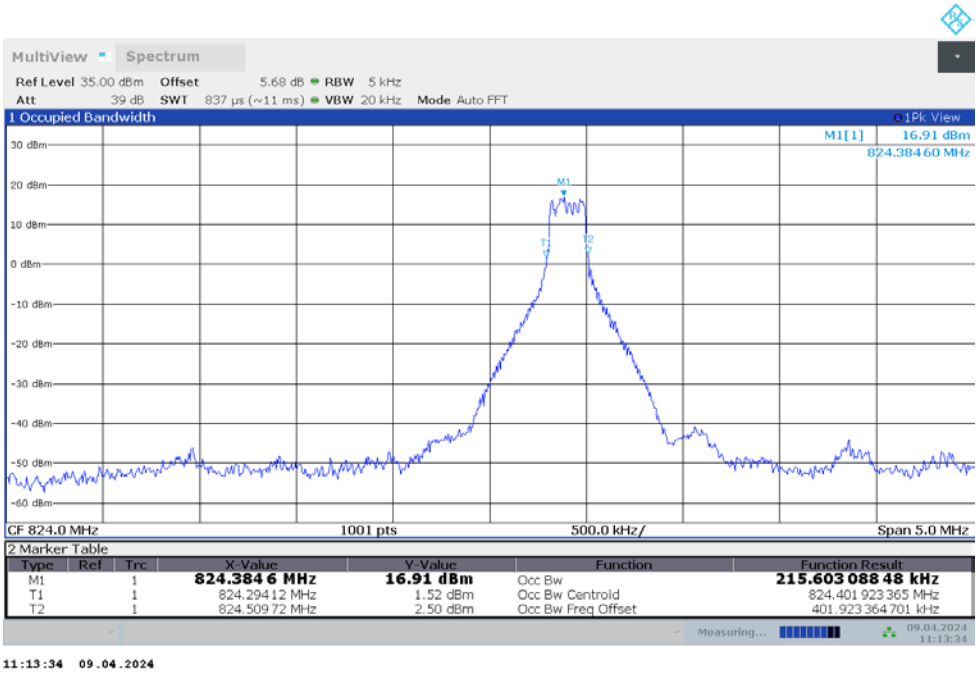
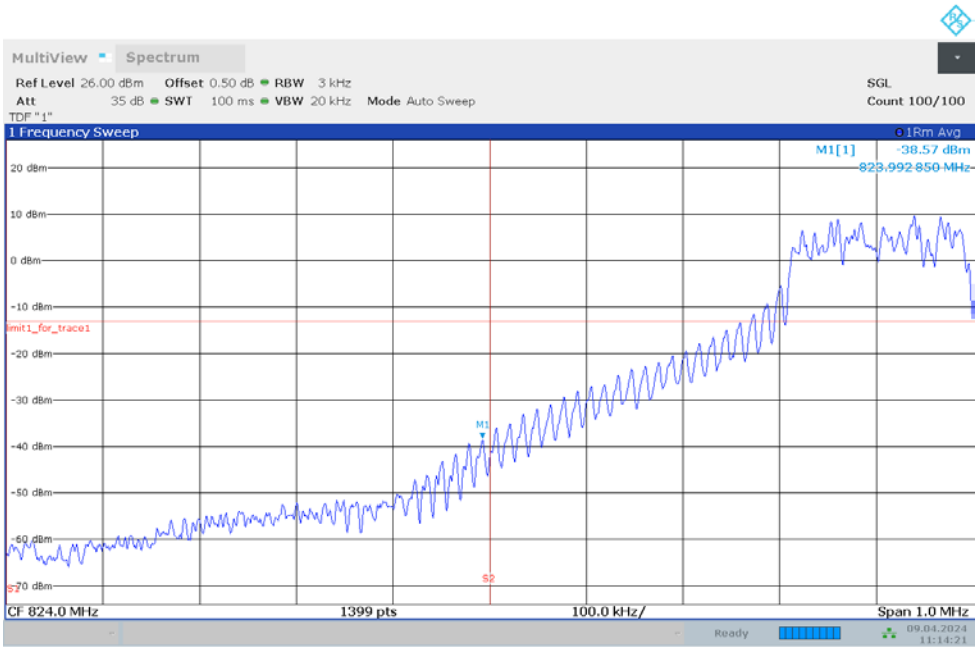
NR n26_Part22

OBW: 1RB-LOW_offset_10M



11:13:34 09.04.2024

LOW BAND EDGE BLOCK-10M-1RB-LOW_offset

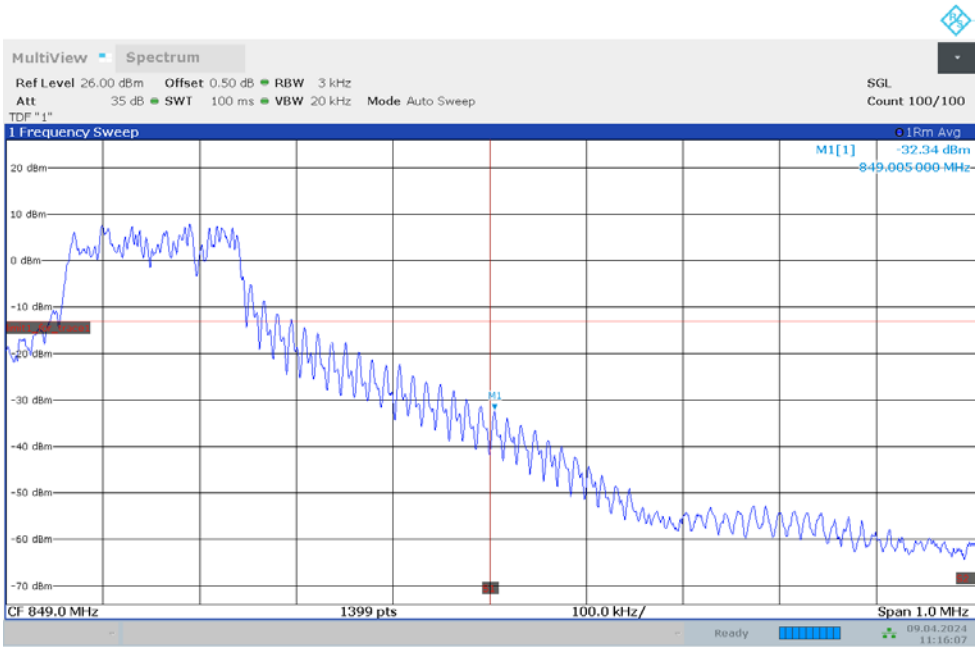


11:14:21 09.04.2024

OBW: 1RB-HIGH_offset_5M

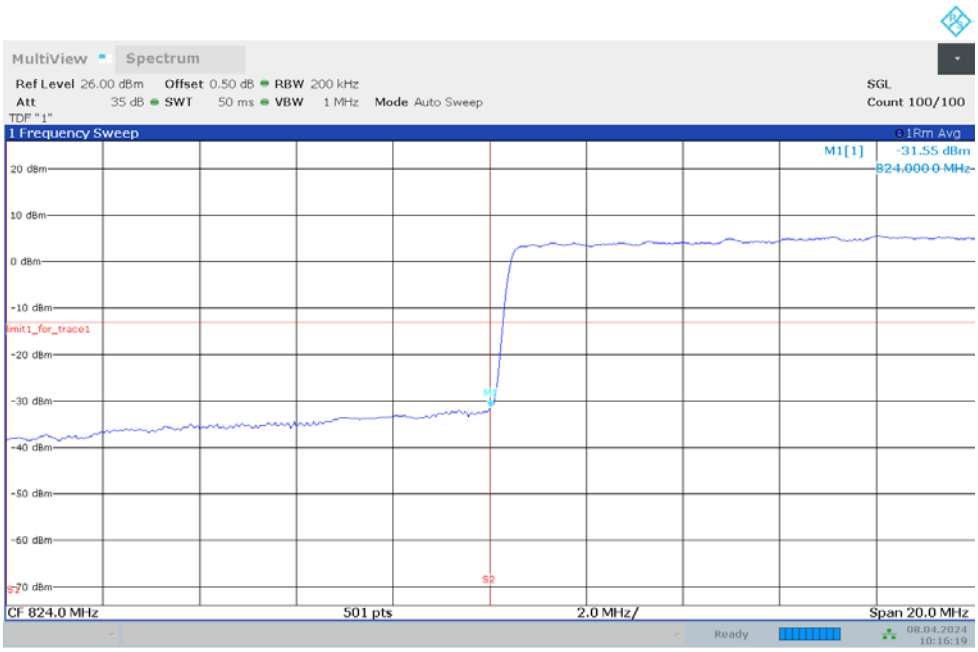
11:15:20 09.04.2024

HIGH BAND EDGE BLOCK-5M-1RB-HIGH_offset



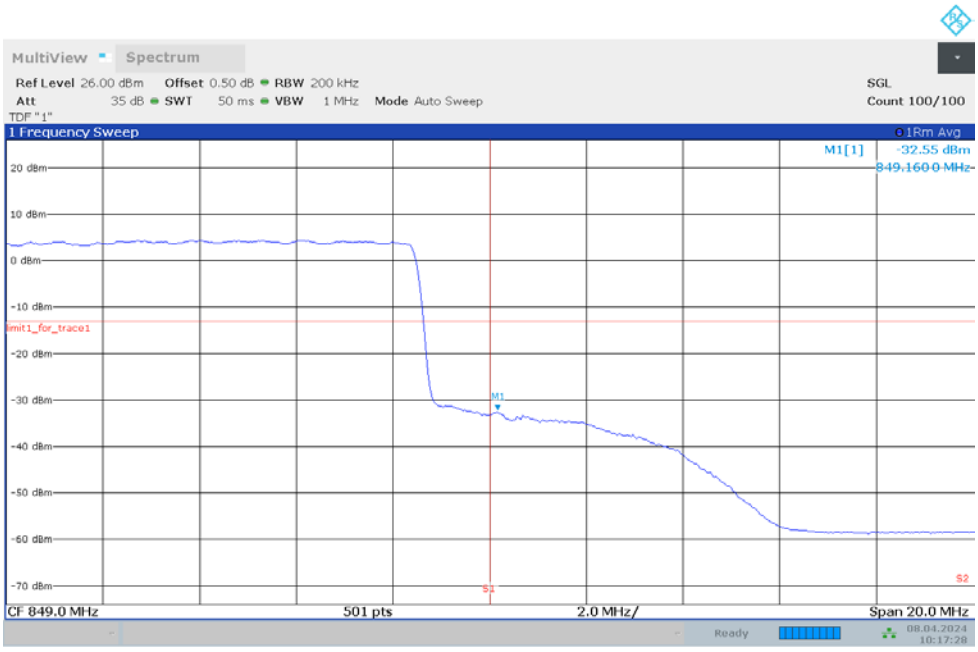
11:16:07 09.04.2024

LOW BAND EDGE BLOCK-20M-100%RB



10:16:20 08.04.2024

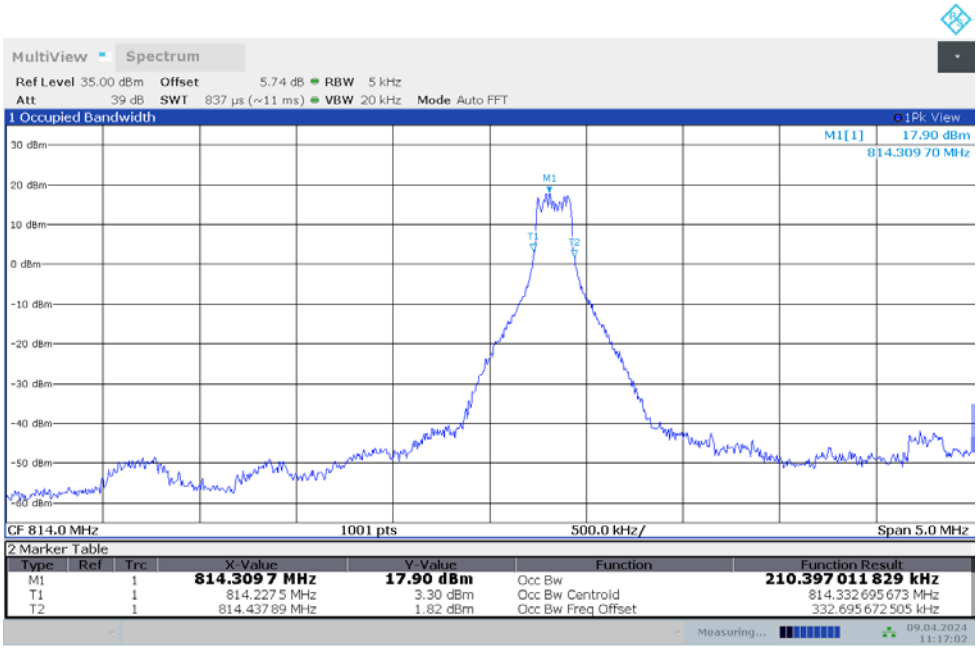
HIGH BAND EDGE BLOCK-20M-100%RB



10:17:28 08.04.2024

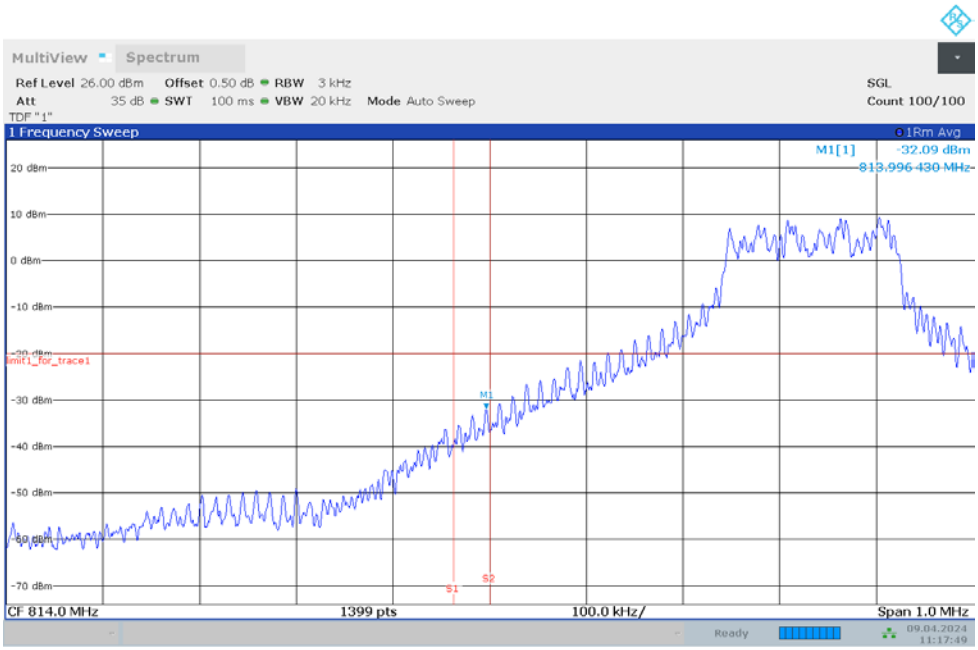
NR n26_Part90

OBW: 1RB-LOW_offset_5M



11:17:02 09.04.2024

LOW BAND EDGE BLOCK-5M-1RB-LOW_offset



11:17:49 09.04.2024

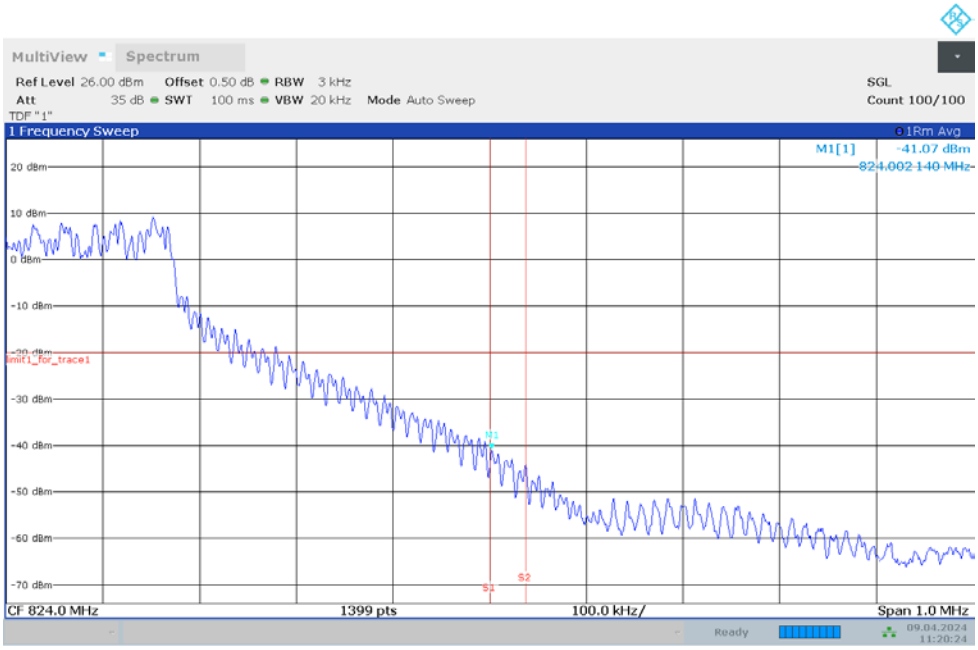
LOW BAND EDGE BLOCK-5M-1RB-LOW_offset

11:18:39 09.04.2024

OBW: 1RB-HIGH_offset_10M

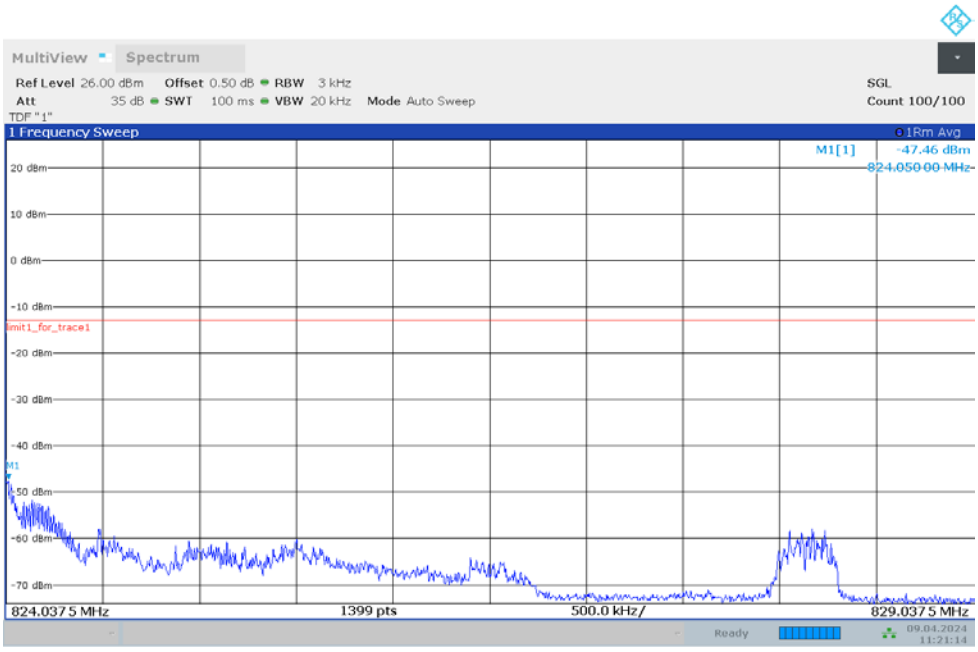
11:19:37 09.04.2024

HIGH BAND EDGE BLOCK-10M-1RB-HIGH_offset



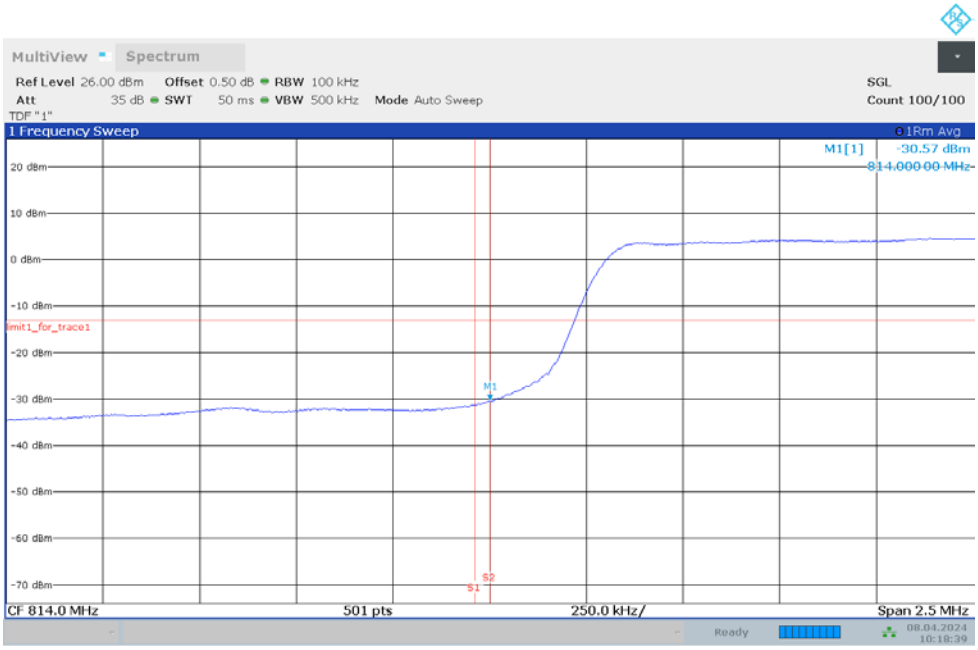
11:20:24 09.04.2024

HIGH BAND EDGE BLOCK-10M-1RB-HIGH_offset



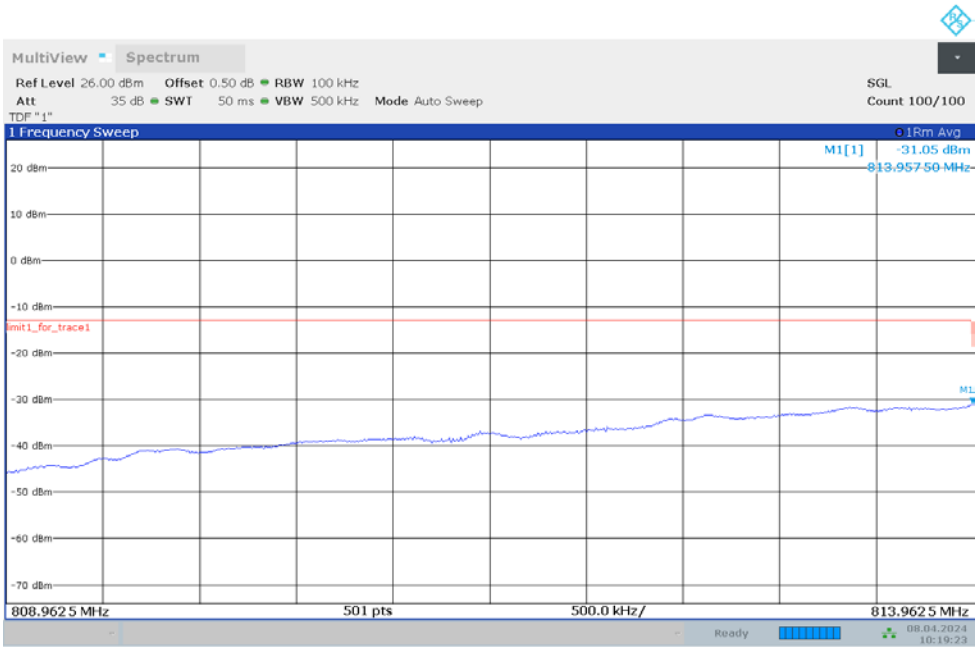
11:21:15 09.04.2024

LOW BAND EDGE BLOCK-10M-100%RB



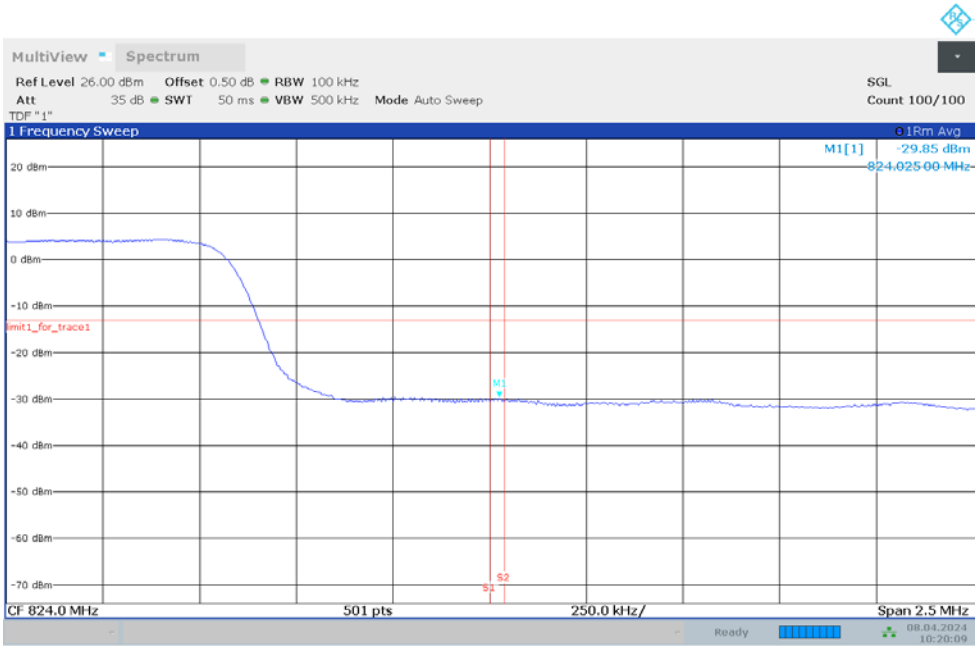
10:18:39 08.04.2024

LOW BAND EDGE BLOCK-10M-100%RB



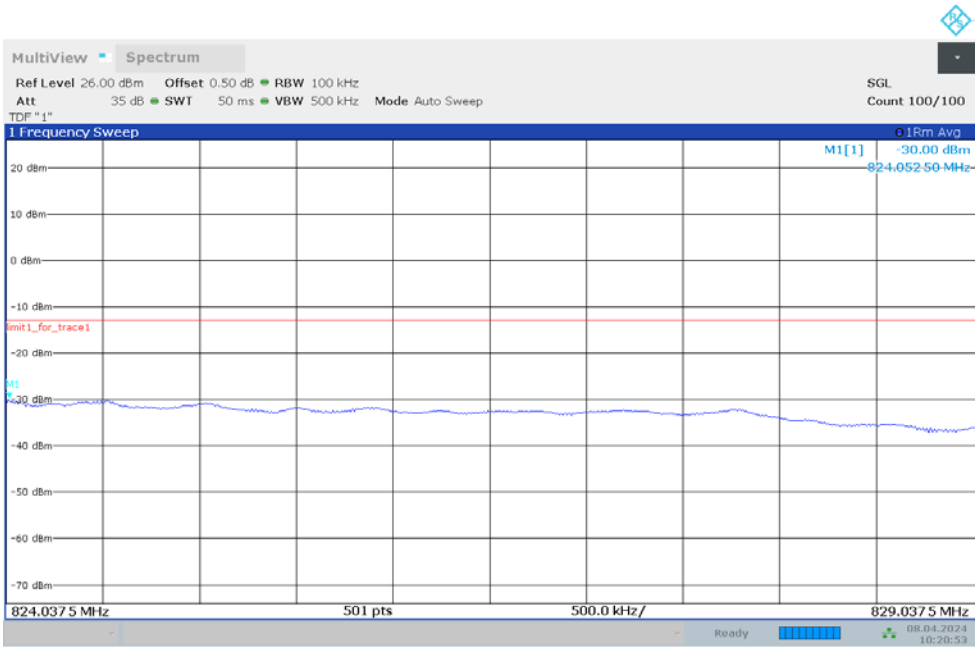
10:19:24 08.04.2024

HIGH BAND EDGE BLOCK-10M-100%RB



10:20:09 08.04.2024

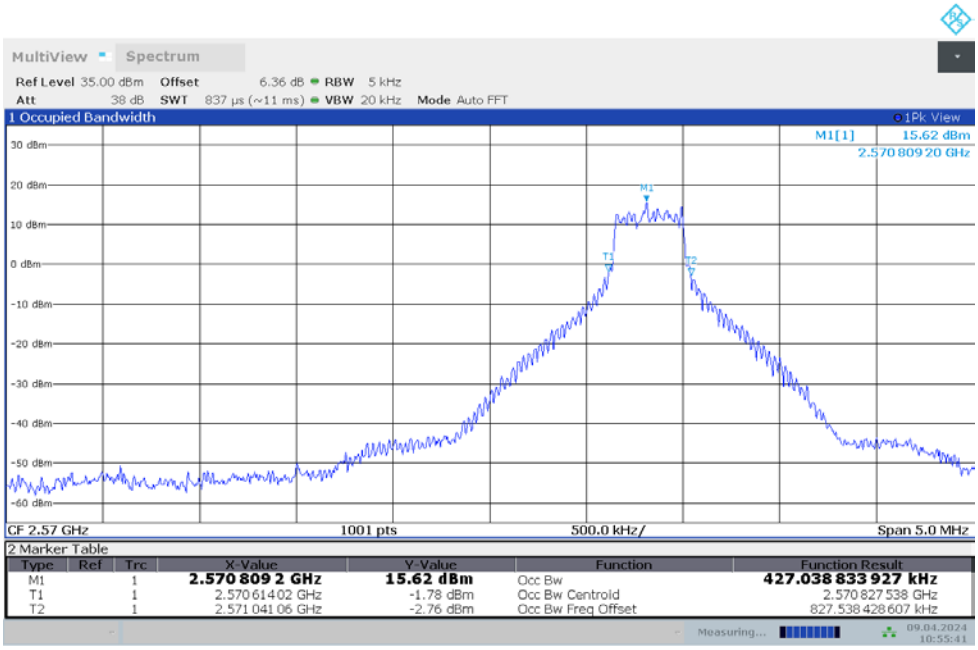
HIGH BAND EDGE BLOCK-10M-100%RB



10:20:53 08.04.2024

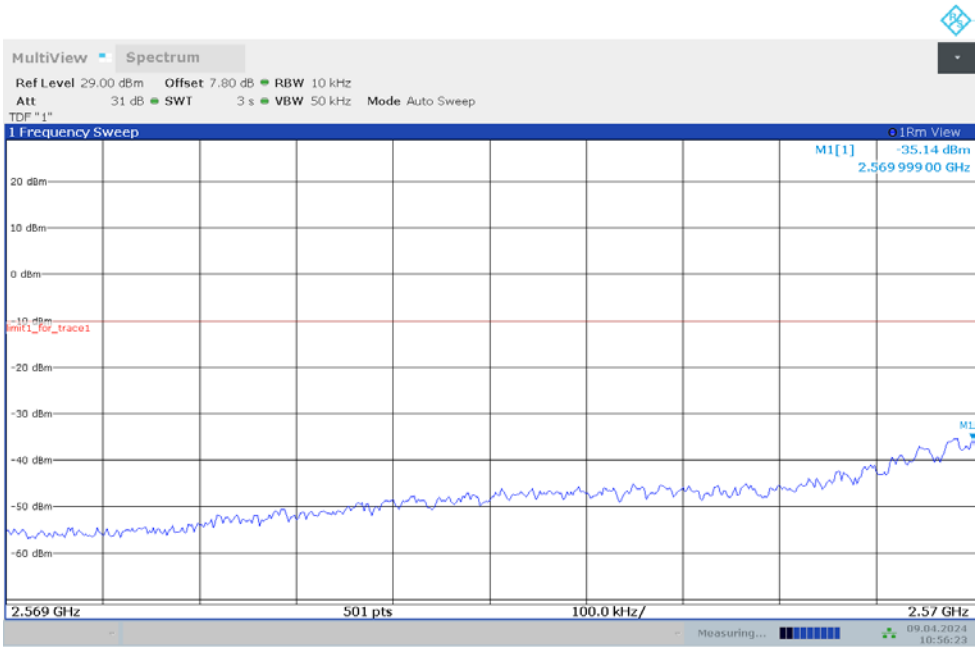
NR n38

OBW: 1RB-LOW_offset_15M



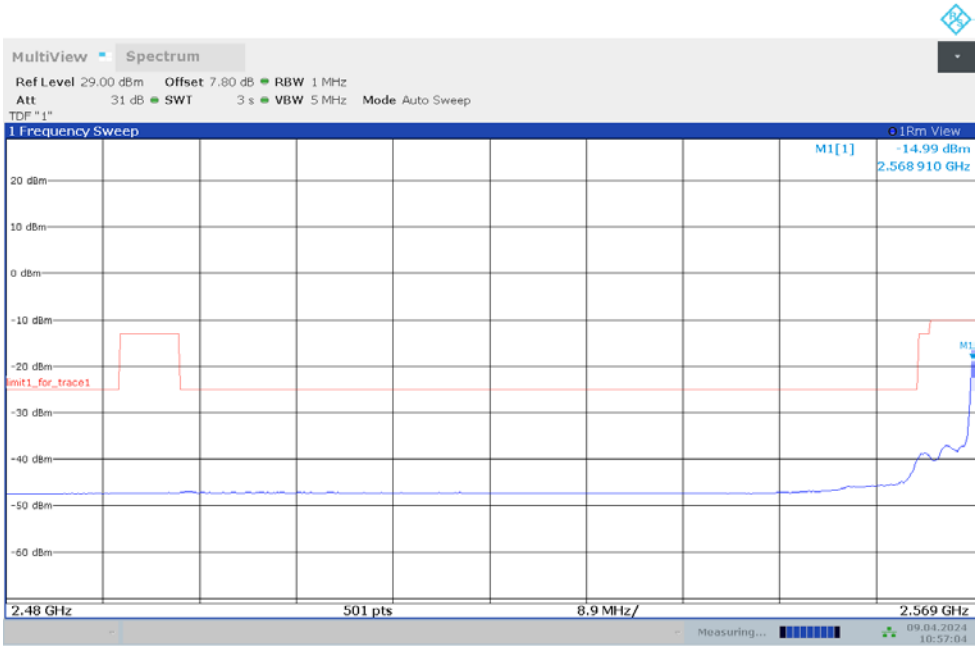
10:55:42 09.04.2024

LOW BAND EDGE BLOCK-15M-1RB-LOW_offset



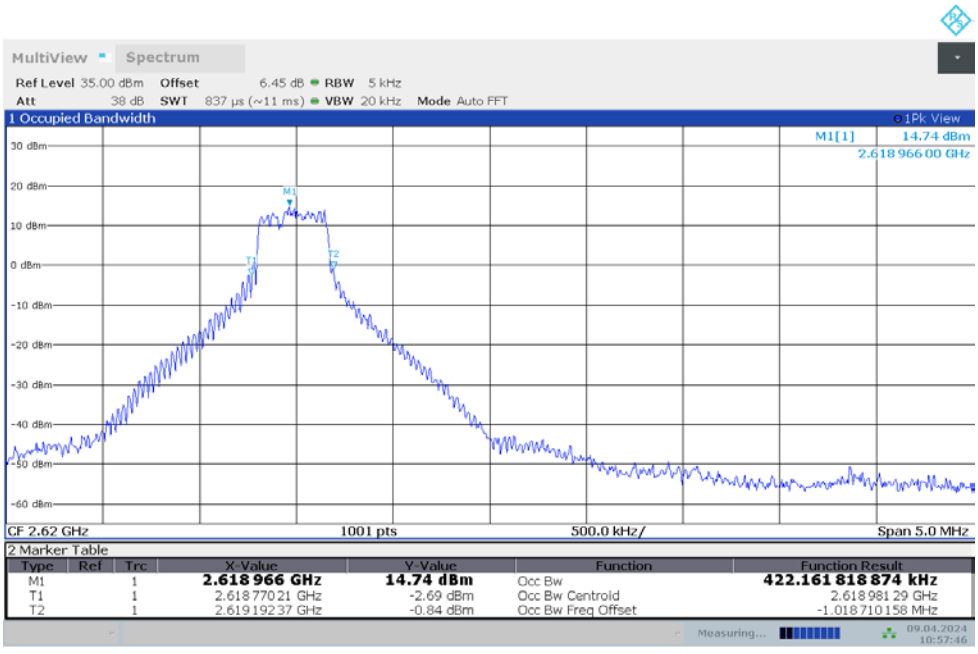
10:56:24 09.04.2024

LOW BAND EDGE BLOCK-15M-1RB-LOW_offset



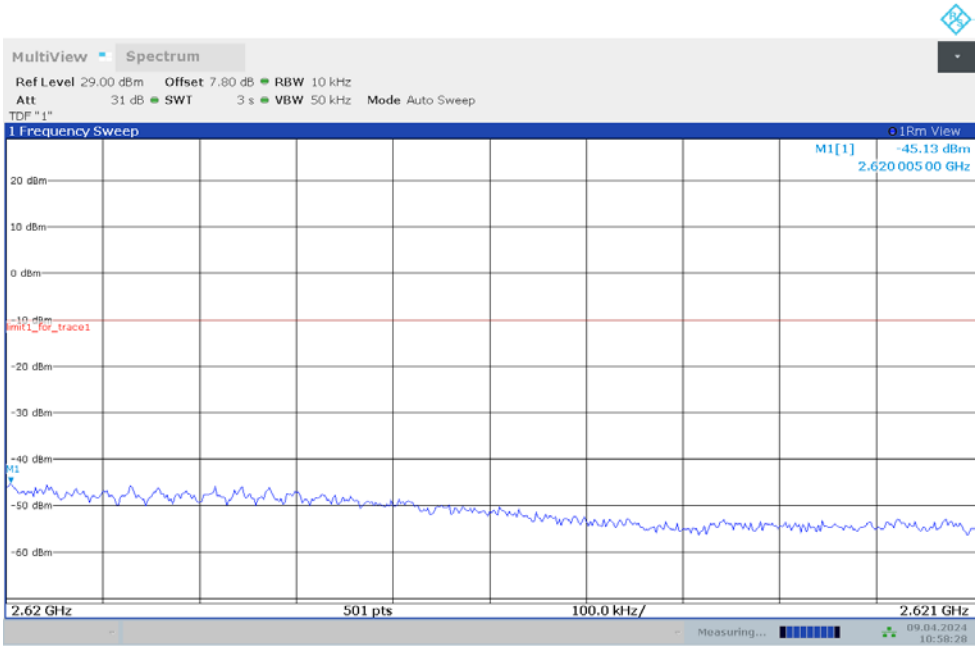
10:57:05 09.04.2024

OBW: 1RB-HIGH_offset_20M



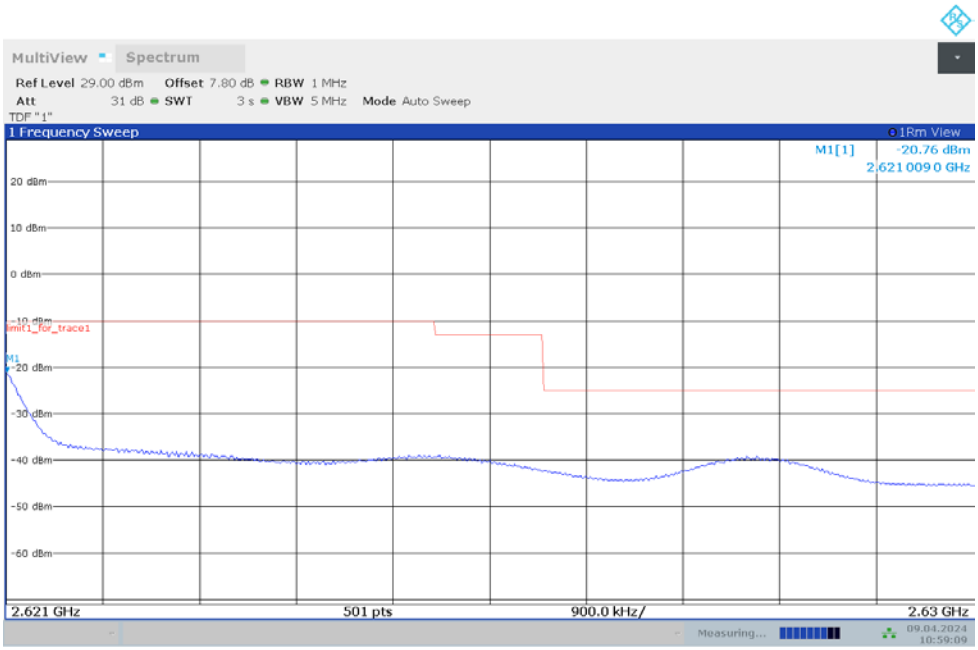
10:57:47 09.04.2024

HIGH BAND EDGE BLOCK-20M-1RB-HIGH_offset



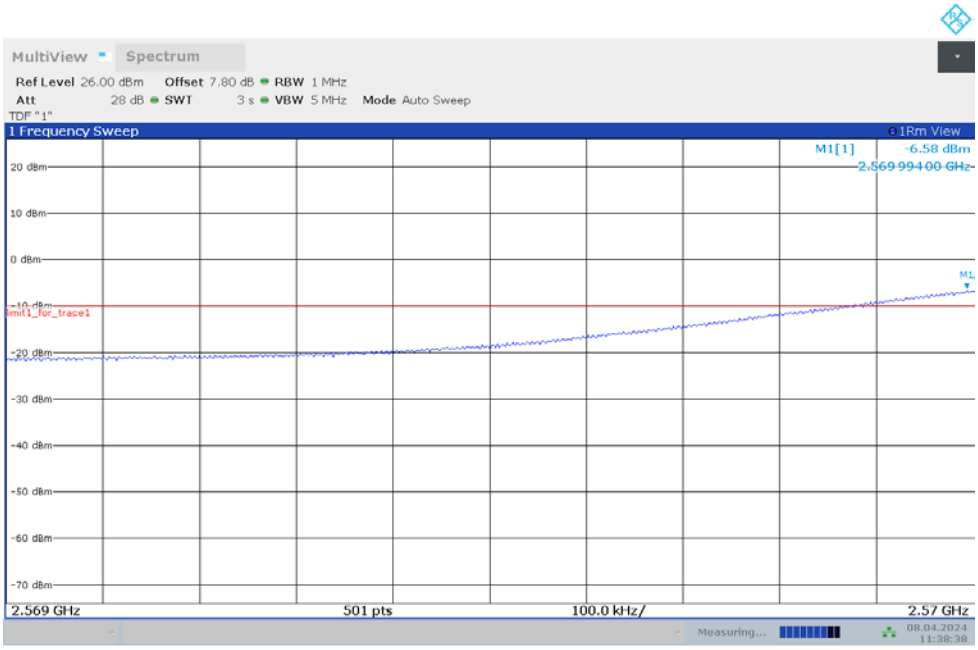
10:58:29 09.04.2024

HIGH BAND EDGE BLOCK-20M-1RB-HIGH_offset



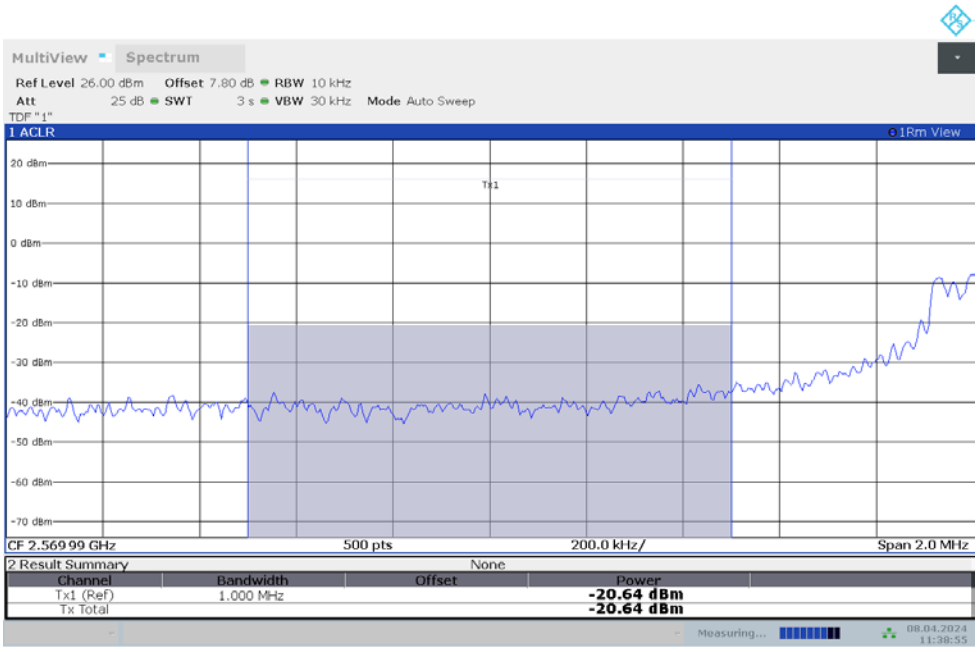
10:59:10 09.04.2024

LOW BAND EDGE BLOCK-40M-100%RB



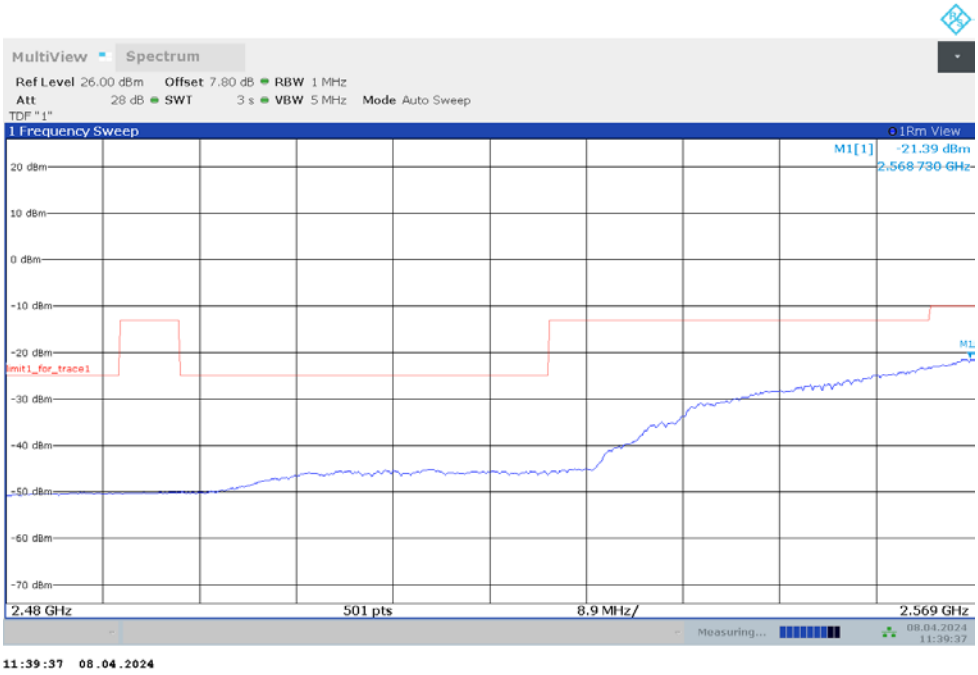
11:38:39 08.04.2024

Channel power

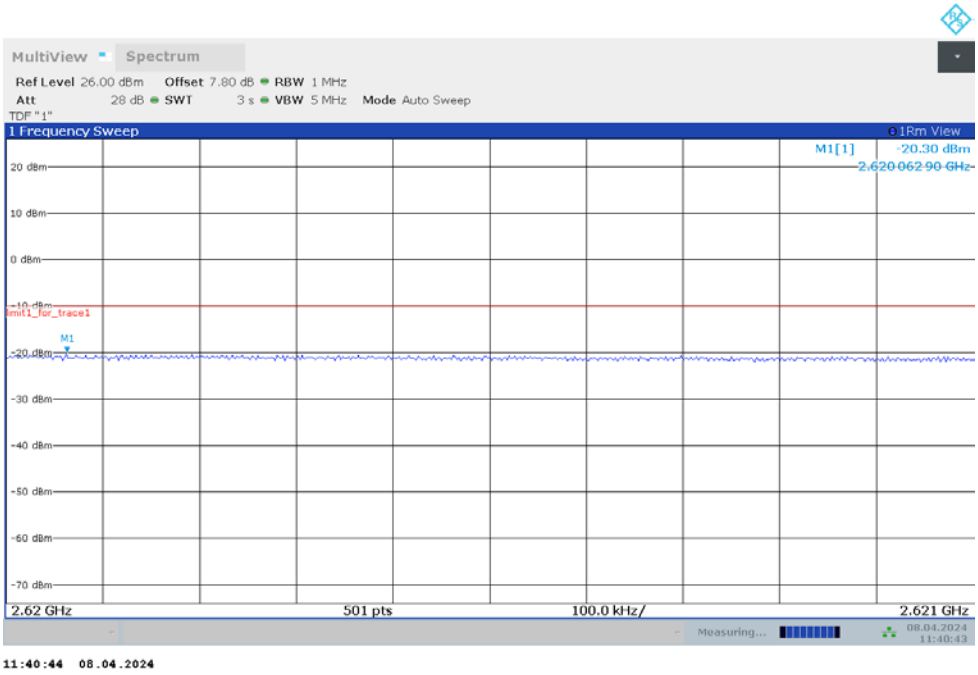


11:38:56 08.04.2024

LOW BAND EDGE BLOCK-40M-100%RB

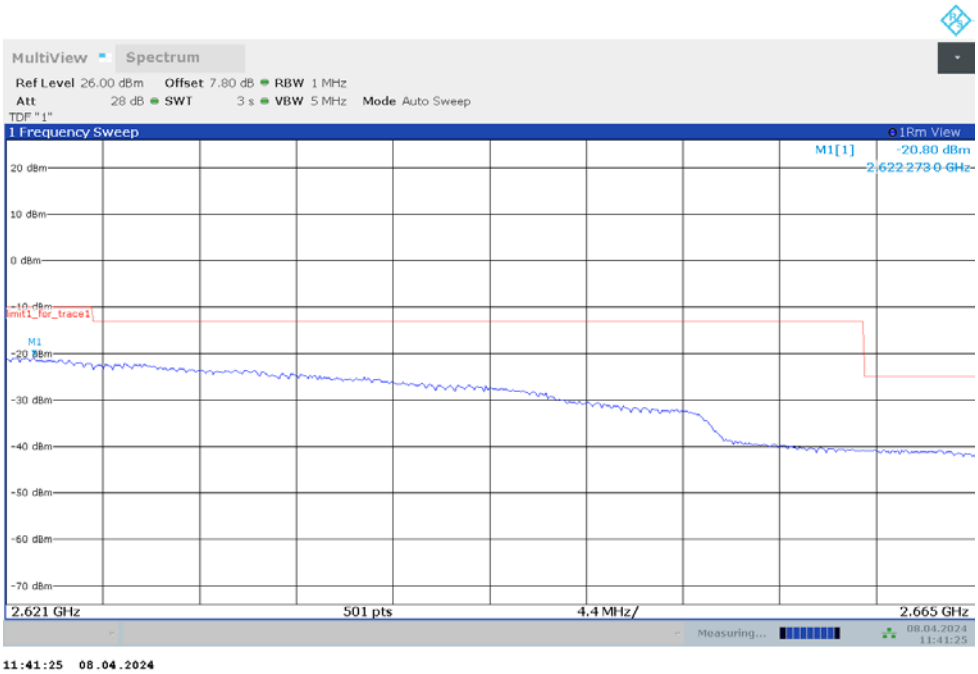


HIGH BAND EDGE BLOCK-40M-100%RB



11:40:44 08.04.2024

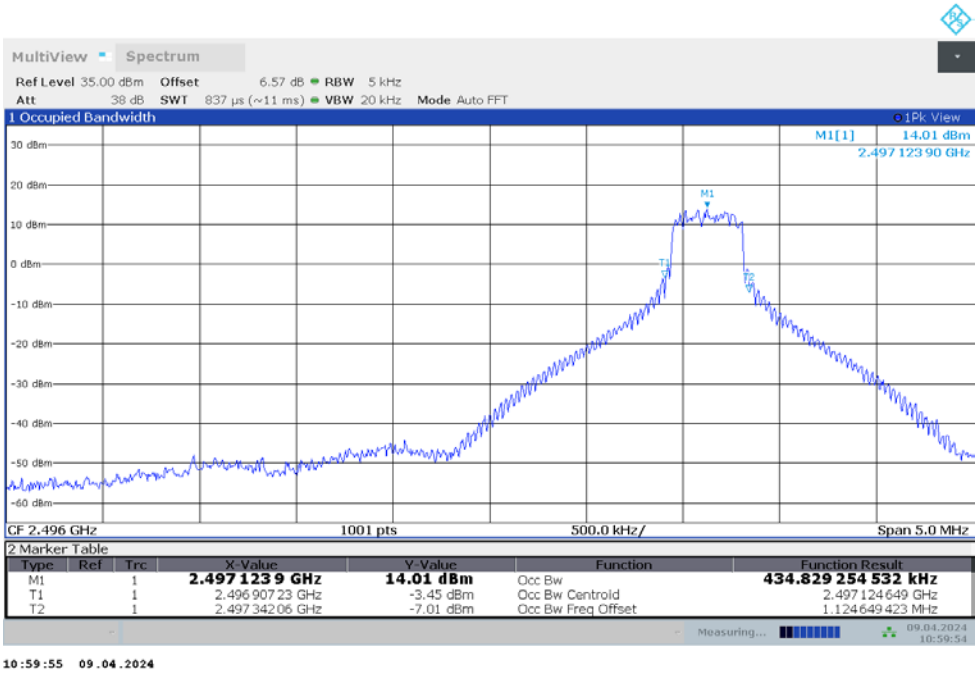
HIGH BAND EDGE BLOCK-40M-100%RB



11:41:25 08.04.2024

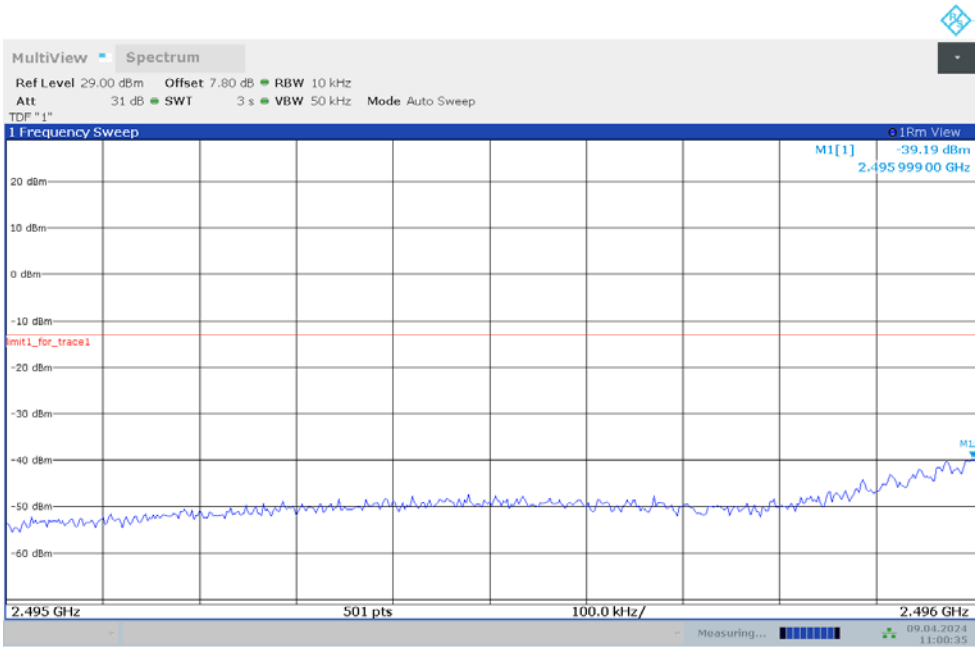
NR n41

OBW: 1RB-LOW_offset_80M



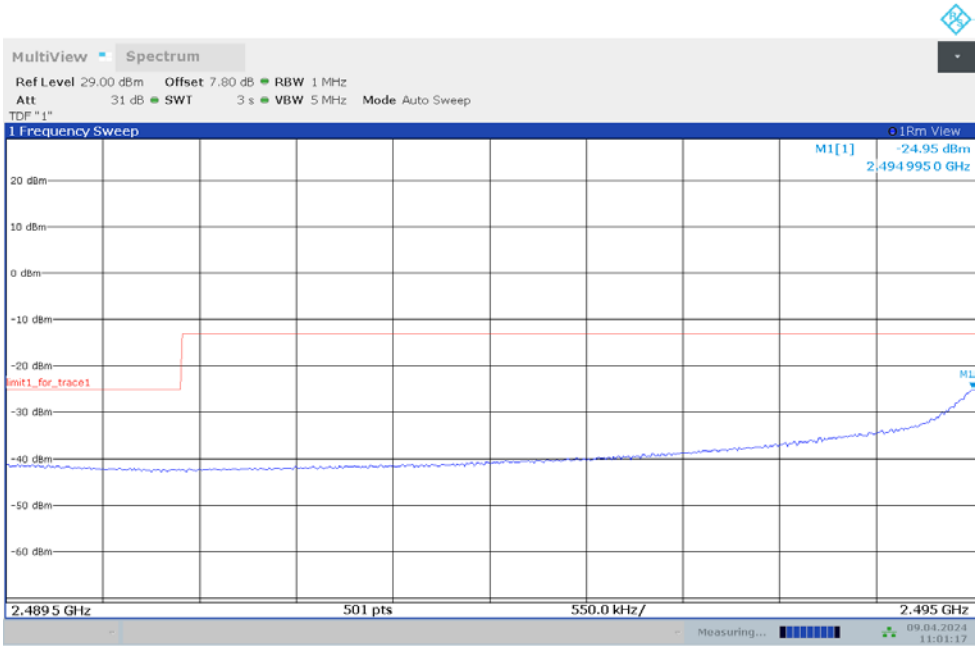
10:59:55 09.04.2024

LOW BAND EDGE BLOCK-80M-1RB-LOW_offset



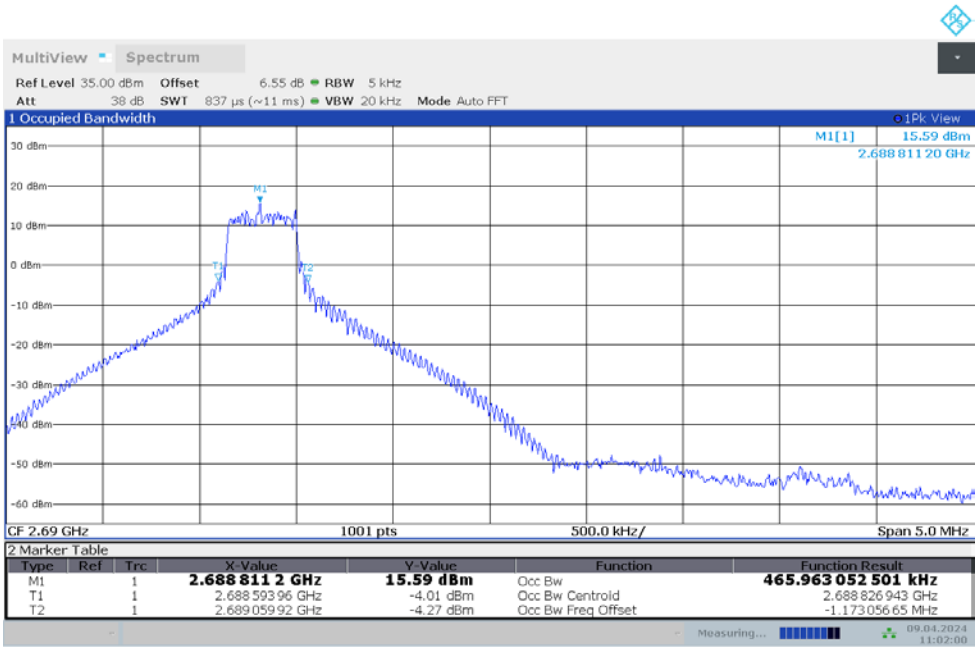
11:00:36 09.04.2024

LOW BAND EDGE BLOCK-80M-1RB-LOW_offset



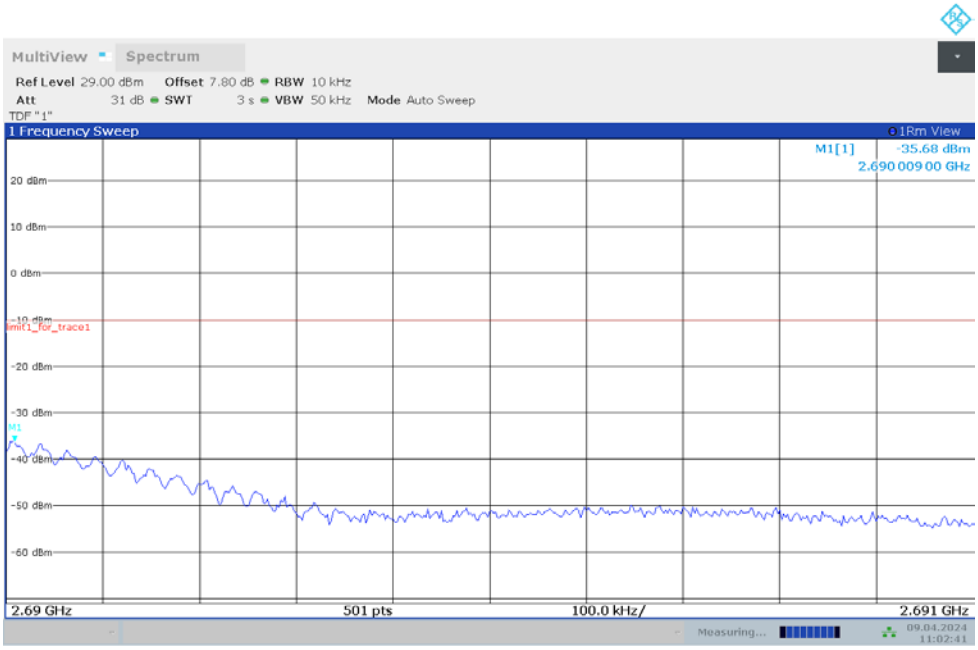
11:01:18 09.04.2024

OBW: 1RB-HIGH_offset_30M



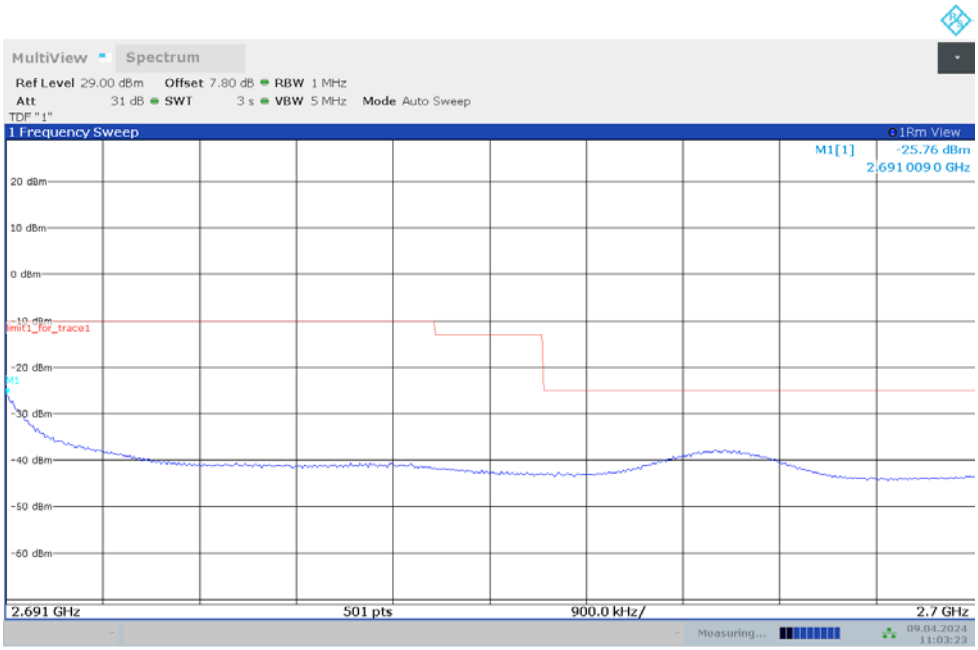
11:02:01 09.04.2024

HIGH BAND EDGE BLOCK-30M-1RB-HIGH_offset



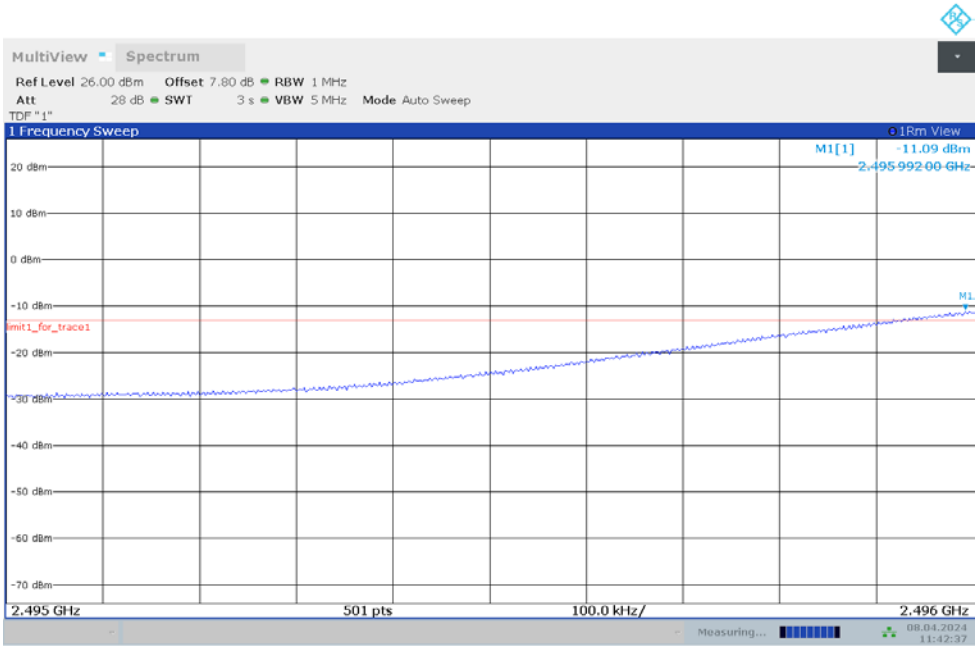
11:02:42 09.04.2024

HIGH BAND EDGE BLOCK-30M-1RB-HIGH_offset



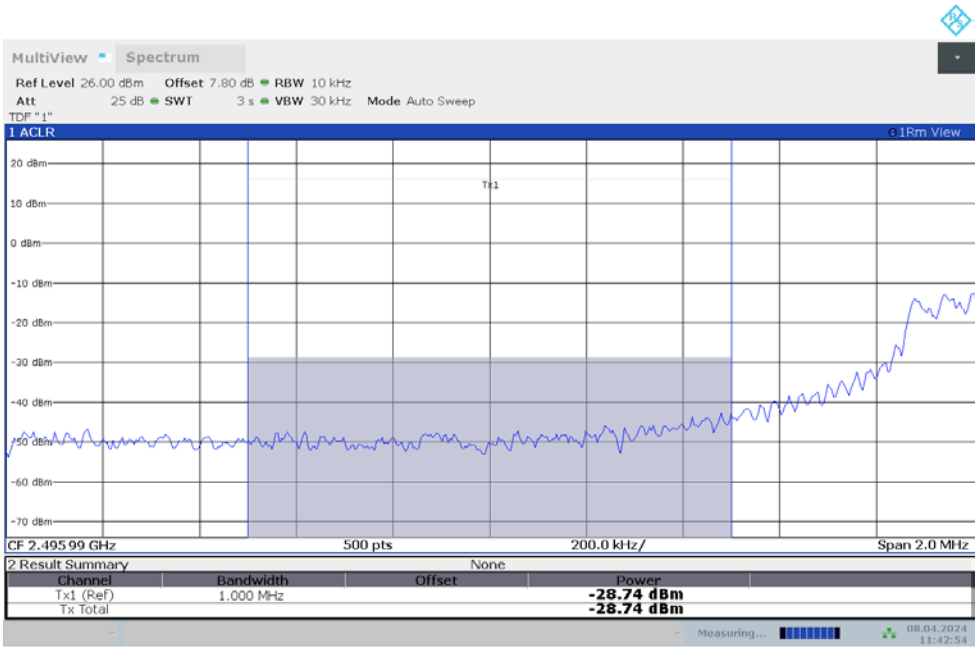
11:03:24 09.04.2024

LOW BAND EDGE BLOCK-100M-100%RB



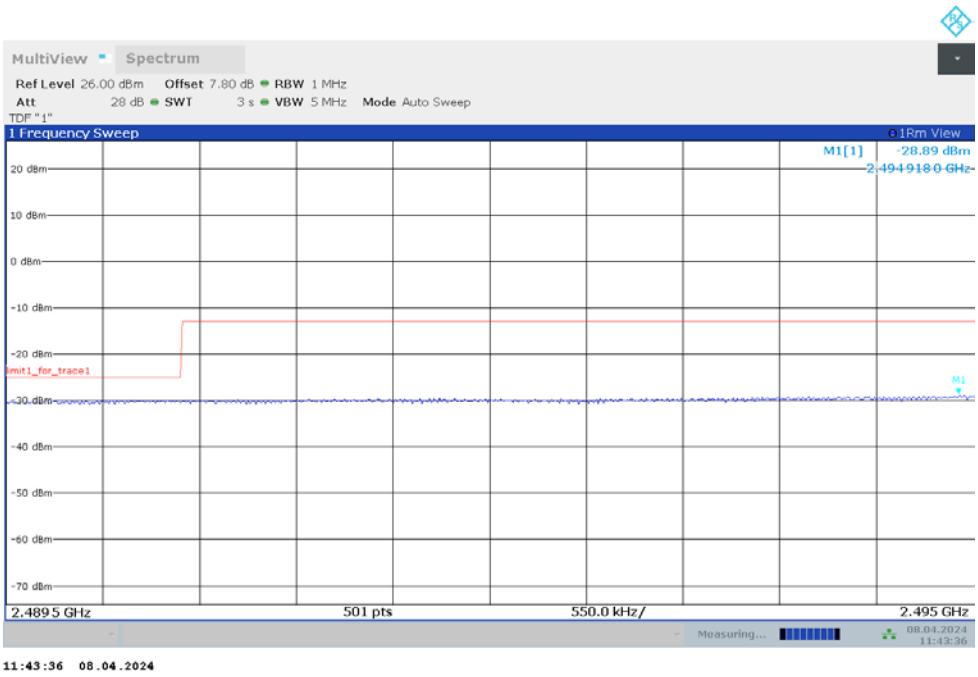
11:42:38 08.04.2024

Channel power

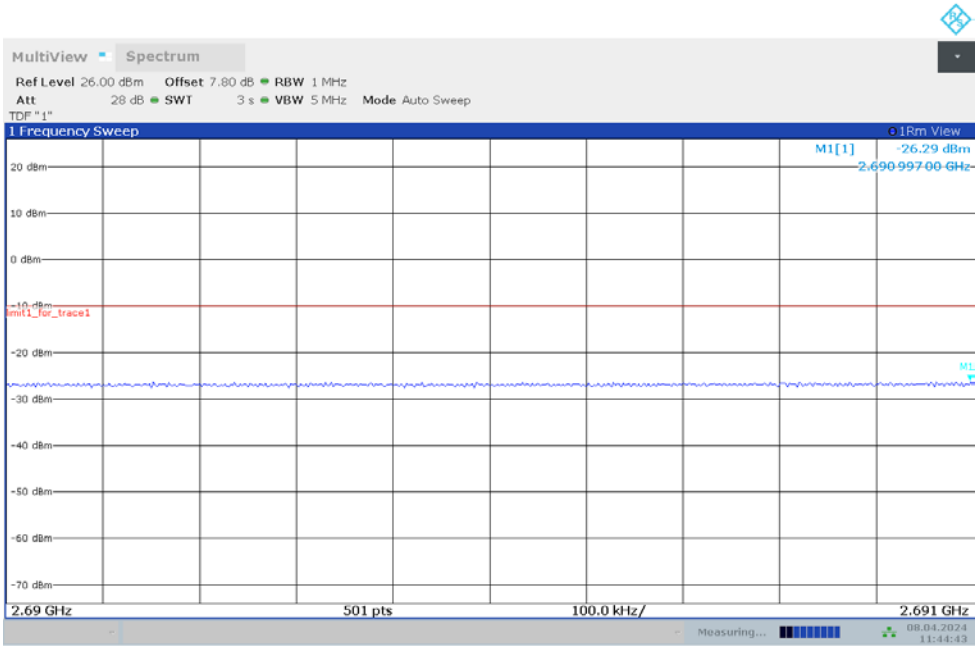


11:42:55 08.04.2024

LOW BAND EDGE BLOCK-100M-100%RB

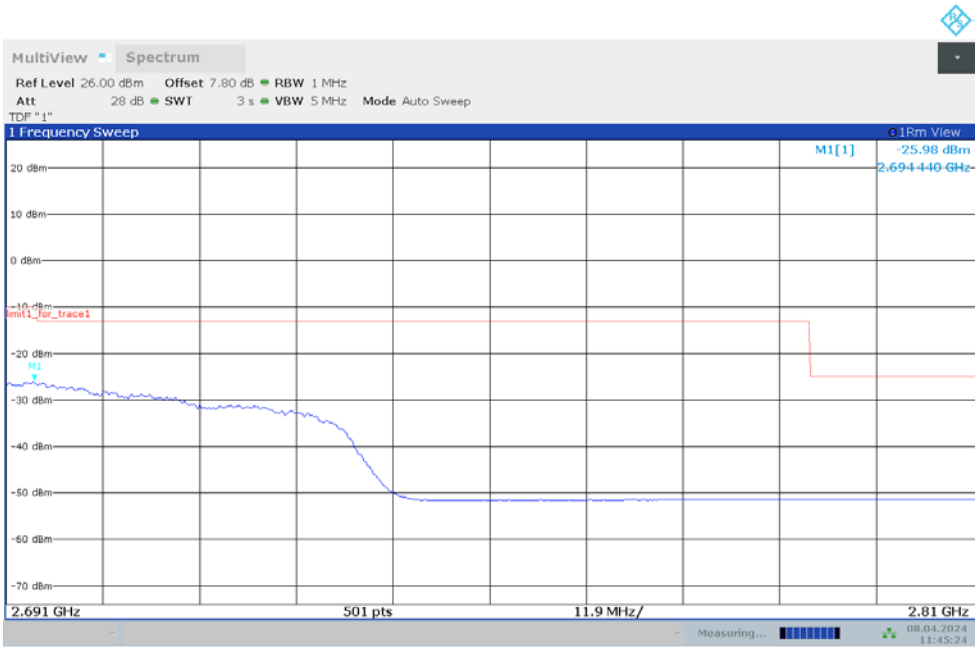


HIGH BAND EDGE BLOCK-100M-100%RB



11:44:44 08.04.2024

HIGH BAND EDGE BLOCK-100M-100%RB



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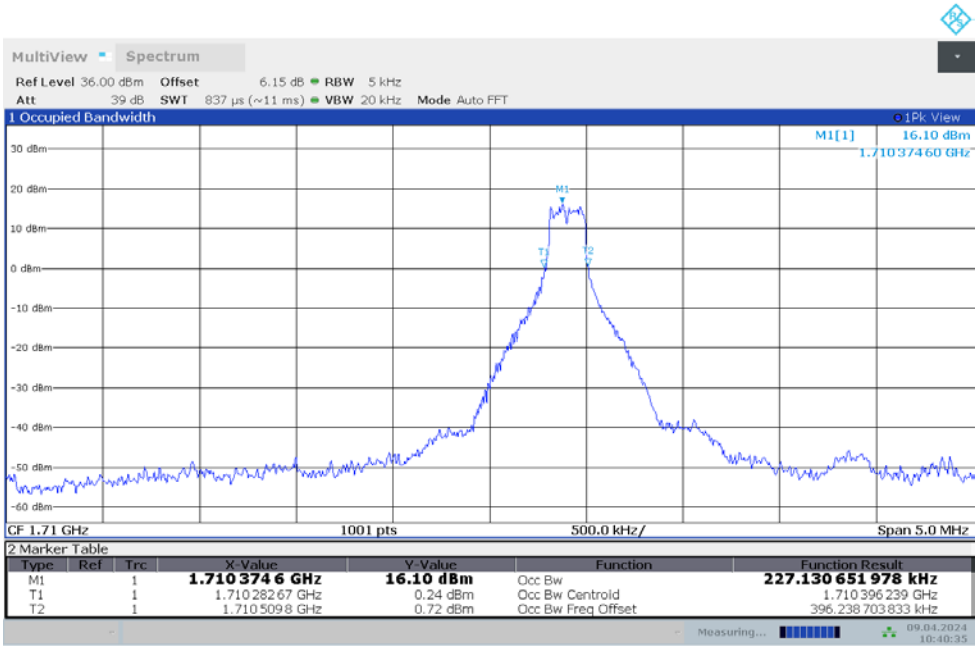
NR n66

OBW: 1RB-LOW_offset_10M



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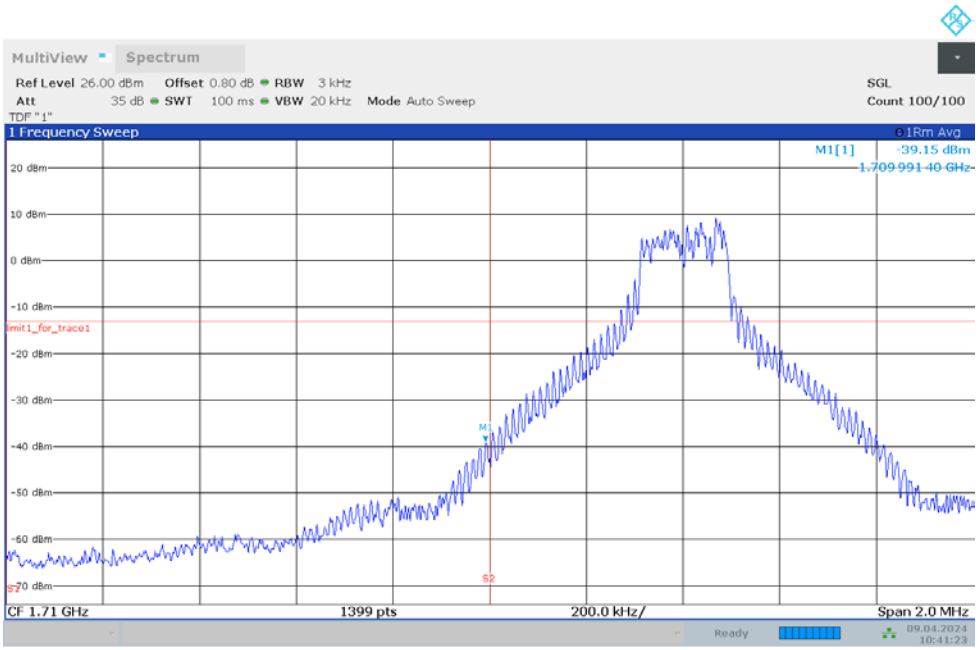
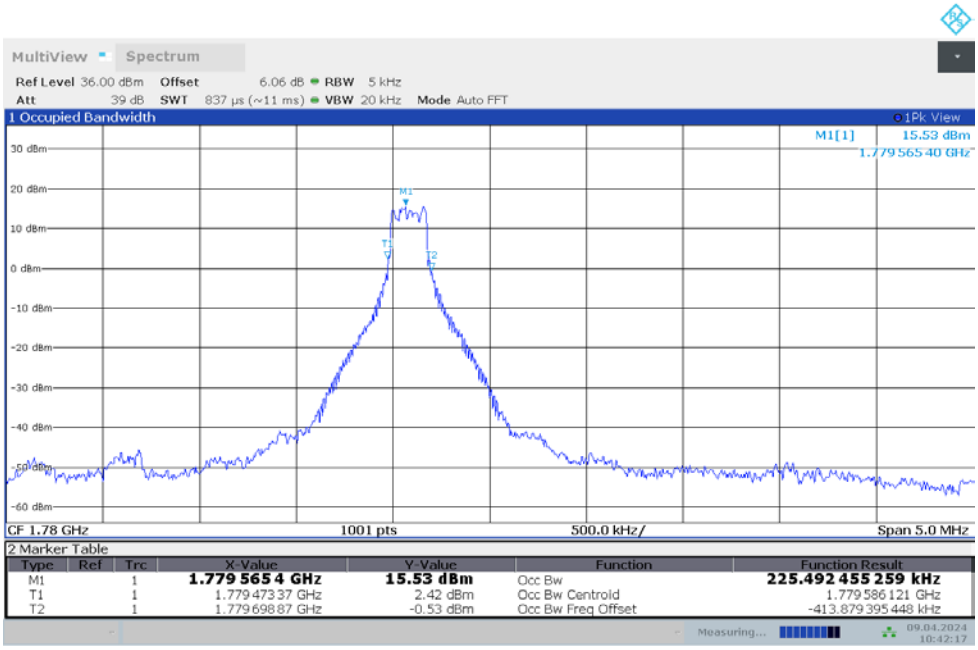
LOW BAND EDGE BLOCK-10M-1RB-LOW_offset



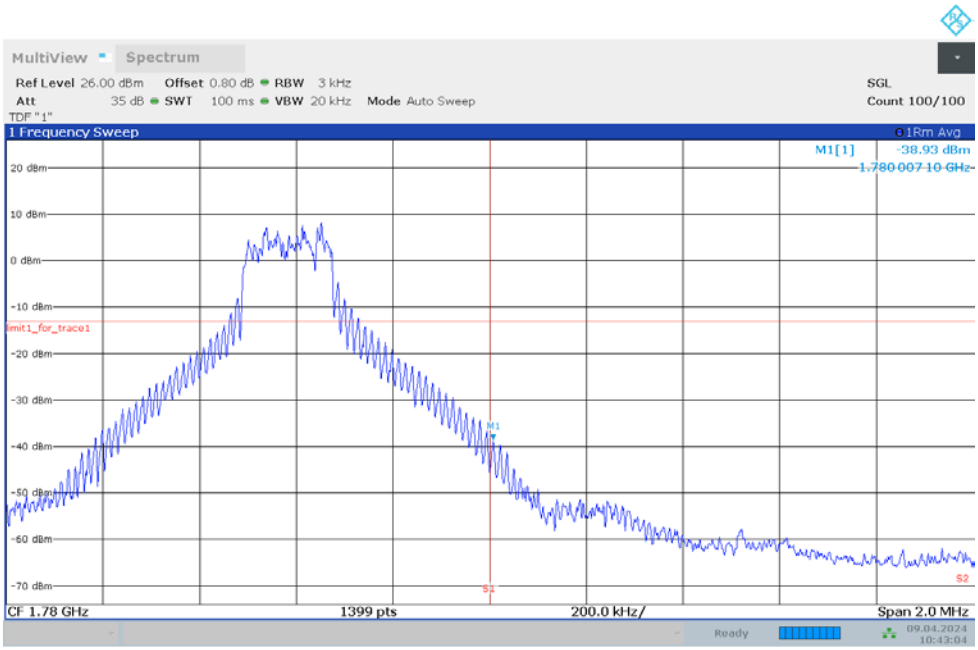
10:41:23 09.04.2024

OBW: 1RB-HIGH_offset_10M



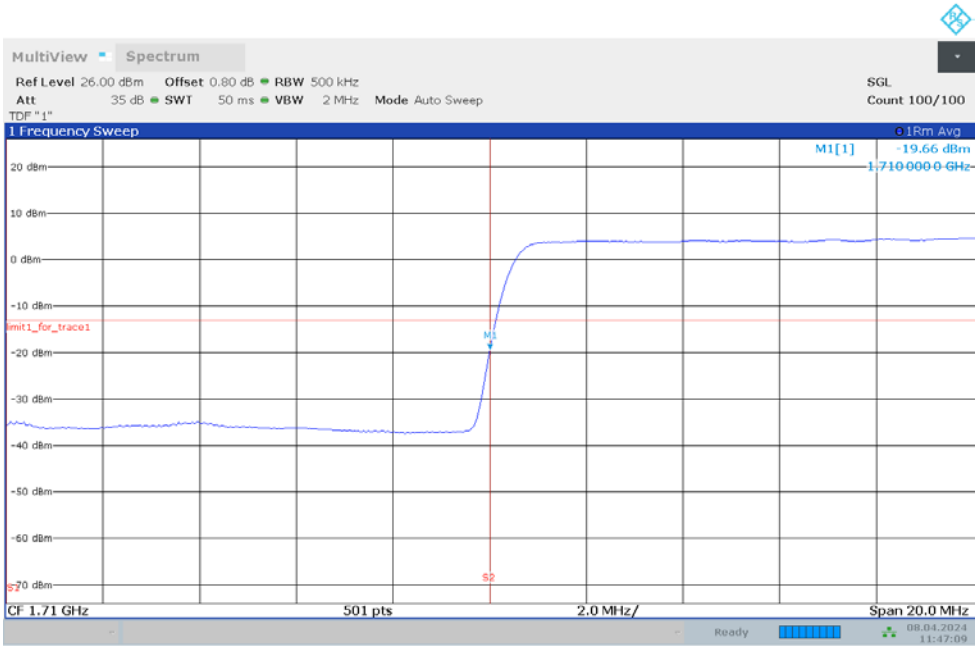
10:42:17 09.04.2024

HIGH BAND EDGE BLOCK-10M-1RB-HIGH_offset



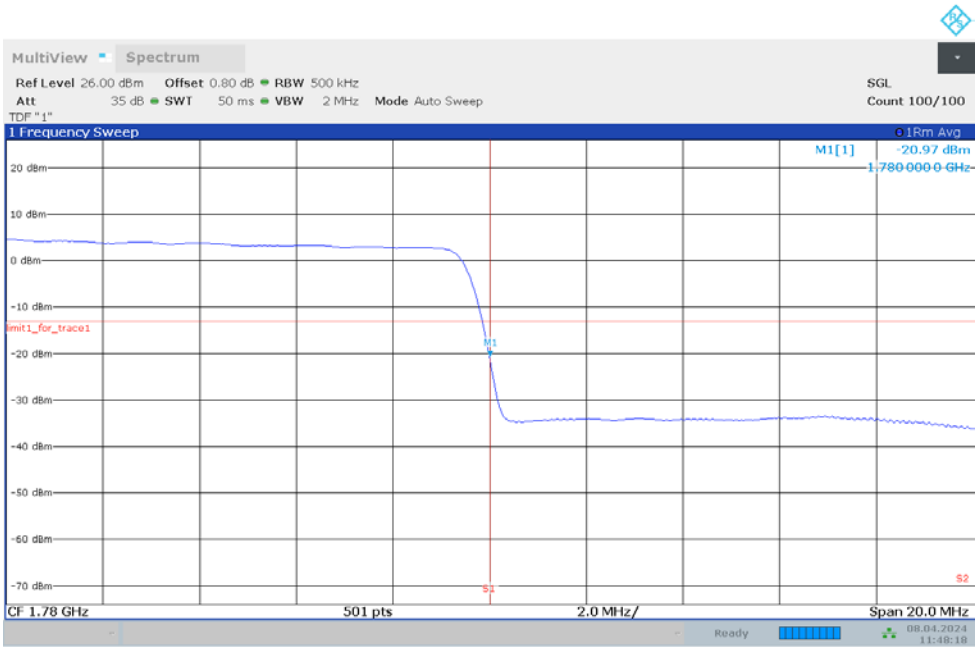
10:43:04 09.04.2024

LOW BAND EDGE BLOCK-40M-100%RB



11:47:10 08.04.2024

HIGH BAND EDGE BLOCK-40M-100%RB



11:48:19 08.04.2024

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×span/RBW.

A. 7.2 Measurement Limit

Part 22.917, Part 24.238 and Part 27.53(h) specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

Part 27.53(m) specifies 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 that 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.

Part 27.53(g) states for operations in the 600 MHz band and the 698–746 MHz band, the power of any emission outside a 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, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

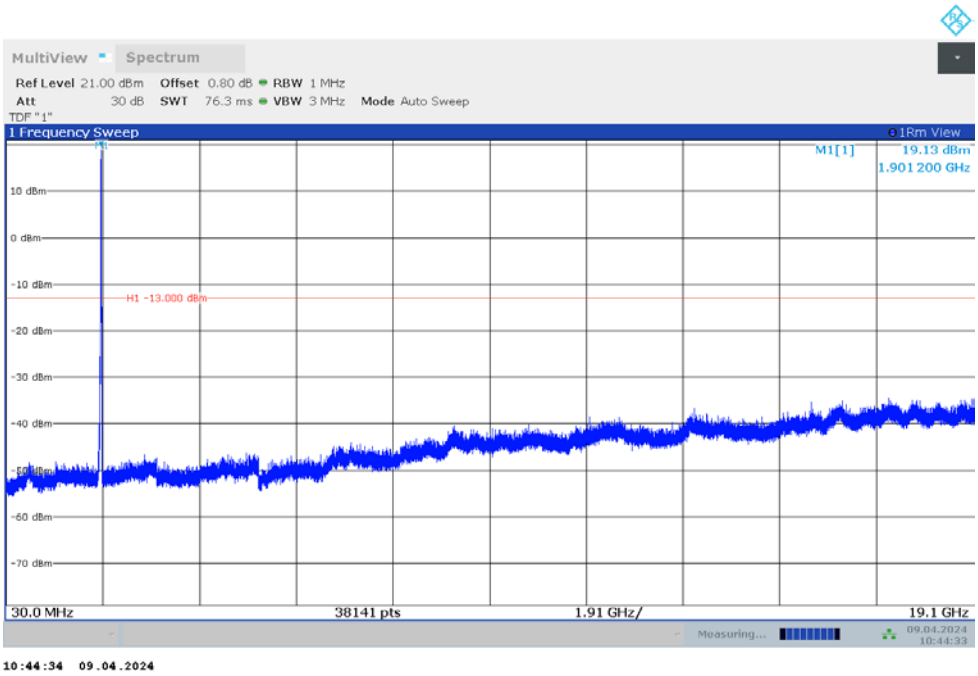
Part 90.691 states that out-of-band emission requirement shall apply only to the ''outer'' channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116Log10(f/6.1) decibels or 50 + 10 Log10(P)

decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz. For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

A. 7.3 Measurement result

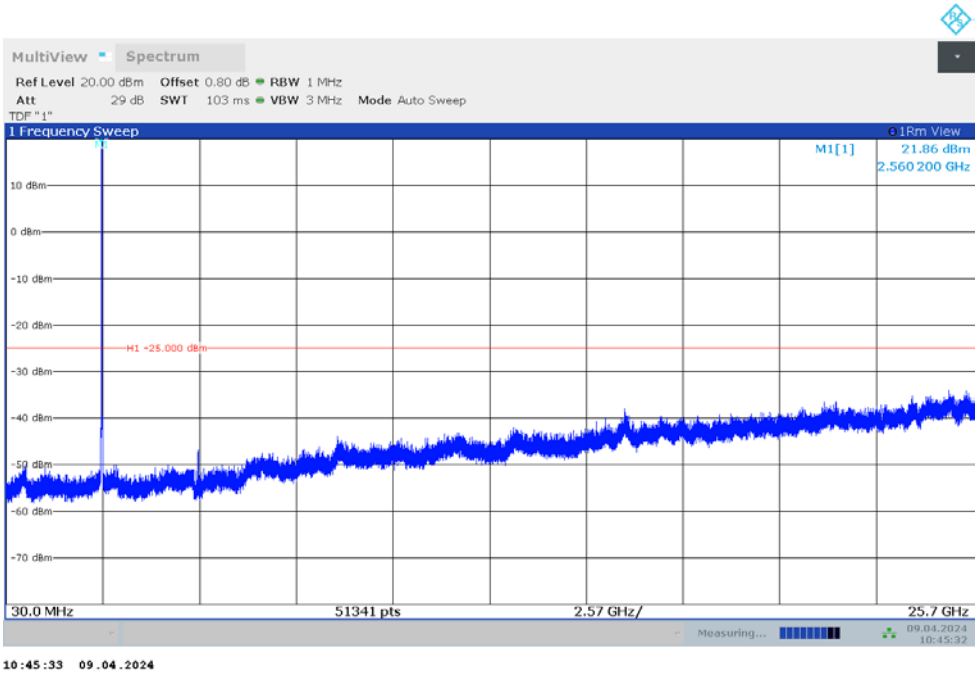
n2

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



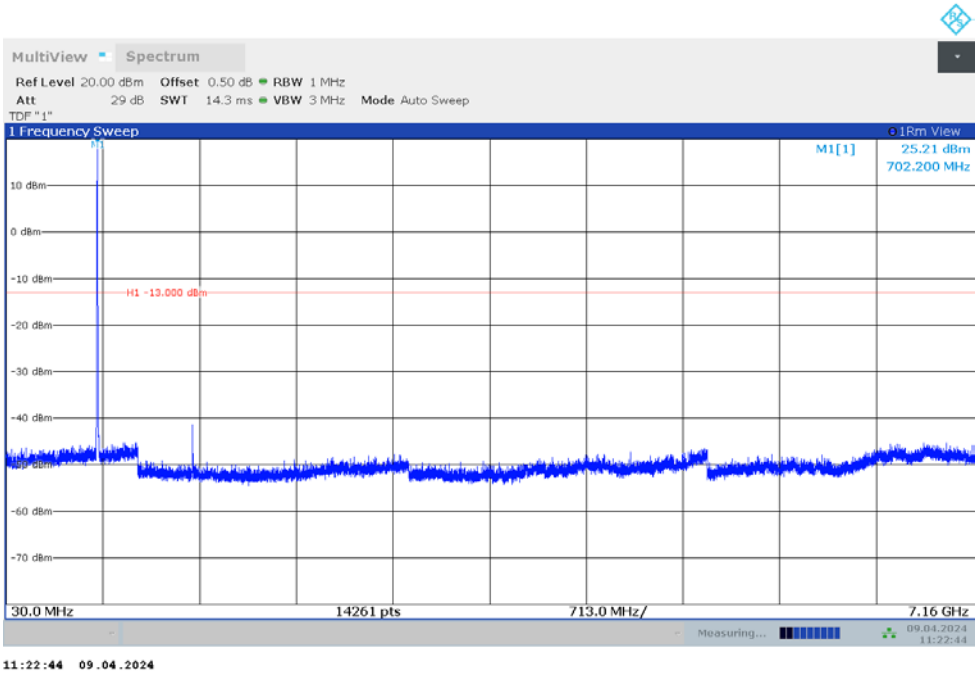
n7

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



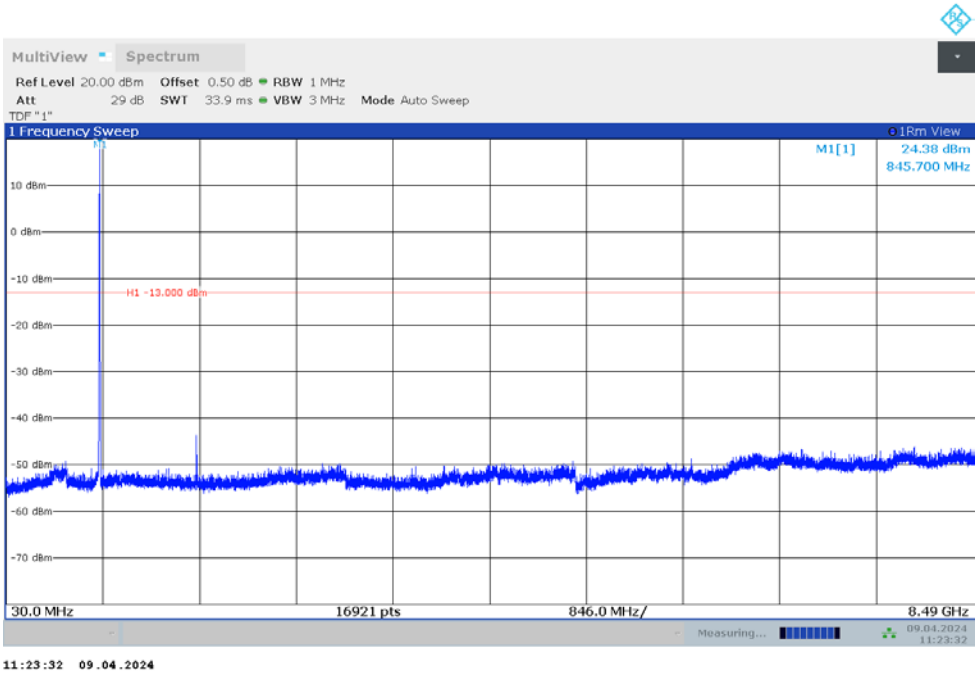
n12

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



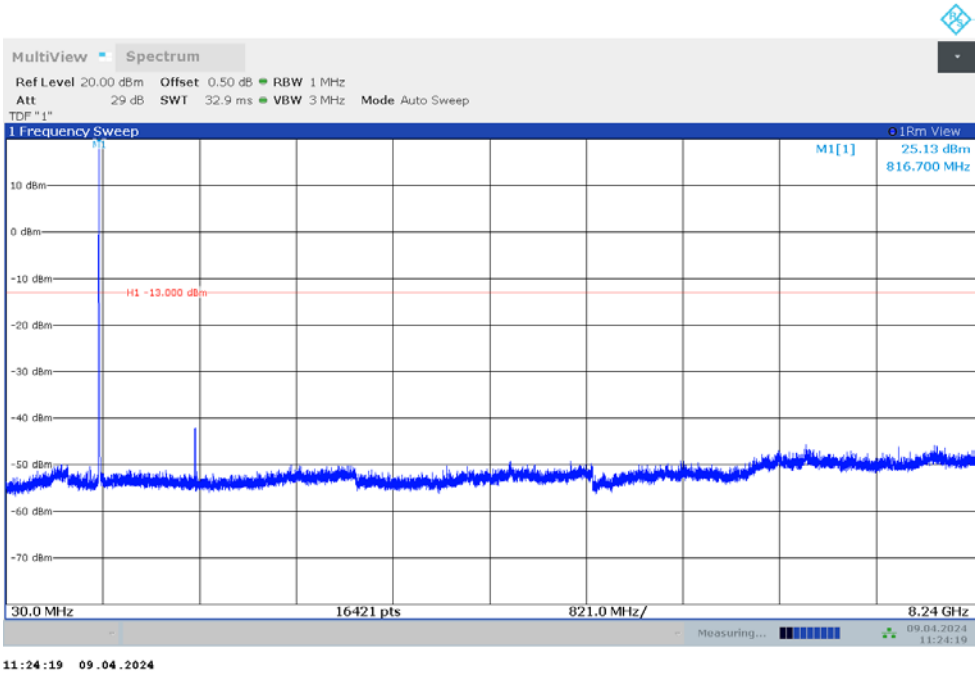
n26_Part22

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



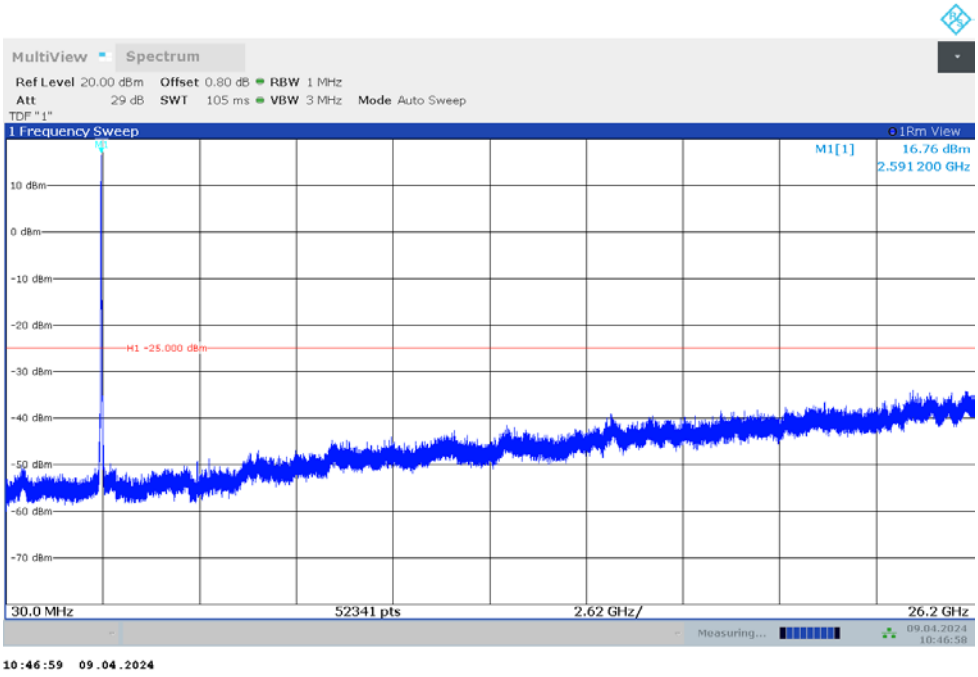
n26_Part90

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



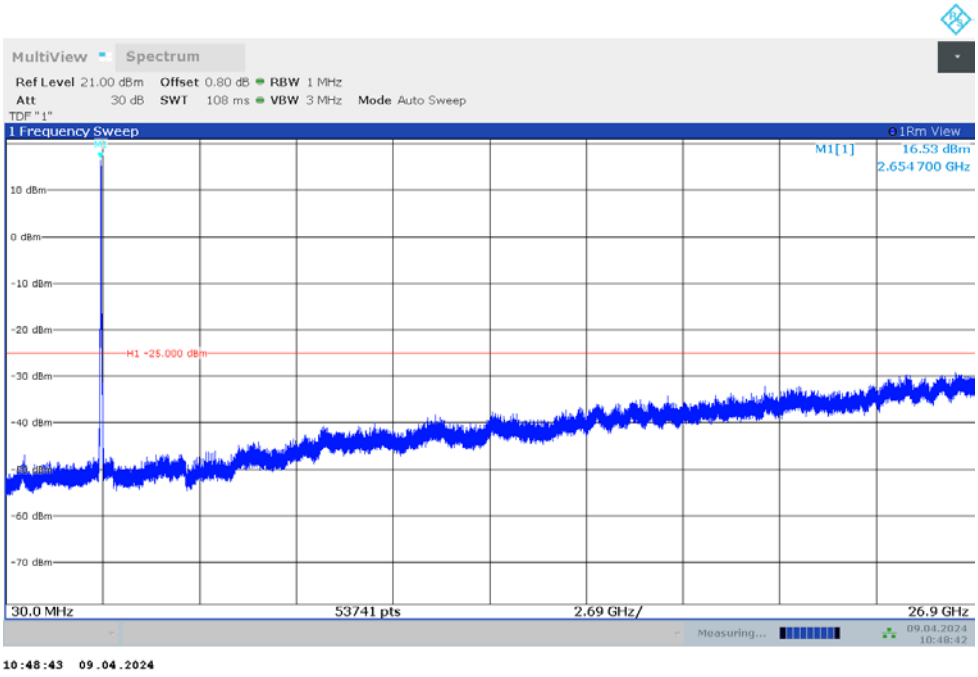
n38

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



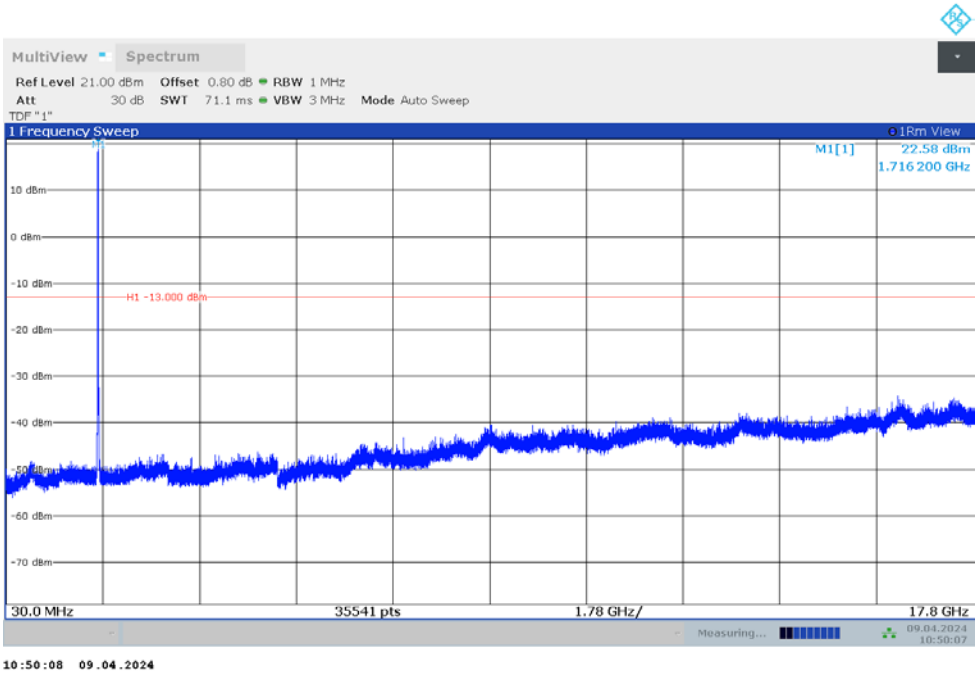
n41

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



n66

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

n2,20MHz

Frequency (MHz)	PAPR (dB)							
	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK	CP-16QAM	CP-64QAM	CP-256QAM
1880	5.56	6.34	6.55	6.23	8.27	8.35	8.34	8.11

n7,40MHz

Frequency (MHz)	PAPR (dB)							
	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK	CP-16QAM	CP-64QAM	CP-256QAM
2535	4.79	5.52	5.89	6.41	7.37	7.42	7.52	8.32

n12,15MHz

Frequency (MHz)	PAPR (dB)							
	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK	CP-16QAM	CP-64QAM	CP-256QAM
707.5	5.66	6.38	6.62	6.64	8.20	8.14	8.18	8.48

n38,40MHz

Frequency (MHz)	PAPR (dB)							
	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK	CP-16QAM	CP-64QAM	CP-256QAM
2595	4.94	5.64	5.95	6.29	7.77	7.41	7.65	8.05

n41,100MHz

Frequency (MHz)	PAPR (dB)							
	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK	CP-16QAM	CP-64QAM	CP-256QAM
2592.99	5.35	5.94	6.31	6.46	7.87	7.90	7.91	8.24

n66,40MHz

Frequency (MHz)	PAPR (dB)							
	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK	CP-16QAM	CP-64QAM	CP-256QAM
1745	5.52	6.14	6.38	6.57	7.88	7.90	8.06	8.36

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

Annex B: Accreditation Certificate

Accredited Laboratory

A2LA has accredited

TELECOMMUNICATION TECHNOLOGY LABS, CAICT

Beijing, People's Republic of China

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 26th day of June 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 7049.01
Valid to July 31, 2024

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

*****END OF REPORT*****