 - 1779.3	0.122	20.88	1M10W7D	64QAM
LTE Band 66/4	27	1710.7 - 1779.3	0.058	17.60	1M07W7D	256QAM
LTE Band 66/4	27	1711.5 - 1778.5	0.216	23.34	2M72G7D	QPSK
LTE Band 66/4	27	1711.5 - 1778.5	0.165	22.17	2M71W7D	16QAM
LTE Band 66/4	27	1711.5 - 1778.5	0.125	20.98	2M71W7D	64QAM
LTE Band 66/4	27	1711.5 - 1778.5	0.077	18.85	2M71W7D	256QAM
LTE Band 66/4	27	1712.5 - 1777.5	0.214	23.30	4M54G7D	QPSK
LTE Band 66/4	27	1712.5 - 1777.5	0.182	22.59	4M54W7D	16QAM
LTE Band 66/4	27	1712.5 - 1777.5	0.147	21.68	4M53W7D	64QAM
LTE Band 66/4	27	1712.5 - 1777.5	0.076	18.83	4M53W7D	256QAM
LTE Band 66/4	27	1715 - 1775	0.214	23.31	9M00G7D	QPSK
LTE Band 66/4	27	1715 - 1775	0.159	22.01	8M99W7D	16QAM
LTE Band 66/4	27	1715 - 1775	0.124	20.94	9M01W7D	64QAM
LTE Band 66/4	27	1715 - 1775	0.064	18.05	9M01W7D	256QAM
LTE Band 66/4	27	1717.5 - 1772.5	0.219	23.40	13M5G7D	QPSK
LTE Band 66/4	27	1717.5 - 1772.5	0.162	22.10	13M5W7D	16QAM
LTE Band 66/4	27	1717.5 - 1772.5	0.127	21.03	13M5W7D	64QAM
LTE Band 66/4	27	1717.5 - 1772.5	0.077	18.85	13M5W7D	256QAM
LTE Band 66/4	27	1720 - 1770	0.192	22.83	18M0G7D	QPSK
LTE Band 66/4	27	1720 - 1770	0.144	21.59	18M0W7D	16QAM
LTE Band 66/4	27	1720 - 1770	0.097	19.89	18M1W7D	64QAM
LTE Band 66/4	27	1720 - 1770	0.047	16.68	18M2W7D	256QAM
LTE Band 25/2	24E	1850.7 - 1914.3	0.265	24.24	1M10G7D	QPSK
LTE Band 25/2	24E	1850.7 - 1914.3	0.200	23.01	1M10W7D	16QAM
LTE Band 25/2	24E	1850.7 - 1914.3	0.162	22.10	1M10W7D	64QAM
LTE Band 25/2	24E	1850.7 - 1914.3	0.082	19.15	1M09W7D	256QAM
LTE Band 25/2	24E	1851.5 - 1913.5	0.262	24.19	2M71G7D	QPSK
LTE Band 25/2	24E	1851.5 - 1913.5	0.214	23.31	2M71W7D	16QAM
LTE Band 25/2	24E	1851.5 - 1913.5	0.161	22.08	2M71W7D	64QAM
LTE Band 25/2	24E	1851.5 - 1913.5	0.086	19.32	2M70W7D	256QAM
LTE Band 25/2	24E	1852.5 - 1912.5	0.271	24.33	4M55G7D	QPSK
LTE Band 25/2	24E	1852.5 - 1912.5	0.225	23.52	4M53W7D	16QAM
LTE Band 25/2	24E	1852.5 - 1912.5	0.152	21.83	4M52W7D	64QAM
LTE Band 25/2	24E	1852.5 - 1912.5	0.082	19.13	4M51W7D	256QAM
LTE Band 25/2	24E	1855 - 1910	0.268	24.28	9M02G7D	QPSK
LTE Band 25/2	24E	1855 - 1910	0.220	23.43	8M99W7D	16QAM
LTE Band 25/2	24E	1855 - 1910	0.164	22.16	9M01W7D	64QAM
LTE Band 25/2	24E	1855 - 1910	0.088	19.43	8M99W7D	256QAM
LTE Band 25/2	24E	1857.5 - 1907.5	0.274	24.38	13M5G7D	QPSK
LTE Band 25/2	24E	1857.5 - 1907.5	0.228	23.57	13M5W7D	16QAM
LTE Band 25/2	24E	1857.5 - 1907.5	0.196	22.93	13M5W7D	64QAM
LTE Band 25/2	24E	1857.5 - 1907.5	0.092	19.65	13M5W7D	256QAM
LTE Band 25/2	24E	1860 - 1905	0.259	24.14	18M0G7D	QPSK
LTE Band 25/2	24E	1860 - 1905	0.231	23.63	18M0W7D	16QAM
LTE Band 25/2	24E	1860 - 1905	0.182	22.59	18M0W7D	64QAM
LTE Band 25/2	24E	1860 - 1905	0.097	19.87	18M0W7D	256QAM

EUT Overview (Mid Bands)

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Mode	FCC Rule Part	Tx Frequency (MHz)	EIRP		Emission Designator	Modulation
			Max. Power (W)	Max. Power (dBm)		
LTE Band 30	27	2307.5 - 2312.5	0.173	22.39	4M51G7D	QPSK
LTE Band 30	27	2307.5 - 2312.5	0.149	21.73	4M50W7D	16QAM
LTE Band 30	27	2307.5 - 2312.5	0.103	20.14	4M53W7D	64QAM
LTE Band 30	27	2307.5 - 2312.5	0.057	17.58	4M50W7D	256QAM
LTE Band 30	27	2310	0.175	22.42	8M99G7D	QPSK
LTE Band 30	27	2310	0.156	21.93	8M97W7D	16QAM
LTE Band 30	27	2310	0.132	21.21	9M00W7D	64QAM
LTE Band 30	27	2310	0.124	20.95	8M96W7D	256QAM
LTE Band 7	27	2502.5 - 2567.5	0.121	20.84	4M54G7D	QPSK
LTE Band 7	27	2502.5 - 2567.5	0.101	20.05	4M51W7D	16QAM
LTE Band 7	27	2502.5 - 2567.5	0.084	19.23	4M52W7D	64QAM
LTE Band 7	27	2502.5 - 2567.5	0.040	16.07	4M51W7D	256QAM
LTE Band 7	27	2505 - 2565	0.117	20.68	9M00G7D	QPSK
LTE Band 7	27	2505 - 2565	0.102	20.10	8M99W7D	16QAM
LTE Band 7	27	2505 - 2565	0.074	18.72	9M02W7D	64QAM
LTE Band 7	27	2505 - 2565	0.036	15.56	9M01W7D	256QAM
LTE Band 7	27	2507.5 - 2562.5	0.134	21.28	13M5G7D	QPSK
LTE Band 7	27	2507.5 - 2562.5	0.107	20.30	13M5W7D	16QAM
LTE Band 7	27	2507.5 - 2562.5	0.084	19.24	13M5W7D	64QAM
LTE Band 7	27	2507.5 - 2562.5	0.041	16.08	13M5W7D	256QAM
LTE Band 7	27	2510 - 2560	0.125	20.97	18M0G7D	QPSK
LTE Band 7	27	2510 - 2560	0.112	20.49	17M9W7D	16QAM
LTE Band 7	27	2510 - 2560	0.091	19.58	18M0W7D	64QAM
LTE Band 7	27	2510 - 2560	0.055	17.39	17M9W7D	256QAM
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.395	25.97	4M51G7D	QPSK
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.326	25.13	4M52W7D	16QAM
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.248	23.94	4M49W7D	64QAM
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.127	21.03	4M49W7D	256QAM
LTE Band 41 (PC2)	27	2501 - 2685	0.395	25.97	9M01G7D	QPSK
LTE Band 41 (PC2)	27	2501 - 2685	0.326	25.13	9M00W7D	16QAM
LTE Band 41 (PC2)	27	2501 - 2685	0.248	23.94	9M00W7D	64QAM
LTE Band 41 (PC2)	27	2501 - 2685	0.127	21.03	9M01W7D	256QAM
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.398	26.00	13M5G7D	QPSK
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.328	25.16	13M5W7D	16QAM
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.249	23.97	13M5W7D	64QAM
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.128	21.06	13M5W7D	256QAM
LTE Band 41 (PC2)	27	2506 - 2680	0.401	26.03	18M0G7D	QPSK
LTE Band 41 (PC2)	27	2506 - 2680	0.188	22.73	18M0W7D	16QAM
LTE Band 41 (PC2)	27	2506 - 2680	0.148	21.70	18M0W7D	64QAM
LTE Band 41 (PC2)	27	2506 - 2680	0.021	13.31	18M0W7D	256QAM
LTE Band 41 (PC3)	27	2498.5 - 2687.5	0.221	23.44	4M52G7D	QPSK
LTE Band 41 (PC3)	27	2498.5 - 2687.5	0.189	22.77	4M52W7D	16QAM
LTE Band 41 (PC3)	27	2498.5 - 2687.5	0.158	21.98	4M51W7D	64QAM
LTE Band 41 (PC3)	27	2498.5 - 2687.5	0.089	19.50	4M49W7D	256QAM
LTE Band 41 (PC3)	27	2501 - 2685	0.217	23.37	8M99G7D	QPSK
LTE Band 41 (PC3)	27	2501 - 2685	0.186	22.69	9M04W7D	16QAM
LTE Band 41 (PC3)	27	2501 - 2685	0.147	21.67	8M99W7D	64QAM
LTE Band 41 (PC3)	27	2501 - 2685	0.073	18.63	9M01W7D	256QAM
LTE Band 41 (PC3)	27	2503.5 - 2682.5	0.226	23.55	13M5G7D	QPSK
LTE Band 41 (PC3)	27	2503.5 - 2682.5	0.194	22.87	13M5W7D	16QAM
LTE Band 41 (PC3)	27	2503.5 - 2682.5	0.153	21.85	13M5W7D	64QAM
LTE Band 41 (PC3)	27	2503.5 - 2682.5	0.067	18.27	13M5W7D	256QAM
LTE Band 41 (PC3)	27	2506 - 2680	0.227	23.56	18M0G7D	QPSK
LTE Band 41 (PC3)	27	2506 - 2680	0.184	22.66	18M0W7D	16QAM
LTE Band 41 (PC3)	27	2506 - 2680	0.142	21.53	18M0W7D	64QAM
LTE Band 41 (PC3)	27	2506 - 2680	0.045	16.57	18M0W7D	256QAM

EUT Overview (High Bands)

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Mode	FCC Rule Part	Tx Frequency (MHz)	ERP		EIRP		Emission Designator	Modulation
			Max. Power (W)	Max. Power (dBm)	Max. Power (W)	Max. Power (dBm)		
Band n71	27	665.5 - 695.5	0.060	17.77			4M52G7D	QPSK
Band n71	27	665.5 - 695.5	0.051	17.07			4M51W7D	16QAM
Band n71	27	665.5 - 695.5	0.039	15.87			4M54W7D	64QAM
Band n71	27	665.5 - 695.5	0.023	13.58			4M50W7D	256QAM
Band n71	27	668 - 693	0.042	16.19			9M00G7D	QPSK
Band n71	27	668 - 693	0.029	14.62			8M93W7D	16QAM
Band n71	27	668 - 693	0.023	13.61			8M97W7D	64QAM
Band n71	27	668 - 693	0.012	10.75			9M00W7D	256QAM
Band n71	27	670.5 - 690.5	0.072	18.56			14M0G7D	QPSK
Band n71	27	670.5 - 690.5	0.053	17.24			13M8W7D	16QAM
Band n71	27	670.5 - 690.5	0.042	16.20			13M8W7D	64QAM
Band n71	27	670.5 - 690.5	0.028	14.49			13M5W7D	256QAM
Band n71	27	673 - 688	0.052	17.20			18M0G7D	QPSK
Band n71	27	673 - 688	0.034	15.27			17M9W7D	16QAM
Band n71	27	673 - 688	0.029	14.57			18M0W7D	64QAM
Band n71	27	673 - 688	0.018	12.49			17M9W7D	256QAM
Band n5	22H	826.5 - 846.5	0.028	14.45	0.046	16.60	4M50G7D	QPSK
Band n5	22H	826.5 - 846.5	0.019	12.68	0.030	14.83	4M54W7D	16QAM
Band n5	22H	826.5 - 846.5	0.012	10.77	0.020	12.92	4M53W7D	64QAM
Band n5	22H	826.5 - 846.5	0.008	9.15	0.013	11.30	4M53W7D	256QAM
Band n5	22H	829 - 844	0.025	14.06	0.042	16.21	9M04G7D	QPSK
Band n5	22H	829 - 844	0.021	13.32	0.035	15.47	8M95W7D	16QAM
Band n5	22H	829 - 844	0.015	11.75	0.025	13.90	8M99W7D	64QAM
Band n5	22H	829 - 844	0.009	9.32	0.014	11.47	9M00W7D	256QAM
Band n5	22H	831.5 - 841.5	0.063	17.97	0.103	20.12	13M5G7D	QPSK
Band n5	22H	831.5 - 841.5	0.047	16.75	0.078	18.90	13M4W7D	16QAM
Band n5	22H	831.5 - 841.5	0.035	15.50	0.058	17.65	13M5W7D	64QAM
Band n5	22H	831.5 - 841.5	0.024	13.77	0.039	15.92	13M5W7D	256QAM
Band n5	22H	834 - 839	0.049	16.87	0.080	19.02	18M0G7D	QPSK
Band n5	22H	834 - 839	0.038	15.77	0.062	17.92	18M0W7D	16QAM
Band n5	22H	834 - 839	0.028	14.48	0.046	16.63	17M9W7D	64QAM
Band n5	22H	834 - 839	0.019	12.77	0.031	14.92	17M9W7D	256QAM

EUT Overview (EN-DC)

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1.0 INTRODUCTION

1.1 Scope

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

1.2 PCTEST Test Location

These measurement tests were conducted at the PCTEST Engineering Laboratory, Inc. 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 Engineering Lab 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.

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Handset FCC ID: A3LSMN976U**. The test data contained in this report pertains only to the emissions due to the EUT's LTE function.

Test Device Serial No.: 17907,12643, 12601, 12684,12619, 13898

2.2 Device Capabilities

This device contains the following capabilities:

850/1900 GSM/GPRS/EDGE, 850/1700/1900 WCDMA/HSPA, Multi-band LTE, 802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII, Bluetooth (1x, EDR, LE), NFC, ANT+, Wireless Power Transfer

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.

This device uses a tuner circuit that dynamically updates the antenna impedance parameters to optimize antenna performance for certain bands and modes of operation. The tuner for this device was set to simulate a "free space" condition where the transmit antenna is matched to the medium into which it is transmitting and, thus, the power is at its maximum level.

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.

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) FCC ID: 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.

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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 Block C Frequency Range

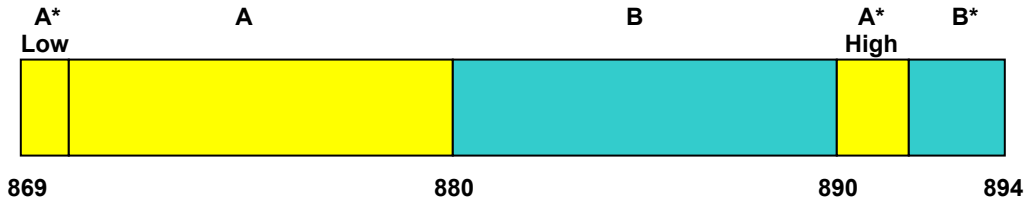
Two paired channels of 11 megahertz each are available for assignment in Block C in the 746-757 MHz and 776-787 MHz bands. In the event that no licenses for two channels in this Block C are assigned based on the results of the first auction in which such licenses were offered because the auction results do not satisfy the applicable reserve price, the spectrum in the 746-757 MHz and 776-787 MHz bands will instead be made available for assignment at a subsequent auction as follows: (i) Two paired channels of 6 megahertz each available for assignment in Block C1 in the 746-752 MHz and 776-782 MHz bands. (ii) Two paired channels of 5 megahertz each available for assignment in Block C2 in the 752-757 MHz and 782-787 MHz bands.

3.3 Block A Frequency Range

698-746 MHz band. The following frequencies are available for licensing pursuant to this part in the 698-746 MHz band: (1) Three paired channel blocks of 12 megahertz each are available for assignment as follows:

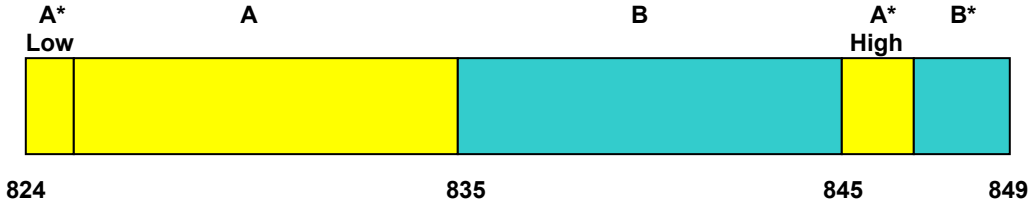
Block A: 698-704 MHz and 728-734 MHz;
Block B: 704-710 MHz and 734-740 MHz; and
Block C: 710-716 MHz and 740-746 MHz.

3.4 Cellular - Base Frequency Blocks



BLOCK 1: 869 – 880 MHz (A* Low + A)
BLOCK 2: 880 – 890 MHz (B)
BLOCK 3: 890 – 891.5 MHz (A* High)
BLOCK 4: 891.5 – 894 MHz (B*)

3.5 Cellular - Mobile Frequency Blocks



BLOCK 1: 824 – 835 MHz (A* Low + A)
BLOCK 2: 835 – 845 MHz (B)
BLOCK 3: 845 – 846.5 MHz (A* High)
BLOCK 4: 846.5 – 849 MHz (B*)

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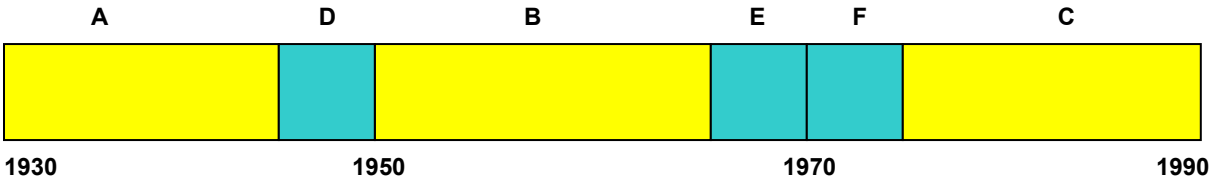
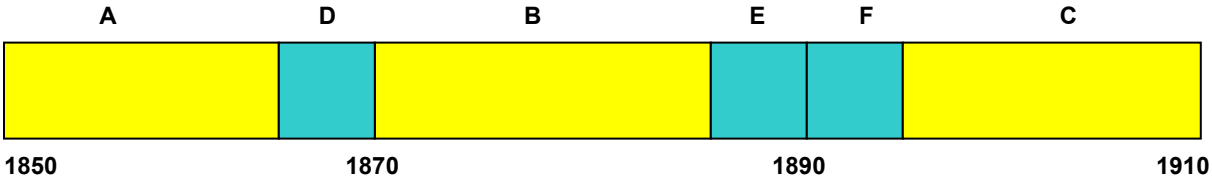
3.6 PCS - Base Frequency Blocks



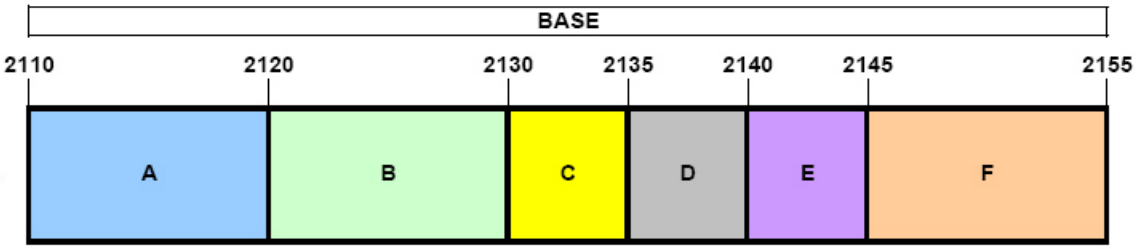
BLOCK 1: 1930 – 1945 MHz (A)
BLOCK 2: 1945 – 1950 MHz (D)
BLOCK 3: 1950 – 1965 MHz (B)
BLOCK 4: 1965 – 1970 MHz (E)
BLOCK 5: 1970 – 1975 MHz (F)
BLOCK 6: 1975 – 1990 MHz (C)

3.7 PCS - Mobile Frequency Blocks



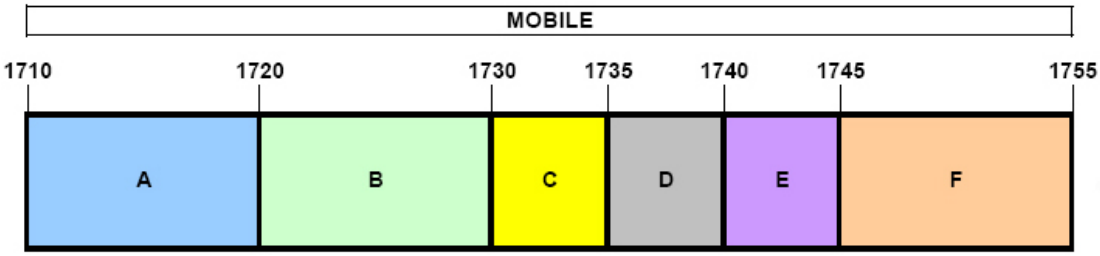
BLOCK 1: 1850 – 1865 MHz (A)
BLOCK 2: 1865 – 1870 MHz (D)
BLOCK 3: 1870 – 1885 MHz (B)
BLOCK 4: 1885 – 1890 MHz (E)
BLOCK 5: 1890 – 1895 MHz (F)
BLOCK 6: 1895 – 1910 MHz (C)

3.8 AWS - Base Frequency Blocks



BLOCK 1: 2110 – 2120 MHz (A)
BLOCK 2: 2120 – 2130 MHz (B)
BLOCK 3: 2130 – 2135 MHz (C)
BLOCK 4: 2135 – 2140 MHz (D)
BLOCK 5: 2140 – 2145 MHz (E)
BLOCK 6: 2145 – 2155 MHz (F)

3.9 AWS - Mobile Frequency Blocks



BLOCK 1: 1710 – 1720 MHz (A)
BLOCK 2: 1720 – 1730 MHz (B)
BLOCK 3: 1730 – 1735 MHz (C)
BLOCK 4: 1735 – 1740 MHz (D)
BLOCK 5: 1740 – 1745 MHz (E)
BLOCK 6: 1745 – 1755 MHz (F)

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3.10 WCS – Mobile/Base Frequency Blocks

The following frequencies are available for WCS in the 2305-2320 MHz and 2345-2360 MHz bands:

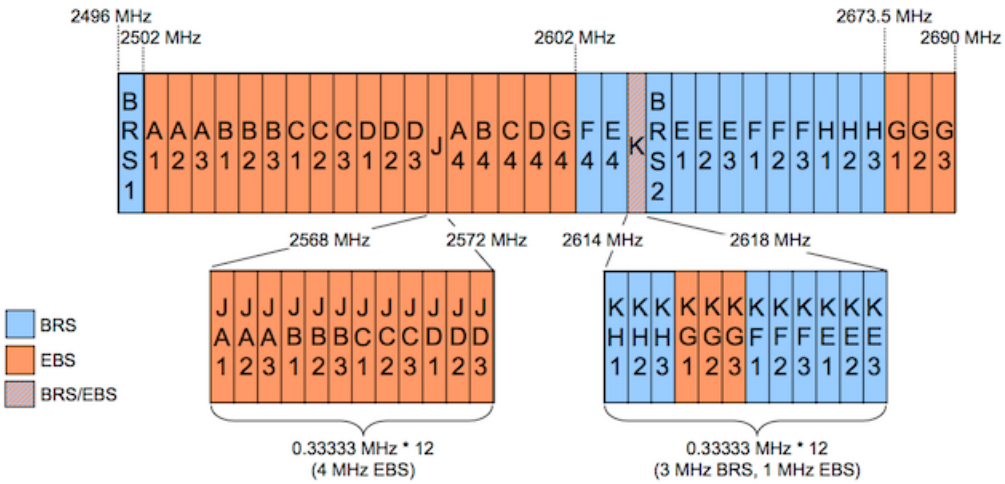
BLOCK 1: 2305-2310 and 2350-2355 MHz (A)

BLOCK 2: 2310-2315 and 2355-236 MHz (B)

BLOCK 3: 2315-2320 MHz (C)

BLOCK 4: 2345-2350 MHz (D)

3.11 BRS/EBS Frequency Block



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3.12 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 $_{[Watts]}$). For Band 7 and 41, the calculated P_d levels are compared to the absolute spurious emission limit of -25dBm which is equivalent to the required minimum attenuation of 55 + 10 $\log_{10}$(Power $_{[Watts]}$). For Band 30, the calculated P_d levels are compared to the absolute spurious emission limit of -40dBm which is equivalent to the required minimum attenuation of 70 + 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.

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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

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5.0 TEST EQUIPMENT CALIBRATION DATA

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

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	LTx1	Licensed Transmitter Cable Set	6/4/2019	Annual	6/4/2020	LTx1
-	LTx3	LIcensed Transmitter Cable Set	6/3/2019	Annual	6/3/2020	LTx3
Agilent	N9020A	MXA Signal Analyzer	4/20/2019	Annual	4/20/2020	US46470561
Agilent	N9038A	MXE EMI Receiver	7/17/2019	Annual	7/17/2020	MY51210133
Agilent	N9030A	PXA Signal Analyzer (44GHz)	6/12/2019	Annual	6/12/2020	MY52350166
Com-Power	PAM-103	Pre-Amplifier (1-1000MHz)	5/10/2019	Annual	5/10/2020	441112
Emco	3115	Horn Antenna (1-18GHz)	3/28/2018	Biennial	3/28/2020	9704-5182
EMCO	3160-09	Small Horn (18 - 26.5GHz)	8/9/2018	Biennial	8/9/2020	135427
ETS Lindgren	3117	1-18 GHz DRG Horn (Medium)	2/14/2019	Biennial	2/14/2021	125518
ETS Lindgren	3164-08	Quad Ridge Horn Antenna	3/28/2018	Biennial	3/28/2020	128337
ETS Lindgren	3164-08	Quad Ridge Horn Antenna	2/22/2019	Biennial	2/22/2021	128338
Mini Circuits	TVA-11-422	RF Power Amp	N/A			QA1317001
Mini Circuits	PWR-SEN-4GHS	USB Power Sensor	4/19/2019	Annual	4/19/2020	11401010036
Mini-Circuits	SSG-4000HP	Synthesized Signal Generator	N/A			11208010032
Mini-Circuits	PWR-SEN-4RMS	USB Power Sensor	4/20/2019	Annual	4/20/2020	11210140001
Mini-Circuits	SSG-4000HP	Synthesized Signal Generator	N/A			11403100002
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			100976
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			112347
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			102060
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	6/5/2019	Annual	6/5/2020	100342
Schwarzbeck	UHA 9105	Dipole Antenna (400 - 1GHz) Rx	4/30/2018	Biennial	4/30/2020	9105-2404
Schwarzbeck	UHA 9105	Dipole Antenna (400 - 1GHz) Tx	4/30/2018	Biennial	4/30/2020	9105-2403
Seekonk	NC-100	Torque Wrench (8" lb)	5/10/2018	Biennial	5/10/2020	N/A
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	4/19/2018	Biennial	4/19/2020	A051107

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.

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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).

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7.0 TEST RESULTS

7.1 Summary

Company Name: Samsung Electronics Co., Ltd.

FCC ID: A3LSMN976U

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
27.53(a)	Out of Band Emissions	Undesirable emissions must meet the limits detailed in 27.53(a)			Section 7.3, 7.4
24.232(d) 27.50(d)	Peak-Average Ratio	< 13 dB			Section 7.5
2.1046	Transmitter Conducted Output Power	N/A			See RF Exposure Report
22.917(a) 27.53(h) 27.53(m)	Uplink Carrier Aggregation	>43 + 10log(P[Watts]) at Band Edge and for all out-of-band emissions			Section 7.8
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 7.9

Table 7-1. Summary of Conducted Test Results

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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 0
27.50(b)(10) 27.50(c)(10)	Effective Radiated Power / Equivalent Isotropic Radiated Power (Band 71, 12, 13)	< 3 Watts max. ERP			Section 0
24.232(c) 27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2/25, 7, 41/38)	< 2 Watts max. EIRP			Section 0
27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4/66)	< 1 Watts max. EIRP			Section 0
27.50(a)(3)	Equivalent Isotropic Radiated Power (Band 30)	< 0.25 Watts max. EIRP			Section 0
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 7.8
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 7.8
27.53(a)	Undesirable Emissions (Band 30)	> 70 + 10 $\log_{10}$ (P[Watts])			Section 7.8
27.53(m)	Undesirable Emissions (Band 7, 41/38)	Undesirable emissions must meet the limits detailed in 27.53(m)			Section 7.8
27.53(m)	Uplink Carrier Aggregation	Undesirable emissions must meet the limits detailed in 27.53(m)			Section 7.8

Table 7-2. Summary of Radiated Test Results

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Notes:

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

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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.

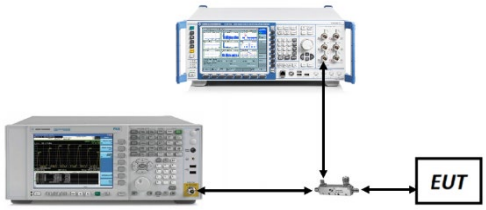

Figure 7-1. Test Instrument & Measurement Setup

Test Notes

None.

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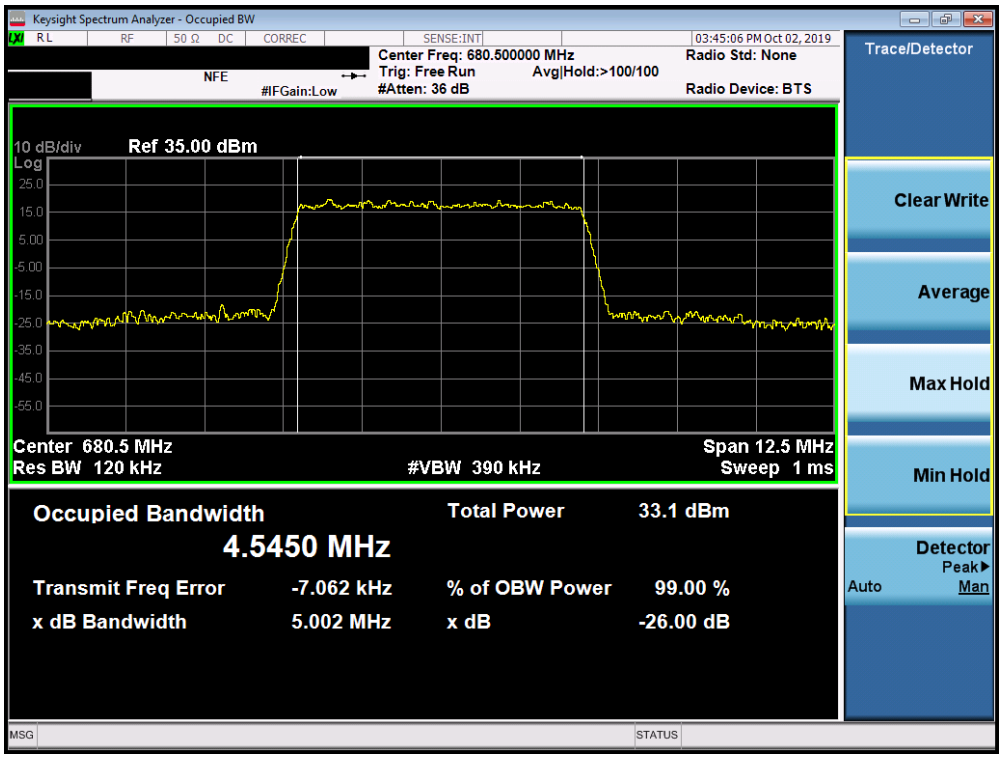
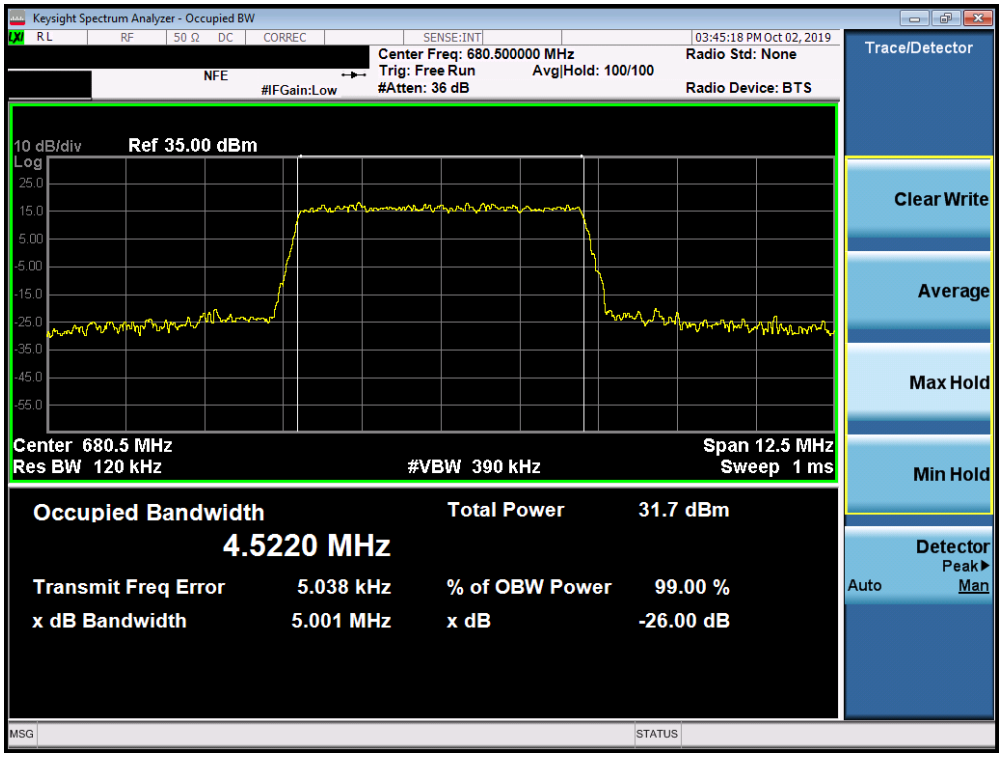
Band 71



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)

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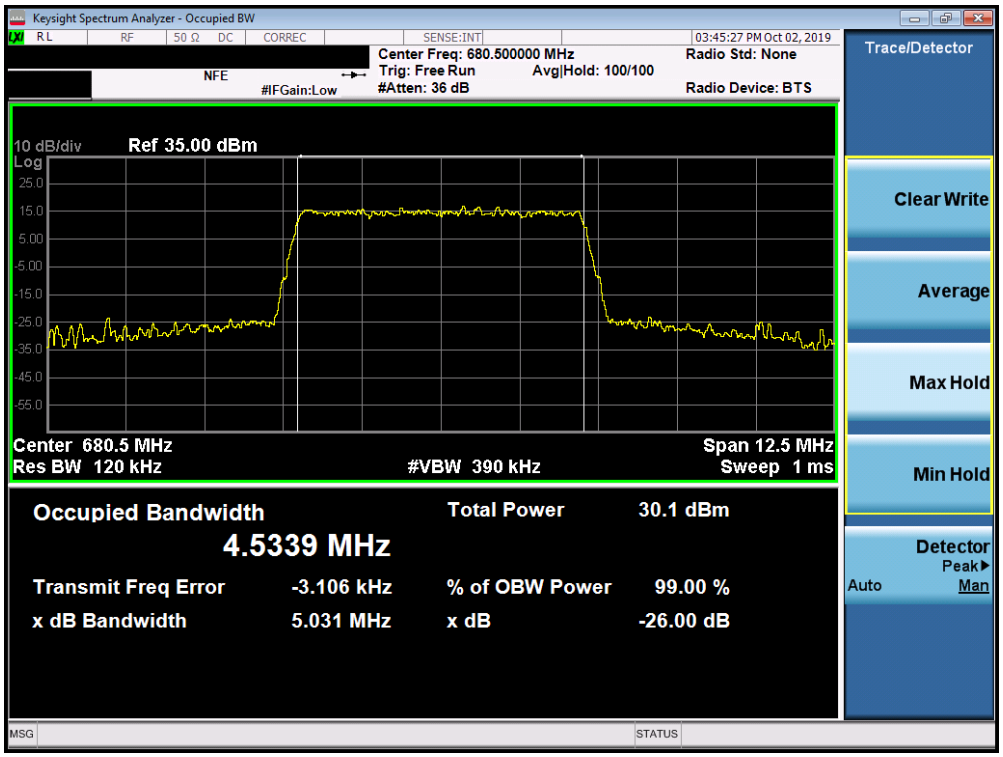
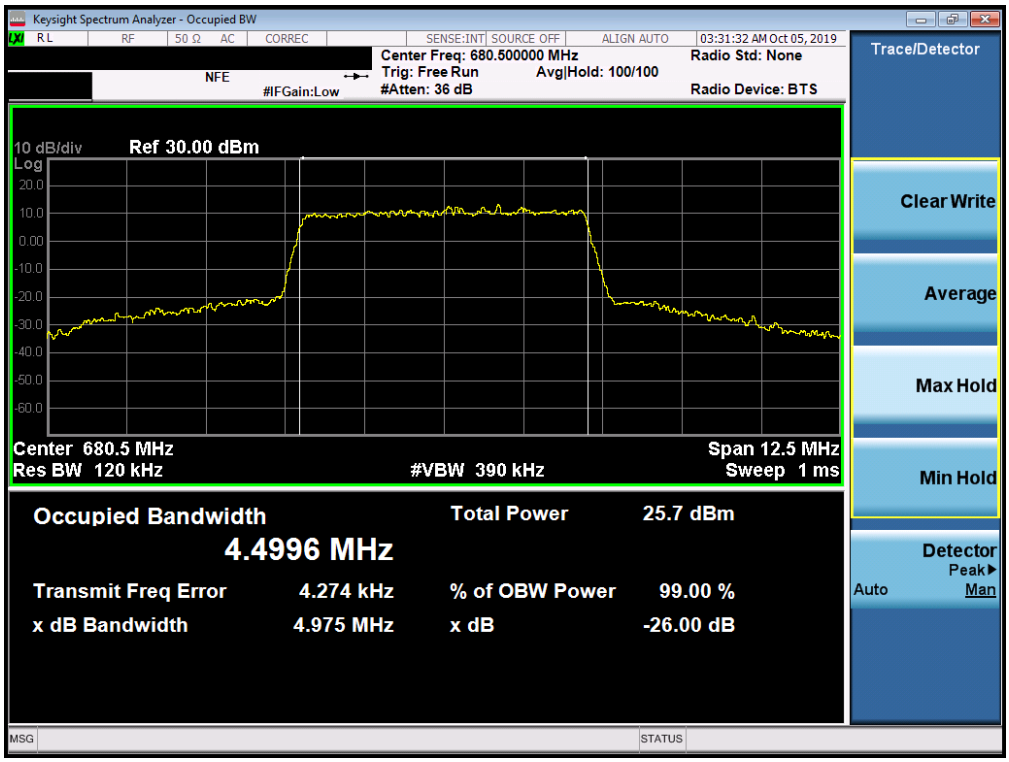


Plot 7-3. Occupied Bandwidth Plot (Band 71 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-4. Occupied Bandwidth Plot (Band 71 - 5.0MHz 256-QAM - Full RB Configuration)

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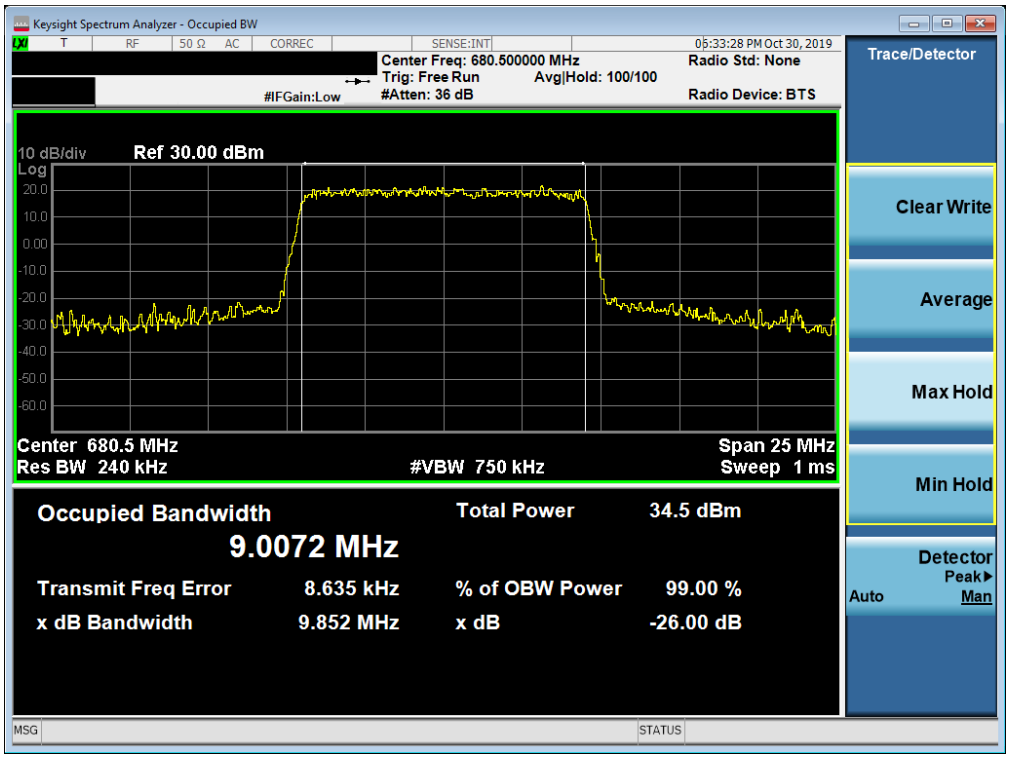
Plot 7-5. Occupied Bandwidth Plot (Band 71 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-6. Occupied Bandwidth Plot (Band 71 - 10.0MHz 16-QAM - Full RB Configuration)

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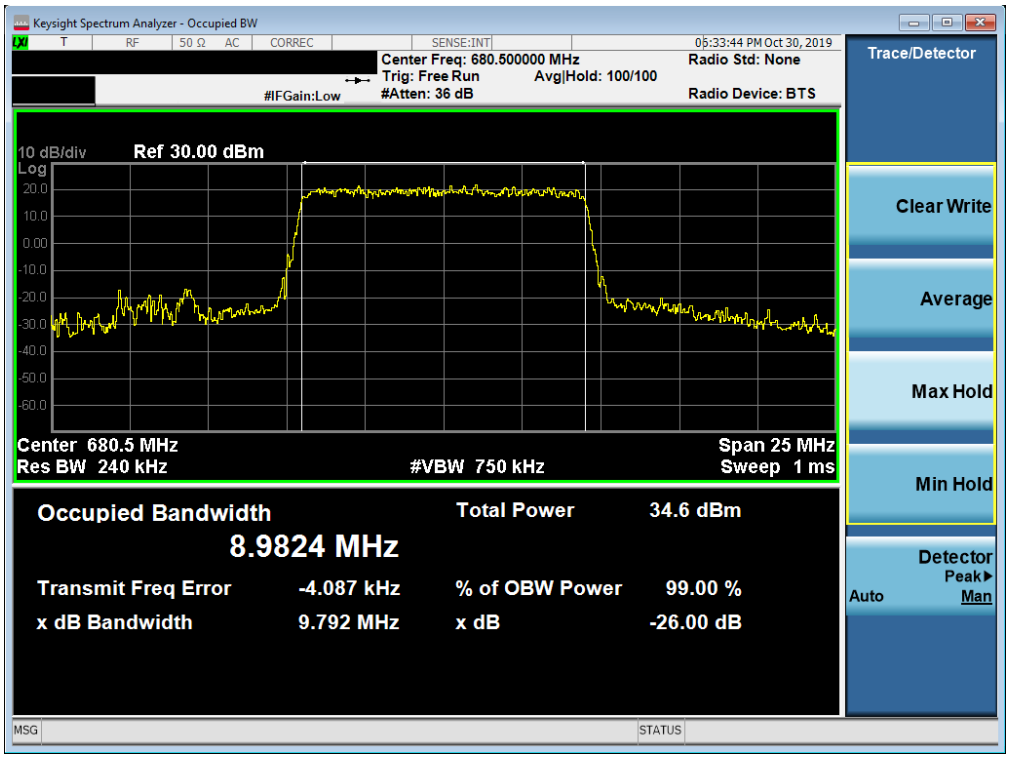

Plot 7-7. Occupied Bandwidth Plot (Band 71 - 10.0MHz 64-QAM - Full RB Configuration)

Plot 7-8. Occupied Bandwidth Plot (Band 71 - 10.0MHz 256-QAM - Full RB Configuration)

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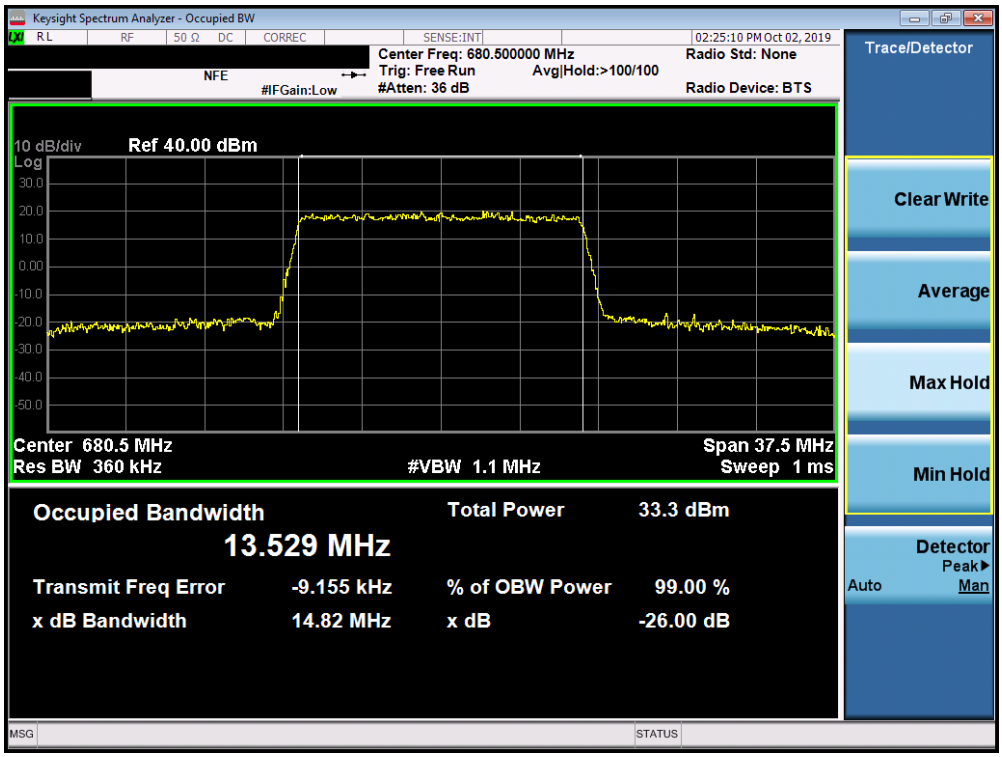
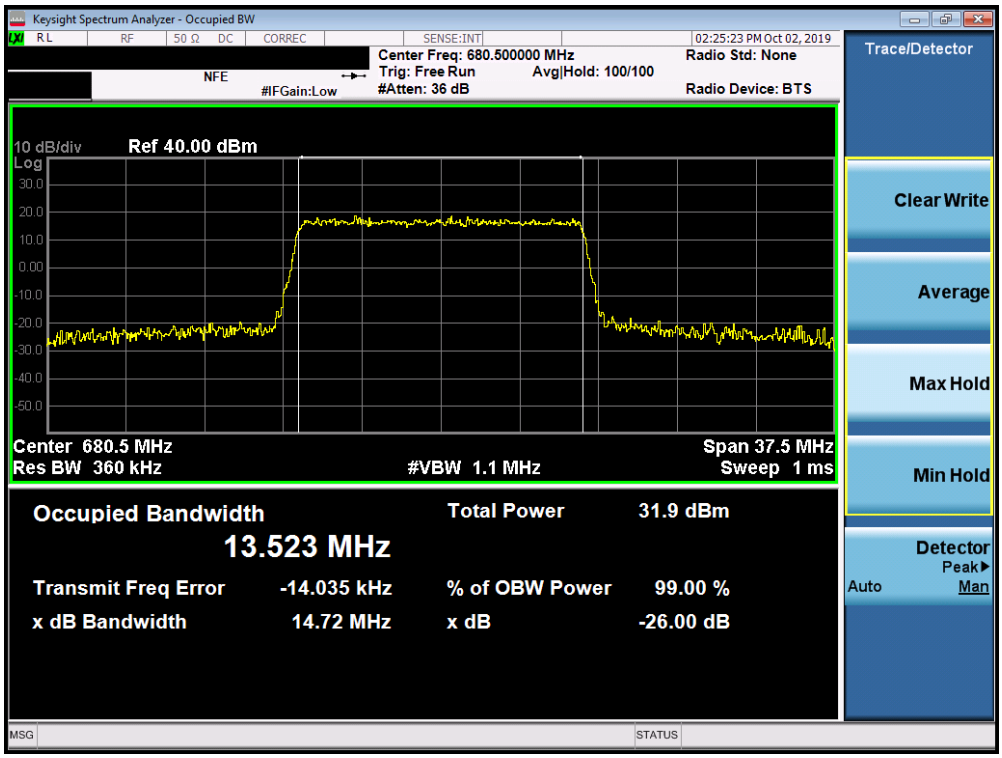


Plot 7-9. Occupied Bandwidth Plot (Band 71 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-10. Occupied Bandwidth Plot (Band 71 - 15.0MHz 16-QAM - Full RB Configuration)

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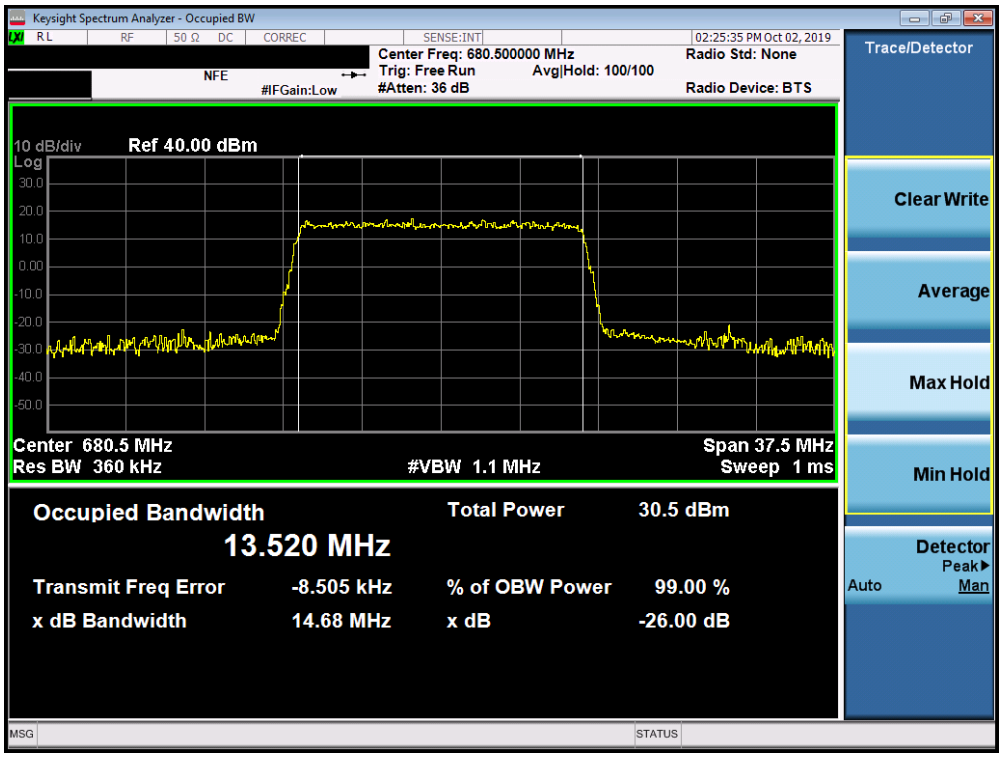
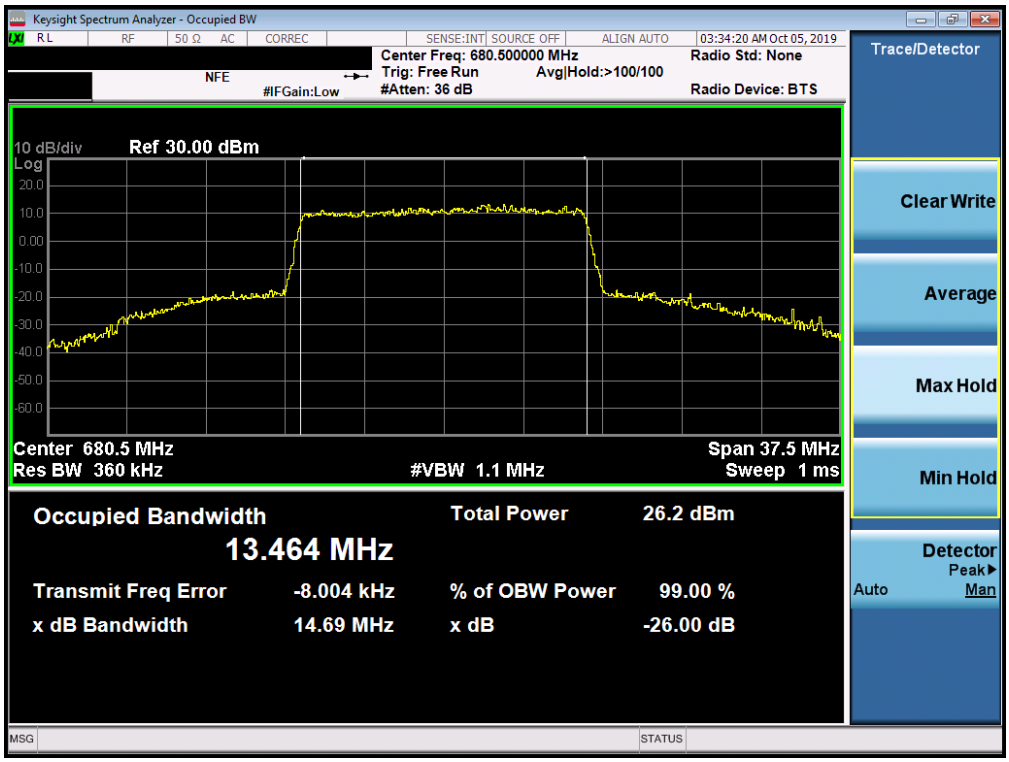


Plot 7-11. Occupied Bandwidth Plot (Band 71 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-12. Occupied Bandwidth Plot (Band 71 - 15.0MHz 256-QAM - Full RB Configuration)

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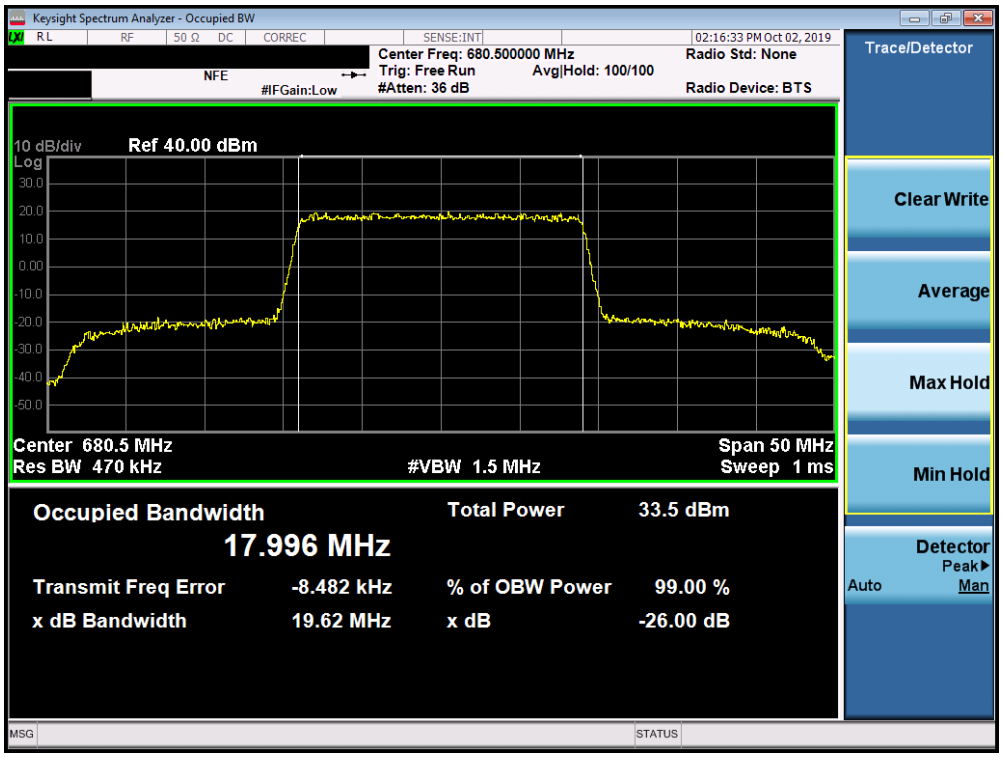
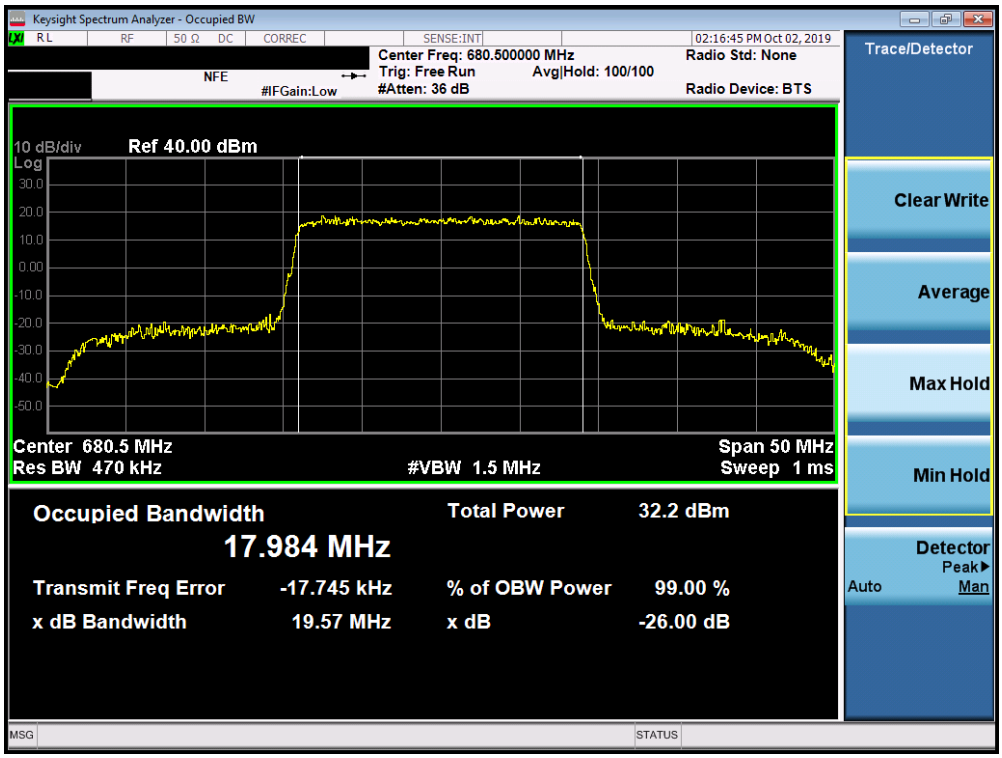


Plot 7-13. Occupied Bandwidth Plot (Band 71 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-14. Occupied Bandwidth Plot (Band 71 - 20.0MHz 16-QAM - Full RB Configuration)

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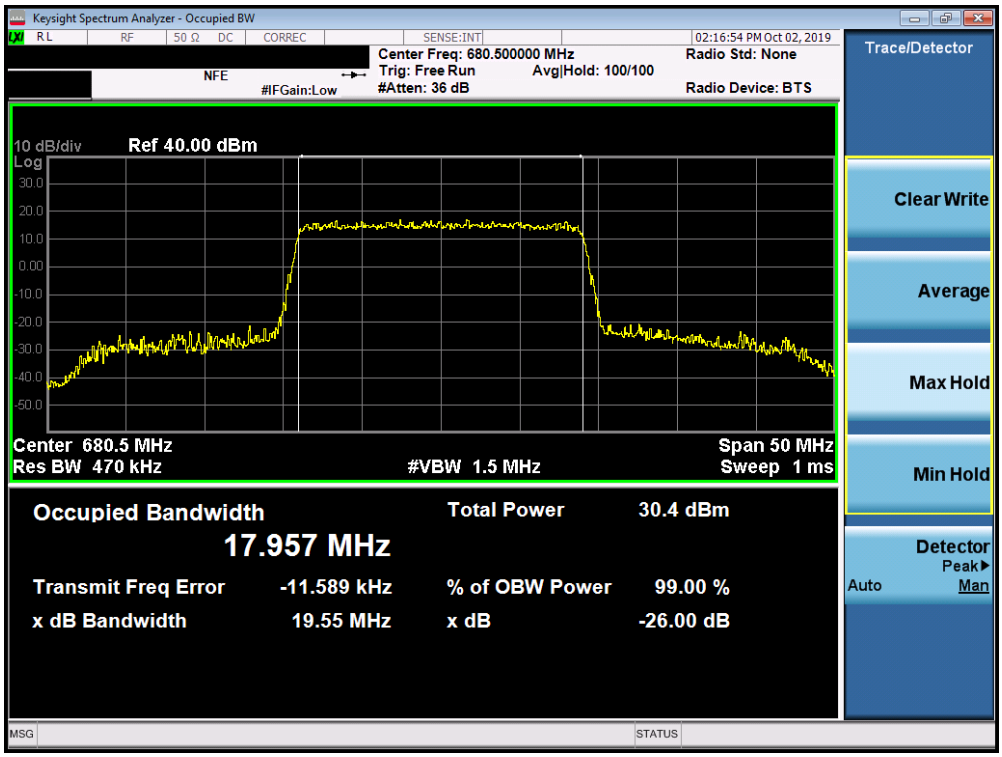
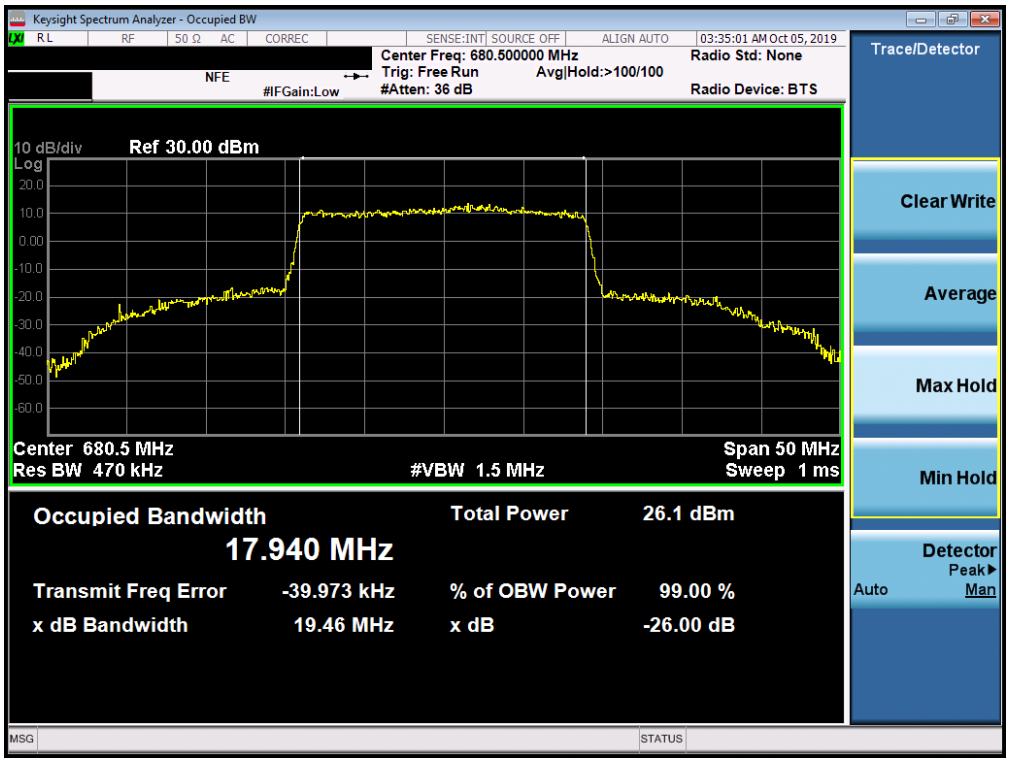


Plot 7-15. Occupied Bandwidth Plot (Band 71 - 20.0MHz 64-QAM - Full RB Configuration)



Plot 7-16. Occupied Bandwidth Plot (Band 71 - 20.0MHz 256-QAM - Full RB Configuration)

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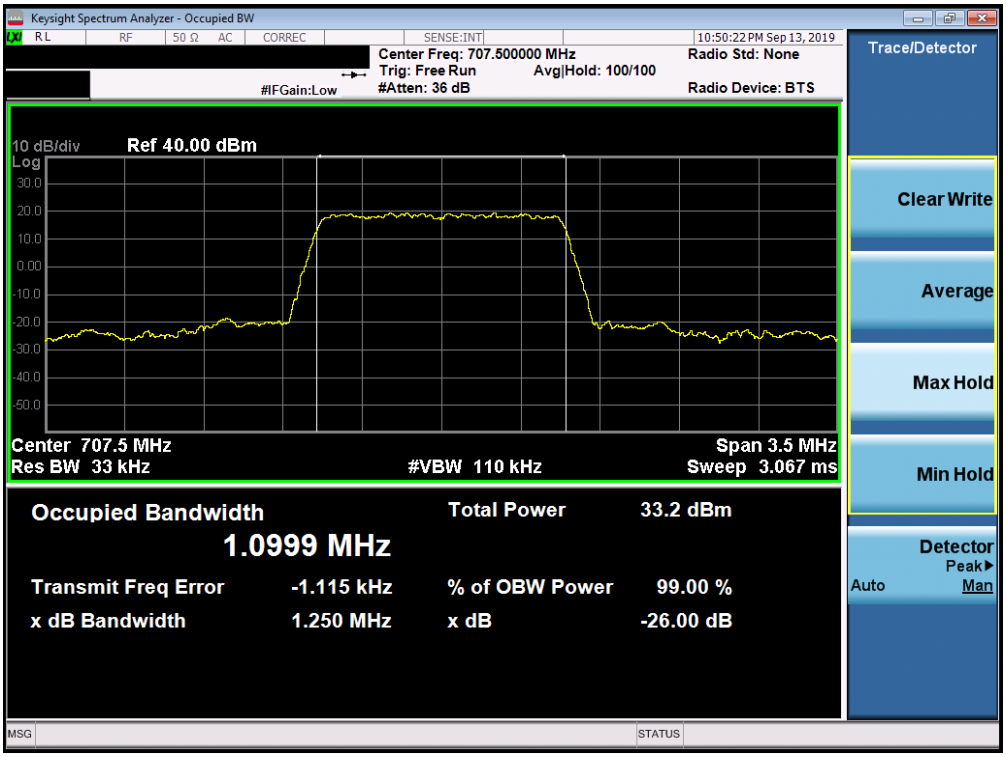
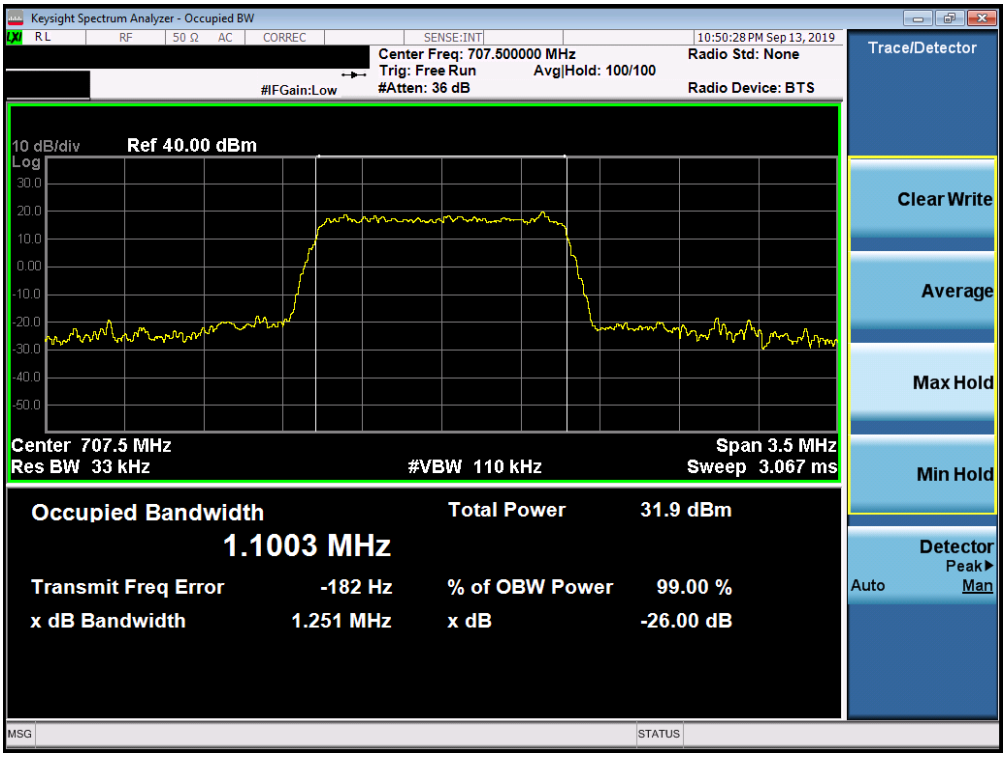
Band 12



Plot 7-17. Occupied Bandwidth Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-18. Occupied Bandwidth Plot (Band 12 - 1.4MHz 16-QAM - Full RB Configuration)

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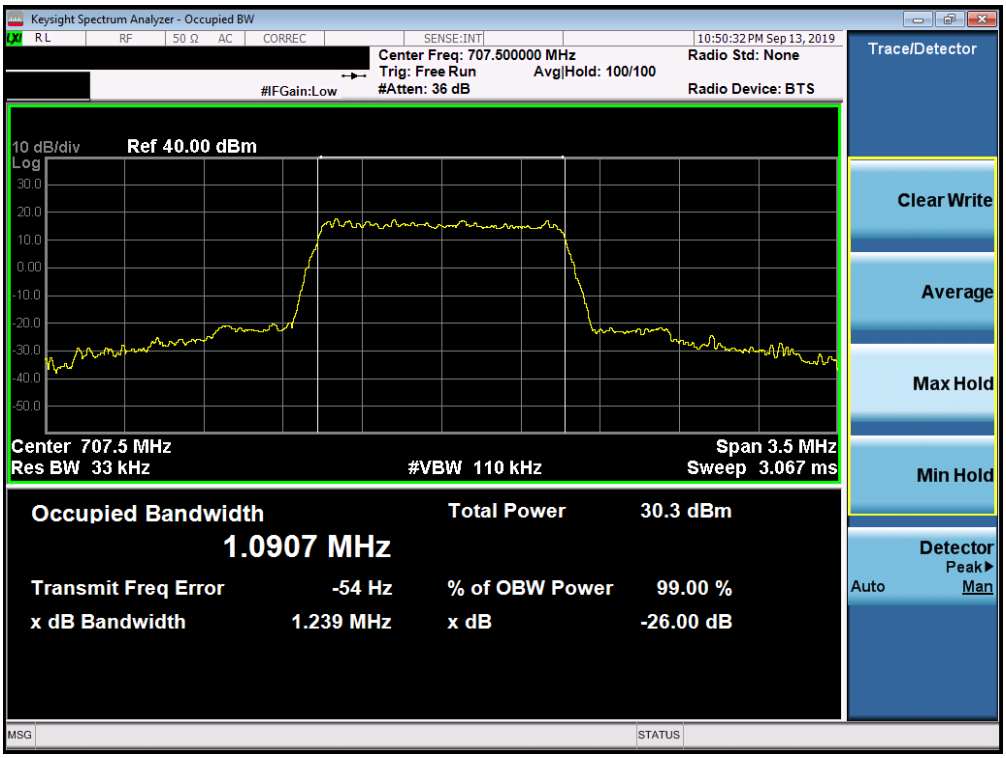
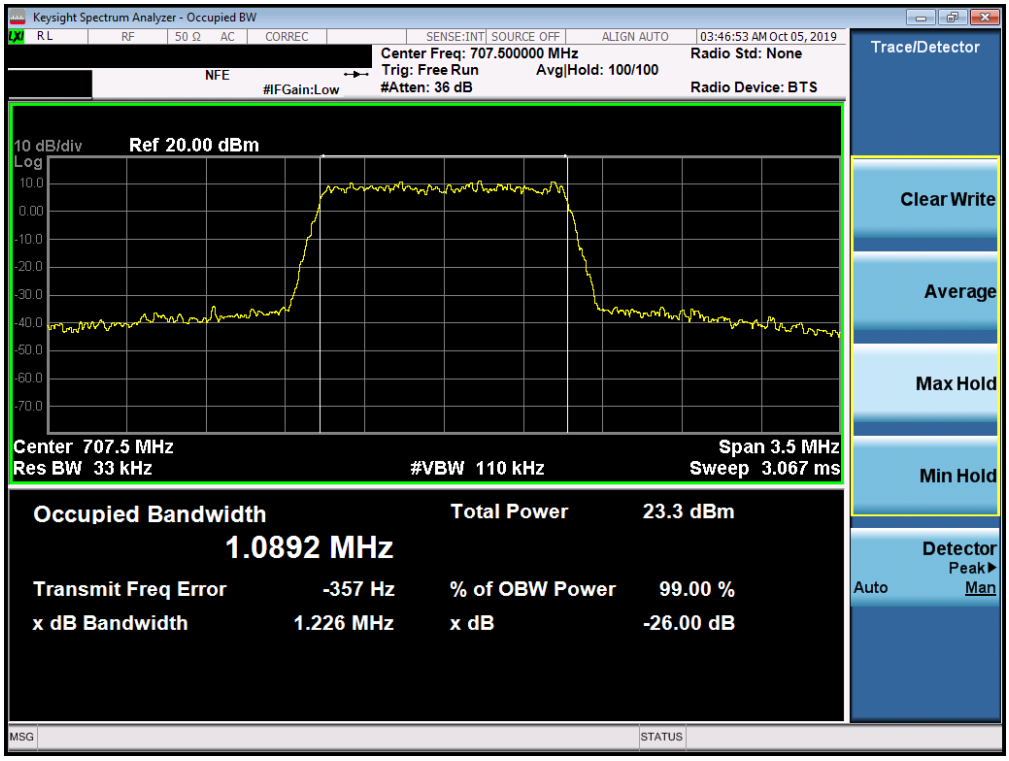


Plot 7-19. Occupied Bandwidth Plot (Band 12 - 1.4MHz 64-QAM - Full RB Configuration)



Plot 7-20. Occupied Bandwidth Plot (Band 12 - 1.4MHz 256-QAM - Full RB Configuration)

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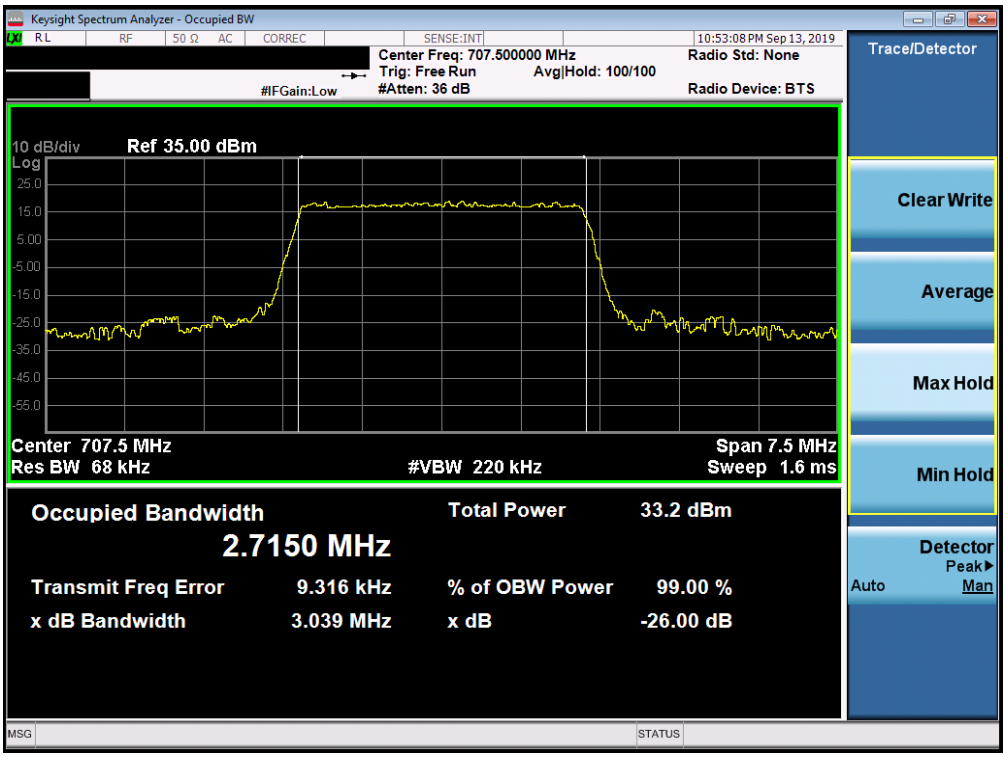
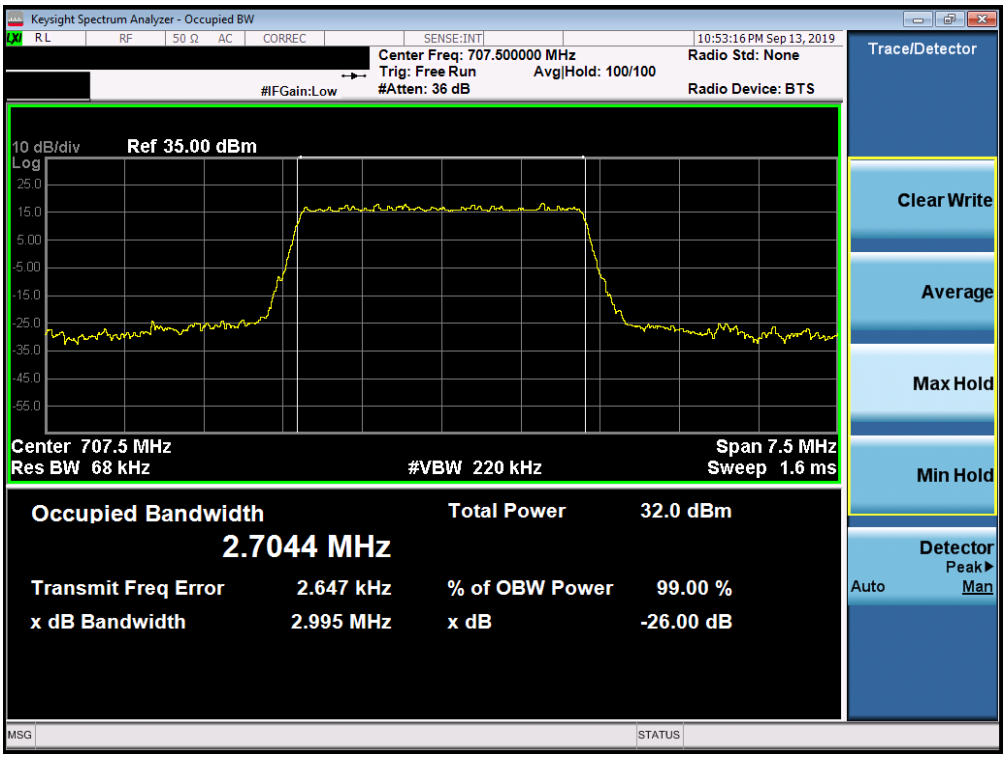


Plot 7-21. Occupied Bandwidth Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-22. Occupied Bandwidth Plot (Band 12 - 3.0MHz 16-QAM - Full RB Configuration)

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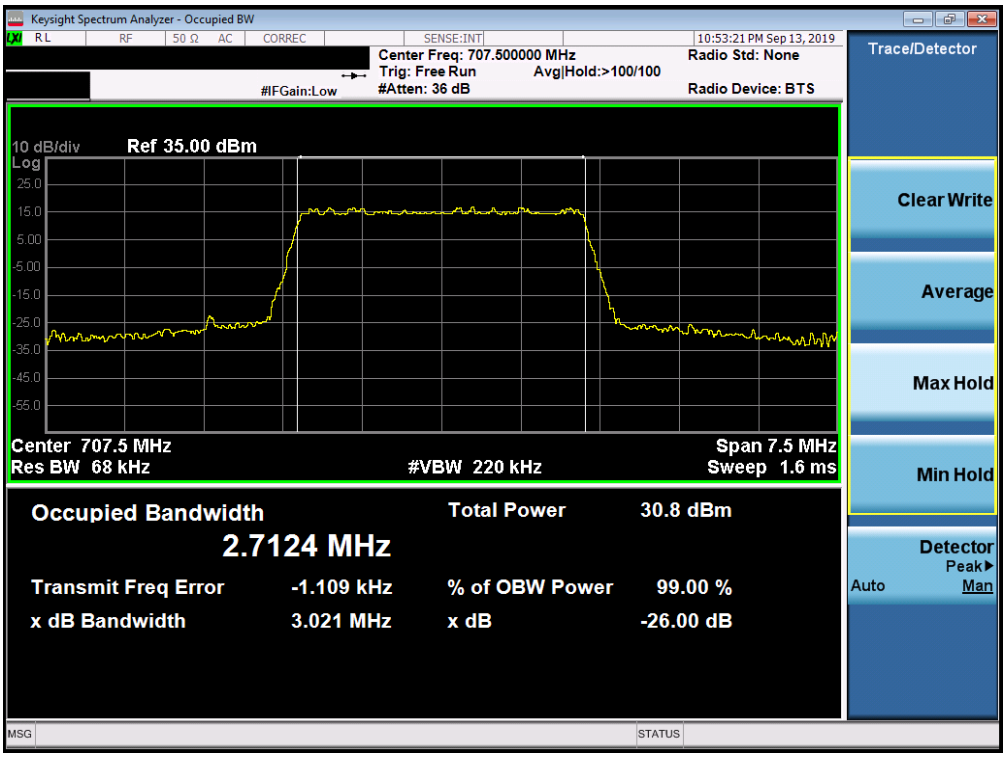
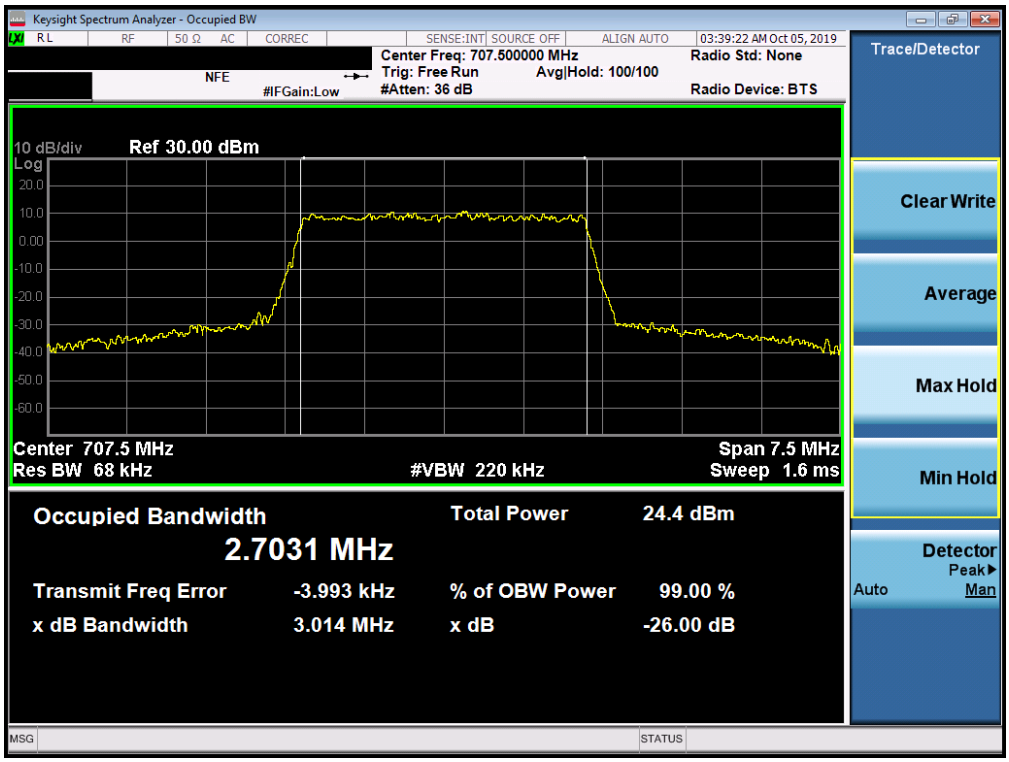


Plot 7-23. Occupied Bandwidth Plot (Band 12 - 3.0MHz 64-QAM - Full RB Configuration)



Plot 7-24. Occupied Bandwidth Plot (Band 12 - 3.0MHz 256-QAM - Full RB Configuration)

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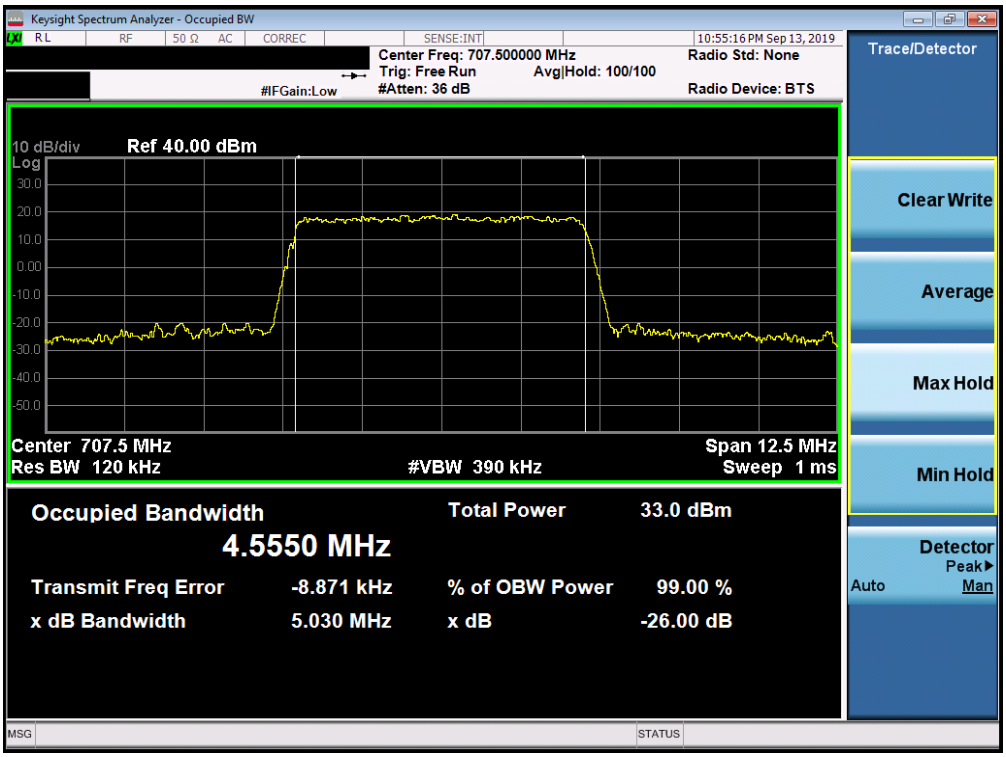
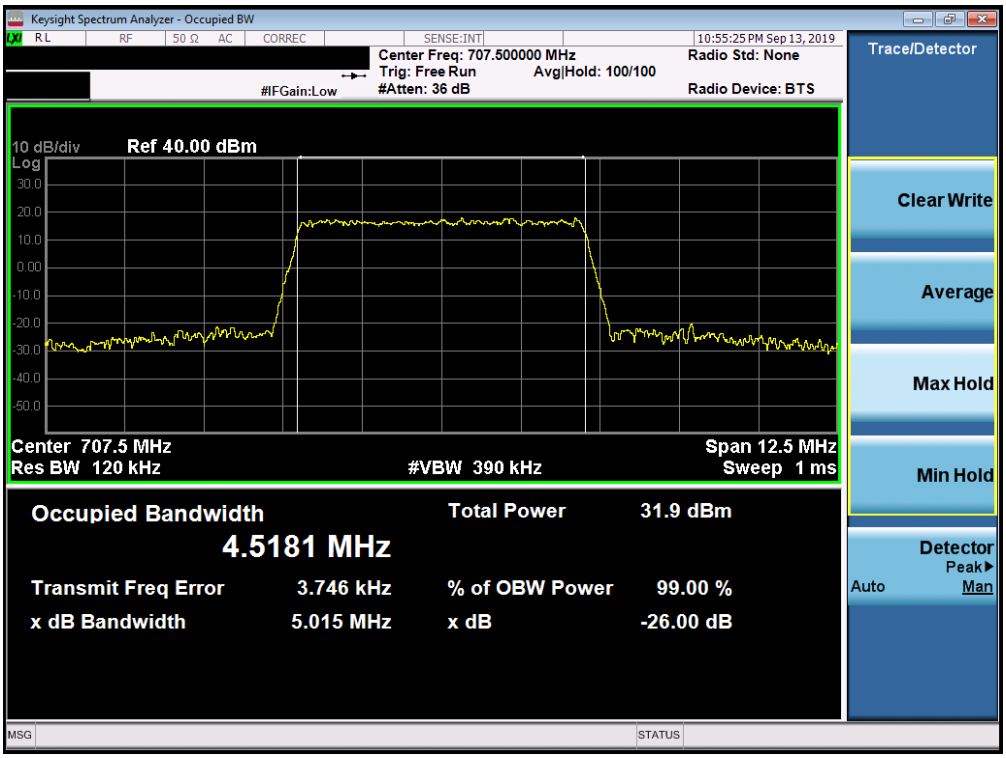


Plot 7-25. Occupied Bandwidth Plot (Band 12 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-26. Occupied Bandwidth Plot (Band 12 - 5.0MHz 16-QAM - Full RB Configuration)

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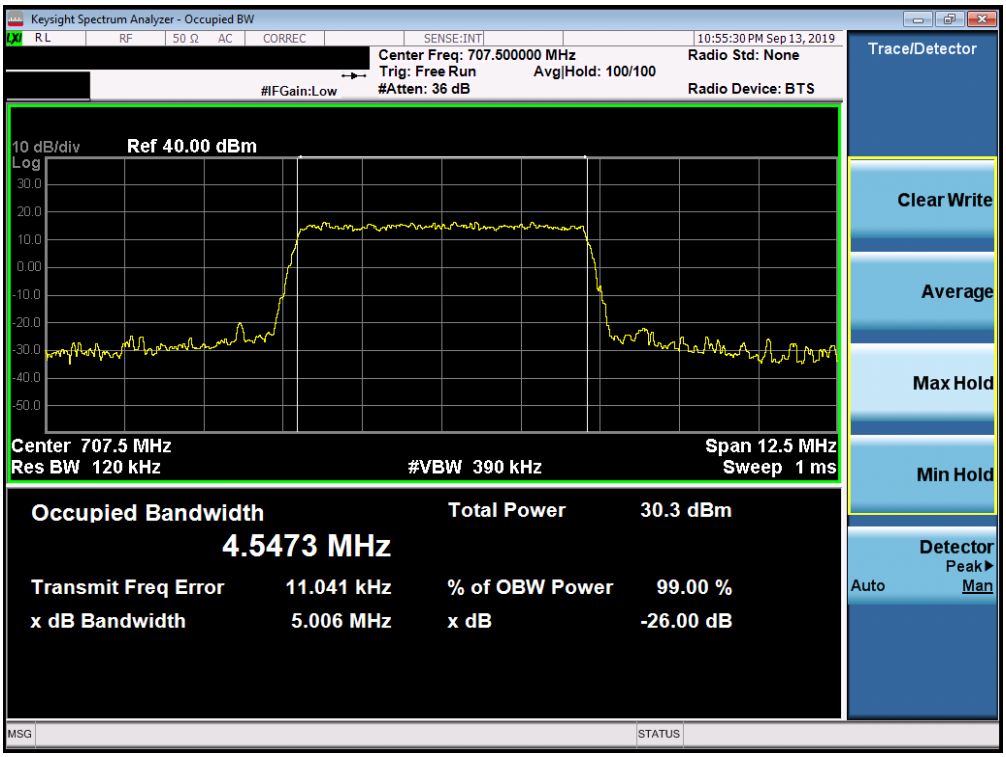
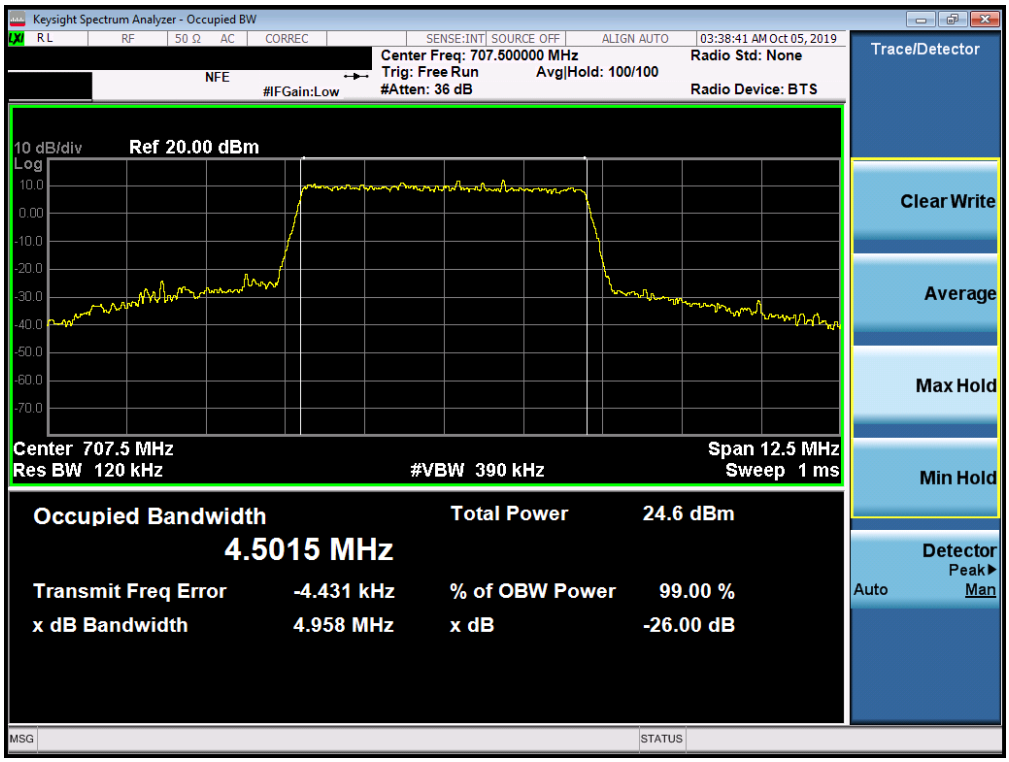


Plot 7-27. Occupied Bandwidth Plot (Band 12 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-28. Occupied Bandwidth Plot (Band 12 - 5.0MHz 256-QAM - Full RB Configuration)

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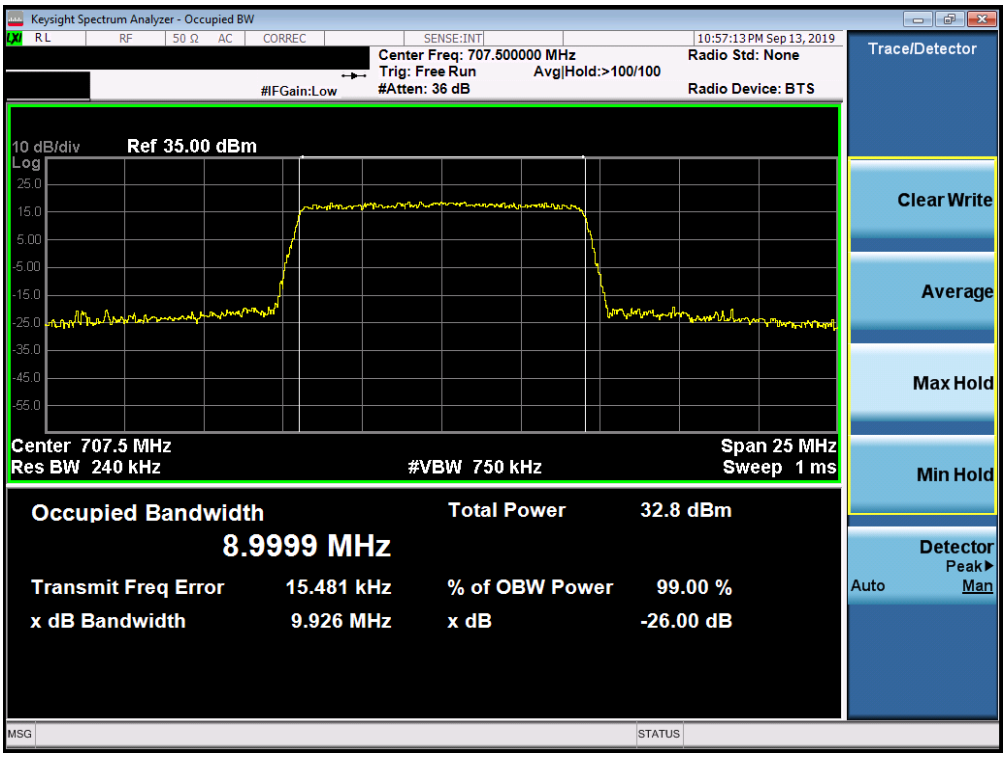
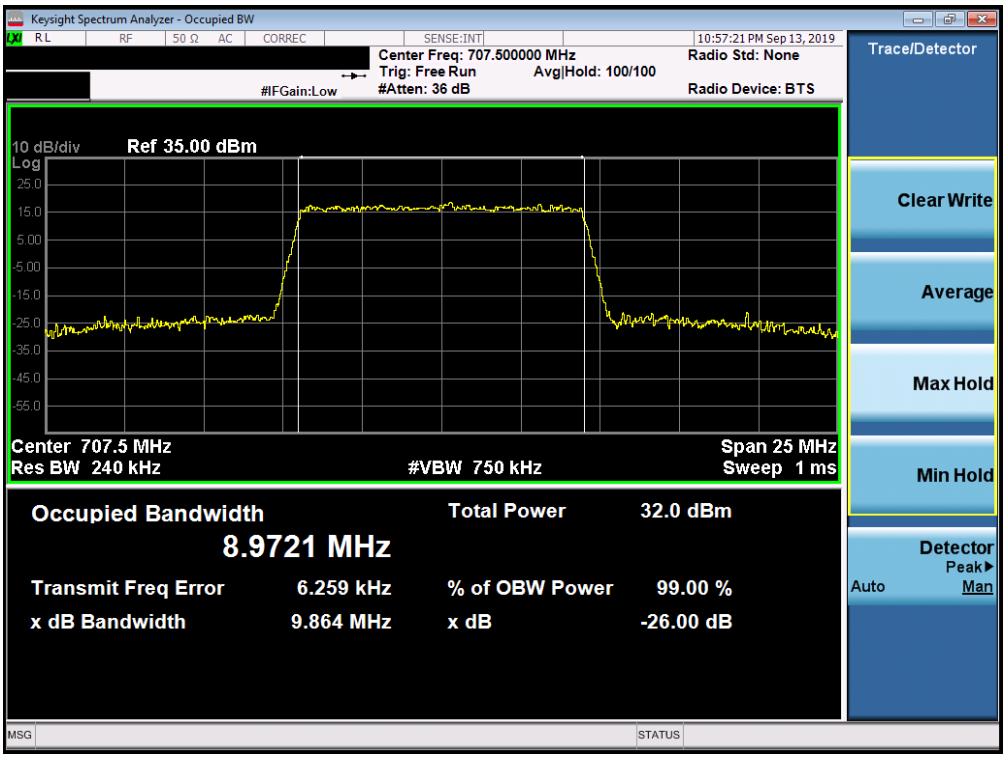


Plot 7-29. Occupied Bandwidth Plot (Band 12 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-30. Occupied Bandwidth Plot (Band 12 - 10.0MHz 16-QAM - Full RB Configuration)

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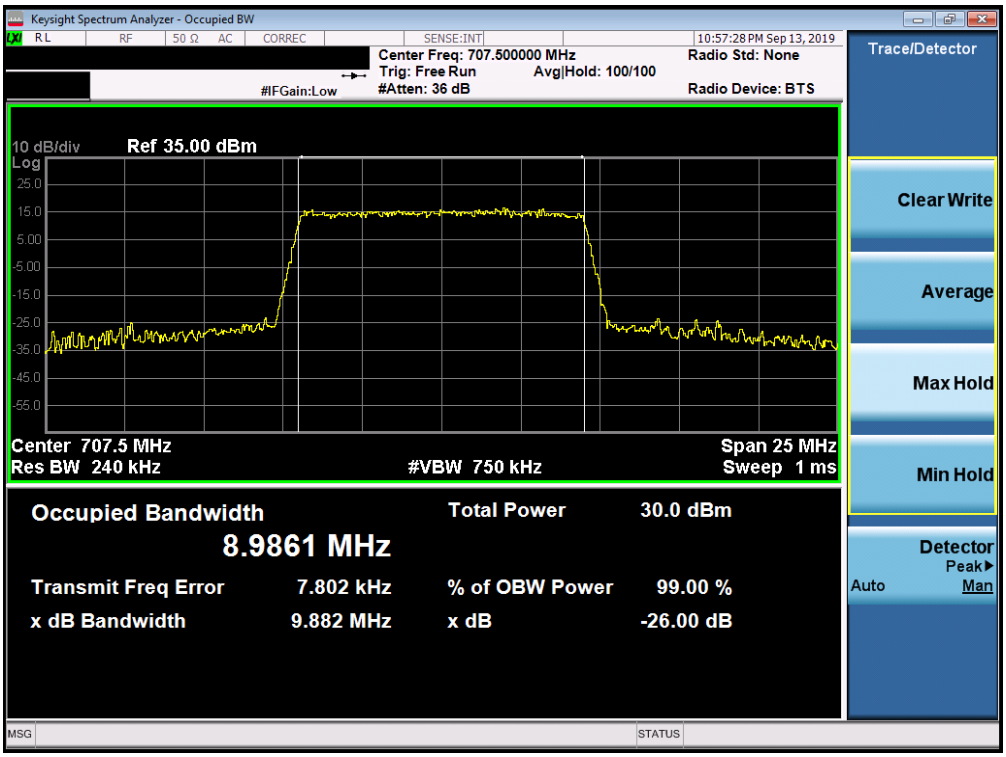
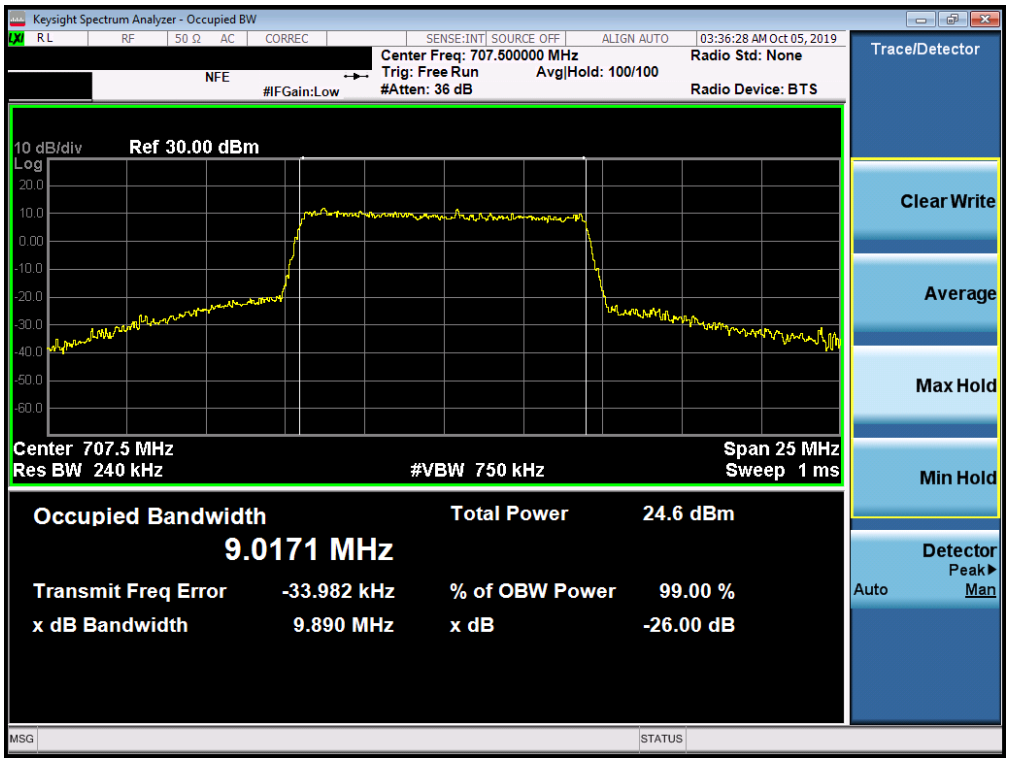


Plot 7-31. Occupied Bandwidth Plot (Band 12 - 10.0MHz 64-QAM - Full RB Configuration)



Plot 7-32. Occupied Bandwidth Plot (Band 12 - 10.0MHz 256-QAM - Full RB Configuration)

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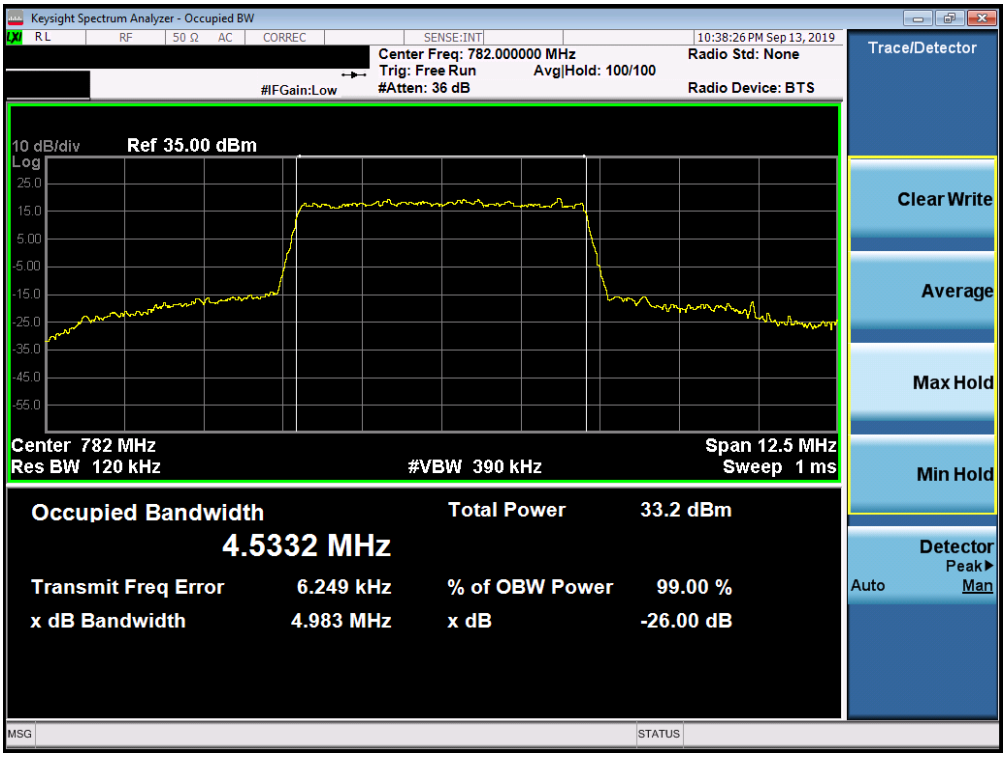
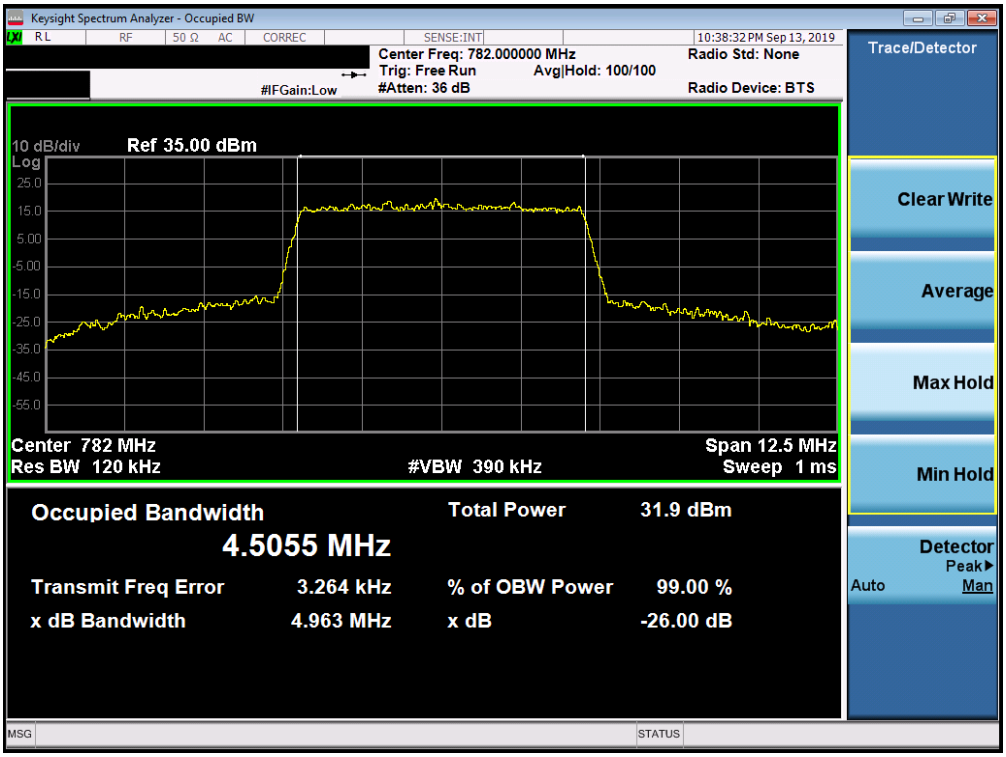
Band 13



Plot 7-33. Occupied Bandwidth Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-34. Occupied Bandwidth Plot (Band 13 - 5.0MHz 16-QAM - Full RB Configuration)

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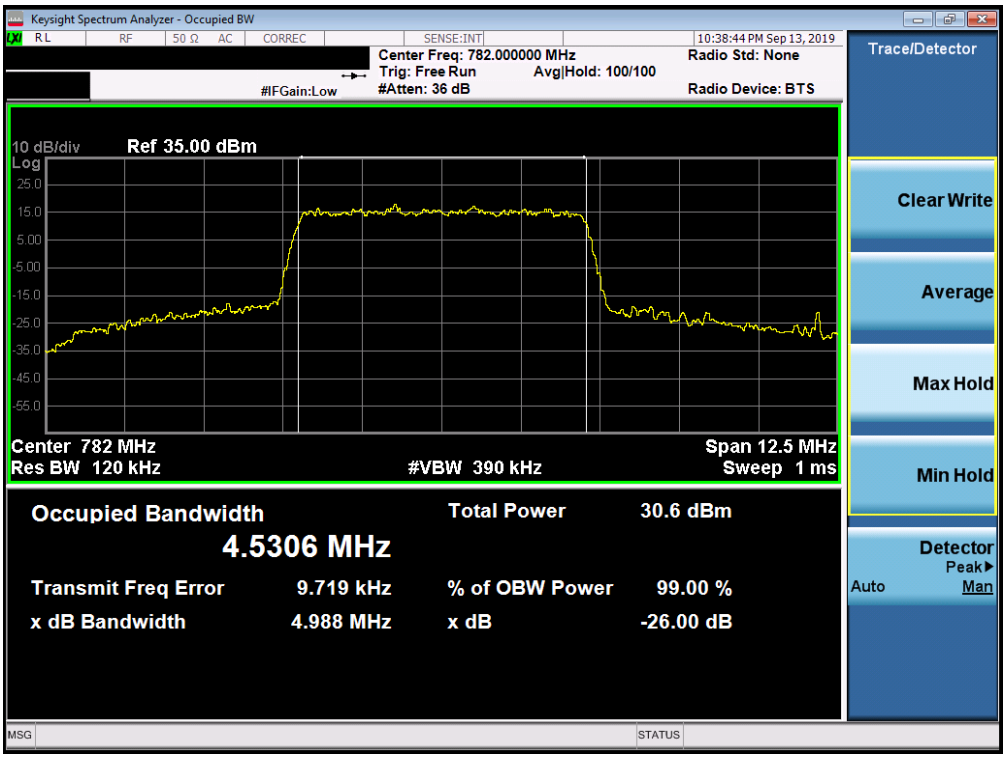
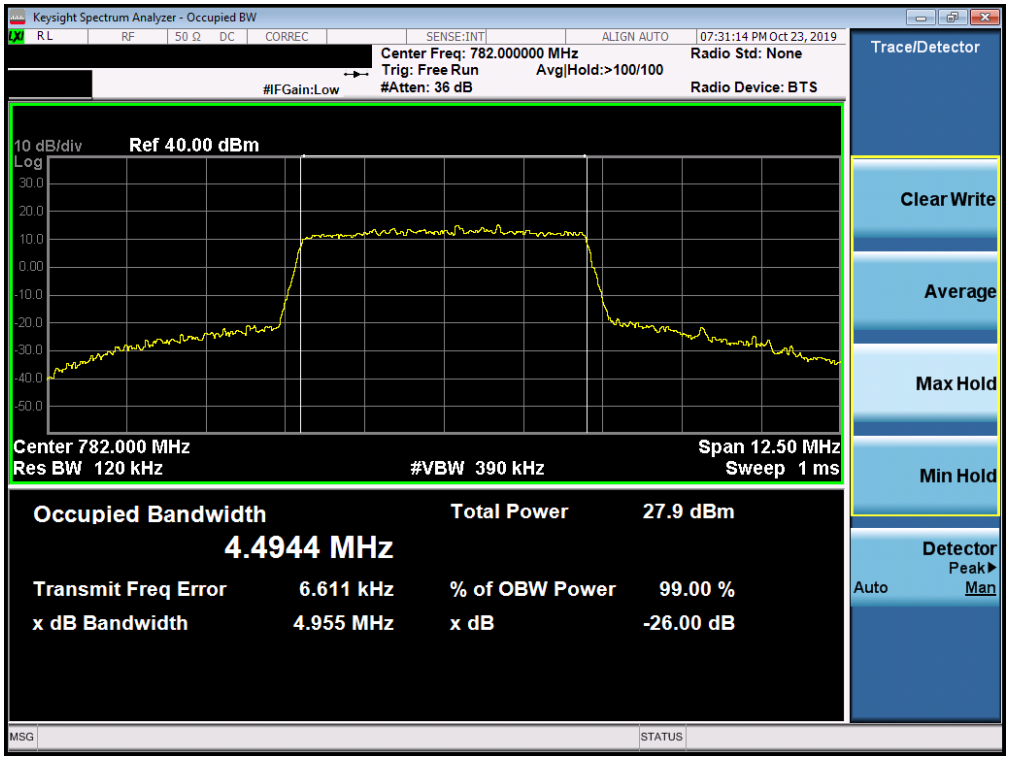


Plot 7-35. Occupied Bandwidth Plot (Band 13 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-36. Occupied Bandwidth Plot (Band 13 - 5.0MHz 256-QAM - Full RB Configuration)

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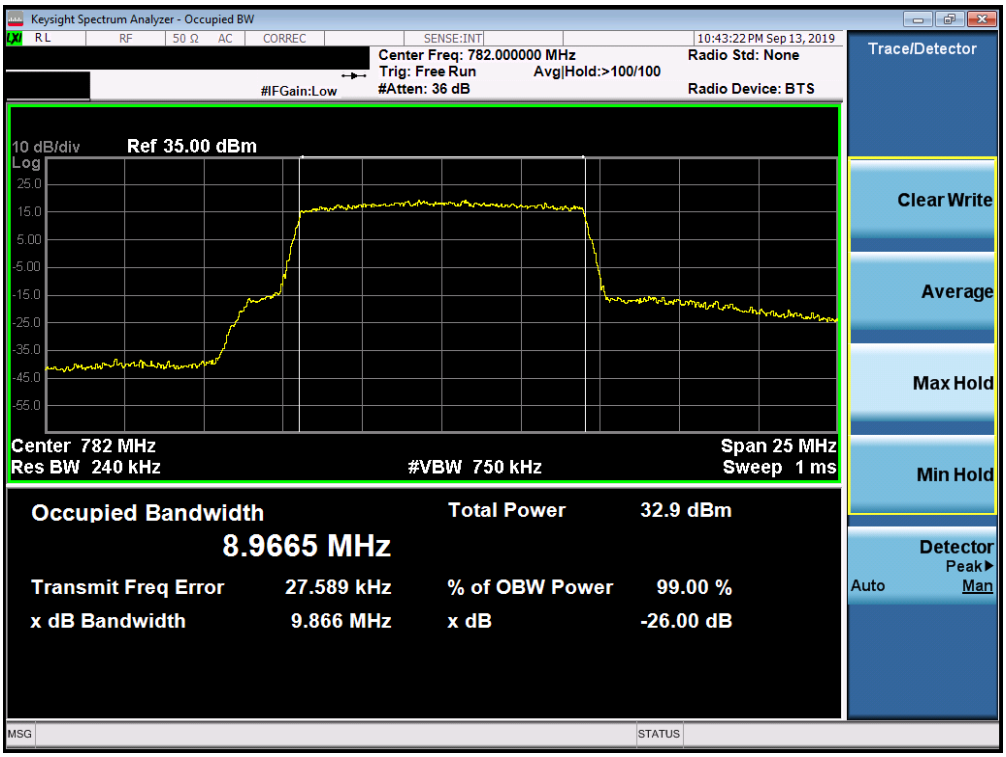
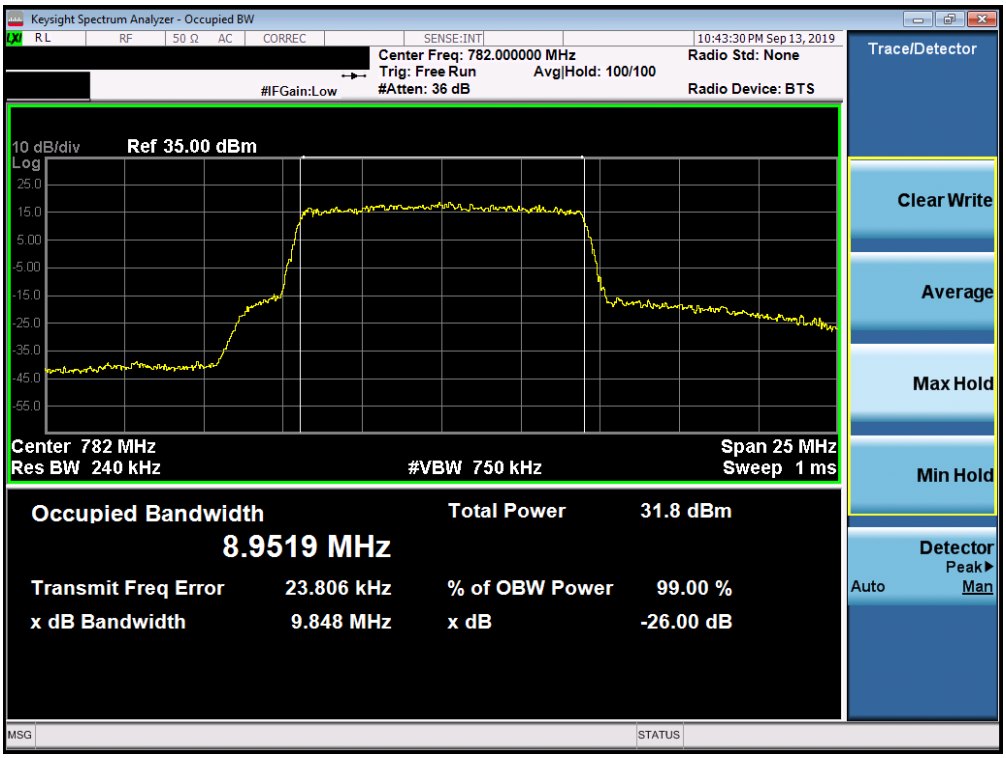


Plot 7-37. Occupied Bandwidth Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-38. Occupied Bandwidth Plot (Band 13 - 10.0MHz 16-QAM - Full RB Configuration)

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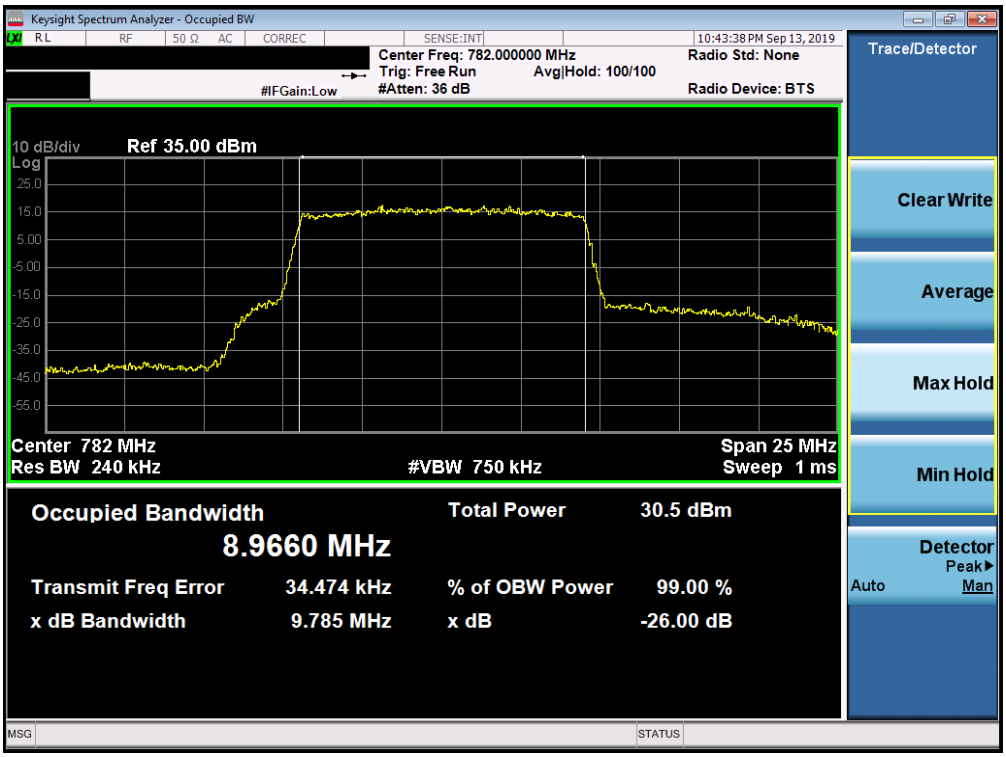
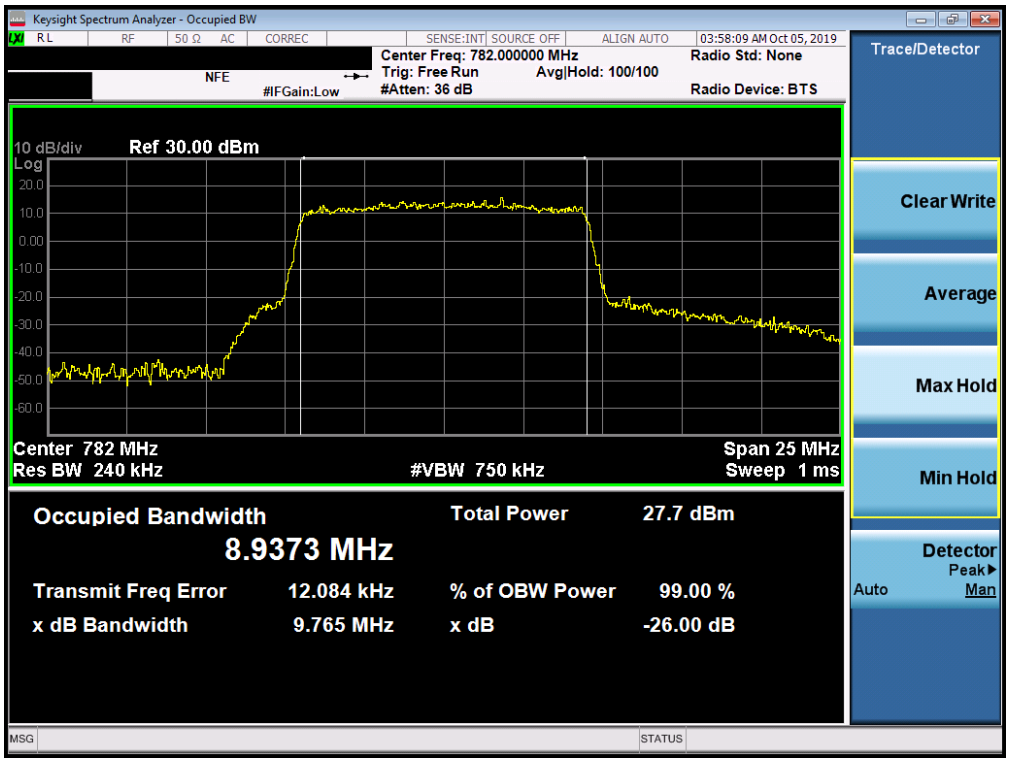


Plot 7-39. Occupied Bandwidth Plot (Band 13 - 10.0MHz 64-QAM - Full RB Configuration)



Plot 7-40. Occupied Bandwidth Plot (Band 13 - 10.0MHz 256-QAM - Full RB Configuration)

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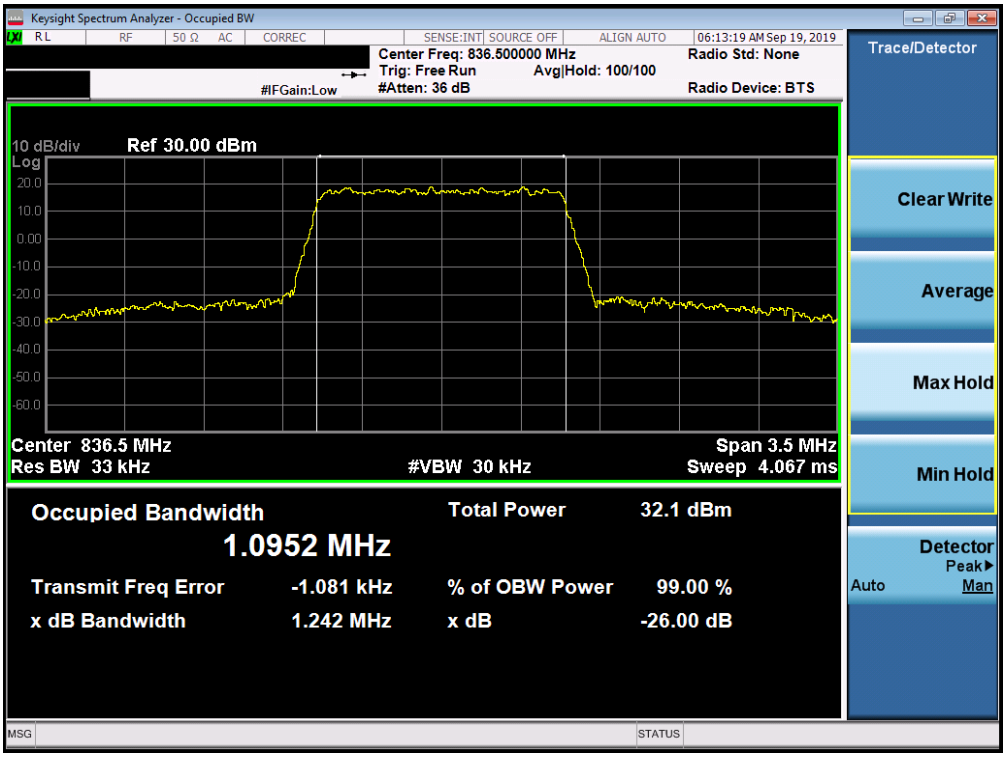
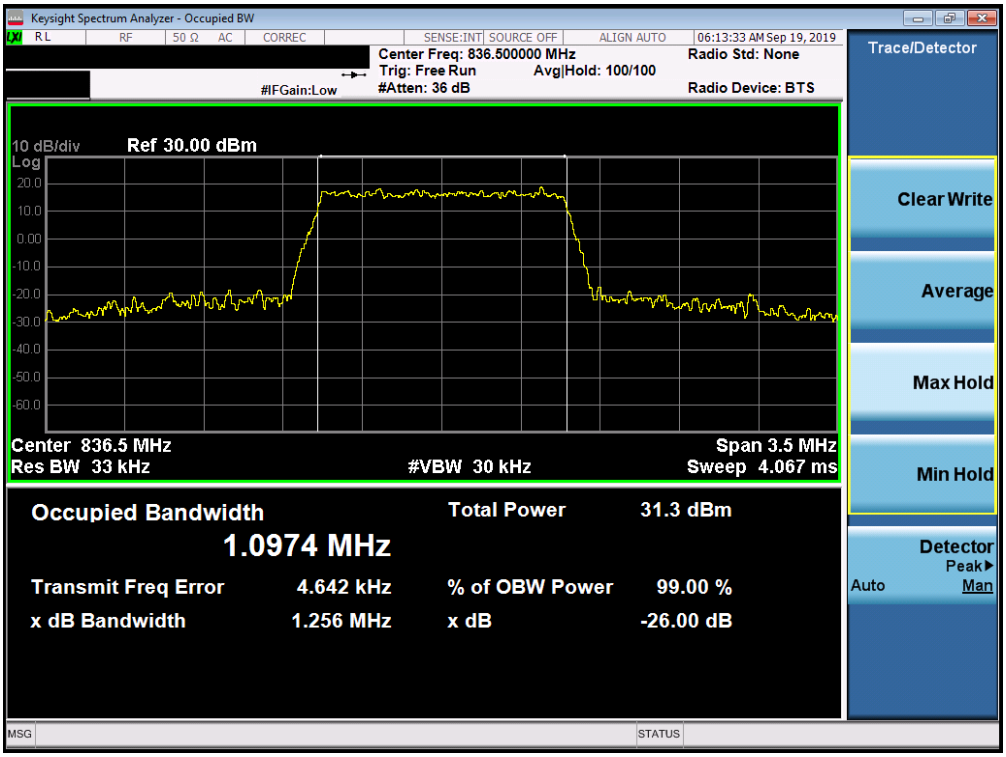
Band 26/5



Plot 7-41. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-42. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz 16-QAM - Full RB Configuration)

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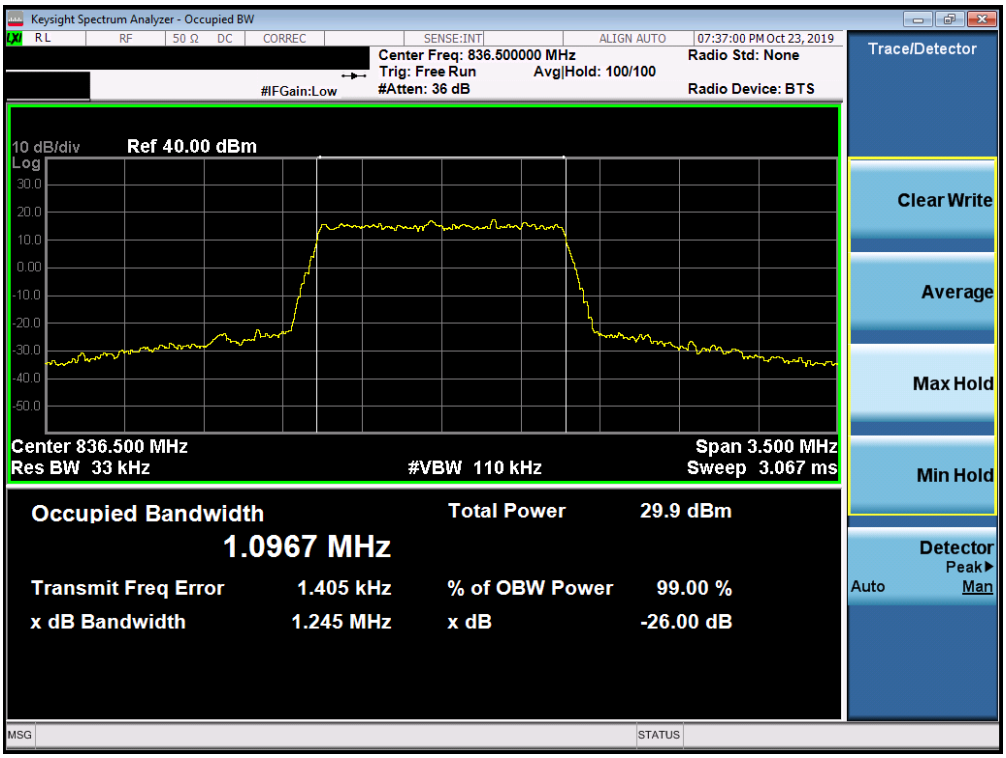
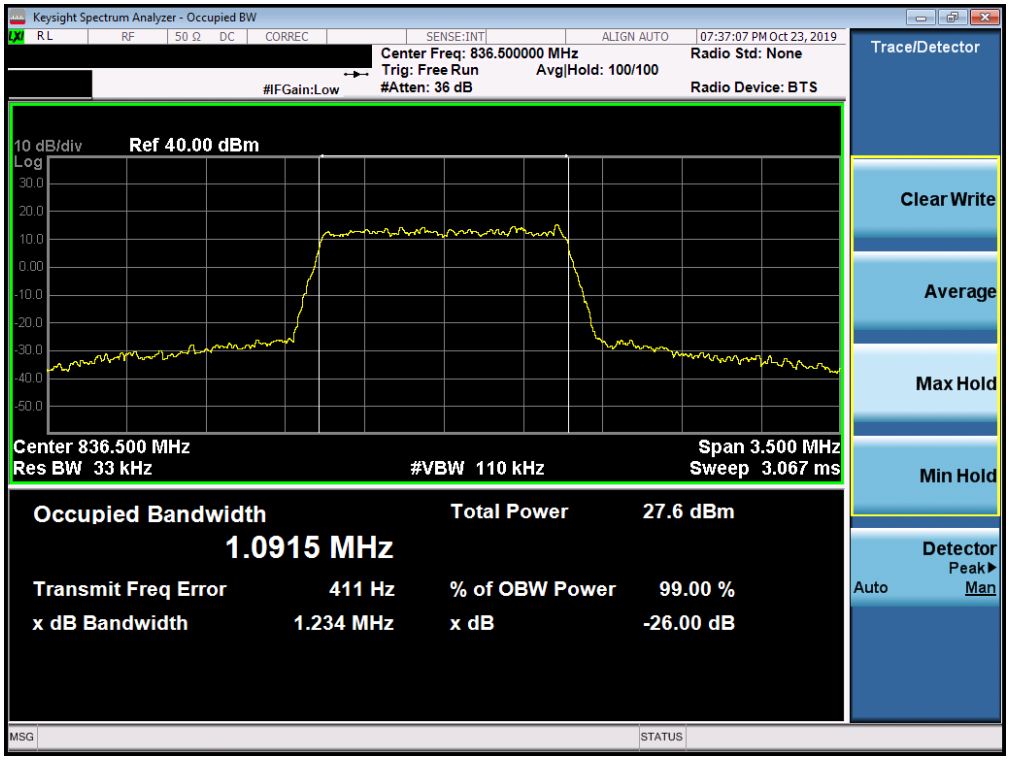


Plot 7-43. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz 64-QAM - Full RB Configuration)



Plot 7-44. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz 256-QAM - Full RB Configuration)

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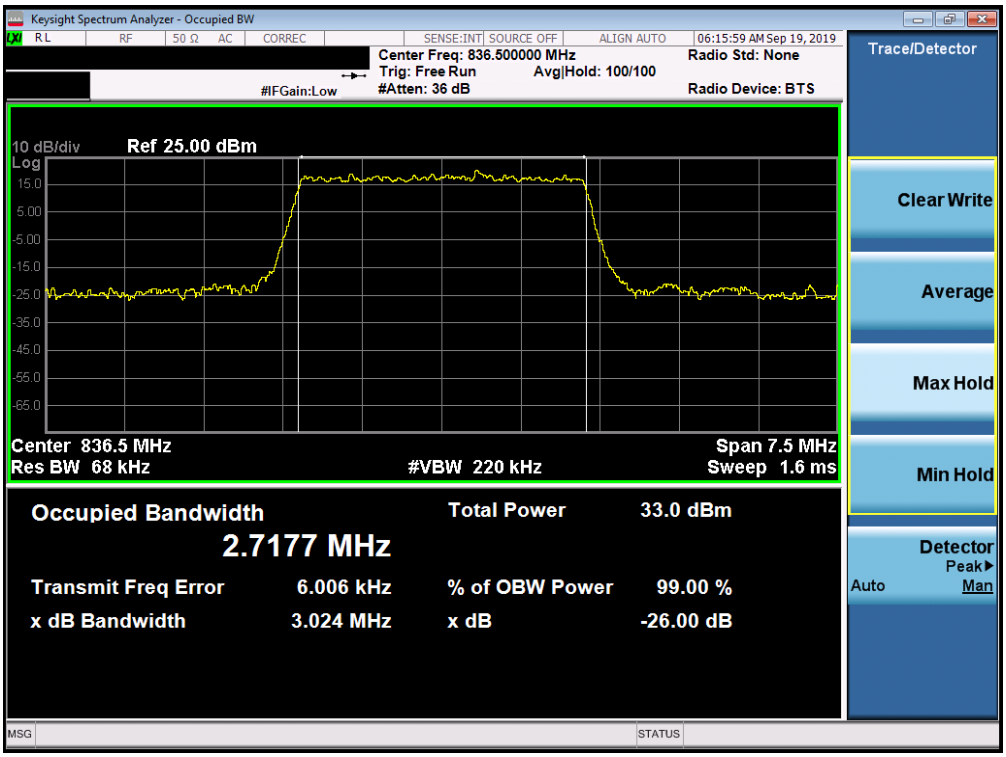
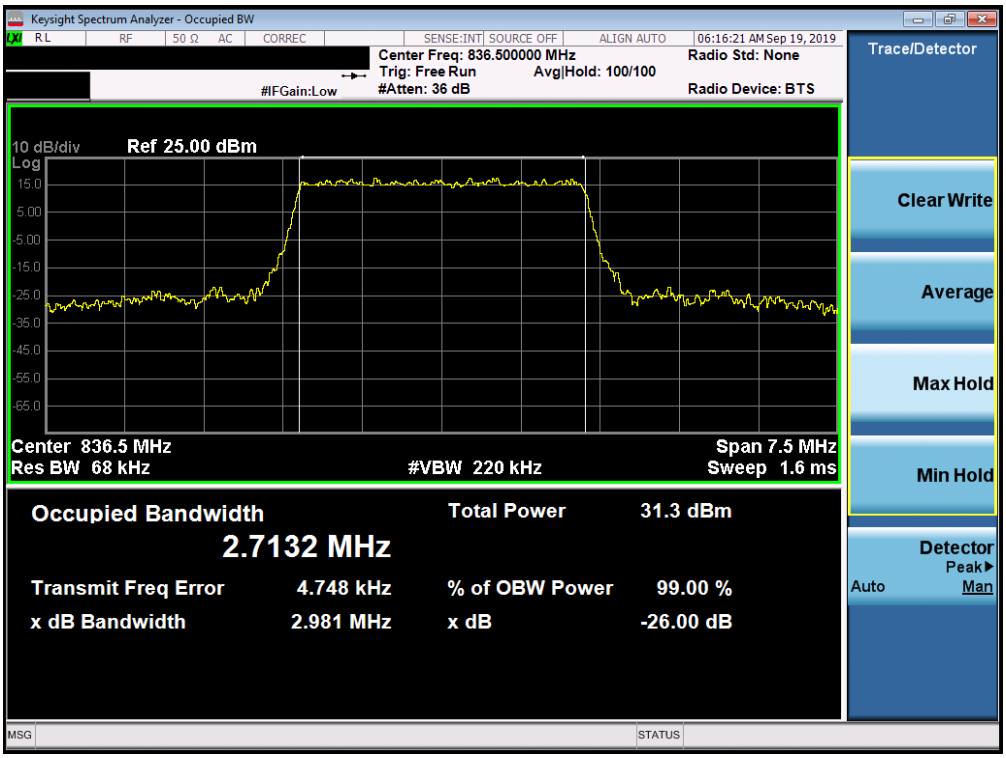


Plot 7-45. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-46. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz 16-QAM - Full RB Configuration)

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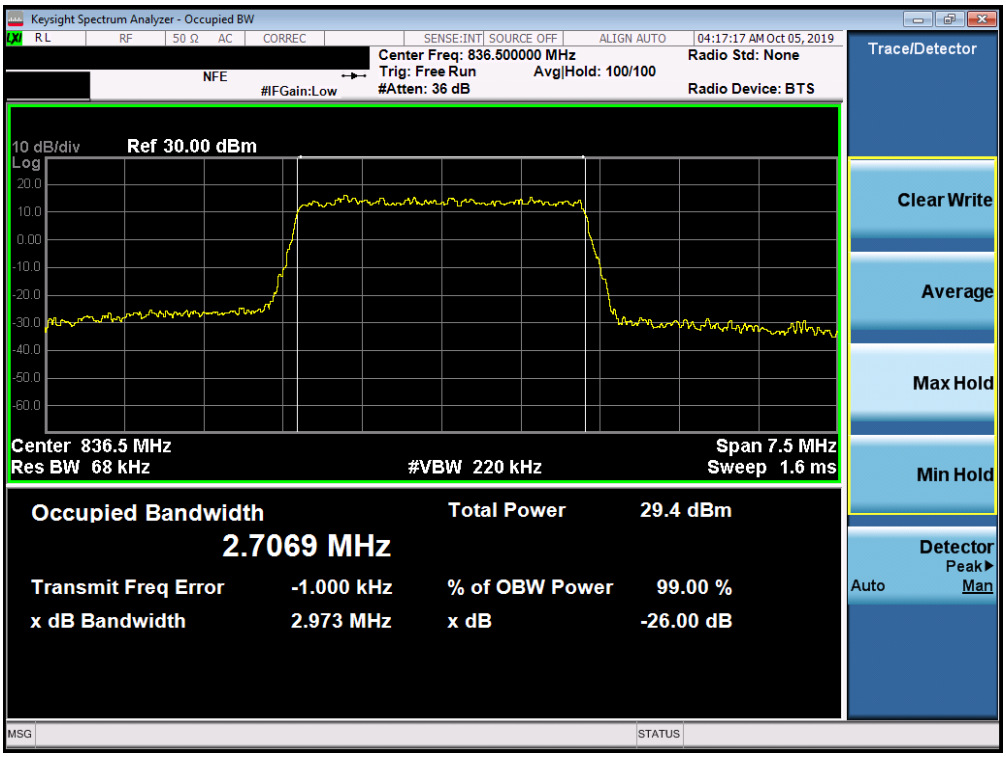
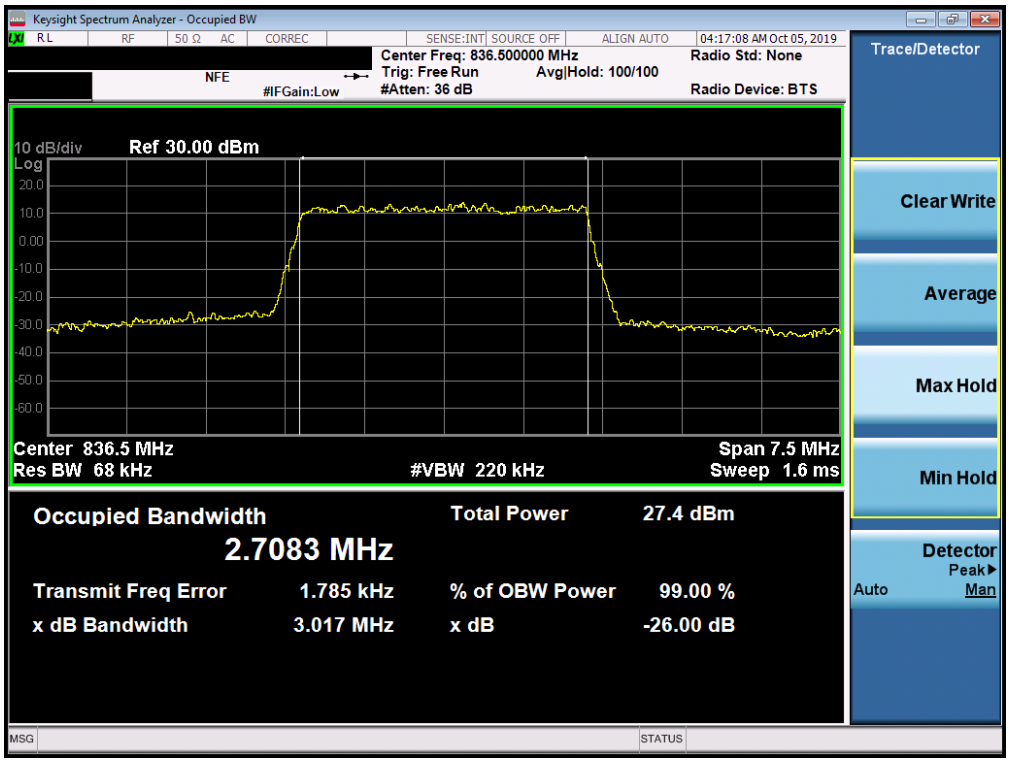


Plot 7-47. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz 64-QAM - Full RB Configuration)



Plot 7-48. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz 256-QAM - Full RB Configuration)

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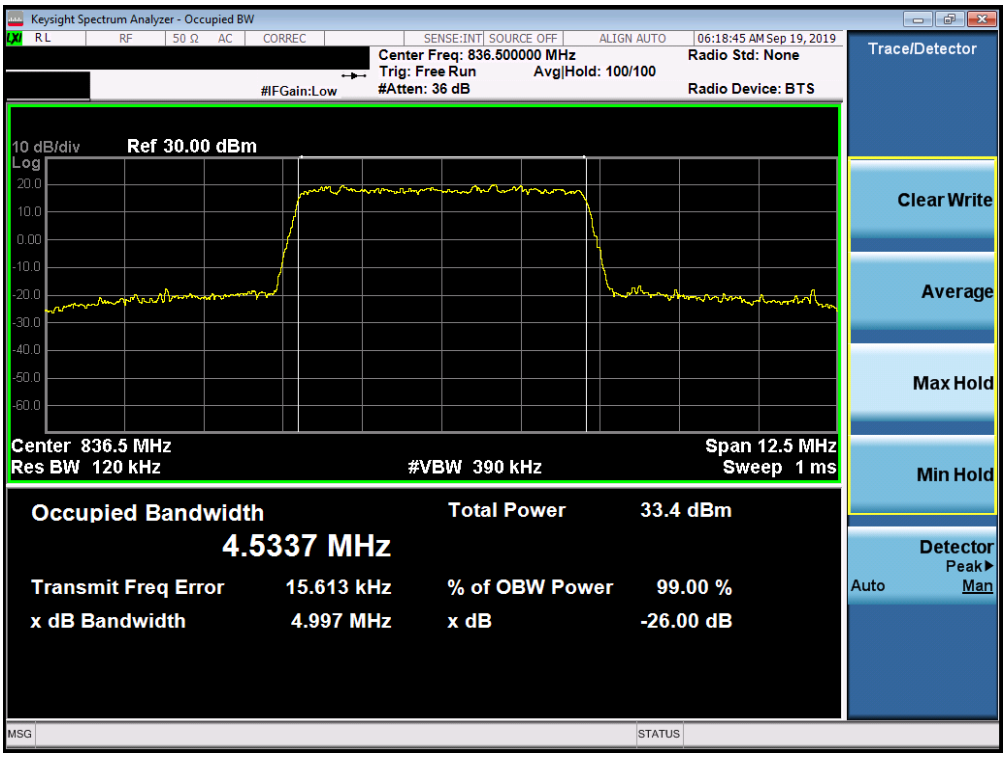
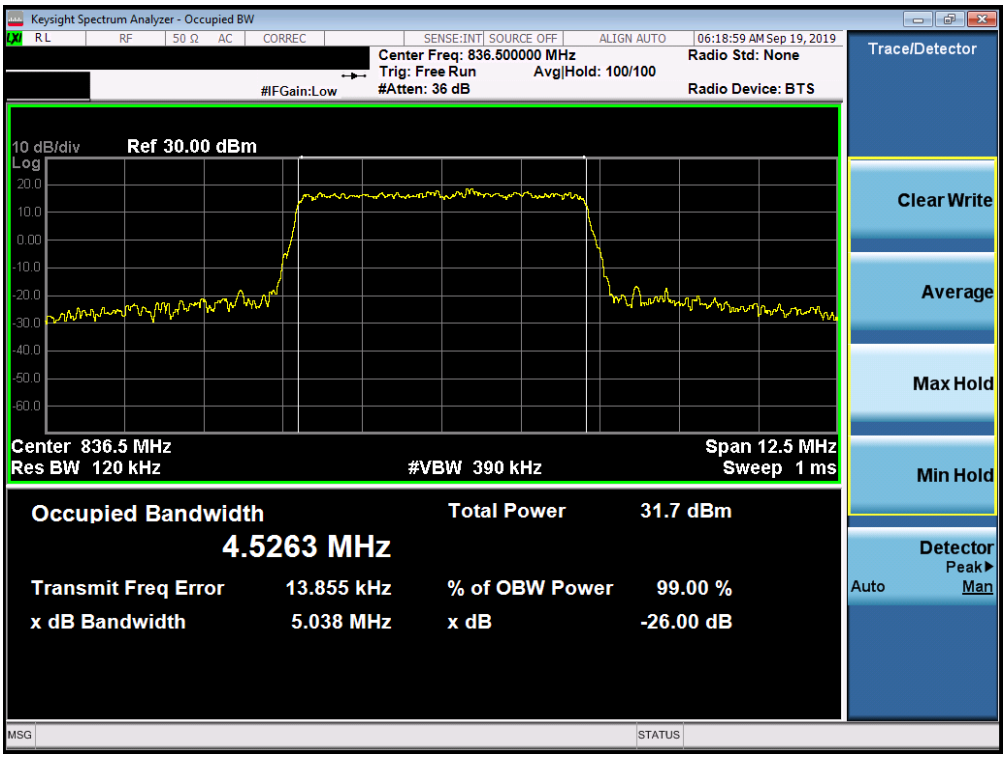


Plot 7-49. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-50. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz 16-QAM - Full RB Configuration)

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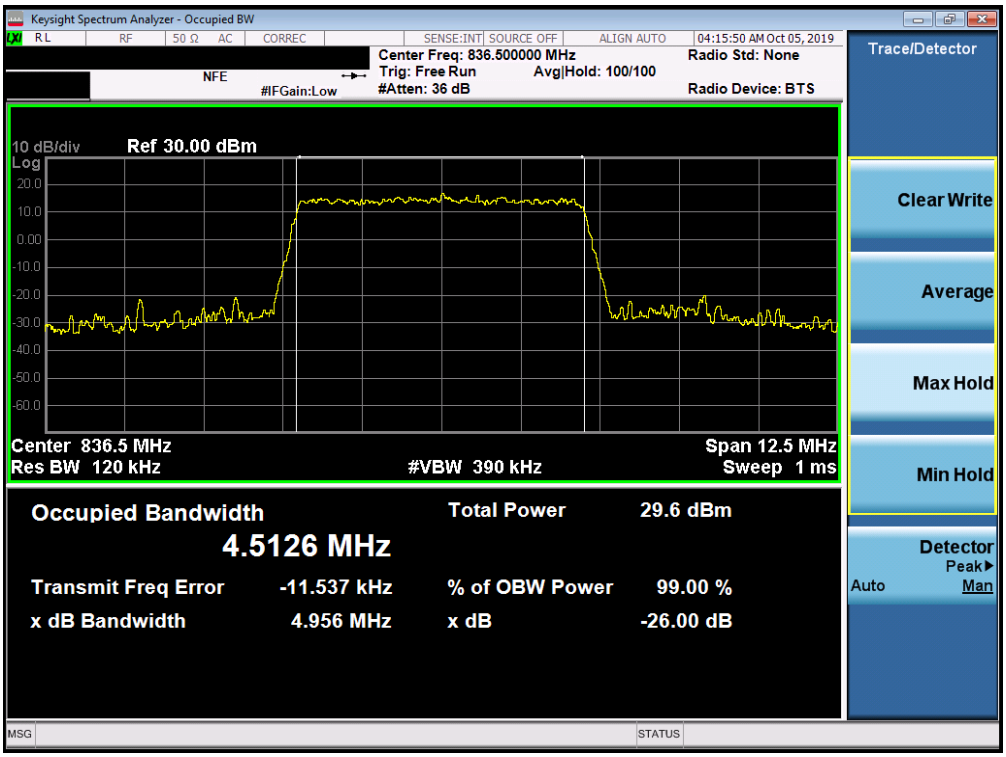
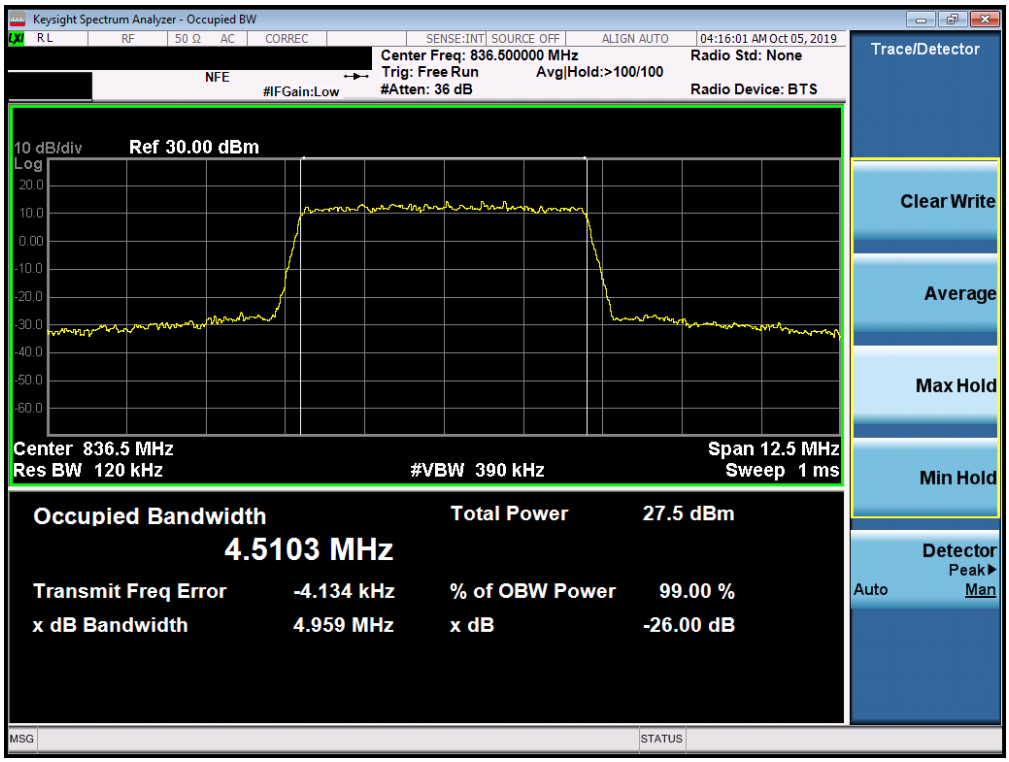


Plot 7-51. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-52. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz 256-QAM - Full RB Configuration)

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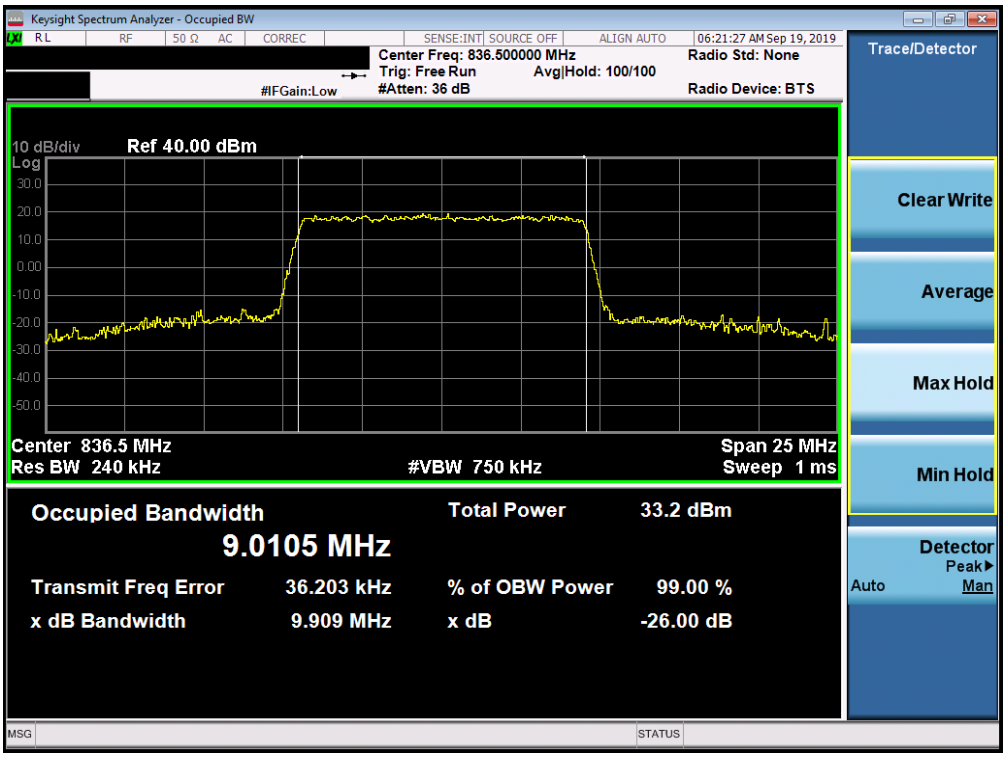
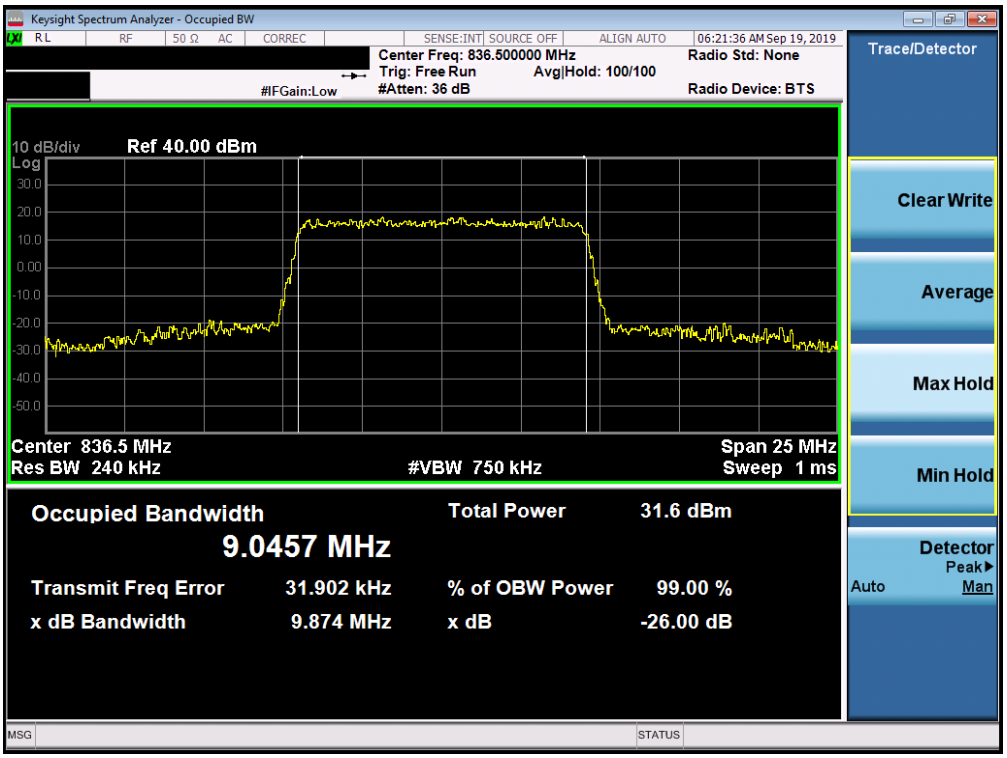


Plot 7-53. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-54. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz 16-QAM - Full RB Configuration)

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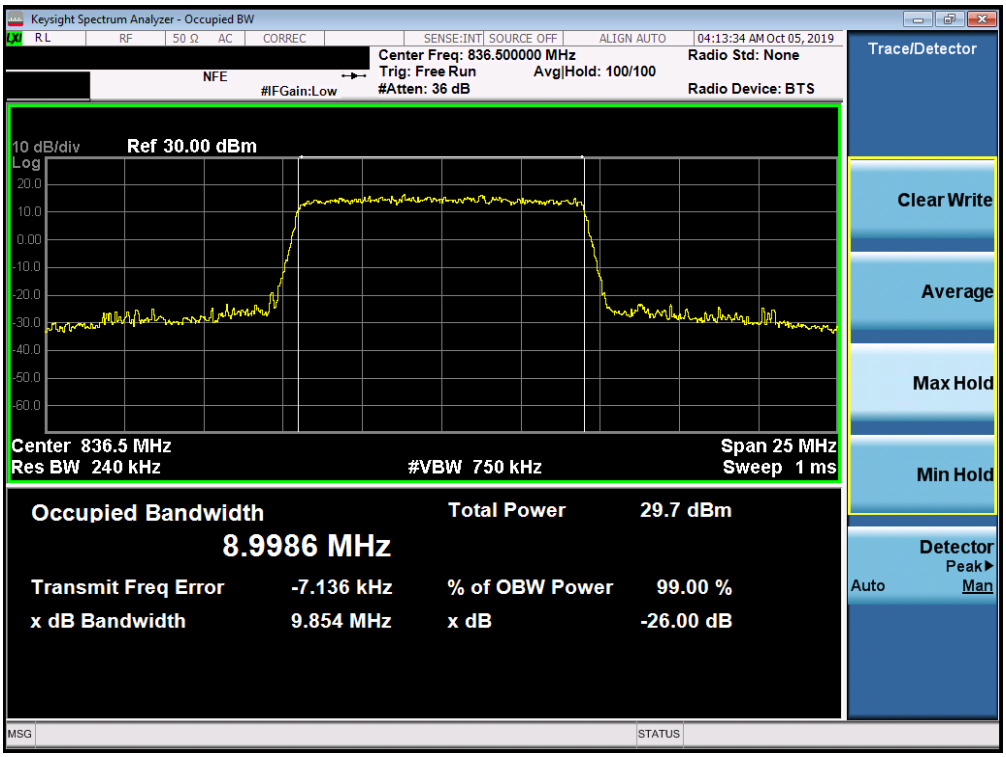
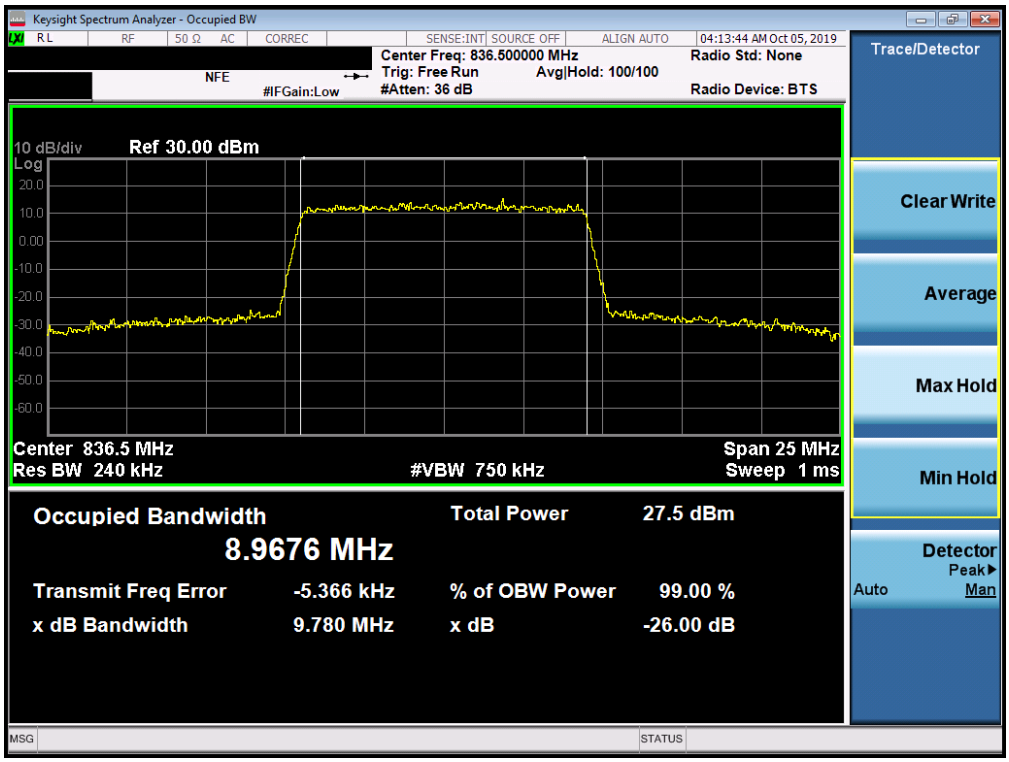


Plot 7-55. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz 64-QAM - Full RB Configuration)



Plot 7-56. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz 256-QAM - Full RB Configuration)

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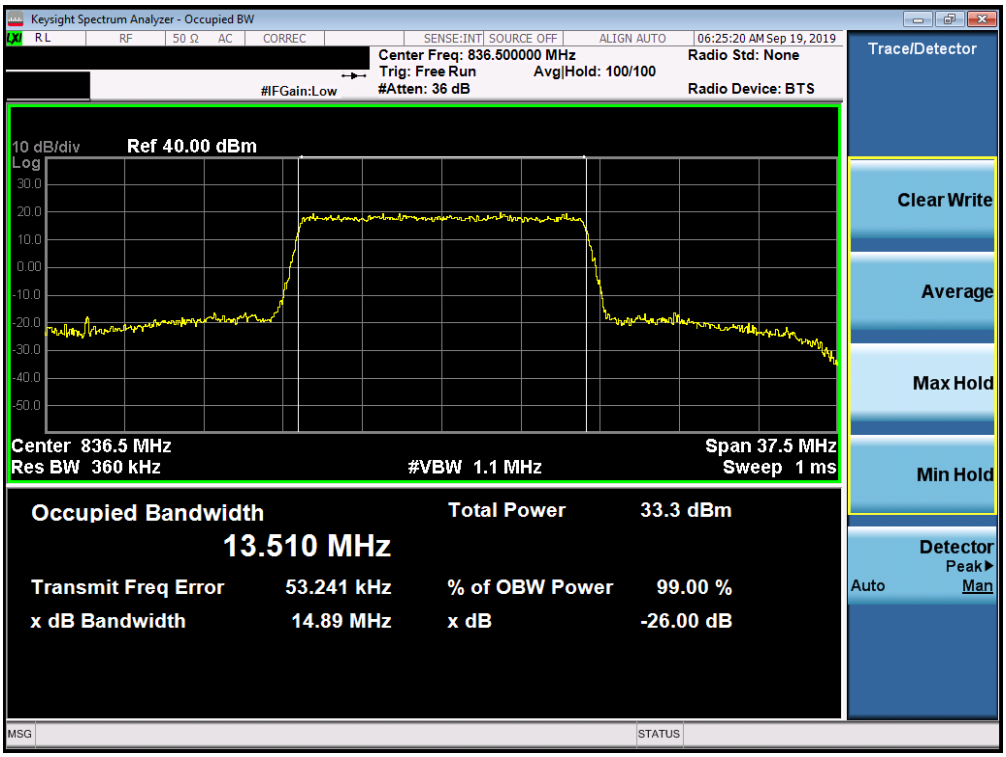
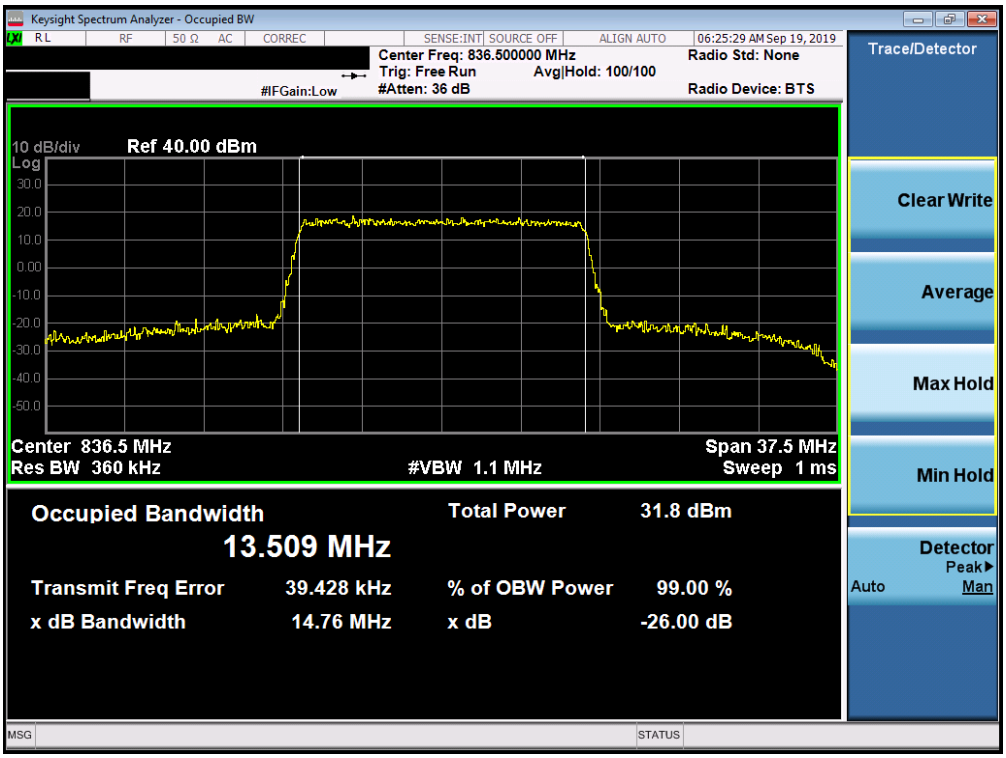


Plot 7-57. Occupied Bandwidth Plot (Band 26 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-58. Occupied Bandwidth Plot (Band 26 - 15.0MHz 16-QAM - Full RB Configuration)

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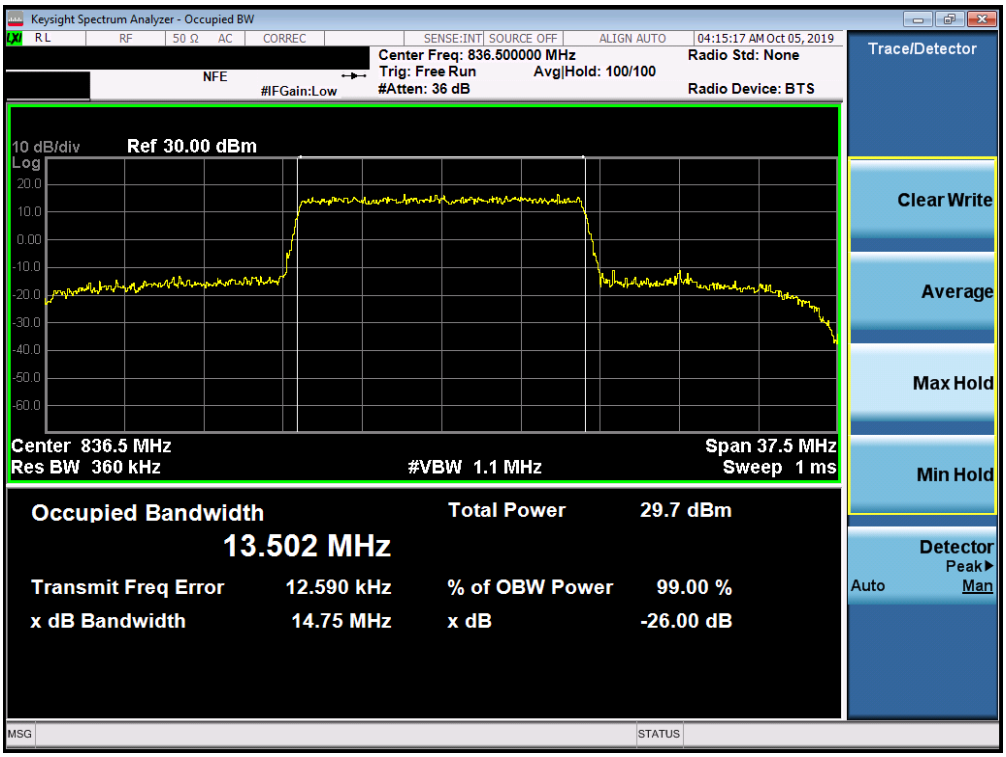
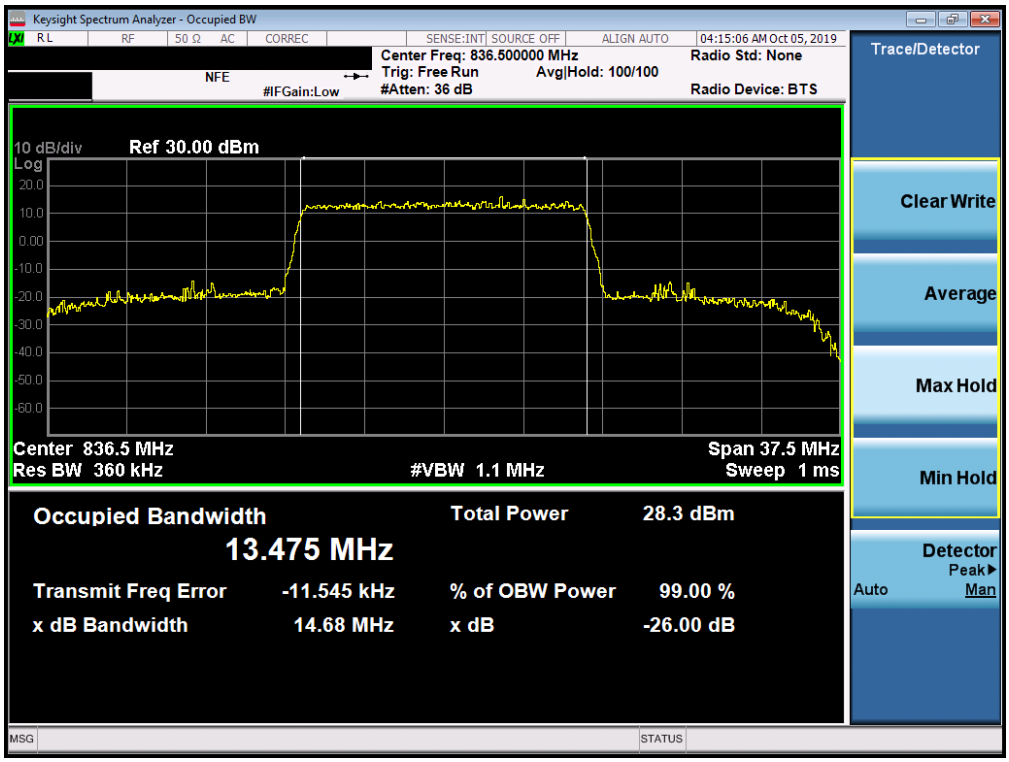


Plot 7-59. Occupied Bandwidth Plot (Band 26 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-60. Occupied Bandwidth Plot (Band 26 - 15.0MHz 256-QAM - Full RB Configuration)

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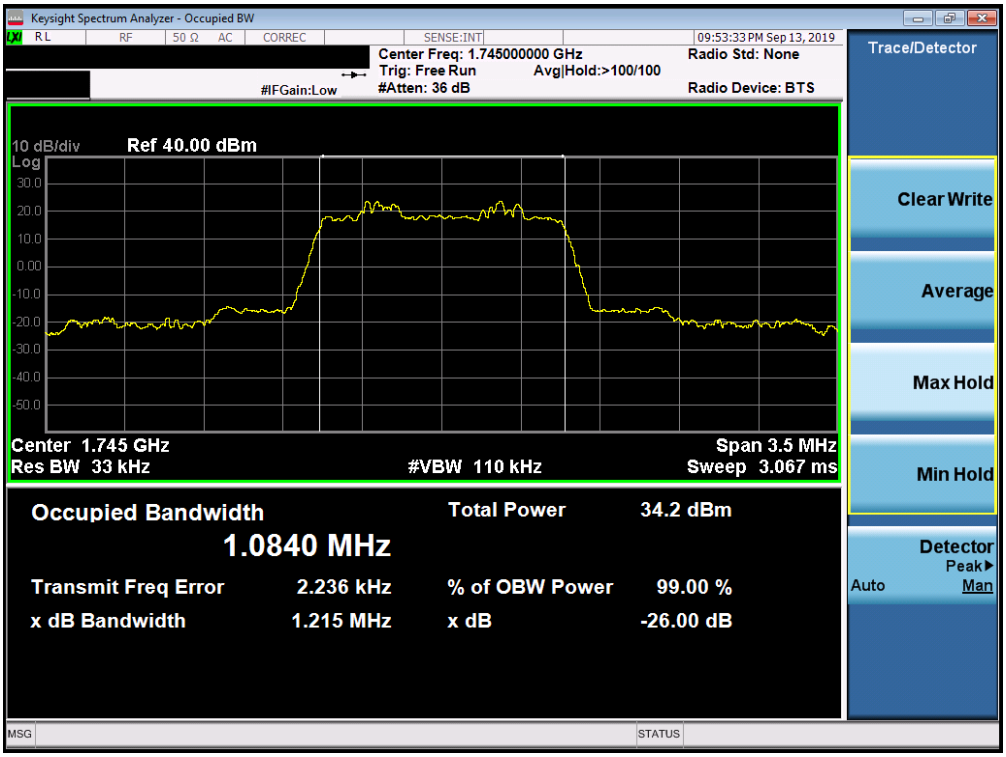
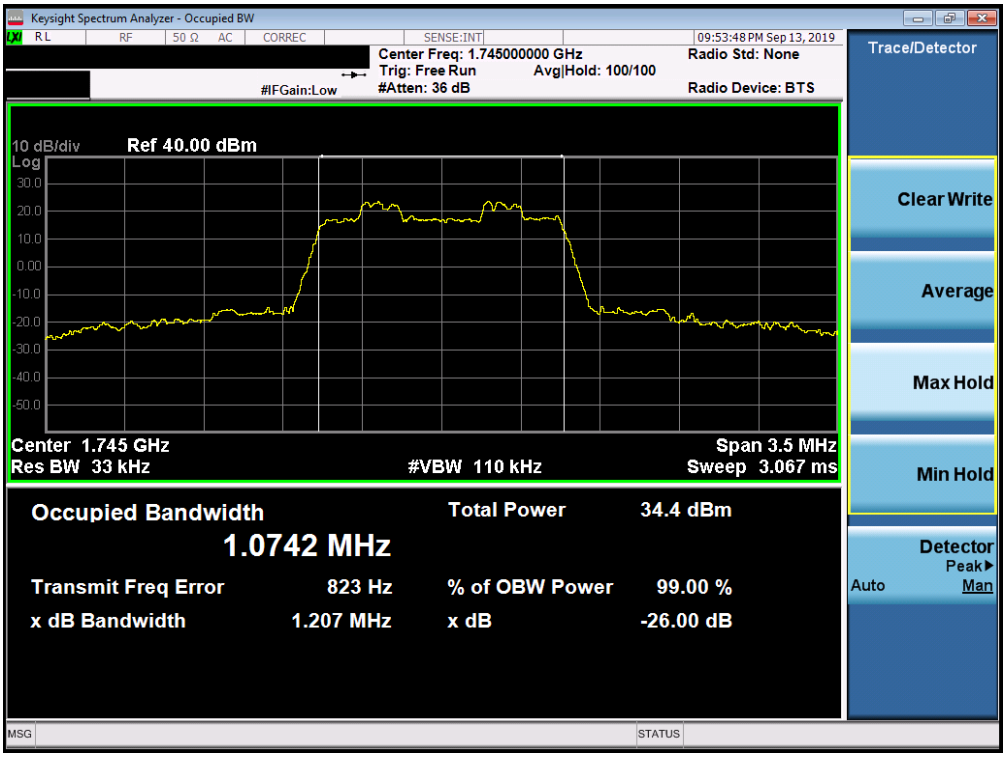
Band 66/4



Plot 7-61. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-62. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz 16-QAM - Full RB Configuration)

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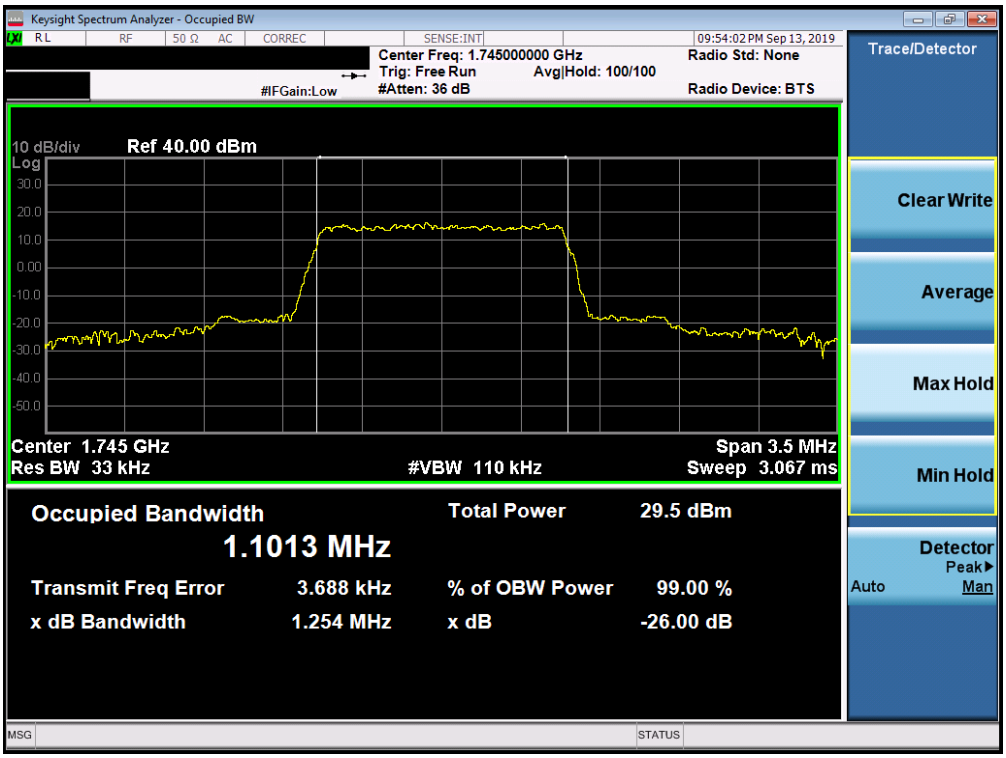
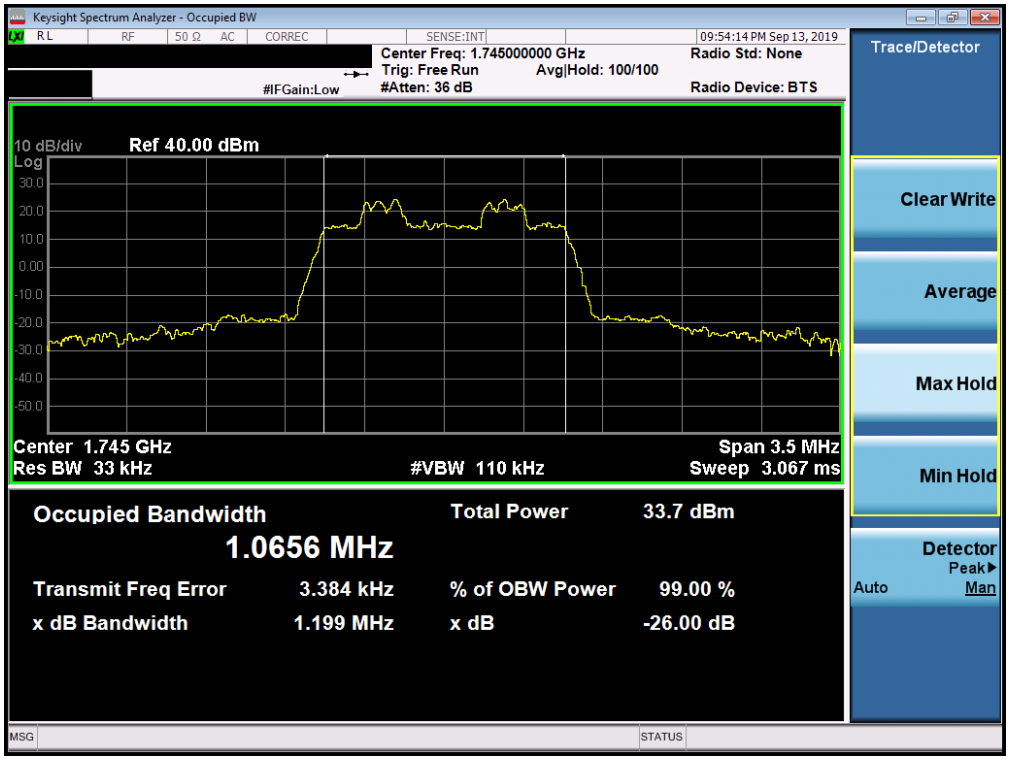


Plot 7-63. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz 64-QAM - Full RB Configuration)



Plot 7-64. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz 256-QAM - Full RB Configuration)

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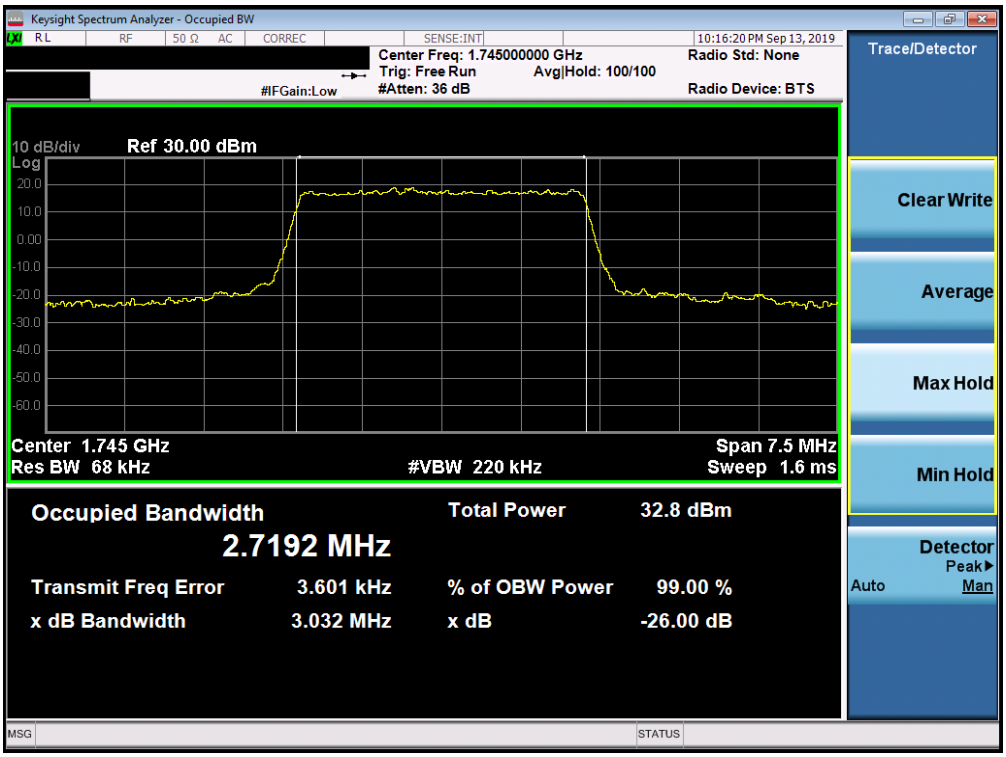
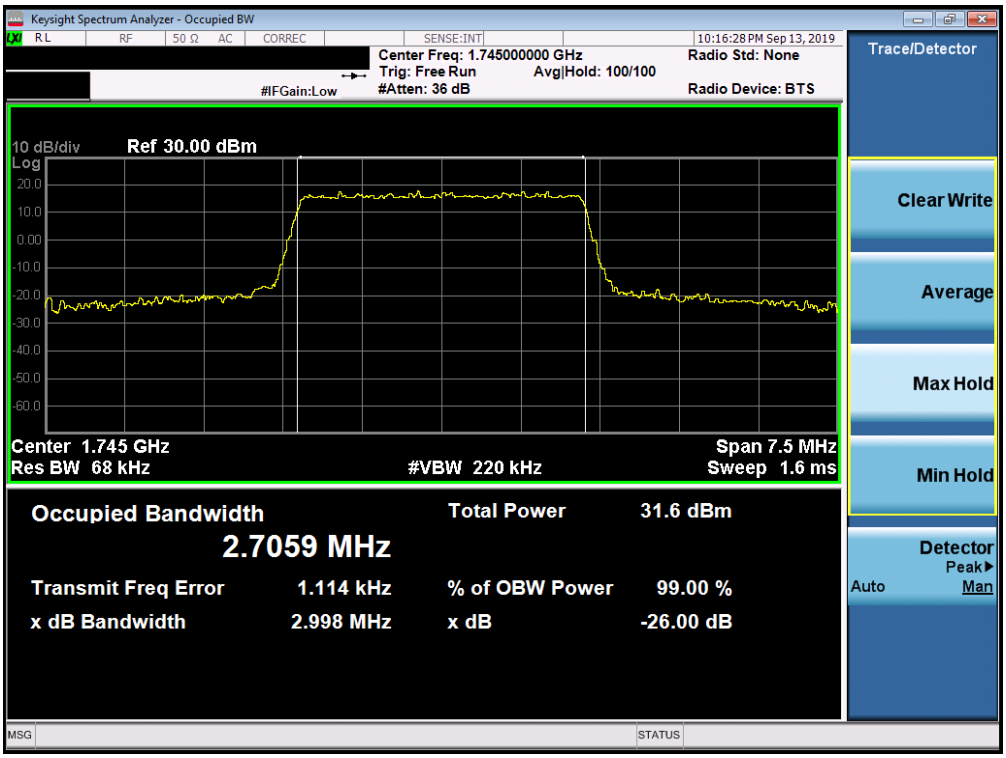


Plot 7-65. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)



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

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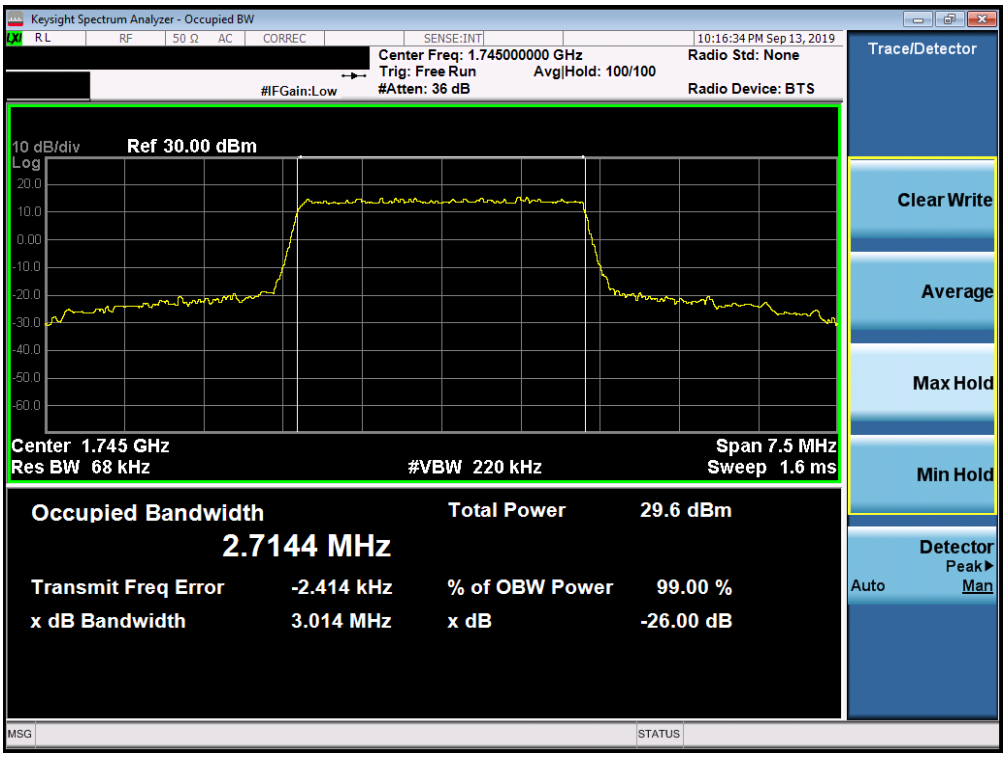

Plot 7-67. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz 64-QAM - Full RB Configuration)

Plot 7-68. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz 256-QAM - Full RB Configuration)

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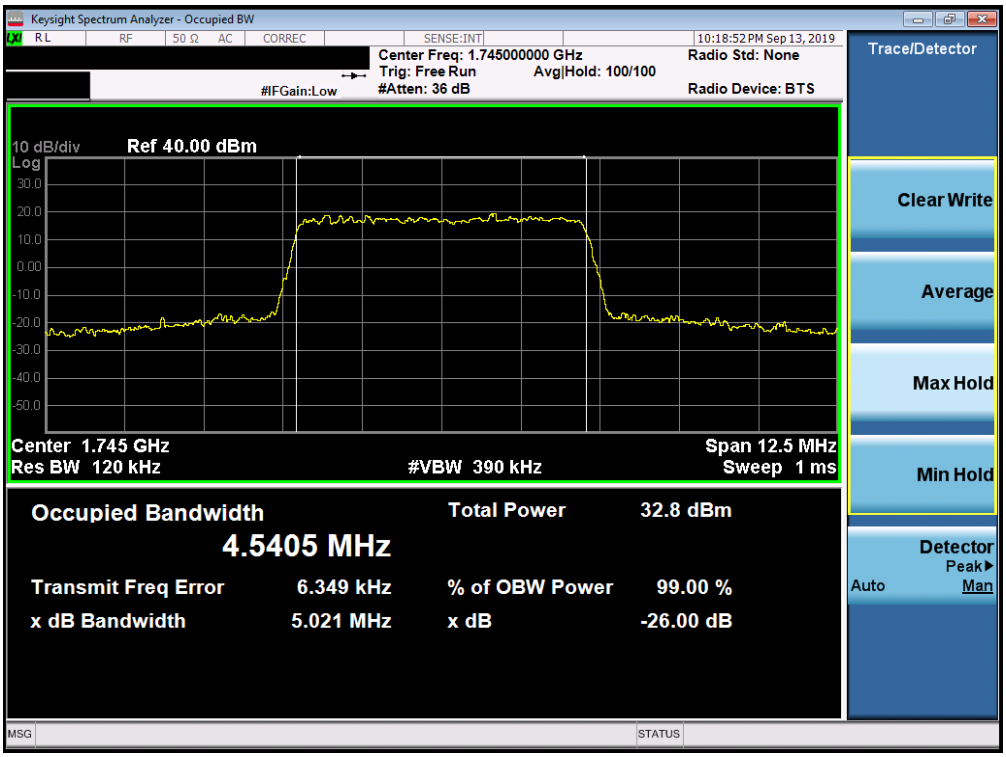
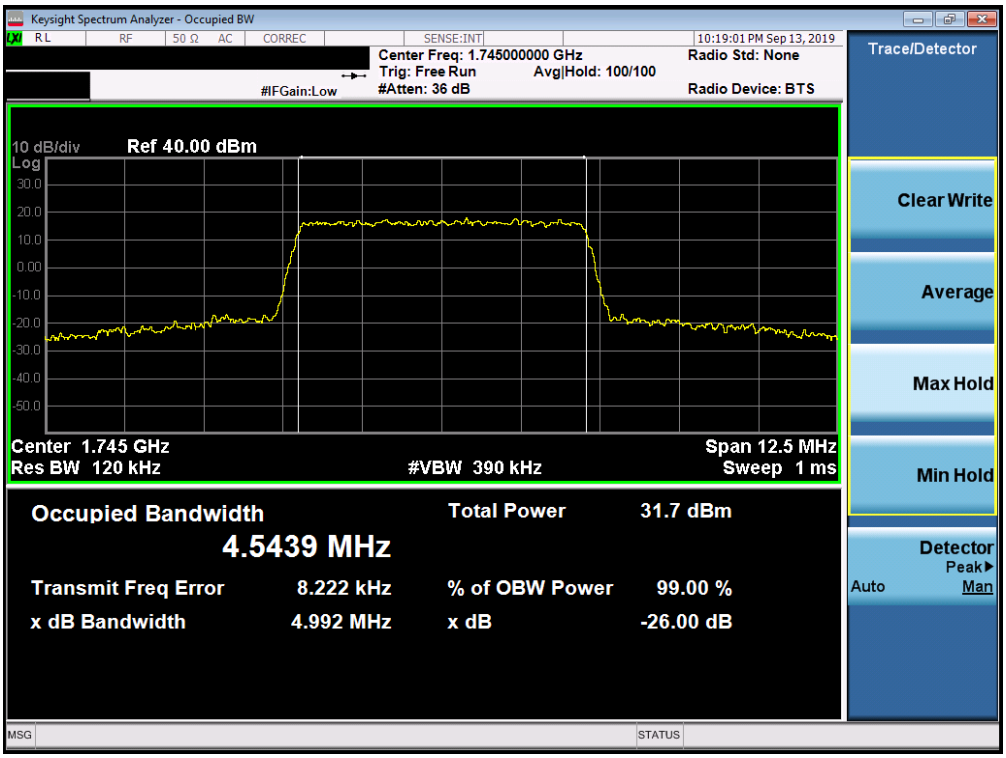


Plot 7-69. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-70. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz 16-QAM - Full RB Configuration)

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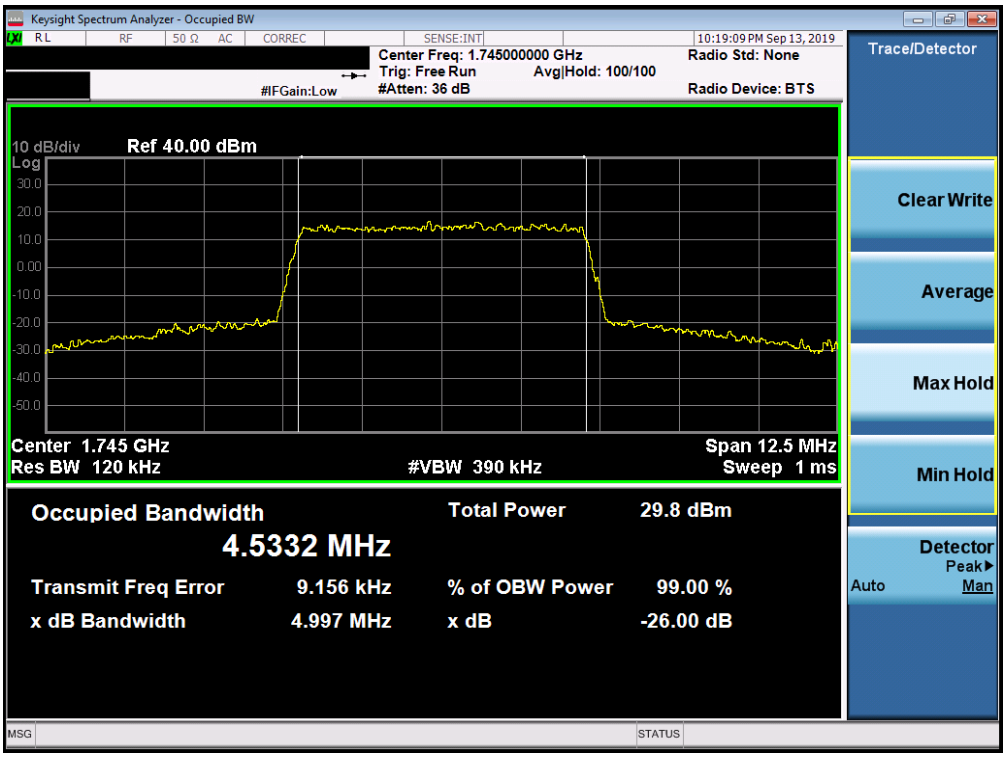
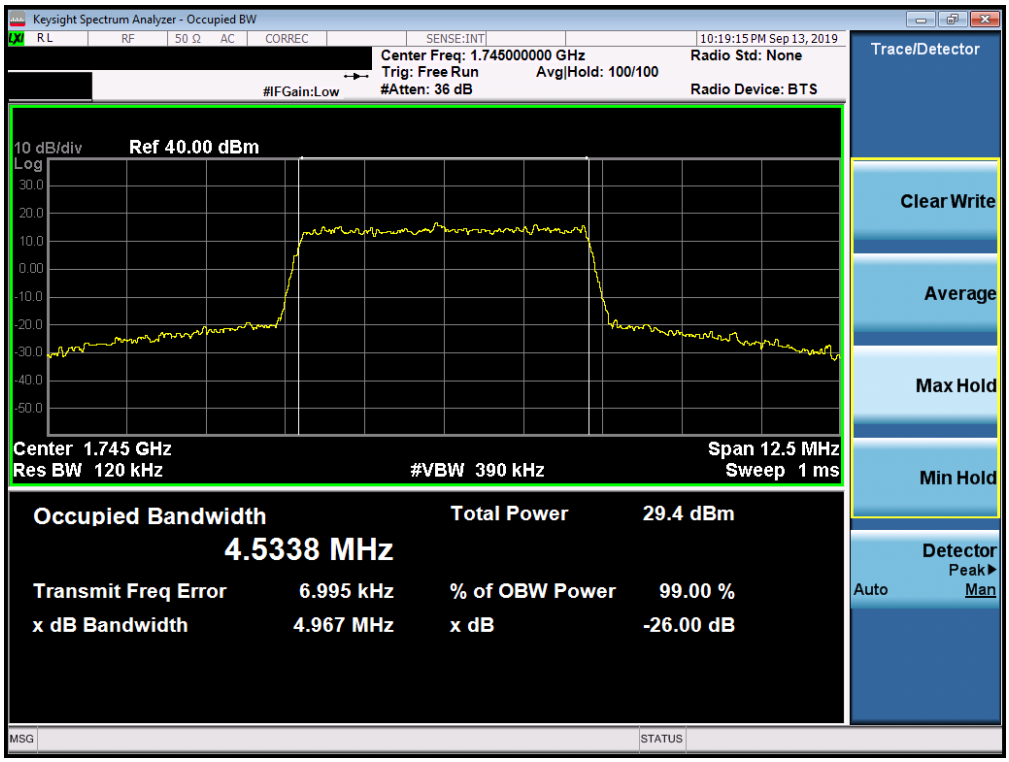


Plot 7-71. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-72. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz 256-QAM - Full RB Configuration)

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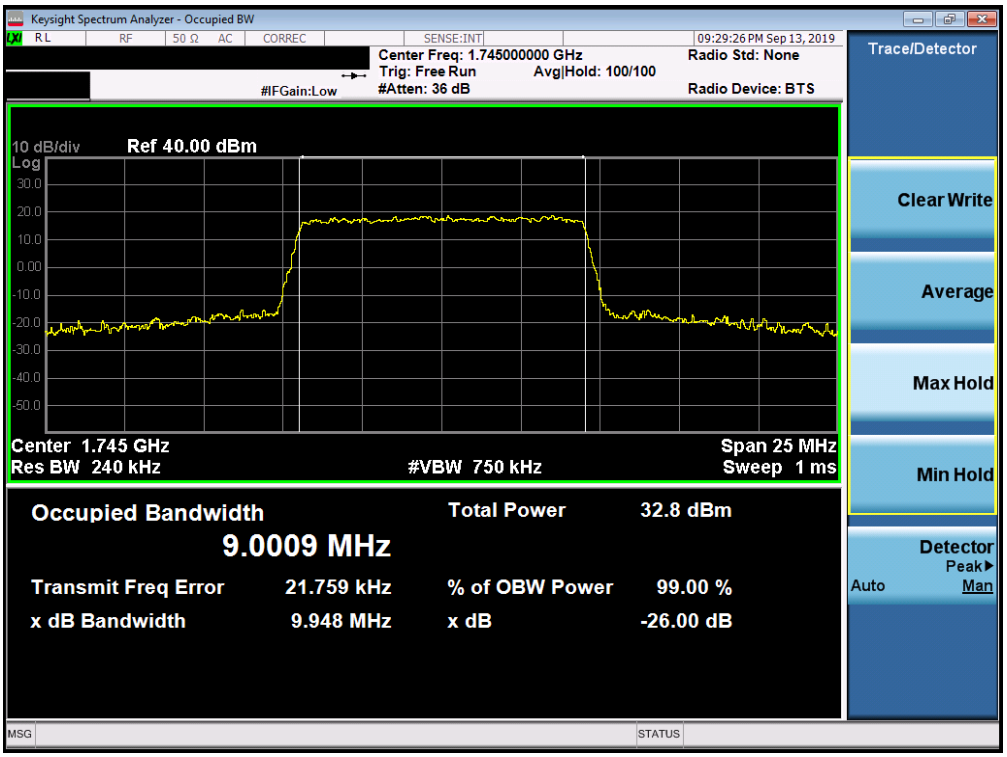
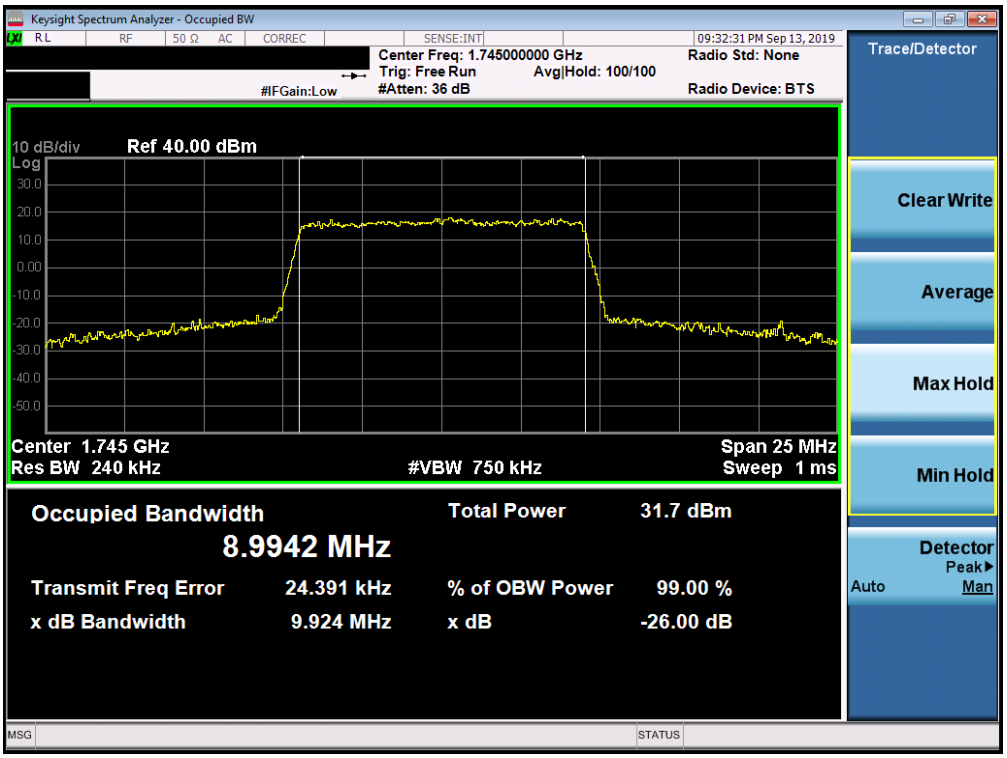


Plot 7-73. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-74. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz 16-QAM - Full RB Configuration)

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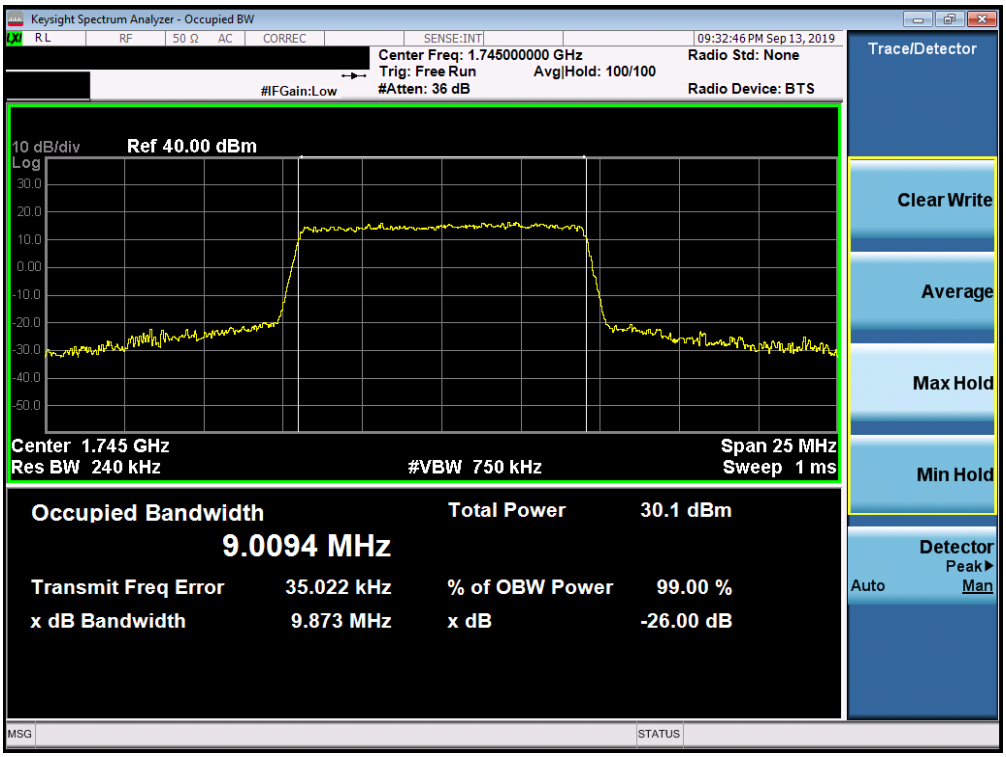
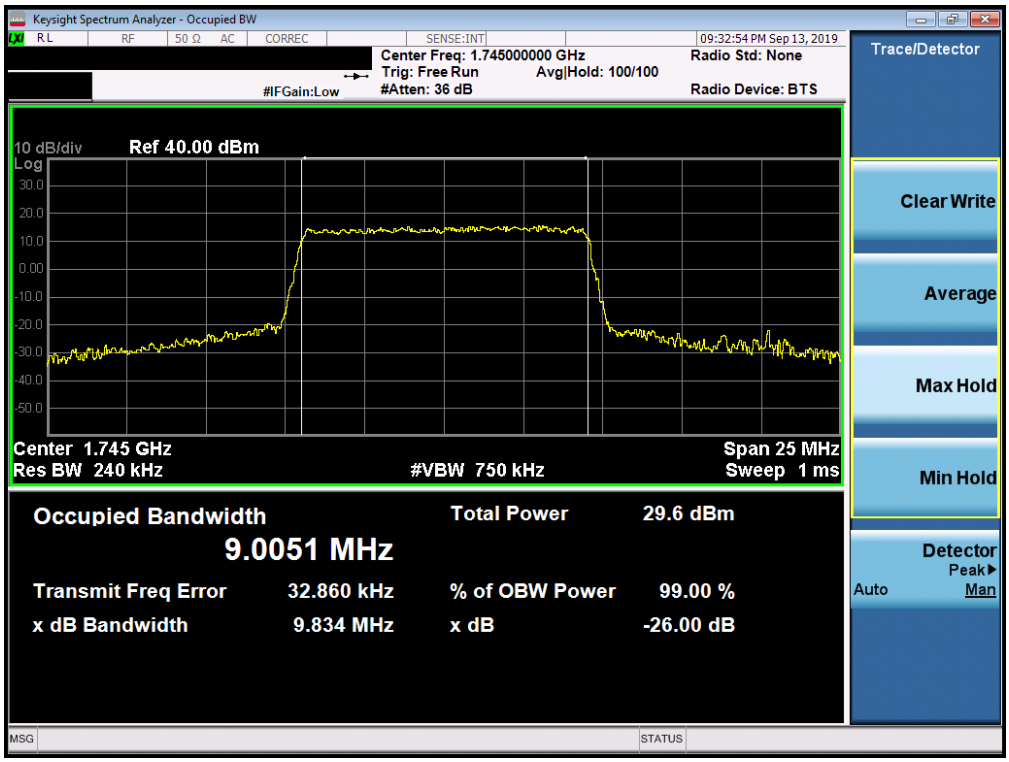


Plot 7-75. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz 64-QAM - Full RB Configuration)



Plot 7-76. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz 256-QAM - Full RB Configuration)

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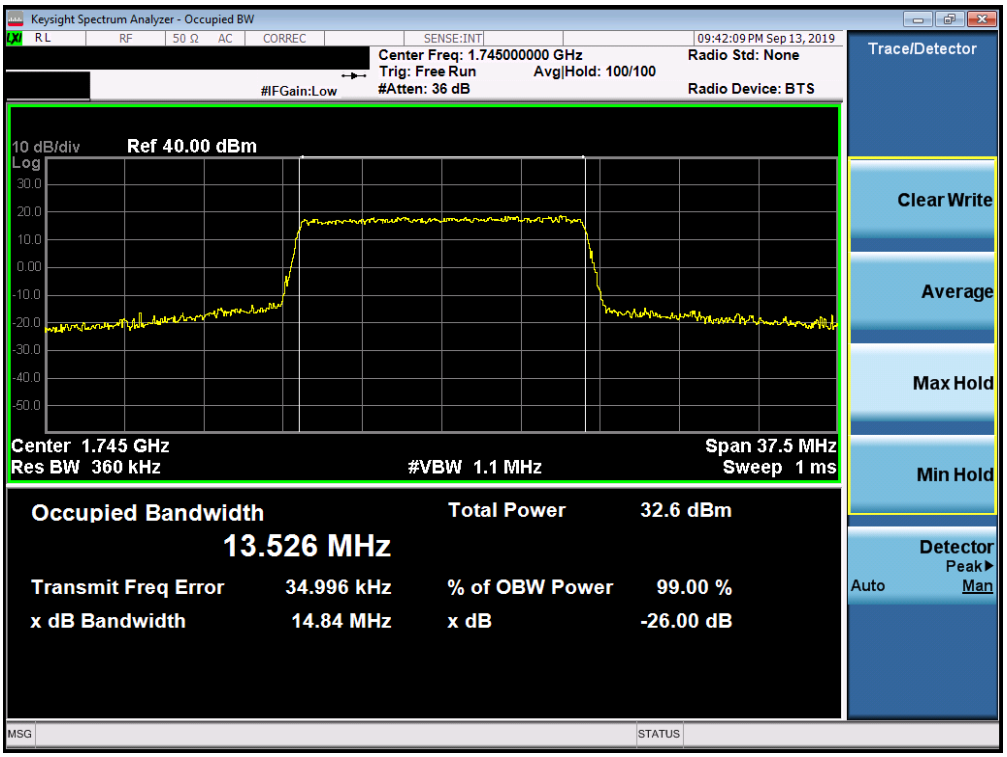
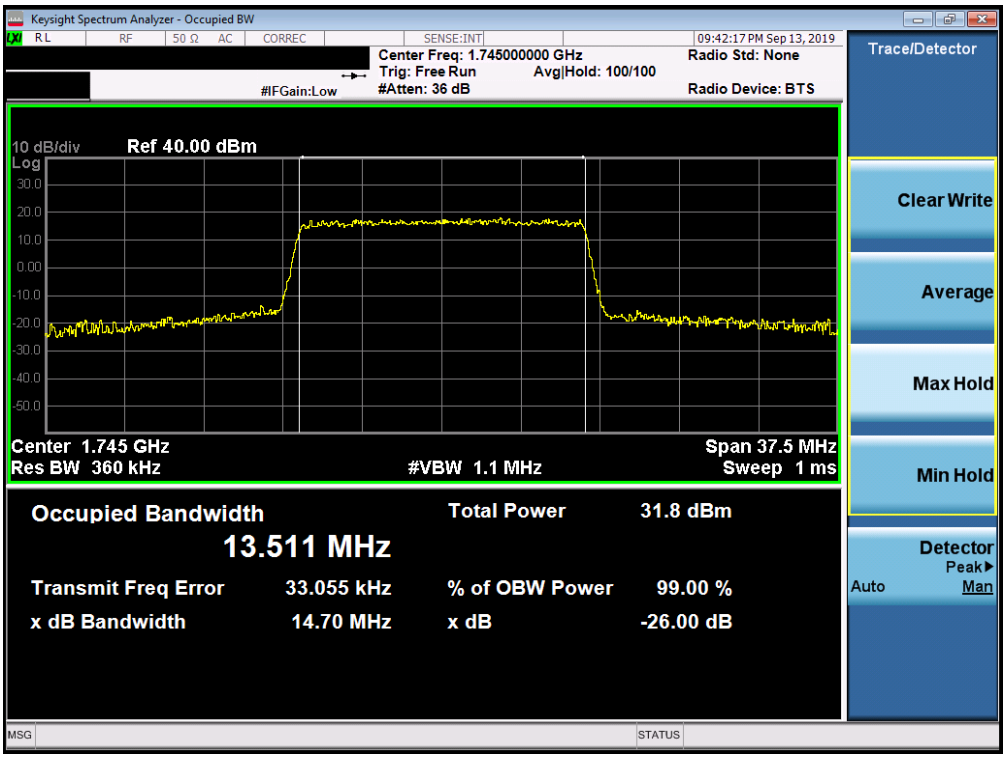


Plot 7-77. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-78. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz 16-QAM - Full RB Configuration)

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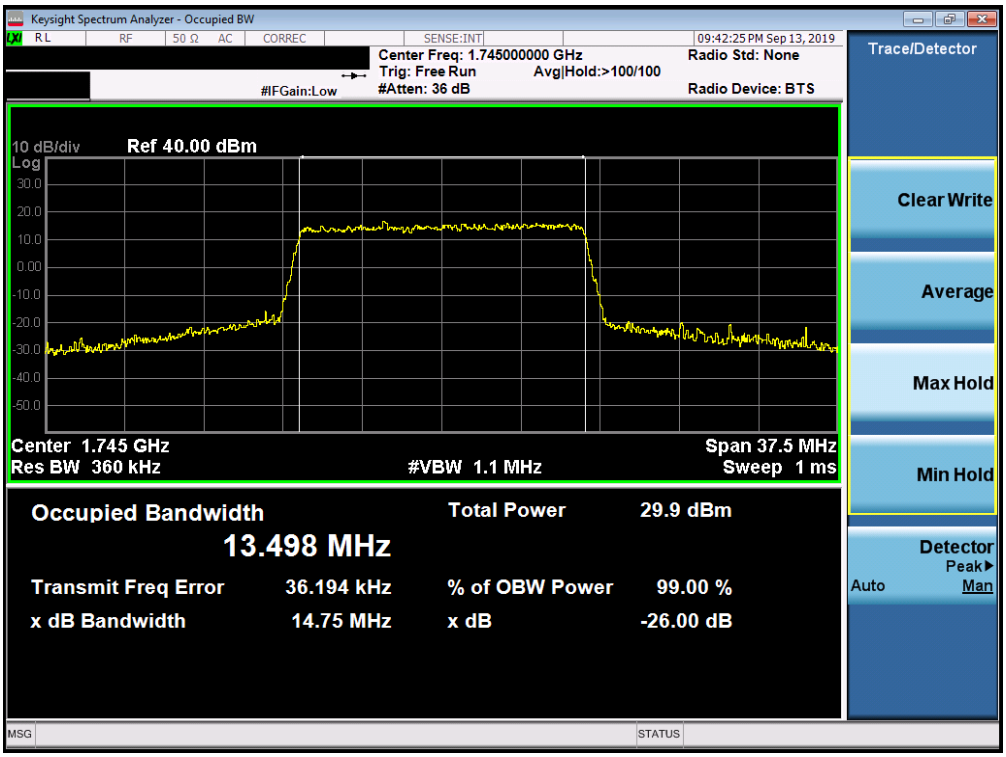
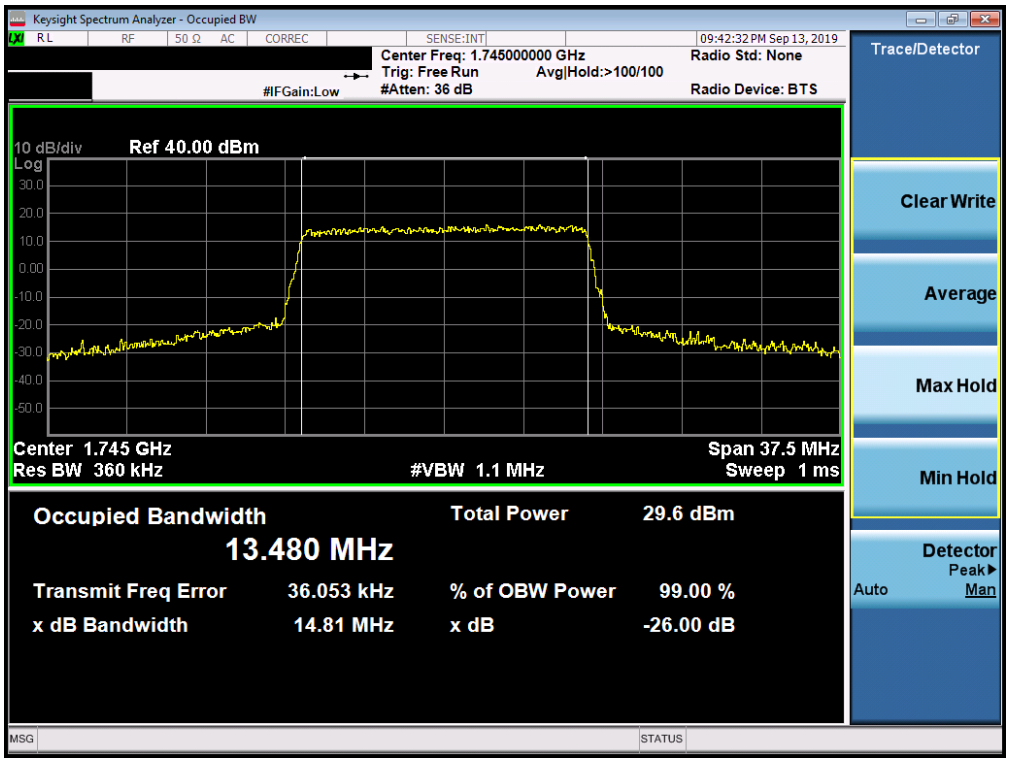


Plot 7-79. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-80. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz 256-QAM - Full RB Configuration)

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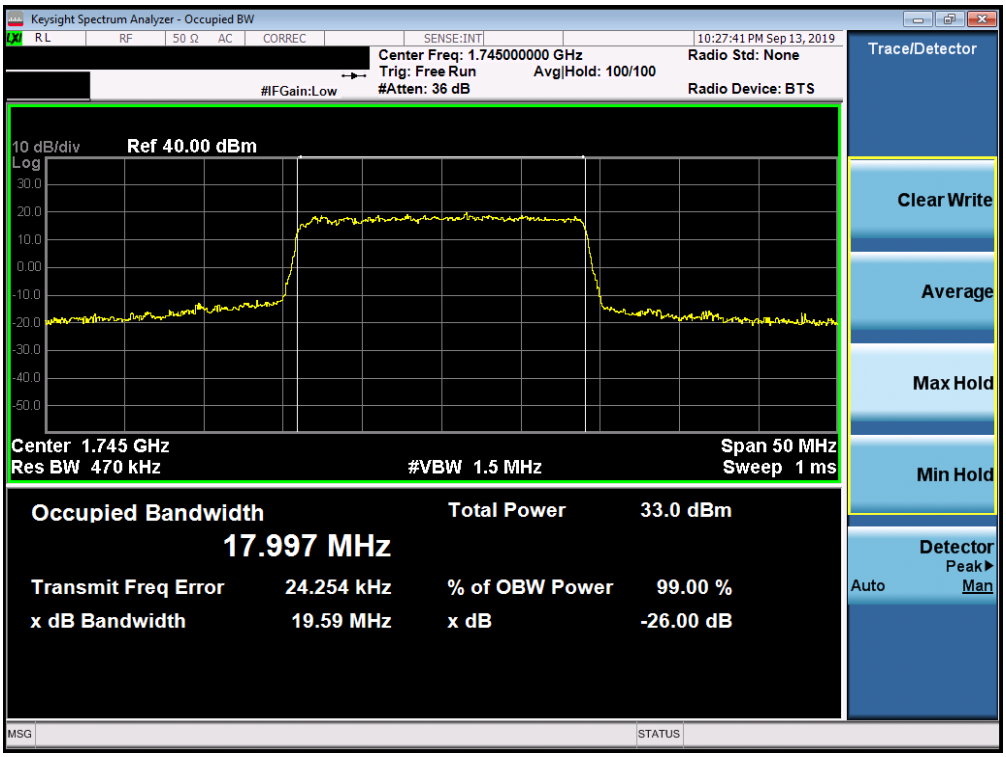
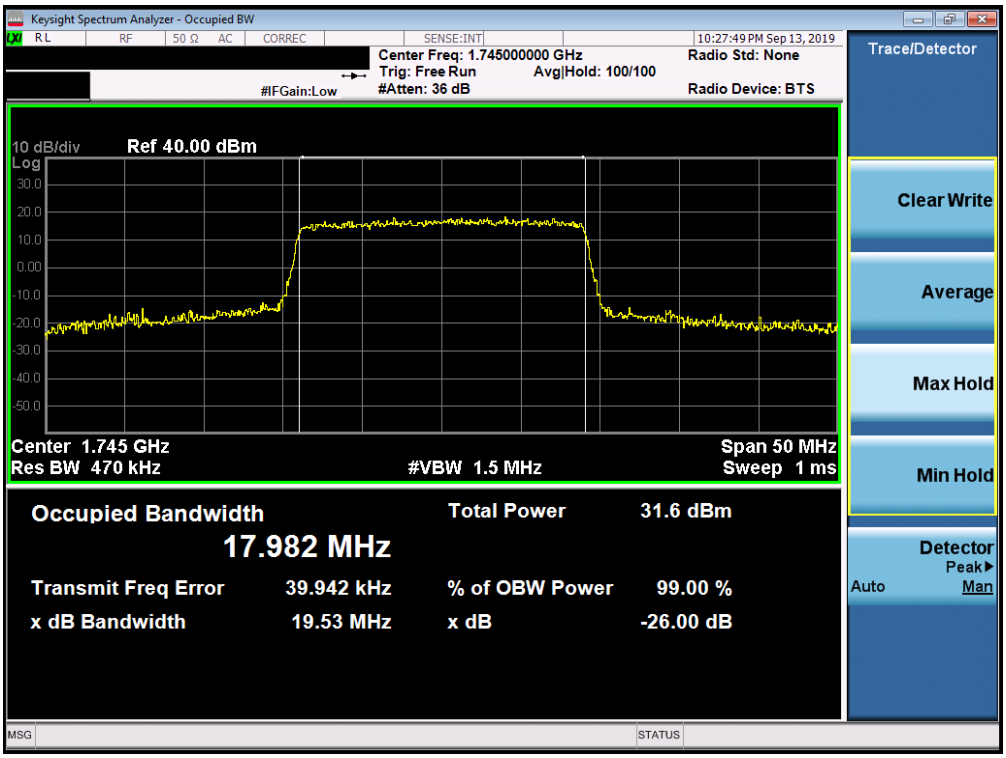


Plot 7-81. Occupied Bandwidth Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-82. Occupied Bandwidth Plot (Band 66/4 - 20.0MHz 16-QAM - Full RB Configuration)

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