

PCTEST ENGINEERING LABORATORY, INC.

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MEASUREMENT REPORT

LTE

Applicant Name:	Date of Testing:
Apple Inc.	11/09/2018-02/02/2019
One Apple Park Way	Test Site/Location:
Cupertino, CA 95014	PCTEST Lab. Morgan Hill, CA, USA
United States	Test Report Serial No.:
	1C1811080029-03-R1.BCG

FCC ID:

BCGA2123

APPLICANT:

Apple Inc.

Application Type: Model: EUT Type: FCC Classification: FCC Rule Part(s): **Test Procedure(s):**

Certification A2123, A2154 **Tablet Device** PCS Licensed Transmitter (PCB) 22, 24, & 27 ANSI C63.26-2015, ANSI/TIA-603-E-2016, KDB 971168 D01 v03r01

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

This revised Test Report (S/N: 1C1811080029-03-R1.BCG) supersedes and replaces the previously issued test report (S/N: 1C1811080028-03.BCG) on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Randy Ortanez President



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MEASUREMENT REPORT FCC Part 22, 24, & 27



			ERP		EIRP			
Mode	FCC Rule Part	Tx Frequency (MHz)	Max. Power (W)	Max. Power (dBm)	Max. Power (W)	Max. Power (dBm)	Emission Designator	Modulation
LTE Band 12	27	699.7 - 715.3	0.208	23.19	0.342	25.34	1M11G7W	QPSK
LTE Band 12	27	699.7 - 715.3	0.179	22.52	0.293	24.67	1M11D7W	16QAM
LTE Band 12	27	699.7 - 715.3	0.130	21.15	0.214	23.30	1M11D7W	64QAM
LTE Band 12	27	700.5 - 714.5	0.208	23.19	0.342	25.34	2M73G7W	QPSK
LTE Band 12	27	700.5 - 714.5	0.181	22.58	0.297	24.73	2M73D7W	16QAM
LTE Band 12	27	700.5 - 714.5	0.131	21.17	0.215	23.32	2M73D7W	64QAM
LTE Band 12	27	701.5 - 713.5	0.208	23.19	0.342	25.34	4M55G7W	QPSK
LTE Band 12	27	701.5 - 713.5	0.178	22.51	0.292	24.66	4M55D7W	16QAM
LTE Band 12	27	701.5 - 713.5	0.131	21.18	0.215	23.33	4M56D7W	64QAM
LTE Band 12	27	704 - 711	0.208	23.19	0.342	25.34	9M06G7W	QPSK
LTE Band 12	27	704 - 711	0.178	22.51	0.292	24.66	9M03D7W	16QAM
LTE Band 12	27	704 - 711	0.131	21.16	0.214	23.31	9M06D7W	64QAM
LTE Band 17	27	706.5 - 713.5	0.208	23.19	0.342	25.34	4M55G7W	QPSK
LTE Band 17	27	706.5 - 713.5	0.179	22.54	0.294	24.69	4M55D7W	16QAM
LTE Band 17	27	706.5 - 713.5	0.133	21.24	0.218	23.39	4M56D7W	64QAM
LTE Band 17	27	709 - 711	0.208	23.19	0.342	25.34	9M06G7W	QPSK
LTE Band 17	27	709 - 711	0.181	22.57	0.296	24.72	9M03D7W	16QAM
LTE Band 17	27	709 - 711	0.132	21.21	0.217	23.36	9M06D7W	64QAM
LTE Band 13	27	779.5 - 784.5	0.208	23.19	0.342	25.34	4M55G7W	QPSK
LTE Band 13	27	779.5 - 784.5	0.177	22.47	0.290	24.62	4M54D7W	16QAM
LTE Band 13	27	779.5 - 784.5	0.136	21.34	0.223	23.49	4M56D7W	64QAM
LTE Band 13	27	782	0.208	23.19	0.342	25.34	9M04G7W	QPSK
LTE Band 13	27	782	0.180	22.56	0.296	24.71	9M02D7W	16QAM
LTE Band 13	27	782	0.132	21.22	0.217	23.37	9M03D7W	64QAM
LTE Band 5	22H	824.7 - 848.3	0.241	23.82	0.395	25.97	1M11G7W	QPSK
LTE Band 5	22H	824.7 - 848.3	0.202	23.05	0.331	25.20	1M11D7W	16QAM
LTE Band 5	22H	824.7 - 848.3	0.155	21.90	0.254	24.05	1M11D7W	64QAM
LTE Band 5	22H	825.5 - 847.5	0.237	23.74	0.388	25.89	2M73G7W	QPSK
LTE Band 5	22H	825.5 - 847.5	0.209	23.20	0.343	25.35	2M73D7W	16QAM
LTE Band 5	22H	825.5 - 847.5	0.153	21.85	0.251	24.00	2M73D7W	64QAM
LTE Band 5	22H	826.5 - 846.5	0.241	23.82	0.395	25.97	4M55G7W	QPSK
LTE Band 5	22H	826.5 - 846.5	0.203	23.07	0.333	25.22	4M55D7W	16QAM
LTE Band 5	22H	826.5 - 846.5	0.156	21.92	0.255	24.07	4M55D7W	64QAM
LTE Band 5	22H	829 - 844	0.241	23.82	0.395	25.97	9M09G7W	QPSK
LTE Band 5	22H	829 - 844	0.209	23.21	0.344	25.36	9M06D7W	16QAM
LTE Band 5	22H	829 - 844	0.150	21.77	0.247	23.92	9M04D7W	64QAM
LTE Band 26	22H	824.7 - 848.3	0.240	23.80	0.394	25.95	1M11G7W	QPSK 1000M
LTE Band 26	22H	824.7 - 848.3	0.209	23.20	0.343	25.35	1M11D7W	16QAM
LTE Band 26	22H	824.7 - 848.3	0.153	21.84	0.251	23.99	1M11D7W	64QAM
LTE Band 26	22H	825.5 - 847.5	0.237	23.75	0.389	25.90	2M73G7W	QPSK 160AM
LTE Band 26	22H	825.5 - 847.5	0.206	23.13	0.337	25.28	2M73D7W	16QAM
LTE Band 26	22H	825.5 - 847.5	0.152	21.83	0.250	23.98	2M73D7W	64QAM
LTE Band 26	22H	826.5 - 846.5 826.5 - 846.5	0.239	23.79	0.393	25.94	4M55G7W	QPSK 16QAM
LTE Band 26	22H		0.214 0.156	23.31	0.352	25.46	4M55D7W	
LTE Band 26	22H	826.5 - 846.5		21.92	0.255	24.07	4M55D7W	64QAM
LTE Band 26	22H	829 - 844 829 - 844	0.241	23.82	0.395	25.97	9M09G7W 9M06D7W	QPSK 160AM
LTE Band 26	22H	829 - 844 829 - 844		23.19	0.342	25.34	9M06D7W	16QAM
LTE Band 26	22H		0.151	21.79	0.248	23.94	31VI04D7 VV	64QAM

EUT Overview (<1GHz)

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			FI	RP		
Mode	FCC Rule	Tx Frequency (MHz)	Max. Power	Max. Power	Emission	Modulation
Mode	Part	TX Frequency (IVII IZ)	(W)	(dBm)	Designator	Modulation
LTE Band 4	27	1710.7 - 1754.3	0.262	24.19	1M11G7W	QPSK
LTE Band 4	27	1710.7 - 1754.3	0.202	23.36	1M11D7W	16QAM
LTE Band 4	27	1710.7 - 1754.3	0.157	21.95	1M11D7W	64QAM
LTE Band 4	27	1711.5 - 1753.5	0.248	23.94	2M73G7W	QPSK
LTE Band 4	27	1711.5 - 1753.5	0.228	23.57	2M73D7W	16QAM
LTE Band 4 LTE Band 4	27 27	<u>1711.5 - 1753.5</u> 1712.5 - 1752.5	0.157 0.262	21.95 24.19	2M73D7W 4M55G7W	64QAM QPSK
LTE Band 4	27	1712.5 - 1752.5	0.202	23.54	4M54D7W	16QAM
LTE Band 4	27	1712.5 - 1752.5	0.155	21.90	4M55D7W	64QAM
LTE Band 4	27	1715 - 1750	0.262	24.19	9M06G7W	QPSK
LTE Band 4	27	1715 - 1750	0.218	23.39	9M05D7W	16QAM
LTE Band 4 LTE Band 4	27 27	<u>1715 - 1750</u> 1717.5 - 1747.5	0.152 0.262	21.83 24.19	9M08D7W 13M7G7W	64QAM QPSK
LTE Band 4	27	1717.5 - 1747.5	0.229	23.59	13M6D7W	16QAM
LTE Band 4	27	1717.5 - 1747.5	0.157	21.96	13M6D7W	64QAM
LTE Band 4	27	1720 - 1745	0.262	24.19	18M1G7W	QPSK
LTE Band 4	27	1720 - 1745	0.217	23.36	18M1D7W	16QAM
LTE Band 4 LTE Band 66	27 27	<u>1720 - 1745</u> 1710.7 - 1779.3	0.167	22.23 24.19	18M1D7W 1M11G7W	64QAM QPSK
LTE Band 66	27	1710.7 - 1779.3	0.262	23.49	1M11D7W	16QAM
LTE Band 66	27	1710.7 - 1779.3	0.171	22.34	1M11D7W	64QAM
LTE Band 66	27	1711.5 - 1778.5	0.262	24.19	2M73G7W	QPSK
LTE Band 66	27	1711.5 - 1778.5	0.223	23.49	2M73D7W	16QAM
LTE Band 66 LTE Band 66	27 27	<u>1711.5 - 1778.5</u> 1712.5 - 1777.5	0.171 0.262	22.33 24.19	2M73D7W 4M55G7W	64QAM QPSK
LTE Band 66	27	1712.5 - 1777.5	0.262	23.54	4M54D7W	16QAM
LTE Band 66	27	1712.5 - 1777.5	0.176	22.46	4M55D7W	64QAM
LTE Band 66	27	1715 - 1775	0.262	24.19	9M06G7W	QPSK
LTE Band 66	27	1715 - 1775	0.223	23.48	9M05D7W	16QAM
LTE Band 66 LTE Band 66	27 27	<u>1715 - 1775</u> 1717.5 - 1772.5	0.169	22.28 24.19	9M08D7W 13M7G7W	64QAM
LTE Band 66	27	1717.5 - 1772.5	0.262	23.63	13M6D7W	QPSK 16QAM
LTE Band 66	27	1717.5 - 1772.5	0.174	22.40	13M6D7W	64QAM
LTE Band 66	27	1720 - 1770	0.262	24.19	18M1G7W	QPSK
LTE Band 66	27	1720 - 1770	0.229	23.59	18M1D7W	16QAM
LTE Band 66	27 24E	1720 - 1770	0.176	22.46 25.79	18M1D7W	64QAM QPSK
LTE Band 2 LTE Band 2	24E	1850.7 - 1909.3 1850.7 - 1909.3	0.379	23.79	1M11G7W 1M11D7W	16QAM
LTE Band 2	24E	1850.7 - 1909.3	0.226	23.54	1M11D7W	64QAM
LTE Band 2	24E	1851.5 - 1908.5	0.374	25.73	2M72G7W	QPSK
LTE Band 2	24E	1851.5 - 1908.5	0.294	24.68	2M73D7W	16QAM
LTE Band 2 LTE Band 2	24E 24E	1851.5 - 1908.5 1852.5 - 1907.5	0.223	23.49 25.79	2M73D7W 4M55G7W	64QAM QPSK
LTE Band 2	24E	1852.5 - 1907.5	0.295	24.70	4M55D7W	16QAM
LTE Band 2	24E	1852.5 - 1907.5	0.229	23.59	4M53D7W	64QAM
LTE Band 2	24E	1855 - 1905	0.378	25.78	9M06G7W	QPSK
LTE Band 2	24E	1855 - 1905	0.301	24.79	9M06D7W	16QAM
LTE Band 2 LTE Band 2	24E 24E	1855 - 1905 1857.5 - 1902.5	0.224 0.375	23.50 25.74	9M05D7W 13M6G7W	64QAM QPSK
LTE Band 2	24L 24E	1857.5 - 1902.5	0.294	24.69	13M6D7W	16QAM
LTE Band 2	24E	1857.5 - 1902.5	0.222	23.46	13M6D7W	64QAM
LTE Band 2	24E	1860 - 1900	0.376	25.75	18M1G7W	QPSK
LTE Band 2	24E	1860 - 1900	0.298	24.74 23.59	18M1D7W	16QAM
LTE Band 2 LTE Band 25	24E 24E	<u>1860 - 1900</u> 1850.7 - 1914.3	0.229	23.59	18M1D7W 1M11G7W	64QAM QPSK
LTE Band 25	24E	1850.7 - 1914.3	0.328	25.16	1M11D7W	16QAM
LTE Band 25	24E	1850.7 - 1914.3	0.247	23.93	1M11D7W	64QAM
LTE Band 25	24E	1851.5 - 1913.5	0.379	25.79	2M72G7W	QPSK
LTE Band 25 LTE Band 25	24E	1851.5 - 1913.5 1851.5 - 1913.5	0.327	25.15 24.06	2M73D7W	16QAM
LTE Band 25	24E 24E	1851.5 - 1913.5 1852.5 - 1912.5	0.255	24.06	2M73D7W 4M55G7W	64QAM QPSK
LTE Band 25	24E	1852.5 - 1912.5	0.326	25.13	4M55D7W	16QAM
LTE Band 25	24E	1852.5 - 1912.5	0.252	24.01	4M53D7W	64QAM
LTE Band 25	24E	1855 - 1910	0.379	25.79	9M06G7W	QPSK
LTE Band 25 LTE Band 25	24E	1855 - 1910	0.327	25.14	9M06D7W	16QAM
LTE Band 25	24E 24E	1855 - 1910 1857.5 - 1907.5	0.249	23.96 25.79	9M05D7W 13M6G7W	64QAM QPSK
LTE Band 25	24L 24E	1857.5 - 1907.5	0.325	25.13	13M6D7W	16QAM
LTE Band 25	24E	1857.5 - 1907.5	0.257	24.10	13M6D7W	64QAM
LTE Band 25	24E	1860 - 1905	0.379	25.79	18M1G7W	QPSK
LTE Band 25	24E	1860 - 1905	0.321	25.06	18M1D7W	16QAM
LTE Band 25	24E	1860 - 1905 FLIT Overview	0.270	24.31	18M1D7W	64QAM

EUT Overview (Mid Bands)

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Mode	FCC Rule Part	Tx Frequency (MHz)	Max. Power (W)	Max. Power (dBm)	Emission Designator	Modulation
LTE Band 30	27	2307.5 - 2312.5	0.219	23.40	4M57G7W	QPSK
LTE Band 30	27	2307.5 - 2312.5	0.180	22.56	4M54D7W	16QAM
LTE Band 30	27	2307.5 - 2312.5	0.153	21.86	4M55D7W	64QAM
LTE Band 30	27	2310	0.219	23.40	9M05G7W	QPSK
LTE Band 30	27	2310	0.185	22.66	9M04D7W	16QAM
LTE Band 30	27	2310	0.150	21.75	9M06D7W	64QAM
LTE Band 7	27	2502.5 - 2567.5	0.332	25.21	4M56G7W	QPSK
LTE Band 7	27	2502.5 - 2567.5	0.293	24.67	4M54D7W	16QAM
LTE Band 7	27	2502.5 - 2567.5	0.215	23.33	4M53D7W	64QAM
LTE Band 7	27	2505 - 2565	0.339	25.30	9M07G7W	QPSK
LTE Band 7	27	2505 - 2565	0.301	24.79	9M07D7W	16QAM
LTE Band 7	27	2505 - 2565	0.221	23.44	9M04D7W	64QAM
LTE Band 7	27	2507.5 - 2562.5	0.341	25.33	13M6G7W	QPSK
LTE Band 7	27	2507.5 - 2562.5	0.308	24.88	13M6D7W	16QAM
LTE Band 7	27	2507.5 - 2562.5	0.228	23.57	13M6D7W	64QAM
LTE Band 7	27	2510 - 2560	0.330	25.18	18M1G7W	QPSK
LTE Band 7	27	2510 - 2560	0.318	25.03	18M1D7W	16QAM
LTE Band 7	27	2510 - 2560	0.225	23.52	18M1D7W	64QAM
LTE Band 41	27	2498.5 - 2687.5	0.490	26.90	4M58G7W	QPSK
LTE Band 41	27	2498.5 - 2687.5	0.424	26.27	4M53D7W	16QAM
LTE Band 41	27	2498.5 - 2687.5	0.341	25.33	4M56D7W	64QAM
LTE Band 41	27	2501 - 2685	0.489	26.89	9M15G7W	QPSK
LTE Band 41	27	2501 - 2685	0.431	26.34	9M10D7W	16QAM
LTE Band 41	27	2501 - 2685	0.324	25.11	9M16D7W	64QAM
LTE Band 41	27	2503.5 - 2682.5	0.483	26.84	13M7G7W	QPSK
LTE Band 41	27	2503.5 - 2682.5	0.431	26.34	13M7D7W	16QAM
LTE Band 41	27	2503.5 - 2682.5	0.320	25.05	13M6D7W	64QAM
LTE Band 41	27	2506 - 2680	0.490	26.90	18M1G7W	QPSK
LTE Band 41	27	2506 - 2680	0.418	26.21	18M1D7W	16QAM
LTE Band 41	27	2506 - 2680	0.327	25.15	18M1D7W	64QAM

EUT 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 18855 Adams Court, Morgan Hill, CA 95037. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014 and KDB 414788 D01 v01.

1.3 Test Facility / Accreditations

Measurements were performed at PCTEST Engineering Lab located in Morgan Hill, CA 95037, U.S.A.

- PCTEST is an ISO 17025-2005 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.02 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.
- 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 (22831) test laboratory with the site description on file with ISED.

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Apple Tablet Device FCC ID: BCGA2123**. The test data contained in this report pertains only to the emissions due to the EUT's LTE function.

Test Device Serial No.: DLXXT001LT6G, DLXXT00NLT6H

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 WLAN, 802.11a/n/ac UNII, Bluetooth (1x, EDR, LE, HDR4, HDR8)

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 as well as Band 26.

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

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

2.3 Antenna Description

Following antenna was used for the testing.

Antennas				
Port A	Port B			
WF3	WF5			

Table 2-1. Antennas vs Ports

Frequency	Antenna Gain (dBi)		
[MHz]	Port A	Port B	
700-800	-0.16	0.01	
820-960	0.49	0.36	
1700-1800	-1.31	-1.08	
1820-2100	0.29	-0.61	
2300-2520	-0.1	0.15	
2540-2700	-0.81	0.56	

Table 2-2. Antenna Peak Gain

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2.4 Test Support Equipment

1	Apple MacBook	Model:	A1398	S/N:	C2QKP008F6F3	
	w/AC/DC Adapter	Model:	A1435	S/N:	C04325505K1F288BG	
2	Apple Lightning Cable	Model:	Kanzi	S/N:	3252E9	
3	USB Lightning Cable	Model:	N/A	S/N:	N/A	
	w/ AC Adapter	Model:	A1385	S/N:	D292066H2NLDHLHAE	
4	Apple Pencil	Model:	A1603	S/N:	G64TG0FEGWTJ	
5	DC Power Supply	Model:	KPS3010D	S/N:	N/A	
	Table 2-3 Test Support Equipment Used					

 Table 2-3. Test Support Equipment Used

2.5 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.

There are two vendors of the WiFi/Bluetooth radio modules, variant 1 and variant 2. Both radio modules have the same mechanical outline, same on-board antenna matching circuit, identical antenna structure, and are built and tested to conform to the same specifications and to operate within the same tolerances. The worst case configuration was found between the two variants. The EUT was also investigated with and without charger.

The emissions below 1GHz and above 18GHz were tested with the highest transmitting power channel and the worst case configuration.

The EUT was manipulated through three orthogonal planes of X-orientation (flatbed), Y-orientation (landscape), and Z-orientation (portrait) during the testing. Only the worst case emissions were reported in this test report.

2.6 Software and Firmware

The test was conducted with firmware version 16E31520i installed on the EUT.

2.7 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

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DESCRIPTION OF TESTS 3.0

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:

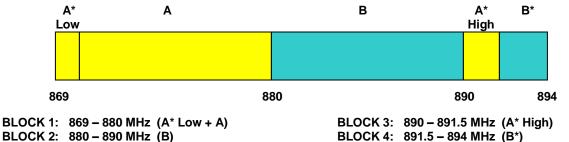
Block A: 698-704 MHz and 728-734 MHz; Block B: 704-710 MHz and 734-740 MHz; and Block C: 710-716 MHz and 740-746 MHz

3.4 600MHz Frequency Range

600MHz band. The following frequencies are available for licensing pursuant to this part in the 600 MHz band: (1) Seven paired channel blocks of 5 megahertz each are available for assignment as follows:

Block A: 617-622 MHz and 663-668 MHz; Block B: 622-627 MHz and 668-673 MHz: Block C: 627-632 MHz and 673-678 MHz; Block D: 632-637 MHz and 678-683 MHz; Block E: 637-642 MHz and 683-688 MHz; Block F: 642-647 MHz and 688-693 MHz; and Block G: 647-652 MHz and 693-698 MHz

3.5 Cellular - Base Frequency Blocks

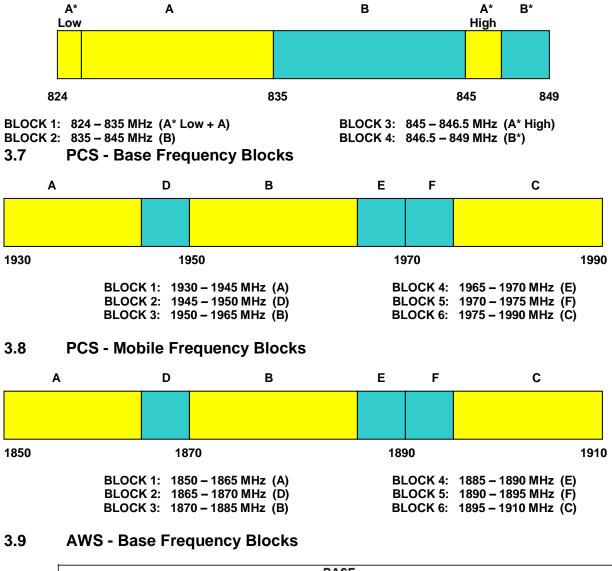


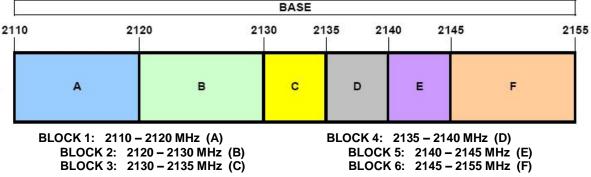
BLOCK 4: 891.5 - 894 MHz (B*)

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3.6 Cellular - Mobile Frequency Blocks

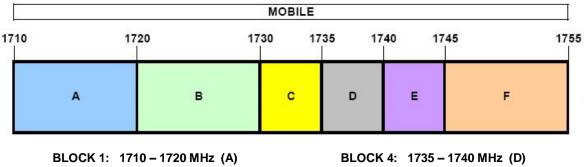




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3.10 AWS - Mobile Frequency Blocks



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

3.11 WCS – Mobile/Base Frequency Blocks

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

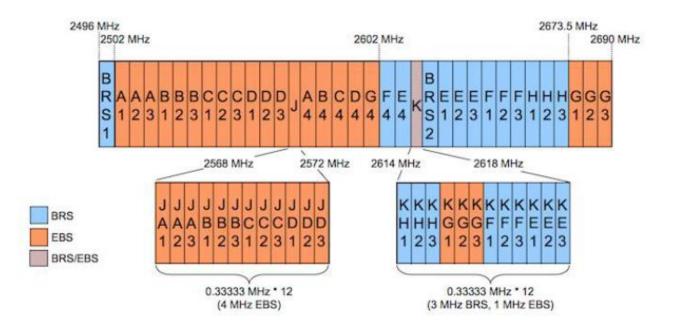
BLOCK 1: 2305-2310 and 2350-2355 MHz (A)

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

BLOCK 3: 2315-2320 MHz (C)

BLOCK 4: 2345-2350 MHz (D)

3.12 BRS/EBS Frequency Block



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3.13 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. Per the guidelines of KDB 412172 D01 v01r01, radiated power levels are measured using the following formula:

ERP or EIRP =
$$P_T + G_T - L_C$$

Where P_T is the transmitter output power, expressed in dBm, G_T is the gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP), and L_c signal attenuation in the connecting cable between the transmitter and antenna in dB.

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:

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

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 + 10log₁₀(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 + 10log₁₀(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 + 10log₁₀(Power [Watts]).

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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	1.29
Radiated Disturbance (<1GHz)	4.15
Radiated Disturbance (>1GHz)	4.70
Radiated Disturbance (>18GHz)	5.01
Temperature	0.01

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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
ATM	180-442A-KF	20dB Nominal Gain Horn Antenna	3/13/2018	Annual	3/13/2019	T058601-02
COM-POWER	LIN-120A	LISN	3/7/2018	Annual	3/7/2019	241296
ESPEC	SU-241	Temperature Chamber	8/10/2018	Annual	8/10/2019	92009574
Keysight Technologies	N9030A	3Hz-44GHz PXA Signal Analyzer	2/27/2018	Annual	2/27/2019	MY49430244
Rohde & Schwarz	FSV40	Signal Analyzer (10Hz-40GHz)	2/6/2018	Annual	2/6/2019	101619
Rohde & Schwarz	ESW26	EMI Test Receiver	7/19/2018	Annual	7/19/2019	101299
Rohde & Schwarz	ESW44	EMI Test Receiver	11/20/2018	Annual	11/20/2019	101570
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	6/11/2018	Annual	6/11/2019	161675
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	4/16/2018	Annual	4/16/2019	161617
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	11/16/2018	Annual	11/16/2019	164175
Rohde & Schwarz	TS-PR1840	Pre-Amplifier (18GHz - 40GHz)	6/11/2018	Annual	6/11/2019	100051
Rohde & Schwarz	TS-PR8	Pre-Amplifier (30MHz - 8GHz)	1/25/2018	Annual	1/25/2019	102333
Rohde & Schwarz	HL562E	Ultra Broadband Antenna (30MHz - 6GHz)	6/8/2018	Annual	6/8/2019	100810
Rohde & Schwarz	TC-TA18	Cross Polarized Vivaldi Antenna (400MHz-18GHz)	11/21/2018	Annual	11/21/2019	101057
Rohde & Schwarz	TC-TA18	Cross Polarized Vivaldi Antenna (400MHz-18GHz)	12/7/2018	Annual	12/7/2019	101063
Rohde & Schwarz	HFH2-Z2	Loop Antenna	3/13/2018	Annual	3/13/2019	100519



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:	Apple Inc.
FCC ID:	BCGA2123
FCC Classification:	PCS Licensed Transmitter (PCB)
Mode(s):	LTE

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
2.1049	Occupied Bandwidth	N/A			Section 7.2
2.1051 2.917(a) 24.238(a) 27.53(c) 27.53(g) 27.53(h)	Out of Band Emissions	> 43 + 10log₁₀ (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)(5)	Peak-Average Ratio	< 13 dB	CONDUCTED	PASS	Section 7.5
2.1046	Transmitter Conducted Output Power	N/A			See RF Exposure Report
2.1046	Additional Maximum Power Reduction (A-MPR)	N/A			Section 7.6
27.53(m)	Uplink Carrier Aggregation	Undesirable emissions much meet the limits pdetailed in 27.53(m)			Section 7.7
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 7.11

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 26/5)	< 7 Watts max. ERP			Section 7.8
27.50(b)(10) 27.50(c)(10)	Effective Radiated Power / Equivalent Isotropic Radiated Power (Band 71, 12/17, 13)	< 3 Watts max. ERP			Section 7.8
24.232(c) 27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 25/2, 7, 41)	< 2 Watts max. EIRP			Section 7.8
27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 66/4)	< 1 Watts max. EIRP			Section 7.8
27.50(a)(3) 27.50(d)(5)	Equivalent Isotropic Radiated Power (Band 30)	< 0.25 Watts max. EIRP	RADIATED	PASS	Section 7.8
2.1053 22.917(a) 24.238(a) 27.53(c) 27.53(g) 27.53(h)	Undesirable Emissions	> 43 + 10log ₁₀ (P[Watts]) for all out-of-band emissions			Section 7.9
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 7.9
27.53(a)	Undesirable Emissions (Band 30)	> 70 + 10log ₁₀ (P[Watts])			Section 7.9
27.53(m)	Undesirable Emissions	Undesirable emissions must meet the limits detailed in 27.53(m)			Section 7.9

Table 7-2. Summary of Radiated Test Results

Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots (Sections 7.2, 7.3, 7.4, 7.5) were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.
- 4) For conducted spurious emissions, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is PCTEST "LTE Automation," Version 4.8.

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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 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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			Occupied
Mode	BW (MHz)	Modulation	BW (kHz)
LTE Band 12	1.4	QPSK	1106.8
LTE Band 12	1.4	16QAM	1114.4
LTE Band 12	1.4	64QAM	1111.7
LTE Band 12	3	QPSK	2732.2
LTE Band 12	3	16QAM	2730.2
LTE Band 12	3	64QAM	2729.0
LTE Band 12	5	QPSK	4553.7
LTE Band 12	5	16QAM	4551.3
LTE Band 12	5	64QAM	4558.5
LTE Band 12	10	QPSK	9055.9
LTE Band 12	10	16QAM	9029.9
LTE Band 12	10	64QAM	9063.1
LTE Band 17	5	QPSK	4553.7
LTE Band 17	5	16QAM	4551.3
LTE Band 17	5	64QAM	4558.5
LTE Band 17	10	QPSK	9055.9
LTE Band 17	10	16QAM	9029.9
LTE Band 17	10	64QAM	9063.1
LTE Band 13	5	QPSK	4552.3
LTE Band 13	5	16QAM	4540.3
LTE Band 13	5	64QAM	4558.7
LTE Band 13	10	QPSK	9036.9
LTE Band 13	10	16QAM	9021.1
LTE Band 13	10	64QAM	9033.0
LTE Band 5	1.4	QPSK	1109.6
LTE Band 5	1.4	16QAM	1113.2
LTE Band 5	1.4	64QAM	1109.1
LTE Band 5	3	QPSK	2731.1
LTE Band 5	3	16QAM	2729.3
LTE Band 5	3	64QAM	2731.4
LTE Band 5	5	QPSK	4552.9
LTE Band 5	5	16QAM	4550.4
LTE Band 5	5	64QAM	4545.5
LTE Band 5	10	QPSK	9085.2
LTE Band 5	10	16QAM	9055.7
LTE Band 5	10	64QAM	9042.1
LTE Band 26	1.4	QPSK	1109.6
LTE Band 26	1.4	16QAM	1113.2
LTE Band 26	1.4	64QAM	1109.1
LTE Band 26	3	QPSK 1004M	2731.1
LTE Band 26	3	16QAM	2729.3
LTE Band 26	3	64QAM	2731.4
LTE Band 26	5		4552.9
LTE Band 26	5	16QAM	4550.4
LTE Band 26	5	64QAM	4545.5
LTE Band 26	10		9085.2
LTE Band 26	10	16QAM	9055.7
LTE Band 26	10	64QAM	9042.1

Table 7-3. Occupied Bandwidth (Low Bands)

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Mode	BW (MHz)	Modulation	Occupied BW (kHz)
LTE Band 4	1.4	QPSK	1107.5
LTE Band 4	1.4	16QAM	1106.4
LTE Band 4	1.4	64QAM	1108.0
LTE Band 4	3	QPSK	2727.5
LTE Band 4	3	16QAM	2729.9
LTE Band 4	3	64QAM	2727.6
LTE Band 4	5	QPSK	4551.9
LTE Band 4 LTE Band 4	5	16QAM	4536.4
LTE Band 4	5 10	64QAM QPSK	4545.8 9055.4
LTE Band 4	10	16QAM	9048.6
LTE Band 4	10	64QAM	9075.9
LTE Band 4	15	QPSK	13680.0
LTE Band 4	15	16QAM	13636.3
LTE Band 4	15	64QAM	13615.2
LTE Band 4	20	QPSK	18086.5
LTE Band 4	20	16QAM	18100.4
LTE Band 4	20	64QAM	18077.2
LTE Band 66	1.4	QPSK 1004M	1107.5
LTE Band 66	1.4	16QAM	1106.4
LTE Band 66 LTE Band 66	1.4 3	64QAM QPSK	1108.0 2727.5
LTE Band 66	3	16QAM	2729.9
LTE Band 66	3	64QAM	2727.6
LTE Band 66	5	QPSK	4551.9
LTE Band 66	5	16QAM	4536.4
LTE Band 66	5	64QAM	4545.8
LTE Band 66	10	QPSK	9055.4
LTE Band 66	10	16QAM	9048.6
LTE Band 66	10	64QAM	9075.9
LTE Band 66	15	QPSK	13680.0
LTE Band 66	15	16QAM	13636.3
LTE Band 66 LTE Band 66	15 20	64QAM	13615.2
LTE Band 66	20	QPSK 16QAM	18086.5 18100.4
LTE Band 66	20	64QAM	18077.2
LTE Band 2	1.4	QPSK	1110.9
LTE Band 2	1.4	16QAM	1107.3
LTE Band 2	1.4	64QAM	1111.9
LTE Band 2	3	QPSK	2722.6
LTE Band 2	3	16QAM	2729.2
LTE Band 2	3	64QAM	2726.0
LTE Band 2	5	QPSK 16QAM	4551.2
LTE Band 2 LTE Band 2	5 5	64QAM	4554.5 4532.6
LTE Band 2	10	QPSK	9059.5
LTE Band 2	10	16QAM	9057.7
LTE Band 2	10	64QAM	9046.2
LTE Band 2	15	QPSK	13584.8
LTE Band 2	15	16QAM	13602.0
LTE Band 2	15	64QAM	13593.8
LTE Band 2	20	QPSK	18086.3
LTE Band 2	20	16QAM	18071.9
LTE Band 2 LTE Band 25	20 1.4	64QAM QPSK	18068.9 1110.9
LTE Band 25	1.4	16QAM	1107.3
LTE Band 25	1.4	64QAM	1111.9
LTE Band 25	3	QPSK	2722.6
LTE Band 25	3	16QAM	2729.2
LTE Band 25	3	64QAM	2726.0
LTE Band 25	5	QPSK	4551.2
LTE Band 25	5	16QAM	4554.5
LTE Band 25	5	64QAM	4532.6
LTE Band 25	10	QPSK 160AM	9059.5
LTE Band 25 LTE Band 25	10 10	16QAM 64QAM	9057.7 9046.2
LTE Band 25	10	QPSK	9046.2 13584.8
LTE Band 25	15	16QAM	13602.0
LTE Band 25	15	64QAM	13593.8
LTE Band 25	20	QPSK	18086.3
LTE Band 25	20	16QAM	18071.9
LTE Band 25	20	64QAM	18068.9

LTE Band 25 20 64QAM 18068.9 Table 7-4. Occupied Bandwidth (Mid Bands)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 af 000
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Mode	BW (MHz)	Modulation	Occupied BW (kHz)
LTE Band 30	5	QPSK	4570.1
LTE Band 30	5	16QAM	4540.3
LTE Band 30	5	64QAM	4547.4
LTE Band 30	10	QPSK	9051.5
LTE Band 30	10	16QAM	9035.1
LTE Band 30	10	64QAM	9059.7
LTE Band 7	5	QPSK	4556.9
LTE Band 7	5	16QAM	4541.9
LTE Band 7	5	64QAM	4534.4
LTE Band 7	10	QPSK	4666.4
LTE Band 7	10	16QAM	9068.9
LTE Band 7	10	64QAM	9044.7
LTE Band 7	15	QPSK	13606.7
LTE Band 7	15	16QAM	13587.3
LTE Band 7	15	64QAM	13612.3
LTE Band 7	20	QPSK	18104.2
LTE Band 7	20	16QAM	18120.3
LTE Band 7	20	64QAM	18123.8
LTE Band 41	5	QPSK	4580.5
LTE Band 41	5	16QAM	4530.4
LTE Band 41	5	64QAM	4558.8
LTE Band 41	10	QPSK	9148.0
LTE Band 41	10	16QAM	9099.0
LTE Band 41	10	64QAM	9158.1
LTE Band 41	15	QPSK	13540.3
LTE Band 41	15	16QAM	13679.2
LTE Band 41	15	64QAM	13648.2
LTE Band 41	20	QPSK	18229.8
LTE Band 41	20	16QAM	18145.5
LTE Band 41	20	64QAM	18122.2

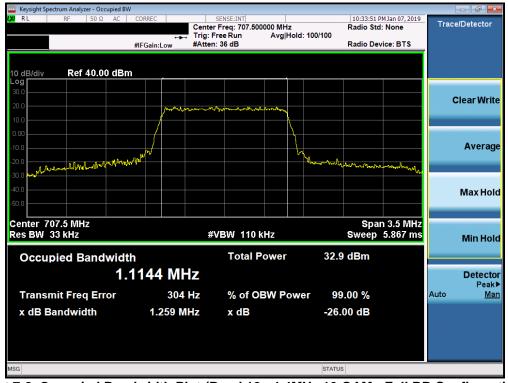
Table 7-5. Occupied Bandwidth (High Bands)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 01 of 220
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Plot 7-1. Occupied Bandwidth Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)



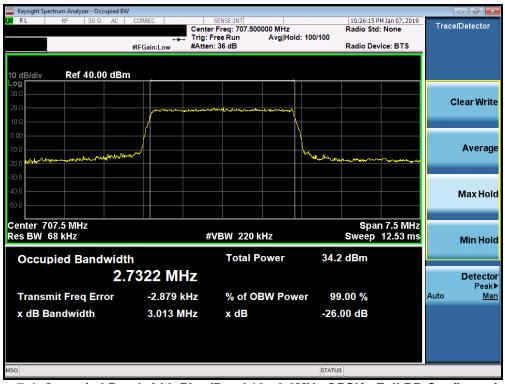
Plot 7-2. Occupied Bandwidth Plot (Band 12 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 at 000
1C1811080029-03-R1.BCG	11/09/2018-02/02/2019	Tablet Device	Page 22 of 338
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Plot 7-3. Occupied Bandwidth Plot (Band 12 - 1.4MHz 64-QAM - Full RB Configuration)



Plot 7-4. Occupied Bandwidth Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 at 000
1C1811080029-03-R1.BCG	11/09/2018-02/02/2019	Tablet Device	Page 23 of 338
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🧱 Keysight Spectrum Analyzer - Occupied BW						
LX RL RF 50Ω AC	CORREC Cent	SENSE:INT ter Freg: 707.500000 MHz	10:26:42 F Radio Sto	M Jan 07, 2019	Trace/I	Detector
		:FreeRun Avg Hol en:36dB	d: 100/100 Radio De	vice: BTS		
	#IFGain:Low #Atten. 50 db Radio Device. 513					
10 dB/div Ref 40.00 dBm						
Log						
30.0					СІ	ear Write
20.0		hanner at a stranger and the second stage				
10.0						
0.00						Average
-10.0	white the second		historythe			Average
-20.0				A Real Property lines		
-40.0						
-40.0					I	Max Hold
-50.0						
Center 707.5 MHz				n 7.5 MHz		
Res BW 68 kHz		#VBW 220 kHz	Sweep	12.53 ms		Min Hold
Occupied Bandwidth	1	Total Power	32.9 dBm			
	/302 MHz					Detector
2.1						Peak ►
Transmit Freq Error	-2.583 kHz	% of OBW Pow	/er 99.00 %		Auto	<u>Man</u>
x dB Bandwidth	3.016 MHz	x dB	-26.00 dB			
MSG			STATUS			

Plot 7-5. Occupied Bandwidth Plot (Band 12 - 3.0MHz 16-QAM - Full RB Configuration)



Plot 7-6. Occupied Bandwidth Plot (Band 12 - 3.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dawa 04 (000	
1C1811080029-03-R1.BCG	11/09/2018-02/02/2019	Tablet Device	Page 24 of 338	
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Keysight Spectrum Analyzer - Occupied BW					
LX RL RF 50Ω AC		SENSE:INT nter Freq: 707.500000 MHz	10:21:36 F Radio Std	M Jan 07, 2019 : None	Trace/Detector
		g: Free Run Avg Hold tten: 36 dB	I: 100/100 Radio Dev	vice: BTS	
	WI Gam. LOW				
10 dB/div Ref 40.00 dBm					
Log 30.0					
20.0					Clear Write
10.0					
0.00	/	\	\		
-10.0	ç.d		man and a second		Average
-10.0 -20.0 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			han how have	markent	
-30.0					
-40.0					Max Hold
-50.0					
Center 707.5 MHz			Span	12.5 MHz	
Res BW 120 kHz		#VBW 390 kHz	Sw	eep 1 ms	Min Hold
Occupied Bandwidt	n	Total Power	34.1 dBm		
	5537 MHz				Detector
					Peak►
Transmit Freq Error	3.164 kHz	% of OBW Pow	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	5.018 MHz	x dB	-26.00 dB		
MSG			STATUS		

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



Plot 7-8. Occupied Bandwidth Plot (Band 12/17 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dawa 05 cf 000	
1C1811080029-03-R1.BCG	11/09/2018-02/02/2019	Tablet Device	Page 25 of 338	
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Keysight Spectrum Analyzer - Occupied BW	1					7 X
LXIRL RF 50Ω AC	CORREC	SENSE:INT Center Freg: 707.50000	0 MHz	10:22:28 PM Jan 07, 2019 Radio Std: None	Trace/Dete	ctor
	+→ #IEGain:Low		Avg Hold:>100/100	Radio Device: BTS		
	#IFGain:Low	#Atten: 36 dB		Radio Device. B13	T I I I I I I I I I I I I I I I I I I I	
10 dB/div Ref 40.00 dBm	۱ <u> </u>					
Log 30.0						
20.0					Clear	Write
10.0	Lower	www.www.www.www.				
0.00			N N			
					Ave	erage
-10.0 -20.0 -30.0	v1v		man	Mana a		
-30.0 what what has a second s				man march		
-40.0					Мах	Hold
-50.0					Max	Ποία
Center 707.5 MHz Res BW 120 kHz		#VBW 390 kH	-	Span 12.5 MH: Sweep 1 ms		
Res DW 120 KHZ		#APM 280 KH	2	Sweep This	Min	Hold
Occupied Bandwidt	h	Total Pov	wer 32.0	dBm		
4	5585 MH	7			Det	ector
						Peak▶
Transmit Freq Error	-1.290 kl	Iz % of OBV	V Power 99	.00 %	Auto	Man
x dB Bandwidth	5.001 MH	lz x dB	-26.0	00 dB		
MSG			STATUS			

Plot 7-9. Occupied Bandwidth Plot (Band 12/17 - 5.0MHz 64-QAM - Full RB Configuration)



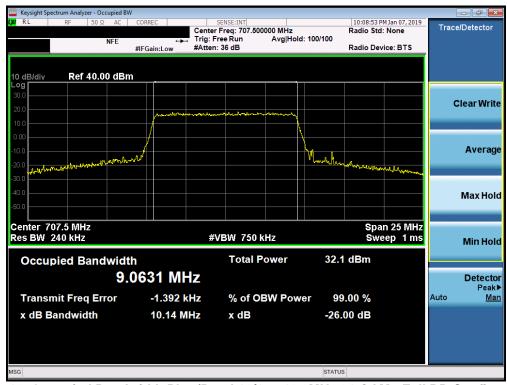
Plot 7-10. Occupied Bandwidth Plot (Band 12/17 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dawa 00 at 000	
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Keysight Spectrum Analyzer - Occupied BV	V				
LX/RL RF 50Ω AC		SENSE:INT Freq: 707.500000 MHz	Radio Std	MJan 07, 2019 : None	Trace/Detector
NFE		Free Run Avg Hold n: 36 dB	Radio Dev	rice: BTS	
10 dB/div Ref 40.00 dBn	n				
30.0					
20.0	Mandoreland Thing Selling	www. Marger and marger and gent of the			Clear Write
10.0					
0.00			\		
-20.0 -20.0	ww		hard harden a france		Average
			make markellow	N. M. Combo	
-30.0					
-50.0					Max Hold
Center 707.5 MHz Res BW 240 kHz	#	≠VBW 750 kHz		n 25 MHz ep 1 ms	
					Min Hold
Occupied Bandwidt		Total Power	33.0 dBm		
9.	0299 MHz				Detector
Transmit Freq Error	-2.241 kHz	% of OBW Pow	er 99.00 %		Peak▶ Auto <u>Man</u>
x dB Bandwidth	10.07 MHz	x dB	-26.00 dB		
			20.00 48		
MSG			STATUS		

Plot 7-11. Occupied Bandwidth Plot (Band 12/17 - 10.0MHz 16-QAM - Full RB Configuration)



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

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dama 07 at 000	
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🔤 Keysight Spectrum Analyzer - Occupi	ied BW				
<mark>(X/RL</mark> RF 50Ω)	AC CORREC	SENSE:INT	0 MH-7	11:12:32 PM Jan 07, 2019 Radio Std: None	Trace/Detector
		Trig: Free Run	Avg Hold: 100/100		
	#IFGain:Low #Atten: 36 dB Radio Device: BTS				
10 dB/div Ref 40.00 d	dBm				
Log 30.0					
20.0					Clear Write
10.0		man and a second and a second and a second and a second a	morene		
0.00	/		N N		
					Average
-10.0	maria		han	1 han .	Average
-10.0 -20.0 -30.0				Mar	
-40.0					Max Hold
-50.0					
Center 782 MHz				Span 12.5 MHz	
Res BW 120 kHz		#VBW 390 kH:	z	Sweep 1 ms	
				•	WIIIT HOIG
Occupied Bandw	vidth	Total Pov	wer 33.9	ə dBm	
	4.5523 MH	7			Detector
					Peak▶
Transmit Freq Error	r 472 H	z % of OBV	V Power 99	0.00 %	Auto <u>Man</u>
x dB Bandwidth	4.995 MH	z xdB	-26.	00 dB	
MSG			STATU	5	
			31410.		

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

Keysight Spectrum Analyzer - Occupied BW						-	
XIRL RF 50Ω AC]	SENSE:INT Center Freq: 782.000000 MH Frig: Free Run Avg Atten: 36 dB	lz Hold:>100/100	Radio Std:		Trace/[Detector
		Atten: 36 dB		Radio Devi	ICE: BTS		
10 dB/div Ref 40.00 dBm _og 30.0							
20.0	martur	www				Cl	ear Writ
10.0							
10.0	hr		mula	Murradia			Averag
20.0 30.0 mm m m m m m m m m m m m m m m m m m				an mark and an	Munn		
40.0						ľ	Max Ho
enter 782 MHz				Span '	12.5 MHz		
tes BW 120 kHz		#VBW 390 kHz			ep 1 ms		Min Ho
Occupied Bandwidt		Total Power	33.0) dBm			
	5403 MHz						Detect Peal
Transmit Freq Error	-1.155 kH	z % of OBW P	ower 99	9.00 %		Auto	<u>Ma</u>
x dB Bandwidth	4.997 MH:	z x dB	-26.	00 dB			
SG			STATU	s			

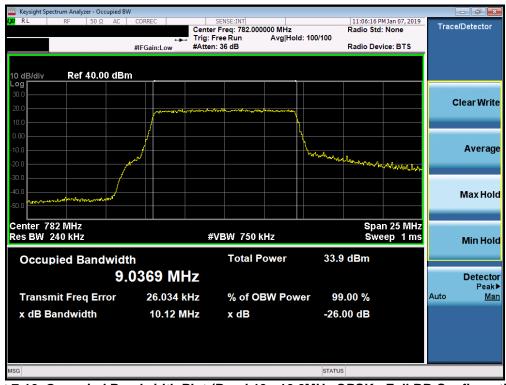
Plot 7-14. Occupied Bandwidth Plot (Band 13 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 at 000	
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Keysight Spectrum Analyzer - Occupied							
LXI RL RF 50Ω AC		SENSE:INT	7	11:13:41 P	MJan 07, 2019	Trace	e/Detector
		ig:FreeRun Avg∥	lold: 100/100				
	#IFGain:Low #A	Atten: 36 dB		Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dE	3m						
30.0							
20.0						C	Clear Write
10.0	and the second s	᠕ᡊ᠕ᢛ᠆ᠴᠬ᠘ᡔᡘ᠕᠕᠆᠕᠂᠀᠖ᠰ᠆ᠰᠬᢦ᠘ᡃᢇᠲ᠆ᢩᡒ᠆᠕	<u></u>				
0.00							
			10.				Average
-20.0	when		Martha Martha	~ Ohn			
-10.0 -20.0 -30.0				- Car all at a free free	now have		
-40.0							
							Max Hold
-50.0							
Center 782 MHz				Span	12.5 MHz		
Res BW 120 kHz		#VBW 390 kHz		Swe	ep 1ms		Min Hold
		Total Power	22.4	dBm			
Occupied Bandwig			32.4	aBm			
4	1.5587 MHz						Detector
Transmit Freq Error	447 Hz	% of OBW Po		.00 %		Auto	Peak▶ Man
							man
x dB Bandwidth	5.204 MHz	x dB	-26.0	00 dB			
MSG			STATUS				

Plot 7-15. Occupied Bandwidth Plot (Band 13 - 5.0MHz 64-QAM - Full RB Configuration)



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

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager				
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 at 000				
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Keysight Spectrum Analyzer - Occupied BW						[
LXI RL RF 50Ω AC	CORREC	SENSE:INT nter Freg: 782.00000) MHz	11:06:40 P Radio Std	M Jan 07, 2019	Trace	e/Detector
	🛶 Tri		Avg Hold: 100/100	Radio Dev			
	#IFGain:Low #A	πen: 36 dB		Radio Dev	ICE: BIS		
10 dB/div Ref 40.00 dBm Log							
30.0							
20.0		unu villan villa and	mm			C	lear Write
10.0			<u>\</u>				
0.00	/		<u>\</u>				
-10.0			<u>\</u>				Average
-20.0	M		July ways	m. washing my	ma have been		
-30.0							
-40.0							Max Hold
-50.0 Whenter							maxiloid
Center 782 MHz Res BW 240 kHz		#VBW 750 kHz	,		n 25 MHz ep 1 ms		
Res BW 240 KHZ		#VBVV / JOKH2		SWG	ep mis		Min Hold
Occupied Bandwidt	h	Total Pov	ver 33.	0 dBm		_	
	0211 MHz						Detector
							Peak►
Transmit Freq Error	5.140 kHz	% of OBW	Power 9	9.00 %		Auto	<u>Man</u>
x dB Bandwidth	10.16 MHz	x dB	-26	.00 dB			
MSG			STATU	IS			

Plot 7-17. Occupied Bandwidth Plot (Band 13 - 10.0MHz 16-QAM - Full RB Configuration)



Plot 7-18. Occupied Bandwidth Plot (Band 13 - 10.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager				
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 at 000				
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🔤 Keysight Spectrum Analyzer - Occup	pied BW						J X
<mark>(X</mark> RL RF 50Ω	AC CORREC	SENSE:INT Center Freg: 836.50000	0 MH-	12:11:17 AM Radio Std:	1 Jan 08, 2019	Trace/Dete	ector
		Trig: Free Run	Avg Hold: 100/10	00			
	#IFGain:Low	#Atten: 36 dB		Radio Devi	ce: BTS		
10 dB/div Ref 40.00	dBm						
Log 30.0							
						Clear	Write
20.0	man	hall when the second	m l				
10.0							
0.00						_	
-10.0	and an array		When we all			Av	erage
-20.0	mAMuA -		10° M	herpport	- Contraction of the second		
-30.0							
-40.0						Ma	(Hold
-50.0							liona
Center 836.5 MHz Res BW 33 kHz		#VBW 110 kH	-		3.5 MHz		
RES DW JJ KHZ			2	Sweep	5.867 ms	Mir	1 Hold
Occupied Bandw	vidth	Total Pov	wer 3	33.7 dBm			
Cocapica Ballan							
	1.1096 MH	Z					tector Peak▶
Transmit Freq Erro	r -776 H	z % of OBV	V Power	99.00 %		Auto	Man
x dB Bandwidth	1.265 MH	z xdB	_	-26.00 dB			
NEC			~	TATUS			
MSG			s	TATUS			

Plot 7-19. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz QPSK - Full RB Configuration)



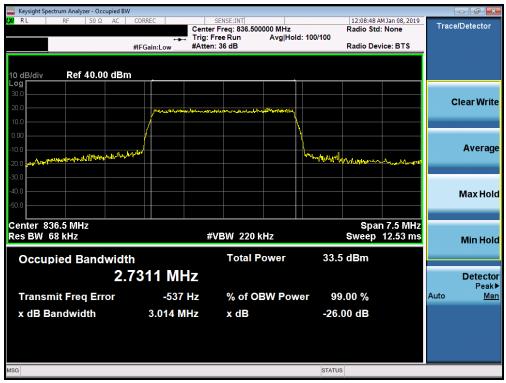
Plot 7-20. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dama 04 at 000		
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Keysight Spectrum Analyzer - Occupied E	3W						- 6 ×
LXI RL RF 50Ω AC	CORREC	SENSE:INT enter Freg: 836.500000 M	Hz	12:12:37 A Radio Std	M Jan 08, 2019	Trace	Detector
	TI	rig: Free Run Avg	Hold: 100/1	100			
	#IFGain:Low #/	Atten: 36 dB		Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dB	m		-,				
Log 30.0							
20.0						С	lear Write
10.0	mon	when have been how and	7				
			1				
0.00							
-10.0	Marman		Un all				Average
may the half of the way the second of the				Kulling milestower	www.		
-30.0					V		
-40.0							Max Hold
-50.0							
Contor 926 5 Miliz					2.6 Mills		
Center 836.5 MHz Res BW 33 kHz		#VBW 110 kHz			1 3.5 MHz 5.867 ms		
				Uncep	0.001 1115		Min Hold
Occupied Bandwid	th	Total Powe	r	32.0 dBm			
	.1091 MHz						Detector
							Peak►
Transmit Freq Error	332 Hz	% of OBW F	Power	99.00 %		Auto	<u>Man</u>
x dB Bandwidth	1.257 MHz	x dB		-26.00 dB			
				20100 012			
				[
MSG				STATUS			

Plot 7-21. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz 64-QAM - Full RB Configuration)



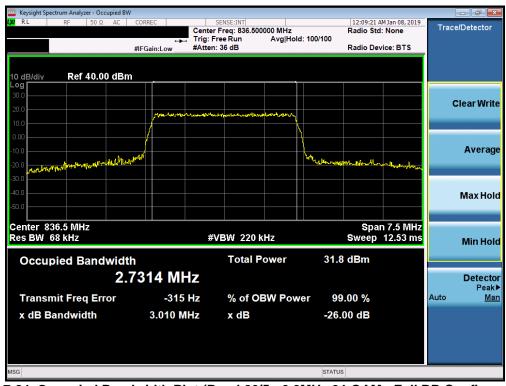
Plot 7-22. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager			
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 at 000			
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Keysight Spectrum Analyzer - Occupied BW							
LXIRL RF 50Ω AC	CORREC	SENSE:INT	00 MHz	12:09:05 A	M Jan 08, 2019	Trace	/Detector
	T	rig: Free Run	Avg Hold: 100/100				
	#IFGain:Low #	Atten: 36 dB		Radio Dev	rice: BTS		
10 dB/div Ref 40.00 dBm Log							
30.0							
20.0	and and show the set of the	an and the second and a second a second	a - March Bark			C	lear Write
10.0							
0.00							
-10.0							Average
-10.0 -20.0			Mulmum	Muy have	Mar Carlor		
-30.0							
-40.0							Max Hold
-50.0							
Center 836.5 MHz					7.5 MALI-		
Res BW 68 kHz		#VBW 220 ki	łz		ז 7.5 MHz 12.53 ms		Min Hold
							Min Hold
Occupied Bandwidt	h	Total Po	ower 32.8	dBm			
2.	7293 MHz	2					Detector
				00.0/		A 4 -	Peak▶
Transmit Freq Error	-3.478 kHz	z % of OB	W Power 99	.00 %		Auto	Man
x dB Bandwidth	3.019 MHz	z xdB	-26.0	00 dB			
MSG			STATUS				

Plot 7-23. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz 16-QAM - Full RB Configuration)



Plot 7-24. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager				
Test Report S/N:	Test Dates:	EUT Type:	Dawa 00 cf 000				
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Keysight Spectrum Analyzer - Occupied BW							
LXI RL RF 50Ω AC	CORREC	SENSE:INT Center Freg: 836.500	000 MHz	12:03:17 A Radio Std	M Jan 08, 2019 : None	Trace	/Detector
	- -	Trig: Free Run	Avg Hold: 100	0/100			
	#IFGain:Low	#Atten: 36 dB		Radio Dev	vice: BTS		
10 dB/div Ref 40.00 dBm					1		
30.0							
20.0	and and a strength of the stre	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	www.ww			С	lear Write
10.0							
0.00	_/		\				
-10.0	^ N		A.				Average
-20.0 m Aunal Man - Mark	<u> </u>		· //	MA MAR MAR	NOR 10 100		-
-30.0							
-40.0							Max Hold
-50.0							Μάχ ποιά
Center 836.5 MHz					12.5 MHz		
Res BW 120 kHz		#VBW 390 k	HZ	SWE	eep 1 ms		Min Hold
Occupied Bandwidth		Total P	ower	33.8 dBm			
	529 MH	-					Detector
4.5	523 WIR						Peak ►
Transmit Freq Error	-3.717 kl	Hz % of OE	3W Power	99.00 %		Auto	<u>Man</u>
x dB Bandwidth	5.020 MI	Hz xdB		-26.00 dB			
MSG				STATUS			

Plot 7-25. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz QPSK - Full RB Configuration)



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

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dawa 04 (000		
1C1811080029-03-R1.BCG	11/09/2018-02/02/2019	Tablet Device	Page 34 of 338		
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Keysight Spectrum Analyzer - Occupied BW					
LX/ RL RF 50 Ω AC	CORREC Cente	SENSE:INT Freg: 836.500000 MHz	12:04:43 A Radio Std	M Jan 08, 2019	Trace/Detector
	Trig:	Free Run Avg Hold	1: 100/100		
	#IFGain:Low #Atte	n: 36 dB	Radio Dev	/ice: BTS	
10 dB/div Ref 40.00 dBm					
30.0					
20.0					Clear Write
10.0		- war a second for a second for			
		N			
-10.0					Average
0.00.0000000	₩		Mar		g.
-20.0				A CONTRACTOR	
-40.0					
					Max Hold
-50.0					
Center 836.5 MHz				12.5 MHz	
Res BW 120 kHz	#	VBW 390 kHz	Sw	eep 1 ms	Min Hold
Occurried Bandwidth		Total Power	33.1 dBm		
Occupied Bandwidth			55.1 UBIII		
4.5	5455 MHz				Detector
Transmit Freq Error	2.682 kHz	% of OBW Pow	er 99.00 %		Peak▶ Auto <u>Man</u>
x dB Bandwidth	5.015 MHz	x dB	-26.00 dB		
	5.015 1112	X UD	-20.00 ab		
MSG			STATUS		
MSG			STATUS		

Plot 7-27. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz 64-QAM - Full RB Configuration)



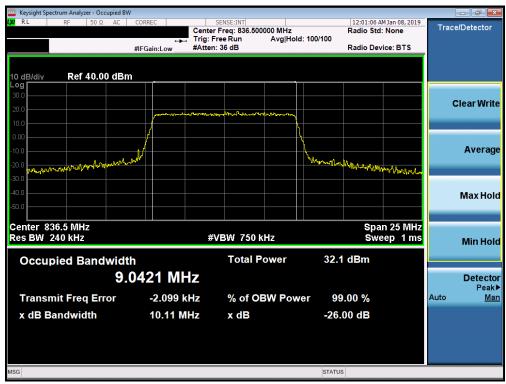
Plot 7-28. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		
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🔤 Keysight Spectrum Analyzer - Occup	ied BW						- # X
LXI RL RF 50 Ω	AC CORREC	SENSE:INT Center Freg: 836.5000	00 MHz	12:00:50 AM	1 Jan 08, 2019	Trace	/Detector
		Trig: Free Run	Avg Hold: 100/100				
	#IFGain:Low	#Atten: 36 dB		Radio Devi	ce: BTS		
10 dB/div Ref 40.00	dBm						
Log 30.0							
20.0						c	lear Write
	- Andrew Andre	www.chillen.com.and.com.and.logh.co	many				
10.0	/		1				
0.00	/						_
-10.0	Mart Mart		Mary mark	woodwalla			Average
-20.0 Mary to the for the start of the start				we when the	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
-30.0							
-40.0							Max Hold
-50.0							
					05.000		
Center 836.5 MHz Res BW 240 kHz		#VBW 750 ki	17		n 25 MHz ep 1 ms		
Res DW 240 KHZ		#VBVV /JOKI	12	Swe	ep i llis		Min Hold
Occupied Bandw	vidth	Total Po	ower 33.2	2 dBm			
		_					Batasta
	9.0557 MH	Z					Detector Peak▶
Transmit Freq Erro	r 8.503 kl	z % of OB	W Power 99	.00 %		Auto	Man
x dB Bandwidth	10.18 MI	lz xdB	26	00 dB			
	10.10 MI	12 X UD	-20.	00 UB			
,							
MSG			STATUS	5			

Plot 7-29. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz 16-QAM - Full RB Configuration)



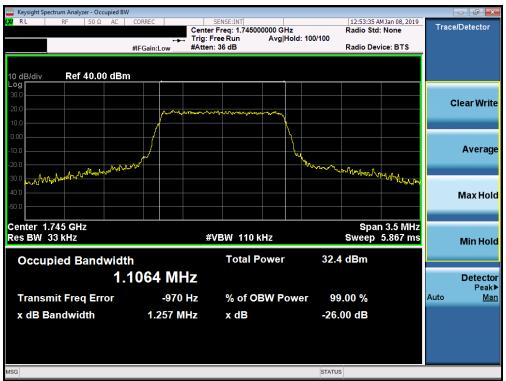
Plot 7-30. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dawa 00 at 000		
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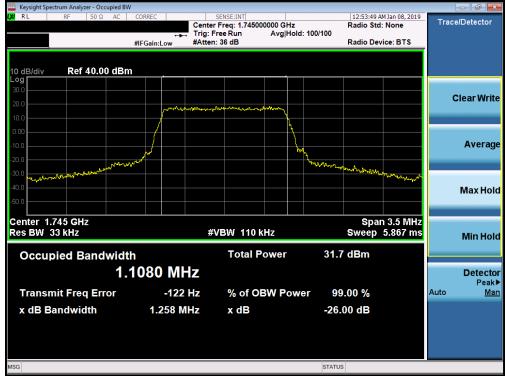
Plot 7-31. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-32. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 27 of 220
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Plot 7-33. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz 64-QAM - Full RB Configuration)



Plot 7-34. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 at 000
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Keysight Spectrum Analyzer - Occupied BW							
LX RL RF 50Ω AC	CORREC	SENSE:INT	00 GHz	12:49:40 A Radio Std	M Jan 08, 2019 None	Trace	e/Detector
		Trig: Free Run /	Avg Hold: 100/100	Radio Dev	ice: BTS		
	#IFGam:Low	Allen: 00 ab		Ruulo Det	ice. Dito		
10 dB/div Ref 40.00 dBm							
Log							
20.0						c	lear Write
10.0	and maker mark	and a fighter and a state of the state of the second state of the	monor				
0.00			<u>v</u>				
-10.0							Average
-20.0	<u>۲</u> ۳۰ (WH Marting	molitanter			
-30.0					and the second		
-40.0							Max Hold
-50.0						_	
Center 1.745 GHz				Spar	17.5 MHz		
Res BW 68 kHz		#VBW 220 kHz			12.53 ms		Min Hold
Occupied Bandwidt	h	Total Pov	ver 32.6	i dBm			
	" 7299 MHz			, abm			Detector
2.1	299 10112						Detector Peak►
Transmit Freq Error	-1.856 kH	z % of OBV	Power 99	.00 %		Auto	Man
x dB Bandwidth	3.006 MHz	z xdB	-26.	00 dB			
MSG			STATU	5			

Plot 7-35. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz 16-QAM - Full RB Configuration)



Plot 7-36. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dawa 00 at 000		
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Keysight Spectrum Analyzer - Occupied B ¹	W				
LXX RL RF 50Ω AC	CORREC	SENSE:INT Center Freq: 1.745000		12:46:16 AM Jan 08, 201 Radio Std: None	9 Trace/Detector
	++→ #IFGain:Low	Trig: Free Run #Atten: 36 dB	Avg Hold: 100/100	Radio Device: BTS	
10 dB/div Ref 40.00 dBr	n				
30.0					
20.0	Junyouter	᠆᠃᠆᠆ᡔᢧᡘ᠕ᡗᢆᠵ᠕᠋ᢞᠮᠵ᠕ᠬᠬ᠆ᠬᡢᡄ	www		Clear Write
10.0					
0.00	_		<u>\</u>		
-10.0			- mar My		Average
20.0 martino martino			V W	monter	
-30.0				l l l l l l l l l l l l l l l l l l l	
-50.0					Max Hold
Center 1.745 GHz Res BW 120 kHz		#VBW 390 k	Hz	Span 12.5 MH Sweep 1 m	
					S Min Hold
Occupied Bandwid	th	Total Po	ower 33.7	7 dBm	
4.	5519 MF	z			Detector
Transmit Freq Error	801	Hz % of OE	W Power 99	9.00 %	Peak▶ Auto <u>Man</u>
x dB Bandwidth	5.041 M	Hz x dB	-26	00 dB	
	0.041 1		20.		
MSG			STATU	s	

Plot 7-37. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-38. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dawa 40 at 000		
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Keysight Spectrum Analyzer - Occupied BW					
LXI RL RF 50Ω AC	CORREC	SENSE:INT nter Freg: 1.745000000 GHz	12:46:55 A Radio Std	M Jan 08, 2019	Trace/Detector
	🛶 Tri	g: Free Run Avg Hold	d: 100/100		
	#IFGain:Low #A	tten: 36 dB	Radio Dev	rice: BTS	
10 dB/div Ref 40.00 dBm					
30.0					
20.0		nhammann a hannarda			Clear Write
10.0					
0.00			\		
-10.0					Average
-20.0	1024		White Man		
-10.0 -20.0 -30.0 www.whenton			han man	manda	
-40.0					Max Hold
-50.0					Maxiloid
Center 1.745 GHz Res BW 120 kHz		#VBW 390 kHz		12.5 MHz ep 1 ms	
Res BW 120 KH2		#VDW J90KHZ	Swe	ep mis	Min Hold
Occupied Bandwidt	h	Total Power	32.2 dBm		
	5458 MHz				Detector
					Peak►
Transmit Freq Error	4.356 kHz	% of OBW Pow	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	5.006 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-39. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-40. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dama 44 at 000		
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Keysight Spectrum Analyzer - Occupied	BW						- # X
LXIRL RF 50Ω AC	CORREC	SENSE:INT Center Freg: 1.74500000	0 GHz	12:38:57 AM Radio Std:	1 Jan 08, 2019 None	Trace	/Detector
			vg Hold: 100/100	Radio Devi	DTC		
	#IFGain:Low	#Atten: 36 dB		Radio Devi	ce: DTS		
10 dB/div Ref 40.00 dB	m						
Log 30.0							
20.0						c	lear Write
10.0	pumentin	᠕᠕᠕᠆ᢔᡄ᠕ᢣᡅᡊᠻᡍᡊᢉᡌᠰᢍᡘᢏᡮᡁᡧ᠆ᢛᠴᠰᠧᢣᡨ᠕᠕᠆ᠰᡎ	~~~				
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	whyter a		handproved allers	1 0			monugo
-20.0 Halver allow allow and				and a start and a start and a start a	YANNIN IN LUI		
-40.0							
-50.0							Max Hold
-30.0							
Center 1.745 GHz					n 25 MHz		
Res BW 240 kHz		#VBW 750 kHz		Swe	ep 1 ms		Min Hold
Occupied Bandwid	ith	Total Pow	ver 32.9	dBm			
	.0486 MH						Detector
3	.0400 1010	Z					Peak ►
Transmit Freq Error	-1.886 kl	Hz % of OBW	Power 99	.00 %		Auto	<u>Man</u>
x dB Bandwidth	10.27 MI	Hz xdB	-26.	00 dB			
MSG			STATUS				

Plot 7-41. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz 16-QAM - Full RB Configuration)



Plot 7-42. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dama 40 af 000		
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Keysight Spectrum Analyzer - Occupied BW						
LX/RL RF 50Ω AC	CORREC Cente	SENSE:INT Freg: 1.745000000 GHz	12:33:48 / Radio Sto	AM Jan 08, 2019 : None	Trace/I	Detector
	🛶 Trig: I	Free Run Avg Holo n: 36 dB				
	#IFGain:Low #Atter	n. 36 dB	Radio De	vice. BTS		
10 dB/div Ref 40.00 dBm						
30.0						on Muito
20.0		a a management and a second			CI	ear Write
10.0		\ \\ \ \ \ \ \\ \ \ \\ \ \\ \ \\ \\ \ \\\ \\ \\ \\ \\ \\\				
0.00			\			
-10.0			- h			Average
-20.0 mahanananananananananananananananananana			"Valentiley/polens/pic.espended	ware hand the		_
-30.0						
-40.0					, P	/lax Hold
-50.0						
Center 1.745 GHz			Snan	37.5 MHz		
Res BW 360 kHz	#	VBW 1.1 MHz		eep 1 ms		Min Hold
						MITTIOIG
Occupied Bandwidth		Total Power	35.1 dBm			
13	.680 MHz					Detector
Transmit Frag Error	-7.155 kHz	% of OBW Pow	er 99.00 %		Auto	Peak▶ Man
Transmit Freq Error					Auto	IVIAII
x dB Bandwidth	16.23 MHz	x dB	-26.00 dB			
MSG			STATUS			

Plot 7-43. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-44. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dama 40 at 000		
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🤤 Keysight Spectrum Analyzer - Occupied B\	W						- • •
LX/RL RF 50Ω AC	CORREC	SENSE:INT Center Freg: 1.745000	000 GHz	12:34:39 AN Radio Std:	1Jan 08, 2019	Trace	/Detector
	•••	Trig: Free Run	Avg Hold: 100/100				
	#IFGain:Low	#Atten: 36 dB		Radio Devi	ce: BTS		
10 dB/div Ref 40.00 dBr	m						
30.0							
20.0						С	lear Write
10.0	Marine	***************************************	and and				
0.00			λ.				
-10.0	ا کمر		h h				Average
	W		Was 1				monugo
-20.0 Hour hard month and the second			and the second sec	www.mmla.Japan	miniluphota		
-40.0							Max Hold
-50.0							
Center 1.745 GHz				Span 3	37.5 MHz		
Res BW 360 kHz		#VBW_1.1 M	Hz		ep 1 ms		Min Hold
		Total Po		dBm			
Occupied Bandwidt			ower 52.3	авт			
1	3.615 M⊦	lz					Detector
Transmit Freq Error	-7.678 k		W Power 99	.00 %		Auto	Peak▶ Man
						riato	man
x dB Bandwidth	15.94 M	Hz x dB	-26.	00 dB			
MSG			STATUS	3			

Plot 7-45. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-46. Occupied Bandwidth Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager			
Test Report S/N:	Test Dates:	EUT Type:	Dama 44 at 220			
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Keysight Spectrum Analyzer - Occupied B	W						
LXI RL RF 50 Ω AC	CORREC	SENSE:INT Center Freg: 1.745000	000 GHz	12:18:46 Al Radio Std:	MJan 08, 2019	Trace	/Detector
	- -	Trig: Free Run	Avg Hold: 100/100				
	#IFGain:Low	#Atten: 36 dB		Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dB	m						
Log 30.0							
20.0						c	lear Write
		hadronethory hours of the	money				
10.0	/		h,				
0.00	/						_
-10.0 -20.0 property million and role	hand the low		Mart Charles and	mmydha			Average
-20.0 https://hith. hittinger and -				^y waana yayaa ka ya	-MAYRAlyshalldela		
-30.0							
-40.0							Max Hold
-50.0							
Center 1.745 GHz Res BW 470 kHz		#VBW 1.5 MI	17		n 50 MHz ep 1 ms		
Res BW 470 KHZ			12	SWE	ep mis		Min Hold
Occupied Bandwid	th	Total Po	ower 33.6	dBm			
		-					Detector
	8.100 MF						Detector Peak▶
Transmit Freq Error	-1.676 k	Hz % of OB	W Power 99	.00 %		Auto	Man
x dB Bandwidth	20.43 M	Hz x dB	26	00 dB			
	20.45 M		-20.	00 UB			
MSG			STATUS	5			

Plot 7-47. Occupied Bandwidth Plot (Band 66/4 - 20.0MHz 16-QAM - Full RB Configuration)



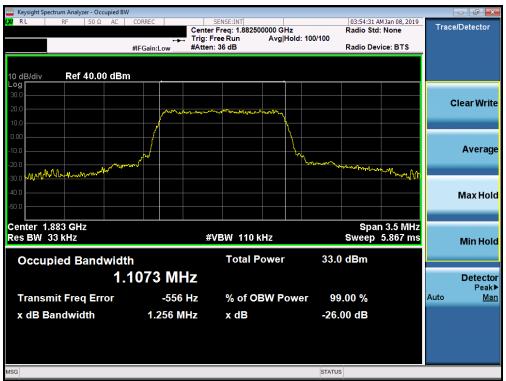
Plot 7-48. Occupied Bandwidth Plot (Band 66/4 - 20.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123						
Test Report S/N:	Test Dates:	EUT Type:	Dama 45 at 000			
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Plot 7-49. Occupied Bandwidth Plot (Band 25/2 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-50. Occupied Bandwidth Plot (Band 25/2 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 46 of 220
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Plot 7-51. Occupied Bandwidth Plot (Band 25/2 - 1.4MHz 64-QAM - Full RB Configuration)



Plot 7-52. Occupied Bandwidth Plot (Band 25/2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dage 47 of 220		
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LXI RL RF 50 Ω AC	CORREC Cent	SENSE:INT er Freg: 1.882500000 GHz	03:50:35 A Radio Std	M Jan 08, 2019	Trace/Detector
	🛶 Trig:	Free Run Avg Hold:	100/100		
	#IFGain:Low #Atte	en: 36 dB	Radio Dev	rice: BTS	
10 dB/div Ref 40.00 dBm					
30.0					
20.0	وروسالها مردا والمستر سادها مر	Lange and the state of the stat			Clear Write
10.0					
0.00	_/				
-10.0					Average
-20.0	<u>~</u>		Why and war war was a second	4-4-monthewayet	
-30.0					
-40.0					Max Hold
-50.0					
Center 1.883 GHz				• 7 6 Milla	
Res BW 68 kHz		#VBW 220 kHz		n 7.5 MHz 12.53 ms	Min Hold
					Min Hold
Occupied Bandwidth	1	Total Power	32.7 dBm		
2.7	292 MHz				Detector
			00.00.0/		Peak►
Transmit Freq Error	-1.312 kHz	% of OBW Powe	r 99.00 %		Auto <u>Man</u>
x dB Bandwidth	3.020 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-53. Occupied Bandwidth Plot (Band 25/2 - 3.0MHz 16-QAM - Full RB Configuration)



Plot 7-54. Occupied Bandwidth Plot (Band 25/2 - 3.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager			
Test Report S/N:	Test Dates:	EUT Type:	Dawa 40 at 000			
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Keysight Spectrum Analyzer - Occupied BW					
LX/RL RF 50Ω AC	CORREC	SENSE:INT Freg: 1.882500000 GHz	03:47:10 Radio Sto	AM Jan 08, 2019	Trace/Detector
	Trig:	Free Run Avg Hold n: 36 dB	>100/100	vice: BTS	
	#IFGain:Low #Atte	n: 36 dB	Radio De	vice: BTS	
10 dB/div Ref 40.00 dBm					
30.0					
20.0	mmmmmm	when you have			Clear Write
10.0	/				
0.00					
-10.0	N.M.		whoman		Average
-10.0 -20.0			- white and	mon	
-30.0					
-40.0					Max Hold
-50.0					
Center 1.883 GHz			Snan	12.5 MHz	
Res BW 120 kHz	#	VBW 390 kHz		eep 1 ms	Min Hold
				<u> </u>	WIITHOID
Occupied Bandwidth	1	Total Power	33.7 dBm		
4.5	512 MHz				Detector
Transmit Frag Error	-3.480 kHz	% of OBW Powe	er 99.00 %		Peak▶ Auto Man
Transmit Freq Error					Auto <u>Mari</u>
x dB Bandwidth	4.987 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-55. Occupied Bandwidth Plot (Band 25/2 - 5.0MHz QPSK - Full RB Configuration)



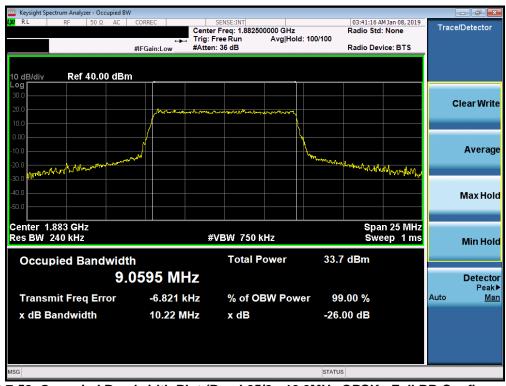
Plot 7-56. Occupied Bandwidth Plot (Band 25/2 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager			
Test Report S/N:	Test Dates:	EUT Type:	Dama 40 at 000			
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Keysight Spectrum Analyzer - Occupied BW								- 6 ×
LXI RL RF 50Ω AC	CORREC	SENSE:INT Center Freg: 1.8825	00000 GHz		03:48:04 At Radio Std:	4 Jan 08, 2019	Trac	e/Detector
	•	Trig: Free Run	Avg Hold:	100/100				
	#IFGain:Low	#Atten: 36 dB			Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dBm								
30.0								
20.0	0.000		and a constant of the constant				(Clear Write
10.0								
0.00	_/							
-10.0								Average
-20.0	المهرا			magul	martumory	where where		
-10.0 -20.0 -30.0								
-40.0								Max Hold
-50.0								Max Holu
Center 1.883 GHz Res BW 120 kHz		#VBW 390				12.5 MHz		
Res BW 120 KHZ		#APM 280	лпz		SWE	ep 1 ms		Min Hold
Occupied Bandwidth	า	Total F	ower	32.3	dBm			
	5326 MH	17						Detector
4.5		12						Peak
Transmit Freq Error	1.079 k	Hz % of O	BW Powe	r 99.	00 %		Auto	<u>Man</u>
x dB Bandwidth	5.015 M	Hz x dB		-26.0	0 dB			
MSG				STATUS				

Plot 7-57. Occupied Bandwidth Plot (Band 25/2 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-58. Occupied Bandwidth Plot (Band 25/2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123					
Test Report S/N:	Test Dates:	EUT Type:	Dama 50 at 220		
1C1811080029-03-R1.BCG	11/09/2018-02/02/2019	Tablet Device	Page 50 of 338		
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Keysight Spectrum Analyzer - Occupied	BW				
L <mark>XI</mark> RL RF 50Ω AC		SENSE:INT Center Freq: 1.882500000 GH2		M Jan 08, 2019	Trace/Detector
		Trig: Free Run Avg Ho	old:>100/100		
	#IFGain:Low	#Atten: 36 dB	Radio Dev	rice: BTS	
10 dB/div Ref 40.00 dB	3m				
Log 30.0					
20.0					Clear Write
	man	Mally March Marca Marca Marca Marca			
10.0					
0.00	1				
-10.0	annav		Manual III . I		Average
-20.0 Marcher Marin Marine Marine	ATTU-SAY		hundly	Mul wall Mar	
-30.0					
-40.0					Max Hold
-50.0					
			<u> </u>	- OF MUL-	
Center 1.883 GHz Res BW 240 kHz		#VBW 750 kHz		n 25 MHz ep 1 ms	
RC3 DW 240 KH2		#4D44 130 KHZ	544		Min Hold
Occupied Bandwid	dth	Total Power	33.0 dBm		
	0.0577 MH	7			Detector
2					Detector Peak▶
Transmit Freq Error	13.575 kH	z % of OBW Po	wer 99.00 %		Auto <u>Man</u>
x dB Bandwidth	10.20 MH	z xdB	-26.00 dB		
	10.20 1111		20.00 48		
MSG			STATUS		

Plot 7-59. Occupied Bandwidth Plot (Band 25/2 - 10.0MHz 16-QAM - Full RB Configuration)



Plot 7-60. Occupied Bandwidth Plot (Band 25/2 - 10.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dawa 54 at 000	
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🔤 Keysight Spectrum Analyzer - Occupied B	W				
LXIRL RF 50Ω AC	CORREC		03:37:35 Radio Sto d: 100/100	AM Jan 08, 2019 d: None	Trace/Detector
	#IFGain:Low	#Atten: 36 dB	Radio De	vice: BTS	
10 dB/div Ref 40.00 dB	m				
30.0		11. Martin align for many decilied as with the Alignan states			Clear Write
10.0			L .		
-10.0	100 ⁰ 00 ⁰ 00		han a s		Average
-20.0 -30.0				Kr-averallardleary	
-40.0					Max Hold
Center 1.883 GHz Res BW 360 kHz		#VBW 1.1 MHz		37.5 MHz eep 1 ms	Min Hold
Occupied Bandwid	th	Total Power	33.8 dBm		
1	3.571 MH				Detector Peak▶
Transmit Freq Error	5.184 kl	Iz % of OBW Pow	ver 99.00 %		Auto <u>Man</u>
x dB Bandwidth	16.16 MI	Hz x dB	-26.00 dB		
MSG			STATUS		

Plot 7-61. Occupied Bandwidth Plot (Band 25/2 - 15.0MHz QPSK - Full RB Configuration)



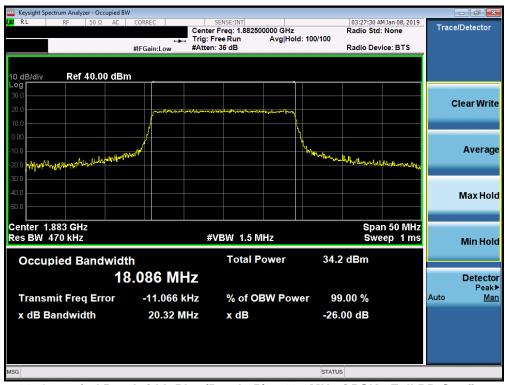
Plot 7-62. Occupied Bandwidth Plot (Band 25/2 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dama 50 at 000	
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🔤 Keysight Spectrum Analyzer - Occupied B	W						- • ×
LXI RE 50Ω AC	CORREC	SENSE:INT Center Freg: 1.88250	0000 GHz	03:38:05 Al Radio Std:	M Jan 08, 2019	Trace	/Detector
		Trig: Free Run	Avg Hold: 100/100				
	#IFGain:Low	#Atten: 36 dB		Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dB	m						
Log 30.0							
20.0						c	lear Write
	runnen	Atom Marken were and	mm				
10.0							
0.00			\\				
-10.0			<u> </u>				Average
-20.0 -30.0	H ^r		have	handwirth	reportioner		
-30.0					· ·		
-40.0							Max Hold
-50.0							
Center 1.883 GHz Res BW 360 kHz		#VBW 1.1 M	U 7		37.5 MHz ep 1 ms		
Res DW 300 KHZ		#VDVV 1.11V	112	0146	ep mis		Min Hold
Occupied Bandwid	th	Total P	ower 32.	1 dBm			
	3.594 MI	1 -7					Detector
	5.534 IVII	12					Detector Peak▶
Transmit Freq Error	-262	Hz % of OE	BW Power 99	9.00 %		Auto	Man
x dB Bandwidth	15.95 N	lHz x dB	-26	.00 dB			
	15.55 1		-20				
MSG			STATU	S			

Plot 7-63. Occupied Bandwidth Plot (Band 25/2 - 15.0MHz 64-QAM - Full RB Configuration)



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

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dawa 50 at 000	
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Keysight Spectrum Analyzer - Occupied BW	/						- 🗗 💌
KAL RF 50Ω AC		SENSE:INT	Hz F	03:28:10 AMJ Radio Std: N		Trace	/Detector
		⊺rig: Free Run Avg∥ ¢Atten: 36 dB	Hold: 100/100 F	Radio Device	e: BTS		
10 dB/div Ref 40.00 dBn	n						
30.0						-	
20.0	moundant		~			C	lear Write
10.0							
0.00							Average
-10.0	lw ^r		W Wyman M	-	elan al al		Average
-20.0 0000000000000000000000000000000000					- Providence of the		
-40.0							Max Hold
-50.0							
Center 1.883 GHz				Span	50 MHz		
Res BW 470 kHz		#VBW 1.5 MHz			p 1 ms		Min Hold
Occupied Bandwidt	h	Total Power	33.3 c	lBm			
	 3.072 MHz	,					Detector
							Peak▶
Transmit Freq Error	4.711 kH					Auto	<u>Man</u>
x dB Bandwidth	20.59 MH	z xdB	-26.00) dB			
MSG			STATUS				

Plot 7-65. Occupied Bandwidth Plot (Band 25/2 - 20.0MHz 16-QAM - Full RB Configuration)



Plot 7-66. Occupied Bandwidth Plot (Band 25/2 - 20.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dama 54 at 000	
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Keysight Spectrum Analyzer - Occupied	BW			
LXIRL RF 50Ω AC		SENSE:INT er Freg: 2.310000000 GHz	09:01:39 PM Jan 23, 2019 Radio Std: None	Trace/Detector
	Trig:	Free Run Avg Hold:>	100/100	
	#IFGain:Low #Atte	en: 36 dB	Radio Device: BTS	-
10 dB/div Ref 35.00 dE	3m			
25.0				
15.0	manyan	mmmmmmm		Clear Write
5.00		k		
-5.00				
-15.0	and the second		mand A	Average
-15.0 -25.0	/		mont have have made	
-35.0				
-45.0				Max Hold
-55.0				Max Hold
Center 2.31 GHz			Span 12.5 MH:	2
Res BW 120 kHz		#VBW 390 kHz	Sweep 1 m	Min Hold
Occupied Bandwid	tth	Total Power	32.3 dBm	
	.5701 MHz			D () ()
4				Detector Peak▶
Transmit Freq Error	6.766 kHz	% of OBW Power	99.00 %	Auto <u>Man</u>
x dB Bandwidth	5.003 MHz	x dB	-26.00 dB	
x dB Bandwiddi	0.000 11112	A GB	20.00 48	
MSG			STATUS	
mod			514105	

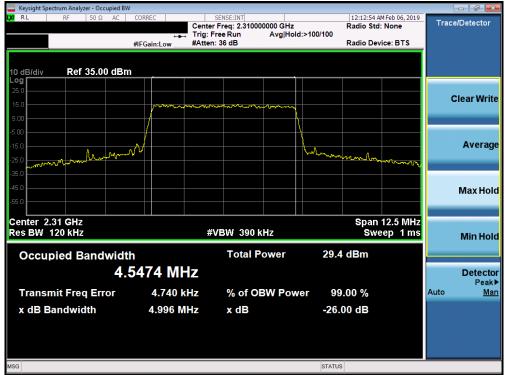
Plot 7-67. Occupied Bandwidth Plot (Band 30 - 5.0MHz QPSK - Full RB Configuration)

Keysight Spectrum Analyzer - Occupied BW					- 6 -
XIRL RF 50Ω AC	Trig: F	SENSE:INT Freq: 2.310000000 GHz Free Run Avg Hold: 1: 36 dB	Radio Std:		Trace/Detector
10 dB/div Ref 35.00 dBm 250 150 500		mannan			Clear Writ
5.00 15.0 25.0 35.0	~~~		Annannann	way Marchart	Averag
45.0					Max Hol
Center 2.31 GHz Res BW 120 kHz		VBW 390 kHz	Swe	12.5 MHz ep 1 ms	Min Hol
Occupied Bandwidt	^h 5403 MHz	Total Power	31.3 dBm		Detecto
Transmit Freq Error	-4.194 kHz	% of OBW Powe	r 99.00 %	,	Auto <u>Ma</u>
x dB Bandwidth	5.003 MHz	x dB	-26.00 dB		
SG			STATUS		

Plot 7-68. Occupied Bandwidth Plot (Band 30 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 55 af 000
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Plot 7-69. Occupied Bandwidth Plot (Band 30 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-70. Occupied Bandwidth Plot (Band 30 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		
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Keysight Spectrum Analyzer - Occupied BW						
LX/RL RF 50Ω AC	CORREC Center	SENSE:INT er Freg: 2.310000000 GHz	08:55:11 F Radio Std	M Jan 23, 2019	Trace/De	tector
NFE	🛶 Trig:	Free Run Avg Hold: en: 36 dB				
	#IFGain:Low #Atte	en: 36 dB	Radio Dev	/ice: BTS		
10 dB/div Ref 35.00 dBm Log						
25.0					-	
15.0	mahamarala	Manual Contraction of the second s			Clea	ar Write
5.00	/					
-5.00		<u> </u>				
-15.0	<u>را</u>		hahan II		A	verage
-25.0 -25.0			hahrarman direction of the second	Hugelrade met		
-35.0						
-45.0					Ma	ax Hold
-55.0						
Center 2.31 GHz			Sng	n 25 MHz		
Res BW 240 kHz	4	#VBW 750 kHz		eep 1 ms		in Hold
					IVI	ποια
Occupied Bandwidth	า	Total Power	31.2 dBm			
9.0	0351 MHz				D	etector
			00.00.00		A	Peak▶
Transmit Freq Error	-1.870 kHz	% of OBW Powe	er 99.00 %		Auto	Man
x dB Bandwidth	10.03 MHz	x dB	-26.00 dB			
MSG			STATUS			

Plot 7-71. Occupied Bandwidth Plot (Band 30 - 10.0MHz 16-QAM - Full RB Configuration)



Plot 7-72. Occupied Bandwidth Plot (Band 30 - 10.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dama 57 at 200		
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Band 7



Plot 7-73. Occupied Bandwidth Plot (Band 7 - 5.0MHz QPSK - Full RB Configuration)

Keysight Spectrum Analyzer - Occupied BW RL RF 50 Ω AC	Trig: F	SENSE:INT r Freq: 2.535000000 GHz Free Run Avg Hold n: 36 dB	Ra I: 100/100	0:43:10 AMJan 23, 2019 dio Std: None dio Device: BTS	Trace/Detector
10 dB/div Ref 40.00 dBm Log 30.0 20.0 10.0		mayor march and a second			Clear Wri
20.00 -10.0 -20.0 mar			mann	wander and	Avera
-40.0					Max Ho
Center 2.535 GHz Res BW 120 kHz Occupied Bandwidtl		VBW 390 kHz Total Power	33.6 dE	Span 12.5 MHz Sweep 1 ms 3m	Min Ho
	5419 MHz				Detect Peal
Transmit Freq Error x dB Bandwidth	-955 Hz 4.966 MHz	% of OBW Pow x dB	er 99.00 -26.00		Auto <u>M</u>

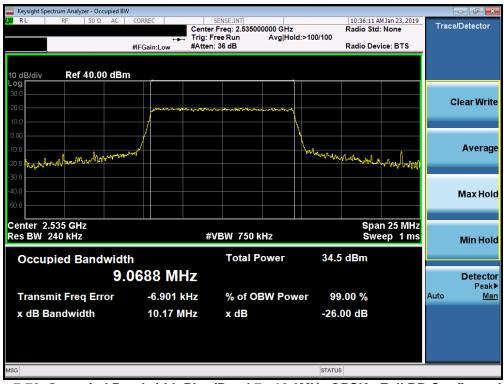
Plot 7-74. Occupied Bandwidth Plot (Band 7 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dama 50 at 200	
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🔤 Keysight Spectrum Analyzer - Occupied BV	N					
LXI RL RF 50 Ω AC	Center	SENSE:INT Freq: 2.535000000 GHz Free Run Avg Hold	Radio Std : 100/100		Trace/D	etector
	#IFGain:Low #Atten	: 36 dB	Radio Dev	vice: BTS		
10 dB/div Ref 40.00 dBn	n					
30.0 20.0	manuna	mann			Cle	ar Write
10.0						
-10.0 -20.0	h lah		MMMAAnnan	hama A		Average
-30.0				arti biyw Ub _{ry B}	N	lax Hold
-50.0						
Center 2.535 GHz Res BW 120 kHz	#	VBW 390 kHz		12.5 MHz ep 1 ms	r	/lin Hold
Occupied Bandwidt	th	Total Power	32.3 dBm			
	5344 MHz				I	Detector Peak▶
Transmit Freq Error	-2.854 kHz	% of OBW Powe	er 99.00 %		Auto	<u>Man</u>
x dB Bandwidth	5.027 MHz	x dB	-26.00 dB			
MSG			STATUS			

Plot 7-75. Occupied Bandwidth Plot (Band 7 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-76. Occupied Bandwidth Plot (Band 7 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dawa 50 at 000		
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🤤 Keysight Spectrum Analyzer - Occupied BW						
IX RL RF 50Ω AC		SENSE:INT er Freq: 2.535000000 GHz Free Run Avg Hold	Radio Sto	M Jan 23, 2019 I: None	Trace/Dete	ctor
		en: 36 dB	Radio De	vice: BTS		
10 dB/div Ref 40.00 dBm						
Log 30.0 20.0					Clear	Write
10.0						
-10.0 -20.0 prost transformer all the second state of the second s	ark		h	Nonder	Ave	erage
-40.0					Max	Hold
-50.0 Center 2.535 GHz				ın 25 MHz		
Res BW 240 kHz	7	#VBW 750 kHz	SW	eep 1 ms	Min	Hold
Occupied Bandwidth	1	Total Power	33.2 dBm			
)689 MHz					ector [⊃] eak ►
Transmit Freq Error	-3.595 kHz	% of OBW Pow	er 99.00 %		Auto	<u>Man</u>
x dB Bandwidth	10.14 MHz	x dB	-26.00 dB			
MSG			STATUS			

Plot 7-77. Occupied Bandwidth Plot (Band 7 - 10.0MHz 16-QAM - Full RB Configuration)



Plot 7-78. Occupied Bandwidth Plot (Band 7 - 10.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dama 60 at 200		
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Keysight Spectrum Analyzer - Occupied B	W				
μχ/ RL RF 50Ω AC		SENSE:INT er Freq: 2.535000000 GHz Free Run Avg Hold	Radio Std	M Jan 23, 2019 : None	Trace/Detector
		en: 36 dB	Radio Dev	vice: BTS	
10 dB/div Ref 40.00 dB i	m				
30.0		when we have a series of the s			Clear Write
10.0					
0.00 -10.0 -20.0 prospheric for a solution of the solution of	NAVE		Markelmand Corrow Calina	144mourales	Average
-30.0					Max Hold
Center 2.535 GHz Res BW 360 kHz	3	#VBW 1.1 MHz		37.5 MHz eep 1 ms	Min Hold
Occupied Bandwid	th	Total Power	34.4 dBm		
1	3.607 MHz				Detector Peak▶
Transmit Freq Error	1.368 kHz	% of OBW Powe	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	15.74 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-79. Occupied Bandwidth Plot (Band 7 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-80. Occupied Bandwidth Plot (Band 7 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dama 04 at 000	
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Plot 7-81. Occupied Bandwidth Plot (Band 7 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-82. Occupied Bandwidth Plot (Band 7 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 at 000		
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Keysight Spectrum Analyzer - Occupied E	BW				- 5 🔀
LX RL RF 50Ω AC	CORREC	SENSE:INT Center Freq: 2.535000000 GH Trig: Free Run Avg		M Jan 23, 2019 : None	Trace/Detector
	#IFGain:Low	#Atten: 36 dB	Radio Dev	vice: BTS	
10 dB/div Ref 40.00 dB	m .				
20.0	- Andrewson -	๛๛๚๚๚๚๚๛๛๛๛๚๚๛๛๚๚๛๛๛๛๚			Clear Write
10.0					
0.00 -10.0 -20.0 July months for the for the form	APUNIC		himmentul		Average
				with the for the party of	
-30.0					
-40.0					Max Hold
-50.0					
Center 2.535 GHz Res BW 470 kHz		#VBW 1.5 MHz		n 50 MHz eep 1 ms	Min Hold
Occupied Bandwid	lth	Total Power	33.9 dBm		
	8.120 MH	lz			Detector Peak►
Transmit Freq Error	-17.912 k	Hz % of OBW Po	ower 99.00 %		Auto <u>Man</u>
x dB Bandwidth	20.36 M	Hz x dB	-26.00 dB		
MSG			STATUS		

Plot 7-83. Occupied Bandwidth Plot (Band 7 - 20.0MHz 16-QAM - Full RB Configuration)



Plot 7-84. Occupied Bandwidth Plot (Band 7 - 20.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dama 60 at 000		
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	ectrum Analyz	er - Occu	pied BW										
LXI RL	RF	50 Ω	AC	CORRE	C		ENSE:INT Freq: 2.5930	00000 GHz		08:19:42 /	M Jan 23, 2019	Trac	e/Detector
					↔	, Trig: Fr	ee Run		d: 100/100				
				#IFGa	in:Low	#Atten:	36 dB			Radio De	vice: BTS		
10 dB/div	Ref	35.00	dBm		-			,					
Log 25.0													
15.0					por some	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	· ·····						Clear Write
5.00				/									
			AD and a star	M					h down				
-5.00 -15.0 -15.0	Monter	vvv. J	V111						ন্দ্রার সম্পর্	Manangla	manna		Average
											,		Average
-25.0													
-35.0													
-45.0													Max Hold
-55.0													
Center 2	.593 GHz	2								Span	12.5 MHz		
Res BW						#\	BW 390	kHz			eep 1ms		Min Hold
_									0.5				inititiona
Occu	pied Ba	andv					Total F	ower	35.	9 dBm			
			4.5	i80	5 M	Ηz							Detector
_		_			1 704							A	Peak▶
Iransi	mit Freq	Erro	or		4.701	KHZ	% of O	BW Pow	ver 9	9.00 %		Auto	Man
x dB E	Bandwid	th		7	7.041 N	۱Hz	x dB		-26	00 dB			
MSG									STATU	s			
				_									

Plot 7-85. Occupied Bandwidth Plot (Band 41 - 5.0MHz QPSK - Full RB Configuration)

Keysight Spectrum Analyzer - Occupied BV				
RL RF 50 Ω AC	Trig:	SENSE:INT er Freq: 2.593000000 GHz Free Run Avg Hold en: 36 dB	08:20:08 AM Jan 23 Radio Std: None I: 100/100 Radio Device: B'	Trace/Detector
0 dB/div Ref 35.00 dBn og 25.0 15.0		manna		Clear Writ
5.00 5.00 15.0 MMM MMM	wt		han han hand	M∰ Averag
15.0				Max Ho
enter 2.593 GHz es BW 120 kHz		≇VBW 390 kHz Total Power	Span 12.5 Sweep 7 34.1 dBm	
Occupied Bandwidt 4.	ⁿ 5304 MHz	Total Fower	34.1 UDIII	Detecto Peak
Transmit Freq Error x dB Bandwidth	3.028 kHz 5.136 MHz	% of OBW Pow x dB	er 99.00 % -26.00 dB	Auto <u>Ma</u>
G			STATUS	

Plot 7-86. Occupied Bandwidth Plot (Band 41 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
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Plot 7-87. Occupied Bandwidth Plot (Band 41 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-88. Occupied Bandwidth Plot (Band 41 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dama 05 at 000		
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Keysight Spectrum Analyzer - Occupied BW							
LXI RL RF 50Ω AC CO		ENSE:INT Freg: 2.593002500 GHz		08:10:18 Ar Radio Std:	1Jan 23, 2019 None	Trace	e/Detector
407	Gain:Low #Atten:		ld: 100/100	Radio Dev	ce: BTS		
#1	Gain:Low #Atten.	30 UB		Radio Dev	ce. BTS		
10 dB/div Ref 35.00 dBm							
Log							
25.0	manhan	M Res. 364					lear Write
15.0							
5.00							
-5.00			Multhman	1 N. L. N	n h h		_
-15.0 MILAAATWAAA			, standÌ	Long partial			Average
-25.0							
-45.0							
-45.0							Max Hold
-55.0							
Center 2.593 GHz					า 25 MHz		
Res BW 240 kHz	#V	BW 750 kHz		Swe	ep 1 ms		Min Hold
Occupied Bandwidth		Total Power	34.2	dBm			
			0112				
9.08	90 MHz						Detector Peak▶
Transmit Freq Error	-2.452 kHz	% of OBW Pov	ver 99	.00 %		Auto	Man
x dB Bandwidth	15.33 MHz	x dB	-26.	00 dB			
MSG			STATUS				

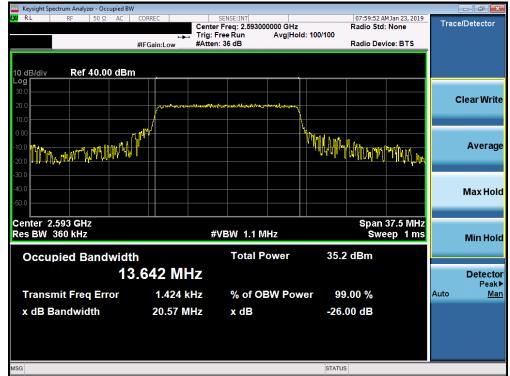
Plot 7-89. Occupied Bandwidth Plot (Band 41 - 10.0MHz 16-QAM - Full RB Configuration)



Plot 7-90. Occupied Bandwidth Plot (Band 41 - 10.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager			
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Plot 7-91. Occupied Bandwidth Plot (Band 41 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-92. Occupied Bandwidth Plot (Band 41 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
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Keysight Spectrum Analyzer - Occupied BV	V					
LX0 RL RF 50Ω AC	Center	SENSE:INT Freq: 2.593000000 GHz ree Run Avg Ho		AM Feb 06, 2019 d: None	Trace/Det	ector
	#IFGain:Low #Atten		Radio De	vice: BTS		
10 dB/div Ref 40.00 dBn	n ,					
20.0	and and as for the first the	munneterneter			Clear	r Write
	W ^{II}		May Maring and a first and a f	19 Martury Maraya (A	/erage
-30.0					Ма	x Hold
Center 2.593 GHz Res BW 360 kHz	#\	/BW 1.1 MHz		37.5 MHz eep 1 ms	Mi	n Hold
Occupied Bandwidt	'n	Total Power	33.8 dBm			
	3.648 MHz				De	etector Peak▶
Transmit Freq Error	6.316 kHz	% of OBW Pov	ver 99.00 %		Auto	Man
x dB Bandwidth	18.97 MHz	x dB	-26.00 dB			
MSG			STATUS			

Plot 7-93. Occupied Bandwidth Plot (Band 41 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-94. Occupied Bandwidth Plot (Band 41 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dawa (0. cf 000		
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Center Freq. 2.55500000 GHZ Radio Std. None	ID at a star
	e/Detector
Trig: Free Run Avg Hold: 100/100 #IEGain:I ow #Atten: 36 dB Radio Device: BTS	
#IFGain:Low #Atten: 36 dB Radio Device. B13	
10 dB/div Ref 35.00 dBm	
25.0	Clear Write
	nour mileo
	Average
-35.0	
-45.0	Max Hold
-55.0	_
Center 2.593 GHz Span 50 MHz	
Res BW 470 kHz #VBW 1.5 MHz Sweep 1 ms	Min Hold
Occupied Bandwidth Total Power 34.4 dBm	
18.146 MHz	Detector Peak▶
Transmit Freq Error -1.335 kHz % of OBW Power 99.00 % Auto	Man
x dB Bandwidth 40.50 MHz x dB -26.00 dB	
MSG STATUS	

Plot 7-95. Occupied Bandwidth Plot (Band 41 - 20.0MHz 16-QAM - Full RB Configuration)



Plot 7-96. Occupied Bandwidth Plot (Band 41 - 20.0MHz 64-QAM - Full RB Configuration)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
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7.3 Spurious and Harmonic Emissions at Antenna Terminal

Test Overview

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

The minimum permissible attenuation level of any spurious emission is $43 + \log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

For Band 30, the minimum permissible attenuation level of any spurious emission <2288MHz and >2365MHz is 70 + log10(P[Watts]).

For Band 7 and 41, the minimum permissible attenuation level of any spurious emission is $55 + \log_{10}(P_{[Watts]})$.

Test Procedure Used

KDB 971168 D01 v03r01 - Section 6.0

Test Settings

- 1. Start frequency was set to 30MHz and stop frequency was set to at least 10 * the fundamental frequency (separated into at least two plots per channel)
- 2. Detector = RMS
- 3. Trace mode = trace average for continuous emissions, max hold for pulse emissions
- 4. Sweep time = auto couple
- 5. The trace was allowed to stabilize
- 6. Please see test notes below for RBW and VBW settings

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.



Figure 7-2. Test Instrument & Measurement Setup

Test Notes

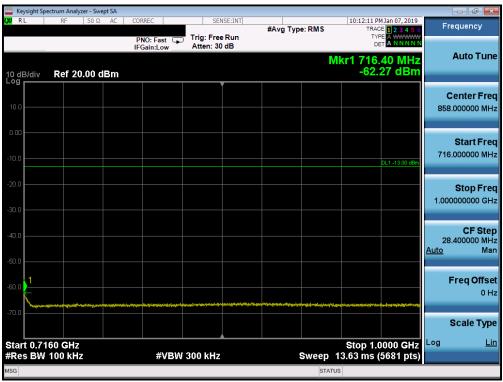
Compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and 1 MHz or greater for frequencies greater than 1 GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

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	nt Spectrum Analyzer										
L <mark>XI</mark> RL	RF	50 Ω AC 0	CORREC		NSE:INT	#Avg Type	e: RMS	TRAC	4 Jan 07, 2019 E 1 2 3 4 5 6	Fr	requency
10 dB/di	v Ref 20.0		PNO: Fast IFGain:Low	Trig: Free Atten: 30			M	DE kr1 697.	90 MHz 65 dBm		Auto Tune
10.0											Center Freq 3.950000 MHz
-10.0									DL1 -13.00 dBm	30	Start Freq 0.000000 MHz
-20.0										697	Stop Freq 7.900000 MHz
-40.0										66 <u>Auto</u>	CF Step 5.790000 MHz Man
-60.0									-		Freq Offset 0 Hz
-70.0 Start 3	0.0 MHz							Stop 6	97.9 MHz		Scale Type Lin
	W 100 kHz		#VBW	/ 300 kHz		S	weep 32	2.06 ms (1	3359 pts)		
MSG							STATUS	3			

Plot 7-97. Conducted Spurious Plot (Band 12/17 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 7-98. Conducted Spurious Plot (Band 12/17 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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PNO: Fast Trig: Free Run #Avg Type: RMS TRACE 2.34 store Frequency Mkr1 6.916 5 GHz		ectrum Analyzer - Sw										
PNO: Fast Trig: Free Run Trig: Free Run Mkr1 6.9165 GHz Auto Tune 10 dB/div Ref 10.00 dBm Center Freq 5.50000000 GHz Start Freq 100 1 <	LXI RL	RF 50 Ω	AC C	ORREC	SEN	ISE:INT	#Avg Tvp	e: RMS			Fr	equency
Log Center Freq 000 DL1-1300481									TYI DI			Auto Tune
000 Center Freq 100 011-1300 dem 1000 011-1300 dem 10000 011-1300	10 dB/div	Ref 10.00	dBm						-44.	71 dBm		
100 DL1-1300 dtm Start Freq 200 DL1-1300 dtm Start Freq 300 DL1-1300 dtm Stop Freq 400 DL1-1300 dtm Stop Freq 900.000000 MHz Auto Man 400 Man Freq Offset 901-1000 GHz Stop 10.000 GHz Log Lin											c	enter Freq
200 Image: Constraint of the second seco	0.00										5.500	0000000 GHz
200 Image: Constraint of the second seco	-10.0											
30.0 40.0 50.0										DL1 -13.00 dBm		
40.0 40.0	-20.0										1.000	0000000 GHz
40.0 40.0	-30.0											
400 1 CF Step 500 0 0 600 0 0 700 0 0 800 0 0	00.0										10.000	
.600 .900.00000 MHz .600	-40.0						↓ 1−					
.600 .900.00000 MHz .600	-50.0	and the second	www		~~~	and the second designed to the second designe			a water a state of the state of			
-70.0 -70.0												
-700 0 Hz C O Hz C O Hz	-60.0											
-80.0	-70.0										I	req Offset
Start 1.000 GHz Stop 10.000 GHz	10.0											0 Hz
Start 1.000 GHz Log Log Lin	-80.0											
#VBW 5.0 WHZ Sweep 15.00 His (1800 Lpts)				#\/R\/	3 0 MHz		-	ween	Stop 10	.000 GHz	Log	Lin
	MSG	1.0 IMINZ		# V D V V	5.0 WHZ					soon pis)		

Plot 7-99. Conducted Spurious Plot (Band 12/17 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 7-100. Conducted Spurious Plot (Band 12/17 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: BCGA2123		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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	ectrum Analyz											
XU RL	RF	50 Ω A(P	RREC	Trig: Fre		#Avg Typ	e: RMS	TRAC	MJan 07, 2019 E 1 2 3 4 5 6 E A WWWWW A N N N N N	Freque	ncy
10 dB/div	Ref 20	.00 dBn		Gain:Low	Atten: 30) dB		N	lkr1 716.		Aut	o Tune
10.0											Cent 858.0000	e r Freq 000 MHz
-10.0										DL1 -13.00 dBm	Sta 716.0000	irt Fred 000 MH;
-20.0											Sto 1.0000000	p Fre 000 GH
-40.0											28.4000 <u>Auto</u>	F Step 000 MH Mar
-50.0	annai ann tá bhí Annail		n zakalen da ana	a blan, sillar (J. 1940), suna (1940)	ali mirana panang nang tanggi nang tang				fa han darana maninta ar batirik di Mdi	a man di bibbi ka si da bira ya	Freq	I Offse
-70.0											Scal	le Type
Start 0.71 #Res BW				#VBV	V 300 kHz			Sweep	Stop 1.0 13.63 ms (0000 GHz 5681 pts)	LUg	Lin
MSG								STATU	JS			

Plot 7-101. Conducted Spurious Plot (Band 12/17 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



Plot 7-102. Conducted Spurious Plot (Band 12/17 - 10.0MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

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