

ELEMENT WASHINGTON DC LLC

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PART 27 MEASUREMENT REPORT

Applicant Name:

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

Date of Testing:

6/2/2022 - 8/10/2022 **Test Report Issue Date:** 8/10/2022 **Test Site/Location:** Element Lab., Columbia, MD, USA **Test Report Serial No.:** 1M2205240063-06.PY7

FCC ID:

PY7-76056F

APPLICANT:

Sony Corporation

Application Type: EUT Type: FCC Classification: FCC Rule Part: Test Procedure(s): Certification Portable Handset PCS Licensed Transmitter Held to Ear (PCE) 27 ANSI C63.26-2015, KDB 648474 D03 v01r04

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

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

RJ Ortanez Executive Vice President



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				E	RP	El	RP	
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	Max. Power [W]	Max. Power [dBm]	Max. Power [W]	Max. Power [dBm]	Emission Designator
20 MHz	20 MH-	QPSK	673.0 - 688.0	0.020	13.12	0.034	15.27	18M0G7D
		16QAM	673.0 - 688.0	0.019	12.75	0.031	14.90	18M0W7D
	15 MHz	QPSK	670.5 - 690.5	0.020	12.97	0.033	15.12	13M5G7D
LTE Band 71		16QAM	670.5 - 690.5	0.019	12.69	0.031	14.84	13M5W7D
LIE Dariu / I	10 MHz	QPSK	668.0 - 693.0	0.022	13.44	0.036	15.59	9M01G7D
	TUIVIHZ	16QAM	668.0 - 693.0	0.019	12.89	0.032	15.04	9M00W7D
		QPSK	665.5 - 695.5	0.022	13.35	0.036	15.50	4M53G7D
	5 MHz	16QAM	665.5 - 695.5	0.021	13.21	0.034	15.36	4M55W7D
10 MI I=	QPSK	704.0 - 711.0	0.032	15.10	0.053	17.25	9M06G7D	
	10 MHz	16QAM	704.0 - 711.0	0.028	14.39	0.045	16.54	9M03W7D
	C 1 4 1	QPSK	701.5 - 713.5	0.032	15.07	0.053	17.22	4M52G7D
LTE Band 12/17	5 MHz	16QAM	701.5 - 713.5	0.029	14.57	0.047	16.72	4M53W7D
(Main ANT)	3 MHz	QPSK	700.5 - 714.5	0.032	15.05	0.052	17.20	2M72G7D
		16QAM	700.5 - 714.5	0.028	14.44	0.046	16.59	2M71W7D
1.		QPSK	699.7 - 715.3	0.033	15.13	0.053	17.28	1M11G7D
	1.4 MHz	16QAM	699.7 - 715.3	0.027	14.36	0.045	16.51	1M10W7D
40.141	QPSK	782.0	0.043	16.33	0.071	18.48	9M00G7D	
LTE Band 13	10 MHz	16QAM	782.0	0.039	15.87	0.063	18.02	9M01W7D
(Main ANT)	C 1 4 1	QPSK	779.5 - 784.5	0.045	16.49	0.073	18.64	4M53G7D
` ′ 5 MH	5 MHz	16QAM	779.5 - 784.5	0.040	16.03	0.066	18.18	4M52W7D
		π/2 BPSK	673.0 - 688.0	0.025	14.06	0.042	16.21	18M0G7D
	20 MHz	QPSK	673.0 - 688.0	0.024	13.89	0.040	16.04	19M0G7D
		16QAM	673.0 - 688.0	0.022	13.44	0.036	15.59	19M0W7D
		π/2 BPSK	670.5 - 690.5	0.025	14.03	0.042	16.18	13M5G7D
	15 MHz	QPSK	670.5 - 690.5	0.026	14.10	0.042	16.25	14M2G7D
		16QAM	670.5 - 690.5	0.022	13.42	0.036	15.57	14M2W7D
NR Band n71		π/2 BPSK	668.0 - 693.0	0.025	13.95	0.041	16.10	9M03G7D
	10 MHz	QPSK	668.0 - 693.0	0.024	13.85	0.040	16.00	9M32G7D
		16QAM	668.0 - 693.0	0.022	13.34	0.035	15.49	9M35W7D
		π/2 BPSK	665.5 - 695.5	0.026	14.20	0.043	16.35	4M59G7D
	5 MHz	QPSK	665.5 - 695.5	0.026	14.10	0.042	16.25	4M54G7D
		16QAM	665.5 - 695.5	0.021	13.13	0.034	15.28	4M51W7D

EUT Overview (LTE/NR Bands <1GHz)

				El	RP	Ell	RP	
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	Max. Power [W]	Max. Power [dBm]	Max. Power [W]	Max. Power [dBm]	Emission Designator
	10 MHz	QPSK	704.0 - 711.0	0.039	15.87	0.063	18.02	9M02G7D
		16QAM	704.0 - 711.0	0.033	15.14	0.054	17.29	9M03W7D
LTE Band 12/17 (Sub ANT)		QPSK	701.5 - 713.5	0.040	15.98	0.065	18.13	4M53G7D
		16QAM	701.5 - 713.5	0.034	15.35	0.056	17.50	4M54W7D
		QPSK	700.5 - 714.5	0.038	15.85	0.063	18.00	2M72G7D
	3 MHz	16QAM	700.5 - 714.5	0.034	15.28	0.055	17.43	2M73W7D
	4.4.841	QPSK	699.7 - 715.3	0.039	15.87	0.063	18.02	1M11G7D
1.4 MHz	16QAM	699.7 - 715.3	0.034	15.26	0.055	17.41	1M11W7D	
LTE Band 13 (Sub ANT)		QPSK	782.0	0.054	17.32	0.089	19.47	9M01G7D
		16QAM	782.0	0.046	16.66	0.076	18.81	9M03W7D
	5 MHz	QPSK	779.5 - 784.5	0.055	17.38	0.090	19.53	4M55G7D
		16QAM	779.5 - 784.5	0.048	16.85	0.079	19.00	4M54W7D

EUT Overview (LTE Bands <1GHz)

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			EIRP			
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	Max. Power [W]	Max. Power [dBm]	Emission Designator
WCDMA1700	N/A	Spread Spectrum	1712.4 - 1752.6	0.041	16.17	4M19F9W
. <u></u>		EUT Over	rview (WCDMA)			
				EI	RP	
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	Max. Power [W]	Max. Power [dBm]	Emission Designator
	20 MHz	QPSK	1720.0 - 1770.0	0.138	21.41	18M1G7D
		16QAM	1720.0 - 1770.0	0.071	18.54	18M1W7D
	15 MHz	QPSK	1717.5 - 1772.5	0.137	21.38	13M5G7D
		16QAM	1717.5 - 1772.5	0.065	18.14	13M6W7D
	10 MHz	QPSK	1715.0 - 1775.0	0.141	21.49	9M02G7D
LTE Band 66/4		16QAM	1715.0 - 1775.0	0.069	18.36	9M04W7D
	5 MHz	QPSK	1712.5 - 1777.5	0.144	21.60	4M54G7D
		16QAM	1712.5 - 1777.5	0.074	18.67	4M55W7D
	3 MHz	QPSK	1711.5 - 1778.5	0.140	21.46	2M72G7D
	5 1011 12	16QAM	1711.5 - 1778.5	0.067	18.23	2M73W7D
	1.4 MHz	QPSK	1710.7 - 1779.3	0.140	21.45	1M10G7D
1.		16QAM	1710.7 - 1779.3	0.067	18.27	1M11W7D
		π/2 BPSK	1720.0 - 1770.0	0.151	21.78	18M0G7D
	20 MHz	QPSK	1720.0 - 1770.0	0.152	21.81	19M1G7D
		16QAM	1720.0 - 1770.0	0.117	20.70	19M1W7D
		π/2 BPSK	1717.5 - 1772.5	0.150	21.76	13M6G7D
	15 MHz	QPSK	1717.5 - 1772.5	0.150	21.76	14M2G7D
NR Band n66		16QAM	1717.5 - 1772.5	0.117	20.69	14M3W7D
		π/2 BPSK	1715.0 - 1775.0	0.144	21.57	9M04G7D
	10 MHz	QPSK	1715.0 - 1775.0	0.146	21.64	9M36G7D
		16QAM	1715.0 - 1775.0	0.118	20.71	9M37W7D
		π/2 BPSK	1712.5 - 1777.5	0.138	21.41	4M59G7D
	5 MHz	QPSK	1712.5 - 1777.5	0.142	21.52	4M53G7D
		16QAM	1712.5 - 1777.5	0.118	20.70	4M52W7D

EUT Overview (LTE/NR Bands >1GHz)

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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: PY7-76056F**. 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.: 94880, 99864, 00001, 00308, 00084

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 TEST RESULTS 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 0.45 installed on the EUT.

2.5 EMI Suppression Device(s)/Modifications

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

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3.0 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

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

Deviation from Measurement Procedure......None

3.2 Radiated Power and Radiated Spurious Emissions

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

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

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

Pd [dBm] = Pg [dBm] - cable loss [dB] + antenna gain [dBd/dBi];

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

For radiated spurious emissions measurements, the field strength conversion method is used per the formulas in Section 5.2.7 of ANSI C63.26-2015. Field Strength (EIRP) is calculated using the following formulas:

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

All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014. Additionally, radiated emissions below 30MHz are also validated on an Open Area Test Site to assert correlation with the chamber measurements per the requirements of KDB 414788 D01 v01r01.

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

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4.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Contribution	Expanded Uncertainty (±dB)
Conducted Bench Top Measurements	1.13
Radiated Disturbance (<1GHz)	4.98
Radiated Disturbance (>1GHz)	5.07
Radiated Disturbance (>18GHz)	5.09

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5.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST). Measurements antennas used during testing were calibrated in accordance to the requirements of ANSI C63.5-2017.

Manufacturer	Model	Description Cal Date Cal Int		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	MT8821C	Radio Communication Analyzer		N/A		6201525694
Emco	3115	Horn Antenna (1-18GHz)	6/18/2020	Biennial	9/25/2022	9704-5182
Emco	3116	Horn Antenna (18 - 40GHz) 7/20/2021 Biennial 7/20/2023		9203-2178		
ETS Lindgren	3117	1-18 GHz DRG Horn (Medium)	4/20/2021	Biennial	4/20/2023	00125518
Keysight Technologies	N9030A	PXA Signal Analyzer (44GHz)	2/14/2022	Annual	2/14/2023	MY52350166
Keysight Technologies	E7515B	UXM 5G Wireless Test Platform	1/12/2022	Annual	1/12/2023	MY59150289
Rohde & Schwarz	CMW500	Radio Communication Tester		N/A		112347
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	8/3/2021	Annual	8/25/2022	100342
Rohde & Schwarz	ESW44	EMI Test Receiver 2Hz to 44 GHz	3/28/2022	Annual	3/28/2023	101716
Rohde & Schwarz	FSW26	2Hz-26.5GHz Signal and Spectrum Analyzer	4/14/2022	Annual	4/14/2023	103187
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	7/27/2020	Biennial	9/25/2022	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

Emission Designator

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 – LTE Band

Example: Middle Channel LTE Mode 2nd Harmonic (1564 MHz)

The average 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 analzyer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 1564 MHz. So 6.1 dB is added to the signal generator reading of -30.9 dBm yielding -24.80 dBm. The fundamental EIRP was 25.501 dBm so this harmonic was 25.501 dBm – (-24.80).

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7.0 TEST RESULTS

7.1 Summary

Company Name:	Sony Corporation
FCC ID:	<u>PY7-76056F</u>
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
Mode(s):	WCDMA/LTE/NR

Test Condition	Test Description	FCC Part Section(s)	Test Limit	Test Result	Reference
	Transmitter Conducted Output Power*	2.1046(a), 2.1046(c)	N/A	PASS	Section 7.2
	Occupied Bandwidth	2.1049(h)	N/A	PASS	Section 7.3
⊞	Conducted Band Edge / Spurious Emissions (LTE Band 13)	2.1051, 27.53(c), 27.53(f)	Undesirable emissions must meet the limits detailed in sections 27.53(c) and 27.53(f)	PASS	Sections 7.4, 7.5
CONDUCTED	Conducted Band Edge / Spurious Emissions (LTE Band 12, 17, 71; NR Band n12, n71)	2.1051, 27.53(g)	≥43 + 10 log (P[Watts]) dB of attenuation below transmitter power	PASS	Sections 7.4, 7.5
Ö	Conducted Band Edge / Spurious Emissions (WCDMA AWS; LTE Band 4, 66; NR Band n66)	2.1051, 27.53(h)	≥43 + 10 log (P[Watts]) dB of attenuation below transmitter power	PASS	Sections 7.4, 7.5
	Peak-to-Average Ratio (WCDMA AWS; LTE Band 4, 66; NR Band n66)	27.50(d)(5)	≤ 13 dB	PASS	Section 7.6
	Frequency Stability	2.1055, 27.54	Fundamental emissions stay within authorized frequency block	PASS	Section 7.9
	Effective Radiated Power (LTE Band 13)	27.50(b)(10)	≤ 3 Watts max. ERP	PASS	Section 7.7
	Effective Radiated Power (LTE Band 12, 17, 71; NR Band n12, n71)	27.50(c)(10)	≤ 3 Watts max. ERP	PASS	Section 7.7
RADIATED	Equivalent Isotropic Radiated Power (WCDMA AWS; LTE Band 4, 66; NR Band n66)	27.50(d)(4)	≤ 1 Watt max. EIRP	PASS	Section 7.7
RADI	Radiated Spurious Emissions (LTE Band 13)	2.1053, 27.53(c), 27.53(f)	Undesirable emissions must meet the limits detailed in sections 27.53(c) and 27.53(f)	PASS	Section 7.8
	Radiated Spurious Emissions (LTE Band 12, 17, 71; NR Band n12, n71)	2.1053, 27.53(g)	≥ 43 + 10 log (P[Watts]) dB of attenuation below transmitter power	PASS	Section 7.8
	Radiated Spurious Emissions (WCDMA AWS; LTE Band 4, 66; NR Band n66)	2.1053, 27.53(h)(1)	≥ 43 + 10 log (P[Watts]) dB of attenuation below transmitter power	PASS	Section 7.8

Table 7-1. Result Summary

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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 shown in Section 7.0 were 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) For conducted spurious emissions, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is EMC Software Tool v1.0.

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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]
z		23060	704.0	1 / 0	23.40
HV	QPSK	23095	707.5	1 / 25	23.47
10 MHz		23130	711.0	1 / 25	23.41
1	16-QAM	23095	707.5	1 / 0	22.77
N		23035	701.5	1 / 12	23.65
MHz	QPSK	23095	707.5	1 / 12	23.58
5 M		23155	713.5	1 / 12	23.48
47	16-QAM	23095	707.5	1 / 24	22.98
N		23025	700.5	1 / 7	23.47
MHz	QPSK	23095	707.5	1 / 7	23.45
3 M		23165	714.5	1 / 7	23.34
(-)	16-QAM	23025	700.5	1/7	22.91
N		23017	699.7	1 / 0	23.50
HV	QPSK	23095	707.5	1 / 0	23.47
1.4 MHz		23173	715.3	1 / 5	23.40
	16-QAM	23173	715.3	1 / 5	22.89

Table 7-2. LTE Band 12/17 (Sub ANT) Conducted Output Power

Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]	
QPSK	23230	782.0	1/0	23.74	
16-QAM	23230	782.0	1 / 25	22.87	
	23205	779.5	1/0	23.80	
QPSK	23230	782.0	1 / 12	23.63	
	23255	784.5	1 / 12	23.60	
16-QAM	23255	784.5	1 / 0	23.06	
	QPSK 16-QAM QPSK 16-QAM	QPSK 23230 16-QAM 23230 QPSK 23205 23205 23255 16-QAM 23255	Modulation Channel [MHz] QPSK 23230 782.0 16-QAM 23230 782.0 QPSK 23205 779.5 QPSK 23230 782.0 16-QAM 23205 779.5 QPSK 23230 782.0 16-QAM 23255 784.5 16-QAM 23255 784.5	Modulation Channel [MHz] RB Size/Offset QPSK 23230 782.0 1 / 0 16-QAM 23230 782.0 1 / 25 QPSK 23205 779.5 1 / 0 QPSK 23230 782.0 1 / 12 QPSK 23230 782.0 1 / 12	

Table 7-3. LTE Band 13 (Sub ANT) Conducted Output Power

	NR (SCS 15kHz)						LTE			NR	LTE	EN-DC		
NR Band	NR Bandwidth [MHz]	NR Channel	NR Frequency [MHz]	Mod.	NR RB#/Offse t	LTE Band	LTE Bandwidth [MHz]	LTE Channel	LTE Frequency [MHz]	Mod.	LTE RB#/Offse t	Conducted Power [dBm]	Conducted Power [dBm]	Total Tx. Power [dBm]
				π/2 BPSK	1/53	3				QPSK	1/50	23.94	23.05	26.53
		QPSK	100/0					QPSK	100/0	22.97	23.02	26.01		
n71	20	Mid	N/1-1 C00 F	QPSK	100/0		20	N C I	1000	QPSK	1/50	22.94	23.11	26.04
n71	20	IVII O	680.5	QPSK	1/53	B2	20	Mid	1880	QPSK	100/0	23.98	23.05	26.55
				QPSK	1/53					QPSK	1/50	23.95	23.09	26.55
				16Q	1/53					16Q	100/0	22.74	23.23	26.00

Table 7-4. EN-DC Conducted Powers (n71-B2)

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	NR (SCS 15kHz)						LTE						LTE	EN-DC
NR Band	NR Bandwidth [MHz]	NR Channel	NR Frequency [MHz]	Mod.	NR RB#/Offset	LTE Band	LTE Bandwidth [MHz]	LTE Channel	LTE Frequency [MHz]	Mod.	LTE RB#/Offset	Power	Conducted Power [dBm]	Total Tx. Power [dBm]
				π/2 BPSK	1/53					QPSK	1/25	24.61	23.32	27.02
				QPSK	100/0					QPSK	50/0 23.62	23.29	26.47	
n66	20	Mid	1745	QPSK	100/0	B13	10	Mid	782	QPSK	1/25	23.63	23.38	26.52
100	20	IVIIU	1/45	QPSK	1/53	B13	10	IVIIG	/82	82 QPSK 50/0 24.60 23	23.32	27.02		
				QPSK	1/53					QPSK	1/25	24.62	23.31	27.02
				16Q	1/53					16Q	1/25	23.59	23.48	26.55

Table 7-5. EN-DC Conducted Powers (n66-B13)

	NR (SCS 15kHz)						LTE					NR	LTE	EN-DC
NR Band	NR Bandwidth [MHz]	NR Channel	NR Frequency [MHz]	Mod.	NR RB#/Offset	LTE Band	LTE Bandwidth [MHz]	LTE Channel	LTE Frequency [MHz]	Mod.	LTE RB#/Offset	Power	Conducted Power [dBm]	Total Tx. Power [dBm]
				QPSK	100/0					QPSK	100/0	24.12	23.60	26.88
				QPSK	100/0					QPSK	1/50	24.08	24.08 23.62	26.87
n66	20	20 Mid	1745	QPSK	1/53	B2	20	Mid	1880	QPSK	100/0	24.93	23.65	27.35
				QPSK	1/53					QPSK	1/50	24.95	23.66	27.36
				16Q	1/53					16Q	1/50	23.94	23.98	26.97

Table 7-6. EN-DC Conducted Powers (n66-B2)

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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 71



Plot 7-1. Occupied Bandwidth Plot (LTE Band 71 - 20MHz QPSK - Full RB Configuration)



Plot 7-2. Occupied Bandwidth Plot (LTE Band 71 - 20MHz 16-QAM - Full RB Configuration)

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Plot 7-3. Occupied Bandwidth Plot (LTE Band 71 - 15MHz QPSK - Full RB Configuration)



Plot 7-4. Occupied Bandwidth Plot (LTE Band 71 - 15MHz 16-QAM - Full RB Configuration)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager	
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Keysight Spectrum Analyzer - Occupied					
LXIRL RF 50Ω DC	CORREC	SENSE:INT Center Freq: 680.500	ALIGN AUTO	03:20:18 PM Jun 03, 2022 Radio Std: None	Trace/Detector
	÷+	Trig: Free Run	Avg Hold: 100/100		
	#IFGain:Low	#Atten: 36 dB		Radio Device: BTS	
10 dB/div Ref 40.00 dt	3m				
Log 30.0					
20.0					Clear Write
10.0	Part Margaret	mal-a-Maranananananananananananananananananana	n hanna		
0.00	1				
-10.0	1		l V		Average
	where and		Whomas .		Average
-20.0 Miller & March			and the start of t	harmon h	
-30.0					
-40.0					Max Hold
-50.0					
Center 680.50 MHz				Span 25.00 MHz	
Res BW 240 kHz		#VBW 750 k	Hz	Sweep 1 ms	
		T () D			
Occupied Bandwi		Total P	ower 31.4	dBm	
).0103 MI	Hz			Detector
Transmit Frag Error	-11.259	vHz % of O	BW Power 99	0.00 %	Peak▶ Auto Man
Transmit Freq Error					Auto <u>Mari</u>
x dB Bandwidth	10.16 N	lHz xdB	-26.	00 dB	
MSG			STATUS	3	

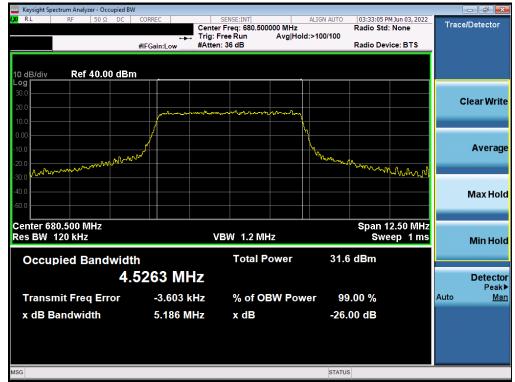
Plot 7-5. Occupied Bandwidth Plot (LTE Band 71 - 10MHz QPSK - Full RB Configuration)



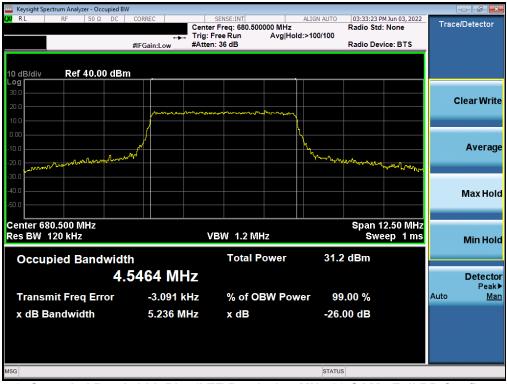
Plot 7-6. Occupied Bandwidth Plot (LTE Band 71 - 10MHz 16-QAM - Full RB Configuration)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT				
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Plot 7-7. Occupied Bandwidth Plot (LTE Band 71 - 5MHz QPSK - Full RB Configuration)



Plot 7-8. Occupied Bandwidth Plot (LTE Band 71 - 5MHz 16-QAM - Full RB Configuration)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT			
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LTE Band 12/17 – Main ANT



Plot 7-9. Occupied Bandwidth Plot (LTE Band 12/17 - 10MHz QPSK - Full RB Configuration – Main ANT)



Plot 7-10. Occupied Bandwidth Plot (LTE Band 12/17 - 10MHz 16-QAM - Full RB Configuration – Main ANT)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT				
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Keysight Spectrum Analyzer - Occ	upied BW								
LXI RL RF 50 Ω	DC CORREC	Cent	SENSE:INT er Freq: 707.50	0000 MHz	ALIGN AUTO	06:13:20 P Radio Std	M Jun 06, 2022	Trac	e/Detector
		Trig:	Free Run	Avg Hold	: 100/100				
, 	#IFGain	Low #Atte:	en: 36 dB			Radio Dev	ice: BTS		
10 dB/div Ref 40.00	0 dBm								
Log 30.0									
20.0									Clear Write
		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mon					
10.0				l l					
0.00	1				X				
-10.0					N				Average
-20.0 Mrshy way way	nr.mm/W				A when a second	ᢪ᠋᠋᠋᠋ᡶ᠕ᠬᡊᠬᡨᡶᡨ	or Amba	_	
-30.0									
-40.0									Max Hold
-50.0									maxinoia
Center 707.500 MHz							2.50 MHz		
Res BW 120 kHz		;	#VBW 390	KHZ		SWe	ep 1 ms		Min Hold
Occupied Band	width		Total F	ower	31.4	dBm			
	4.5196	<b>MHZ</b>							Detector Peak▶
Transmit Freq Err	or 8	.304 kHz	% of O	BW Pow	er 99	.00 %		Auto	Man
x dB Bandwidth	5.	133 MHz	x dB		-26.	00 dB			
MSG					STATUS			_	
mod					STATUS				

Plot 7-11. Occupied Bandwidth Plot (LTE Band 12/17 - 5MHz QPSK - Full RB Configuration – Main ANT)



Plot 7-12. Occupied Bandwidth Plot (LTE Band 12/17 - 5MHz 16-QAM - Full RB Configuration – Main ANT)

FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-13. Occupied Bandwidth Plot (LTE Band 12/17 - 3MHz QPSK - Full RB Configuration – Main ANT)



Plot 7-14. Occupied Bandwidth Plot (LTE Band 12/17 - 3MHz 16-QAM - Full RB Configuration – Main ANT)

FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-15. Occupied Bandwidth Plot (LTE Band 12/17 – 1.4MHz QPSK - Full RB Configuration – Main ANT)



Plot 7-16. Occupied Bandwidth Plot (LTE Band 12/17 - 1.4MHz 16-QAM - Full RB Configuration - Main ANT)

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# LTE Band 13 – Main ANT



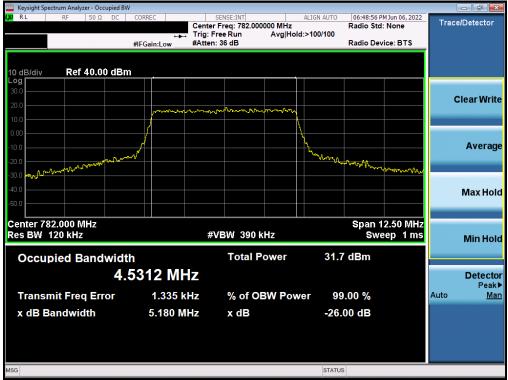
Plot 7-17. Occupied Bandwidth Plot (LTE Band 13 - 10MHz QPSK - Full RB Configuration - Main ANT)



Plot 7-18. Occupied Bandwidth Plot (LTE Band 13 - 10MHz 16-QAM - Full RB Configuration – Main ANT)

FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-19. Occupied Bandwidth Plot (LTE Band 13 - 5MHz QPSK - Full RB Configuration – Main ANT)



Plot 7-20. Occupied Bandwidth Plot (LTE Band 13 - 5MHz 16-QAM - Full RB Configuration – Main ANT)

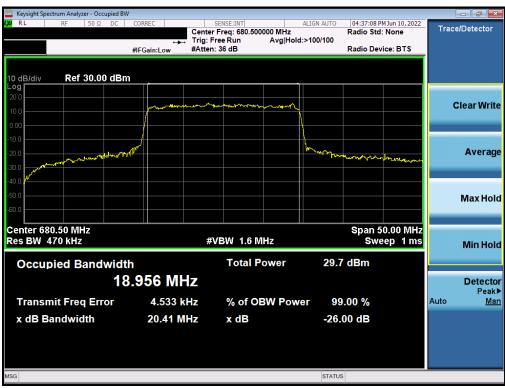
FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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# NR Band n71



Plot 7-21. Occupied Bandwidth Plot (NR Band n71 - 20MHz BPSK - Full RB Configuration)



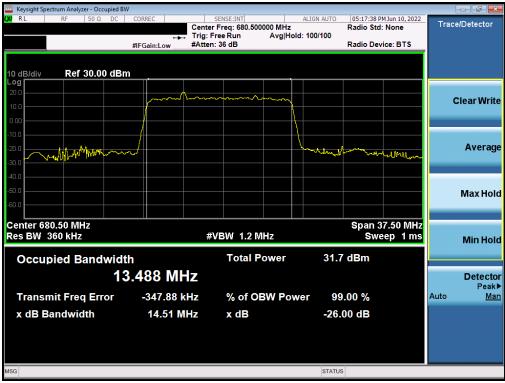
Plot 7-22. Occupied Bandwidth Plot (NR Band n71 - 20MHz QPSK - Full RB Configuration)

FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-23. Occupied Bandwidth Plot (NR Band n71 - 20MHz 16-QAM - Full RB Configuration)



Plot 7-24. Occupied Bandwidth Plot (NR Band n71 - 15MHz BPSK - Full RB Configuration)

FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Keysight Spectrum Analyzer - Occupied BV					
<b>LX/</b> RL RF 50Ω DC		SENSE:INT Freg: 680.500000 MHz		5 PM Jun 10, 2022 td: None	Trace/Detector
	+++ Trig: Fi	ree Run Avg Hol	ld: 100/100 Radio D	evice: BTS	
	#IFGain:Low #Atten:	. 30 0.0	Radio D	evice. D13	
10 dB/div Ref 30.00 dBr	<u>.</u>				
Log					
20.0		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			Clear Write
10.0					Cicul Will
0.00					
-10.0	MUTTER		Mannen -		
1 million and the part			Man man man man man man	MALIN-BIT WALK	Average
-30.0					
-40.0					
-50.0					Max Hold
-60.0					
Center 680.50 MHz				37.50 MHz	
Res BW 360 kHz	#\	/BW 1.2 MHz	SI	veep 1ms	Min Hold
Occupied Bandwidt	'n	Total Power	29.3 dBm		
	175 MHz				Detecto
					Peakl
Transmit Freq Error	12.587 kHz	% of OBW Pov	ver 99.00 %		Auto <u>Mar</u>
x dB Bandwidth	15.24 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-25. Occupied Bandwidth Plot (NR Band n71 - 15MHz QPSK - Full RB Configuration)



Plot 7-26. Occupied Bandwidth Plot (NR Band n71 - 15MHz 16-QAM - Full RB Configuration)

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Keysight Spectrum Analyzer - Occupied E	3W						- d ×
LXIRL RF 50Ω DC		SENSE:INT	ALIGN AUTO	05:40:19 Pf Radio Std:	4 Jun 10, 2022	Trace	/Detector
	Trig: F	ree Run Avg l	Hold: 100/100				
	#IFGain:Low #Atten	1: 36 dB		Radio Dev	ice: BTS		
10 dB/div Ref 40.00 dB	m		-				
30.0							
20.0						C	lear Write
10.0		man prove					
0.00						_	
-10.0			$\langle \rangle$				Average
			l				
-20.0 Jamon Law Man Jun	nor N		mond	Jor Mar Mar	1000		
-40.0					www		
-50.0							Max Hold
-30.0							
Center 680.50 MHz					5.00 MHz		
Res BW 240 kHz	#	VBW 750 kHz		Swe	ep 1 ms		Min Hold
Occupied Bandwid	th	Total Power	31.	2 dBm			
ອ	.0312 MHz						Detector Peak▶
Transmit Freq Error	-174.87 kHz	% of OBW P	ower 9	9.00 %		Auto	Man
x dB Bandwidth	9.812 MHz	x dB	-26	.00 dB			
	5.012 MITZ	A dB	-20	.00 00			
			0717	10			
MSG			STATU	IS			

Plot 7-27. Occupied Bandwidth Plot (NR Band n71 - 10MHz BPSK - Full RB Configuration)



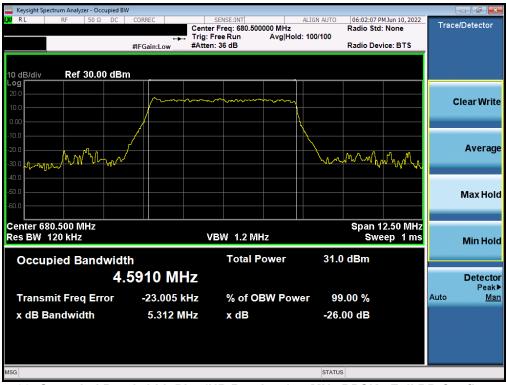
Plot 7-28. Occupied Bandwidth Plot (NR Band n71 - 10MHz QPSK - Full RB Configuration)

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Plot 7-29. Occupied Bandwidth Plot (NR Band n71 - 10MHz 16-QAM - Full RB Configuration)



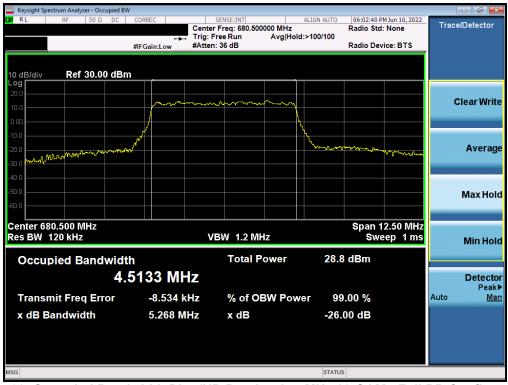
Plot 7-30. Occupied Bandwidth Plot (NR Band n71 - 5MHz BPSK - Full RB Configuration)

FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Keysight Spectrum Analyz										
🗶 RL RF	50 Ω DC	CORREC		680.500000 MI	lz	IGN AUTO	Radio Std	MJun 10, 2022	Trac	e/Detector
		↔ #IFGain:Low	Trig: Free Ru #Atten: 36 dl		Hold: 1	00/100	Radio Dev	vice: BTS		
		#II Galli.Low		-						
10 dB/div Ref	30.00 dBn	า								
Log										
20.0		~~~~	er har and a second	·····					(	lear Write
0.00										
-10.0		/			L.					
-20.0	and the second s					man m	mar human			Average
-30.0										
-40.0										
-50.0										Max Hold
-60.0										Μάλ Πυι
							-			
Center 680.500 N Res BW 120 kHz			VBW	1.2 MHz				2.50 MHz eep 1 ms		
								oop into		Min Hold
Occupied B	andwidt	h	T	otal Power	ſ	28.6	dBm			
	4.	5387 MI	Hz							Detecto
Transmit Free	Error	-5.111	kHz %	of OBW P	ower	aa	.00 %		Auto	Peak) Mar
					OWCI				rato	Inter
x dB Bandwic	ith	5.392 N	AHZ X	dB		-26.0	)0 dB			
MSG						STATUS				
NGG						STATUS				

Plot 7-31. Occupied Bandwidth Plot (NR Band n71 - 5MHz QPSK - Full RB Configuration)



Plot 7-32. Occupied Bandwidth Plot (NR Band n71 - 5MHz 16-QAM - Full RB Configuration)

FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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# WCDMA AWS

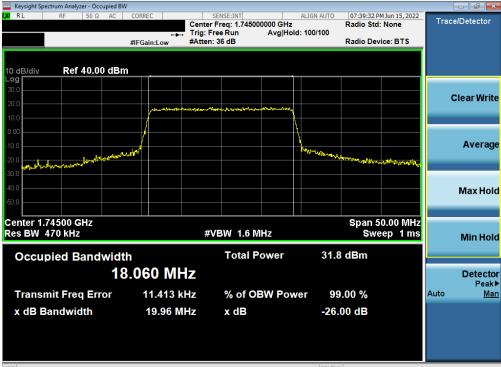
Keysight Spectrum Analyzer - Occupied	BW			- 6 -
LXI RLT RF 50Ω AC		Center Freq: 1.732600000 GHz	IGN AUTO 12:51:13 AM Jul 06, 2022 Radio Std: None	Trace/Detector
		Trig: Free Run Avg Hold: 1 #Atten: 36 dB	00/100 Radio Device: BTS	
	M Gum.cow			Ĩ
10 dB/div Ref 40.00 dB	m			
Log 30.0				
20.0				Clear Write
10.0				
0.00		Martin and and and and and and and and and an		
-10.0	/			Average
-20.0				
-30.0	m		2 Ml marting the -	
-40.0 mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm			Inground Charlens	Max Hold
-50.0				
Center 1.732600 GHz			Span 15.00 MHz	
Res BW 150 kHz		VBW 1.5 MHz	Sweep 1 ms	Min Hold
Occupied Bandwid	lth	Total Power	20.1 dBm	
	.1916 MH	7		Detector
				Peak▶
Transmit Freq Error	-12.260 kH	z % of OBW Power	99.00 %	Auto <u>Man</u>
x dB Bandwidth	4.803 MH	z x dB	-26.00 dB	
			074710	
MSG			STATUS	

Plot 7-33. Occupied Bandwidth Plot (WCDMA, Ch. 1413)

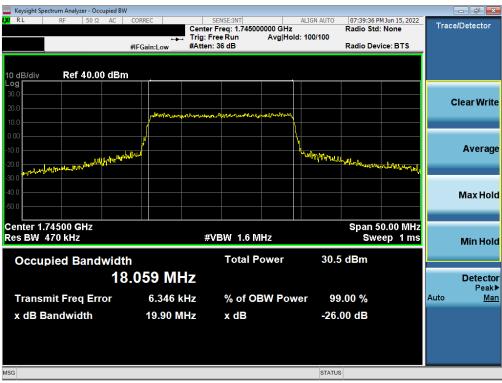
FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 22 of 109	
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## LTE Band 66/4



Plot 7-34. Occupied Bandwidth Plot (LTE Band 66/4 - 20.0MHz QPSK - Full RB)



Plot 7-35. Occupied Bandwidth Plot (LTE Band 66/4 - 20.0MHz 16QAM - Full RB)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 24 of 109
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<b>1</b>		•	V3.0 1/5/2022



Keysight Spectrum Analyzer - Occupied BV					
<b>X RL</b> RF 50 Ω AC	CORREC	SENSE:INT Center Freq: 1.745000000 Trig: Free Run Avg	ALIGN AUTO GHz I Hold: 100/100	07:45:45 PMJun 15, 2022 Radio Std: None	Trace/Detector
	#IFGain:Low	#Atten: 36 dB		Radio Device: BTS	
10 dB/div Ref 40.00 dBr	n				
Log 30.0 20.0		annound and a start of the start			Clear Write
10.0	purchantifro	alory-y-genou-logytelongsyndix-hardfar-artifik			
0.00 -10.0					Average
-20.0	<del></del>			all and the second	
-40.0					Max Hold
-50.0					
Center 1.74500 GHz Res BW 360 kHz		#VBW 1.2 MHz		Span 37.50 MHz Sweep 1 ms	Min Hold
Occupied Bandwidt	h	Total Powe	r 31.4 (	dBm	
	8.545 M⊦	łz			Detector Peak▶
Transmit Freq Error	13.124 k	Hz % of OBW F	Power 99.0	00 %	Auto <u>Man</u>
x dB Bandwidth	15.12 M	lHz x dB	-26.0	0 dB	
MSG			STATUS		

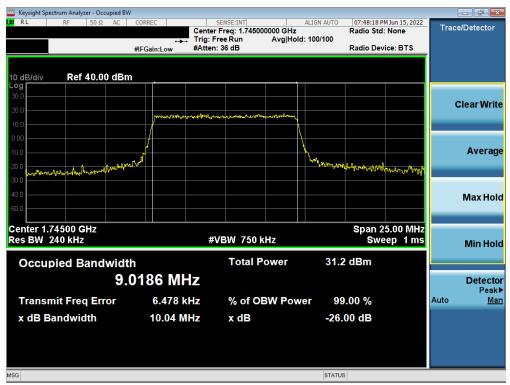
Plot 7-36. Occupied Bandwidth Plot (LTE Band 66/4 - 15.0MHz QPSK - Full RB)



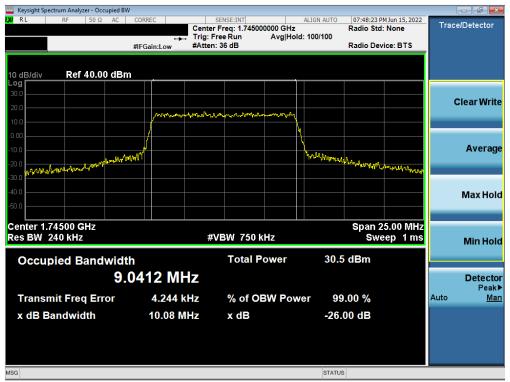
Plot 7-37. Occupied Bandwidth Plot (LTE Band 66/4 - 15.0MHz 16QAM - Full RB)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dama 25 of 109	
1M2205240063-06.PY7	6/2/2022 - 8/10/2022	Portable Handset	Page 35 of 198	
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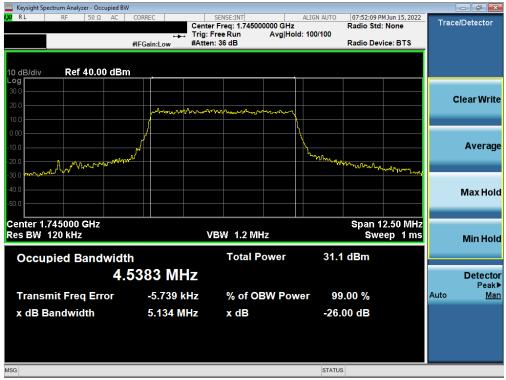
Plot 7-38. Occupied Bandwidth Plot (LTE Band 66/4 - 10.0MHz QPSK - Full RB)



Plot 7-39. Occupied Bandwidth Plot (LTE Band 66/4 - 10.0MHz 16QAM - Full RB)

FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dego 26 of 109	
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Plot 7-40. Occupied Bandwidth Plot (LTE Band 66/4 - 5.0MHz QPSK - Full RB)



Plot 7-41. Occupied Bandwidth Plot (LTE Band 66/4 - 5.0MHz 16QAM - Full RB)

FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 27 of 109
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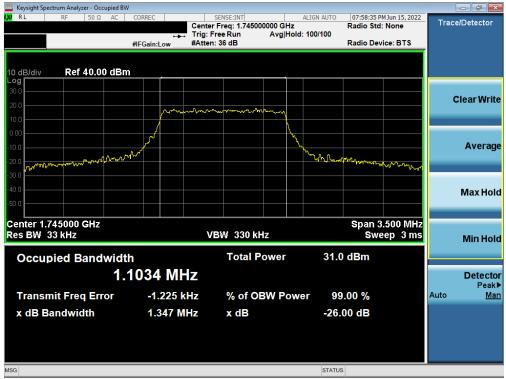
Plot 7-42. Occupied Bandwidth Plot (LTE Band 66/4 – 3.0MHz QPSK - Full RB)



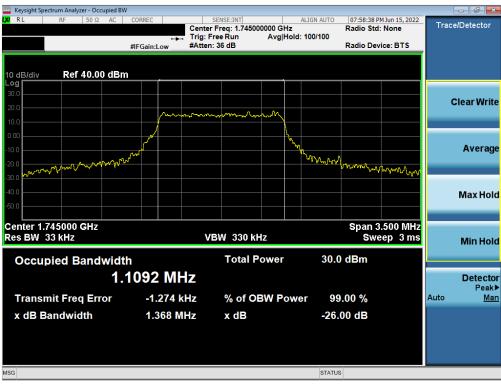
Plot 7-43. Occupied Bandwidth Plot (LTE Band 66/4 - 3.0MHz 16QAM - Full RB)

FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 29 of 109
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Plot 7-44. Occupied Bandwidth Plot (LTE Band 66/4 – 1.4MHz QPSK - Full RB)



Plot 7-45. Occupied Bandwidth Plot (LTE Band 66/4 – 1.4MHz 16QAM - Full RB)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Dage 20 of 109
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### NR Band n66



Plot 7-46. Occupied Bandwidth Plot (NR Band n66 - 20.0MHz DFT-s-OFDM BPSK - Full RB)



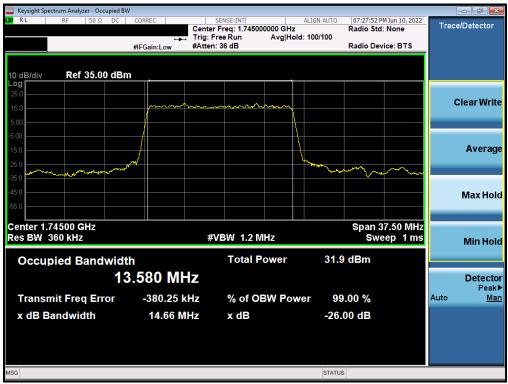
Plot 7-47. Occupied Bandwidth Plot (NR Band n66 - 20.0MHz CP-OFDM QPSK - Full RB)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Dega 40 of 109
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Plot 7-48. Occupied Bandwidth Plot (NR Band n66 - 20.0MHz CP-OFDM 16QAM - Full RB)



Plot 7-49. Occupied Bandwidth Plot (NR Band n66 - 15.0MHz DFT-s-OFDM BPSK - Full RB)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Dage 41 of 109
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Plot 7-50. Occupied Bandwidth Plot (NR Band n66 - 15.0MHz CP-OFDM QPSK - Full RB)



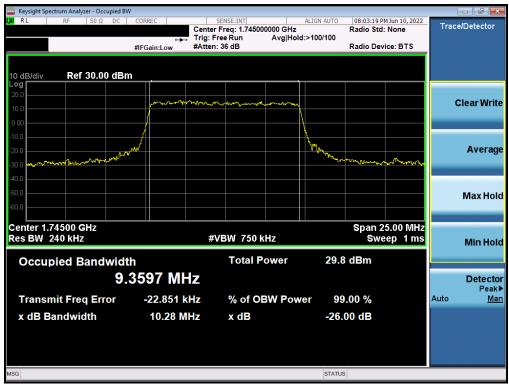
Plot 7-51. Occupied Bandwidth Plot (NR Band n66 - 15.0MHz CP-OFDM 16QAM - Full RB)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Dega 42 of 109
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250     Max Hold       350     Max Hold       450     Max Hold       50     Max Hold       50     Max Hold       50     Span 25.00 MHz       Center 1.74500 GHz     Span 25.00 MHz       Res BW 240 kHz     #VBW 750 kHz       Sweep 1 ms     Min Hold       Occupied Bandwidth     Total Power       31.9 dBm	Keysight Spectrum Analyzer - Occupied E	3W						- d X
Trig: Free Run #Atten: 36 dB       Avg Hold:>100/100       Radio Device: BTS         10 dB/div       Ref 35.00 dBm       Clear Write         250	XX RL RF 50Ω DC						Trace	/Detector
10 dB/div       Ref 35.00 dBm         250		Trig: F	ree Run Avg H					
Log       Image: Clear Write         250       Image: Clear Write         150       Image: Clear Write         500       Image: Clear Write         500       Image: Clear Write         250       Image: Clear Write <td< td=""><td></td><td colspan="6">#IFGain:Low #Atten: 36 dB Radio Device: BTS</td><td></td></td<>		#IFGain:Low #Atten: 36 dB Radio Device: BTS						
Log       Image: Clear Write         250       Image: Clear Write         150       Image: Clear Write         500       Image: Clear Write         500       Image: Clear Write         250       Image: Clear Write <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>								
250       Clear Write         150       Clear Write         500       Average         500       Max Hold         500       Span 25.00 MHz         Center 1.74500 GHz       Span 25.00 MHz         Res BW 240 kHz       #VBW 750 kHz       Sweep 1 ms         Occupied Bandwidth       Total Power       31.9 dBm         9.0377 MHz       More of OBW Power       99.00 %	10 dB/div Ref 35.00 dB	m						
150       Clear Write         500       Average         500       Average         500       Max Hold         500       Max Hold <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
150       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       100       1							c	lear Write
500       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       400       4			and the second second					
150       Average         250       Average         350       Max Hold         450       Max Hold         450       Max Hold         650       Max Hold         Center 1.74500 GHz Res BW 240 kHz       #VBW 750 kHz       Span 25.00 MHz Sweep 1 ms         Occupied Bandwidth 9.0377 MHz       Total Power       31.9 dBm         Detector Peak       Auto       Max Hold	5.00							
250       Ammunication       Ammunica	-5.00			<u>}</u>				
350       Max Hold         450       Max Hold         450       Max Hold         550       Max Hold         550       Max Hold         Center 1.74500 GHz Res BW 240 kHz       Span 25.00 MHz Sweep 1 ms         Occupied Bandwidth 9.0377 MHz       Total Power       31.9 dBm         Detector Peak       Detector Peak         Auto       Mar	-15.0							Average
450       450       Max Hold         450       Max Hold         550       Max Hold         Center 1.74500 GHz Res BW 240 kHz       Span 25.00 MHz Sweep 1 ms         Occupied Bandwidth 9.0377 MHz       Total Power       31.9 dBm         Detector Peak       Detector Peak         Transmit Freq Error       -183.97 kHz       % of OBW Power       99.00 %	-25.0			PAG	r ¹ 20			
250       Max Hold         Center 1.74500 GHz       Span 25.00 MHz         Res BW 240 kHz       #VBW 750 kHz       Span 25.00 MHz         Occupied Bandwidth       Total Power       31.9 dBm         9.0377 MHz       Detector         Transmit Freq Error       -183.97 kHz       % of OBW Power       99.00 %	-35.0 malesment man wow			The second	and have	and the second		
250     Center 1.74500 GHz     Span 25.00 MHz       Res BW 240 kHz     #VBW 750 kHz     Span 25.00 MHz       Occupied Bandwidth     Total Power     31.9 dBm       9.0377 MHz     Detector       Transmit Freq Error     -183.97 kHz     % of OBW Power     99.00 %	-45.0							May Hold
Center 1.74500 GHz Res BW 240 kHz #VBW 750 kHz Span 25.00 MHz Occupied Bandwidth Total Power 31.9 dBm 9.0377 MHz Transmit Freq Error -183.97 kHz % of OBW Power 99.00 %	-55.0							Max Holu
Res BW     240 kHz     #VBW     750 kHz     Sweep     1 ms       Occupied Bandwidth     Total Power     31.9 dBm       9.0377 MHz     Detector       Transmit Freq Error     -183.97 kHz     % of OBW Power     99.00 %								
Occupied Bandwidth Total Power 31.9 dBm 9.0377 MHz Detector Transmit Freq Error -183.97 kHz % of OBW Power 99.00 %								
9.0377 MHz Transmit Freq Error -183.97 kHz % of OBW Power 99.00 %	Res BW 240 kHz	#	VBW 750 kHz		Swe	eep 1 ms		Min Hold
9.0377 MHz Transmit Freq Error -183.97 kHz % of OBW Power 99.00 %	Occurried Denducid	41-	Total Power	24 (	) dBm			
Transmit Freq Error -183.97 kHz % of OBW Power 99.00 %			rotar Fower	51.3	, abiii			
Transmit Freq Error -183.97 kHz % of OBW Power 99.00 %	9	.0377 MHz						Detector
	Transmit Fred Error	-193 07 kHz	% of OBW Bo		0.0.0%		Auto	
x dB Bandwidth 9.836 MHz x dB -26.00 dB							Auto	IMAII
	x dB Bandwidth	9.836 MHz	x dB	-26.	00 dB			
MSG STATUS	MSG			STATU	S			

Plot 7-52. Occupied Bandwidth Plot (NR Band n66 - 10.0MHz DFT-s-OFDM BPSK - Full RB)



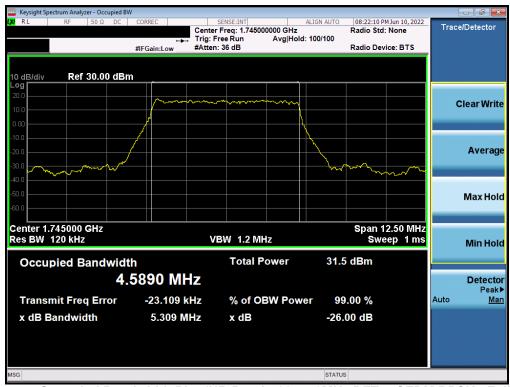
Plot 7-53. Occupied Bandwidth Plot (NR Band n66 - 10.0MHz CP-OFDM QPSK - Full RB)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	
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Plot 7-54. Occupied Bandwidth Plot (NR Band n66 - 10.0MHz CP-OFDM 16QAM - Full RB)



Plot 7-55. Occupied Bandwidth Plot (NR Band n66 - 5.0MHz DFT-s-OFDM BPSK - Full RB)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	
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Plot 7-56. Occupied Bandwidth Plot (NR Band n66 - 5.0MHz CP-OFDM QPSK - Full RB)



Plot 7-57. Occupied Bandwidth Plot (NR Band n66 - 5.0MHz CP-OFDM 16QAM - Full RB)

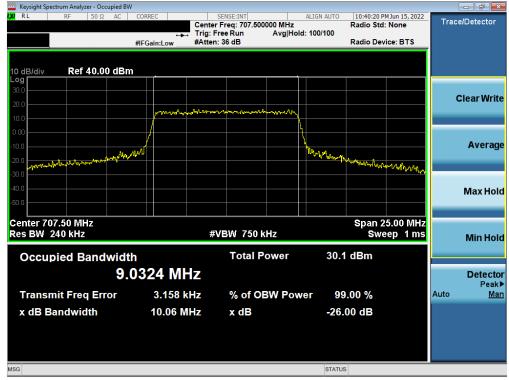
FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 45 of 100
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## LTE Band 12/17 – Sub ANT



Plot 7-58. Occupied Bandwidth Plot (LTE Band 12/17 - 10MHz QPSK - Full RB Configuration - Sub ANT)



Plot 7-59. Occupied Bandwidth Plot (LTE Band 12/17 - 10MHz 16-QAM - Full RB Configuration – Sub ANT)

FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 46 of 100	
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Keysight Spectrum Analyzer - Occupied E	3W				
IXI RL RF 50Ω AC		Freq: 707.500000 MHz ree Run Avg Hold:	Radio Std		Trace/Detector
10 dB/div Ref 40.00 dB	m				
30.0		hand here and here an			Clear Write
0.00					
-10.0 -20.0	m la		Luhon many a	her barren alter a	Average
-40.0				and the second state state.	Max Hold
-50.0					maxinoid
Center 707.500 MHz Res BW 120 kHz	#V	/BW 390 kHz		l2.50 MHz eep 1 ms	Min Hold
Occupied Bandwid	th .5260 MHz	Total Power	30.9 dBm		Detector
4 Transmit Freq Error	-321 Hz	% of OBW Powe	er 99.00 %		Detector Peak► Auto <u>Man</u>
x dB Bandwidth	5.148 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-60. Occupied Bandwidth Plot (LTE Band 12/17 - 5MHz QPSK - Full RB Configuration – Sub ANT)



Plot 7-61. Occupied Bandwidth Plot (LTE Band 12/17 - 5MHz 16-QAM - Full RB Configuration – Sub ANT)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT			
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🔤 Keysight Spectrum Analyzer - Occupie	ed BW				- 6 <b>-</b>
(X) RL   RF   50 Ω Α	Center Trig: F #IFGain:Low #Atten	SENSE:INT r Freq: 707.500000 MHz Free Run Avg Hol n: 36 dB	ALIGN AUTO 10:48:01 F Radio Std d: 100/100 Radio Dev		Trace/Detector
10 dB/div Ref 40.00 d Log 30.0 20.0					Clear Write
0.00 -10.0 -20.0 -30.0	land and land		handroghan and Mark		Average
-40.0					Max Hold
Center 707.500 MHz #Res BW 75 kHz Occupied Bandwi		VBW 240 kHz Total Power		7.500 MHz p 3.8 ms	Min Hold
	2.7239 MHz				Detector Peak▶
Transmit Freq Error x dB Bandwidth	873 Hz 3.099 MHz	% of OBW Pow x dB	ver 99.00 % -26.00 dB		Auto <u>Man</u>
MSG			STATUS		

Plot 7-62. Occupied Bandwidth Plot (LTE Band 12/17 - 3MHz QPSK - Full RB Configuration – Sub ANT)



Plot 7-63. Occupied Bandwidth Plot (LTE Band 12/17 - 3MHz 16-QAM - Full RB Configuration – Sub ANT)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT		
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Plot 7-64. Occupied Bandwidth Plot (LTE Band 12/17 – 1.4MHz QPSK - Full RB Configuration – Sub ANT)

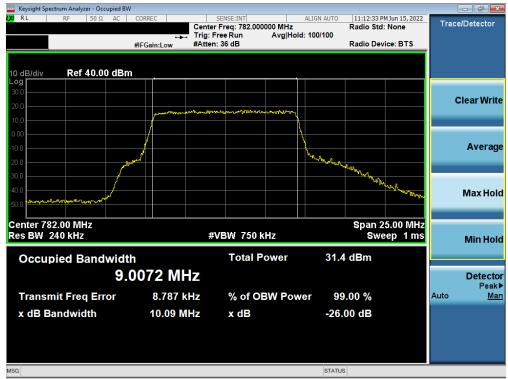


Plot 7-65. Occupied Bandwidth Plot (LTE Band 12/17 – 1.4MHz 16-QAM - Full RB Configuration – Sub ANT)

FCC ID: PY7-76056F		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 40 of 100
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# LTE Band 13 – Sub ANT



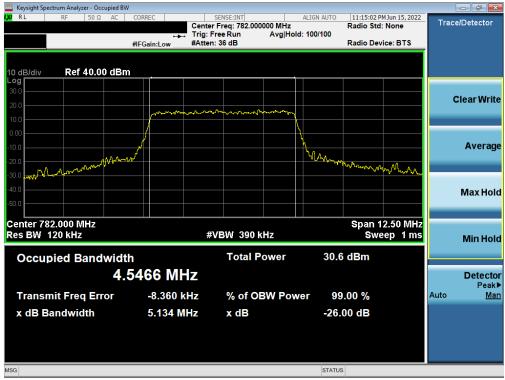
Plot 7-66. Occupied Bandwidth Plot (LTE Band 13 - 10MHz QPSK - Full RB Configuration – Sub ANT)



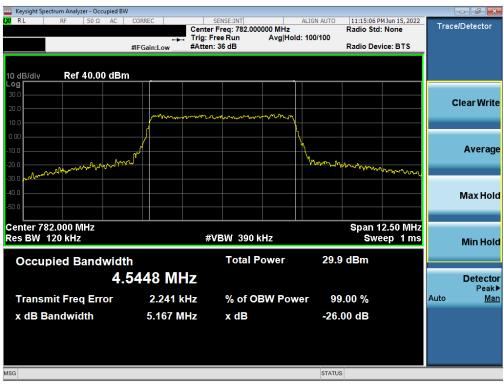
Plot 7-67. Occupied Bandwidth Plot (LTE Band 13 - 10MHz 16-QAM - Full RB Configuration – Sub ANT)

FCC ID: PY7-76056F		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 50 of 198
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Plot 7-68. Occupied Bandwidth Plot (LTE Band 13 - 5MHz QPSK - Full RB Configuration - Sub ANT)



Plot 7-69. Occupied Bandwidth Plot (LTE Band 13 - 5MHz 16-QAM - Full RB Configuration – Sub ANT)

FCC ID: PY7-76056F		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 51 of 109
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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 18GHz (separated into at least two plots per channel)
- 2. RBW ≥ 100kHz
- 3. VBW  $\geq$  3 x RBW
- 4. Detector = RMS
- 5. Trace mode = max hold
- 6. Sweep time = auto couple
- 7. The trace was allowed to stabilize

#### Test Setup

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



Figure 7-3. Test Instrument & Measurement Setup

#### Test Notes

- 1. Per Part 27 and RSS-139, 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.
- 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.

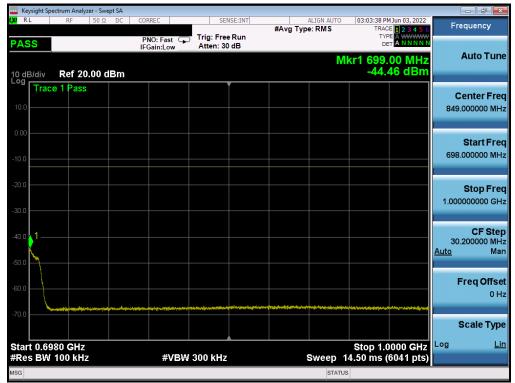
FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT		
Test Report S/N:	Test Dates:	EUT Type:	Dage E2 of 100	
1M2205240063-06.PY7	6/2/2022 - 8/10/2022	Portable Handset	Page 52 of 198	
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# LTE Band 71

Keysight RL	Spectrum Analy RF	yzer - Swe 50 Ω		CORREC		0.51	SE:INT		ALIGN AUTO	02:02:21.0	M Jun 03, 2022	_	- F
KL	KF	50 52	DC	CORREC				#Avg Typ		TRA	CE 1 2 3 4 5 6	F	requency
PASS				PNO: Fast IFGain:Lov		Trig: Free Atten: 30				TY D			
0 dB/div	Ref 2	b 00.0	Bm							061 Mkr1 41.5-	.45 MHz 93 dBm		Auto Tu
.og	ace 1 Pas						Í						
10.0													Center Fr
10.0												34	6.000000 N
0.00													
													Start Fr
10.0											<u> </u>	3	0.000000 N
20.0													Stop Fr
												66	2.000000 N
30.0													
40.0											1		CF St
40.0												6 <u>Auto</u>	3.200000 N N
50.0												Auto	
													Freq Off
60.0													
													Ű
70.0													Scale Ty
													Scale Ty
	.0 MHz									Stop 6	62.0 MHz	Log	
Res B	N 100 kH	Z		#\	/BW	300 kHz		5	weep :	30.34 ms (′	12641 pts)		
SG									STAT	TUS			

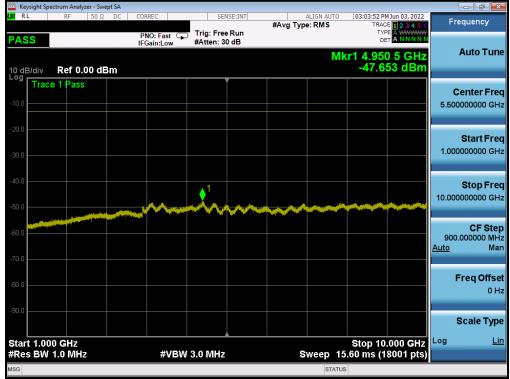
Plot 7-70. Conducted Spurious Plot (LTE Band 71 - 20MHz QPSK – 1 RB - Low Channel)



Plot 7-71. Conducted Spurious Plot (LTE Band 71 - 20MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

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Test Report S/N:	Test Dates:	EUT Type:	Dage 52 of 109	
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Plot 7-72. Conducted Spurious Plot (LTE Band 71 - 20MHz QPSK - 1 RB - Low Channel)



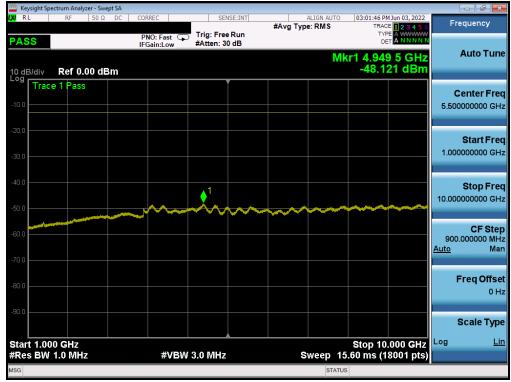
Plot 7-73. Conducted Spurious Plot (LTE Band 71 - 20MHz QPSK - 1 RB - Mid Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT		
Test Report S/N:	Test Dates:	EUT Type:	Page 54 of 198	
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	•		V3.0 1/5/2022	



Keysight Spectrum Analyzer - Swept SA			
XIRL RF 50Ω DC	CORREC SENSE:INT	ALIGN AUTO 03:00:55 PM Jun 03, 2022 #Avg Type: RMS TRACE 1 2 3 4 5 6	Frequency
PASS	PNO: Fast Trig: Free Run IFGain:Low Atten: 30 dB	TYPE A WWWWW DET A NNNN	
10 dB/div Ref 20.00 dBm		Mkr1 698.40 MHz -39.274 dBm	Auto Tune
Log Trace 1 Pass			Center Fred
10.0			849.000000 MHz
0.00			
			Start Fred 698.000000 MHz
-10.0			698.000000 MH2
-20.0			Stop Free
-30.0			1.000000000 GH
1			
-40.0			CF Ster 30.200000 MH
-50.0			<u>Auto</u> Mar
			Freq Offse
-60.0			0 H
-70.0	an biggerin da kanada sa ngaran ganada yang gang gang gang sa manadarakan da mag animi yan da ngaran. An biggerin da kanada sa ngaran gang gang gang gang gang gang sa manadarakan da mag sa manya na da ngaran gang	n fear ann an far air an air an air an an ann an ann an ann an ann an ann an a	Scale Turn
			Scale Type
Start 0.6980 GHz #Res BW 100 kHz	#VBW 300 kHz	Stop 1.0000 GHz Sweep 14.50 ms (6041 pts)	Log <u>Li</u> i
MSG		STATUS	

Plot 7-74. Conducted Spurious Plot (LTE Band 71 - 20MHz QPSK - 1 RB - Mid Channel)



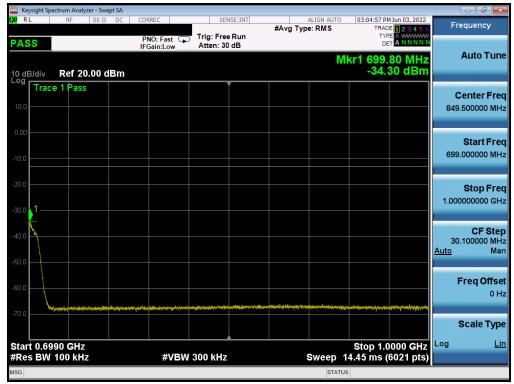
Plot 7-75. Conducted Spurious Plot (LTE Band 71 - 20MHz QPSK - 1 RB - Mid Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Page 55 of 198		
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L			V3.0 1/5/2022		



Keysight Spectrum Analyzer - Swept SA			
<b>X RL</b> RF 50Ω DC	CORREC SENSE:INT	#Avg Type: RMS TRAC	1Jun 03, 2022 E 1 2 3 4 5 6 Frequency
PASS	PNO: Fast Trig: Free Run IFGain:Low Atten: 30 dB	DE Mkr1 662.	TANNNN TANNNNN 70 MHz Auto Tuno
10 dB/div Ref 20.00 dBm		-43.:	21 dBm
10.0			Center Free 346.500000 MH
10.0			Start Fre 30.000000 MH
20.0			Stop Fre 663.000000 MH
40.0			1 CF Ste 63.300000 MH <u>Auto</u> Ma
60.0			Freq Offs 0 ⊢
70.0 And the second secon	ne ty te an	n an	Scale Typ
Start 30.0 MHz #Res BW 100 kHz	#VBW 300 kHz	Stop 6 Sweep 30.38 ms (1	63.0 MHz ^{Log Li} 2661 pts)
ISG		STATUS	

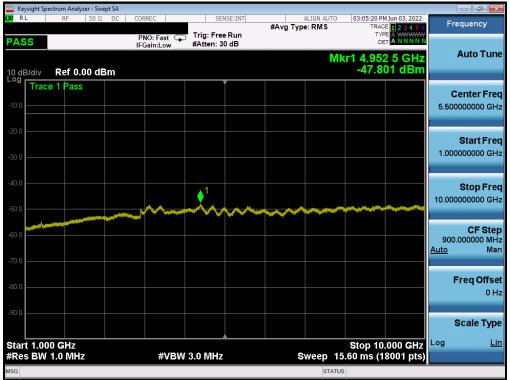
Plot 7-76. Conducted Spurious Plot (LTE Band 71 - 20MHz QPSK - 1 RB - High Channel)



Plot 7-77. Conducted Spurious Plot (LTE Band 71 - 20MHz QPSK - 1 RB - High Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 56 of 109	
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		·	V3.0 1/5/2022	





Plot 7-78. Conducted Spurious Plot (LTE Band 71 - 20MHz QPSK - 1 RB - High Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 57 of 198
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	<u> </u>	·	V3.0 1/5/2022

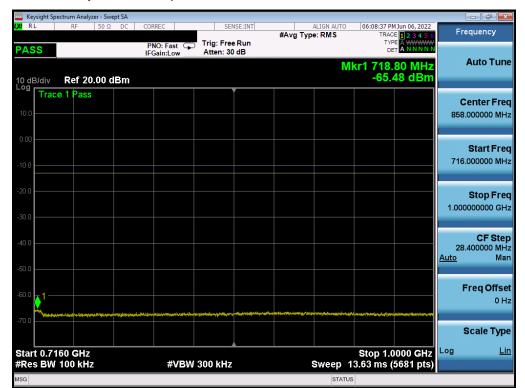
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### LTE Band 12/17 – Main ANT



Plot 7-79. Conducted Spurious Plot (LTE Band 12/17 - 10MHz QPSK - 1 RB - Low Channel – Main ANT)



Plot 7-80. Conducted Spurious Plot (LTE Band 12/17 - 10MHz QPSK - 1 RB - Low Channel – Main ANT)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 58 of 198
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	ctrum Analyzer - Sv										
LXI RL	RF 50 S	2 DC	CORREC	SEN	NSE:INT	#Avg Typ	ALIGN AUTO		4 Jun 06, 2022	Fr	equency
PASS			PNO: Fast IFGain:Low	Trig: Free #Atten: 3				TYF DE			
10 dB/div Log	Ref 0.00 d	Bm					Μ	kr1 1.40 -46.2	8 0 GHz 50 dBm		Auto Tune
-10.0	e 1 Pass										<b>Center Freq</b> 0000000 GHz
-20.0										1.000	Start Freq 0000000 GHz
-40.0				~~~	$\sim$	~~~				10.000	Stop Freq 0000000 GHz
-60.0										900 <u>Auto</u>	CF Step .000000 MHz Man
-80.0											F <b>req Offset</b> 0 Hz
-90.0										Log	Scale Type Lin
Start 1.00 #Res BW			#VBW	3.0 MHz		S	weep 1	Stop 10 5.60 ms (1	.000 GHz 8001 pts)	LUg	
MSG							STATU				

Plot 7-81. Conducted Spurious Plot (LTE Band 12/17 - 10MHz QPSK - 1 RB - Low Channel – Main ANT)

		Analyzer - Sw									_	
<mark>0</mark> RL	RF	50 Ω	2 DC	CORREC	SE	ENSE:INT	#Avg Typ	ALIGN AUT		MJun 06, 2022	Fr	equency
PASS				PNO: Fast IFGain:Low	Trig: Fre Atten: 3		#Avg iyp	Je. KINIS	TY			
0 dB/di	v Rei	f 20.00 (	dBm					l	Mkr1 697 -65.4	.90 MHz 85 dBm		Auto Tun
^{og} Tr	ace 1 P	ass				Ĭ						
10.0												Center Fre
10.0											304	
0.00												
												Start Fr
10.0											30	0.000000 MI
20.0												Stop Fr
											698	8.000000 M
30.0												
												CF Ste
40.0											66	CF 50 6.800000 M
											<u>Auto</u>	м
50.0												
												Freq Offs
60.0										1		- 01
70.0	(paper) is a superior			And an and a state of the local						and the second second		
70.0		and a state of the state of the state		The second s	and a set of the first first first and the							Scale Ty
	0.0 MHz									98.0 MHz	Log	<u>l</u>
Res B	W 100	kHz		#V	BW 300 kHz	z	5	Sweep	32.06 ms (1	3361 pts)		
SG								STA	TUS			

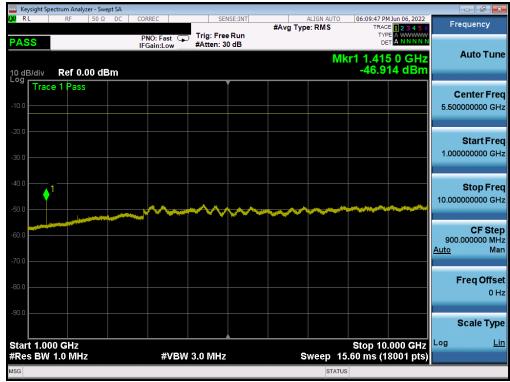
Plot 7-82. Conducted Spurious Plot (LTE Band 12/17 - 10MHz QPSK - 1 RB - Mid Channel – Main ANT)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 59 of 198	
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			V/2 0 1/E/2022	



	ectrum Analyzer - S		000050	0.51	ing mar					
XI RL	RF 50	Ω DC	CORREC		ISE:INT	#Avg Typ	ALIGN AUTO e: RMS	TRAC	4 Jun 06, 2022 E 1 2 3 4 5 6	Frequency
PASS			PNO: Fast IFGain:Low	Trig: Free Atten: 30				TYF		
							М	kr1 716.	10 MHz 74 dBm	Auto Tune
I0 dB/div	Ref 20.00	dBm						-64.9	74 dBm	
Trac	e 1 Pass			· `						Center Free
10.0										858.000000 MH
0.00										Start Free
-10.0										716.000000 MH
-20.0										Stop Free
-30.0										1.000000000 GH
.30.0										
40.0										CF Step 28.400000 MH
										Auto Mar
-50.0										
-60.0 <b>1</b>										Freq Offse
					be and					0 Hz
-70.0	talente for the state of the st	and the second	eller of the interior production					national contract of the second		
										Scale Type
Start 0.71								Stop 1.0	0000 GHz 5681 pts)	Log <u>Lir</u>
#Res BW	100 kHz		#VBW	300 kHz					5681 pts)	
ISG							STATUS	6		

Plot 7-83. Conducted Spurious Plot (LTE Band 12/17 - 10MHz QPSK - 1 RB - Mid Channel - Main ANT)



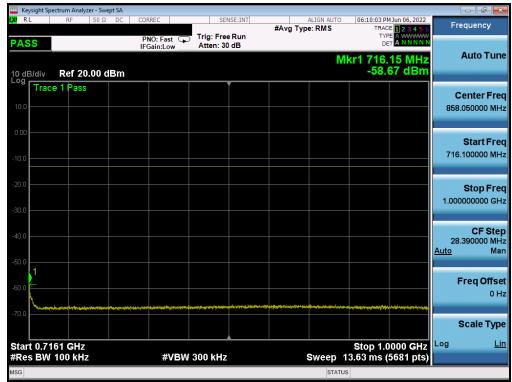
Plot 7-84. Conducted Spurious Plot (LTE Band 12/17 - 10MHz QPSK - 1 RB - Mid Channel – Main ANT)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 60 of 109
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	ectrum Analyzer - Swept SA							
L <mark>XI</mark> RL	RF 50 Ω DC	CORREC	SENSE:INT	A #Avg Type	LIGN AUTO	06:09:57 PM	Jun 06, 2022	Frequency
PASS		PNO: Fast 😱	Trig: Free Run Atten: 30 dB			TYPE DET	A WWWWW A N N N N N	
10 dB/div Log	Ref 20.00 dBm	1			Mł	(r1 692.2 -66.29	20 MHz 4 dBm	Auto Tune
10.0	e 1 Pass							Center Freq 364.000000 MHz
-10.0								Start Freq 30.000000 MHz
-20.0								Stop Freq 698.000000 MHz
-40.0								<b>CF Step</b> 66.800000 MHz <u>Auto</u> Man
-60.0			a star da ar que a curren fun de la meret de seu diferen des		den ek isisenek	deliterate to Manufacture deliterative	1	Freq Offset 0 Hz
-70.0	and a second birth of the second s							Scale Type
Start 30.0 #Res BW		#VBW	300 kHz	Sv	veep 32.	Stop 69 .06 ms (13	0.0 101112	Log <u>Lin</u>
MSG					STATUS			
			-					

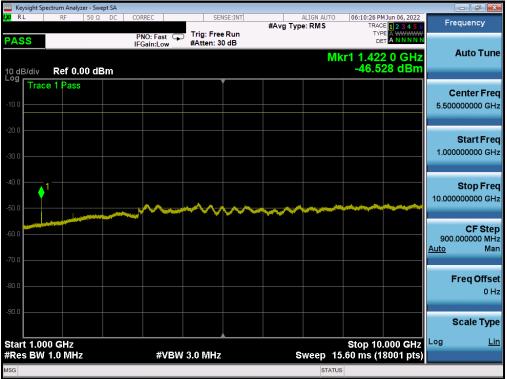
Plot 7-85. Conducted Spurious Plot (LTE Band 12/17 - 10MHz QPSK - 1 RB - High Channel – Main ANT)



Plot 7-86. Conducted Spurious Plot (LTE Band 12/17 - 10MHz QPSK - 1 RB - High Channel – Main ANT)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager	
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Plot 7-87. Conducted Spurious Plot (LTE Band 12/17 - 10MHz QPSK - 1 RB - High Channel – Main ANT)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 62 of 109
1M2205240063-06.PY7	6/2/2022 - 8/10/2022	Portable Handset	Page 62 of 198
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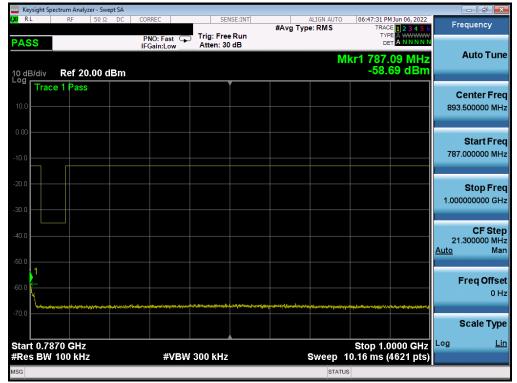
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# LTE Band 13 – Main ANT

Keysight Spectrum Ana							
XIRL RF	50 Ω DC	CORREC	Trig: Free Run	ALIGN #Avg Type: RM	IS TRAC	M Jun 06, 2022 DE 1 2 3 4 5 6 DE 0 4444	Frequency
PASS	0.00 dBm	PNO: Fast IFGain:Low	Atten: 30 dB		Mkr1 771	.80 MHz 09 dBm	Auto Tur
10.0 Trace 1 Pas							<b>Center Fr</b> 403.500000 Mi
10.0							<b>Start Fr</b> 30.000000 M
30.0							<b>Stop Fr</b> 777.000000 M
40.0							<b>CF St</b> 74.700000 M <u>Auto</u> M
60.0					efe for same to be for the same same state of the	1	Freq Offs 0
Start 30.0 MHz					Stop 7	77.0 MHz	Scale Ty
Res BW 100 kH	z	#VBW	/ 300 kHz	Swee	p 35.86 ms (1	4941 pts)	

#### Plot 7-88. Conducted Spurious Plot (LTE Band 13 - 10MHz QPSK - 1 RB - Main ANT)



Plot 7-89. Conducted Spurious Plot (LTE Band 13 - 10MHz QPSK - 1 RB - Main ANT)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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Plot 7-90. Conducted Spurious Plot (LTE Band 13 - 10MHz QPSK - 1 RB - Main ANT)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dege 64 of 109
1M2205240063-06.PY7	6/2/2022 - 8/10/2022	Portable Handset	Page 64 of 198
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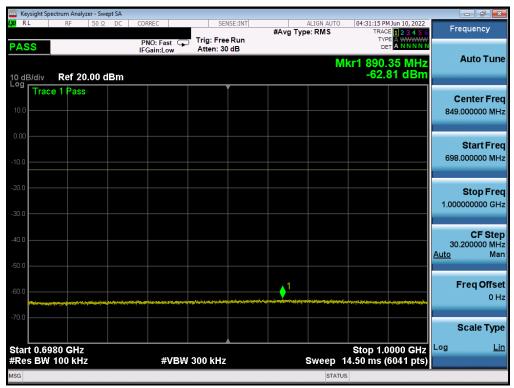
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# NR Band n71

	t Spectrum Anal	yzer - Swep	et SA									
LXI RL	RF	50 Ω	DC	CORREC	SEN	NSE:INT	#Avg Typ	ALIGN AUTO		4 Jun 10, 2022 E <b>1 2 3 4 5</b> 6	Fr	equency
PASS				PNO: Fast IFGain:Low	Trig: Free Atten: 30		#///g / yp	e. King	TYP			
10 dB/di	v Ref 2	0.00 di	Зm					M	kr1 662. -61.4	00 MHz 14 dBm		Auto Tune
	ace 1 Pas	s									c	enter Free
10.0											346	.500000 MH
0.00												Start Free
-10.0											30	.000000 MH
-20.0												ot
~~~~											663	Stop Fre .000000 MH
-30.0												05.044
-40.0											63 Auto	CF Stej .300000 MH Ma
-50.0												
-60.0										1	1	FreqOffse 0 H
-70.0	edentari di cara facilitati		-	terrege flatter gebergingen								511
												Scale Typ
	0.0 MHz W 100 kH	7		#VBW	/ 300 kHz		s	weep 30	Stop 6	63.0 MHz 2661 pts)	Log	Lir
MSG								STATUS				





Plot 7-92. Conducted Spurious Plot (NR Band n71 - 20.0MHz - 1 RB - Low Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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🚾 Keysight Spectrum A						
🗶 RL RF	50 Ω DC	CORREC	SENSE:INT	ALIGN A #Avg Type: RMS		Frequency
PASS		PNO: Fast 🕞 IFGain:Low	Trig: Free Run #Atten: 30 dB		TYPE A WWWWW DET A NNNN	
10 dB/div Ref	0.00 dBm				Mkr1 4.964 0 GHz -44.670 dBm	Auto Tun
Log Trace 1 P	ass		Ĭ			Center Fre
-10.0						5.50000000 GH
-20.0						Start Fre
-30.0						1.000000000 GH
-30.0						
-40.0			1			Stop Fre
			-	\rightarrow		10.000000000 GH
-50.0						
-60.0						CF Ste
						900.000000 MH Auto Ma
-70.0						
						Freq Offs
-80.0						01
-90.0						
						Scale Typ
Start 1.000 GH	z				Stop 10.000 GHz	Log <u>Li</u>
#Res BW 1.0 N		#VBW	3.0 MHz	Sweep	15.60 ms (18001 pts)	
MSG				s	TATUS	



	ectrum Analyze						
L <mark>XI</mark> RL	RF	50 Ω DC	CORREC	SENSE:INT	ALIGN AUTO #Avg Type: RMS	04:38:51 PM Jun 10, 2022 TRACE 1 2 3 4 5 6	Frequency
PASS			PNO: Fast G	Trig: Free Run Atten: 30 dB	#Avg Type. Kino	TYPE A WWWW DET A NNNN	
10 dB/div Log	Ref 20.	00 dBm			n	/kr1 662.90 MHz -62.83 dBm	Auto Tune
10.0 Trac	e 1 Pass						Center Freq 346.500000 MHz
0.00							
-10.0							Start Freq 30.000000 MHz
-20.0							
-30.0							Stop Fred 663.000000 MHz
-40.0							CF Step
-50.0							63.300000 MHz <u>Auto</u> Mar
-60.0						1,	Freq Offset
-70.0	he company in the providence	n an					0 Hz
							Scale Type
Start 30.0 #Res BW			#VBV	V 300 kHz	Sweep 3	Stop 663.0 MHz 30.38 ms (12661 pts)	Log <u>Lin</u>
MSG					STAT	rus	

Plot 7-94. Conducted Spurious Plot (NR Band n71 - 20.0MHz - 1 RB - Mid Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 66 of 109
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	ectrum Analyzer - Swept									
XI RL	RF 50 Ω	DC CORF	REC		ISE:INT	#Avg Type	ALIGN AUTO e: RMS	TRAC	4 Jun 10, 2022 E 1 2 3 4 5 6	Frequency
PASS			0: Fast 😱 ain:Low	Trig: Free Atten: 30				TYF		
10 dB/div	Ref 20.00 dB	m					Μ	kr1 918. -62.	35 MHz 92 dBm	Auto Tune
Trac	e 1 Pass									Center Fred
10.0										849.000000 MHz
0.00										
										Start Freq 698.000000 MHz
-10.0										038.000000 WH12
20.0										Stop Fred
-30.0										1.00000000 GHz
-30.0										
-40.0										CF Step 30.200000 MHz
-50.0										<u>Auto</u> Mar
							4			Freq Offset
60.0	فالملاقعة بالجارية المتحج فالعراج وجواري		موطرية مردانيات مردوا وم	estanta i constanta i constanta	Sectory States	and a strange by an Andrew Strange by the		and the section		0 Hz
70.0										
										Scale Type
Start 0.69				000111				Stop 1.0	000 0112	Log <u>Lin</u>
#Res BW	100 kHz		#VBW	300 kHz			Sweep 1		6041 pts)	
				DI (<u>^</u>		





Plot 7-96. Conducted Spurious Plot (NR Band n71 - 20.0MHz - 1 RB - Mid Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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		n Analyzer - Sw										
LXI RL	F	RF 50 Ω	DC	CORREC		NSE:INT	#Avg Typ	ALIGN AUTO e: RMS	TRAC	1Jun 10, 2022 E 1 2 3 4 5 6	Freq	uency
10 dB/c		ef 20.00 (dBm	PNO: Fast G IFGain:Low	Trig: Fre Atten: 30			М	DE kr1 656.	60 MHz 04 dBm	A	uto Tune
10.0	Frace 1 I	Pass										nter Fred
-10.0												tart Fred
-20.0												top Fred
-40.0 -											63.30 <u>Auto</u>	CF Step 00000 MH Mar
-60.0		ters and the state		elan da gana gana akenan tikata kua kuta	uter (we shall, b) (see e)				Second States of Second States (Second States)		Fre	e q Offse 0 H
-70.0	00.0 84											ale Type: Lir
	30.0 MH BW 100			#VB\	V 300 kHz		s	weep 30	Stop 6 .38 ms (1	63.0 MHz 2661 pts)	209	
MSG								STATUS	3			



	ectrum Analyzer - Swe	•								- F
ASS	RF 50 Ω		ORREC			#Avg Typ	ALIGN AUTO De: RMS	04:45:56 PM Jun 10 TRACE 1 2 3 TYPE A WA DET A N	3 4 5 6	Frequency
0 dB/div	Ref 20.00 c	IBm					М	kr1 702.95 -62.18 d		Auto Tur
10.0 Trac	e 1 Pass									Center Fre 849.000000 Mi
0.0										Start Fr 698.000000 M
0.0										Stop Fr 1.000000000 G
0.0									Δ	CF St 30.200000 M uto M
	alynybertelegelegelegelegelegelegelegelegelegele	forny si they are sported	-sefer af frankskyr op o	ale la contratifican	gir. minister fuged	A land the second s	g toget a loss of groups o	ananan ang panangan kang manangan pang bana		Freq Off ଶ ୦
										Scale Ty
	980 GHz 100 kHz		#VBV	/ 300 kHz			Sweep 1	Stop 1.0000 4.50 ms (6041	0112	
SG							STATUS	;		

Plot 7-98. Conducted Spurious Plot (NR Band n71 - 20.0MHz - 1 RB - High Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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Plot 7-99. Conducted Spurious Plot (NR Band n71 - 20.0MHz - 1 RB - High Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT			
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1M2205240063-06.PY7	6/2/2022 - 8/10/2022	Portable Handset	Page 69 of 198		
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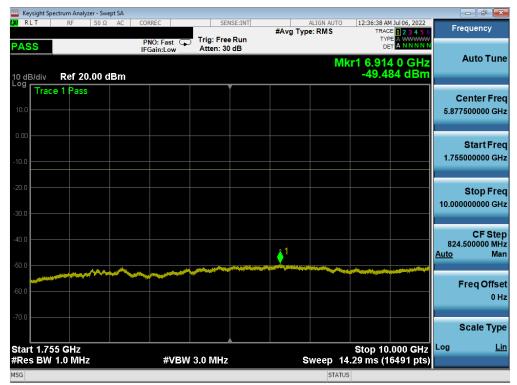
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WCDMA AWS

🚾 Keysight Spe	ctrum Analyz	zer - Swep	ot SA										
XI RLT	RF	50 Ω	AC	CORREC	ast 😱	Trig: Fre		#Avg Typ	ALIGN AUTO	TRAC	M Jul 06, 2022 E 1 2 3 4 5 6 PE A WWWWW T A N N N N N	Fre	equency
PASS	Ref 20	.00 dl	Bm	IFGain:I	Low	Atten: 30) dB		M	(r1 1.70	5 0 GHz 65 dBm		Auto Tune
10.0 Trace	e 1 Pass												enter Freq 500000 MHz
-10.0												30.	Start Fred
-20.0												1.705	Stop Free
-40.0											1	167. <u>Auto</u>	CF Step 500000 MH Mar
60.0 60.0	******		وريا بين يې يې يې	ang selon ang segarah s	****	مېرېل ە بەرك قارىيەرى ك		erie - Telescope an Phoile		a pinanta matanga anta	e ante-iun, stronge	F	Freq Offse 0 Ha
-70.0 Start 0.03										Stop 1.	7050 GHz	Log	Scale Type <u>Lir</u>
#Res BW	1.0 MHz				#VBW	3.0 MHz			Sweep 2 STATU:		(3361 pts)		

Plot 7-31. Conducted Spurious Plot (WCDMA Ch. 1312- Low Channel)



Plot 7-31. Conducted Spurious Plot (WCDMA Ch. 1312- Low Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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	ectrum Analy		ot SA										7 X
<mark>(</mark> RLT	RF	50 Ω	AC	CORREC		SEI	NSE:INT	#Avg Typ	ALIGN AU		52 AM Jul 06, 2022	Frequen	ісу
PASS				PNO: Fa	ast 🖵 .ow	Trig: Free Atten: 10		• ,					
0 dB/div	Ref 0.	00 dB	m						N	lkr1 18.: -56	314 0 GHz .919 dBm	Auto	Tun
^{og} Trac	e 1 Pass											Cente	r Fre
10.0												15.0000000	00 GH
10.0												Star	tFre
30.0												10.0000000	00 GH
10.0												Stop	o Ere
50.0												20.00000000	
										↓ ¹		CI	= Ste
50.0						and the second		h	-		international de la constante d	1.00000000 <u>Auto</u>	
0.0			Anite Addate										
30.0												Freq	Offs 0 H
90.0													_
												Scale	
tart 10.0 Res BW				4	≠vbw	3.0 MHz		s	weep	Stop 25.33 ms	20.000 GHz (20001 pts)	Log	L
SG										ATUS			



Keysight Spe													- 0
(RLT	RF	50 Ω	AC	CORREC	1			#Avg Ty	ALIGN AUTO	TRA	M Jul 06, 2022 CE 1 2 3 4 5 6 (PE A WWWWWW	Fr	equency
PASS	Ref 20).00 d	Bm	IFGain	Fast 🗣	Atten: 3			M	lkr1 1.70	9 5 GHz 58 dBm		Auto Tun
-og Trace	e 1 Pass												enter Fre .000000 MH
10.0												30	Start Fre
20.0												1.710	Stop Fre
40.0											1	168 <u>Auto</u>	CF Ste .000000 MI M
50.0	insaning a k ationsana	araa sa ja sa la	ent	فأبديوه المتراكر مص				19				I	Freq Offs 0 I
											7400 011-	Log	Scale Typ
Start 0.03 ∮Res BW					#VBW	/ 3.0 MH	7		Sweep		7100 GHz (3361 pts)	209	
SG									STAT		(even hre)		

Plot 7-31. Conducted Spurious Plot (WCDMA Ch. 1413- Mid Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 71 of 198	
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			1/2 0 1/5/2022	



	ctrum Analyzer - Swe										
LXU RLT	RF 50 Ω	AC CO	RREC	SEN	ISE:INT	#Avg Typ	ALIGN AUTO e: RMS		4 Jul 06, 2022 E 1 2 3 4 5 6	Frequen	су
PASS		P	NO: Fast 🗣 Gain:Low	Trig: Free Atten: 30				TYF DE			
10 dB/div Log	Ref 20.00 d	IBm					Μ	kr1 6.89 -49.0	8 5 GHz 81 dBm	Auto	Tune
Trace	1 Pass									Center	Freq
10.0										5.87750000	0 GHz
0.00											
											tFreq
-10.0										1.75500000	0 GHZ
-20.0										Ston	Freq
										10.00000000	-
-30.0											
-40.0										CF 824.50000	Step
						∮ ¹				<u>Auto</u>	Man
-50.0	and the second second		an and the second								
-60.0										FreqC	Offset 0 Hz
											UHZ
-70.0										Scale	Туре
Start 1.75								Stop 10	.000 GHz	Log	Lin
#Res BW			#VBW	3.0 MHz		s	weep 1	4.29 ms (1			
MSG							STATU	JS			

Plot 7-31. Conducted Spurious Plot (WCDMA Ch. 1413- Mid Channel)



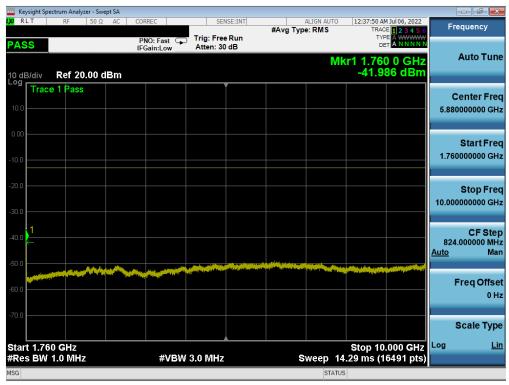
Plot 7-31. Conducted Spurious Plot (WCDMA Ch. 1413- Mid Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager	
Test Report S/N:	Report S/N: Test Dates: EUT Type:		Dage 72 of 109	
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	ctrum Analyzer - Sw									_	
LXI RLT	RF 50 Ω	AC CC	ORREC	SEI	NSE:INT	#Avg Typ	ALIGN AUTO e: RMS		1 Jul 06, 2022 E 1 2 3 4 5 6	Freq	uency
PASS			NO: Fast 🖵	Trig: Free Atten: 30				TYP	E A WWWWW T A N N N N N		
		1	Gain:Low	Atten: 30	ub .		NAL	(r1 1.65)		A	uto Tune
10 dB/div	Ref 20.00 c	Rm					IVIP	-53.	87 dBm		
Log	e 1 Pass			<u> </u>							
Tac	e ass									Ce	nter Freq
10.0										870.0	00000 MHz
0.00										s	start Freq
-10.0											00000 MHz
-10.0											
-20.0											-
20.0											Stop Freq
-30.0										1.7100	00000 GHz
-40.0										168.0	CF Step
										Auto	Man
-50.0									1 -		
			منيند وجدور ورجور ورجو						an in an a shi ka ariya	Er	eq Offset
-60.0	and and a stand of the specific stands of the stand stands of the specific stands of the stand stands of the st										0 Hz
-70.0											ale Type
											ale Type
Start 0.03	00 GHz							Stop 1.7	100 GHz	Log	Lin
#Res BW	1.0 MHz		#VBW	/ 3.0 MHz			Sweep 2	.240 ms (3361 pts)		
MSG							STATUS	5			

Plot 7-31. Conducted Spurious Plot (WCDMA Ch. 1513- High Channel)



Plot 7-31. Conducted Spurious Plot (WCDMA Ch. 1513- High Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT				
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Plot 7-31. Conducted Spurious Plot (WCDMA Ch. 1513- High Channel)

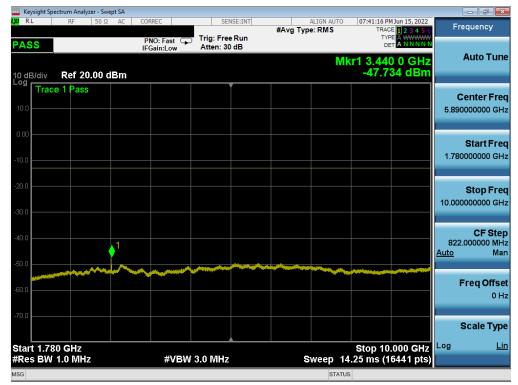
FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager	
Test Report S/N:	t Report S/N: Test Dates: EUT Type:		Dage 74 of 109	
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LTE Band 66/4

	ctrum Analy												ð 💌
RL	RF	50 Ω	AC	CORREC		SEN	ISE:INT	#Avg	ALIGN AUT Type: RMS	TR	PMJun 15, 2022 ACE 1 2 3 4 5 6	Frequ	ency
PASS				PNO: IFGain	Fast 🖵 :Low	Trig: Free Atten: 30							
0 dB/div	Ref 2	0.00 d	Bm						ľ	41 Wkr1 1.7	08 5 GHz I.69 dBm	Au	to Tun
.og	e 1 Pass	;				· · · · · · · · · · · · · · · · · · ·						Cent	ter Fre
10.0												869.500	
0.00													
J.UU												Sta	art Fre
0.0												30.000	000 MH
0.0													
0.0												St 1.709000	op Fre
0.0												1.705000	000 81
10.0											1		CF Ste
0.0												167.900 <u>Auto</u>	HN 0000 Ma
0.0											{		
i0.0		and the state	وسنعصبهم		nater (respective)		anta (la cata da mara agara a		www.com.co.fr.Standerine	a-a-e-a-a-a-a-a-a-a-a-a-a-a-a-a-a-a-a-a	and a second	Free	qOffse
.0.0													0 H
0.0													
													le Typ
tart 0.03										Stop 1	.7090 GHz	Log	Li
Res BW	1.U MH	z			#VBW	3.0 MHz			Sweep	2.240 ms	(3361 pts)		

Plot 7-100. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - Low Channel)



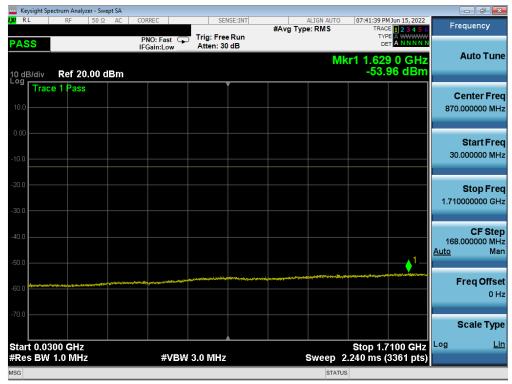
Plot 7-101. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - Low Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager	
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Keysight Spectrum Analyzer - Swept SA						
<mark>IX/</mark> RL RF 50Ω AC		SENSE:INT	#Avg Type: RM	IS TRAC	1 Jun 15, 2022	Frequency
PASS 10 dB/div Ref 0.00 dBm		y: Free Run en: 10 dB			5 GHz 21 dBm	Auto Tune
-10.0						Center Freq 15.00000000 GHz
-20.0						Start Freq 10.000000000 GHz
-40.0						Stop Freq 20.000000000 GHz
-60.0			and the second second	~~~~^1		CF Step 1.000000000 GHz <u>Auto</u> Man
-80.0						Freq Offset 0 Hz
-30.0 Start 10.000 GHz				Stop 20.	000 0112	Scale Type
#Res BW 1.0 MHz	#VBW 3.0	MHz	Swee	p 25.33 ms (2	0001 pts)	
MSG				STATUS		

Plot 7-102. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - Low Channel)



Plot 7-103. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - Mid Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager	
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PASS PNO: Fast IFGain:Low Trig: Free Run Atten: 30 dB Trig: Free Run Atten: 30 dB Trig: Free Run Pert Mkr1 3.490 0 GHz 5.89000000 GHz Auto Tune 00 000	🔤 Keysight Spectrum Analyzer - Swept S					
PASS PNO: Fast IFGain:Low Trig: Free Run Atten: 30 dB Trig: Free Run Atten: 30 dB Trig: Free Run Dot B/Joint Trig: Free Run Atten: 30 dB Auto Tune 100 dB/div Ref 20.00 dBm 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 100 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 100 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 100 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 100 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 100 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 100 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 100 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 100 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 100 48.773 dBm 48.773 dBm 48.773 dBm 48.773 dBm 4	LXI RL RF 50Ω A	AC CORREC	SENSE:INT			Frequency
Mkr1 3.490 0 GHz Mkr1 3.490 0 GHz Center Freq 5.89000000 GHz 1.78000000 GHz 1.780000000 GHz 1.78000000 GHz 1.780000000 GHz 1.78000000 GHz 1.780000000 GHz 1.78000000 GHZ 1.7800000 GHZ	PASS			- //	TYPE A WWWWW	
OP Trace 1 Pass Center Freq 100 Center Freq 5.89000000 GHz 100 Start Freq 1.78000000 GHz 100 Center Freq 1.78000000 GHz 100 Center Freq 5.89000000 GHz 200 Freq Offset 600		IFGain:Low 7	Allen. oo ab		Mkr1 3 490 0 GHz	Auto Tune
Trace 1 Pass Center Freq 100 Center Freq 000 Start Freq 100 Start Freq 101 Center Freq 102 Start Freq 103 Center Freq 104 Start Freq 105 Center Freq 105 Center Freq 106 CF Step 822.000000 MHz Man Freq Offset	10 dB/div Ref 20.00 dBr	m			-48.773 dBm	
100	Trace 1 Pass					Center Freq
100 Start Freq 200 Stop Freq 300 Stop Freq 400 Stop Freq 400 Stop Freq 400 Stop Freq 500 Stop Freq	10.0					
100 Start Freq 200 Stop Freq 300 Stop Freq 400 Stop Freq 400 Stop Freq 400 Stop Freq 500 Stop Freq						
10.0 1.78000000 GHz 200 Stop Freq 300 Stop Freq 400 Stop Freq 1 Stop Freq 1 Stop Freq 200 Stop Freq 400 Stop Freq 1 Stop Freq 1 Stop Freq 200 Stop Freq 1 Stop Freq 10.00000000 GHz 200 Stop Freq 10.00000000 GHz 200 Stop Freq 10.00000000 GHz 200 Stop Freq 10.0000000 GHz 200 Stop Freq 200 Stop Freq 200 Stop Freq 200 Stop Freq <t< td=""><td>0.00</td><td></td><td></td><td></td><td></td><td>Otent From</td></t<>	0.00					Otent From
100 1						•
30.0	-10.0					1.78000000 GH2
30.0	20.0					
30.0 40.0 50.0 60.0 50.0	-20.0					
400 1 822.00000 MHz Auto Man Freq Offset	-30.0					10.000000000 GHz
400 1 822.00000 MHz Auto Man Freq Offset						
50.0 Auto Man	-40.0					
Freq Offset	↓	1				
an n	-50.0					
0 Hz						Freq Offset
	-bU.U					0 Hz
	-70.0					
Scale Type						Scale Type
Start 1 780 GHz Stop 10 000 GHz Log Lin						
	Start 1.780 GHz #Res BW 1.0 MHz	#VBW 3.	0 MHz	Sween	Stop 10.000 GHz 14.25 ms (16441 pts)	
	MSG					





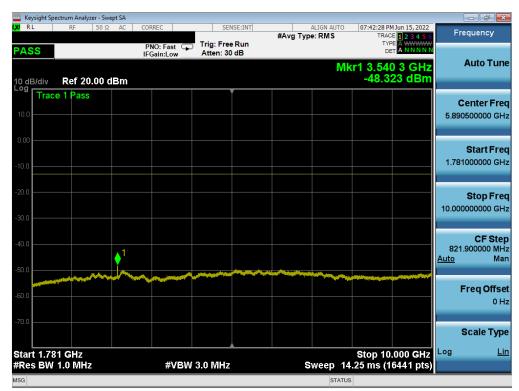
Plot 7-105. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - Mid Channel)

FCC ID: PY7-76056F		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager	
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	ectrum Analyzer - S								- đ	×
XI RL	RF 50	Ω AC	CORREC	SENSE	#A	ALIGN AU vg Type: RMS	TRA	MJun 15, 2022 CE 1 2 3 4 5 6	Frequency	
PASS			PNO: Fast G	Trig: Free R Atten: 30 dl						
10 dB/div	Ref 20.00	dBm					Mkr1 1.58 -53.	0 0 GHz 68 dBm	Auto Tu	une
Log Trac	e 1 Pass			Ĭ					Center F	rea
10.0									870.000000	
0.00									Start F	req
10.0									30.000000	MHz
20.0									Stop F	
30.0									1.710000000	GHZ
									CF S	ten
40.0									168.000000 M	
50.0								1	Auto	wan
	موادوان وروانون وروانون اور	مورد	ووي المردية ال		*** *****	****	and the second	and the second second	Freq Off	fset
60.0	and all and a subscription of the second									0 Hz
70.0										
									Scale Ty	ype
Start 0.03				A			Stop 1.		Log	Lin
	1.0 MHz		#VBW	3.0 MHz			2.240 ms	(3361 pts)		
ISG						ST	ATUS			

Plot 7-106. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - High Channel)



Plot 7-107. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - High Channel)

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<u> </u>		·	V3.0 1/5/2022	





Plot 7-108. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - High Channel)

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	•	·	V3.0 1/5/2022	

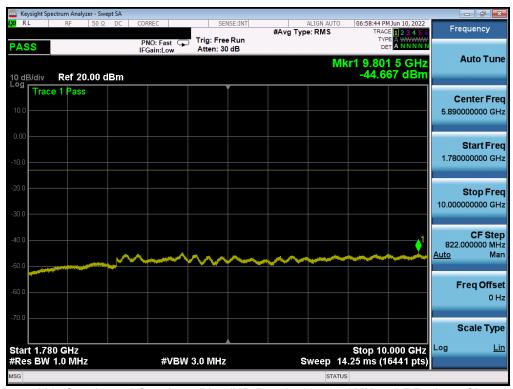
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NR Band n66

Keysight Spe							 					- d" - D
XI RL	RF	50 Ω	DC	CORREC PNO: Fas		Trig: Free	#Avg Typ	ALIGN AUTO	TR/	PM Jun 10, 2022 CE 1 2 3 4 5 6 (PE A WWWWW DET A NNNNN	Freque	ncy
PASS	Ref 20).00 d	Bm	IFGain:Lo		Atten: 30		N	lkr1 1.70	9 0 GHz 38 dBm	Aut	o Tu
-og Trac	e 1 Pass	;									Cent 870.000	
10.00											St a 30.000	nt Fr DOO M
20.0											Sto 1.710000	op Fi 000 G
40.0										1	C 168.0000 <u>Auto</u>	F S1 000 N N
50.0	1977 Haray J. J. J. A.	alaray na Bagian na r	من عل م رتصر الإيم		ndegere er	and the second	<u>in the second state of th</u>				Frec	l Off C
70.0 Start 0.03									Stop 1	7100 GHz	Sca Log	le Ty
fRes BW	1.0 MH;	2		#\	/BW :	3.0 MHz		Sweep	2.240 ms	(3361 pts)		

Plot 7-109. Conducted Spurious Plot (NR Band n66 -20.0MHz - 1 RB - Low Channel)



Plot 7-110. Conducted Spurious Plot (NR Band n66 - 20.0MHz - 1 RB - Low Channel)

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Keysight Spectrum Analyzer - Sw					
X RL RF 50 Ω	DC CORREC PNO: Fast	SENSE:INT Trig: Free Run Atten: 10 dB	ALIGN A #Avg Type: RMS		
10 dB/div Ref 0.00 dl		Attent to db	I	Mkr1 19.574 5 GHz -61.291 dBm	Auto Tun
-10.0 Trace 1 Pass					Center Fre 15.000000000 G⊦
-20.0					Start Fre 10.000000000 GF
-40.0					Stop Fre 20.000000000 GH
60.0				1	CF Ste 1.000000000 GI <u>Auto</u> M
80.0					Freq Offs 0
90.0 Start 10.000 GHz #Res BW 1.0 MHz	#VBW 3		Sween	Stop 20.000 GHz 17.33 ms (20001 pts)	Scale Typ
ISG	"•B M (TATUS	

Plot 7-111. Conducted Spurious Plot (NR Band n66 - 20.0MHz - 1 RB - Low Channel)

	rum Analyzer - Swept	SA				
LXU RL	RF 50 Ω	DC CORREC PNO: Fast	SENSE:INT	ALIGN AUTO #Avg Type: RMS	07:07:18 PM Jun 10, 2022 TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A NNNNN	Frequency
PASS	Ref 20.00 dE	IFGain:Low	Atten: 30 dB	MI	(r1 1.695 5 GHz -51.11 dBm	Auto Tune
10.0	1 Pass					Center Fred 870.000000 MH;
-10.0						Start Free 30.000000 MH
-20.0						Stop Free 1.710000000 GH
-40.0					`	CF Stej 168.000000 MH <u>Auto</u> Ma
-60.0	94/00 <mark>- 19 - 19 - 19 - 19 - 19 - 19 - 19 - 1</mark>		n na		/	Freq Offse 0 H
-70.0						Scale Type
Start 0.030 #Res BW 1		#VBW	3.0 MHz	Sweep 2	Stop 1.7100 GHz 2.240 ms (3361 pts)	
MSG				STATU	5	

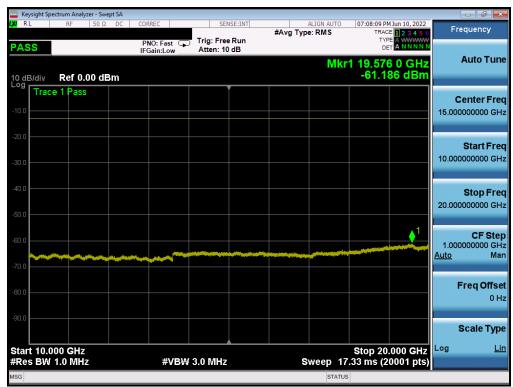
Plot 7-112. Conducted Spurious Plot (NR Band n66 - 20.0MHz - 1 RB - Mid Channel)

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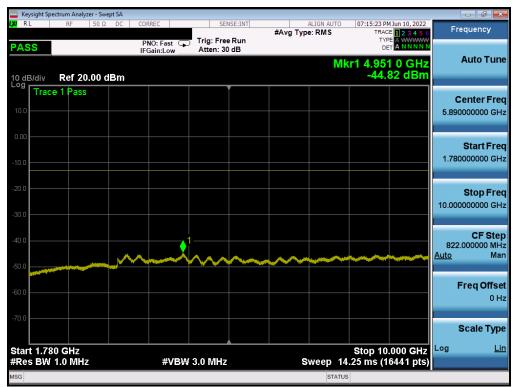
Plot 7-114. Conducted Spurious Plot (NR Band n66 - 20.0MHz - 1 RB - Mid Channel)

FCC ID: PY7-76056F	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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weysight Spectrum Analyzer - Swept SA			
LX RL RF 50 Ω DC	CORREC SENSE:INT	ALIGN AUTO 07:15:01 PM Jun 10, 2022 #Avg Type: RMS TRACE 1 2 3 4 5 6	Frequency
PASS 10 dB/div Ref 20.00 dBm	PNO: Fast 🖵 Trig: Free Run IFGain:Low Atten: 30 dB	Mkr1 1.686 5 GHz -51.21 dBm	Auto Tune
Log Trace 1 Pass			Center Freq 870.000000 MHz
-10.0			Start Freq 30.000000 MHz
-20.0			Stop Freq 1.710000000 GHz
-40.0			CF Step 168.000000 MH: <u>Auto</u> Mar
-60.0			Freq Offse 0 H:
			Scale Type
Start 0.0300 GHz #Res BW 1.0 MHz	#VBW 3.0 MHz	Stop 1.7100 GHz Sweep 2.240 ms (3361 pts)	Log <u>Lin</u>
MSG		STATUS	





Plot 7-116. Conducted Spurious Plot (NR Band n66 - 20.0MHz - 1 RB - High Channel)

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