

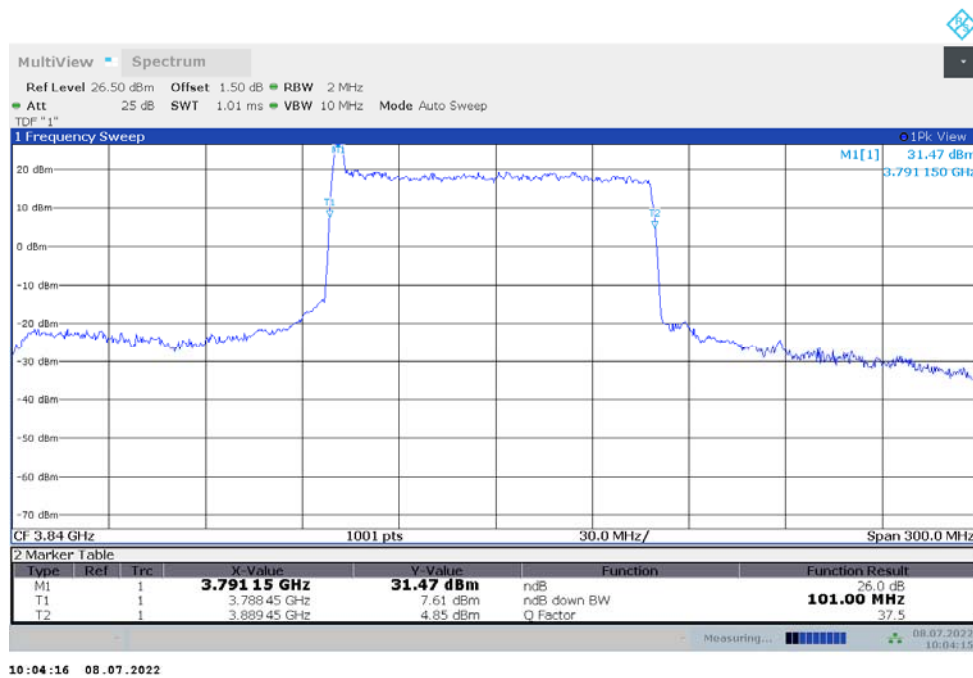
# LTE Band 14+NR n77H n77H,100MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	101.300	101.000

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



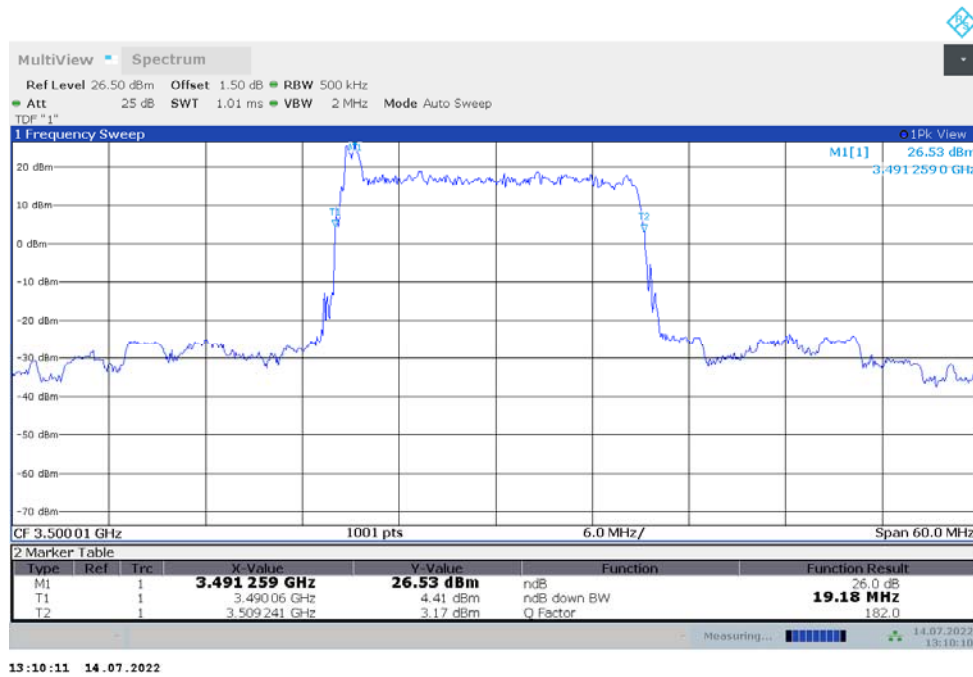
## n77H,100MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



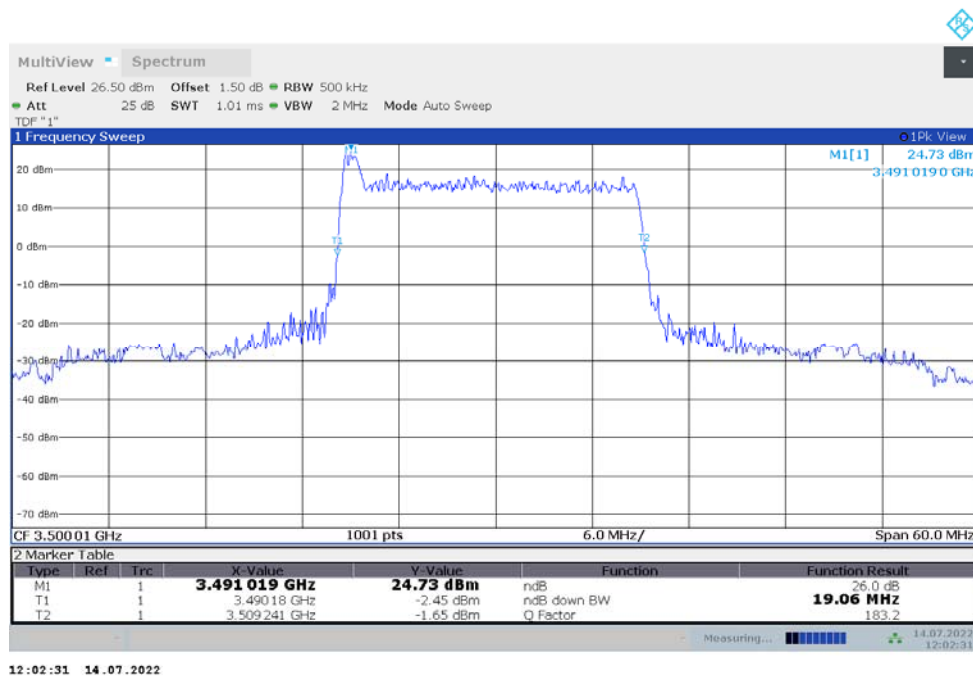
# LTE Band 13+NR n78L n78L,20MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	19.181	19.061

## n78L,20MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



## n78L,20MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



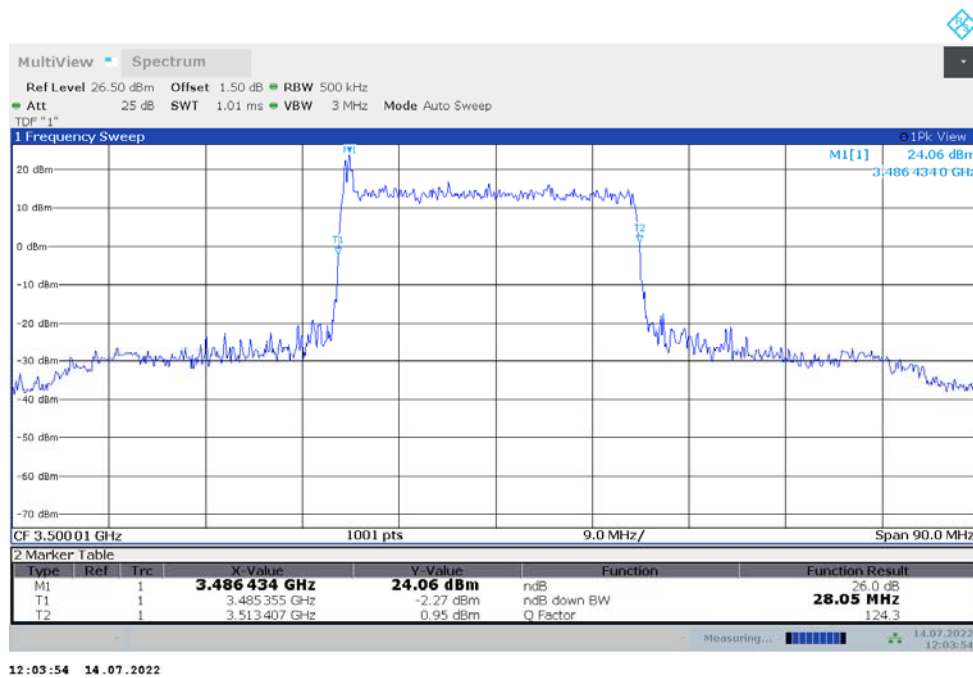
# LTE Band 13+NR n78L n78L,30MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	28.232	28.052

## n78L,30MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



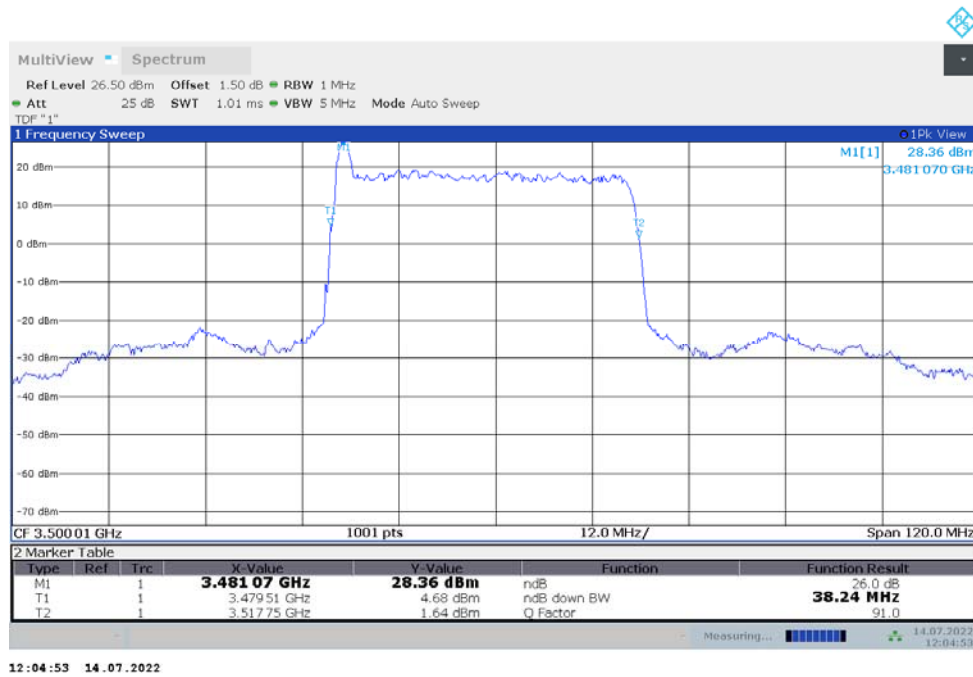
## n78L,30MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



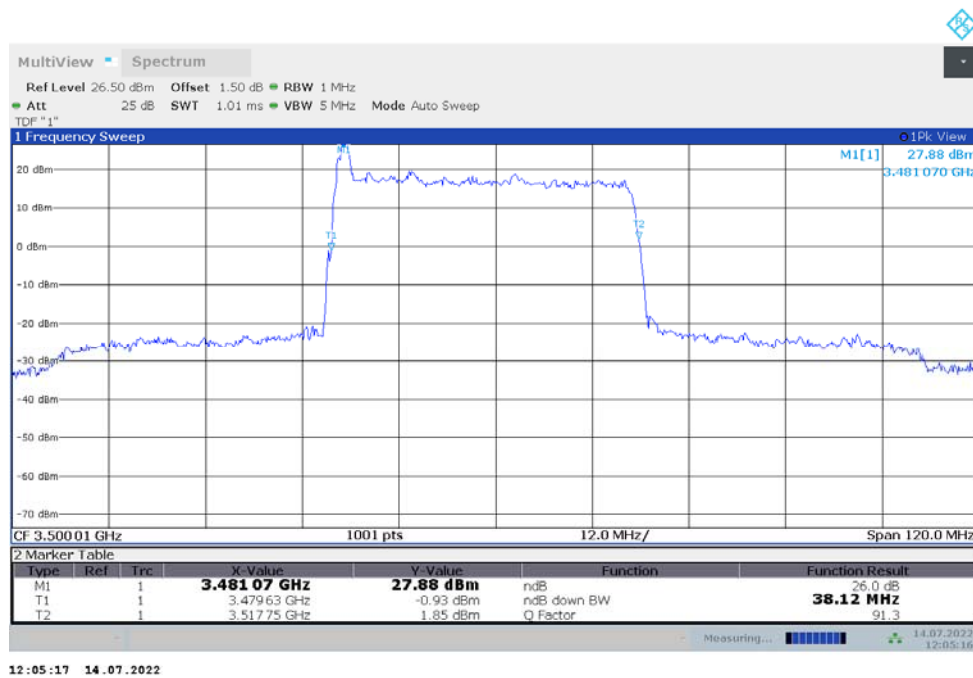
# LTE Band 13+NR n78L n78L,40MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	38.240	38.120

## n78L,40MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



## n78L,40MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



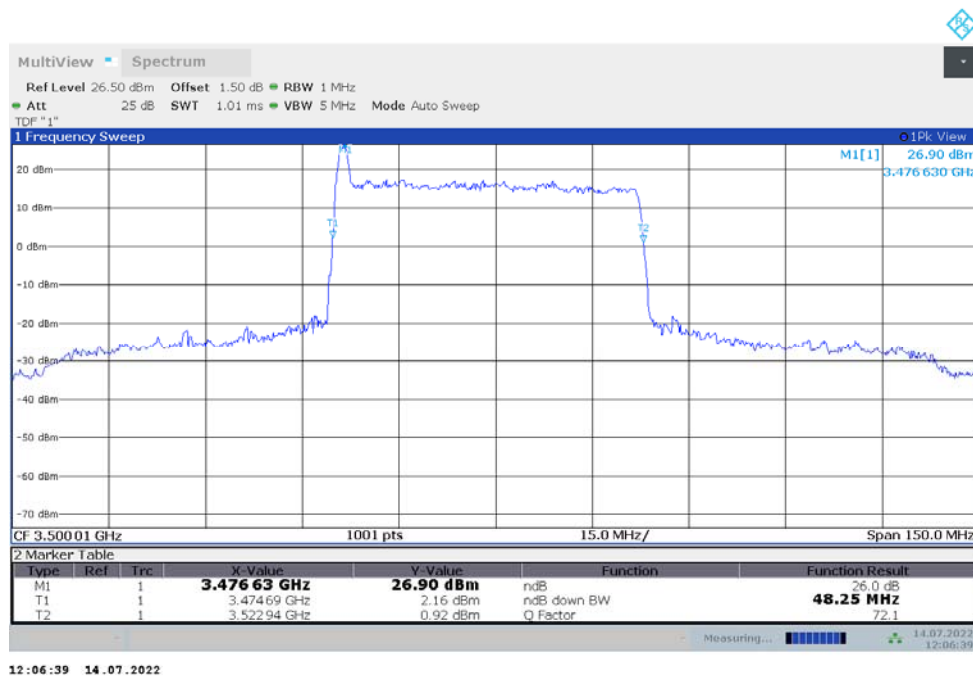
# LTE Band 13+NR n78L n78L,50MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	48.250	48.250

## n78L,50MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



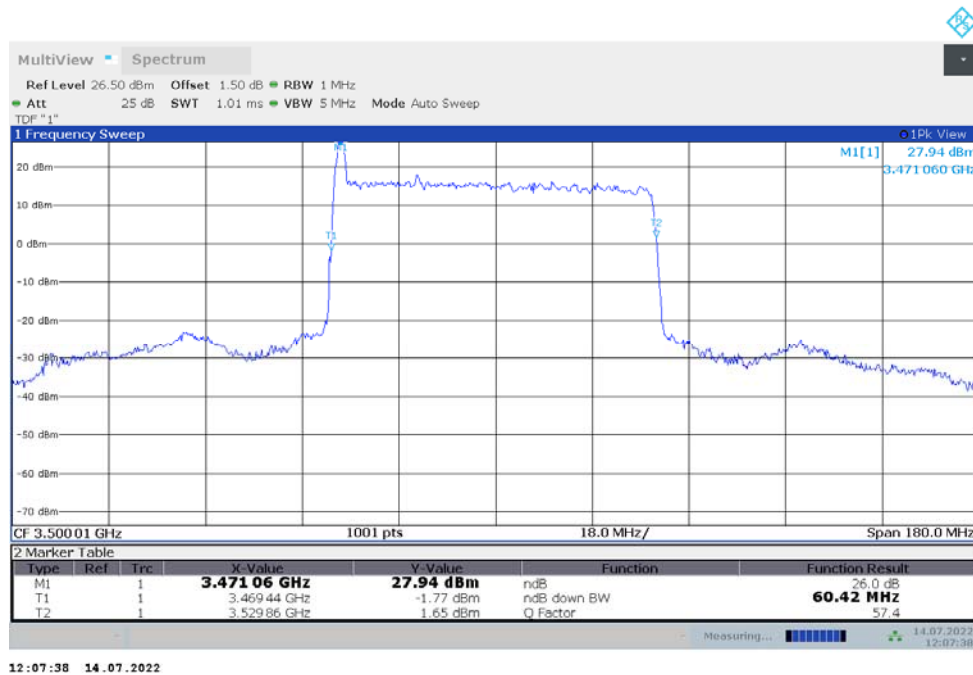
## n78L,50MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



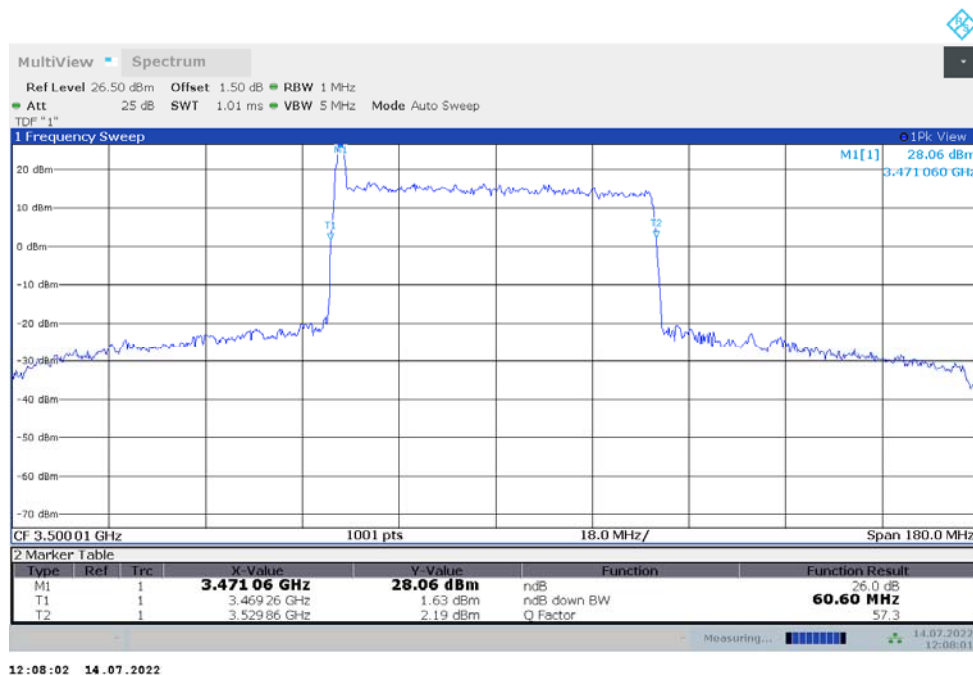
# LTE Band 13+NR n78L n78L,60MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	60.420	60.600

## n78L,60MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



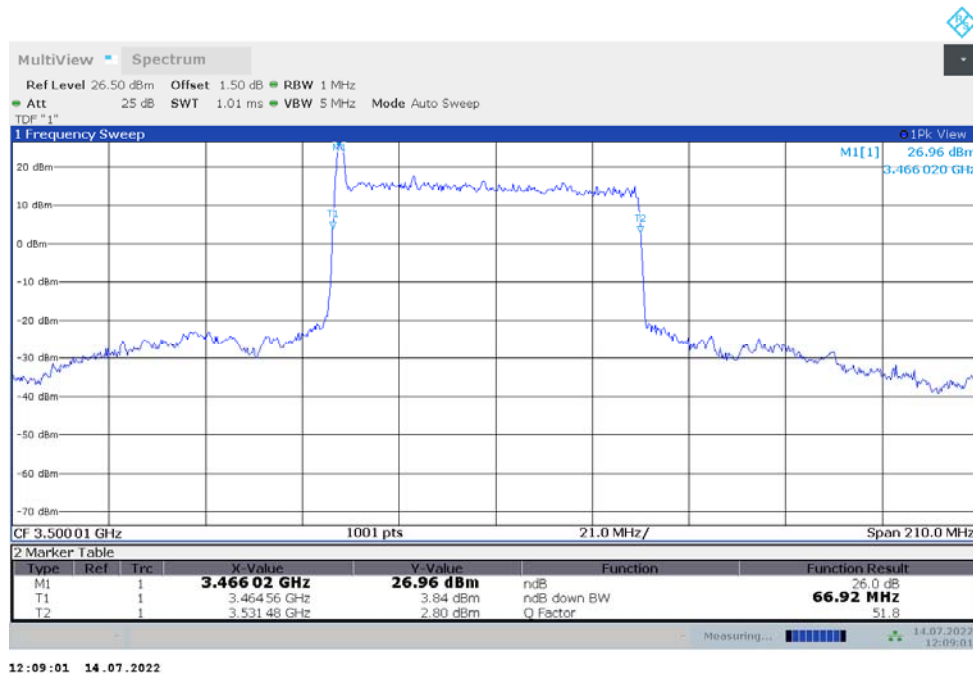
## n78L,60MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



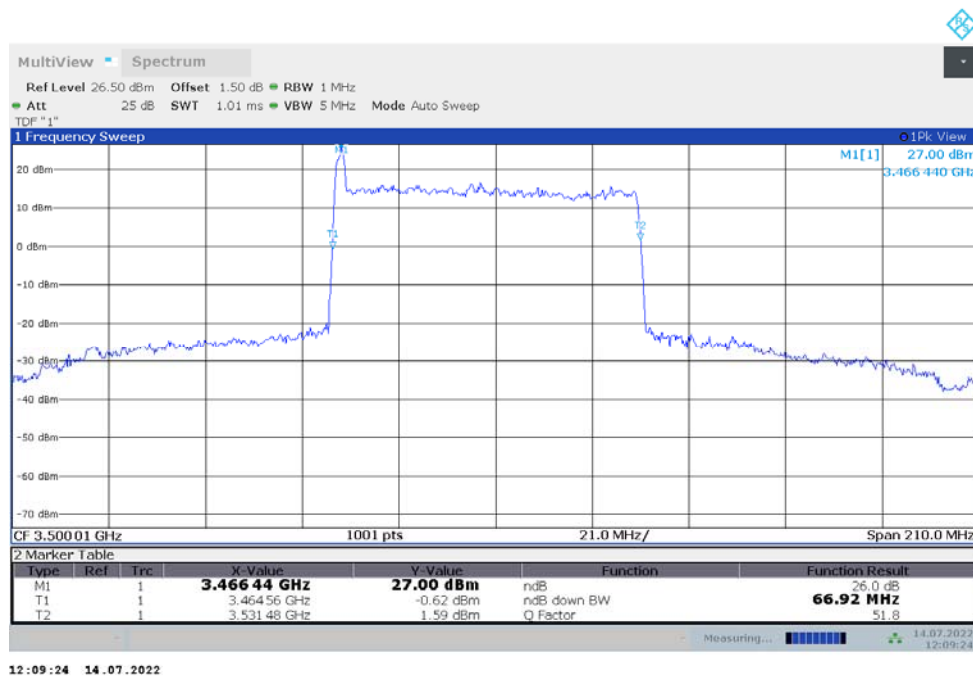
# LTE Band 13+NR n78L n78L,70MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	66.920	66.920

## n78L,70MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



## n78L,70MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

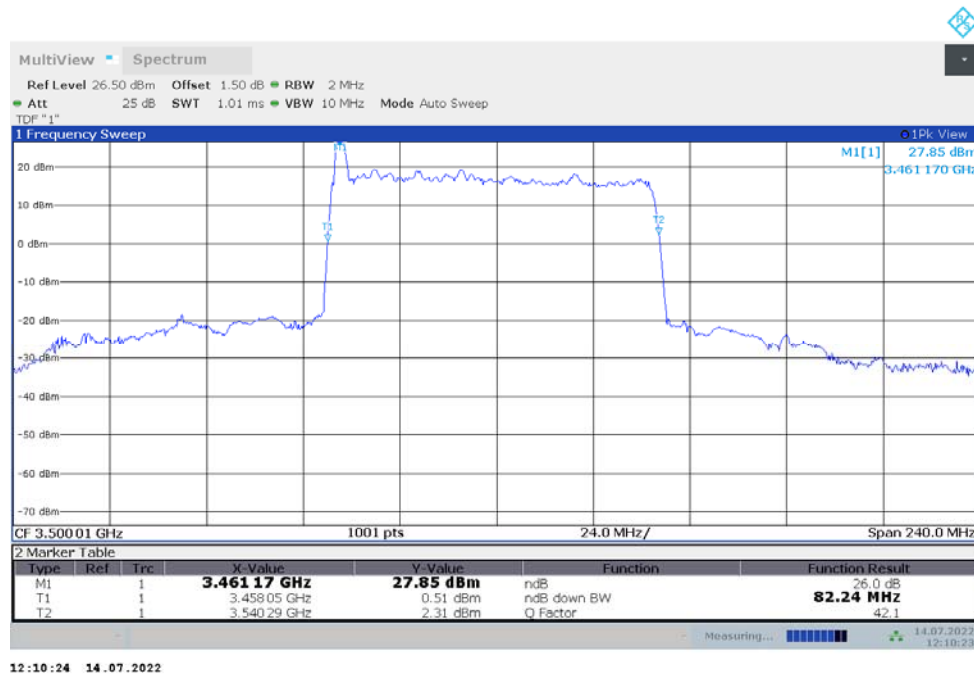




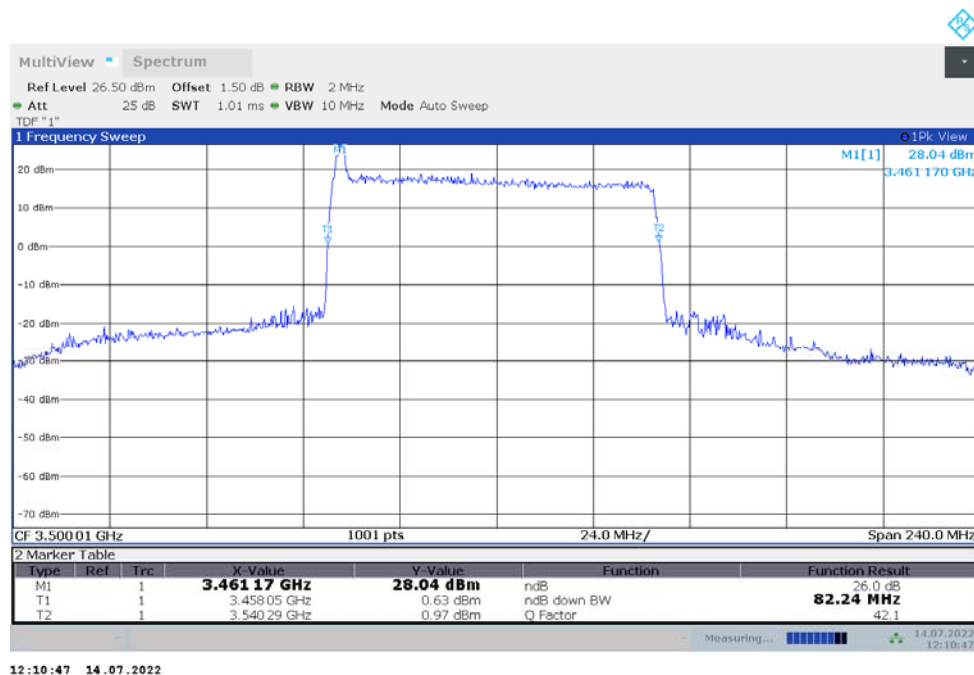
# LTE Band 13+NR n78L n78L,80MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	82.240	82.240

## n78L,80MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



## n78L,80MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

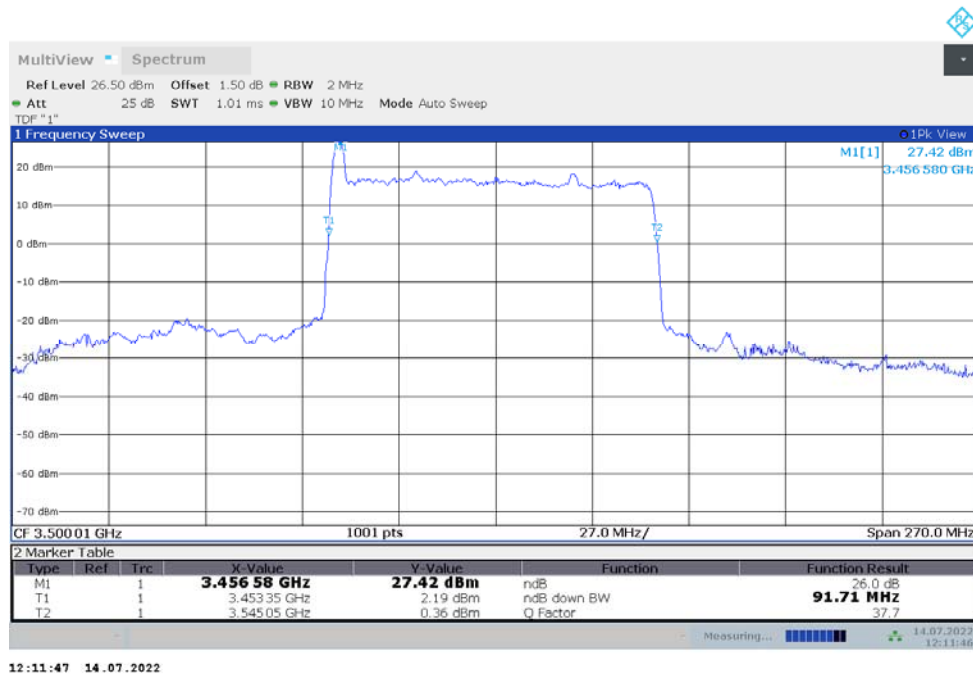




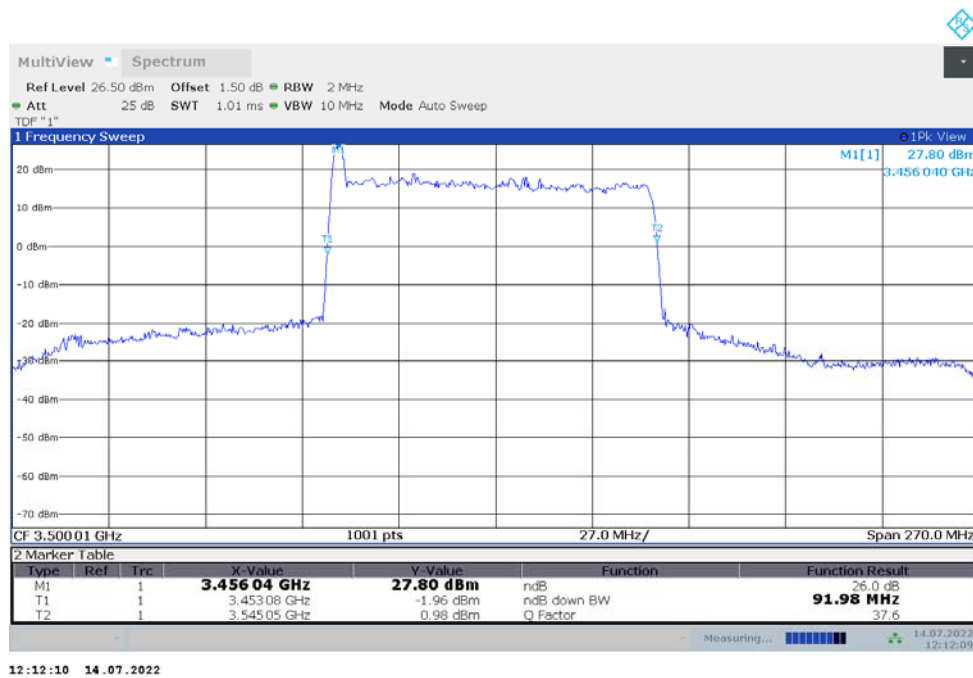
# LTE Band 13+NR n78L n78L,90MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	91.710	91.980

## n78L,90MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



## n78L,90MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



## **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 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 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 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 2337 MHz; 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 2300 MHz,  $61 + 10 \log(P)$  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 90.543 states that for operations in the 758–768 MHz and the 788–798 MHz bands, the power of any emission outside the 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, in accordance with the following: (1) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than  $76 + 10 \log(P)$  dB in a 6.25 kHz band segment, for base and fixed stations. (2) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than  $65 + 10 \log(P)$  dB in a 6.25 kHz band segment, for mobile and portable stations. (3) On any frequency between

775–788 MHz, above 805 MHz, and below 758 MHz, by at least  $43 + 10 \log (P)$  dB. (4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment. (5) Compliance with the provisions of paragraph (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 kHz may be employed.

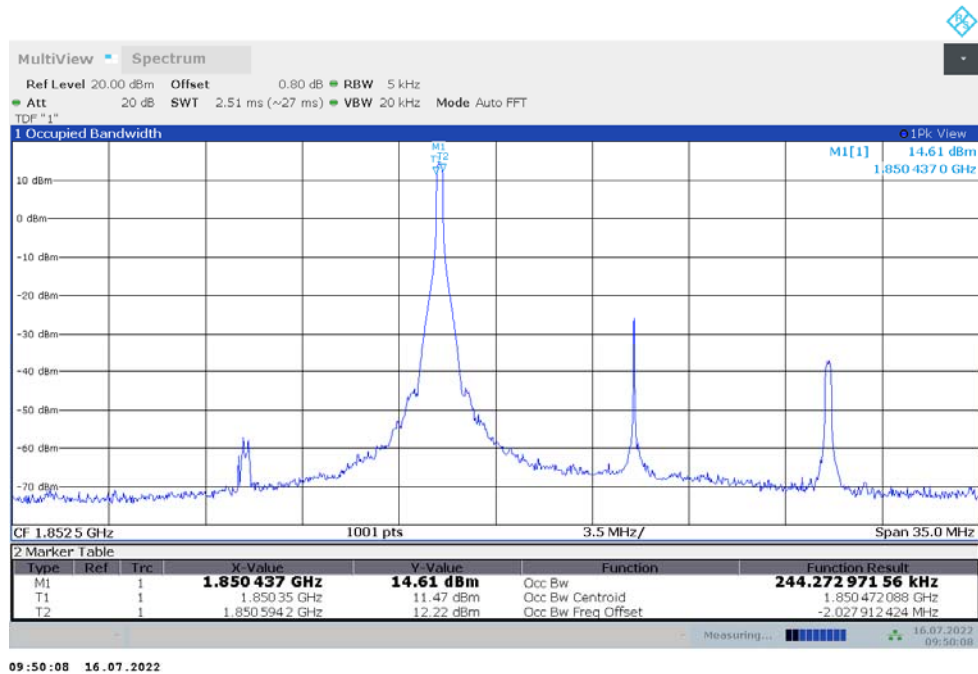
Part 27.53(n) states for mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed  $-13$  dBm/MHz. Compliance with this paragraph (n)(2) is based on the use of measurement instrumentation employing a resolution bandwidth 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.

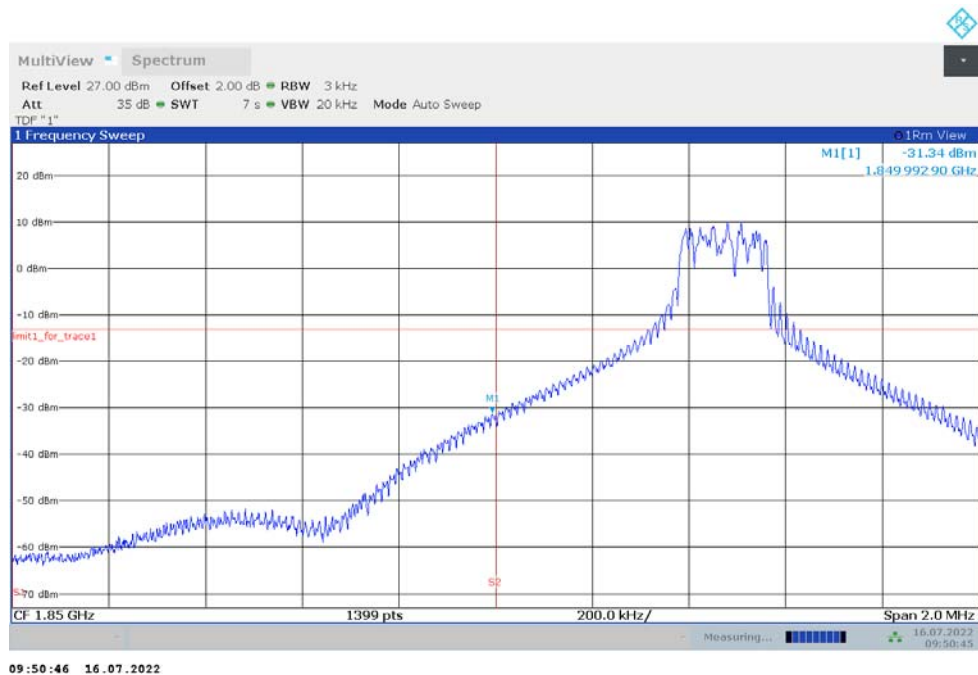
## A.6.2 Measurement result

LTE Band 12+NR n2

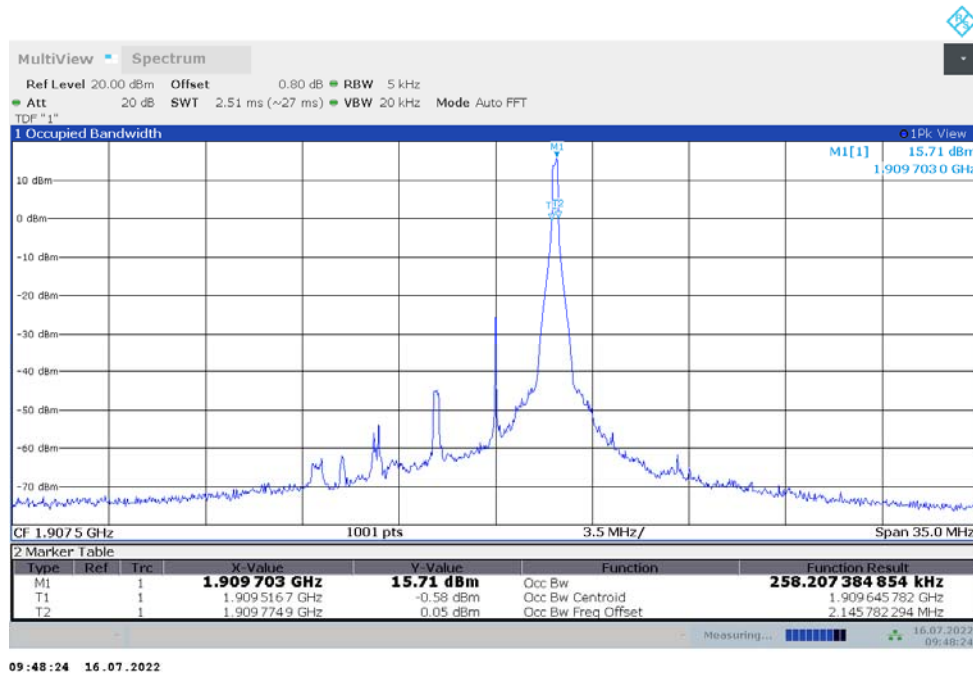
OBW: 1RB-LOW\_offset



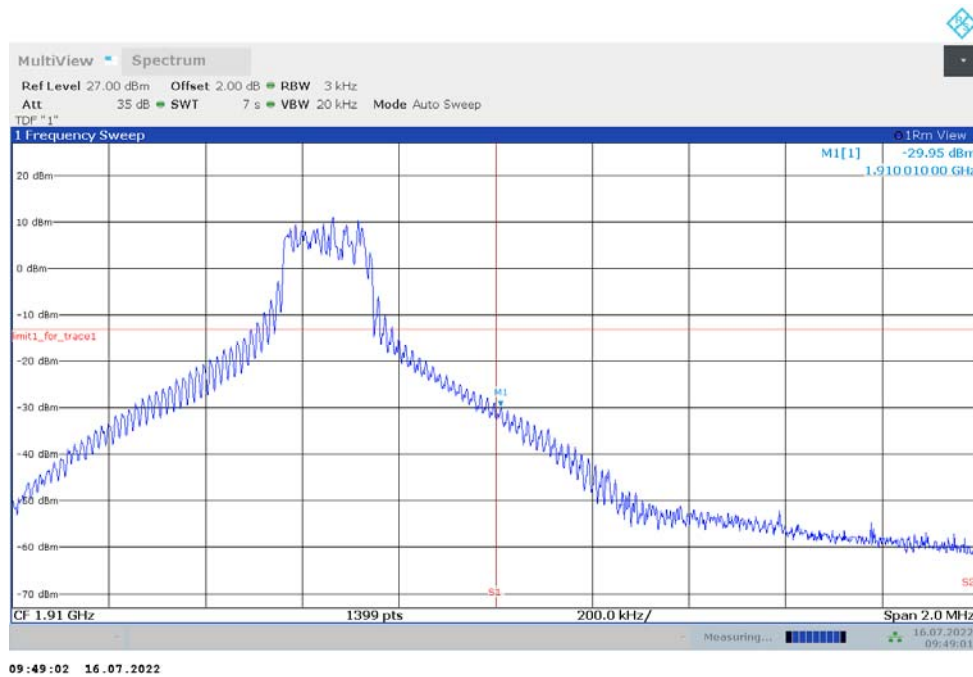
## LOW BAND EDGE BLOCK-1RB-LOW\_offset



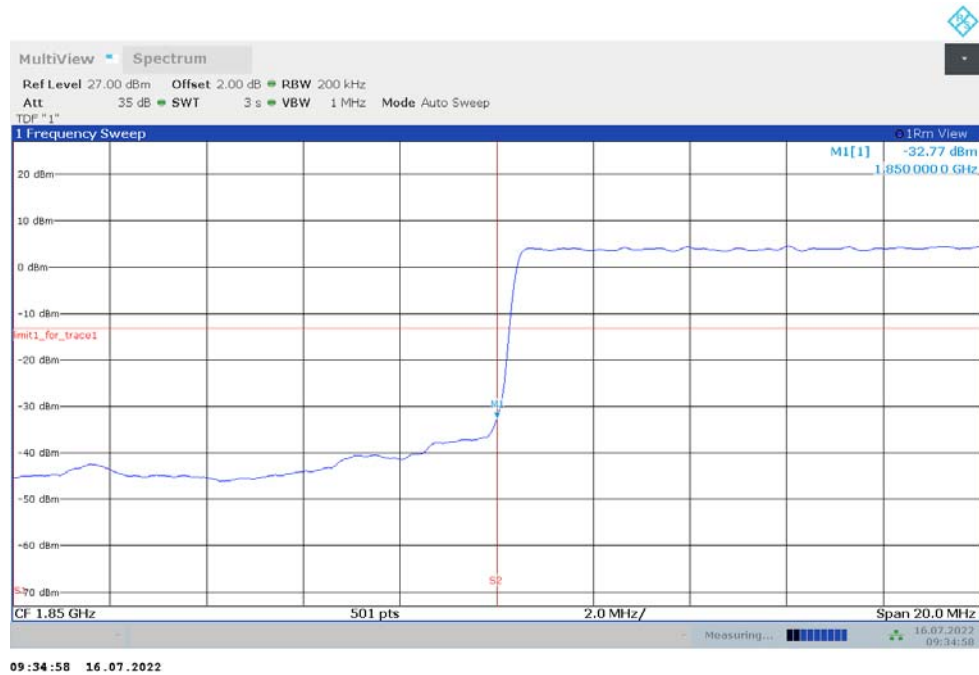
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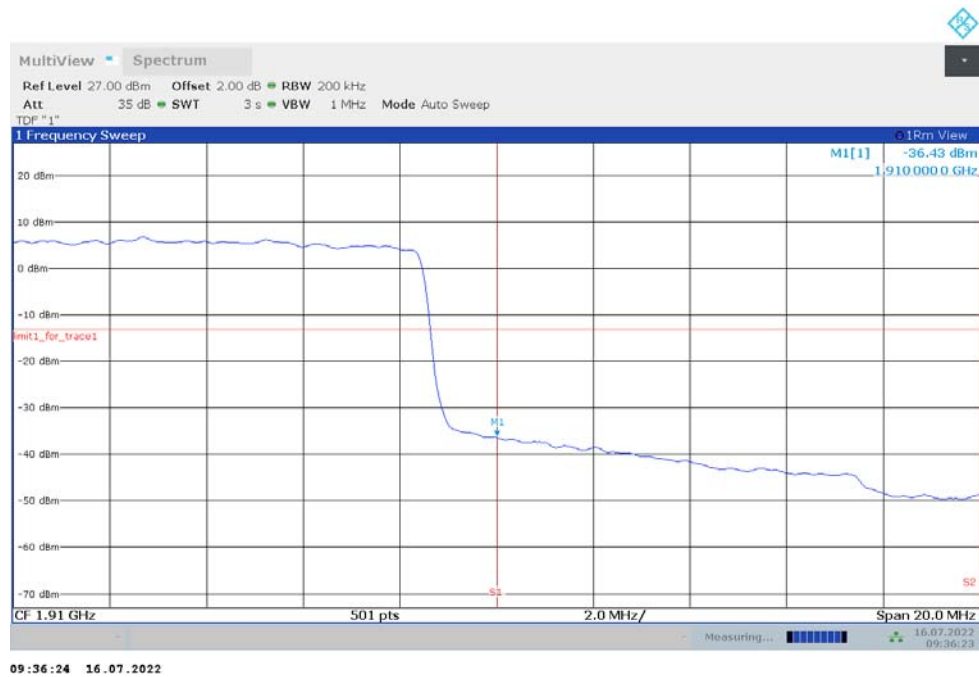
## HIGH BAND EDGE BLOCK-1RB-HIGH\_offset



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

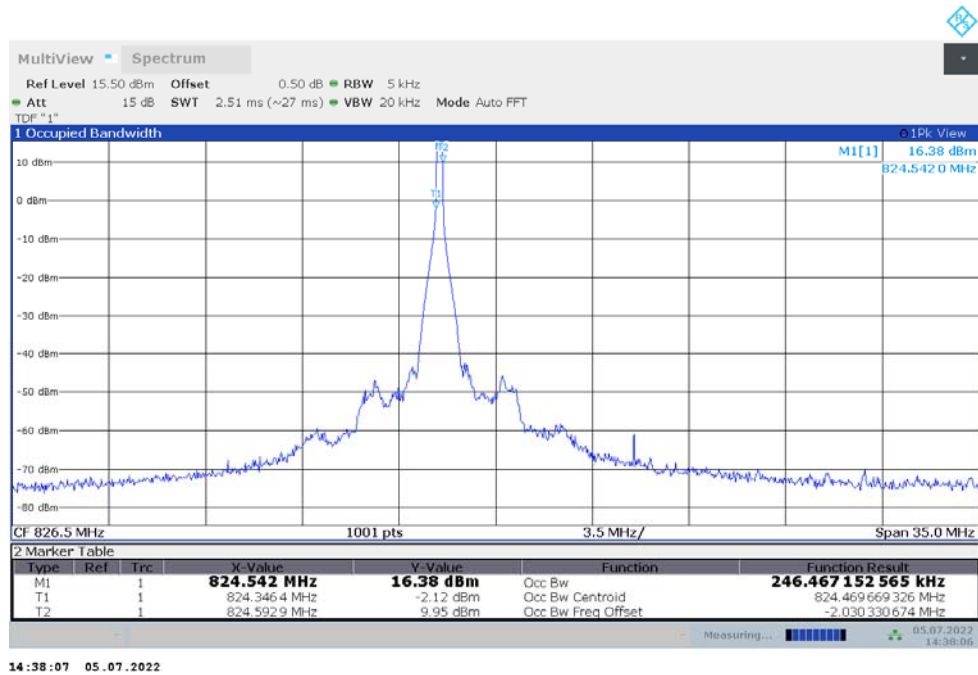


## HIGH BAND EDGE BLOCK-20M-100%RB

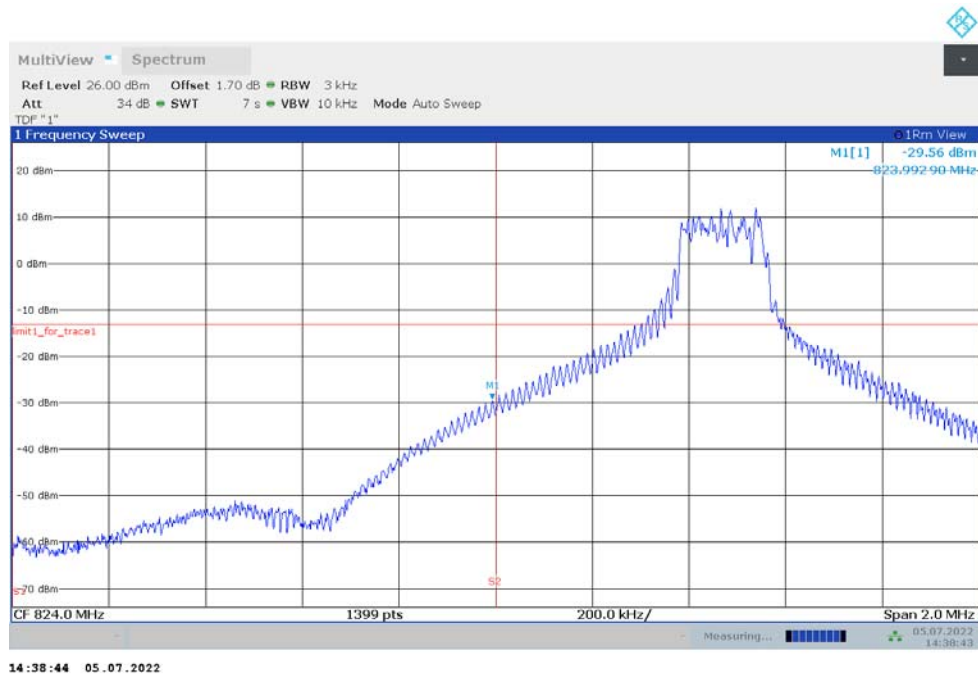


## LTE Band 66+NR n5

### OBW: 1RB-LOW\_offset



## LOW BAND EDGE BLOCK-1RB-LOW\_offset

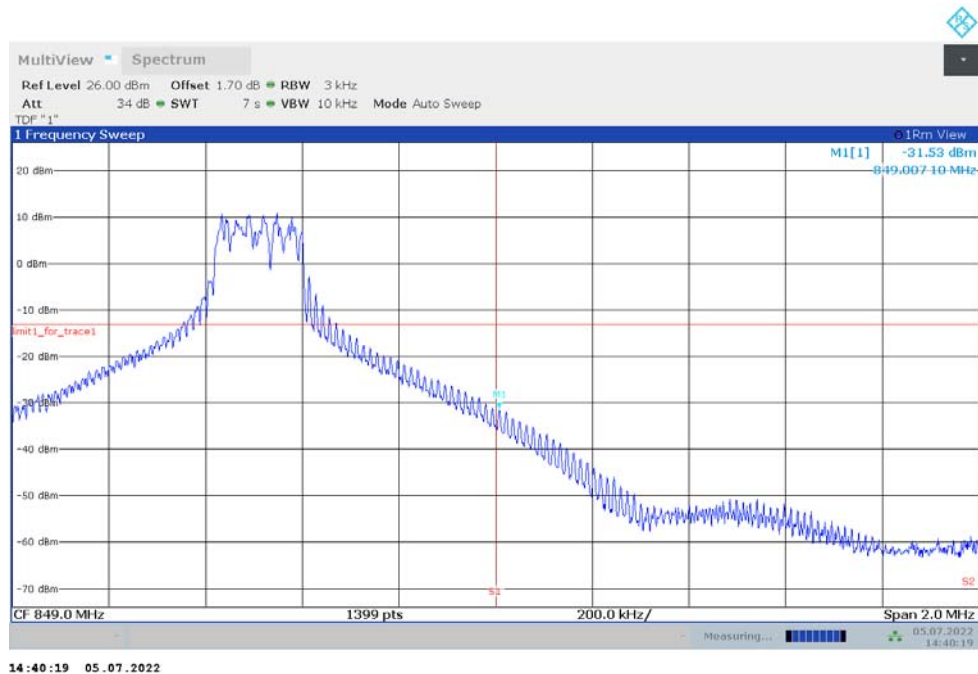




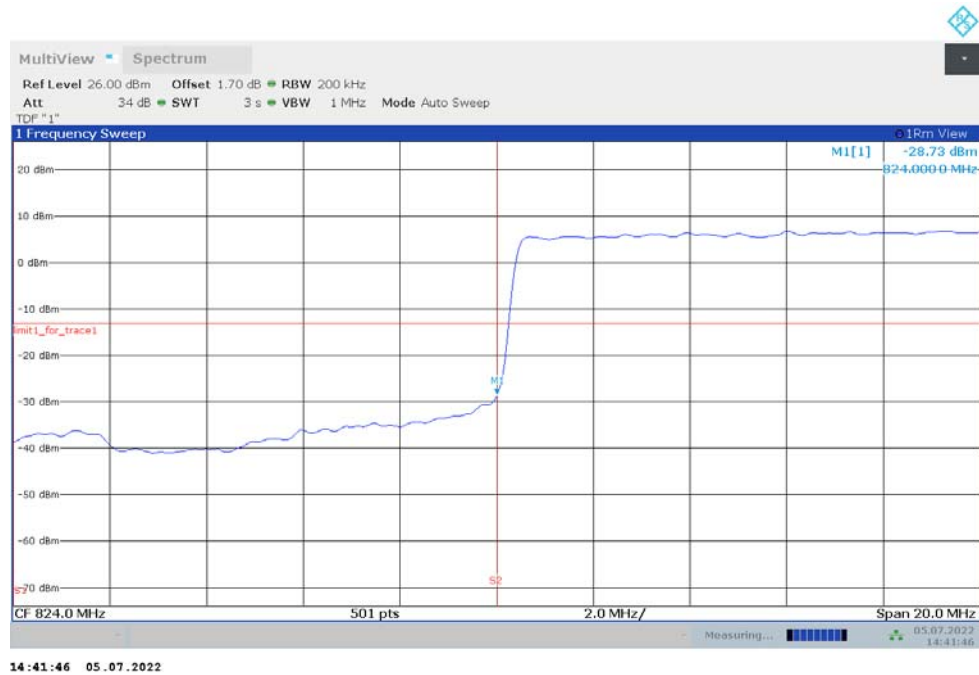
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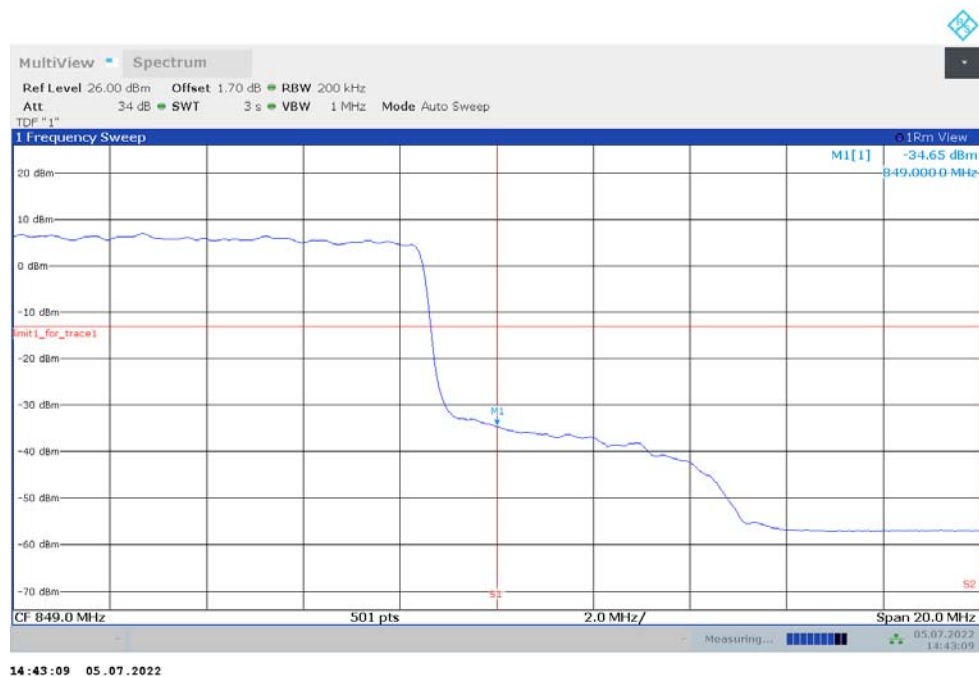
## HIGH BAND EDGE BLOCK-1RB-HIGH\_offset



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

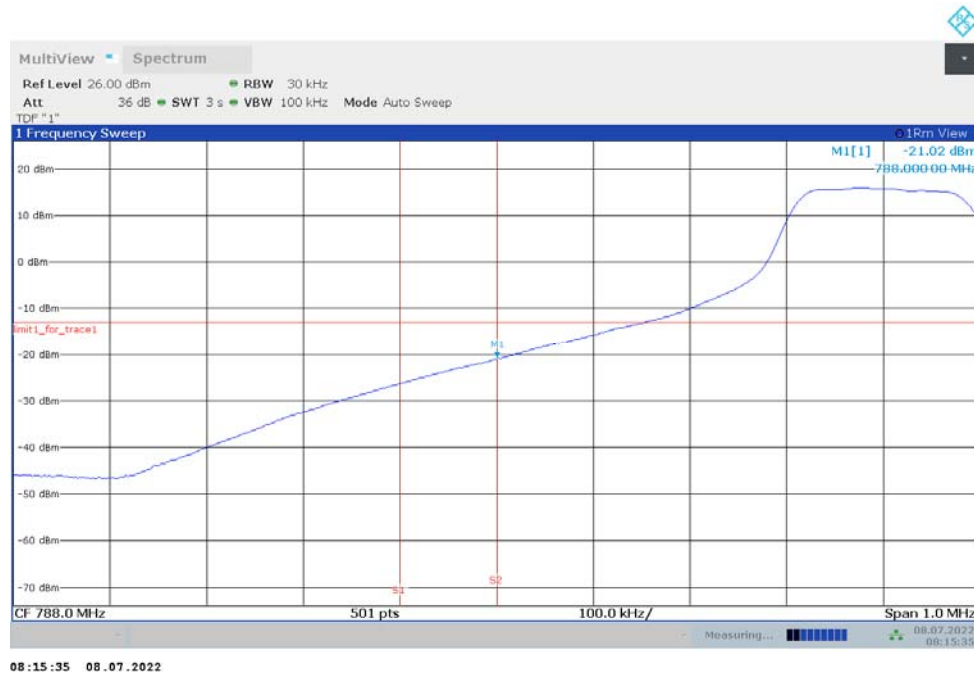


## HIGH BAND EDGE BLOCK-20M-100%RB

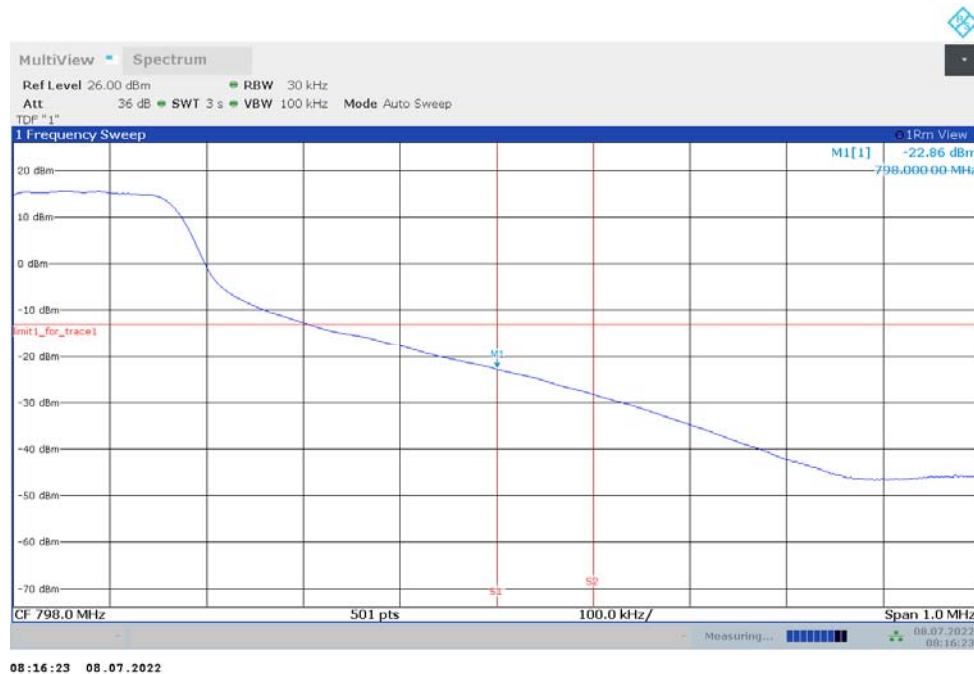


## LTE Band 2+NR n14

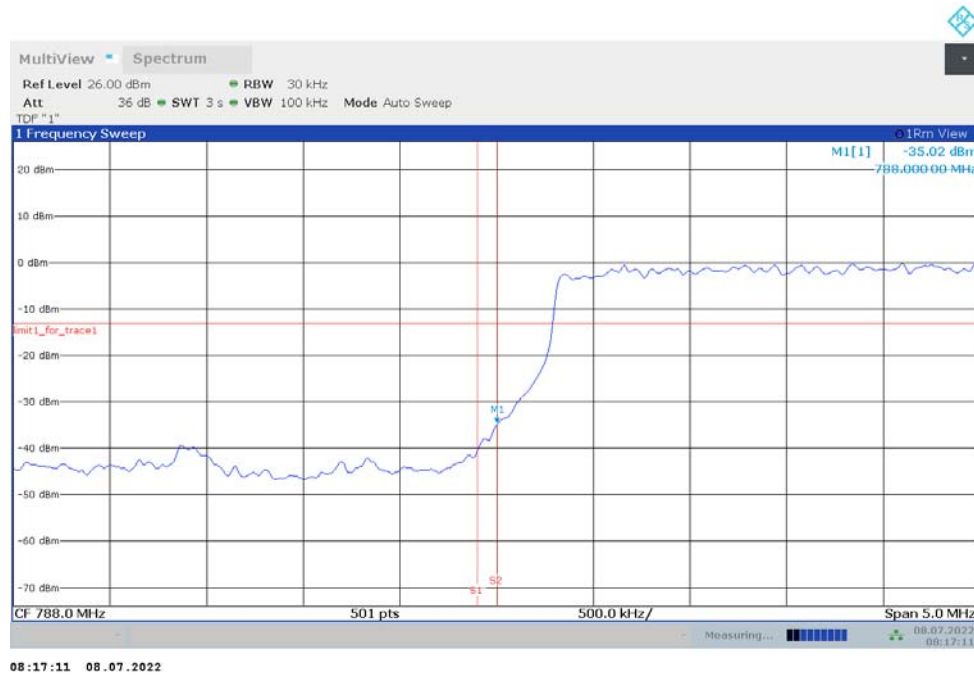
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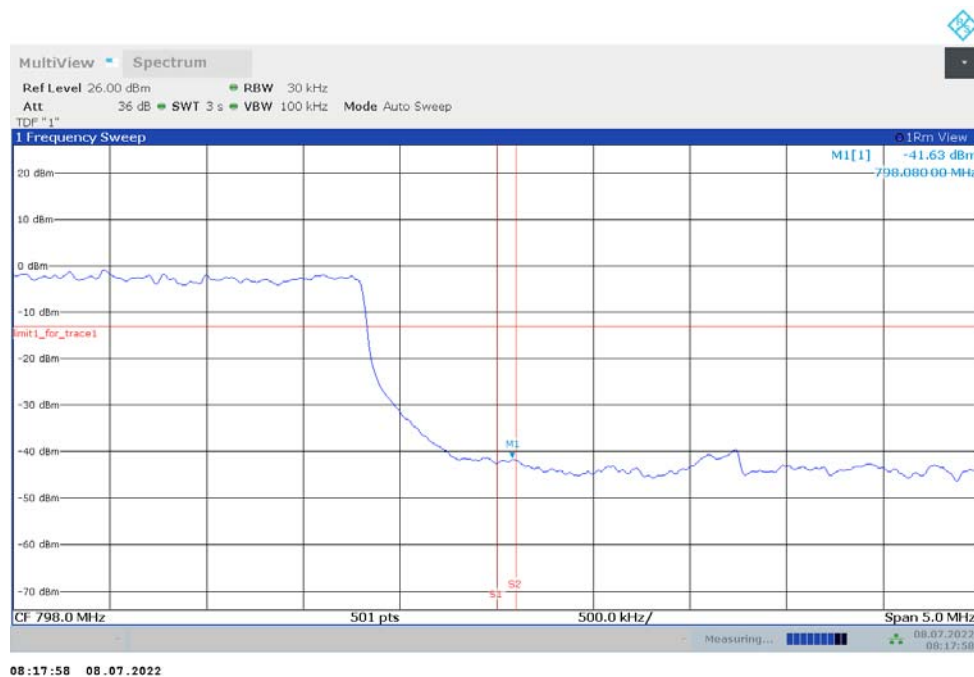
### HIGH BAND EDGE BLOCK-1RB-HIGH\_offset



## LOW BAND EDGE BLOCK-10M-100%RB

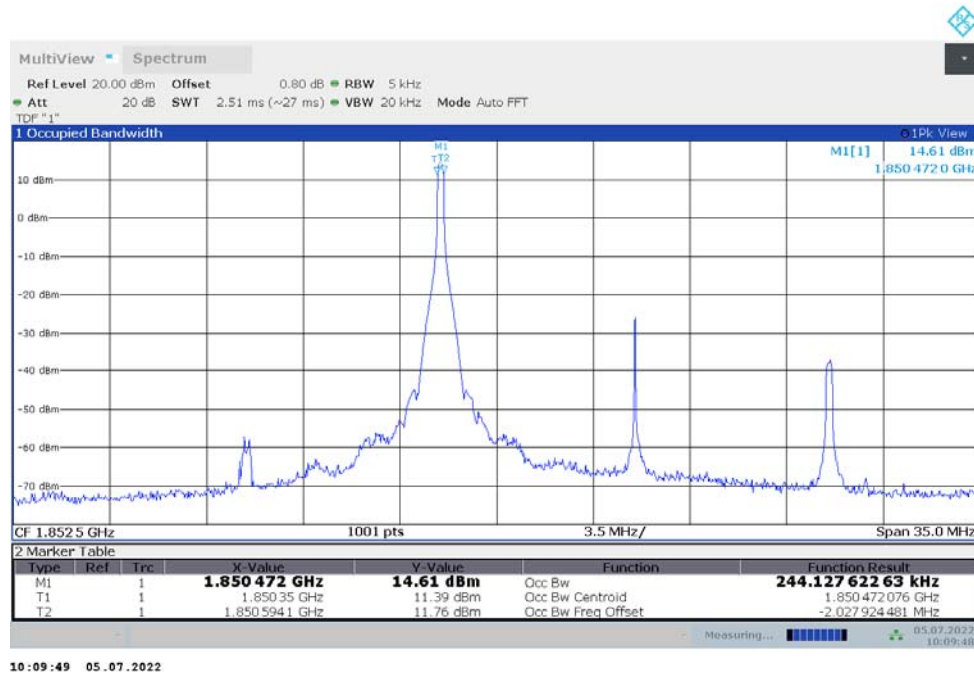


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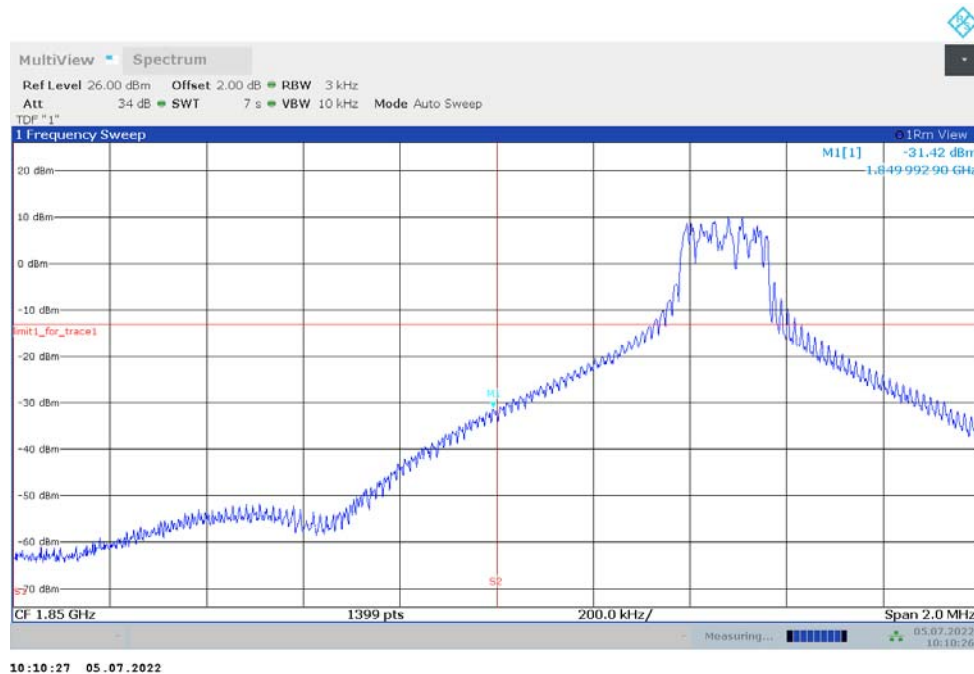


## LTE Band 12+NR n25

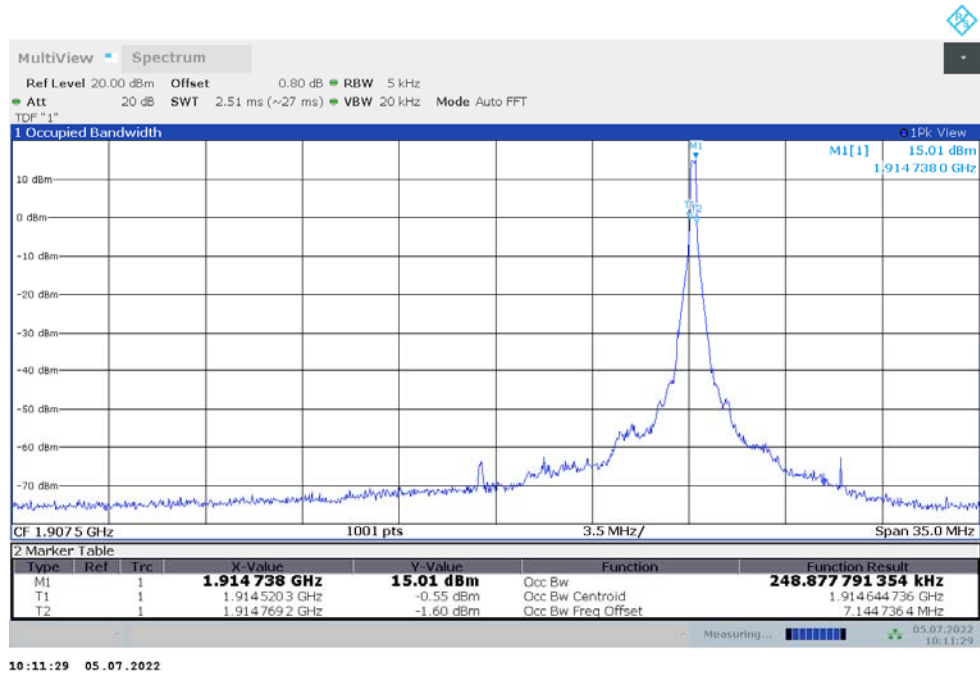
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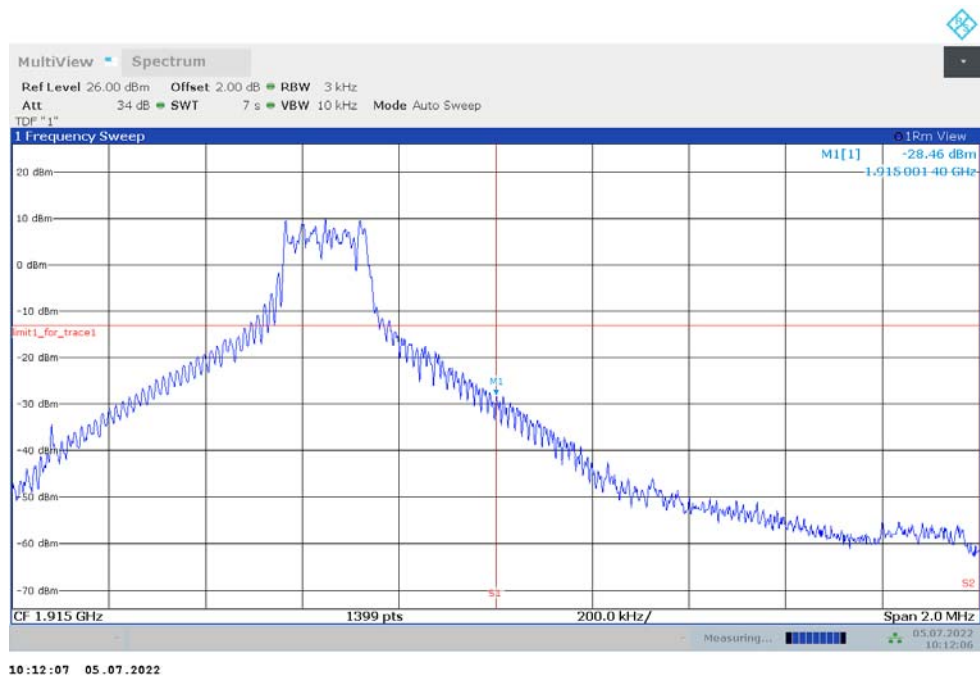
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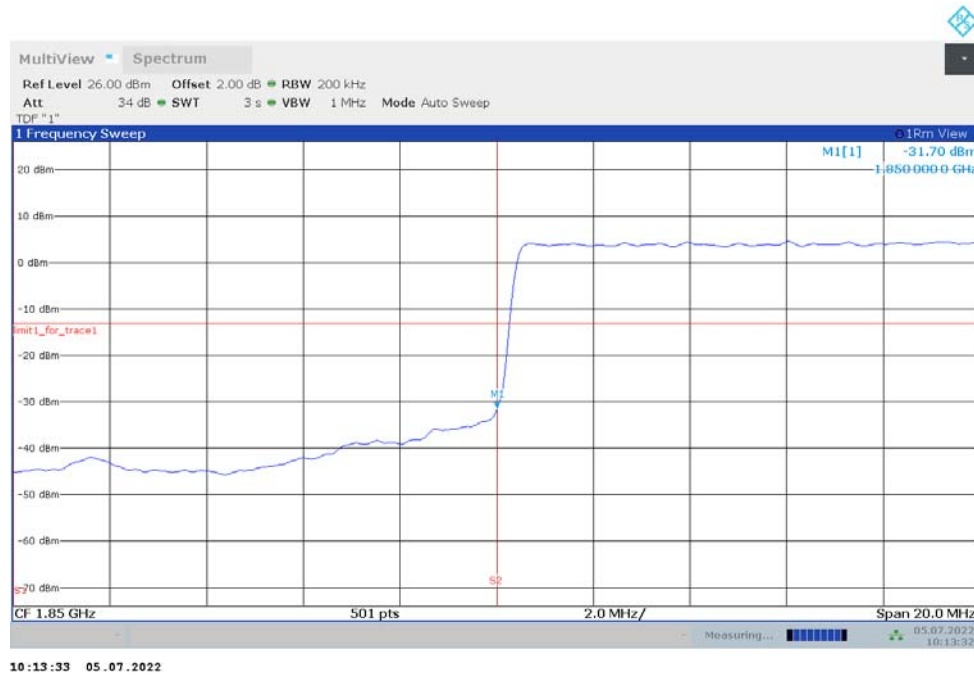
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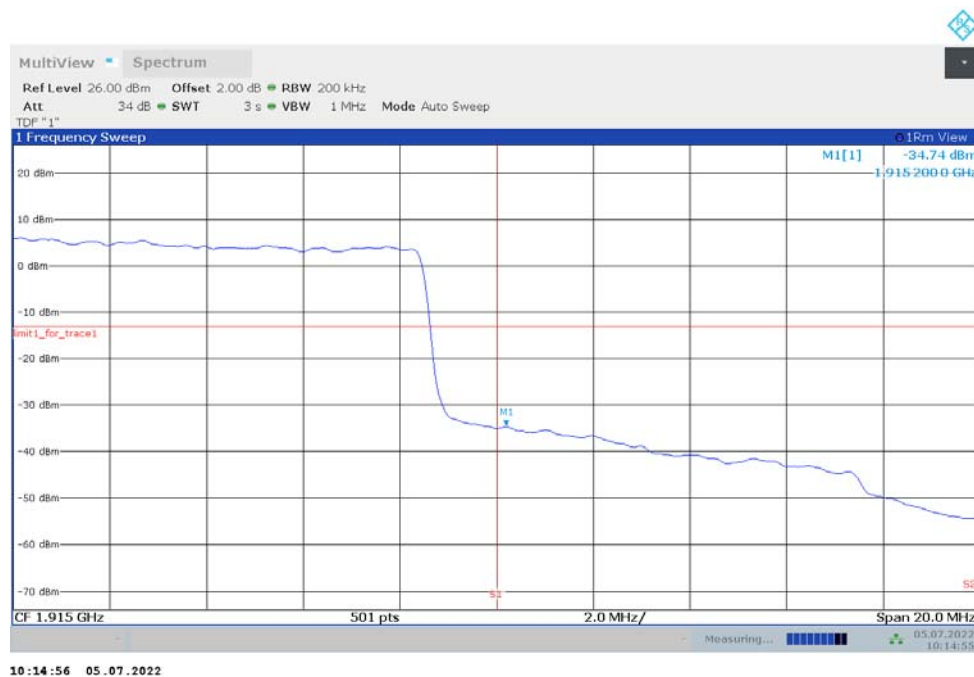
## HIGH BAND EDGE BLOCK-1RB-HIGH\_offset



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



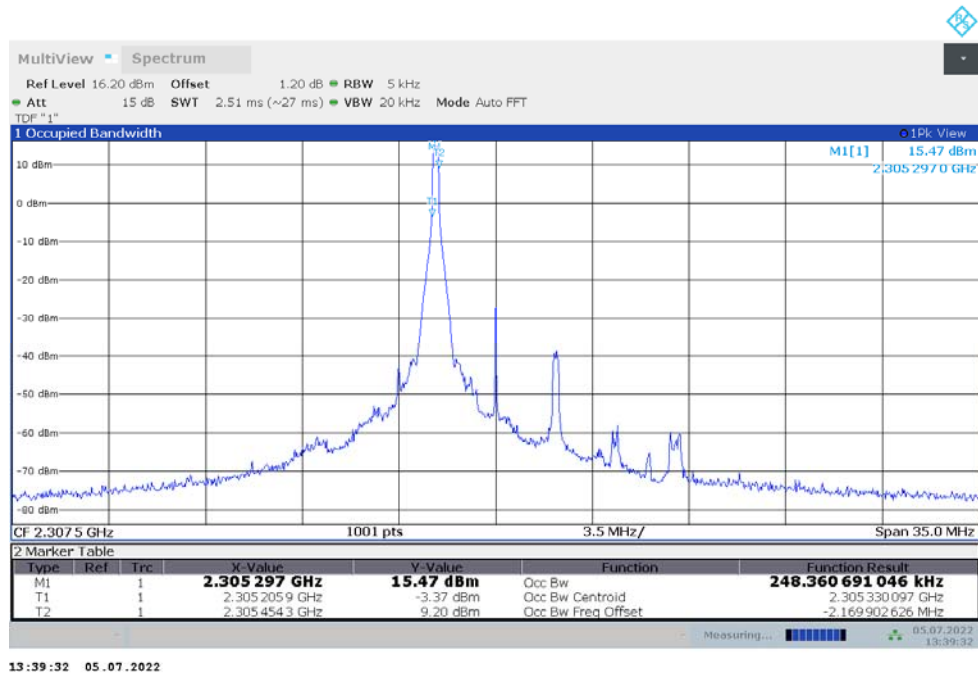
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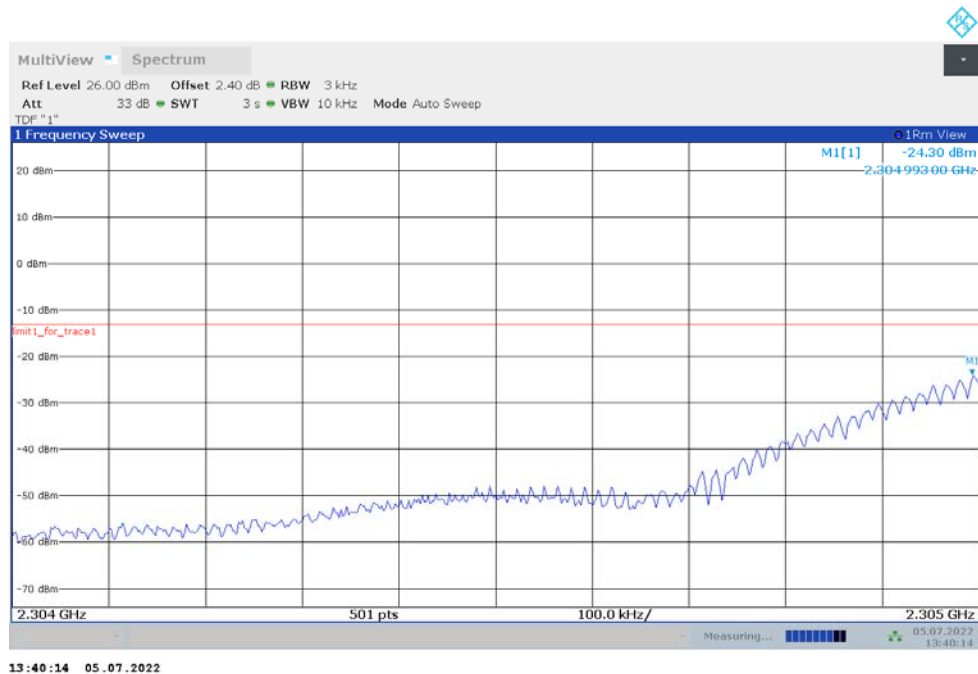


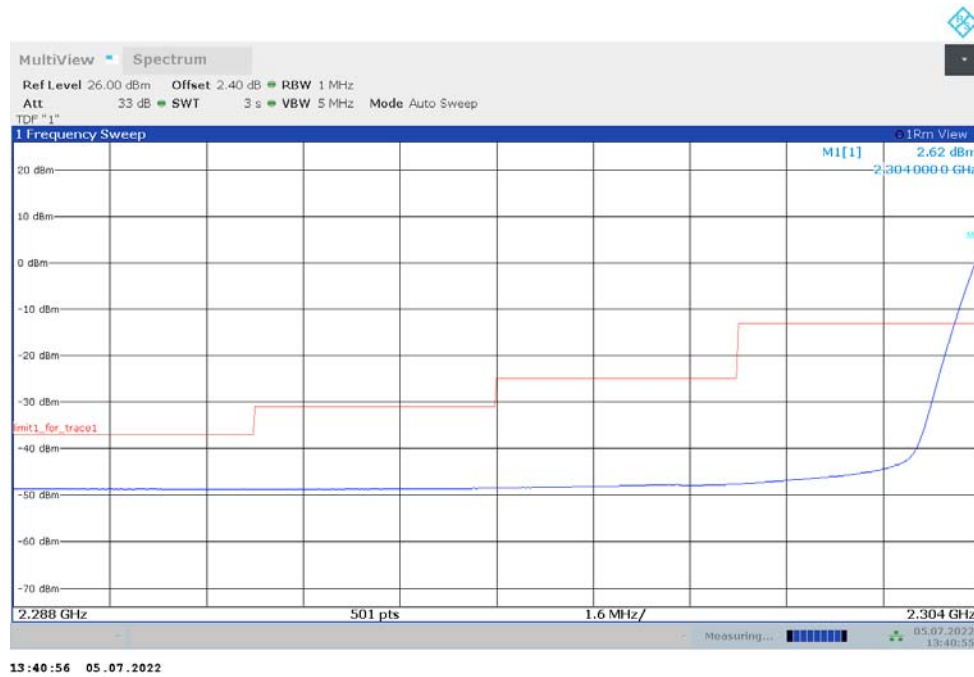
## LTE Band 14+NR n30

### OBW: 1RB-LOW\_offset



## LOW BAND EDGE BLOCK-1RB-LOW\_offset

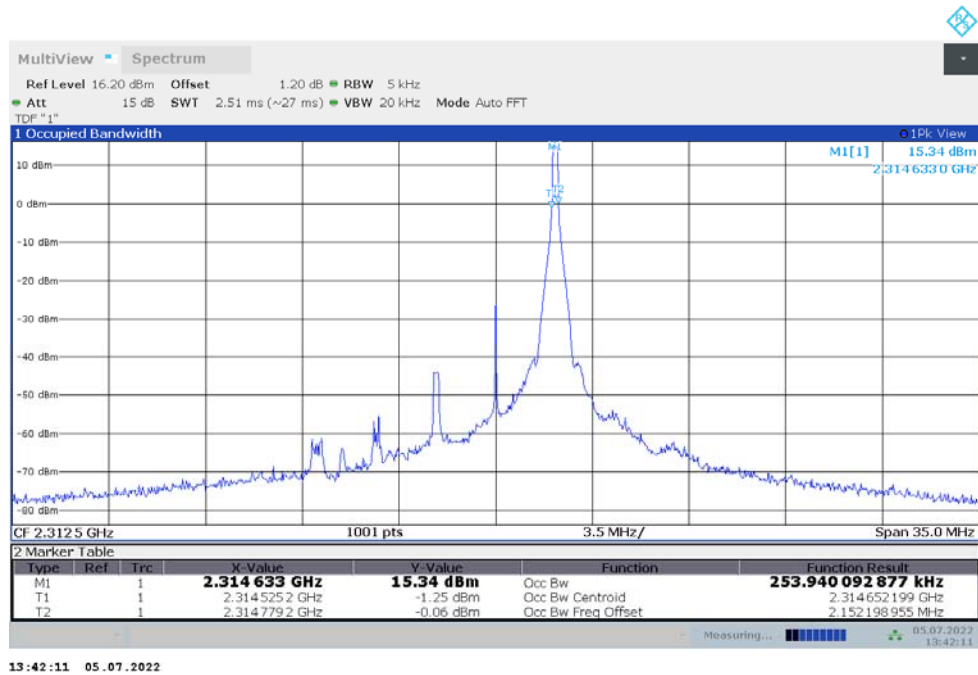




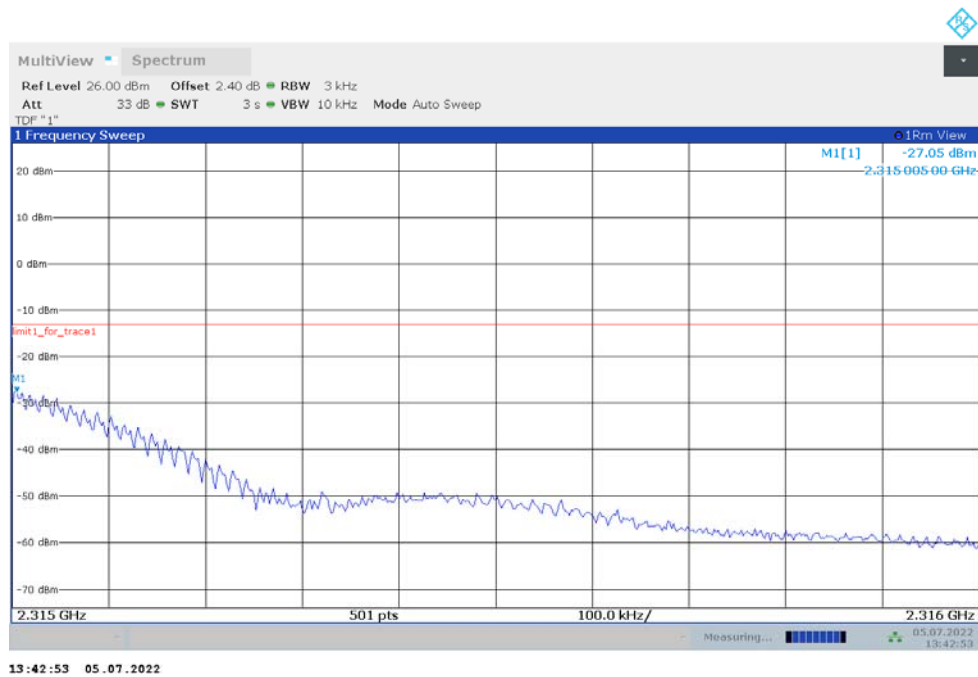
## Channel Power

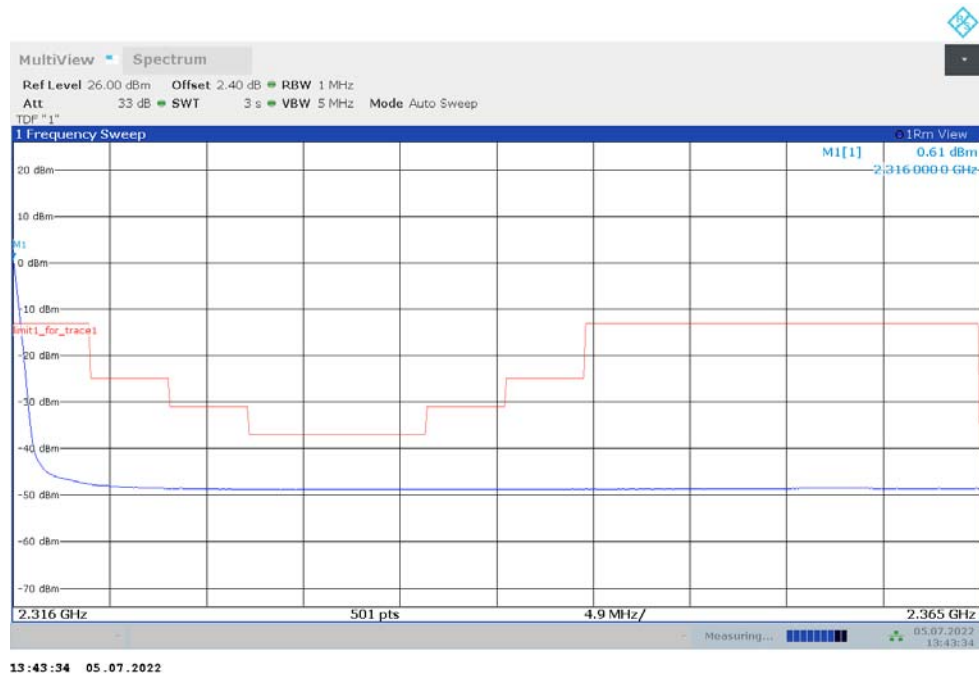


## OBW: 1RB-HIGH\_offset



## HIGH BAND EDGE BLOCK-1RB-HIGH\_offset

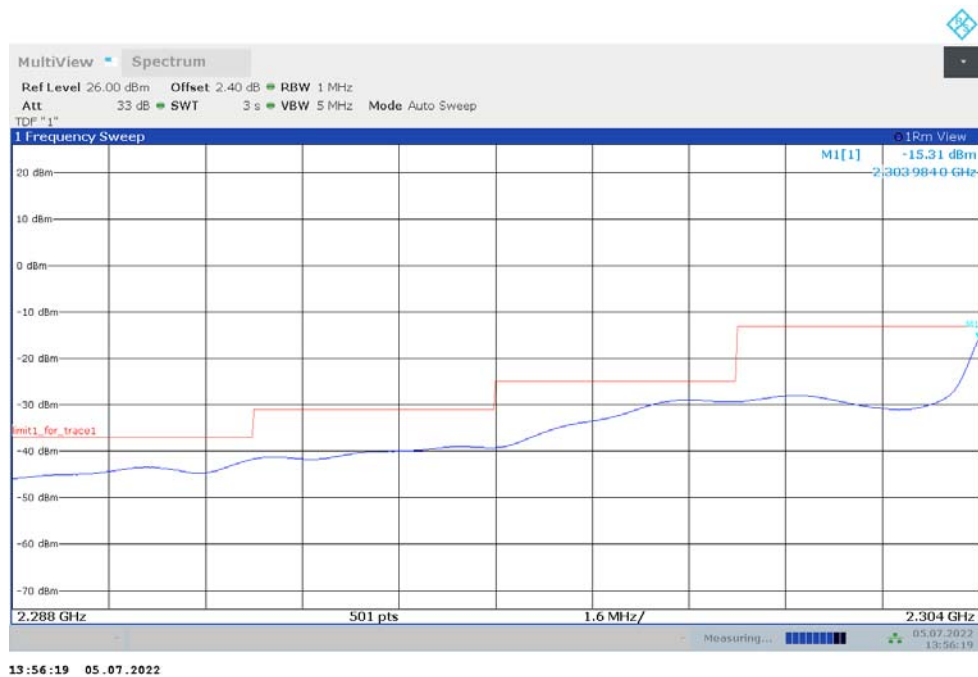
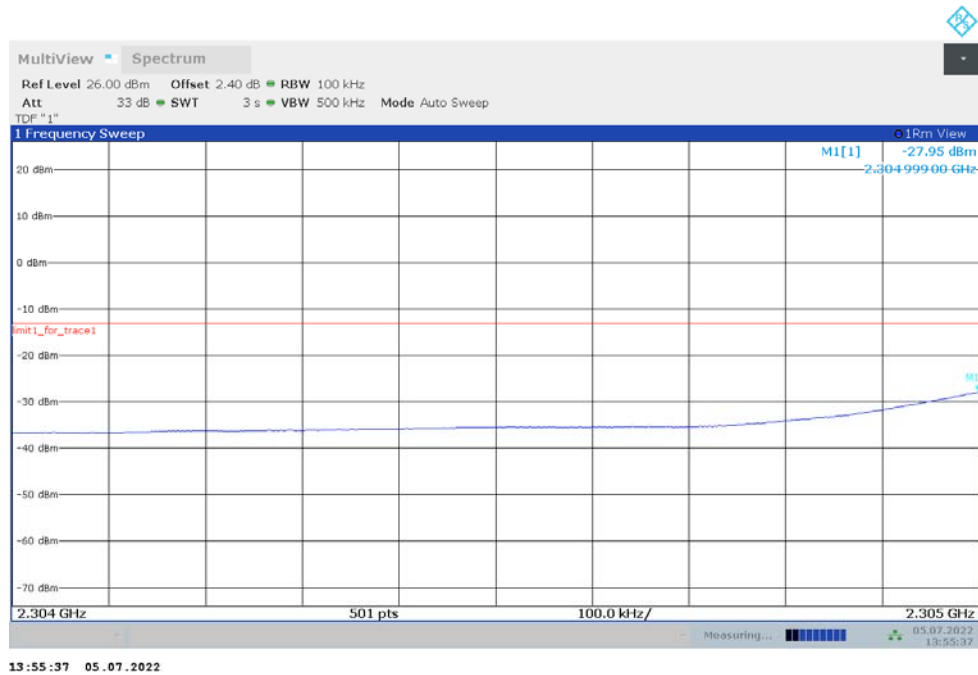




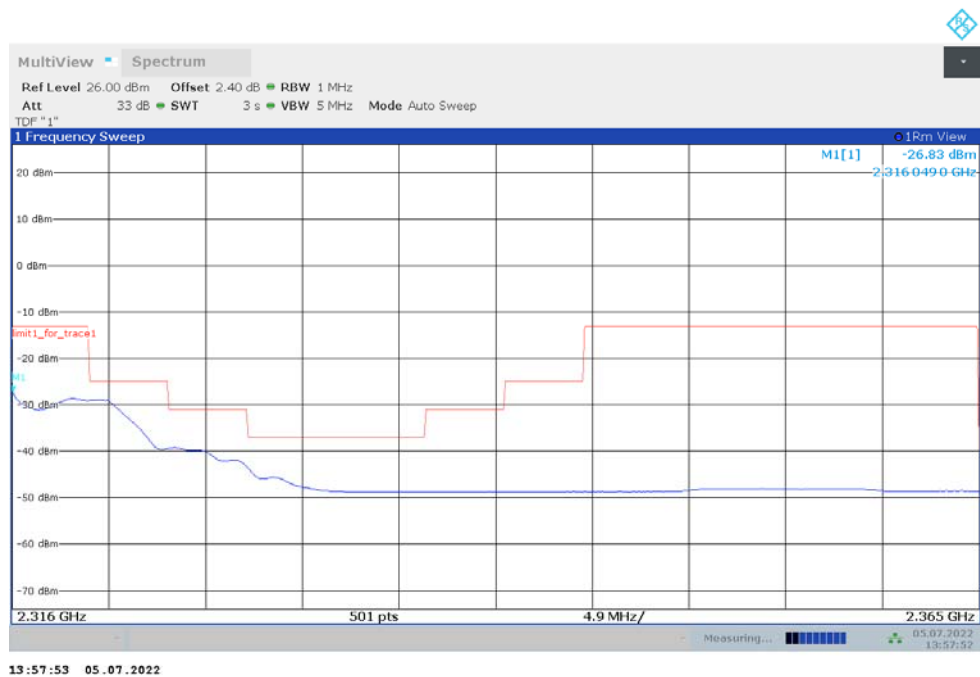
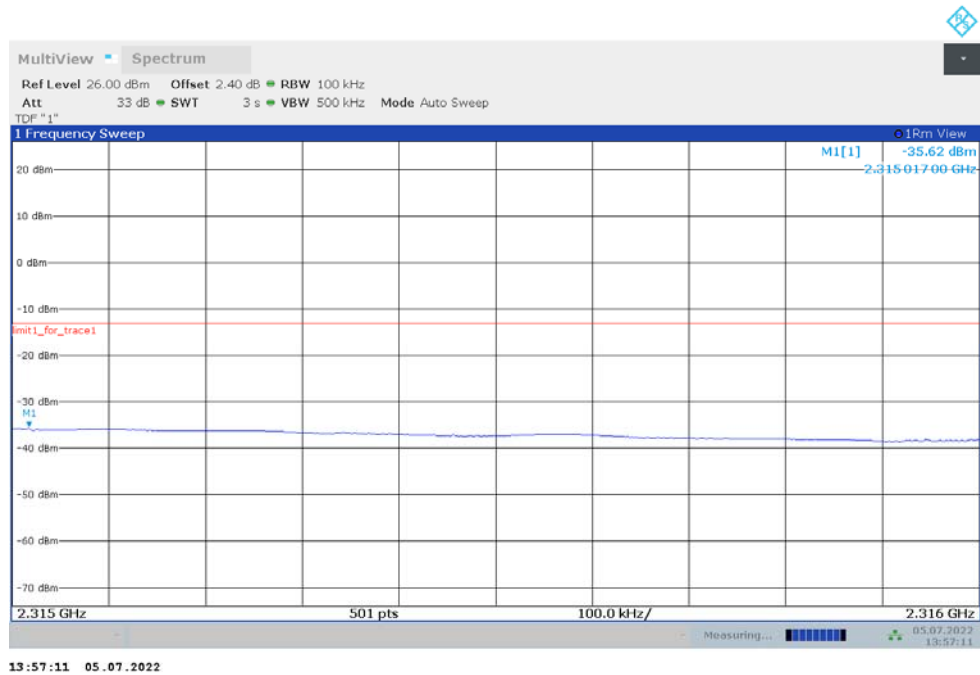
## Channel Power



## LOW BAND EDGE BLOCK-10M-100%RB

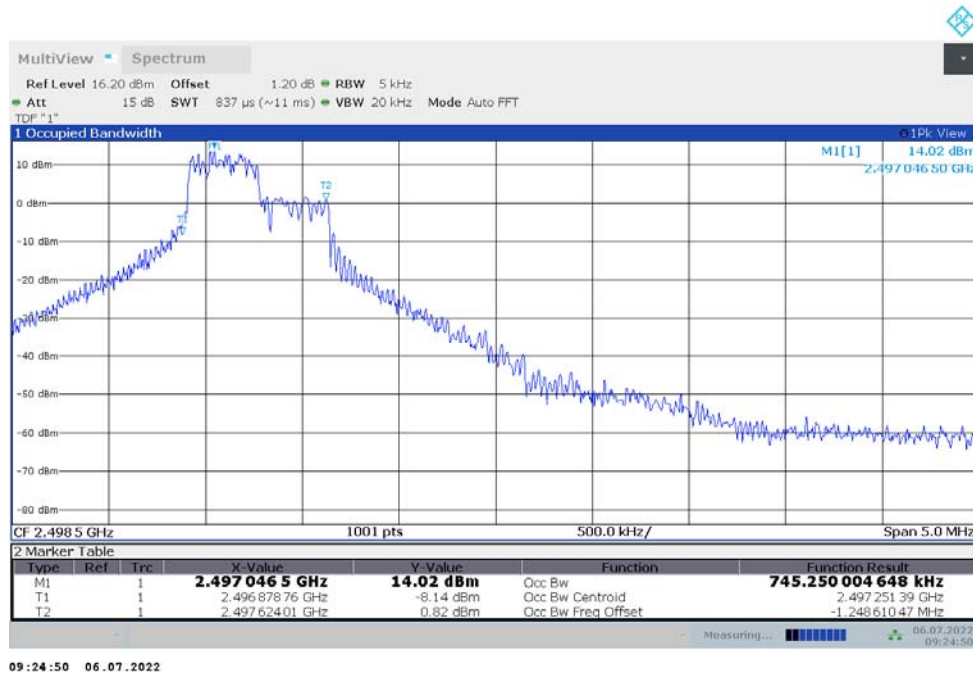


## HIGH BAND EDGE BLOCK-10M-100%RB

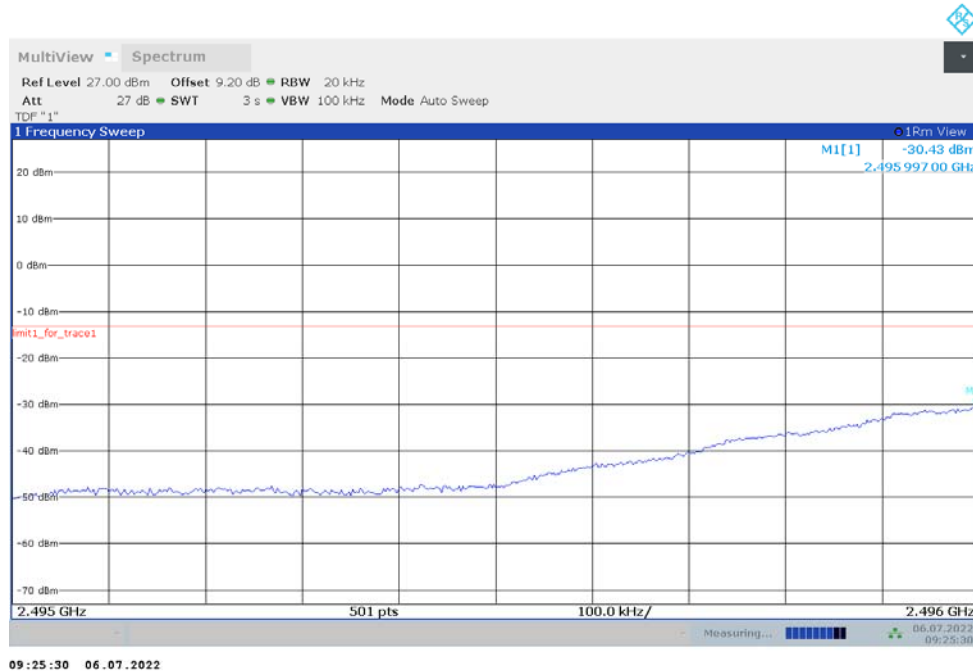


## LTE Band 66+NR n41

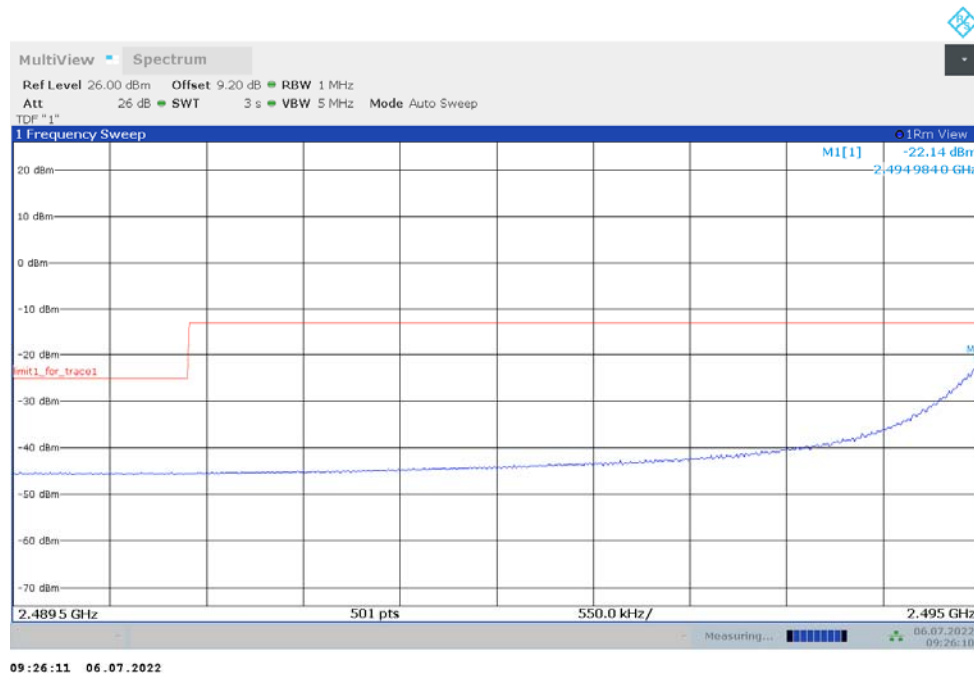
### OBW: 1RB-LOW\_offset



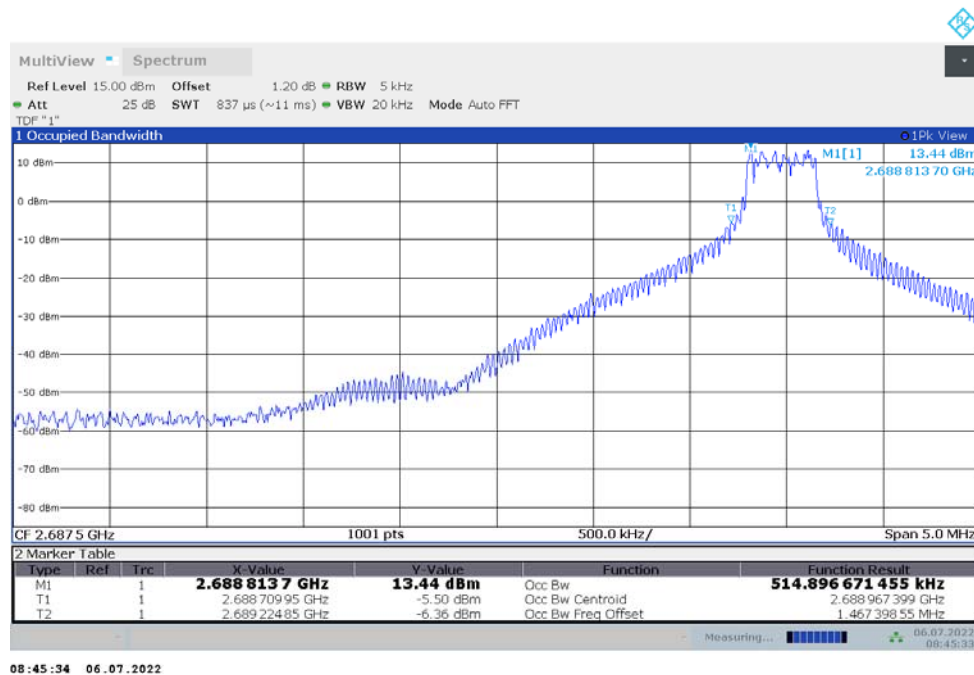
## LOW BAND EDGE BLOCK-1RB-LOW\_offset



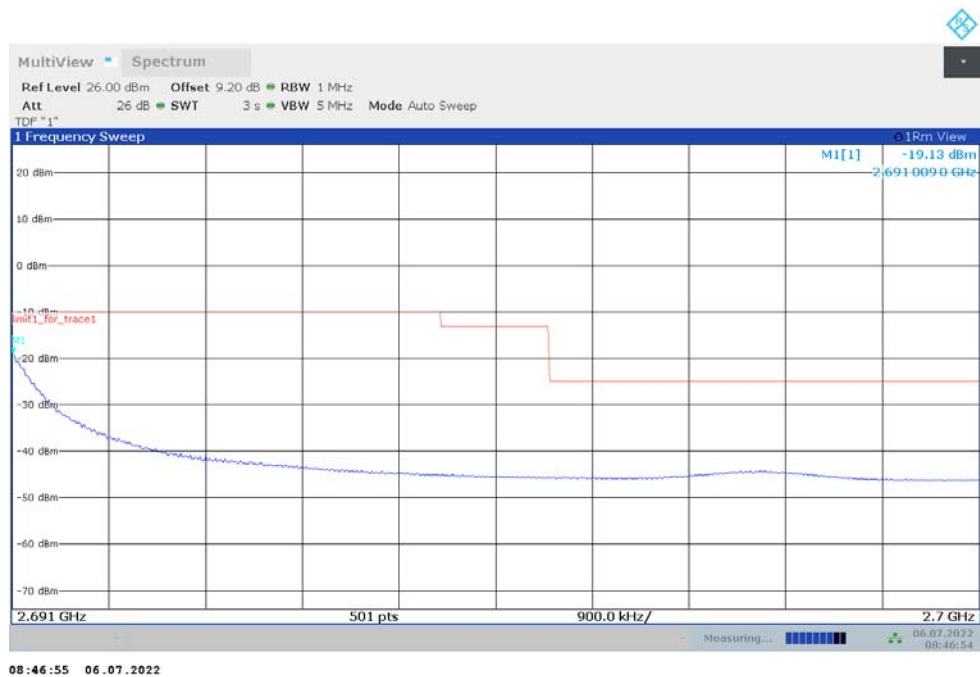
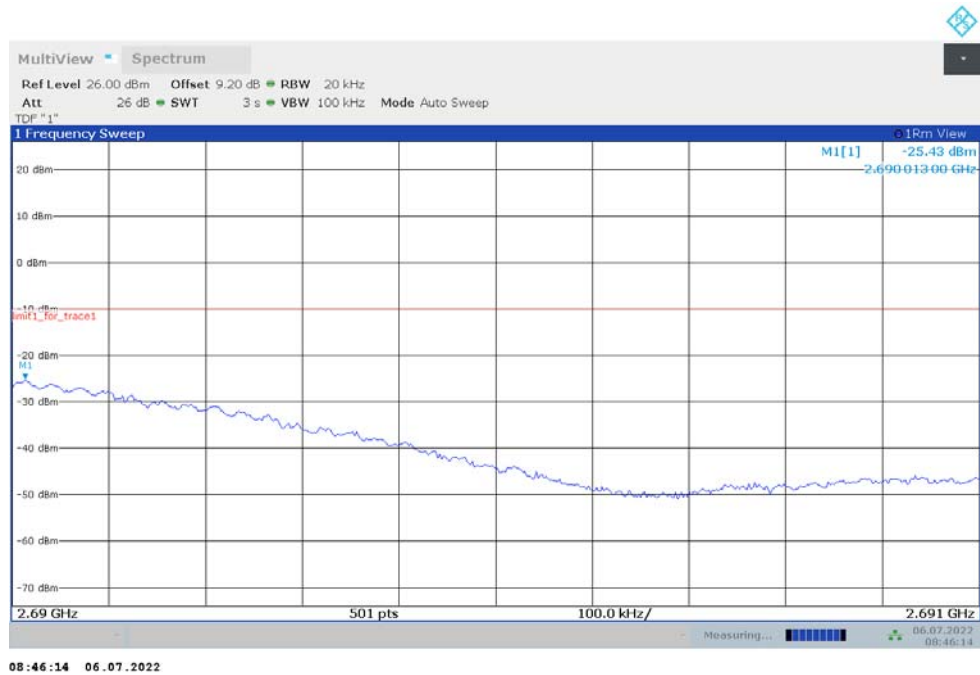




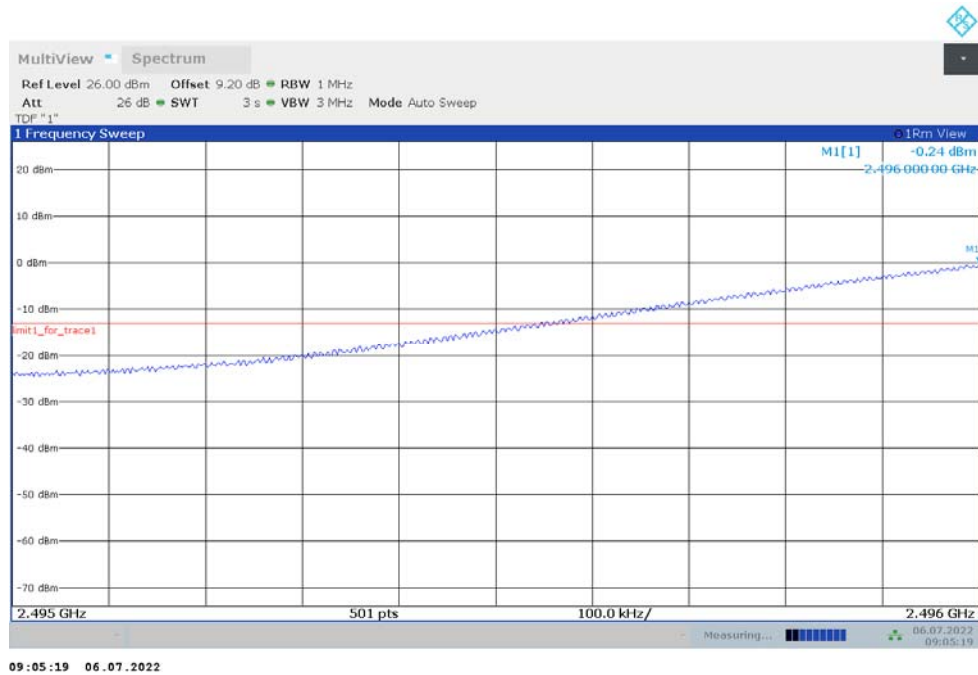
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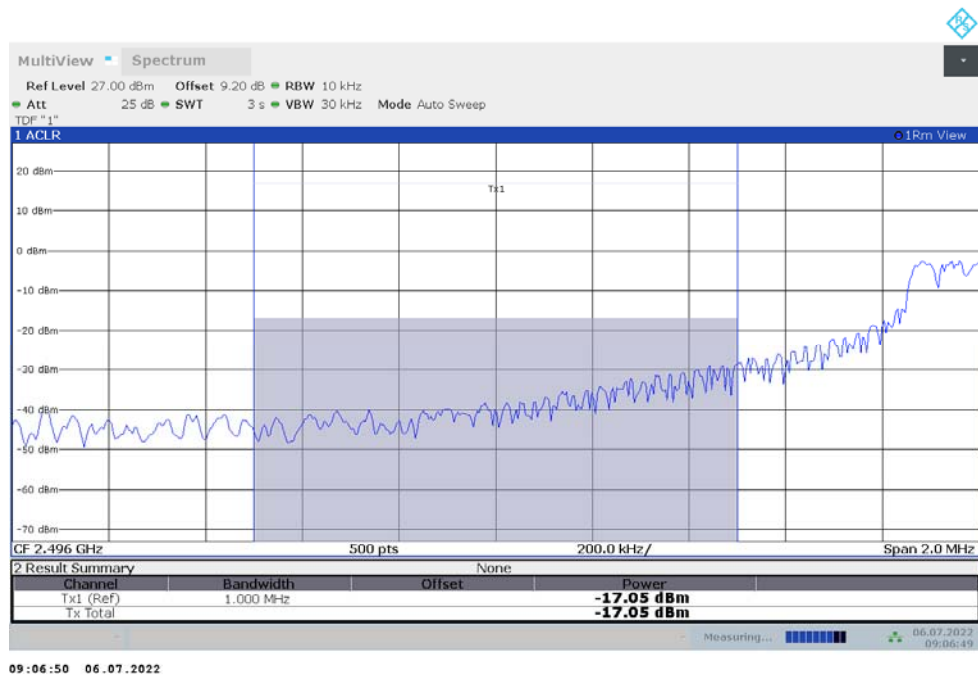
## HIGH BAND EDGE BLOCK-1RB-HIGH\_offset

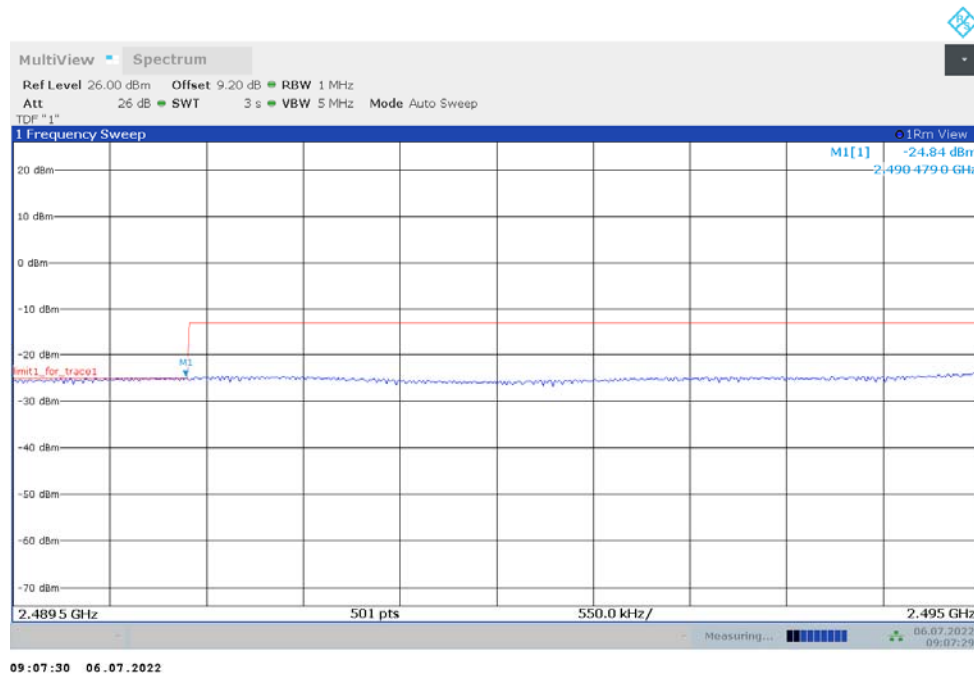


## LOW BAND EDGE BLOCK-100M-100%RB

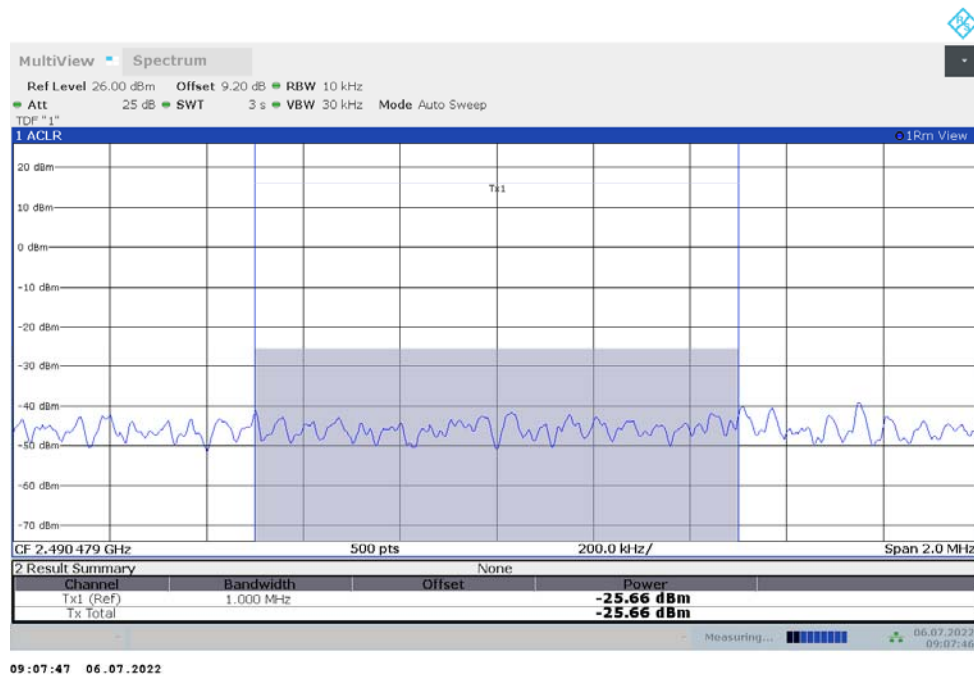


## Channel Power

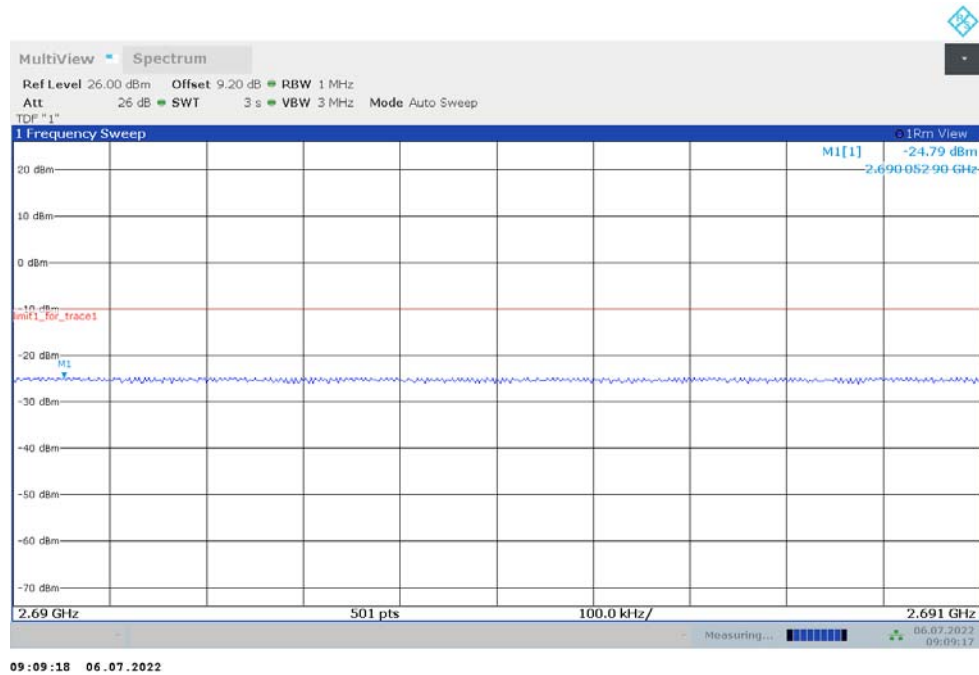




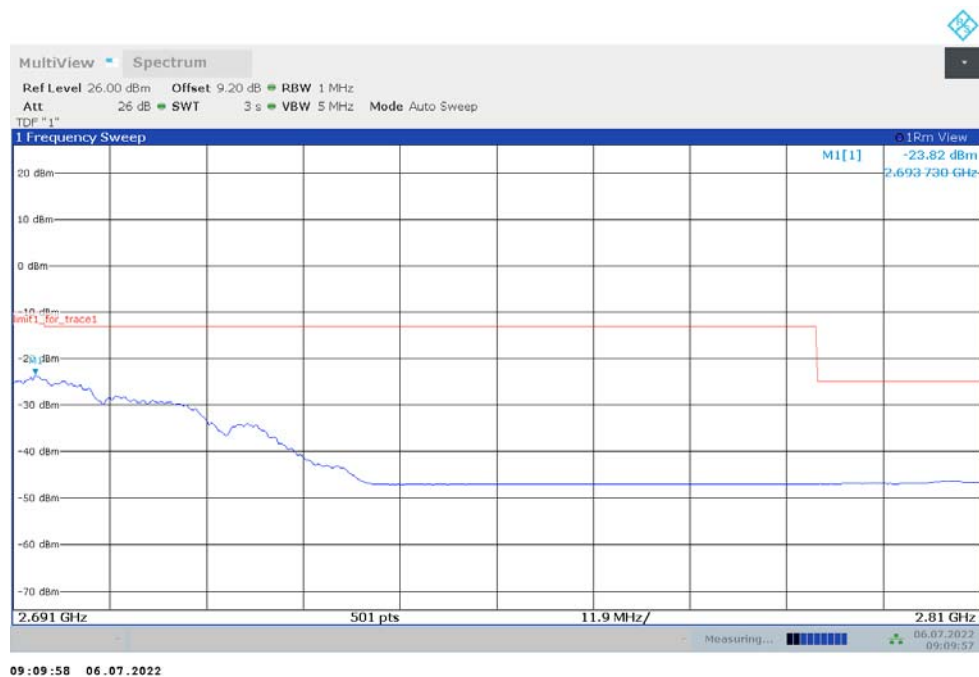
## Channel Power



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

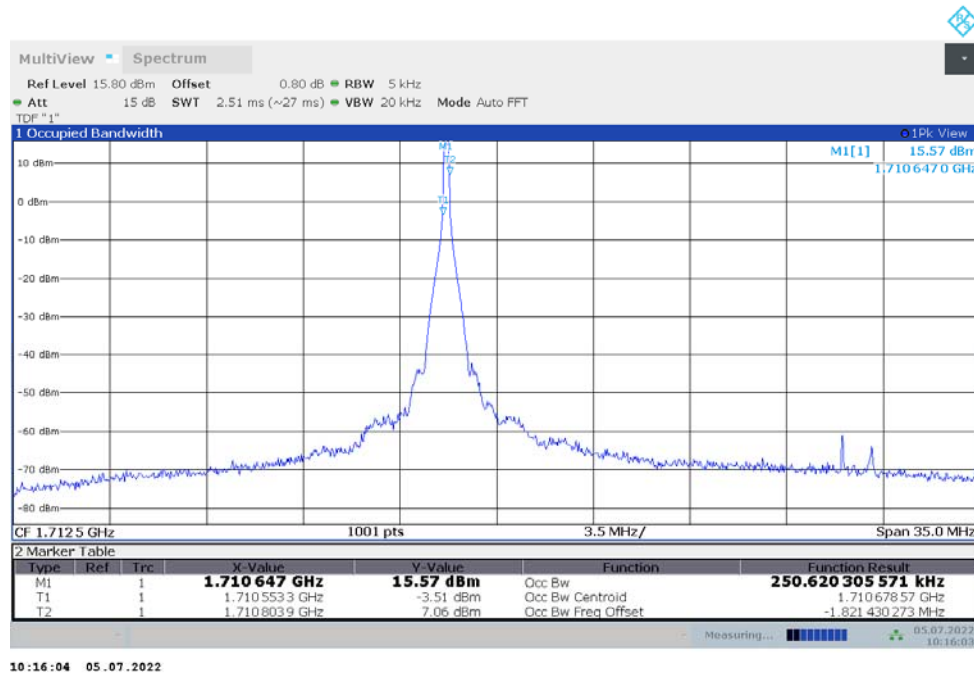


## HIGH BAND EDGE BLOCK-100M-100%RB

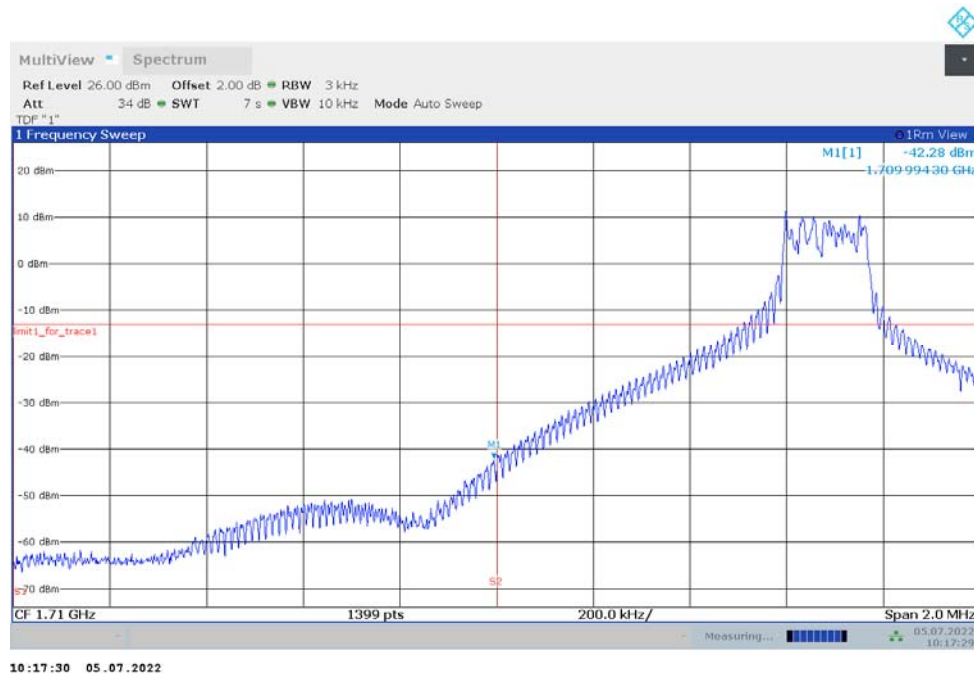


## LTE Band 14+NR n66

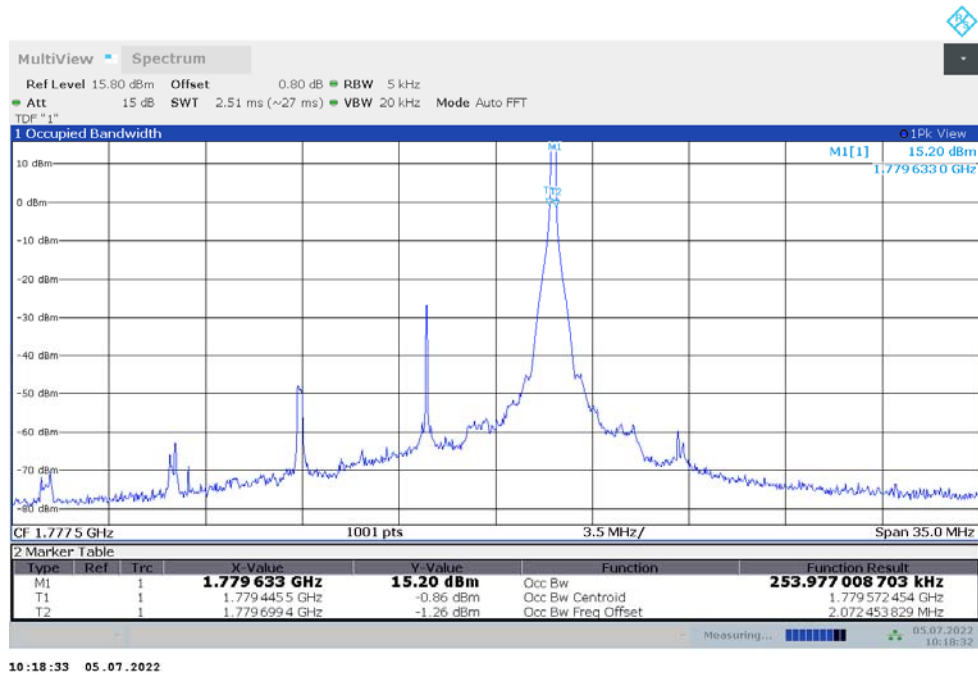
### OBW: 1RB-LOW\_offset



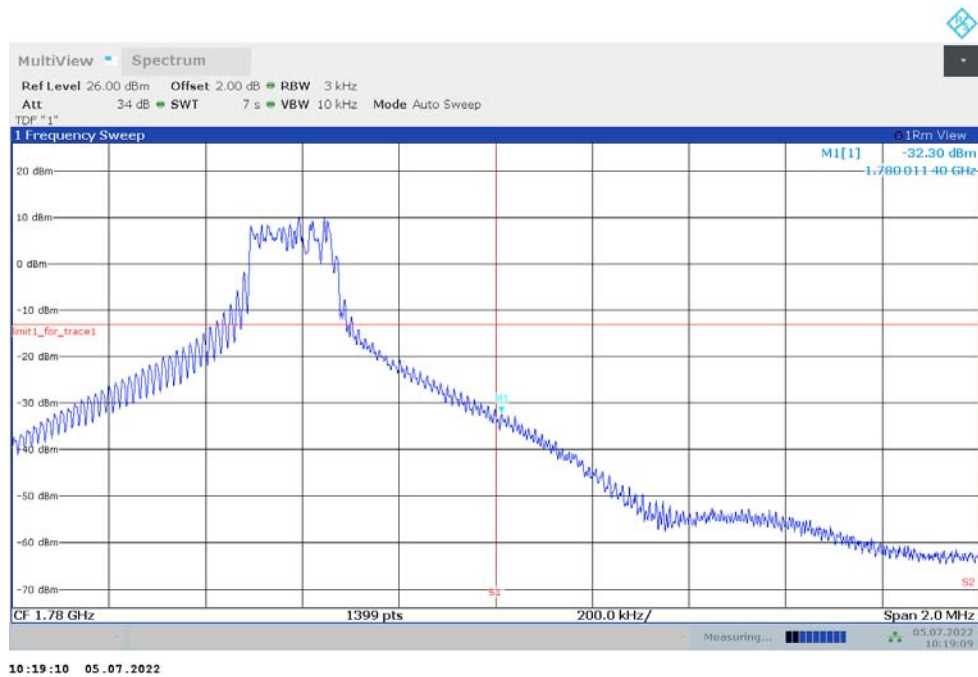
## LOW BAND EDGE BLOCK-1RB-LOW\_offset



## OBW: 1RB-HIGH\_offset

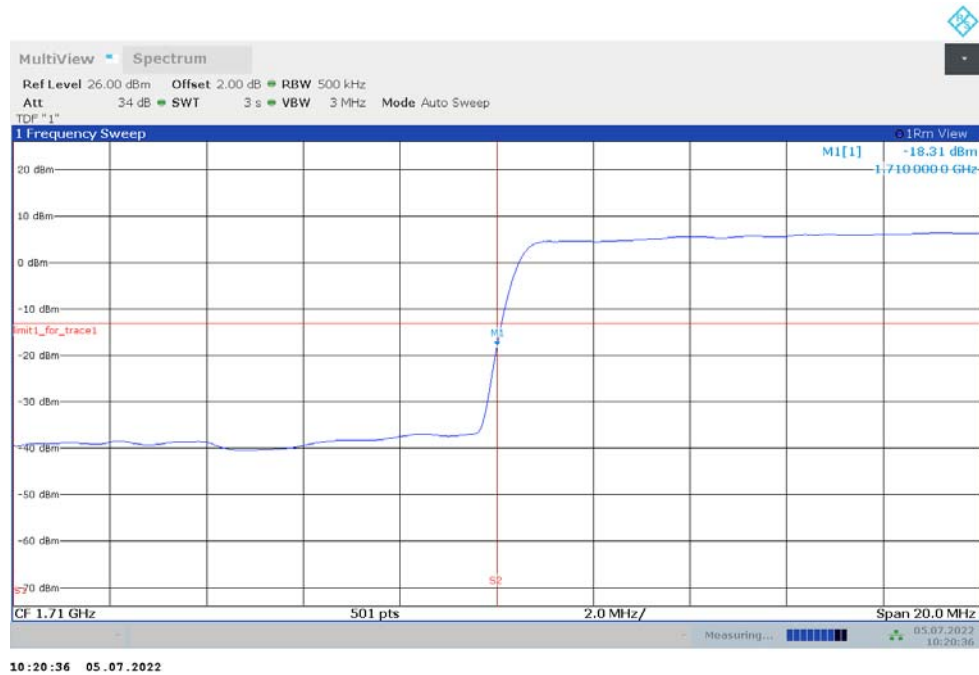


## HIGH BAND EDGE BLOCK-1RB-HIGH\_offset

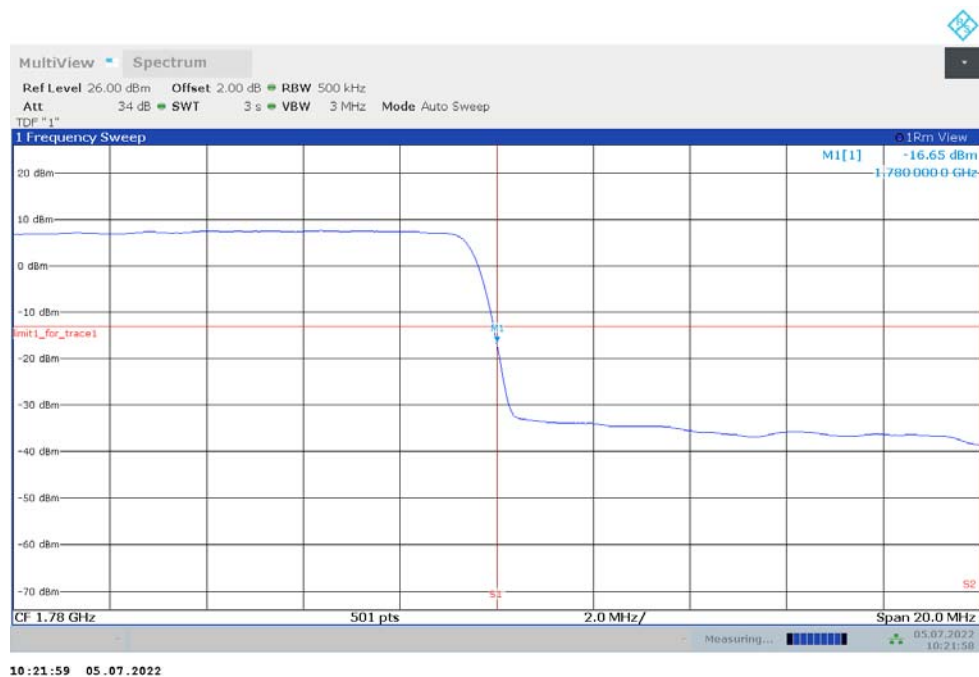




## LOW BAND EDGE BLOCK-40M-100%RB

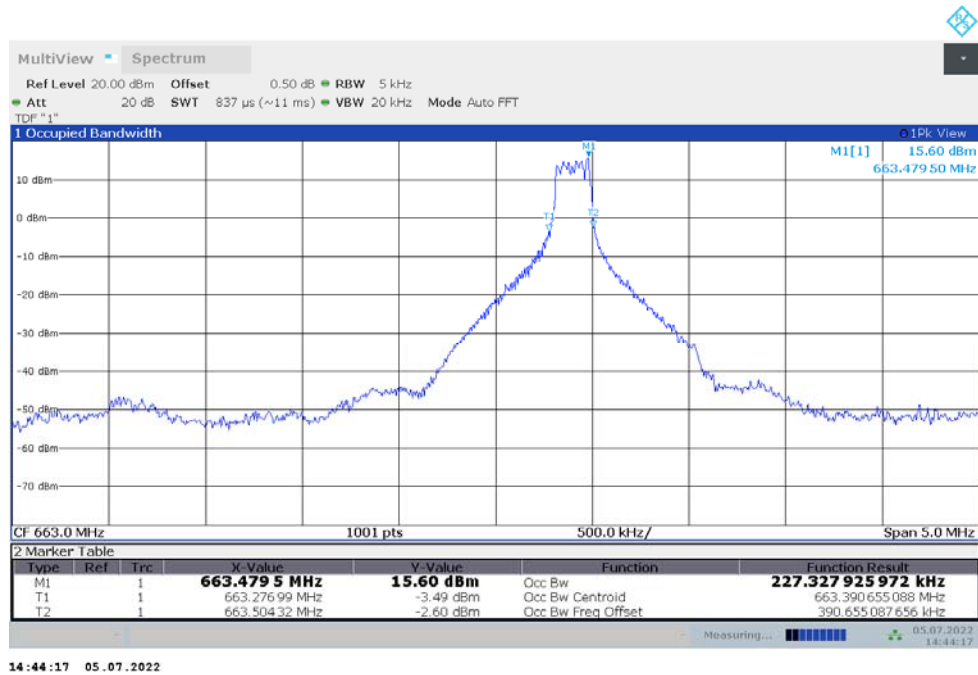


## HIGH BAND EDGE BLOCK-40M-100%RB

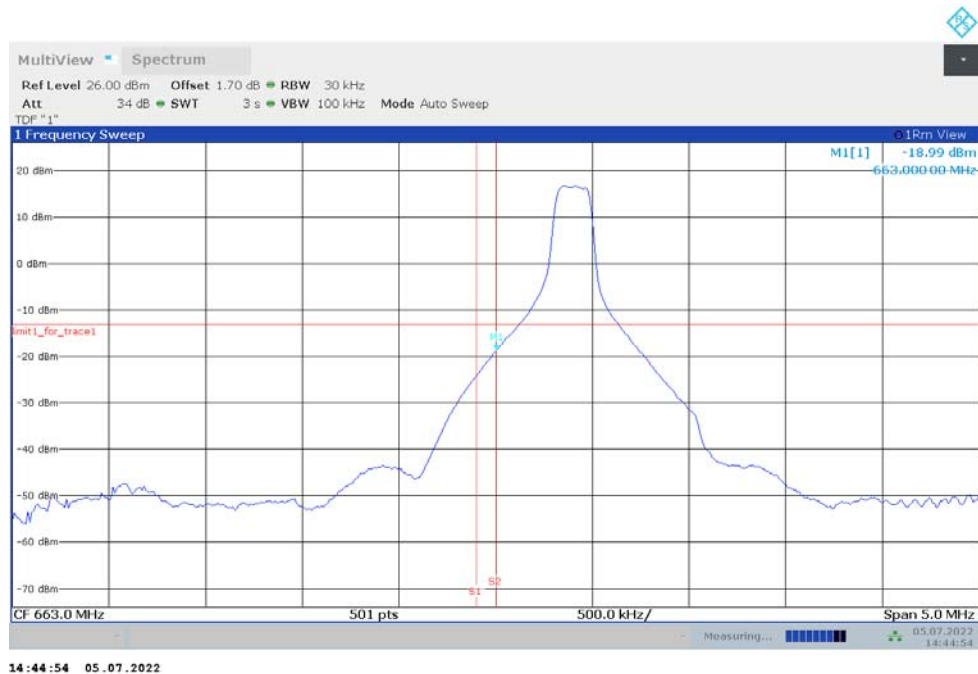


## LTE Band 2+NR n71

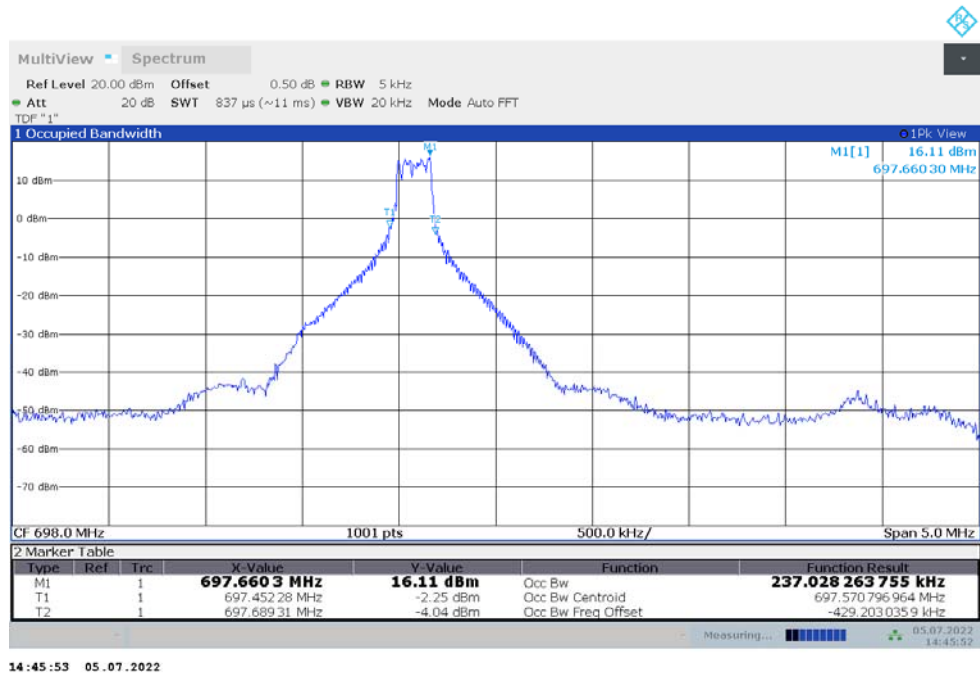
### OBW: 1RB-LOW\_offset



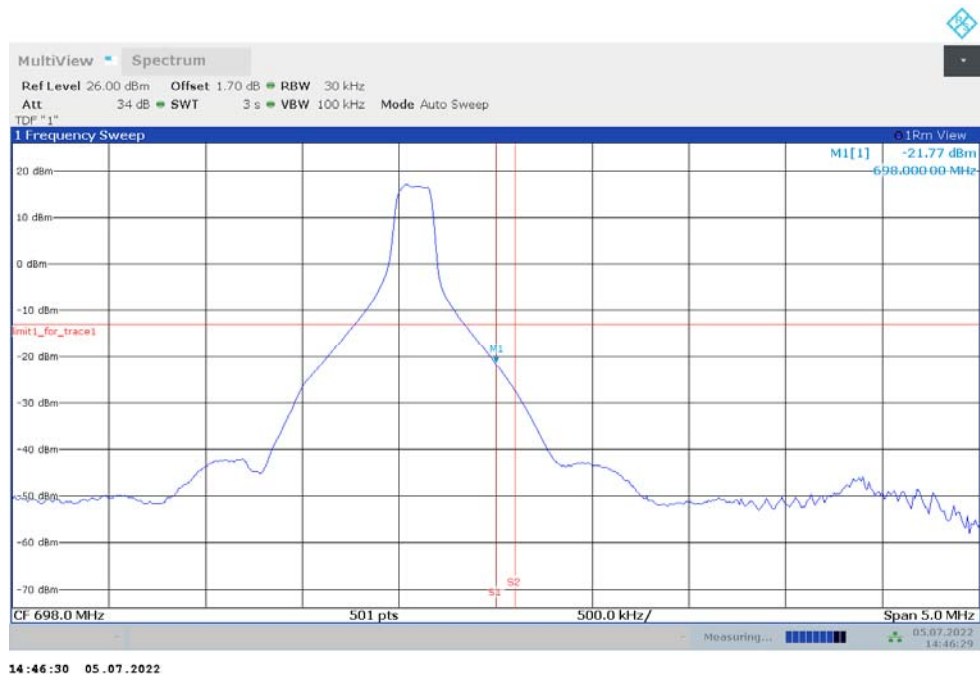
## LOW BAND EDGE BLOCK-1RB-LOW\_offset



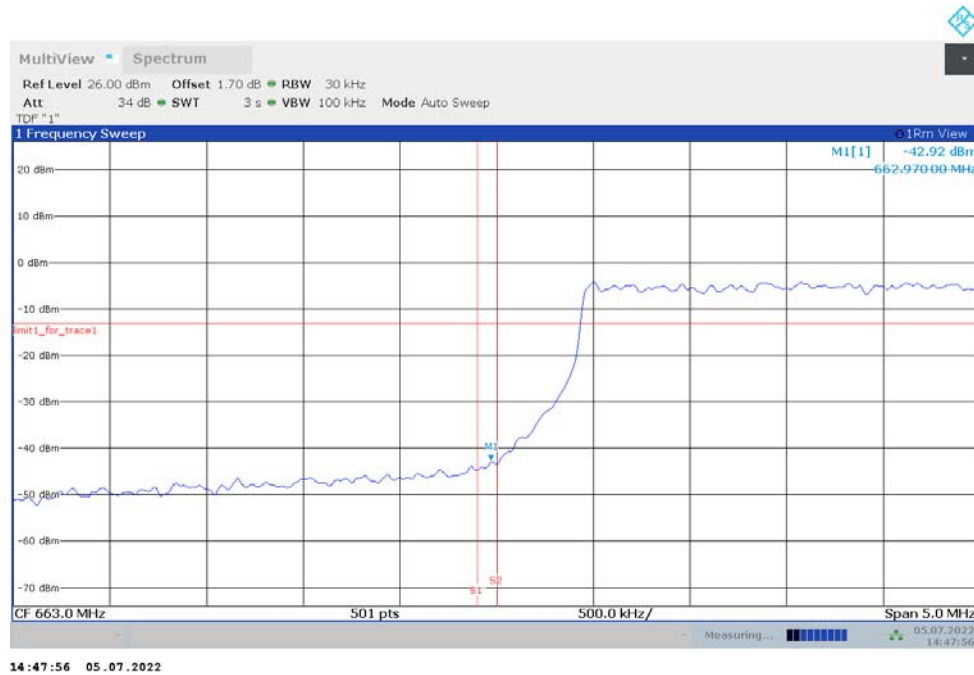
## OBW: 1RB-HIGH\_offset



## HIGH BAND EDGE BLOCK-1RB-HIGH\_offset



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



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

