

TEST REPORT

Report Number: R16238088-E11a

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

Model : SM-F976U, SM-F976U1

FCC ID : A3LSMF976U

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

Test Standard(s) : FCC 47 CFR PART 2, PART 96

Date Of Issue:
2026-05-01

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Revision History			
Rev.	Issue Date	Revisions	Revised By
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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,
UWB, WPT and NFC

SERIAL NUMBERS: ZCO0023M, ZBD0487M, ZBK0208M, ZBD0487M, ZAT0031M, ZBK0219M,
ZBK0213M, ZAQ0548M, ZB30741M

SAMPLE RECEIVE DATE: 2026-03-09, 2026-04-17

DATE TESTED: 2026-03-09 to 2026-04-30

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47 CFR Part 2, Part 96	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 UL LLC By:

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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)	Result	Remarks
Equivalent Isotropic Radiated Power	2.1046, 96.41 (b)	Complies	-
Occupied Bandwidth	2.1049	Complies	-
Band Edge and Emission Mask	2.1051, 96.41(e)	Complies	-
Out of Band Emissions	2.1051, 96.41(e)	Complies	-
Frequency Stability	2.1055	Complies	-
Peak-to-Average Ratio	96.41 (g)	Complies	-
Field Strength of Spurious Radiation	2.1053, 96.41(e)	Complies	-

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.

- ANSI C63.26:2015
- FCC 47 CFR Part 2, Part 96
- FCC KDB 971168 D01: Power Meas License Digital Systems
- FCC KDB 971168 D02: Misc Rev Approv License Devices
- FCC KDB 412172 D01: Determining ERP and EIRP
- FCC KDB 662911 D01: Multiple Transmitter Output
- FCC KDB 940660 D01: Part 96 CBRS Eqpt v03r01

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

Model differences:

Representative Model	Difference	Derivative Model
		SM-F976U1
SM-F976U	Hardware	Same as SM-F976U
	Software	Different UI

The EUT supports the following LTE and 5G NR FR1 Bands and their antenna configurations:

Bands	Config 0	Config 1	SRS
LTE Band 48	ANT F	ANT C	-
5G NR FR1 n48	ANT F	ANT C	ANT G ANT A
ULCA LTE Band 48	ANT F	ANT C	-

6.2. MAXIMUM OUTPUT POWER

LIMITS

FCC: §96.41

(b) Power Limits—

Unless otherwise specified in this section, the maximum effective isotropic radiated power (EIRP) and maximum Power Spectral Density (PSD) of any CBSD and End User Device must comply with the limits shown in the table in this paragraph (b):

Device	Maximum EIRP (dBm/10megahertz)	Maximum PSD (dBm/MHz)
End User Device	23 (0.2 W/10 MHz)	n/a
Category A CBSD	30	20
Category B CBSD1	47	37

EIRP/ERP TEST PROCEDURE

ANSI C63.26:2015

KDB 971168 D01 Section 5.2

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

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

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 conducted and peak EIRP output powers as follows:

LTE BAND 48

Part 96								
EIRP Limit (W)/ 10MHz		0.20						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	EIRP Average (dBm)	EIRP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
5.0	16QAM	3552.5	3697.5	21.11	0.129	4.515	4515	4M52D7W
20.0	QPSK	3560.0	3690.0	21.15	0.130	17.882	17882	17M9G7W
	16QAM			20.39	0.109	17.972	17972	18M0D7W

5G NR n48

Part 96								
EIRP Limit (W) /10MHz		0.20						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	EIRP Average (dBm)	EIRP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
10.0	BPSK	3555.0	3648.3	21.51	0.142	8.667	8667.2	8M67G7W
40.0	BPSK	3570.0	3680.0	20.85	0.122	35.863	35863	35M9G7W
	16QAM			19.56	0.090	36.425	36425	36M4D7W

LTE ULCA BAND 48C

Part 96								
EIRP Limit (W)/ 10MHz		0.20						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	EIRP Average (dBm)	EIRP Average (W)	99% BW (MHz)	99% BW (kHz)	Emission Designator
20+20	QPSK	3560.0	3690.0	21.55	0.143	37.769	37769	37M8G7W
	16QAM			21.26	0.134	37.842	37842	37M8D7W

6.3. WORST-CASE CONFIGURATION AND MODE

The worst-case scenario for all measurements is based upon an engineering evaluation made on conducted average power taken during pre-testing. The modulations with the highest output power were selected as worst-case. Conducted tests were performed on the worst-case antenna port per band. Full radiated Emissions Testing on each antenna was performed and reported.

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 following is the worst-case antenna port, and modulation, as tested:

LTE & 5G NR Bands	Worst-Case Antenna Port	Worst-Case Modulation
LTE Band 48, FR1 Band n48, ULCA Band 48C	ANT F (Sub 2)	LTE: QPSK 5G NR: BPSK

The EUT was investigated in three orthogonal orientations X/Y/Z on both Low Band (Fundamental Below 1GHz) Mid Band (Fundamental between 1-3GHz) and High Band (Fundamental above 3GHz) over all antennas to find the worst-case

orientation. Additionally, the EUT was investigated between 3 folding positions, Fully Open, Fully Closed, and Half Open. For Simultaneous Tx scans in which there are two or more F_c ranges with different worst-case orientations, scans were performed in the orientation with the highest output power, and sufficient margin was added to cover other orientations. The following are the worst-case orientations:

LTE & 5G NR Bands	Config 0 Orientation	Config 1 Orientation	SRS ANT G	SRS ANT A
Low Band ($F_c < 1\text{GHz}$)	-	-	-	-
Mid Band ($1\text{GHz} < F_c < 3\text{GHz}$)	-	-	-	-
High Band ($F_c > 3\text{GHz}$)	X, Open	X, Open	X, Open	Z, Open

Worst Case emissions from 9kHz-30Mhz, 30-1000MHz, 18-26.5GHz, and 26.5GHz-40GHz were done on the modes with the highest pre-tuned conducted average power per antenna. No emissions within 20dB were observed.

6.4. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Power Adapter	Sony	XQZ-UC11-010-236-21	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. For verification testing per FCC Part 96.47, the standalone EUT was connected to a certified CBSD and Spectrum Analyzer via air and an RF cable respectively.

SETUP DIAGRAM

Please see R16238088-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 4)

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
	0.009-30MHz				
8939	Passive Loop Antenna	EMCO	EM-6872	2024-11-18	2026-11-18
8940	Passive Loop Antenna	EMCO	EM-6871	2024-11-18	2026-11-18
	30-1000 MHz				
90628	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2026-02-09	2028-02-09
	1-18 GHz				
206211	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2024-04-09	2026-04-30
	18-40 GHz				
204704	Horn Antenna, 18-26.5GHz	Com Power	AH-826	2025-07-15	2027-07-15
204705	Horn Antenna, 26-40GHz	Com Power	AH-640	2025-11-19	2027-11-19
	Gain-Loss Chains				
207638	Gain-loss string: 0.009-30MHz	Various	Various	2025-06-13	2026-06-13
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
225795	Gain-loss string: 18-40GHz	Various	Various	2025-06-13	2026-06-13
	Receiver & Software				
197954	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-04-21	2026-04-30
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	N/A	N/A
208720	Wideband Radio Communications Tester	Rohde and Schwarz	CMW500	N/A	N/A
21725	Radio Communications Tester	Rohde and Schwarz	CMX500	N/A	N/A
212167	Wideband Radio Communications Tester	Anritsu	MT8821C	N/A	N/A
169109 (BRF012)*	3.4-3.8GHz notch filter, 2W, Fhigh = 18GHz	Micro-Tronics	BRM50711-01	2025-03-13	2026-03-31
241199 (BRF018)*	3.3-4.2GHz notch filter, 2W, Fhigh = 18GHz	Micro-Tronics	BRM50732	2025-03-13	2026-03-31

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				
86408	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2025-07-15	2027-07-15
	Gain-Loss Chains				
91977	Gain-loss string: 1-18GHz	Various	Various	2025-05-31	2026-05-31
	Receiver & Software				
197955	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	N/A	N/A
169109 (BRF012*)	3.4-3.8GHz notch filter, 2W, Fhigh = 18GHz	Micro-Tronics	BRM50711-01	2025-03-13	2026-03-31

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

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	1-18 GHz				
88761	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2025-11-19	2027-11-19
	Gain-Loss Chains				
91979	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				
241205	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05
169109 (BRF012)*	3.4-3.8GHz notch filter, 2W, Fhigh = 18GHz	Micro-Tronics	BRM50711-01	2025-03-13	2026-03-31

Test Equipment Used - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
90411	Spectrum Analyzer MY54490314	Keysight Technologies	N9030A	2026-03-03	2027-03-03
90416	Spectrum Analyzer MY54490254	Keysight Technologies	N9030A	2025-07-31	2026-07-31
214284	Signal Analyzer	Rohde & Schwarz	FSW50	2026-04-16	2027-04-16
212967	Wideband Radio Communications Tester 170733	Rohde and Schwarz	CMW500	2026-02-13	2027-02-13
212166	Wideband Radio Communications Tester	Anritsu	MT8000A	2026-02-23	2027-02-23
262469	Humidity and Temperature Probe	Control Company	15-077-963	2025-04-28	2026-04-30

Test Equipment Used – CBRS End User Device Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
214284	Signal Analyzer	Rohde & Schwarz	FSW50	2026-04-16	2027-04-16
226143*	Coaxial Cable	Junflox MWX	MWX051-01200KMSKMS/B	2025-04-24	2026-04-30
206211*	Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2025-04-30	2026-04-30
238018*	Directional Coupler	Mini-Circuits	ZUDC-10-183+	2025-04-16	2026-04-30

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

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
Attenuators					
226569	2.92mm Coaxial 10dB Attenuator 40GHz	Fairview Microwave	SA4014-10	2025-09-02	2026-09-02
226554*	20dB Attenuator	CentricRF	C18S2-20	2025-03-19 2026-04-01	2026-03-31 2027-04-01
226552*	20dB Attenuator	CentricRF	C18S2-20	2025-03-19 2026-04-01	2026-03-31 2027-04-01
Cables					
246257	SMA Cable	Huber + Suhner	104PEA	2025-09-05	2026-09-05
Couplers					
238018*	Ultra-Wideband Directional Coupler 0.5-18GHz	Mini-Circuits	ZUDC10-183+	2025-04-48	2026-04-30

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

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 48

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE BAND 48	5MHz, QPSK	25/0	3625.0	4.4903	4.905
	5MHz, 16QAM			4.5145	4.902
	10MHz, QPSK	50/0		8.9997	9.718
	10MHz, 16QAM			9.0385	9.613
	15MHz, QPSK	75/0	3620.0	13.414	14.09
	15MHz, 16QAM			13.565	14.24
	20MHz, QPSK	100/0		17.882	19.14
	20MHz, 16QAM			17.972	18.77
	20MHz, QPSK	1/0		.26125	.4064

5G NR n48

Band	Mode	RB Allocation/RB Offset	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
5G NR n48	10MHz, BPSK	24/0	3625.0	8.6252	9.806
	10MHz, 16QAM			8.6672	9.641
	15MHz, BPSK	36/0	3620.0	12.988	14.539
	15MHz, 16QAM			12.950	14.461
	20MHz, BPSK	50/0		17.963	19.640
	20MHz, 16QAM			17.979	19.372
	30MHz, BPSK	75/0	3625.0	26.968	29.176
	30MHz, 16QAM			26.907	28.610
	40MHz, BPSK	100/0	3620.0	35.863	37.858
	40MHz, 16QAM			36.425	37.940
	40MHz, BPSK	1/0		.51177	.8989

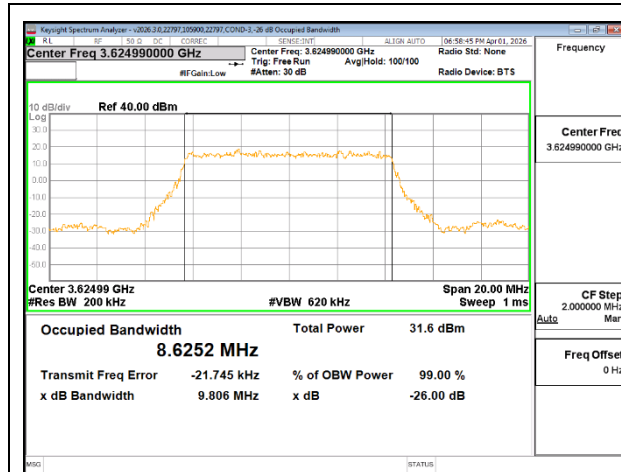
LTE ULCA BAND 48C

Band	Mode	RB Allocation/RB Offset	f (MHz)	99% BW (MHz)	- 26dB BW (MHz)
LTE ULCA BAND 48C	5MHz + 20MHz BAND QPSK	25/0 + 100/0	3625	23.235	25.17
	5MHz + 20MHz BAND 16QAM			23.237	25.06
	20MHz + 5MHz BAND QPSK	100/0 + 25/0		23.279	24.98
	20MHz + 5MHz BAND 16QAM			23.277	24.98
	10MHz + 20MHz BAND QPSK	50/0 + 100/0		28.139	30.78
	10MHz + 20MHz BAND			28.164	30.06
	20MHz + 10MHz BAND QPSK	100/0 + 50/0		28.041	29.95
	20MHz + 10MHz BAND			28.080	30.11
	15MHz + 20MHz BAND QPSK	75/0 + 100/0		32.861	35.01
	15MHz + 20MHz BAND			32.972	34.86
	20MHz + 15MHz BAND QPSK	100/0 + 75/0		32.959	34.99
	20MHz + 15MHz BAND			32.965	35.00
	20MHz + 20MHz BAND QPSK	100/0 + 100/0		37.769	39.78
	20MHz + 20MHz BAND			37.842	39.99

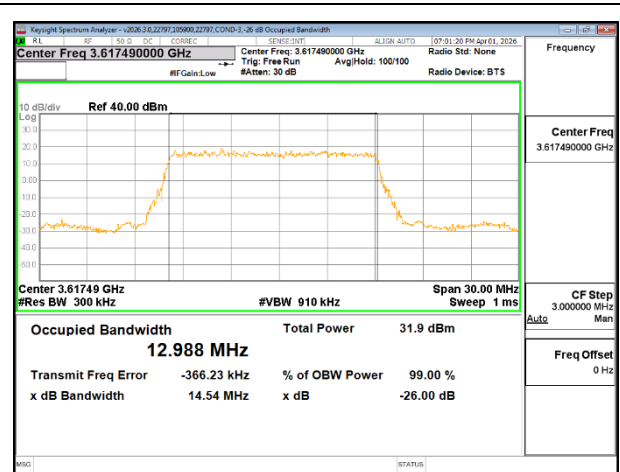
8.1.1. LTE BAND 48



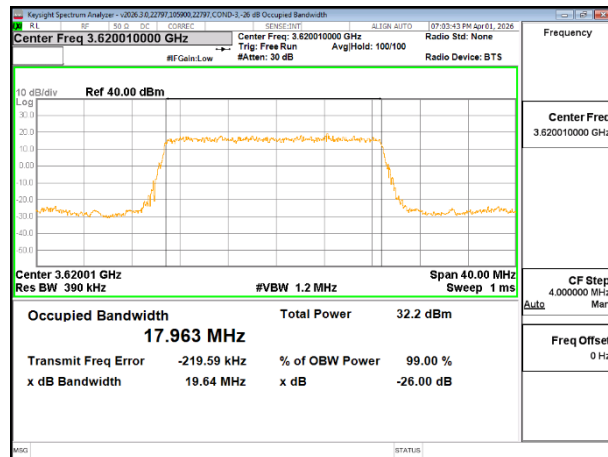
8.1.2. 5G NR n48



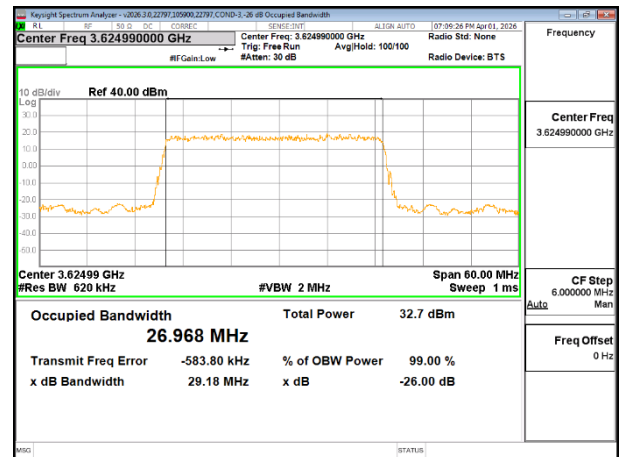
5G NR n48 10MHz BPSK Middle Channel RB24-0



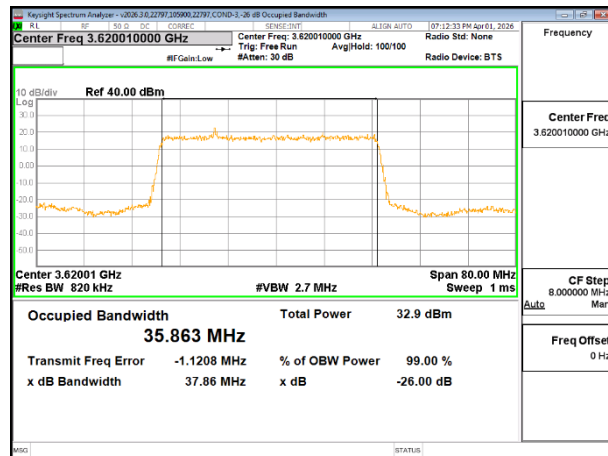
5G NR n48 15MHz BPSK Middle Channel RB36-0



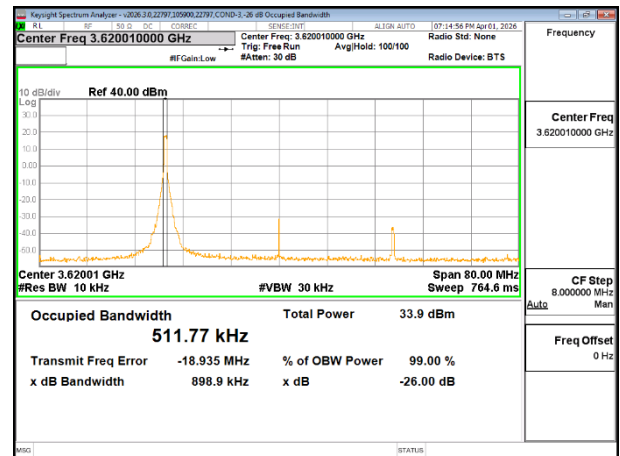
5G NR n48 20MHz BPSK Middle Channel RB50-0



5G NR n48 30MHz BPSK Middle Channel RB75-0

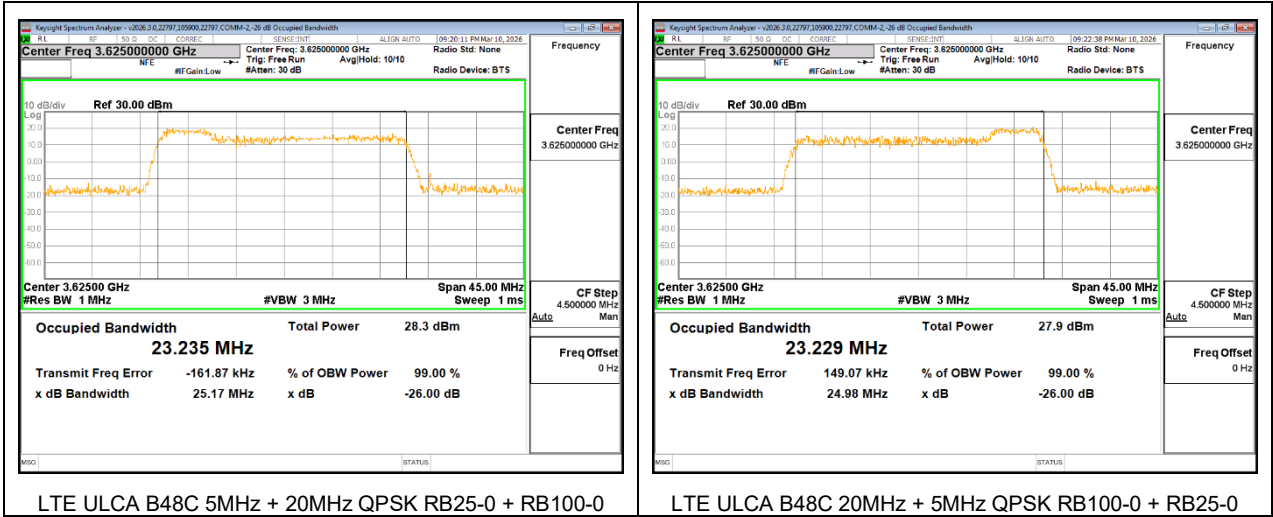


5G NR n48 40MHz BPSK Middle Channel RB100-0



5G NR n48 40MHz BPSK Middle Channel RB1-0

8.1.3. LTE ULCA BAND 48C



8.2. EMISSION MASK AND ADJACENT CHANNEL POWER

LIMITS

FCC: §96.41

(e) 3.5 GHz Emissions and Interference Limits—

(1) General protection levels

(ii) Except as otherwise specified in paragraph (e)(2) of this section, for channel and frequency assignments made by a CBSD to End User Devices, the conducted power of any End User Device emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0 to B megahertz (where B is the bandwidth in megahertz of the assigned channel or multiple contiguous channels of the End User Device) above the upper CBSD-assigned channel edge and within 0 to B megahertz below the lower CBSD-assigned channel edge. At all frequencies greater than B megahertz above the upper CBSD assigned channel edge and less than B megahertz below the lower CBSD-assigned channel edge, the conducted power of any End User Device emission shall not exceed -25 dBm/MHz. Notwithstanding the emission limits in this paragraph, the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB.

(2) Additional protection levels. Notwithstanding paragraph (e)(1) of this section, for CBSDs and End User Devices, the conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

TEST PROCEDURE (FCC LTE BAND 48)

(i) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's authorized frequency channel, a resolution bandwidth of no less than one percent of the fundamental emission bandwidth 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 reference bandwidth (i.e., 1 MHz or 1 percent of emission bandwidth, as specified). 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.

(ii) When measuring unwanted emissions to demonstrate compliance with the limits, the CBSD and End User Device nominal carrier frequency/channel shall be adjusted as close to the licensee's authorized frequency block edges, both upper and lower, as the design permits.

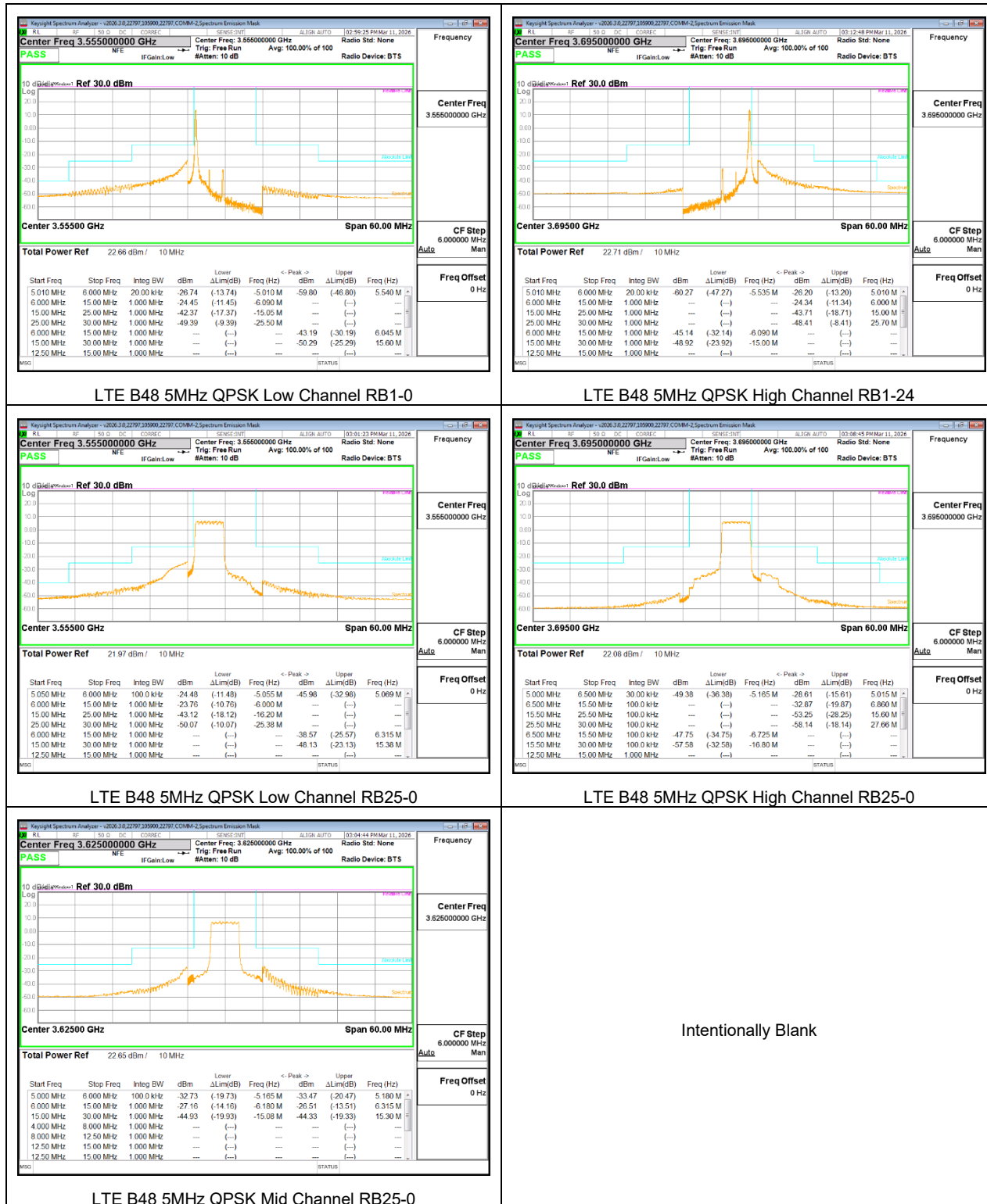
(iii) Compliance with emission limits shall be demonstrated using either average (RMS)-detected or peak-detected power measurement techniques.

(2) Additional protection levels. Notwithstanding paragraph (e)(1) of this section, for CBSDs and End User Devices, the conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

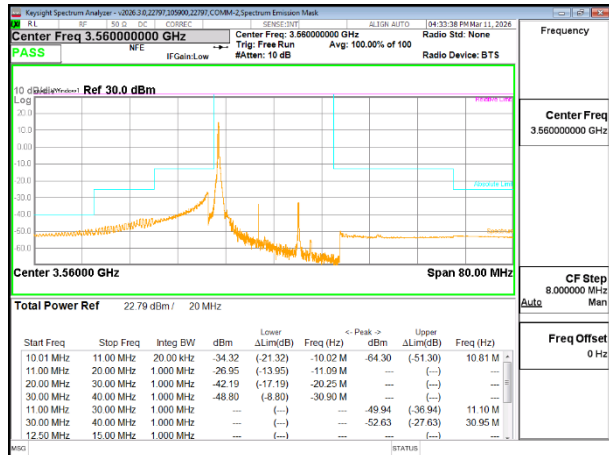
RESULTS

Note: LTE Band 48C ULCA mode(s) were tested using A-MPR at NS_10.

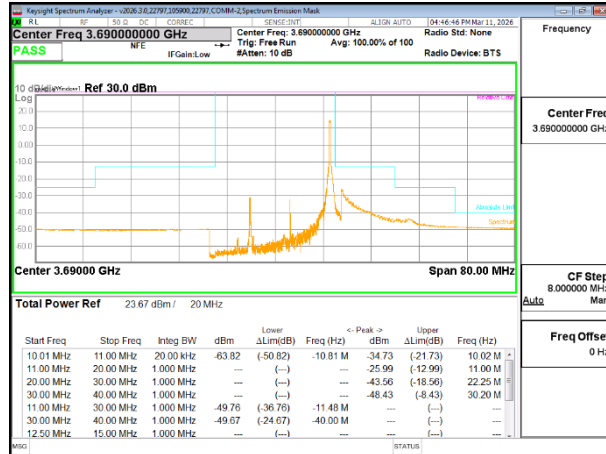
8.2.1. LTE BAND 48 EMISSION MASK



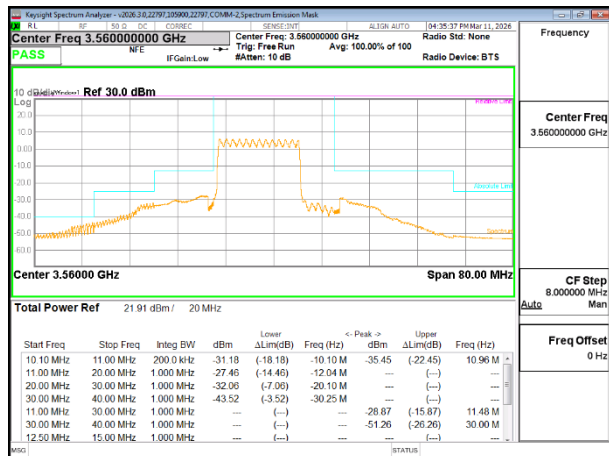




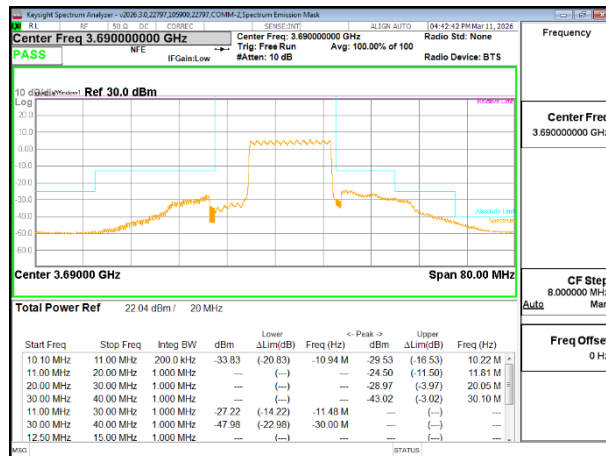
LTE B48 15MHz QPSK Low Channel RB1-0



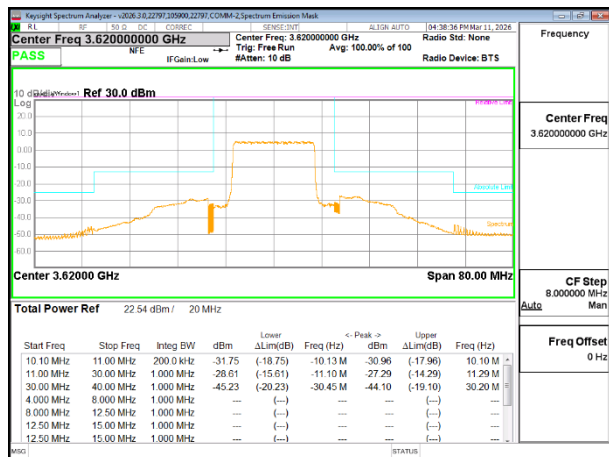
LTE B48 15MHz QPSK High Channel RB1-74



LTE B48 15MHz QPSK Low Channel RB75-0



LTE B48 15MHz QPSK High Channel RB75-0

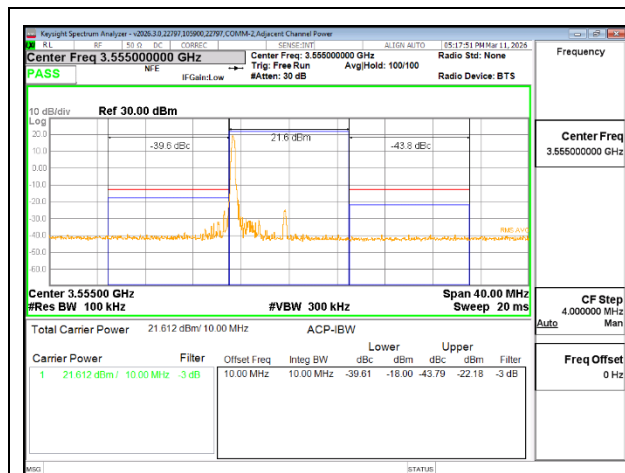


LTE B48 15MHz QPSK Mid Channel RB75-0

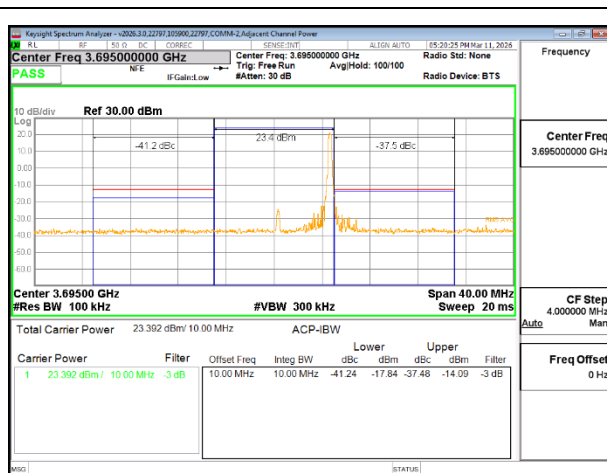
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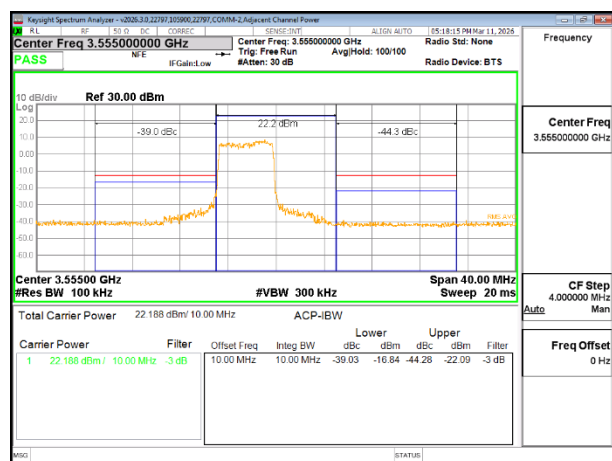
8.2.2. LTE BAND 48 ADJACENT CHANNEL POWER



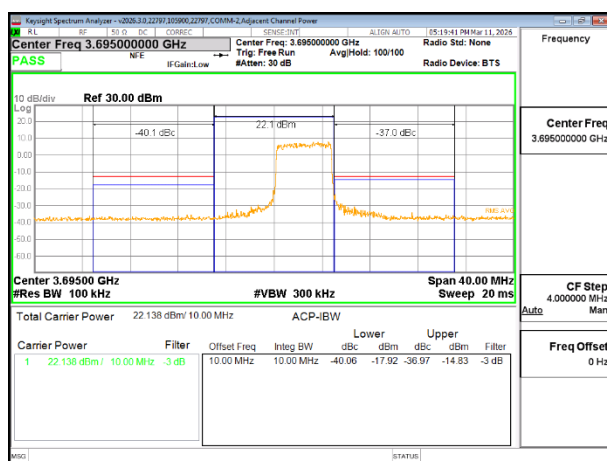
LTE B48 5MHz QPSK Low Channel RB1-0



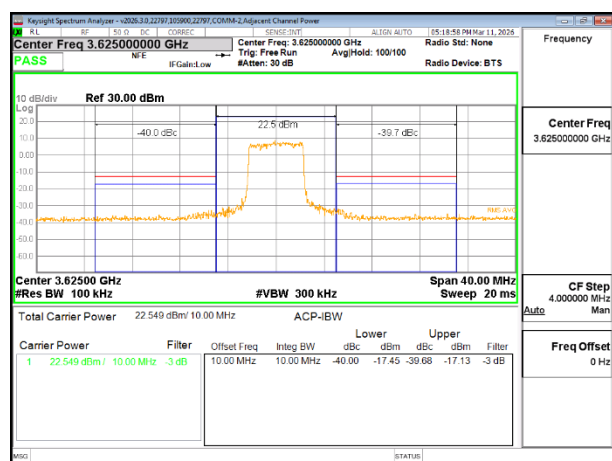
LTE B48 5MHz QPSK High Channel RB1-24



LTE B48 5MHz QPSK Low Channel RB25-0

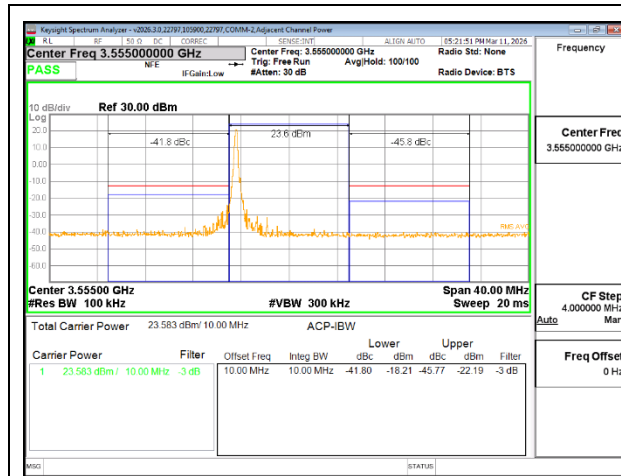


LTE B48 5MHz QPSK High Channel RB25-0

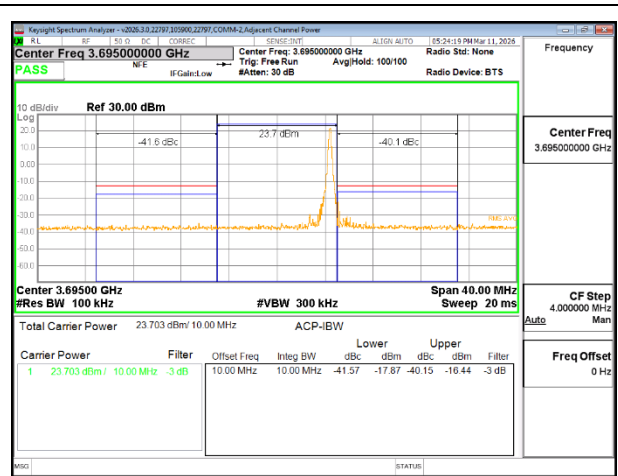


LTE B48 5MHz QPSK Mid Channel RB25-0 (3625 MHz)

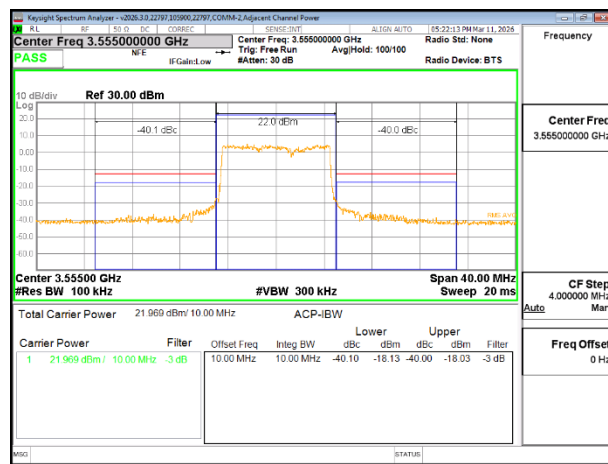
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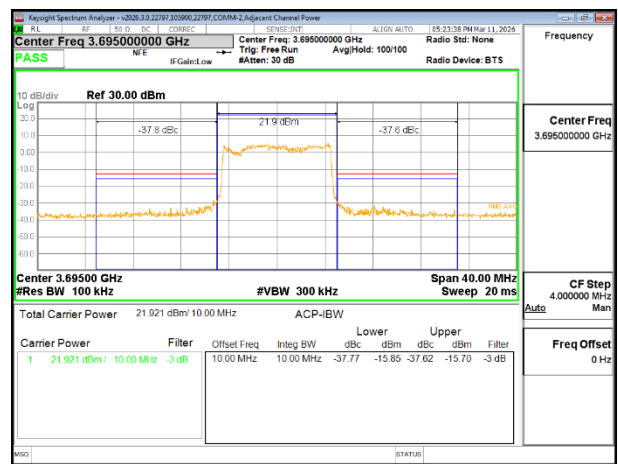
LTE B48 10MHz QPSK Low Channel RB1-0



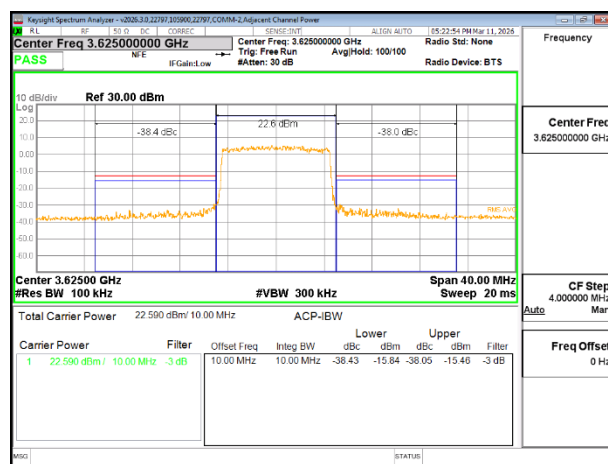
LTE B48 10MHz QPSK High Channel RB1-49



LTE B48 10MHz QPSK Low Channel RB50-0

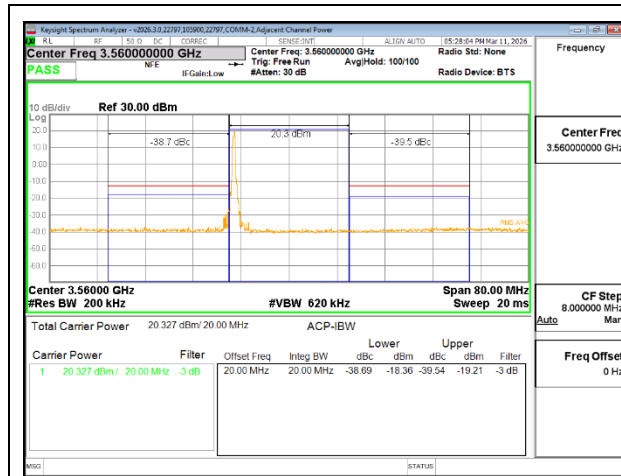


LTE B48 10MHz QPSK High Channel RB50-0

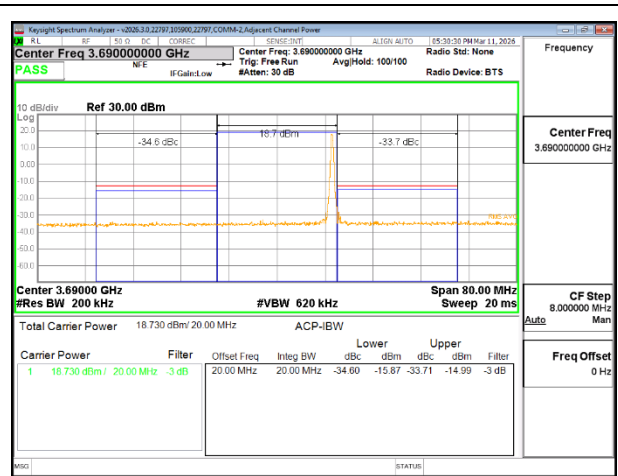


LTE B48 10MHz QPSK Mid Channel RB50-0

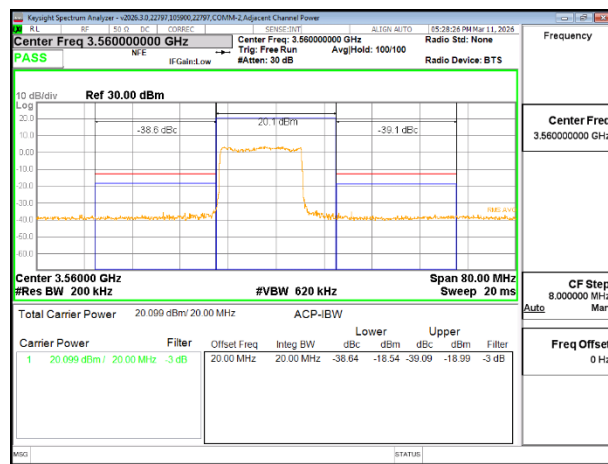
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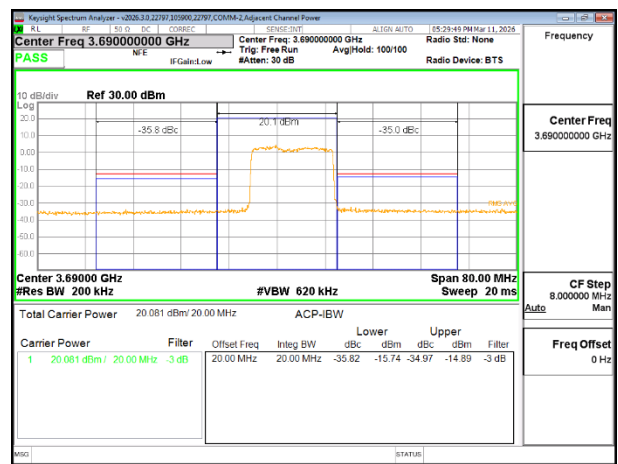
LTE B48 15MHz QPSK Low Channel RB1-0



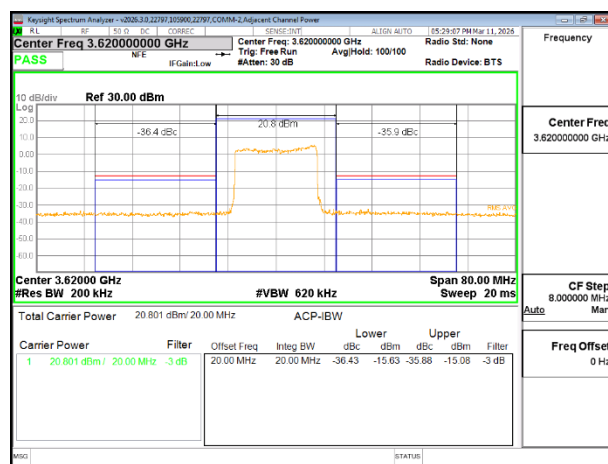
LTE B48 15MHz QPSK High Channel RB1-74



LTE B48 15MHz QPSK Low Channel RB75-0

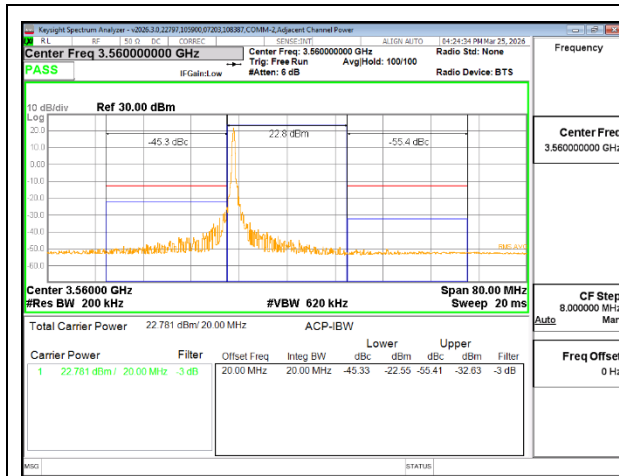


LTE B48 15MHz QPSK High Channel RB75-0

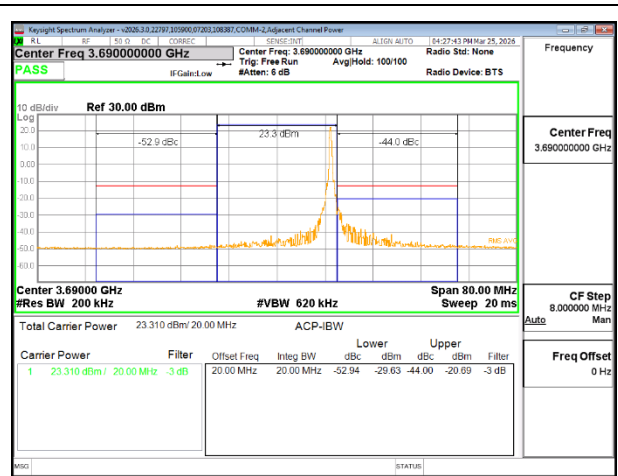


LTE B48 15MHz QPSK Mid Channel RB75-0 (3620MHz)

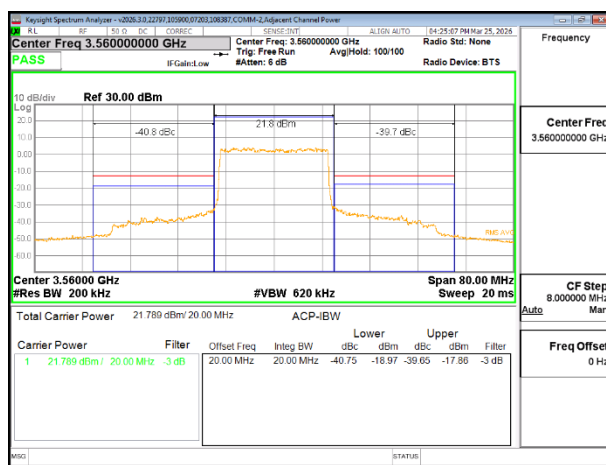
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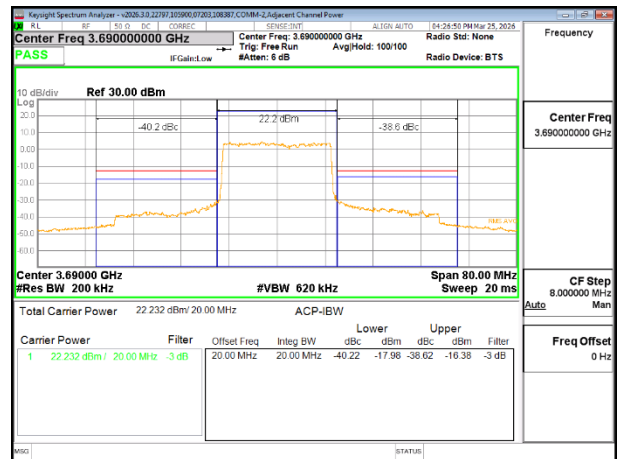
LTE B48 20MHz QPSK Low Channel RB1-0



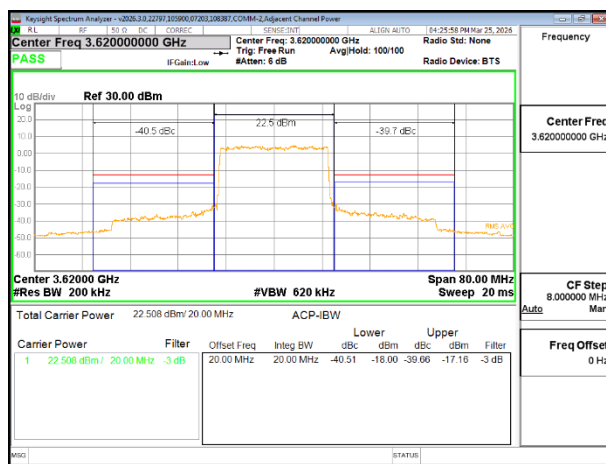
LTE B48 20MHz QPSK High Channel RB1-99



LTE B48 20MHz QPSK Low Channel RB100-0



LTE B48 20MHz QPSK High Channel RB100-0



LTE B48 20MHz QPSK Mid Channel RB100-0

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