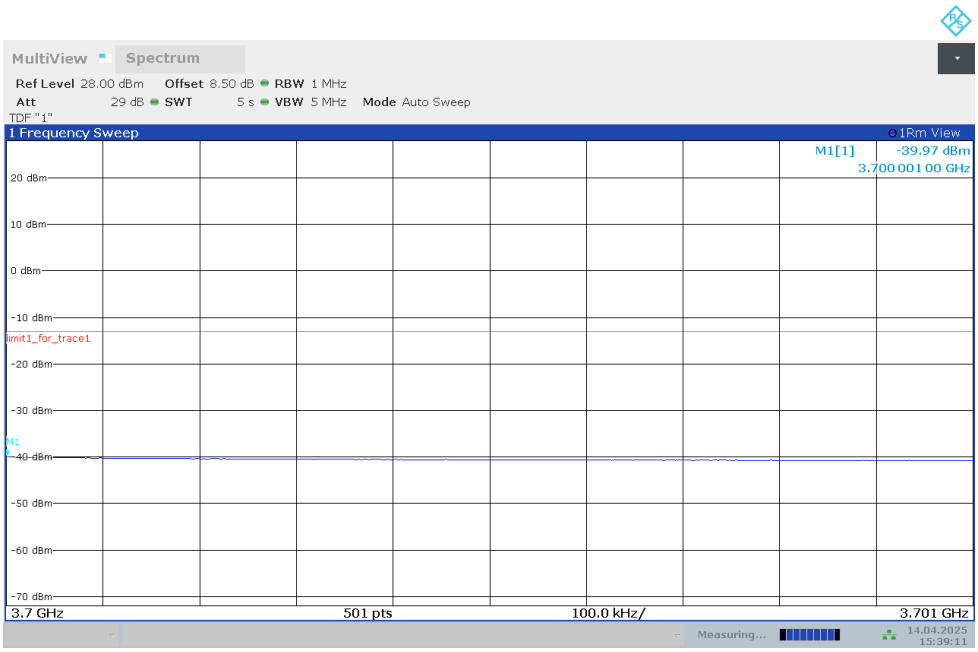
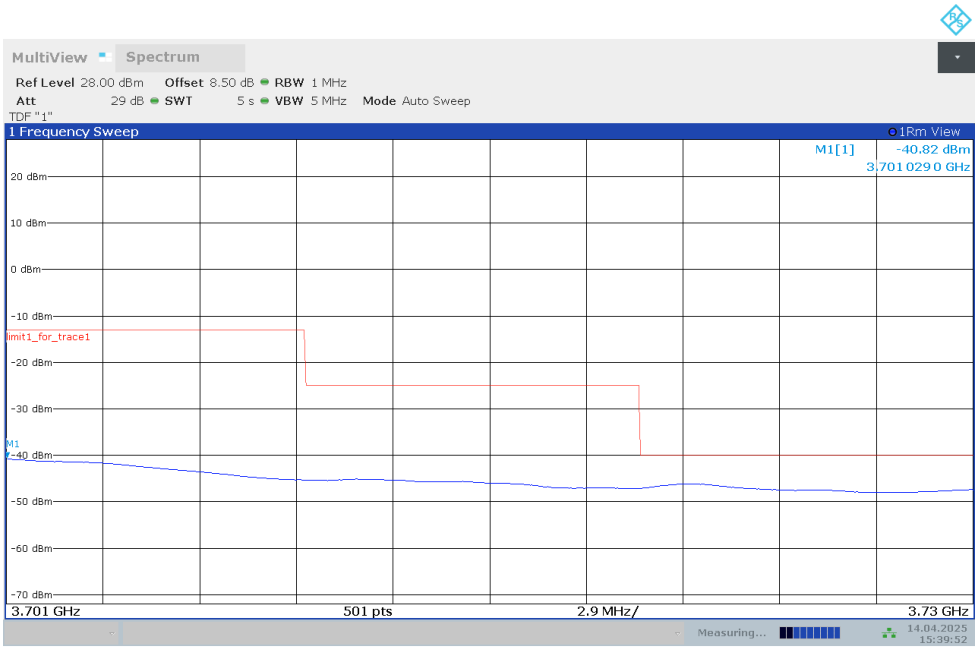
## HIGH BAND EDGE BLOCK-100MHz-100%RB




15:39:12 14.04.2025

## HIGH BAND EDGE BLOCK-100MHz-100%RB




15:39:53 14.04.2025

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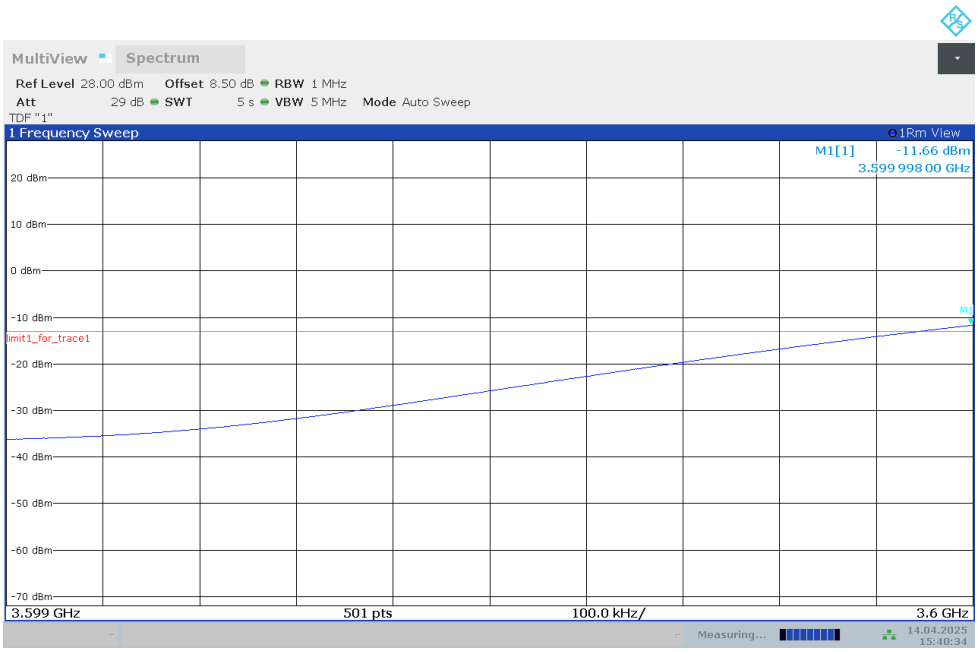
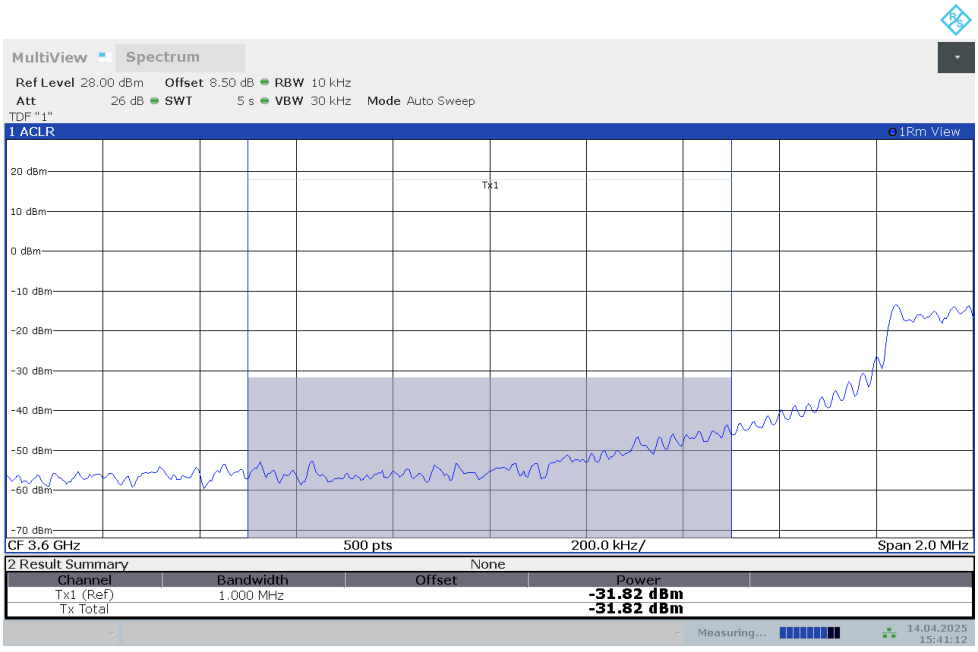
## HIGH BAND EDGE BLOCK-100MHz-100%RB




15:40:34 14.04.2025

## Channel power




15:41:13 14.04.2025

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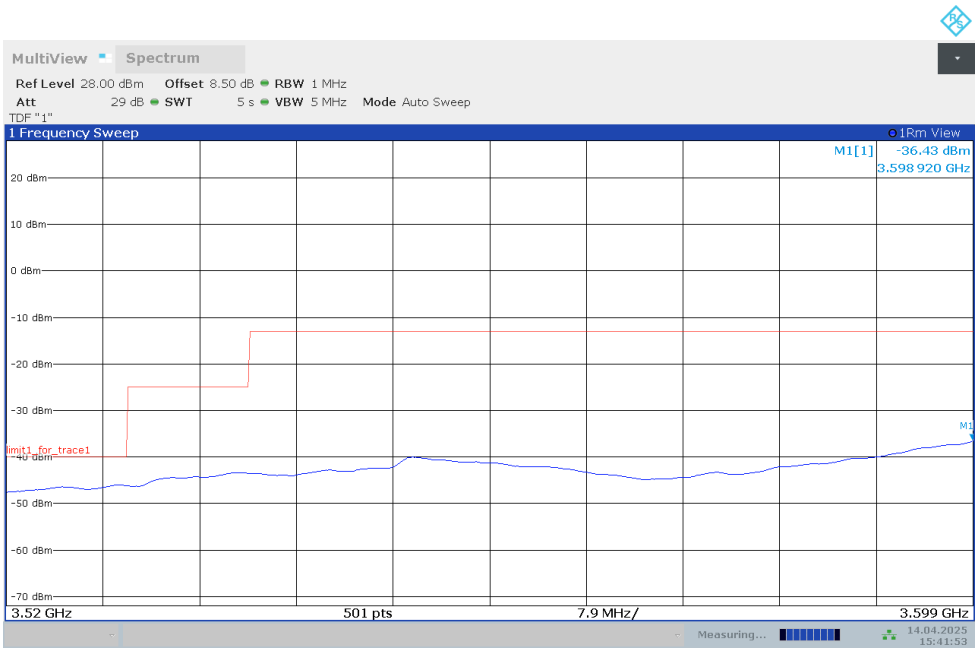
## HIGH BAND EDGE BLOCK-100MHz-100%RB




15:41:54 14.04.2025

## ACLR

15:42:12 14.04.2025

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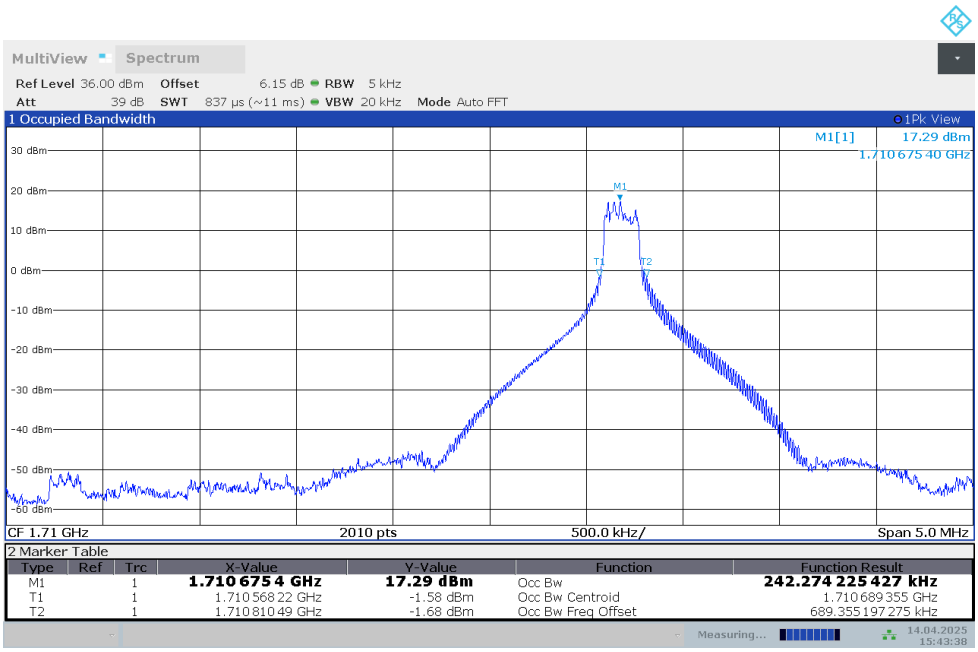
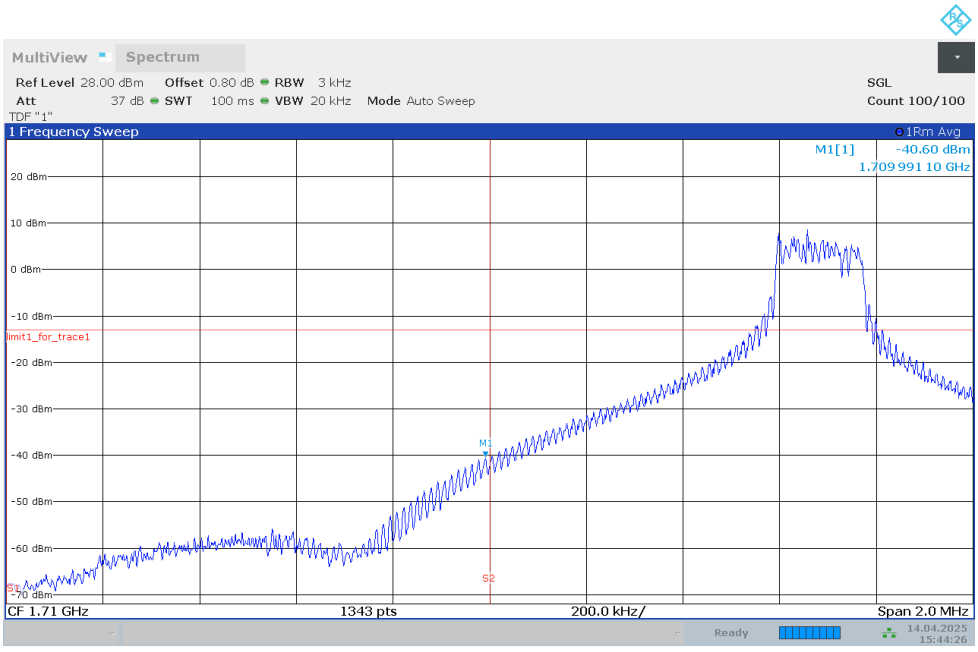
**NR n66**

**OBW: 1RB-LOW_offset**




15:43:39 14.04.2025

**LOW BAND EDGE BLOCK-1RB-LOW_offset**




15:44:27 14.04.2025

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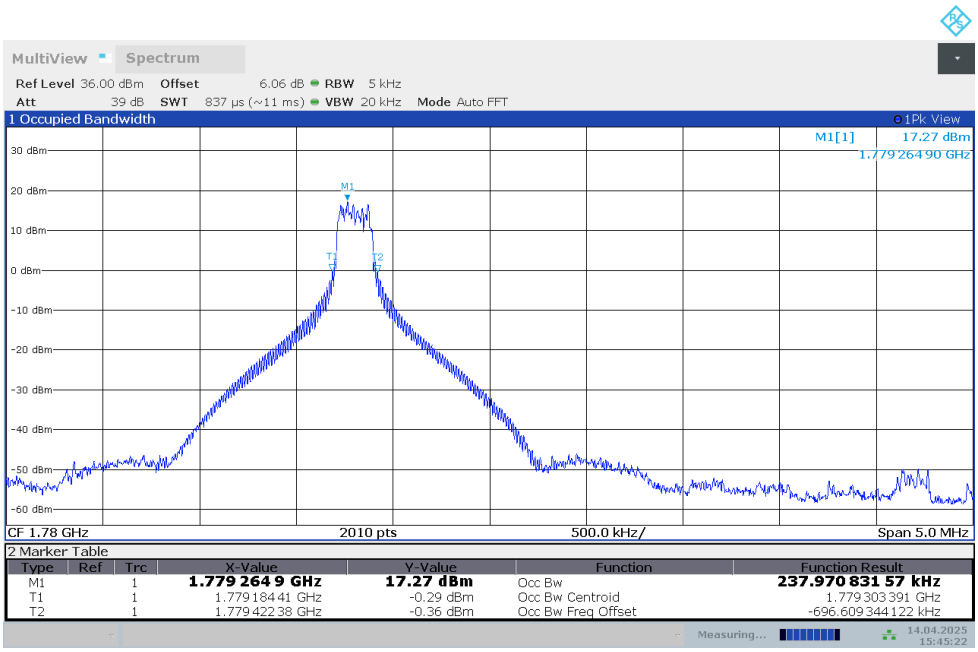
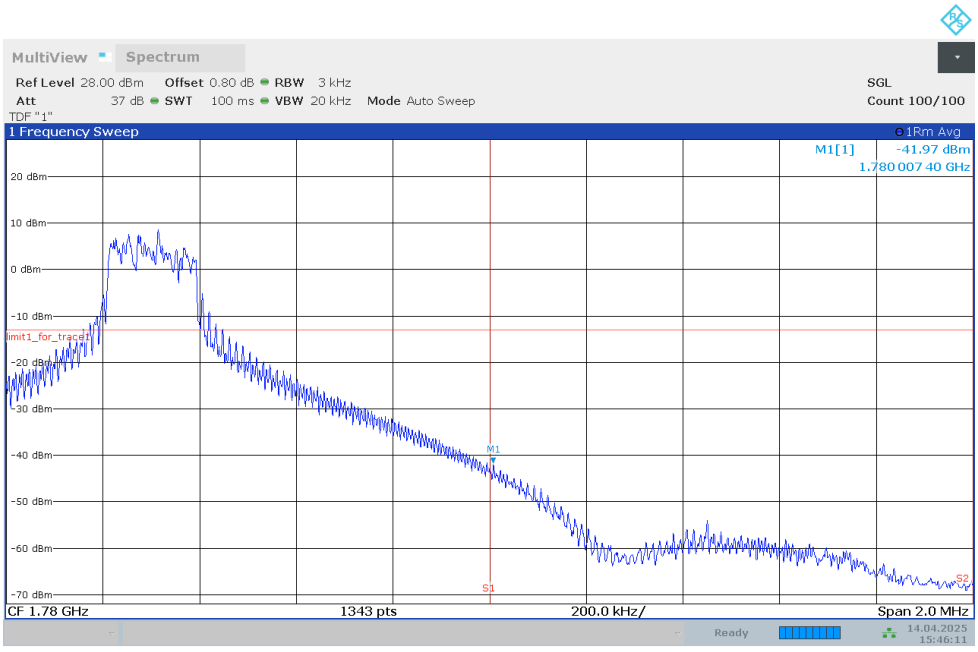
## OBW: 1RB-HIGH_offset




15:45:23 14.04.2025

## HIGH BAND EDGE BLOCK-1RB-HIGH_offset




15:46:11 14.04.2025

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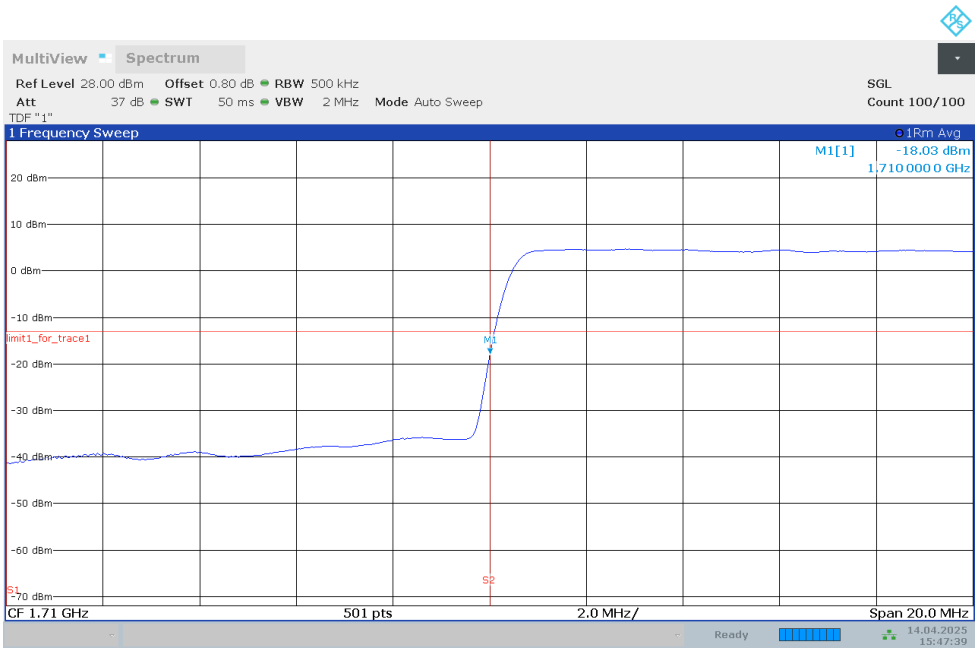
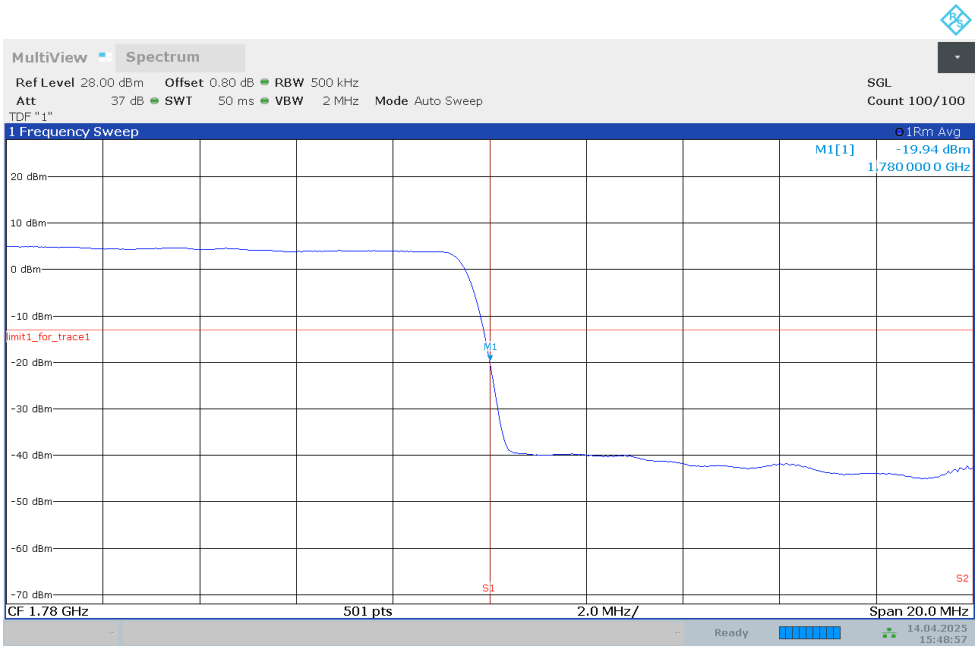
## LOW BAND EDGE BLOCK-40MHz-100%RB




15:47:39 14.04.2025

## HIGH BAND EDGE BLOCK-40MHz-100%RB




15:48:58 14.04.2025

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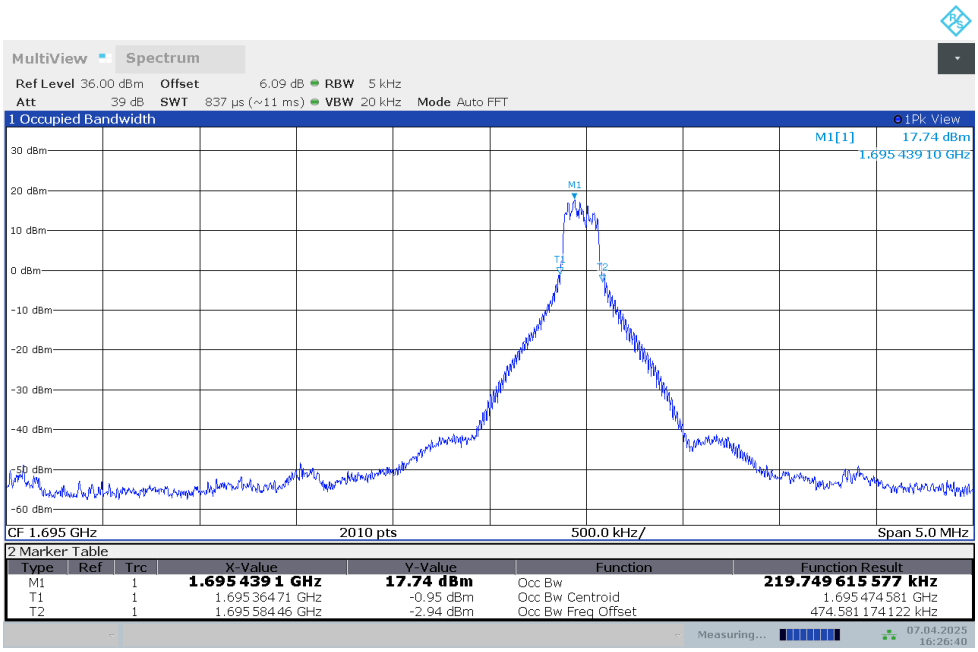
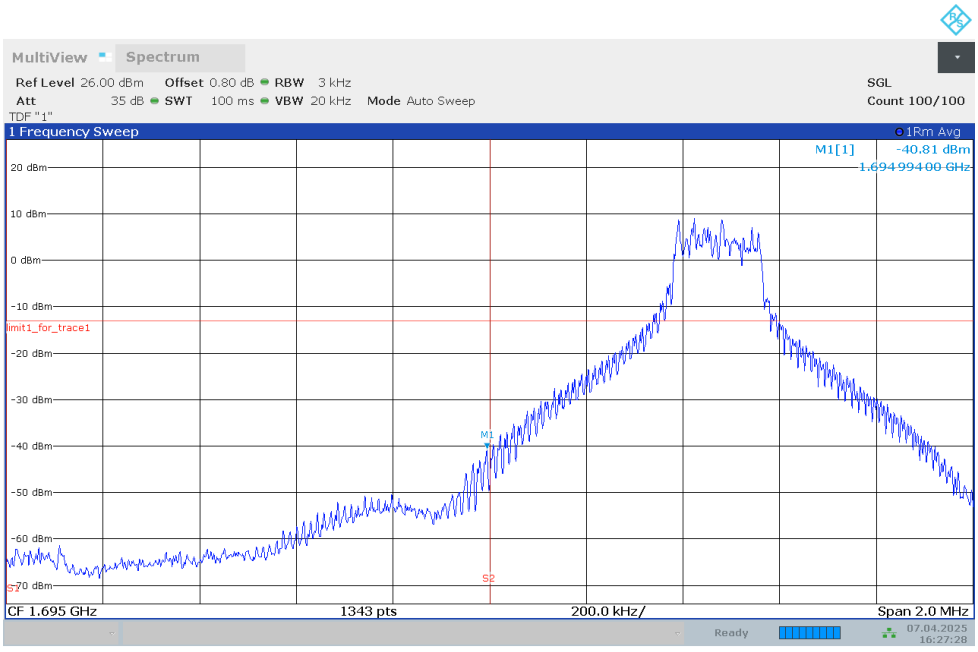
**NR n70**

**OBW: 1RB-LOW_offset**




16:26:41 07.04.2025

**LOW BAND EDGE BLOCK-1RB-LOW_offset**




16:27:29 07.04.2025

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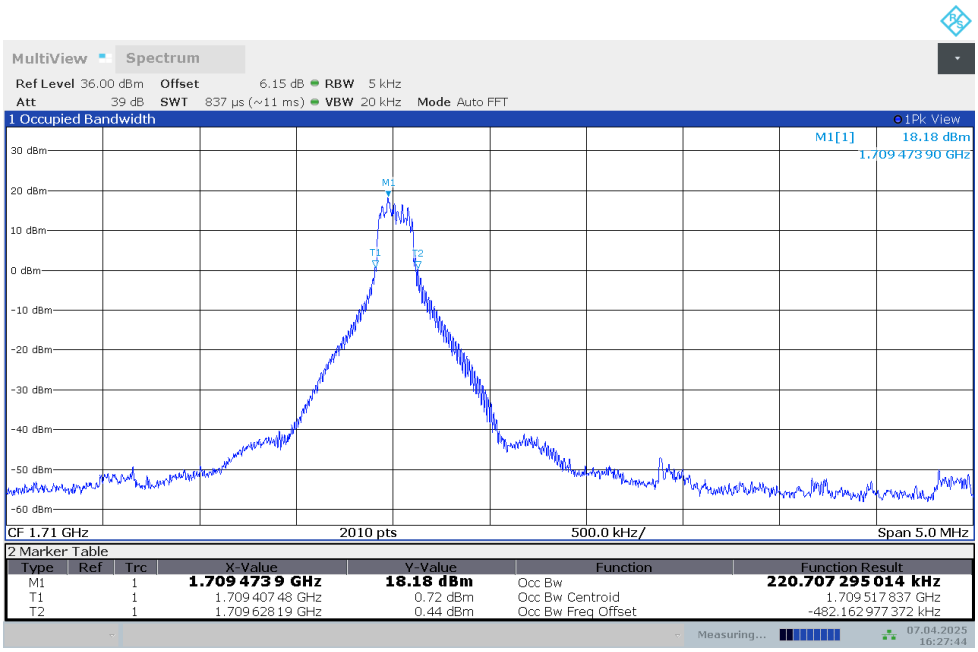
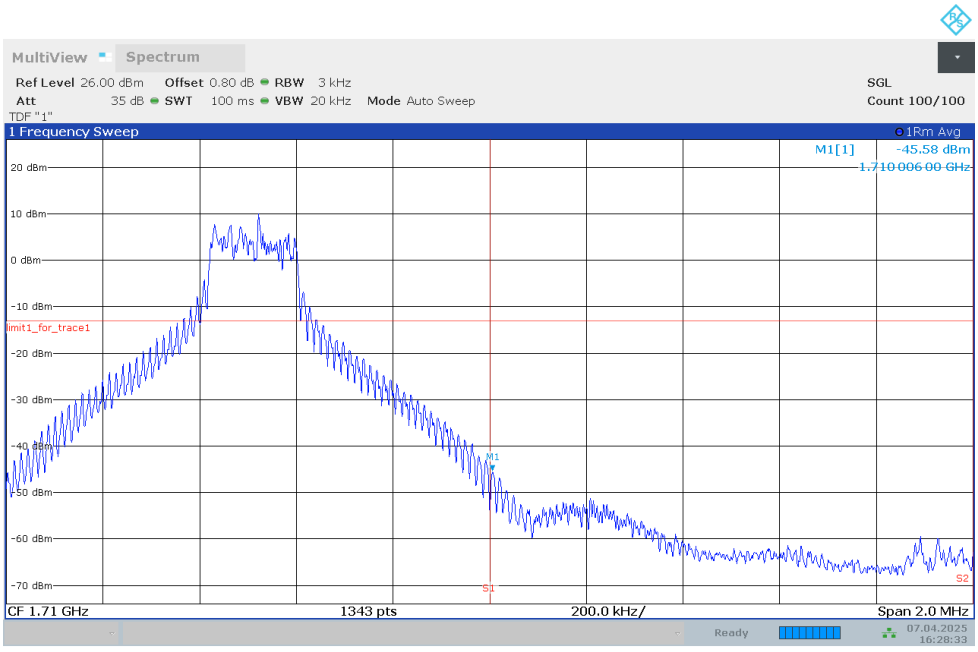
## OBW: 1RB-HIGH_offset




16:27:45 07.04.2025

## HIGH BAND EDGE BLOCK-1RB-HIGH_offset




16:28:33 07.04.2025

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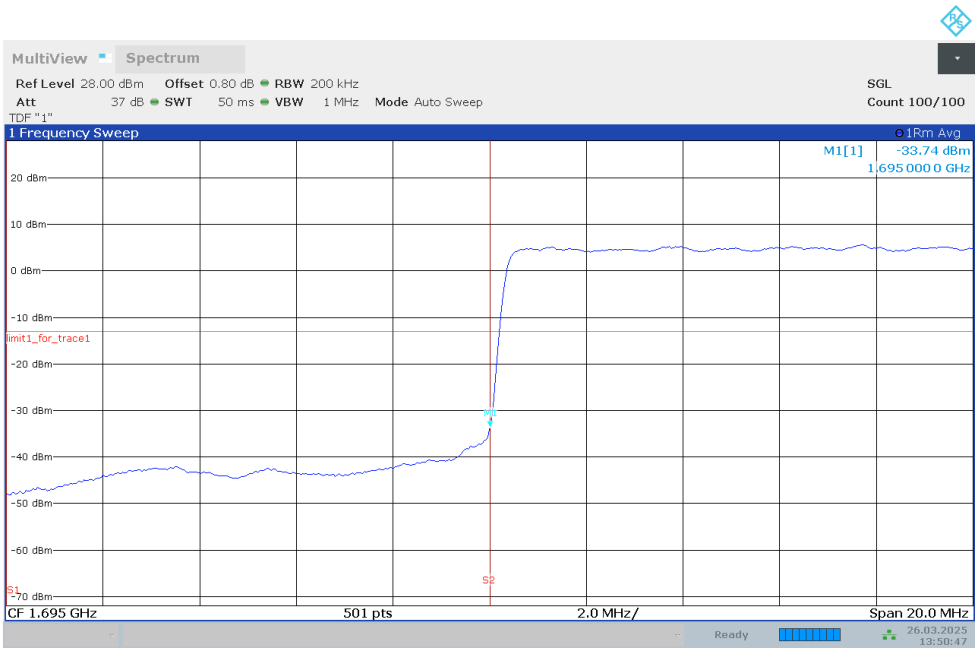
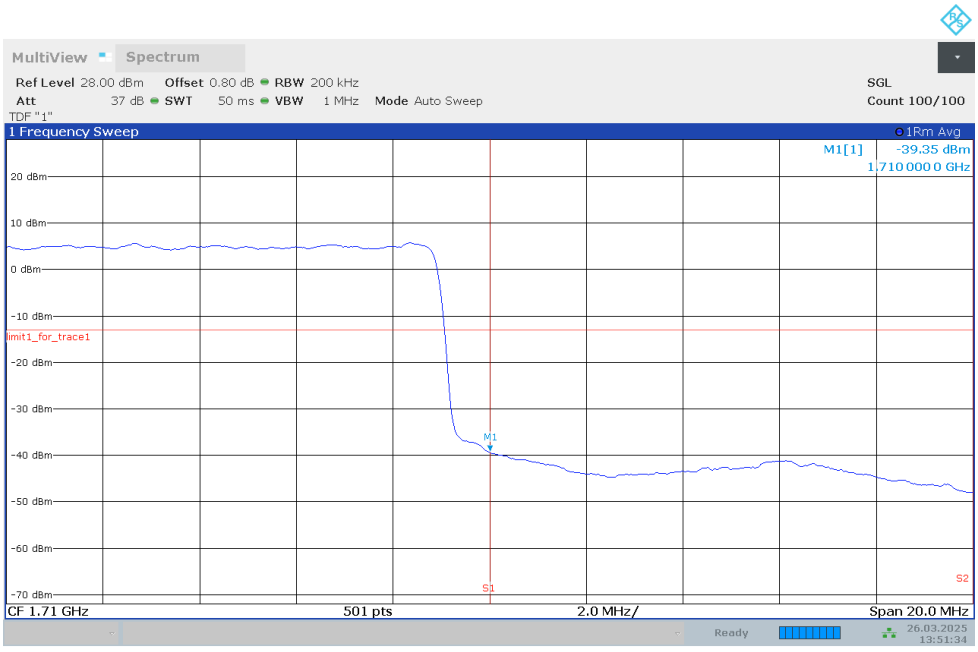
## LOW BAND EDGE BLOCK-15MHz-100%RB




13:50:48 26.03.2025

## HIGH BAND EDGE BLOCK-15MHz-100%RB




13:51:35 26.03.2025

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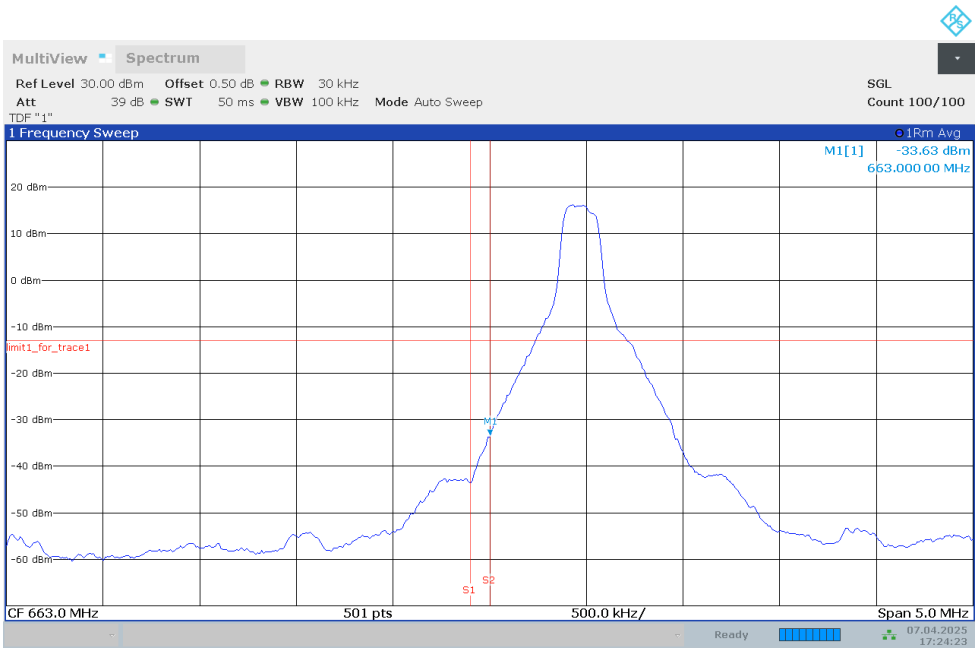
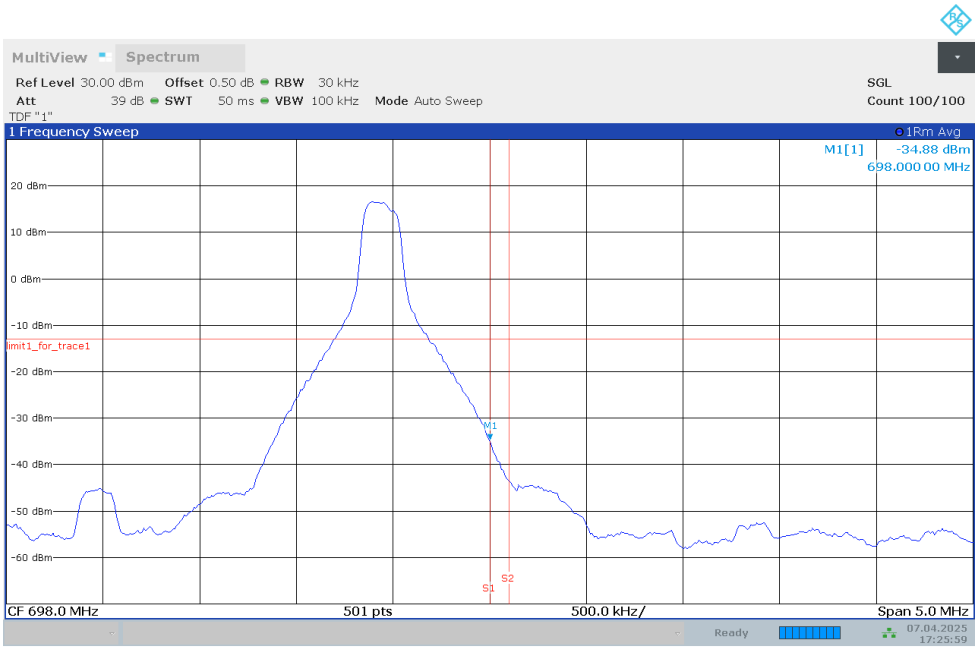
**NR n71**

**LOW BAND EDGE BLOCK-1RB-LOW_offset**




17:24:24 07.04.2025

**HIGH BAND EDGE BLOCK-1RB-HIGH_offset**




17:26:00 07.04.2025

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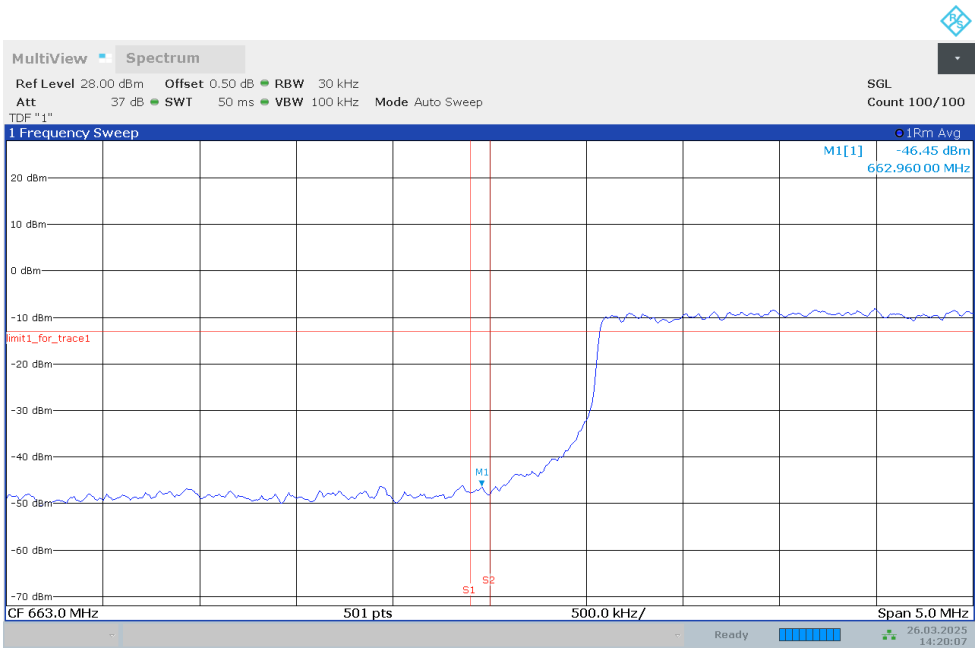
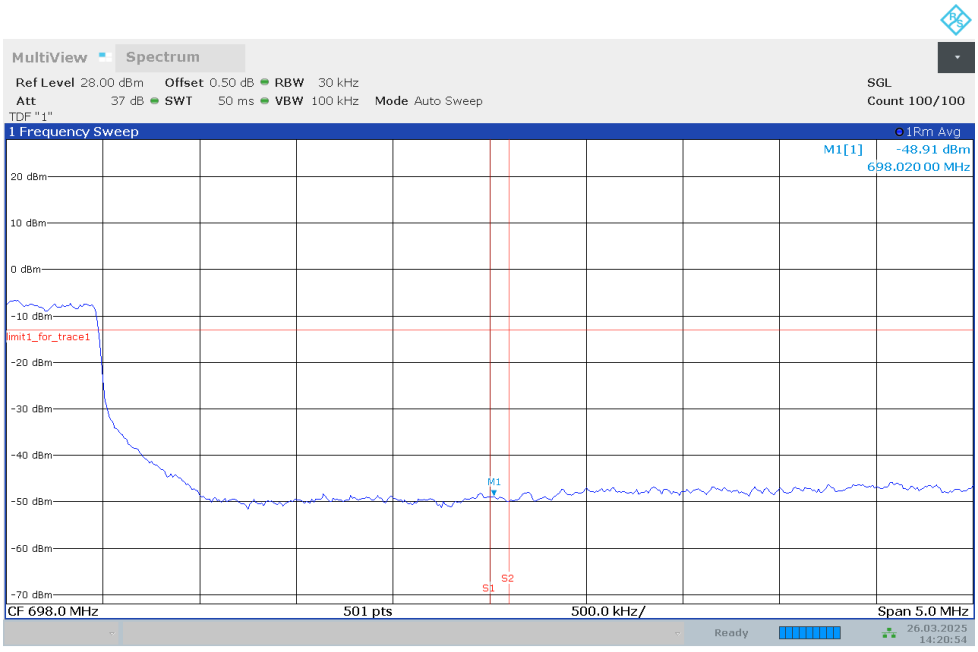
## LOW BAND EDGE BLOCK-35MHz-100%RB




14:20:08 26.03.2025

## HIGH BAND EDGE BLOCK-35MHz-100%RB




14:20:54 26.03.2025

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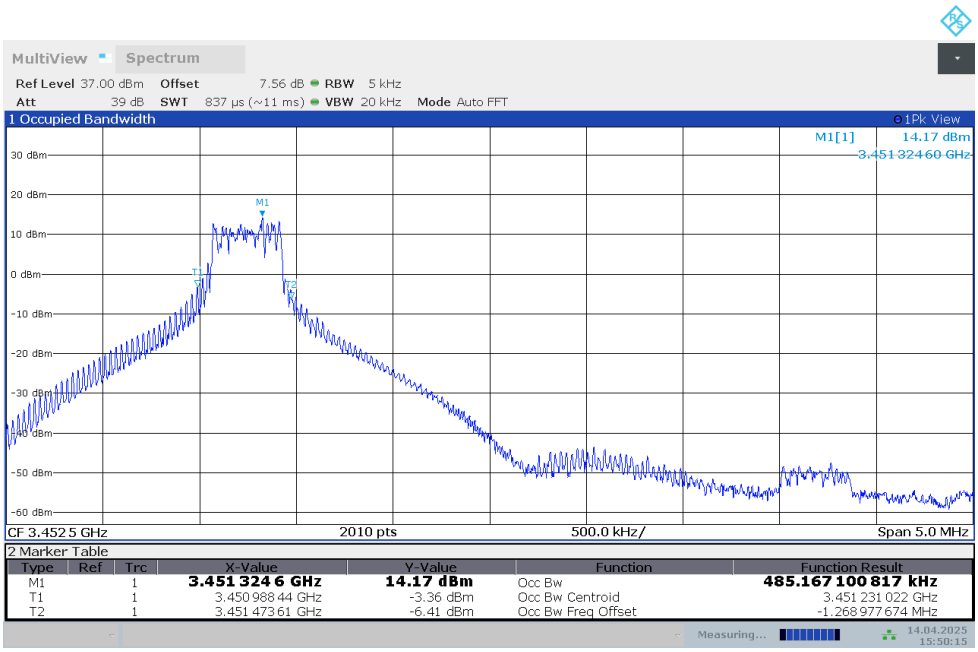
**NR n77L**

**OBW: 1RB-LOW_offset**

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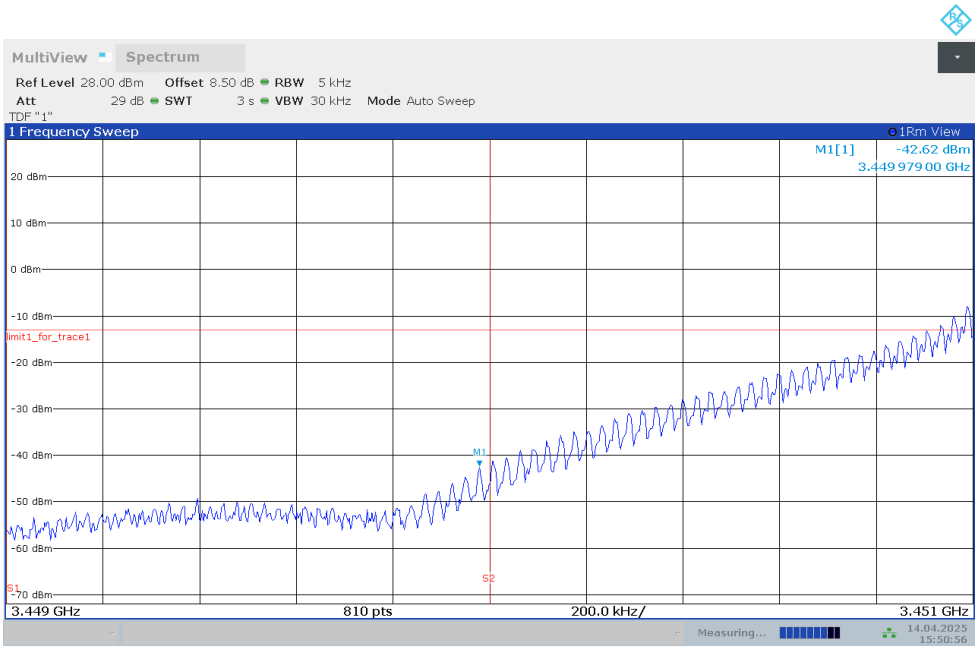
**LOW BAND EDGE BLOCK-1RB-LOW_offset**




15:50:57 14.04.2025

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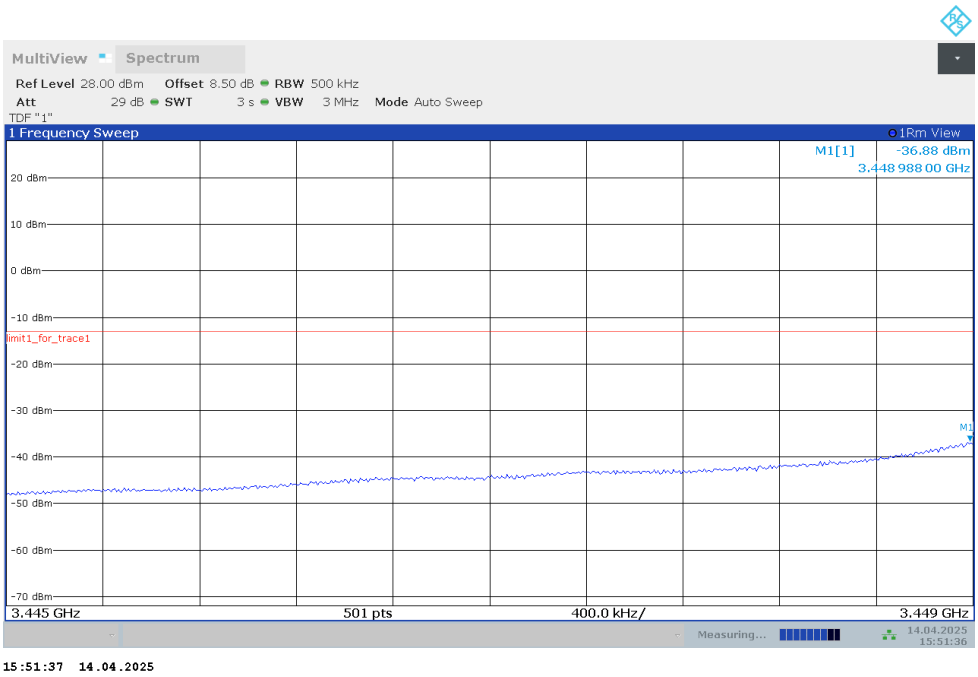
## LOW BAND EDGE BLOCK-1RB-LOW_offset

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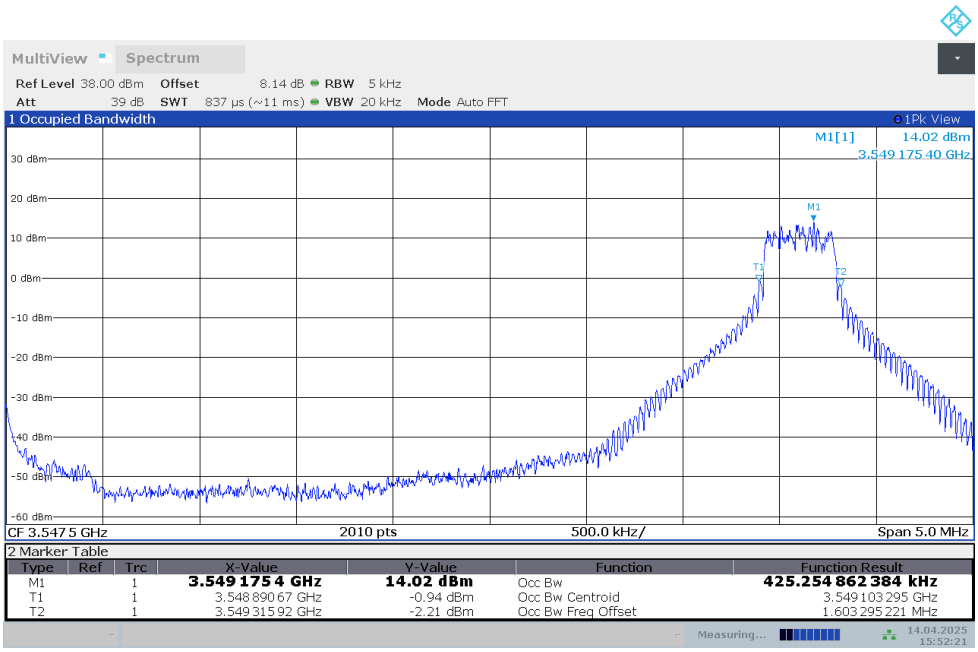
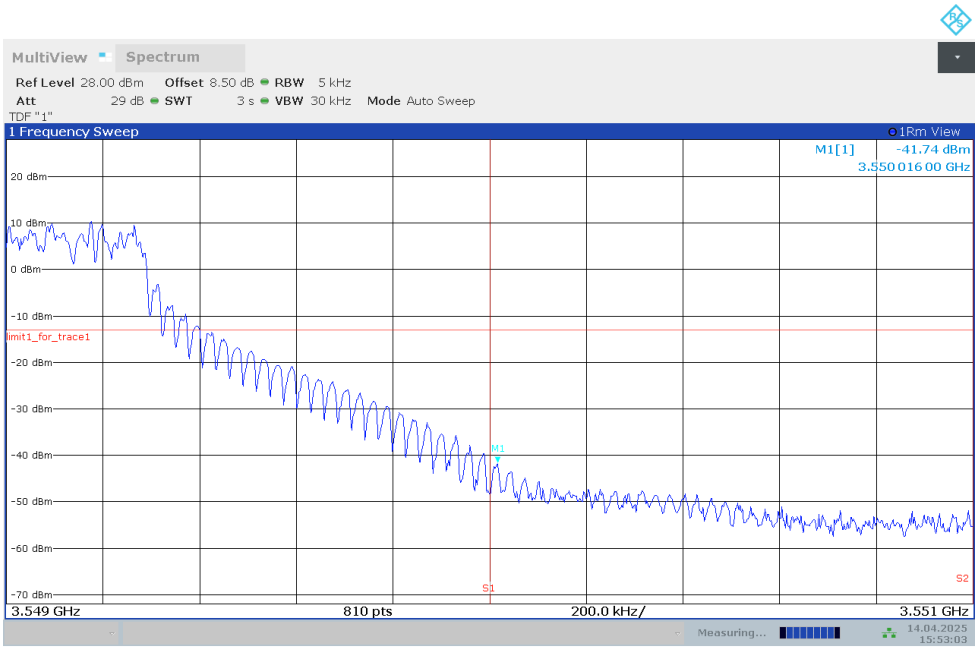
## OBW: 1RB-HIGH_offset




15:52:22 14.04.2025

## HIGH BAND EDGE BLOCK-1RB-HIGH_offset




15:53:03 14.04.2025

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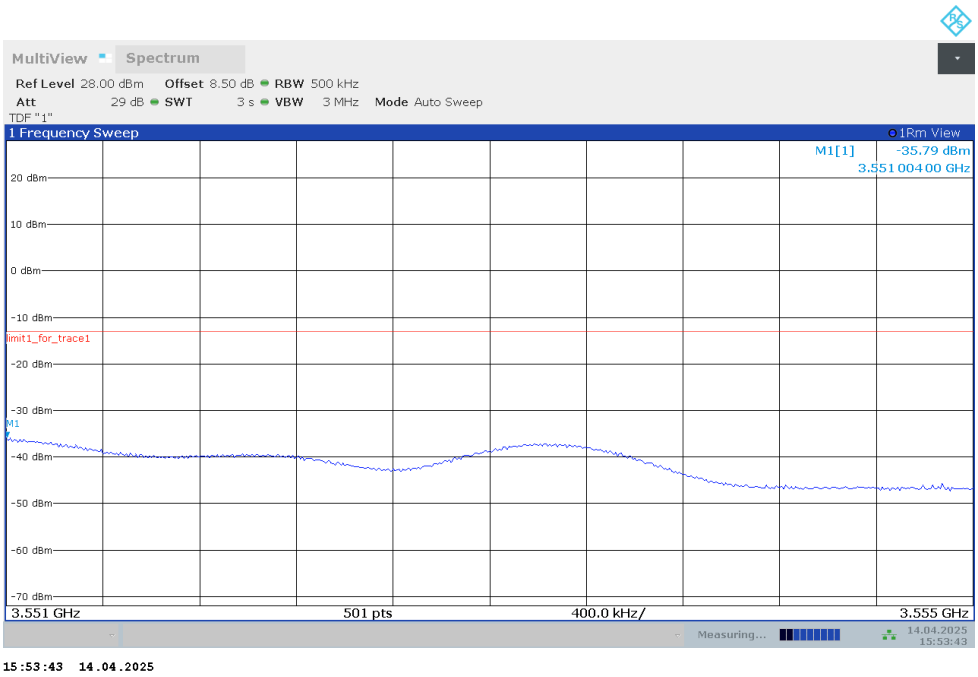
## HIGH BAND EDGE BLOCK-1RB-HIGH_offset

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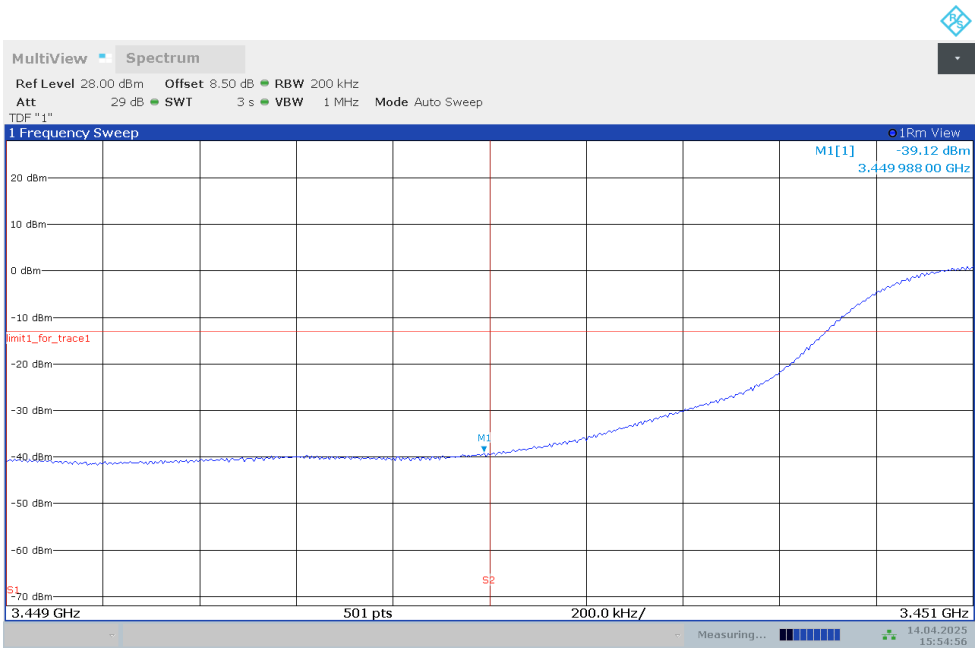
## LOW BAND EDGE BLOCK-100MHz-100%RB

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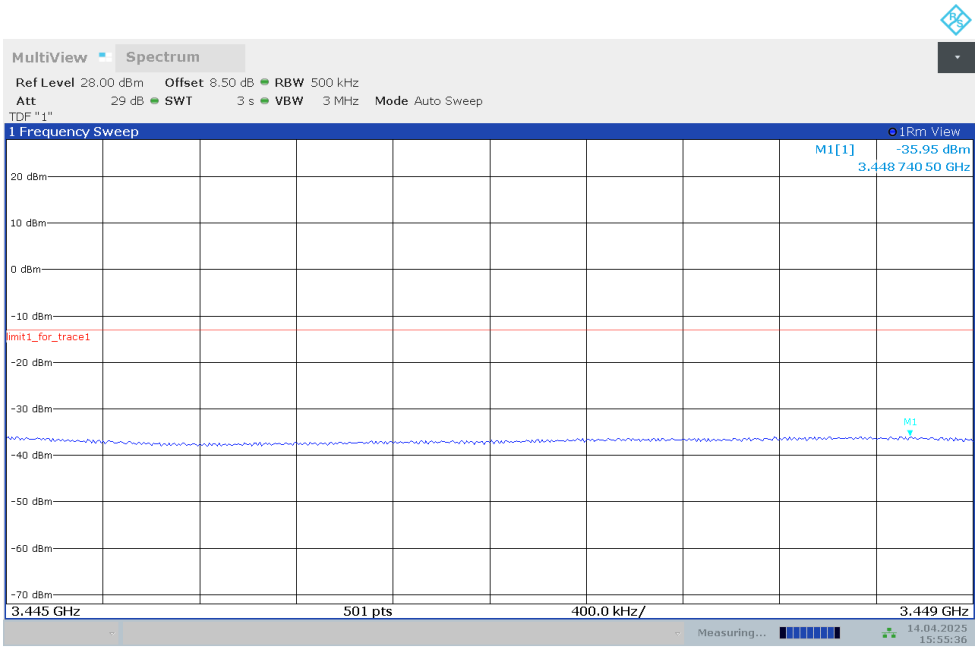
## LOW BAND EDGE BLOCK-100MHz-100%RB




15:55:36 14.04.2025

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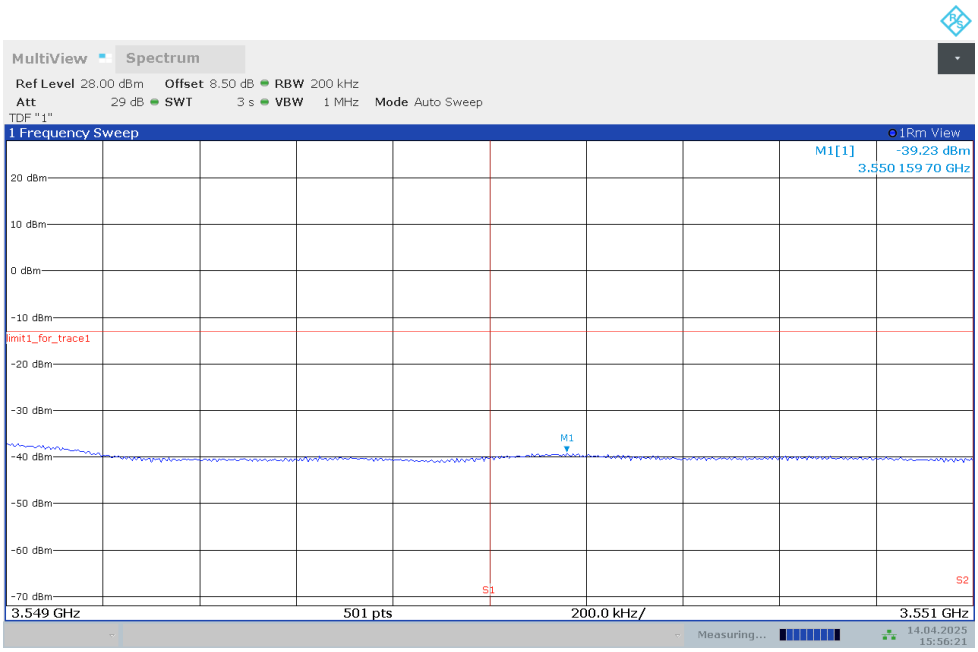
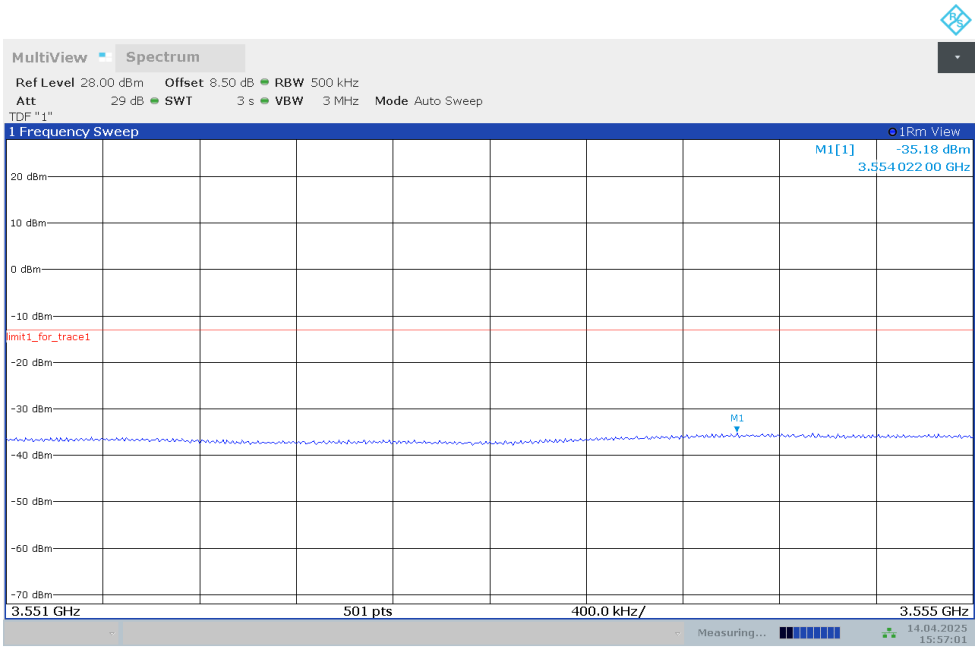
## HIGH BAND EDGE BLOCK-100MHz-100%RB




15:56:22 14.04.2025

## HIGH BAND EDGE BLOCK-100MHz-100%RB




15:57:02 14.04.2025

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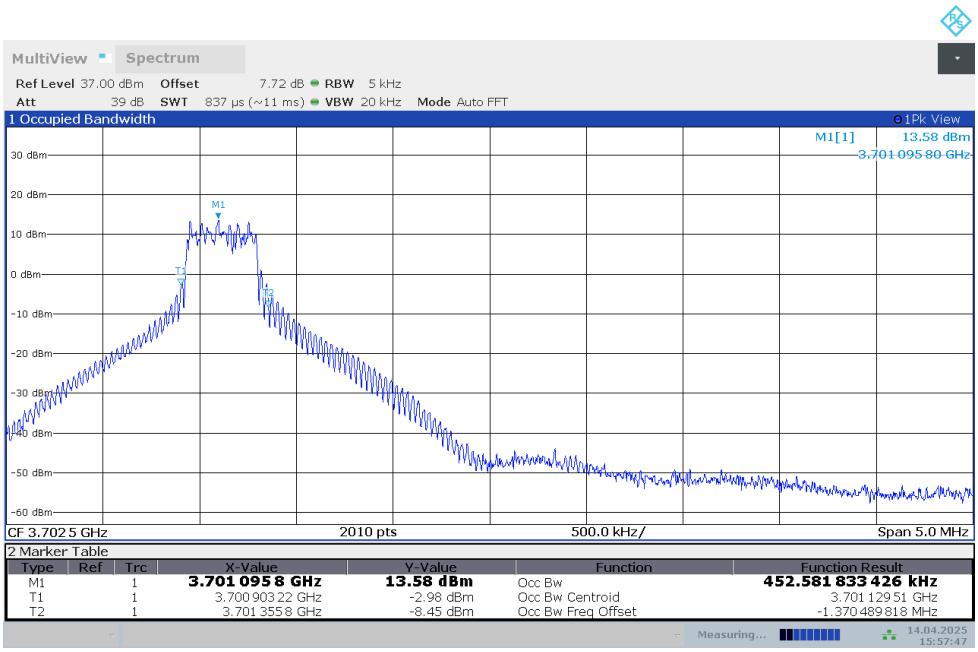
**NR n77H**

**OBW: 1RB-LOW_offset**

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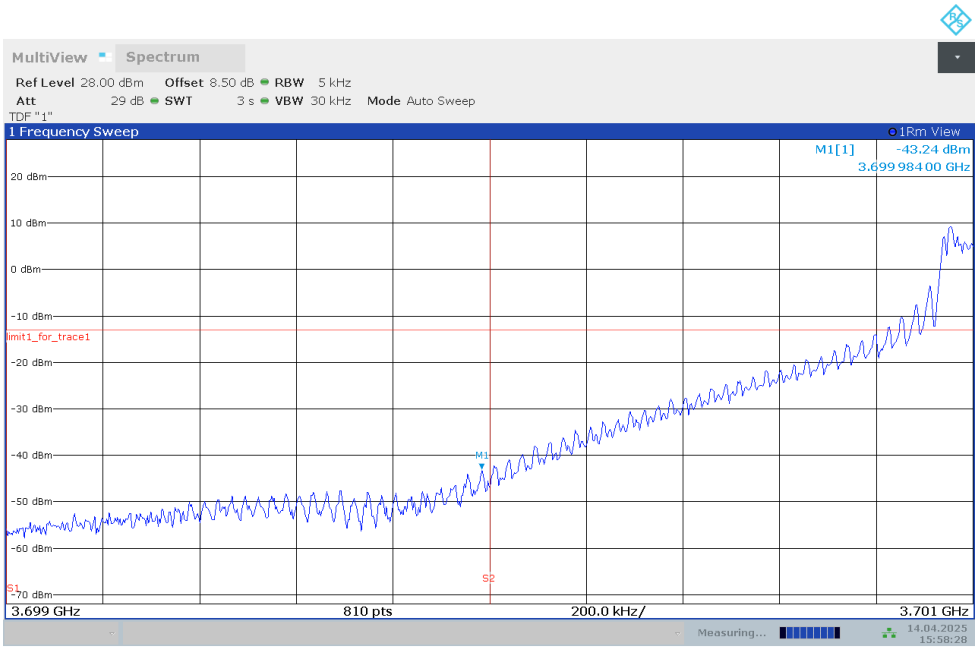
**LOW BAND EDGE BLOCK-1RB-LOW_offset**




15:58:29 14.04.2025

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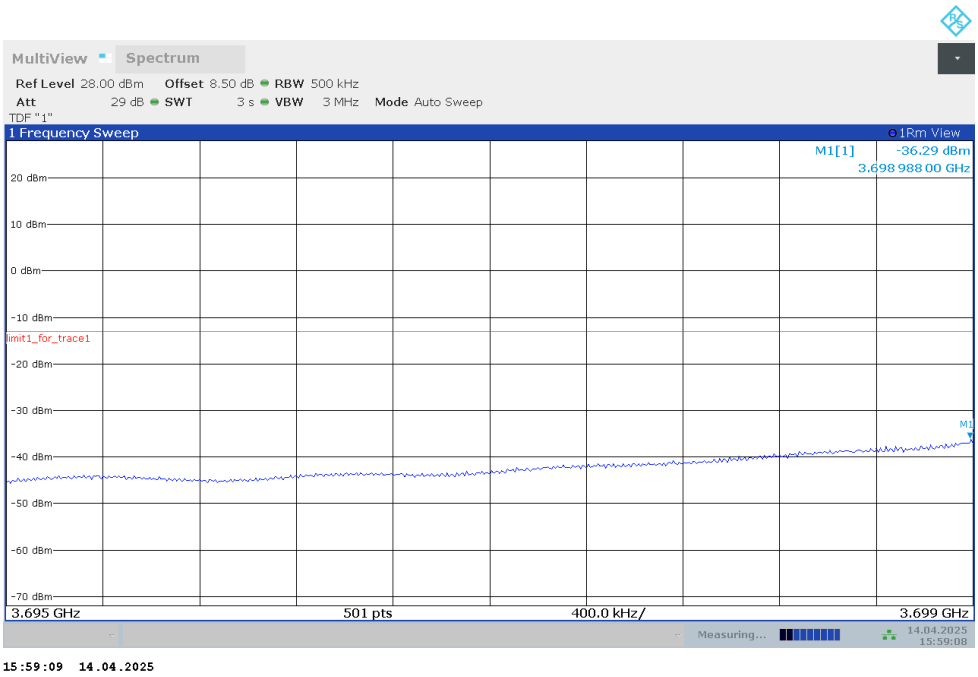
## LOW BAND EDGE BLOCK-1RB-LOW_offset

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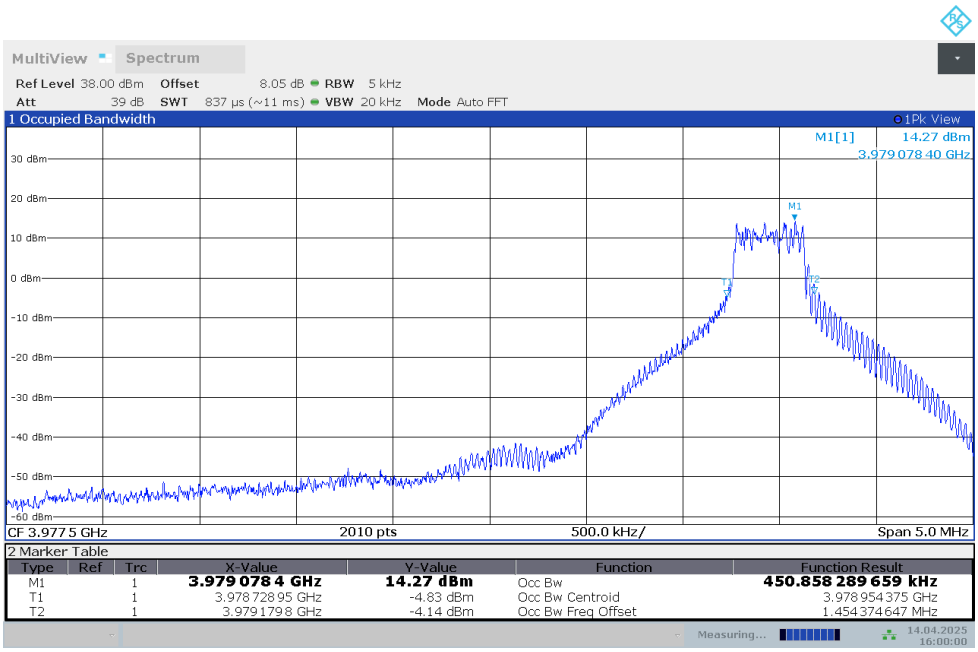
## OBW: 1RB-HIGH_offset

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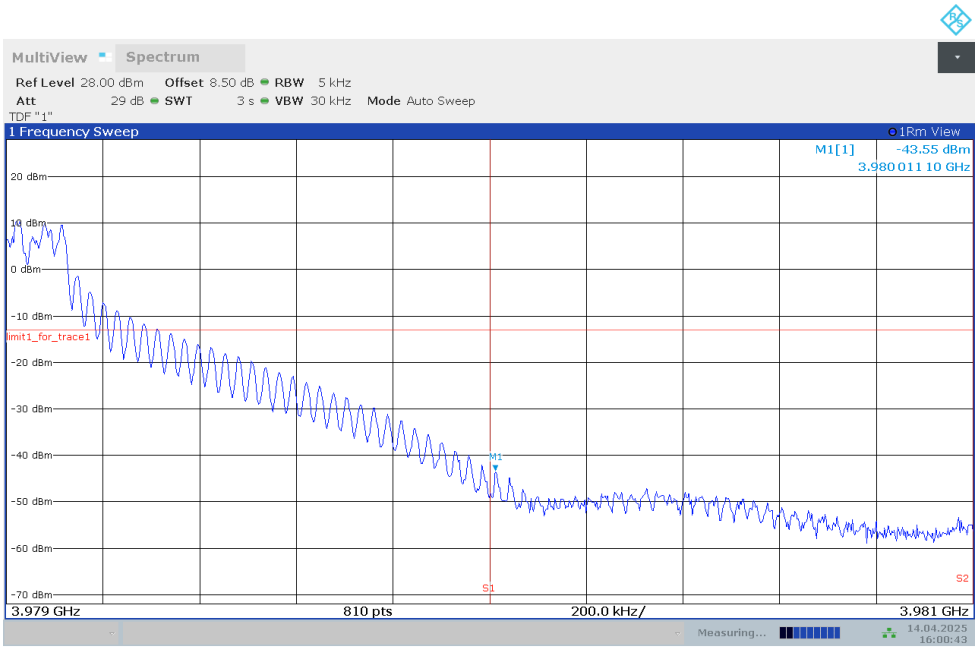
## HIGH BAND EDGE BLOCK-1RB-HIGH_offset




16:00:43 14.04.2025

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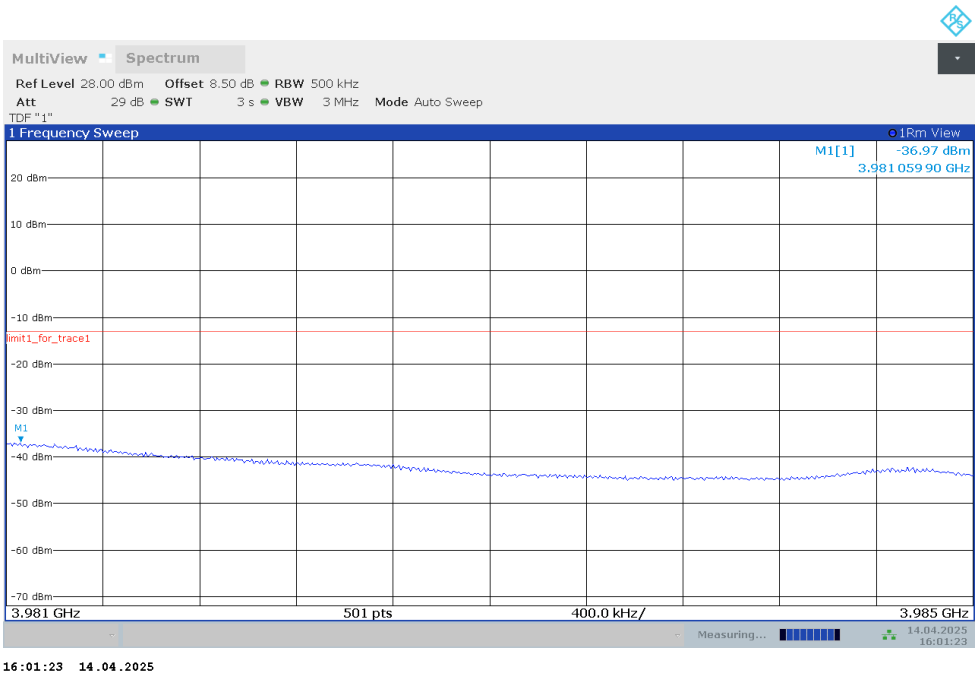
## HIGH BAND EDGE BLOCK-1RB-HIGH_offset




16:01:23 14.04.2025

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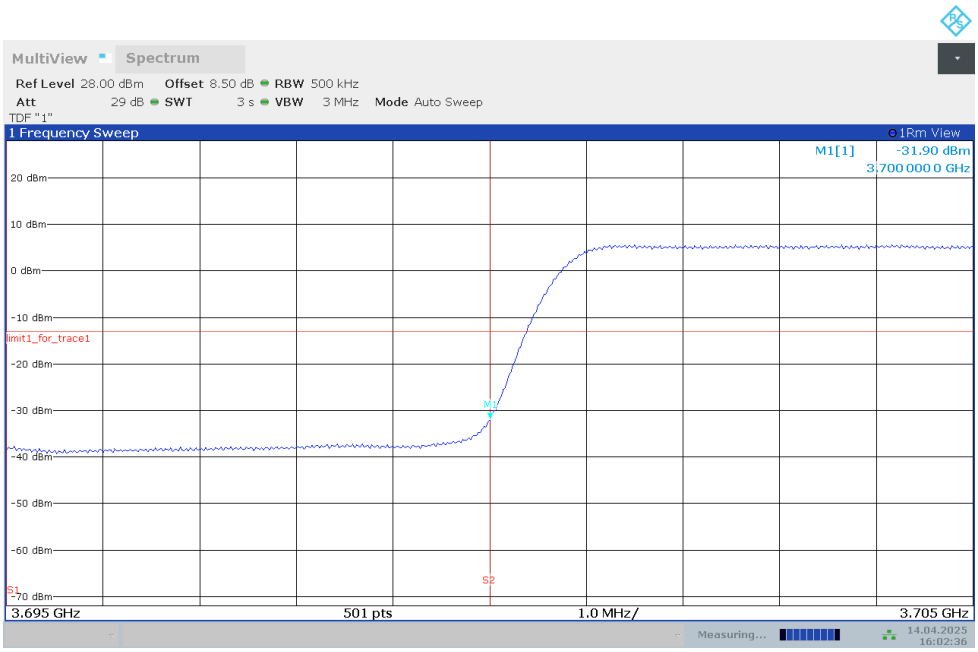
## LOW BAND EDGE BLOCK-100MHz-100%RB

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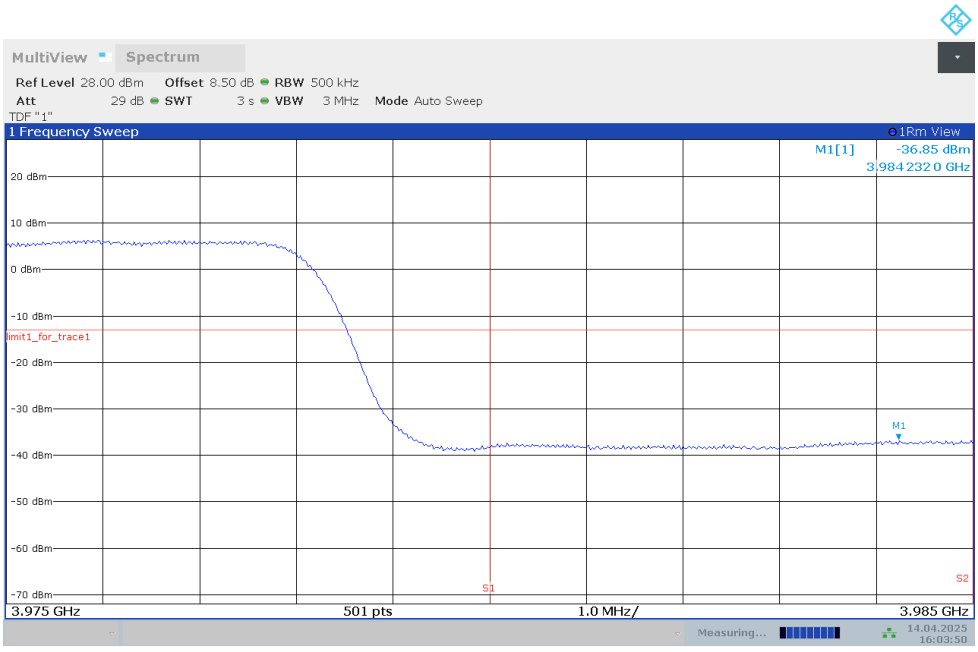
## HIGH BAND EDGE BLOCK-100MHz-100%RB




16:03:51 14.04.2025

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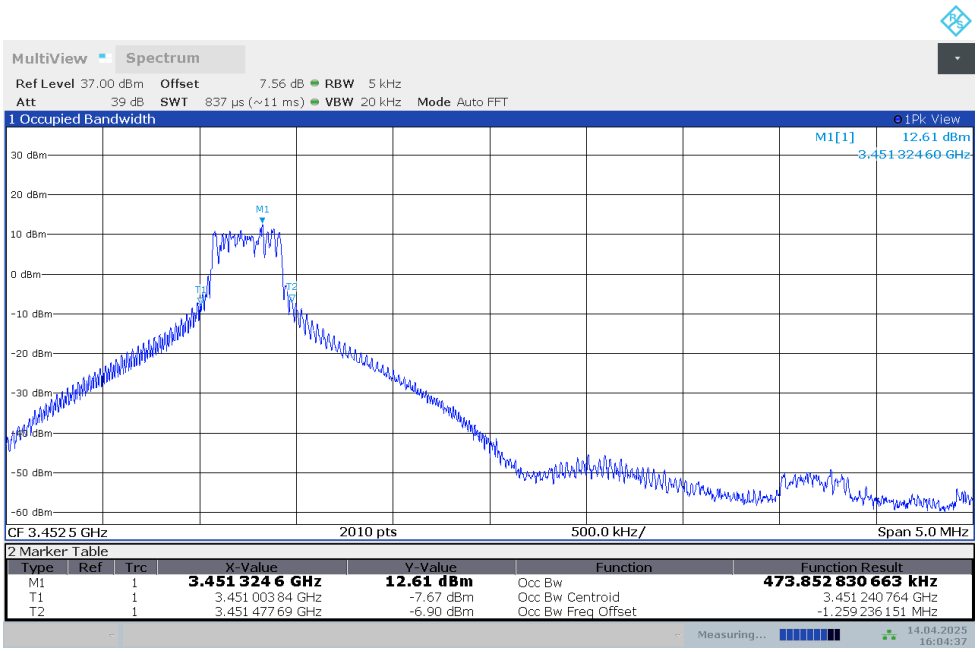
**NR n78L**

**OBW: 1RB-LOW_offset**

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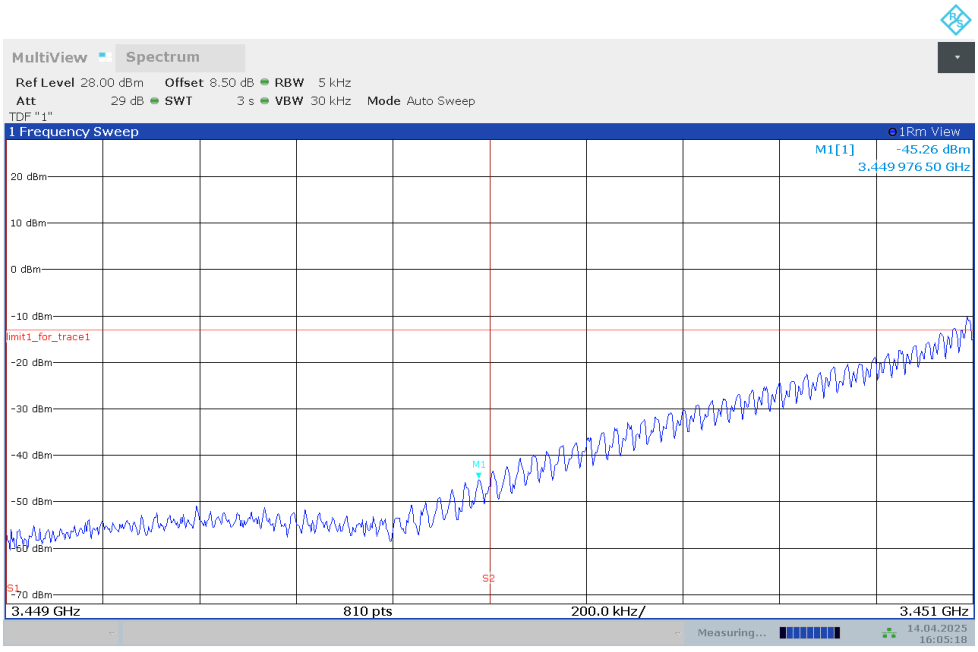
**LOW BAND EDGE BLOCK-1RB-LOW_offset**




16:05:19 14.04.2025

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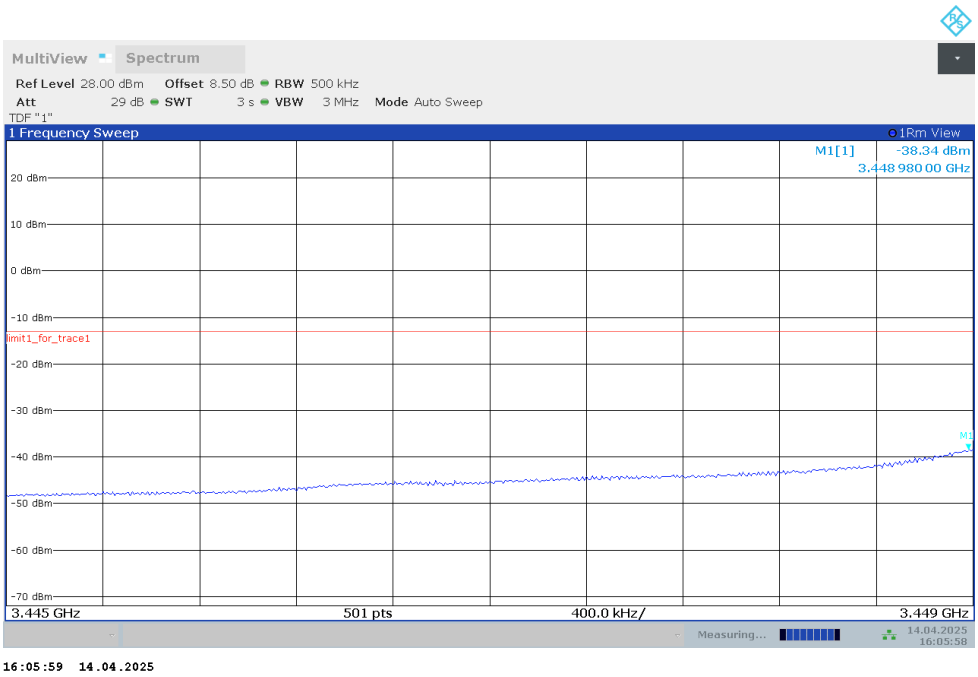
## LOW BAND EDGE BLOCK-1RB-LOW_offset

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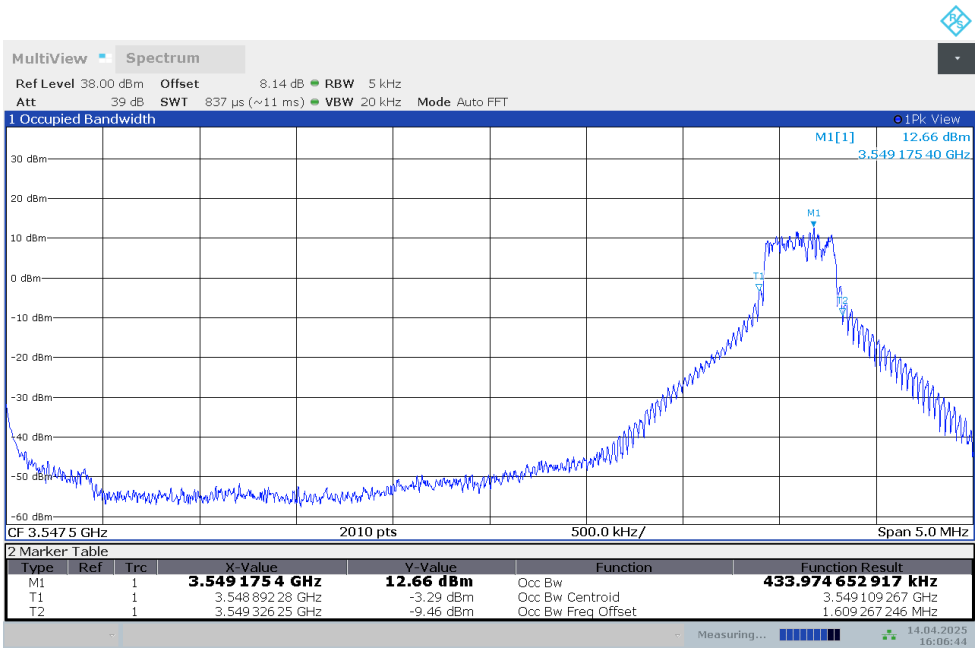
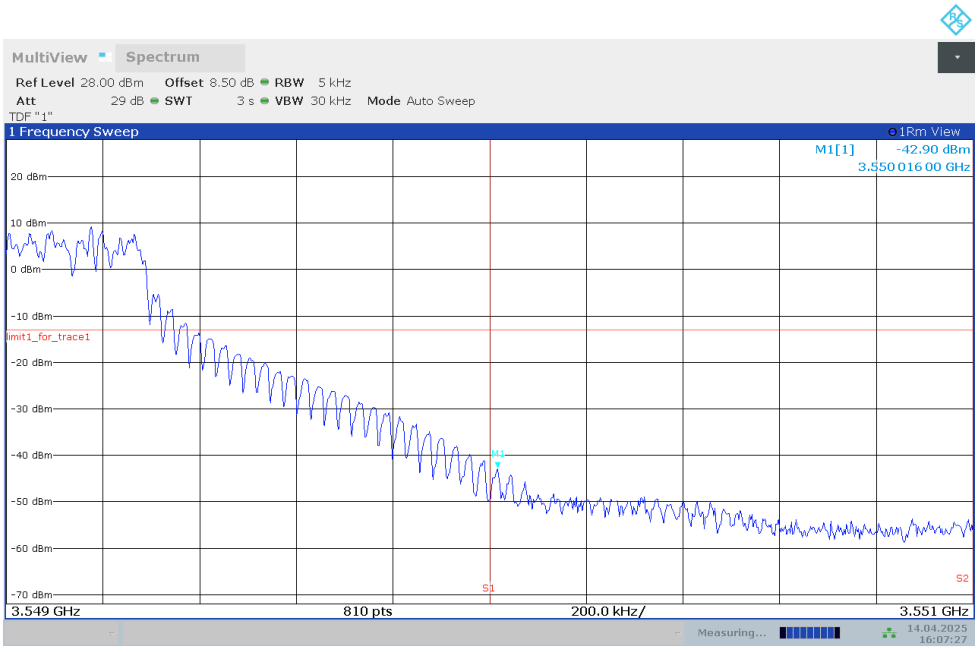
## OBW: 1RB-HIGH_offset




16:06:45 14.04.2025

## HIGH BAND EDGE BLOCK-1RB-HIGH_offset




16:07:27 14.04.2025

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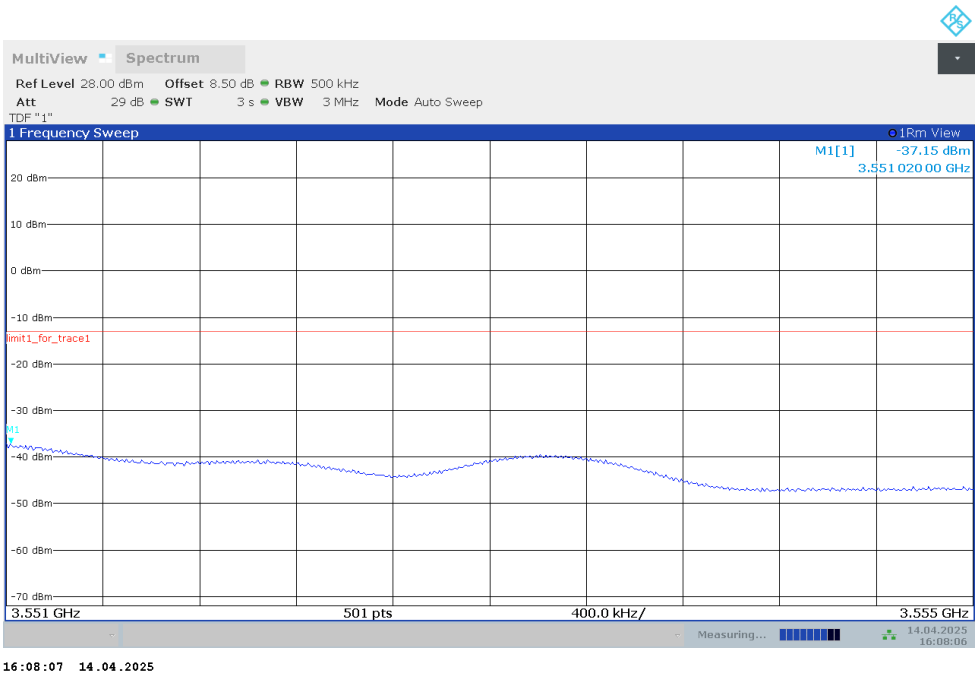
## HIGH BAND EDGE BLOCK-1RB-HIGH_offset

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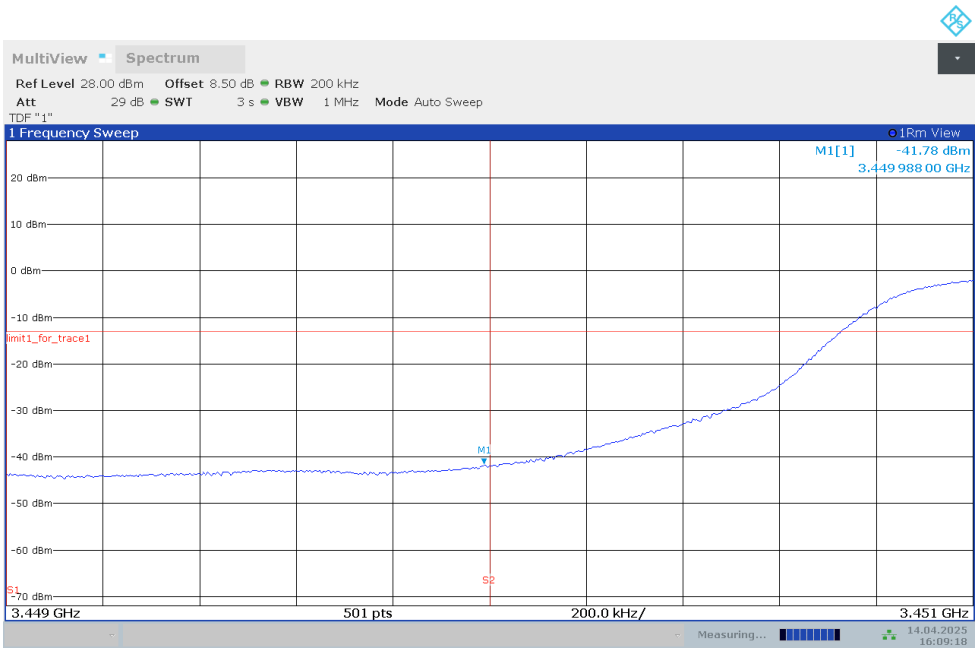
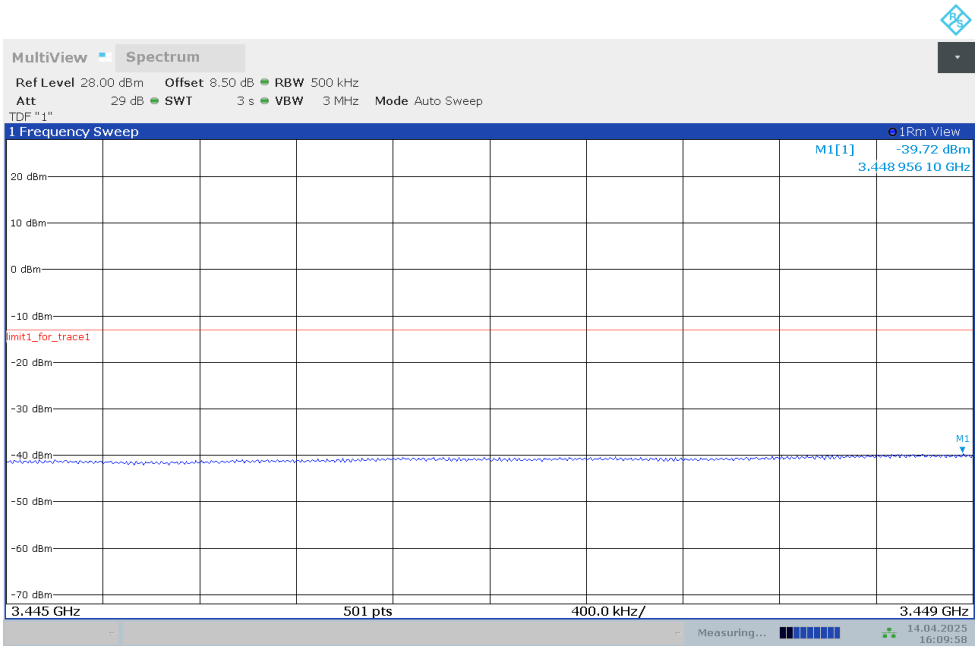
## LOW BAND EDGE BLOCK-100MHz-100%RB




16:09:19 14.04.2025

## LOW BAND EDGE BLOCK-100MHz-100%RB

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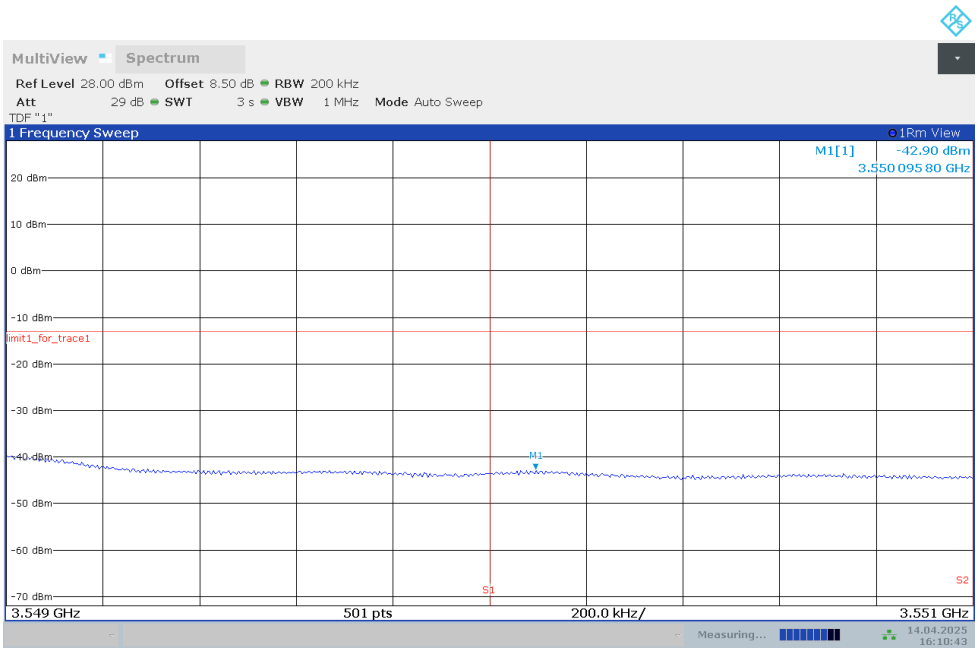
## HIGH BAND EDGE BLOCK-100MHz-100%RB

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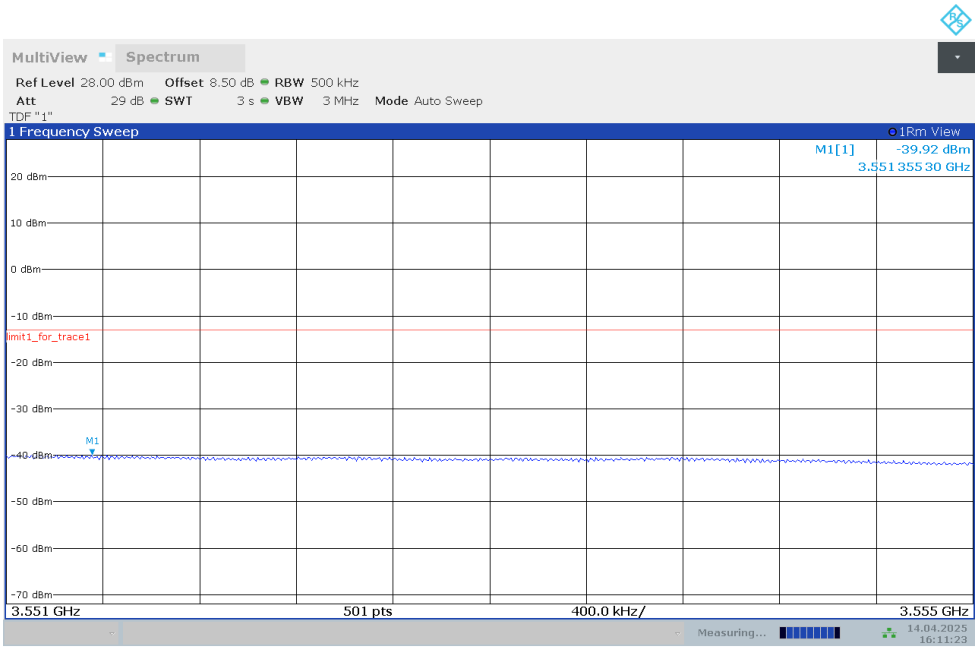
## HIGH BAND EDGE BLOCK-100MHz-100%RB

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## 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 27.53(a) states for mobile and portable stations operating in the 2305–2315 MHz and 2350–2360 MHz bands: By a factor of not less than: 43 +10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on

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all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337MHz; By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz; By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

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.

Part 27.53(l) 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 (l)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater.

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. The conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed -25dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

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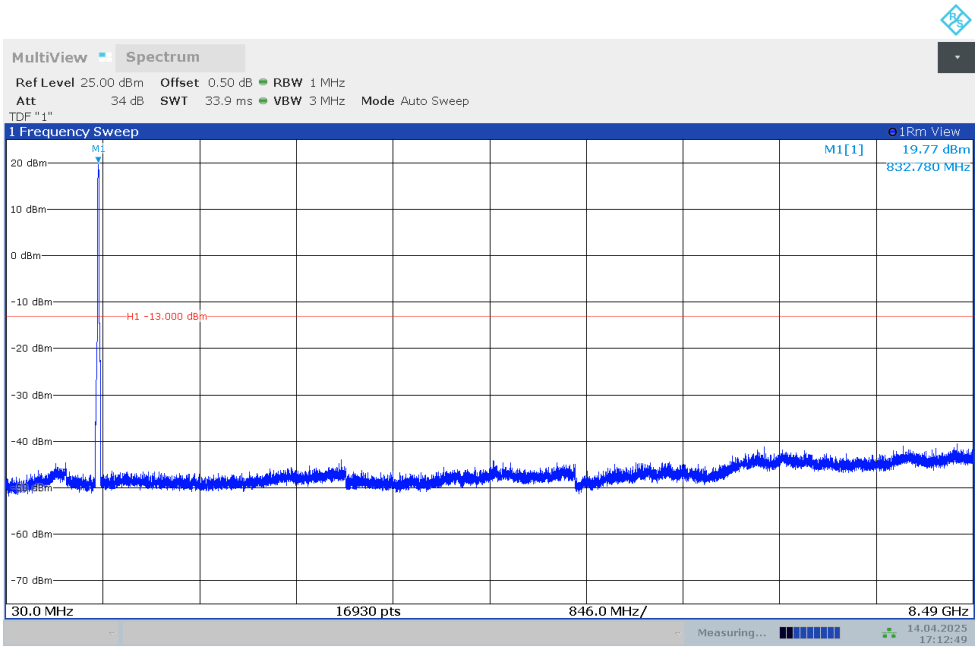
### A.7.3 Measurement result

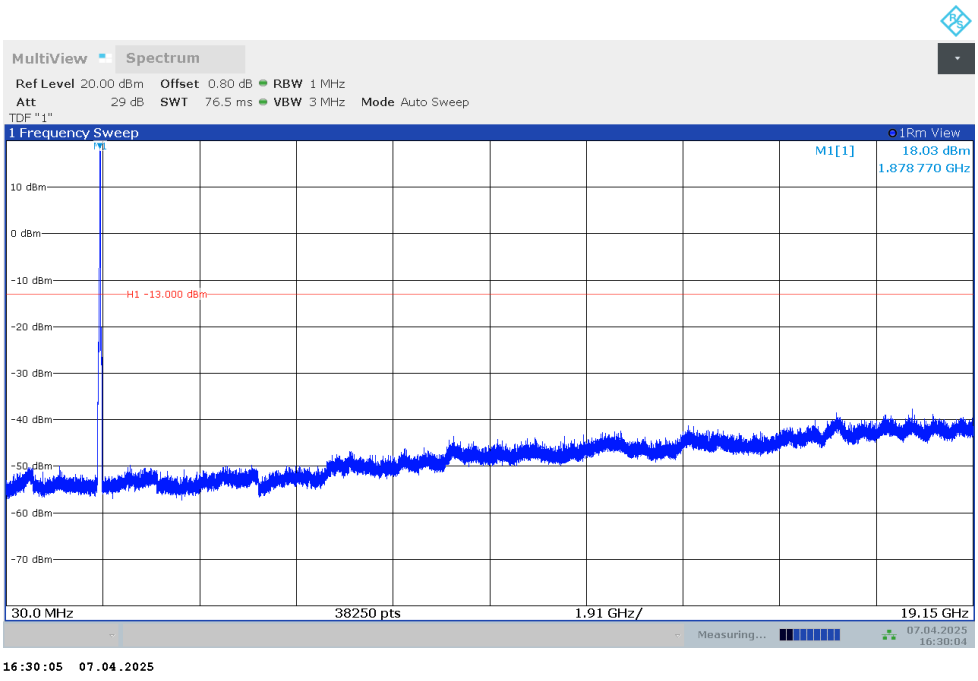
**n5**

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




**n25**

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

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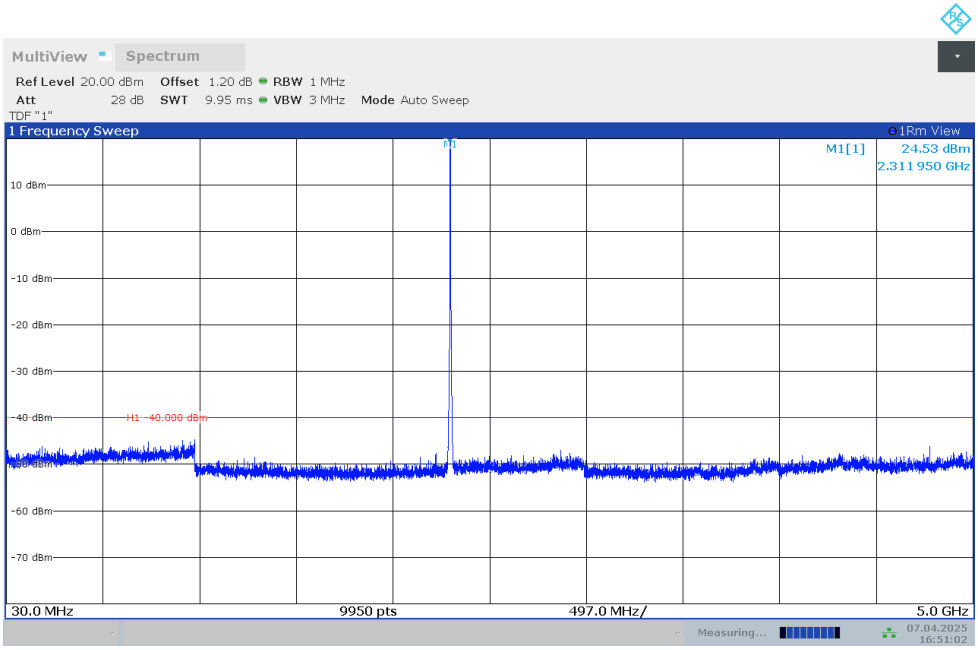
**n30**

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

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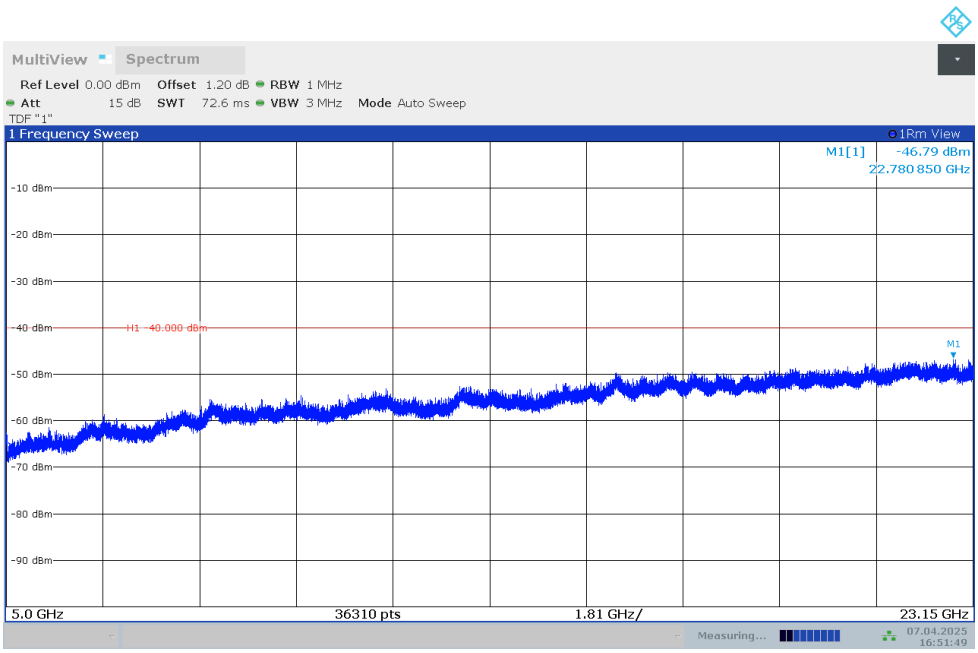


16:51:50 07.04.2025

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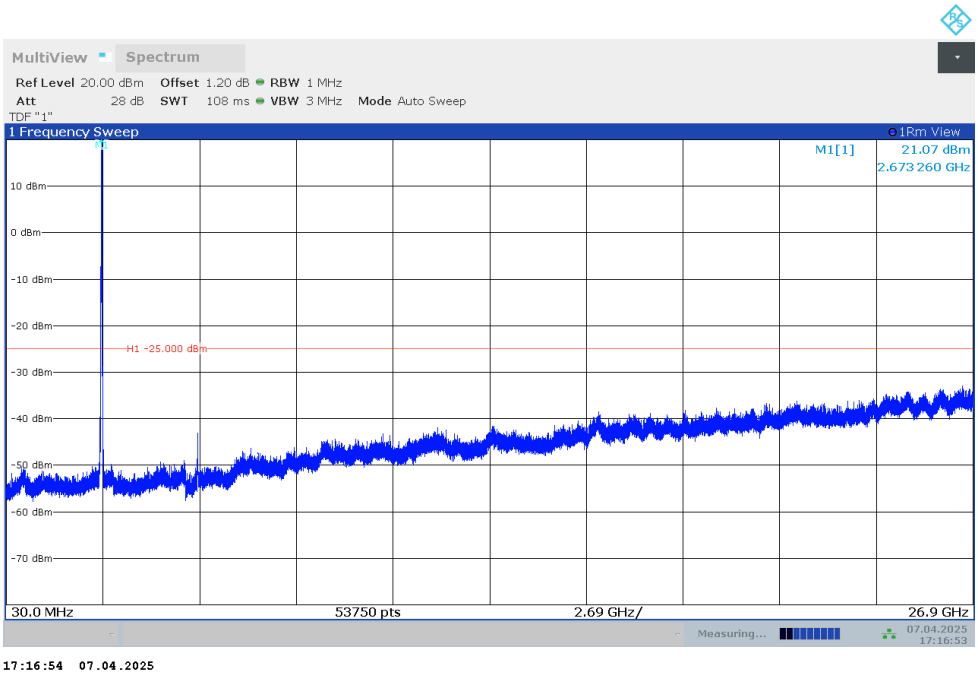
**n41**

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

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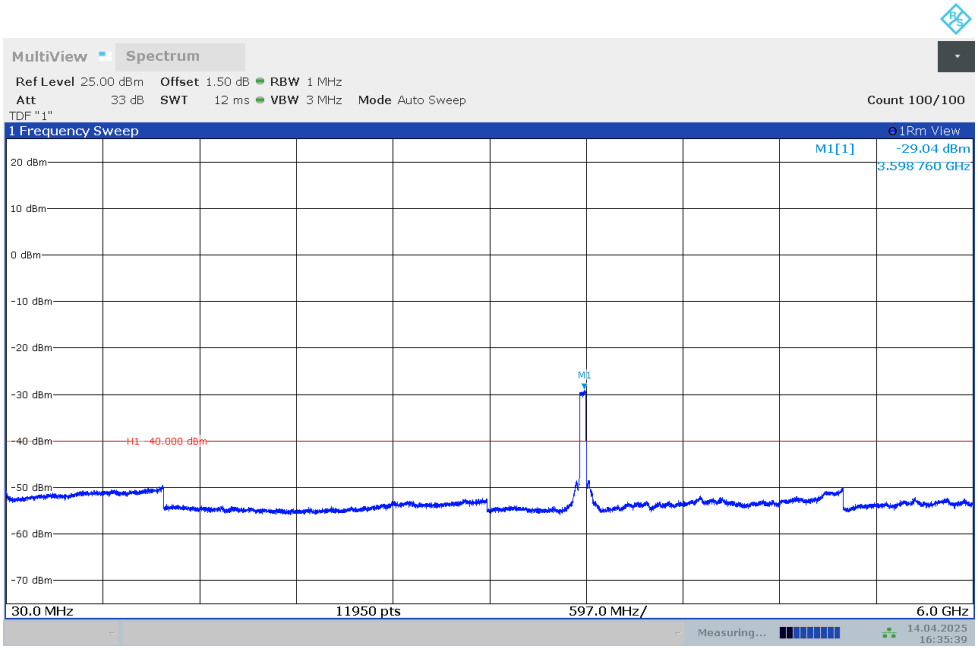
**n48**

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

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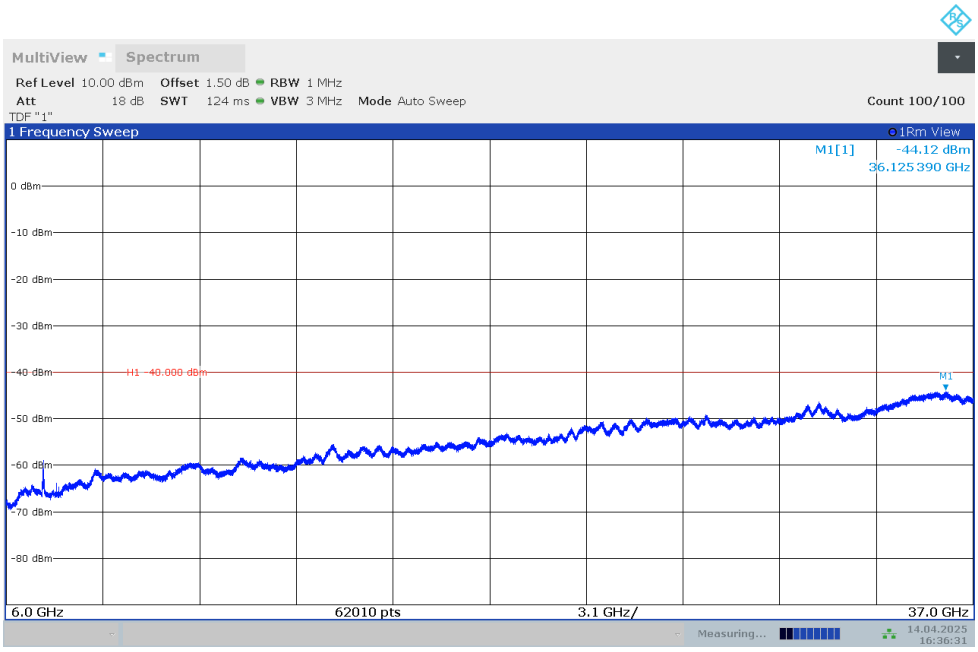


16:36:32 14.04.2025

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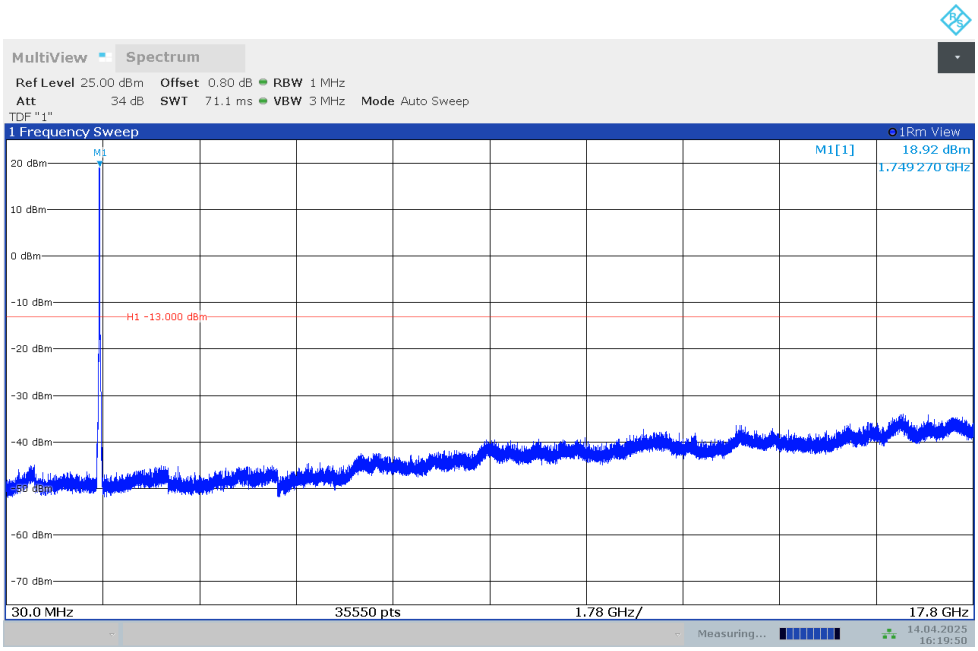
**n66**

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

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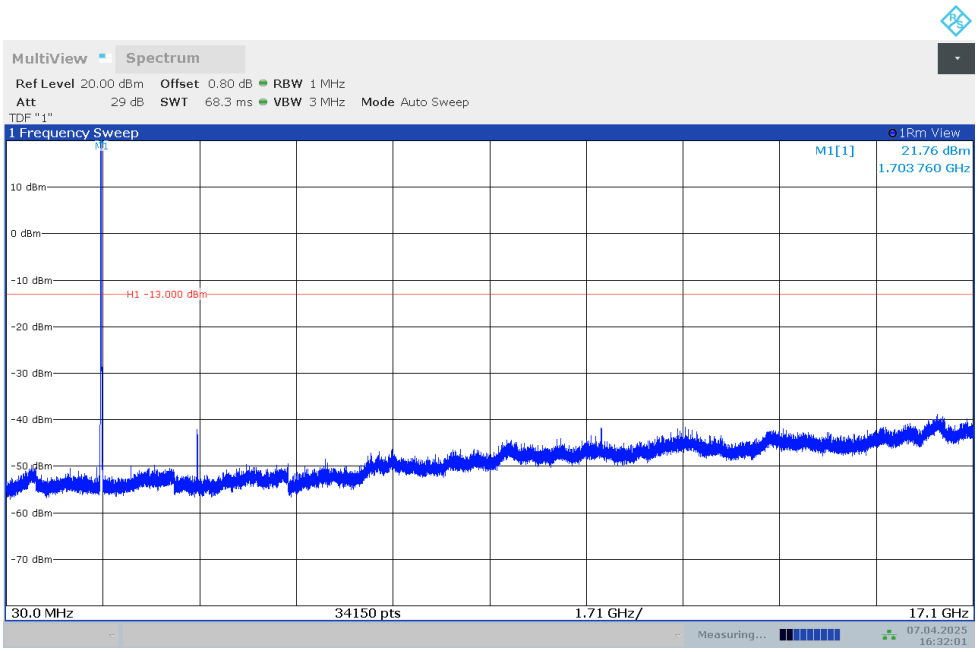
**n70**

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




16:32:02 07.04.2025

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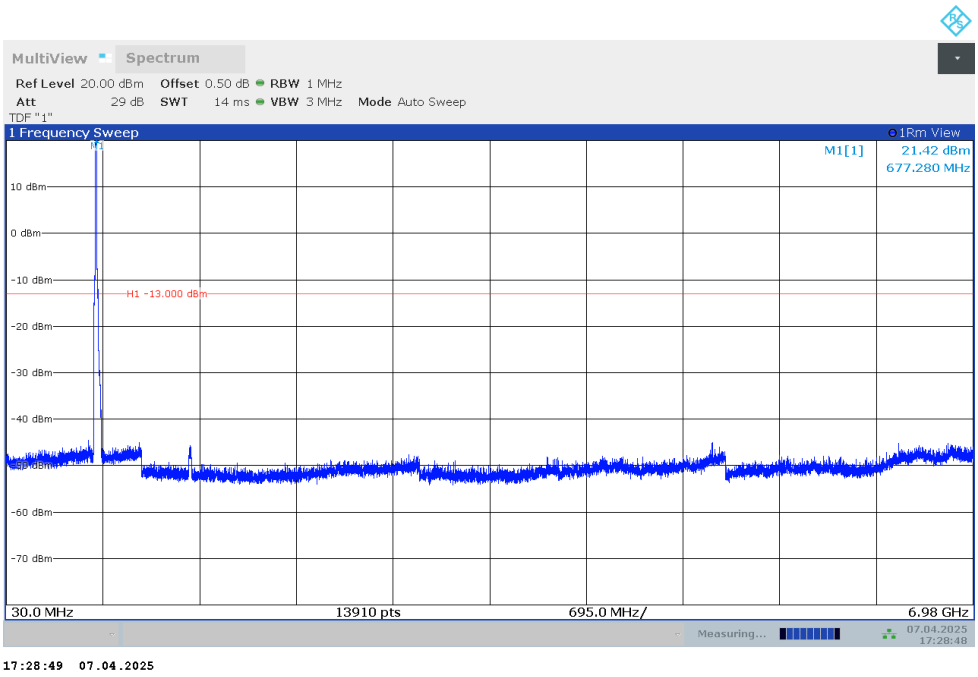
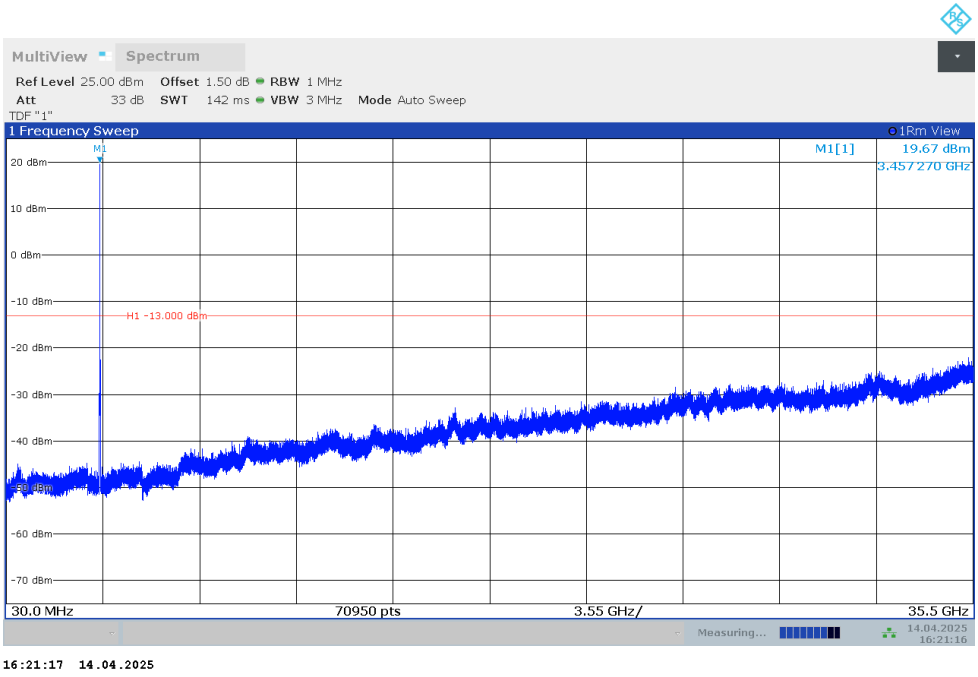
**n71**

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




**n77L**

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

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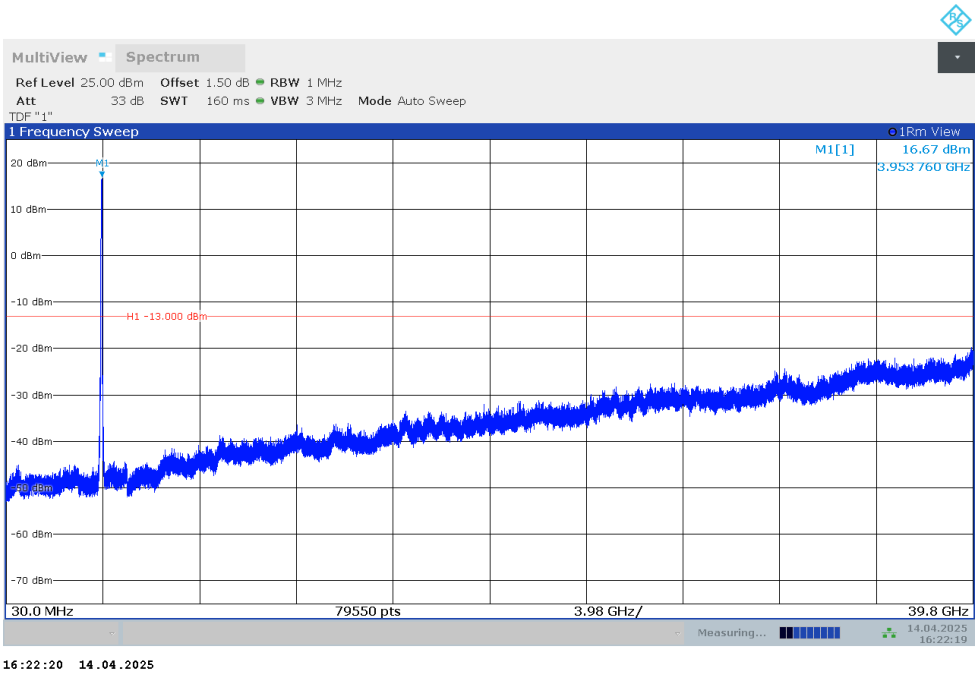
**n77H**

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

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## 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**

**n25,45MHz**

| 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 |
| 1882.5 | 4.82 | 5.74 | 6.50 | 6.69 | 6.83 | 8.46 | 8.43 | 8.59 | 8.79 |

**n30,10MHz**

| 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 |
| 2310 | 3.74 | 4.48 | 5.31 | 5.74 | 6.30 | 6.79 | 6.77 | 7.13 | 8.11 |

**n41,100MHz**

| 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 |
| 2592.99 | 4.85 | 4.95 | 5.76 | 5.76 | 6.09 | 7.23 | 7.29 | 7.52 | 8.05 |

**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 | 5.04 | 5.83 | 6.37 | 6.81 | 6.65 | 8.38 | 8.38 | 8.67 | 8.56 |

**n66,40MHz**

| 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 |
| 1745 | 4.97 | 5.52 | 6.25 | 6.55 | 6.77 | 8.04 | 8.09 | 8.22 | 8.70 |

**n70,15MHz**

| 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 |
| 1702.5 | 4.74 | 5.86 | 6.68 | 6.95 | 6.97 | 8.50 | 8.38 | 8.56 | 8.95 |

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**n71,35MHz**

| 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 |
| 680.5 | 4.38 | 4.82 | 5.60 | 5.93 | 6.40 | 7.13 | 7.18 | 7.38 | 8.43 |

**n77L,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 |
| 3500.01 | 4.85 | 5.55 | 6.23 | 6.44 | 6.72 | 7.86 | 7.89 | 8.03 | 8.56 |

**n77H,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 |
| 3840 | 4.88 | 5.66 | 6.36 | 6.56 | 6.80 | 8.16 | 8.77 | 8.26 | 8.67 |

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## 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 23rd day of July 2024.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 7049.01
Valid to July 31, 2026

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

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

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