

TEST REPORT

Report Number: R15980274-E21

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

Model : SM-S942U, SM-S942U1

FCC ID : A3LSMS942U

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

Test Standard(s) : FCC 47 CFR PART 2, PART 90, PART 25
ISED RSS-GEN ISSUE 5 + A1 + A2, RSS-140 ISSUE 1

Date Of Issue:
2025-12-15

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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2025-11-26	Initial Release	Noah Bennett
V2	2025-12-15	Various Typos resolved. Updated 6.2 & 9.1 EIRP	Noah Bennett

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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/SCS/NTN Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax/
be, WPT and NFC

SERIAL NUMBERS: YHI0909M, YHK0046M, YHK0177M

SAMPLE RECEIVE DATE: 2025-09-11

DATE TESTED: 2025-09-11 to 2025-12-10

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47 CFR PART 2, PART 22H, PART 24E, PART 27, PART 25 ISED RSS-GEN ISSUE 5 + A1 + A2, RSS132 ISSUE 4, RSS-133 ISSUE 7, RSS- 139 ISSUE 4	Complies

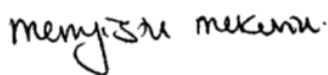
UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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
Effective Radiated Power	90.541 (d)	RSS140§4.3	Complies	
Occupied Bandwidth	2.1049	RSS-GEN§6.7, RSS140	Complies	
Band Edge and Emission Mask	2.1051, 90.543 (e)(f)	RSS140§4.4	Complies	
Out of Band Emissions	2.1051, 90.543 (e)(f)	RSS140§4.4	Complies	
Frequency Stability	2.1055, 90.539	RSS140§4.2	Complies	
Peak-to-Average Ratio	-	RSS140§4.3	Complies	
Field Strength of Spurious Radiation	2.1053, 90.543 (e)(f)	RSS140§4.4	Complies	

SUPPLEMENTAL COVERAGE FROM SPACE (SCS)

Under section § 25.109 (f) of the FCC rules Space and SCS earth stations providing SCS are subject to technical rules in parts 2, 22, 24, and 27 of this chapter based on the operating frequency band. Section § 25.204 (g) specifies that earth stations providing SCS pursuant to §§ 25.125 and 25.115 shall comply with the power requirements and out-of-band emission limits corresponding to devices operating in parts 22, 24, or 27 of this chapter (e.g., §§ 22.913, 24.232, 27.50), as required for their operating frequencies. We have clarified through KDB inquiry that the technical requirements from Part 90R should be applied for SCS operations in the 700 MHz Public Safety Band.

The table below identifies the SCS frequencies available for use and, for each band, the applicable FCC Part 22, 24, 27, and 90R technical requirements, the air interfaces supported by the device for SCS use.

The bands available for SCS and the bands supported by the devices in the scope of this report are:

Band	Frequency		Part 22/24/27/90 Rule parts	3GPP Band	Supported	Applicable to This Report
	DL (MHz)	UL (MHz)				
600 MHz	614 – 652	663 – 698	27.5 (c) 27.50 (c) 27.53 (g)	71/n71	Yes	No
700 MHz	729 – 746	699 – 716	27.5 (c) 27.50 (c) 27.53 (g)	12/n12 17	Yes	No
	746 – 756	777 – 787	27.5 (b) 27.50 (b) 27.53 (f)	13/n13	Yes	No
	758 – 769	788 – 799	90R ^{Note 1}	14 / n14	Yes	Yes
	805 – 806				No	No
800 MHz	869 – 894	824 – 849	22H	WCDMA 5 5/n5 26/n26	Yes	No
Broadband PCS	1930 – 1995	1850 – 1915	24E	WCDMA 2 2/n2 25/n25	Yes	No
Note 1: Clarified through KDB inquiry that the technical requirements from Part 90R should be applied for SCS operations in the 700 MHz Public Safety Band.						

3. TEST METHODOLOGY

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 90, Part 25
- [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
- [FCC KDB 273109 D02](#): Part 25 SCS and CMRS-Bands
- ISED RSS-Gen Issue 5 + A1 + A2, RSS-140 Issue 1

4. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, Certificate Number 0751.06, 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)
 $36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

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 Band14 & 5G NR n14	E	A

6.1.1. MAXIMUM OUTPUT POWER

EIRP/ERP TEST PROCEDURE

ANSI C63.26:2015
KDB 971168 D01 Section 5.6

$$ERP/EIRP = P_{Meas} + GT - LC$$

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

P_{Meas} = 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.

EUT includes different power levels for head use configuration and body use configuration and the tables below contain the highest of all configurations average conducted and peak ERP output powers as follows:

LTE BAND 14, CONFIG 0

Part 90R / RSS 140								
ERP Limit (W)		3.00						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	ERP Average (dBm)	ERP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
10.0	QPSK	793.0	793.0	19.63	0.092	8.9900	8990.0	8M99G7W
	16QAM			19.38	0.087	8.9867	8986.7	8M99D7W

LTE BAND 14, CONFIG 1

Part 90R / RSS 140								
ERP Limit (W)		3.00						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	ERP Average (dBm)	ERP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
10.0	QPSK	793.0	793.0	16.60	0.046	8.9900	8990.0	8M99G7W
	16QAM			13.59	0.023	8.9867	8986.7	8M99D7W

5G NR n14, CONFIG 0

Part 90R / RSS 140								
ERP Limit (W)		3.00						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	ERP Average (dBm)	ERP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
10.0	BPSK	793.0	793.0	19.16	0.082	8.9900	8990.0	8M99G7W
	16QAM			18.17	0.066	8.9867	8986.7	8M99D7W

5G NR n14, CONFIG 1

Part 90R / RSS 140								
ERP Limit (W)		3.00						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	ERP Average (dBm)	ERP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
10.0	BPSK	793.0	793.0	16.49	0.045	9.0065	9006.5	9M01G7W
	16QAM			15.31	0.034	9.0248	9024.8	9M02D7W

6.2. MAXIMUM ANTENNA GAIN

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

Frequency Band	ANT E Antenna Gain (dBi)	ANT A Antenna Gain (dBi)
LTE Band 14 / 5G NR n14 788 – 798 MHz	-3.1	-4.3

6.3. WORST-CASE CONFIGURATION AND MODE

This report covers the following technologies:

- LTE Band 14, 5G NR n14

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 conducted average output power provided by the manufacturer, and 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 14, 5G NR n14	Ant A

The EUT was investigated in three orthogonal orientations X/Y/Z on all available 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 shown in the table below.

Frequency Range	ANTE	ANTA
663 – 849 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.

Representative Model	Difference	Derivative Model
		SM-S942U1
SM-S942U	Hardware	Same as SM-S942U
	Software	Different UI

6.4. 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 LTE and 5G NR testing

SETUP DIAGRAM

Please see R15980274-EP1 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 2)

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
	1-18 GHz				
88761	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2023-10-05	2025-10-05
	Gain-Loss Chains				
91977	Gain-loss string: 1-18GHz	Various	Various	2025-05-31	2026-05-31
	Receiver & Software				
206496	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-07-29	2026-07-29
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Additional Equipment used				
239540	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05
213025	Wideband Radio Communications Tester	Rohde and Schwarz	CMW500	2025-01-14	2026-01-14
169106 (BRF008)	1710-1785MHz notch filter, 2W, Fhigh = 9GHz	Micro-Tronics	BRM50713-01	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
231408 (BRF011)	2.495-2.690GHz notch filter, 2W, Fhigh = 18GHz	Micro-Tronics	BRM50709-01	2025-03-13	2026-03-13
169109 (BRF012)	3.4-3.8GHz notch filter, 2W, Fhigh = 18GHz	Micro-Tronics	BRM50711-01	2025-03-13	2026-03-13
82635 (HPF009)	1GHz high-pass filter, 2W, Fhigh =10GHz	Micro-Tronics	HPM17672	2025-03-13	2026-03-13

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

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	1-18 GHz				
135143	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2024-02-07	2026-02-07
	Gain-Loss Chains				
91979	Gain-loss string: 1-18GHz	Various	Various	2025-05-31	2026-05-31
	Receiver & Software				
197955	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-05-12	2026-05-12
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
213025	Wideband Radio Communications Tester	Rohde and Schwarz	CMW500	2025-01-14	2026-01-14
169108 (BRF010)	1.85-1.97GHz notch filter, 2W, Fhigh = 9GHz	Micro-Tronics	BRM50714-01	2025-03-13	2026-03-13
82635 (HPF009)	1GHz high-pass filter, 2W, Fhigh =10GHz	Micro-Tronics	HPM17672	2025-03-13	2026-03-13

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

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
	30-1000 MHz				
90628	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-01-02	2026-01-02
	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				
207639	Gain-loss string: 25-1000MHz	Various	Various	2025-06-13	2026-06-13
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
213025	Wideband Radio Communications Tester	Rohde and Schwarz	CMW500	2025-01-14	2026-01-14
212167	Wideband Radio Communications Tester	Anritsu	MT8821C	2023-06-05	2024-06-05
	Substitution Meas. Equip				
CBL252986-002	SMA cable	Huber+Suhner	Sucoflex 104A	2025-09-16	2026-09-16
8923	Dipole Antenna	EMCO	3121C-DB-4	N/A	
86408	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2025-07-15	2026-07-15
196940	6dB, DC-18GHz, 5W	Mini-Circuits	BW-N6W5	N/A	
92309	Signal Generator	Keysight	83640B	N/A	

Wireless Conducted Measurement Equipment.

Equip. 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
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

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

Equip. 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:

1. * Testing is completed before equipment expiration date.
2. **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: RSS140

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 was 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.

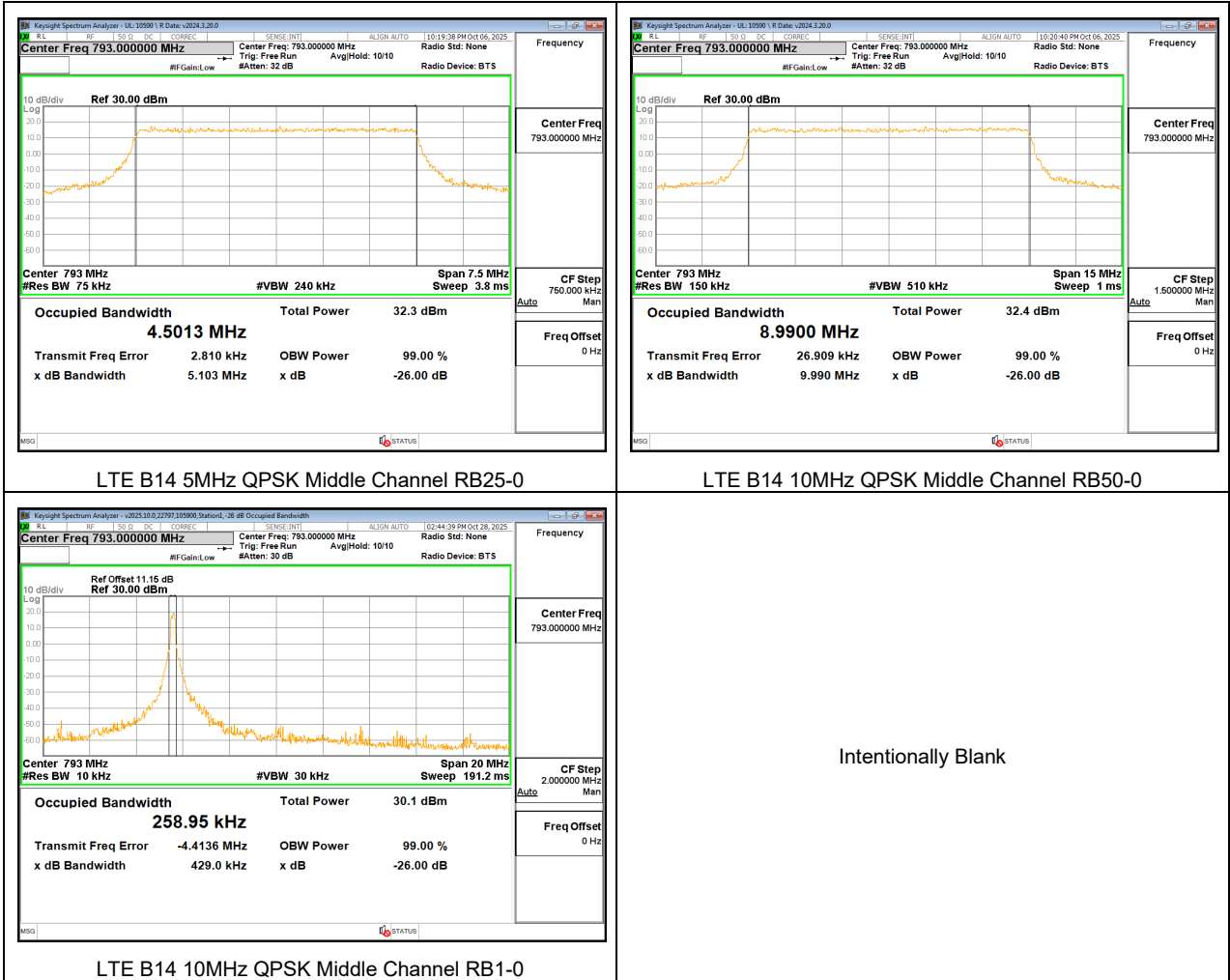
LTE BAND 14

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 14	5MHz, QPSK	25/0	793.0	4.5013	5.103
	5MHz, 16QAM			4.4950	5.107
	10MHz, QPSK	50/0		8.9900	9.990
	10MHz, 16QAM			8.9867	10.000
	10MHz, QPSK	1/0		0.2590	0.429

5G NR n14

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
5G NR n14	5MHz, BPSK	25/0	793.0	4.5185	5.266
	5MHz, 16QAM			4.5149	5.187
	10MHz, BPSK	50/0		9.0065	9.896
	10MHz, 16QAM			9.0248	9.947
	10MHz, BPSK	1/1		1.1112	1.587

8.1.1. LTE BAND 14



8.1.2. 5G NR n14



8.2. EMISSION MASK AND ADJACENT CHANNEL POWER

LIMITS

FCC: §90.543 Emission Limitations.

(e) For operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(2) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations.

(3) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log (P)$ dB.

(4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

(5) Compliance with the provisions of paragraph (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 kHz may be employed.

(f) For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

The RSS-140 the limit of -35 dBm / 6.25 kHz is extended out to 806 MHz. The FCC Part 90 limit from 805 MHz to 806 MHz is -13 dBm measured in 100kHz. The 6.25kHz measurement is a more stringent limit (equivalent to -25 dBm / 100kHz) and therefore demonstrates compliance with both limits.

ISED: RSS140§4.4

The power of any unwanted emission outside the bands 758-768 MHz and 788-798 MHz shall be attenuated below the transmitter output power P in dBW as follows, where p is the transmitter output power in watts:

- a. For any frequency between 769-775 MHz and 799-806 MHz:
 - i. $76 + 10 \log (p)$, dB in a 6.25 kHz band for fixed and base station equipment
 - ii. $65 + 10 \log (p)$, dB in a 6.25 kHz band for mobile and portable/hand-held equipment
- b. For any frequency between 775-788 MHz, above 806 MHz, and below 758 MHz: $43 + 10 \log (p)$, dB in a bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency bands 758-768 MHz and 788-798 MHz, a resolution bandwidth of 30 kHz may be employed.

In addition, the equivalent isotropically radiated power (e.i.r.p.) of all emissions, including harmonics in the band 1559-1610 MHz, shall not exceed -70 dBW/MHz for wideband emissions, and -80 dBW/kHz for discrete emissions of less than 700 Hz bandwidth.

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 required limit.
4. Set resolution bandwidth to at least 1% of emission bandwidth.

TEST PROCEDURE (BAND 14)

(b)ACP measurement procedure. The following are the procedures for making the transmitter ACP measurements. For all measurements modulate the transmitter as it would be modulated in normal operating conditions. For time division multiple access (TDMA) systems, the measurements are to be made under TDMA operation only during time slots when the transmitter is active. All measurements are made at the transmitter's output port. If a transmitter has an integral antenna, a suitable power coupling device shall be used to couple the RF signal to the measurement instrument. The coupling device shall substantially maintain the proper transmitter load impedance. The ACP measurements may be made with a spectrum analyzer capable of making direct ACP measurements. "Measurement bandwidth", as used for non-swept measurements, implies an instrument that measures the power in many narrow bandwidths equal to the nominal resolution bandwidth and integrates these powers to determine the total power in the specified measurement bandwidth.

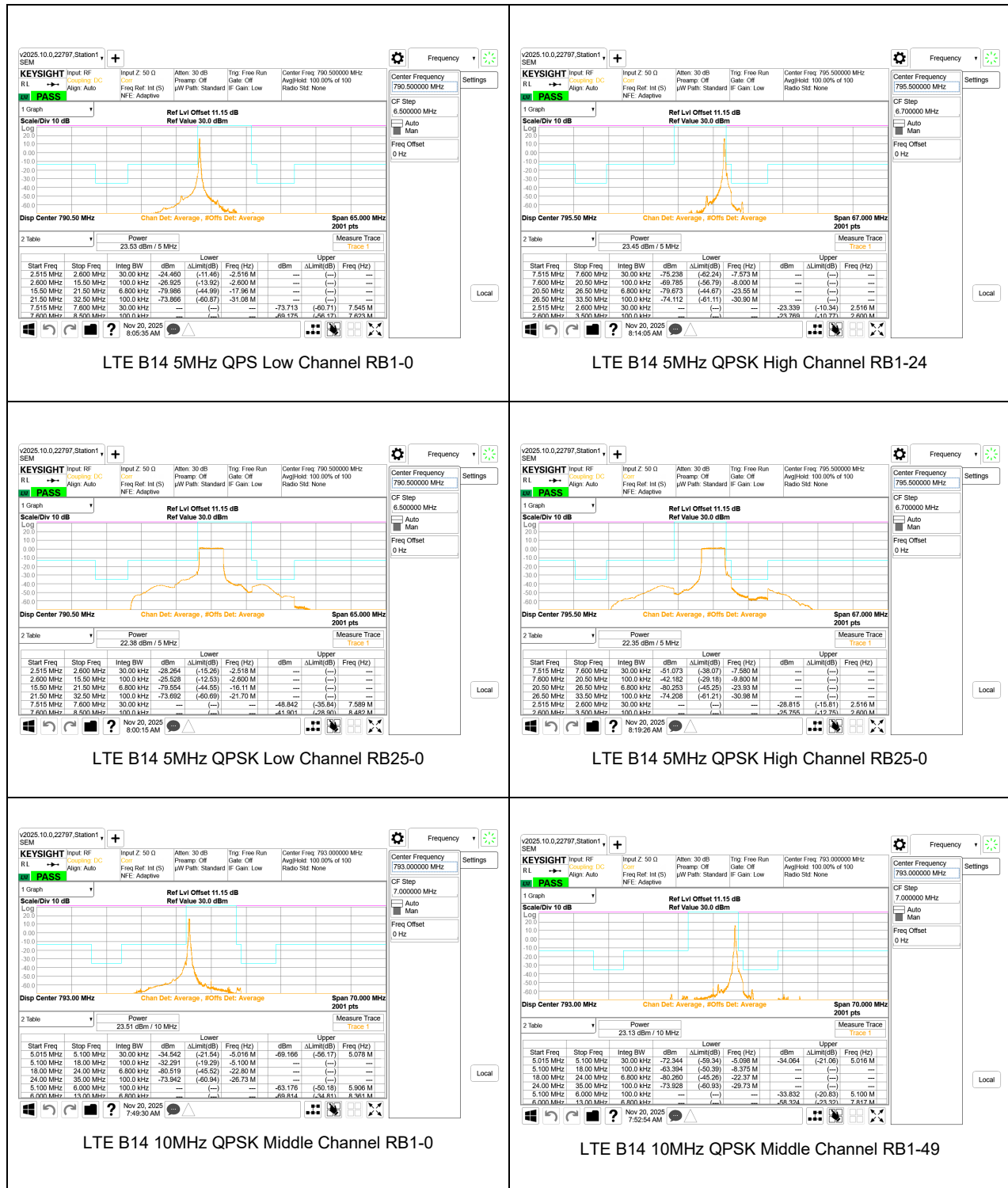
(1)Setting reference level. Set transmitter to maximum output power. Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth to the channel size. For example, for a 6.25 kHz transmitter set the measurement bandwidth to 6.25 kHz. Set the frequency offset of the measurement bandwidth to zero and adjust the center frequency of the instrument to the assigned center frequency to measure the average power level of the transmitter. Record this power level in dBm as the "reference power level."

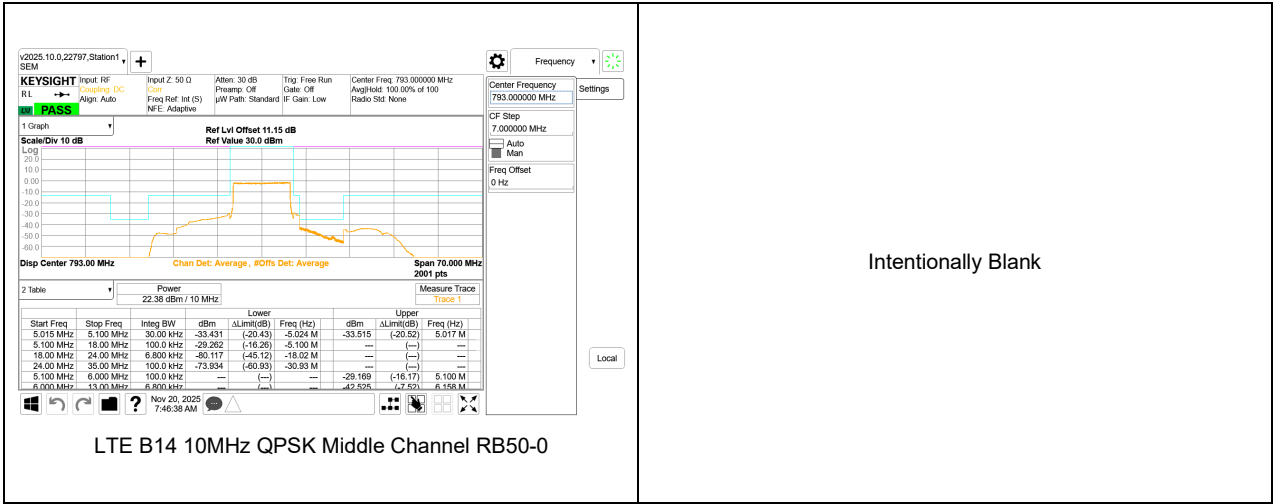
(2)Non-swept power measurement. Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth and frequency offset from the assigned center frequency as shown in the tables in §90.543 (a) above. Any value of resolution bandwidth may be used as long as it does not exceed 2 percent of the specified measurement bandwidth. Measure the power level in dBm. These measurements should be made at maximum power. Calculate ACP by subtracting the reference power level measured in (b)(1) from the measurements made in this step. The absolute value of the calculated ACP must be greater than or equal to the absolute value of the ACP given in the table for each condition above.

(3)Swept power measurement. Set a spectrum analyzer to 30 kHz resolution bandwidth, 1 MHz video bandwidth and average, sample, or RMS detection. Set the reference level of the spectrum analyzer to the RMS value of the transmitter power. Sweep above and below the carrier frequency to the limits defined in the tables. Calculate ACP by subtracting the reference power level measured in (b)(1) from the measurements made in this step. The absolute value of the calculated ACP must be greater than or equal to the absolute value of the ACP given in the table for each condition above.

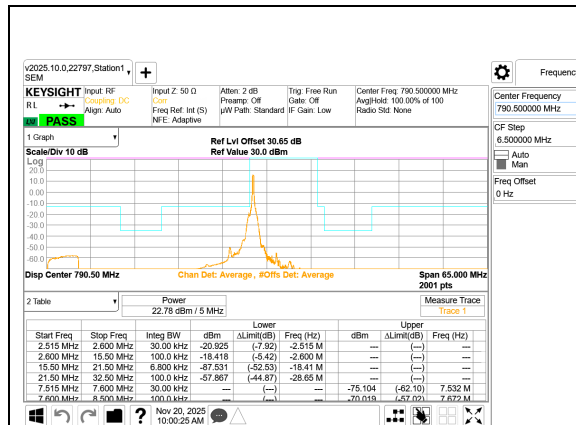
RESULTS

8.2.1. LTE BAND 14

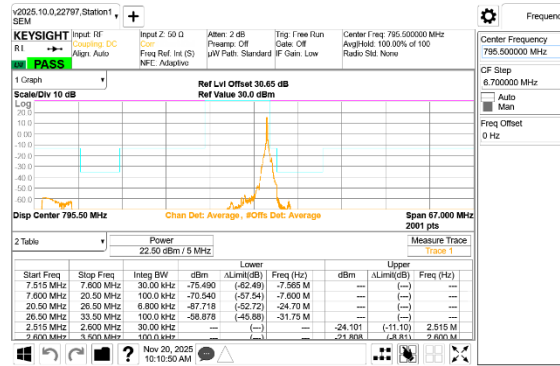




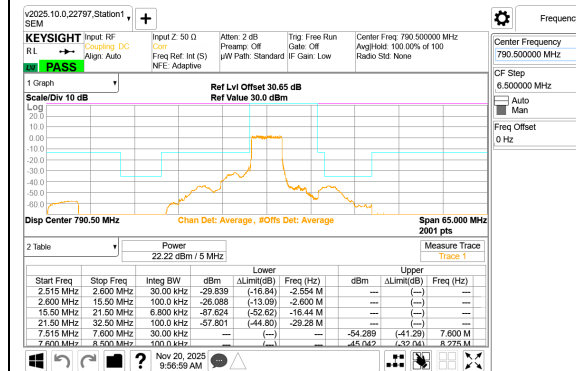
8.2.2. 5G NR n14



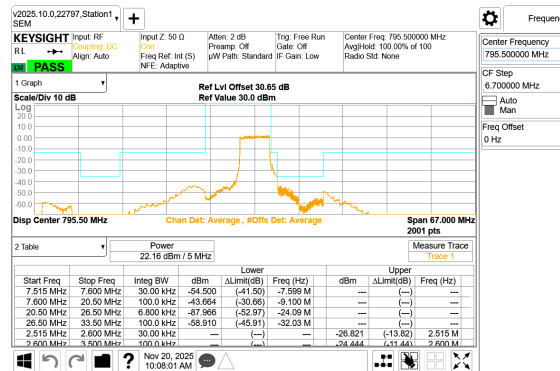
5G NR n14 5MHz BPSK Low Channel RB1-1



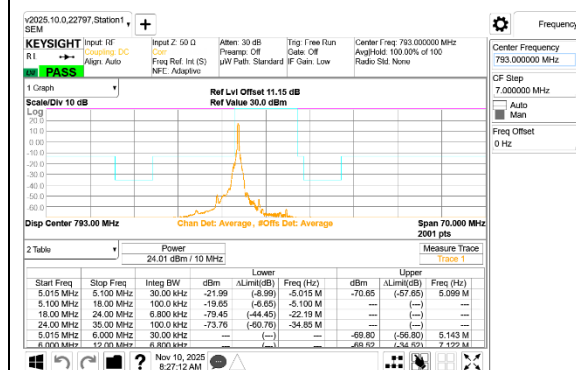
5G NR n14 5MHz BPSK High Channel RB1-23



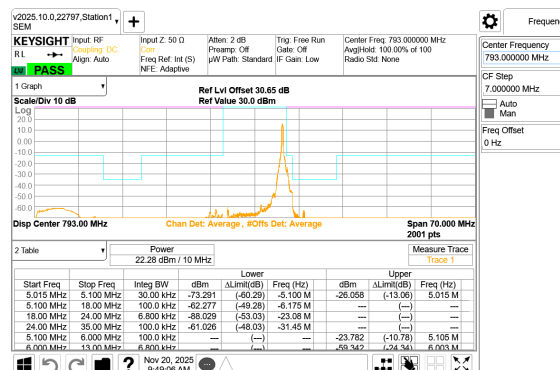
5G NR n14 5MHz BPSK Low Channel RB25-0



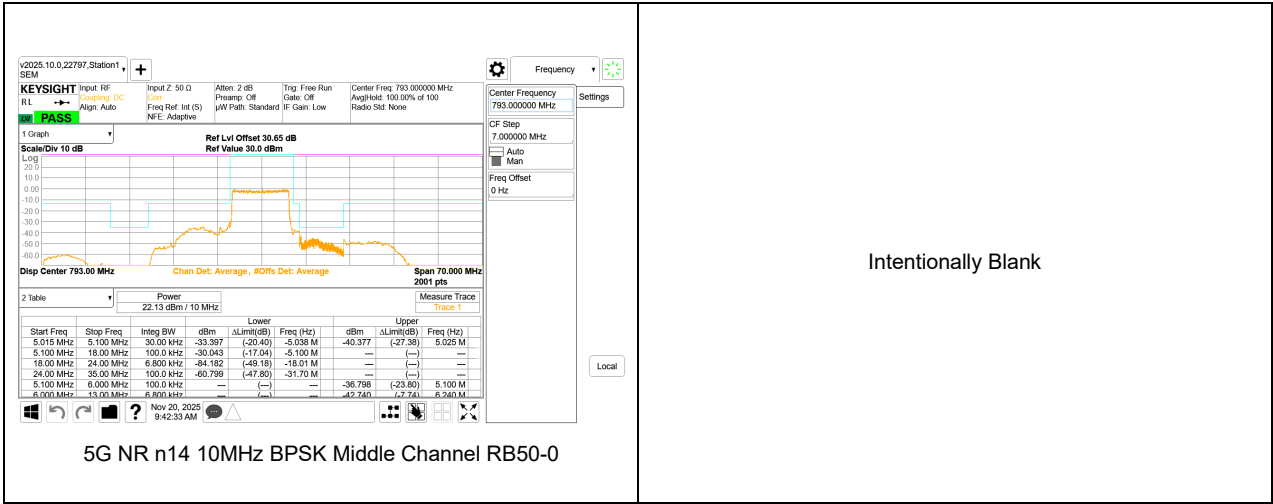
5G NR n14 5MHz BPSK High Channel RB25-0



5G NR n14 10MHz BPSK Middle Channel RB1-1



5G NR n14 10MHz BPSK Middle Channel RB1-50



8.3. OUT OF BAND EMISSIONS

LIMITS

FCC: §90.543 (e), (f)

The minimum permissible attenuation level of any spurious emissions is $43 + 10 \log (P)$ dB where transmitting power (P) in Watts. The band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

Note: Radiated data in section 9.2 confirms a compliance for the emissions in GPS 1559-1610 MHz band were wideband emissions therefore the -40dBm/MHz limit was used.

ISED: RSS140§4.4

The minimum permissible attenuation level of any spurious emissions is $43 + 10 \log (P)$ dB where transmitting power (P) in Watts.

The power of any unwanted emission outside the bands 758-768 MHz and 788-798 MHz shall be attenuated below the transmitter output power P in dBW as follows, where p is the transmitter output power in watts:

- a. For any frequency between 769-775 MHz and 799-806 MHz:
 - i. $76 + 10 \log (p)$, dB in a 6.25 kHz band for fixed and base station equipment
 - ii. $65 + 10 \log (p)$, dB in a 6.25 kHz band for mobile and portable/hand-held equipment
- b. For any frequency between 775-788 MHz, above 806 MHz, and below 758 MHz: $43 + 10 \log (p)$, dB in a bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency bands 758-768 MHz and 788-798 MHz, a resolution bandwidth of 30 kHz may be employed.

In addition, the equivalent isotropically radiated power (e.i.r.p.) of all emissions, including harmonics in the band 1559-1610 MHz, shall not exceed -70 dBW/MHz for wideband emissions, and -80 dBW/kHz for discrete emissions of less than 700 Hz bandwidth.

Note: Radiated data in section 9.2 confirms a compliance for the emissions in GPS 1559-1610 MHz band were wideband emissions therefore the -40dBm/MHz limit was used.

TEST PROCEDURE

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

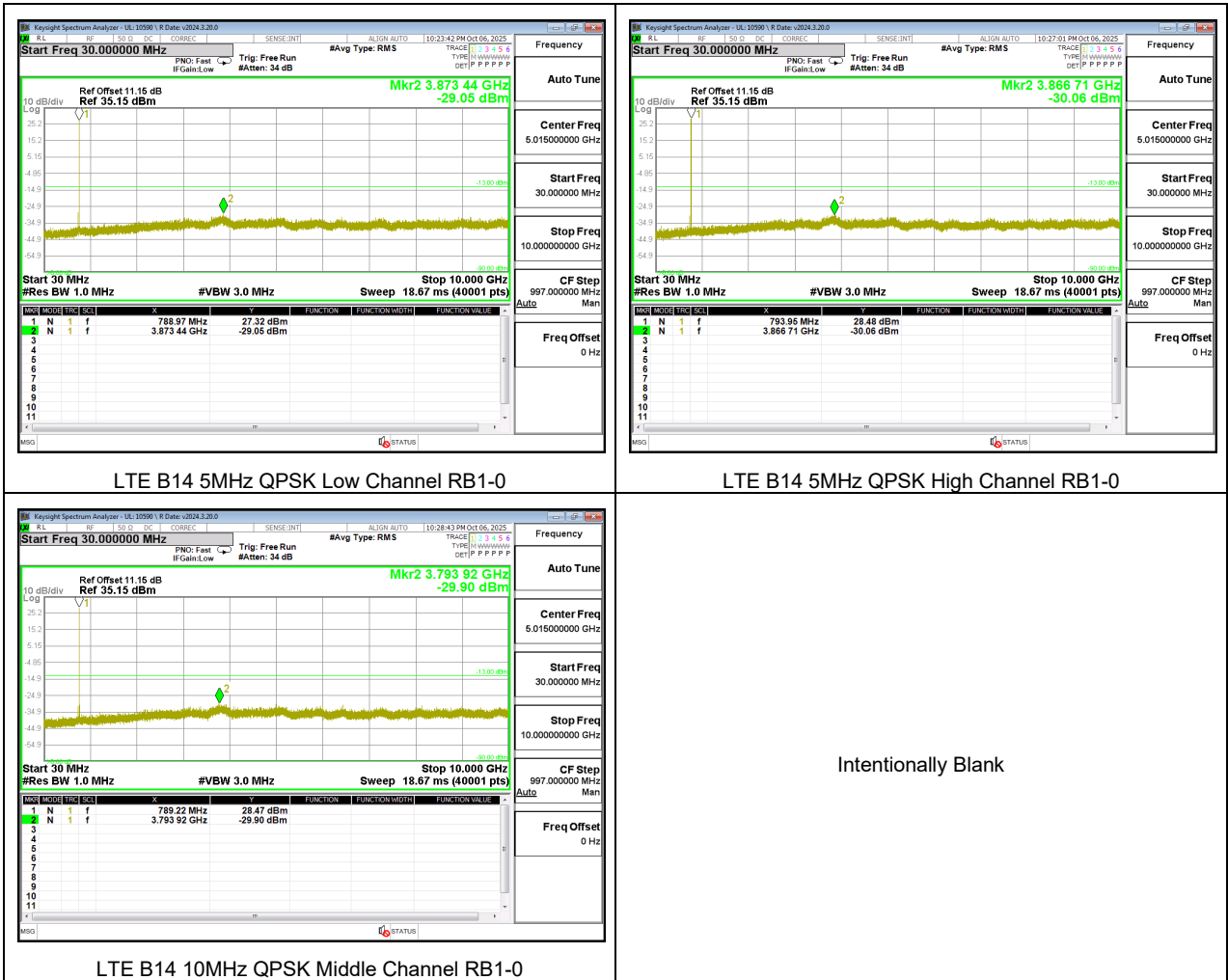
For each out of band emissions measurement:

- Set display line at required limit.
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.
(NOTE: Worst case set RBW/VBW to 1MHz/3MHz)

RESULTS

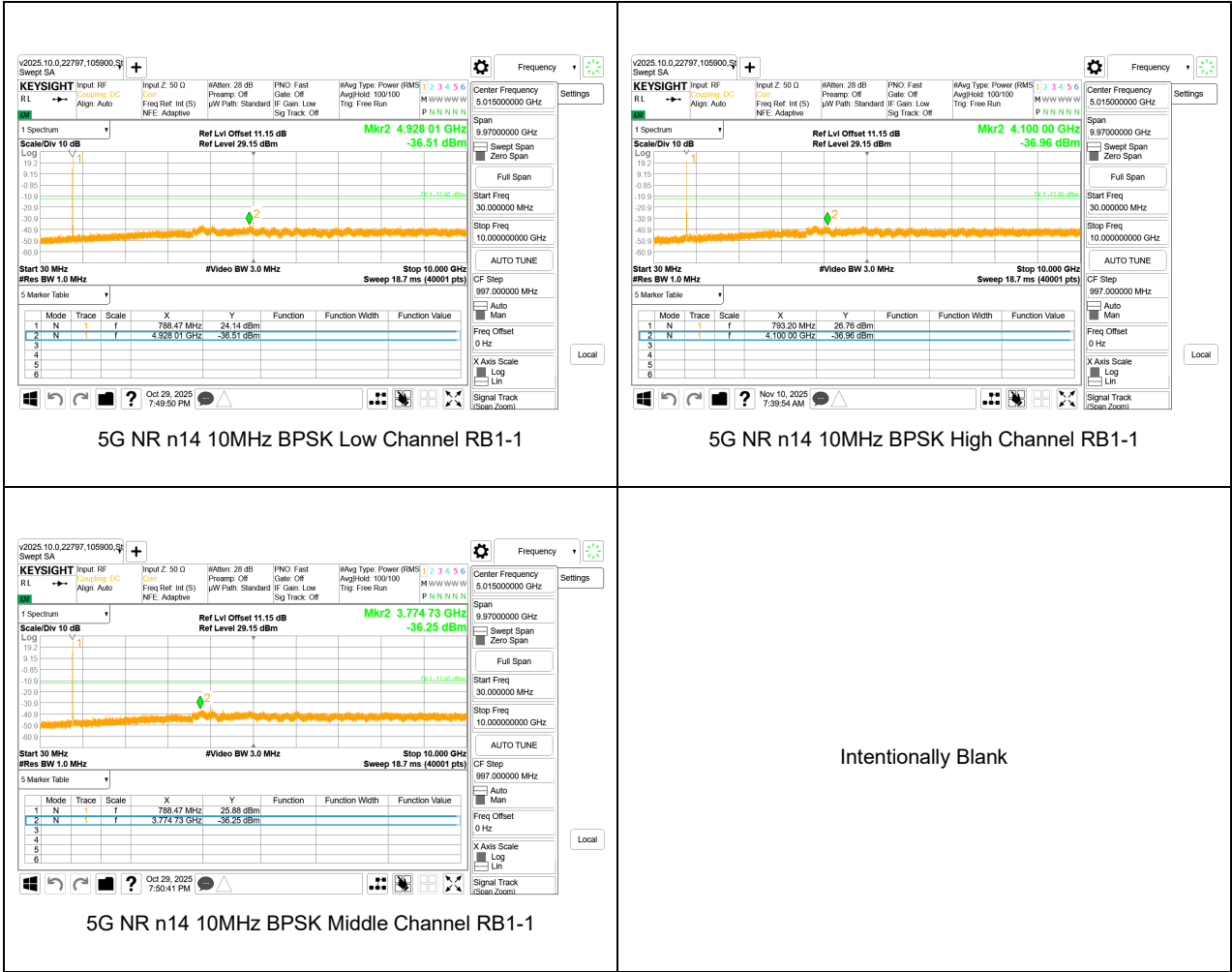
See the following pages.

8.3.1. LTE BAND 14



Note: Radiated data in section 9.2.1 confirms a compliance with narrowband limits for GPS1559-1610 MHz band.

8.3.2. 5G NR n14



Note: Radiated data in section 9.2.2 confirms compliance with narrowband limits for GPS1559-1610 MHz band.

8.4. FREQUENCY STABILITY

LIMITS

FCC: §90.539

(e) The frequency stability of mobile, portable and control transmitters operating in the wideband segment must be 1.25 ppm or better when AFC is locked to a base station, and 5 ppm or better when AFC is not locked.

ISED: RSS140§4.2

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within the operating frequency block when tested to the temperature and supply voltage variations specified in RSS-Gen.

TEST PROCEDURE

Use base station simulator with Frequency Error measurement capability.

- Temp. = -30°C to +50°C
- Voltage = (85% - 100%)

Normal, 3.89VDC

End Voltage, 3.69VDC.

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50°C is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

RESULTS

See the following pages.

8.4.1. LTE BAND 14 (QPSK 10MHz BANDWIDTH)

Test Engineer ID:	105900;22797	Test Date:	2025-10-15
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Band	14	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		788	798			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	788.4100	797.5925			
Extreme (50°C)		788.4100	797.5925	3.8	0.005	Yes
Extreme (40°C)		788.4100	797.5925	4.0	0.005	Yes
Extreme (30°C)		788.4100	797.5925	3.4	0.004	Yes
Extreme (10°C)		788.4100	797.5925	3.6	0.005	Yes
Extreme (0°C)		788.4100	797.5925	4.4	0.006	Yes
Extreme (-10°C)		788.4100	797.5925	2.9	0.004	Yes
Extreme (-20°C)		788.4100	797.5925	5.5	0.007	Yes
Extreme (-30°C)		788.4100	797.5925	5.0	0.006	Yes
20°C	End Point Voltage	788.4100	797.5925	3.2	0.004	Yes

8.4.2. 5G NR n14 (BPSK 10MHz BANDWIDTH)

Test Engineer ID:	105900;22797	Test Date:	2025-10-15
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Band	14	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		788	798			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	788.2250	797.4050			
Extreme (50°C)		788.2250	797.4050	0.9	0.001	Yes
Extreme (40°C)		788.2250	797.4050	1.3	0.002	Yes
Extreme (30°C)		788.2250	797.4050	-1.3	-0.002	Yes
Extreme (10°C)		788.2250	797.4050	1.5	0.002	Yes
Extreme (0°C)		788.2250	797.4050	-2.4	-0.003	Yes
Extreme (-10°C)		788.2250	797.4050	-1.8	-0.002	Yes
Extreme (-20°C)		788.2250	797.4050	-2.2	-0.003	Yes
Extreme (-30°C)		788.2250	797.4050	2.0	0.003	Yes
20°C	End Point Voltage	788.2250	797.4050	6.4	0.008	Yes

8.5. PEAK-TO-AVERAGE POWER RATIO

LIMIT

ISED: RSS140§4.3

In addition, the peak to average power ratio (PAPR) of the equipment shall not exceed 13 dB for more than 0.1% of the time, using a signal that corresponds to the highest PAPR during periods of continuous transmission.

RESULT

Config 0 to measure as the worst case; full resource block (FRB) for each bandwidth was used to measure as the worst case. The results from all CCDF measurements are passed with 13dB peak-to-average power ratio criteria.

TEST PROCEDURE

The EUT was connected to a wideband power sensor to measure peak and average output power.

8.5.1. LTE BAND 14

Test Engineer ID:	33499	Test Date:	2025-10-10
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Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
LTE Band 14	5MHz	793.0	25	0	QPSK	26.33	21.71	4.62
					16QAM	26.46	20.77	5.69
	10MHz	50	0	QPSK	26.45	21.75	4.70	
					16QAM	26.50	20.74	5.76
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

8.5.2. 5G NR n14

Test Engineer ID:	33499	Test Date:	2025-10-10
--------------------------	-------	-------------------	------------

Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
5G NR n14	5MHz	793.0	25	0	BPSK	26.32	22.37	3.95
					16QAM	26.28	20.76	5.52
	10MHz	50	0	BPSK	26.41	22.41	4.00	
					16QAM	26.39	20.76	5.63
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

9. RADIATED TEST RESULTS

Radiated measurement using the Field Strength Method

Using the test configuration shown in Figure 6 below, the radiated emissions is measured directly from the EUT and convert the measured field strength or received power to ERP or EIRP, as required, for comparison to the applicable limits. As stated in 5.5.1 of ANSI C63.26-2015, the field strength measurement method using a test site validated to the requirements of ANSI C63.4 is an alternative to the substitution measurement.

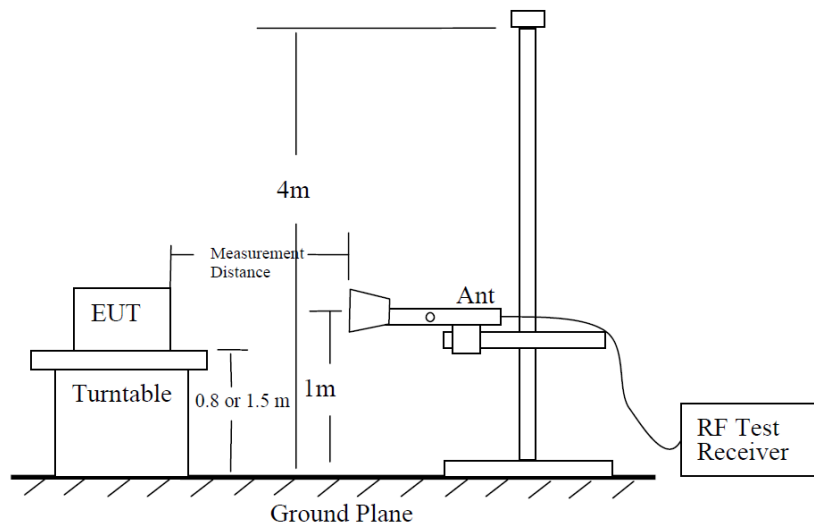


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

Radiated Power Measurement Calculation According to ANSI C63.26-2015

- a) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}.$
- b) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}.$
- c) $E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20\log(D) + 104.8$; where D is the measurement distance (in the far field region) in m.
- d) $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.

So, from d)

The measuring distance is usually at 3m, then $20 \cdot \log(3) = 9.5424$

Then, $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 9.5424 - 104.8 = E \text{ (dB}\mu\text{V/m)} - 95.2576$

Note: Confidence check of each chamber is performed daily to see if any degradation from expected/normal reading reference data. Ambient check of each chamber is performed monthly.

9.1. EFFECTIVE RADIATED POWER ERP/EIRP

RULE PART(S)

FCC: §2.1046, §90.541
ISED: RSS140§4.3

LIMITS

FCC: §90.541 (d) - The transmitting power of a portable (hand-held) unit must not exceed 3 watts ERP.

ISED: RSS140§4.3 - The equivalent radiated power (e.r.p.) for control and mobile equipment shall not exceed 30 W. The e.r.p. for portable equipment including handheld devices shall not exceed 3 W.

In addition, the peak to average power ratio (PAPR) of the equipment shall not exceed 13 dB for more than 0.1% of the time, using a signal that corresponds to the highest PAPR during periods of continuous transmission.

TEST PROCEDURE

ANSI / TIA / EIA 603-E (2016), Clause 2.2.17; PSA setting reference to 971168 D01

For average power measurements:

- a) Set span to at least 1.5 times the OBW;
- b) Set RBW = 1-5% of the OBW, not to exceed 1 MHz;
- c) Set VBW $\geq 3 \times$ RBW;
- d) Set number of points in sweep $\geq 2 \times$ span / RBW;
- e) Sweep time = auto-couple;
- f) Detector = RMS (power averaging);
- g) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- h) Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function.

RESULTS

9.1.1. LTE BAND 14 10MHZ

High Frequency Substitution Measurement UL Morrisville Chamber 4

Company: RFSL
Project #: 15980274
Date: 2025-09-28 thru 2025-10-28
Test Engineer: 19289
Configuration: EUT Only
Mode: TX, 793MHz BAND LTE14 10MHZ QPSK CONFIG0

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
793.00	18.59	H	7.58	-1.05		9.96	34.77	-24.81	RB 1-0
793.00	28.26	V	7.58	-1.05		19.63	34.77	-15.14	RB 1-0
793.00	18.54	H	7.58	-1.05		9.91	34.77	-24.86	RB 1-25
793.00	28.18	V	7.58	-1.05		19.55	34.77	-15.22	RB 1-25
793.00	18.54	H	7.58	-1.05		9.91	34.77	-24.86	RB 1-49
793.00	28.06	V	7.58	-1.05		19.43	34.77	-15.34	RB 1-49

Rev. 10.17.25

CONFIG 0 QPSK

High Frequency Substitution Measurement
UL Morrisville Chamber 4

Company: RFSL
Project #: 15980274
Date: 2025-09-28 thru 2025-12-10
Test Engineer: 19289
Configuration: EUT Only
Mode: TX, 793MHz BAND LTE14 10MHZ 16QAM CONFIG0

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
793.00	18.07	H	7.58	-1.05		9.44	34.77	-25.33	RB 1-0
793.00	28.01	V	7.58	-1.05		19.38	34.77	-15.39	RB 1-0
793.00	18.23	H	7.58	-1.05		9.60	34.77	-25.17	RB 1-25
793.00	27.51	V	7.58	-1.05		18.88	34.77	-15.89	RB 1-25
793.00	18.01	H	7.58	-1.05		9.38	34.77	-25.39	RB 1-49
793.00	27.71	V	7.58	-1.05		19.08	34.77	-15.69	RB 1-49

Rev. 10.17.25

CONFIG 0 16QAM

High Frequency Substitution Measurement
UL Morrisville Chamber 4

Company: RFSL
Project #: 15980274
Date: 2025-09-28 thru 2025-10-28
Test Engineer: 19289
Configuration: EUT Only
Mode: TX, 793MHz BAND LTE14 QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
793.00	25.23	H	7.58	-1.05		16.60	34.77	-18.17	RB 1-0
793.00	15.35	V	7.58	-1.05		6.72	34.77	-28.05	RB 1-0
793.00	21.01	H	7.58	-1.05		12.38	34.77	-22.39	RB 1-25
793.00	15.56	V	7.58	-1.05		6.93	34.77	-27.84	RB 1-25
793.00	20.72	H	7.58	-1.05		12.09	34.77	-22.68	RB 1-49
793.00	15.77	V	7.58	-1.05		7.14	34.77	-27.63	RB 1-49

Rev. 10.17.25

CONFIG 1 QPSK

**High Frequency Substitution Measurement
UL Morrisville Chamber 4**

Company: RFSL
Project #: 15980274
Date: 2025-09-28 thru 2025-12-10
Test Engineer: 19289
Configuration: EUT Only
Mode: TX, 793MHz BAND LTE14 10MHZ 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
793.00	22.22	H	7.58	-1.05		13.59	34.77	-21.18	RB 1-0
793.00	14.63	V	7.58	-1.05		6.00	34.77	-28.77	RB 1-0
793.00	20.23	H	7.58	-1.05		11.60	34.77	-23.17	RB 1-25
793.00	14.80	V	7.58	-1.05		6.17	34.77	-28.60	RB 1-25
793.00	19.87	H	7.58	-1.05		11.24	34.77	-23.53	RB 1-49
793.00	14.91	V	7.58	-1.05		6.28	34.77	-28.49	RB 1-49

Rev. 10.17.25

CONFIG 1 16QAM

9.1.2. 5G NR n14 10MHZ

High Frequency Substitution Measurement UL Morrisville Chamber 4 Company: RFSL Project #: 15980274 Date: 2025-09-28 thru 2025-10-28 Test Engineer: 19289 Configuration: EUT Only Mode: TX, 793MHz BAND N14 10MHZ BPSK CONFIG0									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
793.00	16.97	H	7.58	-1.15		8.24	34.77	-26.53	RB 1-1
793.00	27.55	V	7.58	-1.15		18.82	34.77	-15.95	RB 1-1
793.00	16.83	H	7.58	-1.15		8.10	34.77	-26.67	RB 1-26
793.00	27.55	V	7.58	-1.15		18.82	34.77	-15.95	RB 1-26
793.00	16.27	H	7.58	-1.15		7.54	34.77	-27.23	RB 1-50
793.00	27.89	V	7.58	-1.15		19.16	34.77	-15.61	RB 1-50
Rev. 10.17.25									
CONFIG 0 BPSK									

High Frequency Substitution Measurement UL Morrisville Chamber 4 Company: RFSL Project #: 15980274 Date: 2025-09-28 thru 2025-10-28 Test Engineer: 19289 Configuration: EUT Only Mode: TX, 793MHz BAND N14 10MHZ 16QAM CONFIG0									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
793.00	16.23	H	7.58	-1.15		7.50	34.77	-27.27	RB 1-1
793.00	26.69	V	7.58	-1.15		17.96	34.77	-16.81	RB 1-1
793.00	15.58	H	7.58	-1.15		6.85	34.77	-27.92	RB 1-26
793.00	26.30	V	7.58	-1.15		17.57	34.77	-17.20	RB 1-26
793.00	15.24	H	7.58	-1.15		6.51	34.77	-28.26	RB 1-50
793.00	26.90	V	7.58	-1.15		18.17	34.77	-16.60	RB 1-50
Rev. 10.17.25									
CONFIG 0 16QAM									

High Frequency Substitution Measurement UL Morrisville Chamber 4 Company: RFSL Project #: 15980274 Date: 2025-09-28 thru 2025-10-28 Test Engineer: 19289 Configuration: EUT Only Mode: TX, 793MHz BAND N14 10MHZ BPSK									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
793.00	25.05	H	7.58	-1.15		16.32	34.77	-18.45	RB 1-1
793.00	16.82	V	7.58	-1.15		8.09	34.77	-26.68	RB 1-1
793.00	25.22	H	7.58	-1.15		16.49	34.77	-18.28	RB 1-26
793.00	16.54	V	7.58	-1.15		7.81	34.77	-26.96	RB 1-26
793.00	25.07	H	7.58	-1.15		16.34	34.77	-18.43	RB 1-50
793.00	18.04	V	7.58	-1.15		9.31	34.77	-25.46	RB 1-50
Rev. 10.17.25									
CONFIG 1 BPSK									

**High Frequency Substitution Measurement
UL Morrisville Chamber 4**

Company: RFSL
Project #: 15980274
Date: 2025-09-28 thru 2025-12-10
Test Engineer: 19289
Configuration: EUT Only
Mode: TX, 793MHz BAND LTE14 10MHZ 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	DCCF (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
793.00	24.02	H	7.58	-1.05		15.39	34.77	-19.38	RB 1-0
793.00	15.86	V	7.58	-1.05		7.23	34.77	-27.54	RB 1-0
793.00	24.04	H	7.58	-1.05		15.41	34.77	-19.36	RB 1-25
793.00	15.67	V	7.58	-1.05		7.04	34.77	-27.73	RB 1-25
793.00	23.50	H	7.58	-1.05		14.87	34.77	-19.90	RB 1-49
793.00	17.06	V	7.58	-1.05		8.43	34.77	-26.34	RB 1-49

Rev. 10.17.25

CONFIG 1 16QAM

9.2. FIELD STRENGTH OF SPURIOUS RADIATION, ABOVE 1GHz

LIMITS

FCC: §90.543 Emission Limitations. (Band 14)

(e) For operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(3) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log (P)$ dB.

(f) For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation

RSS140§4.4

The power of any unwanted emission outside the bands 758-768 MHz and 788-798 MHz shall be attenuated below the transmitter output power P in dBW as follows, where p is the transmitter output power in watts:

- a. For any frequency between 769-775 MHz and 799-806 MHz:
 - i. $76 + 10 \log (p)$, dB in a 6.25 kHz band for fixed and base station equipment
 - ii. $65 + 10 \log (p)$, dB in a 6.25 kHz band for mobile and portable/hand-held equipment
- b. For any frequency between 775-788 MHz, above 806 MHz, and below 758 MHz: $43 + 10 \log (p)$, dB in a bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency bands 758-768 MHz and 788-798 MHz, a resolution bandwidth of 30 kHz may be employed.

In addition, the equivalent isotropically radiated power (e.i.r.p.) of all emissions, including harmonics in the band 1559-1610 MHz, shall not exceed -70 dBW/MHz for wideband emissions, and -80 dBW/kHz for discrete emissions of less than 700 Hz bandwidth.

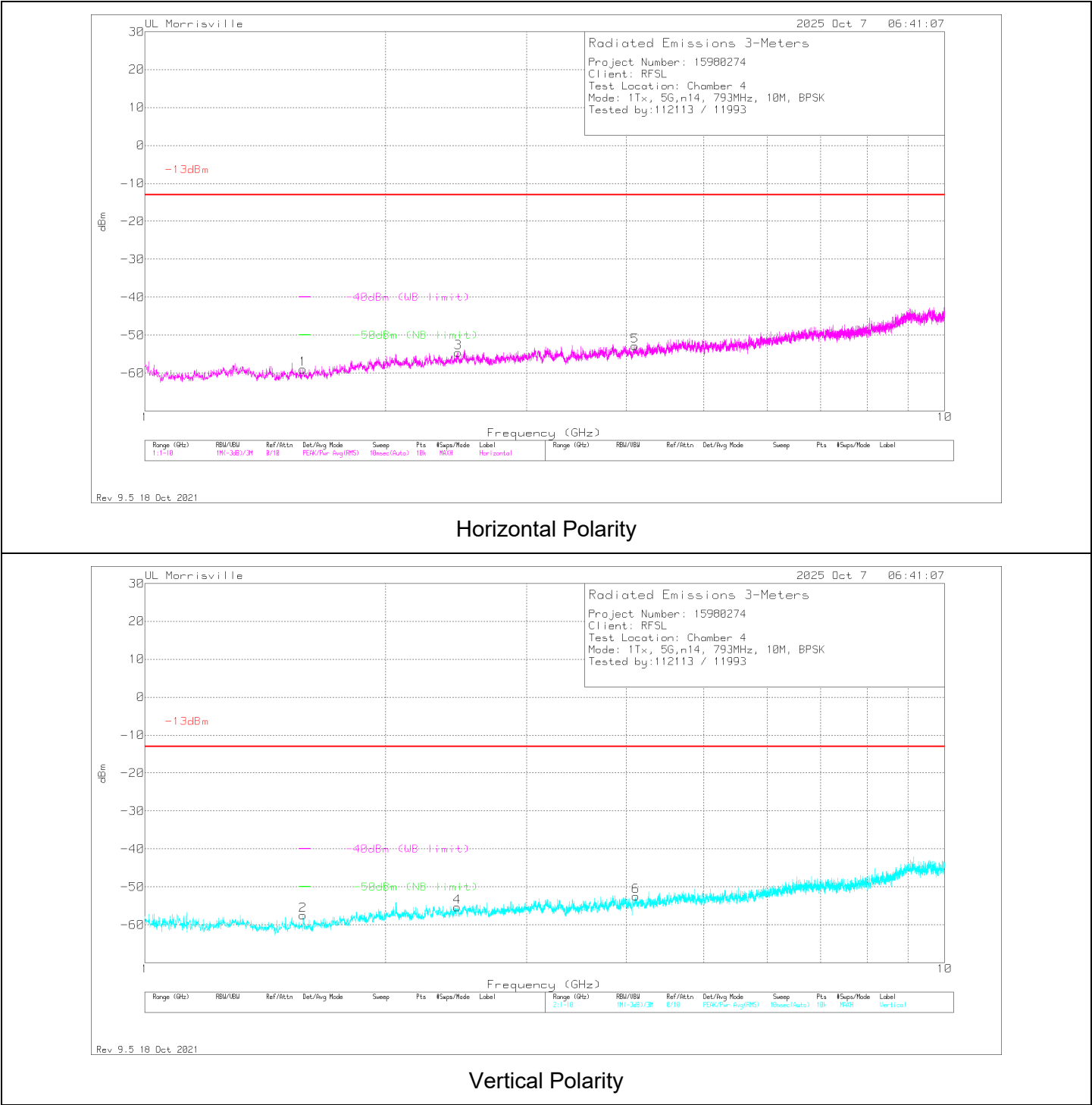
TEST PROCEDURE

KDB 971168 D01 /D02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz

RESULTS

Example Plot



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206211 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	Limit (dBm)	Margin (dB)	-40dBm (WB limit)	PK Margin (dB)	-50dBm (NB limit)	Margin (dB)	Polarity
1	1.576900	-62.66	Pk	28.1	-36.8	.6	11.8	-58.96	-13	-45.96	-40	-18.96	-50	-8.96	H
2	1.576900	-61.18	Pk	28.1	-36.8	.6	11.8	-57.48	-13	-44.48	-40	-17.48	-50	-7.48	V
4	2.458000	-63.26	Pk	32.1	-36.2	.2	11.8	-55.36	-13	-42.36	-	-	-	-	V
3	2.465200	-62.45	Pk	32.2	-36.5	.3	11.8	-54.65	-13	-41.65	-	-	-	-	H
5	4.099600	-64.92	Pk	33.3	-33.7	.6	11.8	-52.92	-13	-39.92	-	-	-	-	H
6	4.113100	-65.09	Pk	33.3	-33.1	.6	11.8	-52.49	-13	-39.49	-	-	-	-	V

9.2.1. LTE BAND 14

LTE BAND 14 (QPSK 10.0MHZ BANDWIDTH, Config 0)

Project #:	15980274
Date:	2025-09-10
Test Engineer:	112113 / 11993
Configuration:	EUT Only
Mode	LTE B14 QPSK 10MHz
Chamber #:	Chamber 2

Frequency (GHz)	Meter Reading (dBm)	Det	88761 ACF (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)	-40dBm (WB limit)	Margin (dB)	-50dBm (NB limit)	Margin (dB)	Polarity
Mid Channel, 793MHz														
1.5877	-49.12	Pk	28.0	-49.1	.5	11.8	-57.92	-13	-44.92	-40	-17.92	-50	-7.92	V
1.5922	-50.37	Pk	28.0	-49.3	.5	11.8	-59.37	-13	-46.37	-40	-19.37	-50	-9.37	H
2.3005	-49.21	Pk	31.8	-48.6	.4	11.8	-53.81	-13	-40.81	-	-	-	-	V
2.4193	-49.64	Pk	31.9	-47.9	.4	11.8	-53.44	-13	-40.44	-	-	-	-	H
3.5272	-49.9	Pk	33.0	-46.2	.3	11.8	-51.00	-13	-38.00	-	-	-	-	V
4.2373	-53.27	Pk	33.4	-46.4	.4	11.8	-54.07	-13	-41.07	-	-	-	-	H

LTE BAND 14 (QPSK 10.0MHZ BANDWIDTH, Config 1)

Project #:	15980274
Date:	2025-09-12
Test Engineer:	33271 / 11993
Configuration:	EUT Only
Mode	LTE B14 QPSK 10MHz
Chamber #:	Chamber 2

Frequency (GHz)	Meter Reading (dBm)	Det	88761 ACF (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)	-40dBm (WB limit)	Margin (dB)	-50dBm (NB limit)	Margin (dB)	Polarity
Mid Channel, 793MHz														
1.576900	-49.44	Pk	27.8	-49.4	.4	11.8	-58.84	-13	-45.84	-40	-18.84	-50	-8.84	H
1.576900	-47.85	Pk	27.8	-49.4	.4	11.8	-57.25	-13	-44.25	-40	-17.25	-50	-7.25	V
4.982500	-53.72	Pk	34	-44.5	.3	11.8	-52.12	-13	-39.12	-	-	-	-	H
4.983400	-55.27	Pk	34	-44.5	.3	11.8	-53.67	-13	-40.67	-	-	-	-	V
8.797600	-56.74	Pk	36	-40.6	.4	11.8	-49.14	-13	-36.14	-	-	-	-	H
8.830000	-56.58	Pk	36	-39.4	.3	11.8	-47.88	-13	-34.88	-	-	-	-	V

9.2.2. 5G NR n14

5G NR n14 (BPSK 10.0MHZ BANDWIDTH, Config 0)

Project #:	15980274
Date:	2025-10-07
Test Engineer:	84740 / 11993
Configuration:	EUT Only
Mode	5G NR n14 BQPSK 10MHz
Chamber #:	Chamber 4

Frequency (GHz)	Meter Reading (dBm)	Det	206211 ACF (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)	-40dBm (WB limit)	Margin (dB)	-50dBm (NB limit)	Margin (dB)	Polarity
Mid Channel, 793MHz														
1.568800	-62.56	Pk	28.0	-36.9	.6	11.8	-59.06	-13	-46.06	-40	-19.06	-50	-9.06	H
1.583200	-63.34	Pk	28.1	-36.6	.6	11.8	-59.44	-13	-46.44	-40	-19.44	-50	-9.44	V
4.383100	-64.94	Pk	33.6	-32.2	.7	11.8	-51.04	-13	-38.04	-	-	-	-	V
4.390300	-64.18	Pk	33.7	-32.8	.7	11.8	-50.78	-13	-37.78	-	-	-	-	H
9.407800	-66.94	Pk	36.5	-24.6	.4	11.8	-42.84	-13	-29.84	-	-	-	-	V
9.548200	-67.36	Pk	36.7	-24.6	.5	11.8	-42.96	-13	-29.96	-	-	-	-	H

5G NR n14 (BPSK 10.0MHZ BANDWIDTH, Config 1)

Project #:	15980274
Date:	2025-09-09
Test Engineer:	112113 / 11993
Configuration:	EUT Only
Mode	5G NR n14 BQPSK 10MHz
Chamber #:	03-RDE-A

Frequency (GHz)	Meter Reading (dBm)	Det	206211 ACF (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)	-40dBm (WB limit)	Margin (dB)	-50dBm (NB limit)	Margin (dB)	Polarity
Mid Channel, 793MHz														
1.576900	-62.66	Pk	28.1	-36.8	.6	11.8	-58.96	-13	-45.96	-40	-18.96	-50	-8.96	H
1.576900	-61.18	Pk	28.1	-36.8	.6	11.8	-57.48	-13	-44.48	-40	-17.48	-50	-7.48	V
2.458000	-63.26	Pk	32.1	-36.2	.2	11.8	-55.36	-13	-42.36	-	-	-	-	V
2.465200	-62.45	Pk	32.2	-36.5	.3	11.8	-54.65	-13	-41.65	-	-	-	-	H
4.099600	-64.92	Pk	33.3	-33.7	.6	11.8	-52.92	-13	-39.92	-	-	-	-	H
4.113100	-65.09	Pk	33.3	-33.1	.6	11.8	-52.49	-13	-39.49	-	-	-	-	V

10. SETUP PHOTOS

Please see R15980274-EP1 for Setup Diagrams and Setup Photos.

END OF REPORT