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PART 24 MEASUREMENT REPORT

Applicant Name:

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

Date of Testing: 9/10/2021 - 11/12/2021 Report Issue Date: 12/02/2021 Test Site/Location:

PCTEST Lab. Columbia, MD, USA Test Report Serial No.: 1M2109090103-03-R2.A3L

FCC ID:

Applicant Name:

A3LSMS906U

Samsung Electronics Co., Ltd.

Application Type: Model: Additional Model(s): EUT Type: FCC Classification: FCC Rule Part: Test Procedure(s): Certification SM-S906U SM-S906U1 Portable Handset PCS Licensed Transmitter Held to Ear (PCE) 24 ANSI C63.26-2015, ANSI/TIA-603-E-2016, KDB 971168 D01 v03r01, KDB 648474 D03 v01r04

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

Note: This revised Test Report (S/N: 1M2109090103-03-R2.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.

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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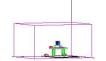


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			Ell	RP	Emission
Mode	Modulation	Tx Frequency Range [MHz]	Max. Power [W]	Max. Power [dBm]	Emission Designator
GSM/GPRS	GMSK	1850.2 - 1909.8	0.832	29.20	245KGXW
EDGE	8-PSK	1850.2 - 1909.8	0.583	27.66	248KG7W
WCDMA	Spread Spectrum	1852.4 - 1907.6	0.249	23.96	4M17F9W

			Tx Frequency	EI	EIRP		
Mode	Bandwidth	Modulation	Range [MHz]	Max. Power [W]	Max. Power [dBm]	Emission Designator	
LTE Band 25/2 -	20 MHz	QPSK	1860 - 1905	0.281	24.49	18M0G7D	
	20 10112	16QAM	1860 - 1905	0.260	24.15	18M0W7D	
	15 MHz	QPSK	1857.5 - 1907.5	0.287	24.58	13M5G7D	
		16QAM	1857.5 - 1907.5	0.268	24.27	13M5W7D	
	10 MHz	QPSK	1855 - 1910	0.288	24.59	9M02G7D	
		16QAM	1855 - 1910	0.285	24.54	9M02W7D	
	5 MHz	QPSK	1852.5 - 1912.5	0.288	24.59	4M53G7D	
	5 101-12	16QAM	1852.5 - 1912.5	0.281	24.49	4M53W7D	
	3 MHz	QPSK	1851.5 - 1913.5	0.286	24.56	2M72G7D	
	3 IVI-12	16QAM	1851.5 - 1913.5	0.257	24.11	2M72W7D	
	1.4 MHz	QPSK	1850.7 - 1914.3	0.283	24.51	1M11G7D	
	1.4 10172	16QAM	1850.7 - 1914.3	0.269	24.30	1M11W7D	
	40 MHz	π/2 BPSK	1870 - 1895	0.333	25.22	38M8G7D	
		QPSK	1870 - 1895	0.344	25.36	38M8G7D	
		16QAM	1870 - 1895	0.288	24.59	38M7W7D	
NR Band n25		π/2 BPSK	1865 - 1900	0.333	25.22	28M8G7D	
ANT A	30 MHz	QPSK	1865 - 1900	0.340	25.32	28M8G7D	
	-	16QAM	1865 - 1900	0.282	24.51	28M8W7D	
		π/2 BPSK	1862.5 - 1902.5	0.328	25.16	23M0G7D	
	25 MHz	QPSK	1862.5 - 1902.5	0.342	25.34	23M9G7D	
		16QAM	1862.5 - 1902.5	0.309	24.90	23M9W7D	
		π/2 BPSK	1860 - 1905	0.328	25.16	17M9G7D	
	20 MHz	QPSK	1860 - 1905	0.346	25.40	19M1G7D	
		16QAM	1860 - 1905	0.290	24.62	19M0W7D	
		π/2 BPSK	1857.5 - 1907.5	0.327	25.15	13M5G7D	
	15 MHz	QPSK	1857.5 - 1907.5	0.349	25.43	14M2G7D	
NR Band n25/2		16QAM	1857.5 - 1907.5	0.292	24.66	14M2W7D	
ANT A		π/2 BPSK	1855 - 1910	0.336	25.26	9M06G7D	
	10 MHz	QPSK	1855 - 1910	0.348	25.41	9M37G7D	
		16QAM	1855 - 1910	0.288	24.60	9M34W7D	
		π/2 BPSK	1852.5 - 1912.5	0.334	25.24	4M51G7D	
	5 MHz	QPSK	1852.5 - 1912.5	0.348	25.42	4M54G7D	
		16QAM	1852.5 - 1912.5	0.282	24.51	4M55W7D	
		EUT	Overview				

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Mode Bandwidth				EI	RP	Emission
		Modulation	Tx Frequency Range [MHz]	Max. Power [W]	Max. Power [dBm]	Designator
		π/2 BPSK	1870 - 1895	0.158	22.00	38M8G7D
	40 MHz	QPSK	1870 - 1895	0.164	22.16	38M8G7D
		16QAM	1870 - 1895	0.129	21.11	38M7W7D
NR Band n25		π/2 BPSK	1865 - 1900	0.160	22.05	28M8G7D
ANT I	30 MHz	QPSK	1865 - 1900	0.172	22.36	28M8G7D
		16QAM	1865 - 1900	0.128	21.07	28M8W7D
		π/2 BPSK	1862.5 - 1902.5	0.168	22.24	23M1G7D
	25 MHz	QPSK	1862.5 - 1902.5	0.169	22.29	23M0G7D
		16QAM	1862.5 - 1902.5	0.134	21.26	23M1W7D
	20 MHz	π/2 BPSK	1860 - 1905	0.156	21.93	18M0G7D
		QPSK	1860 - 1905	0.165	22.17	18M0G7D
		16QAM	1860 - 1905	0.111	20.46	18M0W7D
	15 MHz 10 MHz	π/2 BPSK	1857.5 - 1907.5	0.156	21.92	13M5G7D
		QPSK	1857.5 - 1907.5	0.164	22.15	13M5G7D
NR Band n25/2		16QAM	1857.5 - 1907.5	0.127	21.05	13M5W7D
ANT I		π/2 BPSK	1855 - 1910	0.162	22.09	8M99G7D
		QPSK	1855 - 1910	0.168	22.26	9M01G7D
		16QAM	1855 - 1910	0.132	21.22	9M01W7D
		π/2 BPSK	1852.5 - 1912.5	0.153	21.84	4M51G7D
	5 MHz	QPSK	1852.5 - 1912.5	0.165	22.18	4M51G7D
		16QAM	1852.5 - 1912.5	0.123	20.89	4M51W7D

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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 Laborator 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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PRODUCT INFORMATION 2.0

2.1 **Equipment Description**

The Equipment Under Test (EUT) is the Samsung Portable Handset FCC ID: A3LSMS906U. 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 24.

Test Device Serial No.: 0100M, 0061M, 0097M, 0045M, 0044M, 0080M, 1218M, 0359M, 0364M, 0379M, 0361M

2.2 **Device Capabilities**

This device contains the following capabilities:

850/1900 GSM/GPRS/EDGE, 850/1700/1900 WCDMA/HSPA, Multi-band LTE, Multi-band 5G NR, 802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII (5GHz and 6GHz), Bluetooth (1x, EDR, LE), NFC, Wireless Power Transfer, UWB

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

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

NR Band n25 (1850 - 1915 MHz) overlaps the entire frequency range of NR Band n2 (1850 - 1910 MHz). Therefore, test data provided in this report covers n2 as well as n25 for the operating BWs that overlap between the 2 bands.

This EUT supports 2 antennas (Antenna A and Antenna I) for n2/n25 operations. This report includes conducted and radiated data from both antennas to ensure compliance.

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 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

3.2 Radiated Power and Radiated Spurious Emissions

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

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

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 $P_{g \text{ [dBm]}}$ – 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:

$$\begin{split} E_{[dB\mu V/m]} &= Measured \ amplitude \ level_{[dBm]} + 107 + Cable \ Loss_{[dB]} + Antenna \ Factor_{[dB/m]} \\ And \\ EIRP_{[dBm]} &= E_{[dB\mu V/m]} + 20logD - 104.8; \ where \ D \ is the measurement \ distance \ in \ meters. \end{split}$$

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 414788 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). Measurement antennas used during testing were calibrated in accordance with the requirements of ANSI C63.5-2017.

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	AP2	EMC Cable and Switch System	3/4/2021	Annual	3/4/2022	AP2
-	AP1	EMC Cable and Switch System	3/9/2021	Annual	3/9/2022	AP1
-	ETS	EMC Cable and Switch System	3/4/2021	Annual	3/4/2022	ETS
-	LTx1	Licensed Transmitter Cable Set	3/12/2021	Annual	3/12/2022	LTx1
-	LTx2	Licensed Transmitter Cable Set	3/12/2021	Annual	3/12/2022	LTx2
Agilent	N9030A	50GHz PXA Signal Analyzer	1/20/2021	Annual	1/20/2022	US51350301
Anritsu	MT8821C	Radio Communication Analyzer	N/A			6201381794
Emco	3115	Horn Antenna (1-18GHz)	6/18/2020	Biennial	6/18/2022	9704-5182
Espec	ESX-2CA	Environmental Chamber	8/27/2020	Annual	8/27/2022	17620
ETS Lindgren	3117	1-18 GHz DRG Horn (Medium)	4/20/2021	Biennial	4/20/2023	00125518
ETS Lindgren	3164-08	Quad Ridge Horn Antenna	3/12/2020	Biennial	3/12/2022	128337
Keysight Technologies	N9020A	MXA Signal Analyzer	12/22/2020	Annual	12/22/2021	MY54500644
Keysight Technologies	N9030A	PXA Signal Analyzer (44GHz)	7/21/2021	Annual	7/21/2022	MY49430494
Mini-Circuits	SSG-4000HP	Synthesized Signal Generator		N/A		11208010032
Rohde & Schwarz	CMW500	Radio Communication Tester		N/A		100976
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	8/3/2021	Annual	8/3/2022	100342
Rohde & Schwarz	ESU40	EMI Test Receiver (40GHz)	4/30/2021	Annual	4/30/2022	100348
Rohde & Schwarz	ESW44	EMI Test Receiver 2Hz to 44 GHz	1/21/2021	Annual	1/21/2022	101716
Rohde & Schwarz	FSW26	2Hz-26.5GHz Signal and Spectrum Analyzer	2/10/2021	Annual	2/10/2022	103187
Sunol	JB6	LB6 Antenna	11/13/2020	Biennial	11/13/2022	A082816

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

GSM Emission Designator

Emission Designator = 250KGXW GSM BW = 250 kHz

G = Phase Modulation X = Cases not otherwise coveredW = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 250KG7W EDGE BW = 250 kHz G = Phase Modulation

7 = Quantized/Digital Info W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M16F9W WCDMA BW = 4.16 MHz F = Frequency Modulation 9 = Composite Digital Info W = Combination (Audio/Data)

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:	A3LSMS906U
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
Mode(s):	GSM/GPRS/EDGE/WCDMA/LTE/NR

Test Condition	Test Description	FCC Part Section(s)	RSS Section(s)	Test Limit	Test Result	Reference
-	Occupied Bandwidth	2.1049	RSS-Gen(6.7)	N/A	PASS	Section 7.3
	Conducted Band Edge / Spurious Emissions	2.1051, 24.238(a)	RSS-133(6.5)	> 43 + 10log10(P[Watts]) at Band Edge and for all out-of- band emissions	PASS	Sections 7.4, 7.5
IDNO	Transmitter Conducted Output Power	2.1046	RSS-133(4.1)	N/A	PASS	Section 7.2
0	Frequency Stability	2.1055, 24.235	RSS-133(6.3)	Fundamental emissions stay within authorized frequency block	PASS	Section 7.8
	Effective Radiated Power / Equivalent Isotropic Radiated Power	24.232(c)	RSS-132(5.4)	< 7 Watts max. ERP	PASS	Section 7.7
RADI	Radiated Spurious Emissions	2.1053, 24.238(a)	RSS-133(6.5)	> 43 + 10 log10 (P[Watts]) for all out-of-band emissions	PASS	Section 7.8

Table 7-1. Summary of Test Results

Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots 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.
- 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 EMC Software Tool v1.1.

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7.2 Conducted Power Output Data

Test Overview

The EUT is set up to transmit two contiguous LTE channels. The power level of both carriers is measured by means of a calibrated spectrum analyzer. All emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

Test Procedure Used

KDB 971168 D01 v03r01 - Section 6.0

Test Settings

- 1. Span = $2 \times OBW$ to $3 \times OBW$
- 2. RBW = 1% to 5% of the OBW
- 3. Number of measurement points in sweep > 2 x span / RBW
- 4. Sweep = auto-couple (less than transmission burst duration)
- 5. Detector = RMS (power)
- 6. Trigger was set to enable power measurements only on full power bursts
- 7. Trace was allowed to stabilize
- 8. Spectrum analyzer's "Channel Power" function was used to compute the power by integrating the spectrum across the OBW of the signal

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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Test Notes:

- 1. Conducted power measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device.
- 2. Conducted power measurements are also evaluated for simultaneous transmission of two NR FR1 carriers operating in different bands (interband NR FR1 ULCA). The powers were investigated while both bands are operating at their widest supported channel bandwidth.
- 3. All other conducted power measurements are contained in the RF exposure report for this filing.

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Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
		374000	1870.0	1 / 161	24.47
	π/2 BPSK	376500	1882.5	1 / 108	24.46
		379000	1895.0	1 / 54	24.42
40 MHz		374000	1870.0	1 / 161	24.38
	QPSK	376500	1882.5	1 / 108	24.36
		379000	1895.0	1 / 54	24.46
	16-QAM	379000	1895.0	1 / 54	23.69
		372000	1865.0	1 / 40	24.47
	π/2 BPSK	376500	1882.5	1 / 119	24.46
		381000	1900.0	1 / 80	24.42
30 MHz		372000	1865.0	1 / 40	24.40
	QPSK	376500	1882.5	1 / 119	24.36
		381000	1900.0	1 / 80	24.29
	16-QAM	376500	1882.5	1 / 119	23.50
		372000	1862.5	1 / 66	24.48
	π/2 BPSK	376500	1882.5	1 / 33	24.35
		381000	1902.5	1 / 33	24.35
25 MHz		372000	1862.5	1 / 66	24.31
	QPSK	376500	1882.5	1 / 66	24.39
		381000	1902.5	1/33	24.26
	16-QAM	372000	1862.5	1 / 66	23.83
	π/2 BPSK	372000	1860.0	1 / 79	24.44
		376500	1882.5	1 / 26	24.49
		381000	1905.0	1 / 79	24.36
20 MHz		372000	1860.0	1 / 79	24.35
	QPSK	376500	1882.5	1 / 26	24.44
		381000	1905.0	1 / 79	24.47
	16-QAM	381000	1905.0	1 / 79	23.58
		371500	1857.5	1 / 58	24.49
	π/2 BPSK	376500	1882.5	1 / 58	24.42
		381500	1907.5	1 / 58	24.35
15 MHz		371500	1857.5	1 / 58	24.45
	QPSK	376500	1882.5	1 / 58	24.47
		381500	1907.5	1 / 58	24.28
	16-QAM	371500	1857.5	1 / 58	23.59
		371000	1855.0	1 / 26	24.48
	π/2 BPSK	376500	1882.5	1 / 38	24.47
		382000	1910.0	1 / 13	24.46
10 MHz		371000	1855.0	1 / 26	24.43
	QPSK	376500	1882.5	1 / 38	24.46
		382000	1910.0	1 / 13	24.40
	16-QAM	376500	1882.5	1 / 38	23.59
		370500	1852.5	1 / 12	24.46
	π/2 BPSK	376500	1882.5	1/6	24.46
		382500	1912.5	1 / 18	24.44
5 MHz		370500	1852.5	1 / 12	24.23
	QPSK	376500	1882.5	1/6	24.25
		382500	1912.5	1 / 18	24.40
	16-QAM	376500	1882.5	1/6	23.50
			wers (NR		

Table 7-2. Conducted Max Powers (NR Band n25/2 - ANT A)

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Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
		374000	1870.0	1 / 161	24.04
	π/2 BPSK	376500	1882.5	1 / 161	24.29
		379000	1895.0	1 / 54	24.23
40 MHz		374000	1870.0	1 / 161	23.80
	QPSK	376500	1882.5	1 / 161	24.00
		379000	1895.0	1 / 108	24.16
	16-QAM	379000	1895.0	1 / 54	23.32
		372000	1865.0	1 / 40	24.20
	π/2 BPSK	376500	1882.5	1 / 119	24.38
		381000	1900.0	1 / 40	24.28
30 MHz		372000	1865.0	1 / 40	23.94
	QPSK	376500	1882.5	1 / 119	24.31
		381000	1900.0	1 / 40	24.19
	16-QAM	381000	1900.0	1 / 40	23.17
		372000	1862.5	1 / 99	24.46
	π/2 BPSK	376500	1882.5	1 / 33	24.47
		381000	1902.5	1 / 66	24.47
25 MHz		372000	1862.5	1 / 99	24.32
	QPSK	376500	1882.5	1 / 33	24.24
		381000	1902.5	1 / 66	23.99
	16-QAM	372000	1862.5	1 / 99	23.45
	π/2 BPSK	372000	1860.0	1 / 79	24.15
		376500	1882.5	1 / 79	24.21
		381000	1905.0	1 / 79	24.16
20 MHz		372000	1860.0	1 / 79	23.96
	QPSK	376500	1882.5	1 / 79	24.01
		381000	1905.0	1 / 79	24.17
	16-QAM	376500	1882.5	1 / 79	22.55
		371500	1857.5	1 / 58	24.09
	π/2 BPSK	376500	1882.5	1 / 20	24.37
		381500	1907.5	1 / 39	24.15
15 MHz		371500	1857.5	1 / 58	23.79
	QPSK	376500	1882.5	1 / 20	24.10
		381500	1907.5	1 / 39	23.85
	16-QAM	376500	1882.5	1 / 20	23.15
		371000	1855.0	1 / 38	24.32
	π/2 BPSK	376500	1882.5	1 / 26	24.27
		382000	1910.0	1 / 38	24.32
10 MHz		371000	1855.0	1 / 38	24.16
	QPSK	376500	1882.5	1 / 26	24.17
		382000	1910.0	1 / 38	24.26
	16-QAM	376500	1882.5	1 / 26	23.31
		370500	1852.5	1 / 12	24.10
	π/2 BPSK	376500	1882.5	1 / 12	24.32
		382500	1912.5	1 / 12	24.23
5 MHz		370500	1852.5	1 / 12	24.08
	QPSK	376500	1882.5	1 / 12	24.13
		382500	1912.5	1 / 12	24.01
	16-QAM	376500	1882.5	1 / 12	22.98

Table 7-3. Conducted Max Powers (NR Band n25/2 - ANT I)

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PCC							SCC									
PCC Band	PCC Bandwidth [MHz]	PCC (UL) channel	PCC (UL) channel	PCC (UL) frequency	Mod.	PCC UL RB#/Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) channel	PCC (UL) channel	PCC (UL) frequency	Mod.	SCC UL RB#/Offset	PCC Conducted Power [dBm]	SCC Conducted Power [dBm]	Inter-Band ULCA Total Tx. Power (dBm)
					π/2 BPSK	1/162						π/2 BPSK	1/205	19.73	21.48	23.70
					QPSK	216/0						QPSK	270/0	19.40	20.99	23.28
	Low 374000 1870.0	1870.0	QPSK	1/54			Low	509202	2546.0	QPSK	1/68	19.43	20.86	23.21		
		574000	1070.0	QPSK	1/108			2011	505202		QPSK	1/137	19.27	21.28	23.40	
				QPSK	1/162						QPSK	1/205	19.35	21.46	23.54	
					16Q	1/162						16Q	1/205	19.56	21.32	23.54
					π/2 BPSK	1/54					π/2 BPSK	1/68	19.86	21.57	23.81	
					QPSK	.,.	n41 100				QPSK	270/0	19.61	21.16	23.46	
n25	40	Mid	376500	1882.5	QPSK	1/54		100	Mid	518598	2593.0	QPSK	1/68	19.75	21.59	23.78
	10			1002.0	QPSK	1/108						QPSK	1/137	19.69	21.23	23.54
					QPSK	1/162						QPSK	1/205	19.73	21.17	23.52
					16Q	1/54						16Q	1/68	19.56	21.32	23.54
					π/2 BPSK	1/54						π/2 BPSK	1/68	20.04	21.73	23.98
					QPSK	216/0						QPSK	270/0	19.82	21.23	23.59
	High 379000 189	High	379000	1895.0	QPSK	1/54			High	528000	2640.0	QPSK	1/68	19.99	21.69	23.93
			2.2000		QPSK	1/108		·	526000	2040.0	QPSK	1/137	19.61	21.77	23.83	
			QPSK	1/162						QPSK	1/205	19.49	21.54	23.65		
					16Q	1/54						16Q	1/68	19.76	21.54	23.75

Table 7-4. Conducted Max Powers (NR Bands n25 - n41)

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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.

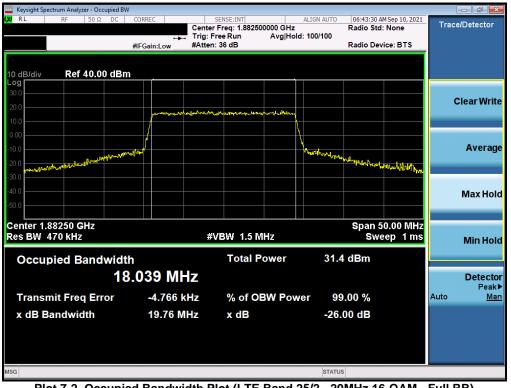
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LTE Band 25/2

www.www.com/www.cow/www.co							- 0
🗶 RL RF 50Ω DC		SENSE:INT er Freq: 1.882500000 GHz		06:43:21 Al Radio Std:	M Sep 10, 2021 None	Trace	/Detector
		Free Run Avg Ho n: 36 dB	old:>100/100	Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dBm							
Log 30.0							
20.0	and an and a second	Mm Marker				C	lear Write
10.0		and the first second second second second					
0.00			\mathbb{N}				
-10.0	,		Willward while				Average
Marmond New Marmon				Marsh willing	multimeter		
-30.0							
-40.0							Max Hold
Center 1.88250 GHz Res BW 470 kHz	#	¥VBW 1.5 MHz			0.00 MHz ep 1 ms		
							Min Hold
Occupied Bandwidth		Total Power	31.9	dBm			
18	.002 MHz						Detector Peak►
Transmit Freq Error	5.481 kHz	% of OBW Po	wer 99	0.00 %		Auto	Man
x dB Bandwidth	19.84 MHz	x dB	-26.	00 dB			
MSG			STATUS	S			

Plot 7-1. Occupied Bandwidth Plot (LTE Band 25/2 - 20MHz QPSK - Full RB)



Plot 7-2. Occupied Bandwidth Plot (LTE Band 25/2 - 20MHz 16-QAM - Full RB)

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Keysight Spectrum Analyzer - Occupied B	V				
<mark>0 RL RF 50 Ω DC</mark>	CORREC Cent	SENSE:INT er Freg: 1.882500000	ALIGN AUTO	07:13:42 AM Sep 10 Radio Std: None	Trace/Detector
		Free Run Ave en: 36 dB	Hold: 100/100	Radio Device: B1	rs
0 dB/div Ref 40.00 dBr	n				
.og 30.0					
20.0		_พ ๛๛ _ท ๅ๛๛ๅ๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛			Clear Writ
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10.0	n lott		had the second		Averag
20.0 Antonio Marchard Marchard				and the stand an	May .
40.0					Max Ho
enter 1.88250 GHz es BW 360 kHz		#VBW 1.1 MHz		Span 37.50 Sweep 1	
				Sweep	Min Hol
Occupied Bandwidt	h	Total Powe	r 31.7	7 dBm	
13	3.535 MHz				Detecto
Transmit Freq Error	-1.309 kHz	% of OBW I	Power 90	9.00 %	Peak Auto Ma
x dB Bandwidth	15.10 MHz	x dB		00 dB	
	13.10 MITZ	хuв	-20.	UU UB	
G			STATU	S	

Plot 7-3. Occupied Bandwidth Plot (LTE Band 25/2 - 15MHz QPSK - Full RB)



Plot 7-4. Occupied Bandwidth Plot (LTE Band 25/2 - 15MHz 16-QAM - Full RB)

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Plot 7-5. Occupied Bandwidth Plot (LTE Band 25/2 - 10MHz QPSK - Full RB)



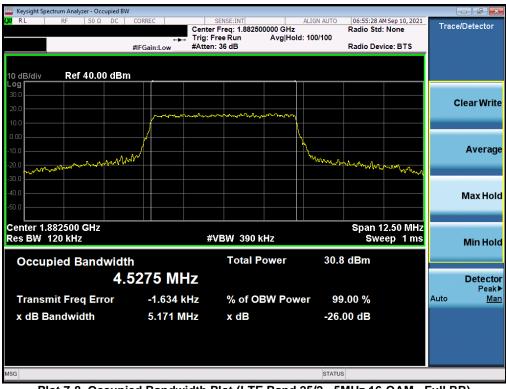
Plot 7-6. Occupied Bandwidth Plot (LTE Band 25/2 - 10MHz 16-QAM - Full RB)

FCC ID: A3LSMS906U	PCTEST Proad to be part of @elesseri	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-7. Occupied Bandwidth Plot (LTE Band 25/2 - 5MHz QPSK - Full RB)



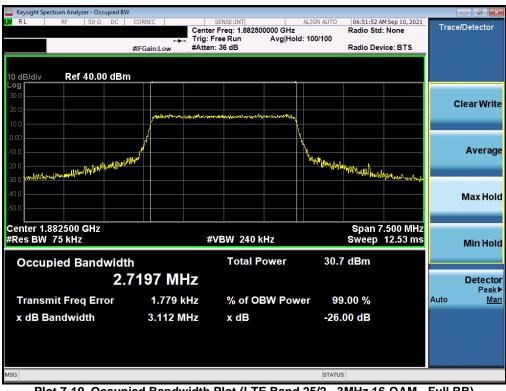
Plot 7-8. Occupied Bandwidth Plot (LTE Band 25/2 - 5MHz 16-QAM - Full RB)

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Plot 7-9. Occupied Bandwidth Plot (LTE Band 25/2 - 3MHz QPSK - Full RB)



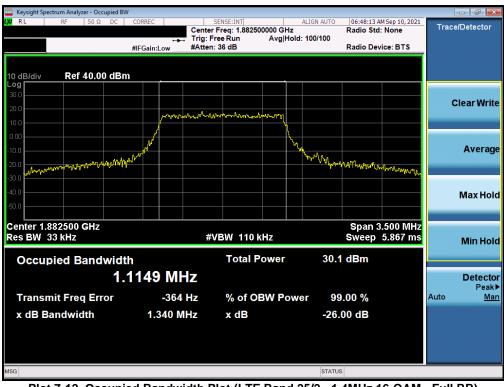
Plot 7-10. Occupied Bandwidth Plot (LTE Band 25/2 - 3MHz 16-QAM - Full RB)

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Plot 7-11. Occupied Bandwidth Plot (LTE Band 25/2 - 1.4MHz QPSK - Full RB)



Plot 7-12. Occupied Bandwidth Plot (LTE Band 25/2 - 1.4MHz 16-QAM - Full RB)

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NR Band n25/2 - Ant A

Spectrum Analyzer 1 Occupied BW	÷				Trace	- * 影
KEYSIGHT Input: RF R L Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 1.882500000 GHz Avg Hold: 100/100 Radio Std: None	Trace Type Clear / Write	Trace Control
1 Graph					Trace Average	Delector
Scale/Div 10.0 dB	F	Ref Value 40.00) dBm		Max Hold	
30.0	post secondaria	Mannahan	and and a start		Min Hold	
0.00					Restart Max Hold	
-20.0 -30.0 -40.0	and a start and a start and a start a st			under alles and a sugar	PEAK Manaza	
-50.0 Center 1.88250 GHz	#\	/ideo BW 3.00	00 MHz	Span 100	MHz	
#Res BW 1.0000 MHz				Sweep 1.00 ms (1001	pts)	
2 Metrics v						
Occupied Bandwidth 38.764	4 MHz		Total Power	30.5 dBm		
Transmit Freq Error x dB Bandwidth	-4.969 kHz 41.04 MHz		% of OBW Pow x dB	er 99.00 % -26.00 dB		
4 h C l ?	Sep 11, 2021 . 12:44:13 PM	\Box			X	

Plot 7-13. Occupied Bandwidth Plot (NR Band n25 - 40.0MHz DFT-s-OFDM BPSK - Full RB)

Occupi		· · ·	+								‡	Trace	- ※
RL	SIGHT ↔	Input: RF Coupling: DC Align: Auto	Input Z: 5 Corr CCo Freq Ref: NFE: Off		Atten: 36 dB	Gat	r: Free Run te: Off Gain: Low	Center Freq Avg Hold: 10 Radio Std: N) GHz	Trace Type Clear / V	/rite	Trace Control
1 Grapi	h	•	NIL. OI								Trace Av	erage	Detector
	Div 10.0	dB		Re	ef Value 40.0	00 dBm							
Log 30.0											Max Hol	5	
20.0				-1			manyar				Min Hold		
10.0			(-		
-10.0											Restart N	lax Hold	
-20.0			monoral					-	man and and and and and and and and and a	PEAK			
-30.0										mound			
-50.0													
Center	1.88250) GHz		#Vi	deo BW 3.0	000 MHz			Sp	an 100 MHz			
#Res E	3W 1.000	00 MHz						Sw	eep 1.00 m	s (1001 pts)			
2 Metri	CS	▼											
	Occur	bied Bandwidth											
	0000		751 MHz			То	tal Power		29.4 df	3m			
		mit Freq Error		9.743 kHz			of OBW Powe	er	99.00				
	x dB I	Bandwidth	4	1.07 MHz		x	dB		-26.00	dB			
	5		? Sep 11, 12:44:4	2021 1 PM 🤃				i i					

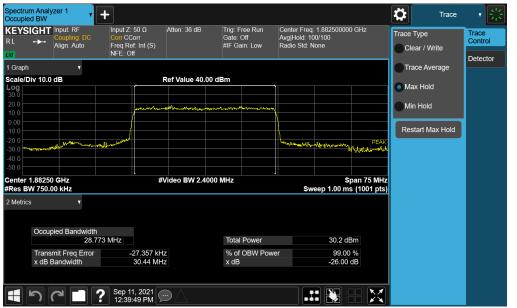
Plot 7-14. Occupied Bandwidth Plot (NR Band n25 - 40.0MHz CP-OFDM QPSK - Full RB)

FCC ID: A3LSMS906U	PCTEST Proad to be part of @elesseri	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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YSIGHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 1.882500000 GHz Avg Hold: 100/100 Radio Std: None	Trace Type Clear / Write	Trace Control
Graph ▼ ale/Div 10.0 dB		Ref Value 40.00	dBm		Trace Average	Delector
g .0 .0		and a start and a start and	1.194414975.14941.19441.1944.1944		Max Hold	
00 0.0 0.0 0.0 0.0	w			human man man PE	Restart Max Hold	
1.0 1.0 Inter 1.88250 GHz		Video BW 3.000	0 MHz	Span 100 M	47	
es BW 1.0000 MHz letrics				Sweep 1.00 ms (1001 pf		
Occupied Bandwidth 38.69	96 MHz		Total Power	28.4 dBm		
Transmit Freq Error x dB Bandwidth	-86.551 kH 41.09 MH		% of OBW Powe x dB	er 99.00 % -26.00 dB		

Plot 7-15. Occupied Bandwidth Plot (NR Band n25 - 40.0MHz CP-OFDM 16QAM - Full RB)



Plot 7-16. Occupied Bandwidth Plot (NR Band n25 - 30.0MHz DFT-s-OFDM BPSK - Full RB)

FCC ID: A3LSMS906U	PCTEST Poud to be part of @ element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Spectrum Ana Occupied BW KEYSIGH RL ••••		HINDUL Z: 50 Ω Corr CCorr Freg Ref: Int (S)	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 1.8825000 Avg Hold: 100/100 Radio Std: None	00 GHz	Trace Type	Trace Control
UV 1 Graph Scale/Div 10. Log 30.0 -10.0 -20.0 -30.0 -40.0	•	NFE: Off	Ref Value 40.00			реак	Clear / Write Trace Average Max Hold Min Hold Restart Max Hold	Detector
-50.0 Center 1.882 #Res BW 750 2 Metrics Occ	0.00 kHz ▼ upied Bandwidth		Video BW 2.40		Sweep 1.00 r			
	28.76	7.617 kH 30.48 MH		Total Power % of OBW Pow x dB	29.1 o er 99.0 -26.00	00 %		

Plot 7-17. Occupied Bandwidth Plot (NR Band n25 - 30.0MHz CP-OFDM QPSK - Full RB)



Plot 7-18. Occupied Bandwidth Plot (NR Band n25 - 30.0MHz CP-OFDM 16QAM - Full RB)

FCC ID: A3LSMS906U	PCTEST Poud to be part of @ element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF R L + Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: Avg Hold: 100 Radio Std: No		Trace Type Clear / Write	Trace Control
1 Graph v Scale/Div 10.0 dB		Ref Value 40.00) dBm			Trace Average	Detector
Log 30.0 20.0 10.0	providence of	and percenting a second start	Adress and the product of the produc			Max Hold	
0.00	a marine all			hours	PEAK	Restart Max Hold	
-40.0 -50.0 Center 1.88250 GHz		Video BW 2.000			Span 62.5 MH		
Res BW 620.00 kHz 2 Metrics				Swe	ep 1.00 ms (1001 pts		
Occupied Bandwic	th .008 MHz		Total Power		30.6 dBm		
Transmit Freq Erro x dB Bandwidth	or -478.08 kH 24.46 MH		% of OBW Pow x dB	er	99.00 % -26.00 dB		
1 500	Sep 11, 2021 12:38:12 PM						

Plot 7-19. Occupied Bandwidth Plot (NR Band n25 - 25.0MHz DFT-s-OFDM BPSK - Full RB)

EYSIGHT	Input: RF Coupling: DC Align: Auto	Input Z: 50 9 Corr CCorr Freq Ref: In NFE: Off		Gate: (ree Run Off in: Low	Center Freq: Avg Hold: 10 Radio Std: N) GHz	Trace Type Clear / Write	Trace Control
Graph	•								Trace Average	
ale/Div 10.	0 dB		Ref Value 40.0	0 dBm			1		Max Hold	
0.0 0.0 0.0			- when an	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	shappy				Min Hold	
00						L	the flore and	PEAK	Restart Max Hold	
0.0										
nter 1.8825 s BW 620.0			#Video BW 2.00	000 MHz		Sw		an 62.5 MHz s (1001 pts)		
vletrics	v									
Occu	upied Bandwidth 23.8	87 MHz		Total	Power		29.3 dE	Bm		
	smit Freq Error Bandwidth		182 kHz 43 MHz	% of x dB	OBW Powe	er	99.00 -26.00			
x dB		E0.		A aD			20100			

Plot 7-20. Occupied Bandwidth Plot (NR Band n25 - 25.0MHz CP-OFDM QPSK - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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YSIGHT Input: RF Coupling: DC Align: Auto	Input Ζ: 50 Ω At Corr CCorr Freq Ref: Int (S) NFE: Off	Gat	: Free Run e: Off Gain: Low	Center Freq: Avg Hold: 10 Radio Std: N		GHz	Trace Type Clear / Write	Trace Control Detecto
Graph v							Trace Average	Delecto
ale/Div 10.0 dB g	Ret	Value 40.00 dBm					Max Hold	
.0	Jant Marian Bert	กร <i>ปสาหา</i> สารสรรษณ์	WAR MAN MAN				Min Hold	
.0			N				Restart Max Hold	
.0 .0 .0	hansan Marandal			hapenaria	han and a provide the	РЕАК ๛๛๛๚ๅ๛๛๛ _{เม} ๛		
nter 1.88250 GHz s BW 620.00 kHz	#Vid	eo BW 2.0000 MHz		Sw	Spa eep 1.00 ms	n 62.5 MHz (1001 pts)		
letrics v						(
Occupied Bandwidth	34 MHz	14	tal Power		28.4 dE			
Transmit Freg Error	-7.305 kHz		of OBW Powe		28.4 GE 99.00			
x dB Bandwidth	25.49 MHz	-76 X C		4	-26.00			

Plot 7-21. Occupied Bandwidth Plot (NR Band n25 - 25.0MHz CP-OFDM 16QAM - Full RB)



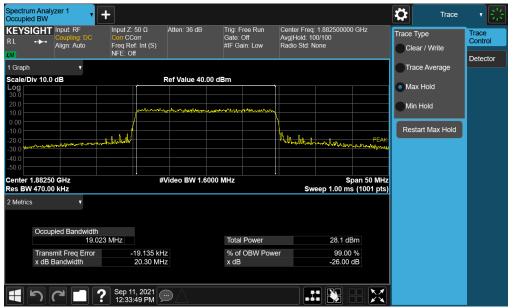
Plot 7-22. Occupied Bandwidth Plot (NR Band n25/2 - 20.0MHz DFT-s-OFDM BPSK - Full RB)

FCC ID: A3LSMS906U	PCTEST Proud to be part of @ element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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EYSIGHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 1 Avg Hold: 100/ Radio Std: Nor		Trace Type Clear / Write	Trace Control
Graph v						Trace Average	Delecio
ale/Div 10.0 dB		Ref Value 40.00	dBm			Max Hold	
0.0		union and and	uert-m-trace-resultionsprong/			Min Hold	
00				Manuer Person	PEAK	Restart Max Hold	
0.0							
nter 1.88250 GHz s BW 470.00 kHz	#	Video BW 1.600	0 MHz	Swee	Span 50 MHz p 1.00 ms (1001 pts		
letrics v							
Occupied Bandwidth			Total Power		29.0.dBm		
Occupied Bandwidth	57 MHz -23.590 kH	Z	Total Power % of OBW Pow	er	29.0 dBm 99.00 %		

Plot 7-23. Occupied Bandwidth Plot (NR Band n25/2 - 20.0MHz CP-OFDM QPSK - Full RB)



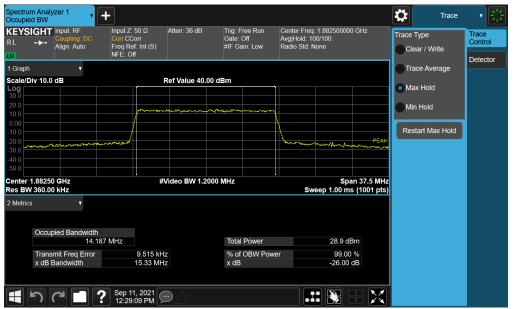
Plot 7-24. Occupied Bandwidth Plot (NR Band n25/2 - 20.0MHz CP-OFDM 16QAM - Full RB)

FCC ID: A3LSMS906U	PCTEST Proud to be part of @element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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1 Graph • Scale/Div 10.0 dB Ref Value 40.00 dBm Log • 200 • <td< th=""><th></th><th>t: RF I pling: DC 0 n: Auto F</th><th>Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off</th><th>Atten: 36 dB</th><th>Trig: Free Run Gate: Off #IF Gain: Low</th><th>Avg F</th><th>er Freq: 1.8825000 łold: 100/100 o Std: None</th><th>00 GHz</th><th>Trace Type Clear / Write</th><th>Trace Control</th></td<>		t: RF I pling: DC 0 n: Auto F	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Avg F	er Freq: 1.8825000 łold: 100/100 o Std: None	00 GHz	Trace Type Clear / Write	Trace Control
300 40	Scale/Div 10.0 dB Log 20.0 10.0 -10.0								Max Hold	Delector
13.526 MHz Total Power 30.2 dBm Transmit Freq Error -368.08 kHz % of OBW Power 99.00 %	-30.0 -40.0 -50.0 Center 1.88250 GH Res BW 360.00 kHz	Z 2	#\	/ideo BW 1.200	00 MHz	h	Sr	pan 37.5 MHz		
	Transmit F	13.526 N req Error	-368.08 kHz		% of OBW P	ower	99.0	0 %		

Plot 7-25. Occupied Bandwidth Plot (NR Band n25/2 - 15.0MHz DFT-s-OFDM BPSK - Full RB)



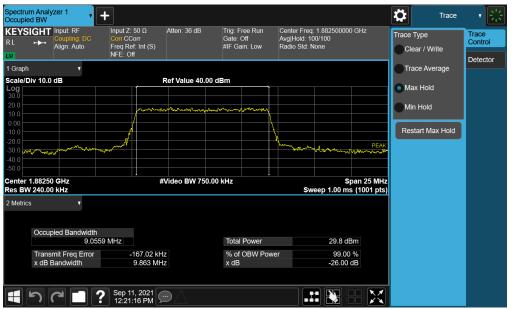
Plot 7-26. Occupied Bandwidth Plot (NR Band n25/2 - 15.0MHz CP-OFDM QPSK - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF R L	H Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 1.882500000 GHz Avg Hold: 100/100 Radio Std: None	Trace Type Clear / Write	Trace Control
1 Graph ▼ Scale/Div 10.0 dB Log		Ref Value 40.00) dBm		Trace Average	Delector
30.0 20.0 10.0		harrow	alyon of the second		Min Hold	
0.00 10.0 20.0 30.0	Deres of the second sec			PEAI Montheward and Manutation	Restart Max Hold	
40.0 50.0 Center 1.88250 GHz Res BW 360.00 kHz	#	Video BW 1.200	00 MHz	Span 37.5 MH Sweep 1.00 ms (1001 pts		
2 Metrics V				<u>.</u>		
Occupied Bandwidth 14.1	75 MHz		Total Power	27.8 dBm		
Transmit Freq Error x dB Bandwidth	-23.846 kH 15.19 MH		% of OBW Pow x dB			
15CD	Sep 11, 2021					

Plot 7-27. Occupied Bandwidth Plot (NR Band n25/2 - 15.0MHz CP-OFDM 16QAM - Full RB)



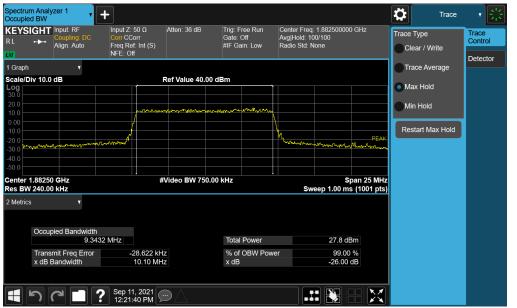
Plot 7-28. Occupied Bandwidth Plot (NR Band n25/2 - 10.0MHz DFT-s-OFDM BPSK - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Graph Scale/Div 10.0 dB Ref Value 40.00 dBm 00 00 00 00 00 00 00 00 00		Clear /		Avg Hold: 1 Radio Std: 1	g: Free Run ate: Off ⁻ Gain: Low			Input Z: Corr CC Freq Re NFE: O	Coupling: DC Align: Auto	/SIGHT .≁·
enter 1.88250 GHz #Video BW 750.00 kHz Span 25 MHz	Trace Average	Trace A				ue 40 00 d	Pof Va		•	
Min Hold PEAK PE	Max Hold	Max Ho				ue 40.00 u				
00 0 0 0 0 0 0 0 0 0	Min Hold	Min Ho			hanna an	m	=n-~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
nter 1.88250 GHz #Video BW 750.00 kHz Span 25 MHz	Restart Max Hold			<u> </u>				لر		
nter 1.88250 GHz #Video BW 750.00 kHz Span 25 MHz		Man and a start	- manual man	Worman				manner	www	
				Sw	z	BW 750.00	#Video			
Metrics v									T	trics
Occupied Bandwidth 9.3694 MHz Total Power 28.7 dBm			08 Z dDm		etel Douror					Occup
Transmit Freq Error -13.515 kHz % of OBW Power 99.00 %				or			2 515 kHz			Trane
x dB Bandwidth 10.28 MHz x dB -26.00 dB										

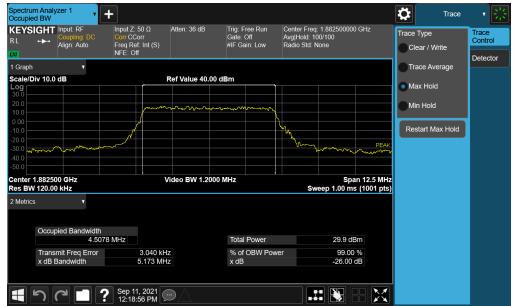
Plot 7-29. Occupied Bandwidth Plot (NR Band n25/2 - 10.0MHz CP-OFDM QPSK - Full RB)



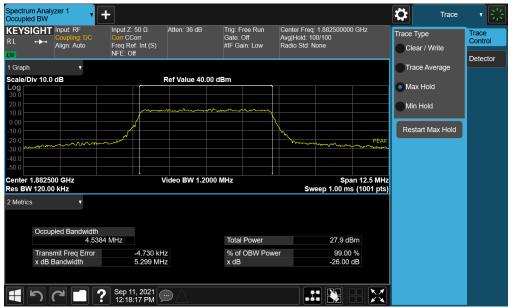
Plot 7-30. Occupied Bandwidth Plot (NR Band n25/2 - 10.0MHz CP-OFDM 16QAM - Full RB)

FCC ID: A3LSMS906U	PCTEST* Proud to be part of @vieleneed	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-31. Occupied Bandwidth Plot (NR Band n25/2 - 5.0MHz DFT-s-OFDM BPSK - Full RB)



Plot 7-32. Occupied Bandwidth Plot (NR Band n25/2 - 5.0MHz CP-OFDM QPSK - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: Avg Hold: 10 Radio Std: N		Trace Type Clear / Write	Trace Control Detector
l Graph	•						Trace Average	
cale/Div 10.0 o	dB		Ref Value 40.00	dBm			Max Hold	
30.0 20.0 10.0			Manna	14.45			Min Hold	
0.00		name of the second s			homen	p	Restart Max Hold	
30.0 40.0 50.0								
enter 1.88250 Res BW 120.00			/ideo BW 1.200	0 MHz	Swe	Span 12.5 M eep 1.00 ms (1001		
2 Metrics								
Occupi	ied Bandwidth 4.545	53 MHz		Total Power		27.7 dBm		
	nit Freq Error andwidth	-8.219 k⊢ 5.192 M⊦		% of OBW Pov x dB	ver	99.00 % -26.00 dB		

Plot 7-33. Occupied Bandwidth Plot (NR Band n25/2 - 5.0MHz CP-OFDM 16QAM - Full RB)

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NR Band n25/2 – Ant I



Plot 7-34. Occupied Bandwidth Plot (NR Band n25 - 40.0MHz DFT-s-OFDM BPSK - Full RB)



Plot 7-35. Occupied Bandwidth Plot (NR Band n25 - 40.0MHz CP-OFDM QPSK - Full RB)

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🔤 Keysight Spectrum Analyzer - Occu	upied BW								(- 6
LXIRLT RF 50Ω	DC COR	REC		SE:INT ea: 1.88250	0000 GH-	ALIGN AUTO	04:53:48 A Radio Std	M Oct 07, 2021	Trace	/Detector
			Trig: Free	Run	Avg Hold	: 100/100	Raulo Stu	None		
	#IFG	ain:Low	#Atten: 36	6 dB			Radio Dev	ice: BTS		
10 dB/div Ref 40.00	dBm									
Log										
30.0									c	lear Write
20.0		مالياور مياليه الم	we that out a d	الم الم الحق المراحل المراحل الم						
10.0			an sta mais di bibata t		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -					
0.00										
-10.0										Average
-20.0	1 m arton					Madall.				
-20.0 -30.0 pph/htmp/hpt/hr/hp/hpr/hp	hill a shirt					Manglelangel	themany			
-40.0								mannun		Max Hold
-50.0										Max Holu
00.0										
Center 1.88250 GHz								00.0 MHz		
#Res BW 1 MHz			#VB	W 3 MH	z		Swe	ep 1 ms		Min Hold
				Total P	owor	20.2	dBm			
Occupied Bandy				TOLAT	ower	29.2	UDIII			
	38.6	90 MF	Z							Detector
Transit Francis		00 705 1		0/ -f OF		00	.00 %		Auto	Peak▶ Man
Transmit Freq Erro	or -	86.765 k	(HZ	% OT UE	BW Pow	er 99	.00 %		Auto	Ivian
x dB Bandwidth		40.97 M	IHz	x dB		-26.	00 dB			
MSG						STATUS				
mou						STATUS				

Plot 7-36. Occupied Bandwidth Plot (NR Band n25 - 40.0MHz CP-OFDM 16QAM - Full RB)



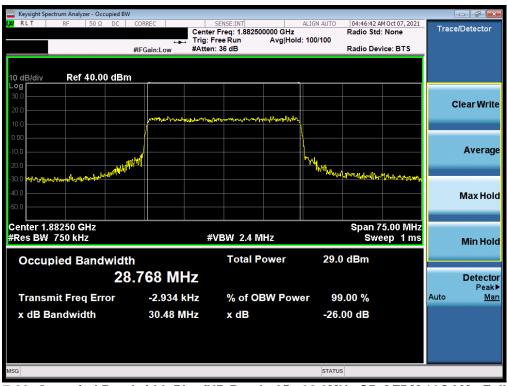
Plot 7-37. Occupied Bandwidth Plot (NR Band n25 - 30.0MHz DFT-s-OFDM BPSK - Full RB)

FCC ID: A3LSMS906U	Potest: Proud to be part of @elettered	PART 24 MEASUREMENT REPORT	MSUNG	Approved by: Technical Manager	
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🔤 Keysight Spectrum Analyzer - Occupied BW	
XX R L T RF 50 Ω DC CORREC SENSE:INT ALIGN AUTO 04:45:54 AM Oct Center Freg: 1.882500000 GHz Radio Std: Noi	
Trig: Free Run Avg Hold: 100/100	
#IFGain:Low #Atten: 36 dB Radio Device:	BTS
10 dB/div Ref 40.00 dBm	
Log 30.0	
20.0	Clear Write
10.0	
	Average
	Average
20.0 Che and a supported by a start of the second s	
-40.0	Max Hold
-50.0	
Center 1.88250 GHz Span 75.0	0 MHz
#Res BW 750 kHz #VBW 2.4 MHz Sweep	
Occupied Bandwidth Total Power 29.1 dBm	
28.751 MHz	Detector
	Peak►
Transmit Freq Error -22.137 kHz % of OBW Power 99.00 %	Auto <u>Man</u>
x dB Bandwidth 30.45 MHz x dB -26.00 dB	
MSG STATUS	

Plot 7-38. Occupied Bandwidth Plot (NR Band n25 - 30.0MHz CP-OFDM QPSK - Full RB)



Plot 7-39. Occupied Bandwidth Plot (NR Band n25 - 30.0MHz CP-OFDM 16QAM - Full RB)

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🔤 Keysight Spectrum Analyzer - Occupier	d BW				
L <mark>X/</mark> RLT RF 50Ω DO		SENSE:INT Center Freg: 1.88250	ALIGN AUTO	04:16:20 AM Oct 07, 202: Radio Std: None	Trace/Detector
		Trig: Free Run	Avg Hold: 100/100	Radio Stu. None	
	#IFGain:Low	#Atten: 36 dB		Radio Device: BTS	_
10 dB/div Ref 40.00 d	Bm				
Log					
30.0					Clear Write
20.0	monorman	may gent of from whe parts was a strong	harmynni		
10.0					
0.00	<u> </u>				
-10.0					Average
-20.0	Marter and		"Margan	The wall and a start where the second s	υ.
-30.0					
-40.0					Max Hold
-50.0					Max Hold
-50.0					
Center 1.88250 GHz				Span 62.50 MH	z
Res BW 620 kHz		#VBW 2 MH	z	Sweep 1 m	S Min Hold
		Total P	24	.5 dBm	
Occupied Bandwi			ower 31	.5 aBm	
	23.095 MH	Ζ			Detector
					Peak►
Transmit Freq Error	-461.58 kH	iz % of OE	BW Power 9	99.00 %	Auto <u>Man</u>
x dB Bandwidth	24.57 MF	z x dB	-26	6.00 dB	
MSG			STAT	110	
mod			STAT	03	

Plot 7-40. Occupied Bandwidth Plot (NR Band n25 - 25.0MHz DFT-s-OFDM BPSK - Full RB)



Plot 7-41. Occupied Bandwidth Plot (NR Band n25 - 25.0MHz CP-OFDM QPSK - Full RB)

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Keysight Spectrum Analyzer - Occupied BW						- ¢	×
XX RLT RF 50Ω DC C	ORREC	SENSE:INT Center Freg: 1.882500	ALIGN	AUTO 04:17:05 AM Radio Std:	Oct 07, 2021	Trace/Detect	tor
	- -	Trig: Free Run	Avg Hold: 100/	100			
#	IFGain:Low	#Atten: 36 dB		Radio Devi	ce: BTS		
10 dB/div Ref 40.00 dBm							
30.0							
20.0						Clear W	/rite
10.0	Harmon	mperaten makin manina	wanter				
0.00							
-10.0						Aver	rage
						7.00	age
-20.0 <mark>สาห_{ากการไฟ}ประทับใน_สารัฐมา/การเหมือง -30.0</mark>	~		hadrad all and a start of the s	Level and a second and a second	LILANIN TYPE		
-40.0							
						MaxH	lold
-50.0							-
Center 1.88250 GHz				Span 62	2.50 MHz		
Res BW 620 kHz		#VBW 2 MH	z	Swe	ep 1 ms	Min H	lold
		Total P	owor	29.5 dBm			
Occupied Bandwidth			ower	29.5 uBm			
23.	052 MH	Ζ				Dete	
Transmit Freq Error	-456.41 k	Hz % of OF	W Power	99.00 %			eak▶ Man
							mari
x dB Bandwidth	24.51 M	Hz xdB		-26.00 dB			
MSG				STATUS			

Plot 7-42. Occupied Bandwidth Plot (NR Band n25 - 25.0MHz CP-OFDM 16QAM - Full RB)



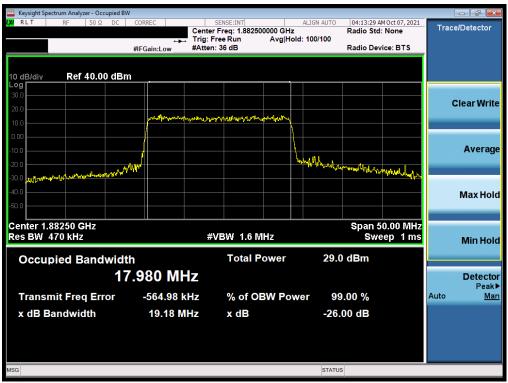
Plot 7-43. Occupied Bandwidth Plot (NR Band n25/2 - 20.0MHz DFT-s-OFDM BPSK - Full RB)

FCC ID: A3LSMS906U	PCTEST Proud to be part of @ element	PART 24 MEASUREMENT REPORT	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Occupied BW							đ 🔀
LX/ RLT RF 50Ω DC (ORREC	SENSE:INT Center Freg: 1.88250		IN AUTO 04:13:07 Al Radio Std:	10ct 07, 2021	Trace/Det	ector
		Trig: Free Run	Avg Hold: 100		None		
	IFGain:Low	#Atten: 36 dB		Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dBm							
Log 30.0							
						Clear	Write
20.0	Distriction and sheet	har black for month of providence	As a Associate				
10.0		the Inches of the set					
0.00							
-10.0						Av	verage 🛛
-20.0	μ		ahahen.	manilanstrubarturepublic			
-20.0 Million and a second of the second of				h.w.b	WHW/IINIPIL/MAN		
-40.0						Ma	x Hold
-50.0						IVIA	
Center 1.88250 GHz					0.00 MHz		
Res BW 470 kHz		#VBW 1.6 M	Hz	Swe	ep 1 ms	Mi	n Hold
Occupied Bandwidth		Total P	ower	28.8 dBm			
			ower	20.0 0.0111			
17.	995 MH	Z				De	tector
Transmit Freq Error	-520.98 kl		3W Power	99.00 %		Auto	Peak▶ Man
						Auto	man
x dB Bandwidth	19.16 MI	Hz xdB		-26.00 dB			
MSG				STATUS			

Plot 7-44. Occupied Bandwidth Plot (NR Band n25/2 - 20.0MHz CP-OFDM QPSK - Full RB)



Plot 7-45. Occupied Bandwidth Plot (NR Band n25/2 - 20.0MHz CP-OFDM 16QAM - Full RB)

FCC ID: A3LSMS906U	PCTEST Proud to be part of @element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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🔤 Keysight Spectrum Analyzer -											- # X
LXIRLT RF 50)Ω DC (CORREC		NSE:INT rea: 1.88250	0000 GHz		LIGN AUTO	03:42:13 A Radio Std	M Oct 07, 2021	Trac	e/Detector
		+	, Trig: Free	e Run			100/100				
	#	#IFGain:Low	#Atten: 3	6 dB				Radio Dev	ice: BTS		
10 dB/div Ref 40	.00 dBm		1			_					
30.0											
20.0											Clear Write
10.0		" the work was	Antoneworker	and the second	and and a second						
0.00											
-10.0						۱Į					Average
-20.0		/				X		~			Average
-20.0 -30.0	~~~~~	ل ا				-		~~~~m	thead the		
-2010 Manufacture											
-40.0											Max Hold
-50.0										_	
Center 1.88250 GHz	:							Span 3	7.50 MHz		
Res BW 360 kHz			#VE	3W 1.2 M	Hz				ep 1 ms		Min Hold
				Terel D			20.0				
Occupied Ban				Total P	ower		30.9	dBm			
	13.	465 MI	Hz								Detector
Transmit Freq E	rror	-354.21		% of OE			- 00	.00 %		Auto	Peak▶ Man
						we				Auto	Man
x dB Bandwidth		14.36 N	ЛНz	x dB			-26.	00 dB			
MSG							STATUS	;			

Plot 7-46. Occupied Bandwidth Plot (NR Band n25/2 - 15.0MHz DFT-s-OFDM BPSK - Full RB)



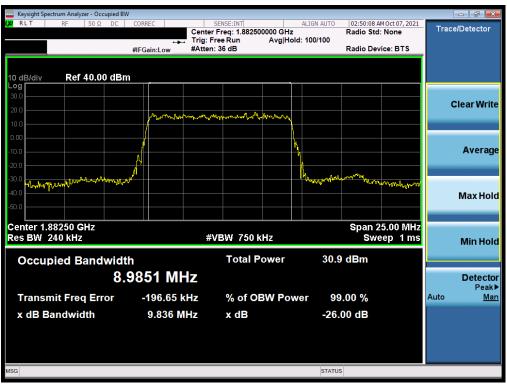
Plot 7-47. Occupied Bandwidth Plot (NR Band n25/2 - 15.0MHz CP-OFDM QPSK - Full RB)

FCC ID: A3LSMS906U	PCTEST* Proud to be part of @ element	PART 24 MEASUREMENT REPORT	Approved by: Technical Manager
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🔤 Keysight Spectrum Analyzer - Oci	cupied BW										
L <mark>X/</mark> RLT RF 50Ω	DC COF	RREC		ISE:INT eq: 1.88250	0000 GH-		LIGN AUTO	03:42:54 A	M Oct 07, 2021	Trac	e/Detector
		÷+-	. Trig: Free	Run			100/100	Raulo Stu	. None		
	#IFC	Gain:Low	#Atten: 36	6 dB				Radio Dev	ice: BTS		
10 dB/div Ref 40.0	0 dBm										
Log 30.0					l î						
											Clear Write
20.0		M an work	minternet and	بالمحم والمحاف وقرأته	n Barton Abura						
10.0		- and and and and	a on or relation	0.511-100-440							
0.00						⊢					
-10.0						H					Average
-20.0	1.01					<u>ل</u> ا	ft.11				
-30.0 march from Joyna and	mmm					_	"WWWWWW	Mapminique	ad the a party		
-40.0											Max Hold
-50.0											
-56.6											
Center 1.88250 GHz									7.50 MHz		
Res BW 360 kHz			#VB	W 1.2 M	Hz			Swe	ep 1 ms		Min Hold
				Total P			20.0	dBm			
Occupied Band				Total P	ower		20.0				
	<u>13.5</u>	46 MI	z								Detector
Transmith From From		264 52	-11-	0/ -6 01				00.0/		Auto	Peak▶ Man
Transmit Freq Err	or ·	-364.52	(HZ	% of O	SW PO	we	r 99	.00 %		Auto	ivian
x dB Bandwidth		14.31 N	IHz	x dB			-26.	00 dB			
MSG						_	STATUS				
						_	JIATOC				

Plot 7-48. Occupied Bandwidth Plot (NR Band n25/2 - 15.0MHz CP-OFDM 16QAM - Full RB)



Plot 7-49. Occupied Bandwidth Plot (NR Band n25/2 - 10.0MHz DFT-s-OFDM BPSK - Full RB)

FCC ID: A3LSMS906U	PCTEST	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Occupied E	3W				
LX/RLT RF 50Ω DC	CORREC	SENSE:INT Center Freg: 1.88250	ALIGN AUTO	02:50:48 AM Oct 07, 2021 Radio Std: None	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 dB	m .				
Log 30.0					
					Clear Write
20.0	10000 1000 1000	Well Margan anna Mr. Harra	Mar No		
10.0		a britisharina mana barangan			
0.00					
-10.0	A				Average
-20.0	~/		- Mul -		
-30.0 mldromanghan man and a south	איי יק		1 July market	a vagenteen amprimente	
-40.0					Max Hold
-50.0					Max Hold
Center 1.88250 GHz				Span 25.00 MHz	
Res BW 240 kHz		#VBW 750 k	Hz	Sweep 1 ms	Min Hold
Occurried Developing	41-	Total P	owor 20.6	i dBm	
Occupied Bandwid			ower 20.0	u bill	
9	.0057 MH	Z			Detector
	404.04.14	I- 0/ -f OF	M D		Peak▶ Auto Man
Transmit Freq Error	-194.84 kl		3W Power 99	0.00 %	Auto <u>Man</u>
x dB Bandwidth	9.785 MH	lz xdB	-26.	00 dB	
MSG			STATUS	3	
			STATU	-	

Plot 7-50. Occupied Bandwidth Plot (NR Band n25/2 - 10.0MHz CP-OFDM QPSK - Full RB)



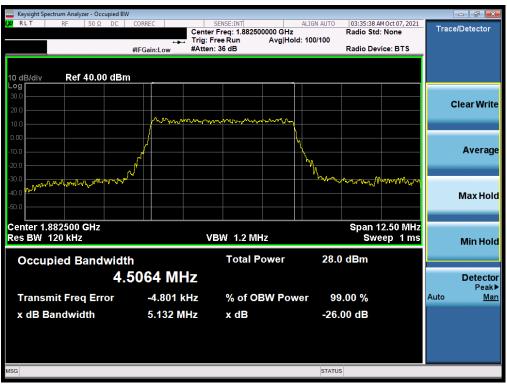
Plot 7-51. Occupied Bandwidth Plot (NR Band n25/2 - 10.0MHz CP-OFDM 16QAM - Full RB)

FCC ID: A3LSMS906U	PCTEST Proud to be part of @element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Occupied B\	N				
🗶 RLT RF 50Ω DC	CORREC	SENSE:INT Center Freq: 1.88250	ALIGN AUTO	03:03:34 AM Oct 07, 2021 Radio Std: None	Trace/Detector
		Talas Dava Dava	Avg Hold: 100/100		
	#IFGain:Low	#Atten: 36 dB		Radio Device: BTS	
10 dB/div Ref 40.00 dBr	n				
Log					
30.0					Clear Write
20.0	A.M. A.	mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm	M + ~ March		Cicul Millo
10.0					
0.00			\\		
-10.0	^		k~		Average
-20.0			/ <u>^_</u>		
-30.0 work when more apress	/		· ma	mannen	
-40.0					
-50.0					Max Hold
-50.0					
Center 1.882500 GHz				Span 12.50 MHz	
Res BW 120 kHz		VBW 1.2 M	lz	Sweep 1 ms	Min Hold
Occupied Bandwidt	h	Total P	ower 30.3	3 dBm	
4	5095 M	Hz			Detector
					Peak►
Transmit Freq Error	-5.844	kHz % of Ol	BW Power 99	9.00 %	Auto <u>Man</u>
x dB Bandwidth	5.048 N	/Hz xdB	-26.	00 dB	
				-	
MSG			STATU	S	

Plot 7-52. Occupied Bandwidth Plot (NR Band n25/2 - 5.0MHz DFT-s-OFDM BPSK - Full RB)



Plot 7-53. Occupied Bandwidth Plot (NR Band n25/2 - 5.0MHz CP-OFDM QPSK - Full RB)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Keysight Spectrum Analyzer - Occupied I	BW				
LXI RLT RF 50Ω DC	CORREC	SENSE:INT Center Freg: 1.88250	ALIGN AUTO	03:36:42 AM Oct 07, 2021 Radio Std: None	Trace/Detector
		Trig: Free Run	Avg Hold: 100/100		
	#IFGain:Low	#Atten: 36 dB		Radio Device: BTS	
10 dB/div Ref 40.00 dB	m				
Log					
30.0					Clear Write
20.0					
10.0		᠃᠕᠆᠆ᠰᡐᠬᠧᠰᢦ᠆᠂ᠰ			
0.00	/		L		
-10.0			<u> </u>		Average
-20.0				4.00	
-30.0 plapsmanth hours	ν γ.		" mr w	an manul	
-40.0					
-50.0					Max Hold
-50.0					
Center 1.882500 GHz				Span 12.50 MHz	
Res BW 120 kHz		VBW 1.2 MH	Iz	Sweep 1 ms	Min Hold
				c	
Occupied Bandwid	lth	Total P	ower 28.	5 dBm	
4	.5081 MH	z			Detector
					Peak►
Transmit Freq Error	2.157 k	Hz % of O	3W Power 9	9.00 %	Auto <u>Man</u>
x dB Bandwidth	5.078 M	Hz xdB	-26	.00 dB	
MSG			STATL	JS	

Plot 7-54. Occupied Bandwidth Plot (NR Band n25/2 - 5.0MHz CP-OFDM 16QAM - Full RB)

FCC ID: A3LSMS906U	PCTEST Prozet to be part of @ electered	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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GSM/GPRS PCS



Plot 7-55. Occupied Bandwidth Plot (GPRS, Ch. 661)



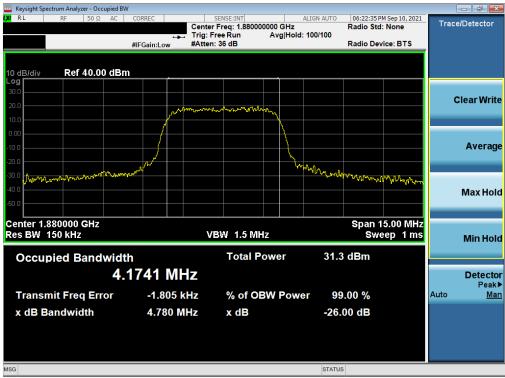
Plot 7-56. Occupied Bandwidth Plot (EDGE, Ch. 661)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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WCDMA PCS



Plot 7-57. Occupied Bandwidth Plot (WCDMA, Ch. 9400)

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7.4 Spurious and Harmonic Emissions at Antenna Terminal

Test Overview

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

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

Test Procedure Used

KDB 971168 D01 v03r01 - Section 6.0

Test Settings

- 1. Start frequency was set to 30MHz and stop frequency was set to 20GHz (separated into at least two plots per channel)
- 2. Detector = RMS
- 3. Trace mode = trace average for continuous emissions, max hold for pulse emissions
- 4. Sweep time = auto couple
- 5. The trace was allowed to stabilize
- 6. Please see test notes below for RBW and VBW settings

Test Setup

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



Figure 7-3. Test Instrument & Measurement Setup

Test Notes

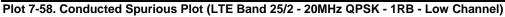
- Per Part 24 and RSS-133, compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth 100 kHz or greater for measurements below 1GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.
- 2. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) 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.

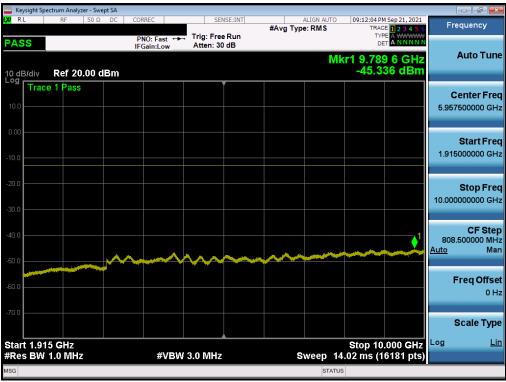
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LTE Band 25/2

ASS PNO: Fast +	Keysight Spectrum	n Analyzer - Swept SA							
Image: SS PNO: Fast	KIRL R	RF 50 Ω DC	CORREC	SENSE:INT					Frequency
Minit 1.0.47 0 GHz GB/div Ref 20.00 dBm -49.870 dBm O -49.870 dBm Center F 939.50000 Start F 00 Start F 184.900000 Start F 181.900000 Start F	PASS		Tho Tast -		#Avg Type		TYP DE		
Trace 1 Pass Center F 0 339.50000 0 Start F 1 Start F 30.00000 Start F 1 Start F 30.00000 Start F 1 Start F		ef 20.00 dBm				Mł	r1 1.847 -49.87	0 GHz 70 dBm	Auto Tun
Start F 30.00000 0 5 1.84900000 5 1.84900000 5 1.81.900000 5	-og Trace 1 F	Pass							Center Fre 939.500000 M⊦
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10.0								Start Fre 30.000000 M⊦
181.90000	30.0								Stop Fre 1.849000000 G⊦
	40.0							1,	CF Ste 181.900000 M⊦ <u>Auto</u> Ma
		anti-part anti-field an anti-field and a state of the state	101,07500 g 10,010,010,010,000,000,000,000,000,000,	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	andring for the color and a star		lalgente totalengestatisk og eft oker	Anny-rid yakenyanyi ge	Freq Offs 0 ⊦
	70.0								Scale Typ
nter 939.5 MHz Span 1.819 GHz es BW 1.0 MHz #VBW 3.0 MHz Sweep 2.425 ms (3639 pts)			#VBW 3.0 M	MHz		Sweep 2	Span 1. .425 ms (3	819 GHz 3639 pts)	Log <u>Li</u>
	ISG								





Plot 7-59. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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	ectrum Analy												- d ×
L <mark>XI</mark> RL	RF	50 Ω	DC	CORREC		SEI	SE:INT	#Avg Typ	ALIGN AUTO		M Sep 21, 2021	Fre	equency
PASS				PNO: F	ast ↔→ .ow	Trig: Free Atten: 10		#***8**JP		TYF DE			
10 dB/div Log	Ref 0.	00 dB	m						Mk	1 19.56 -60.7	95 GHz 75 dBm		Auto Tune
Trac	e 1 Pass												enter Freq
-10.0												15.000	000000 GHz
-20.0													Start Fred
-30.0												10.000	000000 GHz
-40.0													Stop Free
-50.0												20.000	0000000 GH
-60.0											. ↓1		CF Step
~		~~			-							1.000 <u>Auto</u>	0000000 GH: Mar
-70.0													Freq Offse
-80.0												ſ	0 Hz
-90.0													Scale Type
Start 10.0										Stop 20	.000 GHz	Log	Lir
#Res BW				;	#VBW	3.0 MHz		s	weep 1	7.33 ms (2	.000 GH2 0001 pts)		
MSG									STATU	S			

Plot 7-60. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel)



Plot 7-61. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel)

FCC ID: A3LSMS906U	PCTEST* Proud to be part of @element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager	
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	ctrum Analyze												
IXI RL	RF	50 Ω	DC	CORREC		SE	NSE:INT	#Avg Typ	ALIGN AUTO		M Sep 10, 2021	Fre	equency
PASS				PNO: Fa IFGain:Lo		Trig: Fre Atten: 3				TY D	PE A WWWWW ET A N N N N N		
10 dB/div	Ref 20.	00 dE	ŝm						Mk	(r1 9.78 -45.5	16GHz 60dBm		Auto Tune
10.0	e 1 Pass												Center Freq 7500000 GHz
-10.0												1.915	Start Freq 5000000 GHz
-20.0												10.000	Stop Freq 0000000 GHz
-40.0			~~		~	\sim	~~~					808 <u>Auto</u>	CF Step .500000 MHz Man
-60.0												F	Freq Offset 0 Hz
-70.0													Scale Type
Start 1.91					VBW	20144				Stop 10	000 GHz	Log	Lin
#Res BW	T.U IVIAZ			#	ABM	3.0 MHz		5	status		6181 pts)		
MSG									STATUS				

Plot 7-62. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel)



Plot 7-63. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel)

FCC ID: A3LSMS906U	PCTEST* Proud to be part of @element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager	
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	pectrum Analyz											[
L <mark>XI</mark> RL	RF	50 Ω	DC	CORREC		SEI	NSE:INT	#Avg Typ	ALIGN AUTO		M Sep 21, 2021	Fre	quency
PASS				PNO: Fa		Trig: Fre				TY			
FASS				IFGain:L	.ow	Atten: 30	dB						Auto Tune
									IVI	(r1 1.66	9 0 GHz 04 dBm		
10 dB/div	Ref 20.	.00 dB	sm							-55.6			
Trac	ce 1 Pass						Ī					с	enter Freq
10.0													000000 MHz
0.00													
													Start Freq
-10.0												30.	000000 MHz
-20.0													Stop Freq
												1.850	000000 GHz
-30.0													
													CF Step
-40.0													000000 MHz
											1	Auto	Man
-50.0													
-60.0	Anton Transa a gasab Brajam	an income	un financia	ting a line in a li	the state of the state	aingenis they being proj	Manager and the second s	and the state of the	lin secol di figura a della di	a the state of the second second		F	req Offset
-60.0													0 Hz
-70.0													
												S	Scale Type
Start 0.0										Stop 1.	8500 GHz	Log	Lin
#Res BW	1.0 MHz			#	¢VB₩	3.0 MHz			Sweep 2	2.427 ms	(3641 pts)		
MSG									STATU	S			

Plot 7-64. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel)



Plot 7-65. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel)

FCC ID: A3LSMS906U	PCTEST* Proud to be part of @element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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	ectrum Analyz												d X
LXI RL	RF	50 Ω D	C CC	ORREC		SE	NSE:INT	#Avg Typ	ALIGN AUTO		M Sep 21, 2021	Frequer	псу
PASS				PNO: Fas		Trig: Fre				TY	PE A WWWWW ET A N N N N N		
FA33			IF	Gain:Lo	w	Atten: 1) dB					Διιτά	Tune
									MK	1 19.46	1 5 GHz 08 dBm	, luc	, rune
10 dB/div Log		0 dBm								-00.0			
Trac	e 1 Pass											Cente	er Freq
-10.0											——————————————————————————————————————	15.0000000	
-20.0													
													rt Freq
-30.0												10.000000	00 GHz
-40.0												Sto	p Freq
												20.000000	00 GHz
-50.0													
											1	C	F Step
-60.0											-	1.000000	00 GHz
70.0		-		-								Auto	Man
-70.0													
-80.0												Freq	Offset
-00.0													0 Hz
-90.0													
0.010												Scal	е Туре
Start 10.0										Stop 20	.000 GHz	Log	Lin
#Res BW	1.0 MHz			#	ABM :	3.0 MHz		\$	weep 17	.33 ms (2	20001 pts)		
MSG									STATUS	5			

Plot 7-66. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager	
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NR Band n25/2 - Ant A

L Coupling: DC Align: Auto	Input Z: 50 Ω Atten: 30 Corr CCorr Freq Ref: Int (S) NFE: Off	dB PNO: Fast Gate: Off IF Gain: Low Sig Track: Off		Center Frequency 940.000000 MHz Span
spectrum v cale/Div 10 dB	Ref Leve	I 20.00 dBm	Mkr1 1.848 5 -49.939	GHz 1.8200000 GHz
				Full Span
0.0				Start Freq 30.000000 MHz
				Stop Freq 1.850000000 GHz
0.0				AUTO TUNE CF Step
0.0		. Selen and a start of the second		1 182.000000 MHz
				Freq Offset 0 Hz
art 0.0300 GHz tes BW 1.0 MHz	#Video E	BW 3.0 MHz	Stop 1.850 Sweep 2.43 ms (36	

Plot 7-67. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - Low Channel)



Plot 7-68. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - Low Channel)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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EYSIGHT Input: RF L	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 10 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power (Trig: Free Run	(RMS123456 A WWWWW A N N N N N	Center Frequency 15.00000000 GHz Span
Spectrum v cale/Div 10 dB		Ref Level 0.00	dBm		9.207 0 GHz -58.161 dBm	10.0000000 GHz Swept Span Zero Span
Trace 1 Pass						Full Span
30.0						Start Freq 10.000000000 GHz Stop Freq
						20.000000000 GHz
0.0			NTA a dan ayan yakata yayatara			CF Step 1.000000000 GHz
						Auto Man Freq Offset
						0 Hz X Axis Scale
art 10.000 GHz Res BW 1.0 MHz		#Video BW 3.0	MHz		Stop 20.000 GHz 1 ms (20001 pts)	Log Lin

Plot 7-69. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - Low Channel)

EYSIGHT Input: RF Coupling: DC Align: Auto	Input Ζ: 50 Ω <mark>Corr</mark> CCorr Freq Ref: Int (S) NFE: Off	Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power Trig: Free Run	(RMS <mark>123456</mark> A WWWWW A N N N N N	Center Frequency 940.000000 MHz Span	Settings
Spectrum v sale/Div 10 dB	F	Ref Level 20.00	dBm		1.846 5 GHz -50.735 dBm	1.82000000 GHz	
00 Trace 1 Pass						Full Span Start Freq	
0.0						30.000000 MHz Stop Freq 1.850000000 GHz	
					1	AUTO TUNE CF Step 182.000000 MHz	
0.0 0.0		WY DAMAGE STRATEGY DY ALSO BY AN	configuration and a second	and a flag that and by why day of the particle with	2 21, aughtur (1, 4, 10) 21, aughtur (1, 4, 1	Auto Man Freq Offset	
0.0 art 0.0300 GHz es BW 1.0 MHz		#Video BW 3.0	MHz		Stop 1.8500 GHz 2.43 ms (3641 pts)	0 Hz X Axis Scale	

Plot 7-70. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - Mid Channel)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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Plot 7-71. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - Mid Channel)



Plot 7-72. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - Mid Channel)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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EYSIGHT Input: RF L +++ Coupling: DC Align: Auto Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 30 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power (RMS Trig: Free Run	1 2 3 4 5 6 A WW WW W A N N N N N	Center Frequency 940.000000 MHz Span
Spectrum v cale/Div 10 dB	R	ef Level 20.00 o	iBm		48 0 GHz .818 dBm	1.82000000 GHz
Trace 1 Pass						Full Span Start Freq
0.0						30.000000 MHz Stop Freq 1.850000000 GHz
						AUTO TUNE CF Step 182.000000 MHz
50.0 50.0 50.0	advage ta a semiglybaria (aller av k y hetter opene, i ver skalte	gei, er er sagetind för vari der by måde de	anat Westington International Antonio	unique de la construcción de la consta de		Auto Man
70.0 Lart 0.0300 GHz Res BW 1.0 MHz		Video BW 3.0 M	ЛНz	Stop Sweep 2.43 r	p 1.8500 GHz	0 Hz X Axis Scale

Plot 7-73. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - High Channel)



Plot 7-74. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - High Channel)

FCC ID: A3LSMS906U	POTEST. Prout to be part of element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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EYSIGHT Input: RF L + Align: Auto	Input Ζ: 50 Ω Al Corr CCorr Freq Ref: Int (S) NFE: Off	iten: 10 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Powe Trig: Free Run	r (RMS <mark>123456</mark> A WW WW W A N N N N N	Center Frequency 15.00000000 GHz Span
Spectrum v cale/Div 10 dB	Re	ef Level 0.00 dE	3m	Mkr1	19.459 5 GHz -58.196 dBm	10.0000000 GHz Swept Span Zero Span
Trace 1 Pass						Full Span
						Start Freq 10.00000000 GHz Stop Freg
0.0						20.00000000 GHz
0.0					1	AUTO TUNE CF Step 1.000000000 GHz
						Auto
						Freq Offset 0 Hz
art 10.000 GHz tes BW 1.0 MHz	#V	ideo BW 3.0 M	Hz	Sweep ~1	Stop 20.000 GHz 9.1 ms (20001 pts)	X Axis Scale Log Lin

Plot 7-75. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - High Channel)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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NR Band n25/2 - Ant I

	ectrum Analyz												
XI RL	RF	50 Ω	AC	CORREC	C	S	ENSE:INT	#Avg Ty	ALIGN AUTO		M Oct 07, 2021	Fre	equency
PASS				PNO: IFGair	Fast ↔ n:Low	Trig: Fr Atten: 3				TY D			
10 dB/div	Ref 20	.00 d	Bm						M	48.5 kr1 48.5	8 0 GHz 85 dBm		Auto Tun
Trac	e 1 Pass											С	enter Fre
10.0													.000000 MH
0.00													
0.00													Start Fre
-10.0												30	.000000 MH
-20.0													
20.0												1.850	Stop Fre
-30.0													
-40.0													CF Ste
											1	182 <u>Auto</u>	.000000 MH Ma
-50.0	an Lit a colonomia	للجريطه	n is all the		الروفي والمراجع والماريج	Niger and Antole Ale	*****		alarian na ing pangan kana kata dan	alaa tay ji Timbala ingini in	14************************************		
-60.0												F	req Offse
													0 H
-70.0													Scale Typ
													Li
Start 0.03 #Res BW					#VBW	3.0 MH	z		Sweep 2	Stop 1. 2.427 ms	8500 GHz (3641 pts)	Log	<u></u>
ISG									STATU	_			

Plot 7-76. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - Low Channel)



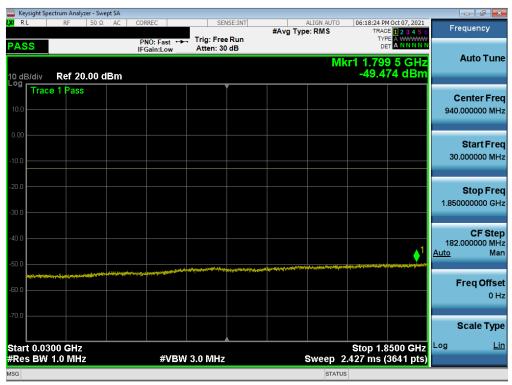
Plot 7-77. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - Low Channel)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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ASS PNO: Fast reperting Free Run Atten: 10 dB TRACE 2345 or Trace 2345 o		ectrum Analyzer - S										
ASS PNO: Fast Trig: Free Run Atten: 10 dB Mkr1 18.306 5 GHz -58.176 dBm Center Free 15.00000000 GH Start Free 10.00000000 GH CF Stee 1.00000000 GH CF Stee 1.000000000 GH CF Stee 1.00000000 GH CF Stee 1.000000000 GH CF Stee 1.0000000000 GH CF Stee 1.000000000 GH CF Stee 1.00000000 GH CF Stee 1.000000000 GH CF Stee 1.00000000 GH CF Stee 1.00000000 GH CF Stee 1.00000000 GH CF Stee 1.00000000 GH CF Stee 1.00000000 GH CF Stee 1.0000000 GH CF Stee 1.0000000 GH CF Stee 1.00000000 GH CF Stee 1.0000000 GH CF Stee 1.0000000 GH CF Stee 1.00000000 GH CF Stee 1.00000000 GH CF Stee 1.00000000 GH CF S	XV RL	RF 50	Ω AC	CORREC	SEN	ISE:INT					Fr	equency
Bill Ref 0.00 dBm -58.176 dBm 0 -58.176 dBm -58.176 dBm 0 - - - 0 - - - 0 - - - 0 - - - - 0 - - - - - 0 - - - - - - 0 - </td <td>PASS</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>TYF DE</td> <td></td> <td></td> <td></td>	PASS								TYF DE			
Trace 1 Pass Center Fre 15.00000000 GH 15.000000000 GH 15.000000000 GH 15.000000000 GH 10.00000000 GH 10.0000000 GH <	10 dB/div	Ref 0.00 (dBm					Mł	(r1 18.30 -58.1	6 5 GHz 76 dBm		Auto Tune
Start Fre Start Fre 10.00000000 GF Stop Fre 20.0000000 GF 1.00000000 GF 1.00000000 GF 1.00000000 GF 1.00000000 GF Auto Ma Freq Offs	-10.0	e 1 Pass										Center Freq 0000000 GHz
CF Step CF	-20.0										10.00	Start Freq
1.00000000 GH Auto Ma	-40.0										20.00	Stop Freq 0000000 GHz
Freq Offs	-60.0						a and the second second					CF Step 0000000 GHz Mar
	-80.0											Freq Offse 0 Ha
Scale Typ	-90.0											Scale Type
art 10.000 GHz Stop 20.000 GHz Log Log Stop 20.000 GHz Log Log Log SW 1.0 MHz Sweep 25.33 ms (20001 pts)				#\/R\A	(30 MHz		8	ween 2	Stop 20	.000 GHz	Log	Lin
	ISG			# V D V	0.0191112					ooo r pisj		

Plot 7-78. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - Low Channel)



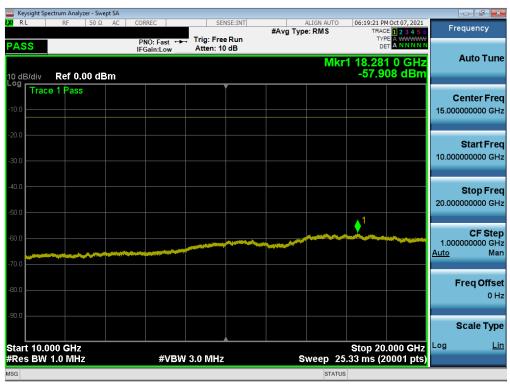
Plot 7-79. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - Mid Channel)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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	ectrum Analyzer - Sv									
L <mark>XI</mark> RL	RF 50 9	Ω AC	CORREC	SEN	ISE:INT	#Avg Typ	ALIGN AUTO		M Oct 07, 2021	Frequency
PASS			PNO: Fast ↔ IFGain:Low	. Trig: Free Atten: 30		#7 (1g -)		TYI Di		Auto Tun
10 dB/div Log	Ref 20.00	dBm					Μ	kr1 7.53 -44.3	0 2 GHz 54 dBm	Auto Tuni
Trace	e 1 Pass			Ì						Center Free
10.0										5.957500000 GH
0.00										
0.00										Start Free
-10.0										1.915000000 GH
20.0										
-20.0										Stop Free 10.00000000 GH
-30.0										10.00000000 GH.
							* 1			CF Step
-40.0										808.500000 MH Auto Mar
-50.0	and the second second	~~	-							
										Freq Offse
-60.0										0 H:
-70.0										
										Scale Type
Start 1.91								Stop 10	.000 0112	Log <u>Lir</u>
#Res BW	1.0 MHz		#VBW	3.0 MHz		5		4.25 ms (1	6441 pts)	
MSG							STAT	US		

Plot 7-80. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - Mid Channel)



Plot 7-81. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - Mid Channel)

FCC ID: A3LSMS906U		PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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	ght Spectr	um Analyzer - Sw										r x
L <mark>XI</mark> RL		RF 50 Ω	AC	CORREC	SE	NSE:INT	#Avg Ty	ALIGN AUTO	06:21:57 PM 00 TRACE	t 07, 2021	Frequ	ency
PASS				PNO: Fast + IFGain:Low	Trig: Fre		• •		TYPE			
				IFGaIII:LOW	Attent	0 00		MI	cr1 1 8/9	CH2	Au	to Tune
10 dB/c	div	Ref 20.00 (lBm						kr1 1.849 (-49.451	dBm		
	Frace '	l Pass				Ĭ					Cen	ter Freg
10.0												000 MHz
0.00											Ct	art Freq
												000 MHz
-10.0												
-20.0												on Erog
												op Freq 1000 GHz
-30.0											1.000000	
												CF Step
-40.0										1	182.000	000 MHz
-50.0											<u>Auto</u>	Man
	hyjajana jadant	ليحدثه ومعجوة وبديدواله	e an e t tente		(10 at 10		in the second				_	
-60.0 —											Free	q Offset 0 Hz
												0 H2
-70.0											Sea	le Type
Start (Stop 1.85		Log	<u>Lin</u>
#Res	BW 1.	0 MHz		#VB	W 3.0 MHz				2.427 ms (36	41 pts)		
MSG								STATU	S			

Plot 7-82. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - High Channel)



Plot 7-83. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - High Channel)

FCC ID: A3LSMS906U	PCTEST Proud to be part of @element	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager	
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	ectrum Analyzer - Sv									
X/RL	RF 50 S	2 AC	CORREC	SEN	ISE:INT	#Avg Typ	ALIGN AUTO		M Oct 07, 2021	Frequency
PASS			PNO: Fast ↔ IFGain:Low	. Trig: Free Atten: 10		#/ (19 -) P		TYI DI		Auto Tune
10 dB/div Log	Ref 0.00 d	Bm					Mk	r1 18.31 -58.0	4 5 GHz 63 dBm	Auto Tune
Trace	e 1 Pass									Center Freq
-10.0										15.00000000 GHz
-20.0										Start Fred
-30.0										10.00000000 GHz
-40.0										
										Stop Fred 20.000000000 GHz
-50.0								↓ ¹		
-60.0							1	^		CF Step 1.00000000 GHz <u>Auto</u> Man
-70.0										
-80.0										Freq Offset 0 Hz
.90.0										
										Scale Type
Start 10.0								Stop 20	.000 0112	Log <u>Lin</u>
#Res BW	1.0 MHz		#VBW	3.0 MHz		S	weep 2	5.33 ms (2	0001 pts)	
MSG							STATI	JS		

Plot 7-84. Conducted Spurious Plot (NR Band n25 - 40.0MHz - 1RB - High Channel)

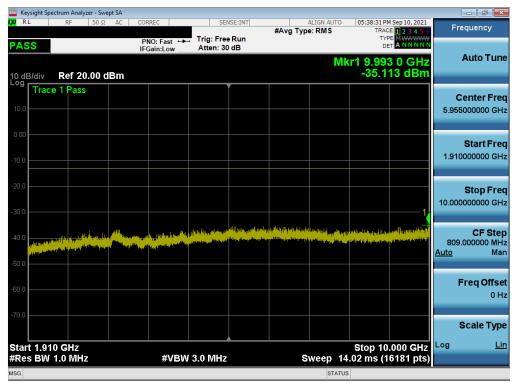
FCC ID: A3LSMS906U	PCTEST* Proud to be part of @element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager	
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GSM/GPRS PCS

	ectrum Analy:	zer - Swep	ot SA										
X/RL	RF	50 Ω	AC	CORREC			NSE:INT	#Avg Typ	ALIGN AUTO e: RMS	TRAC	M Sep 10, 2021	Fr	equency
PASS				PNO: Fa	ast ↔ .ow	Atten: 3							Auto Tune
10 dB/div Log	Ref 20	.00 di	Bm						M	(r1 1.84) -39.1	3 5 GHz 82 dBm		Auto Tune
Trac	e 1 Pass						Ĭ					(Center Freq
10.0												937	.500000 MHz
0.00													Start Freq
-10.0												30	0.000000 MHz
													_
-20.0												1.84	Stop Freq 5000000 GHz
-30.0											1		
-40.0						يعد بال	الملحم والم	and the state of the	والمراجع المراجع الم			181	CF Step .500000 MHz
-50.0				(aniti (beleve))					a planting a state of a late			<u>Auto</u>	Man
													Freq Offset
-60.0													0 Hz
-70.0													Scale Type
										Oten 4 (Lin
Start 0.03 #Res BW		2		\$	¢νΒ₩	3.0 MHz			Sweep 2	stop 1. 2.427 ms (3450 GHz 3641 pts)	g	
MSG									STATUS	3			

Plot 7-85. Conducted Spurious Plot (GPRS Ch. 512)



Plot 7-86. Conducted Spurious Plot (GPRS Ch. 512)

FCC ID: A3LSMS906U	PCTEST* Proud to be part of @element	PART 24 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager	
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