



ELEMENT WASHINGTON DC LLC

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PART 22 MEASUREMENT REPORT

Applicant Name:

Sony Corporation
1-7-1 Konan Minato-ku
Tokyo, 108-0075
Japan

Date of Testing:

02/08/2023 - 03/24/2023

Test Report Issue Date:

04/28/2023

Test Site/Location:

Element lab., Columbia, MD, USA

Test Report Serial No.:

1M2302060006-01-R2.PY7

FCC ID:

PY7-84558E

Applicant Name:

Sony Corporation

Application Type:

Certification

EUT Type:

Portable Handset

FCC Classification:

PCS Licensed Transmitter Held to Ear (PCE)

FCC Rule Part:

22

Test Procedure(s):

ANSI C63.26-2015, KDB 648474 D03 v01r04

Note: This revised Test Report (S/N: 1M2302060006-01-R2.PY7) supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

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

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

RJ Ortanez
Executive Vice President



| | | | |
|---------------------------------------------------|-----------------------------------------------|--------------------------------------|------------------------------------------|
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| Mode | Bandwidth | Modulation | Tx Frequency Range [MHz] | ERP | | EIRP | | Emission Designator |
|------------------|-----------|-----------------|--------------------------|----------------|------------------|----------------|------------------|---------------------|
| | | | | Max. Power [W] | Max. Power [dBm] | Max. Power [W] | Max. Power [dBm] | |
| GSM/GPRS | N/A | GMSK | 824.2 - 848.8 | 0.167 | 22.24 | 0.275 | 24.39 | 243KXW |
| EDGE | N/A | B-PSK | 824.2 - 848.8 | 0.051 | 17.05 | 0.083 | 19.20 | 248KG7W |
| WCDMA | N/A | Spread Spectrum | 826.4 - 846.6 | 0.091 | 19.61 | 0.150 | 21.76 | 4M16F9W |
| LTE Band 5 Main1 | 10 MHz | QPSK | 829.0 - 844.0 | 0.102 | 20.10 | 0.168 | 22.25 | 9M02G7D |
| | | 16QAM | 829.0 - 844.0 | 0.086 | 19.36 | 0.141 | 21.51 | 9M04W7D |
| | 5 MHz | QPSK | 826.5 - 846.5 | 0.106 | 20.26 | 0.174 | 22.41 | 4M54G7D |
| | | 16QAM | 826.5 - 846.5 | 0.082 | 19.13 | 0.134 | 21.28 | 4M52W7D |
| | 3 MHz | QPSK | 825.5 - 847.5 | 0.099 | 19.94 | 0.162 | 22.09 | 2M71G7D |
| | | 16QAM | 825.5 - 847.5 | 0.083 | 19.21 | 0.137 | 21.36 | 2M72W7D |
| | 1.4 MHz | QPSK | 824.7 - 848.3 | 0.095 | 19.77 | 0.155 | 21.92 | 1M11G7D |
| | | 16QAM | 824.7 - 848.3 | 0.083 | 19.21 | 0.137 | 21.36 | 1M11W7D |
| NR Band n5 Main1 | 20 MHz | $\pi/2$ BPSK | 834.0 - 839.0 | 0.076 | 18.78 | 0.124 | 20.93 | 18M0G7D |
| | | QPSK | 834.0 - 839.0 | 0.074 | 18.66 | 0.121 | 20.81 | 19M0G7D |
| | | 16QAM | 834.0 - 839.0 | 0.063 | 17.96 | 0.103 | 20.11 | 19M0W7D |
| | 15 MHz | $\pi/2$ BPSK | 831.5 - 841.5 | 0.076 | 18.79 | 0.124 | 20.94 | 13M5G7D |
| | | QPSK | 831.5 - 841.5 | 0.076 | 18.81 | 0.125 | 20.96 | 14M2G7D |
| | | 16QAM | 831.5 - 841.5 | 0.062 | 17.82 | 0.102 | 20.07 | 14M2W7D |
| | 10 MHz | $\pi/2$ BPSK | 829.0 - 844.0 | 0.073 | 18.61 | 0.119 | 20.76 | 9M04G7D |
| | | QPSK | 829.0 - 844.0 | 0.074 | 18.71 | 0.122 | 20.86 | 9M34G7D |
| | | 16QAM | 829.0 - 844.0 | 0.064 | 18.07 | 0.105 | 20.22 | 9M34W7D |
| | 5 MHz | $\pi/2$ BPSK | 826.5 - 846.5 | 0.075 | 18.74 | 0.123 | 20.89 | 4M52G7D |
| | | QPSK | 826.5 - 846.5 | 0.073 | 18.62 | 0.119 | 20.77 | 4M51G7D |
| | | 16QAM | 826.5 - 846.5 | 0.061 | 17.88 | 0.101 | 20.03 | 4M54W7D |

Overview Table – Main1 Antenna

| Mode | Bandwidth | Modulation | Tx Frequency Range [MHz] | ERP | | EIRP | | Emission Designator |
|----------------|-----------|--------------|--------------------------|----------------|------------------|----------------|------------------|---------------------|
| | | | | Max. Power [W] | Max. Power [dBm] | Max. Power [W] | Max. Power [dBm] | |
| LTE Band 5 Sub | 10 MHz | QPSK | 829.0 - 844.0 | 0.035 | 15.46 | 0.058 | 17.61 | 9M02G7D |
| | | 16QAM | 829.0 - 844.0 | 0.029 | 14.64 | 0.048 | 16.79 | 9M03W7D |
| | 5 MHz | QPSK | 826.5 - 846.5 | 0.035 | 15.47 | 0.058 | 17.62 | 4M54G7D |
| | | 16QAM | 826.5 - 846.5 | 0.029 | 14.66 | 0.048 | 16.81 | 4M54W7D |
| | 3 MHz | QPSK | 825.5 - 847.5 | 0.035 | 15.47 | 0.058 | 17.62 | 2M71G7D |
| | | 16QAM | 825.5 - 847.5 | 0.030 | 14.71 | 0.049 | 16.86 | 2M72W7D |
| | 1.4 MHz | QPSK | 824.7 - 848.3 | 0.035 | 15.46 | 0.058 | 17.61 | 1M11G7D |
| | | 16QAM | 824.7 - 848.3 | 0.028 | 14.54 | 0.047 | 16.69 | 1M12W7D |
| NR Band n5 Sub | 20 MHz | $\pi/2$ BPSK | 834.0 - 839.0 | 0.044 | 16.45 | 0.072 | 18.60 | 18M0G7D |
| | | QPSK | 834.0 - 839.0 | 0.045 | 16.51 | 0.074 | 18.66 | 19M0G7D |
| | | 16QAM | 834.0 - 839.0 | 0.036 | 15.51 | 0.058 | 17.66 | 19M0W7D |
| | 15 MHz | $\pi/2$ BPSK | 831.5 - 841.5 | 0.045 | 16.55 | 0.074 | 18.70 | 13M5G7D |
| | | QPSK | 831.5 - 841.5 | 0.045 | 16.50 | 0.073 | 18.65 | 14M2G7D |
| | | 16QAM | 831.5 - 841.5 | 0.036 | 15.52 | 0.059 | 17.67 | 14M1W7D |
| | 10 MHz | $\pi/2$ BPSK | 829.0 - 844.0 | 0.043 | 16.38 | 0.071 | 18.53 | 9M01G7D |
| | | QPSK | 829.0 - 844.0 | 0.043 | 16.35 | 0.071 | 18.50 | 9M32G7D |
| | | 16QAM | 829.0 - 844.0 | 0.036 | 15.53 | 0.059 | 17.68 | 9M36W7D |
| | 5 MHz | $\pi/2$ BPSK | 826.5 - 846.5 | 0.046 | 16.59 | 0.075 | 18.74 | 4M54G7D |
| | | QPSK | 826.5 - 846.5 | 0.042 | 16.19 | 0.068 | 18.34 | 4M52G7D |
| | | 16QAM | 826.5 - 846.5 | 0.033 | 15.13 | 0.053 | 17.28 | 4M52W7D |

Overview Table – Sub Antenna

| | | | |
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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 **Sony Portable Handset FCC ID: PY7-84558E**. 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.: 01443, 02904, 02227

2.2 Device Capabilities

This device contains the following capabilities:

850/1900 GSM/GPRS/EDGE, 850/1700/1900 WCDMA/HSPA, Multi-band LTE, Multi-band 5G NR FR1, 802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII (5 and 6 GHz), Bluetooth (1x, EDR, LE), NFC, Wireless Power Transfer

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: Belkin F7U050 while operating under normal conditions in a simulated call or data transmission configuration. The worst case radiated emissions data is shown in this report.

2.4 Software and Firmware

Testing was performed on device(s) using software/firmware version 0.621 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 to maximize the reduction of reflections for measurements above 1GHz. For measurements below 1GHz, the absorbers are removed. A raised turntable is used for radiated measurement. The turn table is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm tall test table made of Styrodur is placed on top of the turn table. A Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m.

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

For radiated power measurements, substitution method is used per the guidance of ANSI C63.26-2015. For emissions below 1GHz, a half-wave dipole is substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT. The power of the emission is calculated using the following formula:

$$P_d \text{ [dBm]} = P_g \text{ [dBm]} - \text{cable loss [dB]} + \text{antenna gain [dBd/dBi]};$$

where P_d is the dipole equivalent power, P_g is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to $P_g \text{ [dBm]} - \text{cable loss [dB]}$.

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:

$$E_{\text{[dB}\mu\text{V/m]}} = \text{Measured amplitude level}_{\text{[dBm]}} + 107 + \text{Cable Loss}_{\text{[dB]}} + \text{Antenna Factor}_{\text{[dB/m]}}$$

And

$$\text{EIRP}_{\text{[dBm]}} = E_{\text{[dB}\mu\text{V/m]}} + 20\log D - 104.8; \text{ where } D \text{ is the measurement distance in meters.}$$

All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014. Additionally, radiated emissions below 30MHz are also validated on an Open Area Test Site to assert correlation with the chamber measurements per the requirements of KDB 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 (\pm 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 with the requirements of ANSI C63.5-2017.

| Manufacturer | Model | Description | Cal Date | Cal Interval | Cal Due | Serial Number |
|-----------------------|---------|------------------------------------------|-----------|--------------|-----------|---------------|
| - | AP1-002 | EMC Cable and Switch System | 1/11/2023 | Annual | 1/11/2024 | AP1-001 |
| - | ETS-001 | EMC Cable and Switch System | 1/11/2023 | Annual | 1/11/2024 | ETS-001 |
| - | ETS-002 | EMC Cable and Switch System | 1/11/2023 | Annual | 1/11/2024 | ETS-002 |
| - | LTx1 | Licensed Transmitter Cable Set | 1/12/2023 | Annual | 1/12/2024 | LTx1 |
| - | LTx2 | Licensed Transmitter Cable Set | 1/12/2023 | Annual | 1/12/2024 | LTx2 |
| - | LTx3 | Licensed Transmitter Cable Set | 1/12/2023 | Annual | 1/12/2024 | LTx3 |
| - | LTx4 | Licensed Transmitter Cable Set | 1/12/2023 | Annual | 1/12/2024 | LTx4 |
| - | LTx5 | Licensed Transmitter Cable Set | 1/12/2023 | Annual | 1/12/2024 | LTx5 |
| Anritsu | MT8821C | Radio Communication Analyzer | N/A | | | 6201525694 |
| Emco | 3115 | Horn Antenna (1-18GHz) | 8/8/2022 | Biennial | 8/8/2023 | 9704-5182 |
| Espec | SCP-220 | Environmental Chamber | 5/25/2022 | Annual | 5/25/2023 | OCP55H0612K05 |
| ETS Lindgren | 3164-10 | Quad Ridge Horn 400MHz - 10000MHz | 5/10/2021 | Biennial | 5/10/2023 | 00166283 |
| Keysight Technologies | N9030A | PXA Signal Analyzer | 9/6/2022 | Annual | 9/6/2023 | MY54490576 |
| Rohde & Schwarz | CMW500 | Radio Communication Tester | N/A | | | 112347 |
| Rohde & Schwarz | ESU40 | EMI Test Receiver (40GHz) | 8/25/2022 | Annual | 8/25/2023 | 100348 |
| Rohde & Schwarz | FSW26 | 2Hz-26.5GHz Signal and Spectrum Analyzer | 11/6/2022 | Annual | 11/6/2023 | 103187 |
| Sunol Sciences | JB5 | Bi-Log Antenna (30M - 5GHz) | 8/30/2022 | Biennial | 8/30/2024 | A051107 |

Table 5-1. Test Equipment

Notes:

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

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6.0 SAMPLE CALCULATIONS

GSM Emission Designator

Emission Designator = 250KGXW

GSM BW = 250 kHz
 G = Phase Modulation
 X = Cases not otherwise covered
 W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 250KG7W

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

WCDMA Emission Designator

Emission Designator = 4M16F9W

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

QPSK Modulation

Emission Designator = 8M62G7D

LTE BW = 8.62 MHz
 G = Phase Modulation
 7 = Quantized/Digital Info
 D = Data transmission, telemetry, telecommand

QAM Modulation

Emission Designator = 8M45W7D

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

Spurious Radiated Emission

Example: Spurious emission at 3700.40 MHz

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

| | | | |
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7.0 TEST RESULTS

7.1 Summary

Company Name: Sony Corporation
 FCC ID: PY7-84558E
 FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
 Mode(s): GSM/GPRS/EDGE/WCDMA/LTE/NR

| Test Condition | Test Description | FCC Part Section(s) | Test Limit | Test Result | Reference |
|------------------|----------------------------------------------------------------|----------------------|---------------------------------------------------------------------------------|-------------|-------------------|
| CONDUCTED | Transmitter Conducted Output Power | 2.1046(a), 2.1046(c) | N/A | PASS | Section 7.2 |
| | Occupied Bandwidth | 2.1049(h) | N/A | PASS | Section 7.3 |
| | Conducted Band Edge / Spurious Emissions | 2.1051, 22.917(a) | $\geq 43 + 10 \log (P[\text{Watts}])$ dB of attenuation below transmitter power | PASS | Sections 7.4, 7.5 |
| | Frequency Stability | 2.1055, 22.355 | The carrier frequency of the transmitter must be maintained within the 2.5ppm | PASS | Section 7.8 |
| RADIATED | Effective Radiated Power / Equivalent Isotropic Radiated Power | 22.913(a)(5) | < 7 Watts max. ERP | PASS | Section 7.6 |
| | Radiated Spurious Emissions | 2.1053, 22.917(a) | $> 43 + 10 \log_{10} (P[\text{Watts}])$ for all out-of-band emissions | PASS | Section 7.7 |

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.
- 4) All conducted emissions measurements are performed with automated test software to capture the corresponding plots necessary to show compliance. The measurement software utilized is EMC Software Tool v1.1.

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7.2 Conducted Output Power Data

Test Overview

All emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst-case configuration. All modes of operation were investigated, and the worst-case configuration results are reported in this section.

Test Procedure Used

ANSI C63.26-2015 – Section 5.2

Test Settings

1. Detector = RMS
2. Trace mode = trace average for continuous emissions, max hold for pulse emissions
3. Sweep time = auto couple
4. The trace was allowed to stabilize.
5. Please see test notes below for RBW and VBW settings

Test Setup

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



Figure 7-1. Test Instrument & Measurement Setup

Test Notes

1. Conducted power measurements were evaluated using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device.
2. All other conducted power measurements are contained in the RF exposure report for this filing.

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
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| Bandwidth | Modulation | Channel | Frequency [MHz] | RB Size/Offset | Conducted Power [dBm] |
|-----------|------------|---------|-----------------|----------------|-----------------------|
| 10 MHz | QPSK | 20450 | 829.0 | 1 / 49 | 23.64 |
| | | 20525 | 836.5 | 1 / 0 | 23.68 |
| | | 20600 | 844.0 | 1 / 25 | 23.68 |
| 5 MHz | QPSK | 20425 | 826.5 | 1 / 0 | 23.69 |
| | | 20525 | 836.5 | 1 / 12 | 23.69 |
| | | 20625 | 846.5 | 1 / 12 | 23.67 |
| 3 MHz | QPSK | 20415 | 825.5 | 1 / 7 | 23.65 |
| | | 20525 | 836.5 | 1 / 7 | 23.69 |
| | | 20635 | 847.5 | 1 / 7 | 23.68 |
| 1.4 MHz | QPSK | 20415 | 825.5 | 1 / 7 | 22.99 |
| | | 20407 | 824.7 | 1 / 0 | 23.63 |
| | | 20525 | 836.5 | 1 / 3 | 23.68 |
| 1.4 MHz | 16-QAM | 20643 | 848.3 | 1 / 0 | 23.62 |
| | | 20407 | 824.7 | 1 / 0 | 22.82 |
| | | 20407 | 824.7 | 1 / 0 | 23.63 |

Table 7-2. Conducted Power Output Data (LTE Band 5 Sub)

| Bandwidth | Modulation | Channel | Frequency [MHz] | RB Size/Offset | Conducted Power [dBm] |
|-----------|------------|---------|-----------------|----------------|-----------------------|
| 20 MHz | π/2 BPSK | 166800 | 834.0 | 1 / 53 | 24.01 |
| | | 167300 | 836.5 | 1 / 53 | 24.09 |
| | | 167800 | 839.0 | 1 / 53 | 23.90 |
| | QPSK | 166800 | 834.0 | 1 / 53 | 23.96 |
| | | 167300 | 836.5 | 1 / 53 | 23.99 |
| | | 167800 | 839.0 | 1 / 53 | 23.98 |
| 16-QAM | 167800 | 839.0 | 1 / 53 | 22.92 | |
| 15 MHz | π/2 BPSK | 166300 | 831.5 | 1 / 39 | 24.04 |
| | | 167300 | 836.5 | 1 / 39 | 24.02 |
| | | 168300 | 841.5 | 1 / 20 | 24.00 |
| | QPSK | 166300 | 831.5 | 1 / 39 | 23.96 |
| | | 167300 | 836.5 | 1 / 39 | 24.00 |
| | | 168300 | 841.5 | 1 / 20 | 23.96 |
| 16-QAM | 168300 | 841.5 | 1 / 20 | 22.93 | |
| 10 MHz | π/2 BPSK | 165800 | 829.0 | 1 / 26 | 23.94 |
| | | 167300 | 836.5 | 1 / 13 | 23.89 |
| | | 168800 | 844.0 | 1 / 13 | 23.82 |
| | QPSK | 165800 | 829.0 | 1 / 26 | 23.92 |
| | | 167300 | 836.5 | 1 / 13 | 23.84 |
| | | 168800 | 844.0 | 1 / 13 | 23.81 |
| 16-QAM | 165800 | 829.0 | 1 / 26 | 23.07 | |
| 5 MHz | π/2 BPSK | 165300 | 826.5 | 1 / 18 | 24.07 |
| | | 167300 | 836.5 | 1 / 18 | 24.02 |
| | | 169300 | 846.5 | 1 / 6 | 24.04 |
| | QPSK | 165300 | 826.5 | 1 / 18 | 23.87 |
| | | 167300 | 836.5 | 1 / 18 | 23.90 |
| | | 169300 | 846.5 | 1 / 6 | 23.27 |
| 16-QAM | 165300 | 826.5 | 1 / 18 | 22.68 | |

Table 7-3. Conducted Power Output Data (NR Band n5 Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
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| NR | | | | | | LTE | | | | | | NR Conducted Power [dBm] | LTE Conducted Power [dBm] | EN-DC Total Tx. Power [dBm] |
|---------|---------|--------------------|------------|--------------------|--------------------|----------|---------|---------------------|-------------|---------------------|---------------------|--------------------------|---------------------------|-----------------------------|
| NR Band | Antenna | NR Bandwidth [MHz] | NR Channel | NR Frequency [MHz] | Mod. NR RB#/Offset | LTE Band | Antenna | LTE Bandwidth [MHz] | LTE Channel | LTE Frequency [MHz] | Mod. LTE RB#/Offset | | | |
| n5 | Main1 | 20 | 167300 | 836.5 | QPSK 100/0 | 2 | Main2 | 20 | 18900 | 1880 | QPSK 100/0 | 20.30 | 22.26 | 24.40 |
| | | | | | QPSK 100/0 | | | | | | QPSK 1/50 | 17.99 | 23.42 | 24.51 |
| | | | | | QPSK 1/53 | | | | | | QPSK 100/0 | 20.30 | 22.31 | 24.43 |
| | | | | | QPSK 1/53 | | | | | | QPSK 1/50 | 17.88 | 23.26 | 24.37 |
| | | | | | 16QAM 100/0 | | | | | | 16QAM 1/50 | 20.33 | 22.61 | 24.63 |
| n5 | Main1 | 20 | 167300 | 836.5 | QPSK 100/0 | 30 | Main2 | 10 | 27710 | 2310 | QPSK 50/0 | 21.95 | 19.53 | 23.92 |
| | | | | | QPSK 100/0 | | | | | | QPSK 1/25 | 20.34 | 20.22 | 23.29 |
| | | | | | QPSK 1/53 | | | | | | QPSK 50/0 | 21.88 | 19.40 | 23.82 |
| | | | | | QPSK 1/53 | | | | | | QPSK 1/25 | 20.28 | 20.17 | 23.24 |
| | | | | | 16QAM 100/0 | | | | | | 16QAM 50/0 | 22.64 | 18.35 | 24.01 |
| n5 | Sub | 20 | 167300 | 836.5 | QPSK 100/0 | 2 | Main2 | 20 | 18900 | 1880 | QPSK 100/0 | 19.32 | 21.68 | 23.67 |
| | | | | | QPSK 100/0 | | | | | | QPSK 1/50 | 16.81 | 22.68 | 23.68 |
| | | | | | QPSK 1/53 | | | | | | QPSK 100/0 | 19.24 | 21.65 | 23.62 |
| | | | | | QPSK 1/53 | | | | | | QPSK 1/50 | 16.76 | 22.79 | 23.76 |
| | | | | | 16QAM 1/53 | | | | | | 16QAM 1/50 | 19.20 | 21.92 | 23.78 |
| n5 | Sub | 20 | 167300 | 836.5 | QPSK 100/0 | 30 | Main2 | 10 | 27710 | 2310 | QPSK 50/0 | 20.53 | 20.60 | 23.58 |
| | | | | | QPSK 100/0 | | | | | | QPSK 1/25 | 19.21 | 21.68 | 23.63 |
| | | | | | QPSK 1/53 | | | | | | QPSK 50/0 | 20.29 | 20.60 | 23.46 |
| | | | | | QPSK 1/53 | | | | | | QPSK 1/25 | 18.97 | 21.79 | 23.62 |
| | | | | | 16QAM 100/0 | | | | | | 16QAM 1/25 | 20.45 | 21.05 | 23.77 |

Table 7-4. Conducted Power Output Data (EN-DC: NR Band n5)

| | | | |
|---------------------------------------------------|-----------------------------------------------|--------------------------------------|------------------------------------------|
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7.3 Occupied Bandwidth

Test Overview

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

Test Procedure Used

ANSI C63.26-2015 – Section 5.4.4

Test Settings

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5% of the expected OBW
3. VBW \geq 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize.
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the 99% occupied bandwidth observed in Step 7

Test Setup

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



Figure 7-2. Test Instrument & Measurement Setup

Test Notes

None.

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
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LTE Band 5 – Main1



Plot 7-1. Occupied Bandwidth Plot (LTE Band 5 - 10MHz QPSK - Full RB – Main1)



Plot 7-2. Occupied Bandwidth Plot (LTE Band 5 - 10MHz 16-QAM - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
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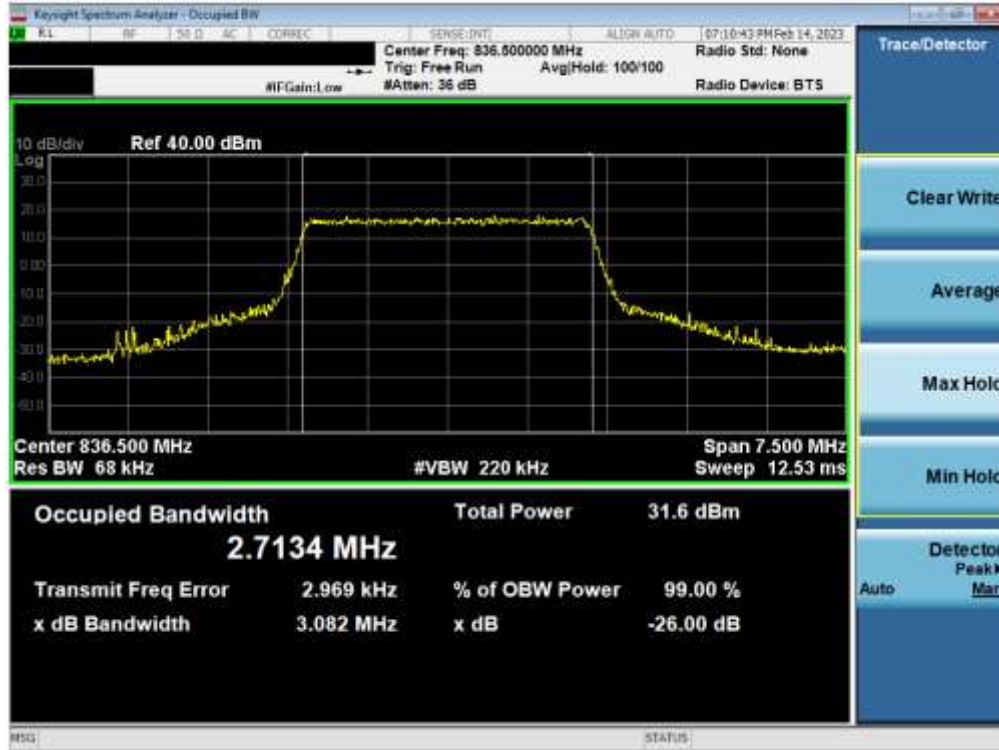


Plot 7-3. Occupied Bandwidth Plot (LTE Band 5 - 5MHz QPSK - Full RB - Main1)



Plot 7-4. Occupied Bandwidth Plot (LTE Band 5 - 5MHz 16-QAM - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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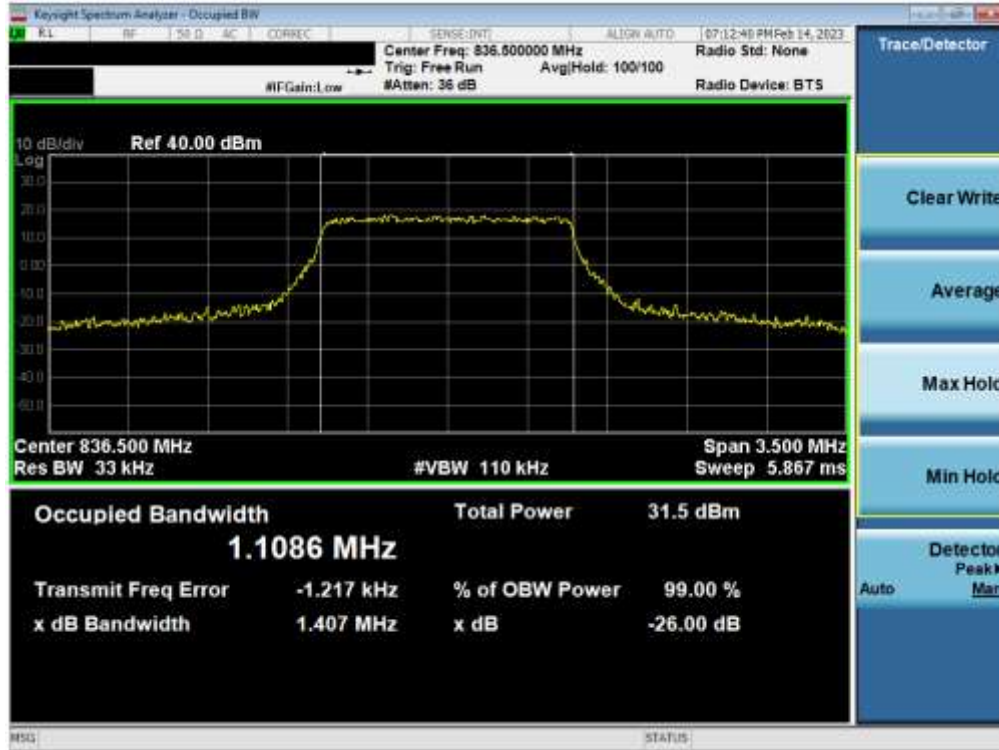


Plot 7-5. Occupied Bandwidth Plot (LTE Band 5 - 3MHz QPSK - Full RB - Main1)



Plot 7-6. Occupied Bandwidth Plot (LTE Band 5 - 3MHz 16-QAM - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
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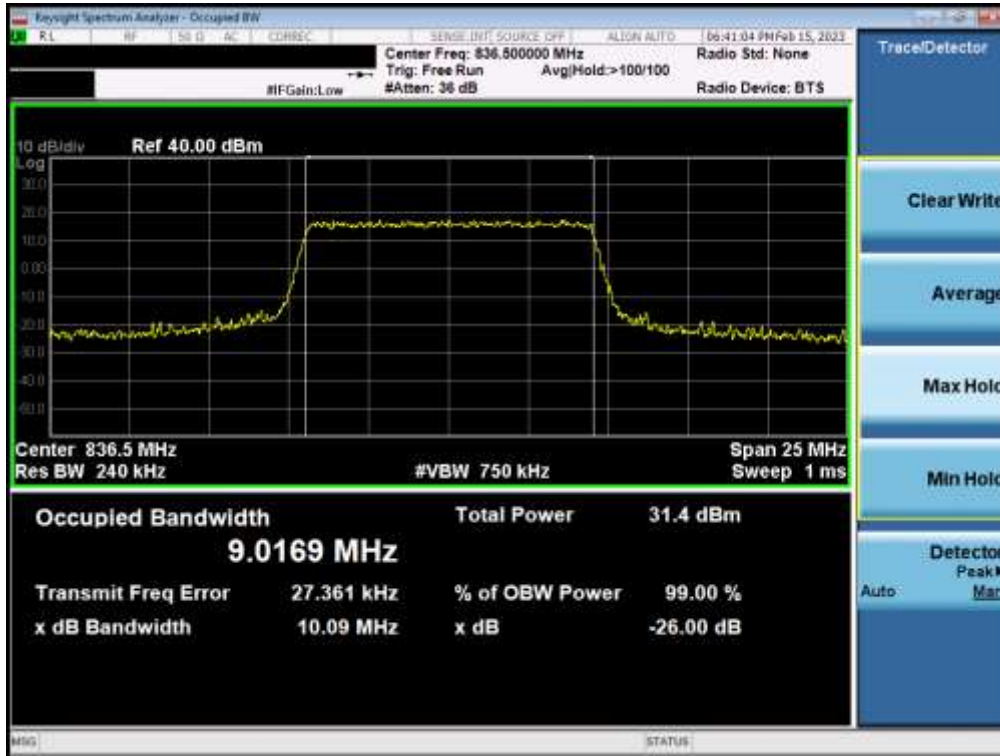
Plot 7-7. Occupied Bandwidth Plot (LTE Band 5 - 1.4MHz QPSK - Full RB - Main1)



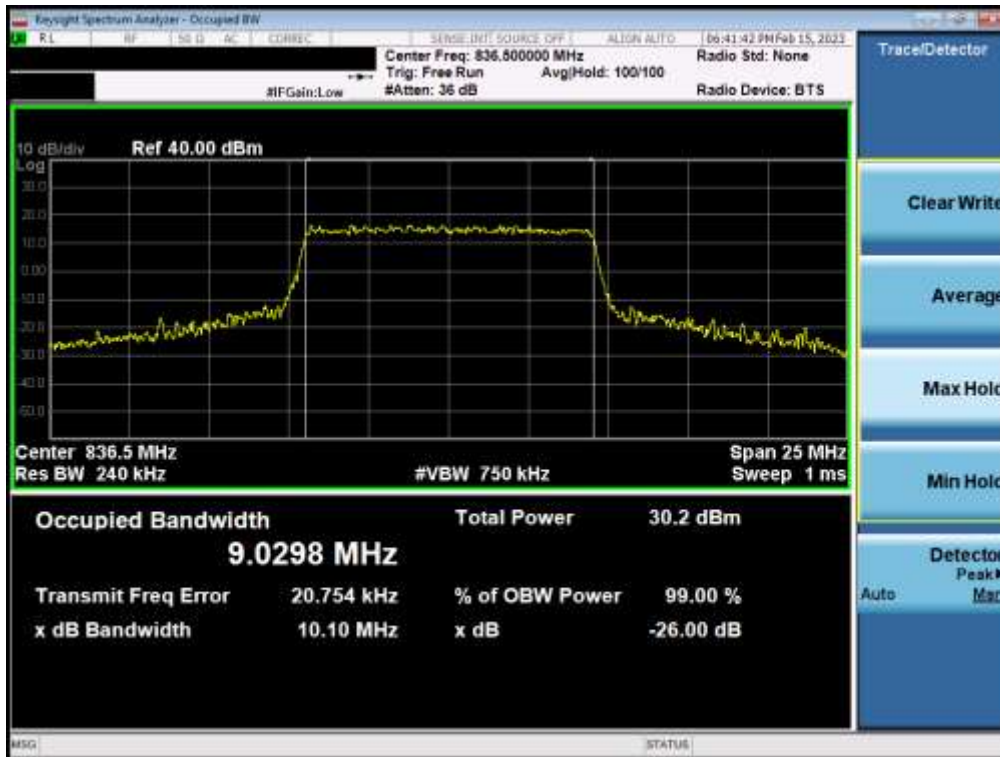
Plot 7-8. Occupied Bandwidth Plot (LTE Band 5 - 1.4MHz 16-QAM - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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LTE Band 5 – Sub

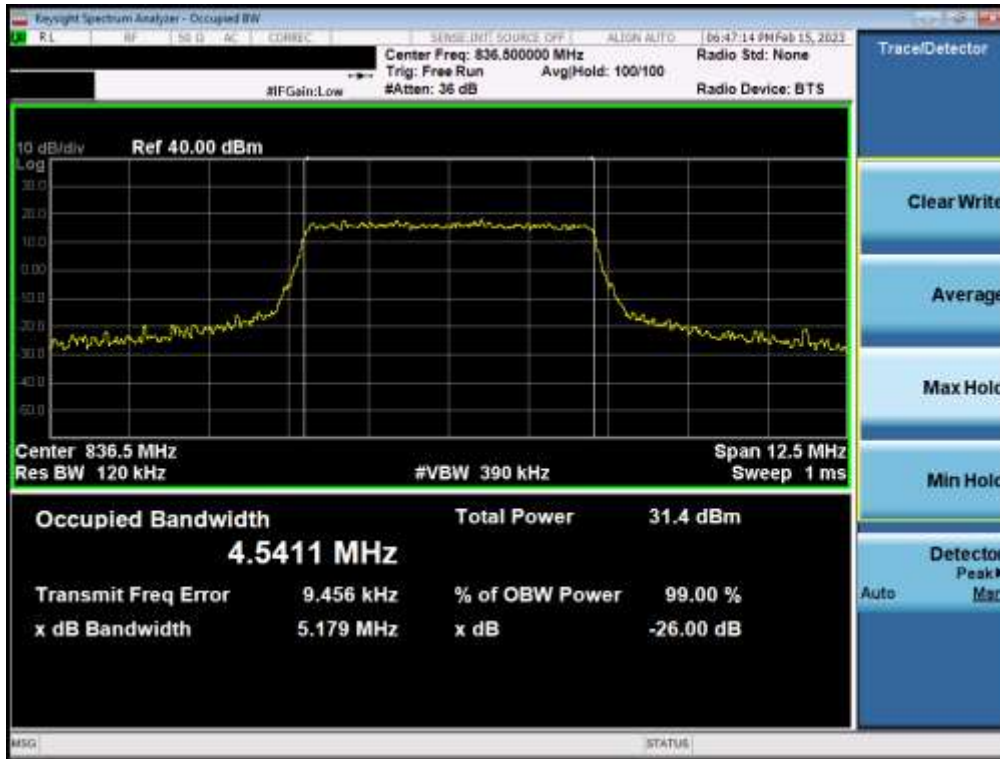


Plot 7-9. Occupied Bandwidth Plot (LTE Band 5 - 10MHz QPSK - Full RB – Sub)



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

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
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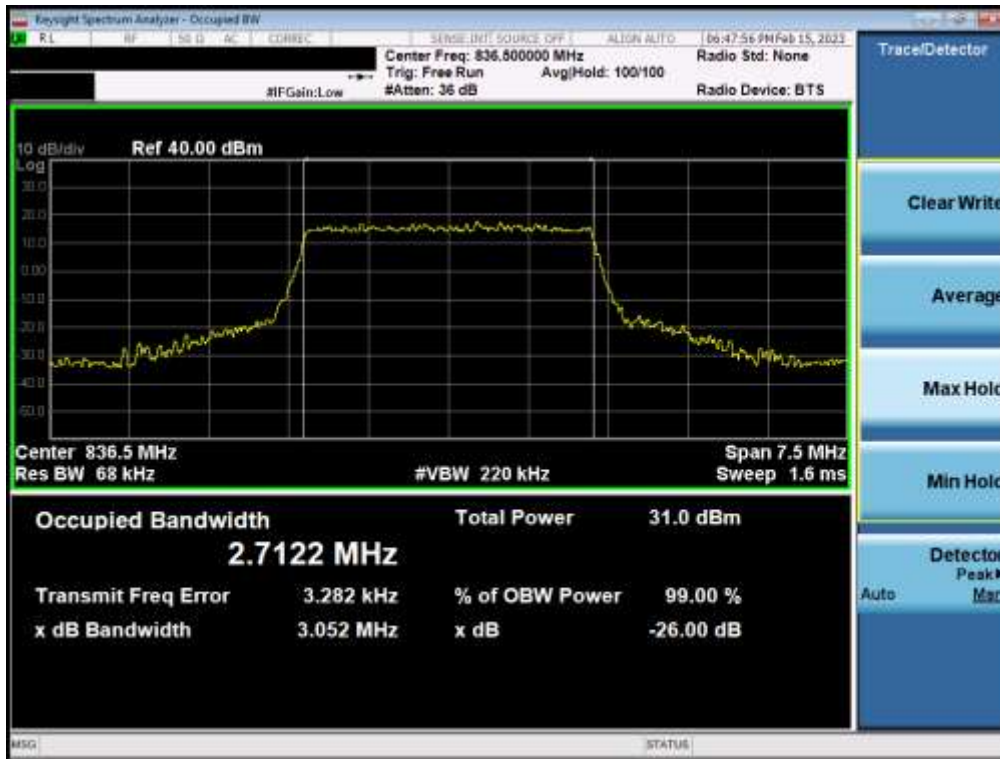


Plot 7-11. Occupied Bandwidth Plot (LTE Band 5 - 5MHz QPSK - Full RB - Sub)

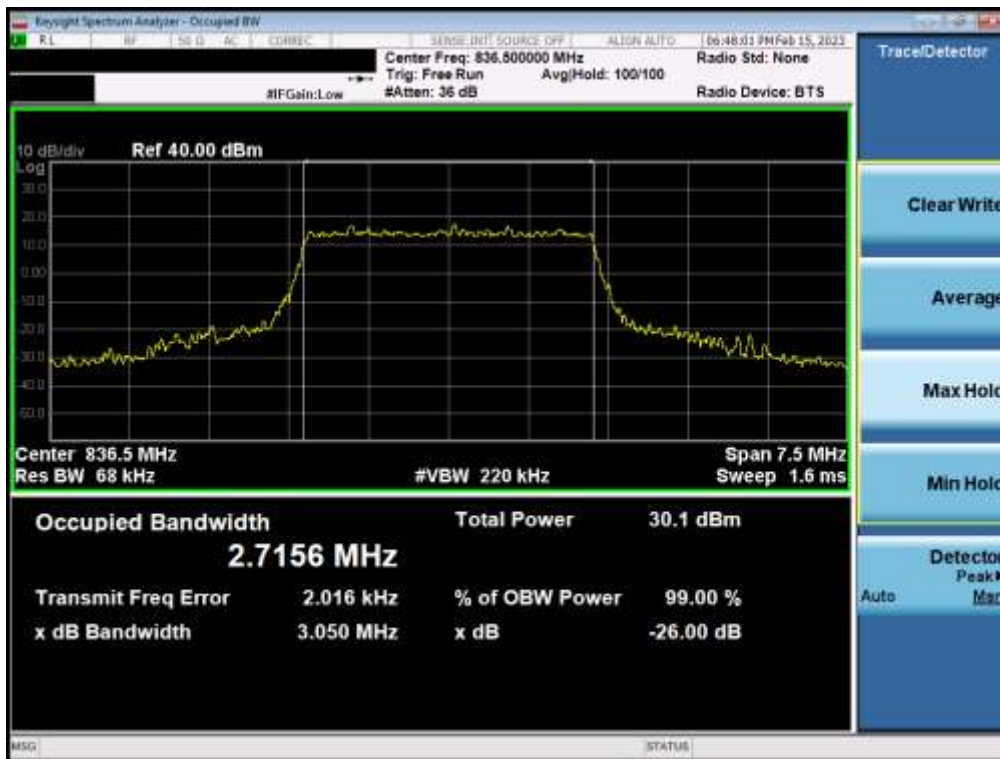


Plot 7-12. Occupied Bandwidth Plot (LTE Band 5 - 5MHz 16-QAM - Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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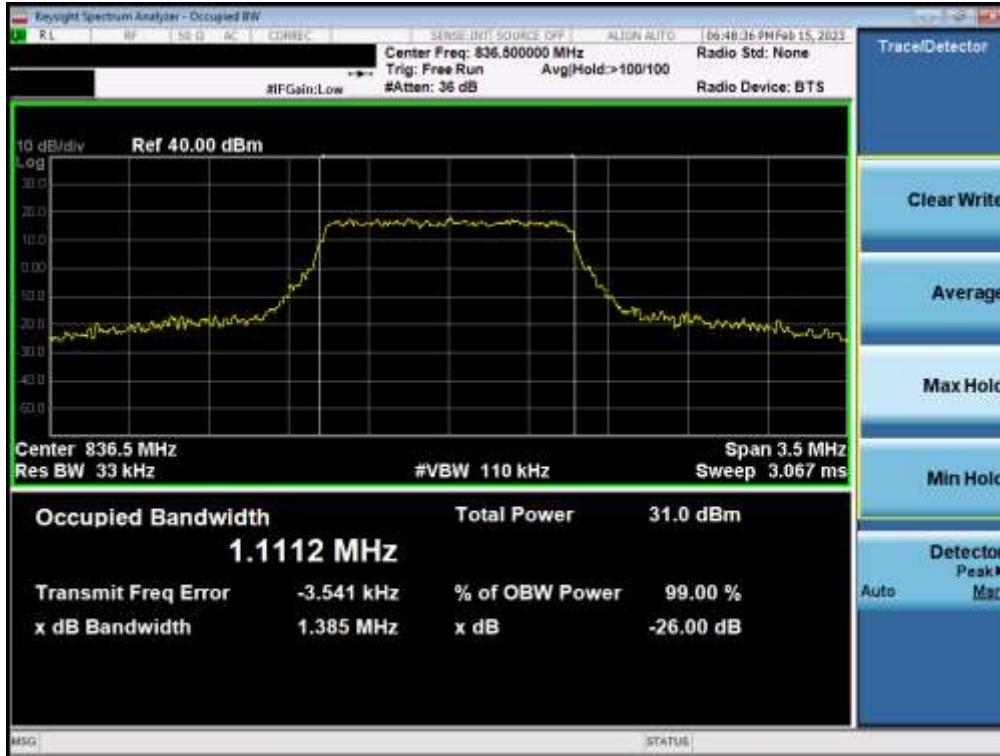


Plot 7-13. Occupied Bandwidth Plot (LTE Band 5 - 3MHz QPSK - Full RB - Sub)

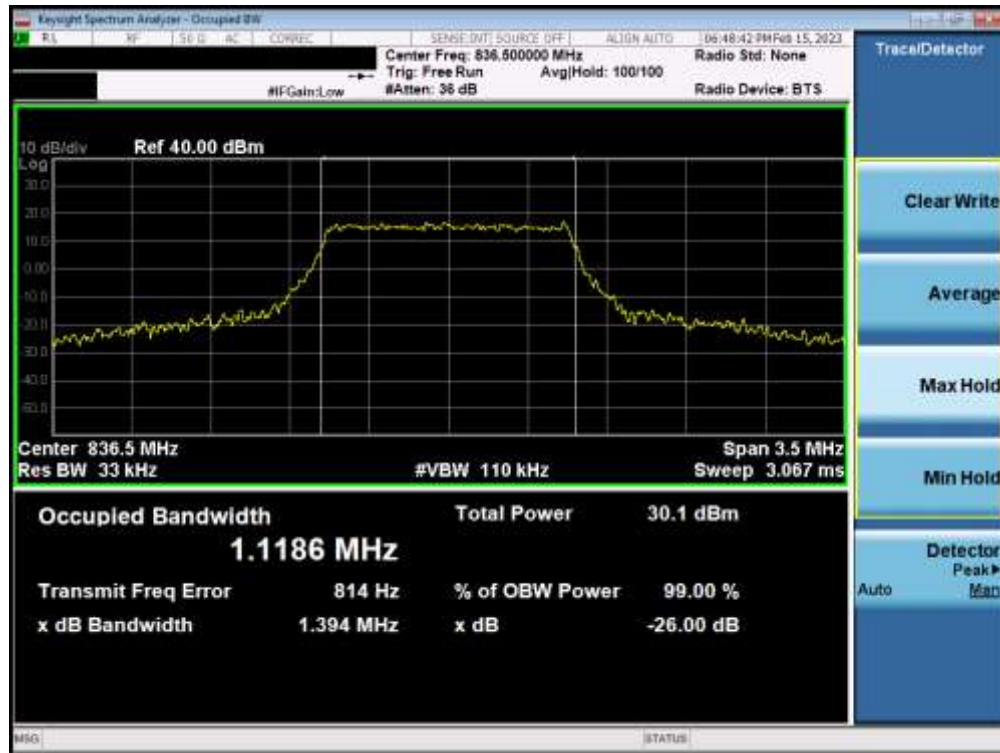


Plot 7-14. Occupied Bandwidth Plot (LTE Band 5 - 3MHz 16-QAM - Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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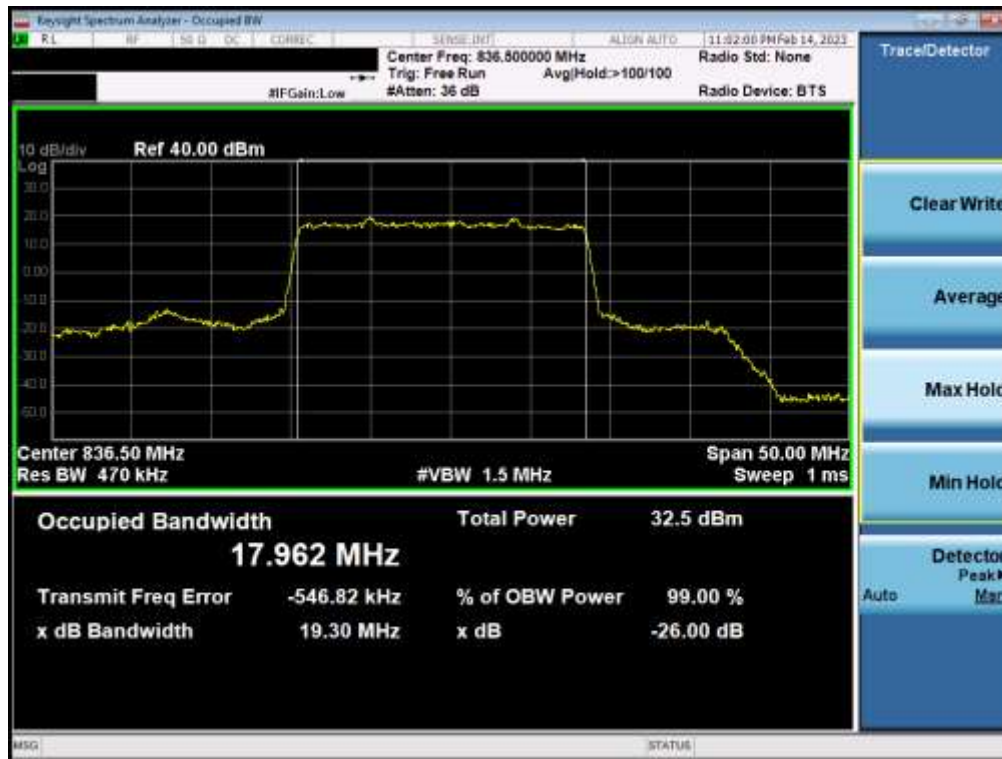
Plot 7-15. Occupied Bandwidth Plot (LTE Band 5 - 1.4MHz QPSK - Full RB - Sub)



Plot 7-16. Occupied Bandwidth Plot (LTE Band 5 - 1.4MHz 16-QAM - Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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NR Band n5 – Main1



Plot 7-17. Occupied Bandwidth Plot (NR Band n5 - 20MHz $\pi/2$ BPSK - Full RB - Main1)

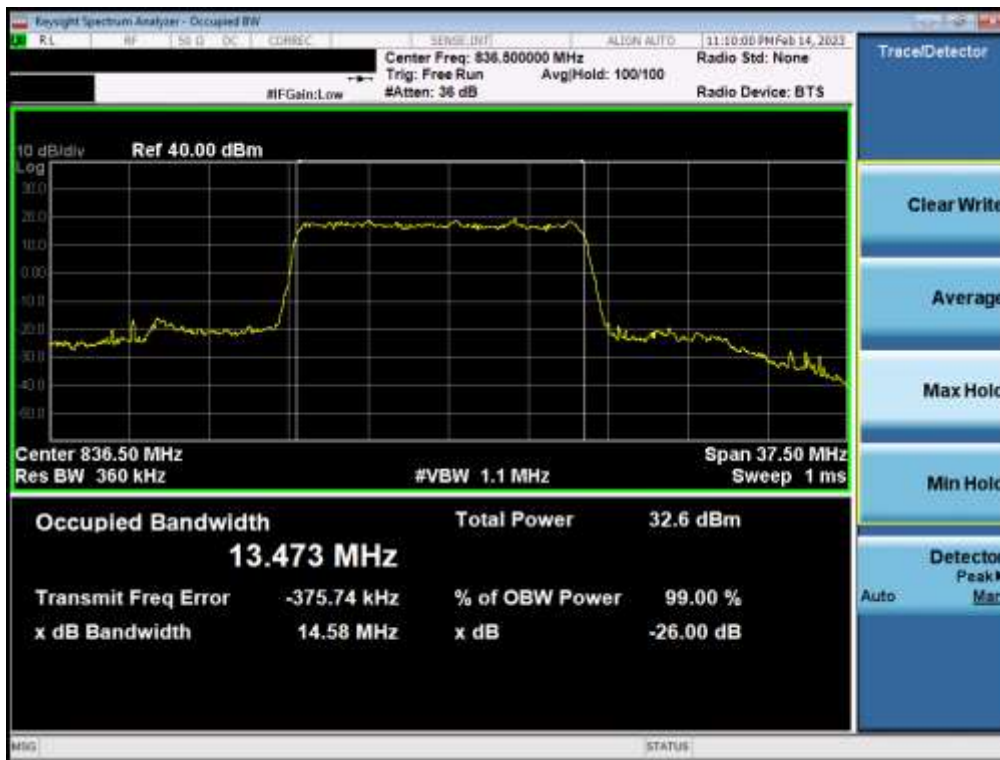


Plot 7-18. Occupied Bandwidth Plot (NR Band n5 - 20MHz QPSK - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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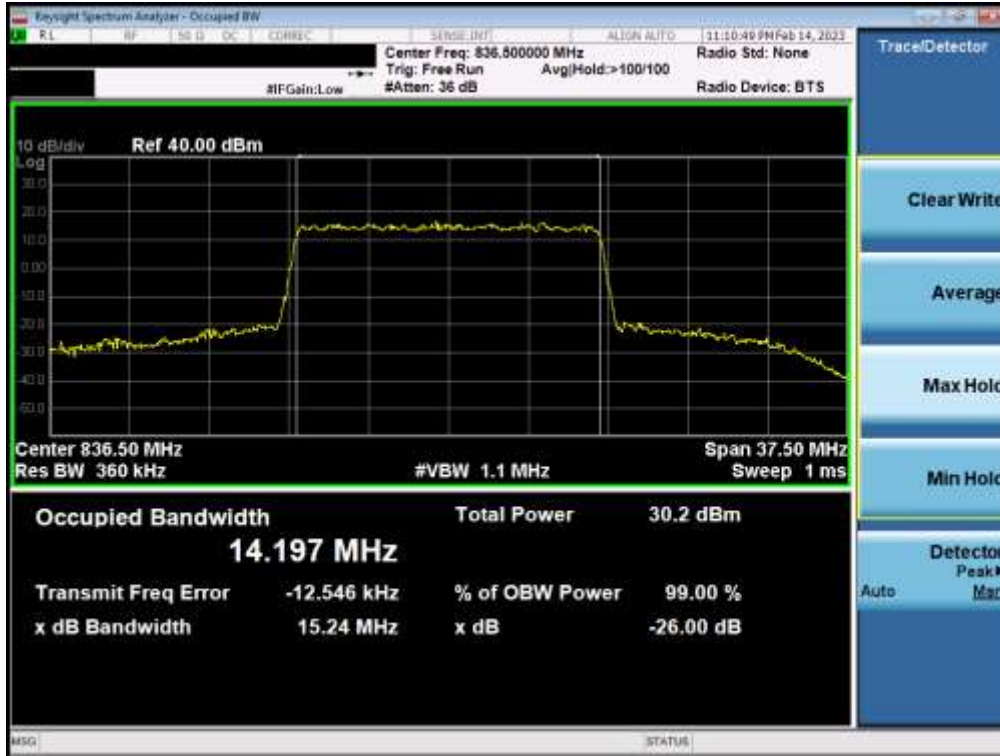


Plot 7-19. Occupied Bandwidth Plot (NR Band n5 - 20MHz 16-QAM - Full RB - Main1)

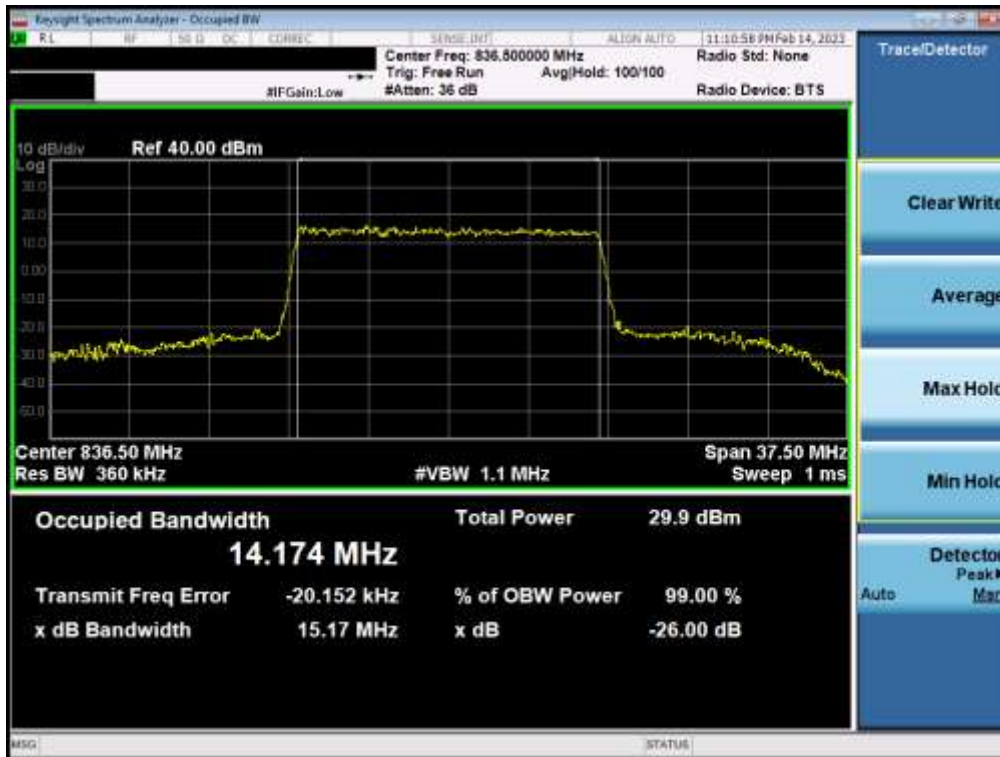


Plot 7-20. Occupied Bandwidth Plot (NR Band n5 - 15MHz $\pi/2$ BPSK - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
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Plot 7-21. Occupied Bandwidth Plot (NR Band n5 - 15MHz QPSK - Full RB - Main1)

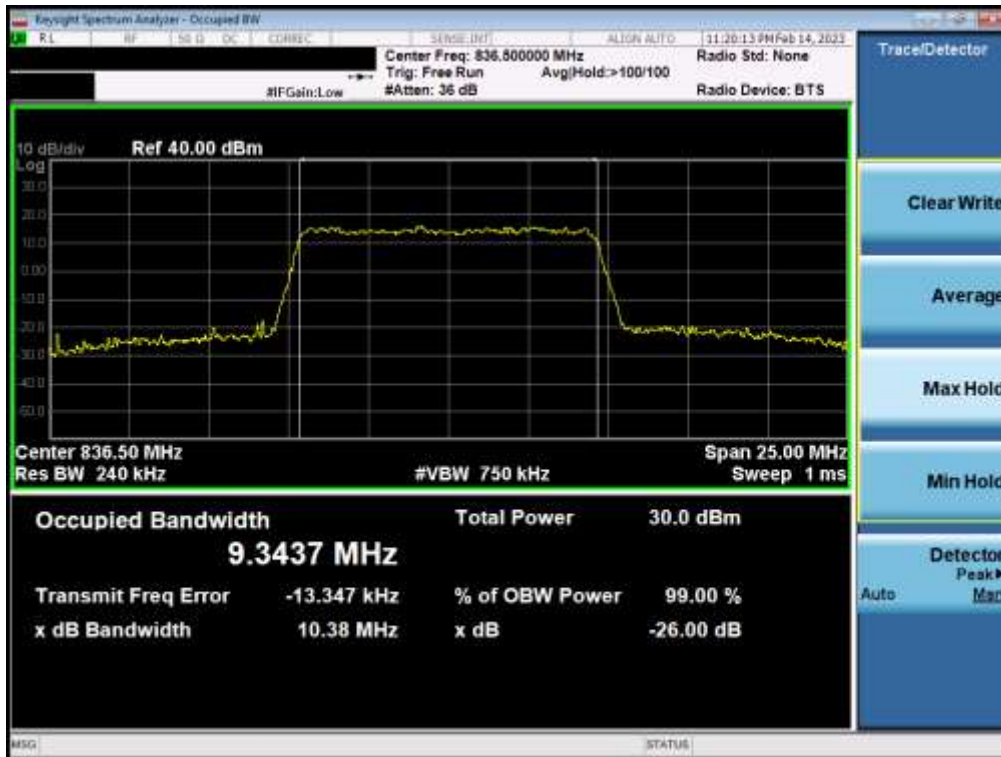


Plot 7-22. Occupied Bandwidth Plot (NR Band n5 - 15MHz 16-QAM - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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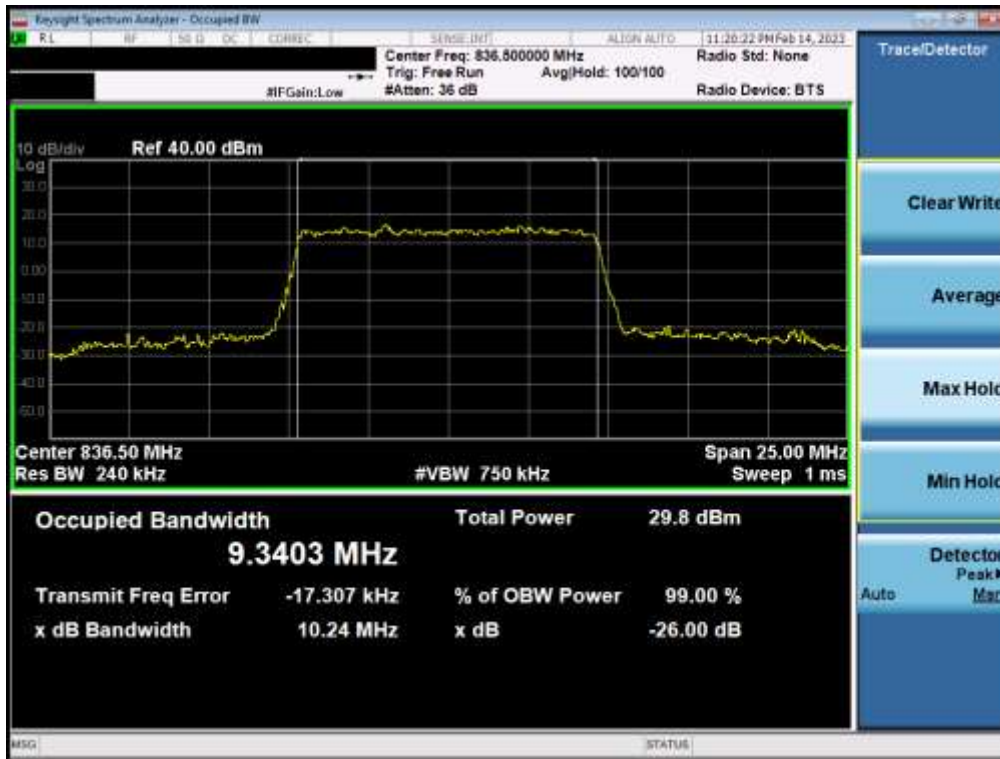


Plot 7-23. Occupied Bandwidth Plot (NR Band n5 - 10MHz $\pi/2$ BPSK - Full RB - Main1)

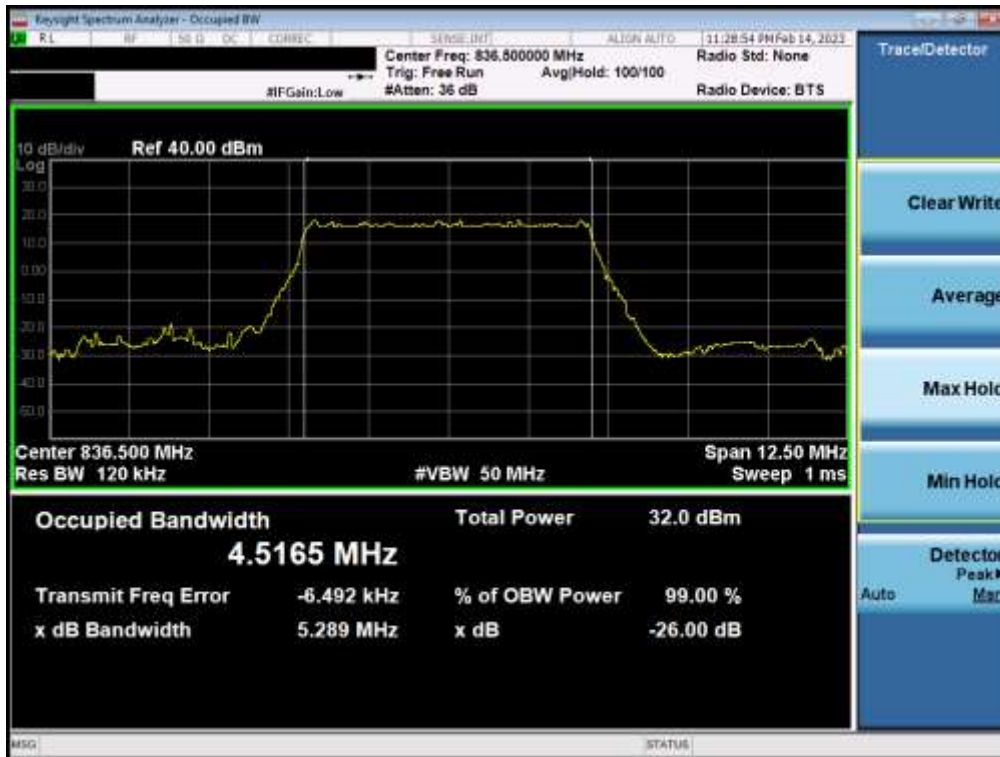


Plot 7-24. Occupied Bandwidth Plot (NR Band n5 - 10MHz QPSK - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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Plot 7-25. Occupied Bandwidth Plot (NR Band n5 - 10MHz 16-QAM - Full RB - Main1)

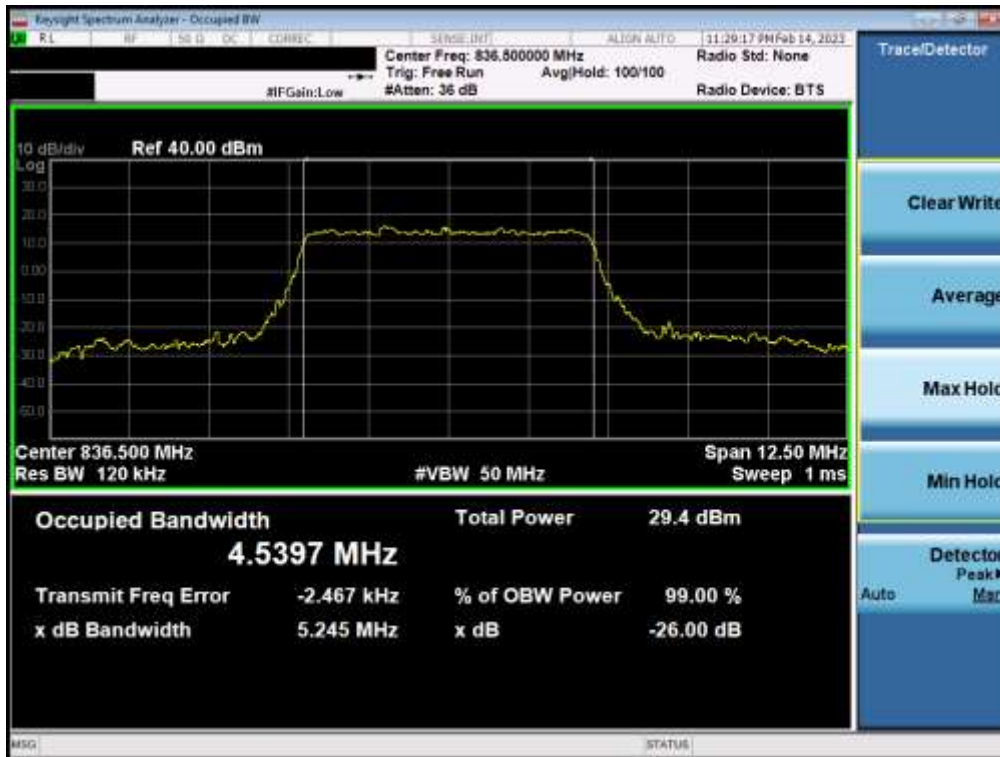


Plot 7-26. Occupied Bandwidth Plot (NR Band n5 - 5MHz $\pi/2$ BPSK - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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Plot 7-27. Occupied Bandwidth Plot (NR Band n5 - 5MHz QPSK - Full RB - Main1)



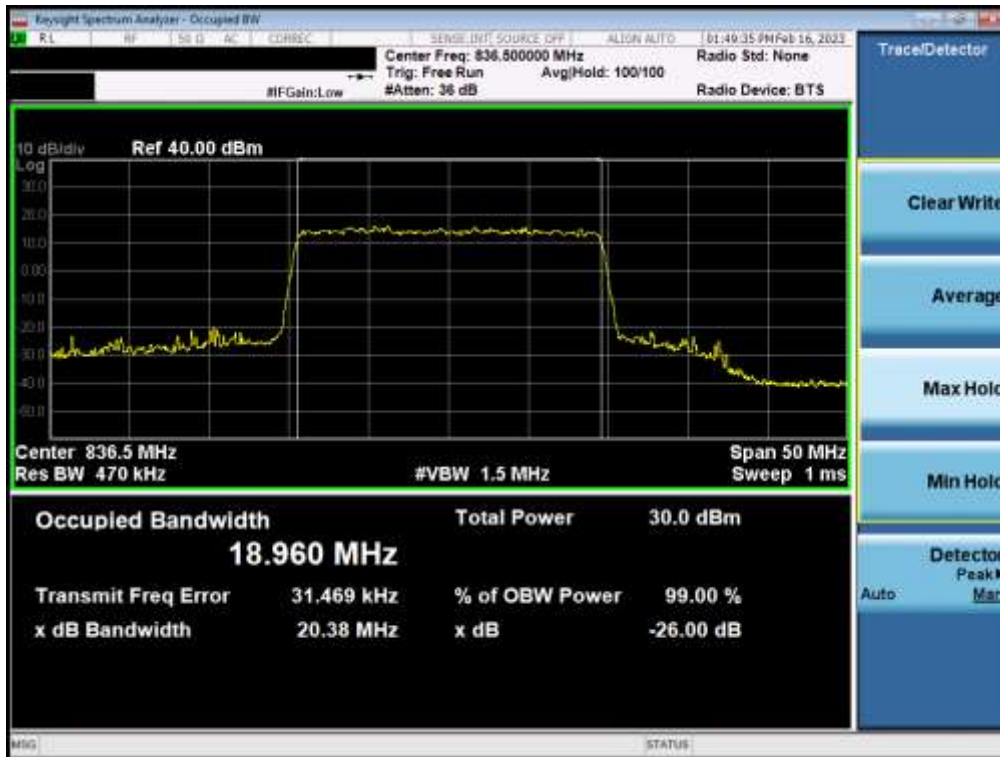
Plot 7-28. Occupied Bandwidth Plot (NR Band n5 - 5MHz 16-QAM - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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NR Band n5 – Sub

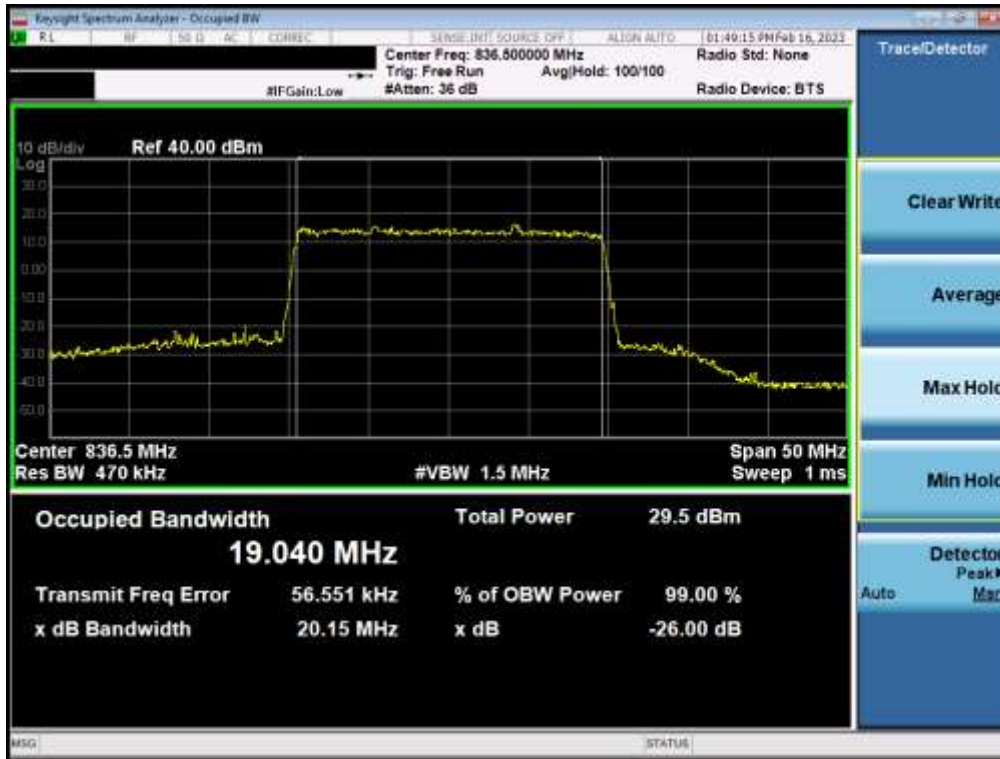


Plot 7-29. Occupied Bandwidth Plot (NR Band n5 - 20MHz $\pi/2$ BPSK - Full RB - Sub)

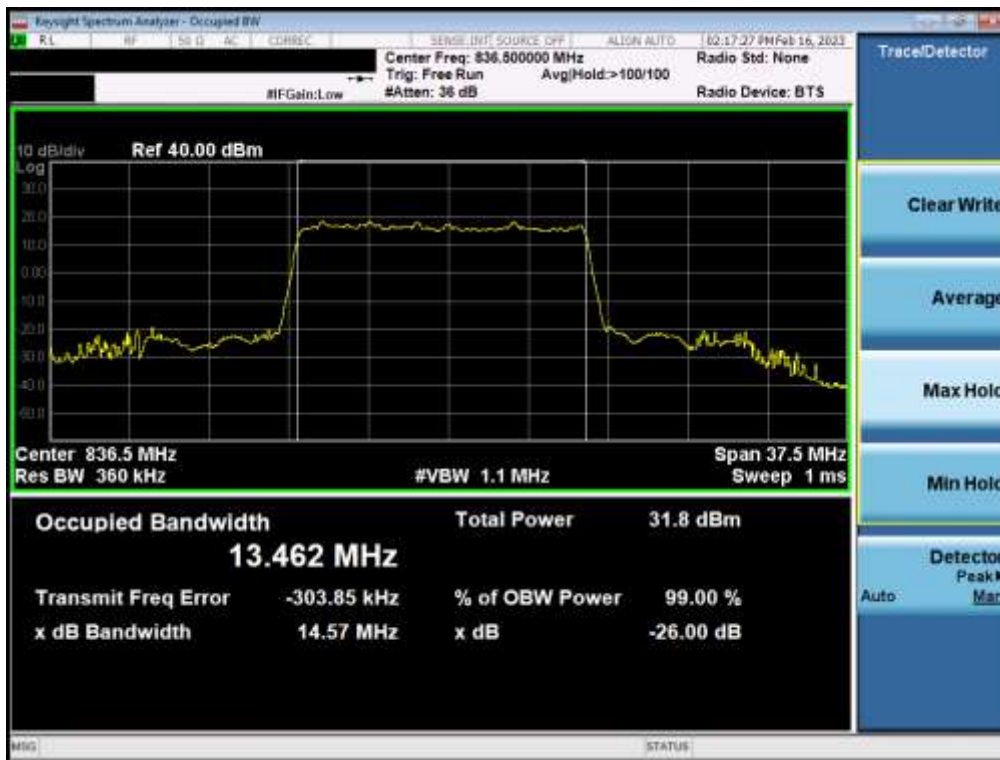


Plot 7-30. Occupied Bandwidth Plot (NR Band n5 - 20MHz QPSK - Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 29 of 117 |

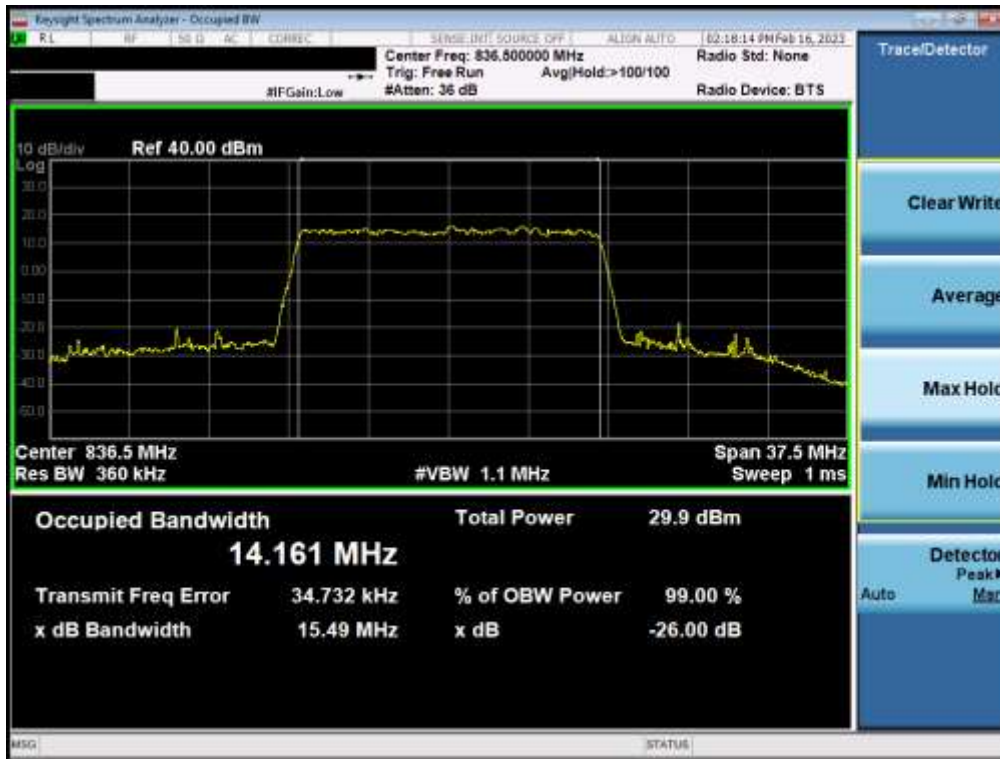


Plot 7-31. Occupied Bandwidth Plot (NR Band n5 - 20MHz 16-QAM - Full RB - Sub)

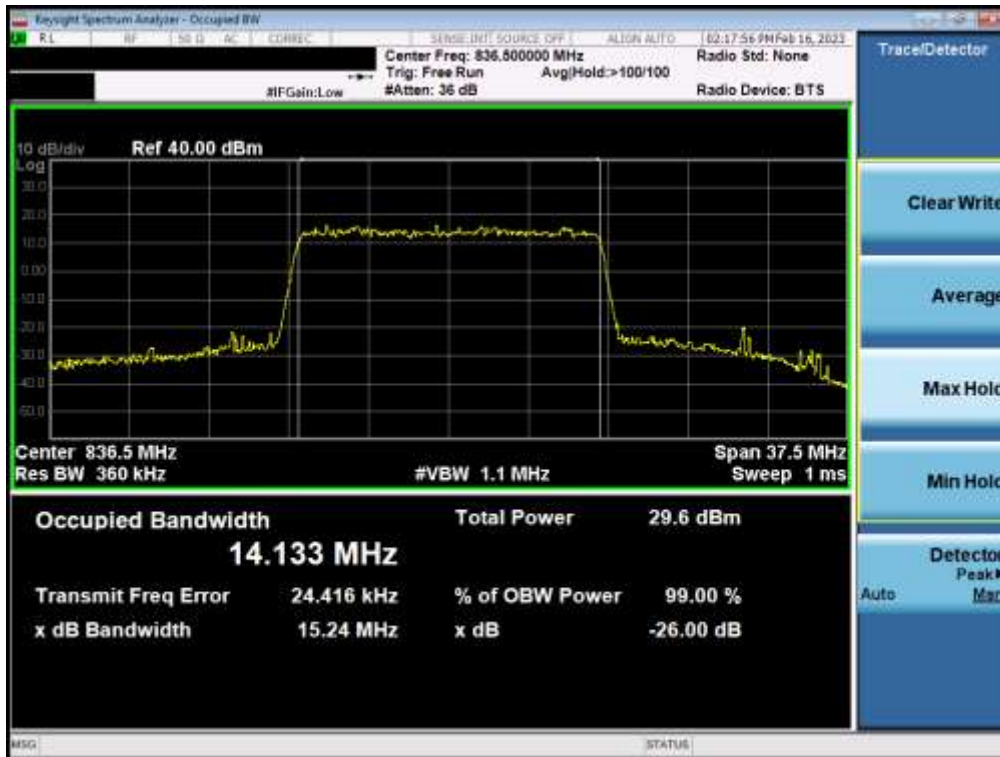


Plot 7-32. Occupied Bandwidth Plot (NR Band n5 - 15MHz $\pi/2$ BPSK - Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 30 of 117 |

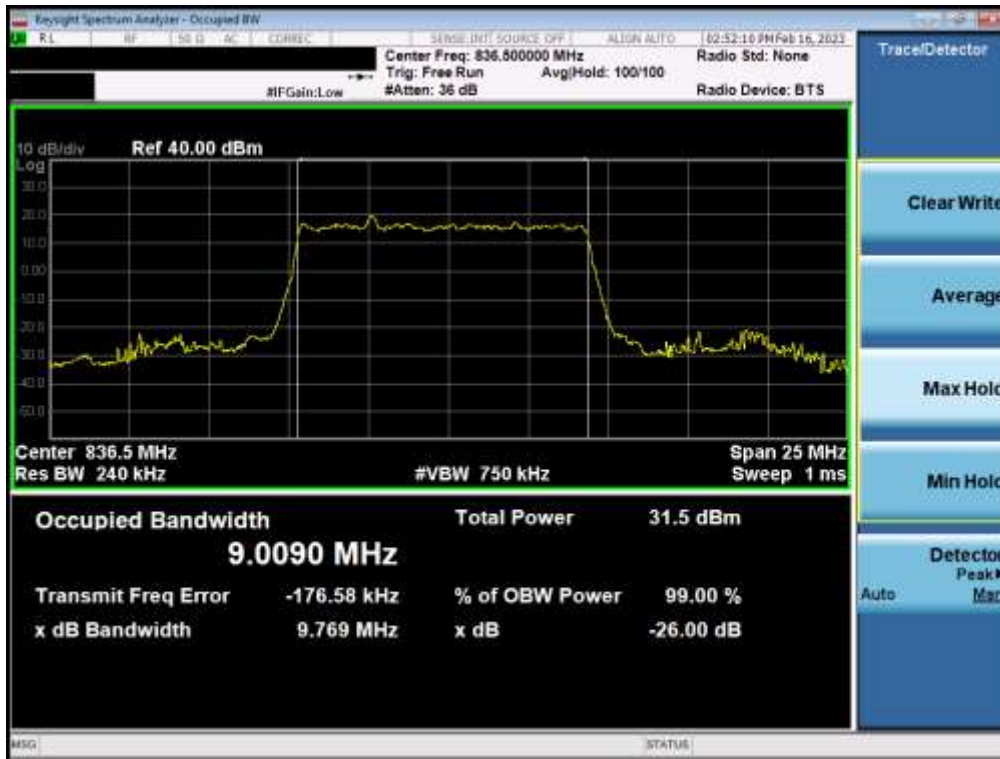


Plot 7-33. Occupied Bandwidth Plot (NR Band n5 - 15MHz QPSK - Full RB - Sub)

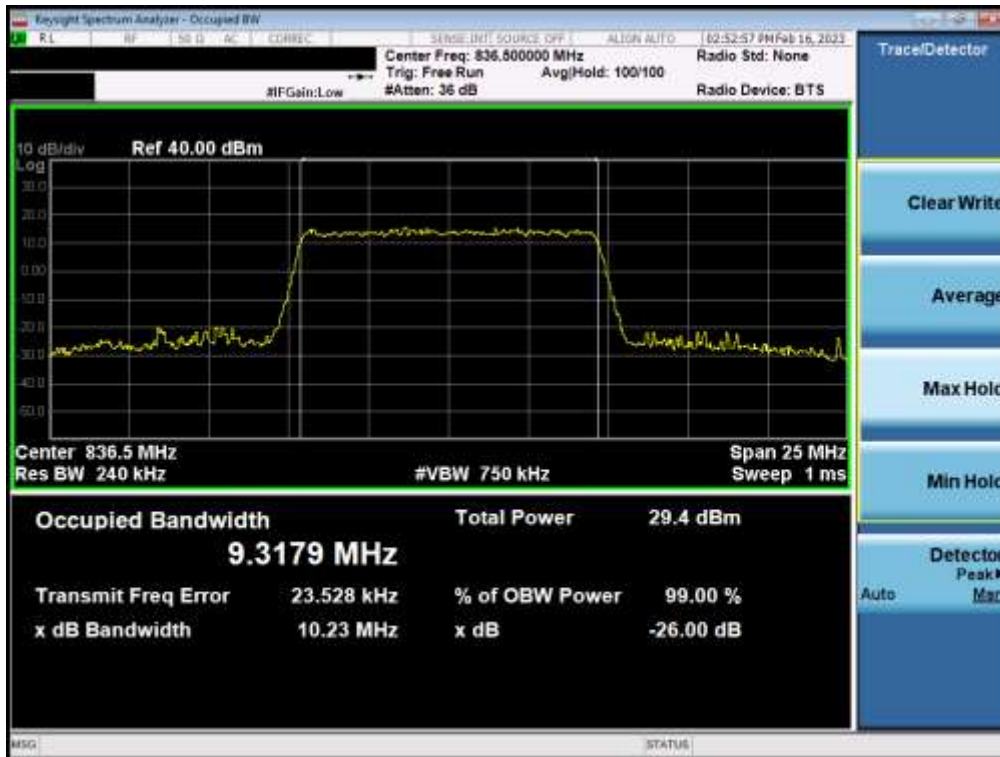


Plot 7-34. Occupied Bandwidth Plot (NR Band n5 - 15MHz 16-QAM - Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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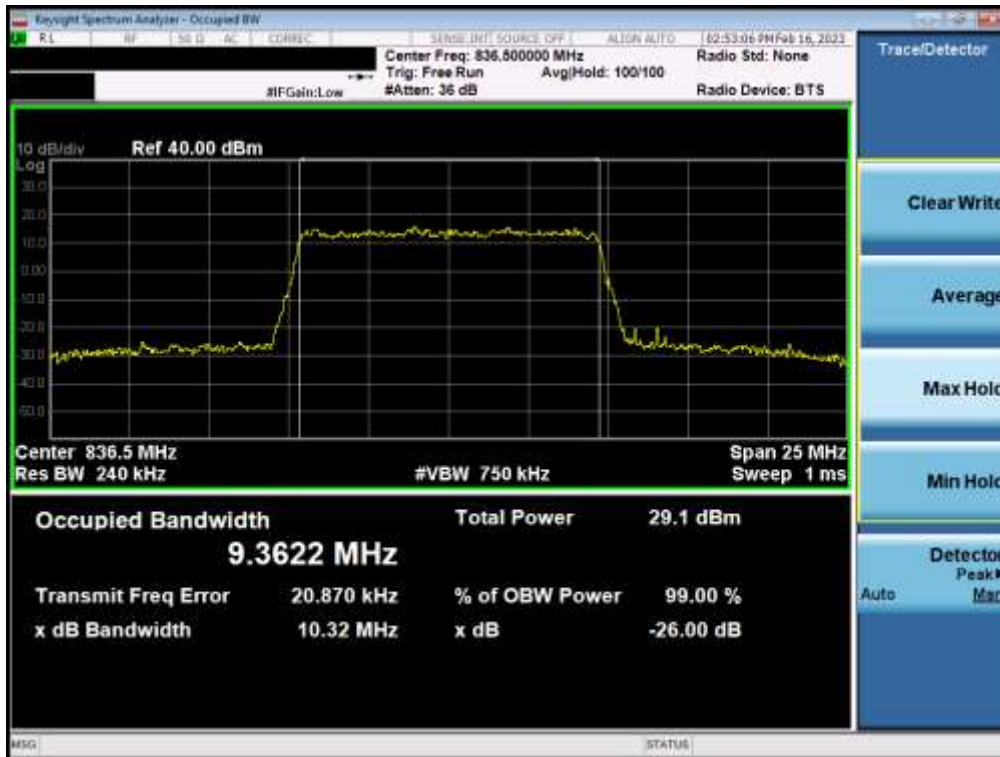


Plot 7-35. Occupied Bandwidth Plot (NR Band n5 - 10MHz $\pi/2$ BPSK - Full RB - Sub)

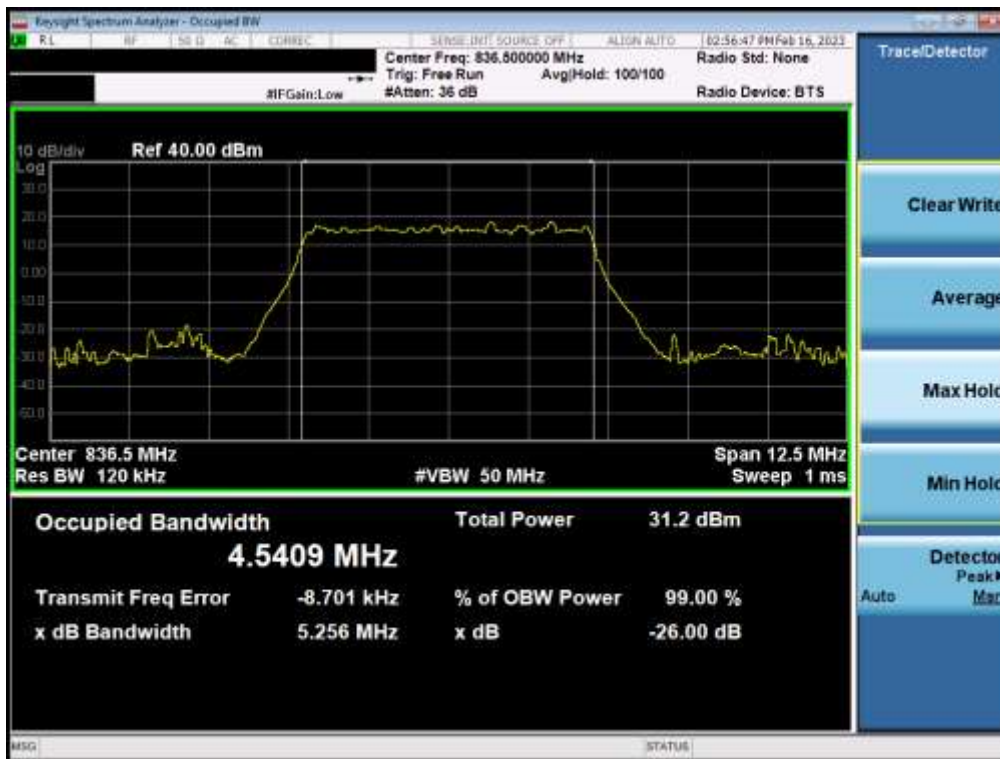


Plot 7-36. Occupied Bandwidth Plot (NR Band n5 - 10MHz QPSK - Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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Plot 7-37. Occupied Bandwidth Plot (NR Band n5 - 10MHz 16-QAM - Full RB - Sub)



Plot 7-38. Occupied Bandwidth Plot (NR Band n5 - 5MHz $\pi/2$ BPSK - Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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Plot 7-39. Occupied Bandwidth Plot (NR Band n5 - 5MHz QPSK - Full RB - Sub)



Plot 7-40. Occupied Bandwidth Plot (NR Band n5 - 5MHz 16-QAM - Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 34 of 117 |

GPRS Cell – Main1



Plot 7-41. Occupied Bandwidth Plot (GPRS, Ch. 190 – Main1)



Plot 7-42. Occupied Bandwidth Plot (EDGE, Ch. 190 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 35 of 117 |

WCDMA Cell – Main1



Plot 7-43. Occupied Bandwidth Plot (WCDMA, Ch. 4183 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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7.4 Spurious and Harmonic Emissions at Antenna Terminal

Test Overview

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

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

Test Procedure Used

ANSI C63.26-2015 – Section 5.7.4

Test Settings

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

Test Setup

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



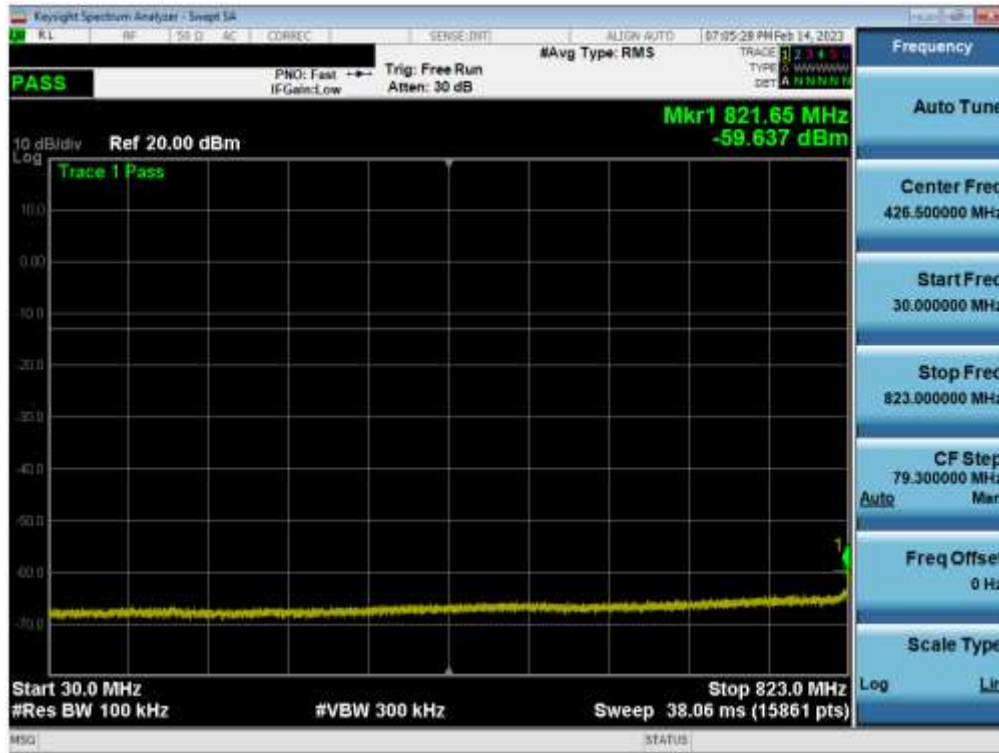
Figure 7-3. Test Instrument & Measurement Setup

Test Notes

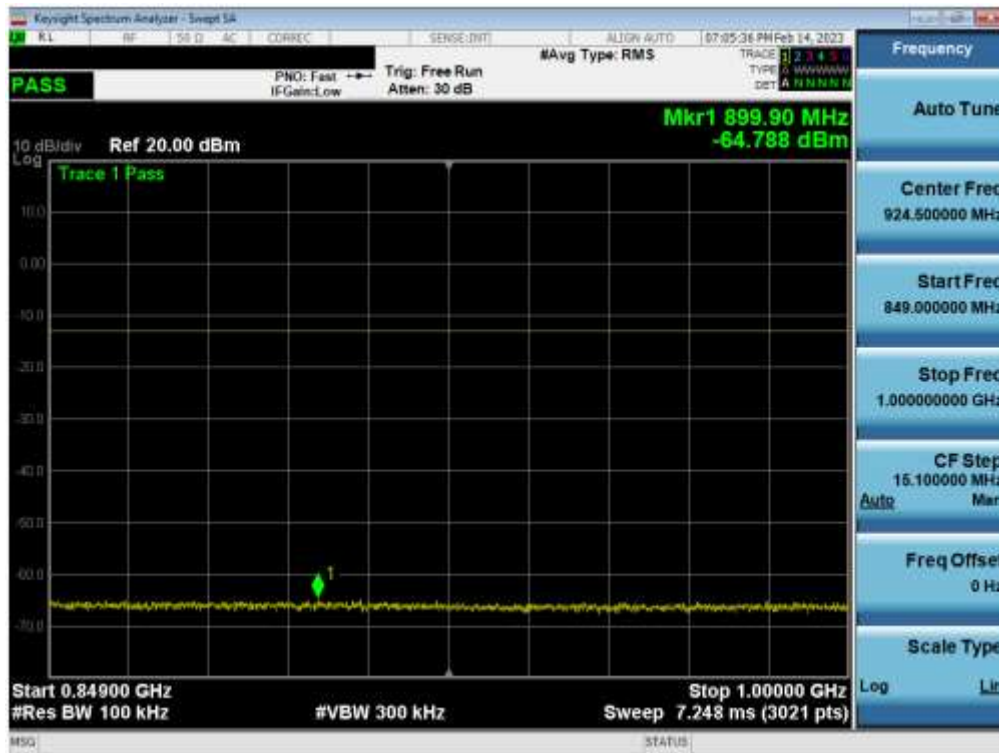
1. Per Part 22, compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth 100 kHz or greater for measurements below 1GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least 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 emissions are attenuated at least 26 dB below the transmitter power.
2. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g., CP-OFDM and DFT-s-OFDM) were investigated to determine the worst-case configuration. All modes of operation were investigated, and the worst-case configuration results are reported in this section.

| | | | |
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| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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LTE Band 5 – Main1

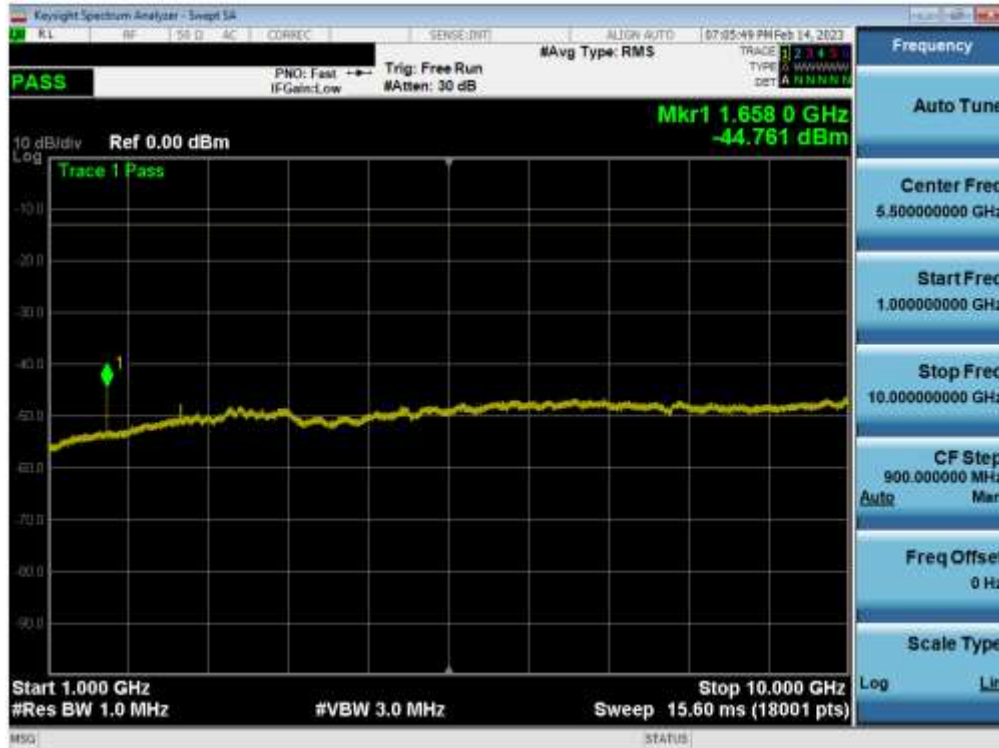


Plot 7-44. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Low Channel - Main1)



Plot 7-45. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Low Channel - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 38 of 117 |

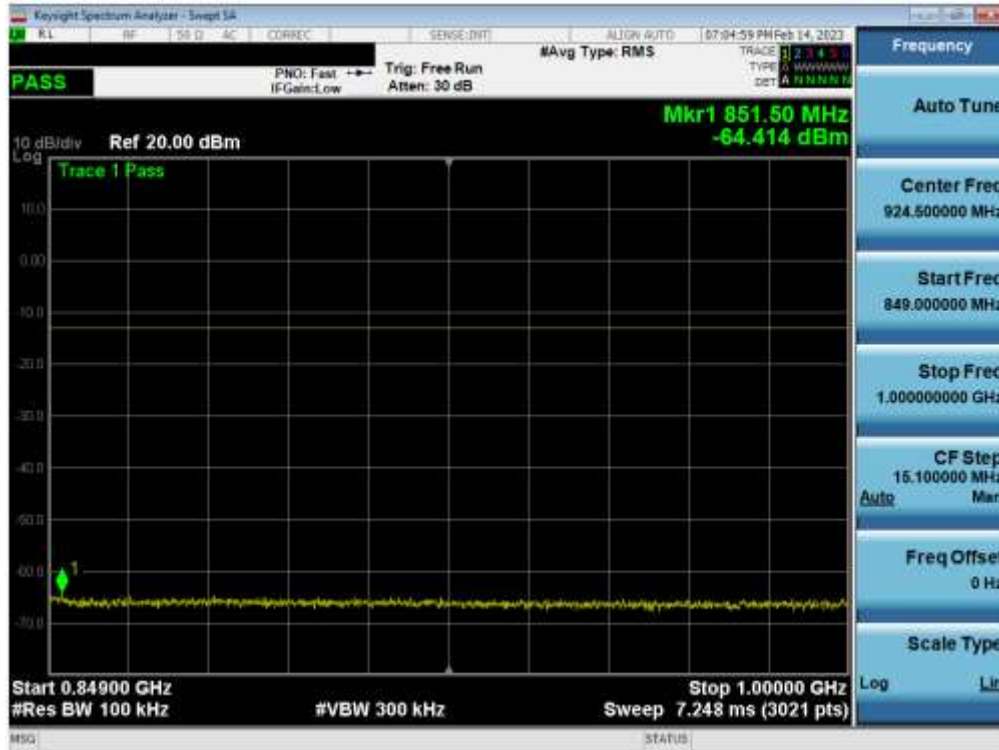


Plot 7-46. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Low Channel - Main1)



Plot 7-47. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Mid Channel - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 39 of 117 |

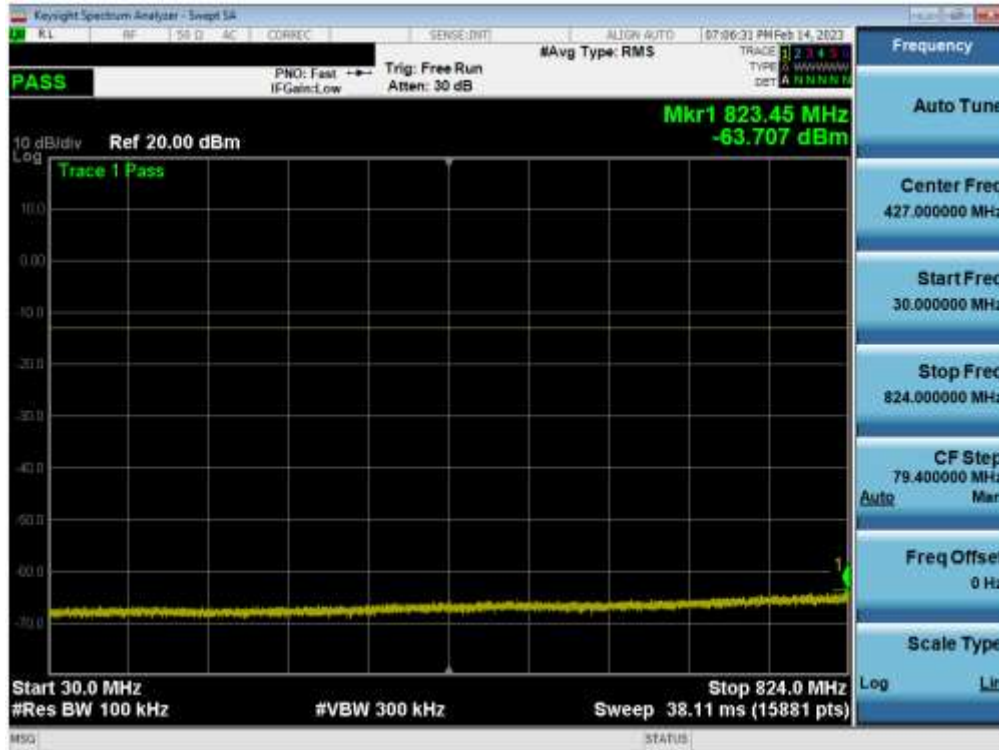


Plot 7-48. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Mid Channel - Main1)



Plot 7-49. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Mid Channel - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 40 of 117 |



Plot 7-50. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - High Channel - Main1)



Plot 7-51. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - High Channel - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 41 of 117 |



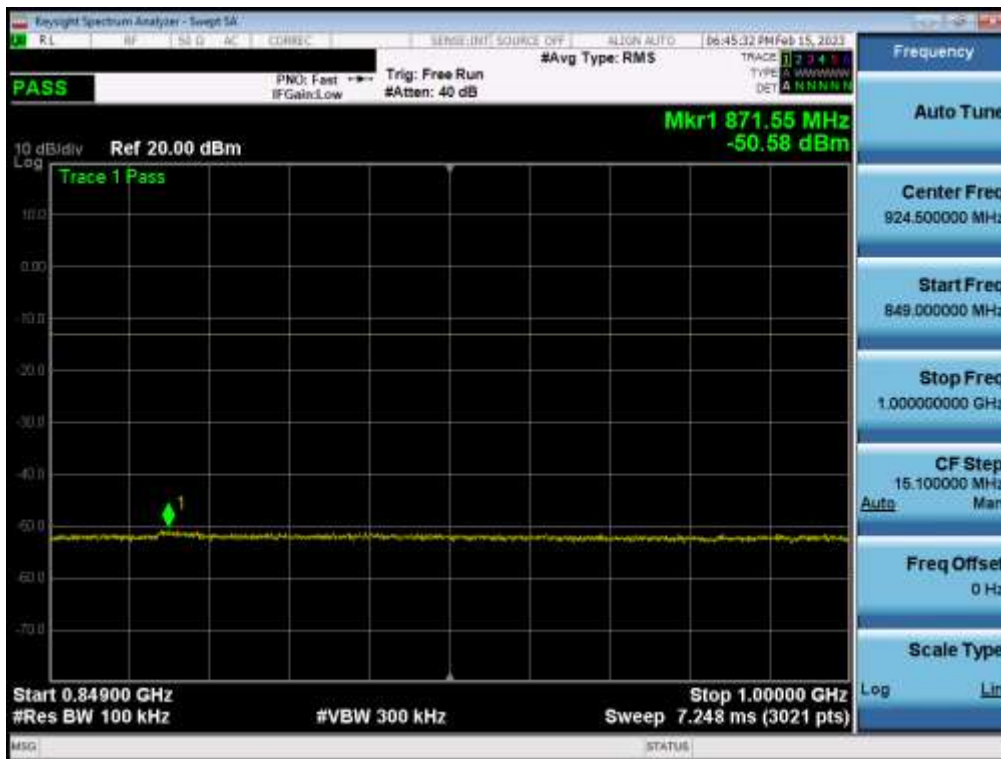
Plot 7-52. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - High Channel - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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LTE Band 5 – Sub

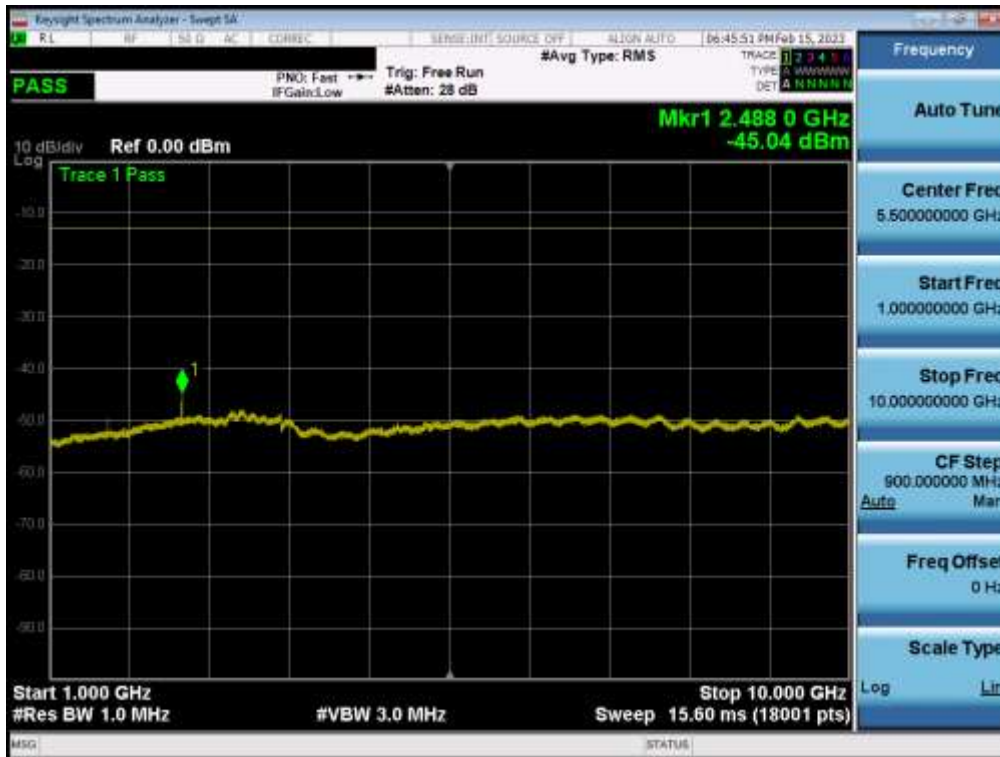


Plot 7-53. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Low Channel - Sub)



Plot 7-54. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Low Channel - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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Plot 7-55. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Low Channel - Sub)

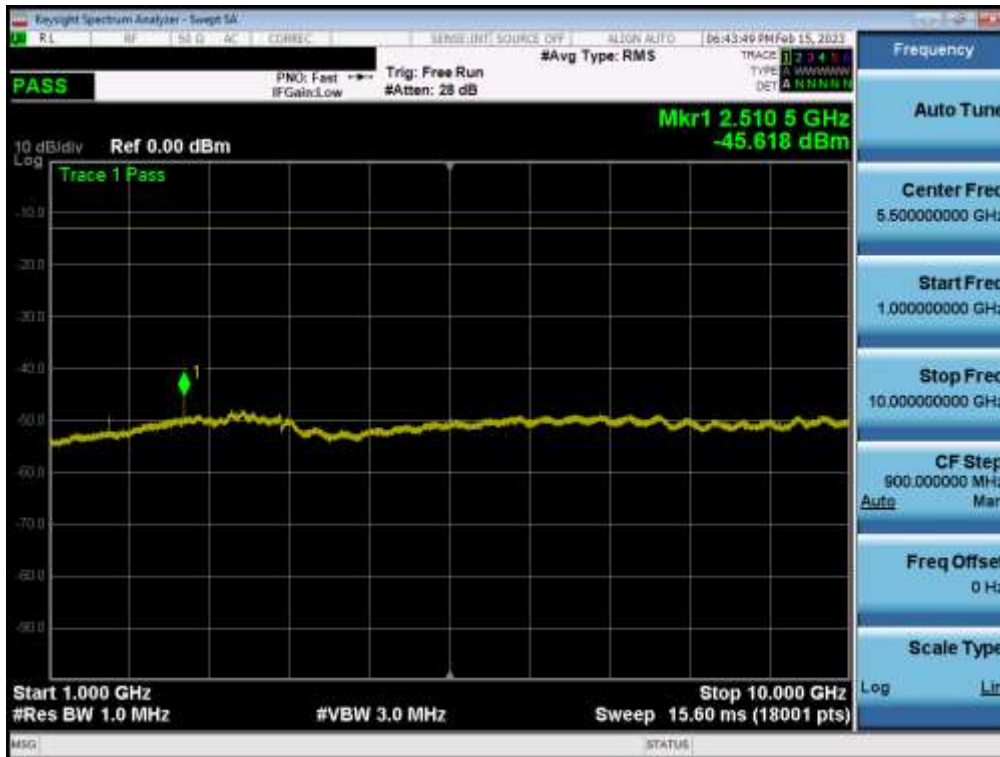


Plot 7-56. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Mid Channel - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 44 of 117 |

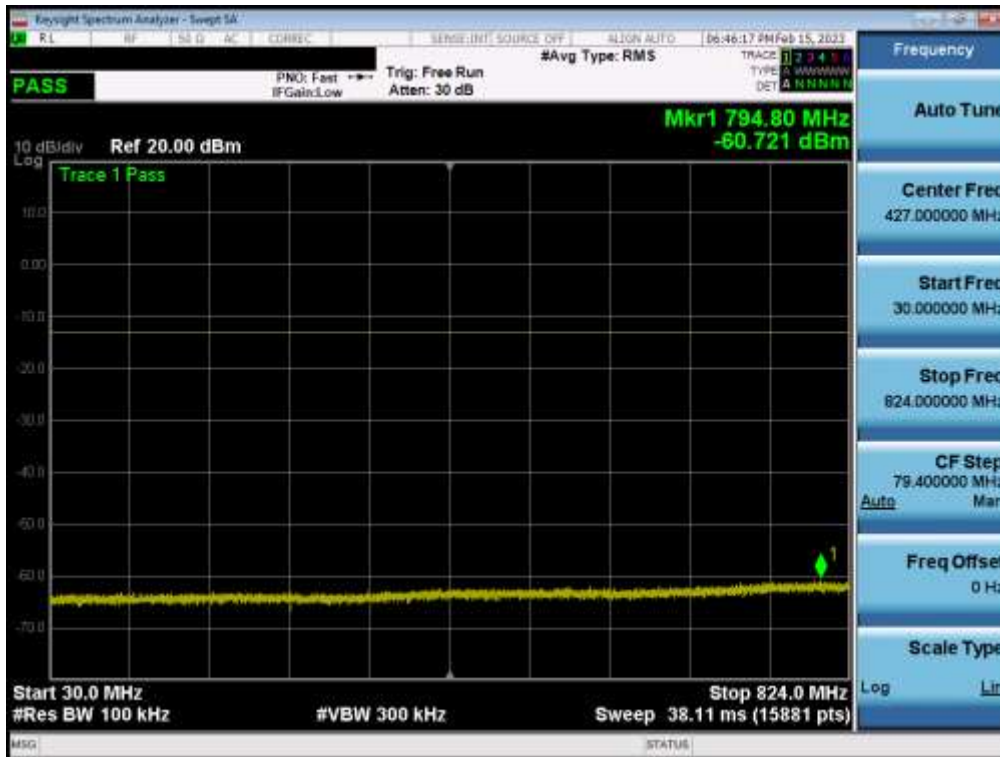


Plot 7-57. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Mid Channel - Sub)

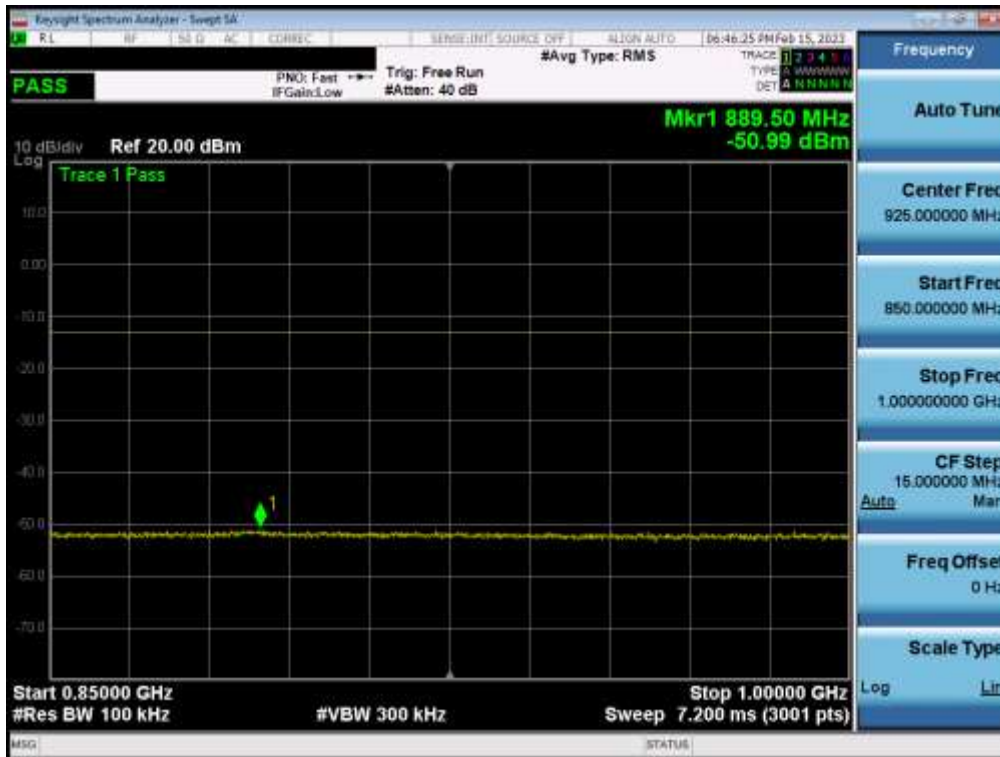


Plot 7-58. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Mid Channel - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 45 of 117 |

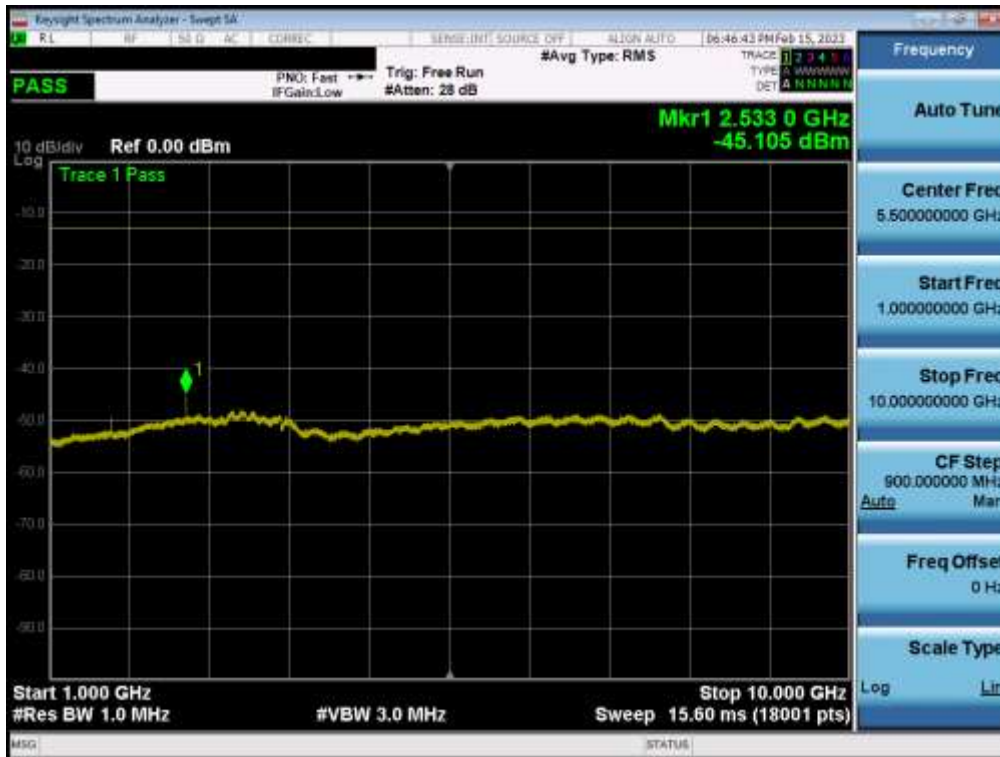


Plot 7-59. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - High Channel - Sub)



Plot 7-60. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - High Channel - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 46 of 117 |



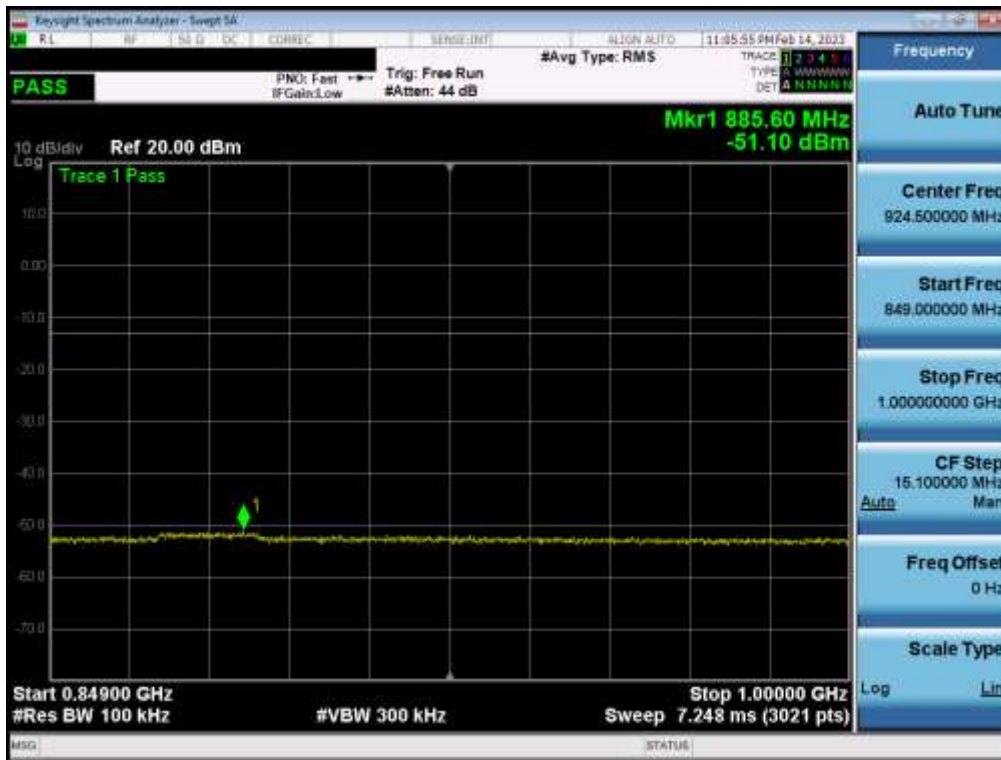
Plot 7-61. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - High Channel - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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NR Band n5 – Main1

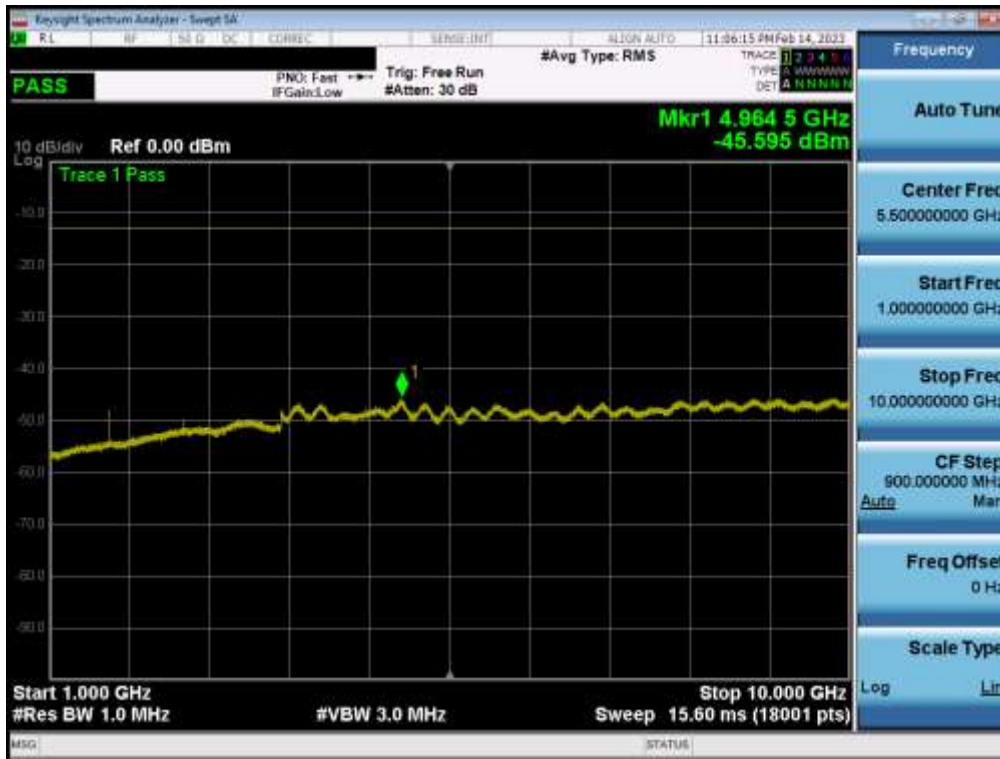


Plot 7-62. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Low Channel - Main1)

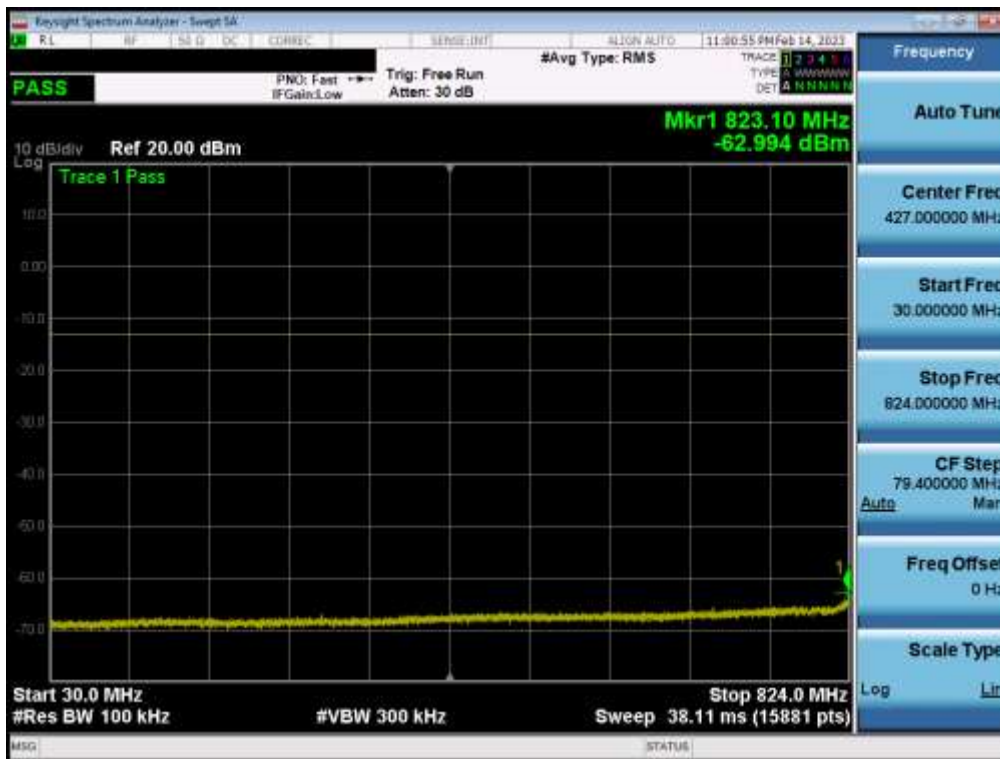


Plot 7-63. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Low Channel - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 48 of 117 |

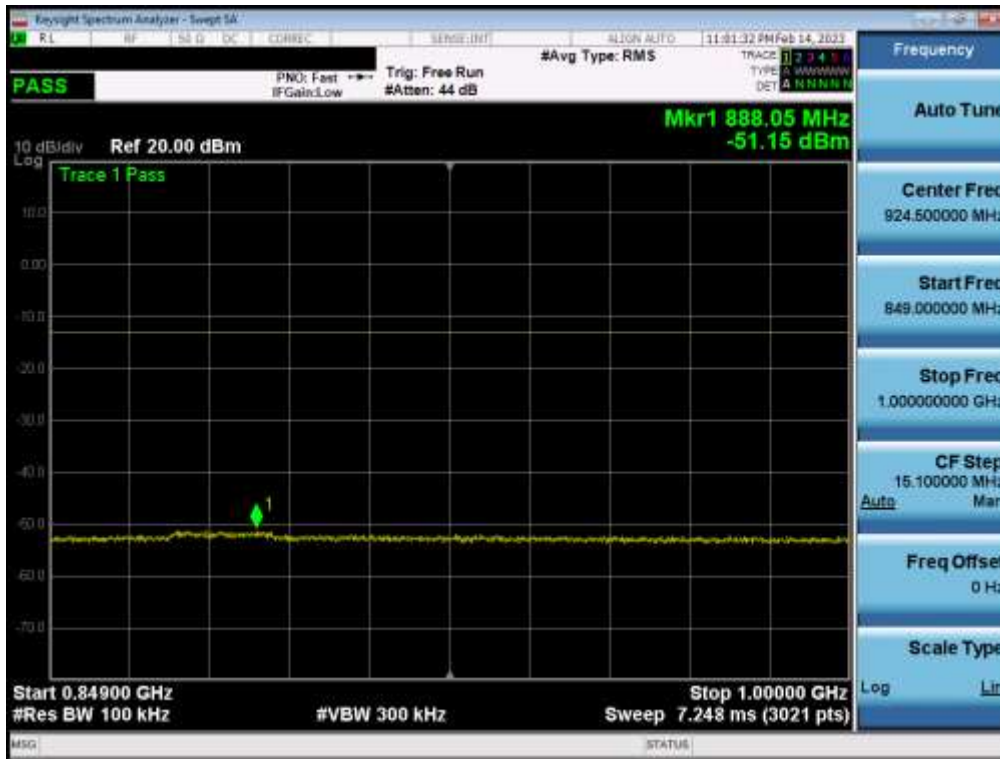


Plot 7-64. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Low Channel - Main1)

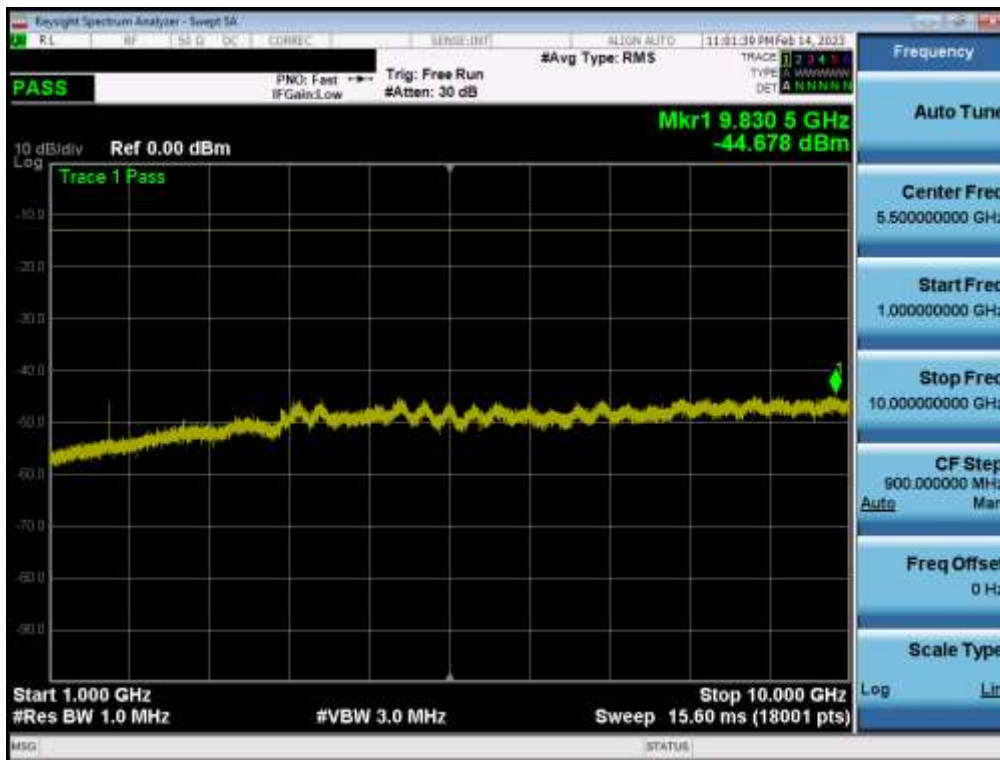


Plot 7-65. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Mid Channel - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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Plot 7-66. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Mid Channel - Main1)



Plot 7-67. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Mid Channel - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 50 of 117 |

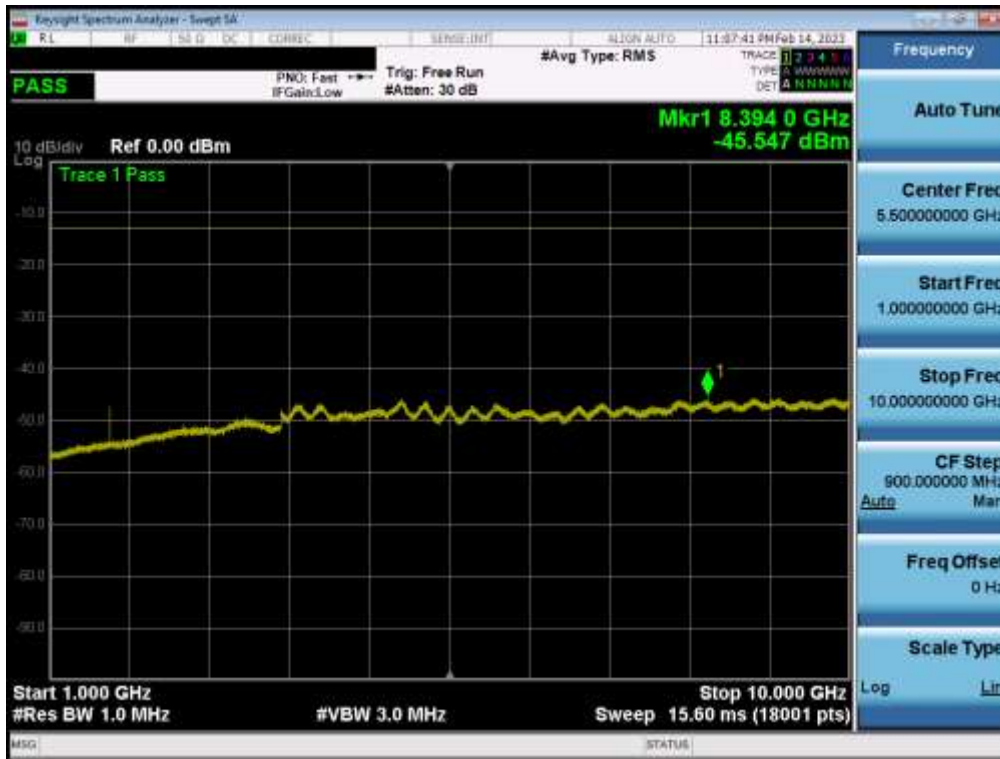


Plot 7-68. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - High Channel - Main1)



Plot 7-69. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - High Channel - Main1)

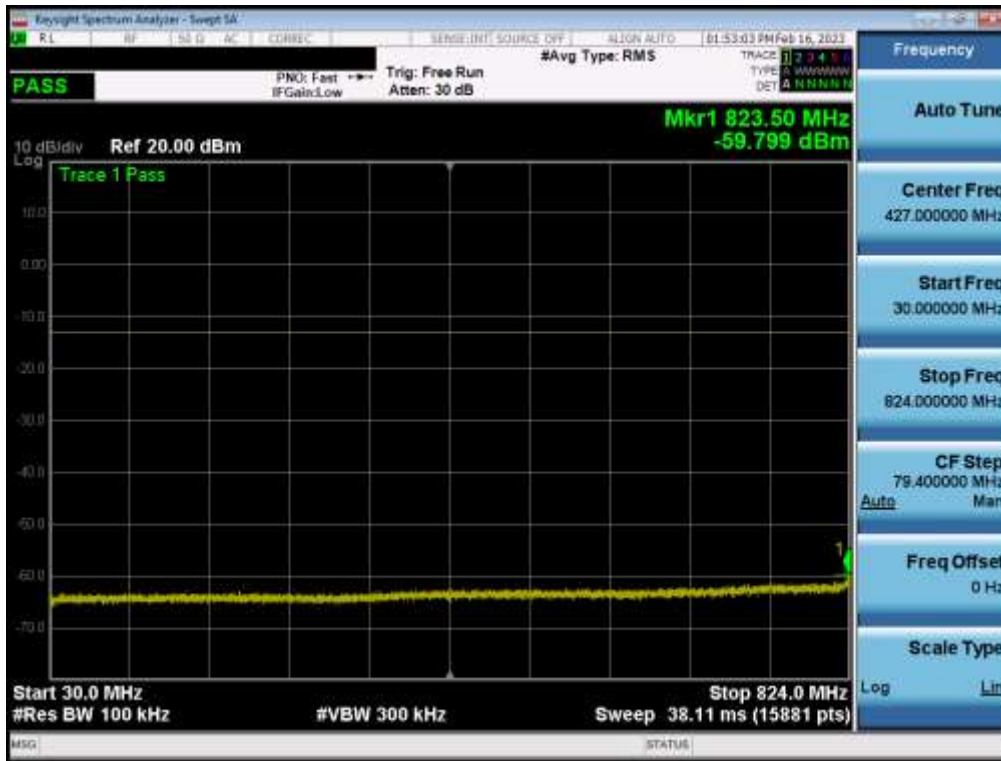
| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 51 of 117 |



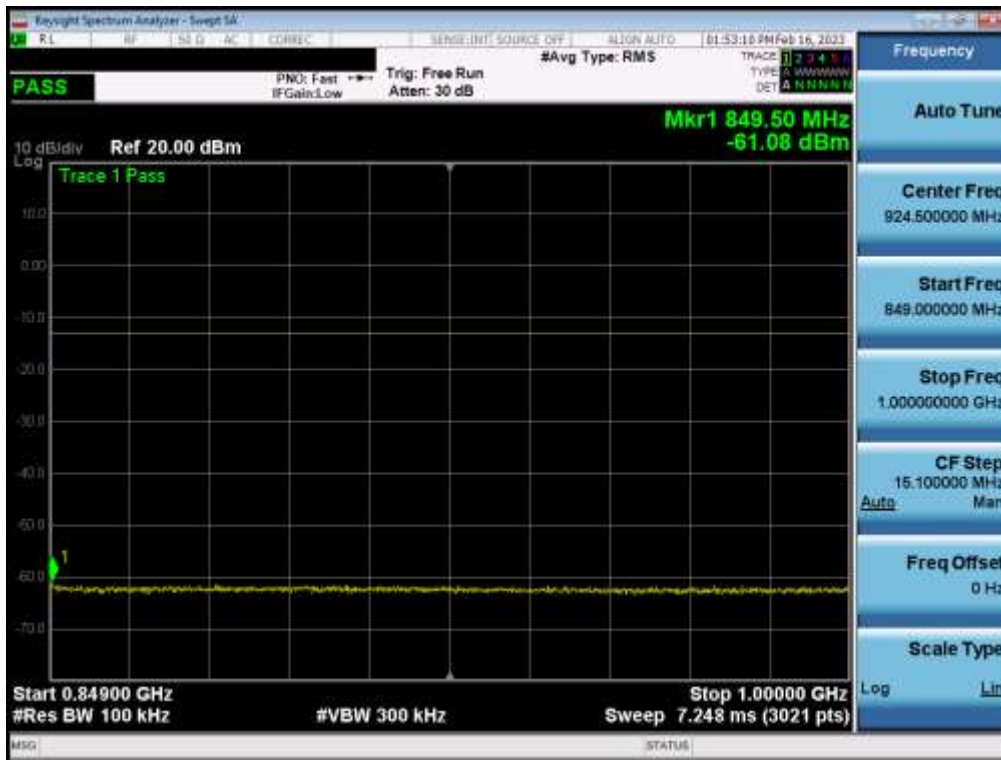
Plot 7-70. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - High Channel - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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NR Band n5 – Sub



Plot 7-71. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Low Channel - Sub)

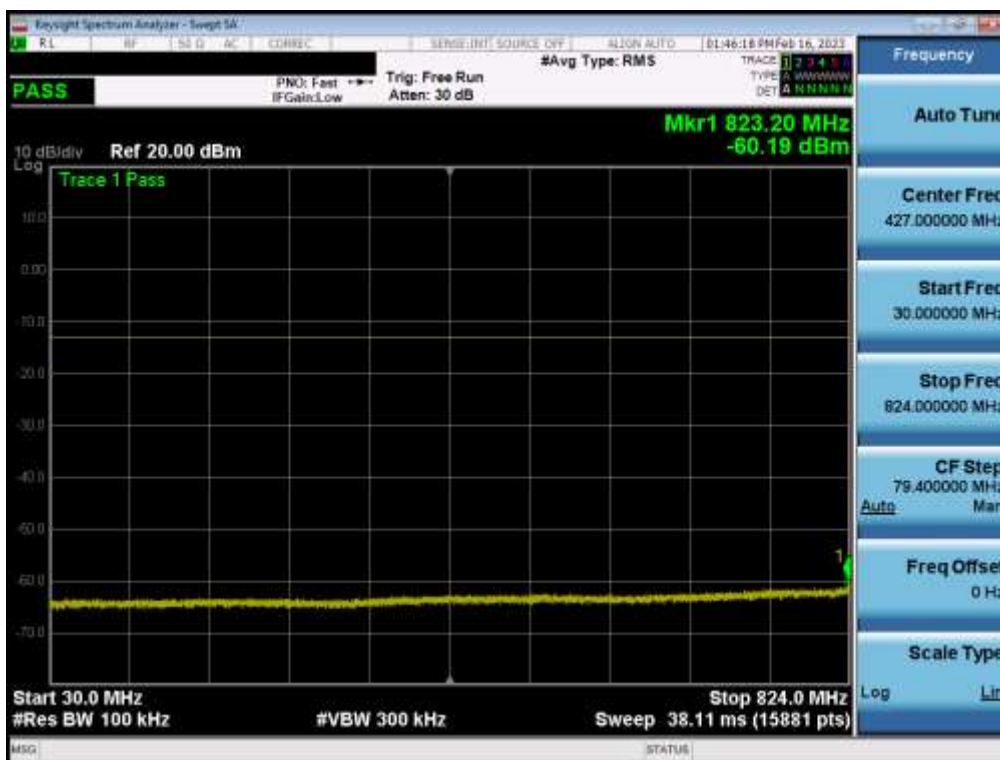


Plot 7-72. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Low Channel - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 53 of 117 |

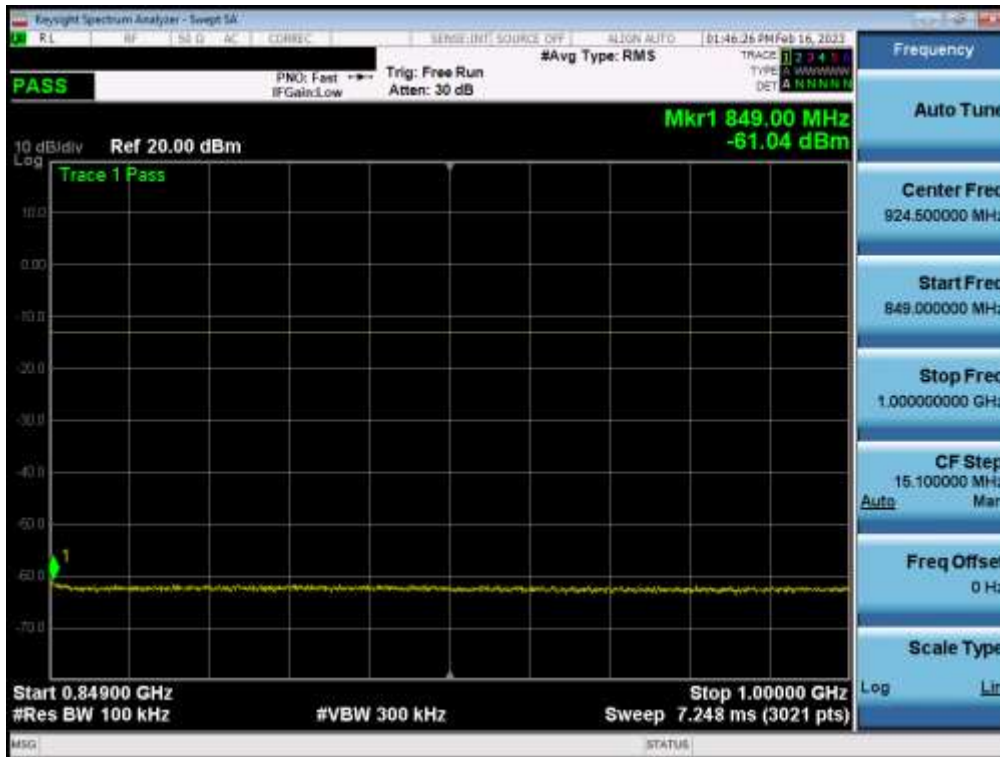


Plot 7-73. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Low Channel - Sub)

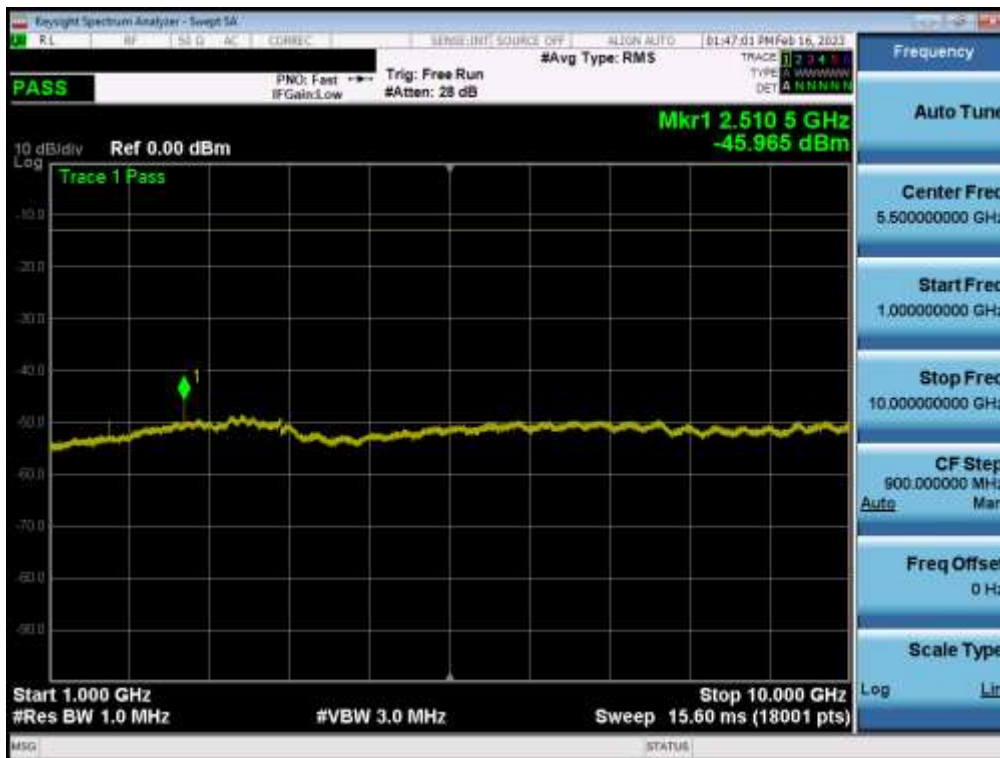


Plot 7-74. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Mid Channel - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 54 of 117 |

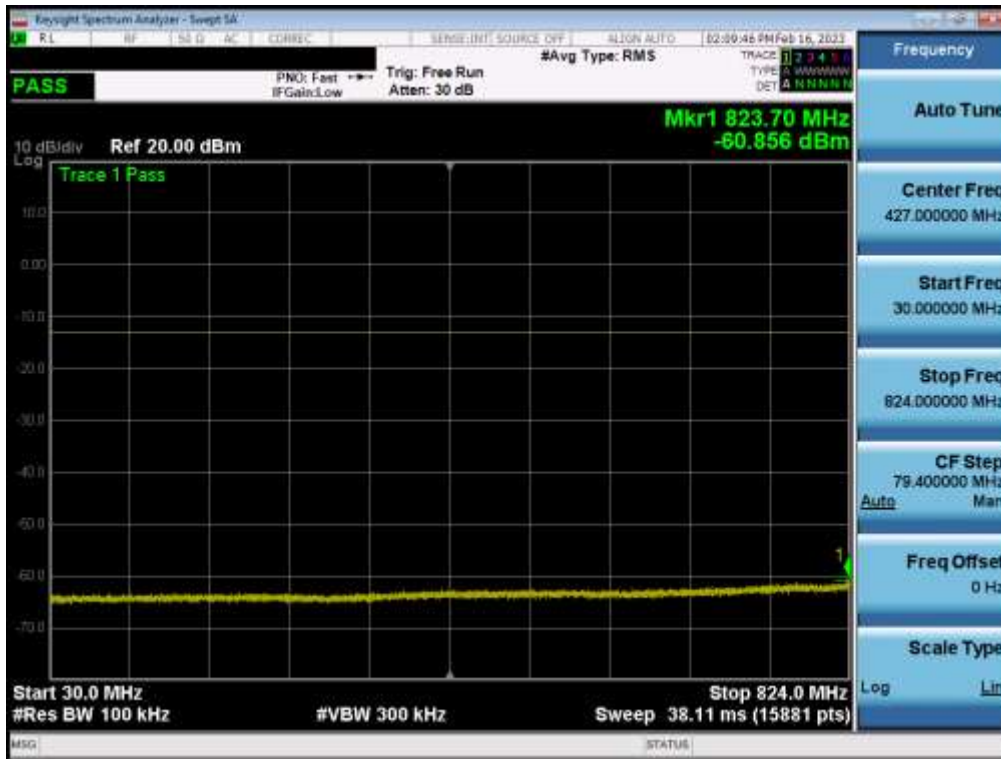


Plot 7-75. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Mid Channel - Sub)

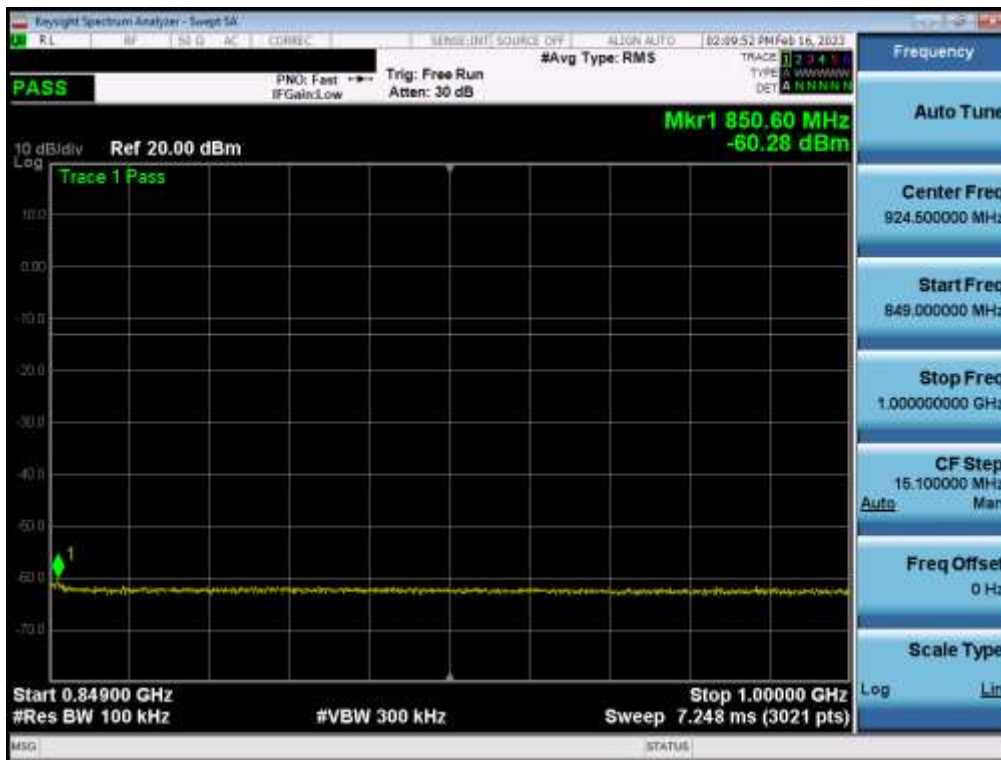


Plot 7-76. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Mid Channel - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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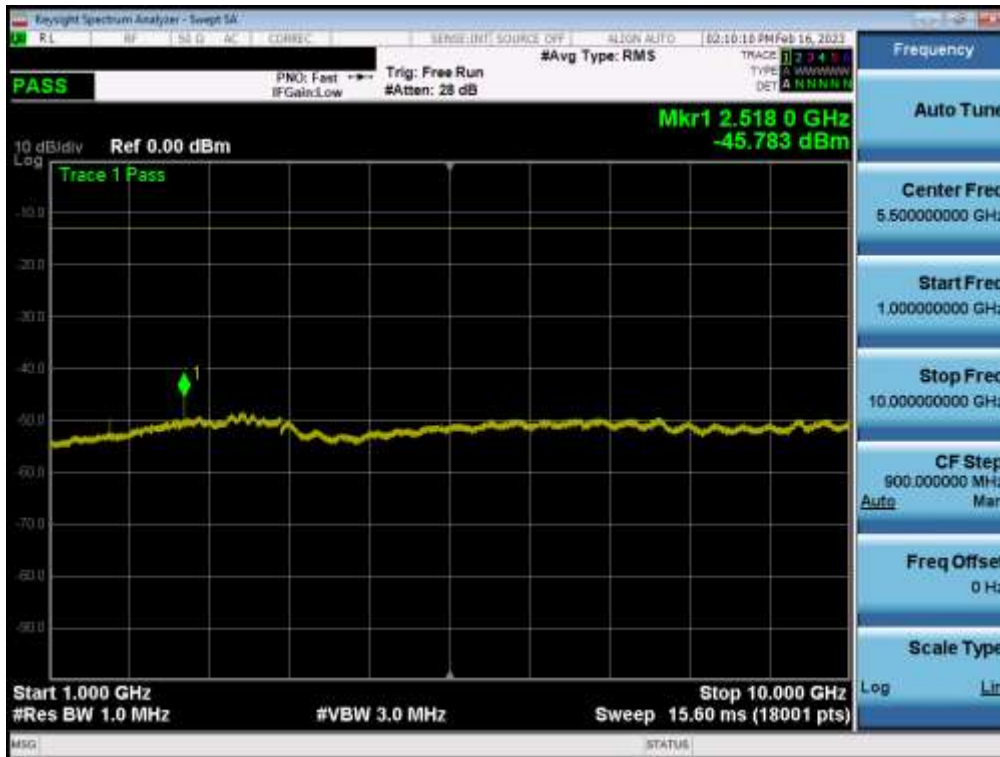


Plot 7-77. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - High Channel - Sub)



Plot 7-78. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - High Channel - Sub)

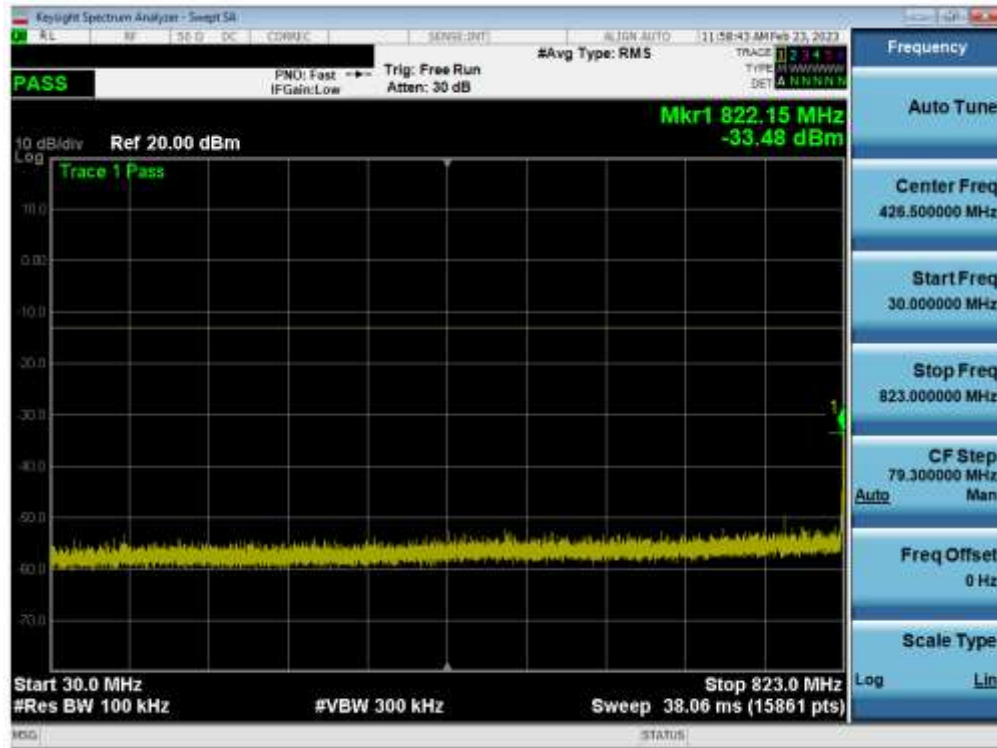
| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 56 of 117 |



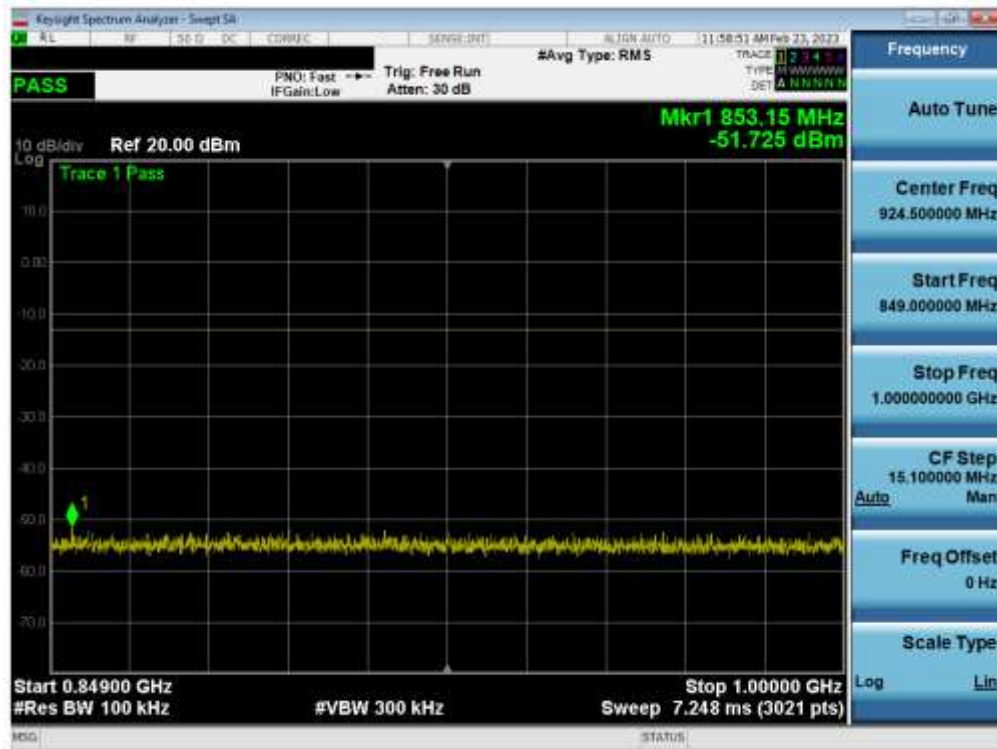
Plot 7-79. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - High Channel - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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GSM/GPRS Cell – Main1

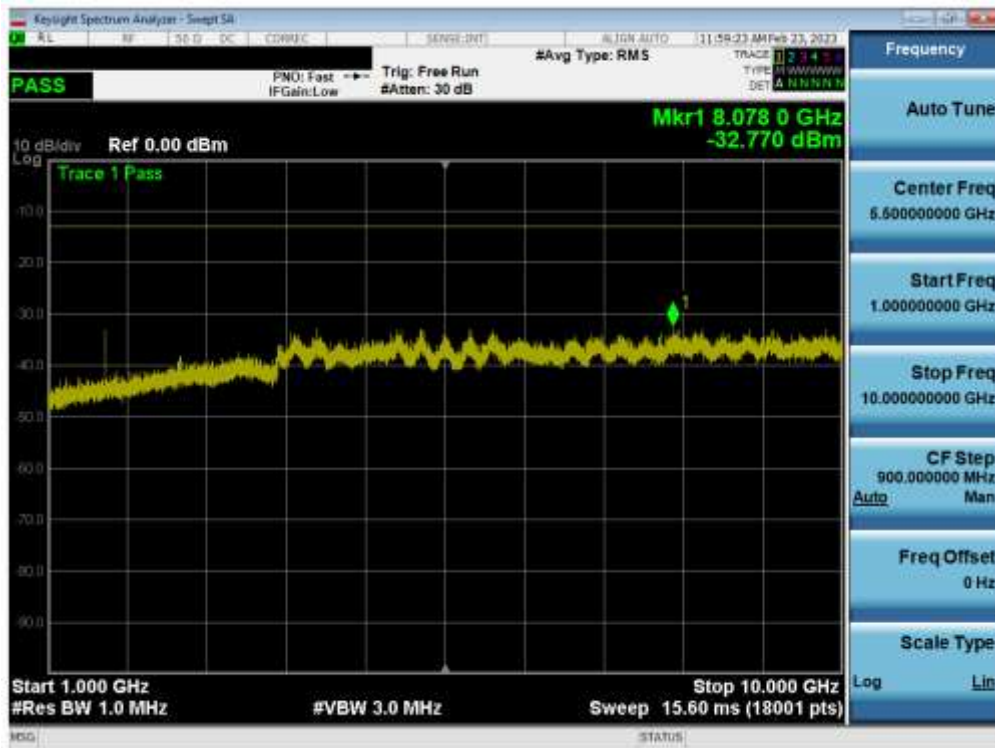


Plot 7-80. Conducted Spurious Plot (GPRS Ch. 128 – Main1)

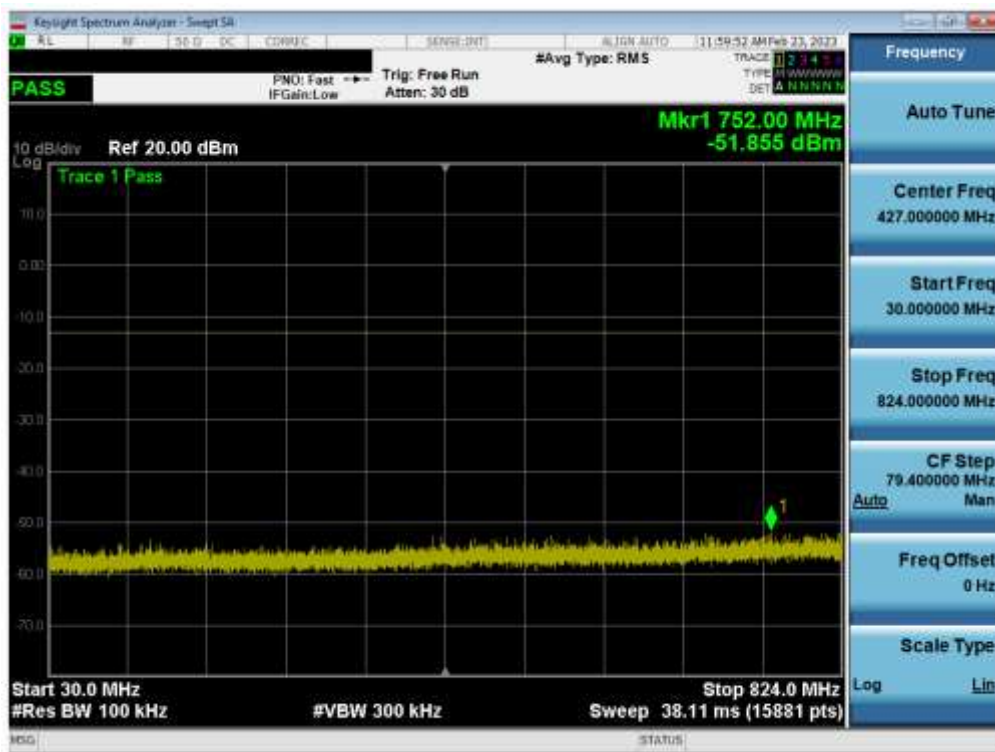


Plot 7-81. Conducted Spurious Plot (GPRS Ch. 128 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 58 of 117 |

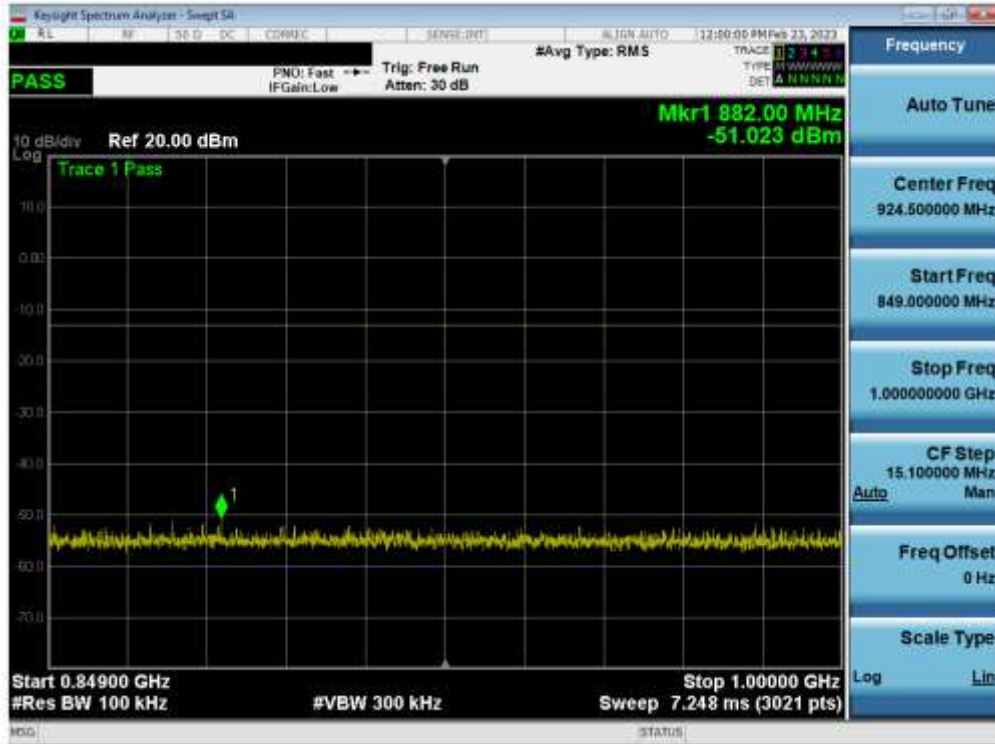


Plot 7-82. Conducted Spurious Plot (GPRS Ch. 128 – Main1)

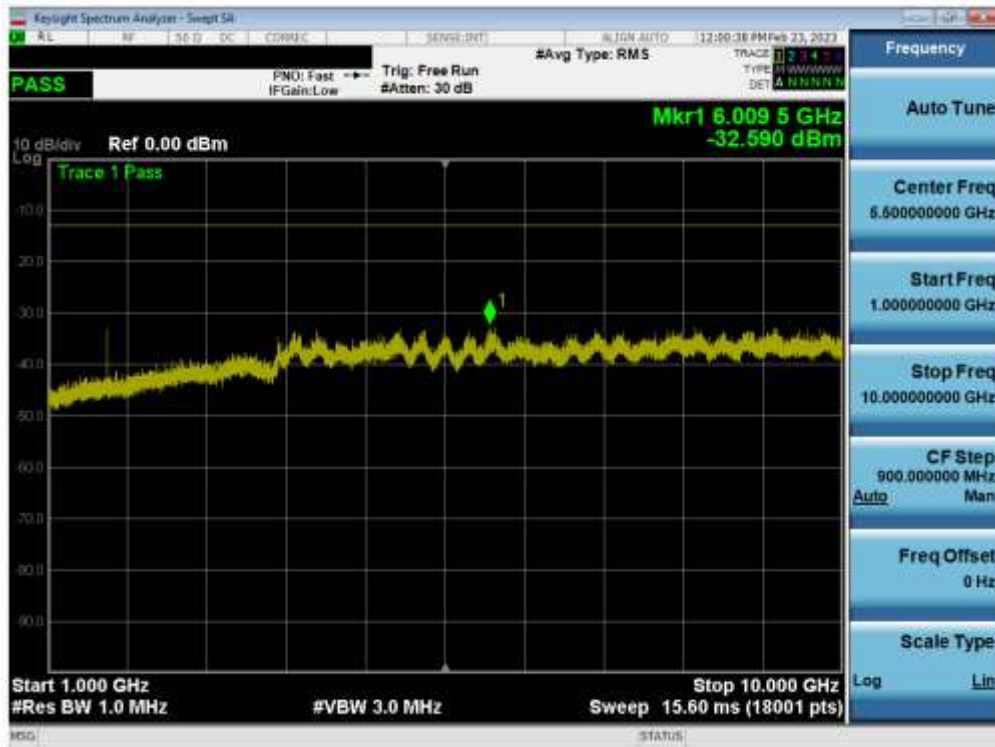


Plot 7-83. Conducted Spurious Plot (GPRS Ch. 190 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 59 of 117 |

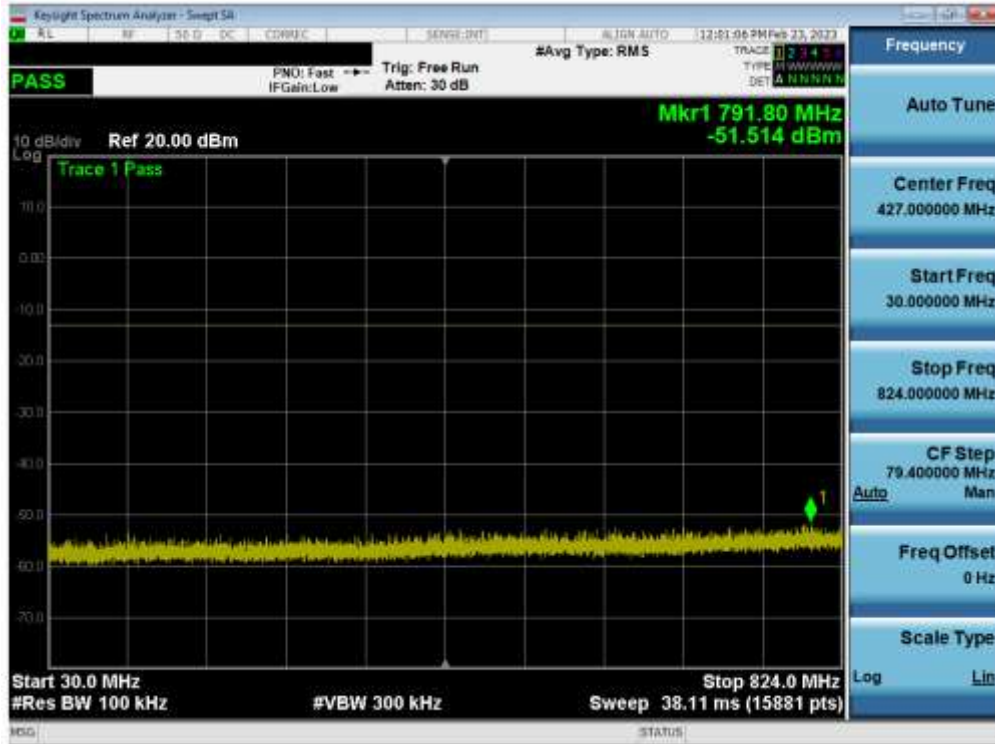


Plot 7-84. Conducted Spurious Plot (GPRS Ch. 190 – Main1)

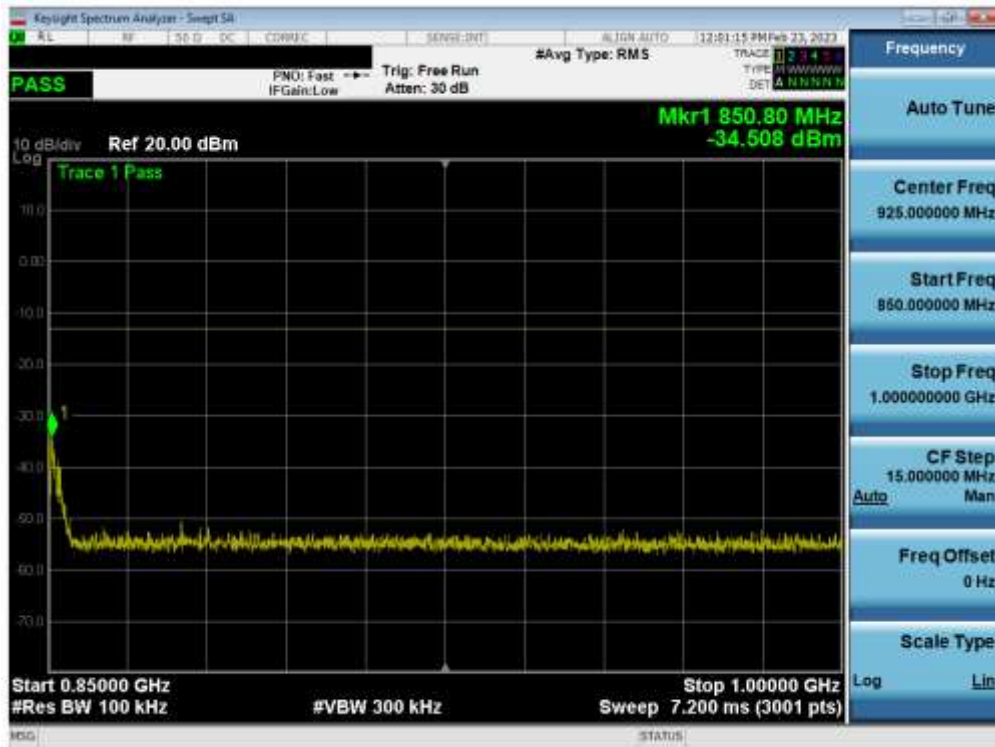


Plot 7-85. Conducted Spurious Plot (GPRS Ch. 190 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 60 of 117 |

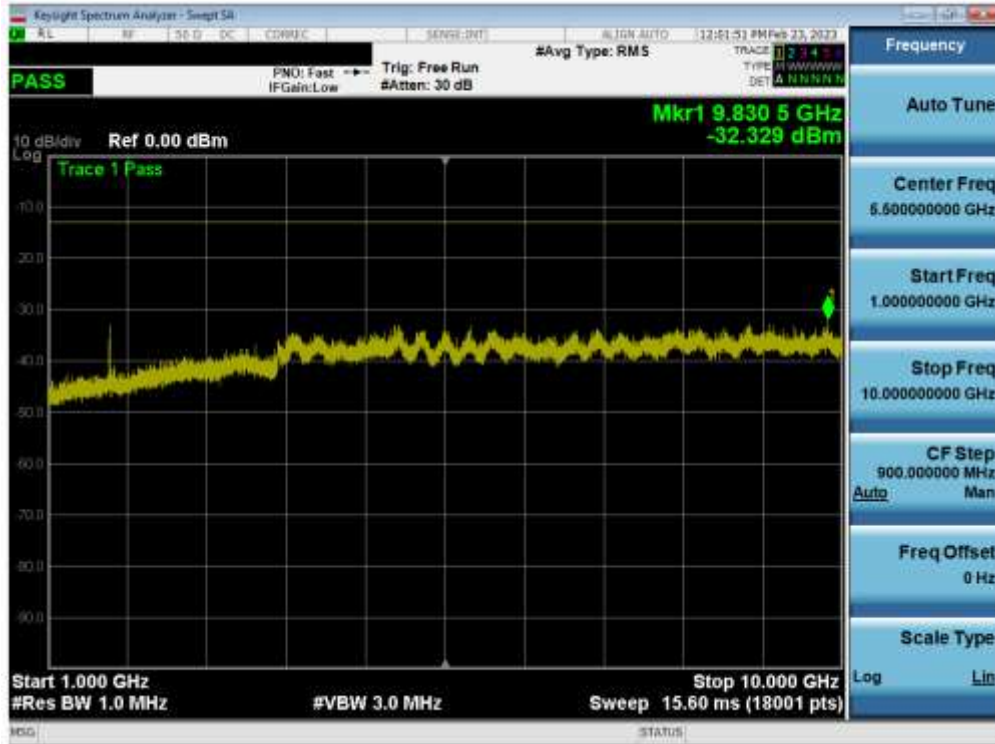


Plot 7-86. Conducted Spurious Plot (GPRS Ch. 251 – Main1)



Plot 7-87. Conducted Spurious Plot (GPRS Ch. 251 – Main1)

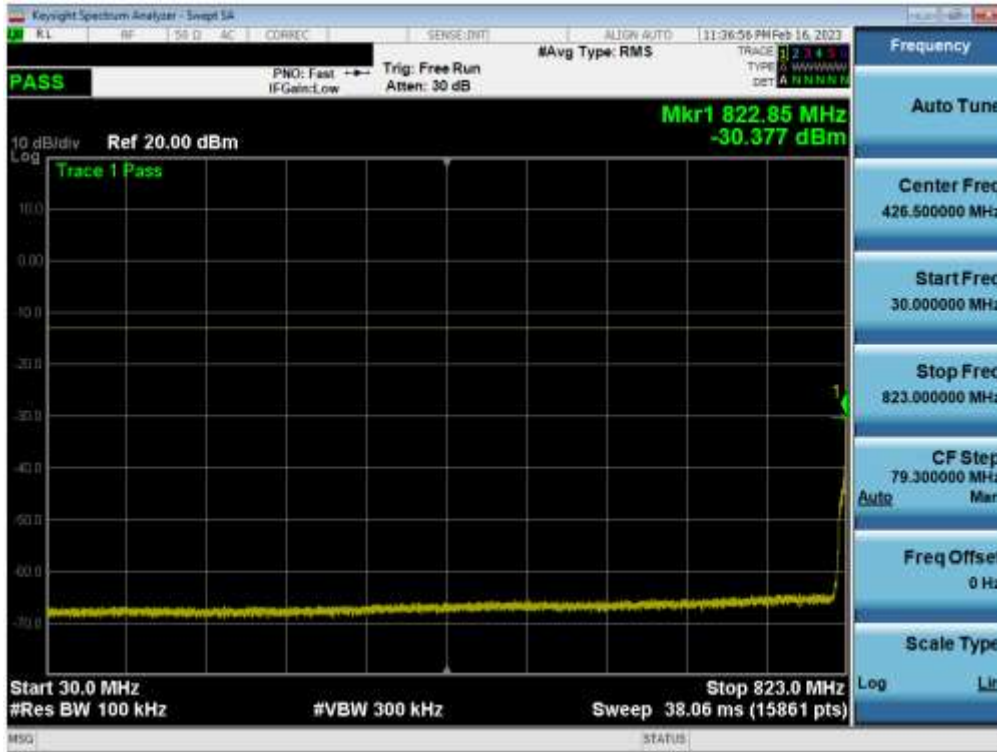
| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 61 of 117 |



Plot 7-88. Conducted Spurious Plot (GPRS Ch. 251 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 62 of 117 |

WCDMA Cell – Main1

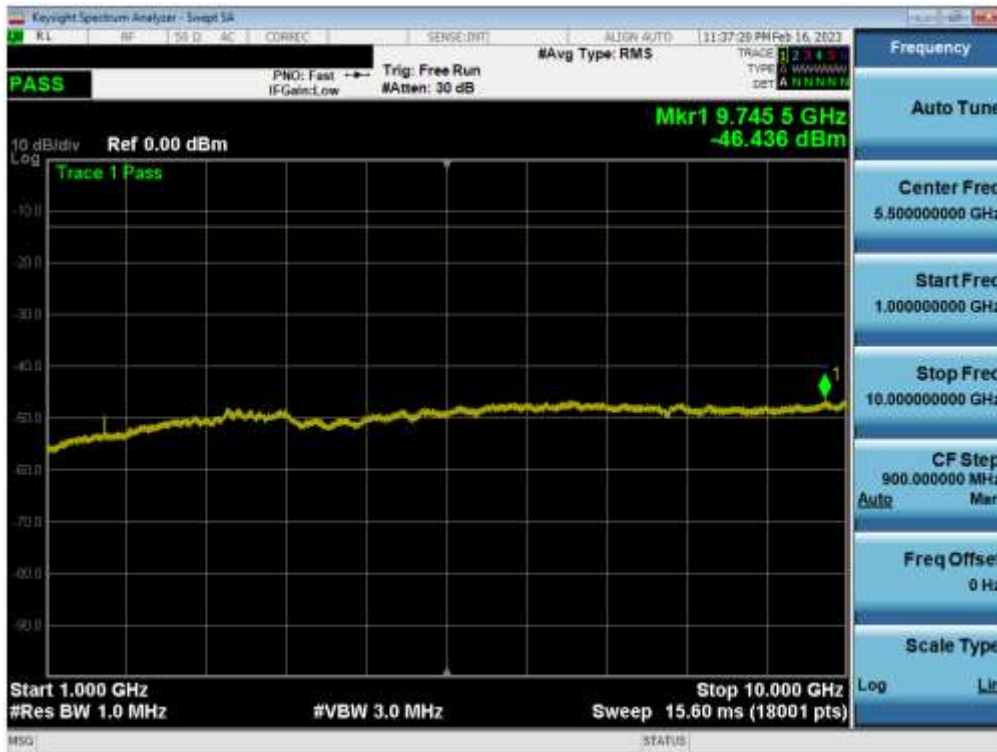


Plot 7-89. Conducted Spurious Plot (WCDMA Ch. 4132 – Main1)

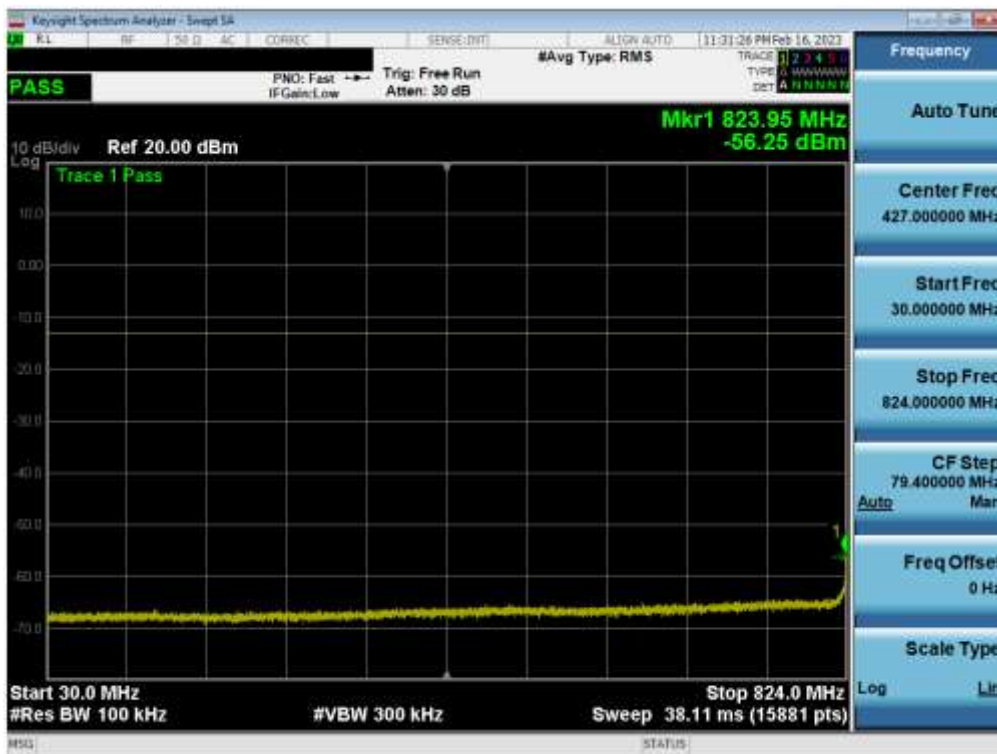


Plot 7-90. Conducted Spurious Plot (WCDMA Ch. 4132 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 63 of 117 |

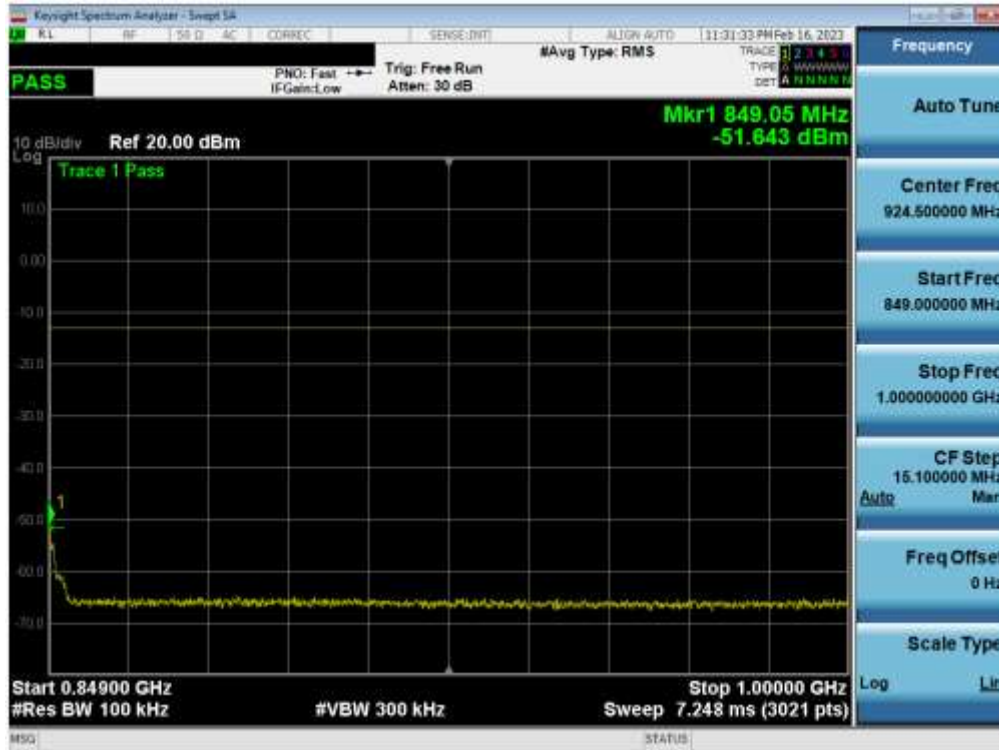


Plot 7-91. Conducted Spurious Plot (WCDMA Ch. 4132 – Main1)

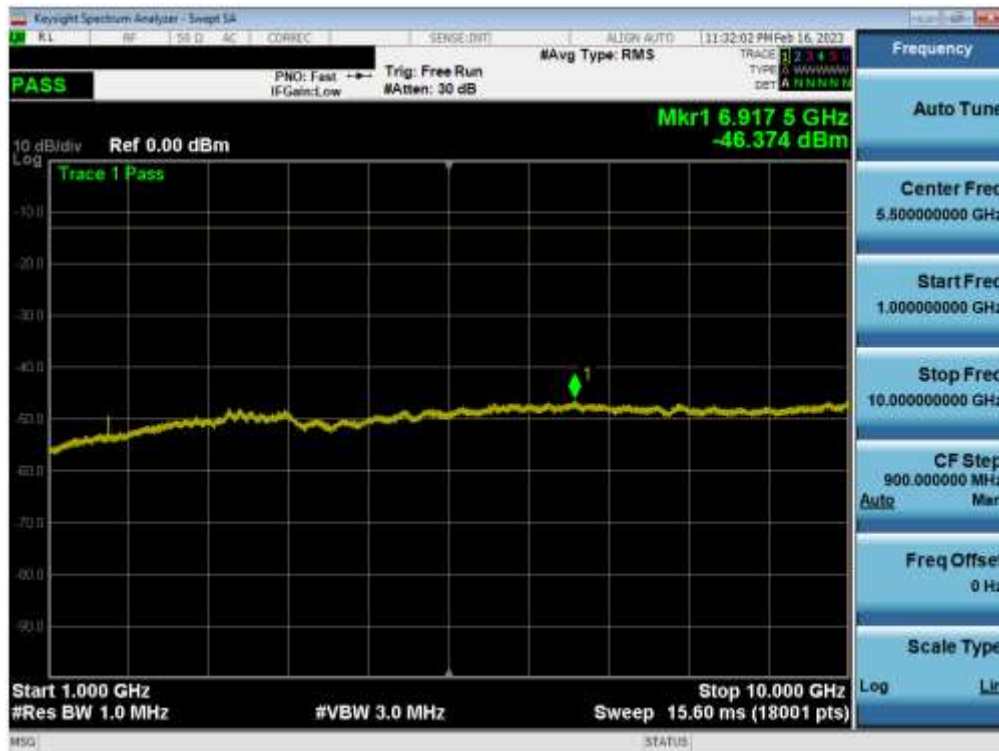


Plot 7-92. Conducted Spurious Plot (WCDMA Ch. 4183 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 64 of 117 |

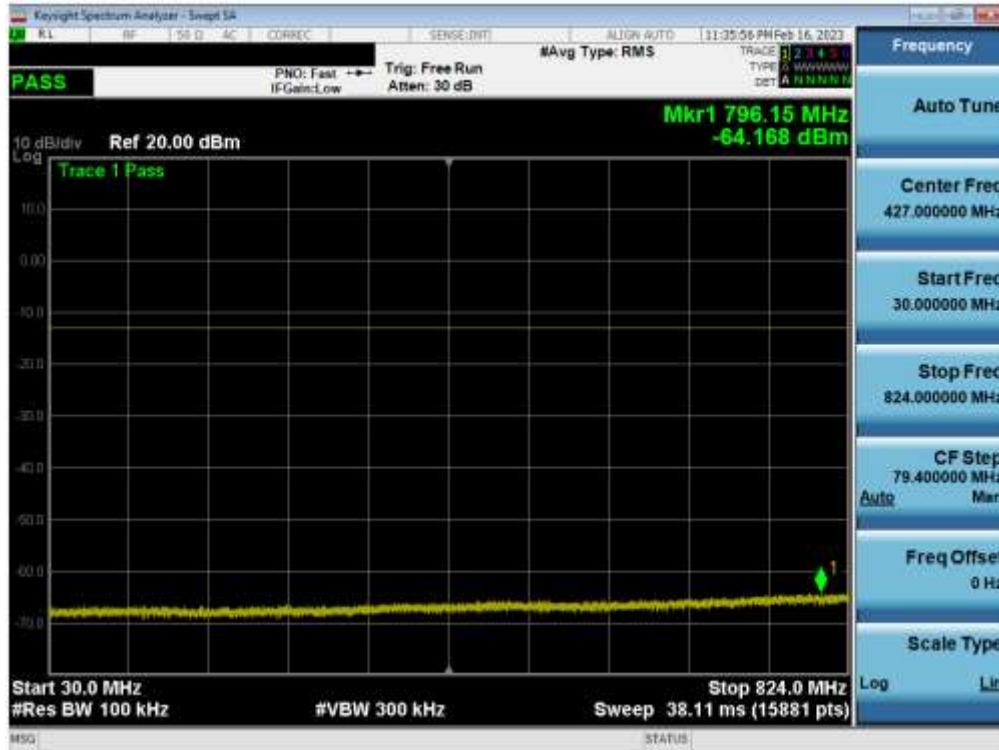


Plot 7-93. Conducted Spurious Plot (WCDMA Ch. 4183 – Main1)



Plot 7-94. Conducted Spurious Plot (WCDMA Ch. 4183 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 65 of 117 |



Plot 7-95. Conducted Spurious Plot (WCDMA Ch. 4233 – Main1)



Plot 7-96. Conducted Spurious Plot (WCDMA Ch. 4233 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 66 of 117 |



Plot 7-97. Conducted Spurious Plot (WCDMA Ch. 4233 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 67 of 117 |

7.5 Band Edge Emissions at Antenna Terminal

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst-case configuration. All modes of operation were investigated, and the worst-case configuration results are reported in this section.

The minimum permissible attenuation level 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 5.7.3

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 to capture all out of band emissions near the band edge.
3. RBW \geq 1% of the emission bandwidth
4. VBW \geq 3 x RBW
5. Detector = RMS
6. Number of sweep points \geq 2 x Span/RBW
7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
8. Sweep time = auto couple
9. The trace was allowed to stabilize.

Test Setup

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



Figure 7-4. Test Instrument & Measurement Setup

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 68 of 117 |

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 emissions are attenuated at least 26 dB below the transmitter power.

2. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g., CP-OFDM and DFT-s-OFDM) were investigated to determine the worst-case configuration. All modes of operation were investigated, and the worst-case configuration results are reported in this section.

| | | | |
|---------------------------------------------------|-----------------------------------------------|--------------------------------------|------------------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 69 of 117 |

LTE Band 5 – Main1



Plot 7-98. Lower Band Edge Plot (LTE Band 5 - 10MHz QPSK – Full RB - Main1)



Plot 7-99. Upper Band Edge Plot (LTE Band 5 - 10MHz QPSK – Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 70 of 117 |



Plot 7-100. Lower Band Edge Plot (LTE Band 5 - 5MHz QPSK – Full RB - Main1)



Plot 7-101. Upper Band Edge Plot (LTE Band 5 - 5MHz QPSK – Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 71 of 117 |



Plot 7-102. Lower Band Edge Plot (LTE Band 5 - 3MHz QPSK – Full RB - Main1)

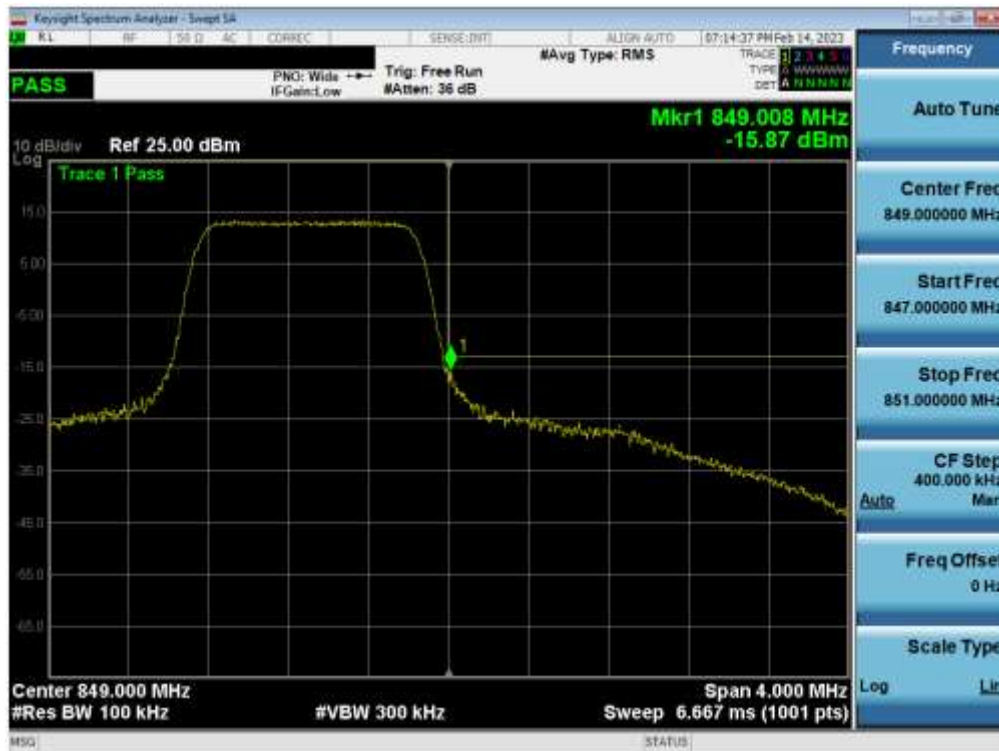


Plot 7-103. Upper Band Edge Plot (LTE Band 5 - 3MHz QPSK – Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 72 of 117 |



Plot 7-104. Lower Band Edge Plot (LTE Band 5 – 1.4MHz QPSK – Full RB - Main1)



Plot 7-105. Upper Band Edge Plot (LTE Band 5 – 1.4MHz QPSK – Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 73 of 117 |

LTE Band 5 – Sub



Plot 7-106. Lower Band Edge Plot (LTE Band 5 - 10MHz QPSK – Full RB - Sub)



Plot 7-107. Upper Band Edge Plot (LTE Band 5 - 10MHz QPSK – Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 74 of 117 |



Plot 7-108. Lower Band Edge Plot (LTE Band 5 - 5MHz QPSK – Full RB - Sub)



Plot 7-109. Upper Band Edge Plot (LTE Band 5 - 5MHz QPSK – Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 75 of 117 |

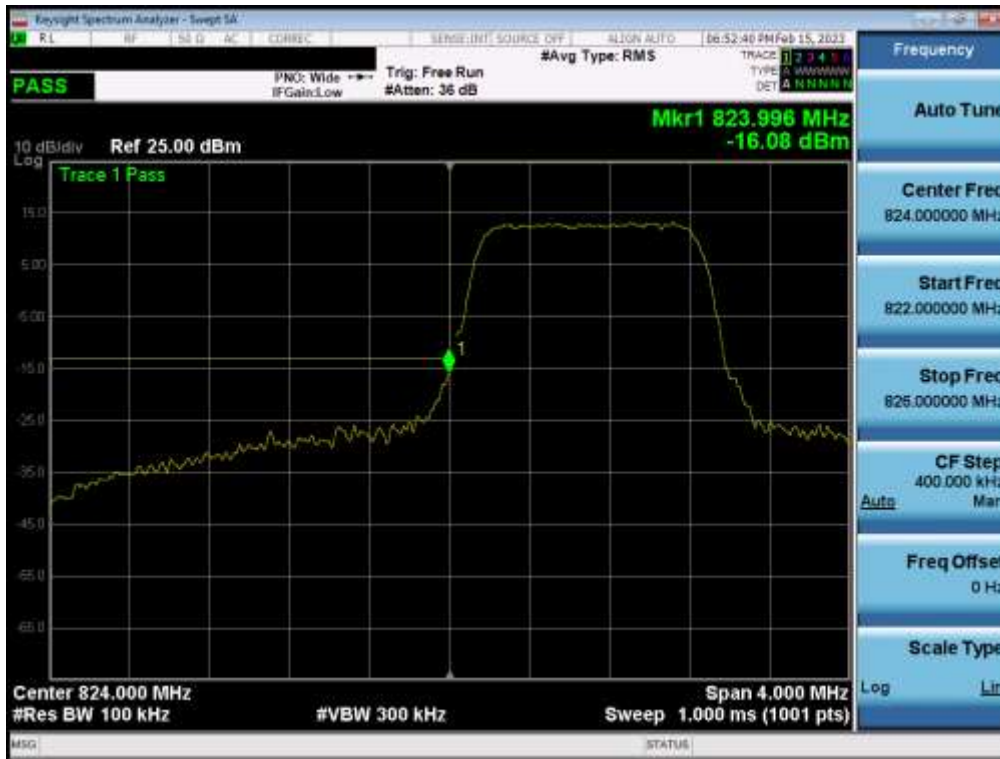


Plot 7-110. Lower Band Edge Plot (LTE Band 5 - 3MHz QPSK – Full RB - Sub)



Plot 7-111. Upper Band Edge Plot (LTE Band 5 - 3MHz QPSK – Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 76 of 117 |



Plot 7-112. Lower Band Edge Plot (LTE Band 5 – 1.4MHz QPSK – Full RB - Sub)



Plot 7-113. Upper Band Edge Plot (LTE Band 5 – 1.4MHz QPSK – Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 77 of 117 |

NR Band n5 – Main1



Plot 7-114. Lower Band Edge Plot (NR Band n5 – 20.0MHz - Full RB - Main1)



Plot 7-115. Upper Band Edge Plot (NR Band n5 – 20.0MHz - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 78 of 117 |



Plot 7-116. Lower Band Edge Plot (NR Band n5 – 15.0MHz - Full RB - Main1)



Plot 7-117. Upper Band Edge Plot (NR Band n5 – 15.0MHz - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 79 of 117 |



Plot 7-118. Lower Band Edge Plot (NR Band n5 – 10.0MHz - Full RB - Main1)



Plot 7-119. Upper Band Edge Plot (NR Band n5 – 10.0MHz - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 80 of 117 |



Plot 7-120. Lower Band Edge Plot (NR Band n5 – 5.0MHz - Full RB - Main1)



Plot 7-121. Upper Band Edge Plot (NR Band n5 – 5.0MHz - Full RB - Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 81 of 117 |

NR Band n5 – Sub



Plot 7-122. Lower Band Edge Plot (NR Band n5 – 20.0MHz - Full RB - Sub)



Plot 7-123. Upper Band Edge Plot (NR Band n5 – 20.0MHz - Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 82 of 117 |



Plot 7-124. Lower Band Edge Plot (NR Band n5 – 15.0MHz - Full RB - Sub)



Plot 7-125. Upper Band Edge Plot (NR Band n5 – 15.0MHz - Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 83 of 117 |



Plot 7-126. Lower Band Edge Plot (NR Band n5 – 10.0MHz - Full RB - Sub)



Plot 7-127. Upper Band Edge Plot (NR Band n5 – 10.0MHz - Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 84 of 117 |



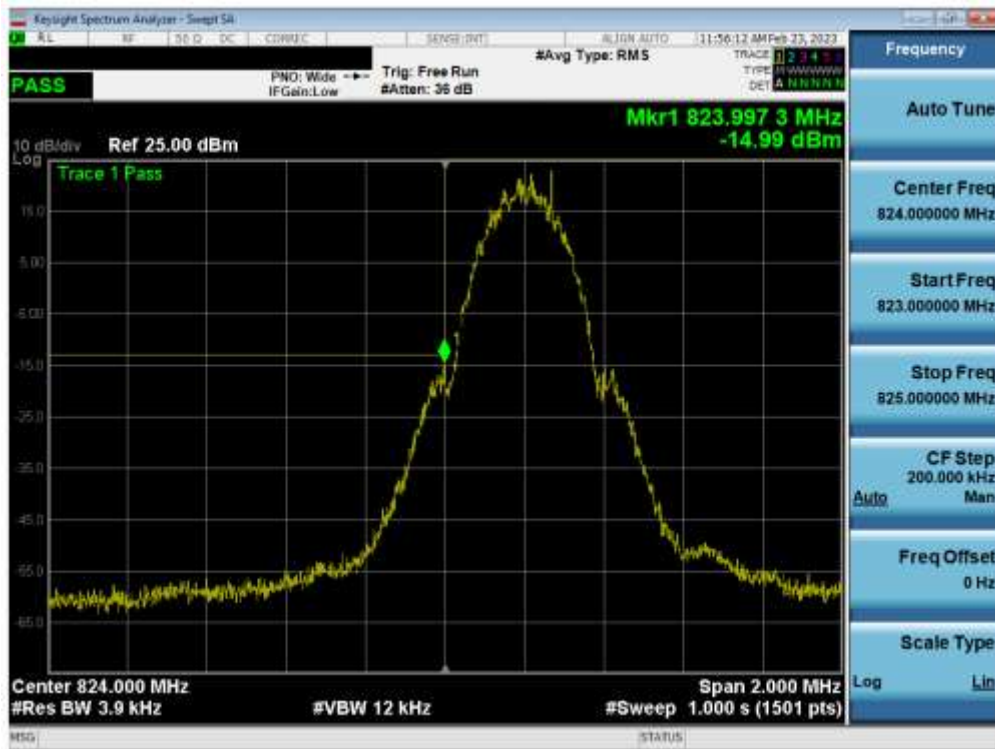
Plot 7-128. Lower Band Edge Plot (NR Band n5 – 5.0MHz - Full RB - Sub)



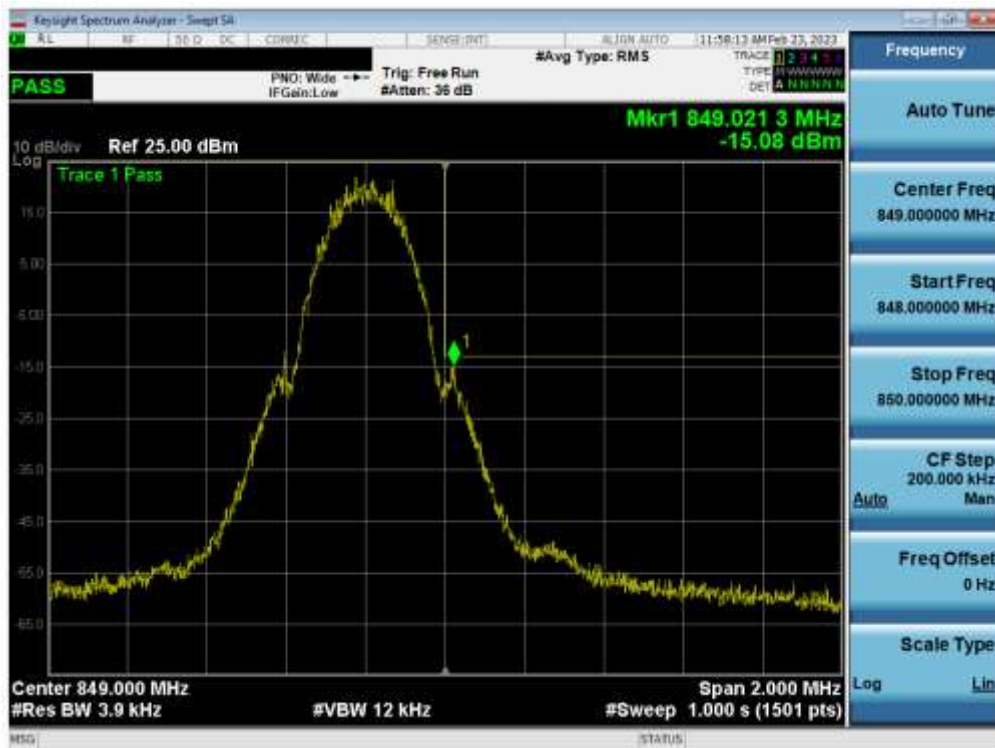
Plot 7-129. Upper Band Edge Plot (NR Band n5 – 5.0MHz - Full RB - Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 85 of 117 |

GSM/GPRS Cell – Main1



Plot 7-130. Lower Band Edge Plot (GPRS Cell – Ch. 128 – Main1)



Plot 7-131. Upper Band Edge Plot (GPRS Cell – Ch. 251 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 86 of 117 |

WCDMA Cell – Main1



Plot 7-132. Lower Band Edge Plot (WCDMA Cell – Ch. 4132 – Main1)



Plot 7-133. Upper Band Edge Plot (WCDMA Cell – Ch. 4233 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 87 of 117 |

7.6 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 doMain1 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 x span / 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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Test Setup

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

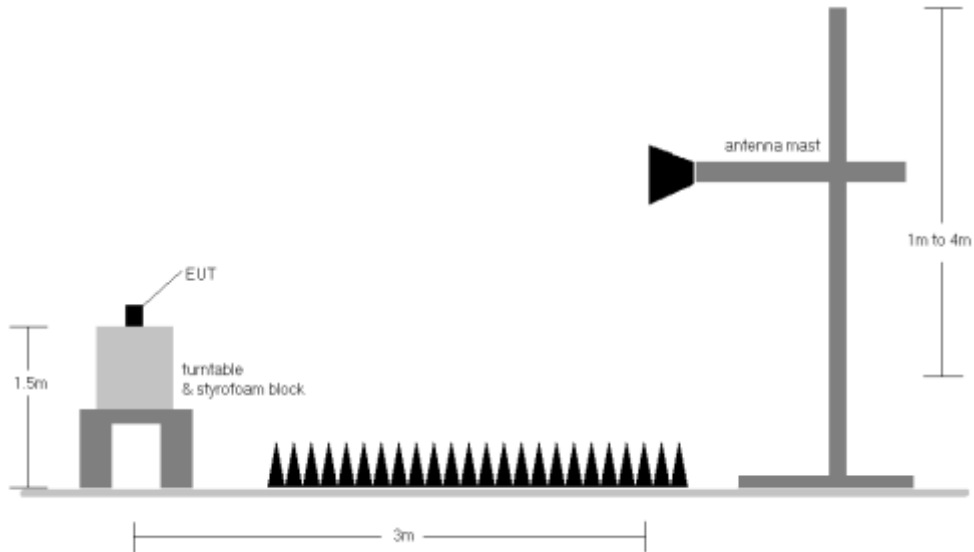


Figure 7-5. Radiated Test Setup < 1GHz

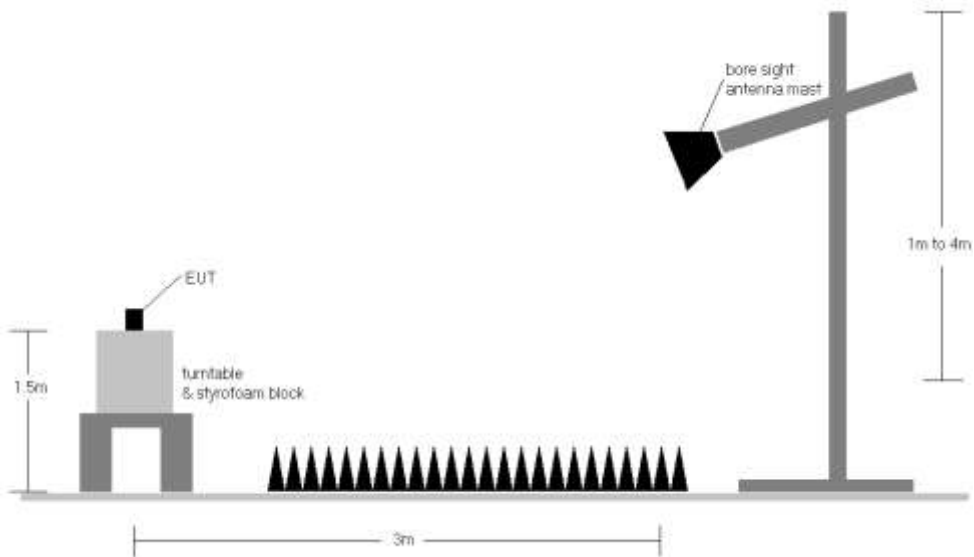


Figure 7-6. Radiated Test Setup > 1GHz

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”.

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
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- 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.
- 5) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g., CP-OFDM and DFT-s-OFDM) were investigated to determine the worst-case configuration. All modes of operation were investigated, and the worst-case configuration results are reported in this section.

| | | | |
|---------------------------------------------------|-----------------------------------------------|--------------------------------------|------------------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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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] | ERP [dBm] | ERP [Watts] | ERP Limit [dBm] | Margin [dB] |
|-----------|------------|-----------------|-----------------|---------------------|----------------------------|-----------------|----------------|------------------------|-----------|-------------|-----------------|-------------|-----------|-------------|-----------------|-------------|
| 10 MHz | QPSK | 829.00 | V | 141 | 253 | 6.10 | 1 / 49 | 15.63 | 19.58 | 0.093 | 38.45 | -18.87 | 21.73 | 0.149 | 40.61 | -18.88 |
| | QPSK | 836.50 | V | 144 | 264 | 6.18 | 1 / 49 | 15.66 | 19.69 | 0.093 | 38.45 | -18.76 | 21.84 | 0.153 | 40.61 | -18.77 |
| | QPSK | 844.00 | V | 152 | 268 | 6.26 | 1 / 25 | 15.89 | 20.59 | 0.102 | 38.45 | -19.35 | 22.25 | 0.168 | 40.61 | -19.36 |
| | 16-QAM | 844.00 | V | 152 | 268 | 6.26 | 1 / 25 | 15.15 | 19.36 | 0.088 | 38.45 | -19.09 | 21.51 | 0.141 | 40.61 | -19.10 |
| 5 MHz | QPSK | 829.00 | V | 141 | 253 | 6.07 | 1 / 6 | 15.80 | 19.73 | 0.094 | 38.45 | -18.72 | 21.88 | 0.154 | 40.61 | -18.73 |
| | QPSK | 836.50 | V | 144 | 264 | 6.18 | 1 / 12 | 15.57 | 19.60 | 0.091 | 38.45 | -18.85 | 21.75 | 0.150 | 40.61 | -18.86 |
| | QPSK | 844.00 | V | 152 | 268 | 6.26 | 1 / 12 | 16.03 | 20.26 | 0.106 | 38.45 | -18.19 | 22.41 | 0.174 | 40.61 | -18.20 |
| | 16-QAM | 836.50 | V | 144 | 264 | 6.18 | 1 / 12 | 15.10 | 19.13 | 0.082 | 38.45 | -19.32 | 21.28 | 0.134 | 40.61 | -19.33 |
| 3 MHz | QPSK | 829.00 | V | 141 | 253 | 6.06 | 1 / 7 | 15.61 | 19.62 | 0.090 | 38.45 | -18.93 | 21.67 | 0.147 | 40.61 | -18.94 |
| | QPSK | 836.50 | V | 144 | 264 | 6.18 | 1 / 7 | 15.59 | 19.62 | 0.092 | 38.45 | -18.93 | 21.77 | 0.150 | 40.61 | -18.94 |
| | QPSK | 844.00 | V | 152 | 268 | 6.29 | 1 / 8 | 15.70 | 19.94 | 0.099 | 38.45 | -18.51 | 22.09 | 0.162 | 40.61 | -18.52 |
| | 16-QAM | 836.50 | V | 144 | 264 | 6.18 | 1 / 7 | 15.18 | 19.21 | 0.083 | 38.45 | -19.24 | 21.36 | 0.137 | 40.61 | -19.25 |
| 1.4 MHz | QPSK | 829.00 | V | 141 | 253 | 6.09 | 1 / 3 | 15.68 | 19.61 | 0.091 | 38.45 | -18.84 | 21.76 | 0.150 | 40.61 | -18.84 |
| | QPSK | 836.50 | V | 144 | 264 | 6.18 | 1 / 3 | 15.59 | 19.62 | 0.092 | 38.45 | -18.83 | 21.77 | 0.150 | 40.61 | -18.84 |
| | QPSK | 844.00 | V | 152 | 268 | 6.40 | 1 / 3 | 15.52 | 19.77 | 0.095 | 38.45 | -18.65 | 21.92 | 0.155 | 40.61 | -18.66 |
| | 16-QAM | 836.50 | V | 144 | 264 | 6.18 | 1 / 3 | 15.18 | 19.21 | 0.083 | 38.45 | -19.25 | 21.36 | 0.137 | 40.61 | -19.25 |
| 10 MHz | QPSK (WCP) | 844.00 | V | 192 | 308 | 6.38 | 1 / 25 | 9.18 | 13.38 | 0.022 | 38.45 | -25.06 | 15.54 | 0.036 | 40.61 | -25.07 |

Table 7-5. ERP Data (LTE Band 5 – Main1)

| 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] | ERP [dBm] | ERP [Watts] | ERP Limit [dBm] | Margin [dB] |
|-----------|------------|-----------------|-----------------|---------------------|----------------------------|-----------------|----------------|------------------------|-----------|-------------|-----------------|-------------|-----------|-------------|-----------------|-------------|
| 10 MHz | QPSK | 829.00 | H | 137 | 245 | 6.70 | 1 / 0 | 10.81 | 15.36 | 0.034 | 38.45 | -23.09 | 17.51 | 0.056 | 40.61 | -23.10 |
| | QPSK | 836.50 | H | 124 | 242 | 6.73 | 1 / 25 | 10.88 | 15.46 | 0.035 | 38.45 | -22.99 | 17.61 | 0.058 | 40.61 | -23.00 |
| | QPSK | 844.00 | H | 126 | 101 | 6.76 | 1 / 25 | 9.91 | 14.52 | 0.028 | 38.45 | -23.93 | 16.67 | 0.046 | 40.61 | -23.94 |
| | 16-QAM | 829.00 | H | 137 | 245 | 6.70 | 1 / 0 | 10.09 | 14.64 | 0.029 | 38.45 | -23.81 | 16.79 | 0.048 | 40.61 | -23.82 |
| 5 MHz | QPSK | 829.00 | H | 137 | 245 | 6.70 | 1 / 0 | 10.86 | 15.41 | 0.035 | 38.45 | -23.04 | 17.56 | 0.057 | 40.61 | -23.05 |
| | QPSK | 836.50 | H | 124 | 242 | 6.73 | 1 / 12 | 10.89 | 15.47 | 0.035 | 38.45 | -22.98 | 17.62 | 0.058 | 40.61 | -22.99 |
| | QPSK | 844.00 | H | 126 | 101 | 6.76 | 1 / 12 | 9.90 | 14.51 | 0.028 | 38.45 | -23.94 | 16.66 | 0.046 | 40.61 | -23.95 |
| | 16-QAM | 836.50 | H | 124 | 242 | 6.73 | 1 / 12 | 10.08 | 14.66 | 0.029 | 38.45 | -23.79 | 16.81 | 0.048 | 40.61 | -23.80 |
| 3 MHz | QPSK | 829.00 | H | 137 | 245 | 6.70 | 1 / 7 | 10.82 | 15.37 | 0.034 | 38.45 | -23.08 | 17.52 | 0.057 | 40.61 | -23.09 |
| | QPSK | 836.50 | H | 124 | 242 | 6.73 | 1 / 7 | 10.89 | 15.47 | 0.035 | 38.45 | -22.98 | 17.62 | 0.058 | 40.61 | -22.99 |
| | QPSK | 844.00 | H | 126 | 101 | 6.76 | 1 / 7 | 9.91 | 14.52 | 0.028 | 38.45 | -23.93 | 16.67 | 0.046 | 40.61 | -23.94 |
| | 16-QAM | 829.00 | H | 137 | 245 | 6.70 | 1 / 7 | 10.16 | 14.71 | 0.030 | 38.45 | -23.74 | 16.86 | 0.049 | 40.61 | -23.75 |
| 1.4 MHz | QPSK | 829.00 | H | 137 | 245 | 6.70 | 1 / 0 | 10.80 | 15.35 | 0.034 | 38.45 | -23.10 | 17.50 | 0.056 | 40.61 | -23.10 |
| | QPSK | 836.50 | H | 124 | 242 | 6.73 | 1 / 3 | 10.88 | 15.46 | 0.035 | 38.45 | -22.99 | 17.61 | 0.058 | 40.61 | -23.00 |
| | QPSK | 844.00 | H | 126 | 101 | 6.76 | 1 / 0 | 9.85 | 14.46 | 0.028 | 38.45 | -23.99 | 16.61 | 0.046 | 40.61 | -24.00 |
| | 16-QAM | 829.00 | H | 137 | 245 | 6.70 | 1 / 0 | 9.99 | 14.54 | 0.028 | 38.45 | -23.91 | 16.69 | 0.047 | 40.61 | -23.92 |
| 10 MHz | QPSK (WCP) | 836.50 | H | 108 | 96 | 6.73 | 1 / 25 | 6.22 | 10.80 | 0.012 | 38.45 | -27.65 | 12.95 | 0.020 | 40.61 | -27.66 |

Table 7-6. ERP Data (LTE Band 5 – Sub)

| 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] | ERP [dBm] | ERP [Watts] | ERP Limit [dBm] | Margin [dB] |
|-----------|------------|-----------------|-----------------|---------------------|----------------------------|-----------------|----------------|------------------------|-----------|-------------|-----------------|-------------|-----------|-------------|-----------------|-------------|
| 20 MHz | m2 QPSK | 834.00 | V | 140 | 256 | 6.15 | 1 / 53 | 14.69 | 18.69 | 0.074 | 38.45 | -19.76 | 20.84 | 0.121 | 40.61 | -19.76 |
| | m2 QPSK | 836.50 | V | 143 | 258 | 6.18 | 1 / 26 | 14.69 | 18.72 | 0.074 | 38.45 | -19.73 | 20.87 | 0.122 | 40.61 | -19.74 |
| | m2 QPSK | 839.00 | V | 146 | 260 | 6.20 | 1 / 26 | 14.63 | 18.78 | 0.076 | 38.45 | -19.67 | 20.93 | 0.124 | 40.61 | -19.67 |
| | QPSK | 834.00 | V | 140 | 256 | 6.15 | 1 / 53 | 14.59 | 18.59 | 0.072 | 38.45 | -19.86 | 20.74 | 0.119 | 40.61 | -19.86 |
| | QPSK | 836.50 | V | 143 | 258 | 6.18 | 1 / 26 | 14.48 | 18.51 | 0.071 | 38.45 | -19.94 | 20.66 | 0.116 | 40.61 | -19.95 |
| | QPSK | 839.00 | V | 146 | 260 | 6.20 | 1 / 26 | 14.51 | 18.66 | 0.074 | 38.45 | -19.79 | 20.81 | 0.121 | 40.61 | -19.79 |
| | 16-QAM | 839.00 | V | 146 | 260 | 6.20 | 1 / 26 | 13.81 | 17.96 | 0.063 | 38.45 | -20.49 | 20.11 | 0.103 | 40.61 | -20.49 |
| | m2 QPSK | 831.50 | V | 140 | 256 | 6.13 | 1 / 20 | 14.82 | 18.79 | 0.076 | 38.45 | -19.66 | 20.94 | 0.124 | 40.61 | -19.66 |
| 16 MHz | m2 QPSK | 836.50 | V | 143 | 258 | 6.18 | 1 / 20 | 14.55 | 18.58 | 0.072 | 38.45 | -19.87 | 20.73 | 0.118 | 40.61 | -19.88 |
| | m2 QPSK | 841.50 | V | 146 | 260 | 6.23 | 1 / 39 | 14.57 | 18.75 | 0.075 | 38.45 | -19.78 | 20.90 | 0.123 | 40.61 | -19.78 |
| | QPSK | 831.50 | V | 140 | 256 | 6.13 | 1 / 20 | 14.84 | 18.81 | 0.076 | 38.45 | -19.64 | 20.96 | 0.125 | 40.61 | -19.64 |
| | QPSK | 836.50 | V | 143 | 258 | 6.18 | 1 / 20 | 14.60 | 18.62 | 0.073 | 38.45 | -19.83 | 20.77 | 0.120 | 40.61 | -19.83 |
| | QPSK | 841.50 | V | 146 | 260 | 6.23 | 1 / 39 | 14.30 | 18.48 | 0.070 | 38.45 | -19.97 | 20.63 | 0.116 | 40.61 | -19.98 |
| | 16-QAM | 841.50 | V | 146 | 260 | 6.23 | 1 / 39 | 13.74 | 17.92 | 0.062 | 38.45 | -20.53 | 20.07 | 0.102 | 40.61 | -20.53 |
| | m2 QPSK | 829.00 | V | 140 | 256 | 6.10 | 1 / 30 | 14.66 | 18.61 | 0.073 | 38.45 | -19.94 | 20.76 | 0.119 | 40.61 | -19.95 |
| | m2 QPSK | 836.50 | V | 143 | 258 | 6.18 | 1 / 26 | 14.45 | 18.48 | 0.070 | 38.45 | -19.97 | 20.63 | 0.116 | 40.61 | -19.98 |
| 10 MHz | m2 QPSK | 844.00 | V | 146 | 260 | 6.26 | 1 / 26 | 14.35 | 18.55 | 0.072 | 38.45 | -19.98 | 20.70 | 0.118 | 40.61 | -19.98 |
| | QPSK | 829.00 | V | 140 | 256 | 6.10 | 1 / 30 | 14.76 | 18.71 | 0.074 | 38.45 | -19.74 | 20.86 | 0.122 | 40.61 | -19.75 |
| | QPSK | 836.50 | V | 143 | 258 | 6.18 | 1 / 26 | 14.34 | 18.37 | 0.069 | 38.45 | -20.08 | 20.52 | 0.113 | 40.61 | -20.09 |
| | QPSK | 844.00 | V | 146 | 260 | 6.26 | 1 / 26 | 14.22 | 18.42 | 0.070 | 38.45 | -20.03 | 20.57 | 0.114 | 40.61 | -20.03 |
| | 16-QAM | 836.50 | V | 143 | 258 | 6.18 | 1 / 26 | 14.04 | 18.07 | 0.064 | 38.45 | -20.38 | 20.22 | 0.105 | 40.61 | -20.39 |
| | m2 QPSK | 829.00 | V | 140 | 256 | 6.07 | 1 / 6 | 14.82 | 18.74 | 0.075 | 38.45 | -19.71 | 20.89 | 0.123 | 40.61 | -19.71 |
| | m2 QPSK | 836.50 | V | 143 | 258 | 6.18 | 1 / 12 | 14.50 | 18.53 | 0.071 | 38.45 | -19.92 | 20.68 | 0.117 | 40.61 | -19.93 |
| | QPSK | 844.00 | V | 146 | 260 | 6.28 | 1 / 6 | 14.46 | 18.62 | 0.074 | 38.45 | -19.76 | 20.84 | 0.121 | 40.61 | -19.76 |
| 5 MHz | QPSK | 829.00 | V | 140 | 256 | 6.07 | 1 / 6 | 14.70 | 18.62 | 0.073 | 38.45 | -19.83 | 20.77 | 0.119 | 40.61 | -19.83 |
| | QPSK | 836.50 | V | 143 | 258 | 6.18 | 1 / 12 | 14.39 | 18.42 | 0.069 | 38.45 | -20.03 | 20.57 | 0.114 | 40.61 | -20.04 |
| | QPSK | 844.00 | V | 146 | 260 | 6.30 | 1 / 6 | 13.92 | 18.16 | 0.065 | 38.45 | -20.30 | 20.31 | 0.107 | 40.61 | -20.30 |
| | 16-QAM | 836.50 | V | 143 | 258 | 6.18 | 1 / 12 | 13.95 | 17.88 | 0.061 | 38.45 | -20.57 | 20.03 | 0.101 | 40.61 | -20.58 |
| | QPSK (WCP) | 839.00 | H | 208 | 290 | 6.80 | 1/53 | 10.81 | 15.86 | 0.026 | 38.45 | -22.98 | 17.61 | 0.058 | 40.61 | -22.98 |

Table 7-7. ERP Data (NR Band n5 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 91 of 117 |

| Bandwidth | Mod. | Frequency [MHz] | Ant. Pol. [HV] | Antenna Height [cm] | Turntable Azimuth [degree] | Ant. Gain [dBi] | RIS Size/Offset | Substitute Level [dBm] | ERP [dBm] | ERP [Watts] | ERP Limit [dBm] | Margin [dB] | EIRP [dBm] | EIRP [Watts] | ERP Limit [dBm] | Margin [dB] |
|-----------|------------|-----------------|----------------|---------------------|----------------------------|-----------------|-----------------|------------------------|-----------|-------------|-----------------|-------------|------------|--------------|-----------------|-------------|
| 20 MHz | m2 BPSK | 834.00 | H | 199 | 200 | 6.65 | 1 / 53 | 11.95 | 16.45 | 0.044 | 38.45 | -22.00 | 18.62 | 0.072 | 40.61 | -22.00 |
| | m2 BPSK | 836.50 | H | 199 | 200 | 6.73 | 1 / 26 | 11.54 | 16.12 | 0.041 | 38.45 | -22.33 | 18.27 | 0.067 | 40.61 | -22.34 |
| | m2 BPSK | 839.00 | H | 202 | 204 | 6.80 | 1 / 26 | 11.79 | 16.44 | 0.044 | 38.45 | -22.01 | 18.89 | 0.072 | 40.61 | -22.01 |
| | QPSK | 834.00 | H | 199 | 200 | 6.65 | 1 / 53 | 11.79 | 16.23 | 0.043 | 38.45 | -22.15 | 18.44 | 0.070 | 40.61 | -22.15 |
| | QPSK | 836.50 | H | 199 | 200 | 6.73 | 1 / 26 | 11.50 | 16.08 | 0.041 | 38.45 | -22.37 | 18.23 | 0.067 | 40.61 | -22.38 |
| | QPSK | 839.00 | H | 202 | 204 | 6.80 | 1 / 26 | 11.86 | 16.51 | 0.045 | 38.45 | -21.94 | 18.66 | 0.074 | 40.61 | -21.94 |
| 15 MHz | 16-QAM | 839.00 | H | 202 | 204 | 6.80 | 1 / 26 | 10.86 | 16.51 | 0.036 | 38.45 | -22.94 | 17.88 | 0.058 | 40.61 | -22.94 |
| | m2 BPSK | 831.50 | H | 199 | 200 | 6.73 | 1 / 39 | 11.91 | 16.48 | 0.045 | 38.45 | -21.97 | 18.64 | 0.073 | 40.61 | -21.97 |
| | m2 BPSK | 836.50 | H | 199 | 200 | 6.73 | 1 / 39 | 11.47 | 16.05 | 0.040 | 38.45 | -22.48 | 18.28 | 0.066 | 40.61 | -22.41 |
| | m2 BPSK | 841.50 | H | 202 | 204 | 6.73 | 1 / 20 | 11.97 | 16.55 | 0.045 | 38.45 | -21.91 | 18.78 | 0.074 | 40.61 | -21.91 |
| | QPSK | 831.50 | H | 199 | 200 | 6.73 | 1 / 39 | 11.71 | 16.23 | 0.043 | 38.45 | -22.15 | 18.44 | 0.070 | 40.61 | -22.17 |
| | QPSK | 836.50 | H | 199 | 200 | 6.73 | 1 / 39 | 11.51 | 16.09 | 0.041 | 38.45 | -22.36 | 18.24 | 0.067 | 40.61 | -22.37 |
| 10 MHz | QPSK | 841.50 | H | 202 | 204 | 6.73 | 1 / 20 | 11.92 | 16.50 | 0.045 | 38.45 | -21.95 | 18.65 | 0.073 | 40.61 | -21.96 |
| | 16-QAM | 841.50 | H | 202 | 204 | 6.73 | 1 / 20 | 10.94 | 15.52 | 0.038 | 38.45 | -22.93 | 17.67 | 0.058 | 40.61 | -22.93 |
| | m2 BPSK | 829.00 | H | 199 | 200 | 6.70 | 1 / 26 | 11.83 | 16.38 | 0.043 | 38.45 | -22.07 | 18.53 | 0.071 | 40.61 | -22.08 |
| | m2 BPSK | 836.50 | H | 199 | 200 | 6.73 | 1 / 13 | 11.34 | 15.91 | 0.039 | 38.45 | -22.54 | 18.06 | 0.064 | 40.61 | -22.54 |
| | m2 BPSK | 844.00 | H | 202 | 204 | 6.76 | 1 / 13 | 11.76 | 16.37 | 0.043 | 38.45 | -22.09 | 18.62 | 0.071 | 40.61 | -22.09 |
| | QPSK | 829.00 | H | 199 | 200 | 6.70 | 1 / 26 | 11.70 | 16.25 | 0.042 | 38.45 | -22.20 | 18.40 | 0.069 | 40.61 | -22.21 |
| 5 MHz | QPSK | 836.50 | H | 199 | 200 | 6.73 | 1 / 13 | 11.35 | 15.93 | 0.039 | 38.45 | -22.52 | 18.08 | 0.064 | 40.61 | -22.53 |
| | QPSK | 844.00 | H | 202 | 204 | 6.76 | 1 / 13 | 11.74 | 16.35 | 0.043 | 38.45 | -22.10 | 18.59 | 0.071 | 40.61 | -22.11 |
| | 16-QAM | 829.00 | H | 199 | 200 | 6.70 | 1 / 26 | 10.98 | 15.53 | 0.036 | 38.45 | -22.92 | 17.68 | 0.058 | 40.61 | -22.93 |
| | m2 BPSK | 829.00 | H | 199 | 200 | 6.67 | 1 / 18 | 11.99 | 16.51 | 0.045 | 38.45 | -21.94 | 18.66 | 0.073 | 40.61 | -21.95 |
| | m2 BPSK | 836.50 | H | 199 | 200 | 6.73 | 1 / 18 | 11.47 | 16.05 | 0.040 | 38.45 | -22.40 | 18.29 | 0.066 | 40.61 | -22.41 |
| | m2 BPSK | 844.00 | H | 202 | 204 | 6.70 | 1 / 6 | 11.95 | 16.59 | 0.045 | 38.45 | -21.87 | 18.74 | 0.075 | 40.61 | -21.87 |
| 20 MHz | QPSK | 829.00 | H | 199 | 200 | 6.67 | 1 / 18 | 11.67 | 16.19 | 0.042 | 38.45 | -22.26 | 18.34 | 0.068 | 40.61 | -22.26 |
| | QPSK | 836.50 | H | 199 | 200 | 6.73 | 1 / 18 | 11.41 | 15.99 | 0.040 | 38.45 | -22.48 | 18.14 | 0.065 | 40.61 | -22.47 |
| | QPSK | 844.00 | H | 202 | 204 | 6.70 | 1 / 6 | 11.18 | 15.81 | 0.038 | 38.45 | -22.64 | 17.96 | 0.063 | 40.61 | -22.64 |
| | 16-QAM | 829.00 | H | 199 | 200 | 6.67 | 1 / 18 | 10.61 | 15.13 | 0.033 | 38.45 | -23.32 | 17.28 | 0.053 | 40.61 | -23.32 |
| | QPSK (WCD) | 839.00 | H | 202 | 229 | 6.80 | 1/1 | 9.80 | 14.45 | 0.020 | 38.45 | -24.00 | 16.60 | 0.040 | 40.61 | -24.00 |

Table 7-8. ERP Data (NR Band n5 – Sub)

| Frequency [MHz] | Mode | Ant. Pol. [HV] | 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 | 165 | 257 | 17.58 | 6.13 | 21.56 | 0.143 | 38.45 | -16.89 | 23.71 | 0.235 | 40.61 | -16.90 |
| 836.50 | GPRS850 | V | 148 | 255 | 18.21 | 6.18 | 22.24 | 0.167 | 38.45 | -16.21 | 24.39 | 0.275 | 40.61 | -16.22 |
| 848.80 | GPRS850 | V | 155 | 257 | 17.91 | 6.41 | 22.17 | 0.165 | 38.45 | -16.29 | 24.32 | 0.270 | 40.61 | -16.29 |
| 836.60 | EDGE850 | V | 148 | 255 | 13.02 | 6.18 | 17.05 | 0.051 | 38.45 | -21.40 | 19.20 | 0.083 | 40.61 | -21.41 |
| 836.60 | GSM850 (WCD) | V | 179 | 162 | 3.29 | 6.18 | 7.32 | 0.005 | 38.45 | -31.13 | 9.47 | 0.009 | 40.61 | -31.14 |

Table 7-9. ERP Data (GPRS Cell – Main1)

| Frequency [MHz] | Mode | Ant. Pol. [HV] | 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 | V | 139 | 286 | 15.29 | 6.07 | 19.21 | 0.083 | 38.45 | -19.24 | 21.36 | 0.137 | 40.61 | -19.24 |
| 836.60 | WCDMA850 | V | 141 | 281 | 15.58 | 6.18 | 19.61 | 0.091 | 38.45 | -18.84 | 21.76 | 0.150 | 40.61 | -18.85 |
| 846.60 | WCDMA850 | V | 148 | 283 | 15.30 | 6.38 | -19.53 | 0.090 | 38.45 | -18.92 | 21.68 | 0.147 | 40.61 | -18.92 |
| 836.60 | WCDMA850 (WCD) | V | 181 | 107 | 5.70 | 6.18 | 5.73 | 0.009 | 38.45 | -28.72 | 11.88 | 0.015 | 40.61 | -28.73 |

Table 7-10. ERP Data (WCDMA Cell – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2-PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 92 of 117 |



7.7 Radiated Spurious Emissions Measurements

Test Overview

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

Test Procedures Used

ANSI C63.26-2015 – Section 5.5.4

Test Settings

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

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 93 of 117 |

Test Setup

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

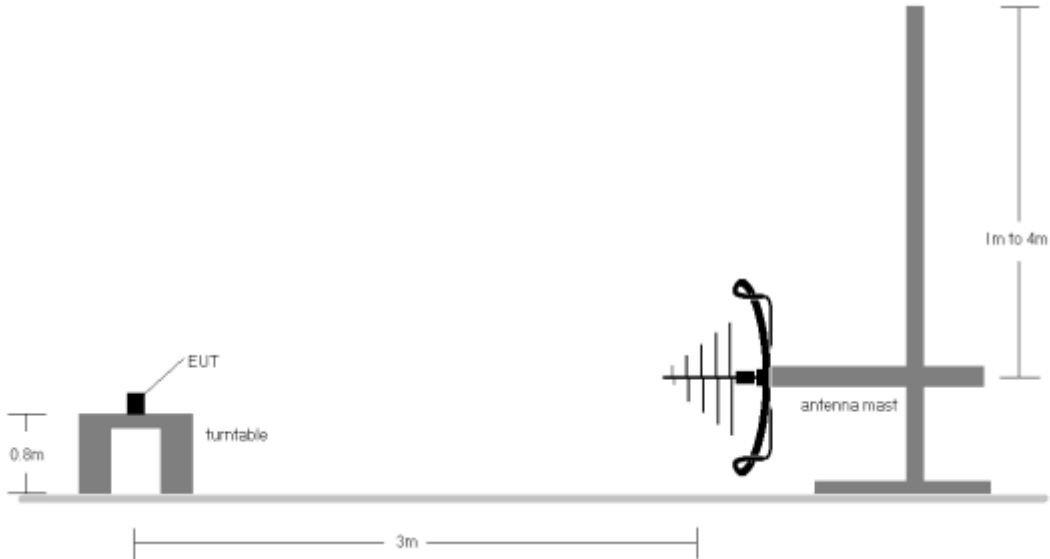


Figure 7-7. Test Instrument & Measurement Setup < 1GHz

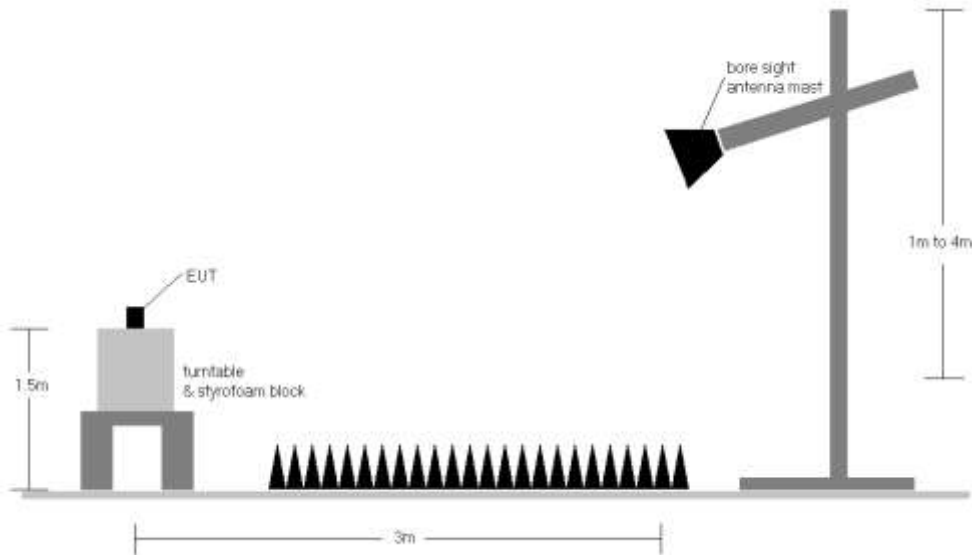


Figure 7-8. Test Instrument & Measurement Setup > 1GHz

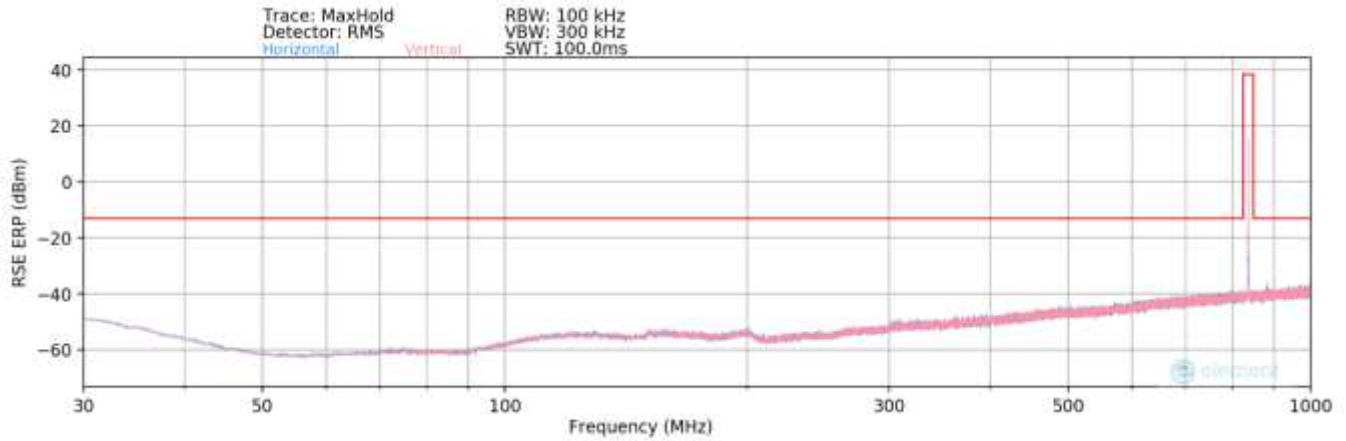
| | | | |
|---------------------------------------------------|-----------------------------------------------|--------------------------------------|------------------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 94 of 117 |

Test Notes

- 1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26-2015 Section 5.2.7:
 - a) $E(\text{dB}\mu\text{V}/\text{m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b) $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V}/\text{m}) + 20\log D - 104.8$; where D is the measurement distance in meters.
 - c) $\text{ERP (dBm)} = E(\text{dB}\mu\text{V}/\text{m}) + 20\log D - 104.8 - 2.15$; 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.
- 9) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g., CP-OFDM and DFT-s-OFDM) were investigated to determine the worst-case configuration. All modes of operation were investigated, and the worst-case configuration results are reported in this section.
- 10) Spurious emissions shown in this section are measured while operating in EN-DC mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor). Spurious emissions from the NR carrier device are subject to the rules under which the NR carrier operates. Spurious emissions caused by the LTE carrier must meet the requirements of the rules under which the LTE carrier operates.

| | | | |
|---------------------------------------------------|-----------------------------------------------|--------------------------------------|------------------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 95 of 117 |

LTE Band 5 – Main1

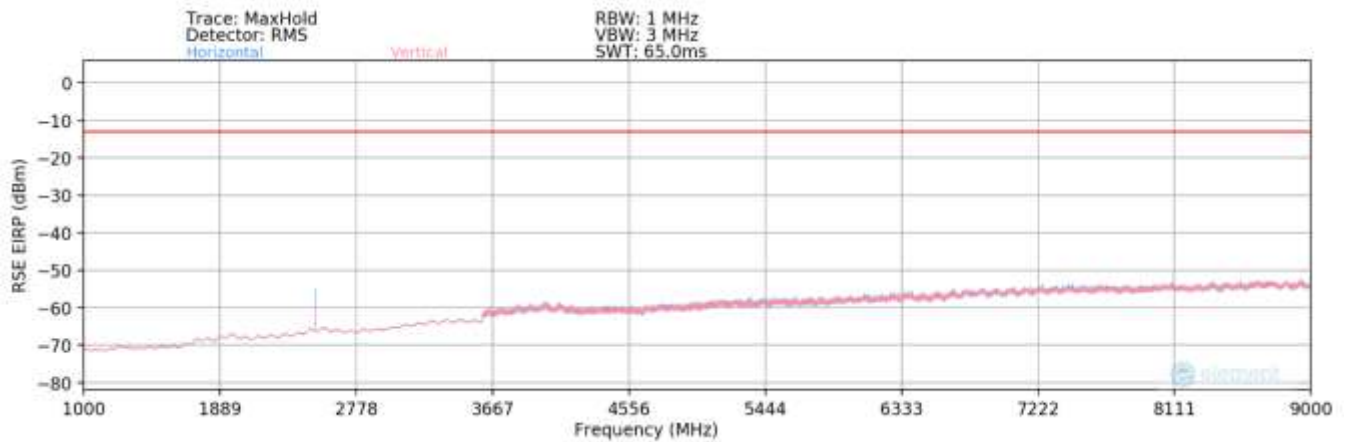


Plot 7-134. Radiated Spurious Plot 30MHz-1GHz (LTE Band 5 – Main1)

| | |
|------------------|--------|
| 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] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|-----------------------------------|-------------|-------------|
| 581.00 | H | - | - | -96.83 | 27.14 | 37.31 | -60.10 | -13.00 | -47.10 |

Table 7-11. Radiated Spurious Data 30MHz – 1GHz (LTE Band 5 – Mid Channel – Main1)



Plot 7-135. Radiated Spurious Plot 1-9GHz (LTE Band 5 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 96 of 117 |

| | |
|------------------|--------|
| 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 | H | 123 | 49 | -72.08 | -10.02 | 24.90 | -70.36 | -13.00 | -57.36 |
| 2487.00 | H | 156 | 154 | -60.23 | -5.86 | 40.91 | -54.35 | -13.00 | -41.35 |
| 3316.00 | H | - | - | -74.74 | -3.69 | 28.57 | -66.69 | -13.00 | -53.69 |
| 4145.00 | H | 169 | 146 | -74.70 | -2.04 | 30.26 | -64.99 | -13.00 | -51.99 |
| 4974.00 | H | - | - | -74.80 | -1.42 | 30.78 | -64.48 | -13.00 | -51.48 |
| 5803.00 | H | - | - | -75.24 | 0.23 | 31.99 | -63.26 | -13.00 | -50.26 |
| 6632.00 | H | - | - | -75.06 | 2.02 | 33.96 | -61.30 | -13.00 | -48.30 |

Table 7-12. Radiated Spurious Data (LTE Band 5 – Low Channel – Main1)

| | |
|------------------|--------|
| 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 | H | 202 | 341 | -73.71 | -9.64 | 23.65 | -71.61 | -13.00 | -58.61 |
| 2509.50 | H | 171 | 152 | -61.89 | -5.48 | 39.63 | -55.63 | -13.00 | -42.63 |
| 3346.00 | H | - | - | -74.19 | -3.65 | 29.16 | -66.10 | -13.00 | -53.10 |
| 4182.50 | H | - | - | -74.39 | -2.37 | 30.24 | -65.02 | -13.00 | -52.02 |
| 5019.00 | H | - | - | -74.93 | -1.35 | 30.72 | -64.53 | -13.00 | -51.53 |

Table 7-13. Radiated Spurious Data (LTE Band 5 – Mid Channel – Main1)

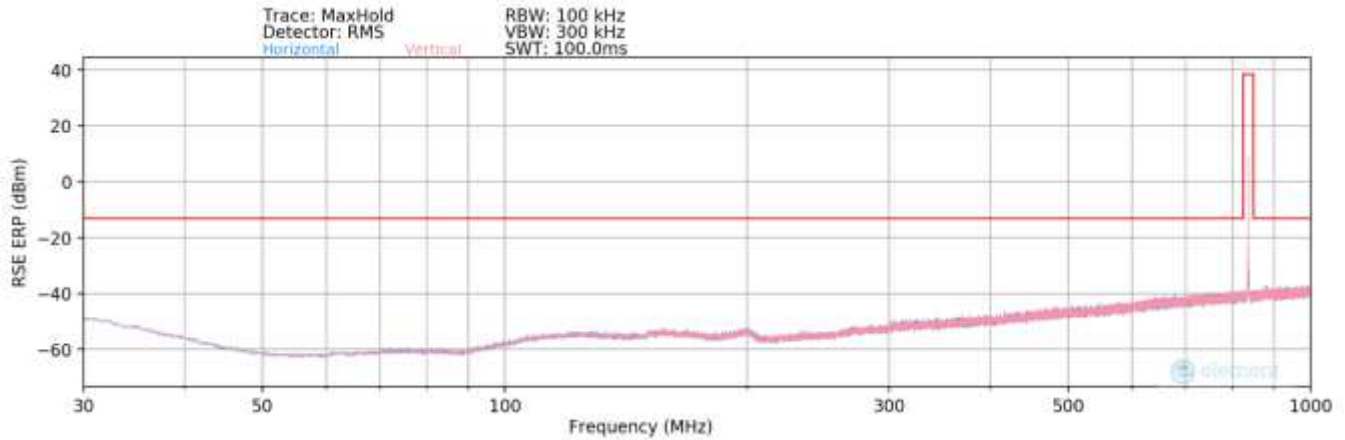
| | |
|------------------|--------|
| Bandwidth (MHz): | 10 |
| Frequency (MHz): | 844 |
| RB / Offset: | 1 / 25 |

| 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 | H | 239 | 351 | -74.01 | -9.39 | 23.60 | -71.66 | -13.00 | -58.66 |
| 2532.00 | H | 208 | 152 | -61.32 | -5.55 | 40.13 | -55.12 | -13.00 | -42.12 |
| 3376.00 | H | - | - | -74.43 | -3.56 | 29.01 | -66.24 | -13.00 | -53.24 |
| 4220.00 | H | 174 | 135 | -74.24 | -2.57 | 30.19 | -65.06 | -13.00 | -52.06 |
| 5064.00 | H | - | - | -75.10 | -0.85 | 31.05 | -64.21 | -13.00 | -51.21 |
| 5908.00 | H | - | - | -75.27 | 0.69 | 32.42 | -62.84 | -13.00 | -49.84 |
| 6752.00 | H | - | - | -75.37 | 2.84 | 34.47 | -60.78 | -13.00 | -47.78 |

Table 7-14. Radiated Spurious Data (LTE Band 5 – High Channel – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 97 of 117 |

LTE Band 5 – Sub

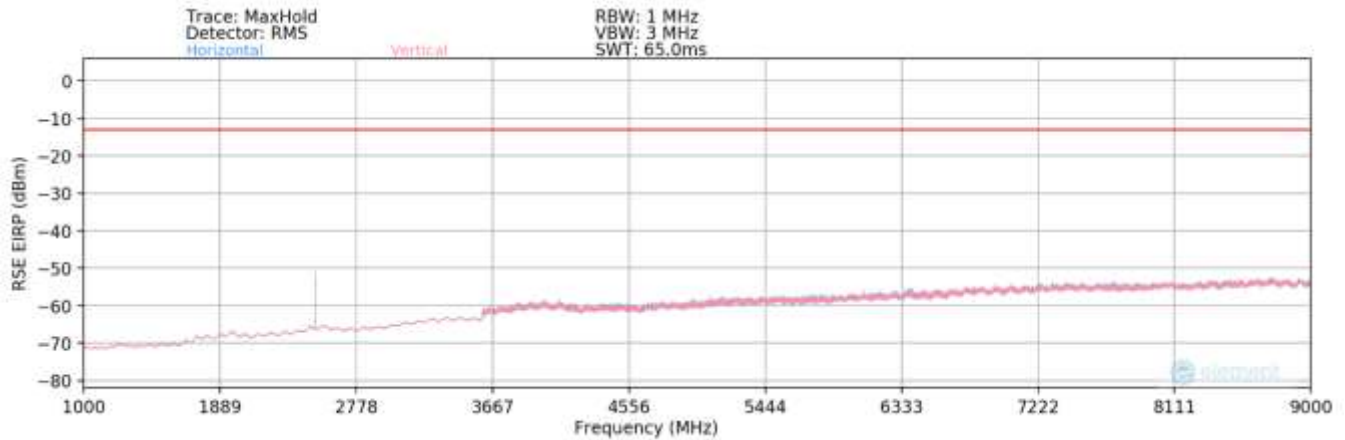


Plot 7-136. Radiated Spurious Plot 30MHz-1GHz (LTE Band 5 – Sub)

| | |
|------------------|--------|
| 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] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|-----------------------------------|-------------|-------------|
| 416.00 | H | - | - | -97.30 | 23.65 | 33.35 | -64.06 | -13.00 | -51.06 |

Table 7-15. Radiated Spurious Data 30MHz – 1GHz (LTE Band 5 – Mid Channel – Sub)



Plot 7-137. Radiated Spurious Plot 1-9GHz (LTE Band 5 – Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 98 of 117 |

| | |
|------------------|--------|
| 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 | H | 237 | 164 | -64.42 | -10.02 | 32.56 | -62.70 | -13.00 | -49.70 |
| 2487.00 | H | 214 | 231 | -63.31 | -5.86 | 37.83 | -57.43 | -13.00 | -44.43 |
| 3316.00 | H | - | - | -74.81 | -3.69 | 28.50 | -66.76 | -13.00 | -53.76 |
| 4145.00 | H | - | - | -74.71 | -2.04 | 30.25 | -65.00 | -13.00 | -52.00 |
| 4974.00 | H | - | - | -74.78 | -1.42 | 30.80 | -64.46 | -13.00 | -51.46 |

Table 7-16. Radiated Spurious Data (LTE Band 5 – Low Channel – Sub)

| | |
|------------------|--------|
| 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 | H | 117 | 174 | -75.58 | -9.64 | 21.78 | -73.48 | -13.00 | -60.48 |
| 2509.50 | H | 142 | 254 | -63.02 | -5.48 | 38.50 | -56.76 | -13.00 | -43.76 |
| 3346.00 | H | - | - | -74.12 | -3.65 | 29.23 | -66.03 | -13.00 | -53.03 |
| 4182.50 | H | - | - | -74.42 | -2.37 | 30.21 | -65.05 | -13.00 | -52.05 |
| 5019.00 | H | - | - | -74.97 | -1.35 | 30.68 | -64.57 | -13.00 | -51.57 |

Table 7-17. Radiated Spurious Data (LTE Band 5 – Mid Channel – Sub)

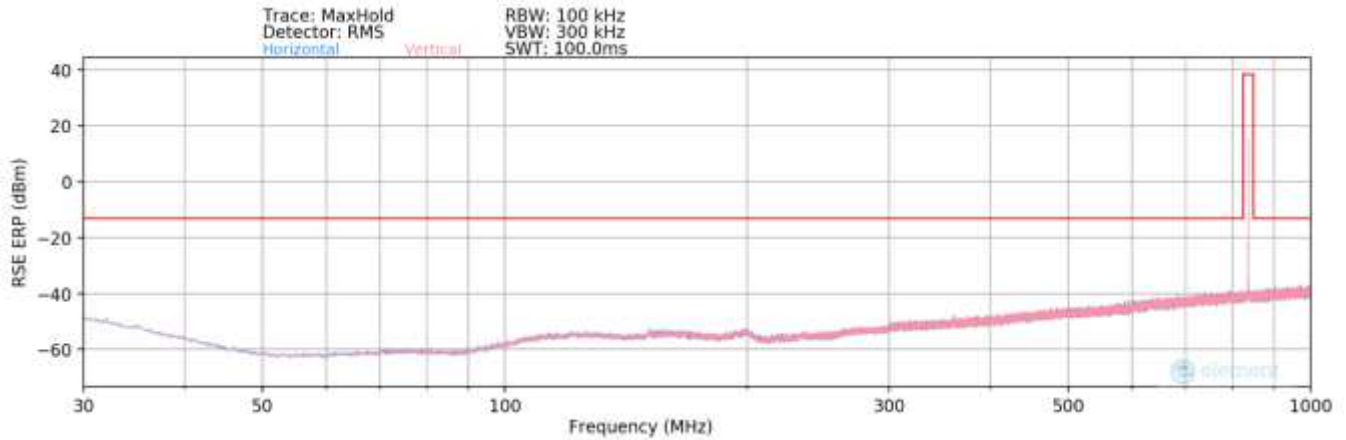
| | |
|------------------|--------|
| Bandwidth (MHz): | 10 |
| Frequency (MHz): | 844 |
| RB / Offset: | 1 / 25 |

| 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 | H | 186 | 165 | -67.82 | -9.39 | 29.79 | -65.47 | -13.00 | -52.47 |
| 2532.00 | H | 144 | 234 | -62.47 | -5.55 | 38.98 | -56.27 | -13.00 | -43.27 |
| 3376.00 | H | - | - | -74.23 | -3.56 | 29.21 | -66.04 | -13.00 | -53.04 |
| 4220.00 | H | - | - | -74.65 | -2.57 | 29.78 | -65.47 | -13.00 | -52.47 |
| 5064.00 | H | - | - | -75.06 | -0.85 | 31.09 | -64.17 | -13.00 | -51.17 |

Table 7-18. Radiated Spurious Data (LTE Band 5 – High Channel – Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 99 of 117 |

NR Band n5 – Main1

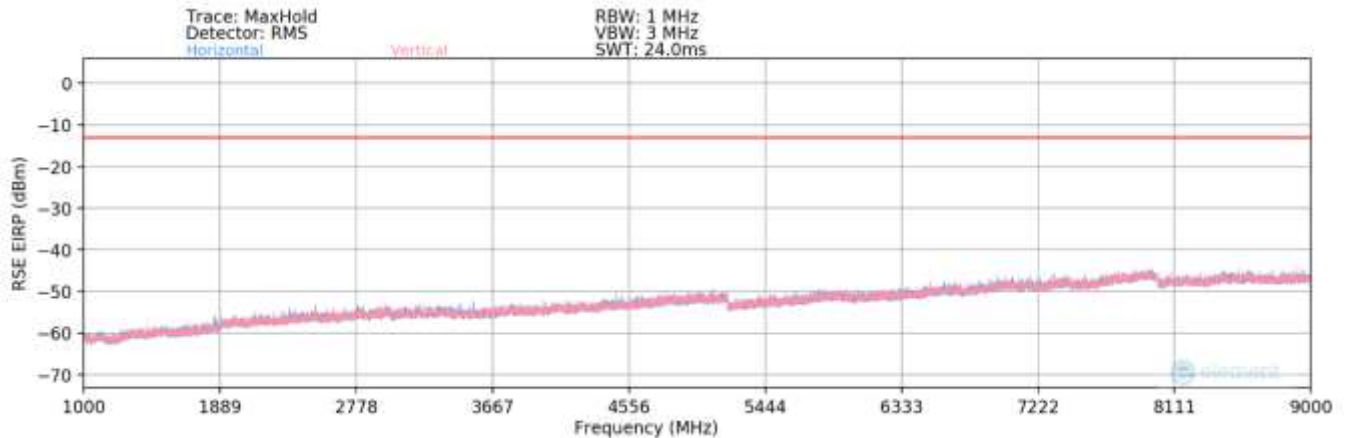


Plot 7-138. Radiated Spurious Plot 30MHz-1GHz (NR band n5 – Main1)

| | |
|------------------|-------------|
| Bandwidth (MHz): | 20 |
| Frequency (MHz): | 836.5 |
| RB / Offset: | 1 / 26 |
| Mode: | Stand Alone |

| 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] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|-----------------------------------|-------------|-------------|
| 499.88 | H | - | - | -90.18 | 25.86 | 42.68 | -54.73 | -13.00 | -41.73 |
| 629.24 | H | - | - | -90.37 | 27.69 | 44.32 | -53.09 | -13.00 | -40.09 |

Table 7-19. Radiated Spurious Data 30MHz – 1GHz (NR Band 5 – Mid Channel – Main1)



Plot 7-139. Radiated Spurious Plot 1-9GHz (NR Band n5 – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 100 of 117 |

| | |
|------------------|-------------|
| Bandwidth (MHz): | 20 |
| Frequency (MHz): | 834 |
| RB / Offset: | 1 / 53 |
| Mode: | Stand Alone |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB μ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1668.00 | H | - | - | -77.01 | -1.19 | 28.80 | -66.46 | -13.00 | -53.46 |
| 2502.00 | H | 326 | 123 | -73.23 | 3.19 | 36.96 | -58.30 | -13.00 | -45.30 |
| 3336.00 | H | - | - | -78.62 | 4.83 | 33.21 | -62.05 | -13.00 | -49.05 |
| 4170.00 | H | - | - | -78.93 | 5.62 | 33.69 | -61.56 | -13.00 | -48.56 |
| 5004.00 | H | - | - | -79.22 | 7.03 | 34.81 | -60.45 | -13.00 | -47.45 |

Table 7-20. Radiated Spurious Data (NR Band n5 – Low Channel – Main1)

| | |
|------------------|-------------|
| Bandwidth (MHz): | 20 |
| Frequency (MHz): | 836.5 |
| RB / Offset: | 1 / 53 |
| Mode: | Stand Alone |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB μ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1673.00 | H | - | - | -76.95 | -1.19 | 28.86 | -66.39 | -13.00 | -53.39 |
| 2509.50 | H | 398 | 128 | -72.50 | 3.17 | 37.67 | -57.58 | -13.00 | -44.58 |
| 3346.00 | H | - | - | -78.74 | 4.85 | 33.11 | -62.14 | -13.00 | -49.14 |
| 4182.50 | H | - | - | -79.14 | 5.51 | 33.37 | -61.89 | -13.00 | -48.89 |
| 5019.00 | H | - | - | -79.24 | 6.94 | 34.70 | -60.56 | -13.00 | -47.56 |

Table 7-21. Radiated Spurious Data (NR Band n5 – Mid Channel – Main1)

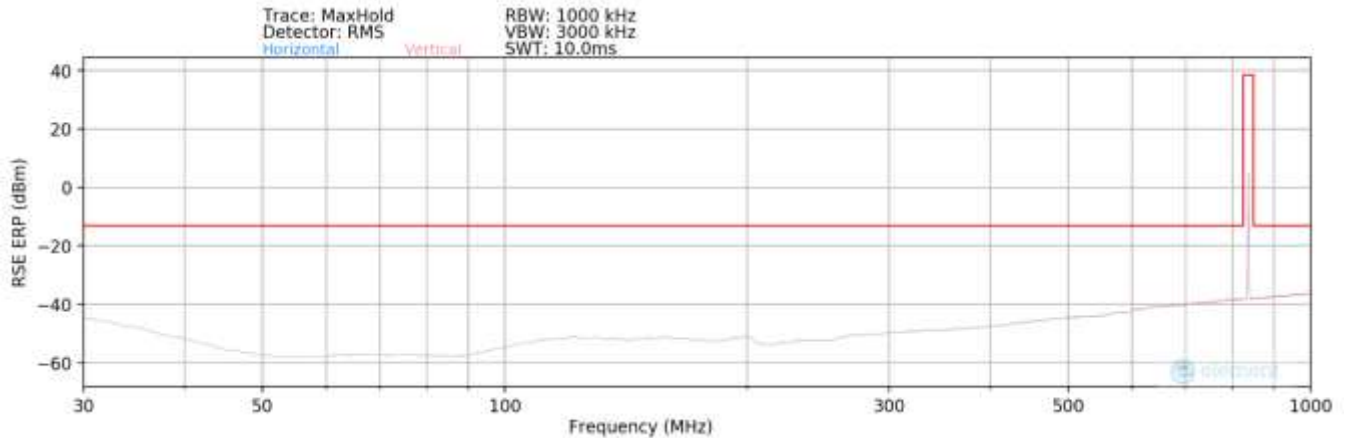
| | |
|------------------|-------------|
| Bandwidth (MHz): | 20 |
| Frequency (MHz): | 839 |
| RB / Offset: | 1 / 53 |
| Mode: | Stand Alone |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB μ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1678.00 | H | - | - | -76.84 | -1.18 | 28.98 | -66.28 | -13.00 | -53.28 |
| 2517.00 | H | 201 | 175 | -72.71 | 3.07 | 37.36 | -57.90 | -13.00 | -44.90 |
| 3356.00 | H | - | - | -78.98 | 4.86 | 32.88 | -62.37 | -13.00 | -49.37 |
| 4195.00 | H | - | - | -78.99 | 5.43 | 33.44 | -61.82 | -13.00 | -48.82 |
| 5034.00 | H | - | - | -79.20 | 6.93 | 34.73 | -60.53 | -13.00 | -47.53 |

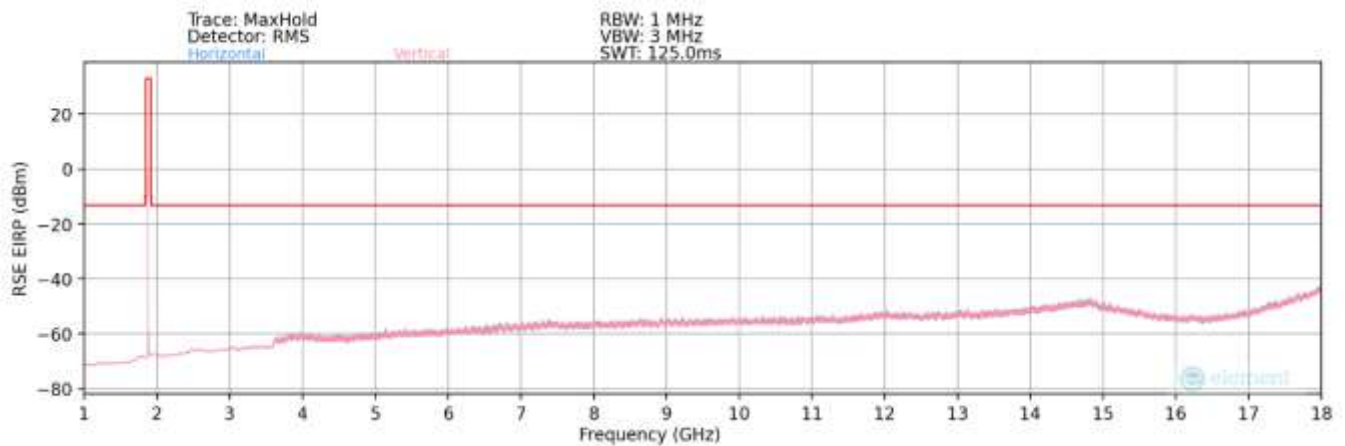
Table 7-22. Radiated Spurious Data (NR Band n5 – High Channel – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 101 of 117 |

EN-DC: NR Band n5 Main1 – LTE Band 2 Main2



Plot 7-140. Radiated Spurious Plot 30MHz-1GHz (EN-DC: NR Band n5 Main1 – LTE Band 2 Main2)



Plot 7-141. Radiated Spurious Plot 1GHz-18GHz (EN-DC: NR Band n5 Main1 – LTE Band 2 Main2)

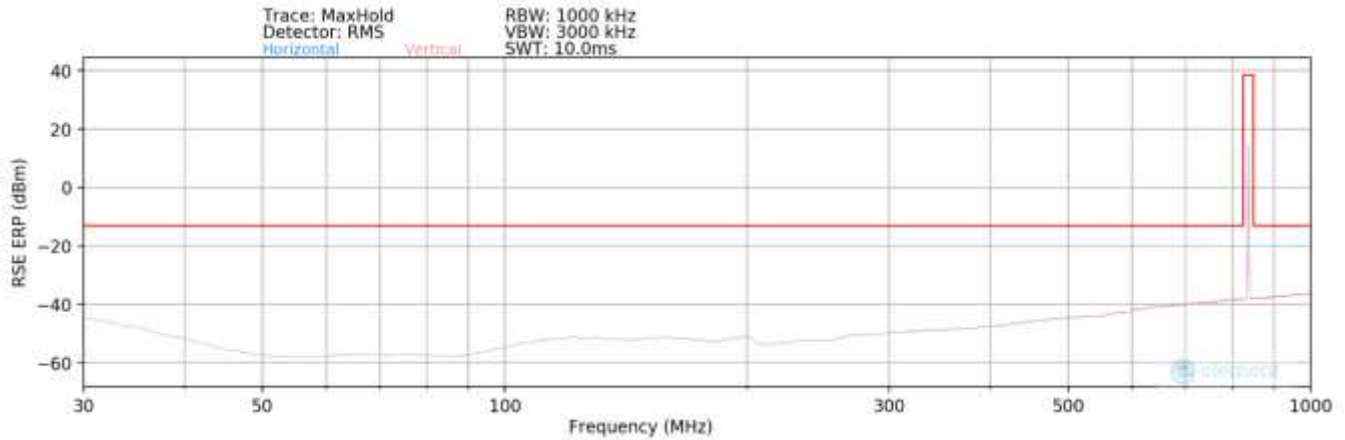
| | |
|------------------|-----------------|
| Bandwidth (MHz): | 20 / 20 |
| Frequency (MHz): | 836.5 / 1880 |
| RB / Offset: | 1 / 53 & 1 / 50 |
| Mode: | EN-DC |
| Anchor Band: | Band 2 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBuV/m] | E(I)RP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|--------------------------------------|-------------|-------------|
| 207.00 | H | - | - | -90.33 | 17.82 | 34.49 | -62.91 | -13.00 | -49.91 |
| 3553.00 | H | - | - | -74.42 | -2.51 | 30.07 | -65.19 | -13.00 | -52.19 |
| 5226.00 | H | - | - | -74.86 | -0.29 | 31.85 | -63.40 | -13.00 | -50.40 |
| 6899.00 | H | - | - | -75.63 | 3.46 | 34.83 | -60.42 | -13.00 | -47.42 |

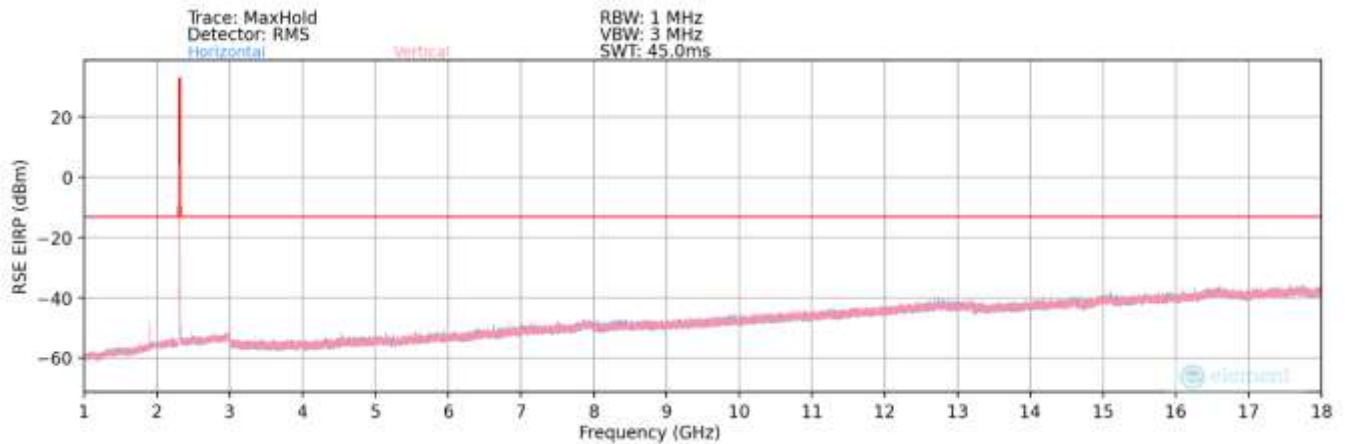
Table 7-23. Radiated Spurious Data (EN-DC: NR Band n5 Main1 – LTE Band 2 Main2)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 102 of 117 |

EN-DC: NR Band n5 Main1 – LTE Band 30 Main2



Plot 7-142. Radiated Spurious Plot 30MHz-1GHz (EN-DC: NR Band n5 Main1 – LTE Band 30 Main2)



Plot 7-143. Radiated Spurious Plot 1GHz-18GHz (EN-DC: NR Band n5 Main1 – LTE Band 30 Main2)

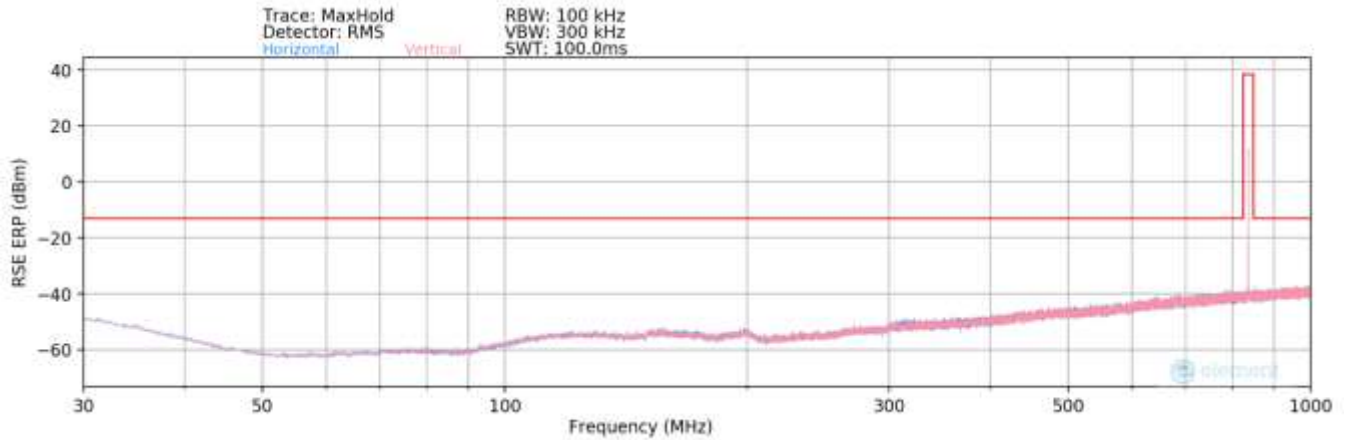
| | |
|------------------|-----------------|
| Bandwidth (MHz): | 20 / 10 |
| Frequency (MHz): | 836.5 / 2310 |
| RB / Offset: | 1 / 53 & 1 / 25 |
| Mode: | EN-DC |
| Anchor Band: | Band 30 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBμV/m] | E(I)RP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|--------------------------------------|-------------|-------------|
| 637.00 | V | - | - | -90.21 | 28.11 | 44.90 | -52.51 | -13.00 | -39.51 |
| 1911.00 | V | - | - | -68.83 | 1.35 | 39.52 | -55.74 | -13.00 | -42.74 |
| 3146.50 | V | - | - | -69.90 | 4.70 | 41.80 | -53.46 | -13.00 | -40.46 |
| 3983.00 | V | 231 | 180 | -70.07 | 5.52 | 42.45 | -52.81 | -13.00 | -39.81 |

Table 7-24. Radiated Spurious Data (EN-DC: NR Band n5 Main1 – LTE Band 30 Main2)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 103 of 117 |

NR Band n5 – Sub

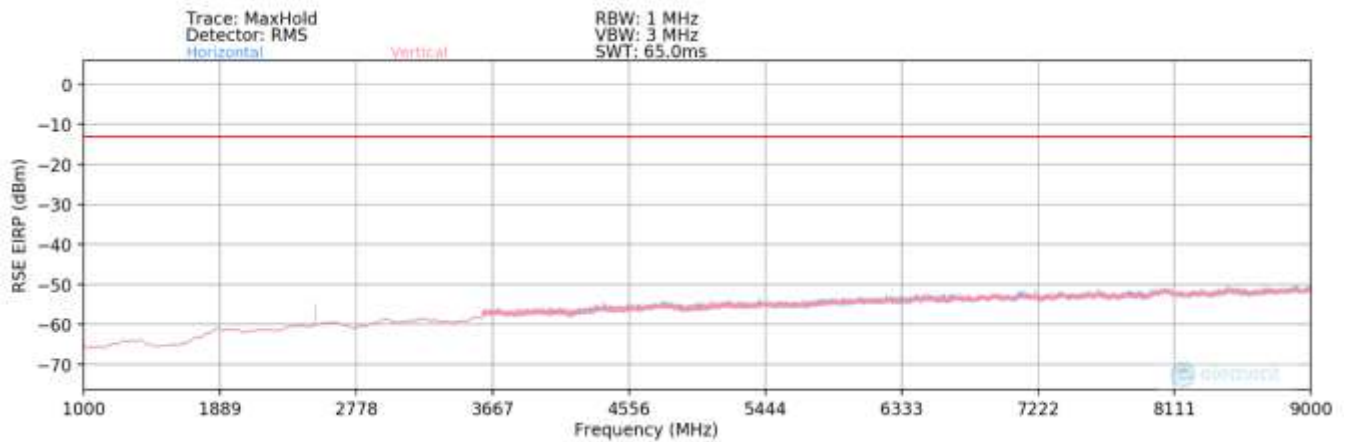


Plot 7-144. Radiated Spurious Plot 30MHz-1GHz (NR band n5 – Sub)

| | |
|------------------|-------------|
| Bandwidth (MHz): | 20 |
| Frequency (MHz): | 836.5 |
| RB / Offset: | 1 / 53 |
| Mode: | Stand Alone |

| 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] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|-----------------------------------|-------------|-------------|
| 316.00 | H | - | - | -97.05 | 21.39 | 31.34 | -66.07 | -13.00 | -53.07 |

Table 7-25. Radiated Spurious Data 30MHz – 1GHz (NR Band 5 – Mid Channel – Sub)



Plot 7-145. Radiated Spurious Plot 1-9GHz (NR Band n5 – Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 104 of 117 |

| | |
|------------------|-------------|
| Bandwidth (MHz): | 20 |
| Frequency (MHz): | 834 |
| RB / Offset: | 1 / 53 |
| Mode: | Stand Alone |
| Anchor Band: | N/A |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB μ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1668.00 | H | - | - | -76.72 | -3.89 | 26.39 | -68.86 | -13.00 | -55.86 |
| 2502.00 | H | 170 | 212 | -66.95 | 0.41 | 40.46 | -54.80 | -13.00 | -41.80 |
| 3336.00 | H | - | - | -77.83 | 1.55 | 30.72 | -64.53 | -13.00 | -51.53 |
| 4170.00 | H | - | - | -78.32 | 2.45 | 31.13 | -64.13 | -13.00 | -51.13 |
| 5004.00 | H | - | - | -79.02 | 3.99 | 31.97 | -63.29 | -13.00 | -50.29 |

Table 7-26. Radiated Spurious Data (NR Band n5 – Low Channel – Sub)

| | |
|------------------|-------------|
| Bandwidth (MHz): | 20 |
| Frequency (MHz): | 836.5 |
| RB / Offset: | 1 / 53 |
| Mode: | Stand Alone |
| Anchor Band: | N/A |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB μ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1673.00 | H | - | - | -76.88 | -3.80 | 26.32 | -68.94 | -13.00 | -55.94 |
| 2509.50 | H | 168 | 214 | -57.54 | 0.48 | 49.94 | -45.32 | -13.00 | -32.32 |
| 3346.00 | H | - | - | -77.77 | 1.58 | 30.81 | -64.45 | -13.00 | -51.45 |
| 4182.50 | H | - | - | -78.41 | 2.48 | 31.07 | -64.19 | -13.00 | -51.19 |
| 5019.00 | H | - | - | -79.26 | 4.10 | 31.84 | -63.42 | -13.00 | -50.42 |

Table 7-27. Radiated Spurious Data (NR Band n5 – Mid Channel – Sub)

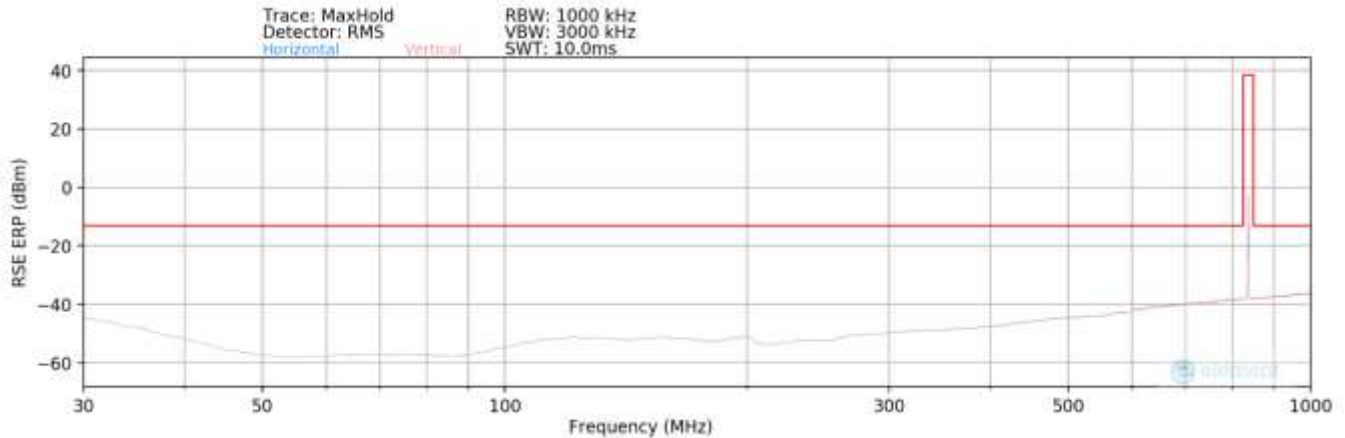
| | |
|------------------|-------------|
| Bandwidth (MHz): | 20 |
| Frequency (MHz): | 839 |
| RB / Offset: | 1 / 53 |
| Mode: | Stand Alone |
| Anchor Band: | N/A |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dB μ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1678.00 | H | - | - | -76.90 | -3.70 | 26.40 | -68.86 | -13.00 | -55.86 |
| 2517.00 | H | 129 | 351 | -69.90 | 0.65 | 37.75 | -57.51 | -13.00 | -44.51 |
| 3356.00 | H | - | - | -77.70 | 1.58 | 30.88 | -64.38 | -13.00 | -51.38 |
| 4195.00 | H | - | - | -78.01 | 2.39 | 31.38 | -63.87 | -13.00 | -50.87 |
| 5034.00 | H | - | - | -79.47 | 4.17 | 31.70 | -63.56 | -13.00 | -50.56 |

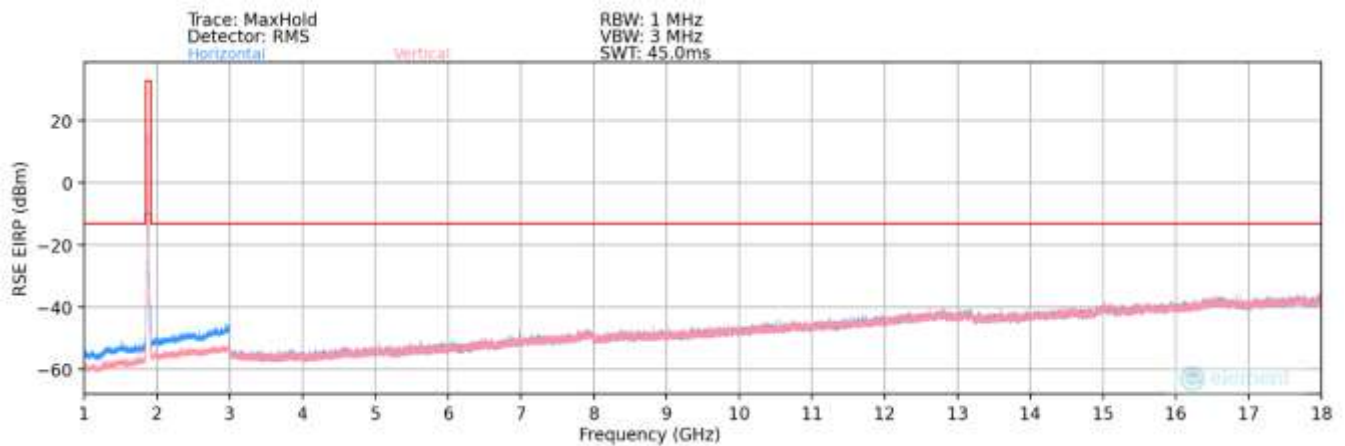
Table 7-28. Radiated Spurious Data (NR Band n5 – High Channel – Sub)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 105 of 117 |

EN-DC: NR Band n5 Sub – LTE Band 2 Main2



Plot 7-146. Radiated Spurious Plot 30MHz-1GHz (EN-DC: NR Band n5 Sub – LTE Band 2 Main2)



Plot 7-147. Radiated Spurious Plot 1GHz-18GHz (EN-DC: NR Band n5 Sub – LTE Band 2 Main2)

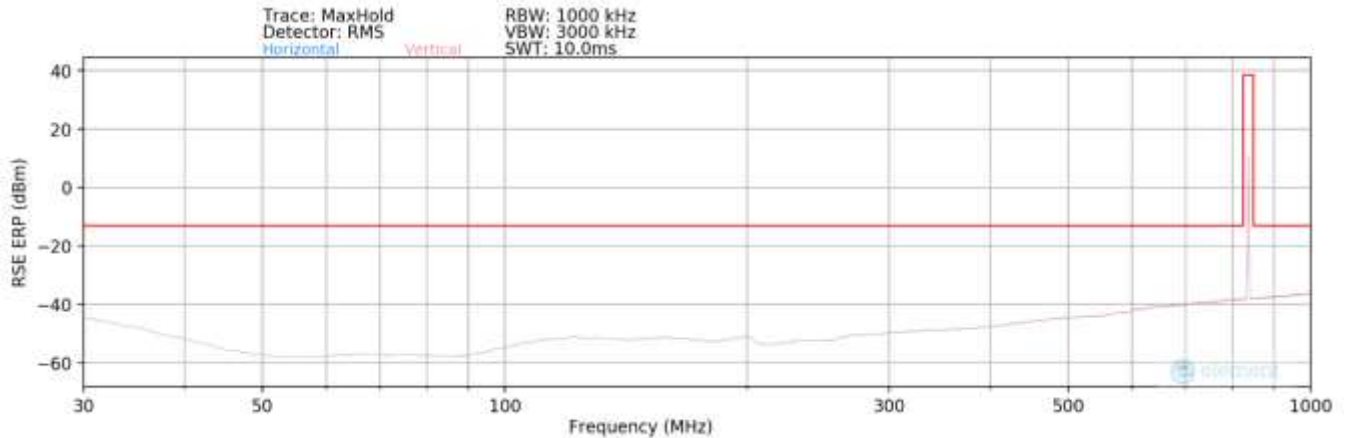
| | |
|------------------|-----------------|
| Bandwidth (MHz): | 20 / 20 |
| Frequency (MHz): | 836.5 / 1880 |
| RB / Offset: | 1 / 53 & 1 / 50 |
| Mode: | EN-DC |
| Anchor Band: | Band 2 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBμV/m] | E(I)RP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|--------------------------------------|-------------|-------------|
| 207.00 | H | - | - | -91.11 | 17.82 | 33.71 | -61.54 | -13.00 | -48.54 |
| 1043.50 | H | - | - | -69.60 | -5.09 | 32.31 | -62.94 | -13.00 | -49.94 |
| 2087.00 | H | - | - | -71.25 | -0.66 | 35.09 | -60.16 | -13.00 | -47.16 |
| 2716.50 | H | - | - | -74.53 | 0.53 | 33.00 | -62.26 | -13.00 | -49.26 |
| 5433.00 | H | - | - | -70.51 | 5.09 | 41.58 | -53.68 | -13.00 | -40.68 |

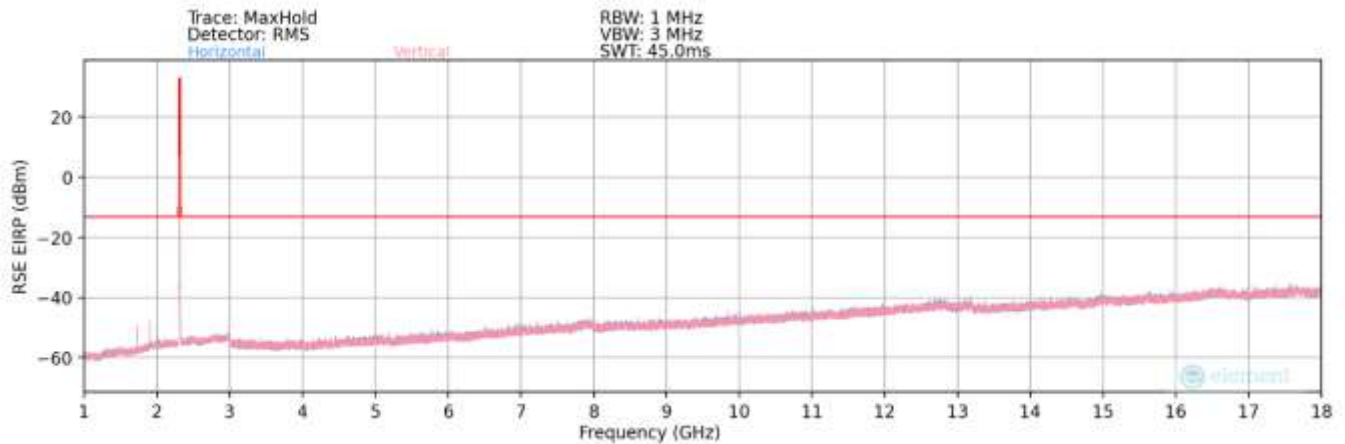
Table 7-29. Radiated Spurious Data (EN-DC: NR Band n5 Sub – LTE Band 2 Main2)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 106 of 117 |

EN-DC: NR Band n5 Sub – LTE Band 30 Main2



Plot 7-148. Radiated Spurious Plot 30MHz-1GHz (EN-DC: NR Band n5 Sub – LTE Band 30 Main2)



Plot 7-149. Radiated Spurious Plot 1GHz-18GHz (EN-DC: NR Band n5 Sub – LTE Band 30 Main2)

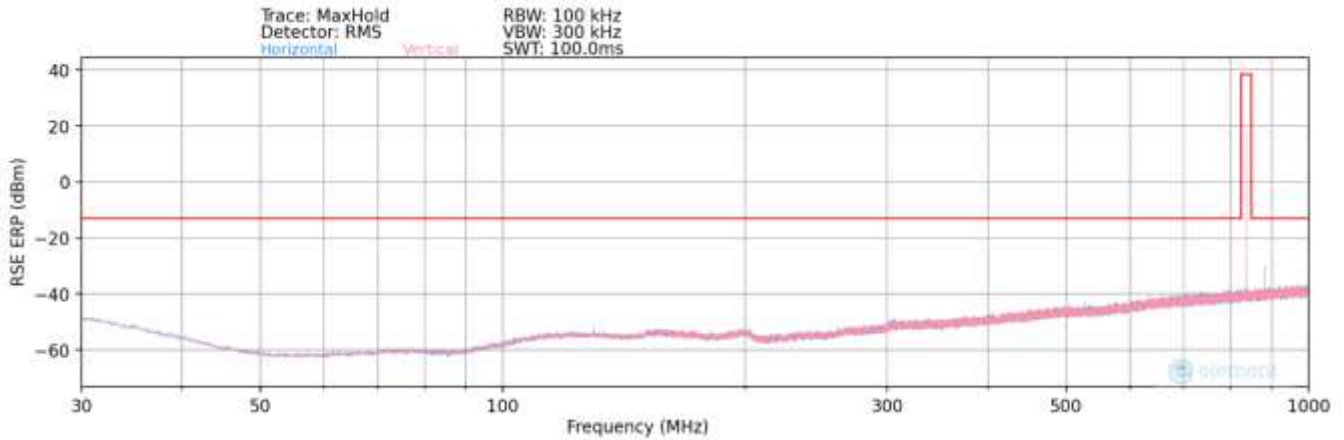
| | |
|------------------|-----------------|
| Bandwidth (MHz): | 20 / 10 |
| Frequency (MHz): | 836.5 / 2310 |
| RB / Offset: | 1 / 53 & 1 / 25 |
| Mode: | EN-DC |
| Anchor Band: | Band 30 |

| Frequency [MHz] | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBμV/m] | E(I)RP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|--------------------------------------|-------------|-------------|
| 637.00 | V | - | - | -90.54 | 28.11 | 44.57 | -50.69 | -13.00 | -37.69 |
| 1673.00 | V | - | - | -67.96 | -3.80 | 35.24 | -60.02 | -13.00 | -47.02 |
| 1911.00 | V | - | - | -68.00 | -0.76 | 38.24 | -57.01 | -13.00 | -44.01 |
| 3783.50 | V | - | - | -70.60 | 2.32 | 38.72 | -56.53 | -13.00 | -43.53 |
| 9877.00 | V | - | - | -73.30 | 9.46 | 43.16 | -52.10 | -13.00 | -39.10 |

Table 7-30. Radiated Spurious Data (EN-DC: NR Band n5 Sub – LTE Band 30 Main2)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 107 of 117 |

GSM/GPRS Cell – Main1

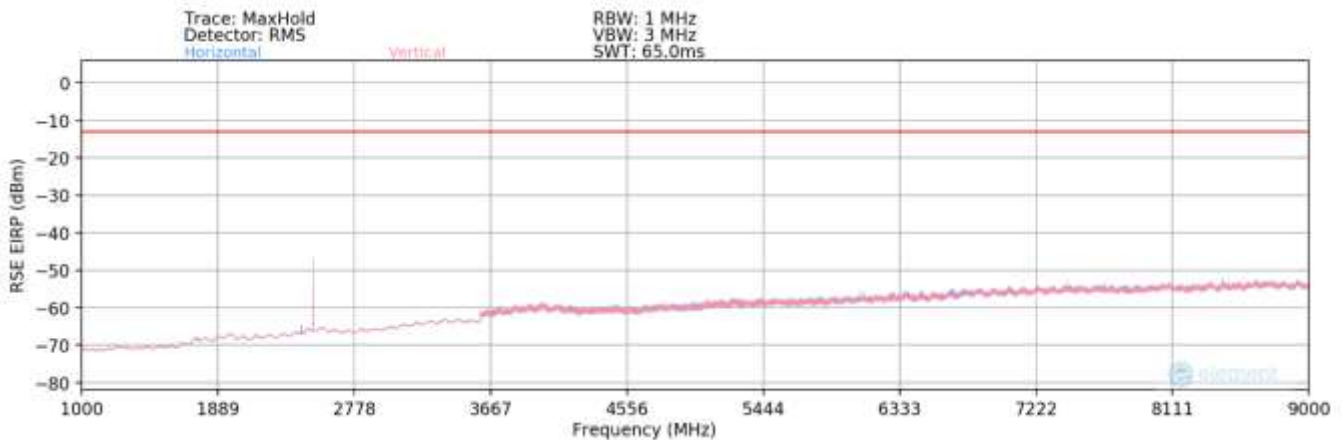


Plot 7-150. Radiated Spurious Plot 30MHz-1GHz (GPRS Cell – Main1)

| | |
|------------------|----------------|
| 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] | ERP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|-----------------------------------|-------------|-------------|
| 138.20 | H | - | - | -98.45 | 19.84 | 28.39 | -69.02 | -13.00 | -56.02 |
| 183.24 | H | - | - | -99.50 | 18.36 | 25.86 | -71.55 | -13.00 | -58.55 |
| 881.60 | H | 125 | 204 | -89.69 | 30.97 | 48.28 | -49.12 | -13.00 | -36.12 |

Table 7-31. Radiated Spurious Data 30MHz – 1GHz (GPRS Cell – Mid Channel – Main1)



Plot 7-151. Radiated Spurious Plot 1-9GHz (GPRS Cell – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 108 of 117 |

| | |
|------------------|----------------|
| 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 | H | 133 | 71 | -63.34 | -10.23 | 33.43 | -61.83 | -13.00 | -48.83 |
| 2472.60 | H | 246 | 151 | -44.52 | -6.05 | 56.43 | -38.82 | -13.00 | -25.82 |
| 3296.80 | H | - | - | -69.11 | -3.89 | 34.00 | -61.26 | -13.00 | -48.26 |
| 4121.00 | H | 199 | 208 | -70.64 | -1.91 | 34.45 | -60.81 | -13.00 | -47.81 |
| 4945.20 | H | - | - | -71.77 | -1.61 | 33.62 | -61.64 | -13.00 | -48.64 |
| 5769.40 | H | - | - | -72.65 | 0.00 | 34.35 | -60.90 | -13.00 | -47.90 |

Table 7-32. Radiated Spurious Data (GPRS Cell – Low Channel – Main1)

| | |
|------------------|----------------|
| 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 | H | - | - | -68.56 | -9.64 | 28.80 | -66.46 | -13.00 | -53.46 |
| 2509.80 | H | 248 | 159 | -47.01 | -5.48 | 54.51 | -40.74 | -13.00 | -27.74 |
| 3346.40 | H | - | - | -69.03 | -3.66 | 34.31 | -60.94 | -13.00 | -47.94 |
| 4183.00 | H | 203 | 209 | -70.39 | -2.38 | 34.23 | -61.03 | -13.00 | -48.03 |
| 5019.60 | H | - | - | -72.27 | -1.34 | 33.39 | -61.87 | -13.00 | -48.87 |
| 5856.20 | H | - | - | -72.84 | 0.19 | 34.35 | -60.91 | -13.00 | -47.91 |

Table 7-33. Radiated Spurious Data (GPRS Cell – Mid Channel – Main1)

| | |
|------------------|----------------|
| 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 | H | - | - | -68.96 | -9.32 | 28.72 | -66.54 | -13.00 | -53.54 |
| 2546.40 | H | 244 | 156 | -46.58 | -5.62 | 54.80 | -40.46 | -13.00 | -27.46 |
| 3395.20 | H | - | - | -68.37 | -3.66 | 34.97 | -60.28 | -13.00 | -47.28 |
| 4244.00 | H | 218 | 200 | -70.30 | -2.61 | 34.09 | -61.17 | -13.00 | -48.17 |
| 5092.80 | H | - | - | -72.31 | -0.66 | 34.03 | -61.22 | -13.00 | -48.22 |
| 5941.60 | H | - | - | -72.36 | 0.59 | 35.23 | -60.03 | -13.00 | -47.03 |

Table 7-34. Radiated Spurious Data (GPRS Cell – High Channel – Main1)

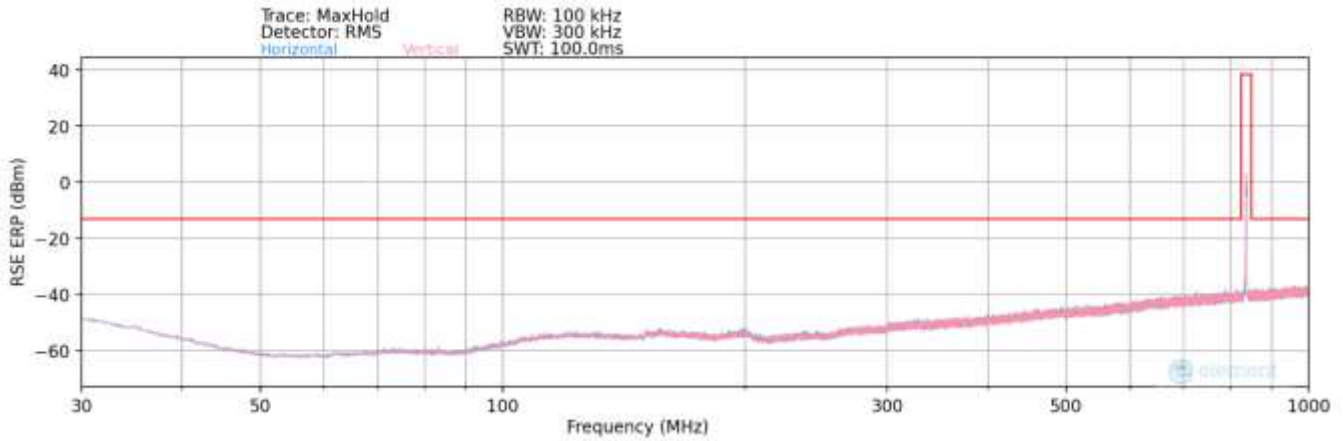
| | |
|------------------|--------------------------|
| Case: | w/ Wireless Charging Pad |
| Mode: | GPRS 1 Tx Slot |
| Channel: | 128 |
| Frequency (MHz): | 824.2 |

| 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 | H | - | - | -68.32 | -10.23 | 28.45 | -66.81 | -13.00 | -53.81 |
| 2472.60 | H | 299 | 166 | -47.77 | -6.05 | 53.18 | -42.07 | -13.00 | -29.07 |
| 3296.80 | H | - | - | -68.96 | -3.89 | 34.15 | -61.11 | -13.00 | -48.11 |
| 4121.00 | H | - | - | -71.71 | -1.91 | 33.38 | -61.88 | -13.00 | -48.88 |
| 4945.20 | H | - | - | -71.77 | -1.61 | 33.62 | -61.64 | -13.00 | -48.64 |
| 5769.40 | H | - | - | -72.44 | 0.00 | 34.56 | -60.69 | -13.00 | -47.69 |

Table 7-35. Radiated Spurious Data with WCP (GPRS Cell – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 109 of 117 |

WCDMA Cell – Main1

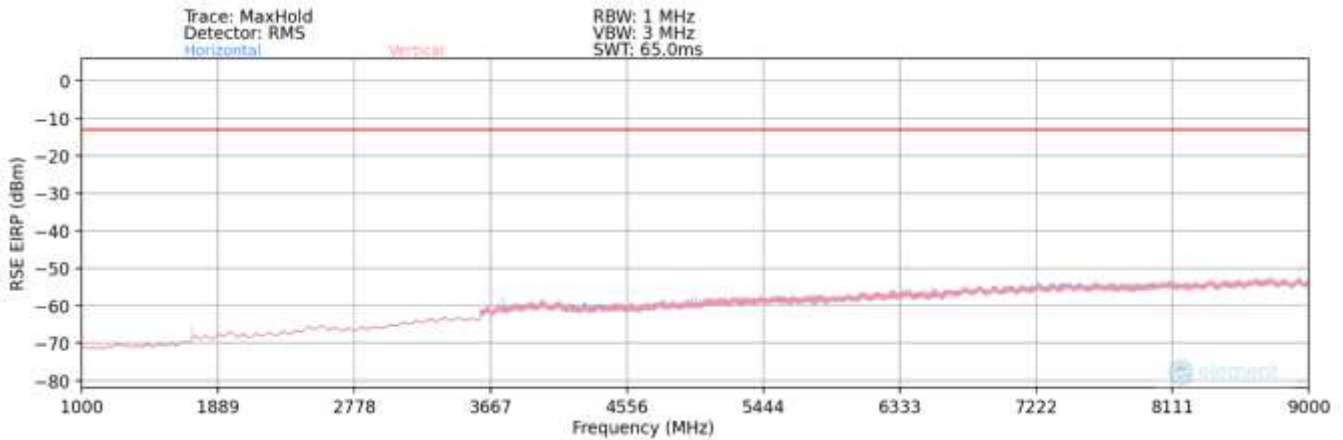


Plot 7-152. Radiated Spurious Plot 30MHz-1GHz (GPRS Cell – Main1)

| | |
|------------------|-----------|
| 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 [dB μ V/m] | ERP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|-----------------------------------|-------------|-------------|
| 452.32 | V | - | - | -96.28 | 24.82 | 35.54 | -61.87 | -13.00 | -48.87 |

Table 7-36. Radiated Spurious Data 30MHz – 1GHz (GPRS Cell – Mid Channel – Main1)



Plot 7-153. Radiated Spurious Plot 1-9GHz (WCDMA Cell – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 110 of 117 |

| | |
|------------------|-----------|
| 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 [dB μ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1652.80 | V | - | - | -68.66 | -10.14 | 28.20 | -67.06 | -13.00 | -54.06 |
| 2479.20 | V | - | - | -71.14 | -5.95 | 29.91 | -65.35 | -13.00 | -52.35 |
| 3305.60 | V | - | - | -71.55 | -3.82 | 31.63 | -63.63 | -13.00 | -50.63 |
| 4132.00 | V | - | - | -72.21 | -1.98 | 32.81 | -62.45 | -13.00 | -49.45 |

Table 7-37. Radiated Spurious Data (WCDMA Cell – Low Channel – Main1)

| | |
|------------------|-----------|
| 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 [dB μ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1673.20 | V | - | - | -68.00 | -9.64 | 29.36 | -65.90 | -13.00 | -52.90 |
| 2509.80 | V | - | - | -68.99 | -5.48 | 32.53 | -62.72 | -13.00 | -49.72 |
| 3346.40 | V | - | - | -71.56 | -3.66 | 31.78 | -63.47 | -13.00 | -50.47 |
| 4183.00 | V | - | - | -71.98 | -2.38 | 32.64 | -62.62 | -13.00 | -49.62 |

Table 7-38. Radiated Spurious Data (WCDMA Cell – Mid Channel – Main1)

| | |
|------------------|-----------|
| 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 [dB μ V/m] | EIRP Spurious Emission Level [dBm] | Limit [dBm] | Margin [dB] |
|-----------------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------------|------------------------------------|-------------|-------------|
| 1693.20 | V | - | - | -67.89 | -9.35 | 29.76 | -65.50 | -13.00 | -52.50 |
| 2539.80 | V | - | - | -68.59 | -5.58 | 32.83 | -62.43 | -13.00 | -49.43 |
| 3386.40 | V | - | - | -71.55 | -3.62 | 31.83 | -63.43 | -13.00 | -50.43 |
| 4233.00 | V | - | - | -72.66 | -2.63 | 31.71 | -63.55 | -13.00 | -50.55 |

Table 7-39. Radiated Spurious Data (WCDMA Cell – High Channel – Main1)

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 111 of 117 |



7.8 Frequency Stability / Temperature Variation

Test Overview and Limit

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

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

For Part 22, 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.

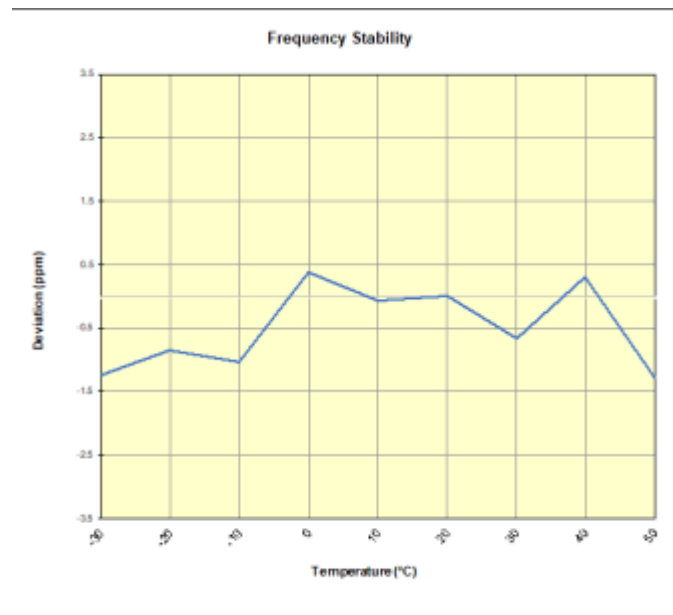
Test Notes

None.

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
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| LTE Band 5 | | | | | |
|------------------|-------------|---------------------------|----------------|-----------------------|---------------|
| | | Operating Frequency (Hz): | | 836,500,000 | |
| | | Ref. Voltage (VDC): | | 4.28 | |
| | | Deviation Limit: | | ± 0.00025% or 2.5 ppm | |
| Voltage (%) | Power (VDC) | Temp (°C) | Frequency (Hz) | Freq. Dev. (Hz) | Deviation (%) |
| 100 % | 4.28 | - 30 | 836,500,168 | -1,045 | -0.0001249 |
| | | - 20 | 836,500,498 | -715 | -0.0000854 |
| | | - 10 | 836,500,352 | -861 | -0.0001029 |
| | | 0 | 836,501,522 | 309 | 0.0000370 |
| | | + 10 | 836,501,160 | -52 | -0.0000062 |
| | | + 20 (Ref) | 836,501,213 | 0 | 0.0000000 |
| | | + 30 | 836,500,663 | -550 | -0.0000657 |
| | | + 40 | 836,501,463 | 250 | 0.0000299 |
| Battery Endpoint | 3.69 | + 20 | 836,502,303 | 1,090 | 0.0001303 |

Table 7-40. LTE Band 5 Frequency Stability Data

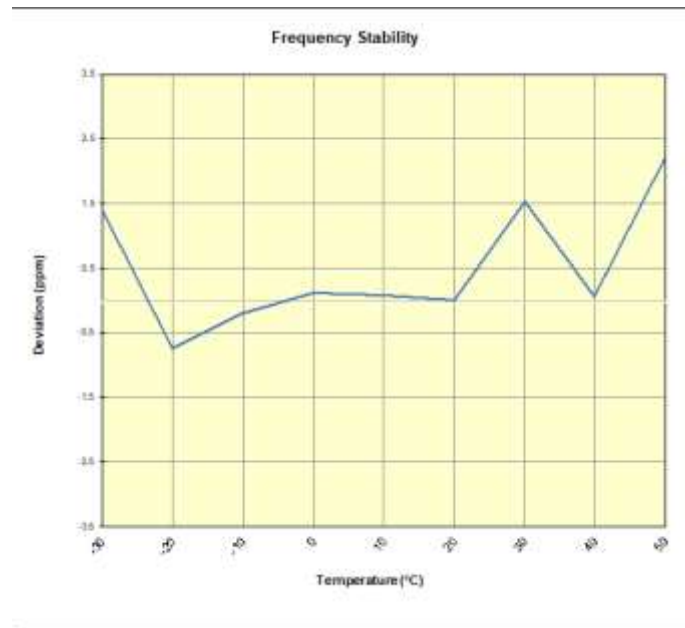


Plot 7-154. LTE Band 5 Frequency Stability Chart

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 113 of 117 |

| NR Band n5 | | | | | |
|------------------|-------------|---------------------------|----------------|-----------------------|---------------|
| | | Operating Frequency (Hz): | | 836,500,000 | |
| | | Ref. Voltage (VDC): | | 4.28 | |
| | | Deviation Limit: | | ± 0.00025% or 2.5 ppm | |
| Voltage (%) | Power (VDC) | Temp (°C) | Frequency (Hz) | Freq. Dev. (Hz) | Deviation (%) |
| 100 % | 4.28 | - 30 | 836,493,776 | 1,158 | 0.0001384 |
| | | - 20 | 836,491,998 | -620 | -0.0000741 |
| | | - 10 | 836,492,451 | -167 | -0.0000200 |
| | | 0 | 836,492,717 | 99 | 0.0000118 |
| | | + 10 | 836,492,687 | 69 | 0.0000083 |
| | | + 20 (Ref) | 836,492,618 | 0 | 0.0000000 |
| | | + 30 | 836,493,893 | 1,274 | 0.0001524 |
| | | + 40 | 836,492,665 | 47 | 0.0000056 |
| Battery Endpoint | 3.69 | + 20 | 836,492,852 | 234 | 0.0000280 |

Table 7-41. NR Band n5 Frequency Stability Data

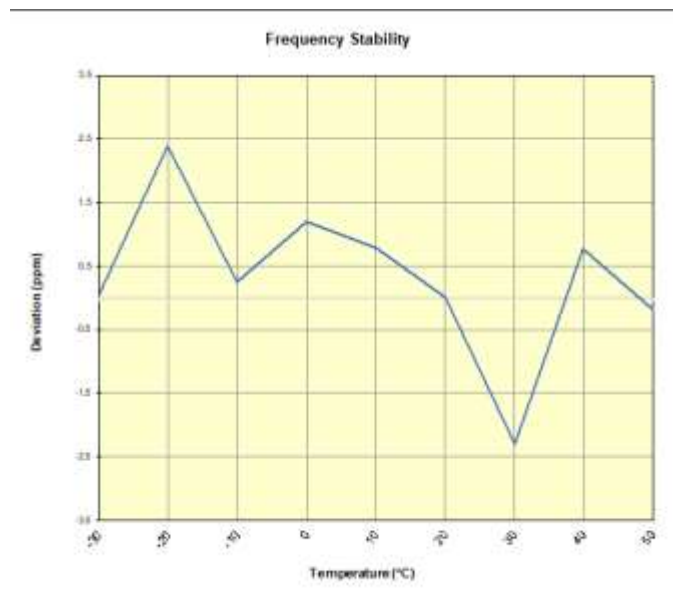


Plot 7-155. NR Band n5 Frequency Stability Chart

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 114 of 117 |

| GSM/GPRS Cellular | | | | | |
|-------------------|-------------|---------------------------|----------------|-----------------------|---------------|
| | | Operating Frequency (Hz): | | 836,600,000 | |
| | | Ref. Voltage (VDC): | | 4.28 | |
| | | Deviation Limit: | | ± 0.00025% or 2.5 ppm | |
| Voltage (%) | Power (VDC) | Temp (°C) | Frequency (Hz) | Freq. Dev. (Hz) | Deviation (%) |
| 100 % | 4.28 | - 30 | 836,600,065 | 54 | 0.0000064 |
| | | - 20 | 836,602,010 | 1,999 | 0.0002389 |
| | | - 10 | 836,600,224 | 213 | 0.0000255 |
| | | 0 | 836,601,015 | 1,005 | 0.0001201 |
| | | + 10 | 836,600,666 | 655 | 0.0000783 |
| | | + 20 (Ref) | 836,600,011 | 0 | 0.0000000 |
| | | + 30 | 836,598,081 | -1,930 | -0.0002307 |
| | | + 40 | 836,600,650 | 639 | 0.0000764 |
| | | + 50 | 836,599,852 | -159 | -0.0000190 |
| Battery Endpoint | 3.69 | + 20 | 836,600,081 | 70 | 0.0000083 |

Table 7-42. GSM/GPRS Cell Frequency Stability Data

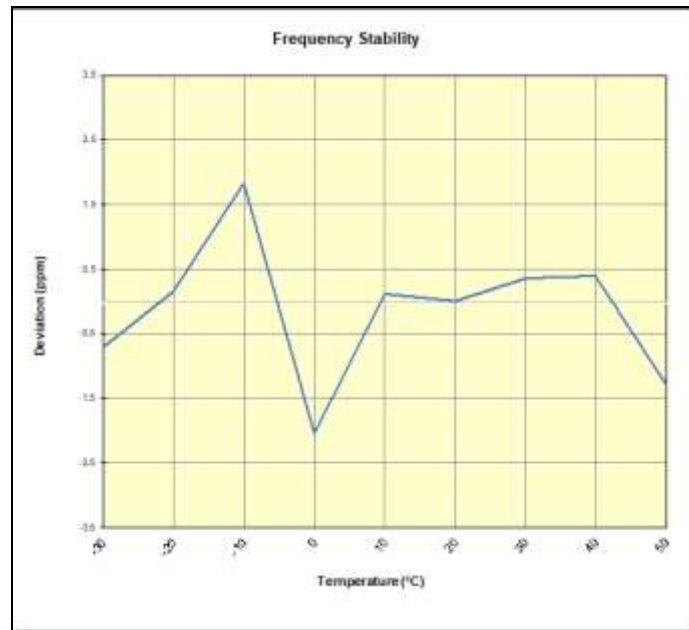


Plot 7-156. GSM/GPRS Cell Frequency Stability Chart

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 115 of 117 |

| WCDMA Cellular | | | | | |
|------------------|-------------|---------------------------|----------------|-----------------------|---------------|
| | | Operating Frequency (Hz): | | 836,600,000 | |
| | | Ref. Voltage (VDC): | | 4.28 | |
| | | Deviation Limit: | | ± 0.00025% or 2.5 ppm | |
| Voltage (%) | Power (VDC) | Temp (°C) | Frequency (Hz) | Freq. Dev. (Hz) | Deviation (%) |
| 100 % | 4.28 | - 30 | 836,606,494 | -585 | -0.0000700 |
| | | - 20 | 836,607,214 | 134 | 0.0000160 |
| | | - 10 | 836,608,615 | 1,535 | 0.0001835 |
| | | 0 | 836,605,366 | -1,714 | -0.0002049 |
| | | + 10 | 836,607,181 | 102 | 0.0000121 |
| | | + 20 (Ref) | 836,607,080 | 0 | 0.0000000 |
| | | + 30 | 836,607,383 | 303 | 0.0000362 |
| | | + 40 | 836,607,410 | 330 | 0.0000395 |
| | | + 50 | 836,606,010 | -1,070 | -0.0001279 |
| Battery Endpoint | 3.69 | + 20 | 836,606,784 | -296 | -0.0000354 |

Table 7-43. WCDMA Cell Frequency Stability Data



Plot 7-157. WCDMA Cell Frequency Stability Chart

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 116 of 117 |

8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Sony Portable Handset FCC ID: PY7-84558E** complies with all the requirements of Part 22 of the FCC rules.

| | | | |
|--------------------------------------------|----------------------------------------|-------------------------------|-----------------------------------|
| FCC ID: PY7-84558E | PART 22 MEASUREMENT REPORT | | Approved by: Technical Manager |
| Test Report S/N: 1M2302060006-01-R2.PY7 | Test Dates: 02/08/2023 - 03/24/2023 | EUT Type: Portable Handset | Page 117 of 117 |