LTE band 17,10MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
710	8.945	8.931

LTE band 17 , 10MHz Bandwidth, MID, QPSK (99% BW)
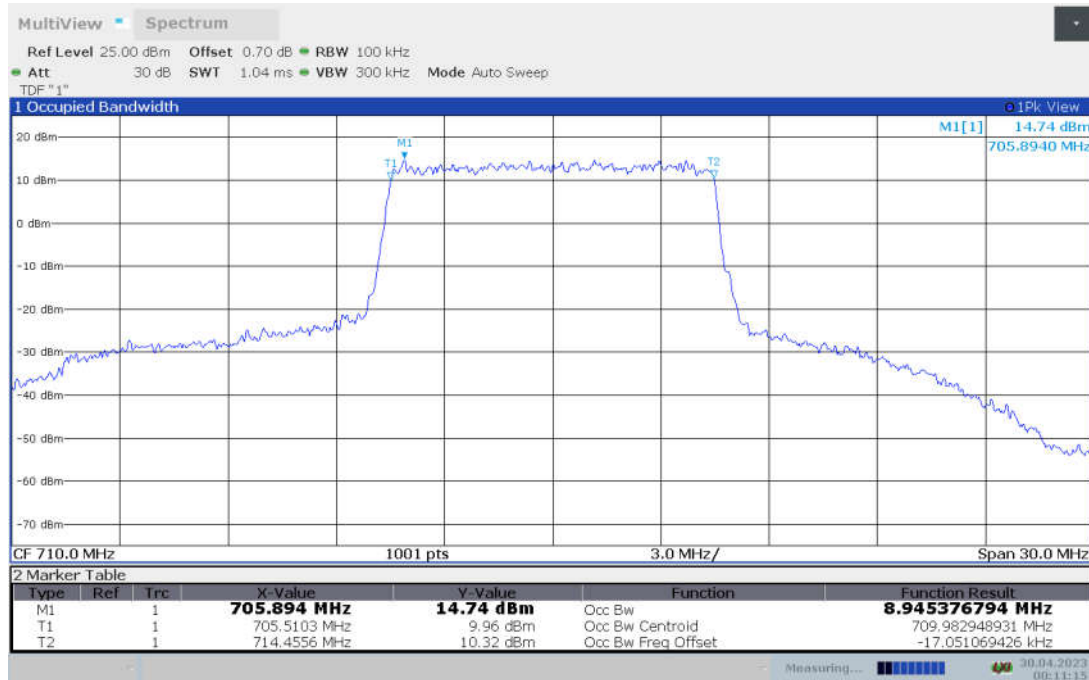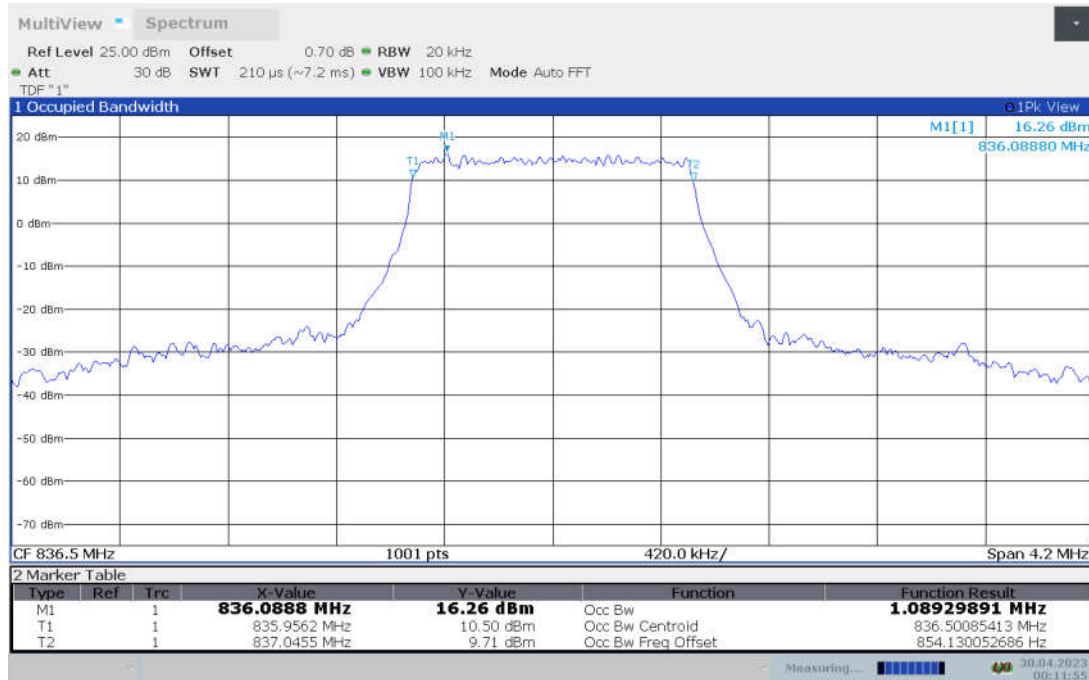

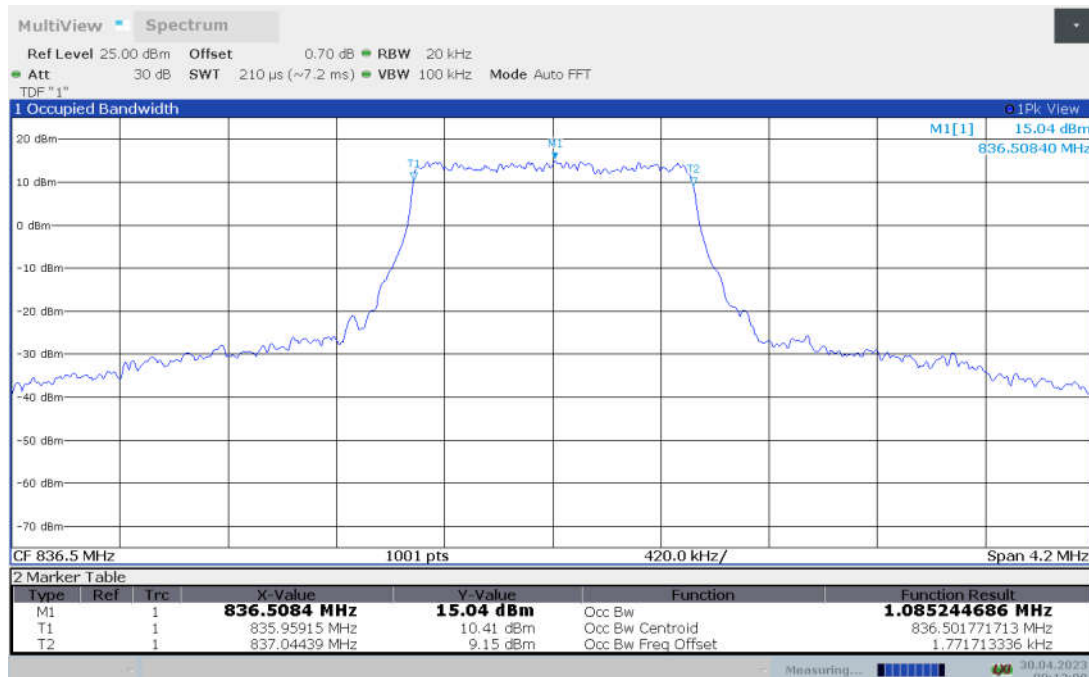**LTE band 17 , 10MHz Bandwidth, MID, 16QAM (99% BW)**
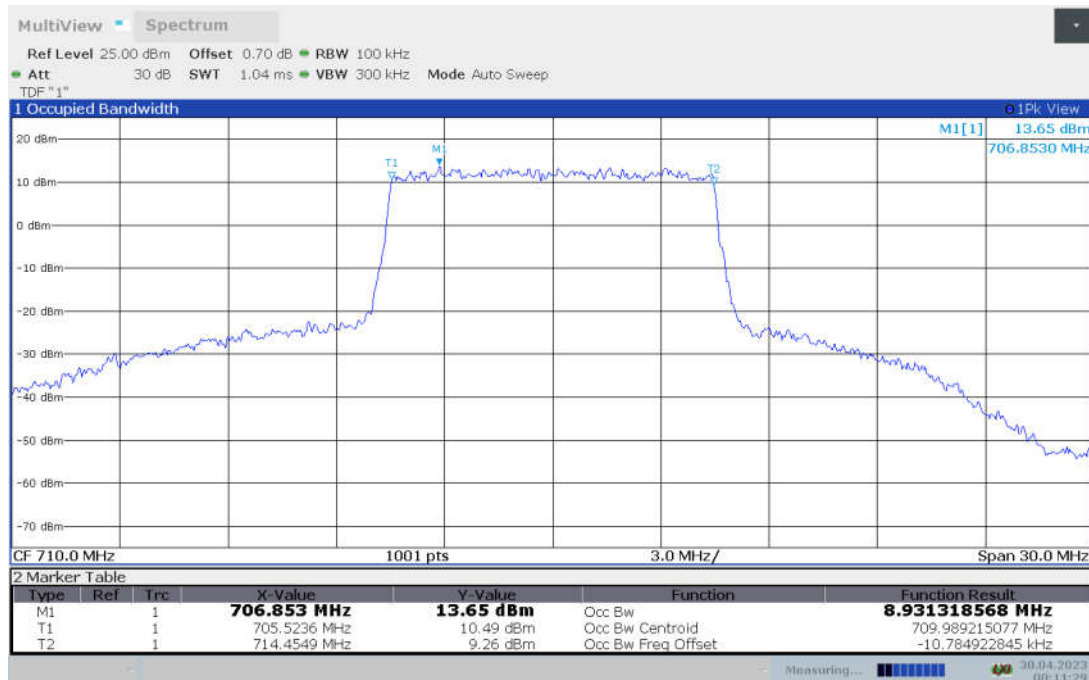
LTE band 26(824MHz-849MHz),1.4MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
836.5	1.089	1.085

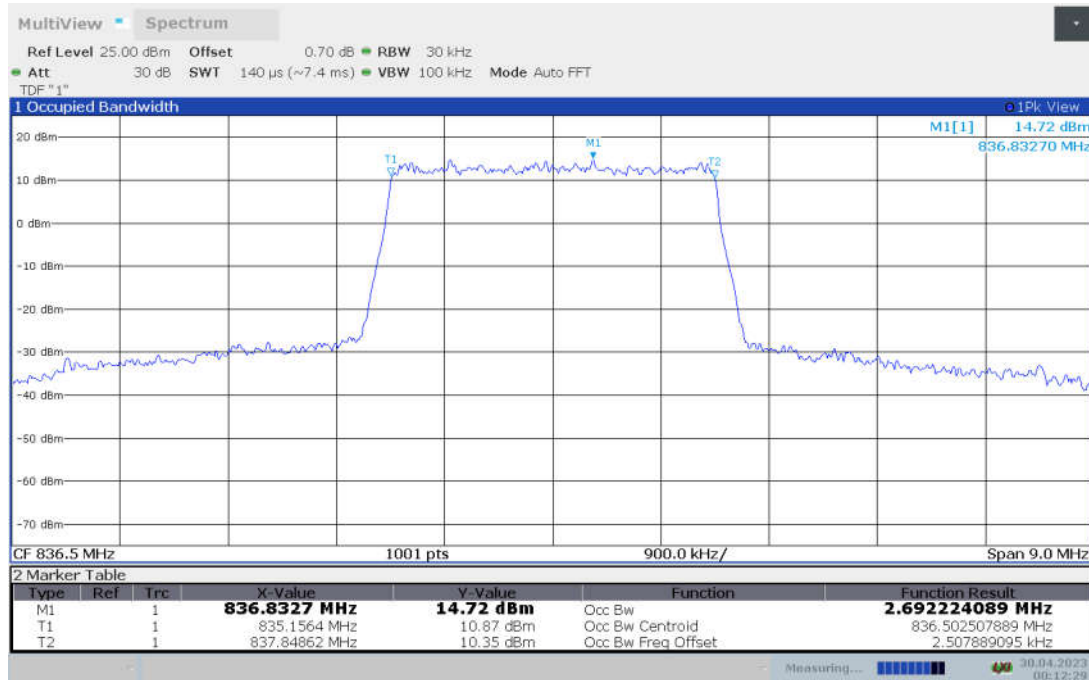### LTE band 26 , 1.4MHz Bandwidth, MID, QPSK (99% BW)

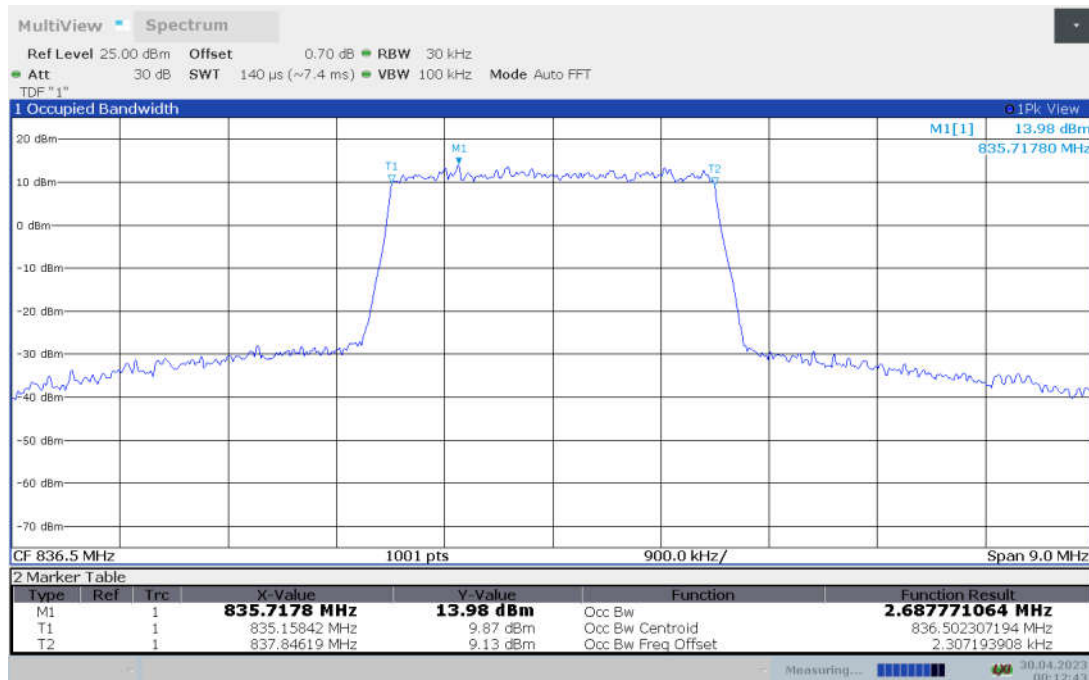### LTE band 26 , 1.4MHz Bandwidth, MID, 16QAM (99% BW)

LTE band 26(824MHz-849MHz),3MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
836.5	2.692	2.688

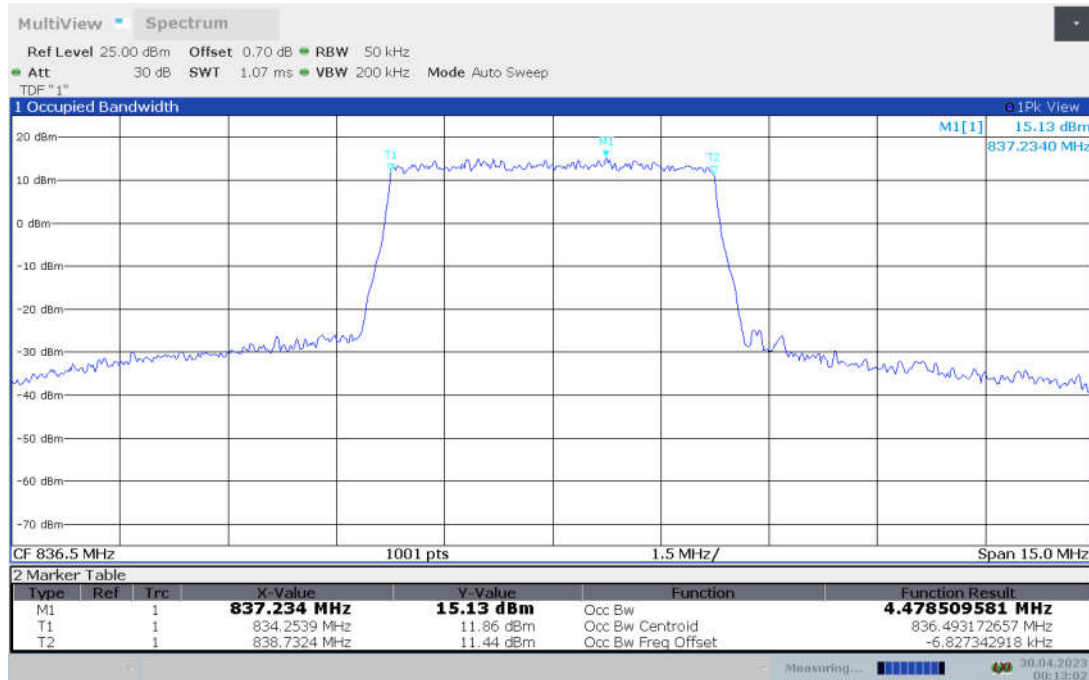**LTE band 26 , 3MHz Bandwidth, MID, QPSK (99% BW)**

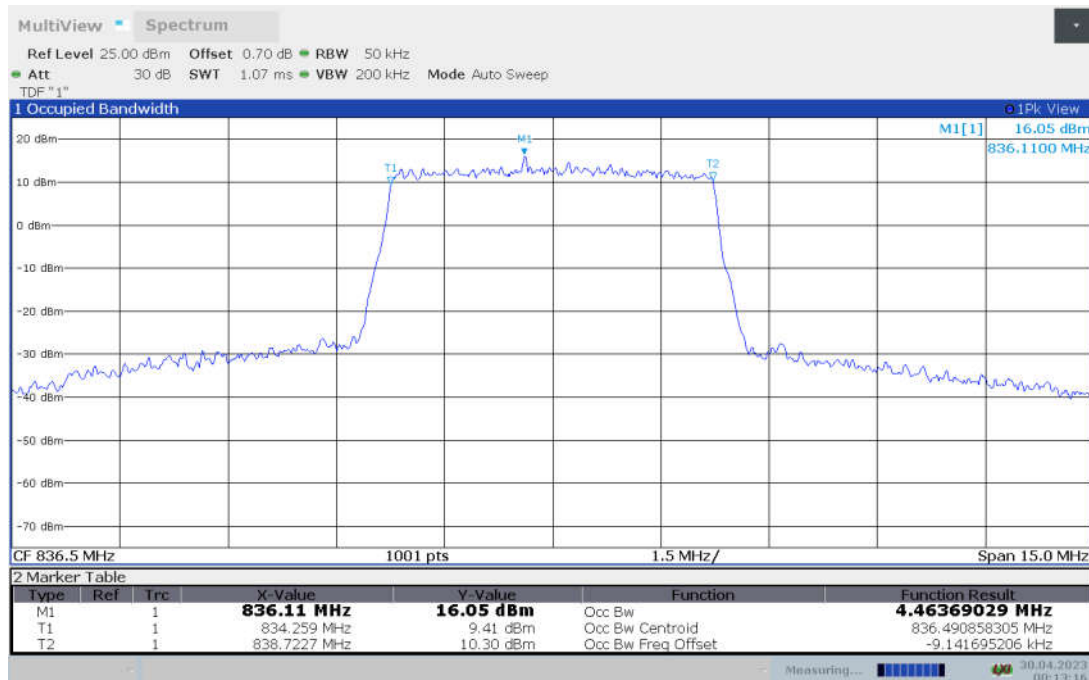**LTE band 26 , 3MHz Bandwidth, MID, 16QAM (99% BW)**

LTE band 26(824MHz-849MHz),5MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
836.5	4.479	4.464

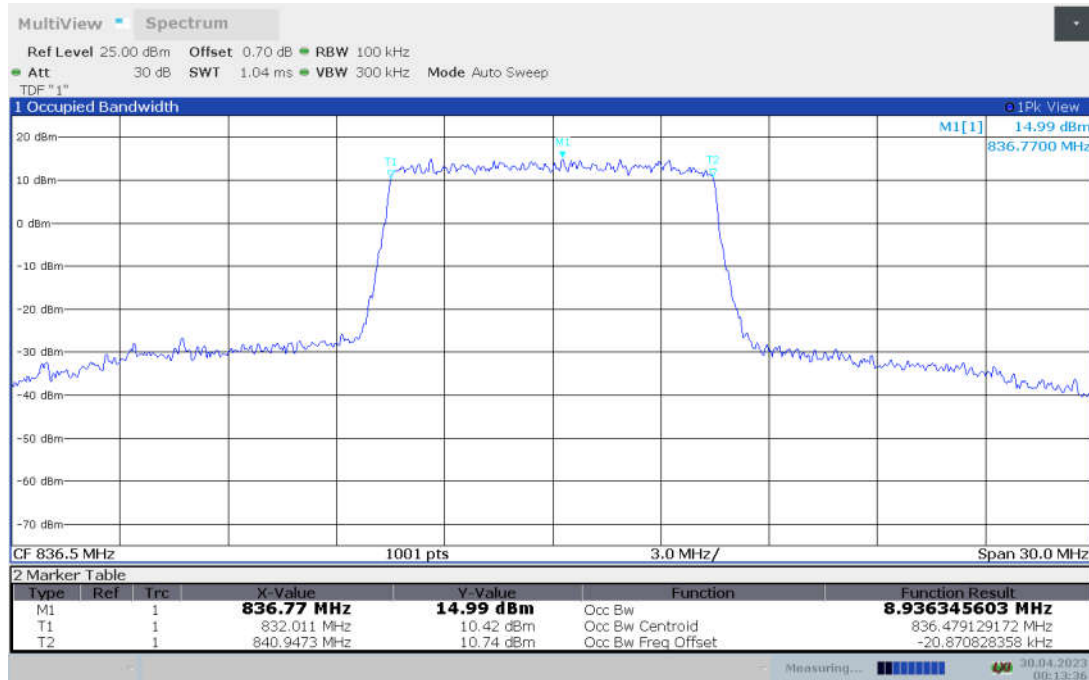**LTE band 26 , 5MHz Bandwidth, MID, QPSK (99% BW)**

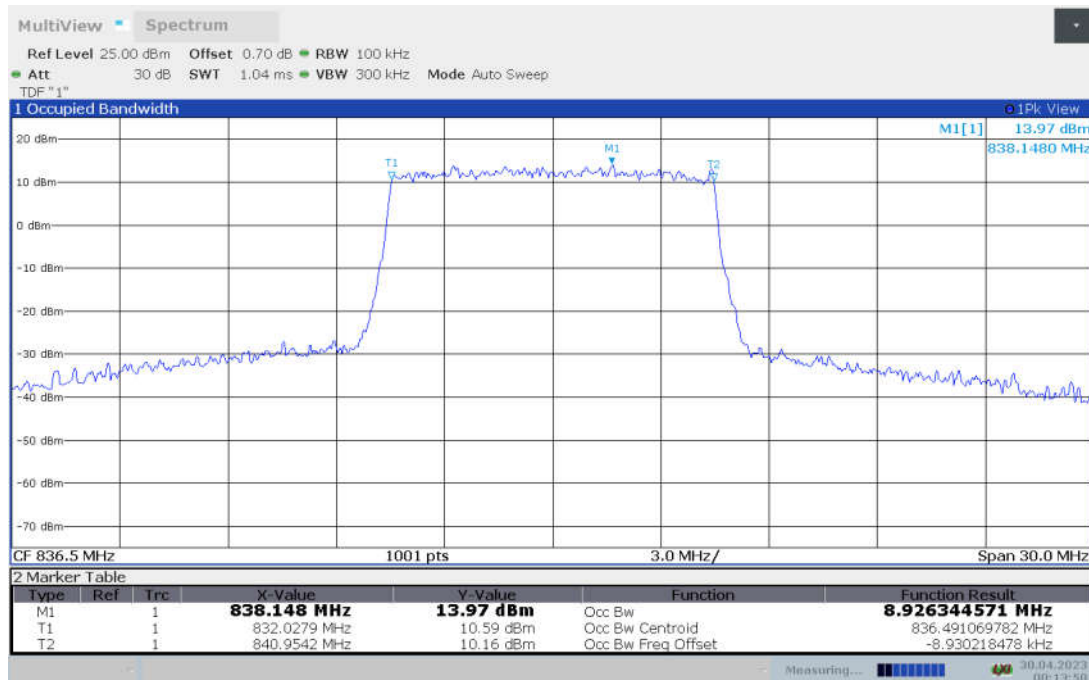**LTE band 26 , 5MHz Bandwidth, MID, 16QAM (99% BW)**

LTE band 26(824MHz-849MHz),10MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
836.5	8.936	8.926

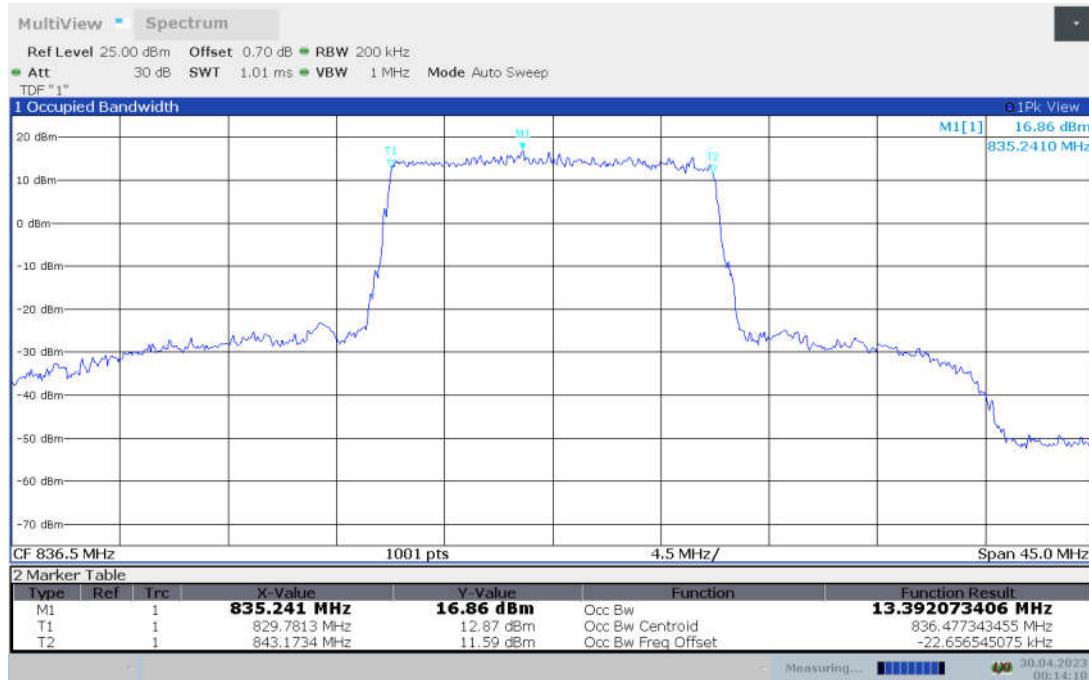## LTE band 26 , 10MHz Bandwidth, MID, QPSK (99% BW)

LTE band 26 , 10MHz Bandwidth, MID, 16QAM (99% BW)

LTE band 26(824MHz-849MHz),15MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
836.5	13.392	13.372

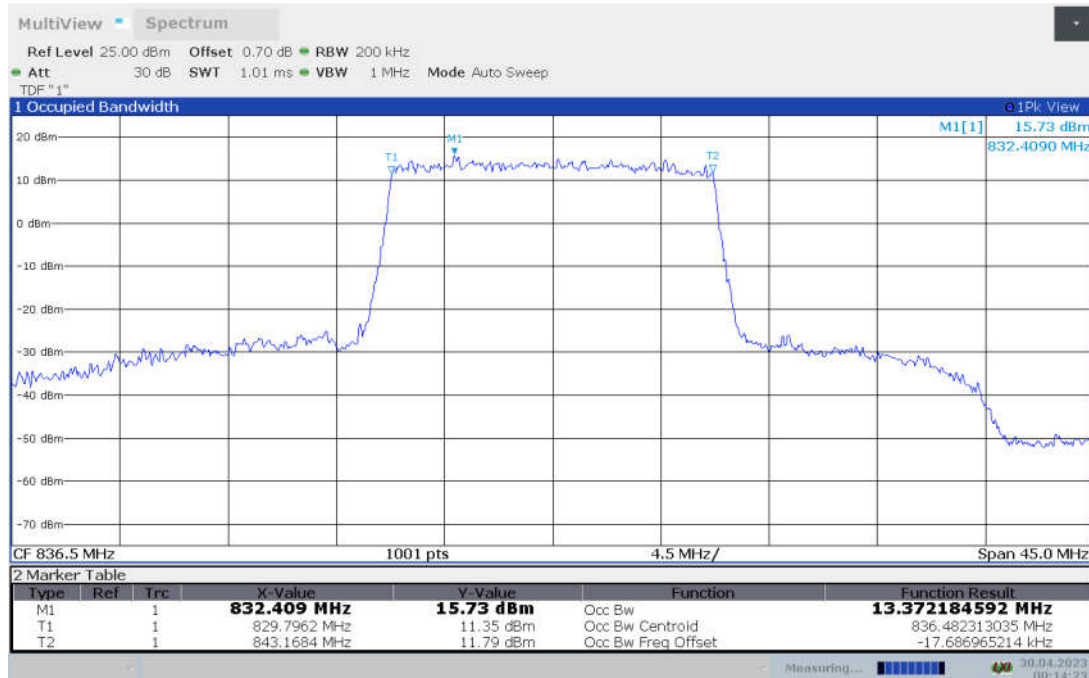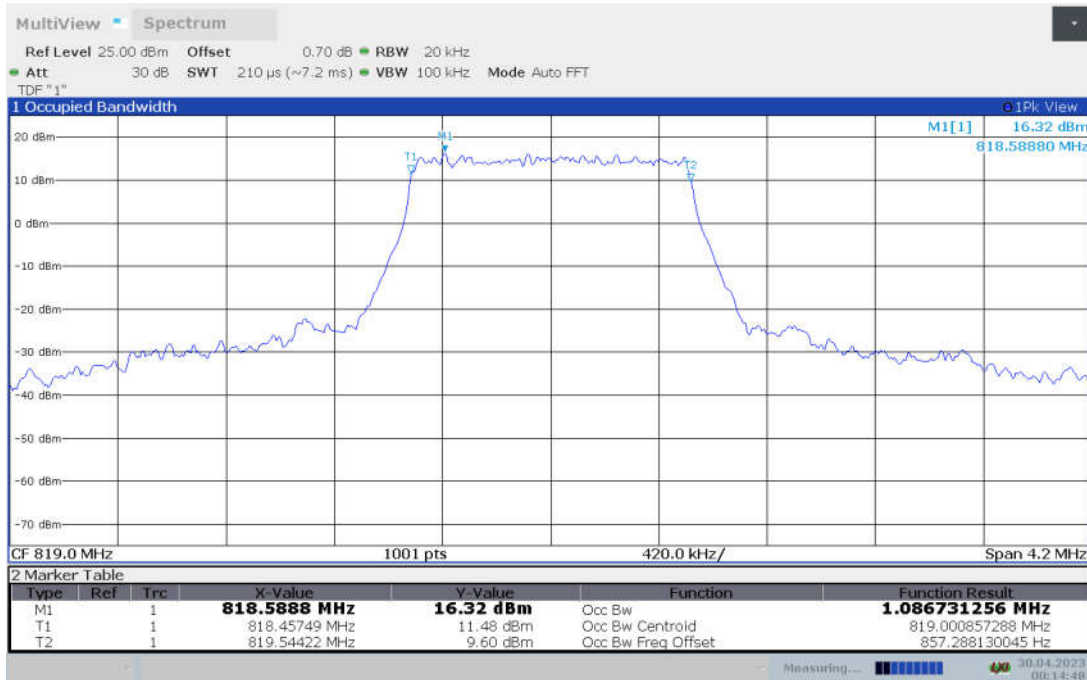**LTE band 26 , 15MHz Bandwidth, MID, QPSK (99% BW)**

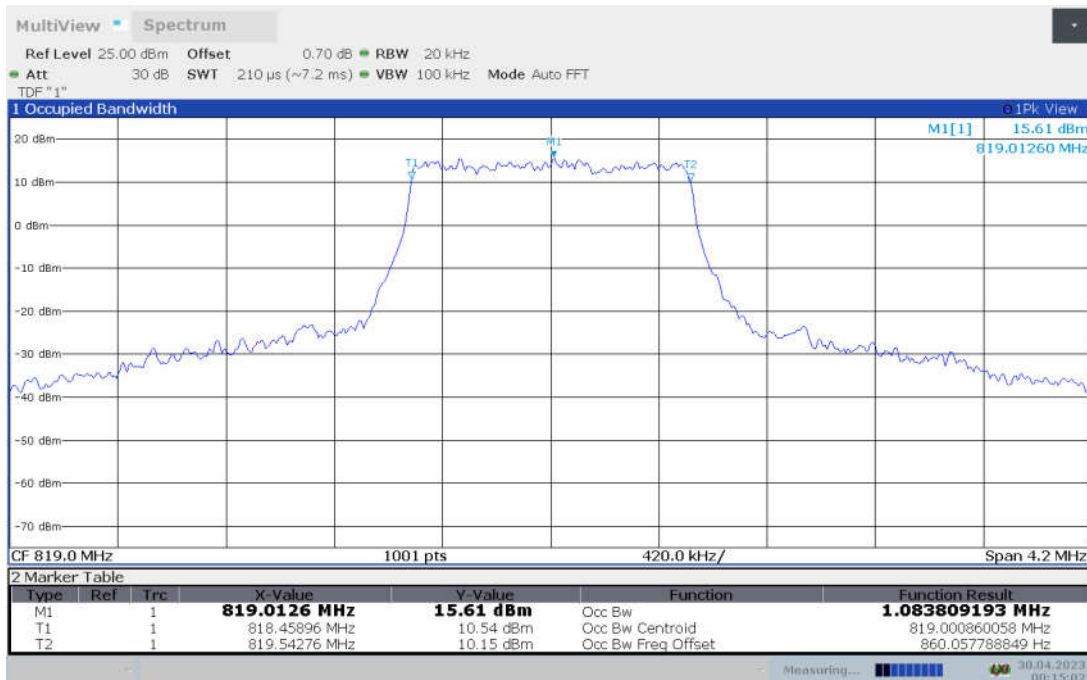**LTE band 26 , 15MHz Bandwidth, MID, 16QAM (99% BW)**

LTE band 26(814MHz-824MHz),1.4MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
819	1.087	1.084

LTE band 26 , 1.4MHz Bandwidth, MID, QPSK (99% BW)

LTE band 26 , 1.4MHz Bandwidth, MID, 16QAM (99% BW)

LTE band 26(814MHz-824MHz),3MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
819	2.691	2.688

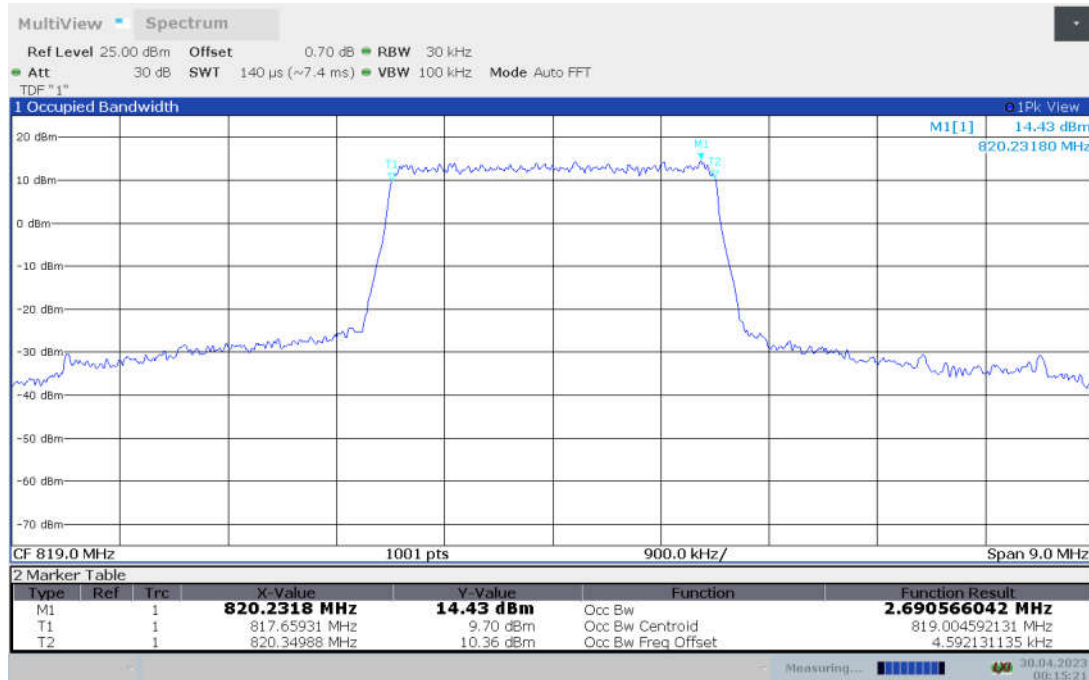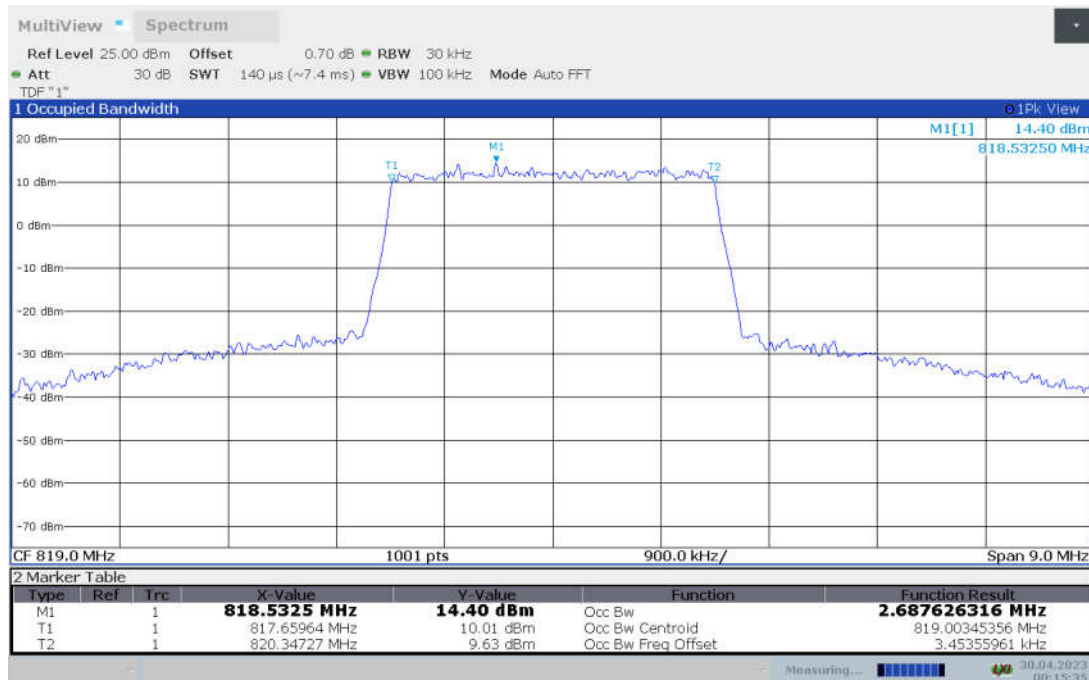**LTE band 26 , 3MHz Bandwidth, MID, QPSK (99% BW)**

LTE band 26 , 3MHz Bandwidth, MID, 16QAM (99% BW)

LTE band 26(814MHz-824MHz),5MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
819	4.482	4.464

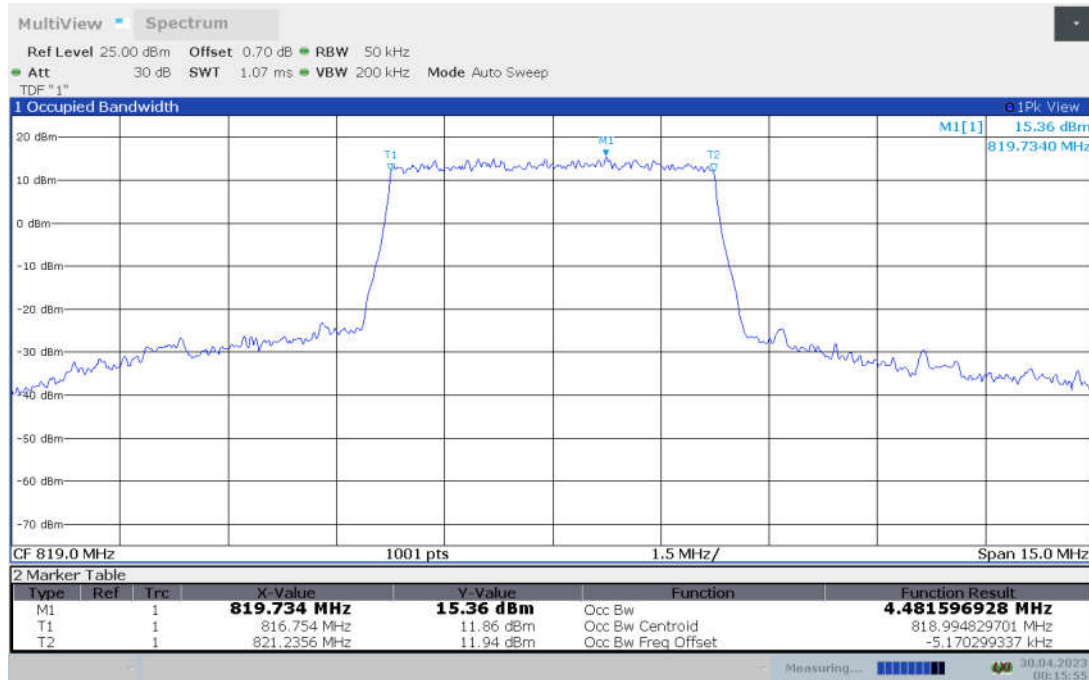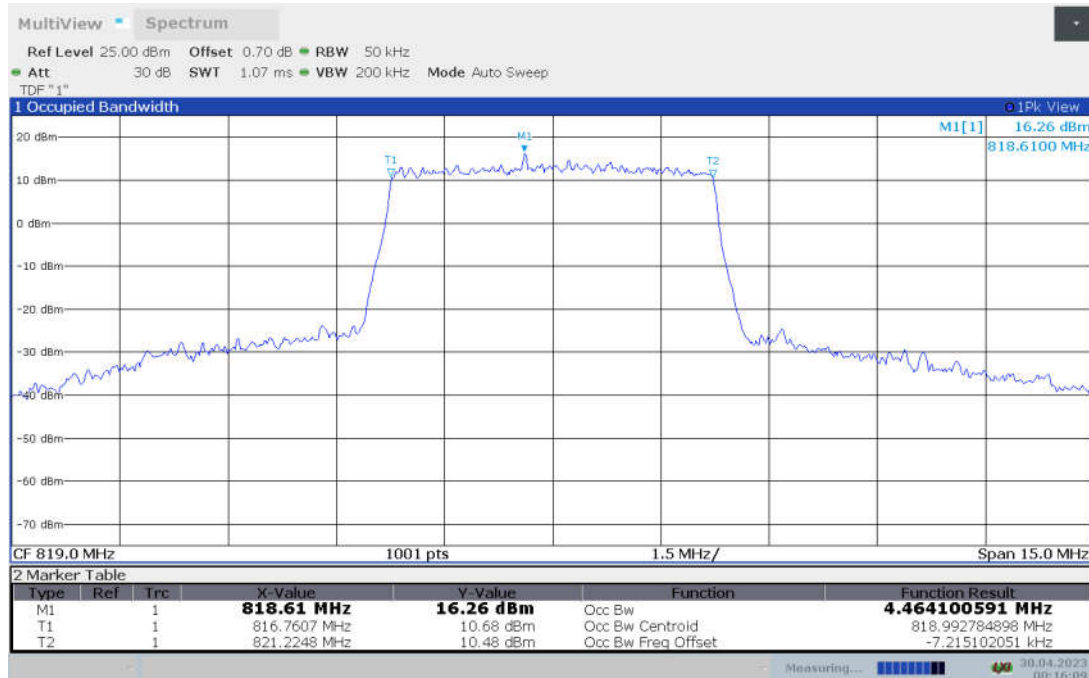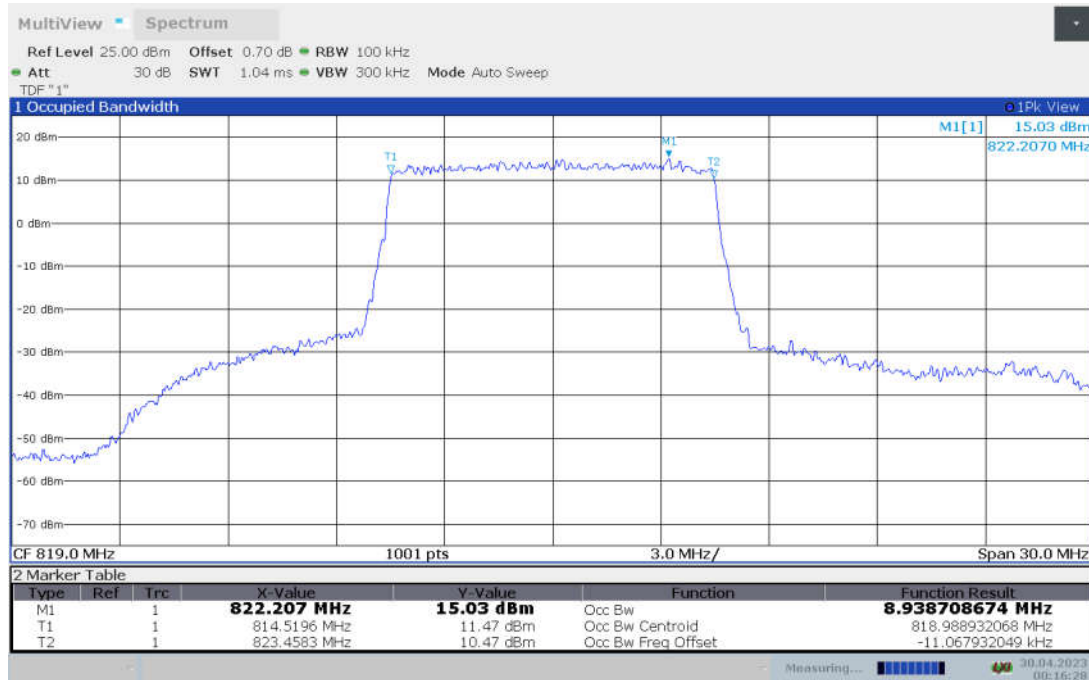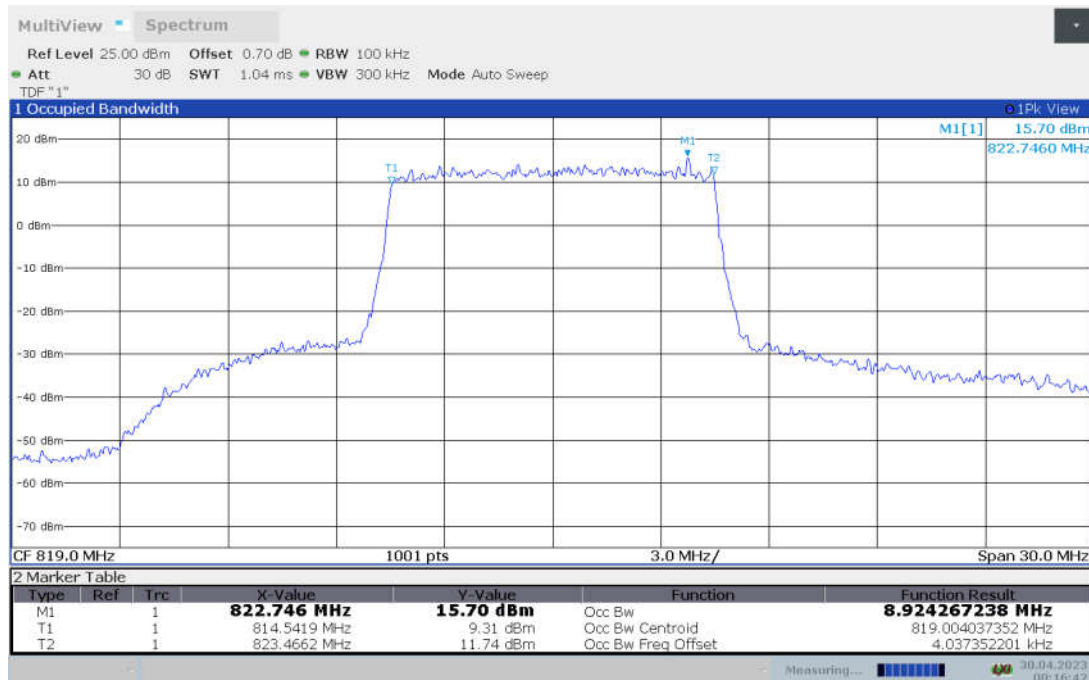**LTE band 26 , 5MHz Bandwidth, MID, QPSK (99% BW)**

LTE band 26 , 5MHz Bandwidth, MID, 16QAM (99% BW)

LTE band 26(814MHz-824MHz),10MHz(99% BW)
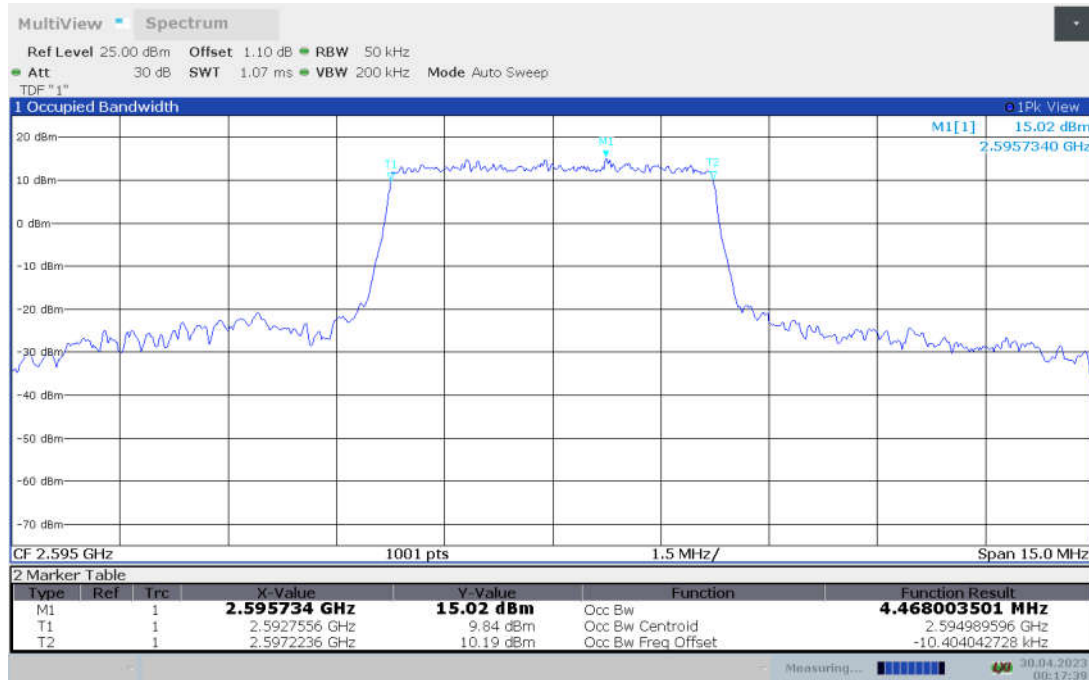
Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
819	8.939	8.924

LTE band 26 , 10MHz Bandwidth, MID, QPSK (99% BW)

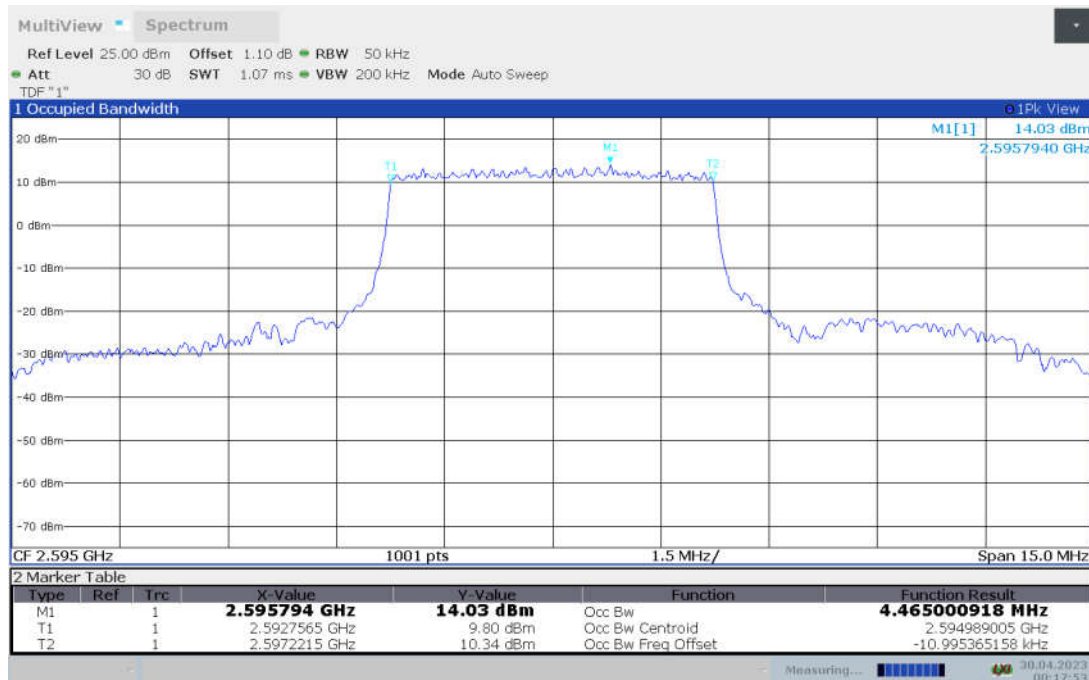### LTE band 26 , 10MHz Bandwidth, MID, 16QAM (99% BW)

LTE band 38,5MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
2595	4.468	4.465

LTE band 38 , 5MHz Bandwidth, MID, QPSK (99% BW)

LTE band 38 , 5MHz Bandwidth, MID, 16QAM (99% BW)

LTE band 38,10MHz(99% BW)

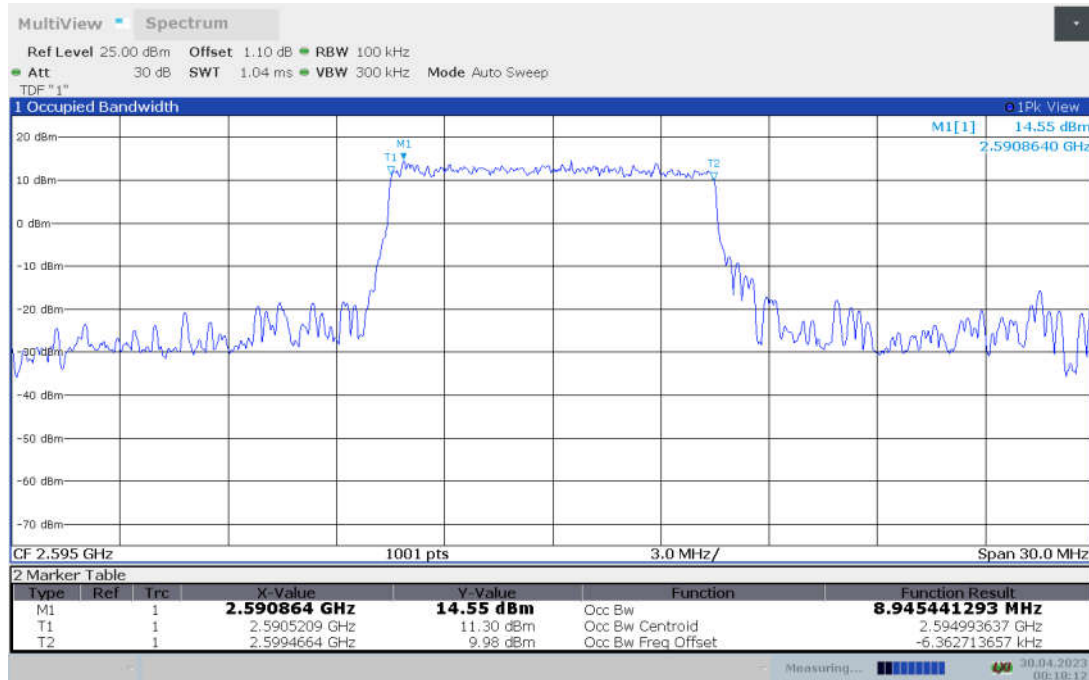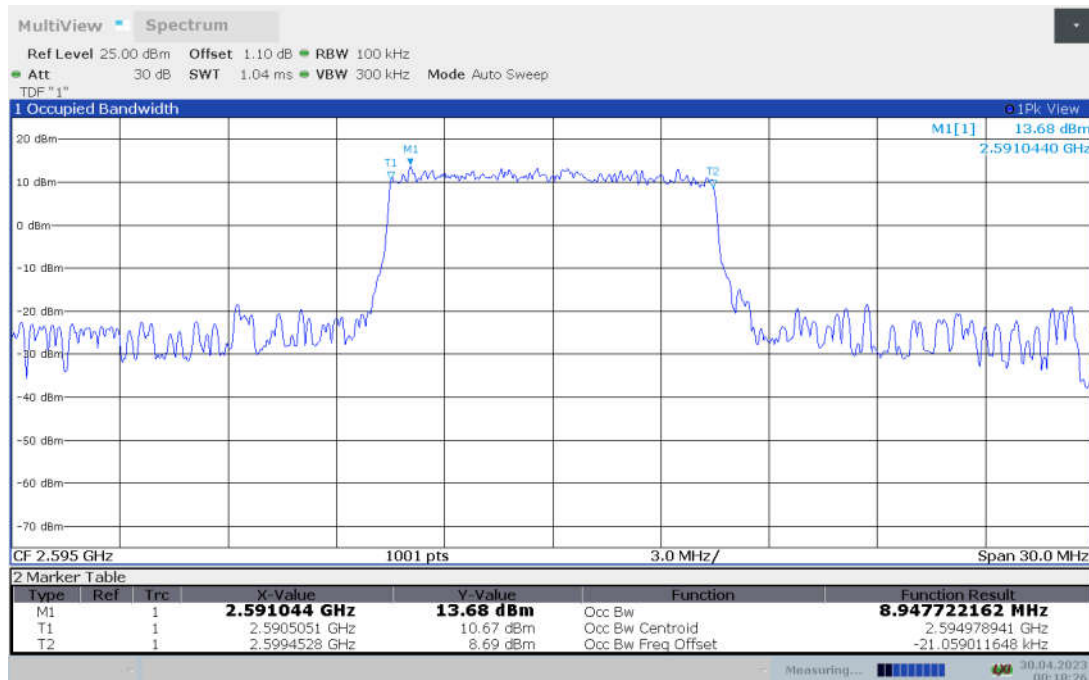| Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
2595	8.945	8.948

LTE band 38 , 10MHz Bandwidth, MID, QPSK (99% BW)

LTE band 38 , 10MHz Bandwidth, MID, 16QAM (99% BW)

LTE band 38,15MHz(99% BW)

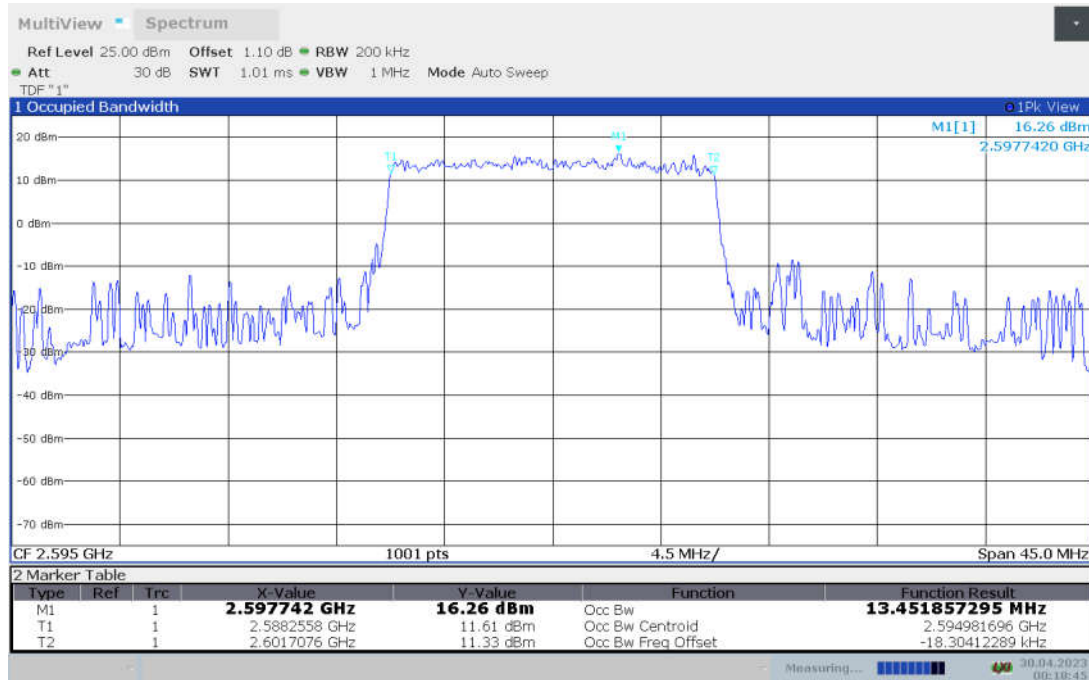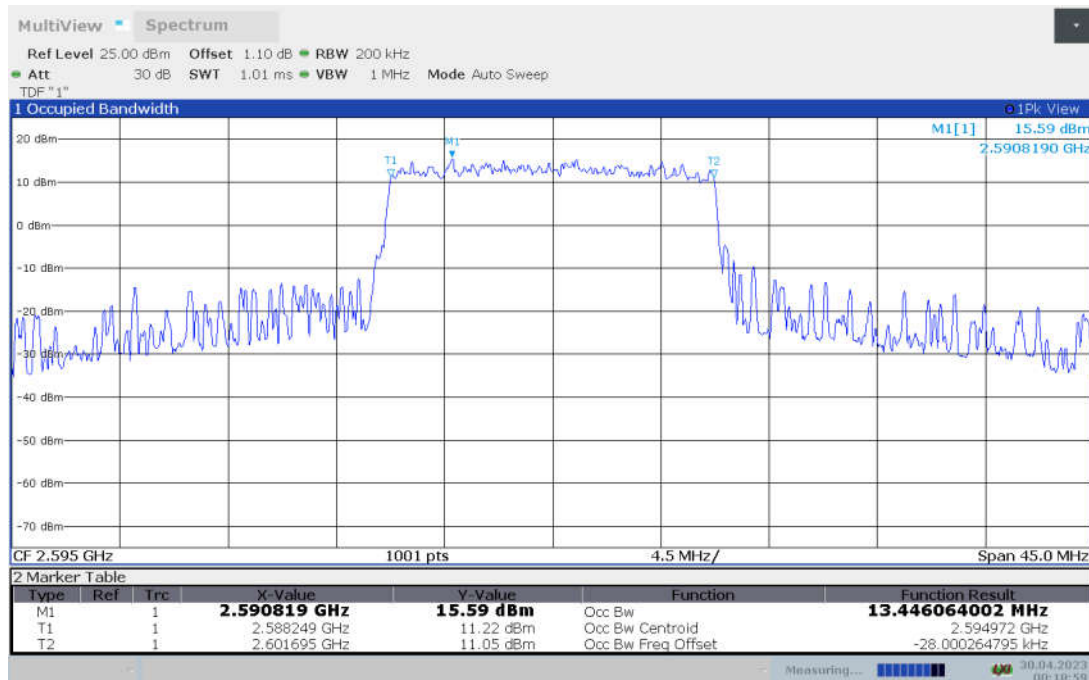| Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
2595	13.452	13.446

LTE band 38 , 15MHz Bandwidth, MID, QPSK (99% BW)

LTE band 38 , 15MHz Bandwidth, MID, 16QAM (99% BW)

LTE band 38,20MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
2595	17.842	17.859

LTE band 38 , 20MHz Bandwidth, MID, QPSK (99% BW)
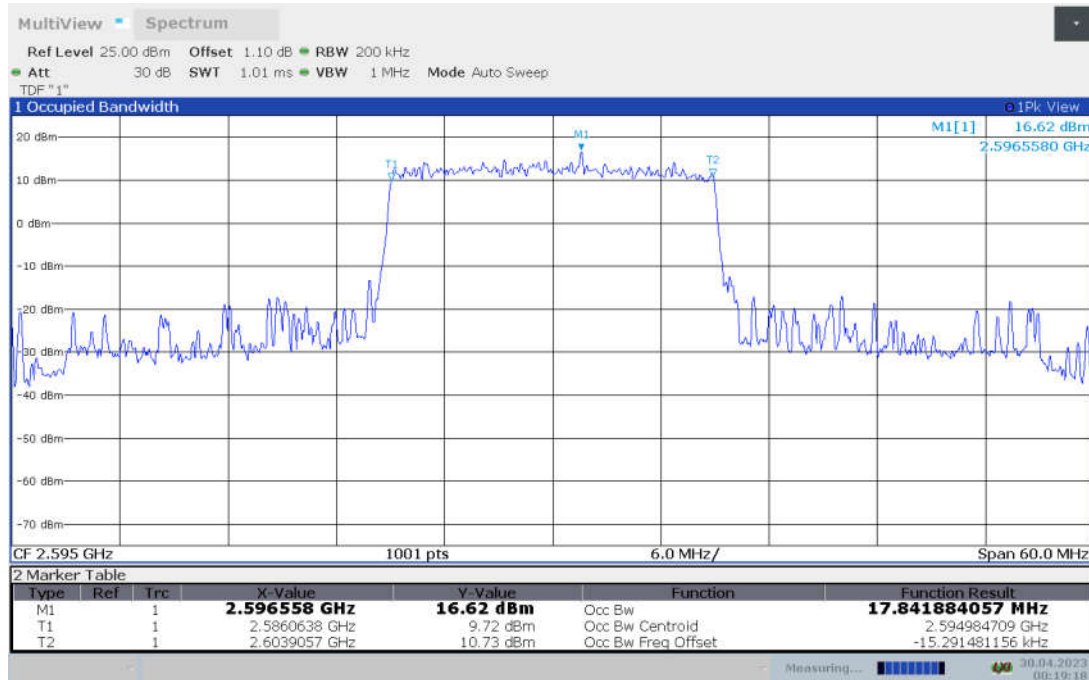
LTE band 38 , 20MHz Bandwidth, MID, 16QAM (99% BW)
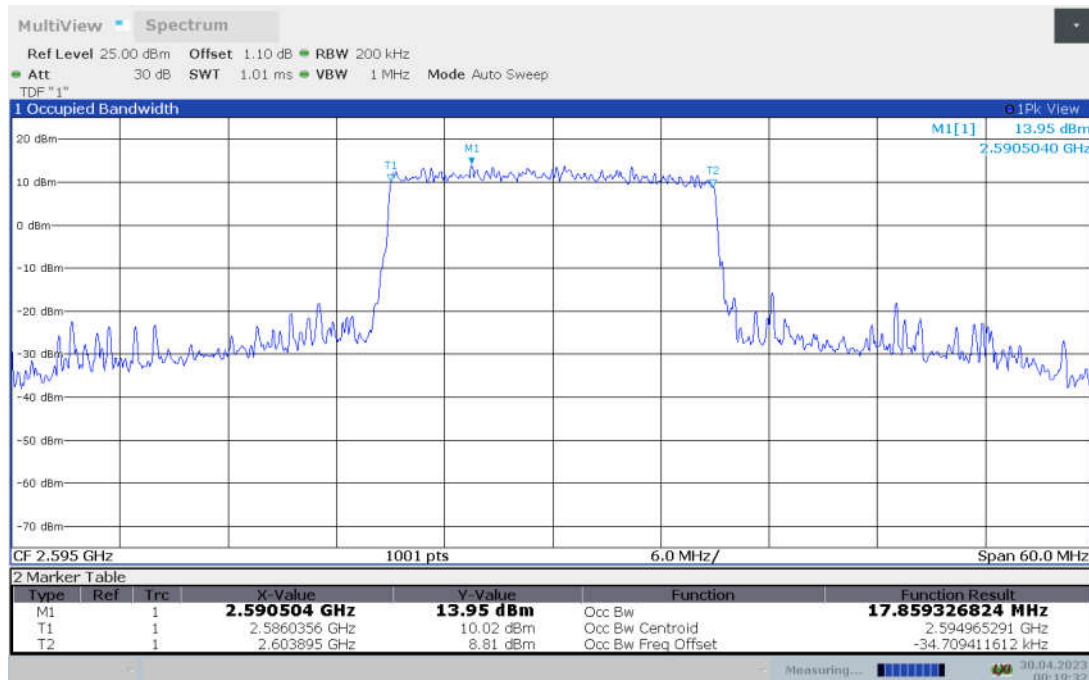
LTE band 41,5MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
2595	4.480	4.466

LTE band 41 , 5MHz Bandwidth, MID, QPSK (99% BW)
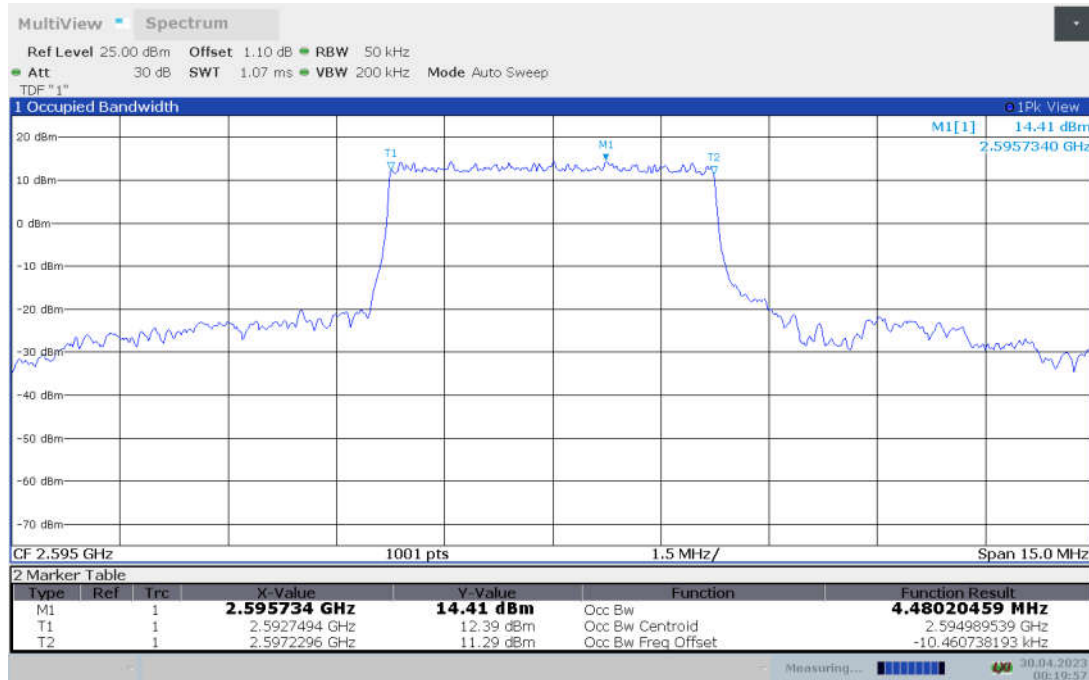
LTE band 41 , 5MHz Bandwidth, MID, 16QAM (99% BW)
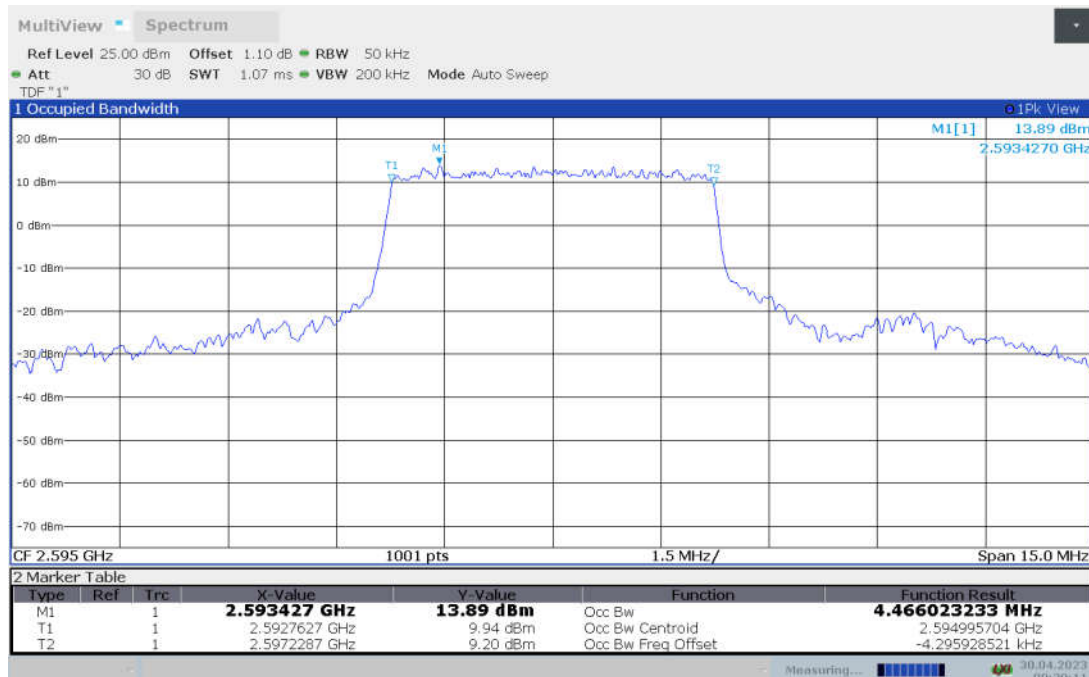
LTE band 41,10MHz(99% BW)

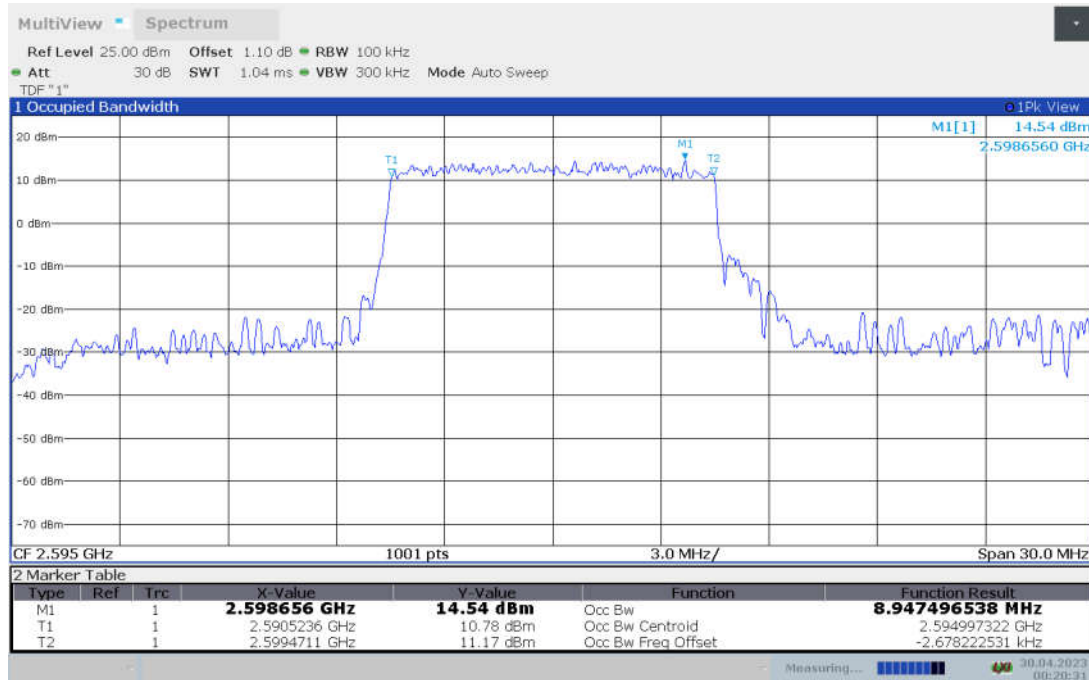| Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
2595	8.947	8.960

LTE band 41 , 10MHz Bandwidth, MID, QPSK (99% BW)

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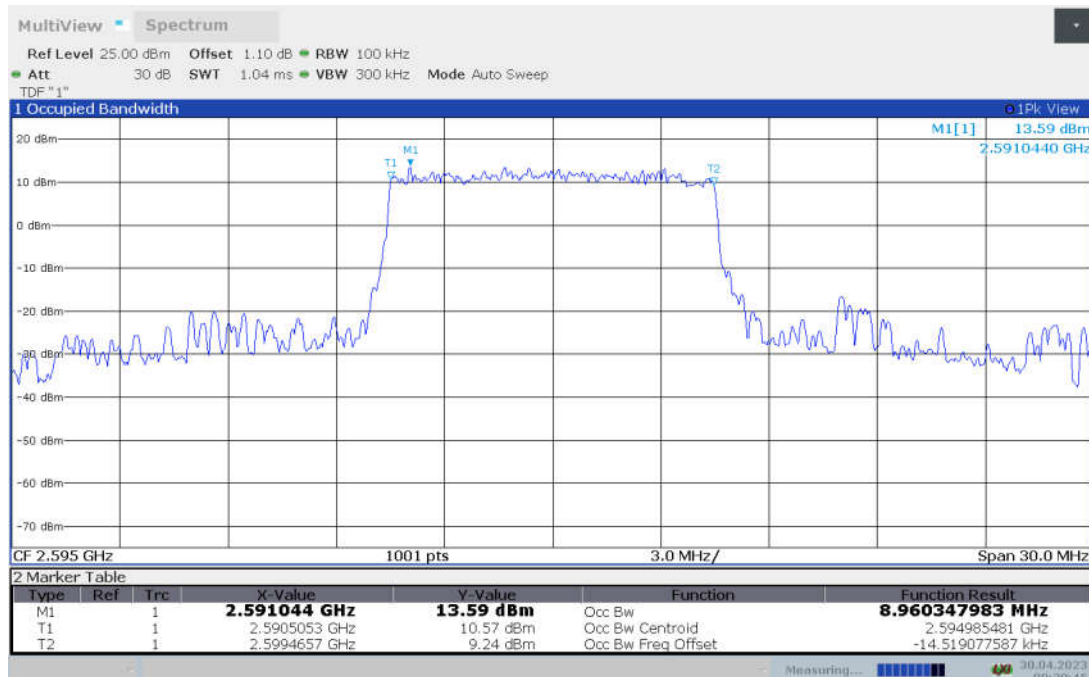
LTE band 41,15MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
2595	13.395	13.403

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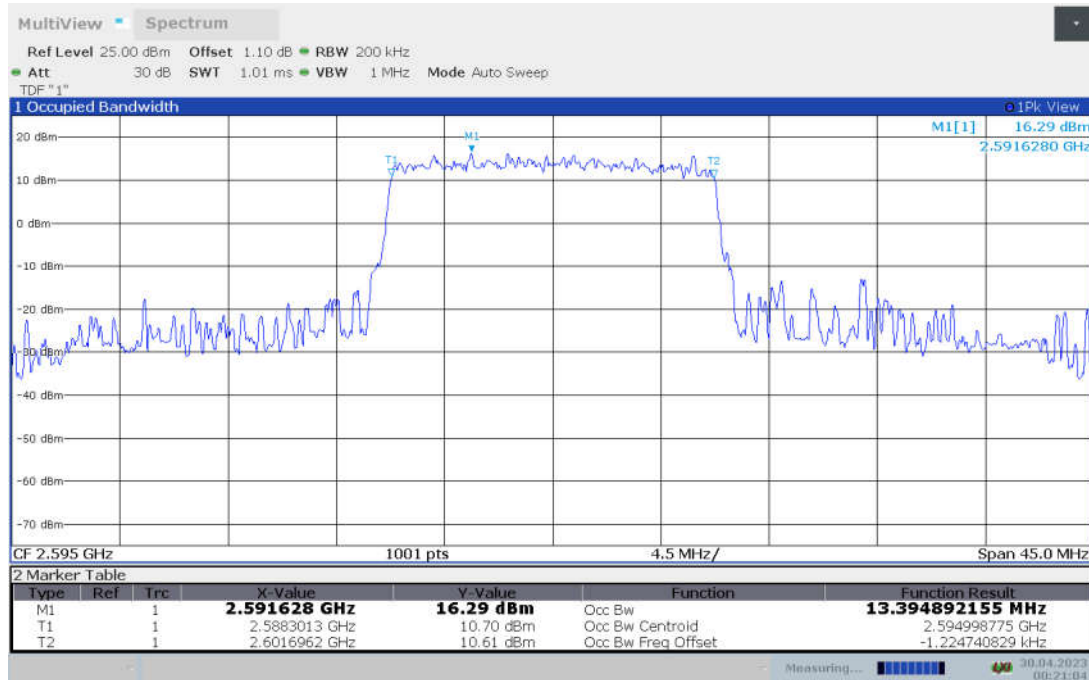

LTE band 41 , 15MHz Bandwidth, MID, 16QAM (99% BW)
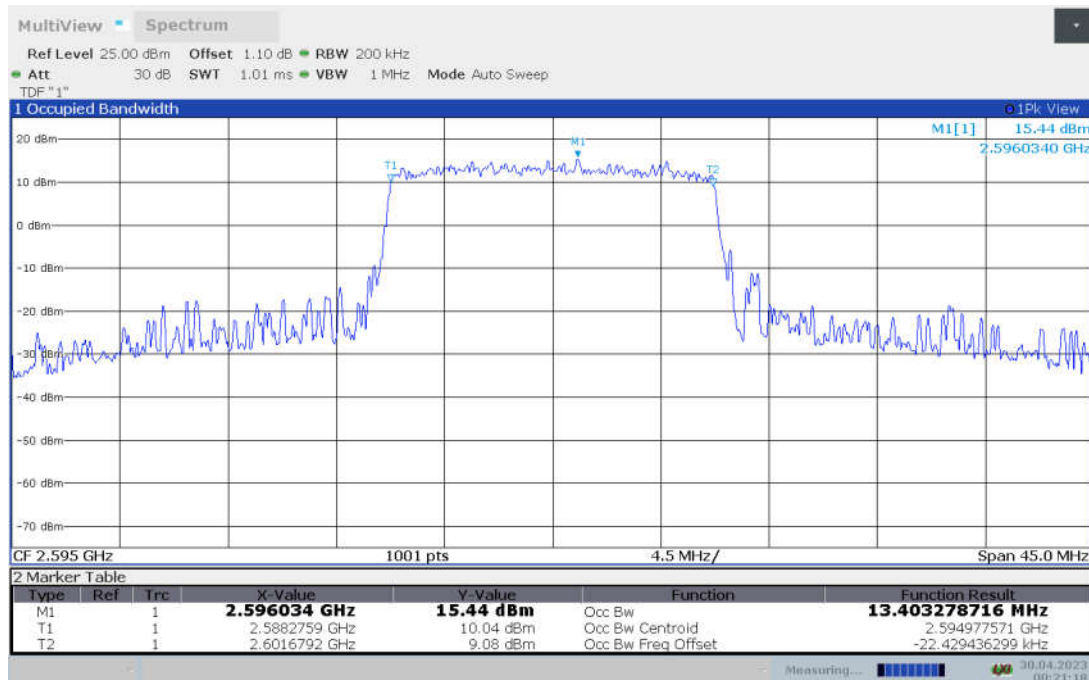
LTE band 41,20MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
2595	17.846	17.838

LTE band 41 , 20MHz Bandwidth, MID, QPSK (99% BW)
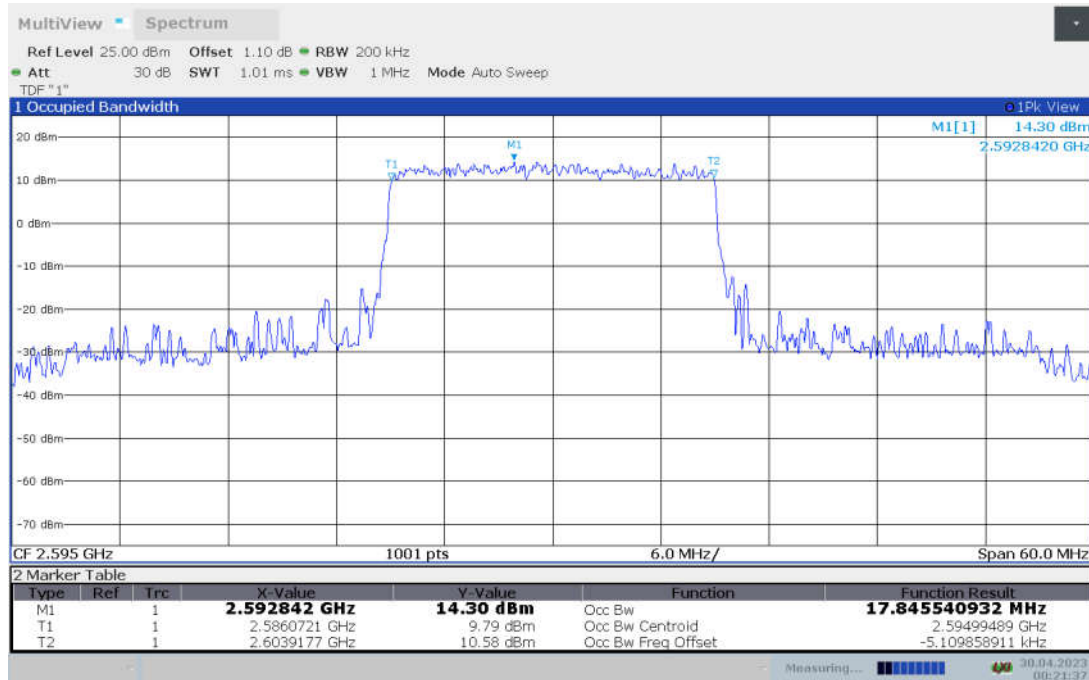
LTE band 41 , 20MHz Bandwidth, MID, 16QAM (99% BW)
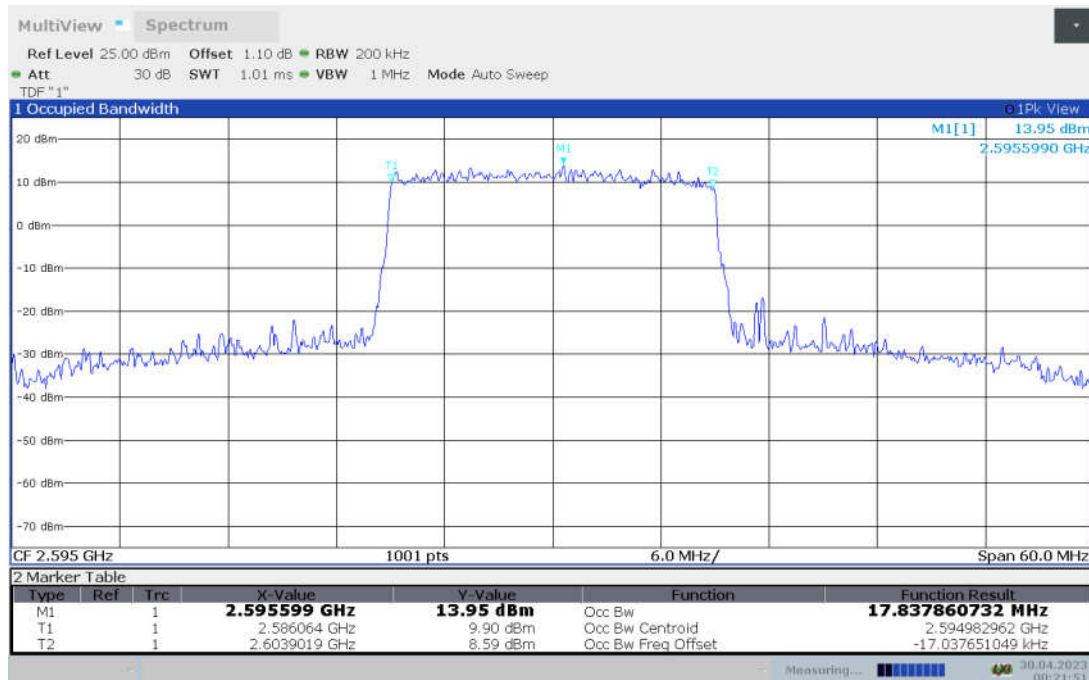
LTE band 66,1.4MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1745	1.083	1.088

LTE band 66 , 1.4MHz Bandwidth, MID, QPSK (99% BW)
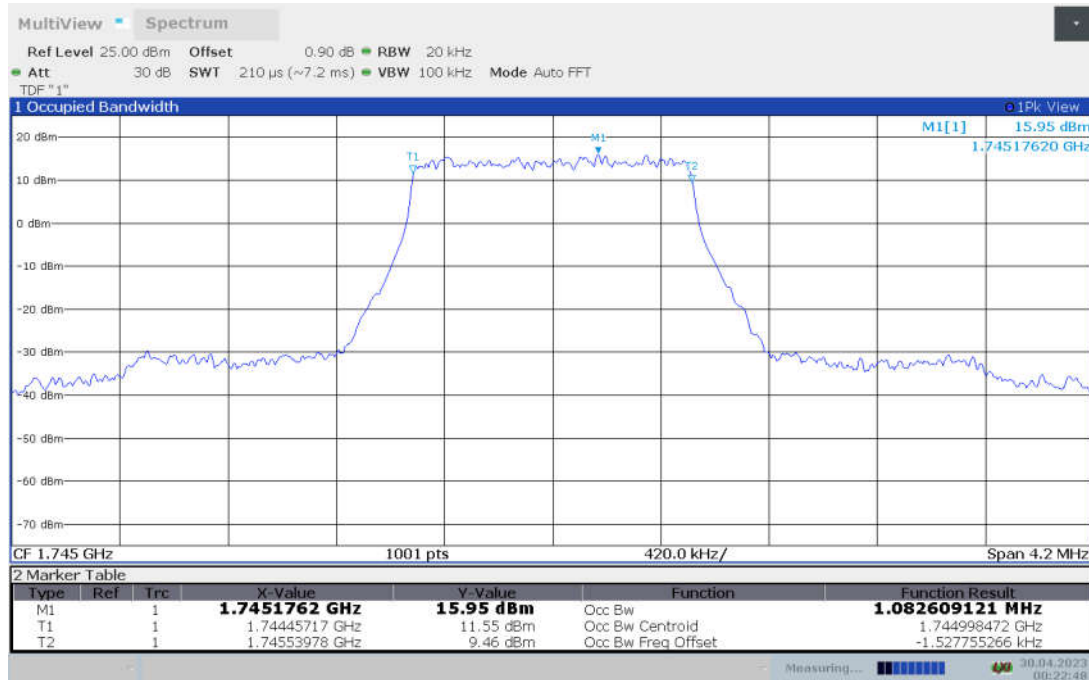
LTE band 66 , 1.4MHz Bandwidth, MID, 16QAM (99% BW)
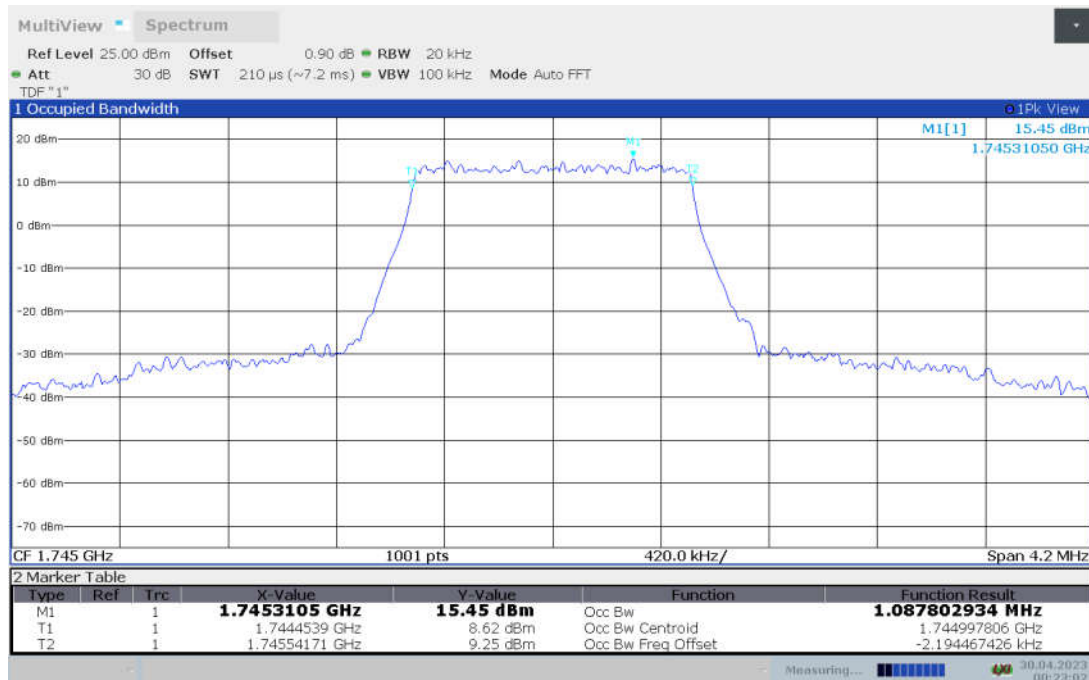
LTE band 66,3MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1745	2.686	2.681

LTE band 66 , 3MHz Bandwidth, MID, QPSK (99% BW)

LTE band 66 , 3MHz Bandwidth, MID, 16QAM (99% BW)

LTE band 66,5MHz(99% BW)

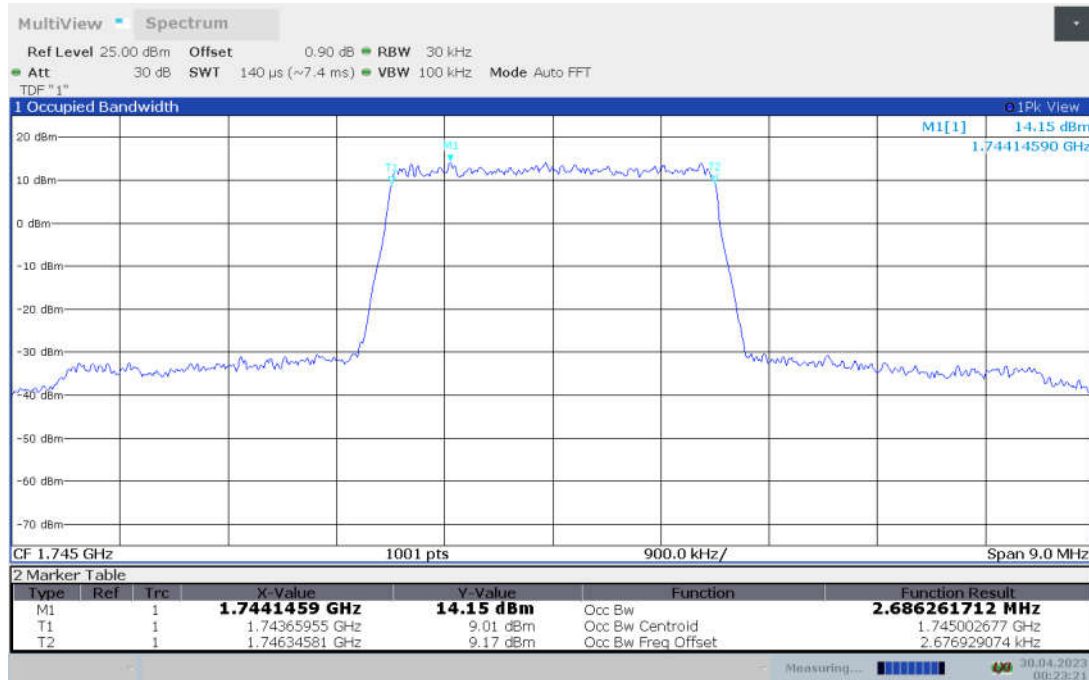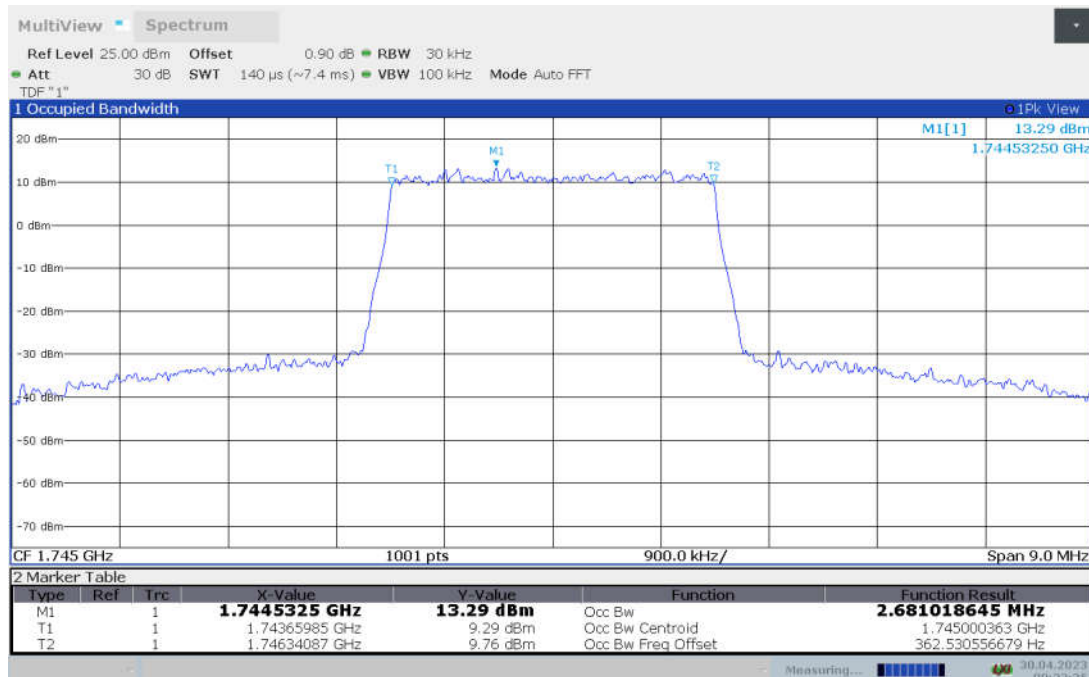| Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1745	4.482	4.465

LTE band 66 , 5MHz Bandwidth, MID, QPSK (99% BW)

LTE band 66 , 5MHz Bandwidth, MID, 16QAM (99% BW)

LTE band 66,10MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1745	8.931	8.936

LTE band 66 , 10MHz Bandwidth, MID, QPSK (99% BW)
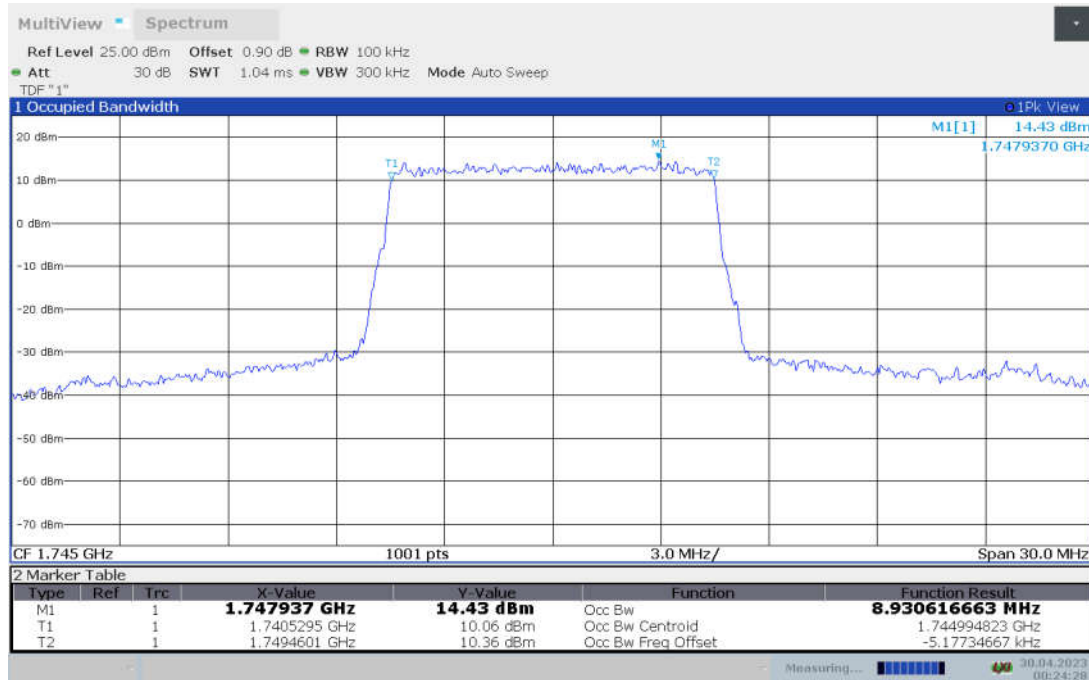
LTE band 66 , 10MHz Bandwidth, MID, 16QAM (99% BW)
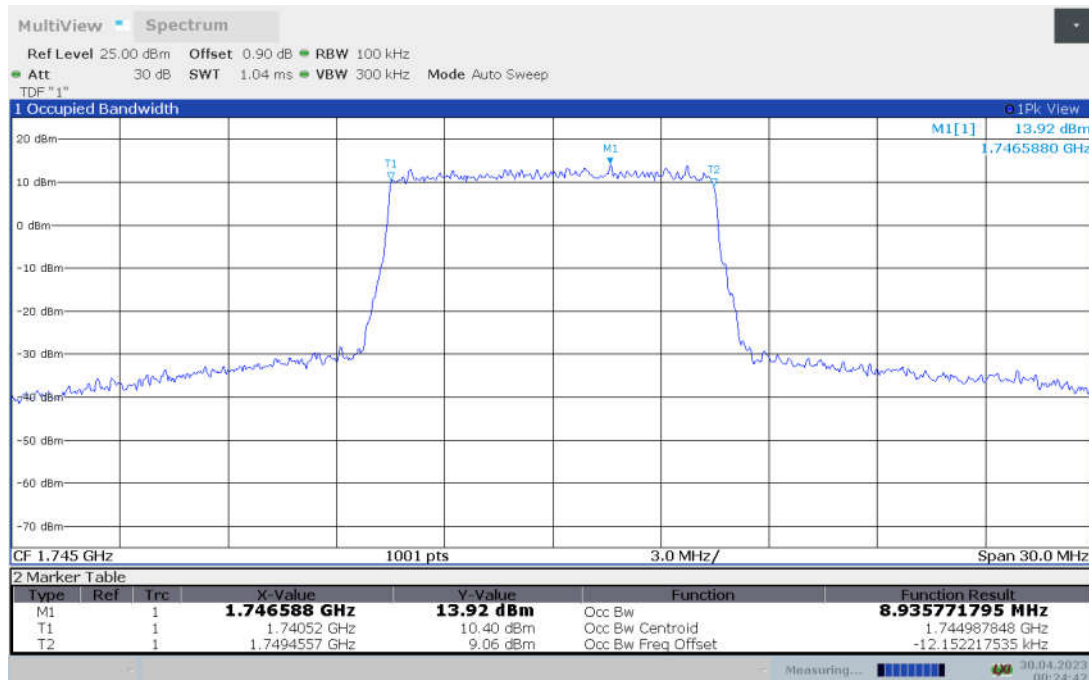
LTE band 66,15MHz(99% BW)

Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1745	13.406	13.404

LTE band 66 , 15MHz Bandwidth, MID, QPSK (99% BW)

LTE band 66 , 15MHz Bandwidth, MID, 16QAM (99% BW)
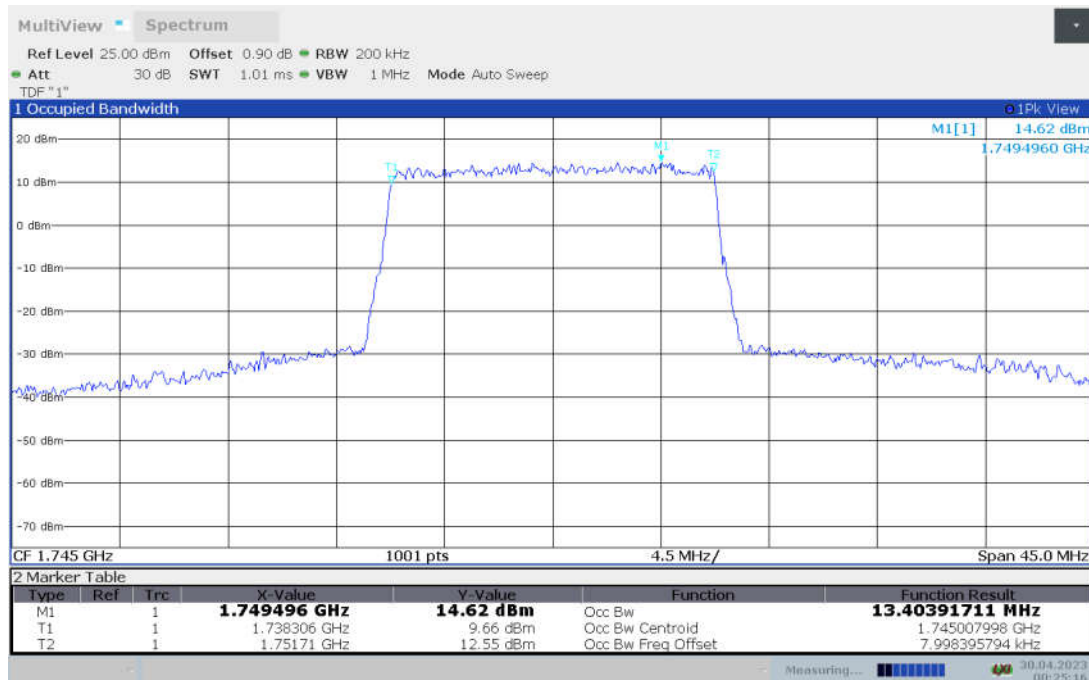
LTE band 66,20MHz(99% BW)

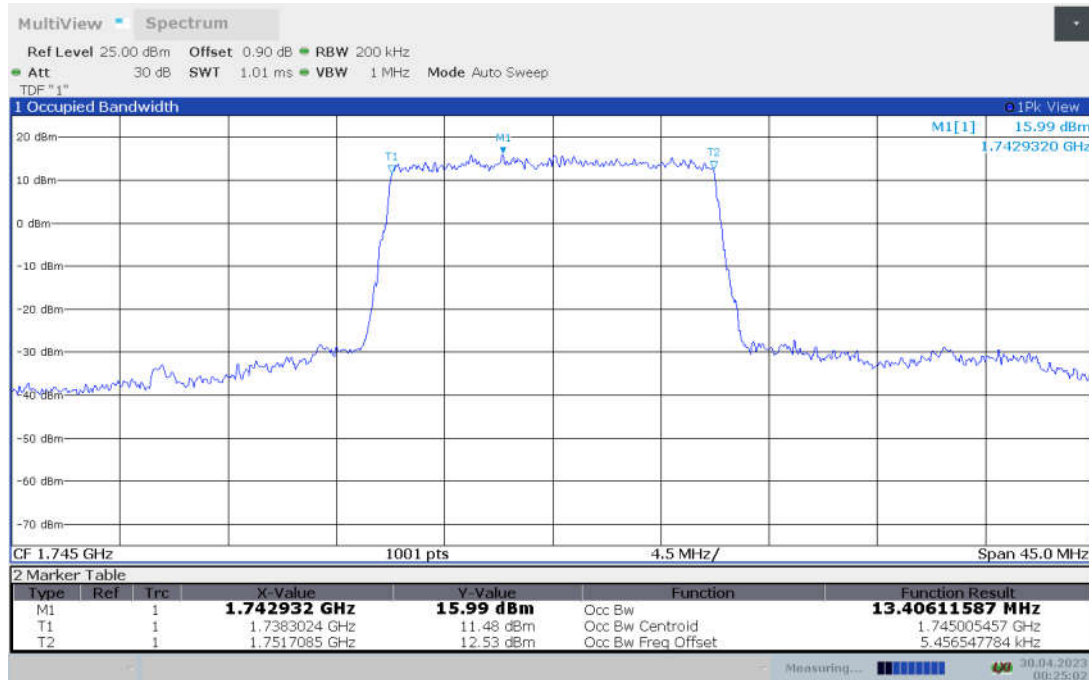| Frequency (MHz)	Occupied Bandwidth (99% BW)(MHz)	
	QPSK	16QAM
1745	17.869	17.877

LTE band 66 , 20MHz Bandwidth, MID, QPSK (99% BW)
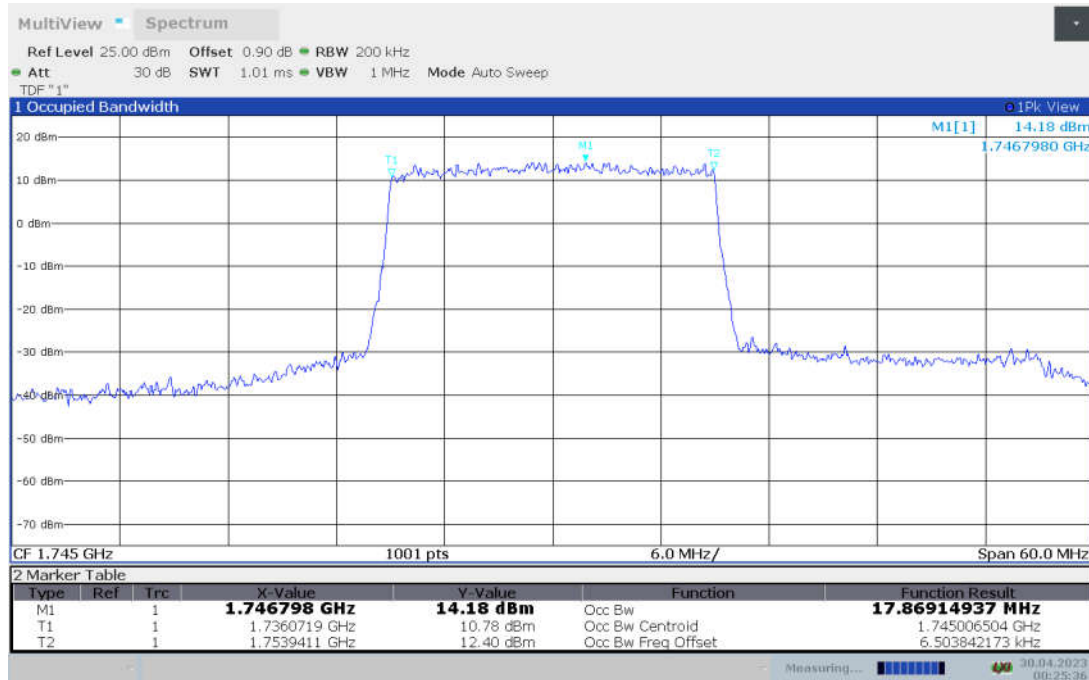

LTE band 66 , 20MHz Bandwidth, MID, 16QAM (99% BW)
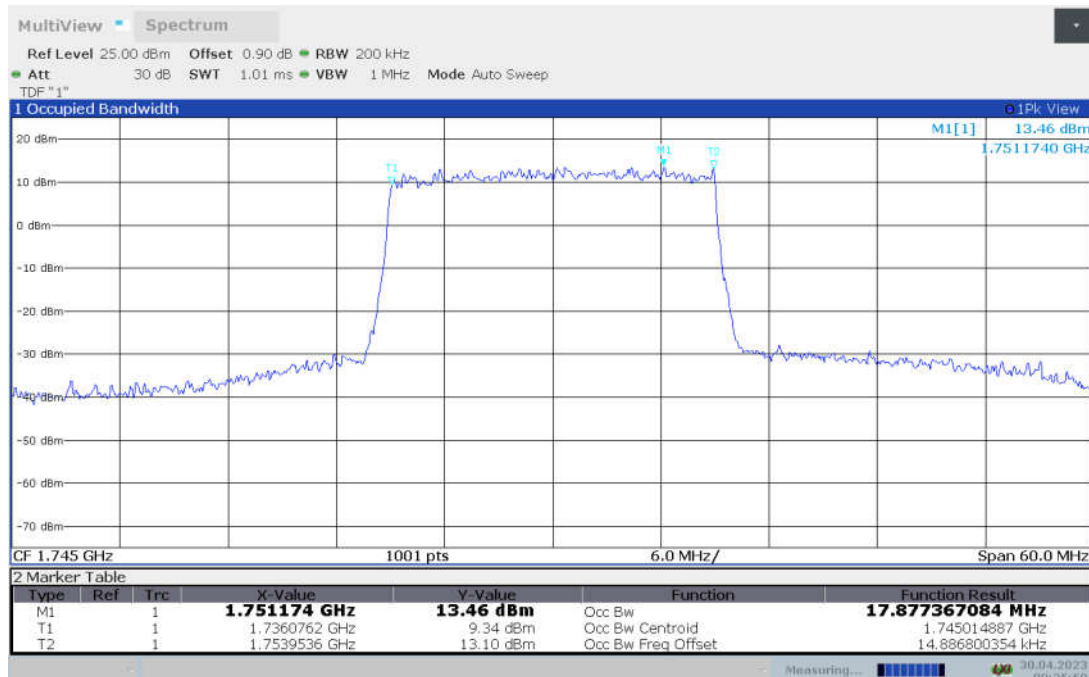
Note: Expanded measurement uncertainty is *U* = 3428 Hz, *k* = 2

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 10log (OBW / 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)	
	QPSK	16QAM
1880	1.263	1.284

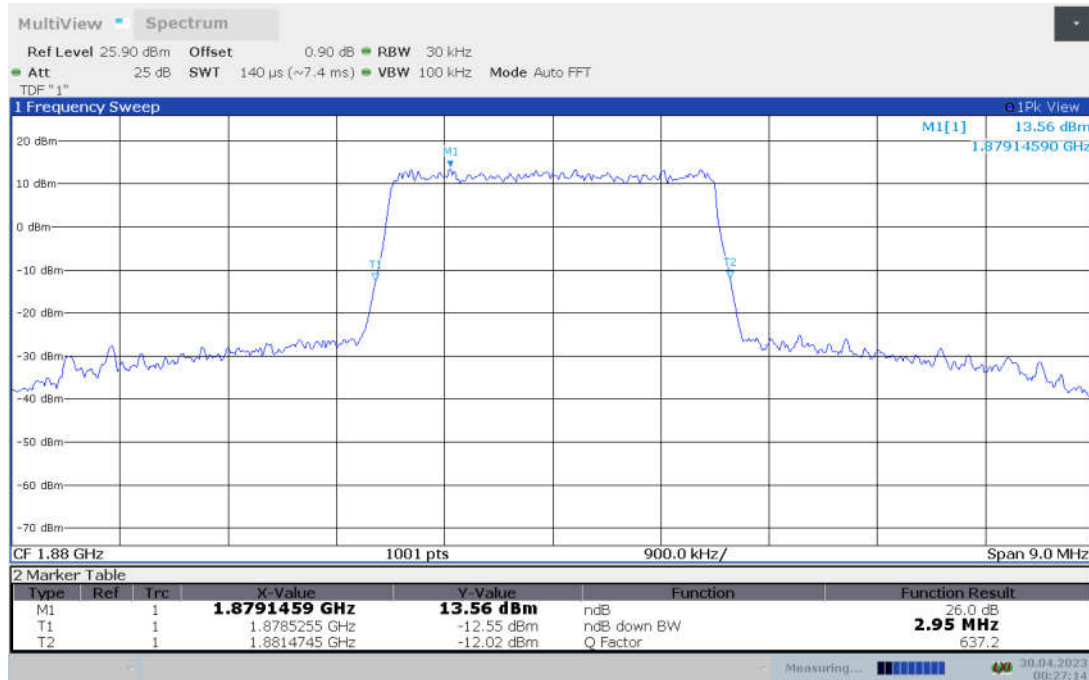**LTE band 2 , 1.4MHz Bandwidth, MID, QPSK (-26dBc BW)**
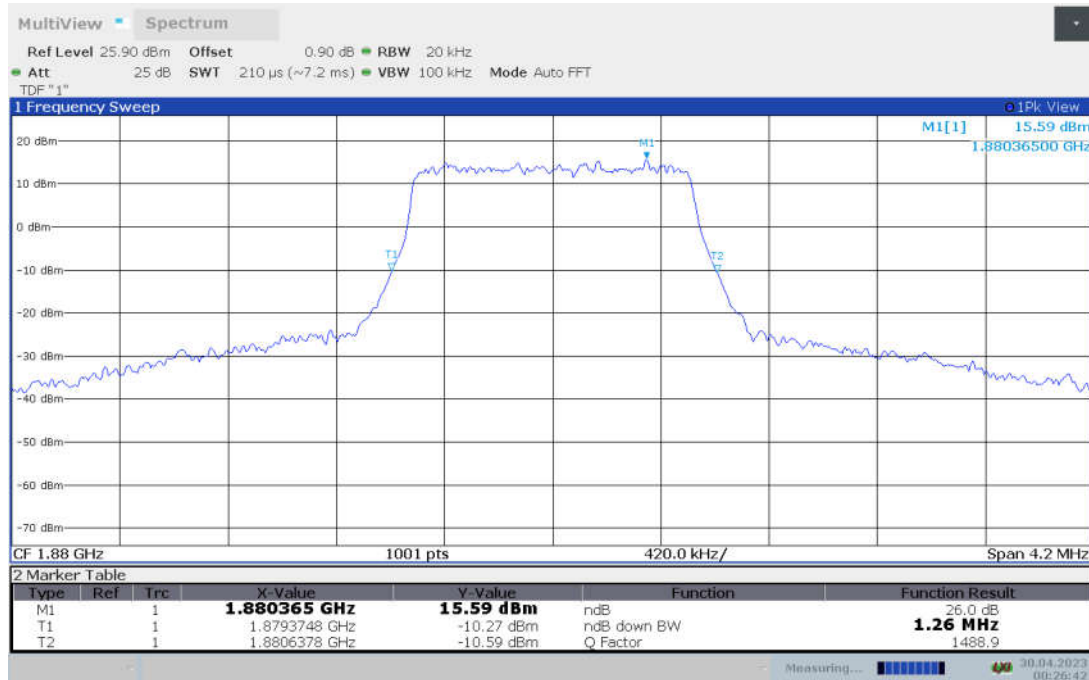
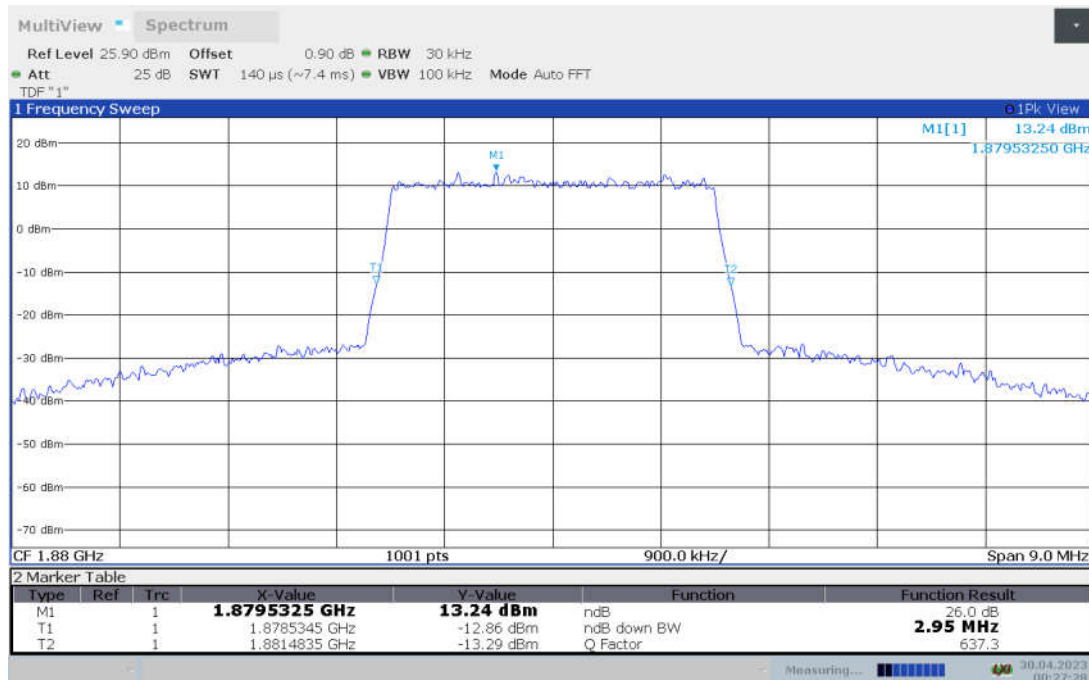**LTE band 2 , 1.4MHz Bandwidth, MID, 16QAM (-26dBc BW)**

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

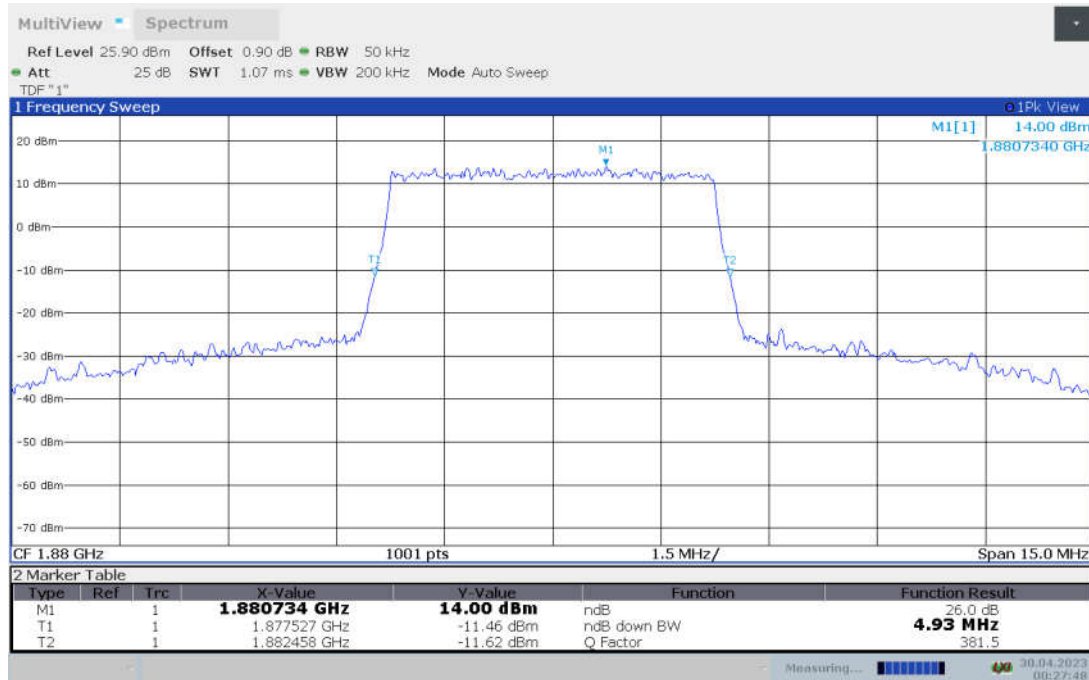| Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
1880	2.949	2.949

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

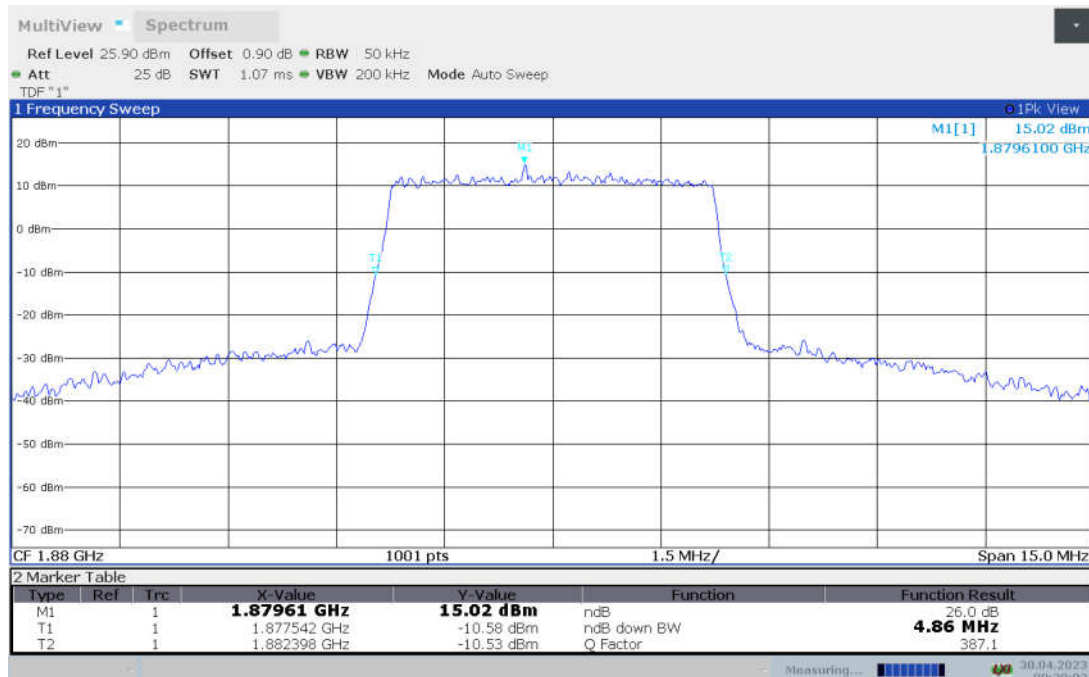### LTE band 2 , 3MHz Bandwidth, MID, 16QAM (-26dBc BW)

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

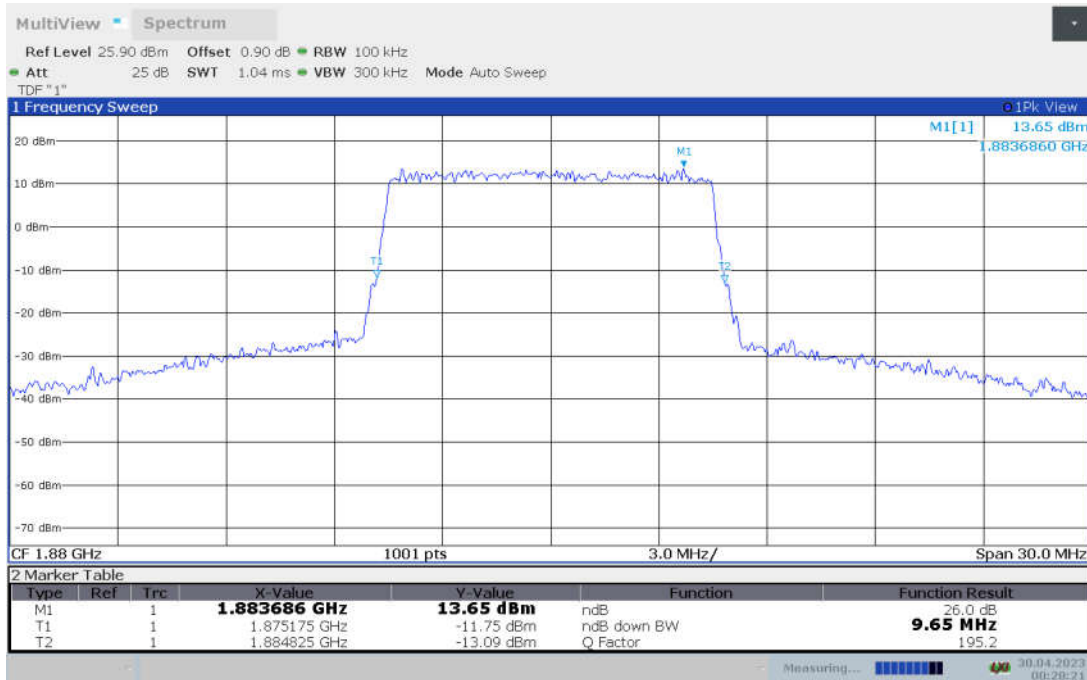| Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
1880	4.930	4.855

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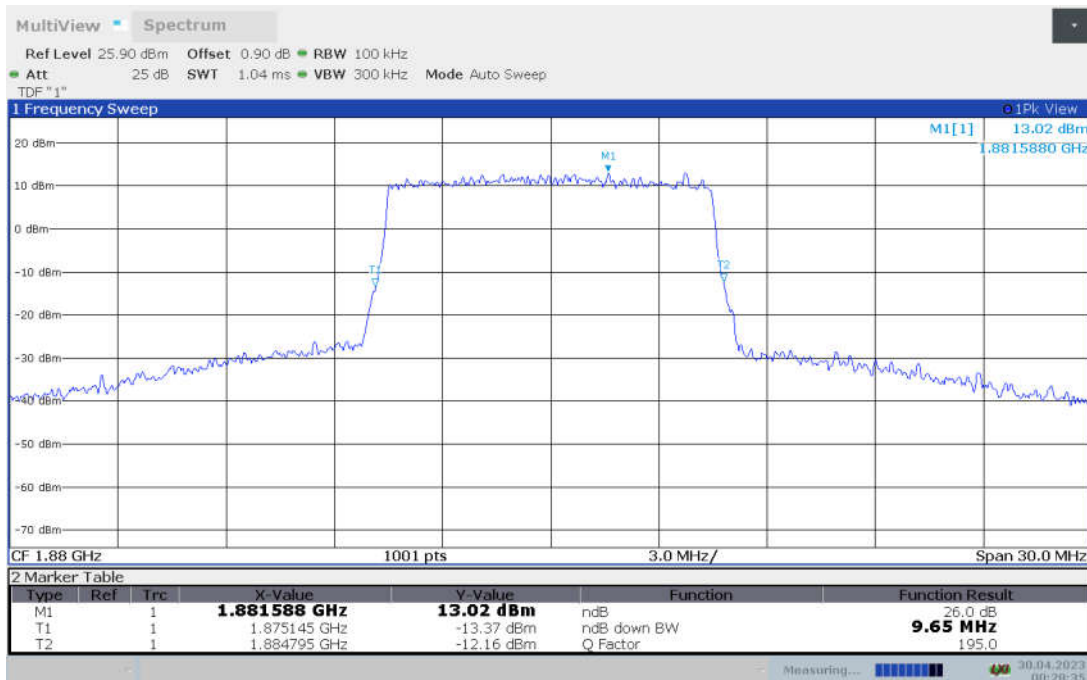

LTE band 2 , 5MHz Bandwidth, MID, 16QAM (-26dBc BW)

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

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
1880	9.650	9.650

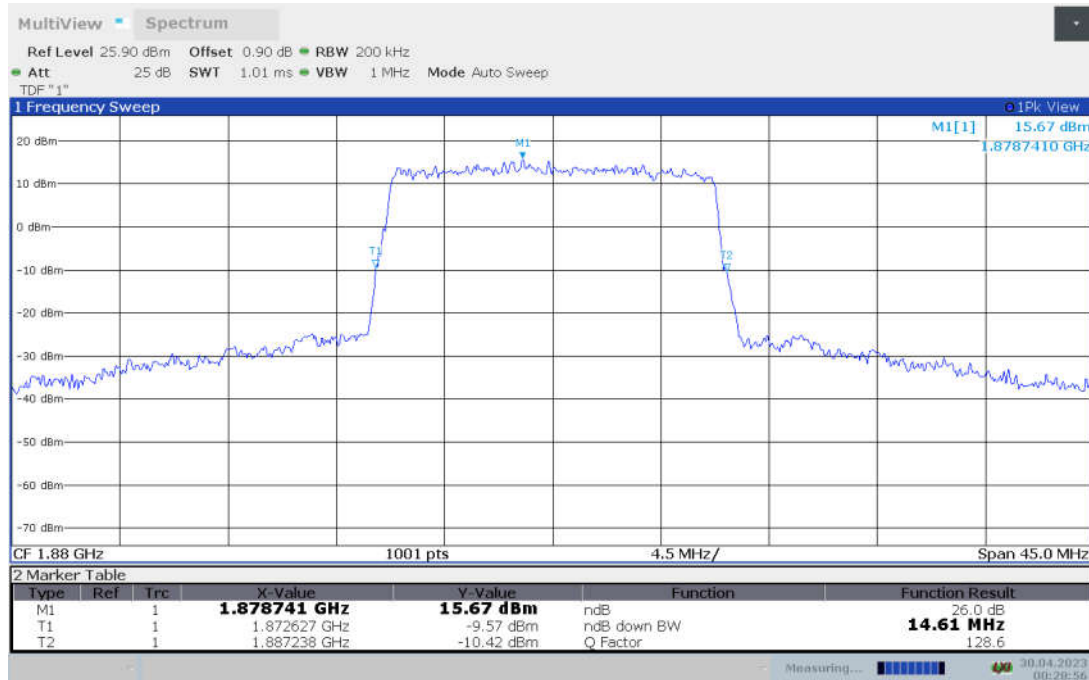**LTE band 2 , 10MHz Bandwidth, MID, QPSK (-26dBc BW)**

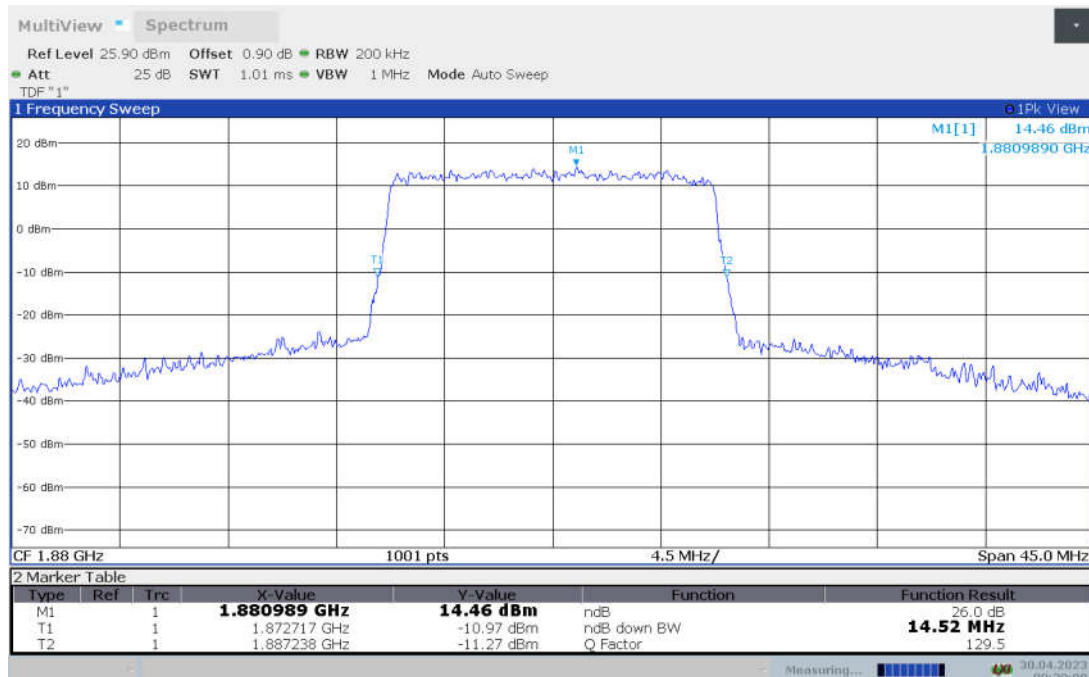**LTE band 2 , 10MHz Bandwidth, MID, 16QAM (-26dBc BW)**

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

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
1880	14.610	14.520

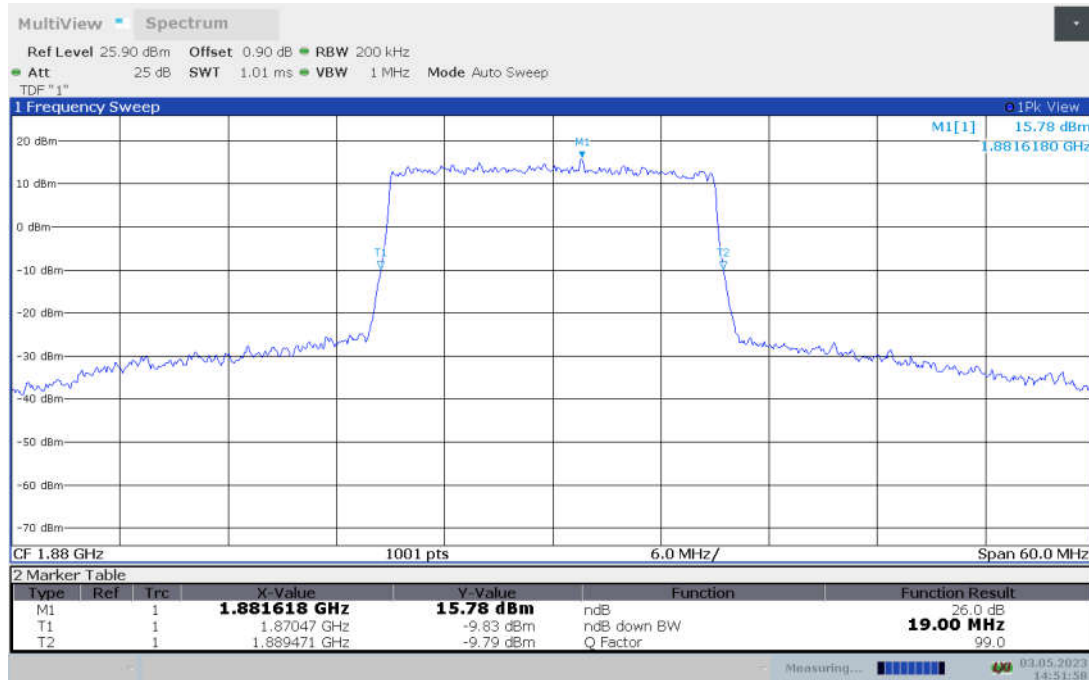**LTE band 2 , 15MHz Bandwidth, MID, QPSK (-26dBc BW)**

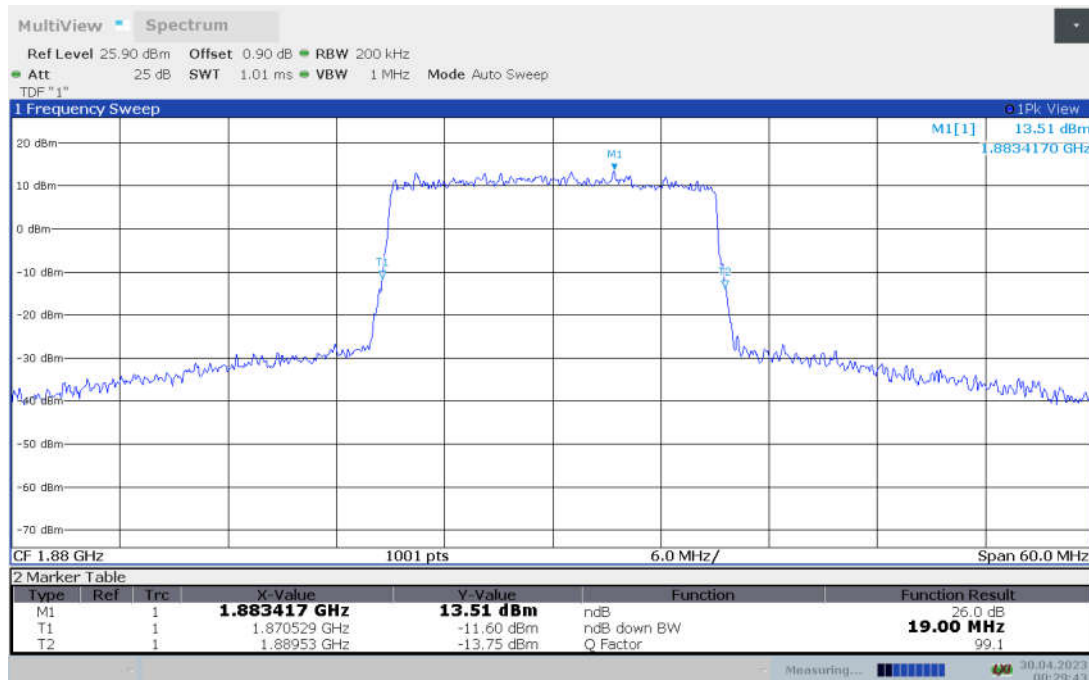**LTE band 2 , 15MHz Bandwidth, MID, 16QAM (-26dBc BW)**

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

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
1880	19.001	19.001

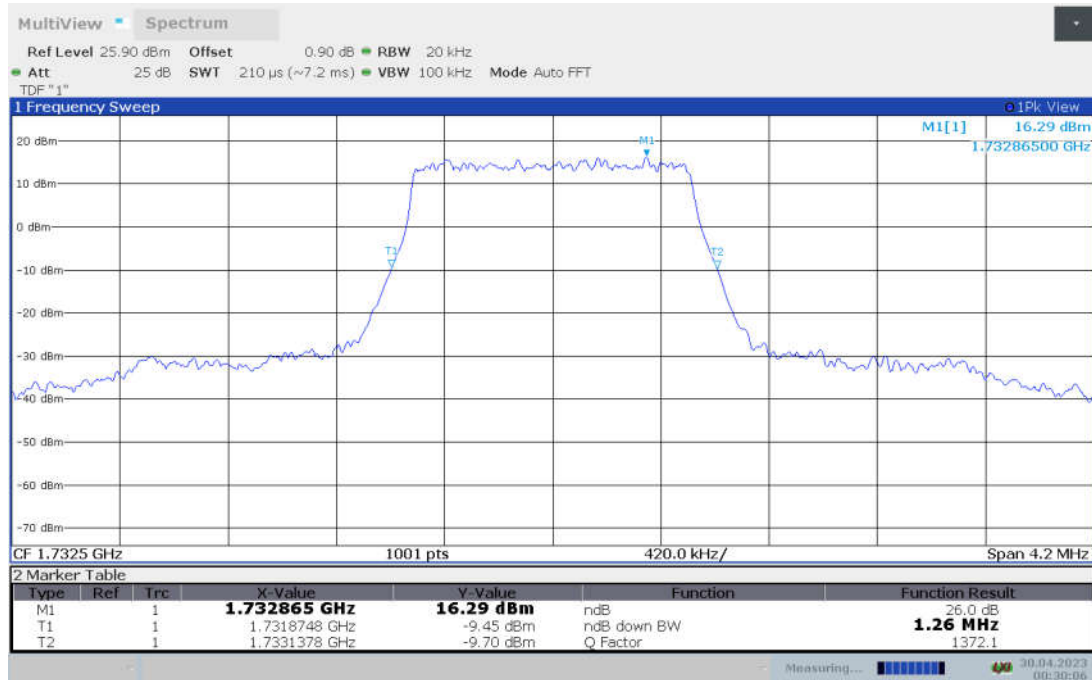**LTE band 2 , 20MHz Bandwidth, MID, QPSK (-26dBc BW)**

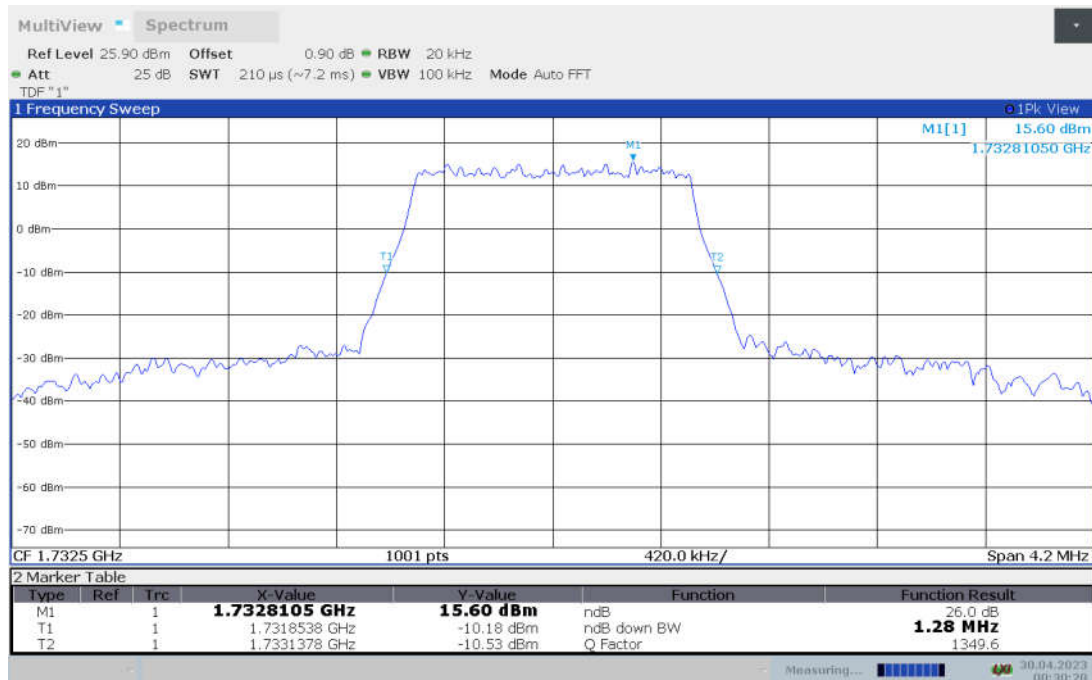**LTE band 2 , 20MHz Bandwidth, MID, 16QAM (-26dBc BW)**

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

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
1732.5	1.263	1.284

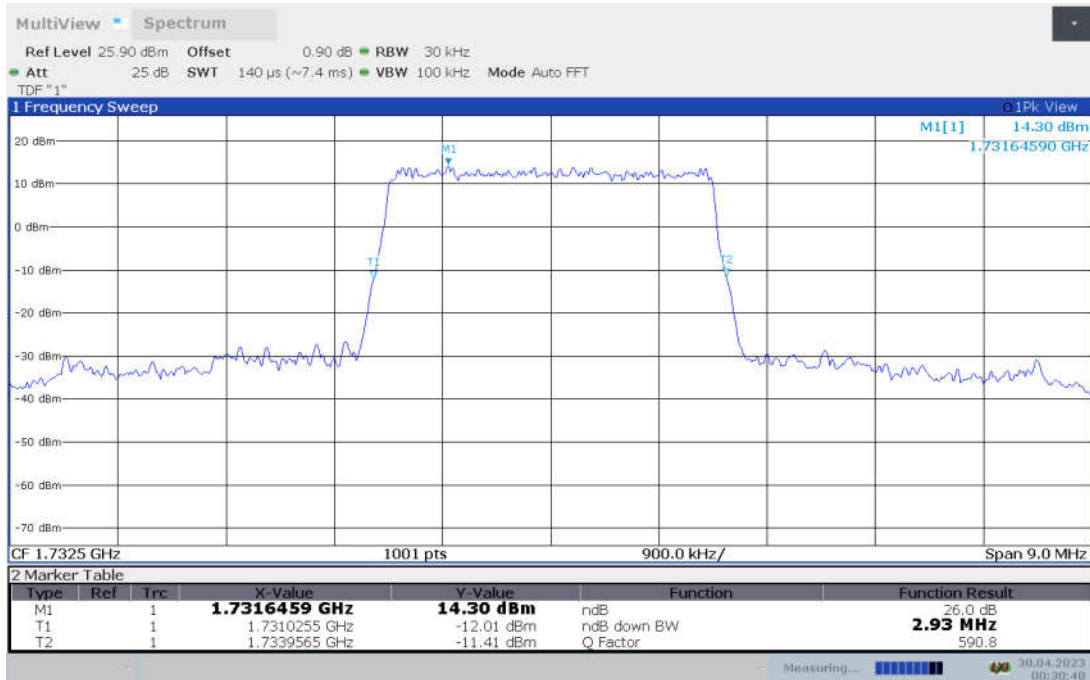**LTE band 4 , 1.4MHz Bandwidth, MID, QPSK (-26dBc BW)**

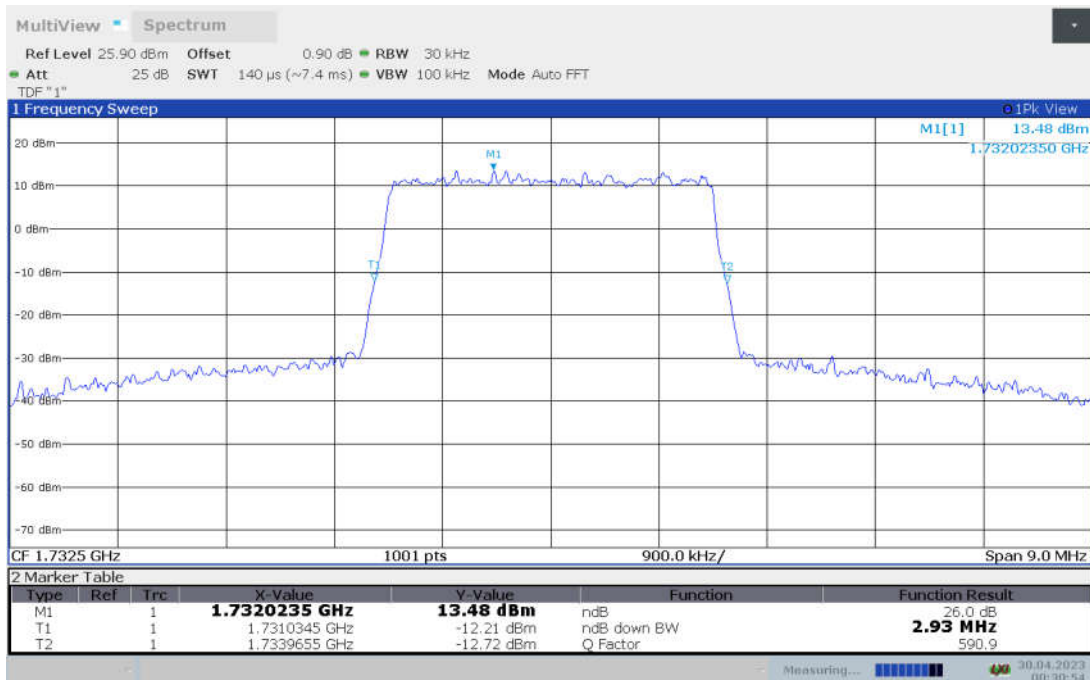**LTE band 4 , 1.4MHz Bandwidth, MID, 16QAM (-26dBc BW)**

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

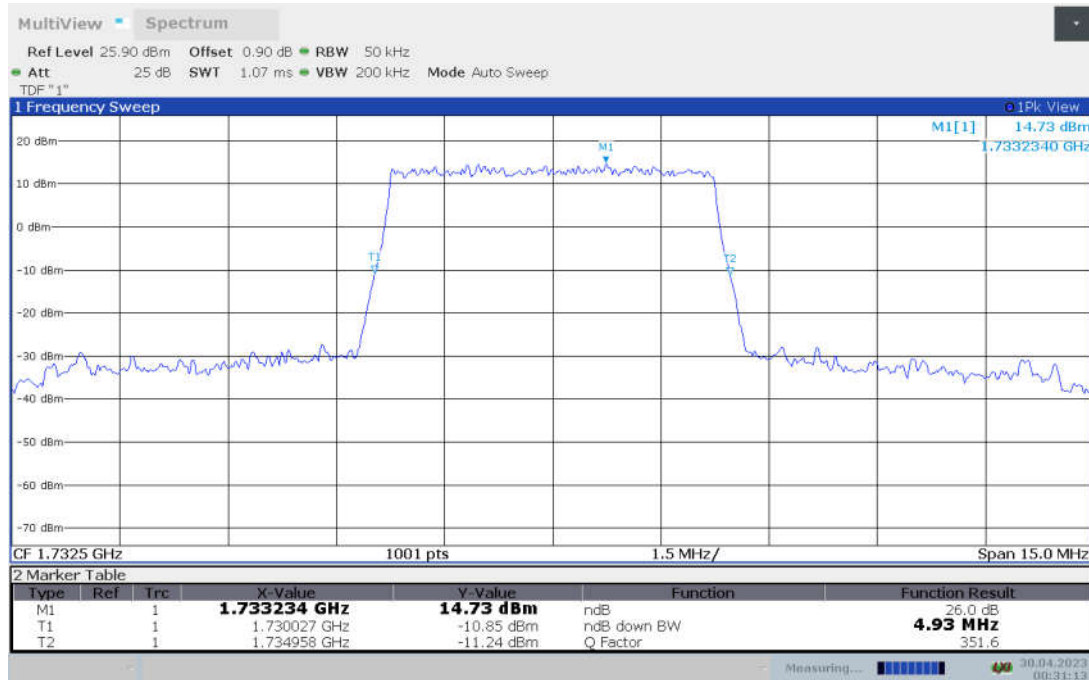| Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
1732.5	2.931	2.931

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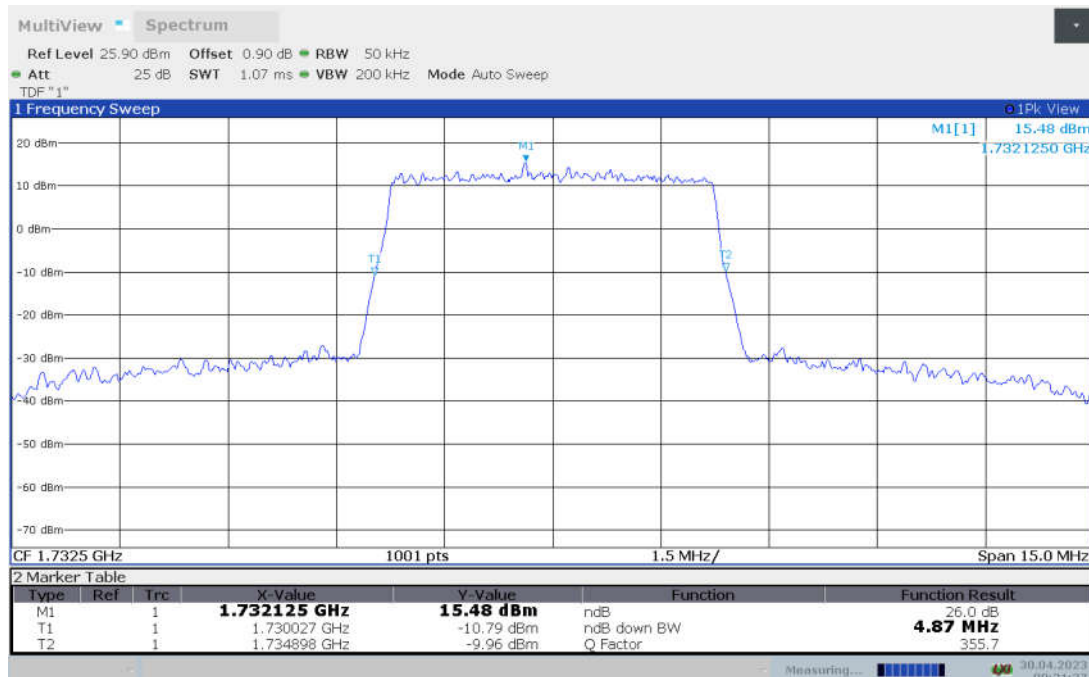

LTE band 4 , 3MHz Bandwidth, MID, 16QAM (-26dBc BW)

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

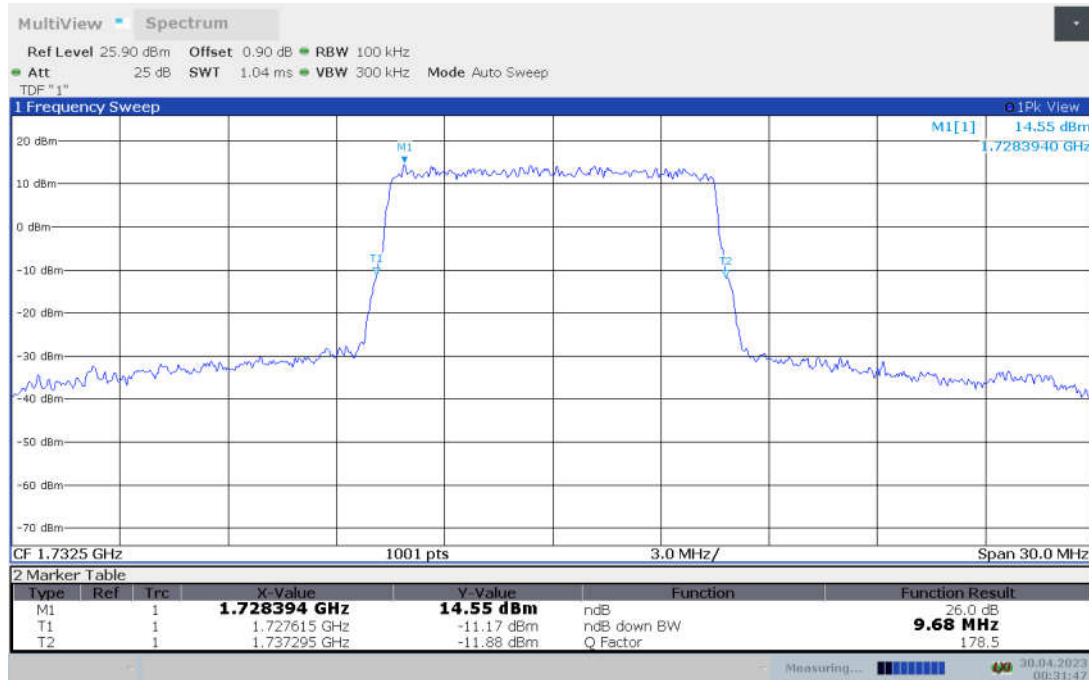| Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
1732.5	4.930	4.870

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

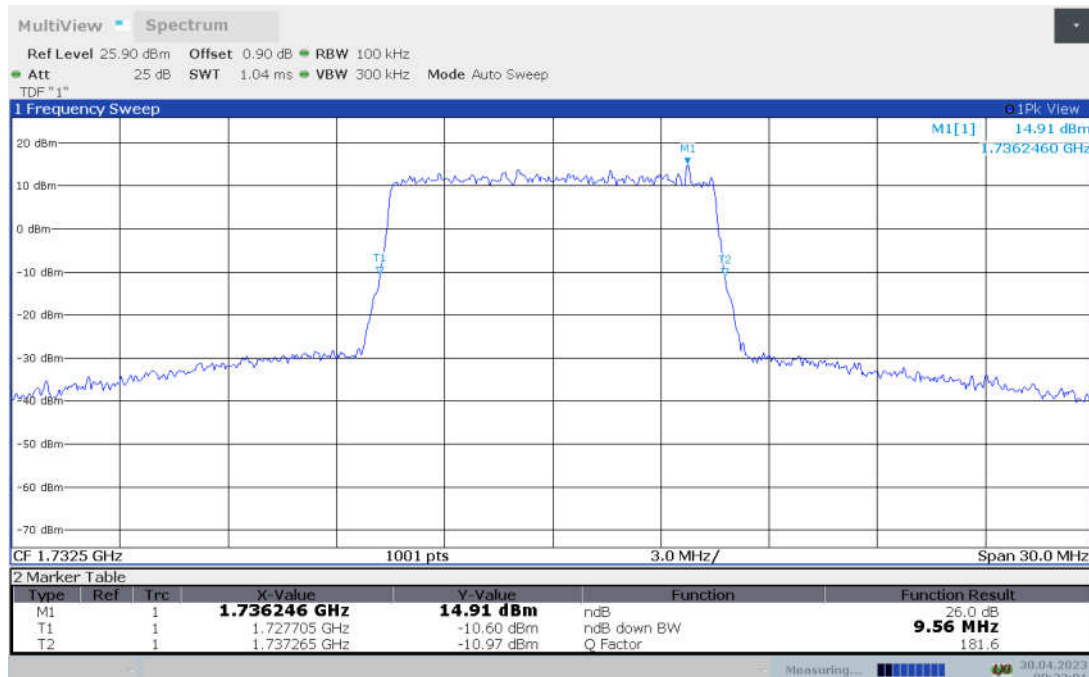## LTE band 4 , 5MHz Bandwidth, MID, 16QAM (-26dBc BW)

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

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
1732.5	9.680	9.560

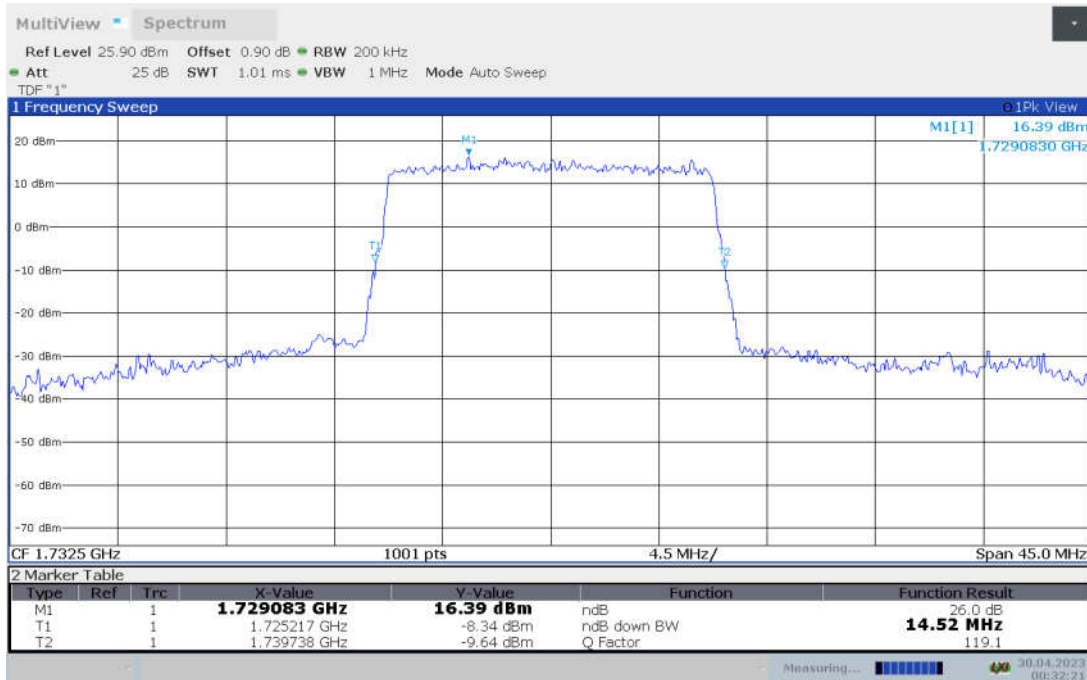**LTE band 4 , 10MHz Bandwidth, MID, QPSK (-26dBc BW)**

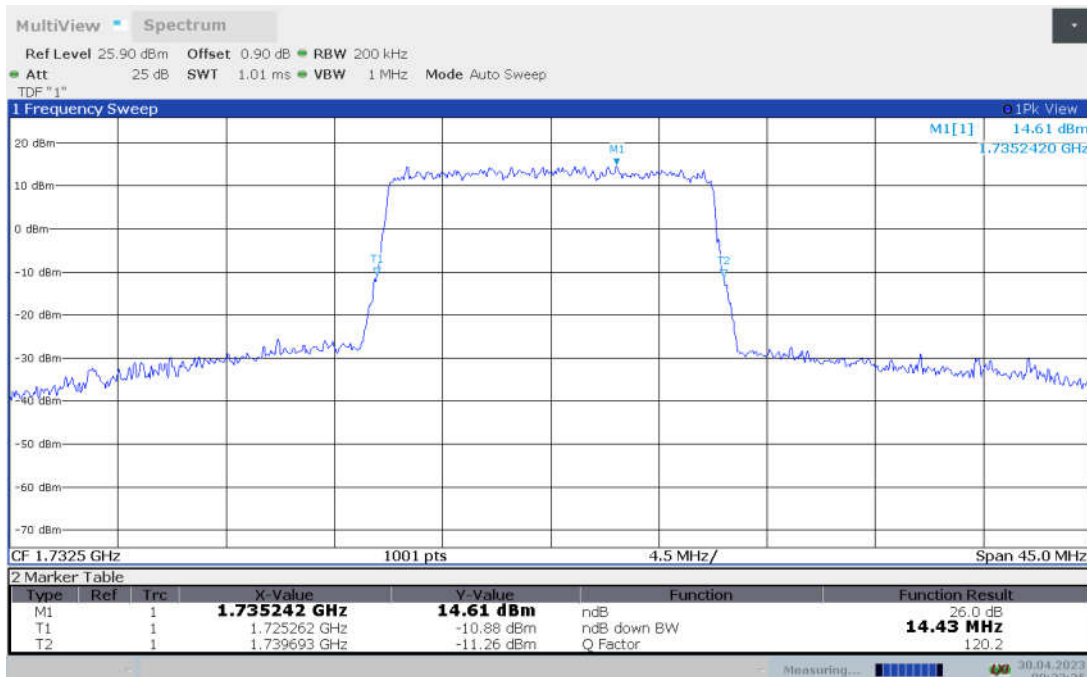**LTE band 4 , 10MHz Bandwidth, MID, 16QAM (-26dBc BW)**

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

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
1732.5	14.520	14.431

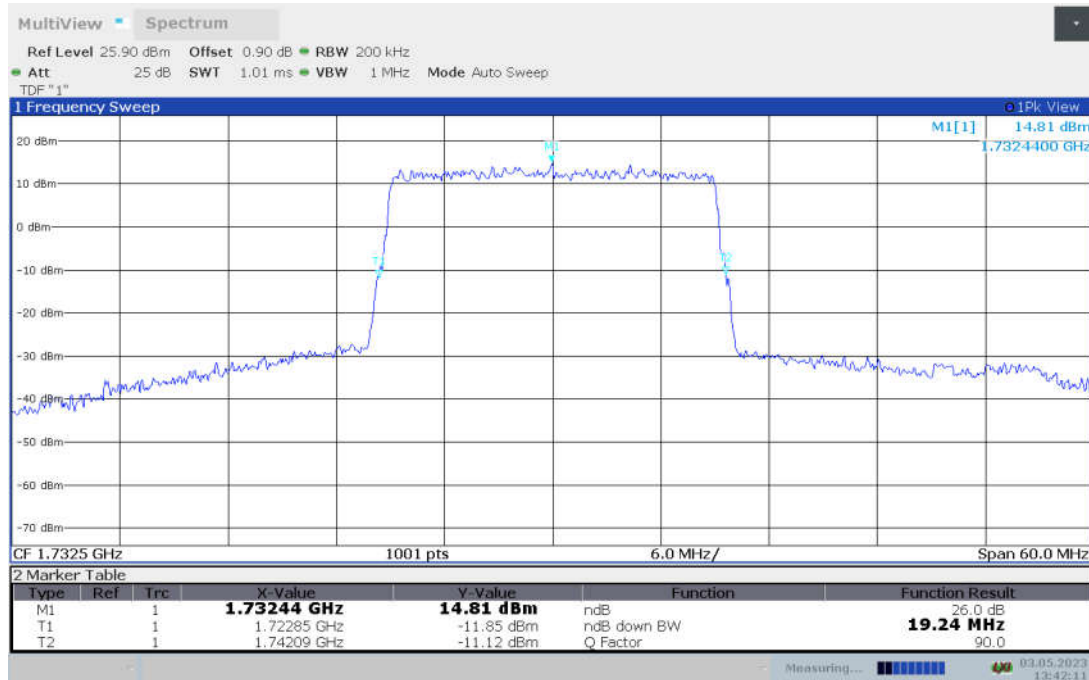### LTE band 4 , 15MHz Bandwidth, MID, QPSK (-26dBc BW)

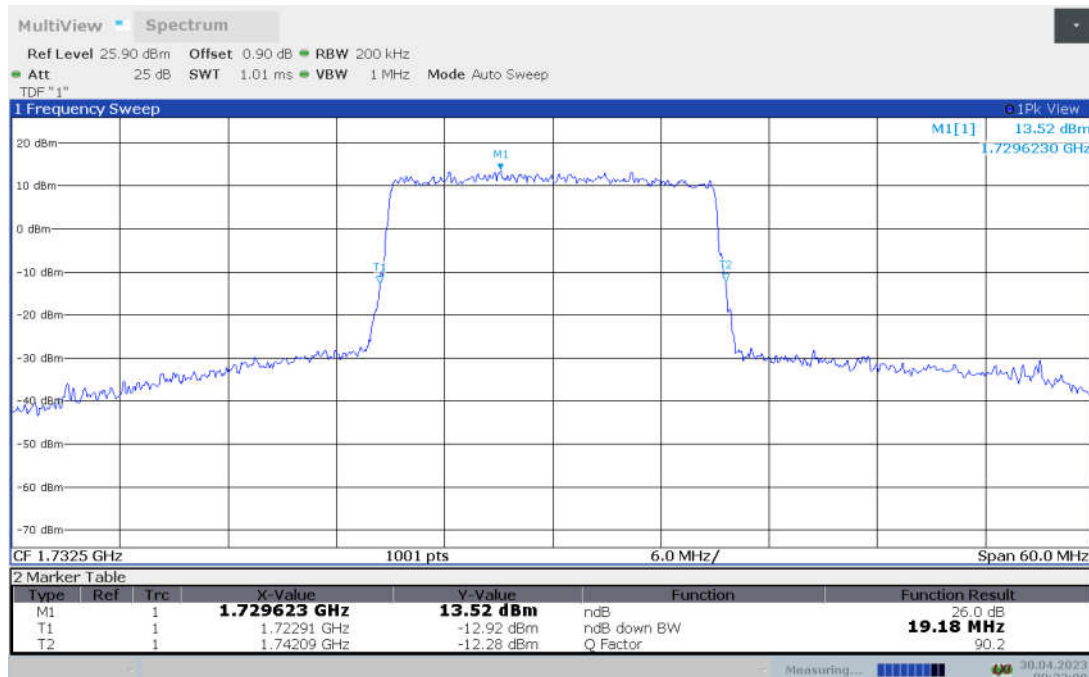### LTE band 4 , 15MHz Bandwidth, MID, 16QAM (-26dBc BW)

LTE band 4,20MHz(-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
1732.5	19.241	19.181

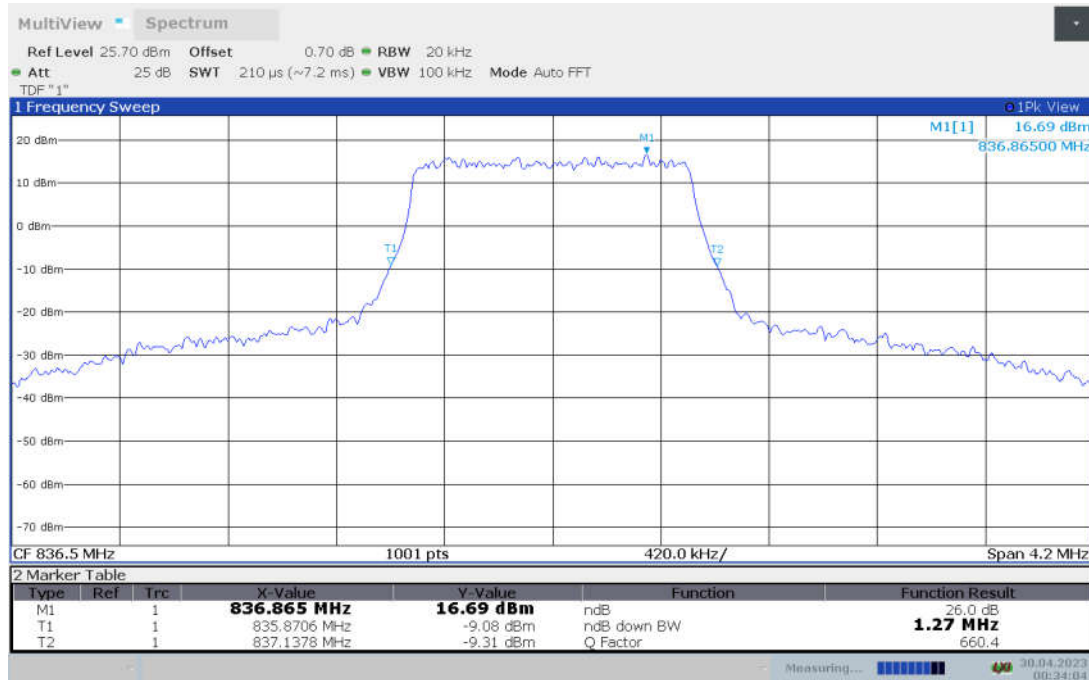## LTE band 4 , 20MHz Bandwidth, MID, QPSK (-26dBc BW)

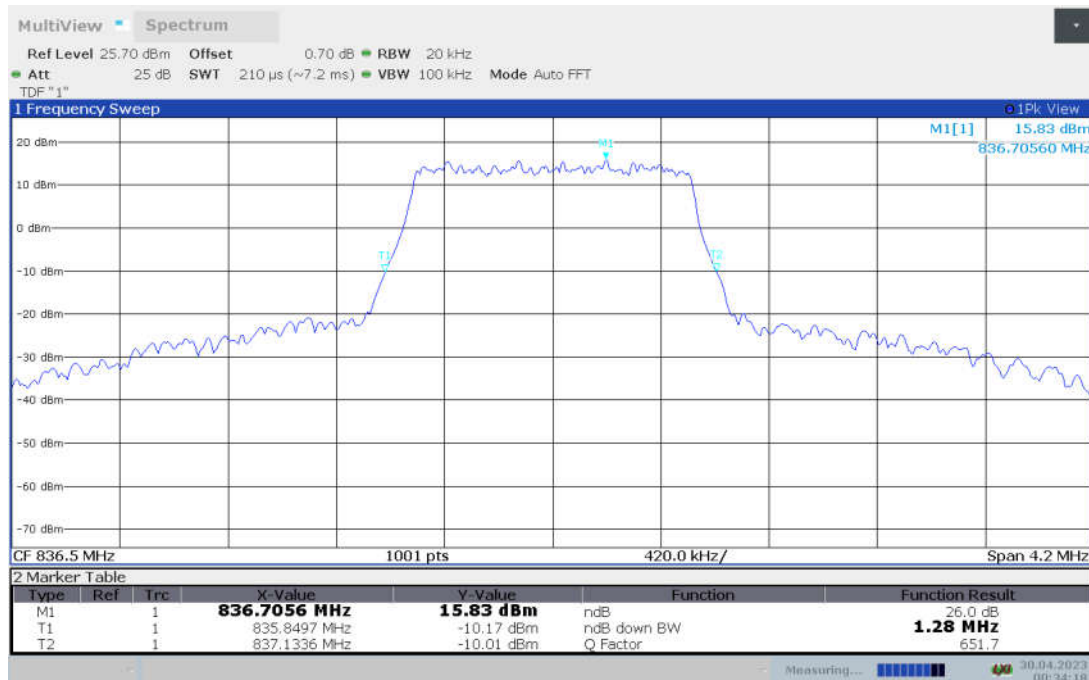## LTE band 4 , 20MHz Bandwidth, MID, 16QAM (-26dBc BW)

LTE band 5,1.4MHz(-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
836.5	1.267	1.284

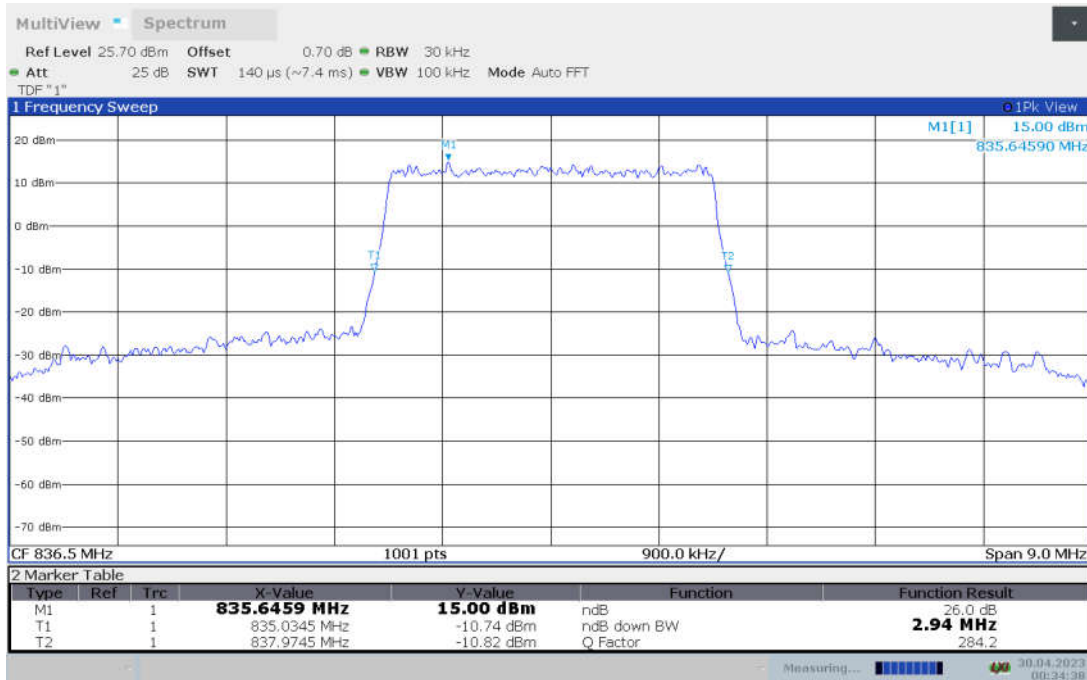**LTE band 5 , 1.4MHz Bandwidth, MID, QPSK (-26dBc BW)**
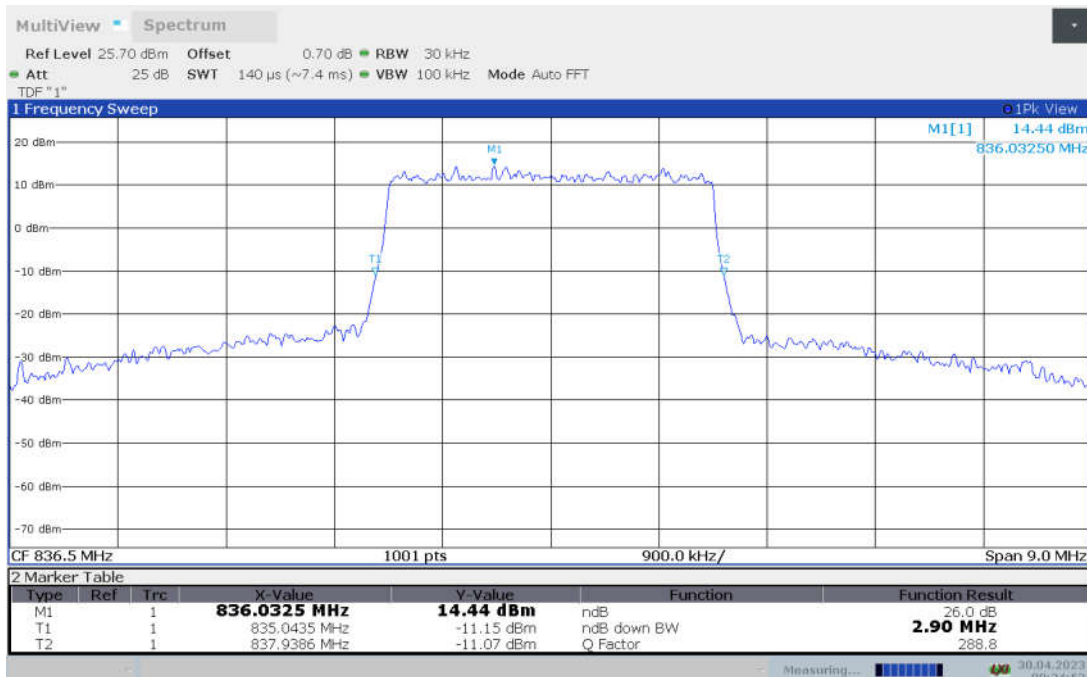

LTE band 5 , 1.4MHz Bandwidth, MID, 16QAM (-26dBc BW)

LTE band 5,3MHz(-26dBc BW)

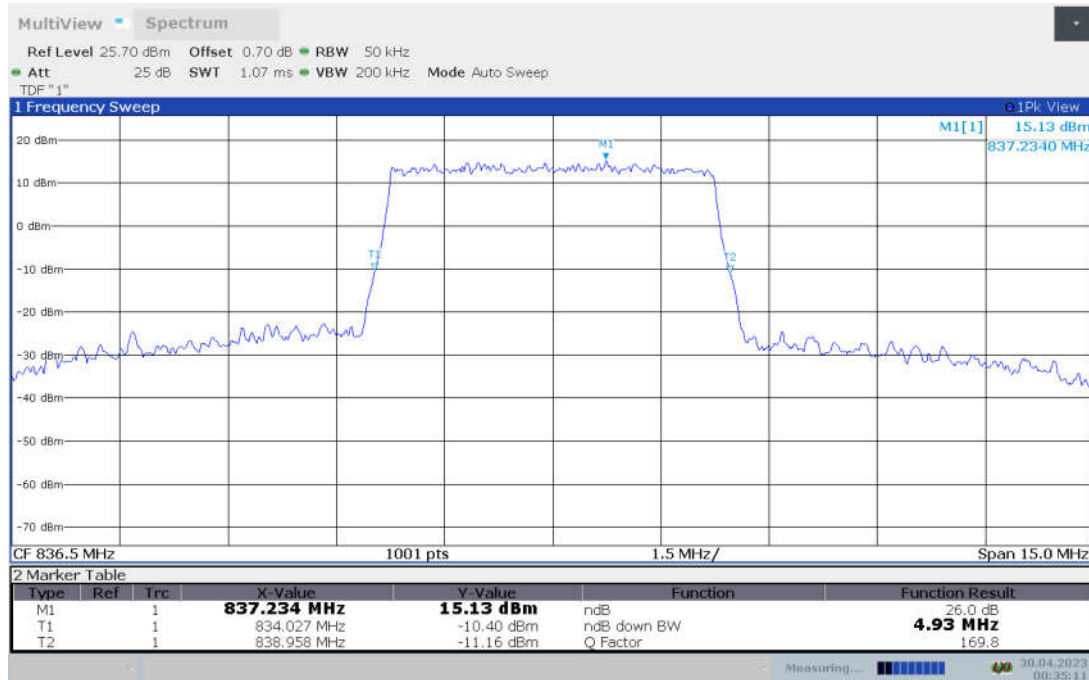| Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
836.5	2.940	2.895

LTE band 5 , 3MHz Bandwidth, MID, QPSK (-26dBc BW)

LTE band 5 , 3MHz Bandwidth, MID, 16QAM (-26dBc BW)

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

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
836.5	4.930	4.855

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

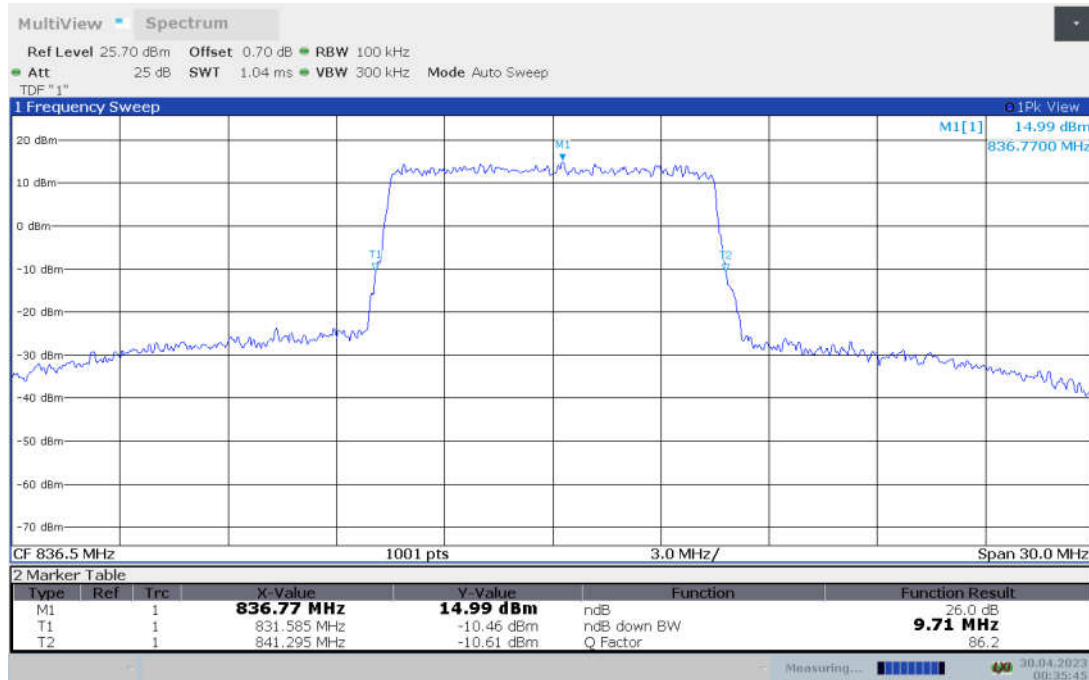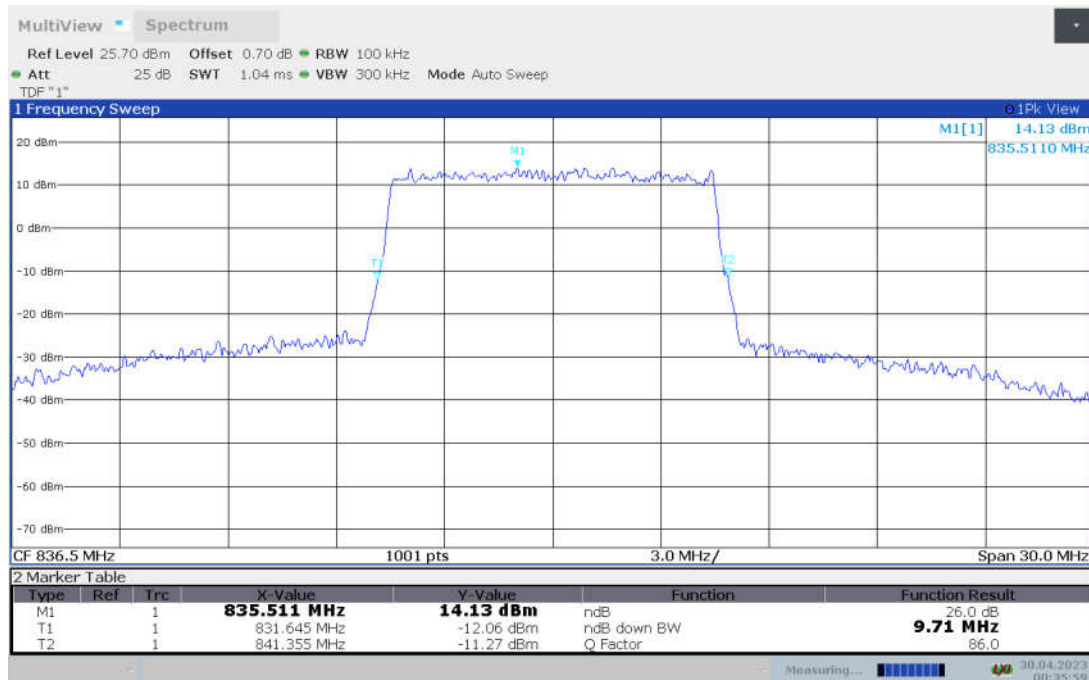**LTE band 5 , 5MHz Bandwidth, MID, 16QAM (-26dBc BW)**
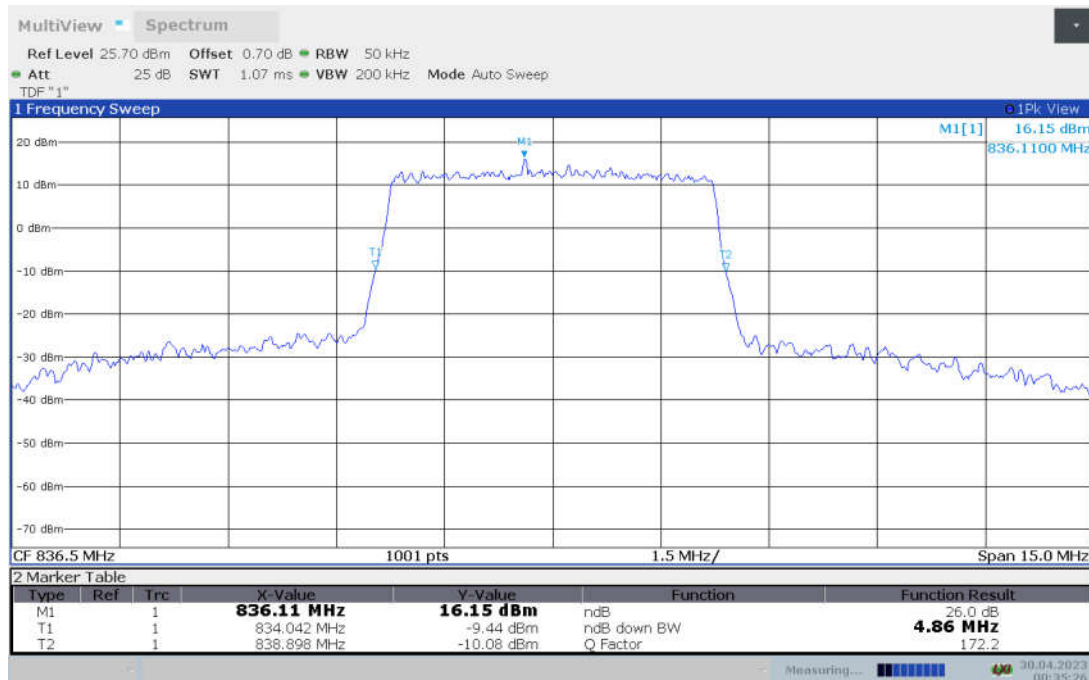
LTE band 5,10MHz(-26dBc BW)

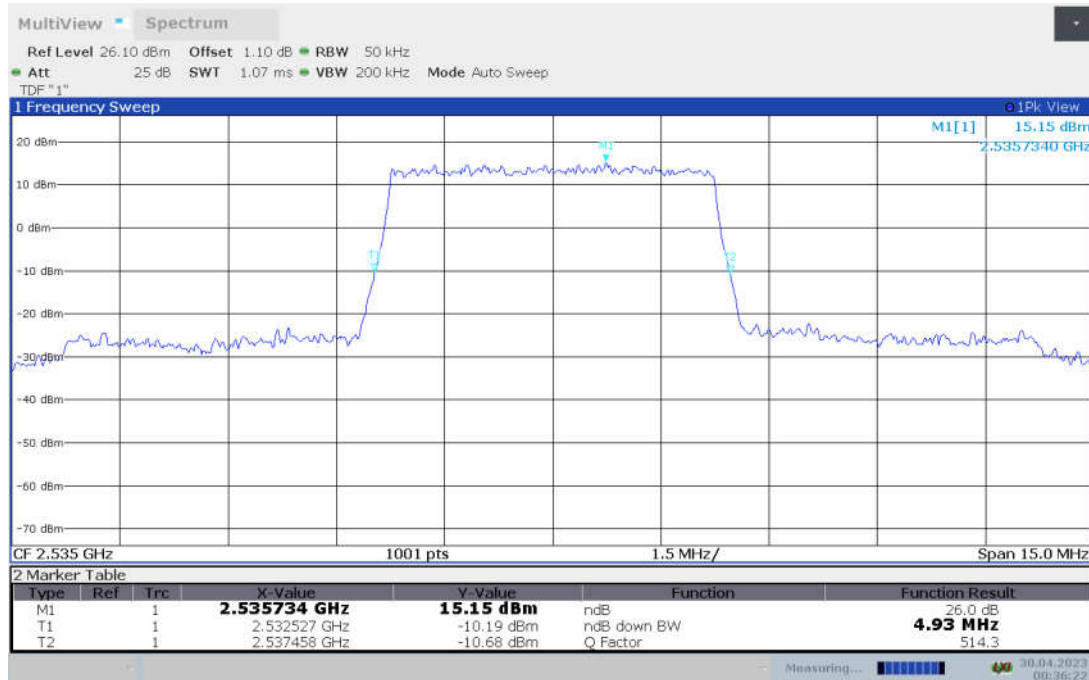| Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
836.5	9.710	9.710

LTE band 5 , 10MHz Bandwidth, MID, QPSK (-26dBc BW)

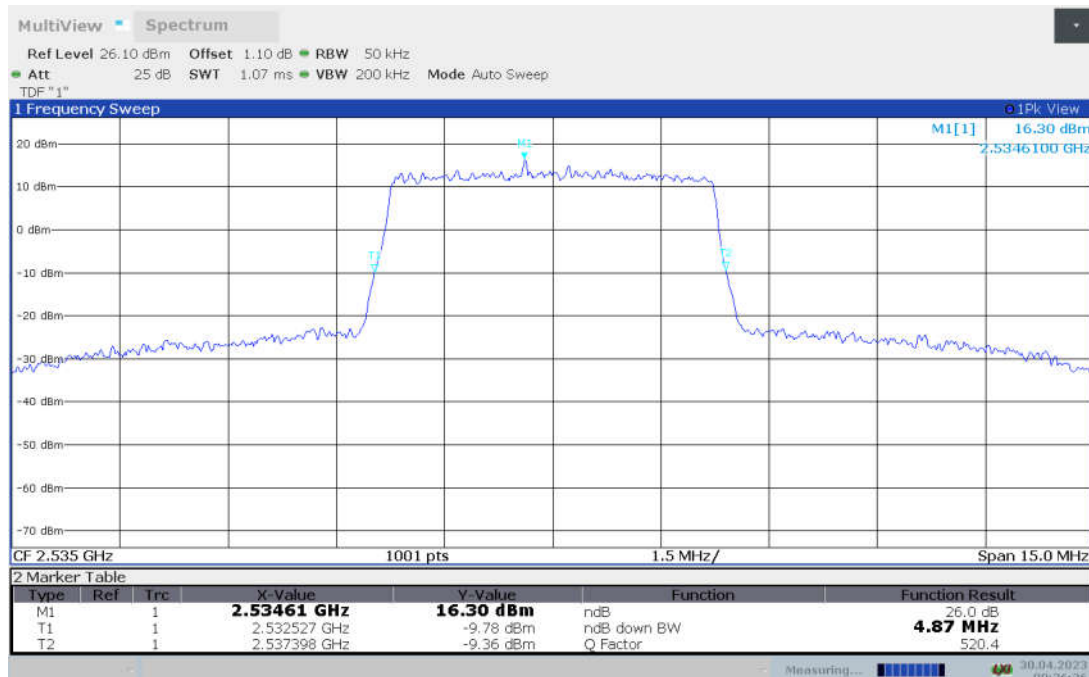## LTE band 5 , 10MHz Bandwidth, MID, 16QAM (-26dBc BW)

LTE band 7,5MHz(-26dBc BW)

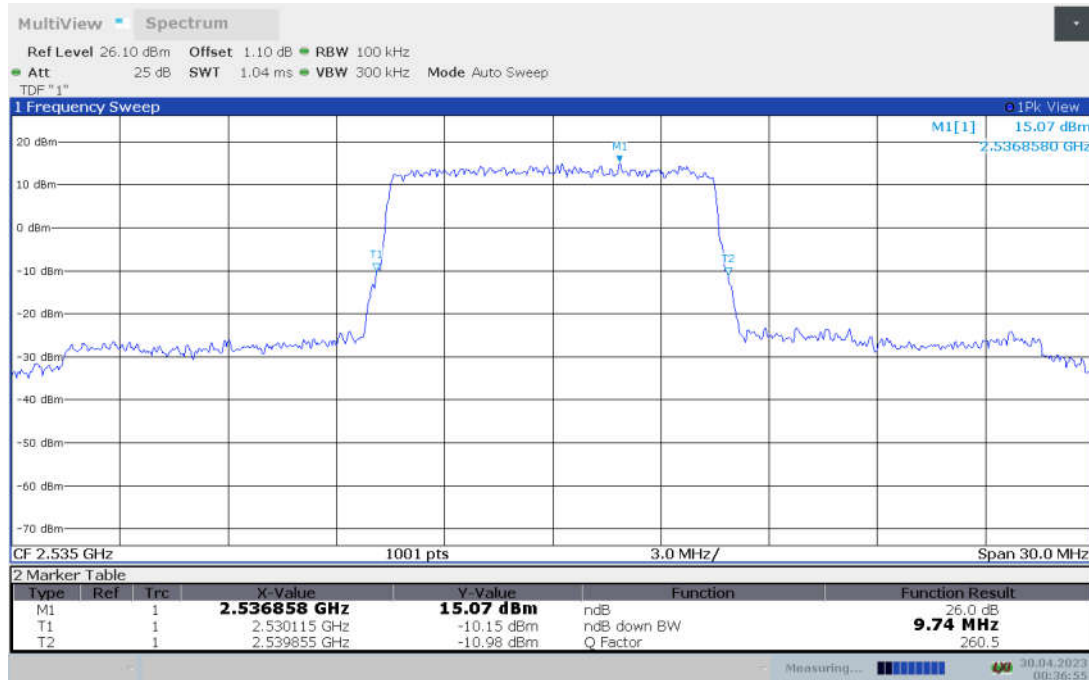| Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
2535	4.930	4.870

LTE band 7 , 5MHz Bandwidth, MID, QPSK (-26dBc BW)

LTE band 7 , 5MHz Bandwidth, MID, 16QAM (-26dBc BW)

LTE band 7,10MHz(-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
2535	9.740	9.620

LTE band 7 , 10MHz Bandwidth, MID, QPSK (-26dBc BW)

LTE band 7 , 10MHz Bandwidth, MID, 16QAM (-26dBc BW)
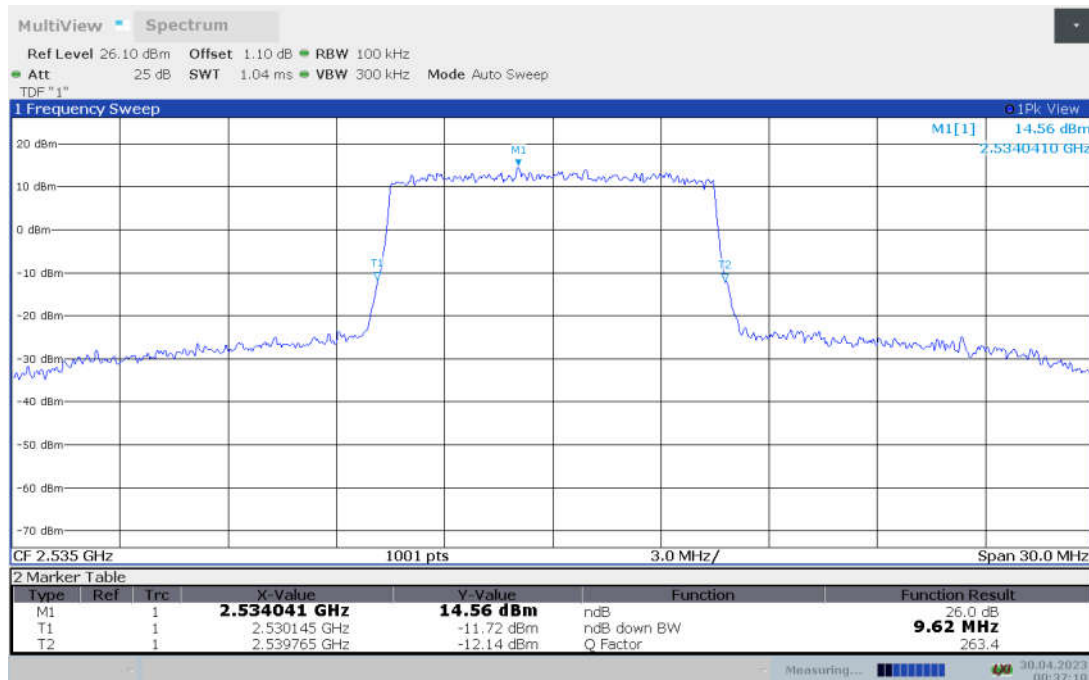
LTE band 7,15MHz(-26dBc BW)

Frequency(MHz)	Emission Bandwidth (-26dBc BW)(MHz)	
	QPSK	16QAM
2535	14.565	14.386

LTE band 7 , 15MHz Bandwidth, MID, QPSK (-26dBc BW)

LTE band 7 , 15MHz Bandwidth, MID, 16QAM (-26dBc BW)