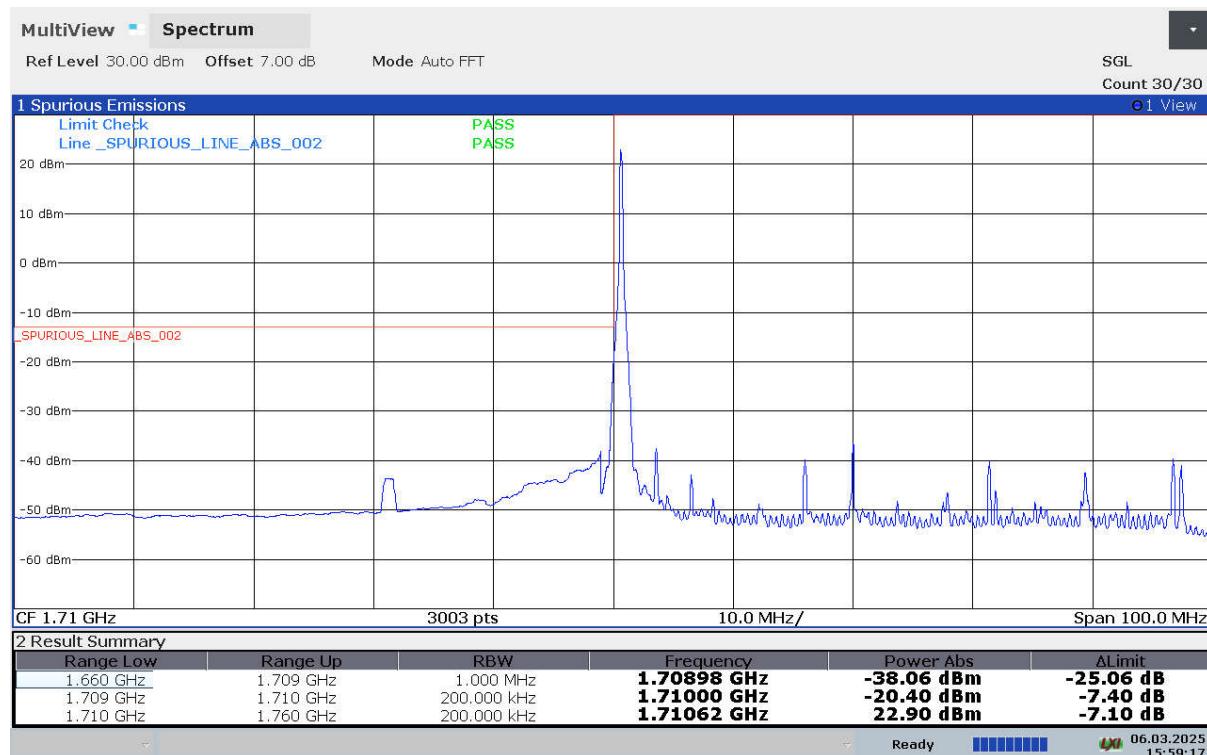
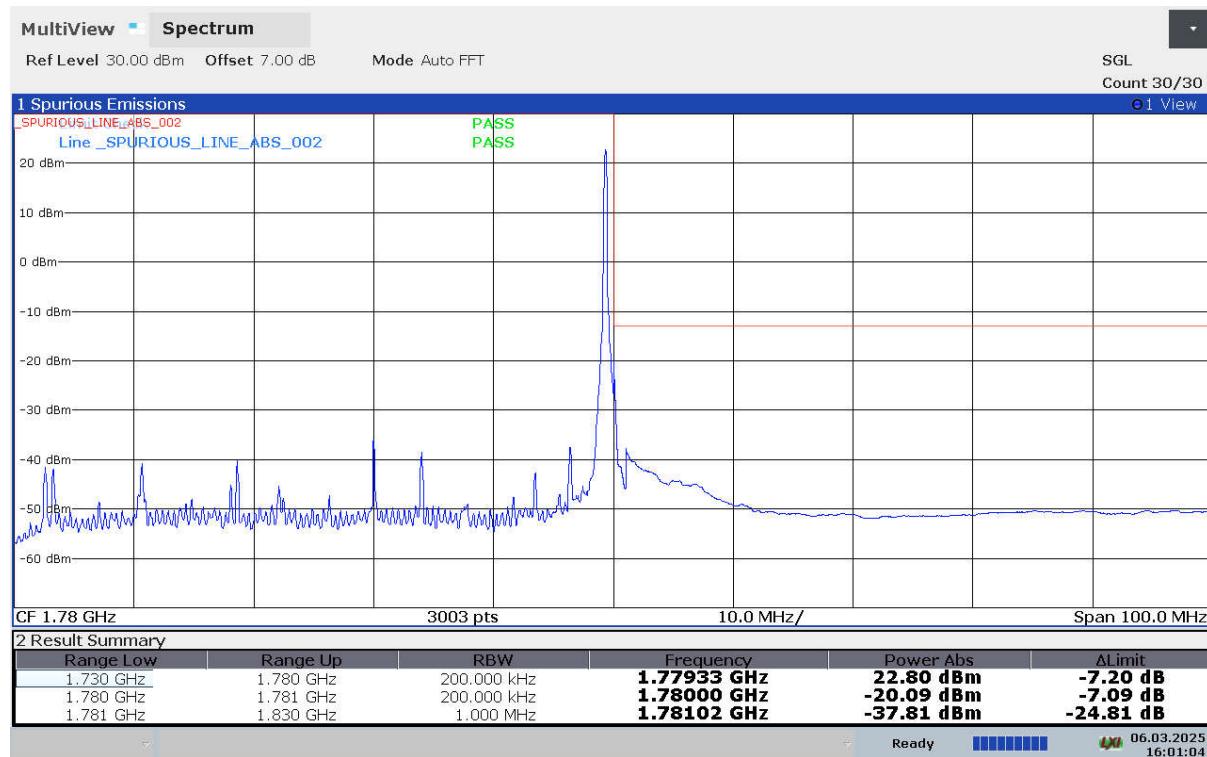


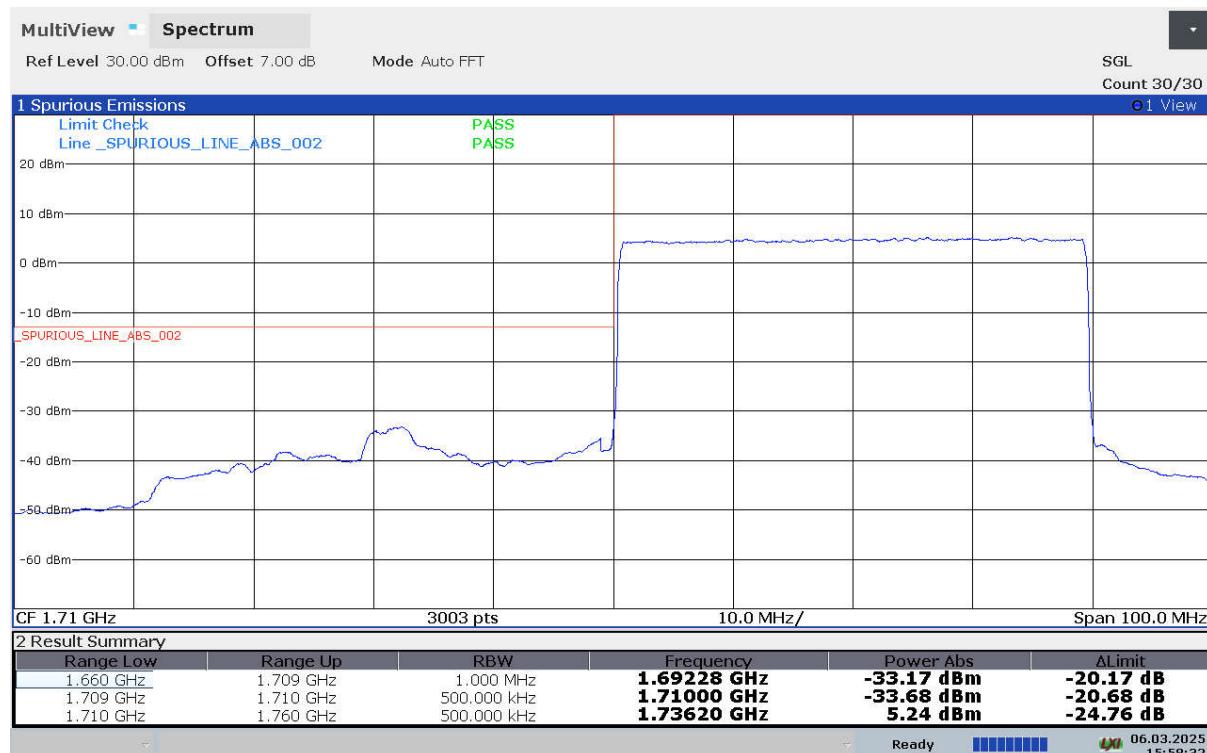
n66

LOW BAND EDGE BLOCK-40M-1RB-LOW_offset



HIGH BAND EDGE BLOCK-40M-1RB-HIGH_offset



LOW BAND EDGE BLOCK-40M-100%RB

HIGH BAND EDGE BLOCK-40M-100%RB


Note: Expanded measurement uncertainty is $U = 0.49\text{dB}(100\text{KHz}-2\text{GHz})/1.21\text{dB}(2\text{GHz}-26.5\text{GHz})$, $k = 1.96$

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 $2 \times \text{span}/\text{RBW}$

A.7.2 Measurement Limit

Part 22.917 and Part 24.238 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(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 than $43 + 10 \log(P)$ 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 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 $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ 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 $43 + 10 \log_{10}(P)$ 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.

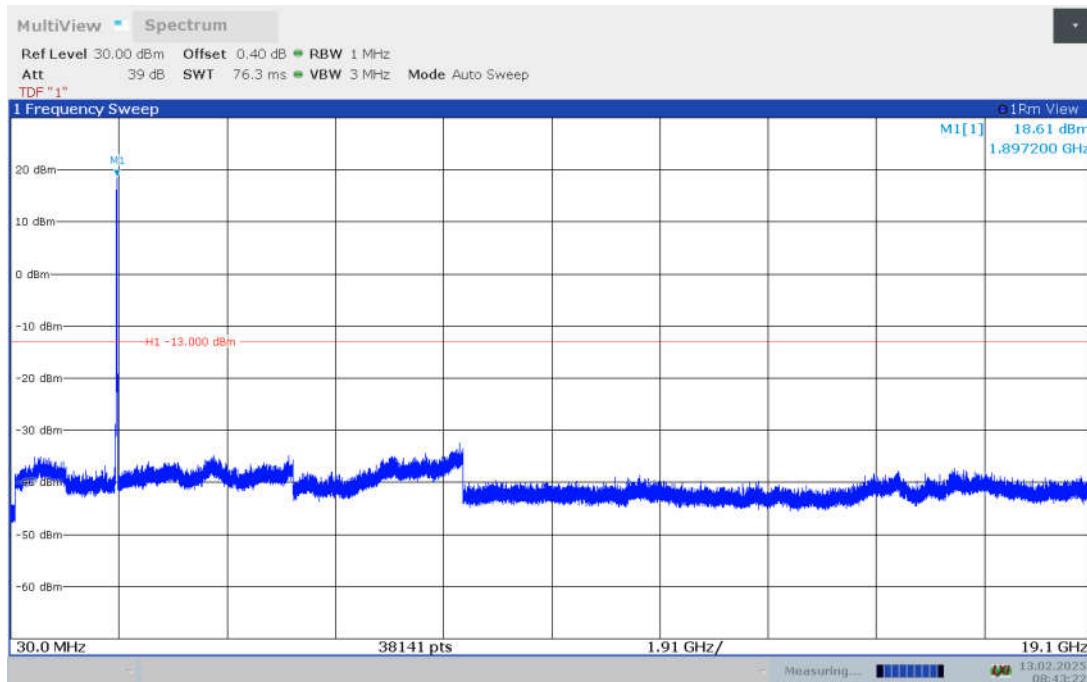
A.7.3 Measurement result

Only worst case result is given below

n2 : 30MHz –19.1GHz

Spurious emission limit –25dBm.

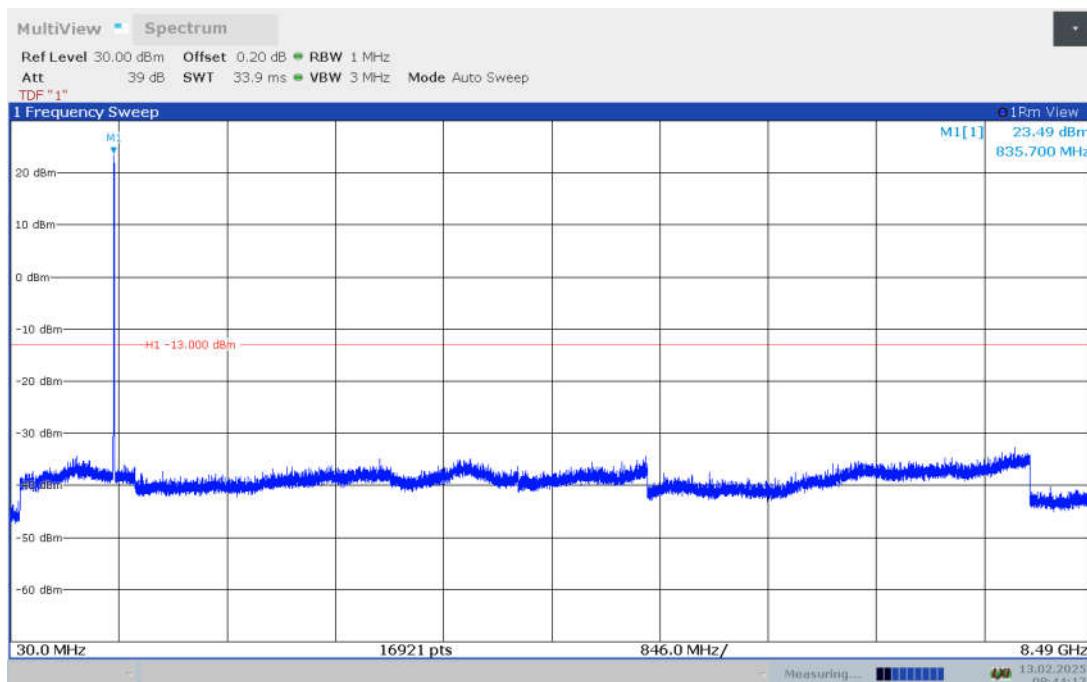
NOTE: peak above the limit line is the carrier frequency.



n5 : 30MHz –8.49GHz

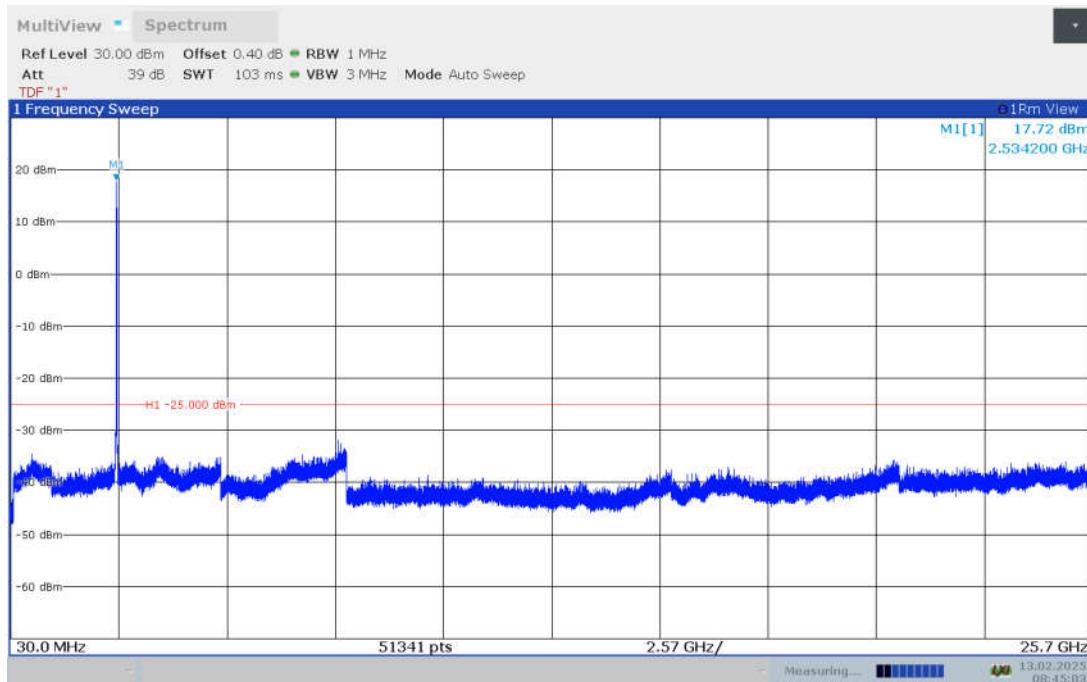
Spurious emission limit –13dBm.

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

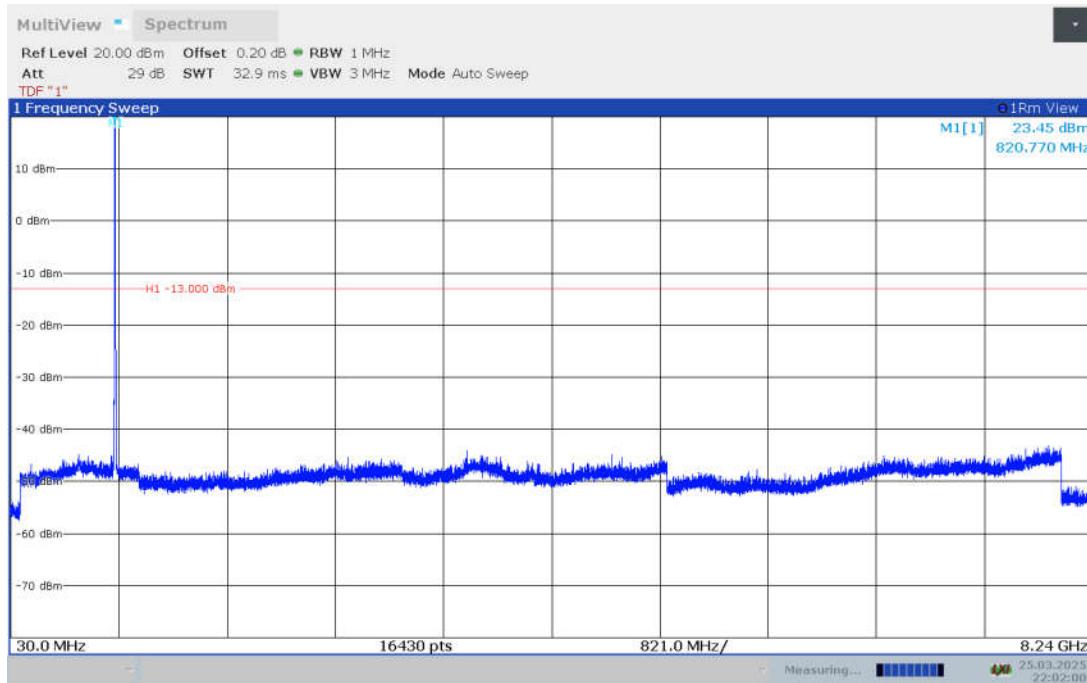


n7 : 30MHz –25.7GHz

Spurious emission limit –25dBm.

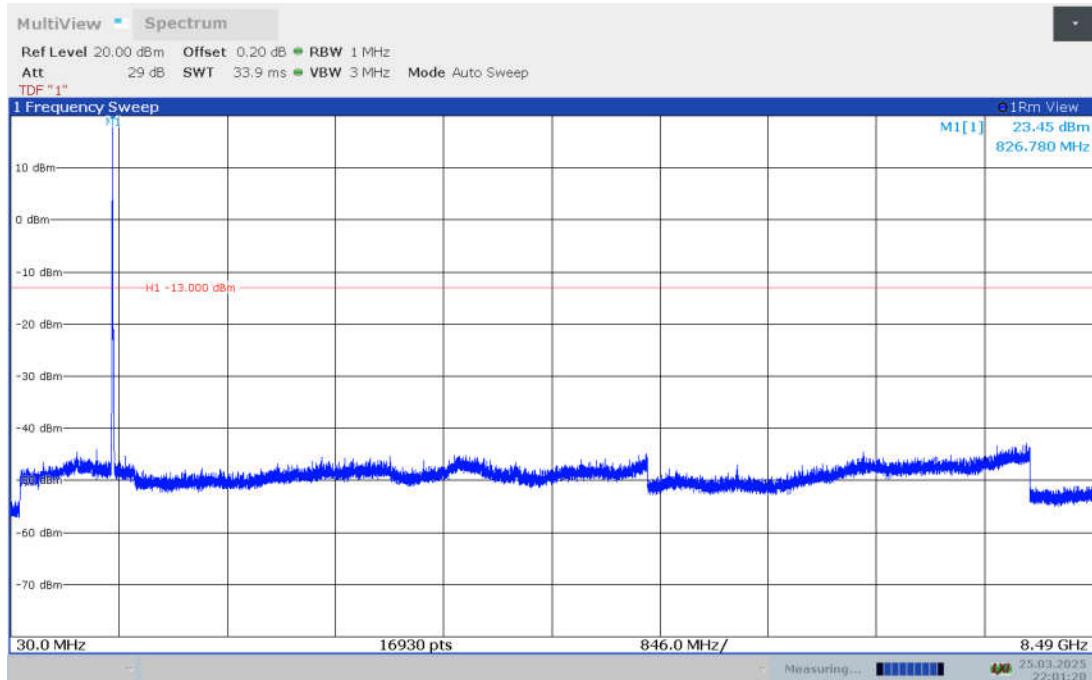
NOTE: peak above the limit line is the carrier frequency.

n26(814MHz-824MHz) : 30MHz –8.24GHz

Spurious emission limit –23dBm.

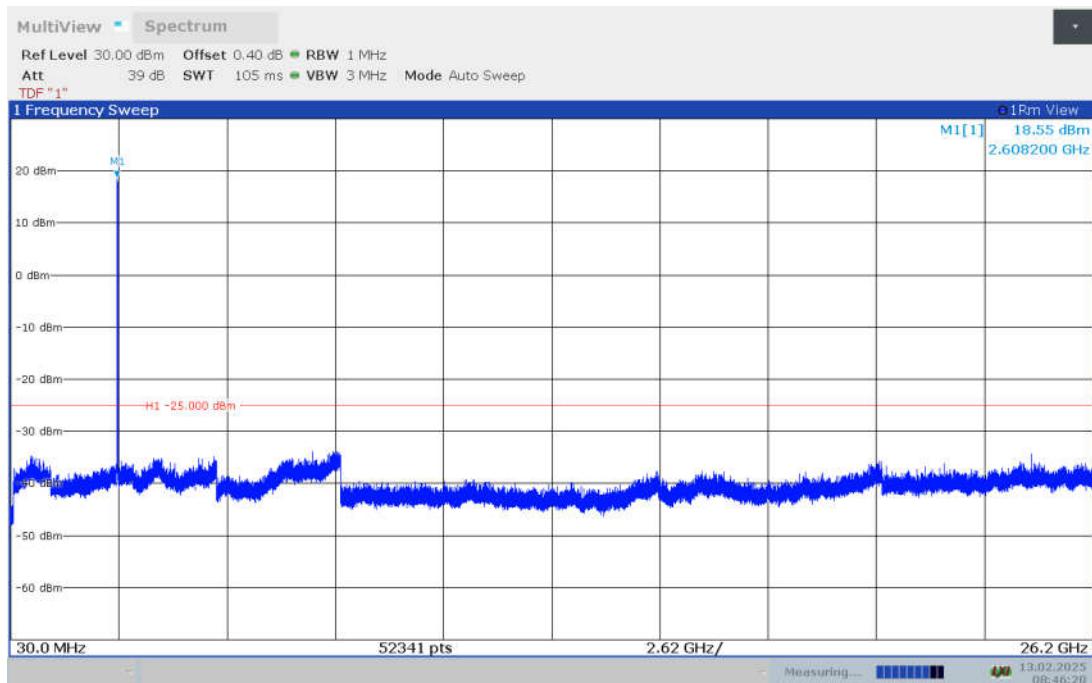
NOTE: peak above the limit line is the carrier frequency.


n26(824MHz-849MHz) : 30MHz –8.49GHz

Spurious emission limit –23dBm.

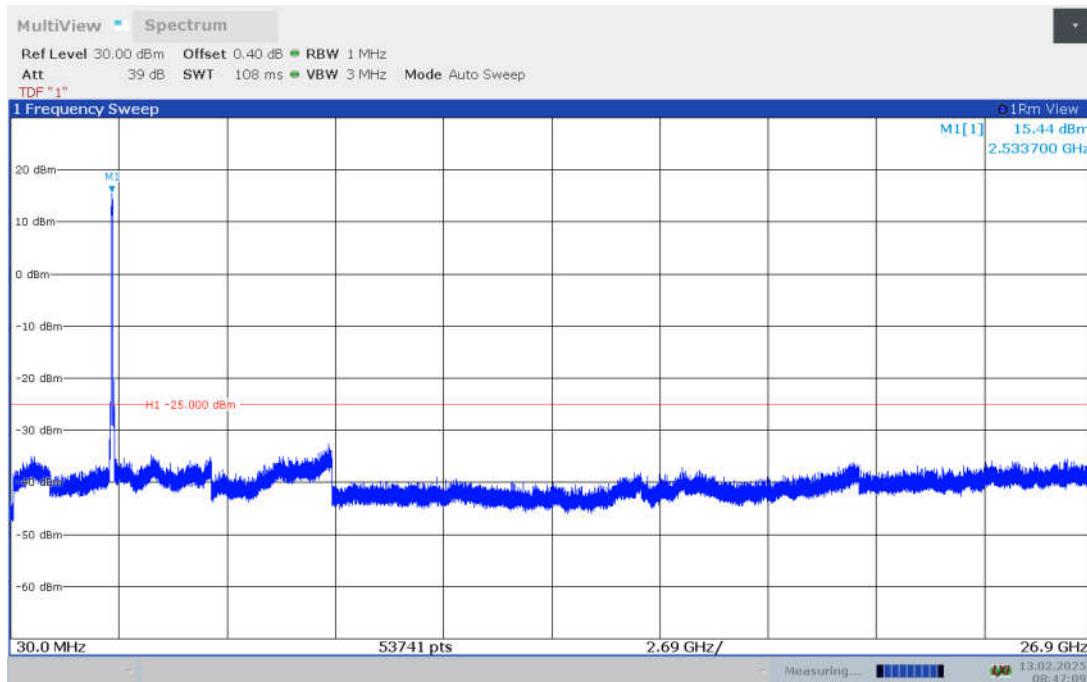
NOTE: peak above the limit line is the carrier frequency.

n38 : 30MHz –26.2GHz

Spurious emission limit –25dBm.

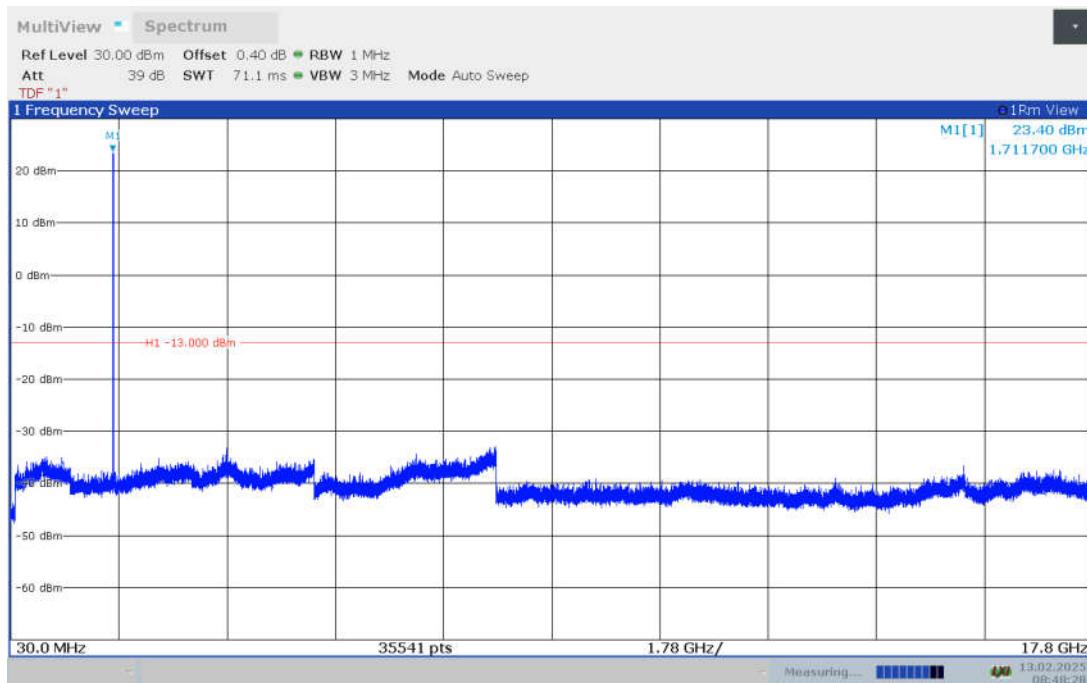
NOTE: peak above the limit line is the carrier frequency.


n41 : 30MHz –26.9GHz

Spurious emission limit –25dBm.

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

n66 : 30MHz –17.8GHz

Spurious emission limit –13dBm.

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


Note: Expanded measurement uncertainty is $U = 0.49\text{dB}(100\text{KHz}-2\text{GHz})/1.21\text{dB}(2\text{GHz}-26.5\text{GHz})$, $k = 1.96$

A.8 PEAK-TO-AVERAGE POWER RATIO

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

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

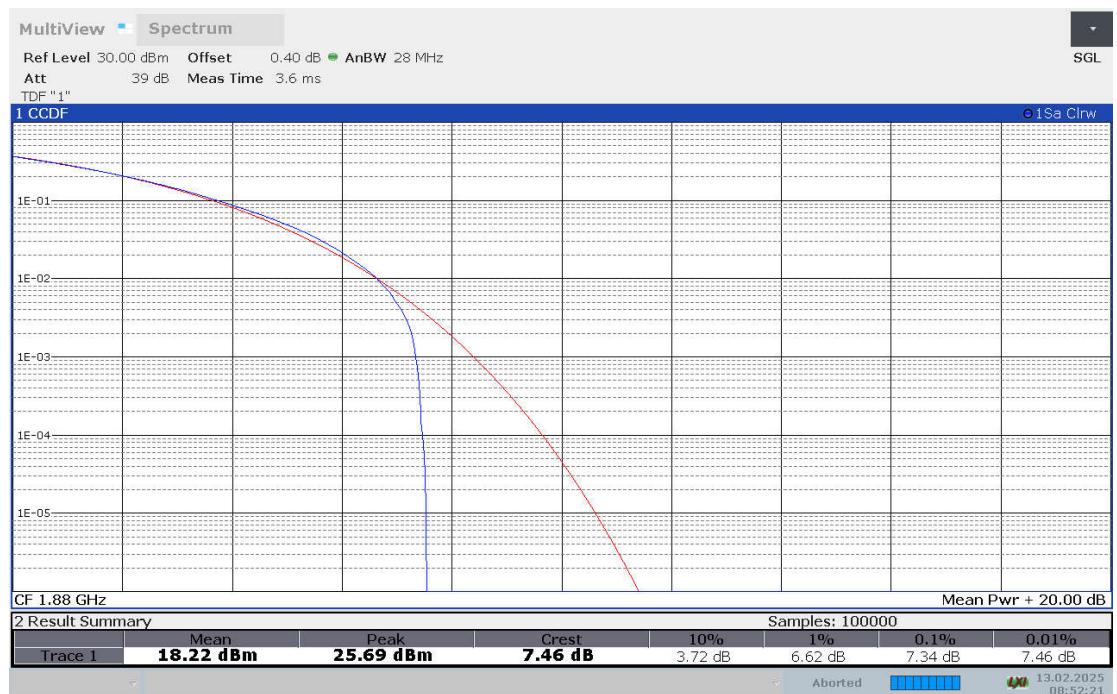
Measurement results

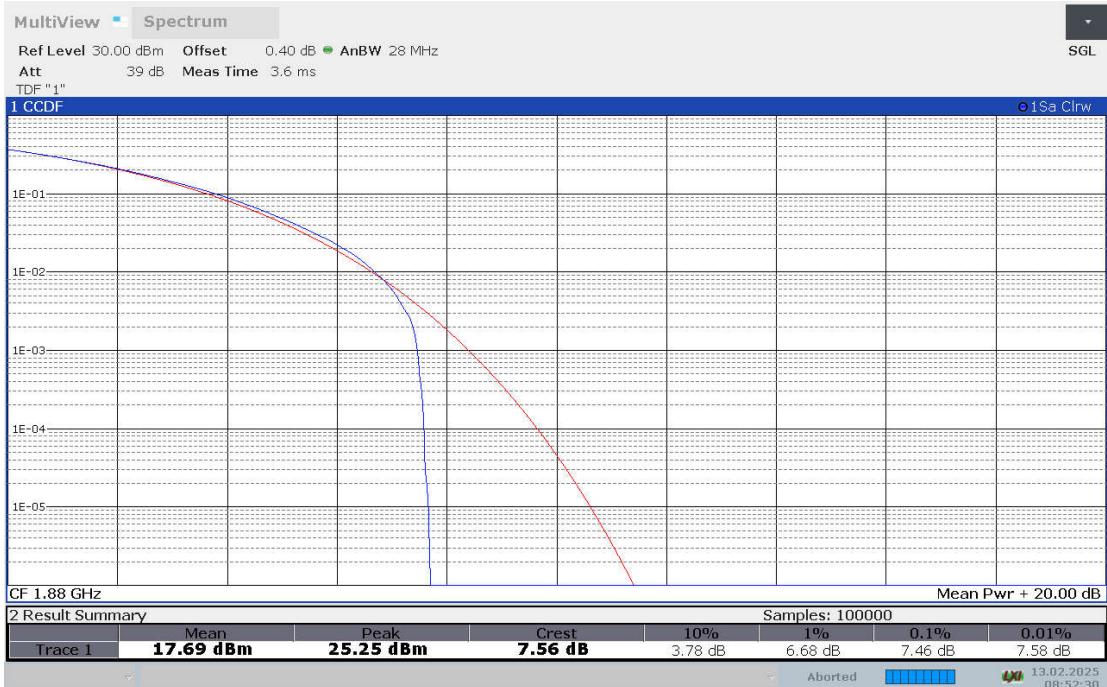
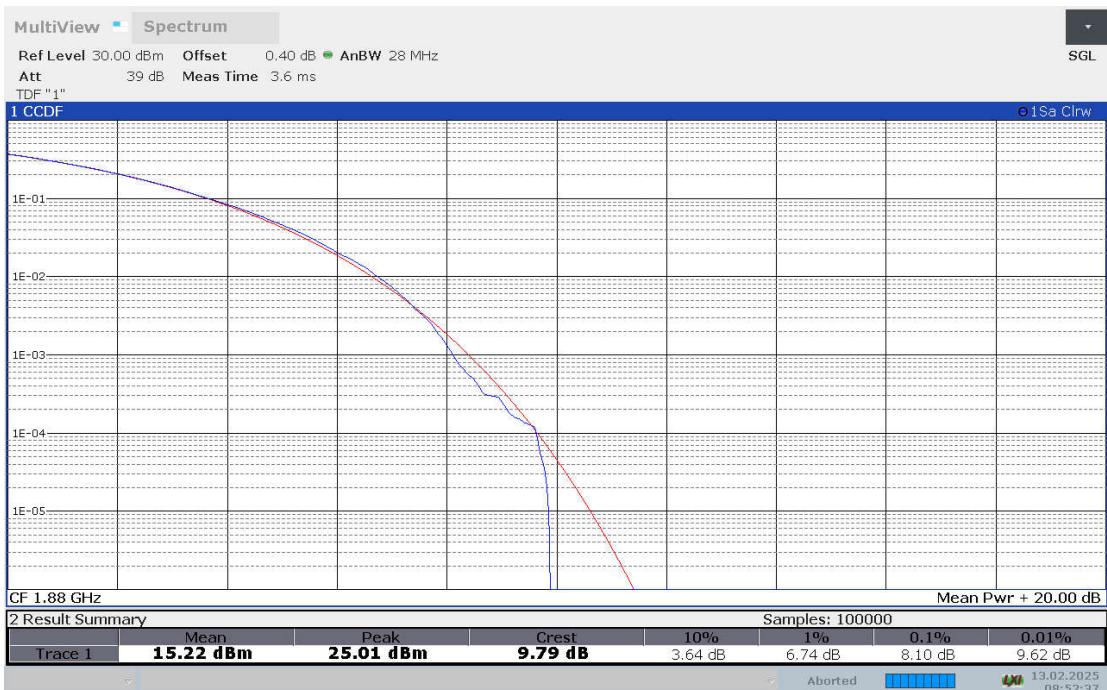
Only worst case result is given below

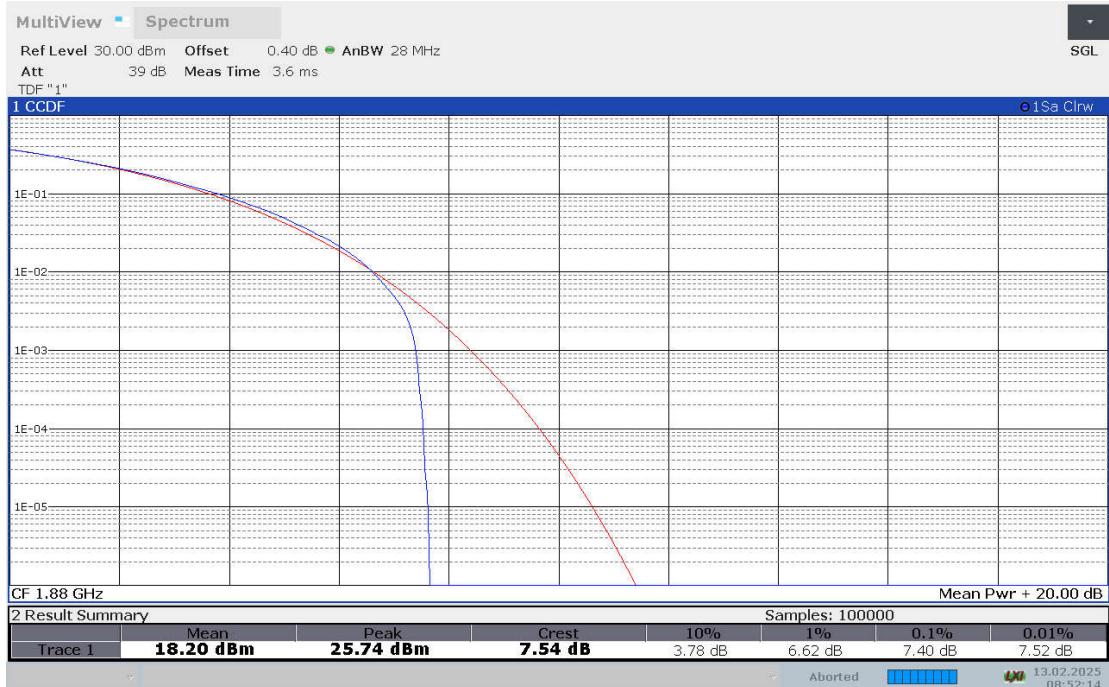
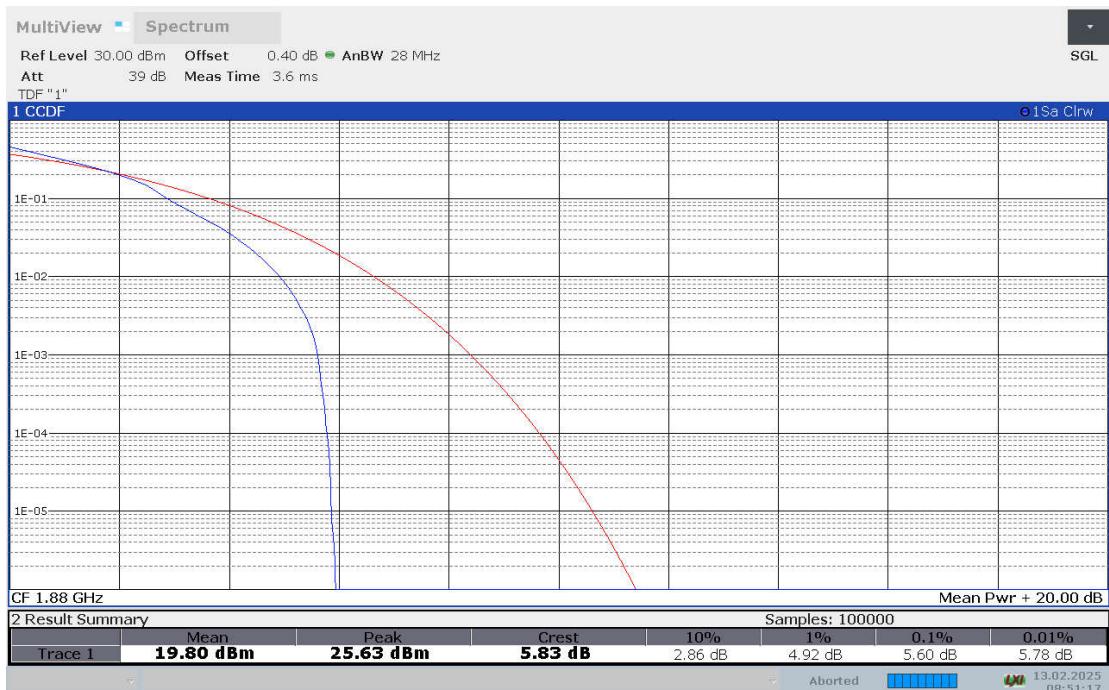
n2,5MHz

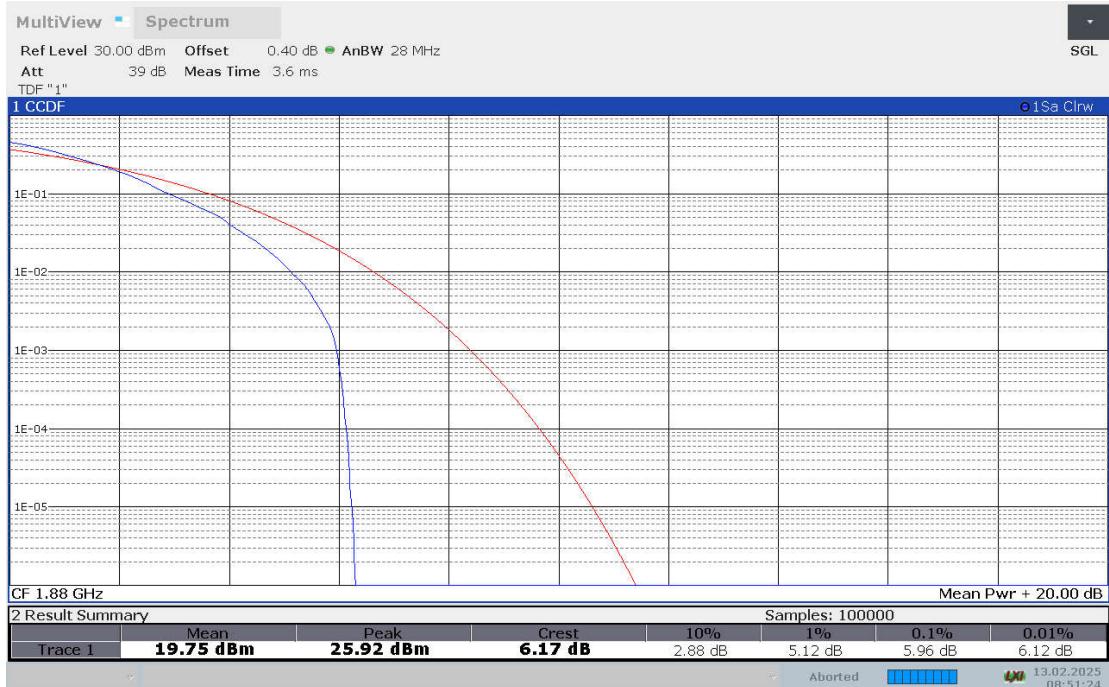
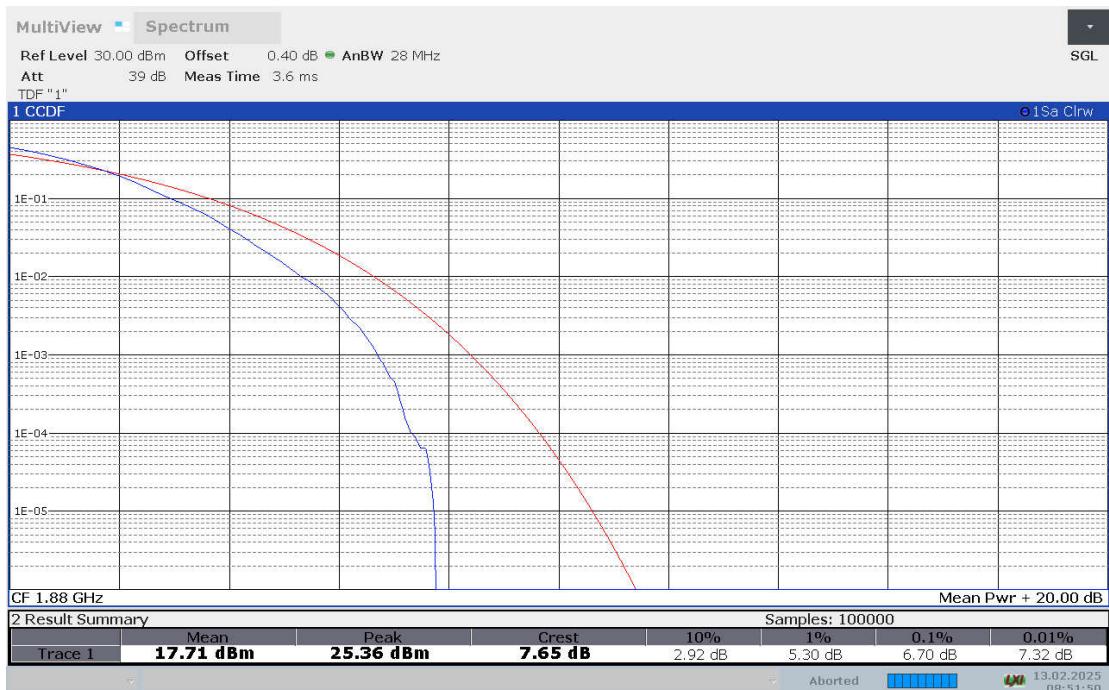
Frequency (MHz)	PAPR (dB)								
	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK	CP-16QAM	CP-64QAM	CP-256QAM
1880	3.98	5.06	5.60	5.96	6.70	7.40	7.34	7.46	8.10

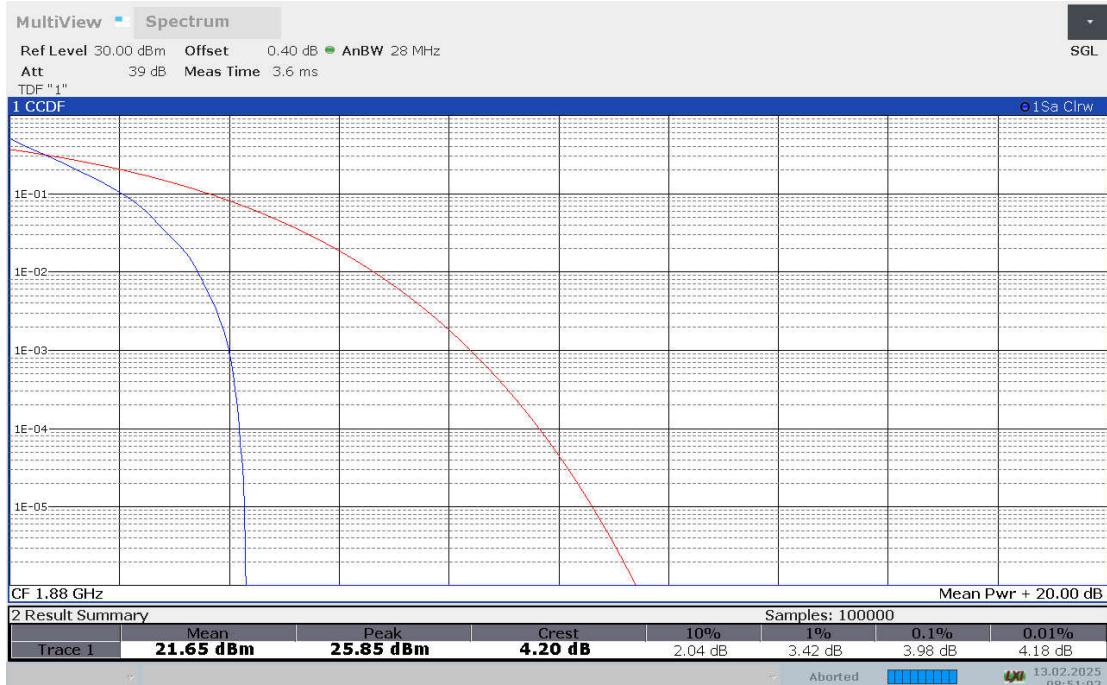
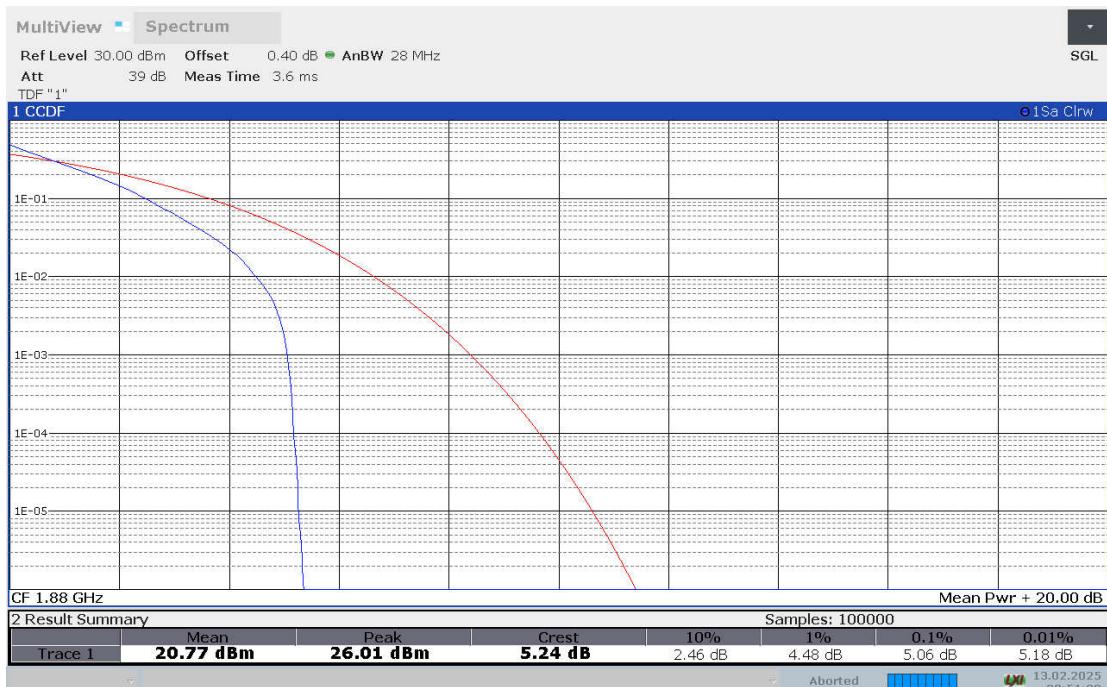
n2, CP-16QAM (PAPR)



n2, CP-64QAM (PAPR)

n2, CP-256QAM (PAPR)


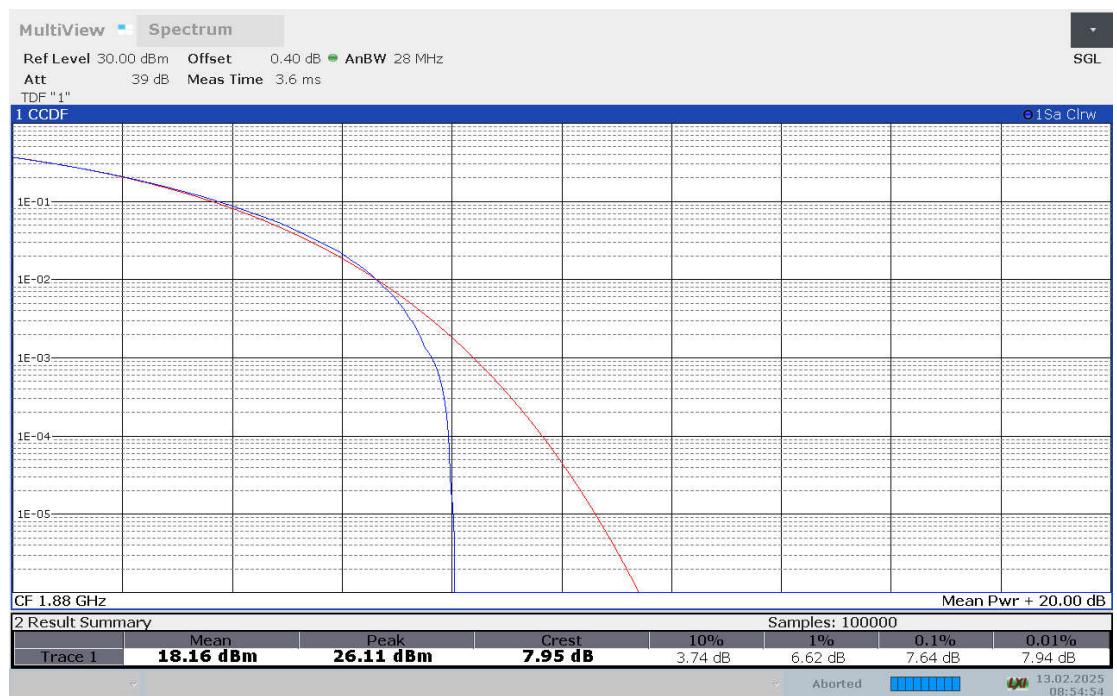
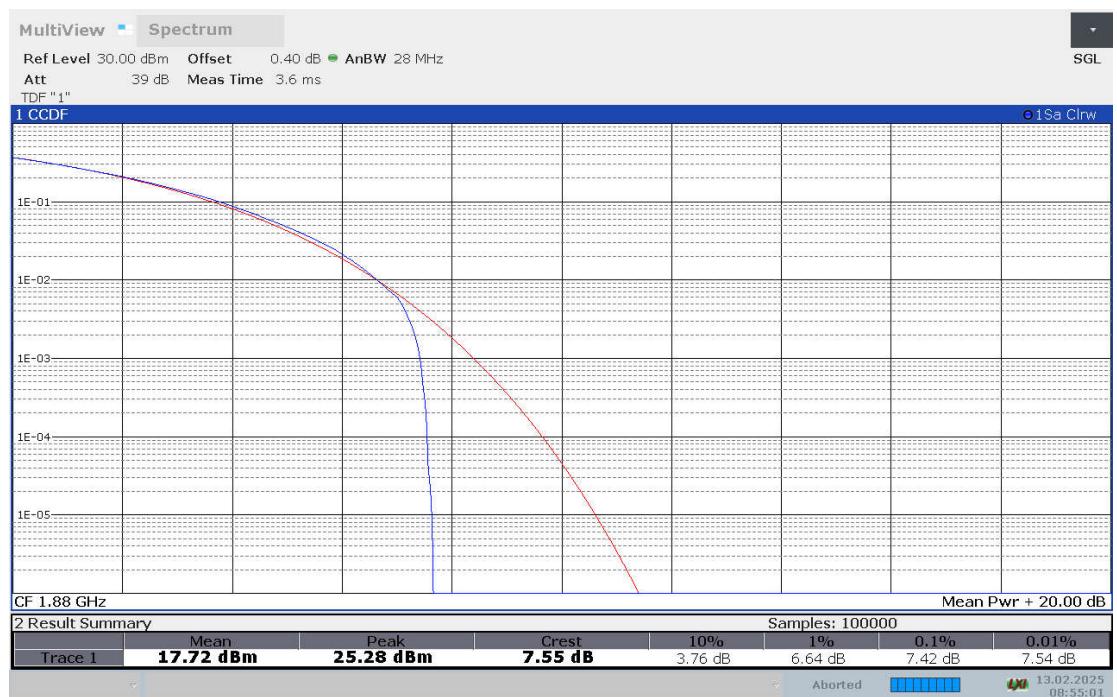
n2, CP-QPSK (PAPR)

n2, DFT-s-16QAM (PAPR)


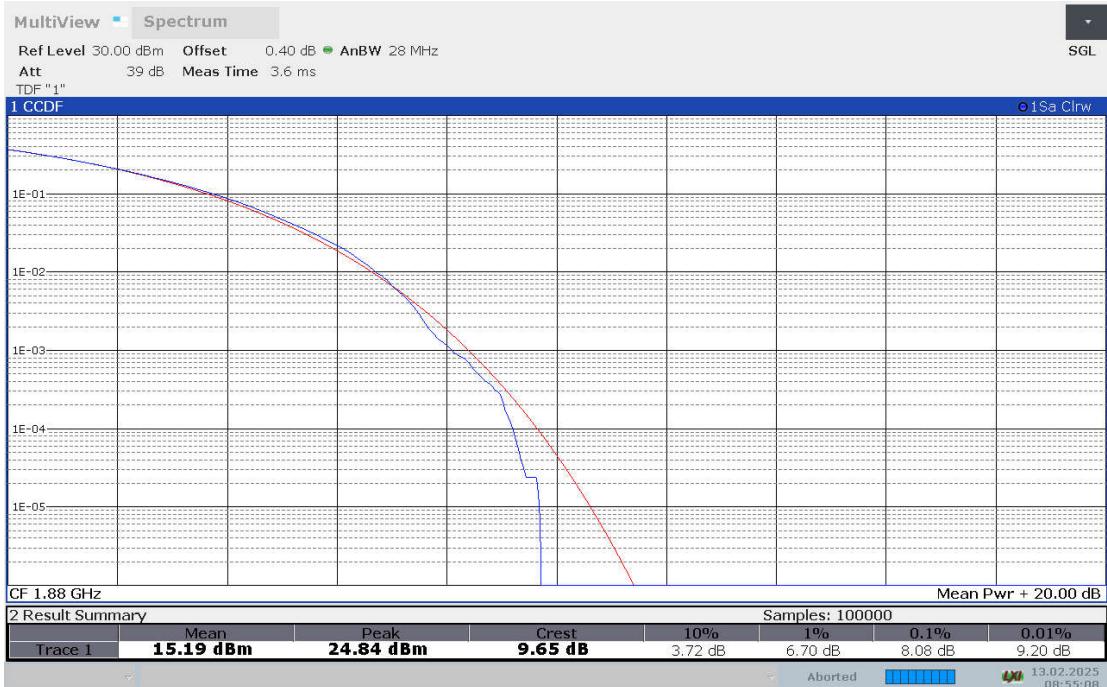
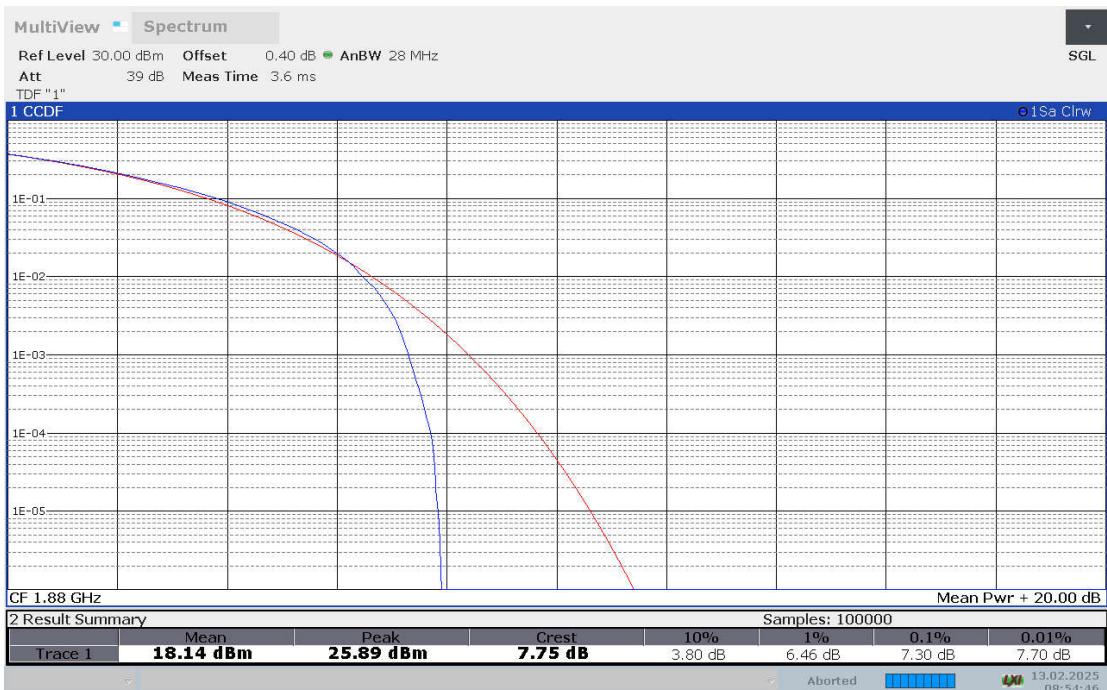
n2, DFT-s-64QAM (PAPR)

n2, DFT-s-256QAM (PAPR)


n2, DFT-s-pi/2 BPSK (PAPR)

n2, DFT-s-QPSK (PAPR)


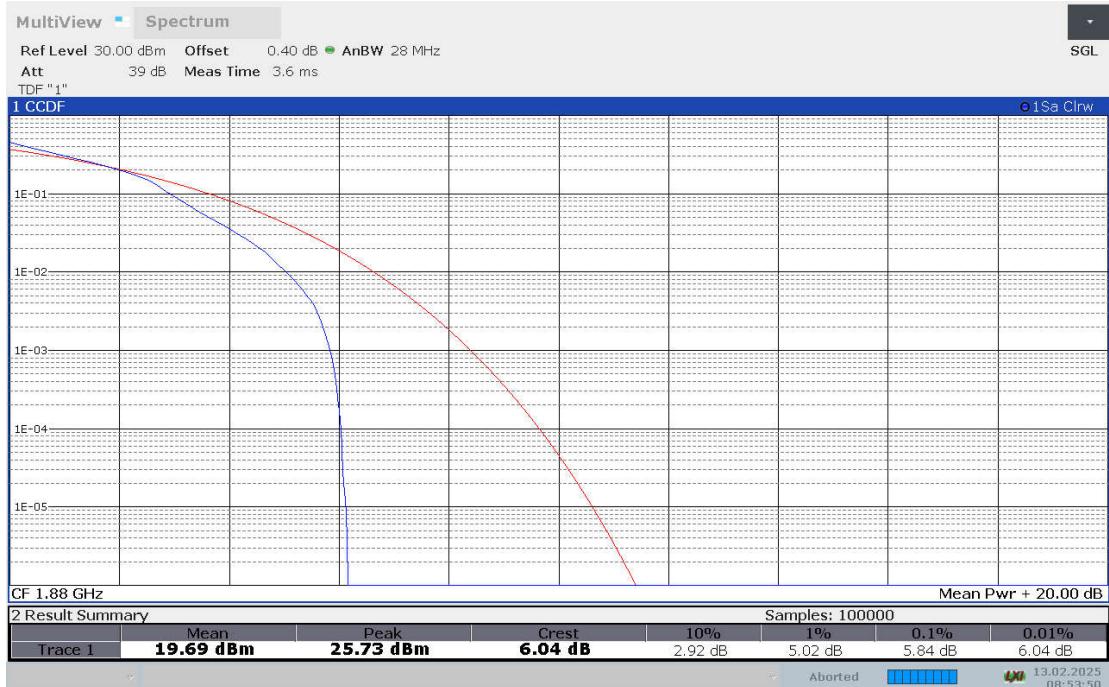
n2, 10MHz

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
1880	4.12	5.14	5.84	6.12	6.46	7.30	7.64	7.42	8.08

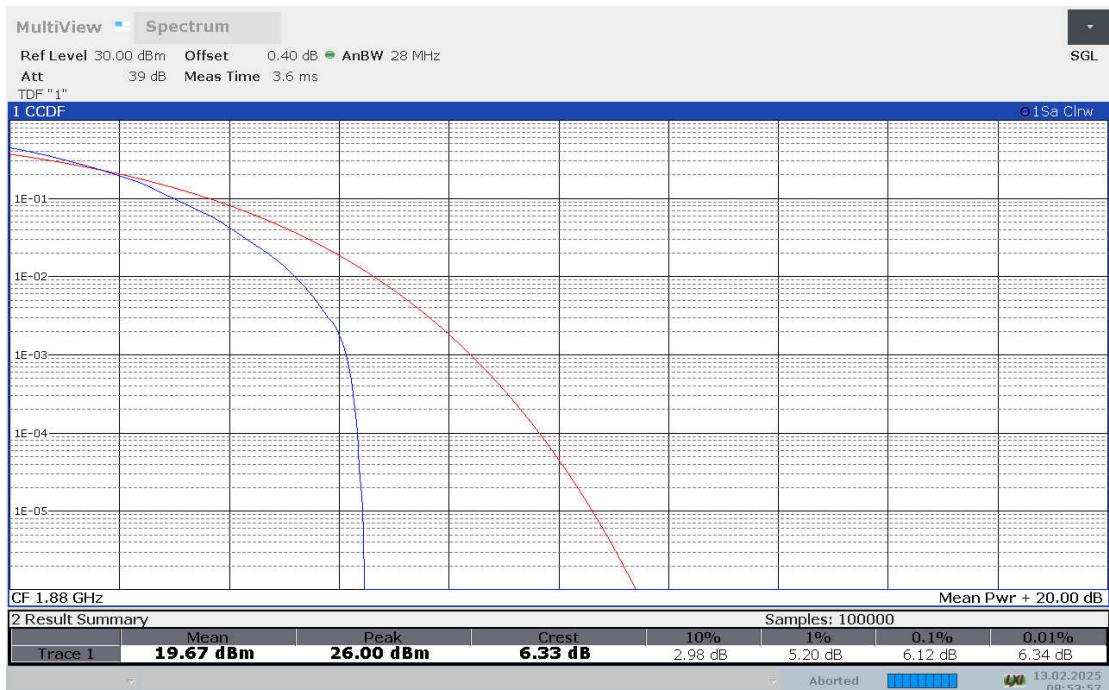
n2, CP-16QAM (PAPR)

n2, CP-64QAM (PAPR)


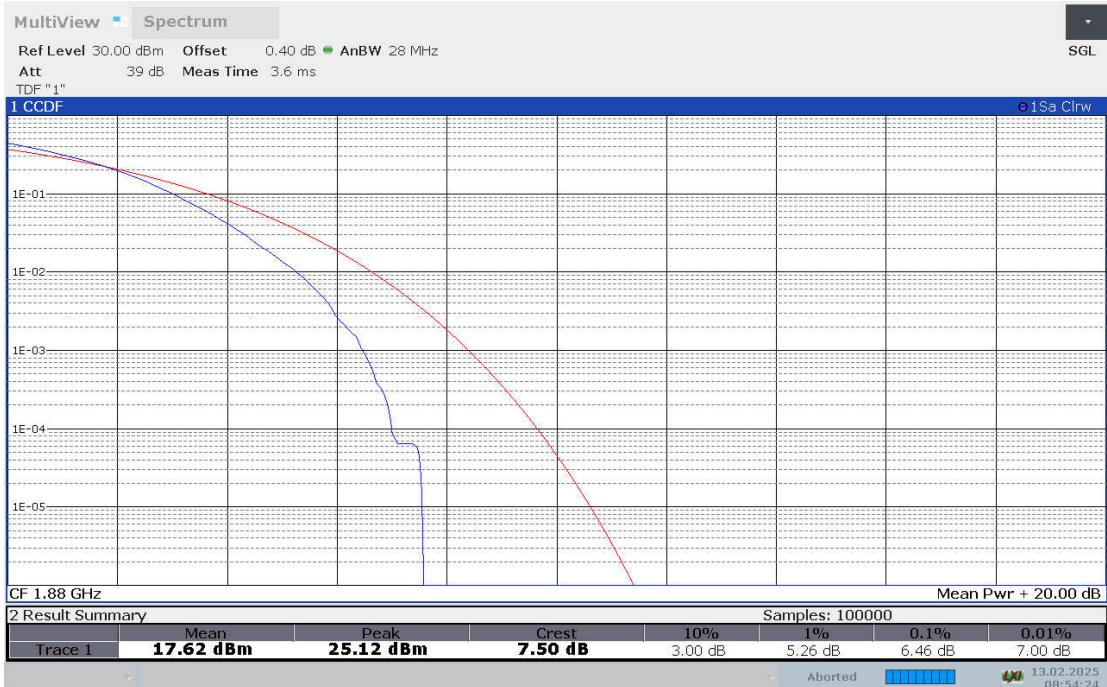
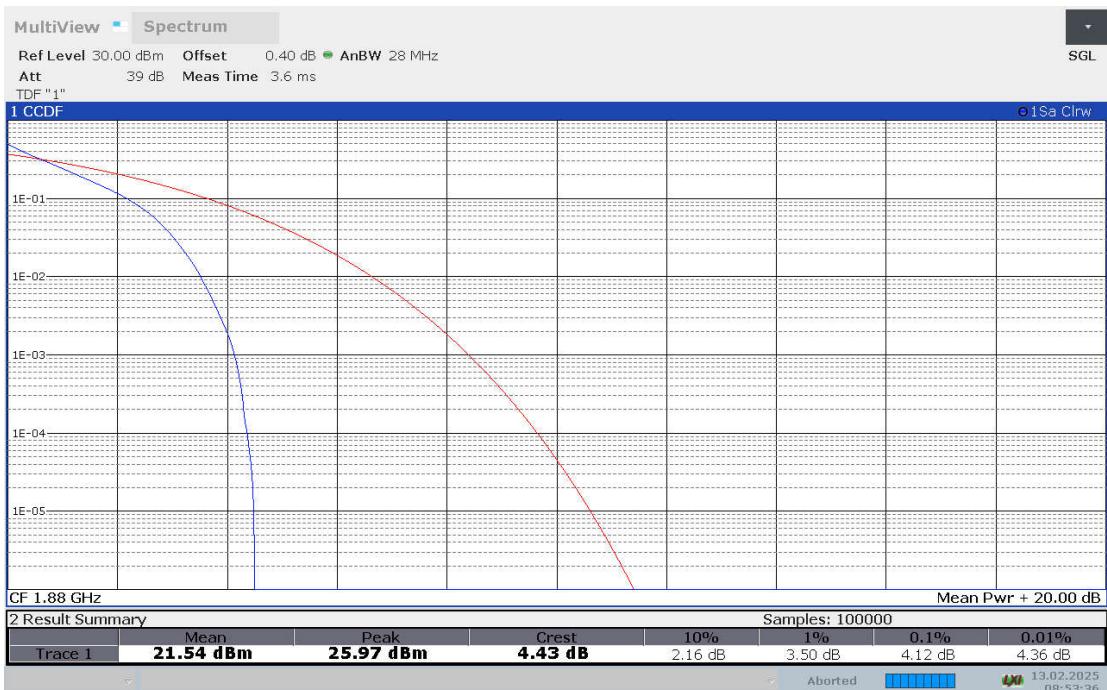
n2, CP-256QAM (PAPR)

n2, CP-QPSK (PAPR)


n2, DFT-s-16QAM (PAPR)

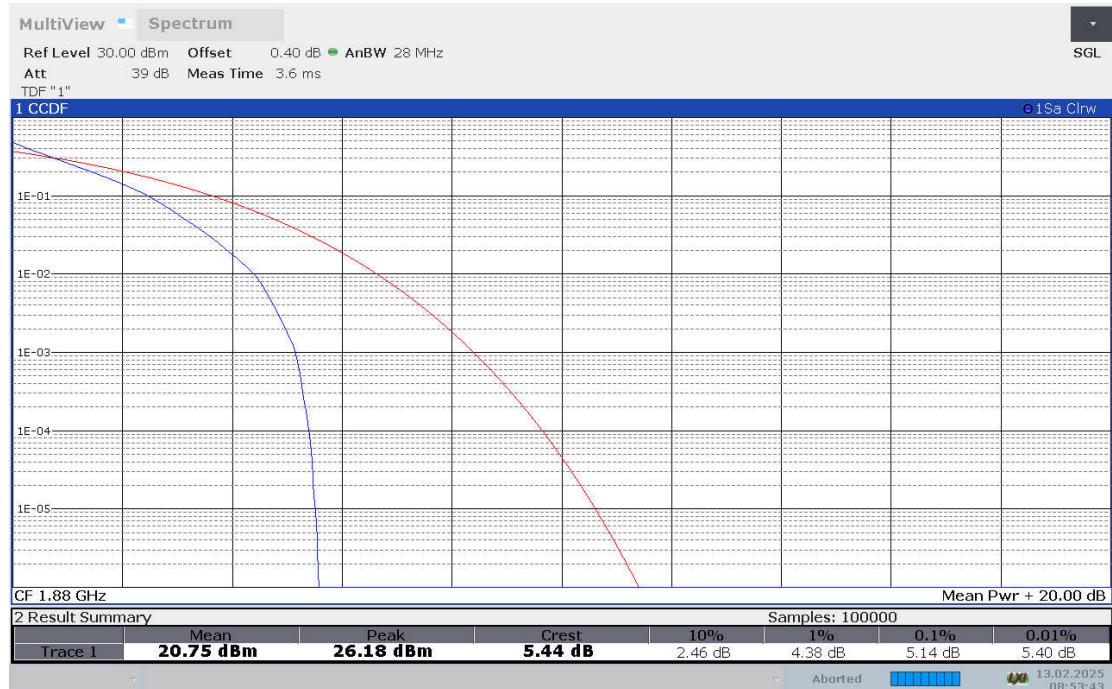


n2, DFT-s-64QAM (PAPR)



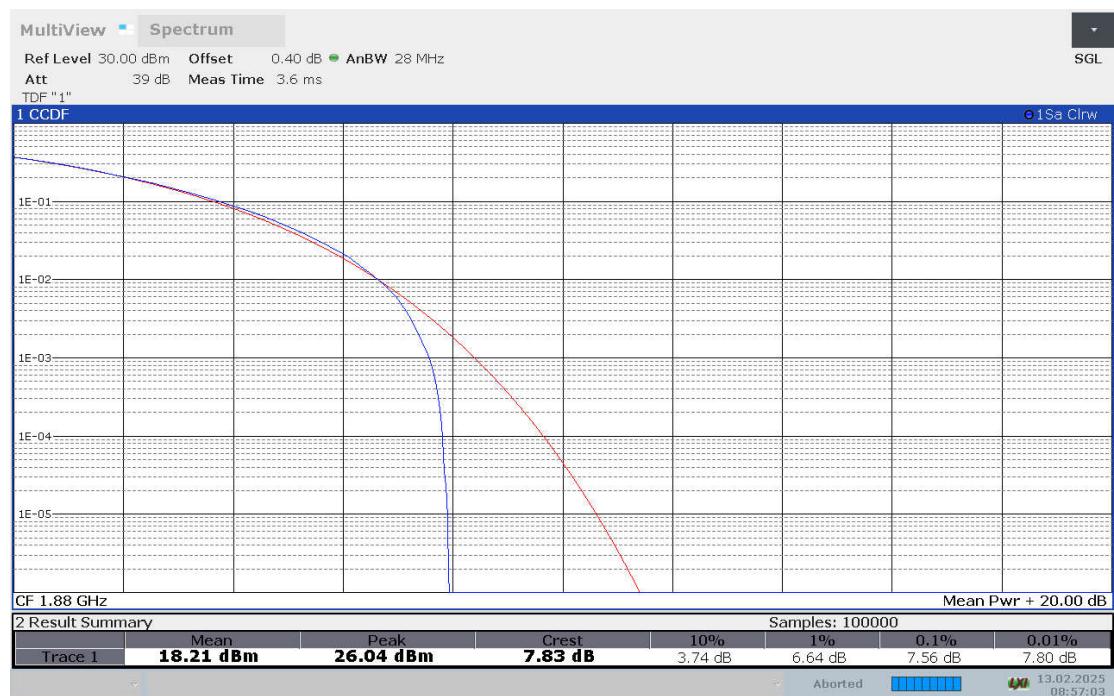
n2, DFT-s-256QAM (PAPR)

n2, DFT-s- $\pi/2$ BPSK (PAPR)


n2, DFT-s-QPSK (PAPR)

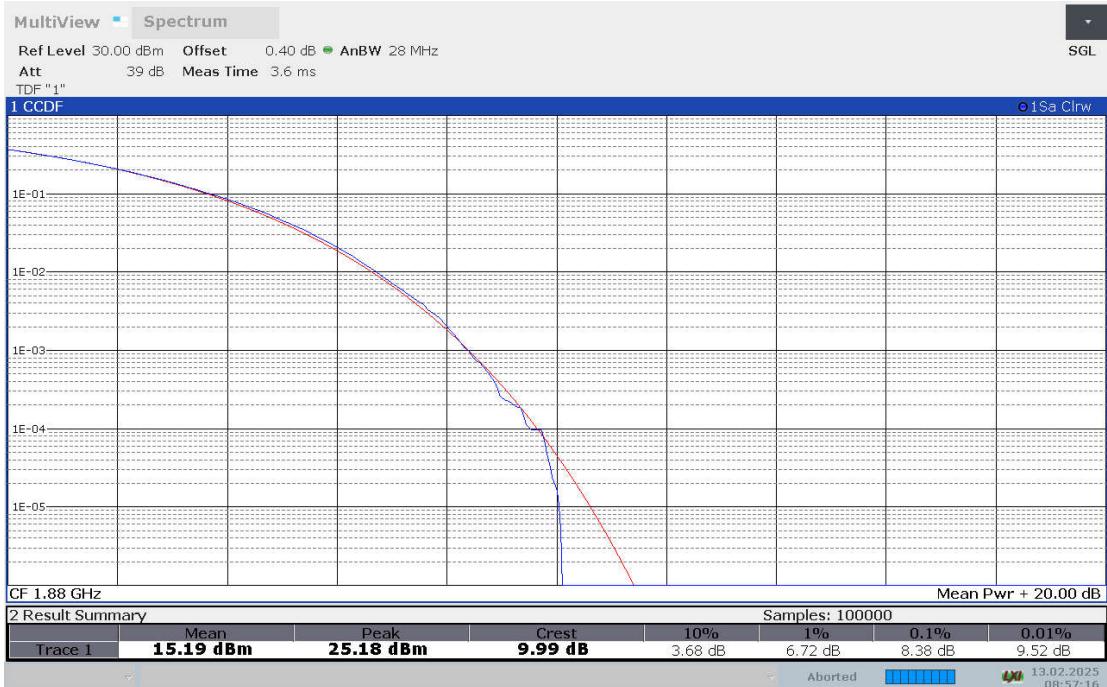


n2, 15MHz

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
1880	4.02	5.06	5.82	6.04	6.52	7.68	7.56	7.98	8.38

n2, CP-16QAM (PAPR)

n2, CP-64QAM (PAPR)


n2, CP-256QAM (PAPR)



n2, CP-QPSK (PAPR)

