LTE Band 5+NR n77L

n77L,90MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	92.250	91.980

n77L,90MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)
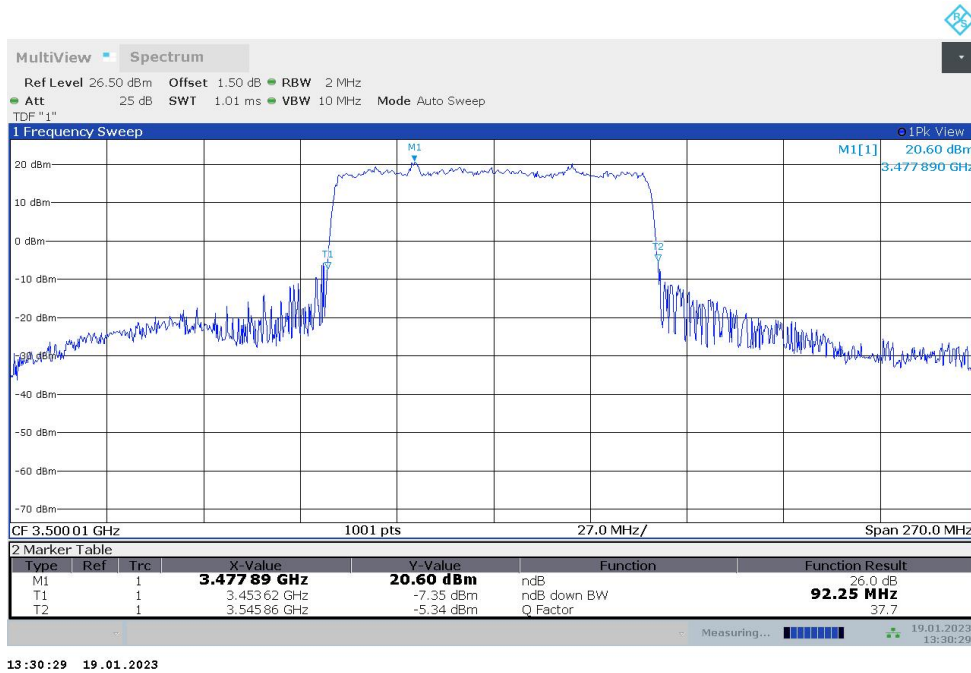
n77L,90MHz Bandwidth,DFT-s-QPSK (-26dBc BW)
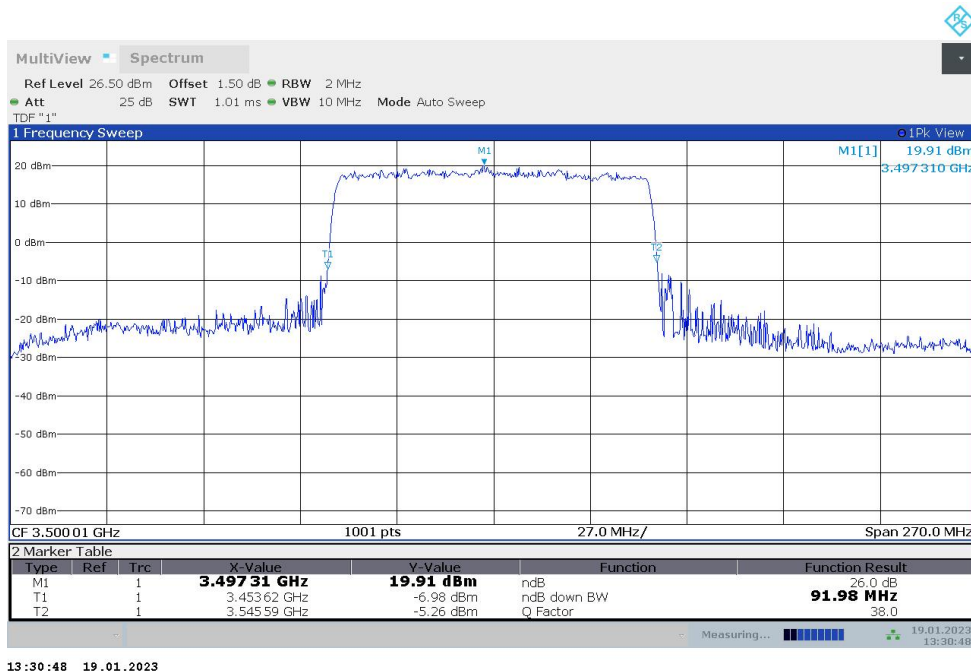
LTE Band 5+NR n77H
n77H,10MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	9.620	9.530

n77H,10MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)

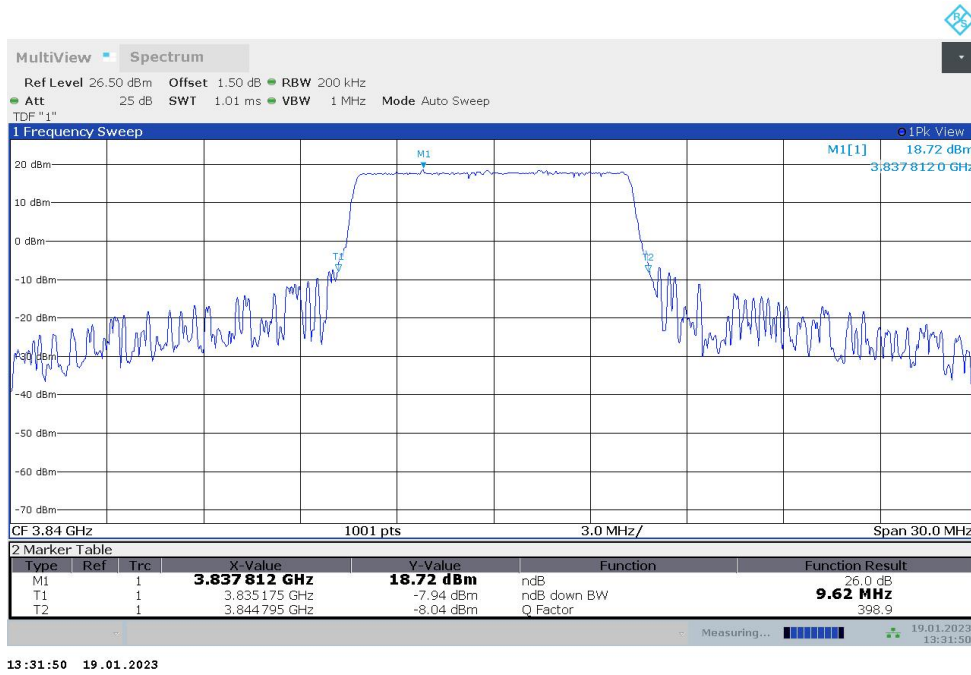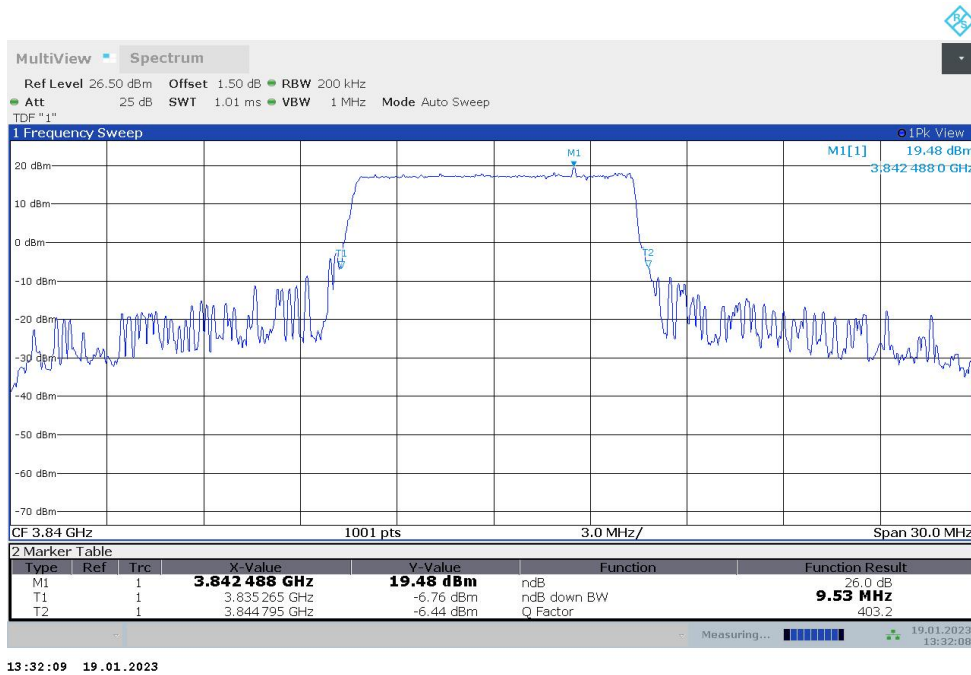### n77H,10MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

LTE Band 5+NR n77H

n77H,15MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	14.296	14.386

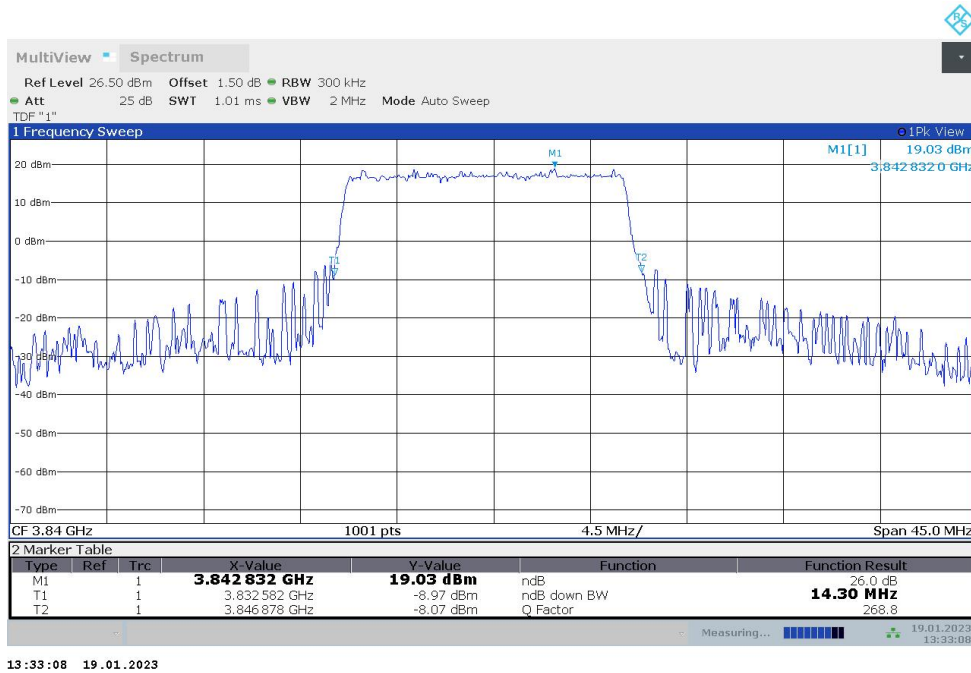**n77H,15MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)**

n77H,15MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

LTE Band 5+NR n77H

n77H,20MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	19.660	19.540

n77H,20MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)
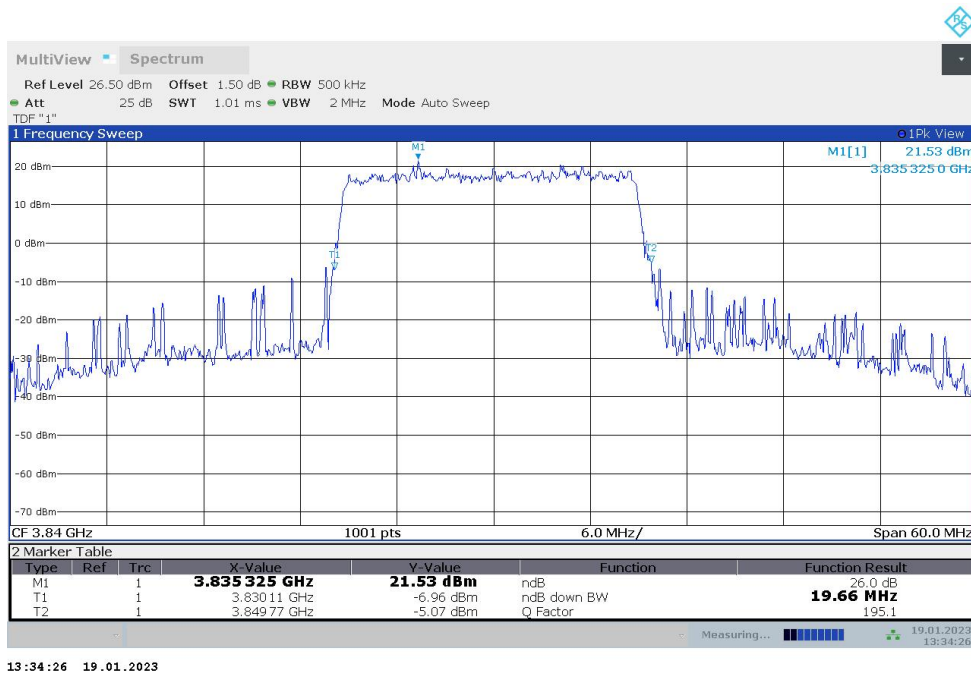
n77H,20MHz Bandwidth,DFT-s-QPSK (-26dBc BW)
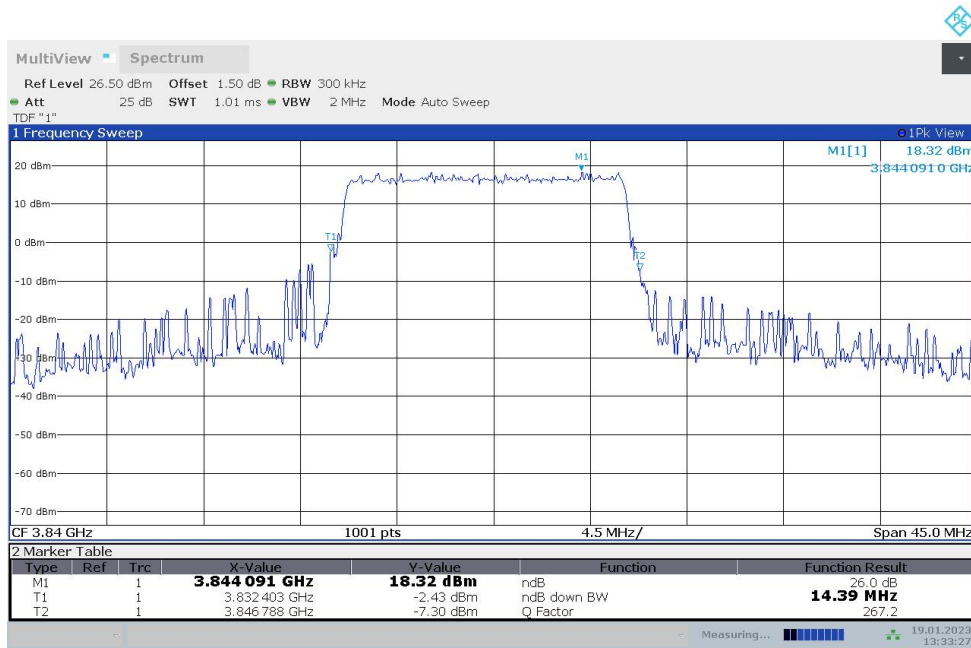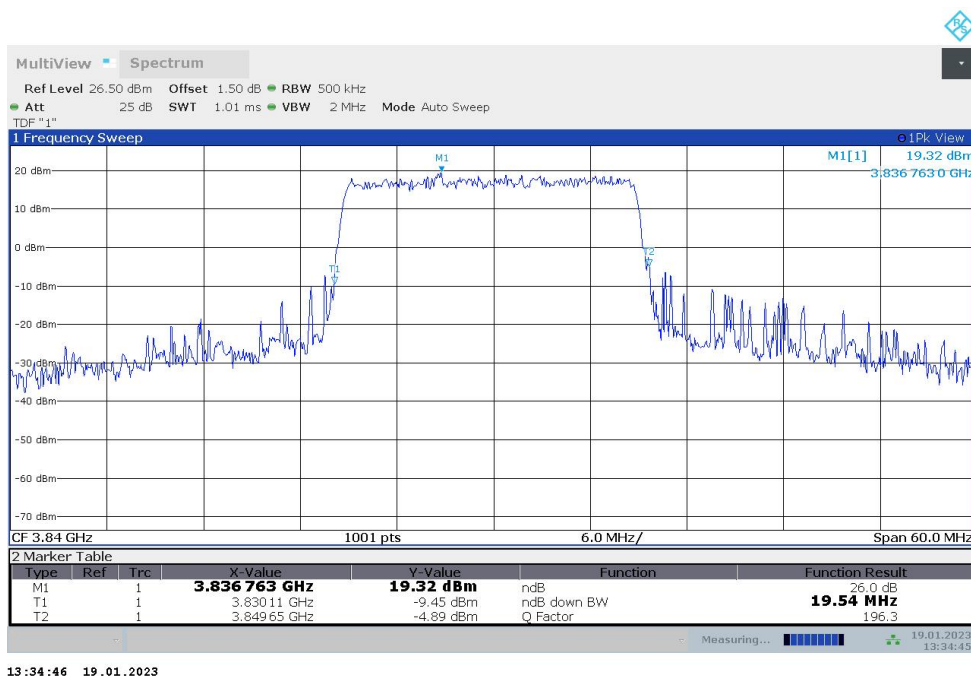
LTE Band 5+NR n77H

n77H,25MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	24.426	24.126

n77H,25MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)

n77H,25MHz Bandwidth,DFT-s-QPSK (-26dBc BW)
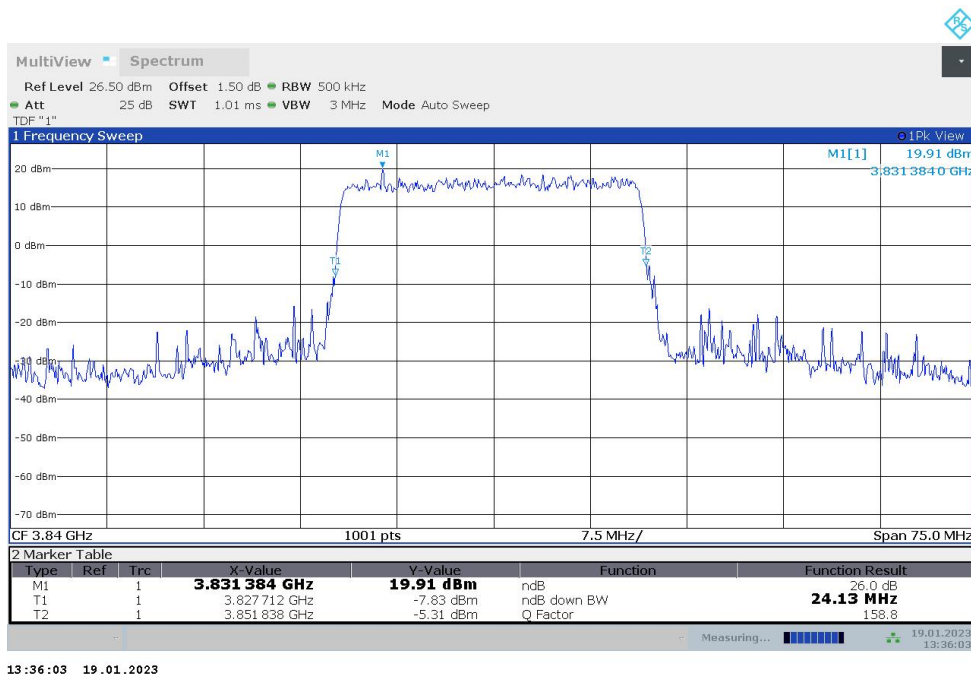
LTE Band 5+NR n77H

n77H,30MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	28.681	28.412

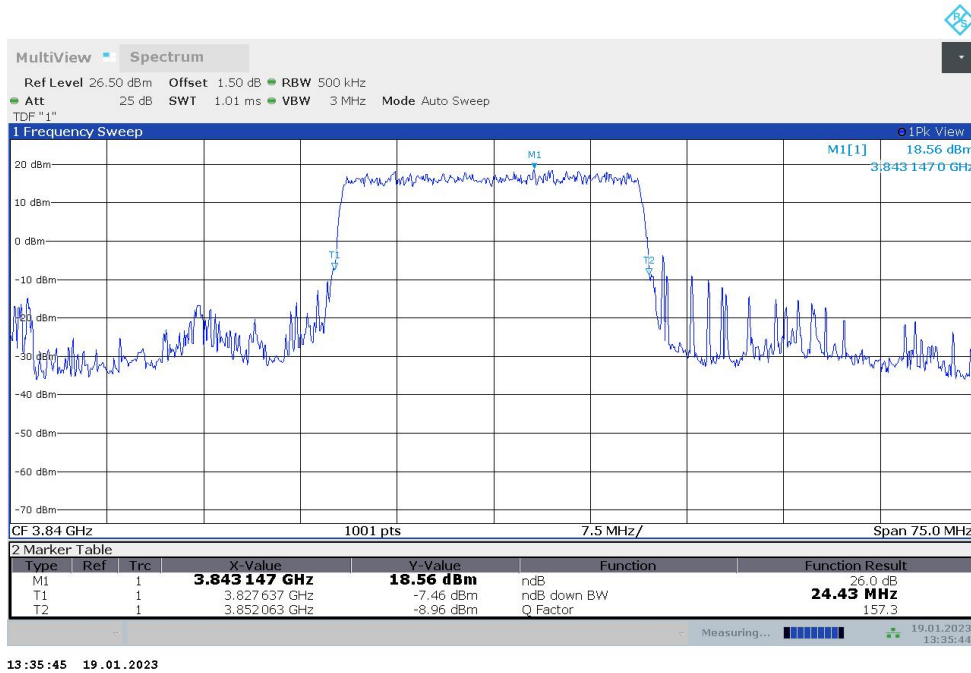**n77H,30MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)**
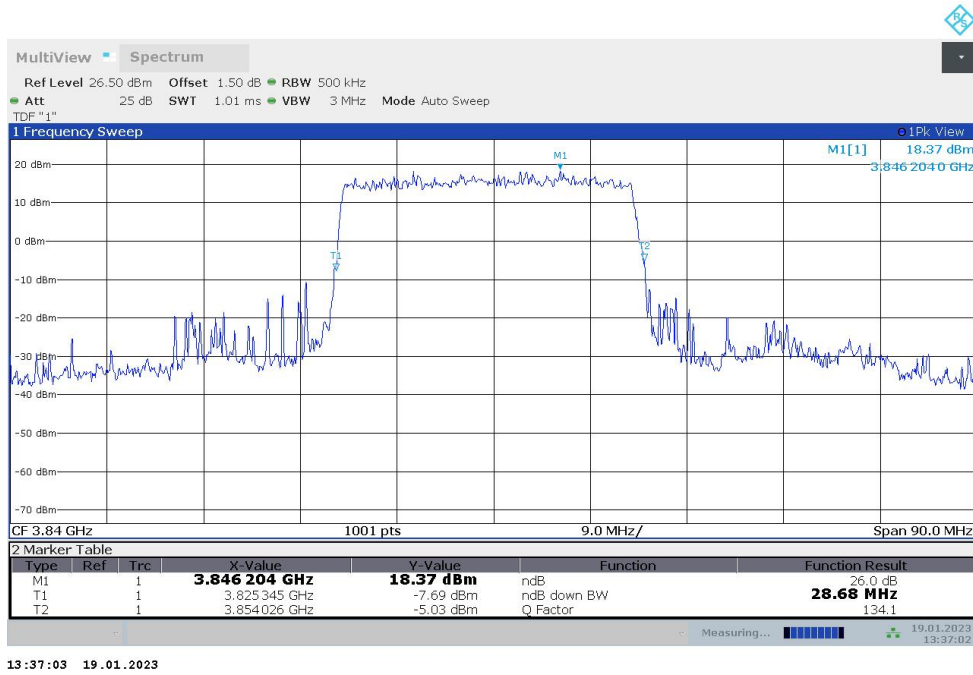

n77H,30MHz Bandwidth,DFT-s-QPSK (-26dBc BW)
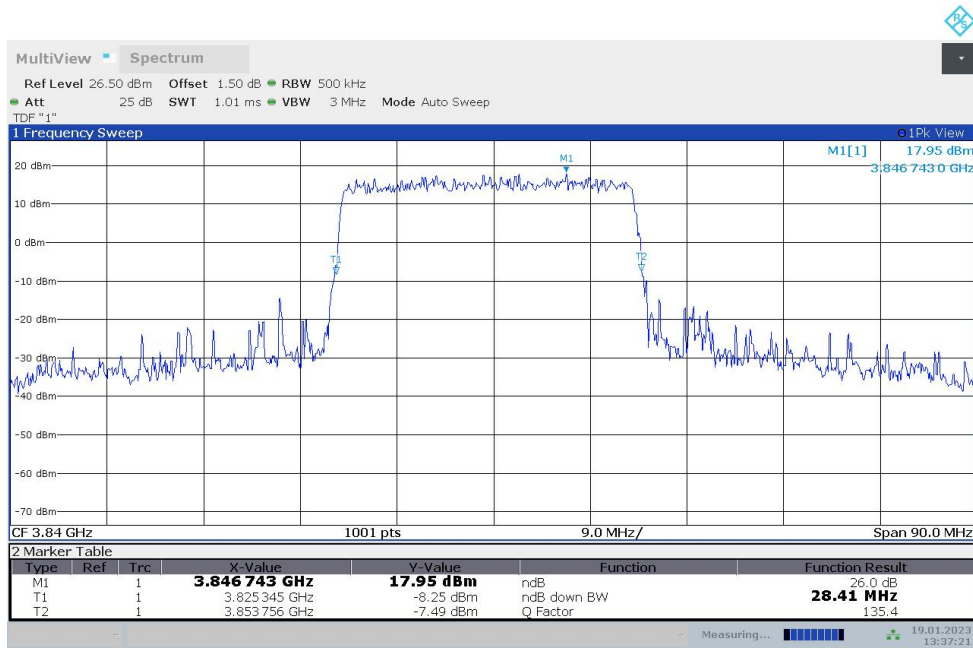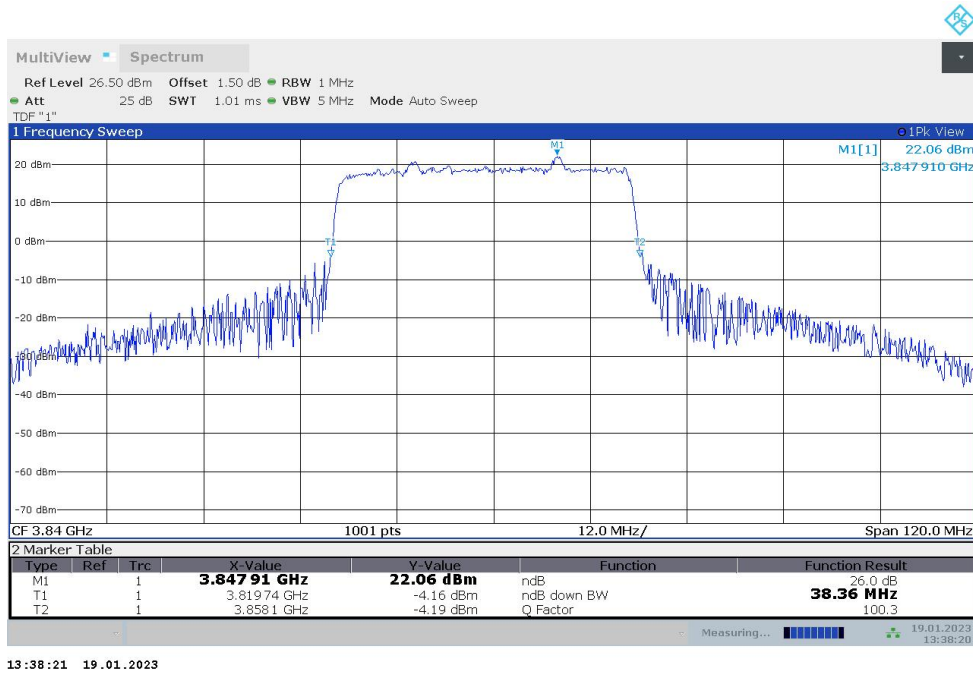
LTE Band 5+NR n77H

n77H,40MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	38.360	38.720

n77H,40MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)

MultiView · Spectrum

Ref Level 26.50 dBm   Offset 1.50 dB   ● RBW 1 MHz
● Att   25 dB   SWT 1.01 ms   ● VBW 5 MHz   Mode Auto Sweep
TDF "1"

1 Frequency Sweep   1Pk View
                                                        M1[1]   22.06 dBm
                                                        3.847 910 GHz

20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm

CF 3.84 GHz   1001 pts   12.0 MHz/   Span 120.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	3.847 91 GHz	22.06 dBm	ndB	26.0 dB
T1		1	3.819 74 GHz	-4.16 dBm	ndB down BW	38.36 MHz
T2		1	3.858 1 GHz	-4.19 dBm	Q Factor	100.3

Measuring...   19.01.2023 13:38:20

13:38:21   19.01.2023

n77H,40MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

MultiView · Spectrum

Ref Level 26.50 dBm   Offset 1.50 dB   ● RBW 1 MHz
● Att   25 dB   SWT 1.01 ms   ● VBW 5 MHz   Mode Auto Sweep
TDF "1"

1 Frequency Sweep   1Pk View
                                                        M1[1]   20.17 dBm
                                                        3.849 590 GHz

20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm

CF 3.84 GHz   1001 pts   12.0 MHz/   Span 120.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	3.849 59 GHz	20.17 dBm	ndB	26.0 dB
T1		1	3.819 74 GHz	-5.86 dBm	ndB down BW	38.72 MHz
T2		1	3.858 46 GHz	-6.78 dBm	Q Factor	99.4

Measuring...   19.01.2023 13:38:39

13:38:40   19.01.2023

LTE Band 5+NR n77H

n77H,50MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	49.000	49.600

n77H,50MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)

13:39:39 19.01.2023

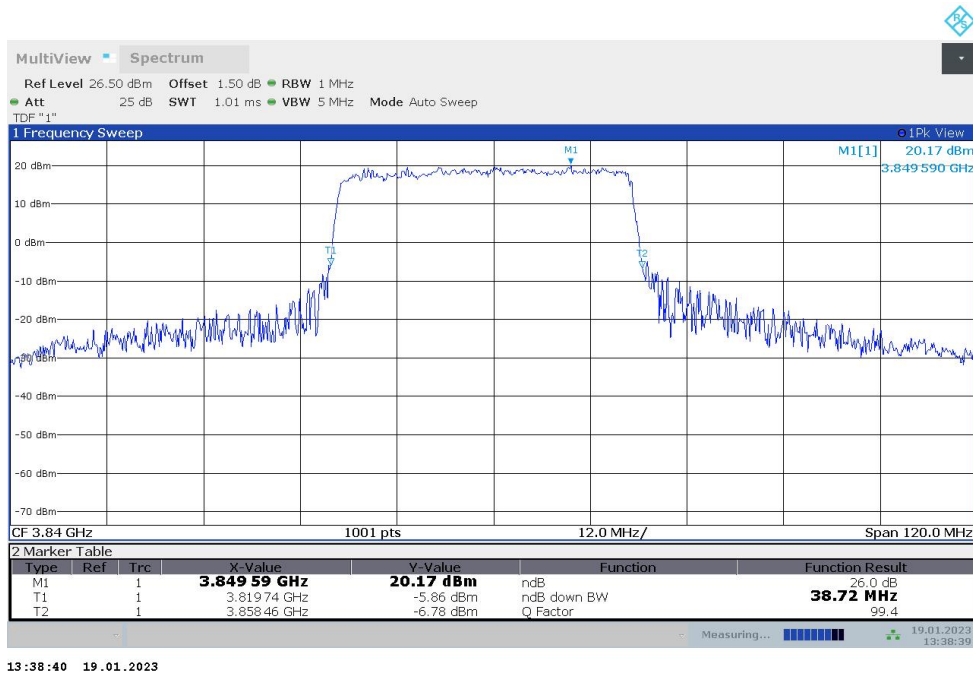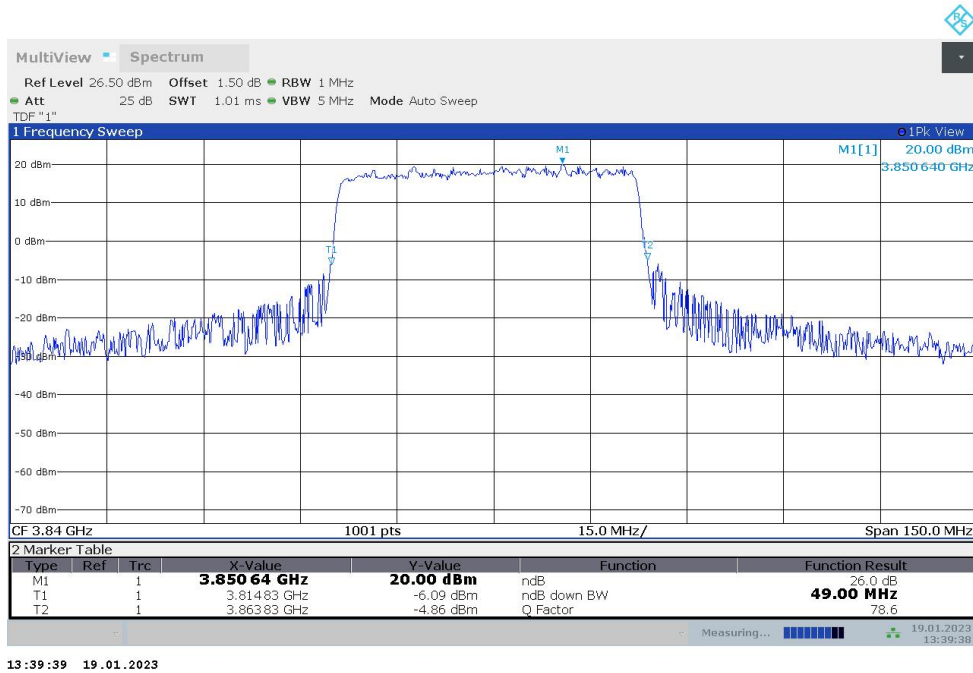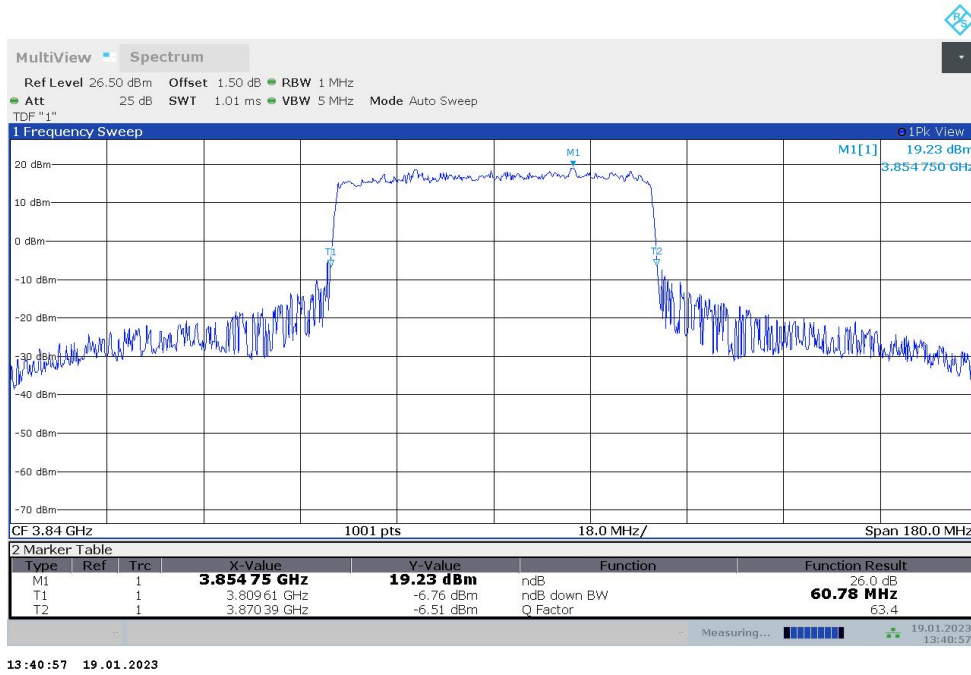**n77H,50MHz Bandwidth,DFT-s-QPSK (-26dBc BW)**

13:39:57 19.01.2023
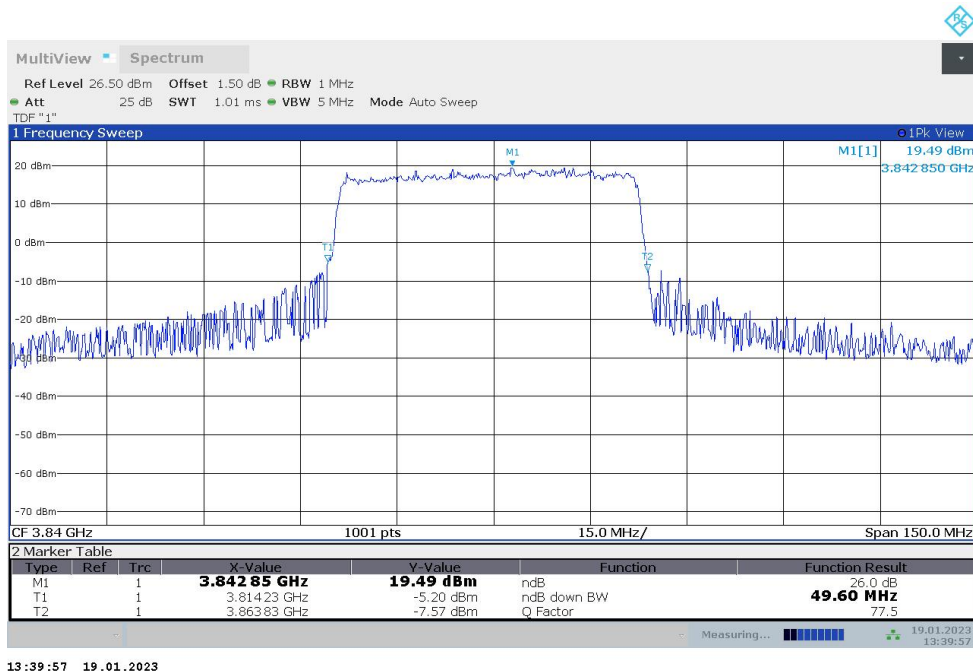
LTE Band 5+NR n77H

n77H,60MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	60.780	60.960

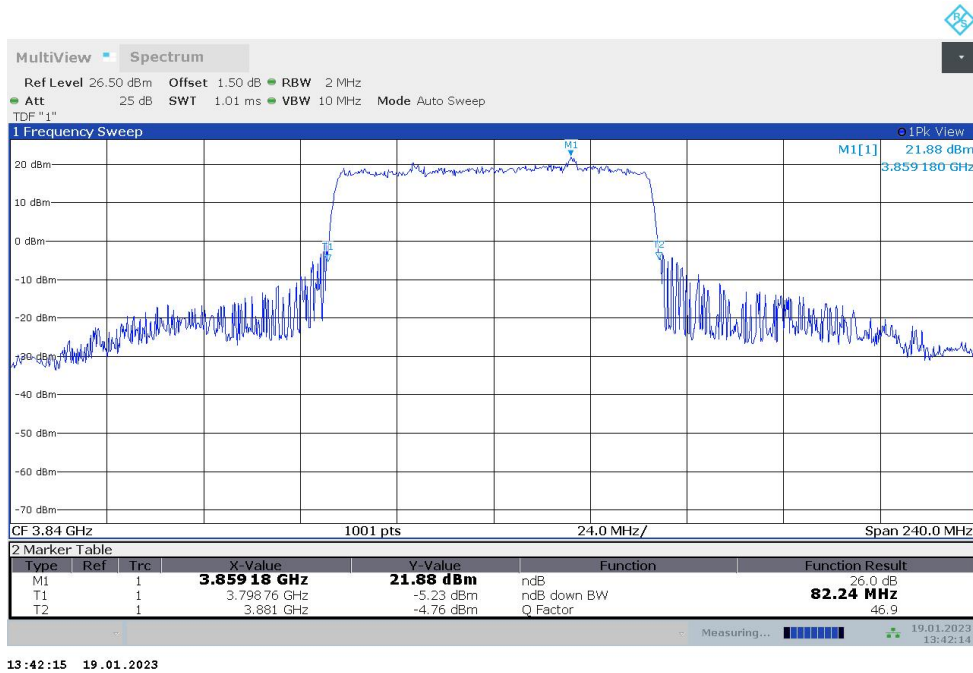**n77H,60MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)**

n77H,60MHz Bandwidth,DFT-s-QPSK (-26dBc BW)
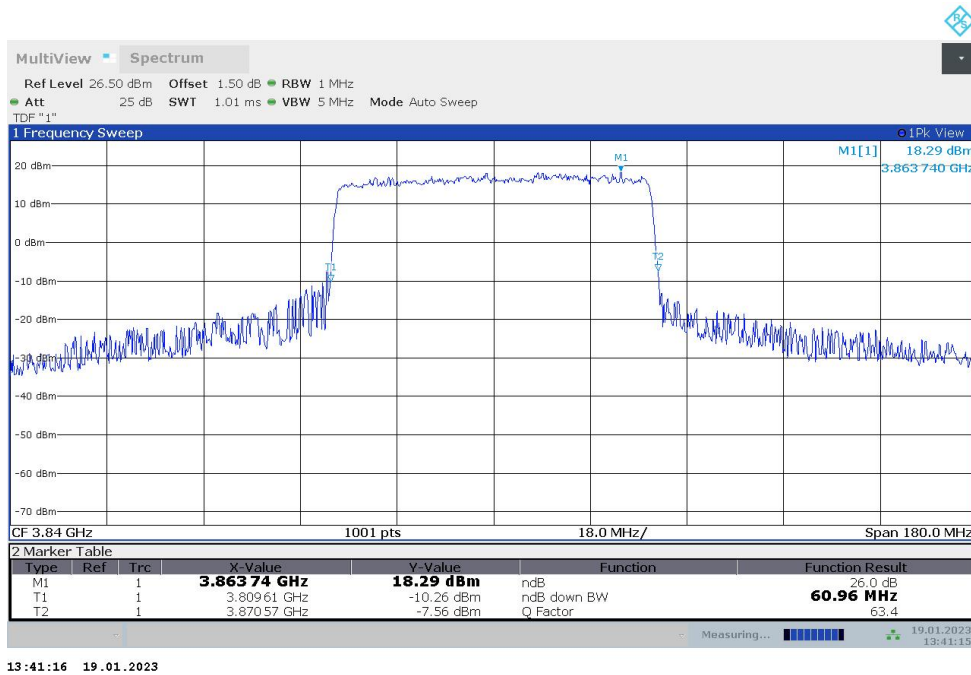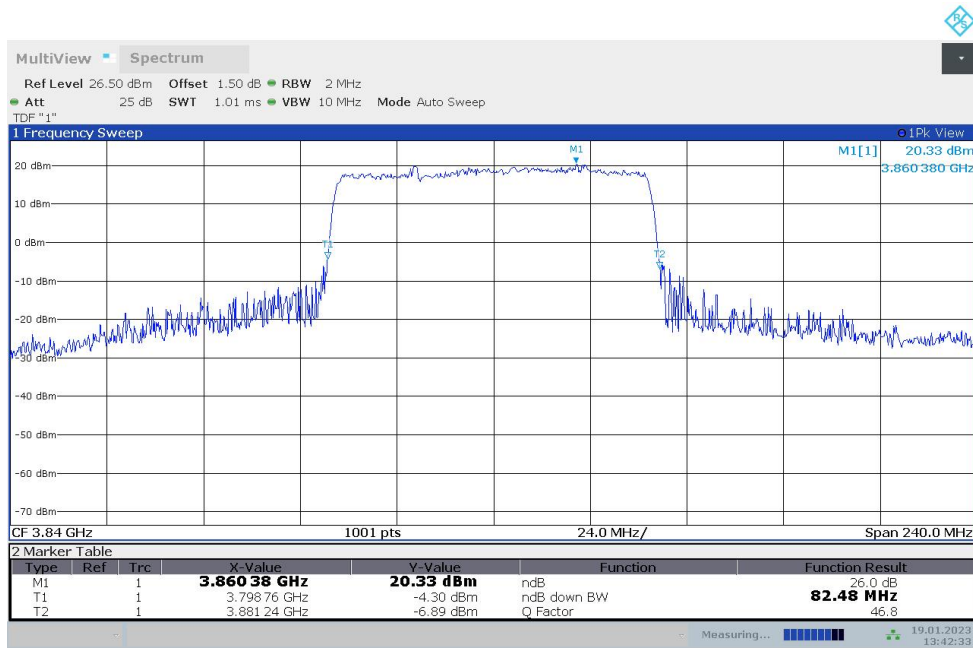
LTE Band 5+NR n77H

n77H,80MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	82.240	82.480

n77H,80MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)

13:42:15 19.01.2023

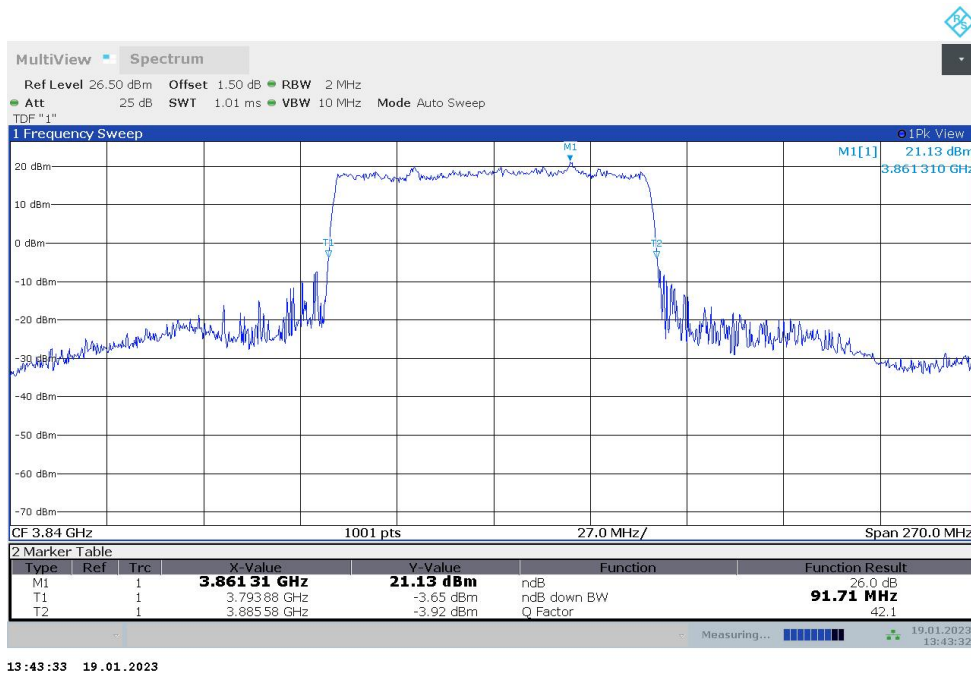**n77H,80MHz Bandwidth,DFT-s-QPSK (-26dBc BW)**
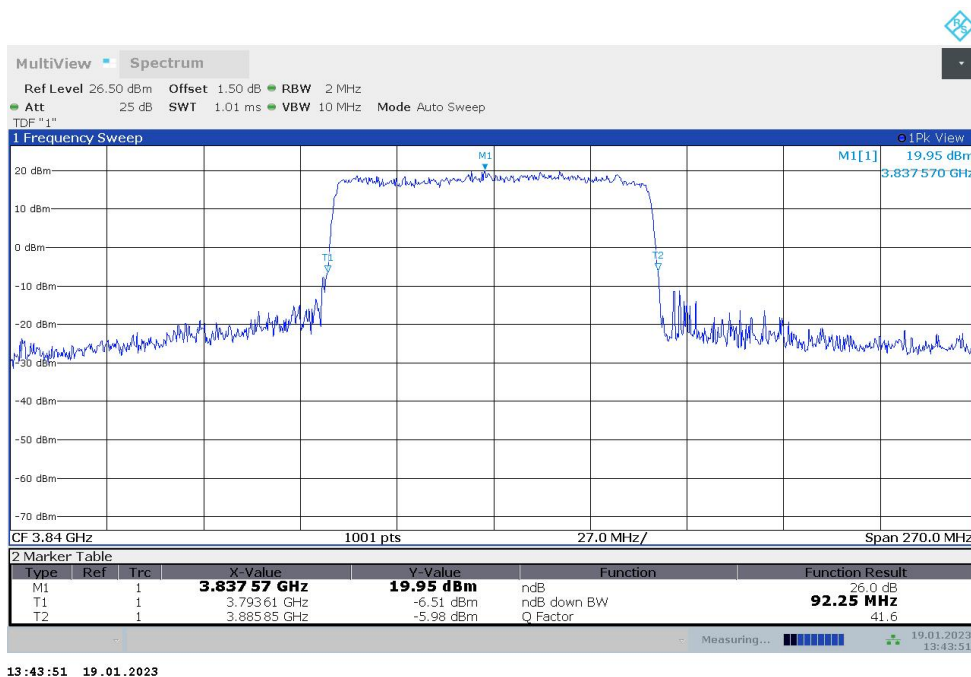

13:42:34 19.01.2023

LTE Band 5+NR n77H

n77H,90MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	91.710	92.250

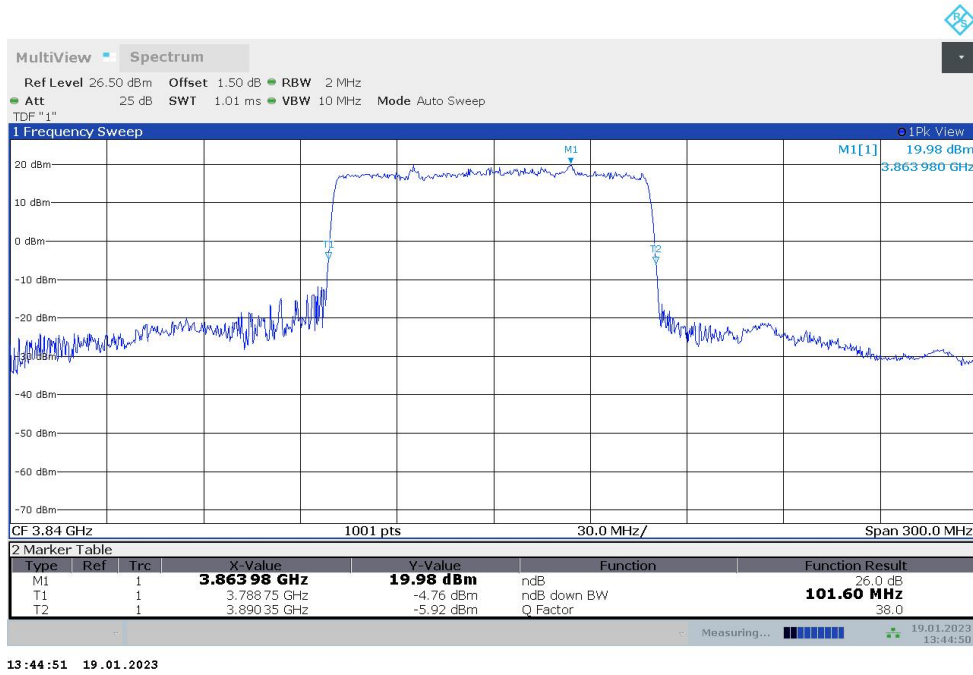**n77H,90MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)**
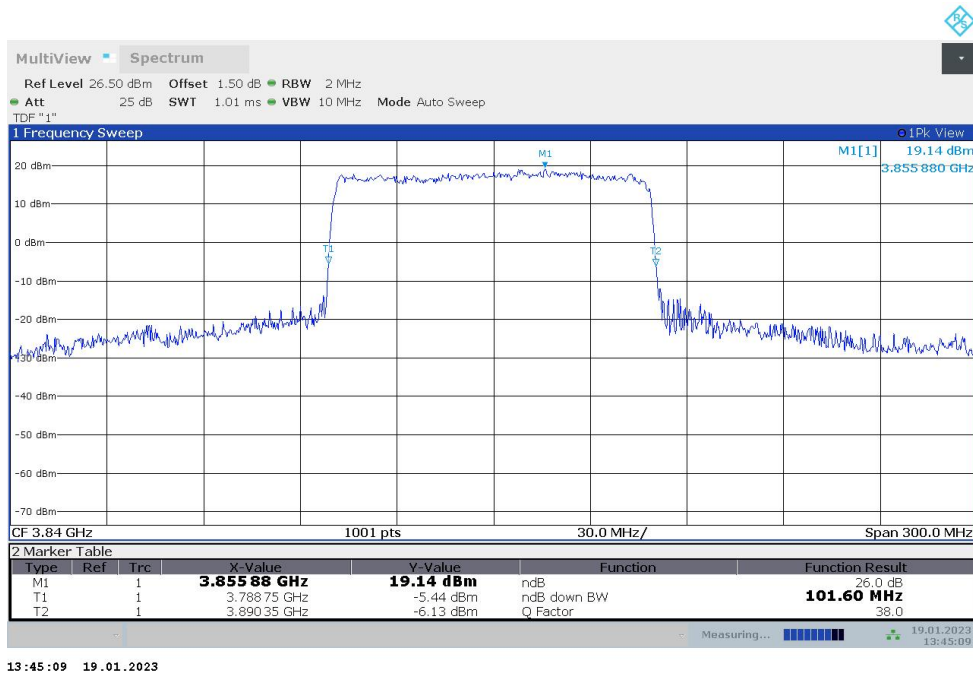

n77H,90MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

LTE Band 5+NR n77H

n77H,100MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	101.600	101.600

n77H,100MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)

13:44:51 19.01.2023

n77H,100MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

13:45:09 19.01.2023

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

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(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 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. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

Part 27.53(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. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

The spectrum analyzer readings are corrected by [10 log (1/duty cycle)] for the non-continuous transmitting scenario.
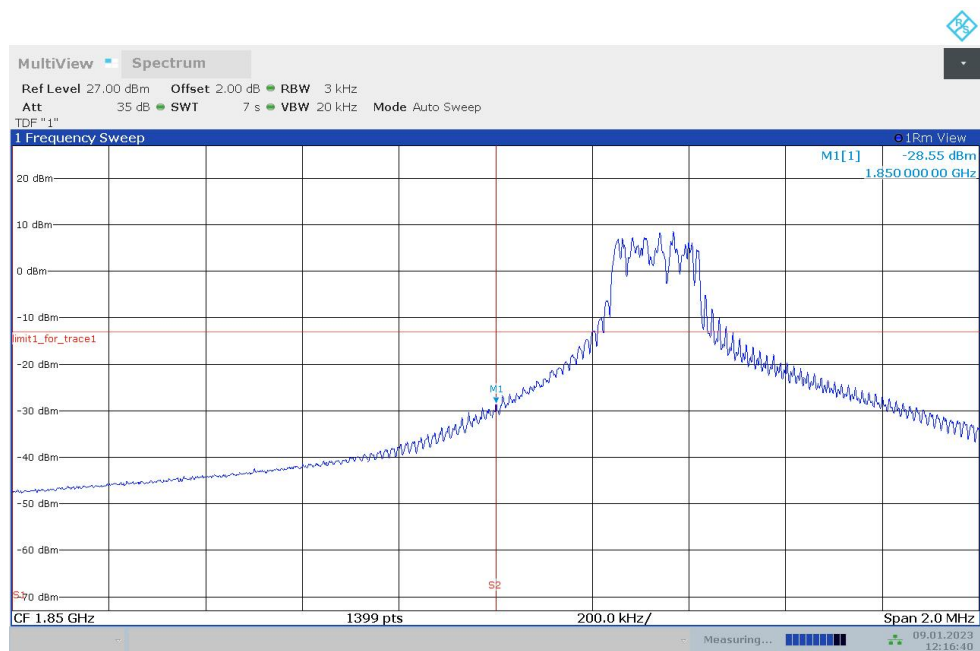
A.6.2 Measurement result
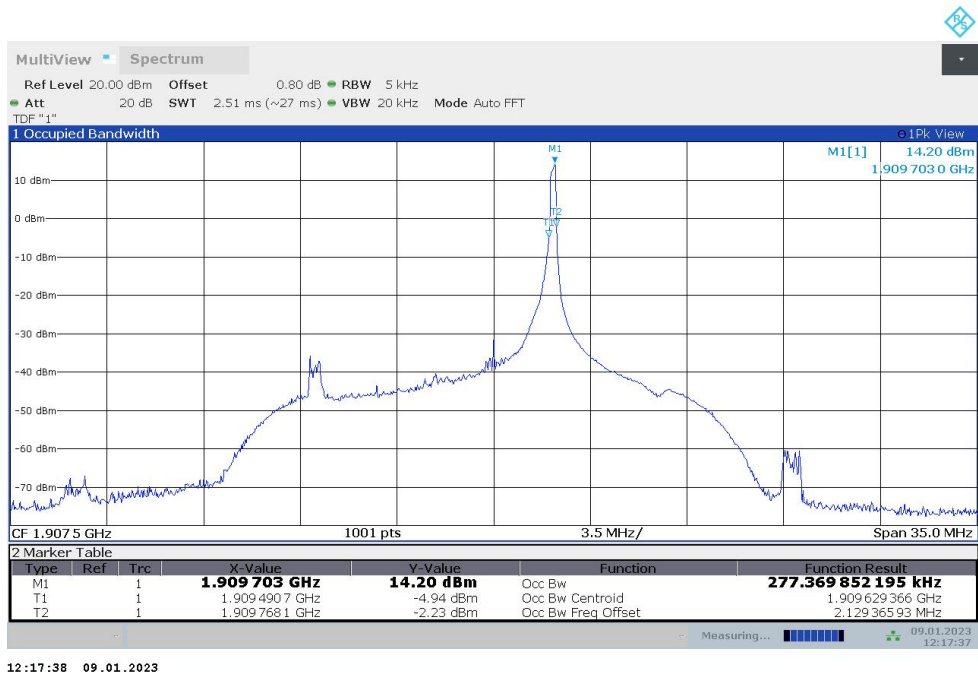
LTE Band 66+NR n2

OBW: 1RB-LOW_offset
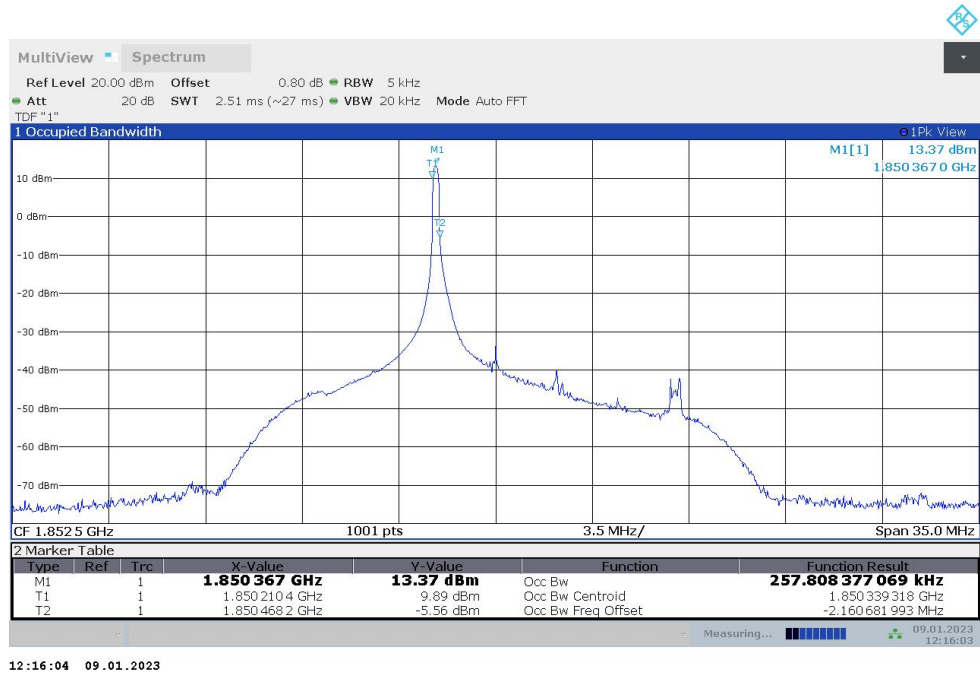
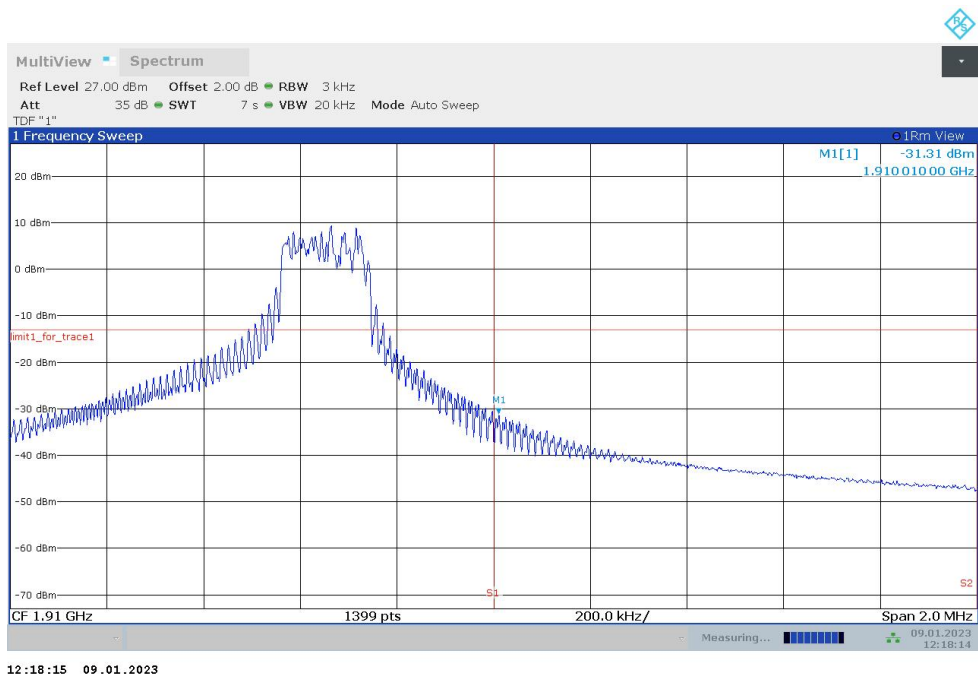12:16:04 09.01.2023

LOW BAND EDGE BLOCK-1RB-LOW_offset

12:16:41 09.01.2023

OBW: 1RB-HIGH_offset

12:17:38 09.01.2023

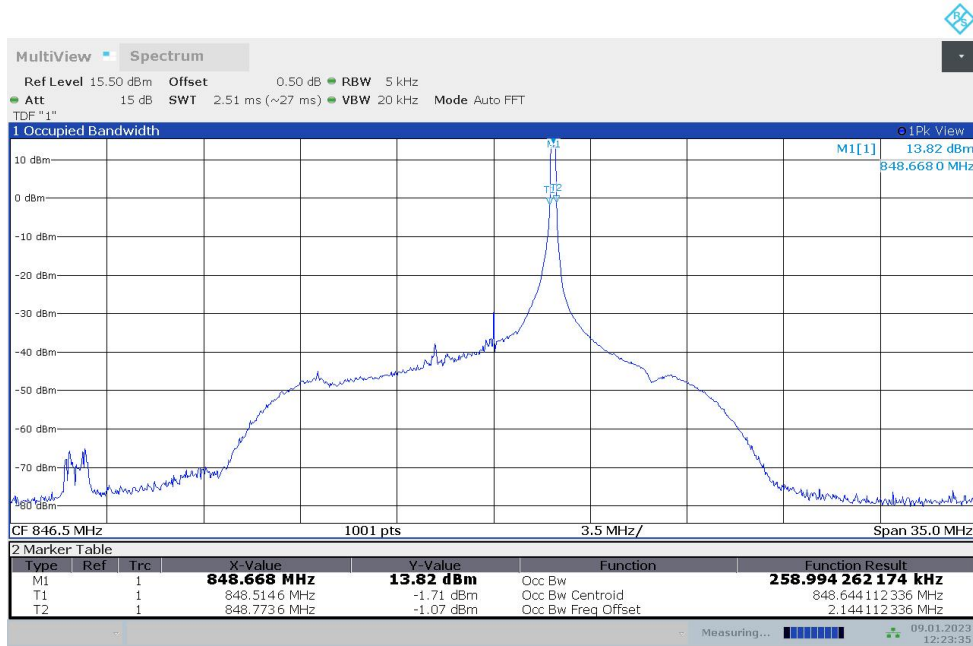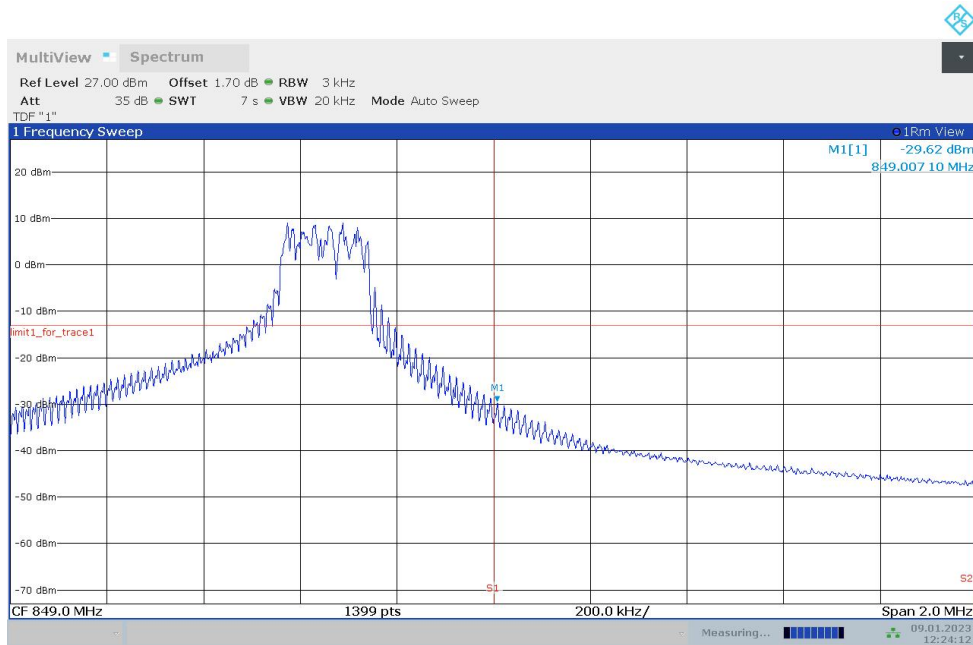## HIGH BAND EDGE BLOCK-1RB-HIGH_offset

12:18:15 09.01.2023

LOW BAND EDGE BLOCK-20M-100%RB

12:19:38 09.01.2023

HIGH BAND EDGE BLOCK-20M-100%RB

12:20:59 09.01.2023
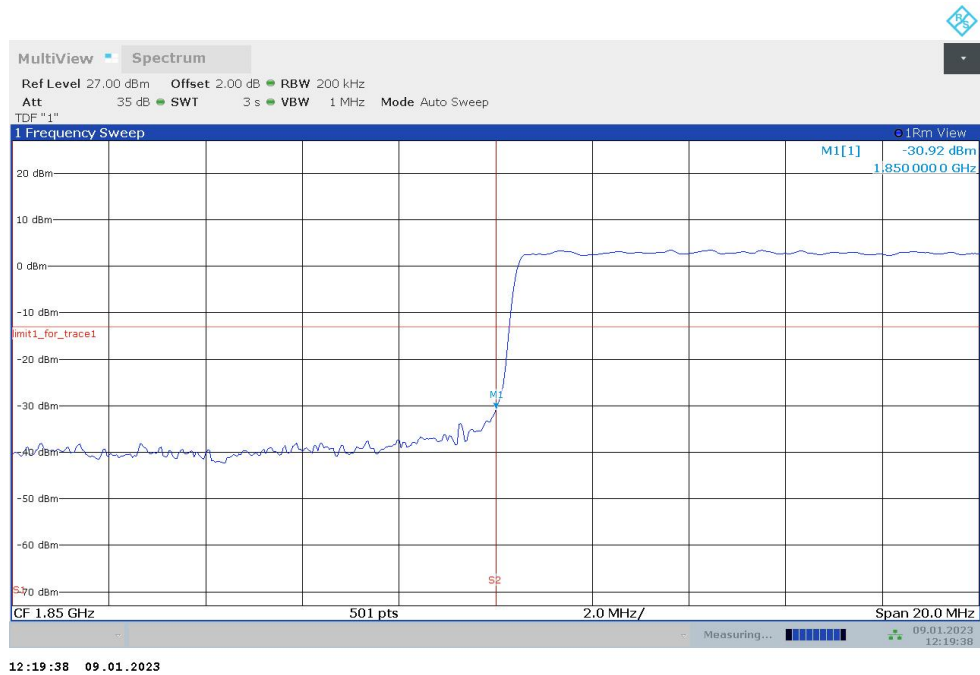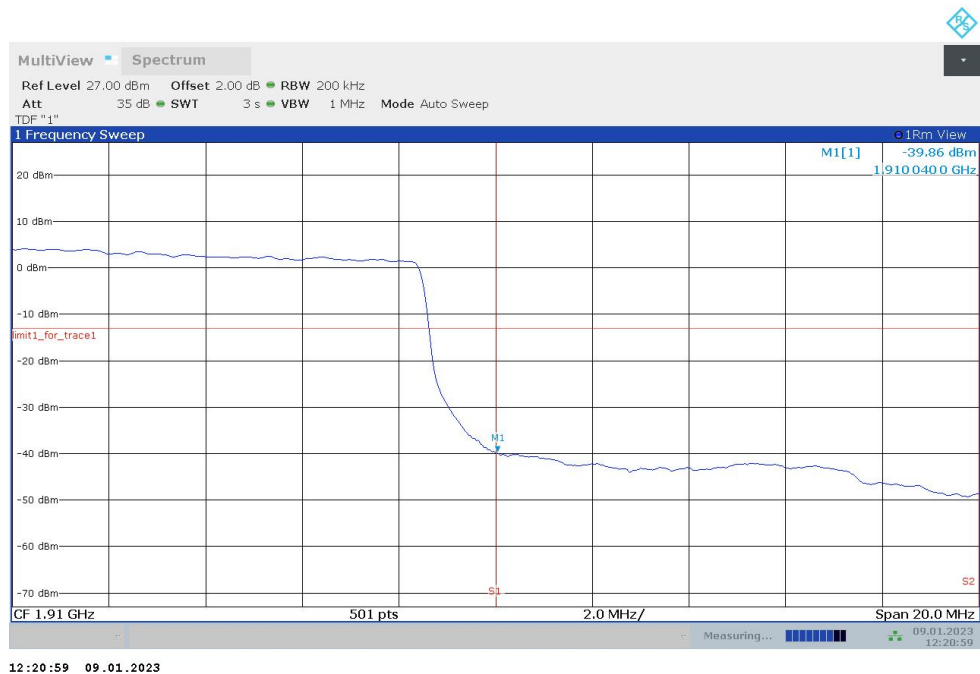
LTE Band 66+NR n5

OBW: 1RB-LOW_offset
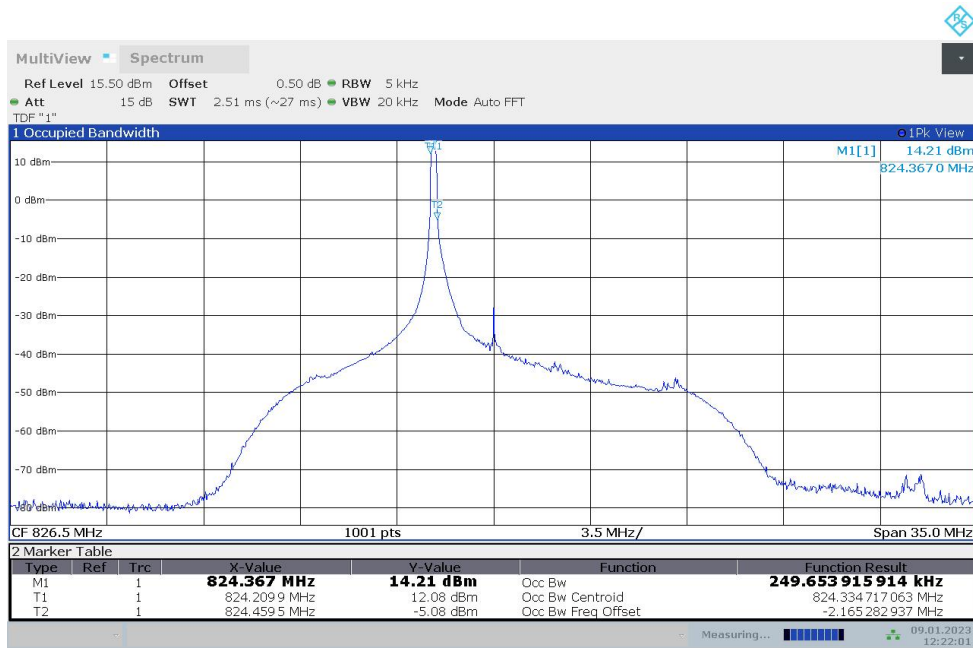
12:22:01 09.01.2023

LOW BAND EDGE BLOCK-1RB-LOW_offset

12:22:38 09.01.2023

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OBW: 1RB-HIGH_offset

12:23:35 09.01.2023

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

12:24:12 09.01.2023

LOW BAND EDGE BLOCK-20M-100%RB

12:25:37 09.01.2023

HIGH BAND EDGE BLOCK-20M-100%RB

12:26:59 09.01.2023
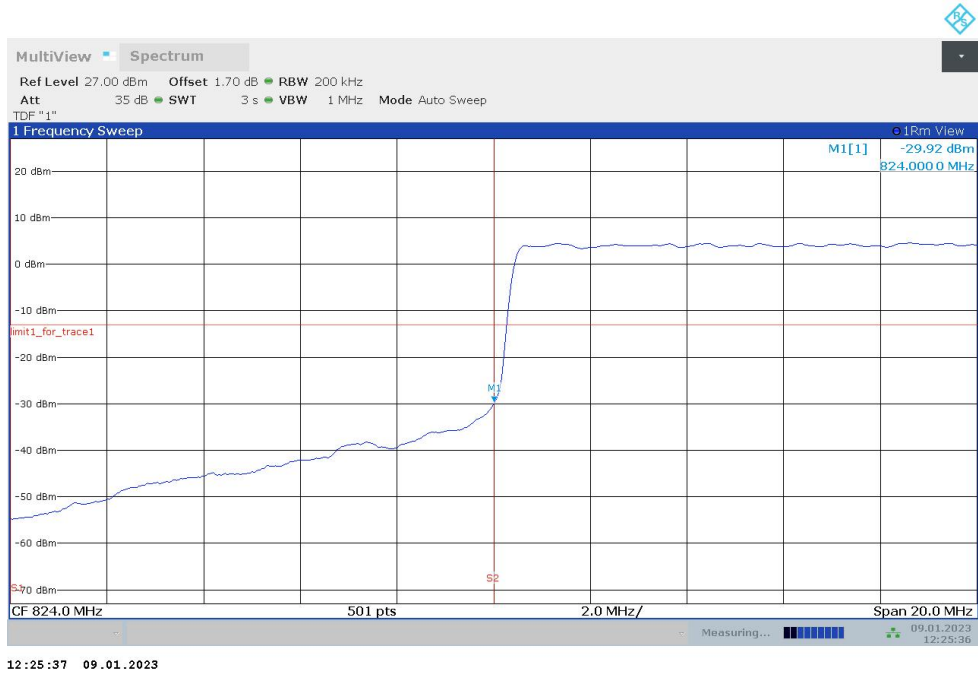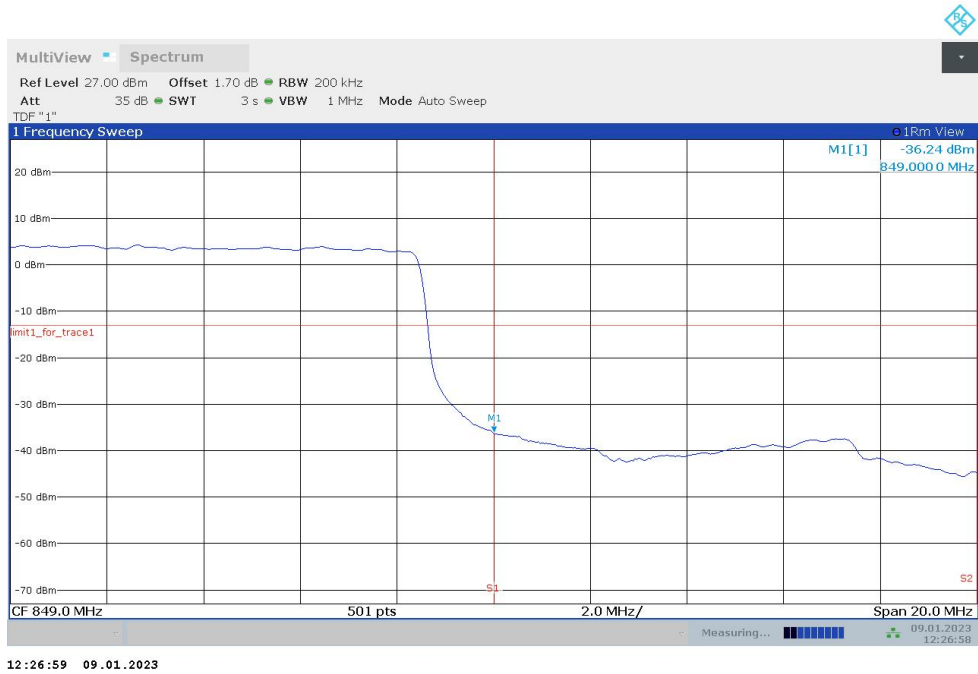
LTE Band 12+NR n30

OBW: 1RB-LOW_offset

12:36:54 09.01.2023

LOW BAND EDGE BLOCK-1RB-LOW_offset

12:37:36 09.01.2023

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