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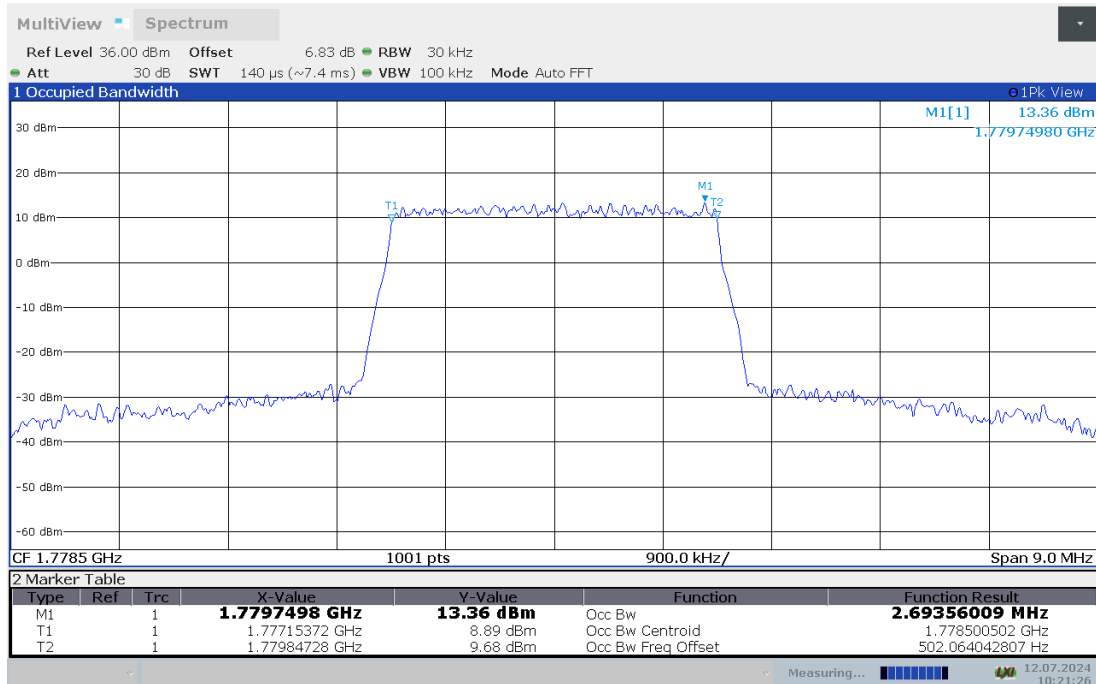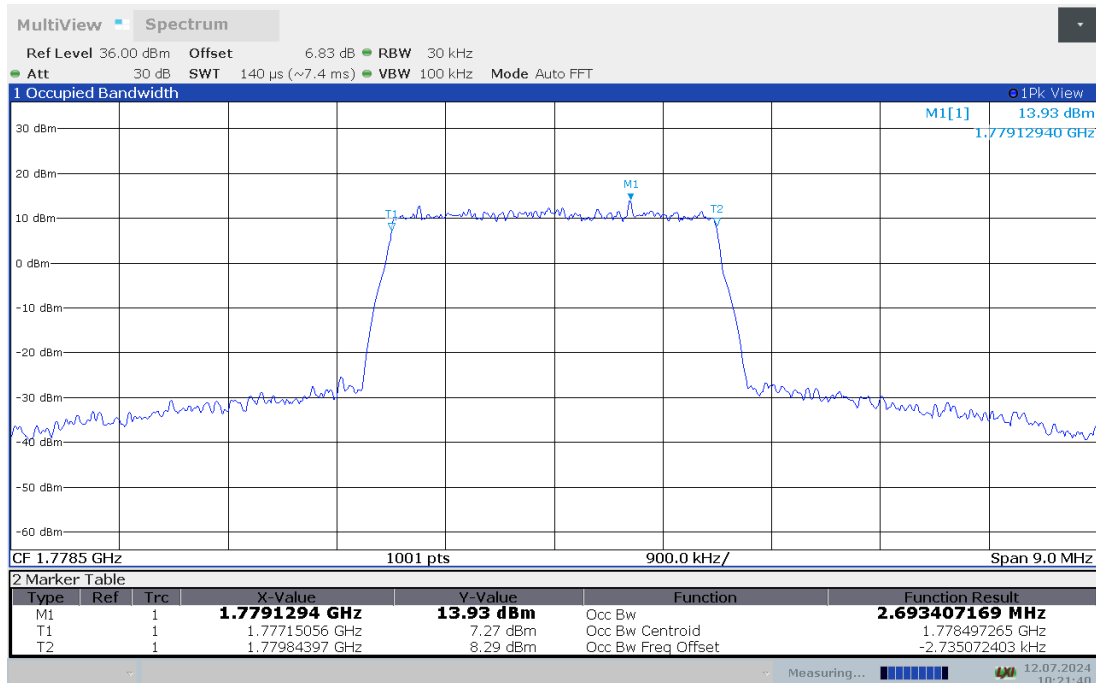

LTE band 66 , 3MHz Bandwidth,HIGH,16QAM (99% BW)

LTE band 66,5MHz(99%)

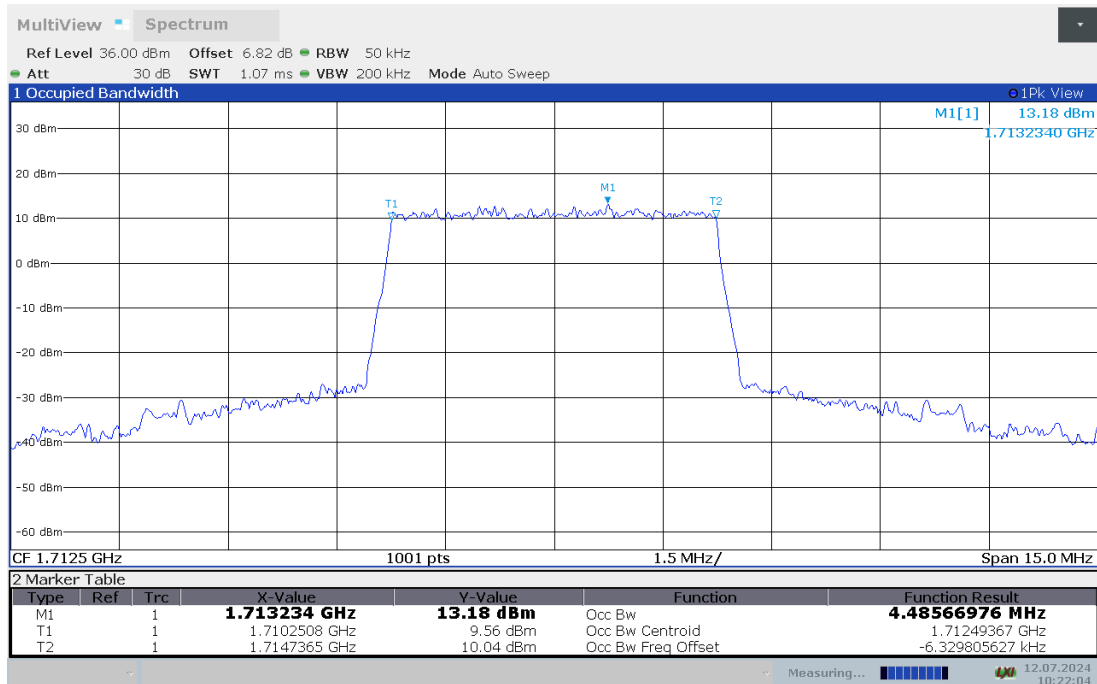| Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1712.5	4.486	4.472
1745	4.483	4.484
1777.5	4.468	4.477

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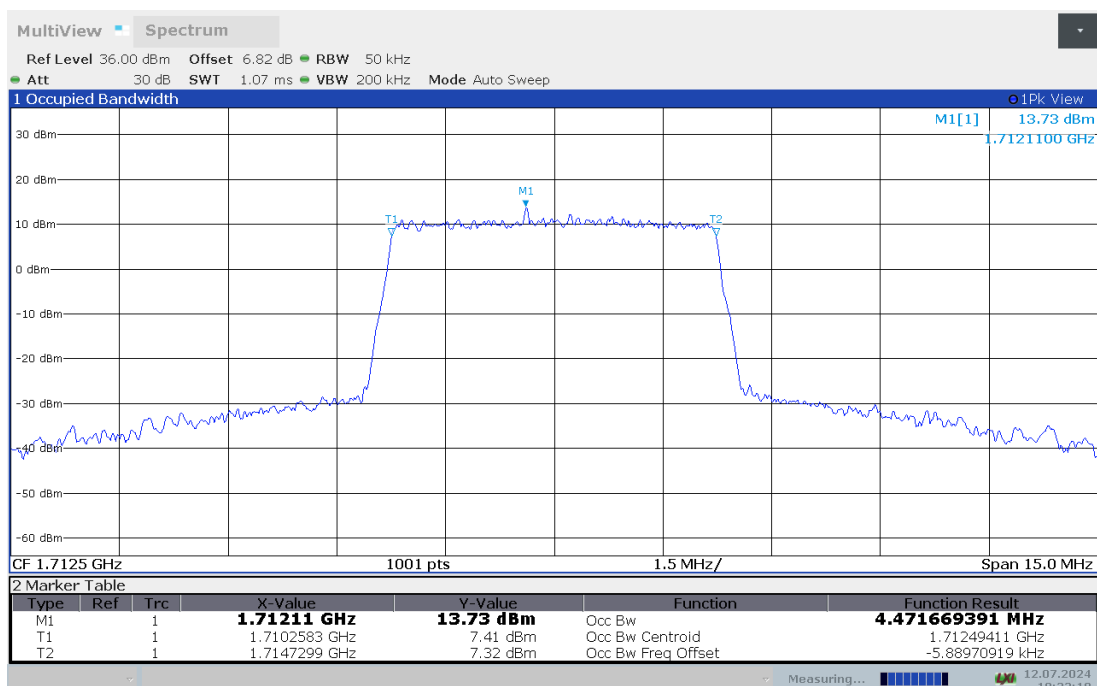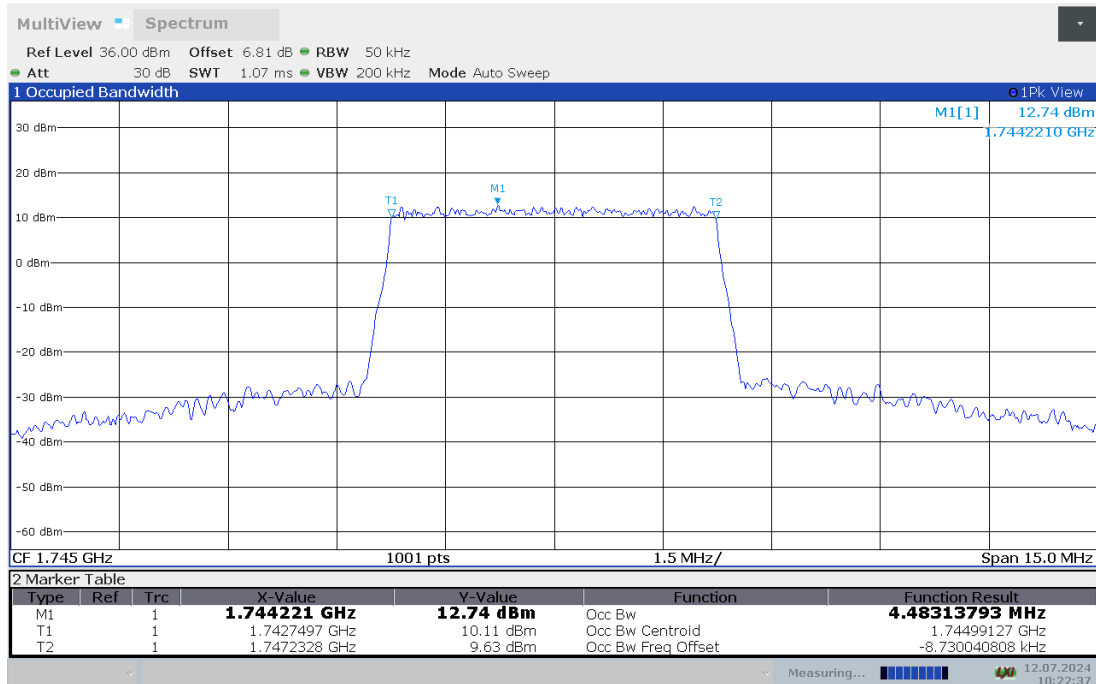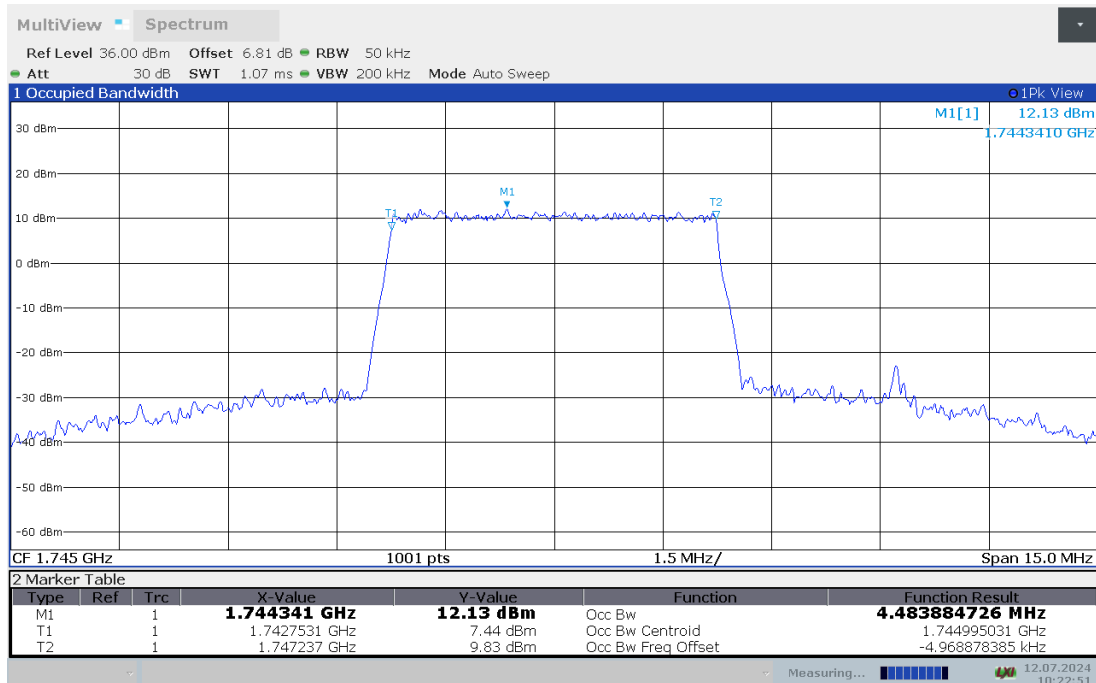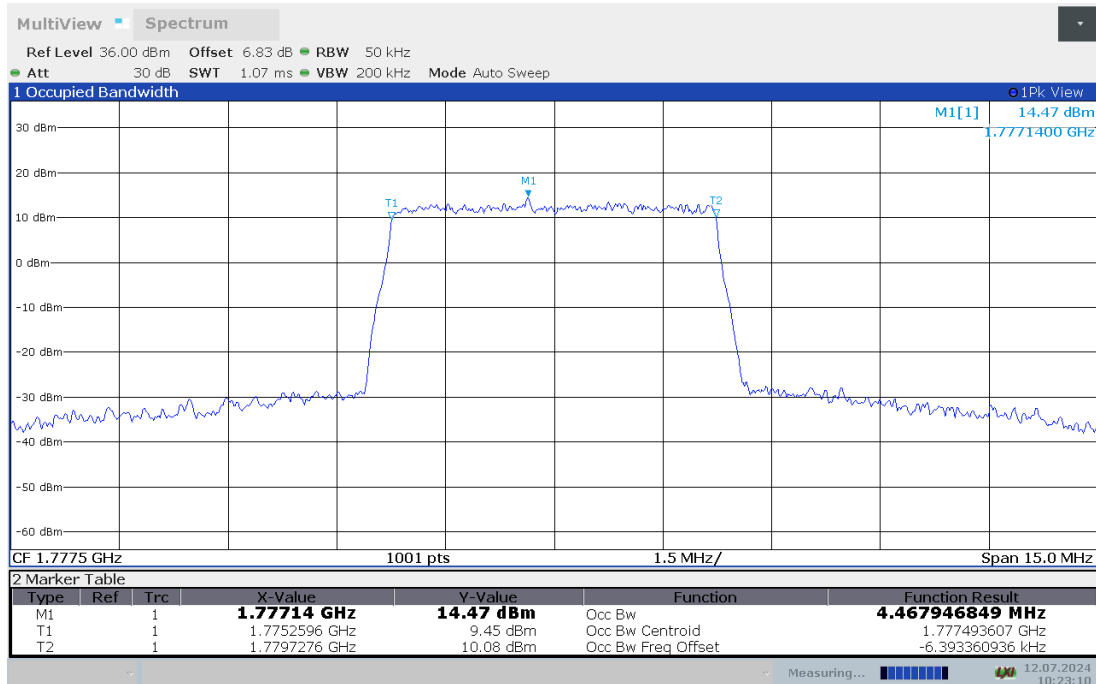

LTE band 66 , 5MHz Bandwidth,LOW,16QAM (99% BW)

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

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.744221 GHz**	**12.74 dBm**	Occ Bw	**4.48313793 MHz**
T1		1	1.7427497 GHz	10.11 dBm	Occ Bw Centroid	1.74499127 GHz
T2		1	1.7472328 GHz	9.63 dBm	Occ Bw Freq Offset	-8.730040808 kHz

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

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.744341 GHz**	**12.13 dBm**	Occ Bw	**4.483884726 MHz**
T1		1	1.7427531 GHz	7.44 dBm	Occ Bw Centroid	1.744995031 GHz
T2		1	1.747237 GHz	9.83 dBm	Occ Bw Freq Offset	-4.968878385 kHz

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

MultiView · Spectrum

Ref Level 36.00 dBm   Offset 6.83 dB   RBW 50 kHz
Att   30 dB   SWT 1.07 ms   VBW 200 kHz   Mode Auto Sweep

1 Occupied Bandwidth   1Pk View
M1[1]   14.47 dBm
1.7771400 GHz

CF 1.7775 GHz   1001 pts   1.5 MHz/   Span 15.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	1.77714 GHz	14.47 dBm	Occ Bw	4.467946849 MHz
T1		1	1.7752596 GHz	9.45 dBm	Occ Bw Centroid	1.777493607 GHz
T2		1	1.7797276 GHz	10.08 dBm	Occ Bw Freq Offset	-6.393360936 kHz

Measuring... 12.07.2024 10:23:10

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

MultiView · Spectrum

Ref Level 36.00 dBm   Offset 6.83 dB   RBW 50 kHz
Att   30 dB   SWT 1.07 ms   VBW 200 kHz   Mode Auto Sweep

1 Occupied Bandwidth   1Pk View
M1[1]   12.94 dBm
1.7791630 GHz

CF 1.7775 GHz   1001 pts   1.5 MHz/   Span 15.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	1.779163 GHz	12.94 dBm	Occ Bw	4.476766501 MHz
T1		1	1.7752566 GHz	7.77 dBm	Occ Bw Centroid	1.777495013 GHz
T2		1	1.7797334 GHz	9.03 dBm	Occ Bw Freq Offset	-4.98679222 kHz

Measuring... 12.07.2024 10:23:24

LTE band 66,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1715	8.970	8.960
1745	8.953	8.953
1775	8.962	8.971

LTE band 66 , 10MHz Bandwidth,LOW,QPSK (99% BW)

LTE band 66 , 10MHz Bandwidth,LOW,16QAM (99% BW)

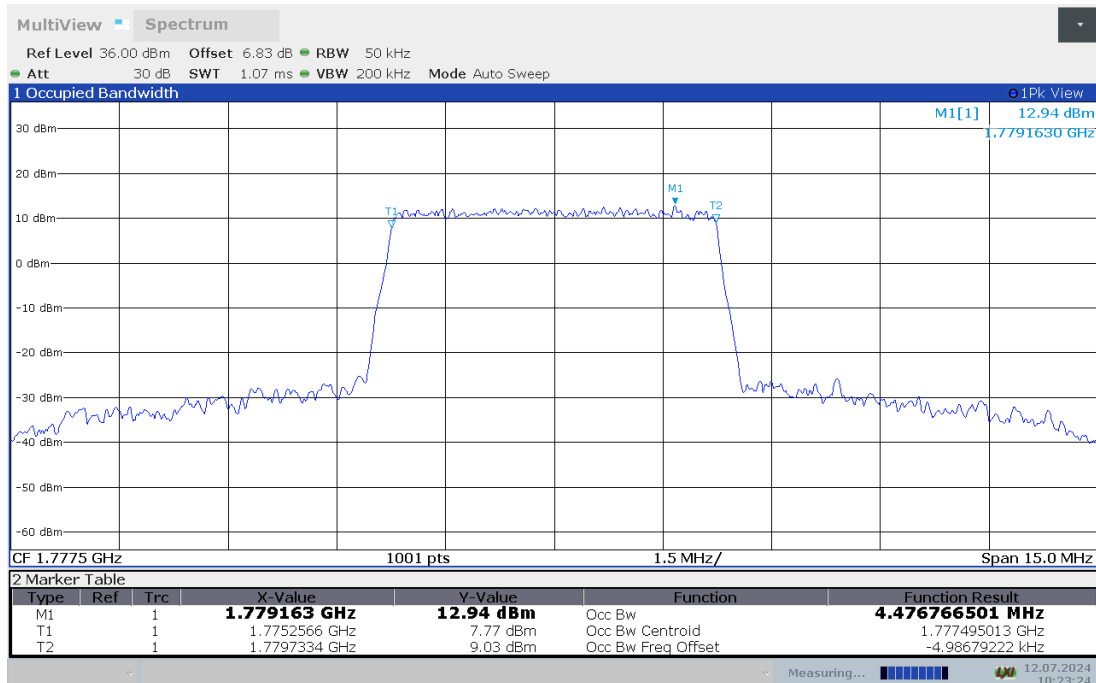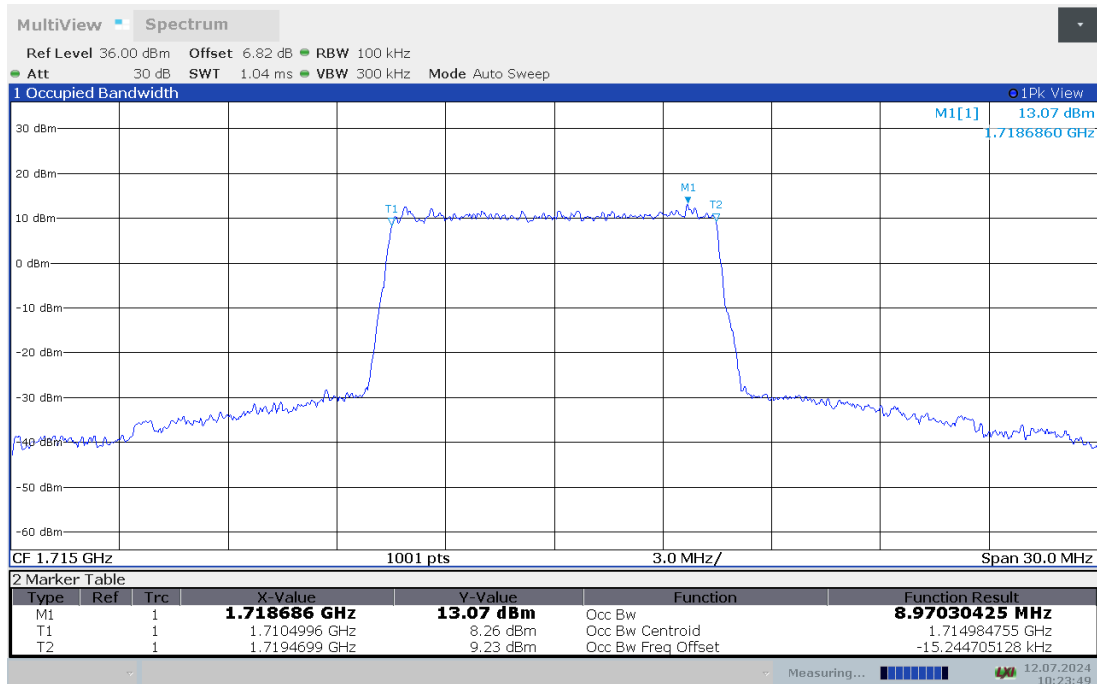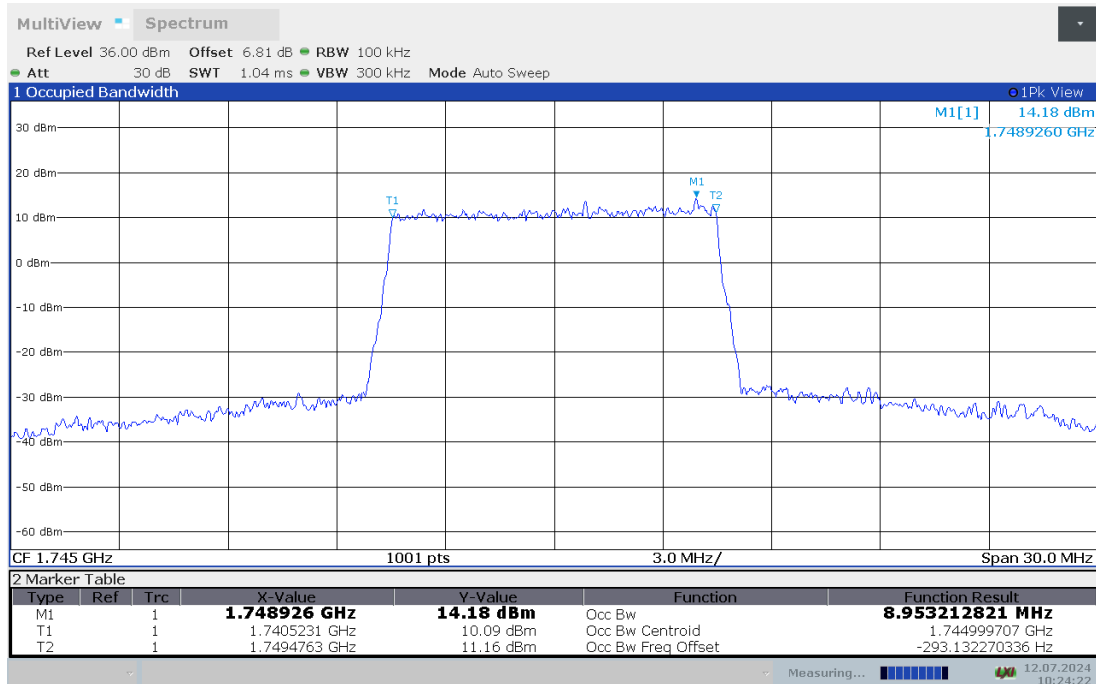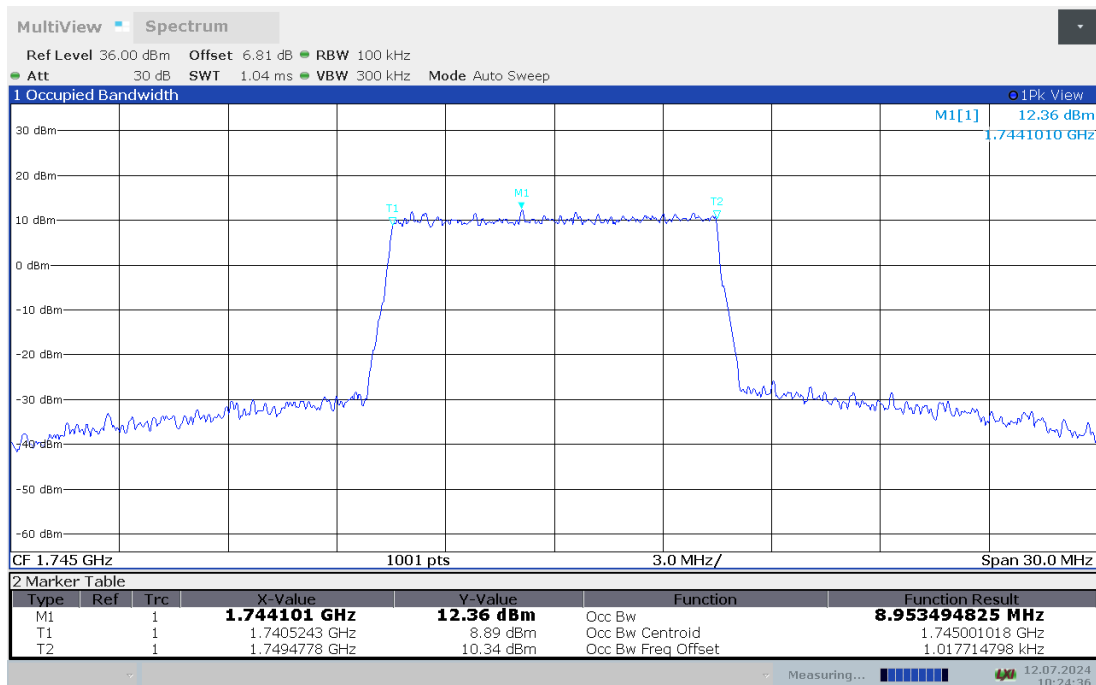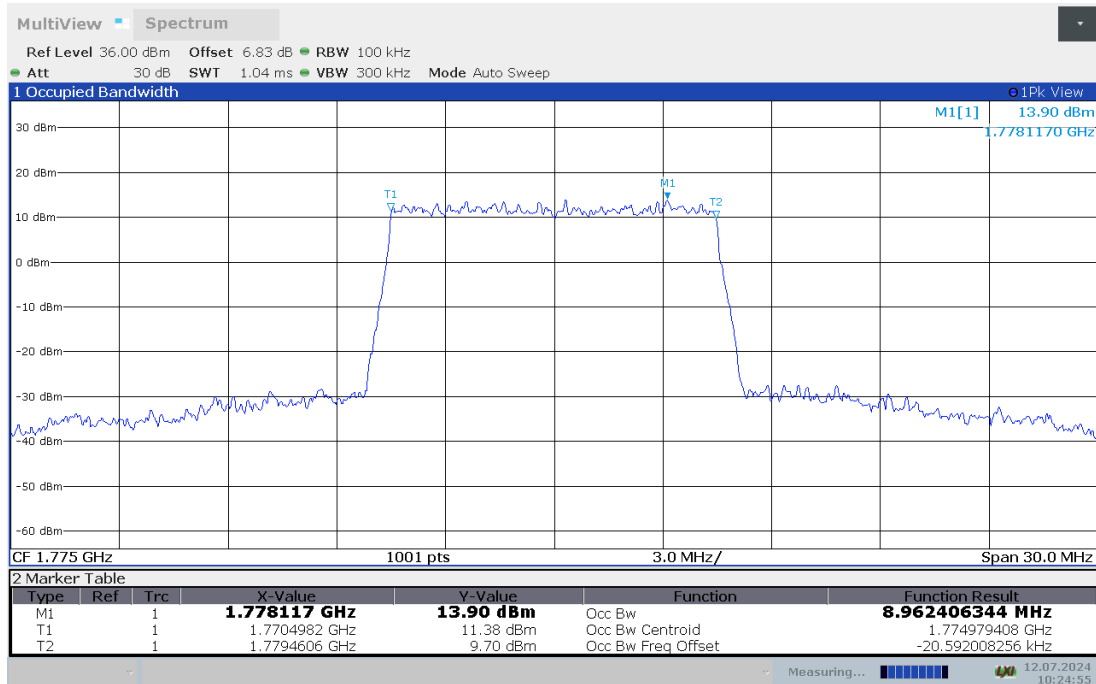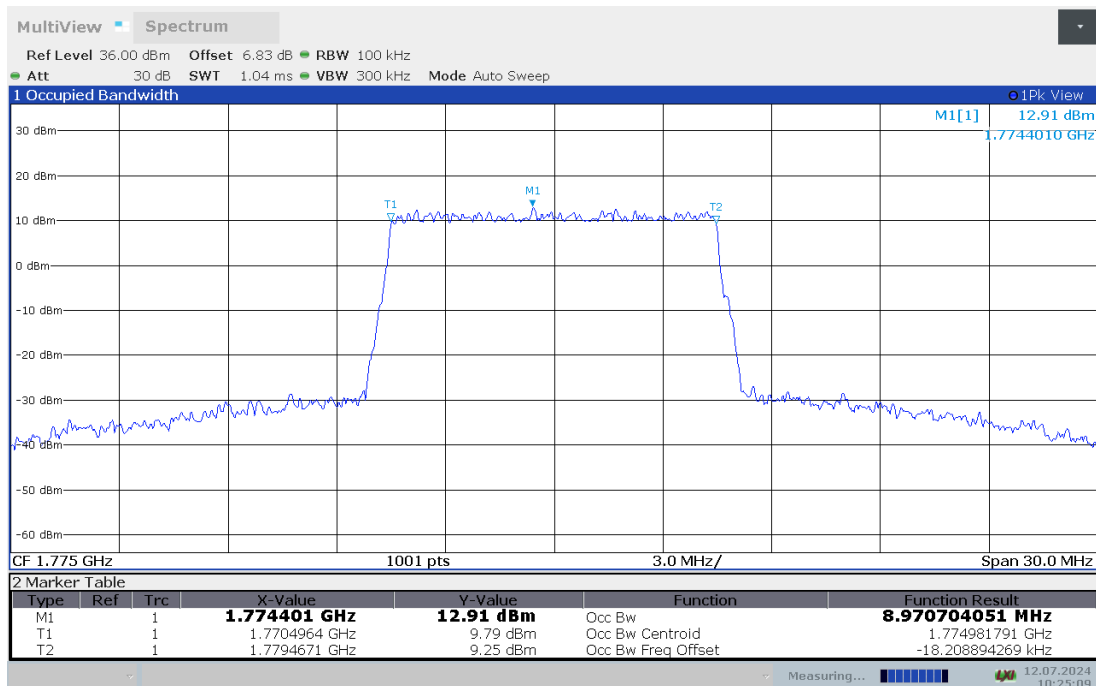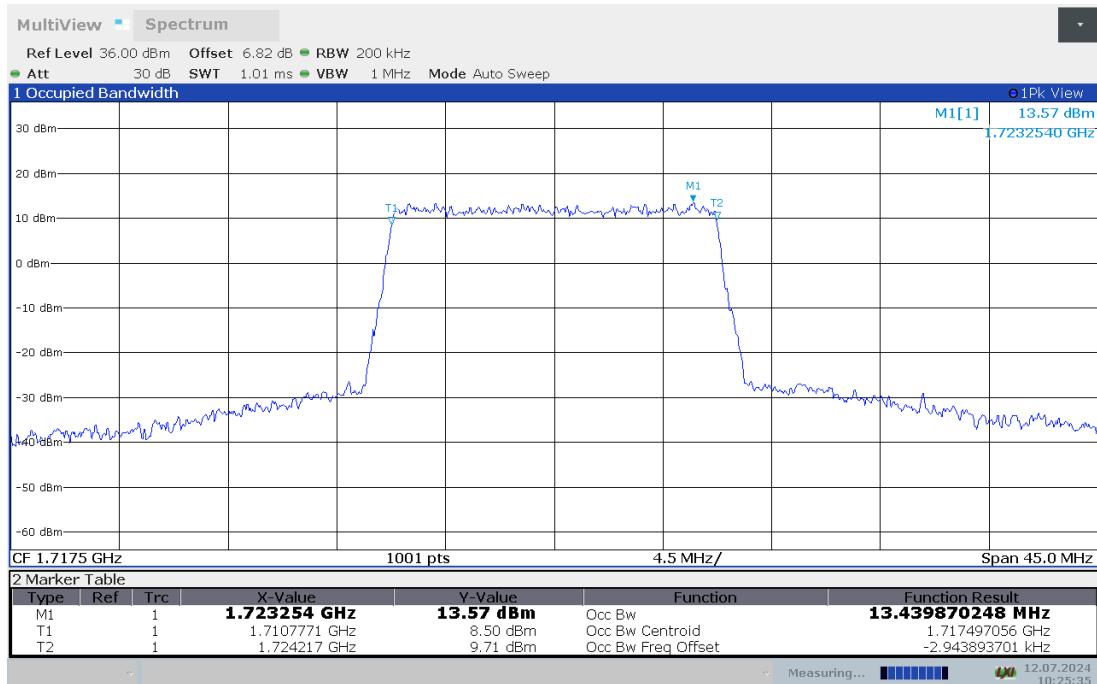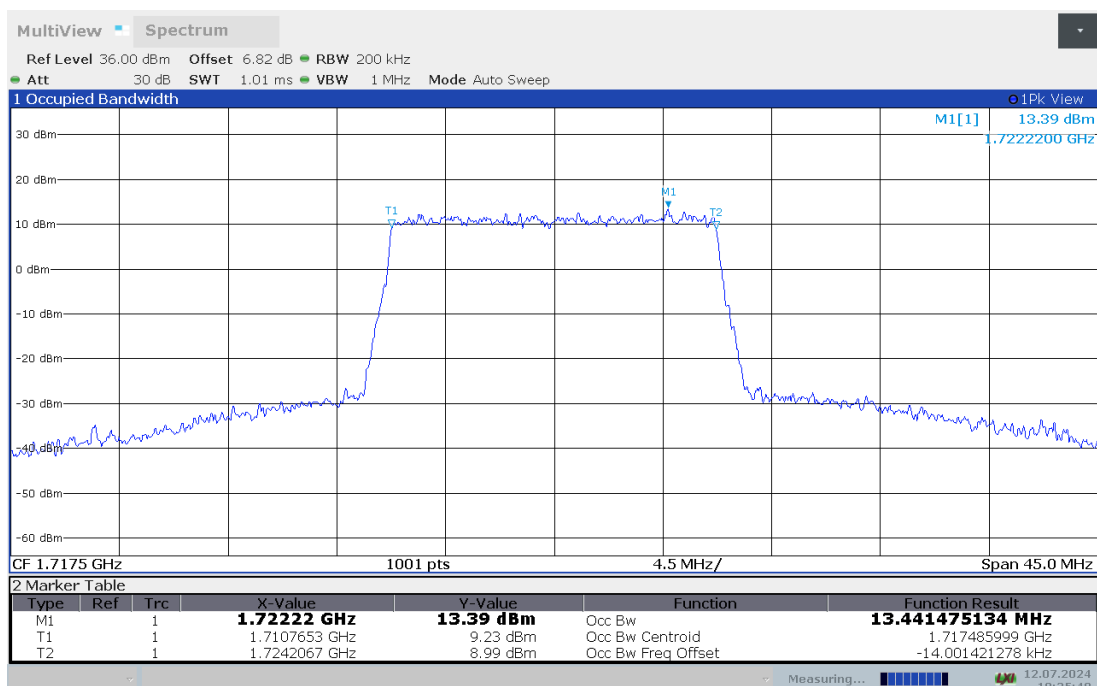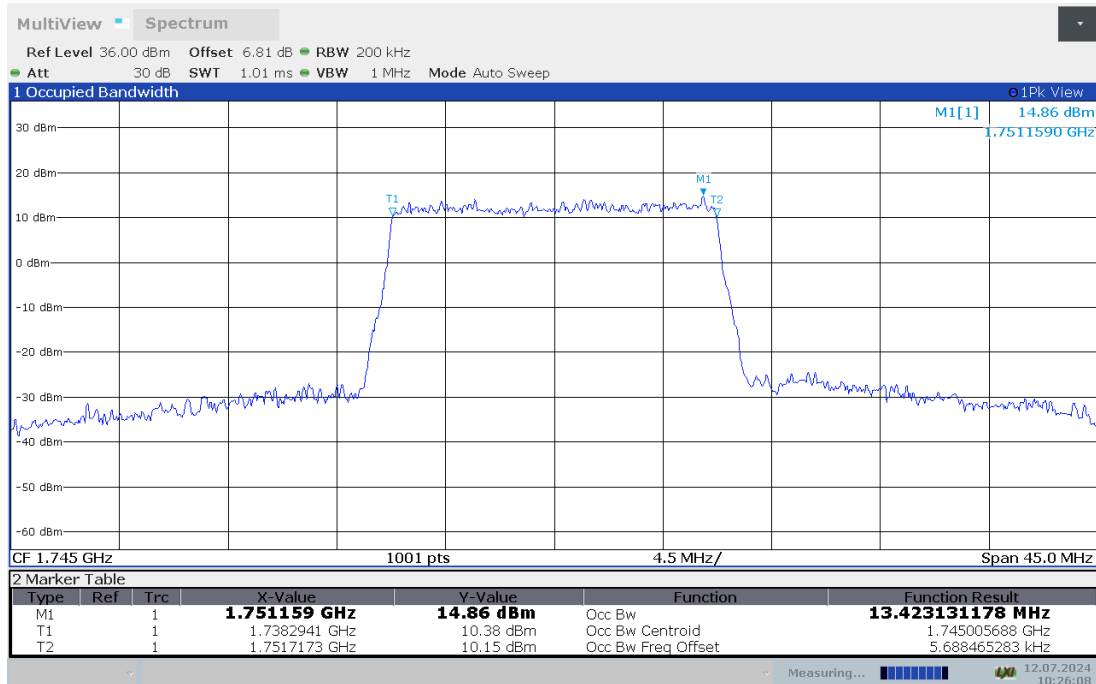## LTE band 66 , 10MHz Bandwidth,MID,QPSK (99% BW)

MultiView	Spectrum				

Ref Level 36.00 dBm   Offset 6.81 dB   RBW 100 kHz
Att   30 dB   SWT   1.04 ms   VBW 300 kHz   Mode Auto Sweep

1 Occupied Bandwidth   ●1Pk View
M1[1]   14.18 dBm
1.7489260 GHz

CF 1.745 GHz   1001 pts   3.0 MHz/   Span 30.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.748926 GHz**	**14.18 dBm**	Occ Bw	**8.953212821 MHz**
T1		1	1.7405231 GHz	10.09 dBm	Occ Bw Centroid	1.744999707 GHz
T2		1	1.7494763 GHz	11.16 dBm	Occ Bw Freq Offset	-293.132270336 Hz

Measuring…   12.07.2024 10:24:22

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

MultiView	Spectrum				

Ref Level 36.00 dBm   Offset 6.81 dB   RBW 100 kHz
Att   30 dB   SWT   1.04 ms   VBW 300 kHz   Mode Auto Sweep

1 Occupied Bandwidth   ●1Pk View
M1[1]   12.36 dBm
1.7441010 GHz

CF 1.745 GHz   1001 pts   3.0 MHz/   Span 30.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.744101 GHz**	**12.36 dBm**	Occ Bw	**8.953494825 MHz**
T1		1	1.7405243 GHz	8.89 dBm	Occ Bw Centroid	1.745001018 GHz
T2		1	1.7494778 GHz	10.34 dBm	Occ Bw Freq Offset	1.017714798 kHz

Measuring…   12.07.2024 10:24:36

LTE band 66 , 10MHz Bandwidth,HIGH,QPSK (99% BW)

LTE band 66 , 10MHz Bandwidth,HIGH,16QAM (99% BW)

LTE band 66,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1717.5	13.440	13.441
1745	13.423	13.488
1772.5	13.458	13.461

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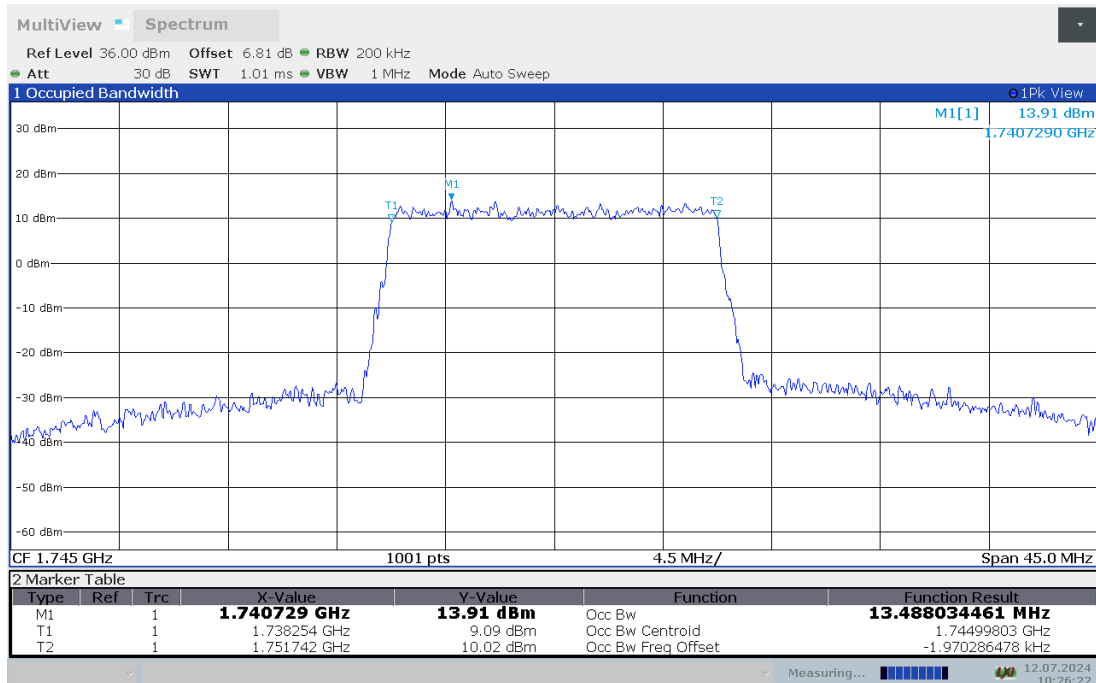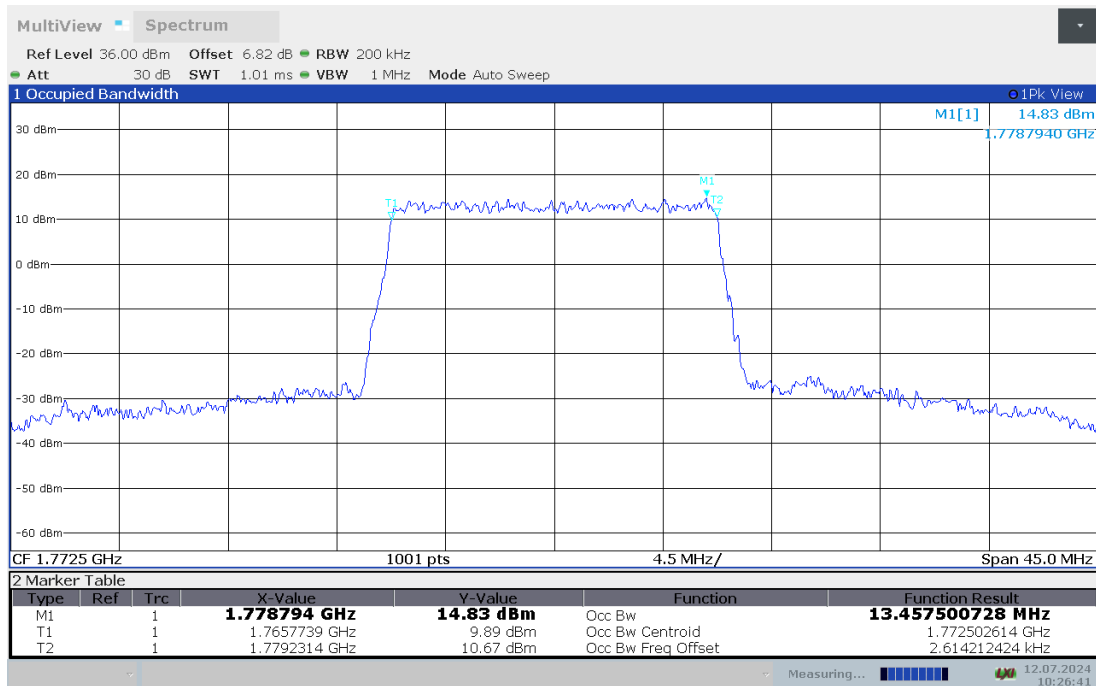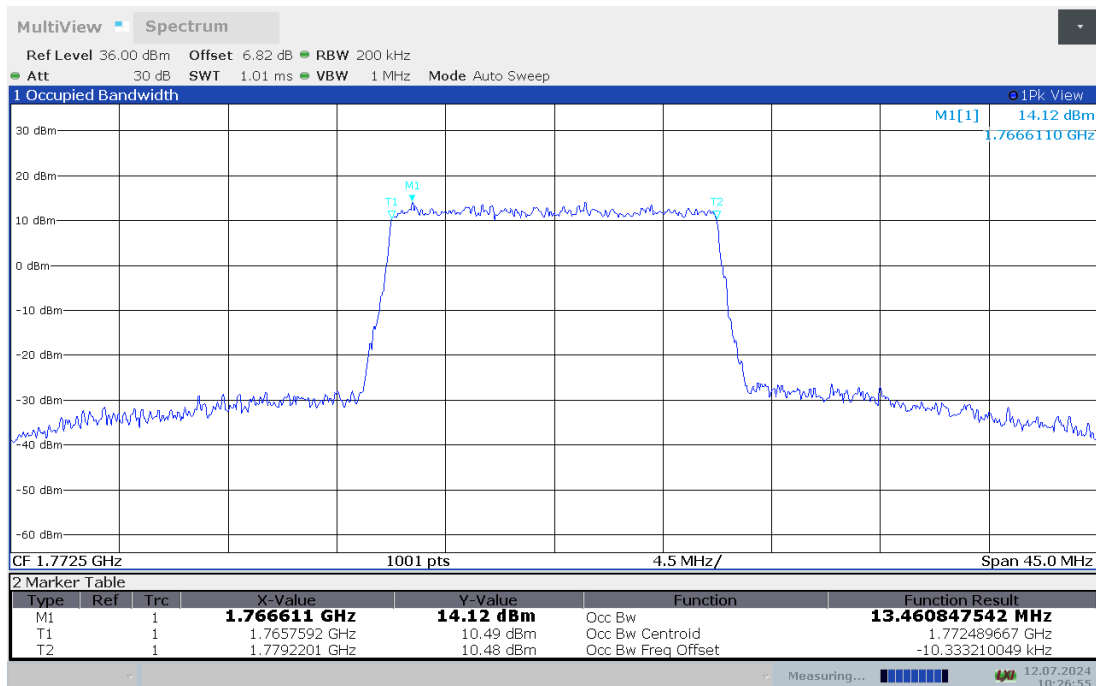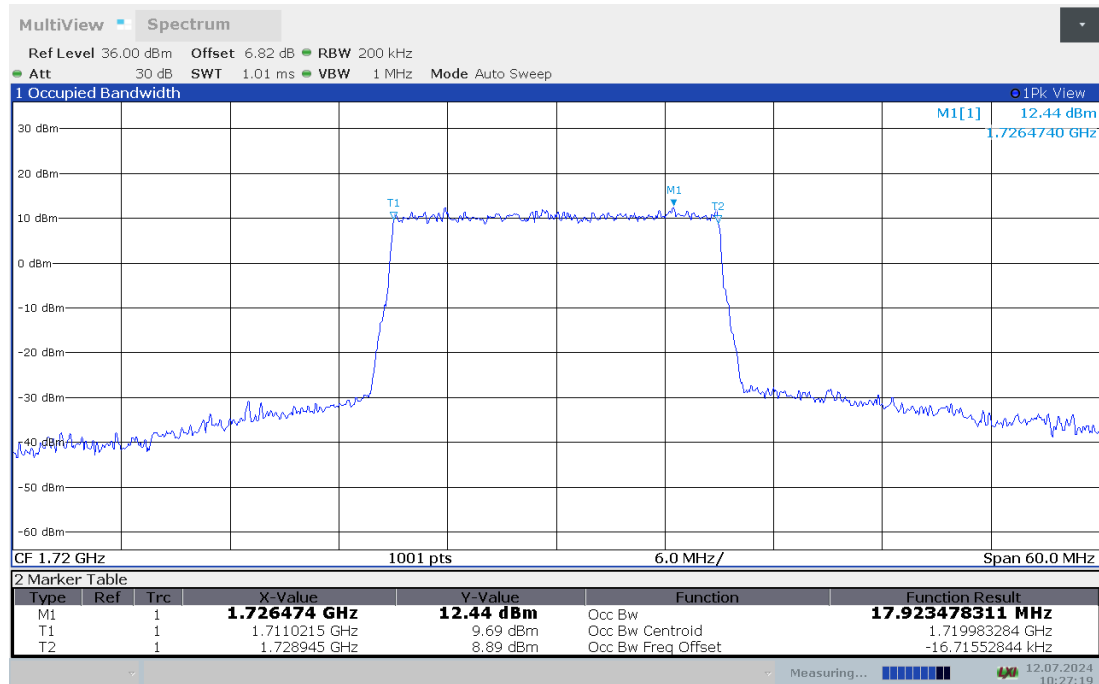

LTE band 66 , 15MHz Bandwidth,LOW,16QAM (99% BW)
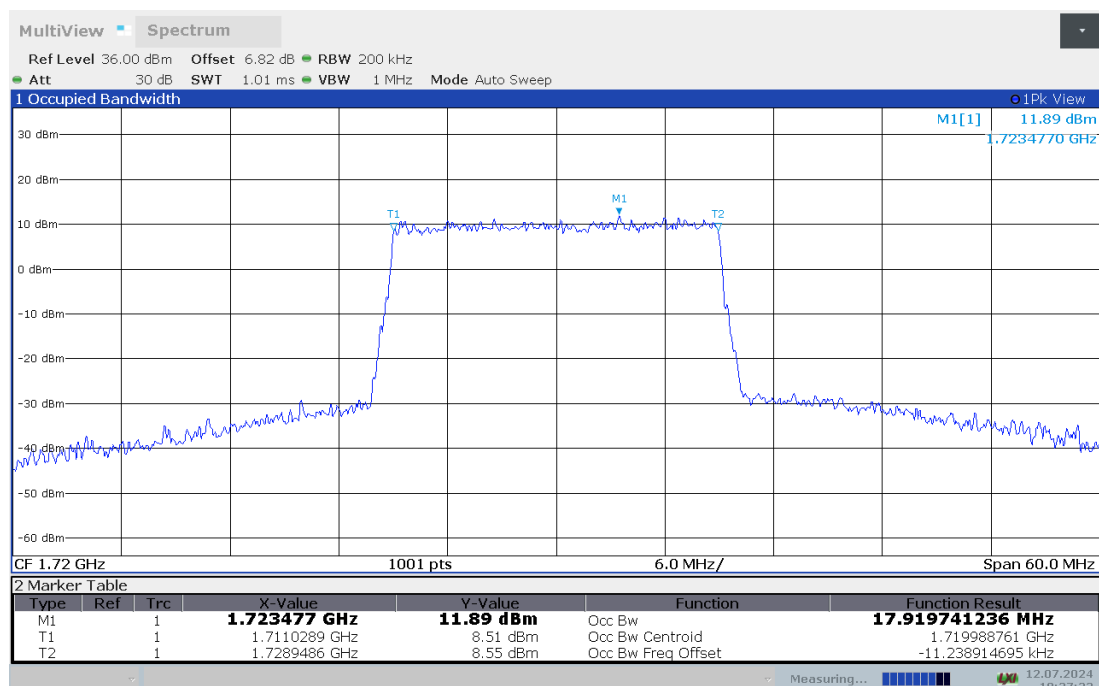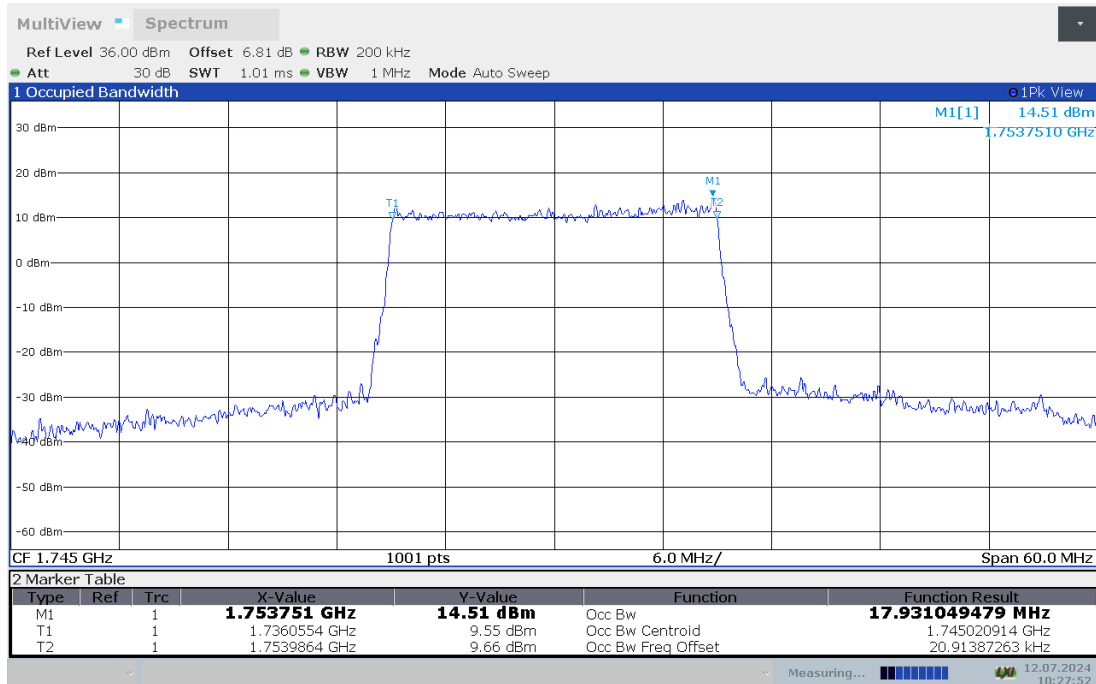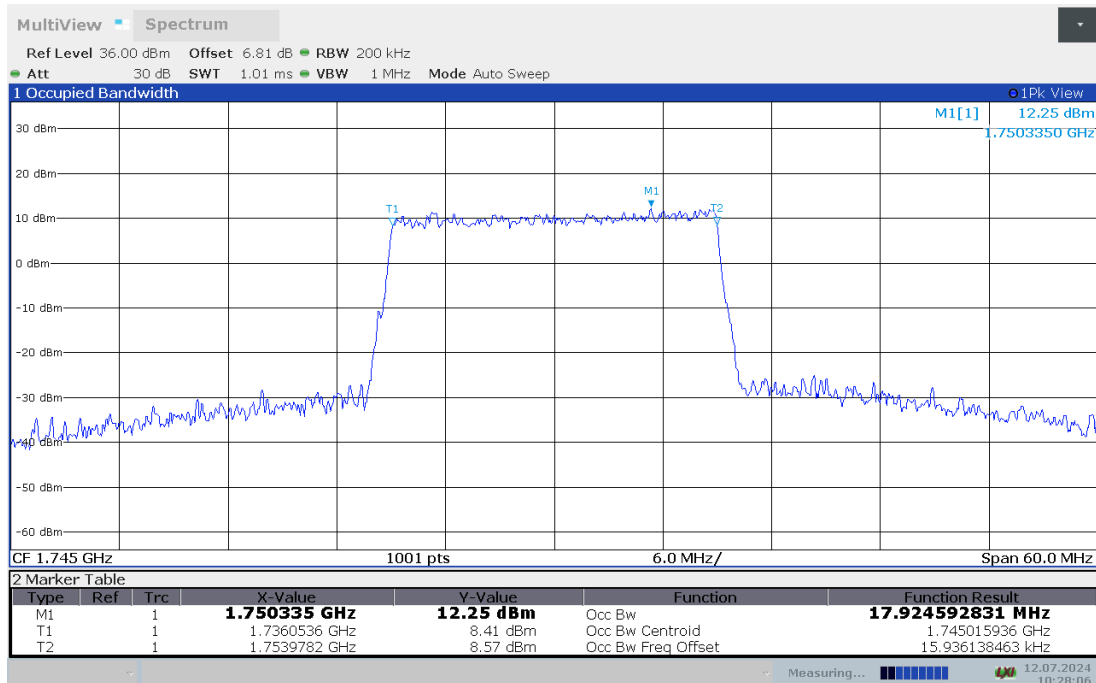
LTE band 66 , 15MHz Bandwidth,MID,QPSK (99% BW)

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

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

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

LTE band 66,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1720	17.923	17.920
1745	17.931	17.925
1770	17.907	17.922

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

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

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

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

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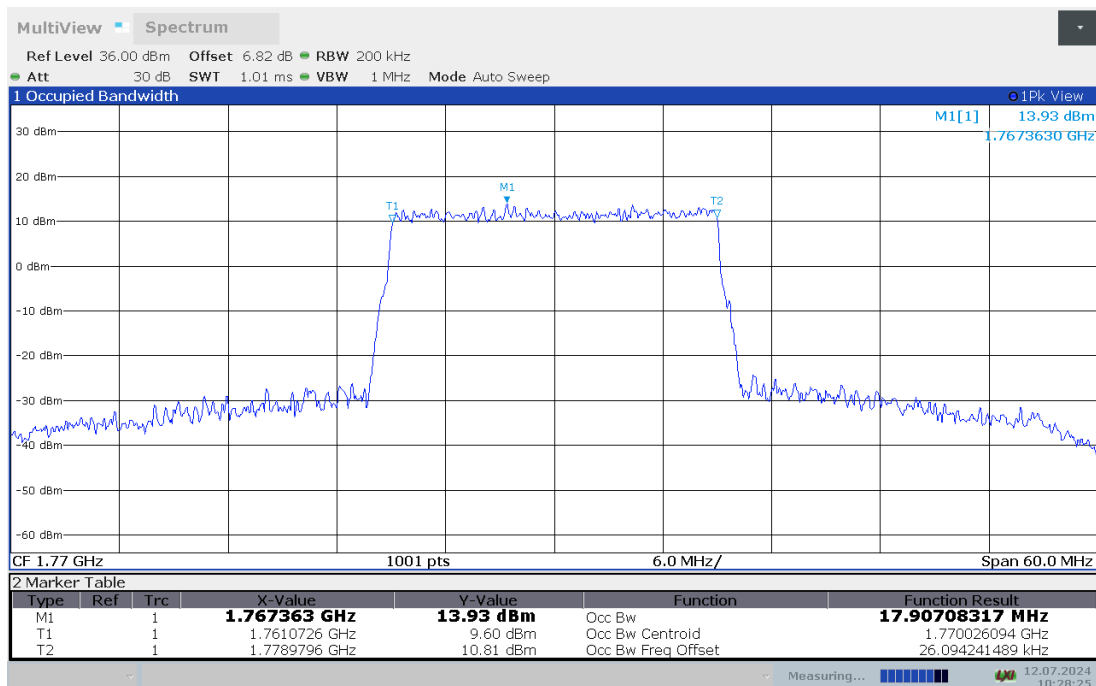
LTE band 66 , 20MHz Bandwidth,HIGH,16QAM (99% BW)
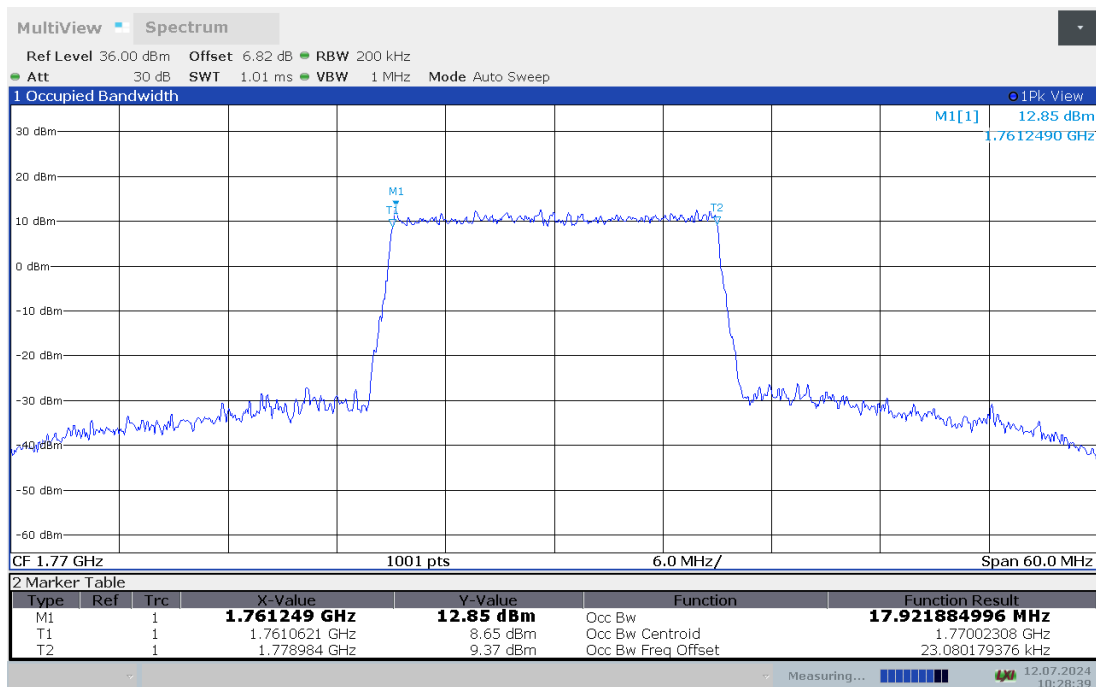
Note: Expanded measurement uncertainty is U = 3428 Hz, k = 2

A.5 EMISSION BANDWIDTH

Reference

FCC: CFR Part 2.1049, 22.917, 24.238, 27.53

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.

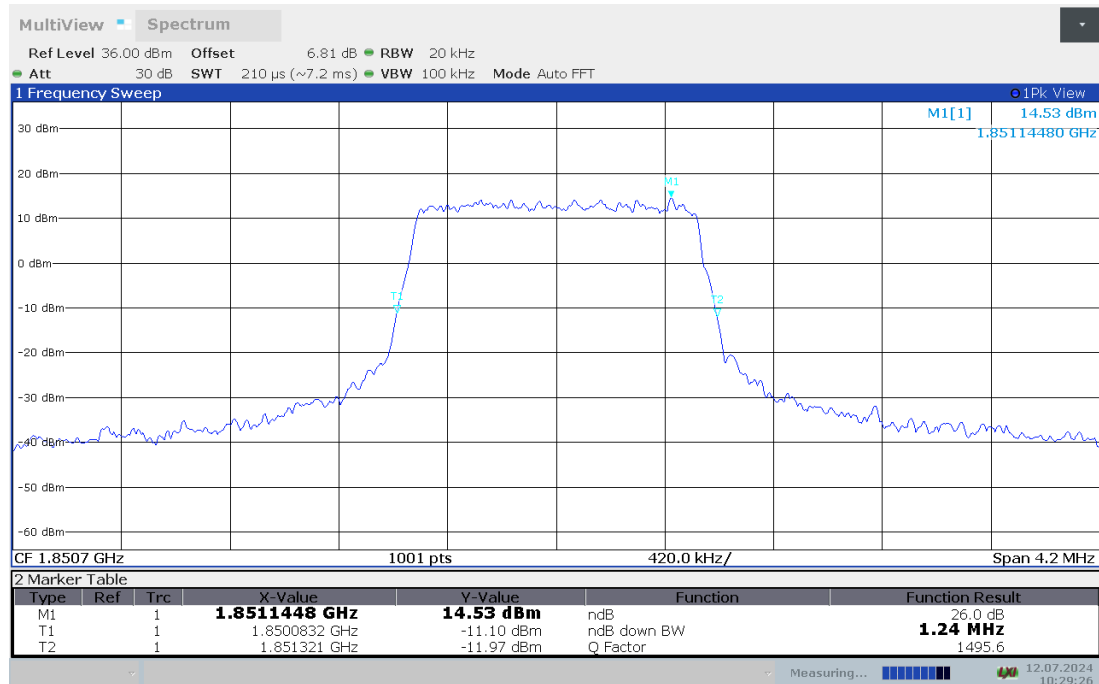e) Use the 26dB bandwidth function of the spectrum analyzer and report the measured bandwidth.

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.
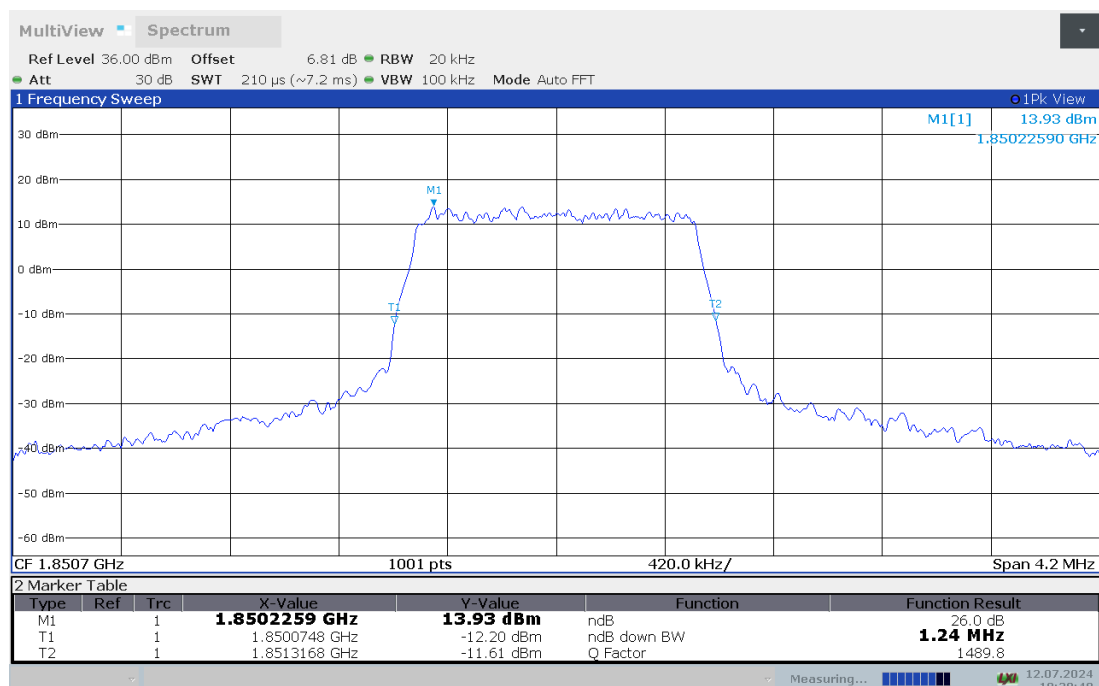
LTE band 2, 1.4MHz (-26Bc BW)

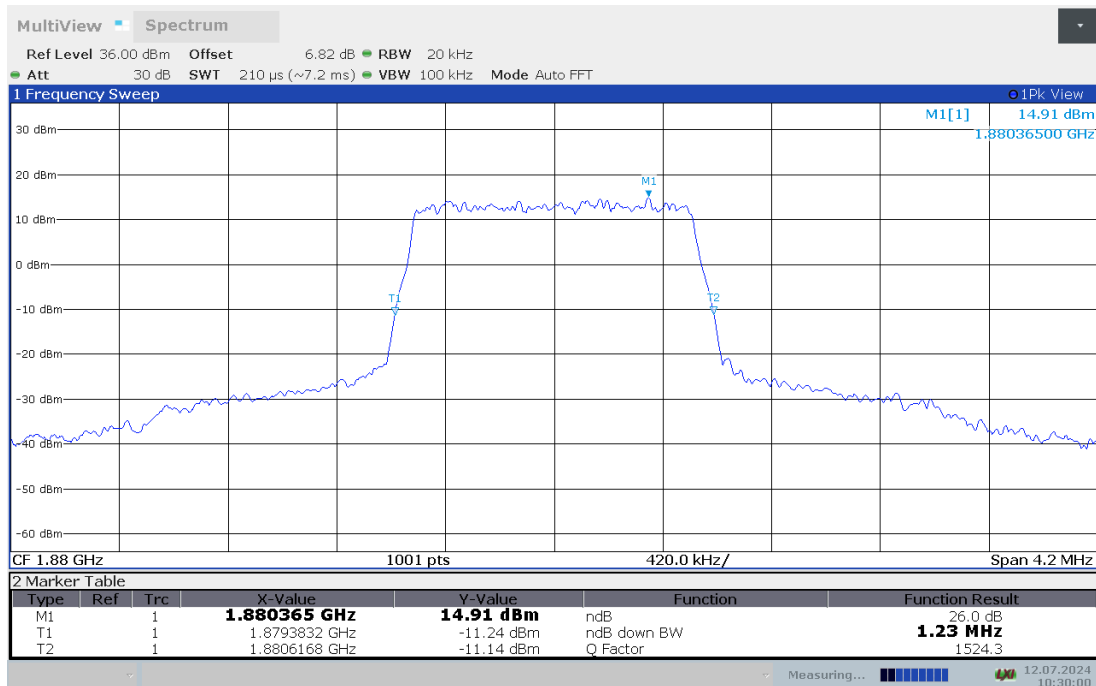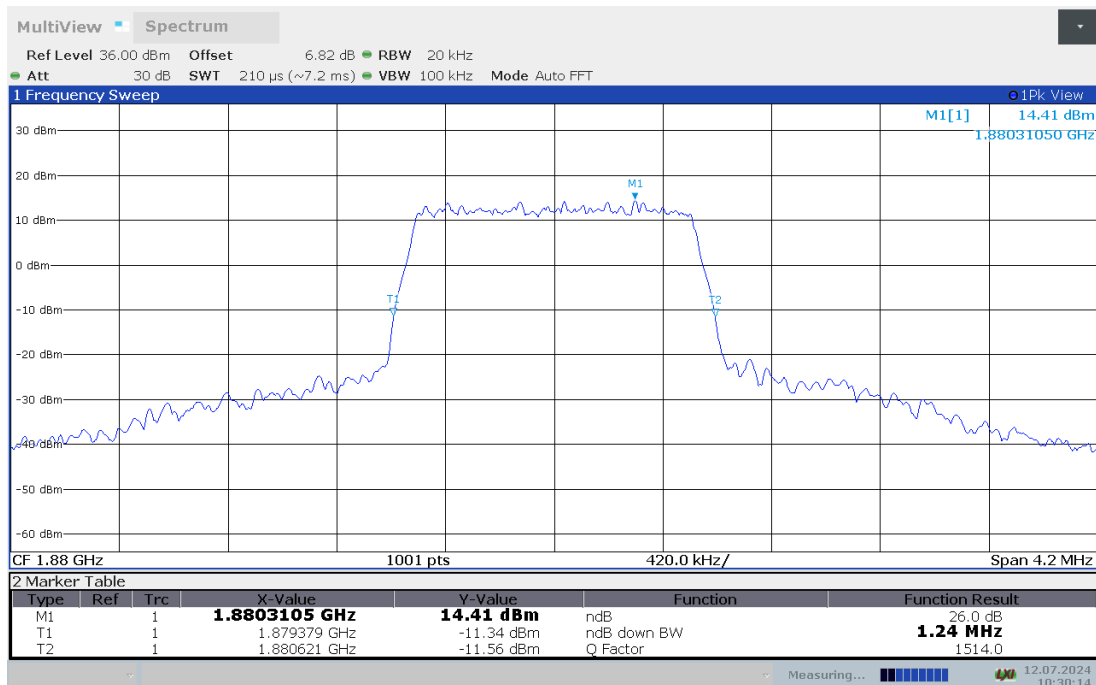| Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1850.7	1.238	1.242
1880	1.234	1.242
1909.3	1.242	1.234

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

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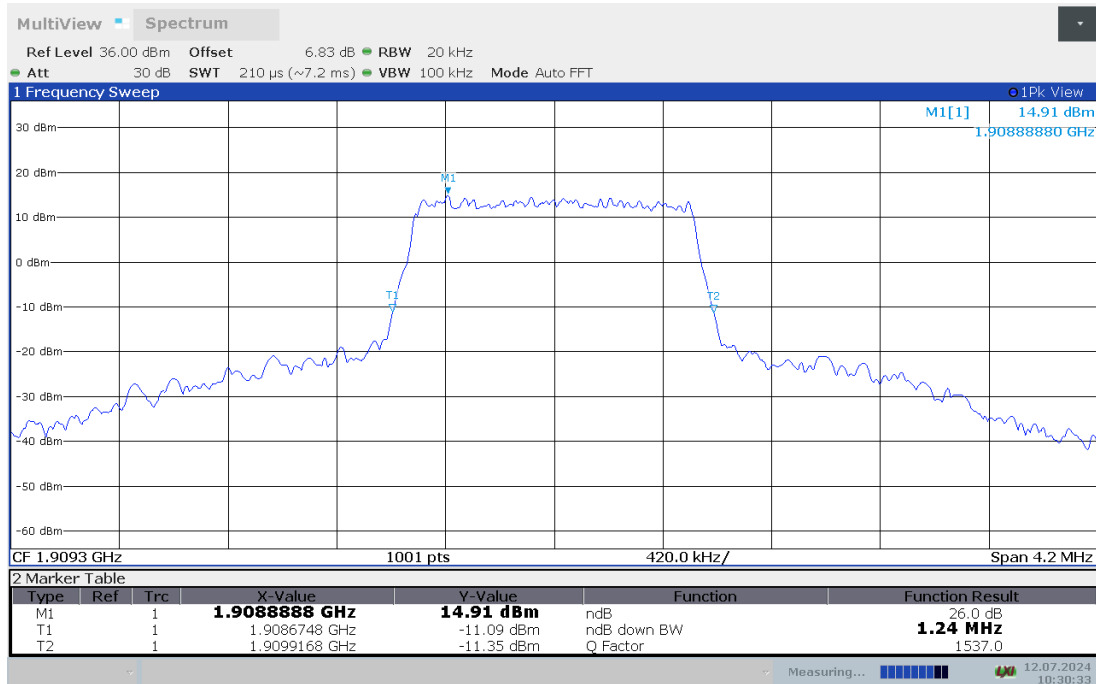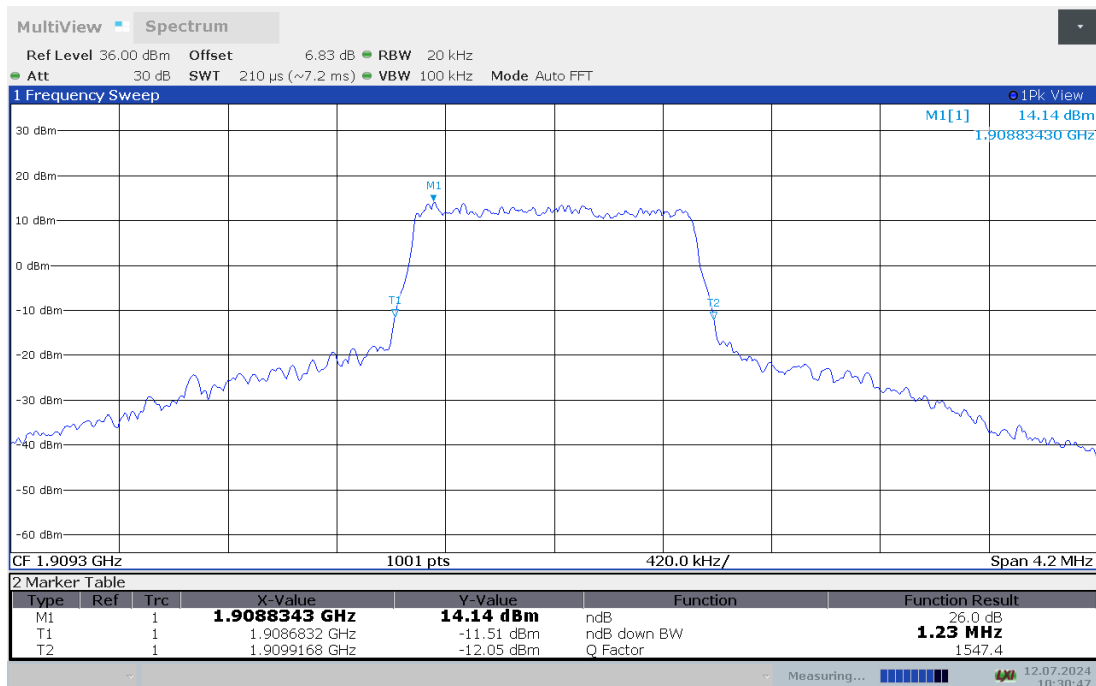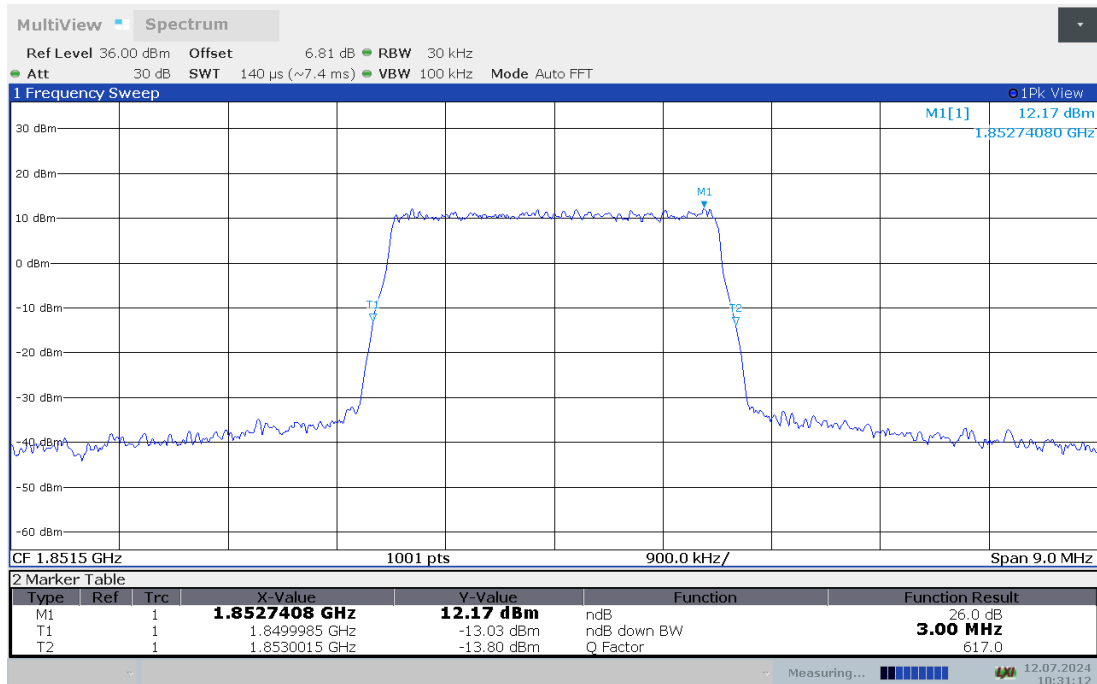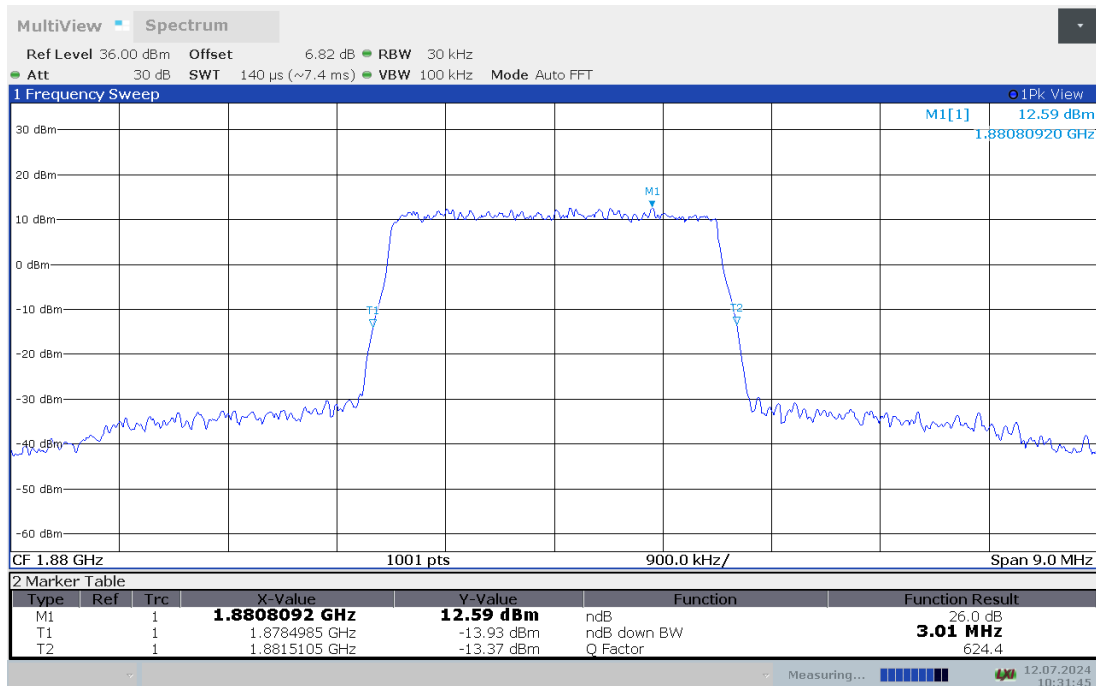
LTE band 2 , 1.4MHz Bandwidth,MID,QPSK (-26dBc BW)

MultiView	Spectrum			
Ref Level 36.00 dBm	Offset	6.82 dB	● RBW	20 kHz
● Att	30 dB	SWT	210 µs (~7.2 ms) ● VBW 100 kHz	Mode Auto FFT

1 Frequency Sweep ● 1Pk View

M1[1] 14.91 dBm
1.88036500 GHz

CF 1.88 GHz   1001 pts   420.0 kHz/   Span 4.2 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.880365 GHz**	**14.91 dBm**	ndB	26.0 dB
T1		1	1.8793832 GHz	-11.24 dBm	ndB down BW	**1.23 MHz**
T2		1	1.8806168 GHz	-11.14 dBm	Q Factor	1524.3

Measuring... 12.07.2024 10:30:00

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

MultiView	Spectrum			
Ref Level 36.00 dBm	Offset	6.82 dB	● RBW	20 kHz
● Att	30 dB	SWT	210 µs (~7.2 ms) ● VBW 100 kHz	Mode Auto FFT

1 Frequency Sweep ● 1Pk View

M1[1] 14.41 dBm
1.88031050 GHz

CF 1.88 GHz   1001 pts   420.0 kHz/   Span 4.2 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.8803105 GHz**	**14.41 dBm**	ndB	26.0 dB
T1		1	1.879379 GHz	-11.34 dBm	ndB down BW	**1.24 MHz**
T2		1	1.880621 GHz	-11.56 dBm	Q Factor	1514.0

Measuring... 12.07.2024 10:30:14

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

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

LTE band 2,3MHz(-26dBc)

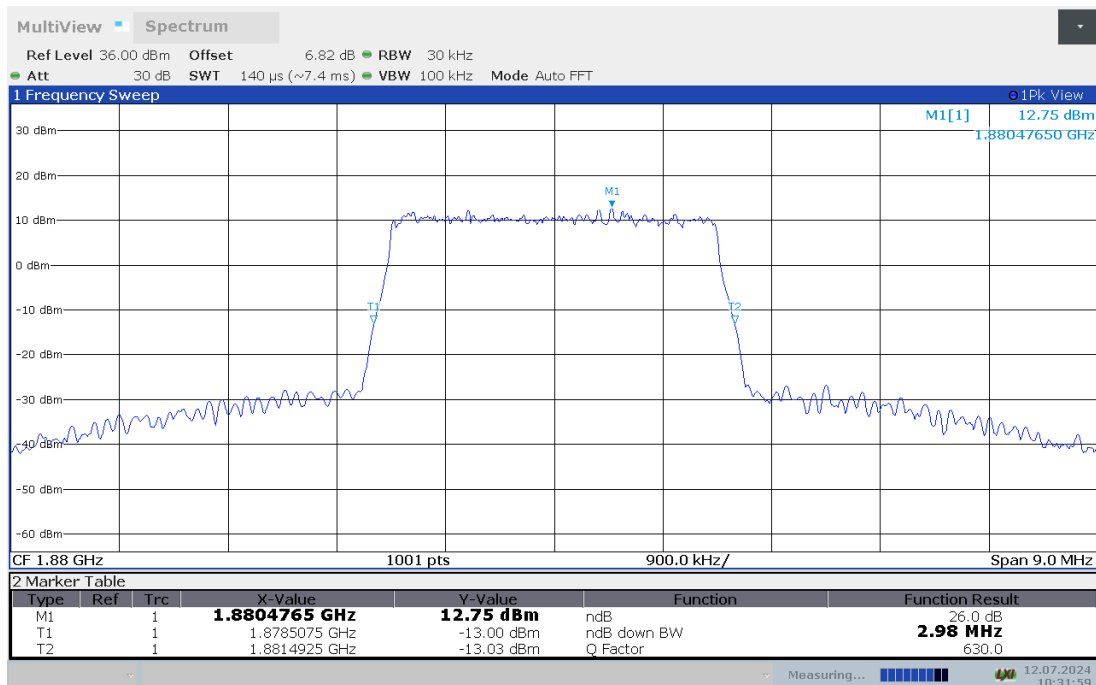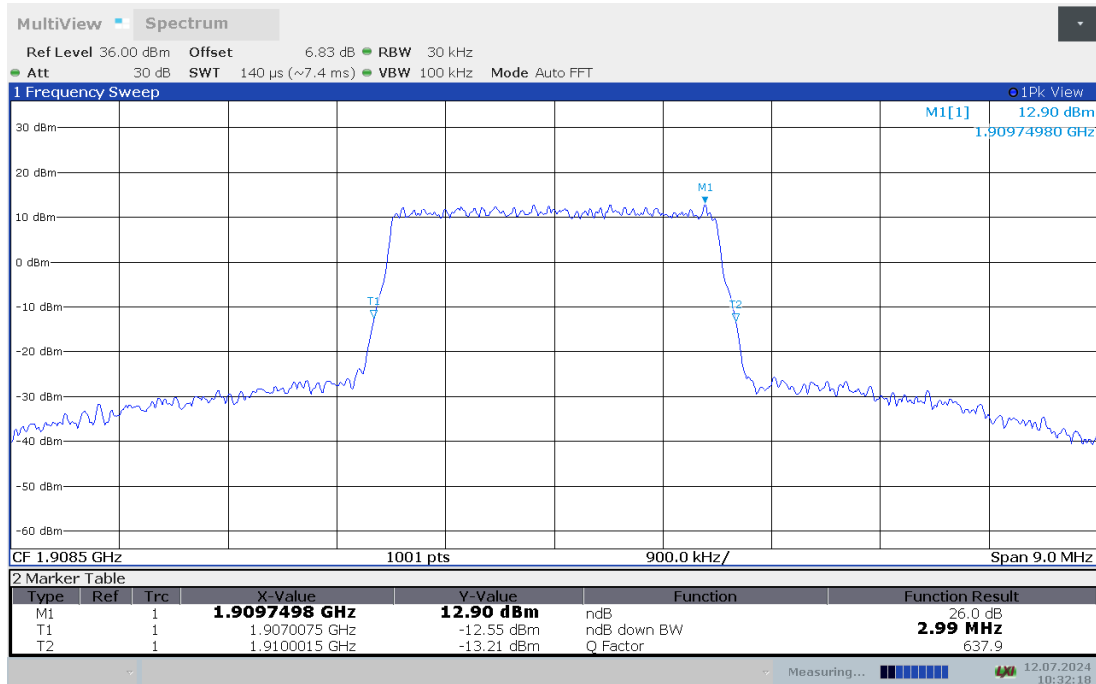| Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1851.5	3.003	3.012
1880	3.012	2.985
1908.5	2.994	2.994

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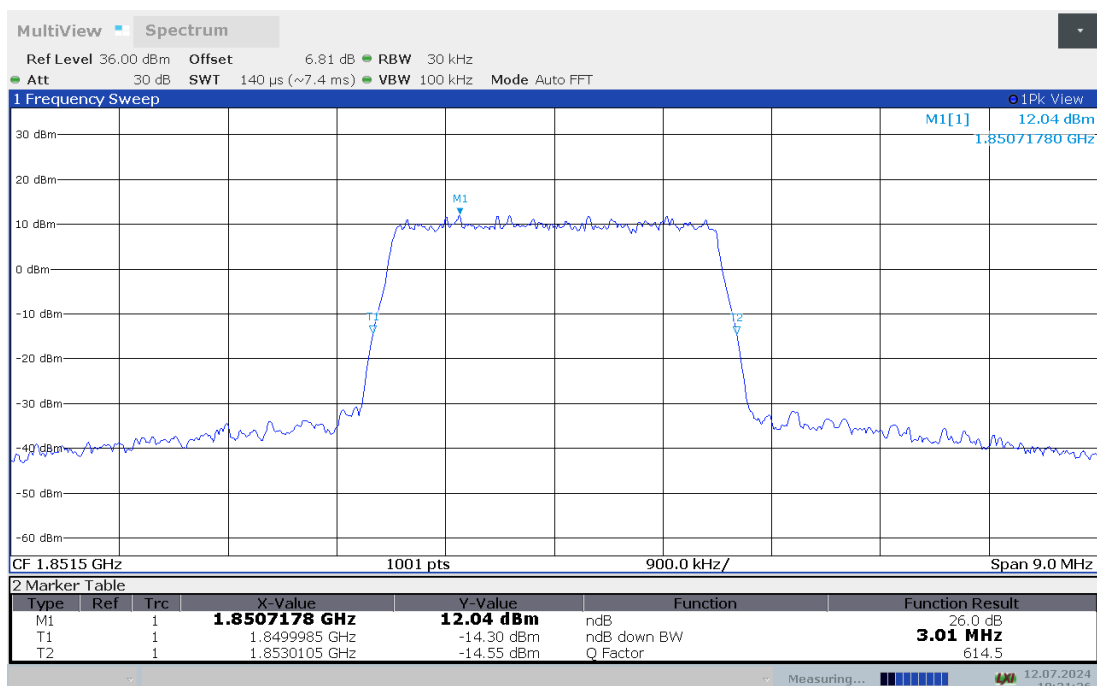
LTE band 2 , 3MHz Bandwidth,LOW,16QAM (-26dBc BW)
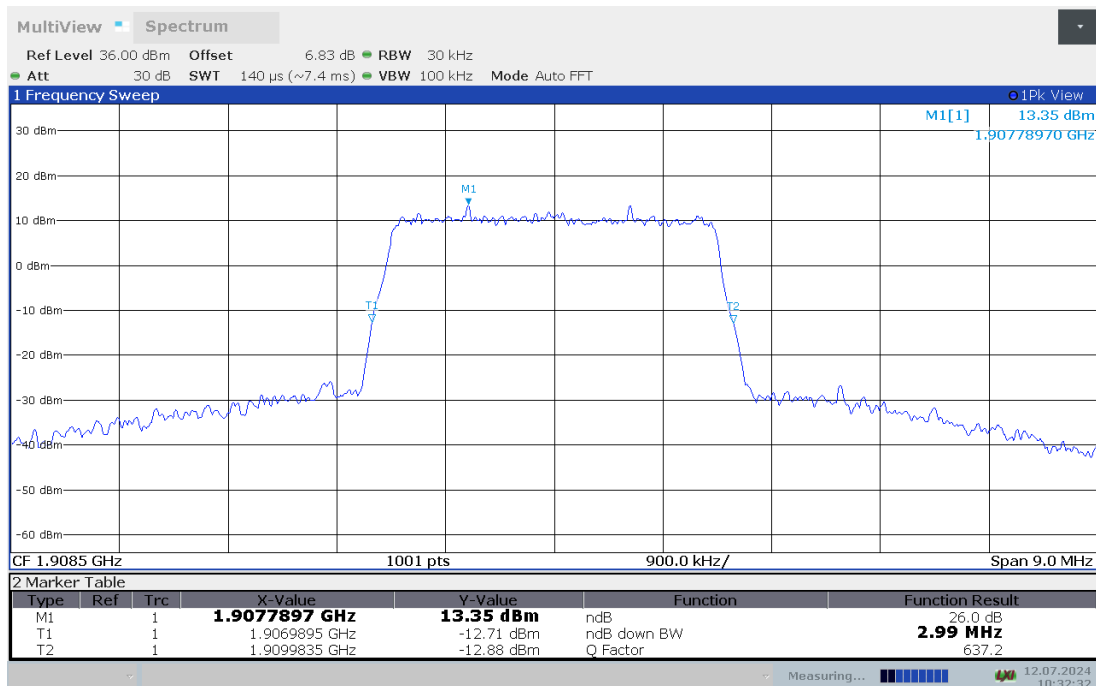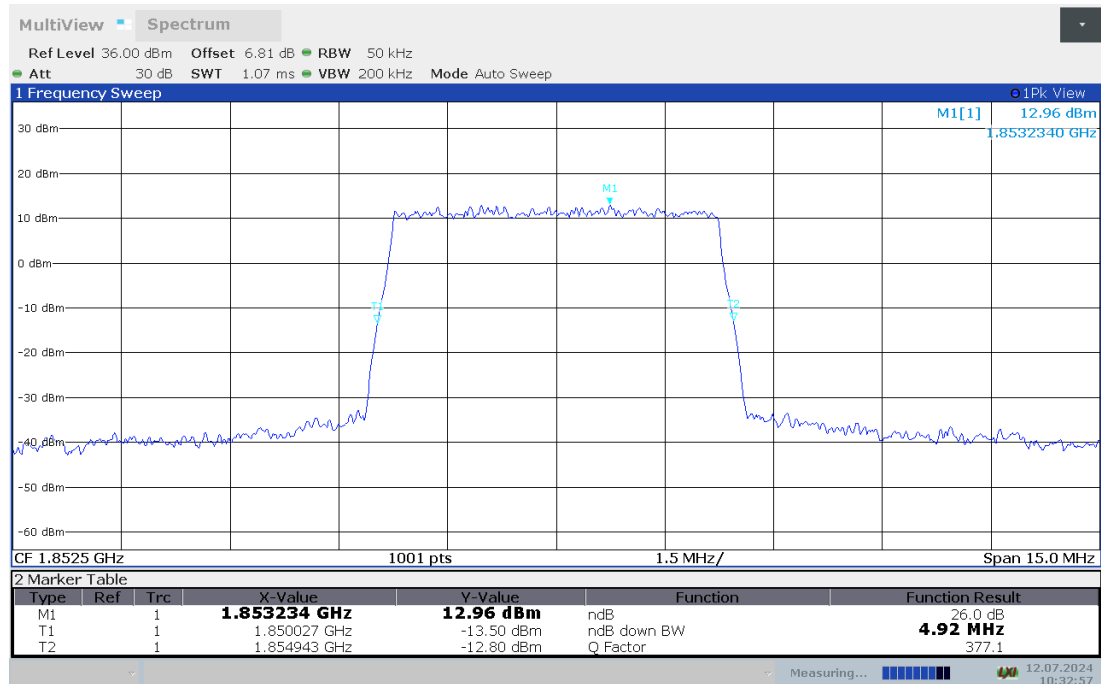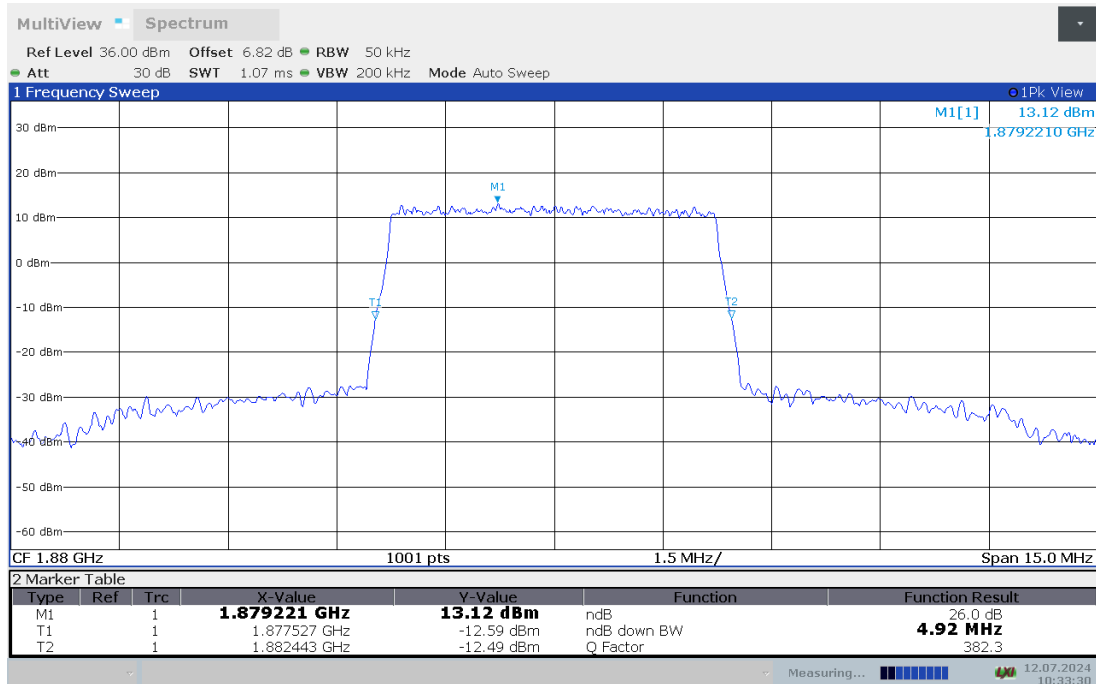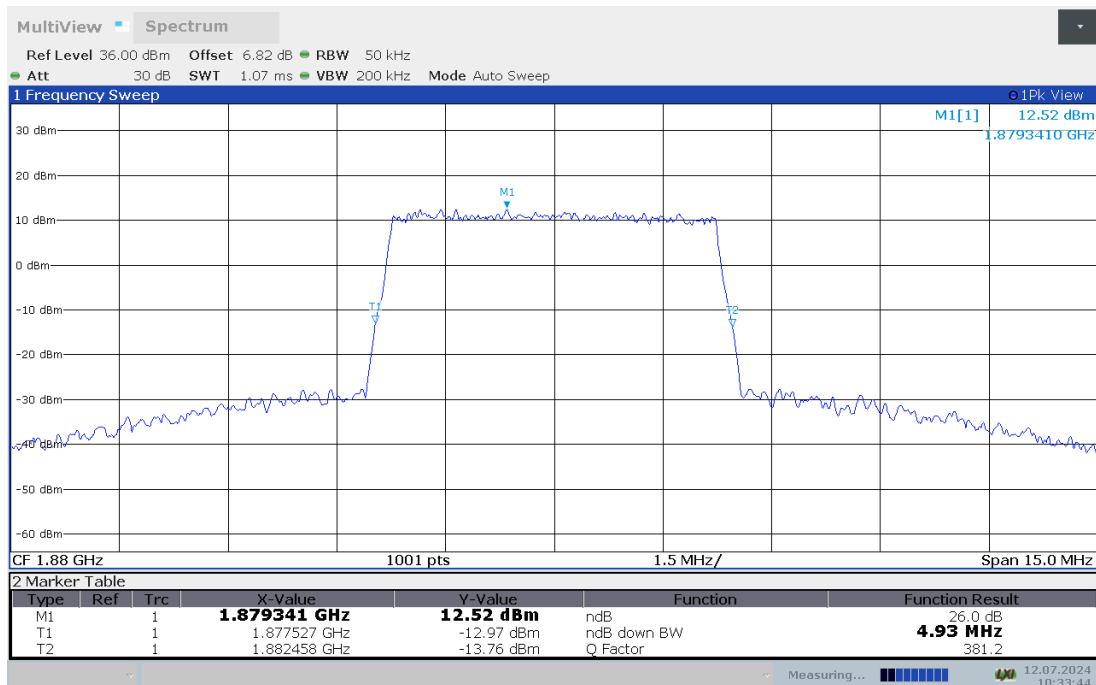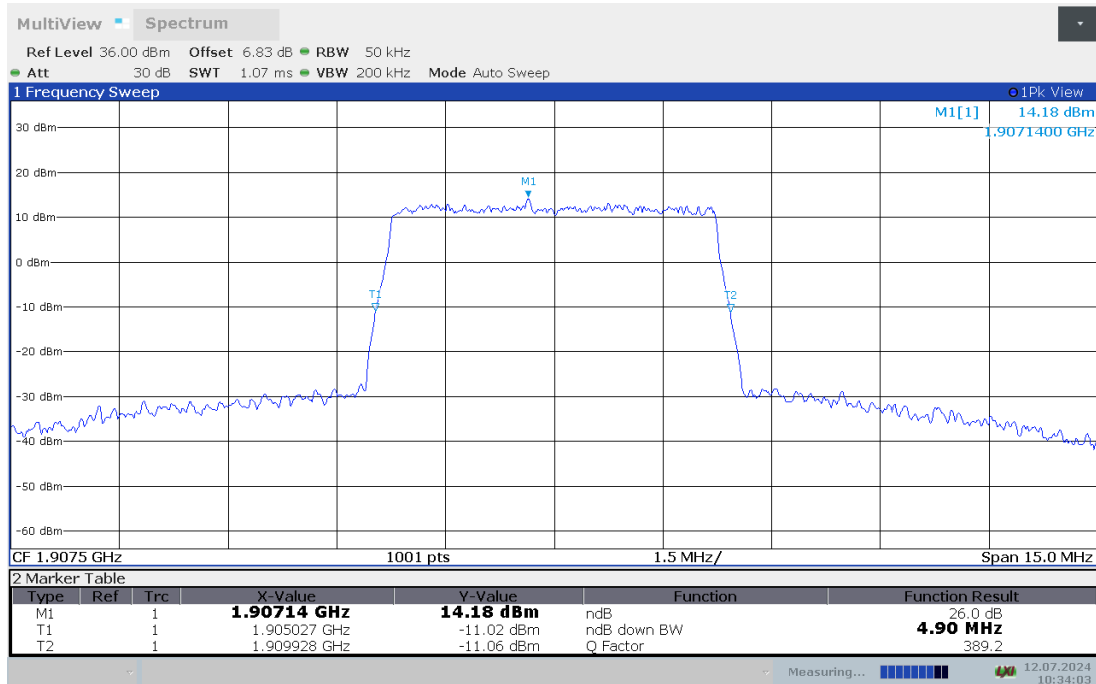
LTE band 2 , 3MHz Bandwidth,MID,QPSK (-26dBc BW)

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

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

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

LTE band 2,5MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1852.5	4.915	4.885
1880	4.915	4.930
1907.5	4.900	4.930

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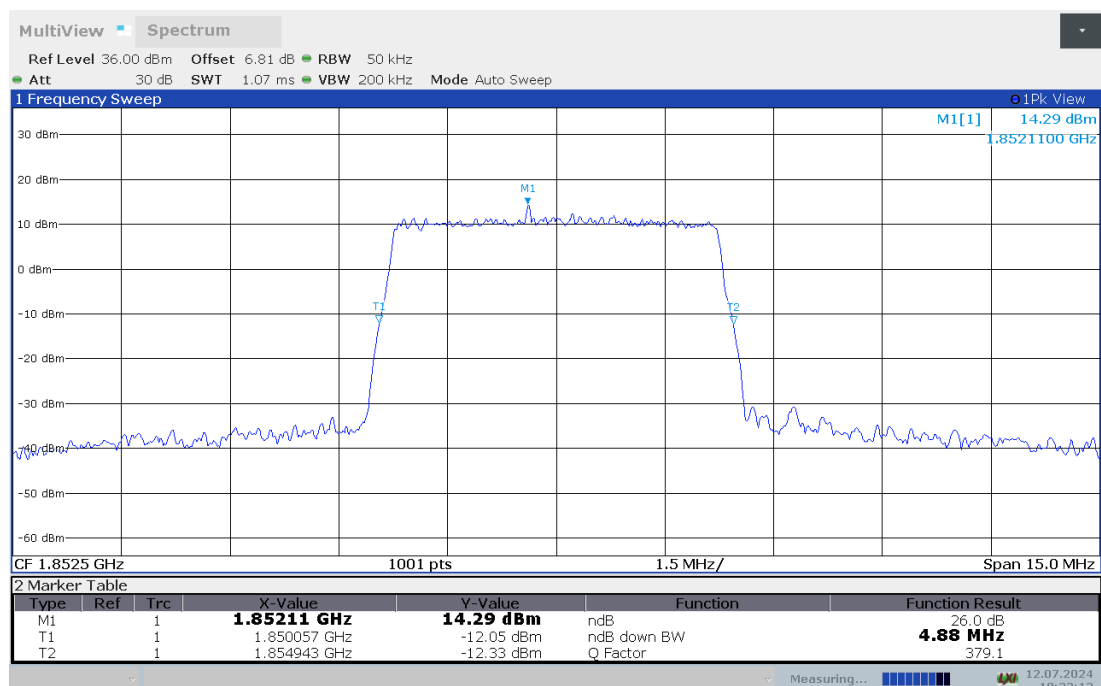
LTE band 2 , 5MHz Bandwidth,LOW,16QAM (-26dBc BW)
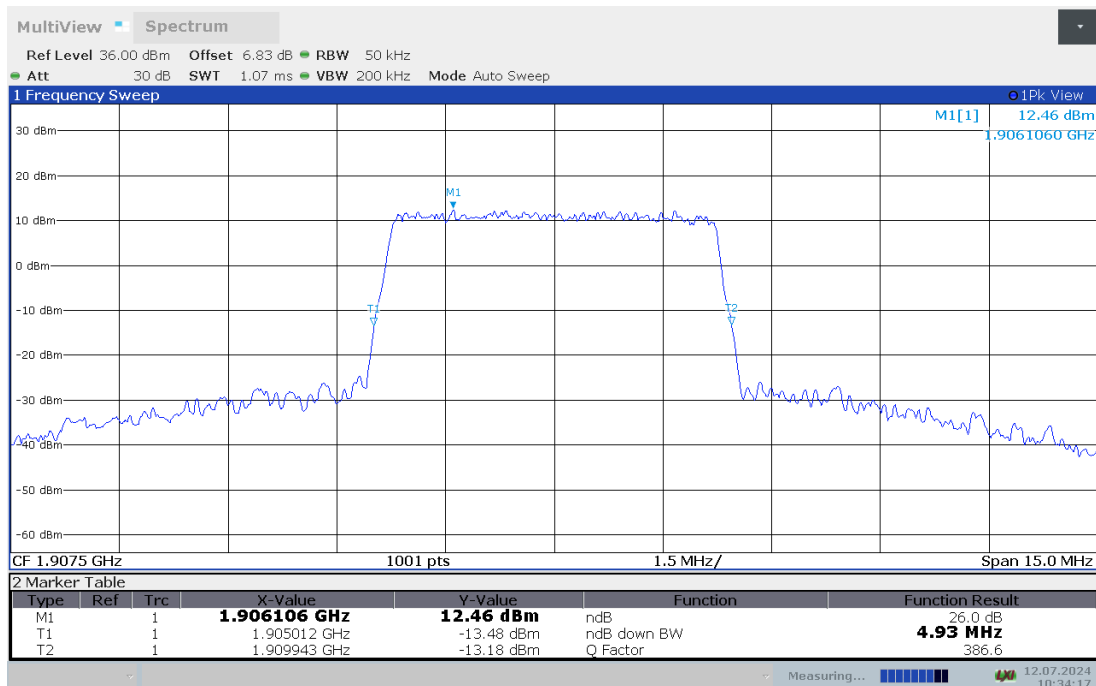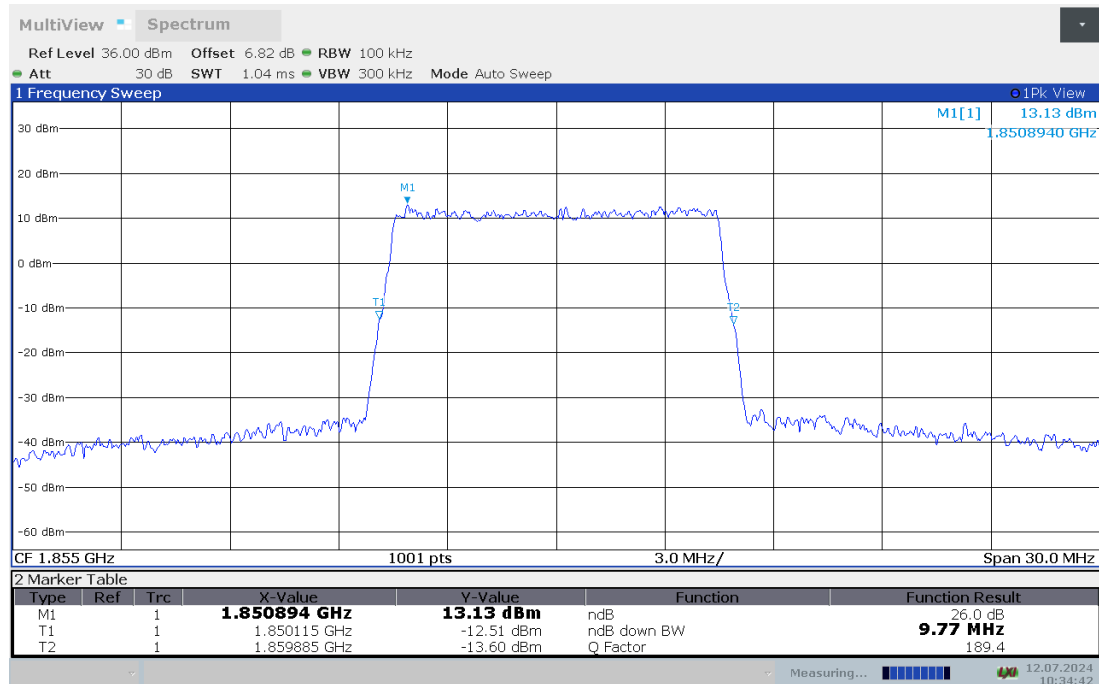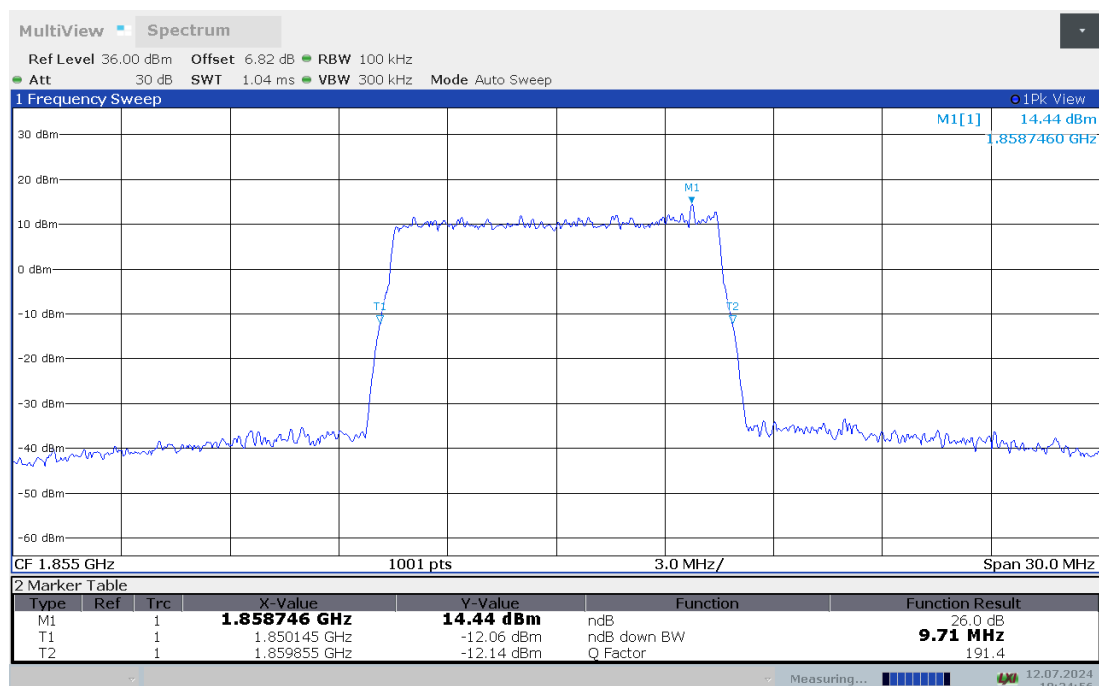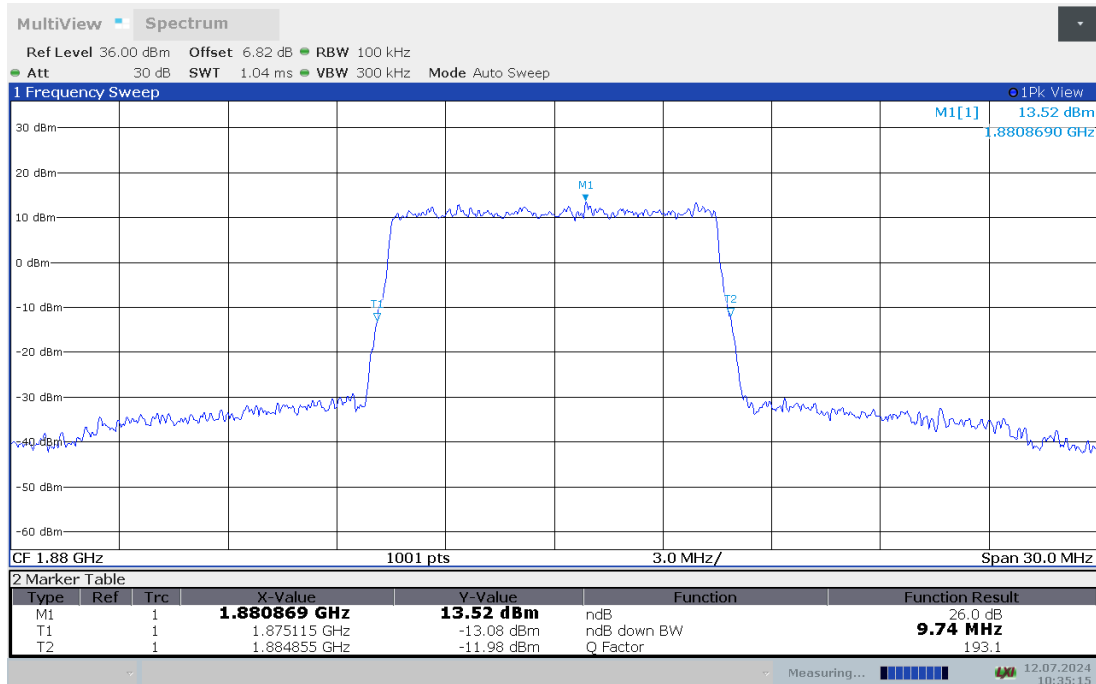
LTE band 2 , 5MHz Bandwidth,MID,QPSK (-26dBc BW)

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.879221 GHz**	**13.12 dBm**	ndB	26.0 dB
T1		1	1.877527 GHz	-12.59 dBm	ndB down BW	**4.92 MHz**
T2		1	1.882443 GHz	-12.49 dBm	Q Factor	382.3

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

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.879341 GHz**	**12.52 dBm**	ndB	26.0 dB
T1		1	1.877527 GHz	-12.97 dBm	ndB down BW	**4.93 MHz**
T2		1	1.882458 GHz	-13.76 dBm	Q Factor	381.2

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

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

LTE band 2,10MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1855	9.770	9.710
1880	9.740	9.710
1905	9.710	9.800

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

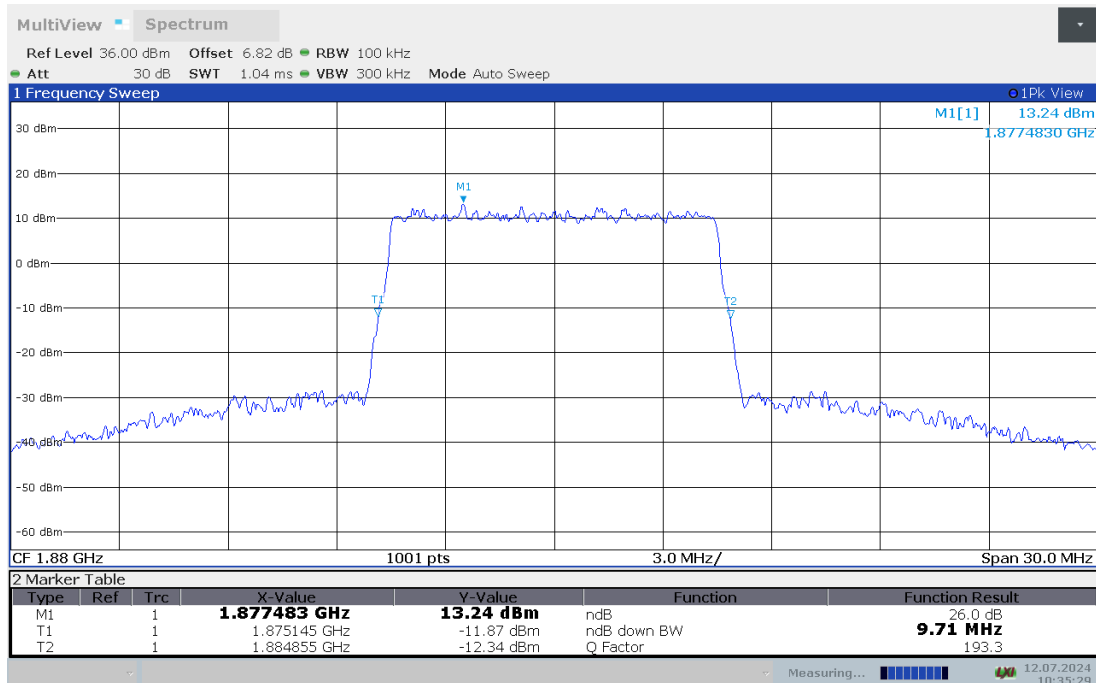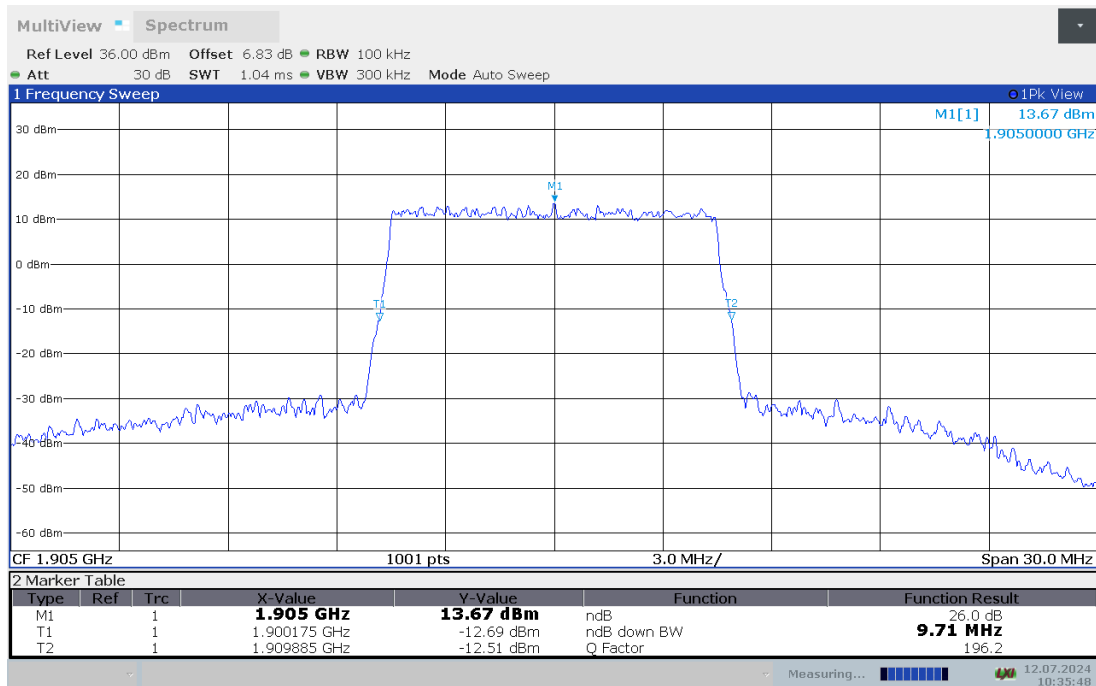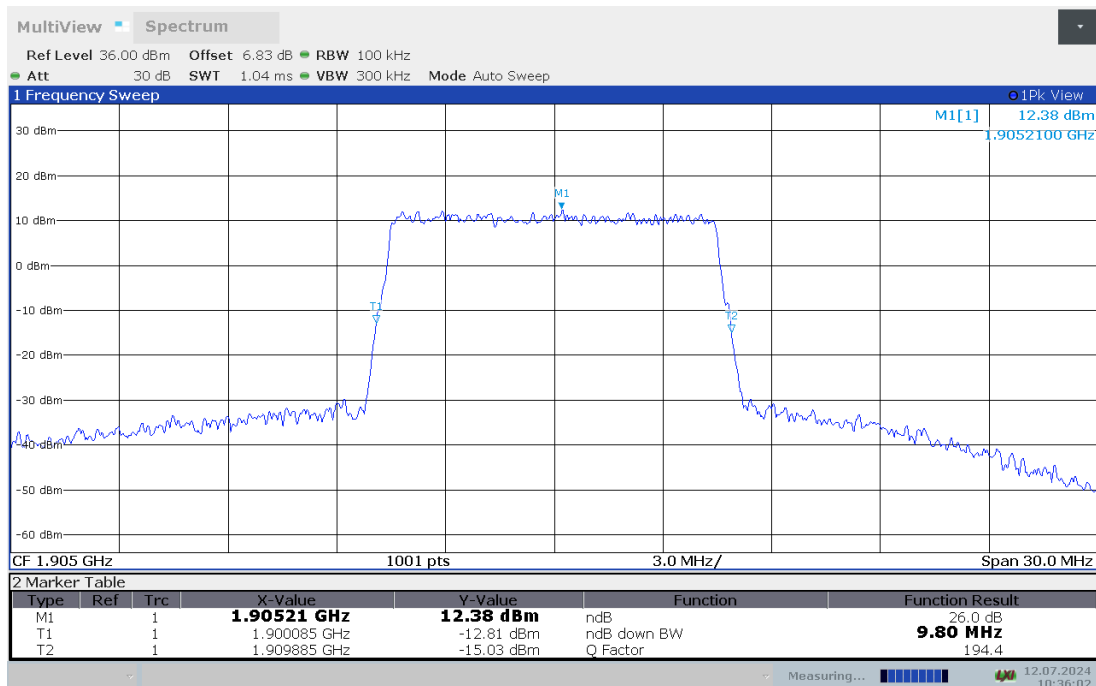### LTE band 2 , 10MHz Bandwidth,LOW,16QAM (-26dBc BW)

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

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

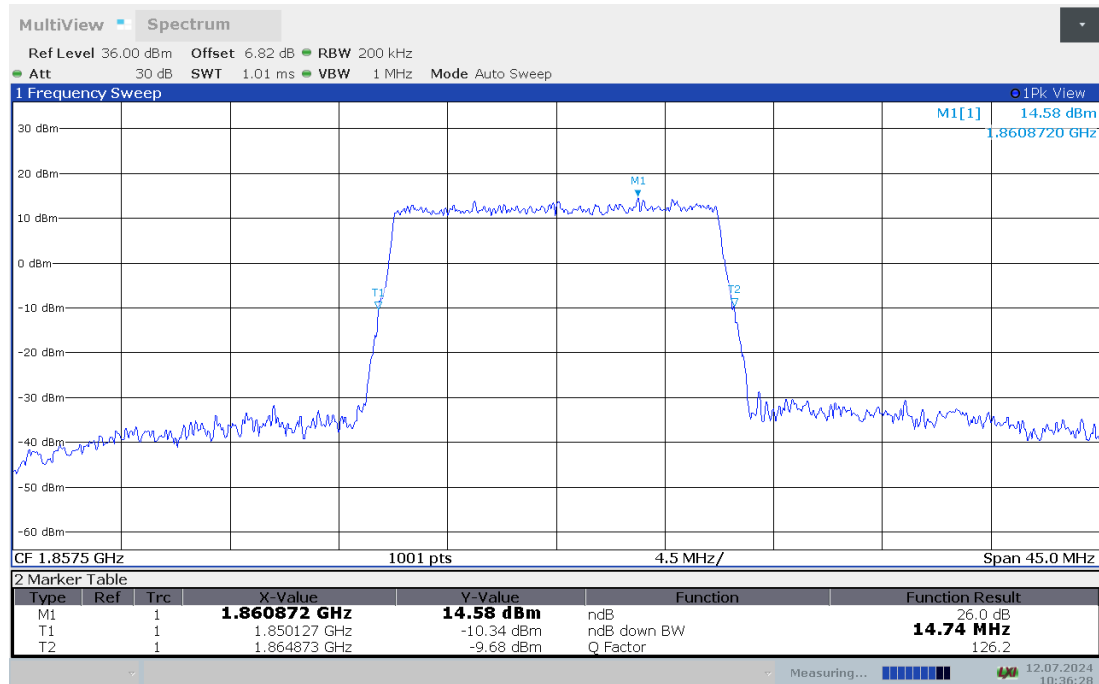## LTE band 2 , 10MHz Bandwidth,HIGH,QPSK (-26dBc BW)

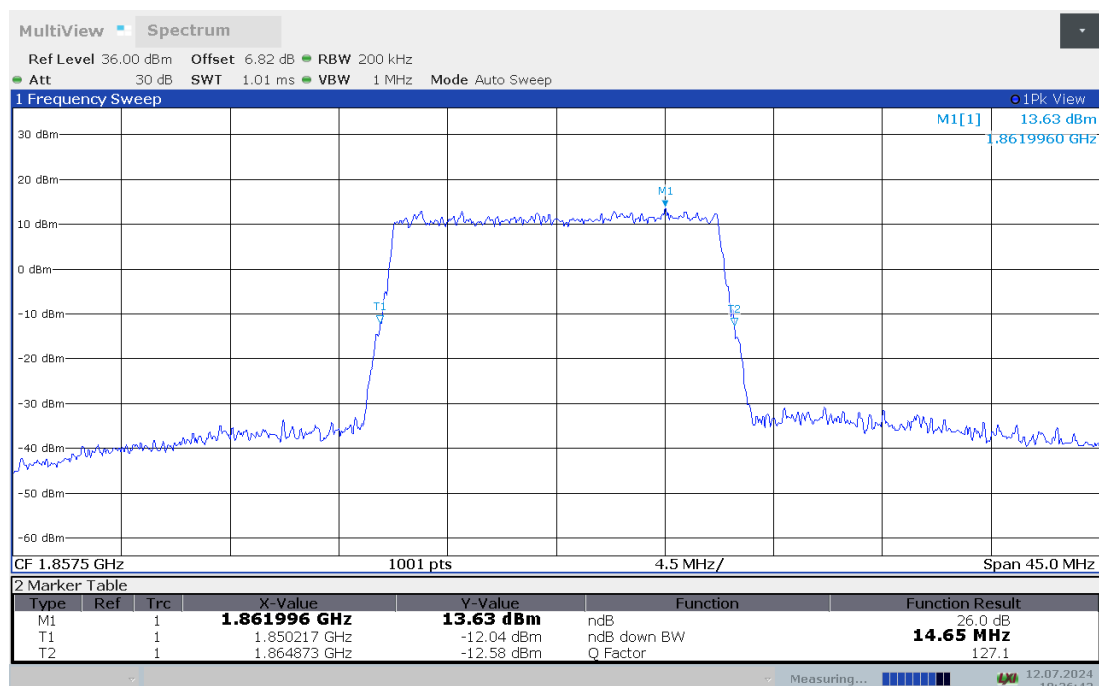## LTE band 2 , 10MHz Bandwidth,HIGH,16QAM (-26dBc BW)

LTE band 2,15MHz(-26dBc)

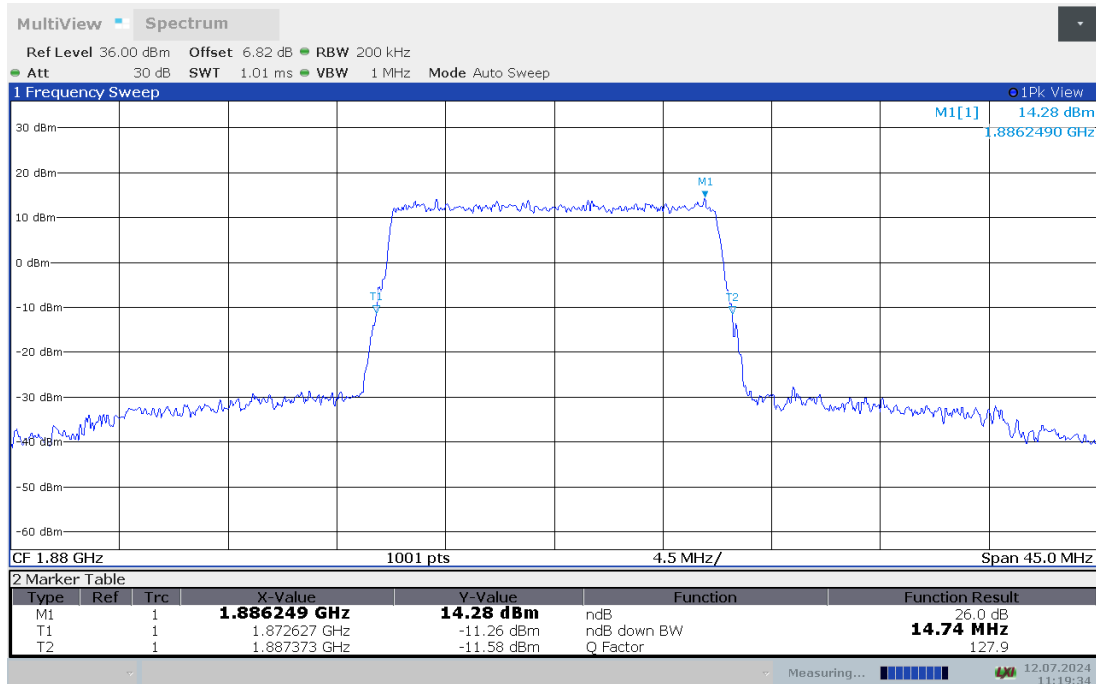| Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1857.5	14.745	14.655
1880	14.745	14.700
1902.5	14.700	14.610

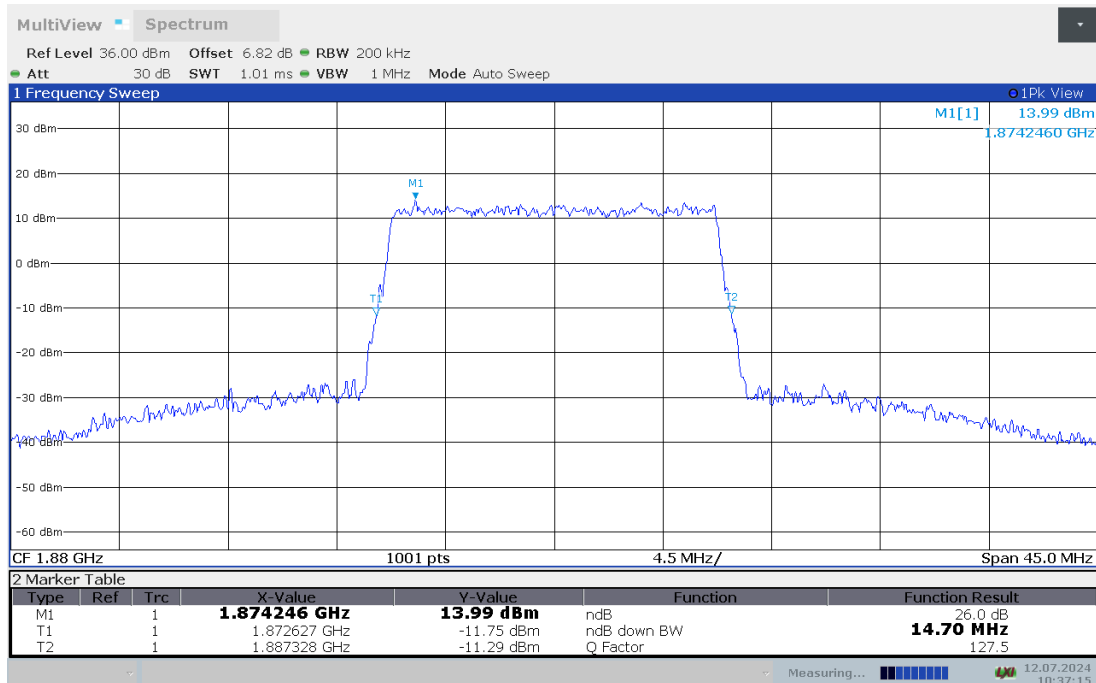### LTE band 2 , 15MHz Bandwidth,LOW,QPSK (-26dBc BW)

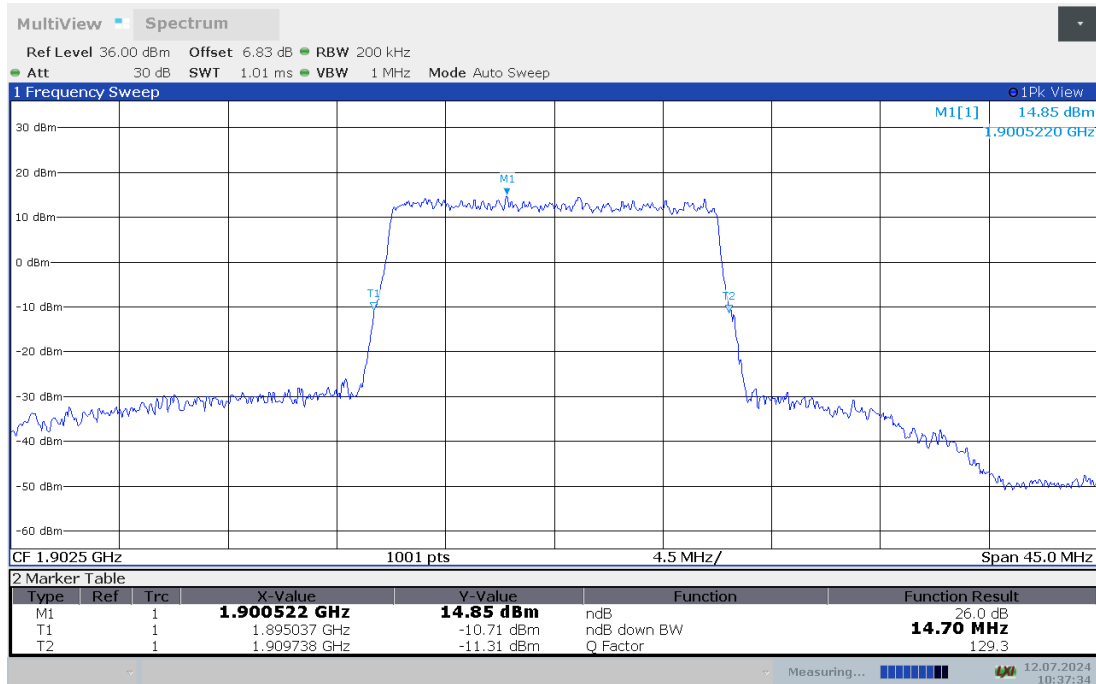
LTE band 2 , 15MHz Bandwidth,LOW,16QAM (-26dBc BW)

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

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

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

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

LTE band 2,20MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1860	19.181	19.181
1880	19.361	19.540
1900	19.361	19.421

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

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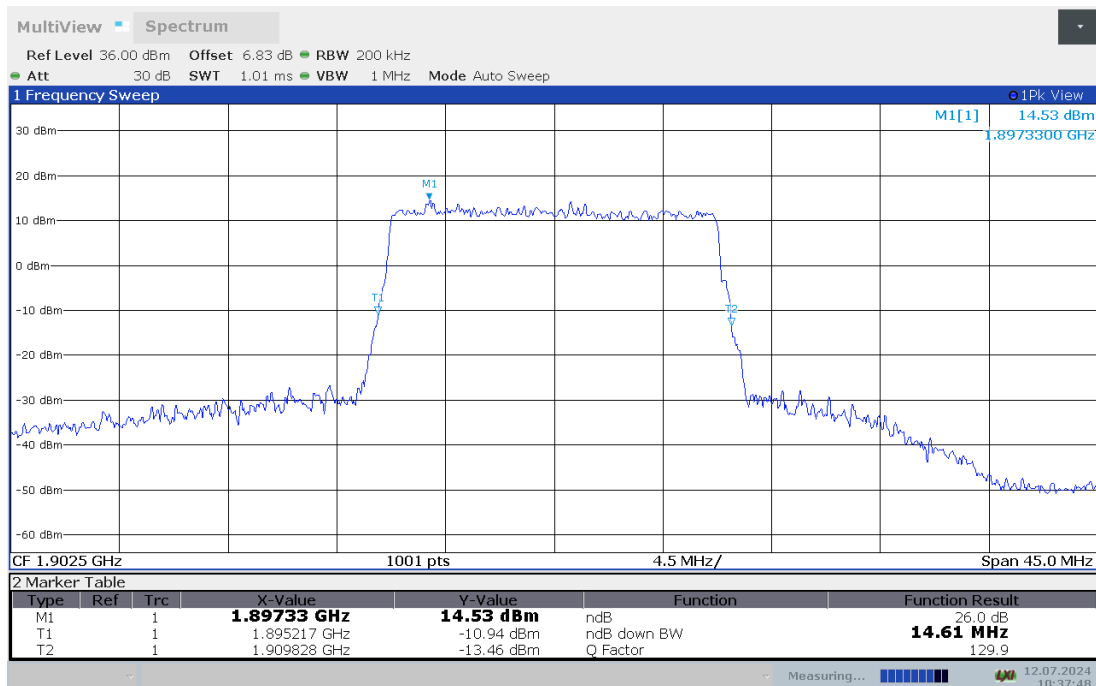
LTE band 2 , 20MHz Bandwidth,MID,QPSK (-26dBc BW)

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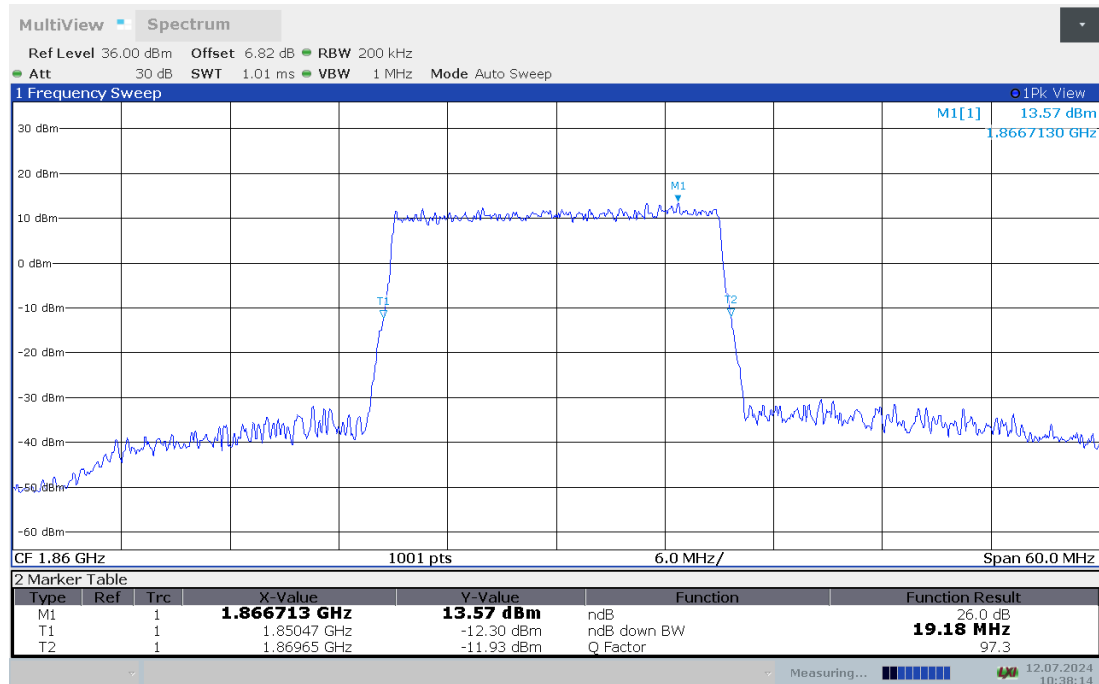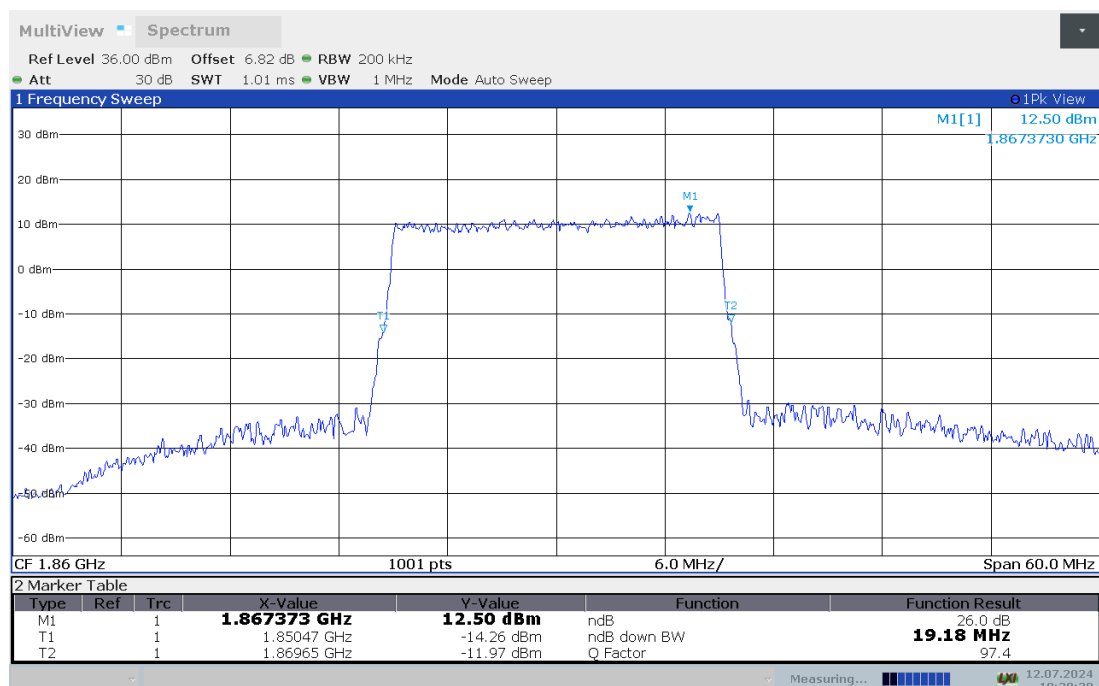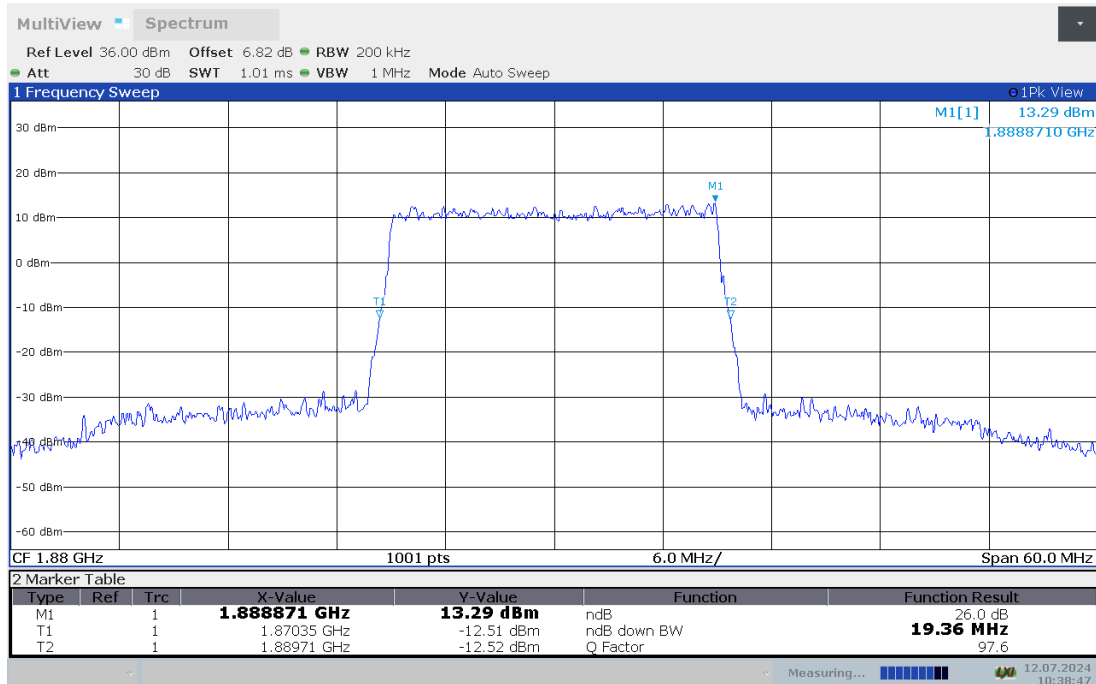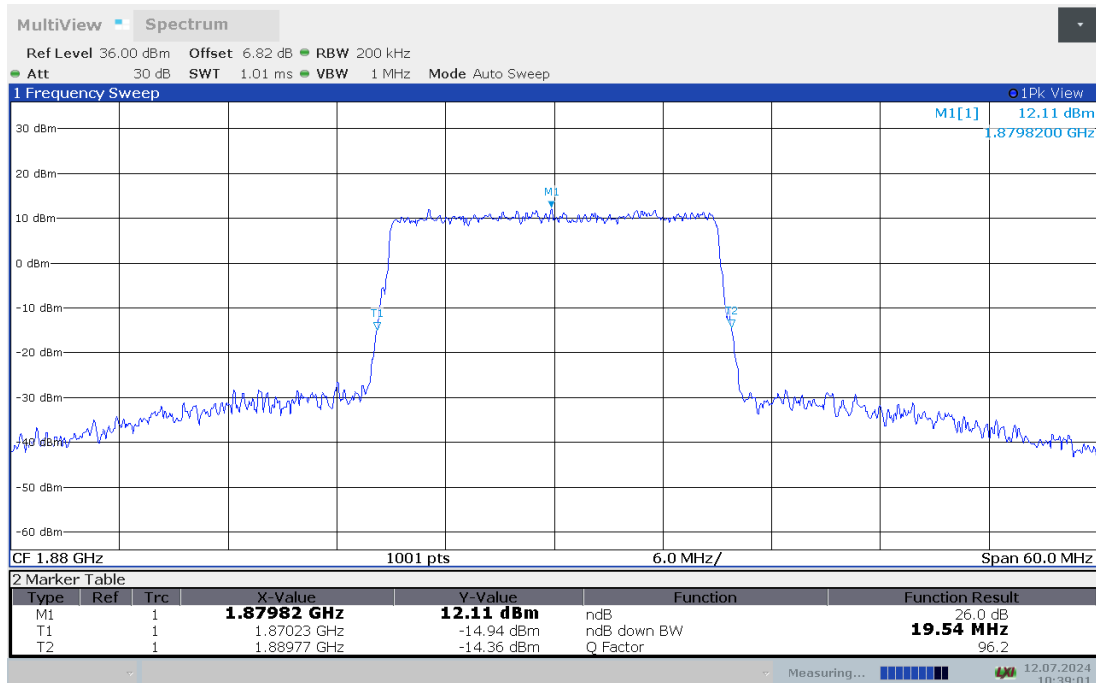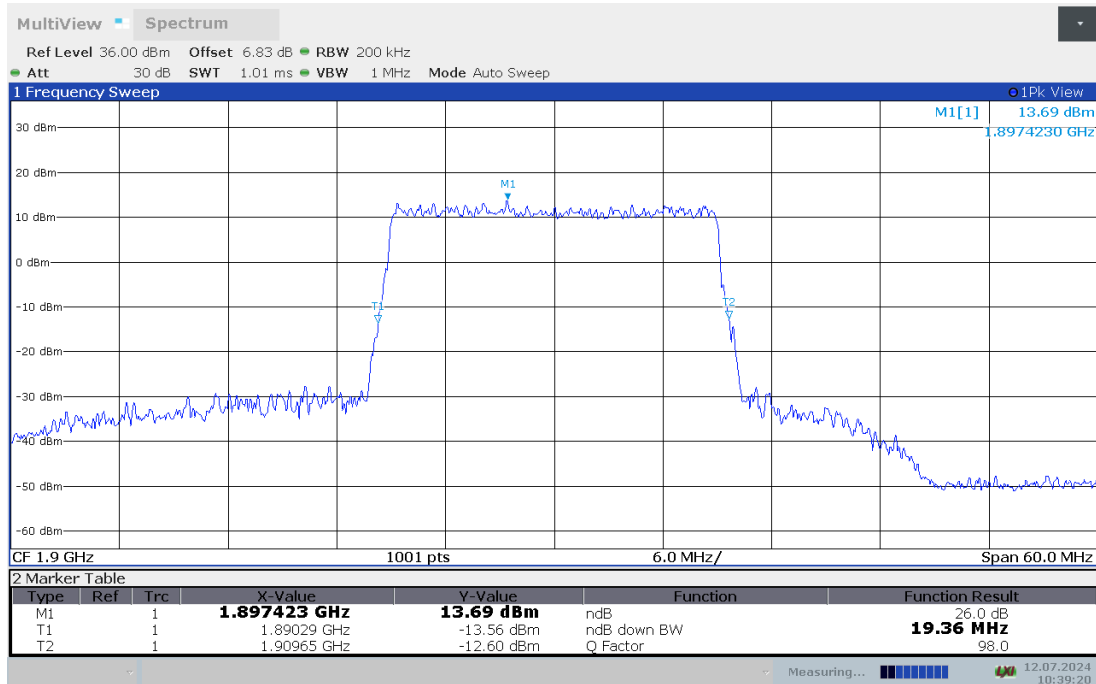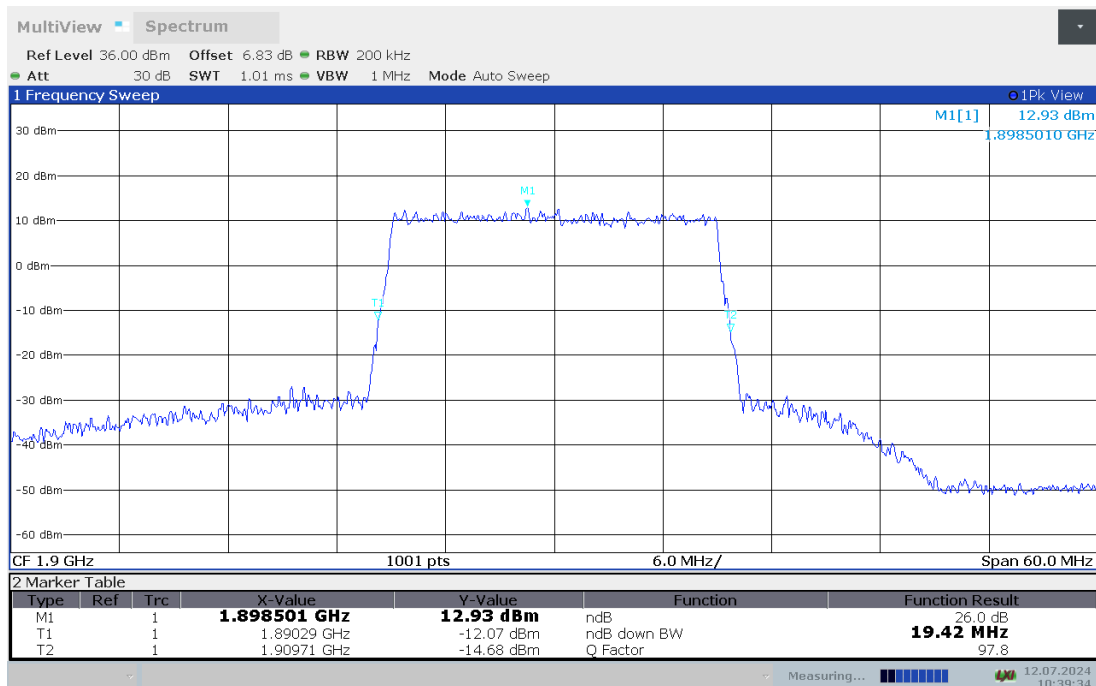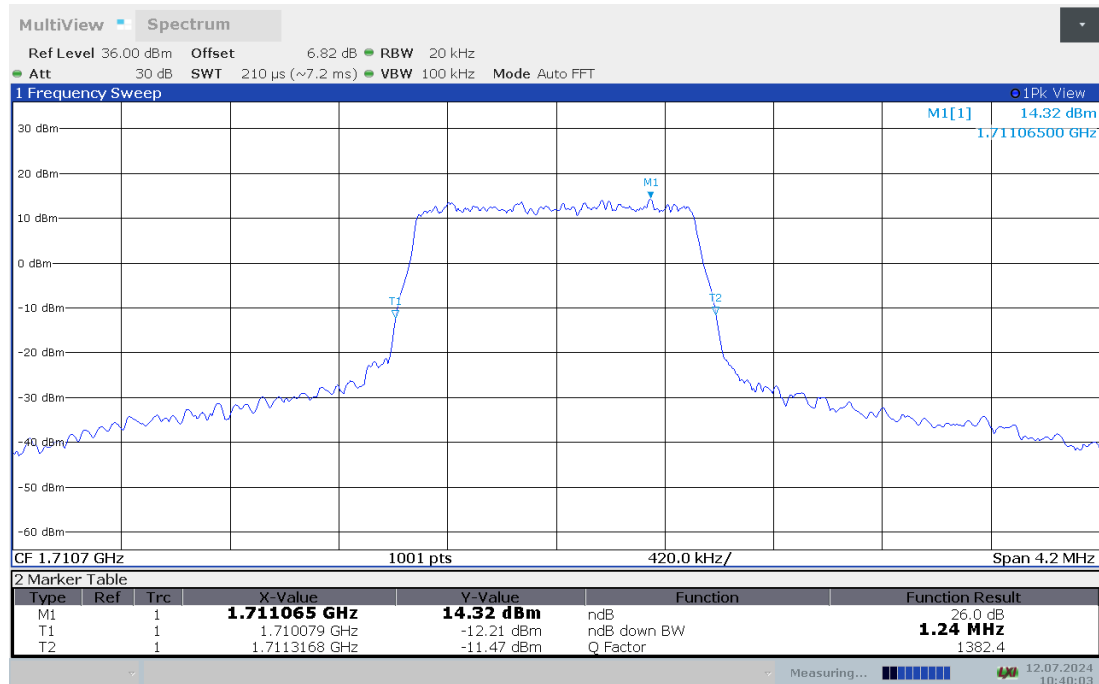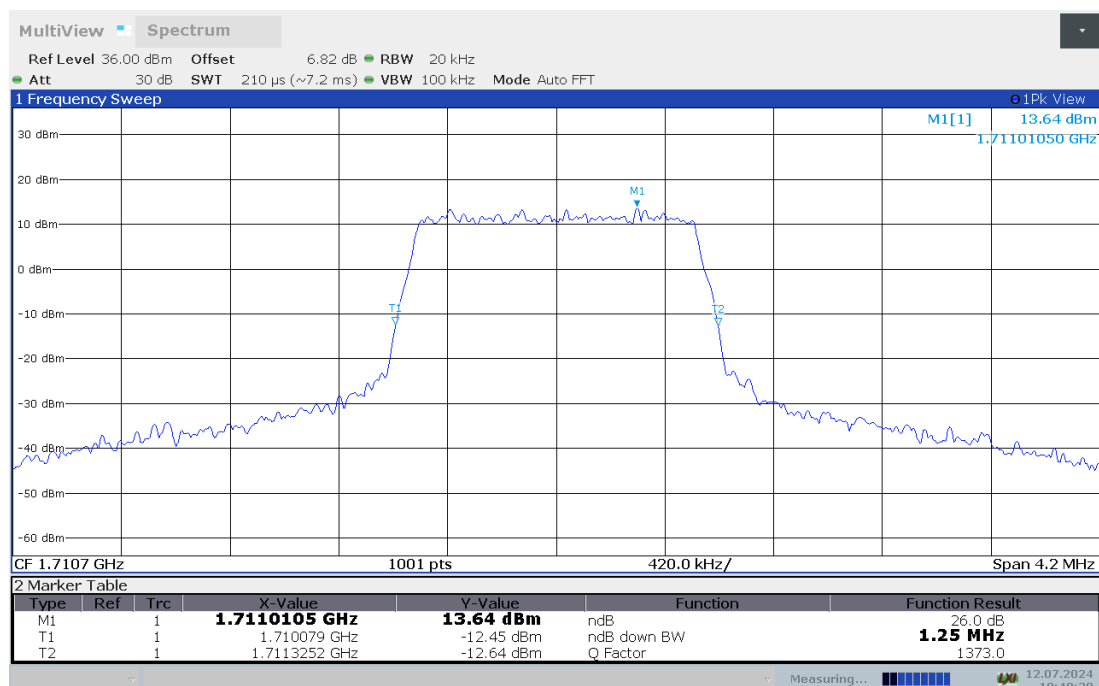
LTE band 2 , 20MHz Bandwidth,HIGH,QPSK (-26dBc BW)

MultiView ▪ Spectrum

Ref Level 36.00 dBm   Offset 6.83 dB ● RBW 200 kHz
● Att   30 dB   SWT 1.01 ms ● VBW 1 MHz   Mode Auto Sweep

1 Frequency Sweep   ●1Pk View
                                                              M1[1]   13.69 dBm
                                                                    1.8974230 GHz

CF 1.9 GHz   1001 pts   6.0 MHz/   Span 60.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.897423 GHz**	**13.69 dBm**	ndB	26.0 dB
T1		1	1.89029 GHz	-13.56 dBm	ndB down BW	**19.36 MHz**
T2		1	1.90965 GHz	-12.60 dBm	Q Factor	98.0

Measuring… ▮▮▮▮▮▮▮▮ 12.07.2024 10:39:20

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

MultiView ▪ Spectrum

Ref Level 36.00 dBm   Offset 6.83 dB ● RBW 200 kHz
● Att   30 dB   SWT 1.01 ms ● VBW 1 MHz   Mode Auto Sweep

1 Frequency Sweep   ●1Pk View
                                                              M1[1]   12.93 dBm
                                                                    1.8985010 GHz

CF 1.9 GHz   1001 pts   6.0 MHz/   Span 60.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.898501 GHz**	**12.93 dBm**	ndB	26.0 dB
T1		1	1.89029 GHz	-12.07 dBm	ndB down BW	**19.42 MHz**
T2		1	1.90971 GHz	-14.68 dBm	Q Factor	97.8

Measuring… ▮▮▮▮▮▮▮▮ 12.07.2024 10:39:34

LTE band 4,1.4MHz(-26dBc)

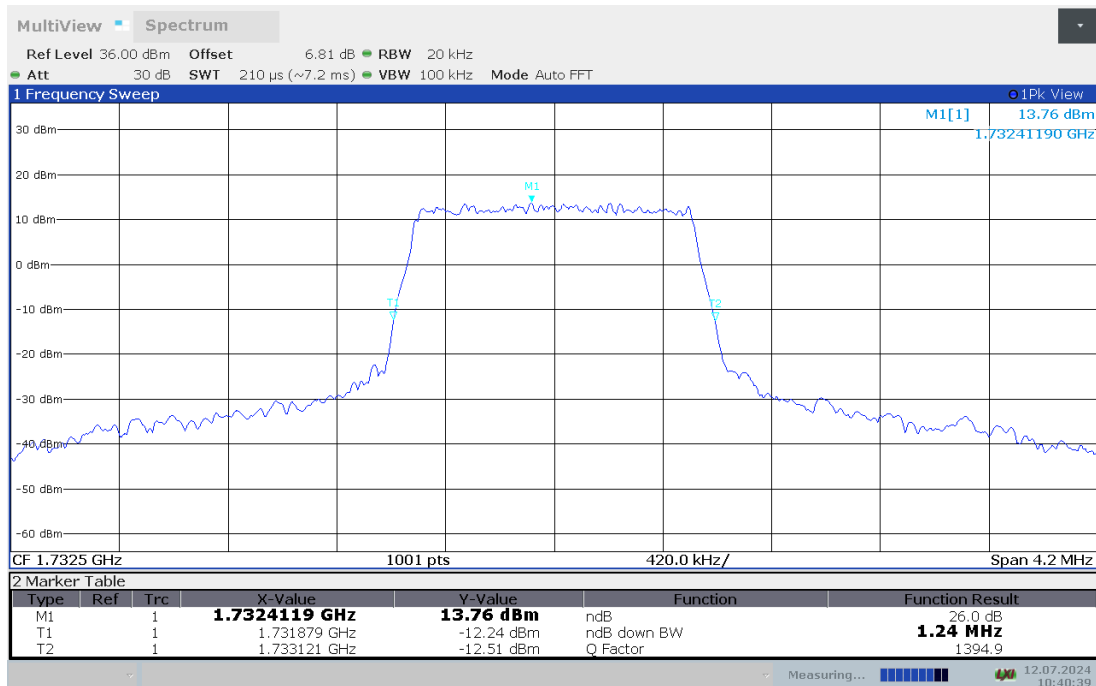| Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1710.7	1.238	1.246
1732.5	1.242	1.234
1754.3	1.242	1.242

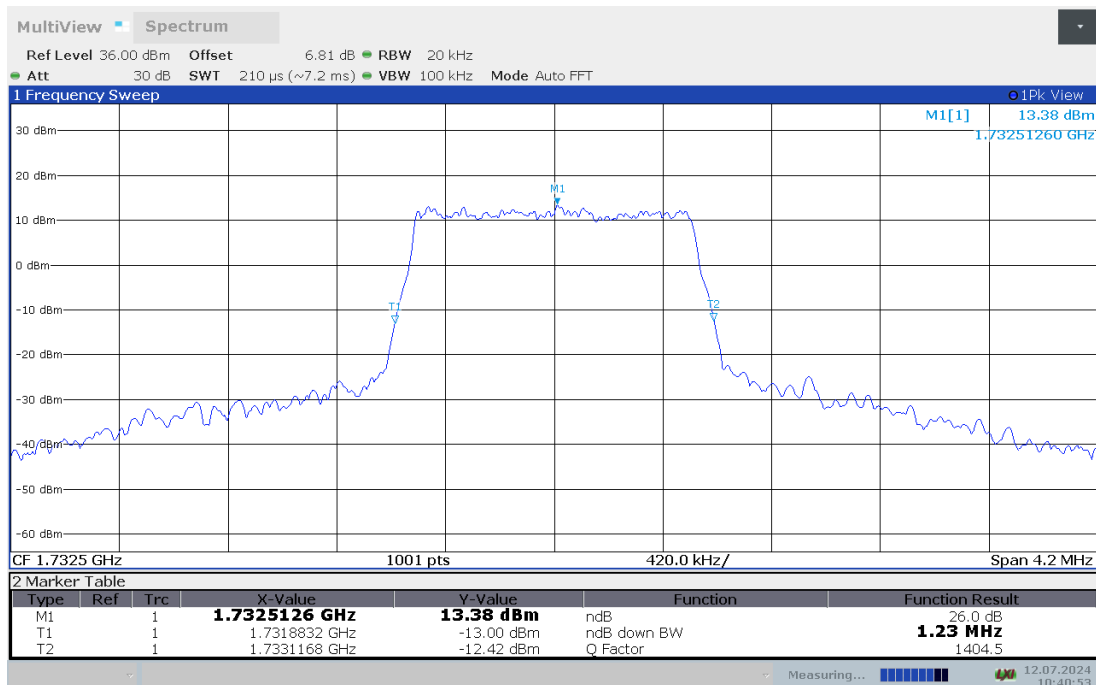### LTE band 4 , 1.4MHz Bandwidth,LOW,QPSK (-26dBc BW)

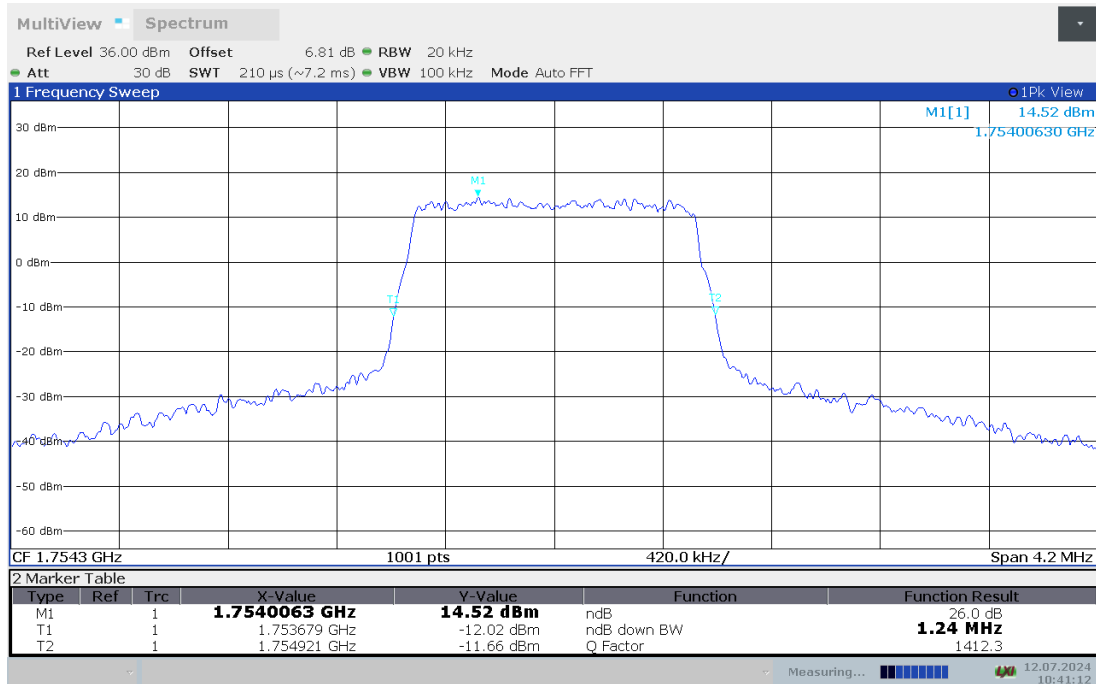
LTE band 4 , 1.4MHz Bandwidth,LOW,16QAM (-26dBc BW)
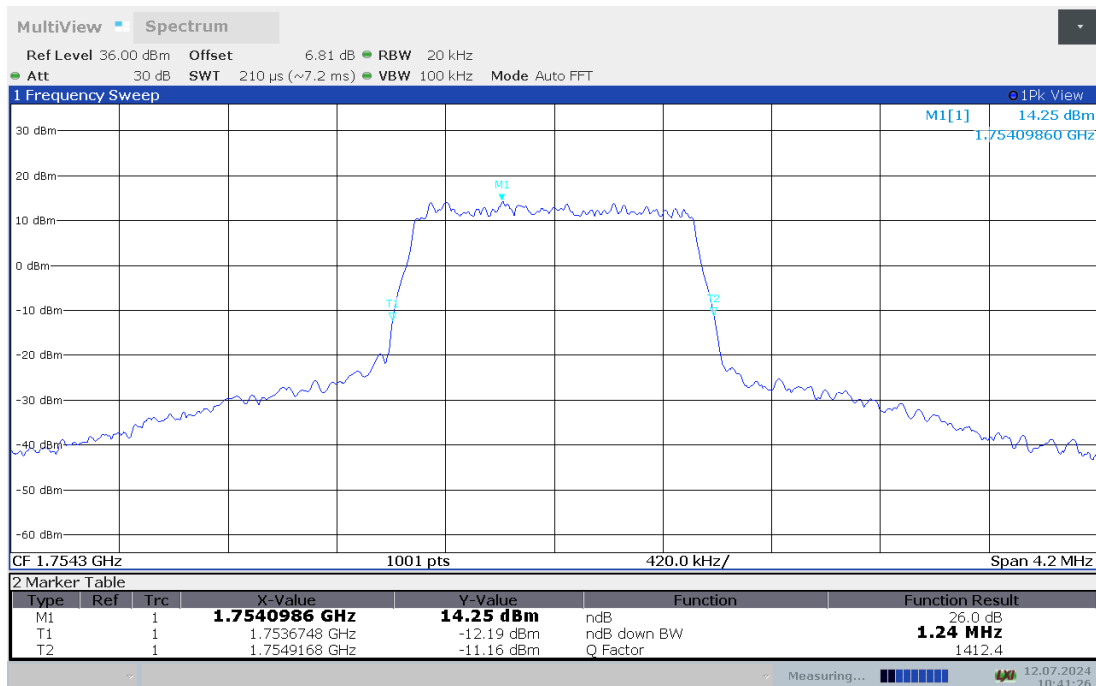
LTE band 4 , 1.4MHz Bandwidth,MID,QPSK (-26dBc BW)

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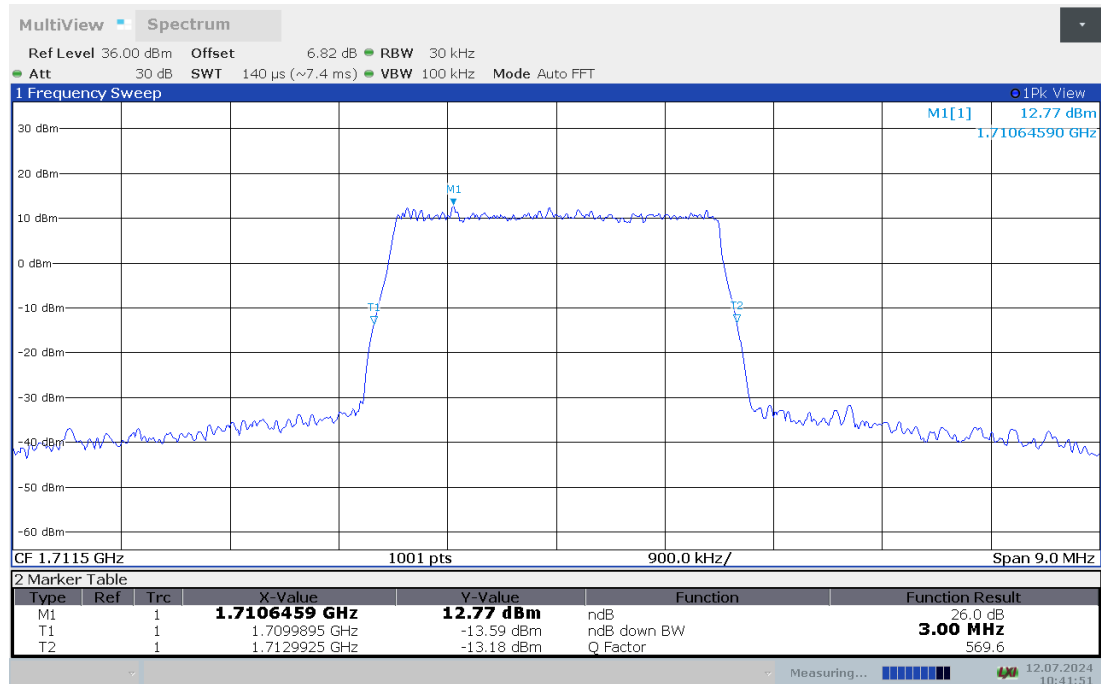
LTE band 4 , 1.4MHz Bandwidth,HIGH,QPSK (-26dBc BW)
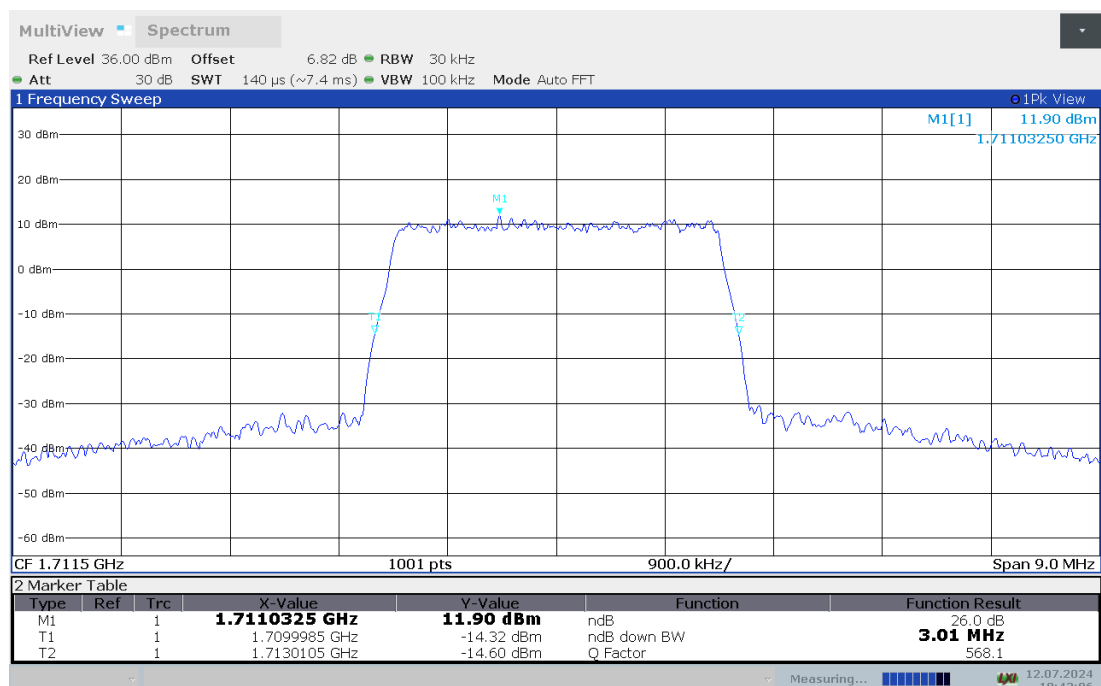

LTE band 4 , 1.4MHz Bandwidth,HIGH,16QAM (-26dBc BW)

LTE band 4,3MHz(-26dBc)

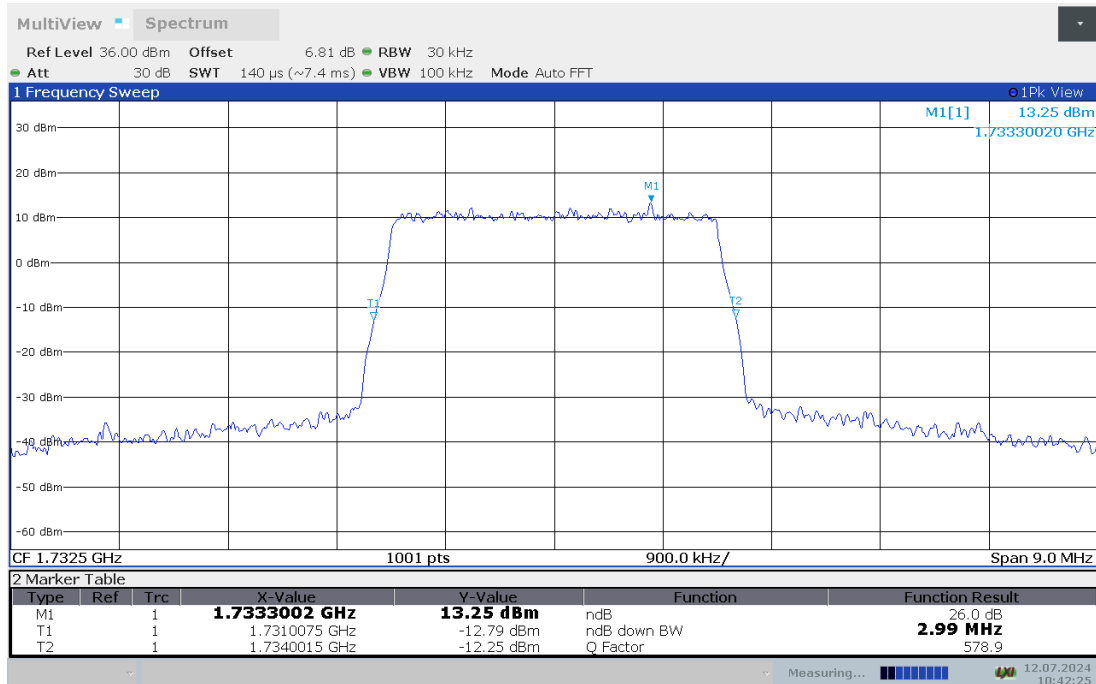| Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1711.5	3.003	3.012
1732.5	2.994	3.003
1753.5	3.012	2.877

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

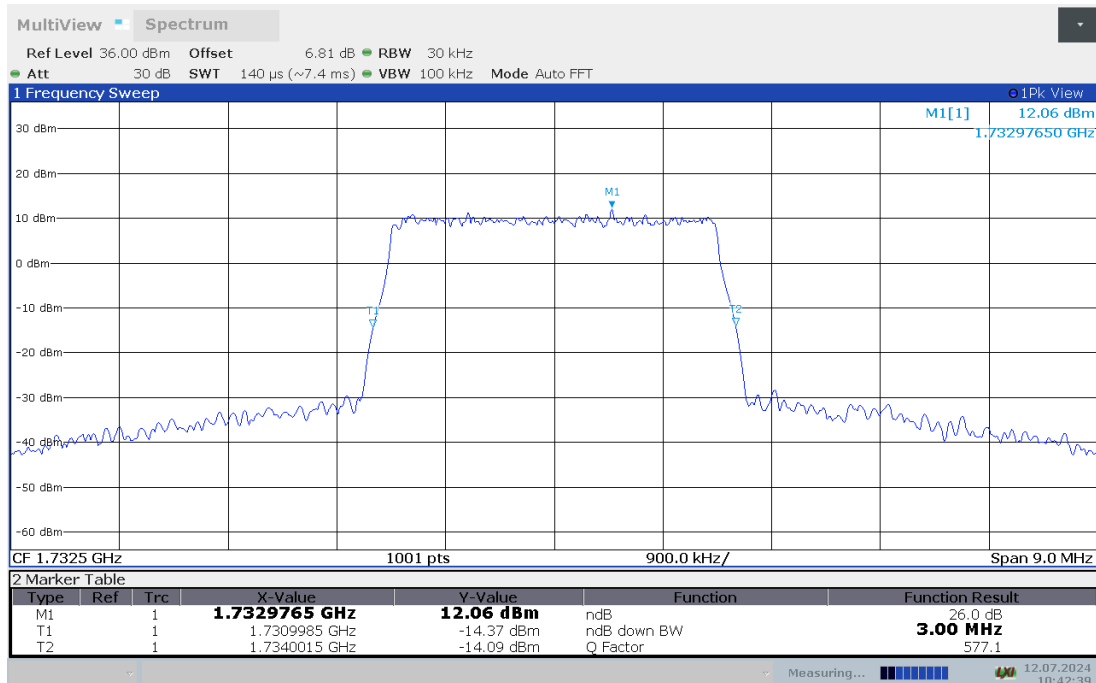

LTE band 4 , 3MHz Bandwidth,LOW,16QAM (-26dBc BW)

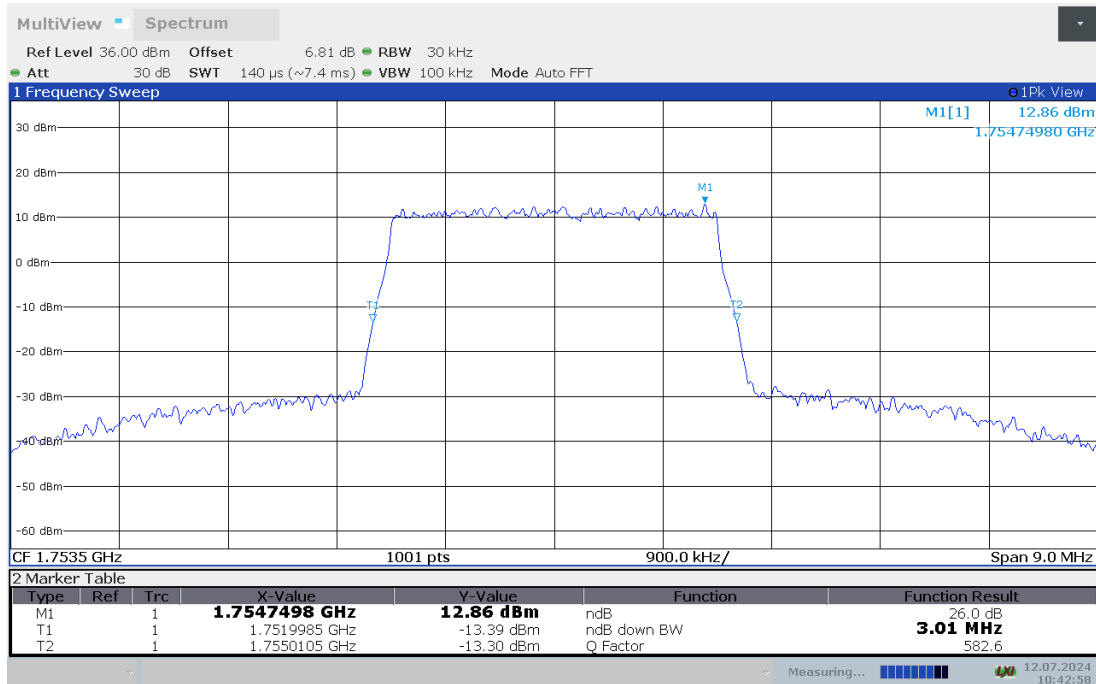**LTE band 4 , 3MHz Bandwidth,MID,QPSK (-26dBc BW)**

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

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

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

LTE band 4,5MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1712.5	4.915	4.885
1732.5	4.930	4.930
1752.5	4.915	4.915

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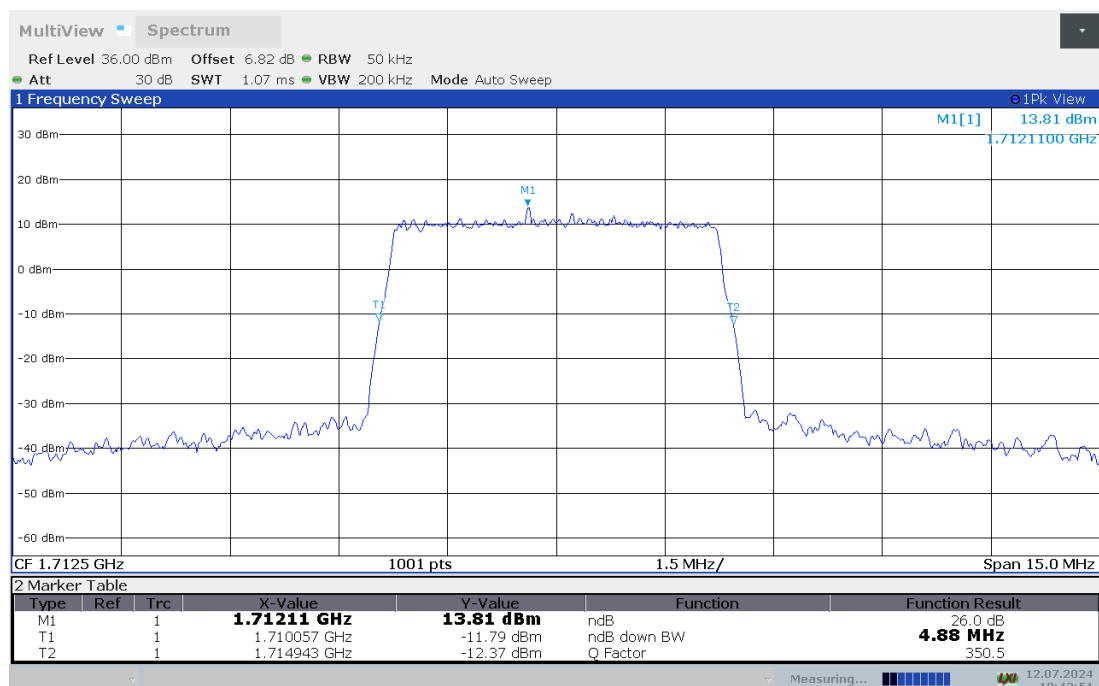
LTE band 4 , 5MHz Bandwidth,LOW,16QAM (-26dBc BW)
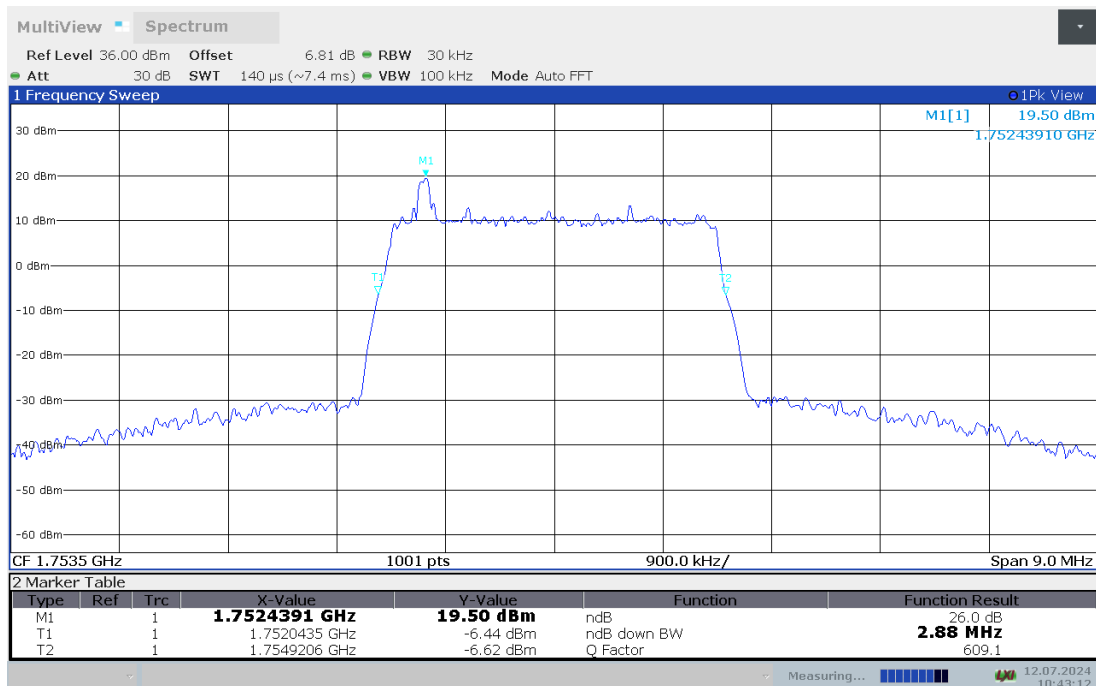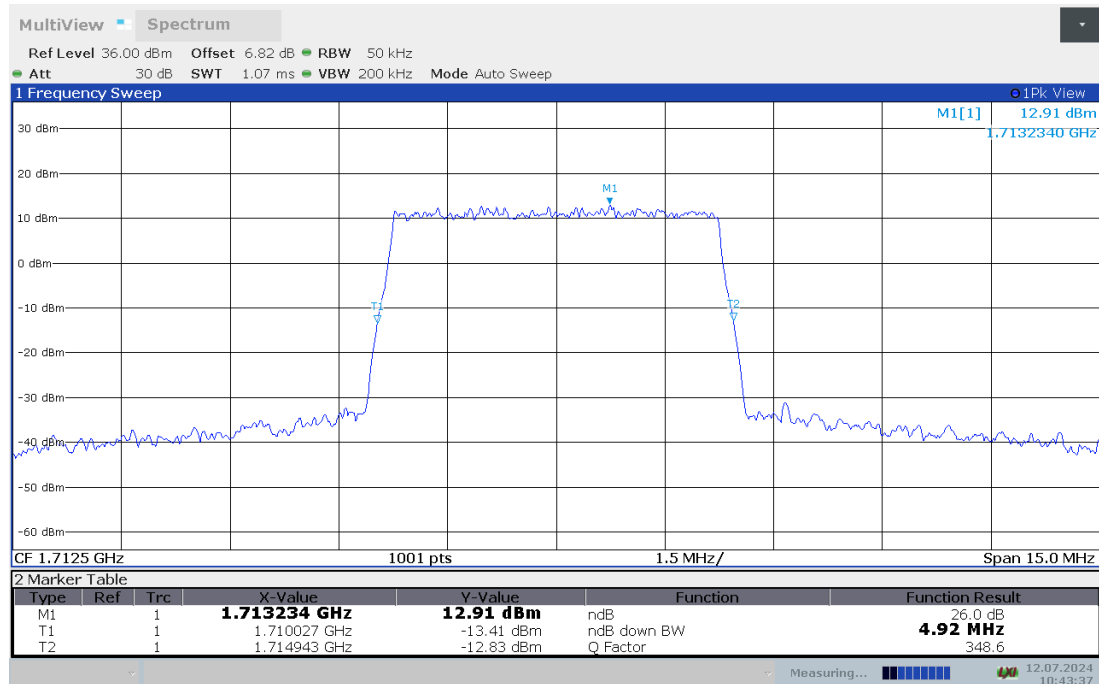
LTE band 4 , 5MHz Bandwidth,MID,QPSK (-26dBc BW)

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.731721 GHz**	**12.36 dBm**	ndB	26.0 dB
T1		1	1.730027 GHz	-12.53 dBm	ndB down BW	**4.93 MHz**
T2		1	1.734958 GHz	-13.73 dBm	Q Factor	351.3

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

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.731841 GHz**	**11.76 dBm**	ndB	26.0 dB
T1		1	1.730027 GHz	-13.81 dBm	ndB down BW	**4.93 MHz**
T2		1	1.734958 GHz	-14.10 dBm	Q Factor	351.3

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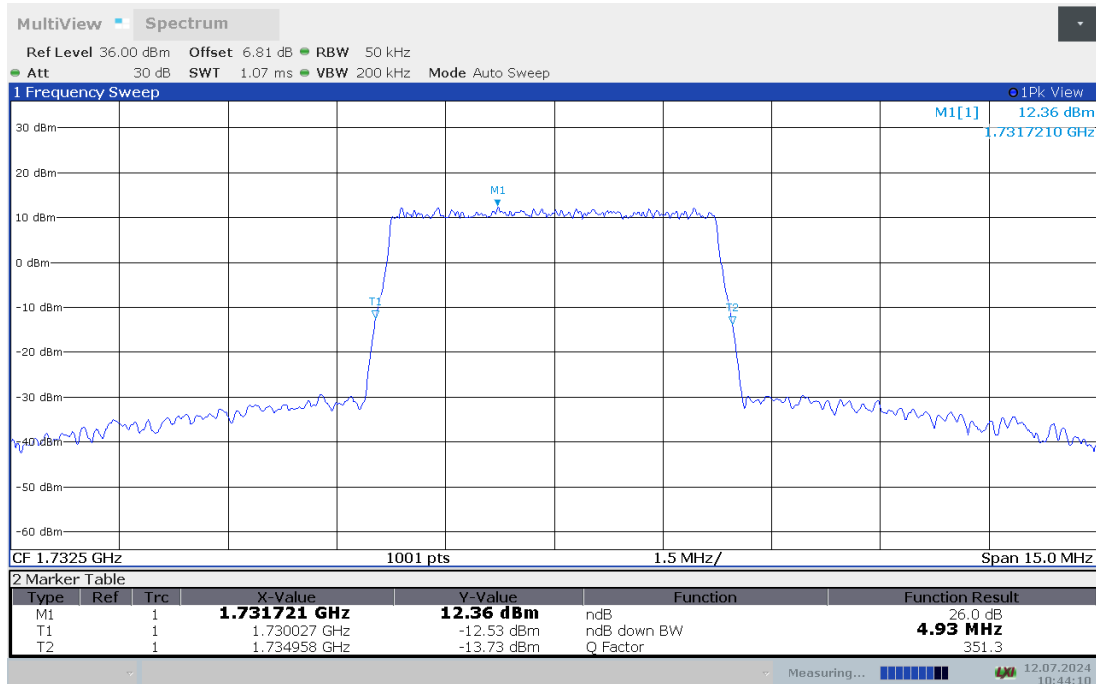

LTE band 4 , 5MHz Bandwidth,HIGH,16QAM (-26dBc BW)

LTE band 4,10MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1715	9.740	9.740
1732.5	9.710	9.710
1750	9.770	9.770

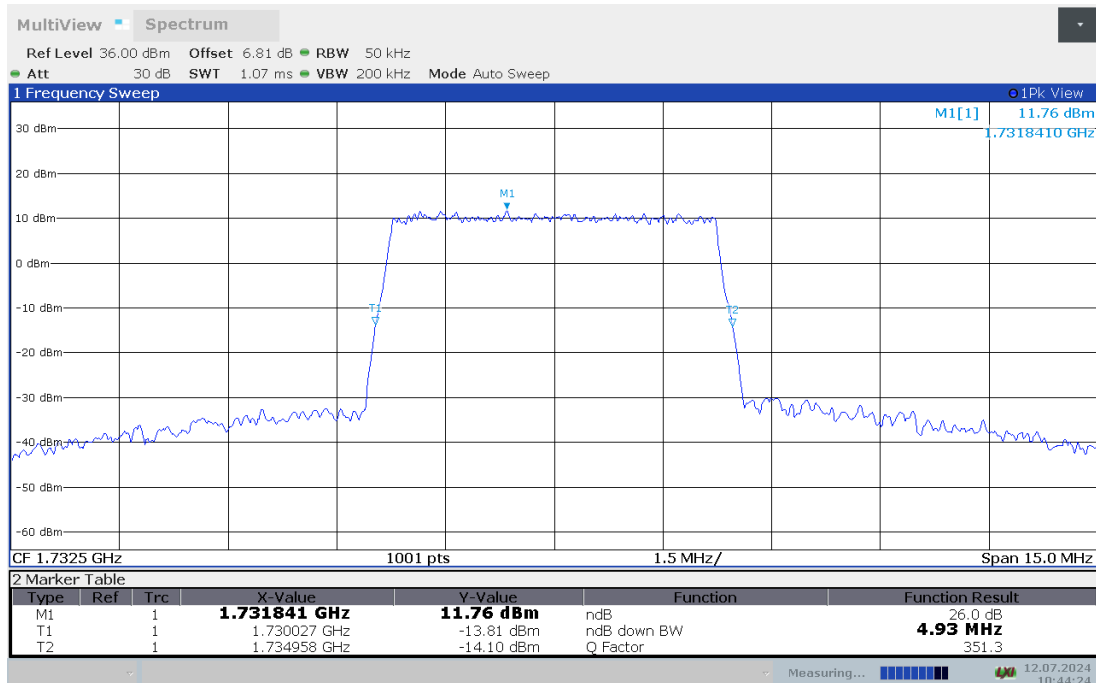## LTE band 4 , 10MHz Bandwidth,LOW,QPSK (-26dBc BW)

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

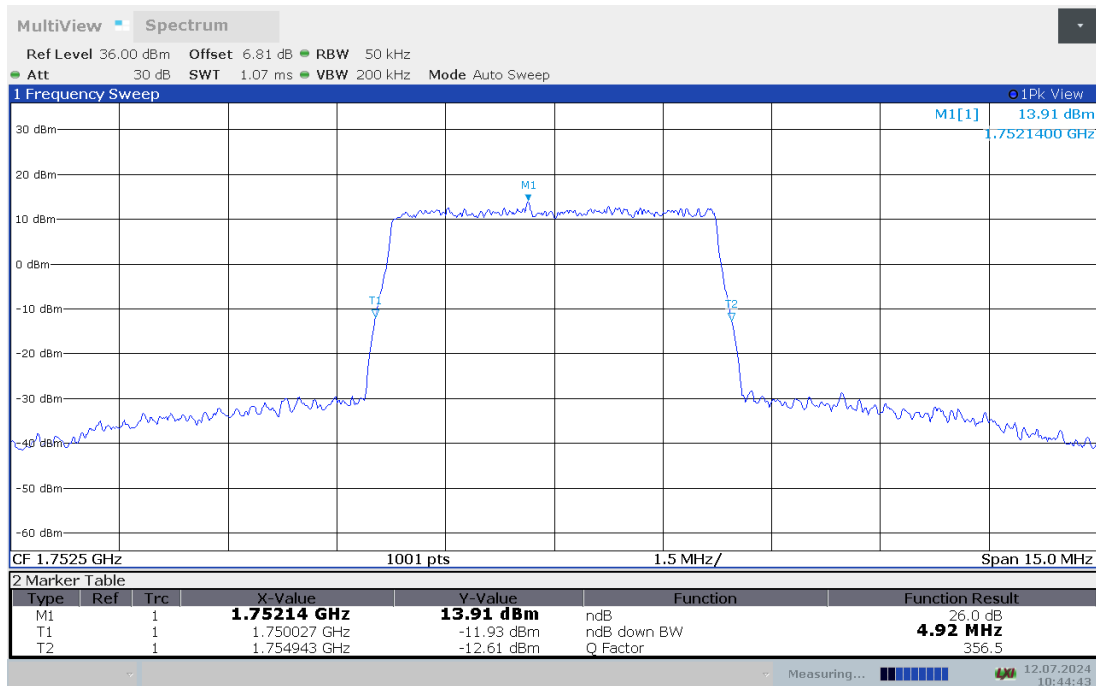## LTE band 4 , 10MHz Bandwidth,MID,QPSK (-26dBc BW)

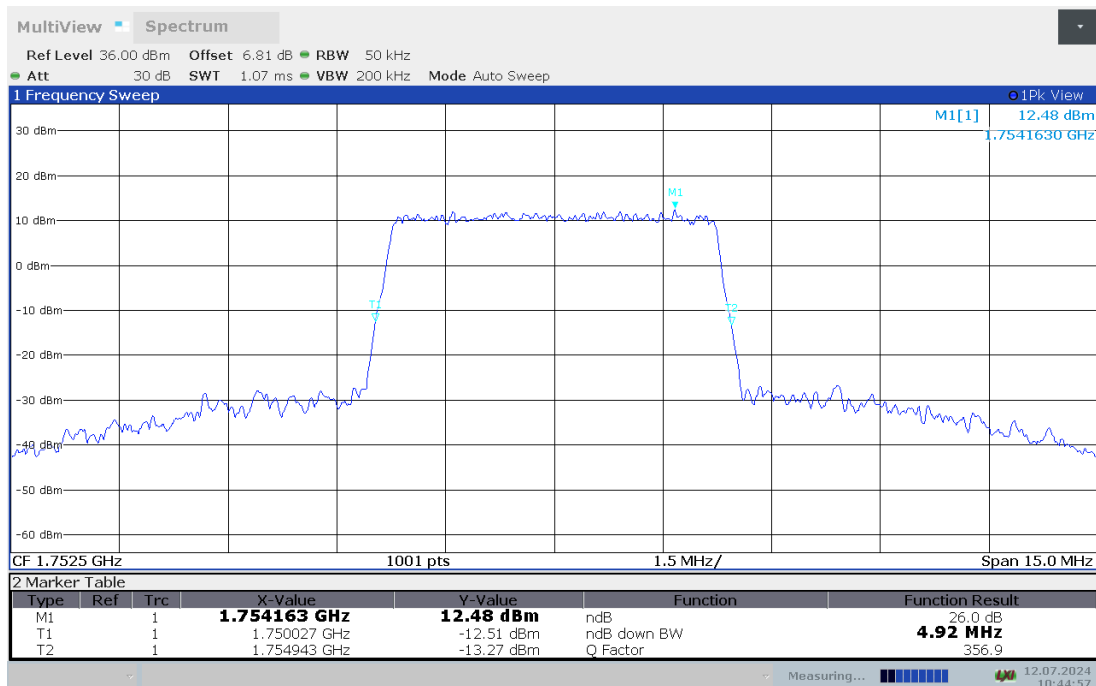## LTE band 4 , 10MHz Bandwidth,MID,16QAM (-26dBc BW)

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

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

LTE band 4,15MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1717.5	14.745	14.835
1732.5	14.745	14.880
1747.5	14.700	14.745

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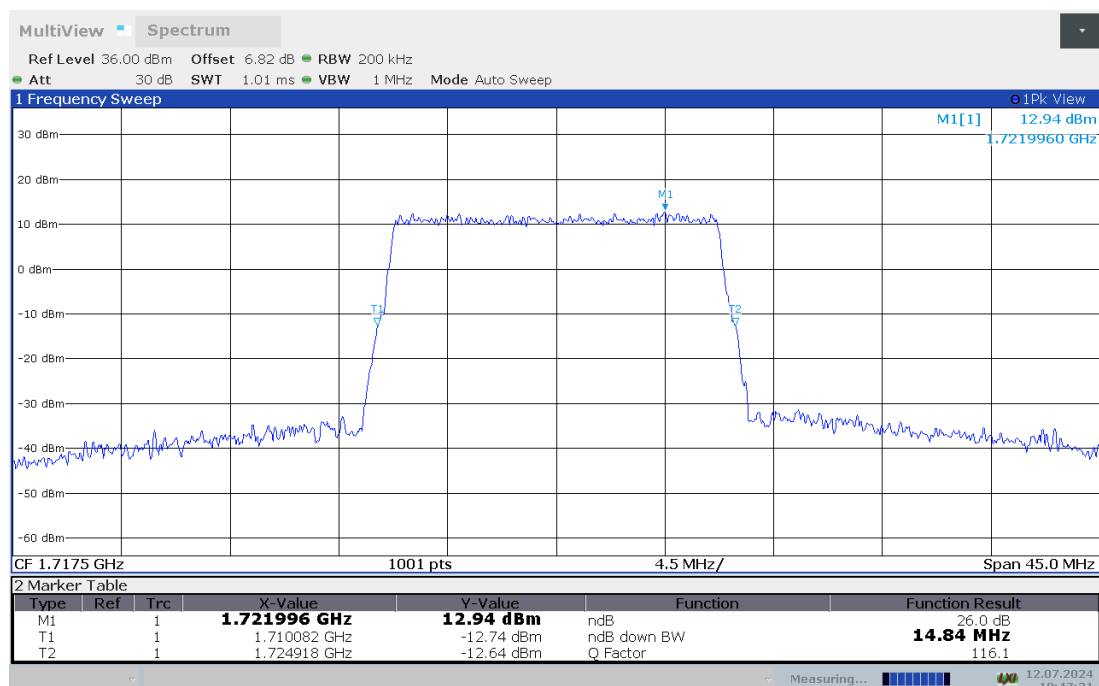
LTE band 4 , 15MHz Bandwidth,LOW,16QAM (-26dBc BW)

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

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

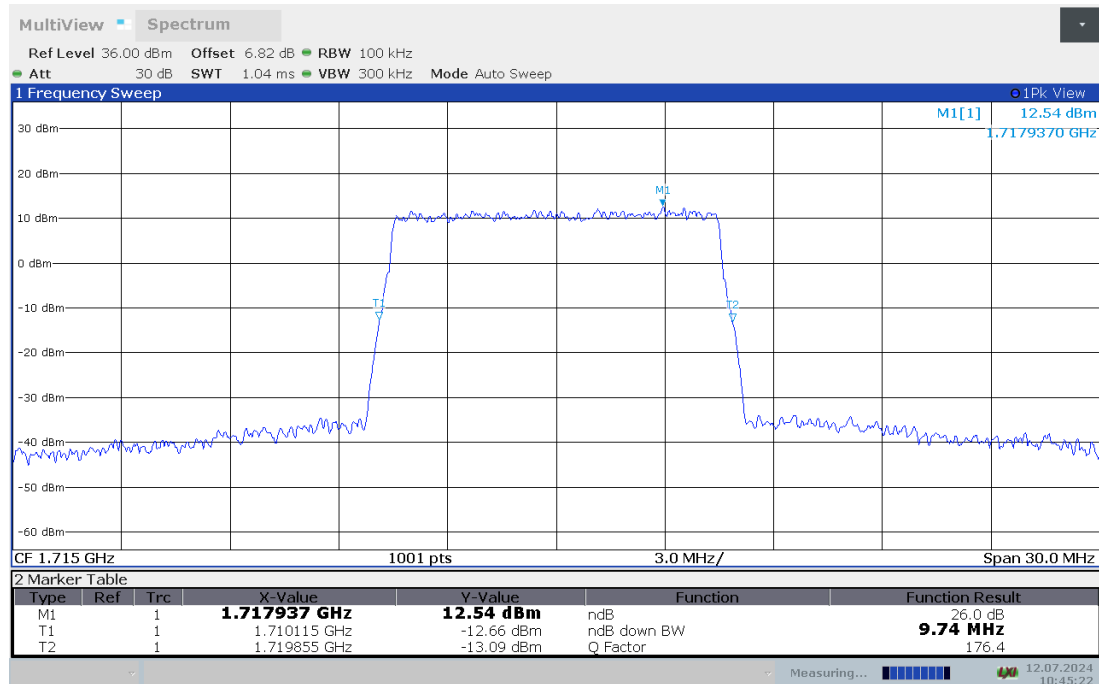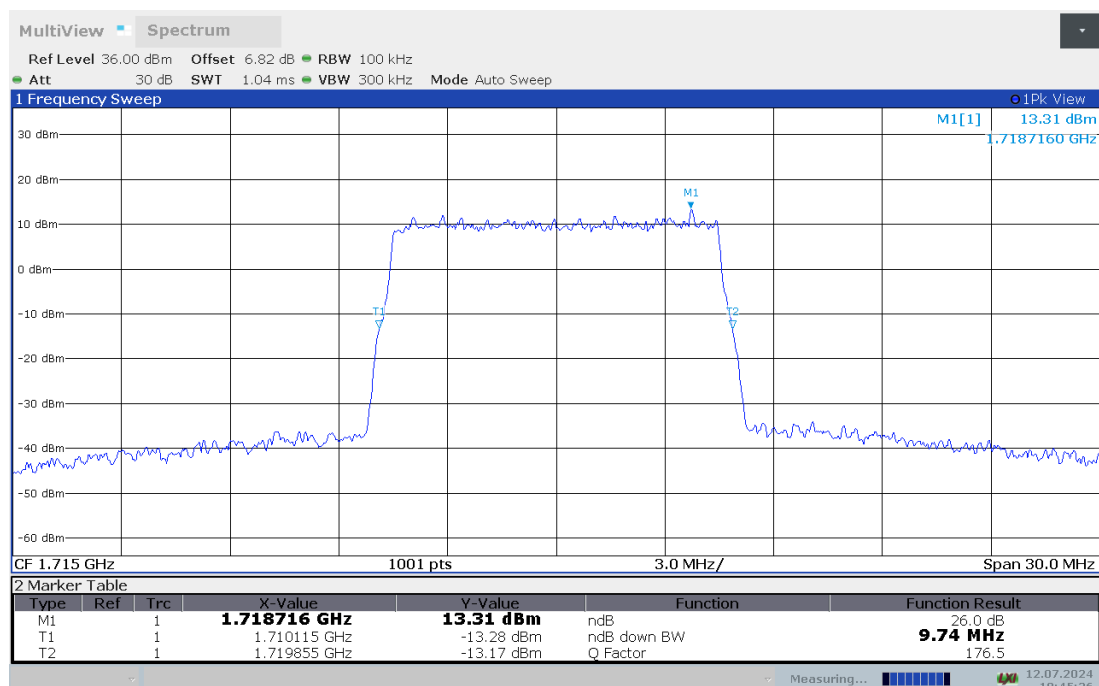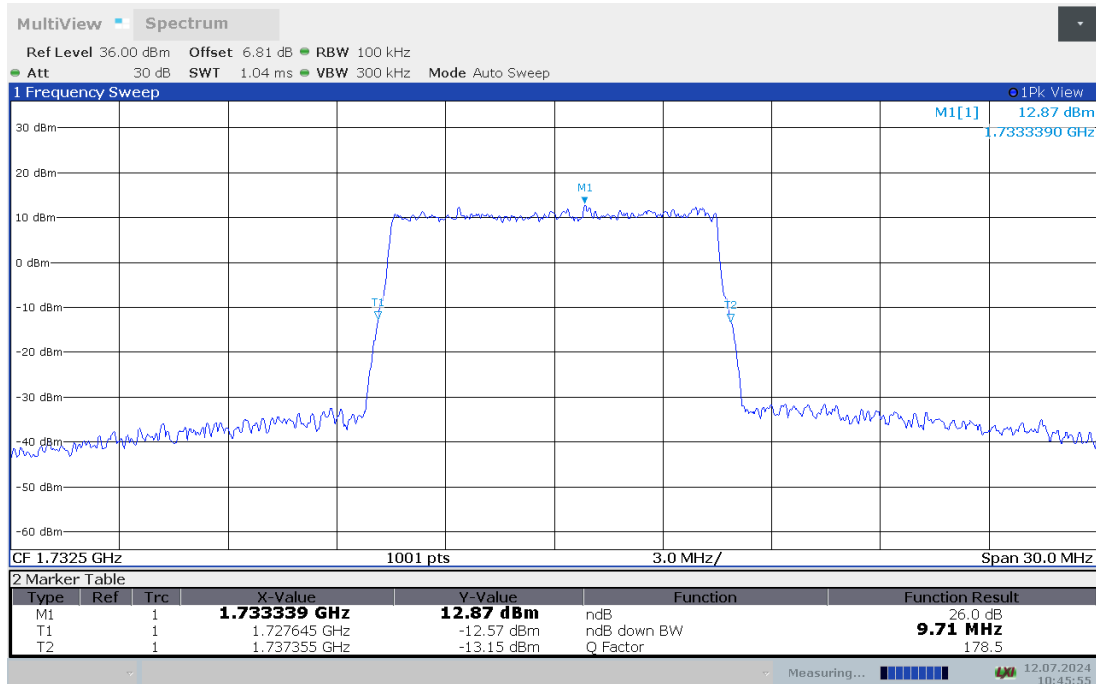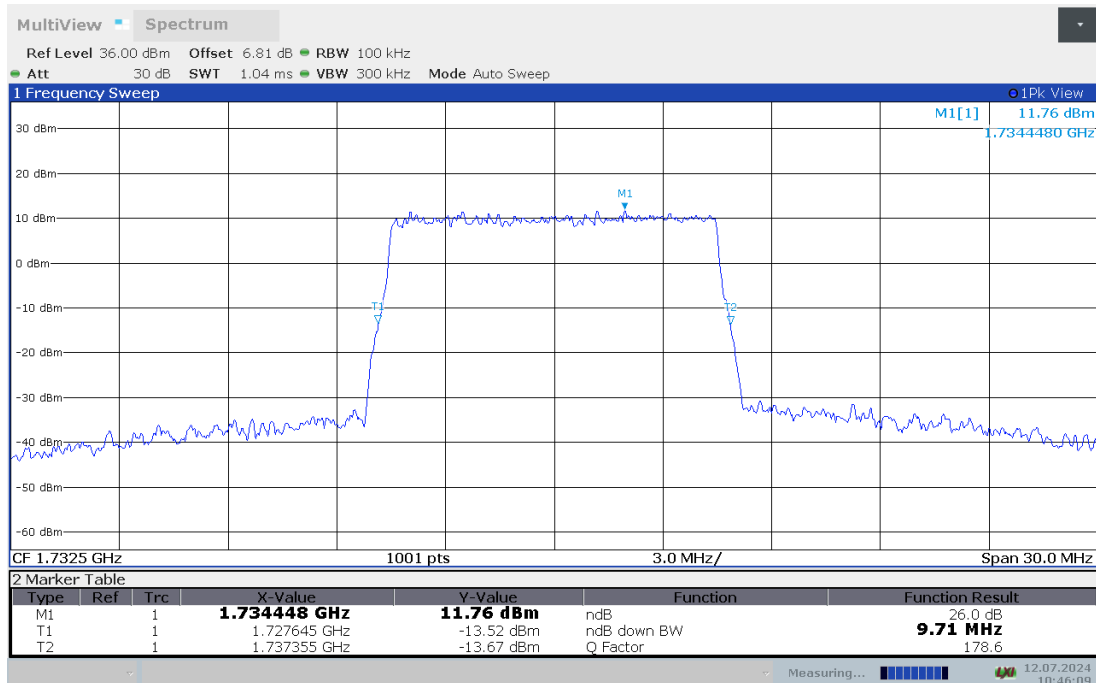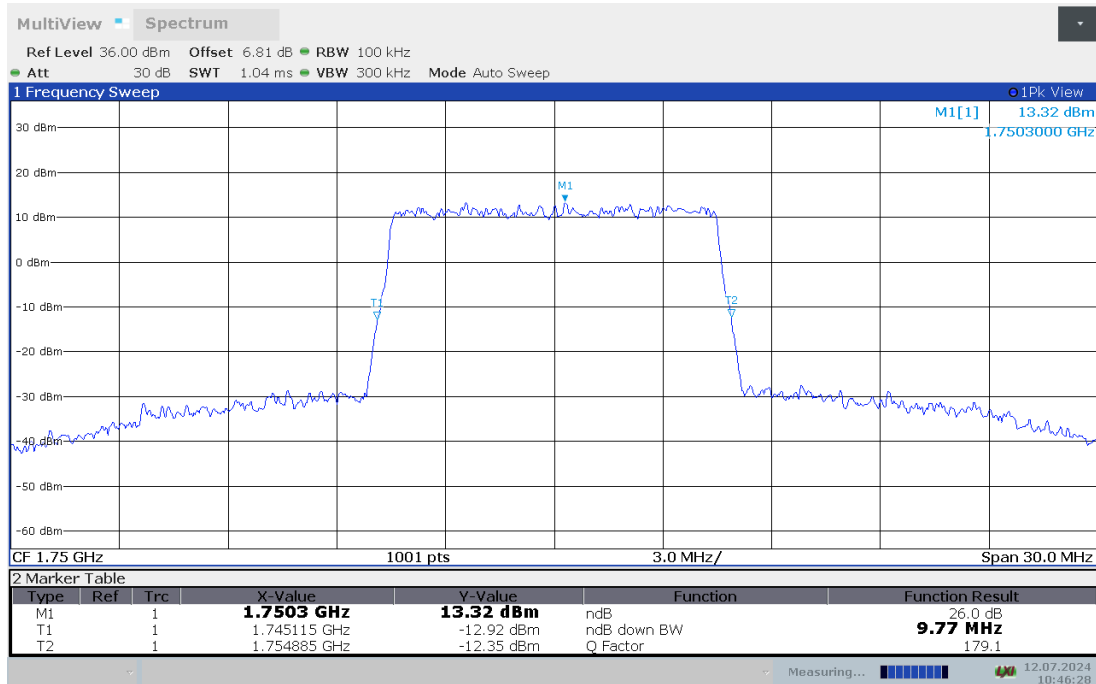## LTE band 4 , 15MHz Bandwidth,HIGH,QPSK (-26dBc BW)

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.75204 GHz**	**14.49 dBm**	ndB	26.0 dB
T1		1	1.740127 GHz	-11.76 dBm	ndB down BW	**14.70 MHz**
T2		1	1.754828 GHz	-11.91 dBm	Q Factor	119.2

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

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.753839 GHz**	**13.86 dBm**	ndB	26.0 dB
T1		1	1.740172 GHz	-10.45 dBm	ndB down BW	**14.74 MHz**
T2		1	1.754918 GHz	-13.46 dBm	Q Factor	118.9

LTE band 4,20MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1720	19.361	19.361
1732.5	19.241	19.361
1745	19.600	19.481

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

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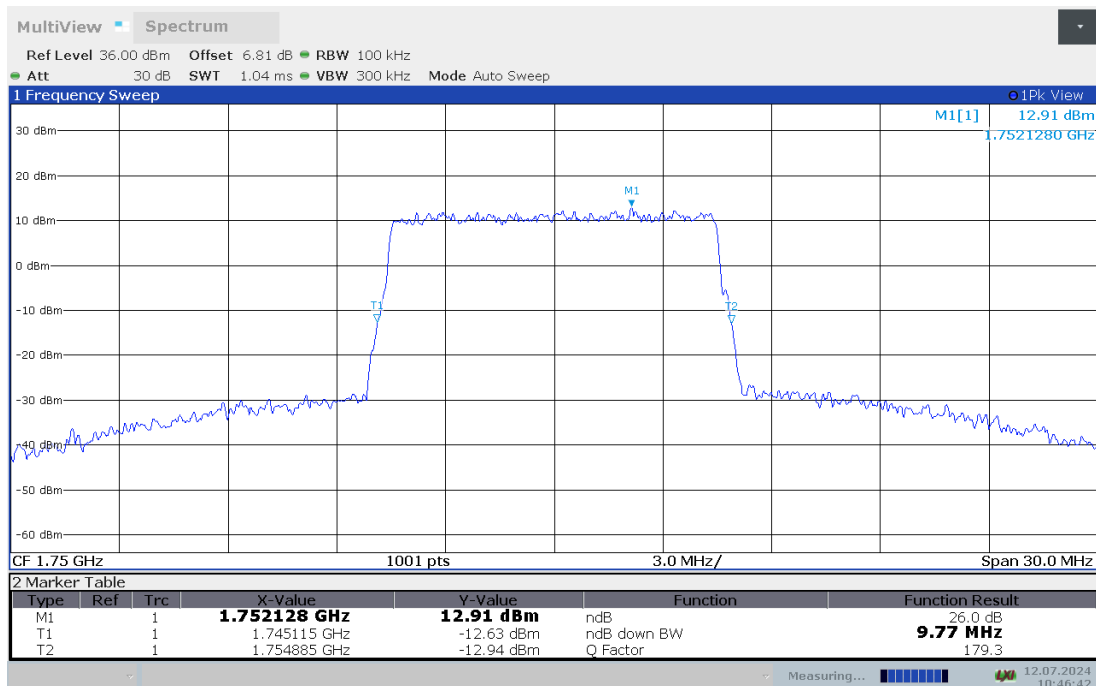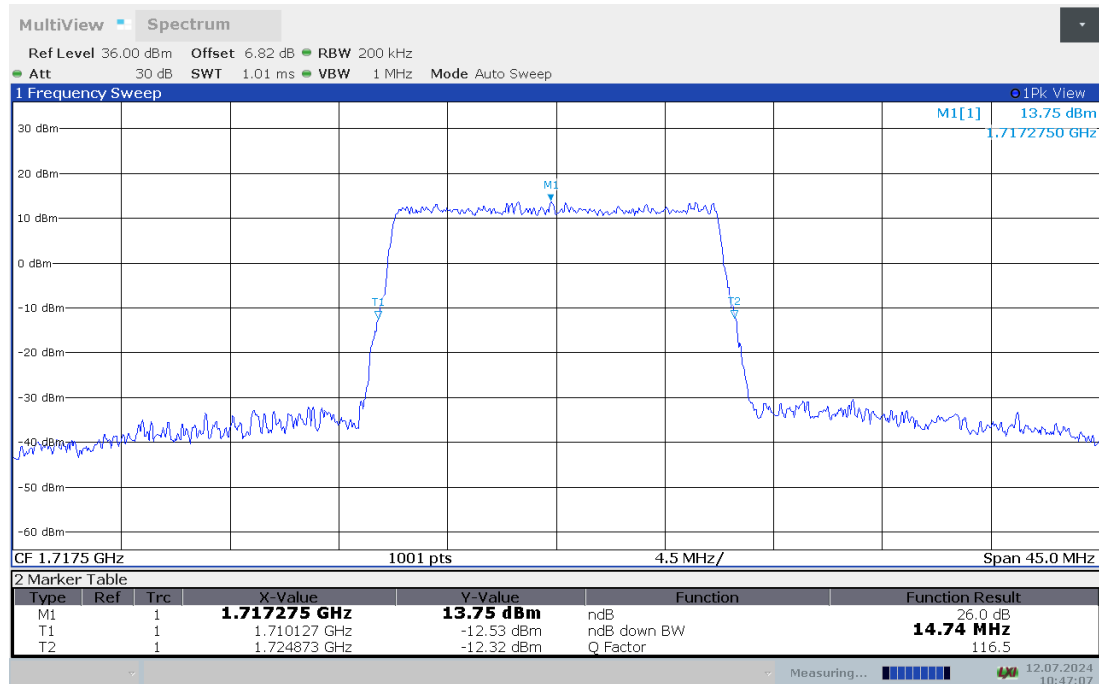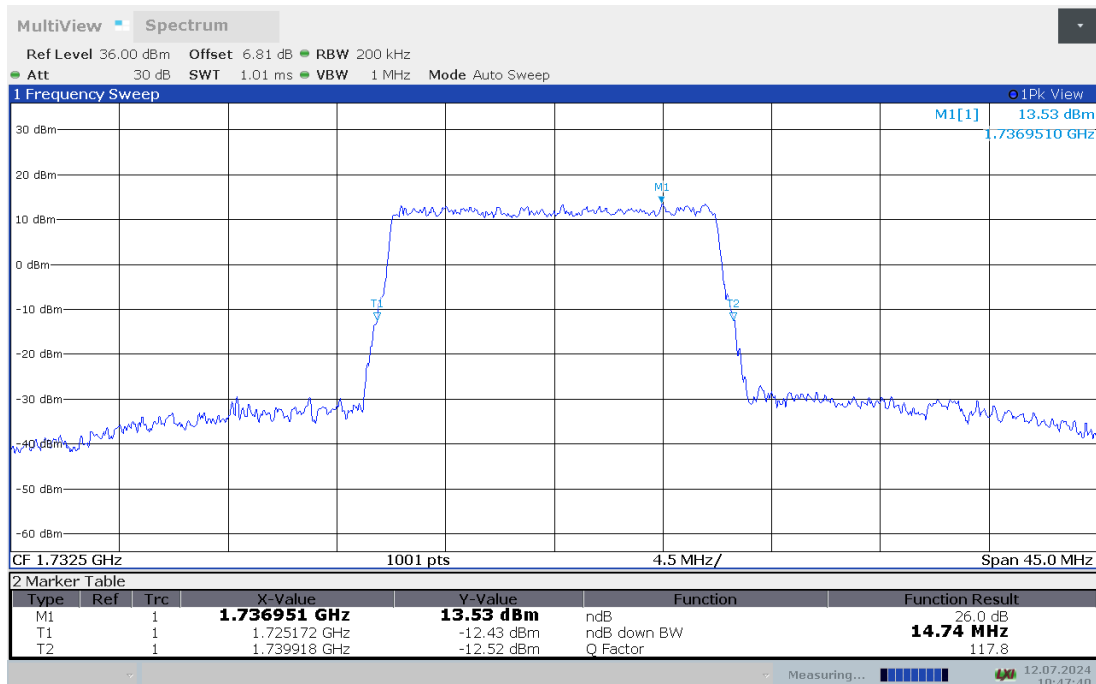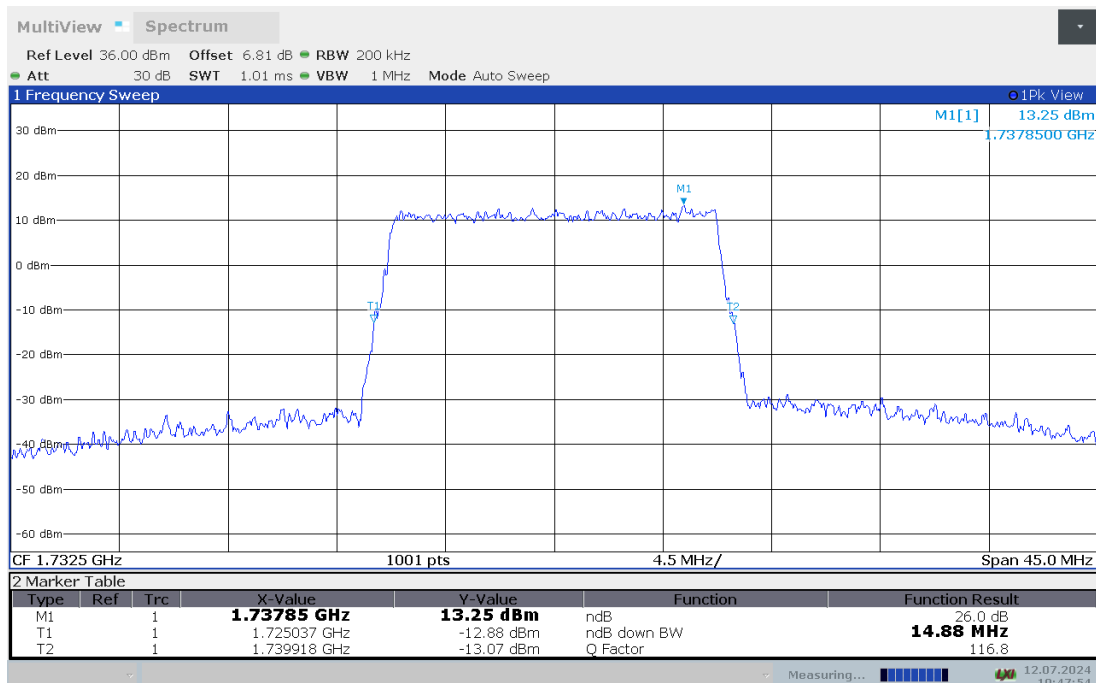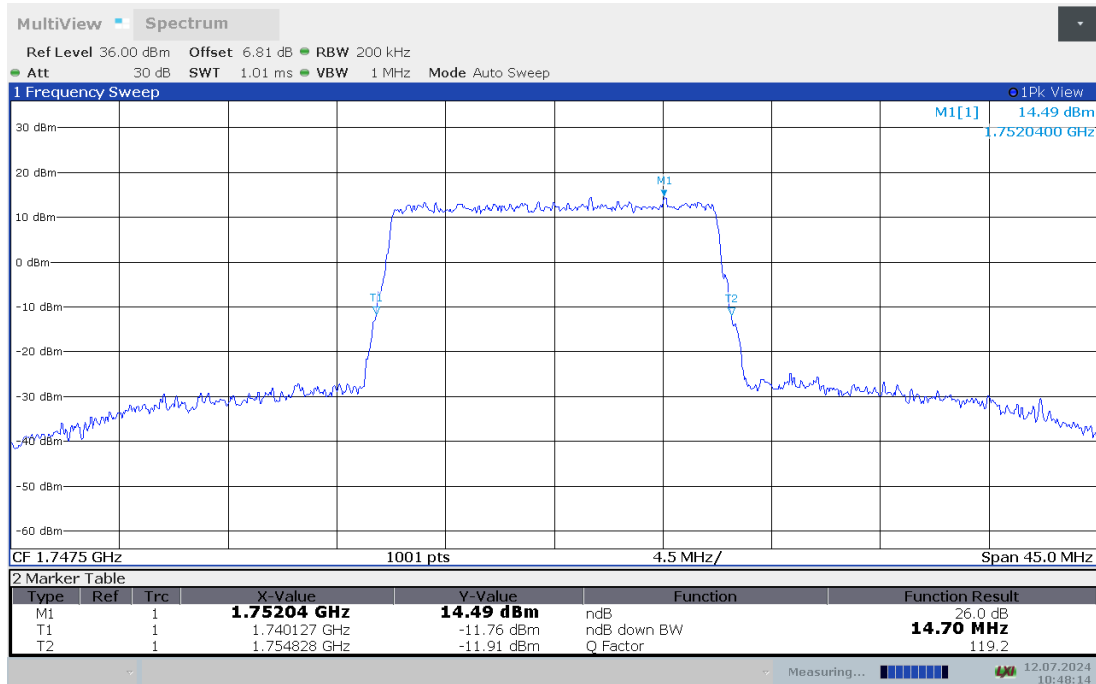
LTE band 4 , 20MHz Bandwidth,MID,QPSK (-26dBc BW)
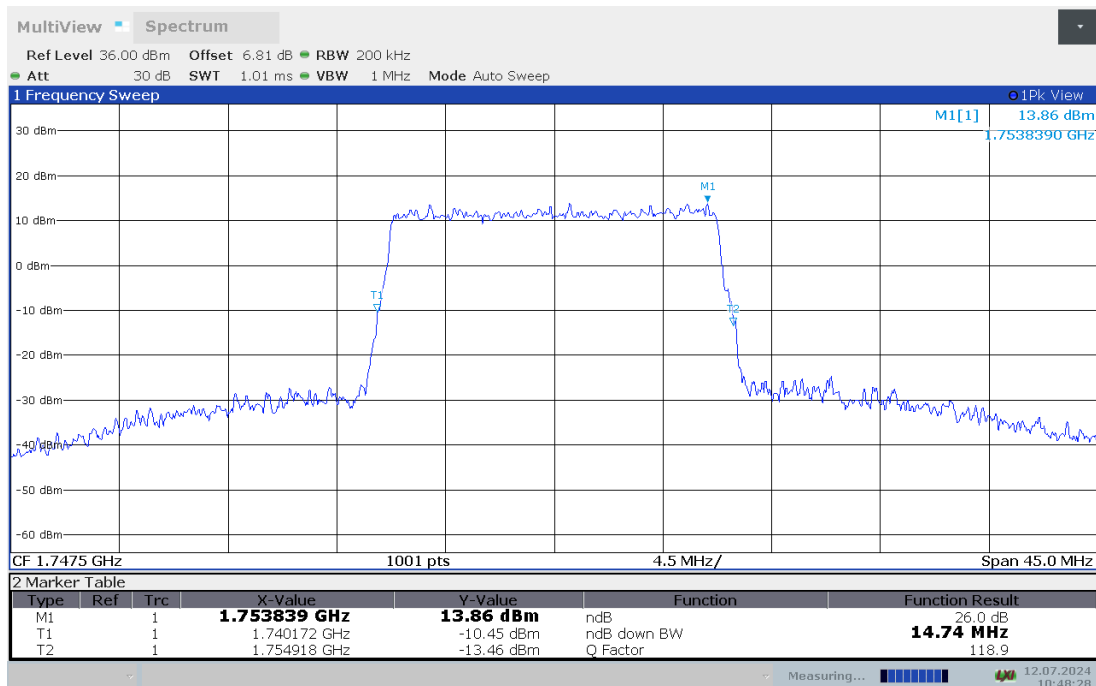

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.739153 GHz**	**13.94 dBm**	ndB	26.0 dB
T1		1	1.72297 GHz	-12.40 dBm	ndB down BW	**19.24 MHz**
T2		1	1.74221 GHz	-13.45 dBm	Q Factor	90.4

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

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.736756 GHz**	**11.77 dBm**	ndB	26.0 dB
T1		1	1.72285 GHz	-14.33 dBm	ndB down BW	**19.36 MHz**
T2		1	1.74221 GHz	-13.91 dBm	Q Factor	89.7

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

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

LTE band 5,1.4MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
824.7	1.238	1.242
836.5	1.238	1.234
848.3	1.238	1.238

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

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

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

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

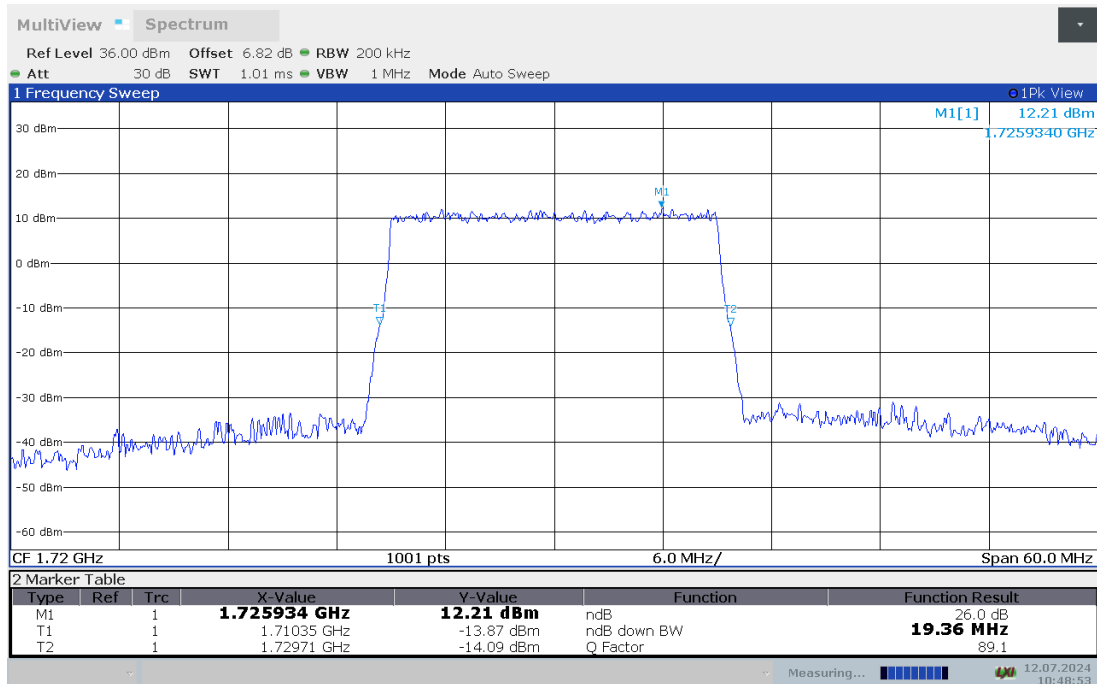## LTE band 5 , 1.4MHz Bandwidth,HIGH,QPSK (-26dBc BW)

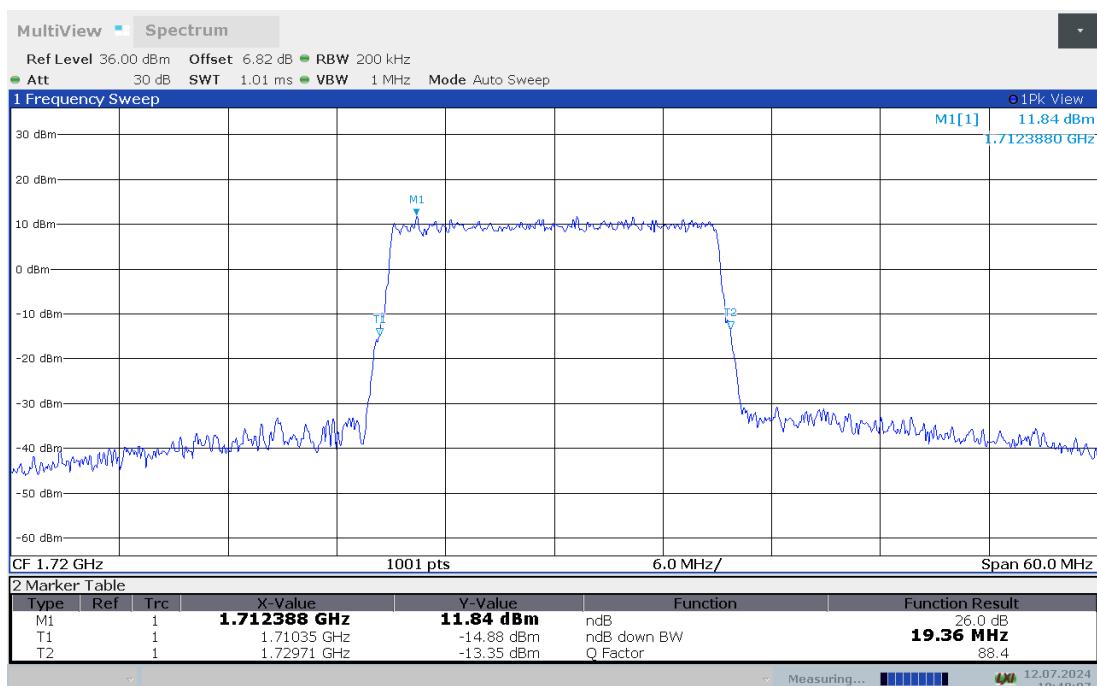## LTE band 5 , 1.4MHz Bandwidth,HIGH,16QAM (-26dBc BW)

LTE band 5,3MHz(-26dBc)

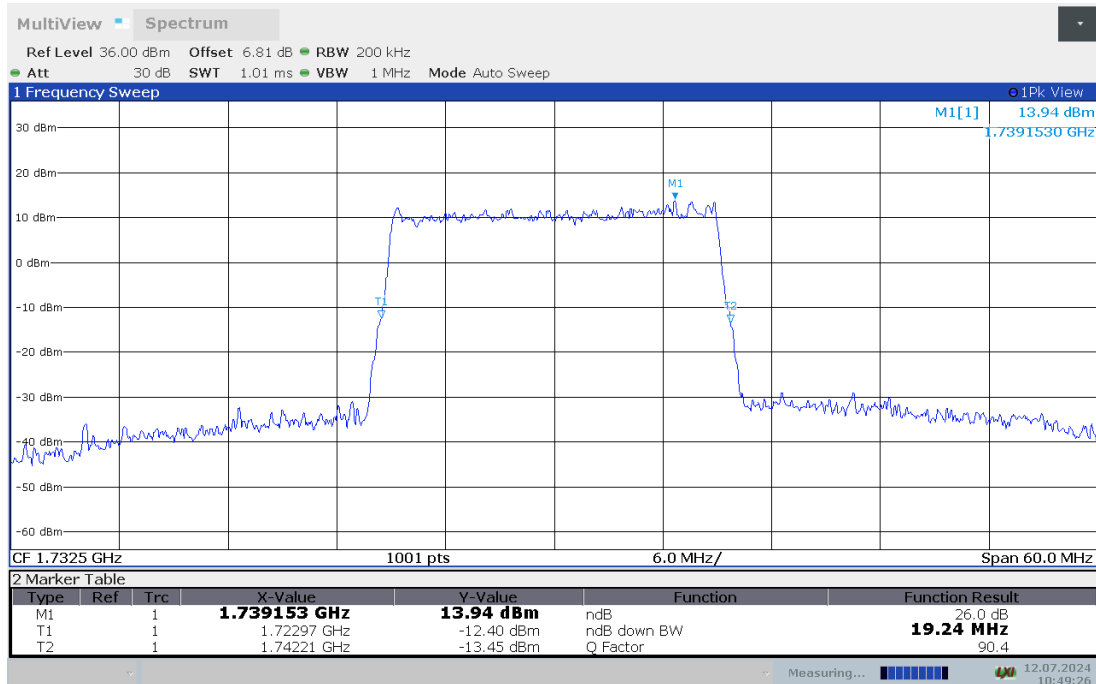| Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
825.5	2.994	3.003
836.5	3.003	3.003
847.5	2.994	3.021

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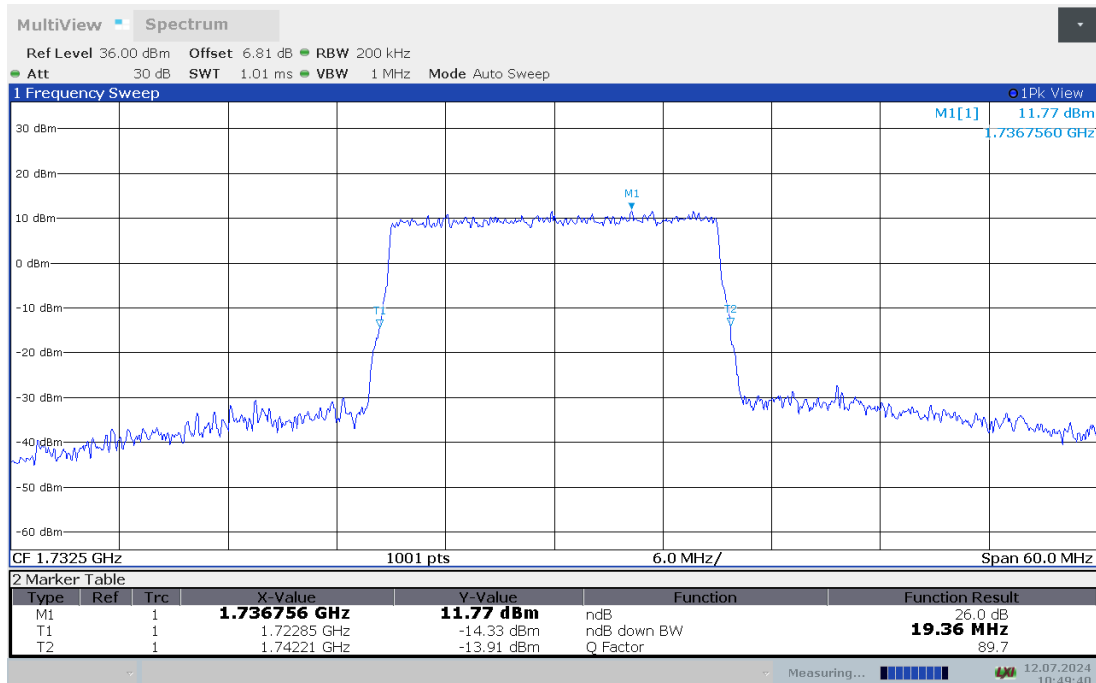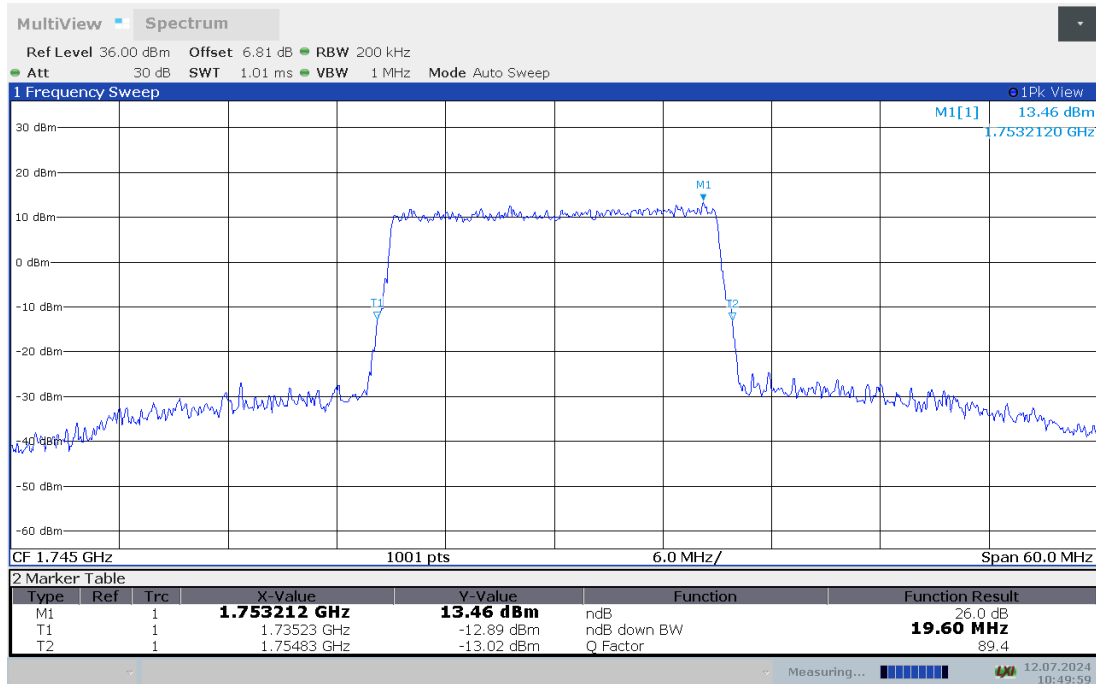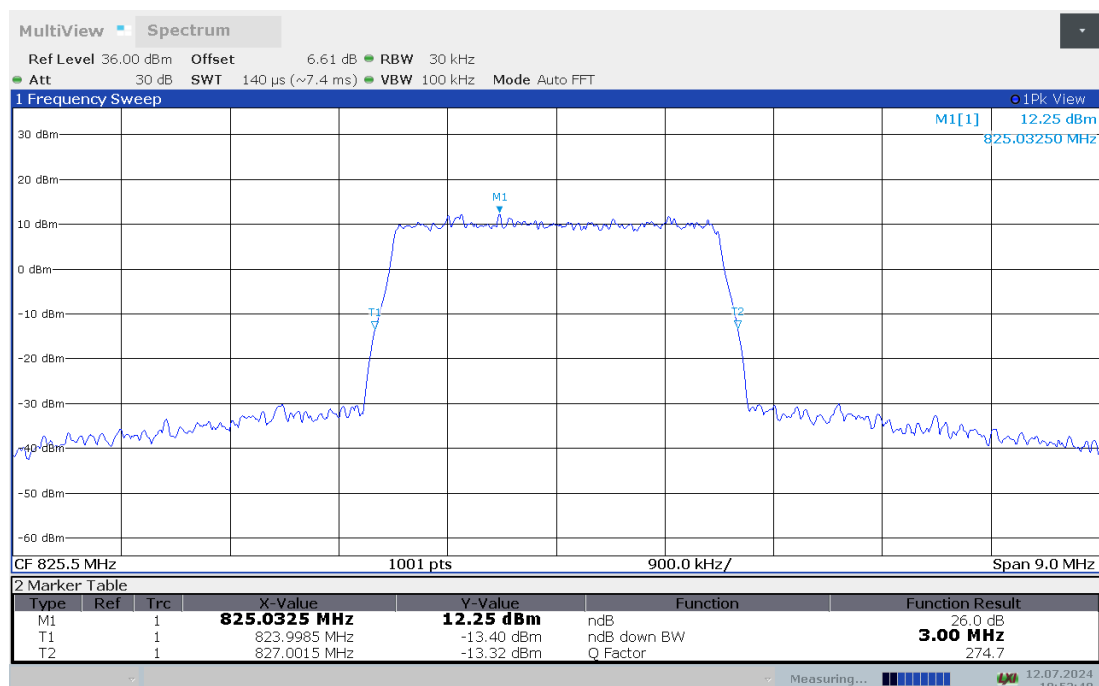

LTE band 5 , 3MHz Bandwidth,LOW,16QAM (-26dBc BW)

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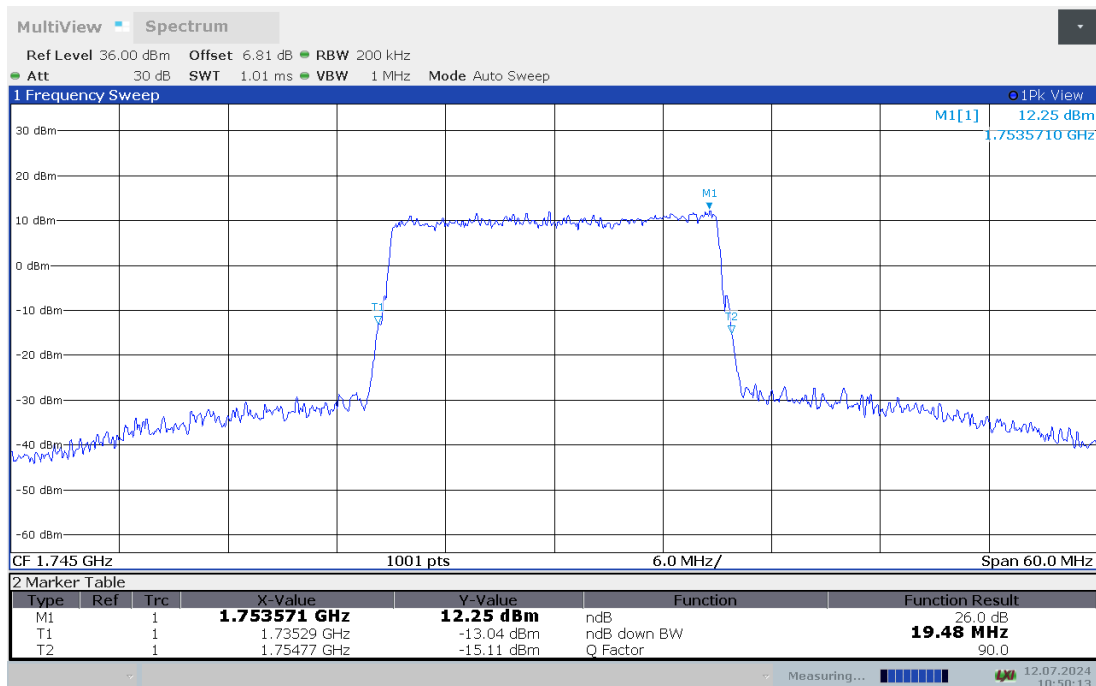

LTE band 5 , 3MHz Bandwidth,MID,16QAM (-26dBc BW)

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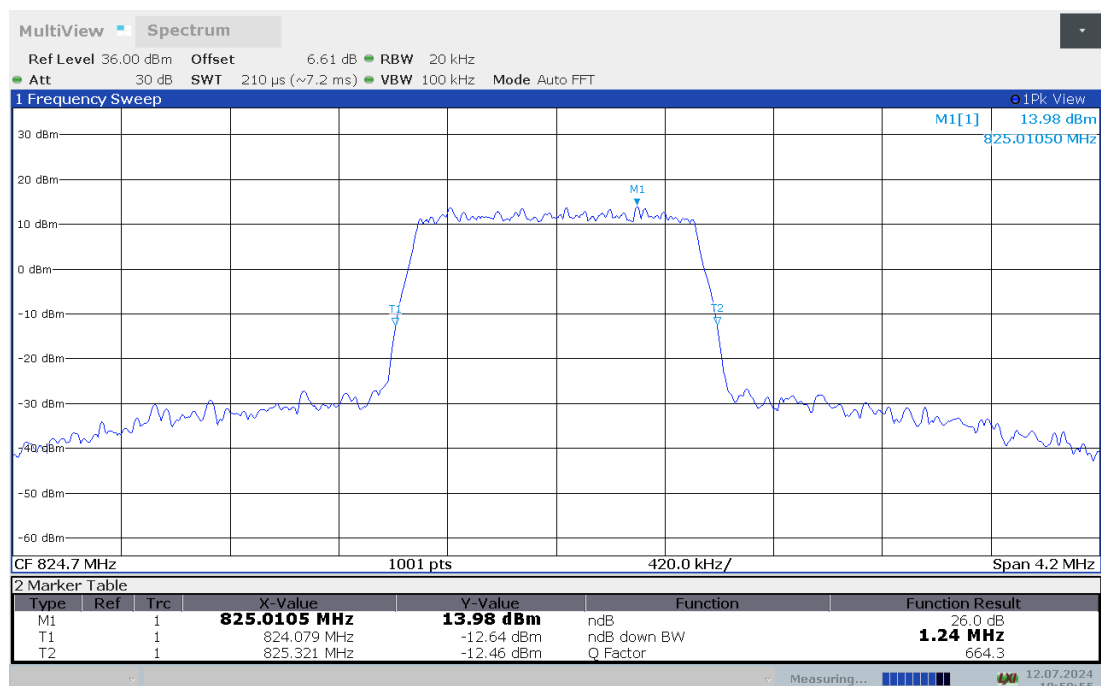

LTE band 5 , 3MHz Bandwidth,HIGH,16QAM (-26dBc BW)

LTE band 5,5MHz(-26dBc)

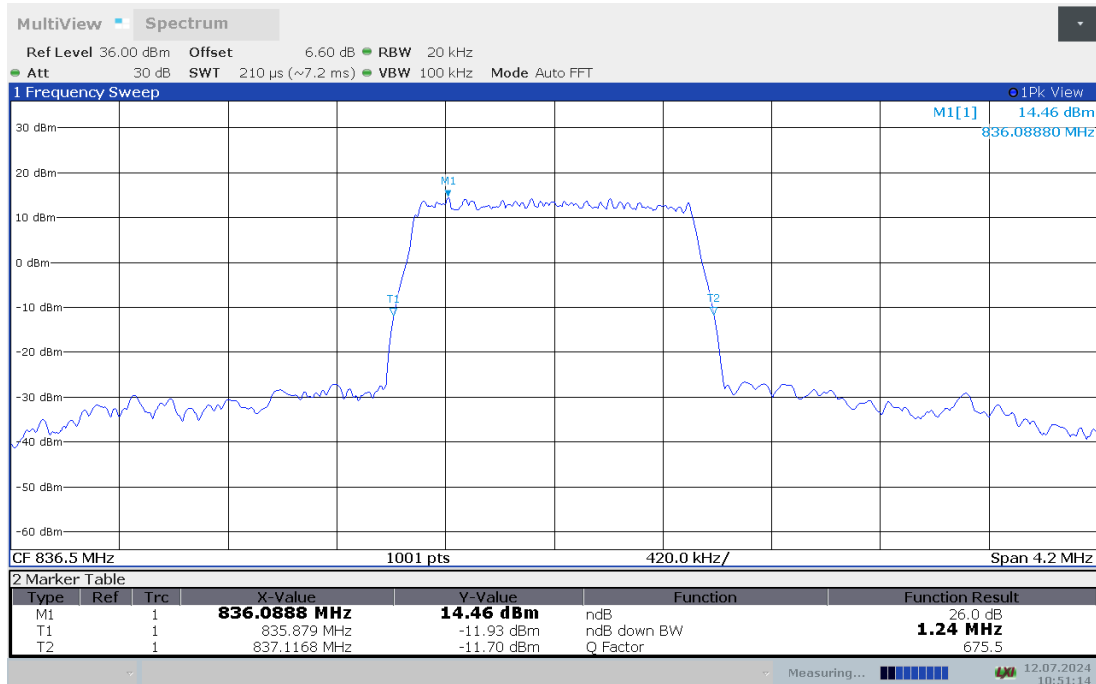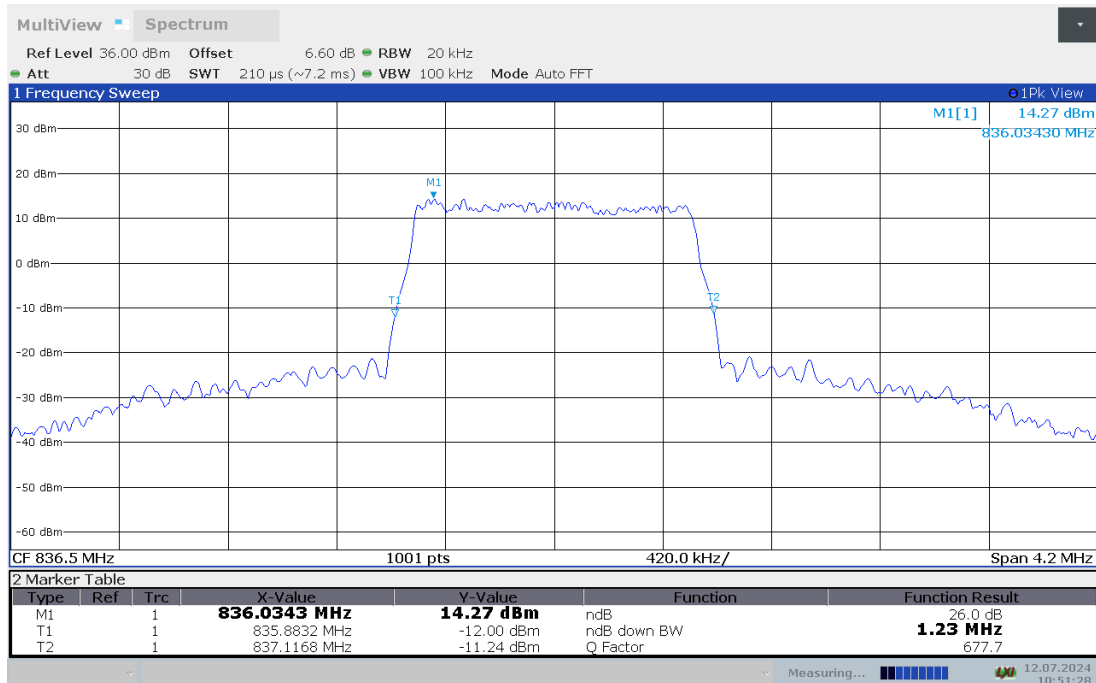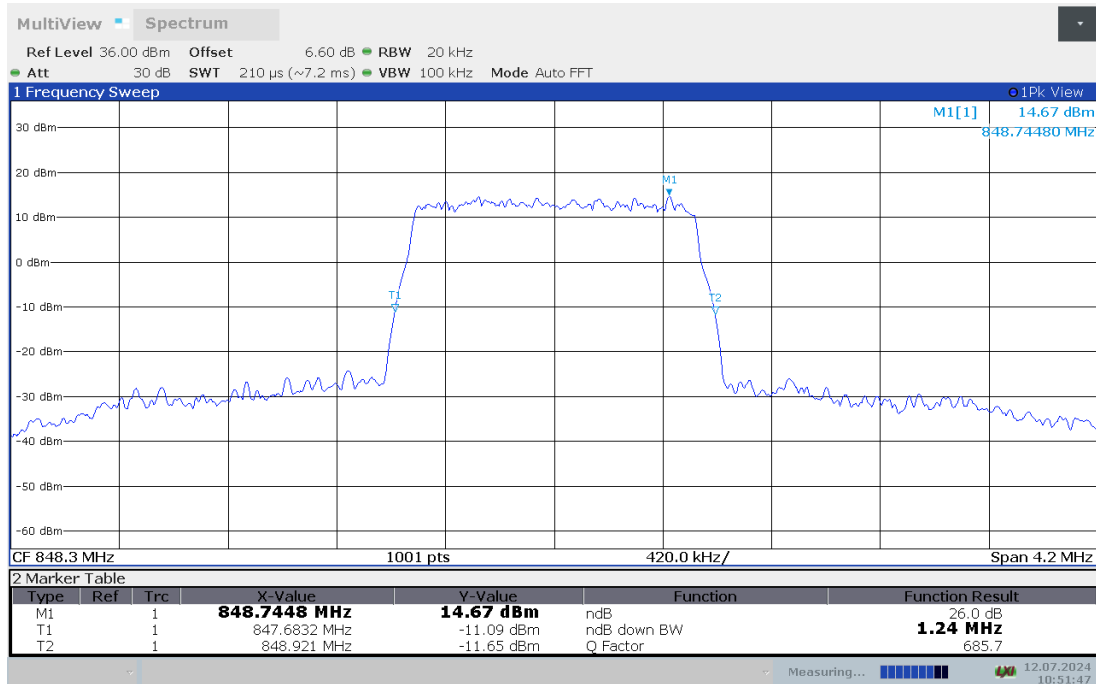| Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
826.5	4.915	4.900
836.5	4.930	4.930
846.5	4.915	4.930

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

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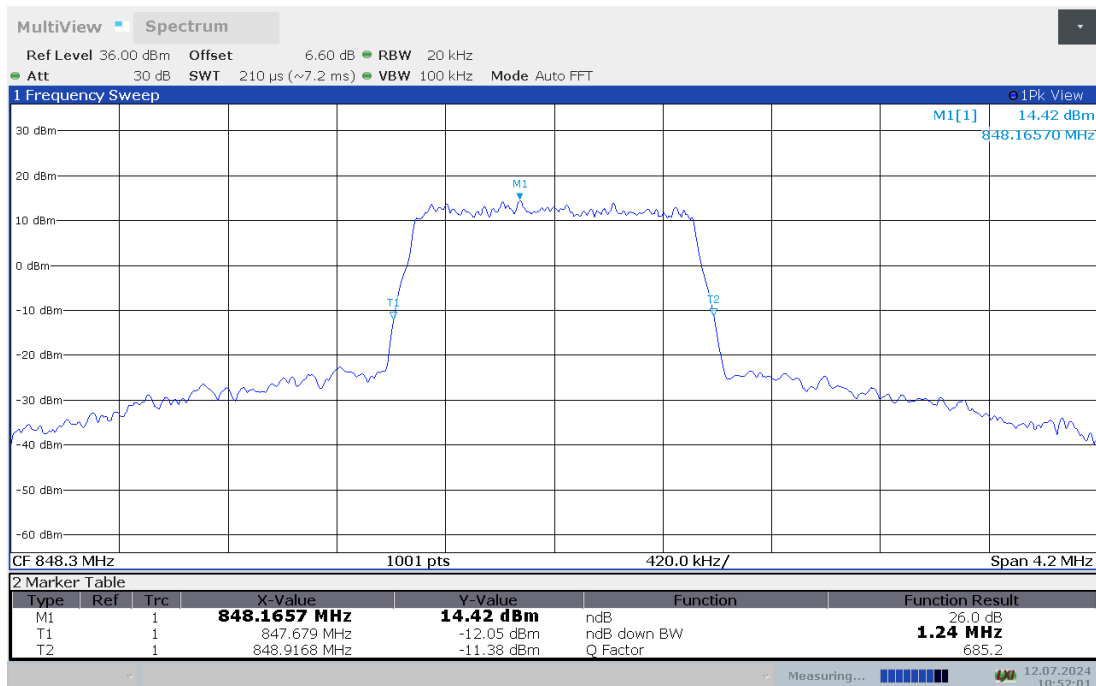
LTE band 5 , 5MHz Bandwidth,MID,QPSK (-26dBc BW)

MultiView · Spectrum

Ref Level 36.00 dBm Offset 6.60 dB ● RBW 50 kHz
● Att 30 dB SWT 1.07 ms ● VBW 200 kHz Mode Auto Sweep

1 Frequency Sweep   ● 1Pk View
                                          M1[1]   13.22 dBm
                                                 835.7210 MHz

CF 836.5 MHz   1001 pts   1.5 MHz/   Span 15.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**835.721 MHz**	**13.22 dBm**	ndB	26.0 dB
T1		1	834.027 MHz	-12.02 dBm	ndB down BW	**4.93 MHz**
T2		1	838.958 MHz	-13.16 dBm	Q Factor	169.5

Measuring... 12.07.2024 10:54:46

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

MultiView · Spectrum

Ref Level 36.00 dBm Offset 6.60 dB ● RBW 50 kHz
● Att 30 dB SWT 1.07 ms ● VBW 200 kHz Mode Auto Sweep

1 Frequency Sweep   ● 1Pk View
                                          M1[1]   12.74 dBm
                                                 835.8410 MHz

CF 836.5 MHz   1001 pts   1.5 MHz/   Span 15.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**835.841 MHz**	**12.74 dBm**	ndB	26.0 dB
T1		1	834.027 MHz	-13.23 dBm	ndB down BW	**4.93 MHz**
T2		1	838.958 MHz	-13.00 dBm	Q Factor	169.5

Measuring... 12.07.2024 10:55:00
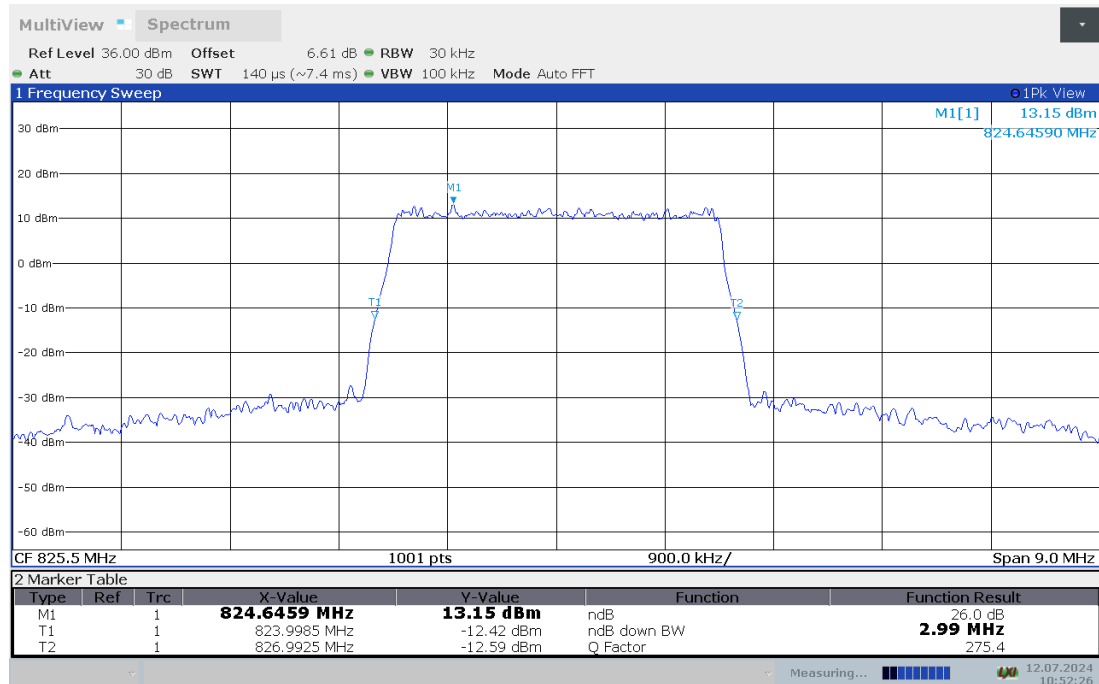
LTE band 5 , 5MHz Bandwidth,HIGH,QPSK (-26dBc BW)
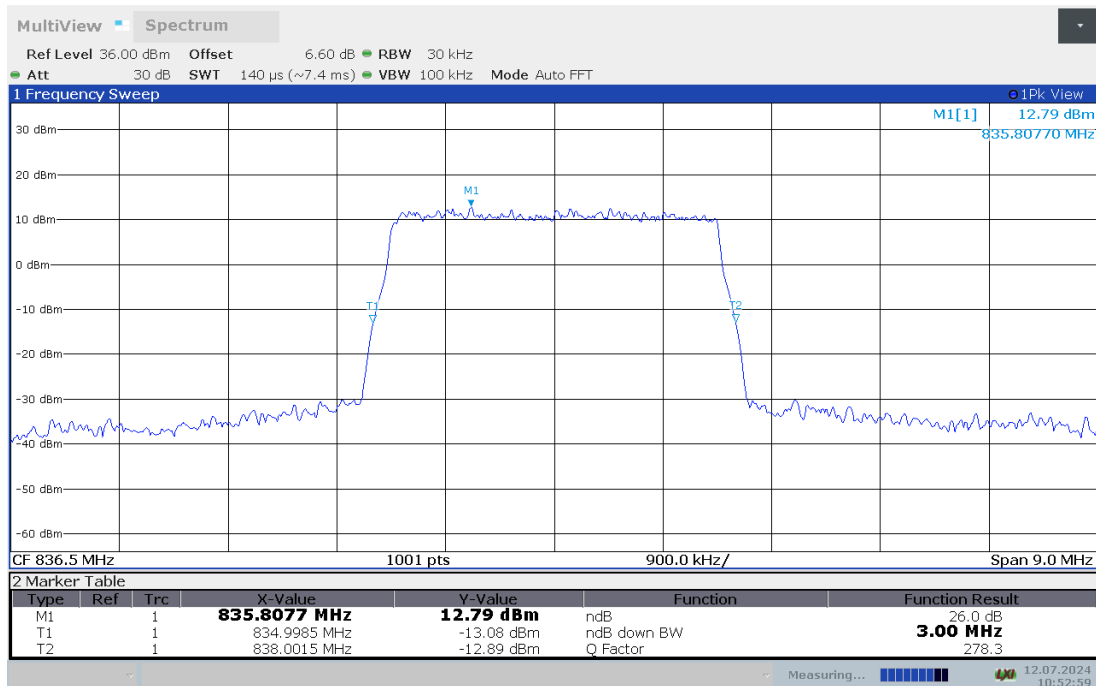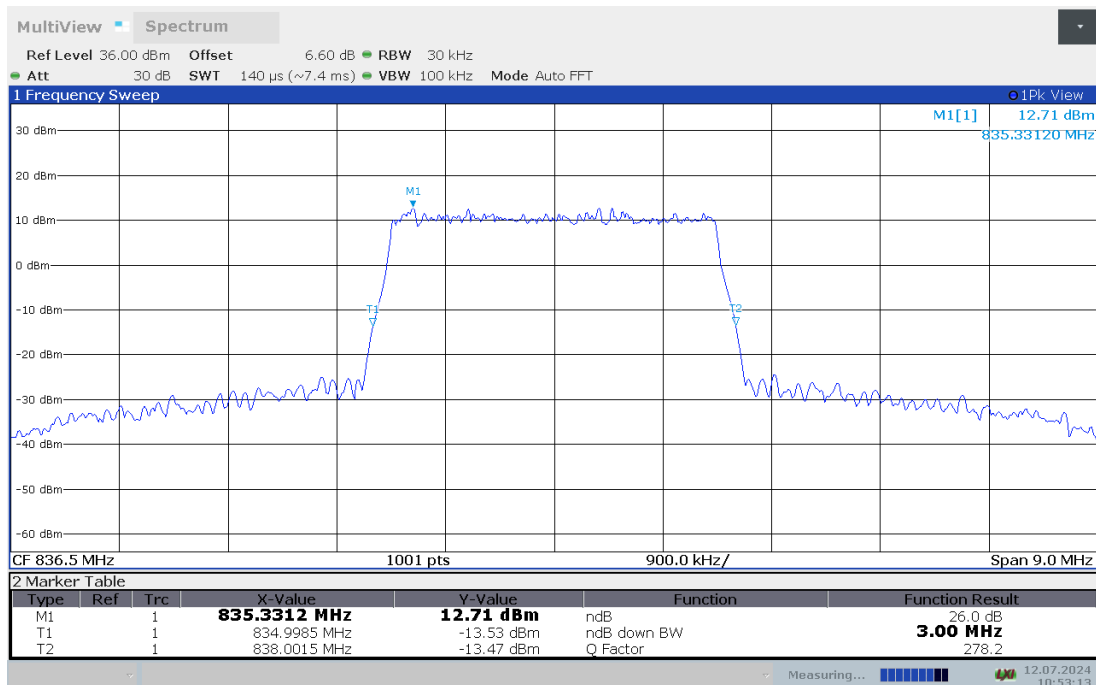

LTE band 5 , 5MHz Bandwidth,HIGH,16QAM (-26dBc BW)

LTE band 5,10MHz(-26dBc)

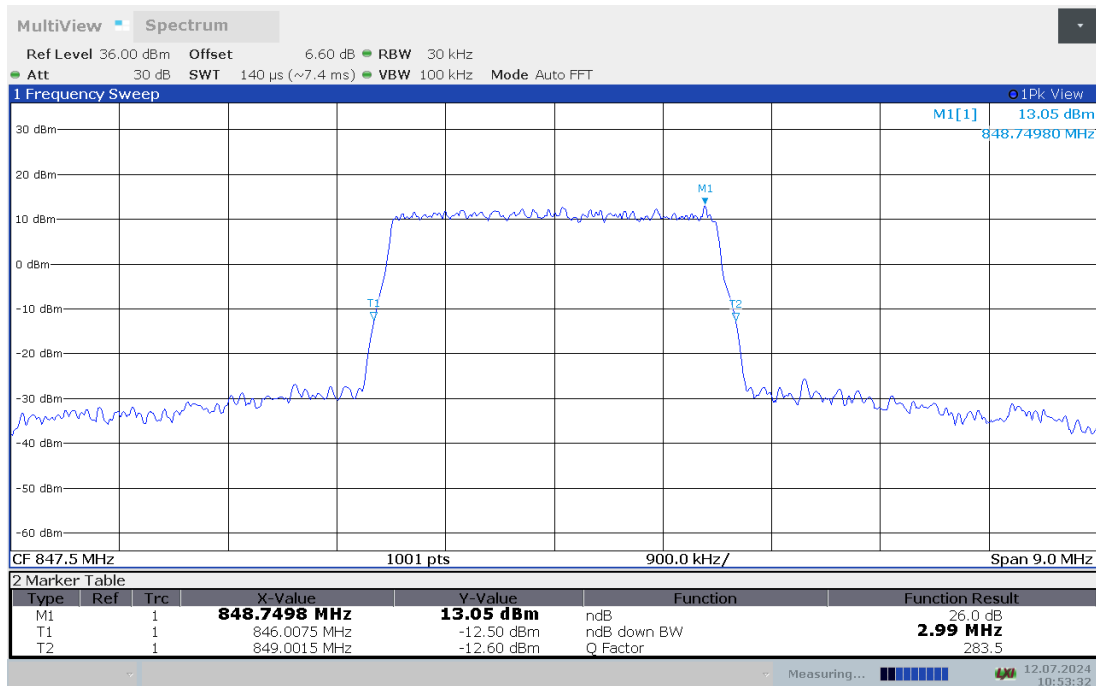| Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
829	9.770	9.710
836.5	9.710	9.740
844	9.710	9.830

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

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

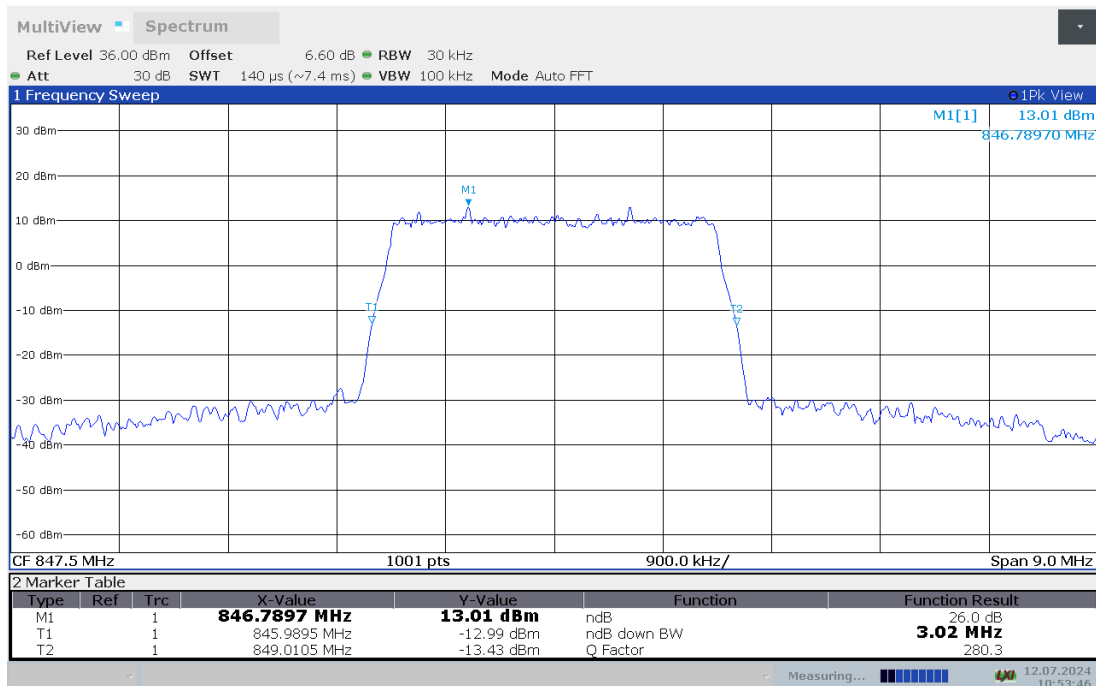## LTE band 5 , 10MHz Bandwidth,MID,QPSK (-26dBc BW)
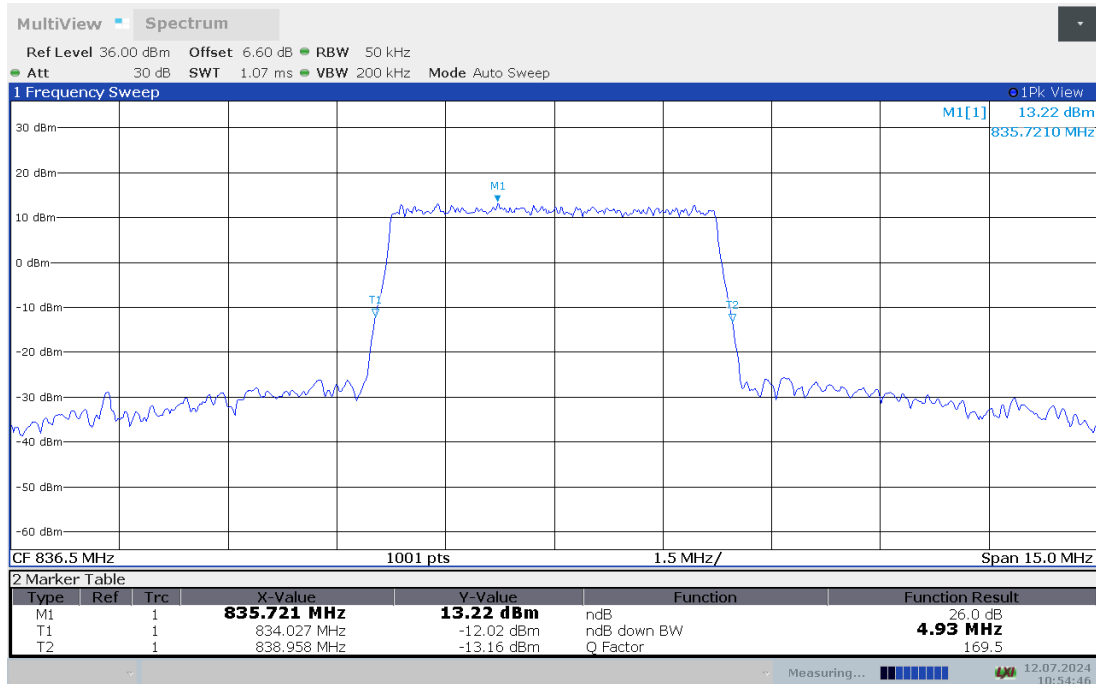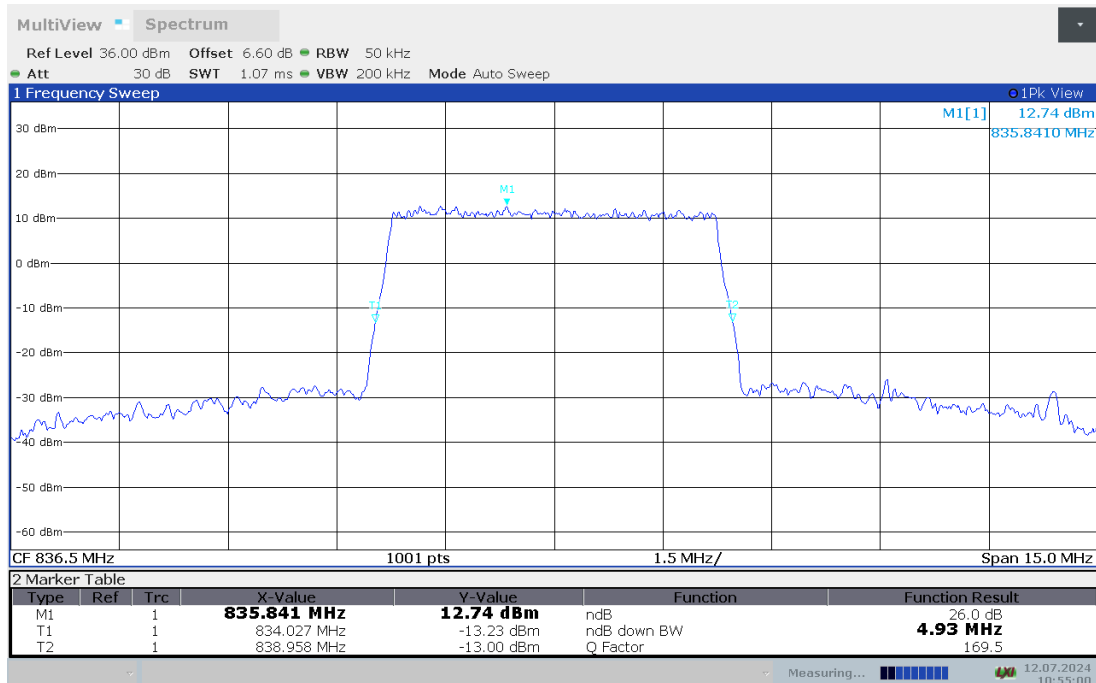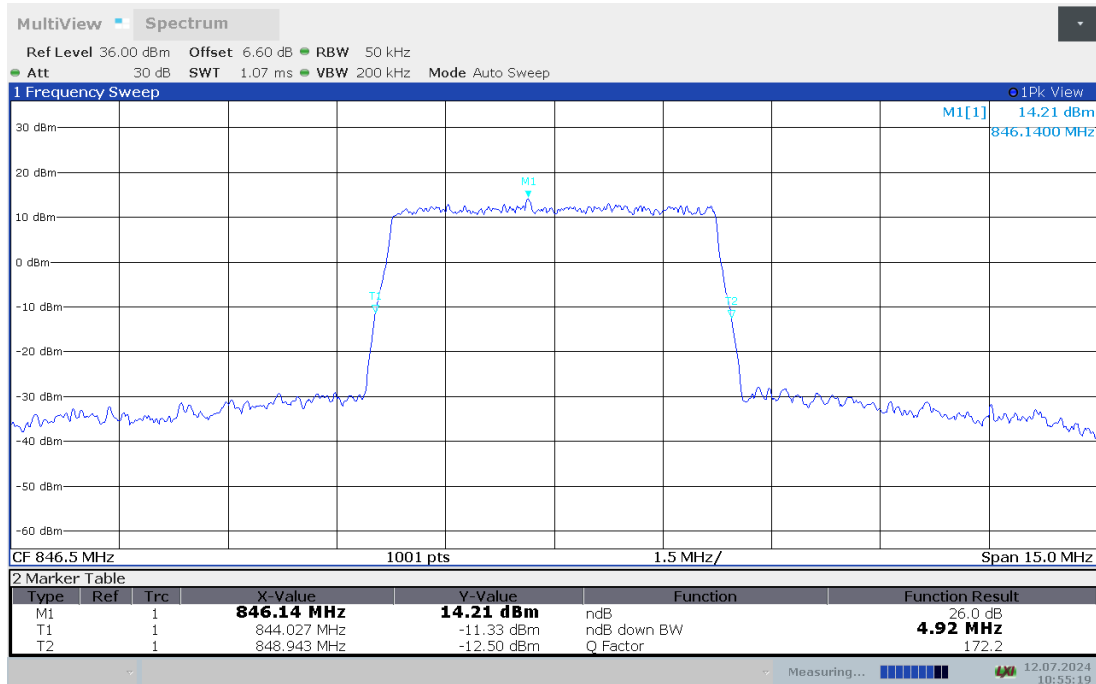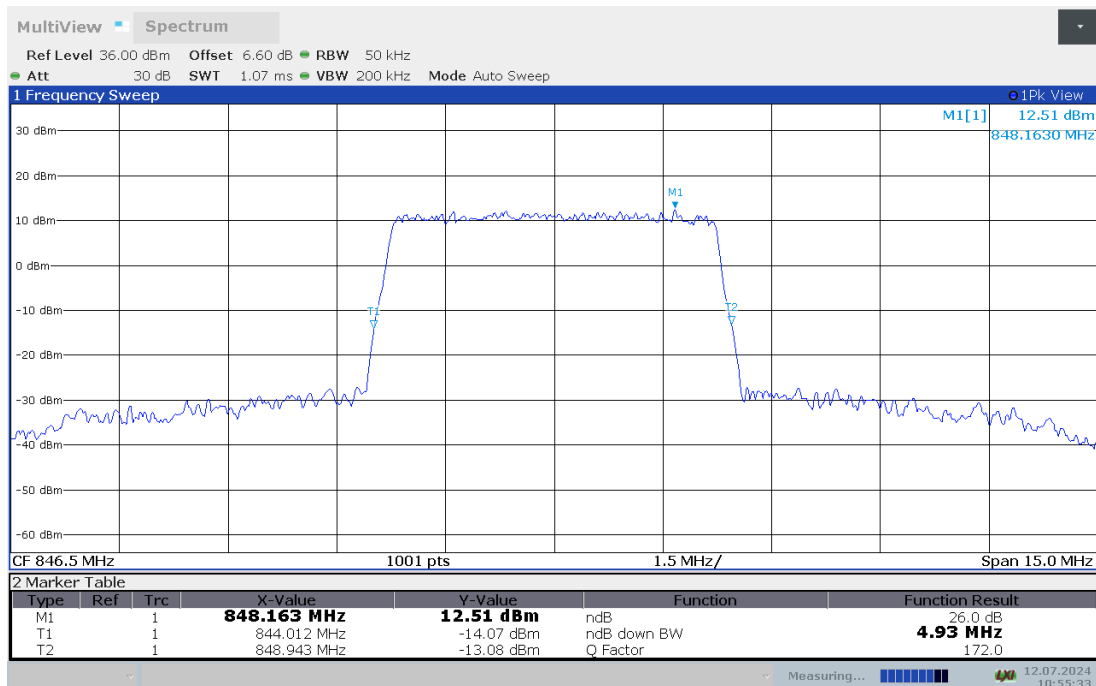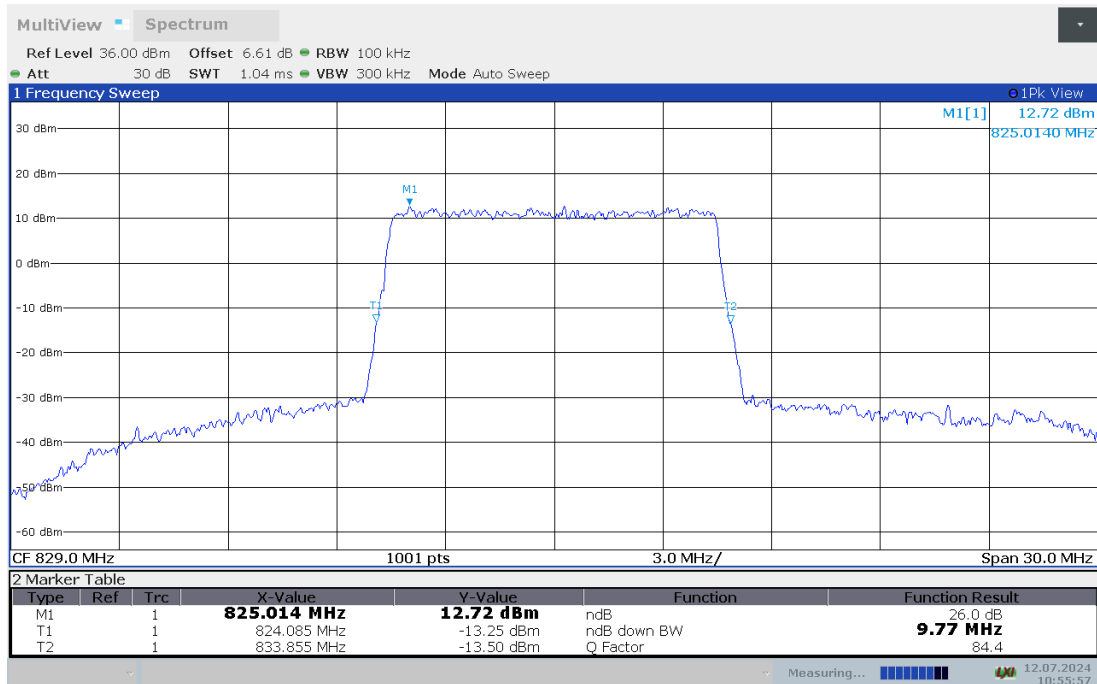
MultiView	Spectrum		
Ref Level 36.00 dBm	Offset 6.60 dB ● RBW 100 kHz		
● Att 30 dB	SWT 1.04 ms ● VBW 300 kHz Mode Auto Sweep		

1 Frequency Sweep ●1Pk View

M1[1] 13.80 dBm
840.4260 MHz

CF 836.5 MHz 1001 pts 3.0 MHz/ Span 30.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**840.426 MHz**	**13.80 dBm**	ndB	26.0 dB
T1		1	831.645 MHz	-12.56 dBm	ndB down BW	**9.71 MHz**
T2		1	841.355 MHz	-12.13 dBm	Q Factor	86.6

Measuring... 12.07.2024 10:56:30

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

MultiView	Spectrum		
Ref Level 36.00 dBm	Offset 6.60 dB ● RBW 100 kHz		
● Att 30 dB	SWT 1.04 ms ● VBW 300 kHz Mode Auto Sweep		

1 Frequency Sweep ●1Pk View

M1[1] 12.99 dBm
834.7620 MHz

CF 836.5 MHz 1001 pts 3.0 MHz/ Span 30.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**834.762 MHz**	**12.99 dBm**	ndB	26.0 dB
T1		1	831.615 MHz	-13.98 dBm	ndB down BW	**9.74 MHz**
T2		1	841.355 MHz	-12.38 dBm	Q Factor	85.7

Measuring... 12.07.2024 10:56:44

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

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

LTE band 7,5MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
2502.5	4.915	4.885
2535	4.945	4.930
2567.5	4.915	4.945

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

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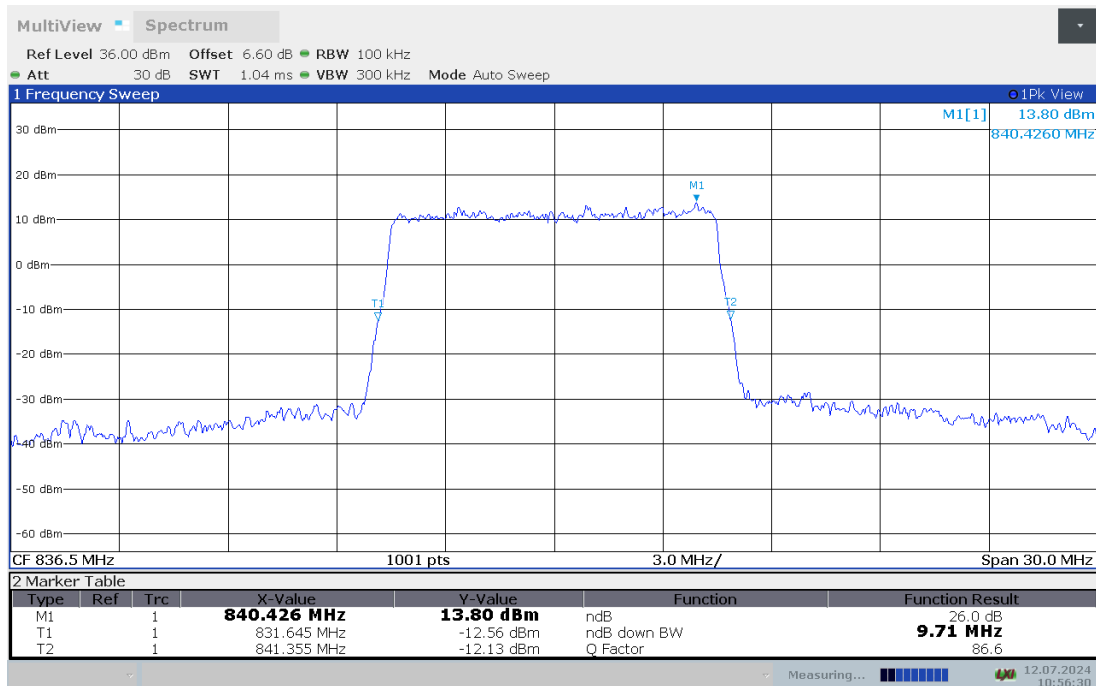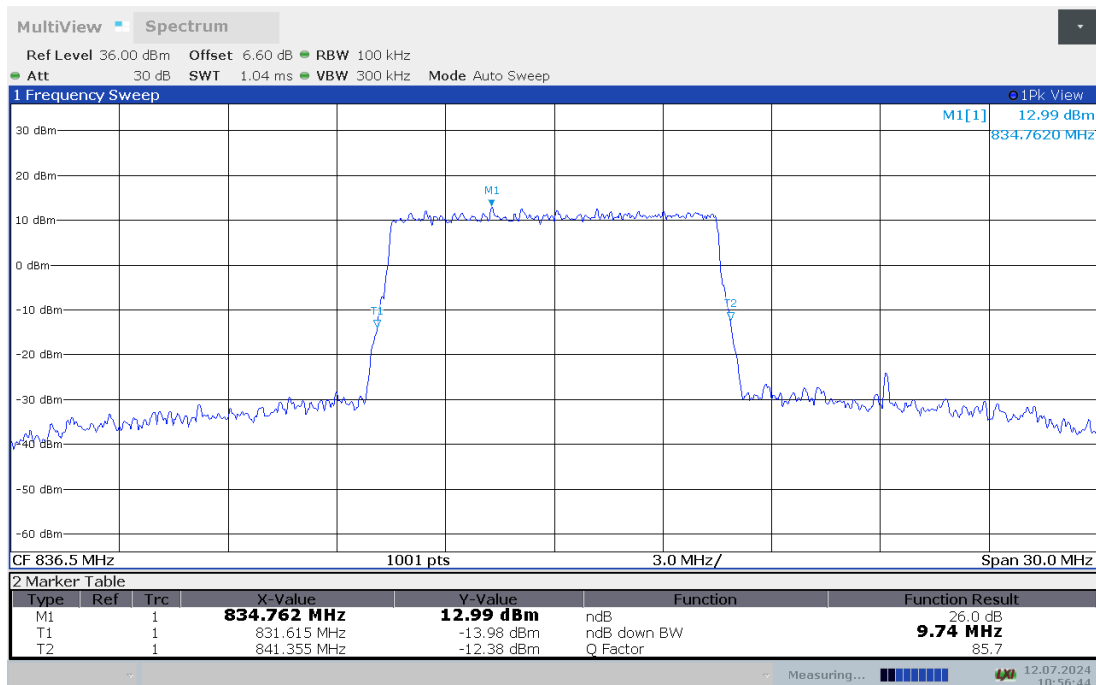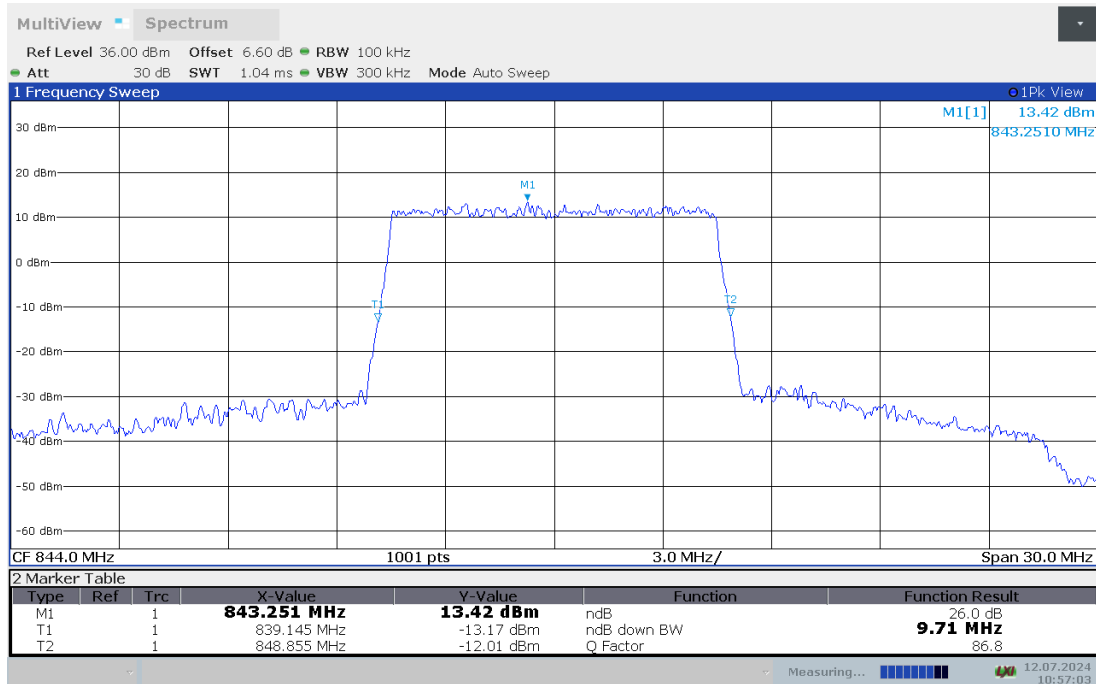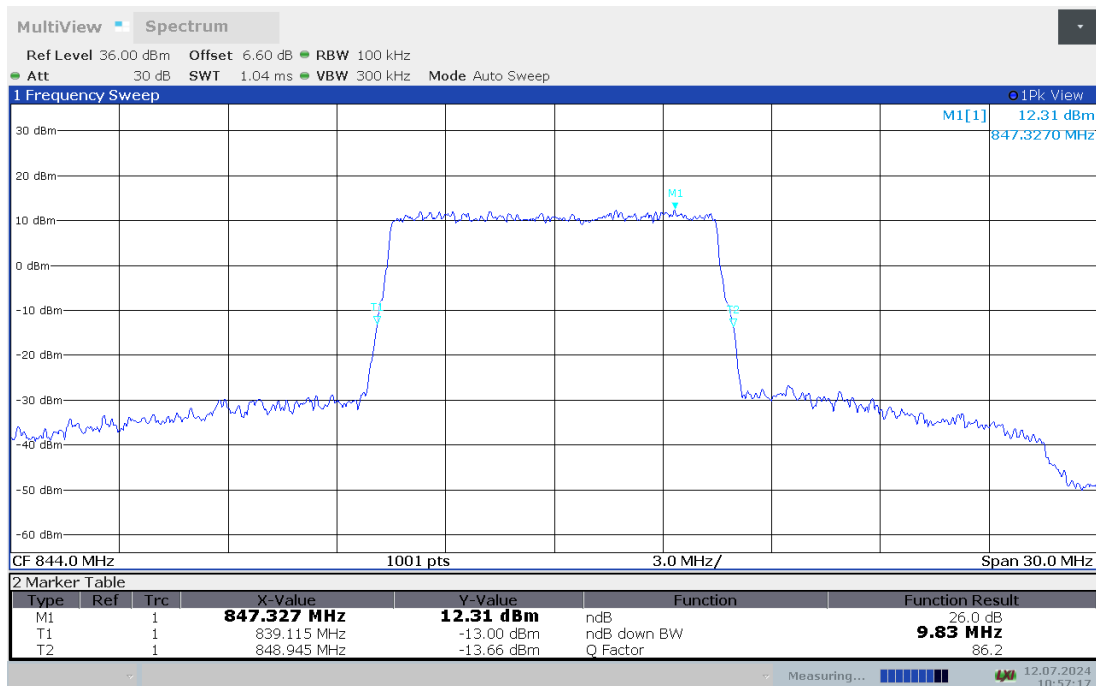
LTE band 7 , 5MHz Bandwidth,MID,QPSK (-26dBc BW)

MultiView ▪ Spectrum

Ref Level 37.00 dBm   Offset 7.04 dB ● RBW 50 kHz
● Att   30 dB   SWT 1.07 ms ● VBW 200 kHz   Mode Auto Sweep

1 Frequency Sweep ●1Pk View

M1[1]   13.22 dBm
2.5342210 GHz

CF 2.535 GHz   1001 pts   1.5 MHz/   Span 15.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.534221 GHz**	**13.22 dBm**	ndB	26.0 dB
T1		1	2.532512 GHz	-13.72 dBm	ndB down BW	**4.95 MHz**
T2		1	2.537458 GHz	-12.86 dBm	Q Factor	512.5

Measuring... ▮▮▮▮▮▮▮   12.07.2024 10:58:19

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

MultiView ▪ Spectrum

Ref Level 37.00 dBm   Offset 7.04 dB ● RBW 50 kHz
● Att   30 dB   SWT 1.07 ms ● VBW 200 kHz   Mode Auto Sweep

1 Frequency Sweep ●1Pk View

M1[1]   12.65 dBm
2.5343410 GHz

CF 2.535 GHz   1001 pts   1.5 MHz/   Span 15.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.534341 GHz**	**12.65 dBm**	ndB	26.0 dB
T1		1	2.532527 GHz	-13.69 dBm	ndB down BW	**4.93 MHz**
T2		1	2.537458 GHz	-13.03 dBm	Q Factor	514.1

Measuring... ▮▮▮▮▮▮▮   12.07.2024 10:58:33
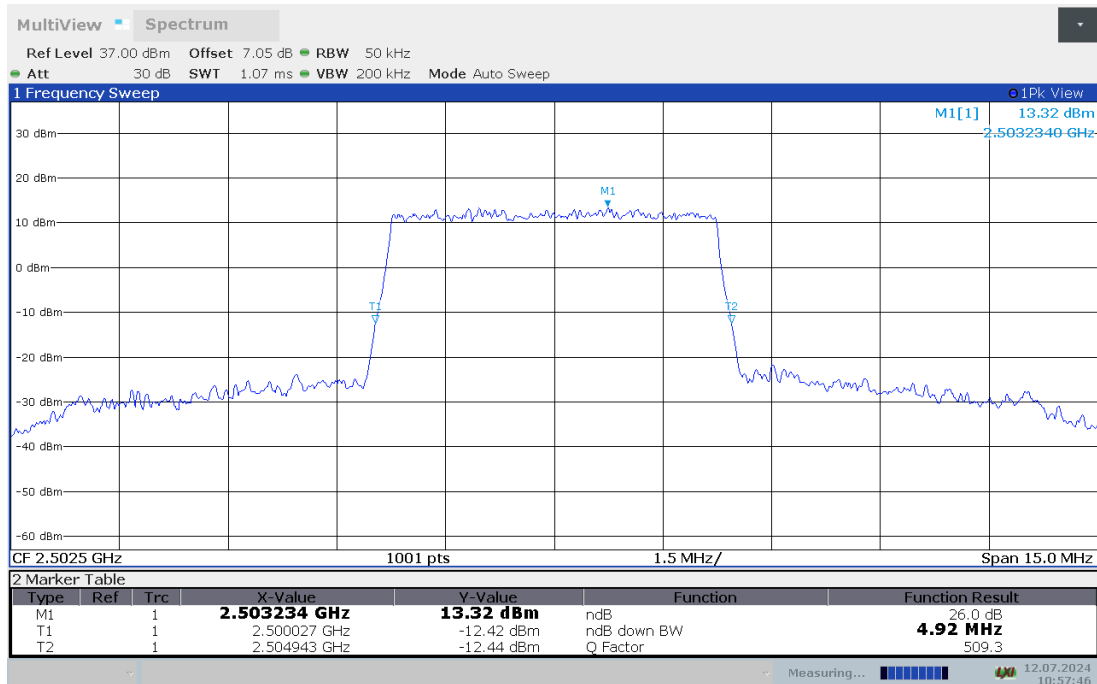
LTE band 7 , 5MHz Bandwidth,HIGH,QPSK (-26dBc BW)

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

LTE band 7,10MHz(-26dBc)

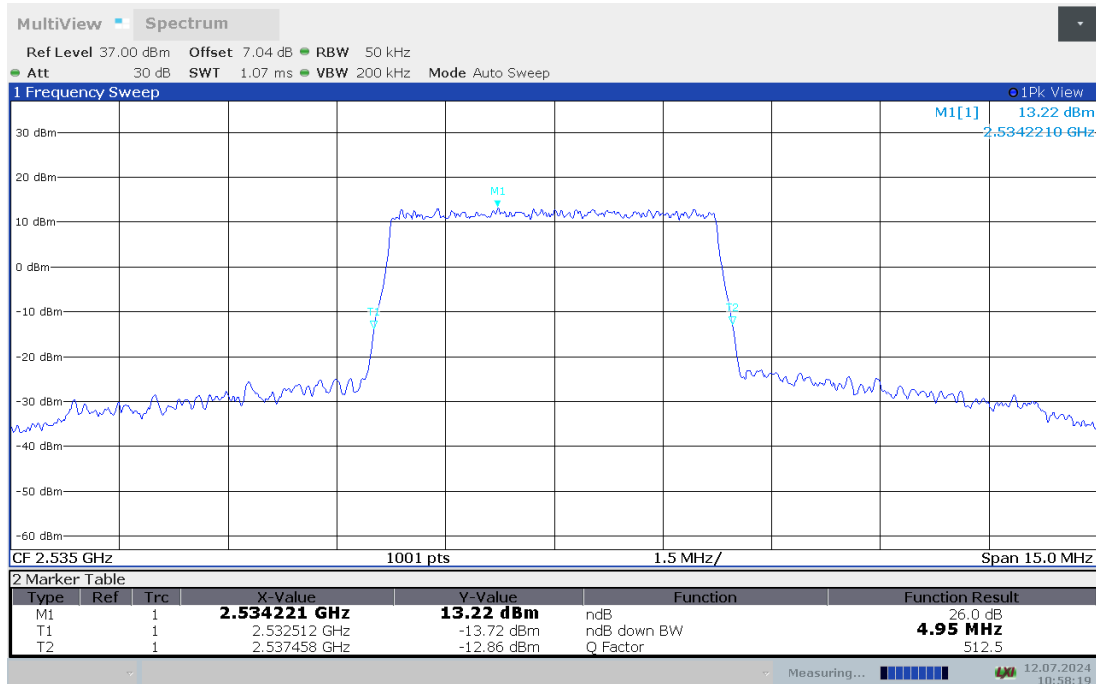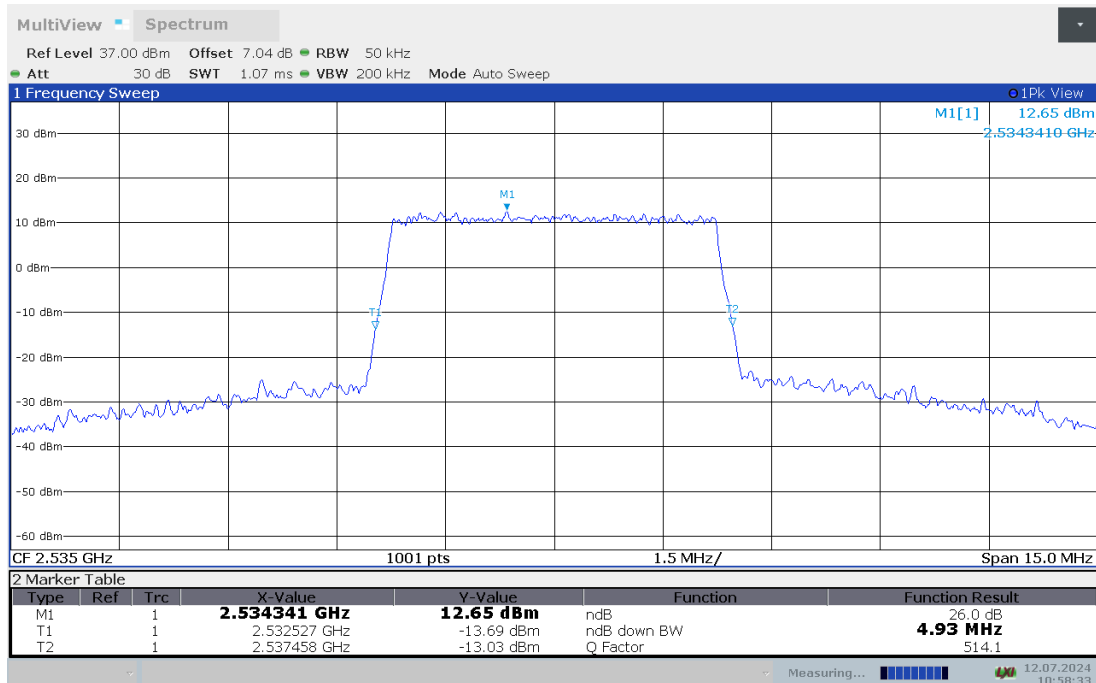| Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
2505	9.710	9.710
2535	9.710	9.770
2565	9.770	9.770

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

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

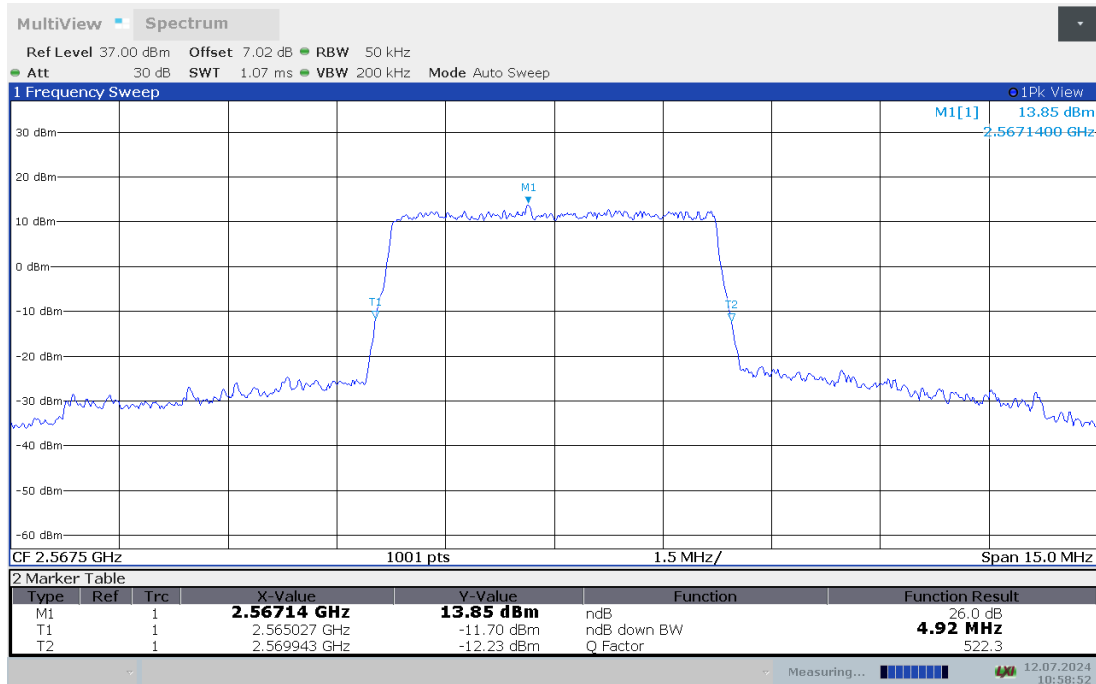**LTE band 7 , 10MHz Bandwidth,MID,QPSK (-26dBc BW)**

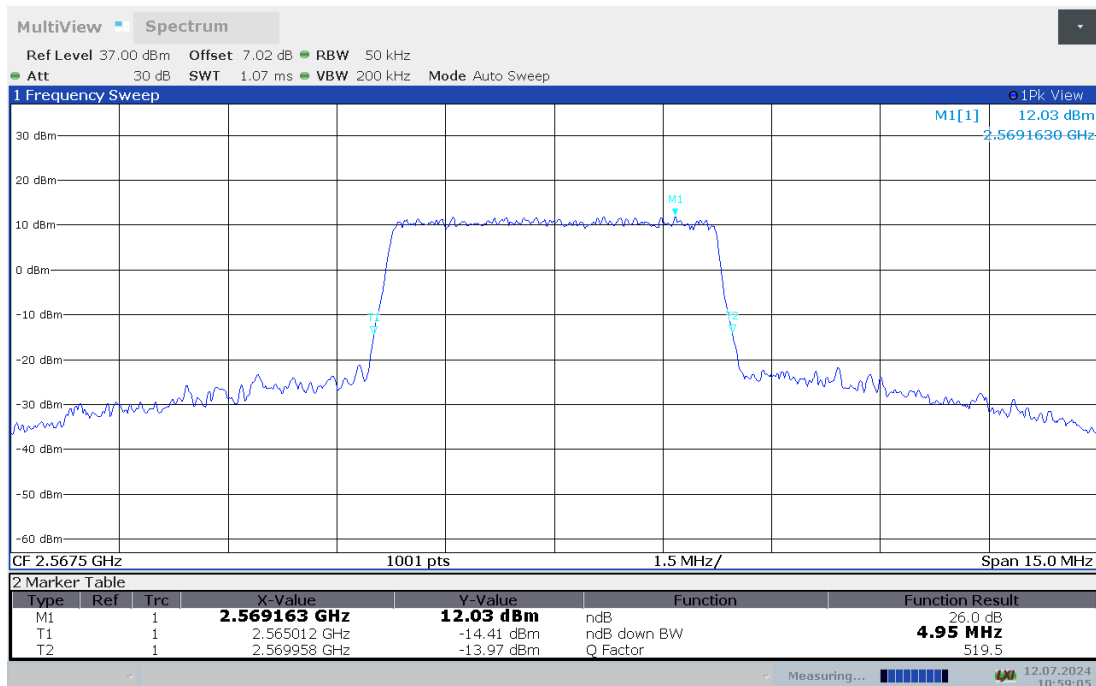**LTE band 7 , 10MHz Bandwidth,MID,16QAM (-26dBc BW)**
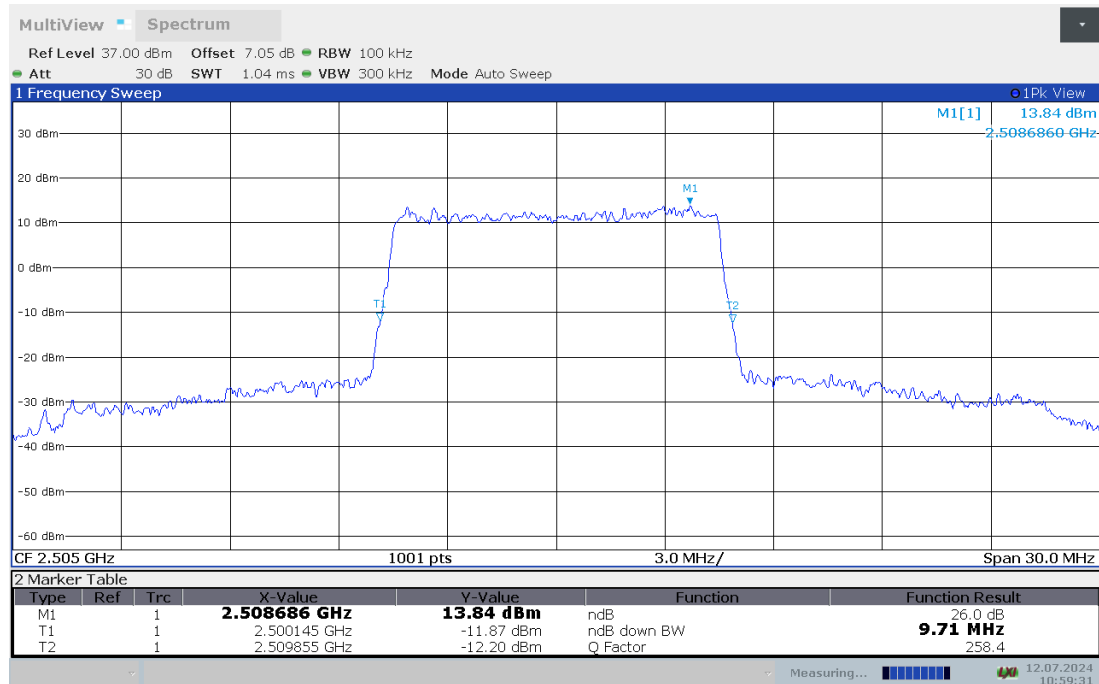
LTE band 7 , 10MHz Bandwidth,HIGH,QPSK (-26dBc BW)
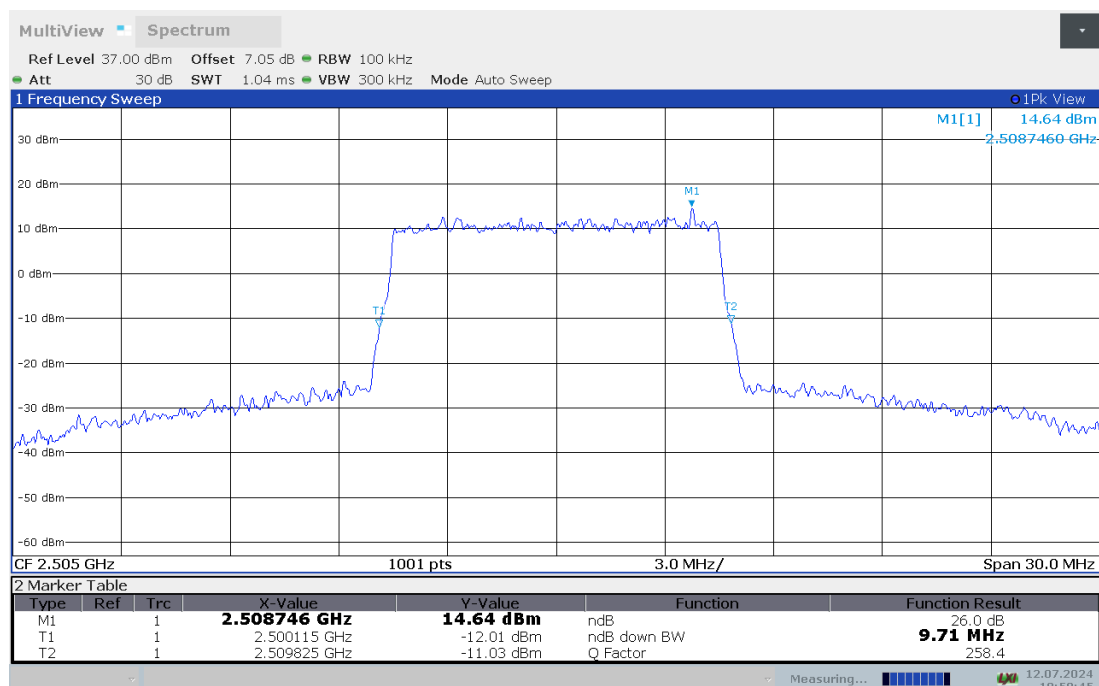

LTE band 7 , 10MHz Bandwidth,HIGH,16QAM (-26dBc BW)

LTE band 7,15MHz(-26dBc)

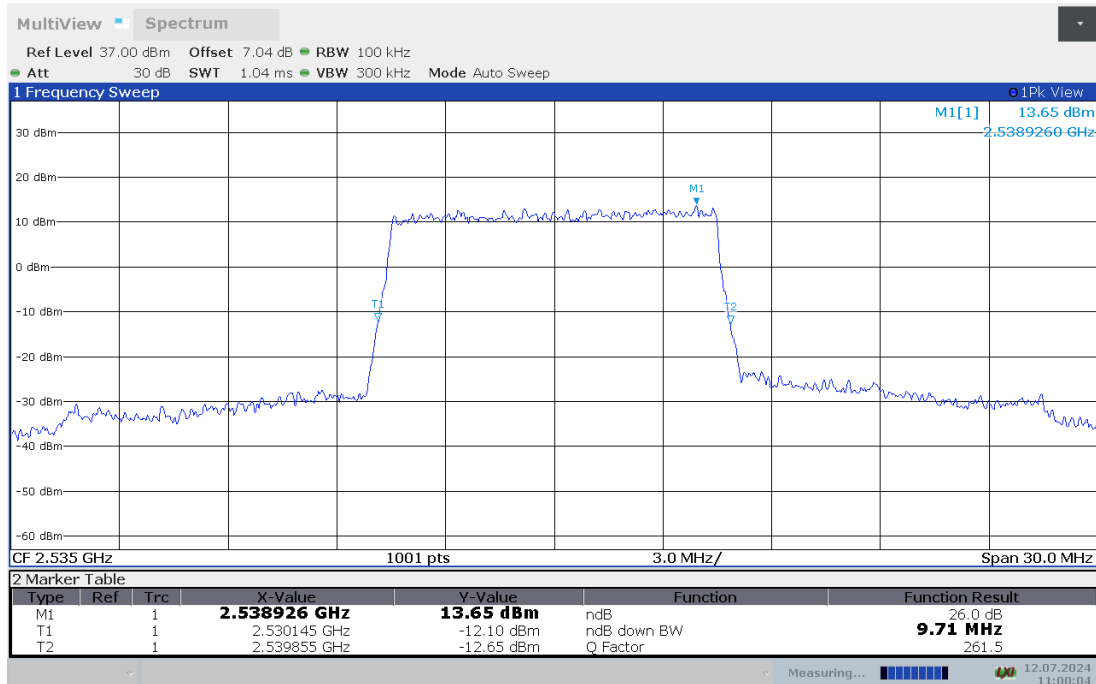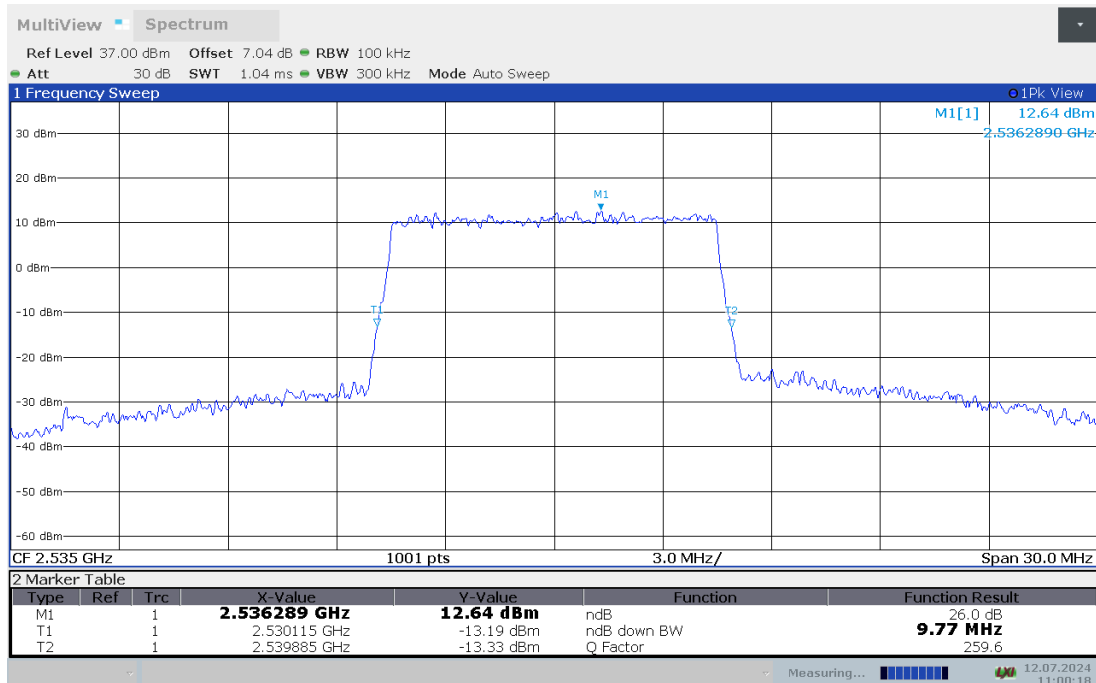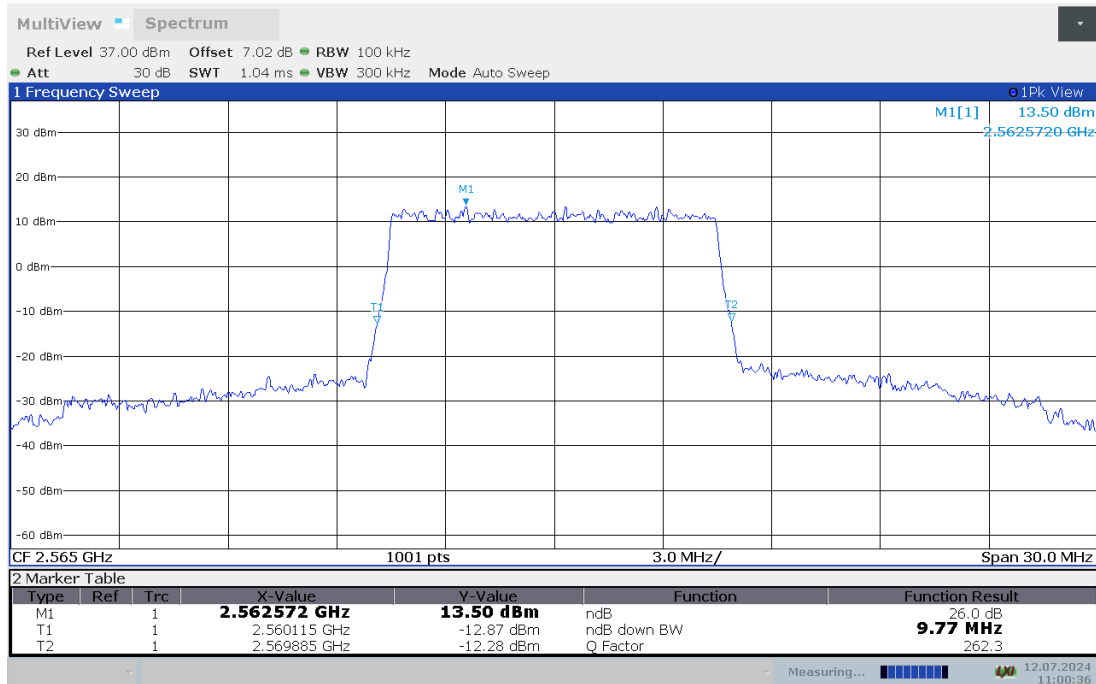| Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
2507.5	14.835	14.745
2535	14.655	14.970
2562.5	14.700	14.610

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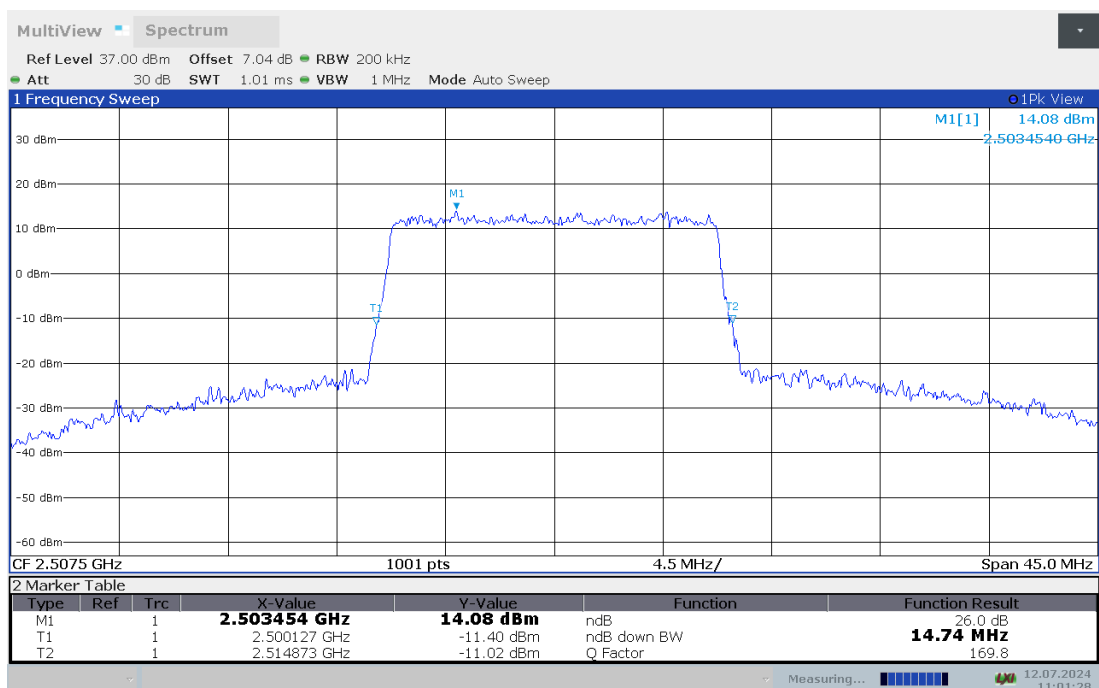
LTE band 7 , 15MHz Bandwidth,LOW,16QAM (-26dBc BW)

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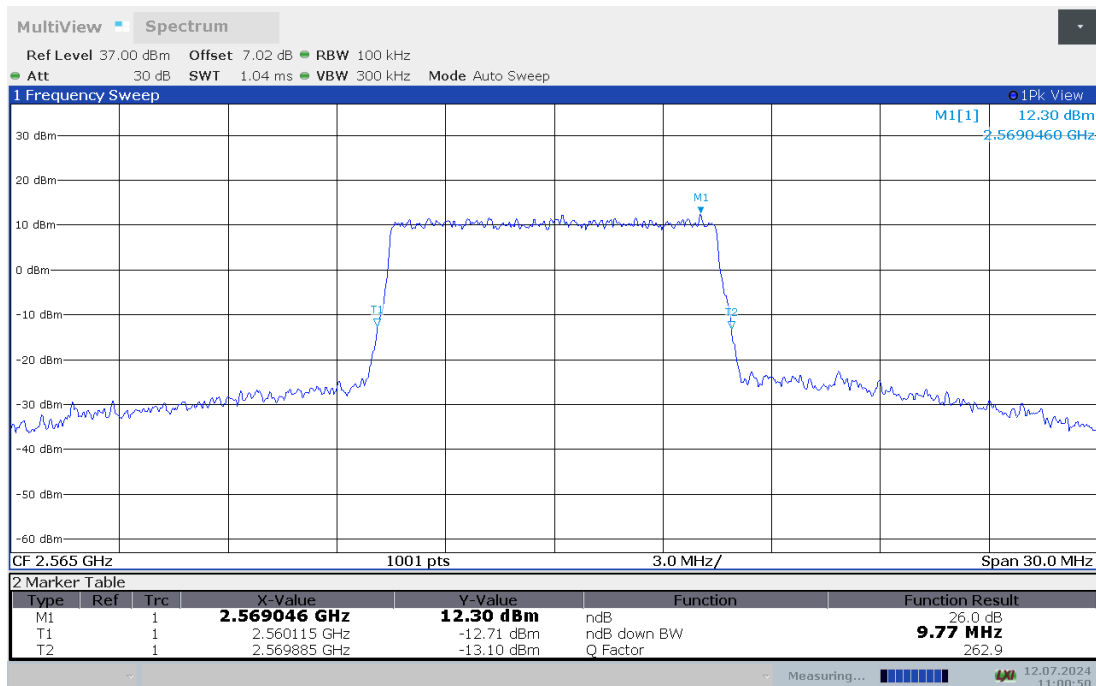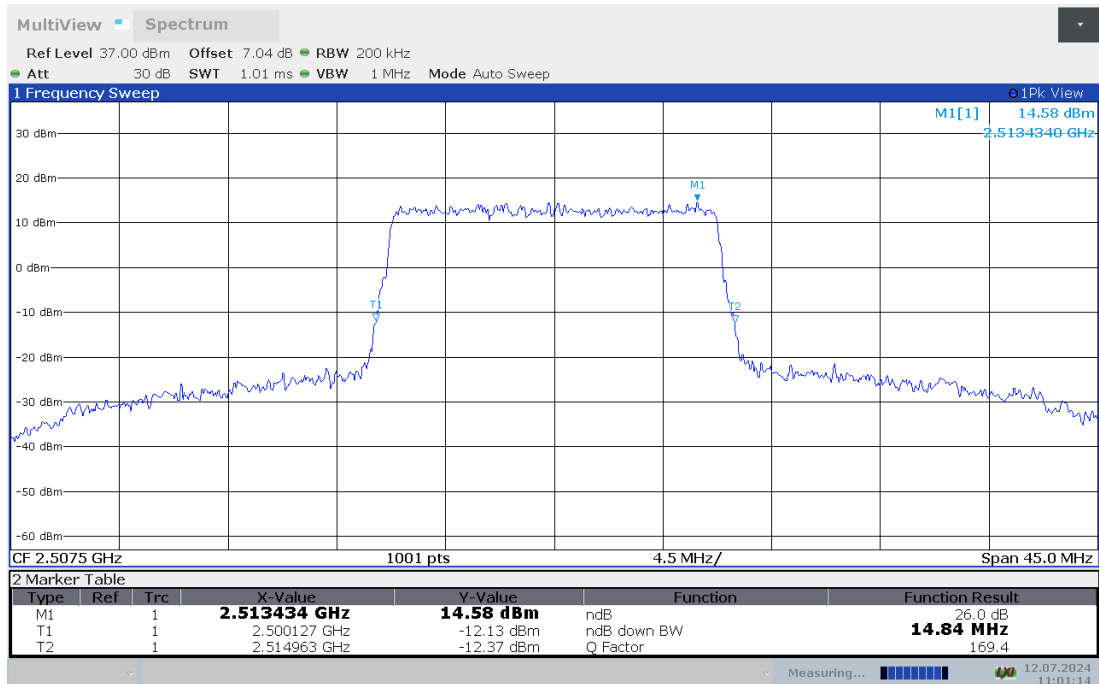

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.539451 GHz**	**14.75 dBm**	ndB	26.0 dB
T1		1	2.527762 GHz	-10.76 dBm	ndB down BW	**14.65 MHz**
T2		1	2.542418 GHz	-10.29 dBm	Q Factor	173.3

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

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.538956 GHz**	**14.31 dBm**	ndB	26.0 dB
T1		1	2.527493 GHz	-12.61 dBm	ndB down BW	**14.97 MHz**
T2		1	2.542463 GHz	-12.62 dBm	Q Factor	169.6

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

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

LTE band 7,20MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
2510	19.181	19.301
2535	19.121	19.181
2560	19.421	19.421

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

LTE band 7 , 20MHz Bandwidth,LOW,16QAM (-26dBc BW)
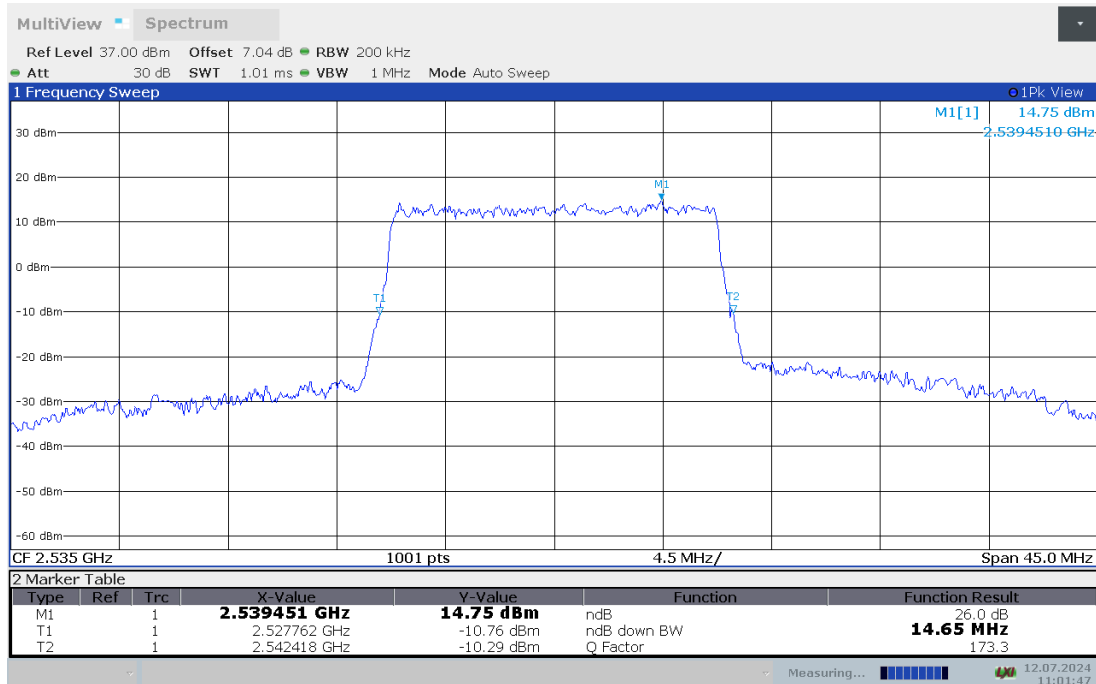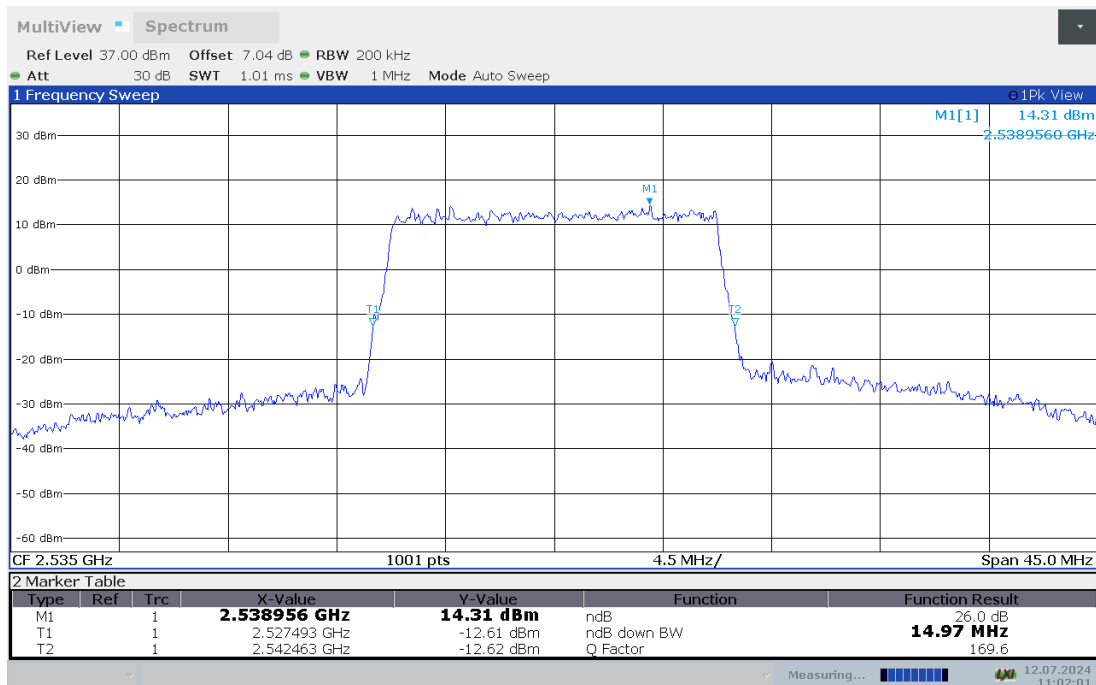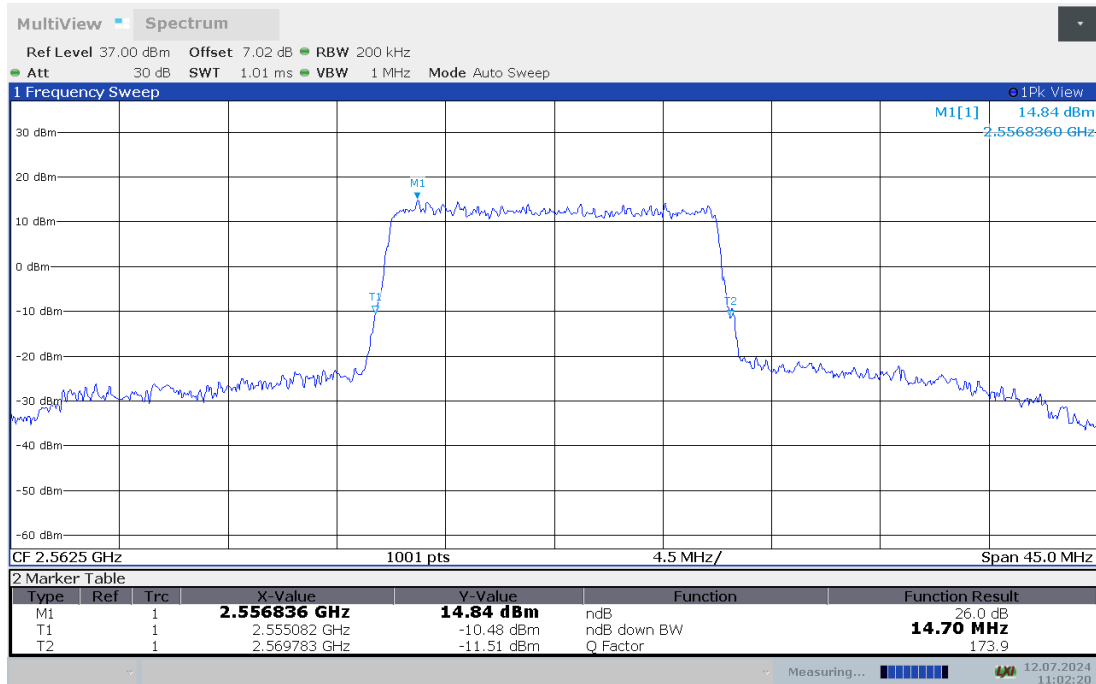
LTE band 7 , 20MHz Bandwidth,MID,QPSK (-26dBc BW)
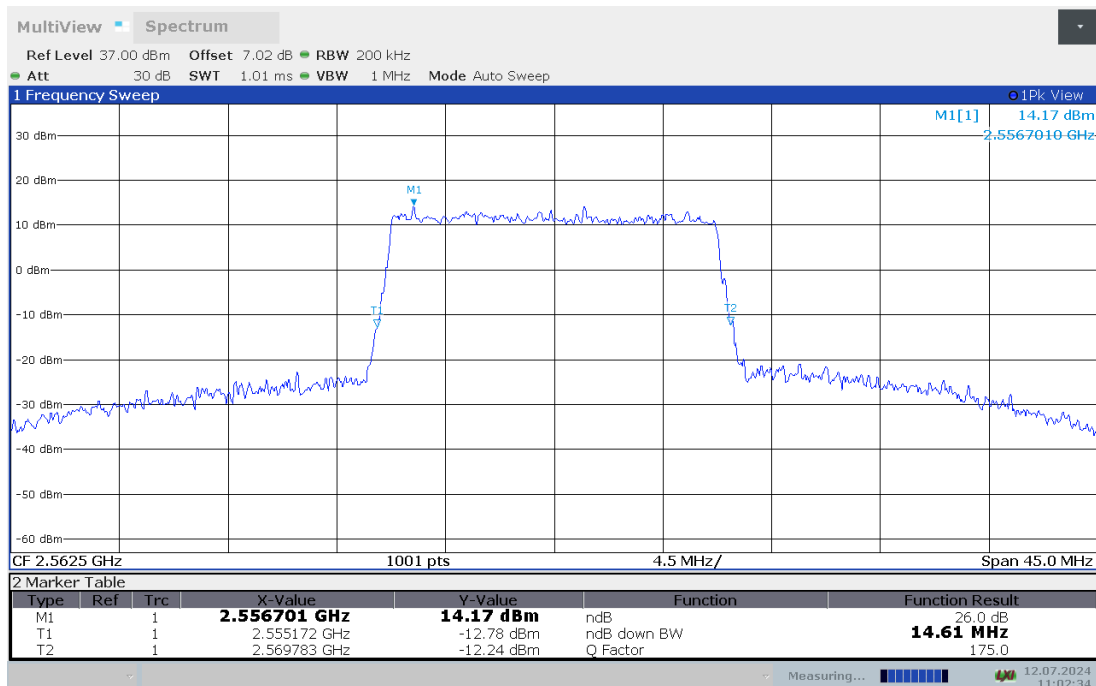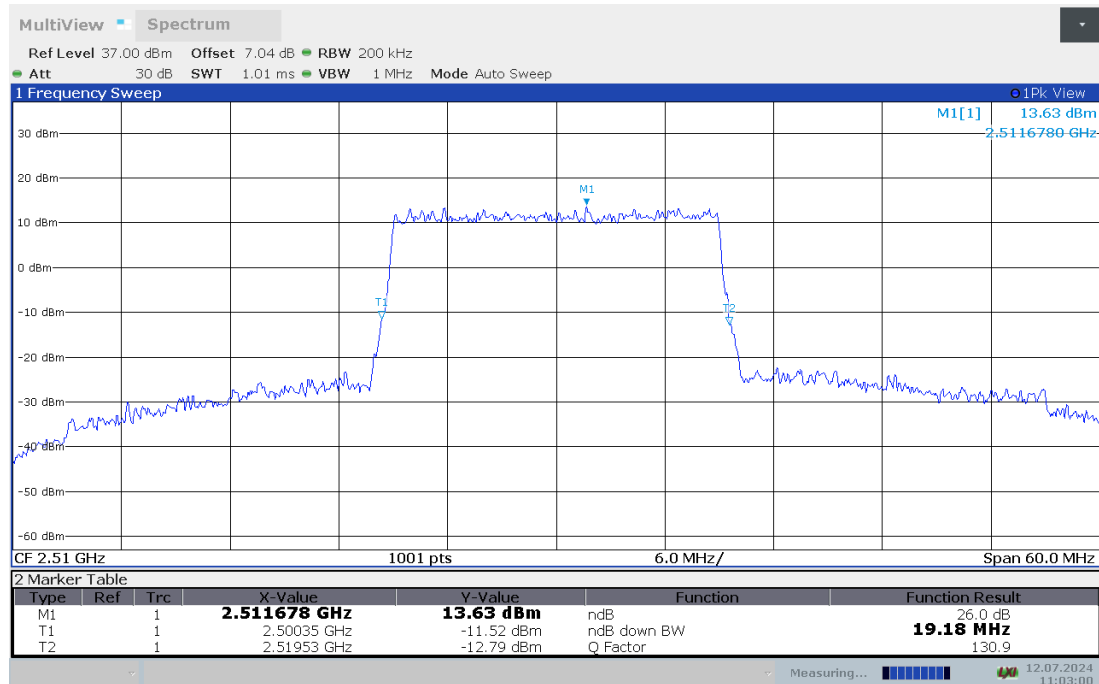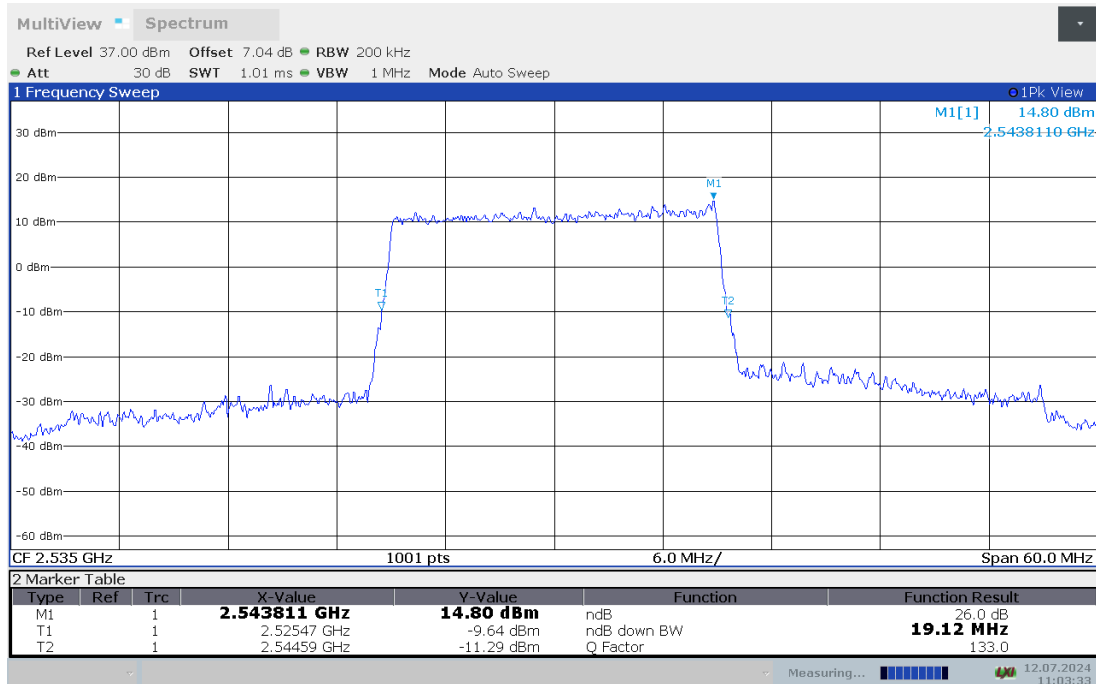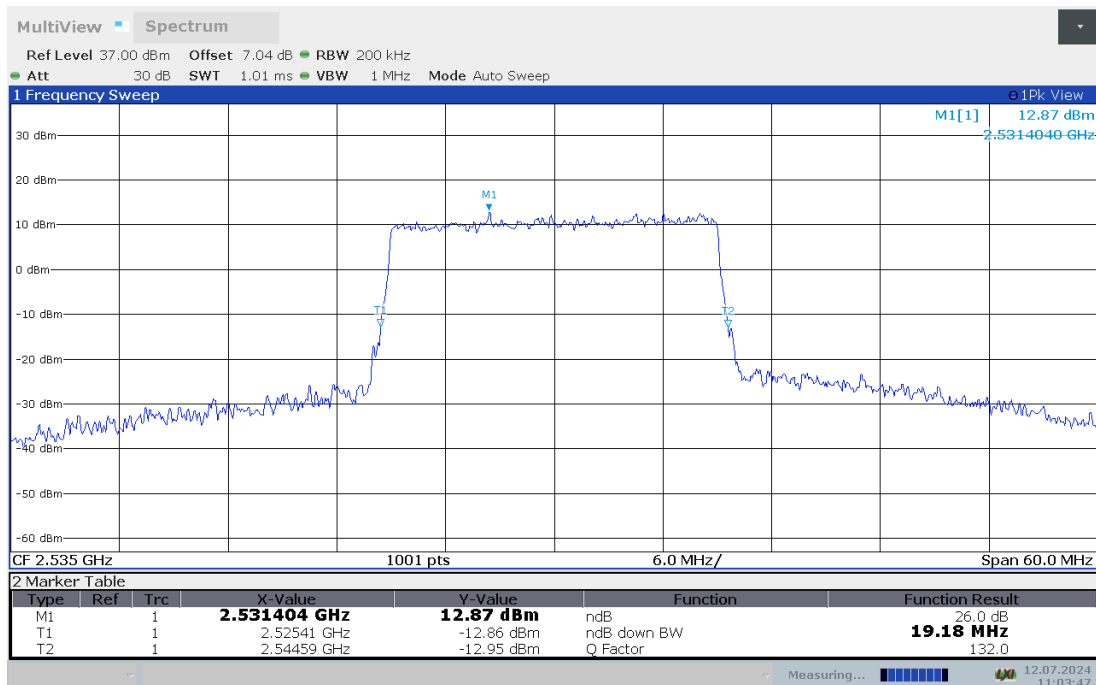
MultiView ▪ Spectrum

Ref Level 37.00 dBm Offset 7.04 dB ● RBW 200 kHz
● Att   30 dB SWT 1.01 ms ● VBW 1 MHz Mode Auto Sweep

1 Frequency Sweep   ●1Pk View

M1[1]   14.80 dBm
2.5438110 GHz

CF 2.535 GHz   1001 pts   6.0 MHz/   Span 60.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.543811 GHz**	**14.80 dBm**	ndB	26.0 dB
T1		1	2.52547 GHz	-9.64 dBm	ndB down BW	**19.12 MHz**
T2		1	2.54459 GHz	-11.29 dBm	Q Factor	133.0

Measuring... ▮▮▮▮▮▮▮▮ 12.07.2024 11:03:33

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

MultiView ▪ Spectrum

Ref Level 37.00 dBm Offset 7.04 dB ● RBW 200 kHz
● Att   30 dB SWT 1.01 ms ● VBW 1 MHz Mode Auto Sweep

1 Frequency Sweep   ●1Pk View

M1[1]   12.87 dBm
2.5314040 GHz

CF 2.535 GHz   1001 pts   6.0 MHz/   Span 60.0 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.531404 GHz**	**12.87 dBm**	ndB	26.0 dB
T1		1	2.52541 GHz	-12.86 dBm	ndB down BW	**19.18 MHz**
T2		1	2.54459 GHz	-12.95 dBm	Q Factor	132.0

Measuring... ▮▮▮▮▮▮▮▮ 12.07.2024 11:03:47

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

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

LTE band 66,1.4MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1710.7	1.238	1.242
1745	1.242	1.229
1779.3	1.238	1.238

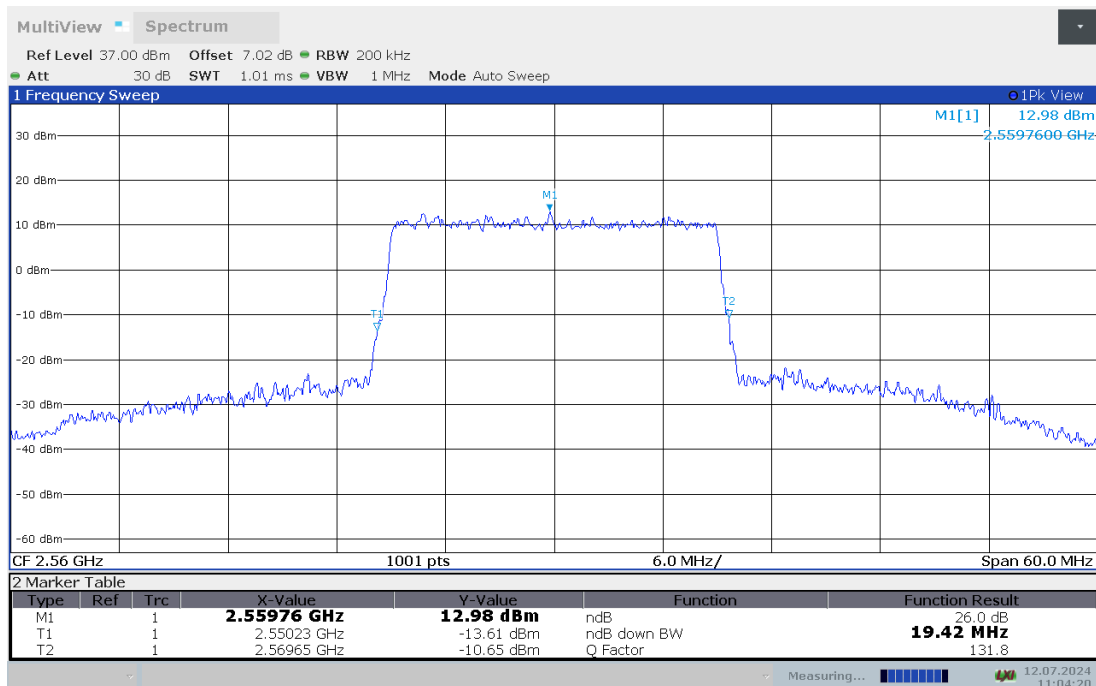## LTE band 66 , 1.4MHz Bandwidth,LOW,QPSK (-26dBc BW)

LTE band 66 , 1.4MHz Bandwidth,LOW,16QAM (-26dBc BW)

LTE band 66 , 1.4MHz Bandwidth,MID,QPSK (-26dBc BW)

LTE band 66 , 1.4MHz Bandwidth,MID,16QAM (-26dBc BW)
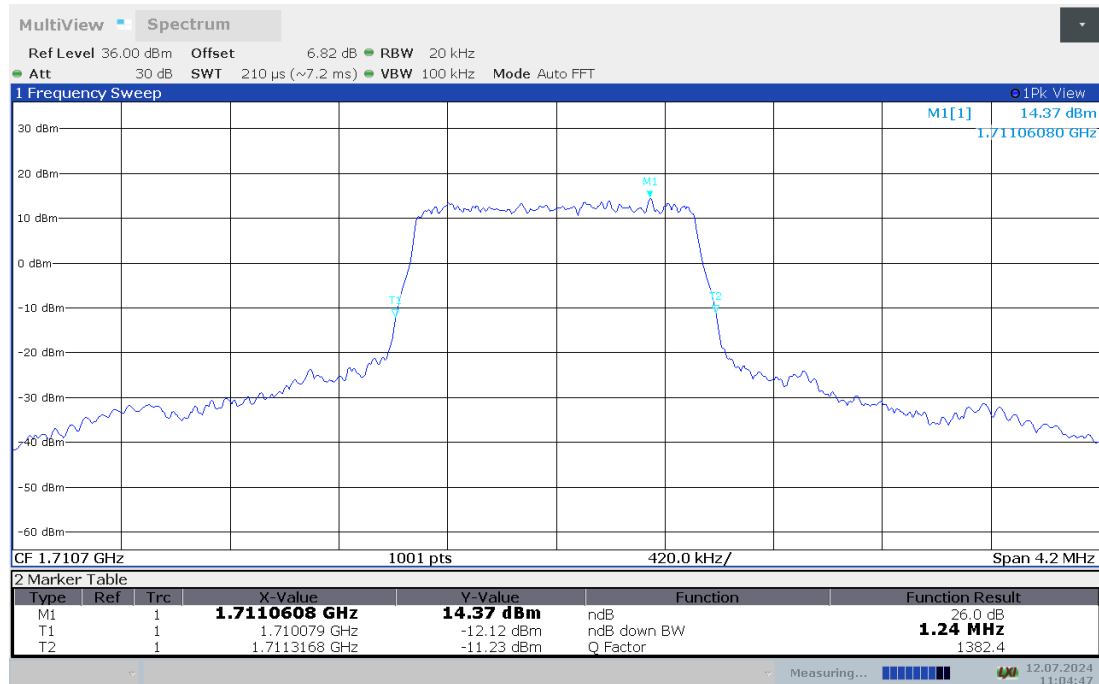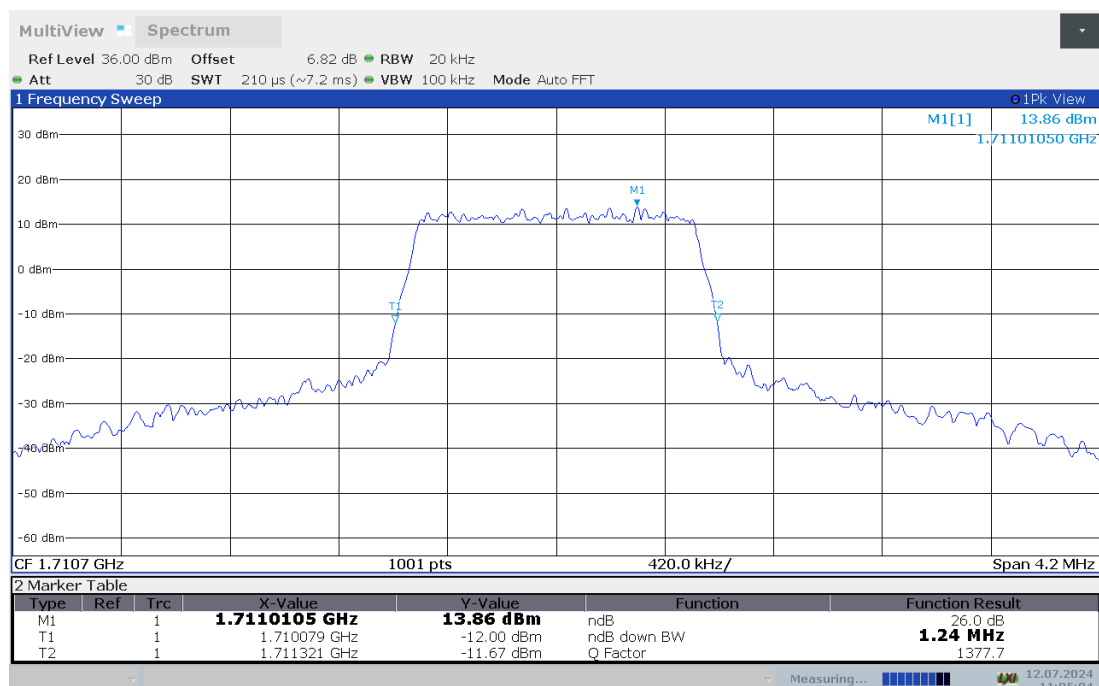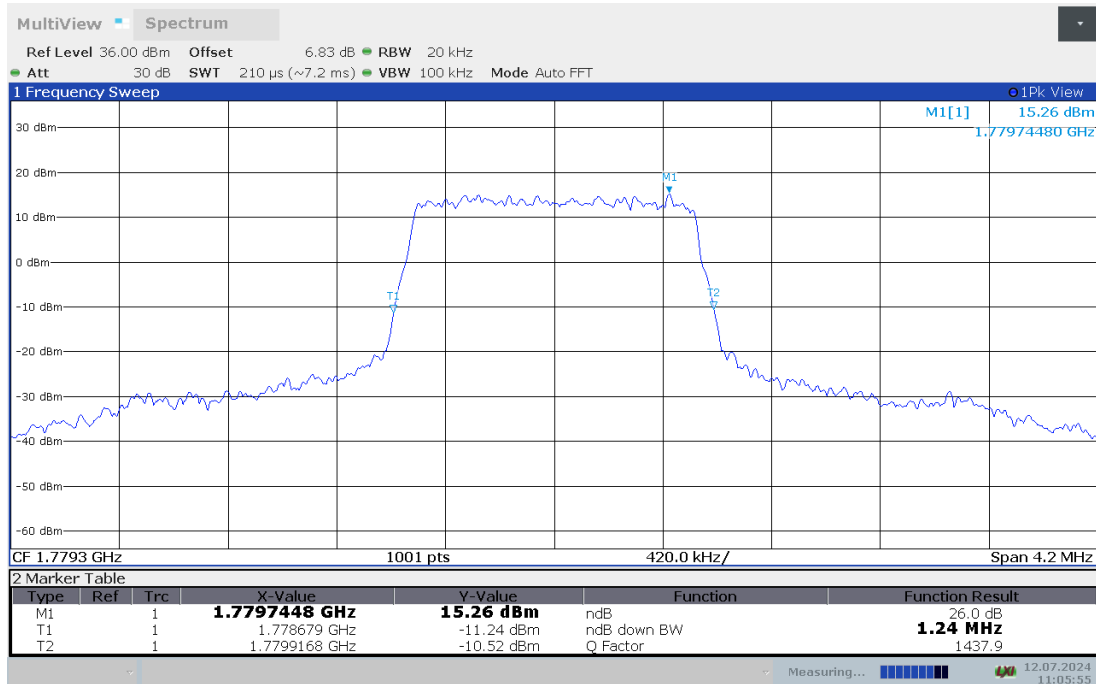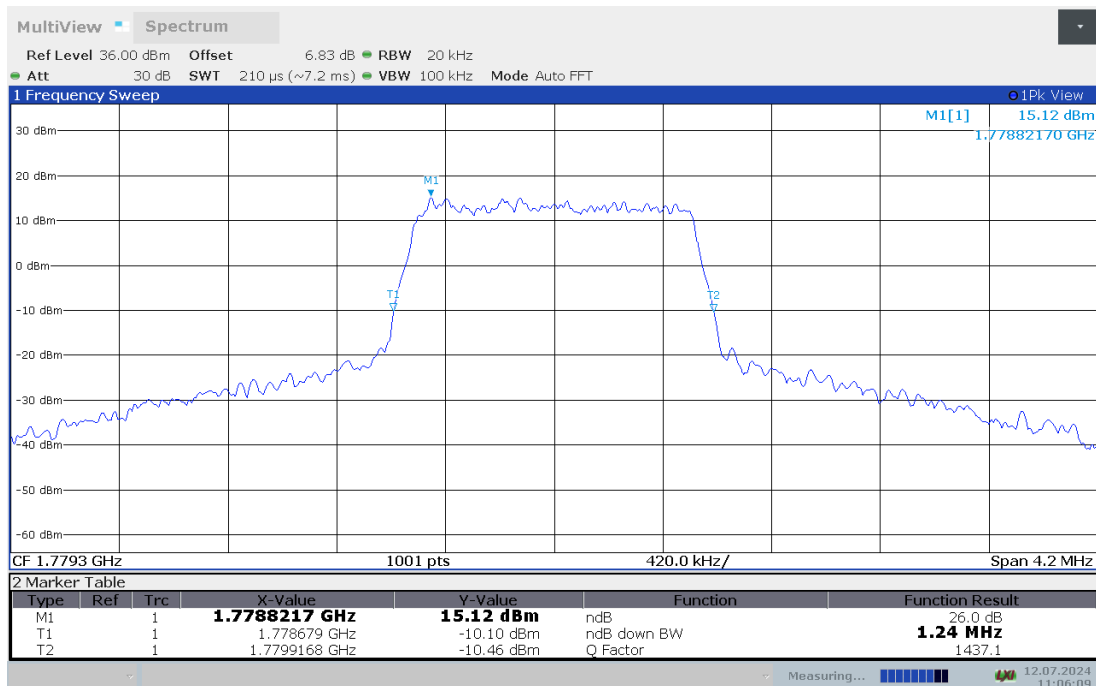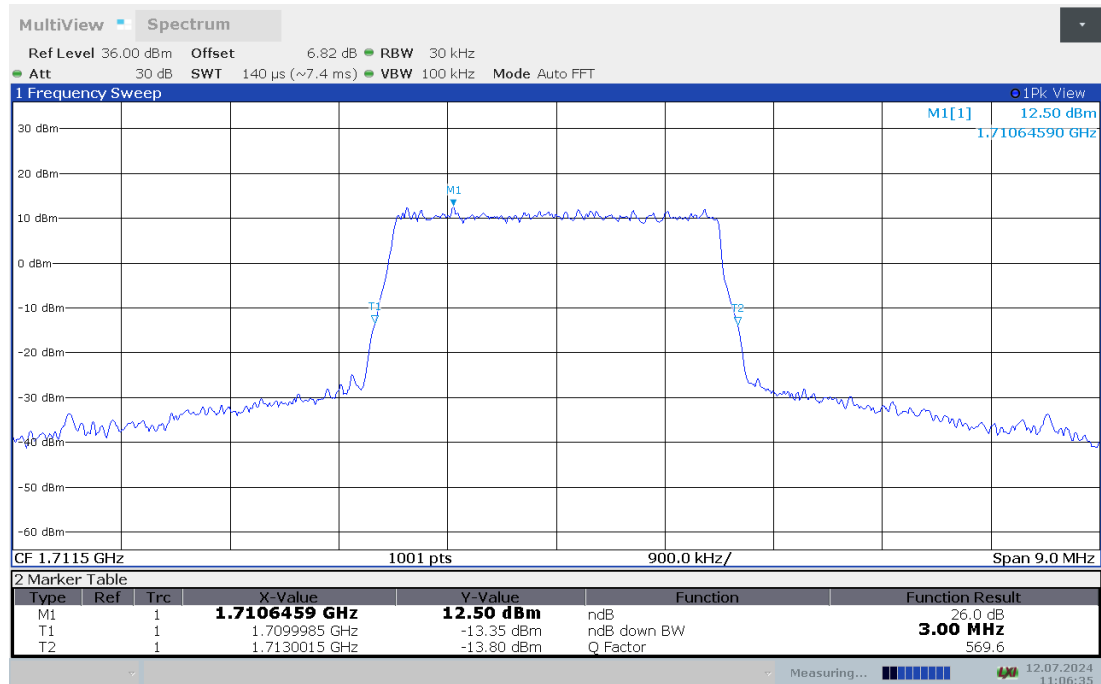
LTE band 66 , 1.4MHz Bandwidth,HIGH,QPSK (-26dBc BW)

MultiView	Spectrum					

Ref Level 36.00 dBm Offset 6.83 dB ● RBW 20 kHz
● Att 30 dB SWT 210 µs (~7.2 ms) ● VBW 100 kHz Mode Auto FFT

1 Frequency Sweep ● 1Pk View

M1[1] 15.26 dBm
1.77974480 GHz

CF 1.7793 GHz 1001 pts 420.0 kHz/ Span 4.2 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.7797448 GHz**	**15.26 dBm**	ndB	26.0 dB
T1		1	1.778679 GHz	-11.24 dBm	ndB down BW	**1.24 MHz**
T2		1	1.7799168 GHz	-10.52 dBm	Q Factor	1437.9

Measuring… 12.07.2024 11:05:55

LTE band 66 , 1.4MHz Bandwidth,HIGH,16QAM (-26dBc BW)

MultiView	Spectrum					

Ref Level 36.00 dBm Offset 6.83 dB ● RBW 20 kHz
● Att 30 dB SWT 210 µs (~7.2 ms) ● VBW 100 kHz Mode Auto FFT

1 Frequency Sweep ● 1Pk View

M1[1] 15.12 dBm
1.77882170 GHz

CF 1.7793 GHz 1001 pts 420.0 kHz/ Span 4.2 MHz

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**1.7788217 GHz**	**15.12 dBm**	ndB	26.0 dB
T1		1	1.778679 GHz	-10.10 dBm	ndB down BW	**1.24 MHz**
T2		1	1.7799168 GHz	-10.46 dBm	Q Factor	1437.1

Measuring… 12.07.2024 11:06:09

LTE band 66,3MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1711.5	3.003	3.003
1745	3.003	2.994
1778.5	3.003	3.012

LTE band 66 , 3MHz Bandwidth,LOW,QPSK (-26dBc BW)

LTE band 66 , 3MHz Bandwidth,LOW,16QAM (-26dBc BW)

LTE band 66 , 3MHz Bandwidth,MID,QPSK (-26dBc BW)
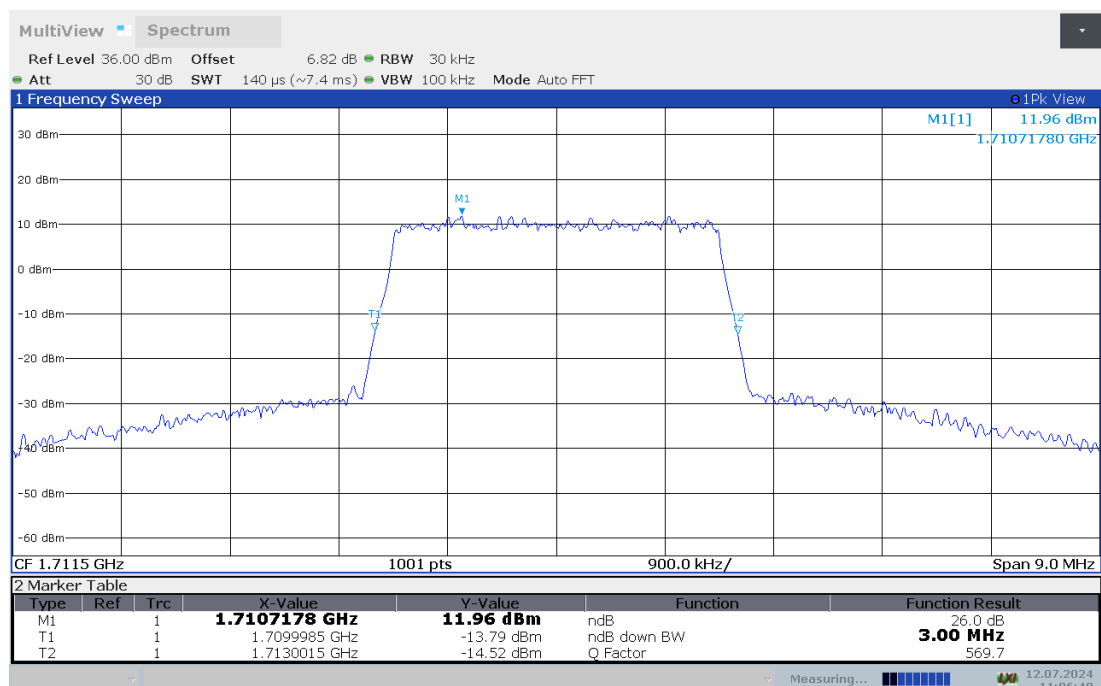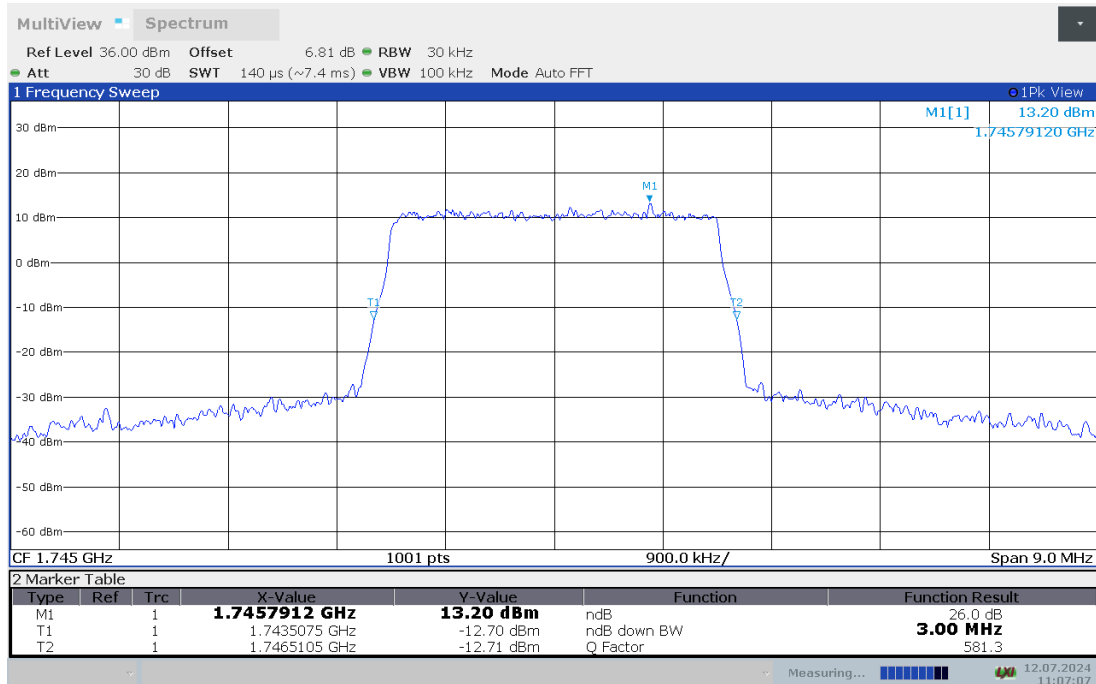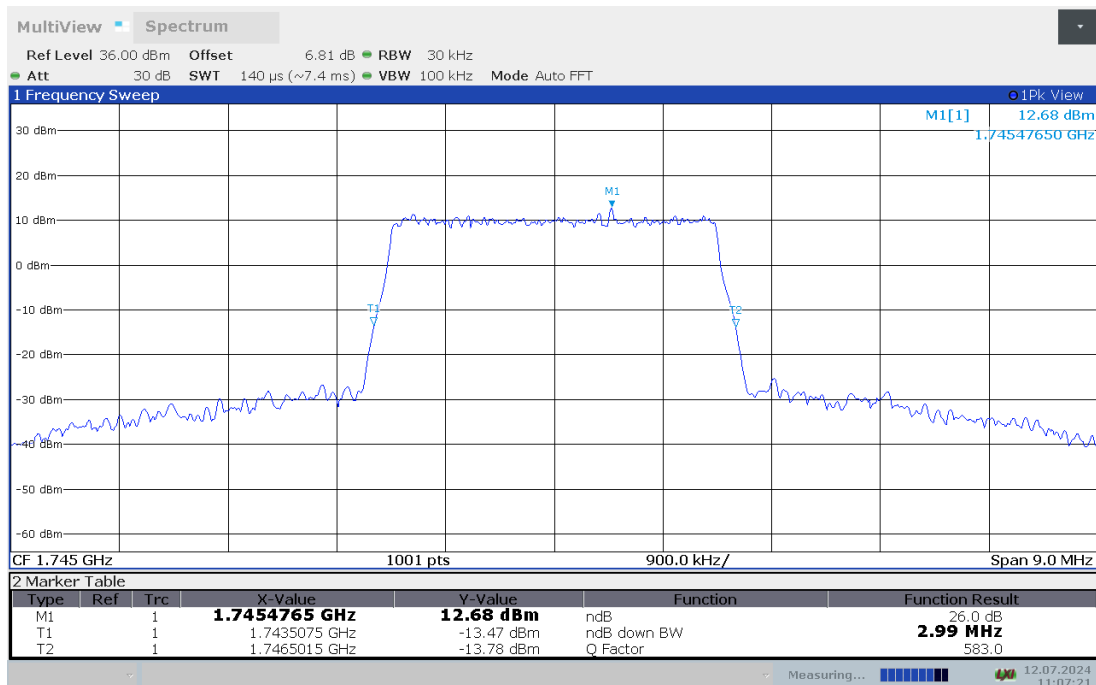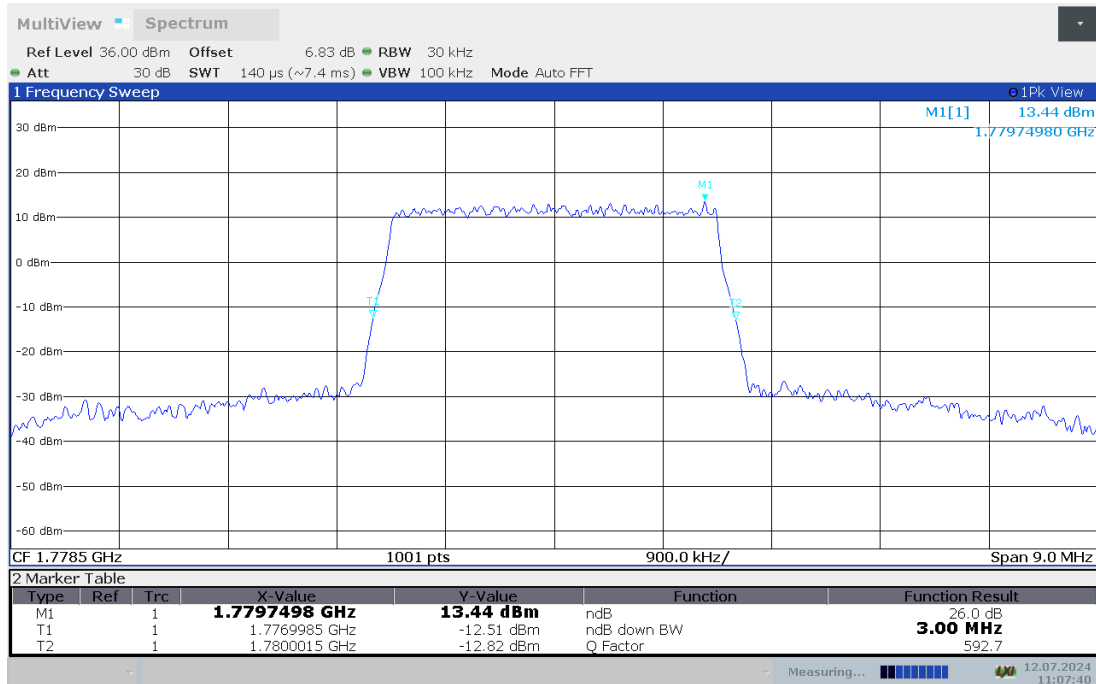

LTE band 66 , 3MHz Bandwidth,MID,16QAM (-26dBc BW)

LTE band 66 , 3MHz Bandwidth,HIGH,QPSK (-26dBc BW)

LTE band 66 , 3MHz Bandwidth,HIGH,16QAM (-26dBc BW)