

PART 22 MEASUREMENT REPORT**Applicant Name:**

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

Date of Testing:

1/6/2025 - 2/28/2025

Test Report Issue Date:

3/1/2025

Test Site/Location:

Element Lab., Columbia, MD, USA

Test Report Serial No.:

1M2501020001-07.A3L

FCC ID:

A3LSMG766U

APPLICANT:

Samsung Electronics Co., Ltd.

Application Type:

Certification

Model:

SM-G766U

Additional Model(s):

SM-G766U1

EUT Type:

Portable Handset

FCC Classification:

PCS Licensed Transmitter Held to Ear (PCE)

FCC Rule Part:

22

Test Procedure(s):

ANSI C63.26-2015

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

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



RJ Ortanez
Executive Vice President



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Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	ERP		EIRP		Emission Designator
				Max. Power [W]	Max. Power [dBm]	Max. Power [W]	Max. Power [dBm]	
GSM/GPRS	N/A	GMSK	824.2 - 848.8	1.319	31.20	2.163	33.35	240KGXW
EDGE	N/A	8-PSK	824.2 - 848.8	0.305	24.84	0.500	26.99	237KG7W
WCDMA	N/A	Spread Spectrum	826.4 - 846.6	0.086	19.33	0.140	21.48	4M16F9W
LTE Band 26/5	15MHz (Band 26 only)	QPSK	831.5 - 841.5	0.089	19.49	0.146	21.64	13M5G7D
		16QAM	831.5 - 841.5	0.069	18.37	0.113	20.52	13M5W7D
	10 MHz	QPSK	829.0 - 844.0	0.093	19.68	0.152	21.83	9M04G7D
		16QAM	829.0 - 844.0	0.074	18.71	0.122	20.86	9M05W7D
	5 MHz	QPSK	826.5 - 846.5	0.092	19.63	0.151	21.78	4M54G7D
		16QAM	826.5 - 846.5	0.071	18.54	0.117	20.69	4M54W7D
	3 MHz	QPSK	825.5 - 847.5	0.094	19.72	0.154	21.87	2M72G7D
		16QAM	825.5 - 847.5	0.072	18.58	0.118	20.73	2M71W7D
	1.4 MHz	QPSK	824.7 - 848.3	0.089	19.48	0.146	21.63	1M11G7D
		16QAM	824.7 - 848.3	0.073	18.66	0.120	20.81	1M11W7D
	20 MHz	$\pi/2$ BPSK	834.0 - 839.0	0.109	20.37	0.179	22.52	18M0G7D
		QPSK	834.0 - 839.0	0.111	20.46	0.183	22.61	17M9G7D
		16QAM	834.0 - 839.0	0.080	19.01	0.131	21.16	17M9W7D
	15 MHz	$\pi/2$ BPSK	831.5 - 841.5	0.111	20.46	0.182	22.61	13M5G7D
		QPSK	831.5 - 841.5	0.115	20.59	0.188	22.74	13M5G7D
		16QAM	831.5 - 841.5	0.081	19.10	0.133	21.25	13M6W7D
	10 MHz	$\pi/2$ BPSK	829.0 - 844.0	0.107	20.28	0.175	22.43	9M03G7D
		QPSK	829.0 - 844.0	0.108	20.35	0.178	22.50	9M03G7D
		16QAM	829.0 - 844.0	0.077	18.87	0.126	21.02	9M03W7D
	5 MHz	$\pi/2$ BPSK	826.5 - 846.5	0.107	20.30	0.176	22.45	4M53G7D
		QPSK	826.5 - 846.5	0.112	20.49	0.184	22.64	4M52G7D
		16QAM	826.5 - 846.5	0.074	18.69	0.121	20.84	4M53W7D

EUT Overview

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1.0 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada.

1.2 Element Test Location

Measurements were conducted at the Element laboratory(ies) indicated in Section 1.3 below. All measurement facilities are compliant with the test site requirements specified in ANSI C63.4-2014 and KDB 414788 D01 v01r01.

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 Agreements (MRAs).

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Handset FCC ID: A3LSMG766U**. 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 and RSS-132.

Test Device Serial No.: 3704M, 4500M, 1969M

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/ac/ax WLAN, 802.11a/n/ac/ax UNII (5GHz and 6GHz), Bluetooth (1x, EDR, LE), NFC

2.3 Test Configuration

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

2.4 Software and Firmware

Testing was performed on device(s) using software/firmware version C766USQ0AXL3 installed on the EUT.

2.5 EMI Suppression Device(s)/Modifications

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

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3.0 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

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

Deviation from Measurement Procedure.....None

3.2 Radiated Power and Radiated Spurious Emissions

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

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

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

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

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

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

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

And

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

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

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

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4.0 MEASUREMENT UNCERTAINTY

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

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

Table 4-1. Measurement Uncertainty Budget – MD

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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
-	LTx1	Licensed Transmitter Cable Set	4/2/2024	Annual	4/2/2025	LTx1
-	LTx2	Licensed Transmitter Cable Set	4/2/2024	Annual	4/2/2025	LTx2
-	LTx3	Licensed Transmitter Cable Set	4/2/2024	Annual	4/2/2025	LTx3
-	WL25-1	Conducted Cable Set (25GHz)	4/2/2024	Annual	4/2/2025	WL25-1
-	WL40-1	Conducted Cable Set (40GHz)	4/2/2024	Annual	4/2/2025	WL40-1
Agilent	N9020A	MXA Signal Analyzer	3/22/2024	Annual	3/22/2025	US46470561
Agilent	N9038A	MXE EMI Receiver	9/16/2024	Annual	9/16/2025	MY51210133
Agilent	N9030A	PXA Signal Analyzer (44GHz)	4/9/2024	Annual	4/9/2025	MY52350166
Anritsu	MT8821C	Radio Communication Analyzer	N/A			6201381794
Anritsu	MT8821C	Radio Communication Analyzer	N/A			6200901190
Emco	3115	Horn Antenna (1-18GHz)	6/7/2024	Biennial	6/7/2026	150693
Espec	ESX-2CA	Environmental Chamber	7/5/2023	Annual	7/5/2025	17620
ETS Lindgren	3164-08	Quad Ridge Horn Antenna	3/29/2023	Biennial	3/29/2025	128337
Keysight Technologies	N9030A	PXA Signal Analyzer (3Hz-26.5GHz)	8/26/2024	Annual	8/26/2025	MY54490576
Keysight Technologies	N9020A	MXA Signal Analyzer	4/11/2024	Annual	4/11/2025	MY54500644
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			100976
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			112347
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			102060
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	10/16/2024	Annual	10/16/2025	100342
Rohde & Schwarz	FSW67	Signal / Spectrum Analyzer	2/15/2024	Annual	2/15/2025	103200
Sunol	DRH-118	Horn Antenna (1-18GHz)	2/21/2024	Biennial	2/21/2026	A050307
Sunol	DRH-118	Horn Antenna (1-18 GHz)	2/13/2024	Biennial	2/13/2026	A042511
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	9/11/2024	Biennial	9/11/2026	A051107

Table 5-1. Test Equipment Calibration Table

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 EMISSION DESIGNATORS

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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7.0 TEST RESULTS

7.1 Summary

Company Name: Samsung Electronics Co., Ltd.
 FCC ID: A3LSMG766U
 FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
 Mode(s): GPRS/EDGE/WCDMA/LTE/NR

Test Condition	Test Description	FCC Part Section(s)	RSS Section(s)	Test Limit	Test Result	Reference
CONDUCTED	Transmitter Conducted Output Power	2.1046(a), 2.1046(c)	RSS-Gen(6.12)	N/A	PASS	Section 7.2
	Occupied Bandwidth	2.1049(h)	RSS-Gen(6.7)	N/A	PASS	Section 7.3
	Conducted Band Edge / Spurious Emissions	2.1051, 22.917(a)	RSS-Gen(6.13), RSS-132(5.5)	$\geq 43 + 10 \log (P[\text{Watts}])$ dB of attenuation below transmitter power	PASS	Sections 7.4, 7.5
	Peak-to-Average Ratio	N/A	RSS-132(5.4)	≤ 13 dB	PASS	Section 7.6
	Frequency Stability	2.1055, 22.355	RSS-Gen(6.11), RSS-132(5.3)	The carrier frequency of the transmitter must be maintained within the 2.5ppm	PASS	Section 7.9
RADIATED	Effective Radiated Power / Equivalent Isotropic Radiated Power	22.913(a)(5)	RSS-Gen(6.12), RSS-132(5.4)	< 7 Watts max. ERP	PASS	Section 7.7
	Radiated Spurious Emissions	2.1053, 22.917(a)	RSS-Gen(7.3), RSS-132(5.6)	$> 43 + 10 \log_{10} (P[\text{Watts}])$ for all out-of-band emissions	PASS	Section 7.8

Table 7-1. Summary of Test Results

Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.
- 4) All conducted emissions measurements are performed with automated test software to capture the corresponding plots necessary to show compliance. The measurement software utilized is EMC Software Tool v1.2.2.

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7.2 Occupied Bandwidth

Test Overview

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

Test Procedure Used

ANSI C63.26-2015 – Section 5.4.4

Test Settings

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5% of the expected OBW
3. VBW $\geq 3 \times$ 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.

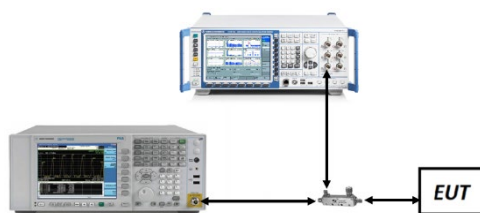


Figure 7-1. Test Instrument & Measurement Setup

Test Notes

None.

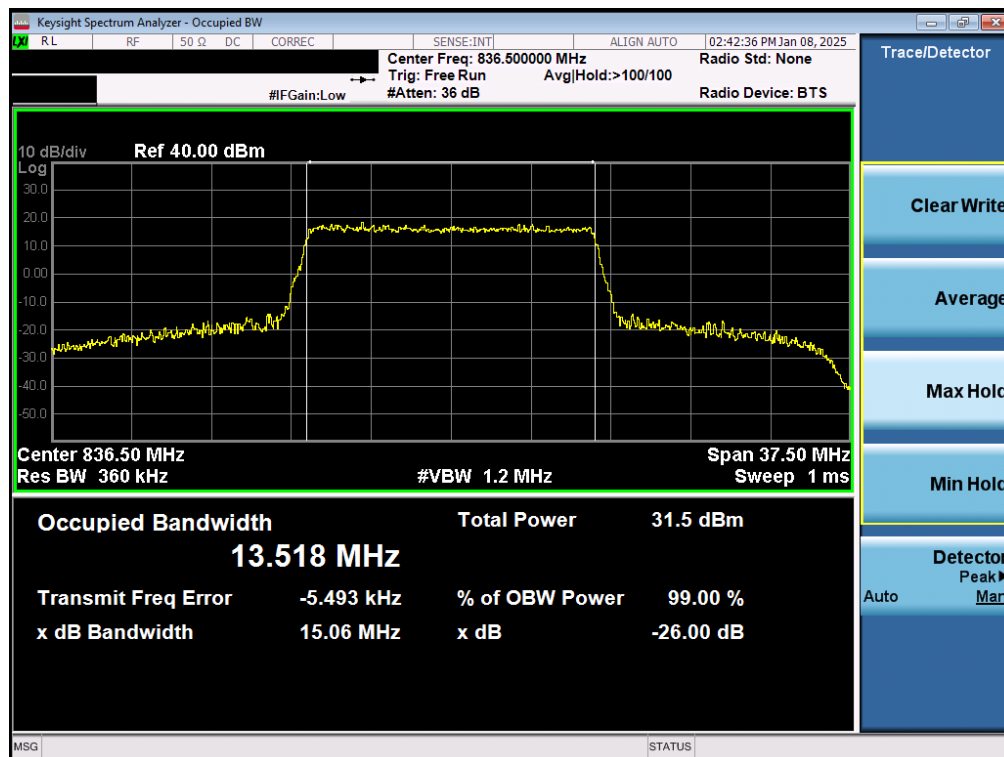
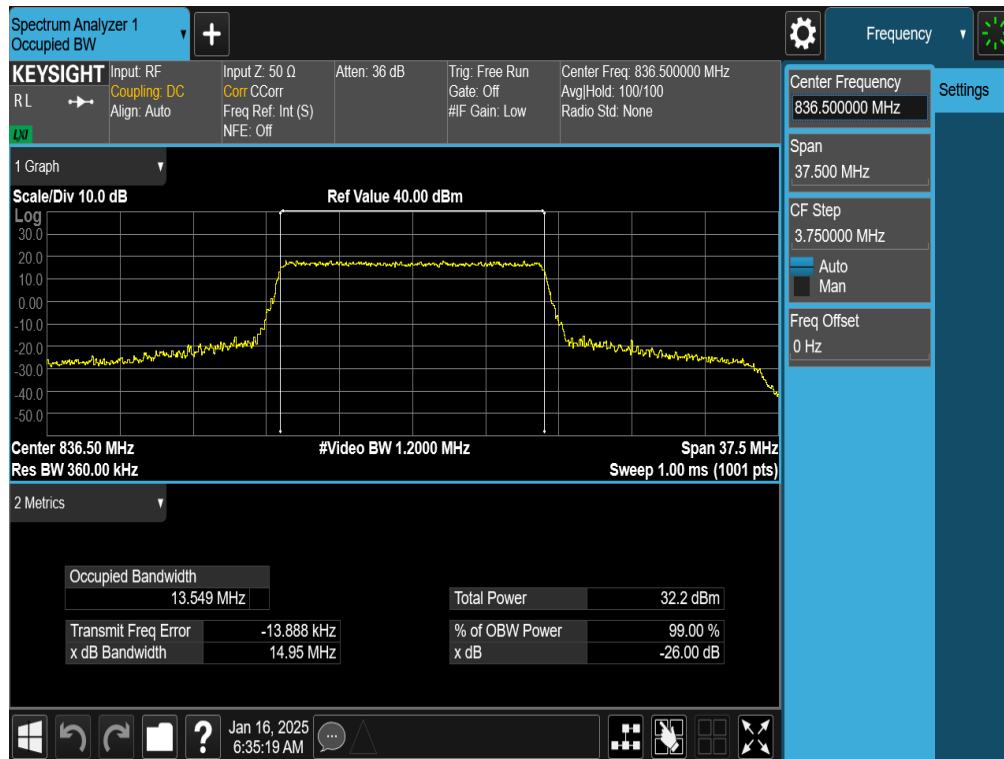
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Mode	Bandwidth	Modulation	OBW [MHz]
GSM-Cell	N/A	GMSK	0.240
GSM-Cell Edge		8-PSK	0.237
WCDMA-Cell		Spread Spectrum	4.16
LTE-B26-5	15MHz	QPSK	13.55
		16QAM	13.52
	10MHz	QPSK	9.04
		16QAM	9.05
	5 MHz	QPSK	4.54
		16QAM	4.54
	3 MHz	QPSK	2.72
		16QAM	2.71
	1.4 MHz	QPSK	1.11
		16QAM	1.11
NR-n5	20 MHz	$\pi/2$ BPSK	17.97
		QPSK	17.91
		16QAM	17.91
	15 MHz	$\pi/2$ BPSK	13.49
		QPSK	13.52
		16QAM	13.56
	10 MHz	$\pi/2$ BPSK	9.03
		QPSK	9.03
		16QAM	9.03
	5 MHz	$\pi/2$ BPSK	4.53
		QPSK	4.52
		16QAM	4.53

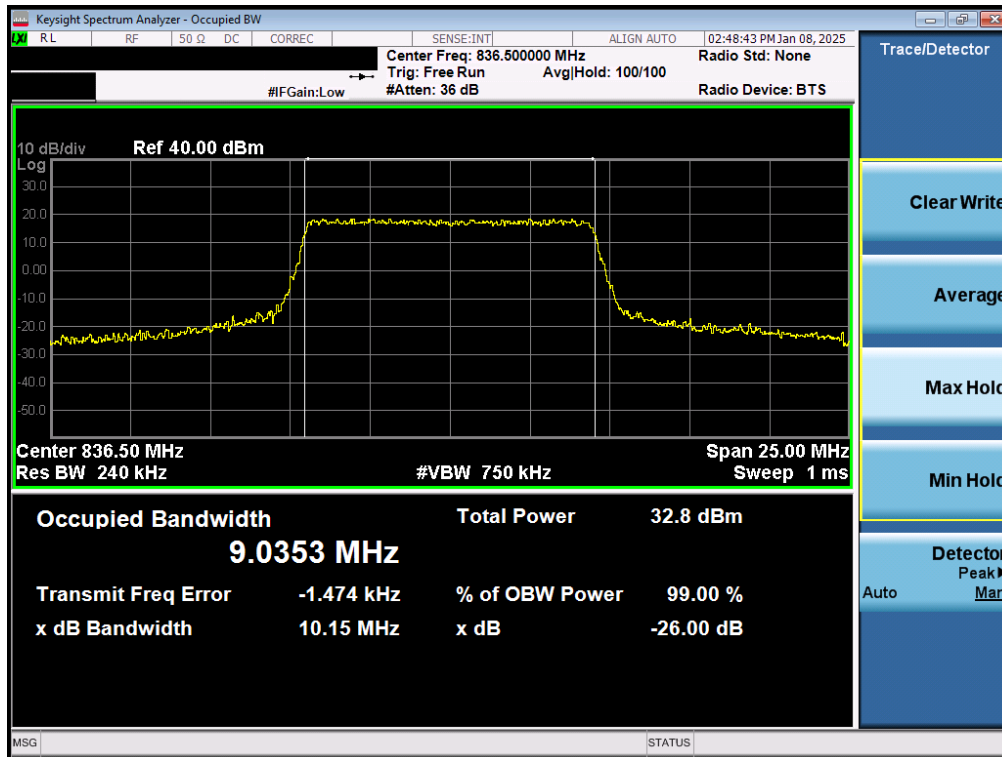
Table 7-2. Occupied Bandwidth Results

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LTE Band 26/5



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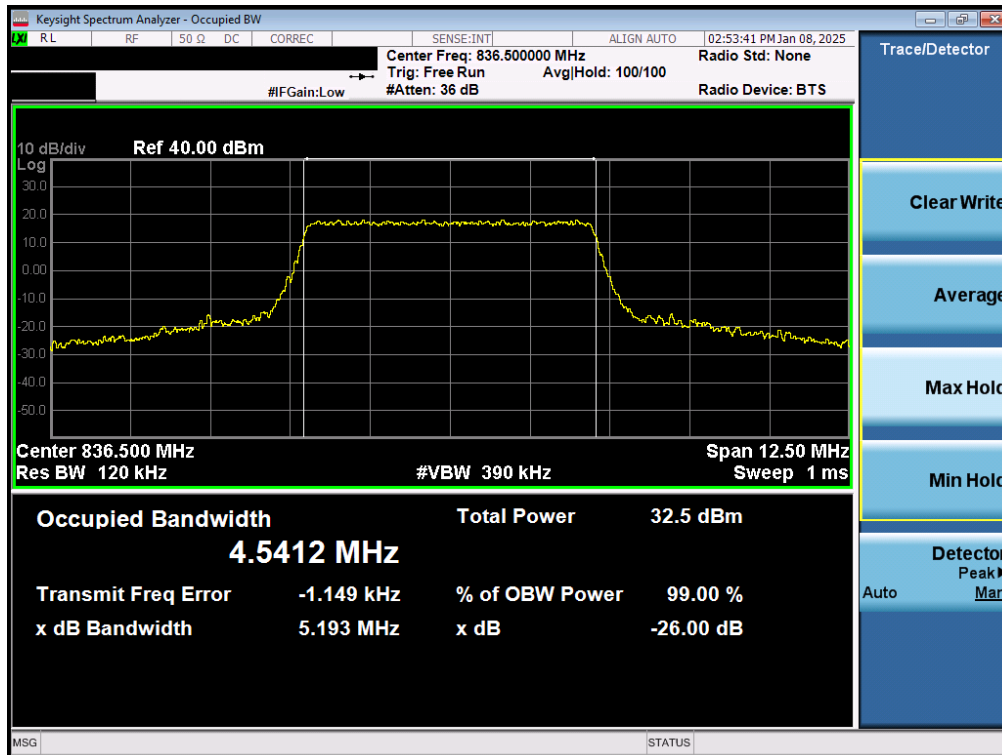


Plot 7-3. Occupied Bandwidth Plot (LTE Band 26/5 - 10MHz QPSK - Full RB - Ant1)

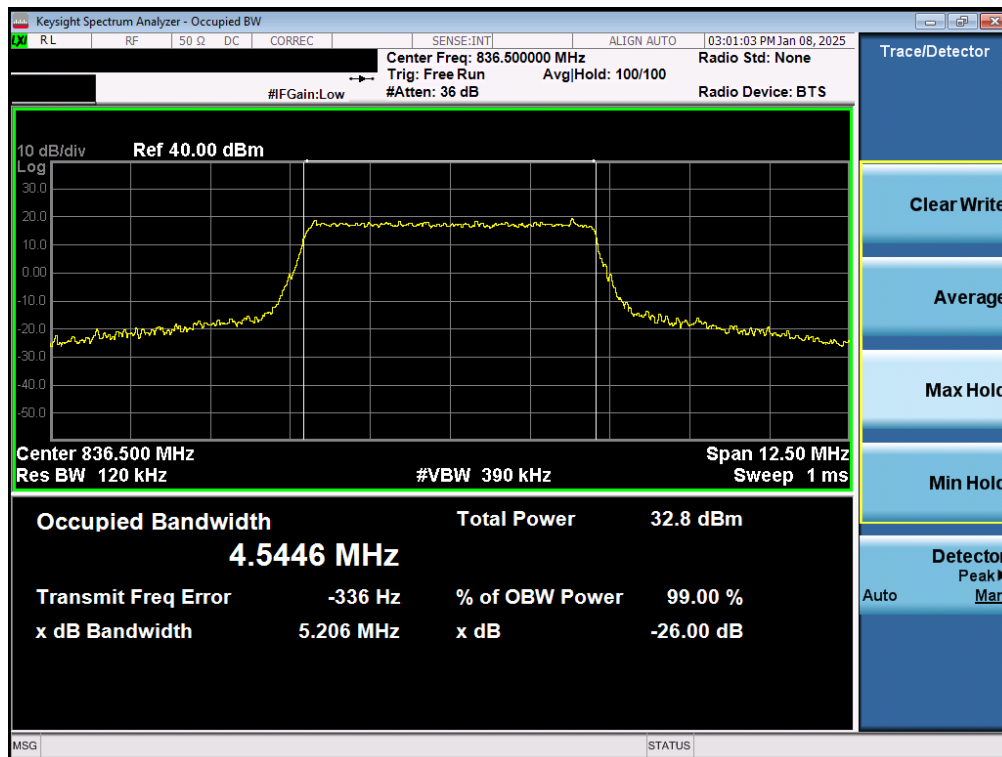


Plot 7-4. Occupied Bandwidth Plot (LTE Band 26/5 - 10MHz 16-QAM - Full RB - Ant1)

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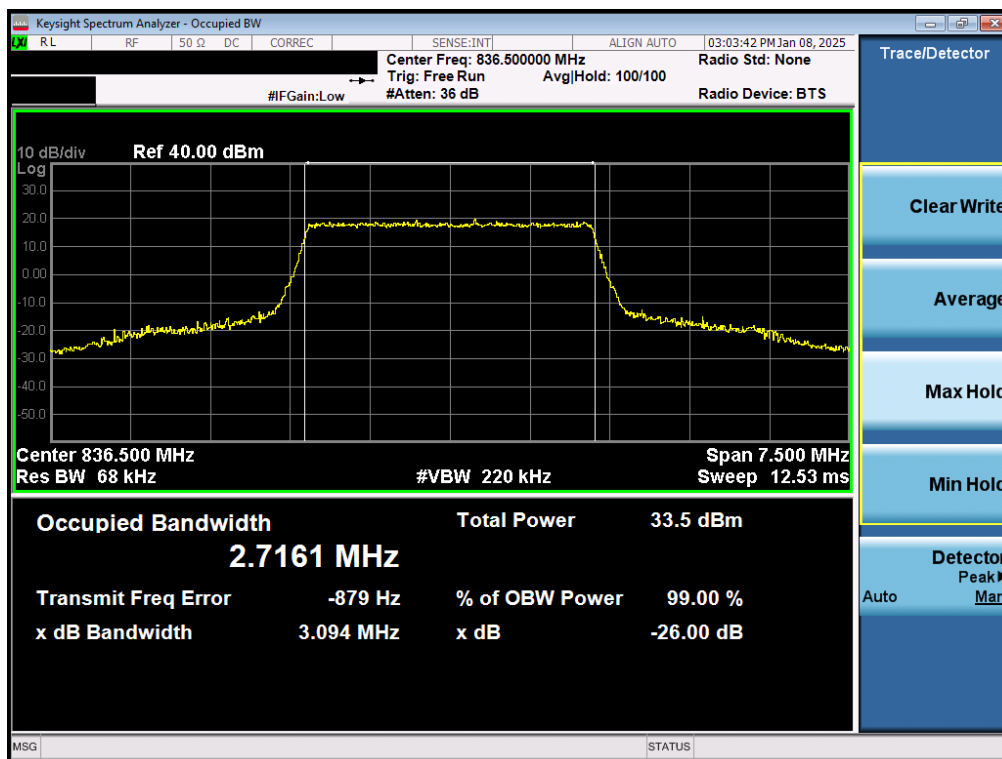


Plot 7-5. Occupied Bandwidth Plot (LTE Band 26/5 - 5MHz QPSK - Full RB - Ant1)

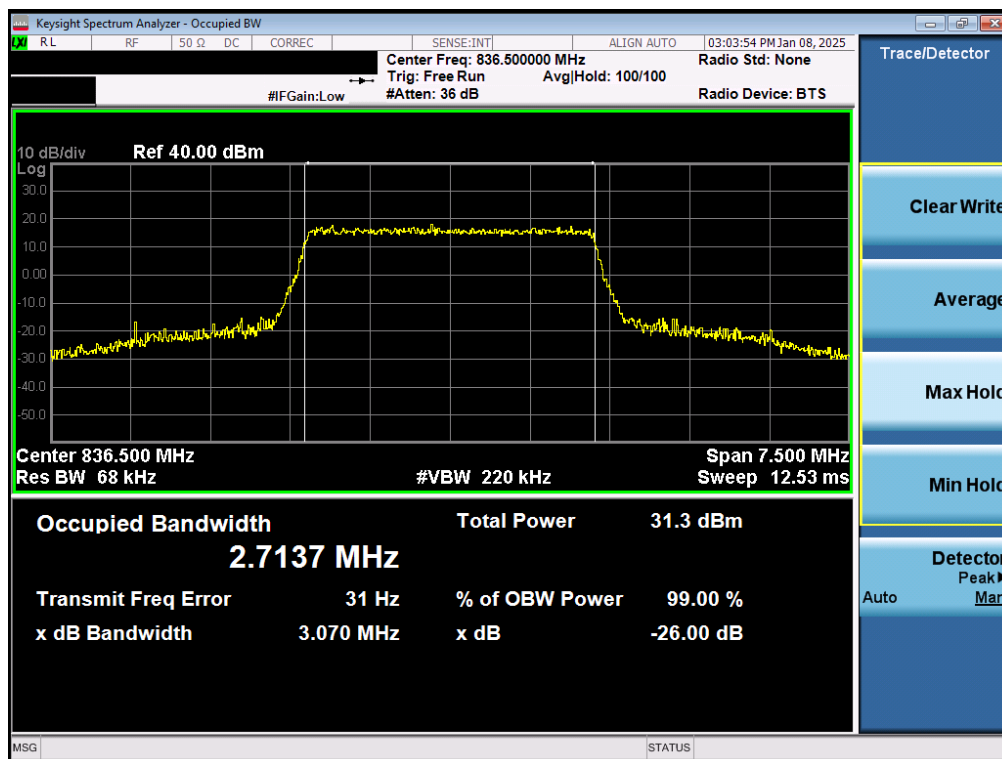


Plot 7-6. Occupied Bandwidth Plot (LTE Band 26/5 - 5MHz 16-QAM - Full RB - Ant1)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 15 of 64

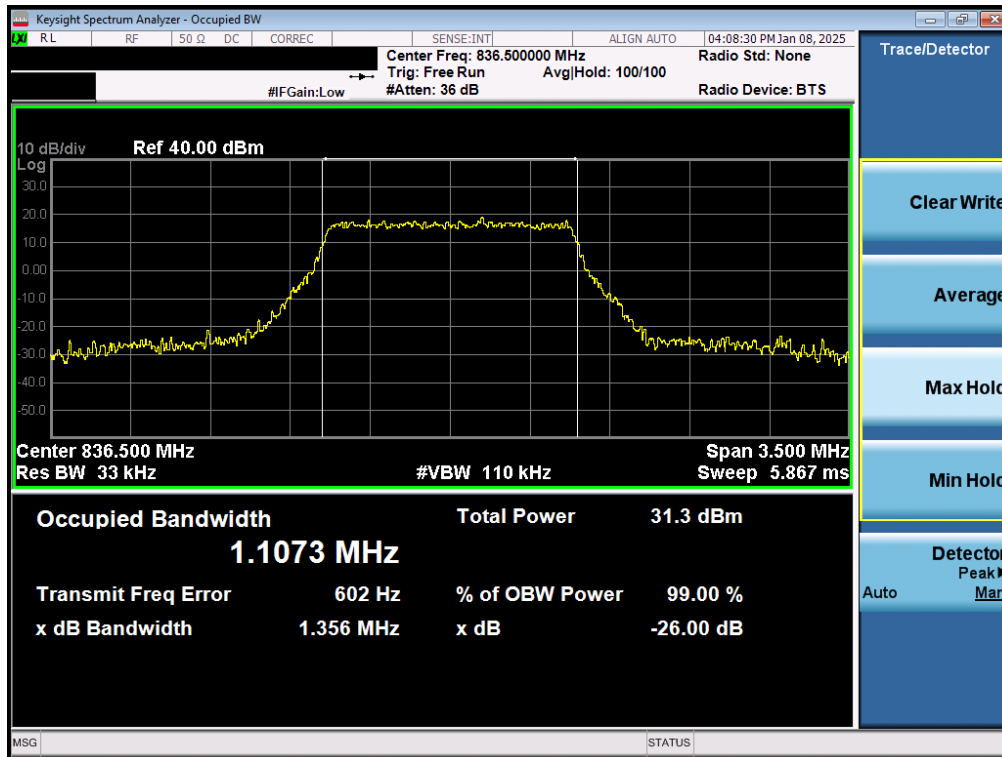


Plot 7-7. Occupied Bandwidth Plot (LTE Band 26/5 - 3MHz QPSK - Full RB - Ant1)

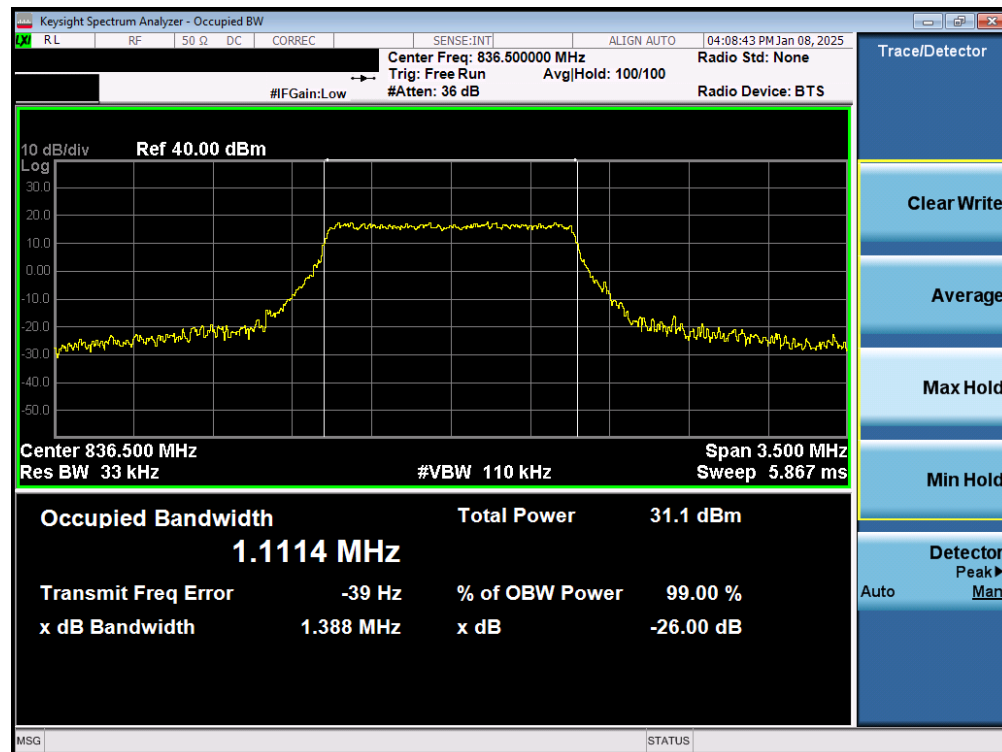


Plot 7-8. Occupied Bandwidth Plot (LTE Band 26/5 - 3MHz 16-QAM - Full RB - Ant1)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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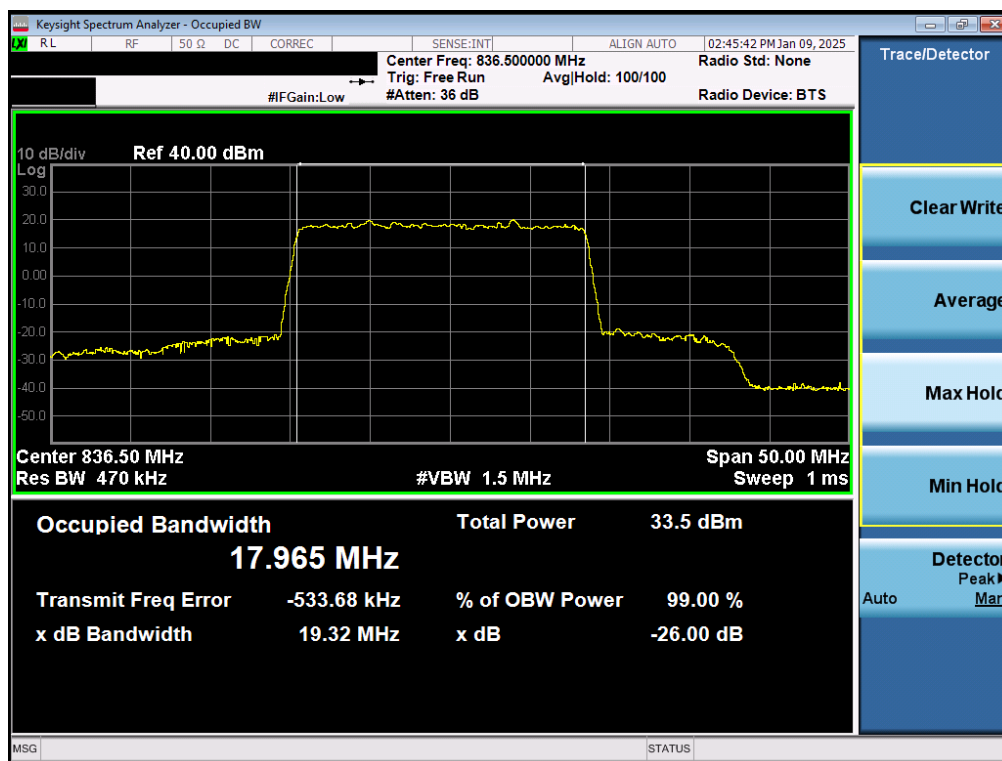
Plot 7-9. Occupied Bandwidth Plot (LTE Band 26/5 - 1.4MHz QPSK - Full RB - Ant1)



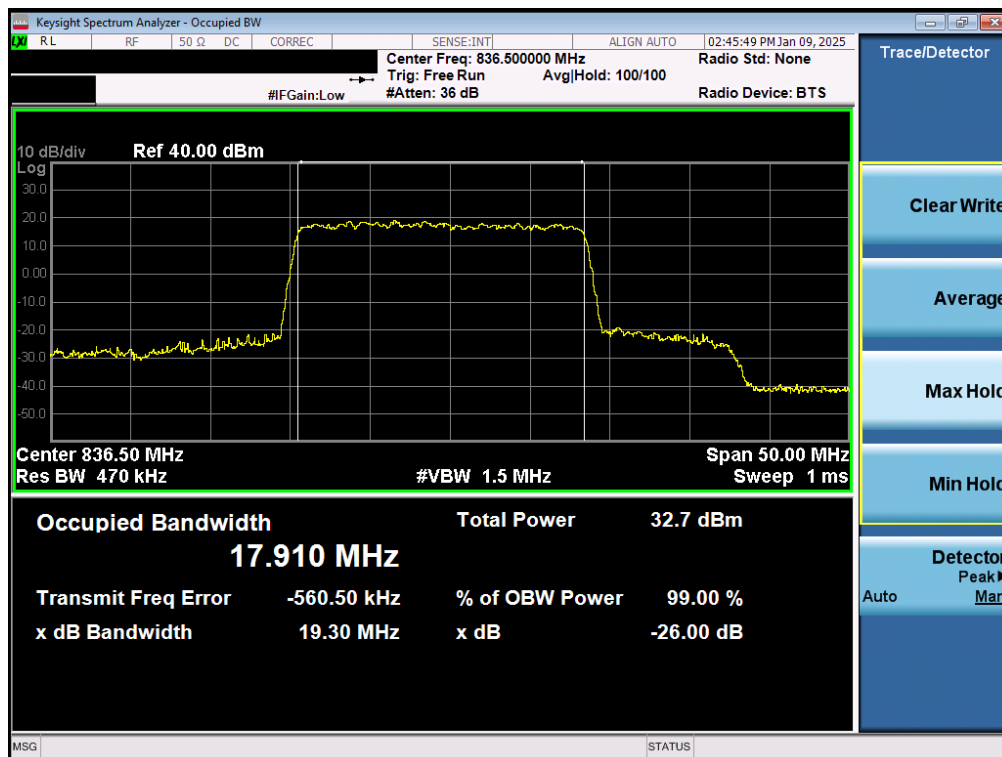
Plot 7-10. Occupied Bandwidth Plot (LTE Band 26/5 - 1.4MHz 16-QAM - Full RB - Ant1)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 17 of 64

NR Band n5

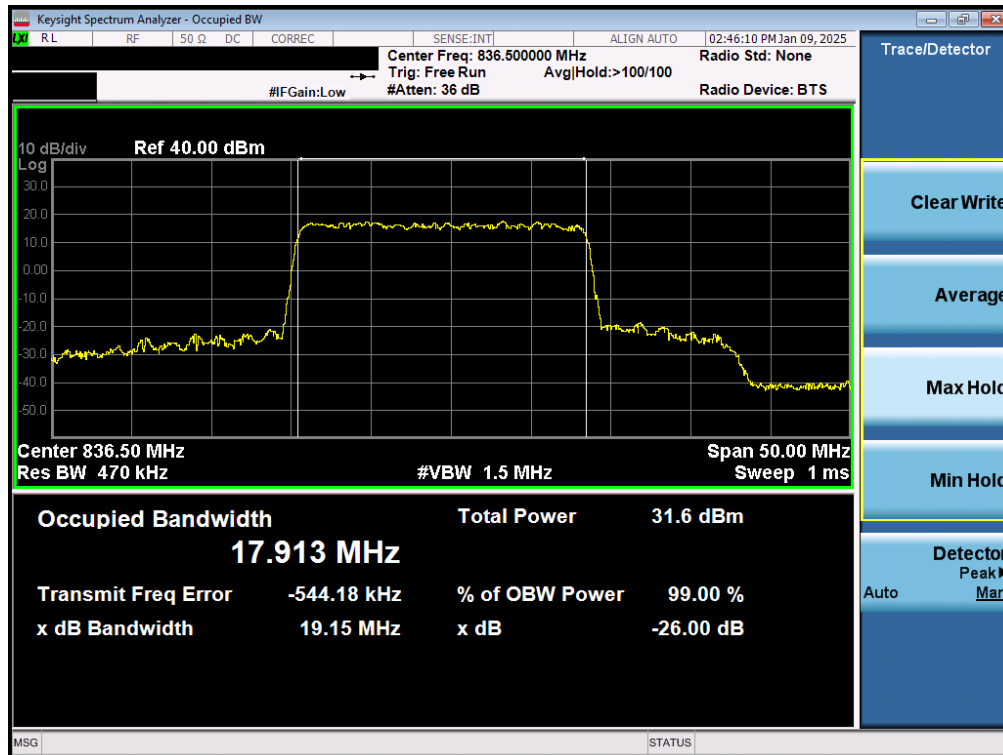


Plot 7-11. Occupied Bandwidth Plot (NR Band n5 - 20MHz $\pi/2$ BPSK - Full RB - Ant1)

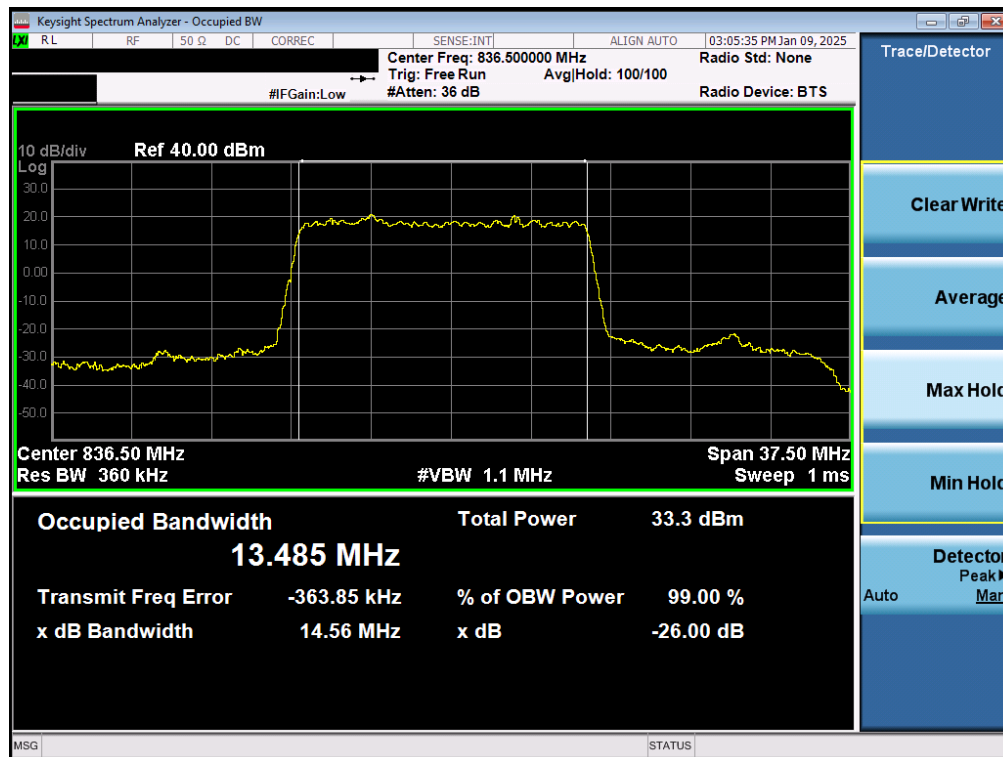


Plot 7-12. Occupied Bandwidth Plot (NR Band n5 - 20MHz QPSK - Full RB - Ant1)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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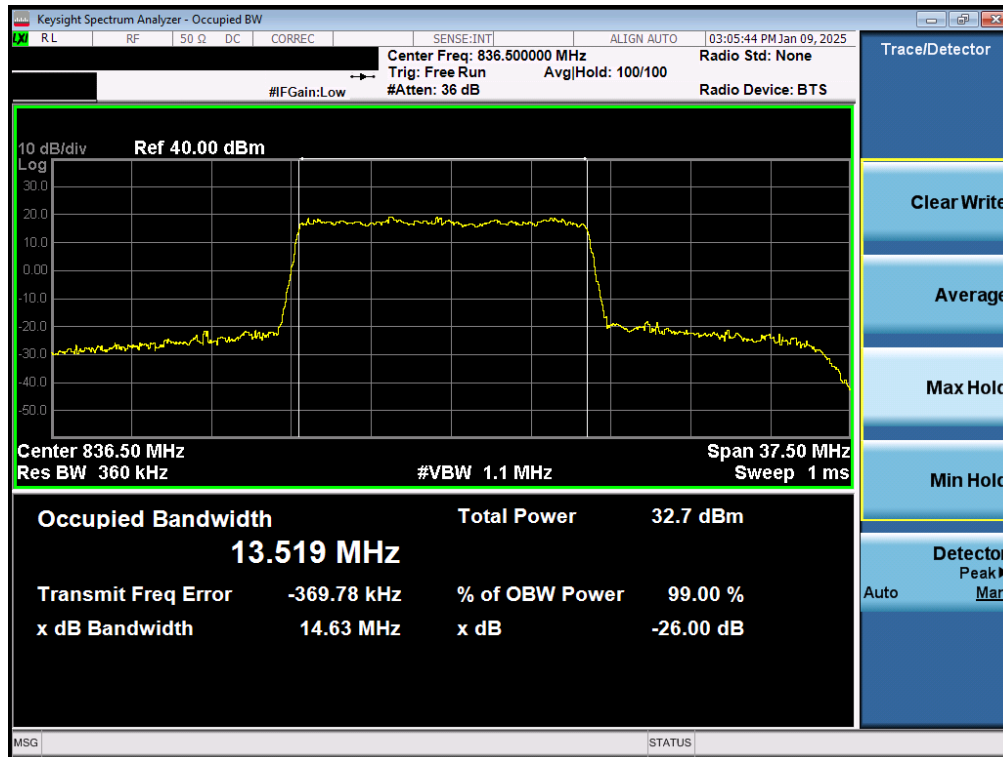


Plot 7-13. Occupied Bandwidth Plot (NR Band n5 - 20MHz 16-QAM - Full RB - Ant1)

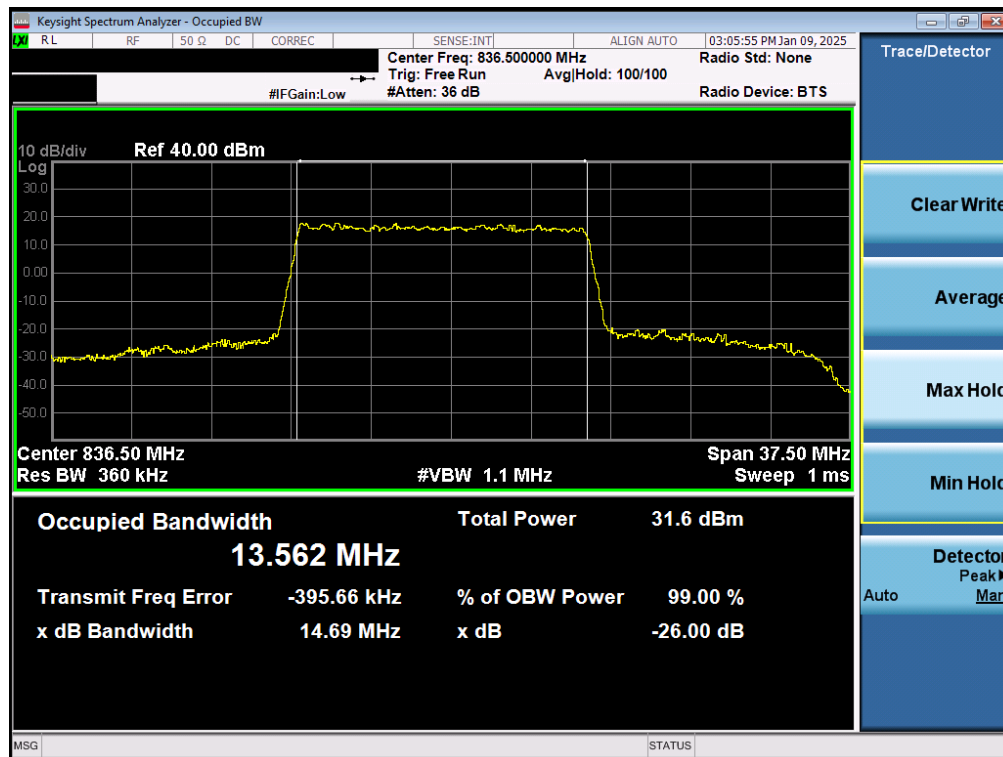


Plot 7-14. Occupied Bandwidth Plot (NR Band n5 - 15MHz $\pi/2$ BPSK - Full RB - Ant1)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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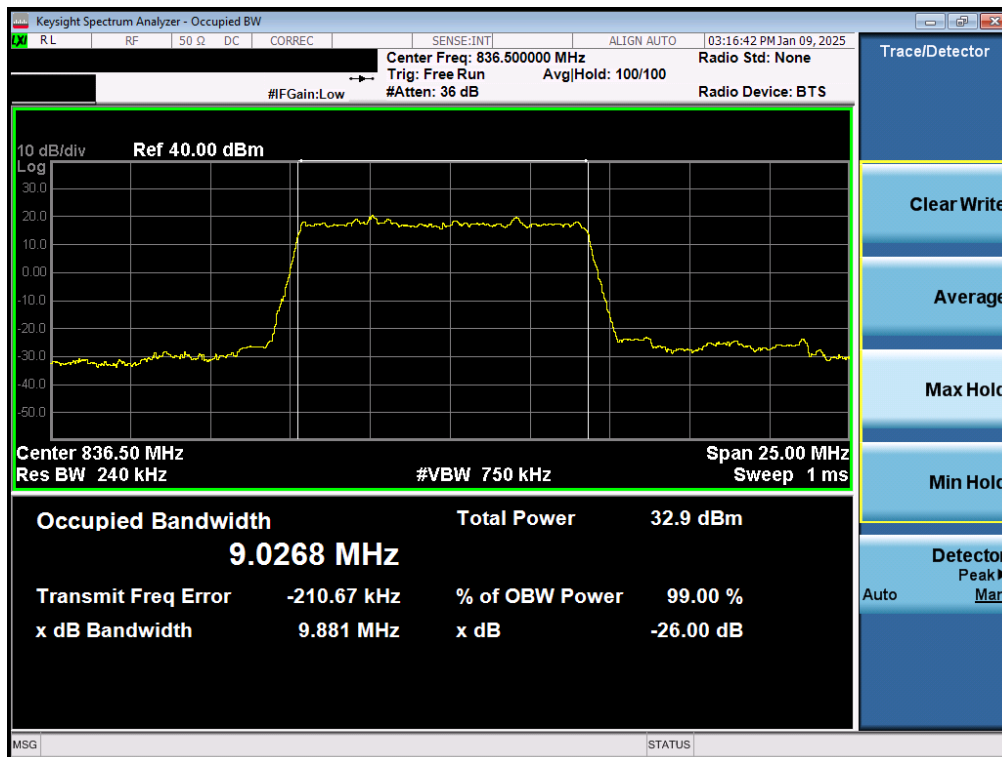


Plot 7-15. Occupied Bandwidth Plot (NR Band n5 - 15MHz QPSK - Full RB - Ant1)

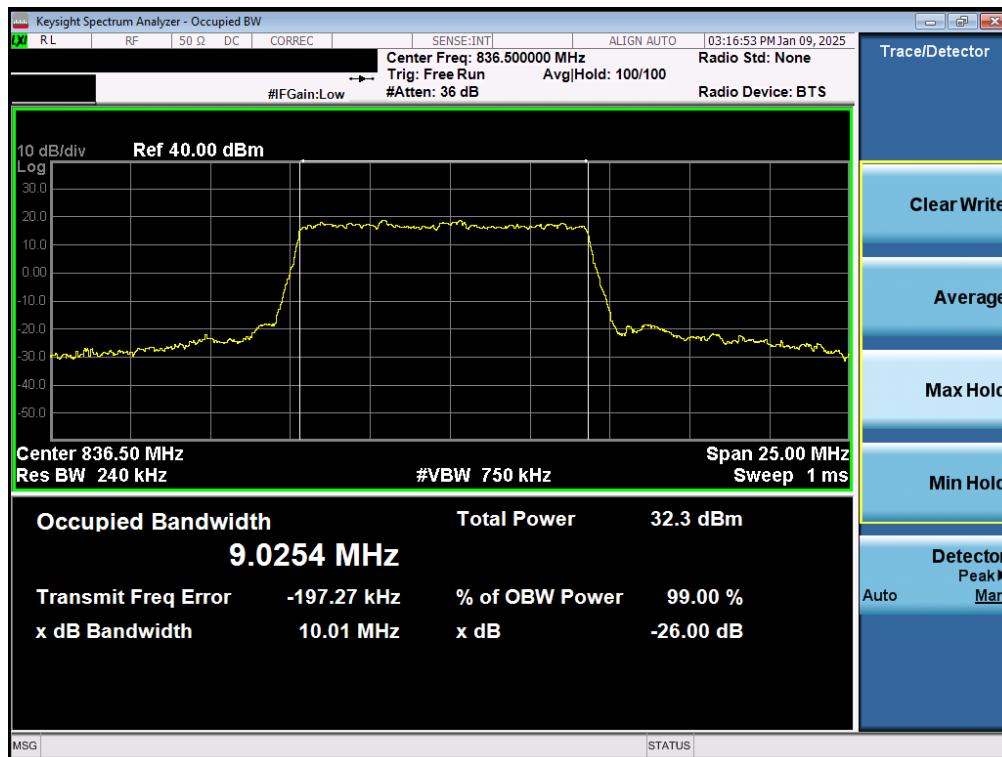


Plot 7-16. Occupied Bandwidth Plot (NR Band n5 - 15MHz 16-QAM - Full RB - Ant1)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 20 of 64

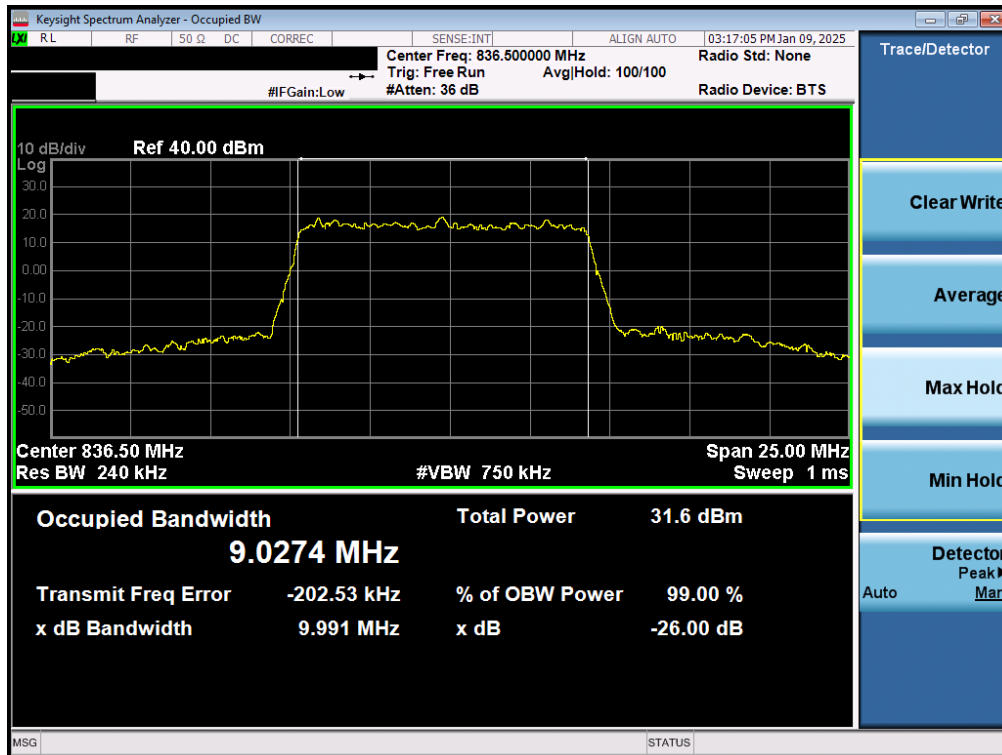


Plot 7-17. Occupied Bandwidth Plot (NR Band n5 - 10MHz $\pi/2$ BPSK - Full RB - Ant1)

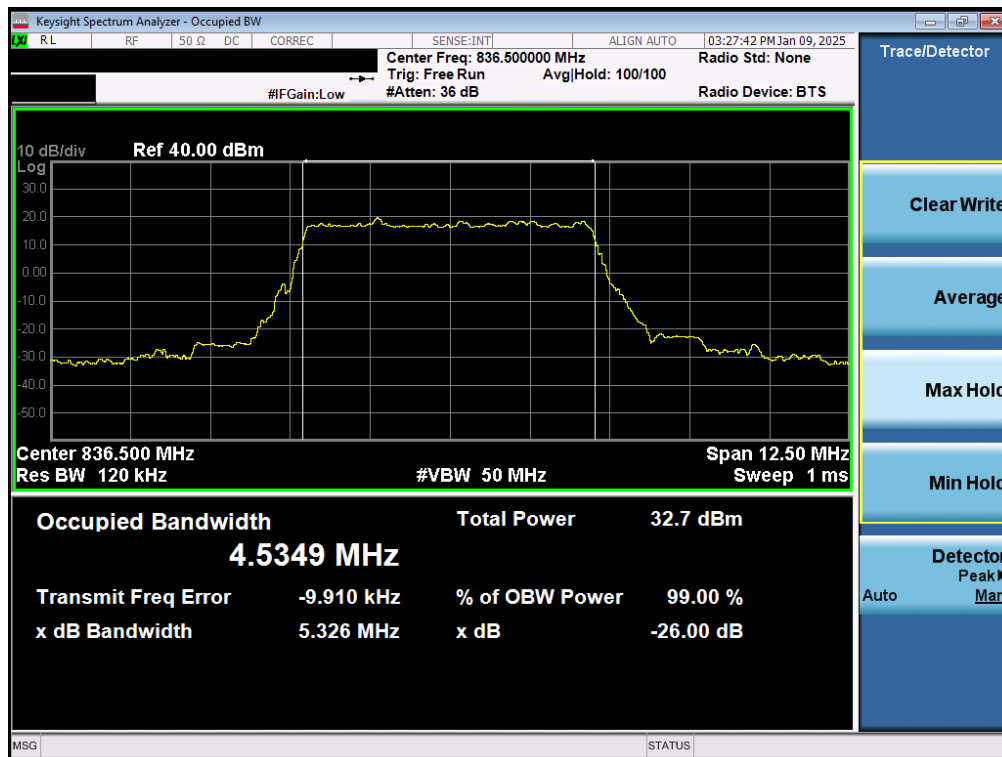


Plot 7-18. Occupied Bandwidth Plot (NR Band n5 - 10MHz QPSK - Full RB - Ant1)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 21 of 64



Plot 7-19. Occupied Bandwidth Plot (NR Band n5 - 10MHz 16-QAM - Full RB - Ant1)

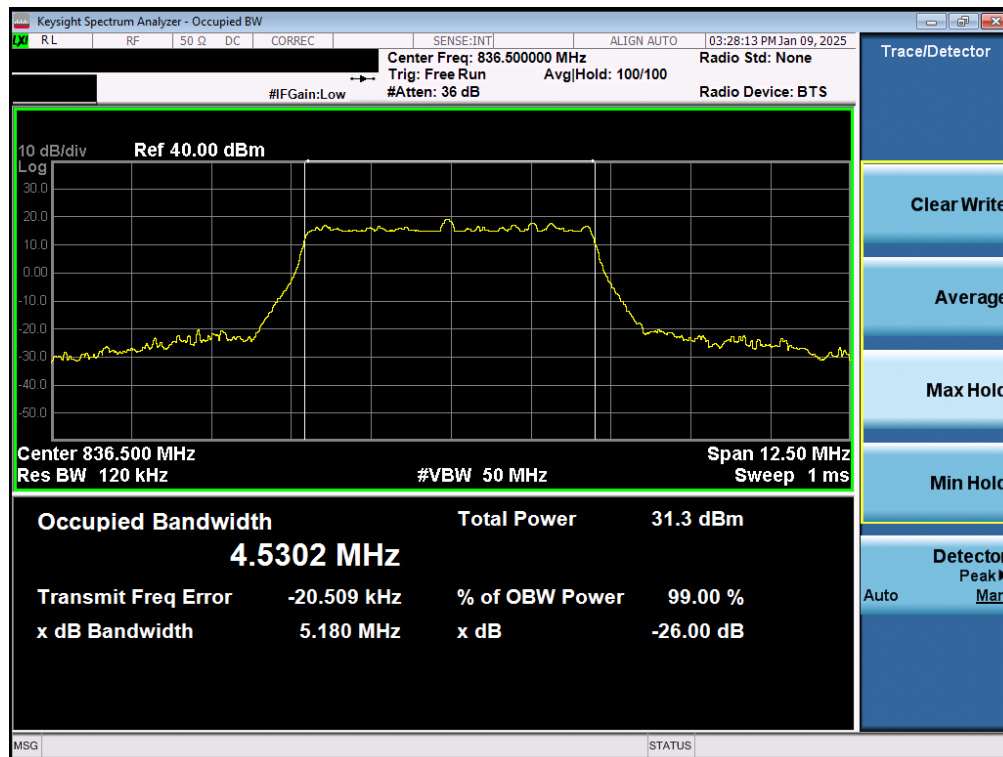


Plot 7-20. Occupied Bandwidth Plot (NR Band n5 - 5MHz $\pi/2$ BPSK - Full RB - Ant1)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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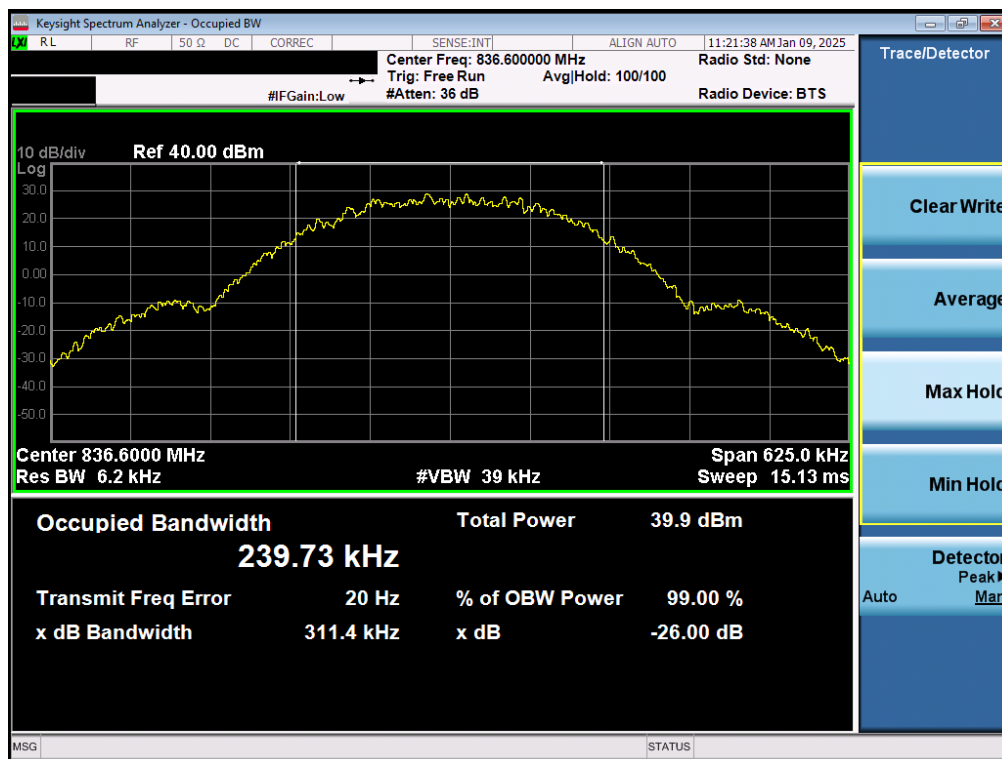
Plot 7-21. Occupied Bandwidth Plot (NR Band n5 - 5MHz QPSK - Full RB - Ant1)



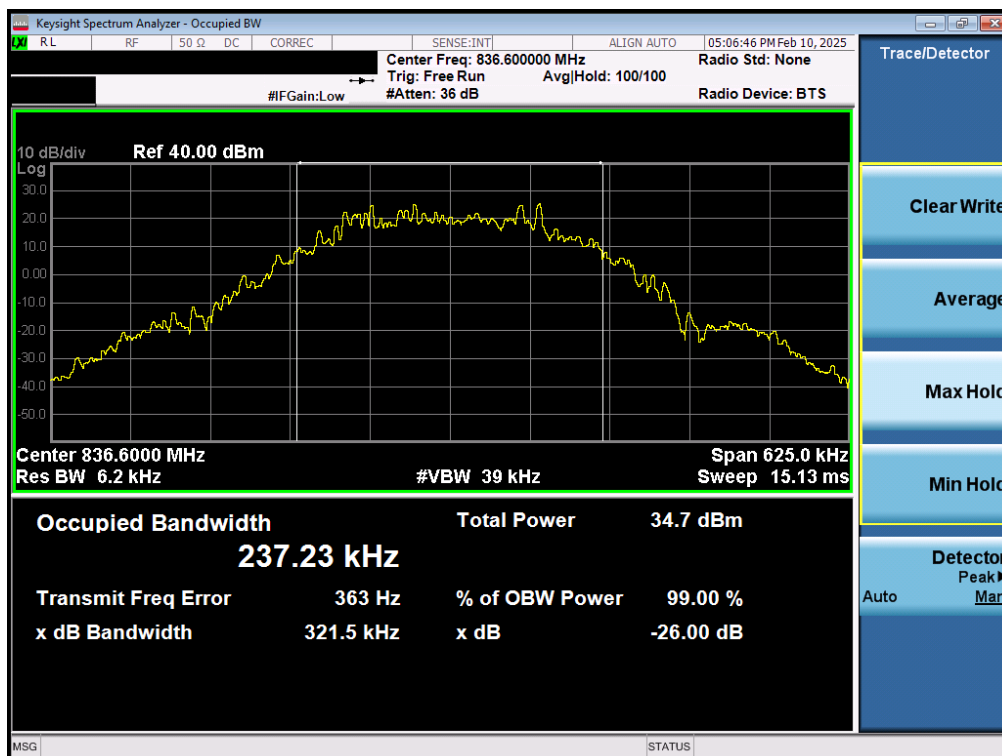
Plot 7-22. Occupied Bandwidth Plot (NR Band n5 - 5MHz 16-QAM - Full RB - Ant1)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 23 of 64

GPRS Cell



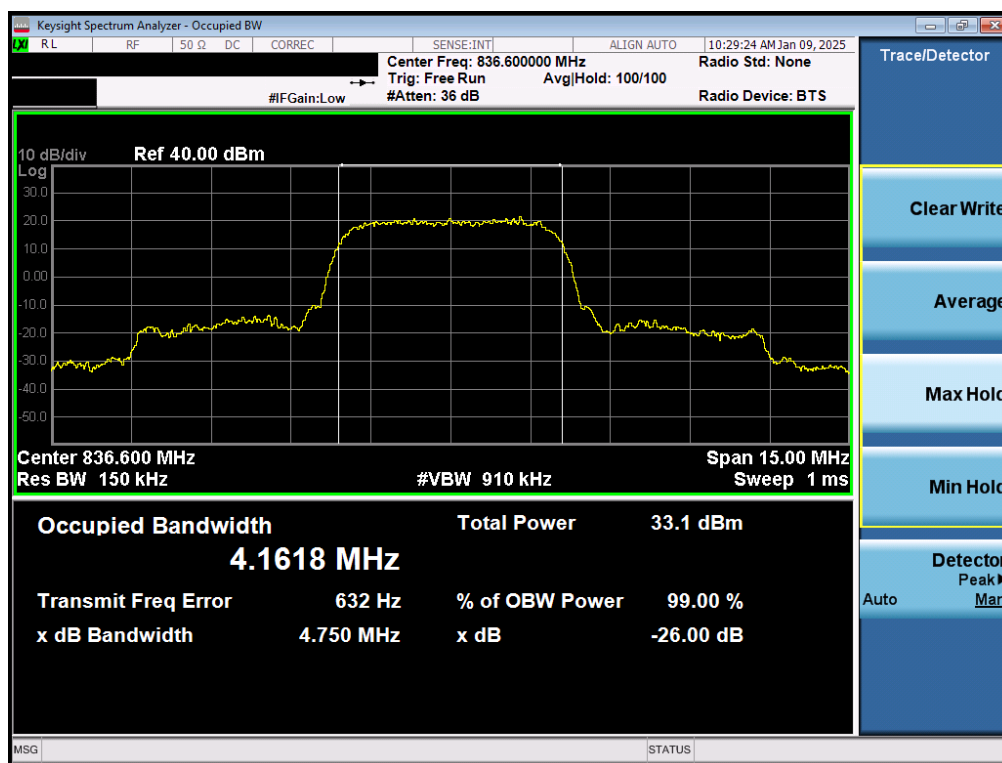
Plot 7-23. Occupied Bandwidth Plot (GPRS, Ch. 190)



Plot 7-24. Occupied Bandwidth Plot (EDGE, Ch. 190)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 24 of 64

WCDMA Cell



Plot 7-25. Occupied Bandwidth Plot (WCDMA, Ch. 4183)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 25 of 64

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

ANSI C63.26-2015 – Section 5.7.4

Test Settings

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

Test Setup

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

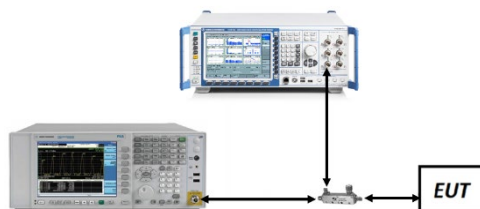


Figure 7-2. Test Instrument & Measurement Setup

Test Notes

1. Per Part 22 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.

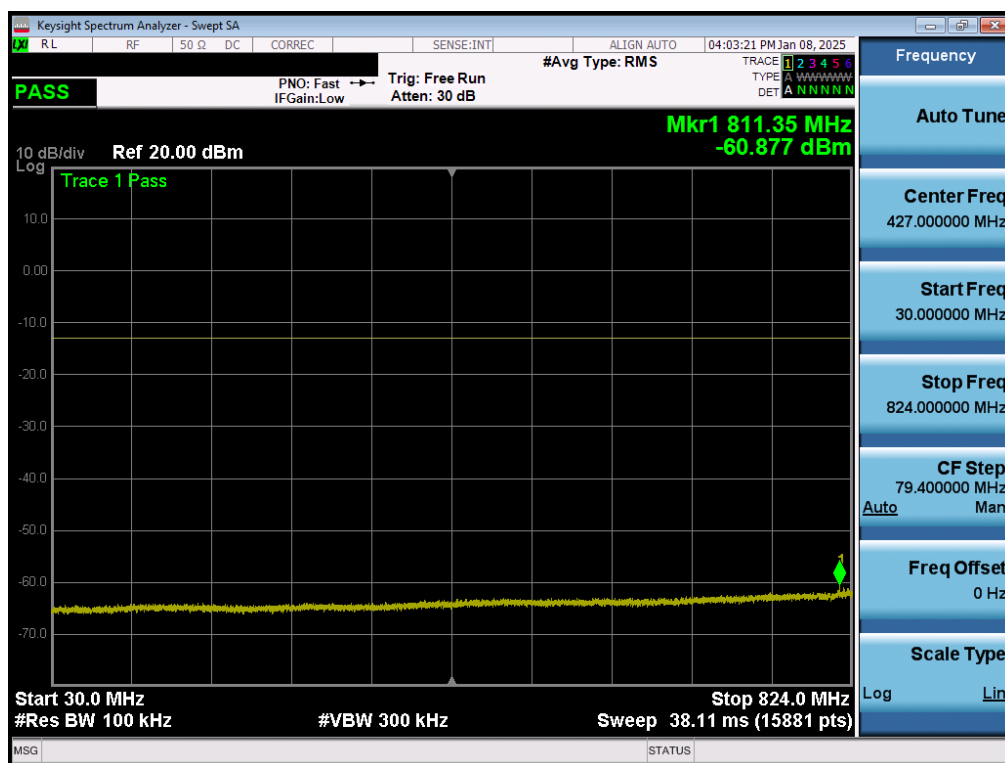
FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 26 of 64

Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
GSM-Cell	250kHz	Low	30.0 - 823.0	-35.22	-13.0	-22.22
		Low	849.0 - 1000.0	-52.11	-13.0	-39.11
		Low	1000.0 - 10000.0	-28.63	-13.0	-15.63
		Mid	30.0 - 824.0	-51.79	-13.0	-38.79
		Mid	849.0 - 1000.0	-52.97	-13.0	-39.97
		Mid	1000.0 - 10000.0	-29.03	-13.0	-16.03
		High	30.0 - 824.0	-52.29	-13.0	-39.29
		High	850.0 - 1000.0	-34.40	-13.0	-21.40
		High	1000.0 - 10000.0	-28.99	-13.0	-15.99
WCDMA-Cell	5MHz	Low	30.0 - 823.0	-25.79	-13.0	-12.79
		Low	849.0 - 1000.0	-54.75	-13.0	-41.75
		Low	1000.0 - 10000.0	-43.50	-13.0	-30.50
		Mid	30.0 - 824.0	-54.04	-13.0	-41.04
		Mid	849.0 - 1000.0	-56.28	-13.0	-43.28
		Mid	1000.0 - 10000.0	-43.63	-13.0	-30.63
		High	30.0 - 824.0	-53.10	-13.0	-40.10
		High	850.0 - 1000.0	-27.94	-13.0	-14.94
		High	1000.0 - 10000.0	-43.68	-13.0	-30.68
LTE-B26-5	10MHz	Low	30.0 - 823.0	-59.08	-13.0	-46.08
		Low	849.0 - 1000.0	-62.10	-13.0	-49.10
		Low	1000.0 - 10000.0	-43.44	-13.0	-30.44
		Mid	30.0 - 824.0	-61.02	-13.0	-48.02
		Mid	849.0 - 1000.0	-61.90	-13.0	-48.90
		Mid	1000.0 - 10000.0	-43.45	-13.0	-30.45
		High	30.0 - 824.0	-60.88	-13.0	-47.88
		High	850.0 - 1000.0	-60.69	-13.0	-47.69
		High	1000.0 - 10000.0	-43.25	-13.0	-30.25
NR-n5	20MHz	Low	30.0 - 824.0	-58.88	-13.0	-45.88
		Low	849.0 - 1000.0	-61.92	-13.0	-48.92
		Low	1000.0 - 10000.0	-43.36	-13.0	-30.36
		Mid	30.0 - 824.0	-59.58	-13.0	-46.58
		Mid	849.0 - 1000.0	-61.52	-13.0	-48.52
		Mid	1000.0 - 10000.0	-43.43	-13.0	-30.43
		High	30.0 - 824.0	-61.16	-13.0	-48.16
		High	849.0 - 1000.0	-60.96	-13.0	-47.96
		High	1000.0 - 10000.0	-43.51	-13.0	-30.51

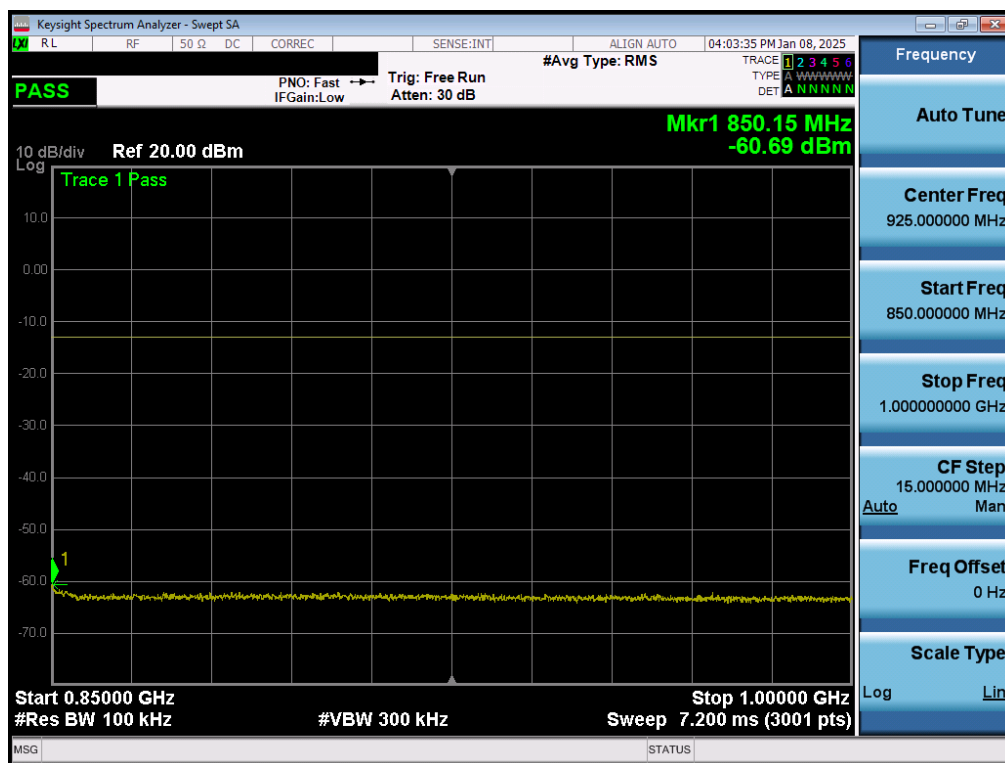
Table 7-3. Conducted Spurious Emissions Results

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 26/5

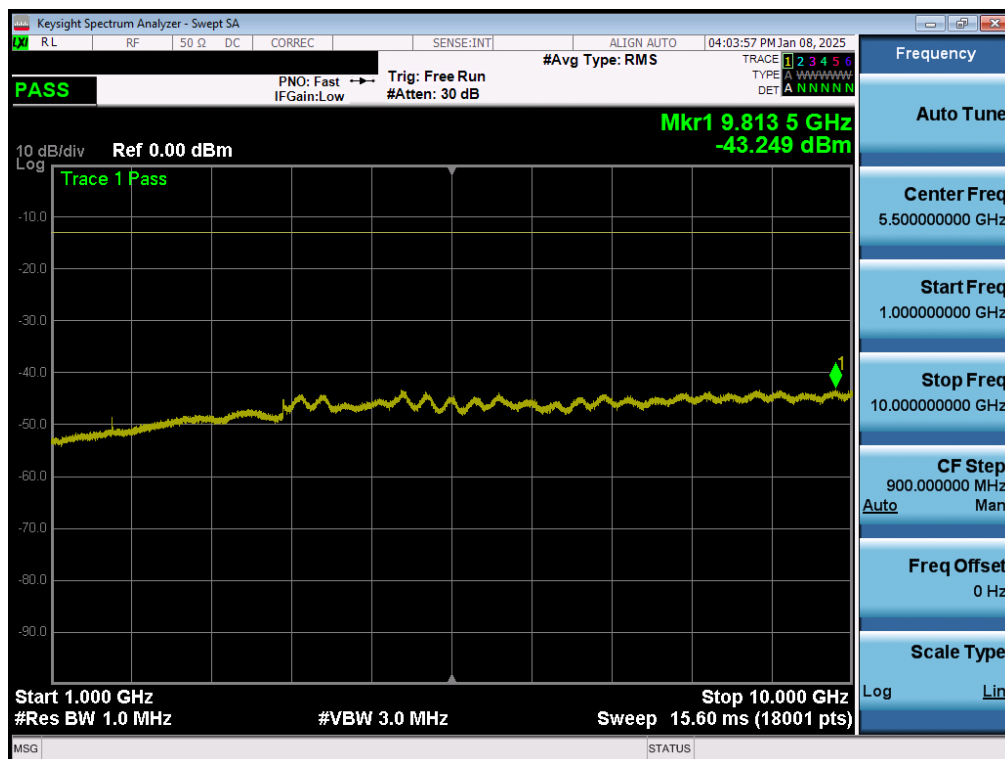


Plot 7-26. Conducted Spurious Plot (LTE Band 26/5 - 10MHz QPSK - 1 RB - High Channel)



Plot 7-27. Conducted Spurious Plot (LTE Band 26/5 - 10MHz QPSK - 1 RB - High Channel)

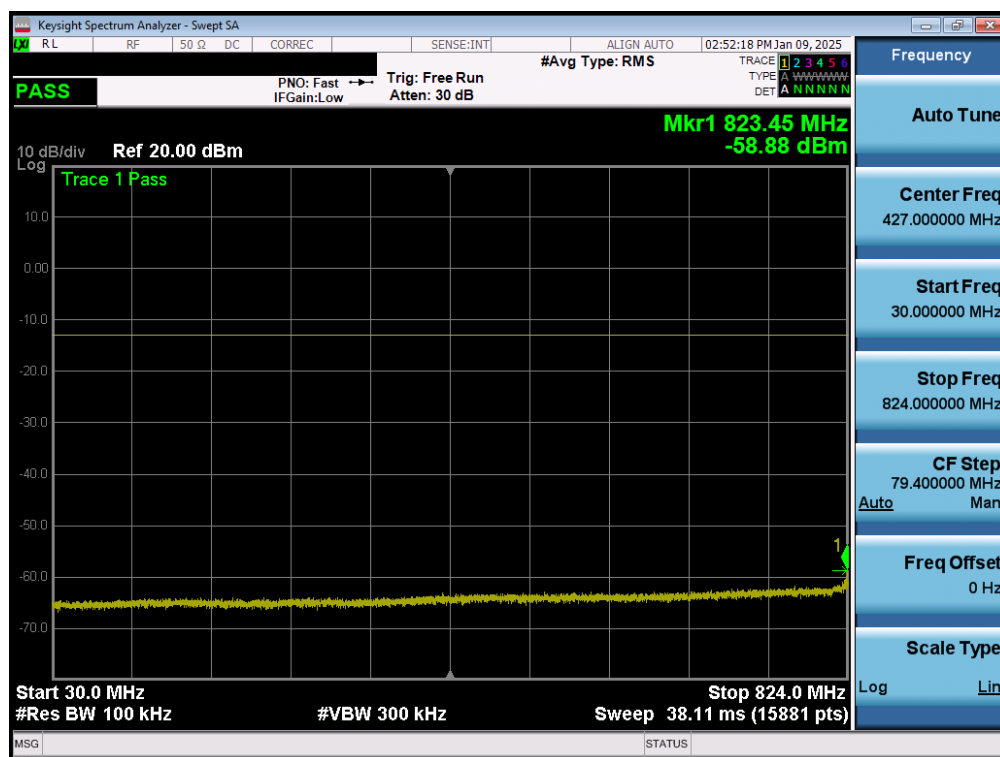
FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 28 of 64



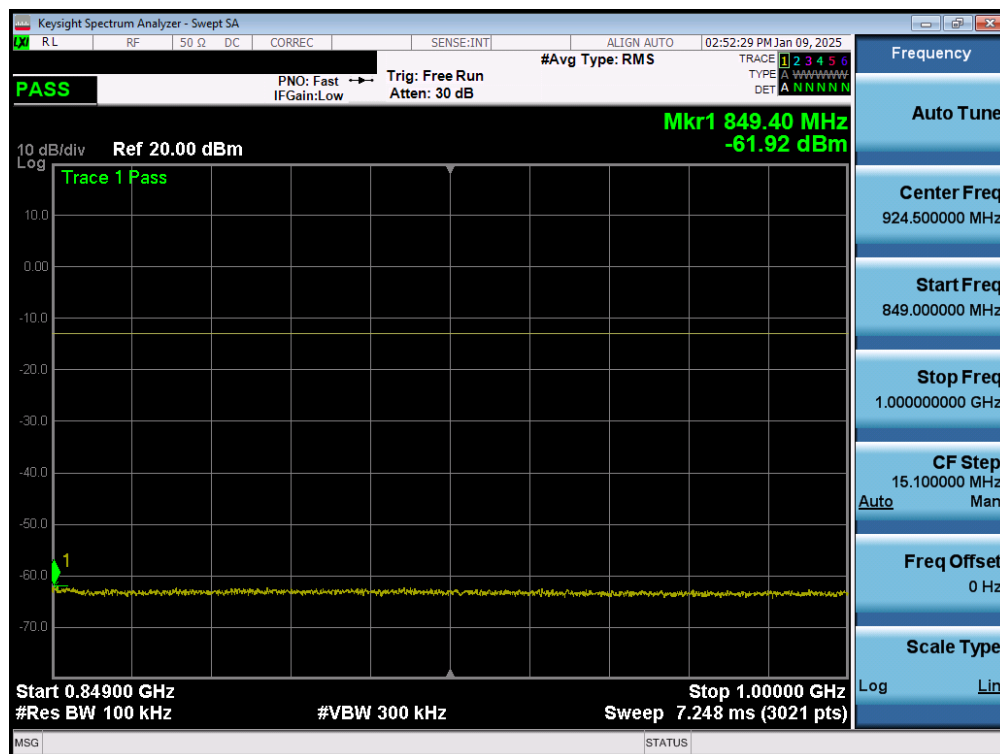
Plot 7-28. Conducted Spurious Plot (LTE Band 26/5 - 10MHz QPSK - 1 RB - High Channel)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 29 of 64

NR Band n5

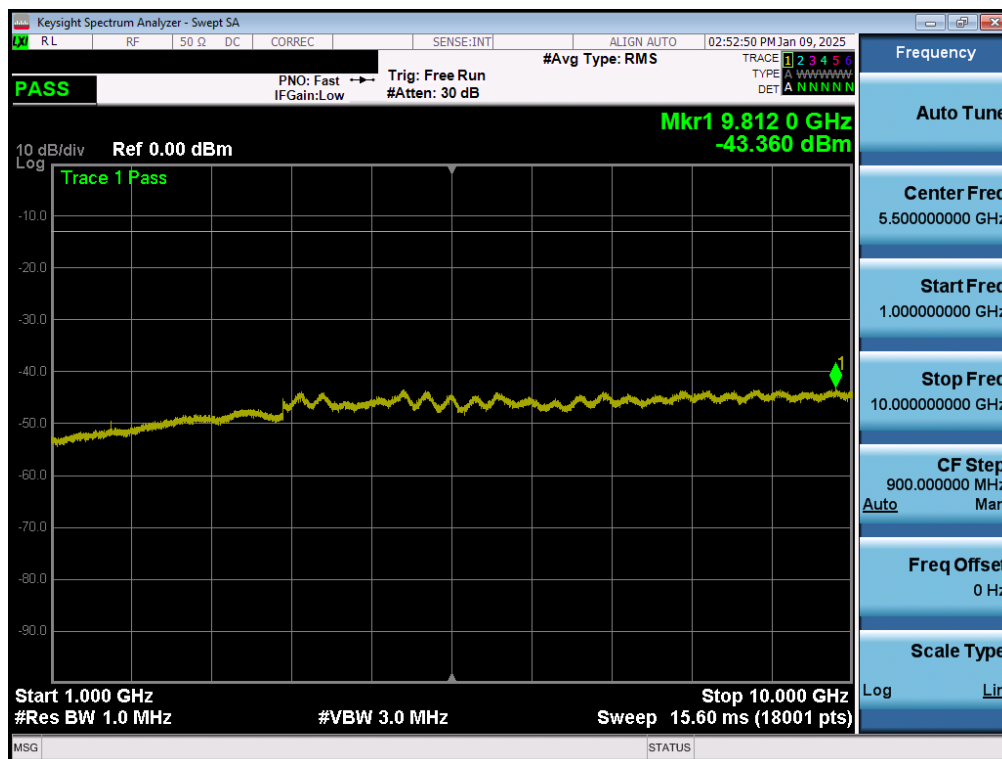


Plot 7-29. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Low Channel - Ant1)



Plot 7-30. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Low Channel - Ant1)

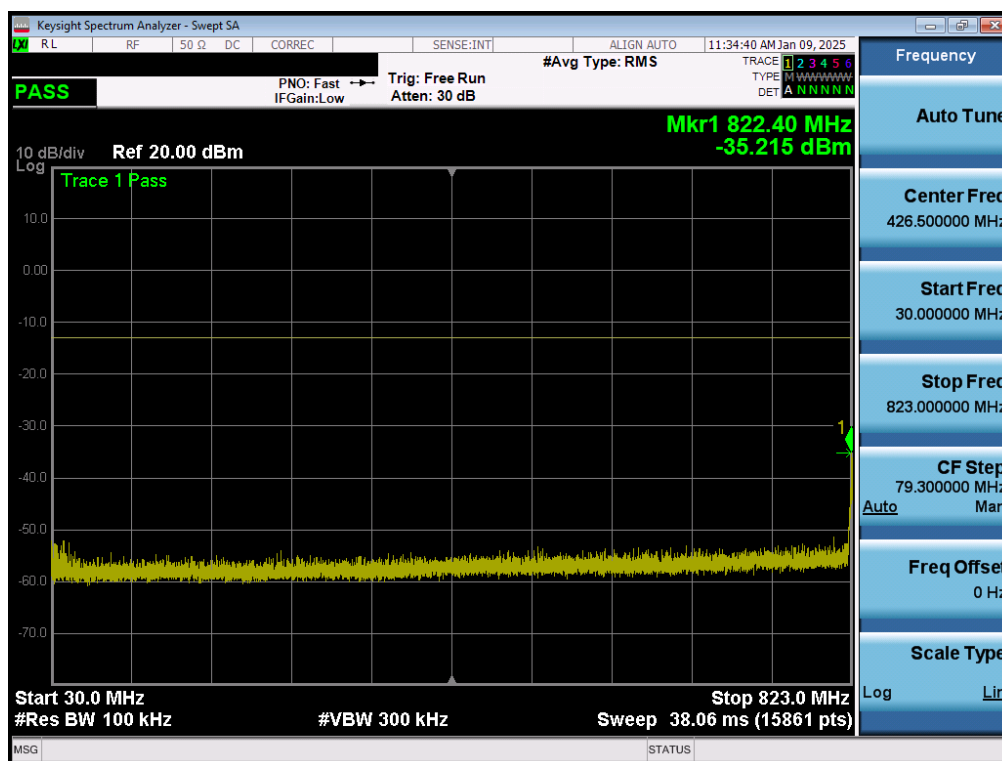
FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 30 of 64



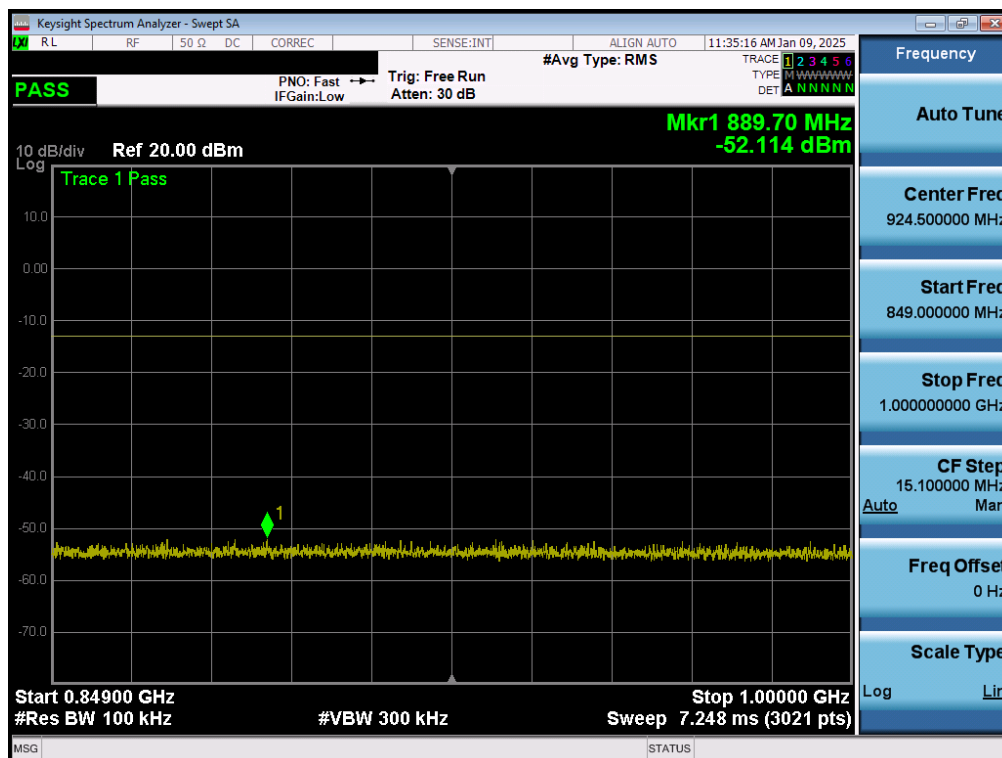
Plot 7-31. Conducted Spurious Plot (NR Band n5 - 20.0MHz - 1 RB - Low Channel - Ant1)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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GSM/GPRS Cell

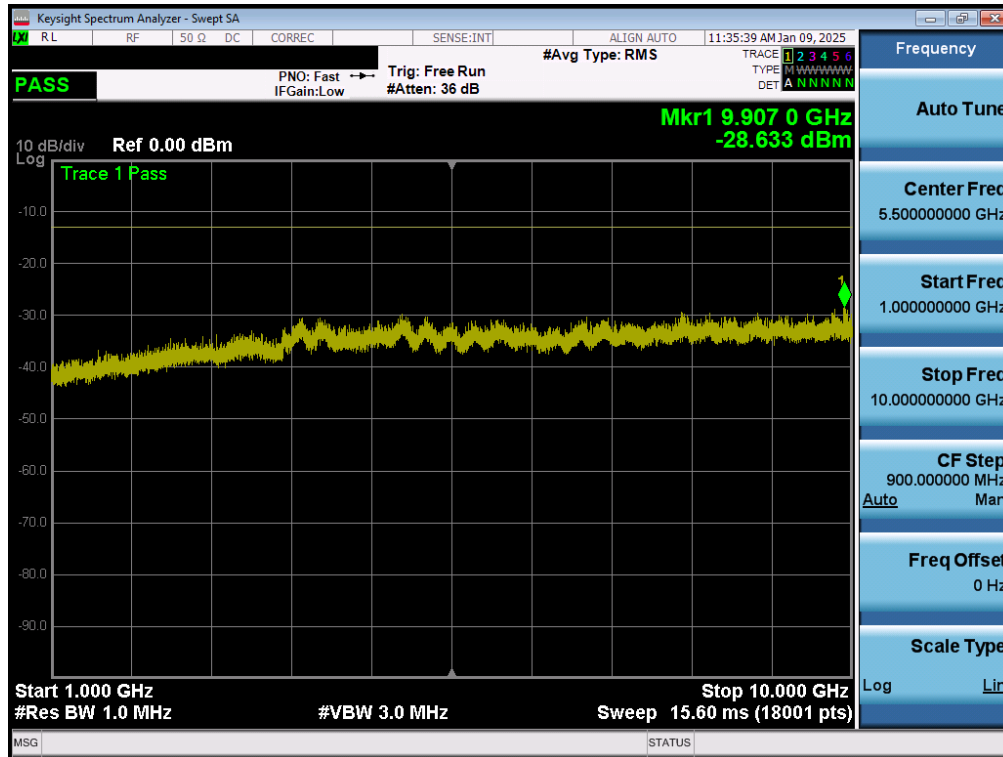


Plot 7-32. Conducted Spurious Plot (GPRS Ch. 128)

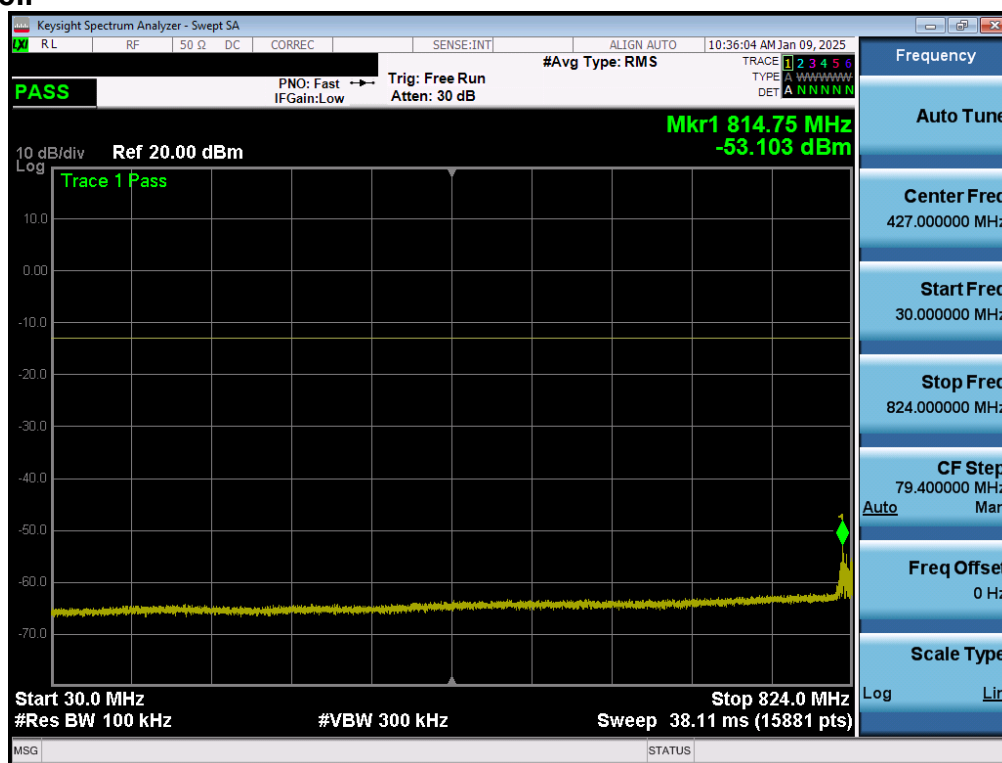


Plot 7-33. Conducted Spurious Plot (GPRS Ch. 128)

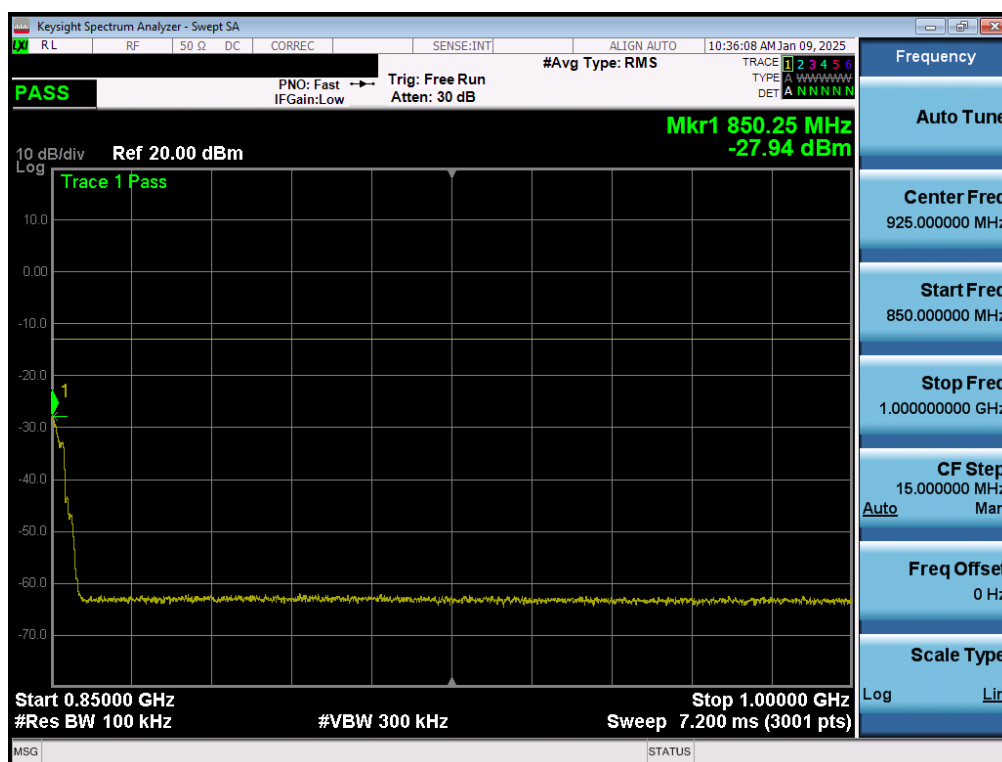
FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 32 of 64



WCDMA Cell

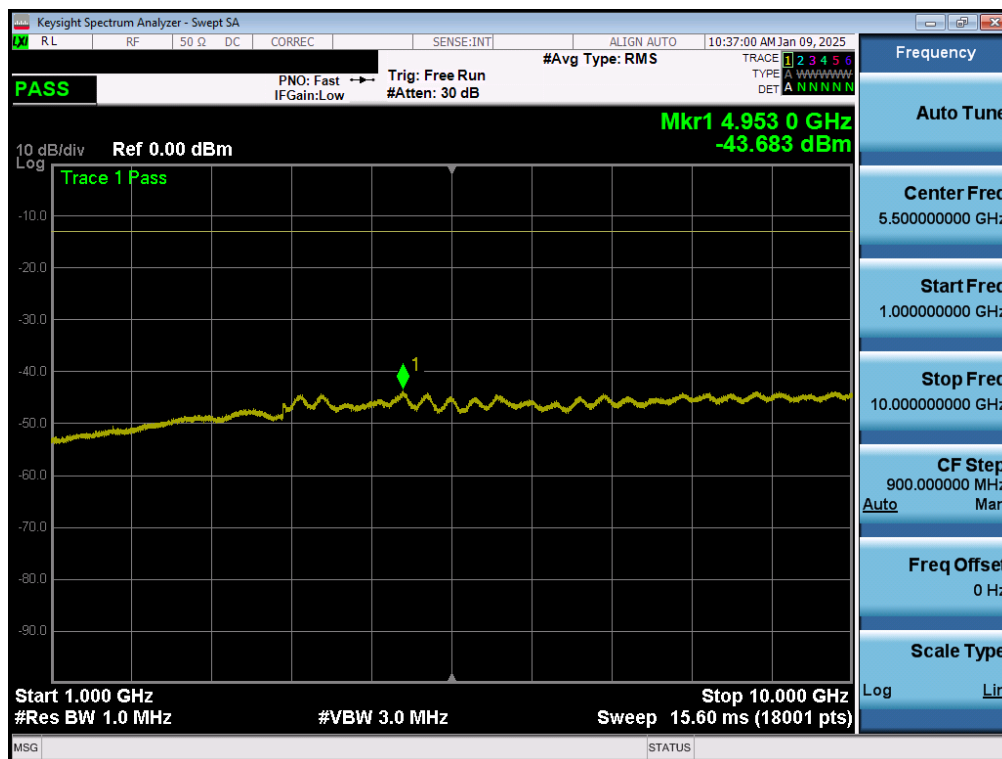


Plot 7-35. Conducted Spurious Plot (WCDMA Ch. 4233)



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

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-37. Conducted Spurious Plot (WCDMA Ch. 4233)

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7.4 Band Edge Emissions at Antenna Terminal

Test Overview

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

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

Test Procedure Used

ANSI C63.26-2015 – Section 5.7.3

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough 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.

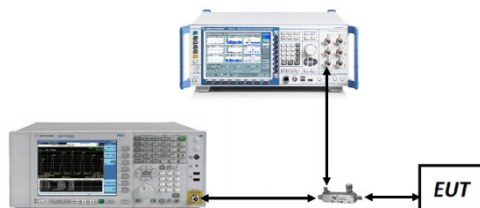


Figure 7-3. Test Instrument & Measurement Setup

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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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.

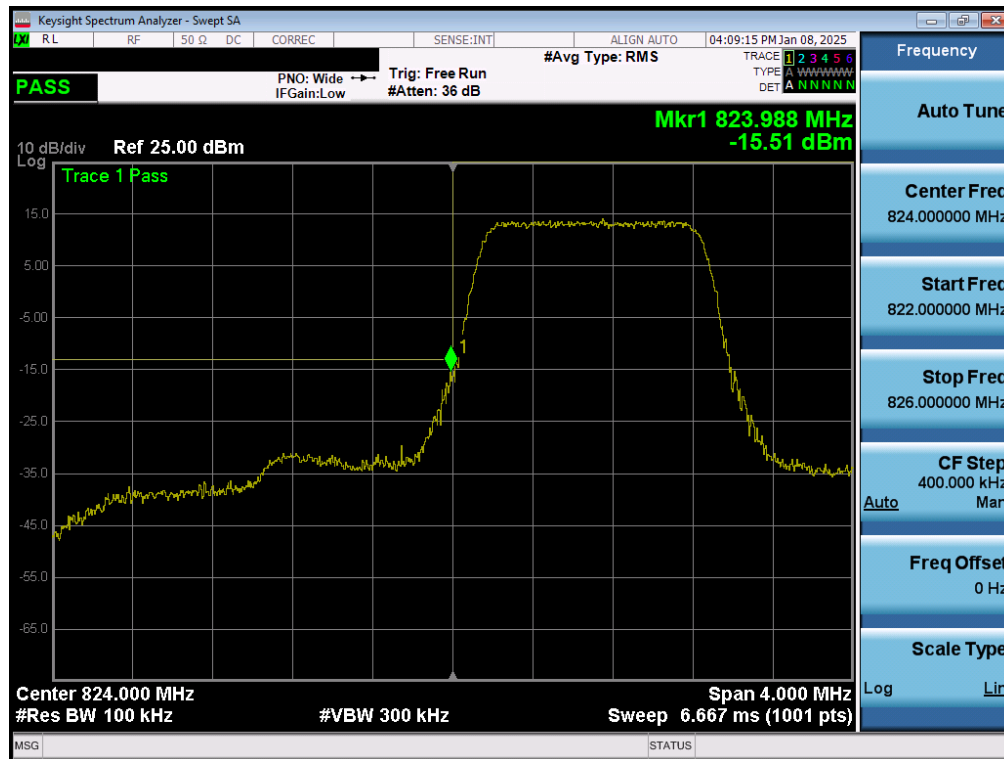
FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
GSM-Cell	250kHz	Low	Band Edge	-30.21	-13	-17.21
		High	Band Edge	-15.48	-13	-2.48
WCDMA-Cell	5MHz	Low	Band Edge	-20.10	-13	-7.10
		High	Band Edge	-20.43	-13	-7.43
LTE-B26-5	15 MHz	Low	Band Edge	-35.80	-13	-22.80
		High	Band Edge	-35.04	-13	-22.04
	10 MHz	Low	Band Edge	-30.85	-13	-17.85
		High	Band Edge	-31.08	-13	-18.08
	5 MHz	Low	Band Edge	-23.95	-13	-10.95
		High	Band Edge	-24.22	-13	-11.22
	3 MHz	Low	Band Edge	-21.87	-13	-8.87
		High	Band Edge	-18.96	-13	-5.96
	1.4 MHz	Low	Band Edge	-15.51	-13	-2.51
		High	Band Edge	-16.45	-13	-3.45
NR-n5	20 MHz	Low	Band Edge	-32.57	-13	-19.57
		High	Band Edge	-27.61	-13	-14.61
	15 MHz	Low	Band Edge	-28.07	-13	-15.07
		High	Band Edge	-26.71	-13	-13.71
	10 MHz	Low	Band Edge	-28.32	-13	-15.32
		High	Band Edge	-27.78	-13	-14.78
	5 MHz	Low	Band Edge	-22.17	-13	-9.17
		High	Band Edge	-21.28	-13	-8.28

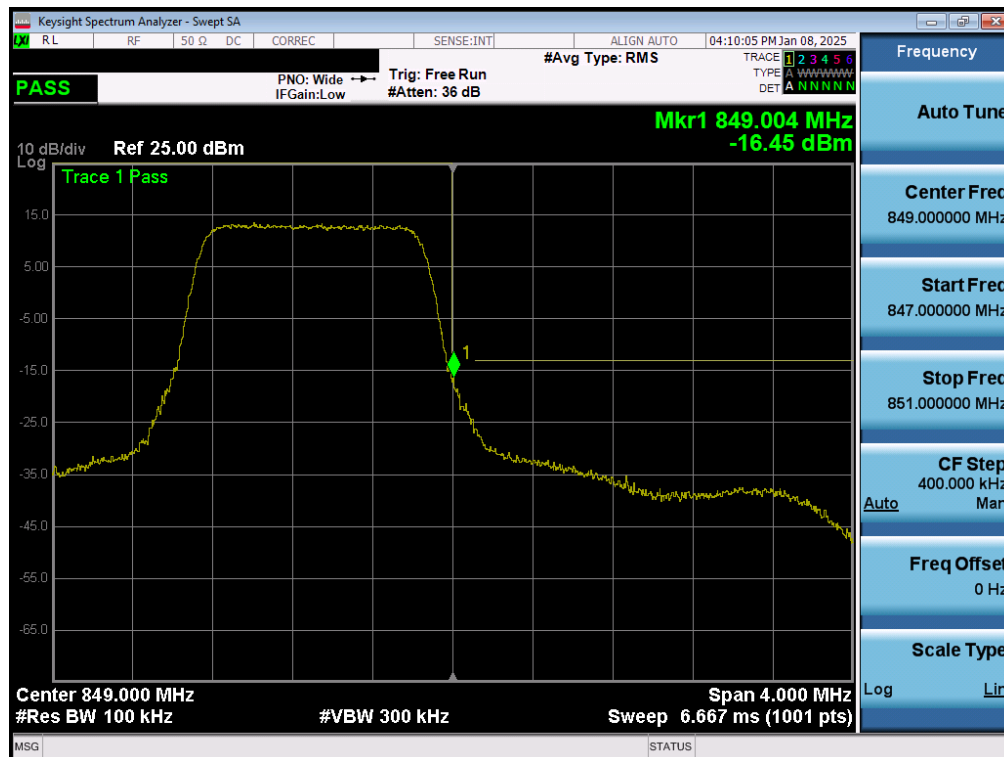
Table 7-4. Conducted Spurious Emissions Results

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 38 of 64

LTE Band 26/5



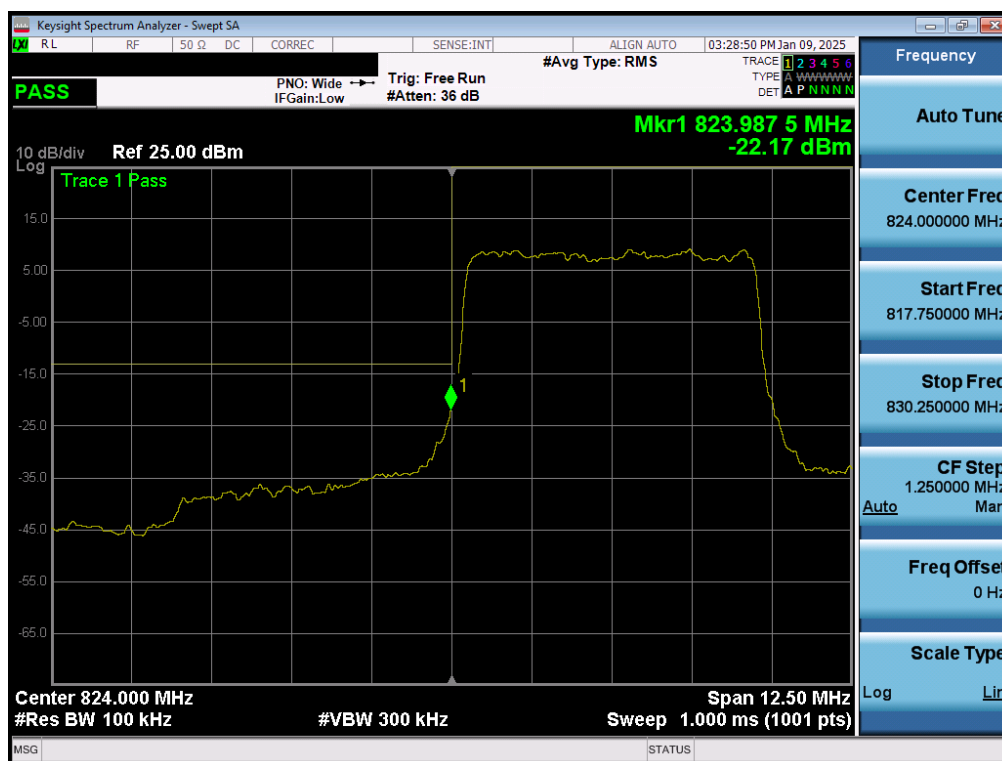
Plot 7-38. Lower Band Edge Plot (LTE Band 26/5 – 1.4MHz QPSK – Full RB - Ant1)



Plot 7-39. Upper Band Edge Plot (LTE Band 26/5 – 1.4MHz QPSK – Full RB - Ant1)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n5



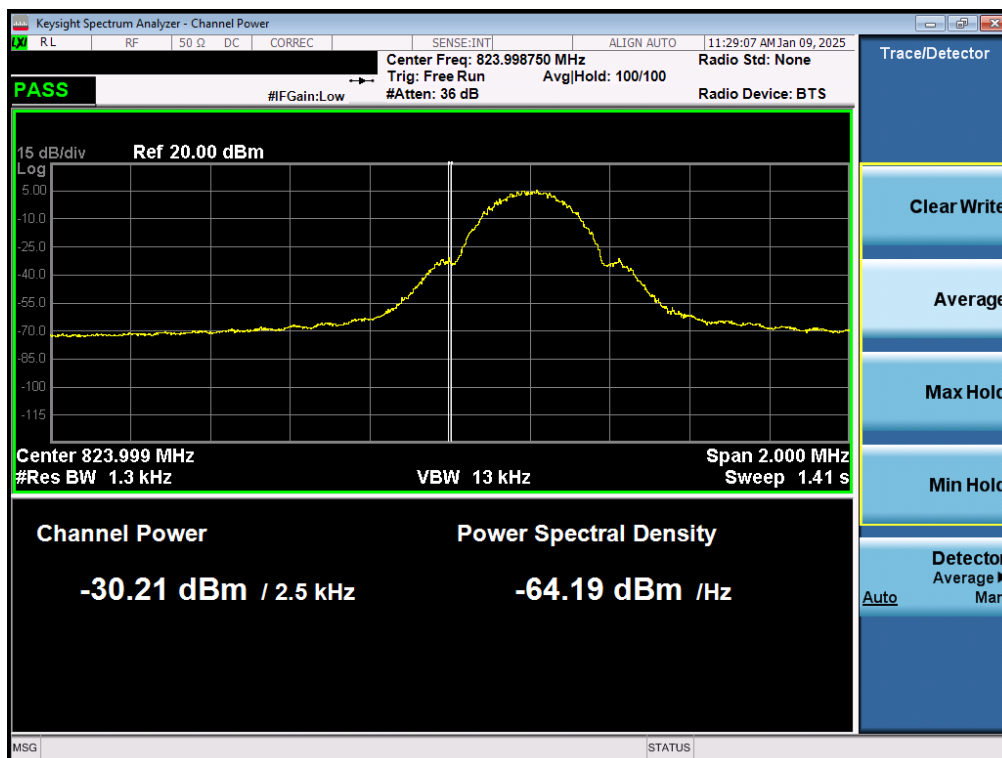
Plot 7-40. Lower Band Edge Plot (NR Band n5 – 5.0MHz - Full RB - Ant1)



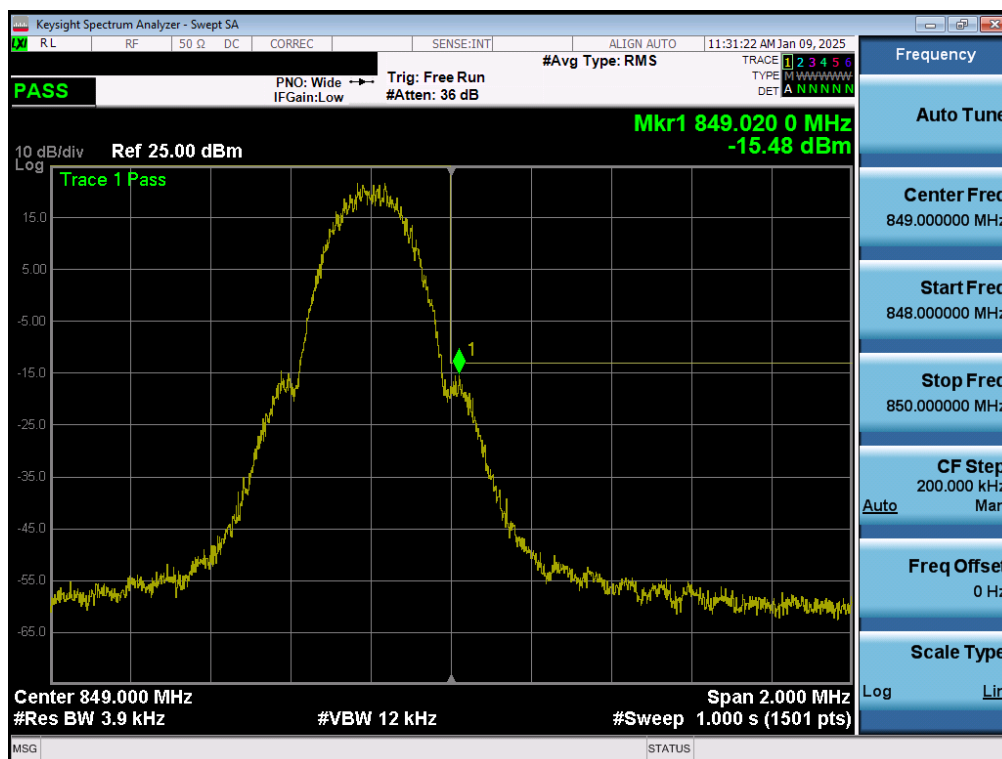
Plot 7-41. Upper Band Edge Plot (NR Band n5 – 5.0MHz - Full RB - Ant1)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 40 of 64

GSM/GPRS Cell



Plot 7-42. Lower Band Edge Plot (GPRS Cell – Ch. 128)



Plot 7-43. Upper Band Edge Plot (GPRS Cell – Ch. 251)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 41 of 64

WCDMA Cell



Plot 7-44. Lower Band Edge Plot (WCDMA Cell – Ch. 4132)



Plot 7-45. Upper Band Edge Plot (WCDMA Cell – Ch. 4233)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 42 of 64

7.5 Radiated Power (ERP)

Test Overview

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

Test Procedures Used

ANSI C63.26-2015 – Section 5.2.4.4

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation. For signals with burst transmission, the signal analyzer's "time domain power" measurement capability is used.
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW $\geq 3 \times$ 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: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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Test Setup

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

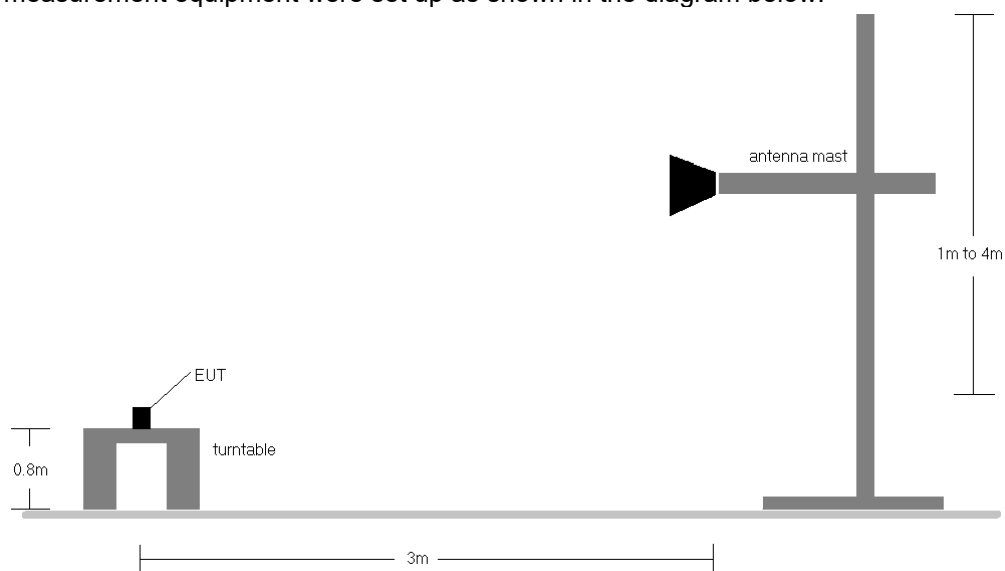


Figure 7-4. Radiated Test Setup < 1GHz

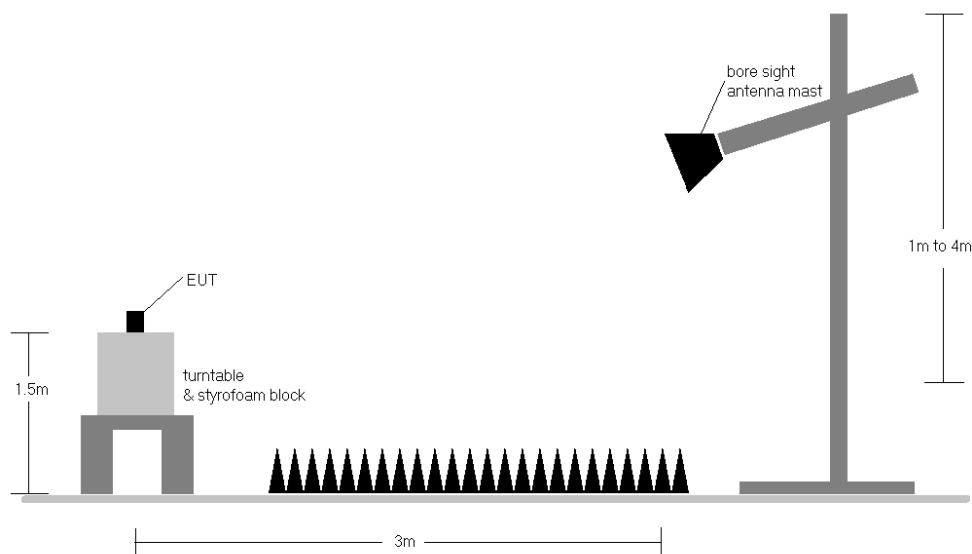


Figure 7-5. Radiated Test Setup > 1GHz

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 44 of 64

Test Notes

- 1) This device employs GSM, GPRS, and EDGE capabilities. The EUT was tested under all configurations and the highest powers are reported in GPRS mode while transmitting with one slot active.
- 2) This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest powers are reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1".
- 3) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst-case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 4) This unit was tested with its standard battery.
- 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: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 45 of 64

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]
15MHz (Band 26 only)	QPSK	831.50	H	224	291	1.46	1 / 0	20.04	19.35	0.086	38.45	-19.10	21.50	0.141	40.61	-19.11
	QPSK	836.50	H	218	297	1.54	1 / 0	19.92	19.31	0.085	38.45	-19.14	21.46	0.140	40.61	-19.14
	QPSK	841.50	H	224	295	1.62	1 / 0	20.02	19.49	0.089	38.45	-18.96	21.64	0.146	40.61	-18.96
	16-QAM	831.50	H	224	291	1.46	1 / 0	18.86	18.17	0.066	38.45	-20.28	20.32	0.108	40.61	-20.29
	16-QAM	836.50	H	218	297	1.54	1 / 0	18.66	18.05	0.064	38.45	-20.40	20.20	0.105	40.61	-20.40
	16-QAM	841.50	H	224	295	1.62	1 / 0	18.90	18.37	0.069	38.45	-20.08	20.52	0.113	40.61	-20.08
10 MHz	QPSK	829.00	H	224	291	1.42	1 / 25	20.27	19.54	0.090	38.45	-18.91	21.69	0.148	40.61	-18.91
	QPSK	836.50	H	218	297	1.54	1 / 25	20.16	19.55	0.090	38.45	-18.90	21.70	0.148	40.61	-18.91
	QPSK	844.00	H	224	295	1.66	1 / 0	20.17	19.68	0.093	38.45	-18.77	21.83	0.152	40.61	-18.77
	16-QAM	829.00	H	224	291	1.42	1 / 25	19.27	18.54	0.071	38.45	-19.91	20.69	0.117	40.61	-19.92
	16-QAM	836.50	H	218	297	1.54	1 / 25	18.80	18.19	0.066	38.45	-20.26	20.34	0.108	40.61	-20.26
	16-QAM	844.00	H	224	295	1.66	1 / 0	19.19	18.71	0.074	38.45	-19.75	20.86	0.122	40.61	-19.75
5 MHz	QPSK	826.50	H	224	291	1.38	1 / 24	20.27	19.50	0.089	38.45	-18.96	21.65	0.146	40.61	-18.96
	QPSK	836.50	H	218	297	1.54	1 / 12	20.08	19.47	0.089	38.45	-18.98	21.62	0.145	40.61	-18.98
	QPSK	846.50	H	224	295	1.70	1 / 12	20.07	19.63	0.092	38.45	-18.82	21.78	0.151	40.61	-18.83
	16-QAM	826.50	H	224	291	1.38	1 / 24	19.27	18.50	0.071	38.45	-19.95	20.65	0.116	40.61	-19.96
	16-QAM	836.50	H	218	297	1.54	1 / 12	19.11	18.50	0.071	38.45	-19.95	20.65	0.116	40.61	-19.96
	16-QAM	846.50	H	224	295	1.70	1 / 12	18.98	18.54	0.071	38.45	-19.91	20.69	0.117	40.61	-19.92
3 MHz	QPSK	825.50	H	224	291	1.36	1 / 7	20.16	19.37	0.087	38.45	-19.08	21.52	0.142	40.61	-19.08
	QPSK	836.50	H	218	297	1.54	1 / 7	19.96	19.35	0.086	38.45	-19.10	21.50	0.141	40.61	-19.10
	QPSK	847.50	H	224	295	1.72	1 / 7	20.15	19.72	0.094	38.45	-18.73	21.87	0.154	40.61	-18.74
	16-QAM	825.50	H	224	291	1.36	1 / 7	19.03	18.24	0.067	38.45	-20.21	20.39	0.109	40.61	-20.22
	16-QAM	836.50	H	218	297	1.54	1 / 7	18.69	18.08	0.064	38.45	-20.37	20.23	0.106	40.61	-20.37
	16-QAM	847.50	H	224	295	1.72	1 / 7	19.01	18.58	0.072	38.45	-19.88	20.73	0.118	40.61	-19.88
1.4 MHz	QPSK	824.70	H	224	291	1.35	1 / 5	20.25	19.45	0.088	38.45	-19.00	21.60	0.145	40.61	-19.00
	QPSK	836.50	H	218	297	1.54	1 / 0	20.09	19.48	0.089	38.45	-18.97	21.63	0.146	40.61	-18.97
	QPSK	848.30	H	224	295	1.73	1 / 3	19.89	19.47	0.089	38.45	-18.98	21.62	0.145	40.61	-18.98
	16-QAM	824.70	H	224	291	1.35	1 / 5	19.08	18.28	0.067	38.45	-20.17	20.43	0.110	40.61	-20.17
	16-QAM	836.50	H	218	297	1.54	1 / 0	18.76	18.16	0.065	38.45	-20.29	20.31	0.107	40.61	-20.30
	16-QAM	848.30	H	224	295	1.73	1 / 3	19.07	18.66	0.073	38.45	-19.79	20.81	0.120	40.61	-19.80

Table 7-5. ERP Data (LTE Band 26/5)

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	TT/2 BPSK	834.00	H	206	309	1.50	1 / 104	20.61	19.96	0.099	38.45	-18.49	22.11	0.163	40.61	-18.49
	TT/2 BPSK	836.50	H	209	301	1.54	1 / 104	20.98	20.37	0.109	38.45	-18.08	22.52	0.179	40.61	-18.08
	TT/2 BPSK	839.00	H	205	313	1.58	1 / 104	20.86	20.29	0.107	38.45	-18.16	22.44	0.176	40.61	-18.16
	QPSK	834.00	H	206	309	1.50	1 / 104	20.43	19.78	0.095	38.45	-18.67	21.93	0.156	40.61	-18.67
	QPSK	836.50	H	209	301	1.54	1 / 104	21.07	20.46	0.111	38.45	-17.99	22.61	0.183	40.61	-17.99
	QPSK	839.00	H	205	313	1.58	1 / 104	20.84	20.27	0.107	38.45	-18.18	22.42	0.175	40.61	-18.18
	16-QAM	834.00	H	206	309	1.50	1 / 104	18.75	18.10	0.065	38.45	-20.35	20.25	0.106	40.61	-20.35
	16-QAM	836.50	H	209	301	1.54	1 / 104	19.36	18.75	0.075	38.45	-19.70	20.90	0.123	40.61	-19.70
	16-QAM	839.00	H	205	313	1.58	1 / 104	19.58	19.01	0.080	38.45	-19.44	21.16	0.131	40.61	-19.44
	16-QAM	839.00	H	205	313	1.58	1 / 104	19.58	19.01	0.080	38.45	-19.44	21.16	0.131	40.61	-19.44
15 MHz	TT/2 BPSK	831.50	H	206	309	1.46	1 / 1	20.69	20.00	0.100	38.45	-18.45	22.15	0.164	40.61	-18.45
	TT/2 BPSK	836.50	H	209	301	1.54	1 / 1	21.06	20.46	0.111	38.45	-17.99	22.61	0.182	40.61	-18.00
	TT/2 BPSK	841.50	H	205	313	1.62	1 / 1	20.90	20.38	0.109	38.45	-18.08	22.53	0.179	40.61	-18.08
	QPSK	831.50	H	206	309	1.46	1 / 1	20.35	19.66	0.093	38.45	-18.79	21.81	0.152	40.61	-18.79
	QPSK	836.50	H	209	301	1.54	1 / 1	21.20	20.59	0.115	38.45	-17.86	22.74	0.188	40.61	-17.87
	QPSK	841.50	H	205	313	1.62	1 / 1	20.65	20.12	0.103	38.45	-18.33	22.27	0.169	40.61	-18.33
	16-QAM	831.50	H	206	309	1.46	1 / 1	18.87	18.18	0.066	38.45	-20.27	20.33	0.108	40.61	-20.28
	16-QAM	836.50	H	209	301	1.54	1 / 1	19.70	19.10	0.081	38.45	-19.35	21.25	0.133	40.61	-19.36
	16-QAM	841.50	H	205	313	1.62	1 / 1	19.62	19.09	0.081	38.45	-19.36	21.24	0.133	40.61	-19.37
	16-QAM	841.50	H	205	313	1.62	1 / 1	19.62	19.09	0.081	38.45	-19.36	21.24	0.133	40.61	-19.37
10 MHz	TT/2 BPSK	829.00	H	206	309	1.42	1 / 1	20.58	19.85	0.097	38.45	-18.60	22.00	0.158	40.61	-18.61
	TT/2 BPSK	836.50	H	209	301	1.54	1 / 1	20.89	20.28	0.107	38.45	-18.17	22.43	0.175	40.61	-18.18
	TT/2 BPSK	844.00	H	205	313	1.66	1 / 1	20.51	20.02	0.100	38.45	-18.43	22.17	0.165	40.61	-18.44
	QPSK	829.00	H	206	309	1.42	1 / 1	20.29	19.56	0.090	38.45	-18.89	21.71	0.148	40.61	-18.90
	QPSK	836.50	H	209	301	1.54	1 / 1	20.96	20.35	0.108	38.45	-18.10	22.50	0.178	40.61	-18.10
	QPSK	844.00	H	205	313	1.66	1 / 1	20.35	19.86	0.097	38.45	-18.59	22.01	0.159	40.61	-18.59
	16-QAM	829.00	H	206	309	1.42	1 / 1	18.38	17.65	0.058	38.45	-20.80	19.80	0.096	40.61	-20.81
	16-QAM	836.50	H	209	301	1.54	1 / 1	19.32	18.71	0.074	38.45	-19.74	20.86	0.122	40.61	-19.75
	16-QAM	844.00	H	205	313	1.66	1 / 1	19.36	18.87	0.077	38.45	-19.58	21.02	0.126	40.61	-19.59
	16-QAM	844.00	H	205	313	1.66	1 / 1	19.36	18.87	0.077	38.45	-19.58	21.02	0.126	40.61	-19.59
5 MHz	TT/2 BPSK	829.00	H	206	309	1.38	1 / 23	20.74	19.97	0.099	38.45	-18.48	22.12	0.163	40.61	-18.48
	TT/2 BPSK	836.50	H	209	301	1.54	1 / 1	20.91	20.30	0.107	38.45	-18.15	22.45	0.176	40.61	-18.15
	TT/2 BPSK	844.00	H	205	313	1.70	1 / 1	20.34	19.89	0.098	38.45	-18.56	22.04	0.160	40.61	-18.56
	QPSK	829.00	H	206	309	1.38	1 / 23	20.34	19.57	0.091	38.45	-18.88	21.72	0.149	40.61	-18.89
	QPSK	836.50	H	209	301	1.54	1 / 1	21.10	20.49	0.112	38.45	-17.96	22.64	0.184	40.61	-17.97
	QPSK	844.00	H	205	313	1.70	1 / 1	20.24	19.80	0.095	38.45	-18.65	21.95	0.157	40.61	-18.66
	16-QAM	829.00	H	206	309	1.38	1 / 23	18.53	17.76	0.060	38.45	-20.69	19.91	0.098	40.61	-20.69
	16-QAM	836.50	H	209	301	1.54	1 / 1	19.29	18.68	0.074	38.45	-19.77	20.83	0.121	40.61	-19.78
	16-QAM	844.00	H	205	313	1.70	1 / 1	19.14	18.69	0.074	38.45	-19.76	20.84	0.121	40.61	-19.76
	16-QAM	844.00	H	205	313	1.70	1 / 1	19.14	18.69	0.074	38.45	-19.76	20.84	0.121	40.61	-19.76
20 MHz	QPSK (CP-OFDM)	836.50	H	207	304	1.54	1 / 104	19.47	18.86	0.077	38.45	-19.59	21.01	0.126	40.61	-19.59

Table 7-6. ERP Data (NR Band n5)

FCC ID: A3

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	GSM850	H	221	297	31.22	1.34	30.41	1.099	38.45	-8.04	32.56	1.804	40.61	-8.05
836.60	GSM850	H	225	301	31.47	1.54	30.86	1.220	38.45	-7.59	33.01	2.002	40.61	-7.59
848.80	GSM850	H	214	303	31.61	1.74	31.20	1.319	38.45	-7.25	33.35	2.163	40.61	-7.26
848.80	GSM850	V	130	235	30.39	1.36	29.60	0.911	38.45	-8.86	31.75	1.495	40.61	-8.86
848.80	EDGE850	H	220	305	25.25	1.74	24.84	0.305	38.45	-13.61	26.99	0.500	40.61	-13.62

Table 7-7. ERP Data (GPRS Cell)

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	218	305	19.82	1.38	19.05	0.080	38.45	-19.40	21.20	0.132	40.61	-19.41
836.60	WCDMA850	H	225	299	19.78	1.54	19.17	0.083	38.45	-19.28	21.32	0.136	40.61	-19.28
846.60	WCDMA850	H	211	309	19.77	1.71	19.33	0.086	38.45	-19.12	21.48	0.140	40.61	-19.13
846.60	WCDMA850	V	146	215	18.59	1.56	18.00	0.063	38.45	-20.45	20.15	0.104	40.61	-20.45

Table 7-8. ERP Data (WCDMA Cell)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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7.6 Radiated Spurious Emissions Measurements

Test Overview

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

Test Procedures Used

ANSI C63.26-2015 – Section 5.5.4

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW $\geq 3 \times$ 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.

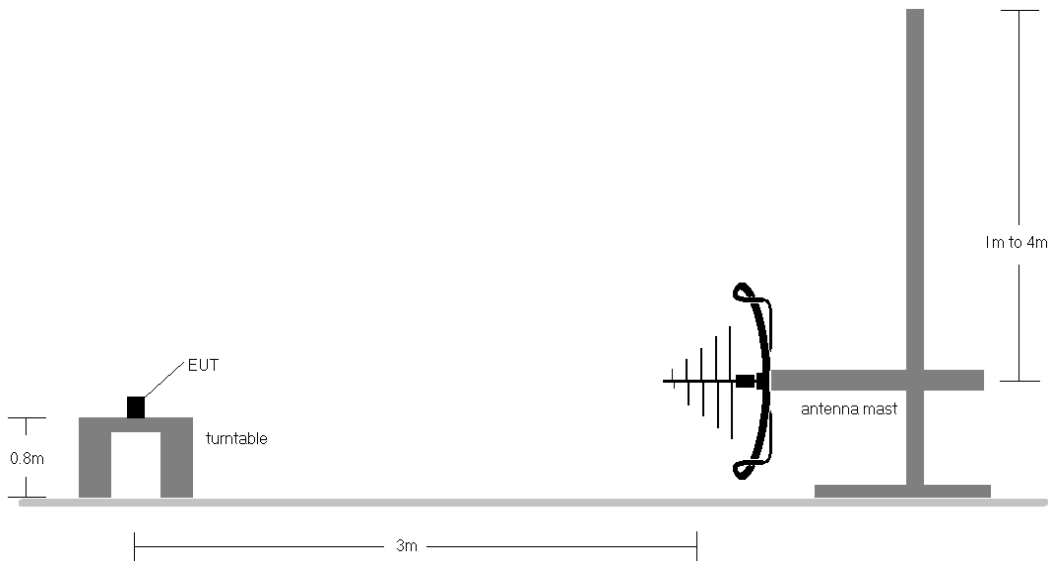


Figure 7-6. Test Instrument & Measurement Setup < 1GHz

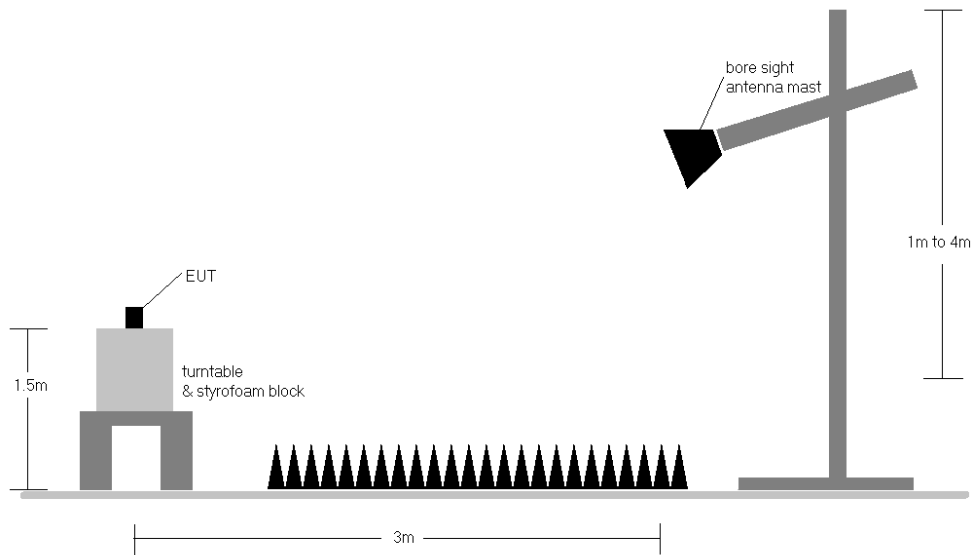


Figure 7-7. Test Instrument & Measurement Setup > 1GHz

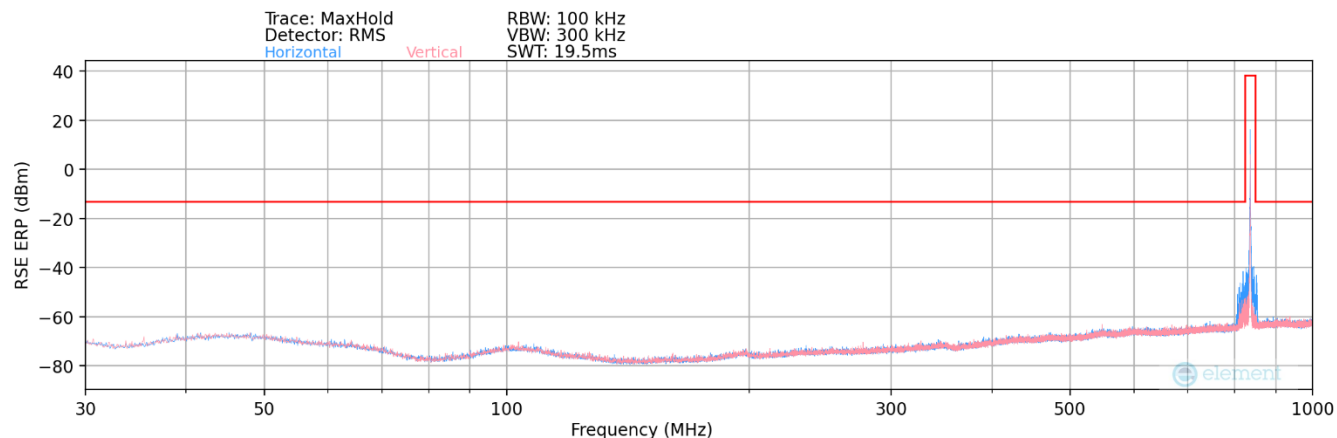
FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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Test Notes

- 1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26-2015 Section 5.2.7:
 - a) $E(\text{dB}\mu\text{V/m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b) $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V/m}) + 20\log D - 104.8$; 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 are reported in GPRS mode while transmitting with one slot active.
- 3) This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest powers are reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1".
- 4) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst-case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 5) This unit was tested with its standard battery.
- 6) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 7) Emissions below 18GHz were measured at a 3-meter test distance while emissions above 18GHz were measured at a 1-meter test distance with the application of a distance correction factor.
- 8) The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 9) For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.
- 10) Spurious emission in EN-DC Operating mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor) has been checked and was found to not to be the worst case. Spurious emissions from the NR carrier device are subject to the rules under which the NR carrier operates. Spurious emissions caused by the LTE carrier must meet the requirements of the rules under which the LTE carrier operates.

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LTE Band 26/5

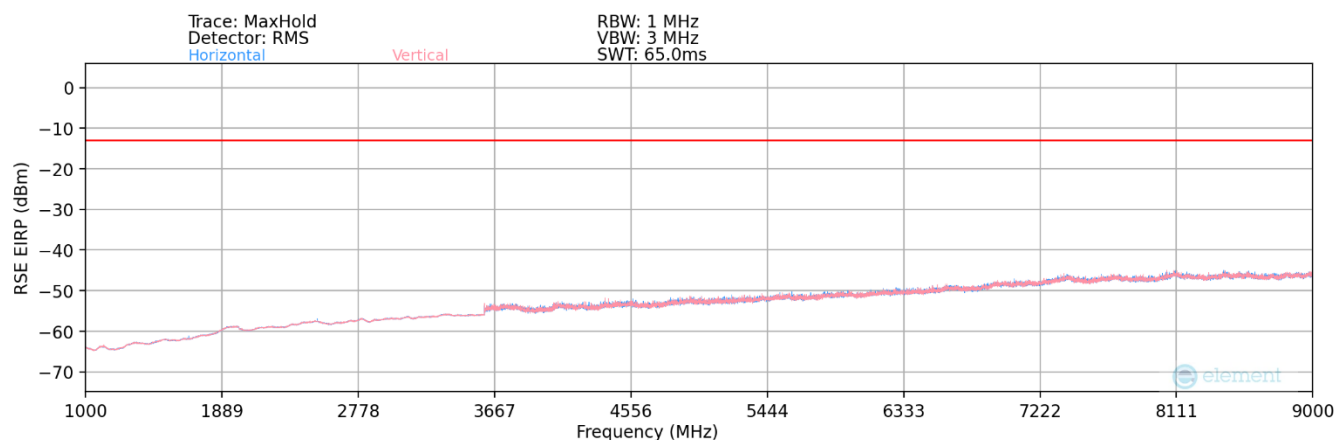


Plot 7-46. Radiated Spurious Plot (LTE Band 26/5)

Bandwidth (MHz):	10
Frequency (MHz):	829
RB / Offset:	1 / 37

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
748.00	H	-	-	-87.12	-2.70	17.18	-80.22	-13.00	-67.22

Table 7-9. Radiated Spurious Data (LTE Band 26/5 – Low Channel)



Plot 7-47. Radiated Spurious Plot (LTE Band 26/5)

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Bandwidth (MHz):	10
Frequency (MHz):	829
RB / Offset:	1 / 37

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	171	346	-76.44	-1.25	29.31	-65.95	-13.00	-52.95
2487.00	H	141	356	-75.22	3.18	34.96	-60.30	-13.00	-47.30
3316.00	H	-	-	-79.51	4.79	32.28	-62.98	-13.00	-49.98
4145.00	H	-	-	-78.79	5.77	33.98	-61.28	-13.00	-48.28
4974.00	H	-	-	-80.15	6.76	33.61	-61.65	-13.00	-48.65

Table 7-10. Radiated Spurious Data (LTE Band 26/5 – Low Channel)

Bandwidth (MHz):	10
Frequency (MHz):	836.5
RB / Offset:	1 / 37

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	221	333	-74.65	-1.28	31.07	-64.19	-13.00	-51.19
2509.50	H	162	1	-76.04	3.17	34.13	-61.13	-13.00	-48.13
3346.00	H	-	-	-78.86	4.95	33.09	-62.17	-13.00	-49.17
4182.50	H	-	-	-79.44	5.52	33.08	-62.17	-13.00	-49.17
5019.00	H	-	-	-79.97	6.93	33.96	-61.29	-13.00	-48.29

Table 7-11. Radiated Spurious Data (LTE Band 26/5 – Mid Channel)

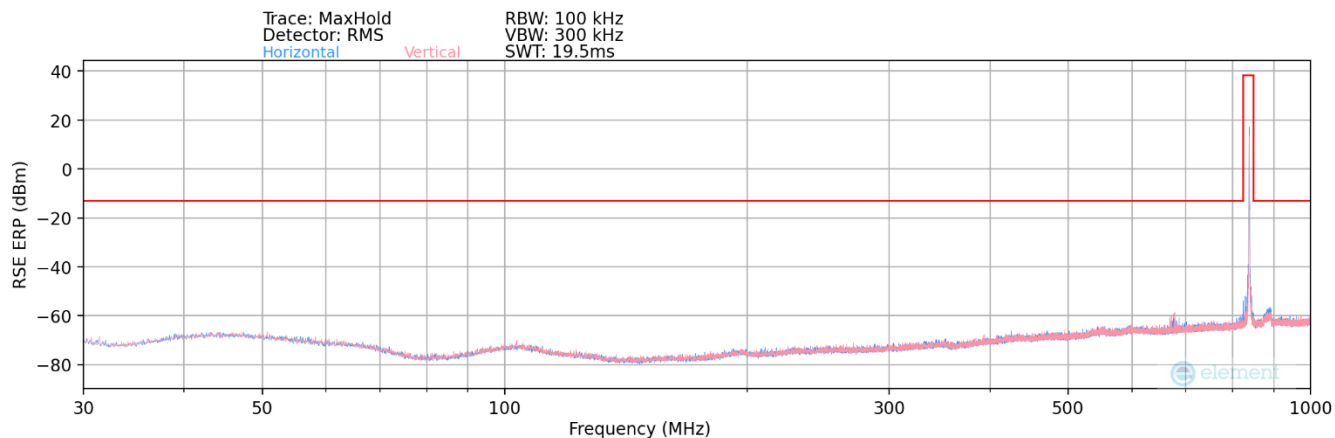
Bandwidth (MHz):	10
Frequency (MHz):	844
RB / Offset:	1 / 37

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	216	2	-75.05	-1.31	30.64	-64.62	-13.00	-51.62
2532.00	H	147	359	-76.03	2.97	33.94	-61.32	-13.00	-48.32
3376.00	H	-	-	-78.77	4.87	33.10	-62.16	-13.00	-49.16
4220.00	H	-	-	-79.12	5.53	33.41	-61.85	-13.00	-48.85

Table 7-12. Radiated Spurious Data (LTE Band 26/5 – High Channel)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n5

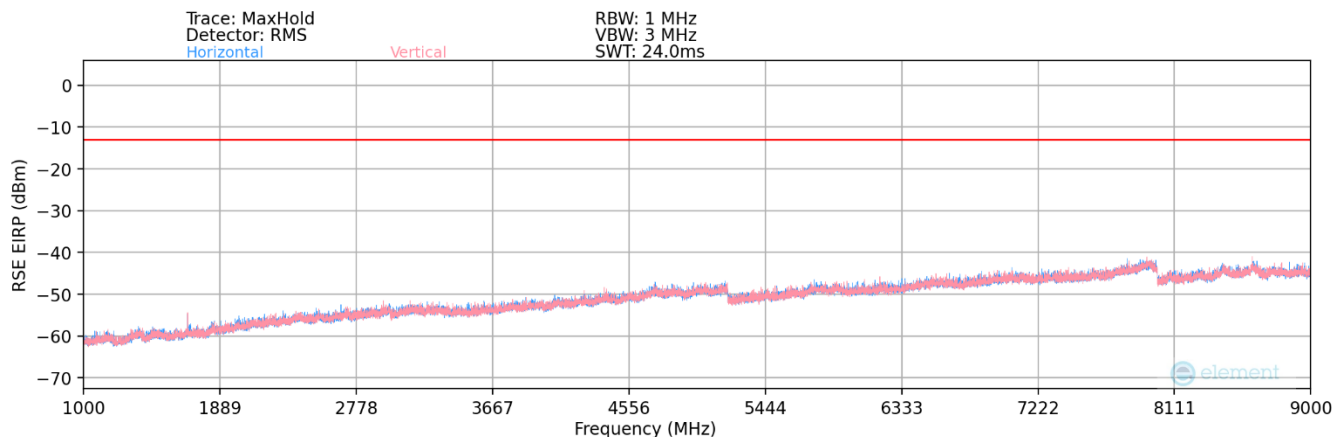


Plot 7-48. Radiated Spurious Plot (NR Band n5)

Bandwidth (MHz):	20
Frequency (MHz):	839
RB / Offset:	1 / 53

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
410.00	H	-	-	-77.68	-8.21	21.11	-76.30	-13.00	-63.30

Table 7-13. Radiated Spurious Data (NR Band n5 – High Channel)



Plot 7-49. Radiated Spurious Plot (NR Band n5)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	20
Frequency (MHz):	834
RB / Offset:	1 / 53

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	127	212	-74.80	0.33	32.53	-62.73	-13.00	-49.73
2502.00	H	-	-	-78.68	4.04	32.36	-62.89	-13.00	-49.89
3336.00	H	-	-	-79.94	6.93	33.99	-61.27	-13.00	-48.27
4170.00	H	-	-	-80.39	8.20	34.81	-60.45	-13.00	-47.45

Table 7-14. Radiated Spurious Data (NR Band n5 – Low Channel)

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

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	107	356	-74.08	0.43	33.35	-61.91	-13.00	-48.91
2509.50	H	102	367	-76.13	4.07	34.94	-60.32	-13.00	-47.32
3346.00	H	-	-	-79.95	6.78	33.83	-61.43	-13.00	-48.43
4182.50	H	-	-	-80.55	8.24	34.69	-60.57	-13.00	-47.57
5019.00	H	-	-	-80.83	10.55	36.72	-58.54	-13.00	-45.54

Table 7-15. Radiated Spurious Data (NR Band n5 – Mid Channel)

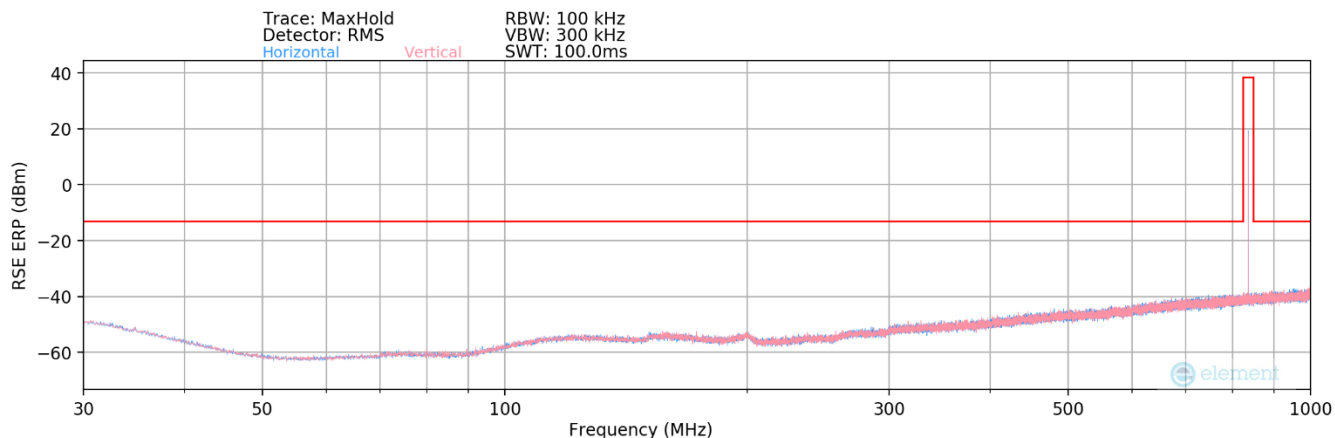
Bandwidth (MHz):	20
Frequency (MHz):	839
RB / Offset:	1 / 53

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	120	358	-73.01	0.51	34.50	-60.76	-13.00	-47.76
2517.00	H	119	358	-76.20	4.33	35.13	-60.13	-13.00	-47.13
3356.00	H	-	-	-79.76	6.64	33.88	-61.38	-13.00	-48.38
4195.00	H	-	-	-80.24	8.25	35.01	-60.25	-13.00	-47.25
5034.00	H	-	-	-81.21	10.64	36.43	-58.83	-13.00	-45.83

Table 7-16. Radiated Spurious Data (NR Band n5 – High Channel)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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GSM/GPRS Cell

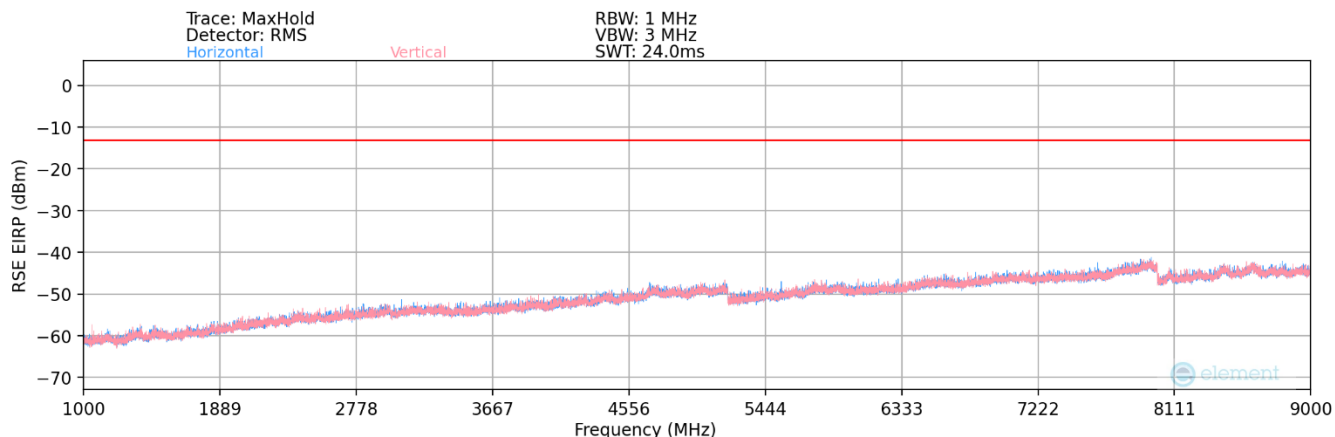


Plot 7-50. Radiated Spurious Plot (GPRS Cell)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
409.00	H	-	-	-84.97	-8.18	13.85	-83.56	-13.00	-70.56

Table 7-17. Radiated Spurious Data (GPRS Cell – Low Channel)



Plot 7-51. Radiated Spurious Plot (GPRS Cell)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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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	224	337	-56.67	-1.22	49.11	-46.15	-13.00	-33.15
2472.60	H	142	328	-63.25	2.83	46.58	-48.68	-13.00	-35.68
3296.80	H	-	-	-72.58	4.40	38.82	-56.44	-13.00	-43.44
4121.00	H	-	-	-77.86	5.85	34.99	-60.27	-13.00	-47.27
4945.20	H	-	-	-78.24	7.03	35.79	-59.47	-13.00	-46.47

Table 7-18. Radiated Spurious Data (GPRS Cell – Low Channel)

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	218	343	-58.70	-1.28	47.02	-48.24	-13.00	-35.24
2509.80	H	117	186	-63.34	3.17	46.83	-48.43	-13.00	-35.43
3346.40	H	-	-	-73.47	4.95	38.48	-56.78	-13.00	-43.78
4183.00	H	-	-	-77.61	5.52	34.91	-60.34	-13.00	-47.34
5019.60	H	-	-	-78.00	6.93	35.93	-59.33	-13.00	-46.33

Table 7-19. Radiated Spurious Data (GPRS Cell – Mid Channel)

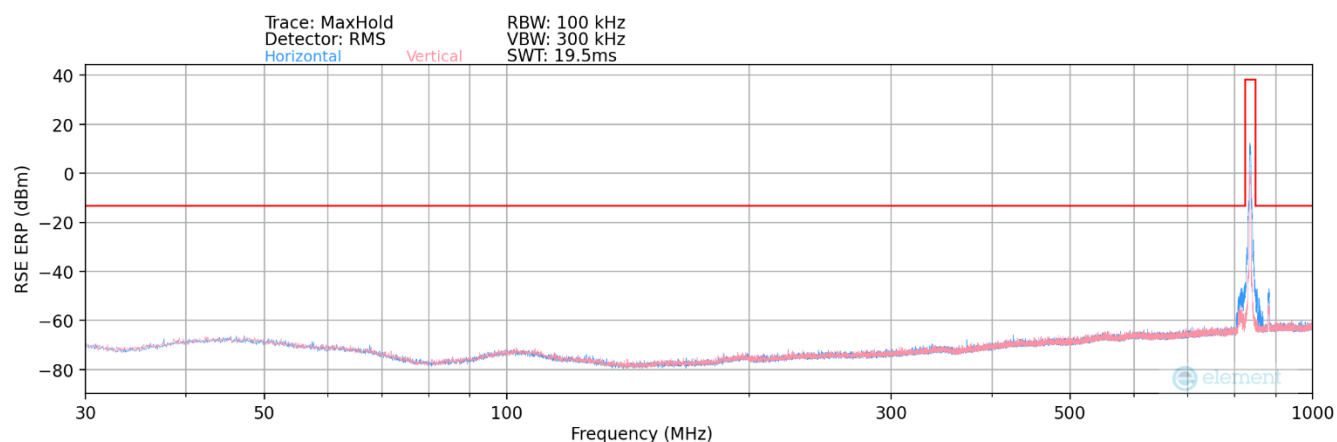
Mode:	GPRS 1 Tx Slot
Channel:	251
Frequency (MHz):	848.8

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	280	338	-65.88	-1.14	39.98	-55.27	-13.00	-42.27
2546.40	H	233	174	-64.06	2.66	45.60	-49.65	-13.00	-36.65
3395.20	H	-	-	-72.93	4.61	38.68	-56.58	-13.00	-43.58
4244.00	H	-	-	-77.06	5.55	35.49	-59.76	-13.00	-46.76
5092.80	H	-	-	-78.23	7.17	35.94	-59.32	-13.00	-46.32

Table 7-20. Radiated Spurious Data (GPRS Cell – High Channel)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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WCDMA Cell

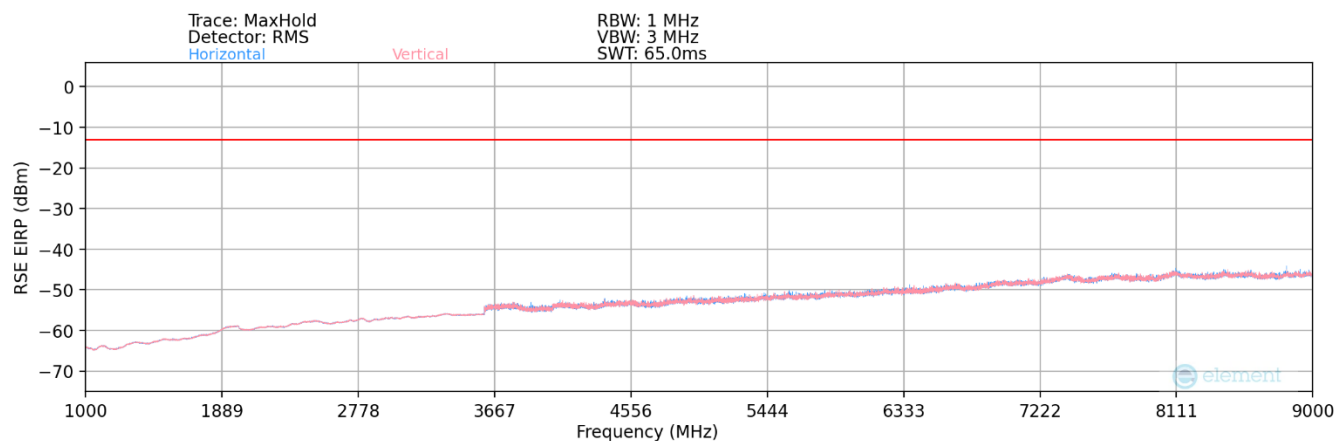


Plot 7-52. Radiated Spurious Plot (WCDMA Cell)

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

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
425.00	H	-	-	-85.03	-7.93	14.04	-83.36	-13.00	-70.36

Table 7-21. Radiated Spurious Data (WCDMA Cell – Mid Channel)



Plot 7-53. Radiated Spurious Plot (WCDMA Cell)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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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	172	354	-77.75	-1.23	28.02	-67.24	-13.00	-54.24
2479.20	H	127	327	-74.08	2.93	35.85	-59.40	-13.00	-46.40
3305.60	H	-	-	-78.75	4.50	32.75	-62.51	-13.00	-49.51
4132.00	H	-	-	-80.07	5.84	32.77	-62.49	-13.00	-49.49
4958.40	H	-	-	-80.28	6.95	33.67	-61.59	-13.00	-48.59

Table 7-22. Radiated Spurious Data (WCDMA Cell – Low Channel)

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	222	341	-77.20	-1.28	28.52	-66.74	-13.00	-53.74
2509.80	H	121	358	-76.22	3.17	33.95	-61.31	-13.00	-48.31
3346.40	H	-	-	-79.15	4.95	32.80	-62.46	-13.00	-49.46
4183.00	H	-	-	-79.69	5.52	32.83	-62.42	-13.00	-49.42
5019.60	H	-	-	-80.13	6.93	33.80	-61.46	-13.00	-48.46

Table 7-23. Radiated Spurious Data (WCDMA Cell – Mid Channel)

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	-	-	-78.69	-1.19	27.12	-68.14	-13.00	-55.14
2539.80	H	118	300	-75.64	2.75	34.11	-61.15	-13.00	-48.15
3386.40	H	-	-	-78.82	4.67	32.85	-62.41	-13.00	-49.41
4233.00	H	-	-	-79.28	5.65	33.37	-61.89	-13.00	-48.89
5079.60	H	-	-	-80.39	7.17	33.78	-61.48	-13.00	-48.48

Table 7-24. Radiated Spurious Data (WCDMA Cell – High Channel)

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		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 C63.26-2015. The frequency stability of the transmitter is measured by:

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

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

Test Procedure Used

ANSI C63.26-2015 – Section 5.6

Test Settings

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

Test Setup

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

Test Notes

None

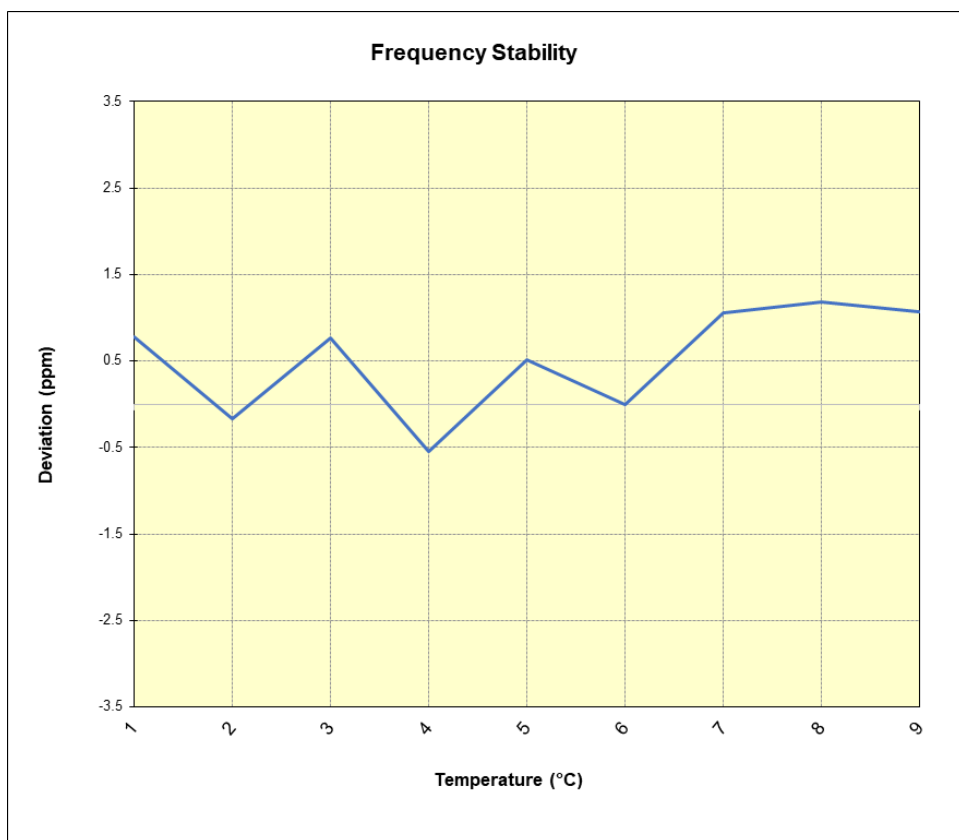
FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 26/5

Operating Frequency (Hz):	836,500,000
Ref. Voltage (VDC):	4.19
Deviation Limit:	$\pm 0.00025\%$ or 2.5 ppm

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.19	- 30	836,708,221	657	0.0000785
		- 20	836,707,422	-142	-0.0000170
		- 10	836,708,211	647	0.0000773
		0	836,707,111	-453	-0.0000541
		+ 10	836,707,999	435	0.0000520
		+ 20 (Ref)	836,707,564	0	0.0000000
		+ 30	836,708,444	880	0.0001052
		+ 40	836,708,554	990	0.0001183
		+ 50	836,708,463	899	0.0001074
Battery Endpoint	3.34	+ 20	836,709,225	1,661	0.0001985

Table 7-25. LTE Band 26/5 Frequency Stability Data



Plot 7-54. LTE Band 26/5 Frequency Stability Chart

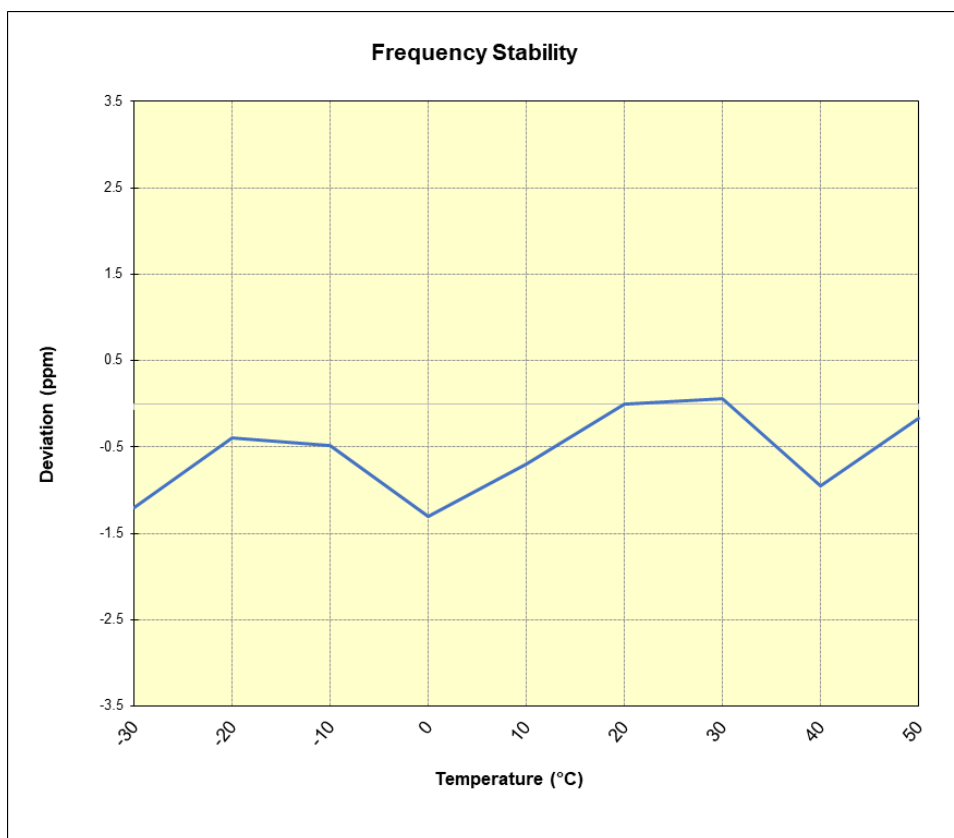
FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n5

Operating Frequency (Hz):	836,500,000
Ref. Voltage (VDC):	4.19
Deviation Limit:	± 0.00025% or 2.5 ppm

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.19	- 30	836,584,088	-1,001	-0.0001197
		- 20	836,584,754	-335	-0.0000400
		- 10	836,584,687	-402	-0.0000481
		0	836,583,996	-1,093	-0.0001307
		+ 10	836,584,507	-582	-0.0000696
		+ 20 (Ref)	836,585,089	0	0.0000000
		+ 30	836,585,135	46	0.0000055
		+ 40	836,584,294	-795	-0.0000950
		+ 50	836,584,953	-136	-0.0000163
Battery Endpoint	3.34	+ 20	836,585,952	863	0.0001032

Table 7-26. NR Band n5 Frequency Stability Data



Plot 7-55. NR Band n5 Frequency Stability Chart

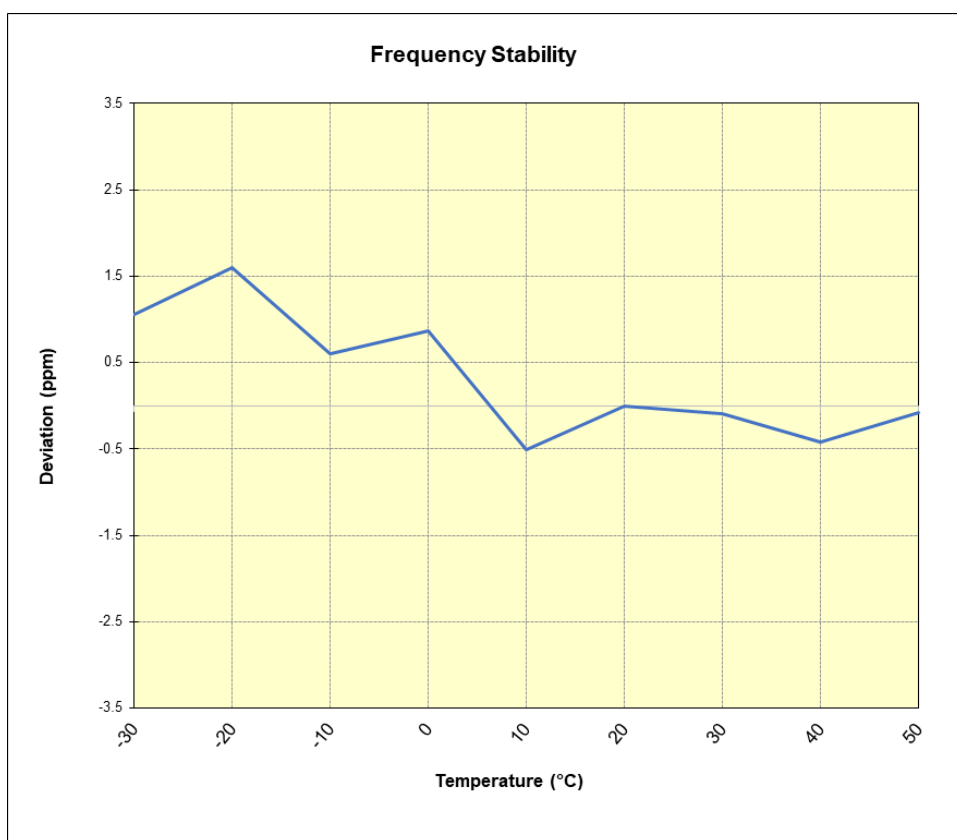
FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 61 of 64

GSM/GPRS Cellular

Operating Frequency (Hz):	836,600,000
Ref. Voltage (VDC):	4.19
Deviation Limit:	$\pm 0.00025\%$ or 2.5 ppm

Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.19	- 30	836,607,347	881	0.0001053
		- 20	836,607,800	1,334	0.0001595
		- 10	836,606,967	501	0.0000599
		0	836,607,191	725	0.0000867
		+ 10	836,606,042	-424	-0.0000507
		+ 20 (Ref)	836,606,466	0	0.0000000
		+ 30	836,606,392	-74	-0.0000088
		+ 40	836,606,114	-352	-0.0000421
		+ 50	836,606,397	-69	-0.0000082
Battery Endpoint	3.34	+ 20	836,607,221	755	0.0000902

Table 7-27. GSM/GPRS Cell Frequency Stability Data

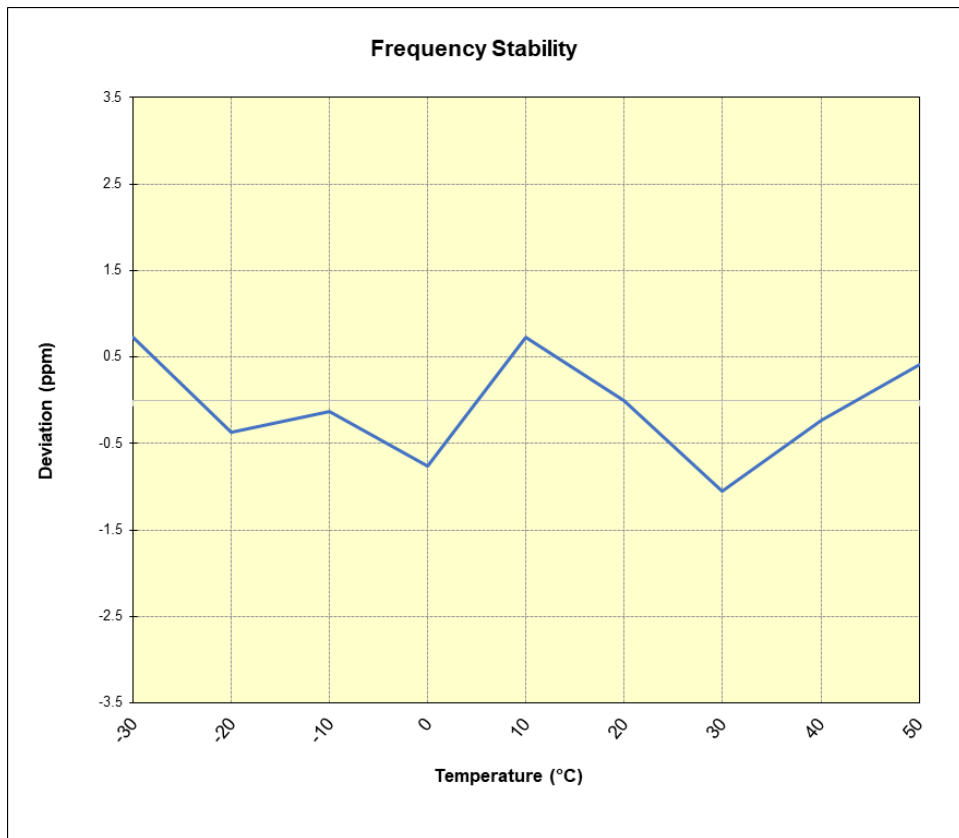


Plot 7-56. GSM/GPRS Cell Frequency Stability Chart

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
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WCDMA Cellular					
		Operating Frequency (Hz):		836,600,000	
		Ref. Voltage (VDC):		4.19	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.19	- 30	836,635,925	609	0.0000728
		- 20	836,635,008	-308	-0.0000368
		- 10	836,635,209	-107	-0.0000128
		0	836,634,681	-635	-0.0000759
		+ 10	836,635,930	614	0.0000734
		+ 20 (Ref)	836,635,316	0	0.0000000
		+ 30	836,634,437	-879	-0.0001051
		+ 40	836,635,120	-196	-0.0000234
		+ 50	836,635,666	350	0.0000418
Battery Endpoint	3.34	+ 20	836,635,447	131	0.0000157

Table 7-28. WCDMA Cell Frequency Stability Data



Plot 7-57. WCDMA Cell Frequency Stability Chart

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		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 **Samsung Portable Handset** **FCC ID: A3LSMG766U** complies with all the requirements of Part 22 of the FCC rules.

FCC ID: A3LSMG766U	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2501020001-07.A3L	Test Dates: 1/6/2025 - 2/28/2025	EUT Type: Portable Handset	Page 64 of 64