

PCTEST

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PART 27 MEASUREMENT REPORT

Applicant Name:

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

Date of Testing:

09/15/2020 – 12/10/2020 **Test Site/Location:** PCTEST Lab. Columbia, MD, USA **Test Report Serial No.:** 1M2009140143-21-R1.A3L

FCC ID:

Applicant Name:

A3LSMG996U

Samsung Electronics Co., Ltd.

Application Type: Model: Additional Model(s): EUT Type: FCC Classification: FCC Rule Part: Test Procedure(s): Certification SM-G996U SM-G996U1 Portable Handset PCS Licensed Transmitter Held to Ear (PCE) 27 ANSI C63.26-2015, ANSI/TIA-603-E-2016, KDB 971168 D01 v03r01, KDB 648474 D03 v01r04

Note: This revised Test Report (S/N: 1M2009140143-21-R1.A3L) supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

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

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

Randy Ortanez President



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				EIRP		
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	Max. Power [W]	Max. Power [dBm]	Emission Designator
		QPSK	2310.0	0.192	22.84	8M99G7D
		16QAM	2310.0	0.128	21.08	8M96W7D
		64QAM	2310.0	0.101	20.03	8M97W7D
ITE Rond 20		256QAM	2310.0	0.058	17.66	8M98W7D
LTE Ballu 30		QPSK	2307.5 - 2312.5	0.194	22.87	4M57G7D
		16QAM	2307.5 - 2312.5	0.127	21.04	4M52W7D
	3 IVITIZ	64QAM	2307.5 - 2312.5	0.107	20.31	4M52W7D
		256QAM	2307.5 - 2312.5	0.060	17.76	4M53W7D
		QPSK	2510.0 - 2560.0	0.148	21.71	18M0G7D
	20 MHz	16QAM	2510.0 - 2560.0	0.129	21.10	18M0W7D
	20 1011 12	64QAM	2510.0 - 2560.0	0.100	19.98	18M0W7D
		256QAM	2510.0 - 2560.0	0.047	16.74	18M0W7D
		QPSK	2507.5 - 2562.5	0.146	21.64	13M5G7D
	15 MHz	16QAM	2507.5 - 2562.5	0.128	21.07	13M5W7D
	10 11112	64QAM	2507.5 - 2562.5	0.099	19.97	13M5W7D
LTE Band 7		256QAM	2507.5 - 2562.5	0.047	16.70	13M5W7D
ETE Band T		QPSK	2505.0 - 2565.0	0.149	21.74	9M01G7D
	10 MHz	16QAM	2505.0 - 2565.0	0.133	21.22	9M01W7D
	10 11112	64QAM	2505.0 - 2565.0	0.100	20.00	9M01W7D
		256QAM	2505.0 - 2565.0	0.048	16.78	9M01W7D
		QPSK	2502.5 - 2567.5	0.150	21.77	4M54G7D
	5 MHz	16QAM	2502.5 - 2567.5	0.130	21.13	4M52W7D
	•	64QAM	2502.5 - 2567.5	0.101	20.04	4M53W7D
		256QAM	2502.5 - 2567.5	0.048	16.84	4M53W7D
	20 MHz	QPSK	2506.0 - 2680.0	0.320	25.05	18M0G7D
		16QAM	2506.0 - 2680.0	0.208	23.18	17M9W7D
		64QAM	2506.0 - 2680.0	0.187	22.71	17M9W7D
		256QAM	2506.0 - 2680.0	0.092	19.64	17M9W7D
		QPSK	2503.5 - 2682.5	0.300	24.77	13M5G7D
	15 MHz	16QAM	2503.5 - 2682.5	0.214	23.30	13M5W7D
		64QAM	2503.5 - 2682.5	0.178	22.51	13M5W7D
LTE Band 41(PC2)		ZOBQAIVI	2503.5 - 2682.5	0.091	19.60	131VI5VV7D
		QPSK 400AM	2501.0 - 2685.0	0.303	24.81	9M04G7D
	10 MHz	16QAM	2501.0 - 2685.0	0.206	23.14	91/03/07D
			2501.0 - 2005.0	0.192	22.04	9100007D
			2501.0 - 2005.0	0.092	19.00	01V190VV7D
			2490.5 - 2007.5	0.295	24.70	41VI3407D
	5 MHz	640AM	2490.5 - 2007.5	0.192	22.04	4M53W7D
		2560AM	2490.5 - 2007.5	0.100	10.75	4M53W7D
			2490.3 - 2007.3	0.094	22.01	18M0G7D
		160AM	2506.0 - 2680.0	0.130	21.04	18M0W7D
	20 MHz	640AM	2506.0 - 2680.0	0.127	20.57	17M9W7D
		2560AM	2506.0 - 2680.0	0.056	17.50	18M0W7D
		OPSK	2503.5 - 2682.5	0.183	22.63	13M6G7D
		16QAM	2503.5 - 2682.5	0.131	21.16	13M5W7D
	15 MHz	64QAM	2503.5 - 2682.5	0.101	20.37	13M5W7D
		256QAM	2503.5 - 2682.5	0.056	17.46	13M5W7D
LTE Band 41(PC3)/38		QPSK	2501.0 - 2685.0	0.185	22.67	9M02G7D
		16QAM	2501.0 - 2685.0	0,126	21.00	9M00W7D
	10 MHz	64QAM	2501.0 - 2685.0	0,118	20.70	9M00W7D
		256QAM	2501.0 - 2685.0	0.057	17.52	8M99W7D
		QPSK	2498.5 - 2687.5	0.180	22.56	4M51G7D
	- • • • •	16QAM	2498.5 - 2687.5	0.118	20.70	4M50W7D
	5 MHz	64QAM	2498.5 - 2687.5	0.115	20.60	4M52W7D
		256QAM	2498.5 - 2687.5	0.058	17.61	4M50W7D

Overview Table (>1GHz Bands)

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				EIRP		Emission
Mode	Mode Bandwidth		Range [MHz]	Max. Power [W]	Max. Power [dBm]	Designator
		π/2 BPSK	2310.0	0.190	22.79	8M98G7D
		QPSK	2310.0	0.177	22.47	8M99G7D
	10 MHz	16QAM	2310.0	0.123	20.90	8M99W7D
		64QAM	2310.0	0.093	19.70	8M96W7D
		256QAM	2310.0	0.091	19.57	8M95W7D
NR Band n30		π/2 BPSK	2307.5 - 2312.5	0.202	23.05	4M49G7D
		QPSK	2307.5 - 2312.5	0.178	22.50	4M51G7D
	5 MHz	16QAM	2307.5 - 2312.5	0.122	20.86	4M50W7D
		64QAM	2307.5 - 2312.5	0.100	19.98	4M52W7D
		256QAM	2307.5 - 2312.5	0.093	19.67	4M48W7D
		π/2 BPSK	2546.01 - 2640.00	0.211	23.25	97M0G7D
		QPSK	2546.01 - 2640.00	0.205	23.12	97M7G7D
	100 MHz	16QAM	2546.01 - 2640.00	0.160	22.03	97M7W7D
		64QAM	2546.01 - 2640.00	0.111	20.47	98M0W7D
		256QAM	2546.01 - 2640.00	0.068	18.32	97M7W7D
		π/2 BPSK	2541.00 - 2644.98	0.224	23.51	87M0G7D
		QPSK	2541.00 - 2644.98	0.210	23.23	88M1G7D
	90 MHz	16QAM	2541.00 - 2644.98	0.146	21.65	87M7W7D
		64QAM	2541.00 - 2644.98	0.111	20.45	87M8W7D
		256QAM	2541.00 - 2644.98	0.068	18.35	88M0W7D
	80 MHz	π/2 BPSK	2536.02 - 2649.99	0.220	23.42	77M5G7D
		QPSK	2536.02 - 2649.99	0.207	23.15	77M6G7D
		16QAM	2536.02 - 2649.99	0.171	22.33	77M7W7D
		64QAM	2536.02 - 2649.99	0.111	20.44	77M8W7D
		256QAM	2536.02 - 2649.99	0.070	18.48	77M7W7D
		π/2 BPSK	2526.00 - 2659.98	0.215	23.32	58M3G7D
		QPSK	2526.00 - 2659.98	0.211	23.24	58M3G7D
	60 MHz	16QAM	2526.00 - 2659.98	0.161	22.06	58M2W7D
		64QAM	2526.00 - 2659.98	0.107	20.29	58M1W7D
NR Band n41 (ANTB /		256QAM	2526.00 - 2659.98	0.072	18.60	58M0W7D
ANTI)		π/2 BPSK	2521.02 - 2664.99	0.220	23.42	46M9G7D
,		QPSK	2521.02 - 2664.99	0.216	23.35	47M7G7D
	50 MHz	16QAM	2521.02 - 2664.99	0.168	22.26	47M7W7D
		64QAM	2521.02 - 2664.99	0.110	20.43	47M6W7D
		256QAM	2521.02 - 2664.99	0.070	18.43	47M6W7D
		π/2 BPSK	2516.01 - 2670.00	0.233	23.68	37M1G7D
		QPSK	2516.01 - 2670.00	0.219	23.40	38M0G7D
	40 MHz	16QAM	2516.01 - 2670.00	0.181	22.57	38M0W7D
		64QAM	2516.01 - 2670.00	0.115	20.59	38M0W7D
		256QAM	2516.01 - 2670.00	0.074	18.67	37M9W7D
		π/2 BPSK	2511.00 - 2674.98	0.242	23.83	27M0G7D
		QPSK	2511.00 - 2674.98	0.234	23.70	27M9G7D
	30 MHz	16QAM	2511.00 - 2674.98	0.190	22.78	28M0W7D
		64QAM	2511.00 - 2674.98	0.125	20.97	28M0W7D
		256QAM	2511.00 - 2674.98	0.079	18.98	28M0W7D
		π/2 BPSK	2506.02 - 2679.99	0.219	23.41	18M3G7D
		QPSK	2506.02 - 2679.99	0.212	23.26	18M3G7D
	20 MHz	16QAM	2506.02 - 2679.99	0.168	22.25	18M3W7D
	-	64QAM	2506.02 - 2679.99	0.106	20.24	18M3W7D
		256QAM	2506.02 - 2679.99	0,073	18.61	18M3W7D
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Overview Table (>1GHz Bands)

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				EI	Emission	
Mode	Bandwidth	Modulation	Range [MHz]	Max. Power [W]	Max. Power [dBm]	Designator
		π/2 BPSK	3750.00 - 3930.00	0.111	20.45	97M1G7D
		QPSK	3750.00 - 3930.00	0.110	20.43	97M9G7D
	100 MHz	16QAM	3750.00 - 3930.00	0.086	19.34	97M6W7D
		64QAM	3750.00 - 3930.00	0.059	17.67	98M3W7D
		256QAM	3750.00 - 3930.00	0.040	15.97	97M9W7D
		π/2 BPSK	3745.02 - 3934.98	0.111	20.47	86M8G7D
		QPSK	3745.02 - 3934.98	0.112	20.49	87M7G7D
	90 MHz	16QAM	3745.02 - 3934.98	0.092	19.62	87M4W7D
		64QAM	3745.02 - 3934.98	0.059	17.71	87M5W7D
		256QAM	3745.02 - 3934.98	0.043	16.31	87M5W7D
		π/2 BPSK	3740.01 - 3939.99	0.115	20.60	77M1G7D
		QPSK	3740.01 - 3939.99	0.115	20.61	77M5G7D
	80 MHz	16QAM	3740.01 - 3939.99	0.093	19.67	77M8W7D
		64QAM	3740.01 - 3939.99	0.064	18.03	77M6W7D
		256QAM	3740 01 - 3939 99	0.044	16.41	77M6W7D
		π/2 BPSK	3735.00 - 3945.00	0.096	19.84	67M6G7D
		OPSK	3735 00 - 3945 00	0.075	18 77	67M5G7D
	70 MHz	160AM	3735.00 - 3945.00	0.070	18.42	67M5W7D
		640AM	3735.00 - 3945.00	0.036	15.60	67M5W7D
		2560AM	3735.00 - 3945.00	0.021	13.27	67M3W7D
		T/2 BPSK	3730.02 - 3949.98	0.021	20.51	58M2G7D
		OPSK	3730.02 - 3949.98	0.115	20.51	57M9G7D
NR Band n77	60 MHz	160AM	3730.02 - 3949.98	0.090	19.56	57M9W7D
Hit Bana III I	00 11112	640AM	3730.02 - 3949.98	0.059	17.69	58M2W7D
		2560AM	3730.02 - 3949.98	0.033	16.38	58M0W/7D
		T/2 BPSK	3725.01 - 3954.99	0.045	20.59	45M9G7D
		OPSK	3725.01 - 3954.99	0.116	20.55	47M9G7D
	50 MH7	160AM	3725.01 - 3954.99	0.002	19.64	47103070
	50 10112	640AM	3725.01 - 3954.99	0.052	18.15	47M8W/7D
		2560AM	3725.01 - 3054.00	0.003	16.13	
			3720.00 - 3960.00	0.044	20.59	35M5G7D
		OPSK	2720.00 - 2060.00	0.115	20.55	29M0G7D
			3720.00 - 3960.00	0.006	20.05	271/03/20
	40 MITZ	E 4 O A M	3720.00 - 3900.00	0.090	17.01	371VI9W7D
			3720.00 - 3960.00	0.061	17.04	3010110070
			3720.00 - 3960.00	0.046	10.04	371VI9VV7D
			3715.02 - 3964.96	0.113	20.51	20100070
	20 1411-	QP3K	3715.02 - 3964.96	0.113	20.55	271019G7D
	30 MHZ	64QAM	3715.02 - 3964.98	0.096	19.83	271VI7V7D
		64QAIVI	3715.02 - 3964.98	0.065	18.11	2/10/9/07D
		256QAM	3715.02 - 3964.98	0.046	16.58	281VIUV7D
		π/2 BPSK	3710.01 - 3969.99	0.113	20.54	1/M8G/D
	00.0411	QPSK	3710.01 - 3969.99	0.108	20.32	181VI3G7D
	20 MHz	16QAM	3710.01 - 3969.99	0.095	19.78	18M1W7D
		64QAM	3710.01 - 3969.99	0.055	17.38	18M3W7D
		256QAM	3710.01 - 3969.99	0.040	16.01	18M4W7D

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1.0 INTRODUCTION

1.1 Scope

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

1.2 PCTEST Test Location

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

1.3 Test Facility / Accreditations

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

- PCTEST is an ISO 17025-2017 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.01 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.
- PCTEST TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC 17065-2012 by A2LA (Certificate number 2041.03) in all scopes of FCC Rules and ISED Standards (RSS).
- PCTEST facility is a registered (2451B) test laboratory with the site description on file with ISED.

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Handset FCC ID: A3LSMG996U**. The test data contained in this report pertains only to the emissions due to the EUT's licensed transmitters that operate under the provisions of Part 27.

Test Device Serial No.: 0551M, 0564M, 0501M

2.2 Device Capabilities

This device contains the following capabilities:

800/850/1900 CDMA/EVDO Rev. 0/A (BC0, BC1, BC10), 850/1900 GSM/GPRS/EDGE, 850/1700/1900 WCDMA/HSPA, Multi-band LTE, 5G NR (FR1/FR2), 802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII, Bluetooth (1x, EDR, LE), NFC, UWB, Wireless Power Transfer

2.3 Test Configuration

The EUT was tested per the guidance of ANSI/TIA-603-E-2016 and KDB 971168 D01 v03r01. See Section 7.0 of this test report for a description of the radiated and antenna port conducted emissions tests.

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

2.4 EMI Suppression Device(s)/Modifications

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

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3.0 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

The measurement procedures described in the "Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards" (ANSI/TIA-603-E-2016) and "Measurement Guidance for Certification of Licensed Digital Transmitters" (KDB 971168 D01 v03r01) were used in the measurement of the EUT.

Deviation from Measurement Procedure.....None

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Radiated Power and Radiated Spurious Emissions 3.2

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. The test site inside the chamber is a 6m x 5.2m elliptical, obstruction-free area in accordance with Figure 5.7 of Clause 5 in ANSI C63.4-2014. Absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections for measurements above 1GHz. For measurements below 1GHz, the absorbers are removed. A raised turntable is used for radiated measurement. The turn table is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm tall test table made of Styrodur is placed on top of the turn table. A Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m.

The equipment under test was transmitting while connected to its integral antenna and is placed on a turntable 3 meters from the receive antenna. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer.

For radiated power measurements, substitution method is used per the guidance of ANSI/TIA-603-E-2016. A halfwave dipole is 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 Pg [dBm] - cable loss [dB].

For radiated spurious emissions measurements and calculations, conversion method is used per the formulas in KDB 971168 Section 5.8.4. Field Strength (EIRP) is calculated using the following formulas:

> E[dBµV/m] = Measured amplitude level[dBm] + 107 + Cable Loss[dB] + Antenna Factor[dB/m] And EIRP_[dBm] = E_[dBµV/m] + 20logD - 104.8; where D is the measurement distance in meters.

All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014. Additionally, radiated emissions below 30MHz are also validated on an Open Area Test Site to assert correlation with the chamber measurements per the requirements of KDB 474788 D01.

Radiated power and radiated spurious emission levels are investigated with the receive antenna horizontally and vertically polarized per ANSI/TIA-603-E-2016.

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4.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Contribution	Expanded Uncertainty (±dB)
Conducted Bench Top Measurements	1.13
Radiated Disturbance (<1GHz)	4.98
Radiated Disturbance (>1GHz)	5.07
Radiated Disturbance (>18GHz)	5.09

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5.0 TEST EQUIPMENT CALIBRATION DATA

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

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	LTx2	Licensed Transmitter Cable Set	4/9/2020	Annual	4/9/2021	LTx2
-	LTx4	Licensed Transmitter Cable Set	7/9/2020	Annual	7/9/2021	LTx4
Agilent	N9020A	MXA Signal Analyzer	8/4/2020	Annual	8/4/2021	US46470561
Keysight Technologies	N9038A	MXE EMI Receiver	8/11/2020	Annual	8/11/2021	MY51210133
Keysight Technologies	N9030B	PXA Signal Analyzer	9/17/2020	Annual	9/17/2021	MY57141001
Agilent	N9030A	PXA Signal Analyzer (44GHz)	7/17/2020	Annual	7/17/2021	MY52350166
Anritsu	MT8821C	Radio Communication Analyzer	N/A		6201381794	
Com-Power	AL-130	9kHz - 30MHz Loop Antenna	10/10/2019	Biennial	10/10/2021	121034
ETS Lindgren	3164-08	Quad Ridge Horn Antenna	3/12/2020	Biennial	3/12/2022	128337
Mini Circuits	TVA-11-422	RF Power Amp N/A		QA1317001		
Mini-Circuits	SSG-4000HP	Synthesized Signal Generator		N/A		11208010032
Rohde & Schwarz	CMW500	Radio Communication Tester		N/A		102060
Rohde & Schwarz	TS-PR26	18-26.5 GHz Pre-Amplifier	11/1/2019	Annual	11/1/2020	100040
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	7/15/2020	Annual	7/15/2021	100342
Rohde & Schwarz	ESU40	EMI Test Receiver (40GHz)	9/9/2020	Annual	9/9/2021	100348
Rohde & Schwarz	SFUNIT-Rx	Shielded Filter Unit	2/21/2020	Annual	2/21/2021	102133
Sunol	DRH-118	Horn Antenna (1-18 GHz)	8/27/2019	Biennial	8/27/2021	A042511
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	7/27/2020	Biennial	7/27/2022	A051107

Table 5-1. Test Equipment

Notes:

- 1. For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.
- 2. Equipment with a calibration date of "N/A" shown in this list was not used to make direct calibrated measurements.

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6.0 SAMPLE CALCULATIONS

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

Example: Spurious emission at 3700.40 MHz

The receive spectrum analyzer reading at 3 meters with the EUT on the turntable was -81.0 dBm. The gain of the substituted antenna is 8.1 dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of -81.0 dBm on the spectrum analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 3700.40 MHz. So 6.1 dB is added to the signal generator reading of -30.9 dBm yielding -24.80 dBm. The fundamental EIRP was 25.50 dBm so this harmonic was 25.50 dBm -(-24.80) = 50.3 dBc.

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7.0 TEST RESULTS

7.1 Summary

Company Name:	Samsung Electronics Co., Ltd.
FCC ID:	A3LSMG996U
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
Mode(s):	WCDMA/LTE/NR/UL-CA

Test Condition	Test Description	FCC Part Section(s)	RSS Section(s)	Test Limit	Test Result	Reference
	Occupied Bandwidth	2.1049	RSS-139(2.3)	N/A	PASS	Section 7.2
	Conducted Band Edge / Spurious Emissions (LTE Band 30)	2.1051, 27.53(a)	RSS-195(5.6)	Undesirable emissions must meet the limits detailed in 27.53(a)	PASS	Sections 7.3, 7.4
۵	Conducted Band Edge / Spurious Emissions (LTE Band 7)				PASS	Sections 7.3, 7.4
UCTE	Conducted Band Edge / Spurious Emissions (LTE Band 41)	2 1051 27 53(m)	RSS-199(4.5)	Undesirable emissions must meet the limits detailed in	PASS	Sections 7.3, 7.4
IGNO	Conducted Band Edge / Spurious Emissions (NR Band n41)	2.1031, 21.35(11)	N33-133(4.3)	27.53(m)	PASS	Sections 7.3, 7.4
0	Conducted Band Edge / Spurious Emissions (LTE Band 38)				PASS	Sections 7.3, 7.4
	Transmitter Conducted Output Power	2.1046	RSS-199(4.4)	N/A	PASS	See RF Exposure Report
	Frequency Stability	2.1055, 27.54	RSS-199(4.3)	Fundamental emissions stay within authorized frequency block	PASS	Section 7.8
	Effective Radiated Power / Equivalent Isotropic Radiated Power (LTE Band 30)	27.50(a)(3)	RSS-195(5.5)	< 0.25 Watts max. EIRP	PASS	Section 7.6
	Effective Radiated Power / Equivalent Isotropic Radiated Power (LTE Band 7)	27.50(h)(2)	RSS-199(4.4)		PASS	Section 7.6
	Effective Radiated Power / Equivalent Isotropic Radiated Power (LTE Band 41)			< 2 Watts max. EIRP	PASS	Section 7.6
Ē	Effective Radiated Power / Equivalent Isotropic Radiated Power (NR Band n41)				PASS	Section 7.6
ADIATI	Effective Radiated Power / Equivalent Isotropic Radiated Power (LTE Band 38)				PASS	Section 7.6
	Radiated Spurious Emissions 2.1053, 27.53 (LTE Band 30)	2.1053, 27.53(a)	RSS-195(5.6)	> 70 + 10log10(P[Watts])	PASS	Section 7.7
	Radiated Spurious Emissions (LTE Band 7)				PASS	Section 7.7
	Radiated Spurious Emissions (LTE Band 41)	2 1053 27 53(m)	DSS 199/4 5)	Undesirable emissions must meet the limits detailed in	PASS	Section 7.7
	Radiated Spurious Emissions (NR Band n41)	z. 1000, zr.00(m)	NGG-199(4.9)	27.53(m)	PASS	Section 7.7
	Radiated Spurious Emissions (LTE Band 38)				PASS	Section 7.7

Table 7-1. Summary of Test Results

Notes:

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- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.
- 4) All conducted emissions measurements are performed with automated test software to capture the corresponding plots necessary to show compliance. The measurement software utilized is PCTEST 2G/3G Automation Version 4.2.

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7.2 Conducted Power Output Data

Test Overview

The EUT is set up to transmit at maximum power for LTE and NR channels. All power levels 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.

Test Procedure Used

KDB 971168 D01 v03r01 - Section 6.0

Test Settings

- 1. Span = $2 \times OBW$ to $3 \times OBW$
- 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 7-1. Test Instrument & Measurement Setup

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Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
		650000	3750.00	1/68	26.38
	π/2 BPSK	656000	3840.00	1/68	26.35
		662000	3930.00	1/68	26.33
E E		650000	3750.00	1/68	26.06
≥ 0	QPSK	656000	3840.00	1/68	26.22
100		662000	3930.00	1/68	26.15
	16-QAM	662000	3930.00	1/68	25.33
	64-QAM	662000	3930.00	1/68	24.44
	256-QAM	662000	3930.00	1/68	22.93
	π/2 BPSK	662332	3934.98	1/61	26.35
Ŧ	QPSK	662332	3934.98	1/61	26.21
Σ	16-QAM	662332	3934.98	1/61	25.61
06	64-QAM	662332	3934.98	1/61	24.48
	256-QAM	662332	3934.98	1/61	23.27
	π/2 BPSK	662666	3939.99	1/162	26.48
Ŧ	QPSK	662666	3939.99	1/162	26.33
Σ	16-QAM	662666	3939.99	1/162	25.66
80	64-QAM	662666	3939.99	1/162	24.80
	256-QAM	662666	3939.99	1/162	23.37
Σ	π/2 BPSK	663000	3945.00	1/94	25.72
₽ ₽ ₽ ₽	QPSK	663000	3945.00	1/94	24.49
≥ ō Ę	16-QAM	663000	3945.00	1/94	24.41
C d O	64-QAM	663000	3945.00	1/94	22.37
÷	256-QAM	663000	3945.00	1/94	20.23
	π/2 BPSK	663332	3949.98	1/81	26.39
Ŧ	QPSK	663332	3949.98	1/81	26.33
Σ	16-QAM	663332	3949.98	1/81	25.55
60	64-QAM	663332	3949.98	1/81	24.46
	256-QAM	656000	3840.00	1/81	23.90
	π/2 BPSK	663666	3954.99	1/99	26.47
문	QPSK	663666	3954.99	1/99	26.35
Σ	16-QAM	663666	3954.99	1/99	25.63
50	64-QAM	663666	3954.99	1/99	24.92
	256-QAM	663666	3954.99	1/99	23.37
	π/2 BPSK	664000	3960.00	1/79	26.47
E E E E E E E E E E E E E E E E E E E	QPSK	664000	3960.00	1/79	26.37
Σ	16-QAM	664000	3960.00	1/79	25.80
40	64-QAM	664000	3960.00	1/79	24.61
	256-QAM	664000	3960.00	1/79	23.60
	π/2 BPSK	664332	3964.98	1/58	26.39
Ĩ Ĩ	QPSK	664332	3964.98	1/58	26.25
30 M	16-QAM	664332	3964.98	1/58	25.82
	64-QAM	664332	3964.98	1/58	24.88
	256-QAM	664332	3964.98	1/58	23.54
	π/2 BPSK	664666	3969.99	1/25	26.42
Ĩ Ĩ	QPSK	664666	3969.99	1/25	26.04
Z	16-QAM	664666	3969.99	1/25	25.77
20	64-QAM	664666	3969.99	1/25	24.15
	256-QAM	664666	3969.99	1/25	22.97

Table 7-1. Conducted Power Data (NR Band n77)

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Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]	
		509202	2546.01	1 / 137	26.51	
	π/2 BPSK	518598	2592.99	1 / 137	26.40	
N		528000	2640.00	1 / 137	26.44	
IHz		509202	2546.01	1 / 137	26.22	
NC	QPSK	518598	2592.99	1 / 137	26.18	
10(528000	2640.00	1 / 137	26.34	
	16-QAM	518598	2592.99	1 / 137	25.74	
	64-QAM	518598	2592.99	1 / 137	23.76	
	256-QAM	518598	2592.99	1 / 137	21.88	
	π/2 BPSK	518598	2592.99	1 / 123	26.54	
Hz	QPSK	518598	2592.99	1 / 123	26.02	
M	16-QAM	518598	2592.99	1 / 123	25.61	
06	64-QAM	518598	2592.99	1 / 123	24.19	
	256-QAM	518598	2592.99	1 / 123	21.90	
	π/2 BPSK	518598	2592.99	1 / 108	26.70	
Hz	QPSK	518598	2592.99	1 / 108	25.92	
M	16-QAM	518598	2592.99	1 / 108	24.64	
8(64-QAM	518598	2592.99	1 / 108	24.07	
	256-QAM	518598	2592.99	1 / 108	23.46	
	π/2 BPSK	518598	2592.99	1 / 81	26.71	
IHz	QPSK	518598	2592.99	1 / 81	26.38	
NC	16-QAM	518598	2592.99	1 / 81	25.59	
6(64-QAM	518598	2592.99	1 / 81	24.08	
	256-QAM	518598	2592.99	1 / 81	21.86	
N	π/2 BPSK	518598	2592.99	1 / 67	26.96	
١Hz	QPSK	518598	2592.99	1 / 67	26.43	
0 N	16-QAM	518598	2592.99	1 / 67	25.19	
5	64-QAM	518598	2592.99	1 / 67	23.83	
	256-QAM	518598	2592.99	1 / 67	21.96	
N	π/2 BPSK	518598	2592.99	1 / 53	26.46	
ЧH	QPSK	518598	2592.99	1 / 53	26.26	
0 1	16-QAM	518598	2592.99	1/53	25.29	
4	64-QAM	518598	2592.99	1 / 53	23.88	
		518598	2592.99	1/53	22.81	
N		518598	2592.99	1/39	26.89	
ИН		518598	2592.99	1/39	26.08	
0	C4 QAM	510590	2592.99	1/39	20.70	
		519509	2592.99	1/39	24.00	
		519509	2592.99	1/39	22.90	
N	ODSK	519509	2592.99	1/20	21.00	
НИ		518509	2592.99	1/20	20.10	
0.	64 OAM	519509	2592.99	1/20	20.90	
	256-0AM	518508	2592.99	1/20	23.81	
	200 00 00	0.0000	2002.00	1,20	20.01	

Table 7-2. Conducted Power Data (LTE Band 41 (PC2)) -

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Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]	
		509202	2546.01	1 / 271	25.44	
	π/2 BPSK	518598	2592.99	1 / 271	25.47	
		528000	2640.00	1 / 271	25.15	
뛰		509202	2546.01	1 / 271	25.40	
N N N N N N N N N N N N N N N N N N N	QPSK	518598	2592.99	1 / 271	25.39	
100		528000	2640.00	1 / 271	25.24	
	16-QAM	518598	2592.99	1 / 271	24.48	
	64-QAM	518598	2592.99	1 / 271	22.85	
	256-QAM	518598	2592.99	1 / 271	21.06	
	π/2 BPSK	528996	2644.98	1 / 243	25.41	
원	QPSK	528996	2644.98	1 / 243	25.38	
Σ	16-QAM	528996	2644.98	1 / 243	23.90	
06	64-QAM	528996	2644.98	1 / 243	22.75	
	256-QAM	528996	2644.98	1 / 243	20.82	
	π/2 BPSK	529998	2649.99	1 / 215	25.32	
원	QPSK	529998	2649.99	1 / 215	25.30	
Σ	16-QAM	529998	2649.99	1 / 215	24.58	
80	64-QAM	529998	2649.99	1 / 215	22.74	
	256-QAM	529998	2649.99	1 / 215	20.95	
	π/2 BPSK	531996	2659.98	1 / 160	25.22	
F	QPSK	531996	2659.98	1 / 160	25.39	
Σ	16-QAM	531996	2659.98	1 / 160	24.31	
60	64-QAM	531996	2659.98	1 / 160	22.59	
	256-QAM	531996	2659.98	1 / 160	21.07	
	π/2 BPSK	532998	2664.99	1 / 131	25.32	
원	QPSK	532998	2664.99	1 / 131	25.50	
Σ	16-QAM	532998	2664.99	1 / 131	24.51	
5(64-QAM	532998	2664.99	1 / 131	22.73	
	256-QAM	532998	2664.99	1 / 131	20.90	
	π/2 BPSK	534000	2670.00	1 / 104	25.58	
뛰	QPSK	534000	2670.00	1 / 104	25.55	
N N N N N N N N N N N N N N N N N N N	16-QAM	534000	2670.00	1 / 104	24.82	
4(64-QAM	534000	2670.00	1 / 104	22.89	
	256-QAM	534000	2670.00	1 / 104	21.14	
	π/2 BPSK	534996	2674.98	1 / 76	25.73	
Hz	QPSK	534996	2674.98	1 / 76	25.85	
N N N	16-QAM	534996	2674.98	1 / 76	25.03	
30	64-QAM	534996	2674.98	1 / 76	23.27	
	256-QAM	534996	2674.98	1 / 76	21.45	
	π/2 BPSK	535998	2679.99	1 / 50	25.31	
H	QPSK	535998	2679.99	1 / 50	25.41	
2	16-QAM	535998	2679.99	1 / 50	24.50	
50	64-QAM	535998	2679.99	1 / 50	22.54	
	256-QAM	535998	2679.99	1 / 50	21.01	

Table 7-2. Conducted Power Data (LTE Band 41 (PC3)) – ANTB

FCC ID: A3LSMG996U	POTEST. Pous to be part of & risesset	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Quality Manager	
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7.3 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 7-2. Test Instrument & Measurement Setup

Test Notes

None.

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LTE Band 30

🔤 Keysight Spectrum Analyzer - Occupied BW							
L RF 50Ω AC C	ORREC	SENSE:INT	ALIGN AUTO	07:08:22 P	M Sep 17, 2020	Trac	e/Detector
	Cente	er Freq: 2.310000000 G	Hz	Radio Std	: None		0.000000
#	IFGain:Low #Atter	n: 36 dB	11010.2 100/100	Radio Dev	vice: BTS		
10 dB/div Ref 30.00 dBm							
20.0							
20.0	perminent	······································	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				Clear Write
10.0			N.				
0.00							
-10.0							
-20.0			<u> </u>		18.0		Average
pt how we when a war when we war			www.har	wall was a way and a second second	MAN MARK		
-30.0							
-40.0							
-50.0							Max Hold
-60.0							maxinoia
Center 2.31000 GHz				Span 2	5.00 MHz		
#Res BW 240 kHz	#	VBW 750 kHz		Swe	eep 1 ms		Min Hold
							Minhold
Occupied Bandwidth		Total Power	3 2. ′	l dBm			
0.0							
8.9							Detector
Transmit Fred Error	15 /60 kHz	% of OBW B	ower 00	0 0 0%		Auto	Man
Hansine Fleg Entit	13.403 KHZ		ower 5:	/0		, all	man
x dB Bandwidth	9.967 MHz	x dB	-26	00 dB			
MSG			STATU	s			

Plot 7-2. Occupied Bandwidth Plot (LTE Band 30 - 10MHz QPSK - Full RB Configuration)



Plot 7-3. Occupied Bandwidth Plot (LTE Band 30 - 10MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	PCTEST Proad to be part of & decent	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager		
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🔤 Keys	sight Spectrun	n Analyzer - Oo	cupied BW										
LXI L	F	RF 50 Ω	AC COF	RREC		SENSE:INT		ALIGN A	AUTO	07:09:05 PI	M Sep 17, 2020	Trac	e/Detector
					Center Tria: E	Freq: 2.3100	00000 GHz	1- 100/1	100	Radio Std	None		0120100101
			#IF	Gain:Low	#Atten	: 36 dB	Avginor			Radio Dev	ice: BTS		
10 dB	3/div	Ref 30.0	0 dBm										
Log													
20.0				0.600.000	war war	asto the algorith	moline						Clear Write
10.0				1									
0.00				//									
10.0				/				l,					
-10.0													
-20.0		m.h.	a margarala					balla -					Average
-30.0	And the second second	موجعه مواله المالي المالي							yeur	white the	mon mary all		
-40 N													
50.0													
-50.0													Max Hold
-60.0													
_ L													
Cent	er 2.310	00 GHz								Span 2	5.00 MHz		
#Res	5 BW 24	0 KHZ			#\	#VBW 750 kHz Sweep 1			ep 1 ms		Min Hold		
						_							
	ccupie	d Banc	lwidth			l otal F	ower		30.3	dBm			
			8 96	75 N	1Hz								Detector
			0.00		1112								Peak
Tr	ansmit	Freq Er	ror	22.87	3 kHz	% of O	BW Pow	er	99 .	00 %		Auto	Man
X	dB Ban	dwidth		9 864	MHz	x dB			-26 0	0 dB			
		awiatii		0.004	111112	A GB			2010				
MSG									STATUS				
Mod									514105				

Plot 7-4. Occupied Bandwidth Plot (LTE Band 30 - 10MHz 64-QAM - Full RB Configuration)



Plot 7-5. Occupied Bandwidth Plot (LTE Band 30 - 10MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	Trace to be part of S decrease	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Occupied BV	/						
L RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	06:44:12 PM	Sep 17, 2020	Trace	Detector
	Cente Trig:	Free Run AvalH	z old: 100/100	Radio Sta:	None		
	#IFGain:Low #Atte	n: 36 dB		Radio Dev	ice: BTS		
10 JEVAN Pof 20 00 dBp	•						
Log							
20.0							
10.0			~			c	lear Write
0.00	1		A l			_	
0.00			1 Y				
-10.0							_
-20.0 AA ALAMAAA			an arra	~ Mr.am	Barn B		Average
-30.0 Well of the of th			P	с . М	man PUL h	_	
-40.0							
-50.0							Marrillald
							Max Hold
-60.0						_	_
Center 2.310000 GHz				Span 1	2.50 MHz		
#Res BW 120 kHz	#	#VBW 390 kHz			ep 1 ms		Min Hold
							MITHOU
Occupied Bandwidt	h	Total Power	32.4	dBm			
	5707 MU-						Detector
4.							Delector Peak
Transmit Freq Error	-16.494 kHz	% of OBW Po	wer 99.	00 %		Auto	Man
x dB Bandwidth	5.061 MHz	x dB	-26.0	0 dB			
MSG			STATUS				

Plot 7-6. Occupied Bandwidth Plot (LTE Band 30 - 5MHz QPSK - Full RB Configuration)

🔤 Keysight Spect	rum Analyzer - O	ccupied BW										
(X) L	RF 50 S	Ω AC	CORREC Cent Trig: #IFGain:Low #Atte			SENSE:INT ALIGN AUTO er Freq: 2.31000000 GHz Free Run Free Run Avg Hold: 100/100 en: 36 dB Avg		C 06:44:40 PM Sep 17, 2020 Radio Std: None Radio Device: BTS		Trac	e/Detector	
10 dB/div	Ref 30.0	00 dBm										
20.0 10.0				whnghow	ᢣᠰᠬᢧᠵᢇᠬᢍ	www.www.wh	wer when we a					Clear Write
-10.0 -20.0	- Jood - March	m	\checkmark						~			Average
-40.0 -50.0 -60.0												Max Hold
Center 2.37 #Res BW	10000 GHz 120 kHz	2			#VE	3W 390 I	(Hz	20	Span ⁷ Sw	12.50 MHz eep 1 ms		Min Hold
Transm	it Freq Er	4.	5 17 1	1 MH .913 kł	Z	% of O	BW Pow	29. /er 9	9.00 %		Auto	Detector Peak► <u>Man</u>
x dB Ba	ndwidth		4.	955 MH	łz	x dB		-26	.00 dB			
MSG								STATU	IS			

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

FCC ID: A3LSMG996U	PCTEST Poud to be part of & riemant	PART 27 MEASUREMENT REPORT	MSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Daga 22 of 242	
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Keysight Spectrum Analyzer - Occupied	BW						
L RF 50 Ω AC	CORREC	SENSE:INT	ALIGN AUTO	06:44:57 PI	4 Sep 17, 2020	Trace	Detector
	U	rig: Free Run Avo	Hold: 100/100	Radio Std:	None		
	#IFGain:Low #	Atten: 36 dB		Radio Dev	ice: BTS		
10 dB/div Ref 30.00 dE	3m						
20.0							
20.0		A March A March A March				c	lear Write
10.0	N market 1 (24) VV						
0.00	<u>/</u>						
-10.0			}				
			X				Average
-2010	\sim						Average
-30.0	,		6 Carol Some	-	mon min		
-40.0					- 1		
50.0							
-30.0							Max Hold
-60.0							
				0			
Center 2.310000 GHZ		40/DWL 200 LU-		Span 1	2.50 MHZ		
#Res BW 120 KHZ		#VBW 390KHZ		Swe	ep i ms		Min Hold
	141	Total Dawa		d Dun			
Occupied Bandwid	ath	rotar Powe	20.3	abm			
Δ	5170 MHz	,					Detector
							Peak▶
Transmit Freq Error	-1.765 kHz	2 % of OBW F	ower 99	.00 %		Auto	<u>Man</u>
x dB Bandwidth	4 925 MHz	x dB	-26 (00 dB			
	1020 1111		2010				
MSG			STATUS				
			SIAIOS				

Plot 7-8. Occupied Bandwidth Plot (LTE Band 30 - 5MHz 64-QAM - Full RB Configuration)



Plot 7-9. Occupied Bandwidth Plot (LTE Band 30 - 5MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	POTEST. Pous to be part of & starsest	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 22 of 242	
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LTE Band 7

🔤 Keysight Spectrum Analyzer - Occupi	ied BW						
ΙΧΟ L RF 50Ω	AC CORREC	SENSE:INT Center Freq: 2.5350 Trig: Free Run #Atten: 36 dB	ALIGN AUT 00000 GHz Avg Hold: 100/100	0 07:42:19 P Radio Std	M Sep 18, 2020 : None	Trace/D	etector
	WI Gam.Low						
10 dB/div Ref 30.00 d	dBm						
20.0	. Nieweek	te dawar March March					
10.0						Cle	ear Write
0.00	/						
-10.0	/		\				
-20.0 pole Manufarman MM	Andrew A		Jul why	Munor			Average
-30.0							
-50.0							
-61.0						N.	ax Hold
Center 2.53500 GHz #Res BW 470 kHz		#VBW 1.5 I	ИHz	Span 5 Swi	i0.00 MHz eep 1 ms	r	vin Hold
Occupied Bandw	vidth	Total F	ower 3	3.0 dBm			
Ballaw	17 002 M						Detector
	17.993 IV	п					Detector Peak►
Transmit Freq Error	r -10.503	kHz % of O	BW Power	99.00 %		Auto	Man
x dB Bandwidth	19.50	MHz xdB	-2	6.00 dB			
MSG			ST	TUS			

Plot 7-10. Occupied Bandwidth Plot (LTE Band 7 - 20MHz QPSK - Full RB Configuration)



Plot 7-11. Occupied Bandwidth Plot (LTE Band 7 - 20MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	PCTEST Proad to be part of & decent	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 24 of 242	
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Keysight Spectrum Analyzer - Occupied BV	V				
L RF 50 Ω AC	CORREC	SENSE:INT	ALIGN AUTO 07:42:5	6 PM Sep 18, 2020	Trace/Detector
	Cent	ter Freq: 2.535000000 GH	IZ Radio S	td: None	110000000000
	#IFGain:Low #Atte	en: 36 dB	Radio D	evice: BTS	
	an ouncon				
10 dB/div Ref 30.00 dBn	n				
Log					
20.0	montermont	Marth Margar Marth and Martin and Martin	~		Clear Write
10.0	/				
0.00					
10.0	 				
-10.0					_
	h		W White must		Average
-30.0				- managenetical and a	
-40.0					
50.0					
-50.0					Max Hold
-60.0				_	
Center 2.53500 GHz			Span	50.00 MHz	
#Res BW 470 kHz		#VBW 1.5 MHz	Si	veep 1ms	Min Hold
Occupied Bandwidt	:h	Total Power	33.0 dBm		
17	7 997 MH-				Detector
					Peak
Transmit Freq Error	-10.916 kHz	% of OBW Po	wer 99.00 %		Auto <u>Man</u>
x dB Bandwidth	10 50 MHz	v dP	26 00 dB		
	19.30 MITZ	X UD	-20.00 UB		
MSG			STATUS		

Plot 7-12. Occupied Bandwidth Plot (LTE Band 7 - 20MHz 64-QAM - Full RB Configuration)



Plot 7-13. Occupied Bandwidth Plot (LTE Band 7 - 20MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	POTEST. Pous to be part of & result	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 25 of 242	
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Keysight Spectrum Analyzer - Occupied BW						-	
L RF 50Ω AC	CORREC	SENSE:INT	ALIGN A	UTO 07:16:09 PM	1 Sep 18, 2020	Trace	Detector
		Center Freq: 2.53500 Trig: Free Run	AvalHold:>100/1	Radio Std:	None	11400	Detector
	#IFGain:Low	#Atten: 36 dB	Avginola.2100/1	Radio Devi	ice: BTS		
10 dB/div Ref 30.00 dBm							
20.0							
20.0	monorm	hyp-andrew look	mar mar			С	lear Write
10.0						-	
0.00	/		<u> </u>				
-10.0	/						
				к і			Average
20.0 AWWWWWWWWWWWWW	14-		"WV	հնանի տուսեր է	». I. I		Average
-30.0				· · · · · · · · · · · · · · · · · · ·	ABOLIN POLICI		
-40.0							
-50.0							
30.0							Max Hold
-60.0						_	
Center 2 53500 CHz				Span 3	7 50 MHz		
#Bac BM 360 kHz		#VRW 11N	147	Sharrow	ep 1 me		
WRCes DW JOO RITZ			1112	GWC	ep i llis		Min Hold
Occupied Bandwidth		Total P	ower	33.0 dBm			
Occupied Bandwidth		Total I	Ower .	55.0 ub m			
13.	516 MH	Z					Detector
							Peak▶
Transmit Freq Error	7.216 kH	z % of O	BW Power	99.00 %		Auto	Man
v dB Bandwidth	14 85 MH	z vdR		26.00 dB		_	
A dB Balldwidth	14.05 MI			-20.00 uB			
MSG			s	STATUS			

Plot 7-14. Occupied Bandwidth Plot (LTE Band 7 - 15MHz QPSK - Full RB Configuration)



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

FCC ID: A3LSMG996U	PCTEST [®] Prazi to be part of @ elevent	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 26 of 242	
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www.www.com analyzer - Occupied BW					
L RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO 07:16:59 P	M Sep 18, 2020	Trace/Detector
	Center Trig: F	r Freq: 2.535000000 GHZ	Radio Std	: None	
	#IFGain:Low #Atten	: 36 dB	Radio Dev	/ice: BTS	
10 dB/div Ref 30.00 dBm					
20.0					
10.0	m an and a second	month and shall be be and a second second			Clear Write
10.0					
0.00					
-10.0					
20.0			hand a star		Average
2000 March White war Aller and Alex and	1 m		white have been and the start of the second	monulal	
-30.0					
-40.0					
-50.0					Max Hold
60.0					Widx HUIU
-80.0					
Center 2,53500 GHz			Span 3	7.50 MHz	
#Res BW 360 kHz	#\	VBW 1.1 MHz	Swi	ep 1 ms	Min Hald
					win Hold
Occupied Bandwidth		Total Power	33.0 dBm		
Occupied Baildwidt					
13	.517 MHz				Detector
					Peak►
Transmit Freq Error	7.005 kHz	% of OBW Pow	ver 99.00 %		Auto <u>Man</u>
x dB Bandwidth	14 85 MHz	x dB	-26 00 dB		
	14.00 11112	A dB	20.00 48		
MSG			STATUS		

Plot 7-16. Occupied Bandwidth Plot (LTE Band 7 - 15MHz 64-QAM - Full RB Configuration)



Plot 7-17. Occupied Bandwidth Plot (LTE Band 7 - 15MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	POTEST. Pous to be part of & result	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
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🔤 Keysight Spectrum Analyzer - Occupied BW 🚽								
L RF 50Ω AC (ORREC	SENSE:INT		ALIGN AUTO	06:35:20 PI	M Sep 18, 2020	Trac	e/Detector
		Trig: Free Run	AvaiHold	· 100/100	Radio Std	None		
#	IFGain:Low	#Atten: 36 dB	, traji tera		Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dBm								
20.0							(Clear Write
20.0	promotion was a second	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	summe					
10.0								
0.00				1				
-10.0	1							Average
	d			A Acres 60	nh a sa a s			Ű
-200 Mary Wry Alen Mary W Card	/			A WANN	ጉሥምሌ	Mr. Mall		
-30.0								
-40.0								Max Hold
-50.0								
Center 2.53500 GHz					Span 2	5.00 MHz		
#Res BW 240 kHz		#VBW 750 k	Hz		Swe	ep 1 ms		Min Hold
Occupied Bandwidth		Total P	ower	33.1	dBm			
	100 MH	7						Detector
9.0		2						Peak
Transmit Freq Error	-9.506 kl	Hz % of OE	BW Pow	er 99	.00 %		Auto	Man
x dB Bandwidth	9.870 M	Hz xdB		-26.0	00 dB			
MSG				STATUS				

Plot 7-18. Occupied Bandwidth Plot (LTE Band 7 - 10MHz QPSK - Full RB Configuration)



Plot 7-19. Occupied Bandwidth Plot (LTE Band 7 - 10MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	PCTEST Pous to be part of @ elevant	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 20 of 242	
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Keysight Spectrum Analyzer - Occupied E	3W					
L RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	06:36:15 PM Se	ep 18, 2020	Trace/Detector
		Senter Freq: 2.535000 Trig: Free Pup	AvailHold: 100/100	Radio Std: No	one	
	#IEGain:Low #	Atten: 36 dB	Avginola. Tool too	Radio Device	BTS	
	an ounicon					
10 dB/div Ref 40.00 dB	m					
Log						
30.0						Clear Write
20.0		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Line Line			Ciedi Wille
10.0						
0.00			۲.			
0.00						
-10.0						Average
-20.0 1 K 1ka I A Martin Martin			Antesta	MAN MALINA	1.0 1 .	
M M M Prof M W M M M M M	-12- 11		and the second second	. አለ ለለዮላ	""hylakal	
-30.0						
-40.0						Max Hold
-50.0						
Center 2.53500 GHz				Span 25.0	00 MHz	
#Res BW 240 kHz		#VBW 750 kł	Ηz	Sweep) 1 ms	Min Hold
						Minitiona
Occupied Bandwid	th	Total Po	ower 33.	1 dBm		
	0400 1411					
9	.0109 MHz	2				Detector
	0.040.111			0.000		Peak►
Transmit Freq Error	-8.943 KH	z % of OB	W Power 99	9.00 %		Auto <u>Man</u>
x dB Bandwidth	9 878 MH	z xdB	-26	00 dB		
			20			
MSG			OTATU	e		
DOW			STATU	0		

Plot 7-20. Occupied Bandwidth Plot (LTE Band 7 - 10MHz 64-QAM - Full RB Configuration)



Plot 7-21. Occupied Bandwidth Plot (LTE Band 7 - 10MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	Trace to be part of S decrease	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Occupied BW	1				
💢 L RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO 05:33:27 P	PM Sep 18, 2020	Trace/Detector
	Cent	ter Freq: 2.535000000 GHz	Radio Sto	: None	Theorem
	#IEGain:Low #Att	en: 36 dB	Radio De	vice: BTS	
	an ouncou				
10 dB/div Ref 30.00 dBm	<u>ו ה</u>				
20.0	men man				Clear Write
10.0					
0.00			\		
-10.0					
			0.0.00	Day B	Average
20.0 Allow the man and the second and the second se	" \ ∕"		AND & MADA MAR	Y WWW/IW	Average
-30.0					
-40.0					
-50.0					Mary Hald
					Max Hold
-60.0					
Center 2 535000 GHz			Snan '	12.50 MHz	
#Res BW/ 120 kHz		#\/B\A/_390.kHz	Swi	een 1ms	
#RC3 BW 120 KH2		#VDVV 330 KHZ	011	cep mis	Min Hold
Occupied Pandwidt	h	Total Power	33 4 dBm		
Occupied Ballowide			00.4 dBm		
4.	5353 MHz				Detector
					Peak►
Transmit Freq Error	4.931 kHz	% of OBW Pov	ver 99.00 %		Auto <u>Man</u>
x dB Bandwidth	5 015 MHz	x dB	-26 00 dB		
	0.010 11112		20.00 48		
MSG			STATUS		
			014100		

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



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

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🔤 Keysight Spectrum Analyzer - Occupied BW 👘								
L RF 50Ω AC CO	DRREC	SENSE:INT	AL	IGN AUTO	05:34:14 PI	M Sep 18, 2020	Trace	e/Detector
		Trig: Free Run	AvalHold: 1	100/100	Radio Std	None		
#1	FGain:Low	#Atten: 36 dB	, ang i norta i n		Radio Dev	ice: BTS		
10 dB/div Ref 30.00 dBm								
20.0								
49.9	mon	when how we have the	mont				0	Clear Write
10.0			l l					
0.00								
-10.0			├ ───					
-20.0	<i>[</i>		Ι \	,				Average
www.www.c. a. providence				Mun Mun M	maller	mumm		-
-30.0								
-40.0								
-50.0								Max Hold
-60.0								
Center 2.535000 GHz					Span 1	2.50 MHz		
#Res BW 120 kHz		#VBW 390 k	Hz		Swe	ep 1 ms		Min Hold
Occupied Bandwidth		l otal P	ower	31.0	dBm			
4 53	318 MH	7						Detector
4.00								Peak▶
Transmit Freq Error	-3.941 kl	Hz % of O	SW Power	99.	00 %		Auto	Man
x dB Bandwidth	5 014 MI	z x dB		-26 0	0 dB			
	01011111			2010				
MSG				STATUS				

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



Plot 7-25. Occupied Bandwidth Plot (LTE Band 7 - 5MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U		PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
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LTE Band 41(PC2)



Plot 7-26. Occupied Bandwidth Plot (LTE Band 41(PC2) - 20MHz QPSK - Full RB Configuration)



Plot 7-27. Occupied Bandwidth Plot (LTE Band 41(PC2) - 20MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	PCTEST Proad to be part of & decent	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Daga 22 of 242	
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www.commercenter.commercenter.commercenter.commercenter.commercenter.commercenter.commercenter.commercenter.com							[- ē 🔀
LXI RF 50 Ω DC (CORREC	SENSE:INT	00000 GHz	ALIGN AUTO	01:58:09 A	M Oct 09, 2020	Trace	/Detector
	·•·	Trig: Free Run	Avg Hold	: 100/100				
	IFGain:Low	#Atten: 36 dB			Radio Dev	ICE: BTS		
10 dB/div Ref 30.00 dBm								
20.0								
10.0	Manan	Ŀᡣᢩ᠆᠆ᡰ᠘ᡗᠱᢌᢛᢪᠧᢎᠯᡣᡆ ᠯ ᡦᢪ᠇ᠧᡍᡜᢥᡗᢌᢏᡁ <mark>ᢪᠧᡒᠮ</mark> ᡭ	manershipshy				C	clear Write
0.00								
-10.0			<u> </u>	Į				
-20.0	h.			N				Average
-30.0 whether here and burn have a south and the south and the	····			and the states of the	Muthalaf	harderly		
-40.0								
-50.0								Max Hold
-60.0								Maxilolu
Center 2.59300 GHz		#\/D\M/ 4.5.0	11J-		Span 5	0.00 MHz		
#Res BW 470 KHZ		#VDVV 1.01	ИПZ		SWE	ep mis		Min Hold
Occupied Bandwidth		Total F	Power	30.6	dBm			
17	913 ML	7						Detector
		12						Peak►
Transmit Freq Error	-7.588 k	Hz % of O	BW Powe	er 99	.00 %		Auto	<u>Man</u>
x dB Bandwidth	19.58 M	Hz xdB		-26.	00 dB			
MSG				STATUS				

Plot 7-28. Occupied Bandwidth Plot (LTE Band 41(PC2) - 20MHz 64-QAM - Full RB Configuration)



Plot 7-29. Occupied Bandwidth Plot (LTE Band 41(PC2) - 20MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U		PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Occupied BW						
LXI RF 50 Ω DC	CORREC	SENSE:INT	ALIGN AUTO	03:48:51 AM O	ct 24, 2020	Trace/Detector
		Trig: Free Run	Avg Hold: 100/100	Radio Sta. Re	one	
	#IFGain:Low	#Atten: 30 dB		Radio Device	BTS	
10 dB/div Ref 40.00 dBm						
20.0						Clear Write
20.0	and the second	الماري والهور حليهم ومرجب والمطاور	marthan			
10.0	1					
0.00						_
-10.0	1		<u> </u>			Average
-20.0 Munipungungan and Marine and	1///			mon man man	Alexa line	
-30.0						
-40.0						Max Hold
-50.0						
Center 2.59300 GHz		#\/D\M 4.4 M	111-7	Span 37.	50 MHz	
#Res BW JOO KHZ		#VDVV 1.11V	INZ	Sweet	<u>, , , , , , , , , , , , , , , , , , , </u>	Min Hold
Occupied Bandwidth	1	Total P	ower 34.	7 dBm		
12	106 ML	1-				Detector
	.490 MIF	12				Detector Peak▶
Transmit Freq Error	5.232 k	Hz % of O	BW Power 9	9.00 %	A	uto <u>Man</u>
x dB Bandwidth	14.57_M	Hz x dB	-26	.00 dB		
			20			
MSG			STATU	JS		

Plot 7-30. Occupied Bandwidth Plot (LTE Band 41(PC2) - 15MHz QPSK - Full RB Configuration)



Plot 7-31. Occupied Bandwidth Plot (LTE Band 41(PC2) - 15MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	POTEST. Pous to be part of & risecset	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dogo 24 of 242	
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Keysight Spectrum Analyzer - Occupied BW							- ē 💌
KF 50 Ω DC	CORREC	SENSE:INT	ALIGN AUTO	03:50:07 A	M Oct 24, 2020	Trace	Detector
		rig: Free Run Av	/g Hold:>100/100				
	#IFGain:Low #/	Atten: 30 dB		Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dBm							
30.0							
20.0						C	lear Write
10.0	and a second	ĸ᠆ᢔᢉᡛᠯᡗᢇᡩᡀ ᡨ ᡘᡣᢑᠢᡘᡊᡅᡡᢩ᠆ᡰᠬ᠆᠈ᢞᡕᡘᠳᢞ᠔ᡒᡗᡟᡣᠬ	-				
	/						
-10.0							Average
20.0			A shall.				rtroruge
20.0 http://www.www.www.				www.www.www.	willing		
-30.0					R		
-40.0							Max Hold
-50.0						-	
Center 2.59300 GHz				Span 3	7.50 MHz		
#Res BW 360 kHz		#VBW 1.1 MHz		Swe	ep 1ms		Min Hold
		Tatal Daw) al Dura			
Occupied Bandwidt	n 	I otal Pow	er 33.0	JaBm			
13.463 MHz							Detector
Transmit From Error	1 956 644	% of OBW	Power 00	0 0 0 %		Auto	Peak▶ Man
Transmit Freq Entor	1.030 KHZ		Fower 5a	9.00 /0		Auto	man
x dB Bandwidth	14.62 MHz	x dB	-26.	.00 dB			
MSG			STATU	s			

Plot 7-32. Occupied Bandwidth Plot (LTE Band 41(PC2) - 15MHz 64-QAM - Full RB Configuration)



Plot 7-33. Occupied Bandwidth Plot (LTE Band 41(PC2) - 15MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	POTEST. Pous to be part of & risecset	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied BW					
L RF 50 Ω AC	CORREC	SENSE:INT	ALIGN AUTO	08:33:22 PM Sep 17, 2020	Trace/Detector
	Cent	ter Freq: 2.593000000 GH	lz Ra	adio Std: None	Trace/Delector
	#IECain:Low #Attr	en:30 dB	1010: 100/100 R:	adio Device: BTS	
	#IFGalli.LOW #/tex	cm. 00 uB		allo Device. Dito	
10 dB/div Ref 30.00 dBm	1				
Log					
20.0	m	mannen	<u></u>		Clear Write
10.0					Clear write
0.00			X .		
0.00	/		N N		
-10.0					
-20.0 -20.0	l'		ur was proceeding	the source of the second se	Average
-30.0					
10.0					
-40.0					
-50.0					Max Hold
-60.0					
Center 2.59300 GHz			Ś	Span 25.00 MHz	
#Res BW 240 kHz		#VBW 750 kHz		Sweep 1 ms	Min Hold
				· · ·	IMILI HOIU
Occupied Bandwidt	h	Total Power	33.0 d	Bm	
Occupied Ballamat					
9.	0353 MHz				Detector
					Peak►
Transmit Freq Error	11.451 kHz	% of OBW Po	ower 99.00	0 %	Auto <u>Man</u>
x dB Bandwidth	9 937 MHz	x dB	-26.00	dB	
	5.557 MILE	A UD	-20100	uВ	
			27.17.10		
MSG			STATUS		

Plot 7-34. Occupied Bandwidth Plot (LTE Band 41(PC2) - 10MHz QPSK - Full RB Configuration)



Plot 7-35. Occupied Bandwidth Plot (LTE Band 41(PC2) - 10MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	POTEST. Pous to be part of & starsest	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied B ¹	N				
R F 50 Ω DC	CORREC	SENSE:INT Center Freq: 2.5930000 Trig: Free Run	ALIGN AUTO 00 GHz AvalHold:>100/100	02:02:12 AM Oct 09, 2020 Radio Std: None	Trace/Detector
	#IFGain:Low	#Atten: 36 dB		Radio Device: BTS	_
10 dB/div Ref 30.00 dBr	n				
20.0	phahawara	mannon	-Man Ma		Clear Write
0.00					
-10.0	f				
-20.0	AV.		William	allulah and making and	Average
-40.0					
-50.0					Max Hold
Center 2 50300 CHz				Span 25.00 MH	
#Res BW 240 kHz		#VBW 750 kH	z	Sweep 1 ms	Min Hold
Occupied Bandwid	th	Total Po	wer 30.3	3 dBm	
9.	0032 MH	Z			Detector Peak
Transmit Freq Error	-12.795 k	Hz % of OB	V Power 99	0.00 %	Auto <u>Man</u>
x dB Bandwidth	9.826 M	Hz x dB	-26.	00 dB	
MSG			STATUS	3	

Plot 7-36. Occupied Bandwidth Plot (LTE Band 41(PC2) - 10MHz 64-QAM - Full RB Configuration)



Plot 7-37. Occupied Bandwidth Plot (LTE Band 41(PC2) - 10MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U		PART 27 MEASUREMENT REPORT	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied BW									
LX RF 50 Ω AC	CORREC	SENSE:	INT		ALIGN AUTO	07:59:00 P	M Sep 17, 2020	Trac	e/Detector
		Center Freq:	2.593000	000 GHz	4. 400/400	Radio Std	: None	ITAC	elDelector
	HECain:Low	#Atten: 36 d	un B	Avginoid	100/100	Radio Dev	rice: BTS		
	#IFGaIII.LOW	#rttern: oo u	-			Itaalo Bel	100. 0 10		
10 dB/div Ref 30.00 dBm									
Log									
20.0		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	$\sim \sim \sim \sim$	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					
10.0									Clear Write
0.00	/			١	5				
0.00					1				
-10.0	N				λ				
-20.0 -AwA r have r have really have the real of the	/				march	many	W Abox		Average
20.0							· UN You		-
-30.0									
-40.0									
-50.0									
60.0									Maxinoiu
-80.0								_	
Center 2 593000 GHz						Snan 1	2.50 MHz	_	
#Pes BM 120 kHz		#\/R\M	300 ki	47		Swe	en 1 me		
TZO KIIZ			330 N	12		0440	cp ma		Min Hold
Occupied Bandwidth		т	otal Pr	wer	33 (dBm			
Occupied Bandwidth				WGI	55.0				
4.5	428 MH	Z							Detector
									Peak►
Transmit Freg Error	3.591 k	Hz %	of OB	W Pow	er 99	9.00 %		Auto	Man
x dB Bandwidth	5.010 M	Hz X	dB		-26.	00 dB			
MSG					STATU	S			

Plot 7-38. Occupied Bandwidth Plot (LTE Band 41(PC2) - 5MHz QPSK - Full RB Configuration)



Plot 7-39. Occupied Bandwidth Plot (LTE Band 41(PC2) - 5MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	PCTEST Poud to be part of & riemant	PART 27 MEASUREMENT REPORT	MSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 20 of 242	
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Plot 7-40. Occupied Bandwidth Plot (LTE Band 41(PC2) - 5MHz 64-QAM - Full RB Configuration)



Plot 7-41. Occupied Bandwidth Plot (LTE Band 41(PC2) - 5MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	POTEST. Pous to be part of & starsest	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
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LTE Band 41(PC3)/38



Plot 7-42. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 20MHz QPSK - Full RB Configuration)



Plot 7-43. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 20MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U		PART 27 MEASUREMENT REPORT	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied	BW						×
LXI RL RF 50Ω DC	CORREC	SENSE:INT	ALIGN AL	JTO 01:44:45 AM	1 Oct 23, 2020	Trace/Detector	_
	• • -	Trig: Free Run	Avg Hold: 100/10	Radio Std.	None		
	#IFGain:Low	#Atten: 36 dB		Radio Devi	ce: BTS		
10 dB/div Ref 40.00 dB	m						
Log							
30.0						Clear Wri	ite
20.0	1	materialen and the have the	The second se			ercui mi	
10.0							
0.00	/		<u> </u>				
-10.0						Avera	ge
-20.0							
-30.0 - margarettalestary anorthe more	and performing		i surolla	hand all the service of the service	. Apply and the second s		
-40.0						Mayella	
50.0						махно	na
-30.0							
Center 2.59300 GHz				Span 5	0.00 MHz		
Res BW 470 kHz		#VBW 1.5 M	Hz	Swe	ep 1 ms	Min Ho	bld
		T-4-LD					
Occupied Bandwid	ith	l otal P	ower 3	30.4 aBM			
1	7.908 MH	Z				Detect	or
	0.744			00 00 0/		Peal	k►
I ransmit Freq Error	-3./14 k	(HZ % OF OE	SW Power	99.00 %		Auto <u>M</u>	an
x dB Bandwidth	19.44 M	Hz x dB	-	26.00 dB			
MSG			12	TATUS			
			5	ini oo			

Plot 7-44. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 20MHz 64-QAM - Full RB Configuration)



Plot 7-45. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 20MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	Trace to be part of S decrease	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Occupied	BW				_ ē 🔀
LX/RL RF 50Ω DC	CORREC	SENSE:INT	ALIGN AUTO	01:10:43 AM Oct 23, 2020	Trace/Detector
	- -	Trig: Free Run	Avg Hold:>100/100	Radio Sta. None	
	#IFGain:Low	#Atten: 36 dB		Radio Device: BTS	-
10 dB/div Ref 40.00 dE	sm				
20.0					Clear Write
10.0	mon	and the second second second second	utreasury		
10.0			l l		
10.00	/				Average
-10.0	- José		5.0 A. A.	A I	Average
-20.0 Topur and a state of the second	~~~~		200 C - 14	at the first was the manager of the of the	
-30.0					
-40.0					Max Hold
-50.0					
Center 2 59300 GHz				Span 37 50 MHz	
Res BW 360 kHz		#VBW 1.1 MF	iz	Sweep 1 ms	Min Hold
					WIIITIOIG
Occupied Bandwic	lth	Total Po	wer 32.7	dBm	
1	3.551 MF	z			Detector
					Peak►
Transmit Freq Error	16.437 k	Hz % of OB	W Power 99	0.00 %	Auto <u>Man</u>
x dB Bandwidth	16.14 M	Hz x dB	-26.	00 dB	
MSG			STATUS	8	

Plot 7-46. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 15MHz QPSK - Full RB Configuration)



Plot 7-47. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 15MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U		PART 27 MEASUREMENT REPORT	Approved by: Quality Manager
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Keysight Spectrum	Analyzer - Occ	upied BW										- 0 ×
LXIRL R	F 50 Ω	DC CO	RREC	SE	NSE:INT	0000 CH-	A	LIGN AUTO	01:11:11 A	M Oct 23, 2020	Trac	e/Detector
				Trig: Fre	e Run	Avg Hol	d:>	100/100	Radio Sta	None		
		#IF	Gain:Low	#Atten: 3	36 dB				Radio Dev	ice: BTS		
10 dB/div	Ref 40.00) dBm										
Log												
30.0												Noar Write
20.0					4							SICAI WIIIC
10.0			min	and a share the street	ייידיאייניייניין, ד'אלא	and the second						
0.00			/				-					
-10.0			1				١,					Average
20.0			Í				l					
-20.0	. C	rhandham					١	any many la	Unlynn			
-3U.U										and and a share and a share a s		
-40.0												Max Hold
-50.0												
Conton 2 502	00.011-								0	7 50 8411-		
Center 2.593	UU GHZ			#\/	BW 11M	H 7			Span 3	7.30 WINZ		
Res DW J00	KHZ			<i></i>		112			GWC	ep mis		Min Hold
Occupie	d Band	width			Total P	ower		30.1	dBm			
Becapic	a-Bulla	40.4	00 M									
		13.4	82 M	ΠZ								Detector
Transmit	Freq Err	or	-4.053	kHz	% of OE	3W Pow	/e	r 99	.00 %		Auto	Man
x dB Band	width		14.72	/Hz	x dB			-26	00 dB			
			14.121					20.				
MSG								STATUS				

Plot 7-48. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 15MHz 64-QAM - Full RB Configuration)



Plot 7-49. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 15MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	Trust to be part of 🛞 element	PART 27 MEASUREMENT REPORT	ING	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 42 of 242	
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🔤 Keysight Spectrum Analyzer - Occupied B	W						×
LXI RL RF 50Ω DC	CORREC	SENSE:INT	ALIGN AL	JTO 01:07:21 A	M Oct 23, 2020	Trace/Detect	or
		Trig: Free Run	Avg Hold: 100/10	Radio Std:	None		
	#IFGain:Low	#Atten: 36 dB		Radio Dev	ice: BTS		
10 dB/div Ref 30.00 dB	m						
Log							
20.0		๛๛๚๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛	mum			Clear W	Irite
10.0	/					cical H	
0.00	<u>/</u>		<u> </u>				
-10.0			└─── \				
-20.0 -20.0	hand		"Margare	malantin	mhilan	Aver	age
-30.0							
-40.0							
-50.0						March	
60.0						MaxH	1010
-00.0							
Center 2.59300 GHz				Span 2	5.00 MHz		
Res BW 240 kHz		#VBW 750 k	Hz	Swe	ep 1 ms	Min H	lold
		T-4-1 B					
Occupied Bandwid	th	l otal P	ower :	52.6 aBM			
9.	.0188 MI	IZ				Dete	ctor
	4.040			00 00 0/		Pe	eak►
Fransmit Freq Error	1.243 k	HZ % of O	BW Power	99.00 %		Auto	<u>wan</u>
x dB Bandwidth	9.863 M	Hz x dB	-	26.00 dB			
MSG			0	TATUS			
mod			5	14105			

Plot 7-50. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 10MHz QPSK - Full RB Configuration)



Plot 7-51. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 10MHz 16-QAM - Full RB Configuration)

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Keysight Spectrum Analyzer - Occupied BW								- 6 💌
LXI RL RF 50 Ω DC C	ORREC	SENSE:INT		LIGN AUTO	01:07:55 A	MOct 23, 2020	Trac	e/Detector
		 Trig: Free Run 	Avg Hold: 1	100/100	Radio Stu.	None		
#I	FGain:Low	#Atten: 36 dB			Radio Dev	ice: BTS		
10 dB/div Ref 30.00 dBm								
20.0	mound	www.prossalations/have/16/16	man				(Clear Write
10.0			N I					
0.00								
-10.0	/		+					
-20.0	K		+	ha				Average
-30.0 Mahahala and many hand				A London Market In Real	-พ.ร.เพษโหรรณ	Marrie Marriel		
-40.0								
-50.0								Max Hold
-60.0								Muxitoru
Center 2.59300 GHz					Span 2	5.00 MHz		
Res BW 240 kHz		#VBW 750	(Hz		Swe	ep 1 ms		Min Hold
Occupied Bandwidth		Total F	ower	30.0	dBm			
				50.0	abiii			
9.00	J37 MF	IZ						Detector
Transmit Fred Error	-2 207 k	(Hz % of O	RW Power	r 99	00 %		Auto	Peak⊫ Man
	-2.201							
x dB Bandwidth	9.868 M	Hz xdB		-26.0)0 dB			
MSG				STATUS				

Plot 7-52. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 10MHz 64-QAM - Full RB Configuration)



Plot 7-53. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 10MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	POTEST. Pous to be part of & risessed	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager
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🤤 Keysight Spectrum Analyzer - Occupied BV	V				
LX RL RF 50 Ω DC	CORREC	SENSE:INT	ALIGN AUTO	12:49:48 AM Oct 23, 2020	Trace/Detector
		Trig: Free Run	Avg Hold: 100/100	Radio Std: None	
	#IFGain:Low	#Atten: 36 dB		Radio Device: BTS	
10 dB/div Ref 30.00 dBn	n				
Log					
20.0		www.www.www.	m		Clear Write
10.0					orear mine
0.00			<u> </u>		
-10.0			<u>\</u>		
-20.0	~~~~		1 hread and a second	mahul Angle	Average
-30.0				- AN ANY	
-40.0					
50.0					
-50.0					Max Hold
-60,0					
Center 2.593000 GHz				Span 12.50 MHz	
Res BW 120 kHz		#VBW 390 k	Hz	Sweep 1 ms	Min Hold
					Wiinthold
Occupied Bandwidt	h	Total P	ower 32.4	dBm	
4	5070 MI	17			Detector
					Peak▶
Transmit Freq Error	3.624	KHZ % of OE	3W Power 99	.00 %	Auto <u>Man</u>
x dB Bandwidth	4.992 N	Hz xdB	-26.	00 dB	
MSG			STATUS	5	

Plot 7-54. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 5MHz QPSK - Full RB Configuration)



Plot 7-55. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 5MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	Trace to be part of S decrease	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager
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Plot 7-56. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 5MHz 64-QAM - Full RB Configuration)



Plot 7-57. Occupied Bandwidth Plot (LTE Band 41(PC3)/38 - 5MHz 256-QAM - Full RB Configuration) NR Band n30

FCC ID: A3LSMG996U		PART 27 MEASUREMENT REPORT	NG	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Occupied BV	N					=	
💢 RL RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	01:30:04 PM	Oct 27, 2020	Tracell	Detector
	Center	r Freq: 2.310000000 GH	Z	Radio Std:	None	Tracen	Delector
	#IEGain:Low #After	reekun Avgi⊓ n:36 dB	010: 100/100	Radio Devi	e: BTS		
	#IT Gam.Low						
10 dB/div Ref 30.00 dBr	n j						
Log							_
20.0							e e v Muite
10.0						CI	earwrite
0.00							
0.00			A l				
-10.0	كعر			- 1			
-20.0			Www.www.	Northern			Average
30.0 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.					Marken and		
(2.2)							
-40.0							
-50.0						1	Max Hold
-60.0							
Center 2.31000 GHz				Span 25	.00 MHz		
Res BW 240 kHz	#	VBW 750 kHz		Swee	ep 1 ms		Min Hold
							Mintholu
Occupied Bandwidt	h	Total Power	32.2	dBm			
8.	9/82 MHZ						Detector
							Peak▶
Transmit Freq Error	-163.64 kHz	% of OBW Po	wer 99.	00 %		Auto	Man
x dB Bandwidth	9 684 MHz	x dB	-26 0	0 dB			
	0.004 11112		20.0				
100			OTATIO				
MSG			STATUS				

Plot 7-58. Occupied Bandwidth Plot (NR Band n30 - 10MHz π/2 BPSK - Full RB Configuration)



Plot 7-59. Occupied Bandwidth Plot (NR Band n30 - 10MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG996U	POTEST. Poas to be part of & viewest	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager			
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Keysight Spectrum Analyzer - Occupied B	N						
LXI RE 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	01:28:49 PM	Oct 27, 2020	Tracell	Detector
		Senter Freq: 2.310000	Availed: 100/100	Radio Std: I	None	114001	50100101
	#IFGain:Low #	Atten: 36 dB	Avginola. 100/100	Radio Devid	e: BTS		
	in ouncon						
10 dB/div Ref 30.00 dB	n <u> </u>						
Log							
20.0		-harmon	~~~~			CI	ear Write
10.0						•••	
0.00							
-10.0							
	A.M. MY		Va.	n			Average
-20.0			1 بىرىمىر يە	How Ward have	MMM Com		Average
-30.0							
-40.0							
-50.0							lov Llold
							viax Hold
-60.0						_	
Cepter 2 31000 GHz				Snan 25	00 MHz		
Res BM/ 240 kHz		#VBM 750 kH	17	Swee	n 1 ms		
		» (BR 100 R	14	01101	sh i ilia		Min Hold
Occupied Bandwid	th	Total Po	wer 30.0) dBm			
Occupied Balluwid							
8.	<u>9854 MHz</u>						Detector
							Peak►
Transmit Freq Error	-193.09 kH	z % of OB	W Power 99	0.00 %		Auto	Man
x dB Bandwidth	9 744 MH	z x dB	-26	00 dB			
	011 44 1111		20.				
MSG			STATU	5			
			or Arto				

Plot 7-60. Occupied Bandwidth Plot (NR Band n30 - 10MHz 16-QAM - Full RB Configuration)



Plot 7-61. Occupied Bandwidth Plot (NR Band n30 - 10MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMG996U		PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Occupied E	3W						
💢 RL RF 50Ω AC	CORREC	SENSE:INT	ALIGN A	UTO 01:28:00 P	M Oct 27, 2020	Trace	Detector
	Cen	ter Freq: 2.3100000	0 GHz	Radio Std	None	mace	Detector
	#EGain:Low #Att	en: 36 dB		Radio Dev	ice: BTS		
	In Guin.20W						
10 dB/div Ref 30.00 dB	m						
Log							
20.0						· ·	lear Write
10.0	- Jamman	Common and the second s	~~				
0.00	/		<u>\</u>				
-10.0							
-10.0	4		ι (A
-20.0	JHN ^T		Whow.	mun			Average
-30.0 mouth and a second and a second						_	
-40.0							
50.0							
-30.0							Max Hold
-60.0							
				0			
Center 2.31000 GHz		40000 750 LU		span 2	5.00 MHZ		
Res BW 240 KHZ		#VEVV 750 KH2		SWE	ep i ms		Min Hold
	41-	Total Pau		26.0.dBm			
Occupied Bandwid	th	TOTAL POV	ver /	20.9 UBIII			
8	.9521 MHz						Detector
							Peak►
Transmit Freq Error	-192.28 kHz	% of OBW	Power	99.00 %		Auto	Man
	0 700 MUL			20.00			
X dB Bandwidth	9.739 MHZ	X dB		-26.00 aB			
MSG			S	STATUS			

Plot 7-62. Occupied Bandwidth Plot (NR Band n30 - 10MHz 256-QAM - Full RB Configuration)



Plot 7-63. Occupied Bandwidth Plot (NR Band n30 - 5MHz π/2 BPSK - Full RB Configuration)

FCC ID: A3LSMG996U	POTEST. Poas to be part of & viewest	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager			
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- Keysight Spectrum Analyzer - Occupied BW							- 7 💌
LX/ RL RF 50Ω AC (CORREC	SENSE:INT	ALIGN	AUTO 02:25:22 P	M Oct 27, 2020	Trace	/Detector
		Center Freq: 2.31000	AvaiHold: 100/	Radio Std /100	: None		
#	FGain:Low	#Atten: 36 dB	, angli terati tera	Radio Dev	ice: BTS		
10 dB/div Ref 30.00 dBm							
20.0							
10.0	m	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				C	lear Write
10.0							
0.00			\square				
-10.0			<u>├</u>				
-20.0 m	<u>۲</u>		<u> </u>	ha dia m			Average
30 0 marth marth white a				ANNY IN Now	mon of my		
(0.0							
-40.0							
-50.0							Max Hold
-60.0							
Center 2.310000 GHz				Span 1	2.50 MHz		
Res BW 120 kHz		VBW 1.2 M	IZ	Swe	eep 1 ms		Min Hold
Occupied Bandwidth		l otal P	ower	30.0 dBm			
4 5	056 MH	7					Detector
1.0							Peak▶
Transmit Freq Error	-12.161 kH	lz % of Ol	3W Power	99.00 %		Auto	<u>Man</u>
x dB Bandwidth	5.073 MH	z x dB		-26.00 dB			
				20100 012			
MSG				STATUS			

Plot 7-64. Occupied Bandwidth Plot (NR Band n30 - 5MHz QPSK - Full RB Configuration)



Plot 7-65. Occupied Bandwidth Plot (NR Band n30 - 5MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	PCTEST Road to be part of @ idense	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager		
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Keysight Spectrum Analyzer - Occupied BV	N					_	
LXI RE 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	02:24:36 PI	M Oct 27, 2020	Trace	Detector
	Cei	nter Freq: 2.310000000	GHZ alHold: 100/100	Radio Std:	None	11000	Deteotor
	#IEGain:Low #Af	tten: 36 dB	ginola. 100/100	Radio Dev	ice: BTS		
	an ounicon						
10 dB/div Ref 40.00 dBr	n						
Log							
30.0						c	lear Write
20.0						Ŭ	
10.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	\cdots	~~				
0.00	i <u>/</u> .						
0.00			۲,				_
-10.0							Average
-20.0			- Arm A	n			
3 monto allow and and			~~~	Vhander	www.muy		
-30.0							
-40.0							Max Hold
-50.0							
Center 2.310000 GHz				Span 1	2.50 MHz		
Res BW 120 kHz		VBW 1.2 MHz		Swe	ep 1 ms		Min Hold
Occupied Bandwidt	th	Total Powe	er 29.9	9 dBm			
	5170 MH-						Detector
4.							Peak
Transmit Freq Error	-24.397 kHz	% of OBW	Power 99	9.00 %		Auto	Man
x dB Bandwidth	5 013 MHz	x dB	-26	00 dB			
	5.015 1112	A UD	-20				
MSG			STATU	s			
			31410				

Plot 7-66. Occupied Bandwidth Plot (NR Band n30 - 5MHz 64-QAM - Full RB Configuration)



Plot 7-67. Occupied Bandwidth Plot (NR Band n30 - 5MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	POTEST. Pous to be part of & starsest	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager			
Test Report S/N:	Test Dates:	EUT Type:	Daga 52 of 242			
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NR Band n41

Keysight Spectrum Analyzer - Occupied B	W							
💢 RLT RF 50Ω AC	CORREC	SENSE:INT	0000 CH-	ALIGN AUTO	03:10:16 P	M Oct 22, 2020	Trac	e/Detector
		ia: Free Run	AvalHold:	>100/100	Radio Std:	None		
	#IFGain:Low #/	Atten: 36 dB	. .		Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dB	m							
Log								
30.0								Cloar Write
20.0		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	······					Siear write
10.0								
0.00								
10.0								Average
				L.	~ ~~			
-20.0					WL PART OF			
-30.0								
-40.0								Max Hold
-50.0								
					A A			
Center 2.5930 GHZ		#\/D\// 0 MU	-		Span 2	SULU IVIHZ		
Res BW 2.4 MHz			2		Swe	ep mis		Min Hold
Occupied Bandwid	th	Total P	ower	35.1	dBm			
Cocupied Ballania								-
9	1.032 MHZ							Detector
Transmit Freq Error	-642.59 kHz	% of O	BW Powe	er 99.	00 %		Auto	Man
x dB Bandwidth	102.6 MHz	x dB		-26.0	0 dB			
ļ								
MSG				STATUS				

Plot 7-68. Occupied Bandwidth Plot (NR Band n41 - 100MHz π/2 BPSK - Full RB Configuration)



Plot 7-69. Occupied Bandwidth Plot (NR Band n41 - 100MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG996U		PART 27 MEASUREMENT REPORT		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 52 of 242
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🔤 Keysight Spectrum Analyzer - Occupied BW						[- 0 🗙
💢 RLT RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	03:12:14 P	M Oct 22, 2020	Trace	Detector
	Cente Tria:	Free Run A	valHold: 100/100	Radio Std	: None		
	#IFGain:Low #Atte	n: 36 dB		Radio Dev	vice: BTS		
10 dBidiy Ref 40 00 dBm	•						
Log	· · · · · · · · · · · · · · · · · · ·						_
30.0							le en Muite
20.0						Ľ	lear write
10.0							
0.00							
10.0							Average
-10.0			h		والتعريب ومكاور		Average
-20.0				And a state of the	and works of		
-30.0							
-40.0							Max Hold
-50.0							
Center 2.5930 GHz				Span 2	50.0 MHz		
Res BW 2.4 MHz	7	¢VBW 8 MHz		Swe	eep 1 ms		Min Hold
		Total Daw		o al Dana			
Occupied Bandwidt	n	Total Fow	er 32.	эавт			
97	.714 MHz						Detector
							Peak▶
Transmit Freq Error	-97.611 kHz	% of OBW	Power 99	9.00 %		Auto	<u>Man</u>
x dB Bandwidth	103.7 MHz	x dB	-26	.00 dB			
MSG			STATU	s			

Plot 7-70. Occupied Bandwidth Plot (NR Band n41 - 100MHz 16-QAM - Full RB Configuration)



Plot 7-71. Occupied Bandwidth Plot (NR Band n41 - 100MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	PCTEST Pous to be part of & elevent	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager			
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Keysight Spectrum Analyzer - Occupied BV	V					
LXI RLT RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO 03:13:28	PM Oct 22, 2020	Trace/I	Detector
	Trig: F	Free Run Avg Hol	d: 100/100	a: None		
	#IFGain:Low #Atter	1: 36 dB	Radio De	vice: BTS		
10 dB/div Ref 30 00 dBr	n					
Log						_
20.0						10/
10.0		m halman and			CI	earwrite
0.00						
-10.0						
20.0	المب					Average
-20.0			how when the work	moleson work		Arciuge
-30.0						
-40.0						
-50.0						Max Hold
-60.0					-	
Center 2.5930 GHz			Span	250.0 MHz		
Res BW 2.4 MHz	#	VBW 8 MHz	SW	eep 1 ms		Min Hold
		Total Bawar	20.6 dBm			
Occupied Bandwidt	in	rolar Fower	29.0 UBIII			
97	7.709 MHz					Detector
						Peak▶
Transmit Freq Error	-135.52 kHz	% of OBW Pow	ver 99.00 %		Auto	Man
x dB Bandwidth	103.8 MHz	x dB	-26.00 dB			
MSG			STATUS			

Plot 7-72. Occupied Bandwidth Plot (NR Band n41 - 100MHz 256-QAM - Full RB Configuration)



Plot 7-73. Occupied Bandwidth Plot (NR Band n41 - 90MHz π/2 BPSK - Full RB Configuration)

FCC ID: A3LSMG996U	PCTEST Proud to be part of @ elessent	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage EE of 242	
1M2009140143-21-R1.A3L	09/15/2020 – 12/10/2020 Portable Handset			
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Keysight Spectrum Analyzer - Occupied BV	V						
LXI RLT RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	03:02:10 P	M Oct 22, 2020	Trace	Detector
	Cent	Free Run Avail	⊓z Hold: 100/100	Radio Std	None		
	#IFGain:Low #Atte	en: 36 dB		Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dBn	n			1			
30.0							
20.0						c	lear Write
20.0	and and a manufacture of the second s	grander and the second second	* ***				
10.0							
0.00			<u>\</u>				
-10.0							Average
20.0	ww		Bullinger all		La bound bull		
20.0 Wy Bhar and				And and the second s			
-30.0							
-40.0							Max Hold
-50.0							
Center 2.5930 GHz				Span 2	25.0 MHz		
Res BW 2.2 MHz	1	#VBW 8 MHz		Swe	ep 1 ms		Min Hold
Occupied Bandwidt	h	Total Power	32.4	l dBm			
20	8 050 MHz						Detector
00							Peak▶
Transmit Freq Error	-120.12 kHz	% of OBW P	ower 99	0.00 %		Auto	Man
x dB Bandwidth	93.05 MHz	x dB	-26	00 dB			
MSG			STATU	5			

Plot 7-74. Occupied Bandwidth Plot (NR Band n41 - 90MHz QPSK - Full RB Configuration)



Plot 7-75. Occupied Bandwidth Plot (NR Band n41 - 90MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	Trace to be part of S decrease	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dage FC of 242		
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🔤 Keysight Spectrum Analyzer - Occupi	ied BW							
LXIRLT RF 50Ω	AC CORREC	SENSE:INT	02000000 CU-	ALIGN AUTO	03:02:45 PI	M Oct 22, 2020	Trac	e/Detector
	-	Trig: Free Run	AvalHold	d: 100/100	Radio Std:	None		
	#IFGain:Low	#Atten: 36 dB			Radio Dev	ice: BTS		
10 al Ridiu Rof 10.00 /	dBm							
Log	ubiii							
30.0								
20.0							Ċ	Clear Write
10.0	manore		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					
10.0	1							
0.00								_
-10.0	Denable							Average
-20.0 Manune Anna Martin				www.	How Alwarth	m-Puppy -		
-30.0								
-40.0								
60.0								Max Holu
-38.0								
Center 2.5930 GHz					Span 2	25.0 MHz		
Res BW 2.2 MHz		#VBW 8	MHz		Swe	ep 1 ms		Min Hold
								Millinoid
Occupied Bandw	vidth	Tota	I Power	32.0) dBm			
	87 846 M	Hz						Detector
	07.040 10	112						Peak▶
Transmit Freq Error	r -42.278	kHz % of	OBW Pow	er 99	.00 %		Auto	<u>Man</u>
x dB Bandwidth	93.13	MHz xdE	}	-26.	00 dB			
MSG				STATUS	5			

Plot 7-76. Occupied Bandwidth Plot (NR Band n41 - 90MHz 64-QAM - Full RB Configuration)



Plot 7-77. Occupied Bandwidth Plot (NR Band n41 - 90MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	Trace to be part of S decrease	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager		
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🔤 Keysight Spectrum Analyzer - Occupied BV	1						
💢 RLT RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	03:05:26 P	M Oct 22, 2020	Trace	/Detector
	Tria: F	ree Run AvalHol	ld: 100/100	Radio Std	None		
	#IFGain:Low #Atten	1: 36 dB		Radio Dev	ice: BTS		
10 JEVIN Pot 40.00 dBp	•						
Log							
30.0							
20.0						c	lear Write
20.0	province and a	mar war	7				
10.0							
0.00							
-10.0							Average
-20.0	~~~~		harman	- Martin Martin	many .		
30.0							
10.0							
-40.0							Max Hold
-50.0							
Contor 2 5020 CHr				Cnon 3			
Boo BW 19 MHz	#			Span z	00.0 WHZ		
Res BW 1.8 MHZ	#			SWC	ep mis		Min Hold
Occupied Bandwidt	h	Total Power	34.9	dBm			
Occupied Ballowide		rotarr onor	0 110				
11	′.545 MHZ						Detector
Tanana it Faran Faran	200 20 1.11-			00.0/		A	Peak►
Transmit Freq Error	-309.20 KHZ	% OF OBW POV	ver 99	.00 %		Auto	<u>ivian</u>
x dB Bandwidth	81.68 MHz	x dB	-26.	00 dB			
MSG			STATUS	5			

Plot 7-78. Occupied Bandwidth Plot (NR Band n41 - 80MHz π/2 BPSK - Full RB Configuration)

🔤 Keysight Spe	ctrum Anal	yzer - Oco	upied B	N										
LXI RLT	RF	50 Ω	AC	COF	REC		SE Center F	NSE:INT	20000 GH-	ALIGN AUTO	02:52:16 P	M Oct 22, 2020	Trac	e/Detecto <u>r</u>
						+	Trig: Fre	e Run	Avg Hold	1:>100/100	Radio Sta	. None		
				#IFC	Gain:L	ow	#Atten: 3	6 dB			Radio Dev	rice: BTS		
10 dB/div	Ref	40.0	0 dBr	n										
Log Brin														
20.0														Clear Write
20.0					m	seren .	~LAL CONSTRUCTION		men har m					
10.0														
0.00				1										
-10.0				ليه						HL				Average
-20.0	Hanger of the	Nuclear Street								North March	non march	manhumpetho		
-30.0														
-40.0														Max Hold
-50.0														
Contor 3.6	020 0	Ll-a									- Cnon 1			
Center 2.3 Res BW 1	1 8 MH:	ПZ 7					#VF	SW 6 MH	7		Span 2 Swe	en 1ms		
														Min Hold
Occup	bied E	Band	widt	th				Total P	ower	33.0) dBm			
			7	76	14	Mŀ	7							Detector
				.0			12							Peak►
Transn	nit Fre	q Err	or		12.7	700 k	Hz	% of O	BW Pow	er 99	0.00 %		Auto	<u>Man</u>
x dB B	andwi	dth			82.	16 M	Hz	x dB		-26.	00 dB			
MSG										STATU	5			
	-			-										

Plot 7-79. Occupied Bandwidth Plot (NR Band n41 - 80MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG996U	Trace to be part of S decrease	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager			
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Keysight Spectrum Analyzer - Occupied BW	V							
XX RLT RF 50Ω AC	CORREC	SENSE:INT		ALIGN AUTO	02:53:10 P	MOct 22, 2020	Trace	e/Detector
		Center Freq: 2.5930	AvaiHold:	>100/100	Radio Std	None		
	#IFGain:Low	#Atten: 36 dB	Arginola.	100/100	Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dBn	n							
20.0								
30.0								lear Write
20.0	m	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mon					
10.0	{		N					
0.00								
10.0								Average
-10.0	السم			l				Average
-20.0				- Martin Providence	her ward and the second	way water the state of the		
-30.0								
-40.0								MaxUald
50.0								Max Hold
-50.0								
Center 2 5930 GHz					Snan 2	00 0 MHz		
Res BW 1.8 MHz		#VBW 6 M	Hz		Swe	en 1 ms		
			112		0	ep 1 mo		Min Hold
Occupied Bandwidt	h	Total	Power	33.2	dBm			
Occupied Ballowide		-	onor	0012				
77	∕.615 M⊦	Z						Detector
								Peak►
Transmit Freq Error	-82.316 k	KHZ % of C	BW Powe	er 99	.00 %		Auto	Man
x dB Bandwidth	82 28 M	Hz x dB		-26	00 dB			
	OLILO III			201				
MSG				STATUS	3			

Plot 7-80. Occupied Bandwidth Plot (NR Band n41 - 80MHz 16-QAM - Full RB Configuration)



Plot 7-81. Occupied Bandwidth Plot (NR Band n41 - 80MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	Trace to be part of S decrease	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager		
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🔤 Ke	/sight Spectrum A	Analyzer - Oc	cupied BW									
L XI R	LT RF	50 Ω	AC COF	RREC	SE	NSE:INT	0000 011-	ALIGN AUTO	02:54:01 P	M Oct 22, 2020	Trac	e/Detector
					Tria: Fre	req: 2.59302 e Run	AvalHold	I: 100/100	Radio Sta	: None		
			#IF	Gain:Low	#Atten: 3	36 dB			Radio Dev	vice: BTS		
40 -	7/-11	Dof 20.0	0 dBm									
Loa		ter 30.0	U UBIII					1				
20.0												
10.0				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m man	monten	howard					Clear Write
0.00												
0.00												
-10.0			ſ									
-20.0		n durt w	annew pand					Mar Mar and a				Average
-30.0	mall the second							and the second	"her the work of the	mouthenergen		
-40 O												
50.0												
-50.0												Max Hold
-60.0												
		011-										
Cen	ter 2.5930	GHZ			40.0	3147 C BALL			span 2	UU.U WIHZ		
Res	DW 1.8 W	INZ			#VI		2		SW	ep 1 ms		Min Hold
		Dond	ما فام أبدرا			Total P	ower	20 /	dBm			
	ccupied		wiath			Totari	OWEI	23.4	ubm			
			77.7	27 MI	Hz							Detector
												Peak►
T	ransmit F	req Err	ror	-88.147	kHz	% of O	3W Pow	er 99	.00 %		Auto	<u>Man</u>
x	dB Band	width		82.13 N	/Hz	x dB		-26	00 dB			
MSG								STATUS	6			

Plot 7-82. Occupied Bandwidth Plot (NR Band n41 - 80MHz 256-QAM - Full RB Configuration)



Plot 7-83. Occupied Bandwidth Plot (NR Band n41 - 60MHz π/2 BPSK - Full RB Configuration)

FCC ID: A3LSMG996U		PART 27 MEASUREMENT REPORT	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied BV	/							_	
X RLT RF 50Ω AC	CORREC	SEI	ISE:INT		ALIGN AUTO	02:31:29 PI	M Oct 22, 2020	Trac	e/Detector
		Trig: Free	eq: 2.59302 Run	AvaiHold	· 100/100	Radio Std:	None		
	#IFGain:Low	#Atten: 3	6 dB			Radio Dev	ice: BTS		
10 dB/div Ref 30.00 dBn	<u>ו</u>								
20.0									
10.0	- marine war	and the second		and the second					Clear Write
10.0									
0.00									
-10.0									
20.0	~.m'				multiple	water and the second			Average
and the second second second							. Rougen the state		···· · ·· · ···· · ···················
-30.0									
-40.0									
-50.0									May Hold
-60.0									Maxmola
60.0									
Center 2.59302 GHz						Span 1	50.0 MHz		
Res BW 1.5 MHz		#VE	W 5 MH	z		Swe	ep 1 ms		Min Hold
									WITT HOID
Occupied Bandwidt	h		Total P	ower	32.2	dBm			
58	5.292 MF	1Z							Detector
Tronomit From Freeze	420.40 %		0/ -5 0		00	00.0/		Auto	Peak▶ Map
Transmit Freq Error	-128.49 K	HZ	% of OF	SVV POW	er 99	.00 %		Auto	<u>ivian</u>
x dB Bandwidth	61.76 M	Hz	x dB		-26.	00 dB			
MSG					STATUS	6			

Plot 7-84. Occupied Bandwidth Plot (NR Band n41 - 60MHz QPSK - Full RB Configuration)



Plot 7-85. Occupied Bandwidth Plot (NR Band n41 - 60MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	PCTEST Pous to be part of & elevent	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager		
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Keysight Spectrum Analyzer - Occupied BW	V						×
XX RLT RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUT	0 02:32:25 P	M Oct 22, 2020	Trace/Detector	
		Center Freq: 2.59302	0000 GHz	Radio Std	: None	110001000000	
	#IFGain:Low	#Atten: 36 dB	Avginola. 100/100	Radio Dev	ice: BTS		
	an ouncon						
10 dB/div Ref 40.00 dBn	n						
20.0							
30.0						Clear Writ	te
20.0	Hannoh	alex-April Mary All Charge	-				
10.0							
0.00							
10.0						Averag	10
-10.0	wal		Here and			Averag	<u>ا</u> ر
-20.0				will we the standing of the second	manthomato		
-30.0							
-40.0						May Hal	ы
50.0						INIAX HOI	a
-50.0							
Center 2 59302 GHz				Snan 1	50.0 MHz		-
Res BW 1.5 MHz		#VBW_5_MH	7	Swe	en 1ms	B.41	
					sop i mo	Min Hoi	a
Occupied Bandwidt	h	Total P	ower 31	.5 dBm			
Occupied Baildwidd							
58	3.145 MH	Z				Detecto	or
						Peak	
Transmit Freq Error	-49.968 ki	HZ % of O	SW Power	99.00 %		Auto <u>Ma</u>	<u>in</u>
x dB Bandwidth	61.72 M	z xdB	-2	6.00 dB			
MSG			STA	TUS			

Plot 7-86. Occupied Bandwidth Plot (NR Band n41 - 60MHz 64-QAM - Full RB Configuration)



Plot 7-87. Occupied Bandwidth Plot (NR Band n41 - 60MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U		PART 27 MEASUREMENT REPORT	Approved by: Quality Manager
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🔤 Keysight Spectrum Analyzer - Occupied E	3W						
LXI RLT RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	02:24:19 P	M Oct 22, 2020	Trace	Detector
		Center Freq: 2.59302	AvalHold:>100/100	Radio Std	: None	11400	Betteeter
	#IFGain:Low	#Atten: 36 dB	Avginola.>100/100	Radio Dev	rice: BTS		
	an ouncon						
10 dB/div Ref 40.00 dB	m						
Log							
30.0						c	loar Write
20.0		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~			ر د	
10.0			<u> </u>			_	
	() () () () () () () () () ()						
0.00							
-10.0							Average
-20.0	لسمعمهم		L				
20.0			Mr. adams	and the second second	monemented.		
-30.0							
-40.0							Max Hold
-50.0							
Center 2.59302 GHz				Span 1	25.0 MHz		
Res BW 1.2 MHz		#VBW_4 MH	Z	Swe	eep 1 ms		Min Hold
							Minitiona
Occupied Bandwid	th	Total P	ower 34	.7 dBm		_	
	E 000 MAL						
4	5.808 MH	IZ					Detector
	4 0 4 0 0 1			0 00 0/		0	Peak►
Transmit Freq Error	-1.0103 M	Hz % of OE	SW Power 9	9.00 %		Auto	Man
x dB Bandwidth	48.72 M	Hz xdB	-26	6.00 dB			
	10112						
						_	
MSC			OTAT				
MSG			STAT	US			

Plot 7-88. Occupied Bandwidth Plot (NR Band n41 - 50MHz π/2 BPSK - Full RB Configuration)

🔤 Keysig	iht Spectrun	n Analyze	er - Occu	upied BW	1											
L <mark>XI</mark> RLT	F	₹F	50 Ω	AC	CORRE	C		SEN	ISE:INT	20000 CH-	ALIGN	AUTO	02:23:30	PM Oct 22, 2020	Tr	ace/Detector
							→ Tri	ig: Free	Run	Avg Ho	: old:>100	/100	Radio St	I. None		
					#IFGa	in:Low	#A	tten: 36	6 dB				Radio De	vice: BTS		
10 dB/	div	Ref 4	10.00) dBm	1						-					
Log 30.0																
20.0																Clear Write
10.0					1	᠕ᡨ᠆ᠬ	-	m	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	- Browning	γ					
0.00															_	
40.00																Average
- 10.0				معريها	~											Average
-20.0	New York	and the second s											www.	- manual and a second		
-30.0																
-40.0 —																Max Hold
-50.0 —																
Cente	r 2.593	02 GI	Iz									I	Span	125.0 MHz		
Res B	W 1.2	MHz						#VB	W 4 M	Iz			Sw	eep 1ms		Min Hold
									Tatal							
Oc	cupie	d Ba	and	widt	h				lotal	ower		33.0	dBm			
				47	.60	00 N	IHz									Detector
Tra	nemit	Erea	Err	or	_8	8 750	1647		% of C		Nor	00	00 %		Auto	Peak▶ Man
					-0	0.755			/0 01 0		WGI		00 78		/ tare	India
x d	B Ban	dwid	th		ł	b0.55	MHZ		x dB			-26.0	0 dB			
MSG												STATUS				

Plot 7-89. Occupied Bandwidth Plot (NR Band n41 - 50MHz QPSK - Full RB Configuration)

FCC ID: A3LSMG996U	Trace to be part of S decrease	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied I	3W				
LXI RLT RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO 02:24:5	L PM Oct 22, 2020	Trace/Detector
	Cen	ter Freq: 2.593020000 GHz	Radio S	ta: None	
	#IFGain:Low #Att	en: 36 dB	Radio D	evice: BTS	
10 dB/div Ref 40.00 dB	m				
20 O					
30.0					Clear Writ
20.0	~~~~	-~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			0100.000
10.0	/				
0.00					
10.0					Avera
10.0	e samble				Averag
-20.0			Marken Mound	When the state of the	
-30.0					
-40.0					
40.0					Махно
-50.0					
Contor 2 50202 CHz				125 0 MHz	
		#\/P\A/ / MU7	Span	125.0 WINZ	
Res BW 1.2 MIHZ			51	veep rms	Min Ho
Occupied Denducid	46	Total Power	32.6 dBm		
Occupied Bandwid	lun		52.0 ubm		
4	7.742 MHz				Detecto
					Peak
Transmit Freq Error	-126.99 kHz	% of OBW Pow	er 99.00 %		Auto <u>Ma</u>
y dB Bondwidth	50 64 MU-	x dB	26.00 dB		
	30.01 MHZ	X UD	-20.00 UB		
MSC			STATUS		
Mod			514105		

Plot 7-90. Occupied Bandwidth Plot (NR Band n41 - 50MHz 16-QAM - Full RB Configuration)



Plot 7-91. Occupied Bandwidth Plot (NR Band n41 - 50MHz 64-QAM - Full RB Configuration)

FCC ID: A3LSMG996U		PART 27 MEASUREMENT REPORT	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied I	BW						×
LXI RET RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	02:25:43 PM 0	Oct 22, 2020	Trace/Detec	tor
		Center Freq: 2.59302	0000 GHz	Radio Std: N	lone	11000000000	
	++→ #IEGain:Low	#Atten: 36 dB	Avginola. 100/100	Radio Devic	e: BTS		
	an ouncon						
10 dB/div Ref 30.00 dB	m						
Log							
20.0						CloarM	Vrito
10.0			and the second s			Clear	vine
0.00	/						
-10.0							
-20.0			the second second			Ave	rage
-30.0				a grander	www.whateling		
10.0							
-40.0							
-50.0						Max	Hold
-60.0							
Center 2.59302 GHz				Span 12	5.0 MHz		
Res BW 1.2 MHz		#VBW 4 MH	Z	Swee	p 1 ms	Min	Hold
							loiu
Occupied Bandwid	lth	Total P	ower 29.	2 dBm			
						_	-
4	7.748 MH	2				Dete	ctor
						P	eak►
Transmit Freq Error	-60.337 kH	z % of O	3W Power 9	9.00 %		Auto	Man
x dB Bandwidth	50 67 MH	z ydB	-26	00 dB			
X dB Balldwidth	30.07 1		-20	.00 uB			
			0.5.4.70				
MSG			STATU	JS			

Plot 7-92. Occupied Bandwidth Plot (NR Band n41 - 50MHz 256-QAM - Full RB Configuration)



Plot 7-93. Occupied Bandwidth Plot (NR Band n41 - 40MHz π/2 BPSK - Full RB Configuration)

FCC ID: A3LSMG996U	PCTEST Poud to be part of & riemant	PART 27 MEASUREMENT REPORT	NG	Approved by: Quality Manager
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🔤 Key	/sight Spectrum	n Analyzer - Oo	ccupied BW											
l xi Ri	LT P	RF 50 Ω	2 AC CO	RREC		SE Contor E	NSE:INT	0000 CH-	ALIGN	AUTO	01:52:13 P	M Oct 22, 2020	Trac	e/Detector
						Trig: Fre	e Run	Avg Hold:	100/1	100	Radio Stu	. None		
			#IF	Gain:Lo	w	#Atten: 3	86 dB				Radio Dev	rice: BTS		
10 dl	3/div	Ref 30.0	00 dBm											
20 0														
10.0					m	-	the second s	-	my					Clear Write
10.0														
0.00														
-10.0				. Mark						$\left\{ - \right\}$				
-20.0		And Barriston	فسلابهم الرجياهمي	1						mark	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	- Conversion Aur		Average
-30.0	and by your a													
-40.0														
-50.0														Maxilald
60.0														Max Hold
-00.0														
Cen	ter 2.593	02 GHz									Span 1	00.0 MHz		
Res	BW 910	kHz				#VE	BW 3 MH	z			Swe	eep 1 ms		Min Hold
														iiiiiiiiiii
0	ccupie	d Band	dwidth				Total P	ower		32.1	dBm			
			38.0	28	MI	17								Detector
														Peak▶
Т	ransmit	Freq Er	ror	4.971	16 N	IHz	% of O	3W Powe	er	99	.00 %		Auto	<u>Man</u>
x	dB Band	dwidth		40.4	10 M	IHz	x dB			-26.0	00 dB			
^														
MSG										STATUS				

Plot 7-94. Occupied Bandwidth Plot (NR Band n41 - 40MHz QPSK - Full RB Configuration)



Plot 7-95. Occupied Bandwidth Plot (NR Band n41 - 40MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	PCTEST Poud to be part of & element	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager
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🔤 Keysight Spectrum Analyzer - Occu	pied BW						
<mark>ιχα</mark> RLT RF 50 Ω	AC CORREC	SENSE:INT	ALIGN	AUTO 01:53:05 P	M Oct 22, 2020	Trace/De	etector
		Center Freq: 2.59302	0000 GHz	Radio Std	None	11000121	
	#FGain:Low	#Atten: 36 dB	Avginola.>100/	Radio Dev	ice: BTS		
	WI Guilleow						
10 dB/div Ref 30.00	dBm						
Log							
20.0	40.00	habbert was bratten and the	م مالا معاقد منافعه العالمين م			Clas	ar Write
10.0						CIC	
0.00							
49.9							
-10.0	ML Verley					_	
-20.0	all the training the second se			March March 19	monton and	A	verage
-30.0					· · · MARIA		
-40.0							
-40.0							
-50.0						М	ax Hold
-60.0							
Center 2.59302 GHz				Span 1	00.0 MHz		
Res BW 910 kHz		#VBW_3 MH	Z	Swe	ep 1 ms	M	lin Hold
,							intriord
Occupied Bandy	vidth	Total P	ower	30.8 dBm			
	27 025 MI	-					
	37.925 MI	IZ				D	etector
	- 4 0 4 2 0 M	11- 0/ of OI		00.00.0/		Auto	Peak► Mon
Transmit Freq Erro	or 4.9438 M	HZ % OT UE	sw Power	99.00 %		Auto	<u>ivian</u>
x dB Bandwidth	40.21 M	Hz xdB		-26.00 dB			
MSG				STATUS			

Plot 7-96. Occupied Bandwidth Plot (NR Band n41 - 40MHz 64-QAM - Full RB Configuration)



Plot 7-97. Occupied Bandwidth Plot (NR Band n41 - 40MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMG996U	Trace to be part of S decrease	PART 27 MEASUREMENT REPORT	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied B\	V						
💢 RLT RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	01:40:14 P	M Oct 22, 2020	Trace	Detector
	Cente	r Freq: 2.593020000 GH:	z old: 100/100	Radio Std	: None	macci	Detector
	#IEGain:Low #Atter	n: 32 dB	010. 100/100	Radio Dev	vice: BTS		
	#IT Gam. Low						
10 dB/div Ref 40.00 dBr	n						
Log							
30.0						~	loor Write
20.0		man and man				ر د	lear write
10.0							
10.0			Ŋ.				
0.00							
-10.0			L\				Average
-20.0	أمهد			-			
2000 manufacture and a second					man marken the		
-30.0							
-40.0							Max Hold
-50.0							maxmora
Center 2.59302 GHz				Span 7	5.00 MHz		
Res BW 680 kHz	#	VBW 2.4 MHz		Swi	ep 1ms		Min Hold
							Min Hold
Occupied Bandwidt	h	Total Power	34.	dBm			
Occupied Balluwid			0 11				
20	5.959 MHz						Detector
							Peak►
Transmit Freq Error	-581.86 kHz	% of OBW Po	wer 99	0.00 %		Auto	Man
x dB Bondwidth	20 00 MU-	v dD	26				
	20.90 10172	X UD	-20.				
				_			
MSG			STATU	S			

Plot 7-98. Occupied Bandwidth Plot (NR Band n41 - 30MHz π/2 BPSK - Full RB Configuration)

🔤 Keysight Spec	trum Analyzer - Oo	ccupied BW										
LXU RLT	RF 50 S	2 AC	CORREC	C	SEN	SE:INT eq: 2.59302	20000 GHz	ALIGN AUTO	01:37:24 P Radio Std	M Oct 22, 2020 : None	Trac	e/Detector
			#IFGain:L	_ow #	Atten: 32	dB	Avginoi	a: 100/100	Radio Dev	vice: BTS		
10 dB/div Log	Ref 35.0	00 dBm										
25.0												Clear Write
15.0			-	~~~ <u>~</u>	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<u>,</u> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		\ \				
5.00								1				
-5.00			1									Average
-25.0	mon	- marine and						where we	menne	Constant and a strength		5
-35.0												
-45.0												Max Hold
-55.0												
Center 2.5	9302 GHz								Span 7	5.00 MHz		
Res BW 6	80 kHz				#VB	W 2.4 N	1Hz		SW	eep 1 ms		Min Hold
Occup	ied Band	dwidt	h			Total P	ower	32.	1 dBm			
		27	.899	MHz								Detector
Transm	nit Freq Er	ror	-124	1.43 kHz	Z	% of O	BW Pow	ver 9	9.00 %		Auto	Peak▶ <u>Man</u>
x dB Ba	andwidth		29	.89 MHz	2	x dB		-26	.00 dB			
MSG								STATU	JS			

Plot 7-99. Occupied Bandwidth Plot (NR Band n41 - 30MHz QPSK - Full RB Configuration)

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Keysight Spectrum Analyzer - Occupied B	W					
LXI RLT RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO 01:41:1	8 PM Oct 22, 2020	Trace/D	etector
	Cente	Free Run AvalHold	>100/100	ata: None		
	#IFGain:Low #Atte	n: 32 dB	Radio E	evice: BTS		
10 dB/div Ref 30.00 dB	m					
20.0						
20.0	\sim	mont			Cle	ar Write
10.0						
0.00	<mark>/</mark>					
-10.0						
20.0	~~		man and a			Average
-20.0			and the second s	man		TVCluge
-30.0				`		
-40.0						
-50.0						lov Hold
					IV	iax Hold
-80.0						
Cepter 2 59302 GHz			Snar	75.00 MHz		
Res BW/ 680 kHz	#	WBM 24 MHz	opai S	ween 1ms	_	
	"		¥	acep 1113	n	/in Hold
Occupied Bandwid	th	Total Power	32.4 dBm			
Occupied Ballowid		rotarr offor				
2	7.969 MHz				I	Detector
						Peak►
Transmit Freq Error	-94.889 kHz	% of OBW Powe	er 99.00 %		Auto	<u>Man</u>
x dB Bandwidth	29 94 MH7	x dB	-26 00 dB			
x ub Buildwidth	20104 10112	X UD	20.00 48			
MSG			STATUS			

Plot 7-100. Occupied Bandwidth Plot (NR Band n41 - 30MHz 16-QAM - Full RB Configuration)



Plot 7-101. Occupied Bandwidth Plot (NR Band n41 - 30MHz 64-QAM - Full RB Configuration)

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Keysight Spectrum Analyzer - Occupied	BW						
💢 RLT RF 50Ω AC	CORREC	SENSE:INT	ALIGN AUTO	01:43:04 P	M Oct 22, 2020	Trac	e/Detector
	C	enter Freq: 2.59302000) GHz	Radio Std	None	mac	
	#EGain:Low #/	tten: 32 dB		Radio Dev	ice: BTS		
	#II Gam.cow						
10 dB/div Ref 30.00 dE	3m						
Log							
20.0							
10.0	portugation	managan	martin				slear write
0.00							
0.00							
-10.0							
-20.0	ma		10-1-				Average
30.0 - Berny Martin Rolling	coltion of .		* WARAUN	willing working	the above of the		
					and the second of the		
-40.0							
-50.0							Max Hold
-60.0							maxmora
66.6							
Center 2.59302 GHz				Span 7	5.00 MHz		
Res BW 680 kHz		#VBW 2.4 MHz		Swe	ep 1 ms		
							Min Hold
Occupied Bandwig	dth	Total Pow	er 28.2	d Bm			
Occupied Bandwid	aun	i otari ota	20.2				
2	28.017 MHz						Detector
							Peak►
Transmit Freq Error	-95.224 kHz	% of OBW	Power 99	0.00 %		Auto	Man
x dB Bondwidth	20.00	v dD	26				
X dB Bandwidth	29.00 MHZ	хав	-20.	00 aB			
MSG			STATU	S			

Plot 7-102. Occupied Bandwidth Plot (NR Band n41 - 30MHz 256-QAM - Full RB Configuration)



Plot 7-103. Occupied Bandwidth Plot (NR Band n41 - 20MHz π/2 BPSK - Full RB Configuration)

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🔤 Keysight Sp	bectrum Analyzer - O	ccupied BW									
L <mark>XI</mark> L	RF 50 S	2 AC COF	REC	SE	NSE:INT SOUR	CE OFF	ALIGN AUTO	08:58:50 A	M Dec 10, 2020	Tree	Detector
				Center F	reg: 2.59302	0000 GHz		Radio Std	: None	Trac	cerDetector
			+-	Trig: Fre	e Run	Avg Hold	d: 100/100				
	l	#IF(Gain:Low	#Atten: 3	6 dB			Radio Dev	rice: BTS		
	D-6.00 /										
	Rel 30.0	лавти	_								
20.0											
20.0			mon	mar and the second	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m					Clear Write
10.0											Cicui Mine
0.00			1								
0.00			8				1				
-10.0		- auf					N .				
-20.0		mand					Monard				Average
and the second	and the start we								mon man		Ŭ
-30.0									i i i i i i i i i i i i i i i i i i i		
-40.0											
50.0											
-30.0											Max Hold
-60.0											
Center 2	2.593 GHz							Spa	n 50 MHz		
Res BW	470 kHz			#VE	3W 1.5 M	Hz		Swe	eep 1 ms		Min Hold
											MILL HOLD
Occu	nied Band	dwidth			Total P	ower	30.7	dBm			
Occu	pieu Band				i otali i		00.1	aBiii			
		18.3	07 MH	7							Detector
		10.0									Peak▶
Trans	mit Freg Er	TOT	32 917 k	Hz	% of O	RW Pow	er 99	00 %		Auto	Man
Tunio	initer roq Er		02.017 K	11/2	// 01 01		01 00	.00 /0			
x dB E	Bandwidth		20.83 M	Hz	x dB		-26.	00 dB			
MSG							STATUS	5			

Plot 7-104. Occupied Bandwidth Plot (NR Band n41 - 20MHz QPSK - Full RB Configuration)



Plot 7-105. Occupied Bandwidth Plot (NR Band n41 - 20MHz 16-QAM - Full RB Configuration)

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Keysight Spectrum Analyzer - Occupied BW				
X L RF 50 Ω AC CORREC SENSE:INT SOURCE OFF ALIGN AUTO 08:	59:51 AM De	ec 10, 2020	Trac	e/Detector
Center Freq: 2.593020000 GHz Radi	o Std: No	one	max	
#EGain: Low #Atten: 36 dB Radi	o Device	BTS		
10 dB/div Ref 30.00 dBm				
Log				
				Cloar Mrita
10.0				Clear write
10.0				
-20.0				Average
-30.0 A A A A A A A A A A A A A A A A A A	www.willow	www.		
-40.0				
-30.0				Max Hold
-60.0				
Center 2.593 GHz	span :	50 MHZ		
Res BW 470 kHz #VBW 1.5 MHz	Sweep	o 1 ms		Min Hold
Occupied Bandwidth Total Power 28.4 dBi	n			
18 304 MHz				Detector
10.00+ IIII IZ				Peak▶
Transmit Freq Error -12.492 kHz % of OBW Power 99.00	%		Auto	Man
x dB Bandwidth 10.51 MHz x dB 26.00 d	D			
X UB Banuwiuun 19.51 MHz X UB -20.00 U	D			

Plot 7-106. Occupied Bandwidth Plot (NR Band n41 - 20MHz 64-QAM - Full RB Configuration)



Plot 7-107. Occupied Bandwidth Plot (NR Band n41 - 20MHz 256-QAM - Full RB Configuration)

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NR Band n41 PC3 – Antenna B



Plot 7-108. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 100MHz π/2 BPSK - Full RB Configuration)



Plot 7-109. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 100MHz QPSK - Full RB Configuration)

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Keysight Spectrum Analyzer - Occup	ied BW						- 6 💌
χα Τ RF 50 Ω	AC CORREC	SENSE:INT SOUR Center Freq: 2.59300 Trig: Free Run #Atten: 36 dB	CE OFF ALIGN AUTO 0000 GHz Avg Hold:>100/100	11:11:16 P Radio Std Radio Dev	MDec 04, 2020 : None rice: BTS	Trace	/Detector
10 dB/div Ref 35.00	dBm						
25.0 15.0	producer and	mballhelaandhentlere	- Malenna -			с	lear Write
-5.00							
-15.0	lensed with the		hings all and	Worldward	and and a fail to the state of		Average
-35.0							Max Hold
-55.0				Snan	250 MHz		
Res BW 2.4 MHz #VBW 8 MHz			Swe	ep 1 ms		Min Hold	
Occupied Bandw	ower 29	.9 dBm			Detector		
Transmit Freq Erro	r -41.215 k	Hz % of OE	3W Power 9	9.00 %		Auto	Peak▶ <u>Man</u>
x dB Bandwidth	103.3 M	Hz x dB	-26	i.00 dB			
100			STAT	18			

Plot 7-110. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 100MHz 16-QAM - Full RB Configuration)



Plot 7-111. Occupied Bandwidth Plot (NR Band n41 PC3 – Antenna B - 100MHz 64-QAM - Full RB Configuration)

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