n78H,50MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3750	49.300	49.000

n78H,50MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)

18:46:26 02.03.2022

n78H,50MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

18:46:44 02.03.2022
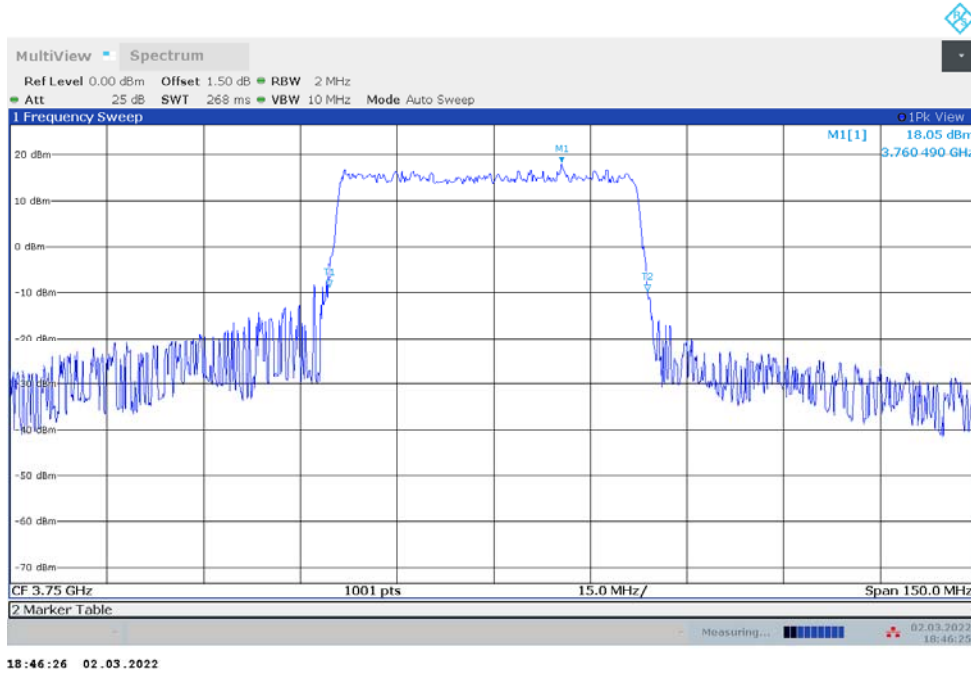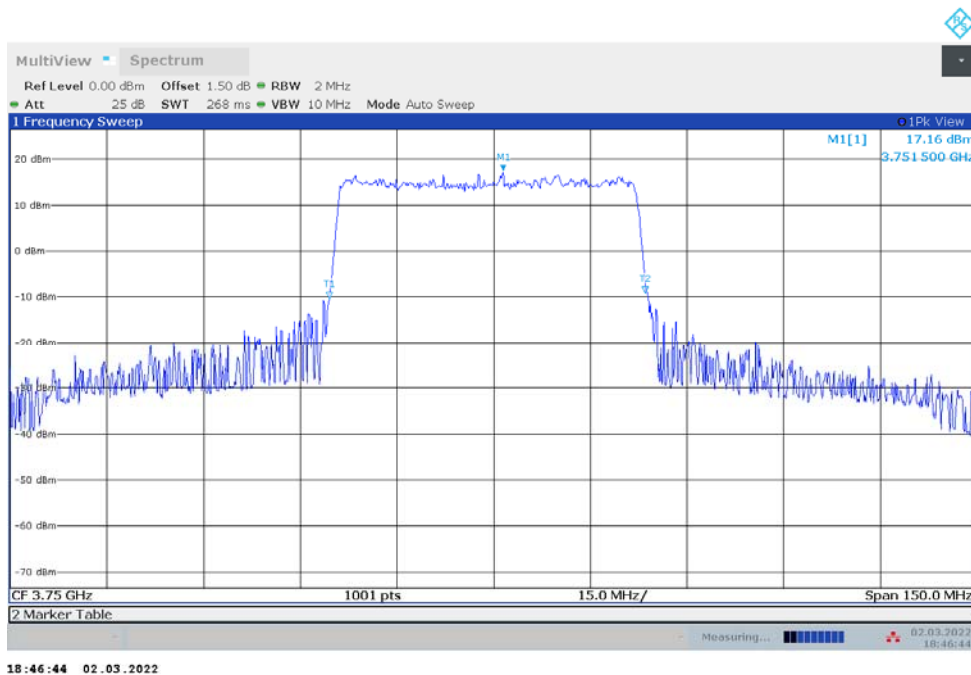
n78H,60MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3750	60.960	61.140

n78H,60MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)

18:47:23 02.03.2022

n78H,60MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

18:47:41 02.03.2022
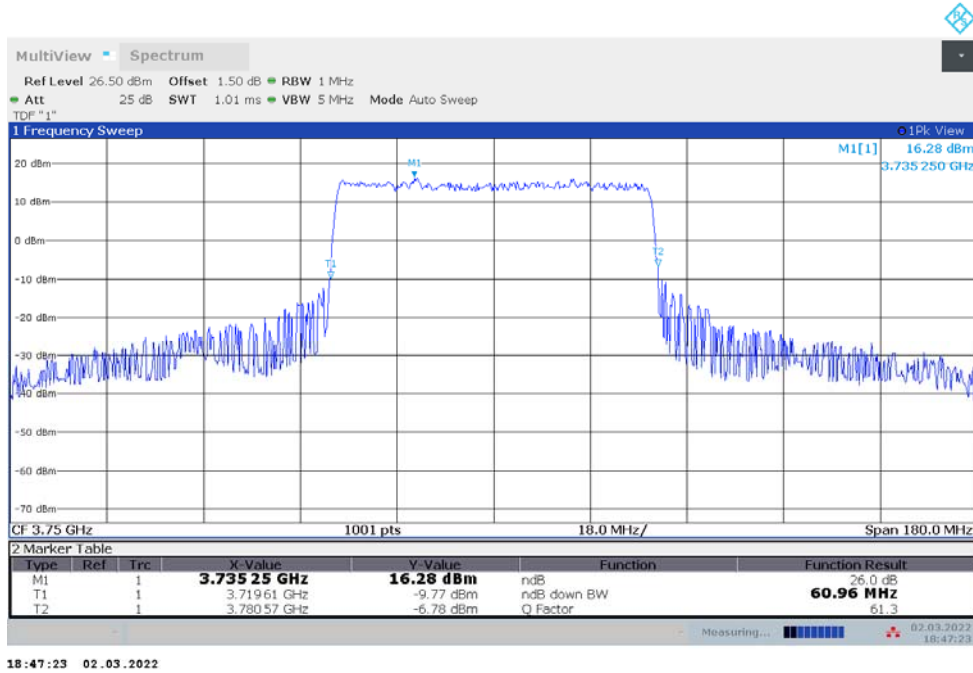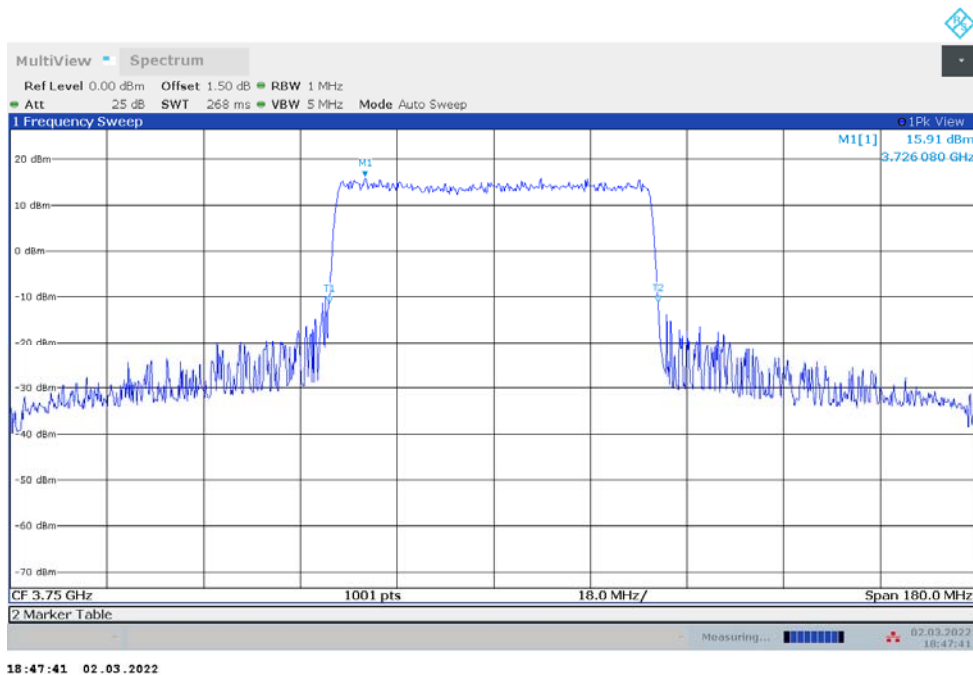
n78H,80MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3750	82.240	82.480

n78H,80MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)
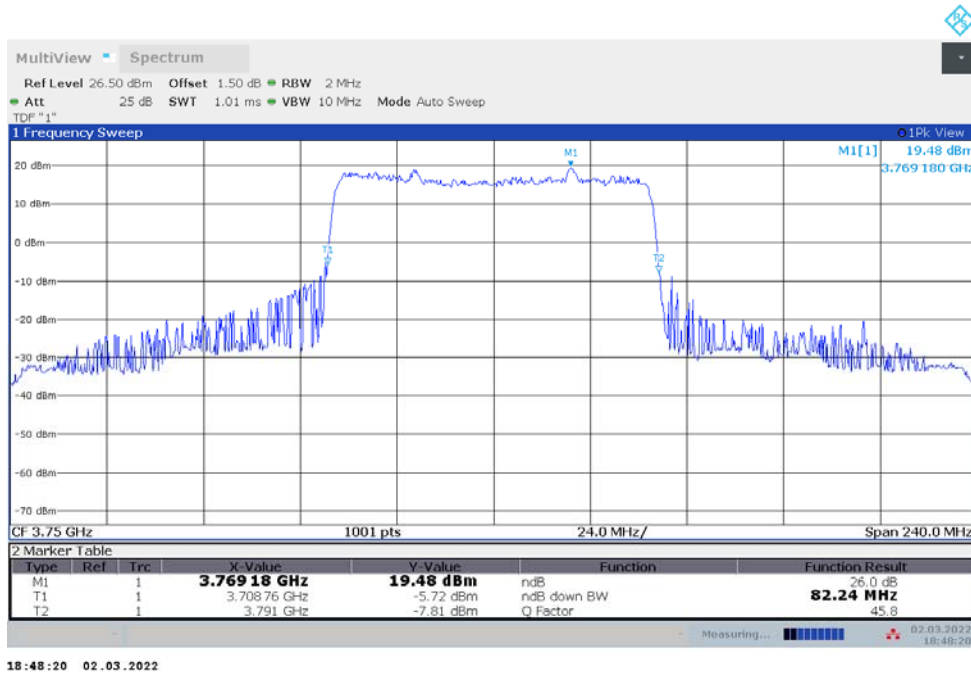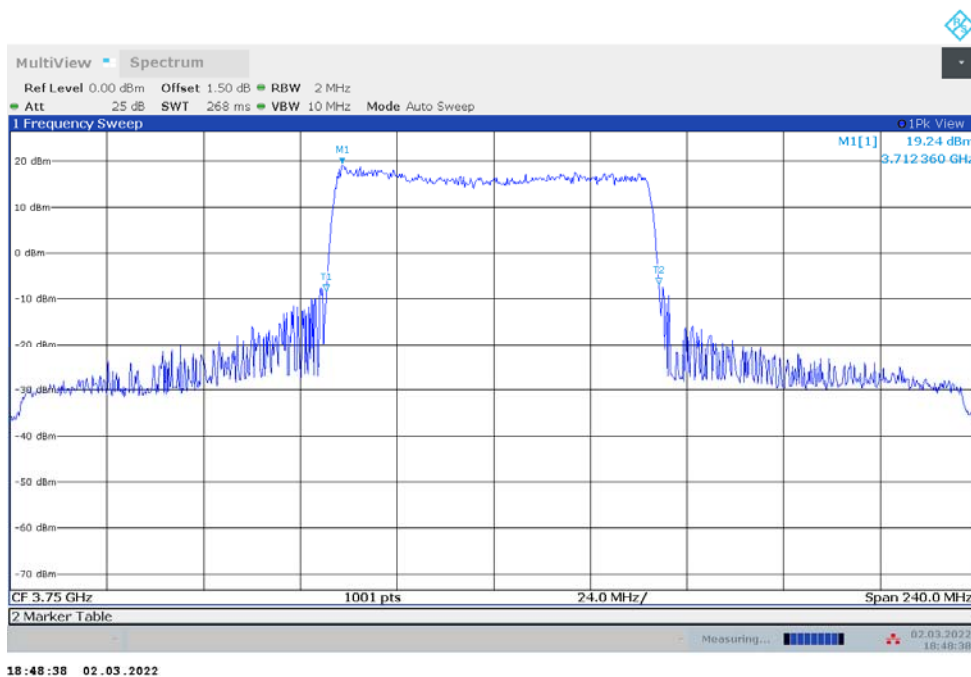

n78H,80MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

n78H,90MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3750	91.980	92.250

n78H,90MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)
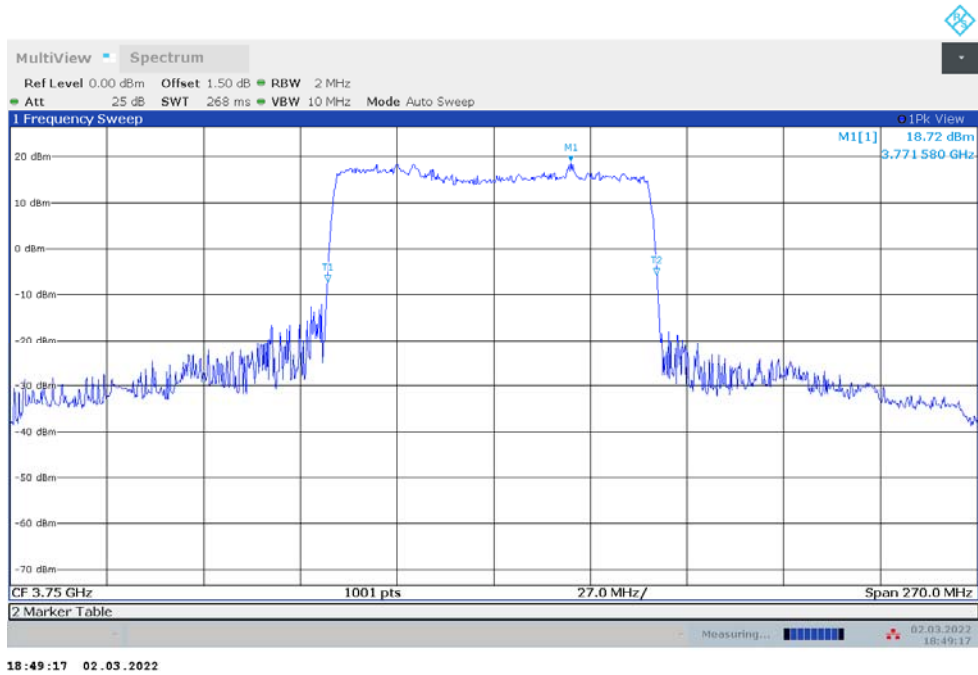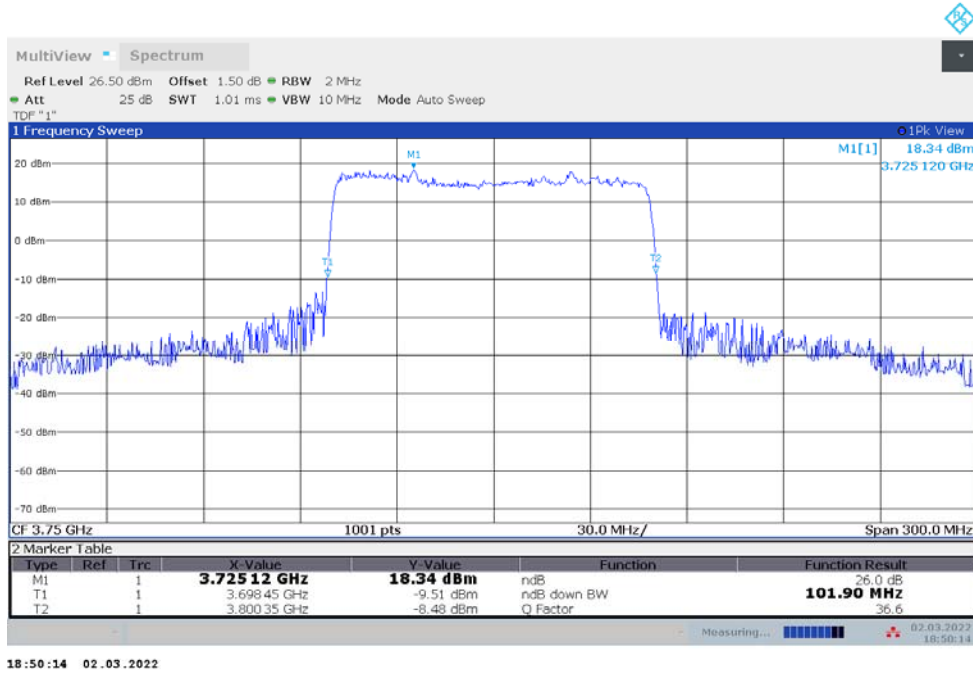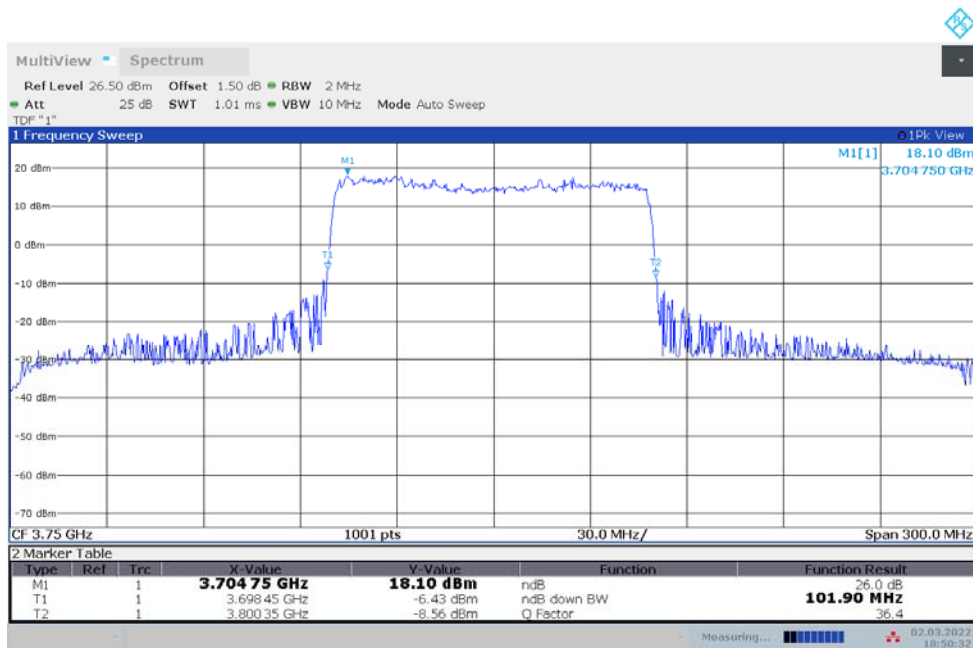

n78H,90MHz Bandwidth,DFT-s-QPSK (-26dBc BW)
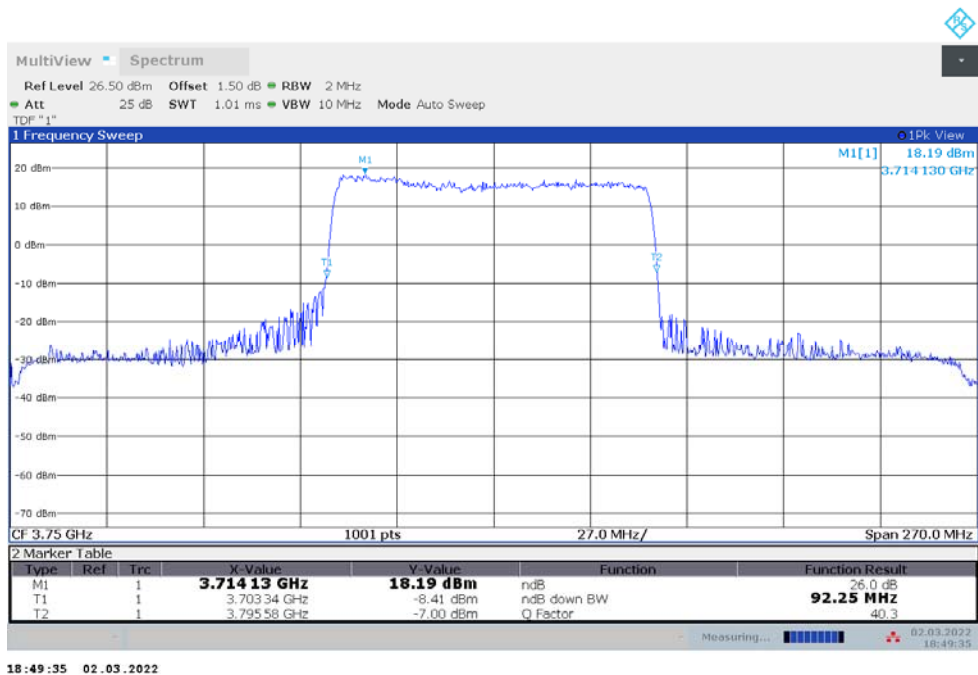
n78H,100MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3750	101.900	101.900

n78H,100MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)

18:50:14 02.03.2022

n78H,100MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

18:50:32 02.03.2022

A.6 Band Edge Compliance

A.6.1 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(h) for operations in the 1695–1710 MHz, 1710–1755 MHz, 1755–1780 MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2110–2155 MHz, 2155–2180 MHz, and 2180–2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB. 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 frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. 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.
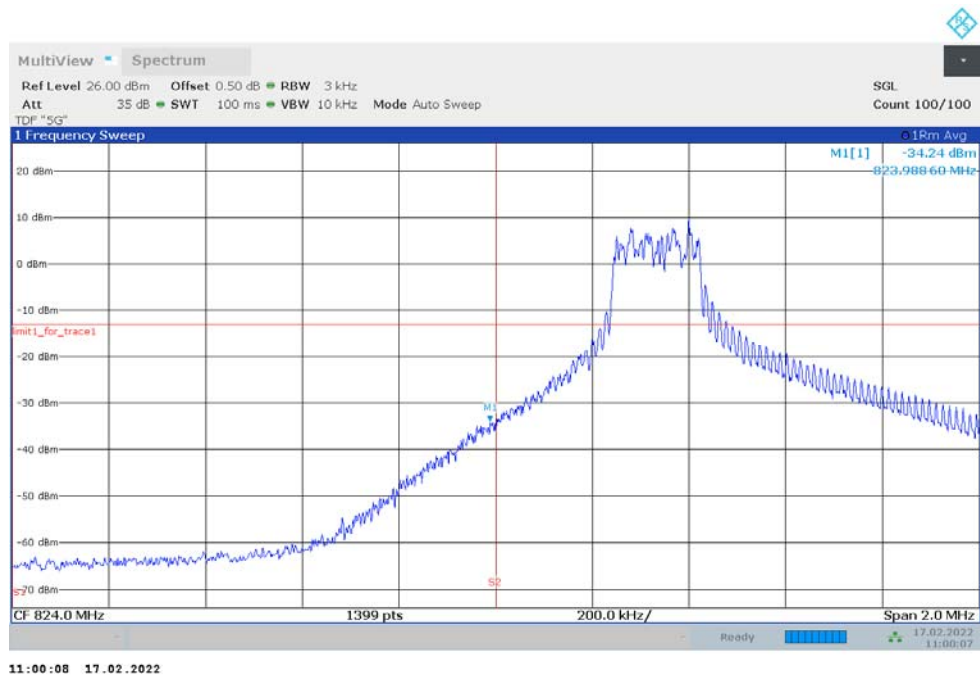
A.6.2 Measurement result
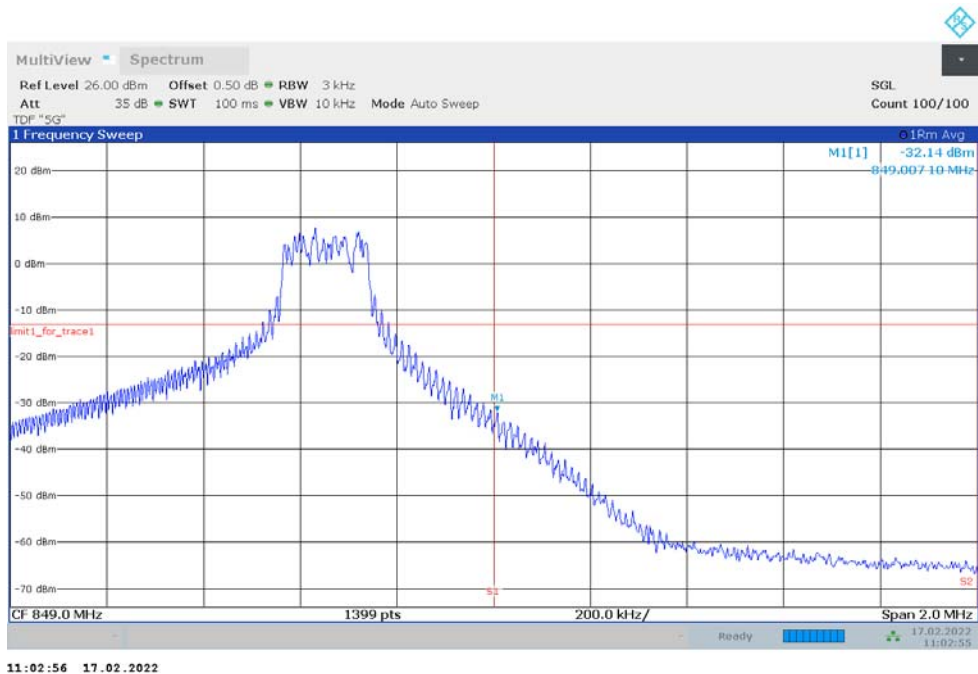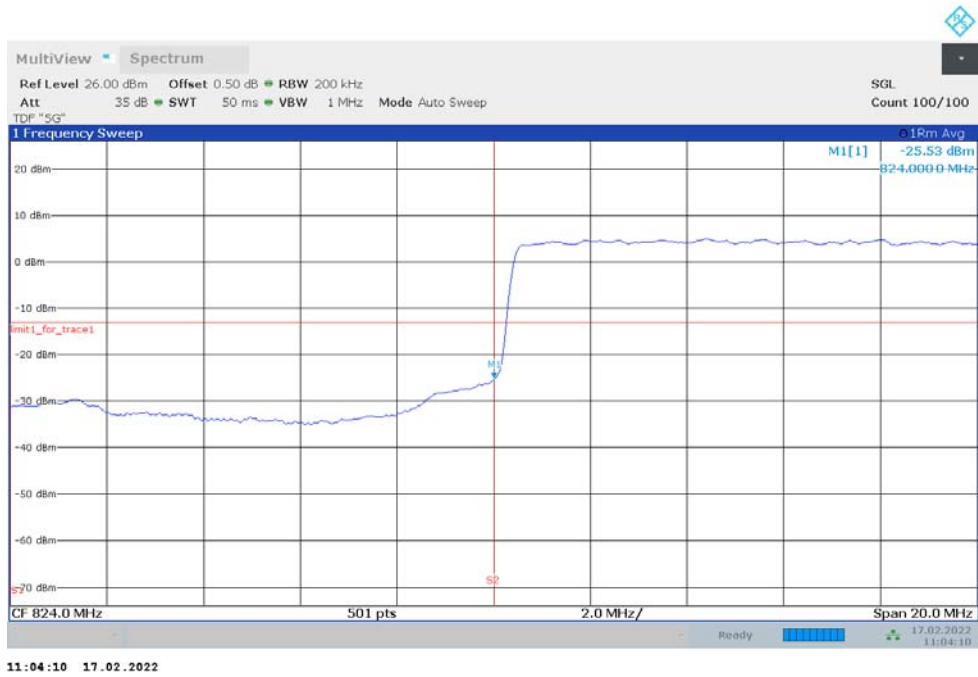### NR n5
OBW: 1RB-LOW_offset
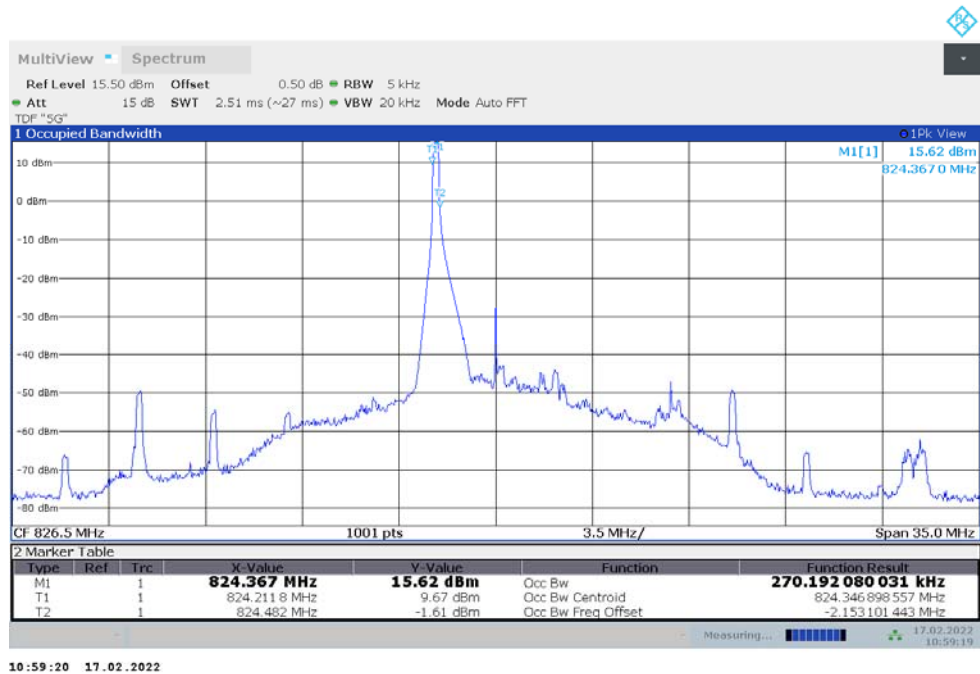
LOW BAND EDGE BLOCK-1RB-LOW_offset

OBW: 1RB-HIGH_offset

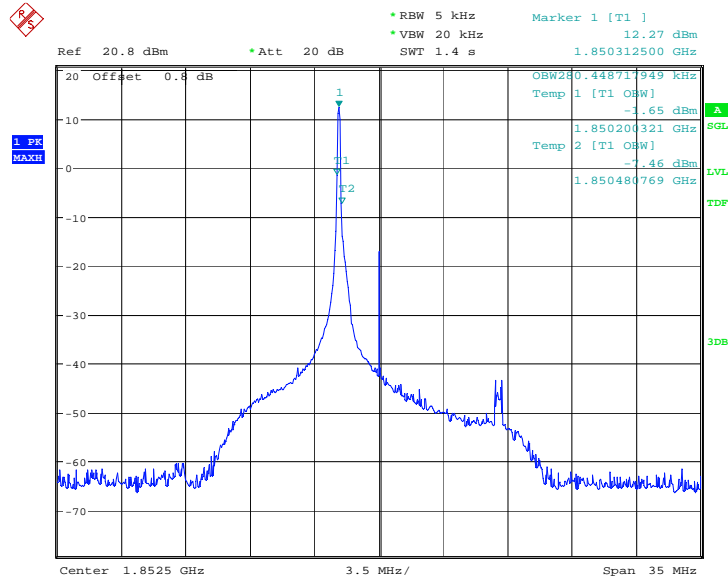**HIGH BAND EDGE BLOCK-1RB-HIGH_offset**

LOW BAND EDGE BLOCK-20M-100%RB

11:04:10 17.02.2022

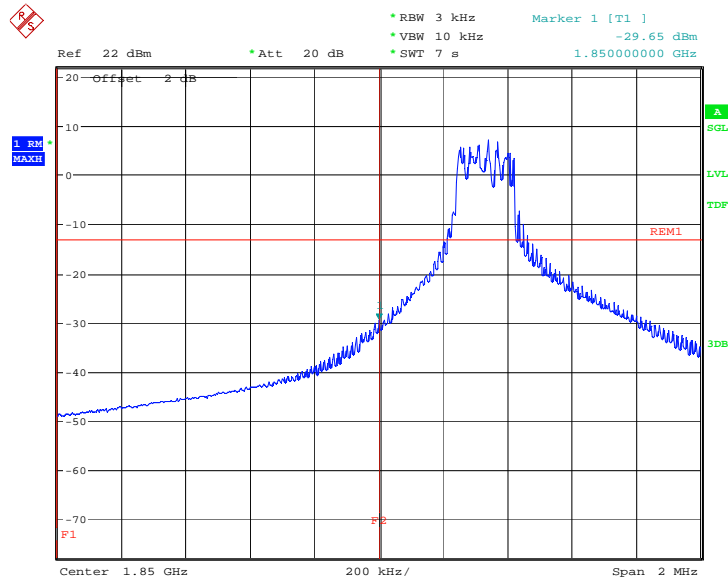**HIGH BAND EDGE BLOCK-20M-100%RB**

11:05:16 17.02.2022
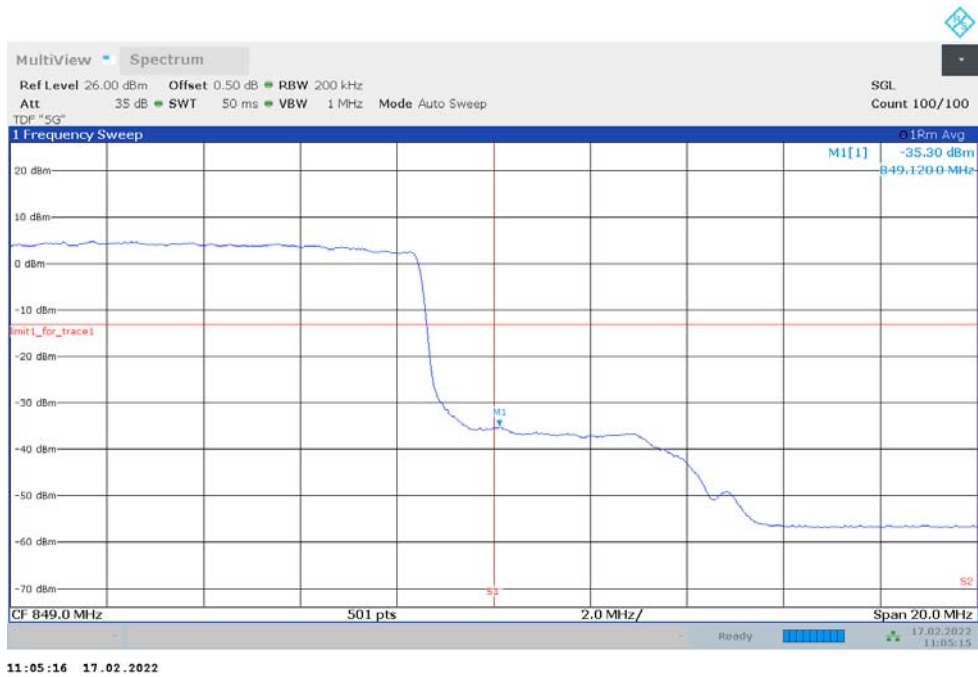
LTE Band 12+NR n25

OBW: 1RB-LOW_offset

Date: 29.OCT.2021 19:53:22

LOW BAND EDGE BLOCK-1RB-LOW_offset

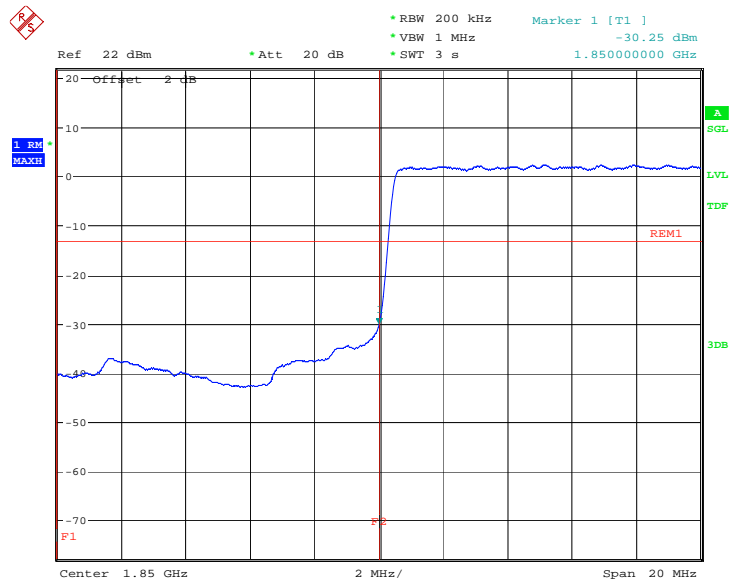Date: 29.OCT.2021 19:53:41

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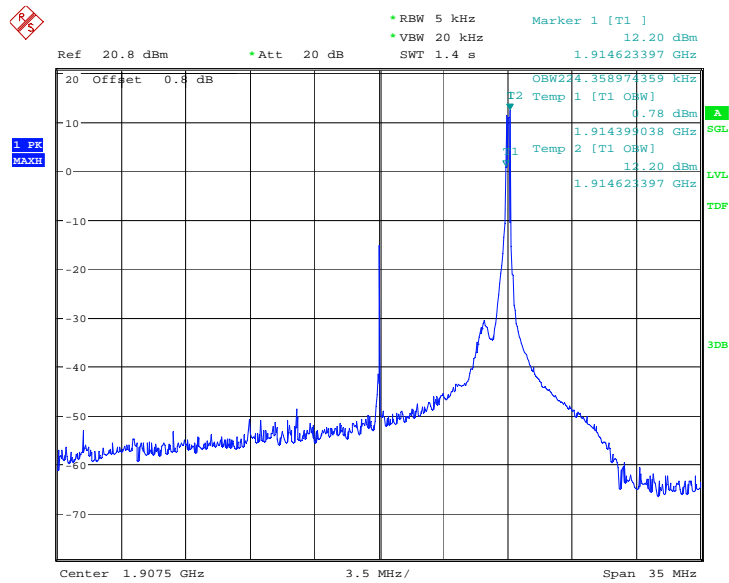
Date: 29.OCT.2021 19:55:11

HIGH BAND EDGE BLOCK-1RB-HIGH_offset
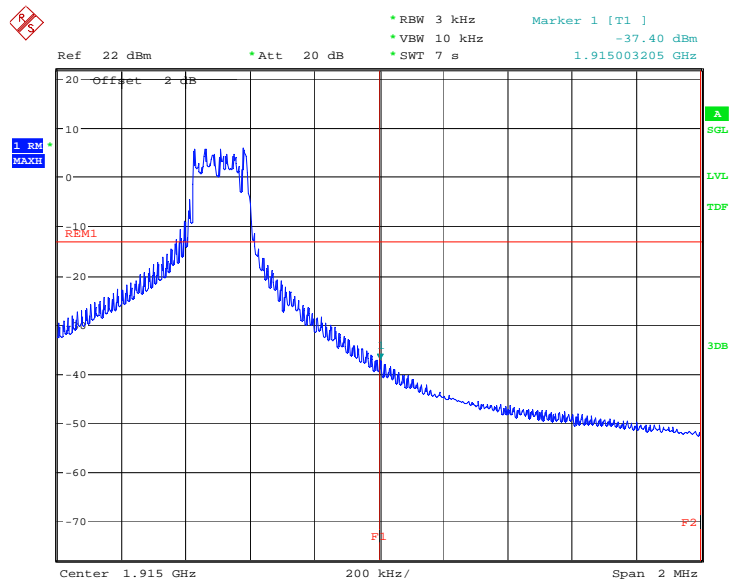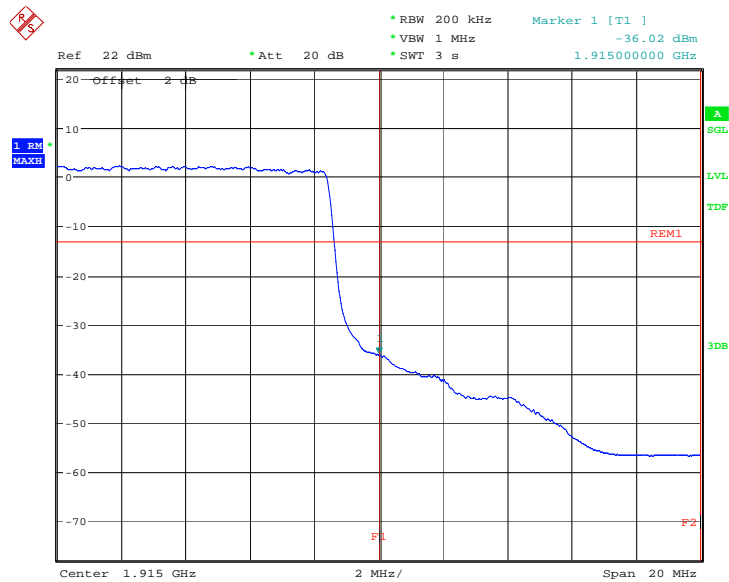

Date: 29.OCT.2021 19:55:31

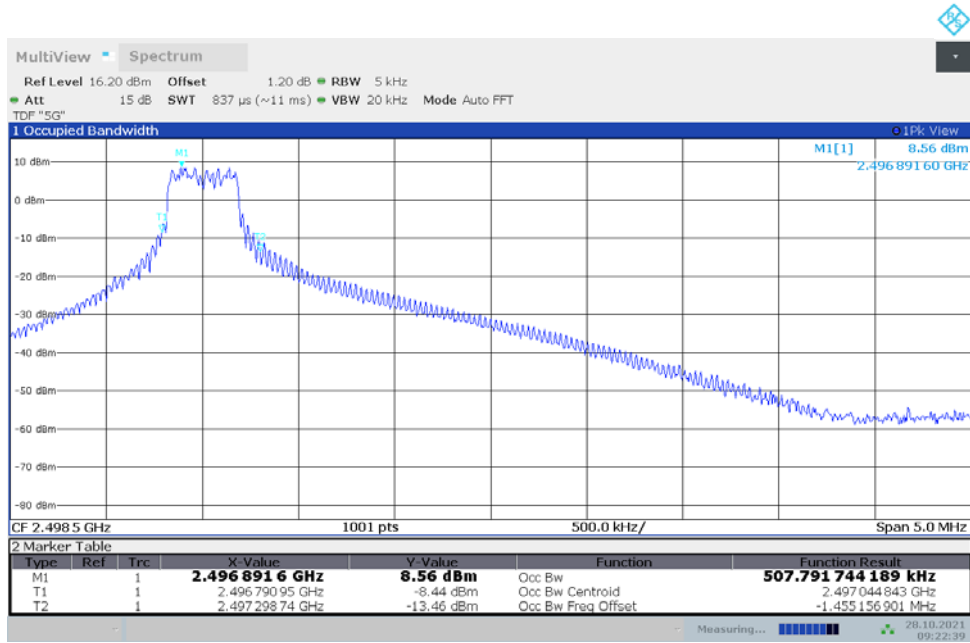## LOW BAND EDGE BLOCK-20M-100%RB

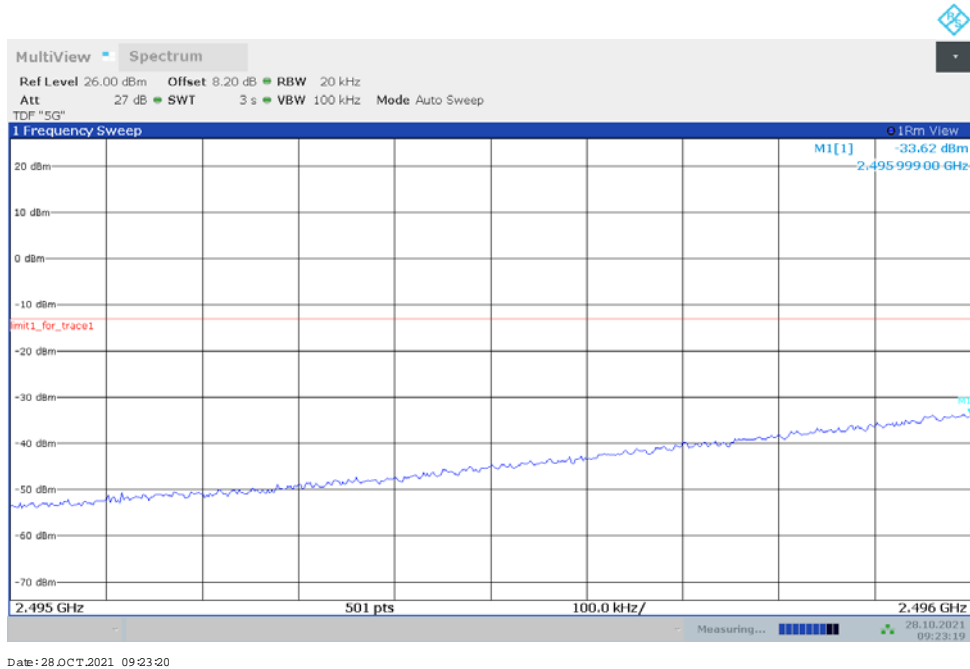Date: 29.OCT.2021 19:57:12

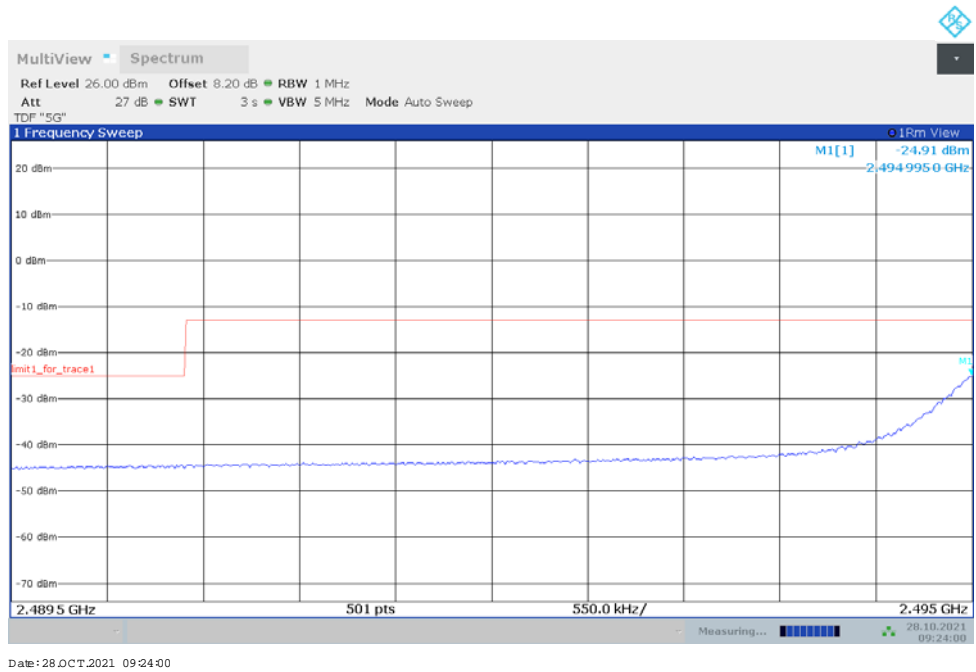## HIGH BAND EDGE BLOCK-20M-100%RB

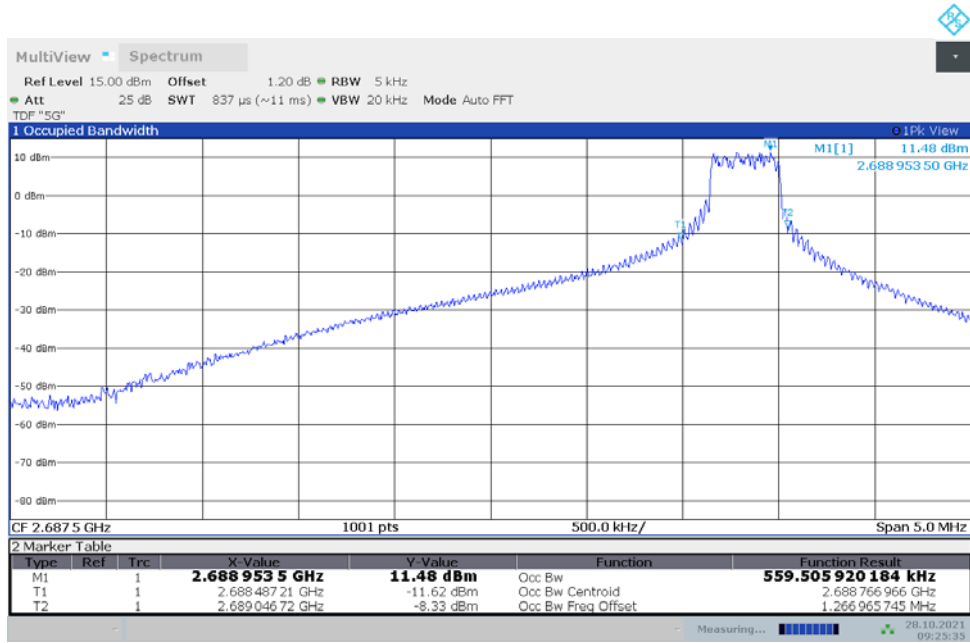Date: 29.OCT.2021 19:58:46

NR n41
OBW: 1RB-LOW_offset

Date：28.OCT.2021 09:22:39

LOW BAND EDGE BLOCK-1RB-LOW_offset

Date：28.OCT.2021 09:23:20

LOW BAND EDGE BLOCK-1RB-LOW_offset

Date：28.OCT.2021　09:24:00

OBW: 1RB-HIGH_offset

Date：28.OCT.2021 09:25:35

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

Date：28.OCT.2021 09:26:16

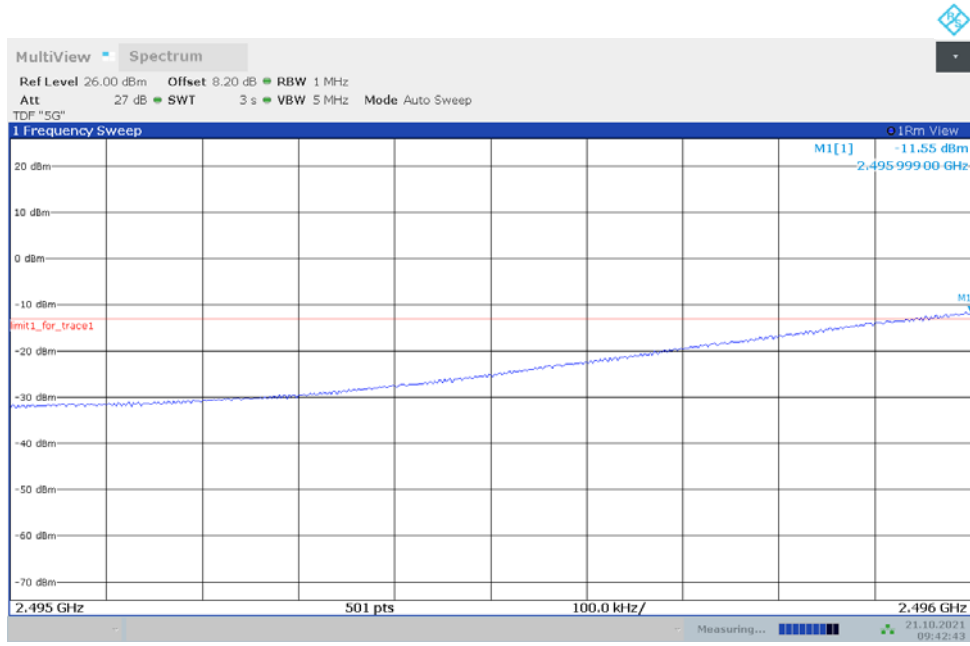**HIGH BAND EDGE BLOCK-1RB-HIGH_offset**

Date:28.OCT.2021 09:26:56

LOW BAND EDGE BLOCK-100M-100%RB

Date：21.OCT.2021 09:42:43

Channal Power

Date：21.OCT.2021 09:43:00
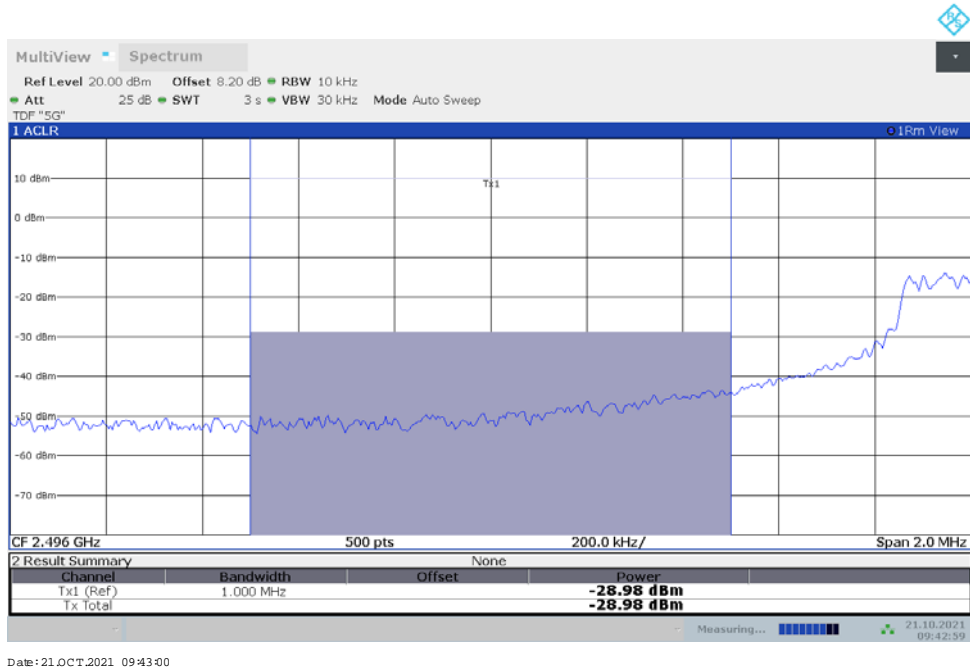
LOW BAND EDGE BLOCK-100M-100%RB
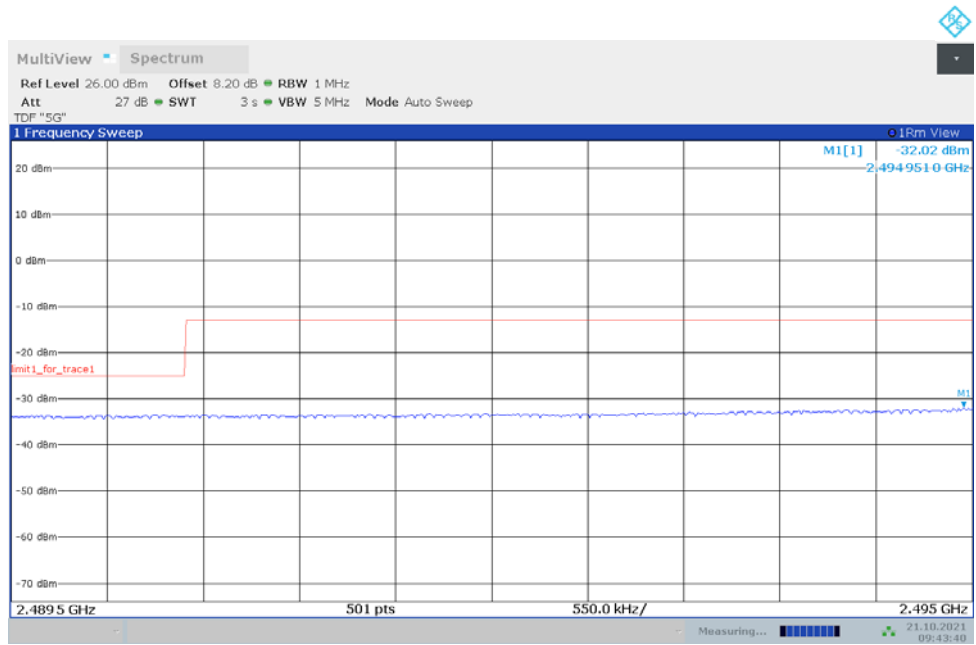
Date：21.OCT.2021 09:43:40

HIGH BAND EDGE BLOCK-100M-100%RB

Date：21.OCT.2021 09:44:48

HIGH BAND EDGE BLOCK-100M-100%RB

Date：21.OCT.2021 09:45:28
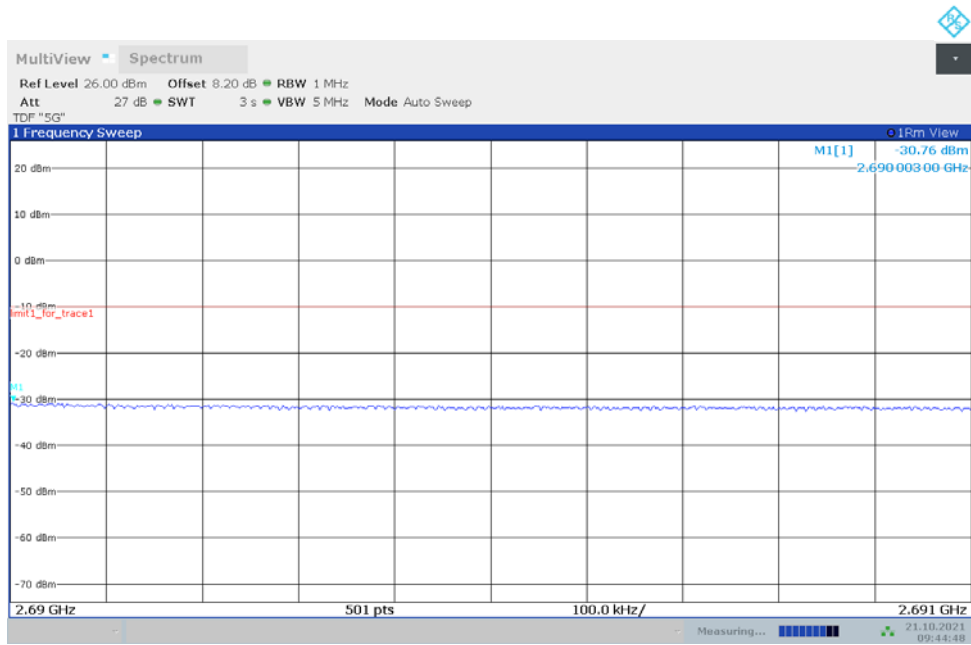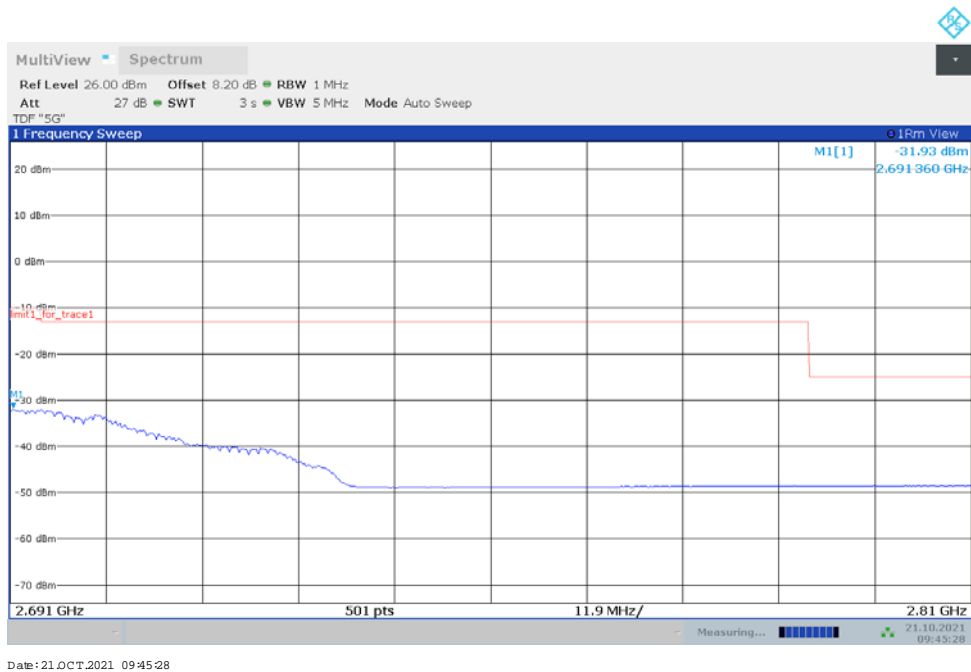
LTE Band 12+NR n66

OBW: 1RB-LOW_offset
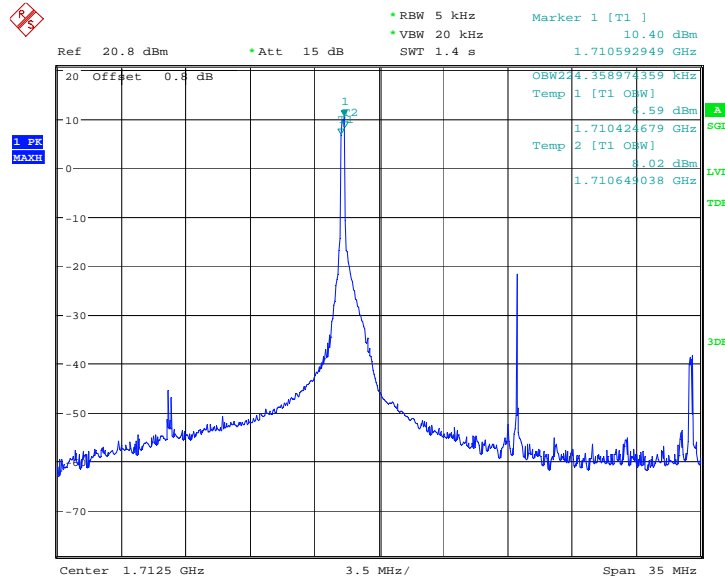
Date: 30.OCT.2021 08:12:56

LOW BAND EDGE BLOCK-1RB-LOW_offset

Date: 30.OCT.2021 08:13:16

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OBW: 1RB-HIGH_offset

Date: 30.OCT.2021 08:14:39

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

Date: 30.OCT.2021 08:14:58

LOW BAND EDGE BLOCK-40M-100%RB

Date: 30.OCT.2021 08:16:42

HIGH BAND EDGE BLOCK-40M-100%RB
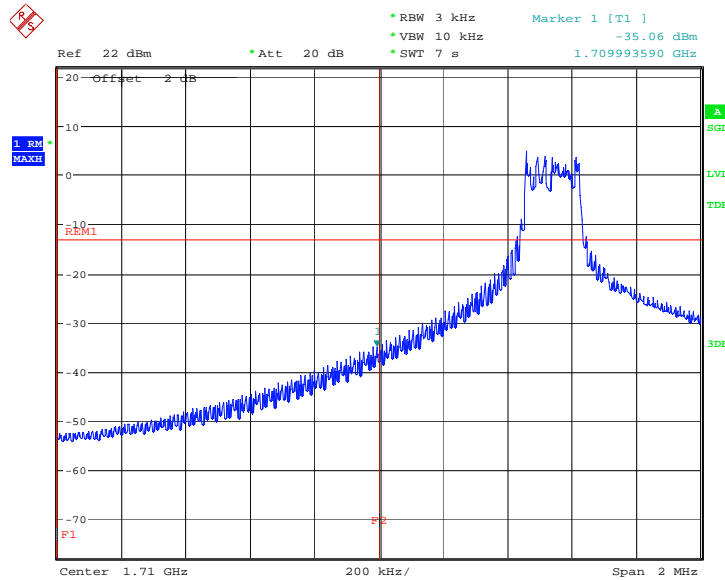

Date: 30.OCT.2021 08:18:21

LTE Band 66+NR n71
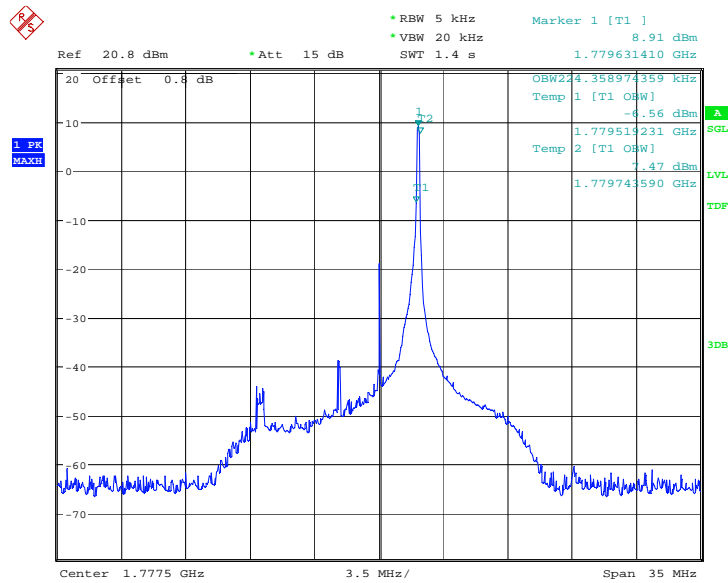
OBW: 1RB-LOW_offset
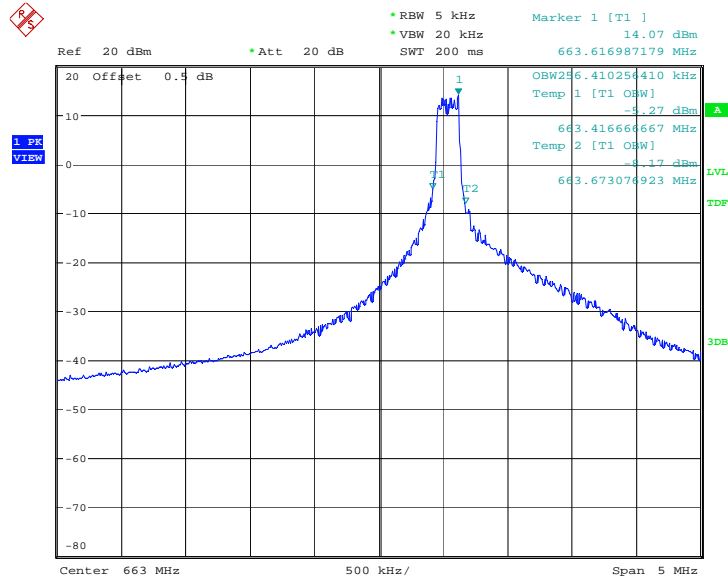
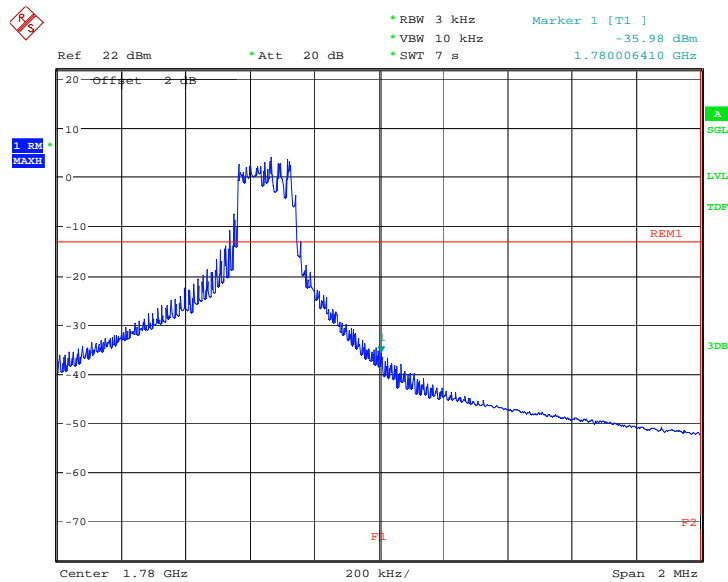Date: 30.OCT.2021 08:42:26

LOW BAND EDGE BLOCK-1RB-LOW_offset
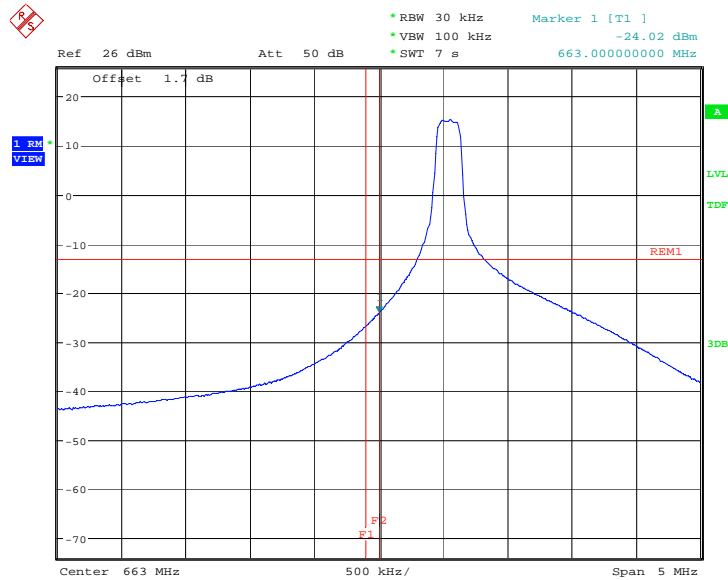
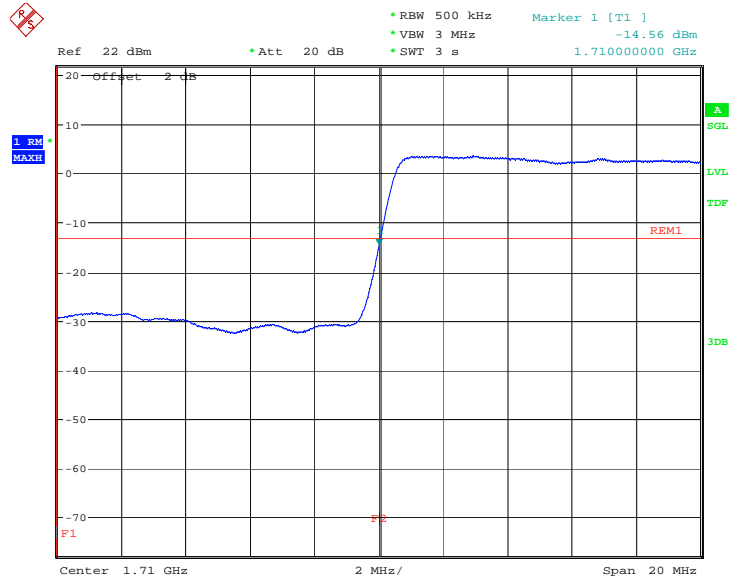Date: 30.OCT.2021 08:43:06

OBW: 1RB-HIGH_offset
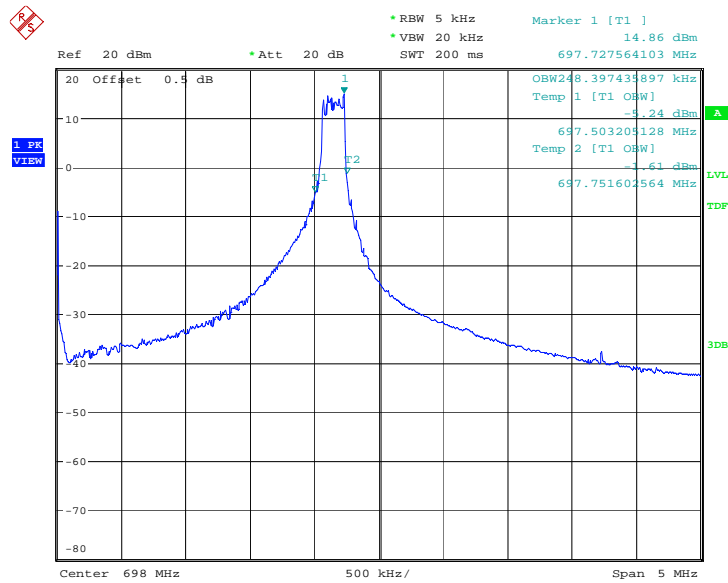
Date: 30.OCT.2021 08:51:12

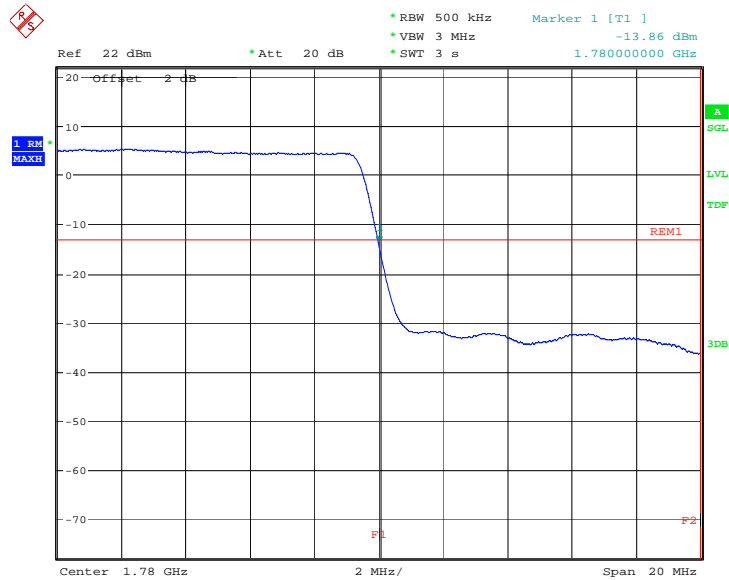## HIGH BAND EDGE BLOCK-1RB-HIGH_offset
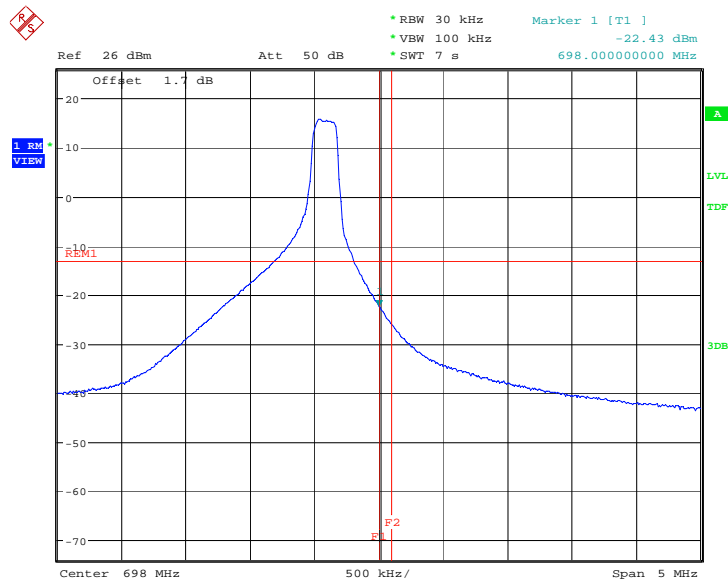
Date: 30.OCT.2021 08:57:33

LOW BAND EDGE BLOCK-20M-100%RB
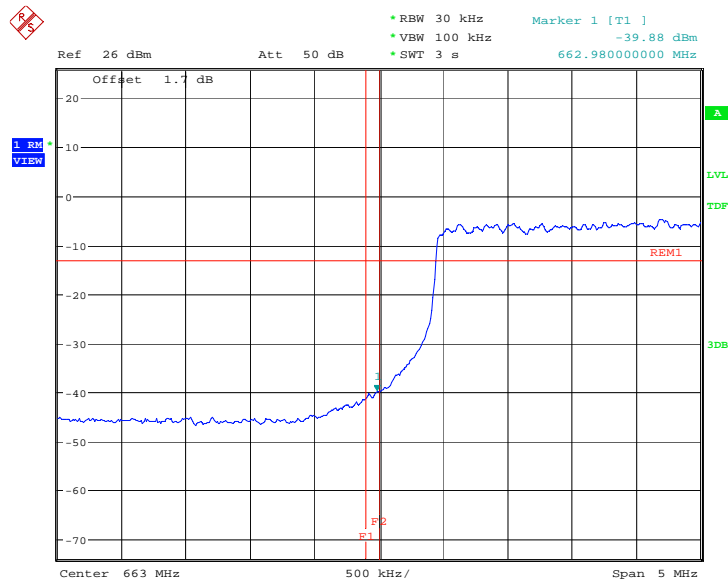
Date: 30.OCT.2021 08:38:27

HIGH BAND EDGE BLOCK-20M-100%RB
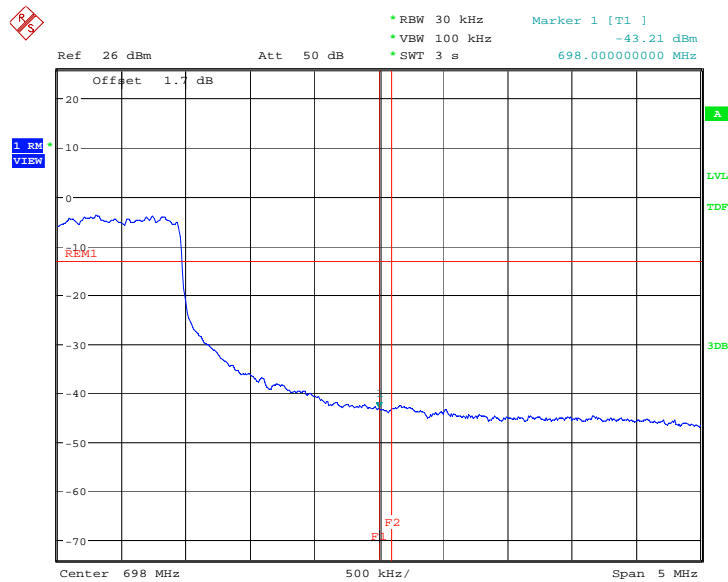
Date: 30.OCT.2021 08:40:25

NR n77L

OBW: 1RB-LOW_offset
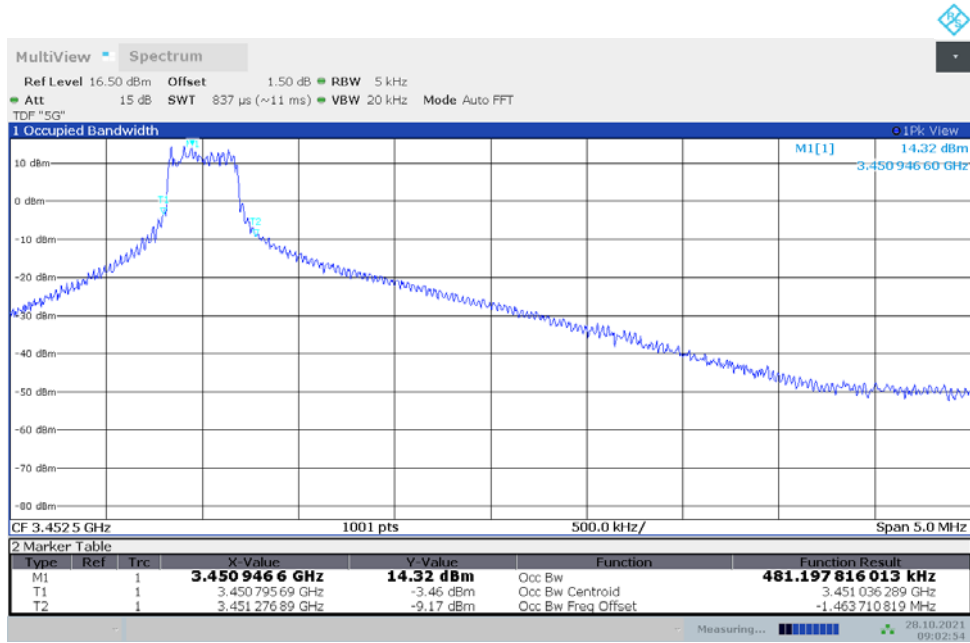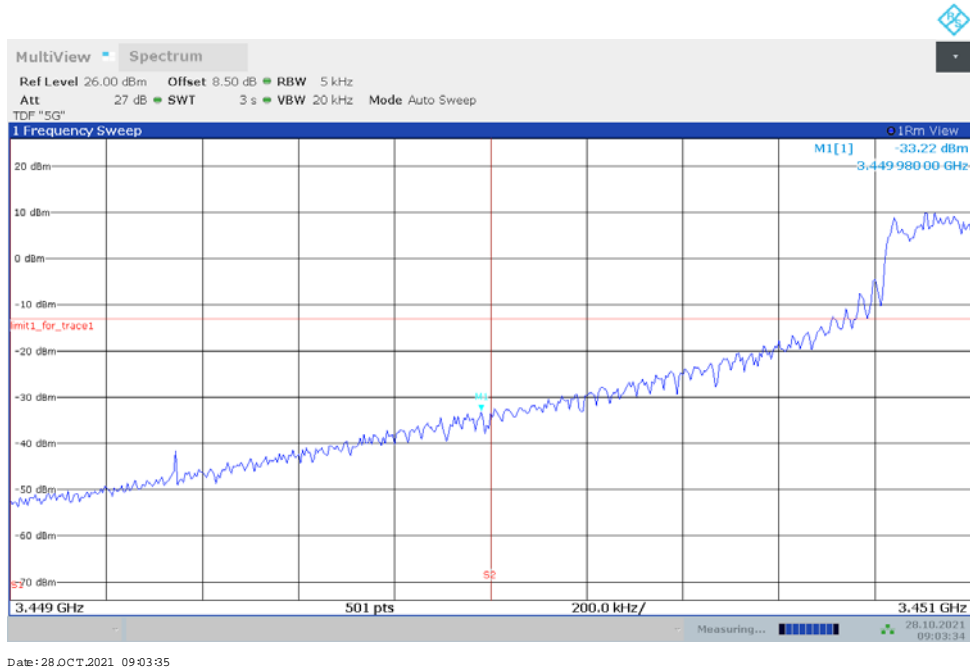
Date：28.OCT.2021 09:02:55

LOW BAND EDGE BLOCK-1RB-LOW_offset

Date：28.OCT.2021 09:03:35

LOW BAND EDGE BLOCK-1RB-LOW_offset

Date: 28.OCT.2021 09:04:13

OBW: 1RB-HIGH_offset

Date: 28.OCT.2021 09:05:03

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

Date: 28.OCT.2021 09:05:43

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

Date: 28.OCT.2021 09:06:21

LOW BAND EDGE BLOCK-90M-100%RB

Date：9 OCT.2021 09:52:11

LOW BAND EDGE BLOCK-90M-100%RB

Date：9 OCT.2021 09:52:56

HIGH BAND EDGE BLOCK-90M-100%RB

Date：9.OCT.2021 09:54:08

HIGH BAND EDGE BLOCK-90M-100%RB

Date：9.OCT.2021 09:54:53
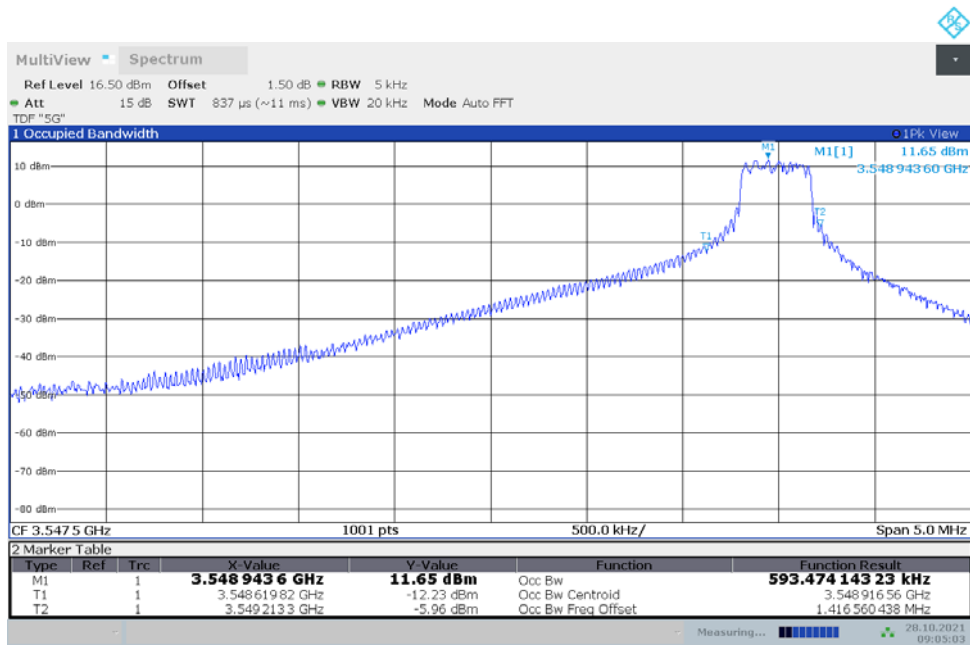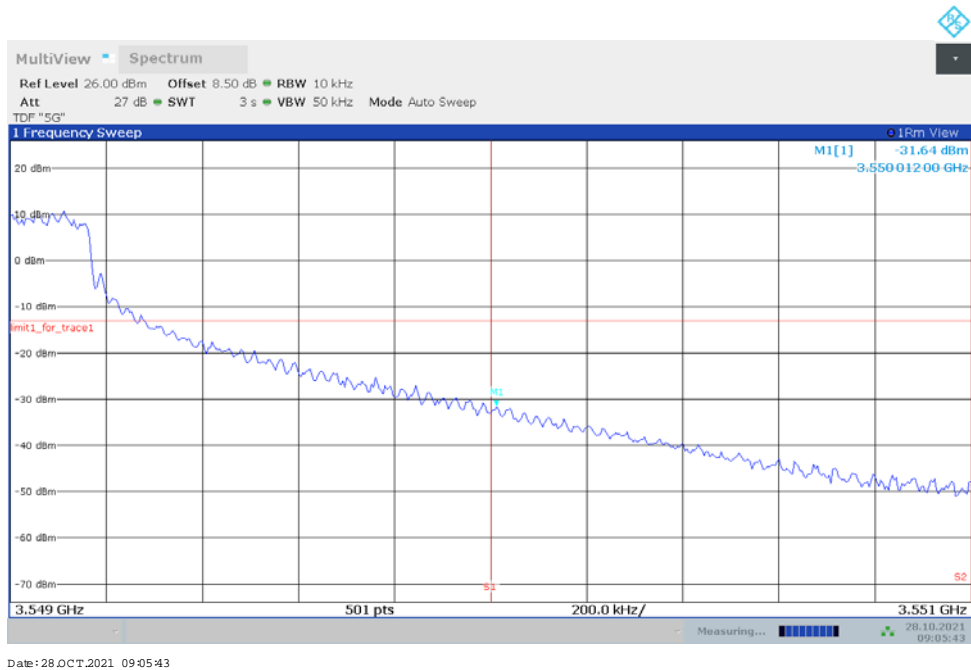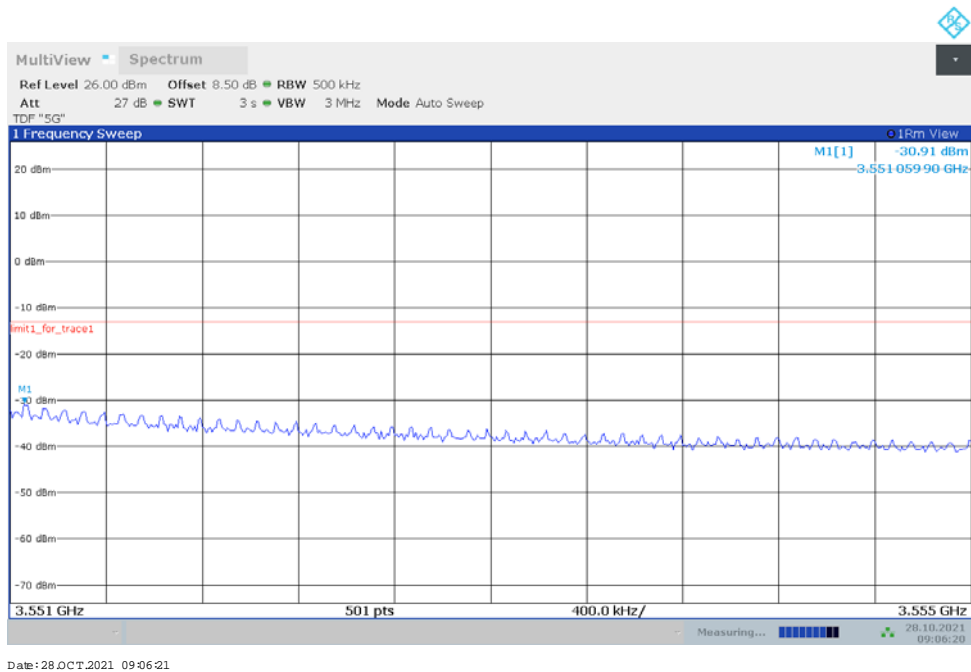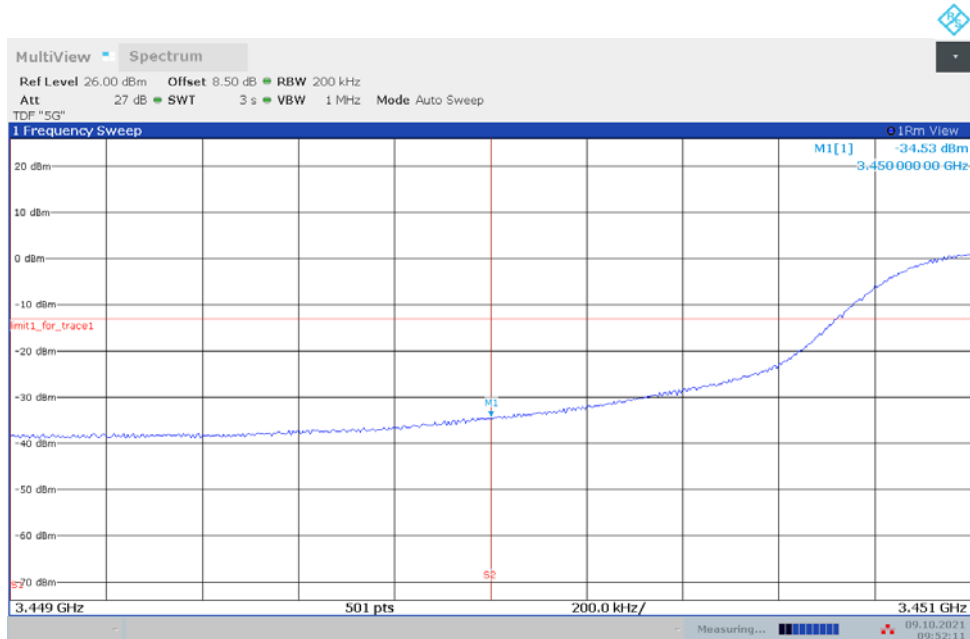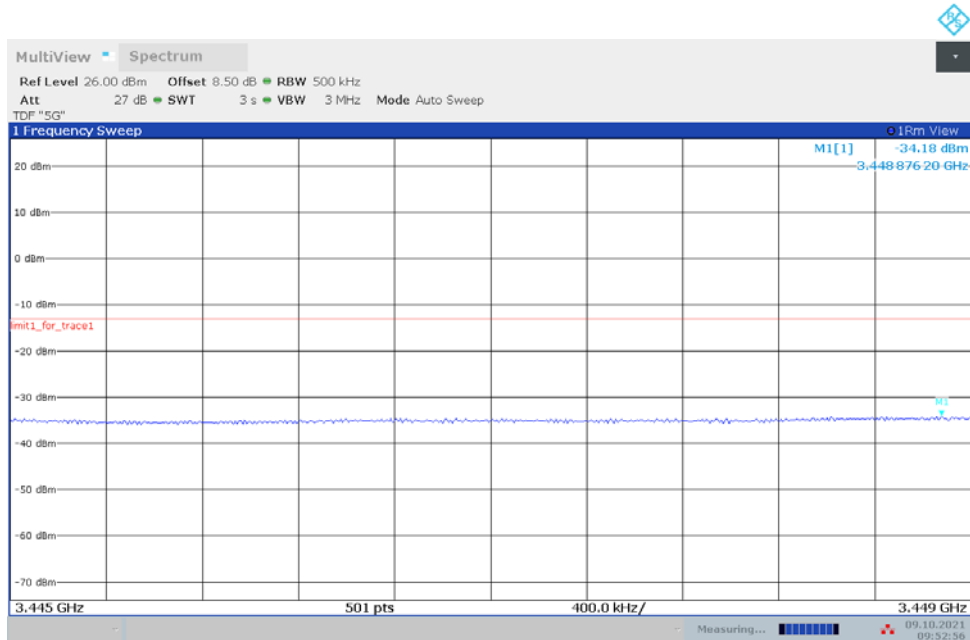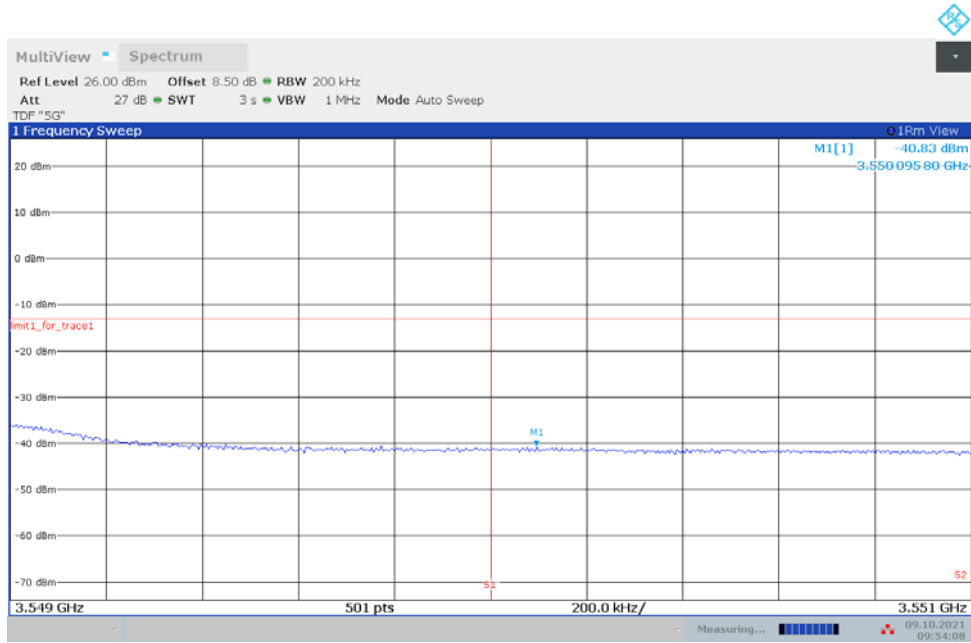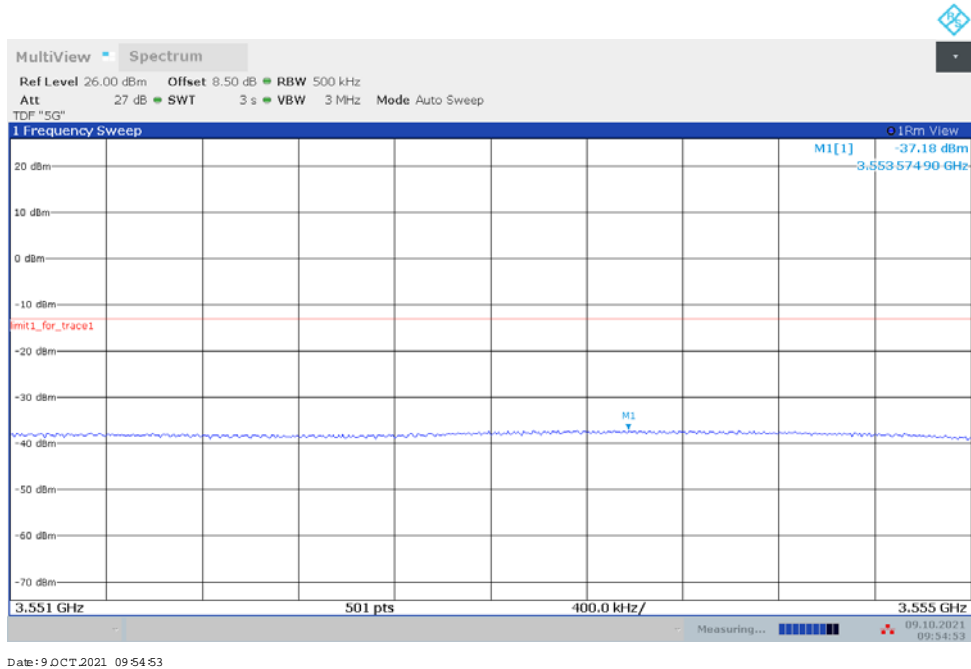
NR n77H

OBW: 1RB-HIGH_offset
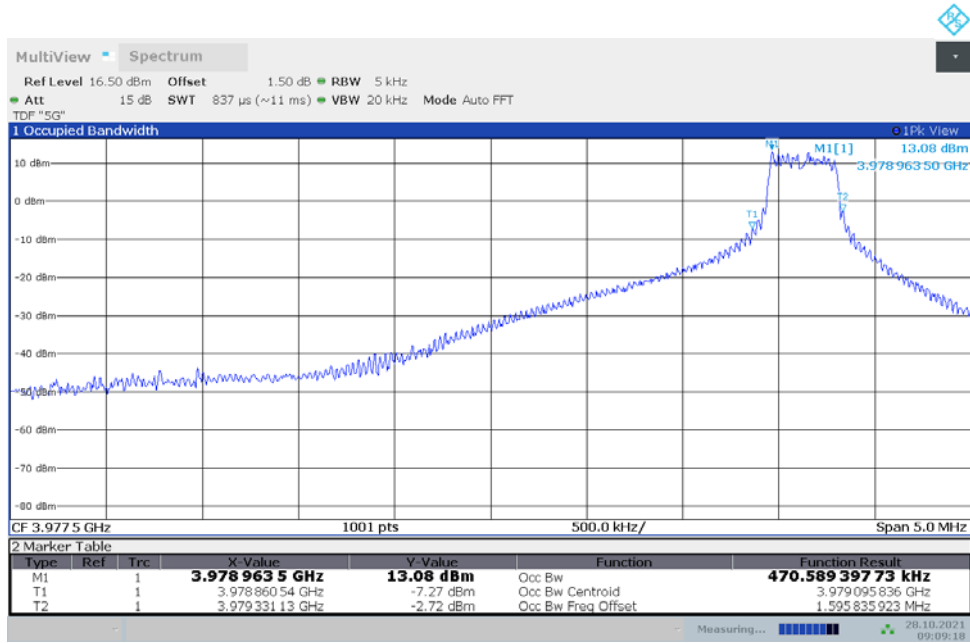
Date：28.OCT.2021 09:09:18

HIGH BAND EDGE BLOCK-1RB-HIGH_offset
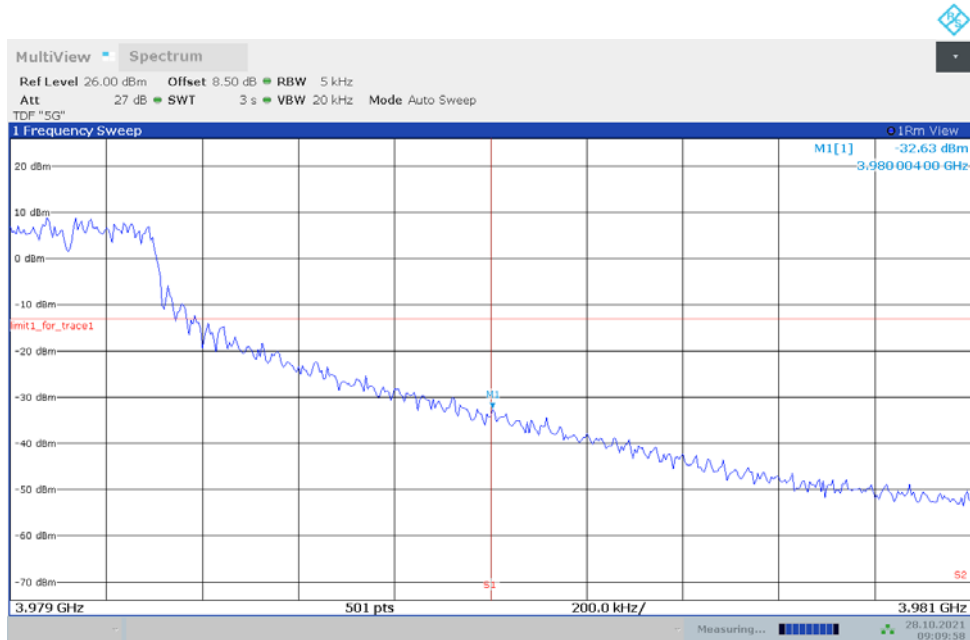
Date：28.OCT.2021 09:09:58

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

Date:28.OCT.2021 09:10:36

OBW: 1RB-LOW_offset

Date: 28.OCT.2021 09:07:04

LOW BAND EDGE BLOCK-1RB-LOW_offset
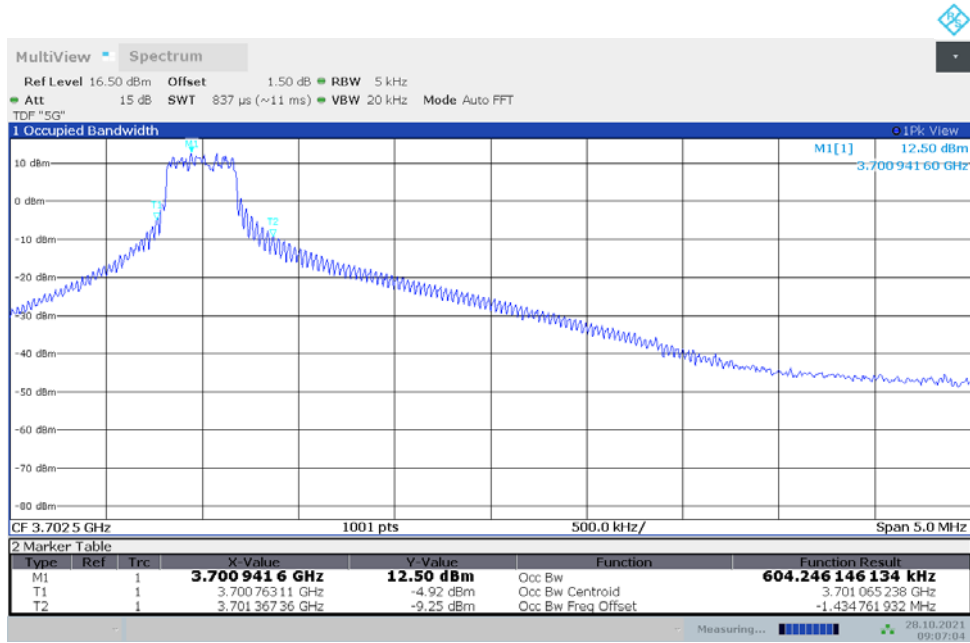
Date: 28.OCT.2021 09:07:44
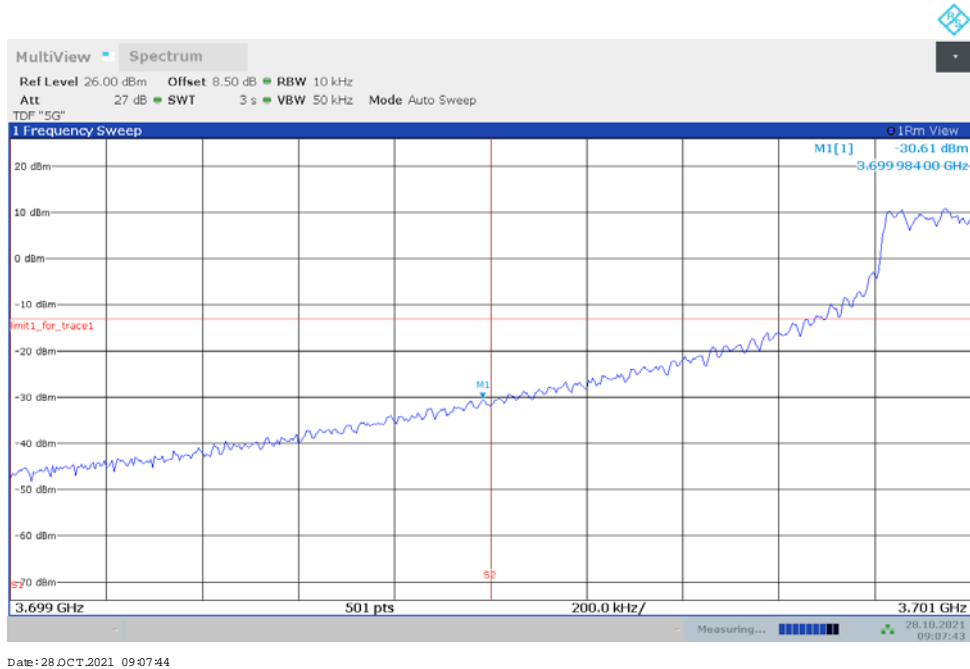
LOW BAND EDGE BLOCK-1RB-LOW_offset
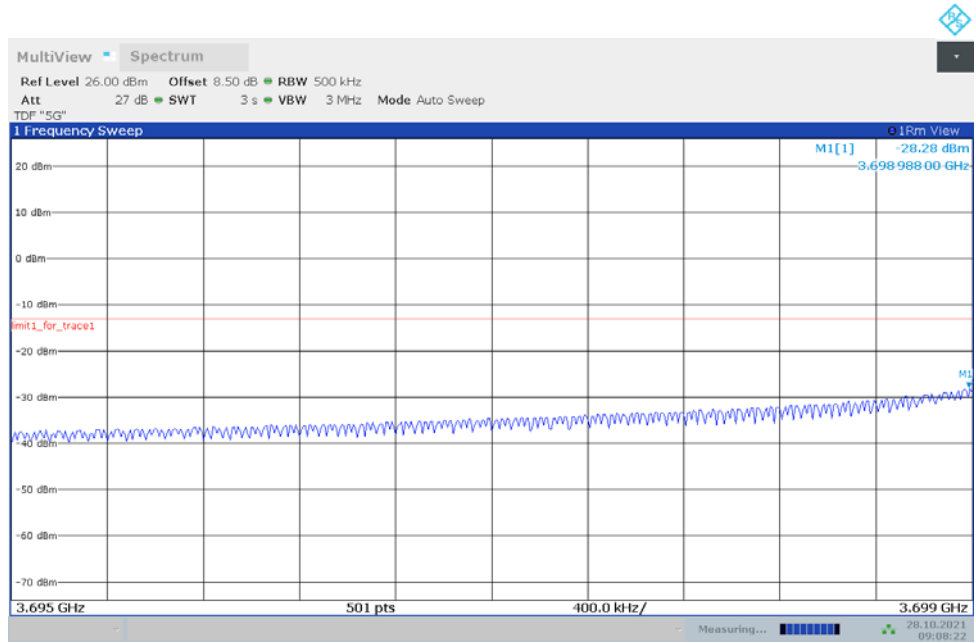
Date：28.OCT.2021 09:08:22

LOW BAND EDGE BLOCK-100M-100%RB

Date:9 OCT.2021 09:56:15

HIGH BAND EDGE BLOCK-100M-100%RB
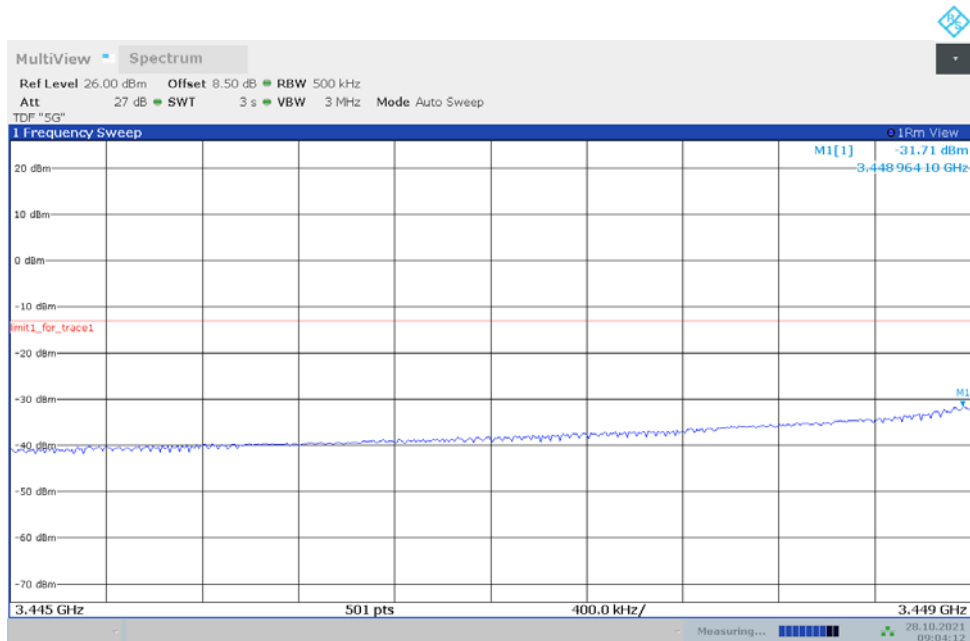

Date:9 OCT.2021 09:57:28
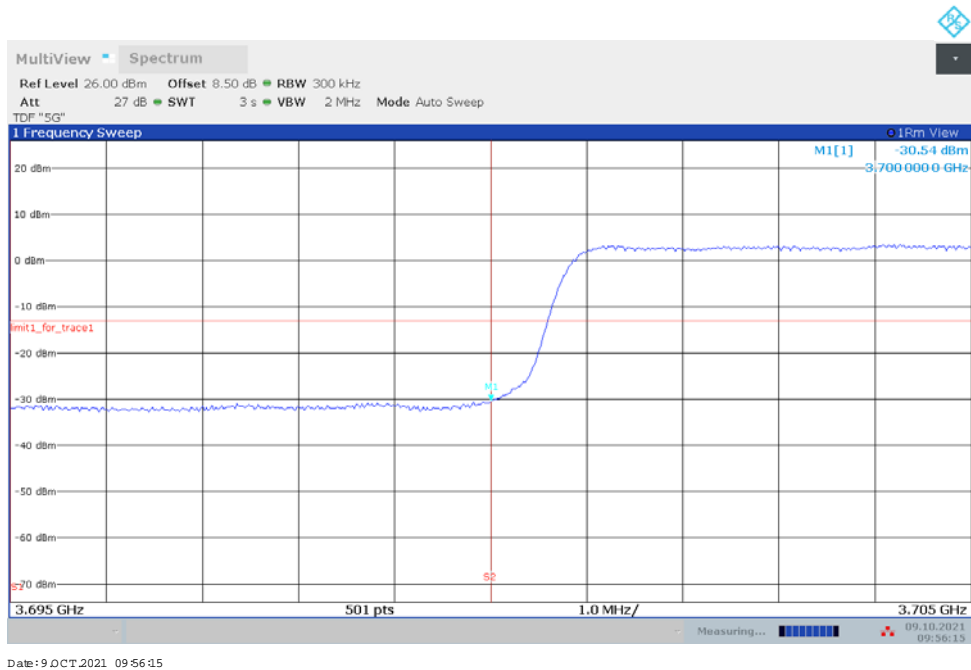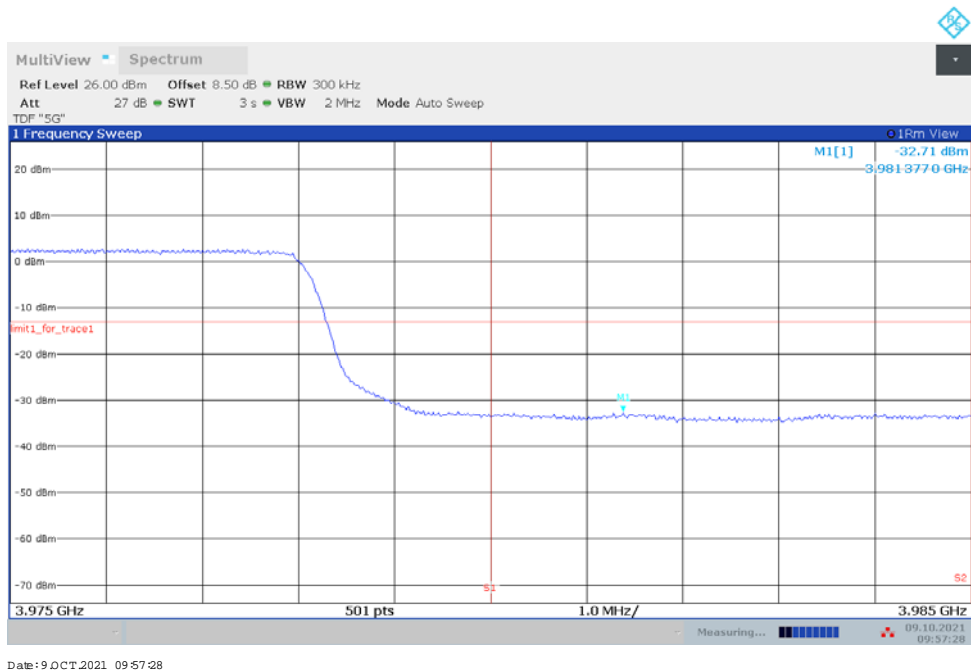
NR n78L

OBW: 1RB-LOW_offset

LOW BAND EDGE BLOCK-1RB-LOW_offset

LOW BAND EDGE BLOCK-1RB-LOW_offset
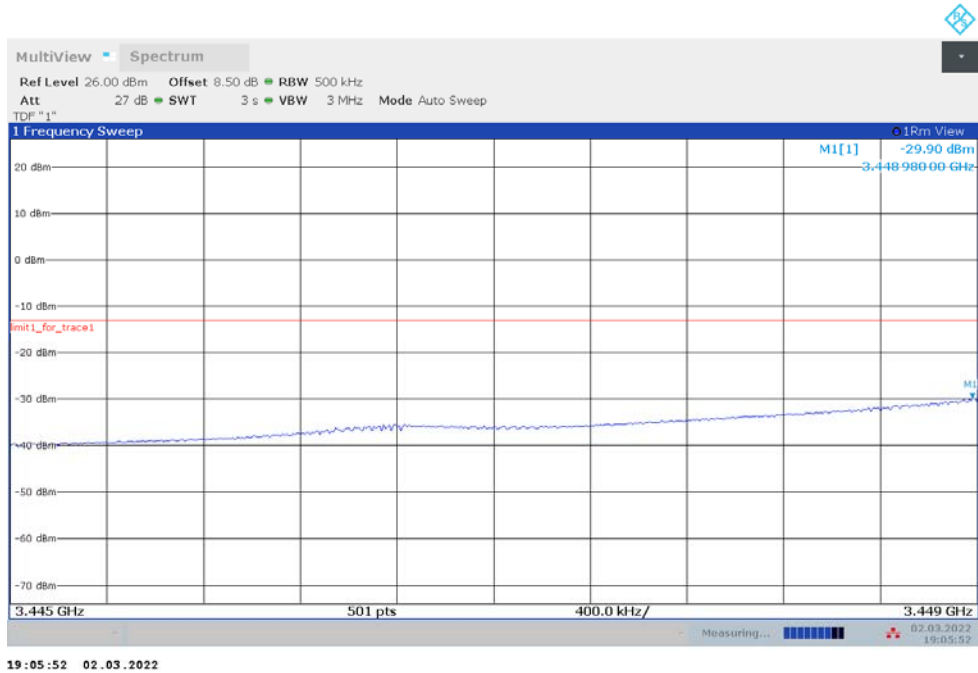
19:05:52 02.03.2022

OBW: 1RB-HIGH_offset

19:06:30 02.03.2022

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

19:07:12 02.03.2022

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

19:07:53 02.03.2022

LOW BAND EDGE BLOCK-90M-100%RB

19:09:09 02.03.2022

LOW BAND EDGE BLOCK-90M-100%RB

19:09:49 02.03.2022

HIGH BAND EDGE BLOCK-90M-100%RB

19:10:56 02.03.2022

HIGH BAND EDGE BLOCK-90M-100%RB

19:11:36 02.03.2022
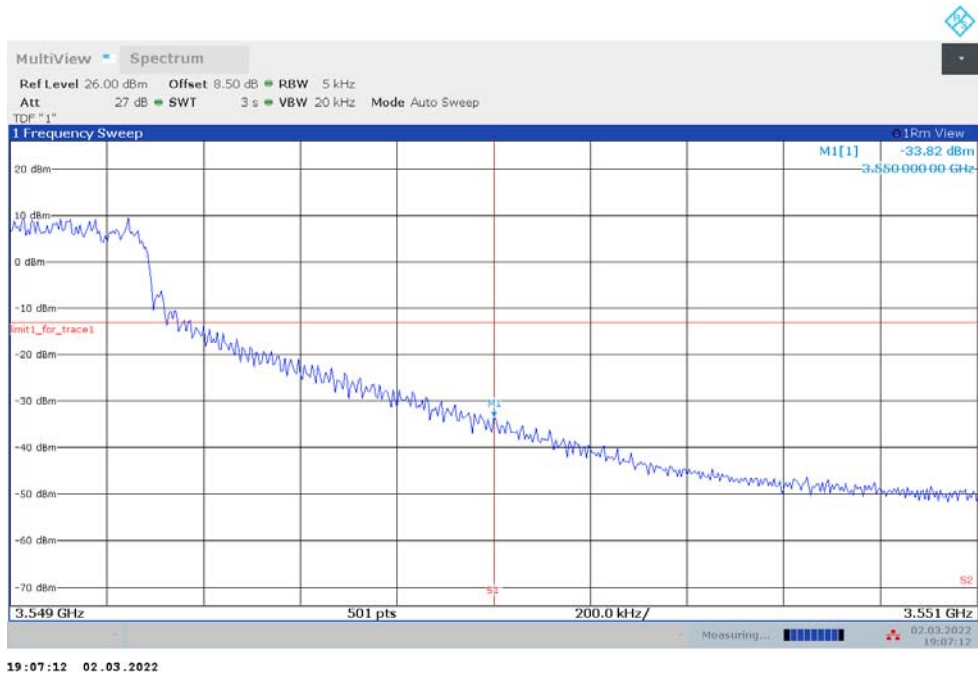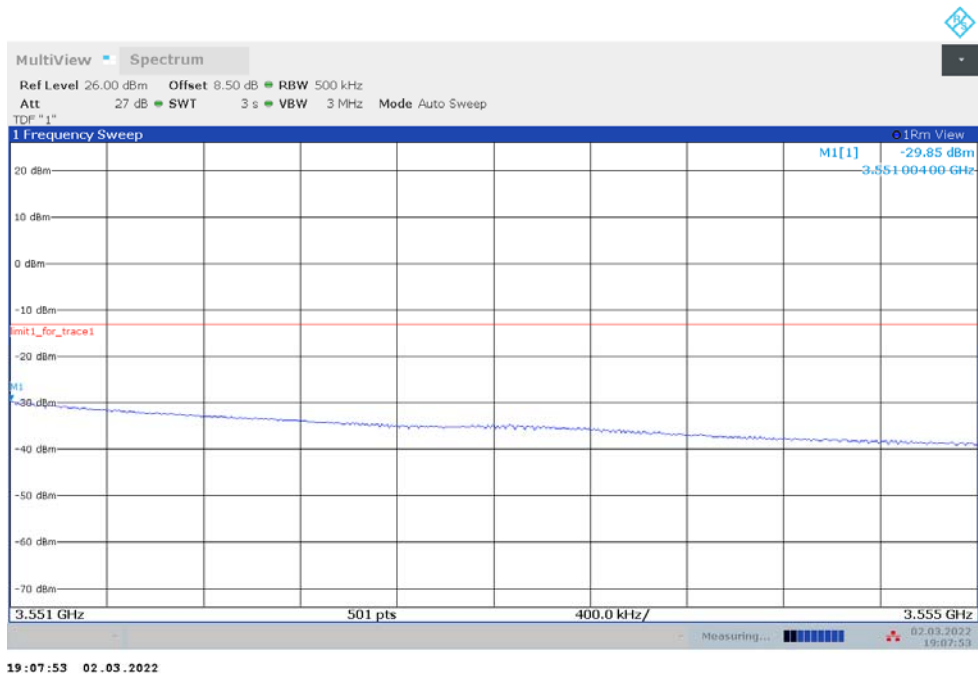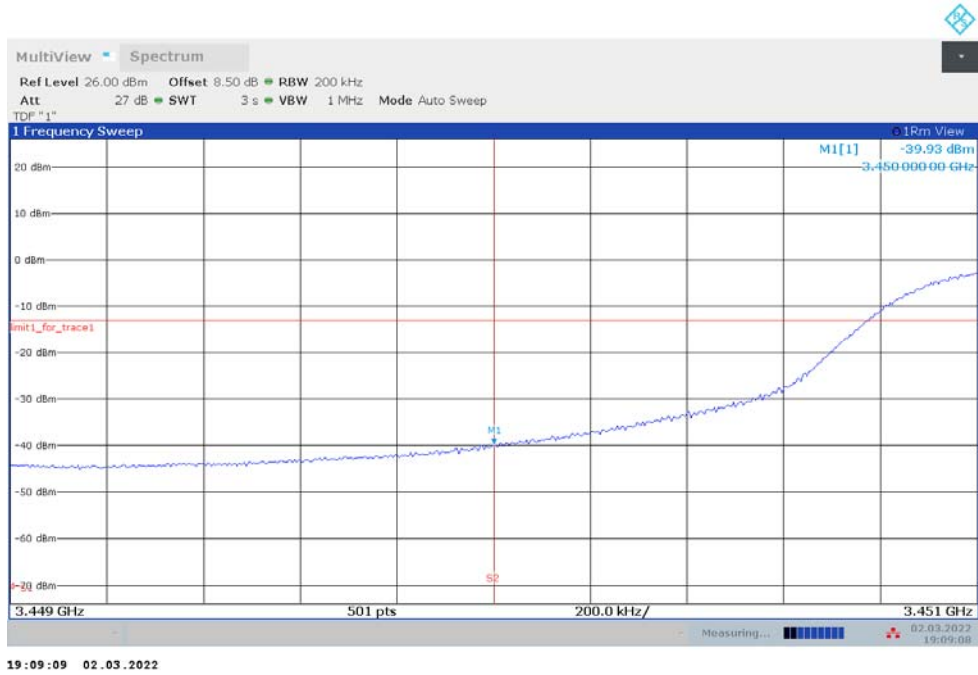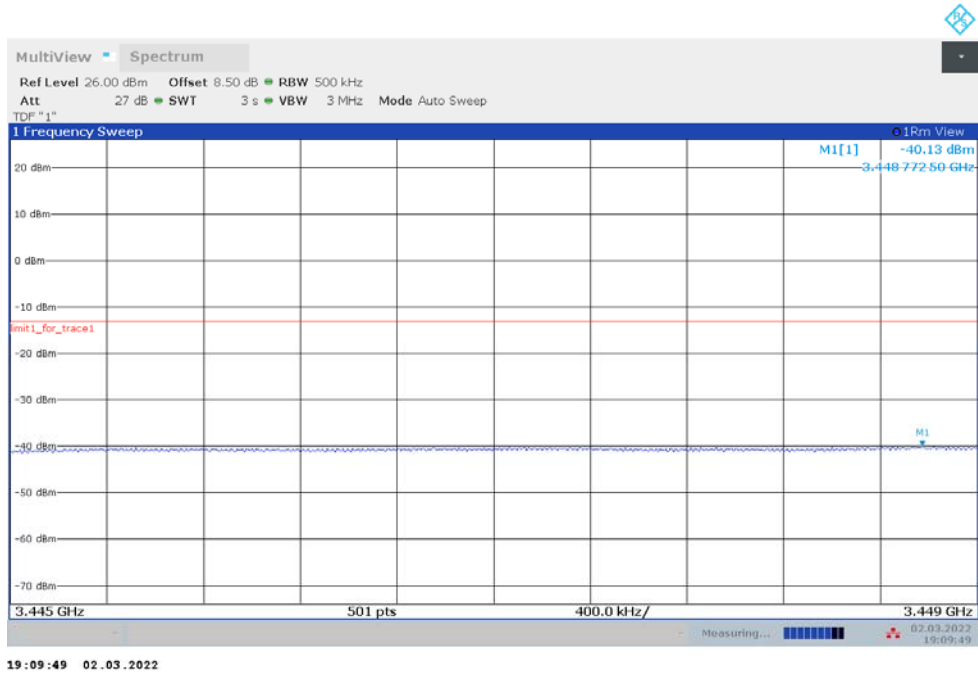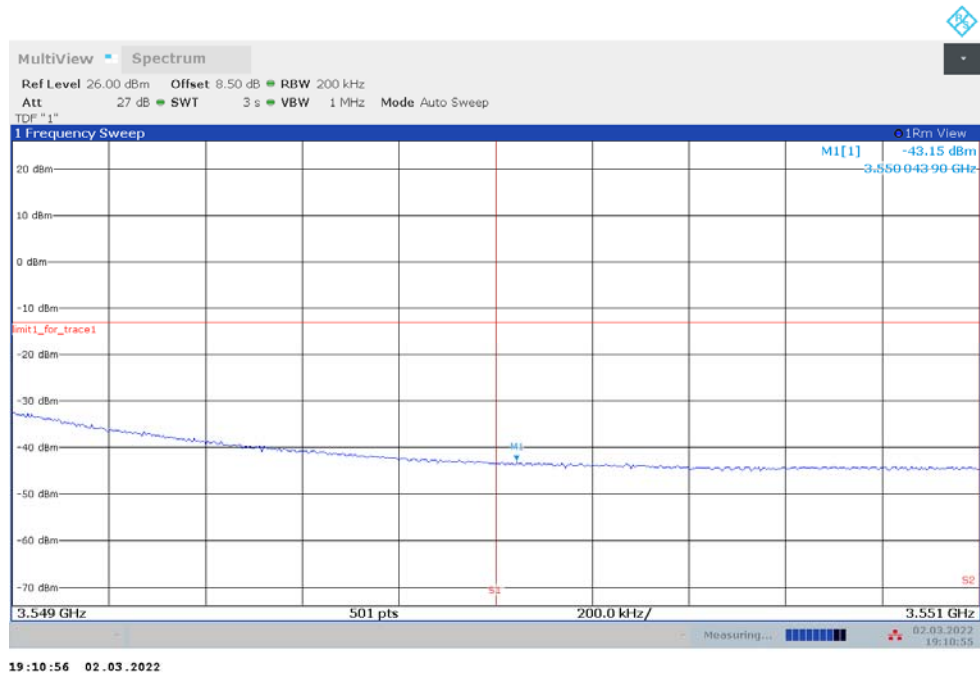
NR n78H

OBW: 1RB-LOW_offset

19:13:28 02.03.2022

LOW BAND EDGE BLOCK-1RB-LOW_offset

19:14:10 02.03.2022

LOW BAND EDGE BLOCK-1RB-LOW_offset
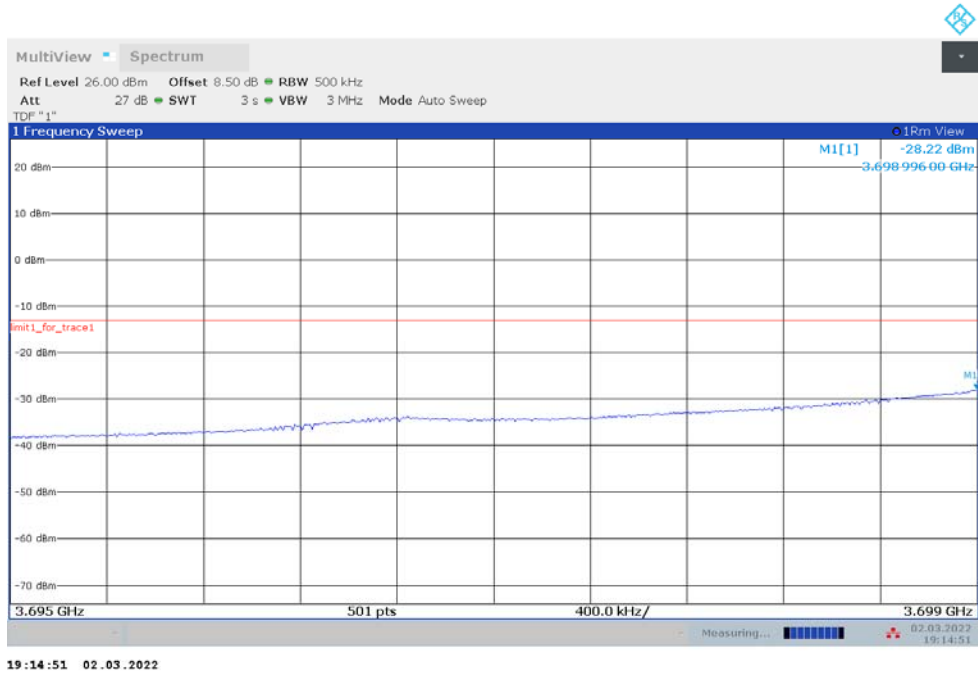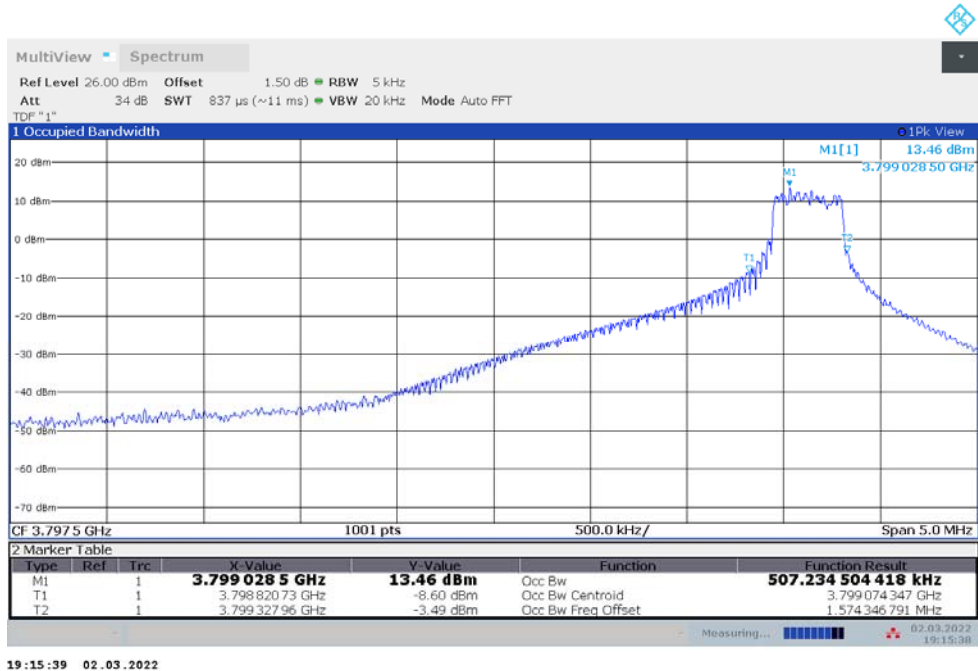
19:14:51 02.03.2022

OBW: 1RB-HIGH_offset

19:15:39 02.03.2022

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

19:16:21 02.03.2022

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

19:17:01 02.03.2022

LOW BAND EDGE BLOCK-100M-100%RB

19:18:17 02.03.2022

HIGH BAND EDGE BLOCK-100M-100%RB

19:19:03 02.03.2022
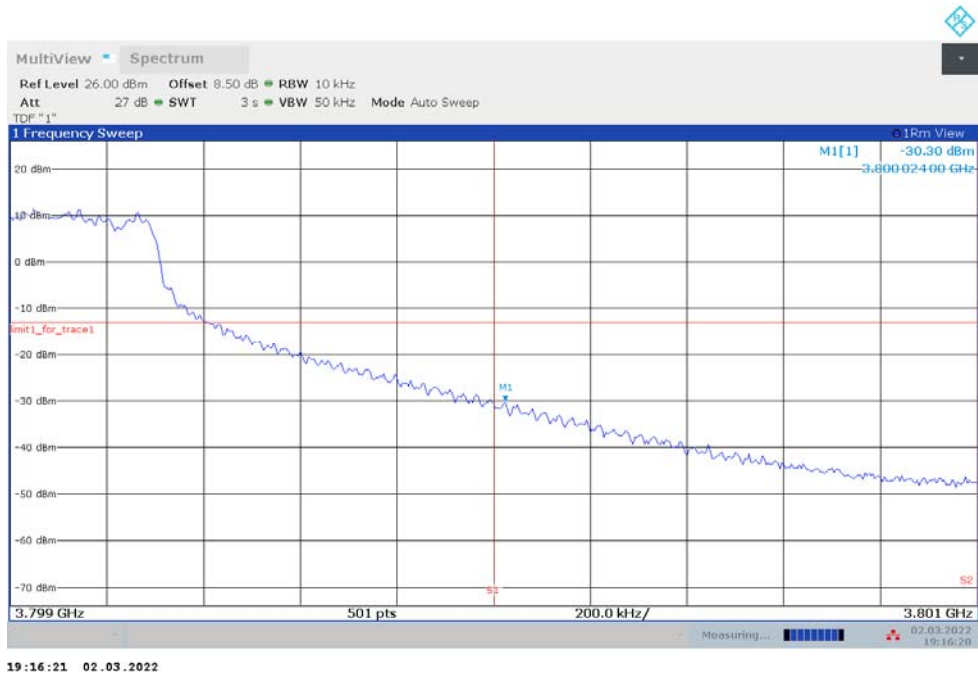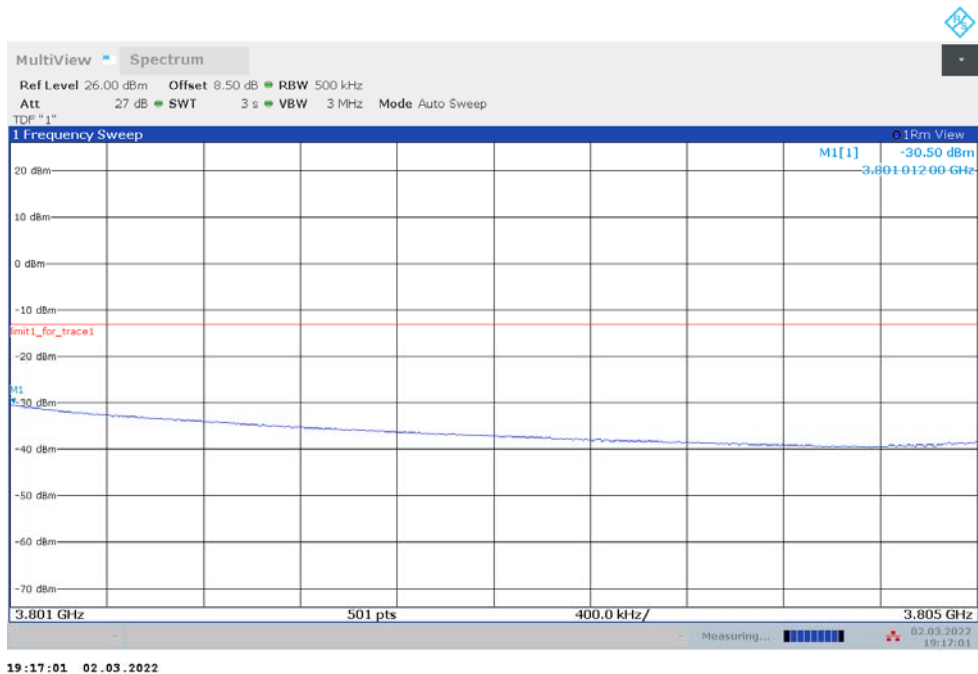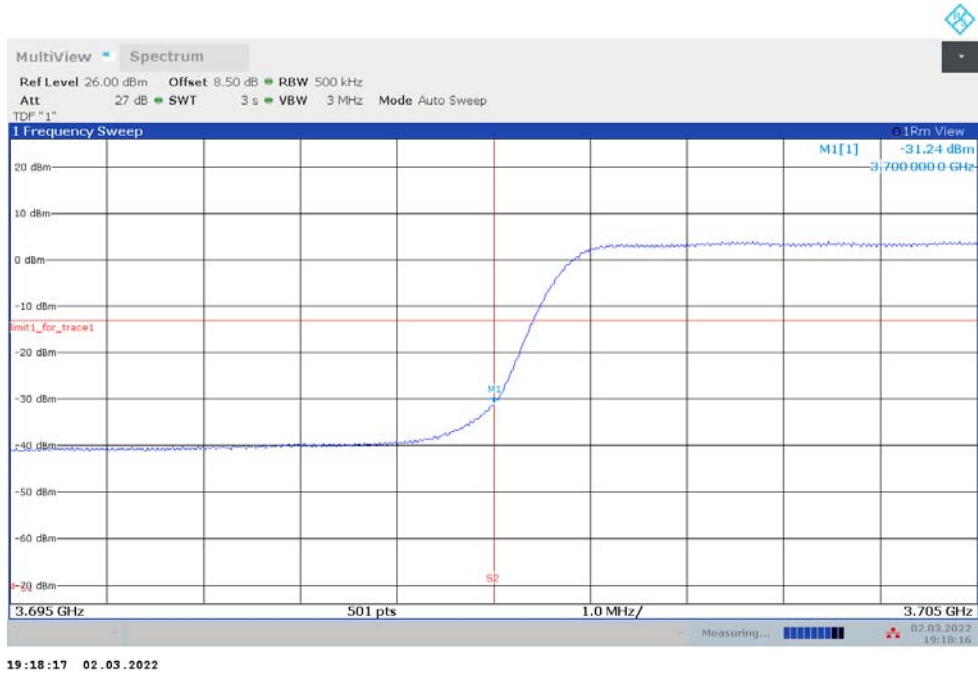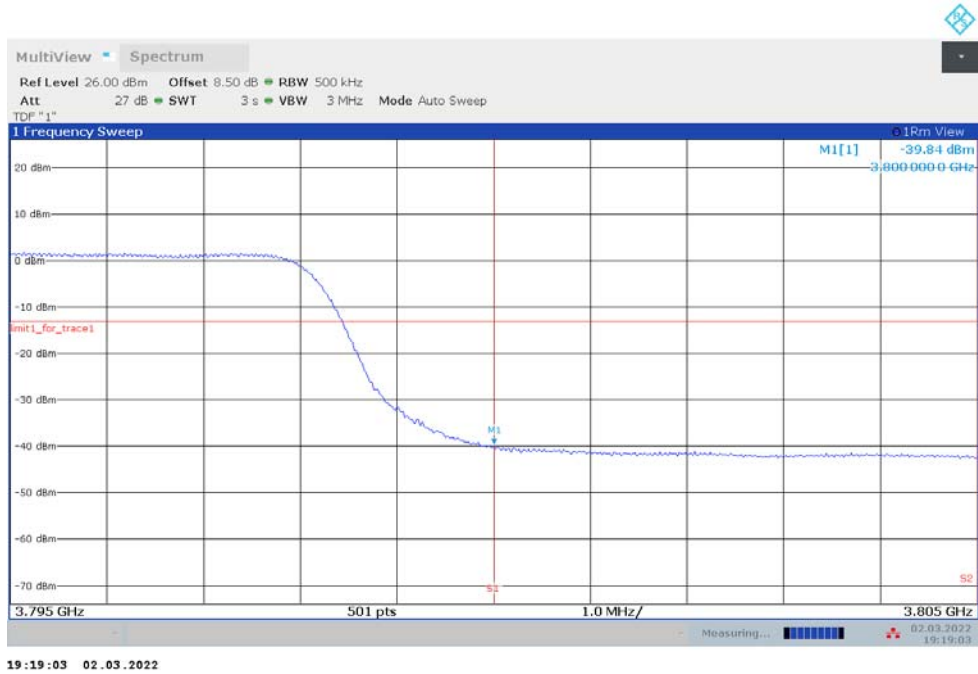
A.7 Conducted Spurious Emission

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 $2 \times$ 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(h) for operations in the 1695–1710 MHz, 1710–1755 MHz, 1755–1780 MHz, 1915–1920 MHz, 1995–2000 MHz, 2000–2020 MHz, 2110–2155 MHz, 2155–2180 MHz, and 2180–2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB. 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 frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. 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

n5
NOTE: peak above the limit line is the carrier frequency.
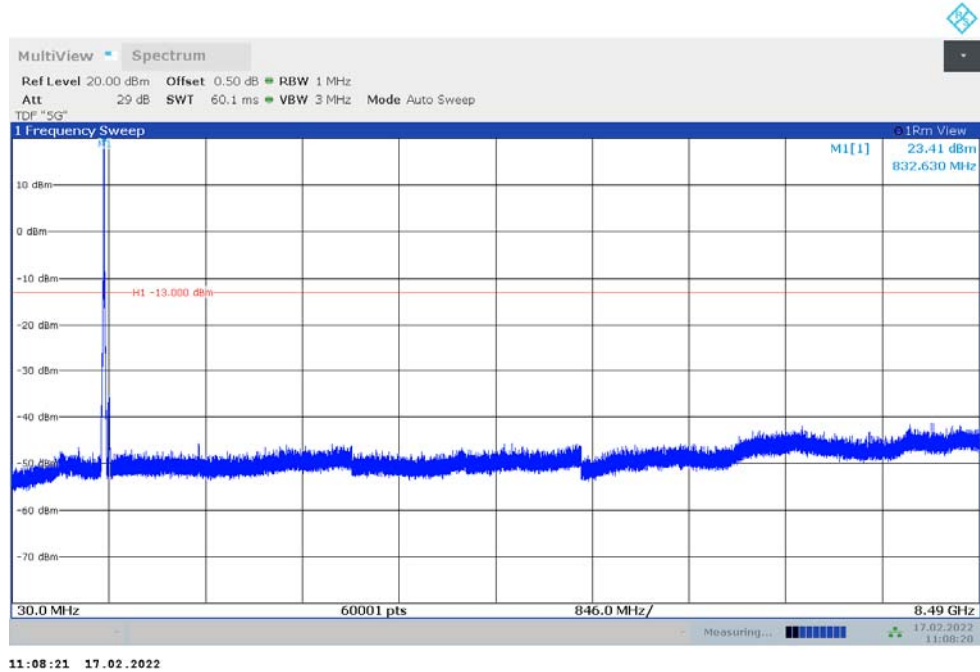
LTE Band 12+NR n25
NOTE: peak above the limit line is the carrier frequency.
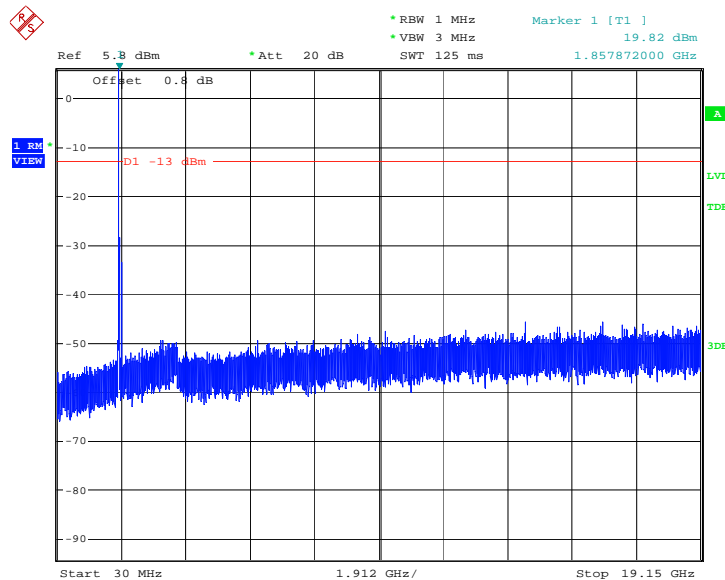
n41

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

Date: 28.OCT.2021 09:30:41
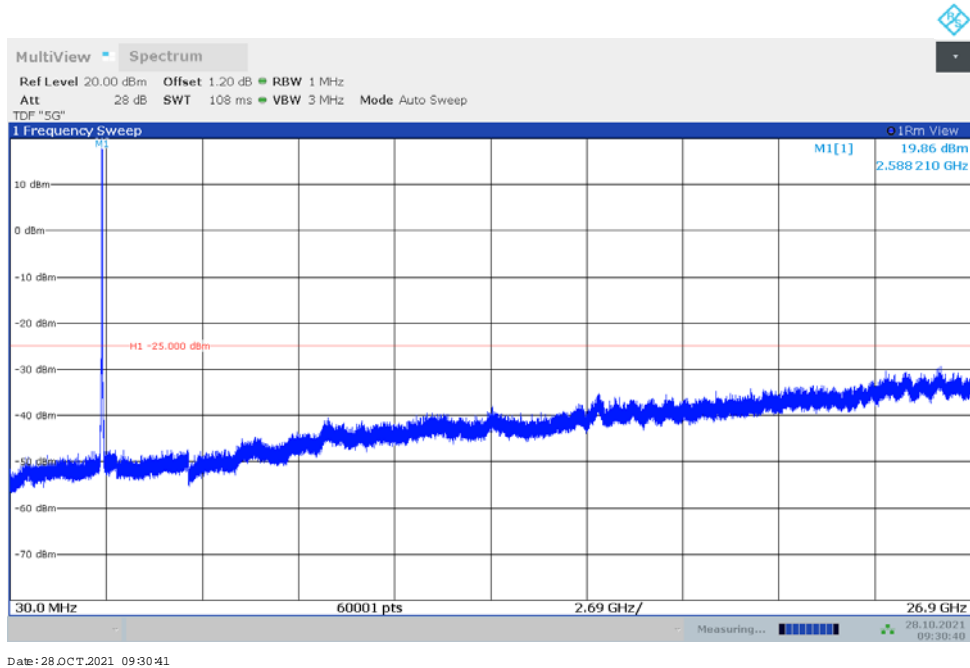
LTE Band 12+NR n66

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

Date: 29.OCT.2021 19:20:34
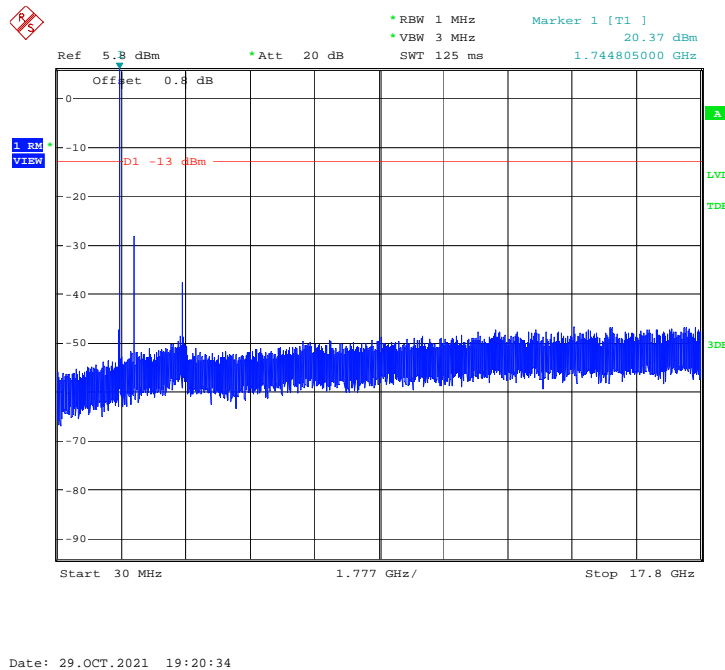
LTE Band 66+NR n71

NOTE: peak above the limit line is the carrier frequency.
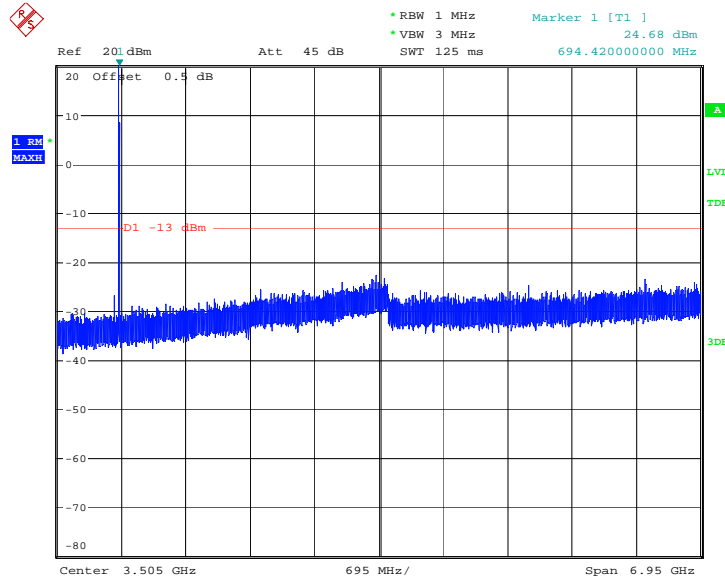
Date: 30.OCT.2021 09:00:51

n77L

NOTE: peak above the limit line is the carrier frequency.
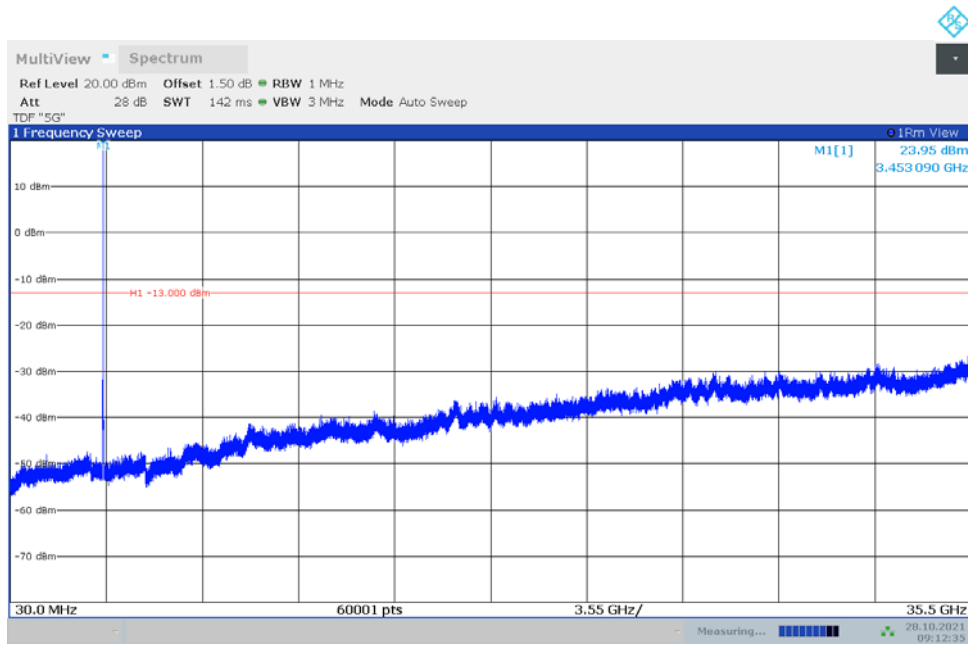
Date:28.OCT.2021 09:12:36

n77H

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

Date: 28.OCT.2021 09:14:40

n78L

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

19:26:16 02.03.2022

n78H
NOTE: peak above the limit line is the carrier frequency.

19:28:02   02.03.2022

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;

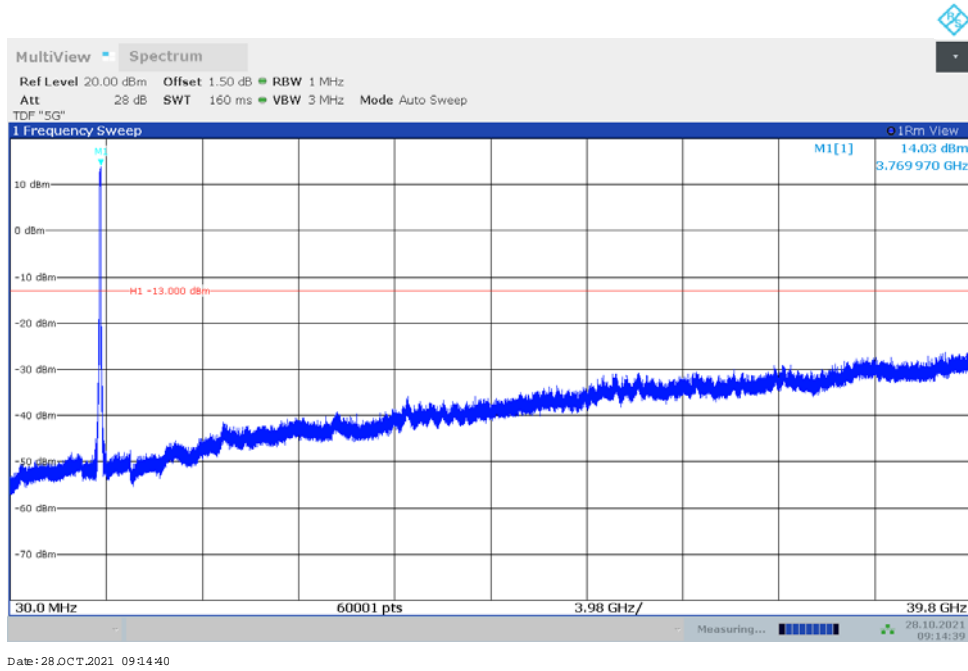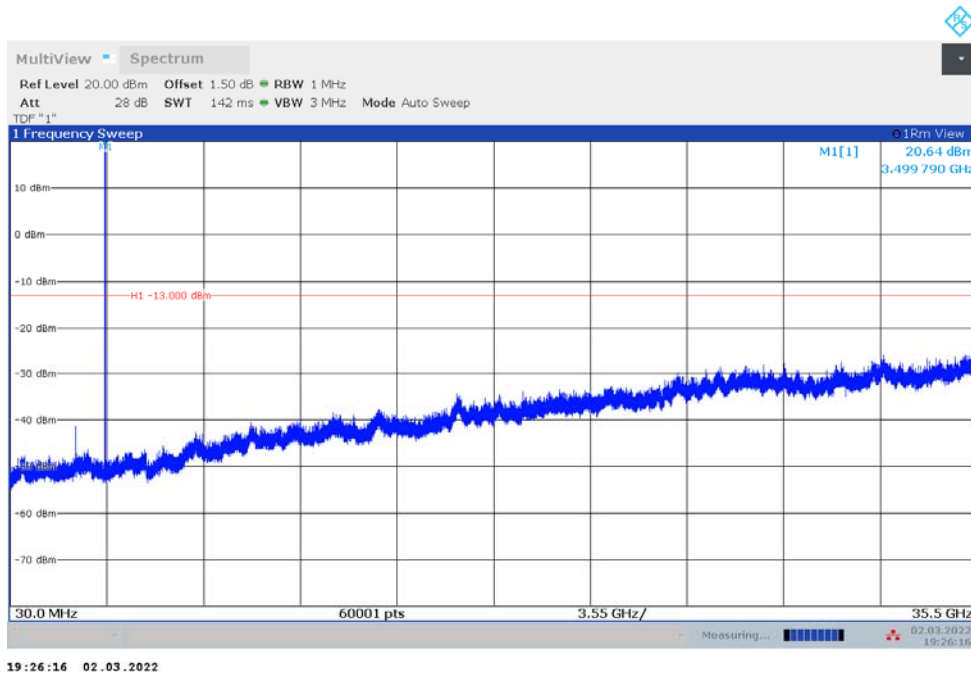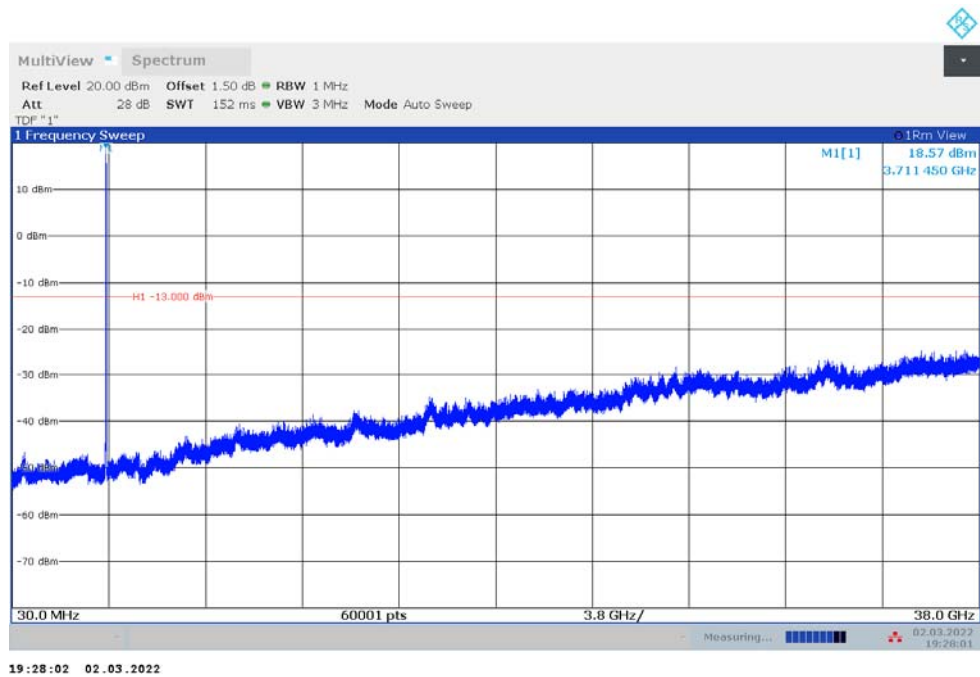d) Record the maximum PAPR level associated with a probability of 0.1%.

Measurement results

LTE Band 12+NR n25,20MHz

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	5.60	6.28	7.26	7.14	7.40	8.88	9.26	9.02	8.72

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	4.86	5.63	6.43	6.63	6.79	8.11	8.19	8.24	8.63

LTE Band 12+NR 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	5.70	6.15	6.80	6.97	7.00	8.66	8.67	8.85	8.73

LTE Band 66+NR n71,20MHz

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	5.60	6.90	7.56	7.39	7.62	9.37	9.36	9.44	9.33

n77L,90MHz

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	5.77	6.44	6.66	6.79	8.27	8.25	8.27	8.41

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	3.70	4.85	6.30	6.51	6.55	8.03	7.84	8.06	8.26

n78L,90MHz

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	4.39	5.65	6.36	6.50	6.51	8.36	8.37	8.40	8.33

n78H,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
3750	3.99	4.63	6.13	6.40	6.48	8.34	8.33	8.42	8.23

Annex B: Accreditation Certificate

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ilac-MRA

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).

2021-09-29 through 2022-09-30
Effective Dates

For the National Voluntary Laboratory Accreditation Program

END OF REPORT