

PART 22 MEASUREMENT REPORT

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

Date of Testing:
8/2 – 9/23/2021
Test Site/Location:
PCTEST Lab. Columbia, MD, USA
Test Report Serial No.:
1M2108040087-02-R1.PY7

FCC ID:	PY7-95324M
Applicant Name:	SONY Corporation

Application Type:	Certification
EUT Type:	Portable Handset
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part:	22
Test Procedure(s):	ANSI C63.26-2015, ANSI/TIA-603-E-2016, KDB 971168 D01 v03r01

Note: This revised Test Report (S/N: 1M2108040087-02-R1.PY7) supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

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

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


Randy Ortanez
President






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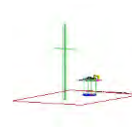
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Mode	Modulation	Tx Frequency Range [MHz]	ERP		EIRP		Emission Designator
			Max. Power [W]	Max. Power [dBm]	Max. Power [W]	Max. Power [dBm]	
GSM/GPRS	GMSK	824.2 - 848.8	0.131	21.17	0.215	23.32	246KGXW
EDGE	8-PSK	824.2 - 848.8	0.038	15.80	0.062	17.95	244KG7W
WCDMA	Spread Spectrum	826.4 - 846.6	0.064	18.08	0.105	20.23	4M17F9W

Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	ERP		EIRP		Emission Designator
				Max. Power [W]	Max. Power [dBm]	Max. Power [W]	Max. Power [dBm]	
LTE Band 5	10 MHz	QPSK	829.0 - 844.0	0.050	16.96	0.081	19.11	9M01G7D
		16QAM	829.0 - 844.0	0.044	16.43	0.072	18.58	9M00W7D
	5 MHz	QPSK	826.5 - 846.5	0.050	16.95	0.081	19.10	4M53G7D
		16QAM	826.5 - 846.5	0.045	16.53	0.074	18.68	4M52W7D
	3 MHz	QPSK	825.5 - 847.5	0.049	16.89	0.080	19.04	2M71G7D
		16QAM	825.5 - 847.5	0.044	16.43	0.072	18.58	2M71W7D
NR Band n5	20 MHz	QPSK	824.7 - 848.3	0.049	16.87	0.080	19.02	1M09G7D
		16QAM	824.7 - 848.3	0.041	16.14	0.067	18.29	1M09W7D
		π/2 BPSK	834.0 - 839.0	0.033	15.24	0.055	17.39	18M0G7D
	15 MHz	QPSK	834.0 - 839.0	0.033	15.22	0.055	17.37	18M9G7D
		16QAM	834.0 - 839.0	0.028	14.46	0.046	16.61	19M0W7D
		π/2 BPSK	831.5 - 841.5	0.034	15.30	0.056	17.45	13M4G7D
	10 MHz	QPSK	831.5 - 841.5	0.035	15.47	0.058	17.62	14M2G7D
		16QAM	831.5 - 841.5	0.027	14.35	0.045	16.50	14M2W7D
		π/2 BPSK	829.0 - 844.0	0.035	15.41	0.057	17.56	9M02G7D
	5 MHz	QPSK	829.0 - 844.0	0.035	15.43	0.057	17.58	9M32G7D
		16QAM	829.0 - 844.0	0.028	14.41	0.045	16.56	9M33W7D
		π/2 BPSK	826.5 - 846.5	0.034	15.37	0.056	17.52	4M50G7D
		QPSK	826.5 - 846.5	0.035	15.46	0.058	17.61	4M50G7D
		16QAM	826.5 - 846.5	0.028	14.48	0.046	16.63	4M50W7D

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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 PCTEST Test Location

These measurement tests were conducted at the PCTEST Engineering Laboratory, Inc. facility 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 PCTEST Engineering Lab located in Columbia, MD 21046, U.S.A.

- PCTEST 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.
- PCTEST 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 ISSED Standards (RSS).
- PCTEST facility is a registered (2451B) test laboratory with the site description on file with ISSED.

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **SONY Portable Handset FCC ID: PY7-95324M**. The test data contained in this report pertains only to the emissions due to the EUT's licensed transmitters that operate under the provisions of Part 22.

Test Device Serial No.: 0109M, 0159M, 00J9M, 05M9Q

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 , 802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII, Bluetooth (1x, EDR, LE), NFC

2.3 Test Configuration

The EUT was tested per the guidance of ANSI/TIA-603-E-2016 and KDB 971168 D01 v03r01. See Section 3.2 of this test report for a description of the radiated and antenna port conducted emissions tests.

2.4 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 “Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards” (ANSI/TIA-603-E-2016) and “Measurement Guidance for Certification of Licensed Digital Transmitters” (KDB 971168 D01 v03r01) 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/TIA-603-E-2016. A half-wave dipole is substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT. The power of the emission is calculated using the following formula:

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

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

For radiated spurious emissions measurements and calculations, conversion method is used per the formulas in KDB 971168 Section 5.8.4. Field Strength (EIRP) is calculated using the following formulas:


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

And

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

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


Radiated power and radiated spurious emission levels are investigated with the receive antenna horizontally and vertically polarized per ANSI/TIA-603-E-2016.

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4.0 MEASUREMENT UNCERTAINTY

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

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

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5.0 TEST EQUIPMENT CALIBRATION DATA


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

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	AP2	EMC Cable and Switch System	3/4/2021	Annual	3/4/2022	AP2
-	AP1	EMC Cable and Switch System	3/9/2021	Annual	3/9/2022	AP1
-	ETS	EMC Cable and Switch System	3/4/2021	Annual	3/4/2022	ETS
-	LTx1	Licensed Transmitter Cable Set	3/12/2021	Annual	3/12/2022	LTx1
-	LTx2	Licensed Transmitter Cable Set	3/12/2021	Annual	3/12/2022	LTx2
-	LTx3	Licensed Transmitter Cable Set	2/26/2021	Annual	2/26/2022	LTx3
Agilent	E5515C	Wireless Communications Test Set	N/A			GB45360985
Agilent	E5515C	Wireless Communications Test Set	N/A			GB46310798
Agilent	N9030A	50GHz PXA Signal Analyzer	1/20/2021	Annual	1/20/2022	US51350301
Anritsu	MT8821C	Radio Communication Analyzer	N/A			6201525694
Emco	3115	Horn Antenna (1-18GHz)	6/18/2020	Biennial	6/18/2022	9704-5182
Espec	ESX-2CA	Environmental Chamber	8/27/2020	Annual	8/27/2022	17620
ETS Lindgren	3117	1-18 GHz DRG Horn (Medium)	4/20/2021	Biennial	4/20/2023	00125518
ETS Lindgren	3164-08	Quad Ridge Horn Antenna	3/12/2020	Biennial	3/12/2022	128337
ETS Lindgren	3816/2NM	LISN	7/9/2020	Biennial	7/9/2022	00114451
Mini-Circuits	SSG-4000HP	Synthesized Signal Generator	N/A			11208010032
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			100976
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			112347
Rohde & Schwarz	ESW44	EMI Test Receiver 2Hz to 44 GHz	1/21/2021	Annual	1/21/2022	101716
Rohde & Schwarz	FSW26	2Hz-26.5GHz Signal and Spectrum Analyzer	2/10/2021	Annual	2/10/2022	103187
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	7/27/2020	Biennial	7/27/2022	A051107
Sunol	JB6	LB6 Antenna	11/13/2020	Biennial	11/13/2022	A082816

Table 5-1. Test Equipment

Notes:

- 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.
- Equipment with a calibration date of "N/A" shown in this list was not used to make direct calibrated measurements.

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6.0 SAMPLE CALCULATIONS

GSM Emission Designator

Emission Designator = 250KGXW

GSM BW = 250 kHz

G = Phase Modulation

X = Cases not otherwise covered

W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 250KG7W

EDGE BW = 250 kHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M16F9W

WCDMA BW = 4.16 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

QPSK Modulation

Emission Designator = 8M62G7D

LTE BW = 8.62 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission, telemetry, telecommand

QAM Modulation


Emission Designator = 8M45W7D

LTE BW = 8.45 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info


D = Data transmission, telemetry, telecommand

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Spurious Radiated Emission

Example: Spurious emission at 3700.40 MHz

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

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7.0 TEST RESULTS

7.1 Summary


Company Name: Sony Mobile Communications Inc
FCC ID: PY7-95324M
FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
Mode(s): NR/GSM/GPRS/EDGE/WCDMA/LTE

Test Condition	Test Description	FCC Part Section(s)	Test Limit	Test Result	Reference
CONDUCTED	Transmitter Conducted Output Power	2.1046	N/A	PASS	See RF Exposure Report
	Occupied Bandwidth	2.1049	N/A	PASS	Section 7.2
	Conducted Band Edge / Spurious Emissions	2.1051, 22.917(a)	> 43 + 10log10(P[Watts]) at Band Edge and for all out-of-band emissions	PASS	Sections 7.3, 7.4
	Frequency Stability	2.1055, 22.355	Fundamental emissions stay within authorized frequency block	PASS	Section 7.8
RADIATED	Effective Radiated Power / Equivalent Isotropic Radiated Power	22.913(a)(5)	< 7 Watts max. ERP	PASS	Section 7.6
	Radiated Spurious Emissions	2.1053, 22.917(a)	> 43 + 10 log10 (P[Watts]) for all out-of-band emissions	PASS	Section 7.7

Table 7-1. Summary of Test Results

Notes:

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

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7.2 Occupied Bandwidth

Test Overview

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

Test Procedure Used

KDB 971168 D01 v03r01 – Section 4.2

Test Settings

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

Test Setup

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

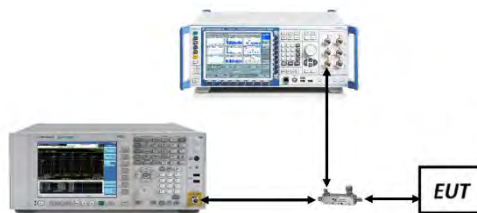


Figure 7-1. Test Instrument & Measurement Setup

Test Notes

None.

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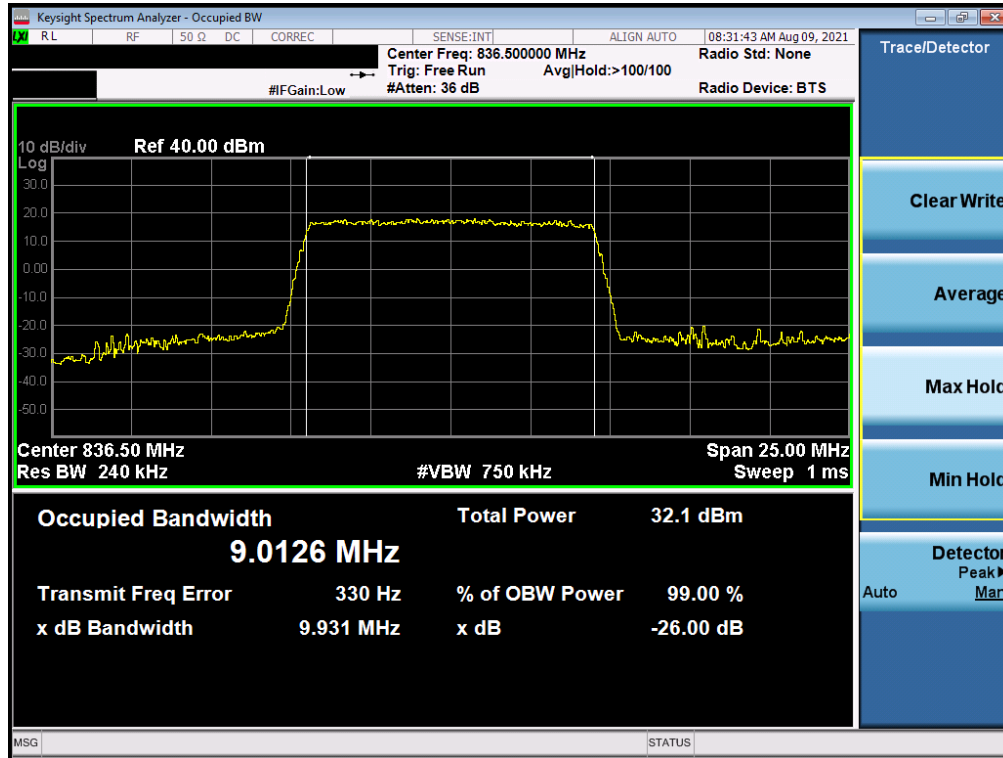
WCDMA Cell



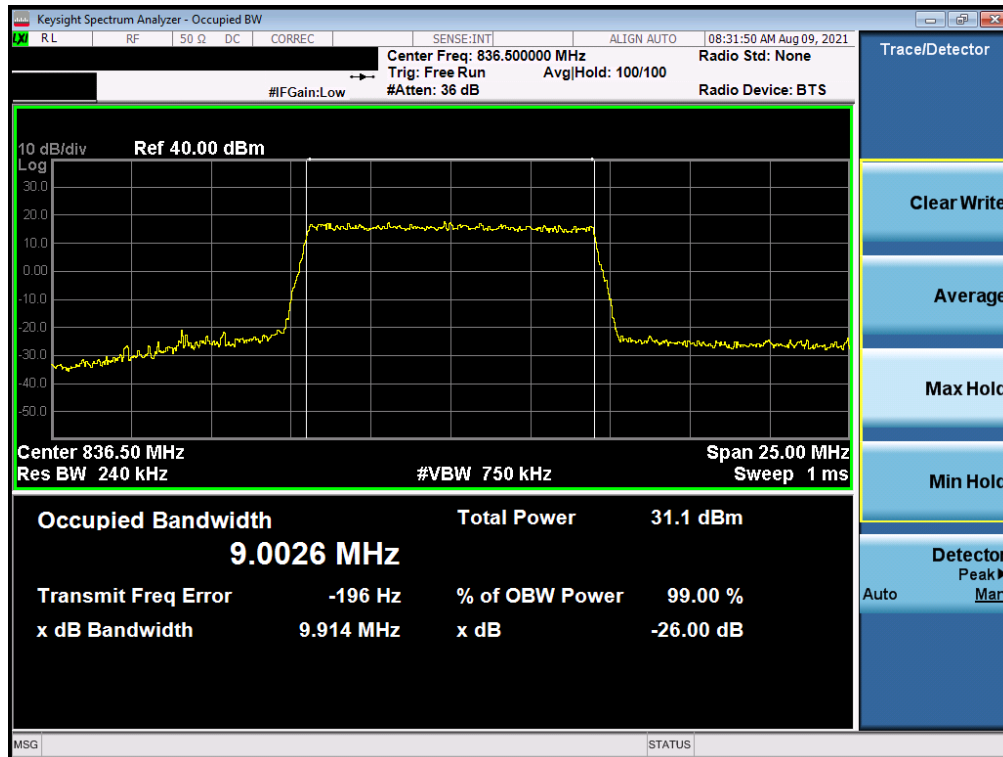
Plot 7-3. Occupied Bandwidth Plot (WCDMA, Ch. 4183)

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LTE Band 5

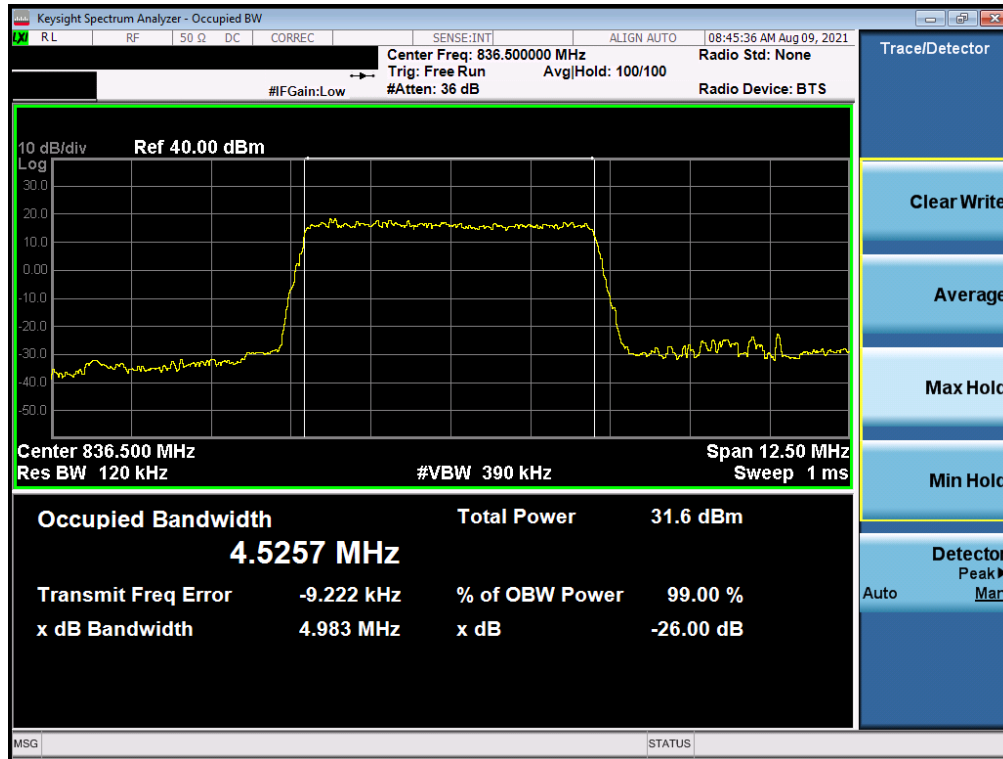


Plot 7-4. Occupied Bandwidth Plot (LTE Band 5 - 10MHz QPSK - Full RB)

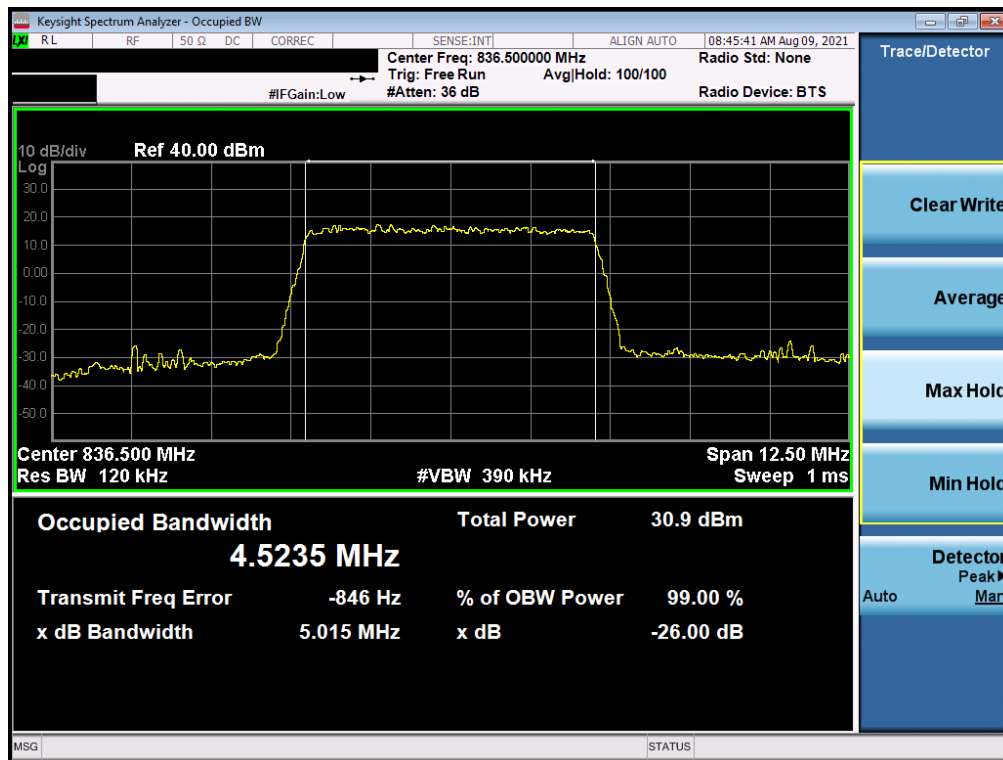


Plot 7-5. Occupied Bandwidth Plot (LTE Band 5 - 10MHz 16-QAM - Full RB)

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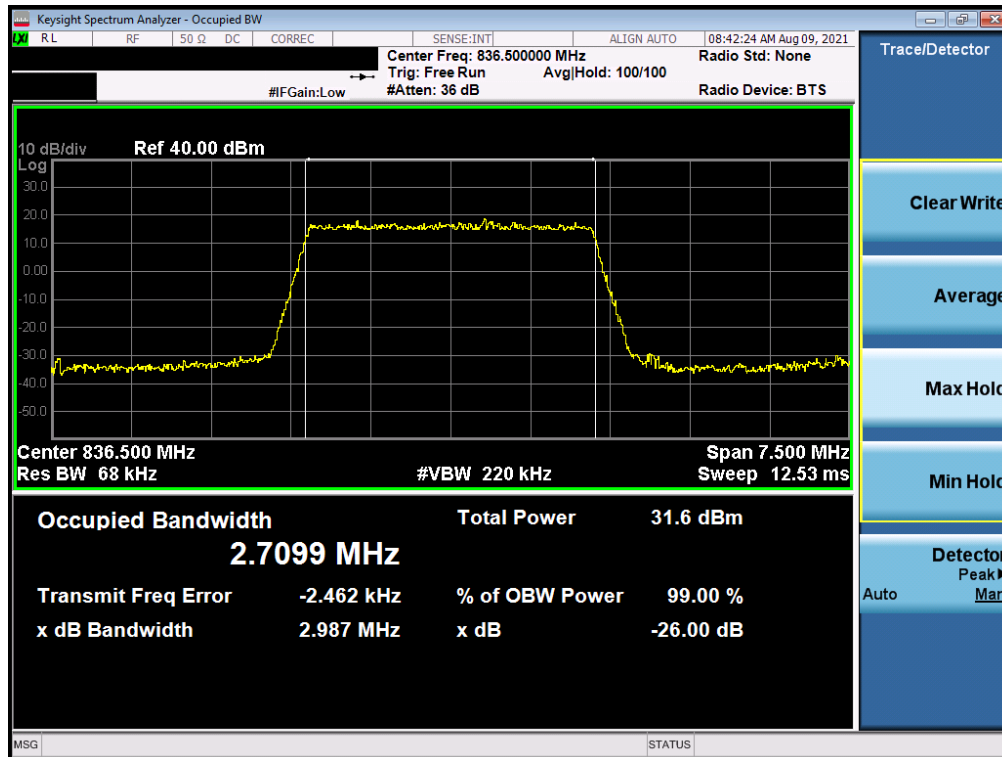


Plot 7-6. Occupied Bandwidth Plot (LTE Band 5 - 5MHz QPSK - Full RB)

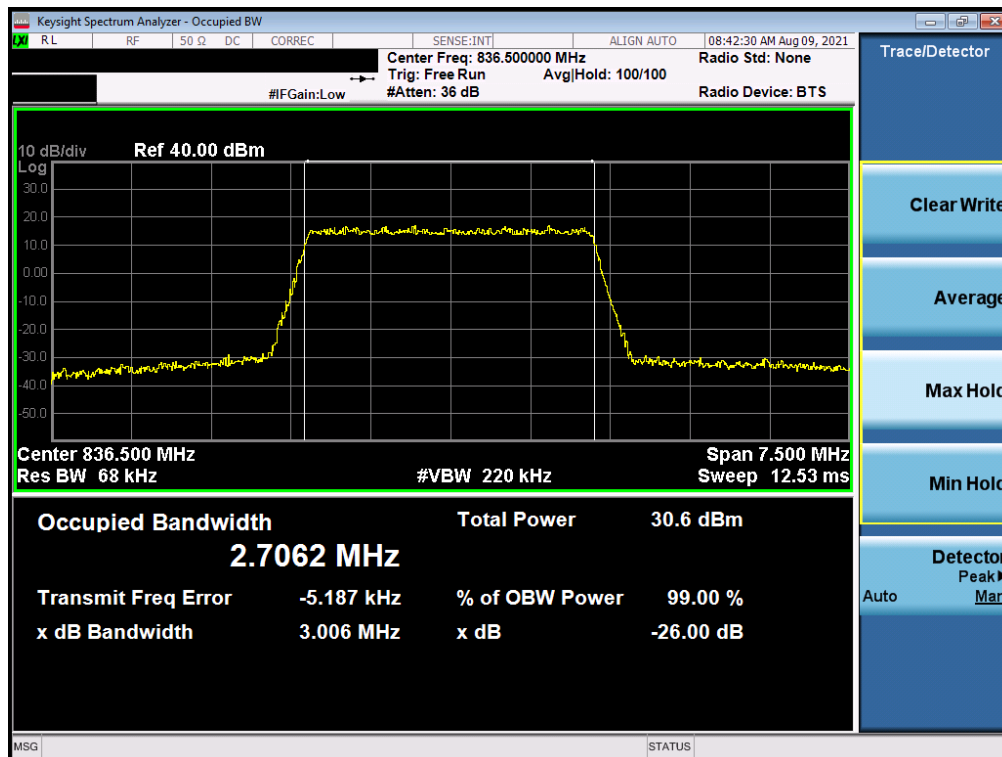


Plot 7-7. Occupied Bandwidth Plot (LTE Band 5 - 5MHz 16-QAM - Full RB)

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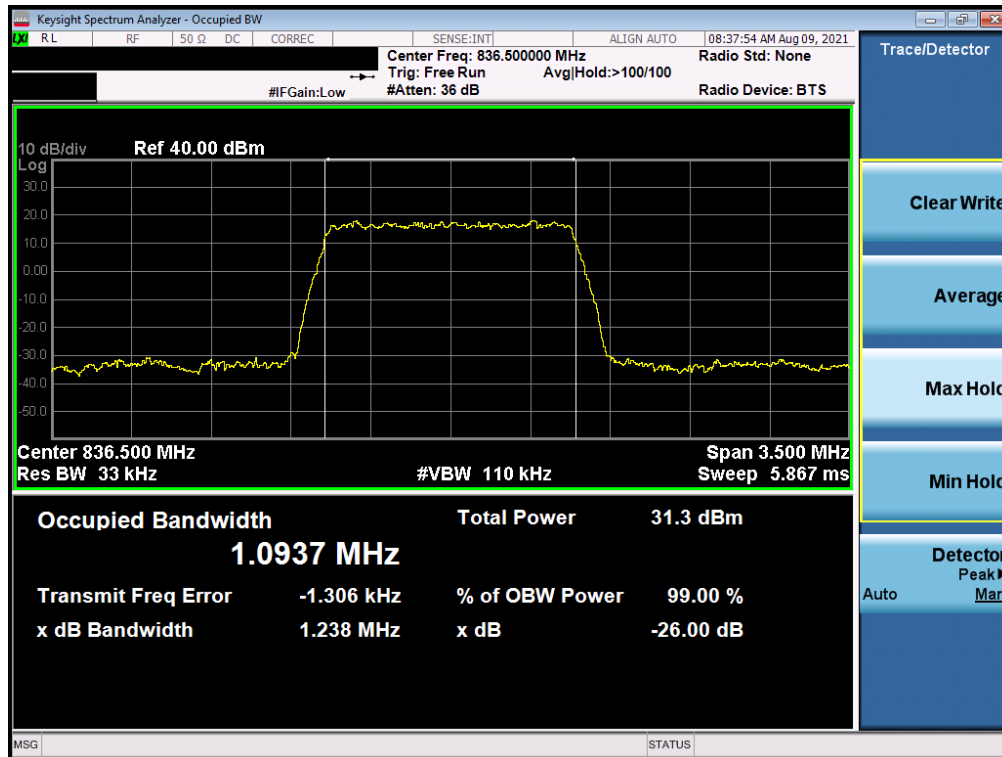


Plot 7-8. Occupied Bandwidth Plot (LTE Band 5 - 3MHz QPSK - Full RB)

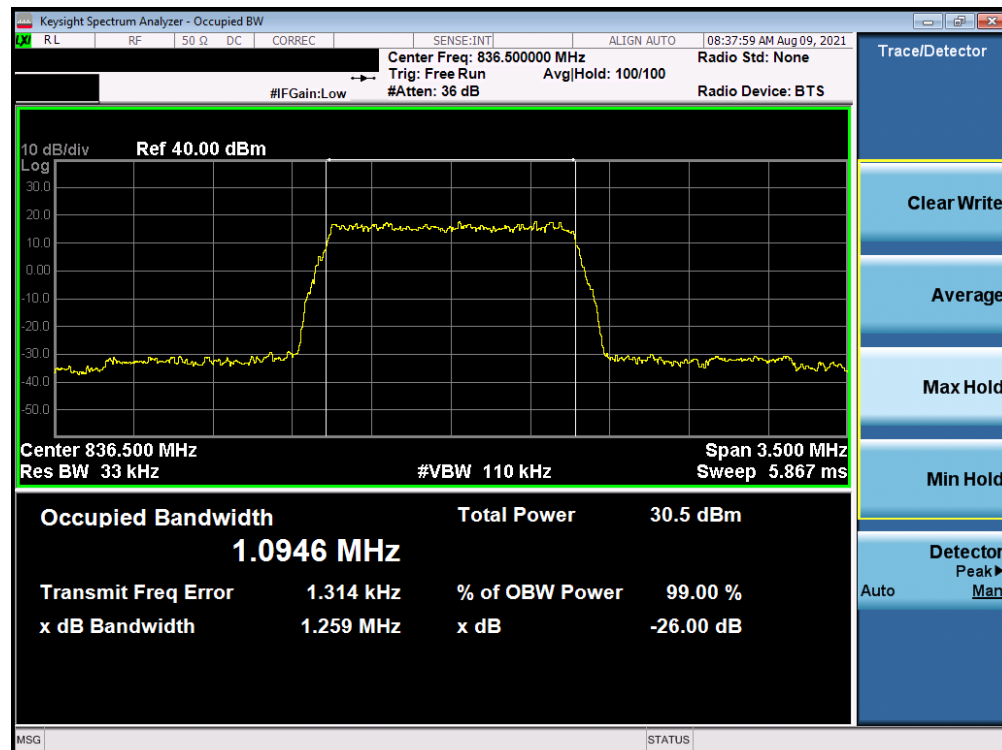


Plot 7-9. Occupied Bandwidth Plot (LTE Band 5 - 3MHz 16-QAM - Full RB)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 - 9/23/2021	EUT Type: Portable Handset		Page 17 of 86



Plot 7-10. Occupied Bandwidth Plot (LTE Band 5 - 1.4MHz QPSK - Full RB)



Plot 7-11. Occupied Bandwidth Plot (LTE Band 5 - 1.4MHz 16-QAM - Full RB)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 - 9/23/2021	EUT Type: Portable Handset		Page 18 of 86

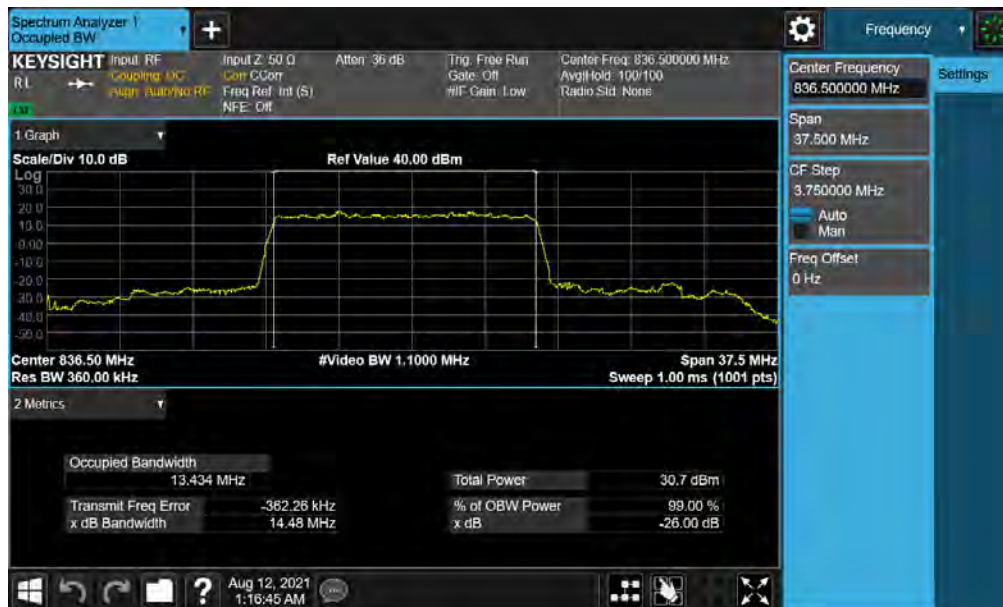
NR Band n5



FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 19 of 86



Plot 7-14. Occupied Bandwidth Plot (NR Band n5 - 20MHz 16-QAM - Full RB)

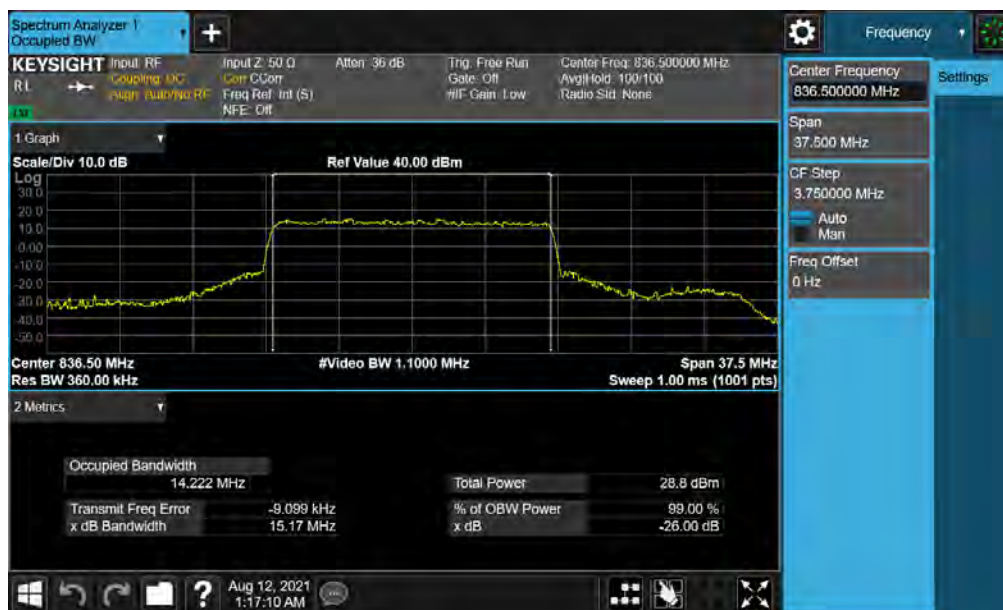


Plot 7-15. Occupied Bandwidth Plot (NR Band n5 - 15MHz $\pi/2$ BPSK - Full RB)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 20 of 86

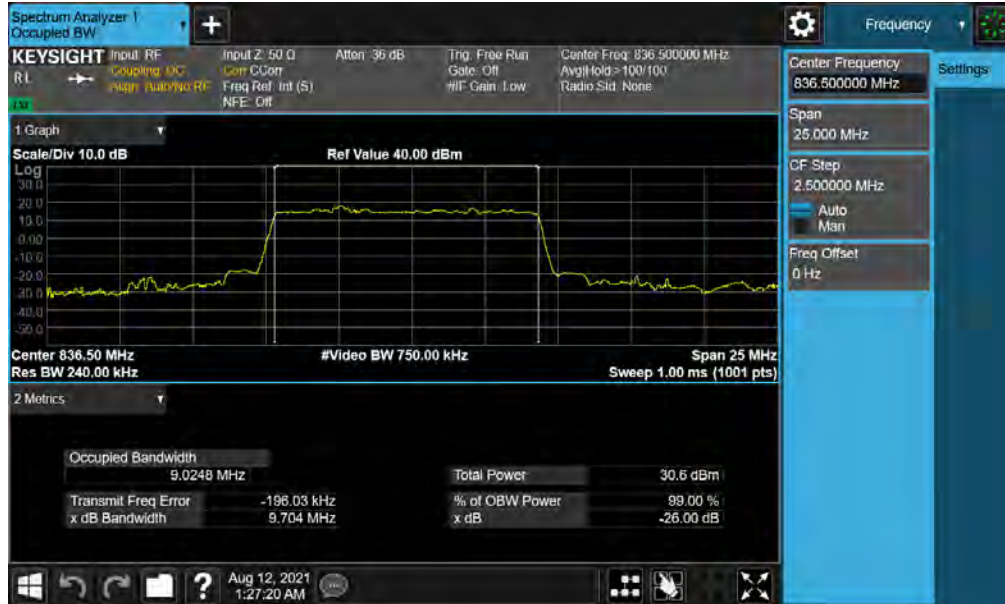


Plot 7-16. Occupied Bandwidth Plot (NR Band n5 - 15MHz QPSK - Full RB)

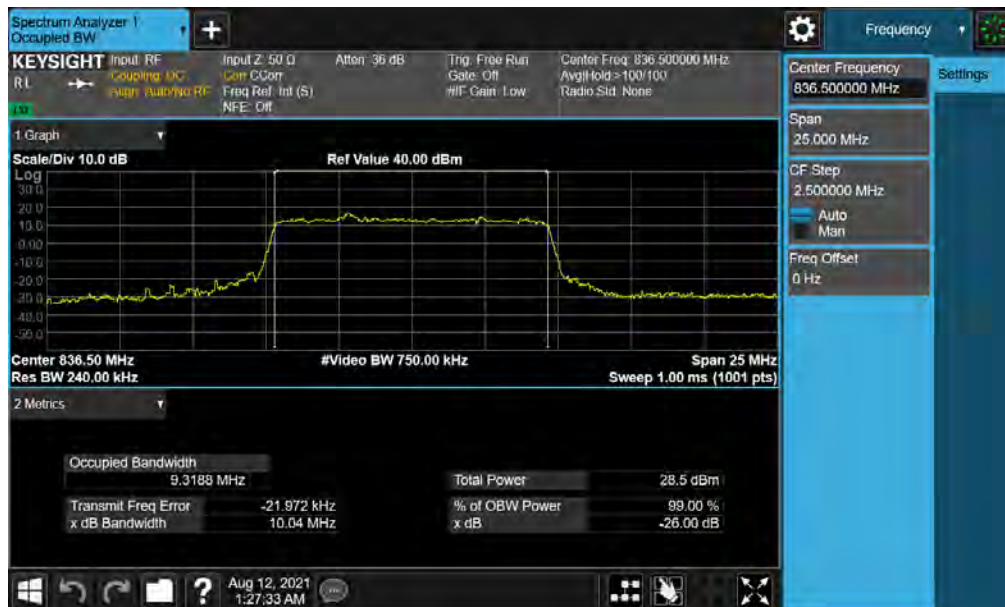


Plot 7-17. Occupied Bandwidth Plot (NR Band n5 - 15MHz 16-QAM - Full RB)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 21 of 86

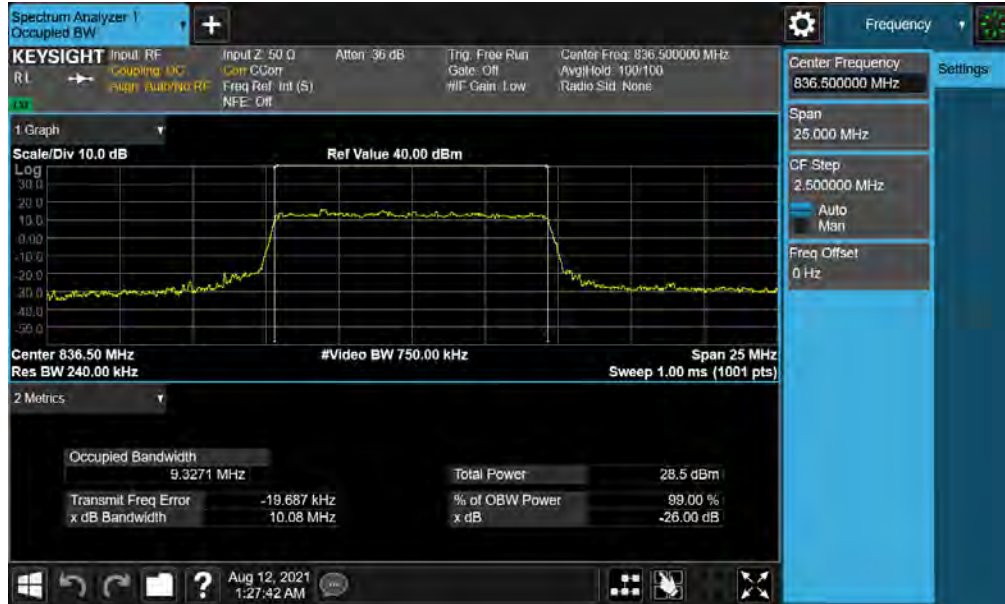


Plot 7-18. Occupied Bandwidth Plot (NR Band n5 - 10MHz $\pi/2$ BPSK - Full RB)

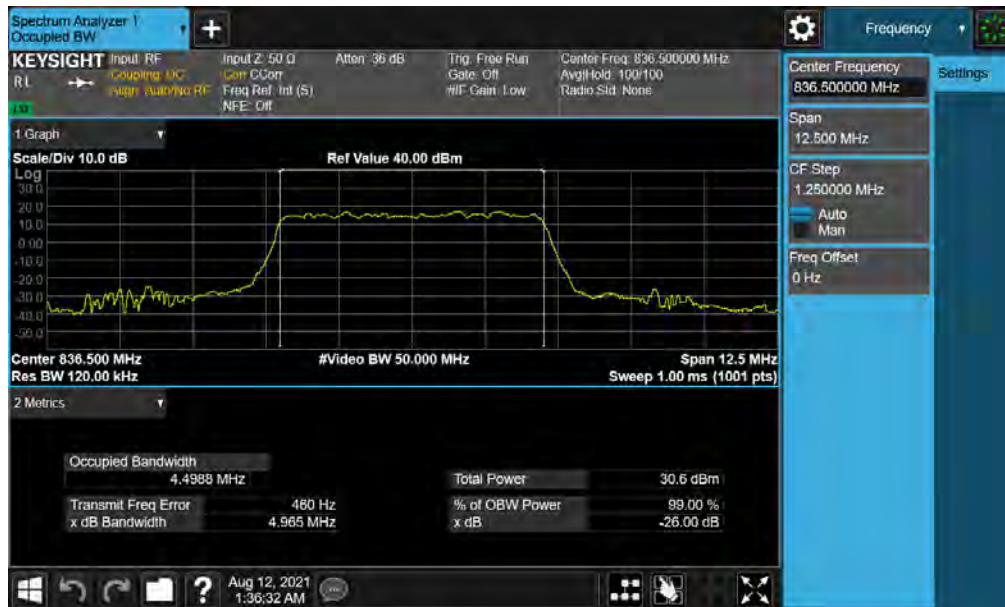


Plot 7-19. Occupied Bandwidth Plot (NR Band n5 - 10MHz QPSK - Full RB)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 22 of 86



Plot 7-20. Occupied Bandwidth Plot (NR Band n5 - 10MHz 16-QAM - Full RB)



Plot 7-21. Occupied Bandwidth Plot (NR Band n5 - 5MHz $\pi/2$ BPSK - Full RB)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 23 of 86



Plot 7-22. Occupied Bandwidth Plot (NR Band n5 - 5MHz QPSK - Full RB)



Plot 7-23. Occupied Bandwidth Plot (NR Band n5 - 5MHz 16-QAM - Full RB)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 24 of 86

7.3 Spurious and Harmonic Emissions at Antenna Terminal

Test Overview

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

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

Test Procedure Used

KDB 971168 D01 v03r01 – Section 6.0

Test Settings

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

Test Setup

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

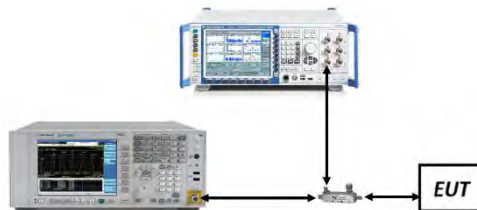


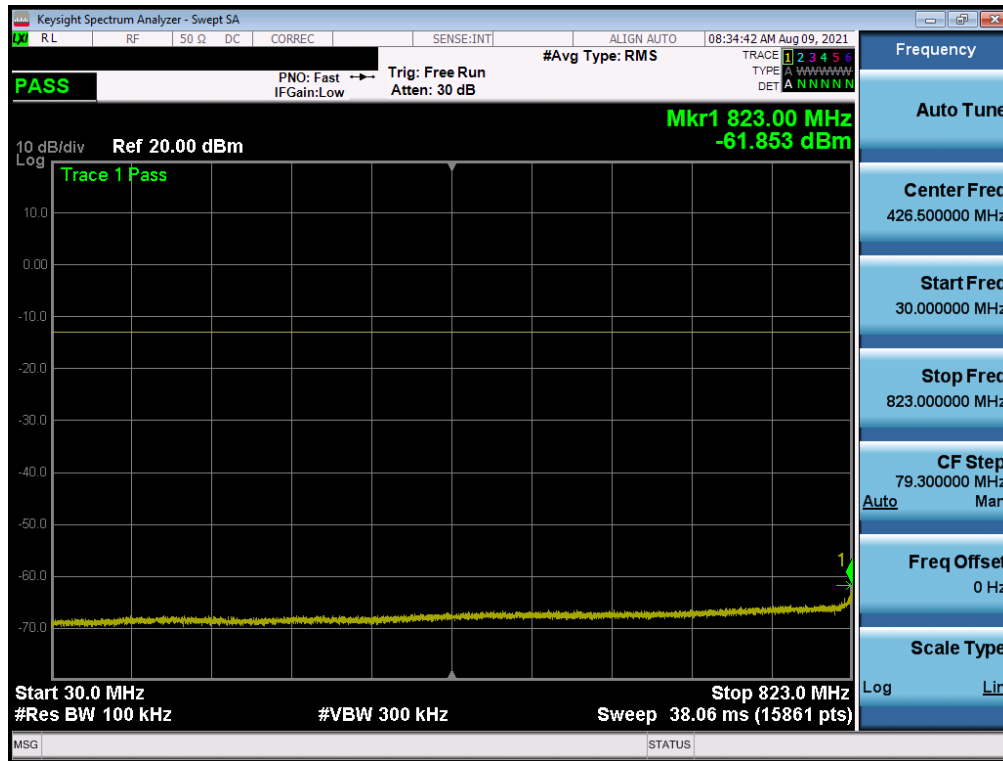
Figure 7-2. Test Instrument & Measurement Setup

Test Notes

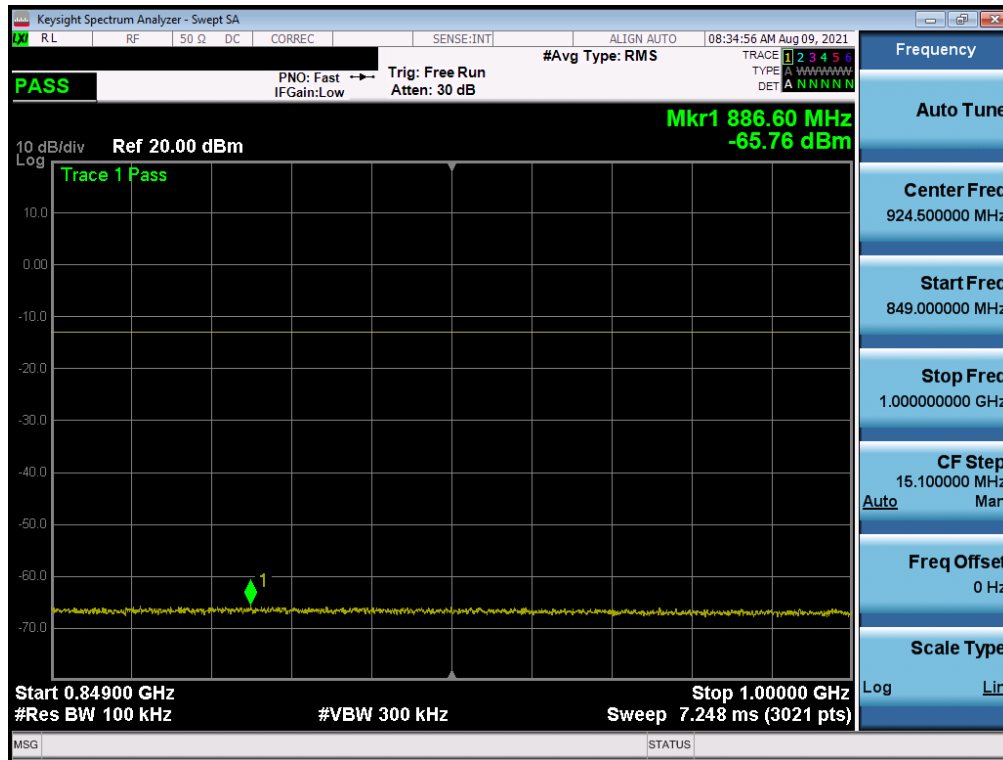
1. Per Part 22 and RSS-132, compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth 100 kHz or greater for measurements below 1GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.
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: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 25 of 86

LTE Band 5

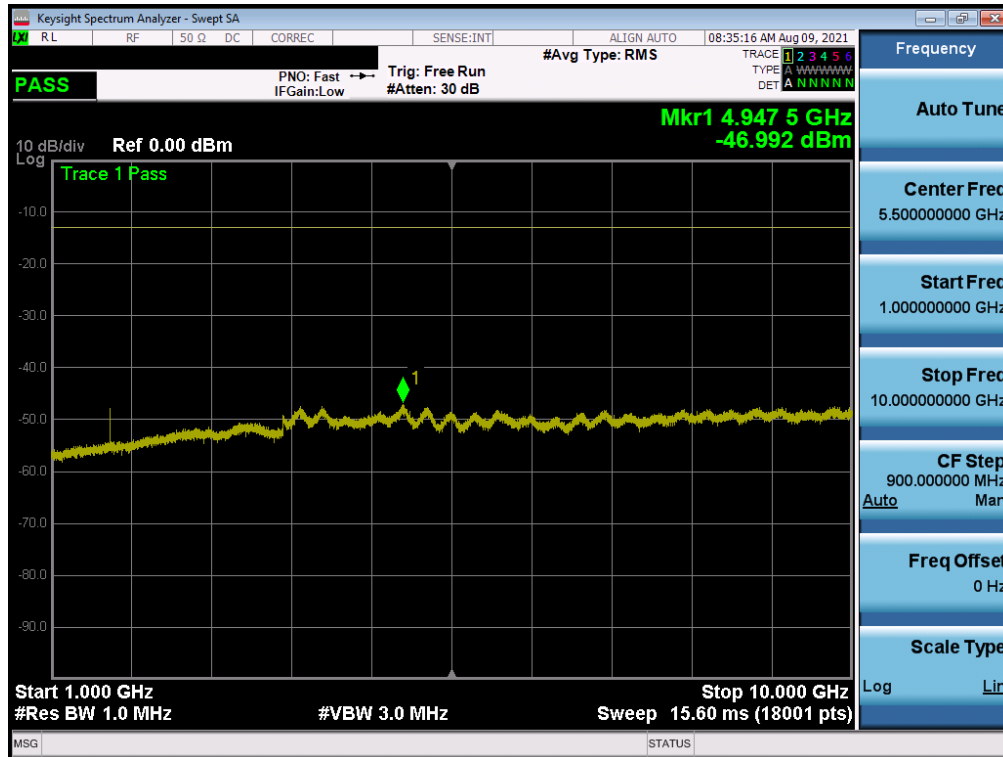


Plot 7-24. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Low Channel)

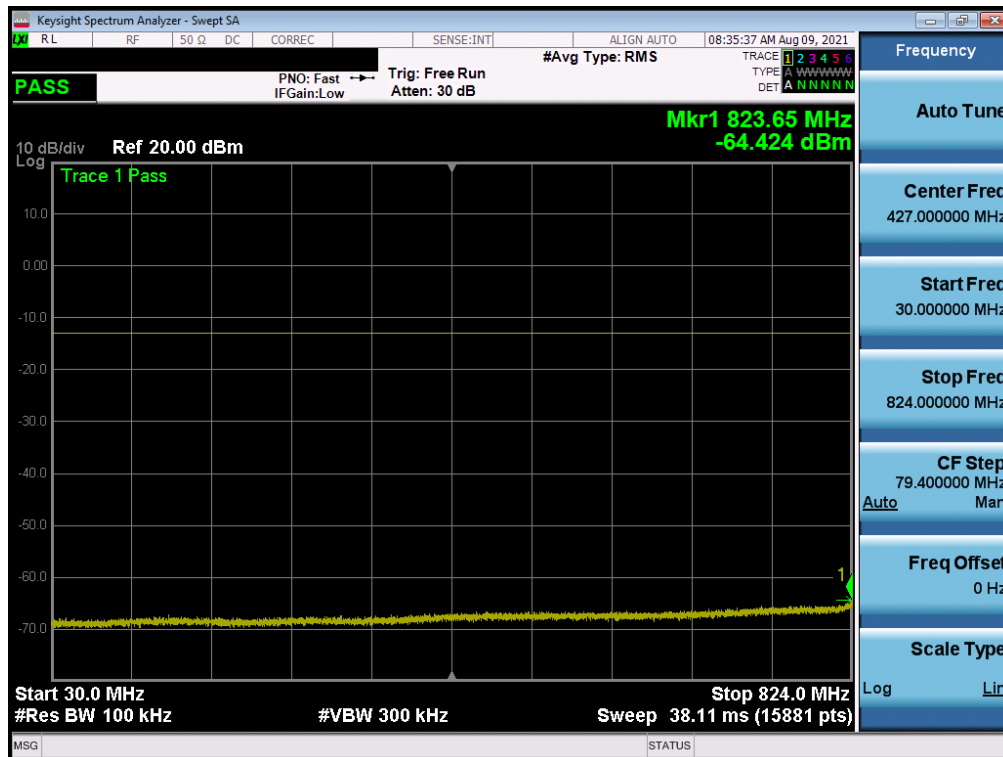


Plot 7-25. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Low Channel)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 - 9/23/2021	EUT Type: Portable Handset		Page 26 of 86

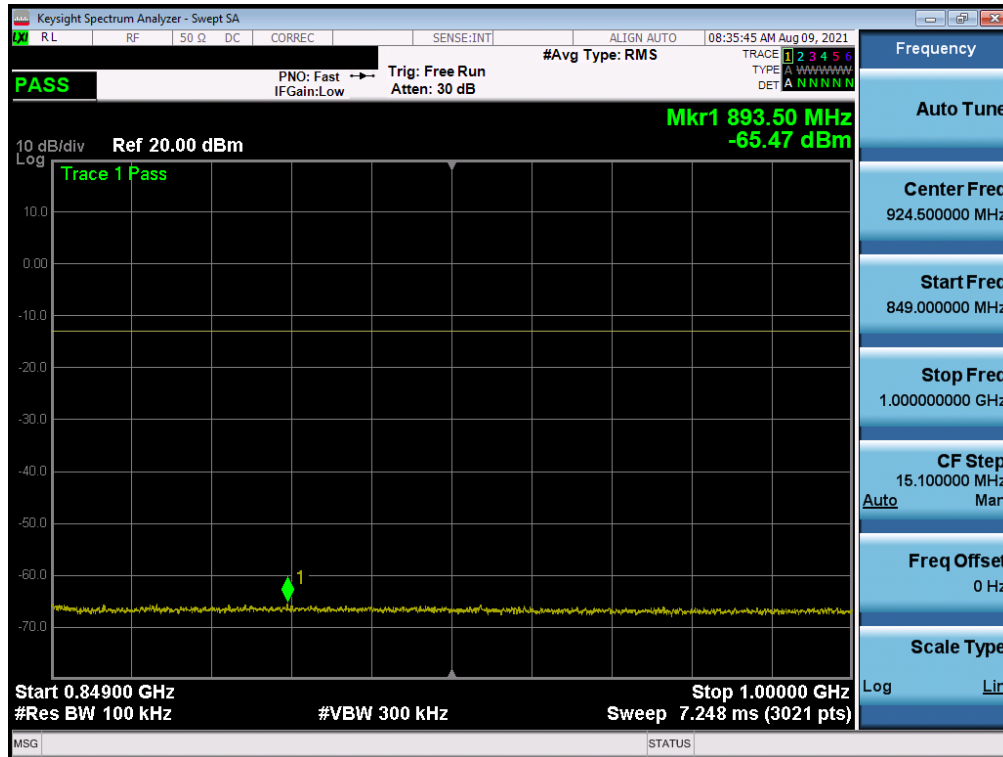


Plot 7-26. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Low Channel)

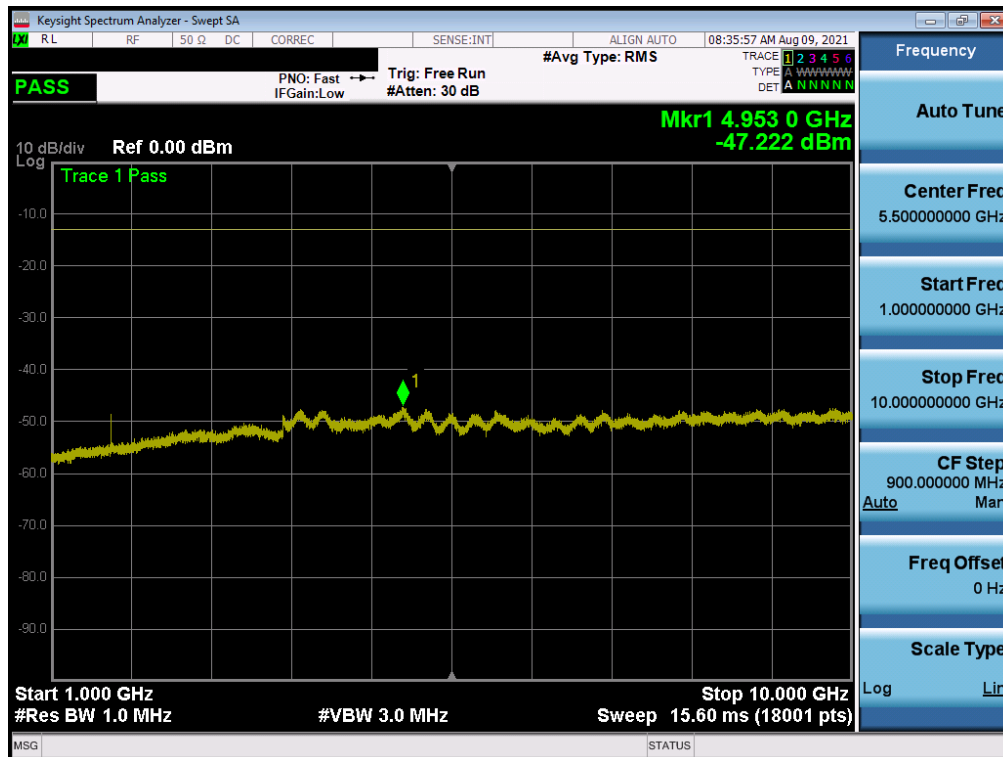


Plot 7-27. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Mid Channel)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 - 9/23/2021	EUT Type: Portable Handset		Page 27 of 86

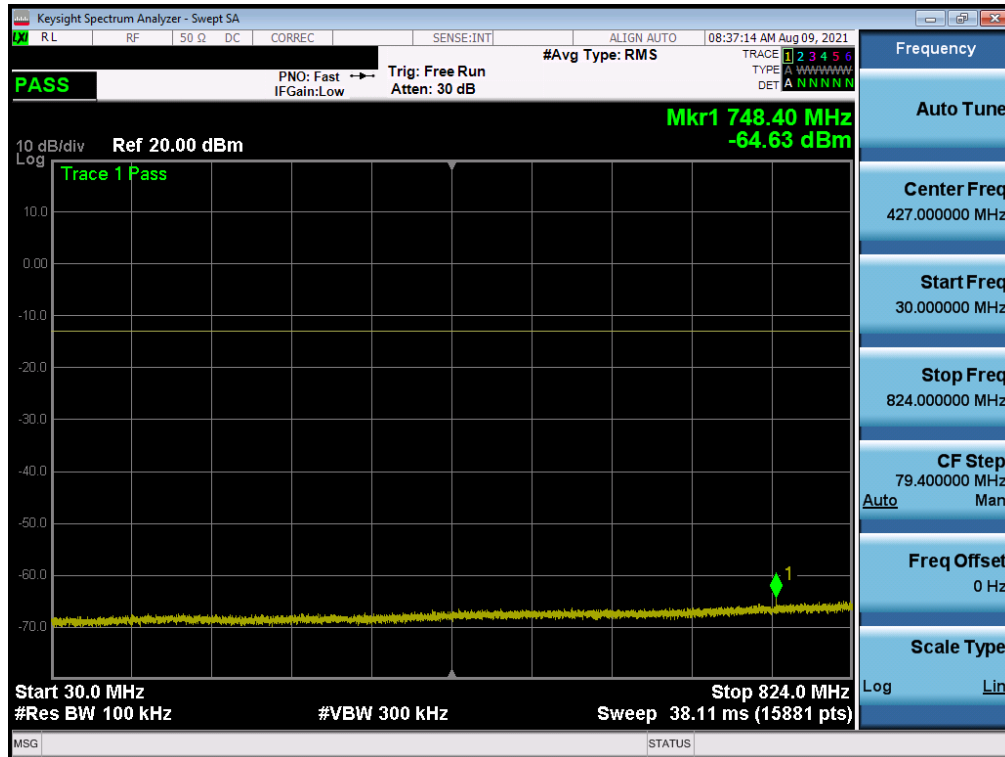


Plot 7-28. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Mid Channel)

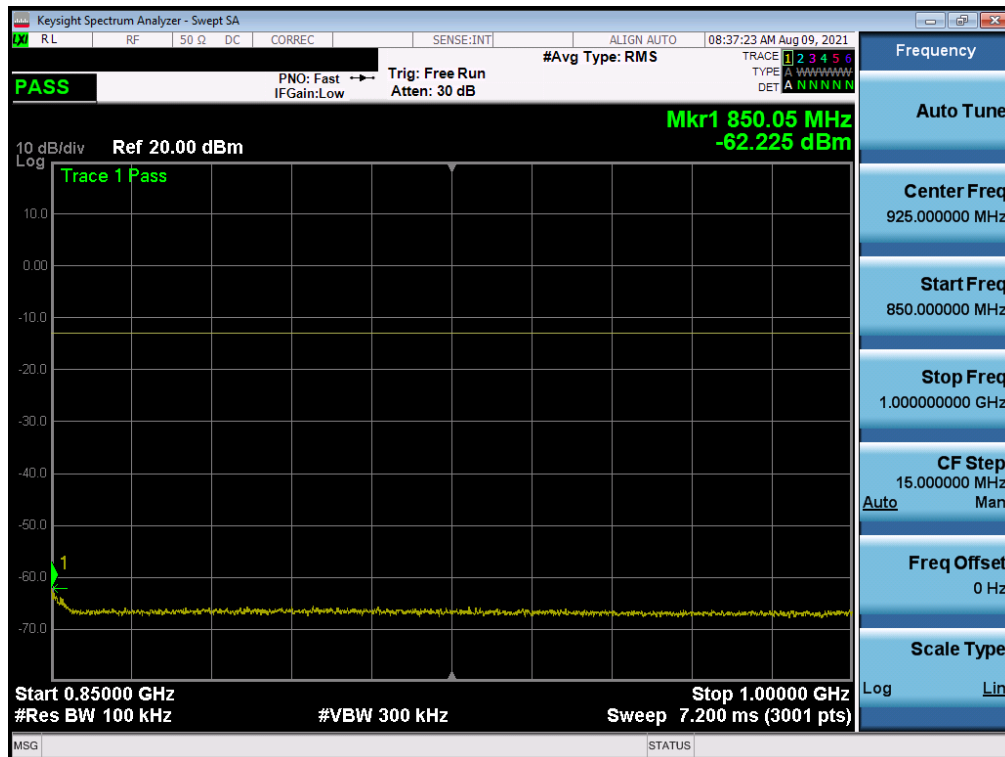


Plot 7-29. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - Mid Channel)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 - 9/23/2021	EUT Type: Portable Handset		Page 28 of 86

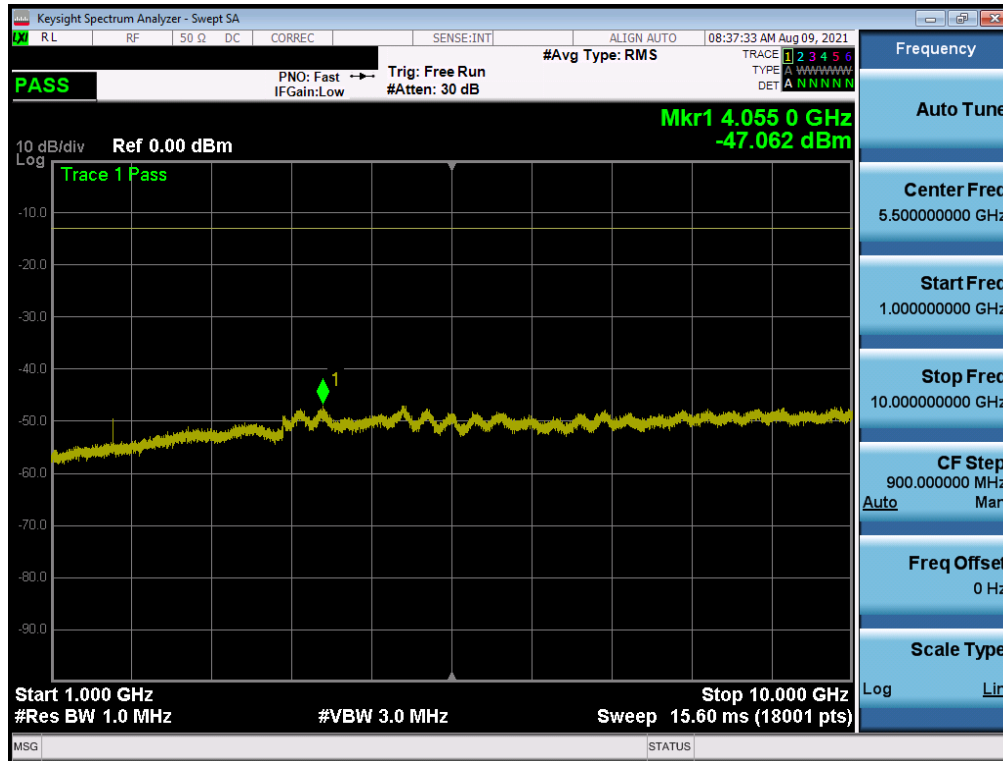


Plot 7-30. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - High Channel)



Plot 7-31. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - High Channel)

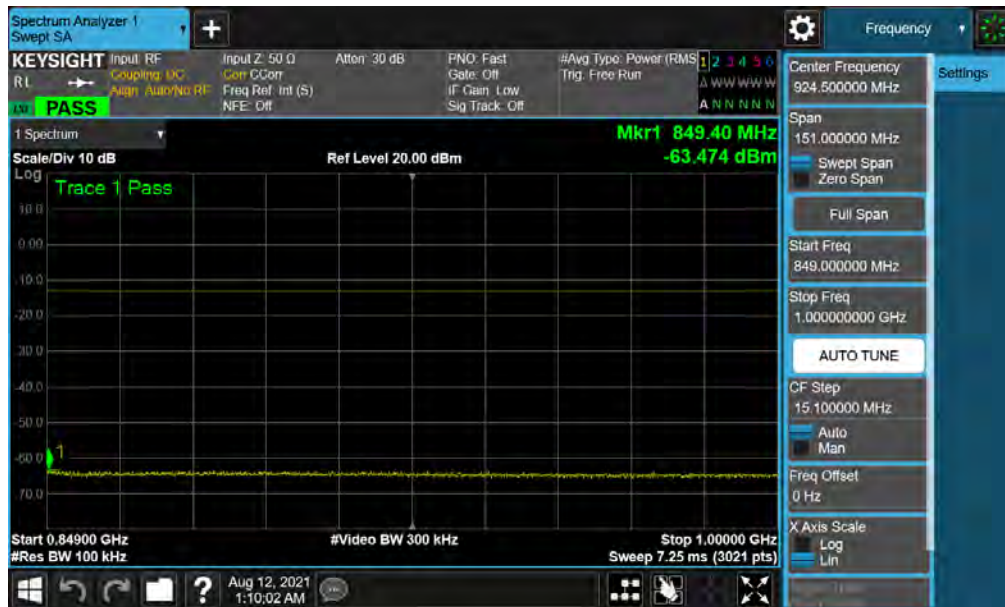
FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 - 9/23/2021	EUT Type: Portable Handset		Page 29 of 86



Plot 7-32. Conducted Spurious Plot (LTE Band 5 - 10MHz QPSK - 1 RB - High Channel)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 - 9/23/2021	EUT Type: Portable Handset		Page 30 of 86

NR Band n5



FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 31 of 86



Plot 7-35. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Low Channel)



Plot 7-36. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Mid Channel)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 - 9/23/2021	EUT Type: Portable Handset		Page 32 of 86



Plot 7-37. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Mid Channel)



Plot 7-38. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Mid Channel)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 - 9/23/2021	EUT Type: Portable Handset		Page 33 of 86



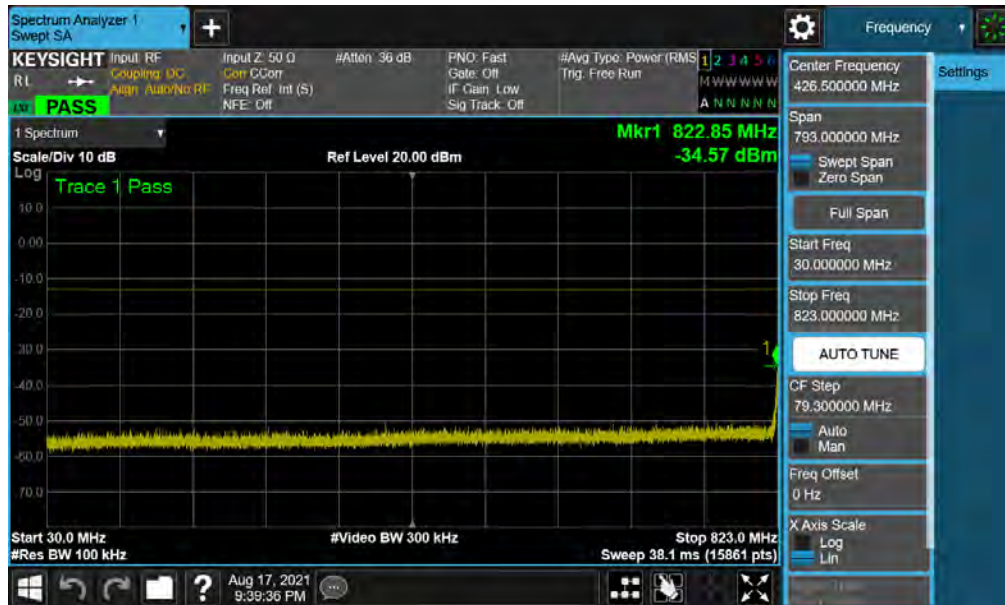
FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 - 9/23/2021	EUT Type: Portable Handset		Page 34 of 86



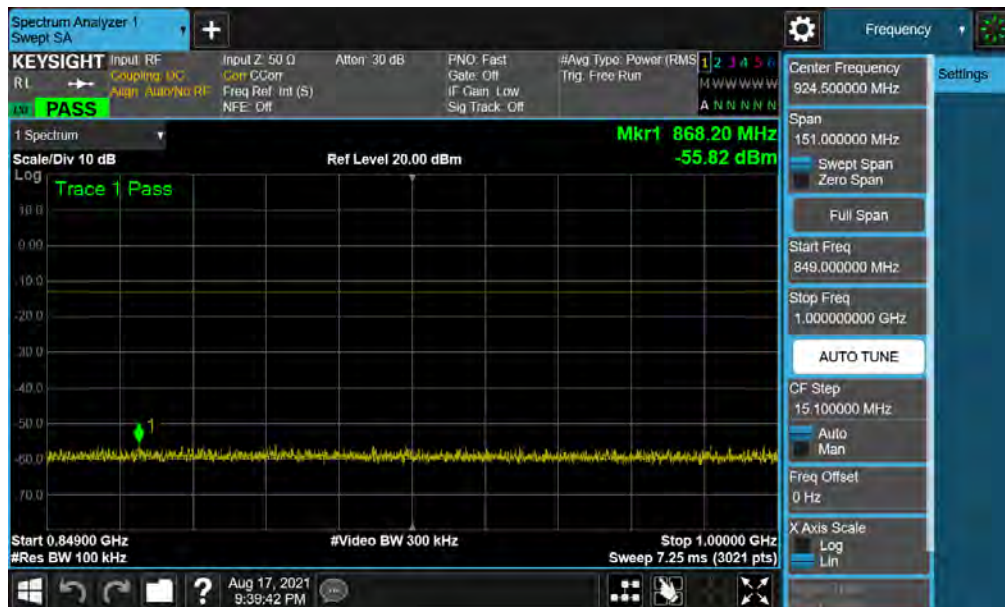
Plot 7-41. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - High Channel)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 35 of 86

GSM/GPRS Cell



Plot 7-42. Conducted Spurious Plot (GPRS Ch. 128)

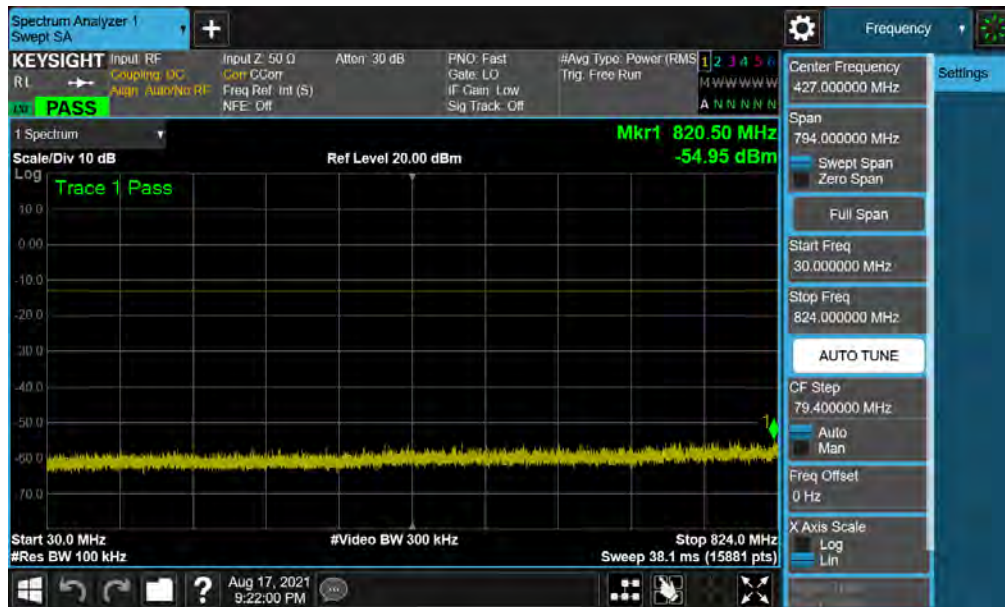


Plot 7-43. Conducted Spurious Plot (GPRS Ch. 128)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 36 of 86

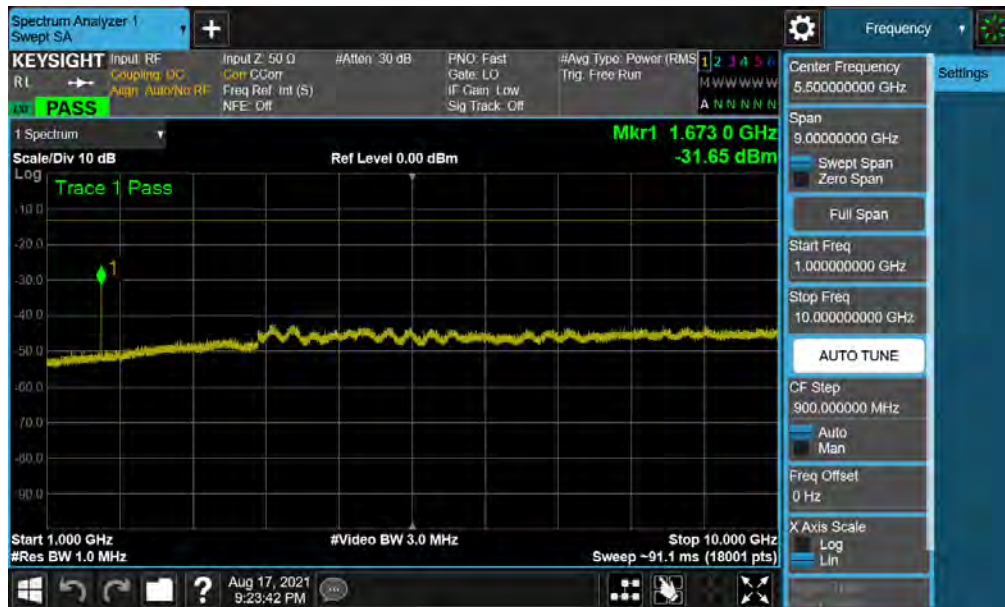
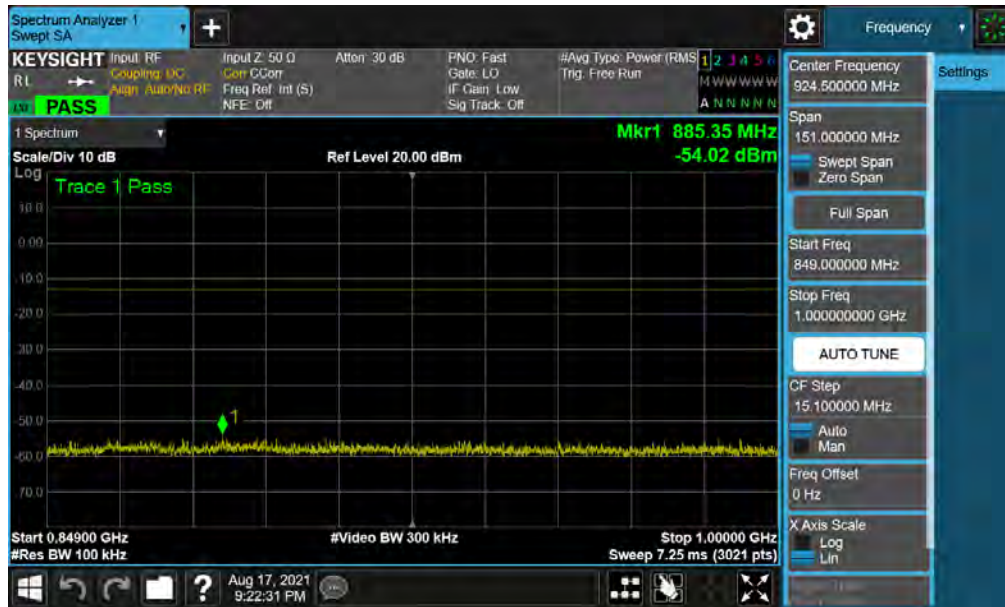


Plot 7-44. Conducted Spurious Plot (GPRS Ch. 128)

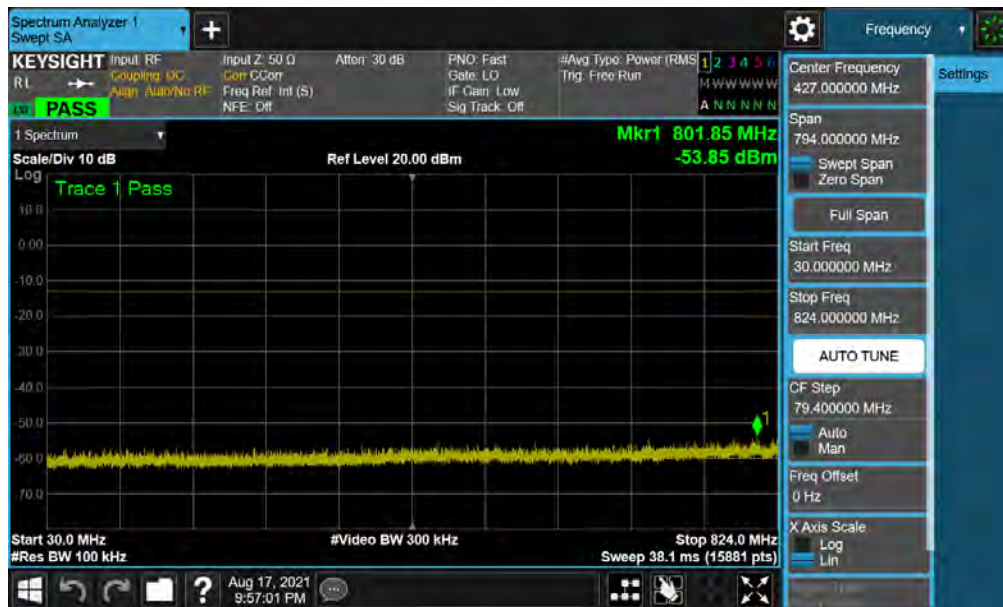


Plot 7-45. Conducted Spurious Plot (GPRS Ch. 190)

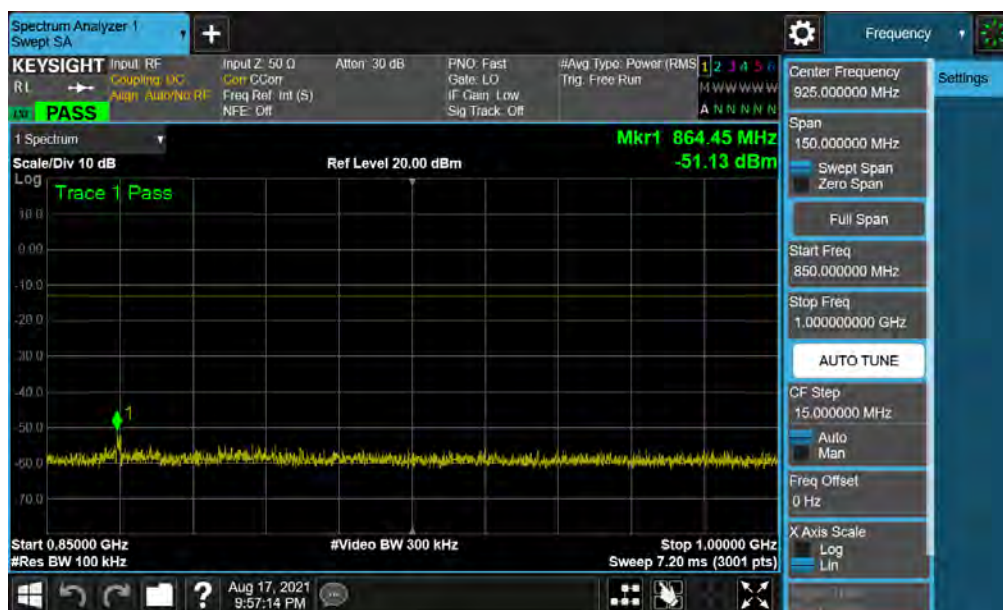
FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 37 of 86



FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 38 of 86



Plot 7-48. Conducted Spurious Plot (GPRS Ch. 251)



Plot 7-49. Conducted Spurious Plot (GPRS Ch. 251)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 39 of 86



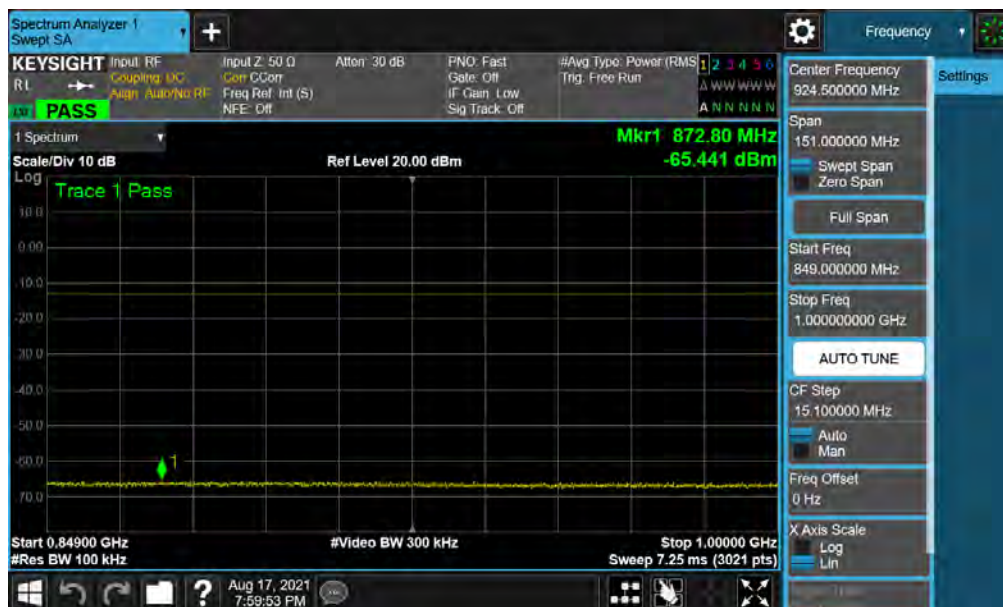
Plot 7-50. Conducted Spurious Plot (GPRS Ch. 251)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 40 of 86

WCDMA Cell



Plot 7-51. Conducted Spurious Plot (WCDMA Ch. 4132)



Plot 7-52. Conducted Spurious Plot (WCDMA Ch. 4132)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 41 of 86



Plot 7-53. Conducted Spurious Plot (WCDMA Ch. 4132)

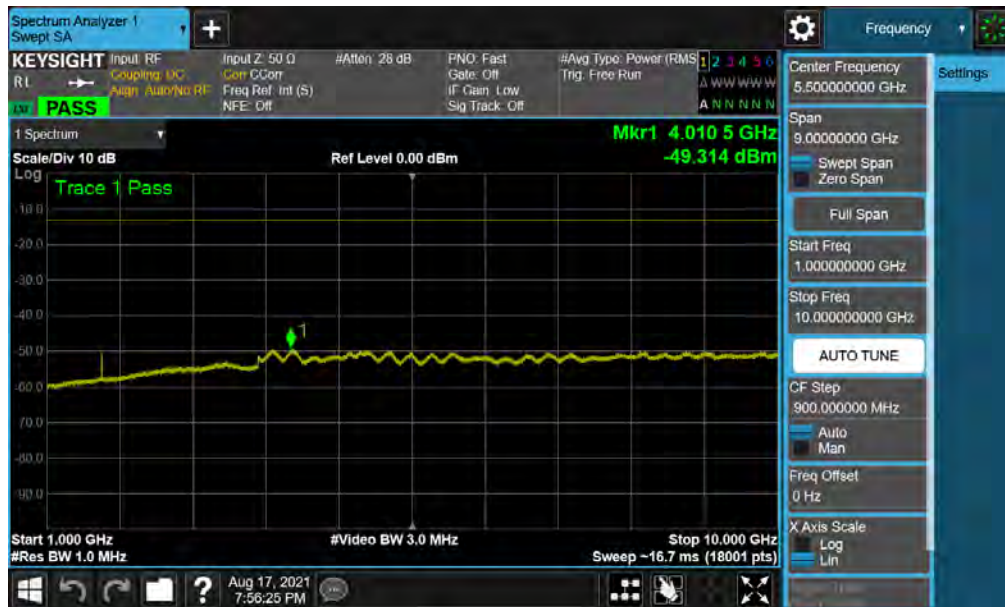


Plot 7-54. Conducted Spurious Plot (WCDMA Ch. 4183)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 42 of 86



Plot 7-55. Conducted Spurious Plot (WCDMA Ch. 4183)



Plot 7-56. Conducted Spurious Plot (WCDMA Ch. 4183)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 43 of 86



Plot 7-57. Conducted Spurious Plot (WCDMA Ch. 4233)





Plot 7-58. Conducted Spurious Plot (WCDMA Ch. 4233)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 44 of 86



Plot 7-59. Conducted Spurious Plot (WCDMA Ch. 4233)

FCC ID: PY7-95324M	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 45 of 86

7.4 Band Edge Emissions at Antenna Terminal

Test Overview

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

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

Test Procedure Used

KDB 971168 D01 v03r01 – Section 6.0

Test Settings

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

Test Setup

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

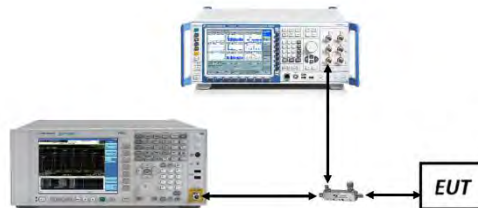



Figure 7-3. Test Instrument & Measurement Setup

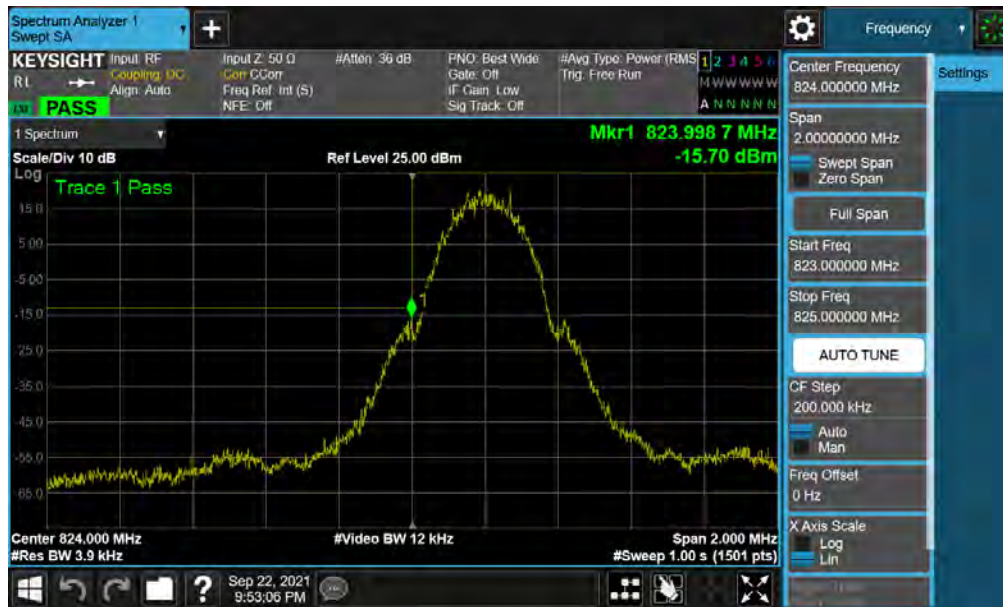
FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 46 of 86

Test Notes

1. Per 22.917(b) and RSS-132(5.5), in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to demonstrate compliance with the out-of-band emissions limit. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.
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: PY7-95324M	 PART 22 MEASUREMENT REPORT SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset
		Page 47 of 86

GSM/GPRS Cell

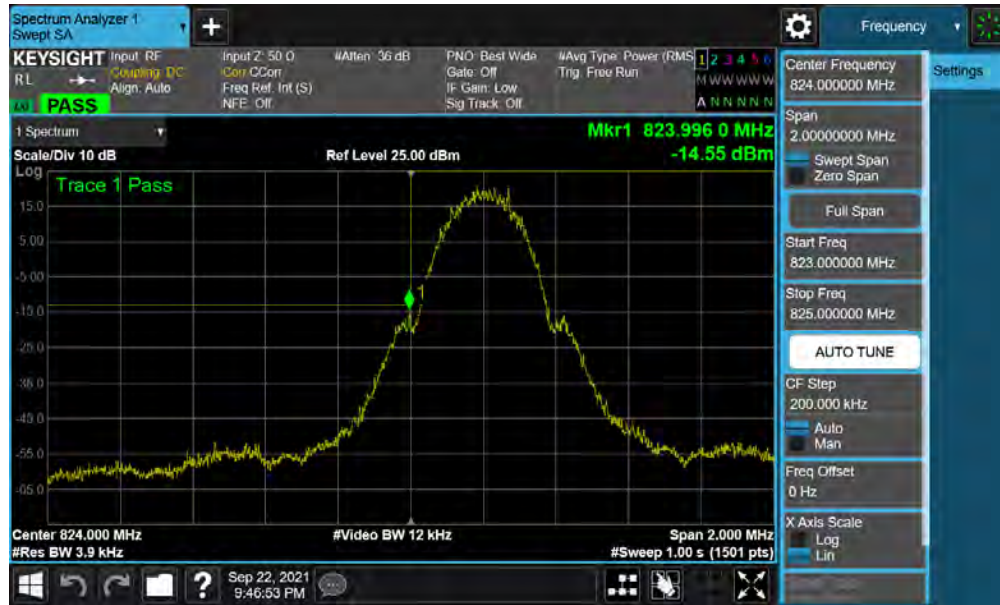


Plot 7-60. Lower Band Edge Plot (GPRS Cell – Ch. 128)



Plot 7-61. Upper Band Edge Plot (GPRS Cell – Ch. 251)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 48 of 86



FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 49 of 86

WCDMA Cell



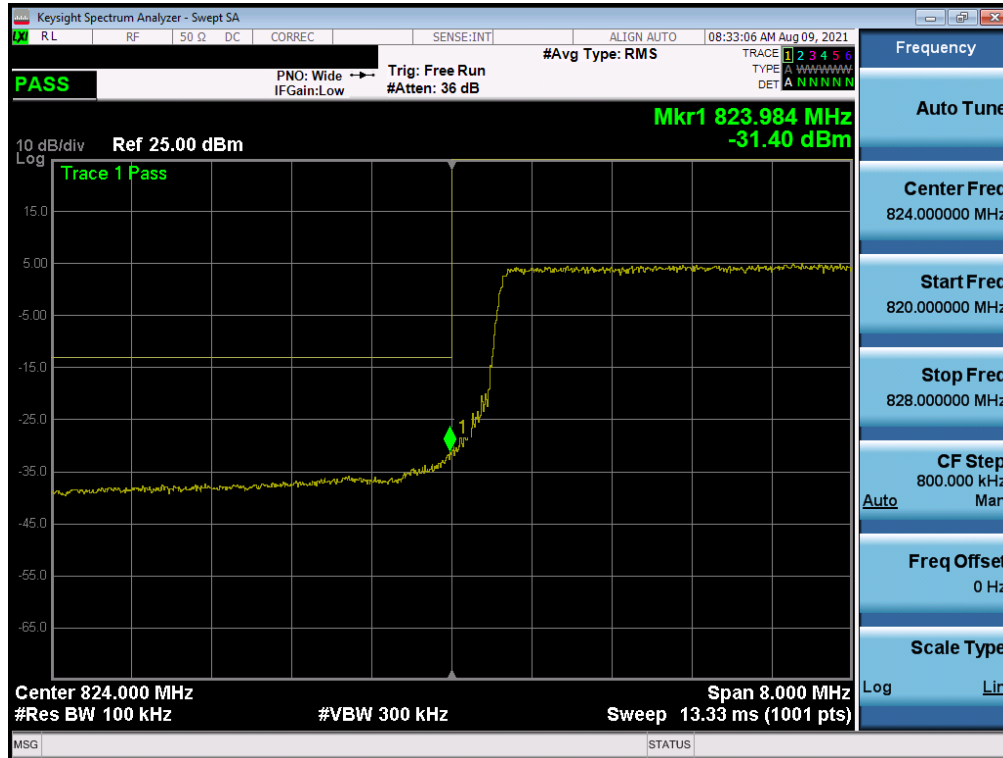
Plot 7-64. Lower Band Edge Plot (WCDMA Cell – Ch. 4132)



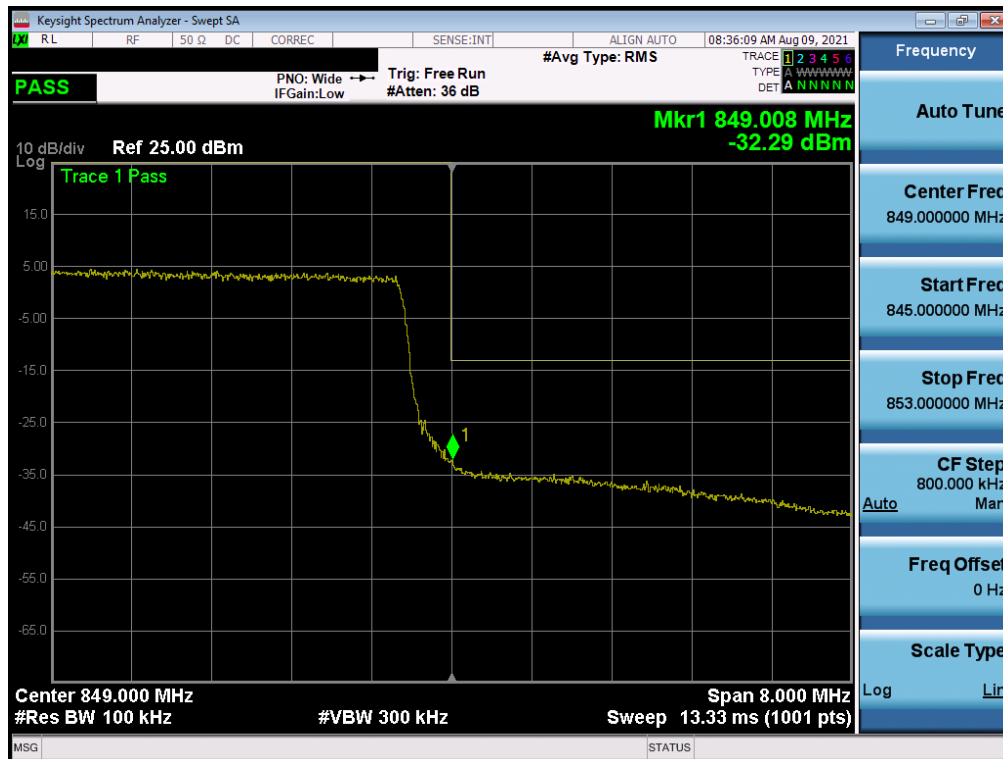
Plot 7-65. Upper Band Edge Plot (WCDMA Cell – Ch. 4233)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 50 of 86

LTE Band 5

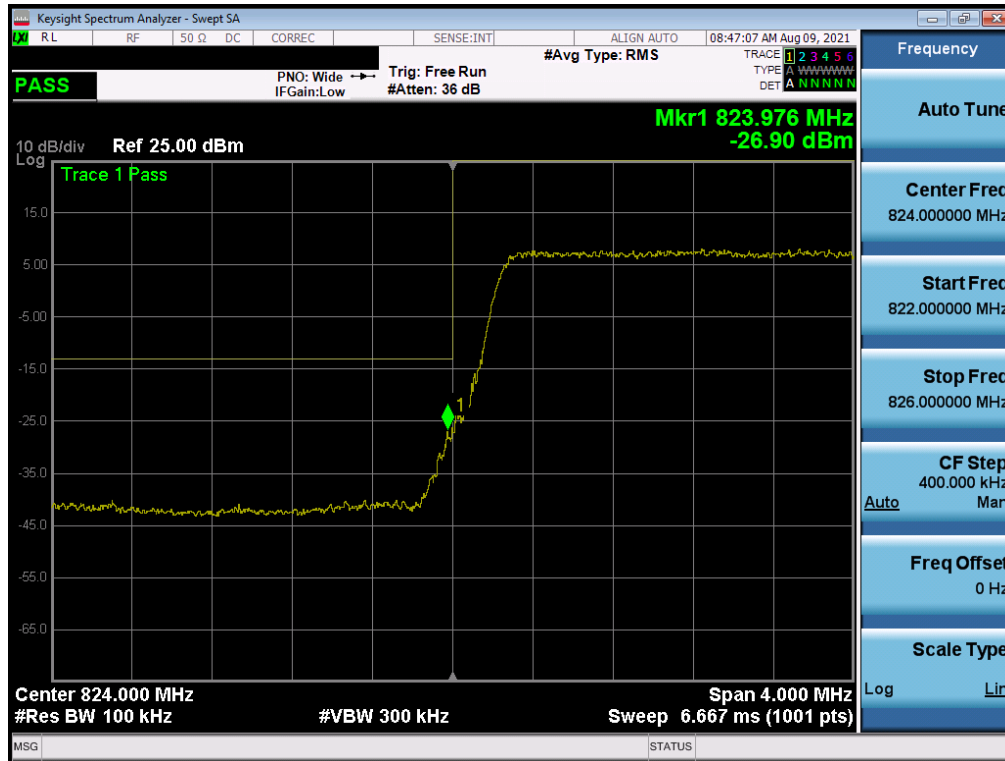


Plot 7-66. Lower Band Edge Plot (LTE Band 5 - 10MHz QPSK – Full RB)



Plot 7-67. Upper Band Edge Plot (LTE Band 5 - 10MHz QPSK – Full RB)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 51 of 86

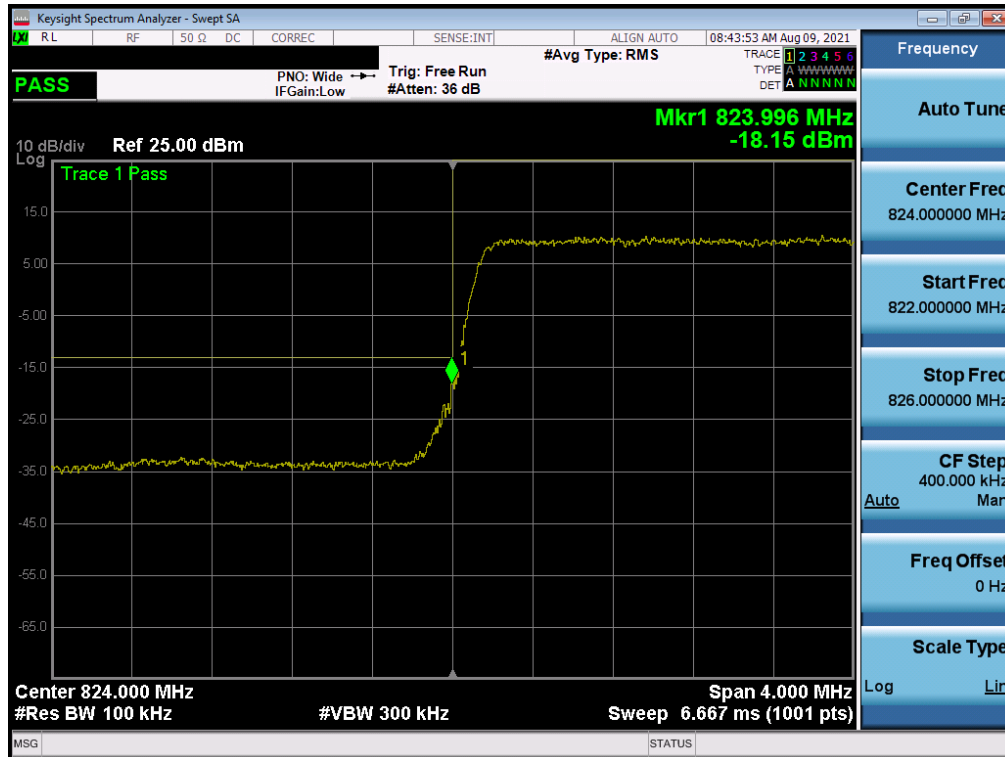


Plot 7-68. Lower Band Edge Plot (LTE Band 5 - 5MHz QPSK – Full RB)

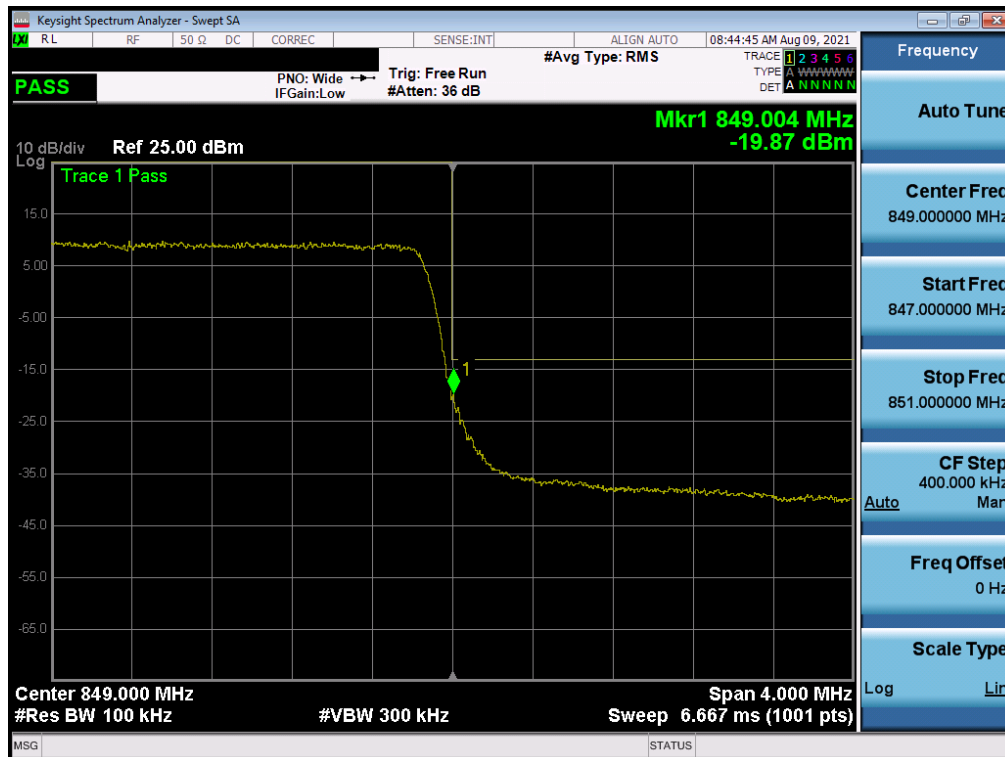


Plot 7-69. Upper Band Edge Plot (LTE Band 5 - 5MHz QPSK – Full RB)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 52 of 86

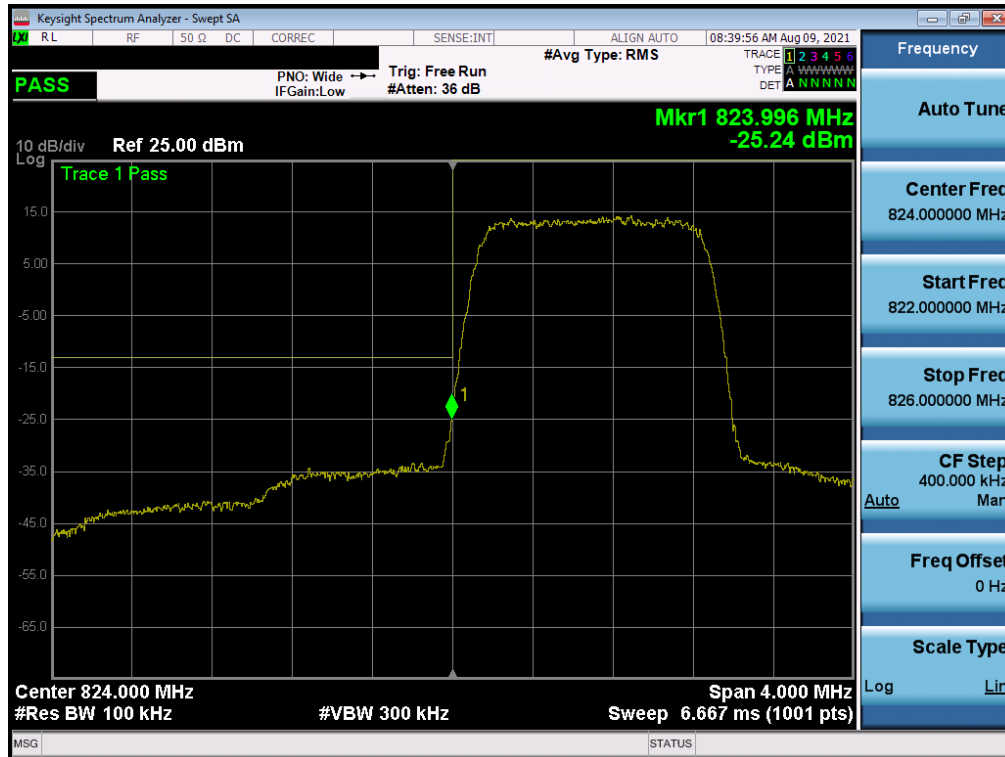


Plot 7-70. Lower Band Edge Plot (LTE Band 5 - 3MHz QPSK – Full RB)

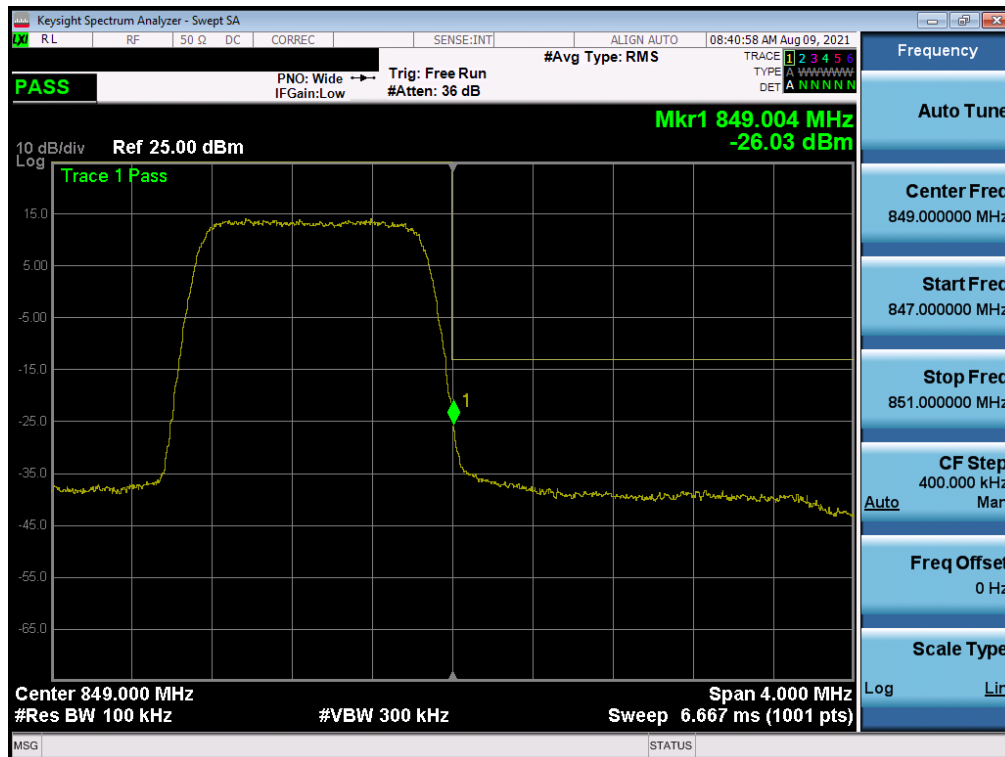


Plot 7-71. Upper Band Edge Plot (LTE Band 5 - 3MHz QPSK – Full RB)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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Plot 7-72. Lower Band Edge Plot (LTE Band 5 - 1.4MHz QPSK - Full RB)



Plot 7-73. Upper Band Edge Plot (LTE Band 5 - 1.4MHz QPSK - Full RB)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 - 9/23/2021	EUT Type: Portable Handset		Page 54 of 86

NR Band n5



Plot 7-74. Lower Band Edge Plot (NR Band n5 – 20.0MHz - Full RB)

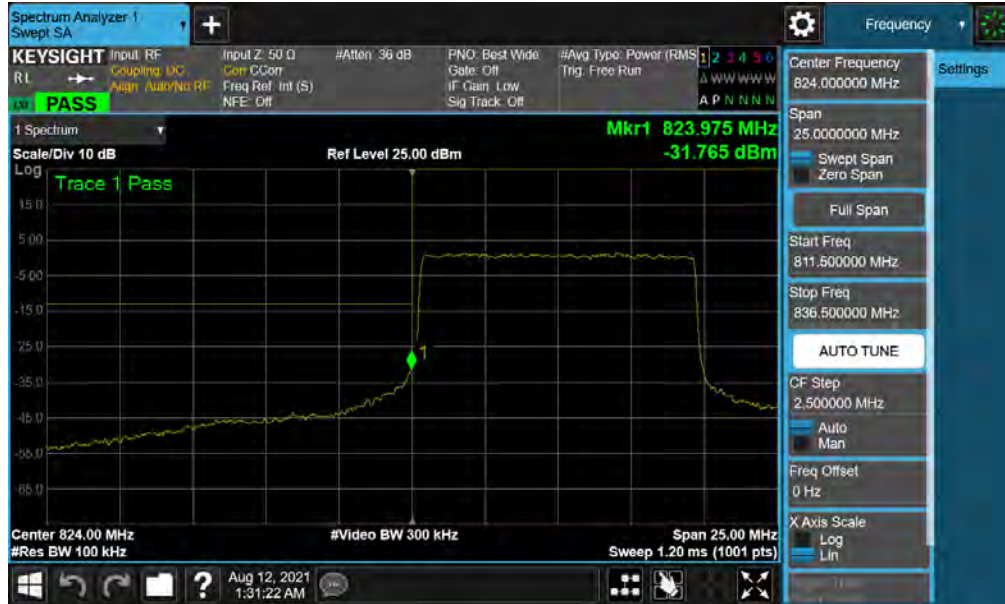


Plot 7-75. Upper Band Edge Plot (NR Band n5 – 20.0MHz - Full RB)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 55 of 86



FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 56 of 86



FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 57 of 86



Plot 7-80. Lower Band Edge Plot (NR Band n5 – 5.0MHz - Full RB)



Plot 7-81. Upper Band Edge Plot (NR Band n5 – 5.0MHz - Full RB)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 58 of 86

7.5 Radiated Power (ERP)

Test Overview

Effective Radiated Power (ERP) measurements are performed using the substitution method described in ANSI/TIA-603-E-2016 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at maximum power, and at the appropriate frequencies.


Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.2.1

ANSI/TIA-603-E-2016 – Section 2.2.17

Test Settings

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

FCC ID: PY7-95324M	 PCTEST <small>Proud to be part of element</small>	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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Test Setup

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

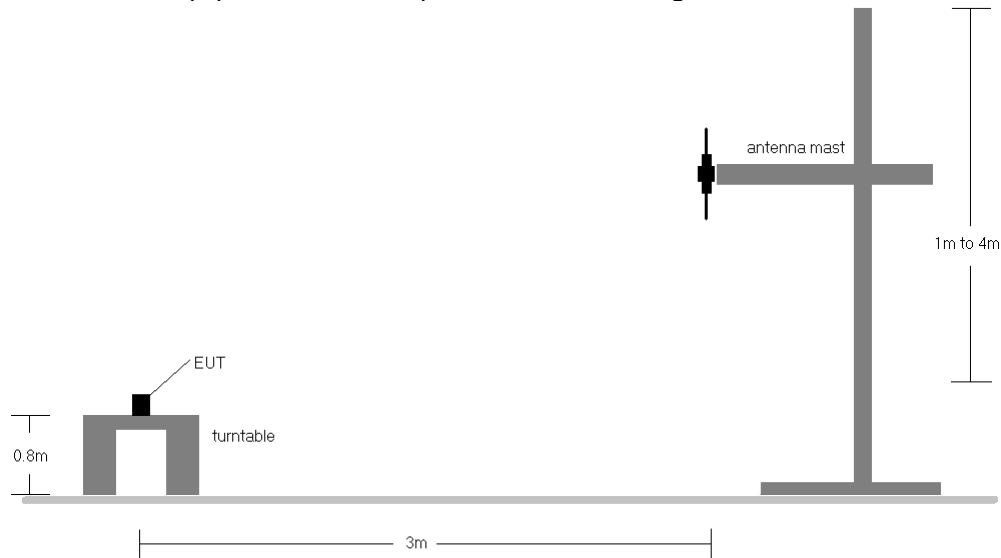


Figure 7-4. Radiated Test Setup <1GHz

Test Notes

- 1) This device employs GSM, GPRS, and EDGE capabilities. The EUT was tested under all configurations and the highest powers is reported in GPRS mode while transmitting with one slot active.
- 2) This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1".
- 3) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 4) This unit was tested with its standard battery.
- 5) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
824.20	GPRS850	H	194	170	15.91	6.65	20.41	0.110	38.45	-18.04	22.56	0.180	40.61	-18.05
836.60	GPRS850	H	196	160	16.58	6.74	21.17	0.131	38.45	-17.28	23.32	0.215	40.61	-17.29
848.80	GPRS850	H	202	161	15.88	6.73	20.46	0.111	38.45	-18.00	22.61	0.182	40.61	-18.00
836.60	GPRS850	V	142	179	14.83	6.74	19.42	0.087	38.45	-19.03	21.57	0.144	40.61	-19.04
836.60	EDGE850	H	142	160	11.21	6.74	15.80	0.038	38.45	-22.65	17.95	0.062	40.61	-22.66

Table 7-2. ERP Data (GPRS Cell – Main Ant)

Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
826.40	WCDMA850	H	201	153	12.81	6.67	17.33	0.054	38.45	-21.12	19.48	0.089	40.61	-21.12
836.60	WCDMA850	H	202	169	13.49	6.74	18.08	0.064	38.45	-20.37	20.23	0.105	40.61	-20.38
846.60	WCDMA850	H	202	166	13.22	6.78	17.85	0.061	38.45	-20.60	20.00	0.100	40.61	-20.60
836.60	WCDMA850	V	139	8	11.54	6.74	16.13	0.041	38.45	-22.32	18.28	0.067	40.61	-22.33


Table 7-3. ERP Data (WCDMA Cell – Main Ant)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10 MHz	QPSK	829.0	H	199	160	6.70	1 / 49	12.20	16.75	0.047	38.45	-21.70	18.90	0.078	40.61	-21.71
	QPSK	836.5	H	199	161	6.73	1 / 0	12.20	16.78	0.048	38.45	-21.67	18.93	0.078	40.61	-21.68
	QPSK	844.0	H	208	159	6.76	1 / 49	12.13	16.74	0.047	38.45	-21.71	18.89	0.077	40.61	-21.72
	16-QAM	836.5	H	199	161	6.73	1 / 0	11.51	16.09	0.041	38.45	-22.36	18.24	0.067	40.61	-22.37
5 MHz	QPSK	829.0	H	199	160	6.67	1 / 0	12.21	16.73	0.047	38.45	-21.72	18.88	0.077	40.61	-21.73
	QPSK	836.5	H	199	161	6.73	1 / 0	12.27	16.85	0.048	38.45	-21.60	19.00	0.079	40.61	-21.61
	QPSK	844.0	H	208	159	6.78	1 / 12	12.32	16.95	0.050	38.45	-21.50	19.10	0.081	40.61	-21.50
	16-QAM	829.0	H	199	160	6.67	1 / 0	11.70	16.23	0.042	38.45	-22.22	18.38	0.069	40.61	-22.23
3 MHz	QPSK	829.0	H	199	160	6.66	1 / 0	12.25	16.76	0.047	38.45	-21.69	18.91	0.078	40.61	-21.70
	QPSK	836.5	H	199	161	6.73	1 / 7	12.27	16.85	0.048	38.45	-21.61	19.00	0.079	40.61	-21.61
	QPSK	844.0	H	208	159	6.79	1 / 0	12.23	16.87	0.049	38.45	-21.58	19.02	0.080	40.61	-21.58
	16-QAM	836.5	H	199	161	6.73	1 / 7	11.68	16.26	0.042	38.45	-22.19	18.41	0.069	40.61	-22.20
1.4 MHz	QPSK	829.0	H	199	160	6.66	1 / 0	12.15	16.66	0.046	38.45	-21.79	18.81	0.076	40.61	-21.80
	QPSK	836.5	H	199	161	6.73	1 / 3	12.24	16.82	0.048	38.45	-21.63	18.97	0.079	40.61	-21.64
	QPSK	844.0	H	208	159	6.77	1 / 3	12.08	16.70	0.047	38.45	-21.75	18.85	0.077	40.61	-21.76
	16-QAM	836.5	H	199	161	6.73	1 / 3	11.56	16.14	0.041	38.45	-22.31	18.29	0.067	40.61	-22.31
10 MHz	QPSK (Opposite Pol.)	836.5	V	145	179	6.73	0.00	12.12	16.70	0.047	38.45	-21.75	18.85	0.077	40.61	-21.76

Table 7-4. ERP Data (LTE Band 5 – Main Ant)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	11/2 BPSK	834.0	H	169	226	6.65	1 / 53	10.27	14.77	0.030	38.45	-23.68	16.92	0.049	40.61	-23.68
	11/2 BPSK	836.5	H	169	230	6.73	1 / 53	10.17	14.75	0.030	38.45	-23.70	16.90	0.049	40.61	-23.71
	11/2 BPSK	839.0	H	170	231	6.80	1 / 53	10.17	14.82	0.030	38.45	-23.63	16.97	0.050	40.61	-23.63
	QPSK	834.0	H	169	226	6.65	1 / 53	9.96	14.46	0.028	38.45	-23.99	16.61	0.046	40.61	-23.99
	QPSK	836.5	H	169	230	6.73	1 / 53	9.87	14.45	0.028	38.45	-24.00	16.60	0.046	40.61	-24.01
	QPSK	839.0	H	170	231	6.80	1 / 53	10.14	14.79	0.030	38.45	-23.66	16.94	0.049	40.61	-23.66
	16-QAM	839.0	H	170	231	6.80	1 / 53	9.51	14.16	0.026	38.45	-24.29	16.31	0.043	40.61	-24.29
	11/2 BPSK	831.5	H	169	226	6.73	1 / 20	10.20	14.78	0.030	38.45	-23.67	16.93	0.049	40.61	-23.68
15 MHz	11/2 BPSK	836.5	H	169	230	6.73	1 / 39	10.12	14.70	0.029	38.45	-23.75	16.85	0.048	40.61	-23.76
	11/2 BPSK	841.5	H	170	231	6.73	1 / 39	10.07	14.65	0.029	38.45	-23.80	16.80	0.048	40.61	-23.81
	QPSK	831.5	H	169	226	6.73	1 / 20	9.83	14.40	0.028	38.45	-24.05	16.55	0.045	40.61	-24.06
	QPSK	836.5	H	169	230	6.73	1 / 39	9.68	14.26	0.027	38.45	-24.19	16.41	0.044	40.61	-24.19
	QPSK	841.5	H	170	231	6.73	1 / 39	10.31	14.89	0.031	38.45	-23.56	17.04	0.051	40.61	-23.57
	16-QAM	831.5	H	169	226	6.73	1 / 20	9.53	14.10	0.026	38.45	-24.35	16.25	0.042	40.61	-24.35
	11/2 BPSK	829.0	H	169	226	6.70	1 / 13	10.02	14.57	0.029	38.45	-23.88	16.72	0.047	40.61	-23.88
	11/2 BPSK	836.5	H	169	230	6.73	1 / 26	9.98	14.56	0.029	38.45	-23.89	16.71	0.047	40.61	-23.90
10 MHz	11/2 BPSK	844.0	H	170	231	6.76	1 / 13	9.95	14.56	0.029	38.45	-23.89	16.71	0.047	40.61	-23.90
	QPSK	829.0	H	169	226	6.70	1 / 13	9.83	14.38	0.027	38.45	-24.07	16.53	0.045	40.61	-24.08
	QPSK	836.5	H	169	230	6.73	1 / 26	9.80	14.38	0.027	38.45	-24.07	16.53	0.045	40.61	-24.08
	QPSK	844.0	H	170	231	6.76	1 / 13	9.86	14.46	0.028	38.45	-23.99	16.81	0.046	40.61	-23.99
	16-QAM	844.0	H	170	231	6.76	1 / 13	9.31	13.92	0.025	38.45	-24.53	16.07	0.040	40.61	-24.54
	11/2 BPSK	829.0	H	169	226	6.67	1 / 12	10.18	14.70	0.030	38.45	-23.75	16.85	0.048	40.61	-23.75
	11/2 BPSK	836.5	H	169	230	6.73	1 / 6	10.03	14.61	0.029	38.45	-23.84	16.76	0.047	40.61	-23.85
	11/2 BPSK	844.0	H	170	231	6.78	1 / 12	9.91	14.54	0.028	38.45	-23.91	16.69	0.047	40.61	-23.92
5 MHz	QPSK	829.0	H	169	226	6.67	1 / 12	9.72	14.25	0.027	38.45	-24.20	16.40	0.044	40.61	-24.21
	QPSK	836.5	H	169	230	6.73	1 / 6	9.58	14.16	0.026	38.45	-24.29	16.31	0.043	40.61	-24.29
	QPSK	844.0	H	170	231	6.78	1 / 12	9.84	14.47	0.028	38.45	-23.98	16.62	0.046	40.61	-23.99
	16-QAM	844.0	H	170	231	6.78	1 / 12	9.32	13.95	0.025	38.45	-24.50	16.10	0.041	40.61	-24.50
	QPSK (CP-OFDM)	839.0	H	170	231	6.73	1 / 39	9.24	13.82	0.024	38.45	-24.63	15.97	0.040	40.61	-24.64
	QPSK (Opposite Pol.)	839.0	V	214	333	6.73	1 / 39	8.32	12.90	0.019	38.45	-25.55	15.05	0.032	40.61	-25.56

Table 7-5. ERP Data (NR Band n5 – Main Ant)



FCC ID: PY7-95324M	 PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
10 MHz	QPSK	829.0	H	217	242	6.70	1 / 0	11.60	16.15	0.041	38.45	-22.30	18.30	0.068	40.61	-22.31
	QPSK	836.5	H	202	251	6.73	1 / 49	11.89	16.47	0.044	38.45	-21.98	18.62	0.073	40.61	-21.99
	QPSK	844.0	H	209	236	6.76	1 / 49	12.35	16.96	0.050	38.45	-21.49	19.11	0.081	40.61	-21.50
	16-QAM	844.0	H	209	236	6.76	1 / 49	11.82	16.43	0.044	38.45	-22.02	18.58	0.072	40.61	-22.03
5 MHz	QPSK	829.0	H	217	242	6.70	1 / 24	11.59	16.14	0.041	38.45	-22.31	18.29	0.067	40.61	-22.32
	QPSK	836.5	H	202	251	6.73	1 / 24	11.77	16.34	0.043	38.45	-22.11	18.49	0.071	40.61	-22.11
	QPSK	844.0	H	209	236	6.76	1 / 24	12.12	16.73	0.047	38.45	-21.72	18.88	0.077	40.61	-21.73
	16-QAM	844.0	H	209	236	6.76	1 / 24	11.93	16.53	0.045	38.45	-21.92	18.68	0.074	40.61	-21.92
3 MHz	QPSK	829.0	H	217	242	6.70	1 / 7	11.54	16.09	0.041	38.45	-22.36	18.24	0.067	40.61	-22.36
	QPSK	836.5	H	202	251	6.73	1 / 0	11.92	16.50	0.045	38.45	-21.95	18.65	0.073	40.61	-21.96
	QPSK	844.0	H	209	236	6.76	1 / 0	12.29	16.89	0.049	38.45	-21.56	19.04	0.080	40.61	-21.56
	16-QAM	844.0	H	209	236	6.76	1 / 0	11.83	16.43	0.044	38.45	-22.02	18.58	0.072	40.61	-22.03
1.4 MHz	QPSK	829.0	H	217	242	6.70	1 / 5	11.29	15.84	0.038	38.45	-22.61	17.99	0.063	40.61	-22.62
	QPSK	836.5	H	202	251	6.73	1 / 3	11.85	16.42	0.044	38.45	-22.03	18.57	0.072	40.61	-22.03
	QPSK	844.0	H	209	236	6.76	1 / 5	12.26	16.87	0.049	38.45	-21.58	19.02	0.080	40.61	-21.59
	16-QAM	844.0	H	209	236	6.76	1 / 5	11.48	16.09	0.041	38.45	-22.37	18.24	0.067	40.61	-22.37
10 MHz	QPSK (Opposite Pol.)	844.0	V	139	67	6.73	0.00	10.53	15.11	0.032	38.45	-23.34	17.26	0.053	40.61	-23.35

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

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	11/2 BPSK	834.0	H	202	342	6.65	1 / 53	10.56	15.06	0.032	38.45	-23.39	17.21	0.053	40.61	-23.39
	11/2 BPSK	836.5	H	202	333	6.73	1 / 53	10.66	15.24	0.033	38.45	-23.21	17.39	0.055	40.61	-23.22
	11/2 BPSK	839.0	H	205	335	6.80	1 / 53	10.39	15.04	0.032	38.45	-23.41	17.19	0.052	40.61	-23.41
	QPSK	834.0	H	202	342	6.65	1 / 53	10.39	14.89	0.031	38.45	-23.56	17.04	0.051	40.61	-23.56
	QPSK	836.5	H	202	333	6.73	1 / 53	10.64	15.22	0.033	38.45	-23.23	17.37	0.055	40.61	-23.24
	QPSK	839.0	H	205	335	6.80	1 / 53	10.33	14.98	0.032	38.45	-23.47	17.13	0.052	40.61	-23.47
15 MHz	16-QAM	836.5	H	202	333	6.73	1 / 53	9.88	14.46	0.028	38.45	-23.99	16.61	0.046	40.61	-24.00
	11/2 BPSK	831.5	H	202	342	6.73	1 / 1	10.63	15.20	0.033	38.45	-23.25	17.35	0.054	40.61	-23.25
	11/2 BPSK	836.5	H	202	333	6.73	1 / 1	10.72	15.30	0.034	38.45	-23.15	17.45	0.056	40.61	-23.16
	11/2 BPSK	841.5	H	205	335	6.73	1 / 1	10.59	15.17	0.033	38.45	-23.28	17.32	0.054	40.61	-23.28
	QPSK	831.5	H	202	342	6.73	1 / 1	10.49	15.06	0.032	38.45	-23.39	17.21	0.053	40.61	-23.39
	QPSK	836.5	H	202	333	6.73	1 / 1	10.89	15.47	0.035	38.45	-22.98	17.62	0.058	40.61	-22.99
10 MHz	QPSK	841.5	H	205	335	6.73	1 / 1	10.16	14.74	0.030	38.45	-23.71	16.89	0.049	40.61	-23.71
	16-QAM	836.5	H	202	333	6.73	1 / 1	9.77	14.35	0.027	38.45	-24.10	16.50	0.045	40.61	-24.11
	11/2 BPSK	829.0	H	202	342	6.70	1 / 1	10.53	15.08	0.032	38.45	-23.37	17.23	0.053	40.61	-23.37
	11/2 BPSK	836.5	H	202	333	6.73	1 / 1	10.65	15.23	0.033	38.45	-23.22	17.38	0.055	40.61	-23.23
	11/2 BPSK	844.0	H	205	335	6.76	1 / 1	10.81	15.41	0.035	38.45	-23.04	17.56	0.057	40.61	-23.04
	QPSK	829.0	H	202	342	6.70	1 / 1	10.44	14.99	0.032	38.45	-23.46	17.14	0.052	40.61	-23.46
5 MHz	QPSK	836.5	H	202	333	6.73	1 / 1	10.85	15.43	0.035	38.45	-23.02	17.58	0.057	40.61	-23.03
	QPSK	844.0	H	205	335	6.76	1 / 1	10.51	15.11	0.032	38.45	-23.34	17.26	0.053	40.61	-23.34
	16-QAM	829.0	H	202	342	6.70	1 / 1	9.86	14.41	0.028	38.45	-24.04	16.56	0.045	40.61	-24.05
	11/2 BPSK	829.0	H	202	342	6.67	1 / 1	10.74	15.26	0.034	38.45	-23.19	17.41	0.055	40.61	-23.19
	11/2 BPSK	836.5	H	202	333	6.73	1 / 13	10.69	15.27	0.034	38.45	-23.18	17.42	0.055	40.61	-23.19
	11/2 BPSK	844.0	H	205	335	6.78	1 / 1	10.74	15.37	0.034	38.45	-23.08	17.52	0.057	40.61	-23.08
20 MHz	QPSK	829.0	H	202	342	6.67	1 / 1	10.66	15.18	0.033	38.45	-23.27	17.33	0.054	40.61	-23.27
	QPSK	836.5	H	202	333	6.73	1 / 13	10.88	15.46	0.035	38.45	-22.99	17.61	0.058	40.61	-23.00
	QPSK	844.0	H	205	335	6.78	1 / 1	10.37	15.00	0.032	38.45	-23.45	17.15	0.052	40.61	-23.45
	16-QAM	836.5	H	202	333	6.73	1 / 13	9.90	14.48	0.028	38.45	-23.97	16.63	0.046	40.61	-23.98
	QPSK (CP-OFDM)	836.5	H	202	333	6.73	1 / 53	8.64	13.22	0.021	38.45	-25.23	15.37	0.034	40.61	-25.24
	QPSK (Opposite Pol.)	836.5	V	159	247	6.77	1 / 53	6.34	10.96	0.012	38.45	-27.49	13.11	0.020	40.61	-27.50

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

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7.6 Radiated Spurious Emissions Measurements

Test Overview


Radiated spurious emissions measurements are performed using the field strength conversion method described in KDB 971168 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using horizontally and vertically polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.8

Test Settings

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

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Test Setup

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

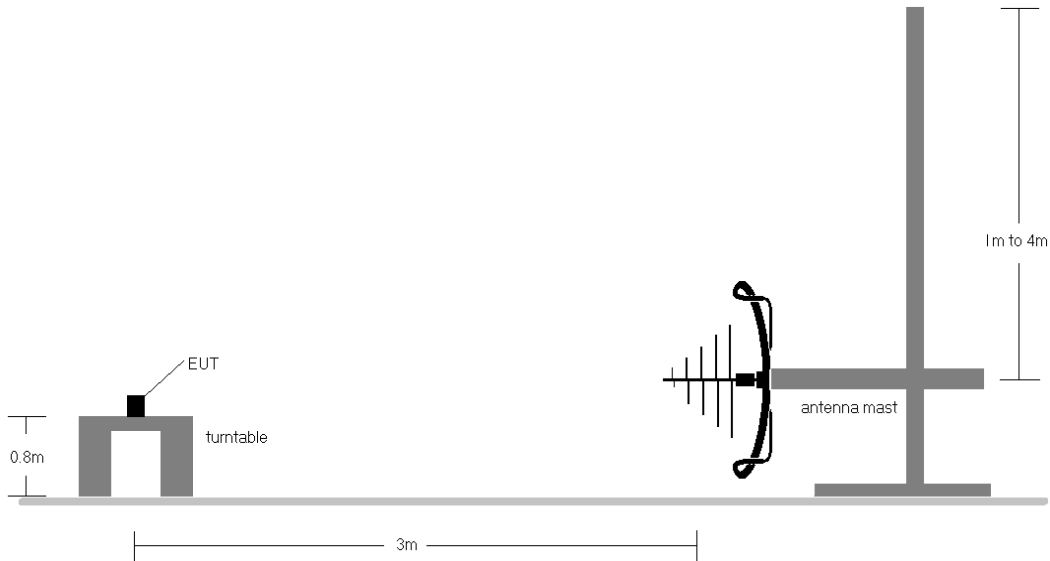


Figure 7-5. Test Instrument & Measurement Setup < 1GHz

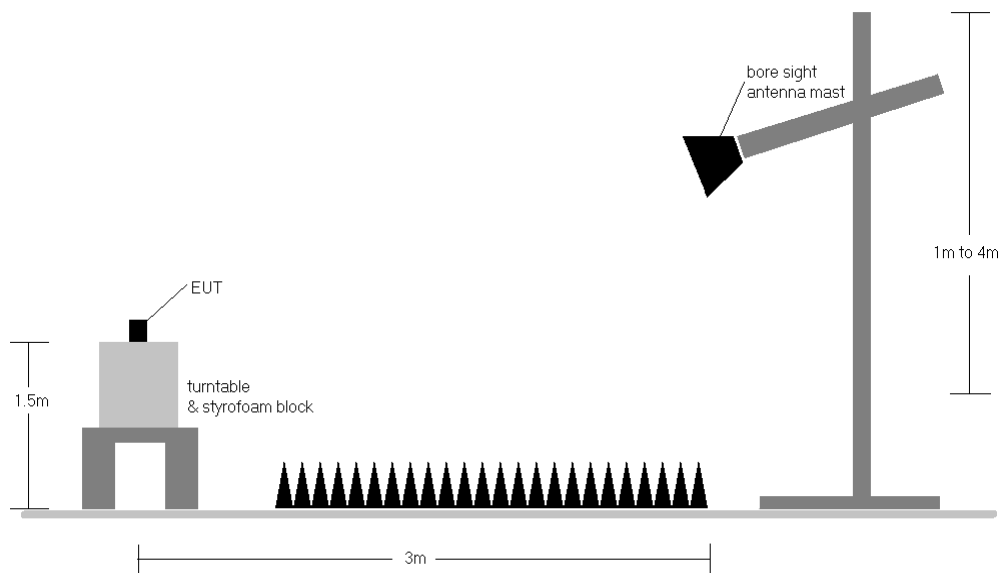



Figure 7-6. Test Instrument & Measurement Setup >1 GHz

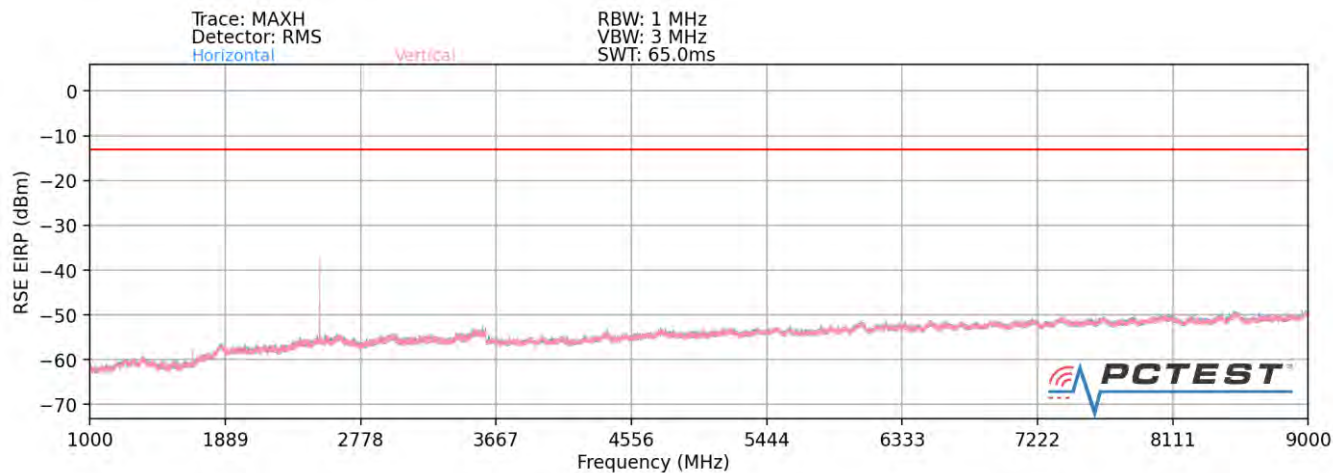
FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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Test Notes

- 1) Field strengths are calculated using the Measurement quantity conversions in KDB 971168 Section 5.8.4.
 - a) $E(\text{dB}\mu\text{V}/\text{m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b) $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V}/\text{m}) + 20\log D - 104.8$; where D is the measurement distance in meters.
- 2) This device employs GSM, GPRS, and EDGE capabilities. The EUT was tested under all configurations and the highest powers is reported in GPRS mode while transmitting with one slot active.
- 3) This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1".
- 4) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 5) This unit was tested with its standard battery.
- 6) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 7) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
- 8) The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 9) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.
- 10) Spurious emissions shown in this section are measured while operating in EN-DC mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor). Spurious emissions from the NR carrier device, is subject to the rules under which the NR carrier operates. Spurious emission caused by the LTE carrier must meet the requirements of the rules under which the LTE carrier operates.

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GSM/GPRS Cell – Main Ant



Plot 7-82. Radiated Spurious Plot (GPRS Cell – Main Ant)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1648.40	H	145	28	-54.14	-6.09	46.77	-48.48	-13.00	-35.48
2472.60	H	128	27	-50.22	-1.80	54.98	-40.27	-13.00	-27.27
3296.80	H	-	-	-69.63	2.87	40.24	-55.02	-13.00	-42.02
4121.00	H	-	-	-74.43	4.80	37.37	-57.89	-13.00	-44.89

Table 7-8. Radiated Spurious Data (GPRS Cell – Low Channel – Main Ant)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.20	H	202	28	-58.45	-5.82	42.73	-52.53	-13.00	-39.53
2509.80	H	193	34	-51.12	-1.51	54.37	-40.88	-13.00	-27.88
3346.40	H	-	-	-69.39	2.91	40.52	-54.74	-13.00	-41.74
4183.00	H	-	-	-74.84	4.61	36.77	-58.49	-13.00	-45.49


Table 7-9. Radiated Spurious Data (GPRS Cell – Mid Channel – Main Ant)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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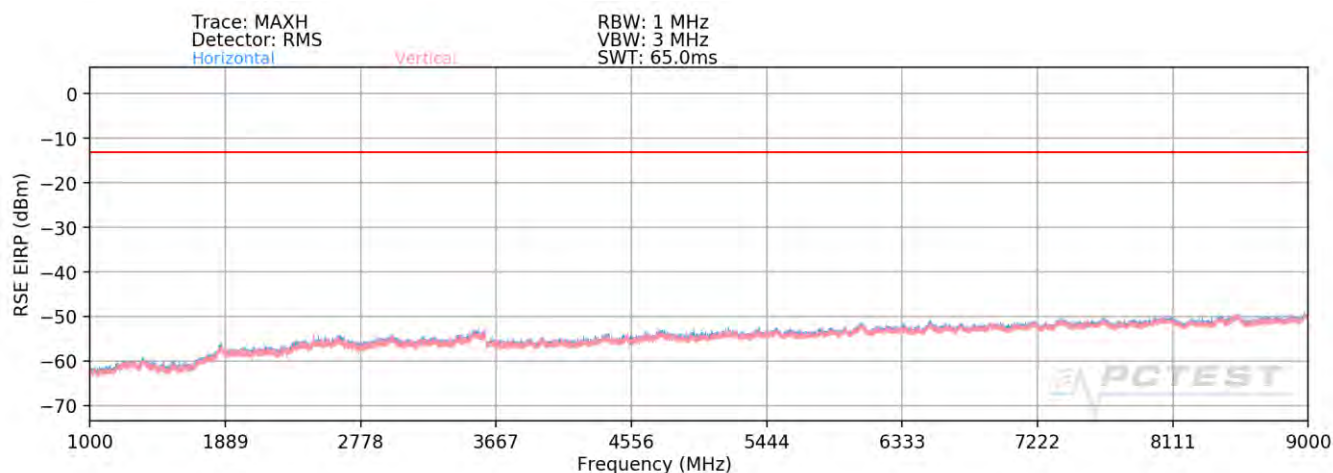
Mode:	GPRS 1 Tx Slot
Channel:	251
Frequency (MHz):	848.8

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1697.60	H	139	36	-55.69	-5.35	45.96	-49.30	-13.00	-36.30
2546.40	H	111	32	-52.11	-0.97	53.92	-41.33	-13.00	-28.33
3395.20	H	-	-	-70.01	3.08	40.07	-55.18	-13.00	-42.18
4244.00	H	-	-	-75.20	4.62	36.42	-58.83	-13.00	-45.83

Table 7-10. Radiated Spurious Data (GPRS Cell – High Channel – Main Ant)

FCC ID: PY7-95324M	 PART 22 MEASUREMENT REPORT SONY	Approved by: Technical Manager
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WCDMA Cell – Main Ant



Plot 7-83. Radiated Spurious Plot (WCDMA Cell – Main Ant)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1652.80	H	-	-	-70.29	-5.43	31.28	-63.97	-13.00	-50.97
2479.20	H	-	-	-67.57	-1.78	37.65	-57.60	-13.00	-44.60
3305.60	H	-	-	-68.97	0.90	38.93	-56.33	-13.00	-43.33

Table 7-11. Radiated Spurious Data (WCDMA Cell – Low Channel – Main Ant)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.20	H	-	-	-67.76	-5.05	34.19	-61.06	-13.00	-48.06
2509.80	H	-	-	-69.21	-1.66	36.13	-59.13	-13.00	-46.13
3346.40	H	-	-	-70.11	0.81	37.70	-57.56	-13.00	-44.56

Table 7-12. Radiated Spurious Data (WCDMA Cell – Mid Channel – Main Ant)

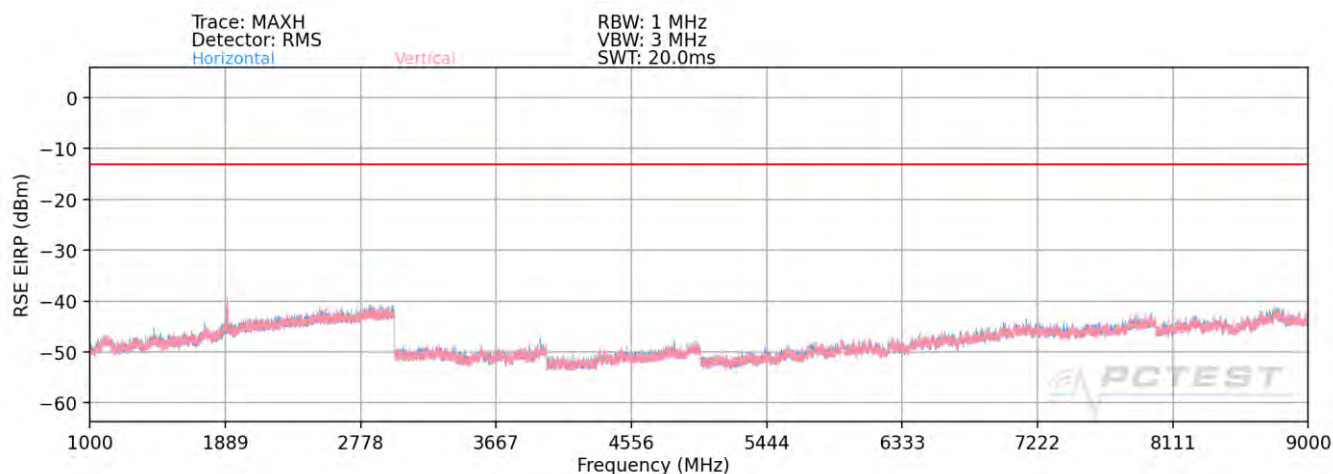
Mode:	WCDMA RMC
Channel:	4233
Frequency (MHz):	846.6

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1693.20	H	-	-	-68.93	-4.69	33.38	-61.88	-13.00	-48.88
2539.80	H	-	-	-69.53	-1.40	36.07	-59.19	-13.00	-46.19
3386.40	H	-	-	-74.62	0.76	33.14	-62.11	-13.00	-49.11

Table 7-13. Radiated Spurious Data (WCDMA Cell – High Channel – Main Ant)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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LTE Band 5 – Main Ant



Plot 7-84. Radiated Spurious Plot (LTE Band 5 – Main Ant)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1658.00	V	-	-	-70.55	2.05	38.50	-56.76	-13.00	-43.76
2487.00	V	208	0	-65.63	5.64	47.01	-48.25	-13.00	-35.25
3316.00	V	-	-	-71.08	7.35	43.27	-51.99	-13.00	-38.99
4145.00	V	-	-	-72.22	7.83	42.61	-52.65	-13.00	-39.65

Table 7-14. Radiated Spurious Data (LTE Band 5 – Low Channel – Main Ant)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.00	V	-	-	-68.99	2.83	40.84	-54.42	-13.00	-41.42
2509.50	V	111	274	-65.67	5.54	46.87	-48.38	-13.00	-35.38
3346.00	V	-	-	-68.55	7.75	46.20	-49.06	-13.00	-36.06
4182.50	V	-	-	-69.40	7.91	45.51	-49.75	-13.00	-36.75


Table 7-15. Radiated Spurious Data (LTE Band 5 – Mid Channel – Main Ant)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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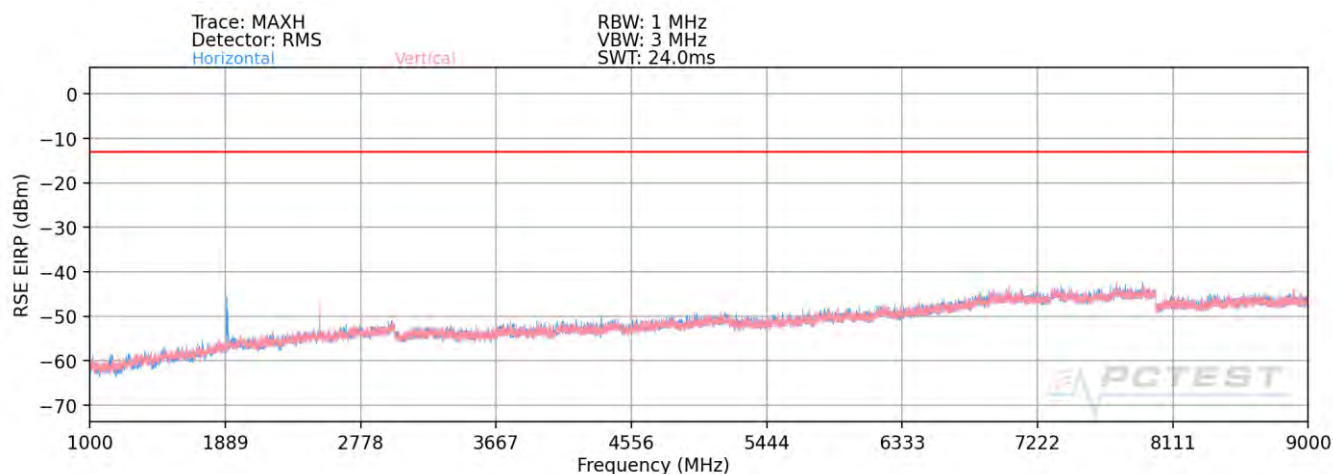
Bandwidth (MHz):	10
Frequency (MHz):	844
RB / Offset:	1 / 25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1688.00	V	-	-	-71.11	3.46	39.35	-55.91	-13.00	-42.91
2532.00	V	175	9	-69.26	5.78	43.52	-51.74	-13.00	-38.74
3376.00	V	-	-	-72.05	7.05	42.00	-53.26	-13.00	-40.26
4220.00	V	-	-	-71.99	8.12	43.13	-52.13	-13.00	-39.13

Table 7-16. Radiated Spurious Data (LTE Band 5 – High Channel – Main Ant)

FCC ID: PY7-95324M	 PART 22 MEASUREMENT REPORT SONY	Approved by: Technical Manager
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NR Band n5 – Main Ant



Plot 7-85. Radiated Spurious Plot (NR Band n5 – Main Ant)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1668.00	V	274	51	-68.21	-0.18	38.61	-56.64	-13.00	-43.64
2502.00	V	233	4	-59.85	3.92	51.07	-44.19	-13.00	-31.19
3336.00	V	-	-	-70.11	4.86	41.75	-53.51	-13.00	-40.51
4170.00	V	-	-	-69.49	6.05	43.56	-51.69	-13.00	-38.69

Table 7-17. Radiated Spurious Data (NR Band n5 – Low Channel – Main Ant)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.00	V	300	34	-67.31	-0.14	39.55	-55.71	-13.00	-42.71
2509.50	V	229	346	-60.16	4.03	50.87	-44.39	-13.00	-31.39
3346.00	V	-	-	-70.12	5.01	41.89	-53.36	-13.00	-40.36
4182.50	V	-	-	-69.17	6.10	43.93	-51.33	-13.00	-38.33
1889.00	V	316	101	-59.23	1.89	49.66	-45.60	-13.00	-32.60


Table 7-18. Radiated Spurious Data (NR Band n5 – Mid Channel – Main Ant)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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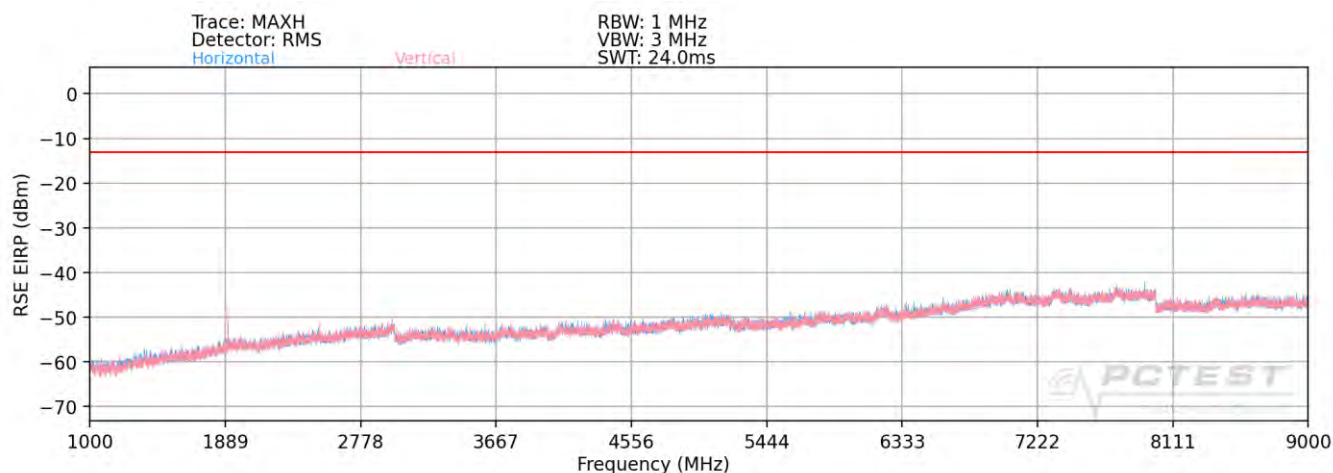
Bandwidth (MHz):	20
Frequency (MHz):	839
RB / Offset:	1 / 53
Mode:	Stand Alone

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1678.00	V	277	49	-66.59	-0.11	40.30	-54.96	-13.00	-41.96
2517.00	V	231	333	-61.21	3.86	49.65	-45.61	-13.00	-32.61
3356.00	V	-	-	-72.00	5.18	40.18	-55.08	-13.00	-42.08
4195.00	V	-	-	-68.49	5.98	44.49	-50.77	-13.00	-37.77

Table 7-19. Radiated Spurious Data (NR Band n5 – High Channel – Main Ant)

FCC ID: PY7-95324M	 PCTEST <small>Proud to be part of element</small>	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 72 of 86

LTE Band 5 – SUB Ant



Plot 7-86. Radiated Spurious Plot (LTE Band 5 – SUB Ant)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1658.00	H	-	-	-68.18	-5.94	32.88	-62.38	-13.00	-49.38
2487.00	H	163.00	28.00	-58.05	-0.45	48.50	-46.76	-13.00	-33.76
3316.00	H	-	-	-69.14	2.41	40.27	-54.98	-13.00	-41.98
4145.00	H	-	-	-69.25	4.27	42.02	-53.24	-13.00	-40.24

Table 7-20. Radiated Spurious Data (LTE Band 5 – Low Channel – SUB Ant)

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



Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.00	H	319.00	322.00	-67.32	-5.98	33.70	-61.55	-13.00	-48.55
2509.50	H	218.00	219.00	-60.48	-0.04	46.48	-48.78	-13.00	-35.78
3346.00	H	-	-	-70.48	2.49	39.01	-56.25	-13.00	-43.25
4182.50	H	-	-	-69.45	4.87	42.42	-52.83	-13.00	-39.83
5019.00	H	-	-	-77.42	3.33	32.91	-62.34	-13.00	-49.34

Table 7-21. Radiated Spurious Data (LTE Band 5 – Mid Channel – SUB Ant)

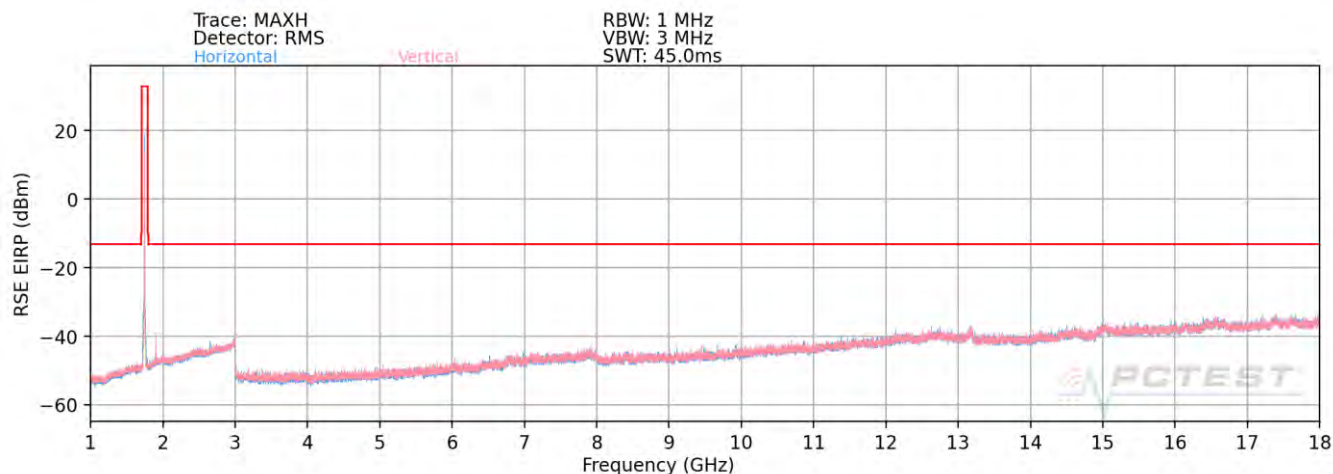
FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 73 of 86

Bandwidth (MHz):	10								
Frequency (MHz):	844								
RB / Offset:	1 / 25								
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1688.00	H	305.00	202.00	-69.04	-6.03	31.93	-63.33	-13.00	-50.33
2532.00	H	102.00	215.00	-58.22	-0.04	48.74	-46.52	-13.00	-33.52
3376.00	H	-	-	-70.70	2.71	39.01	-56.25	-13.00	-43.25
4220.00	H	-	-	-70.06	4.63	41.57	-53.68	-13.00	-40.68

Table 7-22. Radiated Spurious Data (LTE Band 5 – High Channel – SUB Ant)

FCC ID: PY7-95324M	 PART 22 MEASUREMENT REPORT 		Approved by: Technical Manager
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NR Band n5 – B66 EN-DC



Plot 7-87. Radiated Spurious Plot (NR Band n5 – B66 EN-DC – Mid Channel)

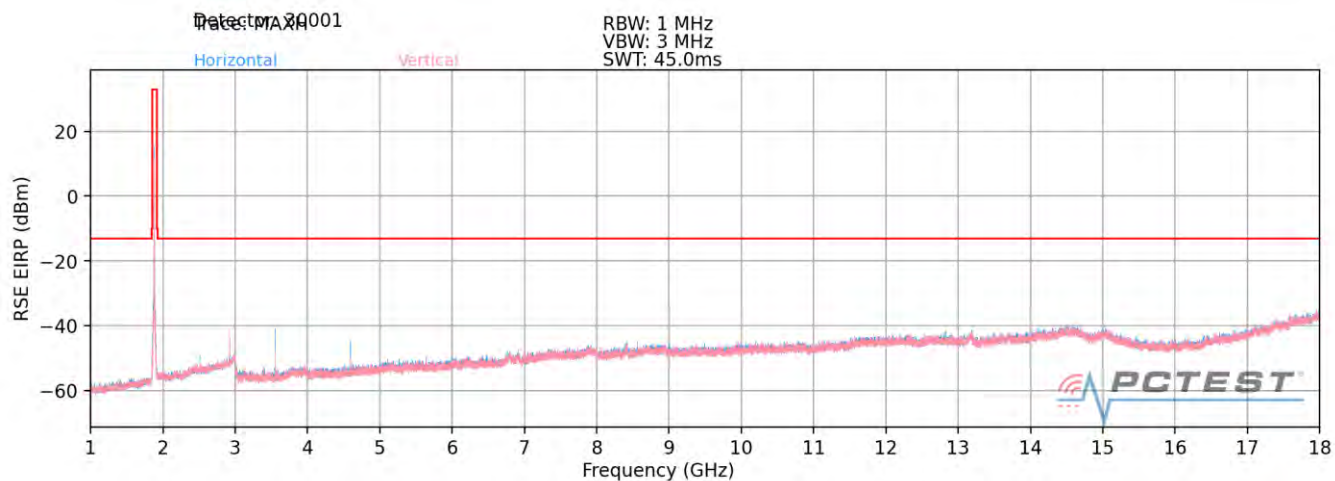
Bandwidth (MHz):	20 / 20
Frequency (MHz):	836.5 / 1745
RB / Offset:	1 / 53 & 1 / 50
Mode:	EN-DC
Anchor Band:	B66

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1889.0	H	-	-	-68.55	1.89	40.34	-54.92	-13.00	-41.92
2653.5	H	-	-	-68.24	3.88	42.64	-52.61	-13.00	-39.61
2797.5	H	-	-	-69.32	4.09	41.77	-53.49	-13.00	-40.49
3562.0	H	-	-	-70.45	5.10	41.65	-53.60	-13.00	-40.60

Table 7-23. Radiated Spurious Data (NR Band n5 – B66 EN-DC – Mid Channel)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 75 of 86

NR Band n5 – B2 EN-DC



Plot 7-88. Radiated Spurious Plot (NR Band n5 – B2 EN-DC – Mid Channel)

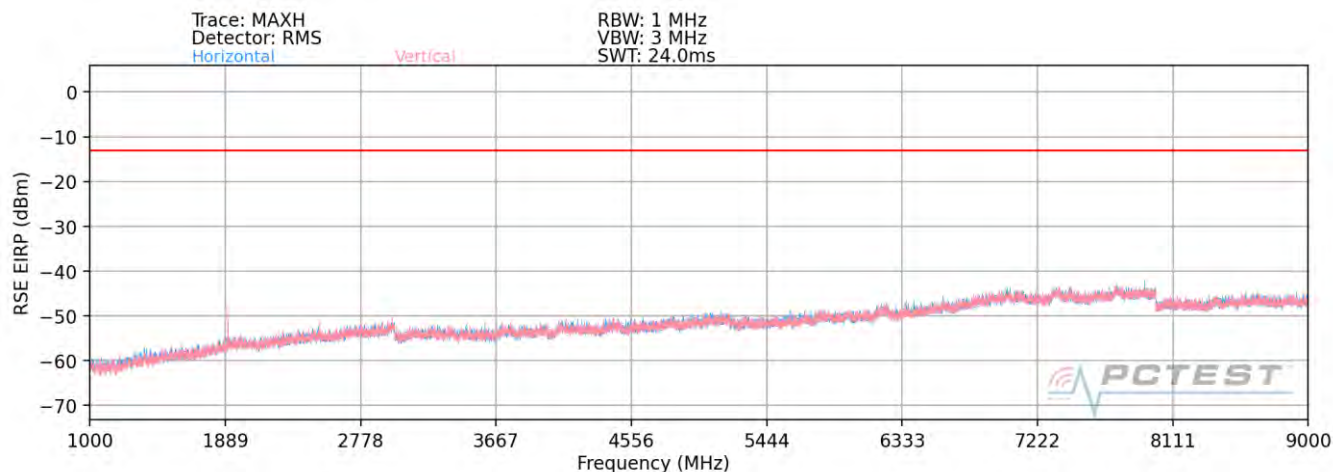
Bandwidth (MHz):	20 & 20
Frequency (MHz):	836.5 & 1880
RB / Offset:	1 / 53 & 1 / 50
Mode:	EN-DC
Anchor Band:	2

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1250.5	V	-	-	-75.10	-1.84	30.06	-65.19	-13.00	-52.19
2294.0	V	-	-	-75.22	2.99	34.77	-60.49	-13.00	-47.49
2923.5	V	161	277	-51.22	4.01	59.79	-35.47	-13.00	-22.47
3337.5	V	-	-	-72.36	4.88	39.52	-55.73	-13.00	-42.73
3967.0	V	-	-	-72.29	5.38	40.09	-55.17	-13.00	-42.17

Table 7-24. Radiated Spurious Data (NR Band n5 – B2 EN-DC – Mid Channel)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 76 of 86

NR Band n5 – Sub Ant



Plot 7-89. Radiated Spurious Plot (NR Band n5 – Sub Ant)

Bandwidth (MHz):	20
Frequency (MHz):	834
RB / Offset:	1 / 50
Mode:	Standalone
Anchor Band:	N/A

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1668.00	H	211	56	-69.01	-0.18	37.81	-57.44	-13.00	-44.44
2502.00	H	120	201	-70.21	3.92	40.71	-54.55	-13.00	-41.55
3336.00	H	-	-	-69.88	4.86	41.98	-53.28	-13.00	-40.28
4170.00	H	-	-	-70.11	6.05	42.94	-52.31	-13.00	-39.31

Table 7-25. Radiated Spurious Data (NR Band n5 – Low Channel – Sub Ant)

Bandwidth (MHz):	20
Frequency (MHz):	836.5
RB / Offset:	1 / 50
Mode:	Standalone
Anchor Band:	N/A

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.00	H	205	43	-68.87	-0.14	37.99	-57.27	-13.00	-44.27
2509.50	H	118	176	-69.36	4.03	41.67	-53.59	-13.00	-40.59
3346.00	H	-	-	-69.75	5.01	42.26	-52.99	-13.00	-39.99
4182.50	H	-	-	-69.74	6.10	43.36	-51.90	-13.00	-38.90


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

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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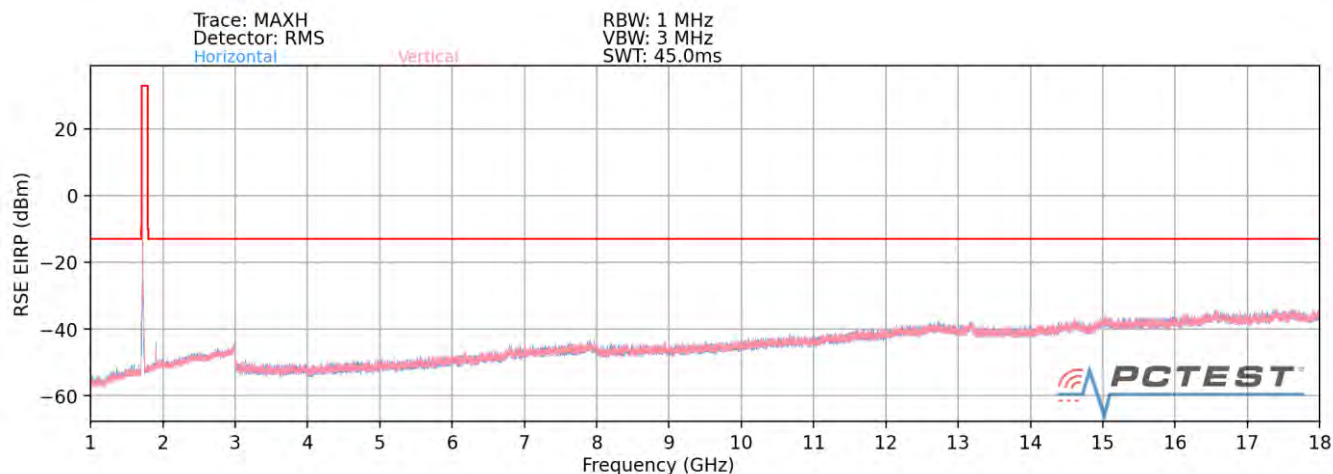
Bandwidth (MHz):	20
Frequency (MHz):	839
RB / Offset:	1 / 50
Mode:	Standalone
Anchor Band:	N/A

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1678.00	H	-	-	-66.89	-0.11	40.00	-55.26	-13.00	-42.26
2517.00	H	122	136	-69.22	3.86	41.64	-53.62	-13.00	-40.62
3356.00	H	-	-	-69.37	5.18	42.81	-52.45	-13.00	-39.45
4195.00	H	-	-	-69.44	5.98	43.54	-51.72	-13.00	-38.72

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

FCC ID: PY7-95324M	 PCTEST® <small>Proud to be part of element</small>	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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NR Band n5 – B66 EN-DC



Plot 7-90. Radiated Spurious Plot (NR Band n5 – B66 EN-DC – Mid Channel)

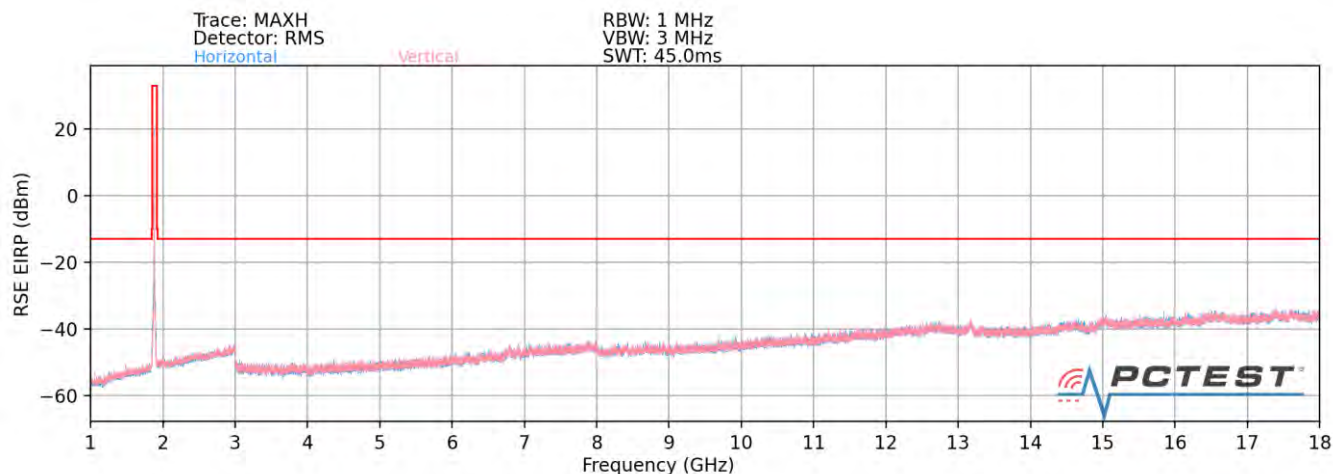
Bandwidth (MHz):	20 / 20
Frequency (MHz):	1745 / 836.5
RB / Offset:	1 / 50 & 1 / 53
Mode:	EN-DC
Anchor Band:	66

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1889.0	H	256	166	-70.71	1.89	38.18	-57.08	-13.00	-44.08
2653.5	H	-	-	-72.29	3.88	38.59	-56.66	-13.00	-43.66
2797.5	H	-	-	-72.61	4.09	38.48	-56.78	-13.00	-43.78
3562.0	H	-	-	-70.36	5.10	41.74	-53.51	-13.00	-40.51

Table 7-28. Radiated Spurious Data (NR Band n5 – B66 EN-DC – Mid Channel)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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NR Band n5 – B2 EN-DC



Plot 7-91. Radiated Spurious Plot (NR Band n5 – B2 EN-DC – Mid Channel)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1250.5	H	-	-	-69.68	-1.84	35.48	-59.77	-13.00	-46.77
2294.0	H	-	-	-70.15	2.99	39.84	-55.42	-13.00	-42.42
2923.5	H	-	-	-71.00	4.01	40.01	-55.25	-13.00	-42.25

Table 7-29. Radiated Spurious Data (NR Band n5 – B2 EN-DC – Mid Channel)

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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7.7 Frequency Stability / Temperature Variation

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-E-2016. The frequency stability of the transmitter is measured by:

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

For Part 22 and RSS-132, the frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency.

Test Procedure Used

ANSI/TIA-603-E-2016

Test Settings


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

Test Setup

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

Test Notes

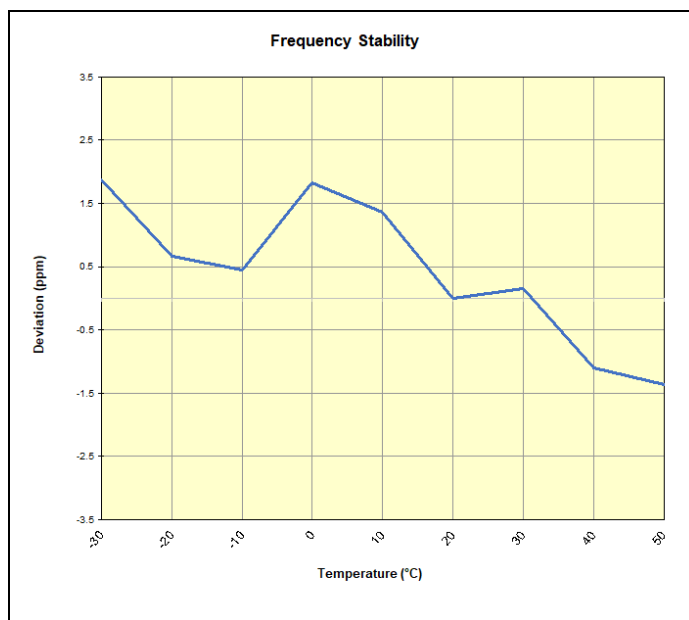
None

FCC ID: PY7-95324M	 PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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LTE Band 5

LTE Band 5					
Operating Frequency (Hz):			836,500,000		
Ref. Voltage (VDC):			3.86		
Deviation Limit:			± 0.00025% or 2.5 ppm		
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.86	- 30	836,593,734	1,571	0.0001878
		- 20	836,592,725	562	0.0000672
		- 10	836,592,539	376	0.0000449
		0	836,593,696	1,533	0.0001832
		+ 10	836,593,308	1,145	0.0001369
		+ 20 (Ref)	836,592,163	0	0.0000000
		+ 30	836,592,288	125	0.0000150
		+ 40	836,591,242	-921	-0.0001101
		+ 50	836,591,027	-1,136	-0.0001358
Battery Endpoint	3.32	+ 20	836,591,999	-164	-0.0000196

Table 7-30. LTE Band 5 Frequency Stability Data



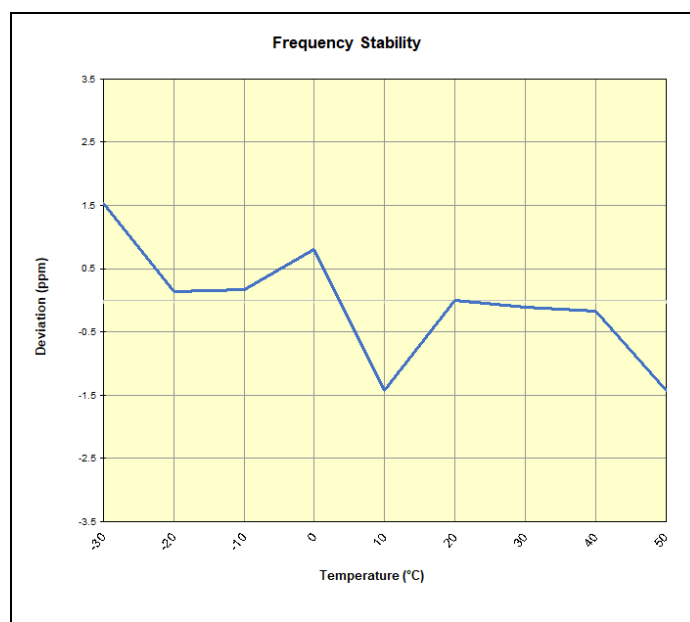
Plot 7-92. LTE Band 5 Frequency Stability Chart

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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NR Band n5

NR Band n5					
Operating Frequency (Hz):			836,500,000		
Ref. Voltage (VDC):			3.86		
Deviation Limit:			± 0.00025% or 2.5 ppm		
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.86	- 30	836,582,501	1,285	0.0001535
		- 20	836,581,335	119	0.0000142
		- 10	836,581,355	139	0.0000166
		0	836,581,887	671	0.0000802
		+ 10	836,580,029	-1,187	-0.0001419
		+ 20 (Ref)	836,581,216	0	0.0000000
		+ 30	836,581,128	-88	-0.0000106
		+ 40	836,581,077	-139	-0.0000166
		+ 50	836,580,030	-1,187	-0.0001418
Battery Endpoint	3.32	+ 20	836,591,000	9,784	0.0011695

Table 7-31. NR Band n5 Frequency Stability Data

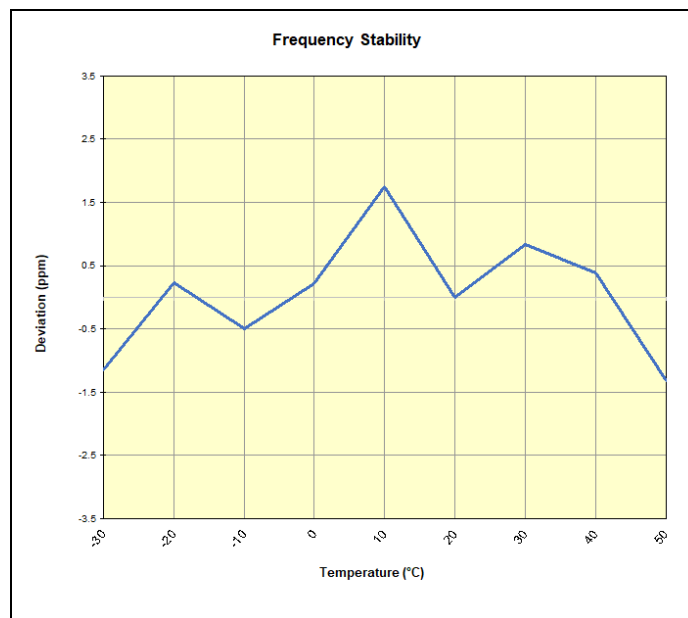


Plot 7-93. NR Band n5 Frequency Stability Chart

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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GSM/GPRS Cellular					
		Operating Frequency (Hz):	836,600,000		
		Ref. Voltage (VDC):	3.86		
		Deviation Limit:	± 0.00025% or 2.5 ppm		
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.86	- 30	836,601,873	-959	-0.0001146
		- 20	836,603,029	197	0.0000235
		- 10	836,602,418	-413	-0.0000494
		0	836,603,011	179	0.0000214
		+ 10	836,604,291	1,459	0.0001744
		+ 20 (Ref)	836,602,832	0	0.0000000
		+ 30	836,603,536	705	0.0000842
		+ 40	836,603,150	318	0.0000380
		+ 50	836,601,737	-1,095	-0.0001308
Battery Endpoint	3.32	+ 20	836,601,111	-1,721	-0.0002057

Table 7-32. GSM/GPRS Cell Frequency Stability Data



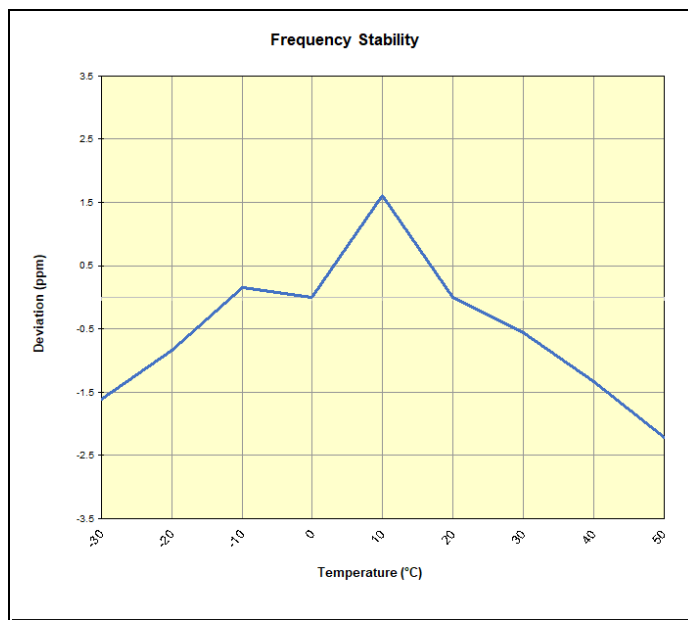
Plot 7-94. GSM/GPRS Cell Frequency Stability Chart

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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WCDMA Cell

WCDMA Cellular					
		Operating Frequency (Hz):		836,600,000	
		Ref. Voltage (VDC):		3.86	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.86	- 30	836,584,440	-1,345	-0.0001607
		- 20	836,585,092	-693	-0.0000828
		- 10	836,585,916	131	0.0000157
		0	836,585,787	2	0.0000002
		+ 10	836,587,133	1,348	0.0001611
		+ 20 (Ref)	836,585,785	0	0.0000000
		+ 30	836,585,320	-465	-0.0000555
		+ 40	836,584,675	-1,110	-0.0001327
		+ 50	836,583,931	-1,854	-0.0002216
Battery Endpoint	3.32	+ 20	836,585,401	-384	-0.0000459

Table 7-33. WCDMA Cell Frequency Stability Data




Plot 7-95. WCDMA Cell Frequency Stability Chart

FCC ID: PY7-95324M	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the SONY **Portable Handset** **FCC ID: PY7-95324M** complies with all the requirements of Part 22 of the FCC rules.

FCC ID: PY7-95324M	 PCTEST <small>Proud to be part of element</small>	PART 22 MEASUREMENT REPORT	SONY	Approved by: Technical Manager
Test Report S/N: 1M2108040087-02-R1.PY7	Test Dates: 8/2 – 9/23/2021	EUT Type: Portable Handset		Page 86 of 86