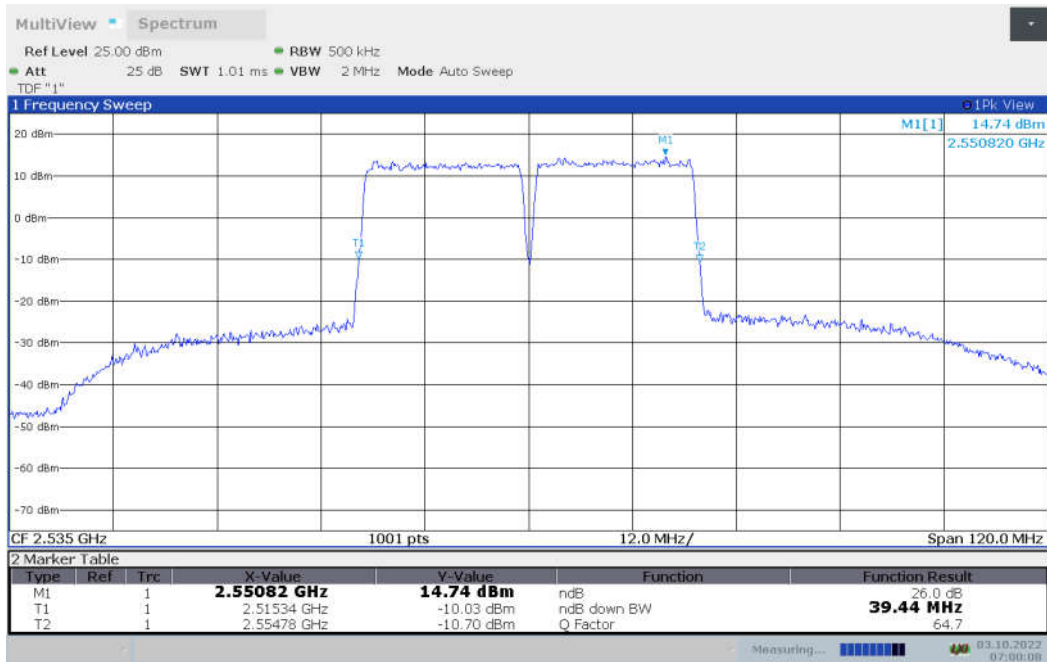




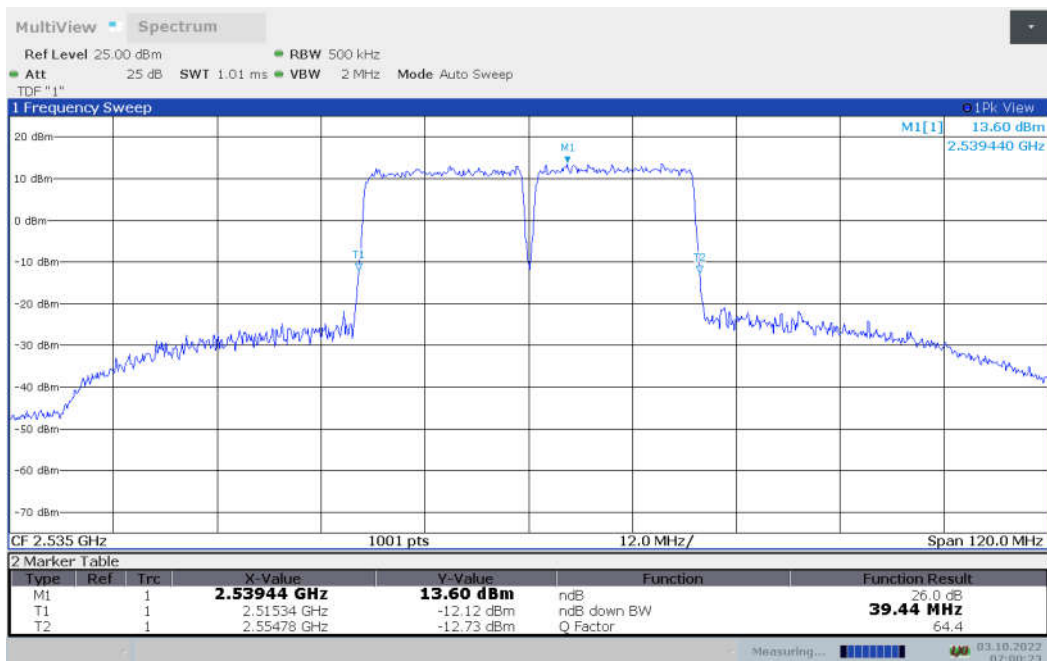
LTE CA band 7, 20MHz+20MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)		
2535.0	QPSK	16QAM	64QAM
	39.44	39.44	39.44

LTE CA band 7, 20MHz+20MHz Bandwidth, QPSK (-26dBc BW)

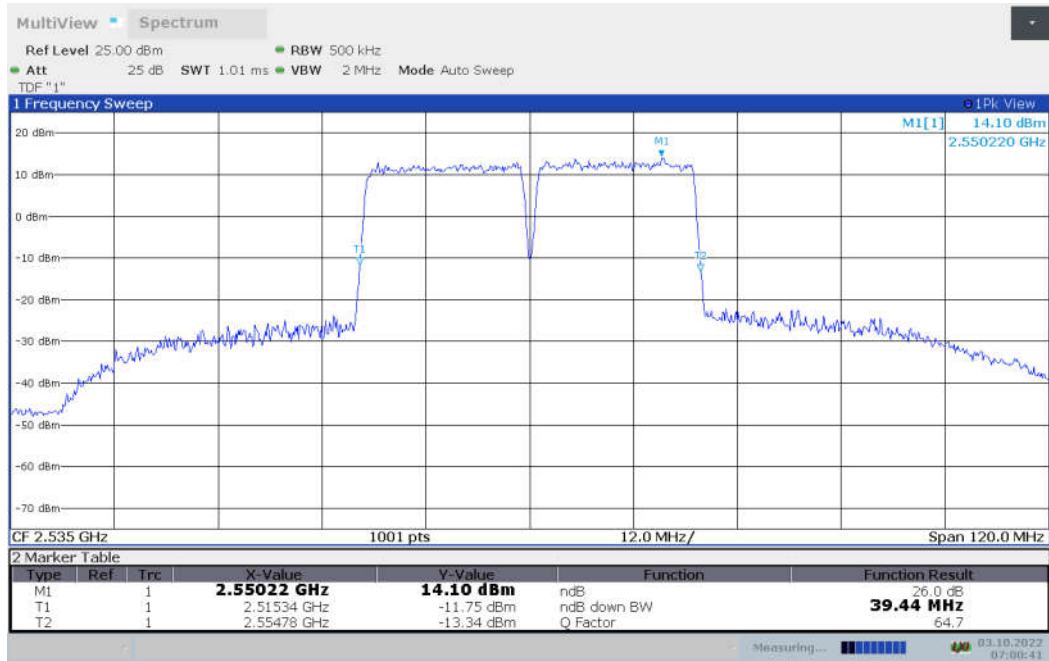


LTE CA band 7, 20MHz+20MHz Bandwidth, 16QAM (-26dBc BW)





LTE CA band 7, 20MHz+20MHz Bandwidth, 64QAM (-26dBc BW)

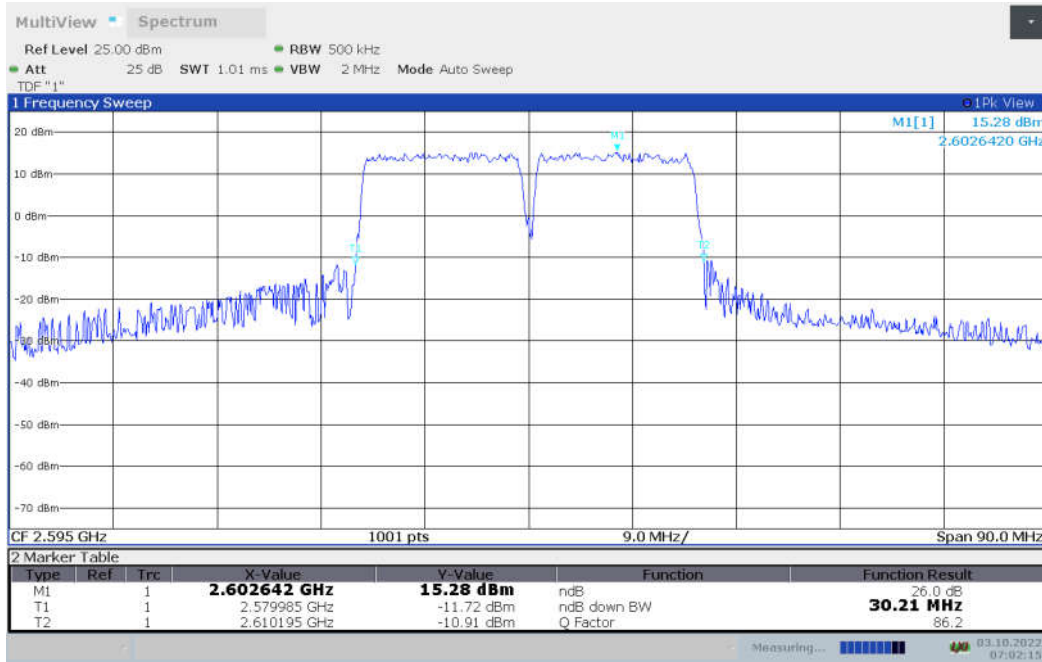




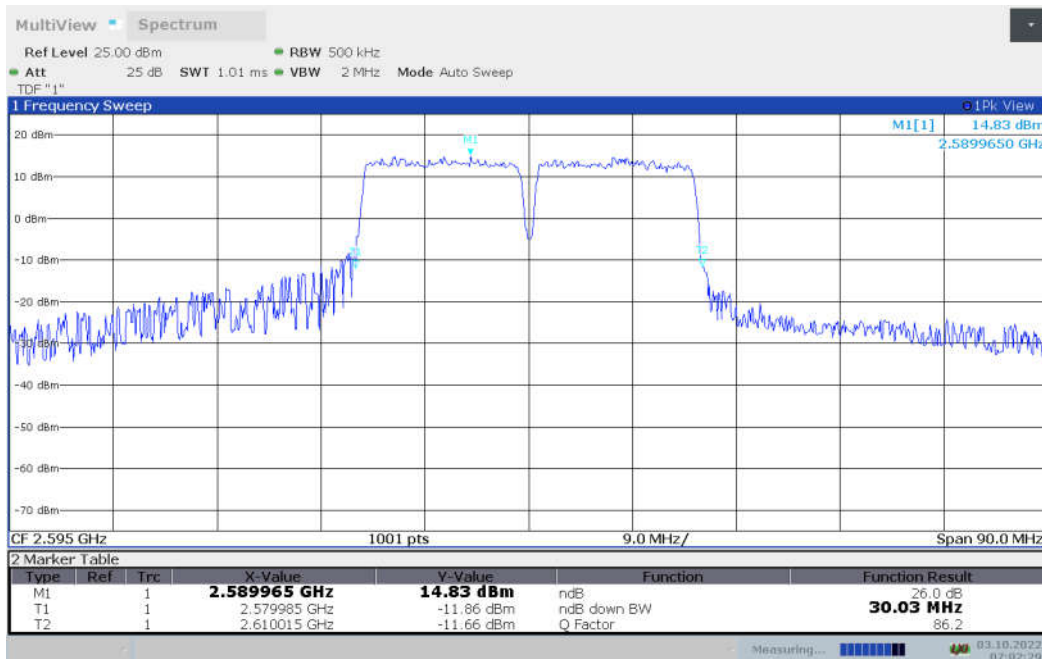
LTE CA band 38, 15MHz+15MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)		
2595.0	QPSK	16QAM	64QAM
	30.21	30.03	30.57

LTE CA band 38, 15MHz+15MHz Bandwidth, QPSK (-26dBc BW)

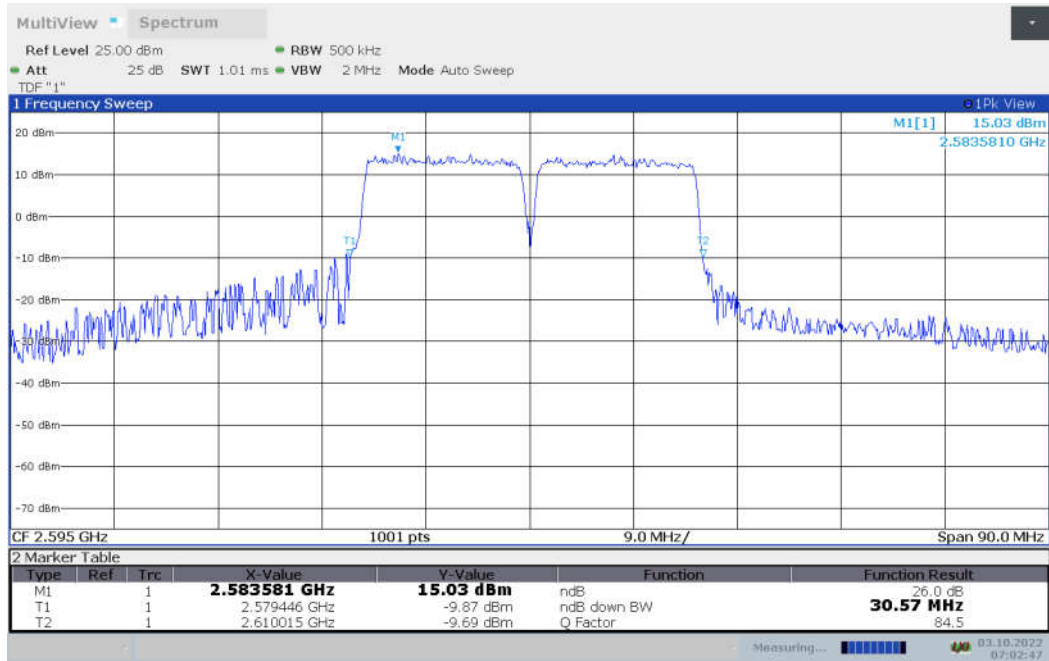


LTE CA band 38, 15MHz+15MHz Bandwidth, 16QAM (-26dBc BW)





LTE CA band 38, 15MHz+15MHz Bandwidth, 64QAM (-26dBc BW)

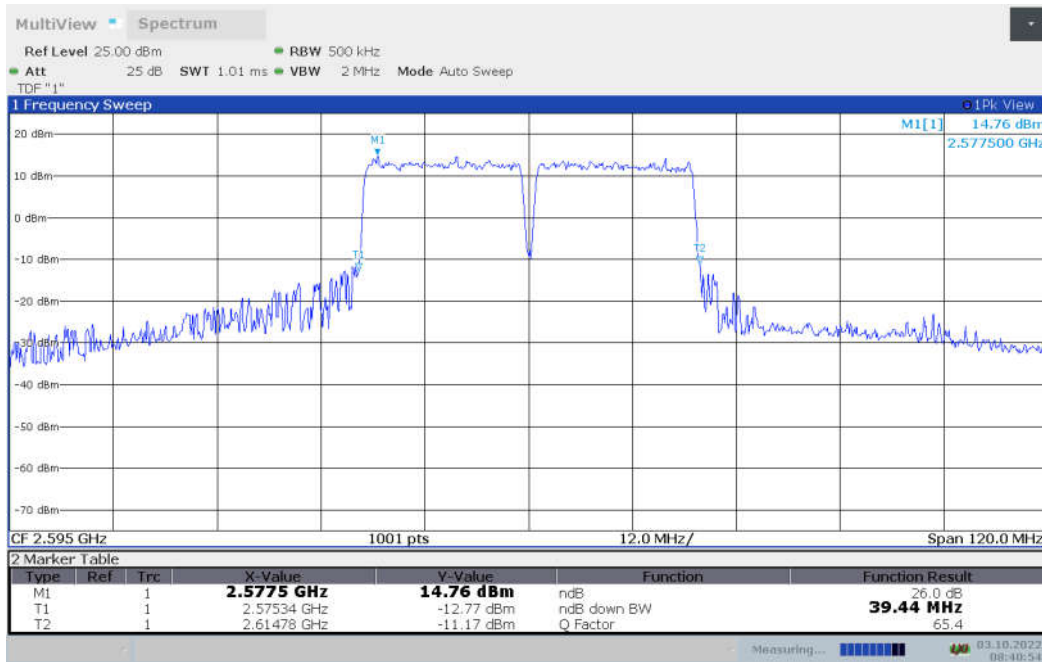




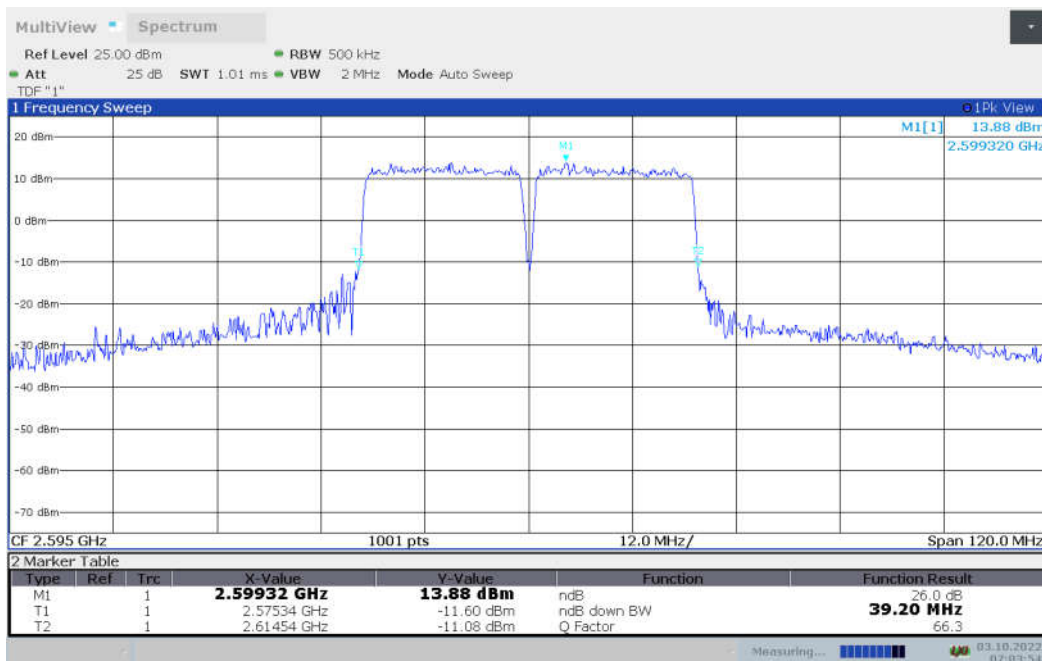
LTE CA band 38, 20MHz+20MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)		
2595.0	QPSK	16QAM	64QAM
	39.44	39.20	39.32

LTE CA band 38, 20MHz+20MHz Bandwidth, QPSK (-26dBc BW)

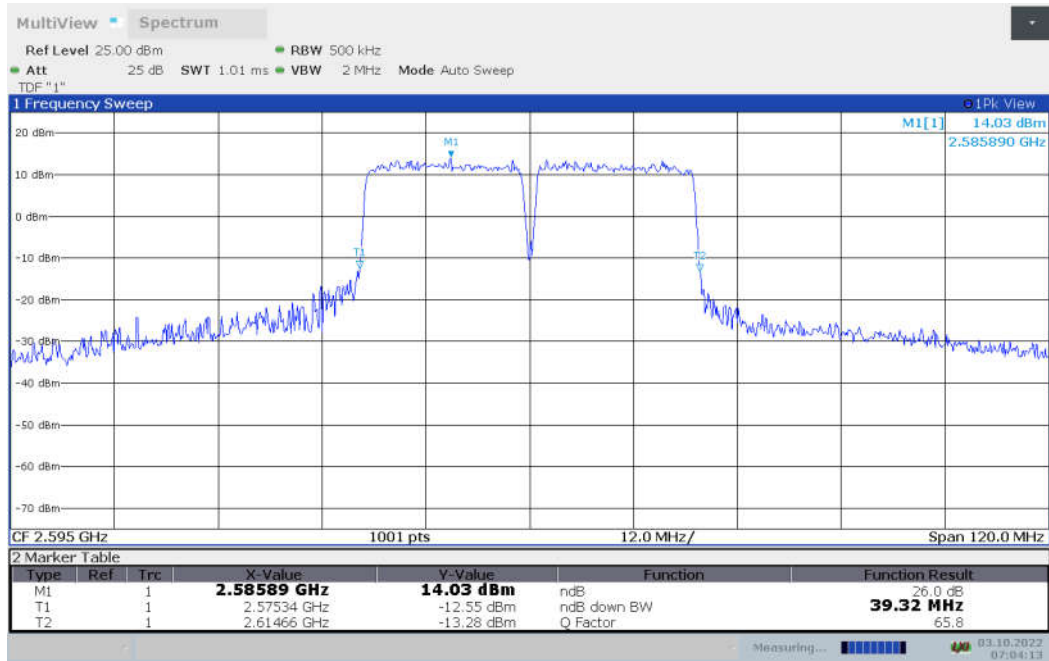


LTE CA band 38, 20MHz+20MHz Bandwidth, 16QAM (-26dBc BW)





LTE CA band 38, 20MHz+20MHz Bandwidth, 64QAM (-26dBc BW)

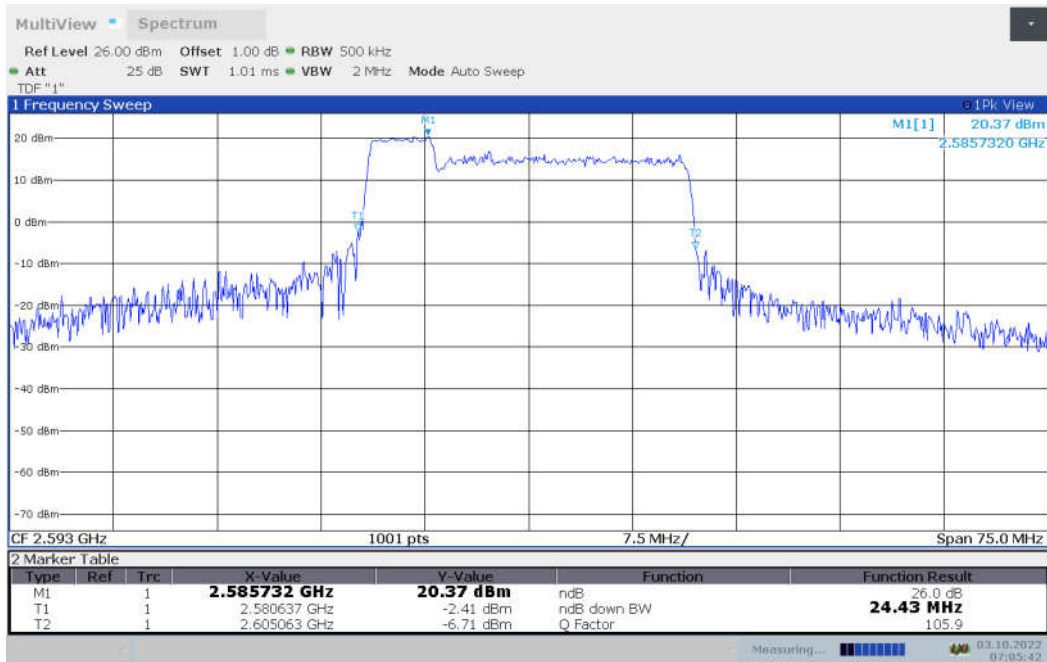




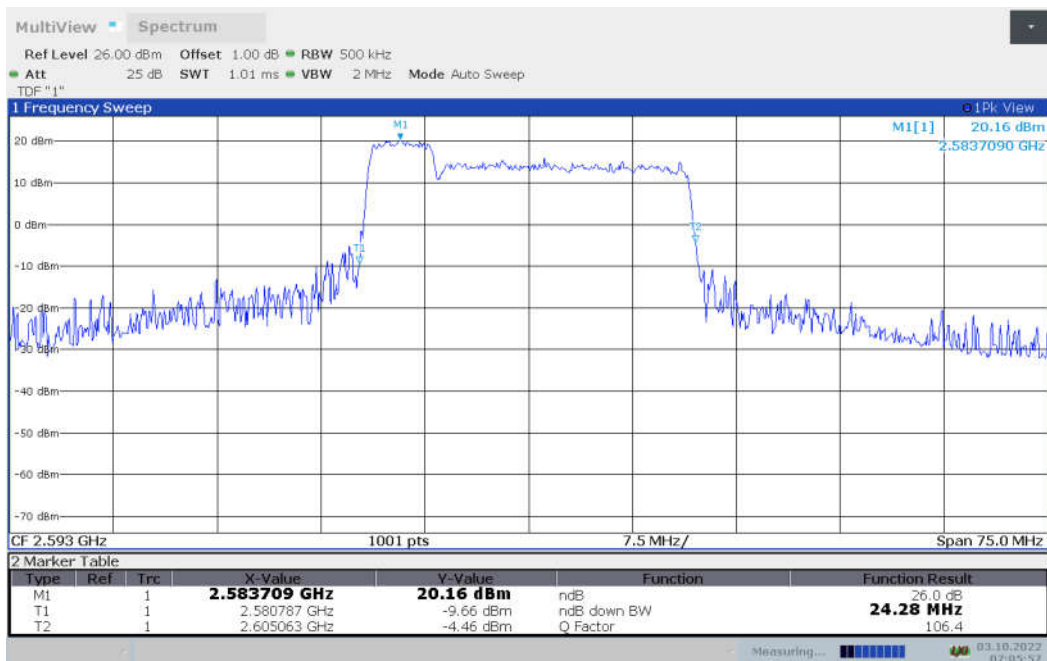
LTE CA band 41, 5MHz+20MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	24.43	24.28	24.20

LTE CA band 41, 5MHz+20MHz Bandwidth, QPSK (-26dBc BW)

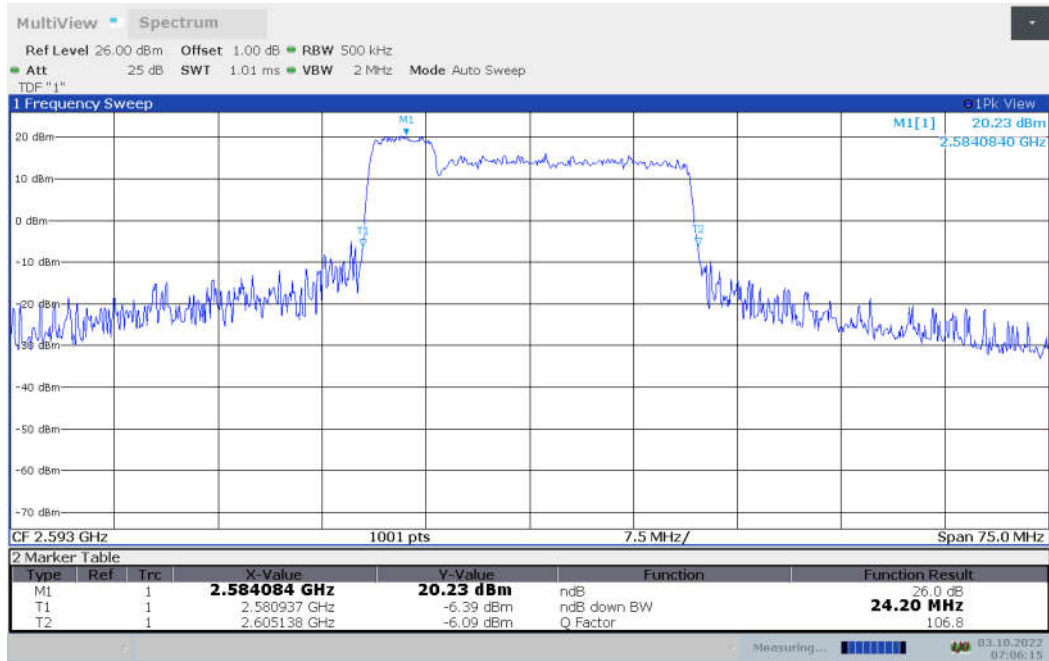


LTE CA band 41, 5MHz+20MHz Bandwidth, 16QAM (-26dBc BW)





LTE CA band 41, 5MHz+20MHz Bandwidth, 64QAM (-26dBc BW)

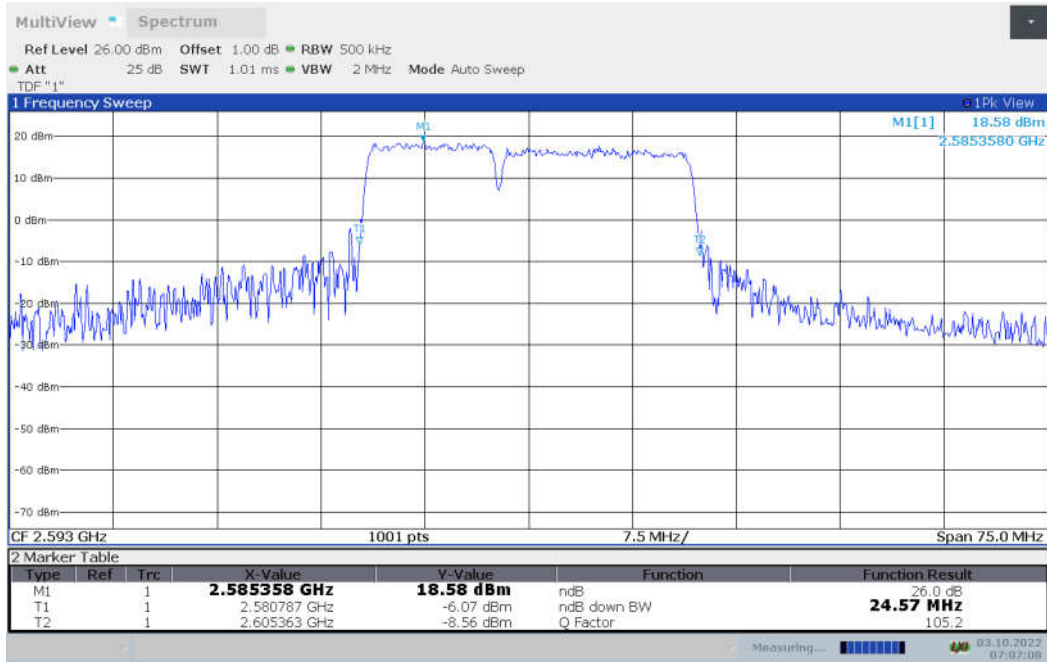




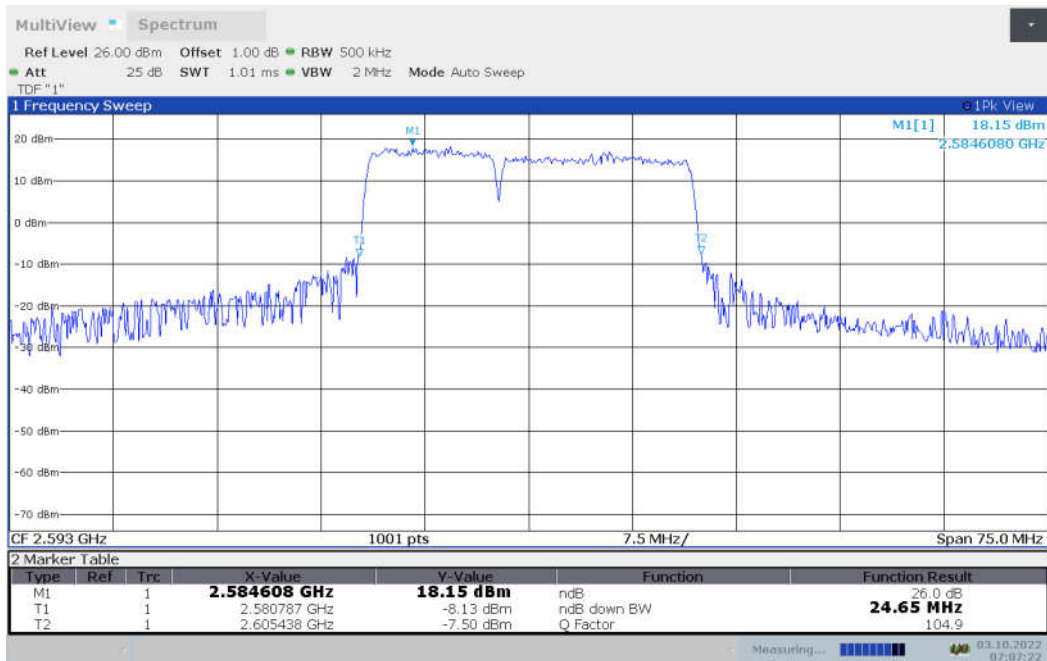
LTE CA band 41, 10MHz+15MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	24.57	24.65	24.57

LTE CA band 41, 10MHz+15MHz Bandwidth, QPSK (-26dBc BW)

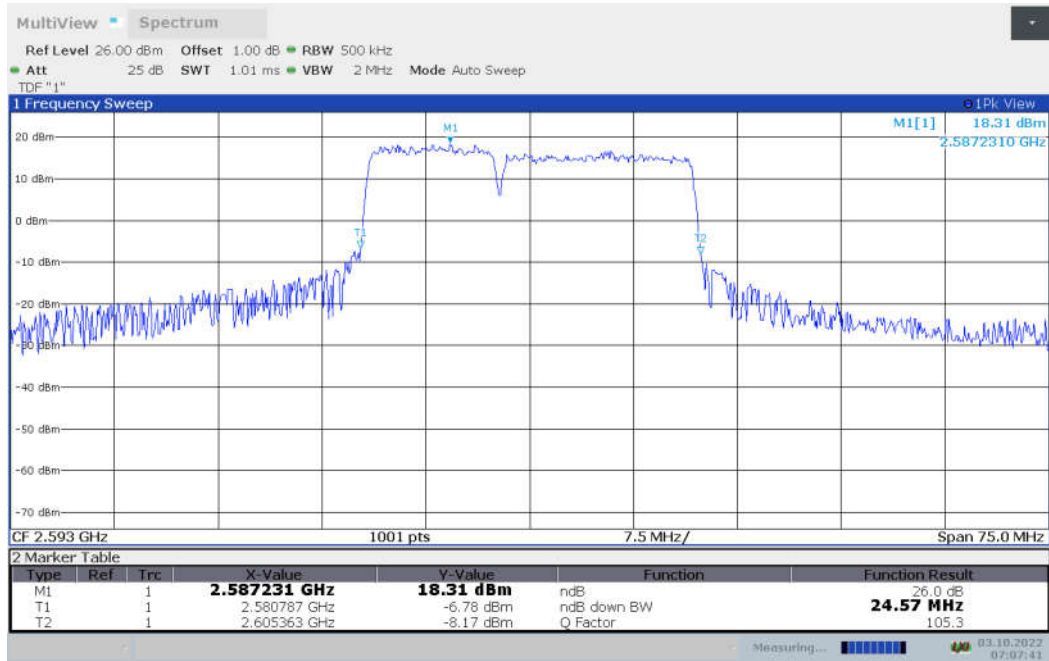


LTE CA band 41, 10MHz+15MHz Bandwidth, 16QAM (-26dBc BW)





LTE CA band 41, 10MHz+15MHz Bandwidth, 64QAM (-26dBc BW)

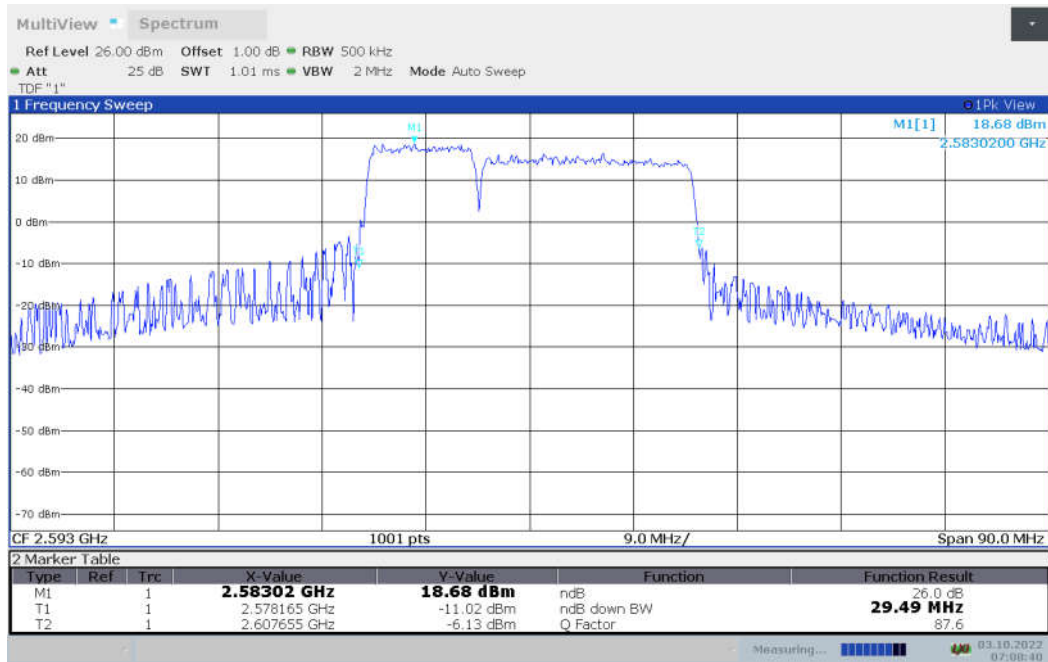




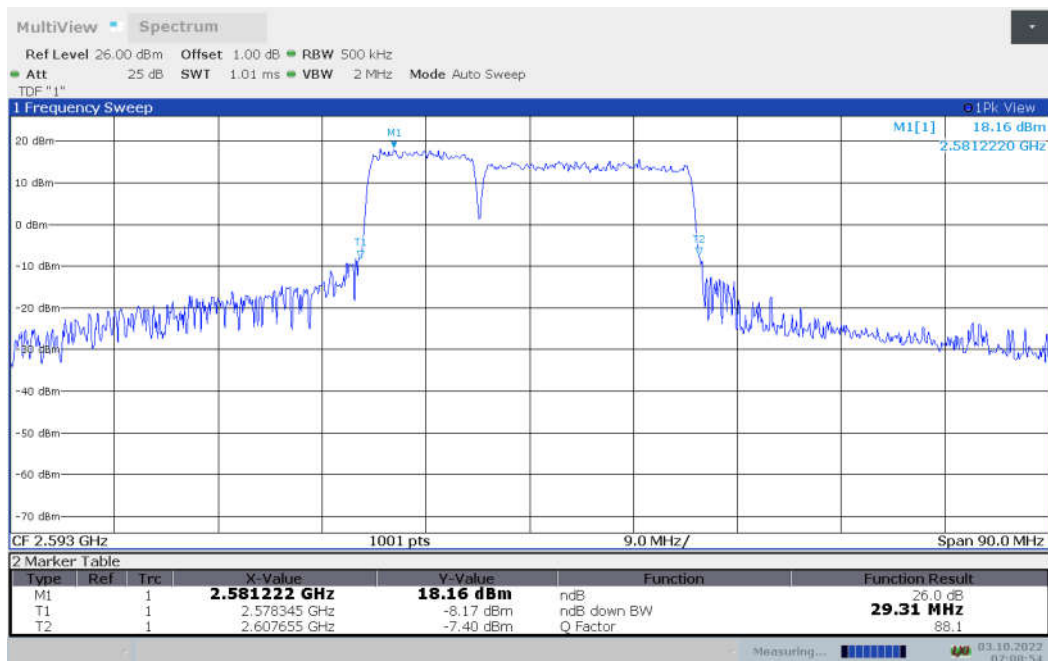
LTE CA band 41, 10MHz+20MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	29.49	29.31	29.31

LTE CA band 41, 10MHz+20MHz Bandwidth, QPSK (-26dBc BW)

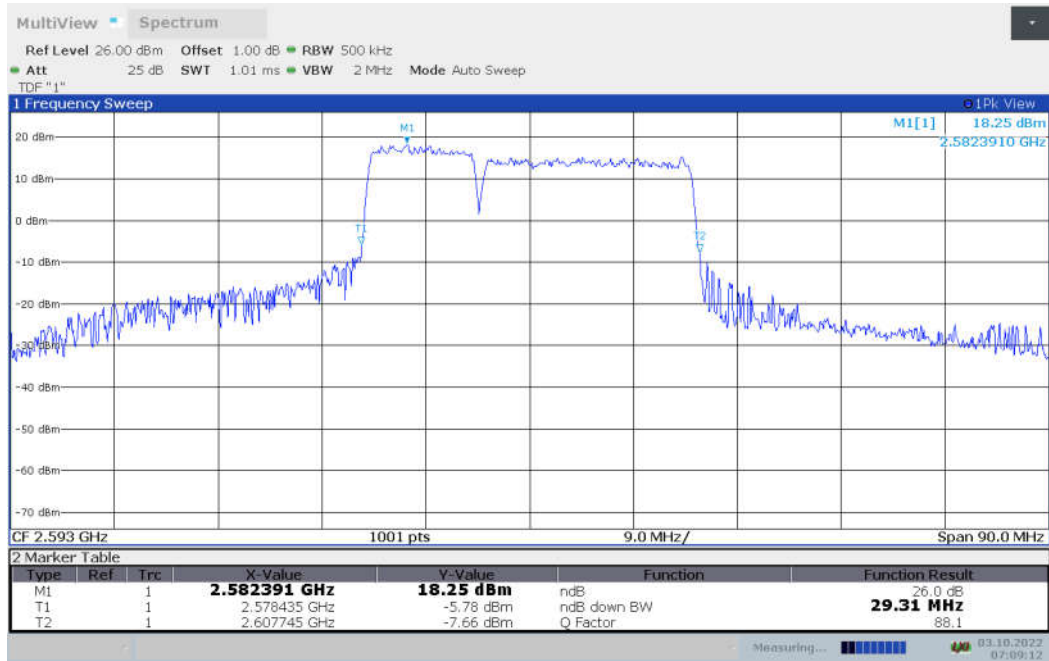


LTE CA band 41, 10MHz+20MHz Bandwidth, 16QAM (-26dBc BW)





LTE CA band 41, 10MHz+20MHz Bandwidth, 64QAM (-26dBc BW)

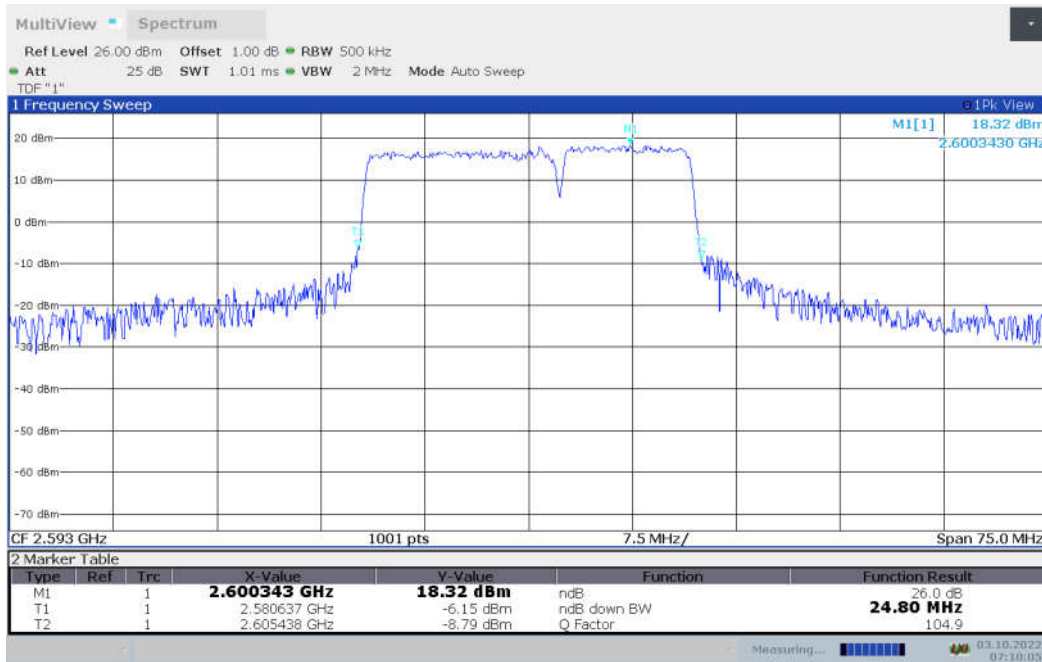




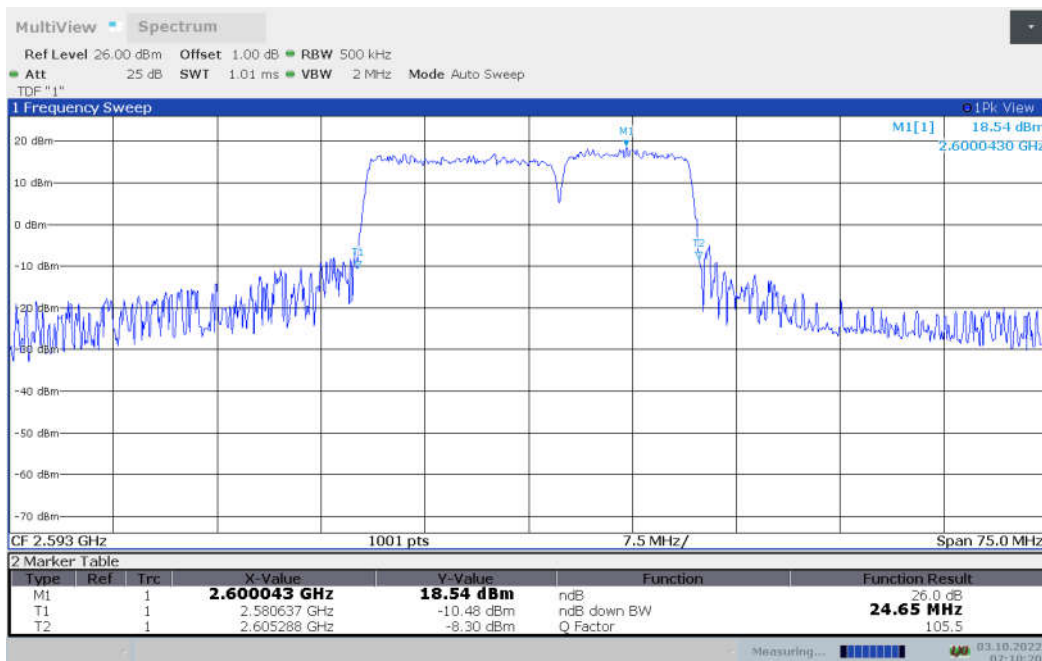
LTE CA band 41, 15MHz+10MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	24.80	24.65	24.80

LTE CA band 41, 15MHz+10MHz Bandwidth, QPSK (-26dBc BW)

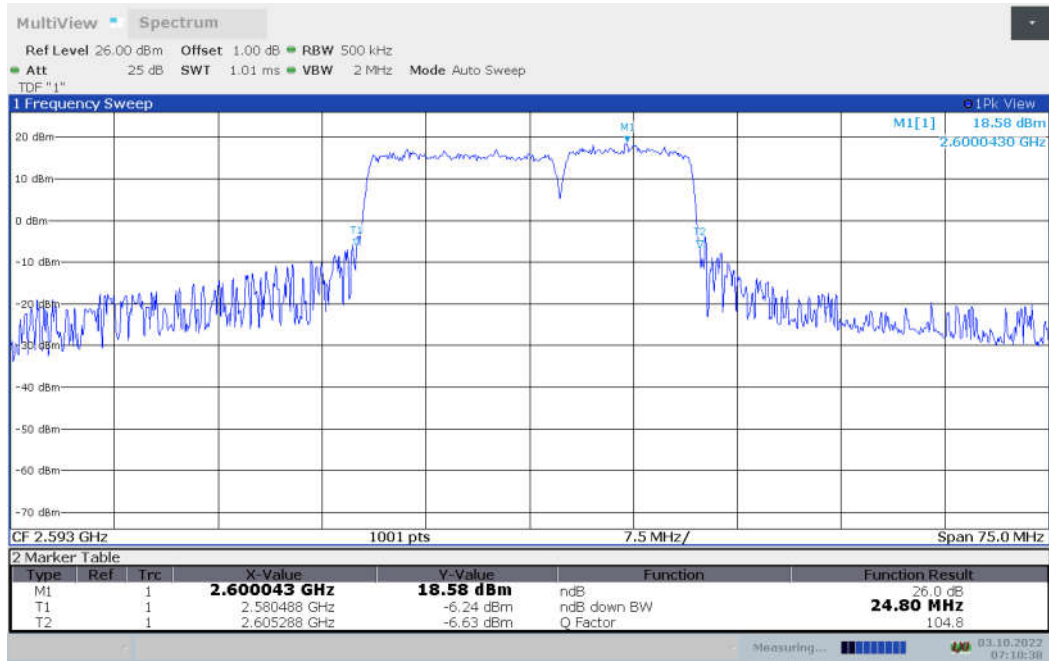


LTE CA band 41, 15MHz+10MHz Bandwidth, 16QAM (-26dBc BW)





LTE CA band 41, 15MHz+10MHz Bandwidth, 64QAM (-26dBc BW)

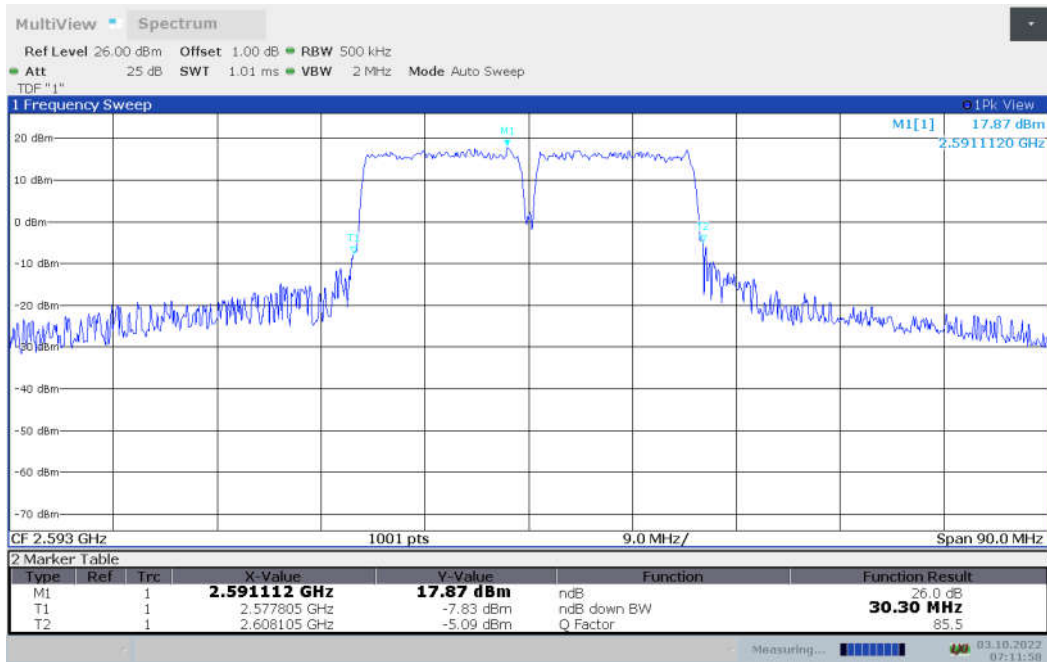




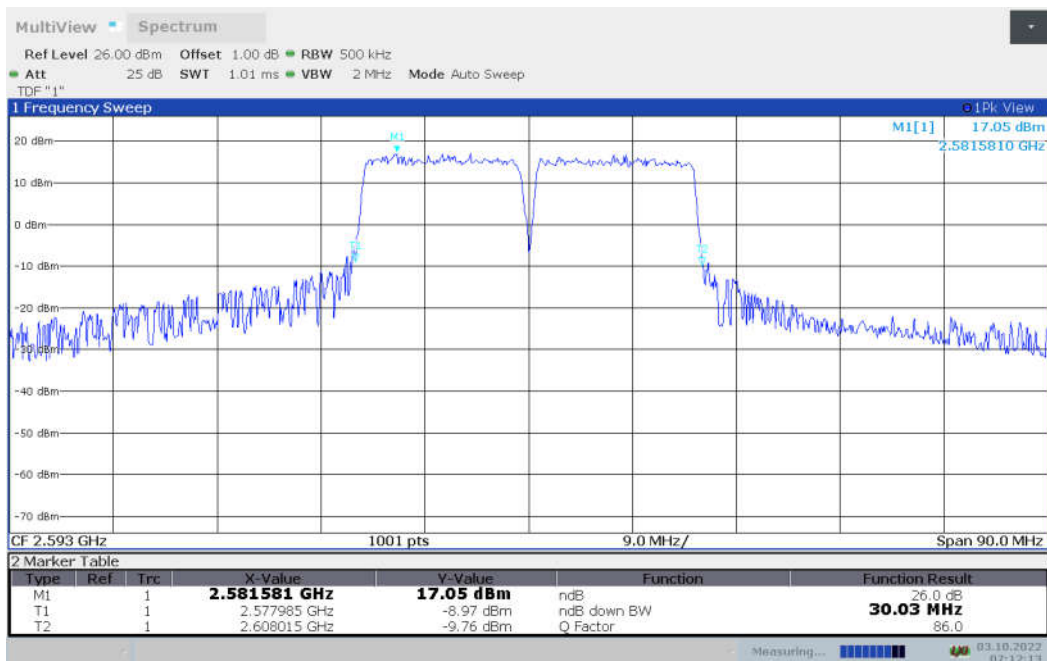
LTE CA band 41, 15MHz+15MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	30.30	30.03	30.12

LTE CA band 41, 15MHz+15MHz Bandwidth, QPSK (-26dBc BW)

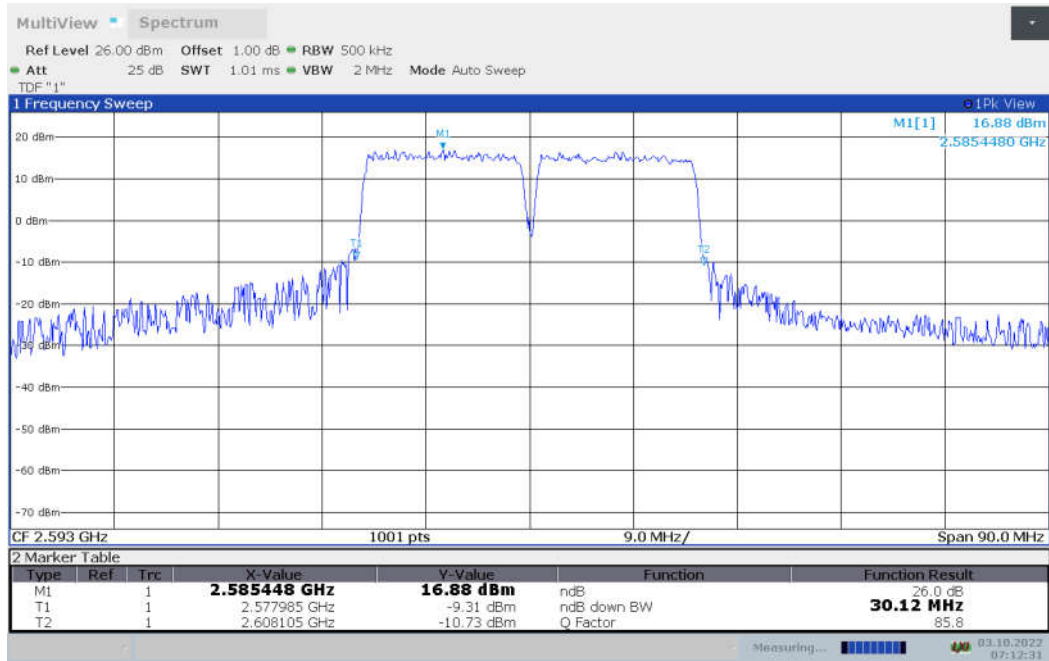


LTE CA band 41, 15MHz+15MHz Bandwidth, 16QAM (-26dBc BW)





LTE CA band 41, 15MHz+15MHz Bandwidth, 64QAM (-26dBc BW)

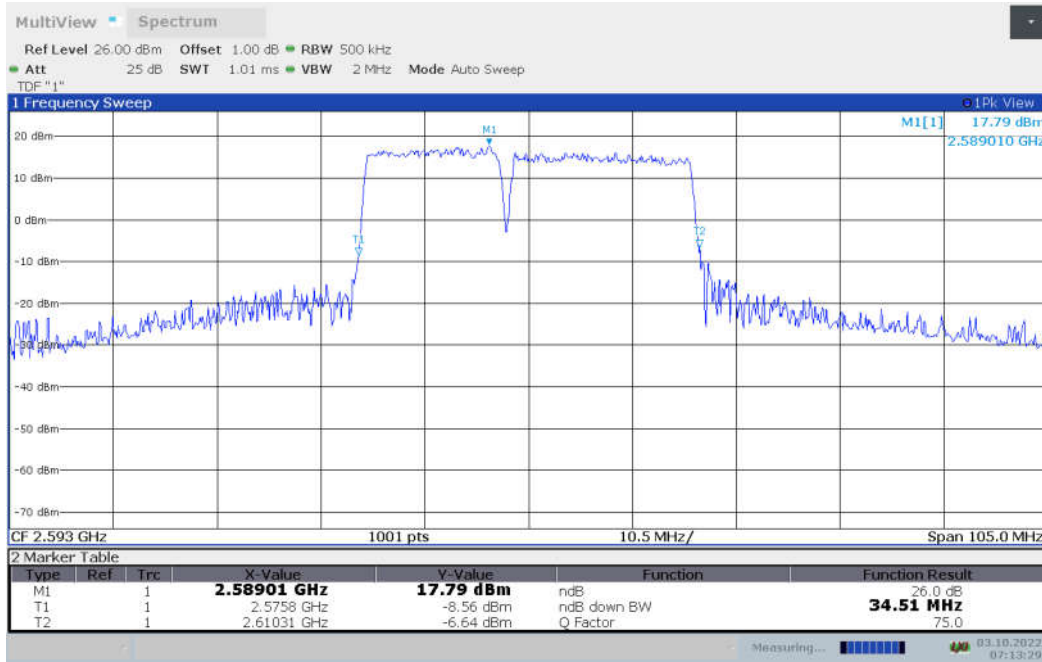




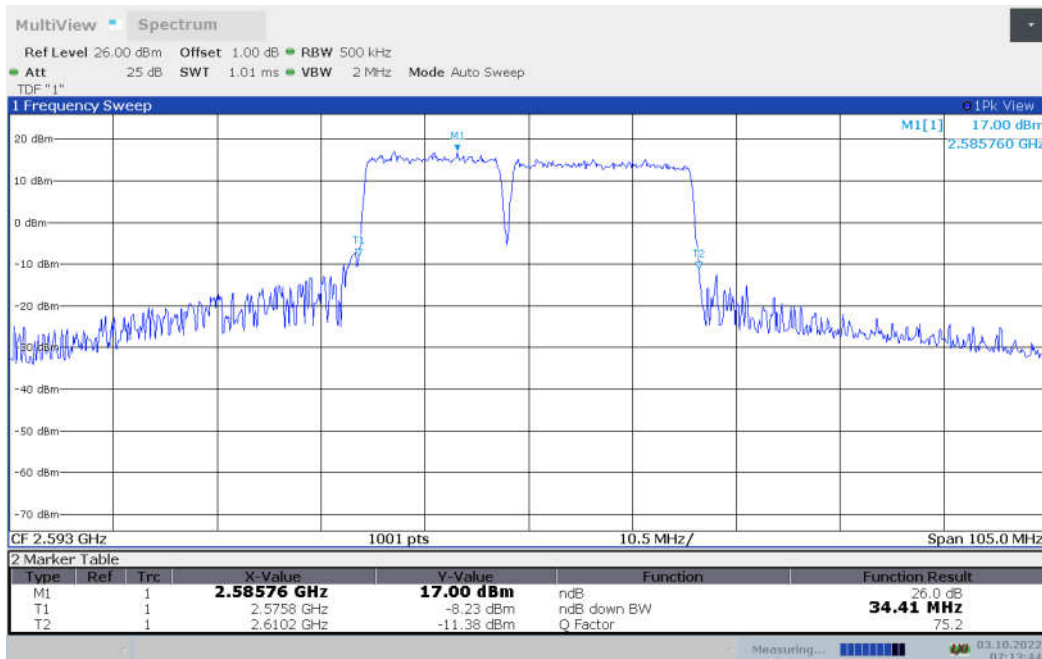
LTE CA band 41, 15MHz+20MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	34.51	34.41	34.41

LTE CA band 41, 15MHz+20MHz Bandwidth, QPSK (-26dBc BW)

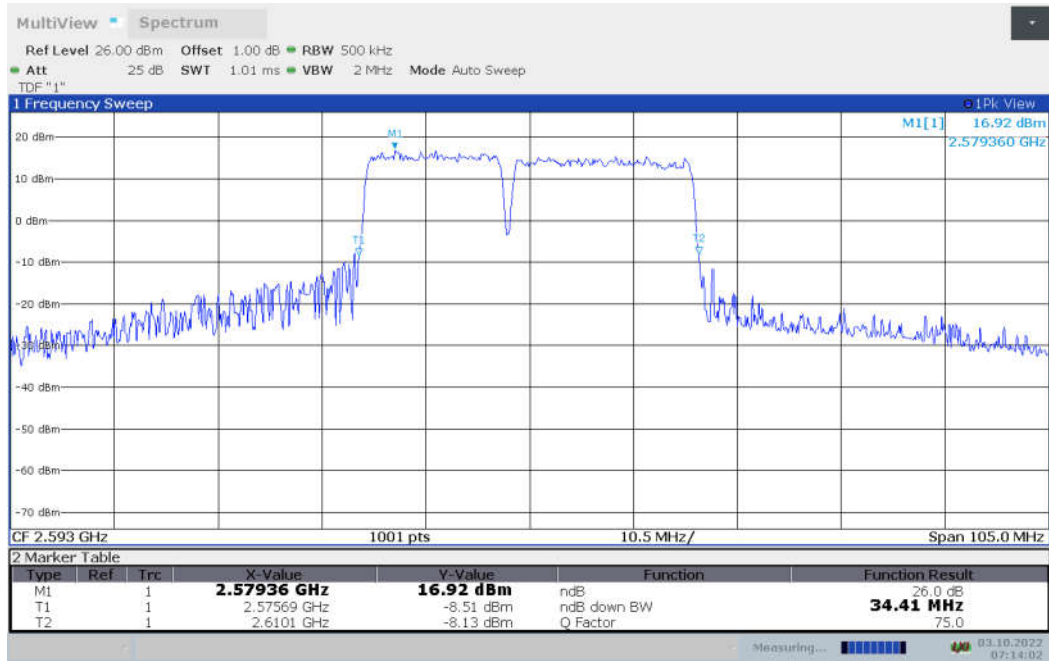


LTE CA band 41, 15MHz+20MHz Bandwidth, 16QAM (-26dBc BW)





LTE CA band 41, 15MHz+20MHz Bandwidth, 64QAM (-26dBc BW)

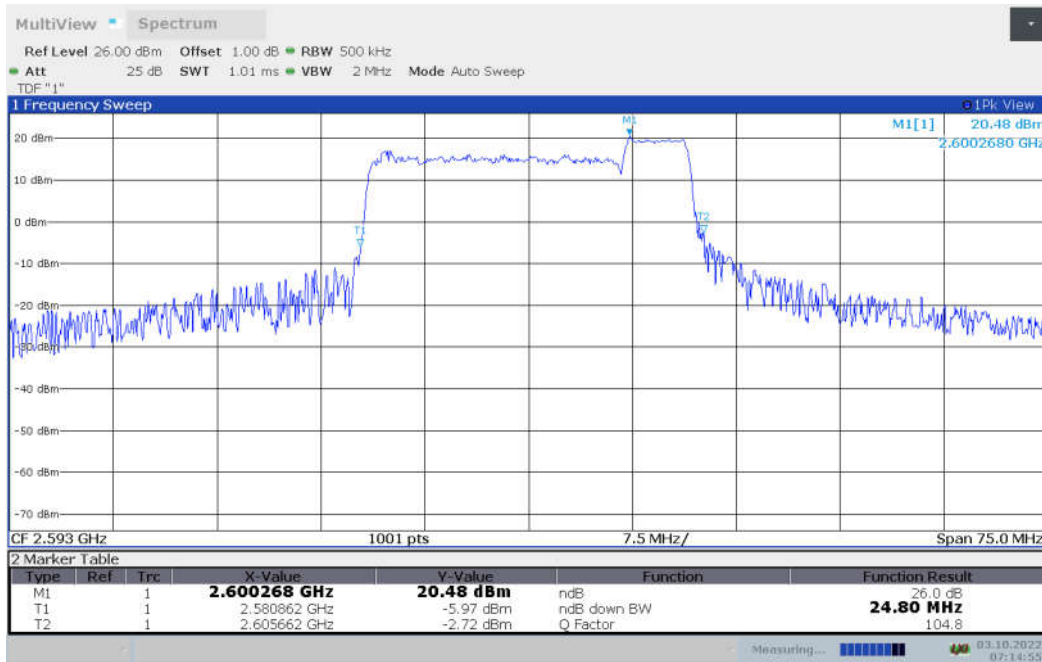




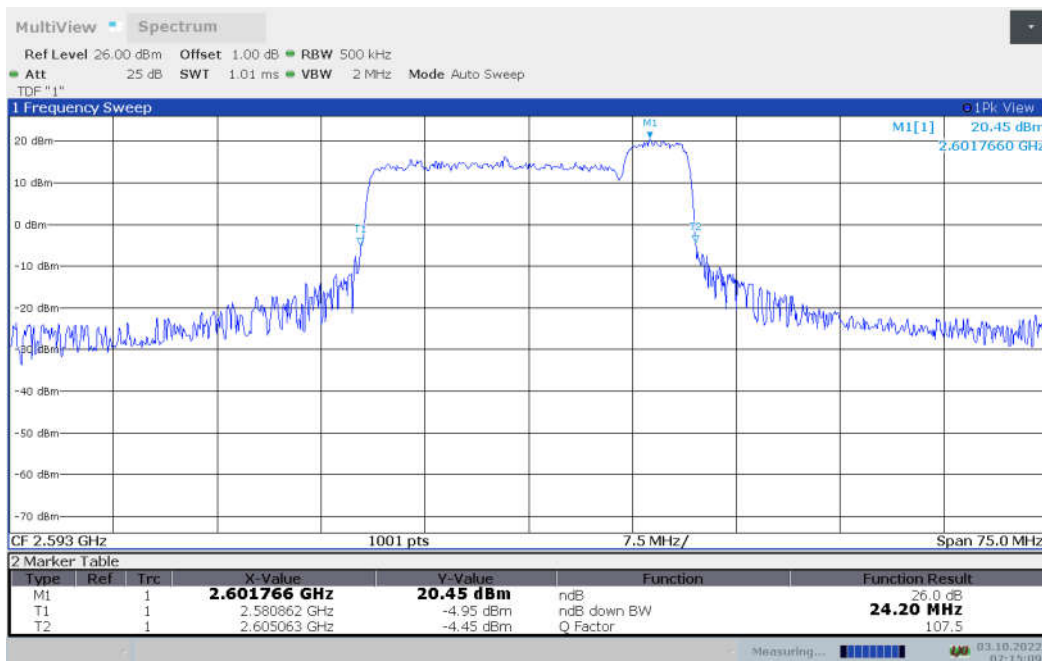
LTE CA band 41, 20MHz+5MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	24.80	24.20	24.20

LTE CA band 41, 20MHz+5MHz Bandwidth, QPSK (-26dBc BW)

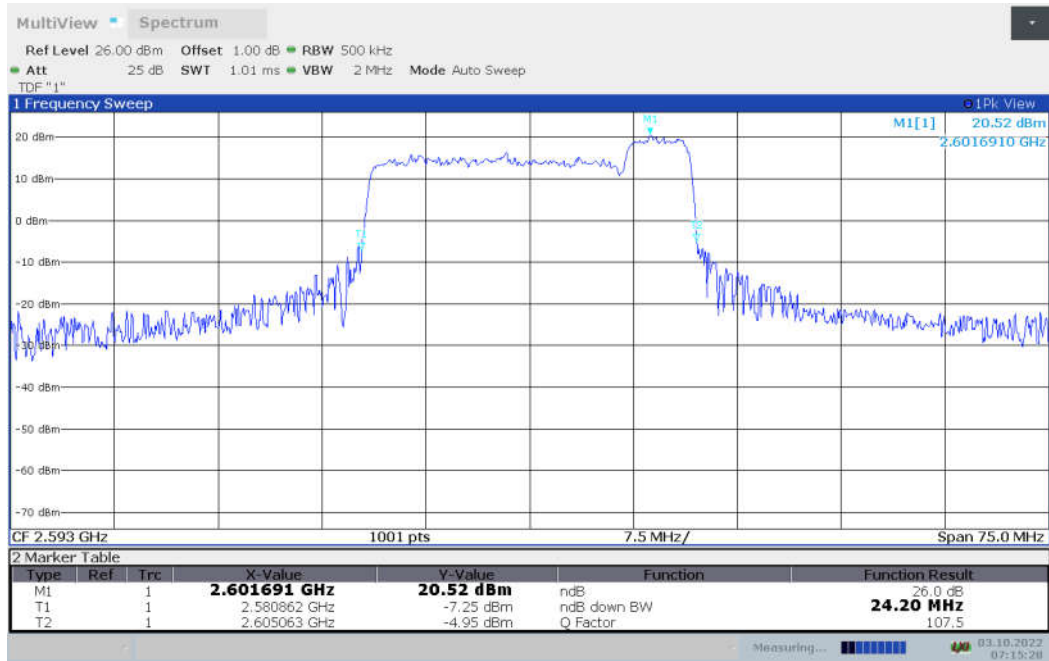


LTE CA band 41, 20MHz+5MHz Bandwidth, 16QAM (-26dBc BW)





LTE CA band 41, 20MHz+5MHz Bandwidth, 64QAM (-26dBc BW)

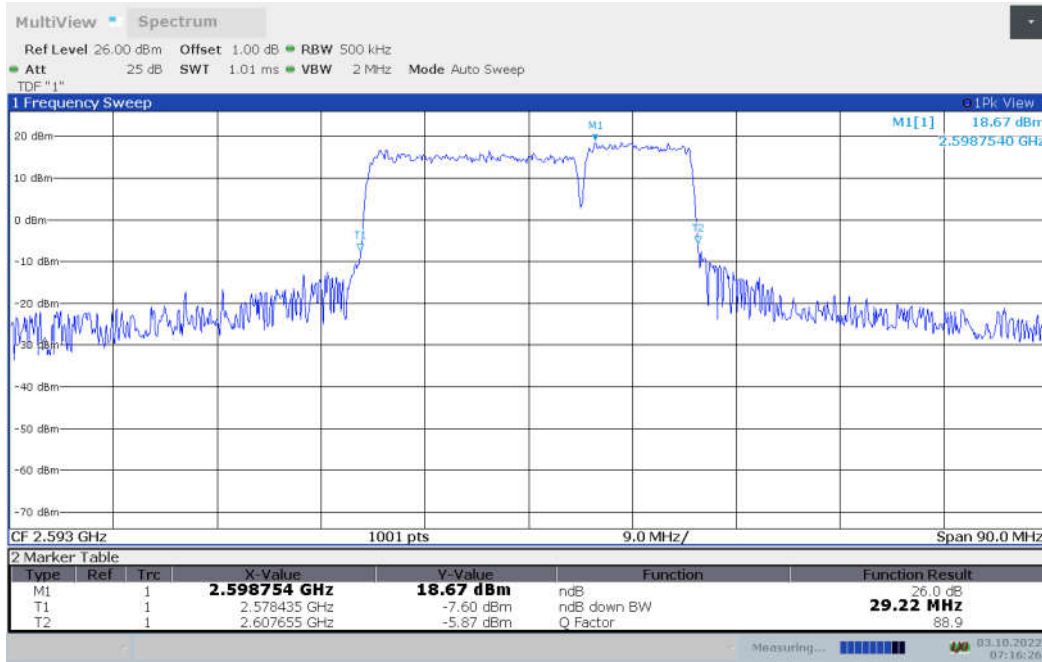




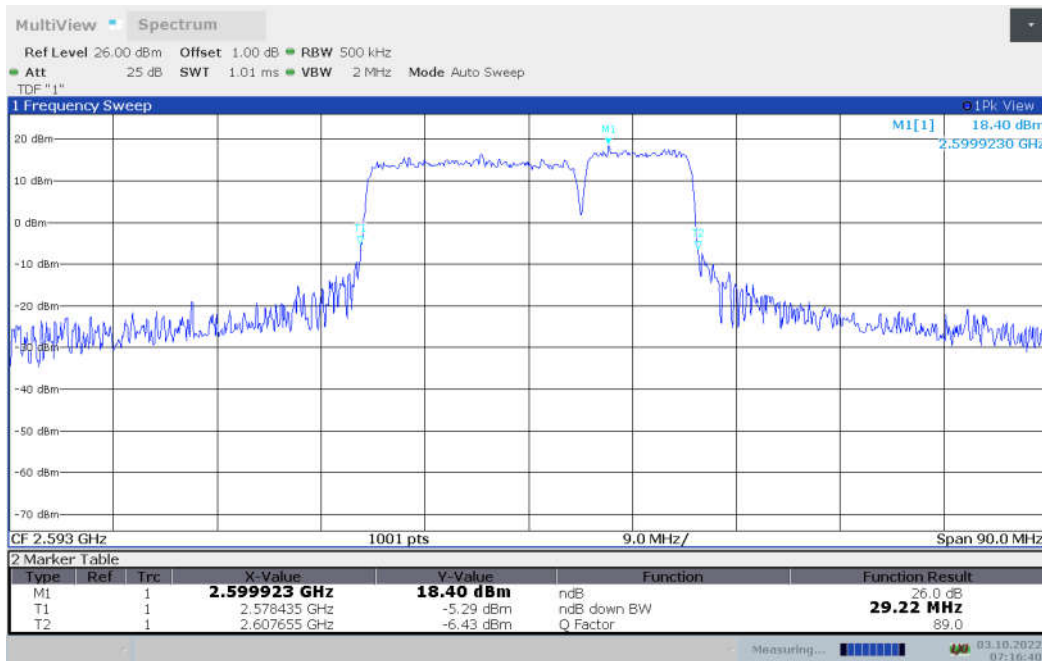
LTE CA band 41, 20MHz+10MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	29.22	29.22	29.40

LTE CA band 41, 20MHz+10MHz Bandwidth, QPSK (-26dBc BW)

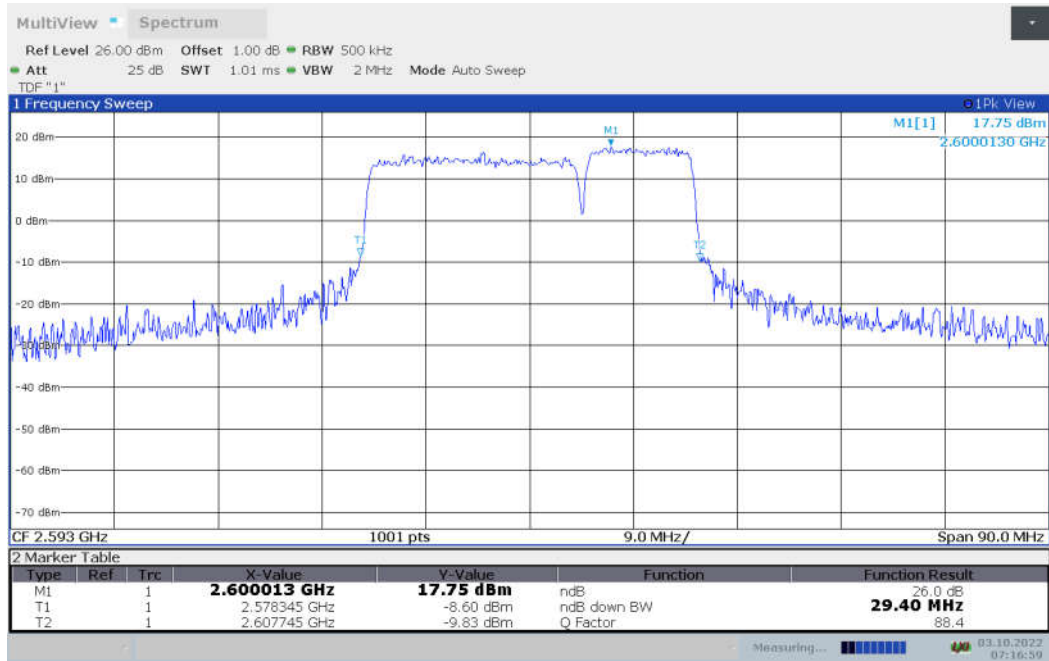


LTE CA band 41, 20MHz+10MHz Bandwidth, 16QAM (-26dBc BW)





LTE CA band 41, 20MHz+10MHz Bandwidth, 64QAM (-26dBc BW)

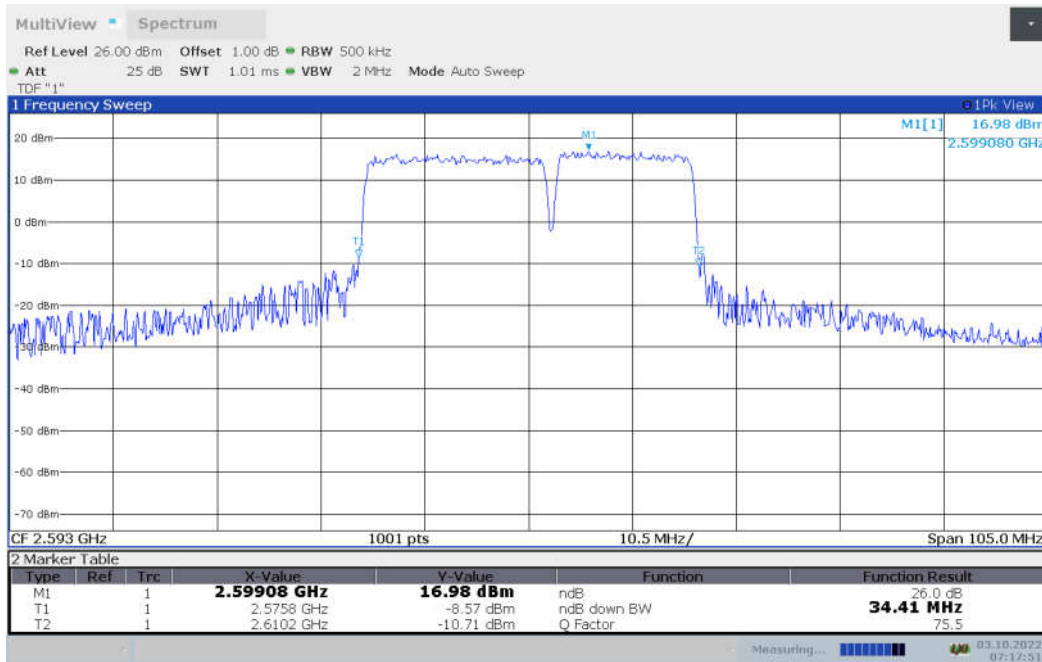




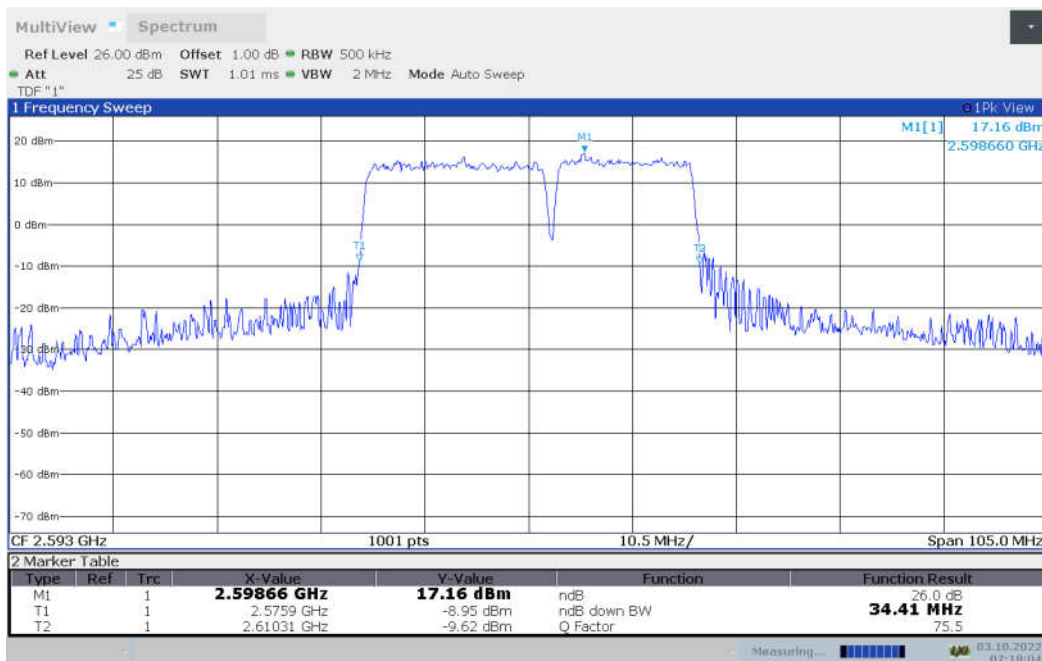
LTE CA band 41, 20MHz+15MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	34.41	34.41	34.83

LTE CA band 41, 20MHz+15MHz Bandwidth, QPSK (-26dBc BW)

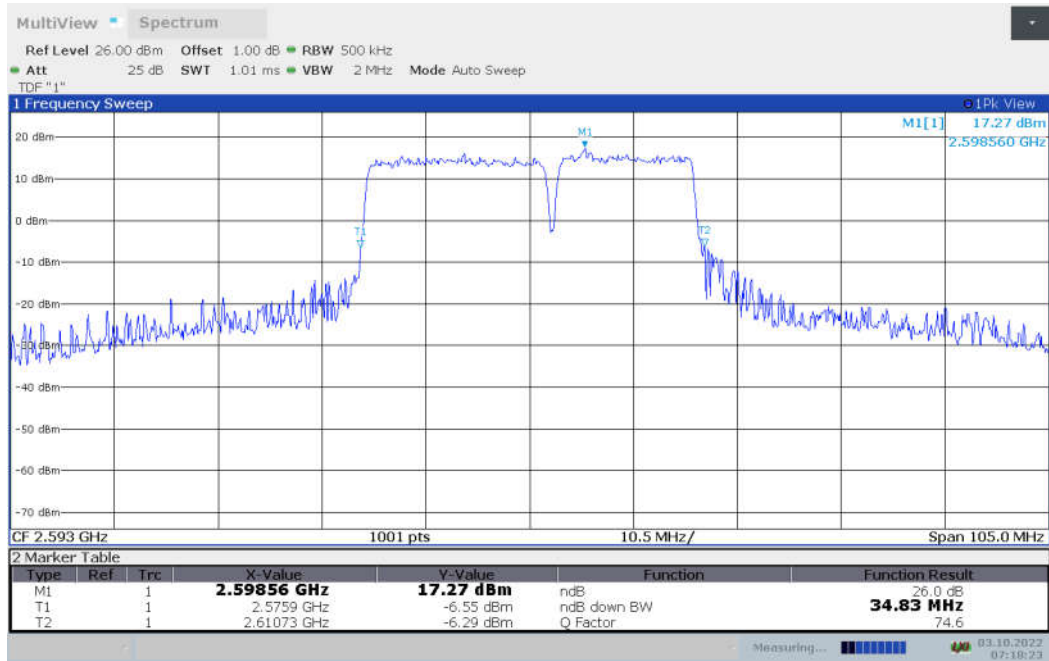


LTE CA band 41, 20MHz+15MHz Bandwidth, 16QAM (-26dBc BW)





LTE CA band 41, 20MHz+15MHz Bandwidth, 64QAM (-26dBc BW)

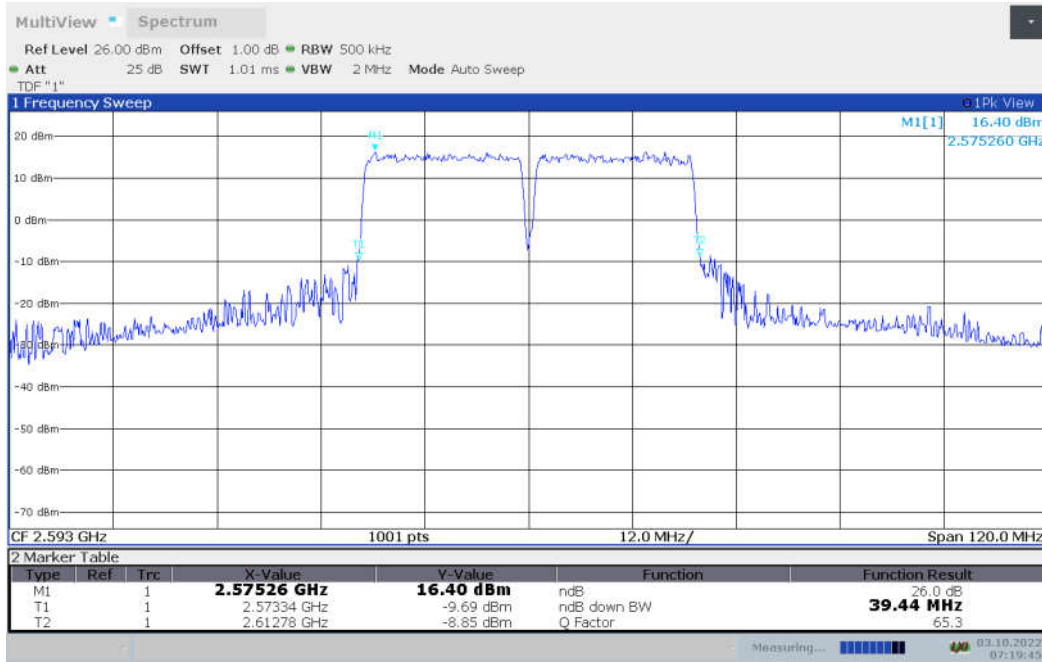




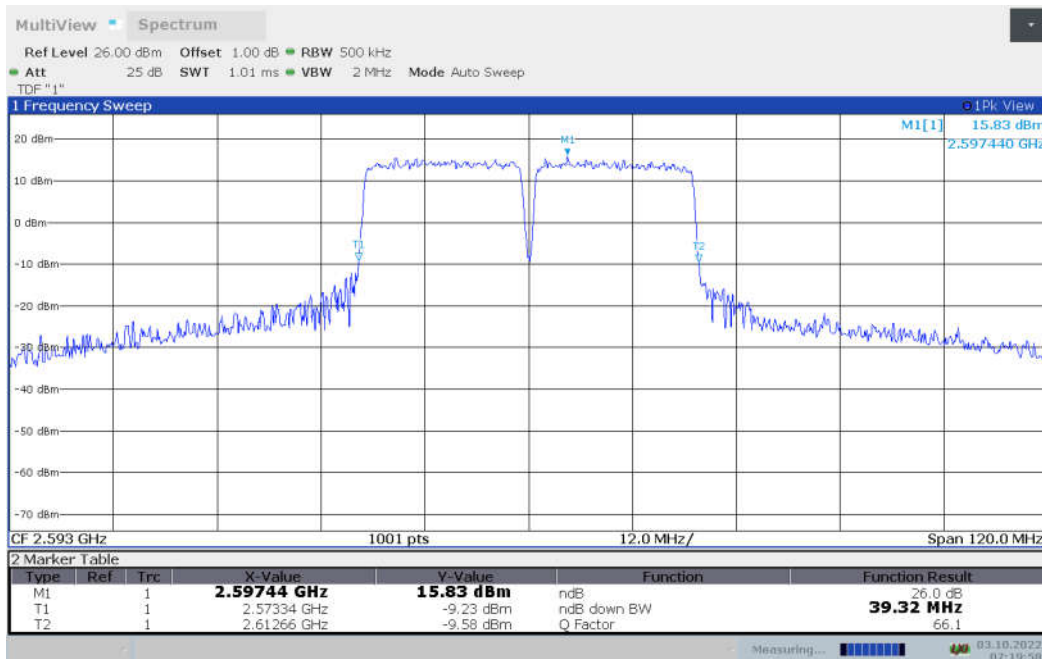
LTE CA band 41, 20MHz+20MHz (-26dBc BW)

Frequency(MHz)	Occupied Bandwidth (-26dBc BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	39.44	39.32	39.32

LTE CA band 41, 20MHz+20MHz Bandwidth, QPSK (-26dBc BW)

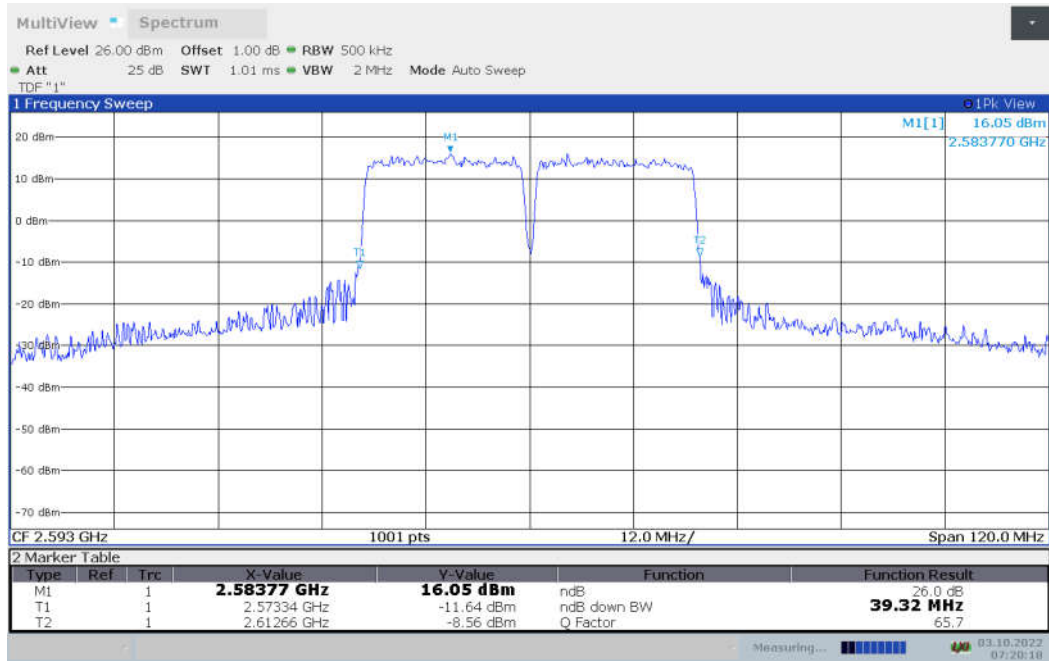


LTE CA band 41, 20MHz+20MHz Bandwidth, 16QAM (-26dBc BW)





LTE CA band 41, 20MHz+20MHz Bandwidth, 64QAM (-26dBc BW)





A.6 BAND EDGE COMPLIANCE

Reference

FCC: CFR Part 2.1051, 22.917, 24.238, 27.53, 90.691.

A.6.1 Measurement limit

Part 22.917 For operations in the 824–849MHz band, the FCC limit is $43 + 10 \log (P)$ dB below the transmitter power(P) in a 100kHz bandwidth. However, in the 1MHz 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.

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 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.6.2 Measurement Procedure

The testing follows ANSI C63.26



- a) The EUT was connected to spectrum analyzer and system simulator via a power divider.
- b) The band edges of low and high channels for the highest RF powers were measured.
- c) Set RBW \geq 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
- d) Set spectrum analyzer with RMS detector.
- e) The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- f) Checked that all the results comply with the emission limit line.

A.6.3 Measurement result

Only worst case result is given below

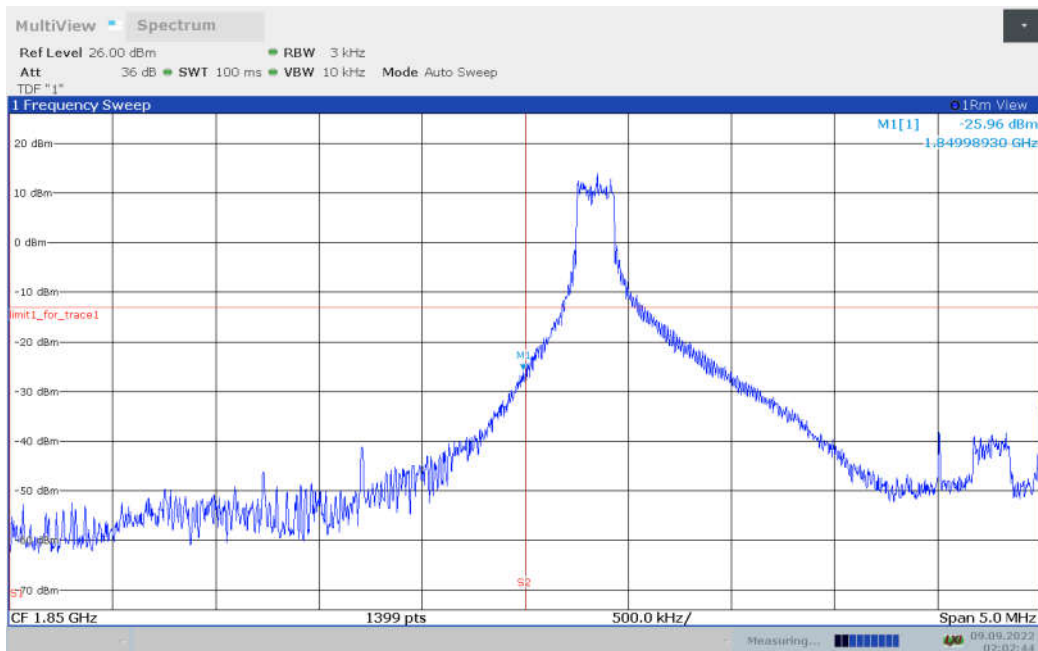


LTE band 2

OBW: 1RB-LOW_offset



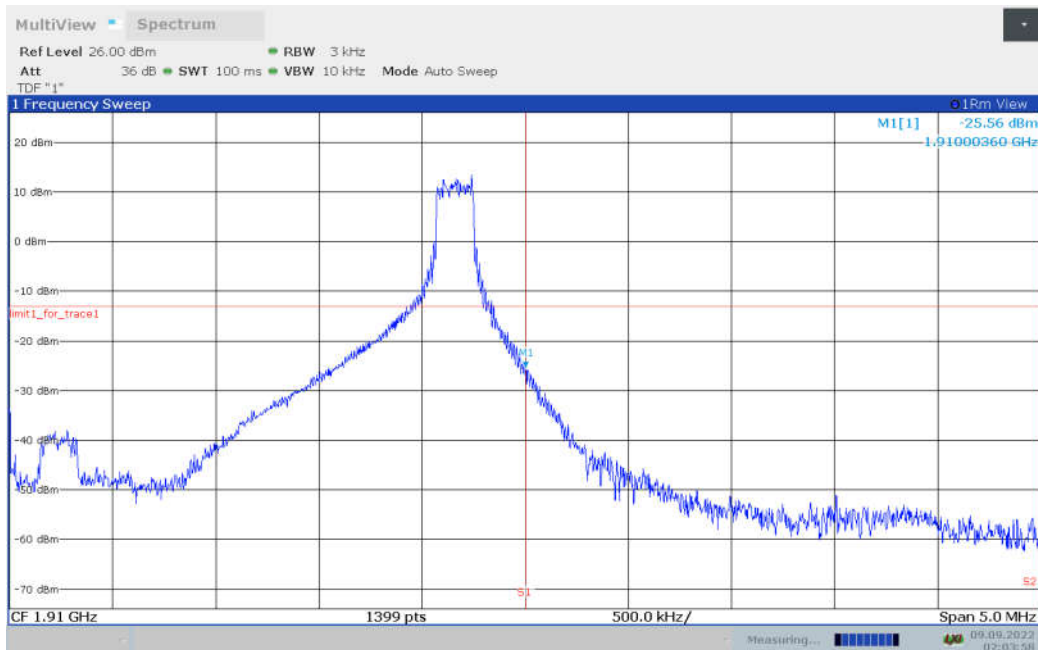
LOW BAND EDGE BLOCK-1RB-5M_offset



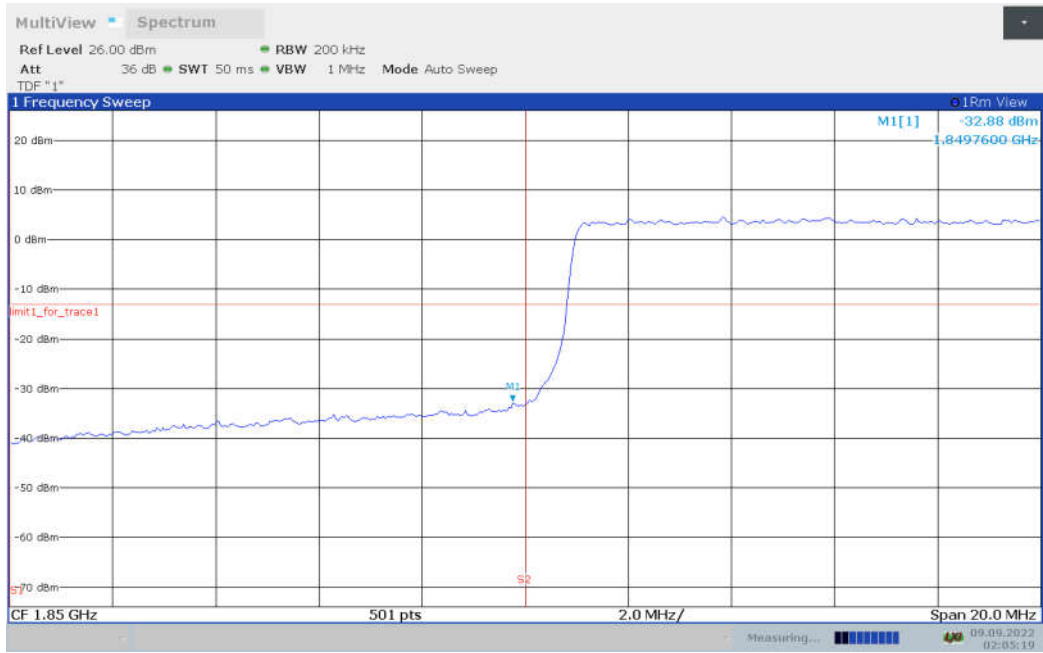
OBW: 1RB-HIGH_offset



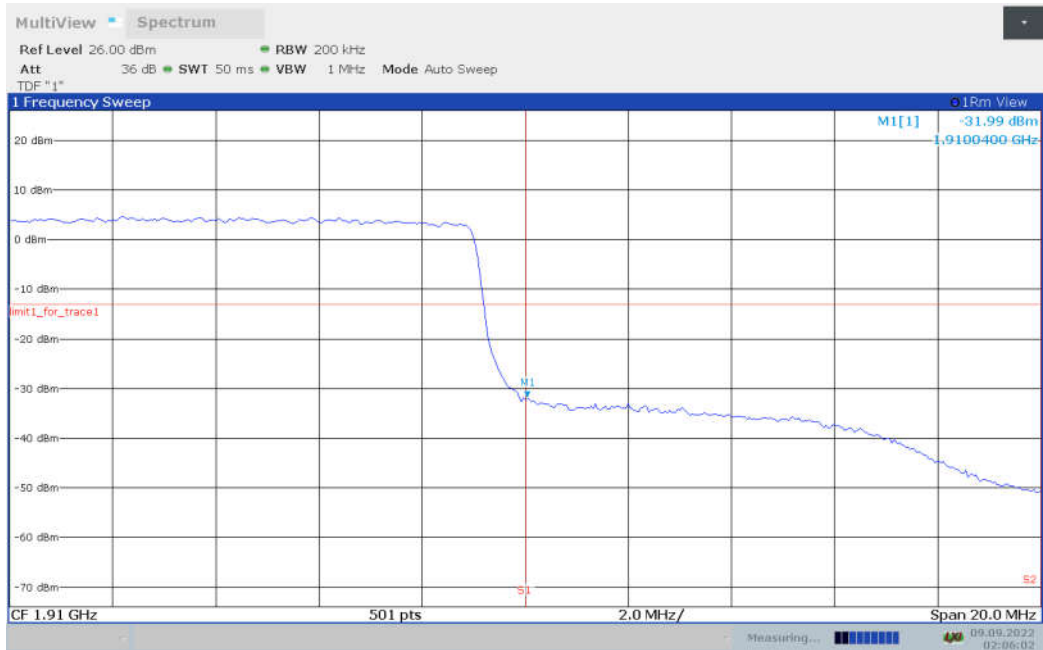
HIGH BAND EDGE BLOCK-1RB-5M_offset



LOW BAND EDGE BLOCK-1RB-20M_offset



HIGH BAND EDGE BLOCK-1RB-20M_offset



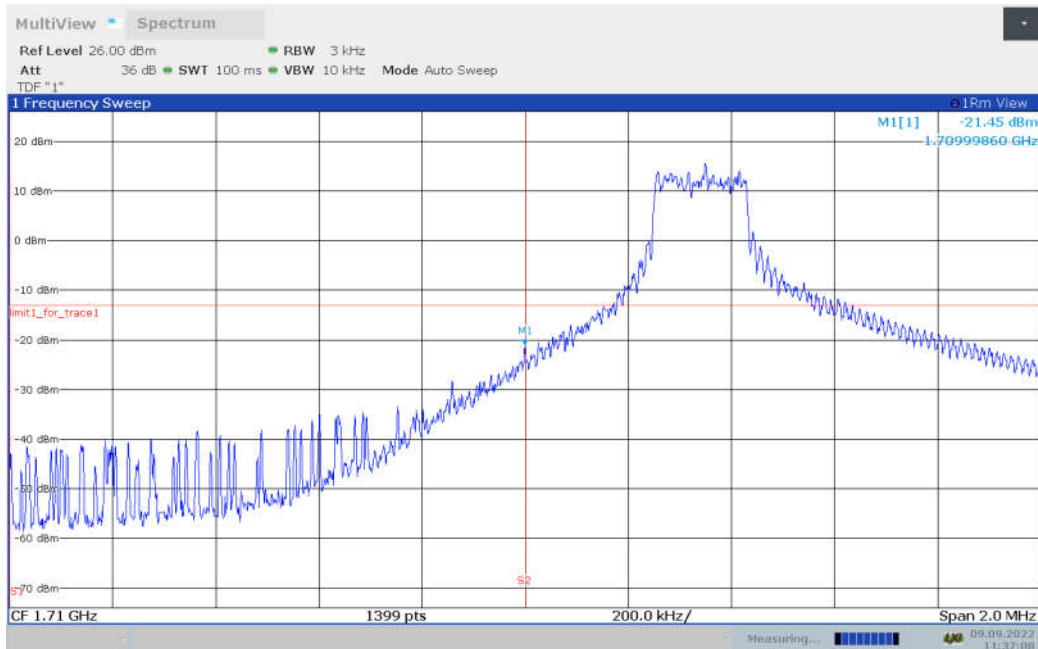


LTE band 4

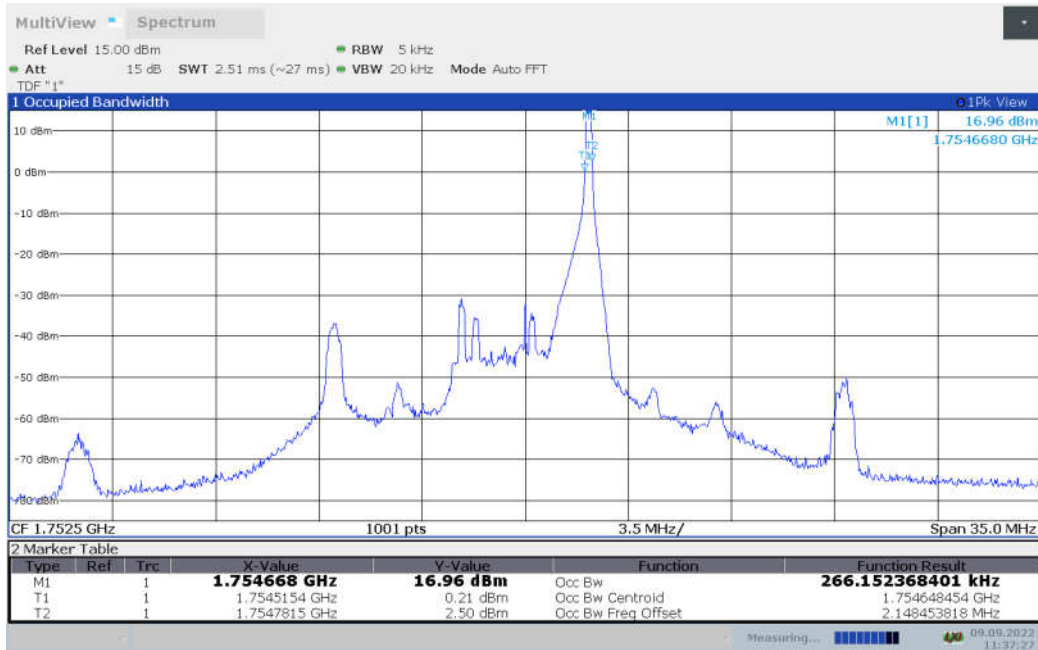
OBW: 1RB-LOW_offset



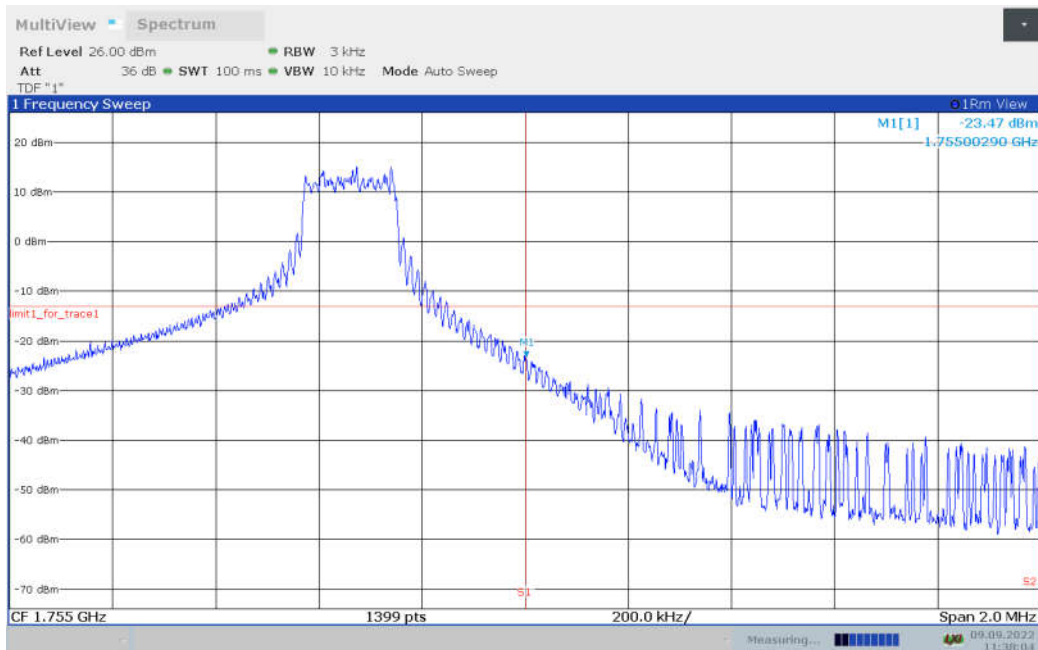
LOW BAND EDGE BLOCK-1RB-5M_offset



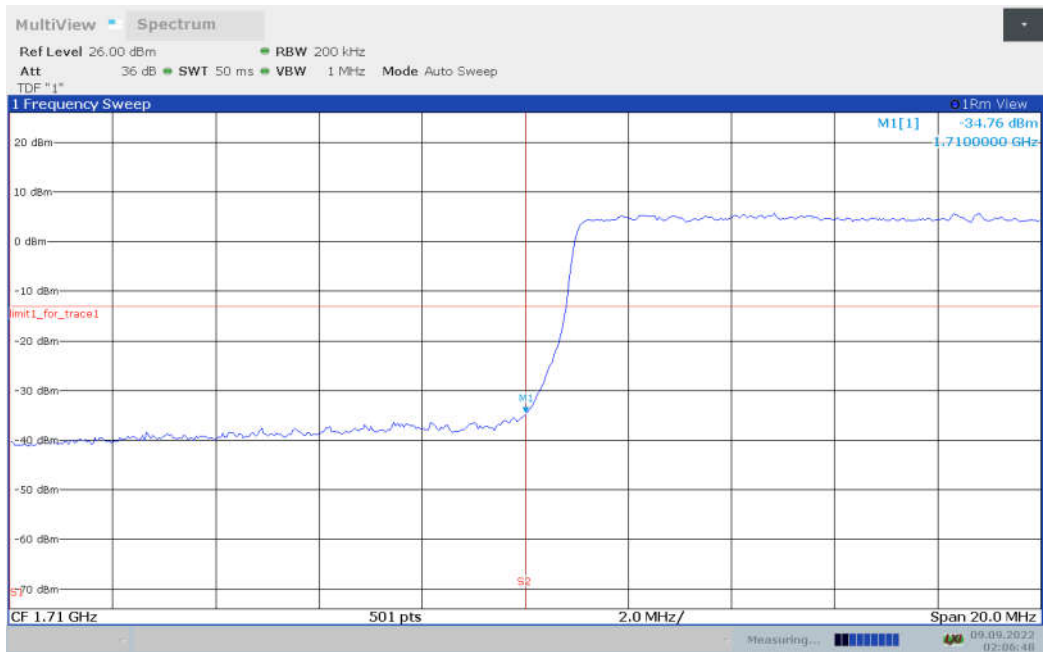
OBW: 1RB-HIGH_offset



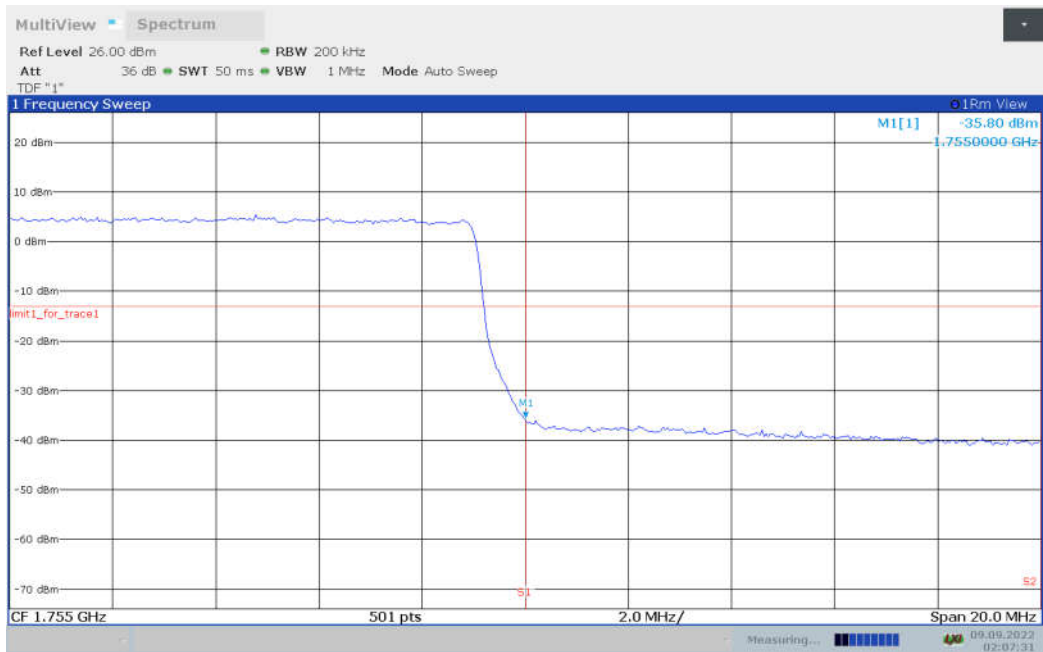
HIGH BAND EDGE BLOCK-1RB-5M_offset



LOW BAND EDGE BLOCK-1RB-20M_offset



HIGH BAND EDGE BLOCK-1RB-20M_offset



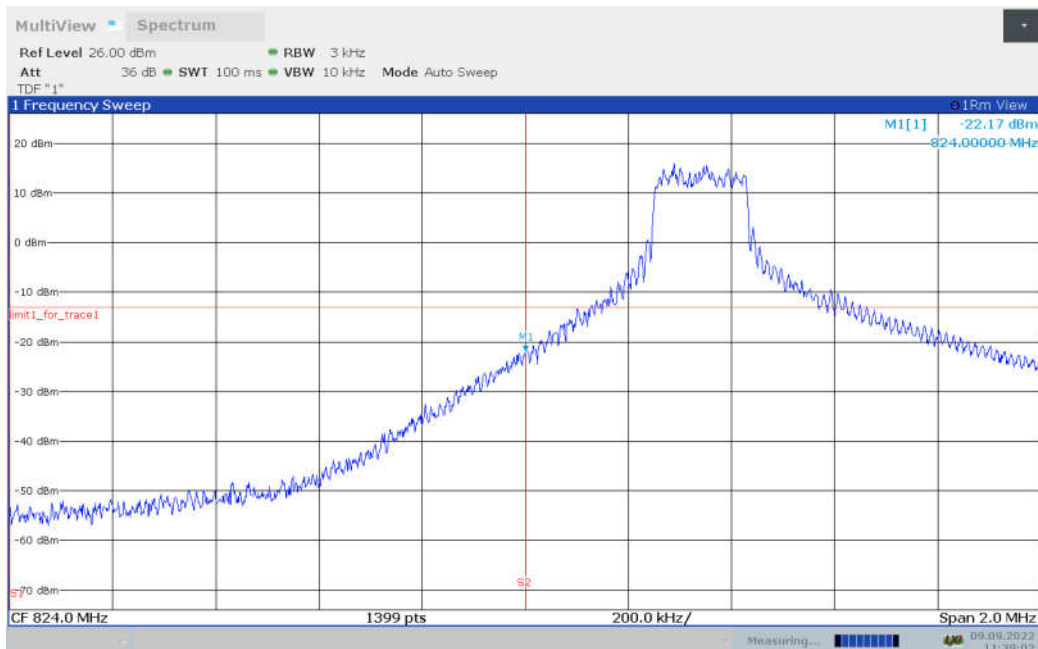


LTE band 5

OBW: 1RB-LOW_offset



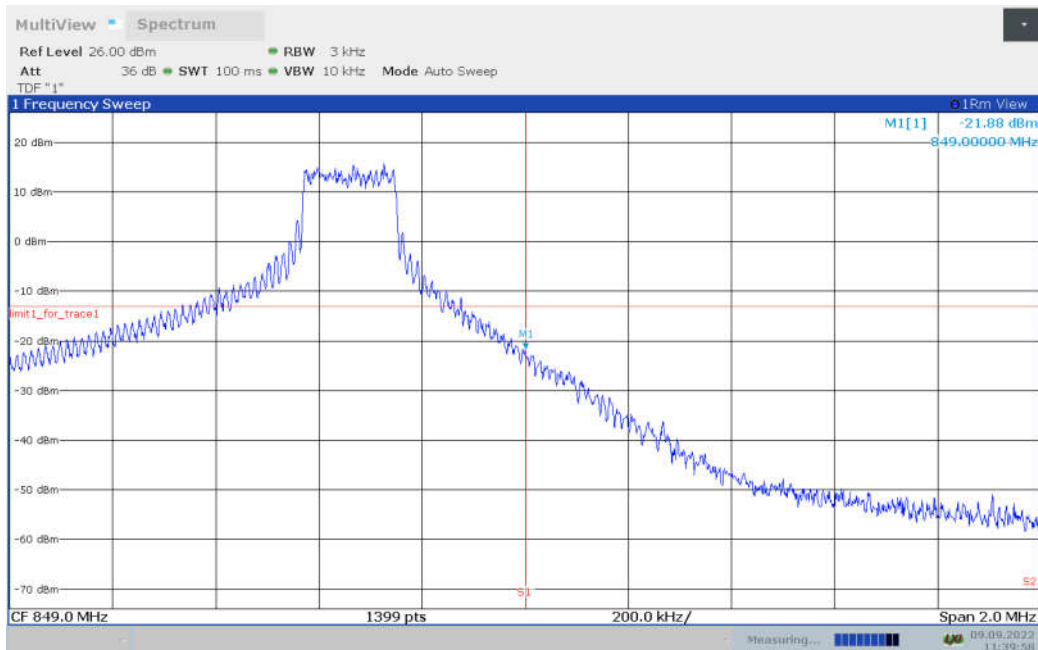
LOW BAND EDGE BLOCK-1RB-5M_offset



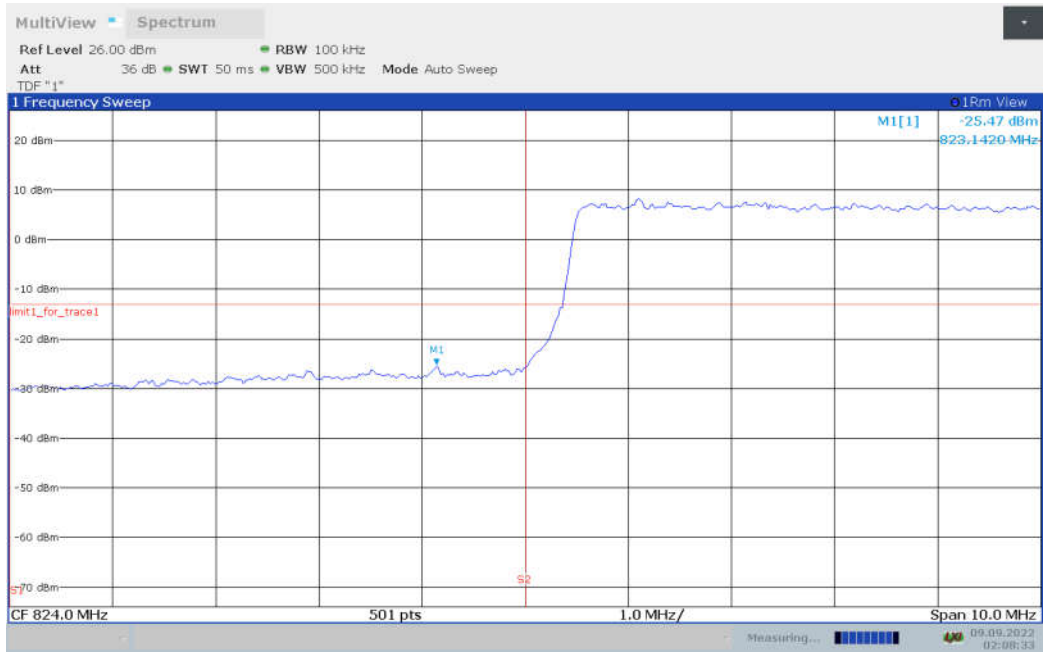
OBW: 1RB-HIGH_offset



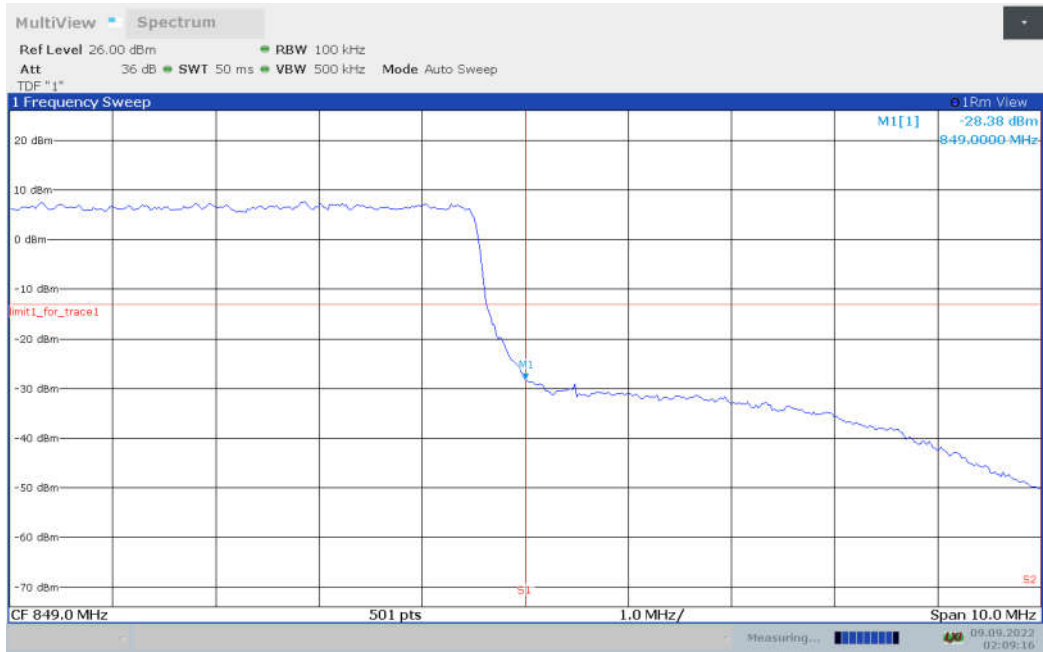
HIGH BAND EDGE BLOCK-1RB-5M_offset



LOW BAND EDGE BLOCK-1RB-10M_offset



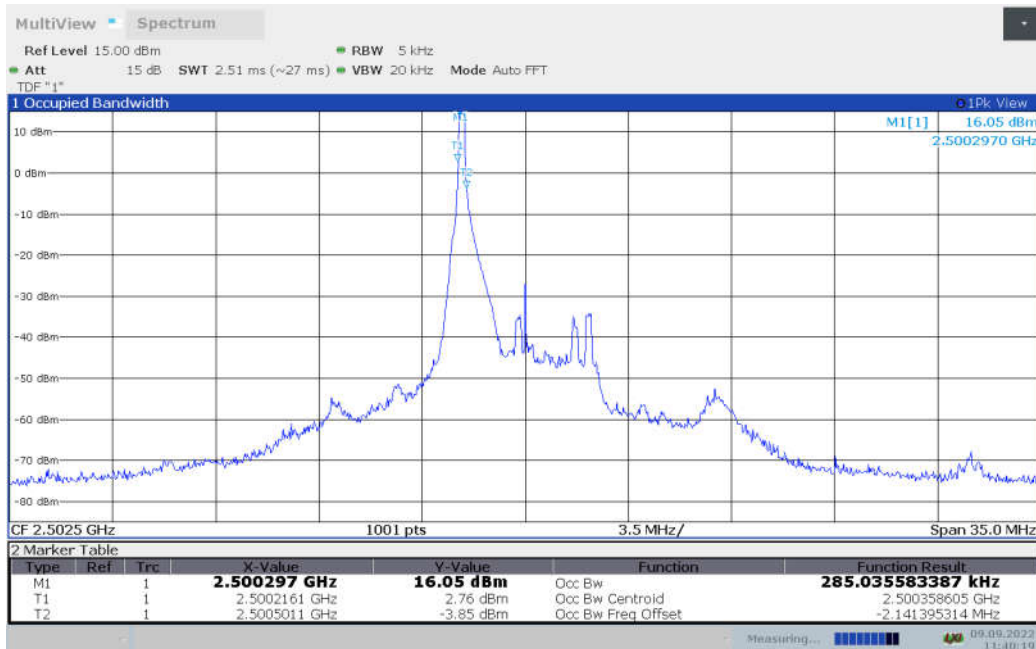
HIGH BAND EDGE BLOCK-1RB-10M_offset





LTE band 7

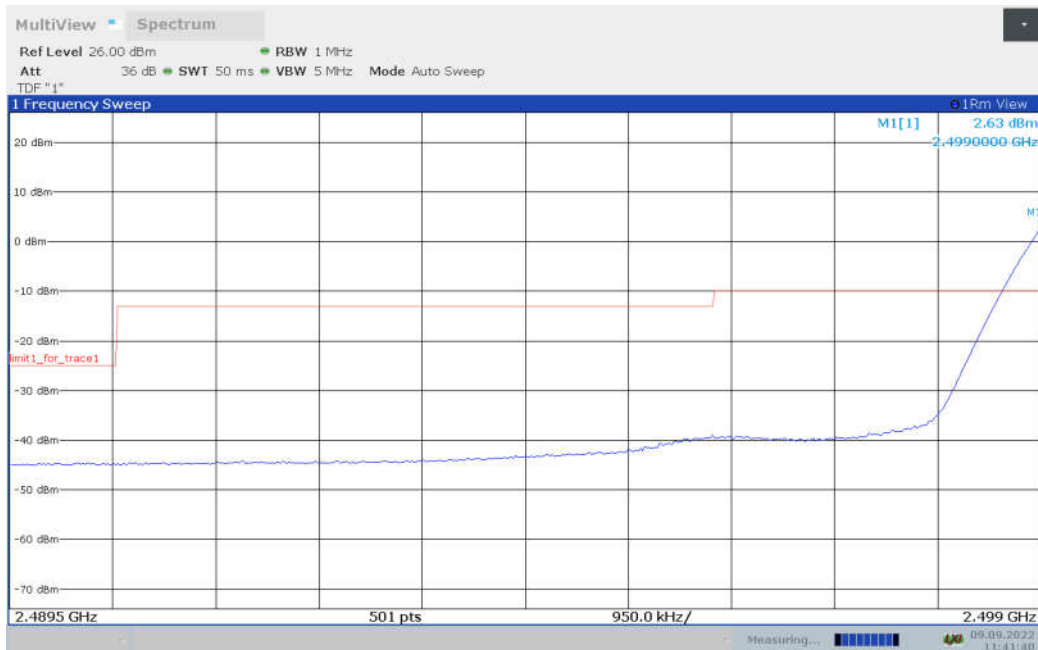
OBW: 1RB-LOW_offset



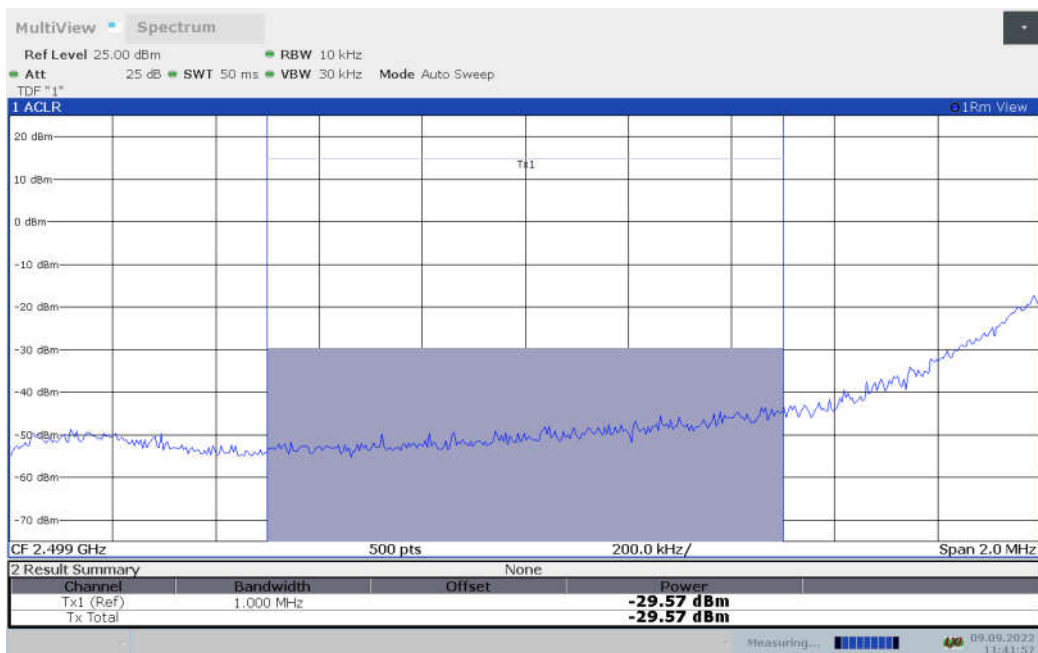
LOW BAND EDGE BLOCK-1RB-5M_offset



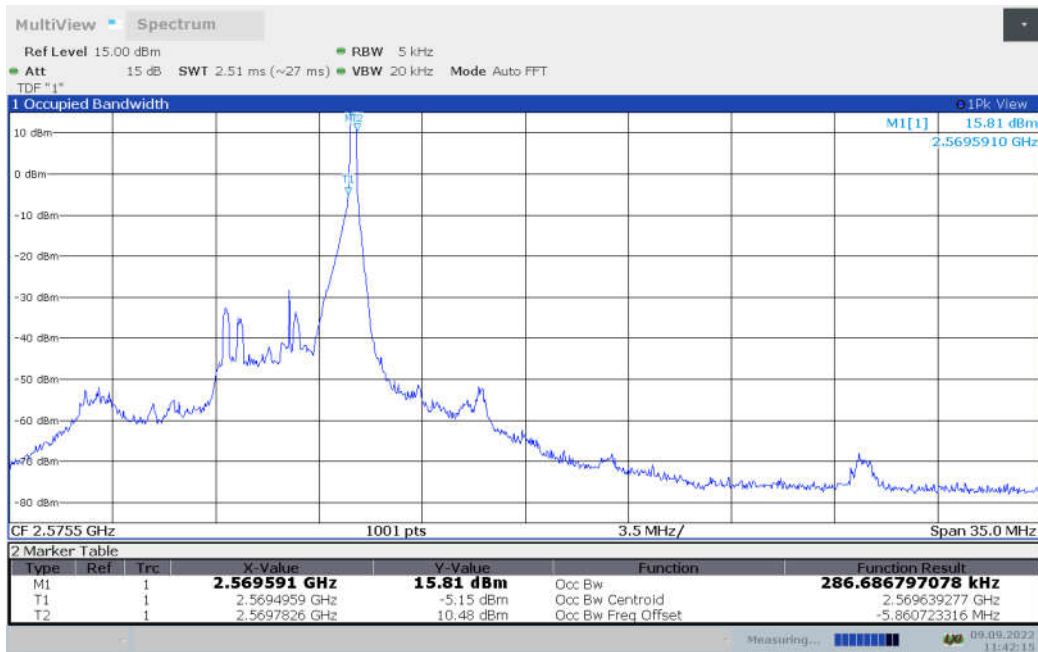
LOW BAND EDGE BLOCK-1RB-5M_offset



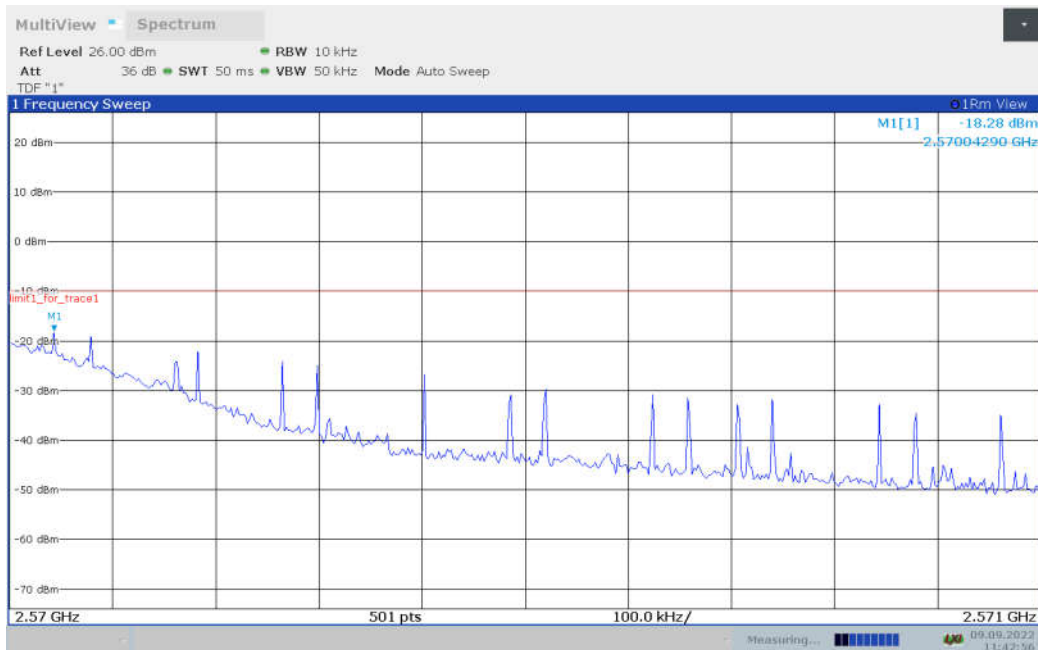
Channel Power



OBW: 1RB-HIGH_offset



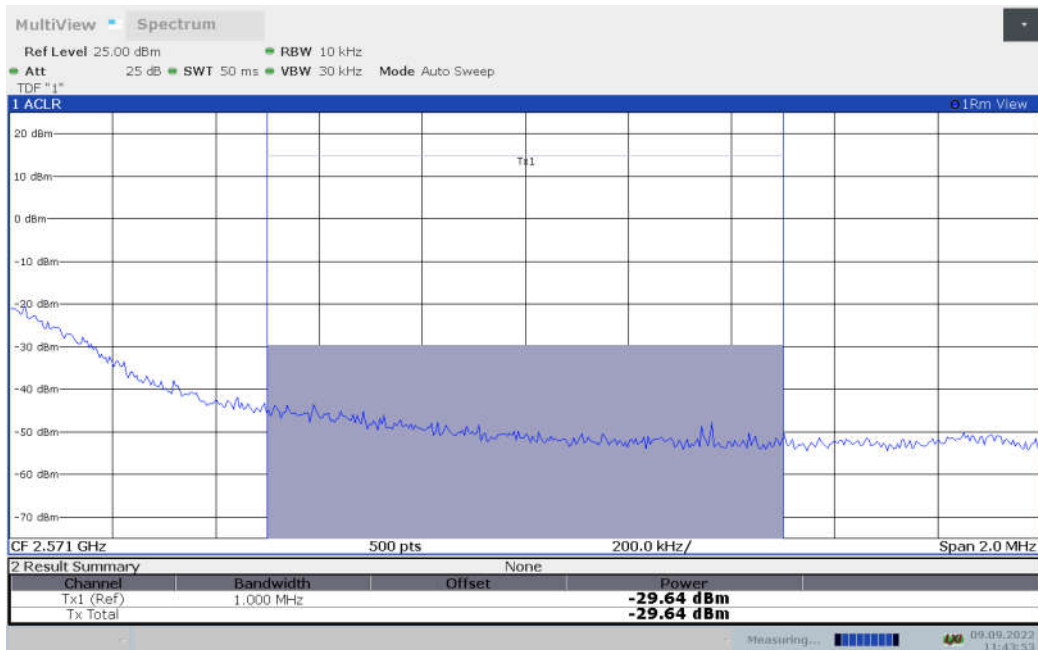
HIGH BAND EDGE BLOCK-1RB-5M_offset



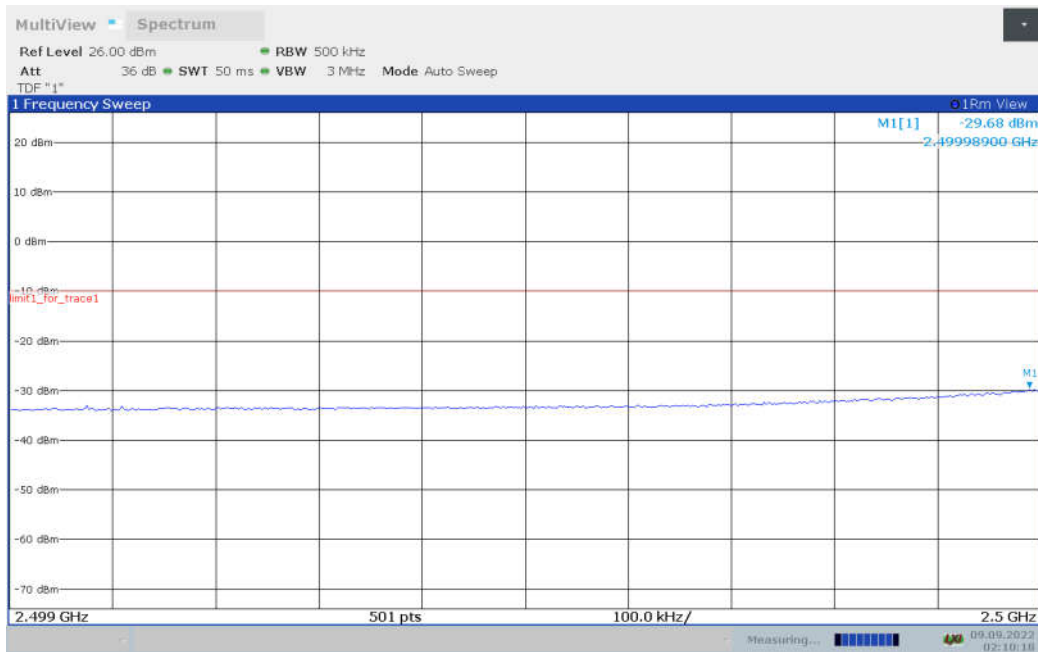
HIGH BAND EDGE BLOCK-1RB-5M_offset



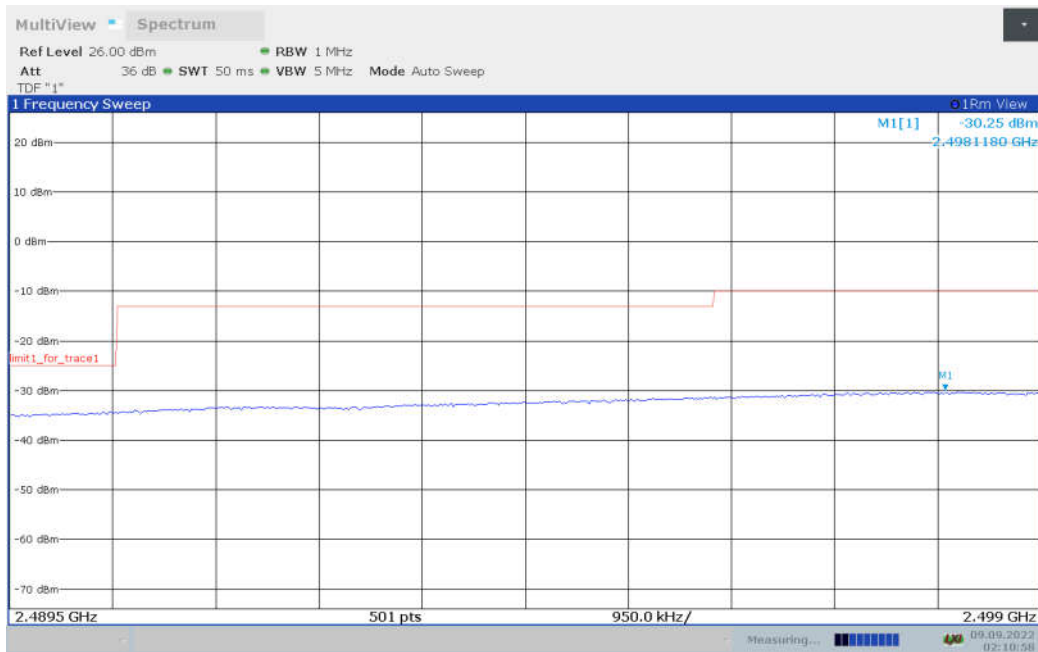
Channel Power



LOW BAND EDGE BLOCK-1RB-20M_offset



LOW BAND EDGE BLOCK-1RB-20M_offset



HIGH BAND EDGE BLOCK-1RB-20M_offset