

TEST REPORT

Report Number: R15980274-E17c

Applicant : Samsung Electronics Co., Ltd.
129, SAMSUNG-RO, YEONGTONG-GU, SUWON-SI
GYEONGGI-DO, 16677, REP. OF KOREA

Model(s) : SC-51G, SCG36

FCC ID : A3LSMS942JPN

EUT Description : GSM/WCDMA/LTE/NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax/be, WPT and NFC

Test Standard(s) : FCC 47 CFR PART 2, PART 27
ISED RSS-GEN ISSUE 5 + A1 + A2, RSS-199 ISSUE 4

Date Of Issue:
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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2025-12-31	Initial Review	Noah Bennett

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS.....5

2. SUMMARY OF TEST RESULTS6

3. TEST METHODOLOGY6

4. FACILITIES AND ACCREDITATION6

5. DECISION RULES AND MEASUREMENT UNCERTAINTY.....7

5.1. METROLOGICAL TRACEABILITY7

5.2. DECISION RULES7

5.3. MEASUREMENT UNCERTAINTY7

5.4. SAMPLE CALCULATION.....7

6. EQUIPMENT UNDER TEST8

6.1. DESCRIPTION OF EUT8

6.2. MAXIMUM OUTPUT POWER8

6.3. MAXIMUM ANTENNA GAIN9

6.4. WORST-CASE CONFIGURATION AND MODE10

6.5. DESCRIPTION OF TEST SETUP11

7. TEST AND MEASUREMENT EQUIPMENT.....12

8. CONDUCTED TEST RESULTS15

8.1. OCCUPIED BANDWIDTH15

8.1.1. LTE BAND 41 (FCC)18

8.1.2. 5G NR n41 (FCC).....19

8.1.3. ULCA LTE BAND 41 (FCC).....22

8.2. EMISSION MASK AND ADJACENT CHANNEL POWER.....24

8.2.1. LTE BAND 41 (FCC)26

8.2.2. 5G NR n41 (FCC).....30

8.2.3. ULCA LTE BAND 41 (FCC).....44

8.3. OUT OF BAND EMISSIONS45

8.3.1. LTE BAND 41 (FCC)46

8.3.2. 5G NR n41 (FCC).....47

8.3.3. ULCA LTE BAND 41 (FCC).....48

8.4. FREQUENCY STABILITY49

8.4.1. LTE B41 (QPSK 20MHz BANDWIDTH, FCC)50

8.4.2. 5G NR n41 (BPSK 100MHz BANDWIDTH, FCC).....51

8.4.3.	ULCA LTE BAND 41 (QPSK 20MHz + 20MHz BANDWIDTH, FCC)	51
8.5.	PEAK-TO-AVERAGE POWER RATIO	52
8.5.1.	LTE BAND 41 (FCC)	53
8.5.2.	5G NR n41 (FCC)	53
8.5.3.	ULCA LTE BAND 41 (FCC)	54
9.	RADIATED TEST RESULTS	55
9.1.	EFFECTIVE RADIATED POWER ERP/EIRP	56
9.1.1.	LTE BAND 41 FCC 20MHz BW	59
9.1.2.	LTE BAND 41 FCC WC BW	61
9.1.3.	5G NR n41FCC 100MHz BW	62
9.1.4.	5G NR n41FCC WC BW	64
9.1.5.	LTE ULCA BAND 41FCC	65
9.2.	FIELD STRENGTH OF SPURIOUS RADIATION	67
9.2.1.	LTE BAND 41 (FCC)	70
10.1.1.	5G NR n41 (FCC)	72
10.1.2.	ULCA LTE BAND 41 (FCC)	74
11.	SETUP PHOTOS	76

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Samsung Electronics Co Ltd.
129, Samsung-ro, Yeongtong-gu, Suwon-si,
Gyeonggi-do, 16677, Rep. of Korea

EUT DESCRIPTION: GSM/WCDMA/LTE/NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax/be, WPT and
NFC

SERIAL NUMBERS: YHI0909M, YHK0046M, YHK0177M, YKA2427M

SAMPLE RECEIVE DATE: 2025-09-11, 2025-10-07, 2025-11-19

DATE TESTED: 2025-09-11 to 2025-12-23

APPLICABLE STANDARDS STANDARD	TEST RESULTS
FCC 47 CFR PART 2, PART 27 ISED RSS-GEN ISSUE 5 + A1 + A2, RSS-199 ISSUE 4	Complies

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document.

Approved & Released For
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2. SUMMARY OF TEST RESULTS

This report contains data provided by the customer which can impact the validity of results. UL LLC is only responsible for correctly integrating customer-provided data with measurements performed by UL LLC.

Requirement Description	Requirement Clause Number (FCC)	Requirement Clause Number (ISED)	Result	Remarks
Equivalent Isotropic Radiated Power	27.50 (h) (2)	RSS199§5.5	Complies	None
Occupied Bandwidth	2.1049	RSS-GEN§6.7 RSS199§5.4	Complies	None
Band Edge and Emission Mask	2.1051, 27.53 (m)(4) & (m) (6)	RSS199§5.6	Complies	None
Out of Band Emissions	2.1051, 27.53 (m)(4) & (m) (6)	RSS199§5.6	Complies	None
Frequency Stability	2.1055, 27.54	RSS199§5.4	Complies	None
Peak-to-Average Ratio	-	RSS199§5.5	Complies	None
Field Strength of Spurious Radiation	2.1053, 27.53 (m)(4) & (m) (6)	RSS199§5.6	Complies	None

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with the following:

ANSI C63.26:2015 The tests documented in this report were performed in accordance with the following.

FCC published lists of [measurement procedures](#) for compliance testing.

ISED published lists of [normative test standards and acceptable alternatives procedures](#).

- ANSI C63.26:2015
- ANSI/TIA-603-E (2016)
- FCC 47 CFR Part 2, Part 27
- [FCC KDB 971168 D01](#): Power Meas License Digital Systems (ISED acceptable alternative procedure)
- [FCC KDB 971168 D02](#): Misc Rev Approv License Devices
- [FCC KDB 412172 D01](#): Determining ERP and EIRP
- ISED RSS-Gen Issue 5 + A1 + A2, RSS-199 Issue 4.

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, certification #0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☒	Building 2800 Suite Perimeter Park Dr. Suite B Morrisville, NC 27560, USA	US0067	27265	825374

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	U _{Lab}
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.52 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	4.88 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.24 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.37 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.17 dB
Occupied Channel Bandwidth	±0.39 %
Temperature	±0.9 °C
Supply voltages	±0.45 %
Time	±0.02 %

Uncertainty figures are valid to a confidence level of 95%.

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

6. EQUIPMENT UNDER TEST

6.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE/NR Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax/be and NFC.

The EUT supports the following LTE and 5G NR Bands and their antenna configurations:

Mode and Bands	Config 0	Config 1
LTE Band41FCC & 5G NR n41FCC	Ant F	Ant B

Note: ULCA 41C is supported in JPN region only.

6.2. MAXIMUM OUTPUT POWER

EIRP/ERP TEST PROCEDURE

ANSI C63.26:2015
KDB 971168 D01 Section 5.6

$$\text{ERP/EIRP} = \text{PMeas} + \text{GT} - \text{LC}$$

where: ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm);

PMeas = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

LTE BAND 41

Part 27 / RSS 199									
EIRP Limit (W)		2.00							
Bandwidth (MHz)	Modulation	Low Frequency	Upper Frequency	Ant	EIRP Average	EIRP Average	99% BW (MHz)	99% BW (kHz)	Emission Designator
15.0	QPSK	2503.5	2682.5	Config_0	20.10	0.102	13.485	13485	13M5G7
20.0	QPSK	2506.0	2680.0	Config_0	19.88	0.097	17.936	17936	17M9G7
	16QAM				18.58	0.072	17.966	17966	18M0D7
20.0	QPSK	2506.0	2680.0	Config_1	18.87	0.077	17.936	17936	17M9G7
	16QAM				18.57	0.072	17.966	17966	18M0D7

5G NR n41

Part 27 / RSS 199									
EIRP Limit (W)		2.00							
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Ant	EIRP Average (dBm)	EIRP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
40.0	BPSK	2516.0	2670.0	Config_0	25.12	0.325	36.486	36486	36M5G7
100.0	QPSK	2546.0	2640.0	Config_0	24.22	0.264	98.390	98390	98M4G7
	16QAM				22.56	0.180	98.171	98171	98M2D7
100.0	QPSK	2546.0	2640.0	Config_1	23.53	0.225	98.390	98390	98M4G7
	16QAM				22.41	0.174	98.171	98171	98M2D7

ULCA LTE BAND 41

Part 27 / RSS 199									
EIRP Limit (W)		2.00							
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Ant	EIRP Average (dBm)	EIRP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
20+20	QPSK	2506.0	2680.0	Config_0	21.01	0.126	37.847	37847	37M8G7W
	16QAM				16.24	0.042	37.830	37830	37M8D7W
20+20	QPSK	2506.0	2680.0	Config_1	18.09	0.064	37.847	37847	37M8G7W
	16QAM				14.61	0.029	37.830	37830	37M8D7W

6.3. MAXIMUM ANTENNA GAIN

The antenna(s) gain, as provided by the manufacturer' are as follows:

Frequency Band	ANT F Antenna Gain (dBi)	ANT B Antenna Gain (dBi)
LTE Band 41 / 5G NR n14/ULCA Band 41 2496 – 2690 MHz (FCC)	-1.6	-1.7
LTE Band 7 / 5G NR n7/ULCA Band 7 2500 – 2690 MHz (ISED)	-1.3	-1.7

6.4. WORST-CASE CONFIGURATION AND MODE

This report covers the following technologies:

- LTE Band 41, 5G NR n41, ULCA LTE Band 41

LTE Band 41 and 5G NR n41 IC Band (2500-2680MHz) are covered by LTE Band 41 and 5G NR n41 FCC Band (2496-2680MHz) because it is a subset of FCC band. Also, they have the same or less output power and supported bandwidths. However, OBW, Emission Mask, and Out of Band emission tests have been done for Both IC and FCC Bands.

For 5G NRs, conducted spurious emission tests were conducted on wider bandwidth with inner 1RB since this is the worst bandwidth and the highest output power.

BPSK modulation applied only for 5G NR frequencies and has the same tune up power as QPSK modulations.

The DFT-s-OFDM and CP-OFDM waveforms were investigated, and DFT-s-OFDM was found to be the worst case.

The worst-case scenario for all measurements is based on an engineering evaluation made on different modulations. Then, QPSK and BPSK were observed as the worst mode to LTE bands and 5G NR bands respectively and set for all conducted and radiated. Output power measurements were measured on BPSK, QPSK, 16QAM, 64QAM, and 256QAM modulations. For testing purposes emissions on Section 9 were measured while QPSK/BPSK was set at or above target power for all bands. Conducted tests were performed on the worst-case antenna port because it has the highest conducted power. The worst-case antenna port is shown in the table below.

LTE and 5G NR Bands	Worst case Antenna Port
LTE Band 41	Ant F
5G NR n41 (SISO)	Ant F

The EUT was investigated in three orthogonal orientations X/Y/Z on all available SISO and MIMO antennas to determine the worst-case orientation. The following table exhibits the worst-case orientation. The full tests of the EUT have made upon the orientations that are shown in the table below.

Frequency Range	ANT F	ANT B
2496 – 2690 MHz	X	Y

Radiated spurious emissions were investigated from 9kHz to 30MHz, 30MHz-1GHz and above 1GHz. There were no emissions found with less than 20dB of margin from 9kHz to 1GHz and above 18GHz.

For simultaneous transmission of multiple channels in the 2.4GHz/5GHz WLAN, UWB, and Cellular bands, tests were conducted for various configurations having the highest power, least separation in frequencies and widest operation bandwidths. No noticeable new emission was found.

This report covers 2 models, the model differences and the representative model is shown below:

Representative Model	Difference	Derivative Model
		SCG36
SC-51G	Hardware	Same as SC-51G
	Software	Different UI

6.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Power Adapter	Flextronics	G-1000-US	Na	na

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB-C	1	USB-C	Shielded	<3m	Phone to power adapter

TEST SETUP

The EUT was connected to a base station simulator and set to transmit at max power for GSM/WCDMA testing

SETUP DIAGRAM

Please see R15980274-EP1c for Setup Diagrams and Setup Photos.

7. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 1)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	0.009-30MHz				
65682	Active Loop Antenna	ETS-Lindgren	6502	2025-10-14	2027-10-14
	30-1000 MHz				
90629	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-01-30	2026-01-30
	18-40 GHz				
91186	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2024-05-16	2026-05-16
91187	Horn Antenna, 26-40GHz	ARA	MWH-2640/B	2024-05-17	2026-05-17
	Gain-Loss Chains				
135999	Gain-loss string: 18-40GHz	Various	Various	2025-05-31	2026-05-31
	Receiver & Software				
206459	Spectrum Analyzer	Rohde & Schwarz	FSW	2025-09-15	2026-09-15
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Additional Equipment used				
241205	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05
212967	Wideband Radio Communications Tester	Rohde and Schwarz	CMW500	2025-02-07	2026-02-07

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 4)

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
	1-18 GHz				
206211	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2024-04-09	2026-04-09
	Gain-Loss Chains				
207640	Gain-loss string: 1-18GHz	Various	Various	2025-06-13	2026-06-13
	Receiver & Software				
197954	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-04-21	2026-04-21
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Additional Equipment used				
241204	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05
212967	Wideband Radio Communications Tester	Rohde and Schwarz	CMW500	2025-02-07	2026-02-07
212166	Wideband Radio Communications Tester	Anritsu	MT8821C	2025-01-20	2026-01-20
198917	1GHz high-pass filter, 2W, Fhigh = 18GHz	Micro-Tronics	HPM18129-02	2025-03-13	2026-03-13
169108 (BRF010)	1.85-1.97GHz notch filter, 2W, Fhigh = 9GHz	Micro-Tronics	BRM50714-01	2025-03-13	2026-03-13
169106 (BRF008)	1710-1785MHz notch filter, 2W, Fhigh = 9GHz	Micro-Tronics	BRM50713-01	2025-03-13	2026-03-13
231408 (BRF011)	2.495-2.690GHz notch filter, 2W, Fhigh = 18GHz	Micro-Tronics	BRM50709-01	2025-03-13	2026-03-13

Wireless Conducted Measurement Equipment.

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	Additional Equipment used				
90411	Spectrum Analyzer MY54490314	Keysight Technologies	N9030A	2025-07-30	2026-07-30
231913	Spectrum Analyzer	Keysight Technologies	N9030B	2025-04-29	2026-04-29
212967	Wideband Radio Communications Tester 170733	Rohde and Schwarz	CMW500	2025-02-07	2026-02-07
222797	Wideband Radio Communications Tester	Rohde and Schwarz	CMW500	2025-02-21	2026-02-28
262469	Humidity and Temperature Probe	Control Company	15-077-963	2024-04-28	2026-04-28
207726	Temp/Humid Chamber	Thermotron	SM-32-8200	2025-01-15	2026-01-15
179892	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2026-08-05
90416	Spectrum Analyzer	Keysight Technologies	N9030A	2025-07-25	2026-07-25
76022	DC Regulated Power Supply	CircuitSpecialists.Com	CSI3005X5	NA	NA
SOFTEMI	Antenna Port Software	UL	Version 2022.8.16	NA	NA

Test Equipment Used - Wireless Conducted Attenuators, Cables, and Couplers

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	Attenuators				
226554	20dB Attenuator	CentricRF	C18S2-20	2025-03-19	2026-03-19
226552	20dB Attenuator	CentricRF	C18S2-20	2025-03-19	2026-03-19
	Cables				
80865	SMA Cable	Huber + Suhner	104PEA	2025-09-05	2026-09-05
247384	SMA Cable	Huber + Suhner	104PEA	2025-09-05	2026-09-05
246257	SMA Cable	Huber + Suhner	104PEA	2025-09-05	2026-09-05
	Couplers				
238018 (CPL003-SAR)	Ultra-Wideband Directional Coupler 0.5-18GHz	Mini-Circuits	ZUDC10-183+	2025-04-48	2026-04-28

NOTES:

- * Testing is completed before equipment expiration date.
- Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

8. CONDUCTED TEST RESULTS

8.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049
ISED: RSS-GEN§6.7, RSS199§5.4

LIMITS

For reporting purposes only.

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the middle channel in each band. The 99% and -26dB bandwidths were also measured and recorded.

RESULTS

There is no limit required, and power is the same for low, middle and high channel; therefore, only middle channel was tested.

LTE BAND 41 (FCC)

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 41	5MHz, QPSK	25/0	2593.0	4.501	5.15
	5MHz, 16QAM			4.502	5.11
	10MHz, QPSK	50/0		8.976	10.21
	10MHz, 16QAM			8.982	10.00
	15MHz, QPSK	75/0		13.485	14.95
	15MHz, 16QAM			13.453	14.86
	20MHz, QPSK	100/0		17.936	20.18
	20MHz, 16QAM			17.966	19.68
	20MHz, QPSK	1/0		0.277	0.41

5G NR n41 (FCC)

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
5G NR n41 (FCC)	10MHz, BPSK	24/0	2593.0	8.702	10.29
	10MHz, 16QAM			8.673	10.01
	15MHz, BPSK	36/0		13.195	14.40
	15MHz, 16QAM			13.273	14.30
	20MHz, BPSK	50/0		18.297	19.51
	20MHz, 16QAM			18.364	19.38
	25MHz, BPSK	64/0		23.413	24.88
	25MHz, 16QAM			23.463	24.66
	30MHz, BPSK	75/0		27.367	28.97
	30MHz, 16QAM			27.390	28.77
	35MHz, BPSK	90/0		32.375	34.71
	35MHz, 16QAM			32.350	34.73
	40MHz, BPSK	100/0		36.486	38.32
	40MHz, 16QAM			36.573	38.26
	45MHz, BPSK	108/0		38.830	41.43
	45MHz, 16QAM			38.787	41.54
	50MHz, BPSK	128/0		46.613	48.56
	50MHz, 16QAM			46.612	48.32
	60MHz, BPSK	162/0		59.032	61.26
	60MHz, 16QAM			58.887	61.09
	70MHz, BPSK	180/0		65.652	68.49
	70MHz, 16QAM			65.616	68.09
	80MHz, BPSK	216/0		78.513	81.38
	80MHz, 16QAM			78.606	81.42
	90MHz, BPSK	243/0		88.530	91.65
	90MHz, 16QAM			88.491	91.46
	100MHz, BPSK	270/0		98.390	101.9
	100MHz, 16QAM			98.171	101.5
	100MHz, BPSK	1/0		0.597	1.03

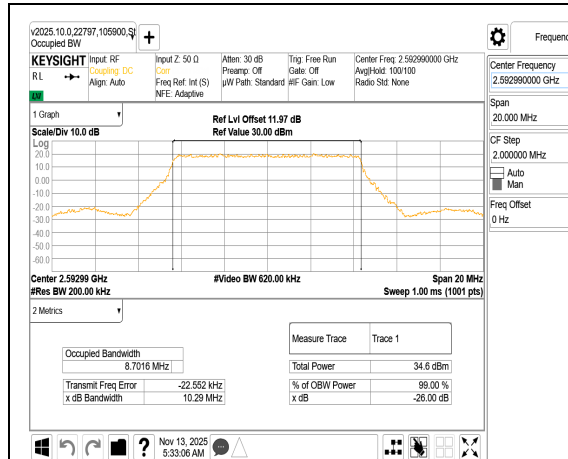
ULCA LTE BAND 41 (FCC)

Band	Mode	RB Allocation/RB Offset	f (MHz)	99% BW (MHz)	- 26dB BW (MHz)
ULCA LTE BAND 41 (FCC)	5MHz + 20MHz, QPSK	25/0 + 100/0	2593	23.417	26.77
	5MHz + 20MHz, 16QAM			23.399	25.73
	20MHz + 5MHz, QPSK	100/0 + 25/0		23.434	27.59
	20MHz + 5MHz, 16QAM			23.374	28.05
	10MHz + 20MHz, QPSK	50/0 + 100/0		28.166	31.57
	10MHz + 20MHz, 16QAM			28.119	32.37
	20MHz + 10MHz, QPSK	100/0 + 50/0		28.158	34.76
	20MHz + 10MHz, 16QAM			28.100	31.09
	15MHz + 15MHz, QPSK	75/0 + 75/0		28.773	32.32
	15MHz + 15MHz, 16QAM			28.704	33.34
	15MHz + 20MHz, QPSK	75/0 + 100/0		32.973	39.59
	15MHz + 20MHz, 16QAM			32.949	37.31
	20MHz + 15MHz, QPSK	100/0 + 75/0		32.968	37.69
	20MHz + 15MHz, 16QAM			32.943	37.35
	20MHz + 20MHz, QPSK	100/0 + 100/0		37.847	44.77
	20MHz + 20MHz, 16QAM			37.830	45.29

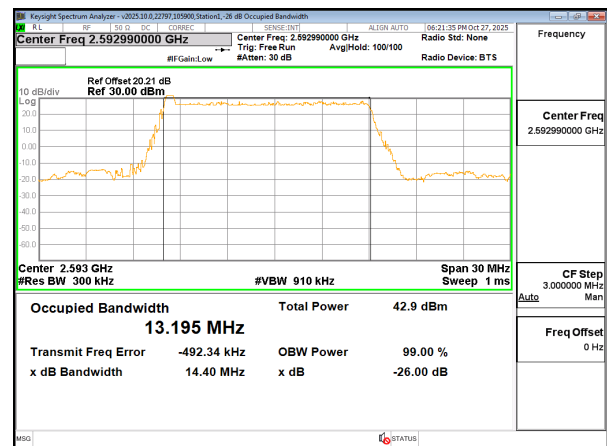
8.1.1. LTE BAND 41 (FCC)



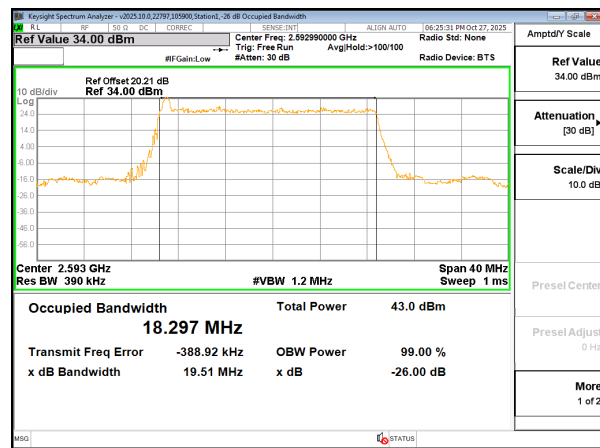
8.1.2. 5G NR n41 (FCC)



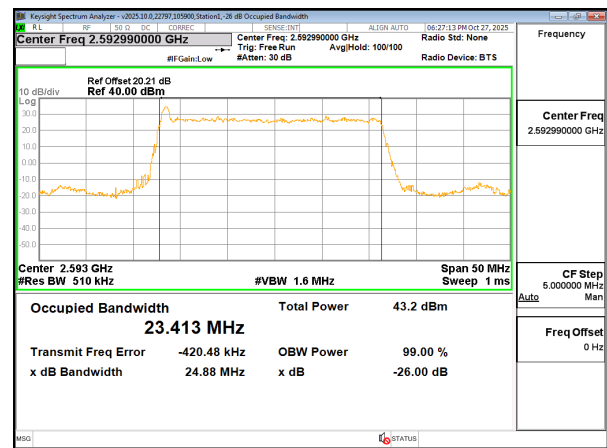
5G NR n41 10MHz BPSK Middle Channel RB24-0



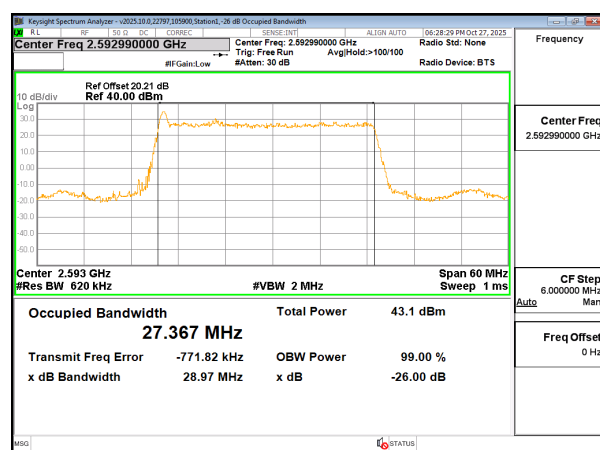
5G NR n41 15MHz BPSK Middle Channel RB36-0



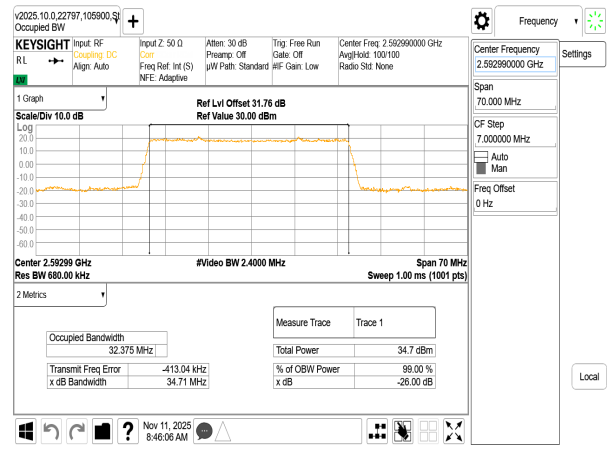
5G NR n41 20MHz BPSK Middle Channel RB50-0



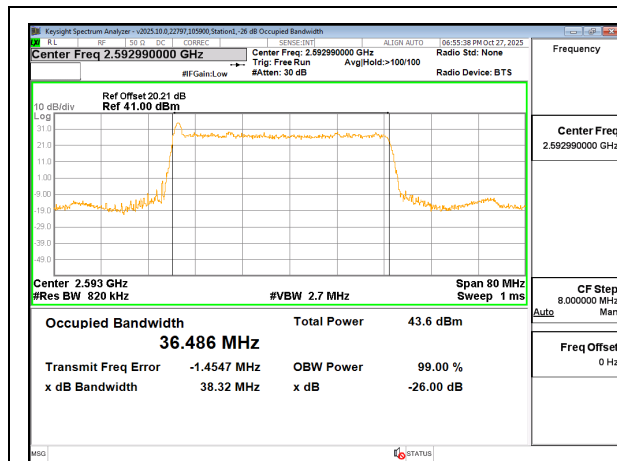
5G NR n41 25MHz BPSK Middle Channel RB64-0



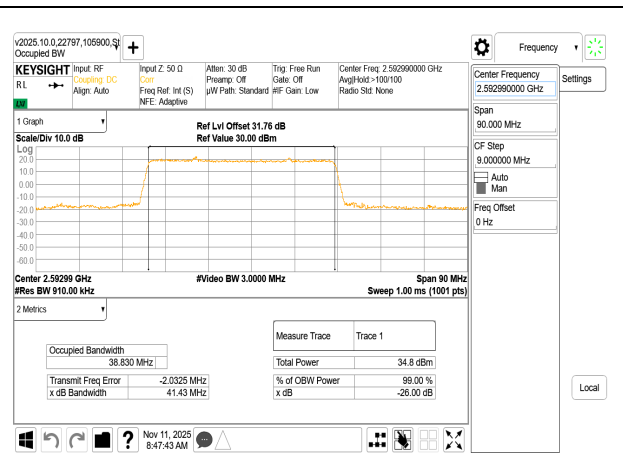
5G NR n41 30MHz BPSK Middle Channel RB75-0



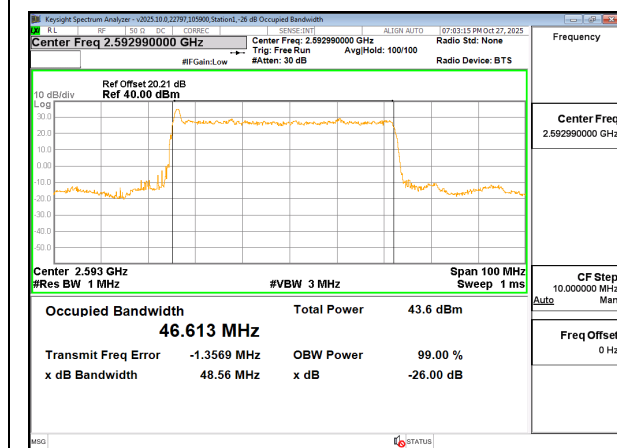
5G NR n41 35MHz BPSK Middle Channel RB90-0



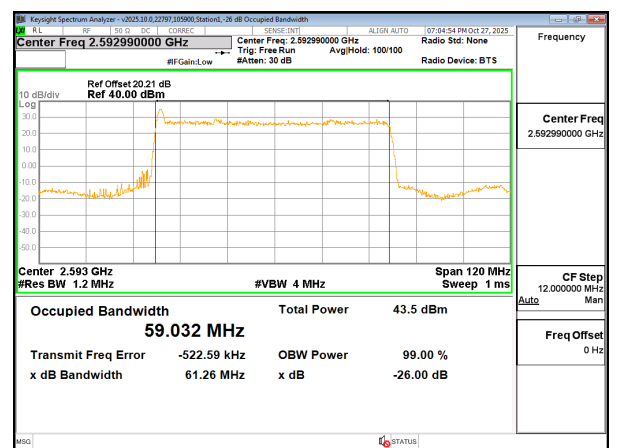
5G NR n41 40MHz BPSK Middle Channel RB100-0



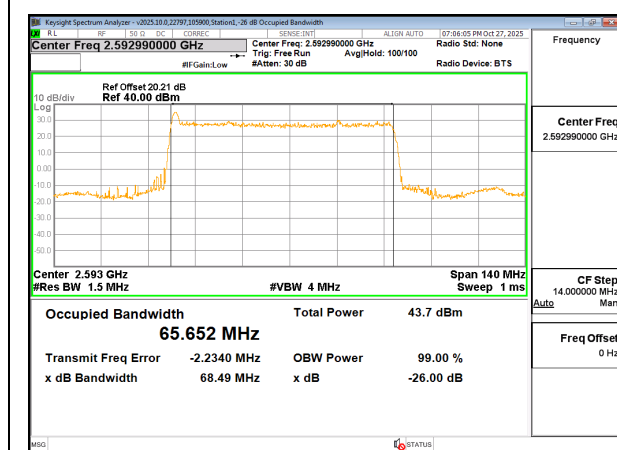
5G NR n41 45MHz BPSK Middle Channel RB108-0



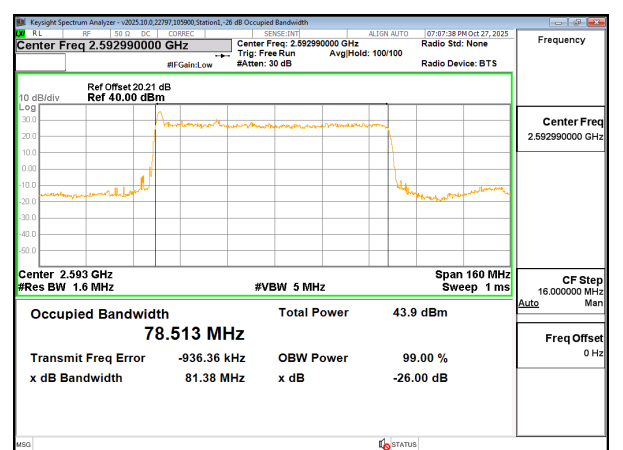
5G NR n41 50MHz BPSK Middle Channel RB128-0



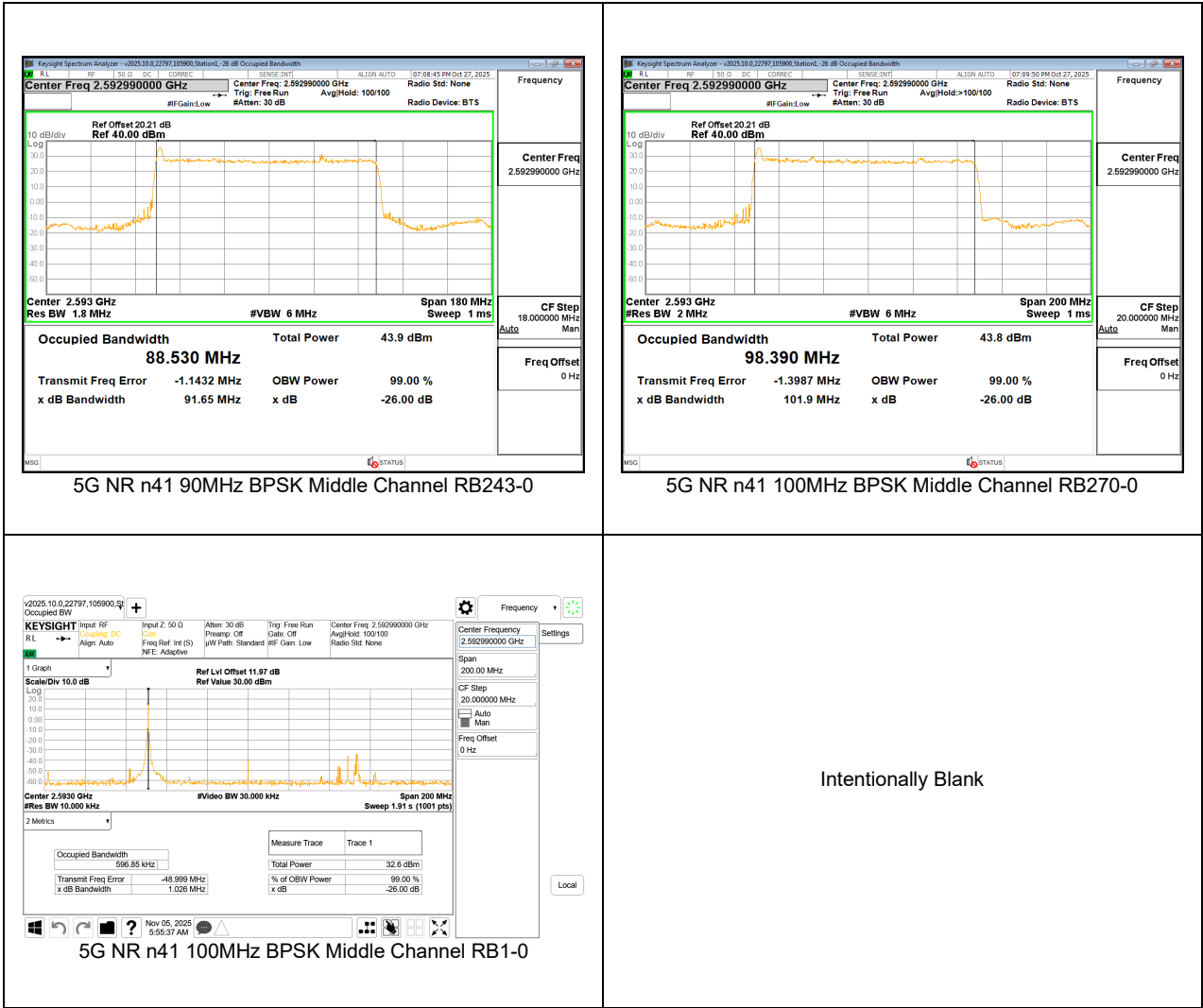
5G NR n41 60MHz BPSK Middle Channel RB162-0



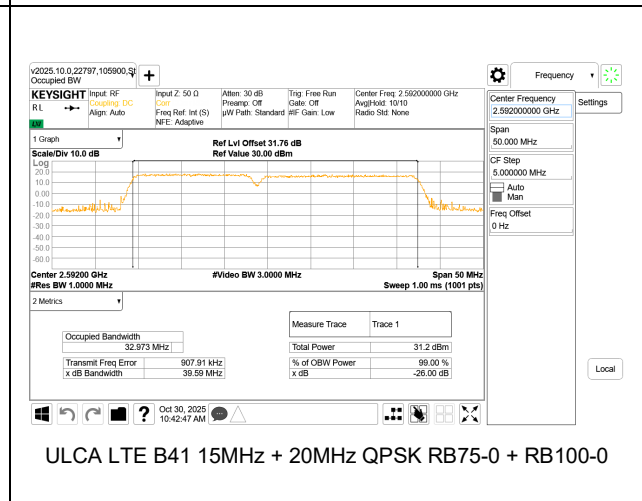
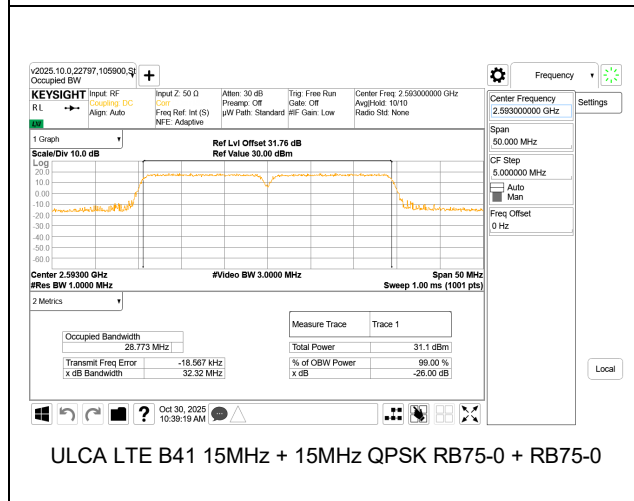
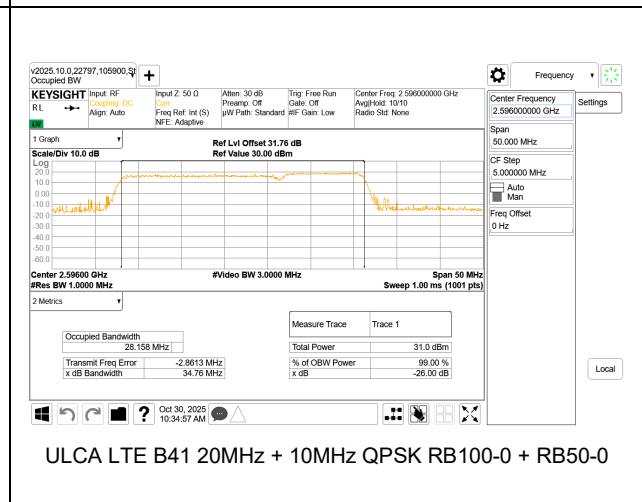
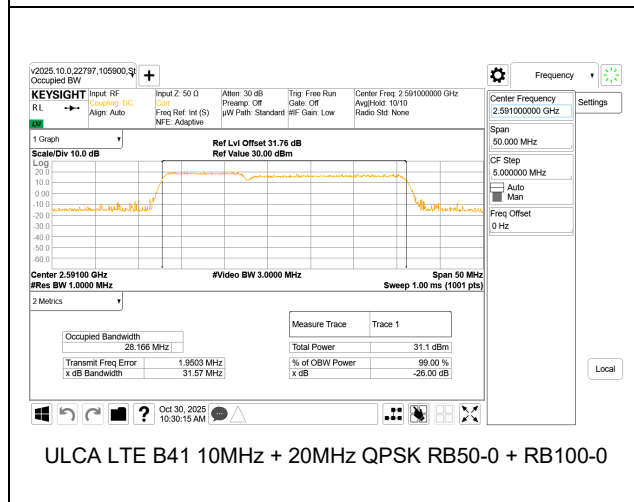
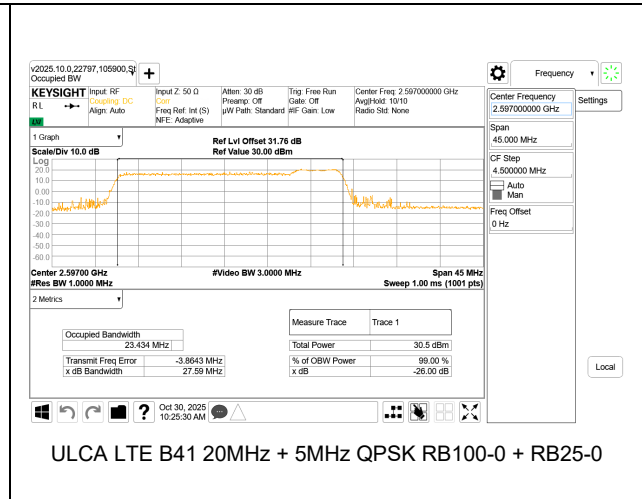
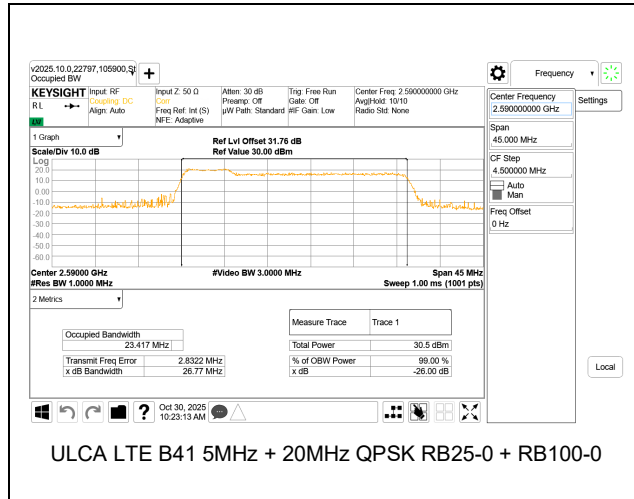
5G NR n41 70MHz BPSK Middle Channel RB180-0

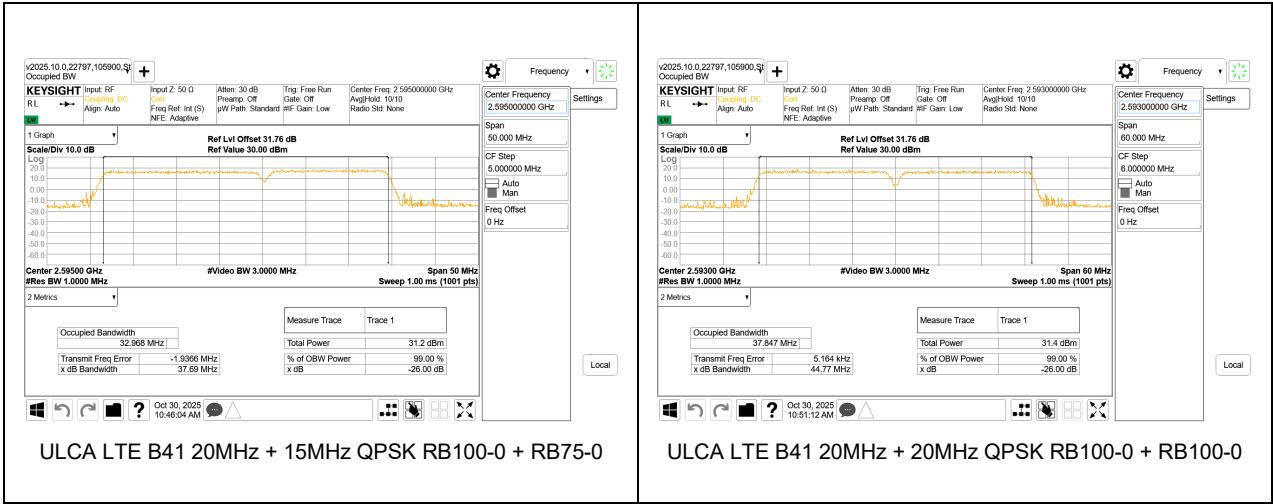


5G NR n41 80MHz BPSK Middle Channel RB216-0



8.1.3. ULCA LTE BAND 41 (FCC)





8.2. EMISSION MASK AND ADJACENT CHANNEL POWER

LIMITS

FCC: §27.53

(m)(4) For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

ISED: RSS199§5.6

For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors), where applicable, of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in the tables below.

Table 5: Unwanted emission limits for subscriber equipment other than fixed subscriber equipment	
Offset from the edge of the frequency block or frequency block group (MHz)	Unwanted emission limits
0-1	-10 dBm/(2% of OB*)
1-5	-10 dBm/MHz
5-X**	-13 dBm/MHz
≥ X	-25 dBm/MHz

*OB is the occupied bandwidth

** X is 6 MHz or the equipment occupied bandwidth, whichever is greater.

In addition to complying with the limits in table 5, subscriber equipment other than fixed subscriber equipment shall not exceed -13 dBm/MHz on all frequencies between 2490.5 MHz and 2496 MHz, and -25 dBm/MHz at or below 2490.5 MHz

TEST PROCEDURE

For Spectrum Emission Mask plots, the spectrum analyzer is configured to sweep with a moving integration window, the width of which can be adjusted to different sizes across the sweep. The window width is configured to be greater than or equal to the required reference bandwidth. The center frequencies of the integration window for the different integration windows was set such that the upper and lower edges of the windows are aligned with the transition points in the reference bandwidths. This is achieved by setting the start / stop frequencies of the window with an offset equal to the reference bandwidth / 2 from the transition point.

The transmitter output was connected to a base station simulator and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

For each band edge measurement:

1. Set the spectrum analyzer span to include the block edge frequency.
2. Set a marker to point the corresponding band edge frequency in each test case.
3. Set display line at -X dBm
4. Set resolution bandwidth to at least 1% of emission bandwidth.

TEST PROCEDURE FOR FCC PART 27

(m)(6) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. 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; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

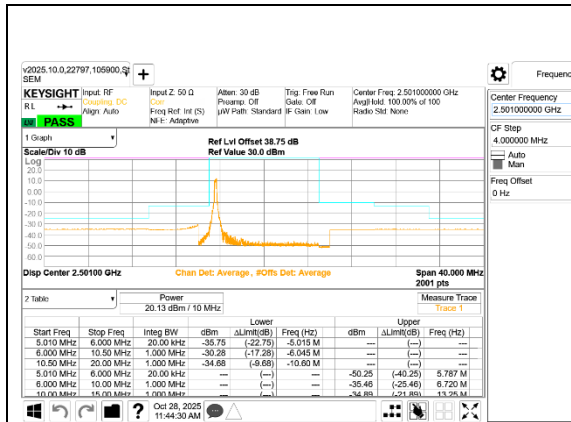
TEST PROCEDURE FOR RSS-199

In the 1 MHz band immediately outside and adjacent to the frequency block group, the power shall be measured with a resolution bandwidth of at least 1% of the occupied bandwidth for fixed stations, base stations, and fixed subscriber equipment, and 2% for subscriber equipment other than fixed subscriber equipment. Beyond this 1 MHz band, a resolution bandwidth of 1 MHz shall be used. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz, or 1% or 2% of the occupied bandwidth, as applicable.

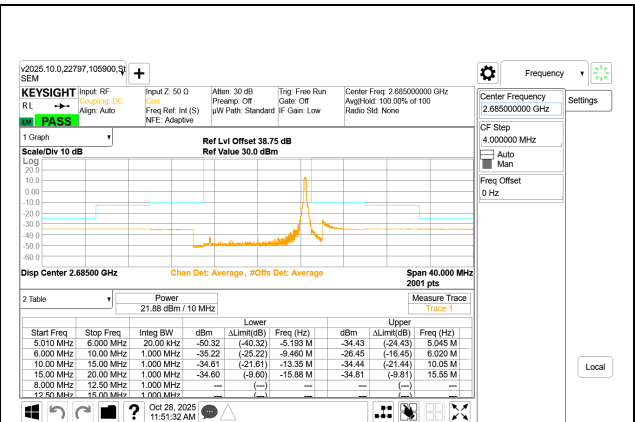
RESULTS

8.2.1. LTE BAND 41 (FCC)

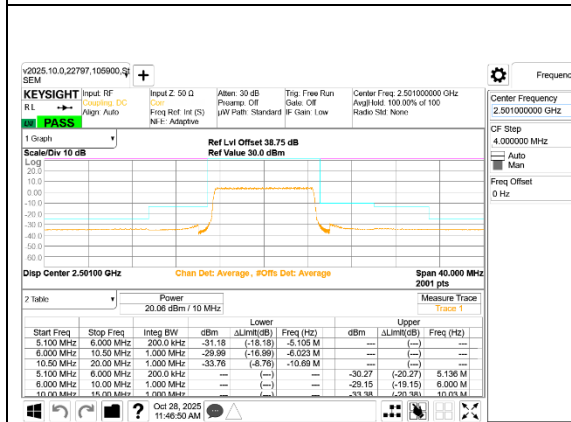




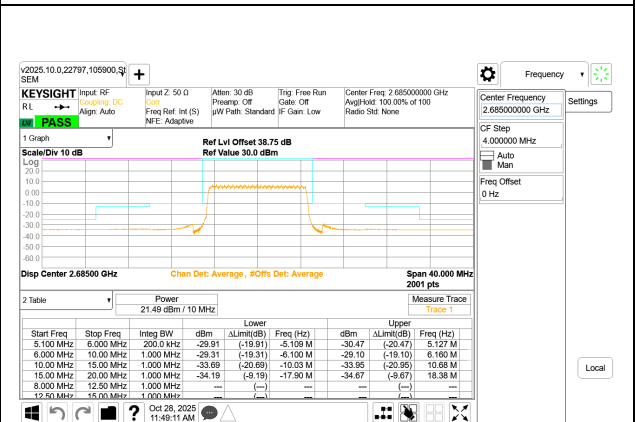
LTE B41 10MHz QPSK Low Channel RB1-0



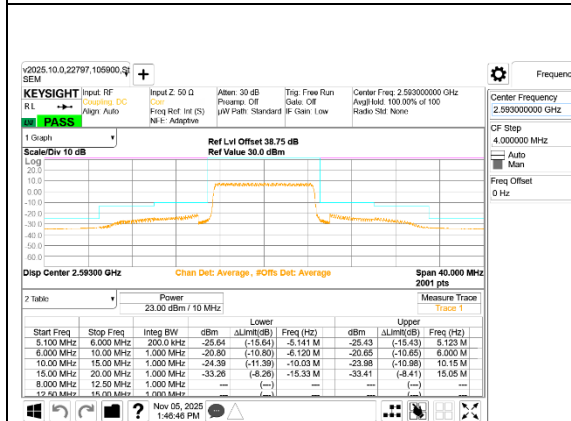
LTE B41 10MHz QPSK High Channel RB1-49



LTE B41 10MHz QPSK Low Channel RB50-0



LTE B41 10MHz QPSK High Channel RB50-0



LTE B41 10MHz QPSK Middle Channel RB50-0

Intentionally Blank





8.2.2. 5G NR n41 (FCC)

