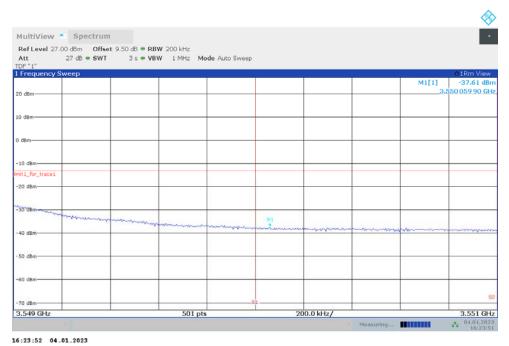
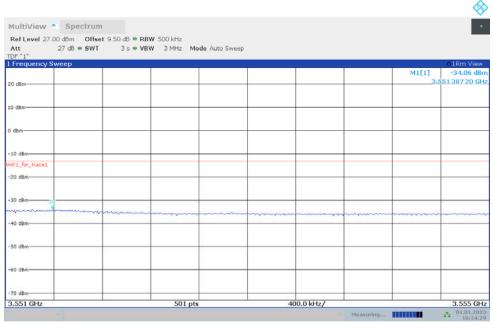




HIGH BAND EDGE BLOCK-90M-100%RB



HIGH BAND EDGE BLOCK-90M-100%RB

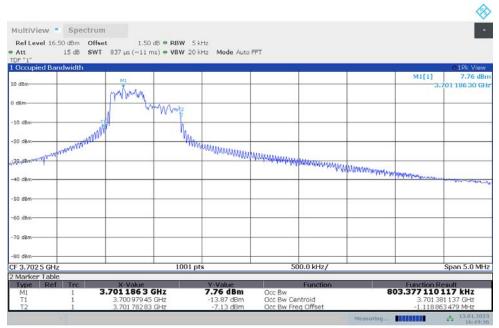


16:24:30 04.01.2023



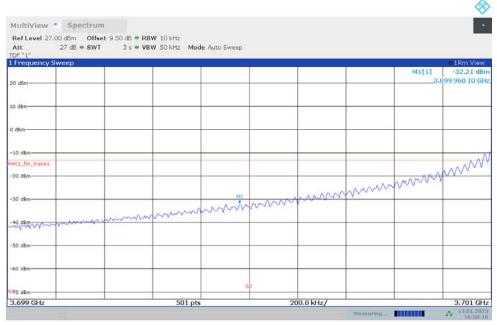


LTE Band 66+NR n77H OBW: 1RB-LOW_offset



16:49:36 13.01.2023

LOW BAND EDGE BLOCK-1RB-LOW_offset

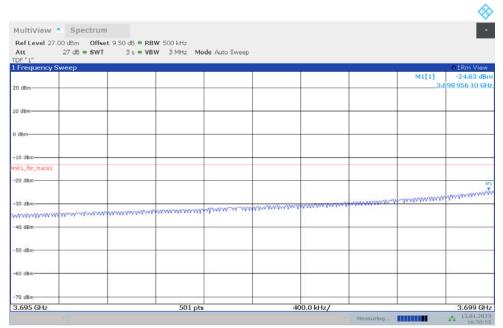


16:50:16 13.01.2023





LOW BAND EDGE BLOCK-1RB-LOW_offset

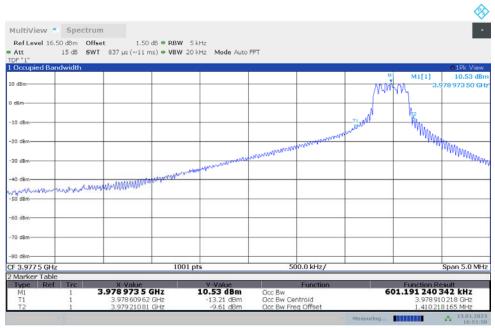


16:50:55 13.01.2023



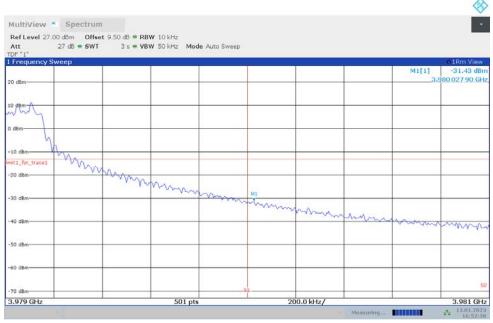


OBW: 1RB-HIGH_offset



16:51:58 13.01.2023

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

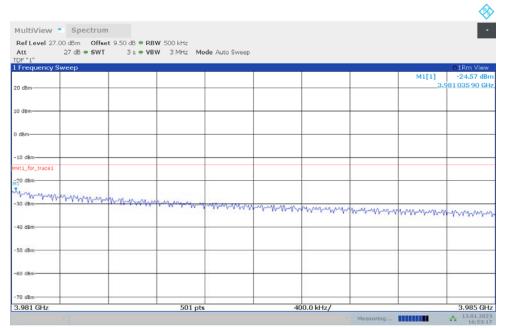


16:52:38 13.01.2023





HIGH BAND EDGE BLOCK-1RB-HIGH_offset



16:53:17 13.01.2023

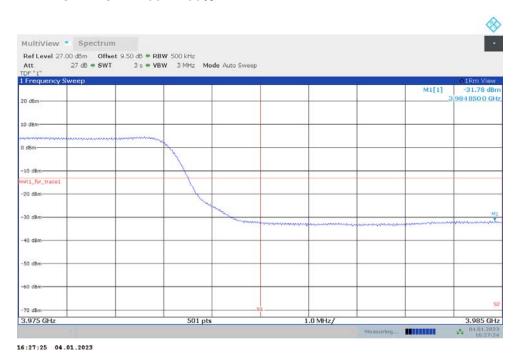




LOW BAND EDGE BLOCK-100M-100%RB



HIGH BAND EDGE BLOCK-100M-100%RB



Note: The maximum value of expanded measurement uncertainty for this test item is U = 0.626 kHz, k = 2.





A.7 Conducted Spurious Emission

A.7.1 Measurement Method

The following steps outline the procedure used to measure the conducted emissions from the EUT.

- 1. In measuring unwanted emissions, the spectrum shall be investigated from 30 MHz or the lowest radio frequency signal generated in the equipment, whichever is lower, without going below 9 kHz, up to at least the frequency given below:
 - (a) If the equipment operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
 - (b) If the equipment operates at or above 10 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.
- 2. Determine EUT transmit frequencies: below outlines the band edge frequencies pertinent to conducted emissions testing.
- 3. The number of sweep points of spectrum analyzer is greater than $2 \times \text{span/RBW}$.

A. 7.2 Measurement Limit

Part 96.41(e) states 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. Part 27.53(n) states for mobile operations in the 3450-3550 MHz band, the conducted power of

any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph (n)(2) 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 frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. 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.

Part 27.53(I) states for mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph (I)(2) 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 frequency block, the minimum resolution





bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. 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.

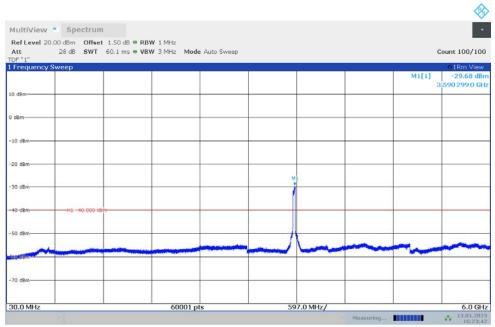




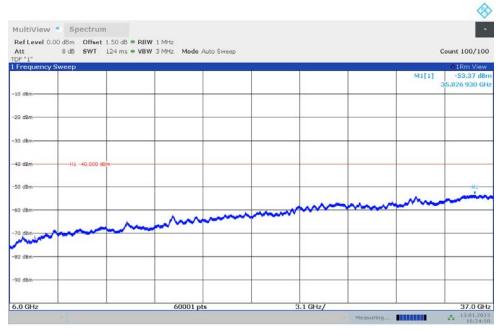
A. 7.3 Measurement result

n48

NOTE: peak above the limit line is the carrier frequency.



16:23:42 13.01.2023



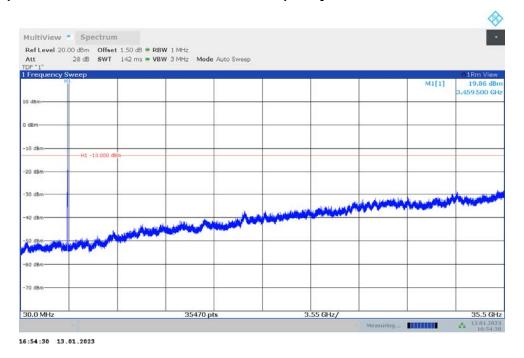
16:24:50 13.01.2023





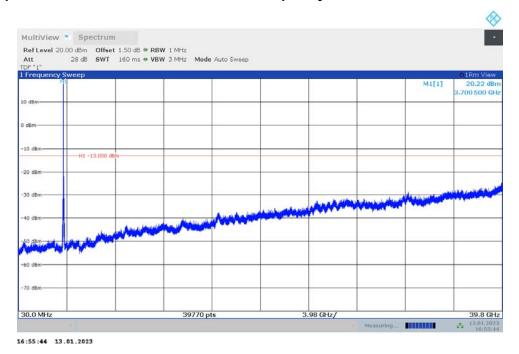
LTE Band 66+NR n77L

NOTE: peak above the limit line is the carrier frequency.



LTE Band 66+NR n77H

NOTE: peak above the limit line is the carrier frequency.



Note: The maximum value of expanded measurement uncertainty for this test item is U = 0.372 dB, k = 2.





A.8 Peak-to-Average Power Ratio

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB

- a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
- b) Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
- c) Set the number of counts to a value that stabilizes the measured CCDF curve;
- d) Record the maximum PAPR level associated with a probability of 0.1%.

Measurement results

n48,100MHz

	Frequency (MHz)	PAPR (dB)								
		DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK	CP-16QAM	CP-64QAM	CP-256QAM
	3624.99	3.72	4.85	6.37	6.59	6.67	8.27	9.21	8.32	8.35

LTE Band 66+NR n77L,90MHz

Frequency (MHz)	PAPR (dB)								
Frequency (MHZ)	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK	CP-16QAM	CP-64QAM	CP-256QAM
3500.01	5.29	6.29	7.44	7.07	7.79	8.65	8.57	8.68	9.55

LTE Band 66+NR n77H,100MHz

Frequency (MHz)	PAPR (dB)								
Frequency (MHZ)	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK	CP-16QAM	CP-64QAM	CP-256QAM
3840	4.80	5.67	7.12	7.32	7.90	9.07	8.96	9.07	9.15

Note: The maximum value of expanded measurement uncertainty for this test item is U = 0.356 dB, k = 2.





A.9 End User Device Additional Requirement (CBSD Protocol)

A.9.1 Measurement Limit

End user device additional requirements (CBSD Protocol) are tested per the test procedures listed below. During testing, the EUT is connected to a certified CBSD (Baicells BSC7048A243 FCC ID: 2AG32 BSC7048A243) as a companion device to show compliance with Part 96.47. End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation. An End User Device must discontinue operations, change frequencies, or change its operational

A.9.2 Measurement Method

The EUT was connected via an RF cable to a certified CBSD and spectrum analyzer.

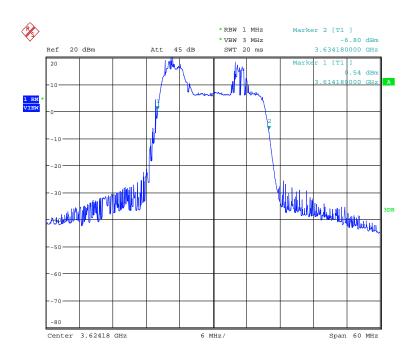
power level within 10 seconds of receiving instructions from its associated CBSD.

- 1. Run#1:
- a. Setup frequency with 3614.18MHz 3634.18MHz.
- b. Check EUT Tx frequency.
- c. Disable AP service and check EUT stop transmission within 10s.
- 2. Run#2:
- a. Setup frequency with 3659.18MHz 3679.18MHz.
- b. Check EUT Tx frequency.
- c. Disable AP service and check EUT stop transmission within 10s.

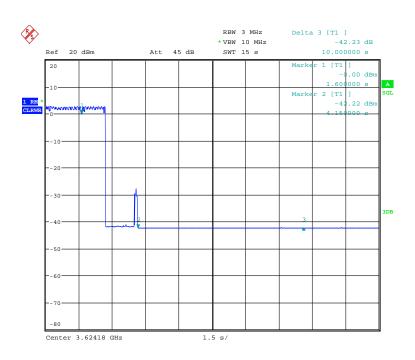




RUN#1:



Date: 12.JAN.2023 11:14:13



Date: 12.JAN.2023 11:47:51

Note:

Marker 1: CBSD sends instructions to discontinue NR operations.

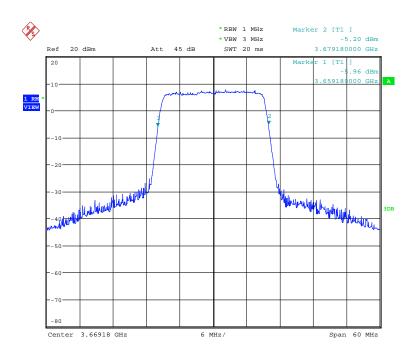
Marker 2: EUT discontinues operation.

Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUT.

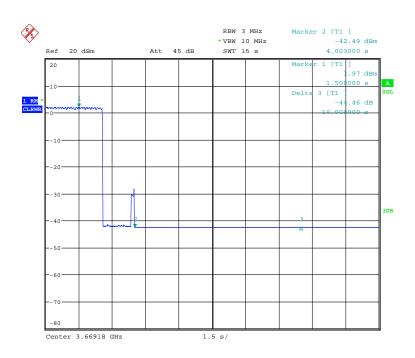




RUN#2:



Date: 12.JAN.2023 13:57:12



Date: 12.JAN.2023 14:10:30

Note:

Marker 1: CBSD sends instructions to discontinue NR operations.

Marker 2: EUT discontinues operation.

Marker 3: 10 seconds elapsed time from CBSD sending instructions to EUT





Annex B: Accreditation Certificate

United States Department of Commerce National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 600118-0

Telecommunication Technology Labs, CAICT

Beijing China

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Electromagnetic Compatibility & Telecommunications

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2022-10-01 through 2023-09-30

Effective Dates



For the National Voluntary Laboratory Accreditation Program

END OF REPORT