

PART 27 MEASUREMENT REPORT

Applicant Name:
 SONY Corporation
 1-7-1 Konan
 Minato-ku
 Tokyo, 108-0075, Japan

Date of Testing:
 05/05/2022 - 07/12/2022
Test Report Issue Date:
 07/14/2022
Test Site/Location:
 Element, Columbia, MD, USA
Test Report Serial No.:
 1M2206010068-02-R1.PY7

FCC ID:	PY7-57325M
Applicant Name:	SONY Corporation

Application Type: Class II Permissive Change
EUT Type: Portable Handset
FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part: 27
Test Procedure(s): ANSI C63.26-2015, KDB 648474 D03 v01r04
Class II Permissive Change: Please see FCC change document
Original Grant Date: 06/17/2022

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.

This revised Test Report (S/N: 1M2206010068-02-R1.PY7) supersedes and replaces the previously issued test report (S/N: 1M2206010068-02.PY7) on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

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



RJ Ortanez
Executive Vice President



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Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP	
				Max. Power [W]	Max. Power [dBm]
NR Band n77 PC2 (3700 - 3980MHz) Main ANT	100 MHz	$\pi/2$ BPSK	3750.0 - 3930.0	0.068	18.34
		QPSK	3750.0 - 3930.0	0.066	18.21
		16QAM	3750.0 - 3930.0	0.059	17.71
	80 MHz	$\pi/2$ BPSK	3740.0 - 3940.0	0.071	18.51
		QPSK	3740.0 - 3940.0	0.066	18.17
		16QAM	3740.0 - 3940.0	0.060	17.80
	60 MHz	$\pi/2$ BPSK	3730.0 - 3950.0	0.071	18.49
		QPSK	3730.0 - 3950.0	0.067	18.25
		16QAM	3730.0 - 3950.0	0.062	17.95
	40 MHz	$\pi/2$ BPSK	3720.0 - 3960.0	0.071	18.53
		QPSK	3720.0 - 3960.0	0.071	18.51
		16QAM	3720.0 - 3960.0	0.062	17.93
	30 MHz	$\pi/2$ BPSK	3715.0 - 3965.0	0.071	18.53
		QPSK	3715.0 - 3965.0	0.073	18.61
		16QAM	3715.0 - 3965.0	0.062	17.93
	20 MHz	$\pi/2$ BPSK	3710.0 - 3970.0	0.071	18.53
		QPSK	3710.0 - 3970.0	0.070	18.48
		16QAM	3710.0 - 3970.0	0.059	17.72

EUT Overview (n77 – Main Antenna)

Note:

Class II Permissive Change test samples were used for EIRP measurements. It has been determined that radiated powers were not changed for PY7-57325M. Differences in radiated powers from the original certification EIRP that are reported herein are within expected measurement tolerances.

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Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP	
				Max. Power [W]	Max. Power [dBm]
UL-MIMO NR Band n77 PC3 (3700 - 3980MHz)	100 MHz	QPSK	3750.0 - 3930.0	0.011	10.22
		16QAM	3750.0 - 3930.0	0.008	8.86
	80 MHz	QPSK	3740.0 - 3940.0	0.011	10.53
		16QAM	3740.0 - 3940.0	0.008	9.02
	60 MHz	QPSK	3730.0 - 3950.0	0.012	10.81
		16QAM	3730.0 - 3950.0	0.008	9.13
	40 MHz	QPSK	3720.0 - 3960.0	0.012	10.72
		16QAM	3720.0 - 3960.0	0.008	9.14
	30 MHz	QPSK	3715.0 - 3965.0	0.012	10.75
		16QAM	3715.0 - 3965.0	0.008	9.10
	20 MHz	QPSK	3710.0 - 3970.0	0.012	10.75
		16QAM	3710.0 - 3970.0	0.008	9.11

EUT Overview (n77 – UL MIMO)

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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: PY7-57325M**. The test data contained in this report pertains only to the emissions due to the EUT's licensed transmitters that operate under the provisions of Part 27.

Test Device Serial No.: 01229, 037C5, 021C5,00KC5, 005EAZ, 00QAZ

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 and FR2), 802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII (5 and 6 GHz), Bluetooth (1x, EDR, LE), NFC, UL-MIMO (n41 and n77)

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

2.3 Test Configuration

The EUT was tested per the guidance of ANSI C63.26-2015. See Section 7.0 of this test report for a description of the radiated and antenna port conducted emissions tests.

This device supports wireless charging capability and, thus, is subject to the test requirements of KDB 648474 D03 v01r04. Additional radiated spurious emission measurements were performed with the EUT lying flat on an authorized wireless charging pad (WCP) Model: 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 0.1309 installed on the EUT.

2.5 EMI Suppression Device(s)/Modifications

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

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3.0 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

The measurement procedures described in the “American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services” (ANSI C63.26-2015) were used in the measurement of the EUT.

Deviation from Measurement Procedure.....None

3.2 Radiated Power and Radiated Spurious Emissions

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

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

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

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

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 $P_g [dBm] - \text{cable loss} [dB]$.

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:

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

And

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

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 to the requirements of ANSI C63.5-2017.

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	AP2	EMC Cable and Switch System	1/4/2022	Annual	1/4/2023	AP2
-	ETS	EMC Cable and Switch System	12/9/2021	Annual	12/9/2022	ETS
-	MVG	EMC Cable and Switch System	3/10/2022	Annual	3/10/2023	MVG
-	LTx4	Licensed Transmitter Cable Set	12/19/2021	Annual	12/19/2022	LTx4
-	LTx5	Licensed Transmitter Cable Set	12/19/2021	Annual	12/19/2022	LTx5
Anritsu	MT8000A	Radio Communication Test Station	N/A			6261914237
Emco	3116	Horn Antenna (18 - 40GHz)	7/20/2021	Biennial	7/20/2023	9203-2178
Keysight Technologies	N9030A	PXA Signal Analyzer (44GHz)	7/21/2021	Annual	7/21/2022	MY49430494
Keysight Technologies	N9030B	PXA Signal Analyzer, Multi-touch	1/7/2022	Annual	1/7/2023	MY57141001
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	8/3/2021	Annual	8/3/2022	100342
Rohde & Schwarz	ESW44	EMI Test Receiver 2Hz to 44 GHz	3/28/2022	Annual	3/28/2023	101716
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	7/27/2020	Biennial	7/27/2022	A051107

Table 5-1. Test Equipment

Notes:

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

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6.0 SAMPLE CALCULATIONS

QPSK Modulation

Emission Designator = 8M62G7D

LTE BW = 8.62 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission, telemetry, telecommand

QAM Modulation

Emission Designator = 8M45W7D

LTE BW = 8.45 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info

D = Data transmission, telemetry, telecommand

Spurious Radiated Emission

Example: Spurious emission at 3700.40 MHz

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

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7.0 TEST RESULTS

7.1 Summary

Company Name: SONY Corporation
 FCC ID: PY7-57325M
 FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
 Mode(s): 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 (NR Band n77)	2.1051, 27.53(l), 27.53(n)	≤ 13 dBm / MHz	PASS	Sections 7.4, 7.5
	Peak-to-Average Ratio (NR Band n77)	27.53(j)(4), 27.53(k)(4)	≤ 13 dB	PASS	Section 7.6
RADIATED	Effective Radiated Power / Equivalent Isotropic Radiated Power (NR Band n77)	27.53(j)(3), 27.53(k)(3)	≤ 1 Watt EIRP	PASS	Section 7.7
	Radiated Spurious Emissions (NR Band n77)	2.1053, 27.53(l), 27.53(n)	≤ 13 dBm / MHz	PASS	Section 7.8

* The only transmitter output conducted powers included in this report are those where the Pmax value, per the tune-up document, is higher than any of the DSI power levels. For the remaining conducted power measurements, see the **RF Exposure Report**.

Table 7-1. Summary of Test Results

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 v1.0.
5. This device supports n77 operation over two antennas simultaneously. The data in this section is marked as "Main" or "Sub".

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

Test Setup

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



Figure 7-1. Test Instrument & Measurement Setup

Test Notes

1. 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. For 16-QAM and 64-QAM the conducted powers have the same targets, which the reports show only 16-QAM modulation.

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Bandwidth	Modulation	Channel	Frequency [MHz]	Main RB Size/Offset	Main Conducted Power [dBm]	RB Size/Offset	Sub Conducted Power [dBm]	UL-MIMO Conducted Power [dBm]
100 MHz	QPSK	650000	3750.00	1 / 68	19.66	1 / 136	20.22	22.96
		656000	3840.00	1 / 136	20.04	1 / 136	19.92	22.99
		662000	3930.00	1 / 68	19.35	1 / 204	19.65	22.51
	16-QAM	650000	3750.00	1 / 68	20.40	1 / 136	20.47	23.45
		656000	3840.00	1 / 136	20.14	1 / 136	20.13	23.14
		662000	3930.00	1 / 68	20.17	1 / 204	20.06	23.13
	64-QAM	650000	3750.00	1 / 68	20.11	1 / 136	20.38	23.26
		656000	3840.00	1 / 136	20.06	1 / 136	20.02	23.05
		662000	3930.00	1 / 68	20.41	1 / 204	19.93	23.19
	256-QAM	650000	3750.00	1 / 68	19.24	1 / 136	19.34	22.30
		656000	3840.00	1 / 136	19.48	1 / 136	18.83	22.18
		662000	3930.00	1 / 68	18.77	1 / 204	18.72	21.76
80 MHz	QPSK	649334	3740.01	1 / 54	19.73	1 / 162	20.24	23.00
		656000	3840.00	1 / 54	20.11	1 / 108	20.05	23.09
		662666	3939.99	1 / 54	20.09	1 / 108	19.88	23.00
	16-QAM	649334	3740.01	1 / 54	20.42	1 / 162	20.44	23.44
		656000	3840.00	1 / 54	20.31	1 / 108	20.34	23.34
		662666	3939.99	1 / 54	20.32	1 / 108	20.06	23.20
	64-QAM	649334	3740.01	1 / 54	20.24	1 / 162	20.31	23.29
		656000	3840.00	1 / 54	20.29	1 / 108	20.33	23.32
		662666	3939.99	1 / 54	20.33	1 / 108	20.23	23.29
	256-QAM	649334	3740.01	1 / 54	19.28	1 / 162	19.08	22.19
		656000	3840.00	1 / 54	19.40	1 / 108	18.84	22.14
		662666	3939.99	1 / 54	19.48	1 / 108	18.90	22.21
60 MHz	QPSK	648668	3730.02	1 / 40	20.17	1 / 121	20.24	23.21
		656000	3840.00	1 / 40	20.22	1 / 121	20.01	23.13
		663332	3949.98	1 / 40	20.47	1 / 121	20.06	23.28
	16-QAM	648668	3730.02	1 / 40	20.17	1 / 121	20.47	23.33
		656000	3840.00	1 / 40	20.42	1 / 121	20.46	23.45
		663332	3949.98	1 / 40	20.45	1 / 121	20.29	23.38
	64-QAM	648668	3730.02	1 / 40	20.28	1 / 121	20.28	23.29
		656000	3840.00	1 / 40	20.40	1 / 121	20.30	23.36
		663332	3949.98	1 / 40	20.24	1 / 121	20.14	23.20
	256-QAM	648668	3730.02	1 / 40	19.40	1 / 121	19.17	22.30
		656000	3840.00	1 / 40	19.93	1 / 121	18.93	22.47
		663332	3949.98	1 / 40	19.46	1 / 121	19.01	22.25
40 MHz	QPSK	648000	3720.00	1 / 26	20.00	1 / 79	20.33	23.18
		656000	3840.00	1 / 26	20.14	1 / 53	20.07	23.12
		664000	3960.00	1 / 26	19.90	1 / 53	20.44	23.19
	16-QAM	648000	3720.00	1 / 26	20.48	1 / 79	19.81	23.17
		656000	3840.00	1 / 26	20.27	1 / 53	20.48	23.39
		664000	3960.00	1 / 26	20.31	1 / 53	20.48	23.41
	64-QAM	648000	3720.00	1 / 26	20.40	1 / 79	19.63	23.04
		656000	3840.00	1 / 26	20.39	1 / 53	20.36	23.39
		664000	3960.00	1 / 26	20.32	1 / 53	20.42	23.39
	256-QAM	648000	3720.00	1 / 26	19.43	1 / 79	19.48	22.46
		656000	3840.00	1 / 26	19.36	1 / 53	19.04	22.21
		664000	3960.00	1 / 26	19.85	1 / 53	19.36	22.62
30 MHz	QPSK	647668	3715.02	1 / 39	19.87	1 / 39	20.43	23.17
		656000	3840.00	1 / 19	20.19	1 / 39	20.40	23.31
		664332	3964.98	1 / 39	20.04	1 / 58	20.38	23.22
	16-QAM	647668	3715.02	1 / 39	20.41	1 / 39	20.04	23.24
		656000	3840.00	1 / 19	20.47	1 / 39	20.35	23.42
		664332	3964.98	1 / 39	20.28	1 / 58	20.31	23.31
	64-QAM	647668	3715.02	1 / 39	20.44	1 / 39	20.39	23.42
		656000	3840.00	1 / 19	20.34	1 / 39	20.41	23.38
		664332	3964.98	1 / 39	20.43	1 / 58	20.35	23.40
	256-QAM	647668	3715.02	1 / 39	19.96	1 / 39	19.41	22.70
		656000	3840.00	1 / 19	19.48	1 / 39	19.26	22.38
		664332	3964.98	1 / 39	19.98	1 / 58	19.19	22.62
20 MHz	QPSK	647334	3710.01	1 / 37	20.14	1 / 25	20.39	23.28
		656000	3840.00	1 / 25	20.12	1 / 37	20.42	23.28
		664666	3969.99	1 / 25	20.18	1 / 25	20.23	23.22
	16-QAM	647334	3710.01	1 / 37	20.37	1 / 25	20.30	23.35
		656000	3840.00	1 / 25	20.41	1 / 37	20.42	23.43
		664666	3969.99	1 / 25	20.24	1 / 25	20.45	23.35
	64-QAM	647334	3710.01	1 / 37	20.34	1 / 25	20.43	23.40
		656000	3840.00	1 / 25	20.33	1 / 37	20.44	23.39
		664666	3969.99	1 / 25	20.35	1 / 25	20.44	23.40
	256-QAM	647334	3710.01	1 / 37	19.89	1 / 25	19.40	22.66
		656000	3840.00	1 / 25	19.75	1 / 37	19.08	22.44
		664666	3969.99	1 / 25	19.74	1 / 25	19.14	22.46

Table 7-2. Conducted Power Data (UL-MIMO NR Band n77 (PC3))

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 13 of 63

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 $\geq 3 \times$ 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.



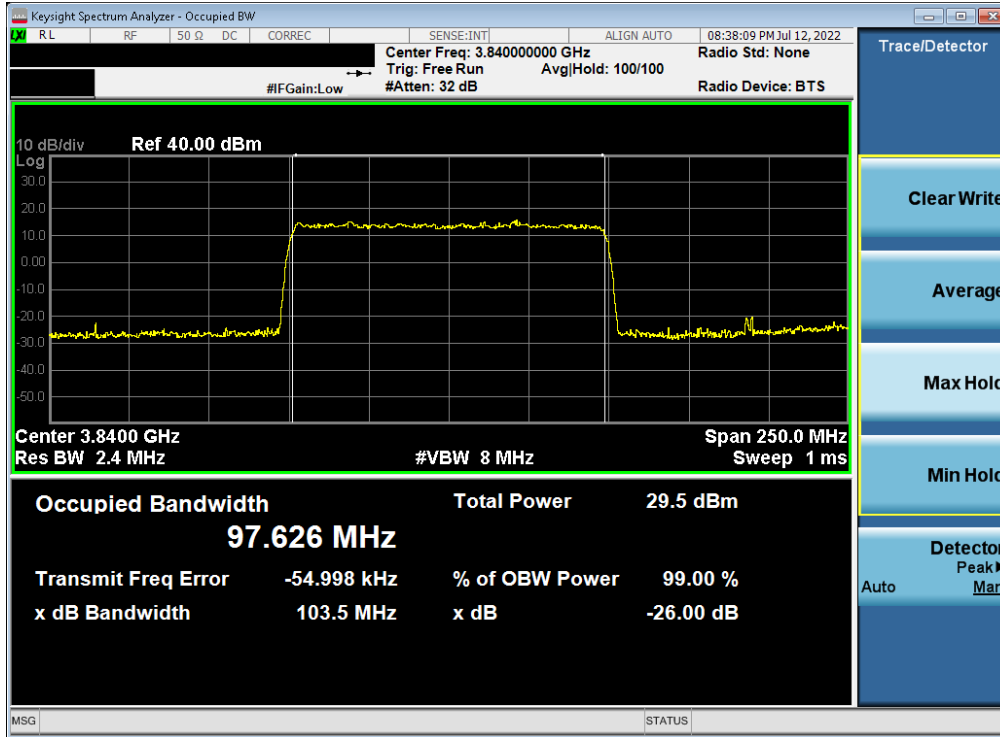
Figure 7-2. Test Instrument & Measurement Setup

Test Notes

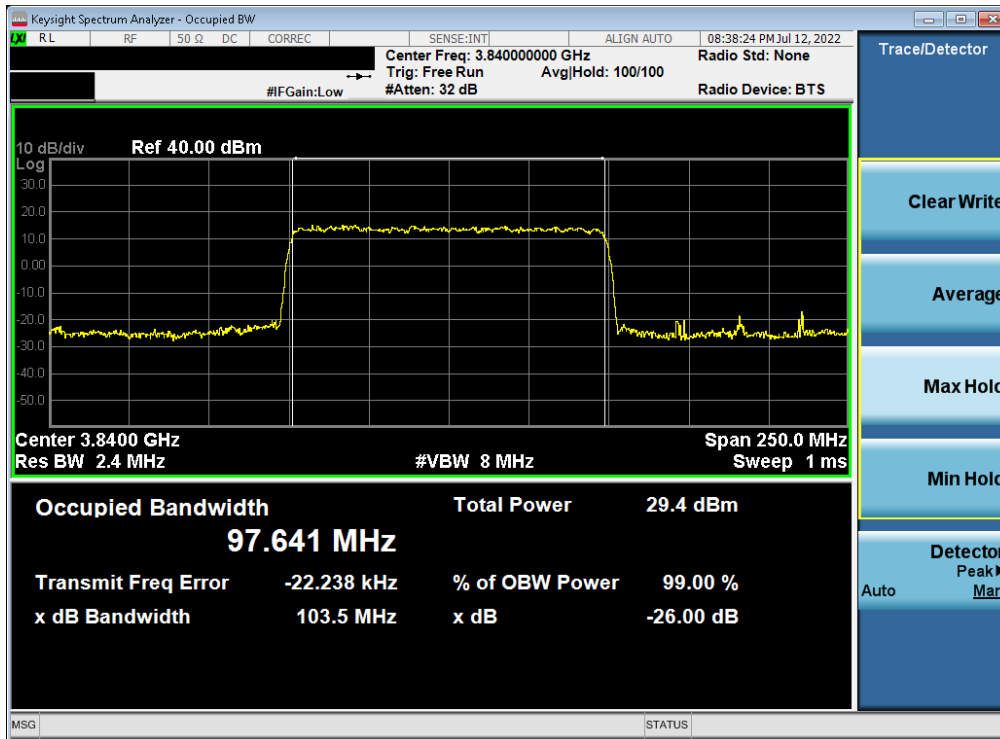
For this section, only the sub antenna occupied bandwidths are in this report, the main antenna occupied bandwidth plots are in the original filing report.

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 14 of 63

UL-MIMO NR Band n77 – Sub Antenna

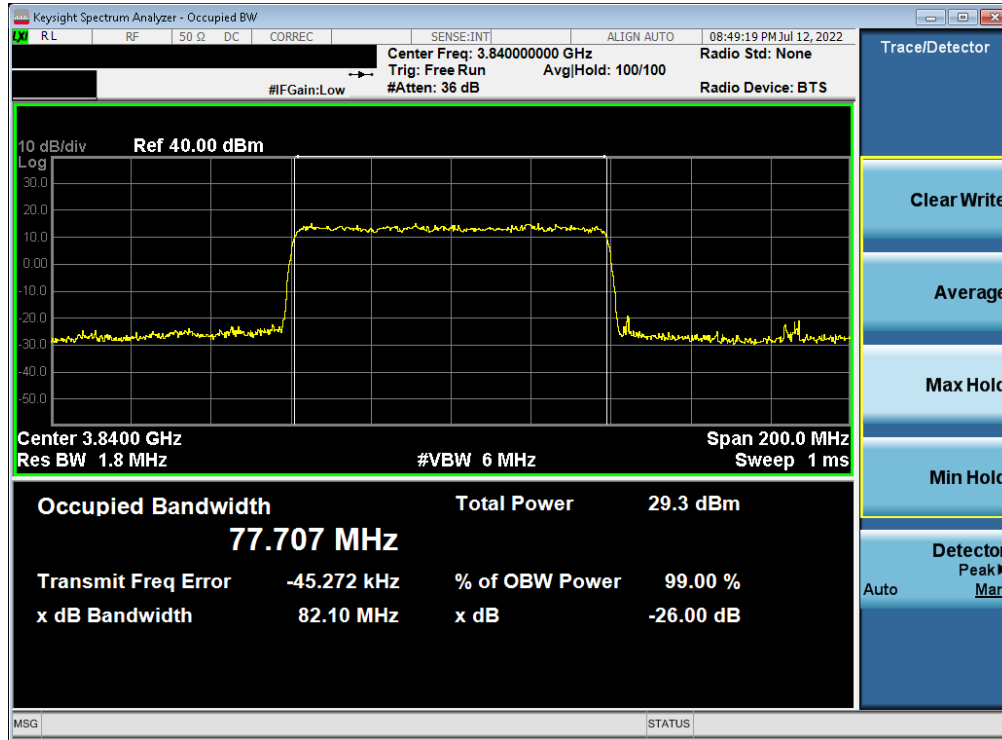


Plot 7-1. Occupied Bandwidth Plot (NR Band n77 - 100MHz QPSK - Full RB - Sub ANT)

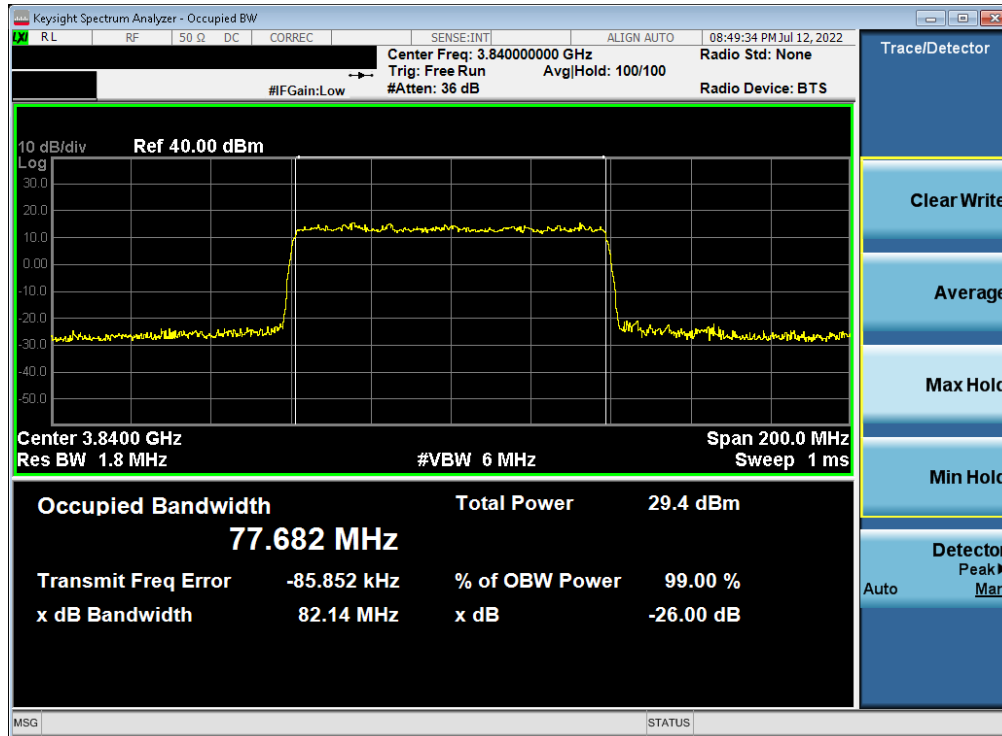


Plot 7-2. Occupied Bandwidth Plot (NR Band n77 - 100MHz 16-QAM - Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 15 of 63

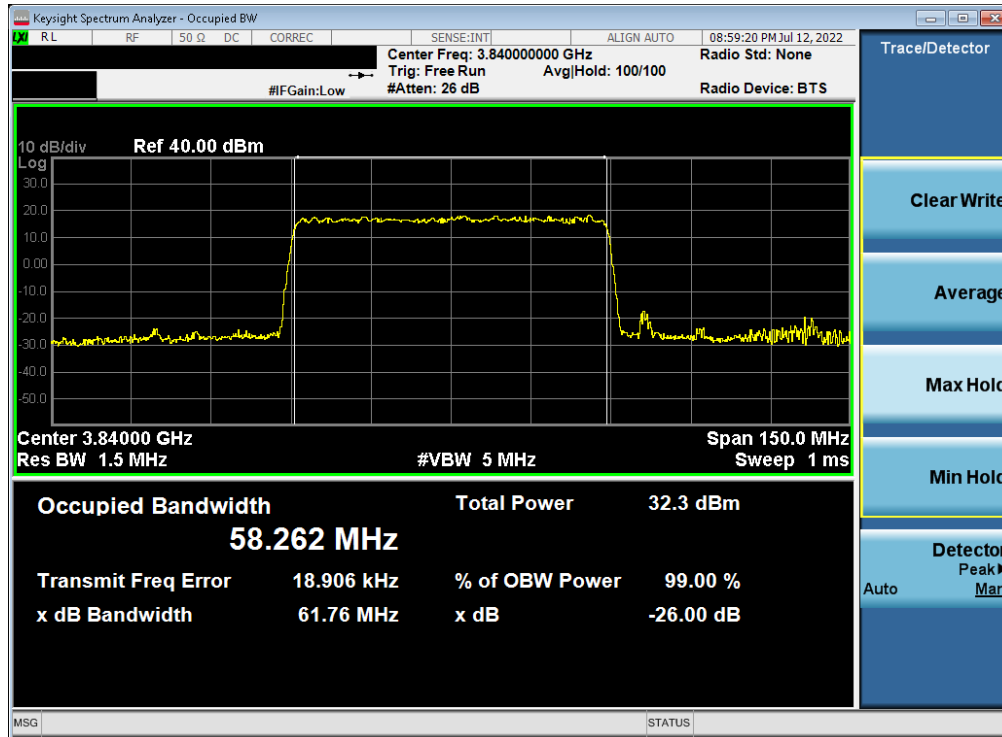


Plot 7-3. Occupied Bandwidth Plot (NR Band n77 - 80MHz QPSK - Full RB - Sub ANT)

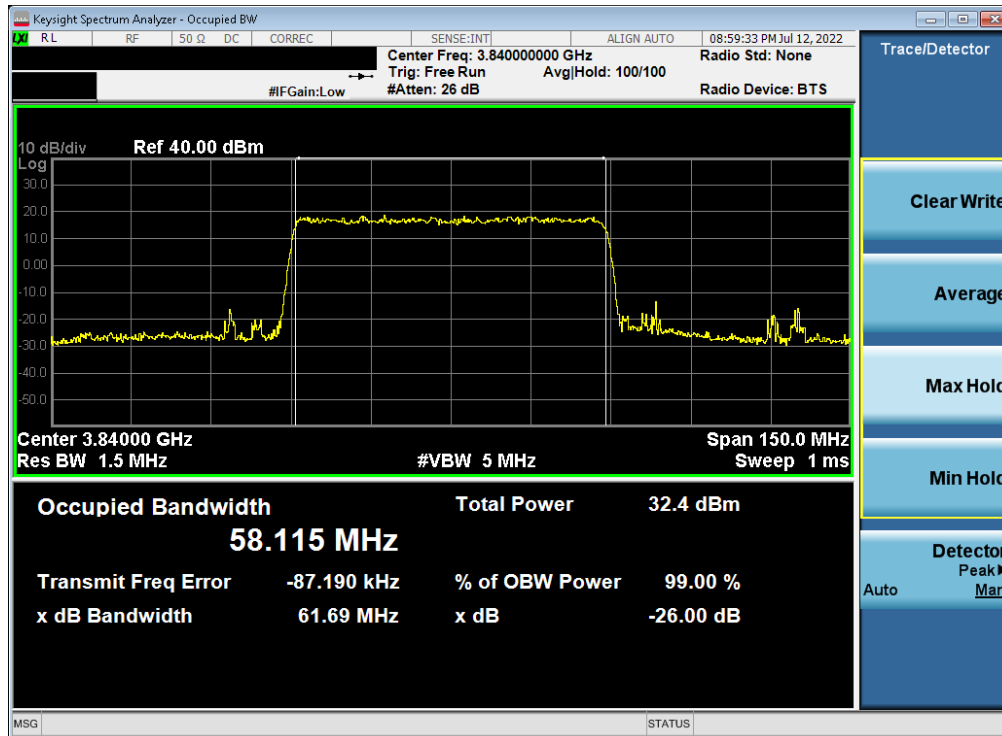


Plot 7-4. Occupied Bandwidth Plot (NR Band n77 - 80MHz 16-QAM - Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 16 of 63

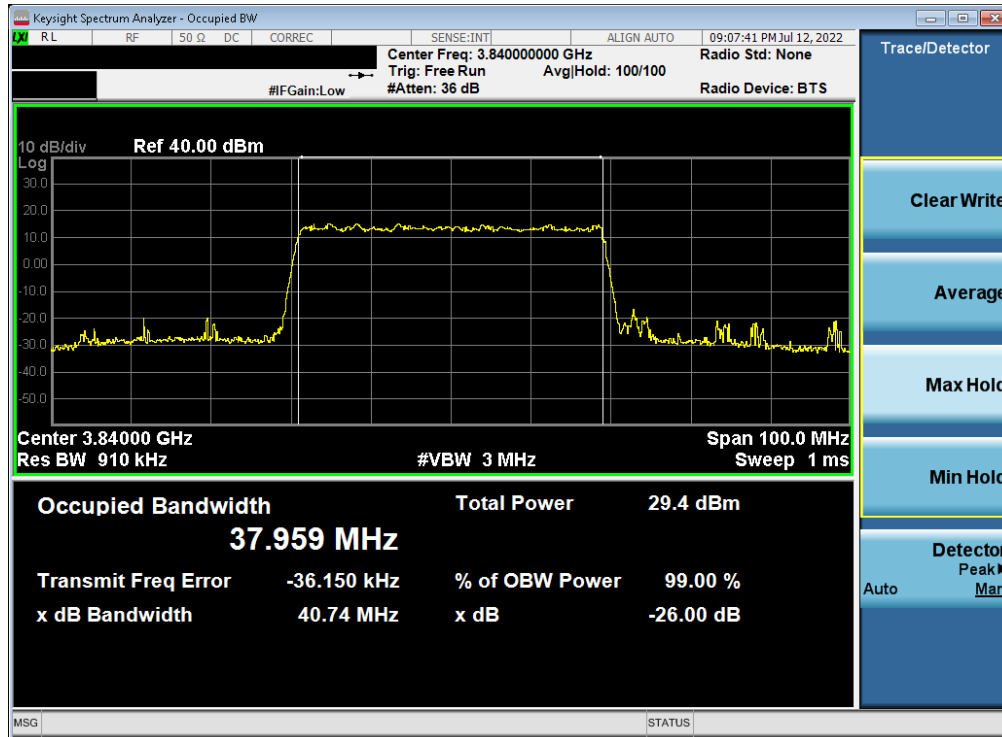


Plot 7-5. Occupied Bandwidth Plot (NR Band n77 - 60MHz QPSK - Full RB - Sub ANT)

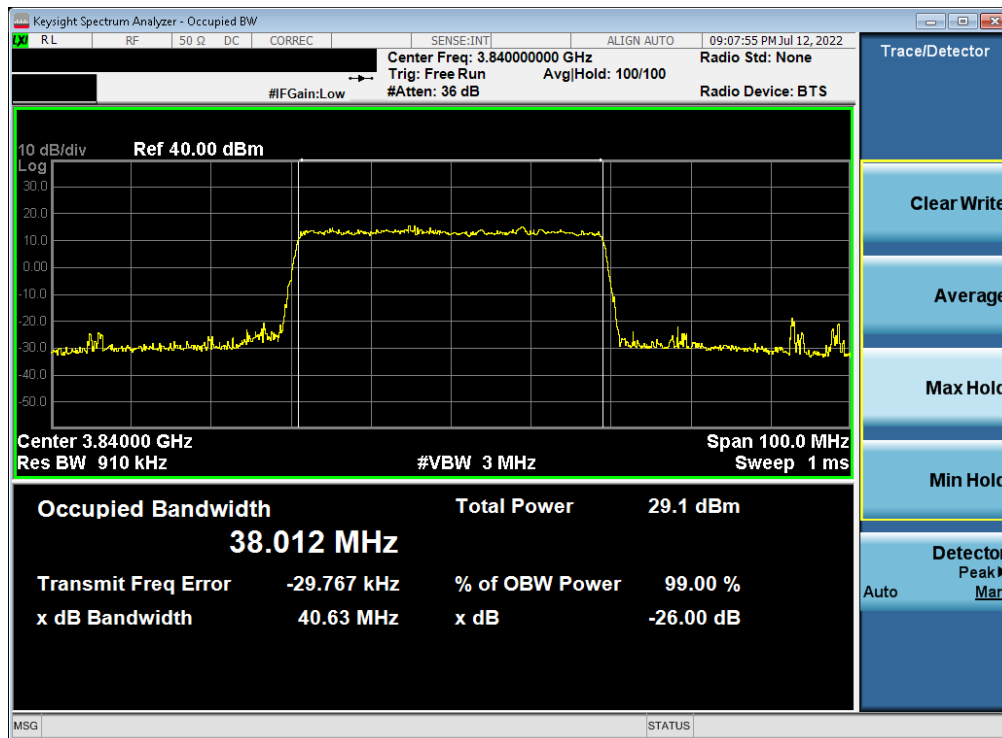


Plot 7-6. Occupied Bandwidth Plot (NR Band n77 - 60MHz 16-QAM - Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 17 of 63

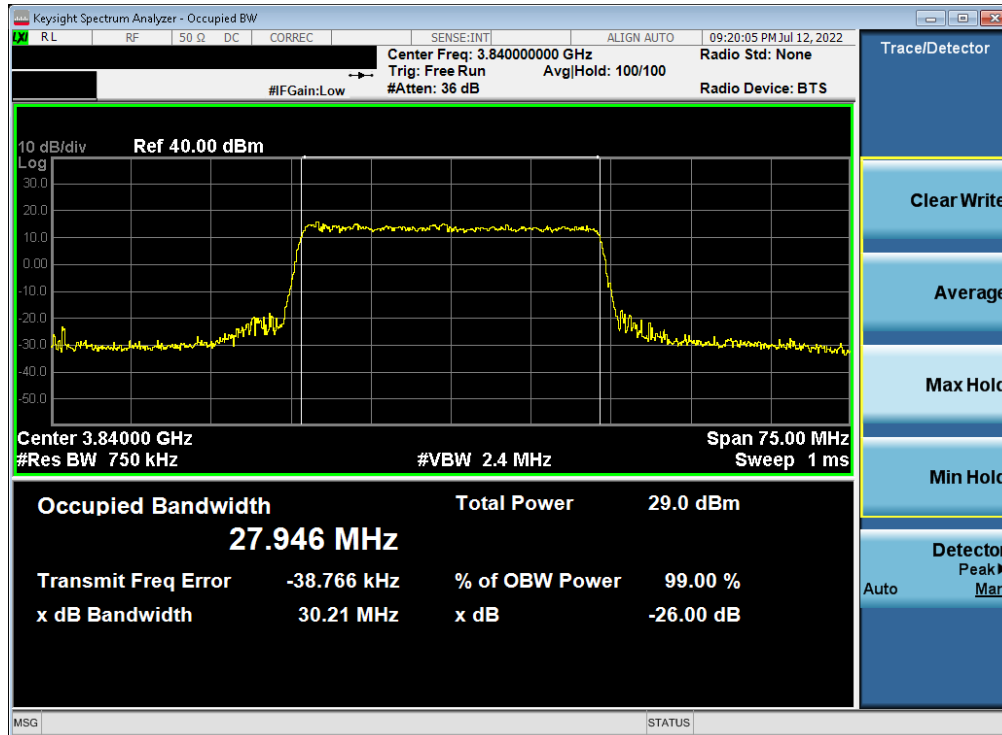


Plot 7-7. Occupied Bandwidth Plot (NR Band n77 - 40MHz QPSK - Full RB - Sub ANT)

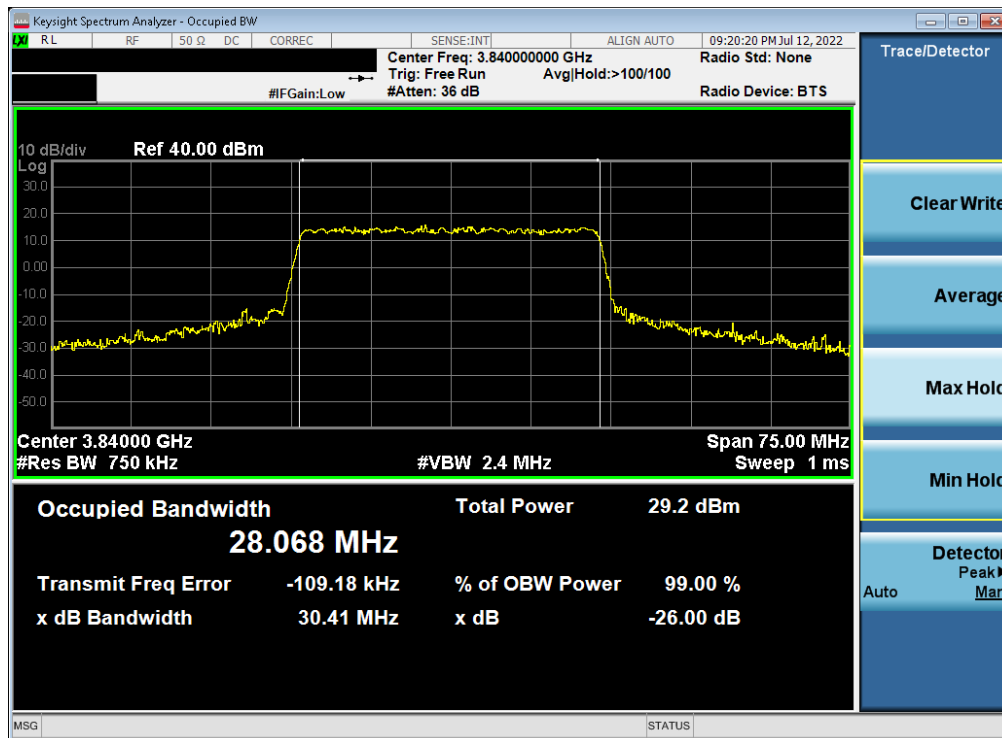


Plot 7-8. Occupied Bandwidth Plot (NR Band n77 - 40MHz 16-QAM - Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 18 of 63

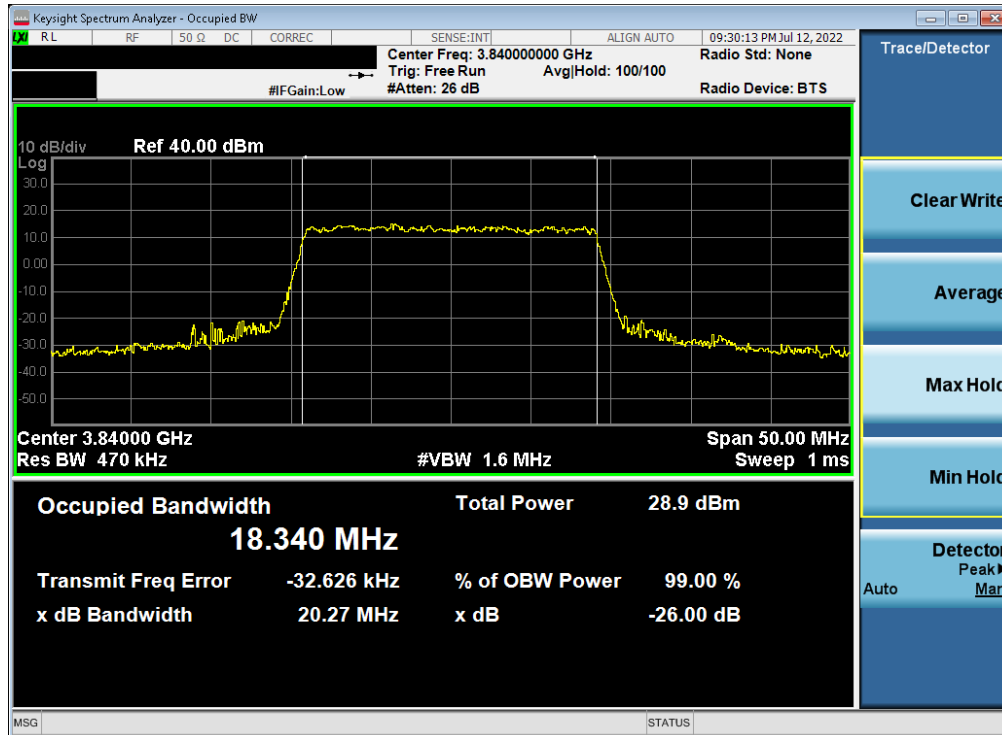


Plot 7-9. Occupied Bandwidth Plot (NR Band n77 - 30MHz QPSK - Full RB - Sub ANT)

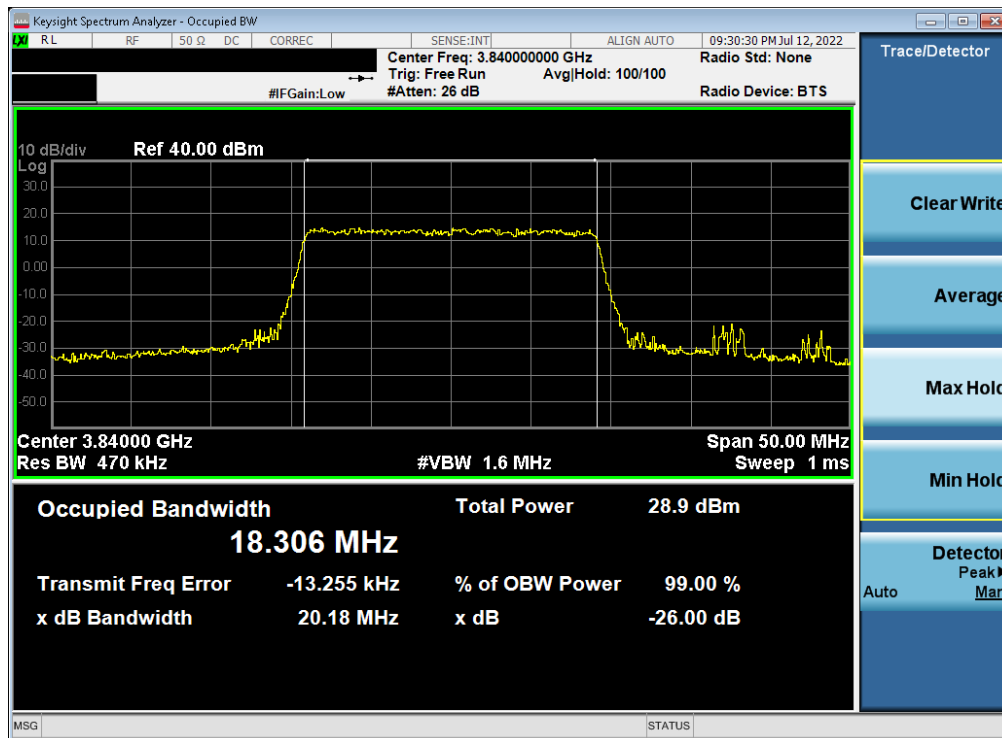


Plot 7-10. Occupied Bandwidth Plot (NR Band n77 - 30MHz 16-QAM - Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 19 of 63



Plot 7-11. Occupied Bandwidth Plot (NR Band n77 - 20MHz QPSK - Full RB - Sub ANT)



Plot 7-12. Occupied Bandwidth Plot (NR Band n77 - 20MHz 16-QAM - Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 20 of 63

7.3 Spurious and Harmonic Emissions at Antenna Terminal

Test Overview

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

For operations in the 3700 – 3980MHz band, the maximum permissible conducted power level of any spurious emission is -13dBm/MHz.

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 the tenth harmonic of the highest transmit frequency (separated into at least two plots per channel)
2. Detector = RMS
3. Trace mode = trace average for continuous emissions, max hold for pulse emissions
4. Sweep time = auto couple
5. The trace was allowed to stabilize
6. Please see test notes below for RBW and VBW settings

Test Setup

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

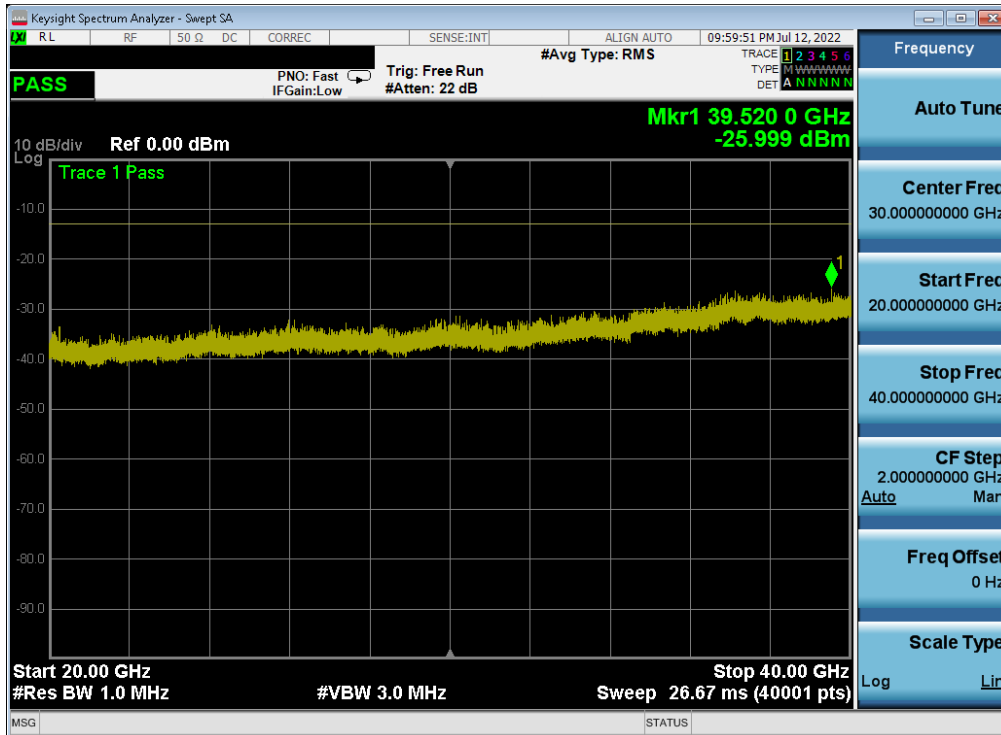


Figure 7-3. Test Instrument & Measurement Setup

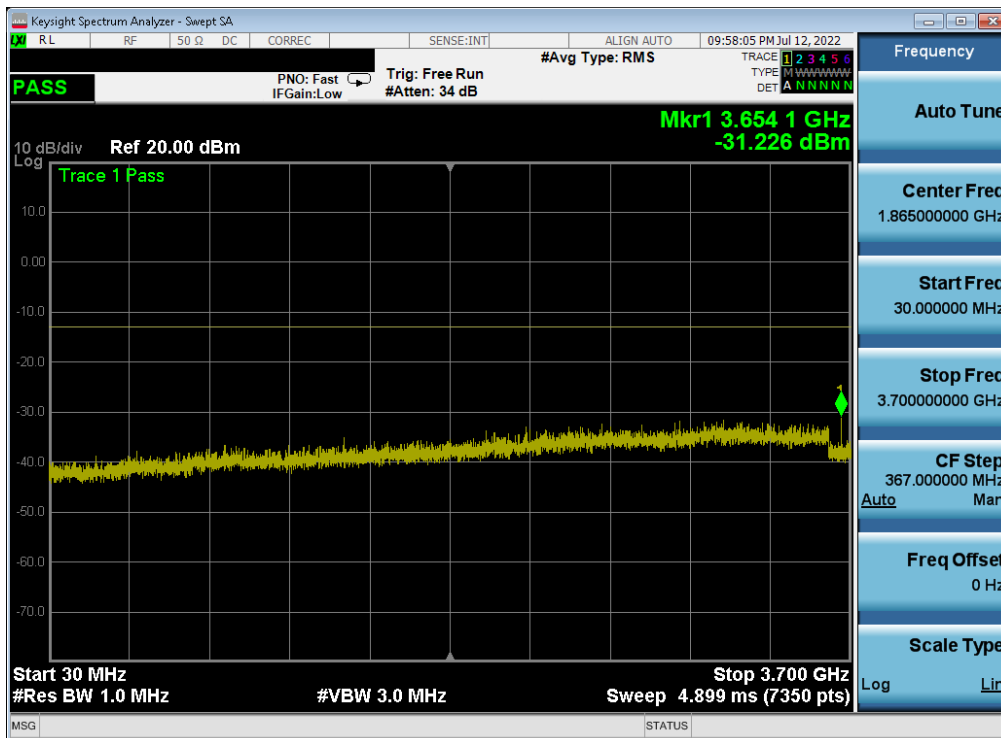
Test Notes

1. Per Part 27.53(l), compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz.
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.
3. In this section, the UL-MIMO NR band n77 (main and sub antennas) plots has a 3dB correction applied to the individual plots to address the MIMO requirements in ANSI C63.26.

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 21 of 63

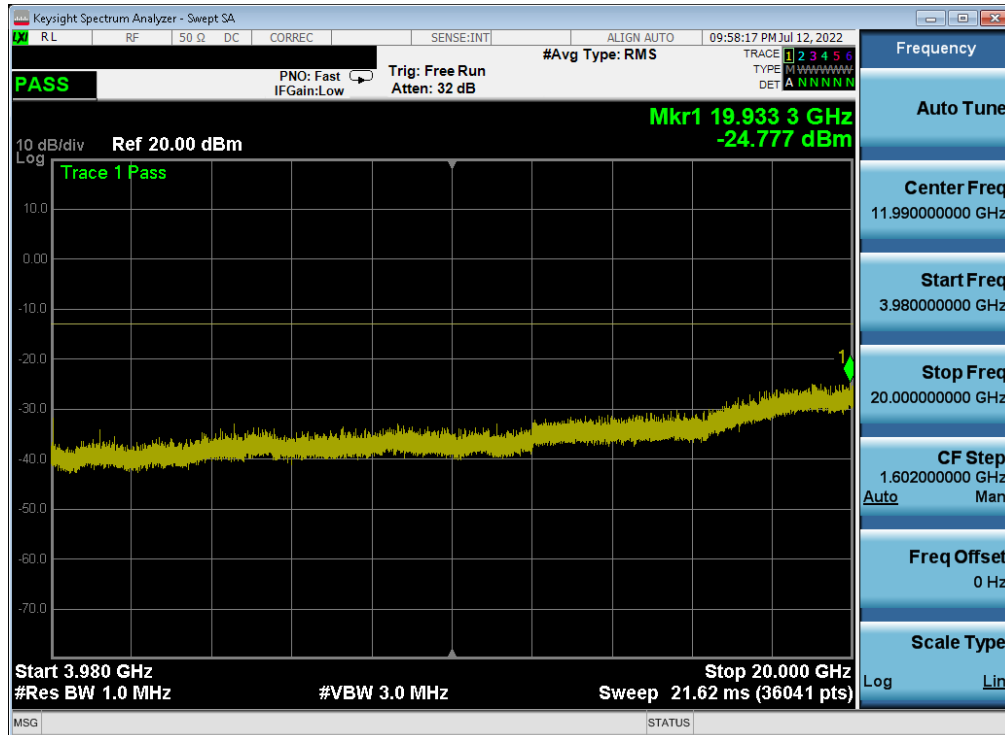


Plot 7-15. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Main ANT)

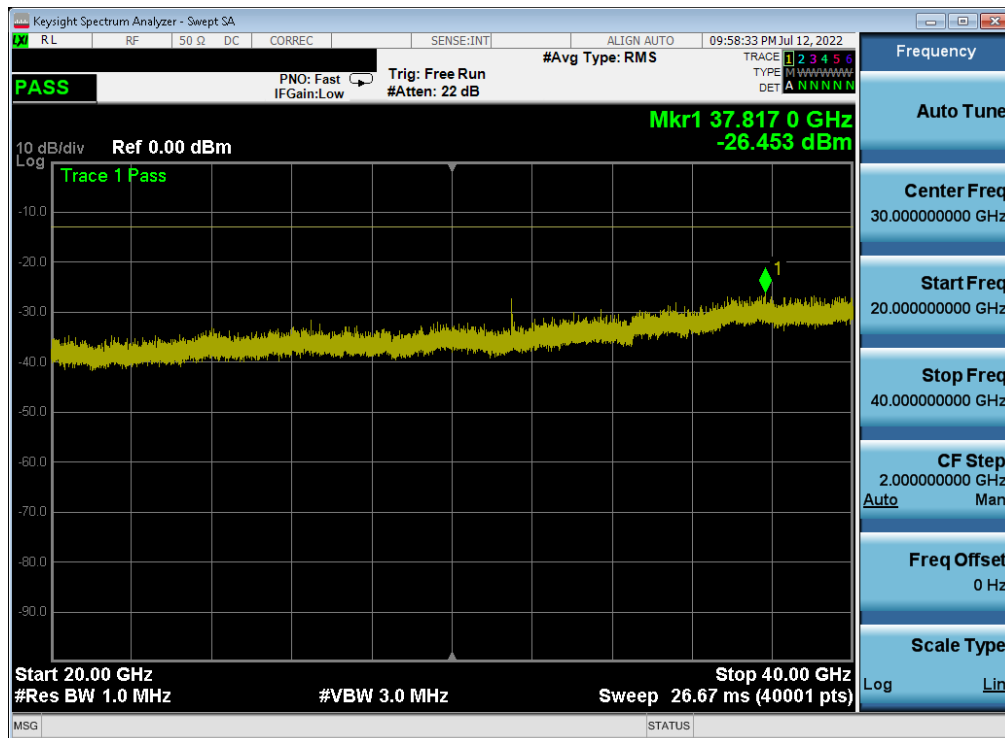


Plot 7-16. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Main ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 23 of 63

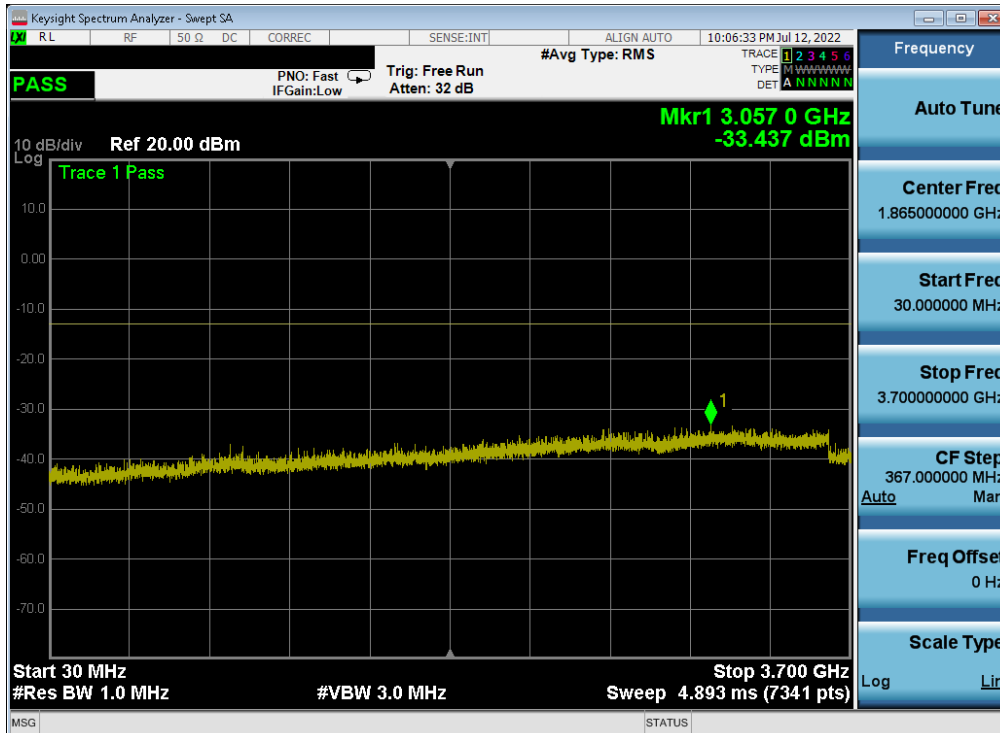


Plot 7-17. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Main ANT)

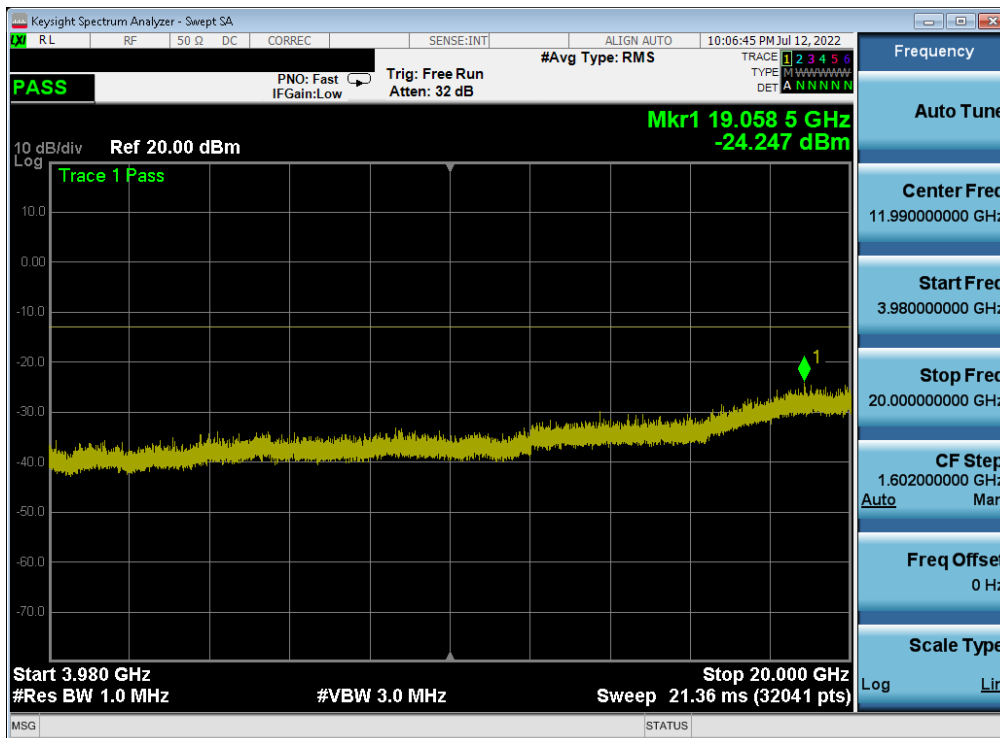


Plot 7-18. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Main ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 24 of 63

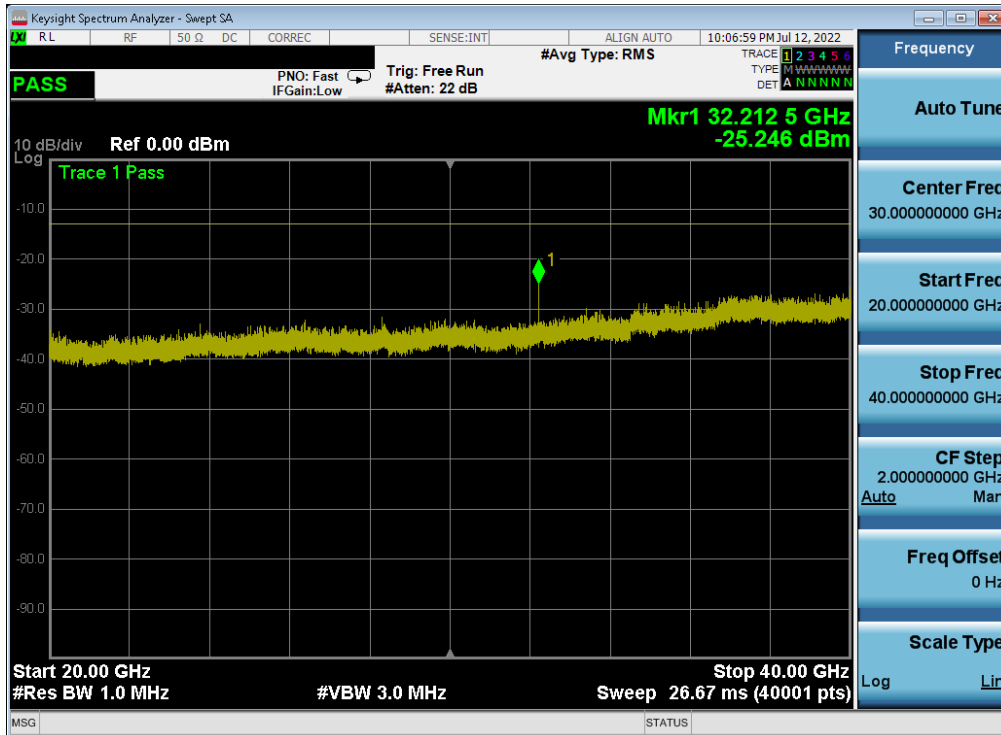


Plot 7-19. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Main ANT)



Plot 7-20. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Main ANT)

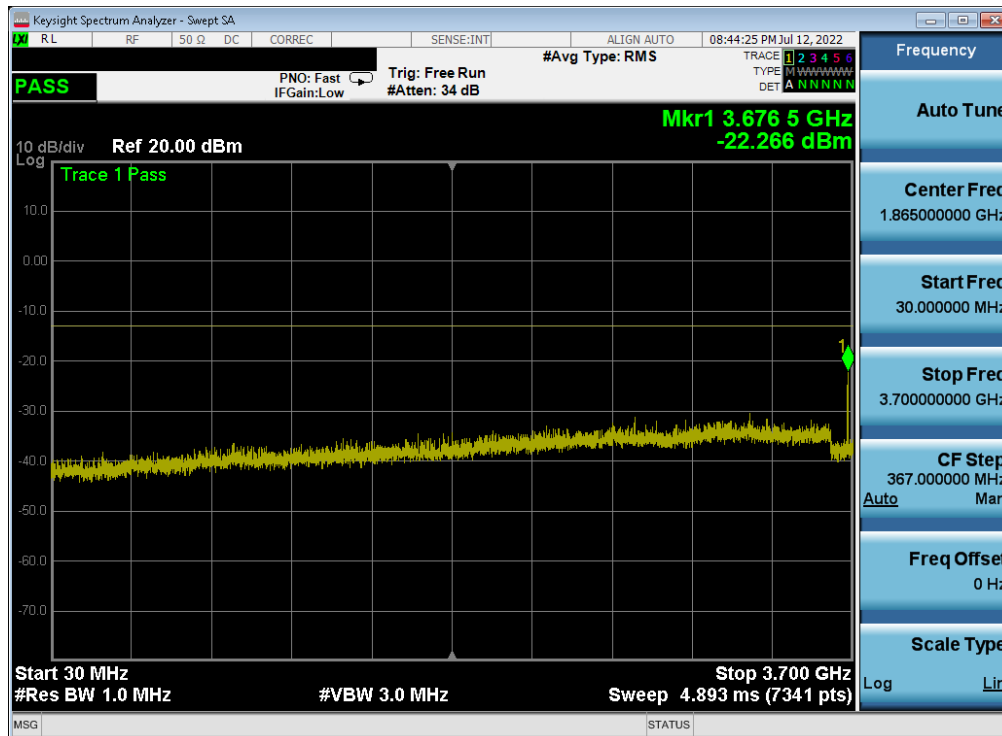
FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 25 of 63



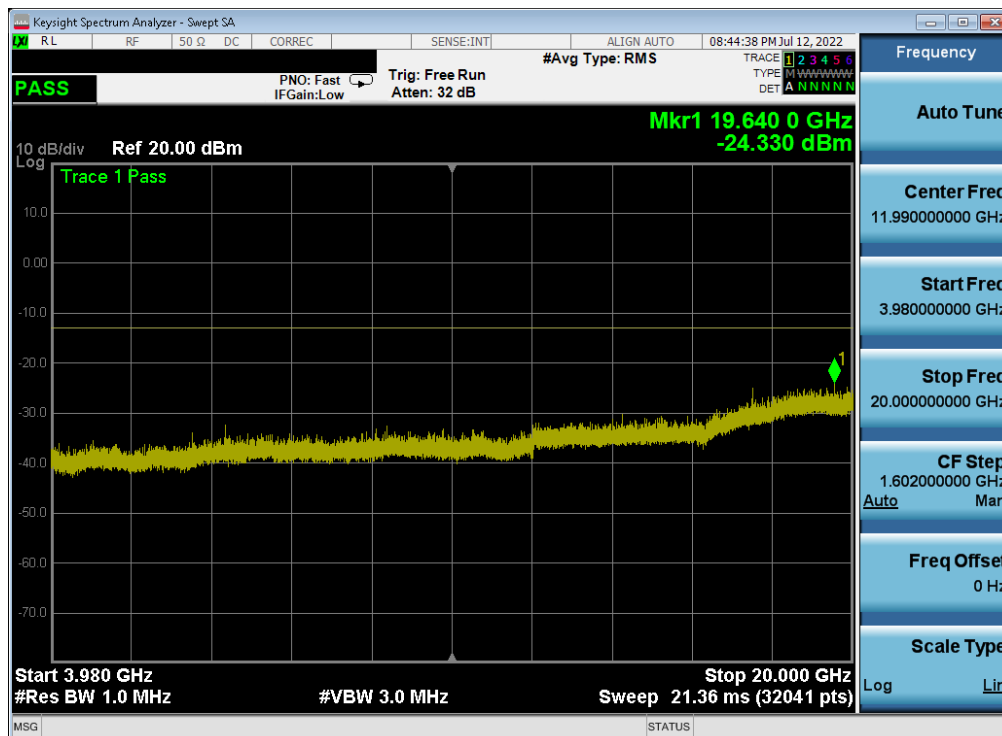
Plot 7-21. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Main ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 26 of 63

UL-MIMO NR Band n77 – Sub Antenna

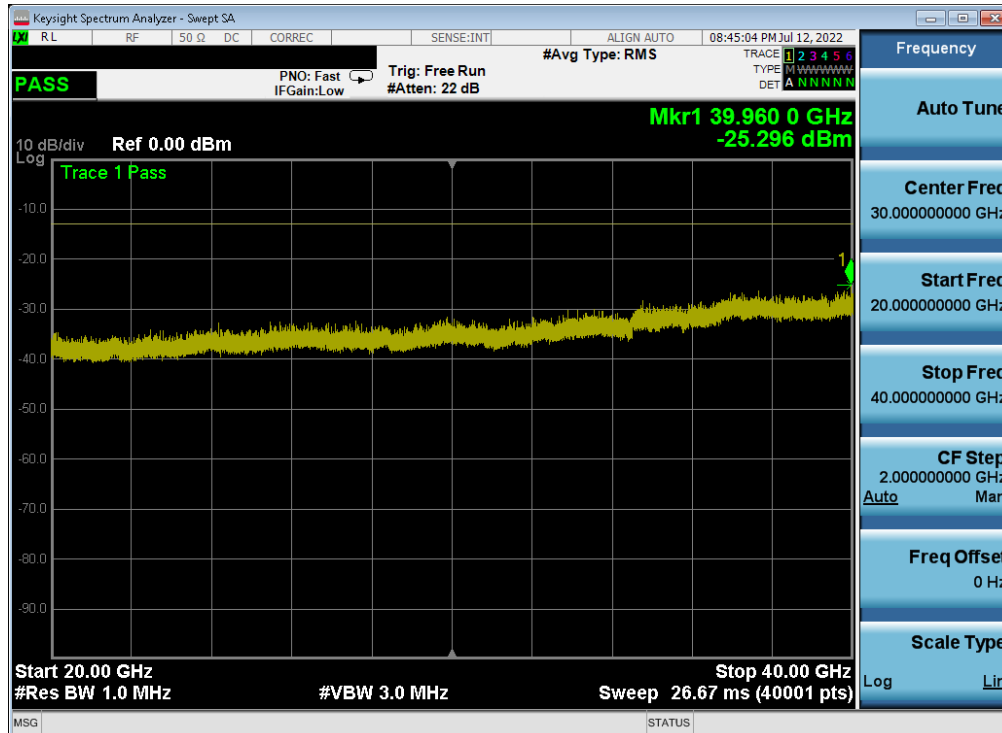


Plot 7-22. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Sub ANT)

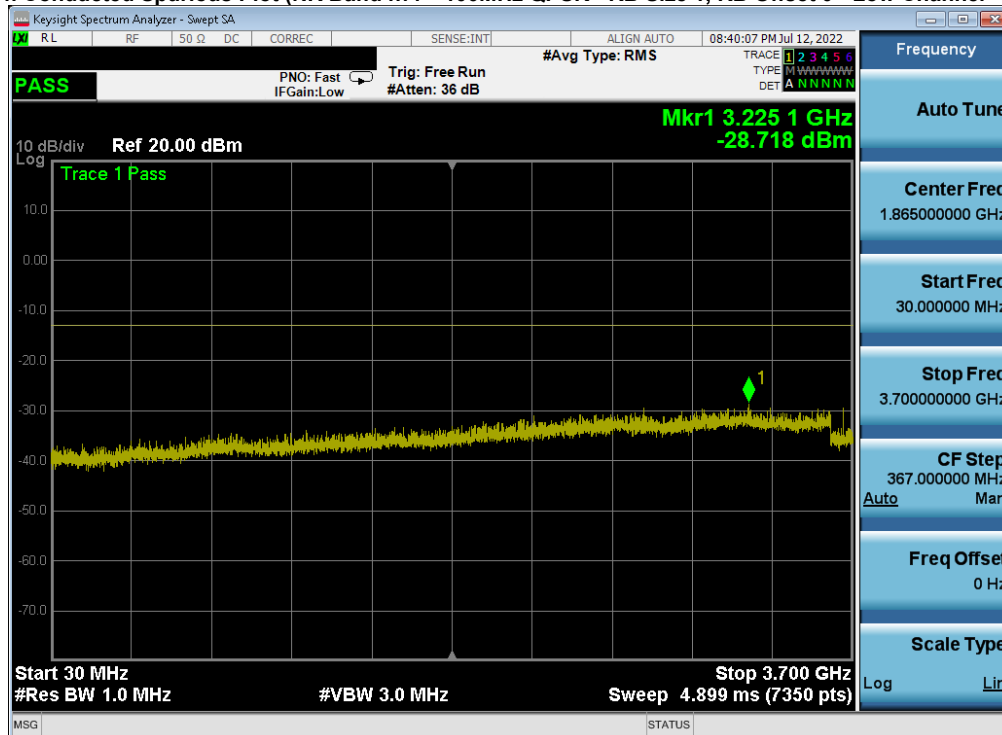


Plot 7-23. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 27 of 63

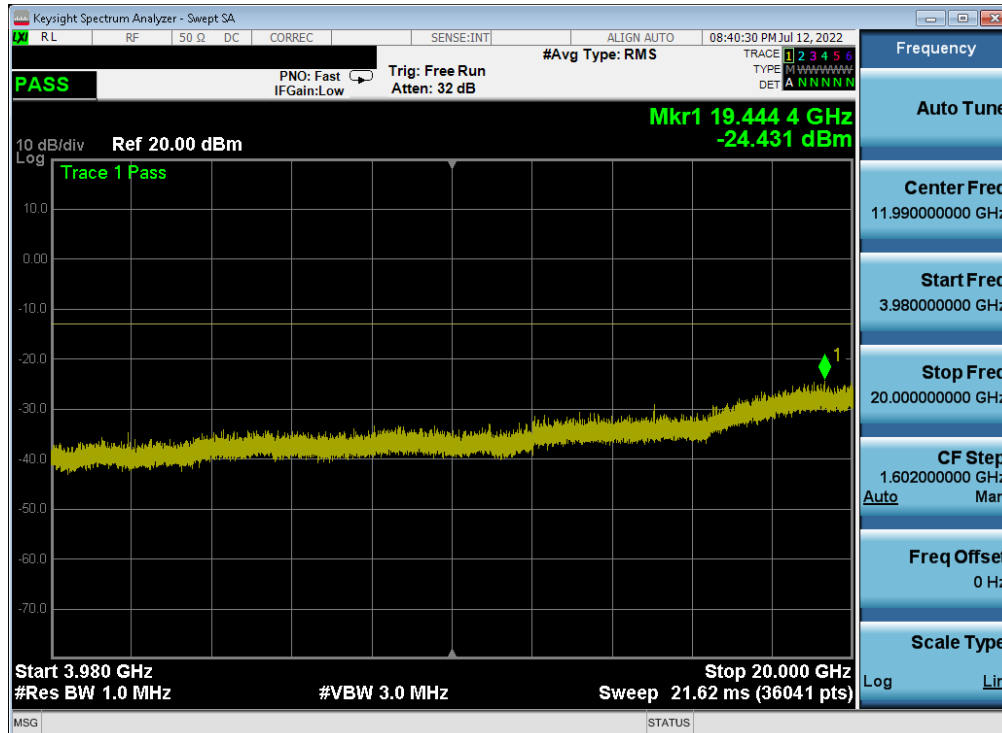


Plot 7-24. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - Low Channel - Sub ANT)

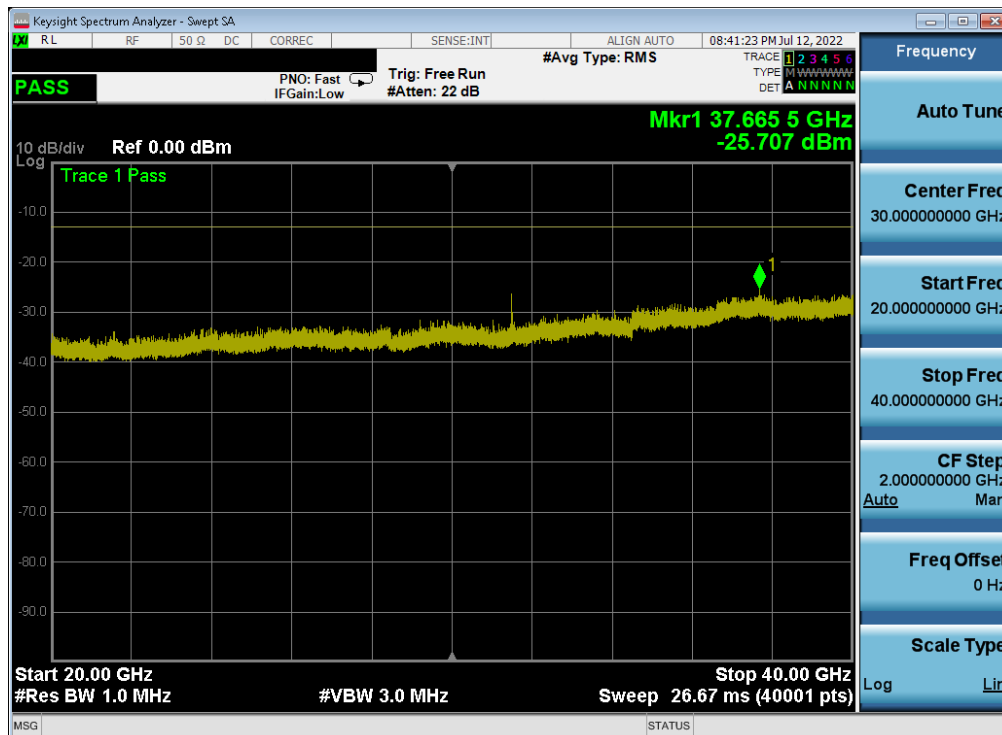


Plot 7-25. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 28 of 63

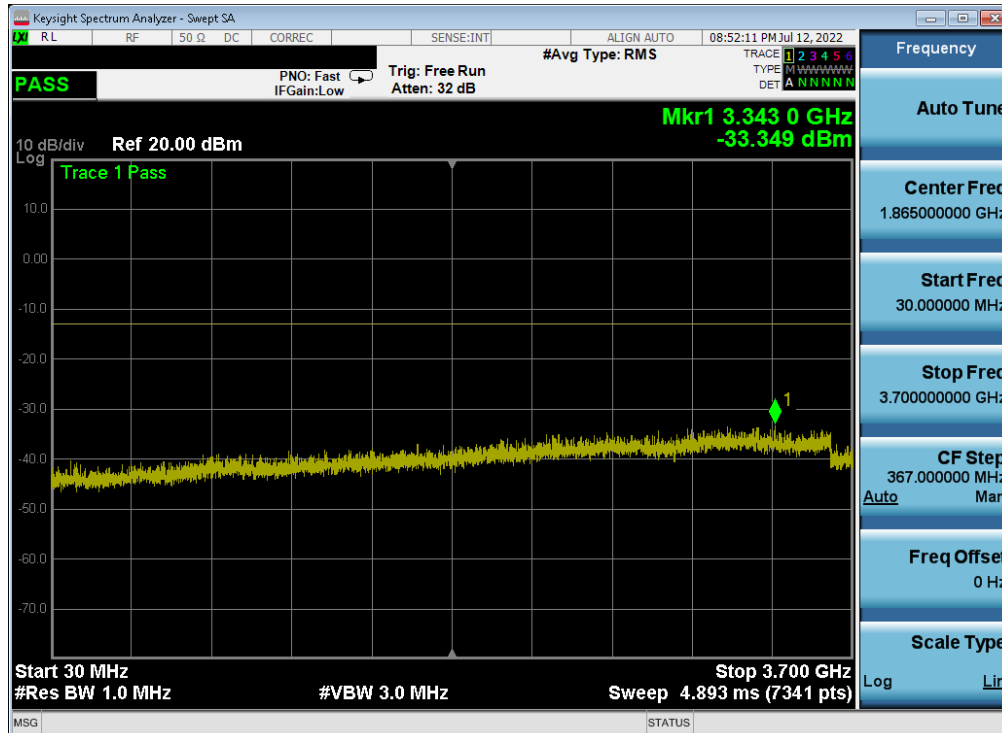


Plot 7-26. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Sub ANT)

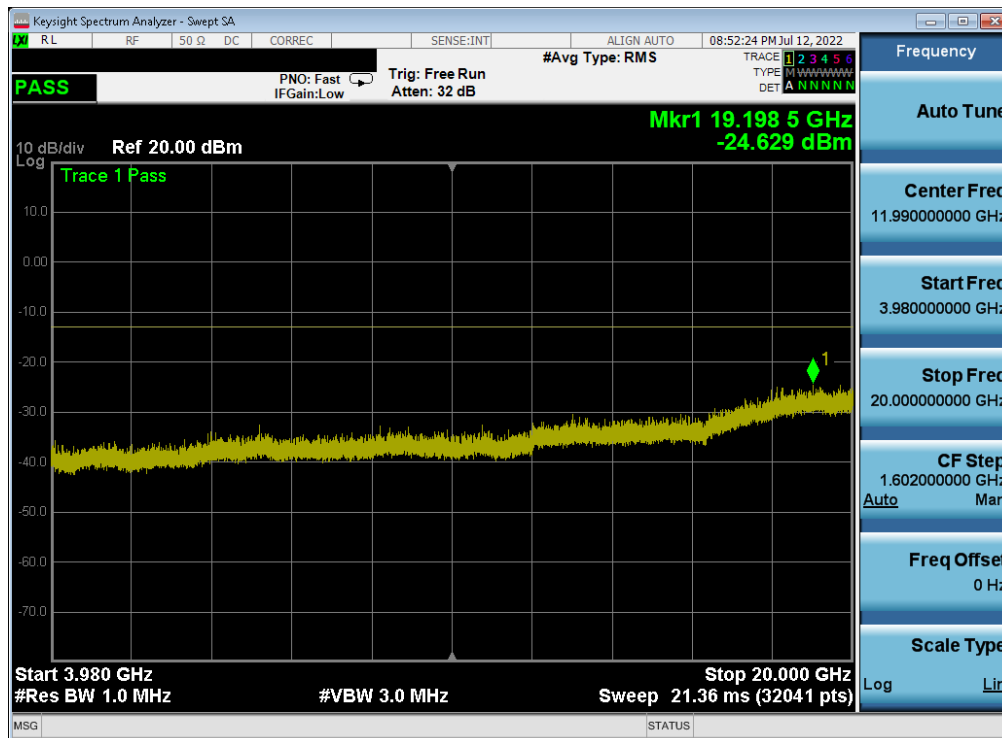


Plot 7-27. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 29 of 63

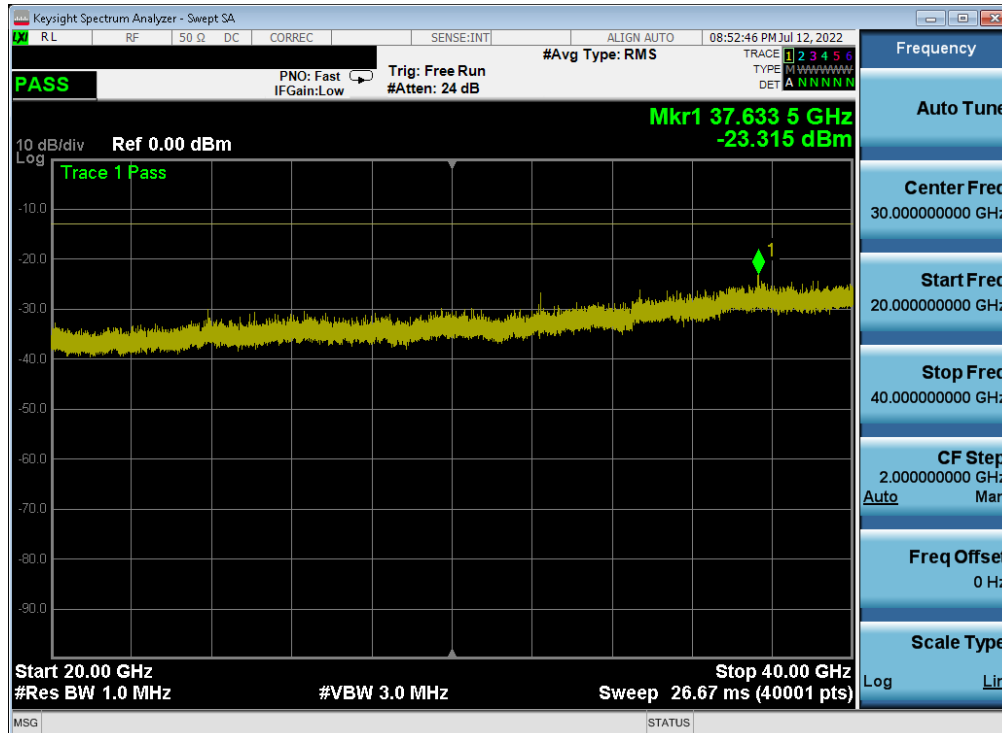


Plot 7-28. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Sub ANT)



Plot 7-29. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 30 of 63



Plot 7-30. Conducted Spurious Plot (NR Band n77 - 100MHz QPSK - RB Size 1, RB Offset 0 - High Channel - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 31 of 63

7.4 Band Edge Emissions at Antenna Terminal

Test Overview

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

For operations in the 3700 – 3980MHz band, the maximum permissible conducted power level of any out-of-band emission is -13dBm/MHz.

Test Procedure Used

ANSI C63.26-2015 – Section 5.7.3

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW \geq 1% of the emission bandwidth
4. VBW \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: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 32 of 63

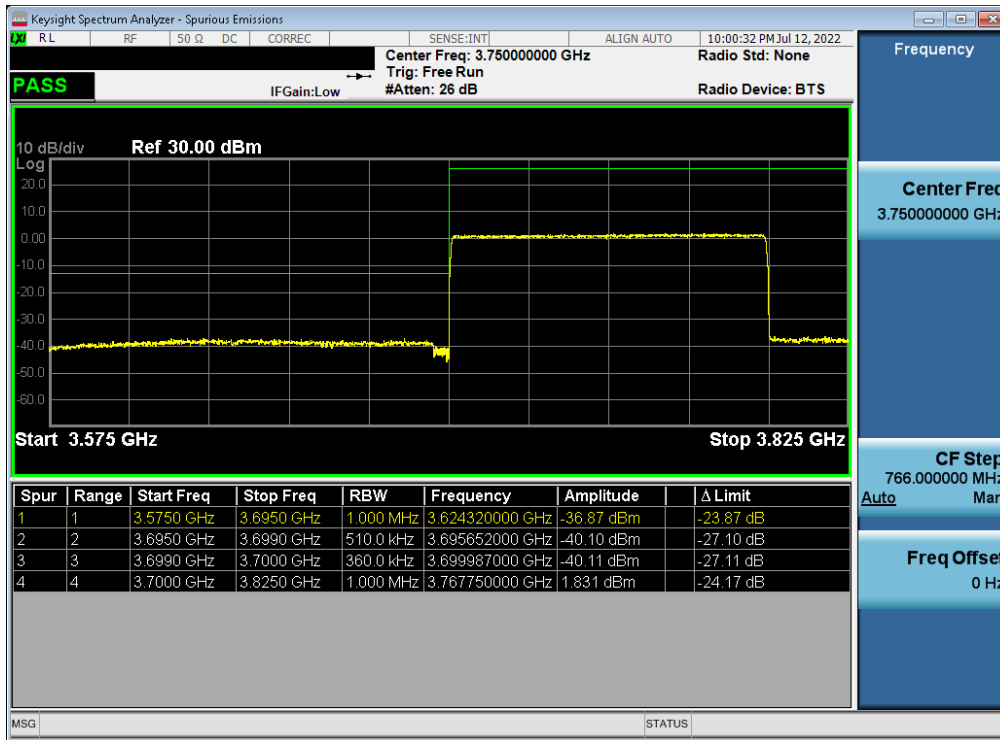
V3.0 1/6/2022

Test Notes

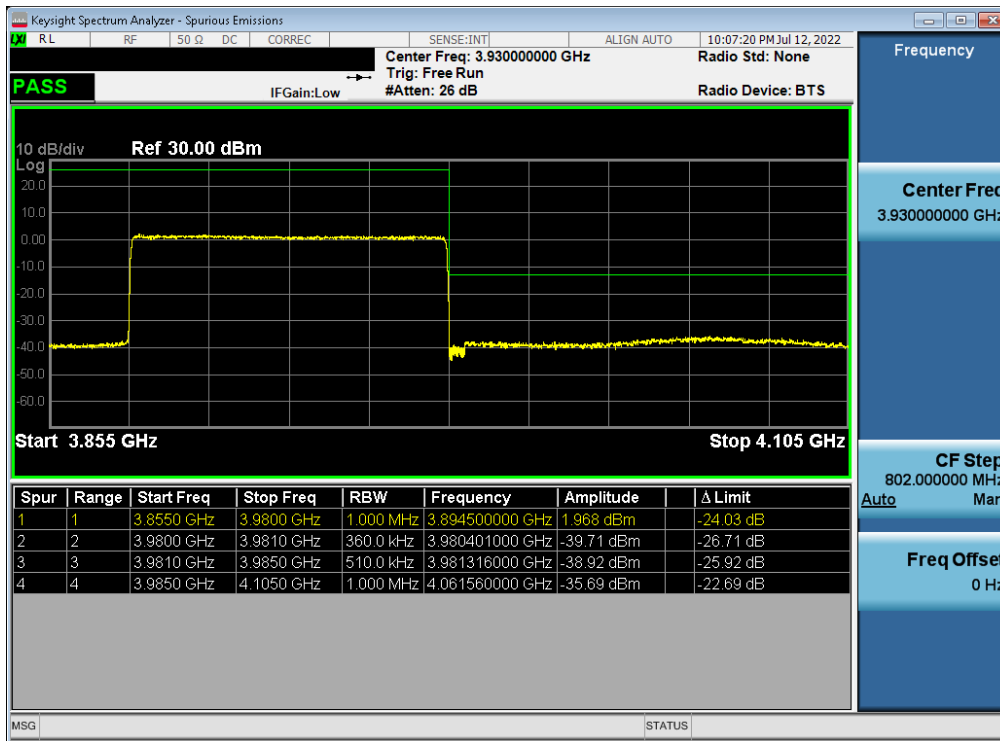
1. Per Part 27.53(l), compliance with the -13dBm/MHz conducted power limit for out-of-band emissions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.
2. 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.
3. 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.
4. In this section, the UL-MIMO NR band n77 (main and sub antennas) plots has a 3dB correction applied to the individual plots to address the MIMO requirements in ANSI C63.26.

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 33 of 63

UL-MIMO NR Band n77 – Main ANT



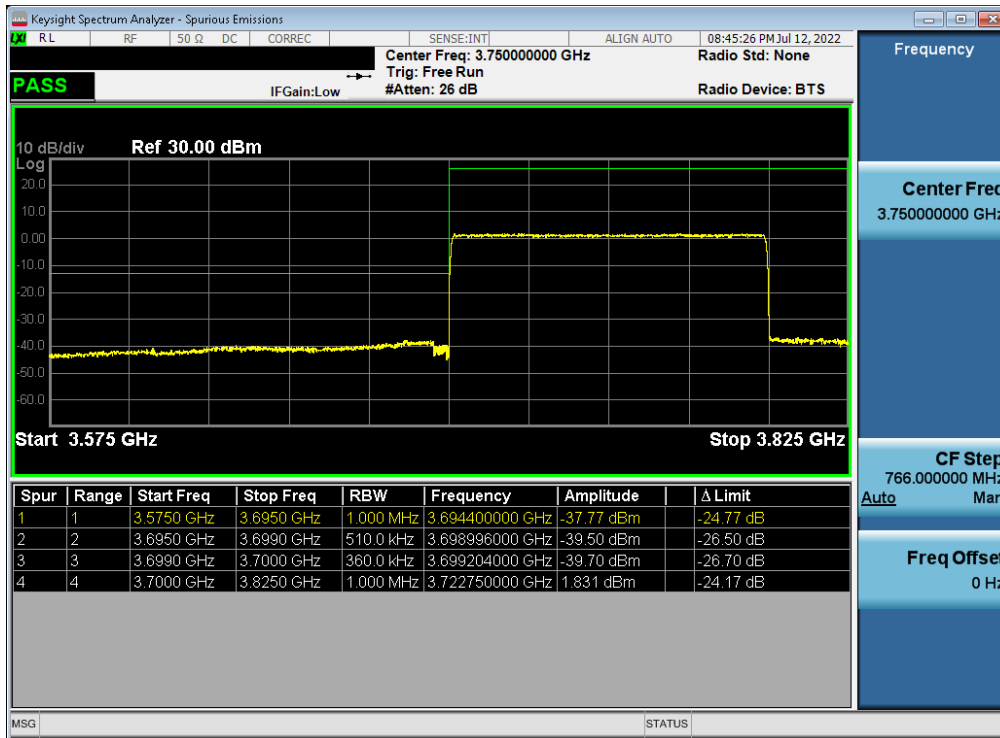
Plot 7-31. Lower ACP Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Main ANT)



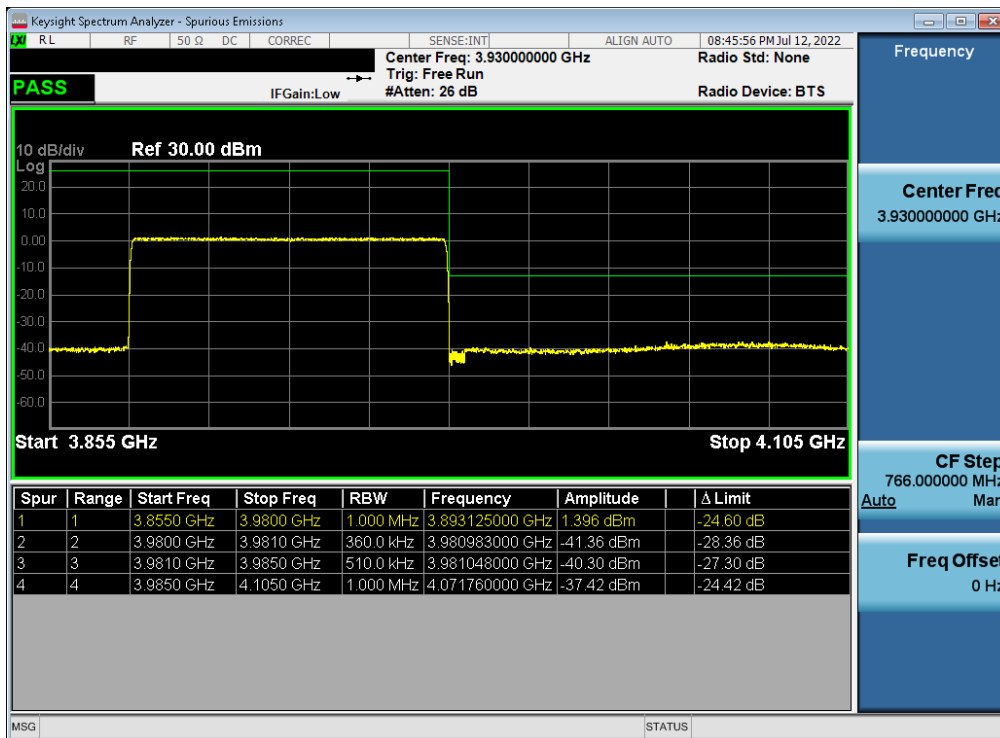
Plot 7-32. Upper ACP Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Main ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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UL-MIMO NR Band n77 – Sub ANT

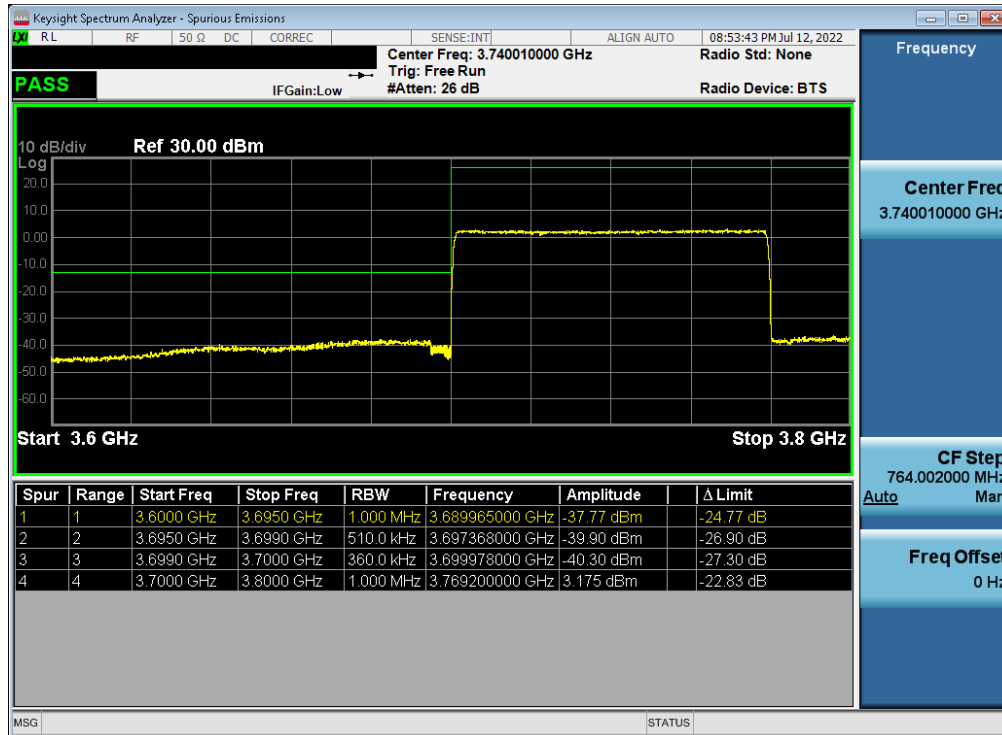


Plot 7-33. Lower ACP Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Sub ANT)

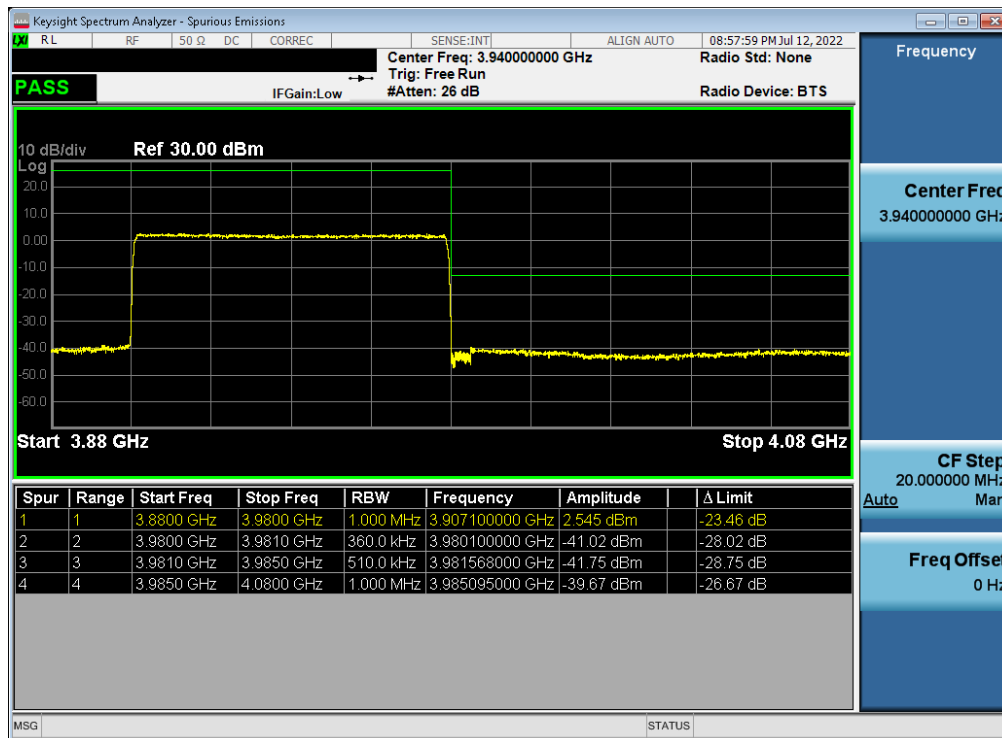


Plot 7-34. Upper ACP Plot (NR Band n77 - 100MHz CP-OFDM-QPSK – Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 35 of 63

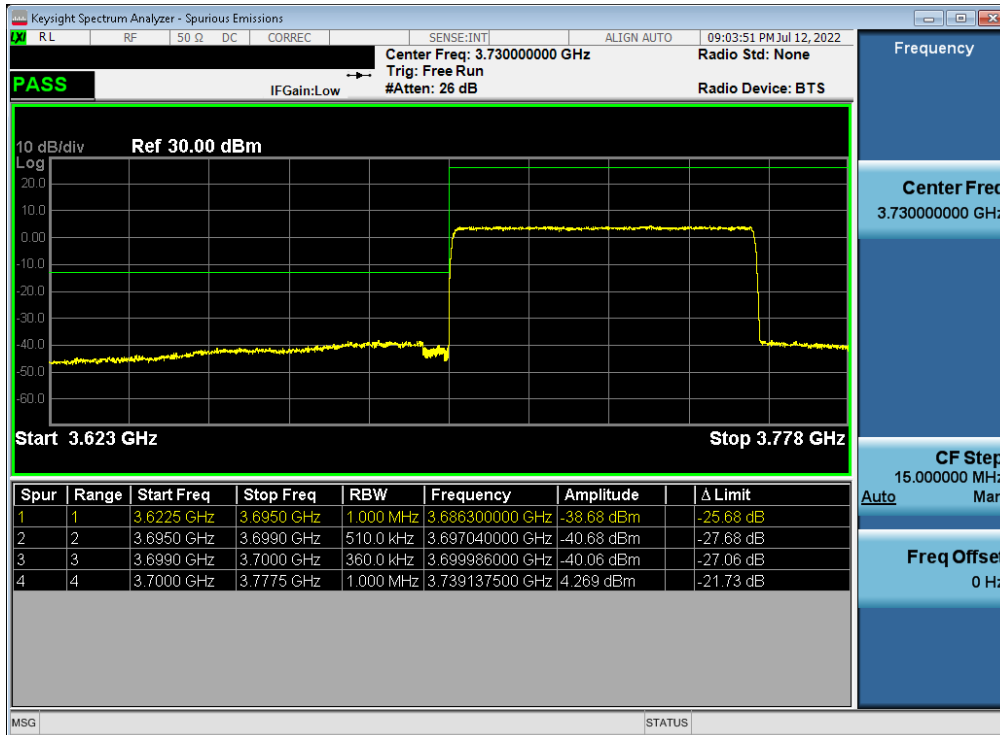


Plot 7-35. Lower ACP Plot (NR Band n77 - 80MHz CP-OFDM-QPSK – Full RB - Sub ANT)

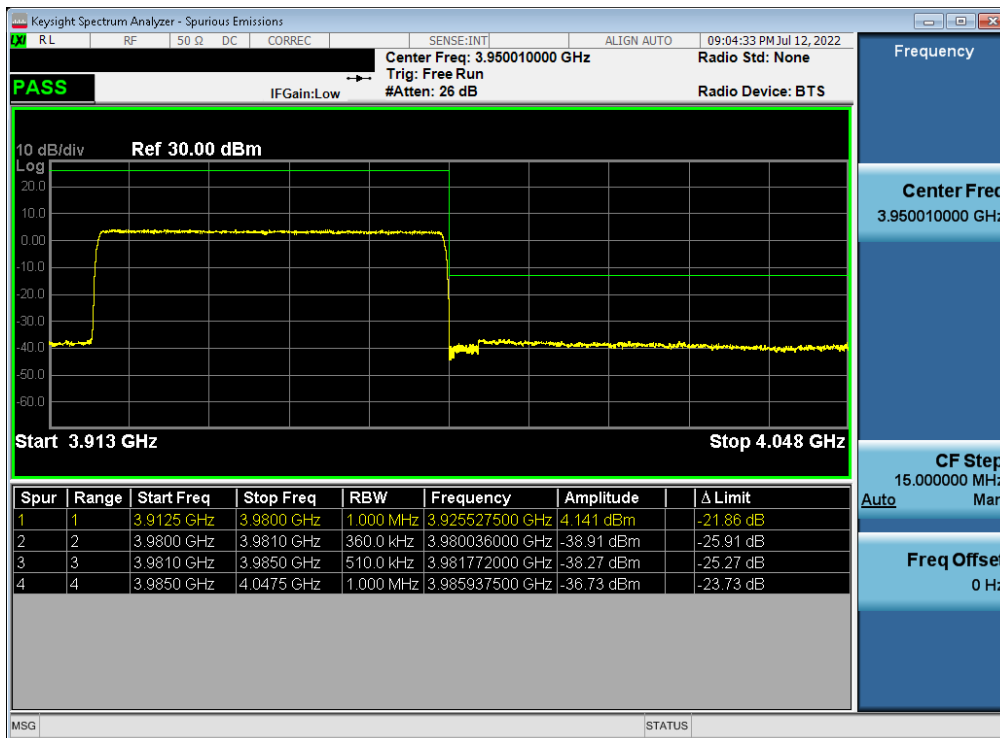


Plot 7-36. Upper ACP Plot (NR Band n77 - 80MHz CP-OFDM-QPSK – Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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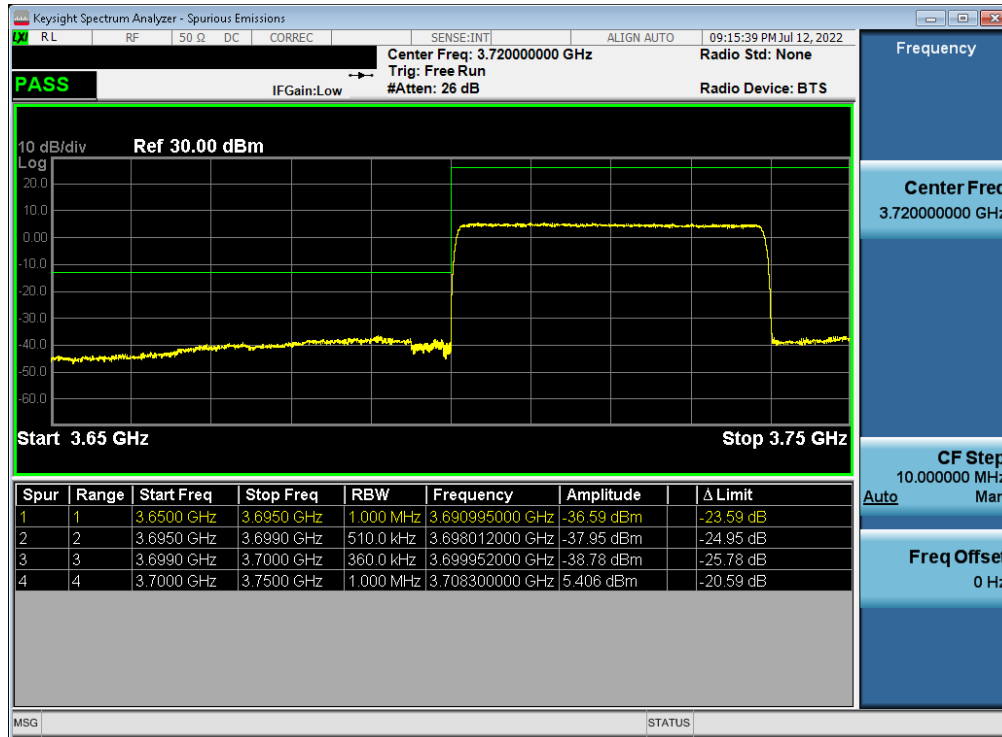


Plot 7-37. Lower ACP Plot (NR Band n77 - 60MHz CP-OFDM-QPSK – Full RB - Sub ANT)

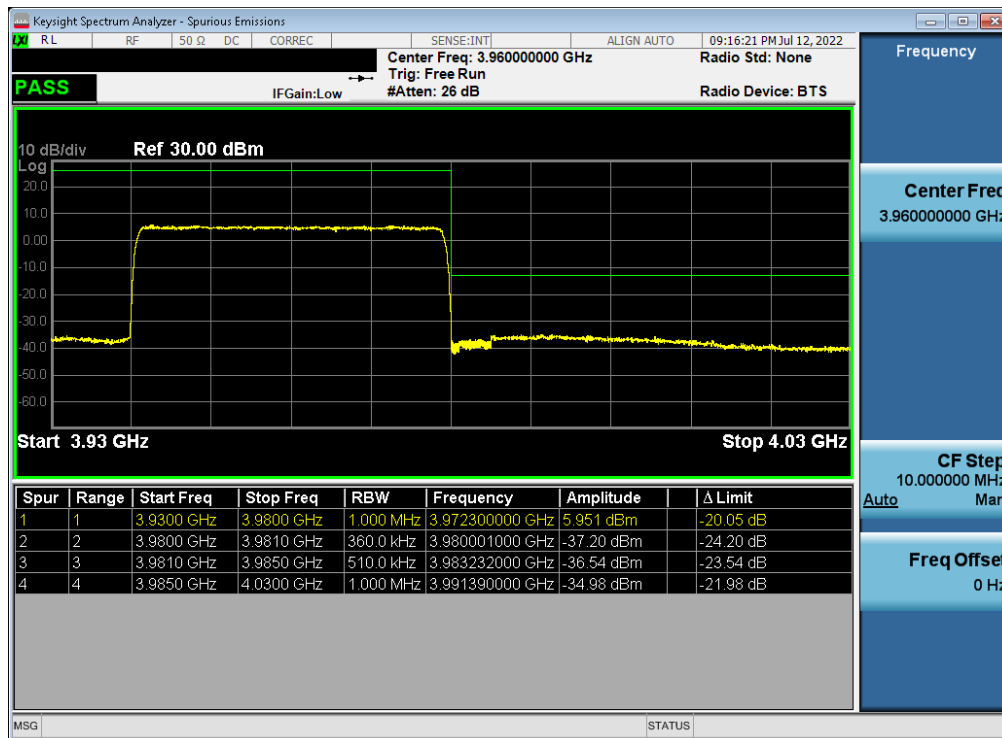


Plot 7-38. Upper ACP Plot (NR Band n77 - 60MHz CP-OFDM-QPSK – Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 37 of 63

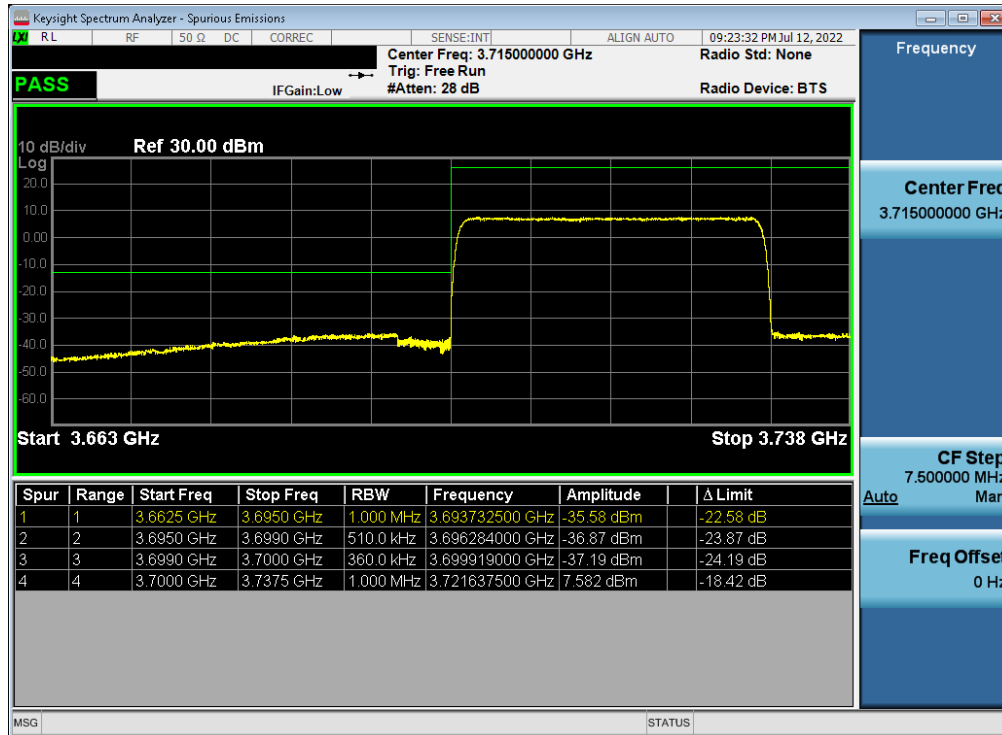


Plot 7-39. Lower ACP Plot (NR Band n77 - 40MHz CP-OFDM-QPSK – Full RB - Sub ANT)

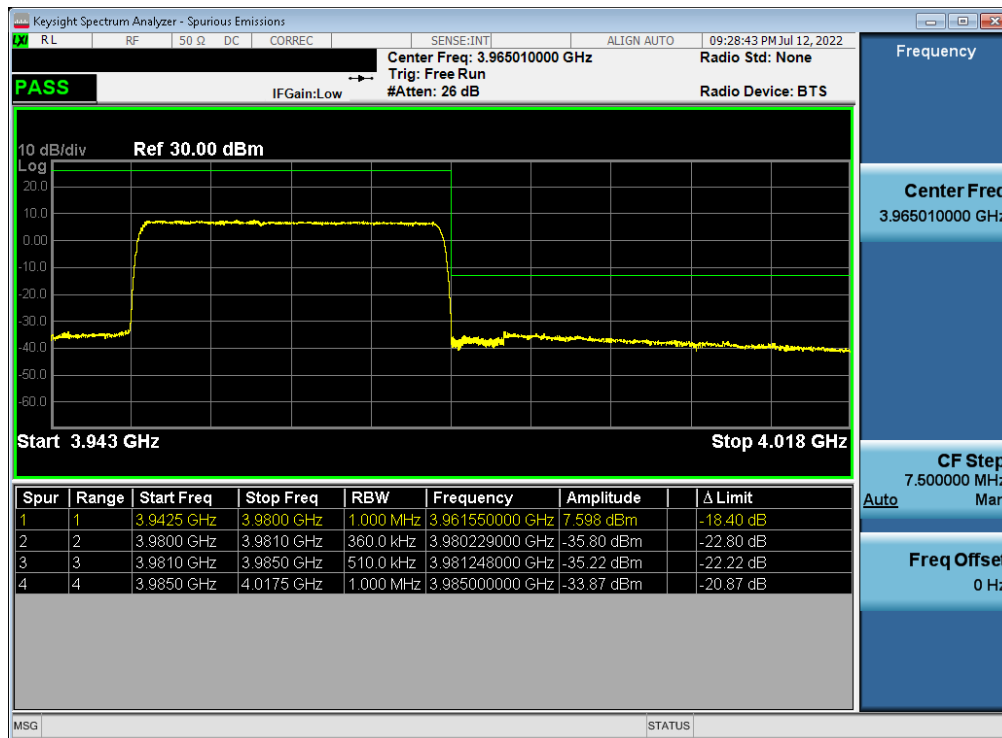


Plot 7-40. Upper ACP Plot (NR Band n77 - 40MHz CP-OFDM-QPSK – Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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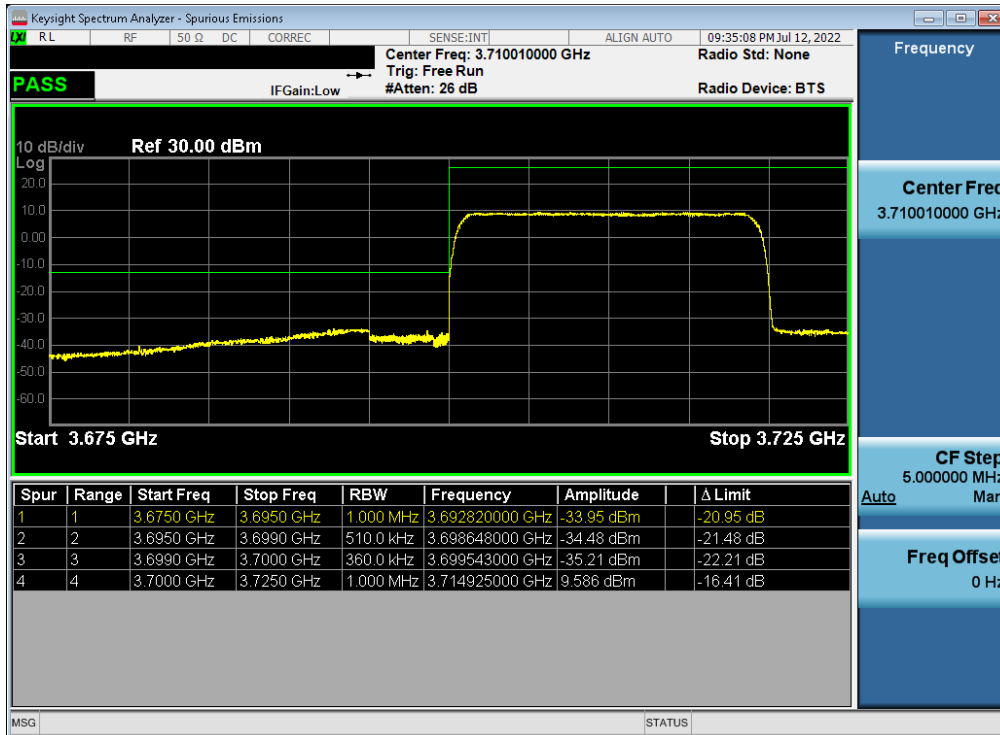


Plot 7-41. Lower ACP Plot (NR Band n77 - 30MHz CP-OFDM-QPSK – Full RB - Sub ANT)

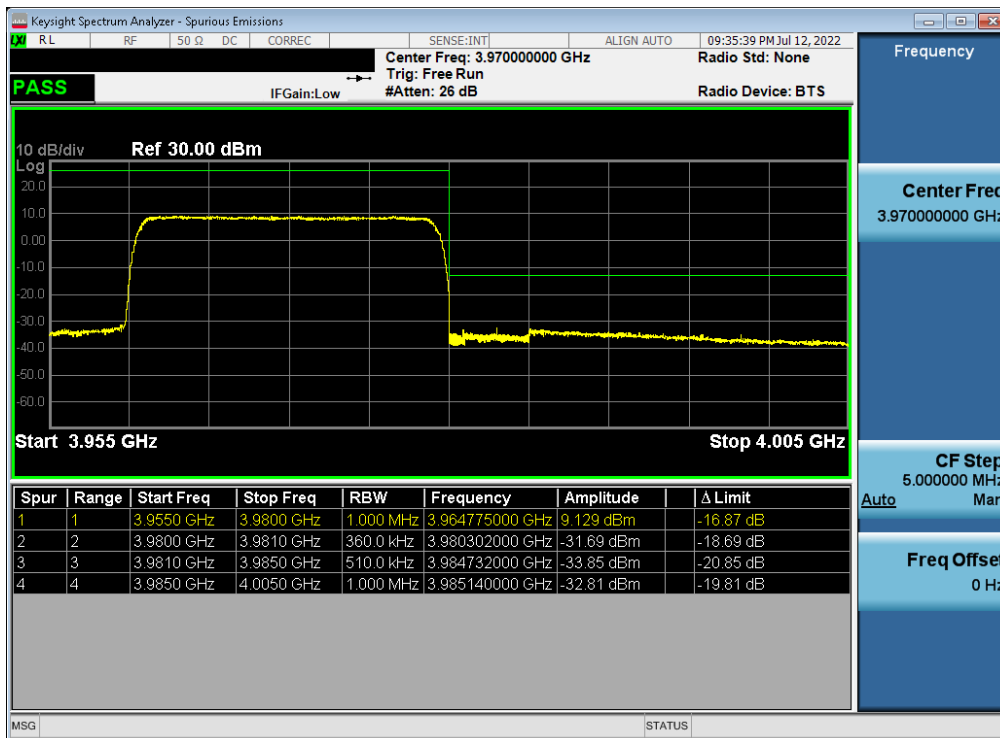


Plot 7-42. Upper ACP Plot (NR Band n77 - 30MHz CP-OFDM-QPSK – Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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Plot 7-43. Lower ACP Plot (NR Band n77 - 20MHz CP-OFDM-QPSK – Full RB - Sub ANT)



Plot 7-44. Upper ACP Plot (NR Band n77 - 20MHz CP-OFDM-QPSK – Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 40 of 63

7.5 Peak-Average Ratio

Test Overview

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

Test Procedure Used

ANSI C63.26-2015 – Section 5.2.3.4

Test Settings

1. The signal analyzer’s CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW \geq OBW or specified reference bandwidth
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal “RF Burst” trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the “on time” of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

Test Setup

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



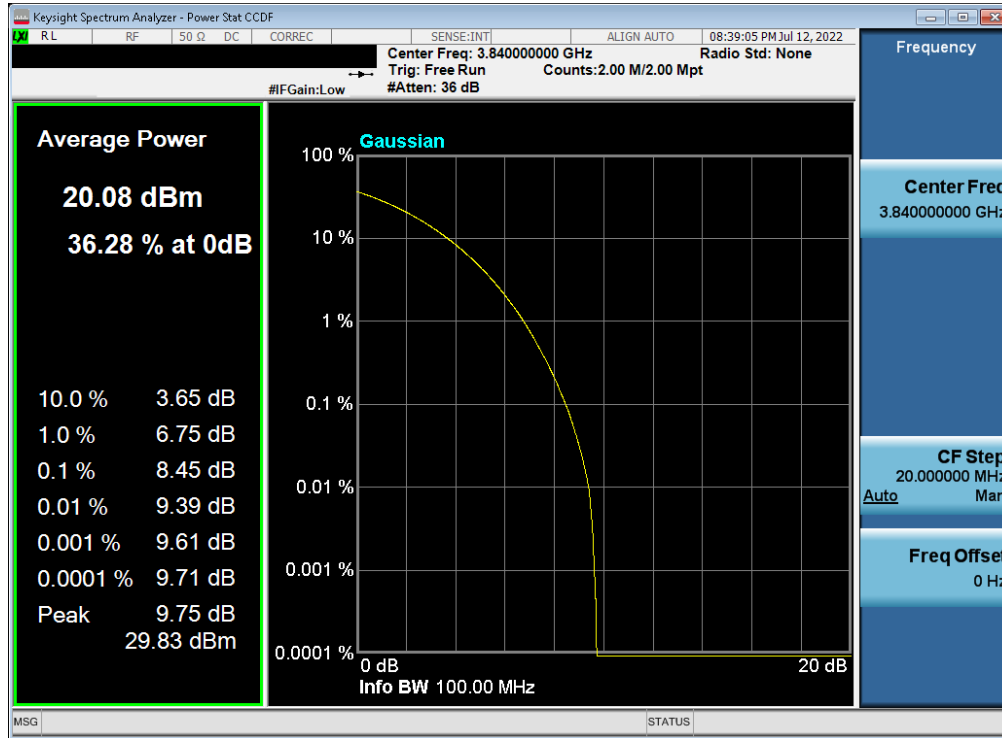
Figure 7-5. Test Instrument & Measurement Setup

Test Notes

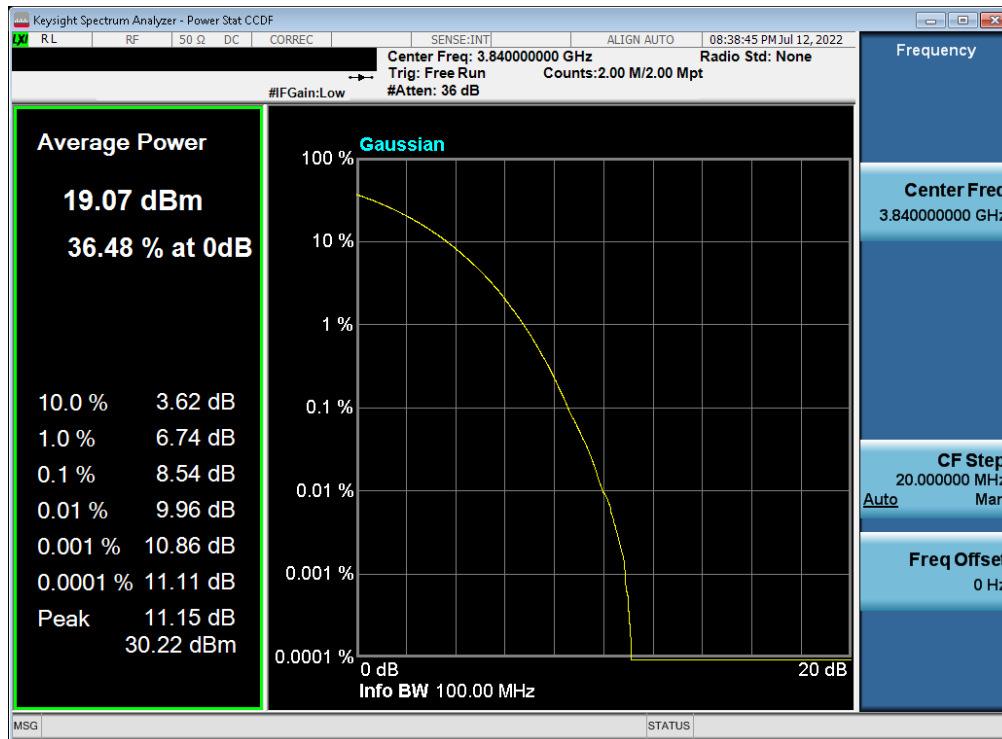
For this section, only the sub antenna peak-average ratio plots are in this report, the main antenna peak-average ratio plots are in the original filing report.

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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UL- MIMO NR Band n77 – Sub ANT

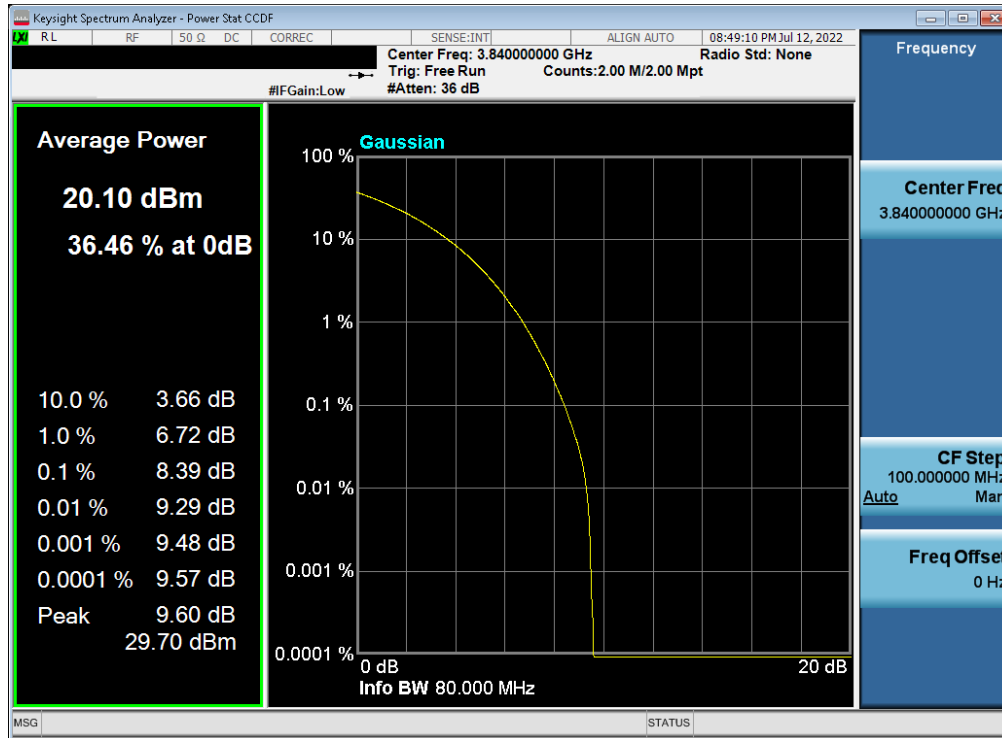


Plot 7-45. PAR Plot (NR Band n77 - 100MHz CP-OFDM QPSK - Full RB - Sub ANT)

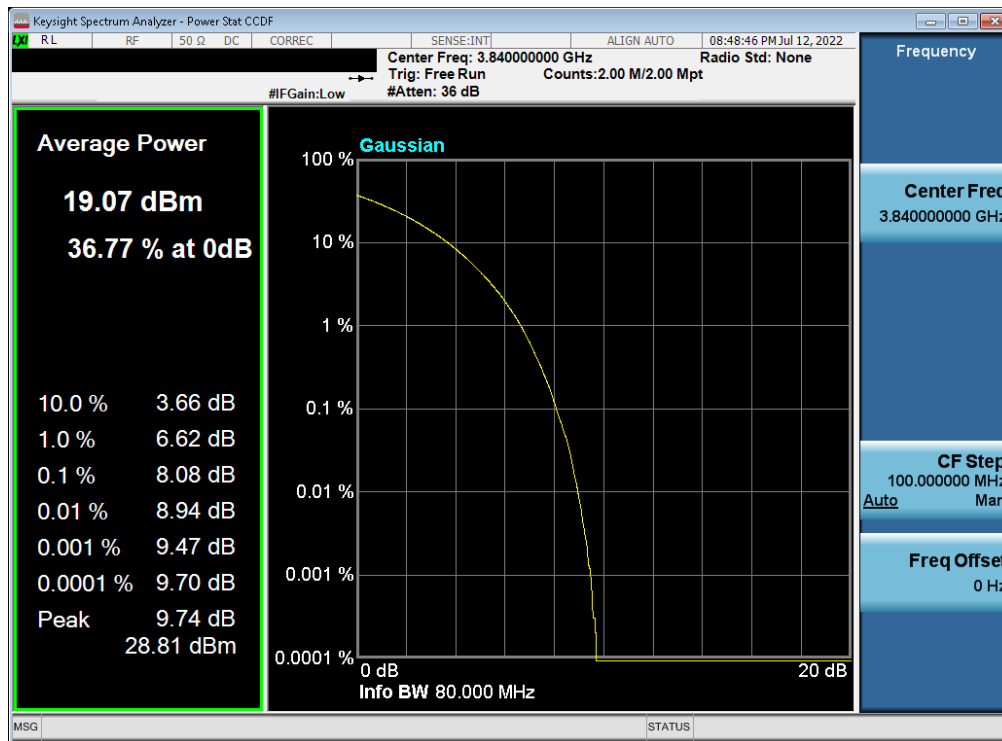


Plot 7-46. PAR Plot (NR Band n77 - 100MHz CP-OFDM 256-QAM - Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 42 of 63

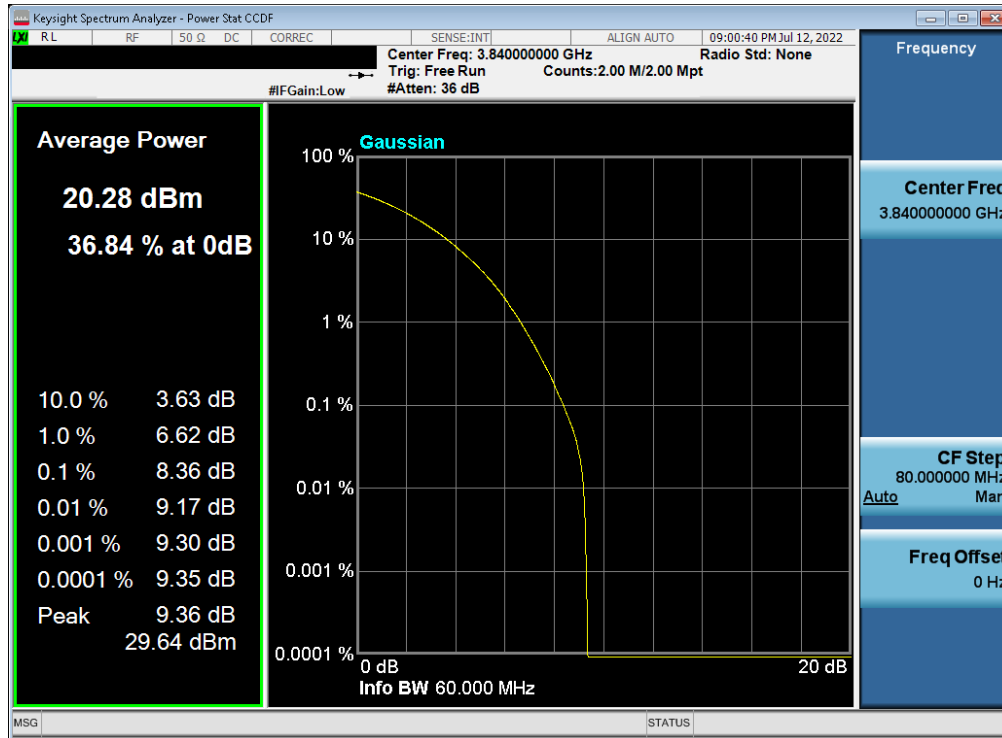


Plot 7-47. PAR Plot (NR Band n77 - 80MHz CP-OFDM QPSK - Full RB - Sub ANT)

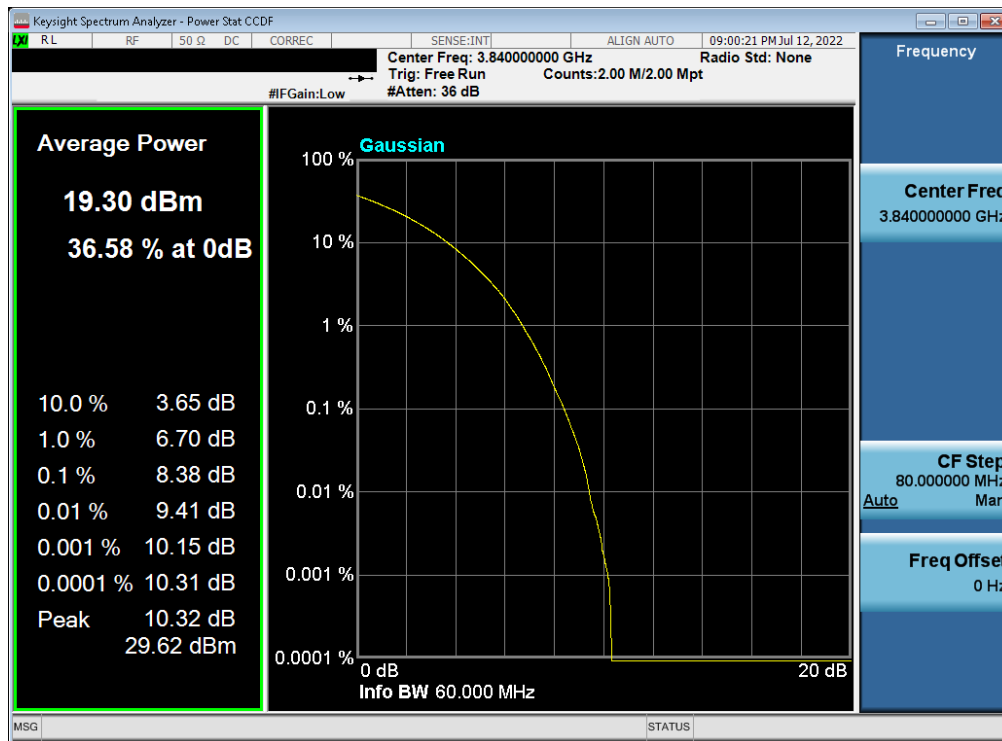


Plot 7-48. PAR Plot (NR Band n77 - 80MHz CP-OFDM 256-QAM - Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 43 of 63

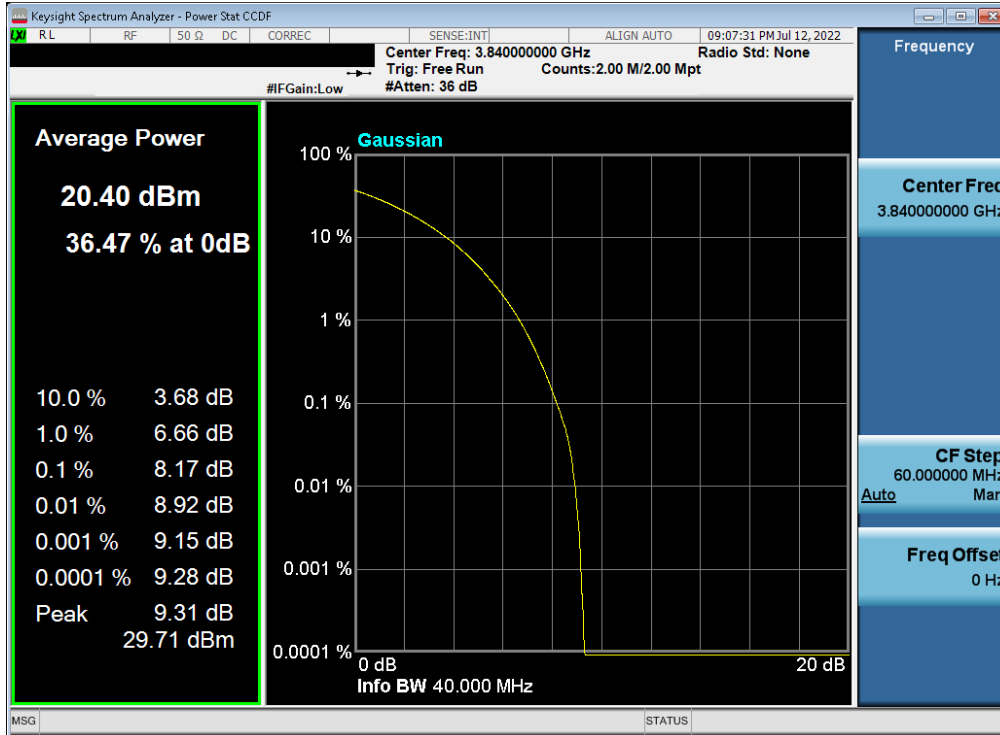


Plot 7-49. PAR Plot (NR Band n77 - 60MHz CP-OFDM QPSK - Full RB - Sub ANT)

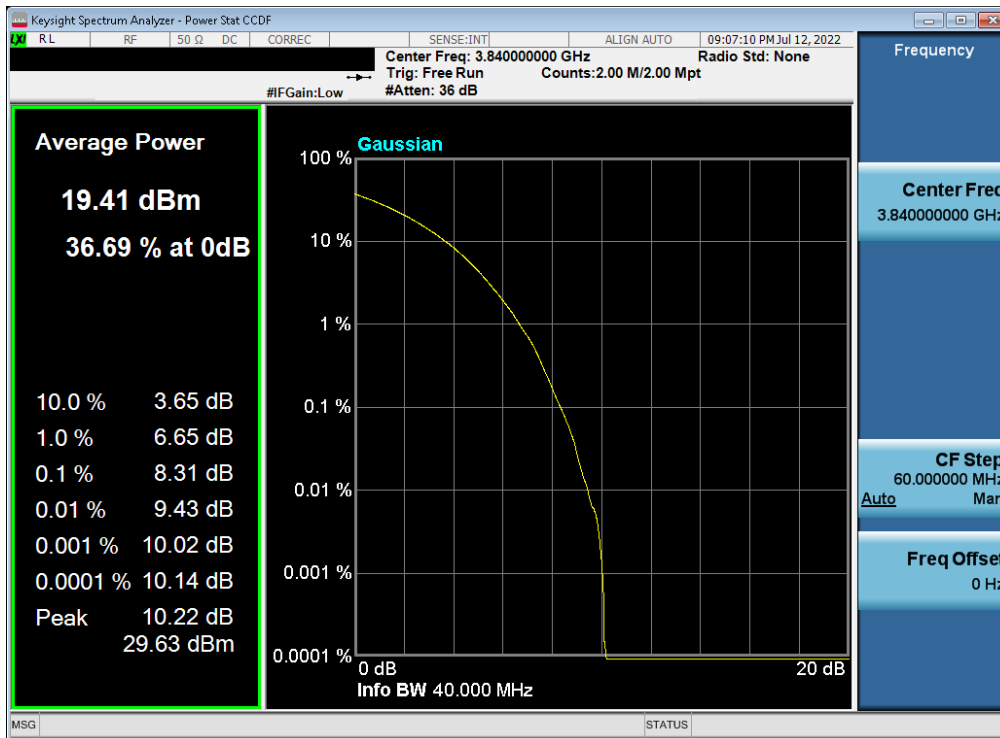


Plot 7-50. PAR Plot (NR Band n77 - 60MHz CP-OFDM 256-QAM - Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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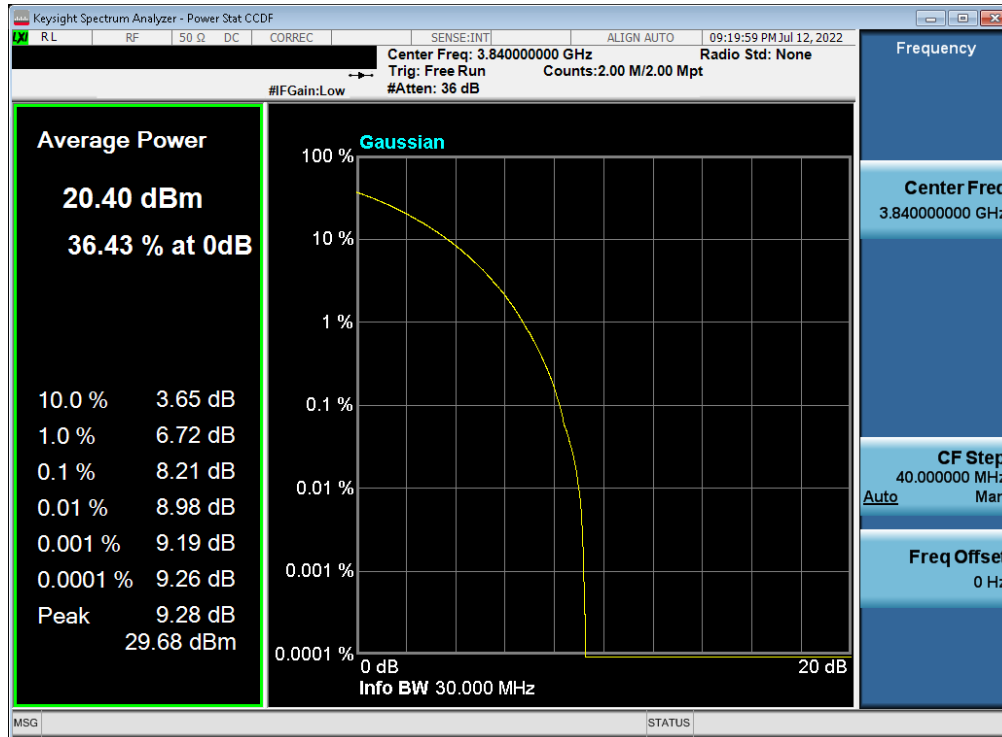


Plot 7-51. PAR Plot (NR Band n77 - 40MHz CP-OFDM QPSK - Full RB - Sub ANT)

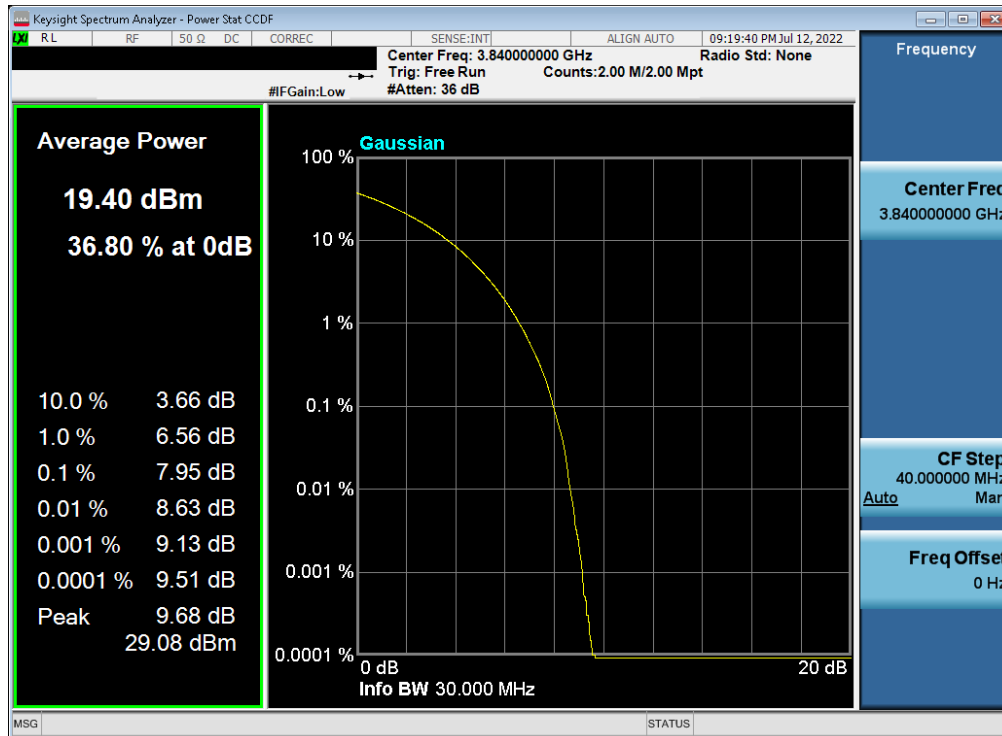


Plot 7-52. PAR Plot (NR Band n77 - 40MHz CP-OFDM 256-QAM - Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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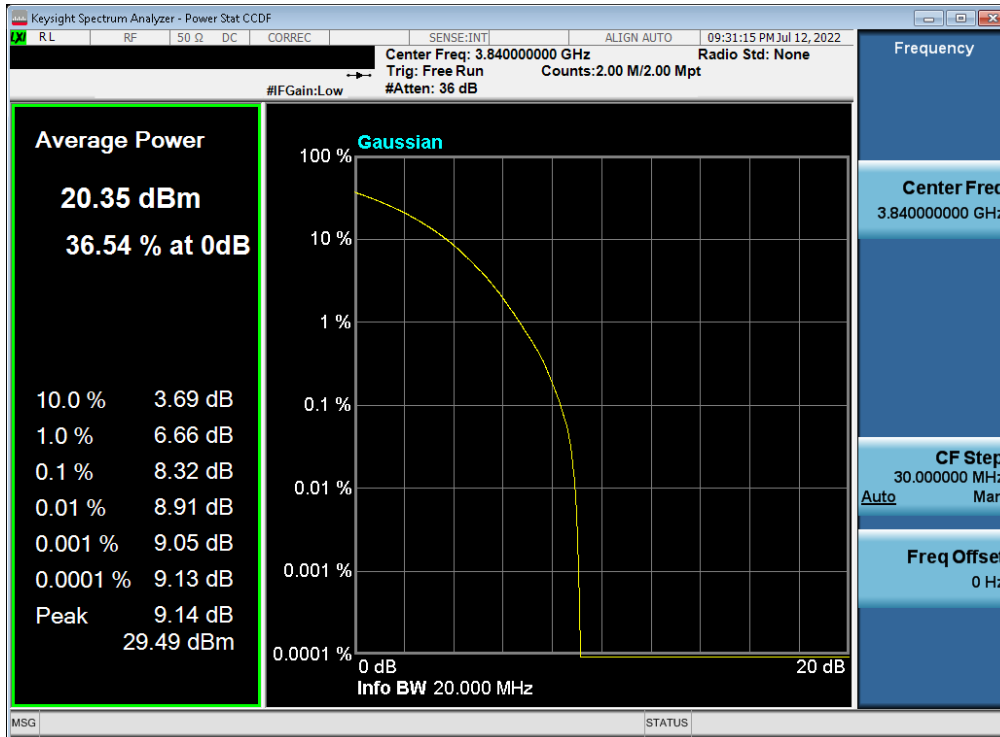


Plot 7-53. PAR Plot (NR Band n77 - 30MHz CP-OFDM QPSK - Full RB - Sub ANT)

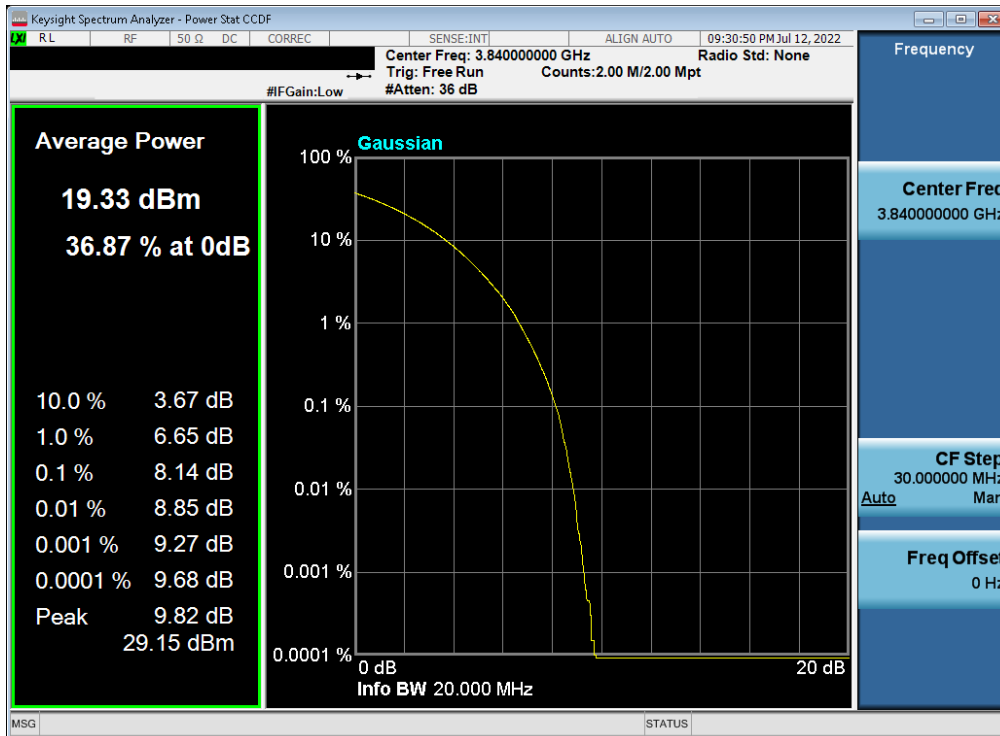


Plot 7-54. PAR Plot (NR Band n77 - 30MHz CP-OFDM 256-QAM - Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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Plot 7-55. PAR Plot (NR Band n77 - 20MHz CP-OFDM QPSK - Full RB - Sub ANT)



Plot 7-56. PAR Plot (NR Band n77 - 20MHz CP-OFDM 16-QAM - Full RB - Sub ANT)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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7.6 Radiated Power (EIRP)

Test Overview

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

Test Procedures Used

ANSI C63.26-2015 – Section 5.2.4.4

Test Settings

1. Radiated power measurements are performed using the signal analyzer’s “channel power” measurement capability for signals with continuous operation. For signals with burst transmission, the signal analyzer’s “time domain power” measurement capability is used
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW \geq 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points \geq 2 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.

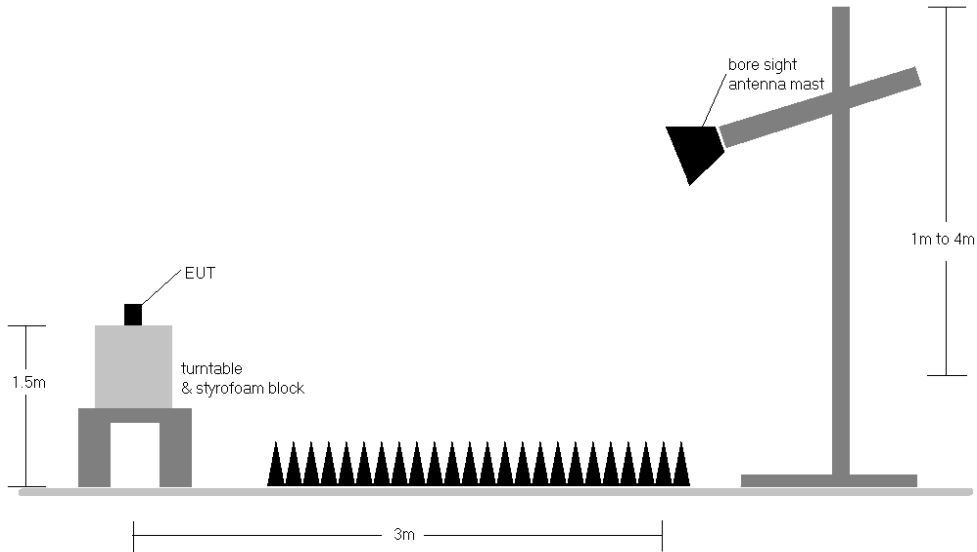


Figure 7-6. Radiated Test Setup >1GHz

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst-case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- 3) 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.
- 4) For radiated power (EIRP), UL-MIMO test cases have both the main and sub antenna transmitting simultaneously.

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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]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	π/2 BPSK	3750.00	H	117	319	5.98	1 / 68	12.15	18.13	0.065	30.00	-11.87
	π/2 BPSK	3840.00	H	127	315	6.02	1 / 68	11.13	17.15	0.052	30.00	-12.85
	π/2 BPSK	3930.00	H	114	314	5.99	1 / 68	12.35	18.34	0.068	30.00	-11.66
	QPSK	3750.00	H	117	319	5.98	1 / 68	12.23	18.21	0.066	30.00	-11.79
	QPSK	3840.00	H	127	315	6.02	1 / 68	11.22	17.24	0.053	30.00	-12.76
	QPSK	3930.00	H	114	314	5.99	1 / 68	11.97	17.96	0.062	30.00	-12.04
80 MHz	16-QAM	3930.00	H	114	314	5.99	1 / 68	11.72	17.71	0.059	30.00	-12.29
	π/2 BPSK	3740.01	H	117	319	5.99	1 / 162	12.04	18.04	0.064	30.00	-11.96
	π/2 BPSK	3840.00	H	127	315	6.02	1 / 54	11.14	17.16	0.052	30.00	-12.84
	π/2 BPSK	3939.99	H	114	314	6.04	1 / 108	12.47	18.51	0.071	30.00	-11.49
	QPSK	3740.01	H	117	319	5.99	1 / 162	12.13	18.12	0.065	30.00	-11.88
	QPSK	3840.00	H	127	315	6.02	1 / 54	11.04	17.06	0.051	30.00	-12.94
60 MHz	QPSK	3939.99	H	114	314	6.04	1 / 108	12.13	18.17	0.066	30.00	-11.83
	16-QAM	3939.99	H	114	314	6.04	1 / 108	11.75	17.80	0.060	30.00	-12.20
	π/2 BPSK	3730.02	H	117	319	6.00	1 / 40	12.21	18.21	0.066	30.00	-11.79
	π/2 BPSK	3840.00	H	127	315	6.02	1 / 40	11.38	17.40	0.055	30.00	-12.60
	π/2 BPSK	3949.98	H	114	314	6.10	1 / 40	12.38	18.49	0.071	30.00	-11.51
	QPSK	3730.02	H	117	319	6.00	1 / 40	12.25	18.25	0.067	30.00	-11.75
40 MHz	QPSK	3840.00	H	127	315	6.02	1 / 40	11.28	17.30	0.054	30.00	-12.70
	QPSK	3949.98	H	114	314	6.10	1 / 40	11.98	18.08	0.064	30.00	-11.92
	16-QAM	3949.98	H	114	314	6.10	1 / 40	11.85	17.95	0.062	30.00	-12.05
	π/2 BPSK	3720.00	H	117	319	6.01	1 / 79	12.44	18.45	0.070	30.00	-11.55
	π/2 BPSK	3840.00	H	127	315	6.02	1 / 26	11.55	17.57	0.057	30.00	-12.43
	π/2 BPSK	3960.00	H	114	314	6.15	1 / 79	12.38	18.53	0.071	30.00	-11.47
30 MHz	QPSK	3720.00	H	117	319	6.01	1 / 79	12.49	18.51	0.071	30.00	-11.49
	QPSK	3840.00	H	127	315	6.02	1 / 26	11.39	17.40	0.055	30.00	-12.60
	QPSK	3960.00	H	114	314	6.15	1 / 79	11.98	18.14	0.065	30.00	-11.86
	16-QAM	3960.00	H	114	314	6.15	1 / 79	11.78	17.93	0.062	30.00	-12.07
	π/2 BPSK	3715.02	H	117	319	6.02	1 / 58	12.41	18.43	0.070	30.00	-11.57
	π/2 BPSK	3840.00	H	127	315	6.02	1 / 19	11.54	17.56	0.057	30.00	-12.44
20 MHz	π/2 BPSK	3964.98	H	114	314	6.18	1 / 58	12.35	18.53	0.071	30.00	-11.47
	QPSK	3715.02	H	117	319	6.02	1 / 58	12.59	18.61	0.073	30.00	-11.39
	QPSK	3840.00	H	127	315	6.02	1 / 19	11.50	17.52	0.056	30.00	-12.48
	QPSK	3964.98	H	114	314	6.18	1 / 58	11.96	18.14	0.065	30.00	-11.86
	16-QAM	3964.98	H	114	314	6.18	1 / 58	11.76	17.93	0.062	30.00	-12.07
	π/2 BPSK	3710.01	H	117	319	6.03	1 / 37	12.38	18.40	0.069	30.00	-11.60
100 MHz	π/2 BPSK	3840.00	H	127	315	6.02	1 / 13	11.53	17.55	0.057	30.00	-12.45
	π/2 BPSK	3969.99	H	114	314	6.20	1 / 13	12.33	18.53	0.071	30.00	-11.47
	QPSK	3710.01	H	117	319	6.03	1 / 37	12.46	18.48	0.070	30.00	-11.52
	QPSK	3840.00	H	127	315	6.02	1 / 13	11.39	17.41	0.055	30.00	-12.59
	QPSK	3969.99	H	114	314	6.20	1 / 13	11.81	18.01	0.063	30.00	-11.99
	16-QAM	3969.99	H	114	314	6.20	1 / 13	11.52	17.72	0.059	30.00	-12.28
100 MHz	QPSK (CP-OFDM)	3930.0	H	114	314	5.99	1/68	11.81	17.80	0.060	30.00	-12.20
	QPSK (Opposite Pol.)	3930.0	V	352	367	6.49	1/68	9.79	16.28	0.043	30.00	-13.72
	QPSK (WCP)	3930.0	H	108	210	5.99	1/136	7.68	13.67	0.023	30.00	-16.33

Table 7-3. EIRP Data (NR Band n77 -Main Antenna)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		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]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
100 MHz	QPSK	3750.00	V	192	19	6.83	1 / 136	0.38	7.21	0.005	30.00	-22.79
	QPSK	3840.00	V	203	4	6.47	1 / 204	3.75	10.22	0.011	30.00	-19.78
	QPSK	3930.00	V	185	18	6.49	1 / 68	3.55	10.04	0.010	30.00	-19.96
	16-QAM	3930.00	V	185	18	6.49	1 / 68	2.37	8.86	0.008	30.00	-21.14
	QPSK	3740.01	V	192	19	6.78	1 / 54	0.47	7.25	0.005	30.00	-22.75
	QPSK	3840.00	V	203	4	6.47	1 / 54	3.85	10.32	0.011	30.00	-19.68
	QPSK	3939.99	V	185	18	6.48	1 / 54	4.06	10.53	0.011	30.00	-19.47
	16-QAM	3840.00	V	203	4	6.47	1 / 54	2.55	9.02	0.008	30.00	-20.98
	QPSK	3730.02	V	192	19	6.73	1 / 40	0.73	7.46	0.006	30.00	-22.54
	QPSK	3840.00	V	203	4	6.47	1 / 40	3.89	10.36	0.011	30.00	-19.64
	QPSK	3949.98	V	185	18	6.46	1 / 40	4.36	10.81	0.012	30.00	-19.19
	16-QAM	3840.00	V	203	4	6.47	1 / 40	2.66	9.13	0.008	30.00	-20.87
	QPSK	3720.00	V	192	19	6.68	1 / 26	0.75	7.43	0.006	30.00	-22.57
	QPSK	3840.00	V	203	4	6.47	1 / 26	3.88	10.35	0.011	30.00	-19.65
	QPSK	3960.00	V	185	18	6.41	1 / 26	4.31	10.72	0.012	30.00	-19.28
	16-QAM	3960.00	V	185	18	6.41	1 / 26	2.73	9.14	0.008	30.00	-20.86
	QPSK	3715.02	V	192	19	6.66	1 / 39	0.77	7.42	0.006	30.00	-22.58
	QPSK	3840.00	V	203	4	6.47	1 / 19	4.07	10.54	0.011	30.00	-19.46
	QPSK	3964.98	V	185	18	6.39	1 / 39	4.36	10.75	0.012	30.00	-19.25
	16-QAM	3840.00	V	203	4	6.47	1 / 19	2.63	9.10	0.008	30.00	-20.90
QPSK	3710.01	V	192	19	6.63	1 / 37	0.90	7.53	0.006	30.00	-22.47	
QPSK	3840.00	V	203	4	6.47	1 / 25	4.04	10.51	0.011	30.00	-19.49	
QPSK	3969.99	V	185	18	6.37	1 / 25	4.38	10.75	0.012	30.00	-19.25	
16-QAM	3840.00	V	203	4	6.47	1 / 25	2.64	9.11	0.008	30.00	-20.89	
QPSK (Opposite Pol.)	3840.0	H	307	333	6.02	1/204	3.22	9.24	0.008	30.00	-20.76	
QPSK (WCP)	3840.0	V	126	318	6.47	1/136	0.64	7.11	0.005	30.00	-22.89	

Table 7-4. EIRP Data (UL-MIMO NR Band n77 (PC3))

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7.7 Radiated Spurious Emissions Measurements

Test Overview

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

Test Procedures Used

ANSI C63.26-2015 – Section 5.5.4

Test Settings

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

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Test Setup

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

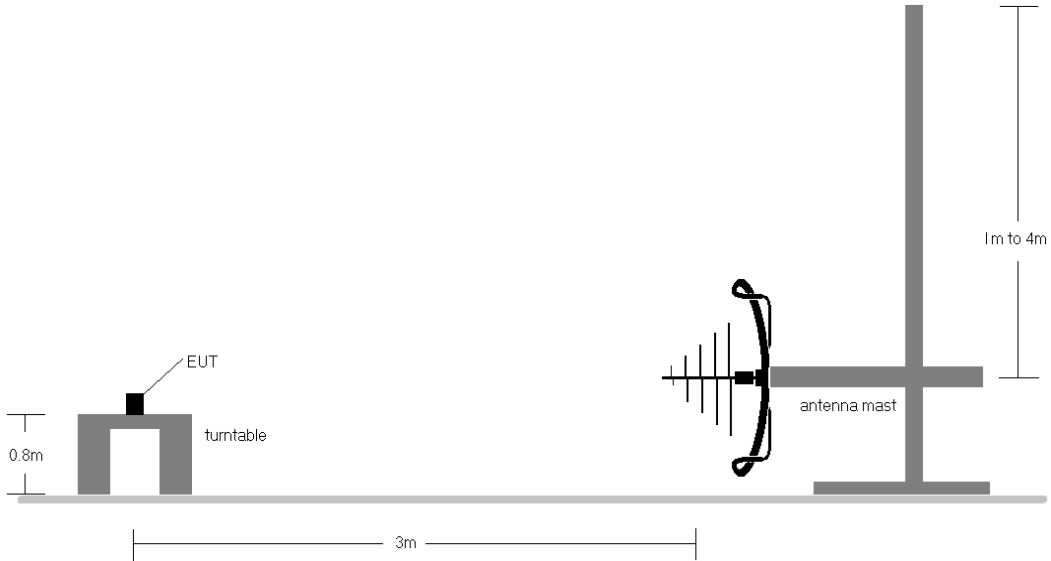


Figure 7-7. Test Instrument & Measurement Setup < 1GHz

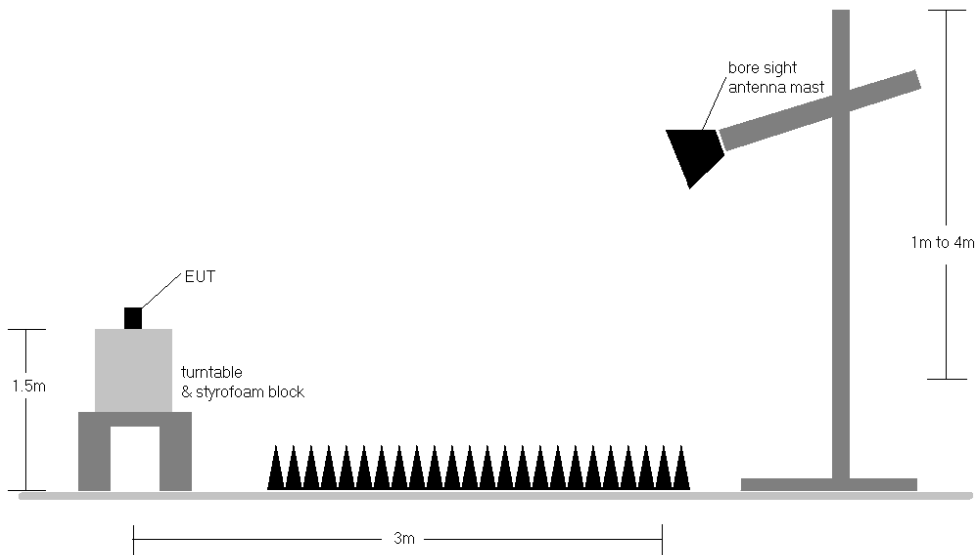


Figure 7-8. Test Instrument & Measurement Setup >1 GHz

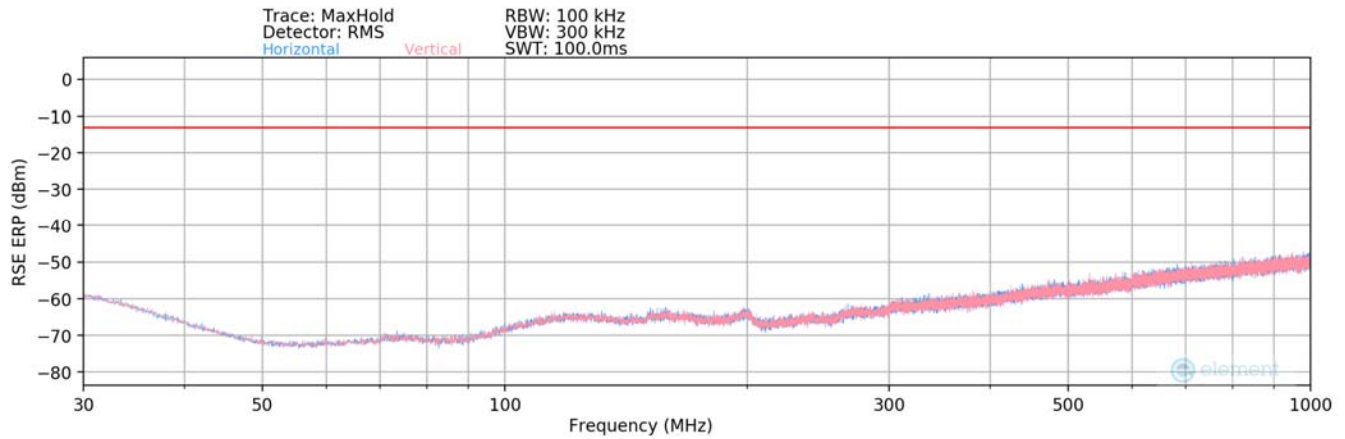
FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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Test Notes

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

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NR Band n77 – Main Antenna



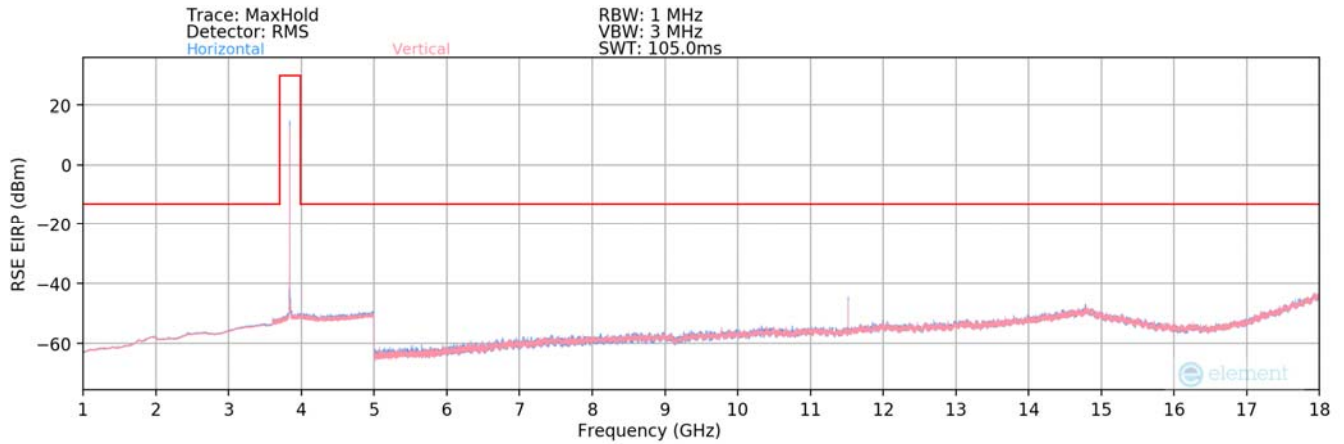
Plot 7-57. Radiated Spurious Plot 30MHz-1GHz (NR Band n77)

Bandwidth (MHz):	100
Frequency (MHz):	3840.00
RB / Offset:	1/136
Mode:	Stand Alone

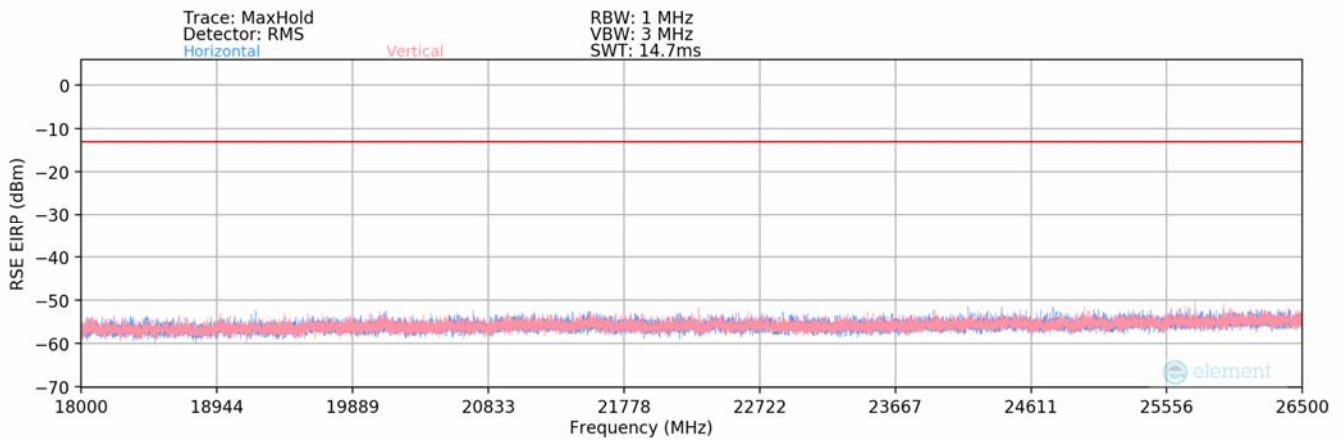
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
346.00	H	-	-	-86.58	21.99	42.41	-55.00	-13.00	-42.00

Table 7-5. Radiated Spurious Data (NR Band n77)

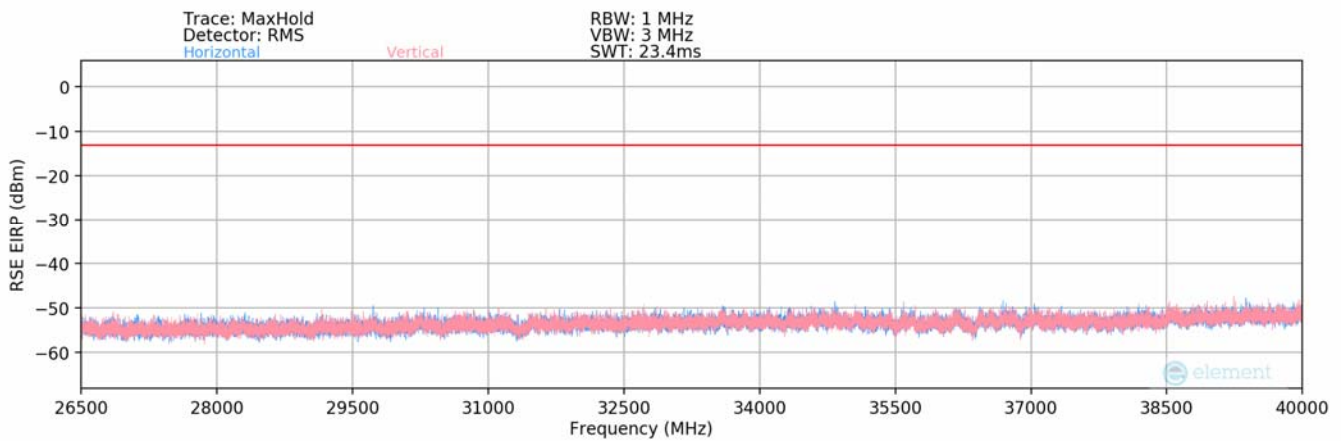
FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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Plot 7-58. Radiated Spurious Plot 1-18GHz (NR Band n77)



Plot 7-59. Radiated Spurious Plot 18-26.5GHz (NR Band n77)



Plot 7-60. Radiated Spurious Plot 26.5-40GHz (NR Band n77)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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Bandwidth (MHz):	100
Frequency (MHz):	3750.00
RB / Offset:	1/136
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]
7500.00	H	-	-	-78.19	7.36	36.17	-59.08	-13.00	-46.08
11250.00	H	182	13	-74.42	10.74	43.32	-51.94	-13.00	-38.94
15000.00	H	-	-	-78.81	15.25	43.44	-51.82	-13.00	-38.82
18750.00	H	-	-	-58.50	2.01	50.52	-54.28	-13.00	-41.28
22500.00	H	-	-	-59.74	3.72	50.99	-53.81	-13.00	-40.81

Table 7-6. Radiated Spurious Data (NR Band n77 – Low Channel)

Bandwidth (MHz):	100
Frequency (MHz):	3840.00
RB / Offset:	1/136
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]
7680.00	H	-	-	-76.46	6.75	37.29	-57.96	-13.00	-44.96
11520.00	H	161	27	-67.42	11.27	50.85	-44.41	-13.00	-31.41
15360.00	H	107	341	-76.56	13.96	44.40	-50.86	-13.00	-37.86
19200.00	H	-	-	-58.37	2.53	51.16	-53.64	-13.00	-40.64
23040.00	H	-	-	-59.26	3.73	51.47	-53.33	-13.00	-40.33
26880.00	H	-	-	-58.49	5.05	53.55	-51.25	-13.00	-38.25

Table 7-7. Radiated Spurious Data (NR Band n77 – Mid Channel)

Bandwidth (MHz):	100
Frequency (MHz):	3930.00
RB / Offset:	1/136
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]
7860.00	H	-	-	-79.18	7.18	35.00	-60.25	-13.00	-47.25
11790.00	H	237	15	-70.29	12.04	48.75	-46.51	-13.00	-33.51
15720.00	H	119	340	-76.42	11.67	42.25	-53.01	-13.00	-40.01
19650.00	H	-	-	-59.69	2.89	50.20	-54.60	-13.00	-41.60
23580.00	H	-	-	-59.12	3.80	51.69	-53.11	-13.00	-40.11
27510.00	H	-	-	-59.67	5.06	52.39	-52.41	-13.00	-39.41

Table 7-8. Radiated Spurious Data (NR Band n77 – High Channel)

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Case:	w/ Wireless Charging Pad
Bandwidth (MHz):	100
Frequency (MHz):	3840.0
RB / Offset:	1/136
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]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7680.00	V	-	-	-78.24	6.75	35.51	-59.74	-13.00	-46.74
11520.00	V	280	336	-75.86	11.27	42.41	-52.85	-13.00	-39.85
15360.00	V	-	-	-79.02	13.96	41.94	-53.32	-13.00	-40.32
19200.00	V	-	-	-58.31	2.53	51.22	-53.58	-13.00	-40.58
23040.00	V	-	-	-59.41	3.73	51.31	-53.49	-13.00	-40.49

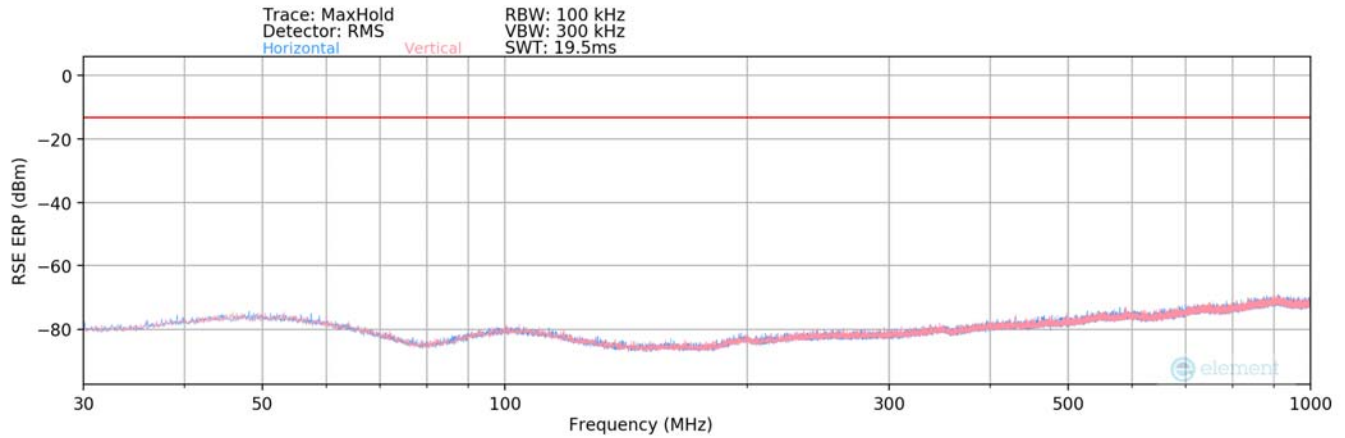
Table 7-9. Radiated Spurious Data with WCP (NR Band n77)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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UL-MIMO NR Band n77 (PC3)



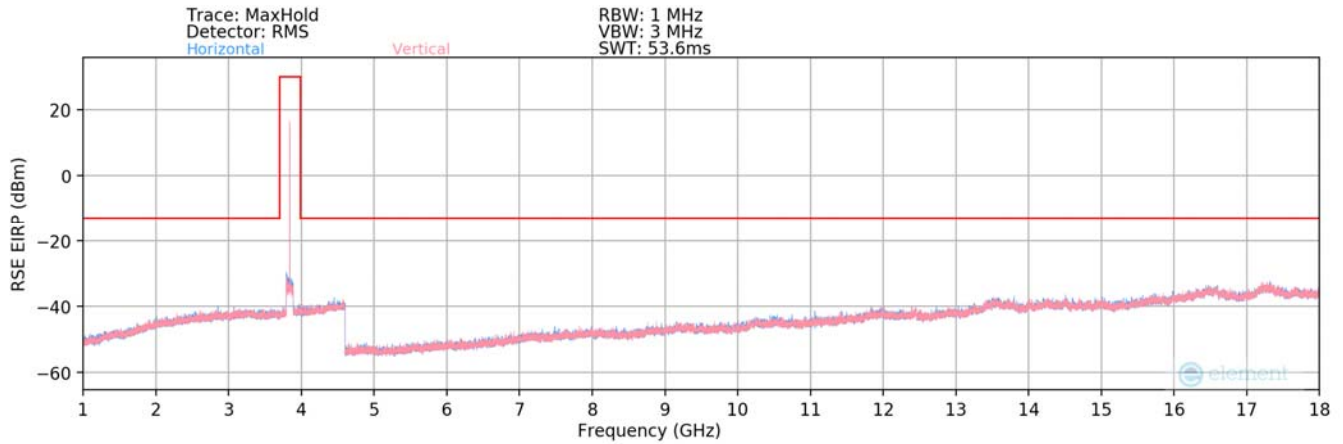
Plot 7-61. Radiated Spurious Plot 30MHz-1GHz (UL-MIMO NR Band n77)

Bandwidth (MHz):	100
Frequency (MHz):	3840.00
RB / Offset:	1/136
Mode:	UL-MIMO

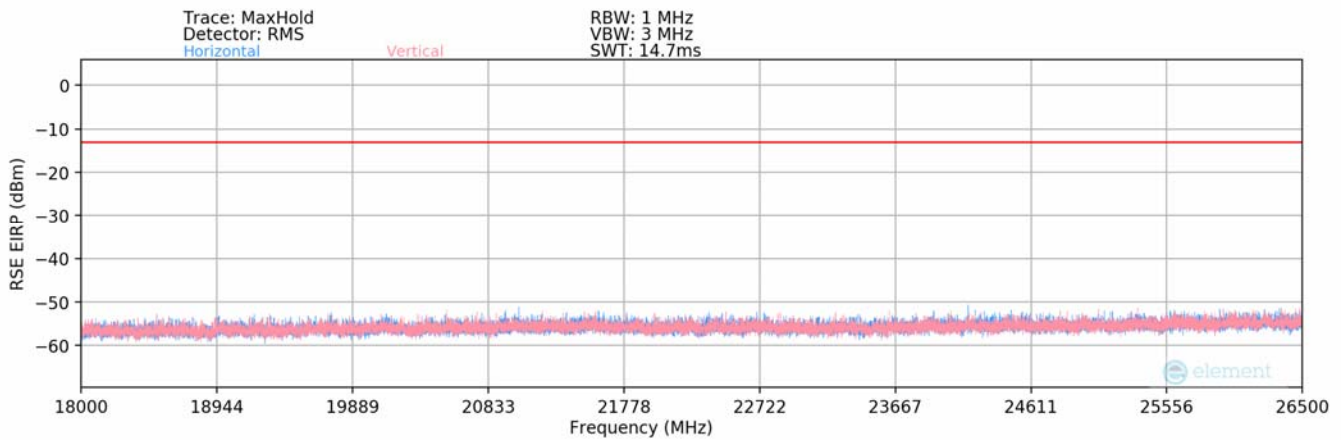
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
592.00	H	-	-	-74.04	-7.71	25.25	-72.16	-13.00	-59.16

Table 7-10. Radiated Spurious Data (UL-MIMO NR Band n77)

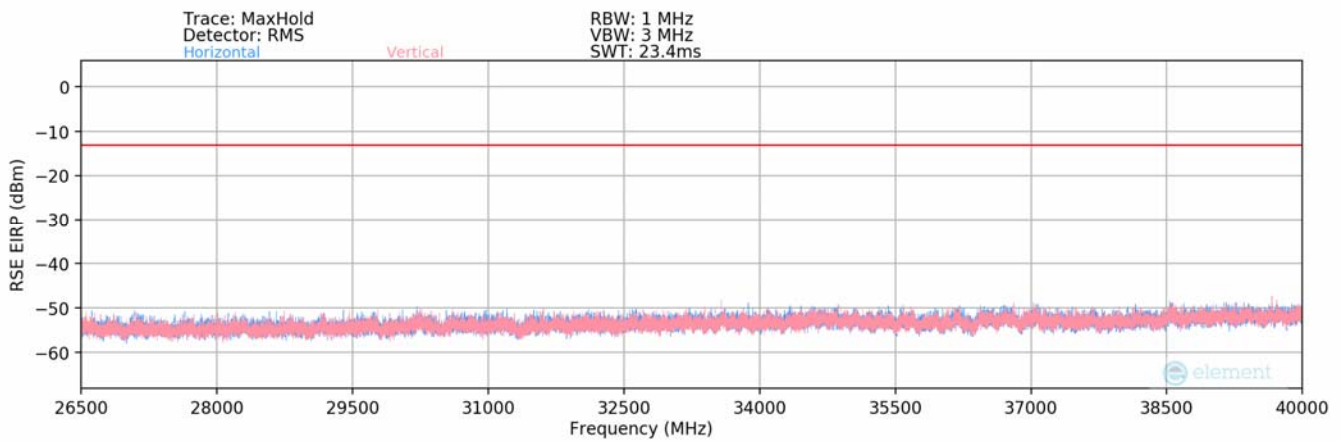
FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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Plot 7-62. Radiated Spurious Plot 1-18GHz (UL-MIMO NR Band n77)



Plot 7-63. Radiated Spurious Plot 18-26.5GHz (UL-MIMO NR Band n77)



Plot 7-64. Radiated Spurious Plot 26.5-40GHz (UL-MIMO NR Band n77)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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Bandwidth (MHz):	100
Frequency (MHz):	3750.00
RB / Offset:	1/136
Mode:	UL-MIMO

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]
7500.00	H	-	-	-74.26	16.54	49.28	-45.97	-13.00	-32.97
11250.00	H	-	-	-76.14	21.70	52.56	-42.70	-13.00	-29.70
15000.00	H	-	-	-77.58	27.57	56.99	-38.27	-13.00	-25.27

Table 7-11. Radiated Spurious Data (UL-MIMO NR Band n77 – Low Channel)

Bandwidth (MHz):	100
Frequency (MHz):	3840.00
RB / Offset:	1/136
Mode:	UL-MIMO

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]
7680.00	H	-	-	-73.97	16.62	49.65	-45.61	-13.00	-32.61
11520.00	H	-	-	-76.96	22.99	53.03	-42.23	-13.00	-29.23
15360.00	H	-	-	-77.51	28.11	57.60	-37.66	-13.00	-24.66

Table 7-12. Radiated Spurious Data (UL-MIMO NR Band n77 – Mid Channel)

Bandwidth (MHz):	100
Frequency (MHz):	3930.00
RB / Offset:	1/136
Mode:	UL-MIMO

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]
7860.00	H	-	-	-74.23	16.65	49.42	-45.83	-13.00	-32.83
11790.00	H	-	-	-74.97	22.24	54.27	-40.98	-13.00	-27.98
15720.00	H	-	-	-77.20	29.47	59.27	-35.99	-13.00	-22.99

Table 7-13. Radiated Spurious Data (UL-MIMO NR Band n77 – High Channel)

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Case:	w/ Wireless Charging Pad
Bandwidth (MHz):	100
Frequency (MHz):	3840.00
RB / Offset:	1/136
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]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7680.00	H	-	-	-74.35	16.62	49.27	-45.99	-13.00	-32.99
11520.00	H	-	-	-76.15	22.99	53.84	-41.42	-13.00	-28.42
15360.00	H	-	-	-77.66	28.11	57.45	-37.81	-13.00	-24.81

Table 7-14. Radiated Spurious Data with WCP (UL-MIMO NR Band n77)

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **SONY Portable Handset FCC ID: PY7-57325M** complies with all the requirements of Part 27 of the FCC rules.

FCC ID: PY7-57325M	PART 27 MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Approved by: Technical Manager
Test Report S/N: 1M2206010068-02-R1.PY7	Test Dates: 05/05/2022 - 07/12/2022	EUT Type: Portable Handset	Page 63 of 63