

ELEMENT WASHINGTON DC LLC

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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:

6/15 - 7/6/2022 **Test Report Issue Date:** 7/7/2022 **Test Site/Location:** Element lab., Columbia, MD, USA **Test Report Serial No.:** 1M2206010070-05.A3L

FCC ID:

A3LSMF936JPN

Applicant Name:

Samsung Electronics Co., Ltd.

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

Certification SC-55C SCG16 Portable Handset PCS Licensed Transmitter Held to Ear (PCE) 27 ANSI C63.26-2015, KDB 648474 D03 v01r04

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

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

RJ Ortanez Executive Vice President



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| | | EI | | RP | | |
|---------------------------|-----------|------------|-----------------------------|-------------------|---------------------|------------------------|
| Mode | Bandwidth | Modulation | Tx Frequency Range [MHz] | Max. Power [W] | Max. Power [dBm] | Emission Designator |
| | 20 MHz | QPSK | 2506.0 - 2680.0 | 0.192 | 22.83 | 18M0G7D |
| | | 16QAM | 2506.0 - 2680.0 | 0.159 | 22.02 | 18M0W7D |
| | | QPSK | 2503.5 - 2682.5 | 0.204 | 23.09 | 13M6G7D |
| LTE Band 41(PC3) | 15 MHz | 16QAM | 2503.5 - 2682.5 | 0.168 | 22.26 | 13M5W7D |
| Ant B | 10 MHz | QPSK | 2501.0 - 2685.0 | 0.212 | 23.26 | 9M03G7D |
| | | 16QAM | 2501.0 - 2685.0 | 0.173 | 22.39 | 9M05W7D |
| | 5 MHz | QPSK | 2498.5 - 2687.5 | 0.193 | 22.86 | 4M55G7D |
| | | 16QAM | 2498.5 - 2687.5 | 0.152 | 21.81 | 4M54W7D |
| | 20 MHz | QPSK | 2580.0 - 2610.0 | 0.123 | 20.88 | 18M1G7D |
| | | 16QAM | 2580.0 - 2610.0 | 0.102 | 20.06 | 18M0W7D |
| | 45 MUL | QPSK | 2577.5 - 2612.5 | 0.122 | 20.86 | 13M6G7D |
| LTE Band 41(PC3) Ant F | 15 MHz | 16QAM | 2577.5 - 2612.5 | 0.102 | 20.10 | 13M5W7D |
| | | QPSK | 2575.0 - 2615.0 | 0.126 | 21.00 | 9M07G7D |
| | 10 MHz | 16QAM | 2575.0 - 2615.0 | 0.109 | 20.39 | 9M04W7D |
| | 5 MHz | QPSK | 2572.5 - 2617.5 | 0.129 | 21.12 | 4M54G7D |
| | | 16QAM | 2572.5 - 2617.5 | 0.093 | 19.68 | 4M54W7D |

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Overview Table

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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 Element Test Location

These measurement tests were conducted at the Element laboratory 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 Element lab located in Columbia, MD 21046, U.S.A.

- Element Washington DC LLC 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.
- Element Washington DC LLC 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).
- Element Washington DC LLC facility is a registered (2451B) test laboratory with the site description on file with ISED.
- Element Washington DC LLC is a Recognized U.S. Certification Assessment Body (CAB # US0110) for ISED Canada as designated by NIST under the U.S. and Canada Mutual Recognition Agreement.

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Handset FCC ID: A3LSMF936JPN**. 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.: 0370M, 0402M, 0421M, 0068M

2.2 Device Capabilities

This device contains the following capabilities:

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

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

2.3 Test Configuration

The EUT was tested per the guidance of ANSI C63.26-2015. 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.

This device supports two configurations: one is with screen open and one is with screen closed. Open, half opened and closed configurations are tested, and the worst case radiated emissions data is shown in this report.

2.4 Software and Firmware

Testing was performed on device(s) using software/firmware version SC55COMU0AVEE installed on the EUT.

2.5 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 "American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services" (ANSI C63.26-2015) 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 C63.26-2015. For emissions below 1GHz, a half-wave 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 $P_{g \, [dBm]}$ – cable loss [dB].

For radiated spurious emissions measurements, the field strength conversion method is used per the formulas in Section 5.2.7 of ANSI C63.26-2015. 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 v01r01.

Radiated power and radiated spurious emission levels are investigated with the receive antenna horizontally and vertically polarized per ANSI C63.26-2015.

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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 |
|------------------------------|---------|--------------------------------------|------------|--------------|------------|---------------|
| - | AP2-001 | EMC Cable and Switch System | 1/4/2022 | Annual | 1/4/2023 | AP2-001 |
| - | AP2-002 | EMC Cable and Switch System | 3/11/2022 | Annual | 3/11/2023 | AP2-002 |
| - | ETS-001 | EMC Cable and Switch System | 12/9/2021 | Annual | 12/9/2022 | ETS-001 |
| - | ETS-002 | EMC Cable and Switch System | 3/10/2022 | Annual | 3/10/2023 | ETS-002 |
| - | LTx1 | Licensed Transmitter Cable Set | 12/19/2021 | Annual | 12/19/2022 | LTx1 |
| - | LTx3 | LIcensed Transmitter Cable Set | 8/18/2021 | Annual | 8/18/2022 | LTx3 |
| - | LTx5 | LIcensed Transmitter Cable Set | 12/19/2021 | Annual | 12/19/2022 | LTx5 |
| - | LTx6-40 | Licensed Transmitter Cable Set | 12/19/2021 | Annual | 12/19/2022 | LTx6-40 |
| - | WL40-1 | WLAN Cable Set (40GHz) | 12/19/2021 | Annual | 12/19/2022 | WL40-1 |
| Anritsu | MT8000A | Radio Communication Test Station | 8/2/2021 | Annual | 8/2/2022 | 6272337437 |
| Anritsu | MT8821C | Radio Communication Analyzer | N/A | | 6201525694 | |
| Espec | ESX-2CA | Environmental Chamber | 8/27/2020 | Annual | 8/27/2022 | 17620 |
| ETS-Lindgren | 3116C | DRG Horn Antenna | 5/11/2021 | Biennial | 5/11/2023 | 218893 |
| ETS Lindgren | 3117 | 1-18 GHz DRG Horn (Medium) | 4/20/2021 | Biennial | 4/20/2023 | 00125518 |
| Keysight Technologies | N9030A | PXA Signal Analyzer (44GHz) | 7/21/2021 | Annual | 7/21/2022 | MY49430494 |
| Keysight Technologies | N9030A | PXA Signal Analyzer (44GHz) | 2/14/2022 | Annual | 2/14/2023 | MY52350166 |
| Keysight Technologies | N9030B | PXA Signal Analyzer, Multi-touch | 1/7/2022 | Annual | 1/7/2023 | MY57141001 |
| Keysight Technologies | N9038A | MXE EMI Receiver | 1/21/2022 | Annual | 1/21/2023 | MY51210133 |
| Rohde & Schwarz | CMW500 | Radio Communication Tester | | N/A | | 100976 |
| Rohde & Schwarz | CMW500 | Radio Communication Tester | | N/A | | 112347 |
| Rohde & Schwarz | ESU40 | EMI Test Receiver (40GHz) | 5/25/2021 | Annual | 7/25/2022 | 100348 |
| Rohde & Schwarz | ESW44 | EMI Test Receiver 2Hz to 44 GHz | 3/28/2022 | Annual | 3/28/2023 | 101716 |
| Rohde & Schwarz | TC-TA18 | Cross Polarized Vivaldi Test Antenna | 8/13/2020 | Biennial | 8/13/2022 | 101073 |
| Sunol | JB5 | Bi-Log Antenna (30M - 5GHz) | 7/27/2020 | Biennial | 7/27/2022 | A051107 |
| 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

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: | A3LSMF936JPN |
| FCC Classification: | PCS Licensed Transmitter Held to Ear (PCE) |
| Mode(s): | LTE/ULCA |

| Test Condition | Test Description | FCC Part Section(s) | Test Limit | Test Result | Reference | | | |
|-------------------|--|----------------------|--|-------------|----------------------|--|--|--|
| | Transmitter Conducted Output Power* | 2.1046(a), 2.1046(c) | N/A | PASS | Section 7.2 | | | |
| CONDUCTED | Occupied Bandwidth | 2.1049(h) | N/A | PASS | Section 7.3 | | | |
| CONDI | Conducted Band Edge / Spurious Emissions (LTE Band 41) | 2.1051, 27.53(m)(4) | Undesirable emissions must meet the limits detailed in 27.53(m)(4) | PASS | Sections 7.4, 7.5 | | | |
| | Frequency Stability | 2.1055, 27.54 | Fundamental emissions stay within authorized frequency block | PASS | Section 7.8 | | | |
| RADIATED | Equivalent Isotropic Radiated Power (LTE Band 41) | 27.50(h)(2) | ≤ 2 Watts max. EIRP | PASS | Section 7.6 | | | |
| RADI | Radiated Spurious Emissions (LTE Band 41) | 2.1053, 27.53(m) | Undesirable emissions must meet the limits detailed in 27.53(m) | PASS | Section 7.7 | | | |
| - | * The only transmitter output conducted powers included in this report are those where the Pmax value, per the tune-up document, is higher than any of the DSI power levels. For the remaining conducted power measurements, see the RF Exposure Report . | | | | | | | |

Table 7-1. Summary of Test Results (FCC)

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 EMC Software Tool v1.1.

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7.2 Conducted Output Power Data

Test Overview

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.

A-MPR is implemented in this device when operating at Power Class 2 in LTE Band 41 per the A-MPR specification in 3GPP TS 36.101. The conducted powers are shown herein to cover the different A-MPR levels specified in the standard. Measurement equipment was set up with triggering/gating on the spectrum analyzer such that powers were measured only during the on-time of the signal.

Test Procedure Used

ANSI C63.26-2015 – Section 5.2

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

Test Notes

- 1. Uplink carrier aggregation is only supported in this EUT while operating in Power Class 3.
- 2. Conducted power measurements were evaluated 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.
- 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] |
|-----------|------------|---------|--------------------|-------------------|--------------------------|
| N | | 39750 | 2506.0 | 1 / 99 | 23.30 |
| H | QPSK | 40620 | 2593.0 | 1 / 99 | 23.01 |
| 20 MHz | | 41490 | 2680.0 | 1 / 99 | 23.37 |
| 7 | 16-QAM | 40620 | 2593.0 | 1 / 99 | 22.16 |
| N | QPSK | 39725 | 2503.5 | 1 / 74 | 23.47 |
| MHz | | 40620 | 2593.0 | 1 / 74 | 23.27 |
| 15 1 | | 41515 | 2682.5 | 1 / 74 | 23.52 |
| - | 16-QAM | 40620 | 2593.0 | 1 / 74 | 22.39 |
| N | QPSK | 39700 | 2501.0 | 1 / 49 | 23.72 |
| MHz | | 40620 | 2593.0 | 1 / 49 | 23.44 |
| 10 1 | | 41540 | 2685.0 | 1 / 49 | 23.55 |
| - | 16-QAM | 40620 | 2593.0 | 1 / 49 | 22.53 |
| N | | 39675 | 2498.5 | 1 / 0 | 23.25 |
| MHz | QPSK | 40620 | 2593.0 | 1 / 0 | 23.03 |
| 5 N | | 41565 | 2687.5 | 1 / 12 | 22.96 |
| | 16-QAM | 40620 | 2593.0 | 1 / 0 | 21.94 |

Table 7-1. Conducted Power Data (LTE Band 41 (PC3) – Ant B)

| Modulation | Channel | Frequency [MHz] | RB Size/Offset | Conducted Power [dBm] |
|------------|--|--|---|--|
| | 39790 | 2510.0 | 1 / 50 | 23.72 |
| QPSK | 40620 | 2593.0 | 1/0 | 23.66 |
| | 41490 | 2680.0 | 1 / 50 | 23.53 |
| 16-QAM | 39790 | 2510.0 | 1 / 50 | 22.64 |
| | 39765 | 2507.5 | 1 / 37 | 23.69 |
| QPSK | 40620 | 2593.0 | 1 / 37 | 23.72 |
| | 41515 | 2682.5 | 1 / 37 | 23.66 |
| 16-QAM | 39765 | 2507.5 | 1 / 37 | 22.68 |
| QPSK | 39740 | 2505.0 | 1 / 49 | 23.84 |
| | 40620 | 2593.0 | 1 / 25 | 23.85 |
| | 41540 | 2685.0 | 1/0 | 23.60 |
| 16-QAM | 39740 | 2505.0 | 1 / 49 | 22.97 |
| | 39715 | 2502.5 | 1 / 12 | 23.96 |
| QPSK | 40620 | 2593.0 | 1 / 12 | 23.56 |
| | 41565 | 2687.5 | 1/0 | 23.03 |
| 16-QAM | 39715 | 2502.5 | 1 / 12 | 22.25 |
| | QPSK 16-QAM QPSK 16-QAM QPSK 16-QAM 16-QAM | 39790 QPSK 39790 40620 41490 16-QAM 39790 A0620 41490 16-QAM 39765 QPSK 40620 41515 40620 16-QAM 39765 QPSK 39740 QPSK 40620 41540 39740 QPSK 39740 QPSK 40620 41540 39740 16-QAM 39740 QPSK 40620 41540 16-QAM 16-QAM 39715 QPSK 40620 41565 16-QAM | Modulation Channel [MHz] 39790 2510.0 QPSK 40620 2593.0 41490 2680.0 16-QAM 39790 2510.0 A1490 2680.0 16-QAM 39790 2510.0 QPSK 40620 2593.0 41490 2680.0 16 QPSK 40620 2593.0 41515 2682.5 16 QPSK 39765 2507.5 QPSK 39765 2507.5 QPSK 40620 2593.0 41515 2682.5 16 QPSK 40620 2593.0 41540 2685.0 16 QPSK 39715 2502.5 QPSK 40620 2593.0 41540 2685.0 16 QPSK 40620 2593.0 41565 2687.5 16 QPSK 40620 2593.0 41565 2687.5 16 | Modulation Channel [MHz] Size/Offset 39790 2510.0 1/50 QPSK 40620 2593.0 1/0 41490 2680.0 1/50 16-QAM 39790 2510.0 1/50 16-QAM 39790 2510.0 1/50 2000 39765 2507.5 1/37 QPSK 40620 2593.0 1/37 41515 2682.5 1/37 16-QAM 39765 2507.5 1/37 16-QAM 39765 2507.5 1/37 QPSK 40620 2593.0 1/49 QPSK 40620 2593.0 1/25 41540 2685.0 1/0 1/25 41540 2685.0 1/10 1/49 QPSK 39715 2502.5 1/12 QPSK 40620 2593.0 1/12 QPSK 2687.5 1/12 1/12 QPSK 40620 2593.0 1/12 |

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

| | | Bandwidth | | PCC | | | scc | | | | ULCA TX. | | |
|------------------|---------------|---------------|------------|-----------------|---------|-----------------|------------|------------|-----------------|---------|-----------------|----------------|-------|
| Power State Band | (PCC + SCC) | Modulation | UL Channel | UL Frequency | UL # RB | UL RB Offset | Modulation | UL Channel | UL Frequency | UL # RB | UL RB Offset | Power [dBm] | |
| | | | 39750 | 2506.0 | 1 | 99 | | 39948 | 2525.8 | 1 | 0 | 23.5 | |
| | | QPSK | QPSK | 40620 | 2593.0 | 1 | 99 | QPSK | 40818 | 2612.8 | 1 | 0 | 23.2 |
| Max | | 20MHz + 20MHz | | 41490 | 2680.0 | 1 | 0 | | 41292 | 2660.2 | 1 | 99 | 23.54 |
| IVICIA | LTE B41 (PC3) | | QPSK | 41490 | 2680 | 100 | 0 | QPSK | 41292 | 2660.2 | 100 | 0 | 21.57 |
| | | 16-QAM | 41490 | 2680 | 100 | 0 | 16-QAM | 41292 | 2660.2 | 100 | 0 | 20.58 | |
| | | 64-QAM | 41490 | 2680 | 100 | 0 | 64-QAM | 41292 | 2660.2 | 100 | 0 | 20.57 | |

Table 7-3. Conducted Power Data (ULCA LTE B41(PC3) – Ant B)

| FCC ID: A3LSMF936JPN | PART 27 MEASUREMENT REPORT | | Approved by: Technical Manager |
|----------------------|----------------------------|------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 12 of 60 |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 12 of 69 |
| © 2022 ELEMENT | | • | V3.0 1/6/2022 |



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

ANSI C63.26-2015 - Section 5.4.4

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.

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | |
|----------------------|-----------------|----------------------------|---------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 13 of 60 |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 13 of 69 |
| © 2022 ELEMENT | • | | V3.0 1/6/2022 |



LTE Band 41(PC3) – Ant B



Plot 7-4. Occupied Bandwidth Plot (LTE Band 41(PC3) - 20MHz QPSK - Full RB - Ant B)



Plot 7-5. Occupied Bandwidth Plot (LTE Band 41(PC3) - 20MHz 16-QAM - Full RB - Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | |
|----------------------|-----------------|----------------------------|----------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 14 of 69 | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Fage 14 01 09 | |
| © 2022 ELEMENT | | | \/3.0.1/6/2022 | |



| 🔤 Keysight Spectrum Analyzer - Occ | | | | | | |
|------------------------------------|--|--|-------------------|-----------------------------------|-----------|------------------|
| LXI RL RF 50 Ω | DC CORREC | SENSE:INT Center Freg: 2.593000 | ALIGN AUTO | 11:13:05 PM Jun Radio Std: Nor | | Trace/Detector |
| | | Trig: Free Run | Avg Hold:>100/100 | | | |
| | #IFGain:Low | #Atten: 36 dB | | Radio Device: I | 315 | |
| 10 dB/div Ref 40.00 | 0 dBm | | | | | |
| Log | | | | | | |
| 30.0 | | | | | | Clear Write |
| 20.0 | - Announder | and a state of the | Maryh-May May | | | Giedi Wille |
| 10.0 | | | | | | |
| 0.00 | | | | | | |
| -10.0 | a she have the second s | | MALINA | | | Average |
| -20.0 | | | | WWWWWW | MUNIVAN . | |
| -30.0 | | | | | | |
| -40.0 | | | | | | Max Hold |
| -50.0 | | | | | | |
| Center 2.59300 GHz | | | | Span 37.50 | | |
| Res BW 360 kHz | | #VBW 1.1 M | Hz | Sweep | | Min Hold |
| | | | | | | Wint Hora |
| Occupied Band | | Total Po | ower 30.7 | ′ dBm | | |
| | 13.561 MH | z | | | | Detector |
| Transmit Frag Fr | or 0.029 k | | | 00.9/ | Au | Peak▶ uto Man |
| Transmit Freq Err | | | | .00 % | 7.0 | |
| x dB Bandwidth | 16.14 M | Hz x dB | -26.0 | 00 dB | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| MSG | | | STATUS | 1 | | |

Plot 7-6. Occupied Bandwidth Plot (LTE Band 41(PC3) - 15MHz QPSK - Full RB - Ant B)



Plot 7-7. Occupied Bandwidth Plot (LTE Band 41(PC3) - 15MHz 16-QAM - Full RB - Ant B)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | |
|----------------------|-----------------|-----------------------------------|---------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 15 of 69 |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Fage 15 01 09 |
| © 2022 ELEMENT | | | V3.0 1/6/2022 |



| Keysight Spectrum Analyzer - Occupied | BW | | | | | | |
|---------------------------------------|-------------|-----------------------------------|-------------------|------------------------------------|----------------|------|-------------------|
| (X) RL RF 50Ω DC | CORREC | SENSE:INT Center Freq: 2.59300 | ALIGN AUTO | 11:13:39 P Radio Std | M Jun 15, 2022 | Trac | e/Detector |
| | •••• | Trig: Free Run | Avg Hold: 100/100 | | | | |
| | #IFGain:Low | #Atten: 36 dB | | Radio Dev | ice: BTS | | |
| | | | | | | | |
| 10 dB/div Ref 40.00 dB | Bm | | | | | | |
| Log 30.0 | | | | | | | |
| | | | | | | (| Clear Write |
| 20.0 | manne | www. | mmy | | | | |
| 10.0 | | | | | | | |
| 0.00 | | | | | | | |
| -10.0 | . Millin | | When h | n | | | Average |
| -10.0 -20.0 -20.0 | | | | ป <i>ิฟ</i> ปิงศุก _ษ าป | montand | _ | |
| -30.0 | | | | | | | |
| -40.0 | | | | | | | Max Hold |
| -50.0 | | | | | | | inux |
| | | | | | | | |
| Center 2.59300 GHz | | #VDW 7501 | | | 5.00 MHz | | |
| Res BW 240 kHz | | #VBW 7501 | (Hz | Swe | ep 1 ms | | Min Hold |
| Occupied Bandwig | dth | Total F | ower 30. | 7 dBm | | | |
| | | | | | | | |
| | 9.0308 MH | Z | | | | | Detector Peak▶ |
| Transmit Freq Error | -1.184 kl | Hz % of O | BW Power 9 | 9.00 % | | Auto | Man |
| | | | | | | | |
| x dB Bandwidth | 10.52 MI | Hz xdB | -20 | .00 dB | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| MSG | | | STAT | JS | | | |

Plot 7-8. Occupied Bandwidth Plot (LTE Band 41(PC3) - 10MHz QPSK - Full RB - Ant B)



Plot 7-9. Occupied Bandwidth Plot (LTE Band 41(PC3) - 10MHz 16-QAM - Full RB - Ant B)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | |
|----------------------|-----------------|-----------------------------------|---------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 16 of 69 |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Fage 10 01 09 |
| © 2022 ELEMENT | | | V3.0 1/6/2022 |





Plot 7-10. Occupied Bandwidth Plot (LTE Band 41(PC3) - 5MHz QPSK - Full RB - Ant B)

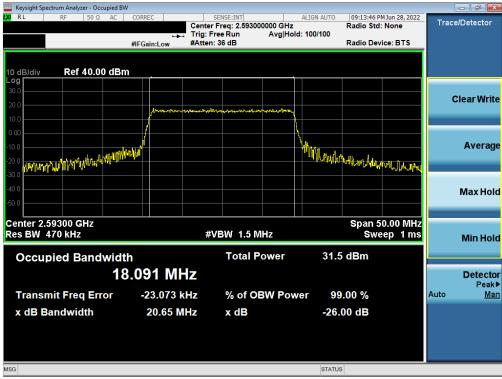


Plot 7-11. Occupied Bandwidth Plot (LTE Band 41(PC3) - 5MHz 16-QAM - Full RB - Ant B)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | | |
|----------------------|-----------------|-----------------------------------|---------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 17 of 69 | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Fage 17 01 09 | |
| © 2022 ELEMENT | • | | V3.0 1/6/2022 | |



LTE Band 41(PC3) – Ant F



Plot 7-12. Occupied Bandwidth Plot (LTE Band 41(PC3) - 20MHz QPSK - Full RB - Ant F)



Plot 7-13. Occupied Bandwidth Plot (LTE Band 41(PC3) - 20MHz 16-QAM - Full RB - Ant F)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | | |
|----------------------|-----------------|-----------------------------------|---------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 18 of 60 | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 18 of 69 | |
| © 2022 ELEMENT | | | V3.0 1/6/2022 | |



| 🔤 Keysight Spectrum Analyzer - Occupie | ed BW | | | | | (| - @ <u>*</u> |
|--|-------------|--|-------------------|--|----------------|-------|--------------|
| <mark>LX4</mark> RL RF 50Ω A | AC CORREC | SENSE:INT | ALIGN AUTO | 09:12:43 P | M Jun 28, 2022 | Trace | /Detector |
| | | Center Freq: 2.59300 Trig: Free Run | Avg Hold: 100/100 | Radio Std | None | | |
| | #IFGain:Low | #Atten: 36 dB | | Radio Dev | ice: BTS | | |
| | | | | | | | |
| 10 dB/div Ref 40.00 d | Bm | | | | | | |
| | | | | | | | |
| 30.0 | | | | | | | |
| 20.0 | | | | | | c | lear Write |
| 10.0 | hanne | union Multon Mark | | | | _ | |
| 0.00 | / | | L A | | | | |
| | | | 1 | | | | |
| -10.0 -20.0 .70.0 .30.0 | w Mary M | | MA W WALK | u. | | | Average |
| -20.0 man white | | | | and the state of t | Making | _ | _ |
| -30.0 | | | | | | | |
| -40.0 | | | | | | | Max Hold |
| -50.0 | | | | | | | Μάλ Ποιά |
| 30.0 | | | | | | | |
| Center 2.59300 GHz | | | | Span 3 | 7.50 MHz | | |
| Res BW 360 kHz | | #VBW 1.1 M | Hz | | ep 1ms | | Min Hold |
| | | | | | | | Milline |
| Occupied Bandwi | idth | Total P | ower 31.9 | dBm | | | |
| | 13.580 MF | 7 | | | | | Detector |
| | 10.000 Mil | 12 | | | | | Peak► |
| Transmit Freq Error | -8.539 k | Hz % of Of | BW Power 99 | 9.00 % | | Auto | <u>Man</u> |
| x dB Bandwidth | 16.24 M | Hz xdB | 26 | 00 dB | | | |
| | 10.24 M | | -20. | UU UB | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| MSG | | | STATU | s | | | |

Plot 7-14. Occupied Bandwidth Plot (LTE Band 41(PC3) - 15MHz QPSK - Full RB - Ant F)



Plot 7-15. Occupied Bandwidth Plot (LTE Band 41(PC3) - 15MHz 16-QAM - Full RB - Ant F)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | |
|----------------------|-----------------|-----------------------------------|---------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 19 of 69 |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Fage 19 01 09 |
| © 2022 ELEMENT | | | V3.0 1/6/2022 |





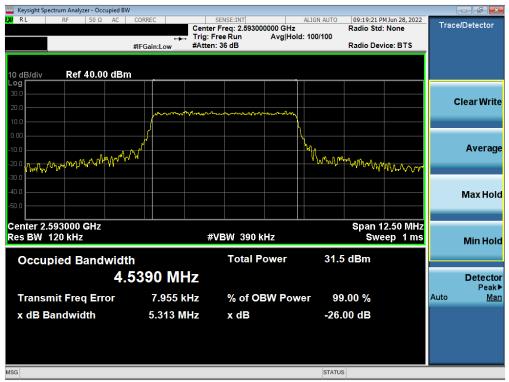
Plot 7-16. Occupied Bandwidth Plot (LTE Band 41(PC3) - 10MHz QPSK - Full RB - Ant F)



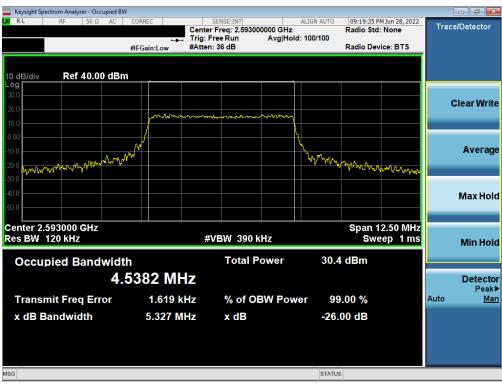
Plot 7-17. Occupied Bandwidth Plot (LTE Band 41(PC3) - 10MHz 16-QAM - Full RB - Ant F)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | | |
|----------------------|-----------------|-----------------------------------|---------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 20 of 69 | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Fage 20 01 09 | |
| © 2022 ELEMENT | | | V3.0 1/6/2022 | |





Plot 7-18. Occupied Bandwidth Plot (LTE Band 41(PC3) - 5MHz QPSK - Full RB - Ant F)



Plot 7-19. Occupied Bandwidth Plot (LTE Band 41(PC3) - 5MHz 16-QAM - Full RB - Ant F)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | | |
|----------------------|-----------------|-----------------------------------|---------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 21 of 69 | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Fage 21 01 09 | |
| © 2022 ELEMENT | | | V3.0 1/6/2022 | |



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.

For Band 41, the minimum permissible attenuation level of any spurious emission is 55 + 10log₁₀(P_[Watts]).

Test Procedure Used

ANSI C63.26-2015 – Section 5.7.4

Test Settings

- 1. Start frequency was set to 30MHz and stop frequency was set to 10GHz (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

1. Per Part 27, compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz.

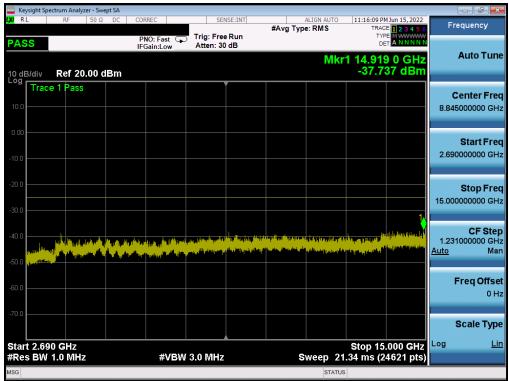
| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 22 of 60 | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 22 of 69 | | |
| © 2022 ELEMENT | | | V3.0 1/6/2022 | | |



LTE Band 41(PC3) – Ant B

| | ectrum Analyzer - Swo | | | | | | | | | | |
|--------------------|-------------------------|-------|------------|-------------------------|---------------------|----------------------------|------------------------|--|-------------------|------|-------------------------|
| LXIRL | RF 50 Ω | DC CO | RREC | SEI | NSE:INT | #Avg Typ | ALIGN AUTO | | 4 Jun 15, 2022 | F | requency |
| PASS | | | NO: Fast 🖵 | Trig: Free Atten: 30 | | #111g 1)p | | TYP | | | |
| TASS | | IF | Gain:Low | Atten: 30 | aB | | | | | | Auto Tune |
| 10 10 11 | Ref 20.00 c | Das | | | | | IVI | <r1 2.472<br="">-30 6</r1> | 2 5 GHZ 35 dBm | | |
| 10 dB/div | e 1 Pass | вш | | | • | | | 1 | | | |
| Trac | e i Pass | | | | | | | | | (| Center Freq |
| 10.0 | | | | | | | | | | 1.25 | 2500000 GHz |
| | | | | | | | | | | | |
| 0.00 | | | | | | | | | | | Start Freq |
| | | | | | | | | | | 30 | 0.000000 MHz |
| -10.0 | | | | | | | | | | | |
| -20.0 | | | | | | | | | | | |
| -20.0 | | | | | | | | | | | Stop Freq |
| -30.0 | | | | | | | | | <u>k</u> | 2.47 | 5000000 GHz |
| | | | | | | | | | 1 | | |
| -40.0 | | | | | | | | | | | CF Step 4.500000 MHz |
| | | | | | | للالفية مراد الار | مەلەر. خەربار رولالە ر | | Land the barrier | Auto | 4.500000 MHZ Man |
| -50.0 (iliteration | | | | | an along the second | mand Addre School descents | and the second second | and a second | | | |
| | a all directions of the | | | | | | | | | | Freq Offset |
| -60.0 | | | | | | | | | | | 0 Hz |
| | | | | | | | | | | | |
| -70.0 | | | | | | | | | | | |
| | | | | | | | | | | | Scale Type |
| Start 0.03 | 0 GHz | | | | | | | Stop 2 | .475 GHz | Log | <u>Lin</u> |
| #Res BW | 1.0 MHz | | #VBW | / 3.0 MHz | | | Sweep 3 | 3.260 ms (| 4891 pts) | | |
| MSG | | | | | | | STATUS | s | | | |

Plot 7-20. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant B)



Plot 7-21. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant B)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | |
|----------------------|-----------------|-----------------------------------|---------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 23 of 69 |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Fage 23 01 09 |
| © 2022 ELEMENT | | | V3.0 1/6/2022 |



| | ectrum Analyz | | | | | | | | | | | - 7 |
|---------------------------|----------------------|--------|------------------|--|---|--|--|--|---|--|---------|-------------------|
| <mark>(</mark> RL | RF | 50 Ω | DC | CORREC | SEI | NSE:INT | #Avg Typ | ALIGN AUTO De: RMS | TRA | MJun 15, 2022 | Fre | quency |
| PASS | | | | PNO: Fast IFGain:Low | Trig: Free Atten: 10 | | | | TY D | | | |
| 0 dB/div | Ref 0.(|)0 dBn | n | | | | | M | r1 26.76 -52.0 | 2 5 GHz 12 dBm | | Auto Tur |
| ^{-og} Trac | e 1 Pass | | | | | | | | | | | |
| 10.0 | | | | | | | | | | | | enter Fre |
| 10.0 | | | | | | | | | | | 21.0000 | 00000 G |
| 20.0 | | | | | | | | | | | | |
| _ | | | | | | | | | | | | Start Fr |
| 30.0 | | | | | | | | | | | 15.0000 | 000000 G |
| | | | | | | | | | | | | |
| 40.0 | | | | | | | | | | | | Stop Fr |
| 50.0 | | | | | | | | | | | 27.000 | 000000 G |
| | | | | . If and the | المريبة المعارية | d | بالمحادث والارتبار | an and the state of the state o | (panting in the part of | demonstration of | | |
| 60.0 <mark>ethieth</mark> | and the strategy of | 2010 C | adentifi (fr | A REAL PROPERTY AND A REAL | terretaria de la comunia. Escala de la comunia | an a | ر بې مېرې يې د د ويند کې د . د بې مېرې يې د د ويند کې د . | and the second | مى بىلى يەرىلەر يەرىلەر يەرىكى يەرىپى مەرىكى يەرىلەر يەرىلەر يەرىكى يەرىكى يەرىكى يەرىكى يەرىكى يەرىكى يەرىكى يە | a des de collecte de la desta de la de La desta de la d | 1 2000 | CF St 000000 G |
| i dina na di | And all a literate p | | فالتراب والتريين | | | | | | | | Auto | M |
| 70.0 | | | | | | | | | | | | |
| 80.0 | | | | | | | | | | | F | req Offs |
| 00.0 | | | | | | | | | | | | 0 |
| 90.0 | | | | | | | | | | | | |
| | | | | | | | | | | | S | cale Ty |
| Start 15.0 | | | | | | | | | Stop 27 | .000 GHz | Log | L |
| | 1.0 MHz | | | #VBW | / 3.0 MHz | | s | weep 2 | 20.80 ms (2 | .000 0112 | | |
| ISG | | | | | | | | STAT | | | | |

Plot 7-22. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant B)

| | | m Analyzer | | | | | | | | | | | |
|-------------------|---|--------------------|-------------|-------|------------|------------|------------------|----------|-----------------------|------------|---------------------------|-------|--------------------|
| <mark>o</mark> RL | | RF 5 | 50Ω D | C COR | REC | SEN | ISE:INT | #Avg Typ | ALIGN AUTO | | 4 Jun 15, 2022 | Fr | equency |
| | | | | P | IO: Fast 🗔 | Trig: Free | | #Avg Typ | e: RIVIS | TYF | E 1 2 3 4 5 6 E M WWWW | | - 4 |
| PASS | | | | IFO | Gain:Low | Atten: 30 | dB | | | | | | |
| | | | | | | | | | Μ | kr1 2.47 | 7 0 GHz | | Auto Tur |
| 0 dB/c | div R | ef 20.0 | 0 dBr | n | | | | | | -35. | 81 dBm | | |
| - ^{og} 🗖 | Trace 1 | Pass | | | | | | | | | | | |
| | | | | | | | | | | | | | enter Fr |
| 10.0 | | | | | | | | | | | | 1.263 | 3000000 GI |
| | | | | | | | | | | | | | |
| 0.00 | | | | | | | | | | | | | Start Fr |
| | | | | | | | | | | | | 30 | .000000 M |
| 10.0 | | | | | | | | | | | | 50 | .000000 141 |
| | | | | | | | | | | | | | |
| 20.0 | | | | | | | | | | | | | Stop Fr |
| | | | | | | | | | | | | 2.49 | 5000000 G |
| 30.0 - | | | | | | | | | | | <u> </u> | | |
| | | | | | | | | | | | l Y | | 05.04 |
| 40.0 — | | | | | | | | | | | | 246 | CF St .600000 M |
| | | | | | | | الالدين وبالحالي | i | in and data | | I pelocal mana | Auto | M |
| 50.0 🖵 | for a state of the second s | and a state of the | a Mathalita | | | | الكاريما وراجعه | | and share provide the | | | | |
| 11 | a million for lata pacifi | | | | | | | | | | | | |
| 60.0 — | | | | | | | | | | | | | Freq Offs |
| | | | | | | | | | | | | | 0 |
| 70.0 | | | | | | | | | | | | | |
| | | | | | | | | | | | | 1 | Scale Ty |
| | | | | | | | | | | | | 1.00 | |
| | 0.030 0 | | | | | | | | _ | Stop 2 | .496 GHz | Log | L |
| Res | BW 1.0 | MHŻ | | | #VBW | 3.0 MHz | | | sweep | 3.288 ms (| 4933 pts) | | |
| SG | | | | | | | | | STATU | JS | | | |

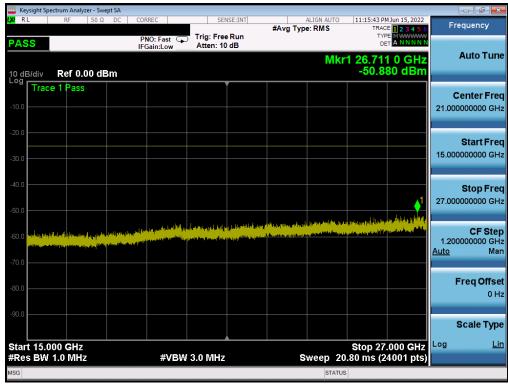
Plot 7-23. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 24 of 60 | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 24 of 69 | | |
| © 2022 ELEMENT | ÷ | | V3.0 1/6/2022 | | |



| Keysight Spectrum Analyzer - Swept SA | | | |
|---------------------------------------|---|---|------------------------------|
| 🗶 RL RF 50Ω DC | CORREC SENSE:IN | #Avg Type: RMS TRACE 1 2 3 4 5 6 | Frequency |
| PASS | PNO: Fast Trig: Free Run IFGain:Low Atten: 30 dB | түре Миники Der A NNNNN Mkr1 14.645 0 GHz -37.461 dBm | Auto Tune |
| 10 dB/div Ref 20.00 dBm | | -57.401 (18) | Center Freq |
| 10.0 | | | 8.845000000 GHz |
| 0.00 | | | Start Freq 2.69000000 GHz |
| -10.0 | | | |
| -30.0 | | | Stop Freq 15.00000000 GHz |
| -40.0 | 181 | n hand a pharticle of the program gard present of the second product of the second product of the second second | CF Step 1.231000000 GHz |
| -50.0 | | | Auto Man |
| -60.0 | | | Freq Offset 0 Hz |
| -70.0 | | | Scale Type |
| Start 2.690 GHz #Res BW 1.0 MHz | #VBW 3.0 MHz | Stop 15.000 GHz Sweep 21.34 ms (24621 pts) | Log <u>Lin</u> |
| MSG | | STATUS | |

Plot 7-24. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant B)



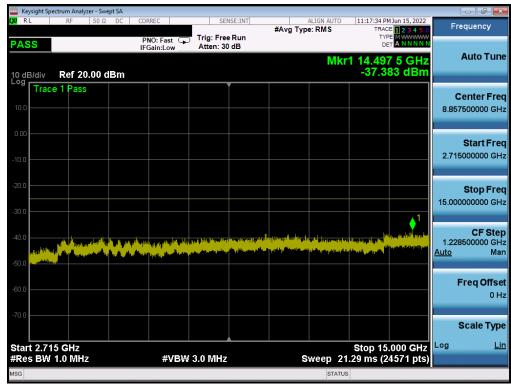
Plot 7-25. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 25 of 69 | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | 22 Portable Handset | | | |
| © 2022 ELEMENT | | | V3.0 1/6/2022 | | |



| 🤤 Keysight Spectrum Analyzer - Swept SA 🚽 | | | | | | | |
|--|--|---|-----------|----------------------|----------------------|--------------------------|--------------------------------|
| LXU RL RF 50Ω DC | CORREC | SENSE:INT | #Avg Type | ALIGN AUTO e: RMS | 11:17:04 PM TRACE | Jun 15, 2022 1 2 3 4 5 6 | Frequency |
| PASS | | g: Free Run ten: 30 dB | 0 ,1 | ML | TYPE | ANNNN | Auto Tune |
| 10 dB/div Ref 20.00 dBm | | • | | IVIN | -40.66 | 9 dBm | |
| 10.0 Trace 1 Pass | | | | | | | Center Freq 1.263000000 GHz |
| 0.00 | | | | | | | |
| -10.0 | | | | | | | Start Free 30.000000 MH; |
| -20.0 | | | | | | | Stop Free |
| -30.0 | | | | | | | 2.496000000 GH |
| -40.0 | | | | | | 1 | CF Step 246.600000 MH |
| -50.0 - optimist and in the state state and the state of the | u pupulu de del ante del alter de la del alter | م أنه الحصل من أنه المن المول أنه المربع المربع بمحمد ومعلم من المربع من المربع من المربع المربع الم | | i and that | | | <u>Auto</u> Mar |
| -60.0 | | | | | | | Freq Offse |
| -70.0 | | | | | | | 0 H: |
| | | | | | | | Scale Type |
| Start 0.030 GHz #Res BW 1.0 MHz | #VBW 3.0 | MHz | | Sweep 3 | 4.Stop 2 4.288 ms | 496 GHz 933 pts) | |
| MSG | | | | STATUS | | | |

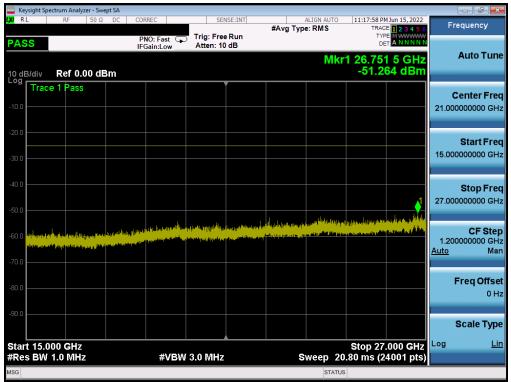
Plot 7-26. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant B)



Plot 7-27. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 26 of 69 | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | | | |
| © 2022 ELEMENT | | | V3.0 1/6/2022 | | |





Plot 7-28. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant B)

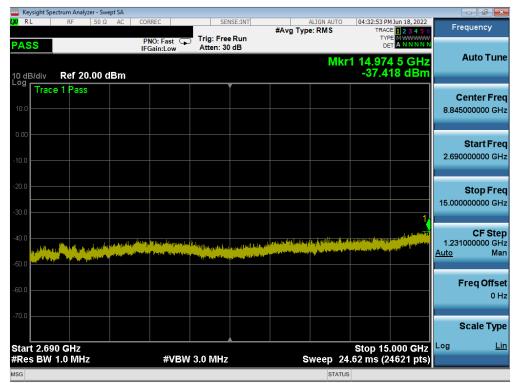
| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 27 of 69 | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Fage 27 01 09 | | |
| © 2022 ELEMENT | | | V3.0 1/6/2022 | | |



LTE Band 41(PC3) – Ant F

| | | ctrum A | Analyzer - Sv | | | | | | | | | | | | |
|----------------------|----------------|---------|---------------|----------------|----------------------|-------------|-------------------------|---------|------|-------------|-----------|-----------------------|------------------------|--------------------|-----------------------------------|
| l <mark>XI</mark> RI | L | RF | 50 \$ | 2 AC | CORREC | | SEN | ISE:INT | #Ava | Al Type: | LIGN AUTO | | MJun 18, 2022 | Fr | equency |
| PAS | S | | | | PNO: Fa IFGain:Lo | | Trig: Free Atten: 30 | | | , . , | | TY D | | | Auto Tune |
| 10 dE | 3/div | Ref | 20.00 | dBm | | | | | | | M | (r1 2.39 -40.9 | 6 5 GHz 17 dBm | | Auto Tulle |
| Log 10.0 | Trace | e 1 P | ass | | | | | | | | | | | | Center Freq 2500000 GHz |
| 0.00 -10.0 | | | | | | | | | | | | | | 30 | Start Freq 0.000000 MHz |
| -20.0 -30.0 | | | | | | | | | | | | | | 2.47 | Stop Freq 5000000 GHz |
| -40.0 | Atta dat | | . to the line | and lease been | | the sectors | | | | line | | l and a finite of the | | 244 <u>Auto</u> | CF Step 500000 MHz Man |
| -60.0 | | | | | | | | | | | | | | | Freq Offset 0 Hz |
| -70.0 | | | | | | | | | | | | | | | Scale Type |
| | t 0.03 s BW | | | | # | VBW 3 | .0 MHz | | | s | weep_3 | Stop 2 | .475 GHz (4891 pts) | Log | <u>Lin</u> |
| MSG | | | | | | | | | | | STATUS | | | | |

Plot 7-29. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant F)



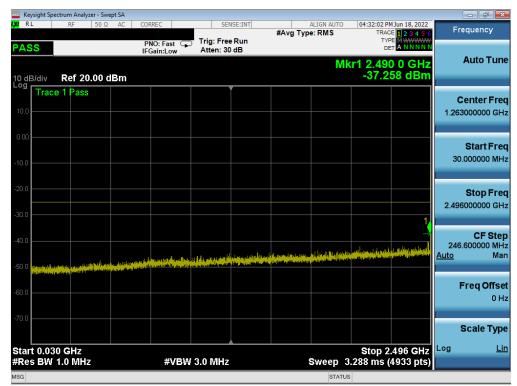
Plot 7-30. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant F)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 28 of 69 | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | | | |
| © 2022 ELEMENT | | | V3.0 1/6/2022 | | |



| Keysight Spectrum Analyzer - Swept SA | | | | | |
|--|--|-----------|---|---------------------------------------|---------------------------|
| LXI RE 50Ω AC | | #Avg Type | RMS TRAC | 4Jun 18, 2022 E 1 2 3 4 5 6 | Frequency |
| PASS | PNO: Fast Trig: Free IFGain:Low Atten: 10 | | TYF | | |
| | | | Mkr1 26.64 | 5 GHz | Auto Tune |
| 10 dB/div Ref 0.00 dBm | | | -46.3 | 28 dBm | |
| Trace 1 Pass | Ĭ | | | | Center Freq |
| -10.0 | | | | 2 | 1.000000000 GHz |
| -20.0 | | | | | |
| -20.0 | | | | | Start Freq |
| -30.0 | | | | 1 | 5.000000000 GHz |
| | | | | | |
| -40.0 | | | | 1 | Stop Freq |
| -50.0 | | | | 2 | 7.000000000 GHz |
| and the second states of the s | the section (A red a barried or section and a section of the | | and the state of the | | 05.04+** |
| -60.0 | ا الله العظيم بلغان و بن من و عن و عن و عن هذا و و عليه و ع المحكم المحكم و عن من و عليه و المحكم و عليه و عليه و عليه و عليه و المحكم و عليه و عليه و عليه و عليه و عليه و | | | | CF Step 1.20000000 GHz |
| -70.0 | | | | Au | <u>uto</u> Man |
| | | | | | |
| -80.0 | | | | | Freq Offset 0 Hz |
| | | | | | 0112 |
| -90.0 | | | | | Scale Type |
| | | | <u> </u> | | |
| Start 15.000 GHz #Res BW 1.0 MHz | #VBW 3.0 MHz | SI | /2 Stop 2/ weep 30.40 ms | .000 GHz 4001 pts) | |
| MSG | | | STATUS | | |

Plot 7-31. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Ant F)



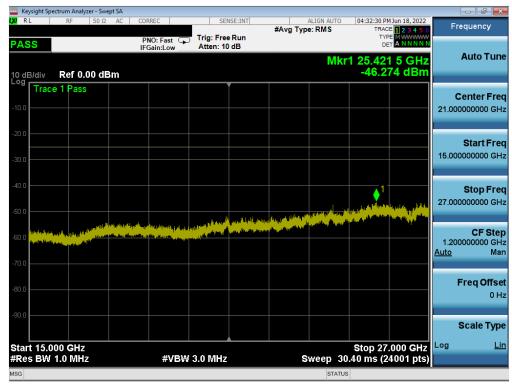
Plot 7-32. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant F)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 20 of 60 | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 29 of 69 | | |
| © 2022 ELEMENT | | · | V3.0 1/6/2022 | | |



| | | ectrum Analyzer - Sw | | | | | | | | | | |
|--------------|----------------|------------------------------|----------------|----------------------------|---|---------------------|---------------------|--|---|--|----------------|-------------------|
| LXU R | L | RF 50 Ω | 2 AC | CORREC | SEI | ISE:INT | #Avg Ty | ALIGN AU | | PM Jun 18, 2022 | Fre | quency |
| PAS | 20 | | | PNO: Fast 🔾 | Trig: Free Atten: 30 | | | | | | | |
| | 50 | | | IFGain:Low | Atten: 30 | dВ | | | | | 4 | Auto Tune |
| | | B-5 00 00 | -1121 | | | | | IV | 1KF1 14.7 -37 | 79 0 GHz 361 dBm | - | |
| 10 di Log | B/div | Ref 20.00 | dBM | | · · · · · · · · · · · · · · · · · · · | | | | -57. | | | |
| | Irac | e 1 Pass | | | | | | | | | Ce | enter Freg |
| 10.0 | <u> </u> | | | | | | | | | | 8.8450 | 000000 GHz |
| | | | | | | | | | | | | |
| 0.00 | <u> </u> | | | | | | | | | | | |
| | | | | | | | | | | | | Start Freq |
| -10.0 | | | | | | | | | | | 2.0900 | 00000 GH2 |
| | | | | | | | | | | | | |
| -20.0 | | | | | | | | | | | | Stop Freq |
| | | | | | | | | | | | 15.0000 | 000000 GHz |
| -30.0 | | | | | | | | | | 1 | | |
| -40.0 | | | | | | | | | | I. INTRODUCTION | | CF Step |
| -40.0 | , and the | أراديا فيراوا ويتحر بالمحادي | a managera (se | Milelplatic and any public | a lateration and an | ayuqulahani | p Joll official and | a a si | anna a sua a sua ang ing sua ang Mangang ang ang ing sua ang | nyp a je v an er Helle en del ander de la del beter | 1.2310 Auto | 000000 GHz Man |
| -50.0 | and the second | الشعار بالأروا | N NULL STATE | | and the second se | and state and state | | 1 | | | Auto | Ivian |
| | | | | | | | | | | | | |
| -60.0 | | | | | | | | | | | F | req Offset |
| | | | | | | | | | | | | 0 Hz |
| -70.0 | | | | | | | | | | | | |
| | | | | | | | | | | | S | cale Type |
| Star | + 2 60 | 0 GHz | | | | | | | Stop 1 | 5.000 GHz | Log | Lin |
| | | 1.0 MHz | | #VBV | V 3.0 MHz | | | Sweep | 24.62 ms | (24621 pts) | _ | |
| MSG | | | | | | | | | ATUS | | | |
| | | | | | | | | | | | | |

Plot 7-33. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant F)



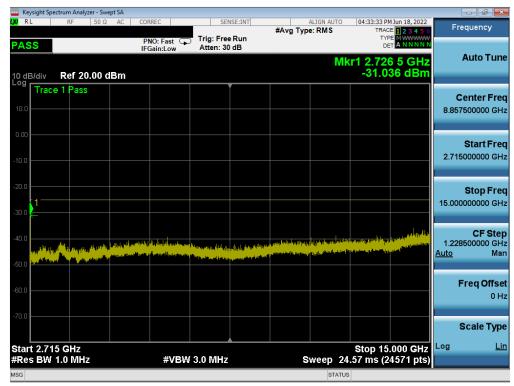
Plot 7-34. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Ant F)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 30 of 69 | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Fage 50 01 09 | | |
| © 2022 ELEMENT | • | · | V3.0 1/6/2022 | | |



| | ctrum Analyzer - Swe | | | | | | | | | | |
|----------------------|--|-----------------|--|---|---------|----------|----------------------|----------------------------------|--|-------------|--------------------|
| L <mark>XI</mark> RL | RF 50 Ω | AC COI | RREC | | ISE:INT | #Avg Typ | ALIGN AUTO e: RMS | TRA | MJun 18, 2022 CE 1 2 3 4 5 6 | Fre | equency |
| PASS | | | NO: Fast 🖵 Gain:Low | Trig: Free Atten: 30 | | | | TΥ | | | |
| , | | | Galli.LUw | /ttern oo | ub | | N | lkr1 2.48 | 0.5 GHz | | Auto Tune |
| 10 dB/div | Ref 20.00 d | Bm | | | | | | -39 | 53 dBm | | |
| Log | 1 Pass | | | `````````````````````````````````````` | | | | | | | |
| | | | | | | | | | | | enter Freq |
| 10.0 | | | | | | | | | | 1.263 | 000000 GHz |
| 0.00 | | | | | | | | | | | |
| 0.00 | | | | | | | | | | | Start Freq |
| -10.0 | | | | | | | | | | 30. | 000000 MHz |
| | | | | | | | | | | | |
| -20.0 | | | | | | | | | | | Stop Freq |
| | | | | | | | | | | | 000000 GHz |
| -30.0 | | | | | | | | | | | |
| 10.0 | | | | | | | | | 👌 | | CF Step |
| -40.0 | | | | | | | Lau | والمرادعا فرأ والرام وأحرار الرف | and a state of the state | | 600000 MHz |
| -50.0 | ينقفون وترجي الر | Telescology and | ري احداد الحزيرات وريد. ويلادر ويتداده ماريور | م الفرانية والمركز (1) (م. مع 1) (1) (1) (1) (1) (1) (1) (1) | | | | hinstein inigh | A Industrial State Party of the Industrial | <u>Auto</u> | Man |
| | (Brocks 19 Constant State States State States) | الكالا المشاور | | | | | | | | | |
| -60.0 | | | | | | | | | | F | req Offset 0 Hz |
| | | | | | | | | | | | 0 H2 |
| -70.0 | | | | | | | | | | | Deals The |
| | | | | | | | | | | S | Scale Type |
| Start 0.030 | | | | | | | | Stop 2 | .430 0112 | Log | Lin |
| #Res BW 1 | 1.0 MHz | | #VBW | 3.0 MHz | | | Sweep | 3.288 ms | (4933 pts) | | |
| MSG | | | | | | | STAT | US | | | |

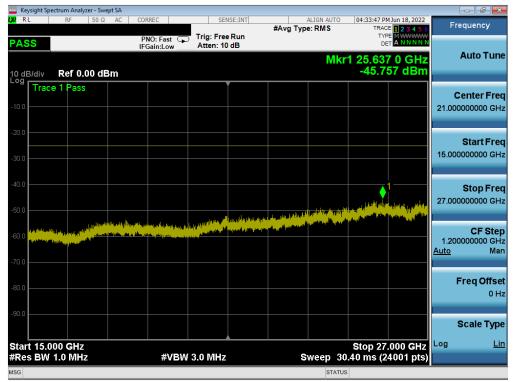
Plot 7-35. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant F)



Plot 7-36. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant F)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 31 of 69 | | |
| © 2022 ELEMENT | | | V3.0 1/6/2022 | | |





Plot 7-37. Conducted Spurious Plot (LTE Band 41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Ant F)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | Test Dates: EUT Type: | | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 32 of 69 | | |
| © 2022 ELEMENT | · | | V3.0 1/6/2022 | | |



ULCA - LTE B41(PC3) - Ant B

| | ectrum Analyz | er - Swept | t SA | | | | | | | | | |
|---------------------|---------------|---------------------|-------|------------------------|--------------------------------|---------|---------------------|---|-----------------------------------|-----------------------|-------------|-----------------------|
| RL | RF | 50 Ω | AC CO | RREC | SEI | NSE:INT | #Avg Typ | ALIGN AUTO e: RMS | | MJun 28, 2022 | Fr | equency |
| PASS | | | | NO: Fast 🕞 Gain:Low | Trig: Free Atten: 30 | | • • • | | TY | | | |
| 0 dB/div | Ref 20 | .00 dE | 3m | | | | | MI | r1 2.46 -41.8 | 5 0 GHz 93 dBm | | Auto Tune |
| .og Trac | e 1 Pass | | | | | | | | | | | Center Fre |
| 10.0 | | | | | | | | | | | | 2500000 GH |
| | | | | | | | | | | | | |
| 0.00 | | | | | | | | | | | | Start Fre |
| 10.0 | | | | | | | | | | | 30 | .000000 MH |
| | | | | | | | | | | | | |
| 20.0 | | | | | | | | | | | | Stop Fre |
| 30.0 | | | | | | | | | | | 2.47 | 5000000 GH |
| | | | | | | | | | | 4 | | |
| 40.0 | | | | | | | | | | | 244 | CF Ste 1.500000 MH |
| | | latar Ita | | and a participation | a la constante de la constante | | (Ladard, Inc. 1944) | al Inconstant State To constant of ^{the constant} | ni na last strikterik Listerik | | <u>Auto</u> | Mai |
| 50.0 mitplates | | in the state of the | | | | | | | | | | |
| 60.0 | | | | | | | | | | | I | Freq Offse 0 H |
| | | | | | | | | | | | | UH |
| 70.0 | | | | | | | | | | | | Scale Typ |
| | | | | | | | | | | | | |
| tart 0.03 Res BW | | | | #\/R\A | / 3.0 MHz | | | Sween | Stop 2 | .475 GHz 4913 pts) | Log | Li |
| SG DW | | | | # 4 D 9 1 | 5.0 1911/2 | | | sweep | _ | as is pis) | | |

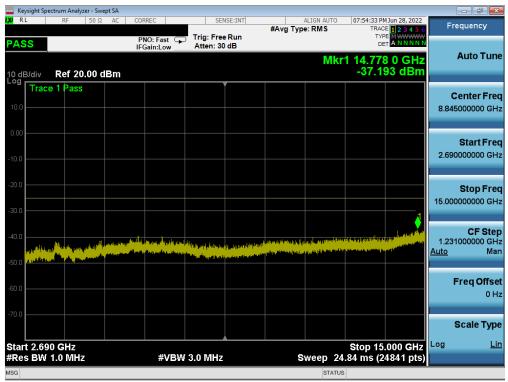
Plot 7-38. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant B)



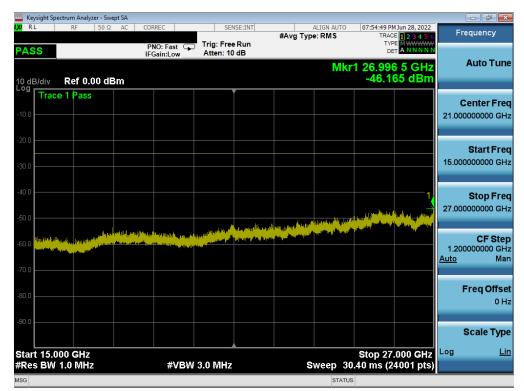
Plot 7-39. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 33 of 69 | | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 33 01 69 | | | |
| © 2022 ELEMENT | | | V3.0 1/6/2022 | | | |





Plot 7-40. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant B)



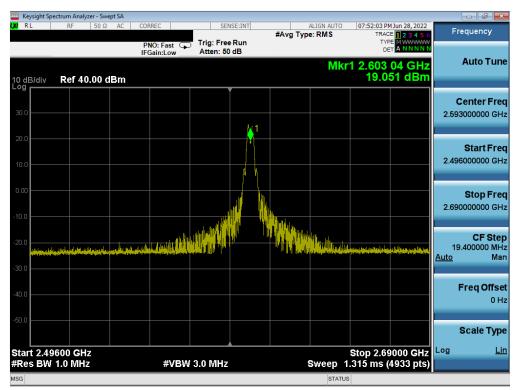
Plot 7-41. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel Ant B)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | | |
|----------------------|-----------------|-----------------------------------|---------------|--|
| Test Report S/N: | Test Dates: | ates: EUT Type: | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 34 of 69 | |
| © 2022 ELEMENT | • | · | V3.0 1/6/2022 | |



| | trum Analyzer - Swe | | | | | | | | | |
|-------------|---------------------|--------|---|-------------------------|--|--|----------------------|--------------------------------|-----------------------|----------------------------|
| LXU RL | RF 50 Ω | AC COR | REC | SEN | ISE:INT | #Avg Typ | ALIGN AUTO e: RMS | | MJun 28, 2022 | Frequency |
| PASS | | | NO: Fast 🖵 | Trig: Free Atten: 30 | | | | TYP | | |
| T AOO | | IFC | Gain:Low | Atten: 30 | ab | | | | | Auto Tune |
| | Ref 20.00 d | Bm | | | | | IV | 1kr1 2.48 | 87 dBm | |
| 10 dB/div | | ыш | | | | | | | | |
| Trace | 1 Pass | | | | | | | | | Center Fred |
| 10.0 | | | | | | | | | | 1.263000000 GHz |
| | | | | | | | | | | |
| 0.00 | | | | | | | | | | Start Fred |
| | | | | | | | | | | 30.000000 MHz |
| -10.0 | | | | | | | | | | |
| -20.0 | | | | | | | | | | |
| -20.0 | | | | | | | | | | Stop Fred |
| -30.0 | | | | | | | | | | 2.496000000 GHz |
| 00.0 | | | | | | | | | 1 | |
| -40.0 | | | | | | | | | | CF Step |
| | | | | | والمتعادية والمتعاد | a control of the second se | | a dia dia da mandra dia kating | transfilment assisted | 246.600000 MHz Auto Mar |
| -50.0 | in the first state | | Alexandra Alexandra Andre Angeletina Alexandra Andre | | and the second | a an la start and | للأنفان ألاعلى إعمال | | | |
| | | | | | | | | | | Freq Offset |
| -60.0 | | | | | | | | | | 0 Hz |
| | | | | | | | | | | 0112 |
| -70.0 | | | | | | | | | | |
| | | | | | | | | | | Scale Type |
| Start 0.030 |) GHz | | | | | | | Stop 2 | .496 GHz | Log <u>Lir</u> |
| #Res BW 1 | | | #VBW | 3.0 MHz | | | Sweep | 3.052 ms (| 5087 pts) | |
| MSG | | | | | | | STAT | US | | |

Plot 7-42. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant B)



Plot 7-43. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | Dates: EUT Type: | | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 35 of 69 | | |
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| Keysight Spectrum A | | | | | | | |
|---------------------|-----------|-----------------|---|----------------------|---|--|----------------------------|
| LXI RL RF | 50 Ω AC (| CORREC | SENSE:INT | ALIG #Avg Type: R | | PM Jun 28, 2022 RACE 1 2 3 4 5 6 | Frequency |
| PASS | | | Trig: Free Run Atten: 30 dB | • // | | | |
| | | IFGaIn:Low | Atten: 30 dB | | Mkr1 14.8 | | Auto Tune |
| 10 dB/div Ref | 20.00 dBm | | | | -37. | 176 dBm | |
| | | | Ţ | | | | |
| | ass | | | | | | Center Freq |
| 10.0 | | | | | | | 8.845000000 GHz |
| | | | | | | | |
| 0.00 | | | | | | | Start Freq |
| -10.0 | | | | | | | 2.690000000 GHz |
| -10.0 | | | | | | | |
| -20.0 | | | | | | | |
| 20.0 | | | | | | | Stop Freq |
| -30.0 | | | | | | | 15.00000000 GHz |
| | | | | | | - | |
| -40.0 | | of a damatata a | | المراجعة المراجع | ^{Adde} n berne het det erke kan so | The second s | CF Step 1.231000000 GHz |
| | | | aldan ^{la} dan desta glaster al angelsen | | الأحمد والمستاع فالدا وتحادثه إعان | | Auto Man |
| -50.0 | | | | | | | |
| | | | | | | | Freq Offset |
| -60.0 | | | | | | | 0 Hz |
| | | | | | | | |
| -70.0 | | | | | | | Scale Type |
| | | | | | | | Scale Type |
| Start 2.690 GH | | | | | Stop ' | 10.000 GHZ I | Log <u>Lin</u> |
| #Res BW 1.0 N | /IHz | #VBW 3 | .0 MHz | Swe | ep 24.62 ms | (24621 pts) | |
| MSG | | | | | STATUS | | |

Plot 7-44. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant B)



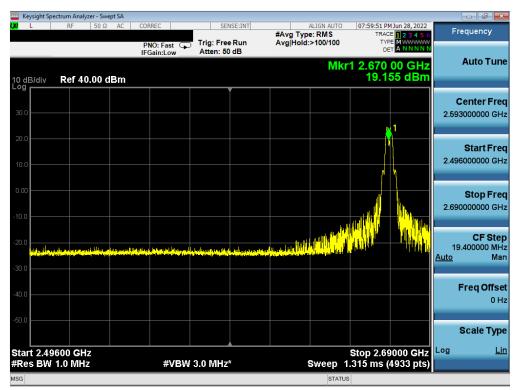
Plot 7-45. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
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| W R.L RF SO.Q AC CORREC SENSEINT ALIGN AUTO Design Mynu 28, 2022 Frequency PASS PN0: Fast IFGain:Low Trig: Free Run Atten: 30 dB TACE 292 40 TACE 292 40 Auto Tune 10 dB/div Ref 20.00 dBm -40.567 dBm -40.567 dBm Center Freq 1.26300000 GHz 100 Trace 1 Pass -40.567 dBm -40.5 | | ght Spect | rum Analyzer - Sw | | | | | | | | | | |
|--|----------------------|-----------|-------------------|-------------------|--|--|---------|---------|----------------------------------|---------|-----------|------|--------------|
| PASS PHO: Fast Pice Run Atten: 30 dB Mikr1 2.489 3 GHz -40.567 dBm 10 dB/div Ref 20.00 dBm Center Freq 10 dB/div Ref 20.00 dBm Center Freq 10 dB/div Ref 20.00 dBm Center Freq 10 dB/div Ref 20.00 dBm Start Freq 20 dB/div Ref 20.00 dBm Start Freq 20 dB/div Ref 20.00 dBm Start Freq 20 dB/div Ref 20.00 dBm Man 20 dB/div Ref 20.00 dBm Start Freq 20 dB/div Ref 20.00 dBm Ref 20.00 dBm Ref 20.00 dBm 20 dB/div Ref 20.00 dBm Ref 20.00 dBm Ref 20.00 dBm 20 dB/div Ref 20.00 dBm Ref 20.00 dBm Ref 20.00 dBm 20 dB/div< | L <mark>XI</mark> RL | | RF 50 Ω | AC O | DRREC | SEI | ISE:INT | #Ava Tv | | | | Fr | equency |
| 10 dB/div Ref 20.00 dBm -40.567 dBm 10 dB/div Ref 20.00 dBm -40.567 dBm 10 dB/div Ref 20.00 dBm -10.567 dBm 00 dB/div Ref 20.00 dBm -10.567 dBm 10 dB/div Ref 20.00 dBm -10.567 dBm -20 dB/div -10.567 dBm -10.567 dBm -20 dB/div <t< td=""><td>PASS</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>TY D</td><td></td><td></td><td>Auto Tune</td></t<> | PASS | | | | | | | | | TY D | | | Auto Tune |
| 100 Center Freq 100 Center Freq 100 Start Start Freq 100 Start Start Freq 100 Start Start Start Freq 100 Start | Log 👝 | | | dBm | | | | | | -40.5 | 67 dBm | | |
| 0.00 Image: start freq 0.00 Image: start freq <td< td=""><td></td><td>Trace</td><td>Trass</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | Trace | Trass | | | | | | | | | | |
| -100 | | | | | | | | | | | | 1.26 | 3000000 GHz |
| -100 | 0.00 | | | | | | | | | | | | • |
| -300 | | | | | | | | | | | | 30 | 0.000000 MHz |
| -30.0 -30.0 <td< td=""><td>-20.0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | -20.0 | | | | | | | | | | | | |
| 400 and a list of a second back of the second and a secon | -30.0 | | | | | | | | | | | 2.49 | 6000000 GHz |
| -50 0 | -40.0 — | | | | | | | | | | 1 | 246 | |
| -60.0 -60.0 -70.0 Freq Offset -70.0 -70.0 -70.0 -70.0 Start 0.030 GHz #VBW 3.0 MHz Sweep 3.096 ms (5161 pts) | | | ويعد بالارد . | المرابعة والمرابع | ومربا المجداد إردامه | و الصاد و سال | | | ار المعالي إيرا. الجامعات الم | | | | |
| 460 0 400 0 100 0 Hz 0 Hz 700 0 500 0 Hz 500 0 Hz 500 0 Hz Start 0.030 GHz #VBW 3.0 MHz Sweep 3.096 ms (5161 pts) | -50.0 | | | | and the second | and the second sec | 1 | | | | | | |
| -70.0 Start 0.030 GHz Stop 2.496 GHz Log Lin #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 3.096 ms (5161 pts) Sweep 3.096 ms (5161 pts) | -60.0 | | | | | | | | | | | | • |
| Start 0.030 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 3.096 ms (5161 pts) | 70.0 | | | | | | | | | | | | |
| #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 3.096 ms (5161 pts) | -70.0 | | | | | | | | | | | | Scale Type |
| | | | | | #\/B\A | (30 MHz | | | Sween | Stop 2 | .496 GHz | Log | Lin |
| | | | | | # V D VI | - 5.0 WITZ | | | | | oror pis) | | |

Plot 7-46. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant B)



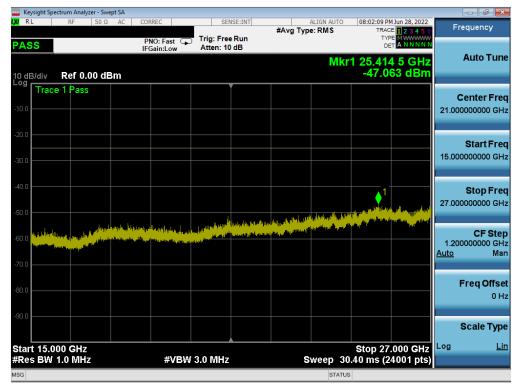
Plot 7-47. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | |
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| © 2022 ELEMENT | - | | V3.0 1/6/2022 | |



| | pectrum Analyzer - Swe | | | | | | | | | - | |
|------------------|--|--|--------------------------------------|---|--------|---|---------------------|--|-------------------|-----------------------|-------------------|
| LX/IRL | RF 50 Ω | AC COF | REC | SEN | SE:INT | #Avg Typ | ALIGN AUT e: RMS | | MJun 28, 2022 | Free | quency |
| PASS | | | NO: Fast 🖵 Gain:Low | Trig: Free Atten: 30 | | 0 ,1 | | TY D | | | Auto Tune |
| 10 dB/div Log | Ref 20.00 d | Bm | | | | | M | kr1 14.77 -37.0 | 3 5 GHz 13 dBm | | auto i une |
| | e 1 Pass | | | | | | | | | | enter Freq |
| 10.0 | | | | | | | | | | 8.8575 | 500000 GHz |
| 0.00 | | | | | | | | | | ; | Start Freq |
| -10.0 | | | | | | | | | | 2.7150 | 000000 GHz |
| -20.0 | | | | | | | | | | | Stop Freq |
| -30.0 | | | | | | | | | | 15.0000 | 000000 GHz |
| -40.0 | | | | | | | | | | | CF Step |
| our Attor | na ¹⁹ mangang panganan Mangang panganan katala | a Regelerander and Barrierander Anderster ander | ntengatipapan pang Kelalahan pang | ^{al} lengestyddiadau ^{Allen} adau arlana | | a paragramatika paralang Ang kanang kanang paragramatika paragramatika paragramatika paragramatika paragramatika paragramatika paragrama | | nen 114 gemierten er en er | | 1.2285 <u>Auto</u> | 600000 GHz Man |
| -50.0 | | | | | | | | | | E | req Offset |
| -60.0 | | | | | | | | | | | 0 Hz |
| -70.0 | | | | | | | | | | S | cale Type |
| Start 2.7 | 15 CH2 | | | | | | | Stop 14 | .000 GHz | Log | Lin |
| | 1.0 MHz | | #VBW | 3.0 MHz | | s | weep | 24.57 ms (2 | .000 GHZ | | |
| MSG | | | | | | | STA | TUS | | | |

Plot 7-48. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant B)



Plot 7-49. Conducted Spurious Plot (ULCA LTE B41(PC3) - 20MHz QPSK - RB Size 1, RB Offset 0 - High Channel Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | |
|----------------------|-----------------|----------------------------|---------------|--|
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| © 2022 ELEMENT | | | V3.0 1/6/2022 | |



7.5 Band Edge Emissions at Antenna Terminal

Test Overview

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 for Band 41 is as noted in the Test Notes on the following page.

Test Procedure Used

ANSI C63.26-2015 - Section 5.7.3

Test Settings

- 1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
- 2. Span was set large enough so as to capture all out of band emissions near the band edge
- 3. RBW \geq 1% of the emission bandwidth
- 4. VBW > 3 x RBW
- 5. Detector = RMS
- 6. Number of sweep points $\geq 2 \times \text{Span/RBW}$
- 7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
- 8. Sweep time = auto couple
- 9. The trace was allowed to stabilize

Test Setup

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



Figure 7-4. Test Instrument & Measurement Setup

Test Notes

Per 27.53(m) for operations in the BRS/EBS bands, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz.

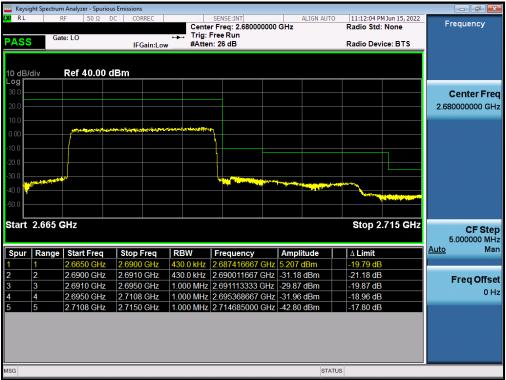
| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | |
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LTE Band 41(PC3) – Ant B



Plot 7-50. Lower ACP Plot (LTE Band 41(PC3) - 20MHz QPSK - Full RB - Ant B)



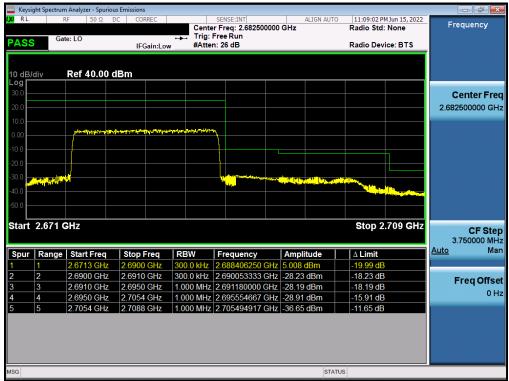
Plot 7-51. Upper ACP Plot (LTE Band 41(PC3) - 20MHz QPSK - Full RB - Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|----------------|--|--|
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| © 2022 ELEMENT | | | \/3.0.1/6/2022 | | |



| | | -Spuriou i0Ω D | us Emission | s RREC | | SENSE:INT | | ALIGN AUTO | 11:10:27 | MJun 15, 2022 | |
|---|---|-------------------|----------------------------|--------------------------------------|--|---|--|--------------------------------------|---|--|--|
| X/RL | NF D | 10 32 L | | RREC | Cente | r Freq: 2.50350 | 0000 GHz | ALIGN AUTO | Radio Sto | | Frequency |
| PASS | Gate: LO | | | | | Free Run | | | | | |
| ASS | | | IF | Gain:Lo | w #Atte | n: 26 dB | | | Radio De | VICE: BIS | r |
| | | | | | | | | | | | |
| 10 dB/div | Ref 40 | 0.00 c | 1Bm | | | | | | | | |
| 30.0 | | | | | | | | | | | |
| | | | | | | | | | | | Center Fr |
| 20.0 | | | | | | | | | | | 2.503500000 0 |
| 10.0 | | | | | | | | | | | |
| 0.00 | | | | | | In surgery and the | der California (Marinel and Al | ingle-strates-region | the second states and the second states of the second states of the second states of the second states of the s | | |
| 10.0 | | | | | | | | | | | |
| 20.0 | | | | | | | | | | | |
| | | | | | | 1 | | | | | |
| -30.0 | | | No. of Concession, Name | A LAND | and the second | | | | | and the second | |
| -40.0 | والمحافة واللمار | | | | | | | | | | |
| -50.0 - 10 k da | and the second second | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Start 2.4 | 77 GHz | | | | | | | | Stop 2 | 2.515 GHz | CF St |
| Start 2.4 | 77 GHz | | | | | | | | Stop 2 | 2.515 GHz | CF St 3.750000 M |
| | 77 GHz nge Start F | req | Stop | Freq | RBW | Frequency | Amp | olitude | Stop 2 | 2.515 GHz | |
| | | | Stop | | | Frequency 2.490389583 | | | | | 3.750000 N |
| Start 2.4 Spur Ra 1 1 2 2 | nge Start F | GHz | | 5 GHz | 1.000 MHz | | GHz -26.8 | 2 dBm | ∆ Limit | 3 | 3.750000 M <u>Auto</u> N |
| Spur Ra 1 1 2 2 3 3 | nge Start F 2.4773 2.4905 2.4950 | GHz GHz GHz | 2.4905 2.4950 2.4960 | 5 <mark>GHz</mark>) GHz) GHz | 1.000 MHz 1.000 MHz 300.0 kHz | 2.490389583 2.494910000 2.495286667 | <mark>GHz -26.8</mark> GHz -25.5 GHz -26.5 | <mark>2 dBm</mark> 7 dBm 7 dBm | Δ Limit -1.816 dl -12.57 dl -13.57 dl | 3 3 3 | 3.750000 M <u>Auto</u> M Freq Offs |
| Spur Ra 1 1 2 2 | nge Start F 2.4773 2.4905 | GHz GHz GHz | 2.4905 2.4950 | 5 <mark>GHz</mark>) GHz) GHz | 1.000 MHz 1.000 MHz 300.0 kHz | 2.490389583 2.494910000 | <mark>GHz -26.8</mark> GHz -25.5 GHz -26.5 | <mark>2 dBm</mark> 7 dBm 7 dBm | Δ Limit -1.816 dl -12.57 dl | 3 3 3 | 3.750000 M <u>Auto</u> N |
| Spur Ra 1 1 2 2 3 3 | nge Start F 2.4773 2.4905 2.4950 | GHz GHz GHz | 2.4905 2.4950 2.4960 | 5 <mark>GHz</mark>) GHz) GHz | 1.000 MHz 1.000 MHz 300.0 kHz | 2.490389583 2.494910000 2.495286667 | <mark>GHz -26.8</mark> GHz -25.5 GHz -26.5 | <mark>2 dBm</mark> 7 dBm 7 dBm | Δ Limit -1.816 dl -12.57 dl -13.57 dl | 3 3 3 | 3.750000 M <u>Auto</u> M Freq Offs |
| Spur Ra 1 1 2 2 3 3 | nge Start F 2.4773 2.4905 2.4950 | GHz GHz GHz | 2.4905 2.4950 2.4960 | 5 <mark>GHz</mark>) GHz) GHz | 1.000 MHz 1.000 MHz 300.0 kHz | 2.490389583 2.494910000 2.495286667 | <mark>GHz -26.8</mark> GHz -25.5 GHz -26.5 | <mark>2 dBm</mark> 7 dBm 7 dBm | Δ Limit -1.816 dl -12.57 dl -13.57 dl | 3 3 3 | 3.750000 M <u>Auto</u> M Freq Offs |
| Spur Ra 1 1 2 2 3 3 | nge Start F 2.4773 2.4905 2.4950 | GHz GHz GHz | 2.4905 2.4950 2.4960 | 5 <mark>GHz</mark>) GHz) GHz | 1.000 MHz 1.000 MHz 300.0 kHz | 2.490389583 2.494910000 2.495286667 | <mark>GHz -26.8</mark> GHz -25.5 GHz -26.5 | <mark>2 dBm</mark> 7 dBm 7 dBm | Δ Limit -1.816 dl -12.57 dl -13.57 dl | 3 3 3 | 3.750000 M <u>Auto</u> M Freq Offs |
| Spur Ra 1 1 2 2 3 3 | nge Start F 2.4773 2.4905 2.4950 | GHz GHz GHz | 2.4905 2.4950 2.4960 | 5 <mark>GHz</mark>) GHz) GHz | 1.000 MHz 1.000 MHz 300.0 kHz | 2.490389583 2.494910000 2.495286667 | <mark>GHz -26.8</mark> GHz -25.5 GHz -26.5 | <mark>2 dBm</mark> 7 dBm 7 dBm | Δ Limit -1.816 dl -12.57 dl -13.57 dl | 3 3 3 | 3.750000 M <u>Auto</u> M Freq Offs |
| Spur Ra 1 1 2 2 3 3 | nge Start F 2.4773 2.4905 2.4950 | GHz GHz GHz | 2.4905 2.4950 2.4960 | 5 <mark>GHz</mark>) GHz) GHz | 1.000 MHz 1.000 MHz 300.0 kHz | 2.490389583 2.494910000 2.495286667 | <mark>GHz -26.8</mark> GHz -25.5 GHz -26.5 | <mark>2 dBm</mark> 7 dBm 7 dBm | Δ Limit -1.816 dl -12.57 dl -13.57 dl | 3 3 3 | 3.750000 M <u>Auto</u> M Freq Offs |

Plot 7-52. Lower ACP Plot (LTE Band 41(PC3) - 15MHz QPSK - Full RB - Ant B)



Plot 7-53. Upper ACP Plot (LTE Band 41(PC3) - 15MHz QPSK - Full RB - Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
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| © 2022 ELEMENT | · · · | | V3.0 1/6/2022 | | |



| Key Karra | rsight Spectrum | Analyzer - S | | | | | CENCE INT | | ALTON AL | 170 | 1.07.20.0 | M http://www.alic.co.co.co. | _ | |
|-----------------------|-------------------|------------------------------|--|--------------------|--------------------------|-----------------------|--|-------------|-------------------------|-------|-------------|-----------------------------|------|-------------------|
| N <mark>i</mark> Kl | - R | F 50 | Ω DC | . COI | RREC | Cente | SENSE:INT r Freq: 2.5010 | 00000 G | ALIGN AL | | adio Std | MJun 15, 2022 : None | Fi | requency |
| PAS | Gat | e: LO | | | | | Free Run n: 26 dB | | | | adia Dav | vice: BTS | | |
| | | | | IFC | Gain:Lov | w #Alle | n. 20 uB | | | Re | adio Dev | ICE. DI S | | |
| | | | | _ | | | | | | | | | | |
| 10 dE Log [| 3/div | Ref 40. | 00 di | Bm | | | | | | | | | | |
| 30.0 | | | | | | | | | | | | | | Center Fre |
| 20.0 | | | | | | | | | | | | | | 1000000 GH |
| 10.0 | | | | | | | | | | | | | | |
| 0.00 | | | | | | | 1140M | n fra fa et | an in the second second | *** | MARK | | | |
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| 10.0 | | | | | | | | | | | | | | |
| 20.0 | | | | | | and the second second | | | | | | | | |
| -30.0 | | | | al official second | er på ester diretter for | and a second second | a de la composición de | | | | | The state of the | | |
| 40.0 | al et mater autor | الا الالاروبية المراجد ال | CALCULAR AND | · | | u | | | | | | a the second | | |
| -50.0 | | | | | | | | | | | | | | |
| | 4 0 404 6 | NI I- | | | | | | | | | 0 4 | 500 011- | | |
| siar | t 2.484 G | ΠZ | | | | | | | | | Stop 2 | .509 GHz | | CF Ste |
| _ | | | | | _ | | | | | 1 1 1 | | | Auto | 2.500000 MH Ma |
| Spui 1 | r Range | Start Fre 2.4835 G | | Stop | | RBW | Frequency 2.49037166 | | Amplitude | | Limit |) | | |
| 2 | 2 | 2.4835 G | | 2.4900 | | | 2.49497000 | | | | 1.27 dE | | | _ |
| 3 | 3 | 2.4950 G | | 2.4960 | | | 2.49586166 | | | | 14.52 dE | | | Freq Offse |
| 4 | 4 | 2.4960 G | Hz | 2.5085 | GHz | 200.0 kHz | 2.50097916 | 7 GHz 5 | .826 dBm | -1 | 9.17 dE | } | | 0 H |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| SG | | | | | | | | | 01 | TATUS | | | | |

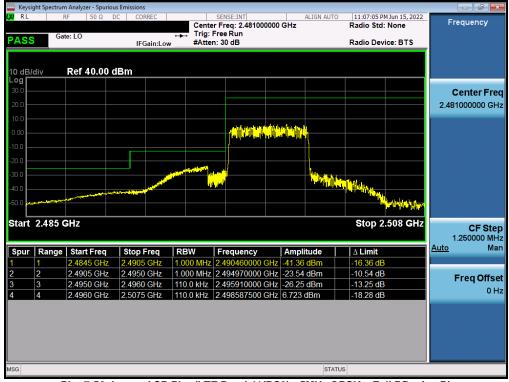
Plot 7-54. Lower ACP Plot (LTE Band 41(PC3) - 10MHz QPSK - Full RB - Ant B)



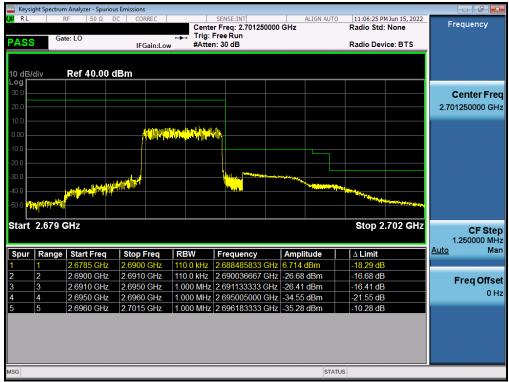
Plot 7-55. Upper ACP Plot (LTE Band 41(PC3) - 10MHz QPSK – Full RB - Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | |
|----------------------|-----------------|----------------------------|---------------|--|
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Plot 7-56. Lower ACP Plot (LTE Band 41(PC3) - 5MHz QPSK - Full RB - Ant B)



Plot 7-57. Upper ACP Plot (LTE Band 41(PC3) - 5MHz QPSK - Full RB - Ant B)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | | |
|----------------------|-----------------|-----------------------------------|---------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 42 of 60 | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 43 of 69 | |
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LTE Band 41(PC3) – Ant F



Plot 7-58. Lower ACP Plot (LTE Band 41(PC3) - 20MHz QPSK - Full RB - Ant F)



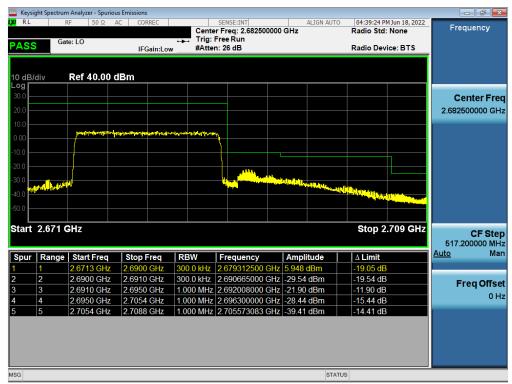
Plot 7-59. Upper ACP Plot (LTE Band 41(PC3) - 20MHz QPSK - Full RB - Ant F)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
|----------------------|-----------------|----------------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 14 of 60 |
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| | | n Analyzer - Spuri | | ns | | | | | | | | |
|--------|---------|--|---|------------|--|---|-----------------------|------------------|----------------------------------|-------------------------|-------------|---------|
| LXU RL | | RF 50 Ω | AC CC | ORREC | | SENSE:INT er Freq: 2.50350 Free Run | 00000 GH | ALIGN AUT | 0 04:38:41 Radio Sto | MJun 18, 2022 : None | Freque | ency |
| PASS | Ga | te: LO | IF | Gain:Lov | | n: 26 dB | | | Radio De | vice: BTS | | |
| | | | | | | | | | | | | |
| 10 dB/ | div | Ref 40.00 | dBm | | | | | | | | | |
| Log | | | | | | | | | | | | |
| 30.0 | | | | | | | | | | | Cent | er Freq |
| 20.0 | | | | | | | | | | | 2.503500 | 000 GHz |
| 10.0 | | | | | | | | | | | | |
| 0.00 | | | | | | physicality | and the second second | waaane Maariyaan | and the production of the second | | | |
| | | | | | | | | | | | | |
| -10.0 | | | | ſ | | | | | | | | |
| -20.0 | | | | | | | | | | | | |
| -30.0 | | | | | n ku din | | | | | where the ster | | |
| -40.0 | | an a | a har and a start of the start | WWW.Warren | and a second | | | | | an a shulle | | |
| -50.0 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Start | 2.477 (| SHz | | | | | | | Stop 2 | 2.515 GHz | | F Step |
| | | | | | | | | | | | | 000 MHz |
| Spur | Range | Start Freq | Stop | Freg | RBW | Frequency | A | mplitude | ∆ Limit | | <u>Auto</u> | Man |
| 1 | 1 | 2.4773 GHz | | 5 GHz | | 2.490080417 | | | -7.087 df | 3 | | |
| 2 | 2 | 2.4905 GHz | _ | 0 GHz | | 2.494104500 | | | -12.15 dl | | Erec | Offeet |
| 3 | 3 | 2.4950 GHz | 2.496 | 0 GHz | 300.0 kHz | 2.495998333 | GHz -30 |).93 dBm | -17.93 df | 3 | Free | Offset |
| 4 | 4 | 2.4960 GHz | 2.514 | 8 GHz | 300.0 kHz | 2.507968750 | GHz 6.4 | 175 dBm | -18.52 dl | 3 | | 0 Hz |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| MSG | | | | | | | | STA | TUS | | | |
| | | | | | | | | | | | | |

Plot 7-60. Lower ACP Plot (LTE Band 41(PC3) - 15MHz QPSK - Full RB - Ant F)



Plot 7-61. Upper ACP Plot (LTE Band 41(PC3) - 15MHz QPSK - Full RB - Ant F)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|--|
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| © 2022 ELEMENT | | · | V3.0 1/6/2022 | | | |



| | | n Analyzer - Spi | | | | | | | | | | | | | | - 0 × |
|---------|-----------|-----------------------------|-------|------------------|--------|------------------------|--|-----------|---------|-----------|--------------|-------------------------|--------------------|----------------------------|---------------|------------|
| 🗶 RL | 6 | ¥F 50 Ω | AC | CORF | EC | | SENSE:INT ALIGN AUTO Center Freq: 2.501000000 GHz Trig: Free Run | | | | | | | PM Jun 18, 2022 d: None | Fre | quency |
| PAS | Gat | te: LO | | IFGa | in:Lov | | | | | | | | adio De | evice: BTS | | |
| | | | | | | | | | | | | | | | | |
| 10 dB | diu | Ref 40.0 | 0 dBn | n | | | | | | | | | | | | |
| | | Kei 40.0 | | | | | | | | | | | | | | |
| 30.0 - | | | | | | | | | | | | | | _ | Ce | enter Freq |
| 20.0 | | | | | | | | | | | | | | | | 000000 GHz |
| 10.0 | | | | | | | | | | | | | | | | |
| | | | | | | | | NA NO POR | A Marca | the state | n/~irijiwiki | n <mark>na na sa</mark> | e hharitety | | | |
| 0.00 - | | | | | | | ľ | | | | | | | | | |
| -10.0 | | | | | | | † | | | | | | | | | |
| -20.0 | | | | | | | | | | | | | | | | |
| -30.0 - | | | | | | | | | | | | | | N 4 | | |
| -40.0 | | and the second state of the | - | | | 1.1 | | | | | | | | New Market | | |
| · · · · | | | | | | | | | | | | | | | | |
| -50.0 — | | | | | | | | | | | | | | | | |
| Start | 2.484 0 | H7 | | | | | | | | | | | Ston | 2.509 GHz | | |
| | 2.1.0.1.4 | | | | | | | | | | | | | | 2.5 | CF Step |
| | | | | | | 1 | | | | | | | | | Auto 2.0 | Man |
| Spur | Range | Start Free | | top Fi | | RBW | | uency | | Ampl | | | ∆ Limit | | <u>/ (uro</u> | |
| 1 | 2 | 2.4835 GH 2.4905 GH | | 4905 (| | 1.000 MHz 1.000 MHz | | | | | | | 9.550 d | | | |
| 2 3 | 3 | 2.4905 GF 2.4950 GF | | 4950 (4960 (| | 200.0 kHz | | | | | | | 16.90 d 19.69 d | | F | req Offset |
| 4 | 4 | 2.4950 GF | | 4900 (5085 (| | 200.0 kHz | | | | | | | 19.38 d | | | 0 Hz |
| - | | 2.4300 01 | | 0000 | 21.12 | 200.0 1012 | 2.004 | 000000 | OHZ | 0.024 | dom | | 10.000 | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | |
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Plot 7-62. Lower ACP Plot (LTE Band 41(PC3) - 10MHz QPSK - Full RB - Ant F)



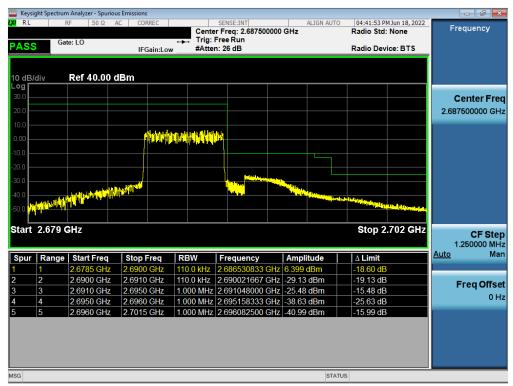
Plot 7-63. Upper ACP Plot (LTE Band 41(PC3) - 10MHz QPSK – Full RB - Ant F)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | | |
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| | sight Spectrum | | | | | | | | | | | | | | | | | | | | | - P | × |
|----------------------|---------------------------|---------|--------------|-------|-------------------------|-----------------|----|-------|-------------------|-------|------------------------------|------|-----------------|------|------------|----|----------------------|----------|--------------------|---|------------|---------|------|
| L <mark>XI</mark> RL | | | 50 Ω | AC | COP | REC | | | Center Trig: F | Fre | SE:INT eq: 2.49850 Run | 0000 | | ALI | IGN AUTO | | 04:41:04 Radio St | | un 18, 2022 one | | Fr | equency | 1 |
| PAS | SGa | te: LO | | | IFG | ain:L | | | Atter | | | | | | | | Radio De | vice | : BTS | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 10 dB | Idiv | Ref 4 | 0.00 |) dBr | n | | | | | | | | | | | | | | | | | | |
| Log | | | | | | | | | | | | | | Γ | | | | | | | | | |
| 30.0 | | | | | | | | | | | | | | | | | | | | | C | enter F | req |
| 20.0 | | | | | | | | | | | | | | | | | | | | | 2.498 | 500000 | GHz |
| 10.0 | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | | | | | | | | | | | | | vile ini | ħ. | | | | | | | | | |
| -10.0 - | | | | | | | | | | | | 1 | | | | | | | | | | | |
| | | | | | | | | | | | | | | Π | | | | | | | | | |
| -20.0 - | | | | | | | | | | | | | | Ħţ | | | | | | | | | |
| -30.0 - | | | | | | , | | | - 11 | TTP - | | | | h | Millione . | | | | | | | | |
| -40.0 | | | March Street | - | . And the second second | (and the second | h. | | <mark>ىم</mark> | Jul I | | | | ┢ | | P | | i. | tick, al. | | | | |
| -50.0 🛥 | Contraction of the second | where a | | | | | | | | | | | | | | | 10.1 | F | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Start | 2.485 (| GHz | | | | | | | | | | | | | | | Stop | 2.5 | 08 GHz | | | CFS | ten |
| | | | | | | | | | | | | | | | | | | | | | 1 | 250000 | |
| Spur | Range | Start | Freg | 8 | itop F | req | | RBW | | Fre | equency | | Ampli | itu | de | | ∆ Limit | | | A | <u>uto</u> | | Man |
| 1 | 1 | 2.484 | | | 4905 | | 1 | 1.000 | | | 90140000 | GHz | | | | | -14.08 d | В | | | | | |
| 2 | 2 | 2.490 | 5 GHz | z 2. | 4950 | GHz | 1 | 1.000 | MHz | 2.4 | 94640000 | GHz | 2 -26.91 | dE | Bm | | -13.91 d | B | | | | reg Of | feot |
| 3 | 3 | 2.495 | 0 GHz | z 2. | 4960 | GHz | 1 | 110.0 | kHz | 2.4 | 95900000 | GHz | 2 -28.70 |) dE | Bm | | -15.70 d | B | | | ſ | | |
| 4 | 4 | 2.496 | 0 GHz | z 2. | 5075 | GHz | 1 | 110.0 | kHz | 2.5 | 00005833 | GHz | 7.047 | dB | 3m | | -17.95 d | В | | | | | 0 Hz |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | |
| MSG | | | | _ | - | _ | - | _ | _ | - | | _ | | - | STAT | us | | _ | | | | | |
| | | | | | | | | | | _ | | | | | | _ | | | | | | | |

Plot 7-64. Lower ACP Plot (LTE Band 41(PC3) - 5MHz QPSK - Full RB - Ant F)

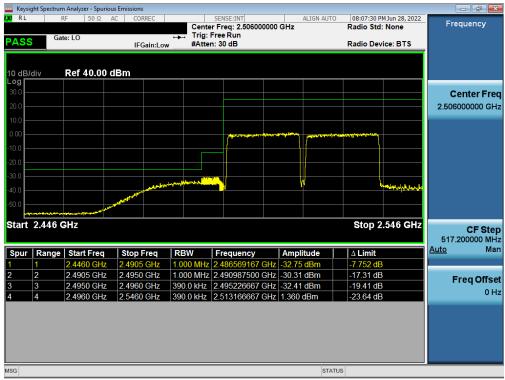


Plot 7-65. Upper ACP Plot (LTE Band 41(PC3) - 5MHz QPSK – Full RB - Ant F)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | | | |
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ULCA - LTE Band 41(PC3) – Ant B



Plot 7-66. Lower ACP Plot (ULCA LTE B41(PC3) - 20MHz QPSK - Full RB - Ant B)



Plot 7-67. Upper ACP Plot (ULCA LTE B41(PC3) - 20MHz QPSK - Full RB - Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 49 of 60 | | | | |
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7.6 Radiated Power (EIRP)

Test Overview

Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26-2015 - Section 5.2.4.4

Test Settings

- Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation. For signals with burst transmission, the signal analyzer's "time domain power" measurement capability is used
- 2. RBW = 1 5% of the expected OBW, not to exceed 1MHz
- 3. VBW \geq 3 x RBW
- 4. Span = 1.5 times the OBW
- 5. No. of sweep points $\geq 2 \times \text{span} / \text{RBW}$
- 6. Detector = RMS
- 7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto". Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration.
- 8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power.
- 9. Trace mode = trace averaging (RMS) over 100 sweeps
- 10. The trace was allowed to stabilize.

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | | | |
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The EUT and measurement equipment were set up as shown in the diagram below.

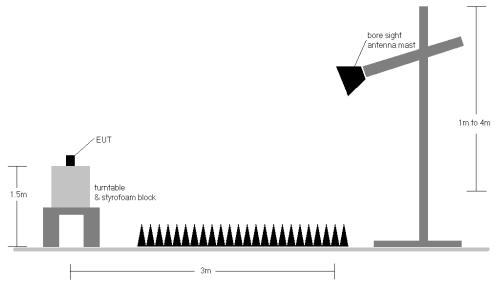


Figure 7-5. Radiated Test Setup >1GHz

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst-case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | | |
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Radiated Power (EIRP)

| Bandwidth | Mod. | Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Ant. Gain [dBi] | RB Size/Offset | Substitute Level [dBm] | EIRP [dBm] | EIRP [Watts] | EIRP Limit [dBm] | Margin [dB] |
|-----------|----------------------|--------------------|--------------------|---------------------------|----------------------------------|--------------------|-------------------|---------------------------|---------------|-----------------|---------------------|----------------|
| z | QPSK | 2506.0 | Н | 102 | 152 | 9.54 | 1/0 | 12.75 | 22.29 | 0.170 | 33.01 | -10.72 |
| MHz | QPSK | 2593.0 | Н | 116 | 150 | 9.46 | 1 / 50 | 13.37 | 22.83 | 0.192 | 33.01 | -10.18 |
| 20 1 | QPSK | 2680.0 | Н | 133 | 149 | 9.51 | 1/0 | 12.42 | 21.93 | 0.156 | 33.01 | -11.08 |
| 2 | 16-QAM | 2593.0 | Н | 116 | 150 | 9.46 | 1 / 50 | 12.56 | 22.02 | 0.159 | 33.01 | -10.99 |
| N | QPSK | 2503.5 | Н | 102 | 152 | 9.54 | 1 / 74 | 12.92 | 22.46 | 0.176 | 33.01 | -10.55 |
| MHz | QPSK | 2593.0 | Н | 116 | 150 | 9.46 | 1 / 74 | 13.63 | 23.09 | 0.204 | 33.01 | -9.92 |
| 15 1 | QPSK | 2682.5 | Η | 133 | 149 | 9.51 | 1 / 74 | 12.57 | 22.08 | 0.161 | 33.01 | -10.93 |
| - | 16-QAM | 2593.0 | Н | 116 | 150 | 9.46 | 1 / 74 | 12.80 | 22.26 | 0.168 | 33.01 | -10.75 |
| Z | QPSK | 2501.0 | Η | 102 | 152 | 9.54 | 1 / 49 | 13.17 | 22.71 | 0.187 | 33.01 | -10.30 |
| MHz | QPSK | 2593.0 | Н | 116 | 150 | 9.46 | 1 / 49 | 13.80 | 23.26 | 0.212 | 33.01 | -9.75 |
| 101 | QPSK | 2685.0 | H | 133 | 149 | 9.51 | 1 / 49 | 12.60 | 22.11 | 0.163 | 33.01 | -10.90 |
| | 16-QAM | 2593.0 | Н | 116 | 150 | 9.46 | 1 / 49 | 12.93 | 22.39 | 0.173 | 33.01 | -10.62 |
| N | QPSK | 2498.5 | Н | 102 | 152 | 9.54 | 1/0 | 12.70 | 22.24 | 0.168 | 33.01 | -10.77 |
| 5 MHz | QPSK | 2593.0 | Н | 116 | 150 | 9.46 | 1/0 | 13.40 | 22.86 | 0.193 | 33.01 | -10.15 |
| 2 | QPSK | 2687.5 | Н | 133 | 149 | 9.51 | 1 / 12 | 12.01 | 21.52 | 0.142 | 33.01 | -11.49 |
| | 16-QAM | 2593.0 | Н | 116 | 150 | 9.46 | 1/0 | 12.35 | 21.81 | 0.152 | 33.01 | -11.20 |
| | QPSK (Opposite Pol.) | 2593.0 | V | 275 | 264 | 9.49 | 1 / 50 | 12.41 | 21.90 | 0.155 | 33.01 | -11.11 |
| 20 MHz | QPSK (Half Open) | 2593.0 | Н | 139 | 149 | 9.46 | 1 / 50 | 12.41 | 21.87 | 0.154 | 33.01 | -11.14 |
| | QPSK (WCP) | 2593.0 | Н | 143 | 145 | 9.46 | 1 / 50 | 12.01 | 21.47 | 0.140 | 33.01 | -11.54 |

Table 7-2. EIRP Data (LTE Band 41(PC3) – Ant B)

| Bandwidth | Mod. | Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Ant. Gain [dBi] | RB Size/Offset | Substitute Level [dBm] | EIRP [dBm] | EIRP [Watts] | EIRP Limit [dBm] | Margin [dB] |
|-----------|----------------------|--------------------|--------------------|---------------------------|----------------------------------|--------------------|-------------------|---------------------------|---------------|-----------------|---------------------|----------------|
| z | QPSK | 2506.0 | Н | 128 | 34 | 9.54 | 1 / 50 | 11.34 | 20.88 | 0.123 | 33.01 | -12.13 |
| MHz | QPSK | 2593.0 | Н | 114 | 348 | 9.46 | 1 / 50 | 11.27 | 20.73 | 0.118 | 33.01 | -12.28 |
| 20 N | QPSK | 2680.0 | Н | 102 | 347 | 9.51 | 1/0 | 11.13 | 20.64 | 0.116 | 33.01 | -12.37 |
| 2 | 16-QAM | 2506.0 | Н | 128 | 34 | 9.54 | 1 / 50 | 10.52 | 20.06 | 0.102 | 33.01 | -12.95 |
| N | QPSK | 2503.5 | Н | 128 | 34 | 9.54 | 1 / 37 | 11.31 | 20.86 | 0.122 | 33.01 | -12.15 |
| MHz | QPSK | 2593.0 | Н | 114 | 348 | 9.46 | 1 / 37 | 11.33 | 20.79 | 0.120 | 33.01 | -12.22 |
| 15 | QPSK | 2682.5 | Н | 102 | 347 | 9.51 | 1 / 37 | 11.26 | 20.77 | 0.120 | 33.01 | -12.24 |
| - | 16-QAM | 2503.5 | Н | 128 | 34 | 9.54 | 1 / 37 | 10.56 | 20.10 | 0.102 | 33.01 | -12.91 |
| N | QPSK | 2501.0 | Н | 128 | 34 | 9.54 | 1 / 49 | 11.45 | 21.00 | 0.126 | 33.01 | -12.01 |
| MHz | QPSK | 2593.0 | Н | 114 | 348 | 9.46 | 1 / 25 | 11.47 | 20.93 | 0.124 | 33.01 | -12.08 |
| 101 | QPSK | 2685.0 | Н | 102 | 347 | 9.51 | 1 / 0 | 11.20 | 20.71 | 0.118 | 33.01 | -12.30 |
| - | 16-QAM | 2501.0 | Н | 128 | 34 | 9.54 | 1 / 49 | 10.85 | 20.39 | 0.109 | 33.01 | -12.62 |
| N | QPSK | 2498.5 | Н | 128 | 34 | 9.54 | 1 / 12 | 11.58 | 21.12 | 0.129 | 33.01 | -11.89 |
| MHz | QPSK | 2593.0 | Н | 114 | 348 | 9.46 | 1 / 12 | 11.18 | 20.64 | 0.116 | 33.01 | -12.37 |
| 5 M | QPSK | 2687.5 | Н | 102 | 347 | 9.51 | 1 / 0 | 10.63 | 20.14 | 0.103 | 33.01 | -12.87 |
| | 16-QAM | 2498.5 | Н | 128 | 34 | 9.54 | 1 / 12 | 10.13 | 19.68 | 0.093 | 33.01 | -13.33 |
| | QPSK (Opposite Pol.) | 2506.0 | V | 280 | 24 | 9.50 | 1 / 0 | 9.94 | 19.44 | 0.088 | 33.01 | -13.57 |
| 20 MHz | QPSK (Half Open) | 2506.0 | Н | 164 | 6 | 9.54 | 1 / 50 | 10.08 | 19.62 | 0.092 | 33.01 | -13.39 |
| | QPSK (WCP) | 2506.0 | Н | 235 | 239 | 9.54 | 1 / 50 | 7.37 | 16.91 | 0.049 | 33.01 | -16.10 |

Table 7-3. EIRP Data (LTE Band 41(PC3) – Ant F)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 51 of 69 | | | | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Fage 51 01 09 | | | | | |
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V3.0 1/6/2022 V3



7.7 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using hybrid (biconical/log) antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26-2015 - Section 5.5.4

Test Settings

- 1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
- 2. VBW \geq 3 x RBW
- 3. Span = 1.5 times the OBW
- 4. No. of sweep points > 2 x span / RBW
- 5. Detector = RMS
- 6. Trace mode = Average (Max Hold for pulsed emissions)
- 7. The trace was allowed to stabilize

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|------------------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | Test Dates: EUT Type: | | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 52 of 69 | | |
| © 2022 ELEMENT V3.0 1/6/2022 | | | | | |



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

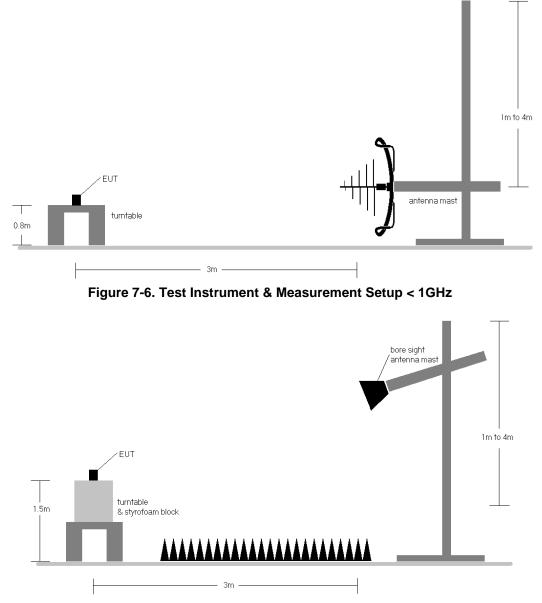


Figure 7-7. Test Instrument & Measurement Setup >1 GHz

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | |
|------------------------------|-----------------|----------------------------|---------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 52 of 60 | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 53 of 69 | |
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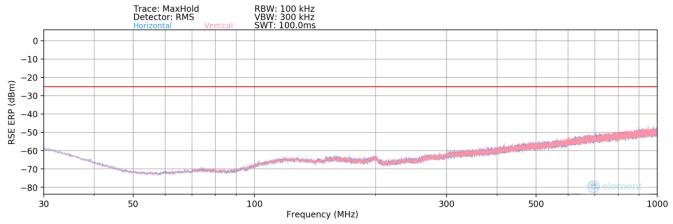
Test Notes

- 1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26-2015 Section 5.2.7:
 - a) $E(dB\mu V/m) = Measured amplitude level (dBm) + 107 + Cable Loss (dB) + Antenna Factor (dB/m) b) EIRP (dBm) = E(dB\mu V/m) + 20logD 104.8; where D is the measurement distance in meters.$
- 2) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst-case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 3) This unit was tested with its standard battery.
- 4) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 5) Emissions below 18GHz were measured at a 3-meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
- 6) The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 7) ULCA spurious emissions 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.

| FCC ID: A3LSMF936JPN | PART 27 MEASUREMENT REPORT | | Approved by: Technical Manager |
|----------------------|----------------------------|------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dago E4 of 60 |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 54 of 69 |
| © 2022 ELEMENT | | | V3.0 1/6/2022 |



LTE Band 41(PC3) - Ant B



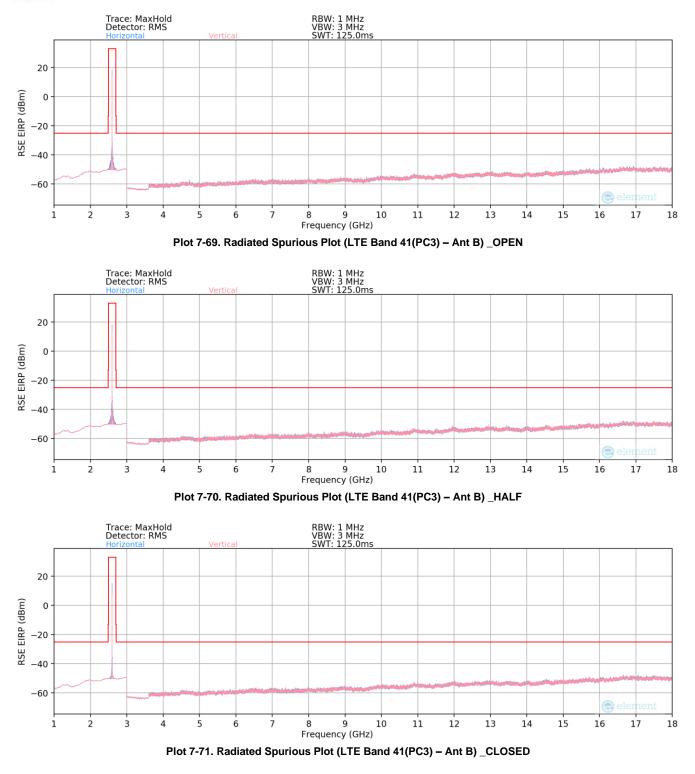


| Bandwidth (MHz): | 20 | | | | | | | | |
|------------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|---|----------------|----------------|
| Frequency (MHz): | | 2593.0 | | | | | | | |
| RB / Offset: | 1 / 50 | | | | | | | | |
| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | ERP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
| 735.32 | Н | - | - | -90.64 | 29.23 | 45.59 | -51.82 | -25.00 | -26.82 |
| 901.72 | Н | - | - | -90.94 | 31.24 | 47.30 | -50.11 | -25.00 | -25.11 |
| 918.44 | Н | - | - | -90.73 | 31.54 | 47.81 | -49.60 | -25.00 | -24.60 |

Table 7-4. Radiated Spurious Data (LTE Band 41(PC3) - Mid Channel - Ant B)

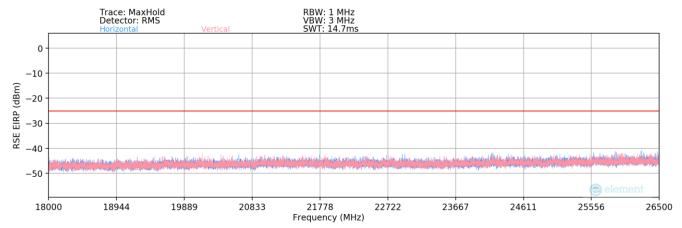
| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|-----------------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | Test Dates: EUT Type: | | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 55 of 69 | | |
| © 2022 ELEMENT V3.0 1/6/202 | | | | | |





| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|------------------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | Test Dates: EUT Type: | | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 56 of 69 | | |
| © 2022 ELEMENT V3.0 1/6/2022 | | | | | |





Plot 7-72. Radiated Spurious Plot (LTE Band 41(PC3) – Ant B)

| Bandwidth (MHz): | 20 |
|------------------|--------|
| Frequency (MHz): | 2506.0 |
| RB / Offset: | 1 / 50 |
| | |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 5012.00 | Н | 329 | 66 | -74.81 | 4.32 | 36.51 | -58.74 | -25.00 | -33.74 |
| 7518.00 | Н | 128 | 314 | -75.05 | 7.81 | 39.76 | -55.50 | -25.00 | -30.50 |
| 10024.00 | Н | - | - | -76.25 | 10.39 | 41.14 | -54.12 | -25.00 | -29.12 |
| 12530.00 | Н | - | - | -78.15 | 13.85 | 42.70 | -52.56 | -25.00 | -27.56 |
| 15036.00 | Н | - | - | -78.56 | 15.63 | 44.07 | -51.18 | -25.00 | -26.18 |
| 17542.00 | Н | - | - | -77.60 | 17.80 | 47.20 | -48.06 | -25.00 | -23.06 |

Table 7-5. Radiated Spurious Data (LTE Band 41(PC3) – Low Channel – Ant B)

| Bandwidth (MHz): | 20 |
|------------------|--------|
| Frequency (MHz): | 2593.0 |
| RB / Offset: | 1 / 50 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 5186.00 | Н | 332 | 56 | -74.66 | 5.18 | 37.52 | -57.74 | -25.00 | -32.74 |
| 7779.00 | Н | 242 | 79 | -74.62 | 7.47 | 39.85 | -55.41 | -25.00 | -30.41 |
| 10372.00 | Н | - | - | -77.47 | 11.18 | 40.71 | -54.54 | -25.00 | -29.54 |
| 12965.00 | Н | - | - | -77.47 | 14.27 | 43.80 | -51.45 | -25.00 | -26.45 |
| 15558.00 | Н | - | - | -77.41 | 16.00 | 45.59 | -49.67 | -25.00 | -24.67 |
| 18151.00 | Н | - | - | -52.29 | 1.74 | 56.46 | -48.34 | -25.00 | -23.34 |

Table 7-6. Radiated Spurious Data (LTE Band 41(PC3) – Mid Channel – Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|------------------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 57 of 60 | | |
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| Bandwidth (MHz): | 20 |
|------------------|--------|
| Frequency (MHz): | 2680.0 |
| RB / Offset: | 1 / 50 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 5360.00 | Н | 136 | 72 | -74.66 | 5.17 | 37.51 | -57.75 | -25.00 | -32.75 |
| 8040.00 | Н | - | - | -76.83 | 8.11 | 38.28 | -56.98 | -25.00 | -31.98 |
| 10720.00 | Н | - | - | -77.29 | 11.72 | 41.43 | -53.83 | -25.00 | -28.83 |
| 13400.00 | Н | - | - | -78.25 | 14.19 | 42.94 | -52.32 | -25.00 | -27.32 |
| 16080.00 | Н | - | - | -78.22 | 17.01 | 45.79 | -49.47 | -25.00 | -24.47 |
| 18760.00 | Н | - | - | -51.88 | 2.06 | 57.18 | -47.62 | -25.00 | -22.62 |

Table 7-7. Radiated Spurious Data (LTE Band 41(PC3) – High Channel – Ant B)

| Case: | w/ Wireless Charging Pad |
|------------------|--------------------------|
| Bandwidth (MHz): | 20 |
| Frequency (MHz): | 2593.0 |
| RB / Offset: | 1 / 50 |
| | |

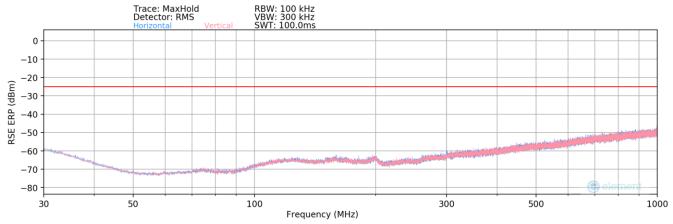
| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 5186.00 | Н | - | - | -75.90 | 5.18 | 36.28 | -58.98 | -25.00 | -33.98 |
| 7779.00 | Н | - | - | -76.04 | 7.47 | 38.43 | -56.83 | -25.00 | -31.83 |
| 10372.00 | Н | - | - | -77.18 | 11.18 | 41.00 | -54.25 | -25.00 | -29.25 |
| 12965.00 | Н | - | - | -78.09 | 14.27 | 43.18 | -52.07 | -25.00 | -27.07 |
| 15558.00 | Н | - | - | -77.52 | 16.00 | 45.48 | -49.78 | -25.00 | -24.78 |

Table 7-8. Radiated Spurious Data with WCP (LTE Band 41(PC3) – Ant B)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 50 of 60 | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 58 of 69 | | |
| © 2022 ELEMENT | • | | V3.0 1/6/2022 | | |



LTE Band 41(PC3) - Ant F





| Bandwidth (MHz): | | 20 | | | | | | |
|------------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|---|----------------|
| Frequency (MHz): | | 2593.0 | | | | | | |
| RB / Offset: | | 1 / 50 | | | | | | |
| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | ERP Spurious Emission Level [dBm] | Limit [dBm] |
| 188.66 | Н | - | - | -89.67 | 18.68 | 36.01 | -61.39 | -25.00 |
| 710.62 | Н | - | - | -88.21 | 28.86 | 47.65 | -49.75 | -25.00 |

Table 7-9. Radiated Spurious Data (LTE Band 41(PC3) – Mid Channel – Ant F)

Margin

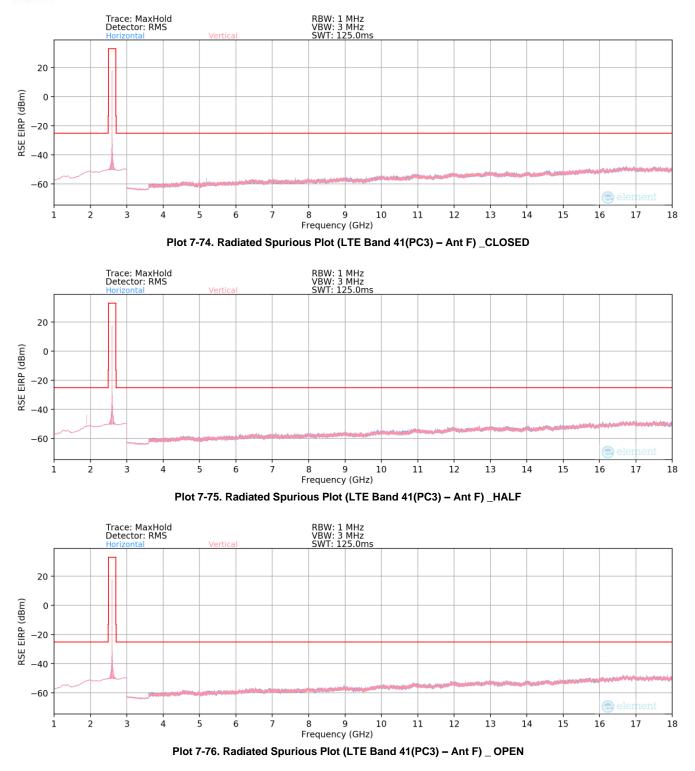
[dB]

-36.39

-24.75

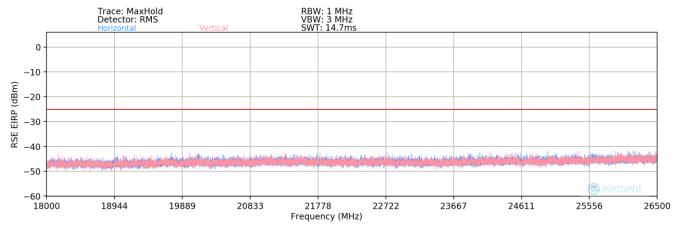
| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 59 of 69 | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 59 01 69 | | |
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| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
|----------------------|-----------------|----------------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 60 of 69 |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Fage 60 01 09 |
| © 2022 ELEMENT | · | · | V3.0 1/6/2022 |





Plot 7-77. Radiated Spurious Plot (LTE Band 41(PC3) - Ant F)

| Bandwidth (MHz): | 20 |
|------------------|--------|
| Frequency (MHz): | 2510.0 |
| RB / Offset: | 1 / 50 |
| | |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 5020.00 | Н | 314 | 306 | -69.04 | 4.51 | 42.47 | -52.78 | -25.00 | -27.78 |
| 7530.00 | Н | 164 | 25 | -75.46 | 7.87 | 39.41 | -55.85 | -25.00 | -30.85 |
| 10040.00 | Н | - | - | -77.48 | 10.41 | 39.93 | -55.33 | -25.00 | -30.33 |
| 12550.00 | Н | - | - | -78.22 | 14.06 | 42.84 | -52.42 | -25.00 | -27.42 |
| 15060.00 | Н | - | - | -78.14 | 15.50 | 44.36 | -50.90 | -25.00 | -25.90 |
| 17570.00 | H | - | - | -77.57 | 17.55 | 46.98 | -48.28 | -25.00 | -23.28 |

Table 7-10. Radiated Spurious Data (LTE Band 41(PC3) – Low Channel – Ant F)

| Bandwidth (MHz): | 20 |
|------------------|--------|
| Frequency (MHz): | 2593.0 |
| RB / Offset: | 1 / 50 |
| | |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 5186.00 | Н | 336 | 39 | -69.86 | 5.18 | 42.32 | -52.94 | -25.00 | -27.94 |
| 7779.00 | Н | 169 | 350 | -75.82 | 7.47 | 38.65 | -56.61 | -25.00 | -31.61 |
| 10372.00 | Н | - | - | -77.69 | 11.18 | 40.49 | -54.76 | -25.00 | -29.76 |
| 12965.00 | Н | - | - | -78.01 | 14.27 | 43.26 | -51.99 | -25.00 | -26.99 |
| 15558.00 | Н | - | - | -77.85 | 16.00 | 45.15 | -50.11 | -25.00 | -25.11 |
| 18151.00 | H | - | - | -52.54 | 1.74 | 56.21 | -48.59 | -25.00 | -23.59 |

Table 7-11. Radiated Spurious Data (LTE Band 41(PC3) – Mid Channel – Ant F)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 61 of 60 | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Page 61 of 69 | | |
| © 2022 ELEMENT | | | V3.0 1/6/2022 | | |



| Bandwidth (MHz): | 20 |
|------------------|--------|
| Frequency (MHz): | 2680.0 |
| RB / Offset: | 1 / 50 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 5360.00 | Н | 154 | 315 | -72.06 | 5.17 | 40.11 | -55.15 | -25.00 | -30.15 |
| 8040.00 | Н | - | - | -77.10 | 8.11 | 38.01 | -57.25 | -25.00 | -32.25 |
| 10720.00 | Н | - | - | -77.37 | 11.72 | 41.35 | -53.91 | -25.00 | -28.91 |
| 13400.00 | Н | - | - | -78.22 | 14.19 | 42.97 | -52.29 | -25.00 | -27.29 |
| 16080.00 | Н | - | - | -78.03 | 17.01 | 45.98 | -49.28 | -25.00 | -24.28 |

Table 7-12. Radiated Spurious Data (LTE Band 41(PC3) – High Channel – Ant F)

| Case: | w/ Wireless Charging Pad |
|------------------|--------------------------|
| Bandwidth (MHz): | 20 |
| Frequency (MHz): | 2510.0 |
| RB / Offset: | 1 / 50 |

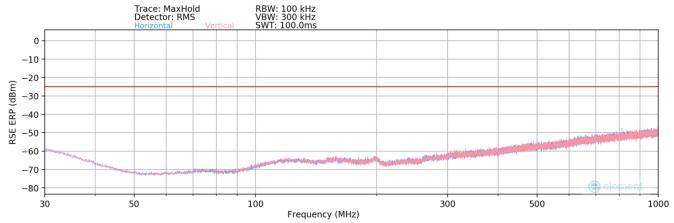
| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 5020.00 | Н | 187 | 340 | -73.12 | 4.51 | 38.39 | -56.86 | -25.00 | -31.86 |
| 7530.00 | Н | 238 | 327 | -76.13 | 7.87 | 38.74 | -56.52 | -25.00 | -31.52 |
| 10040.00 | Н | - | - | -77.05 | 10.41 | 40.36 | -54.90 | -25.00 | -29.90 |
| 12550.00 | Н | - | - | -78.46 | 14.06 | 42.60 | -52.66 | -25.00 | -27.66 |
| 15060.00 | Н | - | - | -78.48 | 15.50 | 44.02 | -51.24 | -25.00 | -26.24 |

Table 7-13. Radiated Spurious Data with WCP (LTE Band 41(PC3) – Ant F)

| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|-----------------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 62 of 69 | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | Portable Handset | Fage 02 01 09 | | |
| © 2022 ELEMENT V3.0 1/6/202 | | | | | |



ULCA - LTE B41(PC3) - Ant B





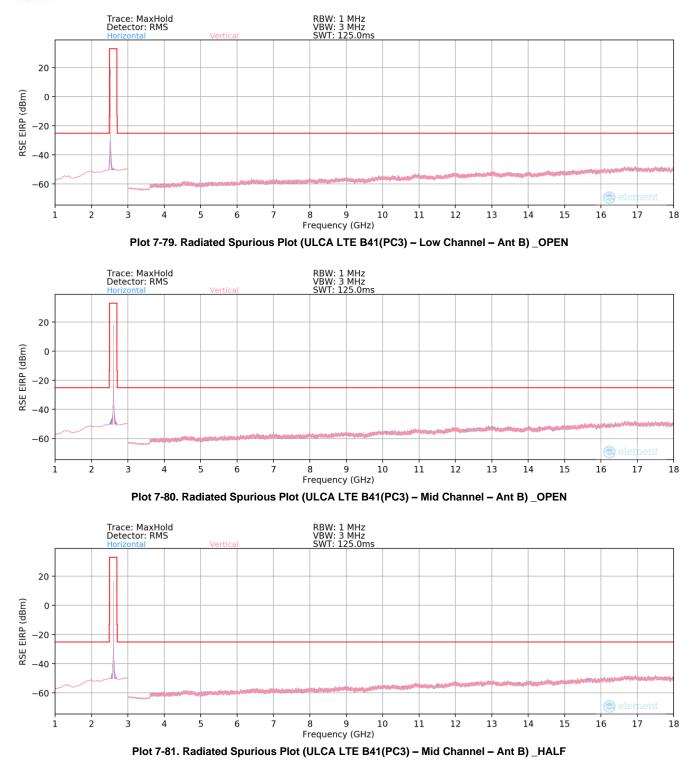
| PCC Bandwidth (MHz): | 20 |
|----------------------|--------|
| PCC Frequency (MHz): | 2593.0 |
| PCC RB / Offset: | 1 / 99 |
| SCC Bandwidth (MHz): | 20 |
| SCC Frequency (MHz): | 2612.8 |
| SCC RB / Offset: | 1/0 |
| | |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | ERP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|---|----------------|----------------|
| 336.76 | Н | - | - | -93.03 | 21.97 | 35.94 | -61.47 | -25.00 | -36.47 |
| 773.82 | Н | - | - | -91.37 | 29.78 | 45.41 | -52.00 | -25.00 | -27.00 |
| 806.50 | Н | - | - | -90.56 | 29.85 | 46.29 | -51.12 | -25.00 | -26.12 |

Table 7-14. Radiated Spurious Data (ULCA LTE B41(PC3) – Mid Channel – Ant B)

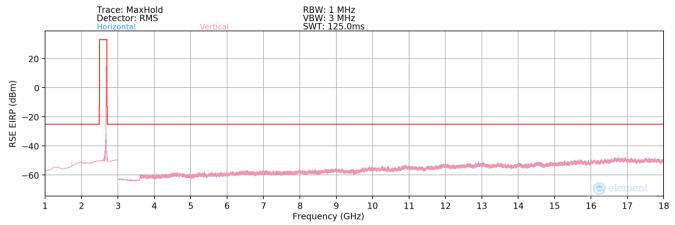
| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | | | |
|------------------------------|-----------------|-----------------------------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | | | |
| 1M2206010070-05.A3L | 6/15 - 7/6/2022 | 15 - 7/6/2022 Portable Handset | | | |
| © 2022 ELEMENT V3.0 1/6/2022 | | | | | |





| FCC ID: A3LSMF936JPN | | PART 27 MEASUREMENT REPORT | | | |
|----------------------------|-----------------|----------------------------|---------------|--|--|
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| PCC Bandwidth (MHz): | 20 |
|----------------------|--------|
| PCC Frequency (MHz): | 2506.0 |
| PCC RB / Offset: | 1 / 99 |
| SCC Bandwidth (MHz): | 20 |
| SCC Frequency (MHz): | 2525.8 |
| SCC RB / Offset: | 1/0 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 5031.80 | Н | 258 | 339 | -75.42 | 4.46 | 36.04 | -59.22 | -25.00 | -34.22 |
| 7547.70 | Н | 204 | 68 | -75.13 | 7.51 | 39.38 | -55.87 | -25.00 | -30.87 |
| 10063.60 | Н | - | - | -76.96 | 10.59 | 40.63 | -54.62 | -25.00 | -29.62 |
| 12579.50 | Н | - | - | -78.04 | 13.93 | 42.89 | -52.37 | -25.00 | -27.37 |
| 15095.40 | Н | - | - | -78.65 | 15.23 | 43.58 | -51.68 | -25.00 | -26.68 |

Table 7-15. Radiated Spurious Data (ULCA LTE B41(PC3) – Low Channel – Ant B)

| PCC Bandwidth (MHz): | 20 |
|----------------------|--------|
| PCC Frequency (MHz): | 2593.0 |
| PCC RB / Offset: | 1 / 99 |
| SCC Bandwidth (MHz): | 20 |
| SCC Frequency (MHz): | 2612.8 |
| SCC RB / Offset: | 1/0 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 5205.80 | Н | 240 | 358 | -74.96 | 5.09 | 37.13 | -58.12 | -25.00 | -33.12 |
| 7808.70 | Н | 244 | 43 | -74.37 | 7.34 | 39.97 | -55.29 | -25.00 | -30.29 |
| 10411.60 | Н | - | - | -78.07 | 11.33 | 40.26 | -55.00 | -25.00 | -30.00 |
| 13014.50 | Н | - | - | -77.92 | 14.32 | 43.40 | -51.86 | -25.00 | -26.86 |
| 15617.40 | Н | - | - | -77.96 | 15.84 | 44.88 | -50.38 | -25.00 | -25.38 |
| 18220.30 | Н | - | - | -50.94 | 1.59 | 57.64 | -47.16 | -25.00 | -22.16 |

Table 7-16. Radiated Spurious Data (ULCA LTE B41(PC3) – Mid Channel – Ant B)

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| PCC Bandwidth (MHz): | 20 |
|----------------------|--------|
| PCC Frequency (MHz): | 2680.0 |
| PCC RB / Offset: | 1/0 |
| SCC Bandwidth (MHz): | 20 |
| SCC Frequency (MHz): | 2660.2 |
| SCC RB / Offset: | 1 / 99 |
| | |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 5340.20 | Н | 233 | 356 | -73.96 | 4.74 | 37.78 | -57.47 | -25.00 | -32.47 |
| 8010.30 | Н | 185 | 77 | -75.51 | 7.73 | 39.22 | -56.04 | -25.00 | -31.04 |
| 10680.40 | Н | - | - | -78.03 | 11.75 | 40.72 | -54.54 | -25.00 | -29.54 |
| 13350.50 | Н | - | - | -77.83 | 13.80 | 42.97 | -52.28 | -25.00 | -27.28 |
| 16020.60 | H | - | - | -77.84 | 16.51 | 45.67 | -49.58 | -25.00 | -24.58 |

Table 7-17. Radiated Spurious Data (ULCA LTE B41(PC3) – High Channel – Ant B)

| Case: | w/ Wireless Charging Pad |
|----------------------|--------------------------|
| PCC Bandwidth (MHz): | 20 |
| PCC Frequency (MHz): | 2593.0 |
| PCC RB / Offset: | 1 / 99 |
| SCC Bandwidth (MHz): | 20 |
| SCC Frequency (MHz): | 2612.8 |
| SCC RB / Offset: | 1/0 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 5205.80 | Н | 167 | 344 | -75.30 | 5.09 | 36.79 | -58.46 | -25.00 | -33.46 |
| 7808.70 | Н | 291 | 33 | -76.59 | 7.34 | 37.75 | -57.51 | -25.00 | -32.51 |
| 10411.60 | Н | - | - | -77.93 | 11.33 | 40.40 | -54.86 | -25.00 | -29.86 |
| 13014.50 | Н | - | - | -77.90 | 14.32 | 43.42 | -51.84 | -25.00 | -26.84 |
| 15617.40 | Н | - | - | -78.11 | 15.84 | 44.73 | -50.53 | -25.00 | -25.53 |

Table 7-18. Radiated Spurious Data with WCP (ULCA LTE B41(PC3) – Ant B)

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7.8 Frequency Stability / Temperature Variation

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015. The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

For Part 27, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Procedure Used

ANSI C63.26-2015 – Section 5.6

Test Settings

- 1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
- 2. The equipment is turned on in a "standby" condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
- 3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

Test Setup

The EUT was connected via an RF cable to a spectrum analyzer with the EUT placed inside an environmental chamber.

Test Notes

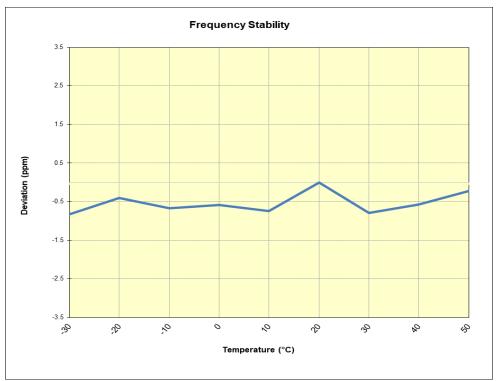
None

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| LTE Band 41 | | | | | | | |
|------------------|-------------|----------------|----------------|--------------------|---------------|--|--|
| | Operating F | requency (Hz): | 2,593,000 |),000 | | | |
| | Ref. | Voltage (VDC): | 4.38 | | | | |
| | | | | | | | |
| Voltage (%) | Power (VDC) | Temp (°C) | Frequency (Hz) | Freq. Dev. (Hz) | Deviation (%) | | |
| | | - 30 | 2,593,000,420 | -2,145 | -0.0000827 | | |
| | | - 20 | 2,593,001,515 | -1,050 | -0.0000405 | | |
| | | - 10 | 2,593,000,823 | -1,742 | -0.0000672 | | |
| | | 0 | 2,593,001,056 | -1,510 | -0.0000582 | | |
| 100 % | 4.38 | + 10 | 2,593,000,629 | -1,936 | -0.0000747 | | |
| | | + 20 (Ref) | 2,593,002,565 | 0 | 0.0000000 | | |
| | | + 30 | 2,593,000,520 | -2,046 | -0.0000789 | | |
| | | + 40 | 2,593,001,090 | -1,476 | -0.0000569 | | |
| | | + 50 | 2,593,001,982 | -584 | -0.0000225 | | |
| Battery Endpoint | 3.35 | + 20 | 2,593,001,867 | -698 | -0.0000269 | | |

Table 7-19. LTE Band 41 Frequency Stability Data



Plot 7-83. LTE Band 41 Frequency Stability Chart

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|----------------------|-----------------|----------------------------|---------------|
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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMF936JPN** complies with all the requirements of Part 27 of the FCC rules.

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