

ELEMENT WASHINGTON DC LLC

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PART 22 MEASUREMENT REPORT

Applicant Name:

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

Date of Testing: 6/15 - 7/4/2022 Test Report Issue Date: 7/7/2022 Test Site/Location: Element lab. Columbia, MD, USA Test Report Serial No.: 1M2206010070-02.A3L

FCC ID:

A3LSMF936JPN

Samsung Electronics Co., Ltd.

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

Applicant Name:

Certification SC-55C SCG16 Portable Handset PCS Licensed Transmitter Held to Ear (PCE) 22 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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| | | Ty Fraguency | | RP E | | RP | Emission |
|----------|-----------------|-----------------------------|-------------------|---------------------|-------------------|---------------------|------------|
| Mode | Modulation | Tx Frequency Range [MHz] | Max. Power [W] | Max. Power [dBm] | Max. Power [W] | Max. Power [dBm] | Designator |
| GSM/GPRS | GMSK | 824.2 - 848.8 | 0.484 | 26.85 | 0.794 | 29.00 | 244KGXW |
| EDGE | 8-PSK | 824.2 - 848.8 | 0.099 | 19.97 | 0.163 | 22.12 | 241KG7W |
| WCDMA | Spread Spectrum | 826.4 - 846.6 | 0.070 | 18.43 | 0.114 | 20.58 | 4M15F9W |

| | | | Ty Frequency | EF | RP | EII | RP | Emission |
|------------|-----------|------------|-----------------------------|-------------------|---------------------|-------------------|--|--|
| Mode | Bandwidth | Modulation | Tx Frequency Range [MHz] | Max. Power [W] | Max. Power [dBm] | Max. Power [W] | Max. Power [dBm] | Emission Designator 9M01G7D 9M01W7D 4M54G7D 4M54W7D 2M72G7D 2M71W7D 1M10G7D |
| | 10 MHz | QPSK | 829.0 - 844.0 | 0.051 | 17.07 | 0.083 | 19.22 | 9M01G7D |
| | | 16QAM | 829.0 - 844.0 | 0.043 | 16.32 | 0.070 | 18.47 | Designator 9M01G7D 9M01W7D 4M54G7D 4M54W7D 2M72G7D 2M71W7D |
| | 5 MHz | QPSK | 826.5 - 846.5 | 0.051 | 17.05 | 0.083 | 19.20 | 4M54G7D |
| LTE Band 5 | 5 MHZ | 16QAM | 826.5 - 846.5 | 0.043 | 16.34 | 0.071 | 18.49 | 4M54W7D |
| LTE Danu 5 | 3 MHz | QPSK | 825.5 - 847.5 | 0.051 | 17.04 | 0.083 | 19.19 | 2M72G7D |
| | 3 10172 | 16QAM | 825.5 - 847.5 | 0.042 | 16.27 | 0.069 | 18.42 | ver Designator 9M01G7D 9M01W7D 4M54G7D 4M54W7D 2M72G7D 2M71W7D 1M10G7D |
| | 1.4 MHz | QPSK | 824.7 - 848.3 | 0.050 | 17.00 | 0.082 | 19.15 | 1M10G7D |
| | | 16QAM | 824.7 - 848.3 | 0.042 | 16.26 | 0.069 | Max. Power Emiss Design [dBm] 9M010 19.22 9M010 18.47 9M010 18.49 4M540 18.49 4M540 19.19 2M720 18.42 2M710 19.15 1M100 | 1M11W7D |

EUT Overview

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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 22.

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.

This device supports two additional antenna configurations for GSM, WCDMA, LTE Low bands [AFS operation]: one is with two antennas transmitting from one feed, and one is with a singular antenna transmitting. Both 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:

Pd [dBm] = Pg [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

GSM Emission Designator

Emission Designator = 250KGXW

 $\begin{array}{l} \text{GSM BW} = 250 \text{ kHz} \\ \text{G} = \text{Phase Modulation} \\ \text{X} = \text{Cases not otherwise covered} \\ \text{W} = \text{Combination (Audio/Data)} \end{array}$

EDGE Emission Designator

Emission Designator = 250KG7W EDGE BW = 250 kHz G = Phase Modulation 7 = Quantized/Digital Info W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M16F9W WCDMA BW = 4.16 MHz E = Frequency Modulation

F = Frequency Modulation 9 = Composite Digital Info W = Combination (Audio/Data)

QPSK Modulation

Emission Designator = 8M62G7D LTE BW = 8.62 MHz

G = Phase Modulation 7 = Quantized/Digital Info D = Data transmission, telemetry, telecommand

QAM Modulation

Emission Designator = 8M45W7D

LTE BW = 8.45 MHz W = Amplitude/Angle Modulated 7 = Quantized/Digital Info D = Data transmission, telemetry, telecommand

Spurious Radiated Emission

Example: Spurious emission at 3700.40 MHz

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

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7.0 TEST RESULTS

7.1 Summary

| Company Name: | Samsung Electronics Co., Ltd. |
|---------------------|--|
| FCC ID: | A3LSMF936JPN |
| FCC Classification: | PCS Licensed Transmitter Held to Ear (PCE) |
| Mode(s): | <u>GSM/GPRS/WCDMA/LTE</u> |

| 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 |
| G | Occupied Bandwidth | 2.1049(h) | N/A | PASS | Section 7.3 |
| CONDUCTED | Conducted Band Edge / Spurious Emissions | 2.1051, 22.917(a) | ≥ 43 + 10 log (P[Watts]) dB of attenuation below transmitter power | PASS | Sections 7.4, 7.5 |
| CON | Peak-to-Average Ratio | N/A | ≤ 13 dB | PASS | Section 7.6 |
| | Frequency Stability | 2.1055, 22.355 | The carrier frequency of the transmitter must be maintained within the 2.5ppm | PASS | Section 7.9 |
| RADIATED | Effective Radiated Power / Equivalent Isotropic Radiated Power | 22.913(a)(5) | < 7 Watts max. ERP | PASS | Section 7.7 |
| RADI | Radiated Spurious Emissions | 2.1053, 22.917(a) | > 43 + 10 log10 (P[Watts]) for all out-of-band emissions | PASS | Section 7.8 |

Table 7-1. Summary of Test Results

Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.
- All conducted emissions measurements are performed with automated test software to capture the corresponding plots necessary to show compliance. The measurement software utilized is EMC Software Tool v1.1.

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7.2 Occupied Bandwidth

Test Overview

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. All modes of operation were investigated and the worst case configuration results are reported in this section.

Test Procedure Used

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 7-1. Test Instrument & Measurement Setup

Test Notes

None.

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LTE Band 5

| Keysight Spectrum Analyzer - Occupied E | 3W | | | | |
|--|-------------------------------|---|----------------------------------|--|-------------------------------|
| IXI RL RF 50Ω DC | CORREC | SENSE:INT Center Freq: 836.500000 MH Trig: Free Run Avg #Atten: 36 dB | ALIGN AUTO z Hold: 100/100 | 08:26:21 PM Jun 15, 2022 Radio Std: None Radio Device: BTS | Trace/Detector |
| 10 dB/div Ref 40.00 dB | m | | | | |
| 30.0 20.0 | | Mall Marganese Security Marganese Security | <u>م</u> | | Clear Write |
| 10.0 0.00 -10.0 -20.0 | MIN | | howala | | Average |
| -30.0 | | | | him many | Max Hold |
| Center 836.50 MHz Res BW 240 kHz | | #VBW 750 kHz | | Span 25.00 MHz Sweep 1 ms | Min Hold |
| Occupied Bandwid 9 Transmit Freg Error | ith .0137 MH -15.474 kl | | | 7 dBm 9.00 % | Detector Peak▶ Auto Man |
| x dB Bandwidth | 10.14 MI | | | .00 dB | |
| MSG | | | STATU | S | |

Plot 7-1. Occupied Bandwidth Plot (LTE Band 5 - 10MHz QPSK - Full RB)



Plot 7-2. Occupied Bandwidth Plot (LTE Band 5 - 10MHz 16-QAM - Full RB)

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| Test Report S/N: | Test Dates: | EUT Type: | Page 12 of 71 |
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Plot 7-3. Occupied Bandwidth Plot (LTE Band 5 - 5MHz QPSK - Full RB)



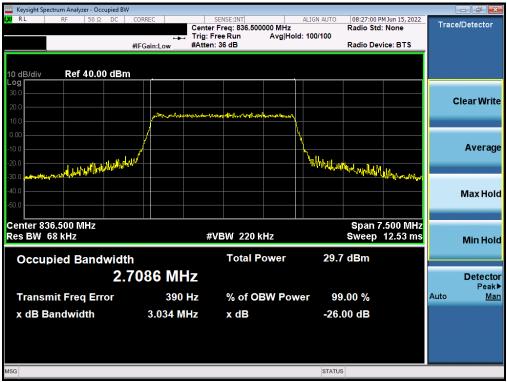
Plot 7-4. Occupied Bandwidth Plot (LTE Band 5 - 5MHz 16-QAM - Full RB)

| FCC ID: A3LSMF936JPN | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
|----------------------|----------------------------|------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 12 of 71 |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 13 of 71 |
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Plot 7-5. Occupied Bandwidth Plot (LTE Band 5 - 3MHz QPSK - Full RB)



Plot 7-6. Occupied Bandwidth Plot (LTE Band 5 - 3MHz 16-QAM - Full RB)

| FCC ID: A3LSMF936JPN | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager | | |
|----------------------|----------------------------|-------------------------------|-----------------------------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 14 of 71 | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | 5 - 7/4/2022 Portable Handset | | | |
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Plot 7-8. Occupied Bandwidth Plot (LTE Band 5 - 1.4MHz 16-QAM - Full RB)

| FCC ID: A3LSMF936JPN | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
|----------------------|----------------------------|------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 15 of 71 |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 15 of 71 |
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GPRS Cell



Plot 7-9. Occupied Bandwidth Plot (GPRS, Ch. 190)



Plot 7-10. Occupied Bandwidth Plot (EDGE, Ch. 190)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | |
|----------------------|-----------------|----------------------------|---------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 16 of 71 |
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| © 2022 ELEMENT | • | | V3.0 1/4/2022 |



WCDMA Cell

| 🔤 Keysight Spectrum Analyze | | | | | | | | | | | | | |
|-----------------------------|--------|-------|---------|-------|----------------|------------------------|--------|----------------|------------|-------------------------|---------------|------|------------------|
| LXI RL RF | 50 Ω D | 00 00 | RREC | | | NSE:INT reg: 836.60 | 0000 N | | ALIGN AUTO | 12:06:22 / Radio Std | MJun 16, 2022 | Trac | e/Detector |
| | | | | ÷ | Trig: Fre | e Run | | | 100/100 | | | | |
| | | #11 | Gain:Lo | w | #Atten: 3 | l6 dB | | | | Radio Dev | /ice: BTS | | |
| | | | | | | | | | | | | | |
| | 0.00 c | dBm | | | | | | | | | | | |
| Log 30.0 | | | | | | | | | | | | | |
| 20.0 | | | | | | | | | | | | | Clear Write |
| 10.0 | | | | son a | ᠾᢦᡅᢝᡭᡷᢪᡟ᠋᠕ᡗ᠂ᢦᢦ | - marine | when h | | | | | | |
| 0.00 | | | (| | | | | ς | | | | | |
| -10.0 | | | | | | | | | | | | | Average |
| -20.0 | | | كمر | | | | | - ¹ | | | | | |
| ~ ~ ~ | monor | ~~~~ | 1 W | | | | | | herend | my m | | | |
| -30.0 | | | | | | | | | | | moren and | | |
| -50.0 | | | | | | | | | | | a headaana | | Max Hold |
| -30.0 | | | | | | | | | | | | | |
| Center 836.600 MI | z | | | | | | | | | | 5.00 MHz | | |
| Res BW 150 kHz | | | | | #VE | 3W 910 | кНz | | | SW | eep 1 ms | | Min Hold |
| Occupied Ba | ndw | idth | | | | Total I | owe | r | 30.2 | 2 dBm | | | |
| Occupied Ba | | | 40 | | | | | | | | | | |
| | | 4.15 | 018 | MIH | IZ | | | | | | | | Detector Peak |
| Transmit Freq | Error | r | 6.4 | 71 kl | Hz | % of O | BW | Powe | er 99 | 0.00 % | | Auto | Mar |
| x dB Bandwidt | | | 4 77 | 79 MI | H7 | x dB | | | -26 | 00 dB | | | |
| | | | | | 12 | AUD | | | -20. | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| MSG | | | | | | | | | STATU | - | | | |
| Wod | | | | | | | | | STATUS | | | | |

Plot 7-11. Occupied Bandwidth Plot (WCDMA, Ch. 4183)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | Approved by: Technical Manager |
|----------------------|-----------------|----------------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | |
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7.3 Spurious and Harmonic Emissions at Antenna Terminal

Test Overview

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

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

Test Procedure Used

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 7-2. Test Instrument & Measurement Setup

Test Notes

1. Per Part 22, compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth 100 kHz or greater for measurements below 1GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

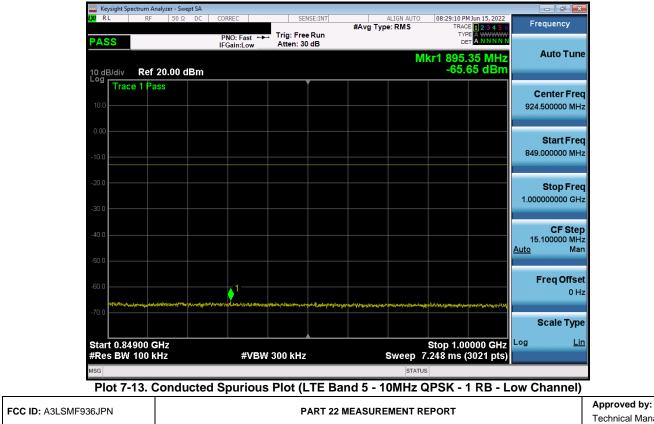
| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | Approved by: Technical Manager |
|----------------------|-----------------|----------------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | Dates: EUT Type: | |
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LTE Band 5

| | ectrum Analy | | | | | | | | | | | | |
|----------------------|--------------|-----------------|--------------------|---------|--------------|-------------------------------|--|----------|------------|-------------------|-------------------|------------|--------------------|
| L <mark>XI</mark> RL | RF | 50 Ω | DC | CORREC | | SE | NSE:INT | #Avg Typ | ALIGN AUTO | TRAC | M Jun 15, 2022 | Fr | equency |
| PASS | | | | PNO: Fa | ast ↔ ∟ow | Trig: Fre Atten: 30 | | • • • | | TYI Di | | | |
| 10 dB/div Log | Ref 20 |).00 dE | Зm | | | | | | Μ | kr1 823. -62.7 | .00 MHz 80 dBm | | Auto Tune |
| Trac | e 1 Pass | | | | | | Ĭ | | | | | (| Center Freq |
| 10.0 | | | | | | | | | | | | 426 | 5.500000 MHz |
| 0.00 | | | | | | | | | | | | | |
| 49.9 | | | | | | | | | | | | 30 | Start Freq |
| -10.0 | | | | | | | | | | | | | |
| -20.0 | | | | | | | | | | | | | Stop Freq |
| -30.0 | | | | | | | | | | | | 823 | 8.000000 MHz |
| | | | | | | | | | | | | | CF Step |
| -40.0 | | | | | | | | | | | | 79 Auto | .300000 MHz Mar |
| -50.0 | | | | | | | | | | | | | |
| -60.0 | | | | | | | | | | | 1 | | Freq Offset |
| | | Marginal States | at a disabata dari | | | an she where a new literature | | | | | | | 0 Hz |
| -70.0 | | | الدرو فرونية بلار | | 1 | تمانا أألد وانقتا أتحداد | 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 19 | | | | | | Scale Type |
| Start 30.0 | MHz | | | | | | | | | Stop 8 | 23.0 MHz | Log | Lin |
| #Res BW | | z | | ; | #VBW | 300 kHz | | 8 | weep 3 | 3.06 ms (1 | 5861 pts) | | |
| MSG | | | | | | | | | STATU | s | | | |

Plot 7-12. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Low Channel)

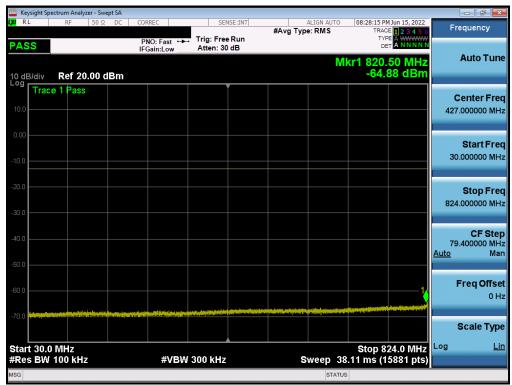


| | | | Technical Manager |
|---------------------|-----------------|------------------|-------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 19 of 71 |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Fage 19 01 / 1 |
| © 2022 ELEMENT | | | V3.0 1/4/2022 |



| weysight Spectrum Analyzer - Swept SA | | | | |
|---|----------------------------|--------------|--|--|
| LXI RL RF 50 Ω DC | PNO: Fast +>+ Trig: Free I | #Avg Type: R | TYPE A WANAAAAA | Frequency |
| PASS 10 dB/div Ref 0.00 dBm | IFGain:Low #Atten: 26 | | Mkr1 1.658 0 GHz -45.765 dBm | Auto Tune |
| -10.0 Trace 1 Pass | | | | Center Freq 5.500000000 GHz |
| -20.0 | | | | Start Freq 1.000000000 GHz |
| -40.0 | | | | Stop Freq 10.000000000 GHz |
| -60.0 | | | | CF Step 900.000000 MHz <u>Auto</u> Man |
| -80.0 | | | | Freq Offset 0 Hz |
| Start 1.000 GHz #Res BW 1.0 MHz | #VBW 3.0 MHz | Swe | Stop 10.000 GHz ep 15.60 ms (18001 pts) | Scale Type |
| MSG | | | STATUS | |

Plot 7-14. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Low Channel)



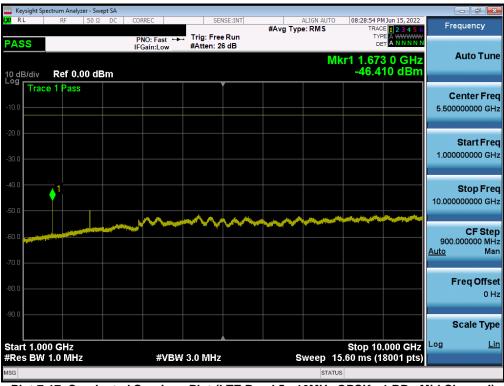
Plot 7-15. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Mid Channel)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | Approved by: Technical Manager | |
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| Test Report S/N: | Test Dates: | EUT Type: | Dage 20 of 71 | |
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| | | ctrum Analy | | | | | | | | | | | | |
|----------------|-------|------------------|---------------------|--|------|----------------------|---------------------|----------|----------------------------------|--|------------------------------|---------------------------------|-------------|----------------------------|
| LXI RI | L | RF | 50 Ω | DC | CORR | EC | S | ENSE:INT | #Avg Typ | ALIGN AUTO | | 1 Jun 15, 2022 E 1 2 3 4 5 6 | Fre | quency |
| PAS | S | | | | |): Fast ↔ iin:Low | Trig: Fr Atten: | | | М | TYF DE kr1 849. | | , | Auto Tune |
| 10 dE Log | | Ref 20 | | Bm | | | | | | | -65. | 72 dBm | | |
| 10.0 | Trace | e 1 Pass | | | | | | | | | | | | enter Freq 500000 MHz |
| 0.00 | | | | | | | | | | | | | | Start Freq |
| -20.0 | | | | | | | | | | | | | | Stop Freq |
| -30.0 -40.0 | | | | | | | | | | | | | | CF Step |
| -50.0 | | | | | | | | | | | | | <u>Auto</u> | Man |
| -60.0 | 1- | | leylard, gösigetert | يە بەر يەر بەر يەر بەر يەر يەر يەر يەر يەر يەر يەر يەر يەر ي | | eren antal direct | and a live a signal | | ىلىرىمىيى ئۇرۇر ھۆكۈرىمىيى تىرىد | and the second | neysandar staden stangeredyt | lationartessalesanessigning | F | r eq Offset 0 Hz |
| -70.0 | | | | | | | | | | | | | | cale Type |
| #Res | | 900 GH 100 kH | | | | #VB۱ | № 300 kH | z | | | 7.248 ms (| 0000 GHz 3021 pts) | Log | Lin |
| MSG | | | | | | | | | | STATU | S | | | |

Plot 7-16. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Mid Channel)



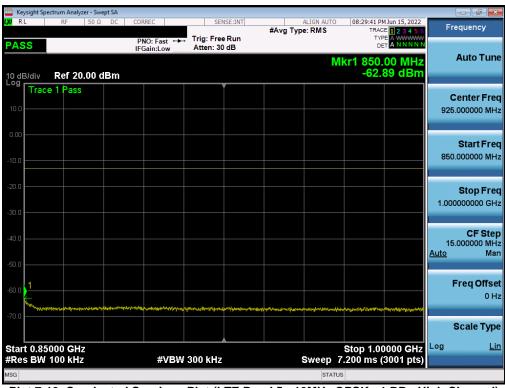
Plot 7-17. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Mid Channel)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | Approved by: Technical Manager |
|----------------------|-----------------|----------------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | Dates: EUT Type: | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 21 of 71 |
| © 2022 ELEMENT | | | V3.0 1/4/2022 |



| | ctrum Analyzer - S | | | | | | |
|-----------------------|--------------------|-----|---------------------------|---|---|--|----------------------------------|
| LXI RL | RF 50 | ΩDC | CORREC | SENSE:INT | ALIGN AL #Avg Type: RMS | | Frequency |
| PASS | | | PNO: Fast ↔ IFGain:Low | Trig: Free Run Atten: 30 dB | | TYPE A WWWW DET A NNNN | |
| 10 dB/div Log | Ref 20.00 | dBm | | | | Mkr1 821.65 MHz -64.946 dBm | Auto Tune |
| Trace | e 1 Pass | | | Ĭ | | | Center Freq |
| 10.0 | | | | | | | 427.000000 MHz |
| 0.00 | | | | | | | Start Freq |
| -10.0 | | | | | | | 30.000000 MHz |
| -20.0 | | | | | | | Stop Freq |
| -30.0 | | | | | | | 824.000000 MHz |
| (0.0) | | | | | | | CF Step |
| -40.0 | | | | | | | 79.400000 MHz <u>Auto</u> Man |
| -50.0 | | | | | | | |
| -60.0 | | | | | | 1 | Freq Offset 0 Hz |
| -70.0 | | | | | per per anticipation de la company de la La company de la company de | | Casla Trma |
| | | | | | | | Scale Type |
| Start 30.0 #Res BW | | | #VBV | / 300 kHz | Sweep | Stop 824.0 MHz 38.11 ms (15881 pts) | |
| MSG | | | | | | TATUS | |

Plot 7-18. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - High Channel)



Plot 7-19. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - High Channel)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | Approved by: Technical Manager |
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| | ectrum Analyzer - S | | | | | | | | | | × |
|------------|---------------------|------|-------------|-------------------------|---------|----------|------------|------------|-----------------------------|-------------|---------|
| LXIRL | RF 50 | Ω DC | CORREC | SEI | NSE:INT | #Avg Typ | ALIGN AUTO | | MJun 15, 2022 | Frequency | у |
| PASS | | | PNO: Fast 🔸 | Trig: Free #Atten: 2 | | | | TY | PE A WWWWW T A N N N N N | | |
| 1,400 | | | IFGain:Low | #Atten: 2 | 0 ab | | 8/1 | | | Auto 1 | Tune |
| 10 dB/div | Ref 0.00 (| Rm | | | | | IVIP | -45.7 | 8 0 GHz 37 dBm | | |
| Log | e 1 Pass | | | , | | | | | | | |
| | | | | | | | | | | Center | |
| -10.0 | | | | | | | | | | 5.50000000 | GHz |
| -20.0 | | | | | | | | | | | |
| -20.0 | | | | | | | | | | Start | Freq |
| -30.0 | | | | | | | | | | 1.00000000 |) GHz |
| | | | | | | | | | | | |
| -40.0 | 1 | | | | | | | | | Stop | Frea |
| | Y | | | | | | | | | 10.00000000 | |
| -50.0 | | | | | | | | | | | |
| ~~~~ | | | | | | | | | | CF | Step |
| -60.0 | | | | | | | | | | 900.00000 |) MHz |
| -70.0 | | | | | | | | | | <u>Auto</u> | Man |
| | | | | | | | | | | F | |
| -80.0 | | | | | | | | | | Freq O | 0 Hz |
| | | | | | | | | | | | 0 112 |
| -90.0 | | | | | | | | | | O colo 1 | Turne I |
| | | | | | | | | | | Scale 1 | Type |
| Start 1.00 | | | | | | | | Stop 10 | .000 GHz | Log | Lin |
| #Res BW | 1.0 MHz | | #VBW | 3.0 MHz | | s | weep 15 | i.60 ms (1 | 8001 pts) | | |
| MSG | | | | | | | STATUS | 5 | | | |

Plot 7-20. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - High Channel)

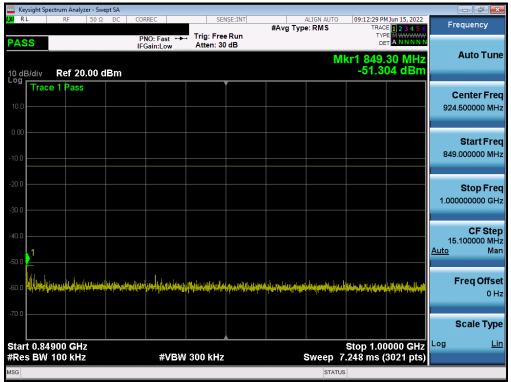
| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | Approved by: Technical Manager | | | |
|----------------------|-----------------|----------------------------|-----------------------------------|--|--|--|
| Test Report S/N: | Test Dates: | Fest Dates: EUT Type: | | | | |
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GSM/GPRS Cell

| | | rum Analyzei | r - Swep | et SA | | | | | | | | | | |
|----------------------|-------------------------------------|------------------------------------|----------------------------|-------------------|---|-----|-------------------------------|--|--|--|-------------------|--------------------------|-------------------|--------------------------------|
| <mark>l,XI</mark> RL | | RF | 50 Ω | DC C | ORREC | | SEI | NSE:INT | #Avg Typ | ALIGN AUTO | | MJun 16, 2022 | F | requency |
| PAS | S | | | | PNO: Fa FGain:Lo | | Trig: Free #Atten: 3 | | #rtvg i yp | e. 11113 | TYI DI | | | |
| 10 dB | /div | Ref 20.0 | 00 di | 3m | | | | | | MI | (r1 822. -35.2 | 75 MHz 68 dBm | | Auto Tune |
| Log 10.0 - | Trace | 1 Pass | | | | | | | | | | | | Center Freq 5.500000 MHz |
| 0.00 - -10.0 - | | | | | | | | | | | | | 30 | Start Freq 0.000000 MHz |
| -20.0 - -30.0 - | | | | | | | | | | | | 1 | 823 | Stop Freq 3.000000 MHz |
| -40.0 - | | | | | | | | | | | | | 79 <u>Auto</u> | CF Step 9.300000 MHz Man |
| -60.0 | lag betal benege Monostraction (| eljin nandelstand referentingen | Hyylagon () Dal fewa (* | Y LA DIAN DAN DAN | We <mark>ylindanı</mark> ed. olubolu | | a laga sagari da gara da Para | Algen Hill Sport And Olympics at which is | na (Mintan Yerle) yana A na ang kanang kana A na ang kanang | a y fange Kang a Kang da yang da ya Ang mang sang sang sang sang sang sang sang s | | Terresting Constructions | | Freq Offset 0 Hz |
| -70.0 | : 30.0 | ٩Hz | | | | | | | | | Stop 8 | 23.0 MHz | Log | Scale Type <u>Lin</u> |
| | | 00 kHz | | | # | VBW | 300 kHz | | S | weep 38 | .06 ms (1 | 5861 pts) | | |
| MSG | | | | | | | | | | STATUS | | | | |

Plot 7-21. Conducted Spurious Plot (GPRS Ch. 128)



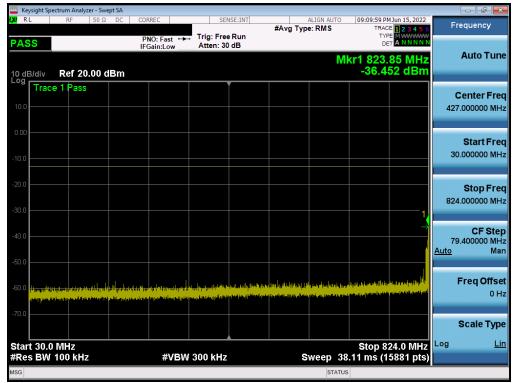
Plot 7-22. Conducted Spurious Plot (GPRS Ch. 128)

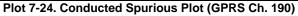
| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | Approved by: Technical Manager | | |
|----------------------|-----------------|----------------------------|-----------------------------------|--|--|
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| | ght Spectru | m Analyzer | - Swept | SA | | | | | | | | | | |
|--------|---|------------|---------|-----------------------|---------------------|----------------|-------------------------|--------|-------------------|---|--|----------------------------|--------------------|--------------------------|
| IXI RL | | RF 5 | 50 Ω | DC CO | ORREC | | SEI | SE:INT | #Avg Typ | ALIGN AUT | | AM Jun 16, 2022 | Fr | equency |
| PASS | ; | | | | PNO: Fa FGain:Lo | ist ↔ ow_ | Trig: Free #Atten: 3 | | #7 19 1 JF | | | | | Auto Tune |
| 10 dB/ | div R | ef 0.00 | dBn | n | | | | | | l | Mkr1 9.1 -32. | 89 5 GHz 994 dBm | | Auto Tune |
| Log | Trace 1 | Pass | | | | | | | | | | | | Center Fred |
| -20.0 | | | | | | | | | | | | | 5.50 | 000000 GH2 |
| -30.0 | | | | | | | | | | | | <u>1</u> | 1.00 | Start Fred |
| -40.0 | | | | a land an hair a | | obride di jere | | | Anna att allanti | li yan kanadar Manadari yang kanadari yang kanadari yang kanadari kanadari kanadari kanadari kanadari kanadari | مر حدر رومی واللوں استاد و میں واللوں | Hall Strangerstrand Straft | | |
| -50.0 | and a line of the second s Second second s | | | and the second second | | | | | | | | | 10.00 | Stop Fred 0000000 GH: |
| -60.0 | | | | | | | | | | | | | | CF Step |
| -70.0 | | | | | | | | | | | | | 900 <u>Auto</u> | 0.000000 MH Mar |
| -80.0 | | | | | | | | | | | | | | Freq Offse |
| -90.0 | | | | | | | | | | | | | | 0 H |
| | | | | | | | | | | | | | | Scale Type |
| | 1.000 C BW 1.0 | | | | # | VBW | 3.0 MHz | | s | weep | Stop 1 15.60 ms | 0.000 GHz (18001 pts) | Log | Lir |
| MSG | | | | | | | | | | | ATUS | | | |

Plot 7-23. Conducted Spurious Plot (GPRS Ch. 128)



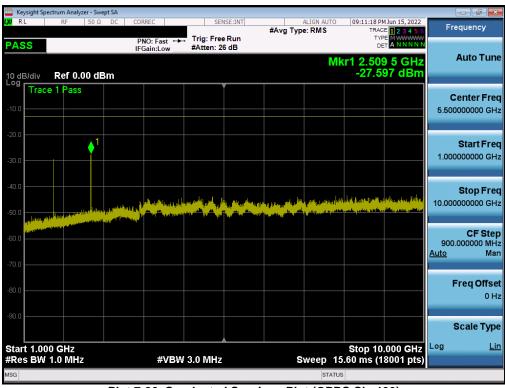


| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|--|
| Test Report S/N: | Test Dates: | st Dates: EUT Type: | | | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 25 of 71 | | | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 | | | |



| _ | | m Analyzer - Sw | | | | | | | | | | × |
|---------|-----------------|-----------------|-------------------|----------------------------|---------------------------|---------|----------|----------------|-------------------------|-------------------------|-------------------|---------|
| LXI RL | | RF 50 Ω | DC DC | CORREC | SEI | NSE:INT | #Avg Typ | ALIGN AUTO | | MJun 15, 2022 | Frequenc | У |
| PASS | | | | PNO: Fast ++ IFGain:Low | Trig: Free Atten: 30 | | | | TYF | | | |
| | | | | IFGaIn:Low | Atten. 30 | ub . | | M | kr1 849. | | Auto T | Tune |
| 10 dB/ | div R | ef 20.00 (| dBm | | | | | | -35. | 92 dBm | | |
| | Trace 1 | Pass | | |) | Í | | | | | Center | Erog |
| 10.0 | | | | | | | | | | | 924.500000 | |
| | | | | | | | | | | | 024.000000 | |
| 0.00 | | | | | | | | | | | | _ |
| | | | | | | | | | | | Start 849.00000 | |
| -10.0 | | | | | | | | | | | 849.00000 | WHZ |
| ~ ~ | | | | | | | | | | | | |
| -20.0 — | | | | | | | | | | | Stop | - |
| -30.0 | ı ——— | | | | | | | | | | 1.00000000 |) GHz |
| 2 | - | | | | | | | | | | | |
| -40.0 | \ | | | | | | | | | | CF : 15.100000 | Step |
| | 1 | | | | | | | | | | Auto | Man |
| -50.0 | | | | | | | | | | | | |
| | , ili | | والمتحاج والأراجة | والاطاراد وسلونه أعاقتها | بوالإدرام والبألية الدامه | | - | add the second | | an for the left and the | Freq O | ffset |
| -60.0 — | | | | | | | | | | | | 0 Hz |
| -70.0 | | | | | | | | | | | | |
| 10.0 | | | | | | | | | | | Scale | Гуре |
| L | | | | | | | | | | | Log | Lin |
| | 0.8490 BW 10 | | | #\/B\A | / 300 kHz | | | Sween 7 | Stop 1.00 7.248 ms (| JOOD GILZ | LUg | <u></u> |
| MSG | DW IV | 0 MH2 | | # 8 D 9 4 | -500 KHZ | | | STATU | | 502 r ptsj | | |
| | | | | | | | | 31/10 | <u> </u> | | | |

Plot 7-25. Conducted Spurious Plot (GPRS Ch. 190)



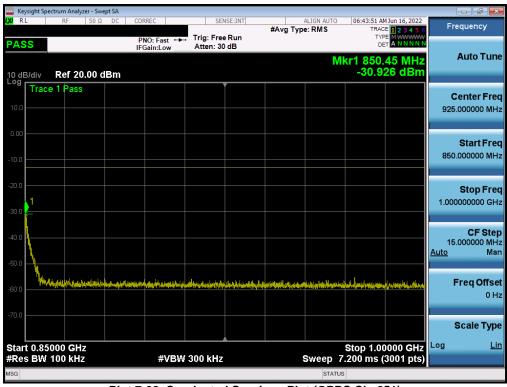
Plot 7-26. Conducted Spurious Plot (GPRS Ch. 190)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|--|
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| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 26 of 71 | | | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 | | | |



| | ight Spectrun | | | | | | | | | | | | |
|---------------|--|--|---------------------------|--|---------------------------|--|--------------------|----------|---|--|---|-------------|-------------------------|
| LXI RL | F | RF 50 | ΩDC | CORREC | | SEN | ISE:INT | #Avg Tvp | ALIGN AUTO e: RMS | | 1 Jun 15, 2022 E 1 2 3 4 5 6 | F | requency |
| PASS | 6 | | | PNO: Fas IFGain:Lo | | Trig: Free Atten: 30 | | | | TYP | | | Auto Turo |
| 10 dB/ Log | div Re | ef 20.00 | dBm | | | | | | М | kr1 823. -53.8 | 45 MHz 88 dBm | | Auto Tune |
| | Trace 1 | Pass | | | | , | | | | | | (| Center Freq |
| 10.0 | | | | | | | | | | | | | .000000 MHz |
| 0.00 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | Start Freq |
| -10.0 | | | | | | | | | | | | 30 | 0.000000 MHz |
| -20.0 | | | | | | | | | | | | | Stop Freq |
| | | | | | | | | | | | | 824 | 4.000000 MHz |
| -30.0 - | | | | | | | | | | | | | |
| -40.0 | | | | | | | | | | | | 79 | CF Step 9.400000 MHz |
| -50.0 | | | | | | | | | | | 1. | <u>Auto</u> | Man |
| | | | | | | | | | | | <u> </u> | | |
| -60.0 🚜 | بقودينان إفاريك | and a state of the | tin a start of the | llegister og byfet. Andere vælder som | و <mark>ليا ويا من</mark> | and the product of th | an the activity of | | Angen Ang | a de la companya de Esta companya de la c | ann e bran ann an | | Freq Offset 0 Hz |
| -70.0 | and the set of the set | | and the particular second | | | | | | | | | | |
| | | | | | | | | | | | | | Scale Type |
| | 30.0 MH | | | | | | | | | Stop 8 | 24.0 MHz | Log | Lin |
| | BW 100 |) kHz | | #\ | /BW : | 300 kHz | | S | | 3.11 ms (1 | 5881 pts) | | |
| MSG | | | | | | | | | STATUS | 3 | | | |

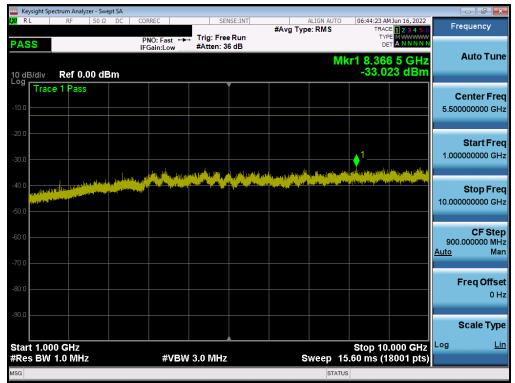
Plot 7-27. Conducted Spurious Plot (GPRS Ch. 251)



Plot 7-28. Conducted Spurious Plot (GPRS Ch. 251)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|--|
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Plot 7-29. Conducted Spurious Plot (GPRS Ch. 251)

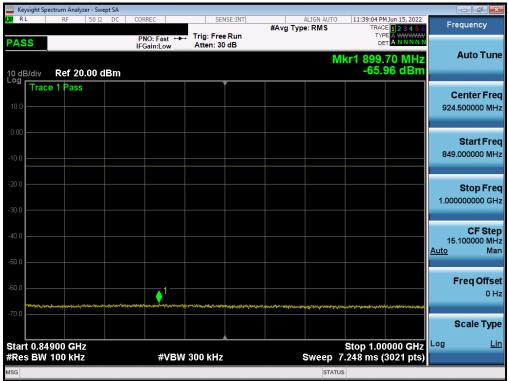
| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|--|--|
| Test Report S/N: | Test Dates: | Test Dates: EUT Type: | | | | | |
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| © 2022 ELEMENT | • | · | V3.0 1/4/2022 | | | | |



WCDMA Cell

| | trum Analyzer | | | | | | | | | _ | |
|---------------------------|--|----------------------|---|--|------------------------------------|---|----------------------|-----------------------|------------------|---------------------|-------------------------------|
| X/RL | RF | 50Ω DC | CORREC | 5 | SENSE:INT | #Avg Typ | ALIGN AUTO e: RMS | | I Jun 15, 2022 | Fred | uency |
| PASS | | | PNO: Fast IFGain:Lov | | | | | TYP DE | | | |
| 10 dB/div Log | Ref 20.0 | 00 dBm | | | | | Μ | kr1 822. -31.52 | 85 MHz 22 dBm | A | uto Tune |
| 10.0 Trace | 1 Pass | | | | | | | | | | nter Freq 00000 MHz |
| -10.0 | | | | | | | | | | | Start Fred 00000 MHz |
| -20.0 | | | | | | | | | 1 | | Stop Frec 00000 MH; |
| -40.0 | | | | | | | | | | 79.3 <u>Auto</u> | CF Step 00000 MH Mar |
| -60.0 | n sen af at the coloradistic stress | | rd ben verstere delse Bardinska | | ngen geste statistication of a set | li je konstante se postante | | | | Fr | e q Offse 0 H: |
| -70.0 | ية الله بي مشاهلة ال ي قد الارا عند بين ا | id - Hile address of | te ar er el notad en (LER) limbel de le | The second s | | | | | | S | cale Type |
| Start 30.0 I #Res BW 1 | | | #\ | /BW 300 kH | lz | s | weep 38 | Stop 82 3.06 ms (1 | 20.0 191112 | Log | Lin |
| MSG | | | | | | | STATUS | 6 | | | |

Plot 7-30. Conducted Spurious Plot (WCDMA Ch. 4132)



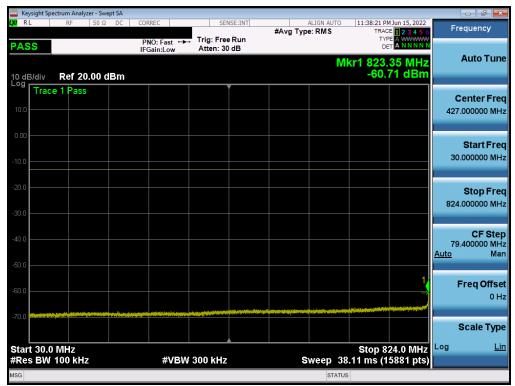
Plot 7-31. Conducted Spurious Plot (WCDMA Ch. 4132)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|----------------|--|--|
| Test Report S/N: | Test Dates: | st Dates: EUT Type: | | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 29 of 71 | | |
| © 2022 ELEMENT | | - | \/2.0.1/4/2022 | | |



| | ectrum Analyzer - | - Swept SA | | | | | | | | | |
|-----------------------|--|------------|----------------------------|-------------------------|---------|----------|------------|-----------------------|-----------------------|-------------|---------------------------|
| LXI RL | RF 5 | 0Ω DC | CORREC | SEI | NSE:INT | #Avg Typ | ALIGN AUTO | | MJun 15, 2022 | Fr | equency |
| PASS | | | PNO: Fast ++ IFGain:Low | Trig: Free #Atten: 2 | | #Avg Typ | e. RIVIS | TY | | | |
| 10 dB/div | Ref 0.00 | dBm | | | | | Μ | kr1 1.65 -50.6 | 4 5 GHz 14 dBm | | Auto Tune |
| Log Trac | e 1 Pass | | | | | | | | | c | enter Freq |
| -10.0 | | | | | | | | | | 5.500 | 000000 GHz |
| -20.0 | | | | | | | | | | | Otort From |
| -30.0 | | | | | | | | | | 1.000 | Start Fred 0000000 GHz |
| | | | | | | | | | | | |
| -40.0 | ▲1 | | | | | | | | | 10.000 | Stop Fred |
| -50.0 | ? | | | | - | | | | | | |
| -60.0 | and the second s | | | | | | | | | 900 | CF Step .000000 MH; |
| -70.0 | | | | | | | | | | <u>Auto</u> | Mar |
| | | | | | | | | | | F | Freq Offset |
| -80.0 | | | | | | | | | | | 0 Hz |
| -90.0 | | | | | | | | | | | Scale Type |
| | | | | | | | | <u></u> | | | Lin |
| Start 1.00 #Res BW | | | #VBW | / 3.0 MHz | | s | weep 1 | Stop 10 5.60 ms (1 | .000 GHz 8001 pts) | 209 | |
| MSG | | | | | | | STATU | JS | | | |

Plot 7-32. Conducted Spurious Plot (WCDMA Ch. 4132)



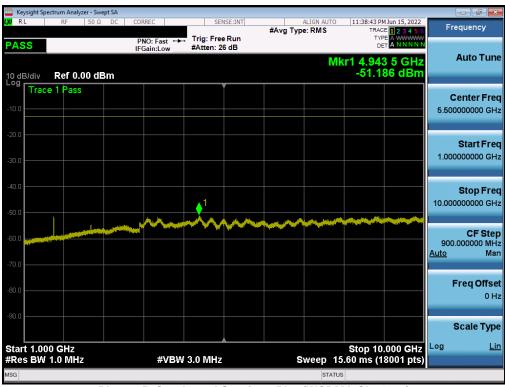


| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | | |
|----------------------|-----------------|--------------------------------|---------------|--|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 30 of 71 | | | | |
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| © 2022 ELEMENT | • | | V3.0 1/4/2022 | | | | |



| | ectrum Analyz | | | | | | | | | | | | |
|-----------------------|---------------------------|--------|----|-------------------------|--------|------------------------|------------------------|--------------------------------|------------|----------------------------------|--------------------------------|------------|---------------------------|
| LXI RL | RF | 50 Ω | DC | CORREC | | SEN | ISE:INT | #Avg Typ | ALIGN AUTO | | M Jun 15, 2022 | Fr | equency |
| PASS | | | | PNO: Fast IFGain:Lov | | rig: Free Atten: 30 | | | | TYI Di | | | |
| 10 dB/div Log | Ref 20 | .00 dB | sm | | | | | | Μ | lkr1 849. -60. | 00 MHz 56 dBm | | Auto Tune |
| Trac | e 1 Pass | | | | | | | | | | | c | enter Freq |
| 10.0 | | | | | | | | | | | | 924 | .500000 MHz |
| 0.00 | | | | | | | | | | | | | |
| 10.0 | | | | | | | | | | | | 849 | Start Freq .000000 MHz |
| -10.0 | | | | | | | | | | | | | |
| -20.0 | | | | | | | | | | | | | Stop Freq |
| -30.0 | | | | | | | | | | | | 1.000 | 0000000 GHz |
| | | | | | | | | | | | | | CF Step |
| -40.0 | | | | | | | | | | | | 15 Auto | .100000 MHz Man |
| -50.0 | | | | | | | | | | | | Auto | Wan |
| -60.0 | | | | | | | | | | | | I | =req Offset |
| -00.0 | No. 35 advant Arabitation | | | وور وروار المناطق | | mandaduration | . de Addesse of . b.b. | and the other star shifts also | | A da mate na Maria anda a da ana | fin and the same time the Wild | | 0 Hz |
| -70.0 | | | | | | | | | | | | | Scale Type |
| | | | | | | | | | | | | | Lin |
| Start 0.84 #Res BW | | | | #\ | /BW 30 | 00 kHz | | | Sweep | Stop 1.0 7.248 ms (| 0000 GHz (3021 pts) | | |
| MSG | | | | | | | | | STATU | | | | |

Plot 7-34. Conducted Spurious Plot (WCDMA Ch. 4183)



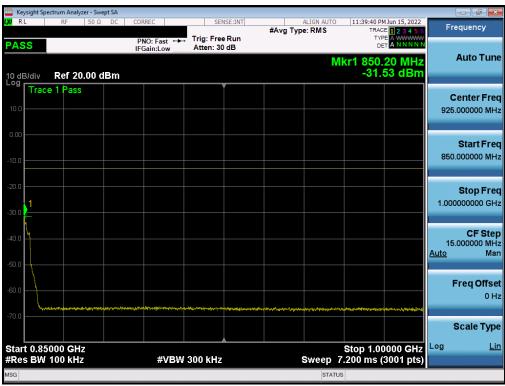
Plot 7-35. Conducted Spurious Plot (WCDMA Ch. 4183)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | |
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| CORREC | SENSE:INT | | | | | |
|----------------------------|--------------------------------|-----------|---|---|----------------------------------|--|
| | SENSE:1NT | #Avg Type | ALIGN AUTO | | 1 Jun 15, 2022 E 1 2 3 4 5 6 | Frequency |
| PNO: Fast ↔→ IFGain:Low | Trig: Free Run Atten: 30 dB | • , | | TYF De | | |
| | | | M | kr1 821. -65.3 | 35 MHz 09 dBm | Auto Tune |
| | Ĭ | | | | | Center Freq |
| | | | | | | 427.000000 MHz |
| | | | | | | |
| | | | | | | Start Freq 30.000000 MHz |
| | | | | | | 30.000000 Mil 12 |
| | | | | | | Stop Freq |
| | | | | | | 824.000000 MHz |
| | | | | | | |
| | | | | | | CF Step 79.400000 MHz |
| | | | | | | <u>Auto</u> Man |
| | | | | | | Freq Offset |
| | | | | | 1 | 0 Hz |
| | | | | | a bene fan de bester of an oddie | |
| | | | | | | Scale Type |
| #VBM | 300 kHz | | ween 39 | Stop 8 | 24.0 MHz | Log <u>Lin</u> |
| # V D V V | 500 MH2 | | | | soor pisj | |
| | IFGain:Low | | PNO: Fast → Trig: Free Run IFGain:Low Atten: 30 dB | PNO: Fast Trig: Free Run IFGain:Low Trig: Free Run Atten: 30 dB MI Image: State of the | PNO: Fast | PNO: Fast Trig: Free Run Atten: 30 dB Type Community Mkr1 821.35 MHz -65.309 dBm |

Plot 7-36. Conducted Spurious Plot (WCDMA Ch. 4233)



Plot 7-37. Conducted Spurious Plot (WCDMA Ch. 4233)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | | |
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| © 2022 ELEMENT | • | • | V3.0 1/4/2022 | | | | |



| Keysight Spec | | | | | | | | | | | | | × |
|--------------------------|-----------------------|-------|------|---------------------|-----|-------------------------|--------|----------|------------|--------------------|---------------------------------|-------------------------------|-------------|
| L <mark>XI</mark> RL | RF | 50Ω [| DC C | ORREC | | SEI | SE:INT | #Avg Typ | ALIGN AUTO | TRA | MJun 15, 2022 CE 1 2 3 4 5 6 | Frequency | |
| PASS | | | | PNO: Fa FGain:Lo | | Trig: Free #Atten: 2 | | | | T) E | | Auto Tu | |
| 10 dB/div Log | Ref 0.00 |) dBm | n | | | | | | N | /kr1 4.95 -51.3 | 7 0 GHz 09 dBm | Auto Tu | ine |
| Trace | 1 Pass | | | | | | | | | | | Center Fi | req |
| -10.0 | | | | | | | | | | | | 5.500000000 | GHz |
| -20.0 | | | | | | | | | | | | | |
| -30.0 | | | | | | | | | | | | Start Fr 1.000000000 G | |
| | | | | | | | | | | | | | |
| -40.0 | | | | | | | | | | | | Stop Fr | |
| -50.0 | | | | | | | | | | | | 10.000000000 | SHZ |
| -60.0 | and the second second | | | | | ~~~ | | | | | | CF St | tep |
| | | | | | | | | | | | | 900.000000 N <u>Auto</u> N | MH2 Mar |
| -70.0 | | | | | | | | | | | | | |
| -80.0 | | | | | | | | | | | | Freq Offs 0 | set) Hz |
| -90.0 | | | | | | | | | | | | | |
| | | | | | | | | | | | | Scale Ty | /pe |
| Start 1.000 #Res BW 1 | | | | | | 2.0 Mille | | | | Stop 1 | 0.000 GHz | — | Lin |
| #Res BW 1 | .U WHZ | | | # | VBW | 3.0 MHz | | 8 | stat | | 18001 pts) | | |

Plot 7-38. Conducted Spurious Plot (WCDMA Ch. 4233)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | | |
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7.4 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 of any spurious emission is 43 + 10 log₁₀(P_[Watts]), where P is the transmitter power in Watts.

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 > 1% of the emission bandwidth
- 4. VBW \geq 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 7-3. Test Instrument & Measurement Setup

Test Notes

1. Per 22.917(b), in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to demonstrate compliance with the out-of-band emissions limit. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

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LTE Band 5



Plot 7-39. Lower Band Edge Plot (LTE Band 5 - 10MHz QPSK – Full RB)



Plot 7-40. Upper Band Edge Plot (LTE Band 5 - 10MHz QPSK – Full RB)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | |
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| © 2022 ELEMENT | • | · | V3.0 1/4/2022 | | | |



| 🚾 Keysight Spectrum Analyzer - Swept SA 👘 | | | | | |
|---|--|---------------------------------|------------------------------|---|----------------------------|
| X RL RF 50 Ω DC | CORREC | SENSE:INT | ALIGN AUTO #Avg Type: RMS | 08:49:10 PM Jun 15, 2022 TRACE 1 2 3 4 5 6 | Frequency |
| PASS | PNO: Wide ↔ IFGain:Low | Trig: Free Run #Atten: 36 dB | #Avg Type: RMS | | |
| 10 dB/div Ref 25.00 dBm | | | Mkr1 | 823.987 5 MHz -25.07 dBm | Auto Tune |
| Trace 1 Pass | | Ĭ | | | Center Fred |
| 15.0 | | | | | 824.000000 MH |
| 5.00 | | | | | |
| 5.00 | | | | | Start Free |
| -5.00 | | | | | 817.750000 MH: |
| 45.0 | | | | | |
| -15.0 | | 1 | | | Stop Free 830.250000 MH |
| -25.0 | | <u>}</u> | | | 830.250000 MH |
| | | 1 | | | CF Ster |
| -35.0 | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | ~~~~ | | | 1.250000 MH Auto Mar |
| -45.0 | | | | | |
| -55.0 | | | | | FreqOffse |
| | | | | | 0 H |
| -65.0 | | | | | Scale Type |
| | | | | | |
| Center 824.000 MHz #Res BW 100 kHz | #VBW | 300 kHz | Sween | Span 12.50 MHz 1.000 ms (1001 pts) | Log <u>Lir</u> |
| MSG | **** | | STATU | | |

Plot 7-41. Lower Band Edge Plot (LTE Band 5 - 5MHz QPSK – Full RB)



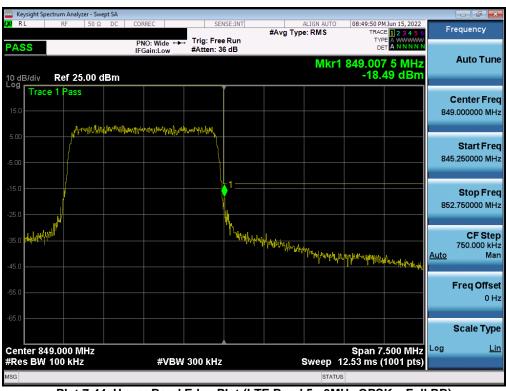
Plot 7-42. Upper Band Edge Plot (LTE Band 5 - 5MHz QPSK – Full RB)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | | |
|----------------------|-----------------|---------------------------------|---------------|--|--|--|--|
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| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | /15 - 7/4/2022 Portable Handset | | | | | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 | | | | |





Plot 7-43. Lower Band Edge Plot (LTE Band 5 - 3MHz QPSK – Full RB)



Plot 7-44. Upper Band Edge Plot (LTE Band 5 - 3MHz QPSK – Full RB)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | Approved by: Technical Manager |
|----------------------|---------------------------------|----------------------------|-----------------------------------|
| Test Report S/N: | port S/N: Test Dates: EUT Type: | | Dogo 27 of 71 |
| | | Portable Handset | Page 37 of 71 |
| © 2022 ELEMENT | | · | V3.0 1/4/2022 |





Plot 7-45. Lower Band Edge Plot (LTE Band 5 – 1.4MHz QPSK – Full RB)



Plot 7-46. Upper Band Edge Plot (LTE Band 5 – 1.4MHz QPSK – Full RB)

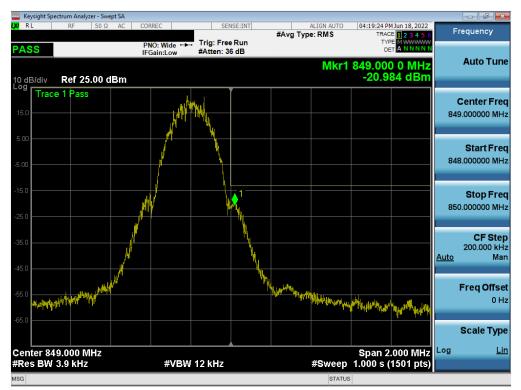
| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | Approved by: Technical Manager |
|----------------------|-----------------|----------------------------|-----------------------------------|
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GSM/GPRS Cell



Plot 7-47. Lower Band Edge Plot (GPRS Cell - Ch. 128)





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WCDMA Cell



Plot 7-49. Lower Band Edge Plot (WCDMA Cell – Ch. 4132)



Plot 7-50. Upper Band Edge Plot (WCDMA Cell – Ch. 4233)

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7.5 Radiated Power (ERP)

Test Overview

Effective Radiated Power (ERP) 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

- 1. 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.

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<u>1001 0010p</u>

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

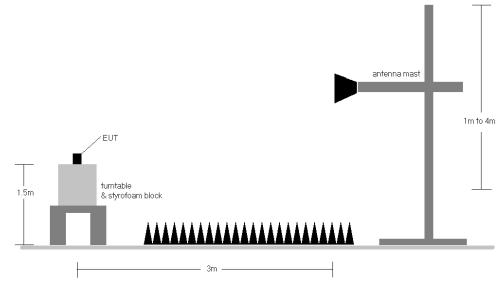


Figure 7-4. Radiated Test Setup < 1GHz

Test Notes

- 1) This device employs GSM, GPRS, and EDGE capabilities. The EUT was tested under all configurations and the highest powers are reported in GPRS mode while transmitting with one slot active.
- 2) This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest powers are reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1".
- 3) 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.
- 4) This unit was tested with its standard battery.

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| Bandwidth | Mod. | Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Ant. Gain [dBi] | RB Size/Offset | Substitute Level [dBm] | ERP [dBm] | ERP [Watts] | ERP Limit [dBm] | Margin [dB] | EIRP [dBm] | EIRP [Watts] | EIRP Limit [dBm] | Margin [dB] |
|-----------|----------------------|--------------------|--------------------|---------------------------|----------------------------------|--------------------|-------------------|---------------------------|-----------|----------------|--------------------|----------------|---------------|-----------------|---------------------|----------------|
| | QPSK | 829.0 | Н | 102 | 327 | 6.70 | 1/0 | 12.43 | 16.98 | 0.050 | 38.45 | -21.47 | 19.13 | 0.082 | 40.61 | -21.48 |
| 10 MHz | QPSK | 836.5 | Н | 112 | 334 | 6.73 | 1 / 25 | 12.15 | 16.73 | 0.047 | 38.45 | -21.72 | 18.88 | 0.077 | 40.61 | -21.73 |
| | QPSK | 844.0 | Н | 207 | 331 | 6.76 | 1 / 25 | 12.46 | 17.07 | 0.051 | 38.45 | -21.38 | 19.22 | 0.083 | 40.61 | -21.39 |
| | 16-QAM | 844.0 | Н | 207 | 331 | 6.76 | 1 / 25 | 11.71 | 16.32 | 0.043 | 38.45 | -22.13 | 18.47 | 0.070 | 40.61 | -22.14 |
| | QPSK | 829.0 | Н | 102 | 327 | 6.67 | 1 / 12 | 12.53 | 17.05 | 0.051 | 38.45 | -21.40 | 19.20 | 0.083 | 40.61 | -21.41 |
| 5 MHz | QPSK | 836.5 | Н | 112 | 334 | 6.73 | 1 / 12 | 12.23 | 16.81 | 0.048 | 38.45 | -21.64 | 18.96 | 0.079 | 40.61 | -21.65 |
| 3 WHZ | QPSK | 844.0 | Н | 207 | 331 | 6.78 | 1 / 12 | 12.35 | 16.99 | 0.050 | 38.45 | -21.46 | 19.14 | 0.082 | 40.61 | -21.47 |
| | 16-QAM | 844.0 | Н | 207 | 331 | 6.78 | 1 / 12 | 11.71 | 16.34 | 0.043 | 38.45 | -22.11 | 18.49 | 0.071 | 40.61 | -22.11 |
| | QPSK | 829.0 | Н | 102 | 327 | 6.66 | 1/7 | 12.53 | 17.04 | 0.051 | 38.45 | -21.41 | 19.19 | 0.083 | 40.61 | -21.42 |
| 3 MHz | QPSK | 836.5 | Н | 112 | 334 | 6.73 | 1/7 | 12.03 | 16.61 | 0.046 | 38.45 | -21.84 | 18.76 | 0.075 | 40.61 | -21.85 |
| 3 11112 | QPSK | 844.0 | Н | 207 | 331 | 6.79 | 1/7 | 12.36 | 17.01 | 0.050 | 38.45 | -21.45 | 19.16 | 0.082 | 40.61 | -21.45 |
| | 16-QAM | 844.0 | Н | 207 | 331 | 6.79 | 1/7 | 11.62 | 16.27 | 0.042 | 38.45 | -22.19 | 18.42 | 0.069 | 40.61 | -22.19 |
| | QPSK | 829.0 | Н | 102 | 327 | 6.66 | 1/3 | 12.50 | 17.00 | 0.050 | 38.45 | -21.45 | 19.15 | 0.082 | 40.61 | -21.45 |
| 1.4 MHz | QPSK | 836.5 | Н | 112 | 334 | 6.73 | 1/3 | 12.11 | 16.68 | 0.047 | 38.45 | -21.77 | 18.83 | 0.076 | 40.61 | -21.77 |
| 1.4 MITZ | QPSK | 844.0 | Н | 207 | 331 | 6.77 | 1/3 | 12.37 | 16.99 | 0.050 | 38.45 | -21.46 | 19.14 | 0.082 | 40.61 | -21.47 |
| | 16-QAM | 844.0 | Н | 207 | 331 | 6.77 | 1/3 | 11.64 | 16.26 | 0.042 | 38.45 | -22.20 | 18.41 | 0.069 | 40.61 | -22.20 |
| | QPSK (Opposite Pol.) | 844.0 | V | 137 | 48 | 6.36 | 1 / 49 | 12.60 | 16.81 | 0.048 | 38.45 | -21.64 | 18.96 | 0.079 | 40.61 | -21.65 |
| 10 MHz | QPSK (Half Open) | 844.0 | Н | 190 | 331 | 6.76 | 1 / 49 | 11.89 | 16.50 | 0.045 | 38.45 | -21.95 | 18.65 | 0.073 | 40.61 | -21.96 |
| | QPSK (WCP) | 844.0 | Н | 188 | 350 | 6.76 | 1 / 49 | 8.97 | 13.58 | 0.023 | 38.45 | -24.87 | 15.73 | 0.037 | 40.61 | -24.88 |

Table 7-2. ERP Data (LTE Band 5 _Ant A + Ant B) _OPEN

| Bandwidth | Mod. | Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Ant. Gain [dBi] | RB Size/Offset | Substitute Level [dBm] | ERP [dBm] | ERP [Watts] | ERP Limit [dBm] | Margin [dB] | EIRP [dBm] | EIRP [Watts] | EIRP Limit [dBm] | Margin [dB] |
|-----------|----------------------|--------------------|--------------------|---------------------------|----------------------------------|--------------------|-------------------|---------------------------|-----------|----------------|--------------------|----------------|---------------|-----------------|---------------------|----------------|
| | QPSK | 829.0 | Н | 197 | 205 | 6.70 | 1 / 25 | 7.91 | 12.46 | 0.018 | 38.45 | -25.99 | 14.61 | 0.029 | 40.61 | -26.00 |
| 10 MHz | QPSK | 836.5 | Н | 201 | 205 | 6.73 | 1/0 | 8.10 | 12.68 | 0.019 | 38.45 | -25.77 | 14.83 | 0.030 | 40.61 | -25.78 |
| | QPSK | 844.0 | Н | 191 | 204 | 6.76 | 1/0 | 7.42 | 12.03 | 0.016 | 38.45 | -26.42 | 14.18 | 0.026 | 40.61 | -26.43 |
| | 16-QAM | 836.5 | H | 201 | 205 | 6.73 | 1/0 | 7.22 | 11.80 | 0.015 | 38.45 | -26.65 | 13.95 | 0.025 | 40.61 | -26.66 |
| | QPSK | 829.0 | Н | 197 | 205 | 6.70 | 1 / 12 | 7.98 | 12.53 | 0.018 | 38.45 | -25.92 | 14.68 | 0.029 | 40.61 | -25.93 |
| 5 MHz | QPSK | 836.5 | Н | 201 | 205 | 6.73 | 1 / 12 | 8.18 | 12.76 | 0.019 | 38.45 | -25.69 | 14.91 | 0.031 | 40.61 | -25.70 |
| JIMITZ | QPSK | 844.0 | Н | 191 | 204 | 6.76 | 1 / 12 | 7.34 | 11.95 | 0.016 | 38.45 | -26.50 | 14.10 | 0.026 | 40.61 | -26.51 |
| | 16-QAM | 829.0 | H | 197 | 205 | 6.70 | 1 / 12 | 7.14 | 11.69 | 0.015 | 38.45 | -26.76 | 13.84 | 0.024 | 40.61 | -26.76 |
| | QPSK | 829.0 | Н | 197 | 205 | 6.70 | 1/7 | 7.97 | 12.52 | 0.018 | 38.45 | -25.93 | 14.67 | 0.029 | 40.61 | -25.94 |
| 3 MHz | QPSK | 836.5 | Н | 201 | 205 | 6.73 | 1 / 7 | 7.98 | 12.56 | 0.018 | 38.45 | -25.89 | 14.71 | 0.030 | 40.61 | -25.90 |
| 3 10112 | QPSK | 844.0 | Н | 191 | 204 | 6.76 | 1 / 7 | 7.36 | 11.97 | 0.016 | 38.45 | -26.49 | 14.12 | 0.026 | 40.61 | -26.49 |
| | 16-QAM | 836.5 | H | 201 | 205 | 6.73 | 1 / 7 | 7.14 | 11.72 | 0.015 | 38.45 | -26.73 | 13.87 | 0.024 | 40.61 | -26.74 |
| | QPSK | 829.0 | Н | 197 | 205 | 6.70 | 1/3 | 7.93 | 12.48 | 0.018 | 38.45 | -25.97 | 14.63 | 0.029 | 40.61 | -25.97 |
| 1.4 MHz | QPSK | 836.5 | Н | 201 | 205 | 6.73 | 1/3 | 8.06 | 12.63 | 0.018 | 38.45 | -25.82 | 14.78 | 0.030 | 40.61 | -25.82 |
| 1.4 WITZ | QPSK | 844.0 | Н | 191 | 204 | 6.76 | 1/3 | 7.34 | 11.95 | 0.016 | 38.45 | -26.50 | 14.10 | 0.026 | 40.61 | -26.51 |
| | 16-QAM | 829.0 | Н | 197 | 205 | 6.70 | 1/3 | 7.07 | 11.62 | 0.015 | 38.45 | -26.83 | 13.77 | 0.024 | 40.61 | -26.84 |
| 10 MHz | QPSK (Opposite Pol.) | 836.5 | V | 121 | 209 | 6.18 | 1 / 25 | 8.54 | 12.57 | 0.018 | 38.45 | -25.88 | 14.72 | 0.030 | 40.61 | -25.89 |
| TO MINZ | QPSK (WCP) | 836.5 | Н | 103 | 164 | 6.73 | 1/0 | 6.43 | 11.01 | 0.013 | 38.45 | -27.44 | 13.16 | 0.021 | 40.61 | -27.45 |

Table 7-3. ERP Data (LTE Band 5 _Ant A) _CLOSED

| Frequency [MHz] | Mode | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Substitute Level [dBm] | Ant. Gain [dBi] | ERP [dBm] | ERP [Watts] | ERP Limit [dBm] | Margin [dB] | EIRP [dBm] | EIRP [Watts] | EIRP Limit [dBm] | Margin [dB] |
|--------------------|-------------------------|--------------------|---------------------------|----------------------------------|------------------------------|--------------------|-----------|----------------|--------------------|----------------|---------------|-----------------|---------------------|----------------|
| 824.20 | GPRS850 | н | 103 | 349 | 22.35 | 6.65 | 26.85 | 0.484 | 38.45 | -11.60 | 29.00 | 0.794 | 40.61 | -11.61 |
| 836.60 | GPRS850 | Н | 102 | 351 | 21.88 | 6.74 | 26.47 | 0.444 | 38.45 | -11.98 | 28.62 | 0.728 | 40.61 | -11.99 |
| 848.80 | GPRS850 | н | 106 | 356 | 21.07 | 6.73 | 25.65 | 0.367 | 38.45 | -12.81 | 27.80 | 0.602 | 40.61 | -12.81 |
| 824.20 | GPRS850 (Opposite Pol.) | V | 137 | 64 | 22.22 | 6.13 | 26.20 | 0.417 | 38.45 | -12.25 | 28.35 | 0.684 | 40.61 | -12.26 |
| 824.20 | EDGE850 | Н | 103 | 349 | 15.47 | 6.65 | 19.97 | 0.099 | 38.45 | -18.48 | 22.12 | 0.163 | 40.61 | -18.49 |
| 824.20 | GPRS850 (Half Open) | Н | 102 | 319 | 21.77 | 6.65 | 26.27 | 0.424 | 38.45 | -12.18 | 28.42 | 0.695 | 40.61 | -12.19 |
| 824.20 | GPRS850 (WCP) | Н | 114 | 328 | 17.77 | 6.65 | 22.27 | 0.169 | 38.45 | -16.18 | 24.42 | 0.277 | 40.61 | -16.19 |
| | | | | | | | | | | | | | | |

Table 7-4. ERP Data (GPRS Cell _Ant A + Ant B) _OPEN

| Frequency [MHz] | Mode | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Substitute Level [dBm] | Ant. Gain [dBi] | ERP [dBm] | ERP [Watts] | ERP Limit [dBm] | Margin [dB] | EIRP [dBm] | EIRP [Watts] | EIRP Limit [dBm] | Margin [dB] |
|--------------------|-------------------------|--------------------|---------------------------|----------------------------------|------------------------------|--------------------|-----------|----------------|--------------------|----------------|---------------|-----------------|---------------------|----------------|
| 824.20 | GPRS850 | V | 137 | 358 | 17.65 | 6.13 | 21.63 | 0.146 | 38.45 | -16.82 | 23.78 | 0.239 | 40.61 | -16.83 |
| 836.60 | GPRS850 | V | 127 | 5 | 17.54 | 6.18 | 21.57 | 0.144 | 38.45 | -16.88 | 23.72 | 0.235 | 40.61 | -16.89 |
| 848.80 | GPRS850 | V | 226 | 21 | 16.69 | 6.41 | 20.95 | 0.124 | 38.45 | -17.51 | 23.10 | 0.204 | 40.61 | -17.51 |
| 824.20 | GPRS850 (Opposite Pol.) | Н | 217 | 229 | 15.61 | 6.65 | 20.11 | 0.103 | 38.45 | -18.34 | 22.26 | 0.168 | 40.61 | -18.35 |
| 824.20 | EDGE850 | V | 137 | 358 | 12.43 | 6.18 | 16.46 | 0.044 | 38.45 | -21.99 | 18.61 | 0.073 | 40.61 | -22.00 |
| 824.20 | GPRS850 (WCP) | V | 137 | 183 | 16.58 | 6.18 | 20.61 | 0.115 | 38.45 | -17.84 | 22.76 | 0.189 | 40.61 | -17.85 |

Table 7-5. ERP Data (GPRS Cell _Ant A) _CLOSED

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| Frequency [MHz] | Mode | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Substitute Level [dBm] | | ERP [dBm] | ERP [Watts] | ERP Limit [dBm] | Margin [dB] | EIRP [dBm] | EIRP [Watts] | EIRP Limit [dBm] | Margin [dB] |
|--------------------|-------------------------|--------------------|---------------------------|----------------------------------|------------------------------|------|-----------|----------------|--------------------|----------------|---------------|-----------------|---------------------|----------------|
| 826.40 | WCDMA850 | Н | 103 | 351 | 13.91 | 6.67 | 18.43 | 0.070 | 38.45 | -20.02 | 20.58 | 0.114 | 40.61 | -20.02 |
| 836.60 | WCDMA850 | Н | 104 | 351 | 13.60 | 6.74 | 18.19 | 0.066 | 38.45 | -20.26 | 20.34 | 0.108 | 40.61 | -20.27 |
| 846.60 | WCDMA850 | Н | 203 | 356 | 12.65 | 6.78 | 17.28 | 0.053 | 38.45 | -21.17 | 19.43 | 0.088 | 40.61 | -21.17 |
| 826.40 | WCDMA850(Opposite Pol.) | V | 102 | 47 | 13.77 | 6.07 | 17.69 | 0.059 | 38.45 | -20.76 | 19.84 | 0.096 | 40.61 | -20.76 |
| 826.40 | WCDMA850 (Half Open) | Н | 155 | 351 | 13.10 | 6.67 | 17.62 | 0.058 | 38.45 | -20.83 | 19.77 | 0.095 | 40.61 | -20.83 |
| 826.40 | WCDMA850 (WCP) | Н | 328 | 345 | 8.72 | 6.67 | 13.24 | 0.021 | 38.45 | -25.21 | 15.39 | 0.035 | 40.61 | -25.21 |
| | | | | | | | | | | | | | | |

Table 7-6. ERP Data (WCDMA Cell _Ant A + Ant B) _OPEN

| Frequency [MHz] | Mode | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Substitute Level [dBm] | Ant. Gain [dBi] | ERP [dBm] | ERP [Watts] | ERP Limit [dBm] | Margin [dB] | EIRP [dBm] | EIRP [Watts] | EIRP Limit [dBm] | Margin [dB] |
|--------------------|-------------------------|--------------------|---------------------------|----------------------------------|------------------------------|--------------------|-----------|----------------|--------------------|----------------|---------------|-----------------|---------------------|----------------|
| 826.40 | WCDMA850 | Н | 220 | 41 | 8.73 | 6.67 | 13.25 | 0.021 | 38.45 | -25.20 | 15.40 | 0.035 | 40.61 | -25.20 |
| 836.60 | WCDMA850 | Н | 207 | 199 | 8.79 | 6.74 | 13.38 | 0.022 | 38.45 | -25.07 | 15.53 | 0.036 | 40.61 | -25.08 |
| 846.60 | WCDMA850 | Н | 204 | 189 | 6.70 | 6.78 | 11.33 | 0.014 | 38.45 | -27.12 | 13.48 | 0.022 | 40.61 | -27.12 |
| 836.60 | WCDMA850(Opposite Pol.) | V | 134 | 16 | 8.11 | 6.18 | 12.14 | 0.016 | 38.45 | -26.31 | 14.29 | 0.027 | 40.61 | -26.32 |
| 836.60 | WCDMA850 (WCP) | Н | 122 | 171 | 6.97 | 6.74 | 11.56 | 0.014 | 38.45 | -26.89 | 13.71 | 0.023 | 40.61 | -26.90 |

Table 7-7. ERP Data (WCDMA Cell _Ant A) _CLOSED

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | |
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7.6 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

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

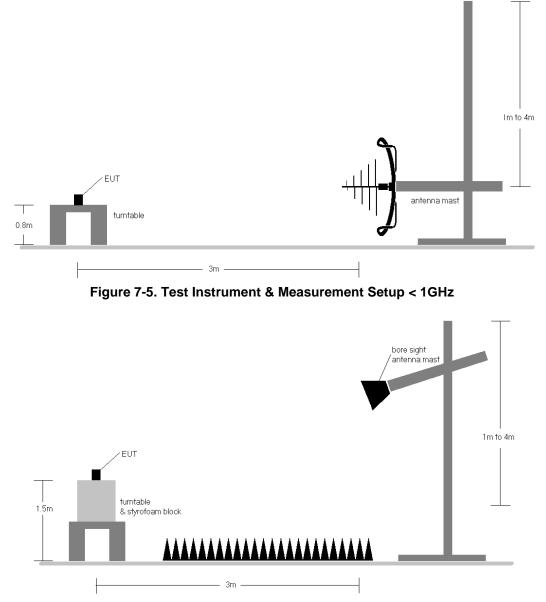


Figure 7-6. Test Instrument & Measurement Setup > 1GHz

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | Approved by: Technical Manager |
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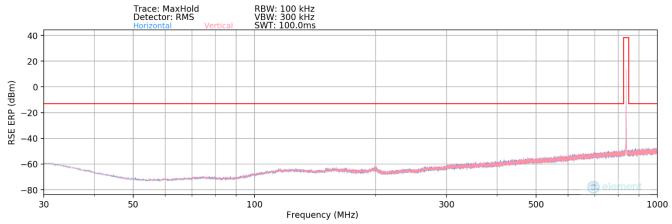
Test Notes

- 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) This device employs GSM, GPRS, and EDGE capabilities. The EUT was tested under all configurations and the highest powers are reported in GPRS mode while transmitting with one slot active.
- 3) This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest powers are reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1".
- 4) 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.
- 5) This unit was tested with its standard battery.
- 6) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 7) 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.
- 8) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

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LTE Band 5 _Ant A + Ant B



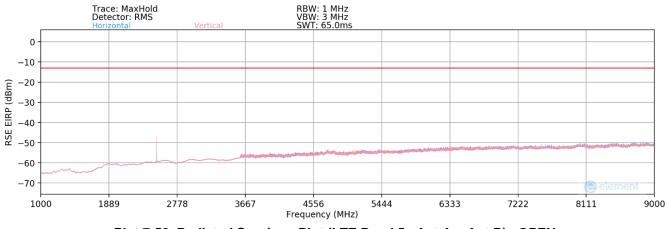


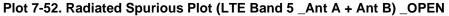
| Bandwidth (MHz): | : 10 | | | | | | | | |
|------------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|---|----------------|----------------|
| Frequency (MHz): | 836.5 | | | | | | | | |
| RB / Offset: | 1 / 25 | | | | | | | | |
| 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] |
| 429.14 | V | - | - | -101.26 | 24.25 | 29.99 | -67.42 | -13.00 | -54.42 |
| | V 7 9 Dodio | - ted Spurie | | | | | - | | -54.42 |

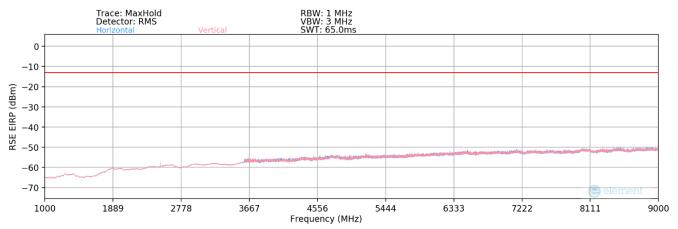
Table 7-8. Radiated Spurious Data (LTE Band 5 – Mid Channel _Ant A + Ant B)

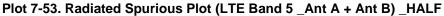
| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | |
|----------------------|-----------------|----------------------------|----------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 48 of 71 | | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Faye 40 01 / 1 | | | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 | | | |

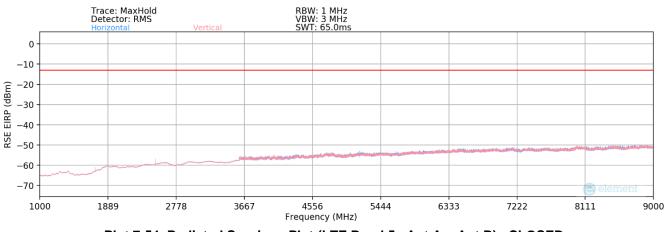














| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | |
|----------------------|----------------------------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 40 of 71 | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 Portable Handset | | Page 49 of 71 | | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 | | |



| Bandwidth (MHz): | 10 |
|------------------|--------|
| Frequency (MHz): | 829 |
| RB / Offset: | 1 / 25 |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1658.00 | V | - | - | -76.42 | -3.75 | 26.83 | -68.42 | -13.00 | -55.42 |
| 2487.00 | V | 311 | 321 | -58.97 | 0.56 | 48.59 | -46.66 | -13.00 | -33.66 |
| 3316.00 | V | - | - | -77.18 | 1.92 | 31.74 | -63.52 | -13.00 | -50.52 |
| 4145.00 | V | - | - | -77.28 | 2.87 | 32.59 | -62.67 | -13.00 | -49.67 |
| 4974.00 | V | - | - | -78.09 | 4.07 | 32.98 | -62.28 | -13.00 | -49.28 |

Table 7-9. Radiated Spurious Data (LTE Band 5 – Low Channel _Ant A + Ant B)

| Bandwidth (MHz): | 10 |
|------------------|--------|
| Frequency (MHz): | 836.5 |
| RB / Offset: | 1 / 25 |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1673.00 | V | - | - | -76.42 | -3.55 | 27.03 | -68.22 | -13.00 | -55.22 |
| 2509.50 | V | 316 | 296 | -56.13 | 0.80 | 51.67 | -43.59 | -13.00 | -30.59 |
| 3346.00 | V | - | - | -77.21 | 1.95 | 31.74 | -63.52 | -13.00 | -50.52 |
| 4182.50 | V | - | - | -77.68 | 2.95 | 32.27 | -62.99 | -13.00 | -49.99 |
| 5019.00 | V | - | - | -78.13 | 4.33 | 33.20 | -62.05 | -13.00 | -49.05 |

Table 7-10. Radiated Spurious Data (LTE Band 5 – Mid Channel _Ant A + Ant B)

| Bandwidth (MHz): | 10 |
|------------------|--------|
| Frequency (MHz): | 844 |
| RB / Offset: | 1 / 25 |

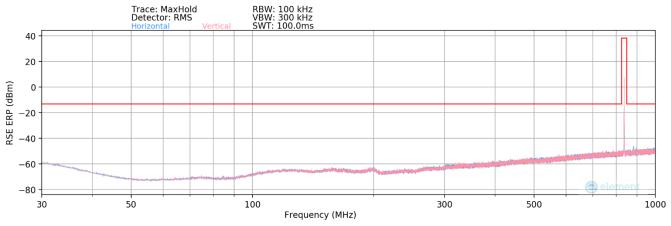
| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1688.00 | V | - | - | -76.24 | -3.19 | 27.57 | -67.69 | -13.00 | -54.69 |
| 2532.00 | V | 344 | 277 | -57.12 | 1.17 | 51.05 | -44.20 | -13.00 | -31.20 |
| 3376.00 | V | - | - | -76.58 | 1.79 | 32.21 | -63.05 | -13.00 | -50.05 |
| 4220.00 | V | - | - | -76.85 | 2.94 | 33.09 | -62.16 | -13.00 | -49.16 |
| 5064.00 | V | - | - | -78.49 | 4.86 | 33.37 | -61.88 | -13.00 | -48.88 |

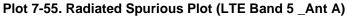
Table 7-11. Radiated Spurious Data (LTE Band 5 – High Channel _Ant A + Ant B)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | |
|------------------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | est Dates: EUT Type: | | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 50 of 71 | | |
| © 2022 ELEMENT V3.0 1/4/2022 | | | | | |



LTE Band 5 _Ant A





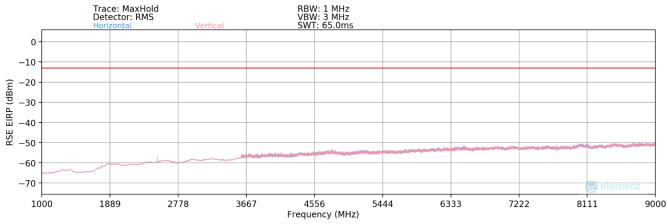
| Bandwidth (MHz): | 10 | |
|------------------|--------|--|
| Frequency (MHz): | 836.5 | |
| RB / Offset: | 1 / 25 | |
| | | |

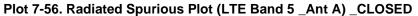
| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | ERP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|---|----------------|----------------|
| 778.48 | Н | - | - | -99.32 | 29.79 | 37.47 | -59.94 | -13.00 | -46.94 |
| 881.50 | Н | - | - | -99.13 | 30.76 | 38.63 | -58.78 | -13.00 | -45.78 |

Table 7-12. Radiated Spurious Data (LTE Band 5 – Mid Channel _Ant A)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | Dates: EUT Type: | | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 51 of 71 | | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 | | |







| Bandwidth (MHz): | | 10 | | | | | | | |
|------------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| Frequency (MHz): | | 829 | | | | | | | |
| RB / Offset: | | 1 / 25 | | | | | | | |
| 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] |
| 1658.00 | Н | 147 | 222 | -75.76 | -3.87 | 27.37 | -67.89 | -13.00 | -54.89 |
| 2487.00 | Н | 149 | 137 | -66.72 | 0.42 | 40.70 | -54.56 | -13.00 | -41.56 |
| 3316.00 | Н | - | - | -76.88 | 1.85 | 31.97 | -63.29 | -13.00 | -50.29 |
| 4145.00 | Н | - | - | -76.74 | 2.88 | 33.14 | -62.11 | -13.00 | -49.11 |
| 4974.00 | Н | - | - | -77.42 | 4.02 | 33.60 | -61.66 | -13.00 | -48.66 |

Table 7-13. Radiated Spurious Data (LTE Band 5 – Low Channel _Ant A)

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1673.00 | Н | - | - | -75.96 | -3.66 | 27.38 | -67.87 | -13.00 | -54.87 |
| 2509.50 | Н | 181 | 130 | -68.41 | 0.73 | 39.32 | -55.94 | -13.00 | -42.94 |
| 3346.00 | Н | - | - | -76.65 | 1.85 | 32.20 | -63.06 | -13.00 | -50.06 |
| 4182.50 | Н | - | - | -77.14 | 2.76 | 32.62 | -62.63 | -13.00 | -49.63 |
| 5019.00 | Н | - | - | -77.90 | 4.18 | 33.28 | -61.98 | -13.00 | -48.98 |

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | st Dates: EUT Type: | | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 52 of 71 | | |
| © 2022 ELEMENT | | • | V3.0 1/4/2022 | | |



| Bandwidth (MHz): | 10 |
|------------------|--------|
| Frequency (MHz): | 844 |
| RB / Offset: | 1 / 25 |

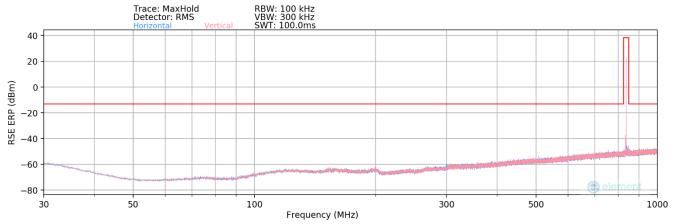
| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1688.00 | Н | - | - | -76.21 | -3.26 | 27.53 | -67.73 | -13.00 | -54.73 |
| 2532.00 | Н | 174 | 132 | -71.34 | 1.03 | 36.69 | -58.56 | -13.00 | -45.56 |
| 3376.00 | Н | - | - | -76.50 | 1.77 | 32.27 | -62.98 | -13.00 | -49.98 |
| 4220.00 | Н | - | - | -76.65 | 2.79 | 33.14 | -62.12 | -13.00 | -49.12 |
| 5064.00 | Н | - | - | -77.72 | 4.56 | 33.84 | -61.42 | -13.00 | -48.42 |

Table 7-15. Radiated Spurious Data (LTE Band 5 – High Channel _Ant A)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | |
|----------------------|-----------------|-----------------------------------|---------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 53 of 71 |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Fage 55 0171 |
| © 2022 ELEMENT | | | V3.0 1/4/2022 |



GSM/GPRS Cell _Ant A + Ant B





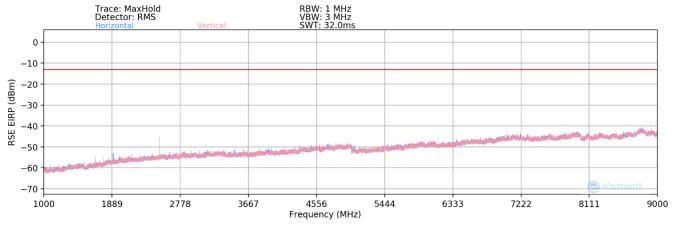
| Mode: | GPRS 1 Tx Slot |
|------------------|----------------|
| Channel: | 190 |
| Frequency (MHz): | 836.6 |
| | |

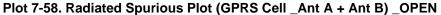
| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | ERP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|---|----------------|----------------|
| 161.38 | Н | - | - | -93.98 | 19.67 | 32.69 | -64.72 | -13.00 | -51.72 |
| 506.70 | Н | - | - | -92.51 | 25.91 | 40.40 | -57.00 | -13.00 | -44.00 |
| 881.60 | Н | - | - | -91.55 | 30.75 | 46.20 | -51.21 | -13.00 | -38.21 |

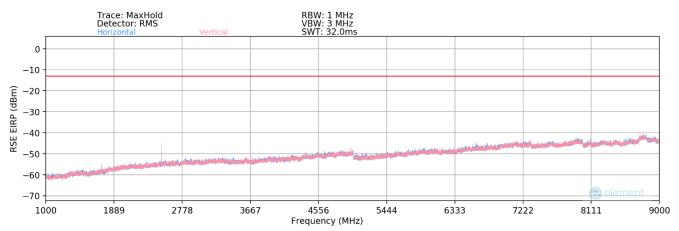
Table 7-16. Radiated Spurious Data (GPRS Cell – Mid Channel _Ant A + Ant B)

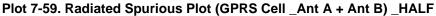
| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 54 of 71 | | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 54 of 71 | | | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 | | | |

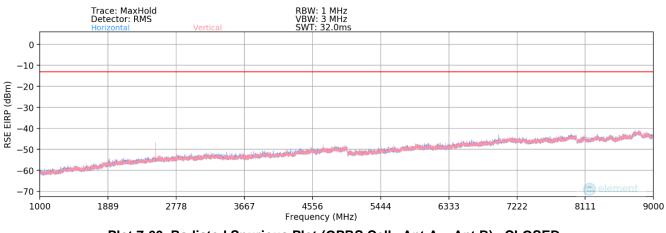














| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 55 of 71 | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 55 of 71 | | |
| © 2022 ELEMENT | • | • | V3.0 1/4/2022 | | |



| Mode: | GPRS 1 Tx Slot |
|------------------|----------------|
| Channel: | 128 |
| Frequency (MHz): | 824.2 |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1648.40 | Н | 168 | 9 | -69.26 | -3.81 | 33.93 | -61.33 | -13.00 | -48.33 |
| 2472.60 | Н | 218 | 143 | -55.14 | 0.49 | 52.35 | -42.90 | -13.00 | -29.90 |
| 3296.80 | Н | - | - | -72.28 | 1.99 | 36.71 | -58.55 | -13.00 | -45.55 |
| 4121.00 | Н | - | - | -74.92 | 3.09 | 35.17 | -60.09 | -13.00 | -47.09 |
| 4945.20 | Н | - | - | -75.52 | 3.90 | 35.38 | -59.88 | -13.00 | -46.88 |

Table 7-17. Radiated Spurious Data (GPRS Cell – Low Channel _Ant A + Ant B)

| Mode: | GPRS 1 Tx Slot |
|------------------|----------------|
| Channel: | 190 |
| Frequency (MHz): | 836.6 |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1673.20 | Н | 153 | 353 | -69.41 | -3.54 | 34.05 | -61.21 | -13.00 | -48.21 |
| 2509.80 | Н | 124 | 141 | -51.10 | 0.80 | 56.70 | -38.55 | -13.00 | -25.55 |
| 3346.40 | Н | - | - | -72.08 | 1.95 | 36.87 | -58.39 | -13.00 | -45.39 |
| 4183.00 | Н | - | - | -75.29 | 2.95 | 34.66 | -60.60 | -13.00 | -47.60 |
| 5019.60 | Н | - | - | -75.42 | 4.35 | 35.93 | -59.33 | -13.00 | -46.33 |
| 5856.20 | Н | - | - | -76.32 | 6.10 | 36.78 | -58.48 | -13.00 | -45.48 |

Table 7-18. Radiated Spurious Data (GPRS Cell – Mid Channel _Ant A + Ant B)

| Mode: | GPRS 1 Tx Slot |
|------------------|----------------|
| Channel: | 251 |
| Frequency (MHz): | 848.8 |
| | l |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1697.60 | Н | 152 | 121 | -67.05 | -2.94 | 37.01 | -58.25 | -13.00 | -45.25 |
| 2546.40 | Н | 137 | 143 | -53.40 | 1.29 | 54.89 | -40.37 | -13.00 | -27.37 |
| 3395.20 | Н | - | - | -71.87 | 1.69 | 36.82 | -58.43 | -13.00 | -45.43 |
| 4244.00 | Н | - | - | -74.97 | 3.00 | 35.03 | -60.23 | -13.00 | -47.23 |
| 5092.80 | Н | - | - | -75.36 | 4.49 | 36.13 | -59.12 | -13.00 | -46.12 |

Table 7-19. Radiated Spurious Data (GPRS Cell – High Channel _Ant A + Ant B)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | |
|----------------------|-----------------|-----------------------------------|---------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage FC of 71 |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 56 of 71 |
| © 2022 ELEMENT | • | | V3.0 1/4/2022 |



| Case: | w/ Wireless Charging Pad | | | | |
|------------------|--------------------------|--|--|--|--|
| Mode: | GPRS 1 Tx Slot | | | | |
| Channel: | 190 | | | | |
| Frequency (MHz): | 836.6 | | | | |

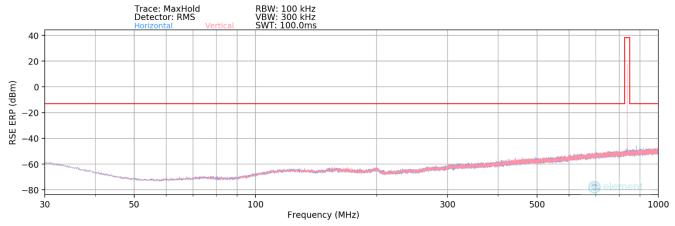
| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1673.20 | Н | 172 | 245 | -69.47 | -3.54 | 33.99 | -61.27 | -13.00 | -48.27 |
| 2509.80 | Н | 142 | 145 | -57.45 | 0.80 | 50.35 | -44.90 | -13.00 | -31.90 |
| 3346.40 | Н | - | - | -71.41 | 1.95 | 37.54 | -57.72 | -13.00 | -44.72 |
| 4183.00 | Н | - | - | -74.68 | 2.95 | 35.27 | -59.99 | -13.00 | -46.99 |
| 5019.60 | Н | - | - | -75.56 | 4.35 | 35.79 | -59.47 | -13.00 | -46.47 |

Table 7-20. Radiated Spurious Data with WCP (GPRS Cell _Ant A + Ant B)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | |
|----------------------|-----------------|-----------------------------------|---------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 57 of 71 |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Fage 57 01 71 |
| © 2022 ELEMENT | | | V3.0 1/4/2022 |



GSM/GPRS Cell _Ant A





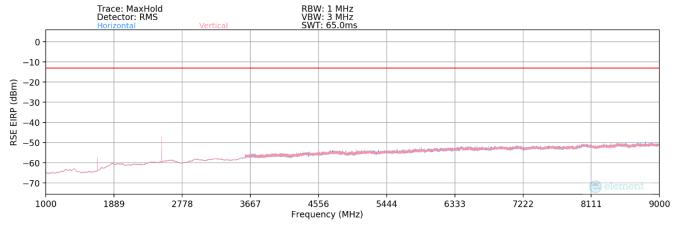
| Mode: | GPRS 1 Tx Slot |
|------------------|----------------|
| Channel: | 190 |
| Frequency (MHz): | 836.6 |
| | |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|---|----------------|----------------|
| 185.52 | V | - | - | -91.73 | 18.56 | 33.83 | -63.58 | -13.00 | -50.58 |
| 428.52 | V | - | - | -92.43 | 24.20 | 38.77 | -58.64 | -13.00 | -45.64 |
| 881.60 | V | - | - | -91.23 | 30.75 | 46.52 | -50.89 | -13.00 | -37.89 |

Table 7-21. Radiated Spurious Data (GPRS Cell – Mid Channel _Ant A)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 58 of 71 | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Fage 56 0171 | | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 | | |







| Mode: | GPRS 1 Tx Slot |
|------------------|----------------|
| Channel: | 128 |
| Frequency (MHz): | 824.2 |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1648.40 | V | 266 | 267 | -63.10 | -3.94 | 39.96 | -55.30 | -13.00 | -42.30 |
| 2472.60 | V | 233 | 158 | -51.67 | 0.32 | 55.65 | -39.61 | -13.00 | -26.61 |
| 3296.80 | V | 361 | 3 | -71.09 | 2.00 | 37.91 | -57.35 | -13.00 | -44.35 |
| 4121.00 | V | 131 | 171 | -70.12 | 2.95 | 39.83 | -55.43 | -13.00 | -42.43 |
| 4945.20 | V | - | - | -75.66 | 3.76 | 35.10 | -60.15 | -13.00 | -47.15 |
| 5769.40 | V | - | - | -75.83 | 5.42 | 36.59 | -58.67 | -13.00 | -45.67 |
| 6593.60 | V | - | - | -75.54 | 6.36 | 37.83 | -57.43 | -13.00 | -44.43 |

Table 7-22. Radiated Spurious Data (GPRS Cell – Low Channel _Ant A)

| Mode: | GPRS 1 Tx Slot |
|------------------|----------------|
| Channel: | 190 |
| Frequency (MHz): | 836.6 |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1673.20 | V | 141 | 265 | -60.80 | -3.65 | 42.55 | -52.71 | -13.00 | -39.71 |
| 2509.80 | V | 191 | 158 | -53.91 | 0.74 | 53.83 | -41.43 | -13.00 | -28.43 |
| 3346.40 | V | - | - | -71.88 | 1.85 | 36.97 | -58.29 | -13.00 | -45.29 |
| 4183.00 | V | 150 | 198 | -72.99 | 2.76 | 36.77 | -58.48 | -13.00 | -45.48 |
| 5019.60 | V | - | - | -75.86 | 4.18 | 35.32 | -59.93 | -13.00 | -46.93 |
| 5856.20 | V | - | - | -76.19 | 5.68 | 36.49 | -58.76 | -13.00 | -45.76 |
| 6692.80 | V | - | - | -76.11 | 6.91 | 37.80 | -57.46 | -13.00 | -44.46 |

Table 7-23. Radiated Spurious Data (GPRS Cell – Mid Channel _Ant A)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | | |
|----------------------|-----------------|-----------------------------------|---------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Daga 50 of 71 | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 59 of 71 | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 | |



| Mode: | GPRS 1 Tx Slot |
|------------------|----------------|
| Channel: | 251 |
| Frequency (MHz): | 848.8 |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1697.60 | V | 190 | 247 | -62.12 | -2.97 | 41.91 | -53.34 | -13.00 | -40.34 |
| 2546.40 | V | 128 | 348 | -51.77 | 1.23 | 56.46 | -38.80 | -13.00 | -25.80 |
| 3395.20 | V | - | - | -71.93 | 1.61 | 36.68 | -58.57 | -13.00 | -45.57 |
| 4244.00 | V | 147 | 293 | -70.56 | 2.95 | 39.39 | -55.87 | -13.00 | -42.87 |
| 5092.80 | V | - | - | -75.72 | 4.56 | 35.84 | -59.42 | -13.00 | -46.42 |
| 5941.60 | V | - | - | -76.12 | 5.72 | 36.60 | -58.66 | -13.00 | -45.66 |
| 6790.40 | V | - | - | -76.16 | 6.76 | 37.60 | -57.66 | -13.00 | -44.66 |

Table 7-24. Radiated Spurious Data (GPRS Cell – High Channel _Ant A)

| Sample #: | w/ Wireless Charging Pad |
|------------------|--------------------------|
| Mode: | GPRS 1 Tx Slot |
| Channel: | 251 |
| Frequency (MHz): | 848.8 |

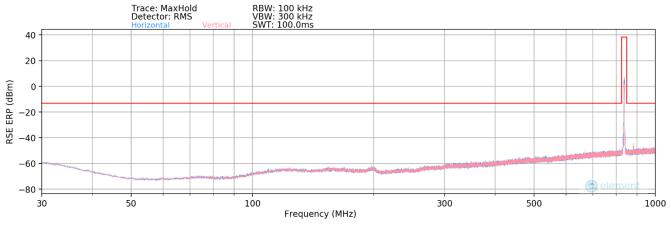
| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1697.60 | V | 173 | 62 | -63.84 | -2.97 | 40.19 | -55.06 | -13.00 | -42.06 |
| 2546.40 | V | 184 | 10 | -52.64 | 1.23 | 55.59 | -39.67 | -13.00 | -26.67 |
| 3395.20 | V | - | - | -71.43 | 1.61 | 37.18 | -58.07 | -13.00 | -45.07 |
| 4244.00 | V | 139 | 320 | -70.52 | 2.95 | 39.43 | -55.83 | -13.00 | -42.83 |
| 5092.80 | V | - | - | -75.70 | 4.56 | 35.86 | -59.40 | -13.00 | -46.40 |
| 5941.60 | V | - | - | -76.19 | 5.72 | 36.53 | -58.73 | -13.00 | -45.73 |
| 6790.40 | V | - | - | -76.31 | 6.76 | 37.45 | -57.81 | -13.00 | -44.81 |

Table 7-25. Radiated Spurious Data with WCP (GPRS Cell _Ant A)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 60 of 71 | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Fage of 0171 | | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 | | |



WCDMA Cell _Ant A + Ant B



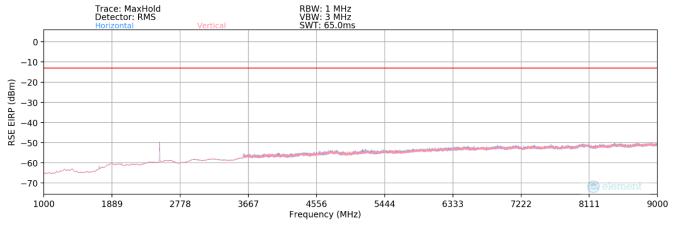


| Mode: | | WCDMA RMC | | | | | | | |
|------------------|------------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|---|----------------|----------------|
| Channel: | | 4183 | | | | | | | |
| Frequency (MHz): | Frequency (MHz): 836.6 | | | | | | | | |
| 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] |
| 194.14 | Н | - | - | -100.92 | 19.57 | 25.65 | -71.76 | -13.00 | -58.76 |
| 537.66 | Н | - | - | -100.81 | 26.22 | 32.41 | -65.00 | -13.00 | -52.00 |
| 881.60 | Н | - | - | -97.16 | 30.75 | 40.59 | -56.82 | -13.00 | -43.82 |

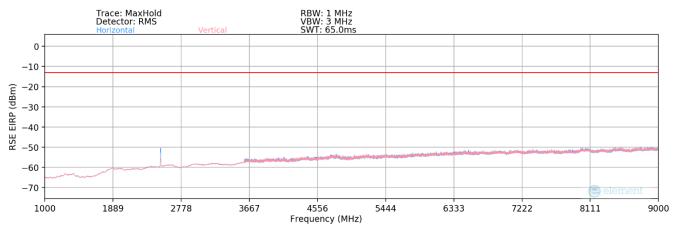
Table 7-26. Radiated Spurious Data (WCDMA Cell – Mid Channel _Ant A + Ant B)

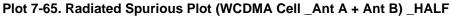
| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | |
|----------------------|-----------------|-----------------------------------|---------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 61 of 71 |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Fage of 0171 |
| © 2022 ELEMENT | | | V3.0 1/4/2022 |

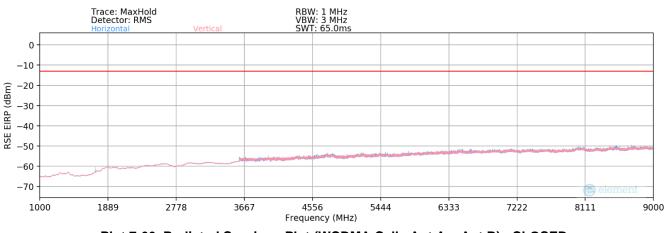












Plot 7-66. Radiated Spurious Plot (WCDMA Cell _Ant A + Ant B) _CLOSED

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 62 of 71 | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 62 of 71 | | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 | | |



| Mode: | WCDMA RMC |
|------------------|-----------|
| Channel: | 4132 |
| Frequency (MHz): | 826.4 |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1652.80 | Н | 158 | 68 | -74.68 | -3.78 | 28.54 | -66.71 | -13.00 | -53.71 |
| 2479.20 | Н | 168 | 145 | -63.06 | 0.51 | 44.45 | -50.80 | -13.00 | -37.80 |
| 3305.60 | Н | - | - | -77.06 | 1.95 | 31.89 | -63.37 | -13.00 | -50.37 |
| 4132.00 | Н | - | - | -77.15 | 2.98 | 32.83 | -62.43 | -13.00 | -49.43 |
| 4958.40 | Н | - | - | -77.64 | 3.94 | 33.30 | -61.96 | -13.00 | -48.96 |

Table 7-27. Radiated Spurious Data (WCDMA Cell – Low Channel _Ant A + Ant B)

| Mode: | WCDMA RMC |
|------------------|-----------|
| Channel: | 4183 |
| Frequency (MHz): | 836.6 |
| | |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1673.20 | Н | 205 | 57 | -74.32 | -3.54 | 29.14 | -66.12 | -13.00 | -53.12 |
| 2509.80 | Н | 199 | 210 | -62.98 | 0.80 | 44.82 | -50.43 | -13.00 | -37.43 |
| 3346.40 | Н | - | - | -77.01 | 1.95 | 31.94 | -63.32 | -13.00 | -50.32 |
| 4183.00 | Н | - | - | -77.62 | 2.95 | 32.33 | -62.93 | -13.00 | -49.93 |
| 5019.60 | Н | - | - | -77.81 | 4.35 | 33.54 | -61.72 | -13.00 | -48.72 |

Table 7-28. Radiated Spurious Data (WCDMA Cell – Mid Channel _Ant A + Ant B)

| Mode: | WCDMA RMC |
|------------------|-----------|
| Channel: | 4233 |
| Frequency (MHz): | 846.6 |

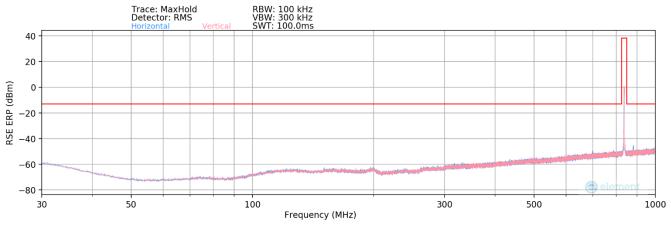
| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1693.20 | Н | 143 | 58 | -75.01 | -3.06 | 28.93 | -66.33 | -13.00 | -53.33 |
| 2539.80 | Н | 139 | 202 | -63.55 | 1.21 | 44.66 | -50.60 | -13.00 | -37.60 |
| 3386.40 | Н | - | - | -76.43 | 1.72 | 32.29 | -62.97 | -13.00 | -49.97 |
| 4233.00 | Н | - | - | -77.09 | 2.89 | 32.80 | -62.45 | -13.00 | -49.45 |
| 5079.60 | Н | - | - | -78.18 | 4.56 | 33.38 | -61.88 | -13.00 | -48.88 |

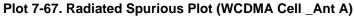
Table 7-29. Radiated Spurious Data (WCDMA Cell – High Channel _Ant A + Ant B)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | | |
|----------------------|-----------------|----------------------------|----------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 63 of 71 | | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Fage 03 01 7 1 | | | |
| © 2022 ELEMENT | | • | V3.0 1/4/2022 | | | |



WCDMA Cell _Ant A



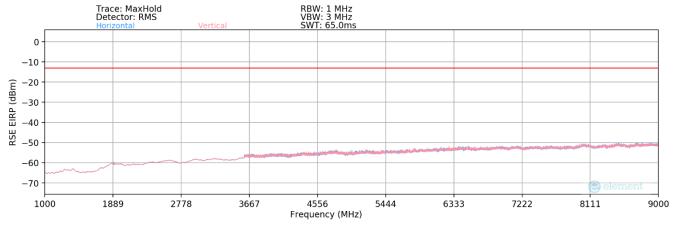


| Mode: | WCDMA RMC | | | | | | | | |
|------------------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|---|----------------|----------------|
| Channel: | | 4183 | | | | | | | |
| Frequency (MHz): 836.6 | | | | | | | | | |
| 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] |
| 154.30 | Н | - | - | -101.82 | 19.83 | 25.01 | -72.40 | -13.00 | -59.40 |
| 692.12 | Н | - | - | -99.52 | 28.34 | 35.82 | -61.59 | -13.00 | -48.59 |
| 881.60 | H | - | - | -99.26 | 30.75 | 38.49 | -58.92 | -13.00 | -45.92 |

Table 7-30. Radiated Spurious Data (WCDMA Cell – Mid Channel _Ant A)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|----------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 64 of 71 | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Fage 64 01 7 1 | | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 | | |







| Mode: | WCDMA RMC |
|------------------|-----------|
| Channel: | 4132 |
| Frequency (MHz): | 826.4 |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1652.80 | Н | - | - | -75.92 | -3.90 | 27.18 | -68.08 | -13.00 | -55.08 |
| 2479.20 | Н | 157 | 143 | -75.49 | 0.35 | 31.86 | -63.40 | -13.00 | -50.40 |
| 3305.60 | Н | - | - | -76.72 | 1.93 | 32.21 | -63.05 | -13.00 | -50.05 |
| 4132.00 | Н | - | - | -77.24 | 2.86 | 32.62 | -62.64 | -13.00 | -49.64 |
| 4958.40 | Н | - | - | -77.85 | 3.90 | 33.05 | -62.21 | -13.00 | -49.21 |

Table 7-31. Radiated Spurious Data (WCDMA Cell – Low Channel _Ant A)

| Mode: | WCDMA RMC |
|------------------|-----------|
| Channel: | 4183 |
| Frequency (MHz): | 836.6 |
| | |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1673.20 | Н | - | - | -76.18 | -3.65 | 27.17 | -68.09 | -13.00 | -55.09 |
| 2509.80 | Н | 153 | 352 | -75.98 | 0.74 | 31.76 | -63.50 | -13.00 | -50.50 |
| 3346.40 | Н | - | - | -76.73 | 1.85 | 32.12 | -63.14 | -13.00 | -50.14 |
| 4183.00 | Н | - | - | -77.39 | 2.76 | 32.37 | -62.88 | -13.00 | -49.88 |
| 5019.60 | Н | - | - | - 7 8.15 | 4.18 | 33.03 | -62.22 | -13.00 | -49.22 |

Table 7-32. Radiated Spurious Data (WCDMA Cell – Mid Channel _Ant A)

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | | |
|----------------------|-----------------|----------------------------|---------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage CE of 71 | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Page 65 of 71 | | |
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| Mode: | WCDMA RMC |
|------------------|-----------|
| Channel: | 4233 |
| Frequency (MHz): | 846.6 |

| 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] |
|-----------------|--------------------|------------------------|----------------------------------|----------------------------|----------------|-------------------------------|--|----------------|----------------|
| 1693.20 | Н | - | - | -76.52 | -3.11 | 27.37 | -67.89 | -13.00 | -54.89 |
| 2539.80 | Н | 184 | 332 | -75.94 | 1.12 | 32.18 | -63.08 | -13.00 | -50.08 |
| 3386.40 | Н | - | - | -76.62 | 1.66 | 32.04 | -63.22 | -13.00 | -50.22 |
| 4233.00 | Н | - | - | -77.62 | 2.84 | 32.22 | -63.04 | -13.00 | -50.04 |
| 5079.60 | Н | - | - | -78.09 | 4.52 | 33.43 | -61.82 | -13.00 | -48.82 |

Table 7-33. Radiated Spurious Data (WCDMA Cell – High Channel _Ant A)

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | |
|----------------------|-----------------|-----------------------------------|---------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 66 of 71 |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Faye 00 01 / 1 | |
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7.7 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 22 and RSS-132, the frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency.

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

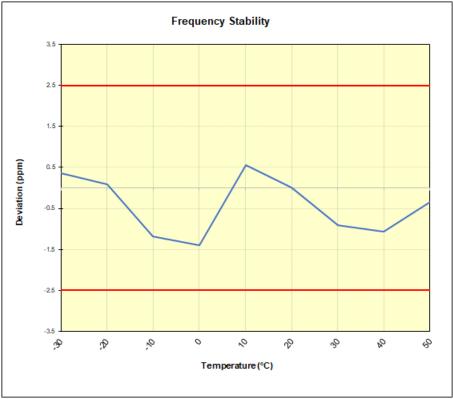
None

| FCC ID: A3LSMF936JPN | | PART 22 MEASUREMENT REPORT | | |
|----------------------|-----------------|----------------------------|---------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 67 of 71 | |
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| © 2022 ELEMENT | · | · | V3.0 1/4/2022 | |



| LTE Band 5 | | | | | | | |
|------------------|-------------|------------------|-------------------|--------------------|------------------|--|--|
| | Operating F | requency (Hz): | 836,500,000 | | | | |
| | Ref. | Voltage (VDC): | 4.38 | | | | |
| | | Deviation Limit: | ± 0.00025% | or 2.5 ppm | | | |
| | | | | | | | |
| Voltage (%) | Power (VDC) | Temp (°C) | Frequency (Hz) | Freq. Dev. (Hz) | Deviation (%) | | |
| | | - 30 | 836,500,476 | 300 | 0.0000359 | | |
| | | - 20 | 836,500,241 | 65 | 0.000078 | | |
| | | - 10 | 836,499,183 | -993 | -0.0001187 | | |
| | | 0 | 836,499,010 | -1,166 | -0.0001394 | | |
| 100 % | 4.38 | + 10 | 836,500,638 | 463 | 0.0000553 | | |
| | | + 20 (Ref) | 836,500,176 | 0 | 0.0000000 | | |
| | | + 30 | 836,499,420 | -756 | -0.0000903 | | |
| | | + 40 | 836,499,291 | -885 | -0.0001057 | | |
| | | + 50 | 836,499,886 | -290 | -0.0000347 | | |
| Battery Endpoint | 3.35 | + 20 | 836,499,327 | -849 | -0.0001015 | | |

Table 7-34. LTE Band 5 Frequency Stability Data



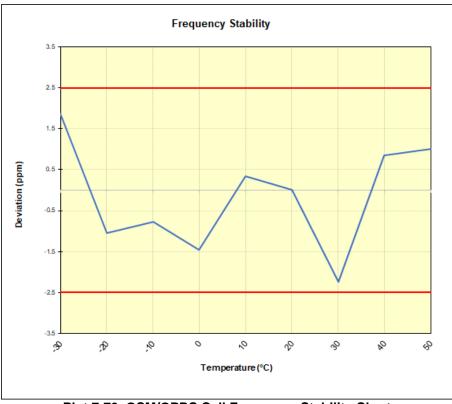
Plot 7-69. LTE Band 5 Frequency Stability Chart

| FCC ID: A3LSMF936JPN | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager | | |
|----------------------|----------------------------|-----------------------|-----------------------------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 68 of 71 | | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | 2022 Portable Handset | | | |
| © 2022 ELEMENT | | · | V3.0 1/4/2022 | | |



| GSM/GPRS Cellular | | | | | | | |
|-------------------|-------------|------------------|-------------------|--------------------|------------------|--|--|
| | Operating F | requency (Hz): | 836,60 | 00,000 | | | |
| | Ref. | Voltage (VDC): | 4.38 | | | | |
| | | Deviation Limit: | ± 0.00025% | or 2.5 ppm | | | |
| | | | | | - | | |
| Voltage (%) | Power (VDC) | Temp (°C) | Frequency (Hz) | Freq. Dev. (Hz) | Deviation (%) | | |
| | | - 30 | 836,604,719 | 1,566 | 0.0001871 | | |
| | | - 20 | 836,602,273 | -880 | -0.0001052 | | |
| | | - 10 | 836,602,511 | -642 | -0.0000768 | | |
| | | 0 | 836,601,938 | -1,215 | -0.0001453 | | |
| 100 % | 4.38 | + 10 | 836,603,440 | 287 | 0.0000343 | | |
| | | + 20 (Ref) | 836,603,153 | 0 | 0.0000000 | | |
| | | + 30 | 836,601,283 | -1,870 | -0.0002235 | | |
| | | + 40 | 836,603,865 | 712 | 0.0000851 | | |
| | | + 50 | 836,604,002 | 849 | 0.0001015 | | |
| Battery Endpoint | 3.35 | + 20 | 836,601,781 | -1,372 | -0.0001640 | | |

Table 7-35. GSM/GPRS Cell Frequency Stability Data



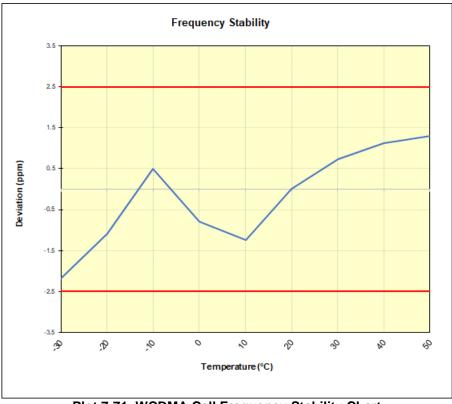
Plot 7-70. GSM/GPRS Cell Frequency Stability Chart

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | |
|----------------------|-----------------|-----------------------------------|---------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 69 of 71 |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Fage 09 01 / 1 | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 |



| WCDMA Cellular | | | | | | | |
|------------------|-------------|------------------|-------------------|--------------------|------------------|--|--|
| | Operating F | requency (Hz): | 826,400,000 | | | | |
| | Ref. | Voltage (VDC): | 4. | 4.38 | | | |
| | | Deviation Limit: | ± 0.00025% | o or 2.5 ppm | | | |
| | | | | | | | |
| Voltage (%) | Power (VDC) | Temp (°C) | Frequency (Hz) | Freq. Dev. (Hz) | Deviation (%) | | |
| | | - 30 | 826,407,275 | -1,802 | -0.0002181 | | |
| | | - 20 | 826,408,187 | -891 | -0.0001078 | | |
| | | - 10 | 826,409,490 | 412 | 0.0000499 | | |
| | | 0 | 826,408,427 | -651 | -0.0000787 | | |
| 100 % | 4.38 | + 10 | 826,408,050 | -1,028 | -0.0001244 | | |
| | | + 20 (Ref) | 826,409,077 | 0 | 0.0000000 | | |
| | | + 30 | 826,409,682 | 605 | 0.0000732 | | |
| | | + 40 | 826,410,011 | 934 | 0.0001130 | | |
| | | + 50 | 826,410,153 | 1,076 | 0.0001301 | | |
| Battery Endpoint | 3.35 | + 20 | 826,410,694 | 1,617 | 0.0001956 | | |

Table 7-36. WCDMA Cell Frequency Stability Data



Plot 7-71. WCDMA Cell Frequency Stability Chart

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | | |
|----------------------|-----------------|-----------------------------------|---------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 70 of 71 | |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | 2022 Portable Handset | | |
| © 2022 ELEMENT | | | V3.0 1/4/2022 | |



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 22 of the FCC rules.

| FCC ID: A3LSMF936JPN | | Approved by: Technical Manager | |
|----------------------|-----------------|-----------------------------------|---------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 71 of 71 |
| 1M2206010070-02.A3L | 6/15 - 7/4/2022 | Portable Handset | Fage / TOL/T |
| © 2022 ELEMENT | | | V3.0 1/4/2022 |