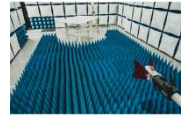




PCTEST
7185 Oakland Mills Road, Columbia, MD 21046 USA
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<http://www.pctest.com>



MEASUREMENT REPORT

LTE / Sub 6GHz NR

Applicant Name:

LG Electronics USA, Inc.
1000 Sylvan Avenue
Englewood Cliffs, NJ 07632
United States

Date of Testing:

11/26/2019 - 1/19/2020

Test Site/Location:

PCTEST Lab. Columbia, MD, USA

Test Report Serial No.:

1M1911250198-03-R3.ZNF

FCC ID:

ZNFV600TM

APPLICANT:

LG Electronics USA, Inc.

Application Type:

Certification

Model:

LM-V600TM

Additional Model(s):

LMV600TM, V600TM

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.

Note: This revised Test Report (S/N: 1M1911250198-03-R3.ZNF) supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly


Randy Ortanez
President



FCC ID: ZNFV600TM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3.ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 1 of 488

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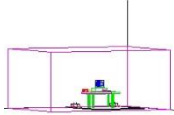
V 9.0 02/01/2019

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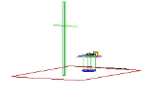
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MEASUREMENT REPORT

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	0.068	18.34			4M55G7D	QPSK
LTE Band 71	27	665.5 - 695.5	0.055	17.39			4M54W7D	16QAM
LTE Band 71	27	665.5 - 695.5	0.045	16.51			4M54W7D	64QAM
LTE Band 71	27	665.5 - 695.5	0.044	16.45			4M52W7D	256QAM
LTE Band 71	27	668 - 693	0.074	18.69			8M97G7D	QPSK
LTE Band 71	27	668 - 693	0.067	18.24			8M96W7D	16QAM
LTE Band 71	27	668 - 693	0.047	16.73			8M99W7D	64QAM
LTE Band 71	27	668 - 693	0.042	16.28			8M97W7D	256QAM
LTE Band 71	27	670.5 - 690.5	0.076	18.79			13M4G7D	QPSK
LTE Band 71	27	670.5 - 690.5	0.066	18.22			13M5W7D	16QAM
LTE Band 71	27	670.5 - 690.5	0.049	16.90			13M5W7D	64QAM
LTE Band 71	27	670.5 - 690.5	0.044	16.39			13M4W7D	256QAM
LTE Band 71	27	673 - 688	0.074	18.67			18M0G7D	QPSK
LTE Band 71	27	673 - 688	0.062	17.92			17M9W7D	16QAM
LTE Band 71	27	673 - 688	0.049	16.88			17M9W7D	64QAM
LTE Band 71	27	673 - 688	0.044	16.39			17M8W7D	256QAM
LTE Band 12	27	699.7 - 715.3	0.057	17.55	0.093	19.70	1M09G7D	QPSK
LTE Band 12	27	699.7 - 715.3	0.049	16.86	0.080	19.01	1M10W7D	16QAM
LTE Band 12	27	699.7 - 715.3	0.037	15.72	0.061	17.87	1M09W7D	64QAM
LTE Band 12	27	699.7 - 715.3	0.026	14.12	0.042	16.27	1M09W7D	256QAM
LTE Band 12	27	700.5 - 714.5	0.057	17.58	0.094	19.73	2M70G7D	QPSK
LTE Band 12	27	700.5 - 714.5	0.049	16.94	0.081	19.09	2M70W7D	16QAM
LTE Band 12	27	700.5 - 714.5	0.037	15.73	0.061	17.88	2M71W7D	64QAM
LTE Band 12	27	700.5 - 714.5	0.027	14.25	0.044	16.40	2M70W7D	256QAM
LTE Band 12/17	27	701.5 - 713.5	0.056	17.52	0.093	19.67	4M51G7D	QPSK
LTE Band 12/17	27	701.5 - 713.5	0.049	16.90	0.080	19.05	4M50W7D	16QAM
LTE Band 12/17	27	701.5 - 713.5	0.038	15.78	0.062	17.93	4M52W7D	64QAM
LTE Band 12/17	27	701.5 - 713.5	0.027	14.36	0.045	16.51	4M48W7D	256QAM
LTE Band 12/17	27	704 - 711	0.058	17.67	0.096	19.82	9M01G7D	QPSK
LTE Band 12/17	27	704 - 711	0.051	17.07	0.084	19.22	8M98W7D	16QAM
LTE Band 12/17	27	704 - 711	0.039	15.95	0.065	18.10	9M02W7D	64QAM
LTE Band 12/17	27	704 - 711	0.033	15.25	0.055	17.40	8M98W7D	256QAM
LTE Band 13	27	779.5 - 784.5	0.051	17.10	0.084	19.25	4M55G7D	QPSK
LTE Band 13	27	779.5 - 784.5	0.045	16.56	0.074	18.71	4M53W7D	16QAM
LTE Band 13	27	779.5 - 784.5	0.035	15.40	0.057	17.55	4M53W7D	64QAM
LTE Band 13	27	779.5 - 784.5	0.028	14.42	0.045	16.57	4M51W7D	256QAM
LTE Band 13	27	782	0.048	16.80	0.079	18.95	9M01G7D	QPSK
LTE Band 13	27	782	0.041	16.16	0.068	18.31	8M98W7D	16QAM
LTE Band 13	27	782	0.032	15.09	0.053	17.24	8M98W7D	64QAM
LTE Band 13	27	782	0.026	14.23	0.043	16.38	8M95W7D	256QAM
LTE Band 26/5	22H	824.7 - 848.3	0.036	15.62	0.060	17.77	1M09G7D	QPSK
LTE Band 26/5	22H	824.7 - 848.3	0.033	15.13	0.053	17.28	1M10W7D	16QAM
LTE Band 26/5	22H	824.7 - 848.3	0.024	13.75	0.039	15.90	1M09W7D	64QAM
LTE Band 26/5	22H	824.7 - 848.3	0.020	13.10	0.033	15.25	1M09W7D	256QAM
LTE Band 26/5	22H	825.5 - 847.5	0.038	15.82	0.063	17.97	2M72G7D	QPSK
LTE Band 26/5	22H	825.5 - 847.5	0.034	15.34	0.056	17.49	2M71W7D	16QAM
LTE Band 26/5	22H	825.5 - 847.5	0.022	13.51	0.037	15.66	2M71W7D	64QAM
LTE Band 26/5	22H	825.5 - 847.5	0.021	13.17	0.034	15.32	2M70W7D	256QAM
LTE Band 26/5	22H	826.5 - 846.5	0.038	15.78	0.062	17.93	4M57G7D	QPSK
LTE Band 26/5	22H	826.5 - 846.5	0.032	15.06	0.053	17.21	4M52W7D	16QAM
LTE Band 26/5	22H	826.5 - 846.5	0.025	13.92	0.040	16.07	4M54W7D	64QAM
LTE Band 26/5	22H	826.5 - 846.5	0.020	13.06	0.033	15.21	4M49W7D	256QAM
LTE Band 26/5	22H	829 - 844	0.037	15.74	0.062	17.89	9M01G7D	QPSK
LTE Band 26/5	22H	829 - 844	0.035	15.41	0.057	17.56	9M05W7D	16QAM
LTE Band 26/5	22H	829 - 844	0.023	13.64	0.038	15.79	8M99W7D	64QAM
LTE Band 26/5	22H	829 - 844	0.022	13.50	0.037	15.65	8M95W7D	256QAM
LTE Band 26	22H	831.5 - 841.5	0.043	16.38	0.071	18.53	13M5G7D	QPSK
LTE Band 26	22H	831.5 - 841.5	0.037	15.68	0.061	17.83	13M5W7D	16QAM
LTE Band 26	22H	831.5 - 841.5	0.029	14.55	0.047	16.70	13M5W7D	64QAM
LTE Band 26	22H	831.5 - 841.5	0.026	14.09	0.042	16.24	13M5W7D	256QAM

EUT Overview (<1 GHz)

FCC ID: ZNFV600TM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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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	0.147	21.68	1M09G7D	QPSK
LTE Band 66/4	27	1710.7 - 1779.3	0.119	20.77	1M10W7D	16QAM
LTE Band 66/4	27	1710.7 - 1779.3	0.086	19.32	1M09W7D	64QAM
LTE Band 66/4	27	1710.7 - 1779.3	0.039	15.87	1M09W7D	256QAM
LTE Band 66/4	27	1711.5 - 1778.5	0.147	21.68	2M71G7D	QPSK
LTE Band 66/4	27	1711.5 - 1778.5	0.118	20.73	2M70W7D	16QAM
LTE Band 66/4	27	1711.5 - 1778.5	0.077	18.85	2M71W7D	64QAM
LTE Band 66/4	27	1711.5 - 1778.5	0.037	15.72	2M70W7D	256QAM
LTE Band 66/4	27	1712.5 - 1777.5	0.144	21.58	4M54G7D	QPSK
LTE Band 66/4	27	1712.5 - 1777.5	0.117	20.68	4M54W7D	16QAM
LTE Band 66/4	27	1712.5 - 1777.5	0.078	18.94	4M54W7D	64QAM
LTE Band 66/4	27	1712.5 - 1777.5	0.035	15.41	4M51W7D	256QAM
LTE Band 66/4	27	1715 - 1775	0.134	21.29	8M98G7D	QPSK
LTE Band 66/4	27	1715 - 1775	0.113	20.54	9M03W7D	16QAM
LTE Band 66/4	27	1715 - 1775	0.075	18.73	8M97W7D	64QAM
LTE Band 66/4	27	1715 - 1775	0.036	15.51	8M97W7D	256QAM
LTE Band 66/4	27	1717.5 - 1772.5	0.147	21.67	13M5G7D	QPSK
LTE Band 66/4	27	1717.5 - 1772.5	0.115	20.61	13M4W7D	16QAM
LTE Band 66/4	27	1717.5 - 1772.5	0.075	18.75	13M5W7D	64QAM
LTE Band 66/4	27	1717.5 - 1772.5	0.037	15.66	13M4W7D	256QAM
LTE Band 66/4	27	1720 - 1770	0.134	21.26	17M9G7D	QPSK
LTE Band 66/4	27	1720 - 1770	0.112	20.50	17M9W7D	16QAM
LTE Band 66/4	27	1720 - 1770	0.076	18.82	17M9W7D	64QAM
LTE Band 66/4	27	1720 - 1770	0.042	16.22	18M0W7D	256QAM
LTE Band 25/2	24E	1850.7 - 1914.3	0.133	21.25	1M09G7D	QPSK
LTE Band 25/2	24E	1850.7 - 1914.3	0.123	20.89	1M10W7D	16QAM
LTE Band 25/2	24E	1850.7 - 1914.3	0.092	19.66	1M09W7D	64QAM
LTE Band 25/2	24E	1850.7 - 1914.3	0.084	19.25	1M09W7D	256QAM
LTE Band 25/2	24E	1851.5 - 1913.5	0.132	21.21	2M70G7D	QPSK
LTE Band 25/2	24E	1851.5 - 1913.5	0.128	21.08	2M70W7D	16QAM
LTE Band 25/2	24E	1851.5 - 1913.5	0.084	19.25	2M71W7D	64QAM
LTE Band 25/2	24E	1851.5 - 1913.5	0.095	19.79	2M70W7D	256QAM
LTE Band 25/2	24E	1852.5 - 1912.5	0.130	21.14	4M52G7D	QPSK
LTE Band 25/2	24E	1852.5 - 1912.5	0.118	20.74	4M52W7D	16QAM
LTE Band 25/2	24E	1852.5 - 1912.5	0.086	19.33	4M53W7D	64QAM
LTE Band 25/2	24E	1852.5 - 1912.5	0.077	18.85	4M51W7D	256QAM
LTE Band 25/2	24E	1855 - 1910	0.126	21.02	9M00G7D	QPSK
LTE Band 25/2	24E	1855 - 1910	0.120	20.80	9M00W7D	16QAM
LTE Band 25/2	24E	1855 - 1910	0.082	19.12	8M98W7D	64QAM
LTE Band 25/2	24E	1855 - 1910	0.090	19.54	8M96W7D	256QAM
LTE Band 25/2	24E	1857.5 - 1907.5	0.144	21.59	13M5G7D	QPSK
LTE Band 25/2	24E	1857.5 - 1907.5	0.128	21.07	13M5W7D	16QAM
LTE Band 25/2	24E	1857.5 - 1907.5	0.099	19.96	13M5W7D	64QAM
LTE Band 25/2	24E	1857.5 - 1907.5	0.091	19.58	13M4W7D	256QAM
LTE Band 25/2	24E	1860 - 1905	0.145	21.63	18M0G7D	QPSK
LTE Band 25/2	24E	1860 - 1905	0.142	21.53	17M9W7D	16QAM
LTE Band 25/2	24E	1860 - 1905	0.109	20.38	18M0W7D	64QAM
LTE Band 25/2	24E	1860 - 1905	0.096	19.82	18M0W7D	256QAM

EUT Overview (Mid Bands)

FCC ID: ZNFV600TM	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3.ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset	Page 4 of 488

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	0.063	18.02	4M51G7D	QPSK
LTE Band 30	27	2307.5 - 2312.5	0.054	17.34	4M53W7D	16QAM
LTE Band 30	27	2307.5 - 2312.5	0.043	16.32	4M54W7D	64QAM
LTE Band 30	27	2307.5 - 2312.5	0.026	14.20	4M51W7D	256QAM
LTE Band 30	27	2310	0.063	18.01	8M95G7D	QPSK
LTE Band 30	27	2310	0.053	17.26	8M98W7D	16QAM
LTE Band 30	27	2310	0.042	16.26	8M97W7D	64QAM
LTE Band 30	27	2310	0.026	14.20	9M02W7D	256QAM
LTE Band 7	27	2502.5 - 2567.5	0.070	18.46	4M53G7D	QPSK
LTE Band 7	27	2502.5 - 2567.5	0.064	18.03	4M52W7D	16QAM
LTE Band 7	27	2502.5 - 2567.5	0.041	16.17	4M52W7D	64QAM
LTE Band 7	27	2502.5 - 2567.5	0.031	14.94	4M50W7D	256QAM
LTE Band 7	27	2505 - 2565	0.072	18.54	8M98G7D	QPSK
LTE Band 7	27	2505 - 2565	0.063	18.00	8M97W7D	16QAM
LTE Band 7	27	2505 - 2565	0.040	15.98	8M95W7D	64QAM
LTE Band 7	27	2505 - 2565	0.030	14.74	8M96W7D	256QAM
LTE Band 7	27	2507.5 - 2562.5	0.072	18.54	13M5G7D	QPSK
LTE Band 7	27	2507.5 - 2562.5	0.067	18.27	13M5W7D	16QAM
LTE Band 7	27	2507.5 - 2562.5	0.040	15.98	13M5W7D	64QAM
LTE Band 7	27	2507.5 - 2562.5	0.036	15.53	13M5W7D	256QAM
LTE Band 7	27	2510 - 2560	0.076	18.80	17M9G7D	QPSK
LTE Band 7	27	2510 - 2560	0.066	18.22	17M9W7D	16QAM
LTE Band 7	27	2510 - 2560	0.048	16.81	17M9W7D	64QAM
LTE Band 7	27	2510 - 2560	0.038	15.82	17M9W7D	256QAM
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.269	24.30	4M48G7D	QPSK
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.263	24.20	4M53W7D	16QAM
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.156	21.93	4M48W7D	64QAM
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.136	21.35	4M48W7D	256QAM
LTE Band 41 (PC2)	27	2501 - 2685	0.273	24.36	9M01G7D	QPSK
LTE Band 41 (PC2)	27	2501 - 2685	0.240	23.81	9M02W7D	16QAM
LTE Band 41 (PC2)	27	2501 - 2685	0.155	21.92	9M03W7D	64QAM
LTE Band 41 (PC2)	27	2501 - 2685	0.116	20.64	8M97W7D	256QAM
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.281	24.48	13M5G7D	QPSK
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.273	24.36	13M4W7D	16QAM
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.144	21.59	13M5W7D	64QAM
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.130	21.13	13M5W7D	256QAM
LTE Band 41 (PC2)	27	2506 - 2680	0.299	24.76	17M9G7D	QPSK
LTE Band 41 (PC2)	27	2506 - 2680	0.271	24.32	17M9W7D	16QAM
LTE Band 41 (PC2)	27	2506 - 2680	0.163	22.12	17M9W7D	64QAM
LTE Band 41 (PC2)	27	2506 - 2680	0.136	21.33	17M8W7D	256QAM

EUT Overview (High Bands)

FCC ID: ZNFV600TM	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3.ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset	Page 5 of 488

Mode	FCC Rule Part	Tx Frequency (MHz)	ERP		Emission Designator	Modulation
			Max. Power (W)	Max. Power (dBm)		
n71	27	665.5 - 695.5	0.048	16.85	4M53G7D	QPSK
n71	27	665.5 - 695.5	0.041	16.14	4M49W7D	16QAM
n71	27	665.5 - 695.5	0.033	15.18	4M52W7D	64QAM
n71	27	665.5 - 695.5	0.027	14.32	4M54W7D	256QAM
n71	27	668 - 693	0.050	16.97	9M38G7D	QPSK
n71	27	668 - 693	0.041	16.09	9M38W7D	16QAM
n71	27	668 - 693	0.032	15.05	9M36W7D	64QAM
n71	27	668 - 693	0.025	14.05	9M34W7D	256QAM
n71	27	670.5 - 690.5	0.051	17.04	14M2G7D	QPSK
n71	27	670.5 - 690.5	0.041	16.10	14M2W7D	16QAM
n71	27	670.5 - 690.5	0.032	15.06	14M2W7D	64QAM
n71	27	670.5 - 690.5	0.025	14.06	14M2W7D	256QAM
n71	27	673 - 688	0.057	17.54	17M9G7D	QPSK
n71	27	673 - 688	0.038	15.83	18M0W7D	16QAM
n71	27	673 - 688	0.031	14.92	17M9W7D	64QAM
n71	27	673 - 688	0.024	13.80	18M0W7D	256QAM

EUT Sub 6GHz Overview (<1 GHz)

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Mode	FCC Rule Part	Tx Frequency (MHz)	EIRP		Emission Designator	Modulation
			Max. Power (W)	Max. Power (dBm)		
n66	27	1712.5 - 1777.5	0.135	21.32	4M52G7D	QPSK
n66	27	1712.5 - 1777.5	0.113	20.55	4M52W7D	16QAM
n66	27	1712.5 - 1777.5	0.089	19.48	4M53W7D	64QAM
n66	27	1712.5 - 1777.5	0.071	18.51	4M53W7D	256QAM
n66	27	1715 - 1775	0.161	22.06	9M34G7D	QPSK
n66	27	1715 - 1775	0.129	21.10	9M34W7D	16QAM
n66	27	1715 - 1775	0.106	20.25	9M31W7D	64QAM
n66	27	1715 - 1775	0.086	19.36	9M30W7D	256QAM
n66	27	1717.5 - 1772.5	0.090	19.56	14M2G7D	QPSK
n66	27	1717.5 - 1772.5	0.067	18.26	14M2W7D	16QAM
n66	27	1717.5 - 1772.5	0.062	17.95	14M2W7D	64QAM
n66	27	1717.5 - 1772.5	0.044	16.40	14M2W7D	256QAM
n66	27	1720 - 1770	0.119	20.77	19M0G7D	QPSK
n66	27	1720 - 1770	0.102	20.07	19M0W7D	16QAM
n66	27	1720 - 1770	0.079	18.99	19M1W7D	64QAM
n66	27	1720 - 1770	0.059	17.68	19M0W7D	256QAM
n25 / n2	24E	1852.5 - 1912.5	0.192	22.83	4M49G7D	QPSK
n25 / n2	24E	1852.5 - 1912.5	0.151	21.79	4M50W7D	16QAM
n25 / n2	24E	1852.5 - 1912.5	0.114	20.59	4M51W7D	64QAM
n25 / n2	24E	1852.5 - 1912.5	0.096	19.83	4M52W7D	256QAM
n25 / n2	24E	1855 - 1910	0.210	23.22	9M33G7D	QPSK
n25 / n2	24E	1855 - 1910	0.162	22.10	9M37W7D	16QAM
n25 / n2	24E	1855 - 1910	0.129	21.12	9M34W7D	64QAM
n25 / n2	24E	1855 - 1910	0.114	20.56	9M34W7D	256QAM
n25 / n2	24E	1857.5 - 1907.5	0.208	23.18	14M2G7D	QPSK
n25 / n2	24E	1857.5 - 1907.5	0.150	21.77	14M2W7D	16QAM
n25 / n2	24E	1857.5 - 1907.5	0.120	20.80	14M2W7D	64QAM
n25 / n2	24E	1857.5 - 1907.5	0.100	20.02	14M2W7D	256QAM
n25 / n2	24E	1860 - 1905	0.198	22.97	19M1G7D	QPSK
n25 / n2	24E	1860 - 1905	0.170	22.31	19M0W7D	16QAM
n25 / n2	24E	1860 - 1905	0.146	21.65	19M0W7D	64QAM
n25 / n2	24E	1860 - 1905	0.127	21.04	19M0W7D	256QAM

EUT Sub 6GHz Overview (Mid Bands)

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Mode	FCC Rule Part	Tx Frequency (MHz)	EIRP		Emission Designator	Modulation
			Max. Power (W)	Max. Power (dBm)		
n41 (PC2)	27	2506 - 2687.5	0.160	22.04	18M5G7D	QPSK
n41 (PC2)	27	2506 - 2687.5	0.121	20.84	18M5W7D	16QAM
n41 (PC2)	27	2506 - 2687.5	0.091	19.60	18M4W7D	64QAM
n41 (PC2)	27	2506 - 2687.5	0.081	19.08	18M4W7D	256QAM
n41 (PC2)	27	2516 - 2685	0.141	21.50	38M0G7D	QPSK
n41 (PC2)	27	2516 - 2685	0.107	20.30	38M1W7D	16QAM
n41 (PC2)	27	2516 - 2685	0.081	19.06	38M0W7D	64QAM
n41 (PC2)	27	2516 - 2685	0.072	18.58	38M0W7D	256QAM
n41 (PC2)	27	2521 - 2682.5	0.133	21.25	47M8G7D	QPSK
n41 (PC2)	27	2521 - 2682.5	0.106	20.25	47M7W7D	16QAM
n41 (PC2)	27	2521 - 2682.5	0.077	18.89	47M8W7D	64QAM
n41 (PC2)	27	2521 - 2682.5	0.072	18.56	47M8W7D	256QAM
n41 (PC2)	27	2526 - 2680	0.131	21.17	58M5G7D	QPSK
n41 (PC2)	27	2526 - 2680	0.094	19.74	58M4W7D	16QAM
n41 (PC2)	27	2526 - 2680	0.069	18.38	58M4W7D	64QAM
n41 (PC2)	27	2526 - 2680	0.064	18.05	58M4W7D	256QAM
n41 (PC2)	27	2536 - 2687.5	0.144	21.57	78M2G7D	QPSK
n41 (PC2)	27	2536 - 2687.5	0.103	20.14	78M1W7D	16QAM
n41 (PC2)	27	2536 - 2687.5	0.076	18.78	78M1W7D	64QAM
n41 (PC2)	27	2536 - 2687.5	0.070	18.45	78M1W7D	256QAM
n41 (PC2)	27	2541 - 2685	0.179	22.52	87M9G7D	QPSK
n41 (PC2)	27	2541 - 2685	0.145	21.62	88M0W7D	16QAM
n41 (PC2)	27	2541 - 2685	0.124	20.94	87M8W7D	64QAM
n41 (PC2)	27	2541 - 2685	0.113	20.54	87M9W7D	256QAM
n41 (PC2)	27	2546 - 2682.5	0.145	21.60	97M8G7D	QPSK
n41 (PC2)	27	2546 - 2682.5	0.112	20.51	97M6W7D	16QAM
n41 (PC2)	27	2546 - 2682.5	0.094	19.74	97M7W7D	64QAM
n41 (PC2)	27	2546 - 2682.5	0.084	19.26	97M9W7D	256QAM

EUT Sub 6GHz Overview (High Bands)

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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 ISSED Standards (RSS).
- PCTEST facility is a registered (2451B) test laboratory with the site description on file with ISSED.

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **LG Portable Handset FCC ID: ZNFV600TM**. The test data contained in this report pertains only to the emissions due to the EUT's LTE and Sub 6GHz NR function.

Test Device Serial No.: 03036, 03044, 03085, 03077, 03101

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, 5G NR (n71, n66, n25, n2, n41(PC2)), 802.11b/g/n/ac/ax WLAN, 802.11a/n/ac/ax 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.

Sub 6GHz NR Band n71 (663 – 698 MHz) operates using 15kHz Subcarrier Spacing with both CP-OFDM and DFT-s OFDM waveforms. The band supports QPSK, 16QAM, 64QAM, and 256QAM modulation. The test data provided in this report represents the worst case configuration.

Sub 6GHz NR Band n66 (1710 – 1780 MHz) operates using 15kHz Subcarrier Spacing with both CP-OFDM and DFT-s OFDM waveforms. The band supports QPSK, 16QAM, 64QAM, and 256QAM modulation. The test data provided in this report represents the worst case configurations.

Sub 6GHz NR Band n25 (1850 – 1915 MHz) operates using 15kHz Subcarrier Spacing with both CP-OFDM and DFT-s OFDM waveforms. The band supports QPSK, 16QAM, 64QAM, and 256QAM modulation. The test data provided in this report represents the worst case configurations.

Sub 6GHz NR Band n2 (1850 – 1910 MHz) operates using 15kHz Subcarrier Spacing with both CP-OFDM and DFT-s OFDM waveforms. The band supports QPSK, 16QAM, 64QAM, and 256QAM modulation. The test data provided in this report represents the worst case configurations.

Sub 6GHz NR Band n41 (2496 – 2690 MHz) operates using 30kHz Subcarrier Spacing with both CP-OFDM and DFT-s OFDM waveforms. The band supports QPSK, 16QAM, 64QAM, and 256QAM modulation. The test data provided in this report represents the worst case configurations.

Sub 6GHz NR Band n25 (1850 - 1915 MHz) overlaps the entire frequency range of Sub 6GHz NR Band n2 (1850 - 1910 MHz). Therefore, test data provided in this report covers n2 as well as n25.

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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: YZP-PWMAW815A while operating under normal conditions in a simulated call or data transmission configuration. The worst case radiated emissions data is shown in this report.

The device was operated using FTM test software to broadcast Sub 6GHz functions as well as LTE during EN-DC operations.

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 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:

$$P_d [\text{dBm}] = P_g [\text{dBm}] - \text{cable loss} [\text{dB}] + \text{antenna gain} [\text{dBd/dBi}]$$

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 $P_g [\text{dBm}] - \text{cable loss} [\text{dB}]$.

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 $43 + 10 \log_{10}(\text{Power} [\text{Watts}])$. For Band 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 $55 + 10 \log_{10}(\text{Power} [\text{Watts}])$. For Band 30 and 48, the calculated P_d levels are compared to the absolute spurious emission limit of -40dBm which is equivalent to the required minimum attenuation of $70 + 10 \log_{10}(\text{Power} [\text{Watts}])$.

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 ($\pm$ 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
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
Anritsu	MT8821C	Radio Communication Analyzer	N/A			6200901190
Emco	3115	Horn Antenna (1-18GHz)	3/28/2018	Biennial	3/28/2020	9704-5182
Emco	3116	Horn Antenna (18 - 40GHz)	6/7/2018	Biennial	6/7/2020	9203-2178
Emco	3160-09	Small Horn (18 - 26.5GHz)	8/9/2018	Biennial	8/9/2020	135427
Emco	3160-10	Small Horn (26.5 - 40GHz)	8/9/2018	Biennial	8/9/2020	130993
Keysight Technologies	N9020A	MXA Signal Analyzer	4/29/2019	Annual	4/29/2020	MY54500644
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			140144
Rohde & Schwarz	SFUNIT-Rx	Shielded Filter Unit	7/11/2019	Annual	7/11/2020	102134
Rohde & Schwarz	SFUNIT-Rx	Shielded Filter Unit	7/8/2019	Annual	7/8/2020	102133
Seekonk	NC-100	Torque Wrench (8" lb)	5/10/2018	Biennial	5/10/2020	N/A

Table 5-1. Test Equipment

Notes:

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 analyzer. 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: LG Electronics USA, Inc.
 FCC ID: ZNFV600TM
 FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
 Mode(s): LTE / Sub 6GHz NR

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
2.1049	Occupied Bandwidth	N/A	CONDUCTED	PASS	Section 7.2, 7.12
2.1051 22.917(a) 24.238(a) 27.53(c) 27.53(g) 27.53(h)	Out of Band Emissions	$> 43 + 10 \log_{10}(P[\text{Watts}])$ at Band Edge and for all out-of-band emissions			Section 7.3, 7.4, 7.12
27.53(m)	Out of Band Emissions	Undesirable emissions must meet the limits detailed in 27.53(m)			Section 7.3, 7.4, 7.12
27.53(a)	Out of Band Emissions	Undesirable emissions must meet the limits detailed in 27.53(a)			Section 7.3, 7.4, 7.12
2.1046	Power Output	N/A			Section 7.5
24.232(d) 27.50	Peak-Average Ratio	$< 13 \text{ dB}$			Section, 7.12
2.1046	Transmitter Conducted Output Power	N/A			See RF Exposure Report
22.917(a) 27.53(h) 27.53(m)	Uplink Carrier Aggregation	$> 43 + 10 \log(P[\text{Watts}])$ at Band Edge and for all out-of-band emissions			Section 7.8
2.1055 22.355 24.235 27.54	Frequency Stability	$< 2.5 \text{ ppm}$ (Part 22) and fundamental emissions stay within authorized frequency block (Part 24, 27)			Section 7.11, 7.12

Table 7-1. Summary of Radiated 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 7.8, 7.12
27.50(b)(10) 27.50(c)(10)	Effective Radiated Power / Equivalent Isotropic Radiated Power (Band 71, 12, 13)	< 3 Watts max. ERP			Section 7.8, 7.12
24.232(c) 27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2/25, 7, 41/38)	< 2 Watts max. EIRP			Section 7.8, 7.12
27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4/66)	< 1 Watts max. EIRP			Section 7.8, 7.12
27.50(a)(3)	Equivalent Isotropic Radiated Power (Band 30)	< 0.25 Watts max. EIRP			Section 7.8
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, 7.12
96.41(e)	Undesirable Emissions	-40 dBm/MHz			Section 7.12
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, 7.12
27.53(m) 27.53(c) 27.53(g)	Uplink Carrier Aggregatin	Undesirable emissions must meet the limits detailed in 27.53(m)			Section 7.10

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, 0, 7.12) 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 $\geq 3 \times$ 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.

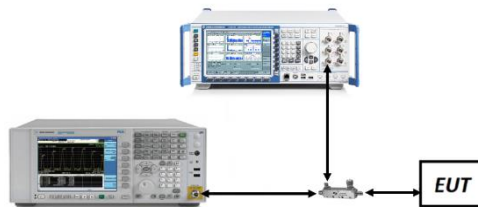


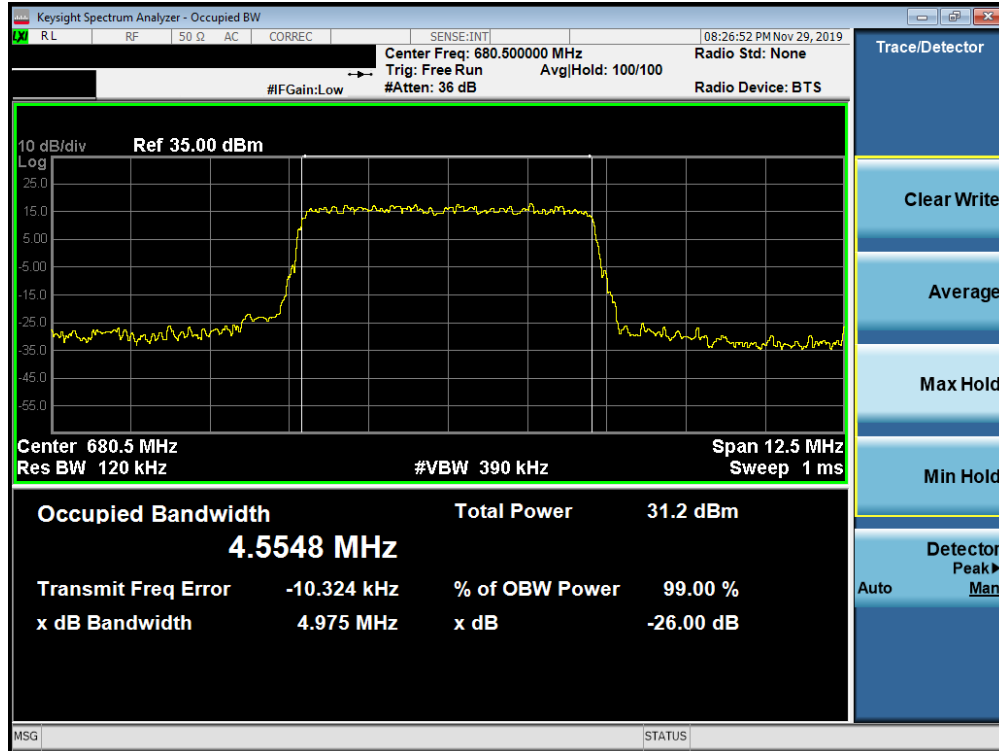
Figure 7-1. Test Instrument & Measurement Setup

Test Notes

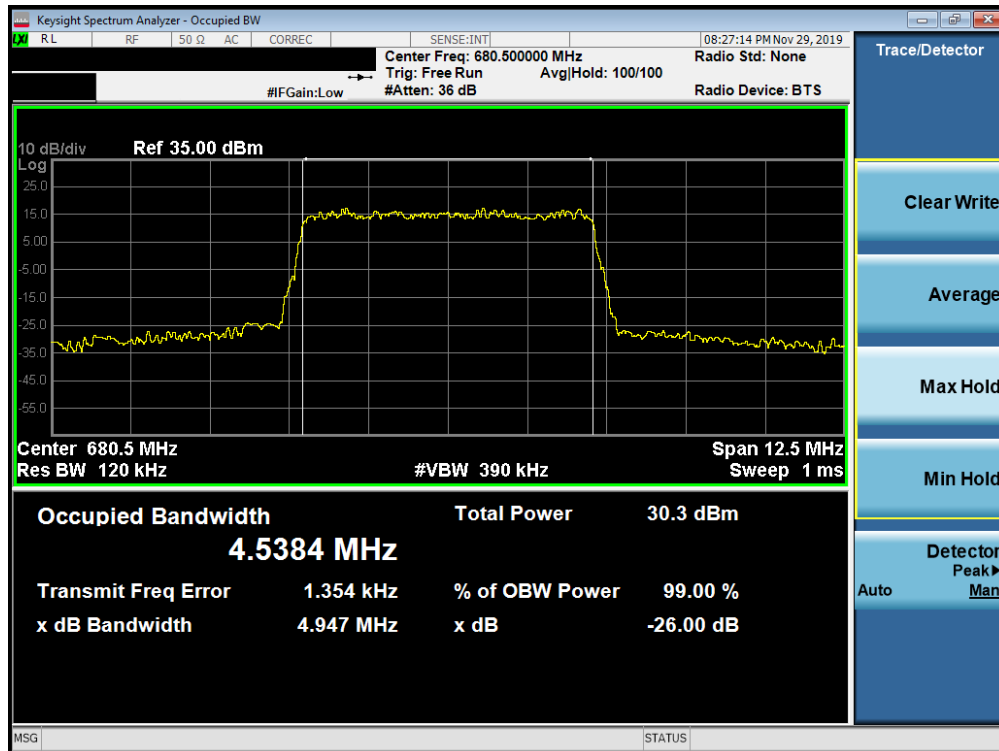
None.

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Band 71

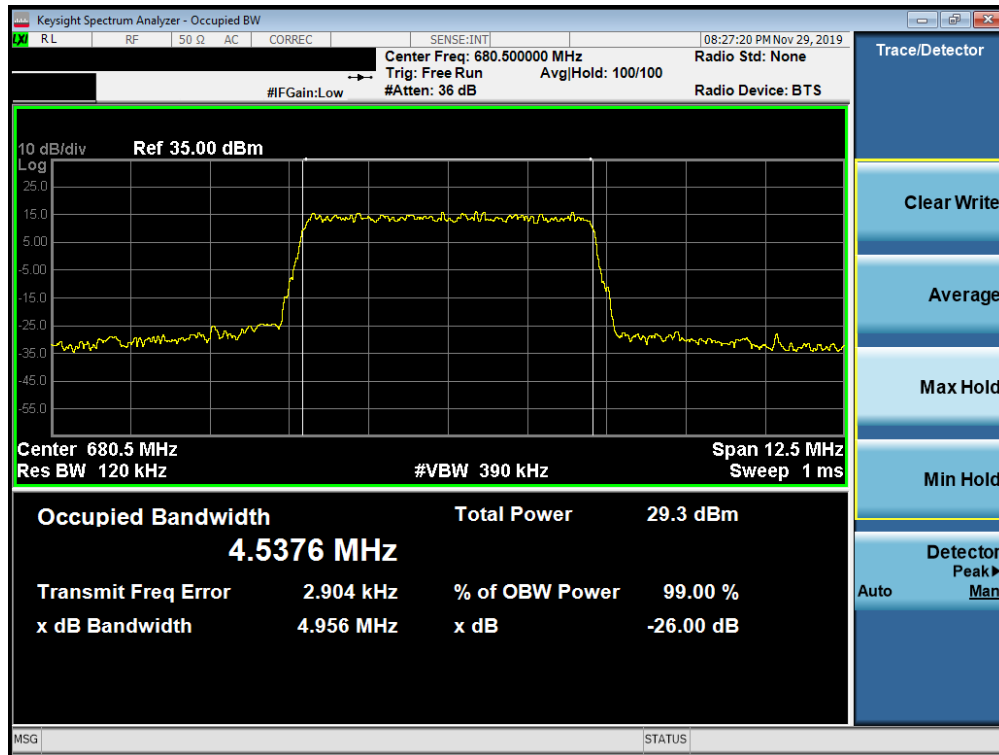


Plot 7-1. Occupied Bandwidth Plot (Band 71 - 5.0MHz QPSK - Full RB Configuration)



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

FCC ID: ZNFV600TM	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
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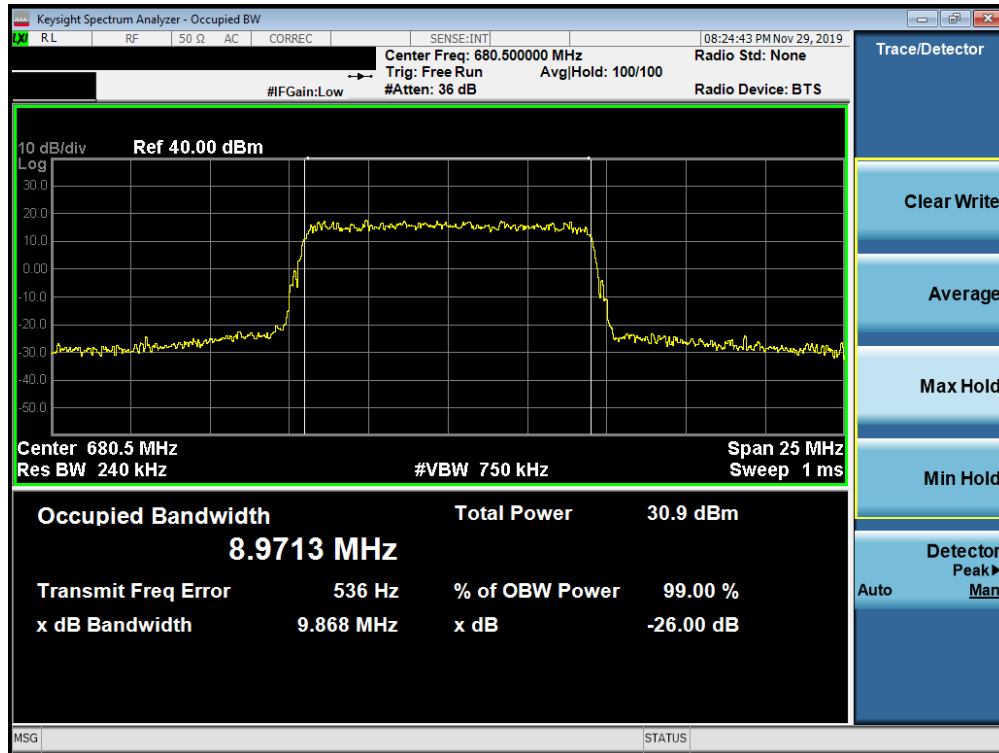


Plot 7-3. Occupied Bandwidth Plot (Band 71 - 5.0MHz 64-QAM - Full RB Configuration)

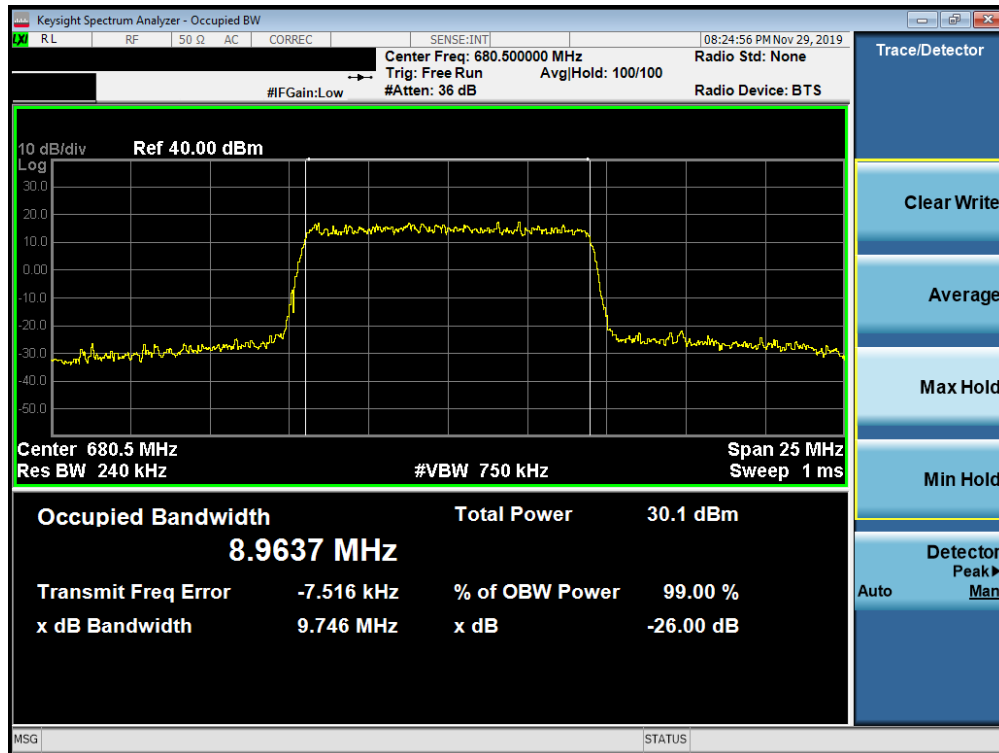


Plot 7-4. Occupied Bandwidth Plot (Band 71 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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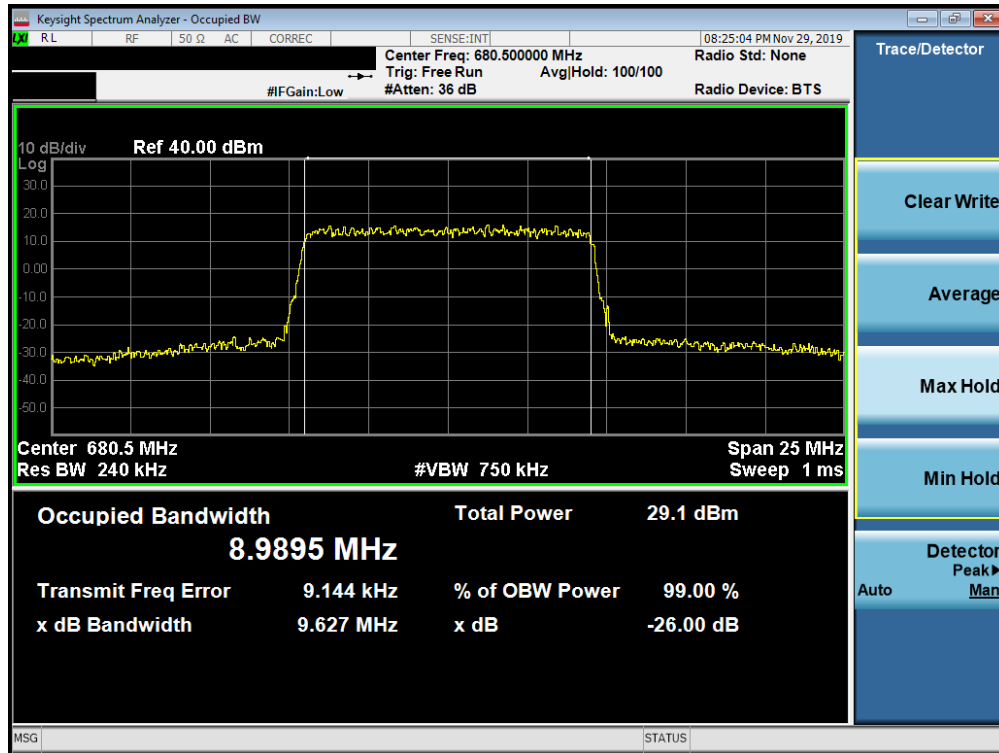


Plot 7-5. Occupied Bandwidth Plot (Band 71 - 10.0MHz QPSK - Full RB Configuration)

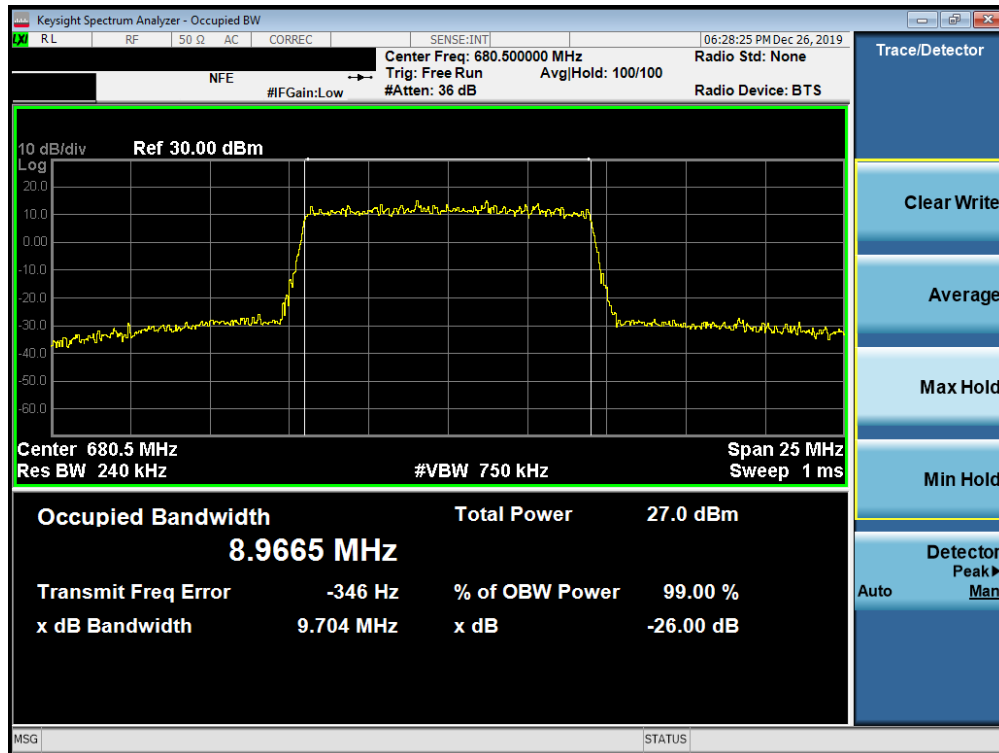


Plot 7-6. Occupied Bandwidth Plot (Band 71 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 22 of 488

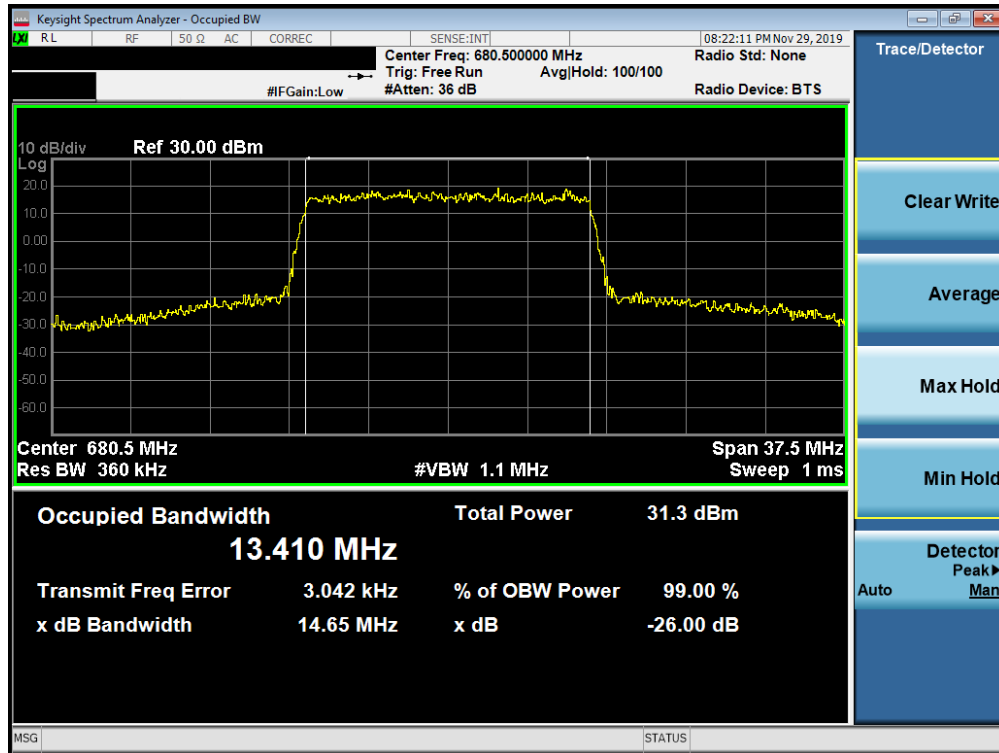


Plot 7-7. Occupied Bandwidth Plot (Band 71 - 10.0MHz 64-QAM - Full RB Configuration)

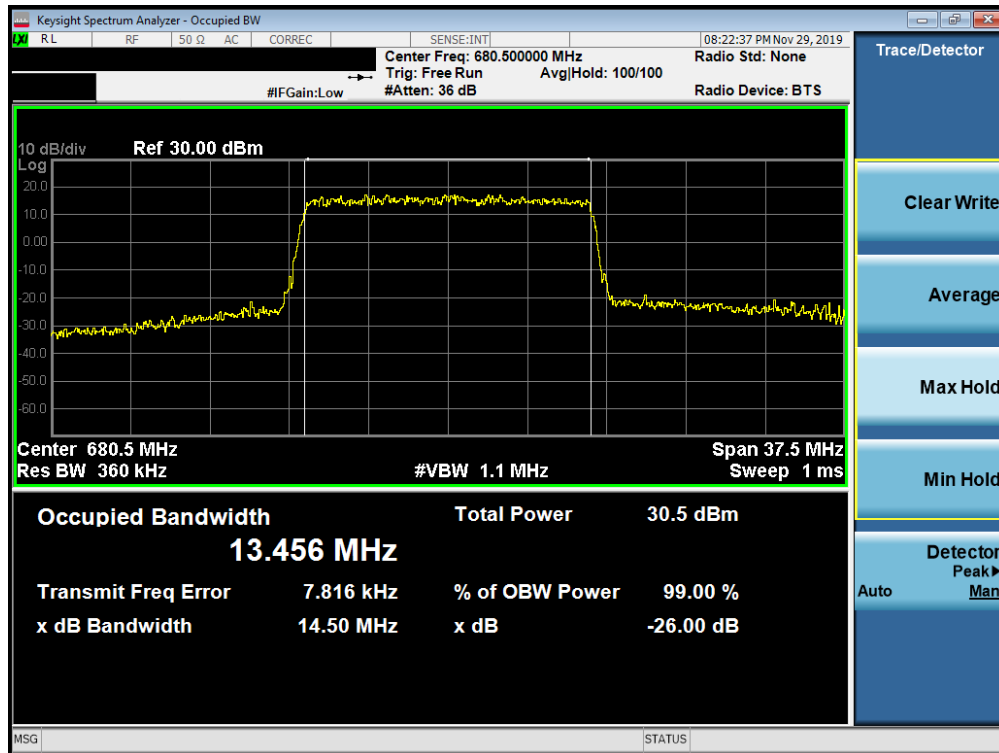


Plot 7-8. Occupied Bandwidth Plot (Band 71 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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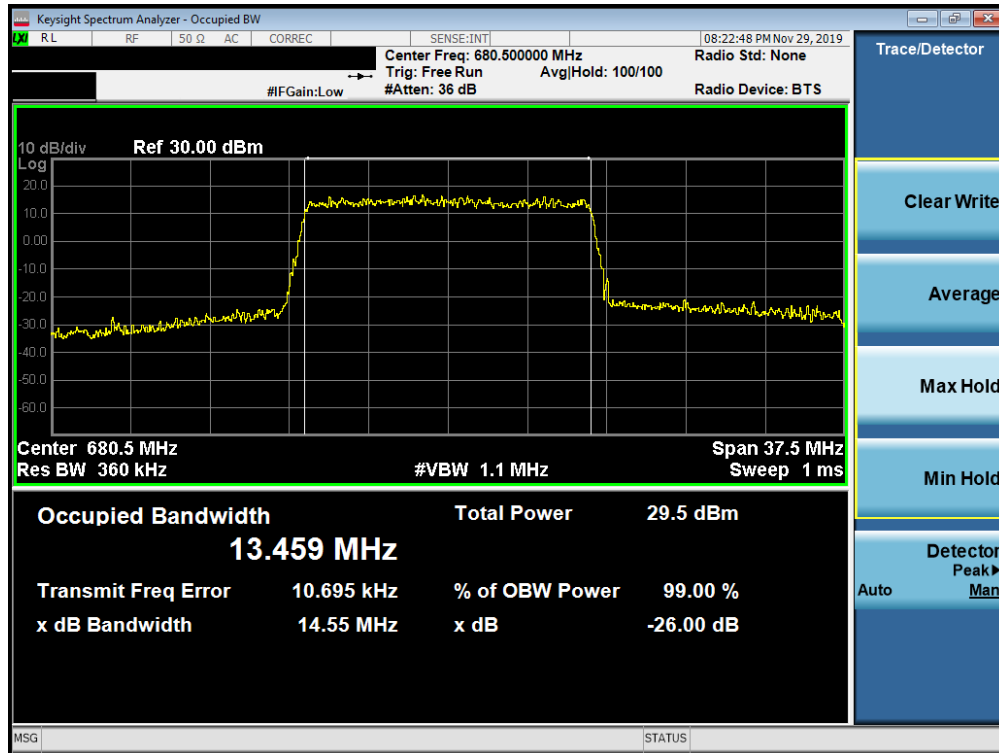


Plot 7-9. Occupied Bandwidth Plot (Band 71 - 15.0MHz QPSK - Full RB Configuration)

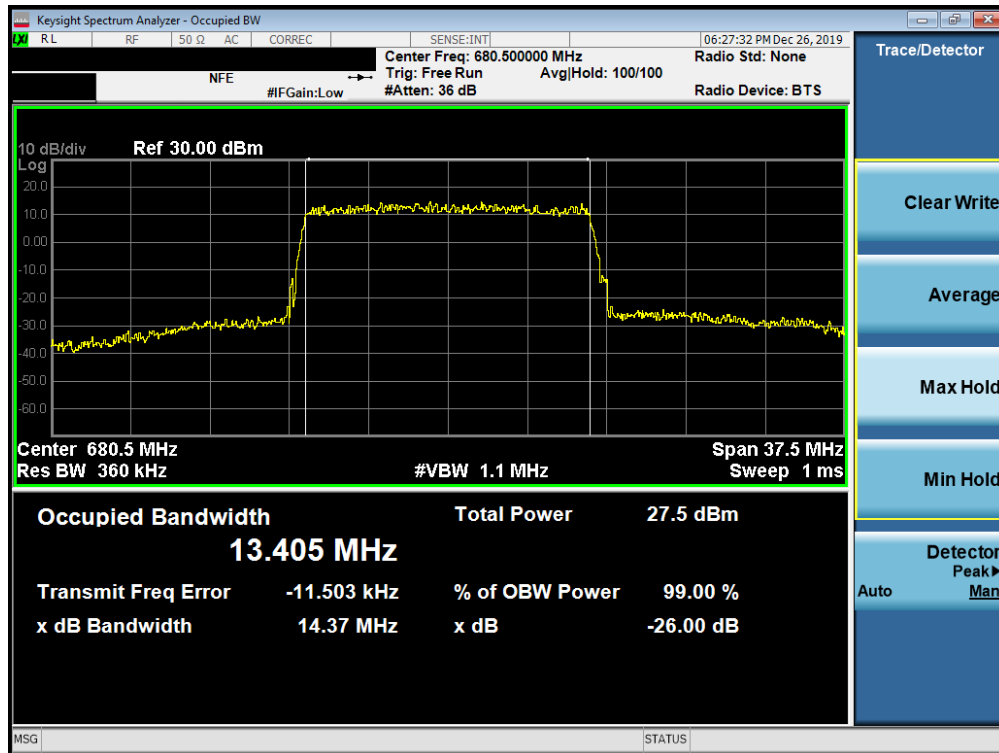


Plot 7-10. Occupied Bandwidth Plot (Band 71 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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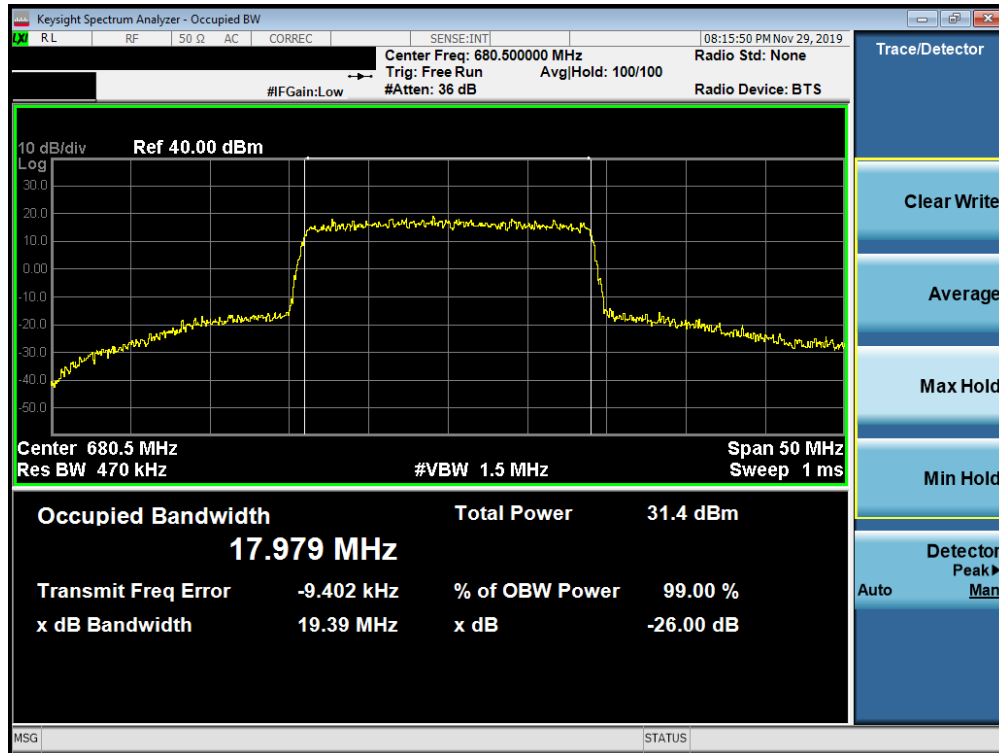


Plot 7-11. Occupied Bandwidth Plot (Band 71 - 15.0MHz 64-QAM - Full RB Configuration)

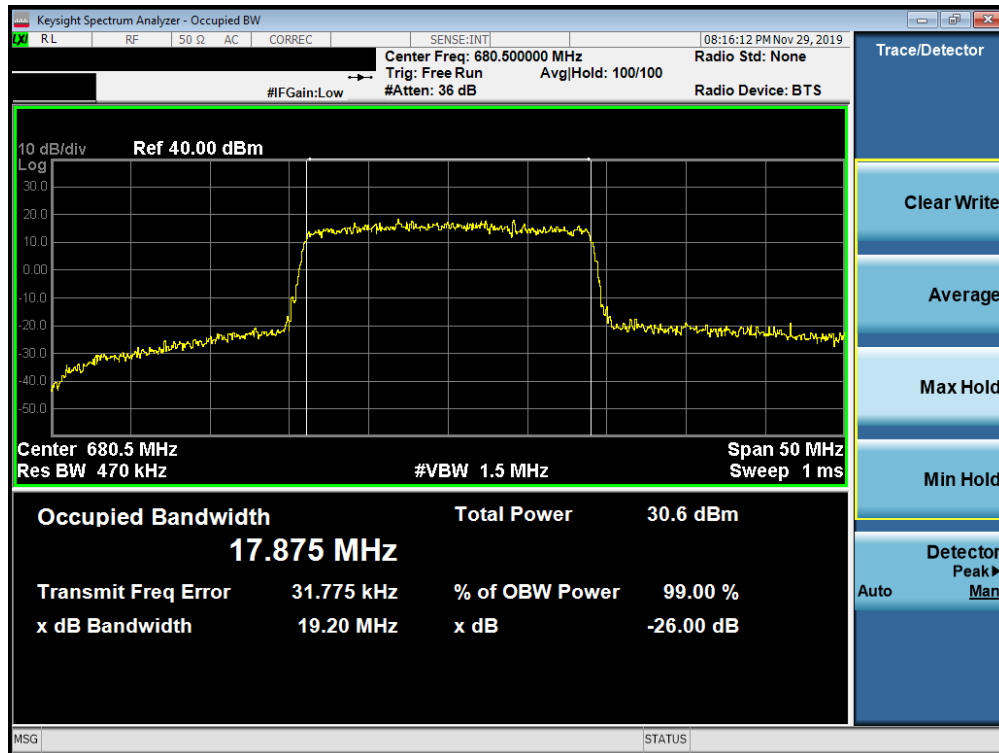


Plot 7-12. Occupied Bandwidth Plot (Band 71 - 15.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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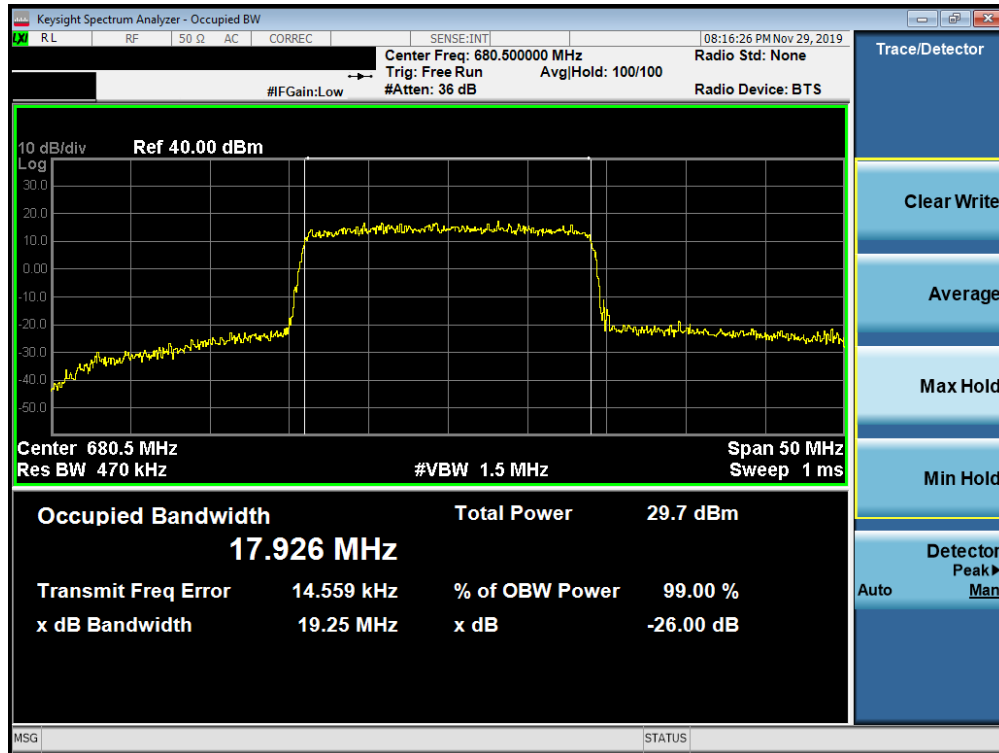


Plot 7-13. Occupied Bandwidth Plot (Band 71 - 20.0MHz QPSK - Full RB Configuration)

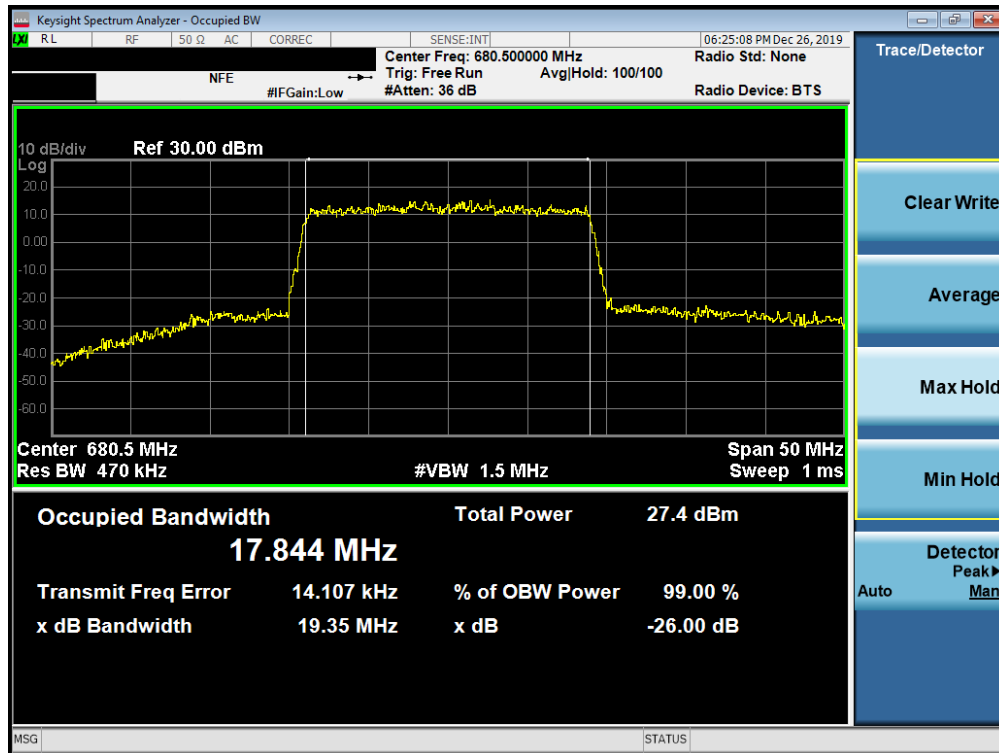


Plot 7-14. Occupied Bandwidth Plot (Band 71 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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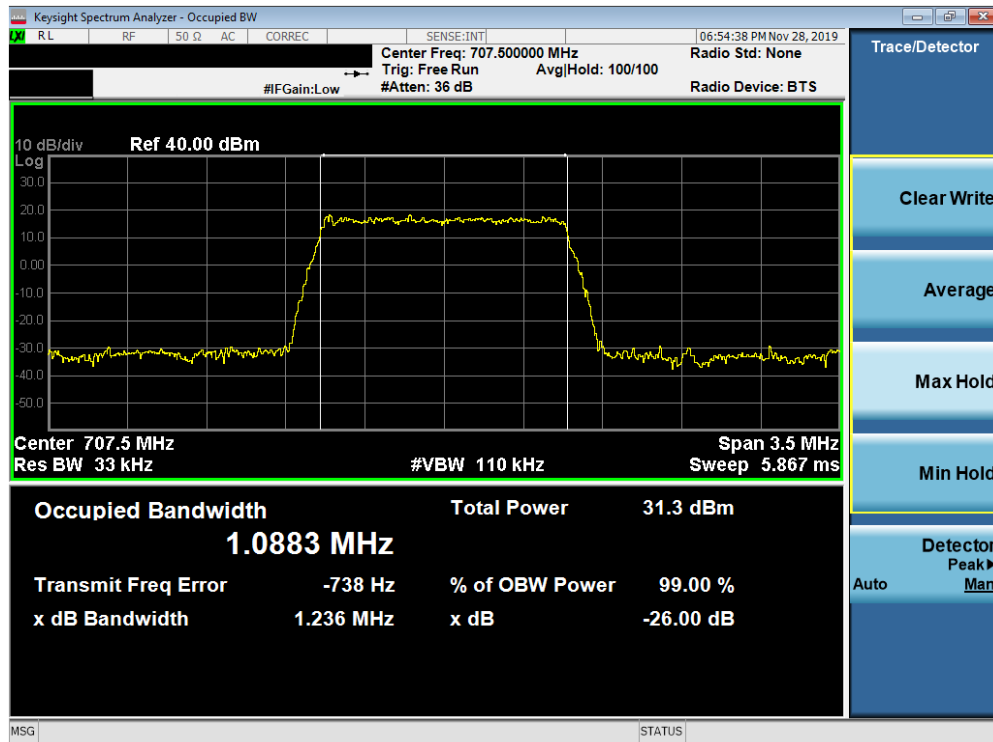


Plot 7-15. Occupied Bandwidth Plot (Band 71 - 20.0MHz 64-QAM - Full RB Configuration)

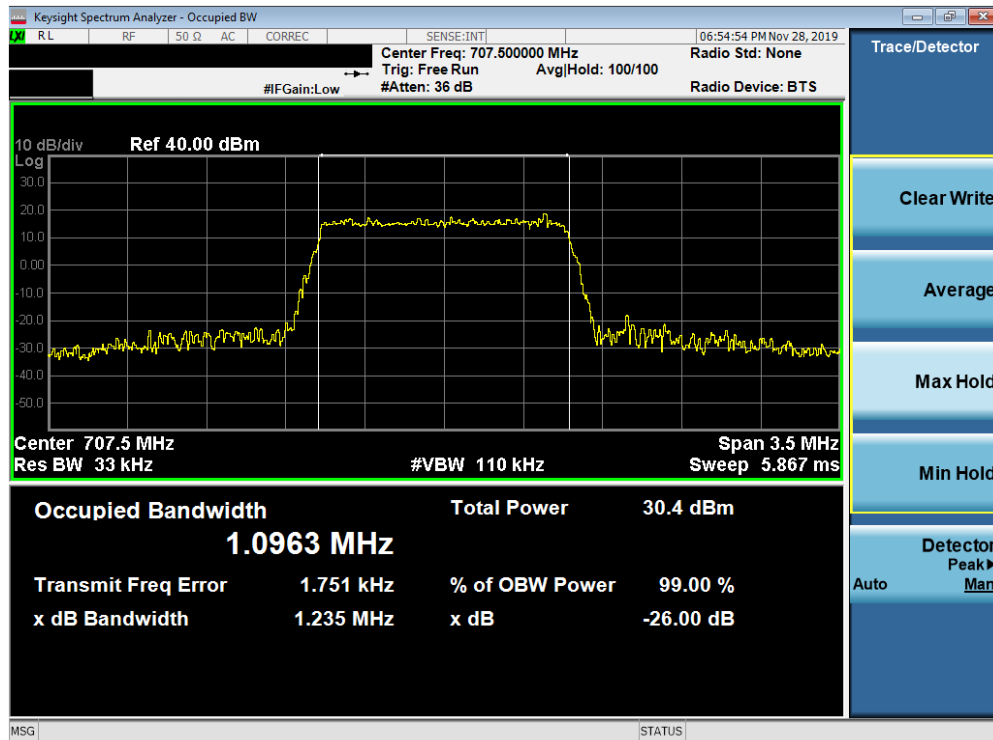


Plot 7-16. Occupied Bandwidth Plot (Band 71 - 20.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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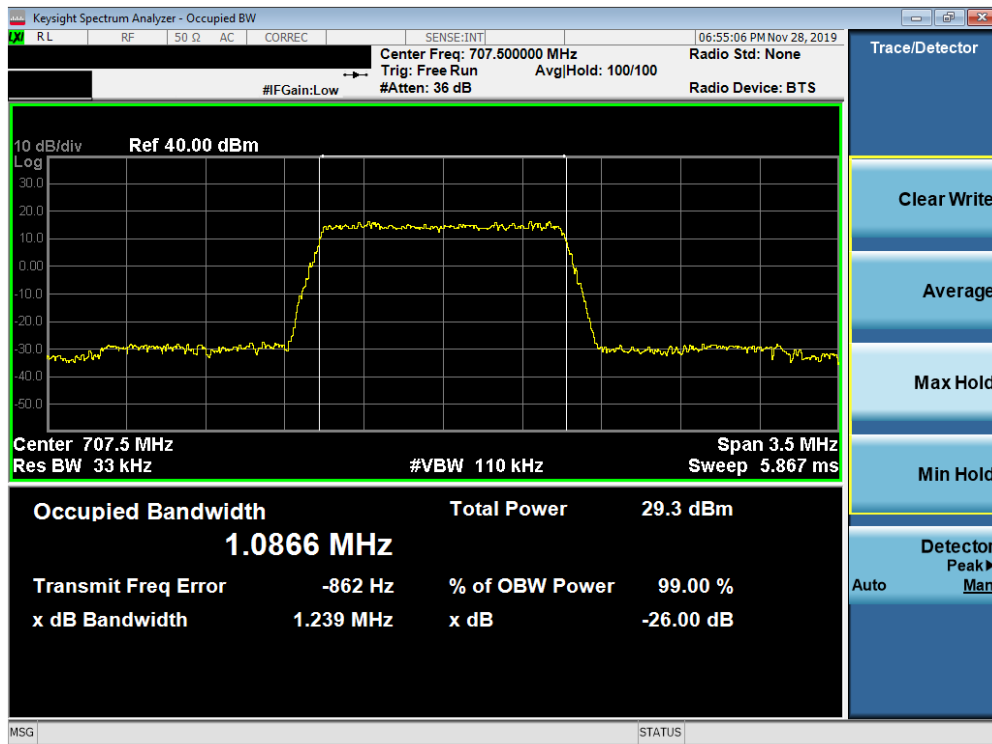


Plot 7-17. Occupied Bandwidth Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)

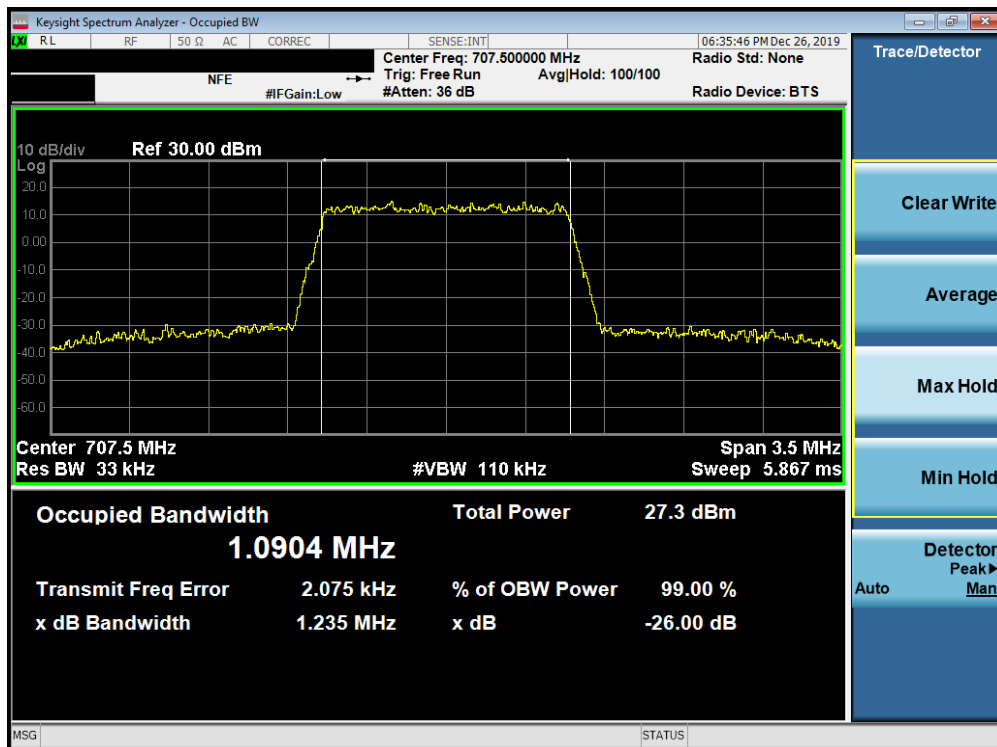


Plot 7-18. Occupied Bandwidth Plot (Band 12 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 28 of 488

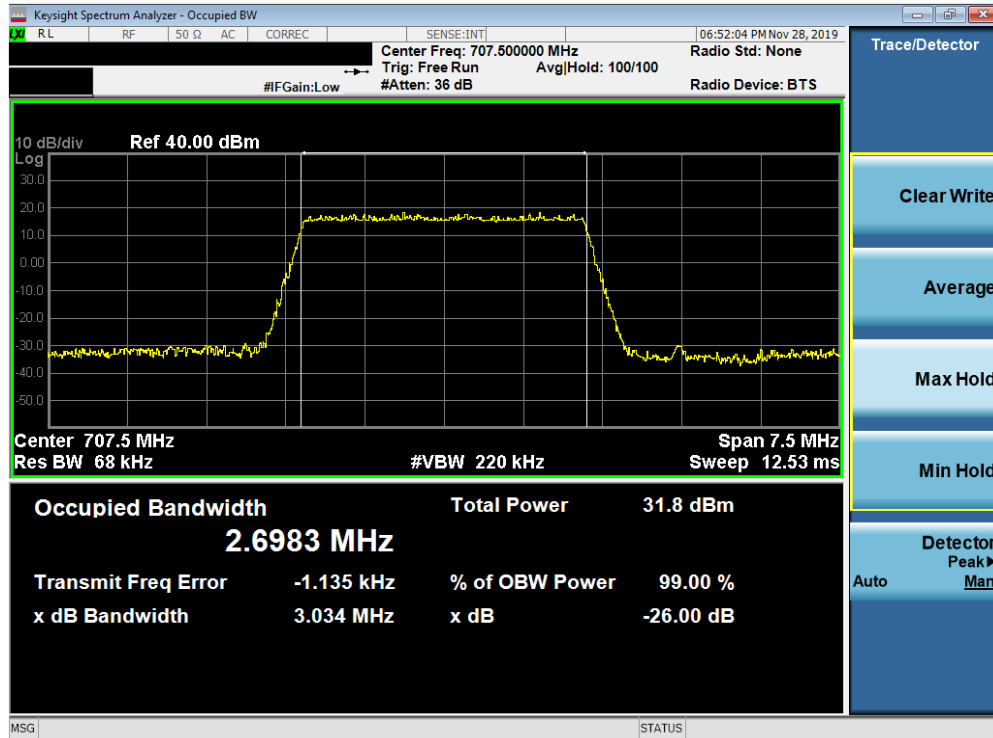


Plot 7-19. Occupied Bandwidth Plot (Band 12 - 1.4MHz 64-QAM - Full RB Configuration)

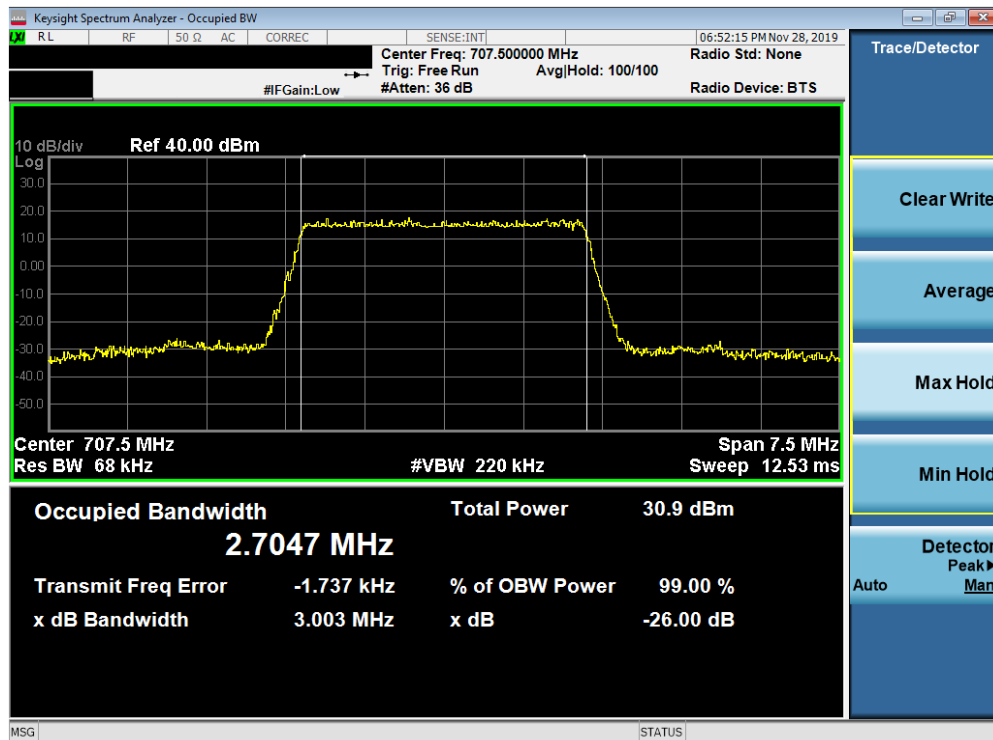


Plot 7-20. Occupied Bandwidth Plot (Band 12 - 1.4MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 29 of 488

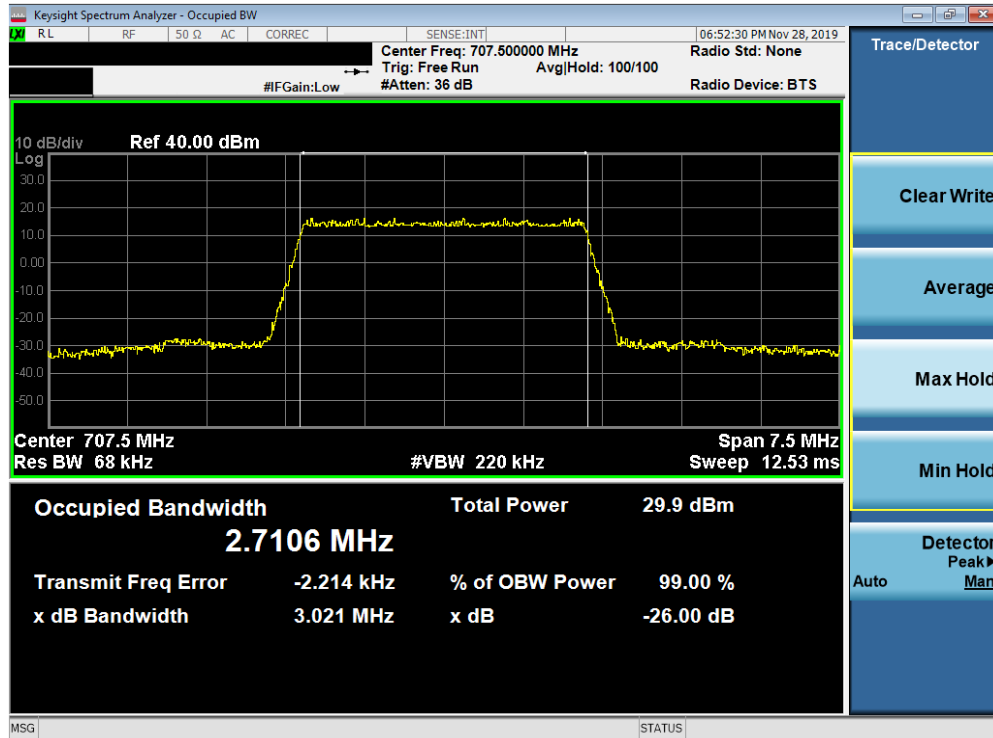


Plot 7-21. Occupied Bandwidth Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)

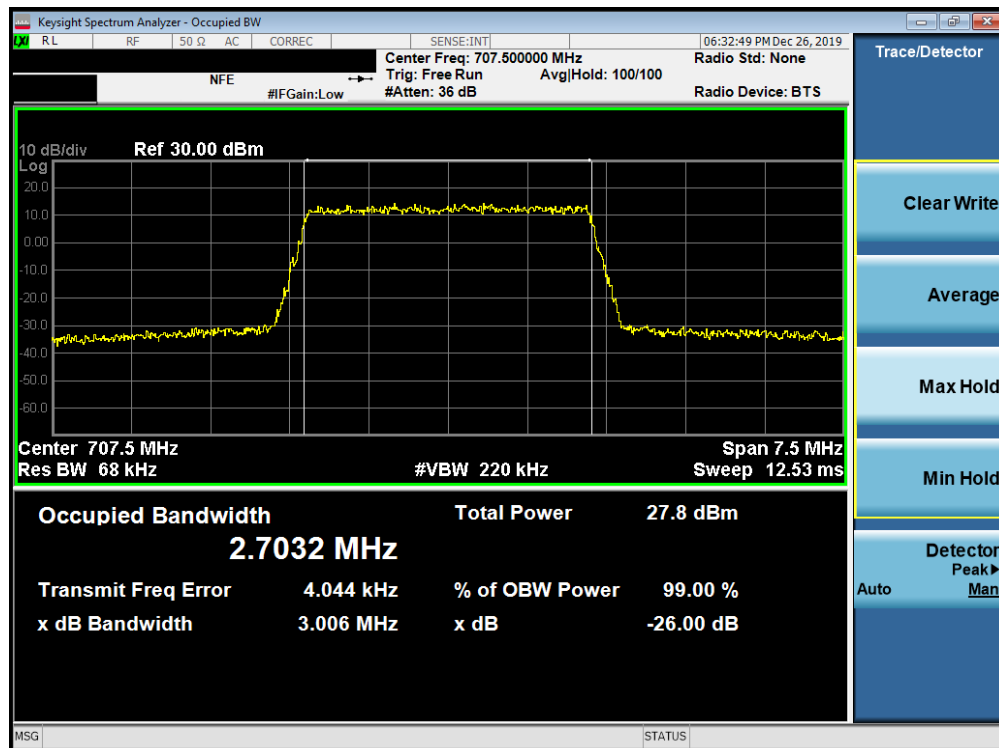


Plot 7-22. Occupied Bandwidth Plot (Band 12 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
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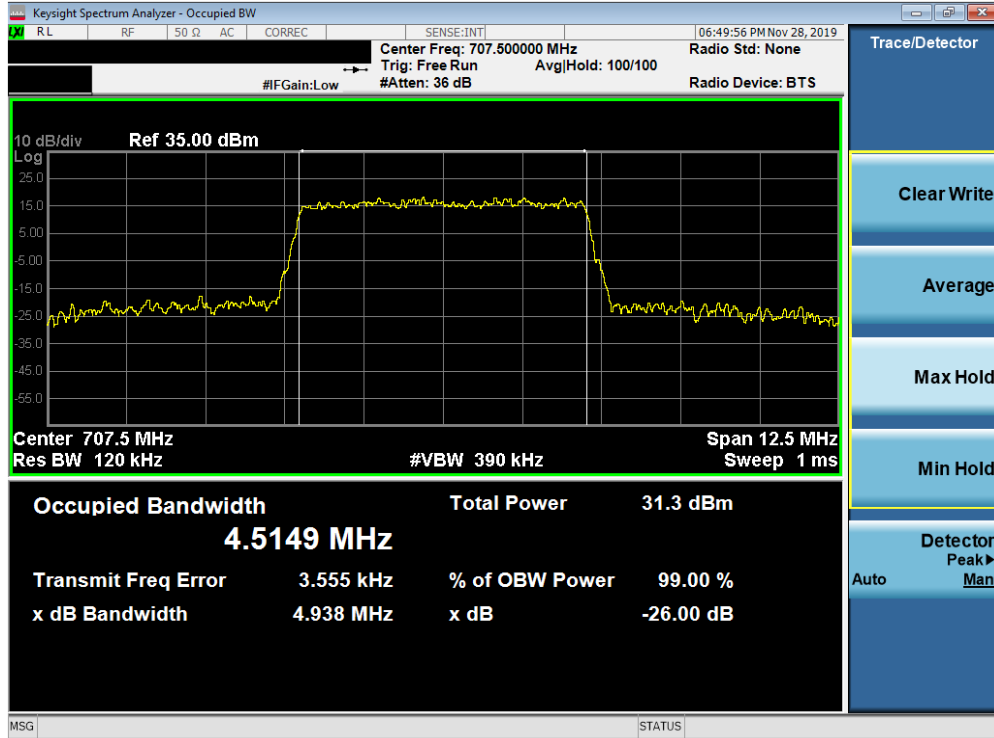


Plot 7-23. Occupied Bandwidth Plot (Band 12 - 3.0MHz 64-QAM - Full RB Configuration)

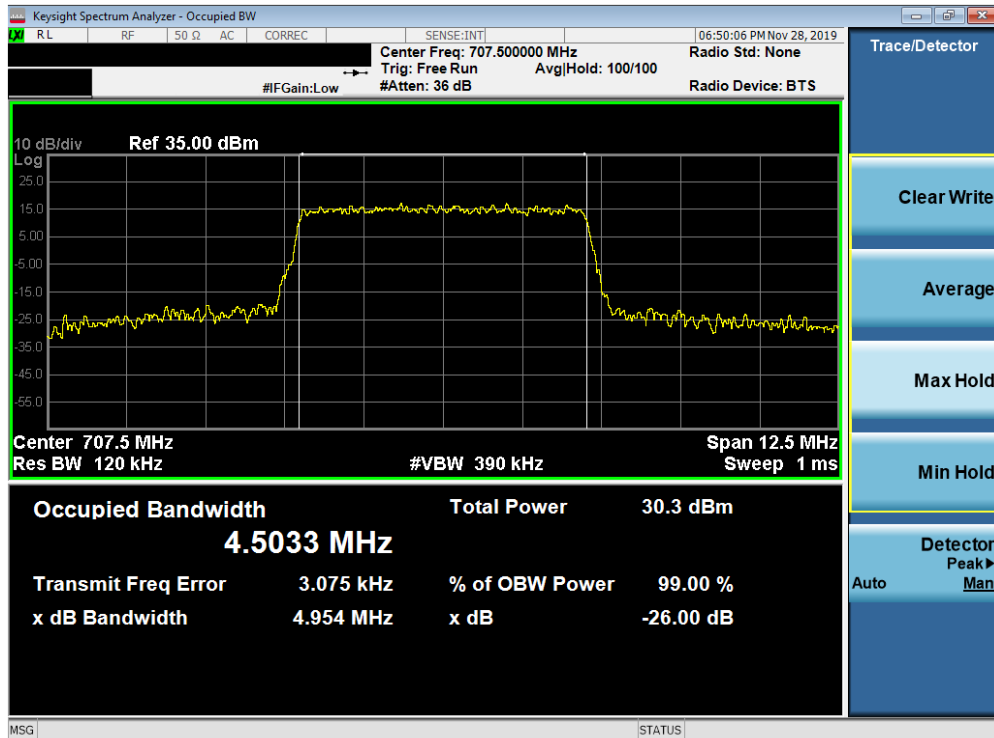


Plot 7-24. Occupied Bandwidth Plot (Band 12 - 3.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
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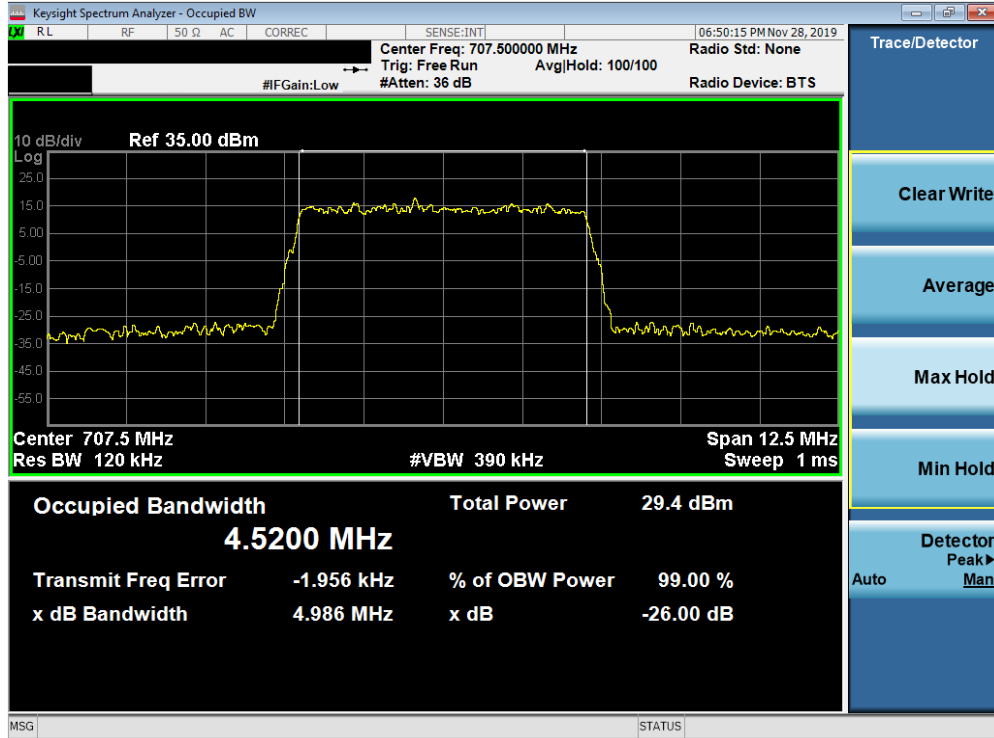


Plot 7-25. Occupied Bandwidth Plot (Band 12/17 - 5.0MHz QPSK - Full RB Configuration)

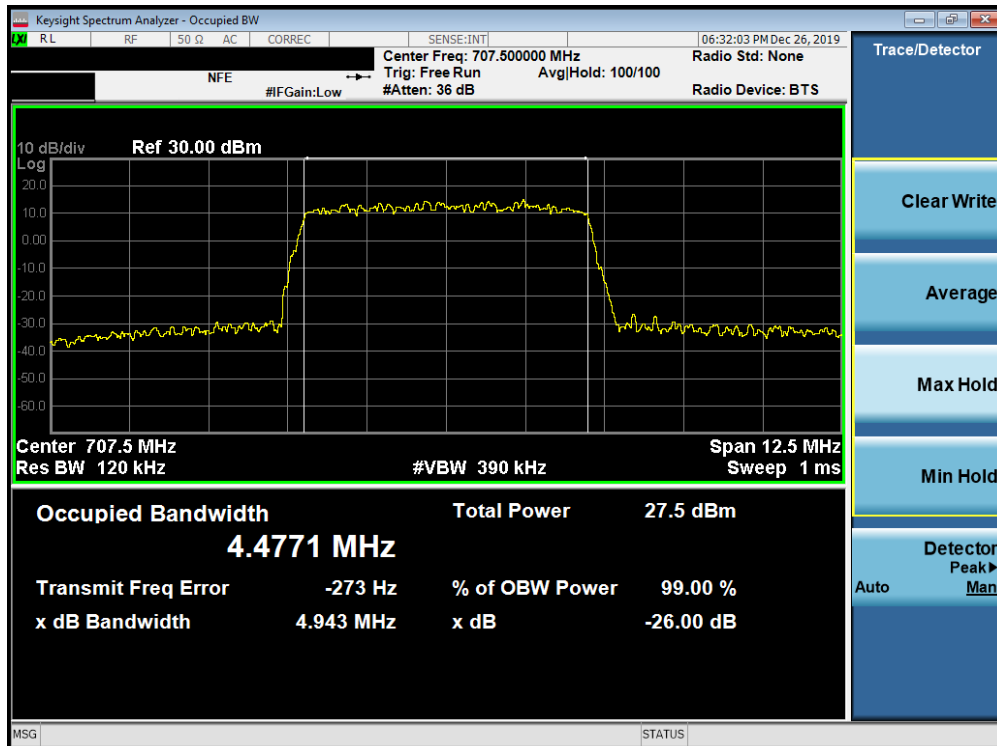


Plot 7-26. Occupied Bandwidth Plot (Band 12/17 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 32 of 488

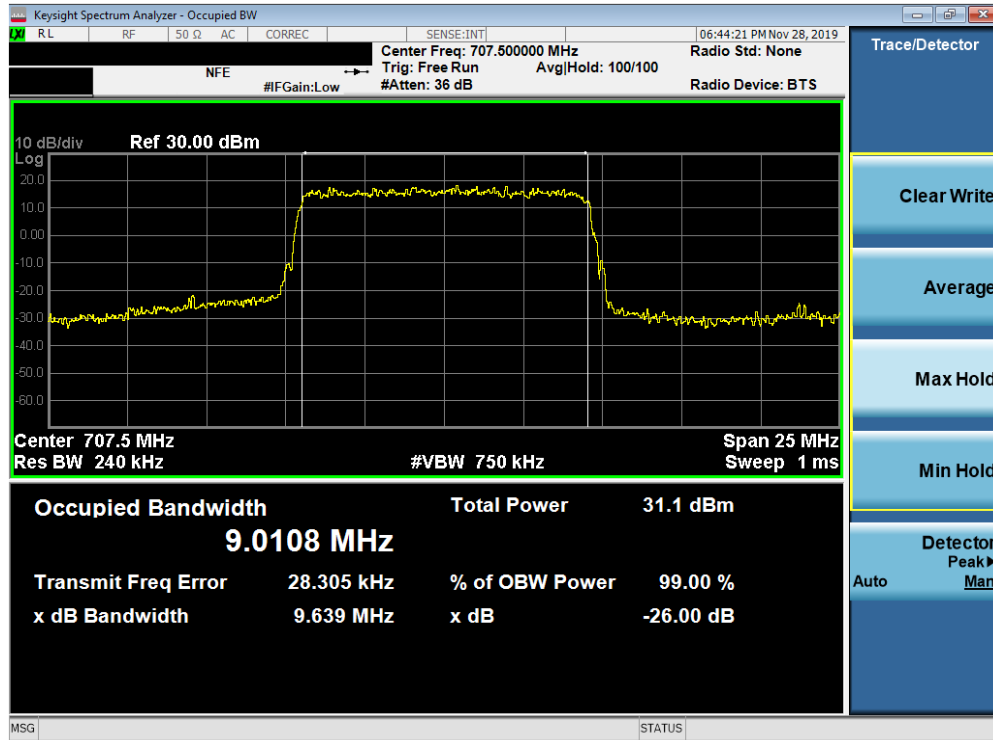


Plot 7-27. Occupied Bandwidth Plot (Band 12/17 - 5.0MHz 64-QAM - Full RB Configuration)

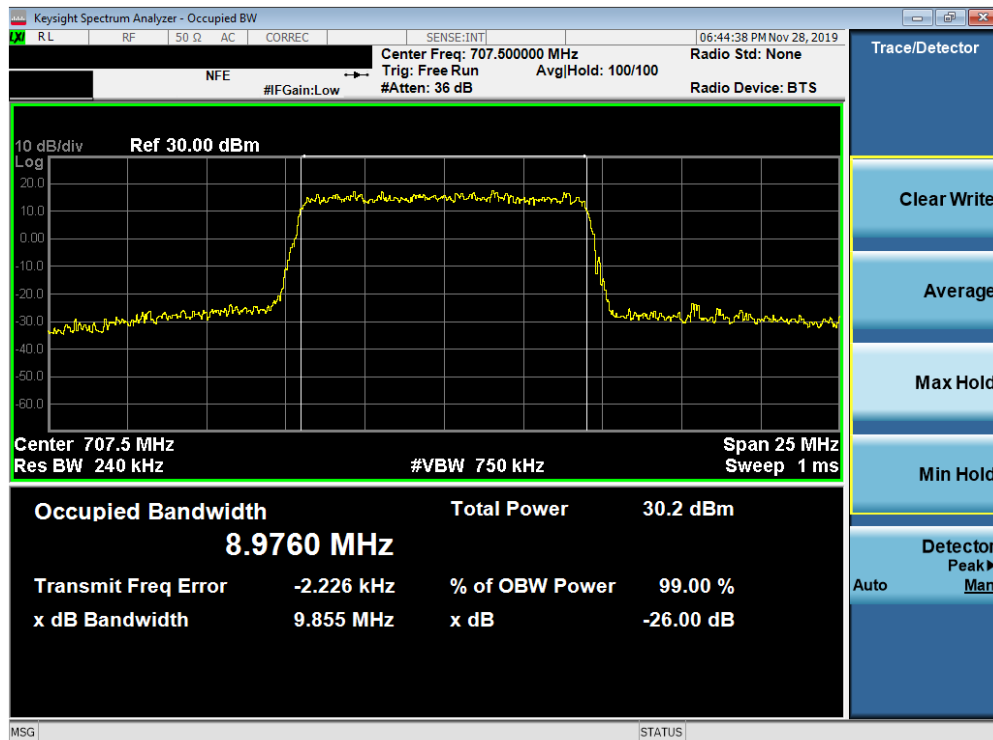


Plot 7-28. Occupied Bandwidth Plot (Band 12/17 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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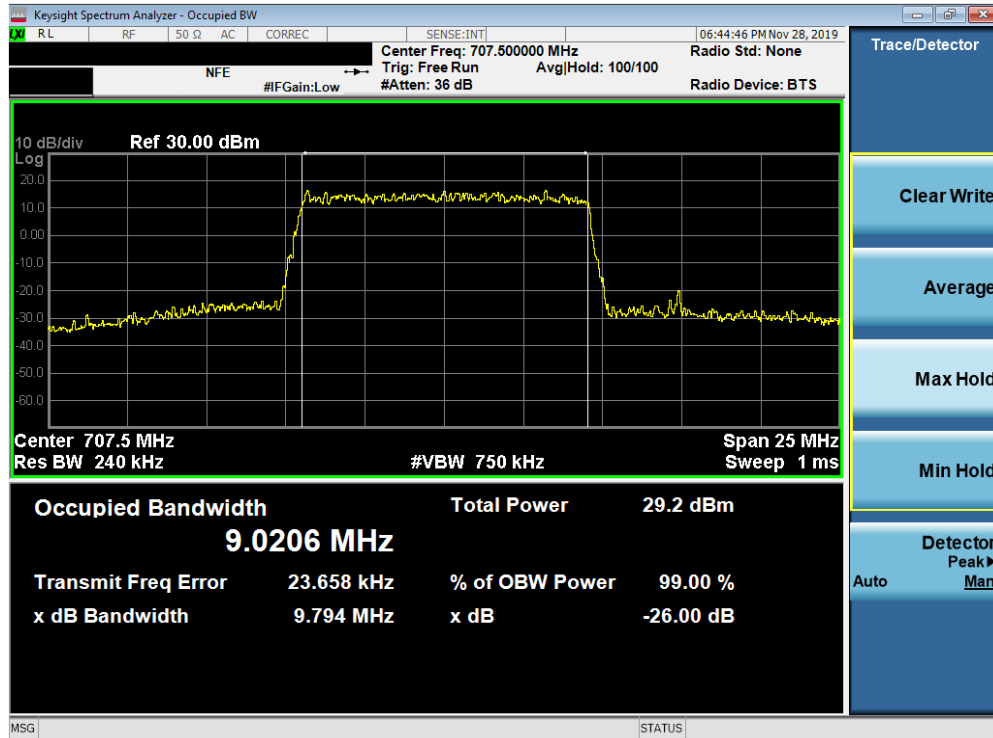


Plot 7-29. Occupied Bandwidth Plot (Band 12/17 - 10.0MHz QPSK - Full RB Configuration)

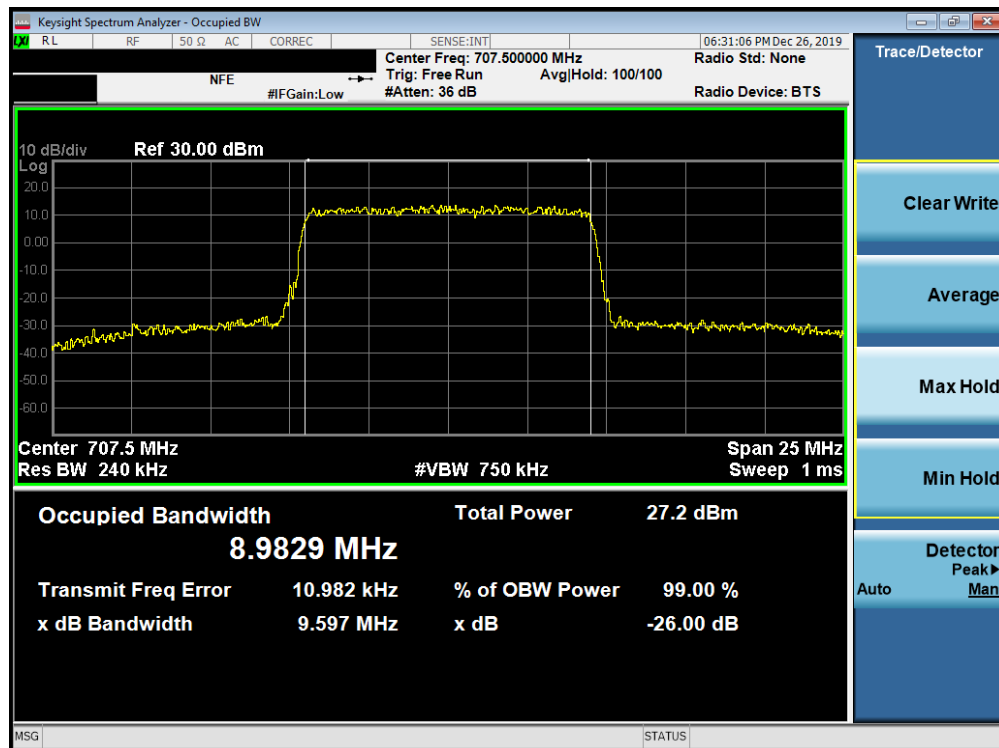


Plot 7-30. Occupied Bandwidth Plot (Band 12/17 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 34 of 488



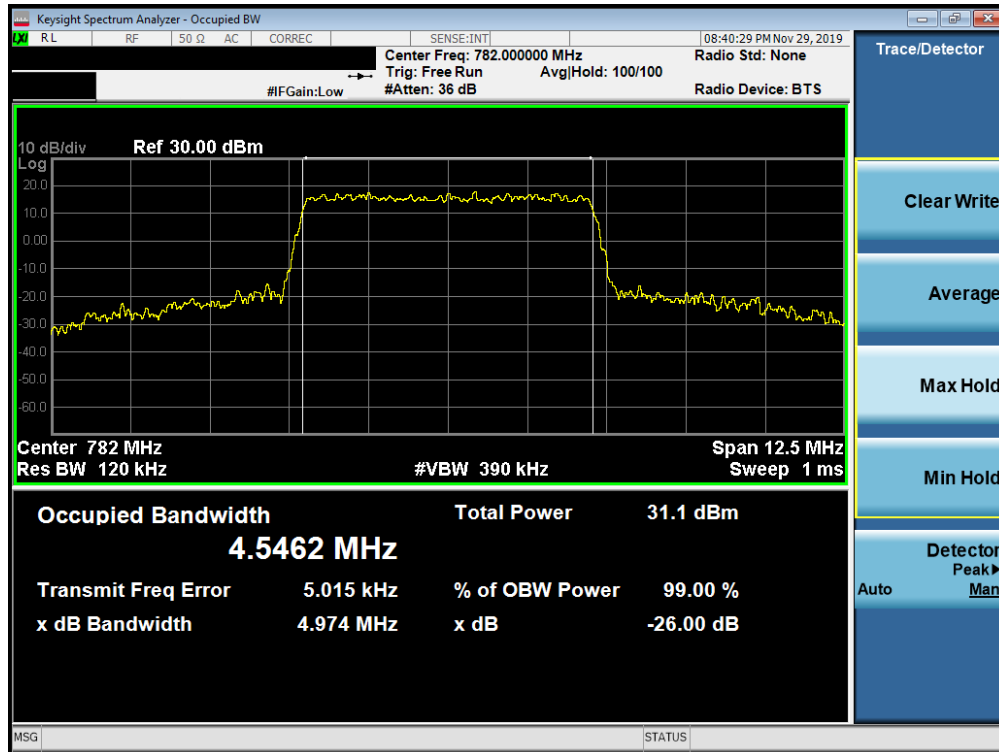
Plot 7-31. Occupied Bandwidth Plot (Band 12/17 - 10.0MHz 64-QAM - Full RB Configuration)



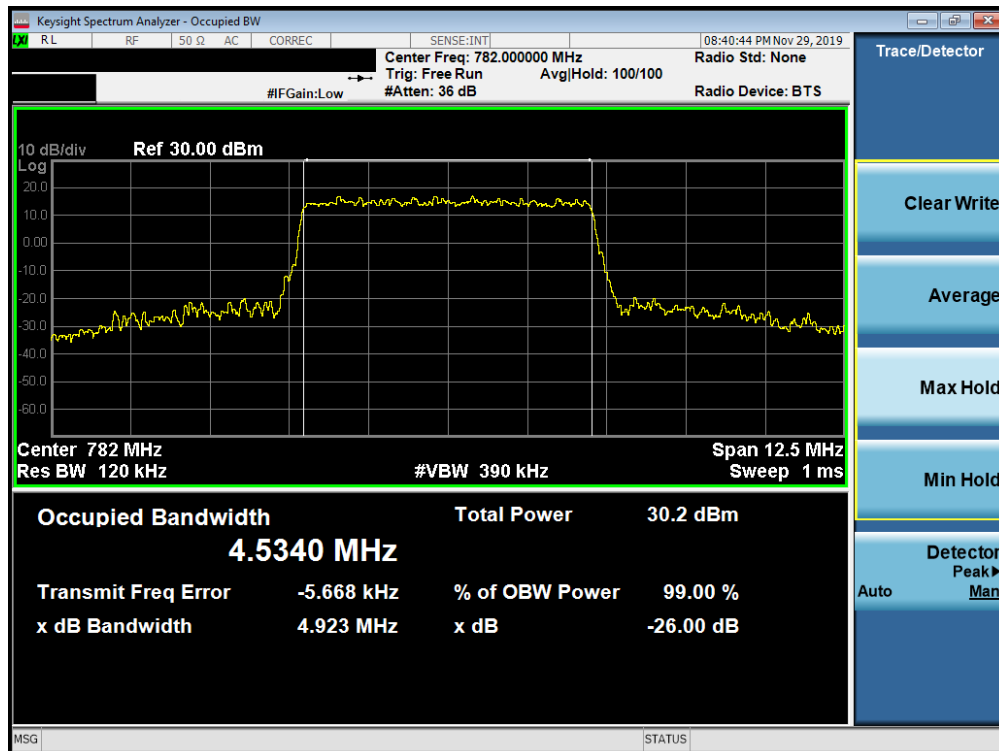
Plot 7-32. Occupied Bandwidth Plot (Band 12/17 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Band 13



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

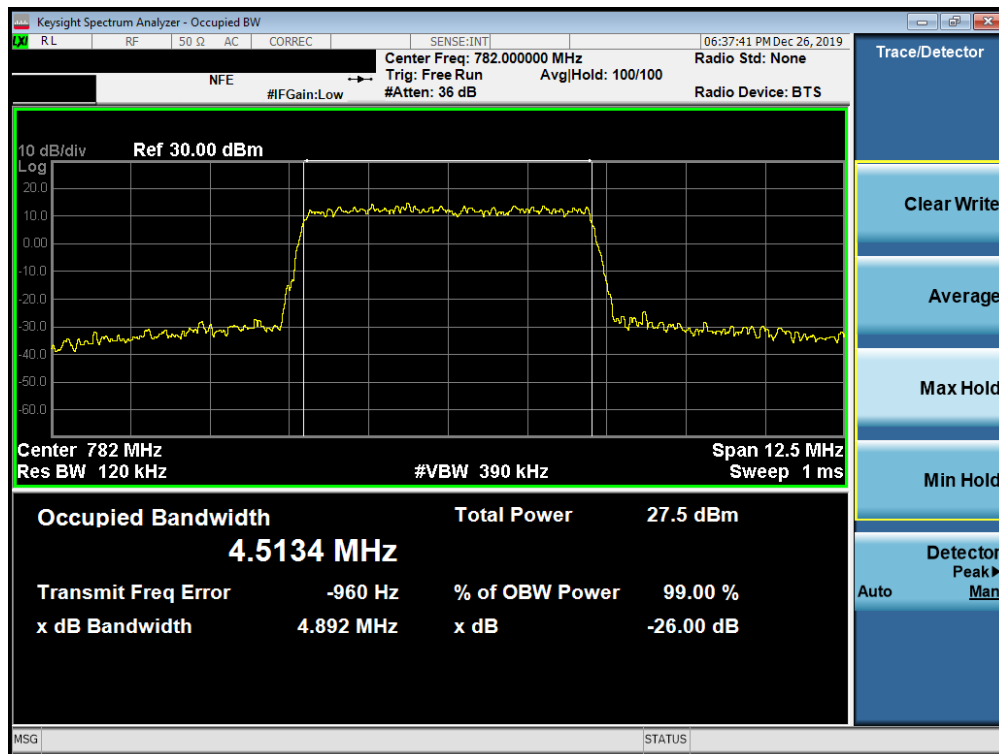


Plot 7-34. Occupied Bandwidth Plot (Band 13 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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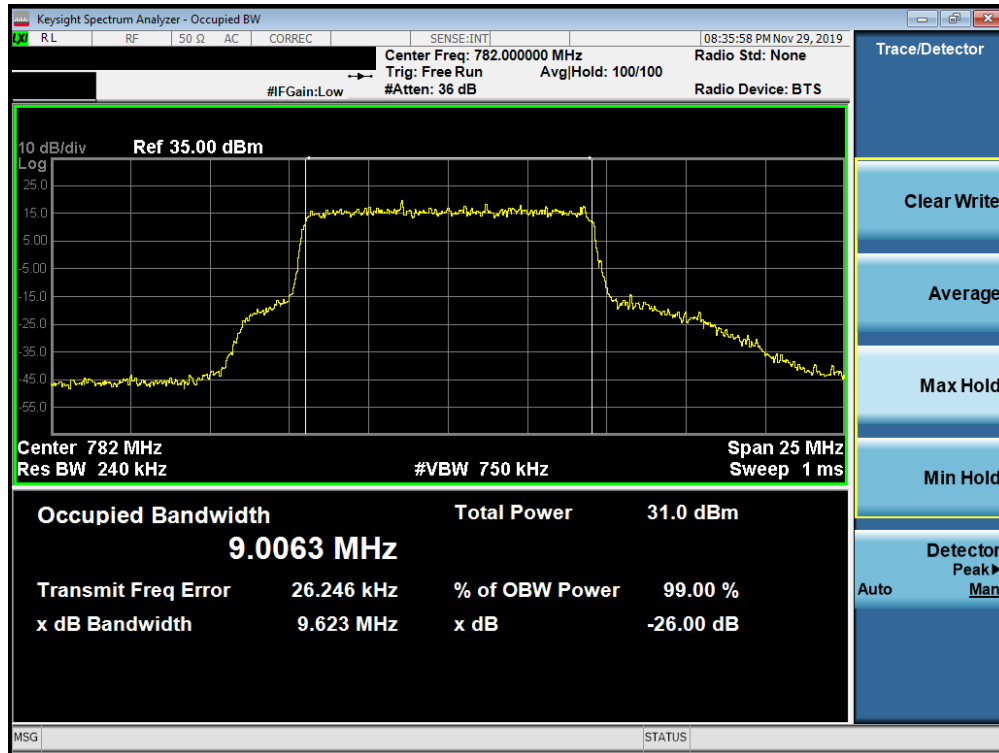


Plot 7-35. Occupied Bandwidth Plot (Band 13 - 5.0MHz 64-QAM - Full RB Configuration)

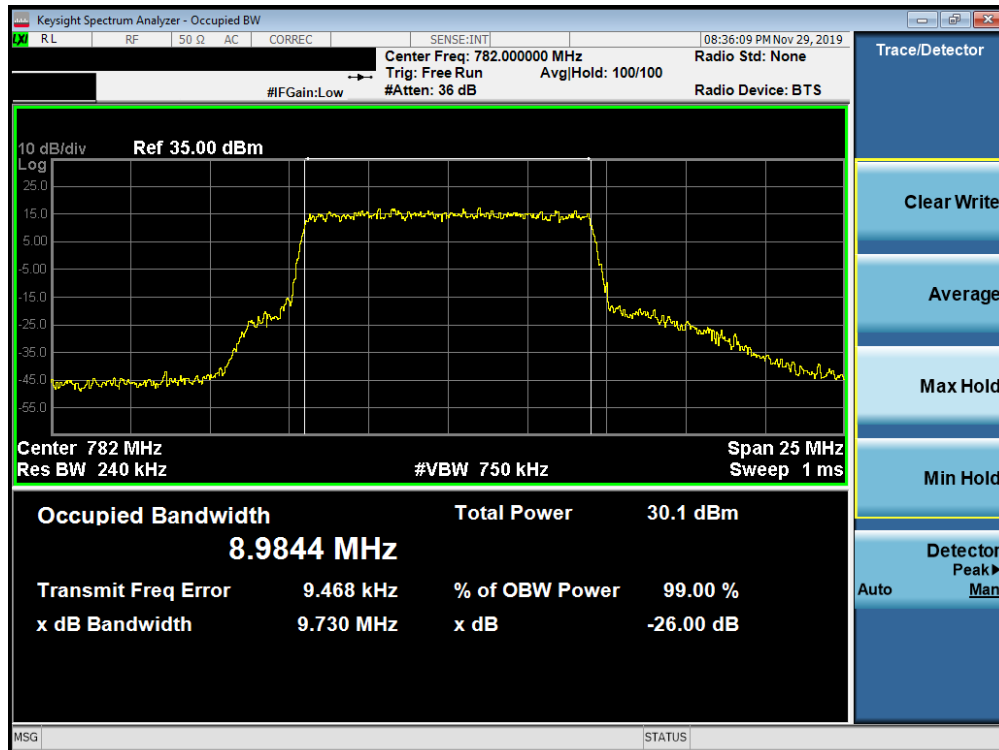


Plot 7-36. Occupied Bandwidth Plot (Band 13 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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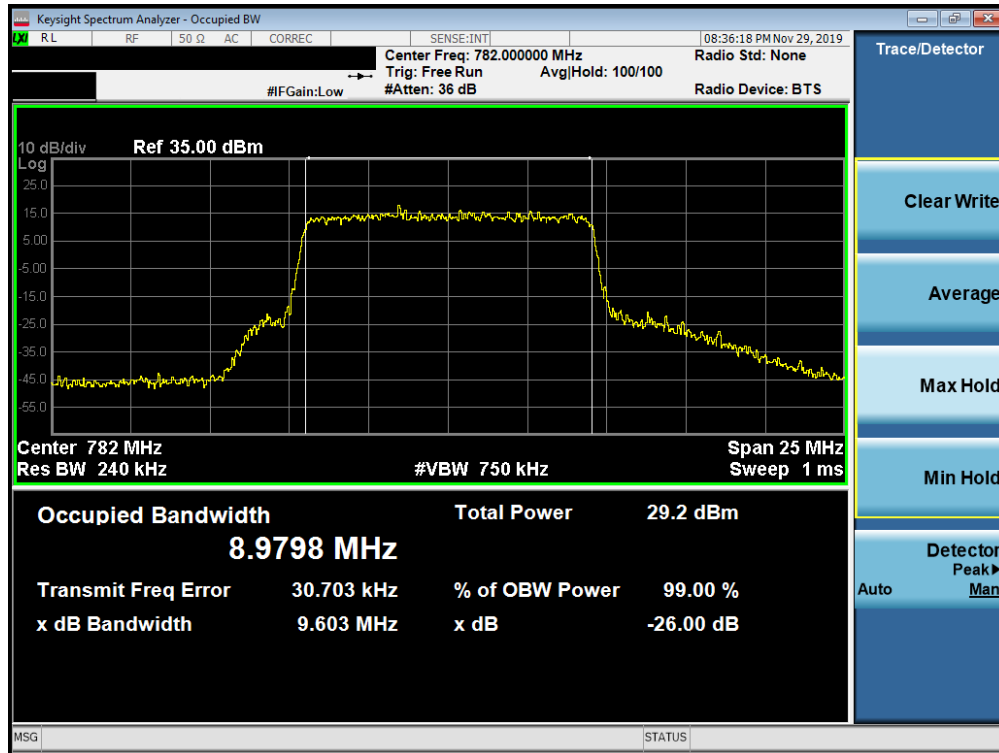


Plot 7-37. Occupied Bandwidth Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)

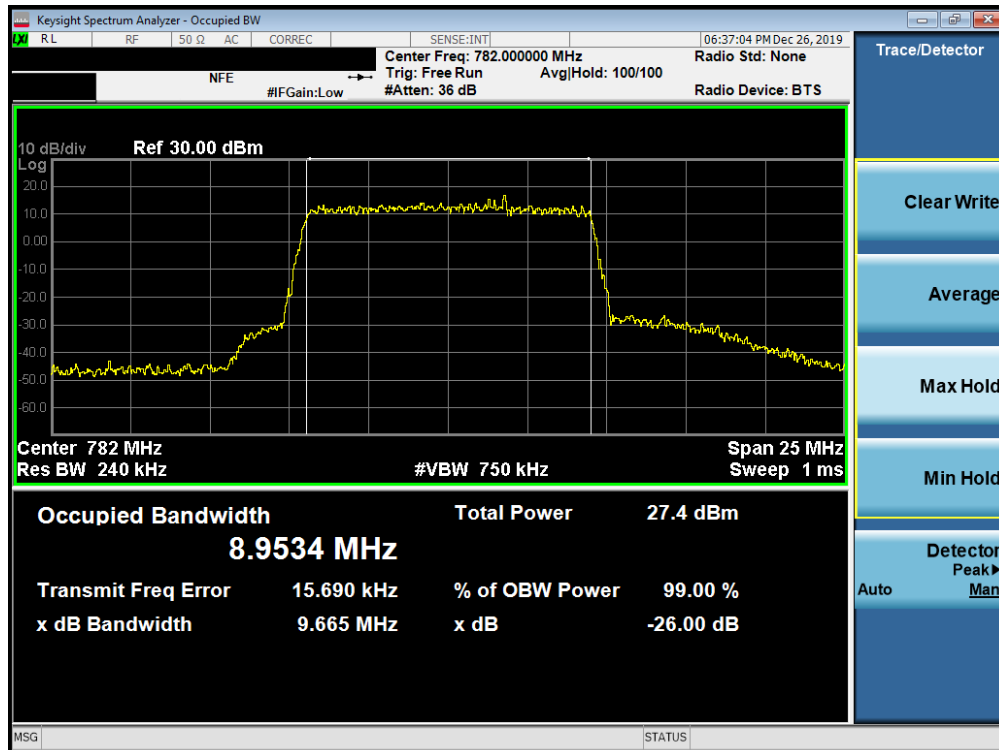


Plot 7-38. Occupied Bandwidth Plot (Band 13 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
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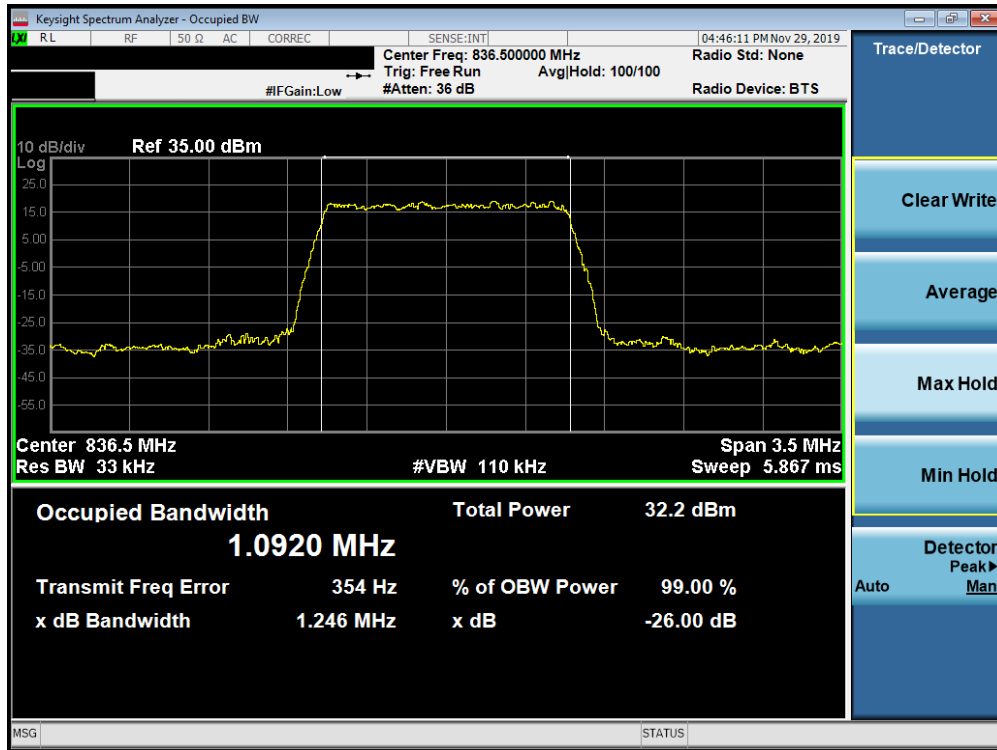
Plot 7-39. Occupied Bandwidth Plot (Band 13 - 10.0MHz 64-QAM - Full RB Configuration)



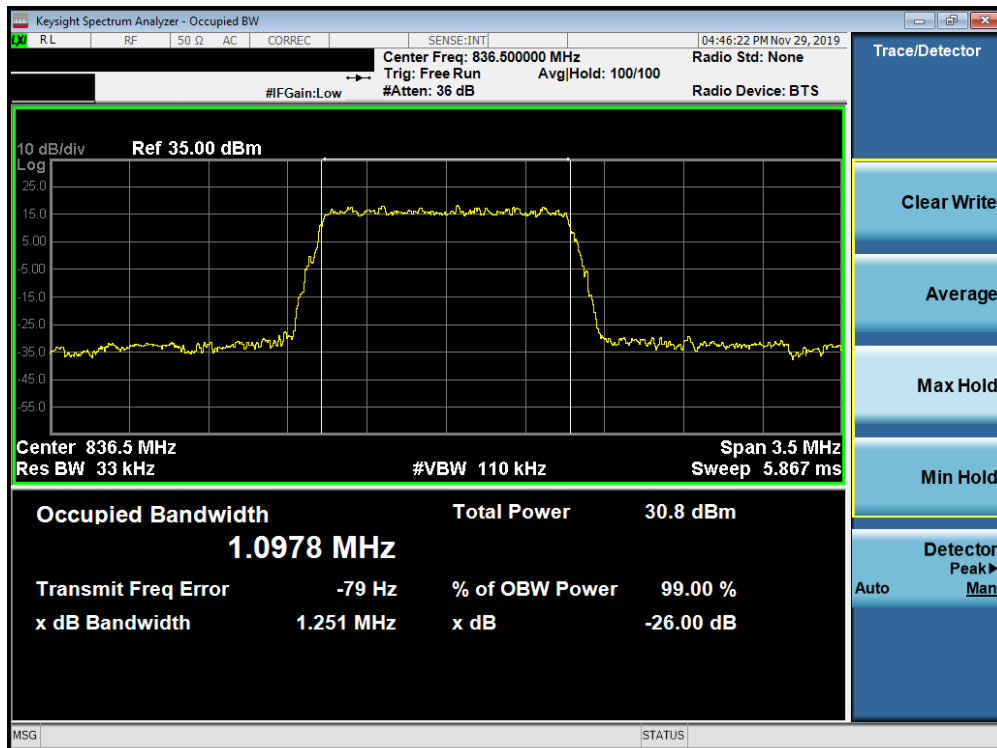
Plot 7-40. Occupied Bandwidth Plot (Band 13 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 39 of 488

Band 26/5

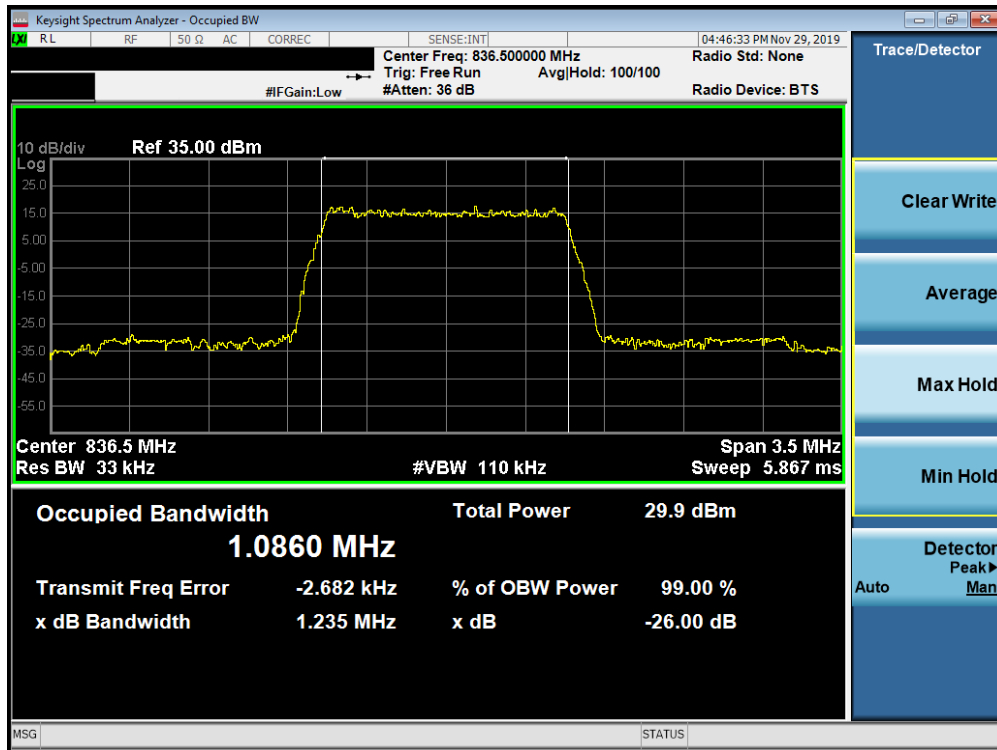


Plot 7-41. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz QPSK - Full RB Configuration)

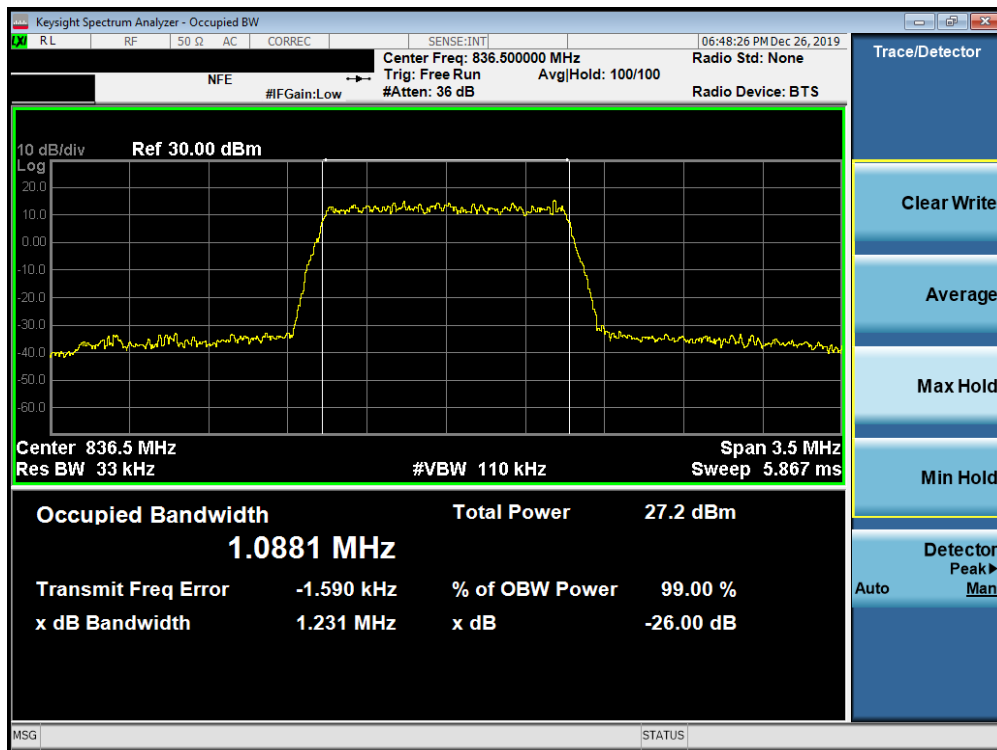


Plot 7-42. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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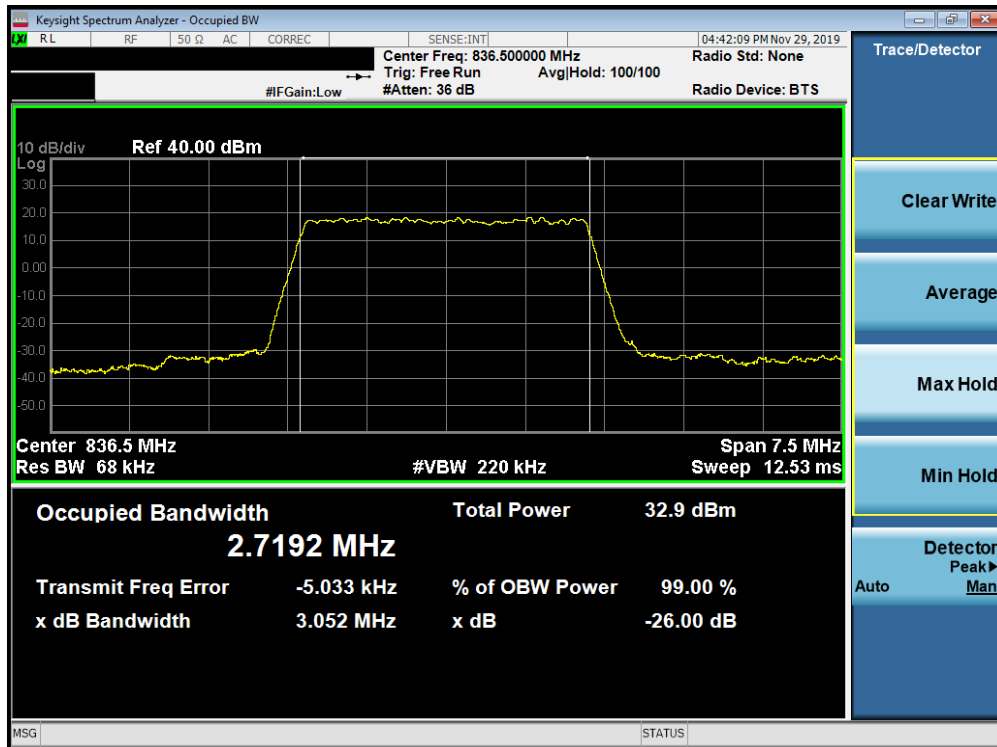


Plot 7-43. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz 64-QAM - Full RB Configuration)

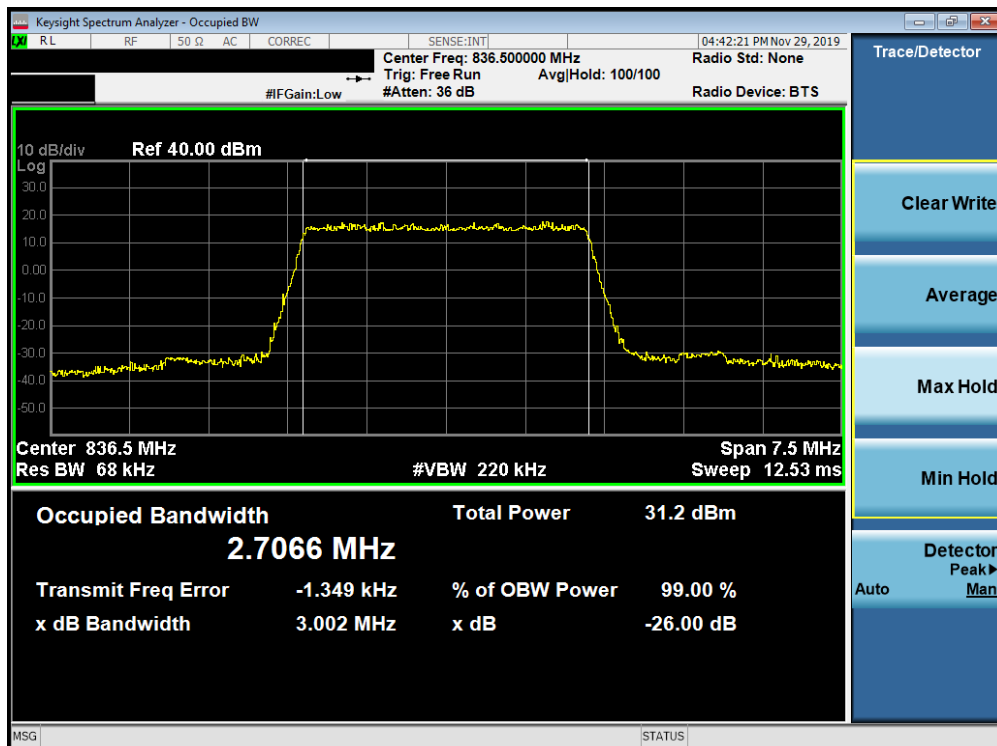


Plot 7-44. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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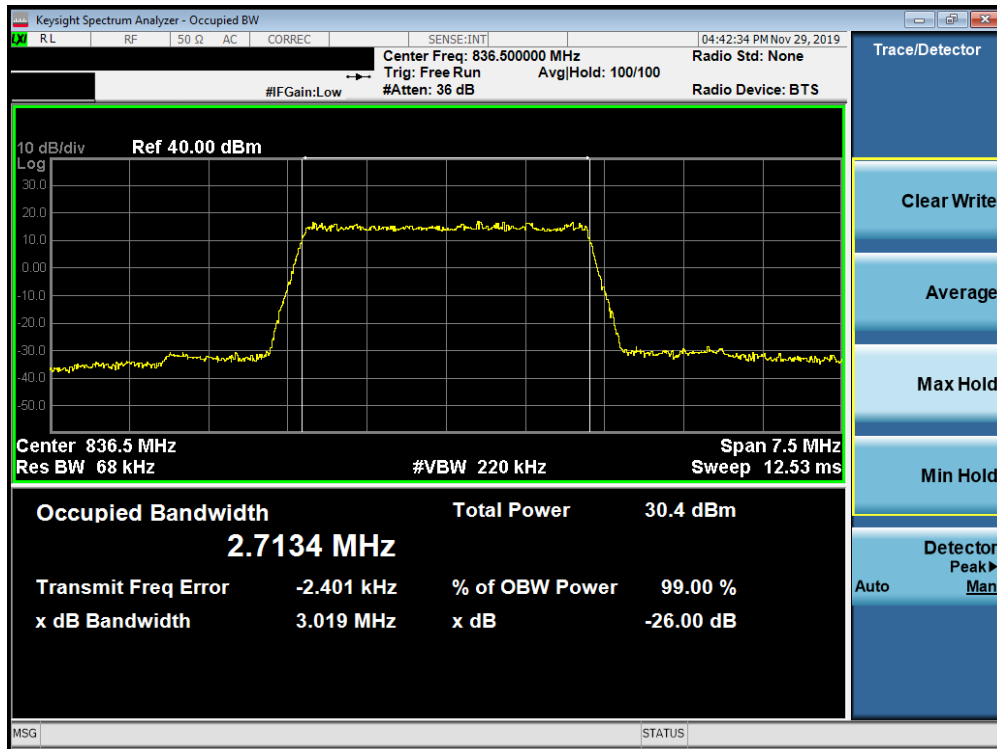


Plot 7-45. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz QPSK - Full RB Configuration)

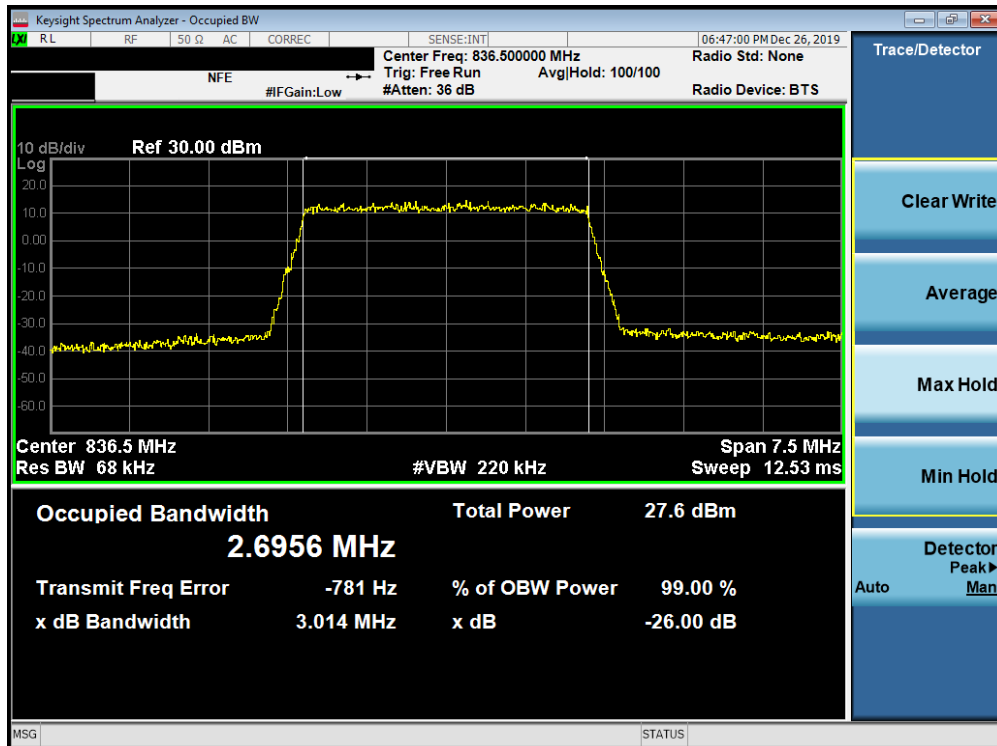


Plot 7-46. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
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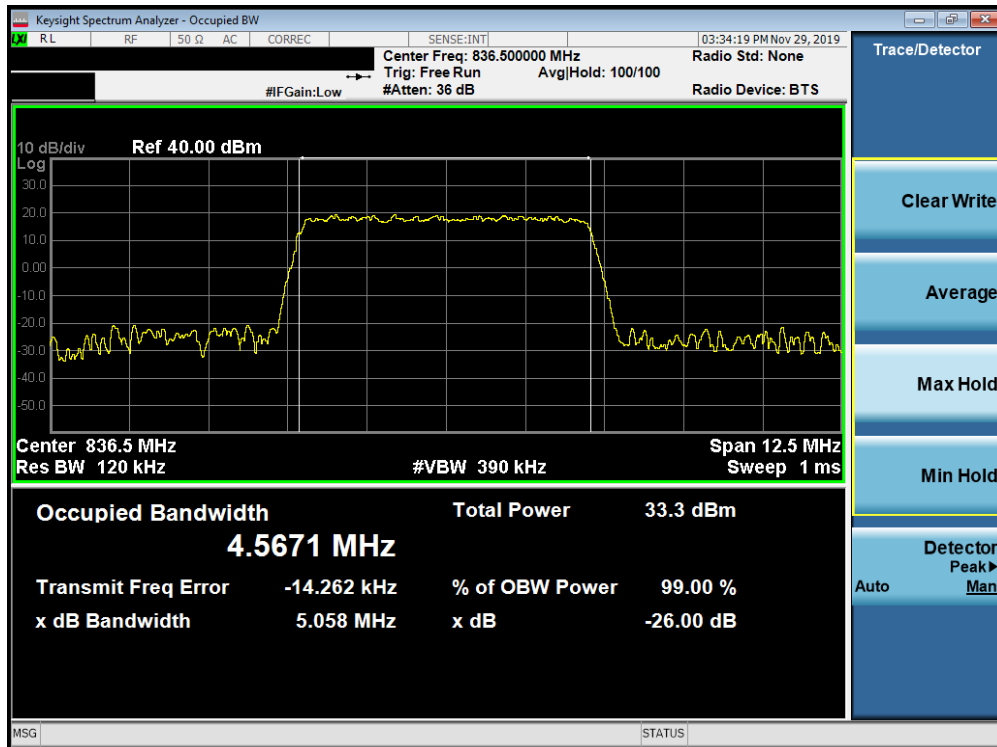


Plot 7-47. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz 64-QAM - Full RB Configuration)

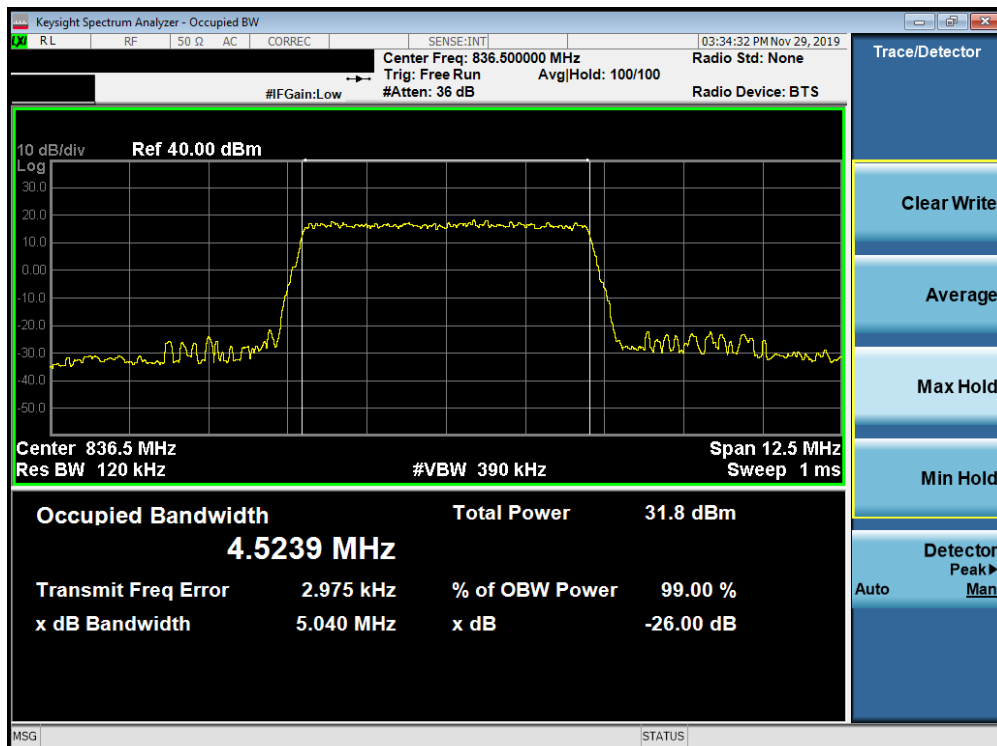


Plot 7-48. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3.ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset	Page 43 of 488

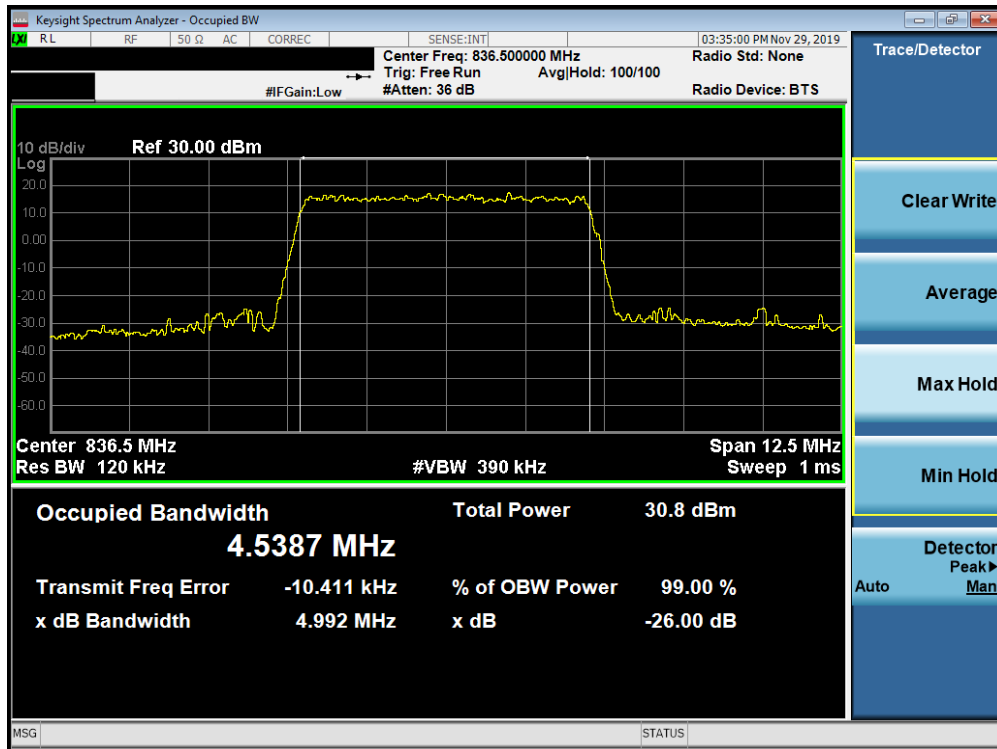


Plot 7-49. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz QPSK - Full RB Configuration)

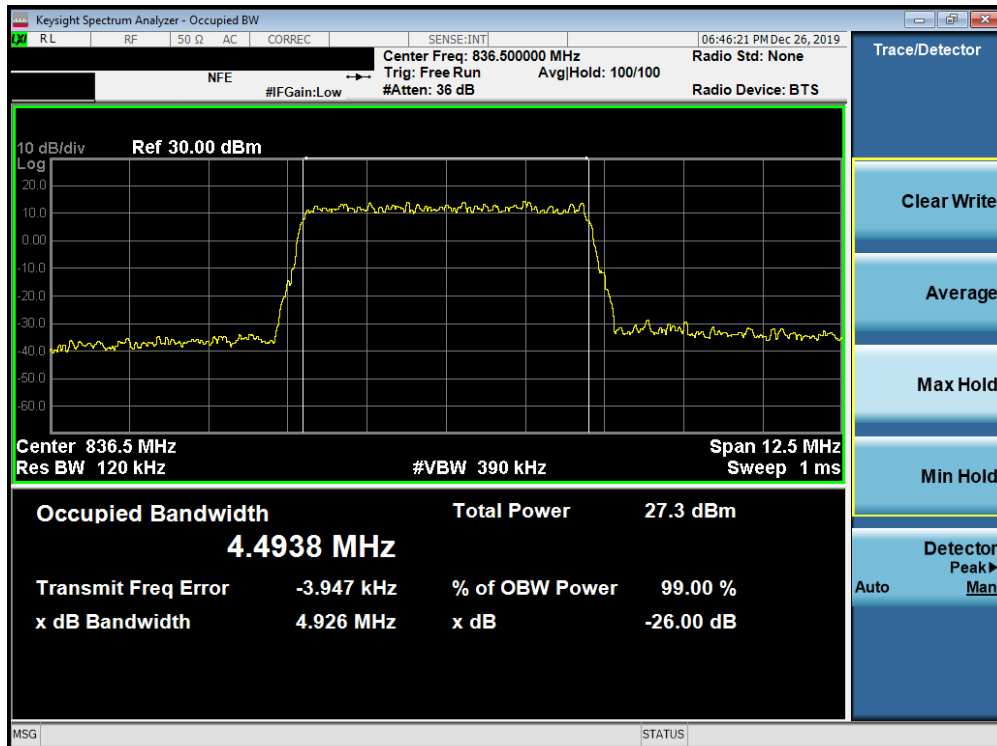


Plot 7-50. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 44 of 488

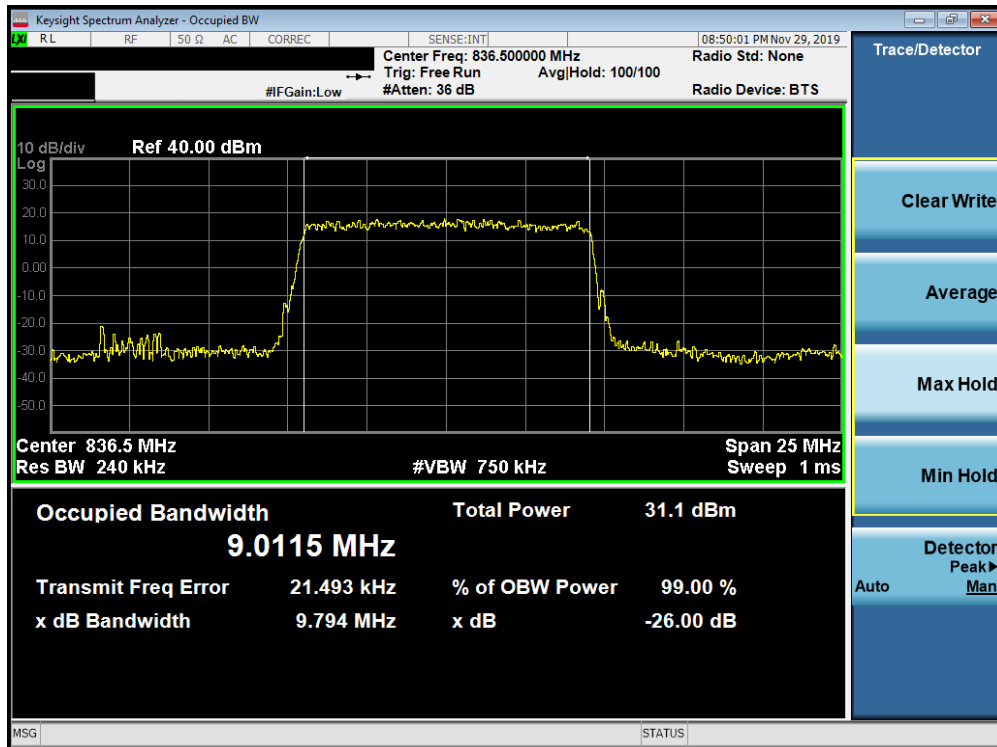


Plot 7-51. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz 64-QAM - Full RB Configuration)

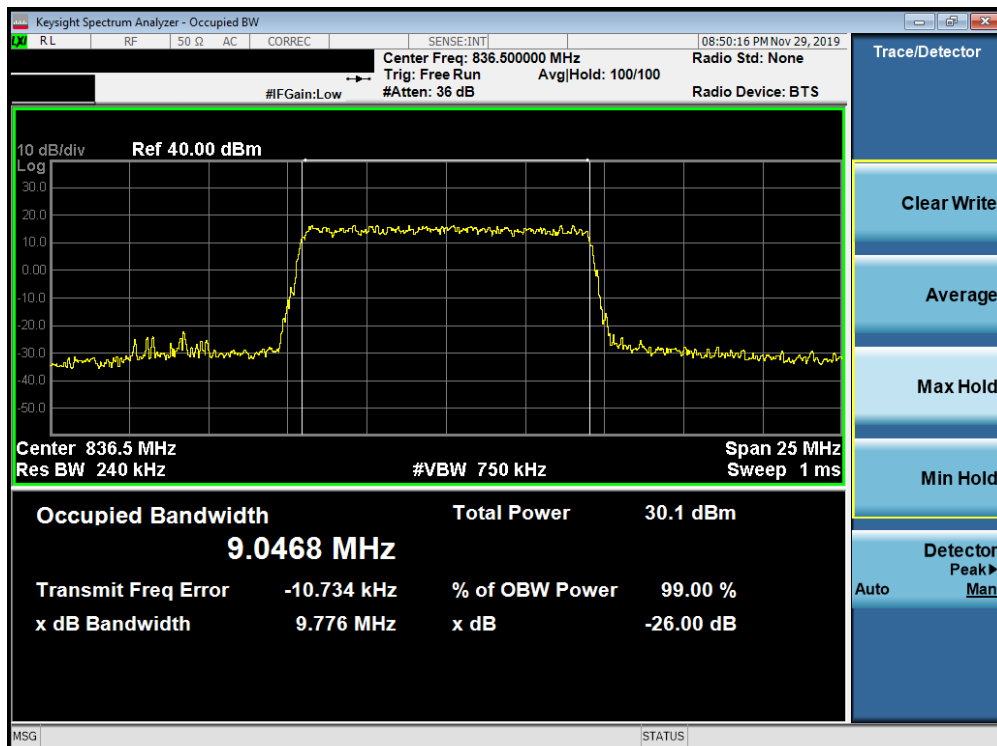


Plot 7-52. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 45 of 488

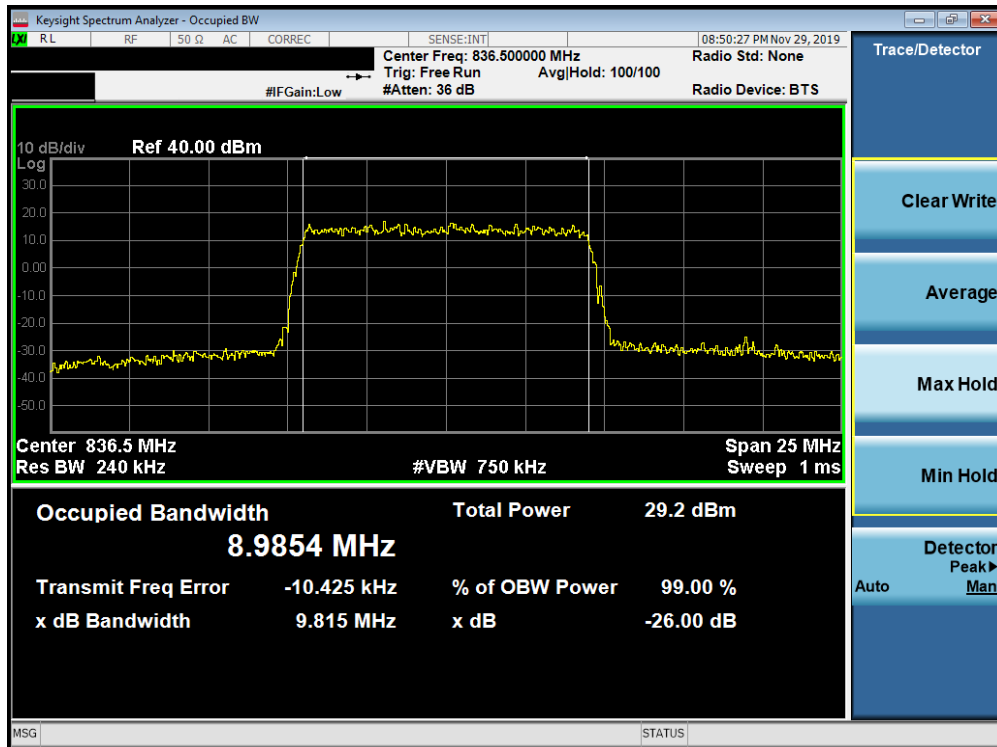


Plot 7-53. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz QPSK - Full RB Configuration)

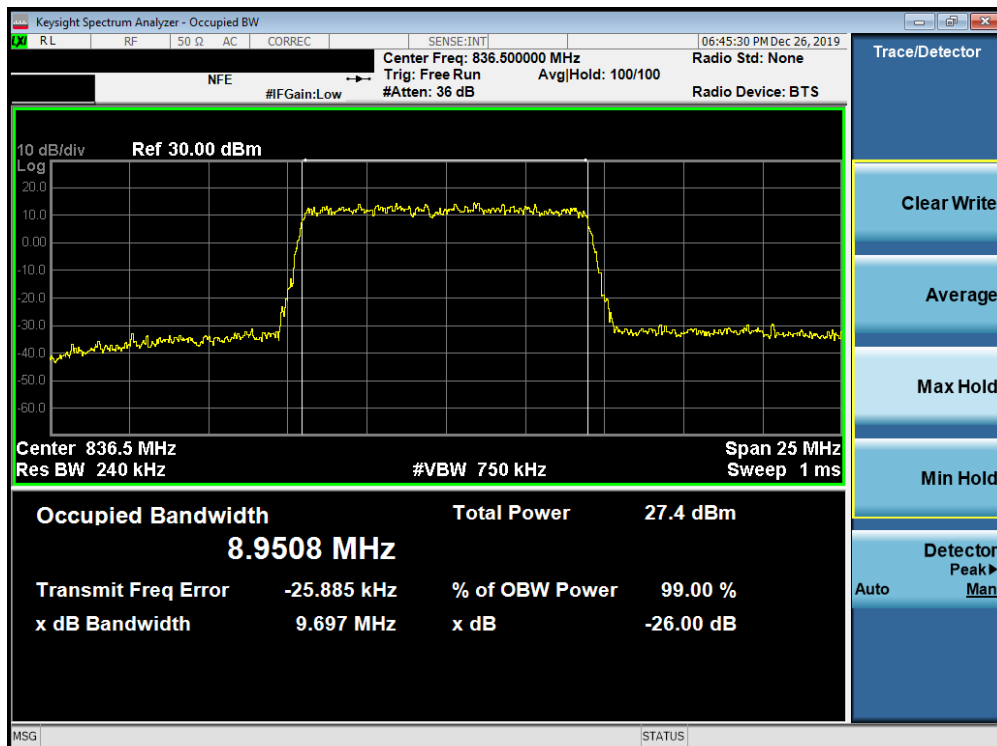


Plot 7-54. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 46 of 488

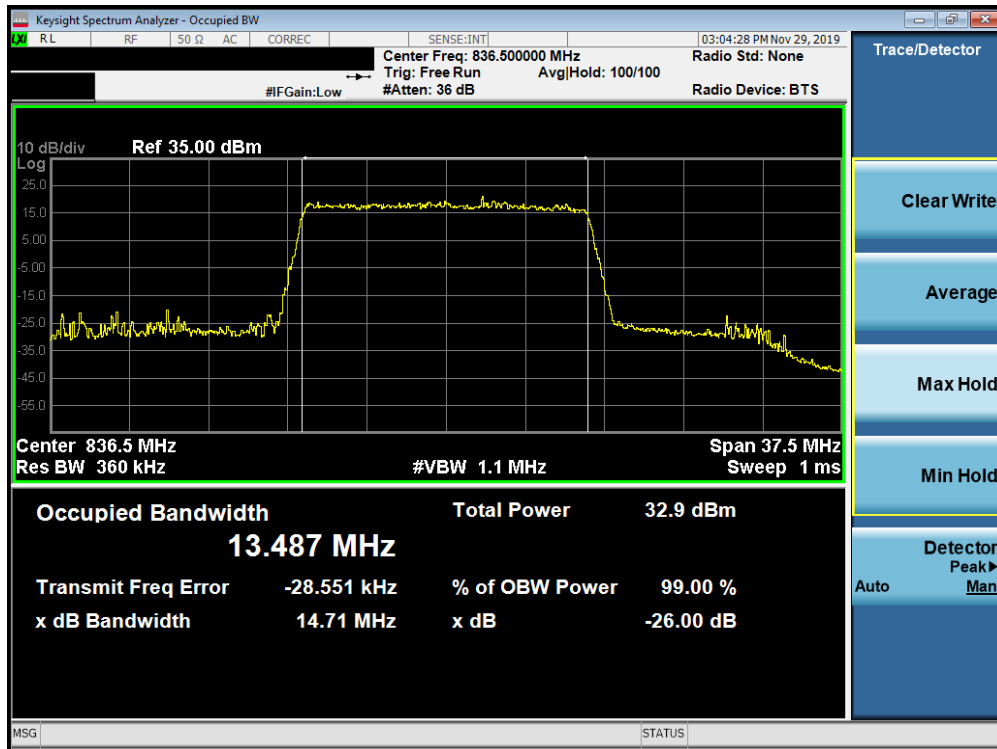


Plot 7-55. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz 64-QAM - Full RB Configuration)

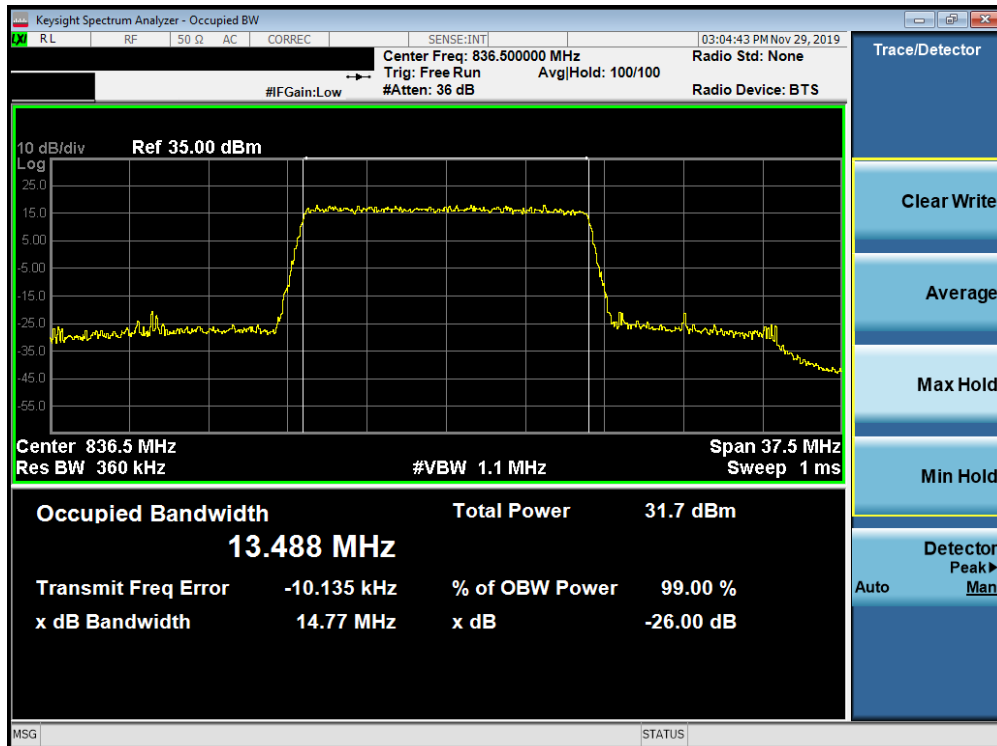


Plot 7-56. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 47 of 488

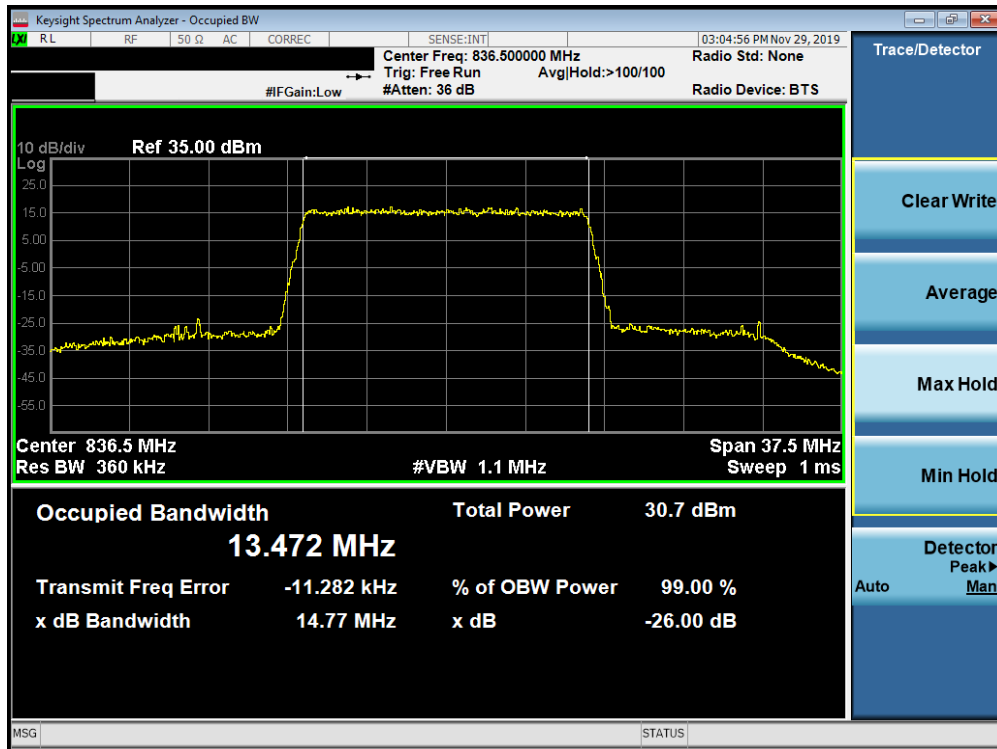


Plot 7-57. Occupied Bandwidth Plot (Band 26 - 15.0MHz QPSK - Full RB Configuration)

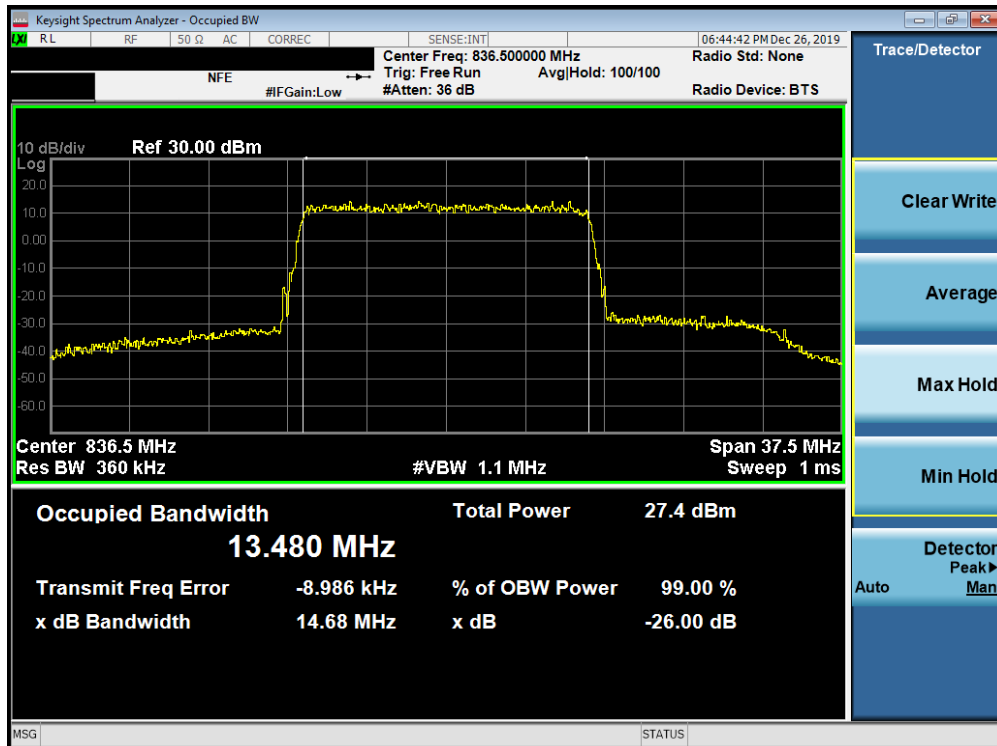


Plot 7-58. Occupied Bandwidth Plot (Band 26 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset	Page 48 of 488	



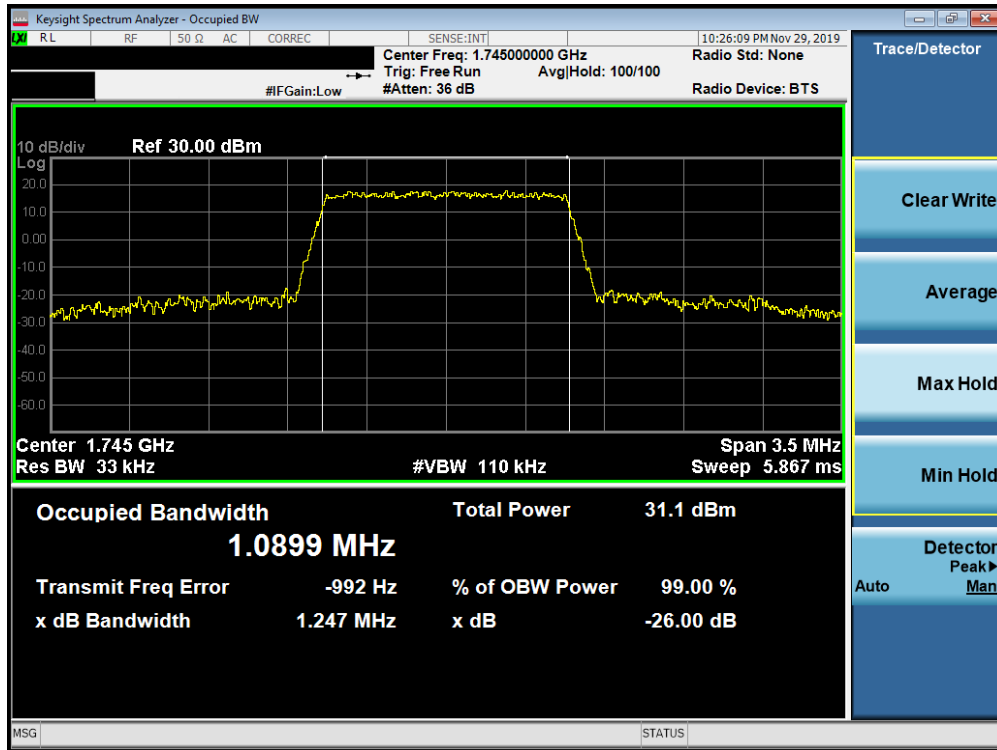
Plot 7-59. Occupied Bandwidth Plot (Band 26 - 15.0MHz 64-QAM - Full RB Configuration)



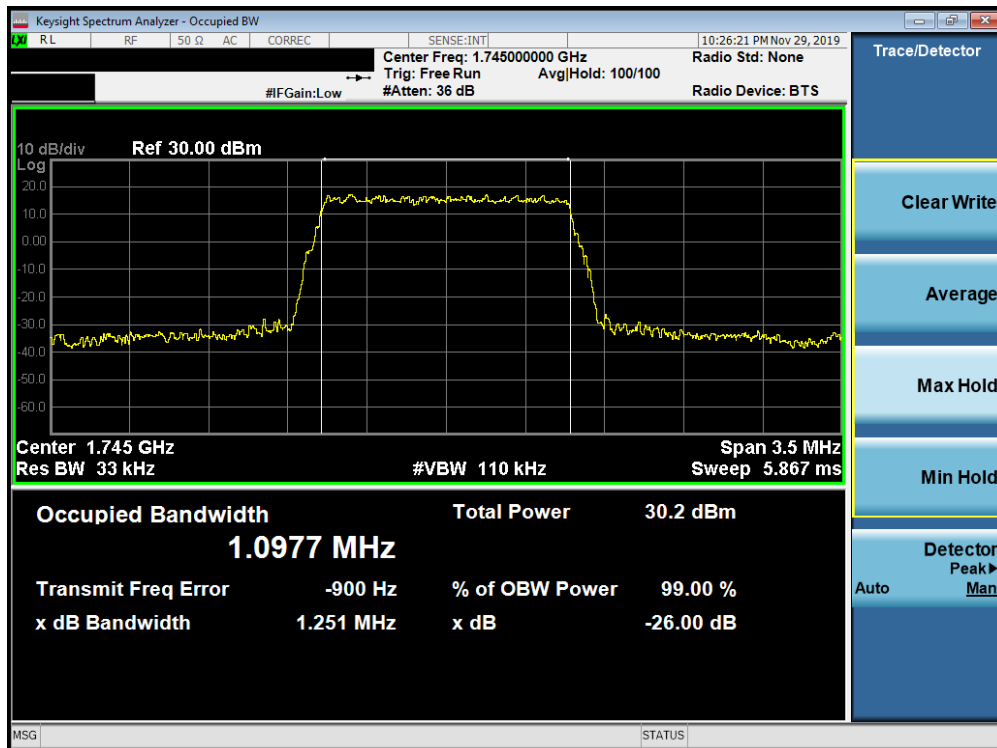
Plot 7-60. Occupied Bandwidth Plot (Band 26 - 15.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 49 of 488

Band 66/4

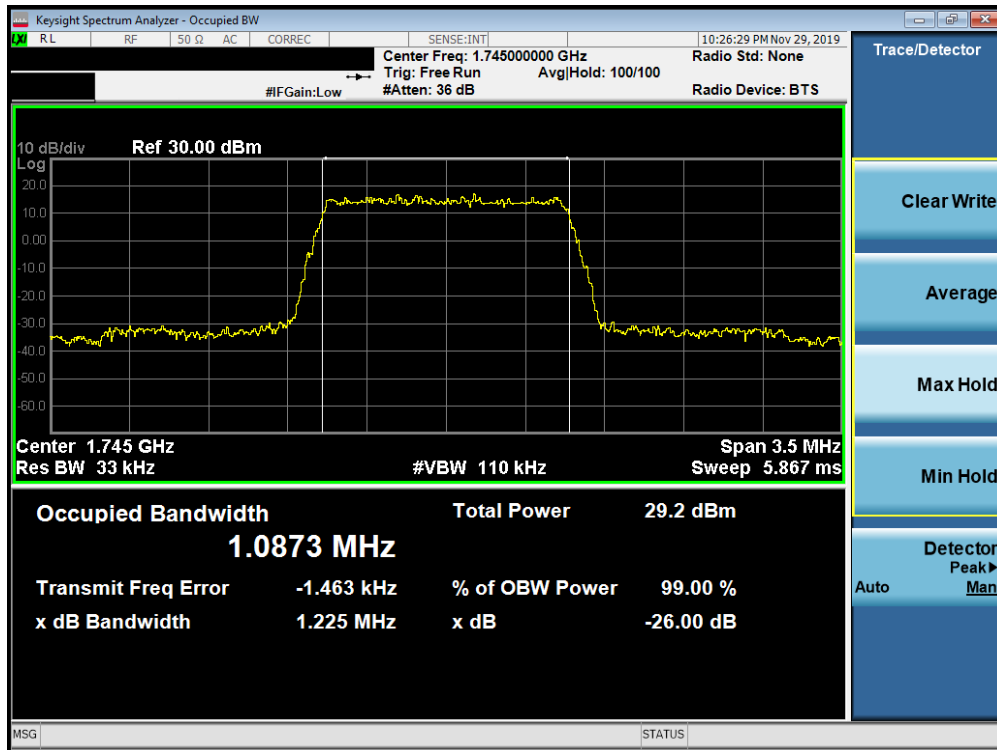


Plot 7-61. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)

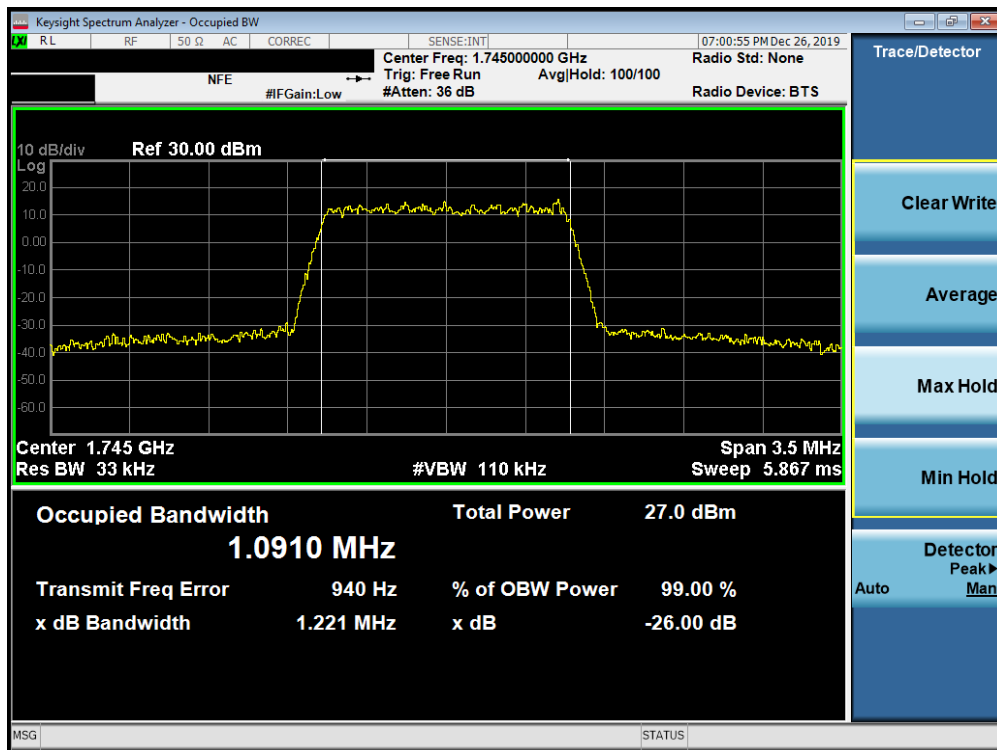


Plot 7-62. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 50 of 488

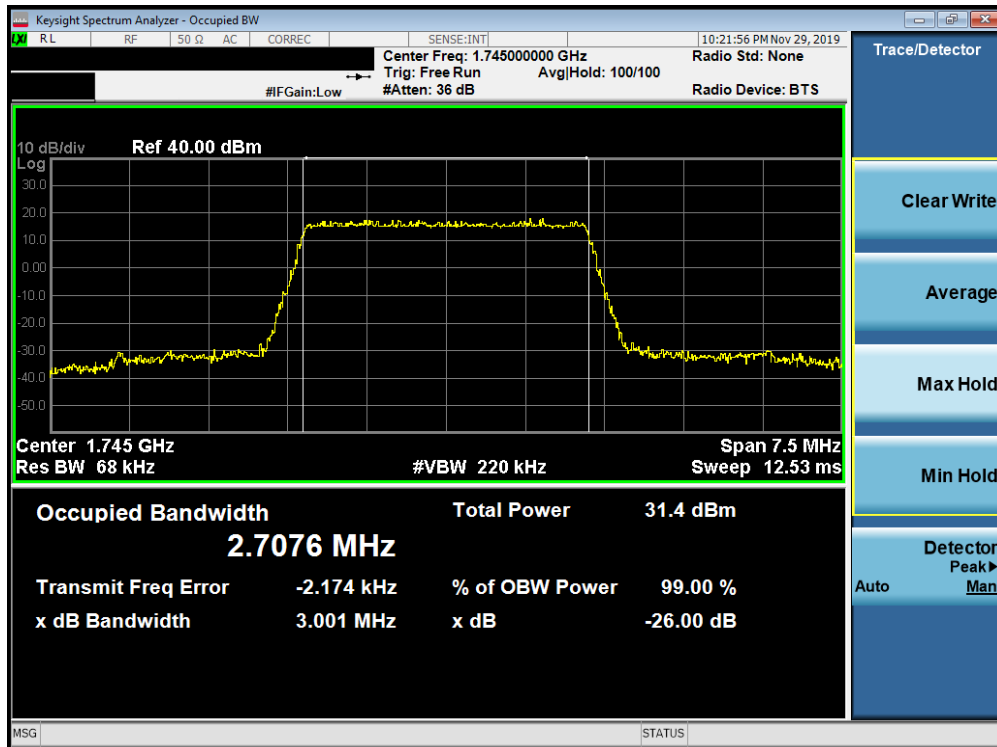


Plot 7-63. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz 64-QAM - Full RB Configuration)

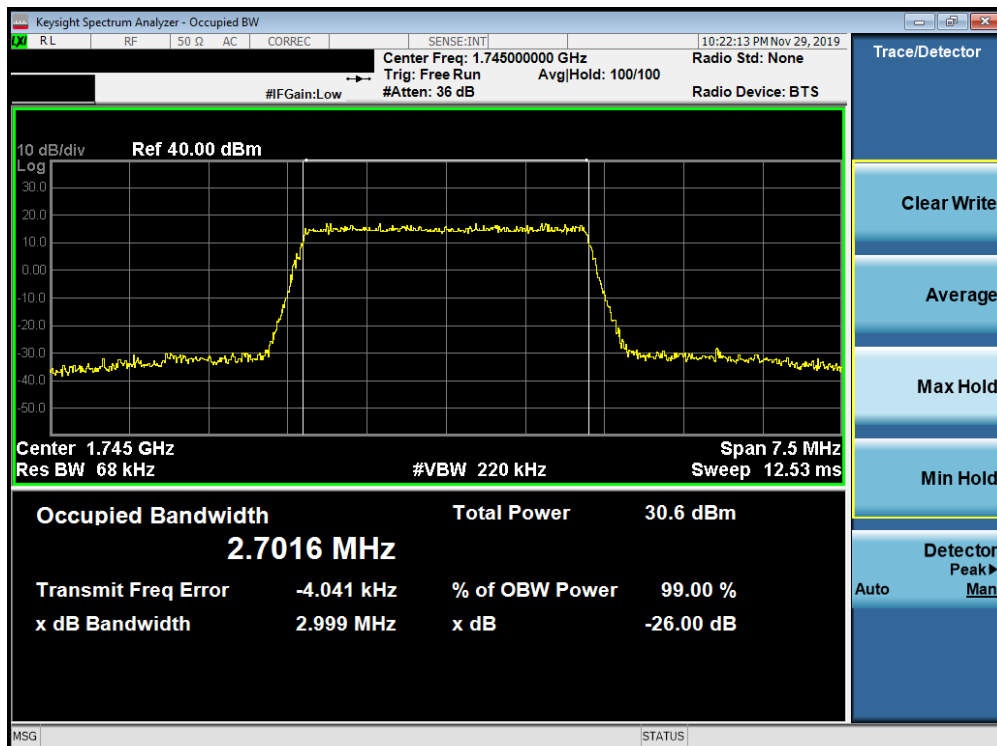


Plot 7-64. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 51 of 488

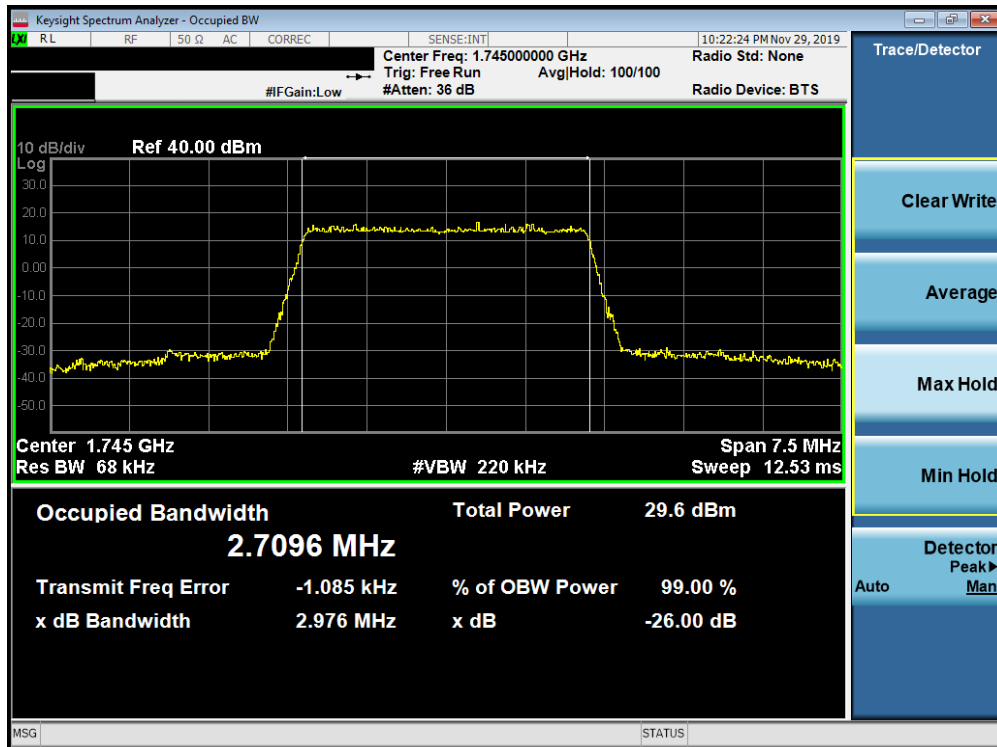


Plot 7-65. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)

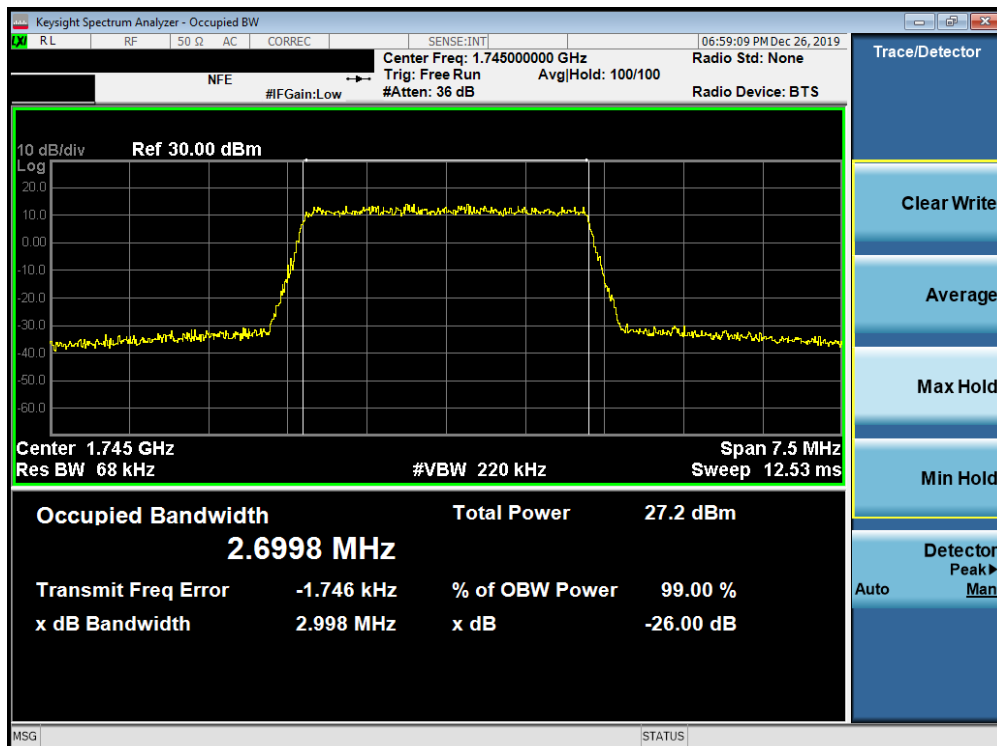


Plot 7-66. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 52 of 488

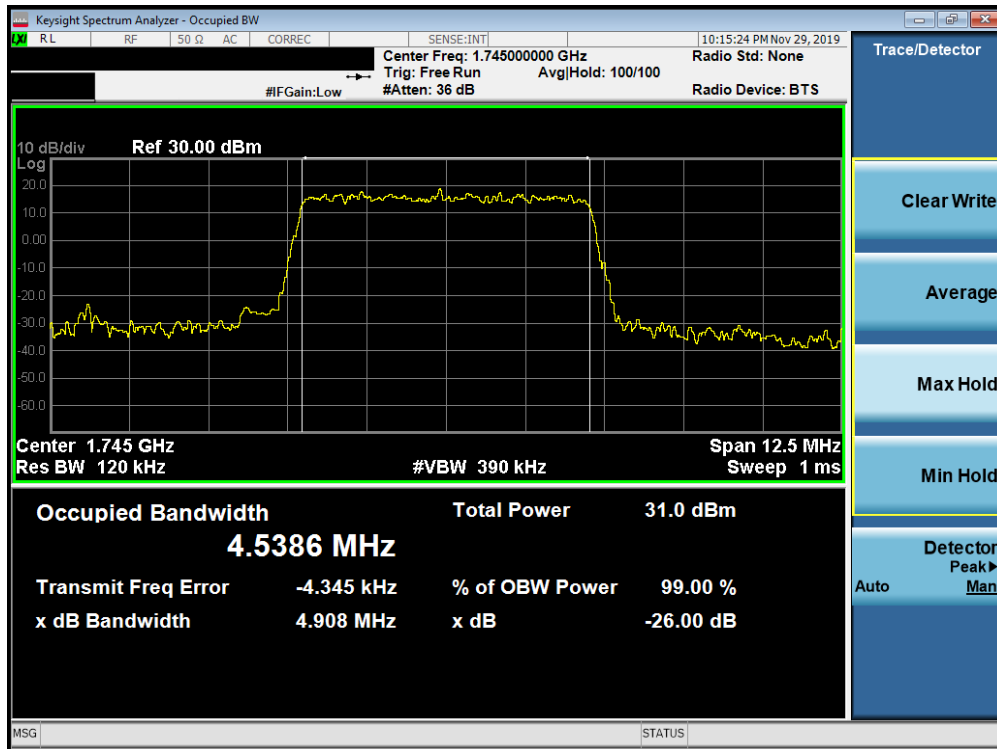


Plot 7-67. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz 64-QAM - Full RB Configuration)

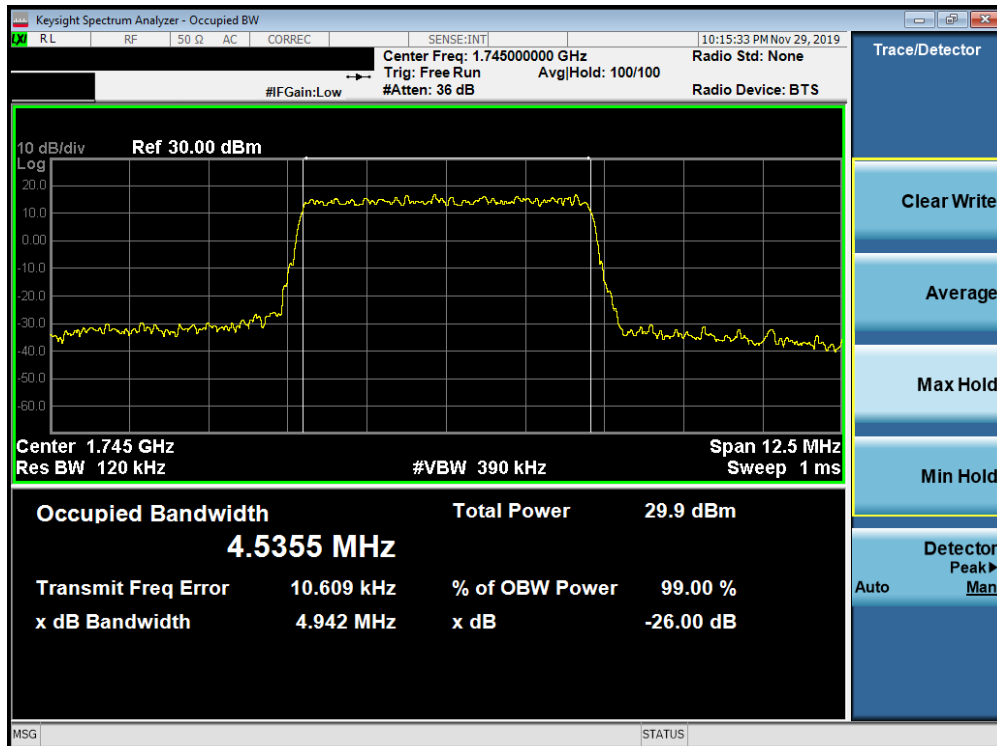


Plot 7-68. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 53 of 488

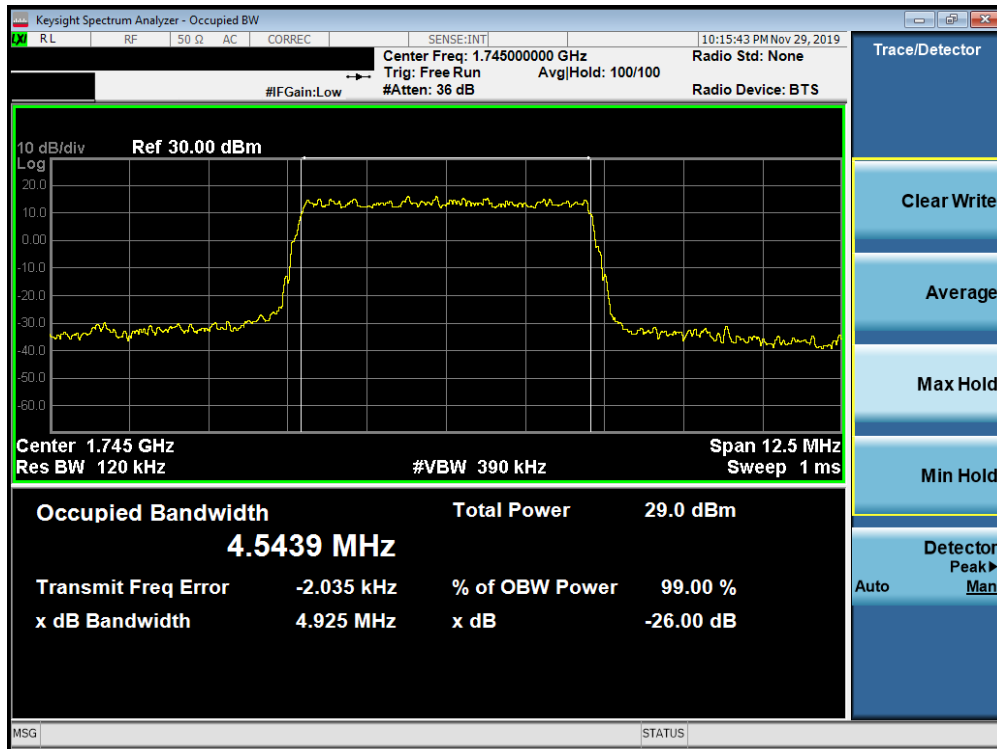


Plot 7-69. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)

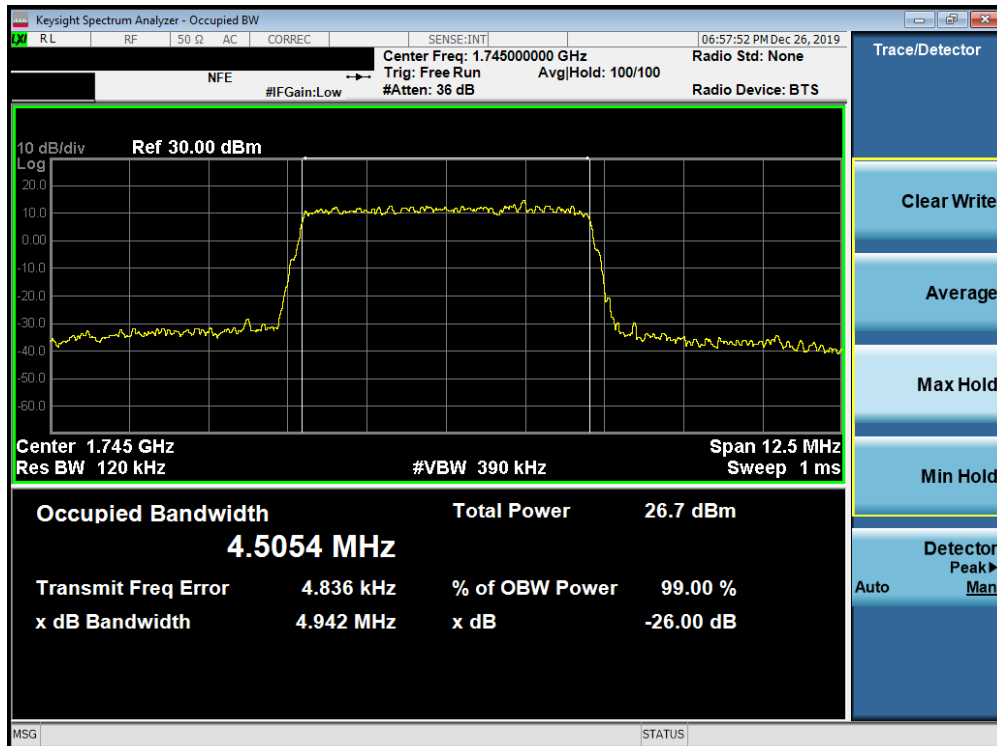


Plot 7-70. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 54 of 488

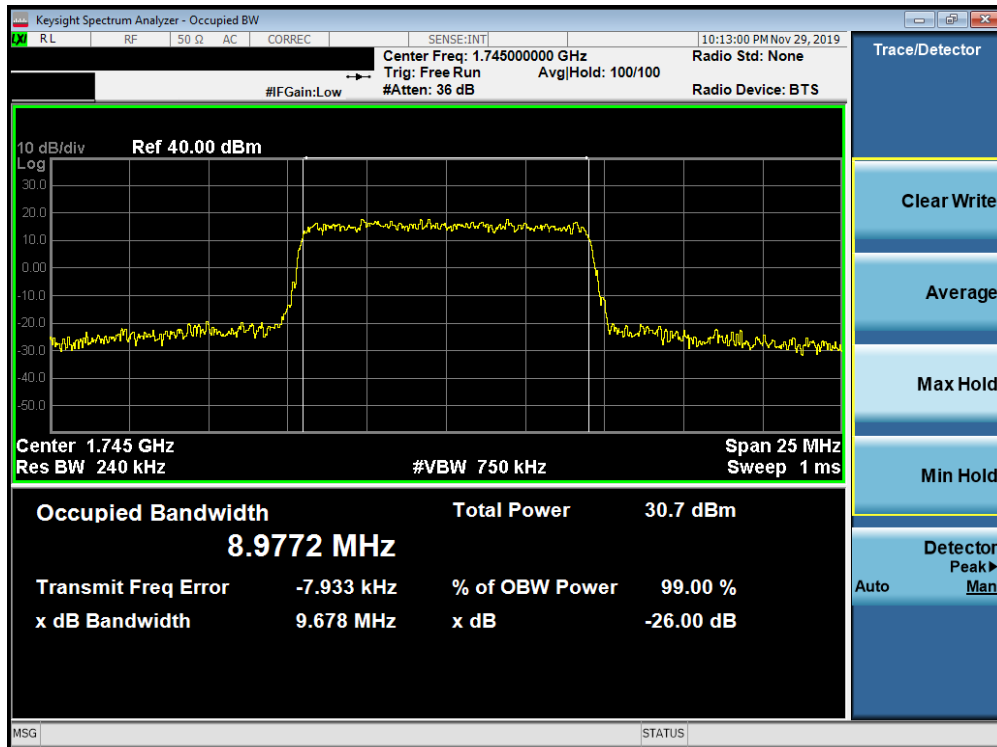


Plot 7-71. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz 64-QAM - Full RB Configuration)

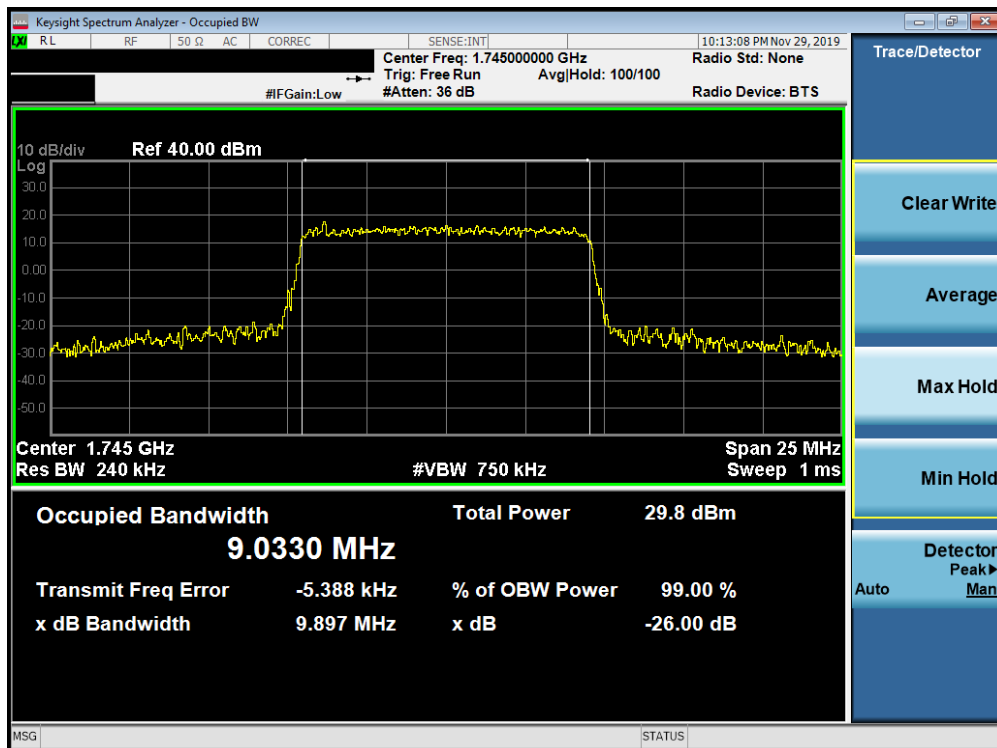


Plot 7-72. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 55 of 488

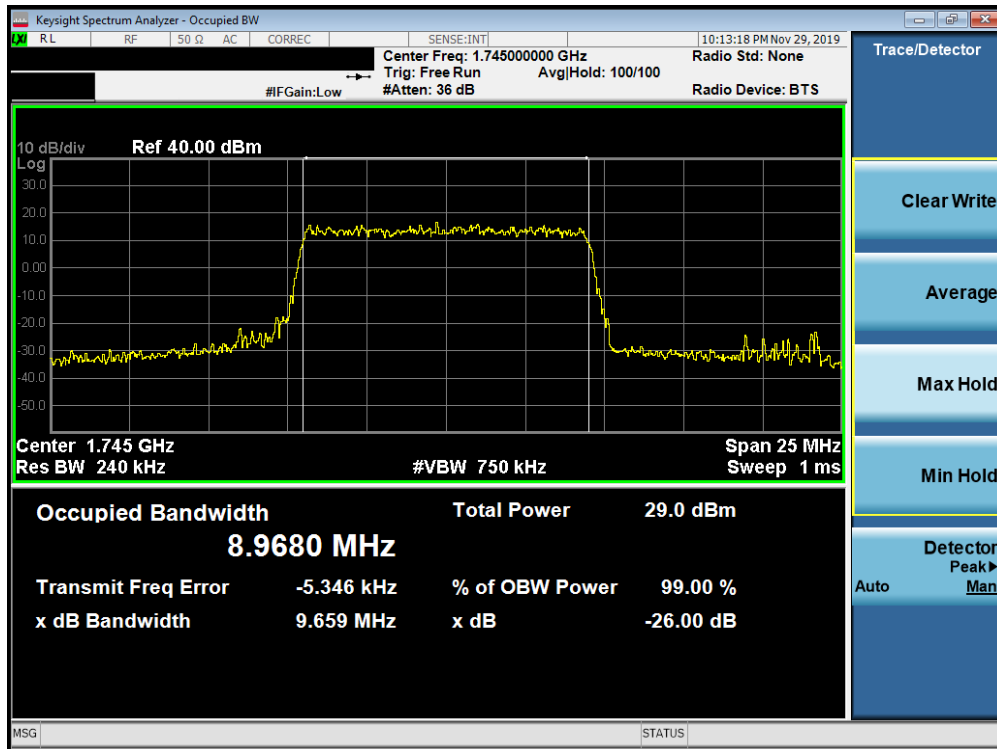


Plot 7-73. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)

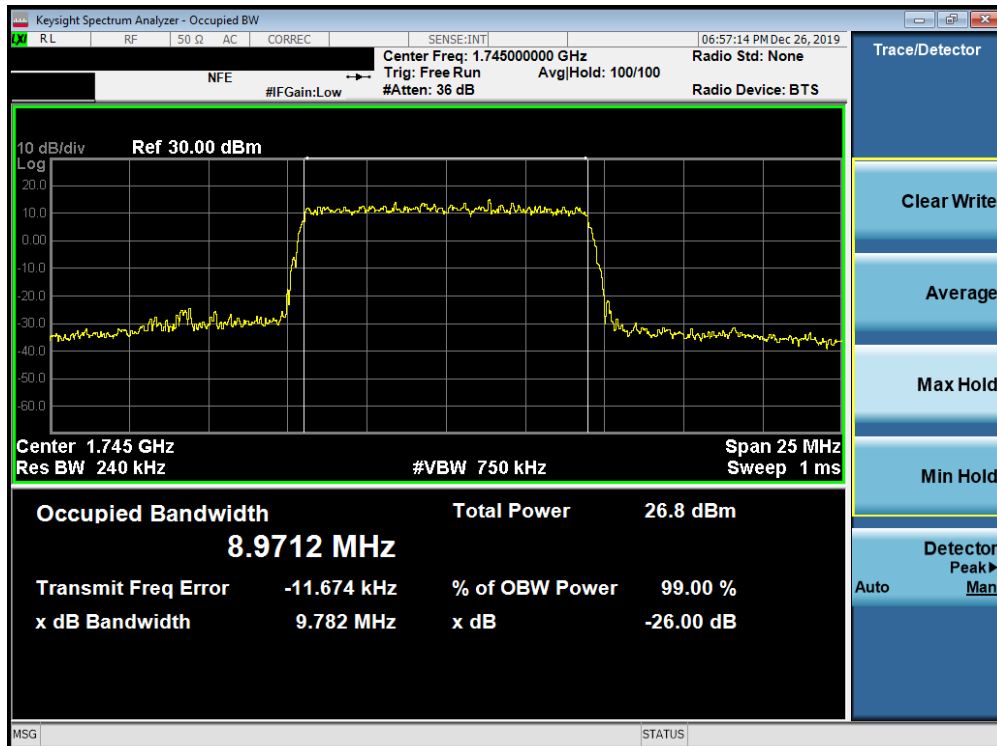


Plot 7-74. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset	Page 56 of 488

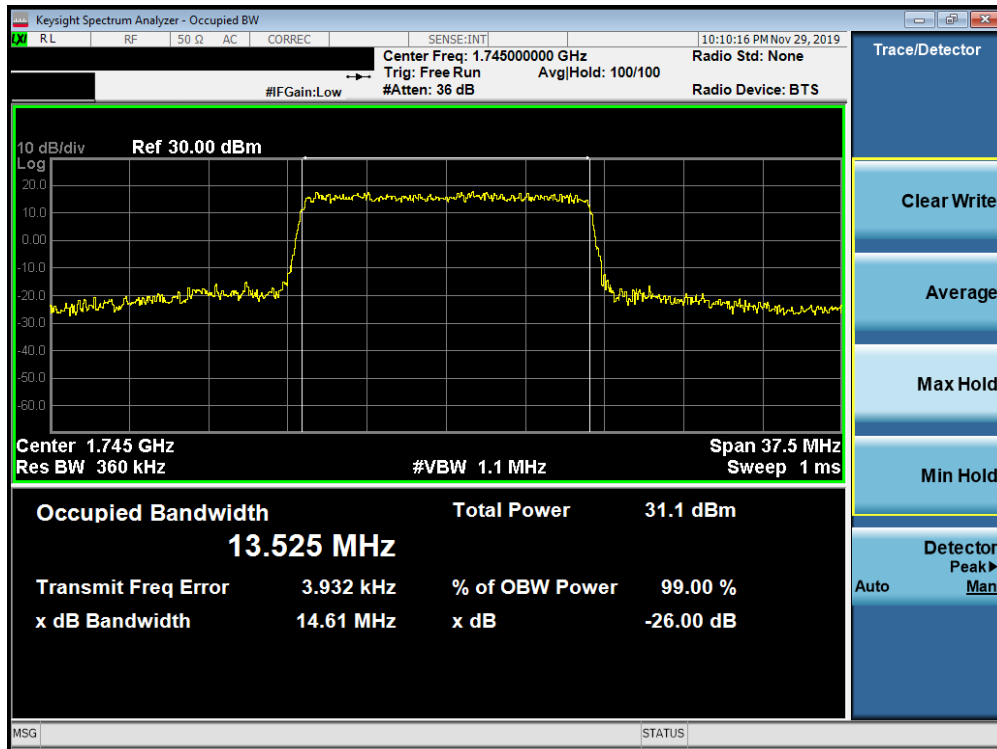


Plot 7-75. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz 64-QAM - Full RB Configuration)

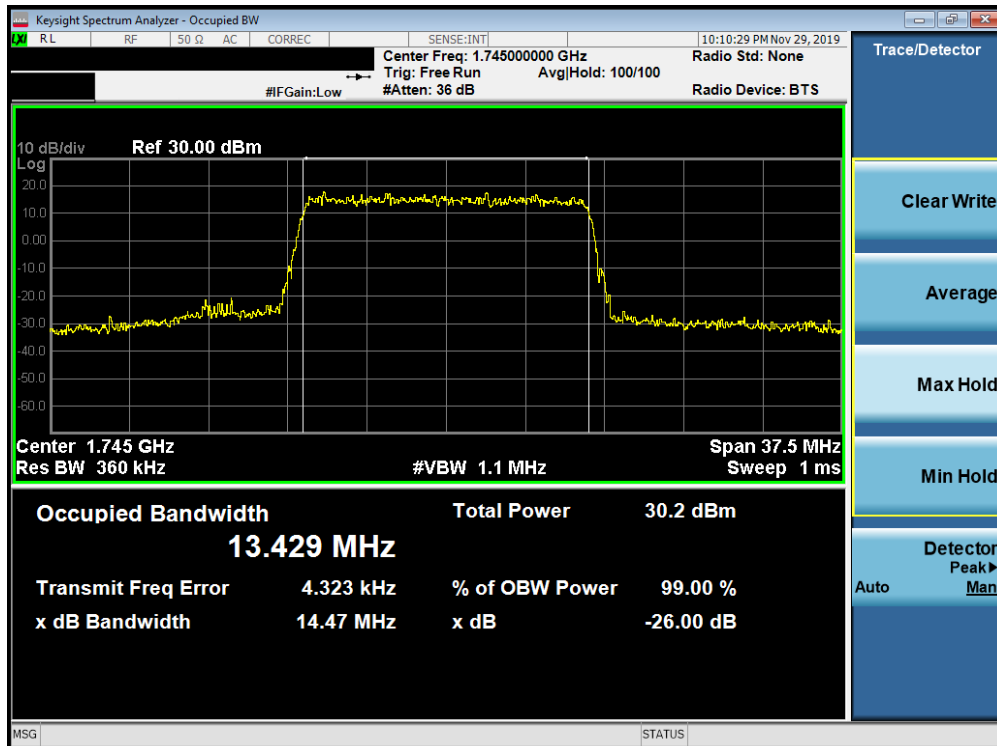


Plot 7-76. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 57 of 488

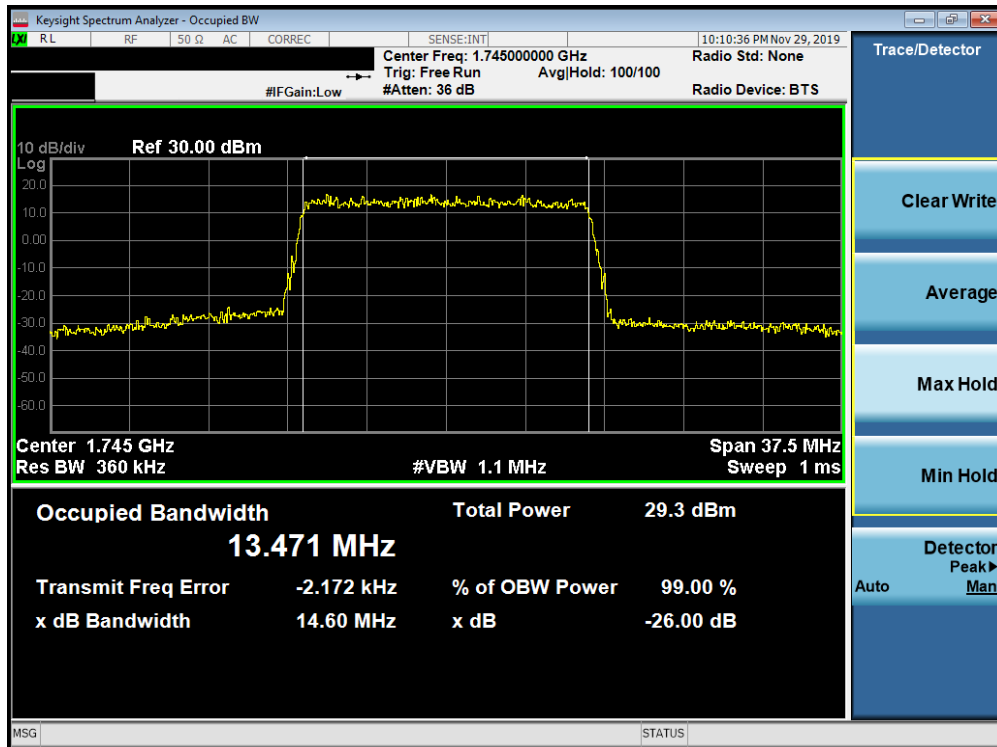


Plot 7-77. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)

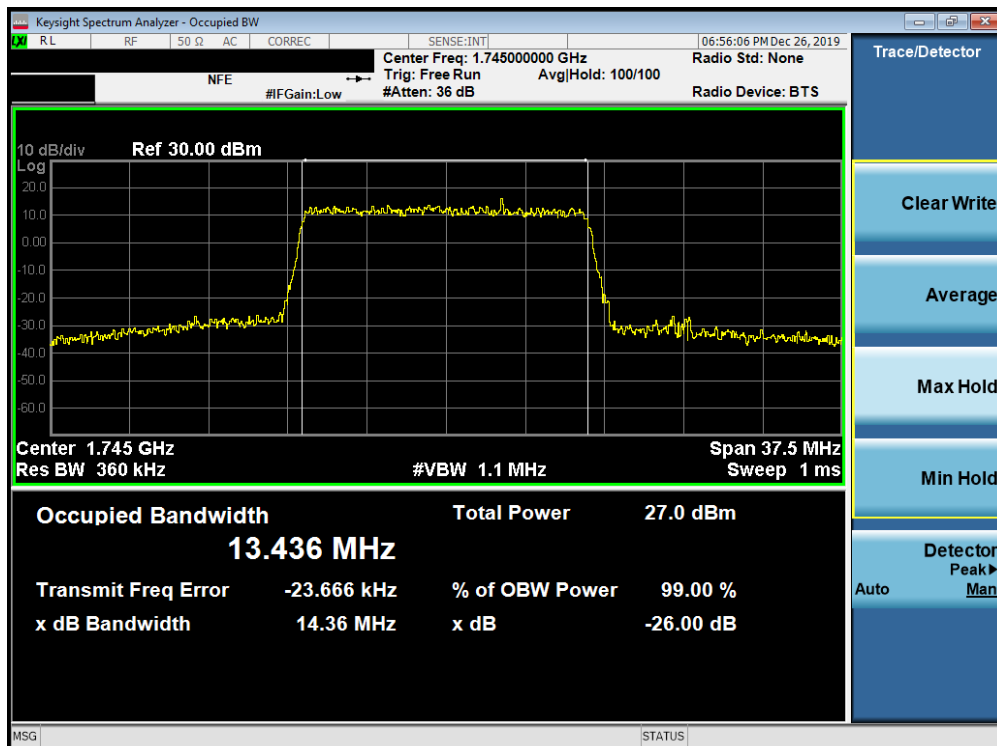


Plot 7-78. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 58 of 488

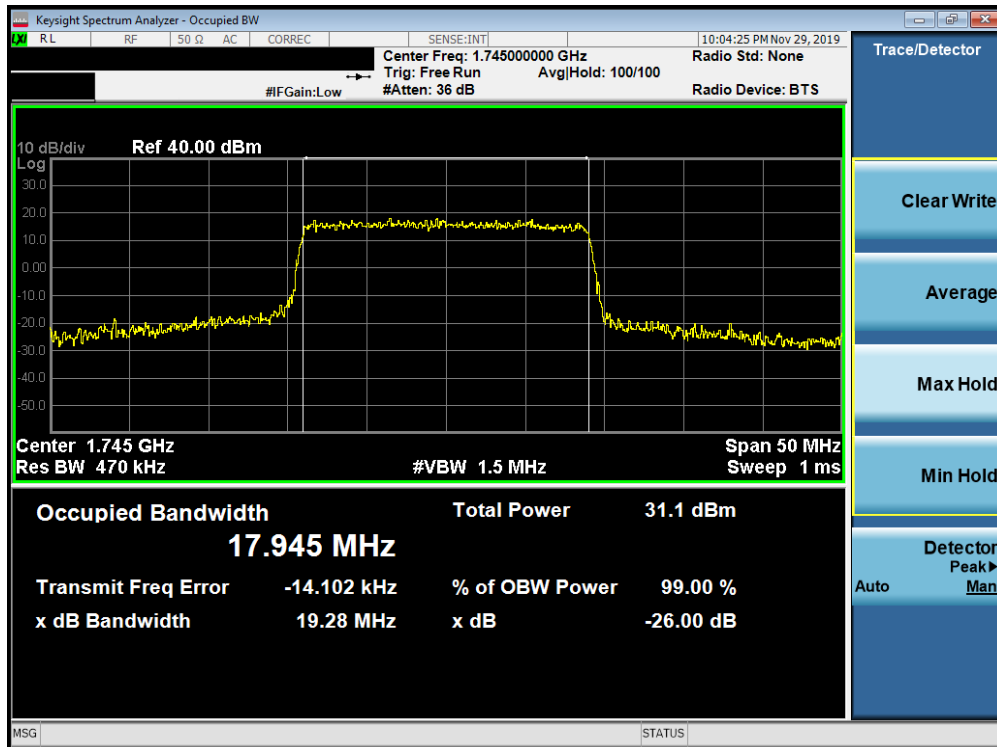


Plot 7-79. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz 64-QAM - Full RB Configuration)

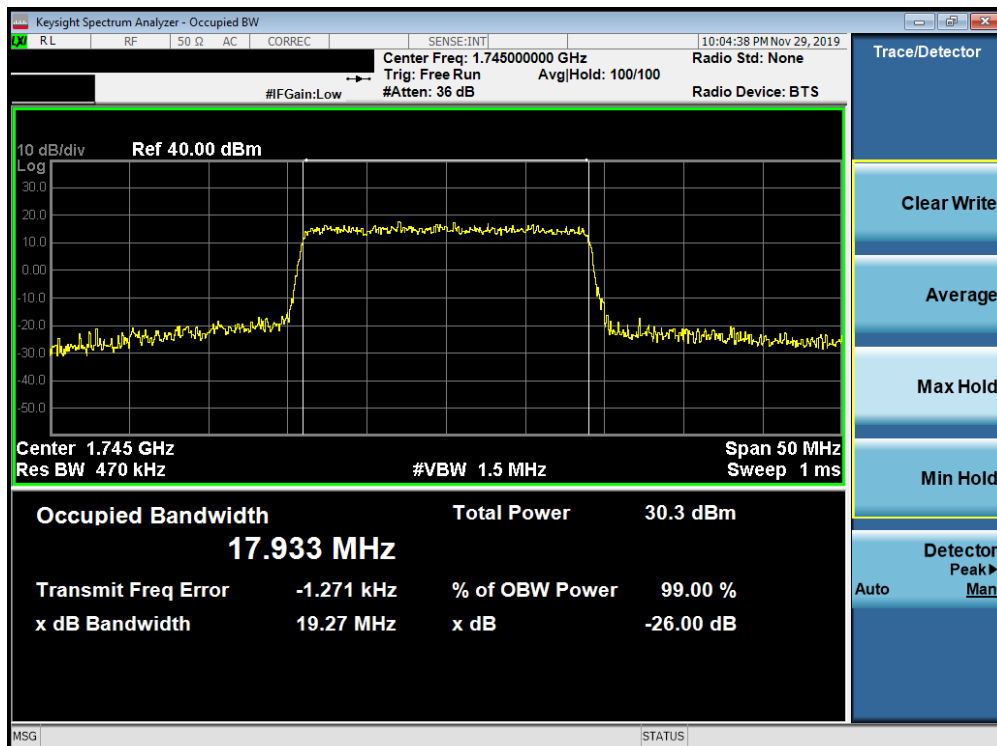


Plot 7-80. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 59 of 488

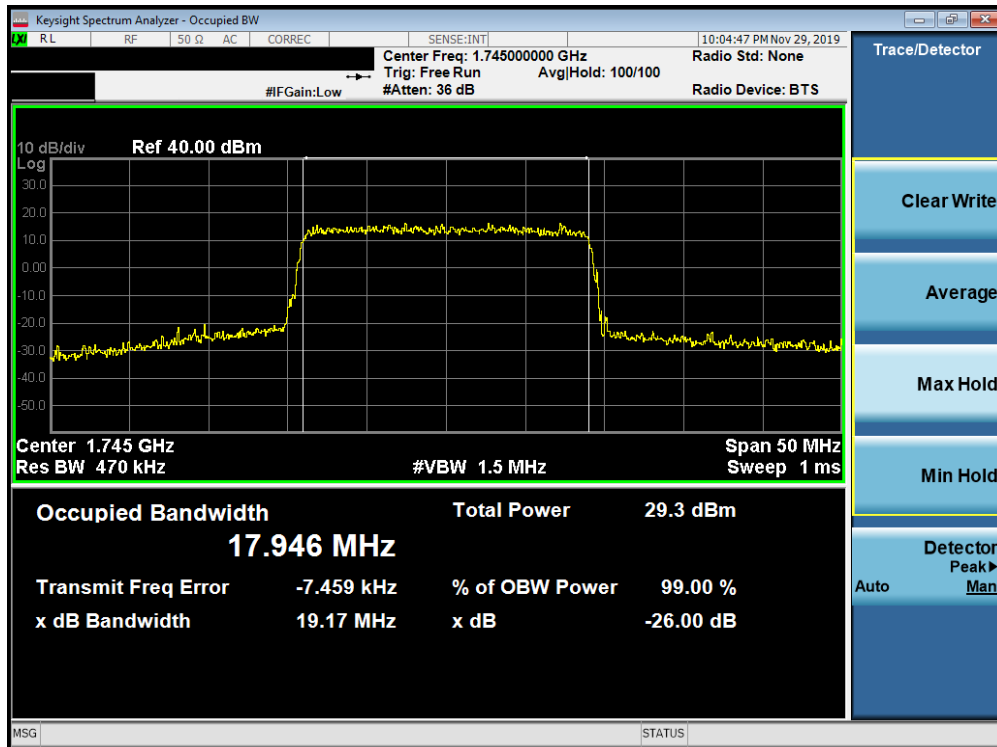


Plot 7-81. Occupied Bandwidth Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)

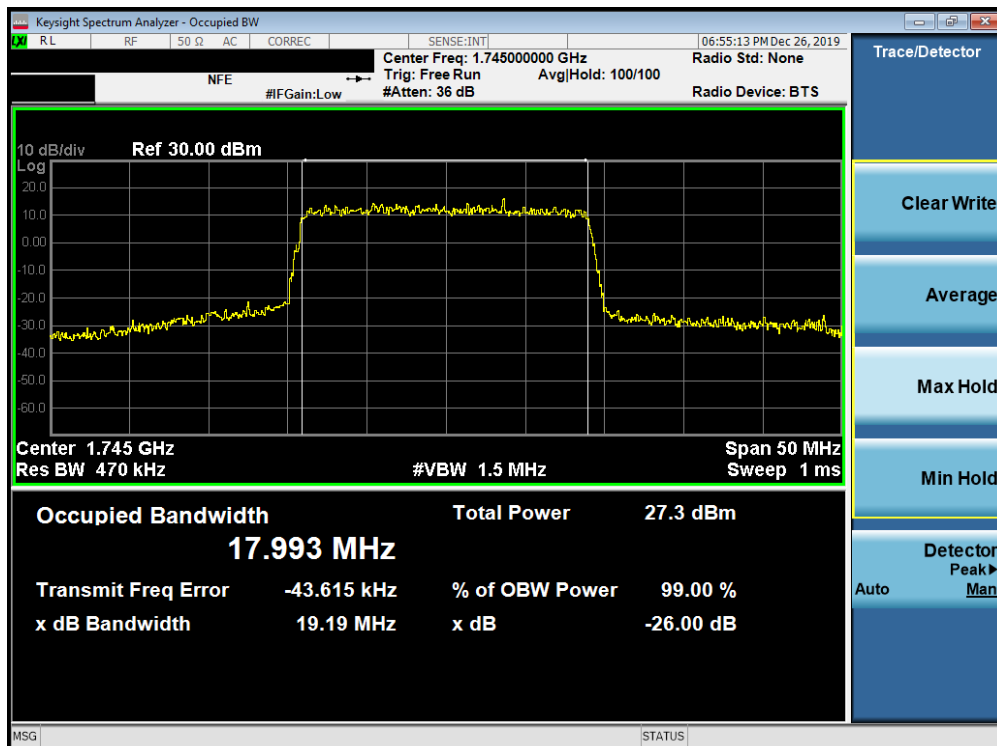


Plot 7-82. Occupied Bandwidth Plot (Band 66/4 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 60 of 488



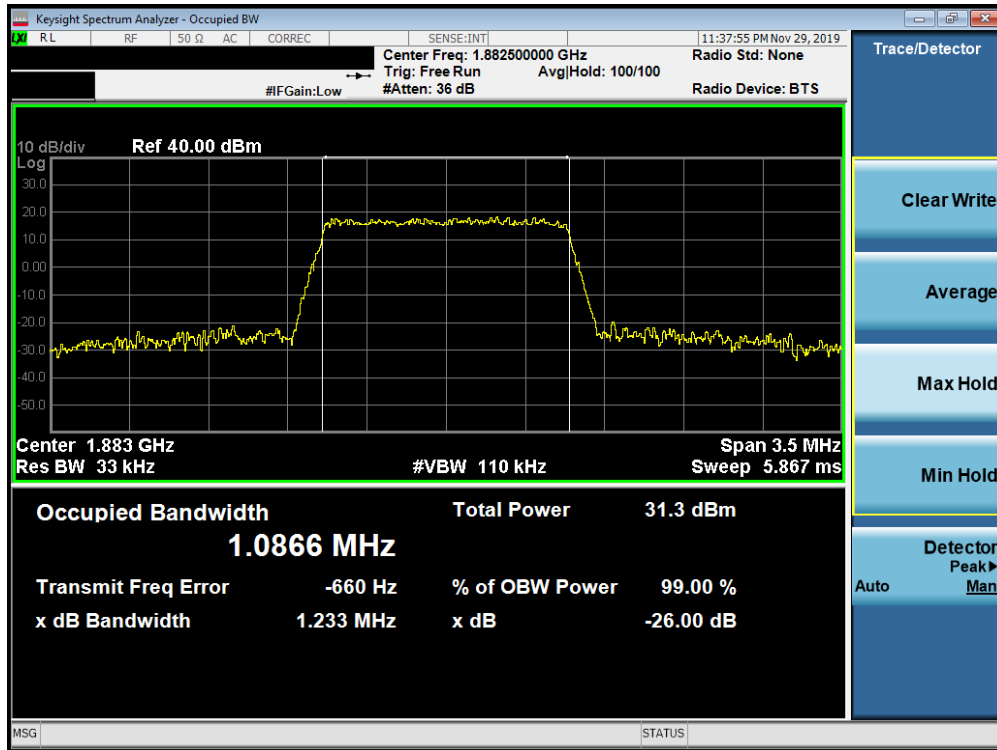
Plot 7-83. Occupied Bandwidth Plot (Band 66/4 - 20.0MHz 64-QAM - Full RB Configuration)



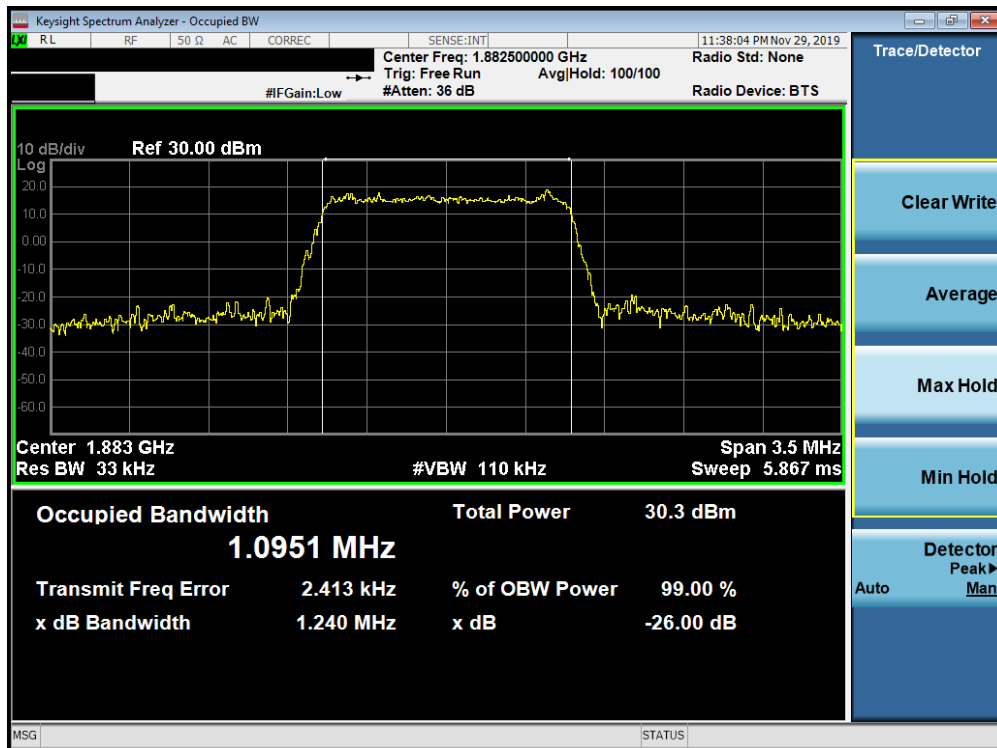
Plot 7-84. Occupied Bandwidth Plot (Band 66/4 - 20.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 61 of 488

Band 25/2

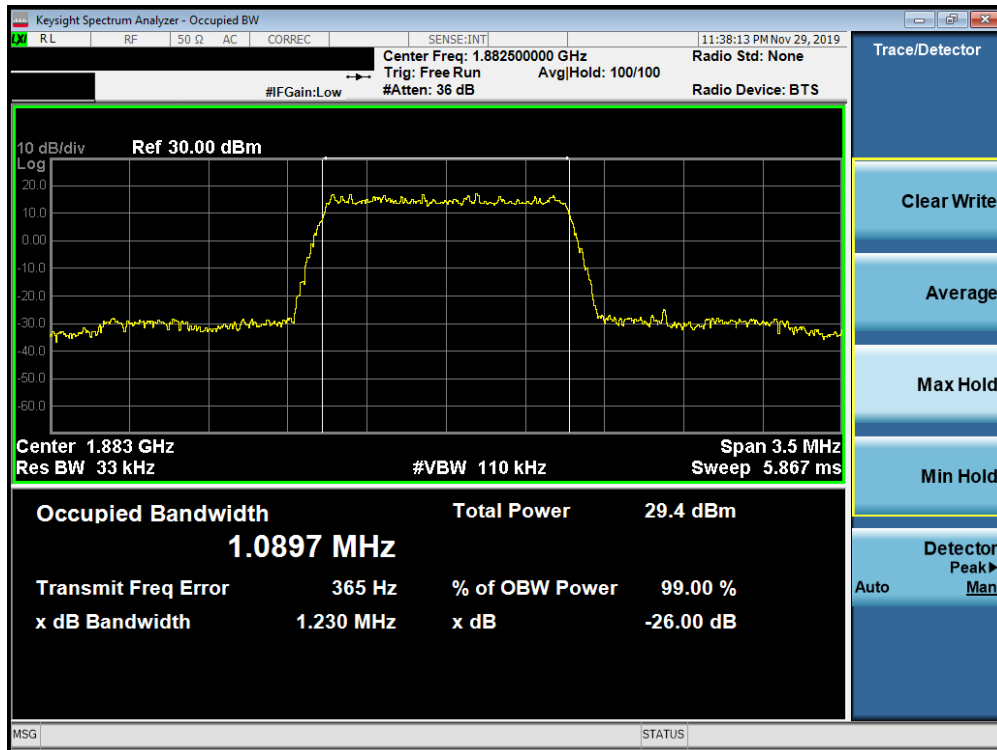


Plot 7-85. Occupied Bandwidth Plot (Band 25/2 - 1.4MHz QPSK - Full RB Configuration)

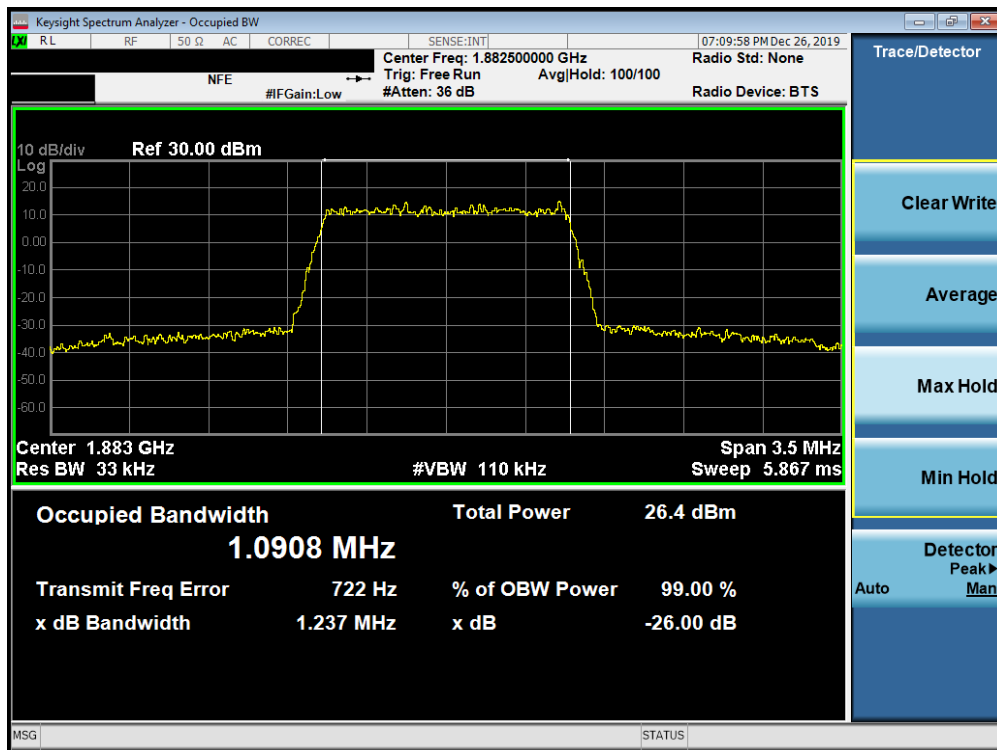


Plot 7-86. Occupied Bandwidth Plot (Band 25/2 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset	Page 62 of 488		

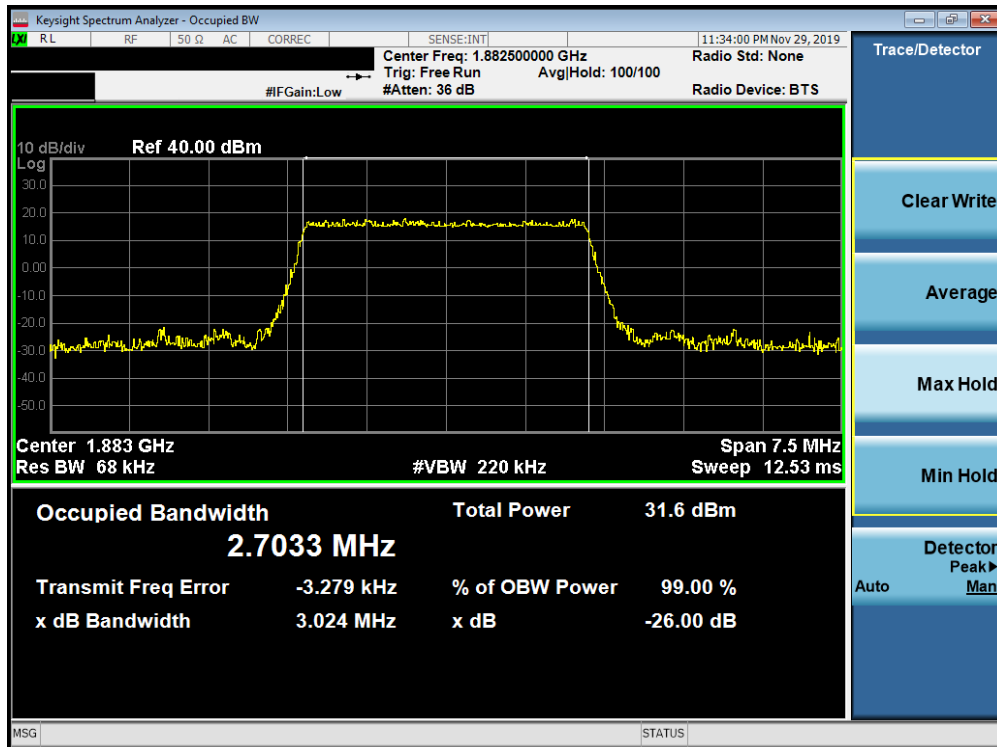


Plot 7-87. Occupied Bandwidth Plot (Band 25/2 - 1.4MHz 64-QAM - Full RB Configuration)

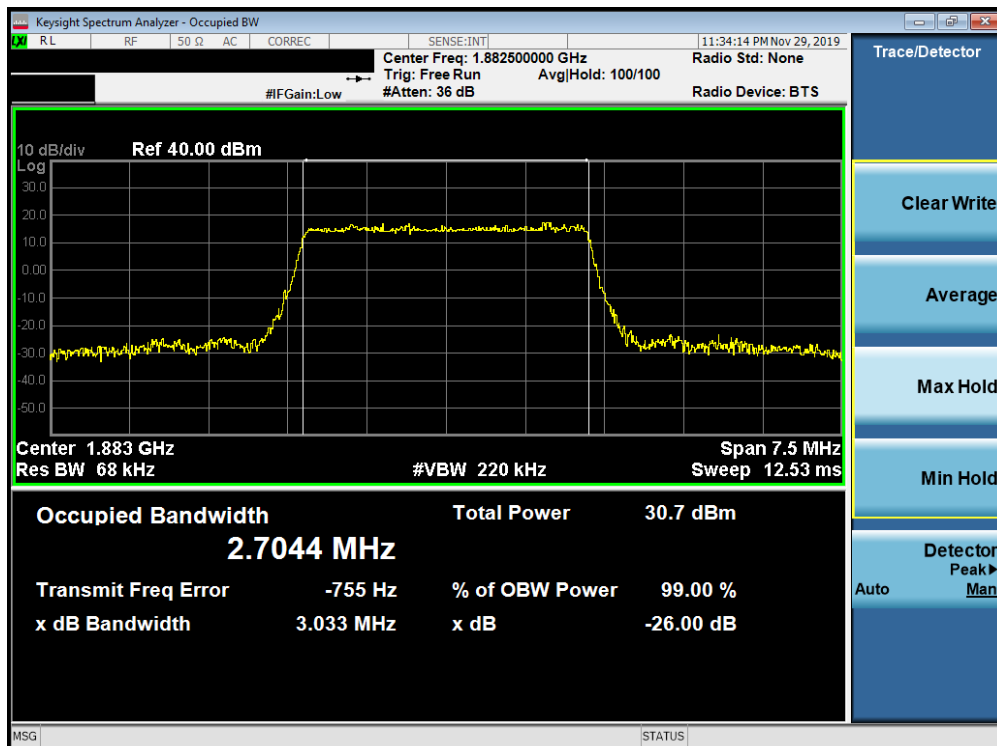


Plot 7-88. Occupied Bandwidth Plot (Band 25/2 - 1.4MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 63 of 488

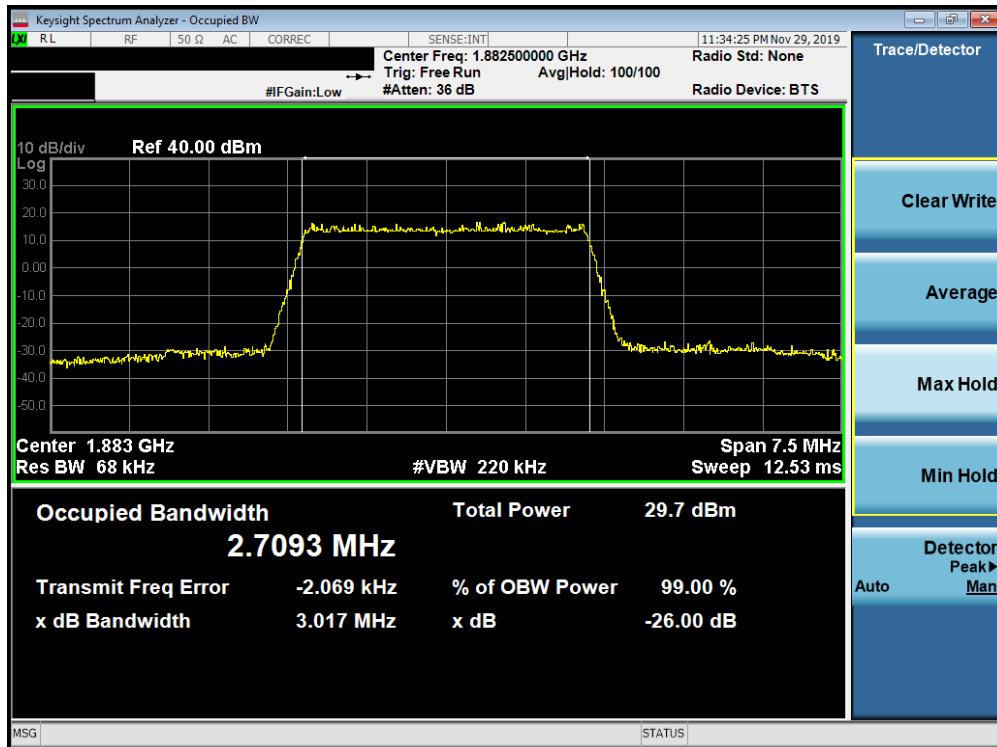


Plot 7-89. Occupied Bandwidth Plot (Band 25/2 - 3.0MHz QPSK - Full RB Configuration)

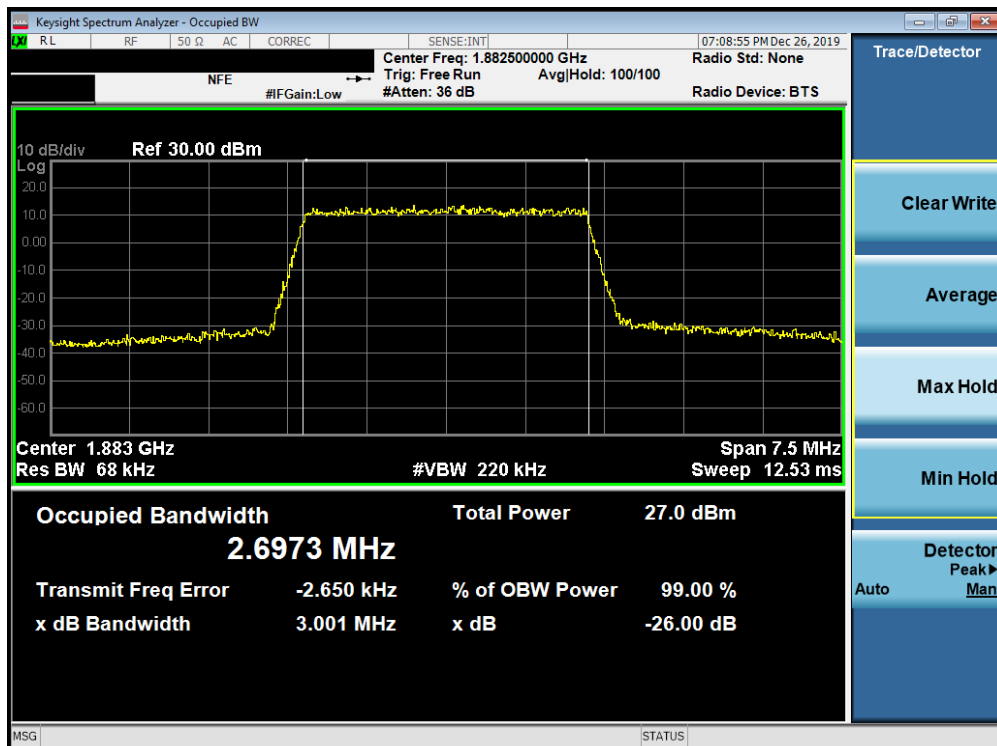


Plot 7-90. Occupied Bandwidth Plot (Band 25/2 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 64 of 488

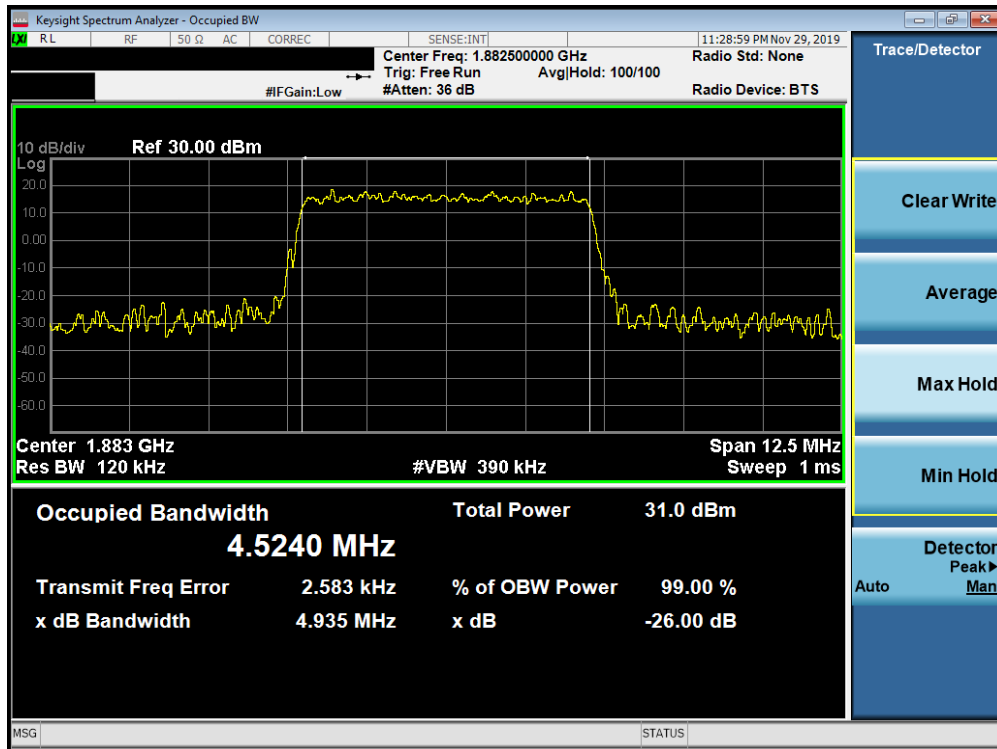


Plot 7-91. Occupied Bandwidth Plot (Band 25/2 - 3.0MHz 64-QAM - Full RB Configuration)

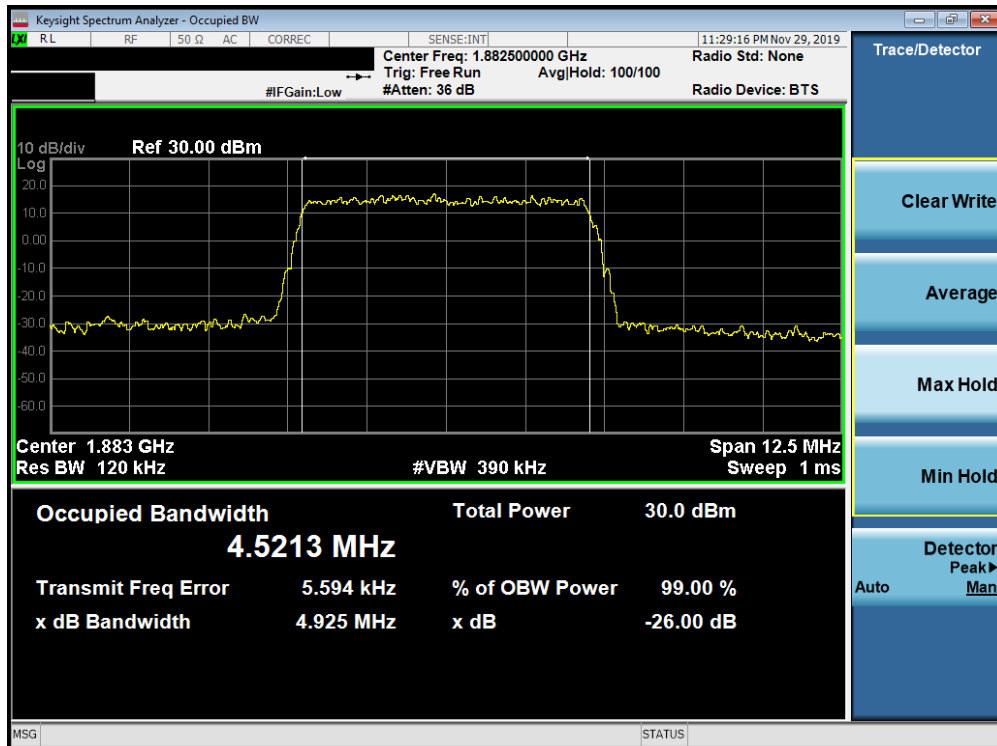


Plot 7-92. Occupied Bandwidth Plot (Band 25/2 - 3.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 65 of 488

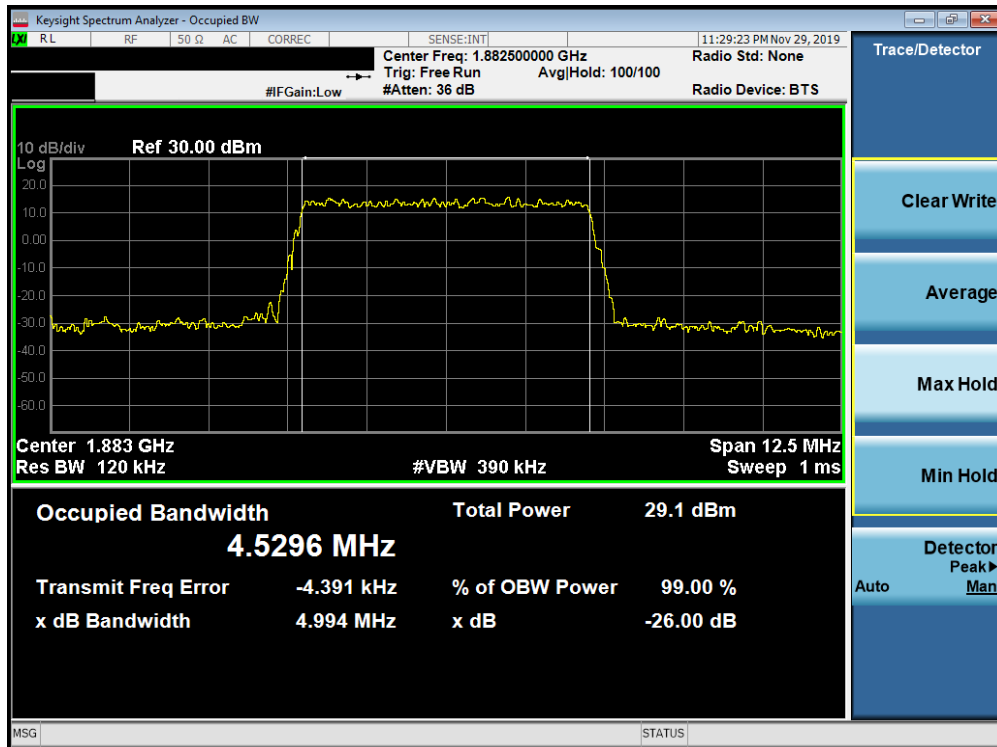


Plot 7-93. Occupied Bandwidth Plot (Band 25/2 - 5.0MHz QPSK - Full RB Configuration)

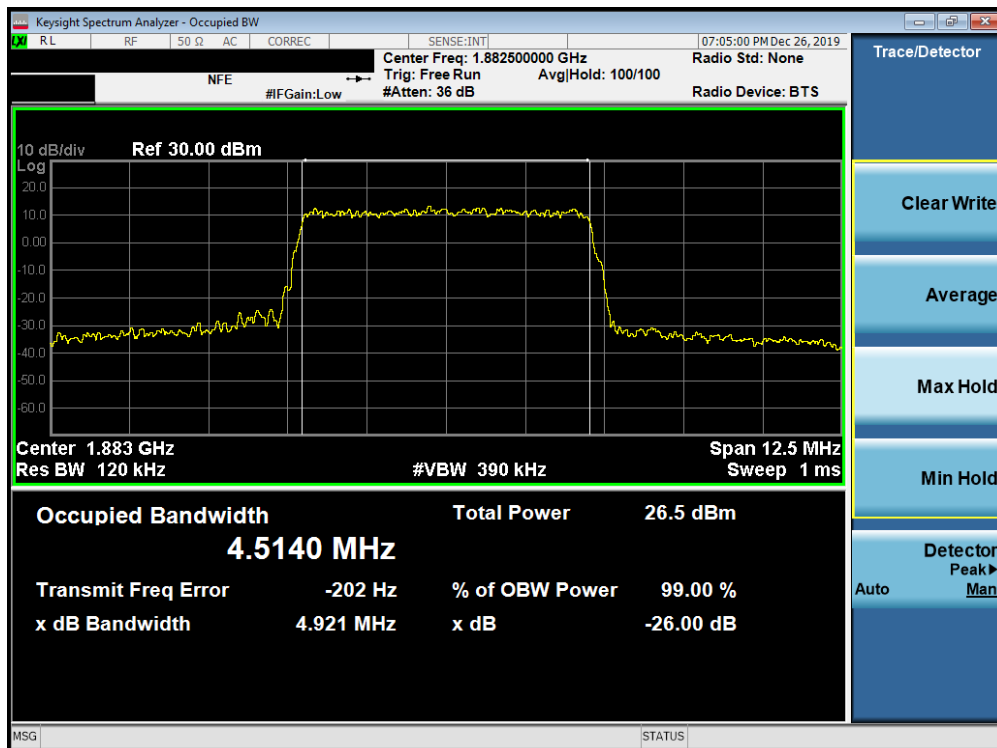


Plot 7-94. Occupied Bandwidth Plot (Band 25/2 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 66 of 488

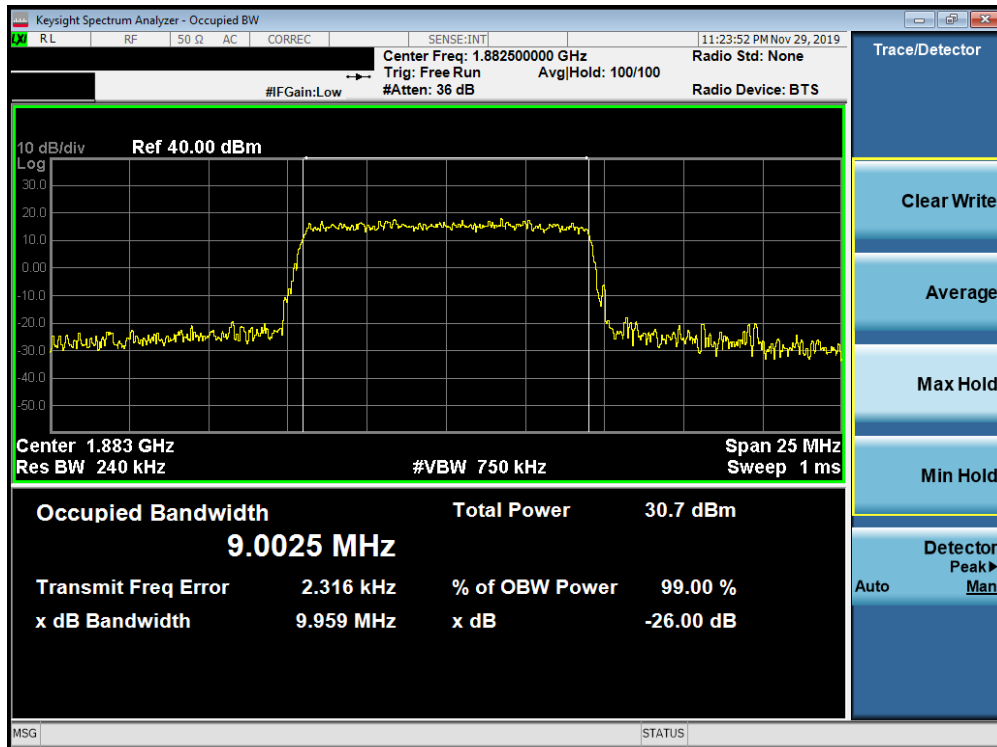


Plot 7-95. Occupied Bandwidth Plot (Band 25/2 - 5.0MHz 64-QAM - Full RB Configuration)

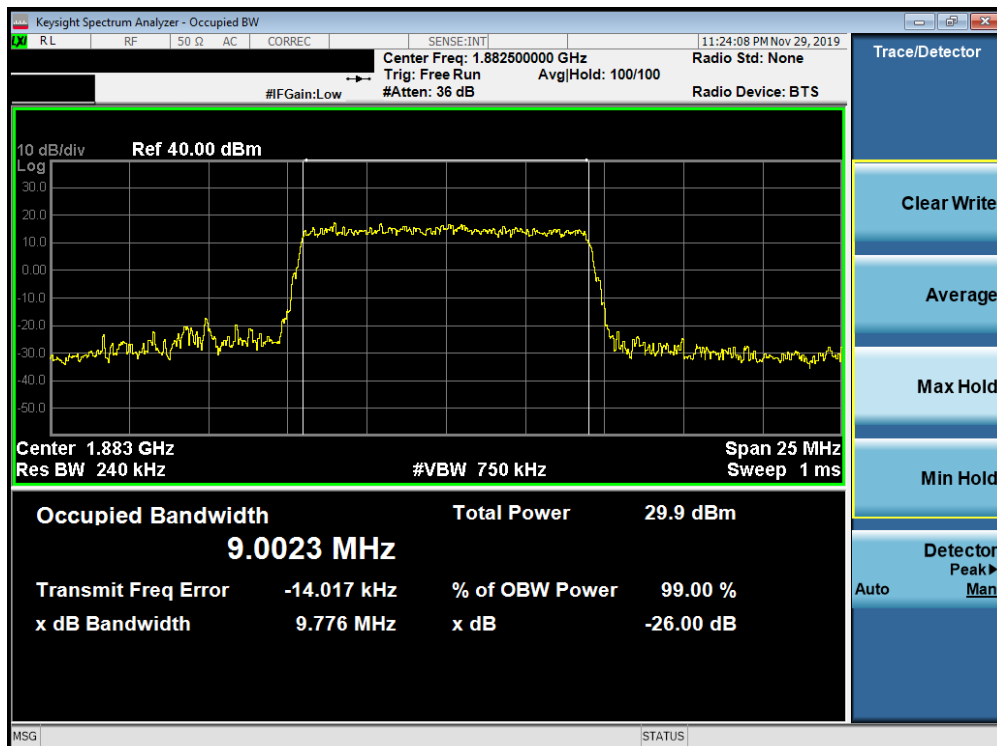


Plot 7-96. Occupied Bandwidth Plot (Band 25/2 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 67 of 488

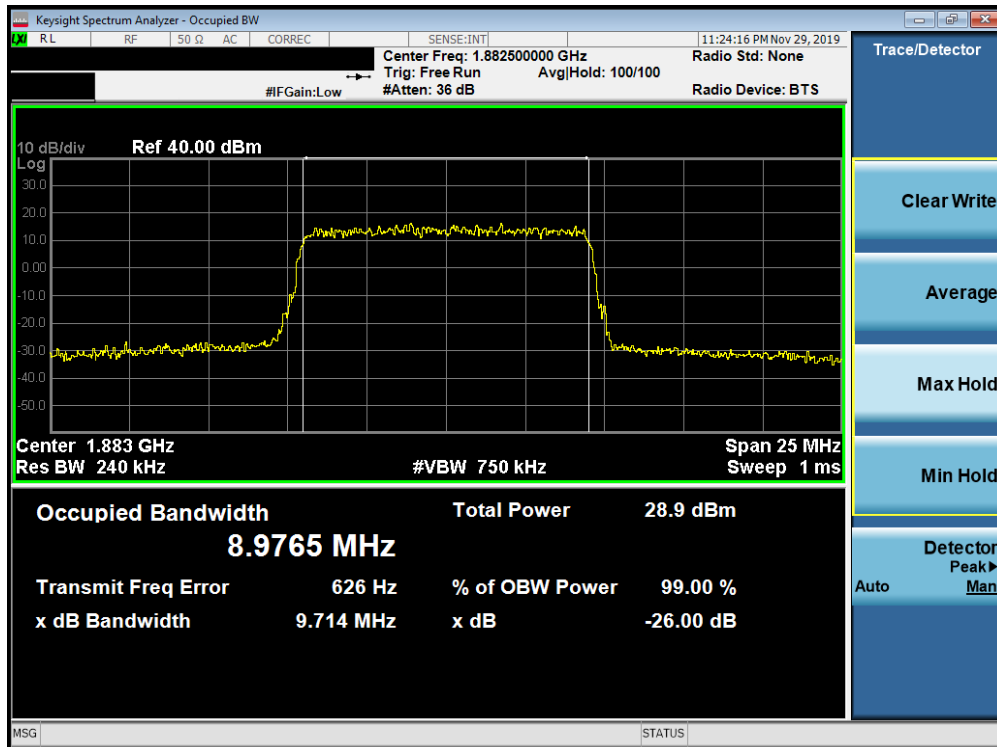


Plot 7-97. Occupied Bandwidth Plot (Band 25/2 - 10.0MHz QPSK - Full RB Configuration)

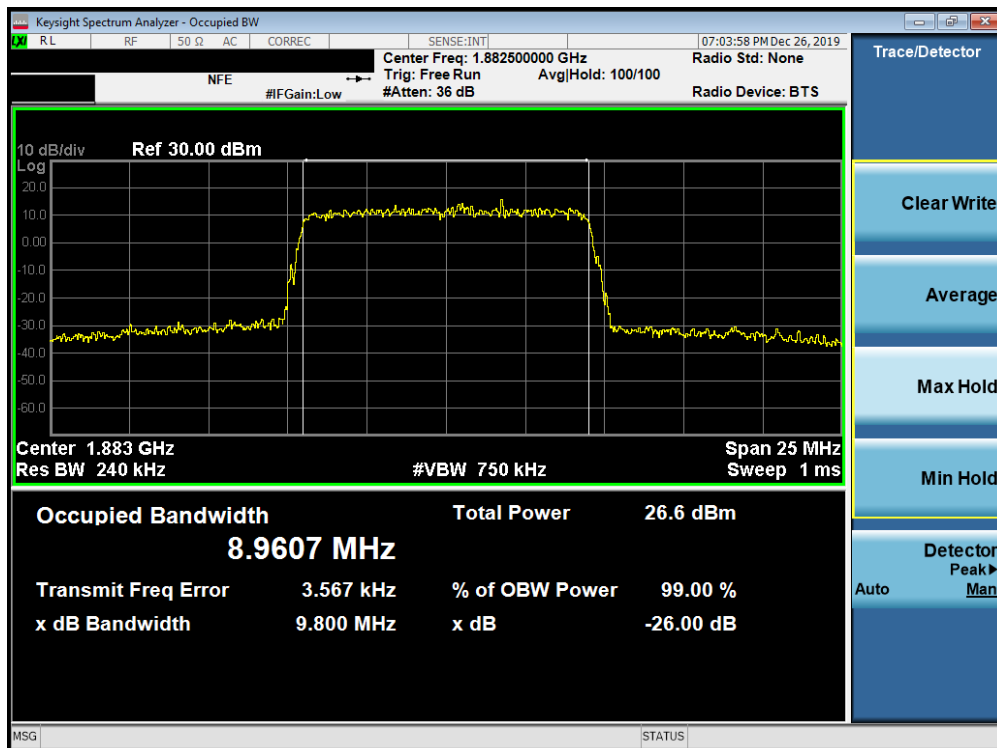


Plot 7-98. Occupied Bandwidth Plot (Band 25/2 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 68 of 488

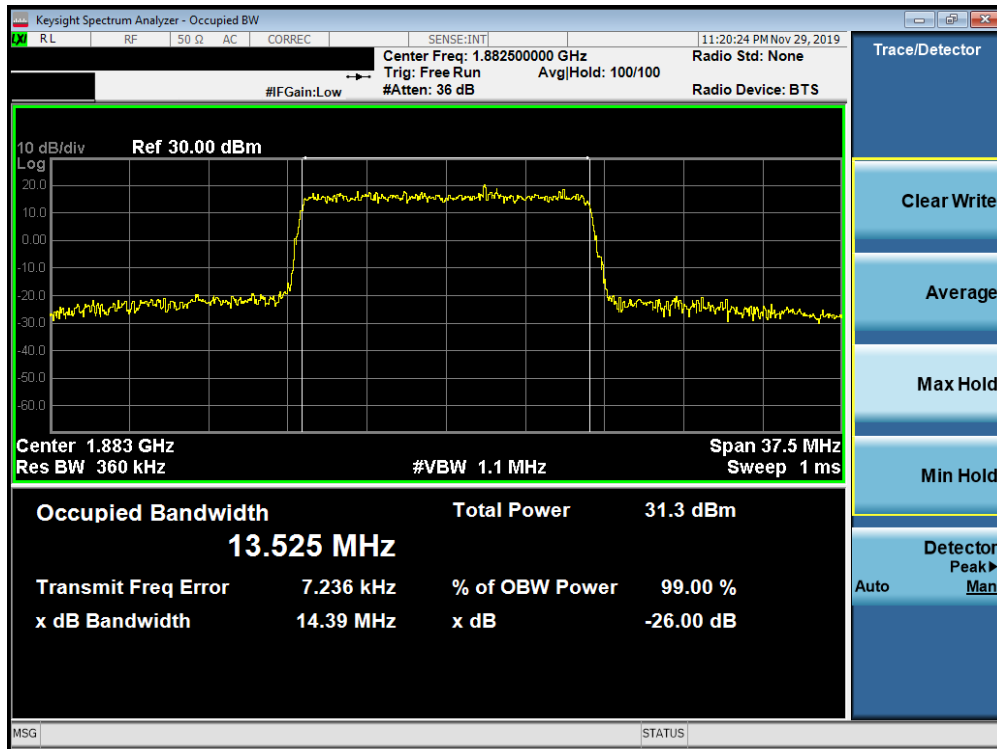


Plot 7-99. Occupied Bandwidth Plot (Band 25/2 - 10.0MHz 64-QAM - Full RB Configuration)

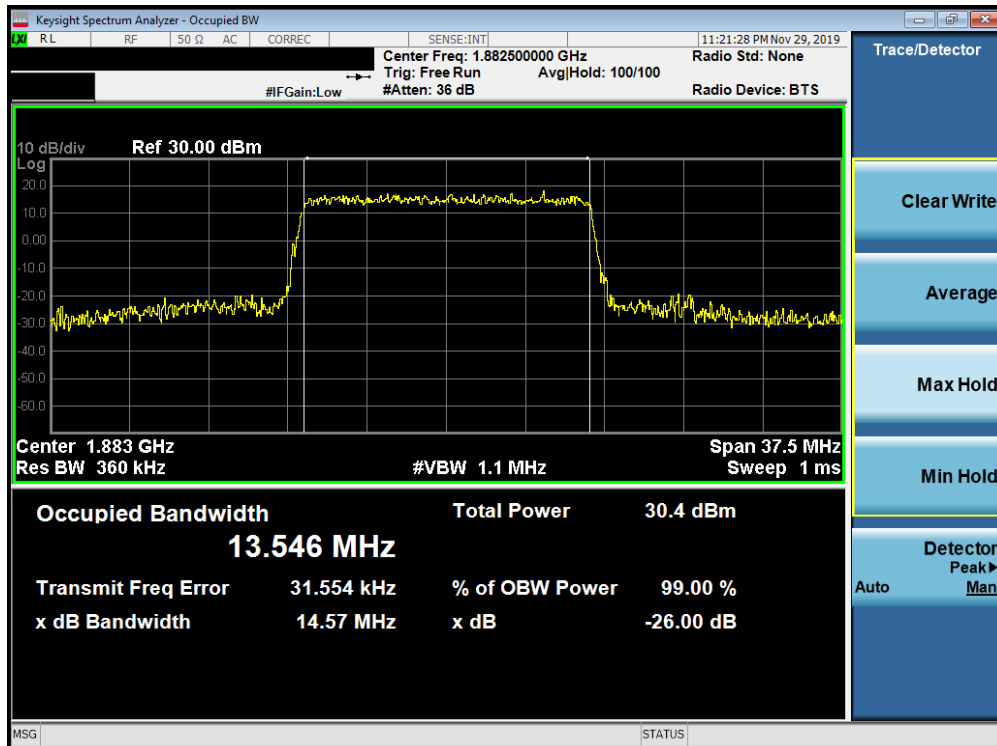


Plot 7-100. Occupied Bandwidth Plot (Band 25/2 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 69 of 488

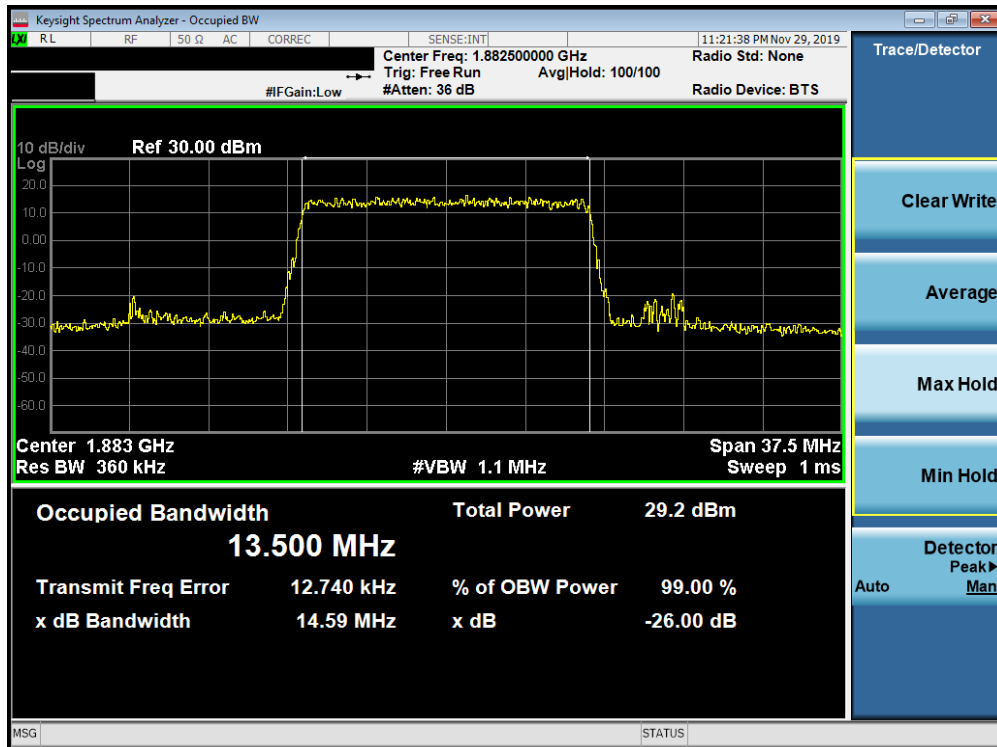


Plot 7-101. Occupied Bandwidth Plot (Band 25/2 - 15.0MHz QPSK - Full RB Configuration)

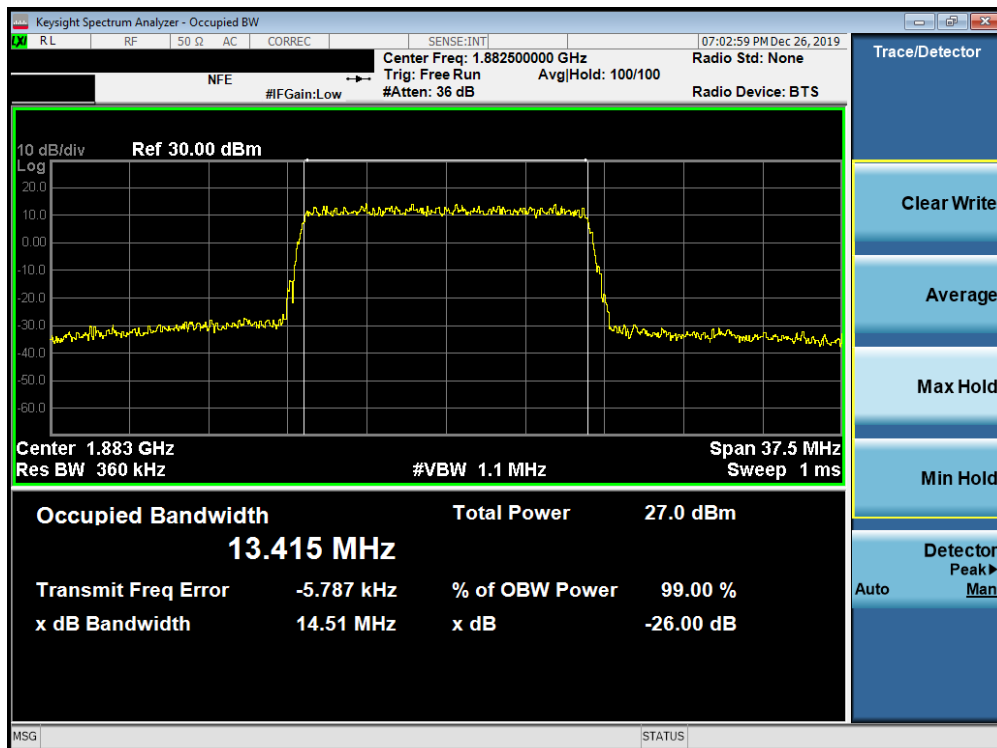


Plot 7-102. Occupied Bandwidth Plot (Band 25/2 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 70 of 488

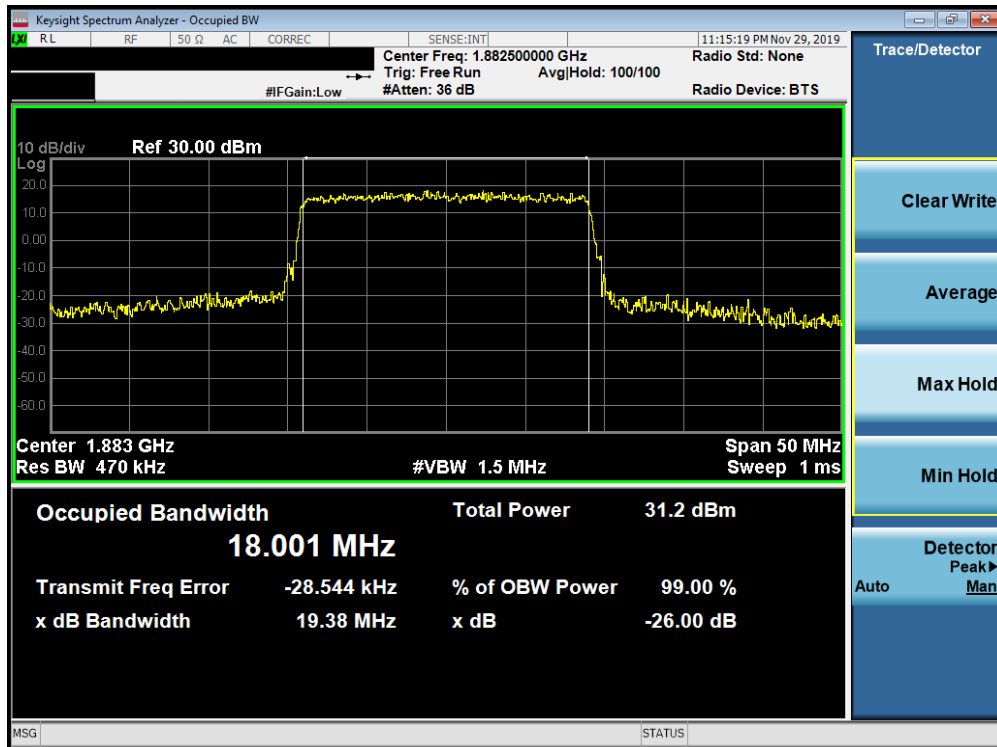


Plot 7-103. Occupied Bandwidth Plot (Band 25/2 - 15.0MHz 64-QAM - Full RB Configuration)

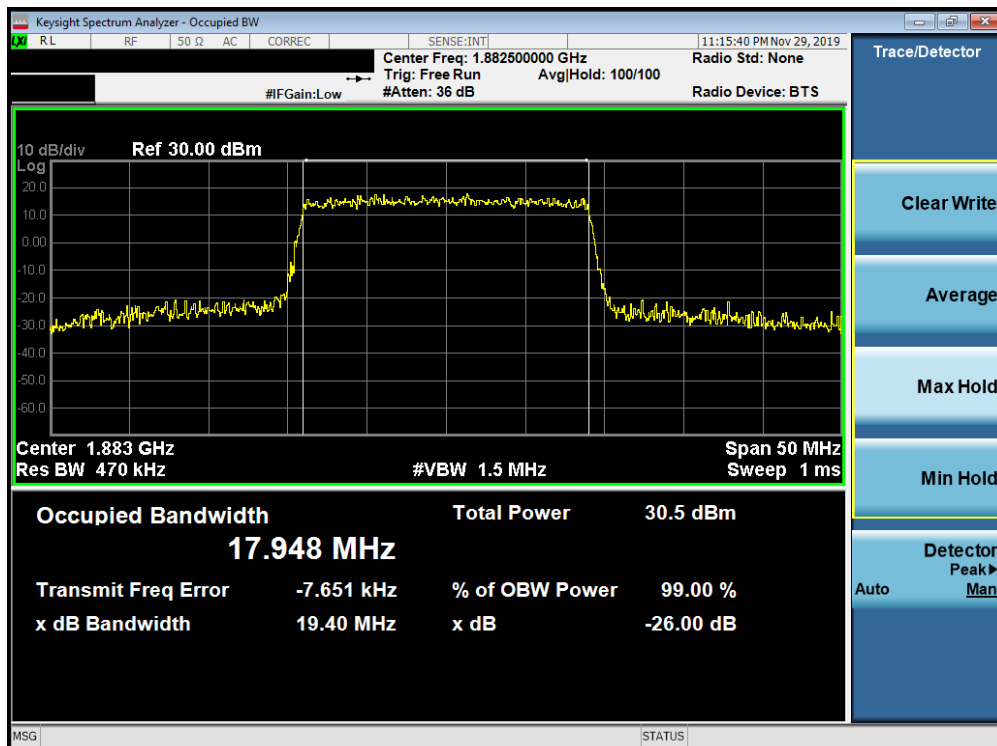


Plot 7-104. Occupied Bandwidth Plot (Band 25/2 - 15.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 71 of 488

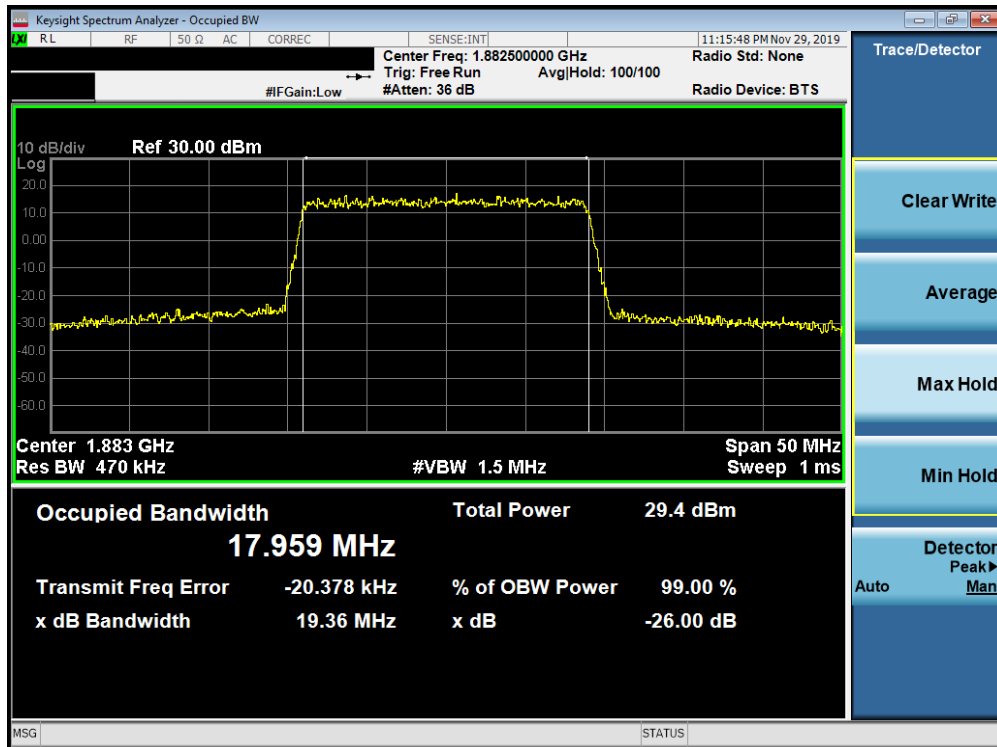


Plot 7-105. Occupied Bandwidth Plot (Band 25/2 - 20.0MHz QPSK - Full RB Configuration)

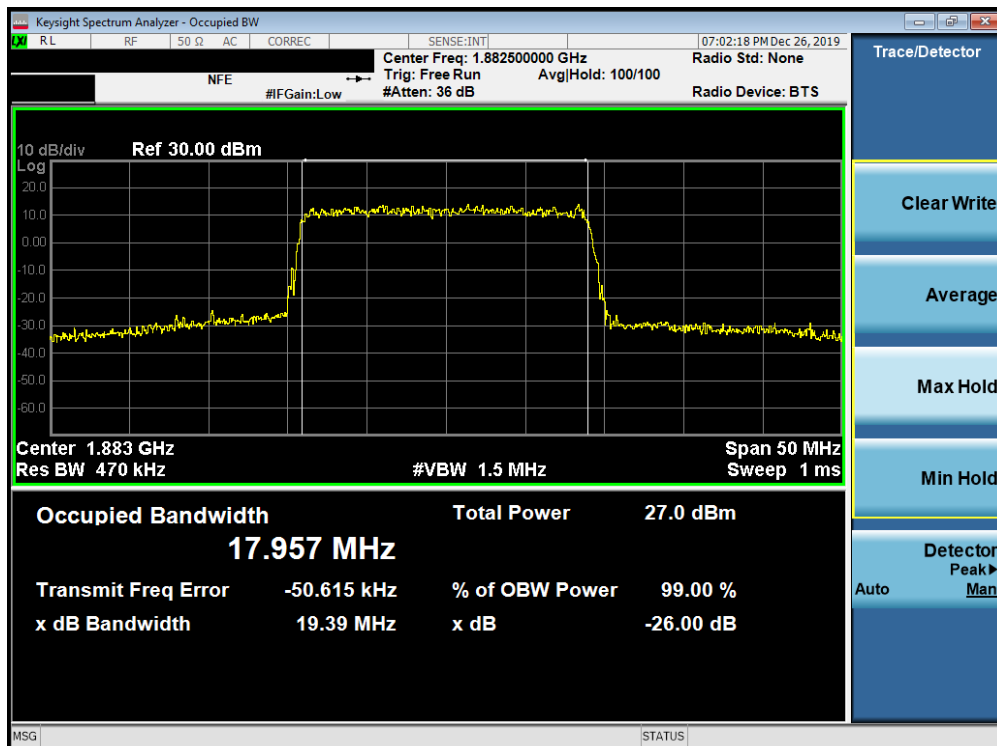


Plot 7-106. Occupied Bandwidth Plot (Band 25/2 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 72 of 488



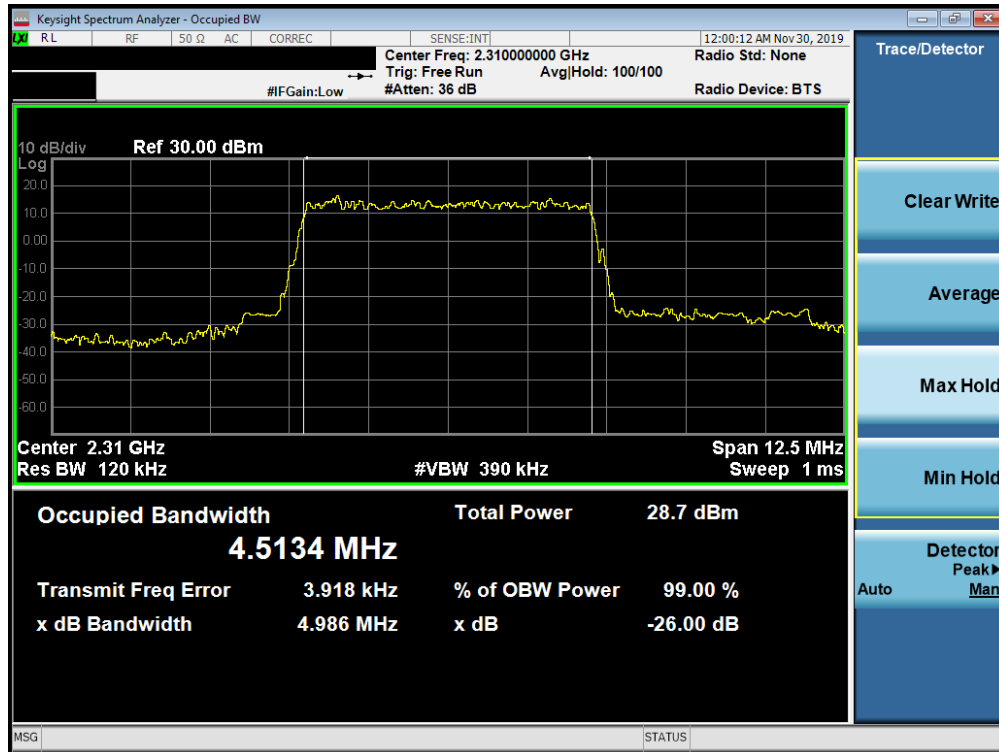
Plot 7-107. Occupied Bandwidth Plot (Band 25/2 - 20.0MHz 64-QAM - Full RB Configuration)



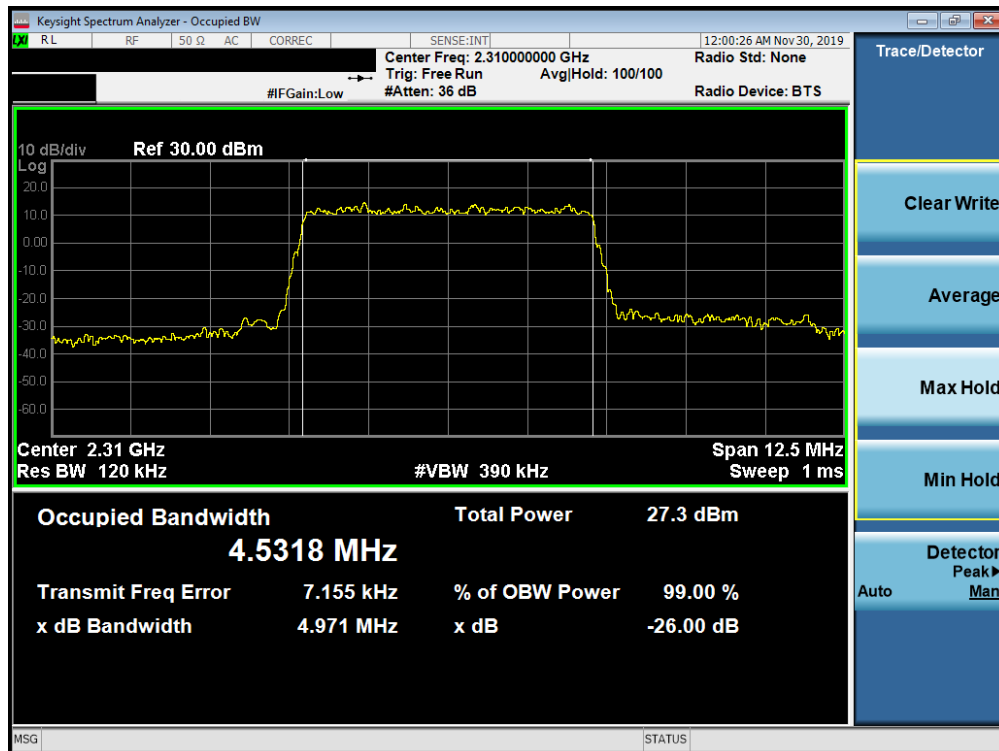
Plot 7-108. Occupied Bandwidth Plot (Band 25/2 - 20.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 73 of 488

Band 30

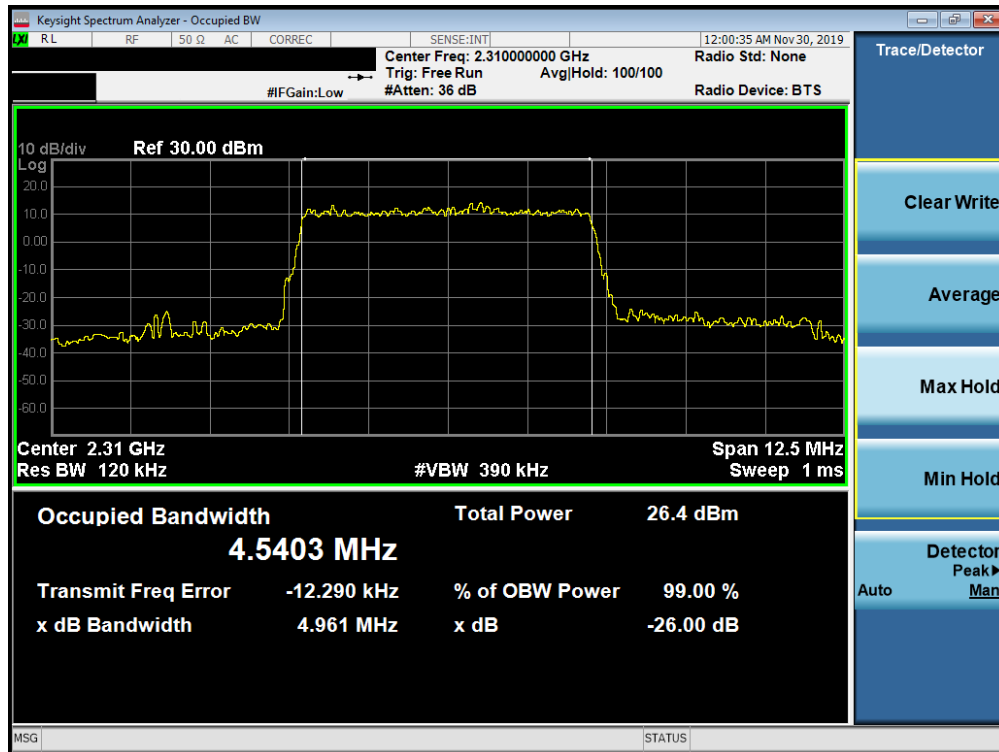


Plot 7-109. Occupied Bandwidth Plot (Band 30 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-110. Occupied Bandwidth Plot (Band 30 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 74 of 488

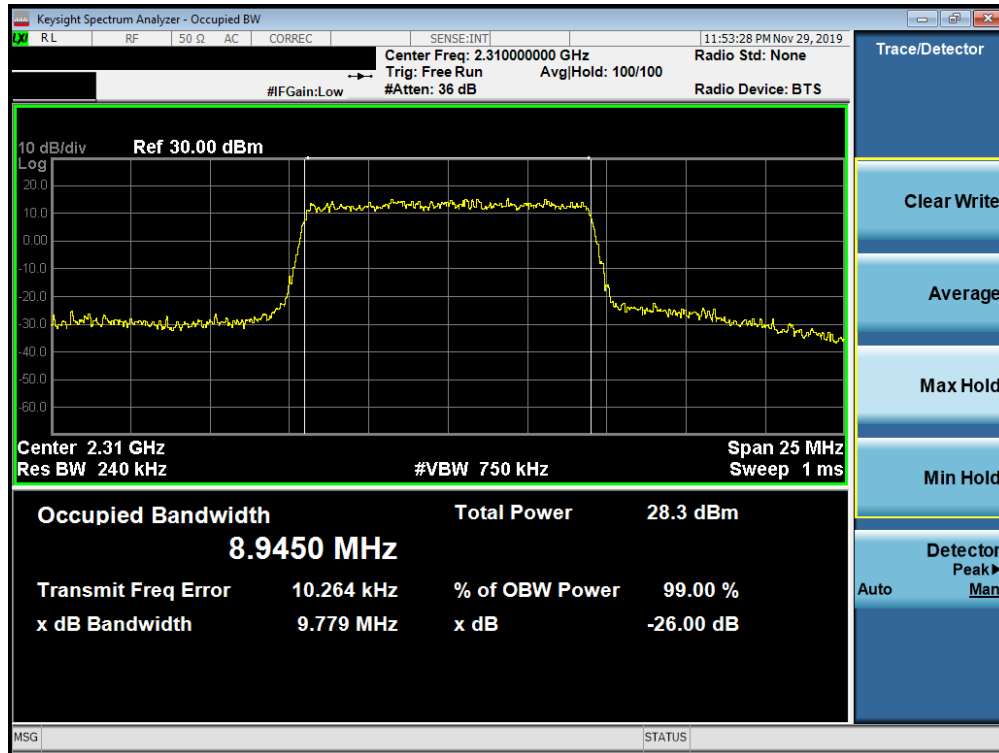


Plot 7-111. Occupied Bandwidth Plot (Band 30 - 5.0MHz 64-QAM - Full RB Configuration)

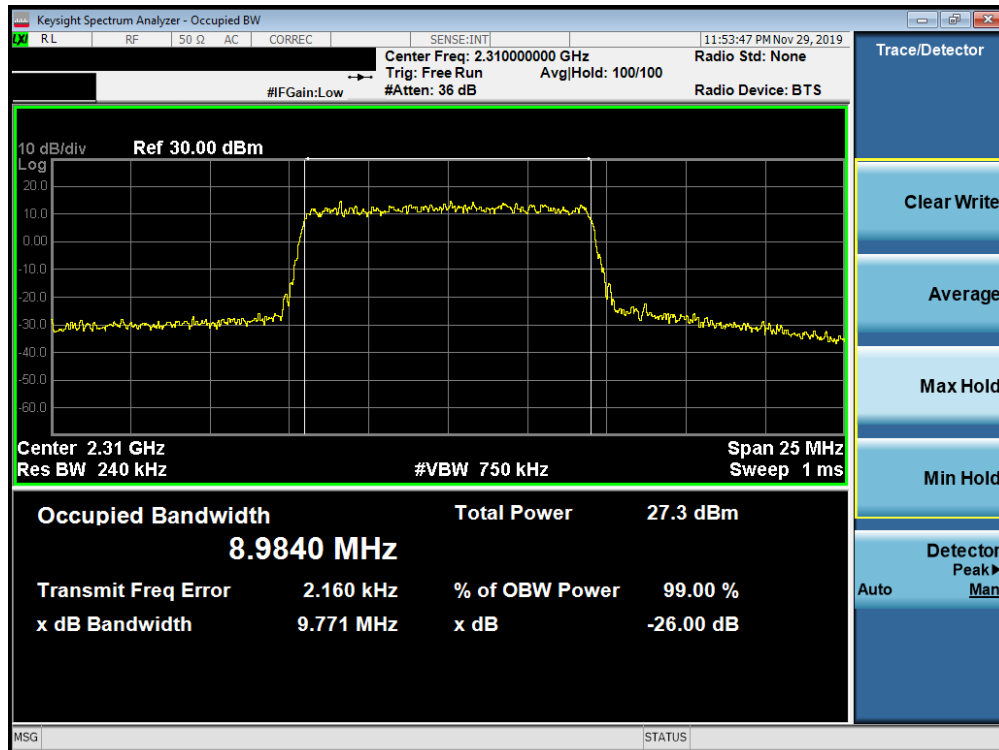


Plot 7-112. Occupied Bandwidth Plot (Band 30 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 75 of 488

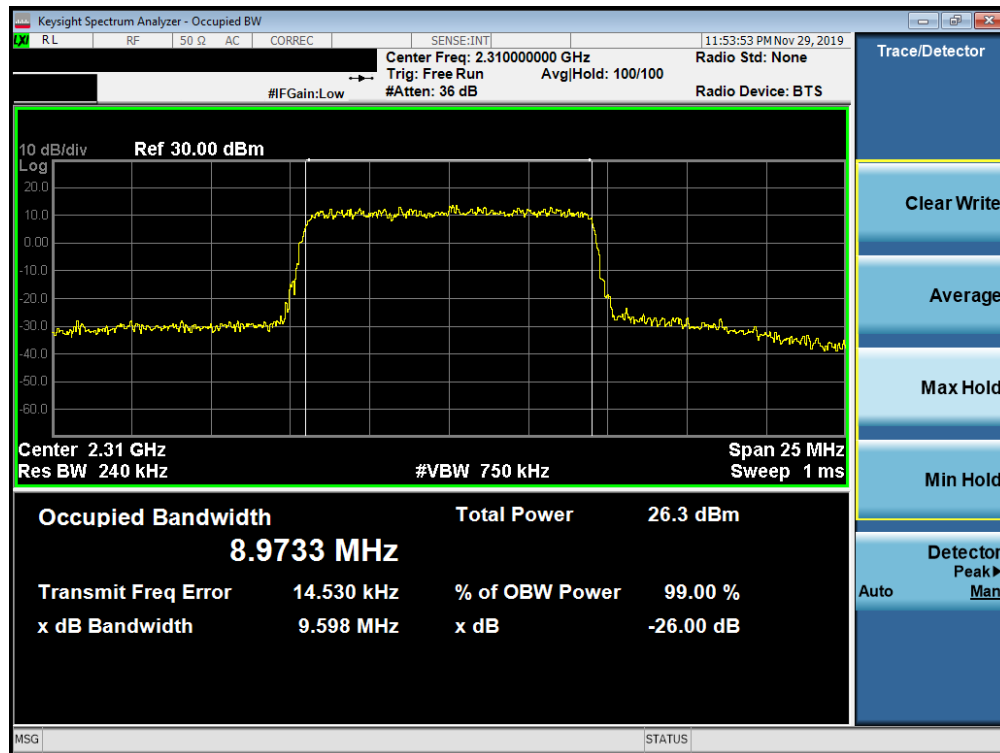


Plot 7-113. Occupied Bandwidth Plot (Band 30 - 10.0MHz QPSK - Full RB Configuration)

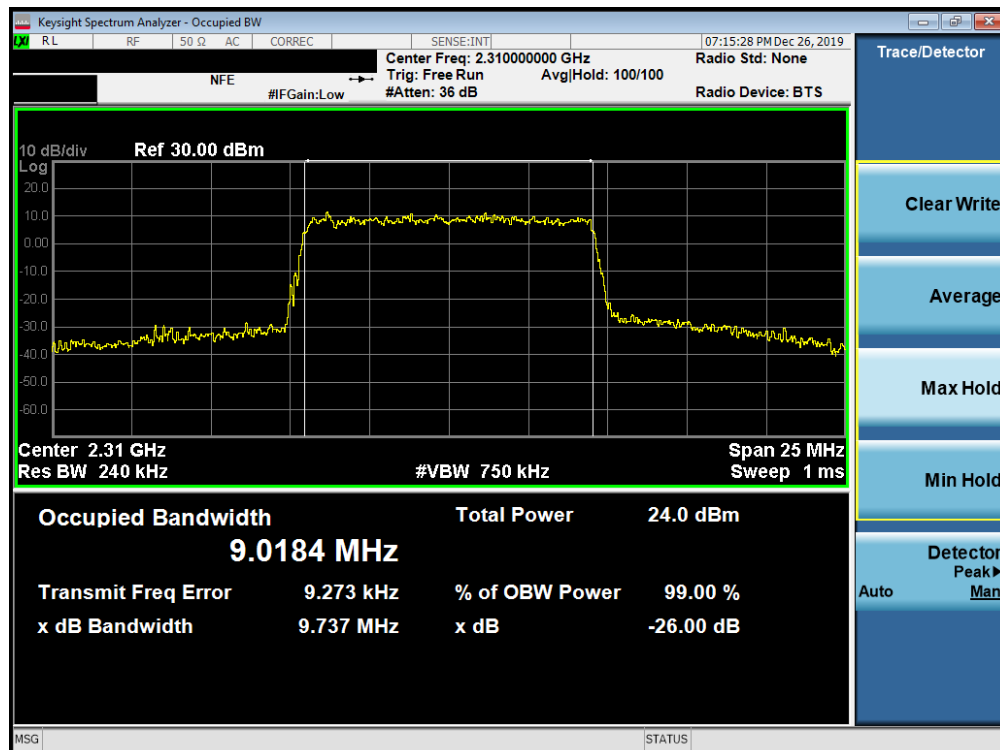


Plot 7-114. Occupied Bandwidth Plot (Band 30 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 76 of 488



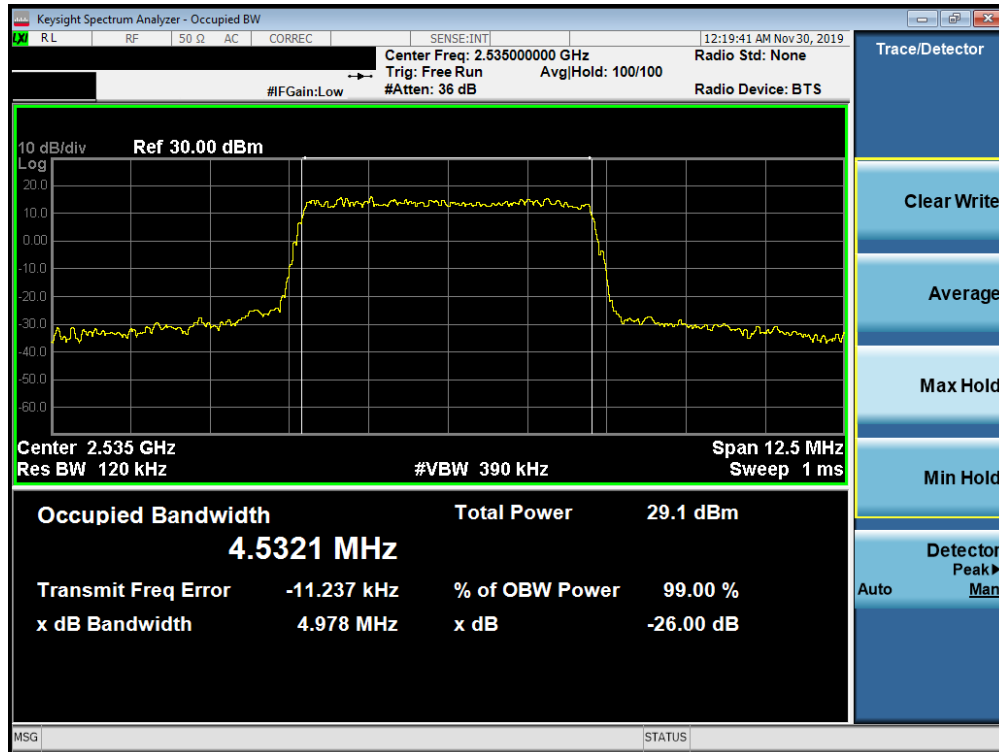
Plot 7-115. Occupied Bandwidth Plot (Band 30 - 10.0MHz 64-QAM - Full RB Configuration)



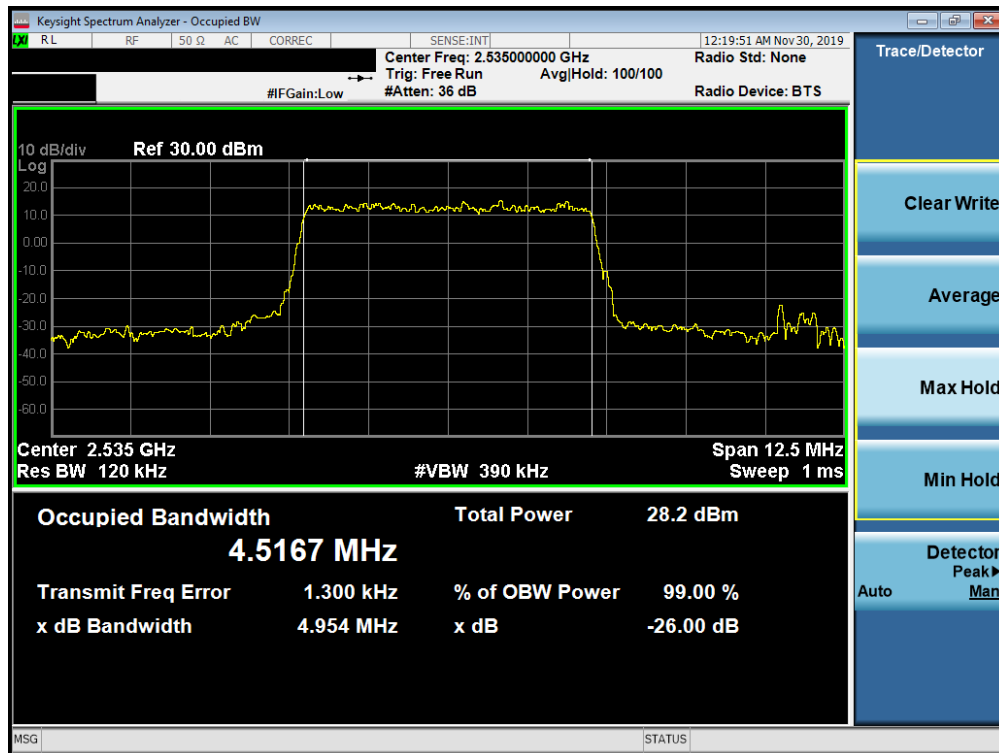
Plot 7-116. Occupied Bandwidth Plot (Band 30 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 77 of 488

Band 7

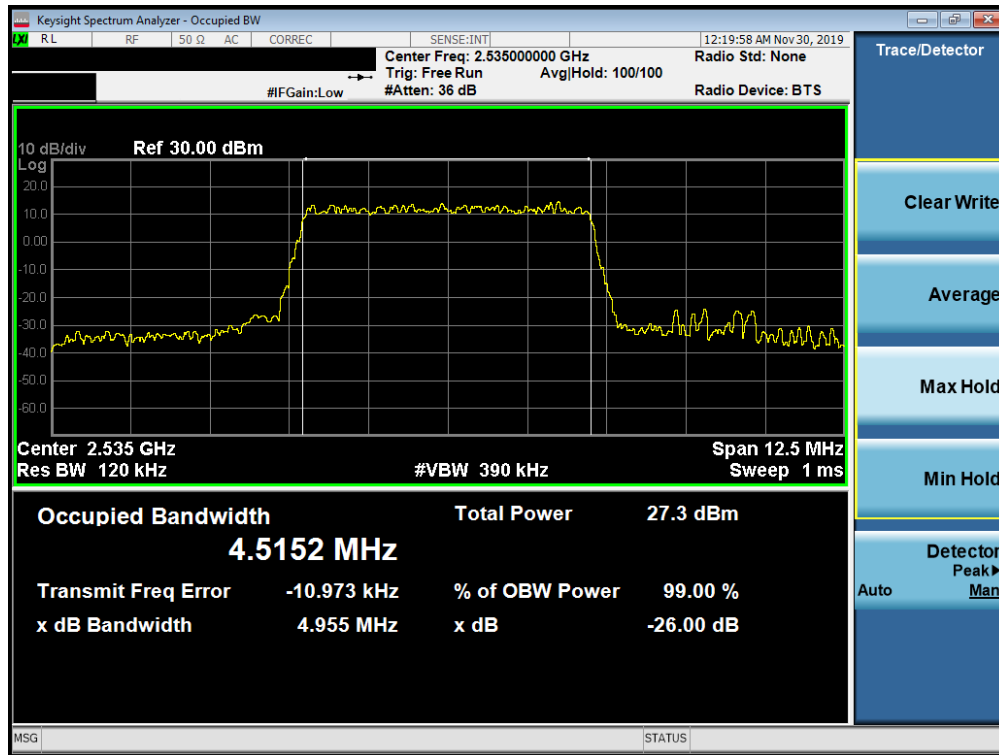


Plot 7-117. Occupied Bandwidth Plot (Band 7 - 5.0MHz QPSK - Full RB Configuration)

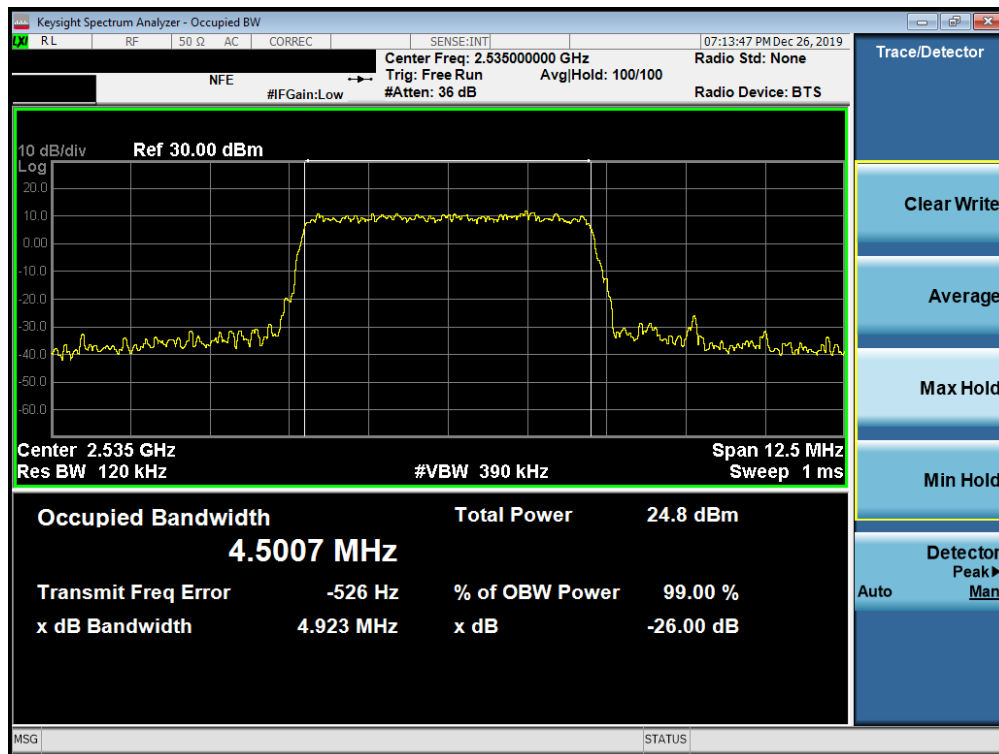


Plot 7-118. Occupied Bandwidth Plot (Band 7 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 78 of 488

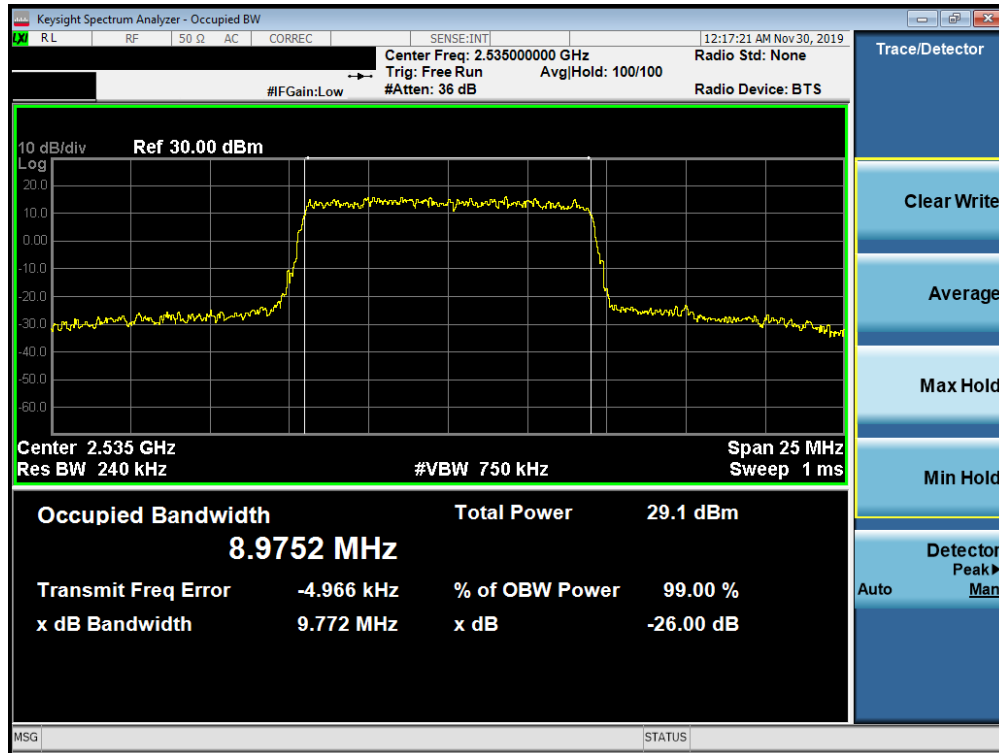


Plot 7-119. Occupied Bandwidth Plot (Band 7 - 5.0MHz 64-QAM - Full RB Configuration)

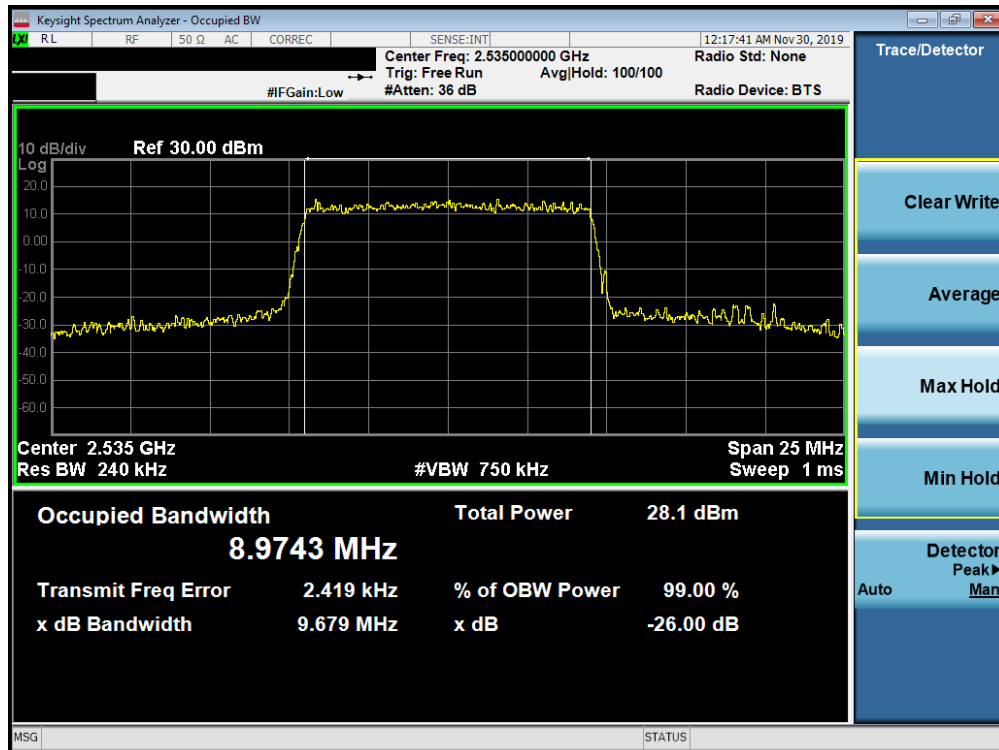


Plot 7-120. Occupied Bandwidth Plot (Band 7 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 79 of 488

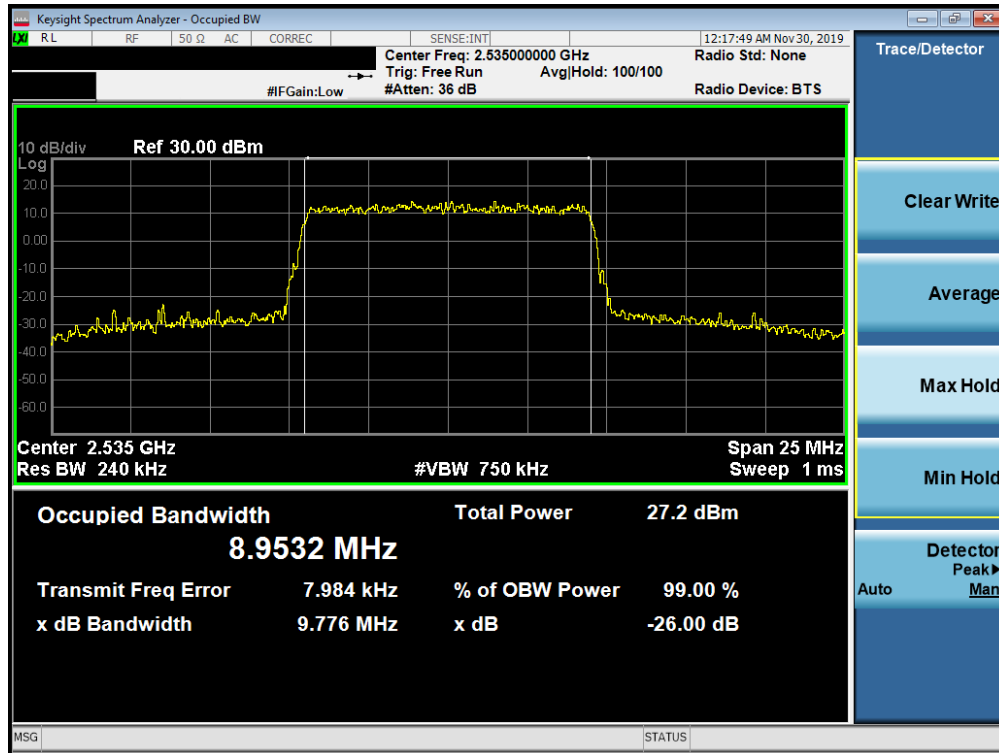


Plot 7-121. Occupied Bandwidth Plot (Band 7 - 10.0MHz QPSK - Full RB Configuration)

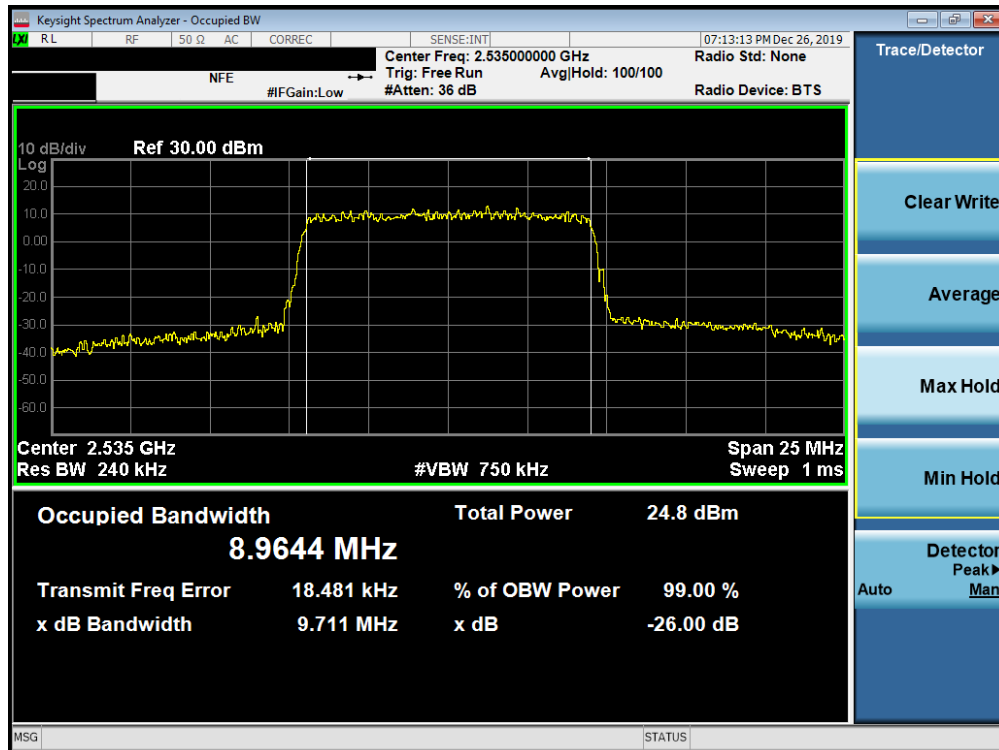


Plot 7-122. Occupied Bandwidth Plot (Band 7 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset	Page 80 of 488

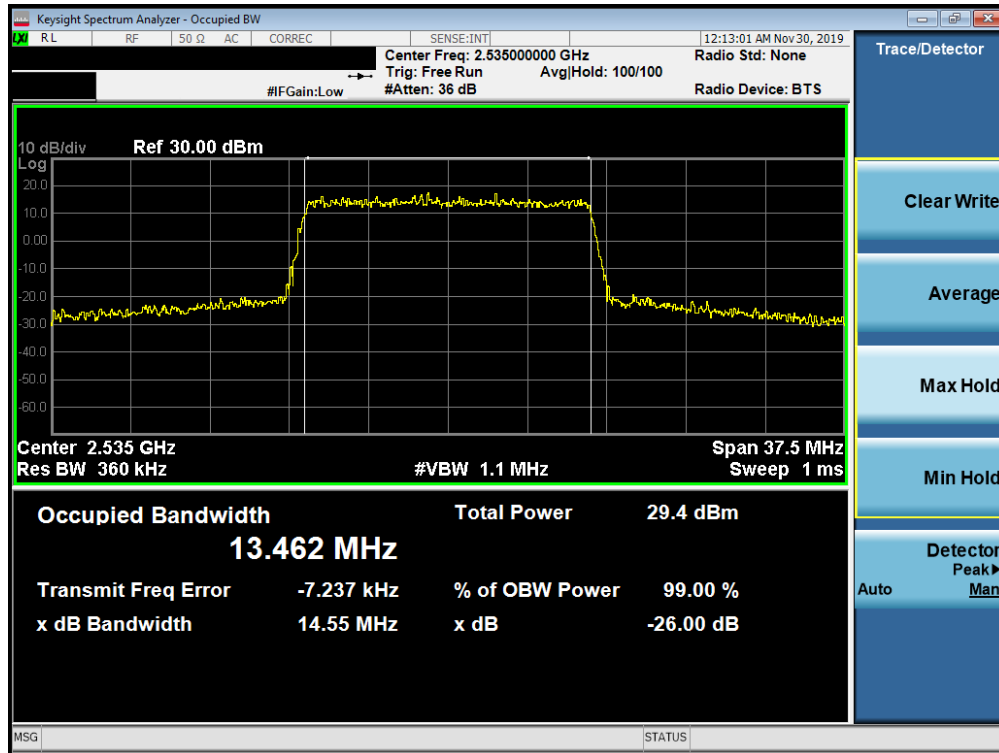


Plot 7-123. Occupied Bandwidth Plot (Band 7 - 10.0MHz 64-QAM - Full RB Configuration)

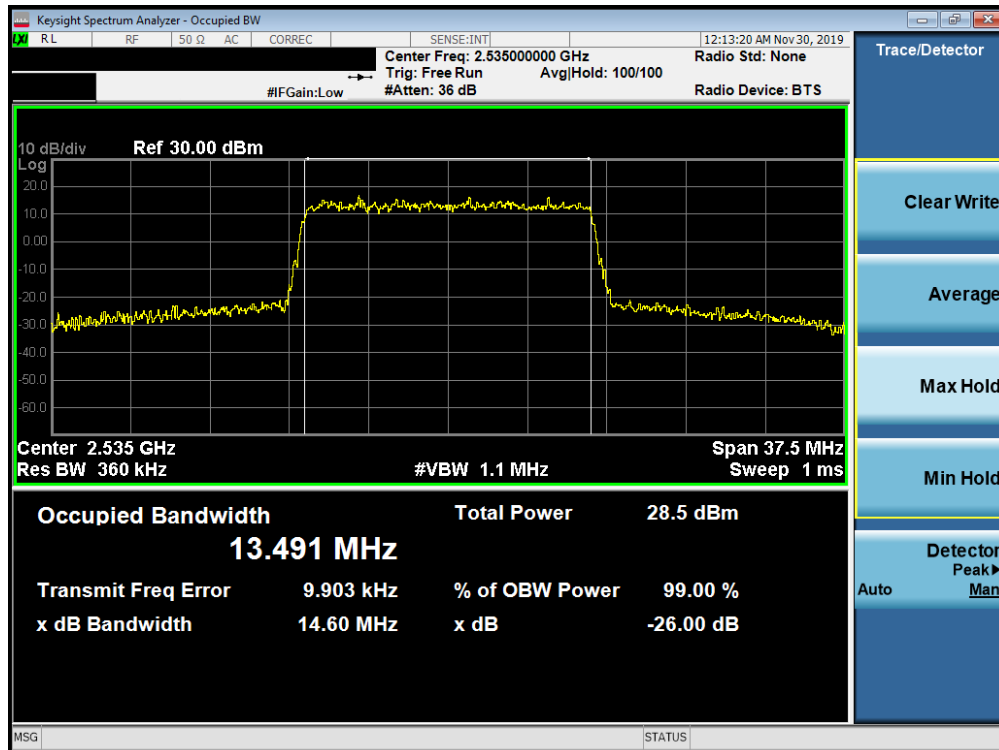


Plot 7-124. Occupied Bandwidth Plot (Band 7 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 81 of 488

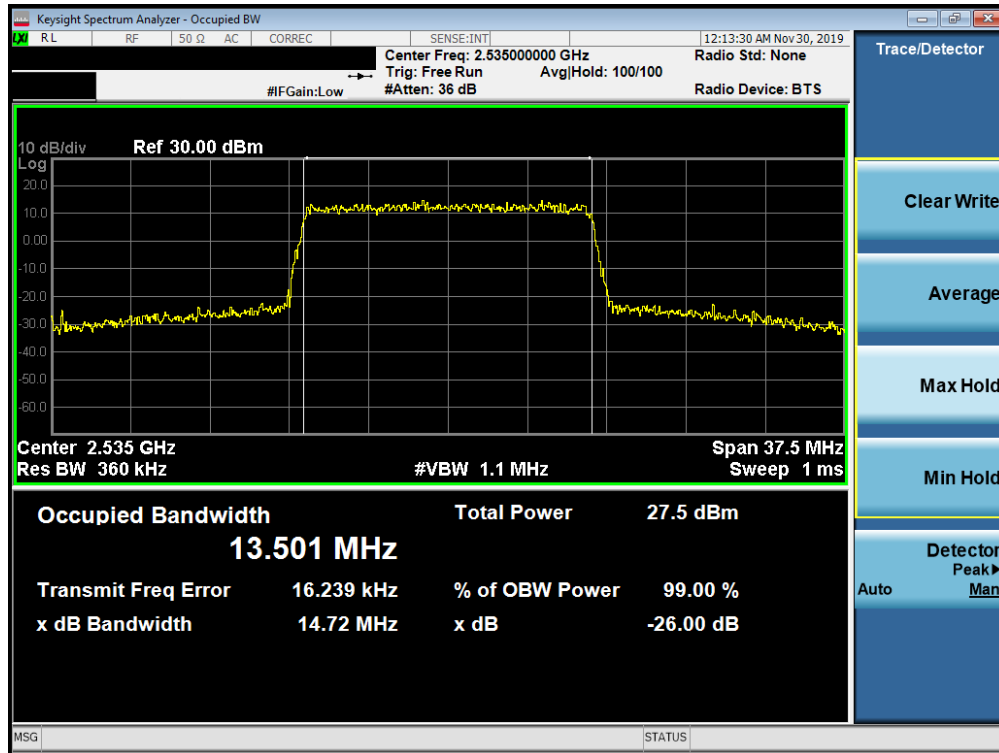


Plot 7-125. Occupied Bandwidth Plot (Band 7 - 15.0MHz QPSK - Full RB Configuration)

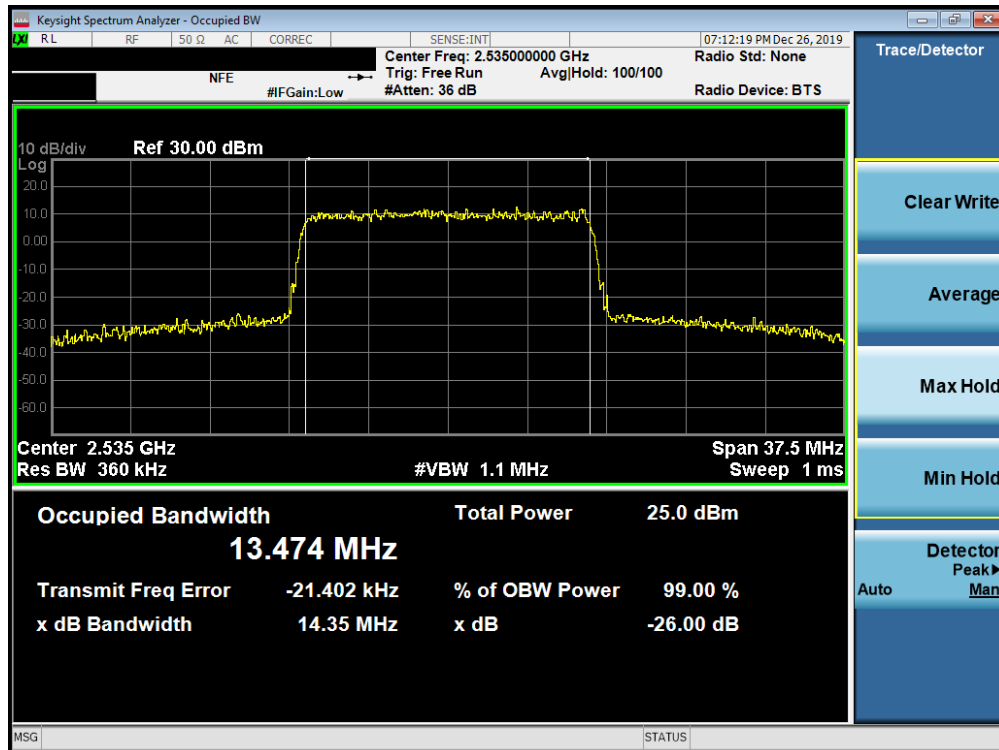


Plot 7-126. Occupied Bandwidth Plot (Band 7 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 82 of 488

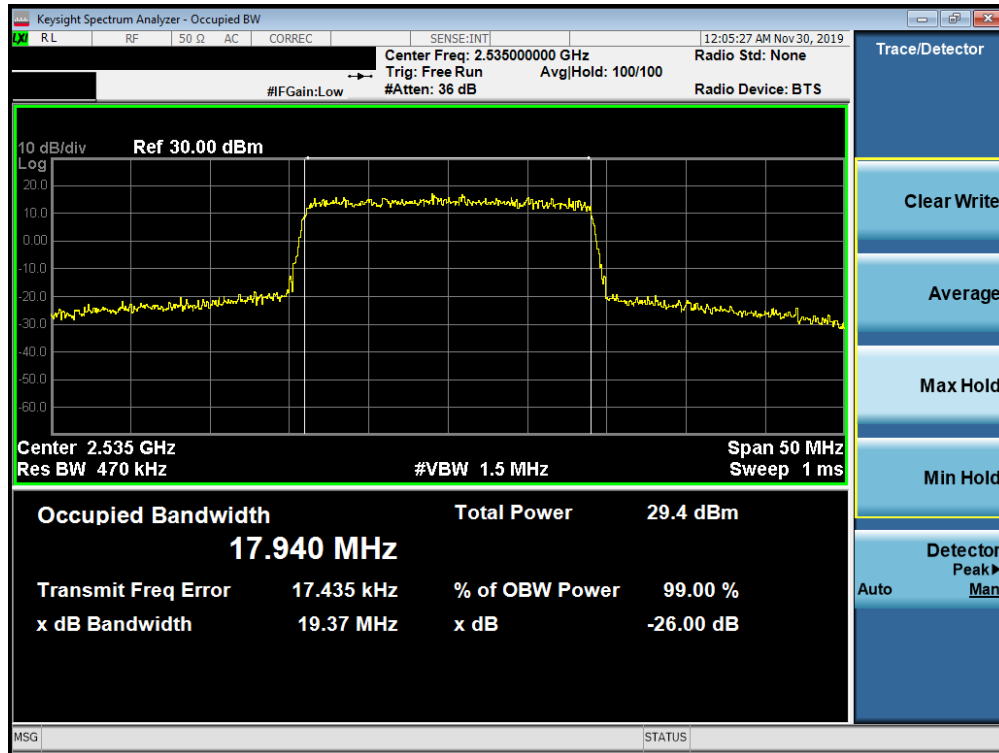


Plot 7-127. Occupied Bandwidth Plot (Band 7 - 15.0MHz 64-QAM - Full RB Configuration)

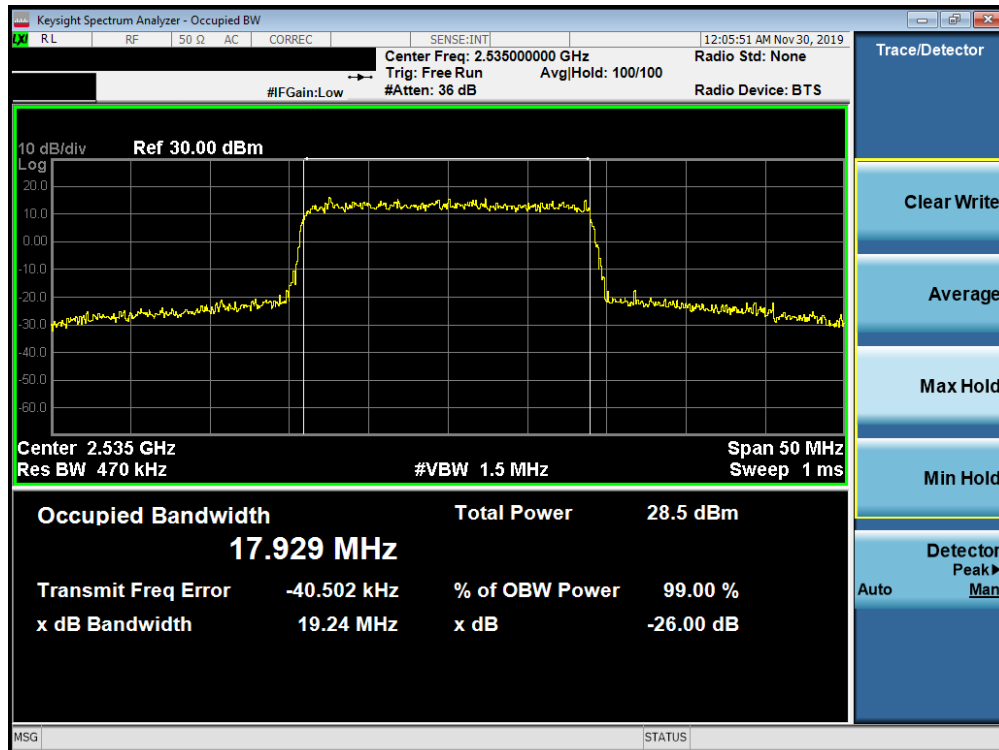


Plot 7-128. Occupied Bandwidth Plot (Band 7 - 15.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 83 of 488

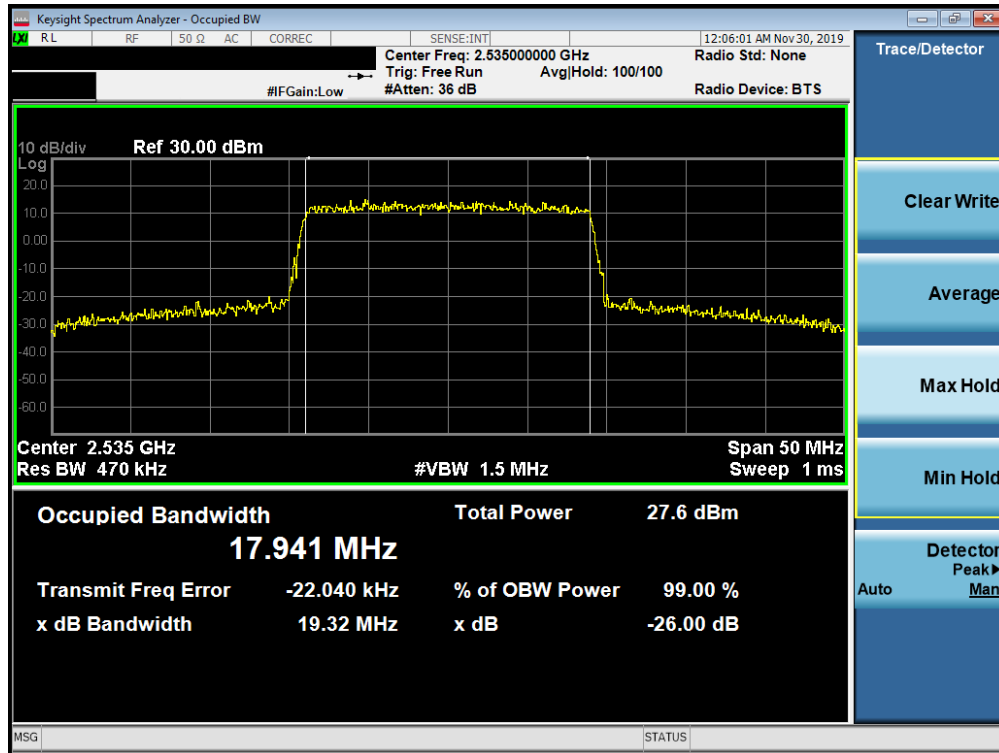


Plot 7-129. Occupied Bandwidth Plot (Band 7 - 20.0MHz QPSK - Full RB Configuration)

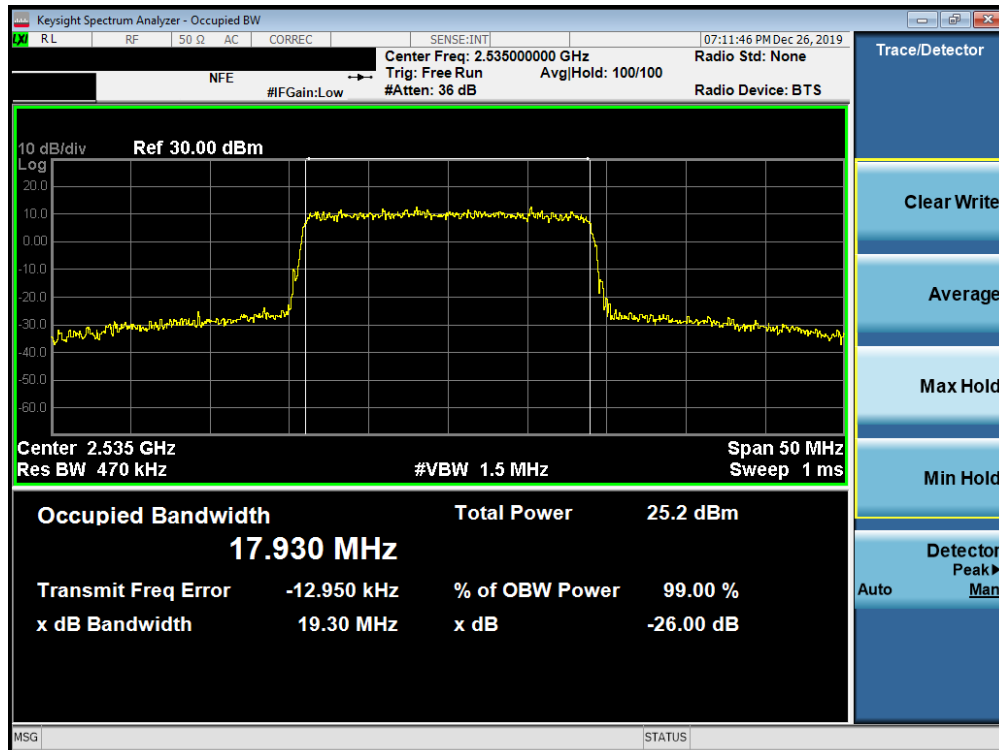


Plot 7-130. Occupied Bandwidth Plot (Band 7 - 20.0MHz 16-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset	Page 84 of 488



Plot 7-131. Occupied Bandwidth Plot (Band 7 - 20.0MHz 64-QAM - Full RB Configuration)



Plot 7-132. Occupied Bandwidth Plot (Band 7 - 20.0MHz 256-QAM - Full RB Configuration)

FCC ID: ZNFV600TM	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	LG	Approved by: Quality Manager
Test Report S/N: 1M1911250198-03-R3-ZNF	Test Dates: 11/26/2019 - 1/19/2020	EUT Type: Portable Handset		Page 85 of 488