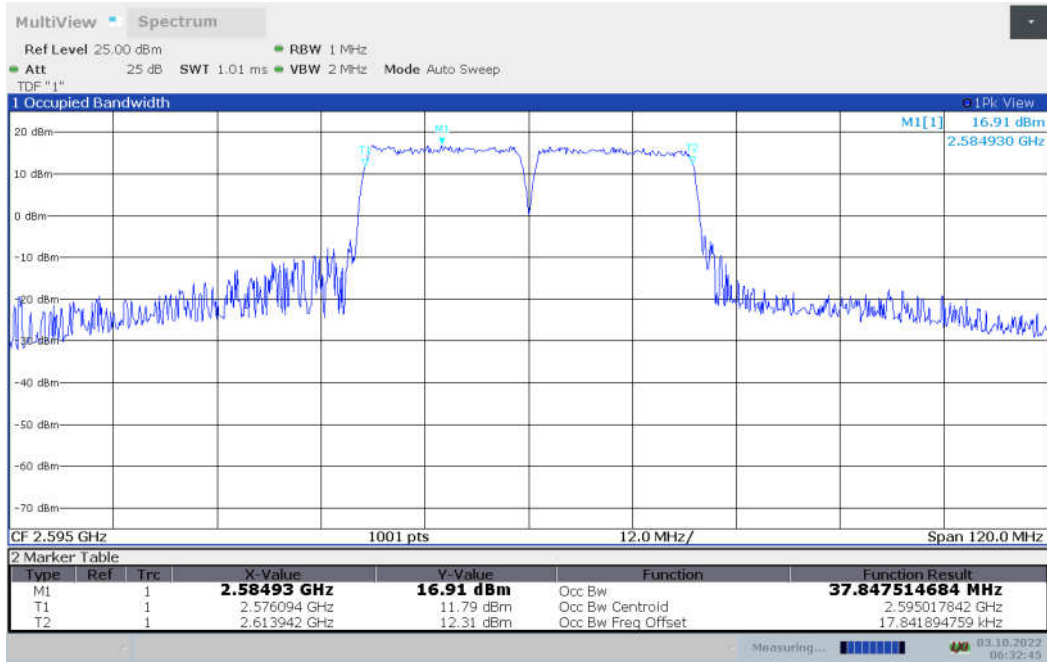




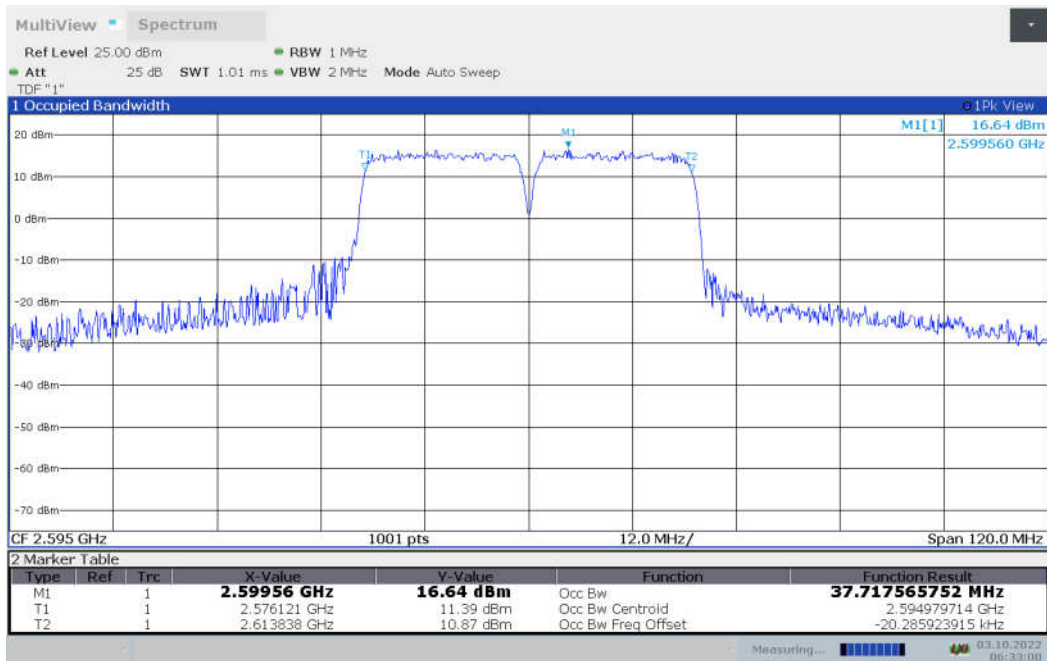
LTE CA band 38, 20MHz+20MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(MHz)		
	2595.0	QPSK	16QAM
	37.848	37.718	37.761

LTE CA band 38, 20MHz+20MHz Bandwidth, QPSK (99% BW)

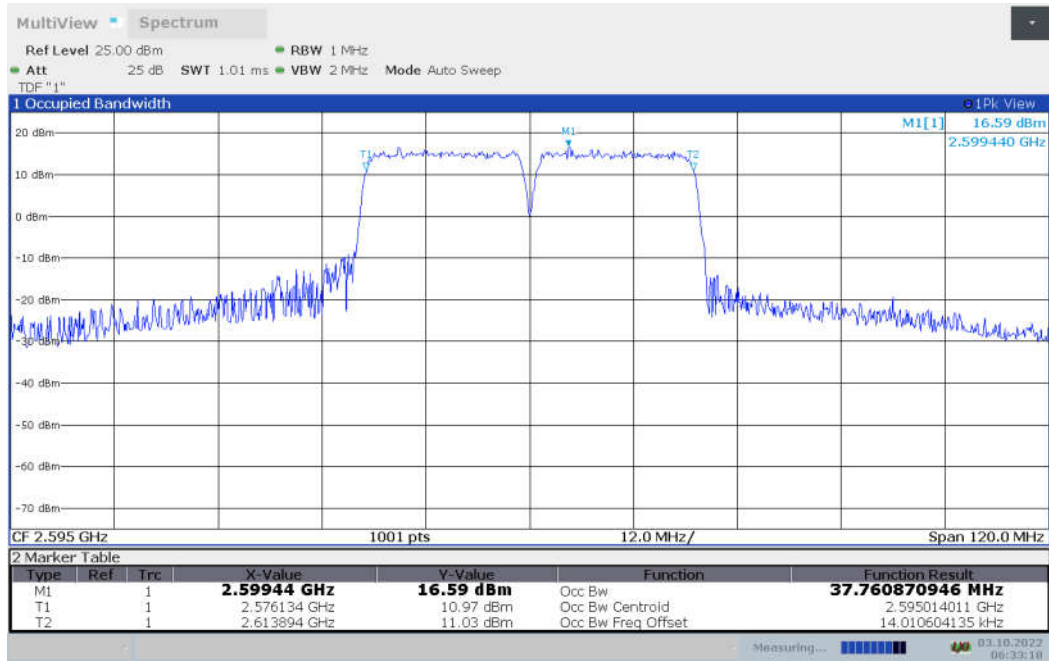


LTE CA band 38, 20MHz+20MHz Bandwidth, 16QAM (99% BW)





LTE CA band 38, 20MHz+20MHz Bandwidth, 64QAM (99% BW)

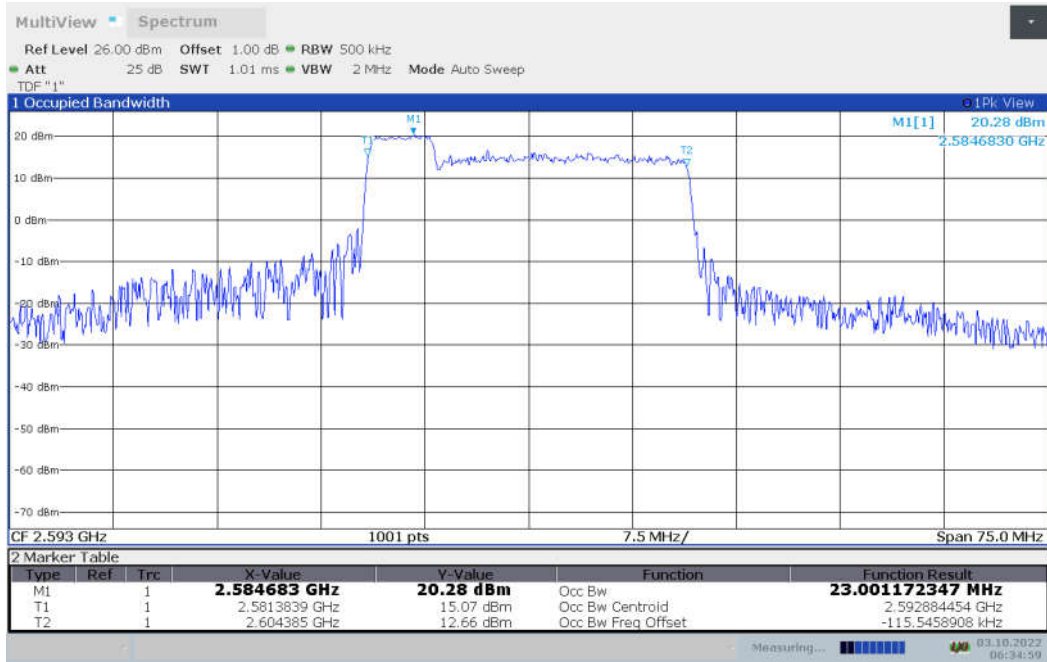




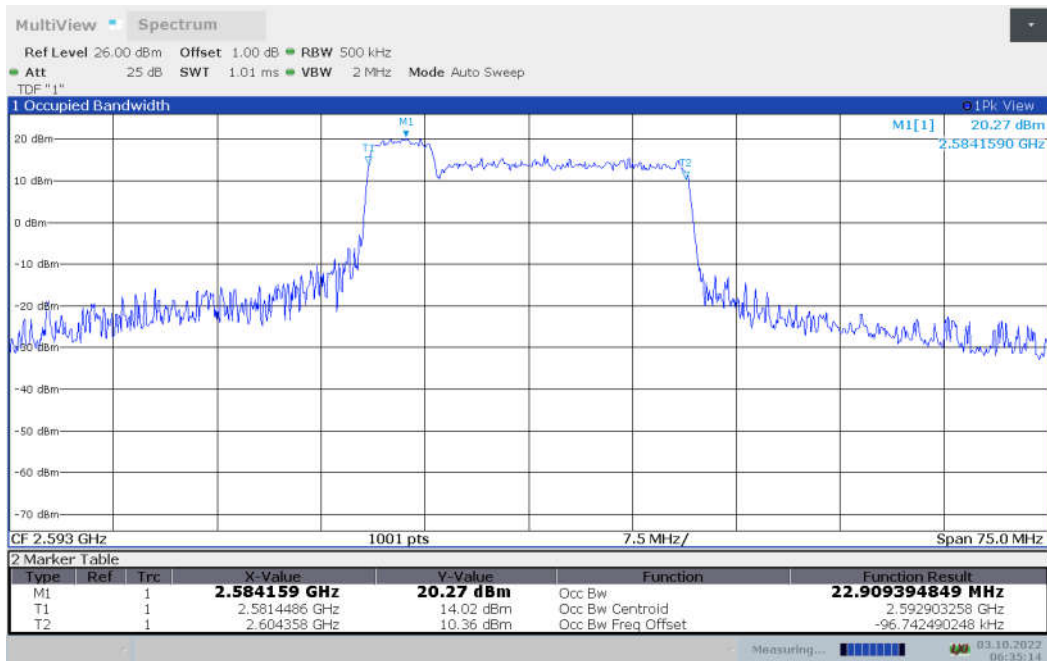
LTE CA band 41, 5MHz+20MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	23.001	22.909	22.929

LTE CA band 41, 5MHz+20MHz Bandwidth, QPSK (99% BW)

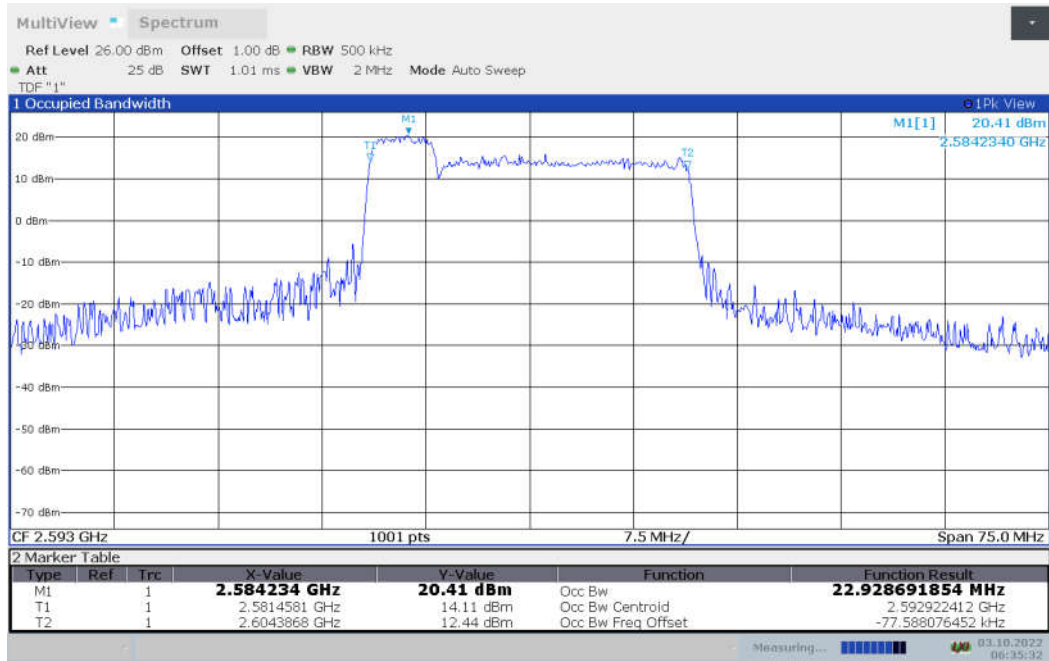


LTE CA band 41, 5MHz+20MHz Bandwidth, 16QAM (99% BW)





LTE CA band 41, 5MHz+20MHz Bandwidth, 64QAM (99% BW)

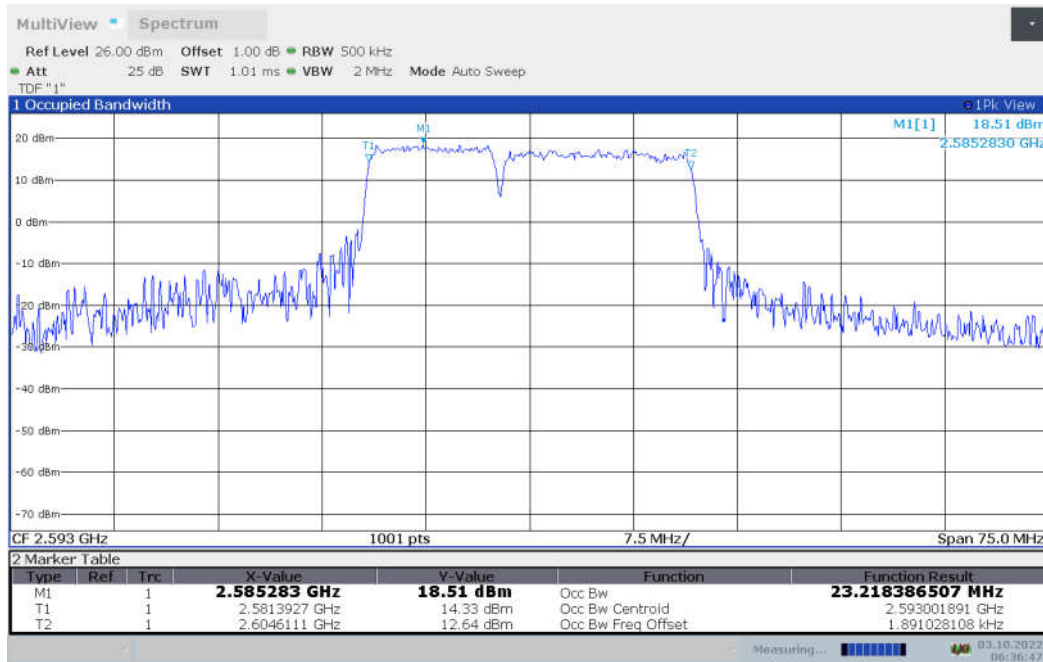




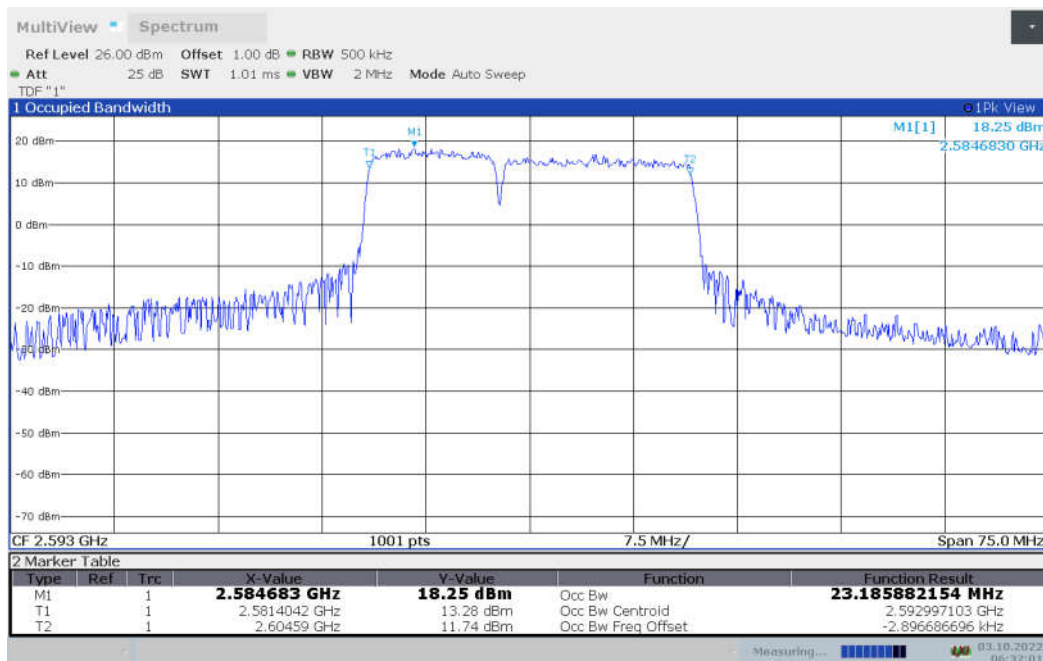
LTE CA band 41, 10MHz+15MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(MHz)		
	2593.0	QPSK	16QAM
	23.218	23.186	23.205

LTE CA band 41, 10MHz+15MHz Bandwidth, QPSK (99% BW)

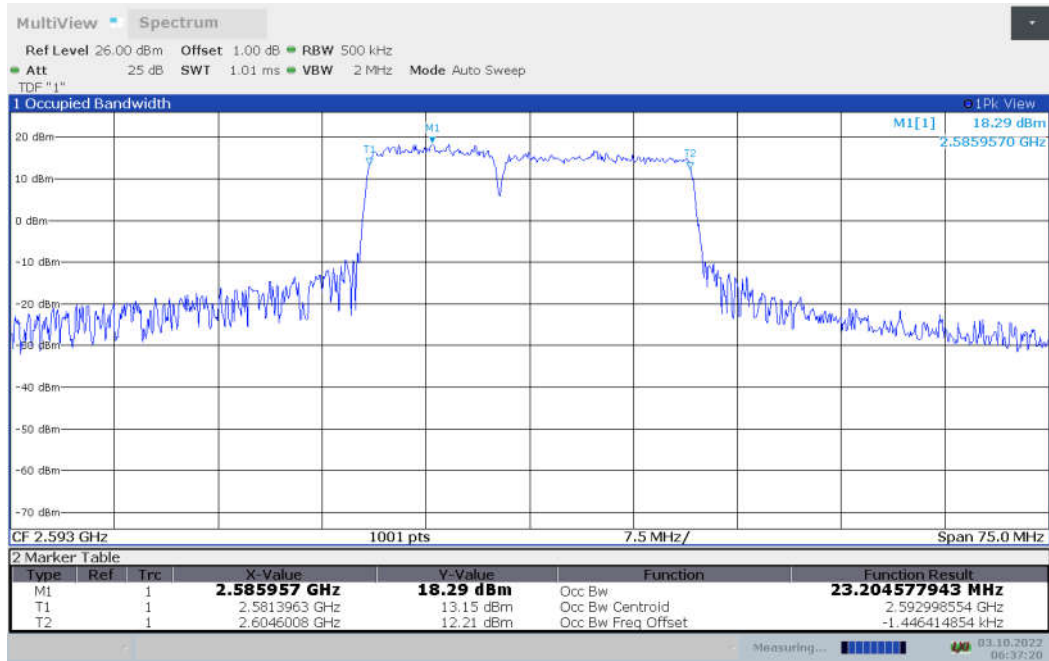


LTE CA band 41, 10MHz+15MHz Bandwidth, 16QAM (99% BW)





LTE CA band 41, 10MHz+15MHz Bandwidth, 64QAM (99% BW)

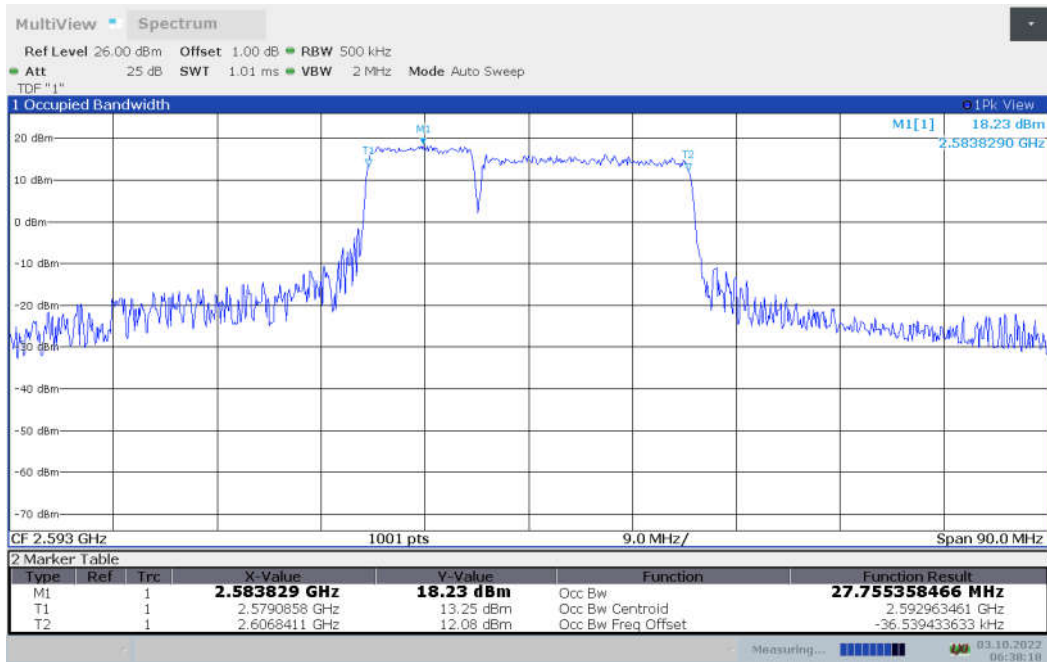




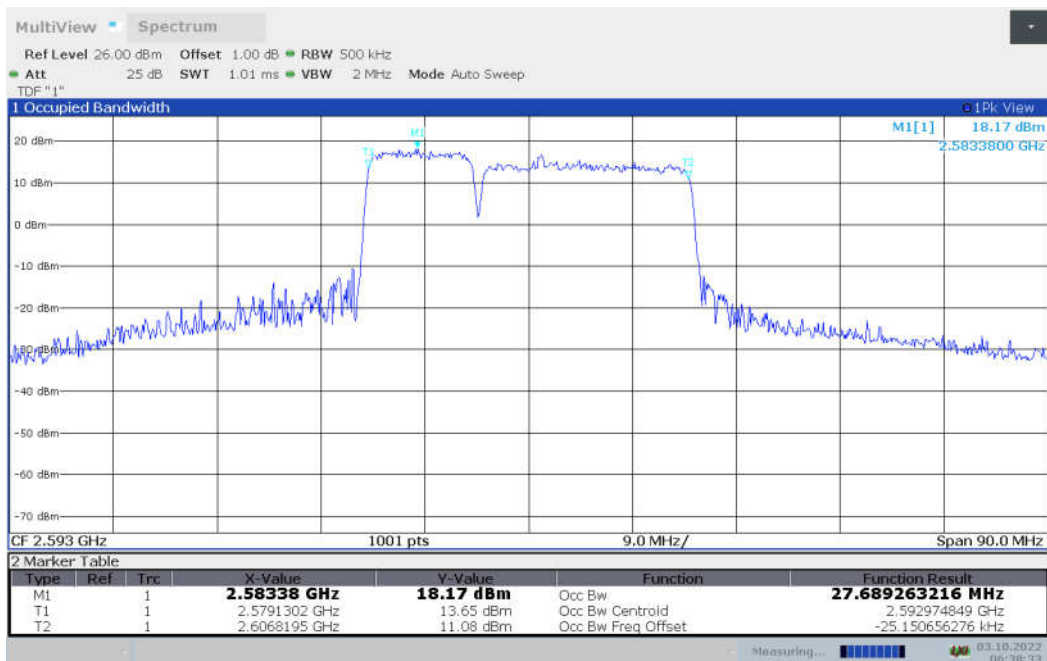
LTE CA band 41, 10MHz+20MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	27.755	27.689	27.697

LTE CA band 41, 10MHz+20MHz Bandwidth, QPSK (99% BW)

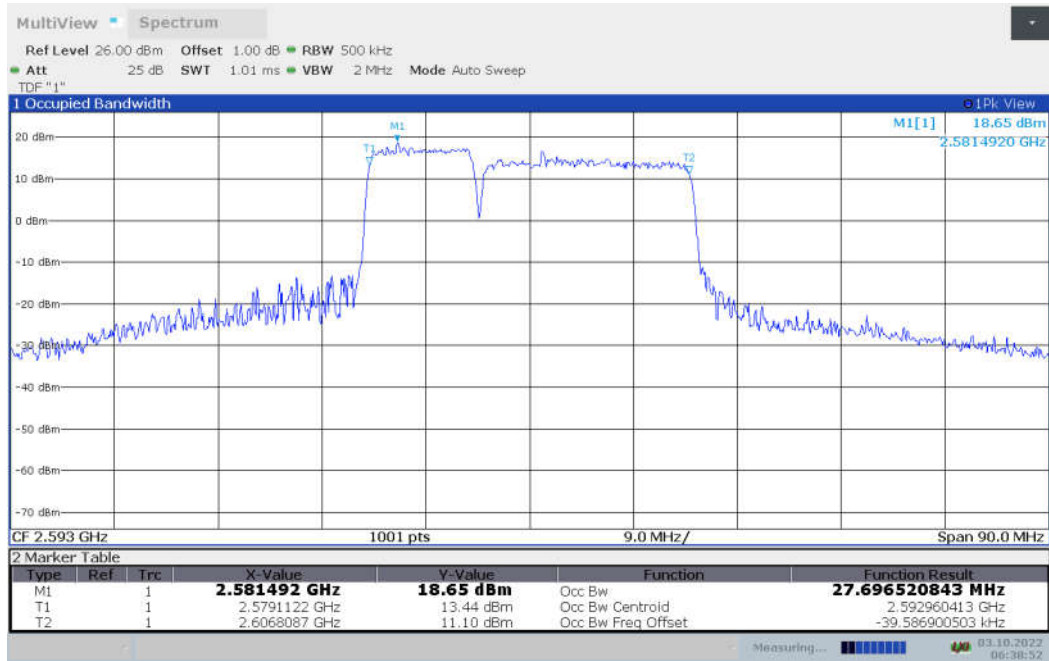


LTE CA band 41, 10MHz+20MHz Bandwidth, 16QAM (99% BW)





LTE CA band 41, 10MHz+20MHz Bandwidth, 64QAM (99% BW)

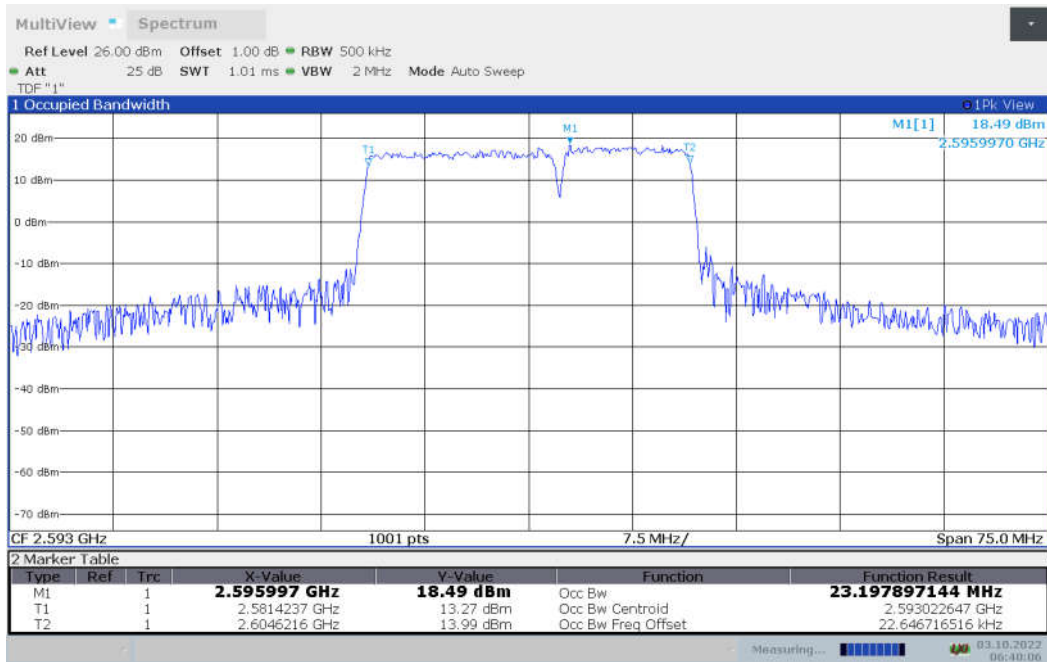




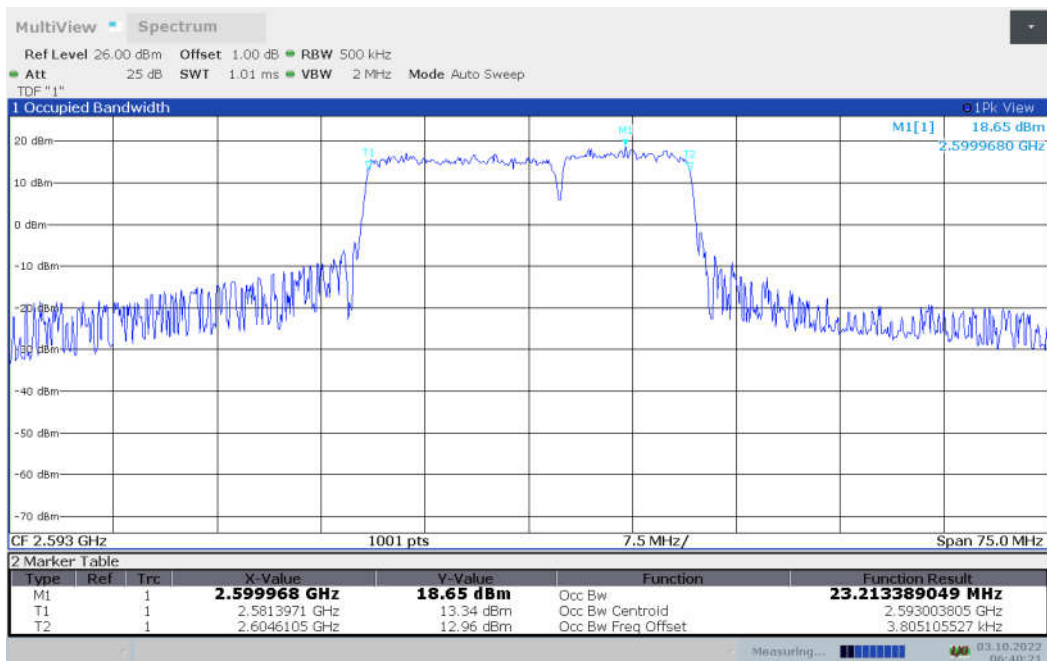
LTE CA band 41, 15MHz+10MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(MHz)		
	2593.0	QPSK	16QAM
	23.198	23.213	23.175

LTE CA band 41, 15MHz+10MHz Bandwidth, QPSK (99% BW)

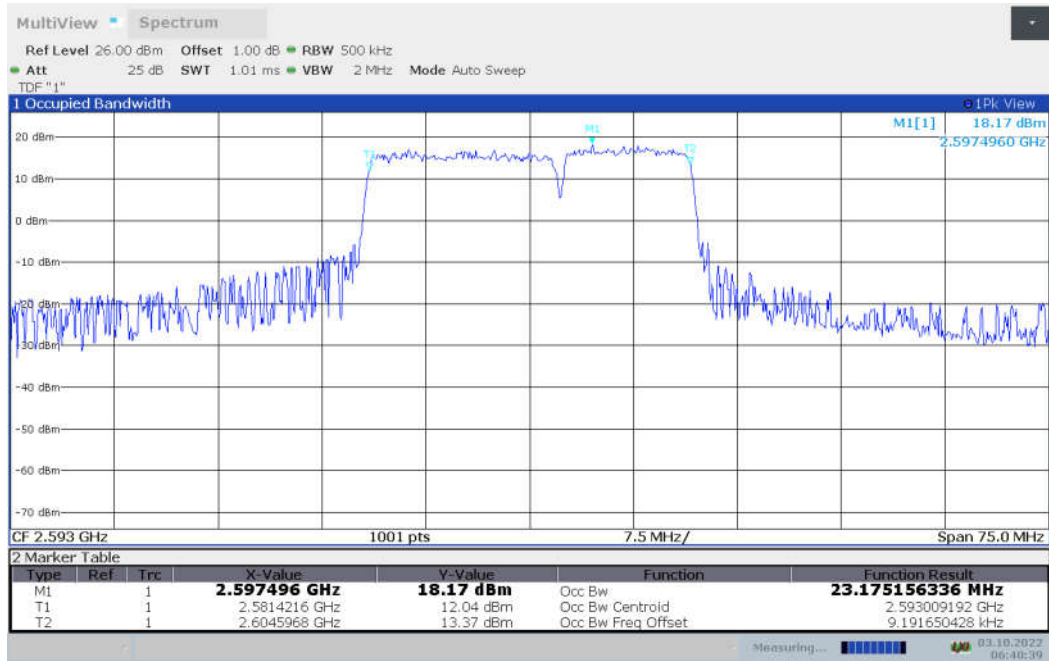


LTE CA band 41, 15MHz+10MHz Bandwidth, 16QAM (99% BW)





LTE CA band 41, 15MHz+10MHz Bandwidth, 64QAM (99% BW)

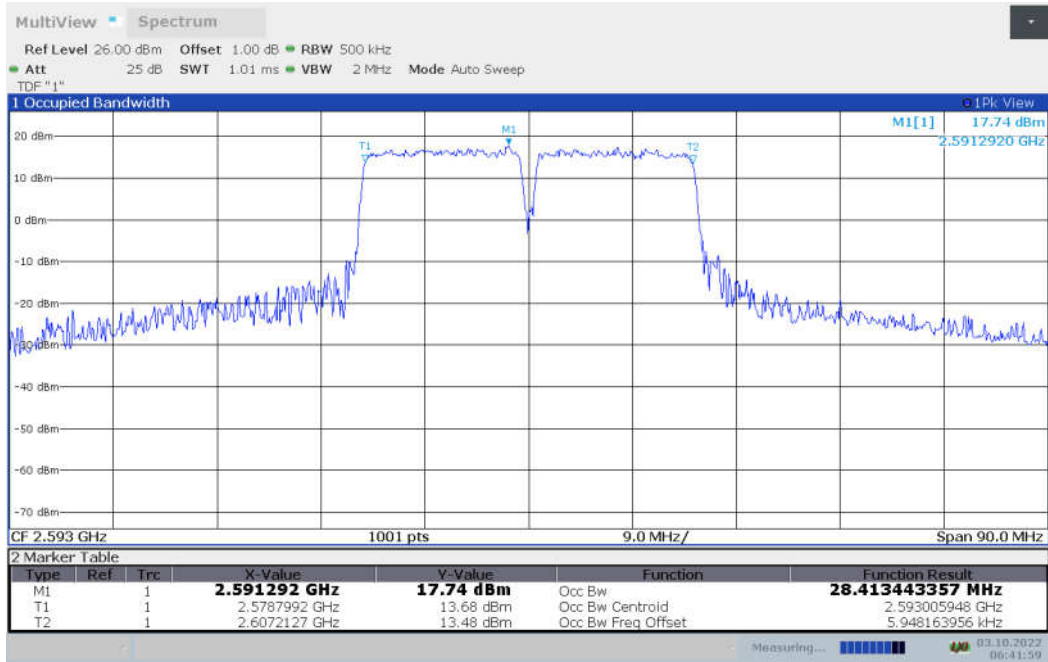




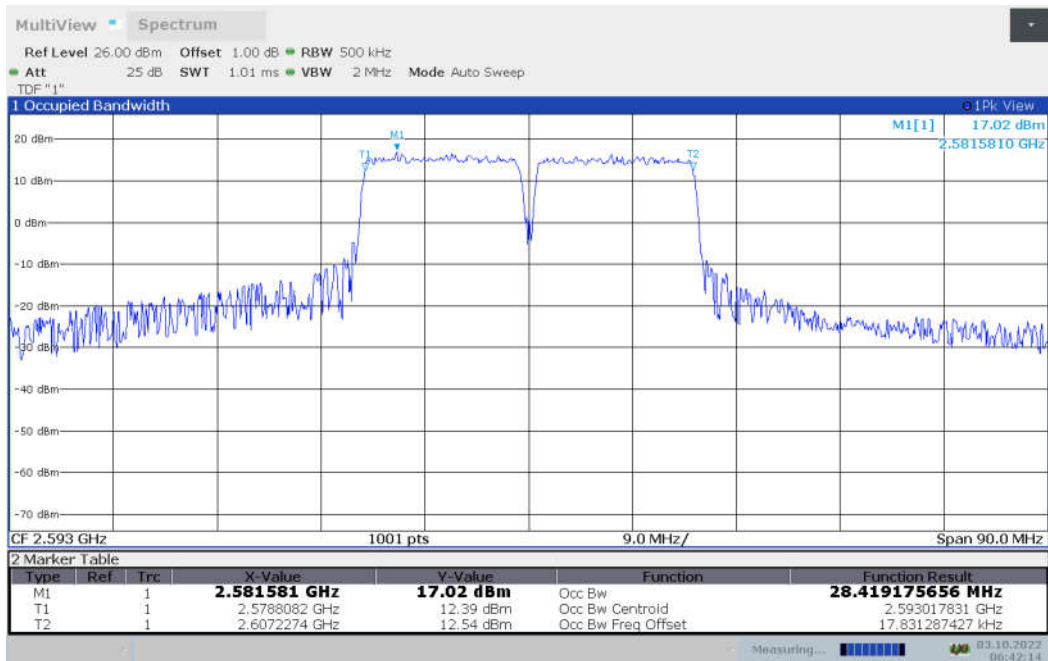
LTE CA band 41, 15MHz+15MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	28.413	28.419	28.394

LTE CA band 41, 15MHz+15MHz Bandwidth, QPSK (99% BW)

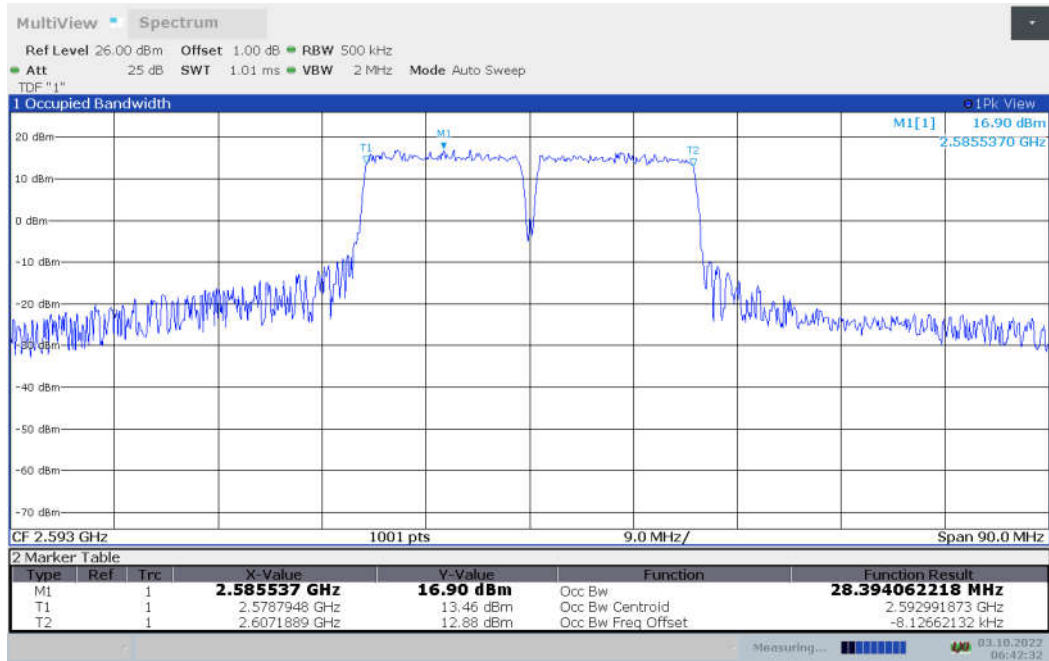


LTE CA band 41, 15MHz+15MHz Bandwidth, 16QAM (99% BW)





LTE CA band 41, 15MHz+15MHz Bandwidth, 64QAM (99% BW)

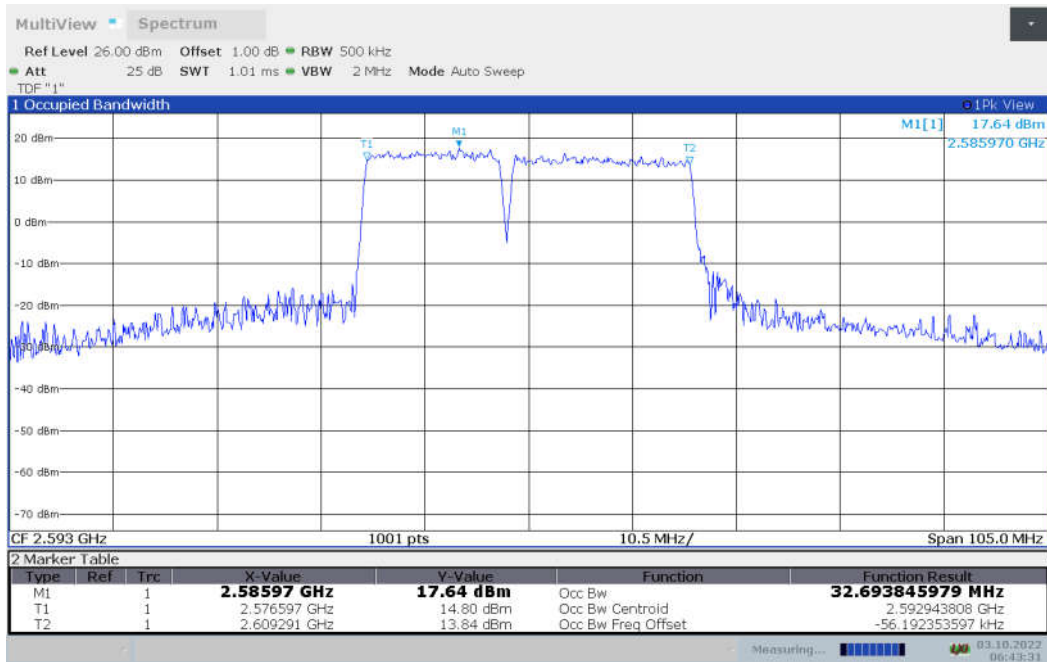




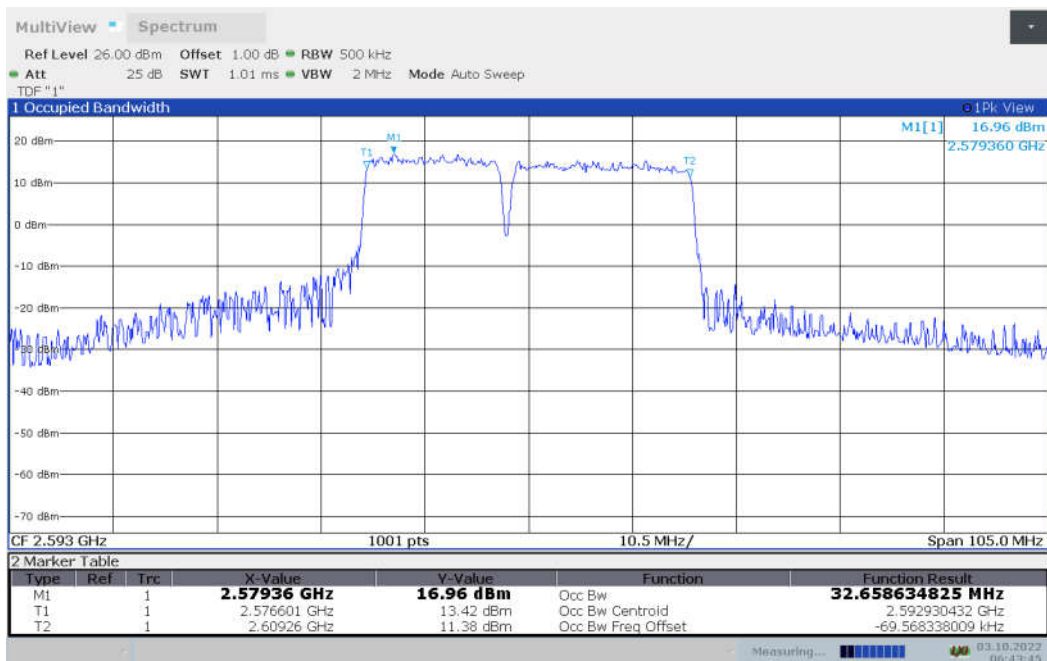
LTE CA band 41, 15MHz+20MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	32.694	32.659	32.630

LTE CA band 41, 15MHz+20MHz Bandwidth, QPSK (99% BW)

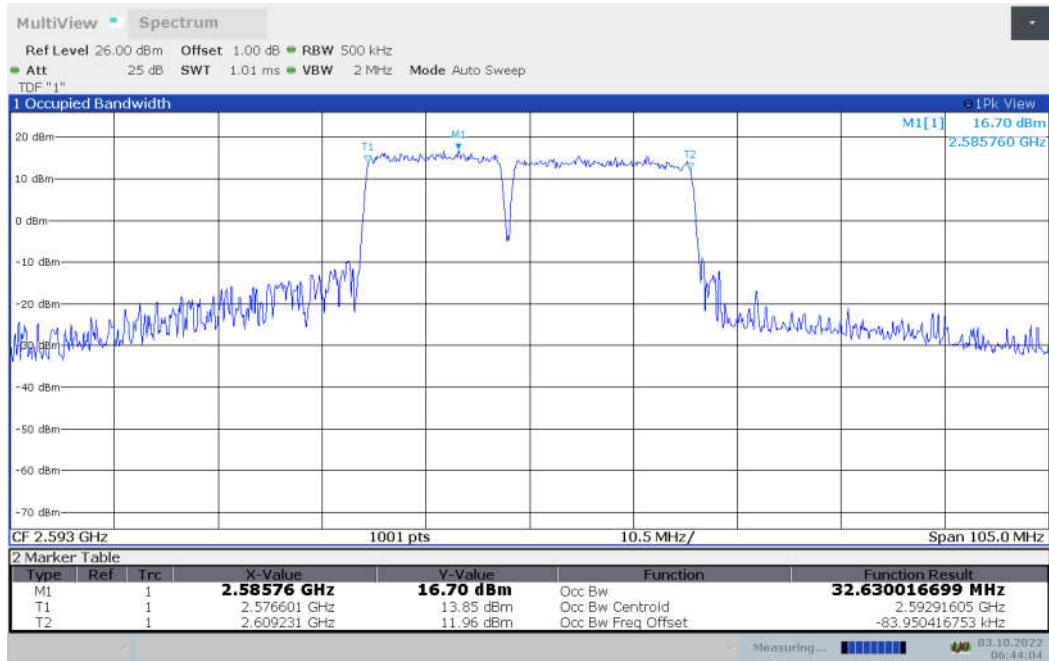


LTE CA band 41, 15MHz+20MHz Bandwidth, 16QAM (99% BW)





LTE CA band 41, 15MHz+20MHz Bandwidth, 64QAM (99% BW)

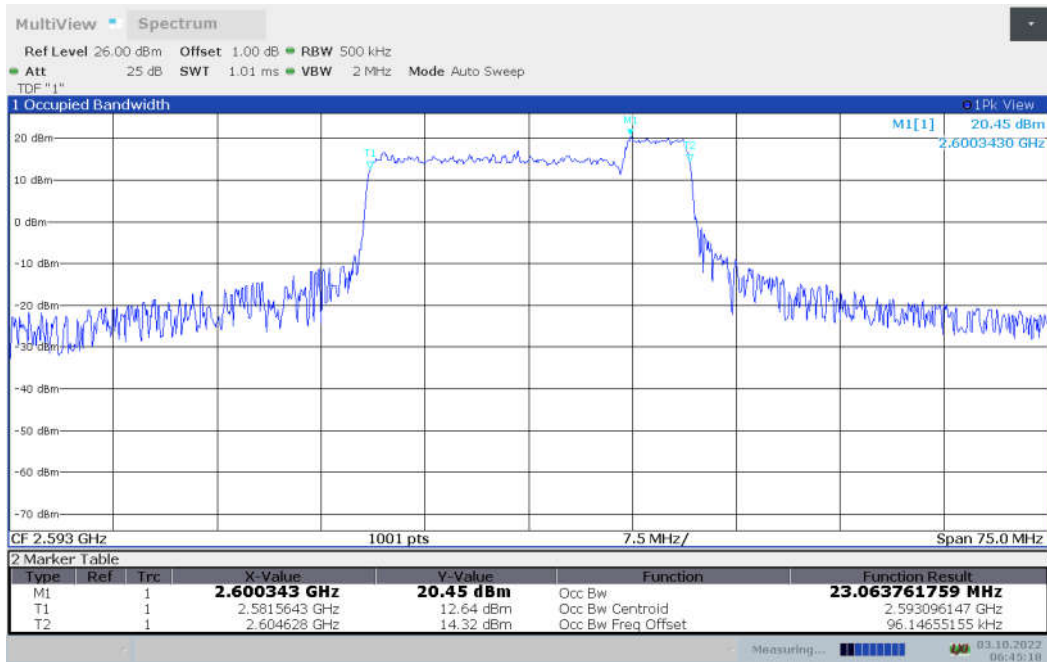




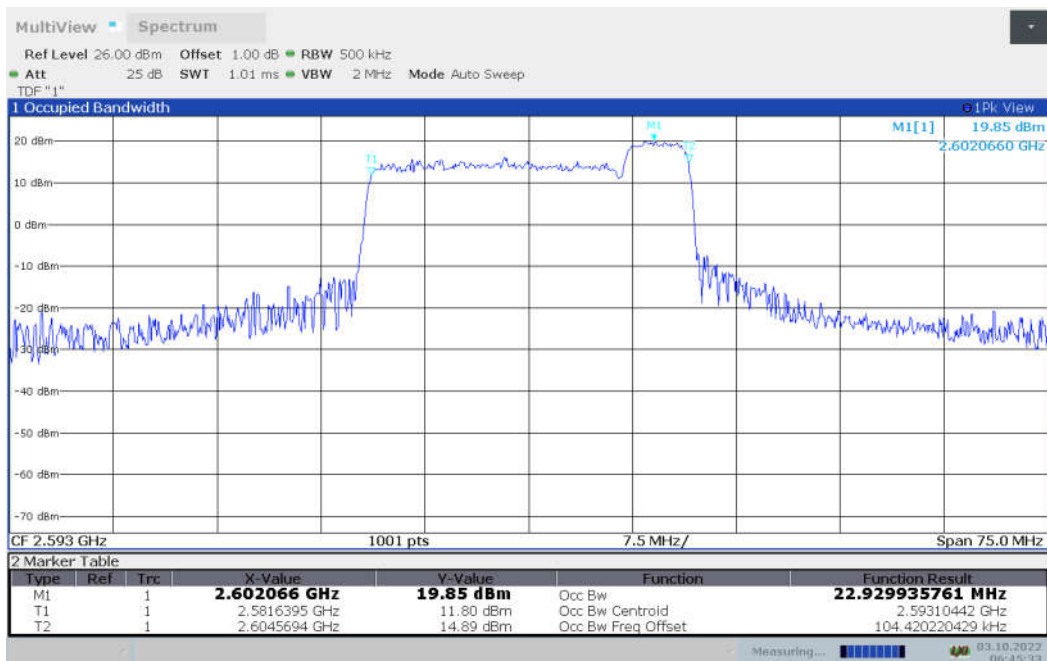
LTE CA band 41, 20MHz+5MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	23.064	22.930	22.934

LTE CA band 41, 20MHz+5MHz Bandwidth, QPSK (99% BW)

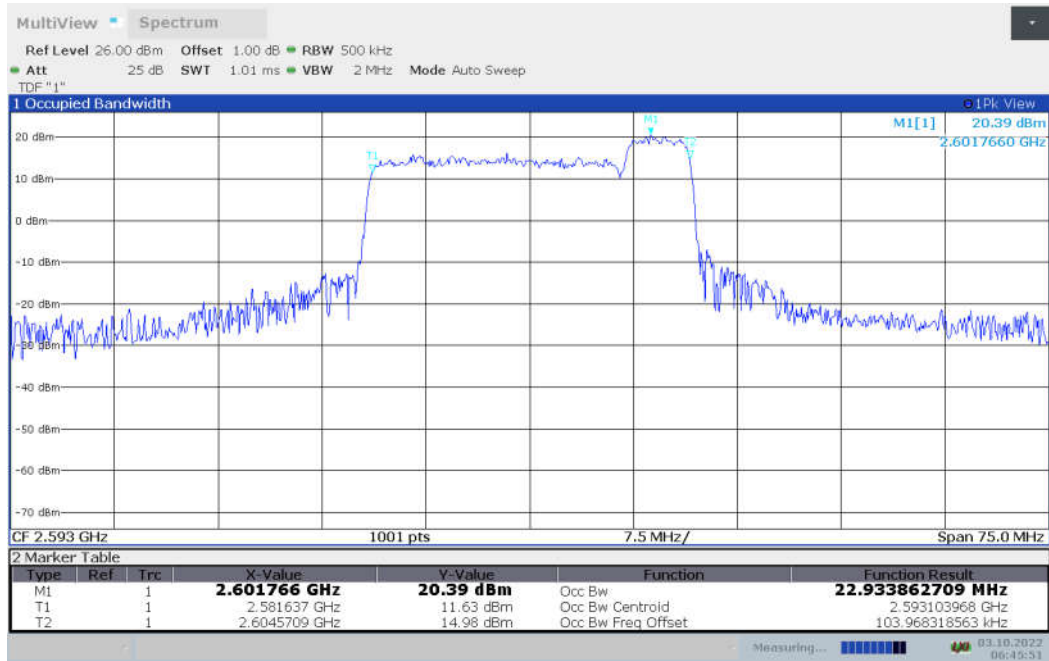


LTE CA band 41, 20MHz+5MHz Bandwidth, 16QAM (99% BW)





LTE CA band 41, 20MHz+5MHz Bandwidth, 64QAM (99% BW)

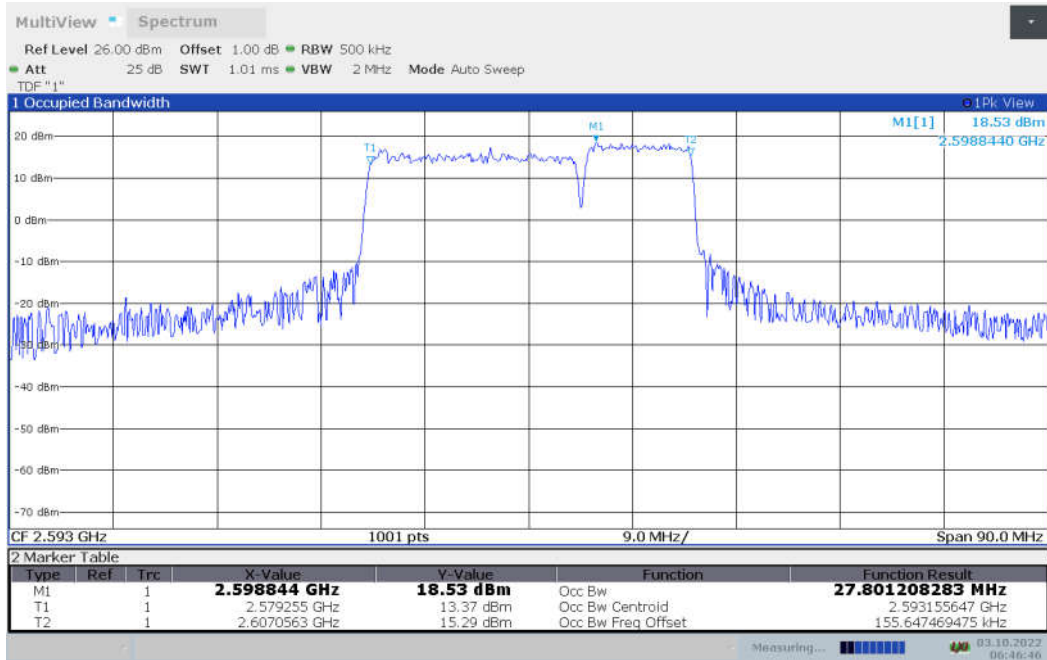




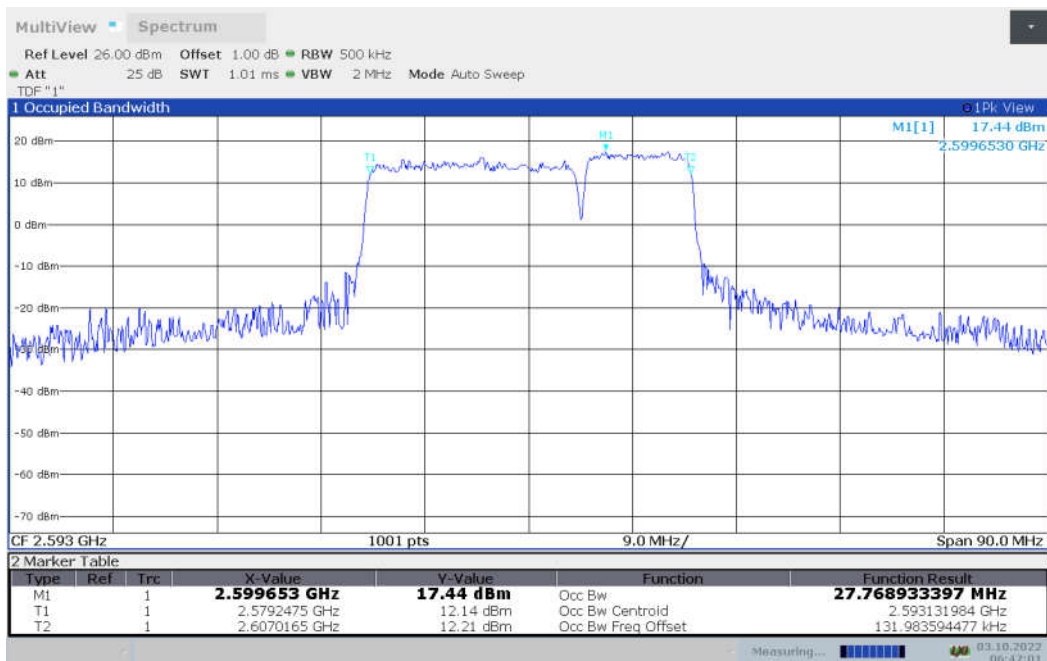
LTE CA band 41, 20MHz+10MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	27.801	27.769	27.796

LTE CA band 41, 20MHz+10MHz Bandwidth, QPSK (99% BW)

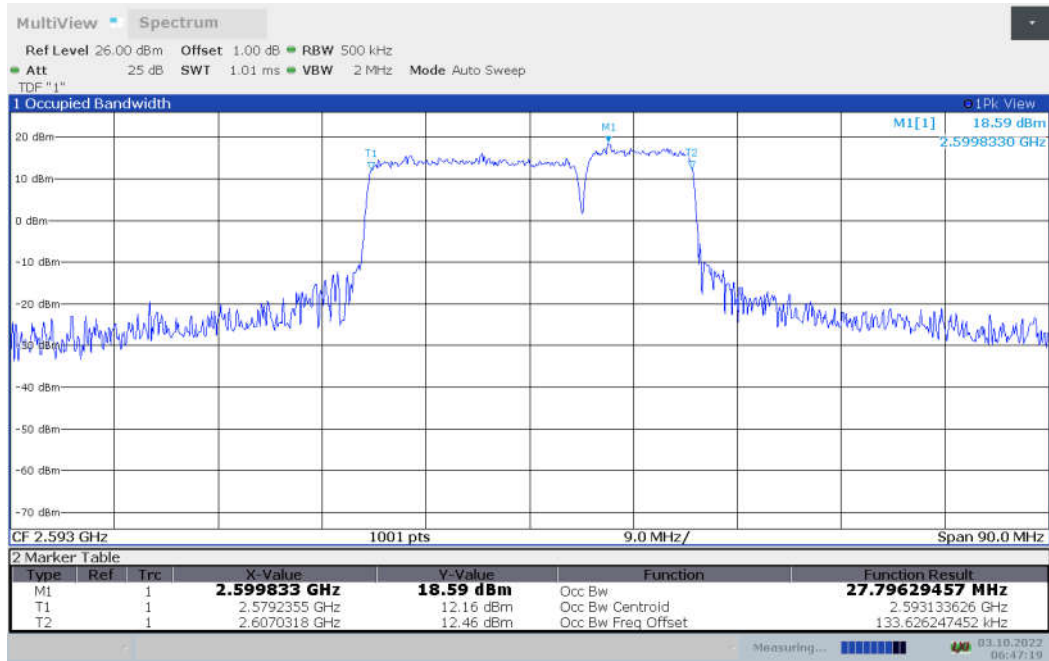


LTE CA band 41, 20MHz+10MHz Bandwidth, 16QAM (99% BW)





LTE CA band 41, 20MHz+10MHz Bandwidth, 64QAM (99% BW)

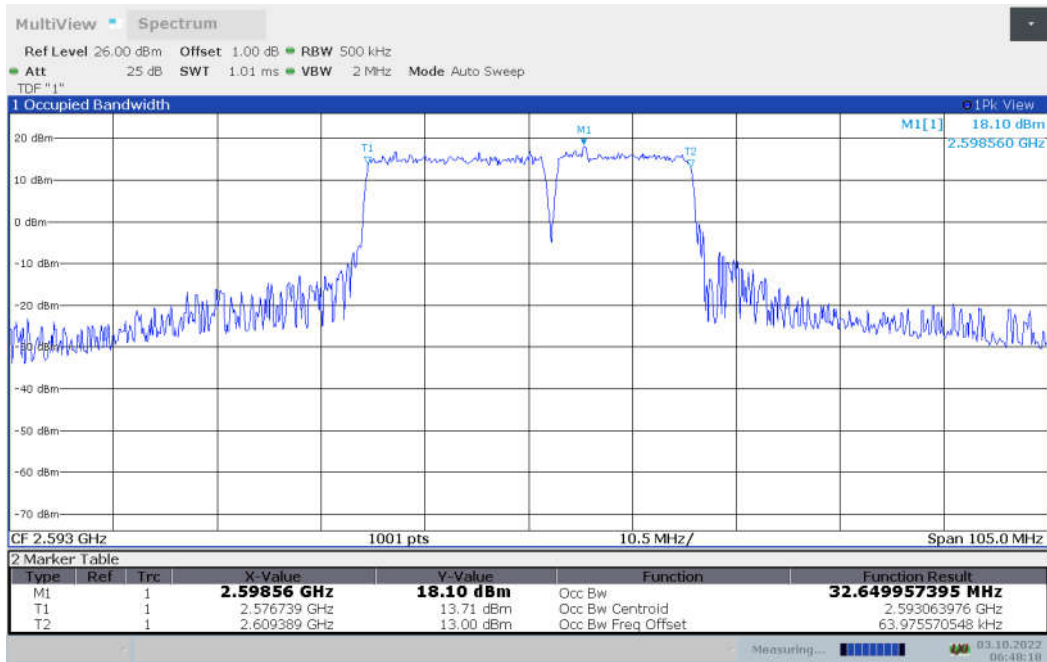




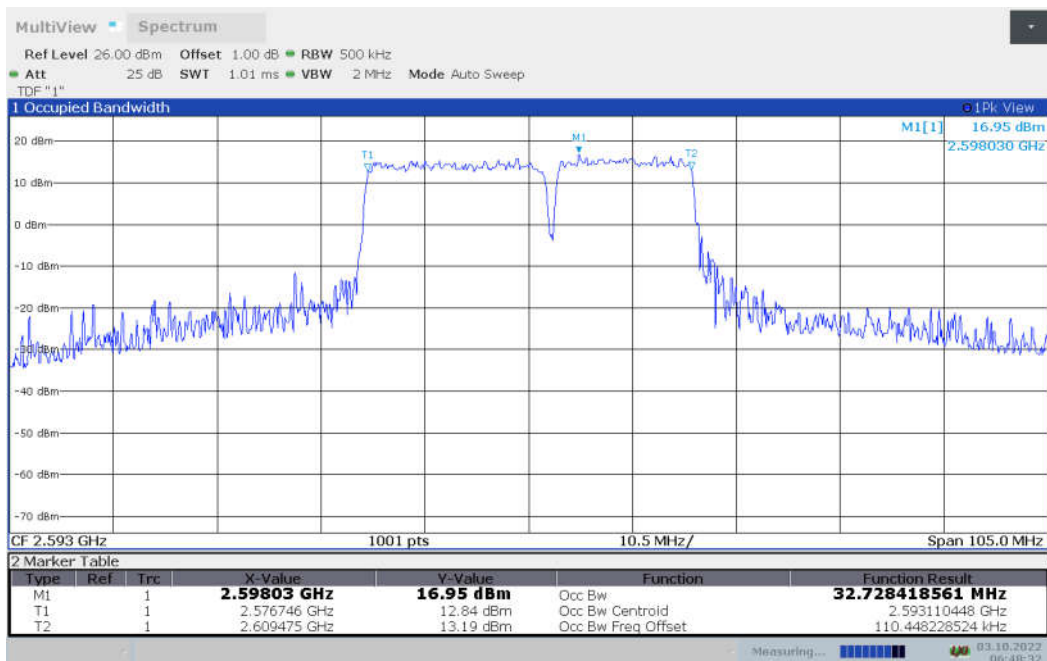
LTE CA band 41, 20MHz+15MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	32.650	32.728	32.631

LTE CA band 41, 20MHz+15MHz Bandwidth, QPSK (99% BW)

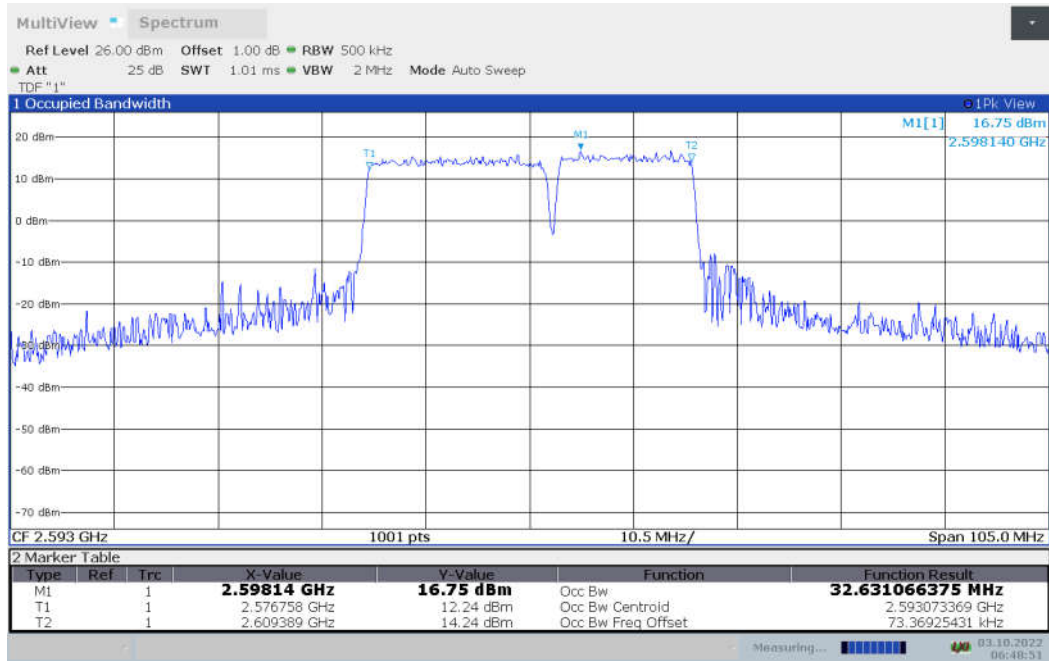


LTE CA band 41, 20MHz+15MHz Bandwidth, 16QAM (99% BW)





LTE CA band 41, 20MHz+15MHz Bandwidth, 64QAM (99% BW)

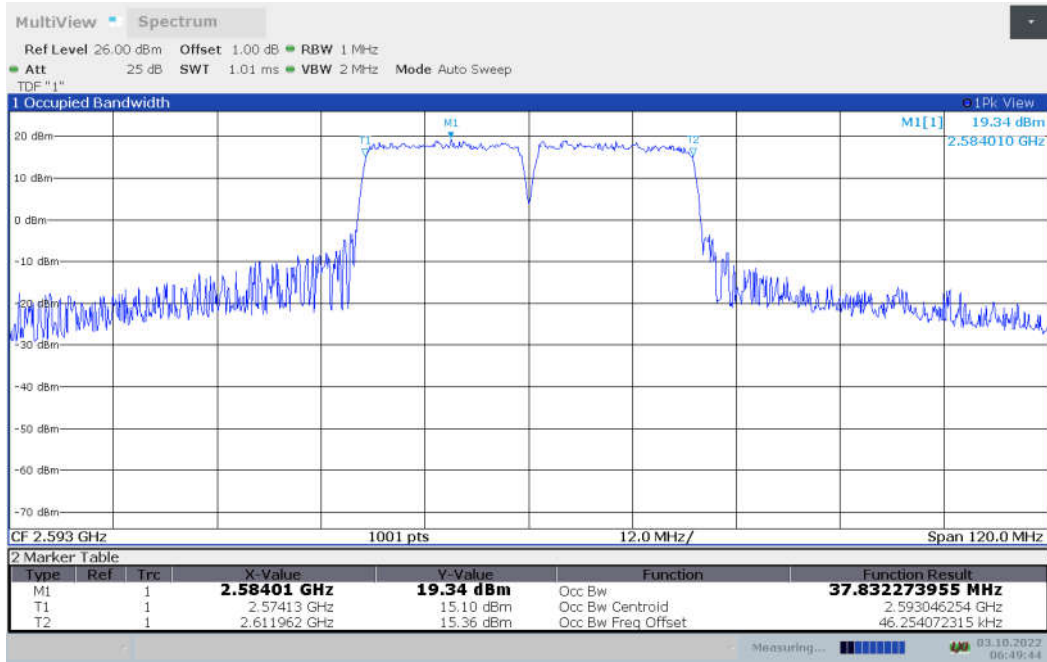




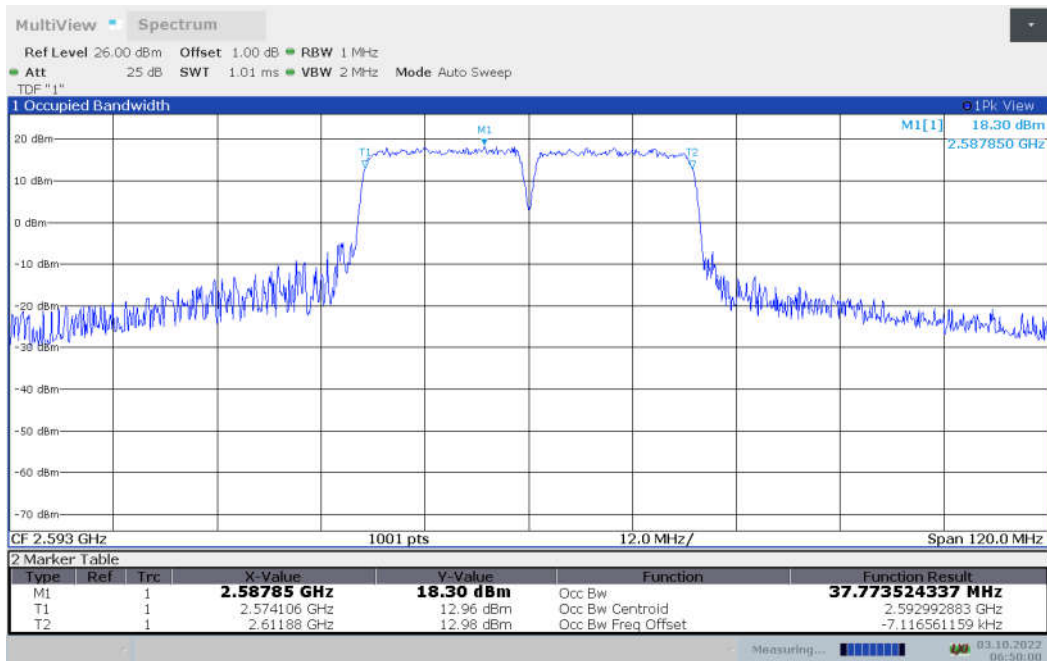
LTE CA band 41, 20MHz+20MHz (99% BW)

Frequency(MHz)	Occupied Bandwidth (99% BW)(MHz)		
2593.0	QPSK	16QAM	64QAM
	37.832	37.773	37.748

LTE CA band 41, 20MHz+20MHz Bandwidth, QPSK (99% BW)

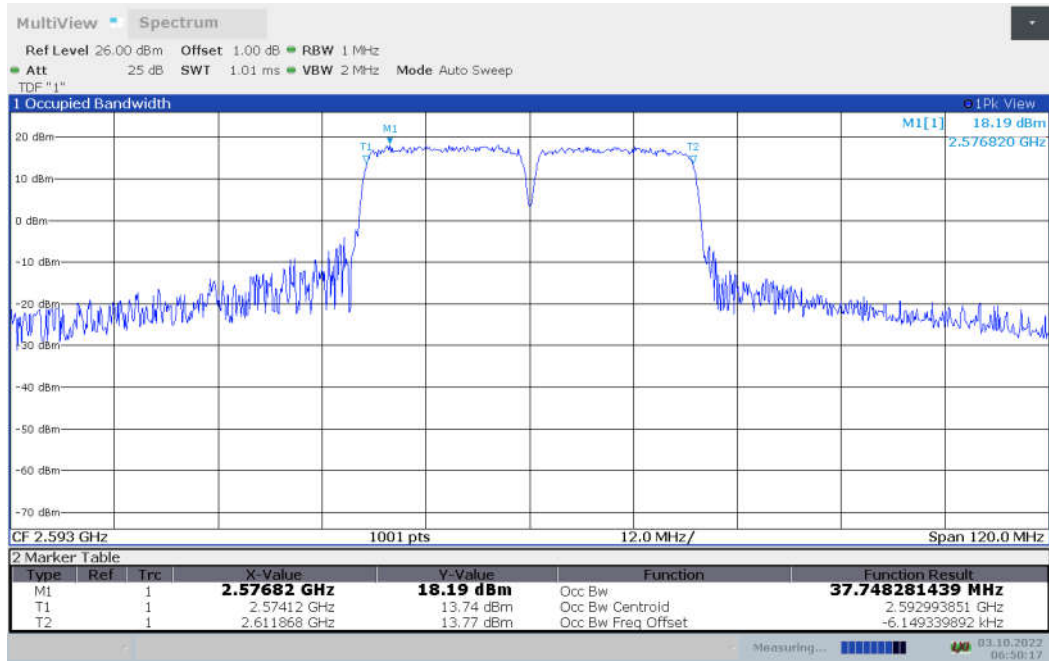


LTE CA band 41, 20MHz+20MHz Bandwidth, 16QAM (99% BW)





LTE CA band 41, 20MHz+20MHz Bandwidth, 64QAM (99% BW)





A.5 EMISSION BANDWIDTH

Reference

FCC: CFR Part 2.1049, 22.917, 24.238, 27.53, 90.1215.

A.5.1 Measurement Procedure

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) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (i.e., two to five times the OBW).
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least $10\log(\text{OBW} / \text{RBW})$ below the reference level.
- d) Set the detection mode to peak, and the trace mode to max hold.
- e) Use the 26dB bandwidth function of the spectrum analyzer and report the measured bandwidth.

A.5.2 Emission Bandwidth Results

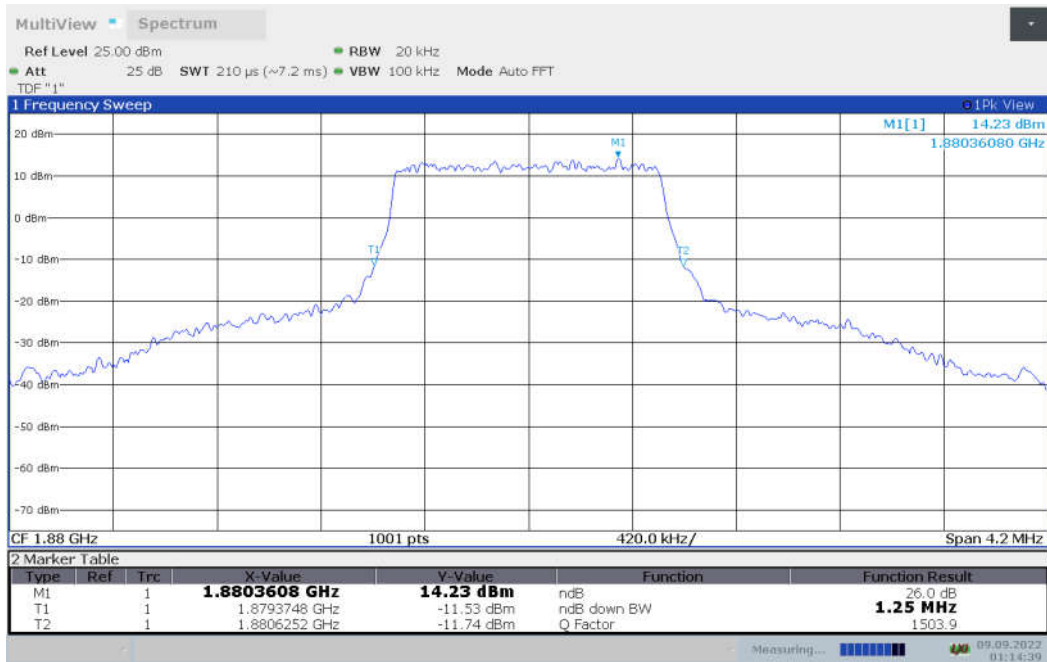
Similar to conducted emissions; Emission bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequencies. Table below lists the measured -26dBc BW. Spectrum analyzer plots are included on the following pages.



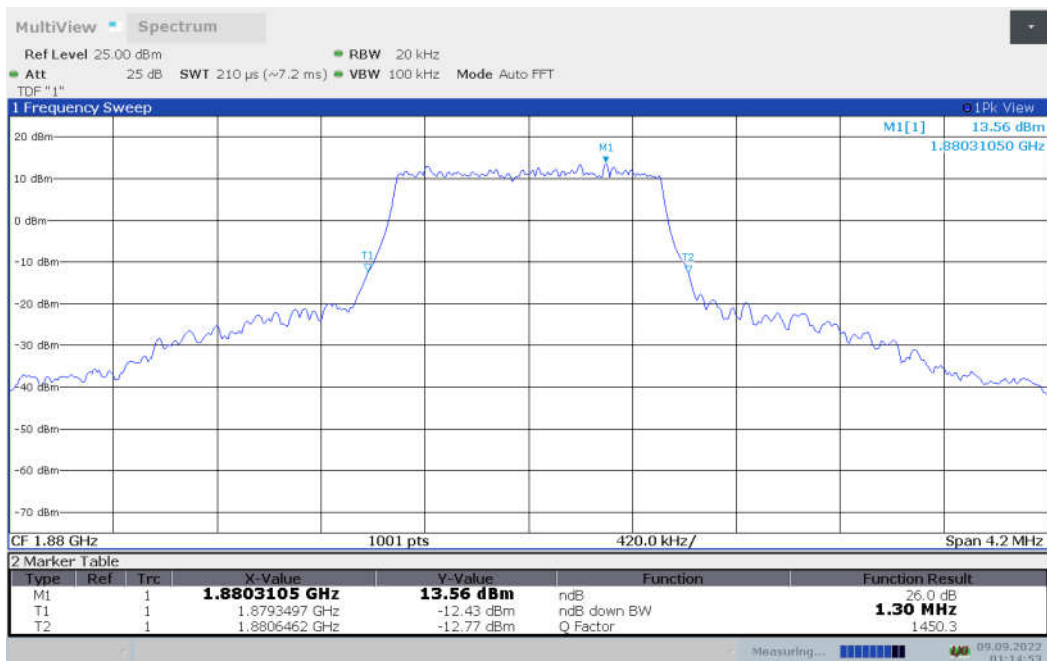
LTE band 2, 1.4MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)		
1880.0	QPSK	16QAM	64QAM
	1.25	1.30	1.29

LTE band 2, 1.4MHz Bandwidth, QPSK (-26dBc BW)

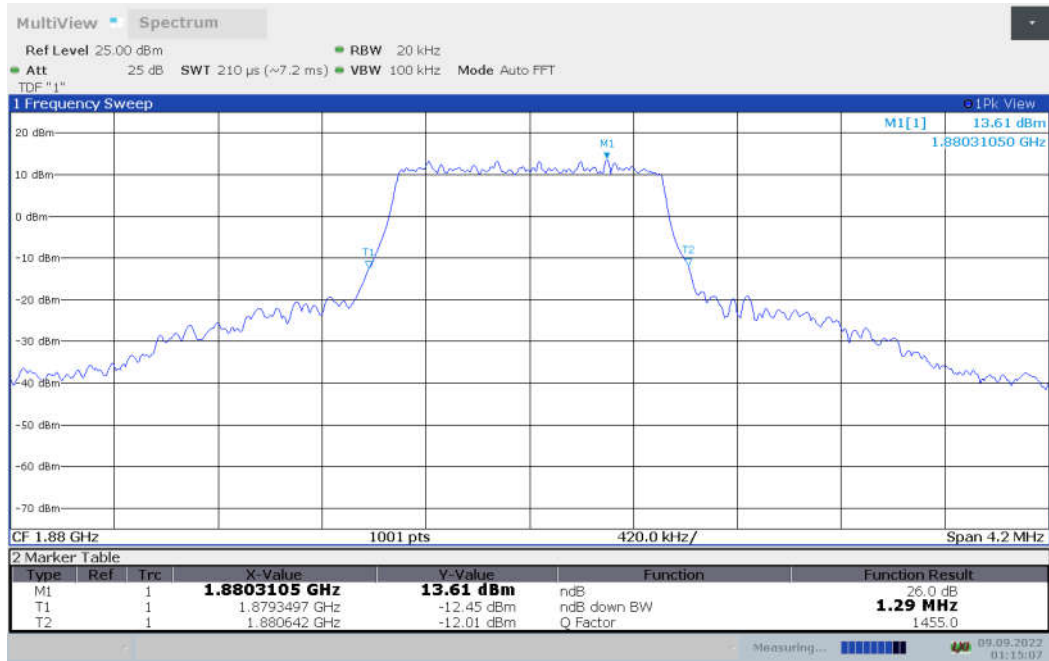


LTE band 2, 1.4MHz Bandwidth, 16QAM (-26dBc BW)





LTE band 2, 1.4MHz Bandwidth, 64QAM (-26dBc BW)

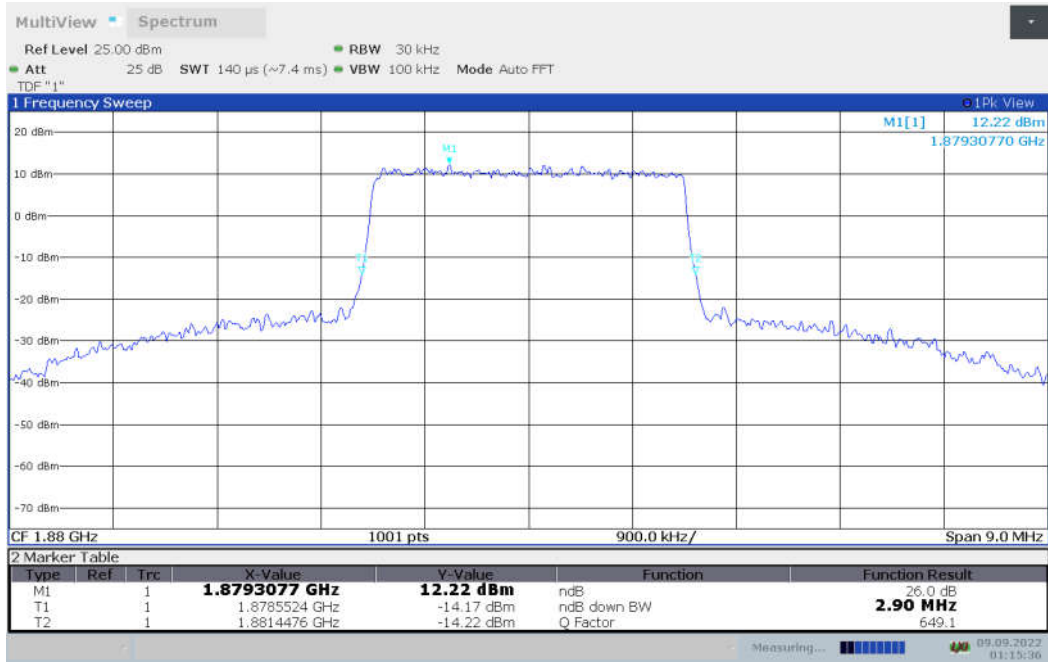




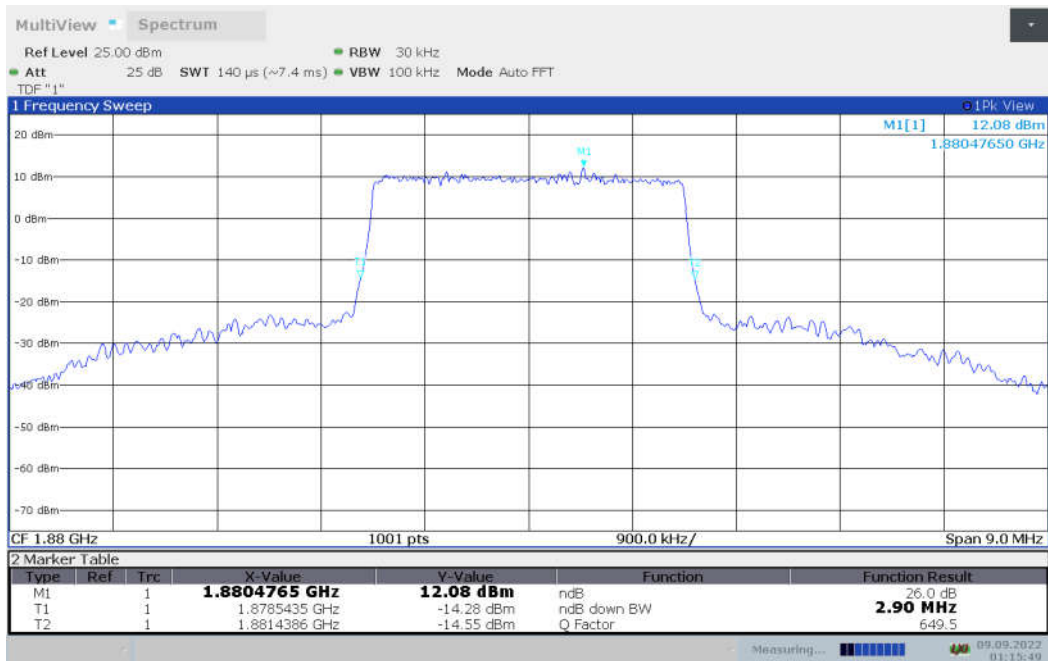
LTE band 2, 3MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)		
1880.0	QPSK	16QAM	64QAM
	2.90	2.90	2.88

LTE band 2, 3MHz Bandwidth, QPSK (-26dBc BW)

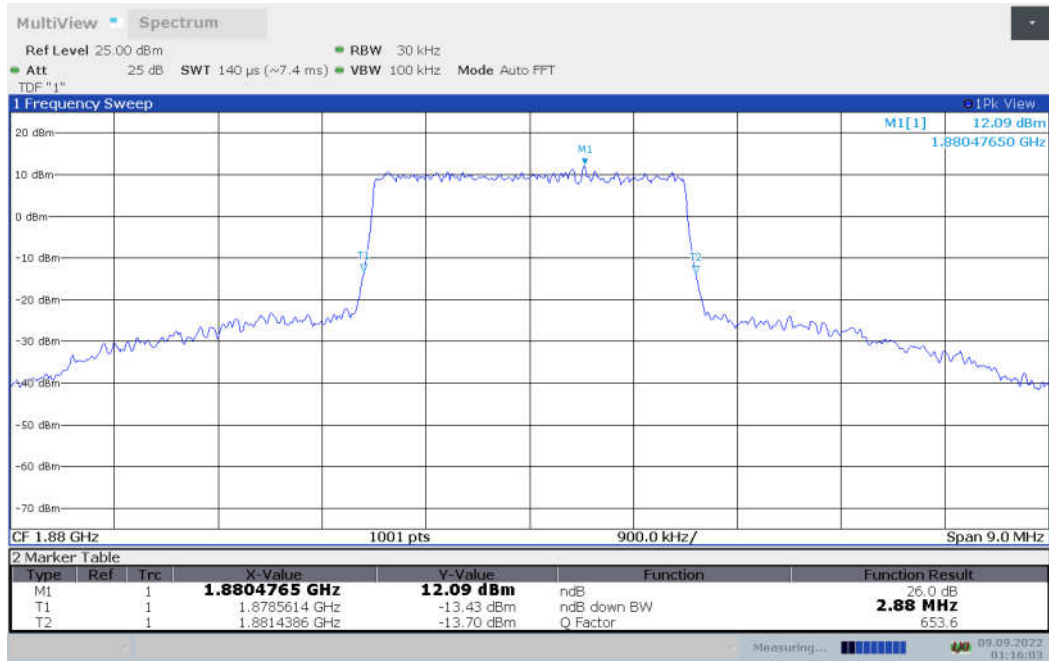


LTE band 2, 3MHz Bandwidth, 16QAM (-26dBc BW)





LTE band 2, 3MHz Bandwidth, 64QAM (-26dBc BW)

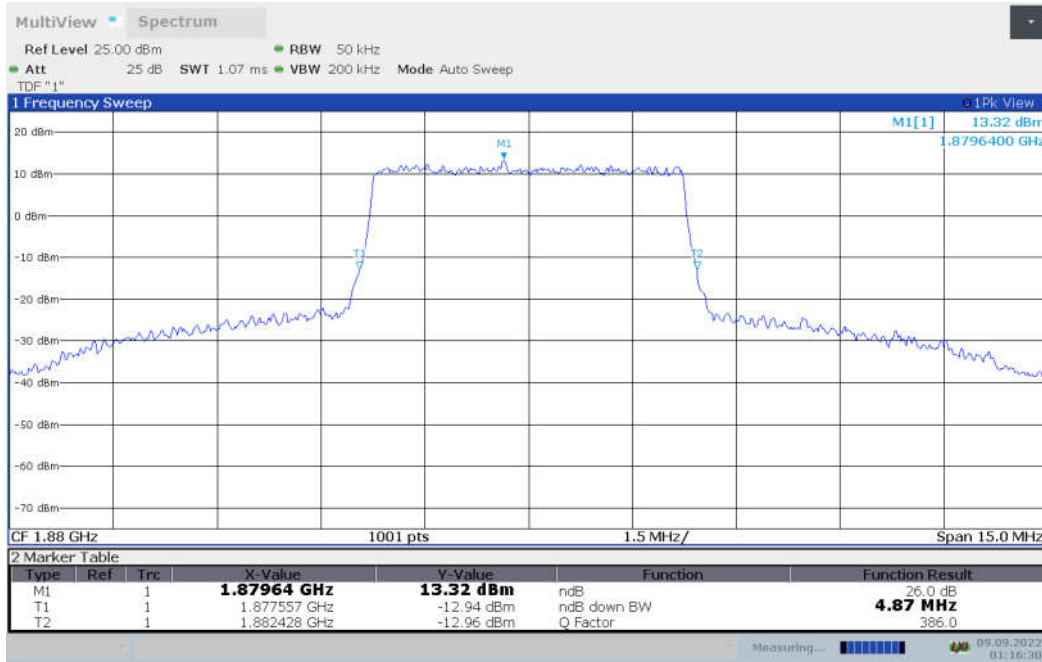




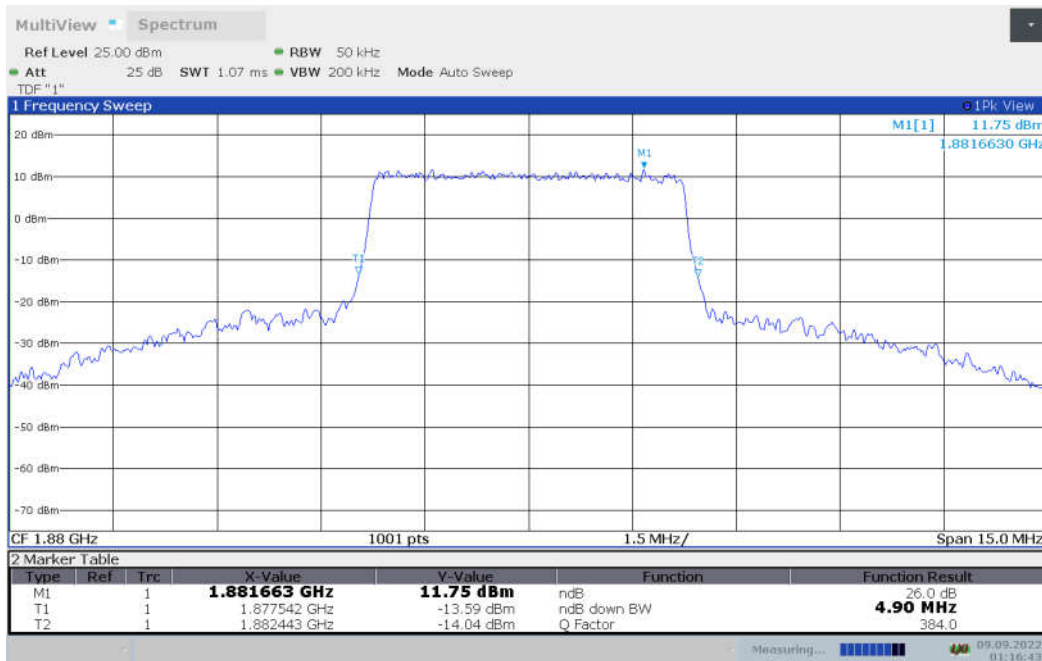
LTE band 2, 5MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)		
1880.0	QPSK	16QAM	64QAM
	4.87	4.90	4.90

LTE band 2, 5MHz Bandwidth, QPSK (-26dBc BW)

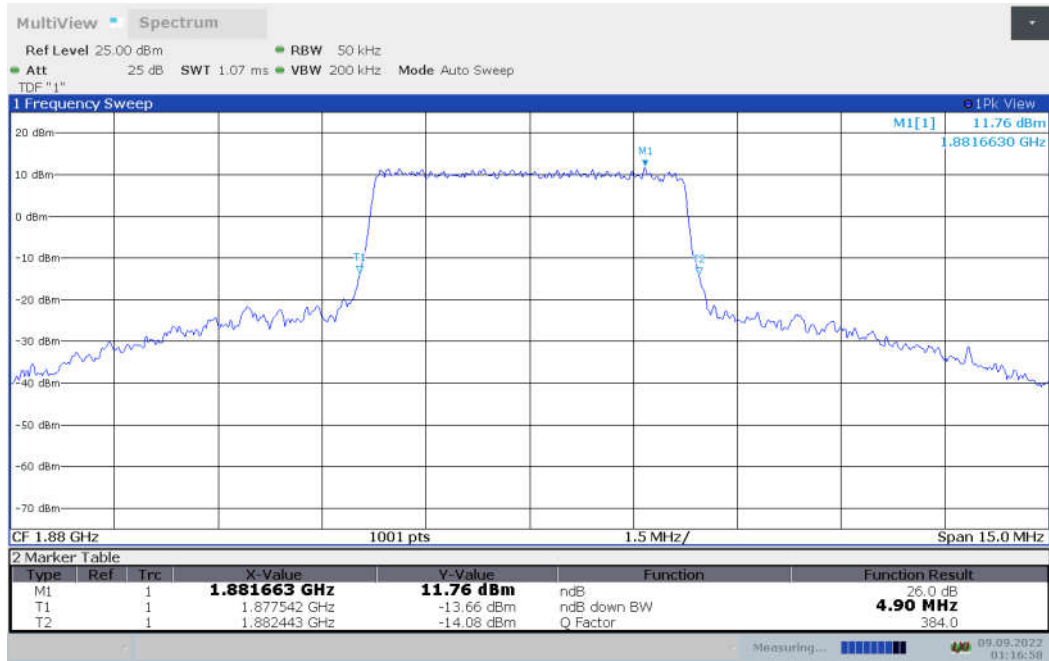


LTE band 2, 5MHz Bandwidth,16QAM (-26dBc BW)





LTE band 2, 5MHz Bandwidth,64QAM (-26dBc BW)

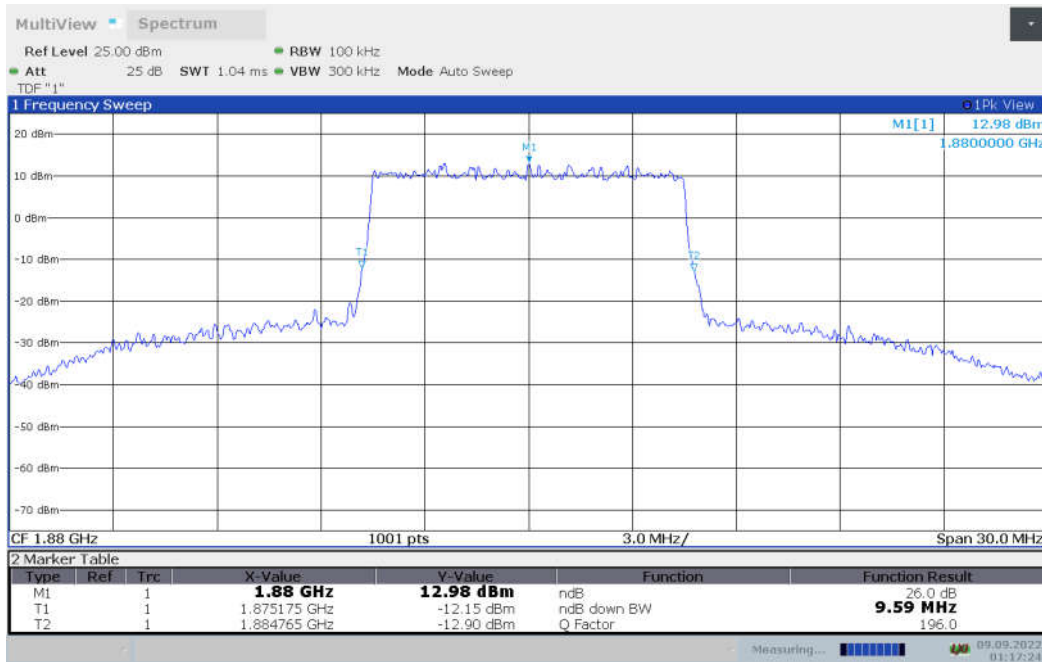




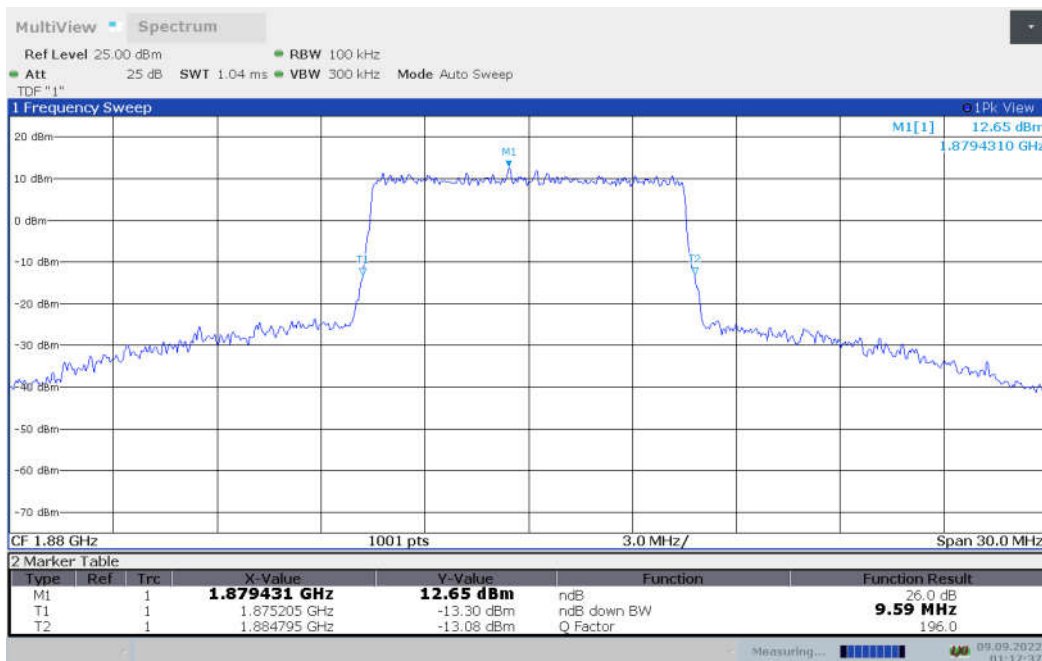
LTE band 2, 10MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)		
1880.0	QPSK	16QAM	64QAM
	9.59	9.59	9.71

LTE band 2, 10MHz Bandwidth, QPSK (-26dBc BW)

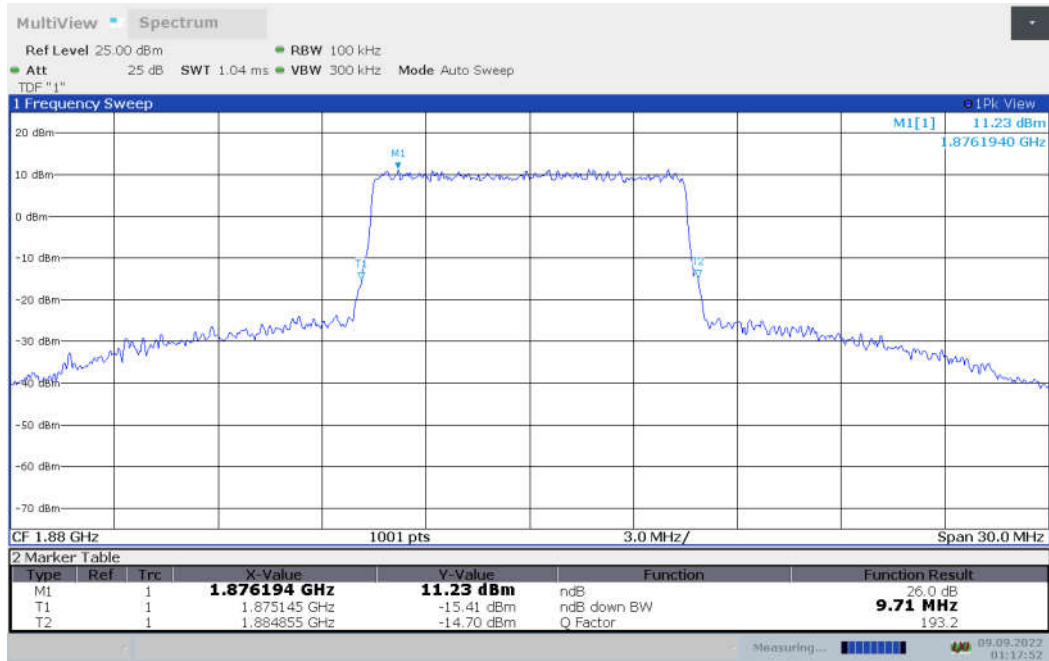


LTE band 2, 10MHz Bandwidth, 16QAM (-26dBc BW)





LTE band 2, 10MHz Bandwidth, 64QAM (-26dBc BW)

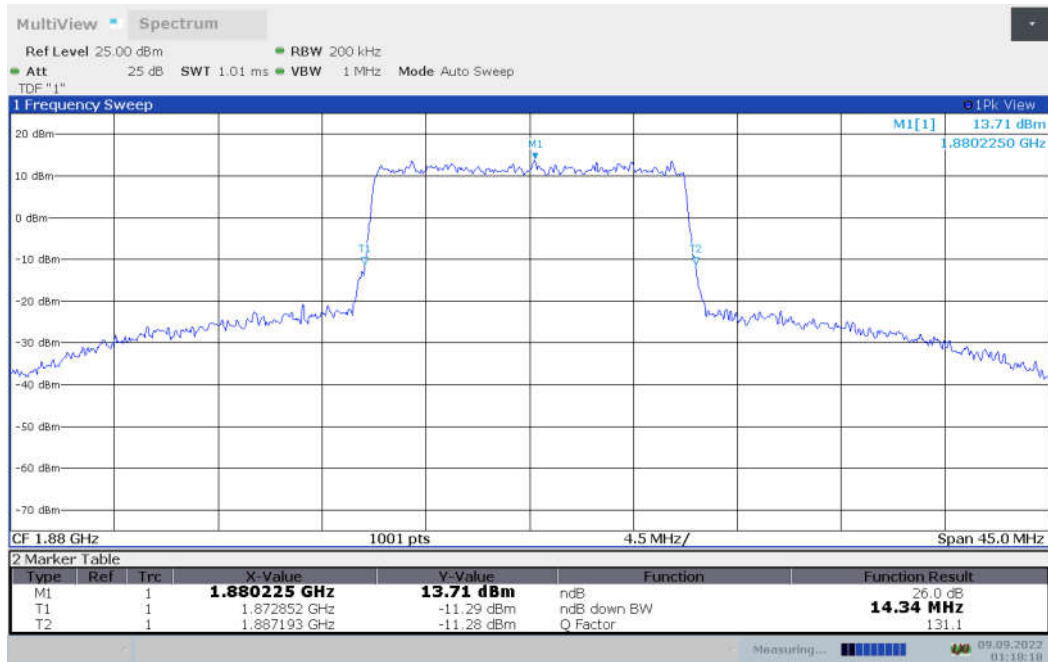




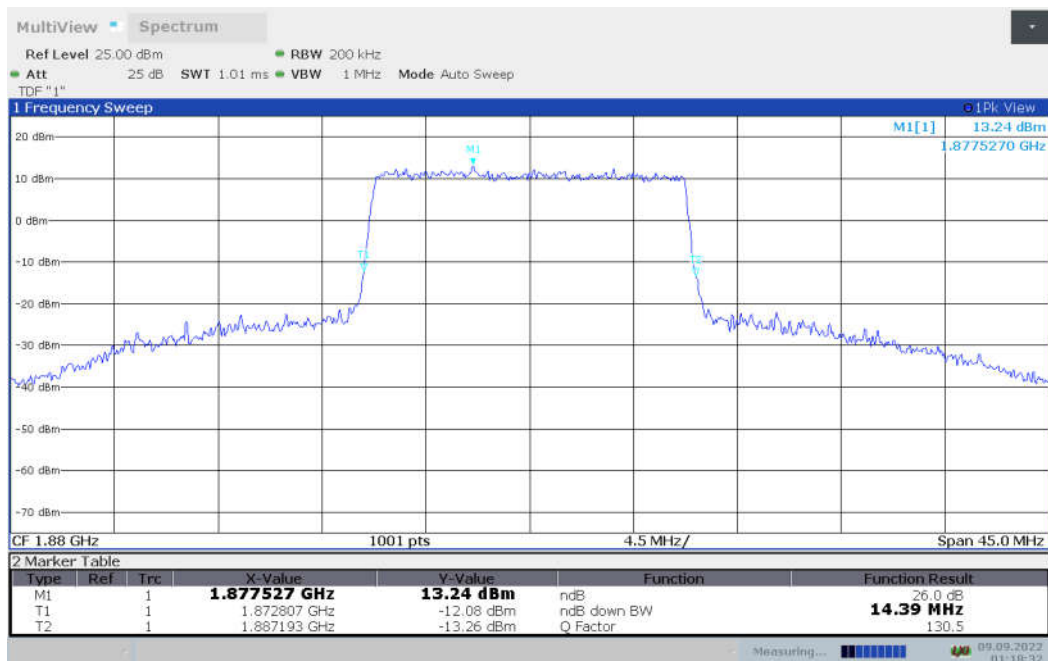
LTE band 2, 15MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)		
1880.0	QPSK	16QAM	64QAM
	14.34	14.39	14.48

LTE band 2, 15MHz Bandwidth, QPSK (-26dBc BW)

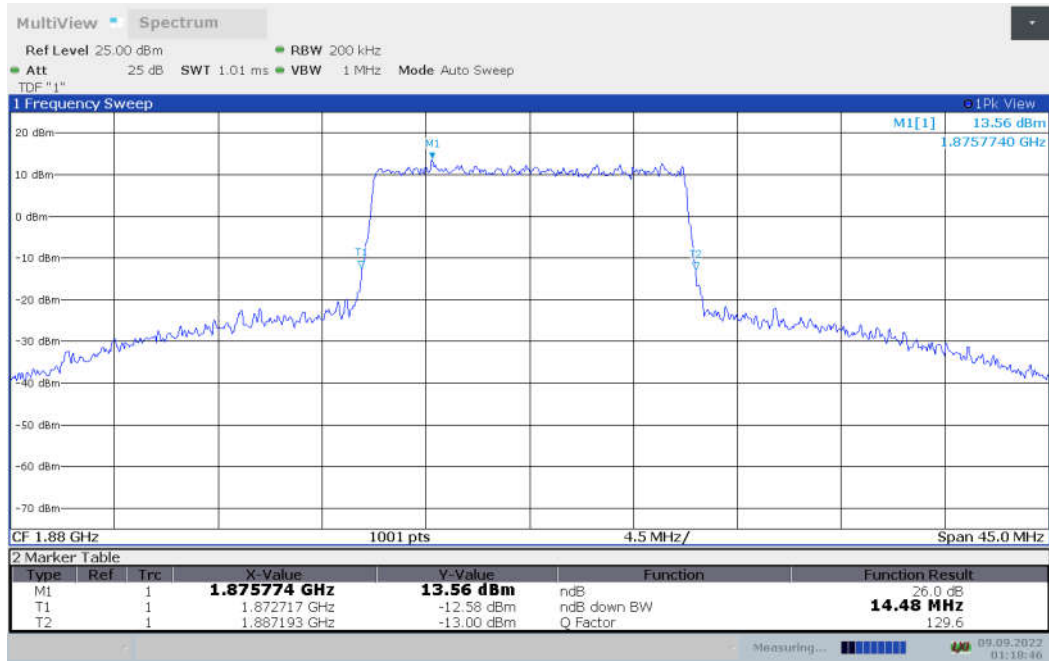


LTE band 2, 15MHz Bandwidth, 16QAM (-26dBc BW)





LTE band 2, 15MHz Bandwidth, 64QAM (-26dBc BW)

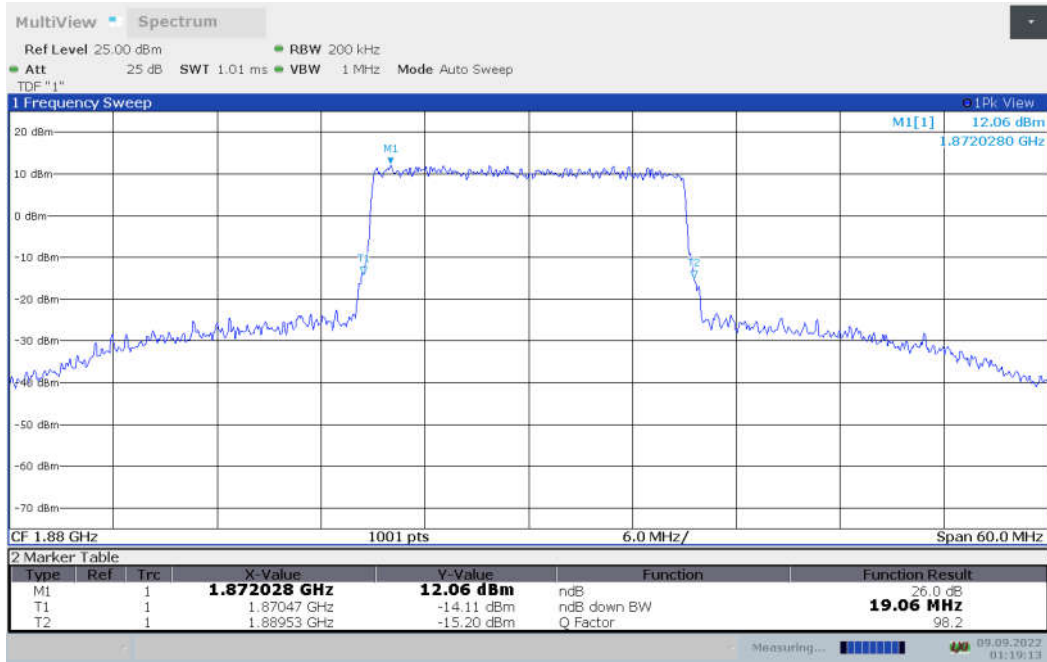




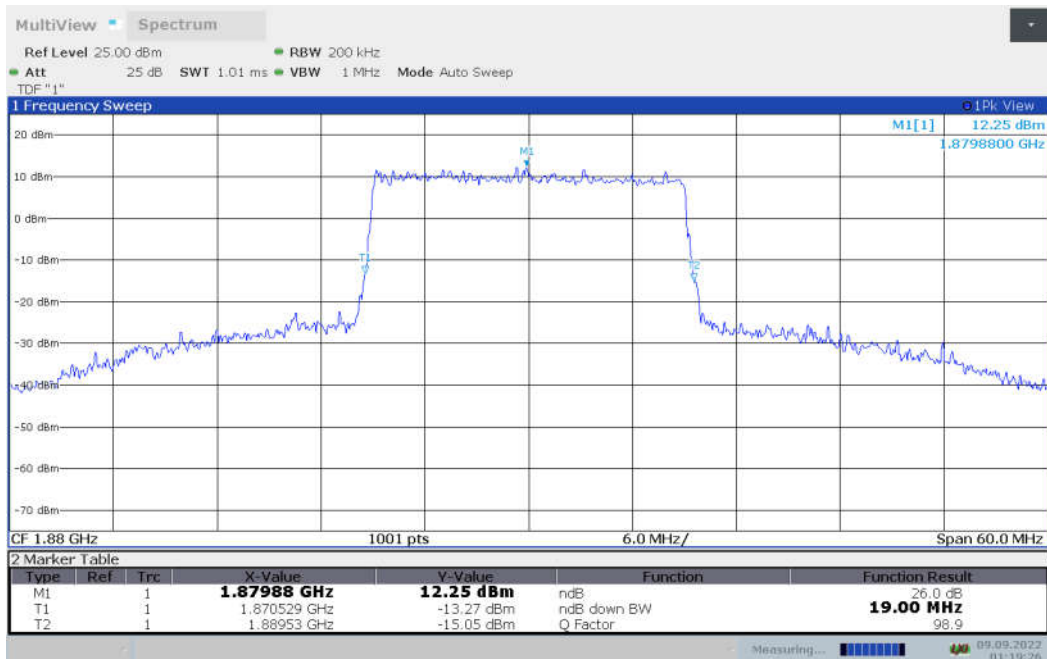
LTE band 2, 20MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)		
1880.0	QPSK	16QAM	64QAM
	19.06	19.00	19.18

LTE band 2, 20MHz Bandwidth, QPSK (-26dBc BW)

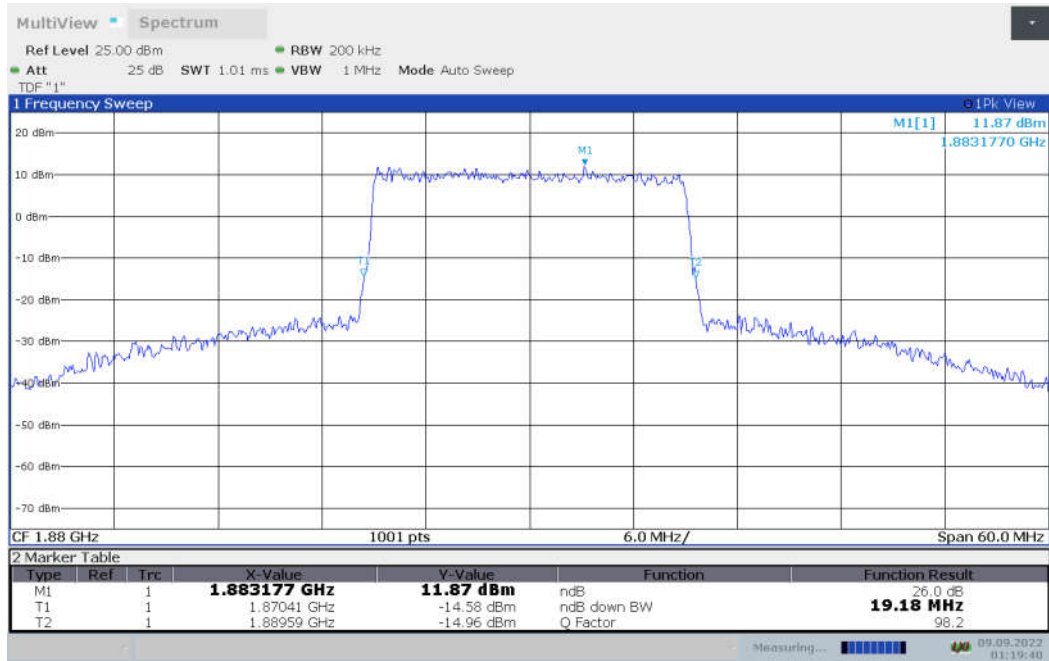


LTE band 2, 20MHz Bandwidth, 16QAM (-26dBc BW)





LTE band 2, 20MHz Bandwidth, 64QAM (-26dBc BW)

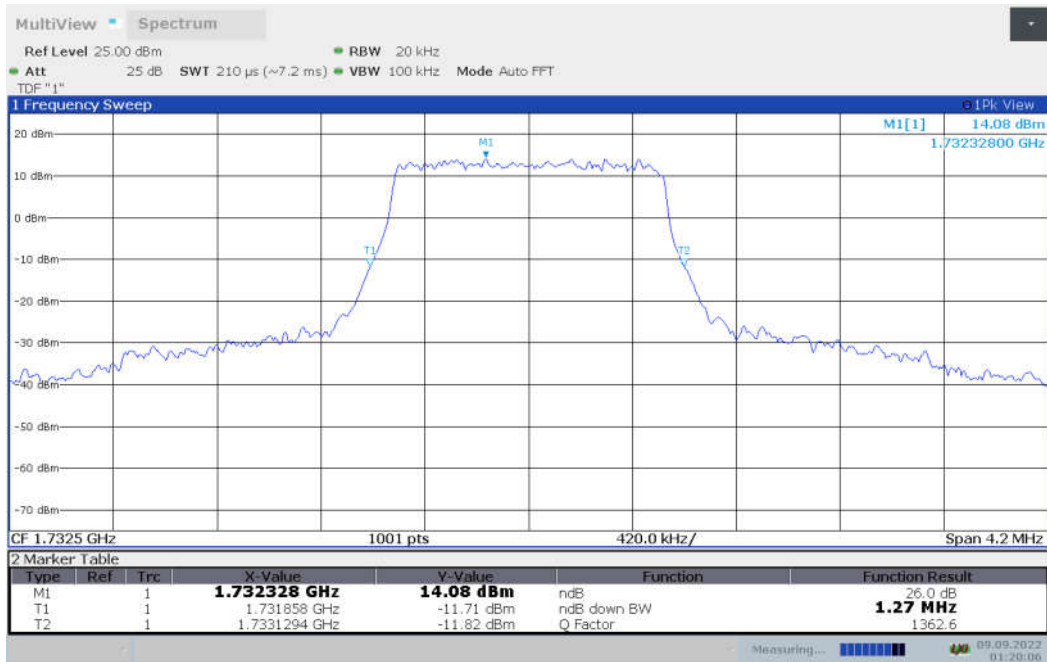




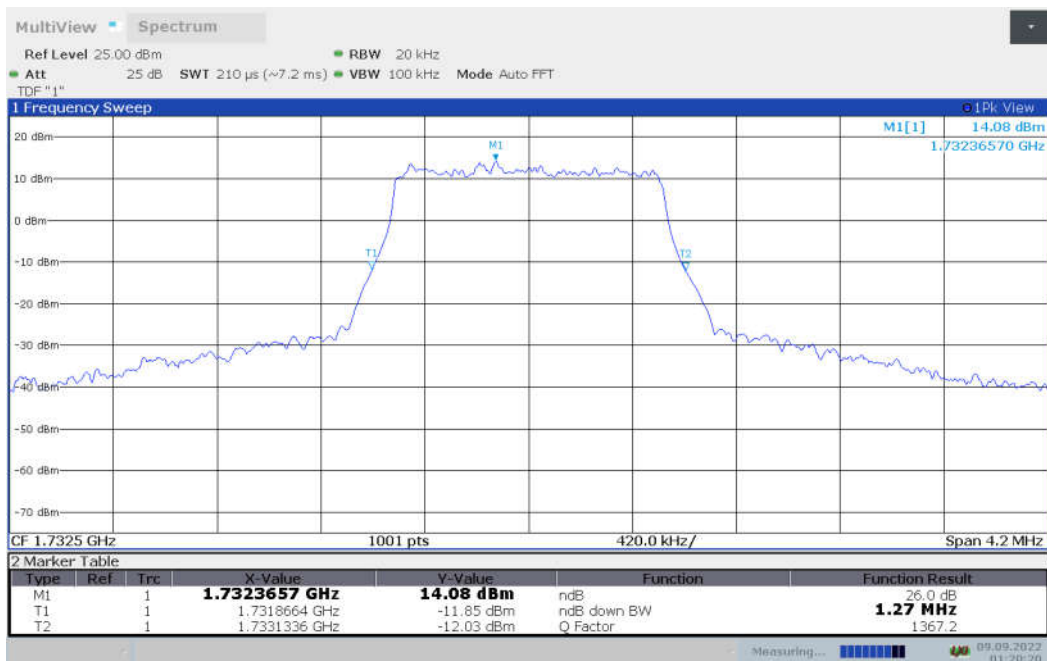
LTE band 4, 1.4MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)		
1732.5	QPSK	16QAM	64QAM
	1.27	1.27	1.26

LTE band 4, 1.4MHz Bandwidth, QPSK (-26dBc BW)

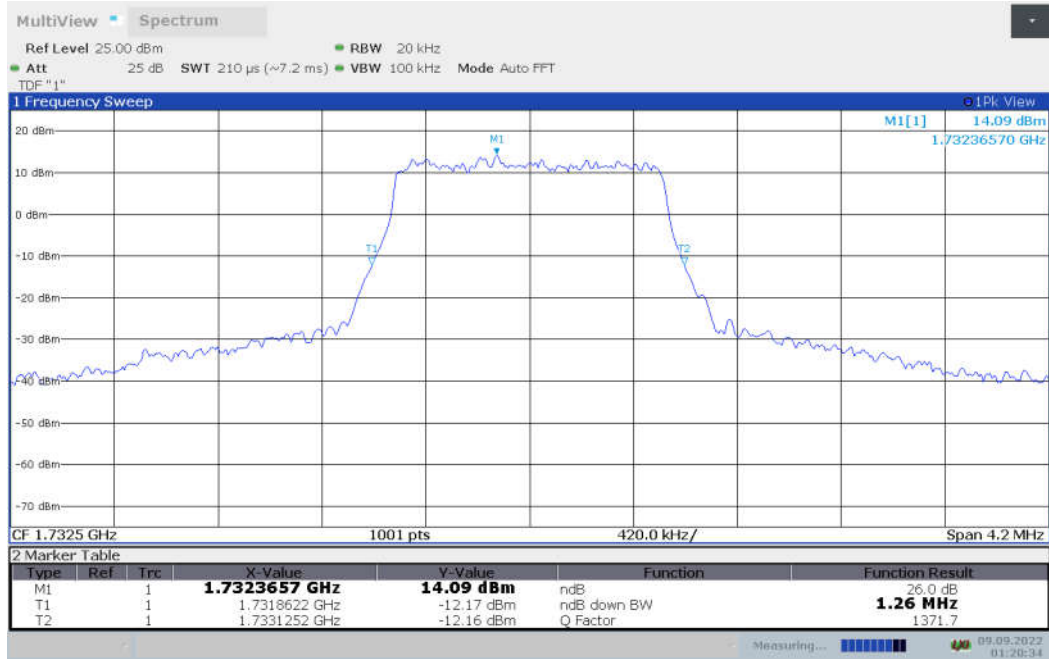


LTE band 4, 1.4MHz Bandwidth, 16QAM (-26dBc BW)





LTE band 4, 1.4MHz Bandwidth, 64QAM (-26dBc BW)

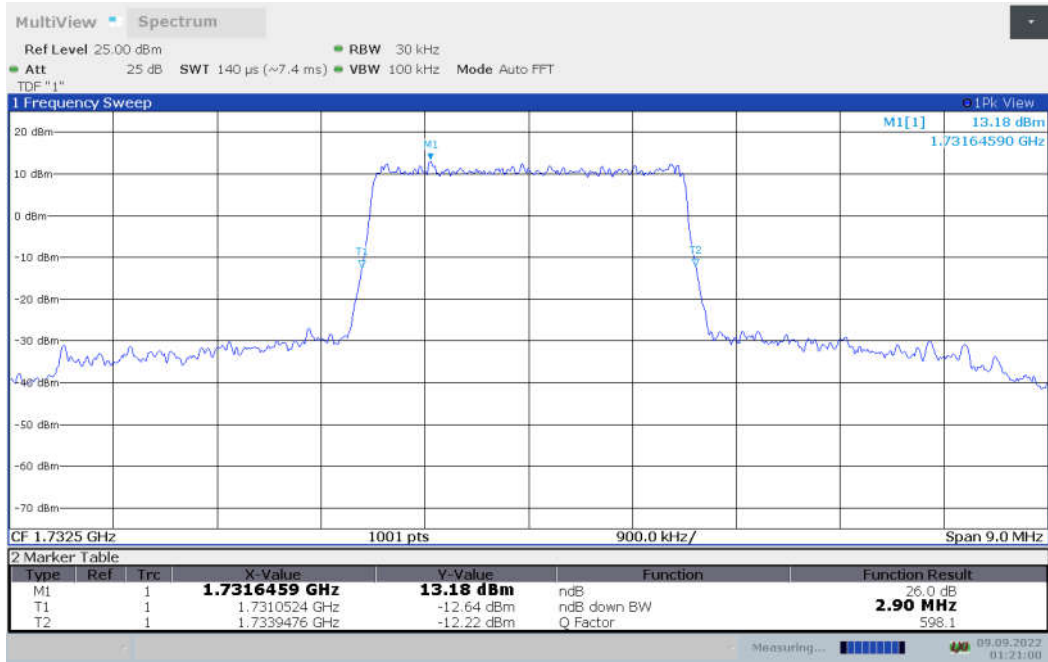




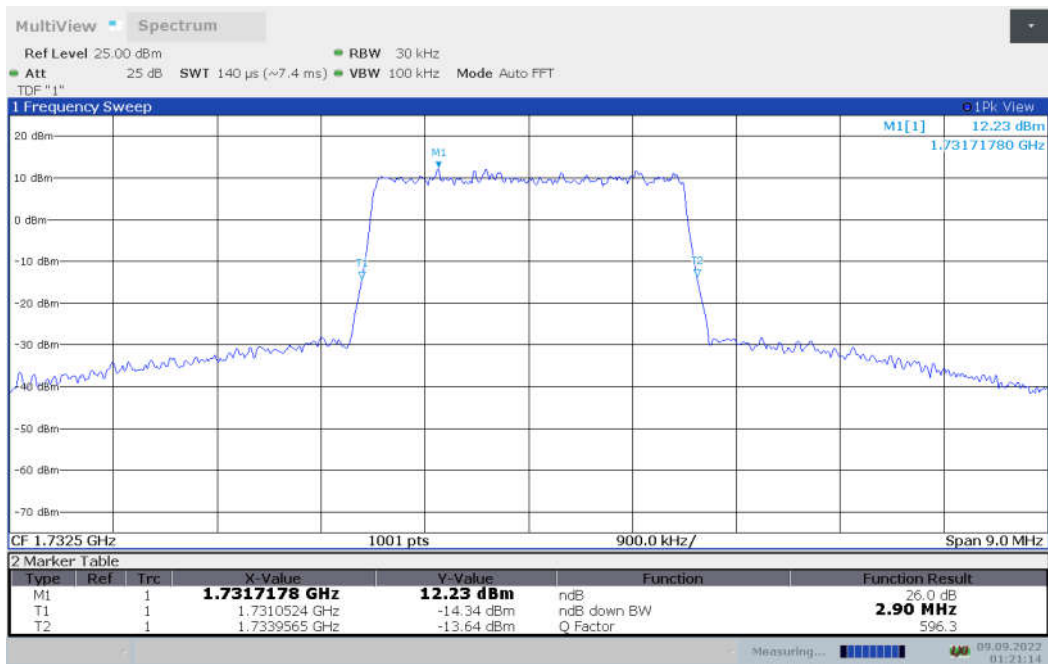
LTE band 4, 3MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)		
1732.5	QPSK	16QAM	64QAM
	2.90	2.90	2.90

LTE band 4, 3MHz Bandwidth, QPSK (-26dBc BW)

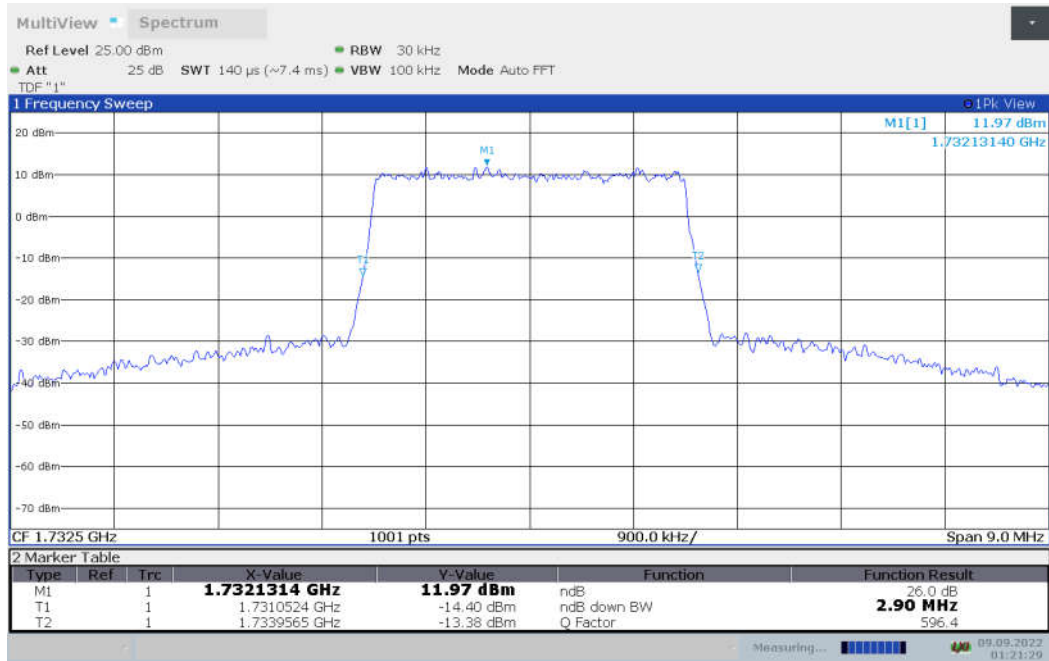


LTE band 4, 3MHz Bandwidth, 16QAM (-26dBc BW)





LTE band 4, 3MHz Bandwidth, 64QAM (-26dBc BW)

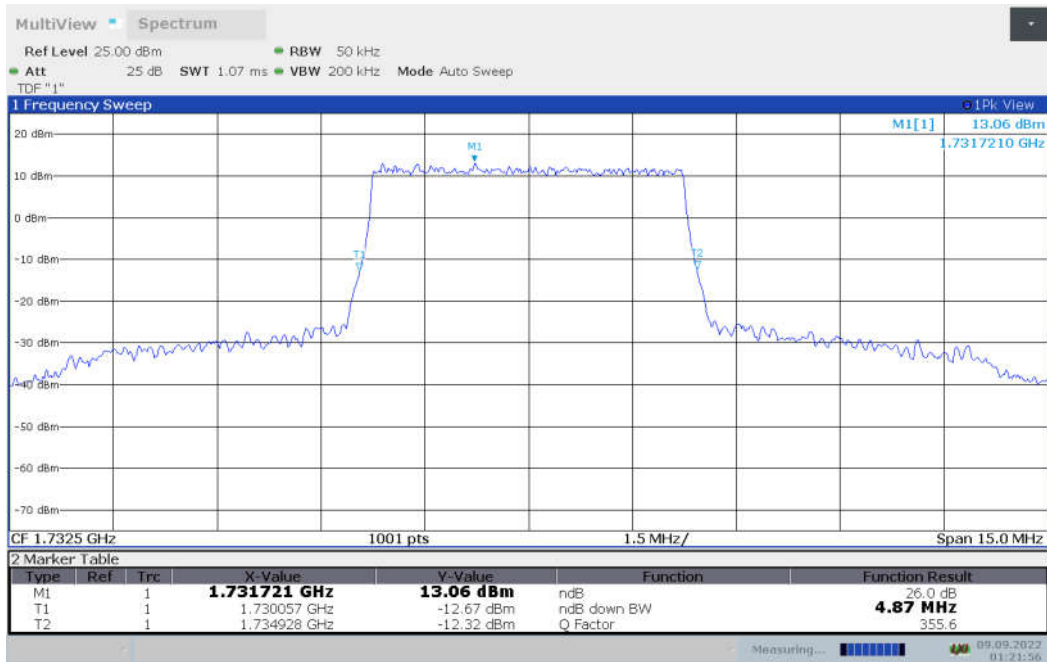




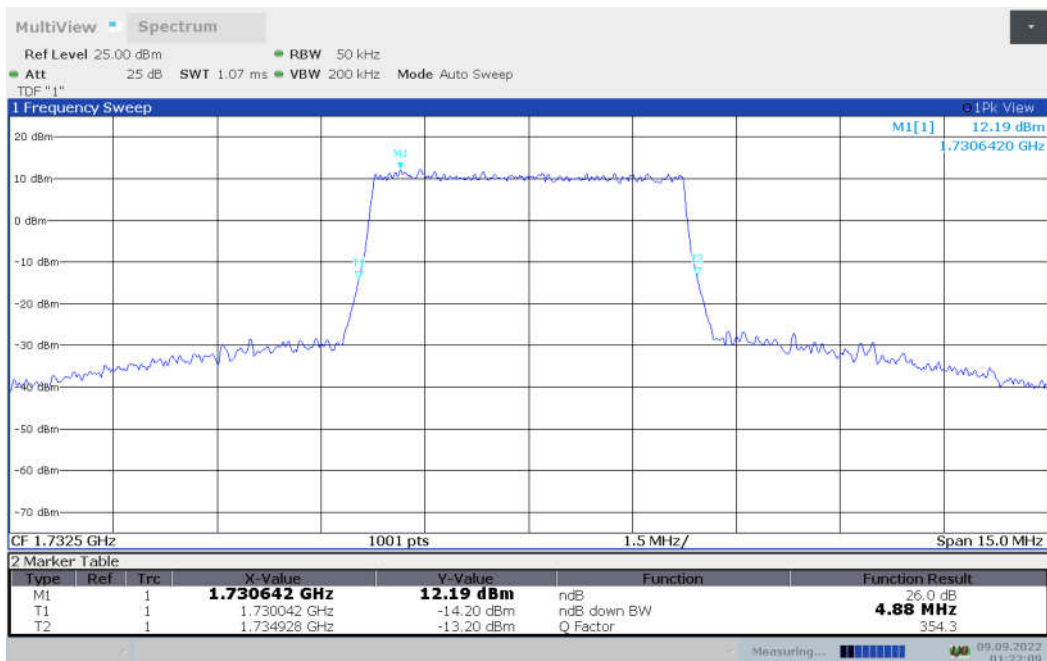
LTE band 4, 5MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)		
1732.5	QPSK	16QAM	64QAM
	4.87	4.88	4.88

LTE band 4, 5MHz Bandwidth, QPSK (-26dBc BW)

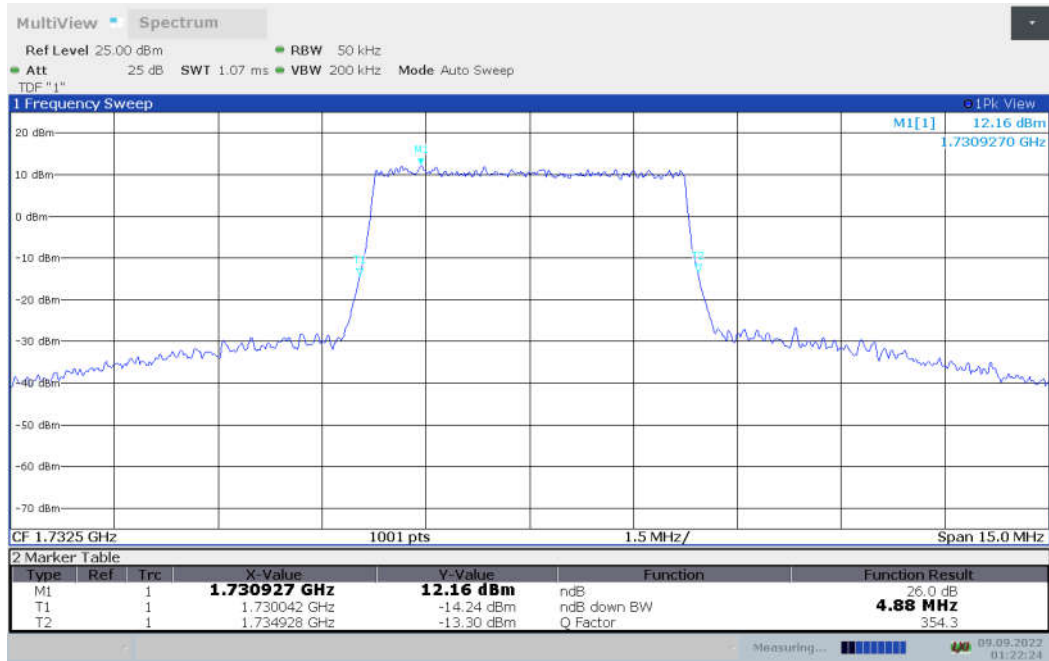


LTE band 4, 5MHz Bandwidth, 16QAM (-26dBc BW)





LTE band 4, 5MHz Bandwidth,64QAM (-26dBc BW)

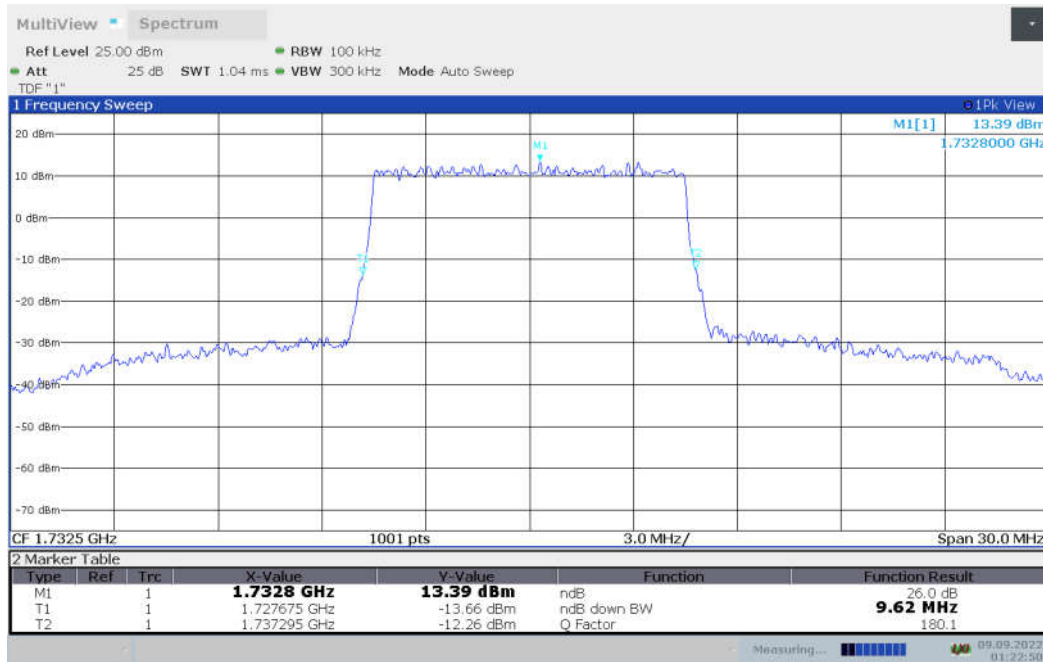




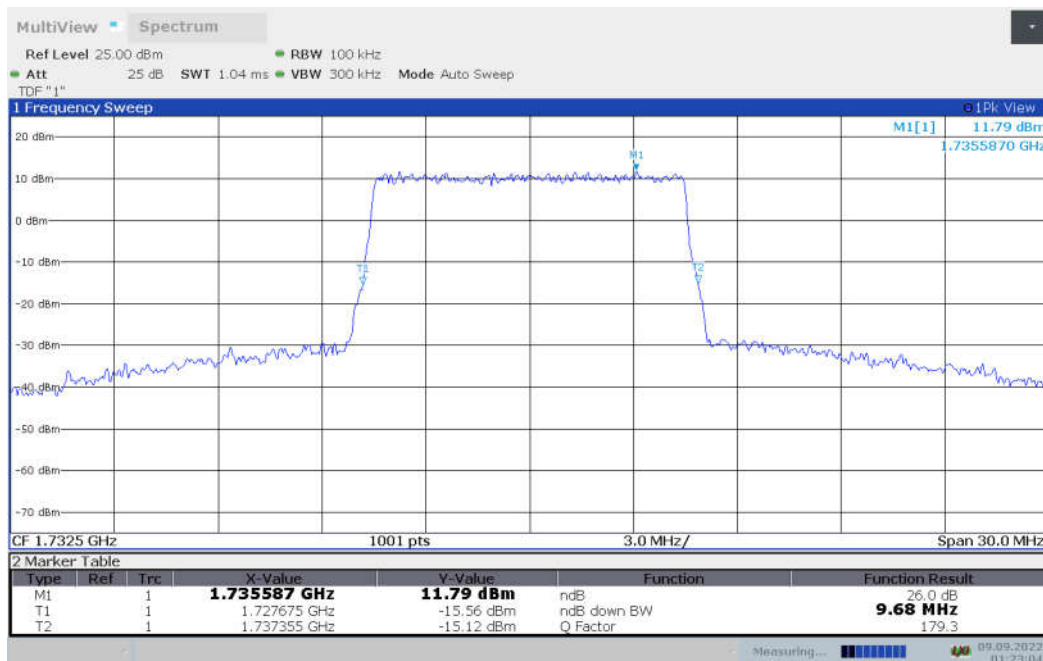
LTE band 4, 10MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)		
1732.5	QPSK	16QAM	64QAM
	9.62	9.68	9.68

LTE band 4, 10MHz Bandwidth, QPSK (-26dBc BW)

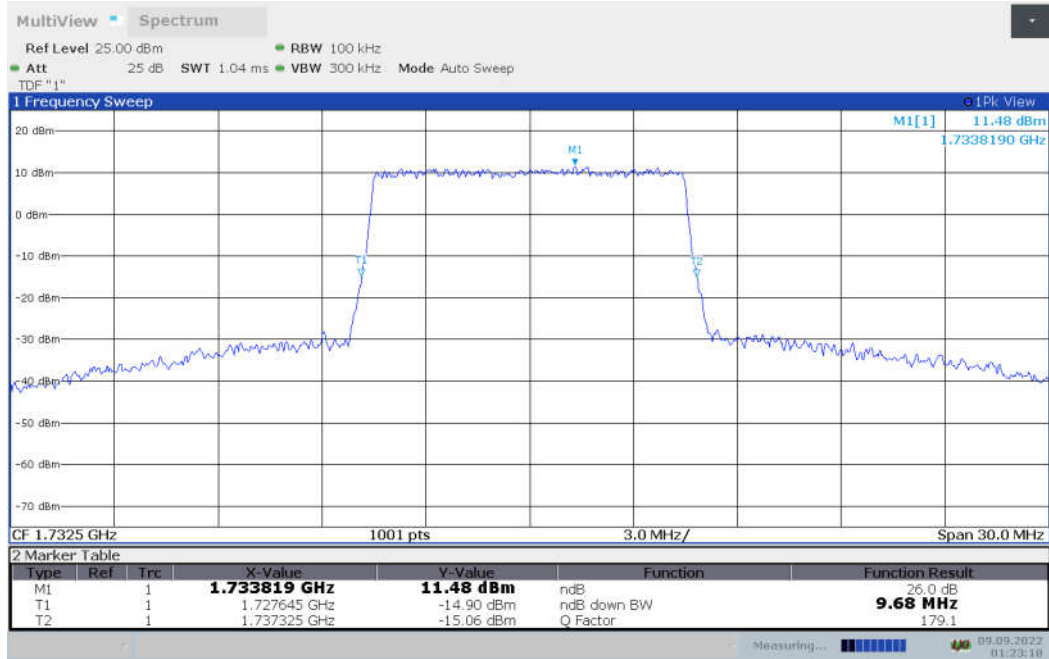


LTE band 4, 10MHz Bandwidth, 16QAM (-26dBc BW)





LTE band 4, 10MHz Bandwidth, 64QAM (-26dBc BW)

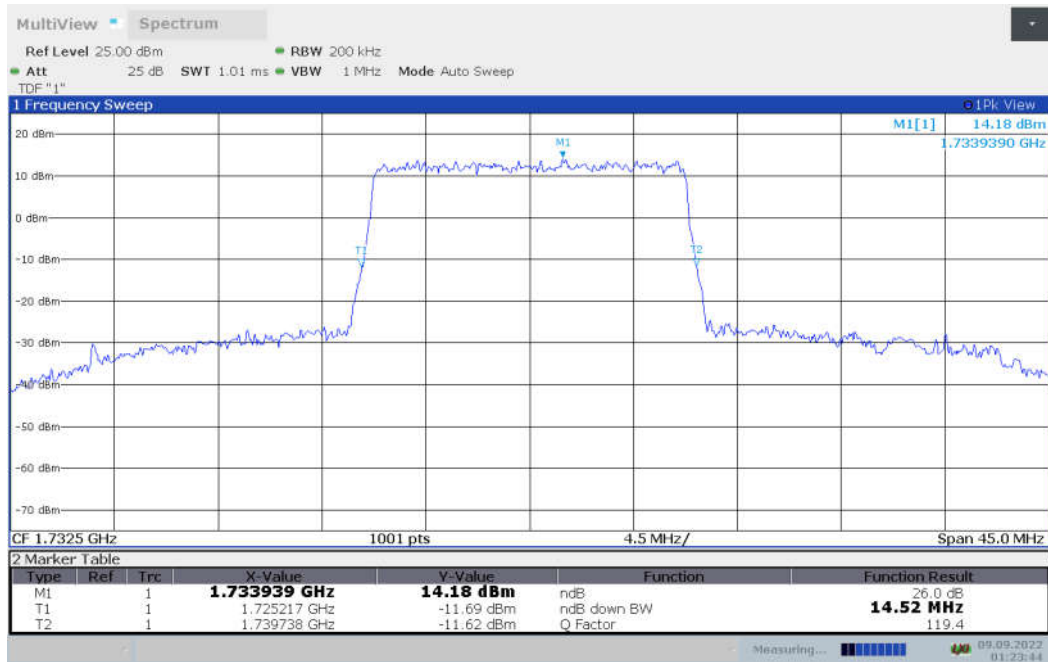




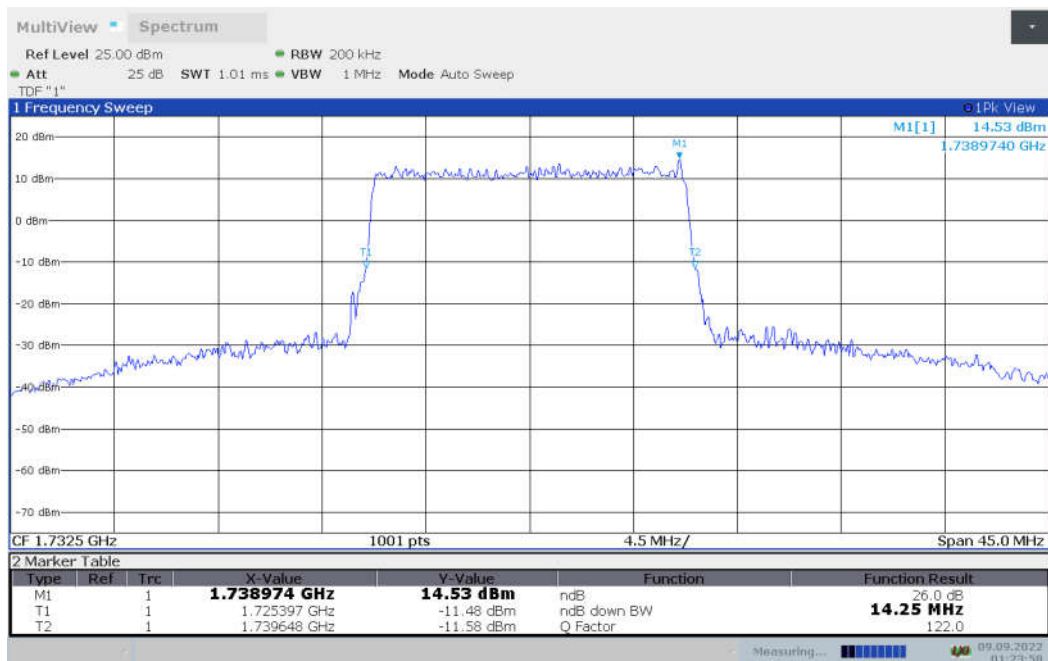
LTE band 4, 15MHz (-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)		
1732.5	QPSK	16QAM	64QAM
	14.52	14.25	14.52

LTE band 4, 15MHz Bandwidth, QPSK (-26dBc BW)



LTE band 4, 15MHz Bandwidth, 16QAM (-26dBc BW)





LTE band 4, 15MHz Bandwidth, 64QAM (-26dBc BW)

