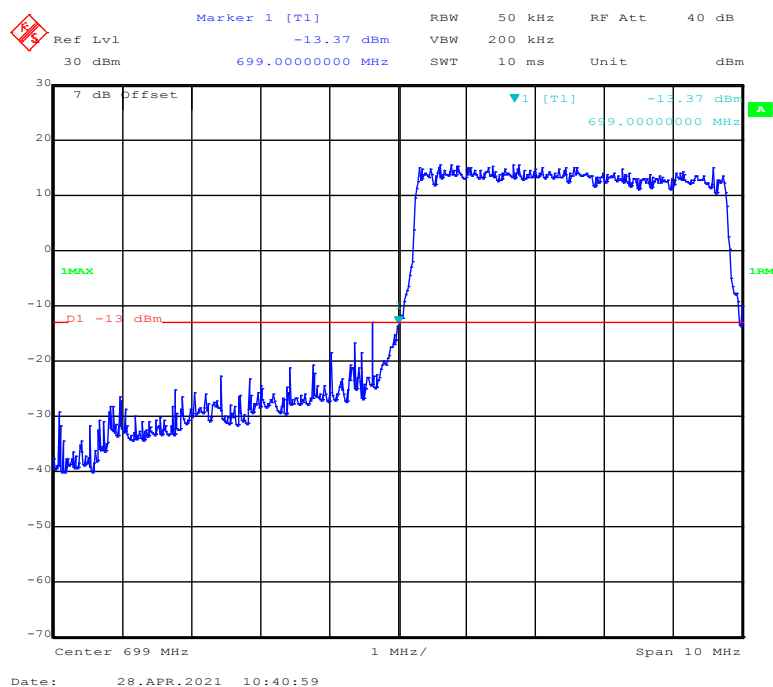
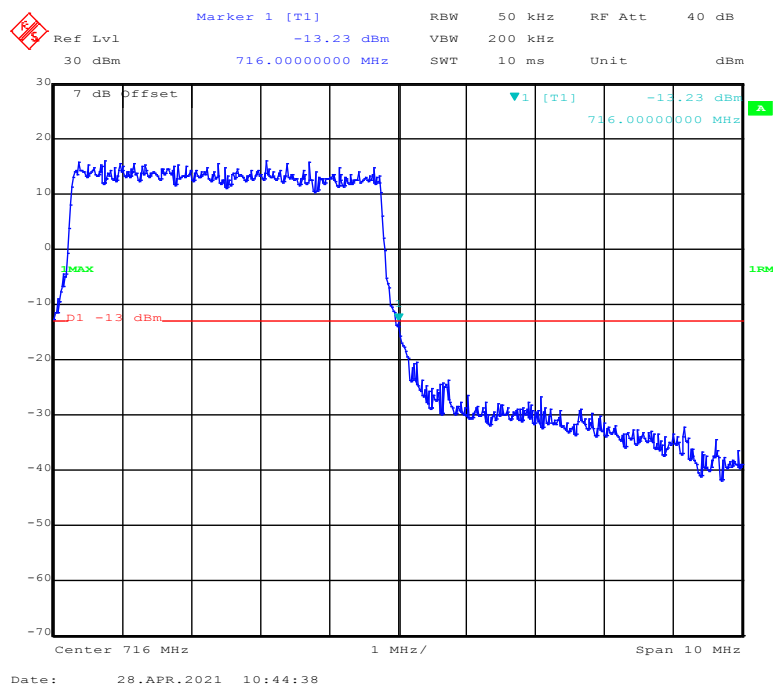
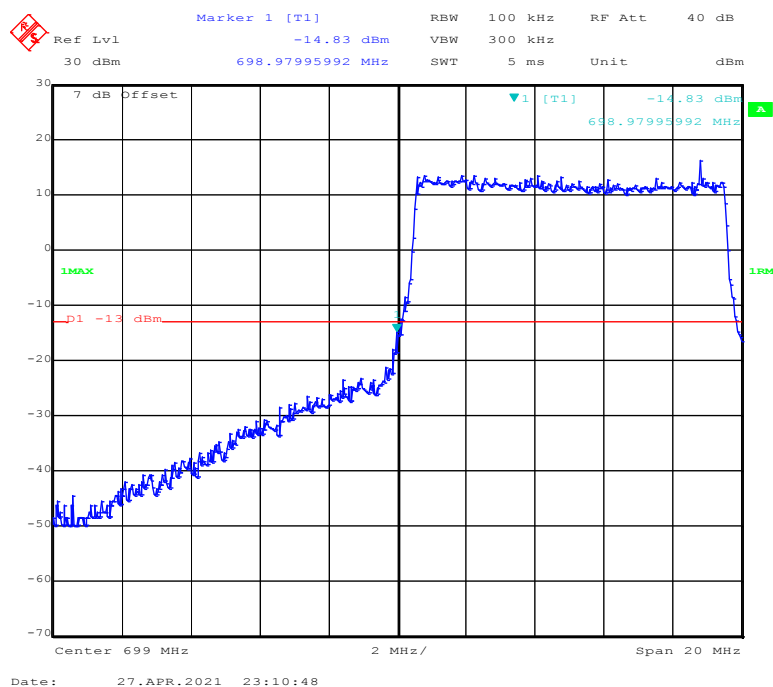
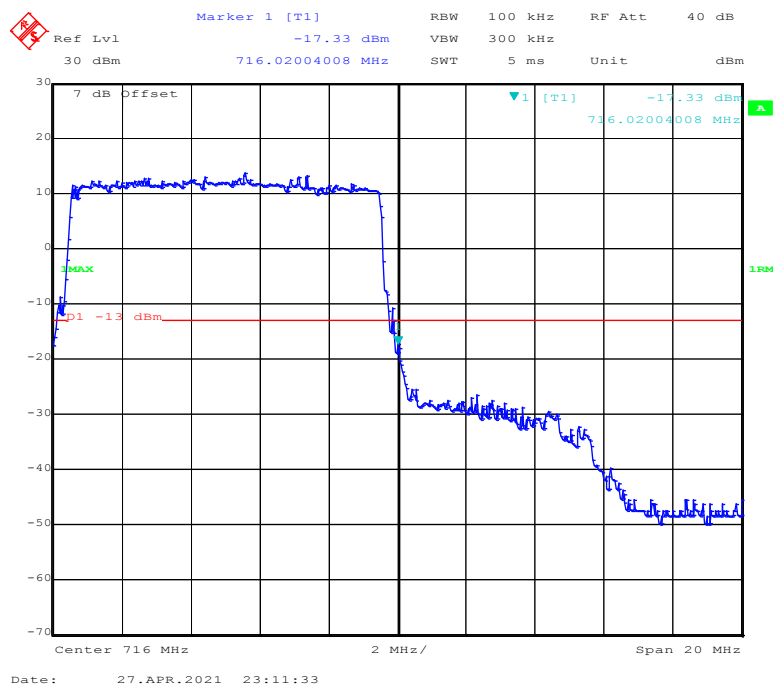
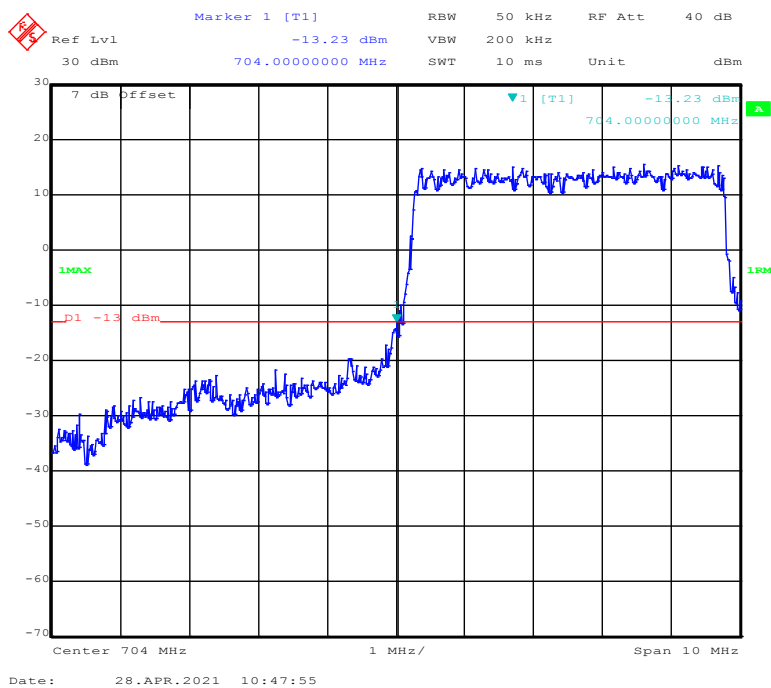
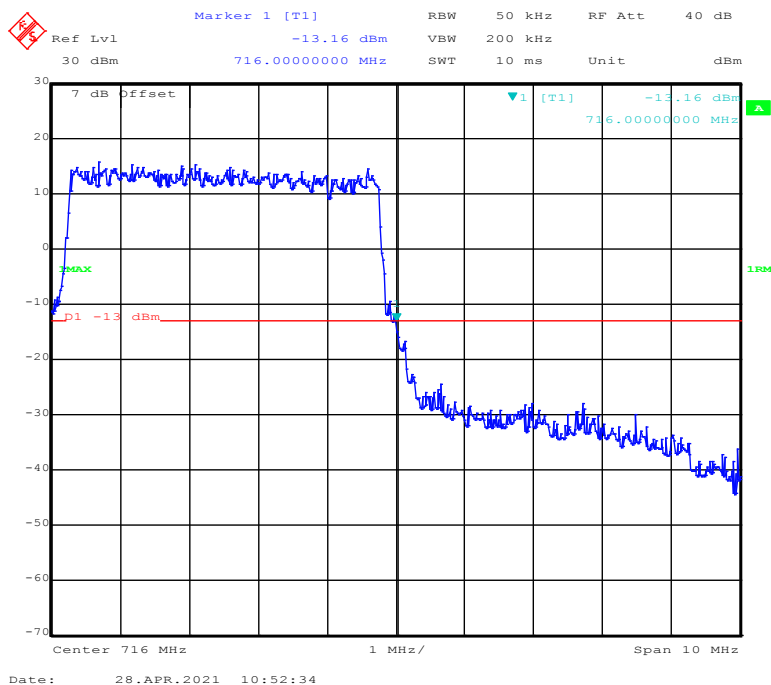
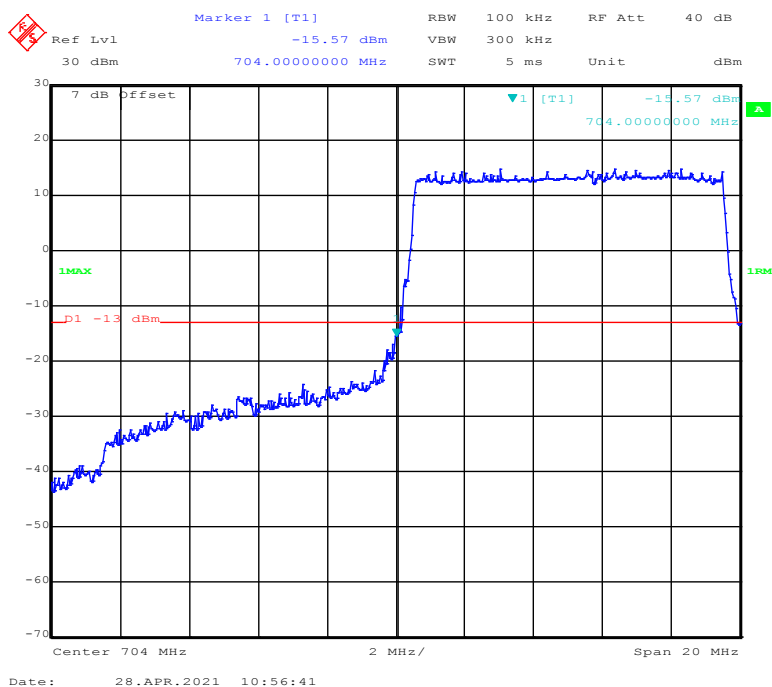
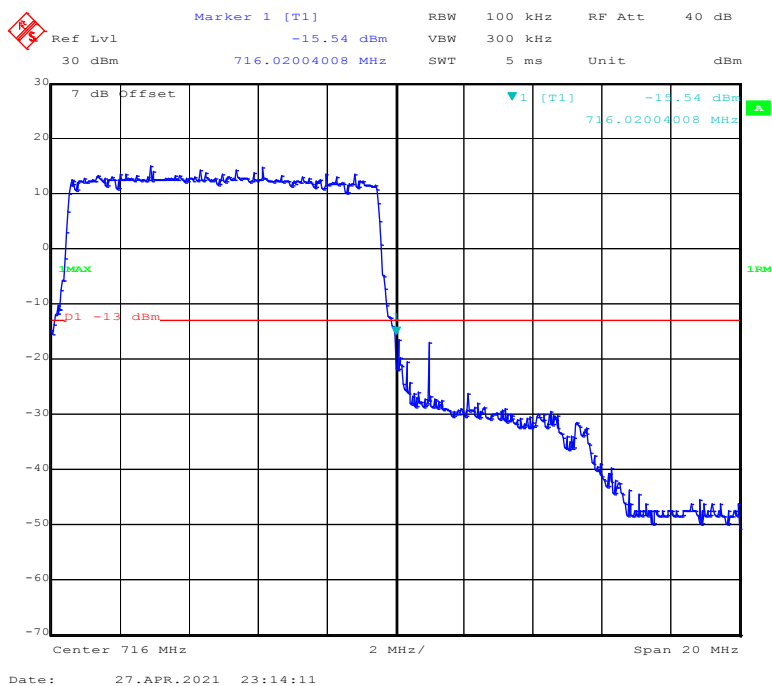
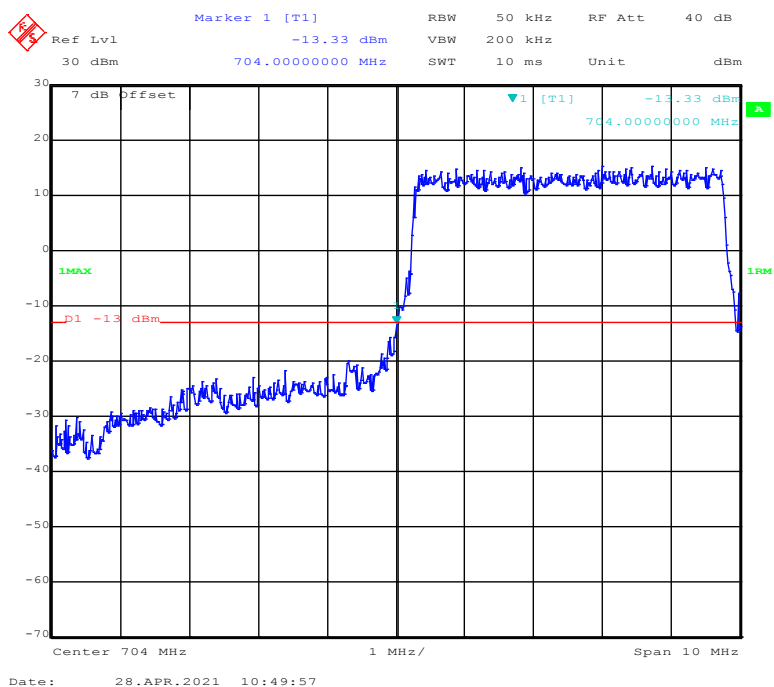
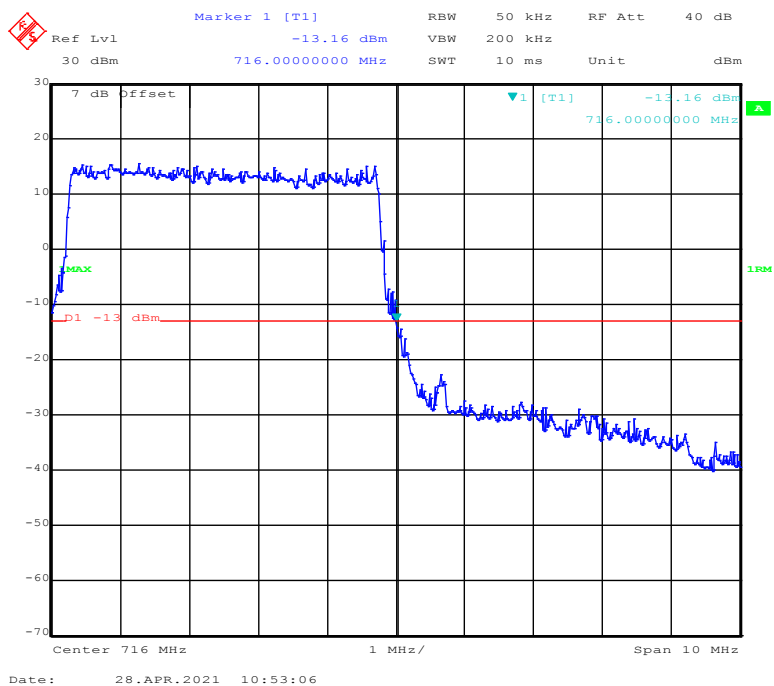


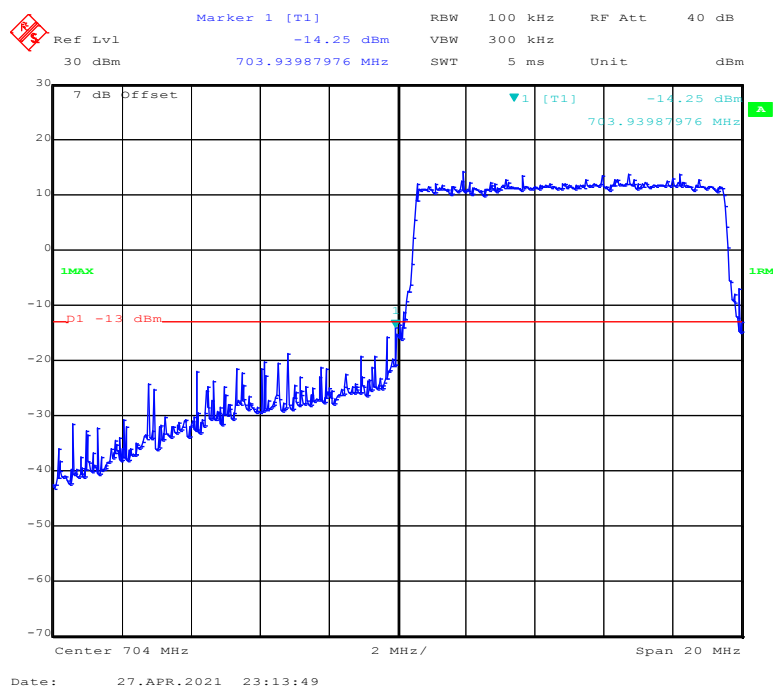
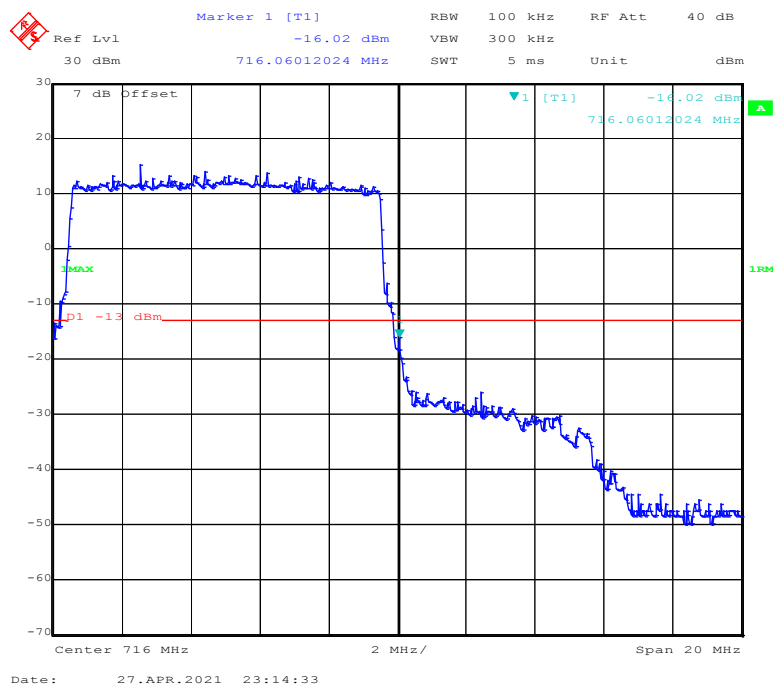
16-QAM (5.0 MHz, FULL RB) - Left Band Edge**16-QAM (5.0 MHz, FULL RB) - Right Band Edge**

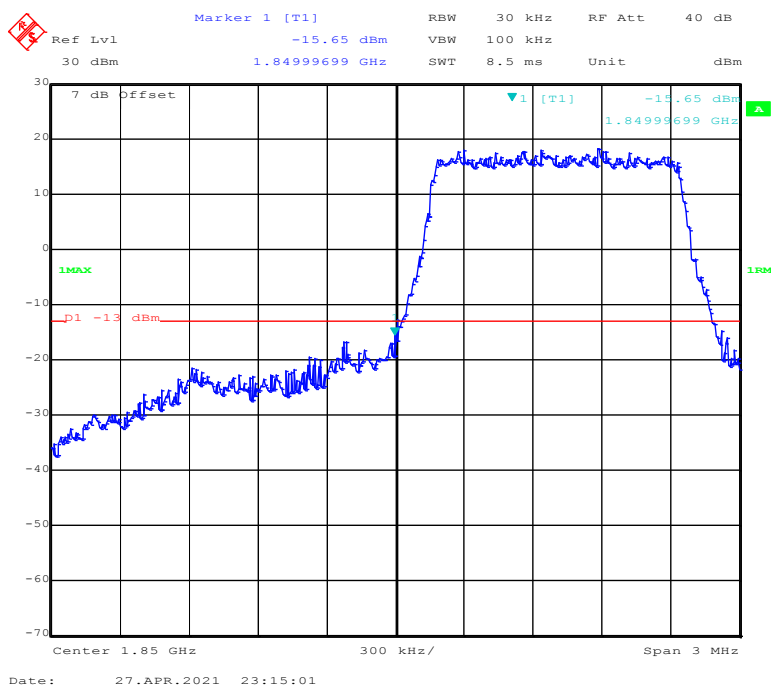
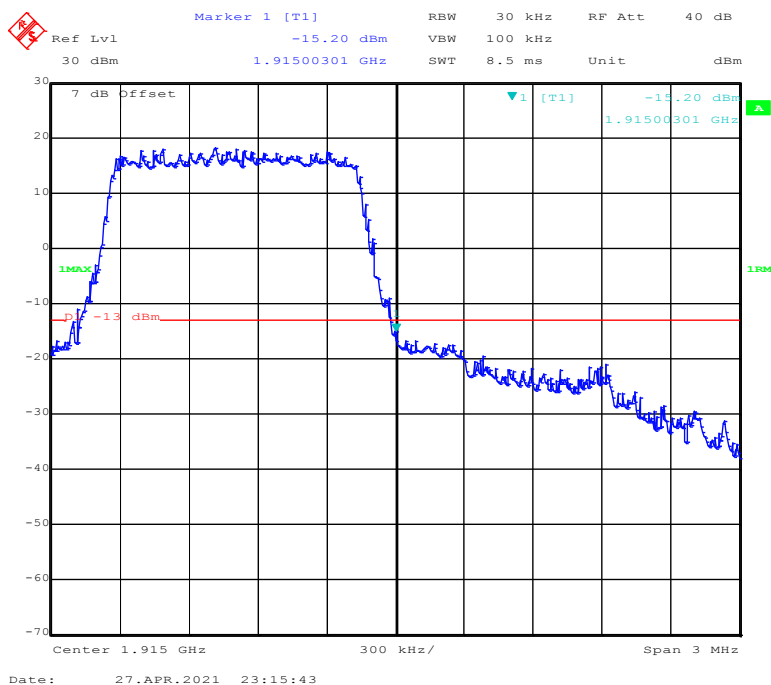
16-QAM (10.0 MHz, FULL RB) - Left Band Edge**16-QAM (10.0 MHz, FULL RB) - Right Band Edge**

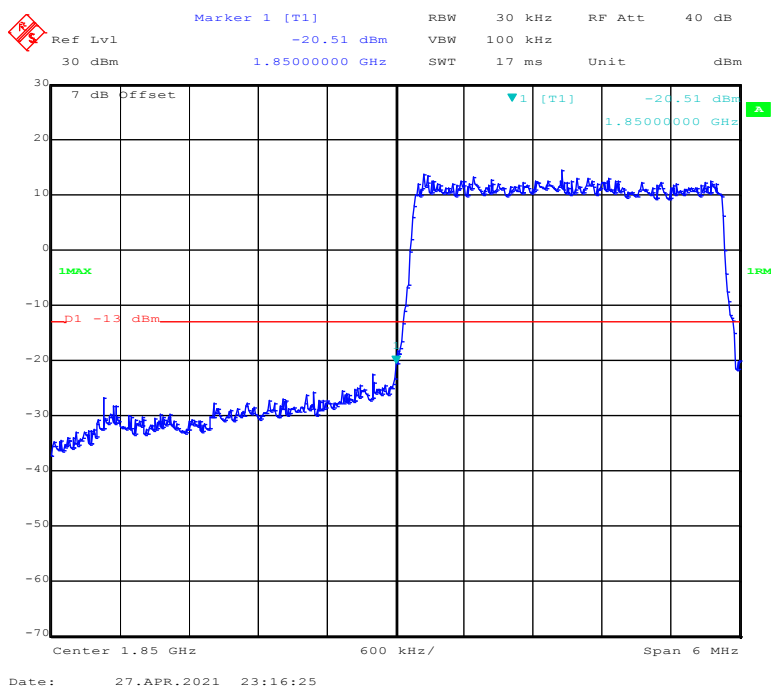
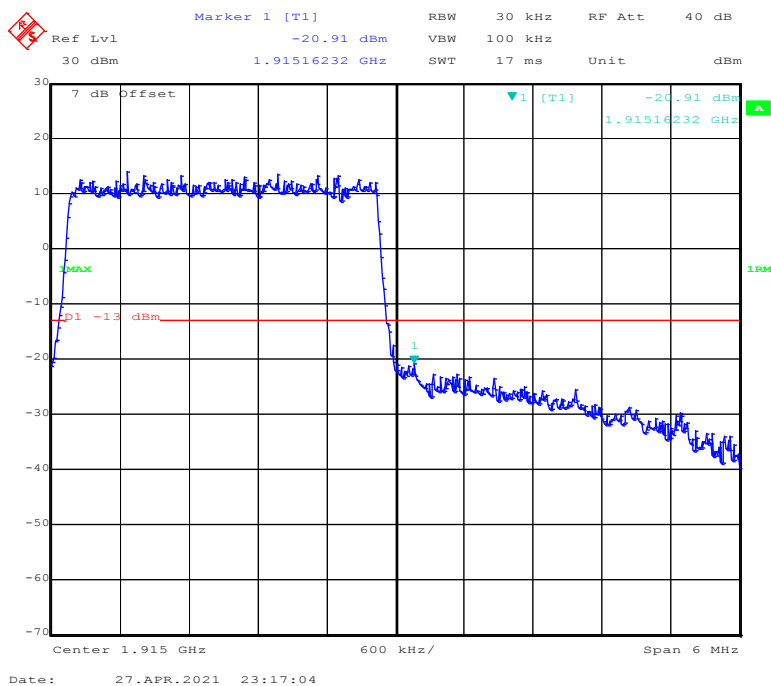
LTE Band 17:**QPSK (5.0 MHz, FULL RB) - Left Band Edge****QPSK (5.0 MHz, FULL RB) - Right Band Edge**

QPSK (10.0 MHz, FULL RB) - Left Band Edge**QPSK (10.0 MHz, FULL RB) - Right Band Edge**

16-QAM (5.0 MHz, FULL RB) - Left Band Edge**16-QAM (5.0 MHz, FULL RB) - Right Band Edge**

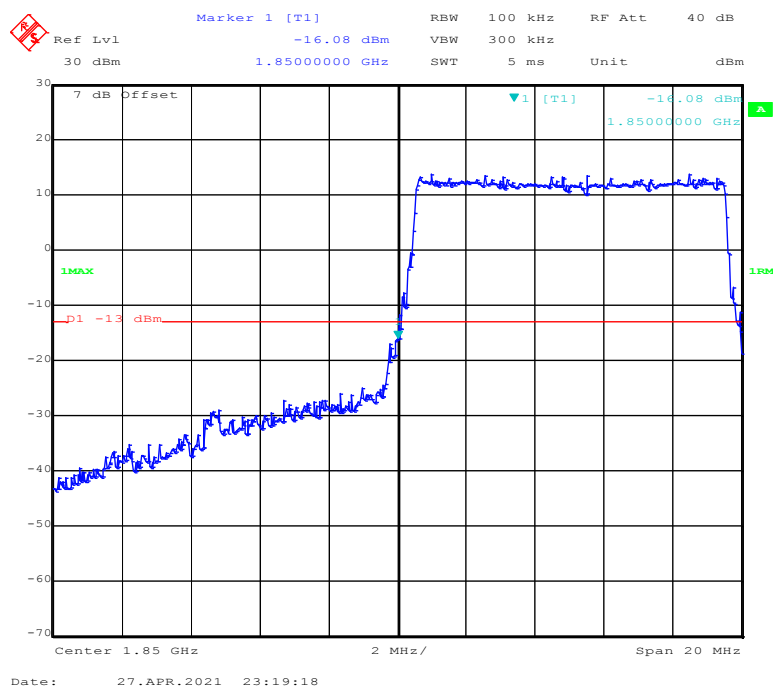
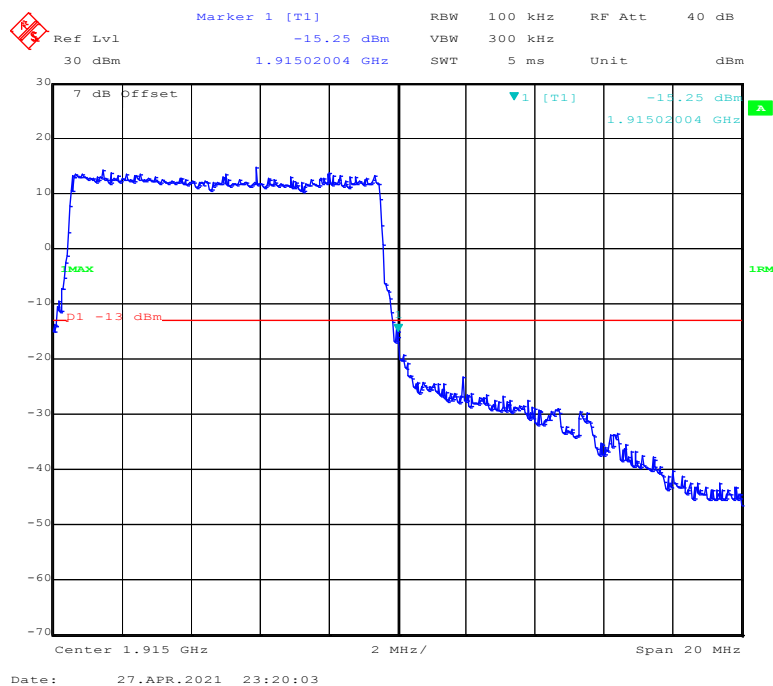
16-QAM (10.0 MHz, FULL RB) - Left Band Edge**16-QAM (10.0 MHz, FULL RB) - Right Band Edge**

LTE Band 25:**QPSK (1.4 MHz, FULL RB) - Left Band Edge****QPSK (1.4 MHz, FULL RB) - Right Band Edge**

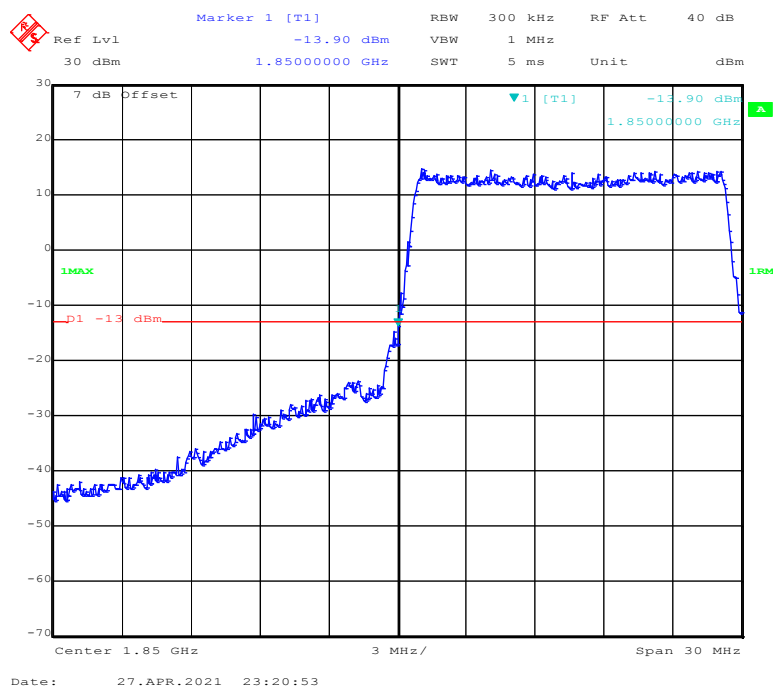
QPSK (3 MHz, FULL RB) - Left Band Edge**QPSK (3 MHz, FULL RB) - Right Band Edge**

Ref Lvl 30 dBm
 30 dBm
 1.85000000 GHz
 -13.66 dBm
 RBW 50 kHz
 200 kHz
 10 ms
 Unit dBm
 7 dB Offset
 1MAX
 D1 -13 dBm
 Marker 1 [T1]
 -13.66 dBm
 1.85000000 GHz
 Center 1.85 GHz
 1 MHz/
 Span 10 MHz
 Date: 28.APR.2021 10:58:56

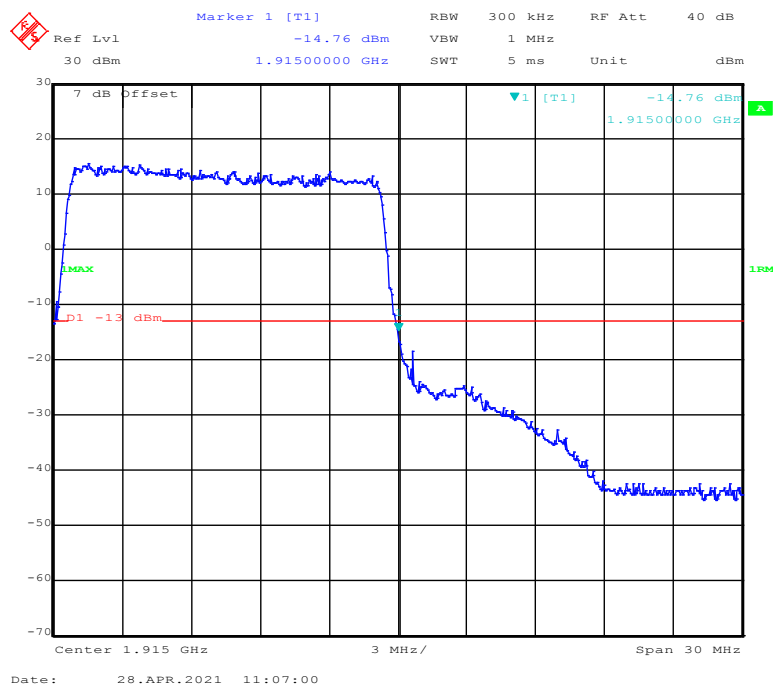
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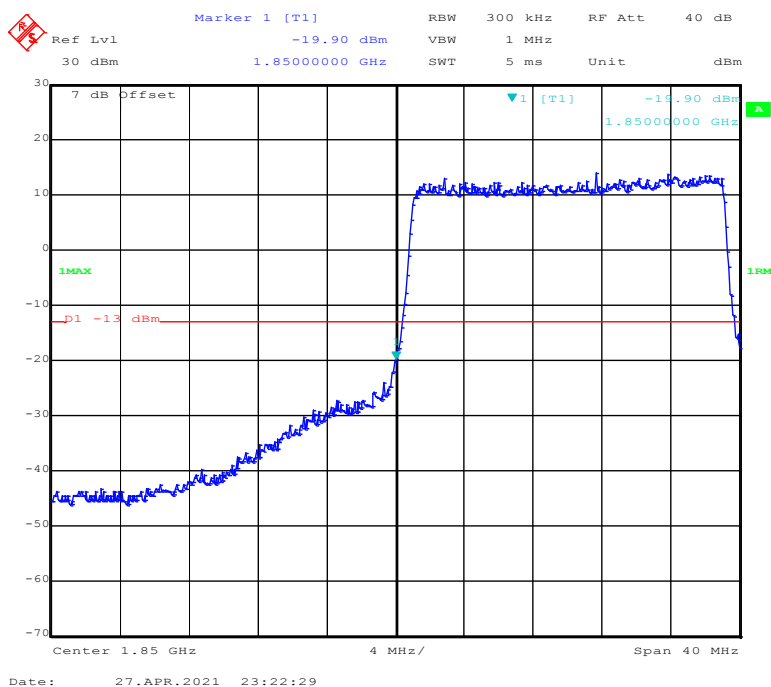
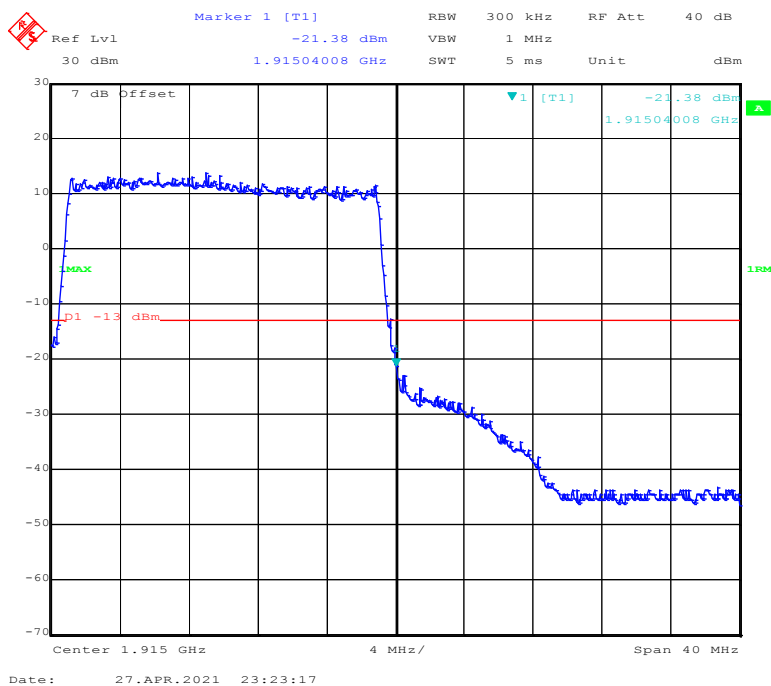
QPSK (10 MHz, FULL RB) - Left Band Edge**QPSK (10 MHz, FULL RB) - Right Band Edge**

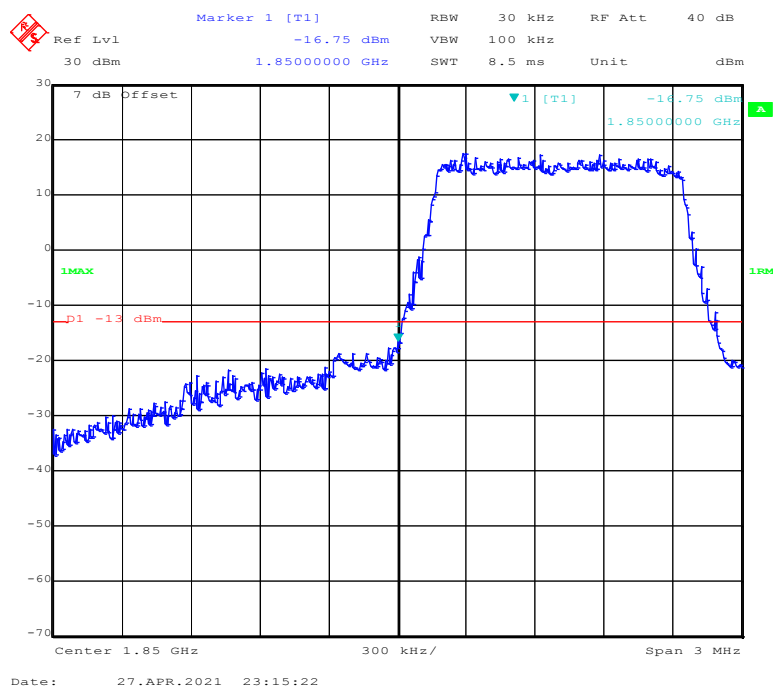
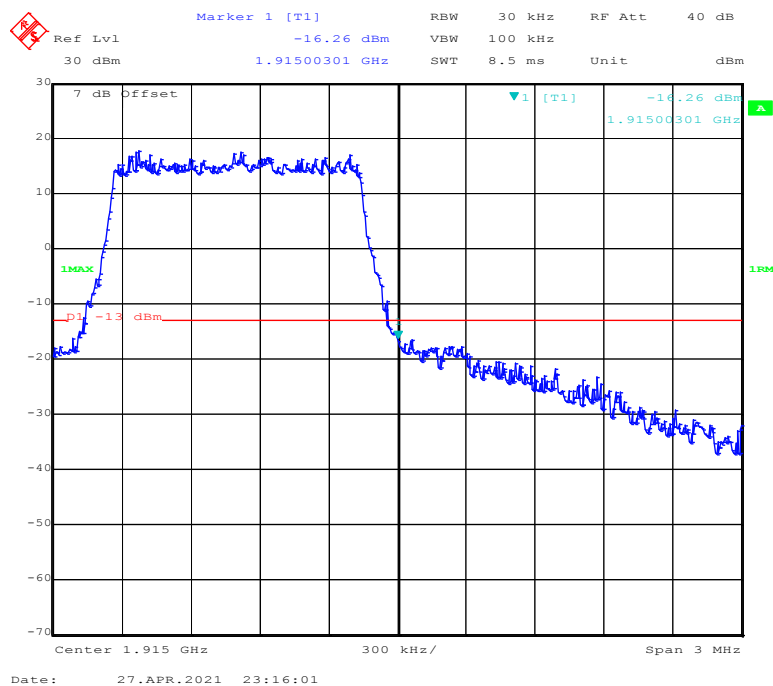
QPSK (15 MHz, FULL RB) - Left Band Edge

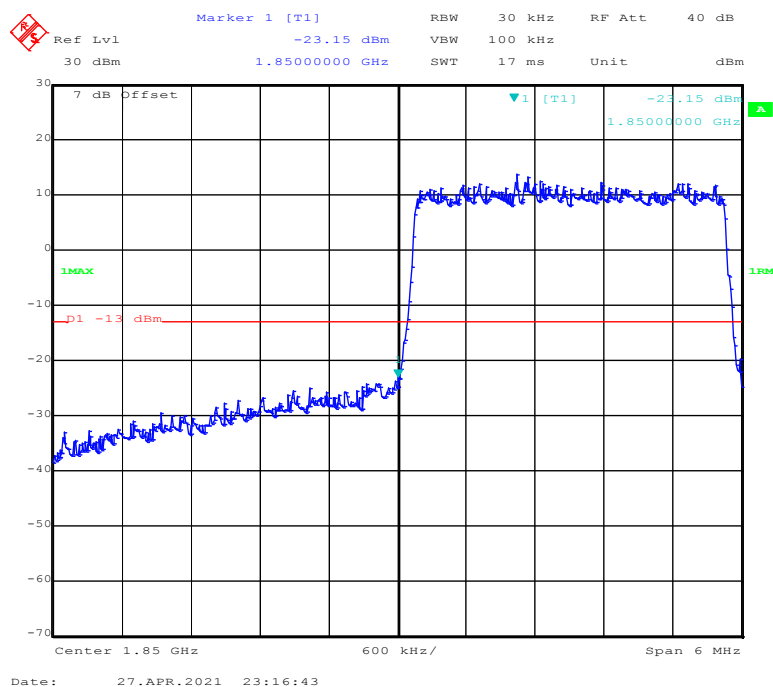
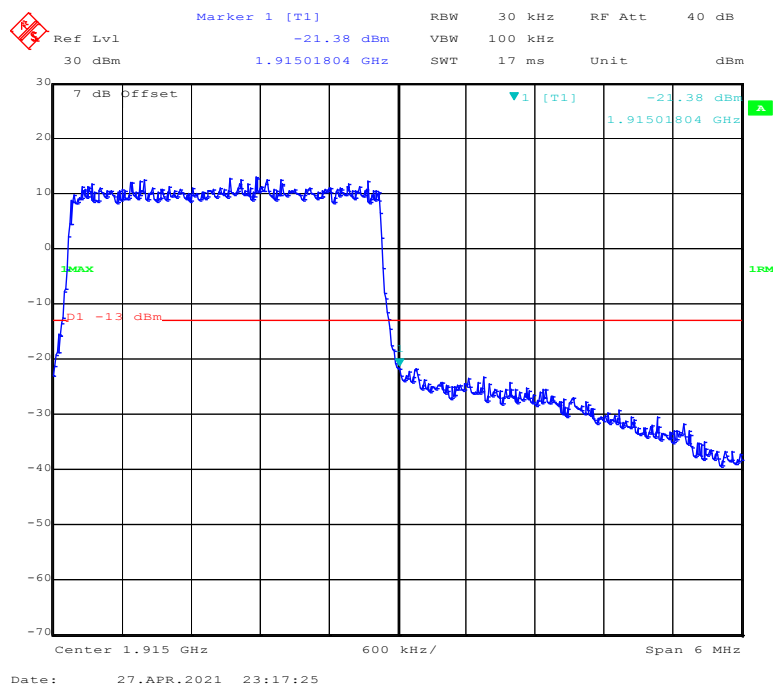


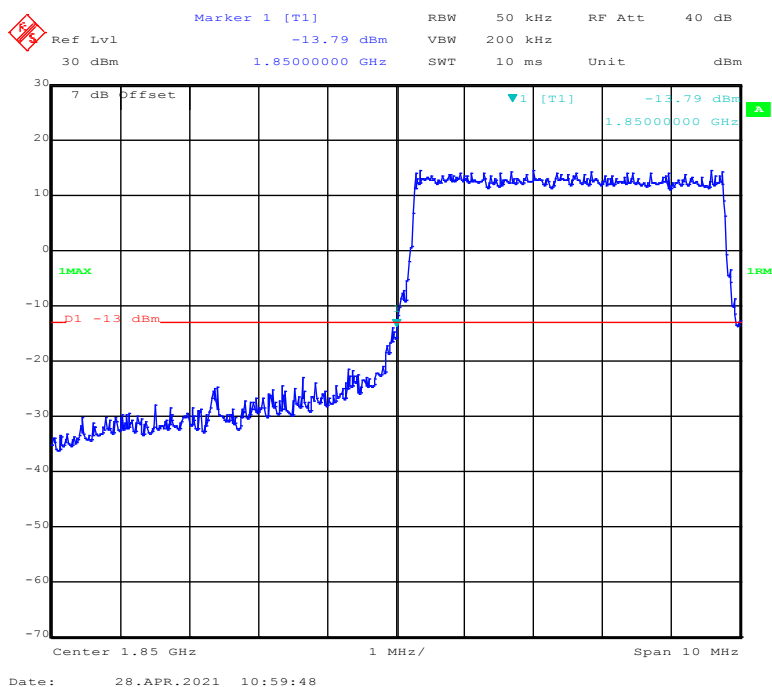
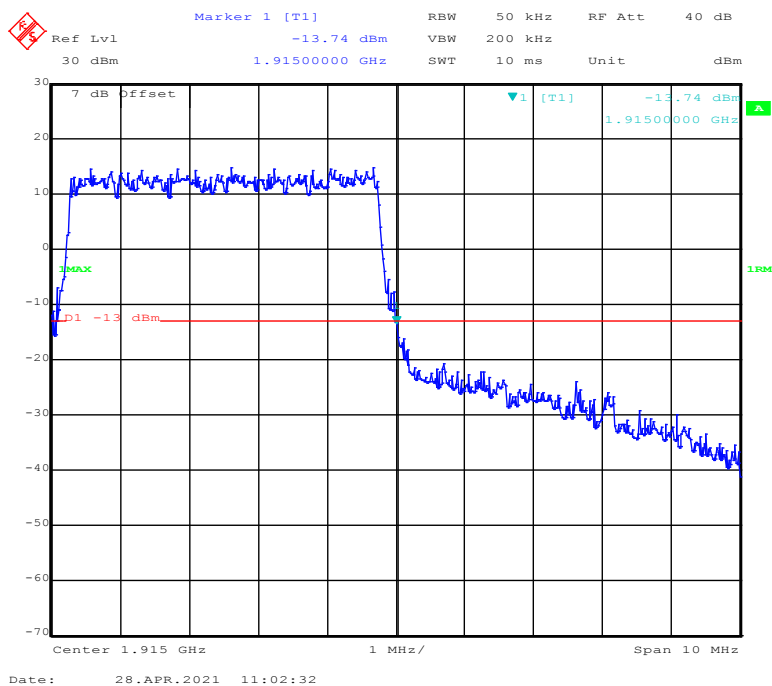
QPSK (15 MHz, FULL RB) - Right Band Edge

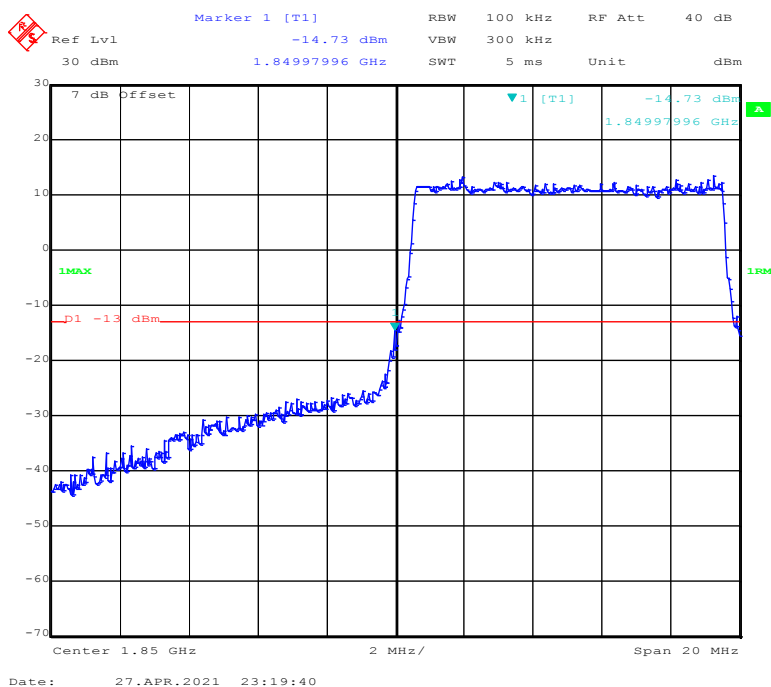
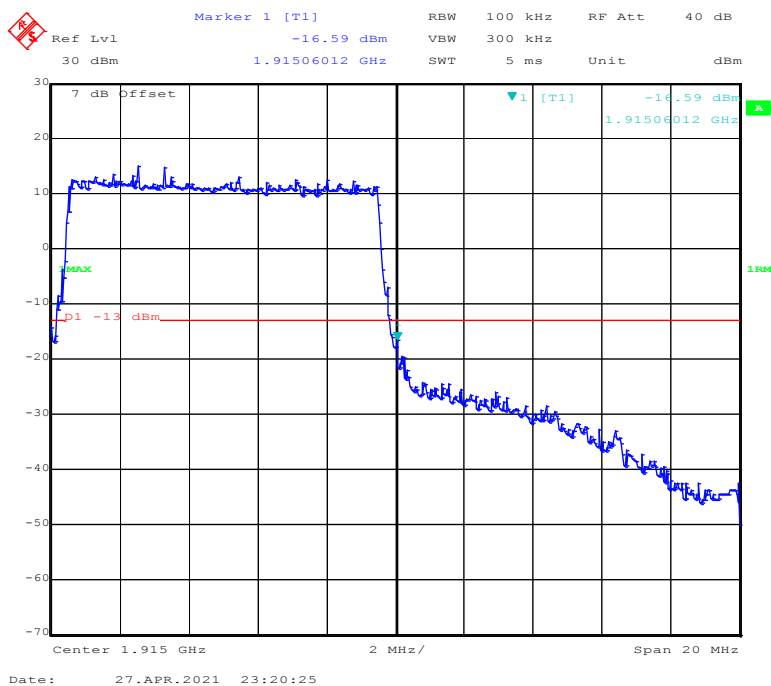


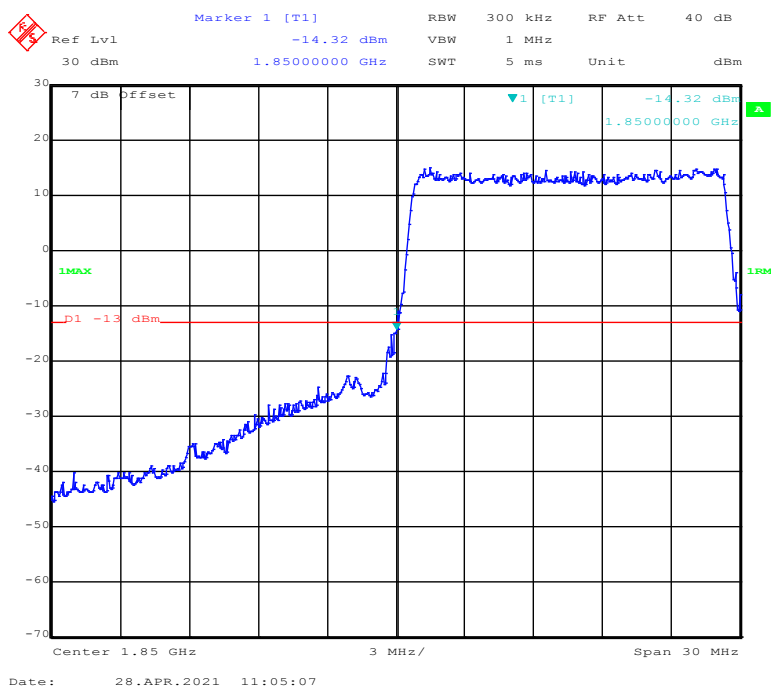
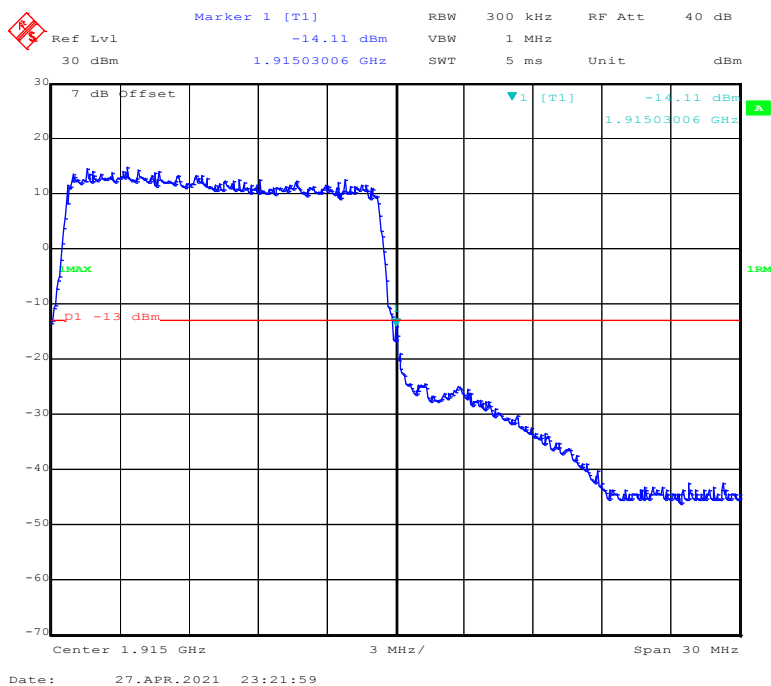
QPSK (20 MHz, FULL RB) - Left Band Edge**QPSK (20 MHz, FULL RB) - Right Band Edge**

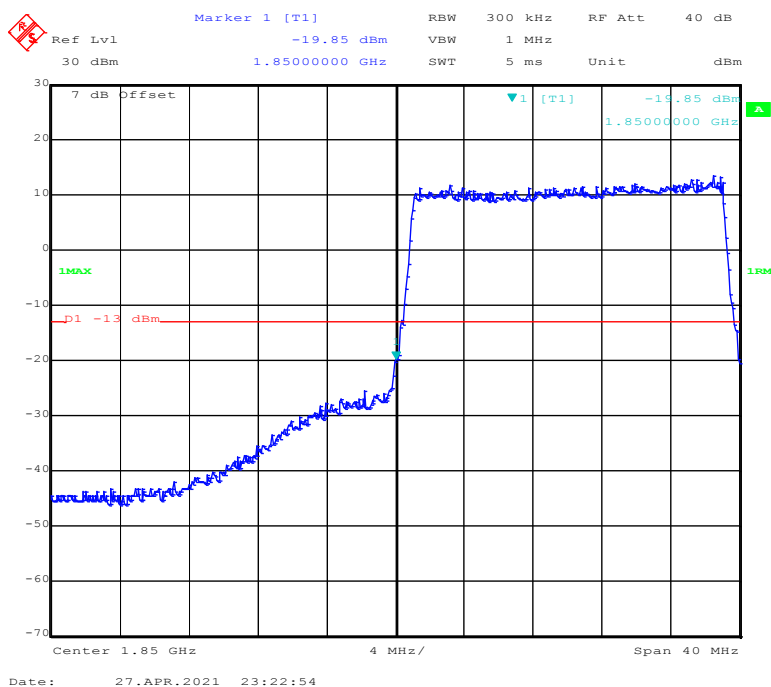
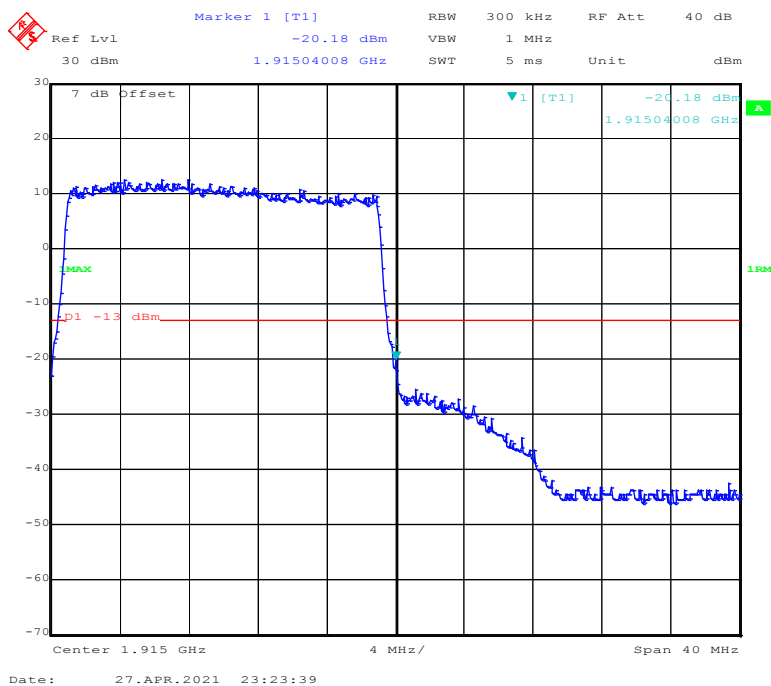
16-QAM (1.4 MHz, FULL RB) - Left Band Edge**16-QAM (1.4 MHz, FULL RB) - Right Band Edge**

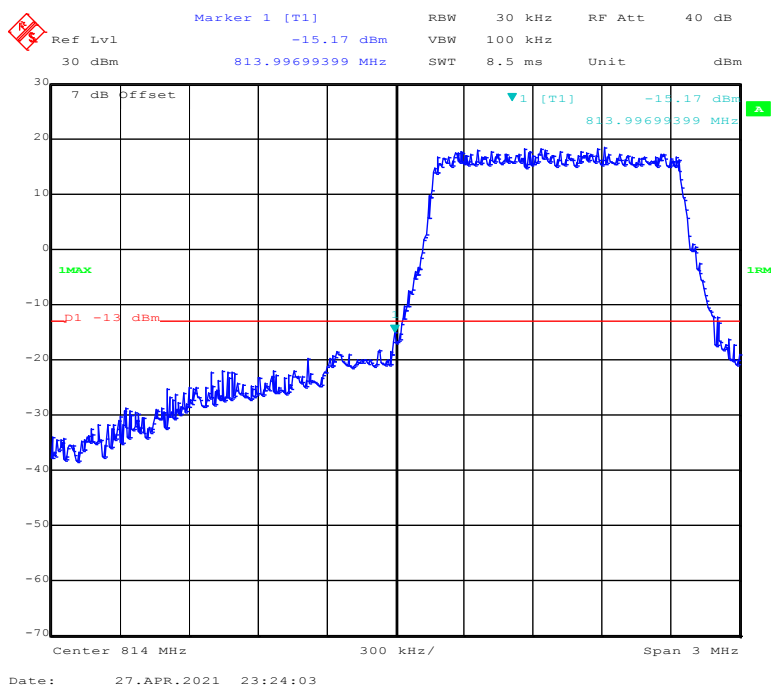
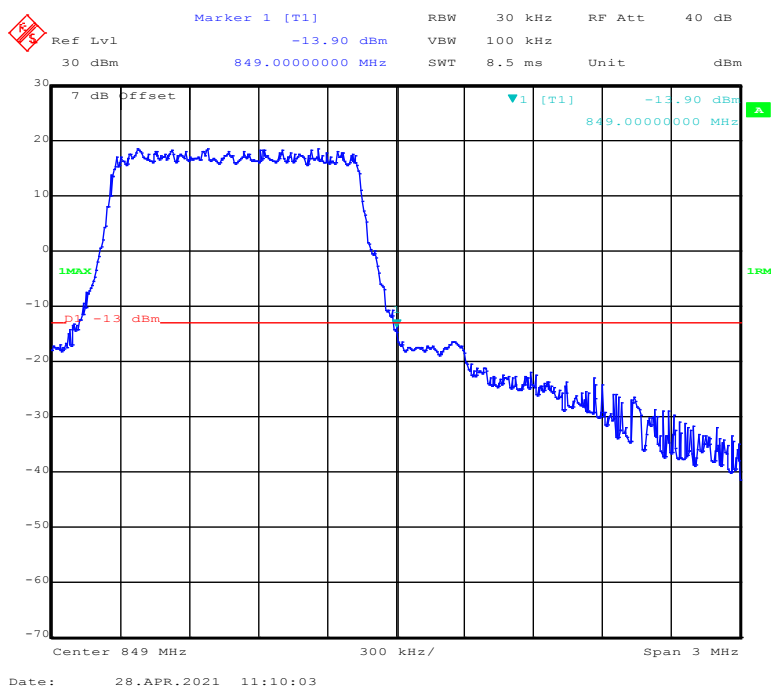
16-QAM (3 MHz, FULL RB) - Left Band Edge**16-QAM (3 MHz, FULL RB) - Right Band Edge**

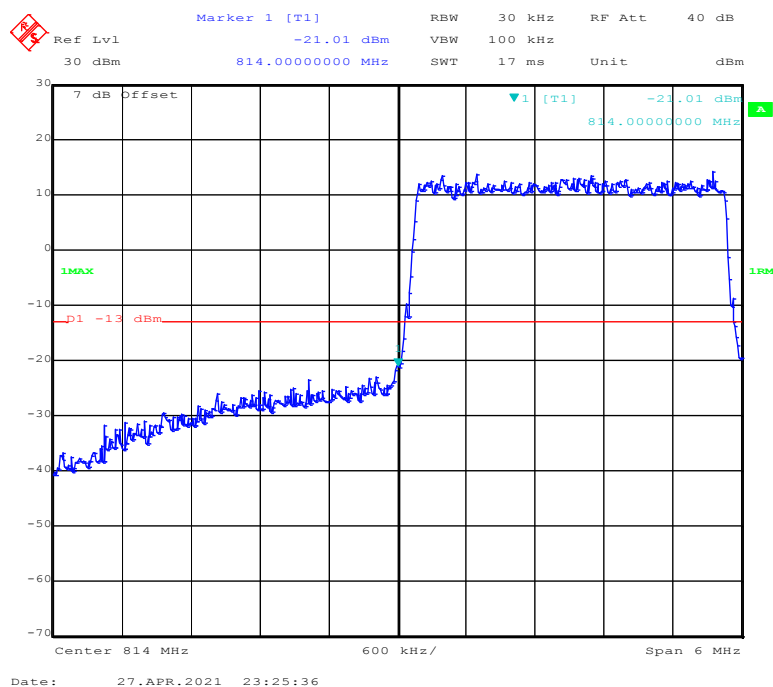
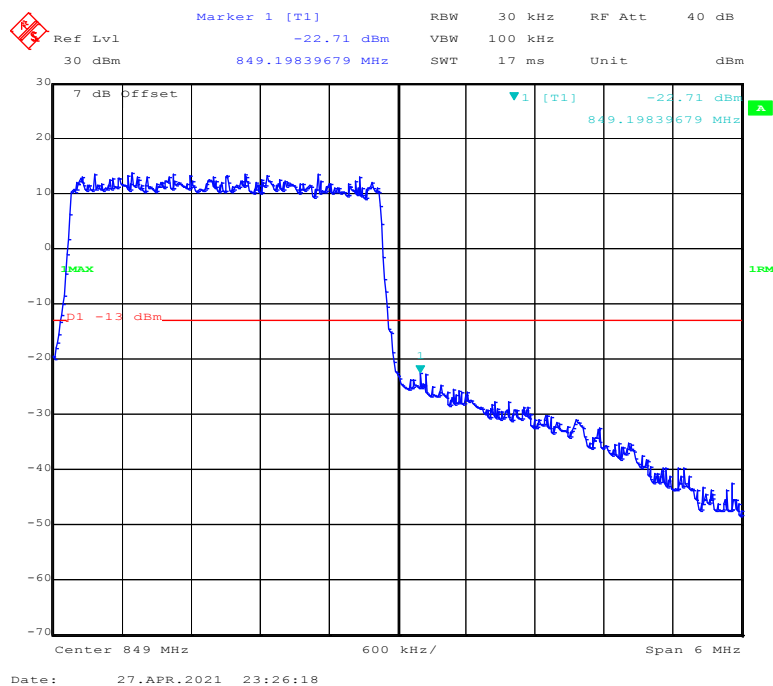
16-QAM (5 MHz, FULL RB) - Left Band Edge**16-QAM (5 MHz, FULL RB) - Right Band Edge**

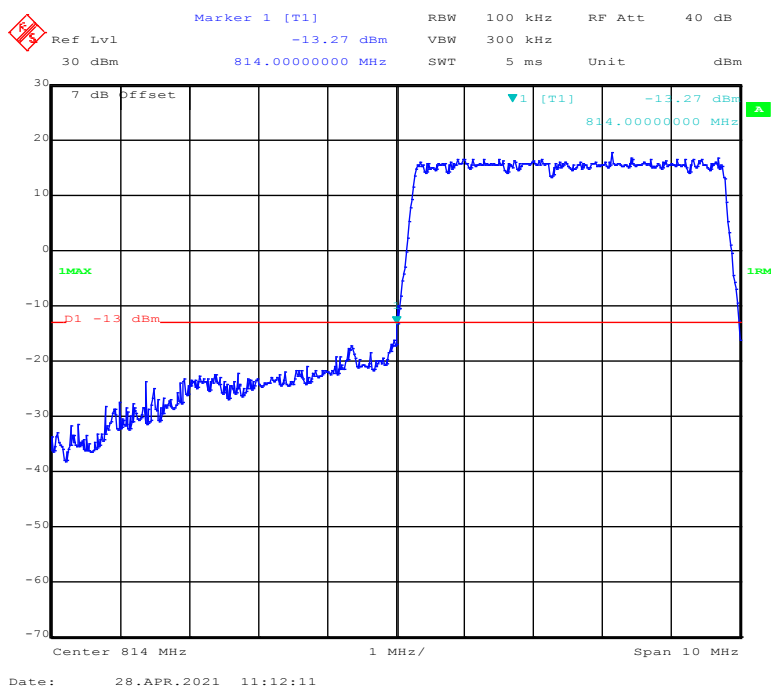
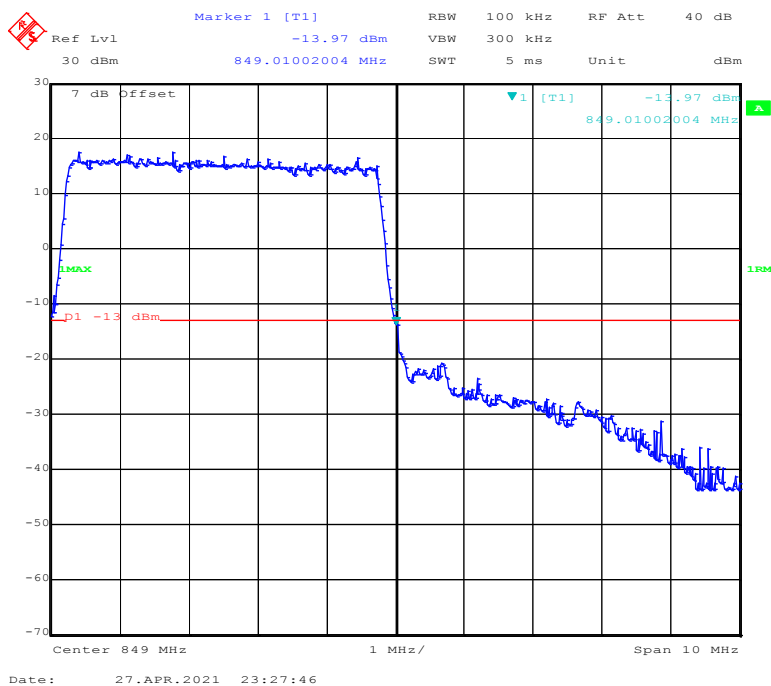
16-QAM (10 MHz, FULL RB) - Left Band Edge**16-QAM (10 MHz, FULL RB) - Right Band Edge**

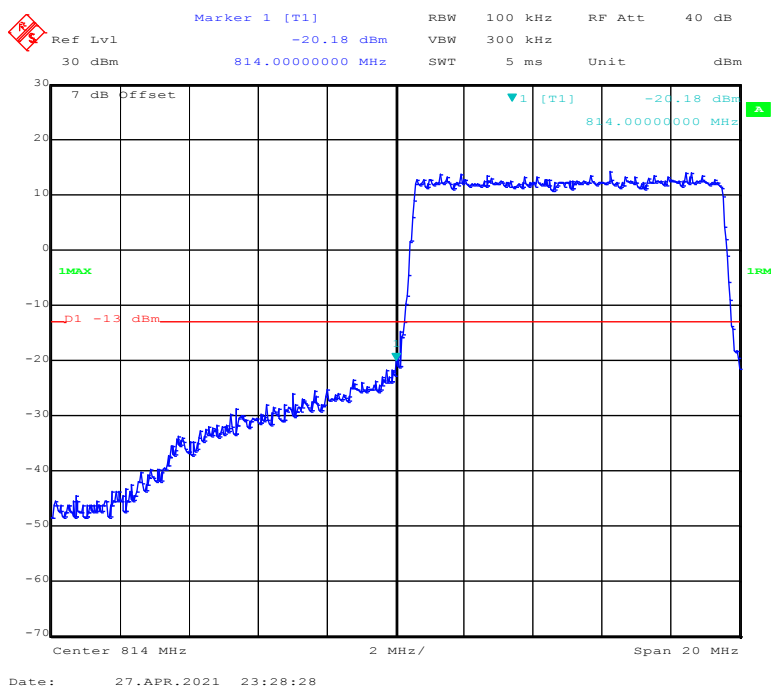
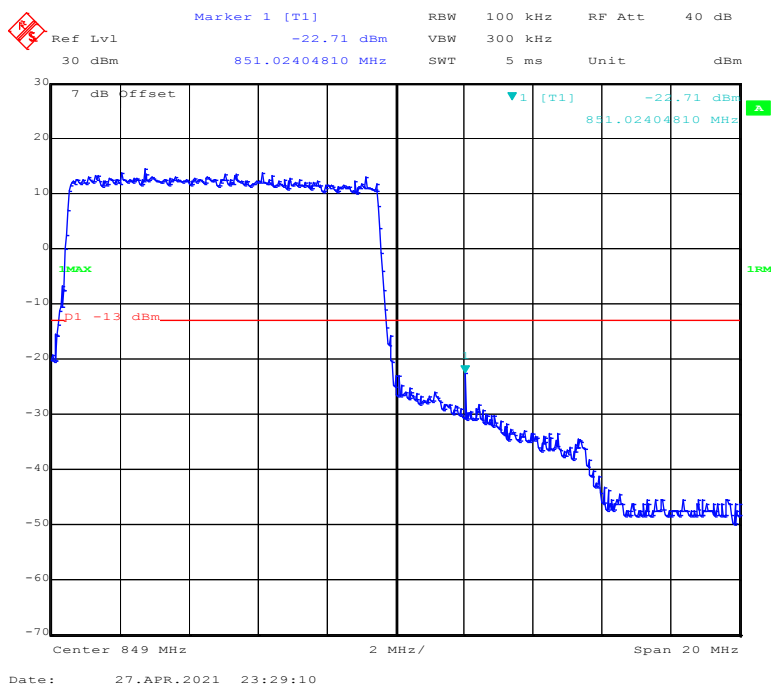
16-QAM (15 MHz, FULL RB) - Left Band Edge**16-QAM (15 MHz, FULL RB) - Right Band Edge**

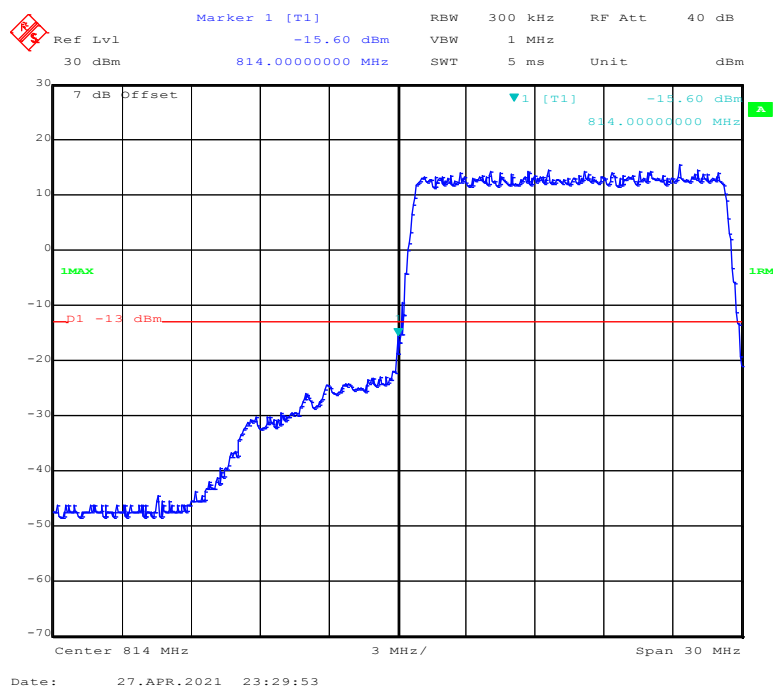
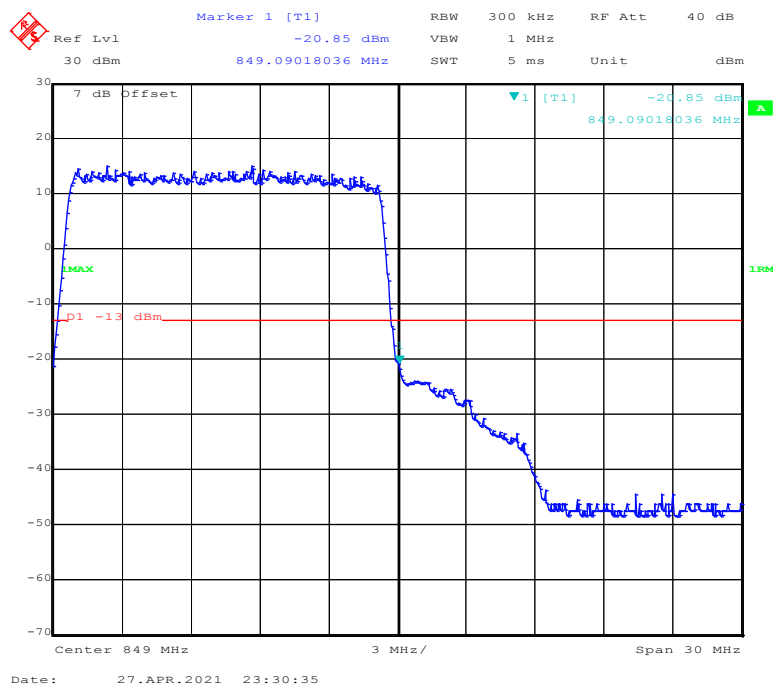
16-QAM (20 MHz, FULL RB) - Left Band Edge**16-QAM (20 MHz, FULL RB) - Right Band Edge**

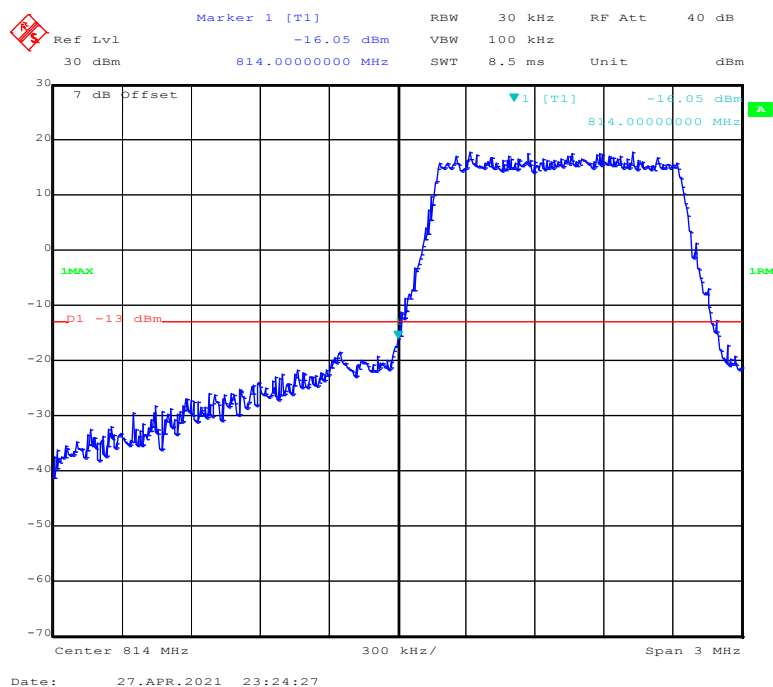
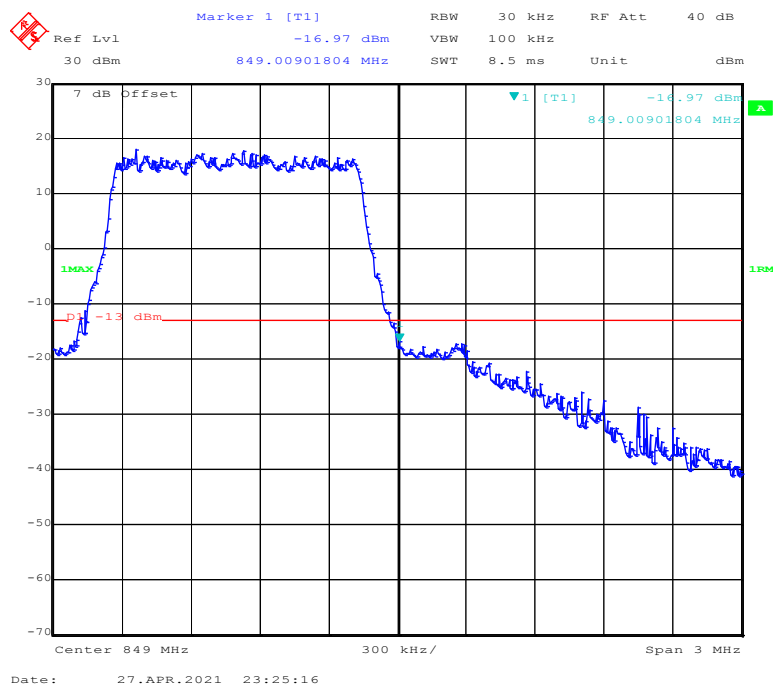
LTE Band 26:**QPSK (1.4 MHz, FULL RB) - Left Band Edge****QPSK (1.4 MHz, FULL RB) - Right Band Edge**

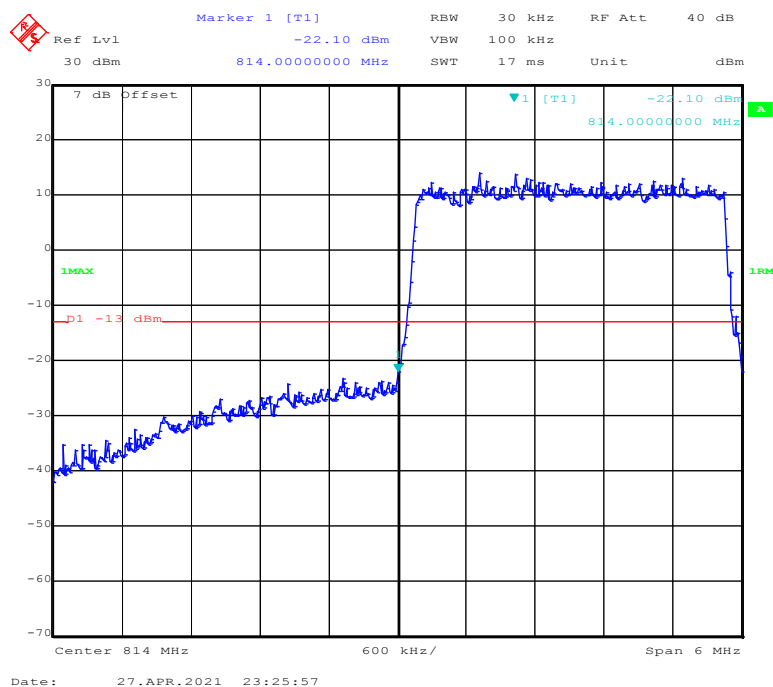
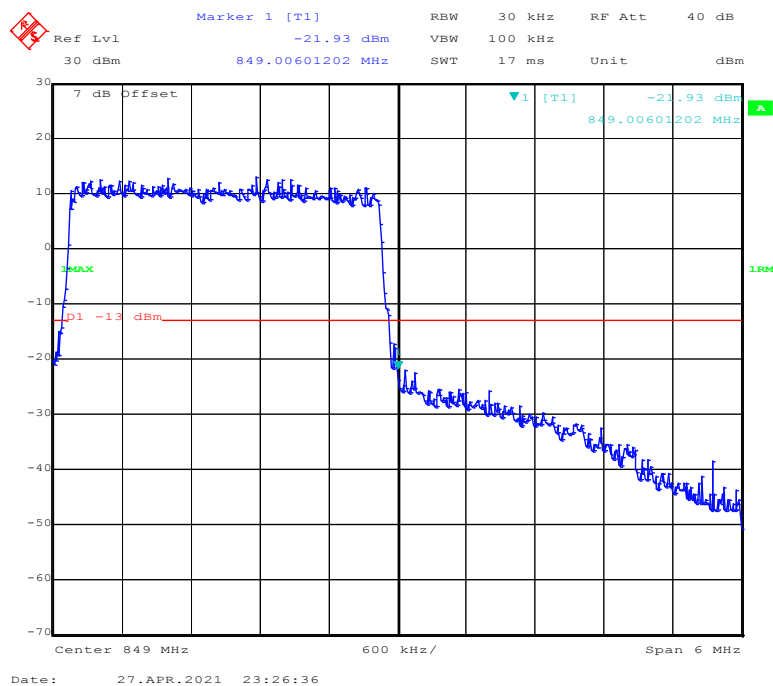
QPSK (3 MHz, FULL RB) - Left Band Edge**QPSK (3 MHz, FULL RB) - Right Band Edge**

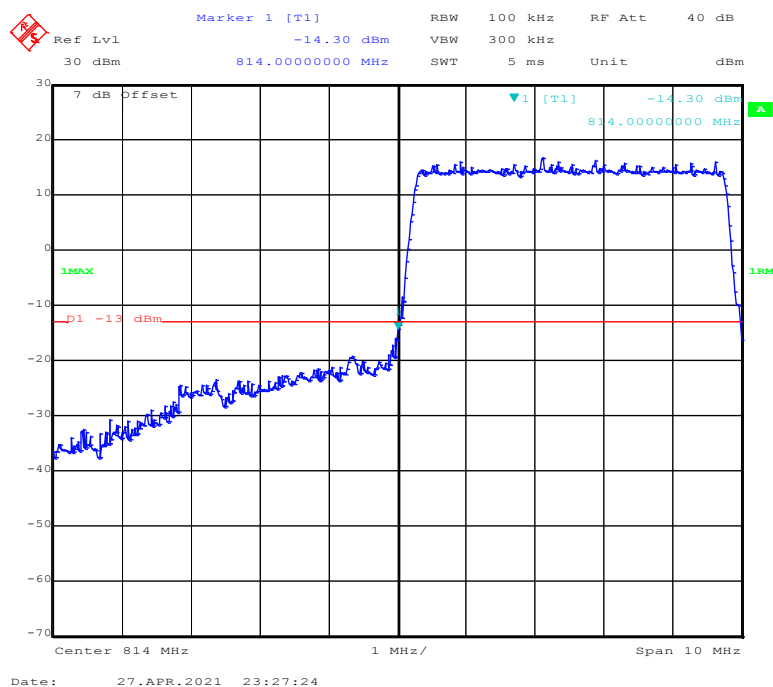
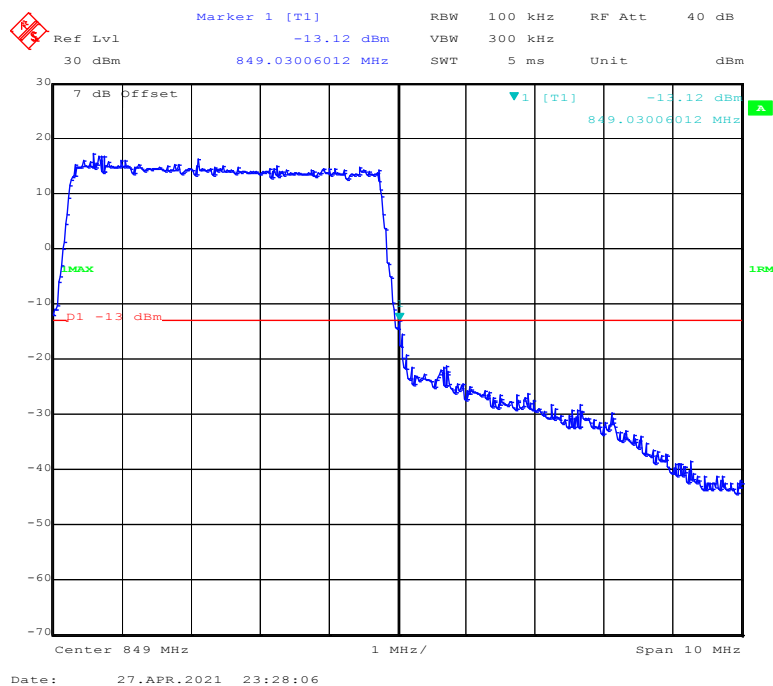
QPSK (5 MHz, FULL RB) - Left Band Edge**QPSK (5 MHz, FULL RB) - Right Band Edge**

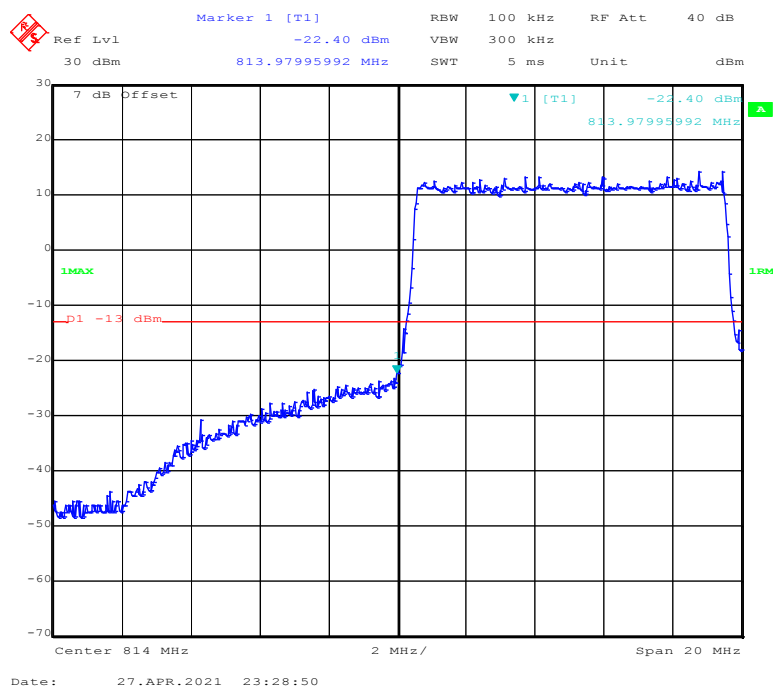
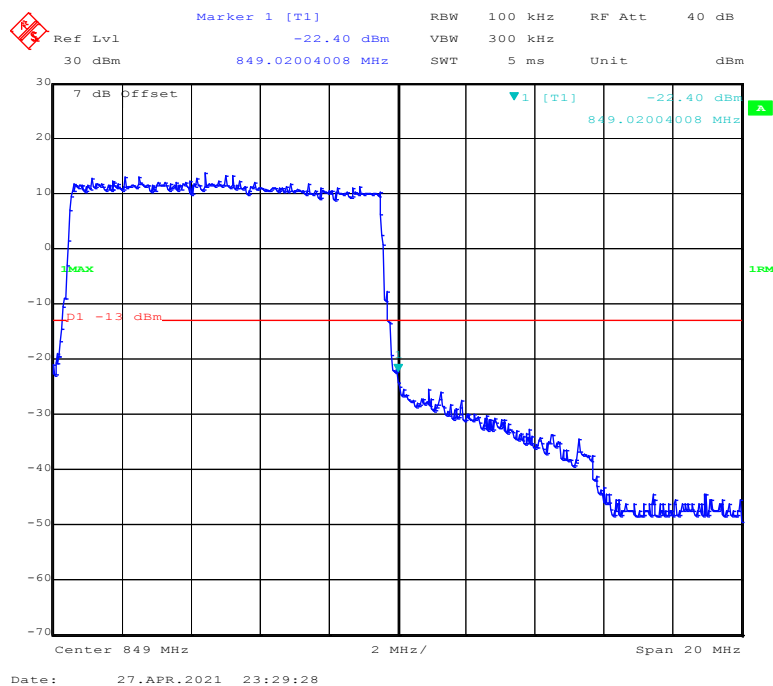
QPSK (10 MHz, FULL RB) - Left Band Edge**QPSK (10 MHz, FULL RB) - Right Band Edge**

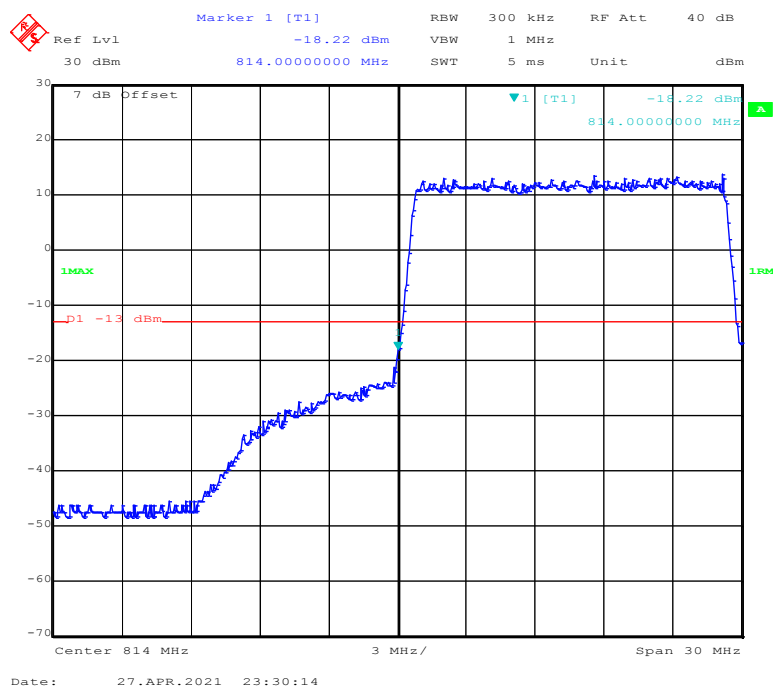
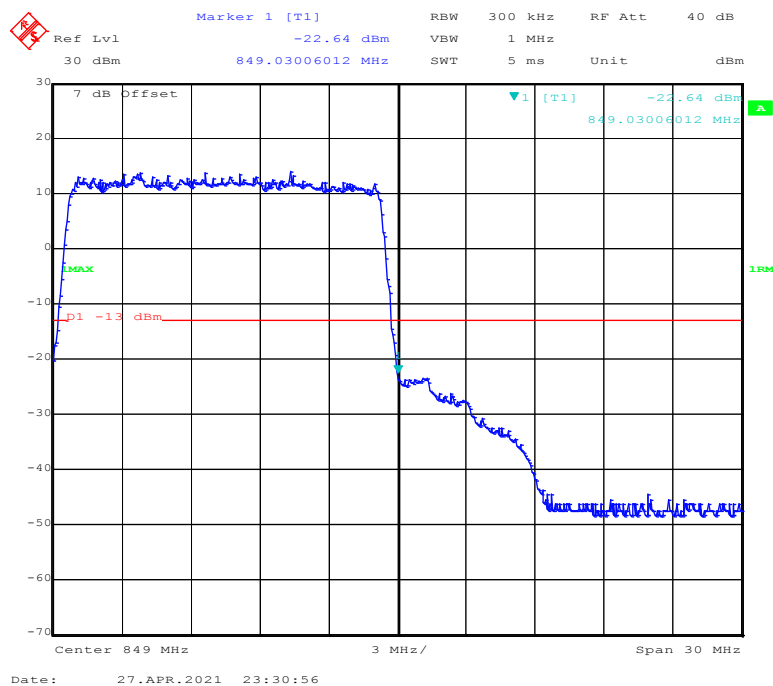
QPSK (15 MHz, FULL RB) - Left Band Edge**QPSK (15 MHz, FULL RB) - Right Band Edge**

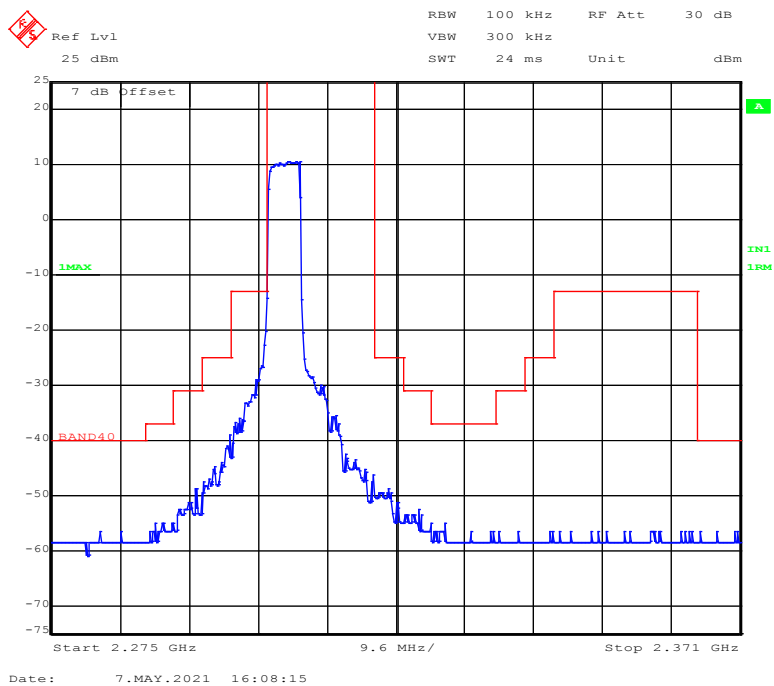
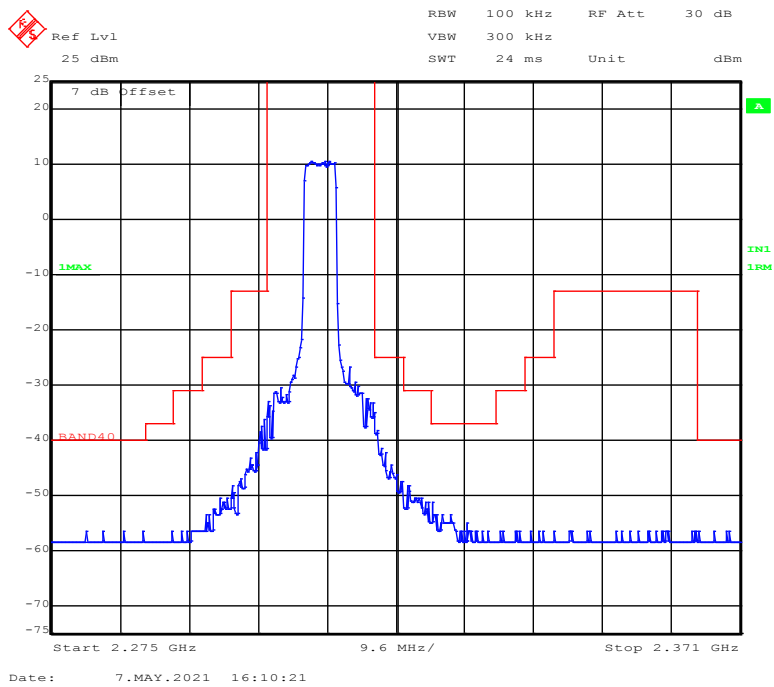
16-QAM (1.4 MHz, FULL RB) - Left Band Edge**16-QAM (1.4 MHz, FULL RB) - Right Band Edge**

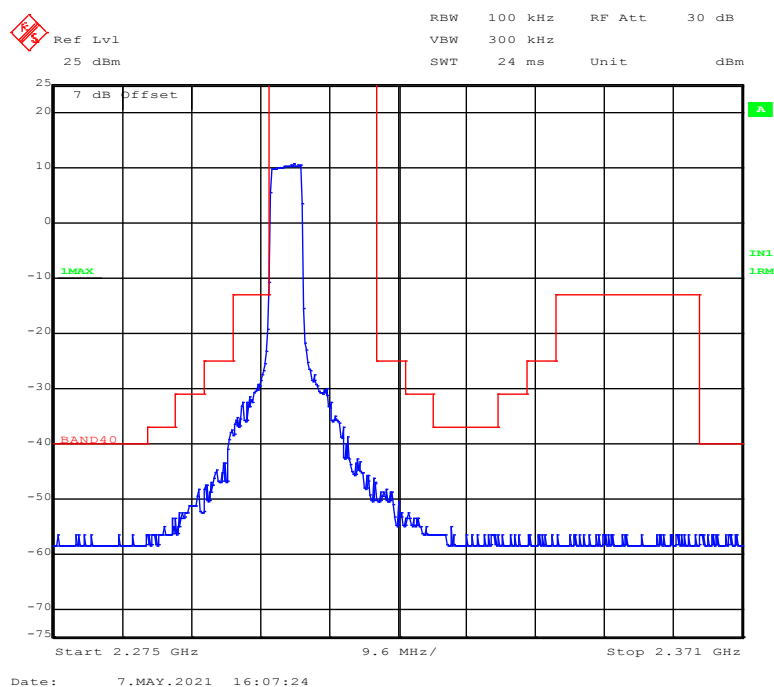
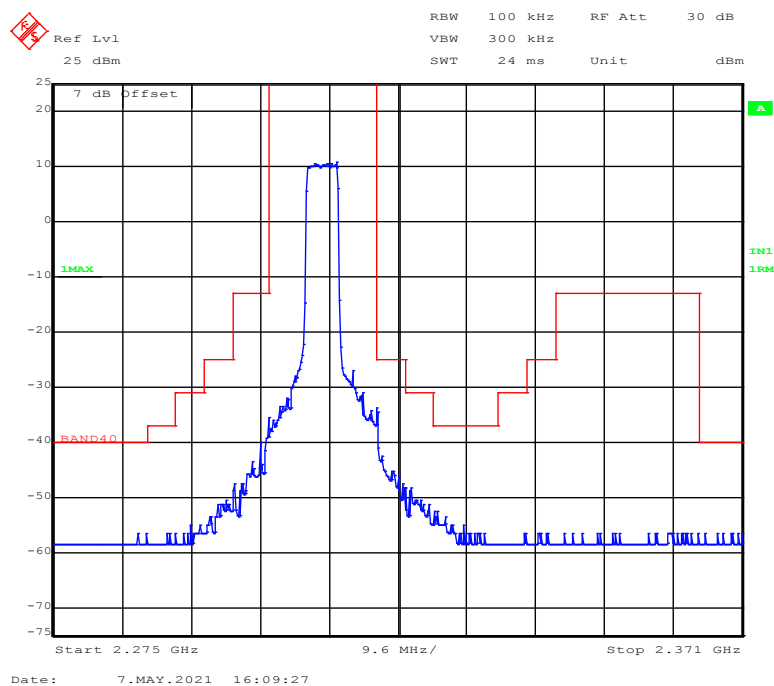
16-QAM (3 MHz, FULL RB) - Left Band Edge**16-QAM (3 MHz, FULL RB) - Right Band Edge**

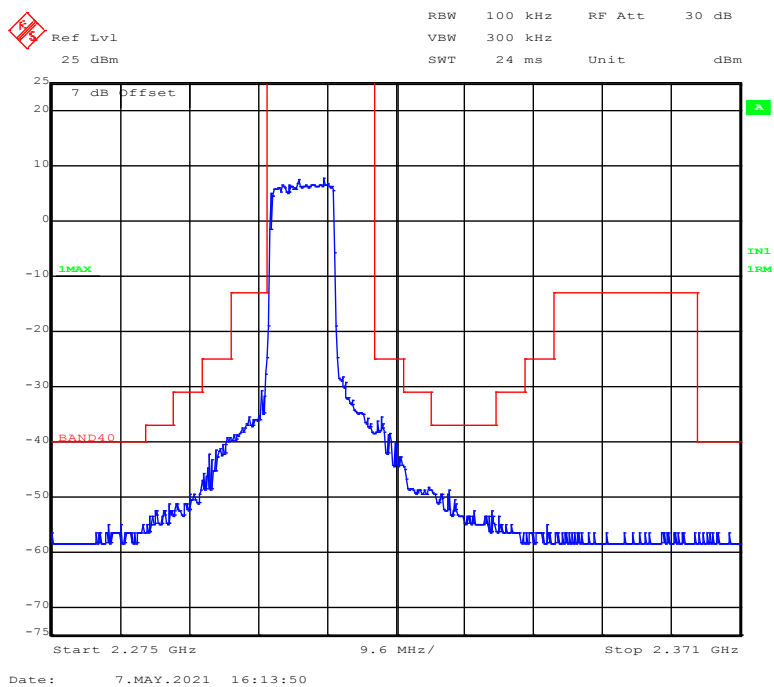
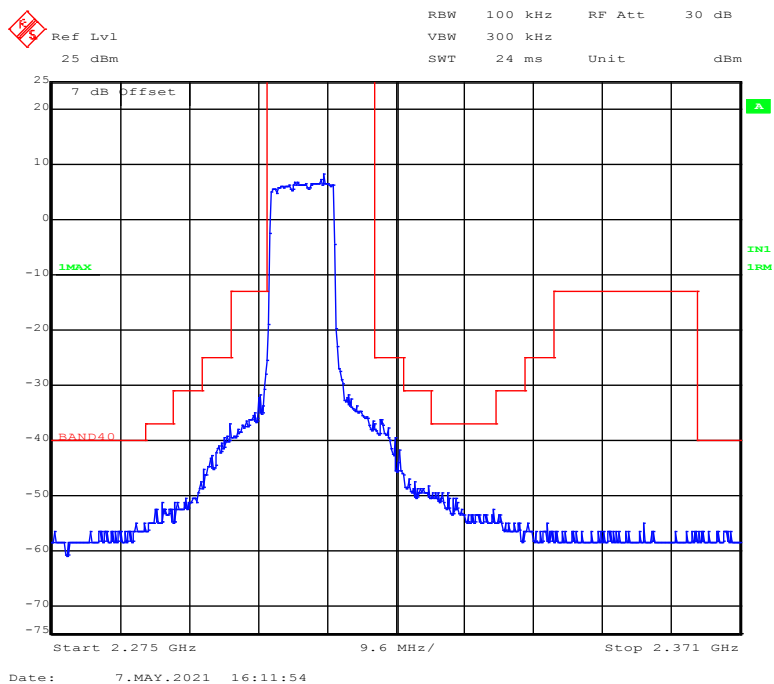
16-QAM (5 MHz, FULL RB) - Left Band Edge**16-QAM (5 MHz, FULL RB) - Right Band Edge**

16-QAM (10 MHz, FULL RB) - Left Band Edge**16-QAM (10 MHz, FULL RB) - Right Band Edge**

16-QAM (15 MHz, FULL RB) - Left Band Edge**16-QAM (15 MHz, FULL RB) - Right Band Edge**

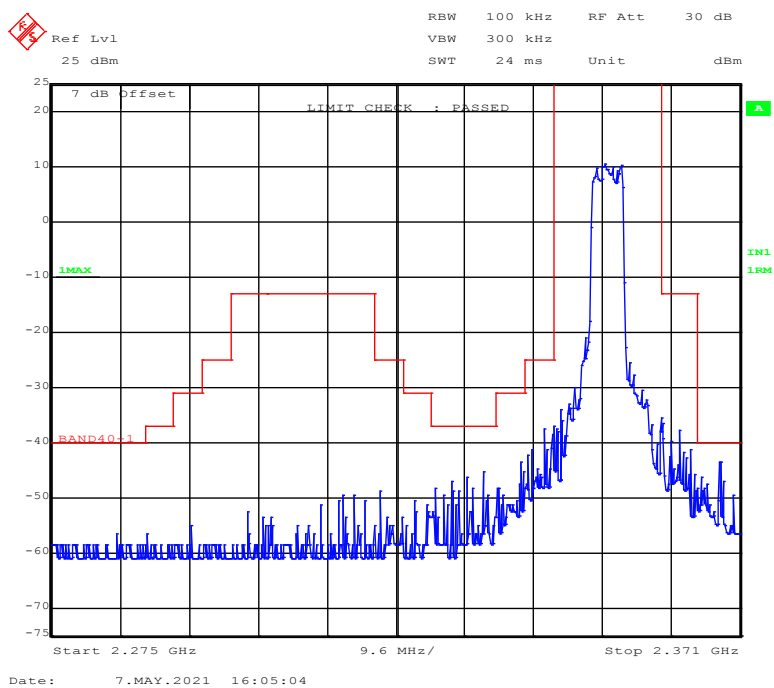
LTE Band 40:**2305-2315MHz****QPSK (5.0 MHz, FULL RB) - Left Band Edge****QPSK (5.0 MHz, FULL RB) - Right Band Edge**

16-QAM (5.0 MHz, FULL RB) - Left Band Edge**16-QAM (5.0 MHz, FULL RB) - Right Band Edge**

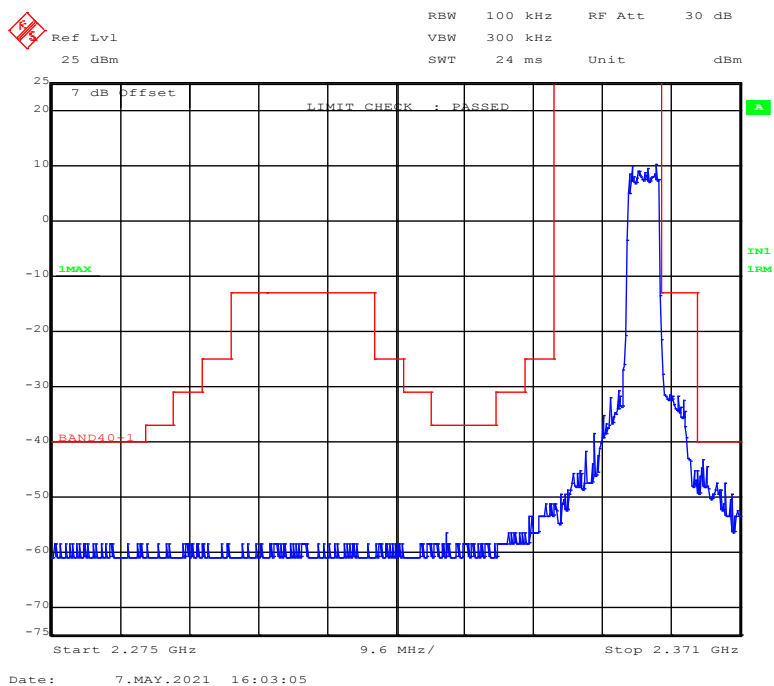
QPSK (10.0 MHz, FULL RB) Band Edge**16-QAM (10.0 MHz, FULL RB) Band Edge**

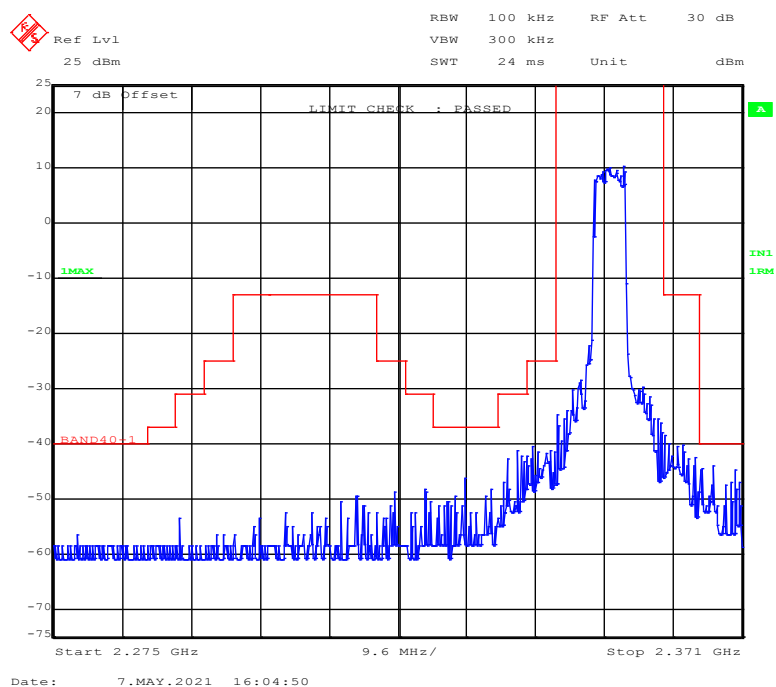
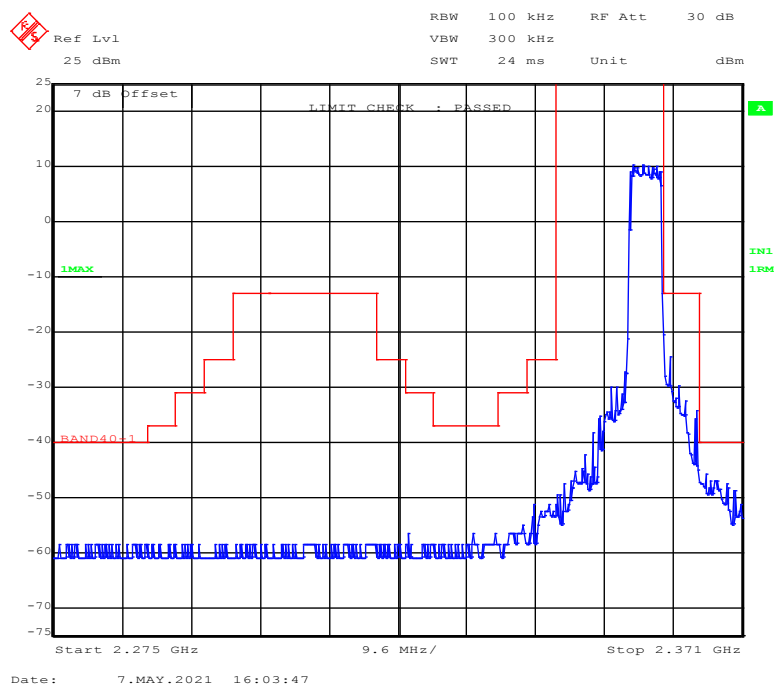
2350-2360MHz

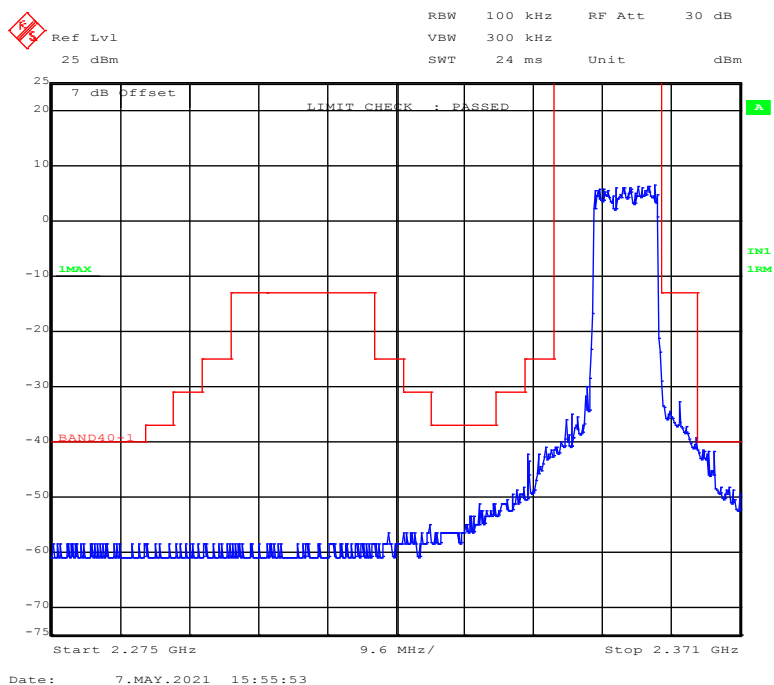
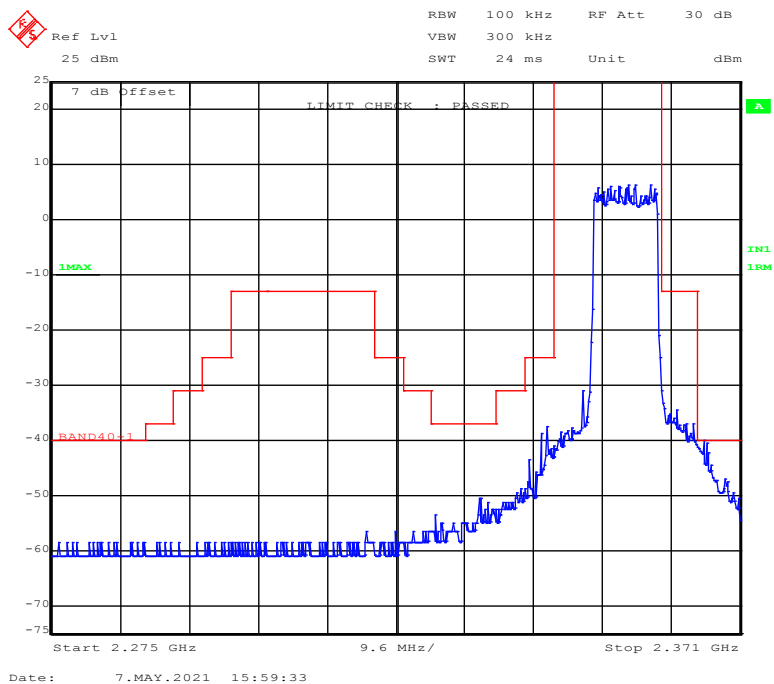
QPSK (5.0 MHz, FULL RB) - Left Band Edge

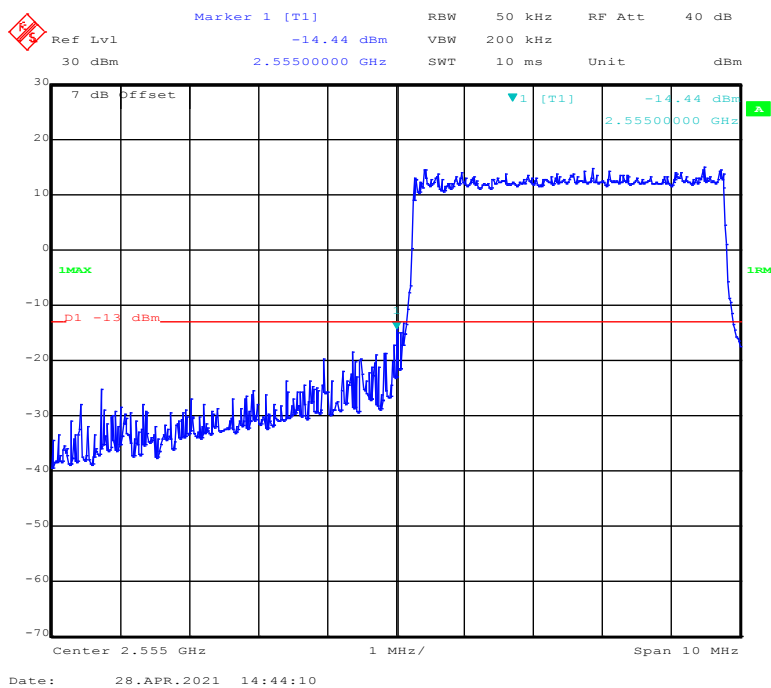
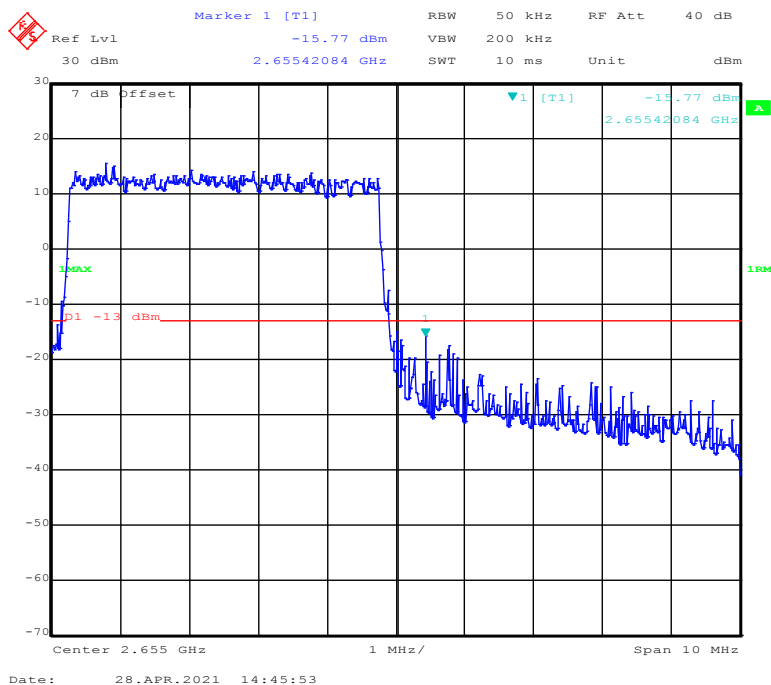


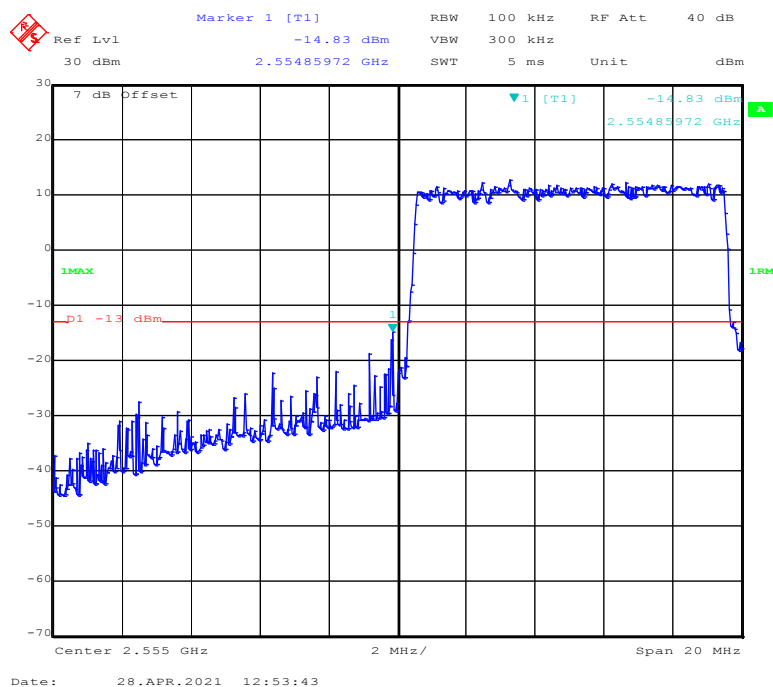
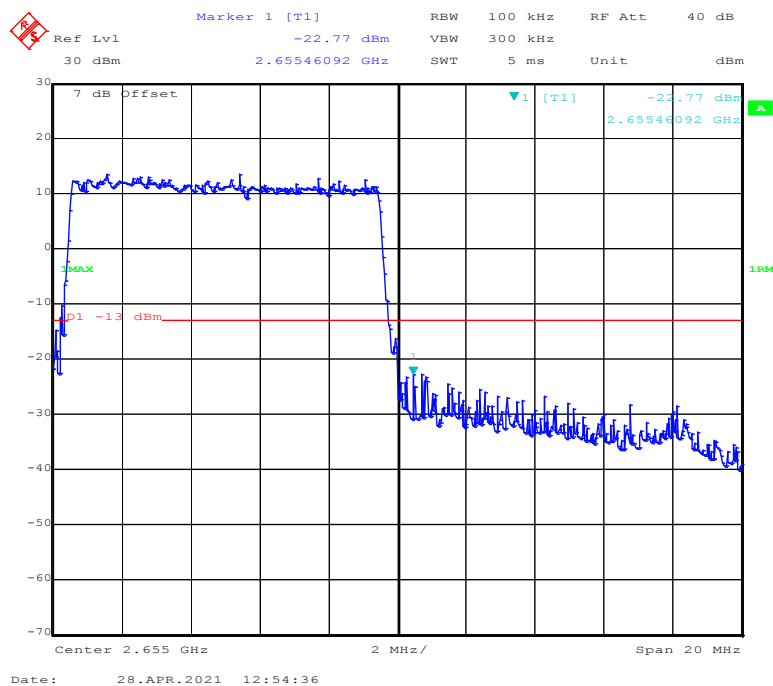
QPSK (5.0 MHz, FULL RB) - Right Band Edge

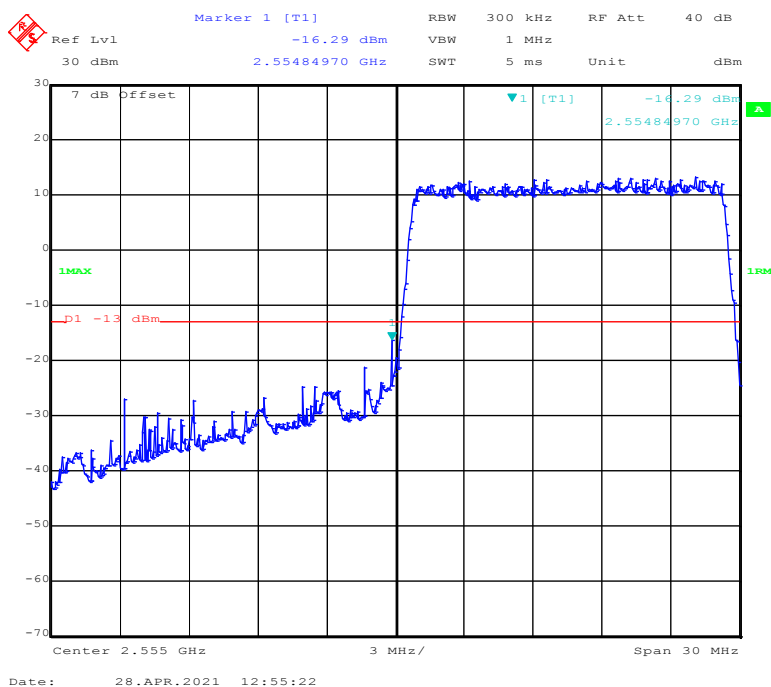
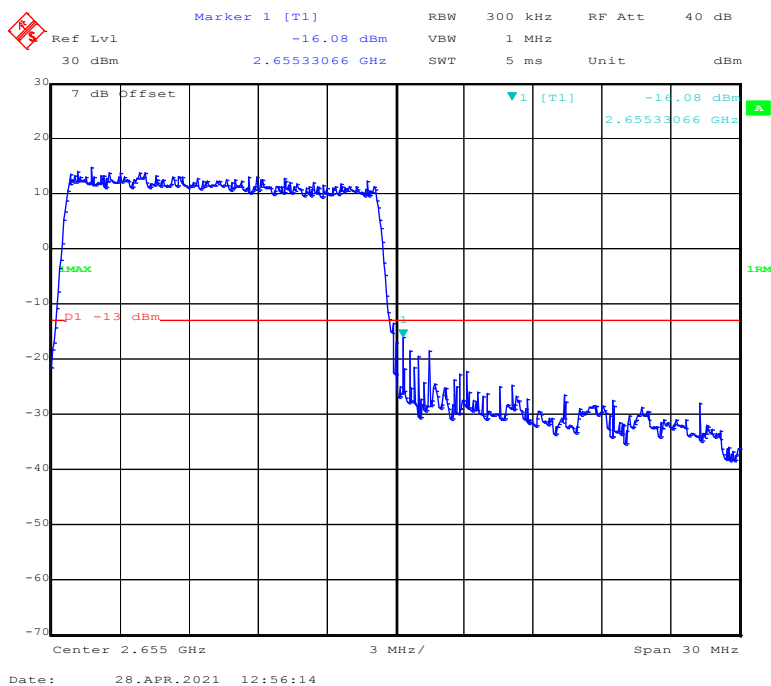


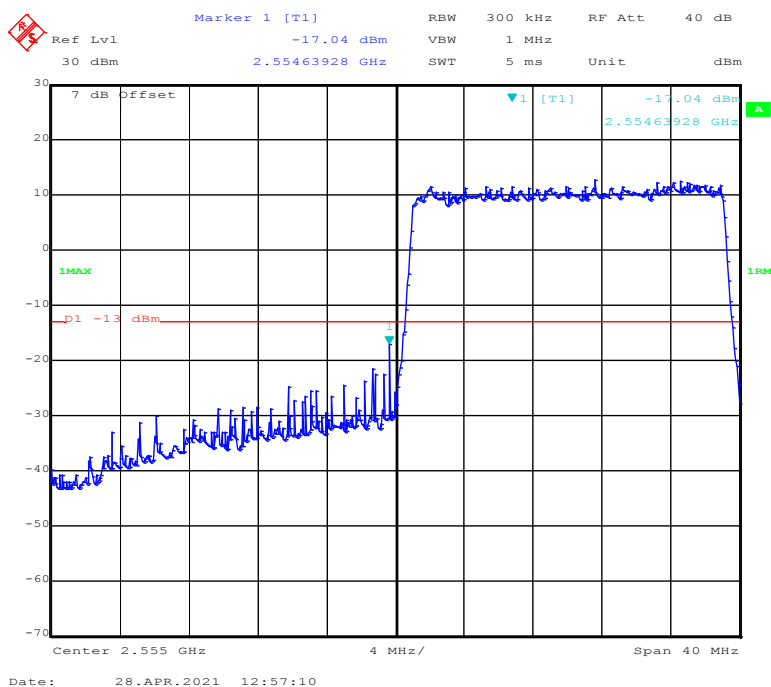
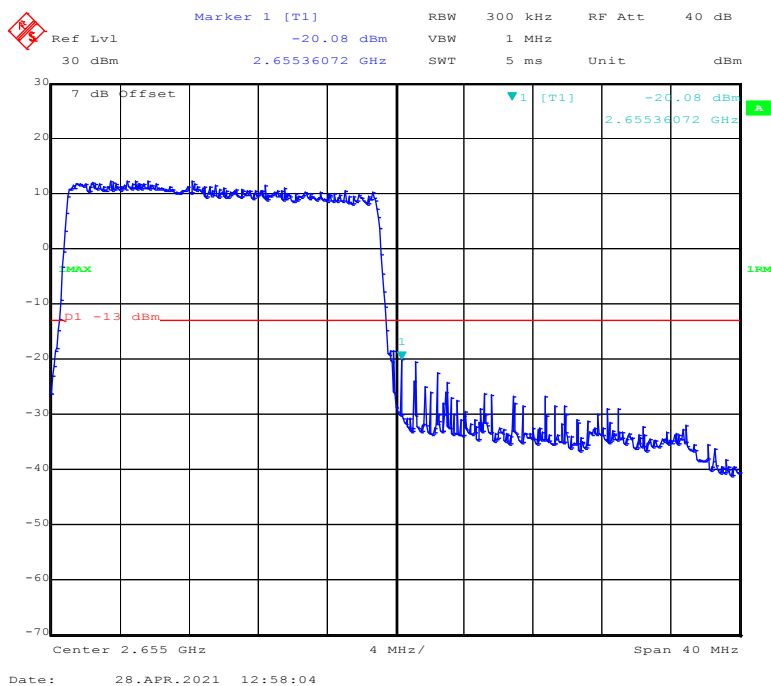
16-QAM (5.0 MHz, FULL RB) - Left Band Edge**16-QAM (5.0 MHz, FULL RB) - Right Band Edge**

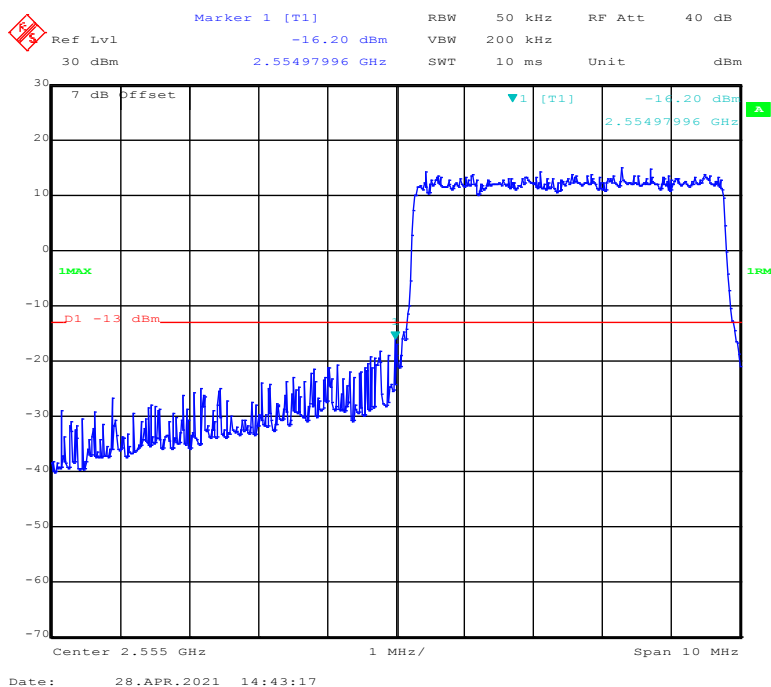
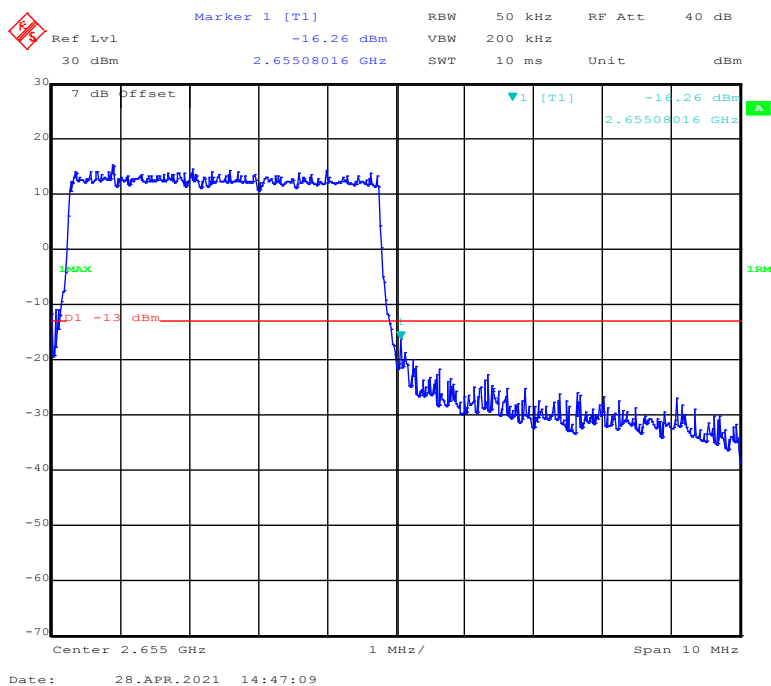
QPSK (10.0 MHz, FULL RB) Band Edge**16-QAM (10.0 MHz, FULL RB) Band Edge**

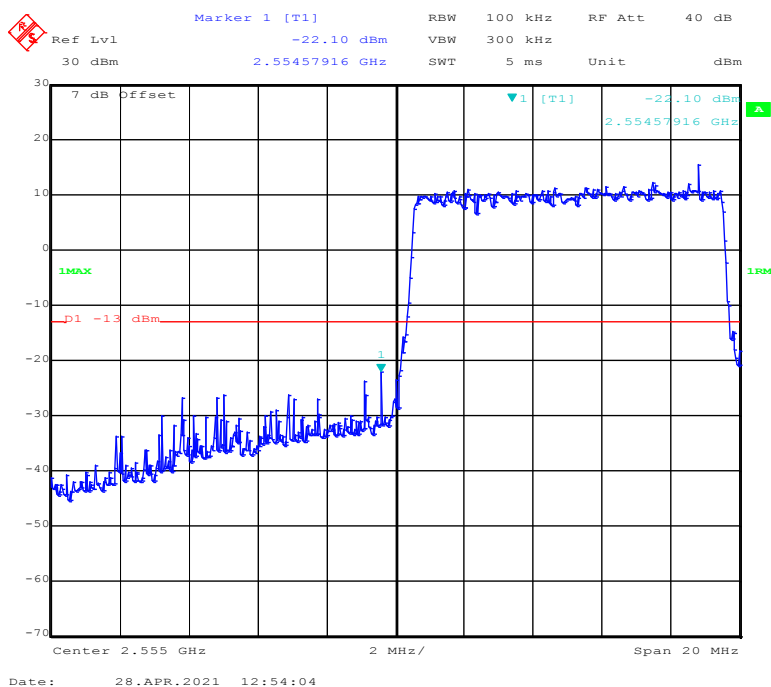
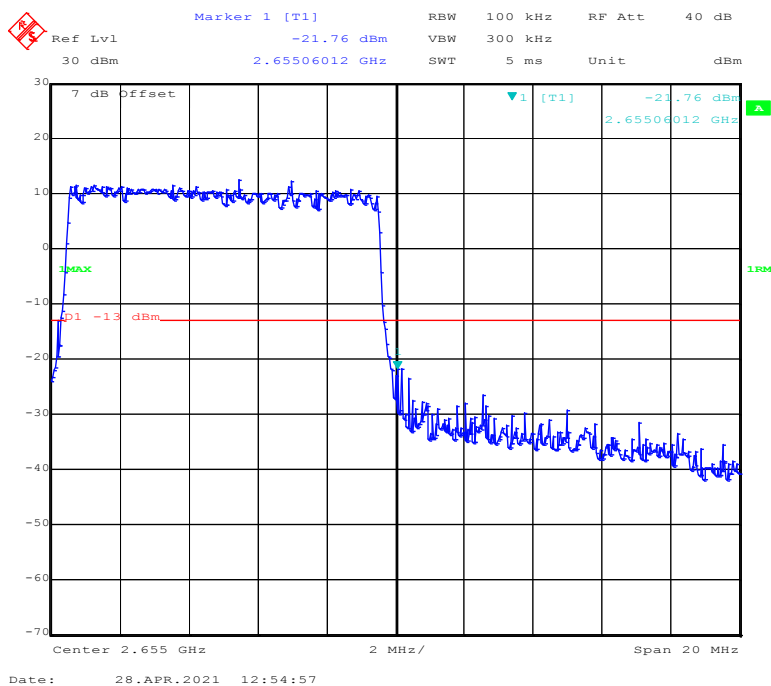
LTE Band 41:**QPSK (5.0 MHz, FULL RB) - Left Band Edge****QPSK (5.0 MHz, FULL RB) - Right Band Edge**

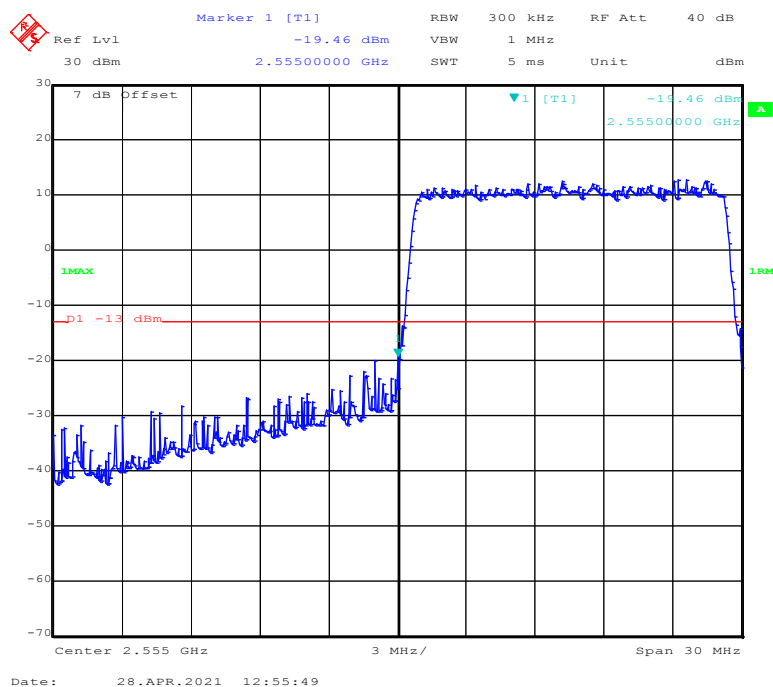
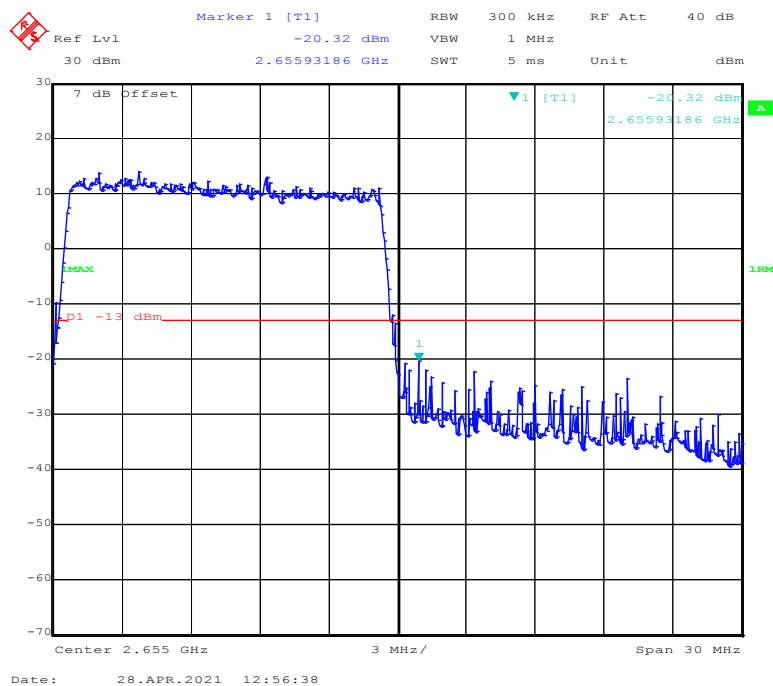
QPSK (10.0 MHz, FULL RB) - Left Band Edge**QPSK (10.0 MHz, FULL RB) - Right Band Edge**

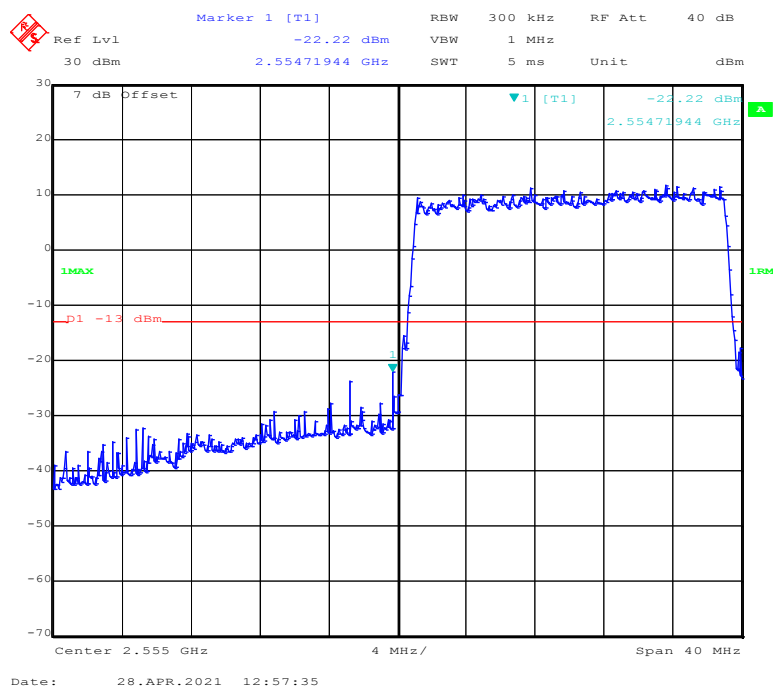
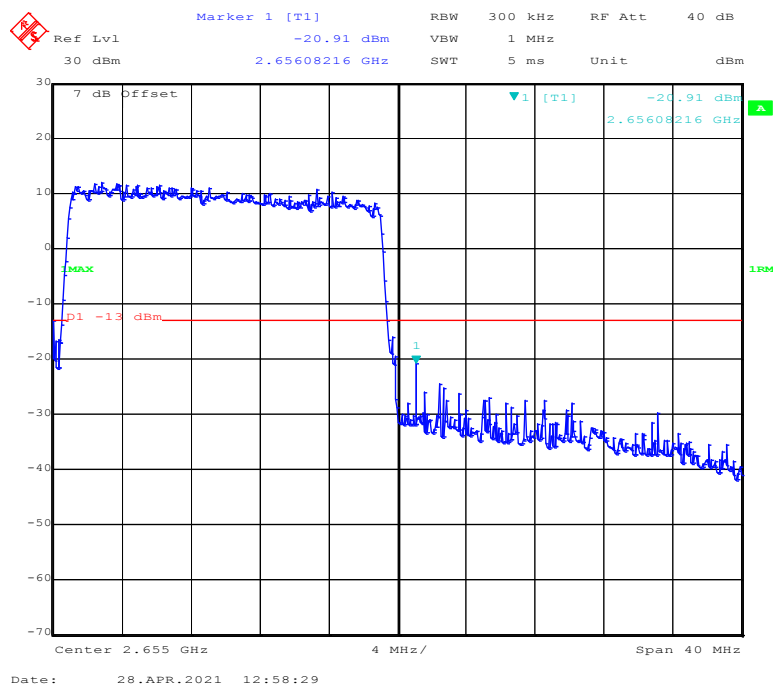
QPSK (15.0 MHz, FULL RB) - Left Band Edge**QPSK (15.0 MHz, FULL RB) - Right Band Edge**

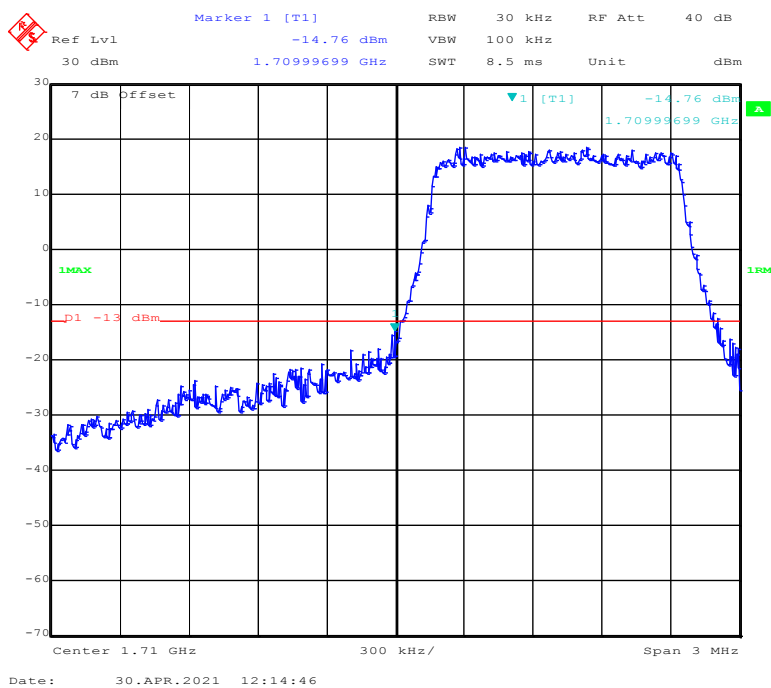
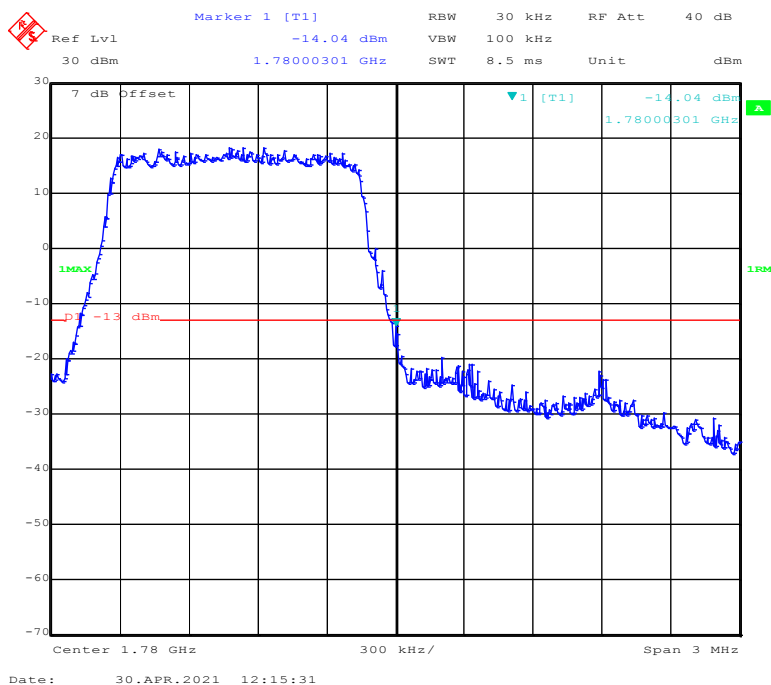
QPSK (20.0 MHz, FULL RB) - Left Band Edge**QPSK (20.0 MHz, FULL RB) - Right Band Edge**

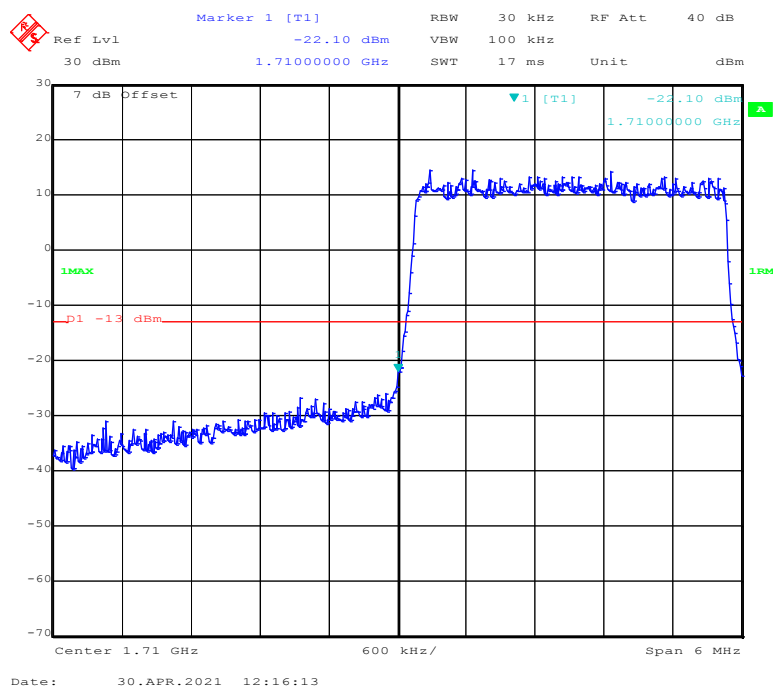
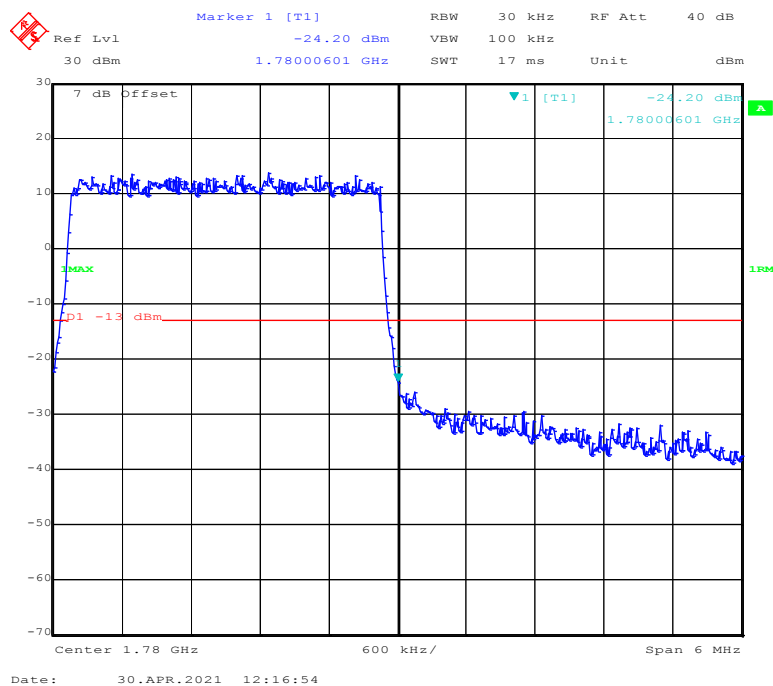
16-QAM (5.0 MHz, FULL RB) - Left Band Edge**16-QAM (5.0 MHz, FULL RB) - Right Band Edge**

16-QAM (10.0 MHz, FULL RB) - Left Band Edge**16-QAM (10.0 MHz, FULL RB) - Right Band Edge**

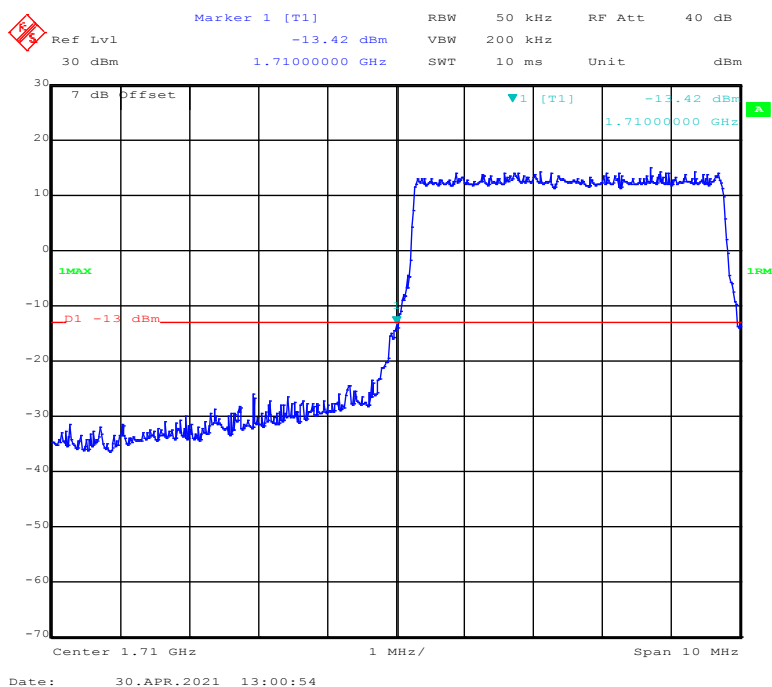
16-QAM (15.0 MHz, FULL RB) - Left Band Edge**16-QAM (15.0 MHz, FULL RB) - Right Band Edge**

16-QAM (20.0 MHz, FULL RB) - Left Band Edge**16-QAM (20.0 MHz, FULL RB) - Right Band Edge**

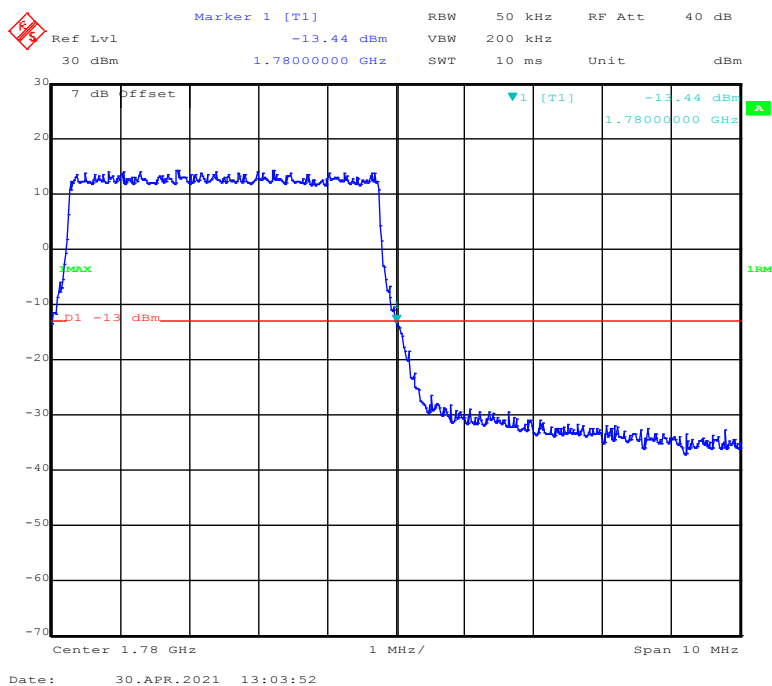
LTE Band 66:**QPSK (1.4 MHz, FULL RB) - Left Band Edge****QPSK (1.4 MHz, FULL RB) - Right Band Edge**

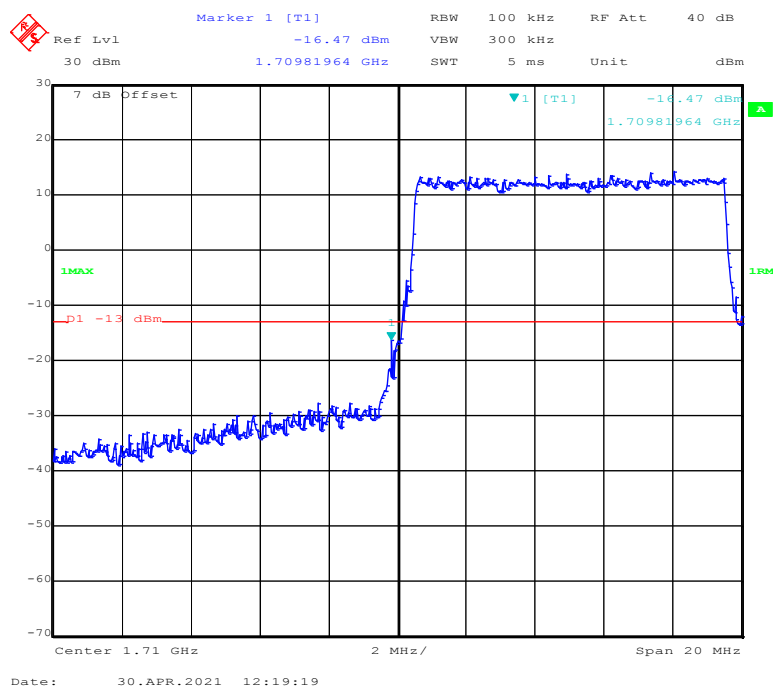
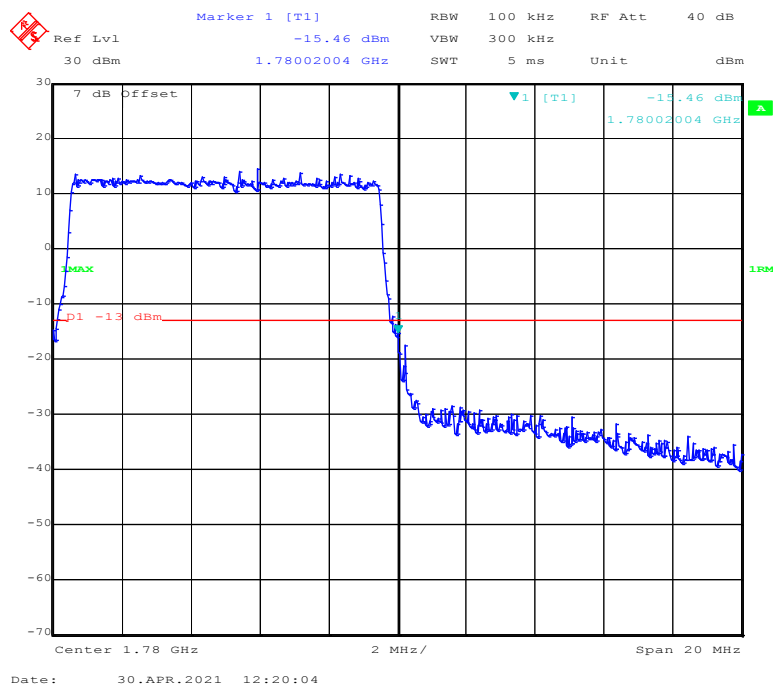
QPSK (3 MHz, FULL RB) - Left Band Edge**QPSK (3 MHz, FULL RB) - Right Band Edge**

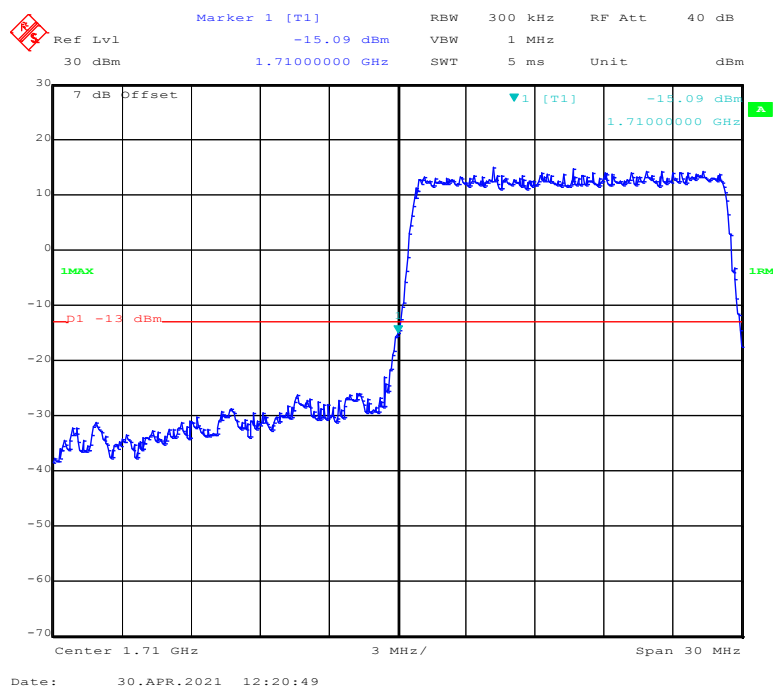
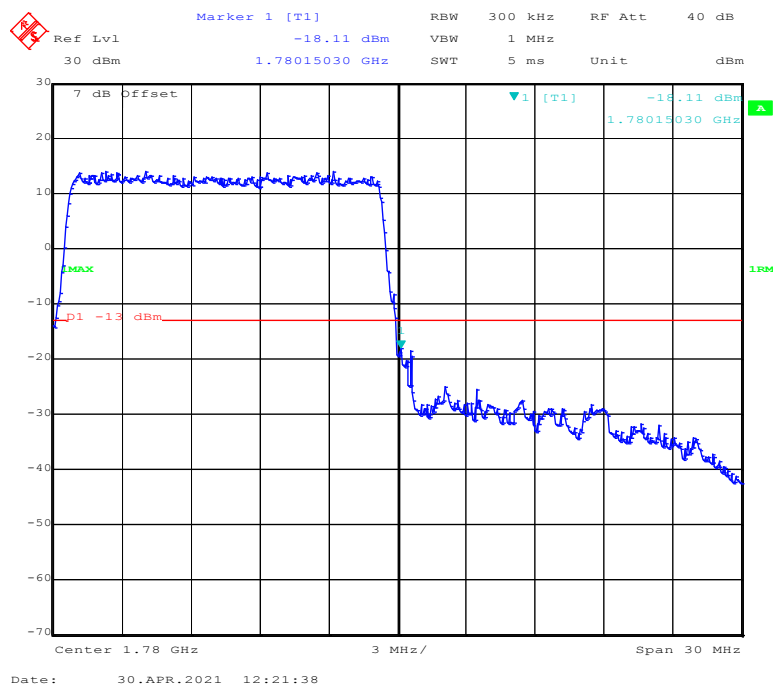
QPSK (5 MHz, FULL RB) - Left Band Edge

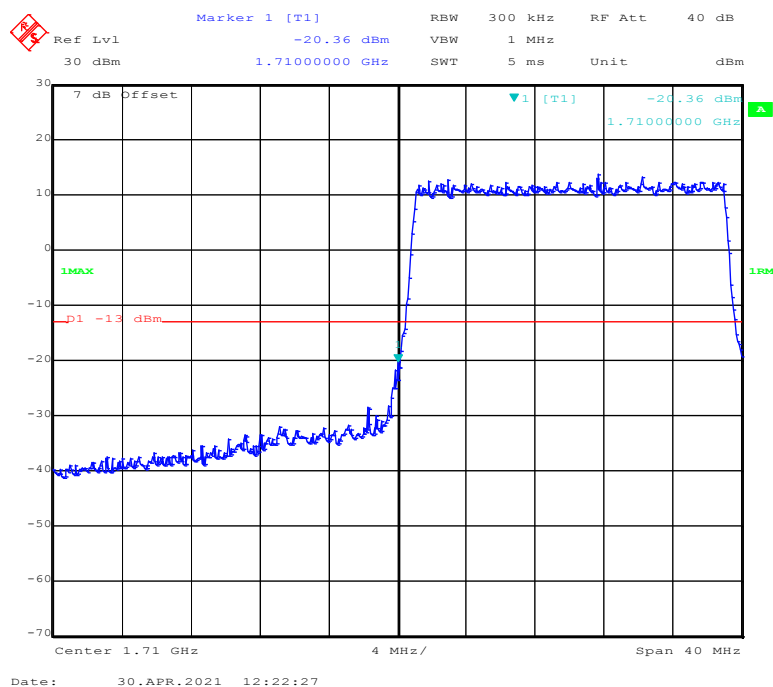
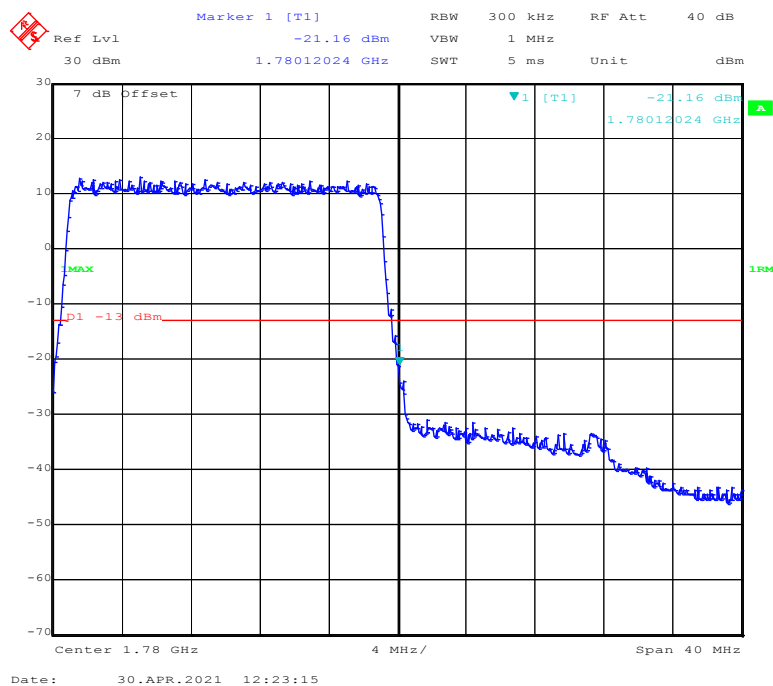


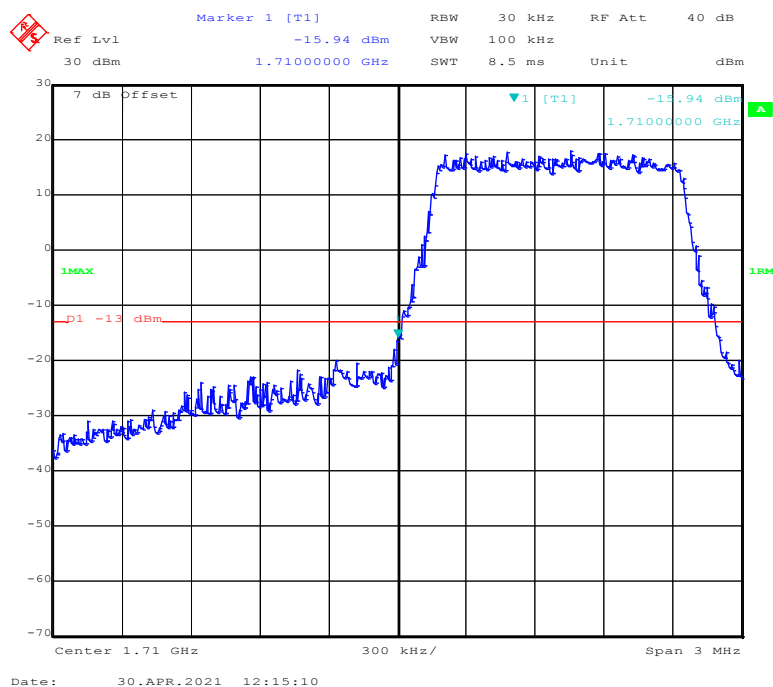
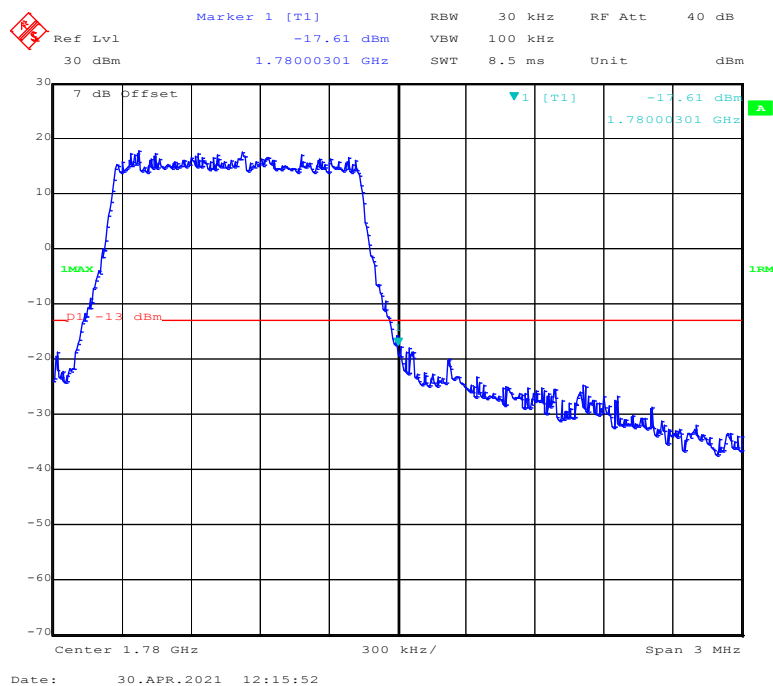
QPSK (5 MHz, FULL RB) - Right Band Edge

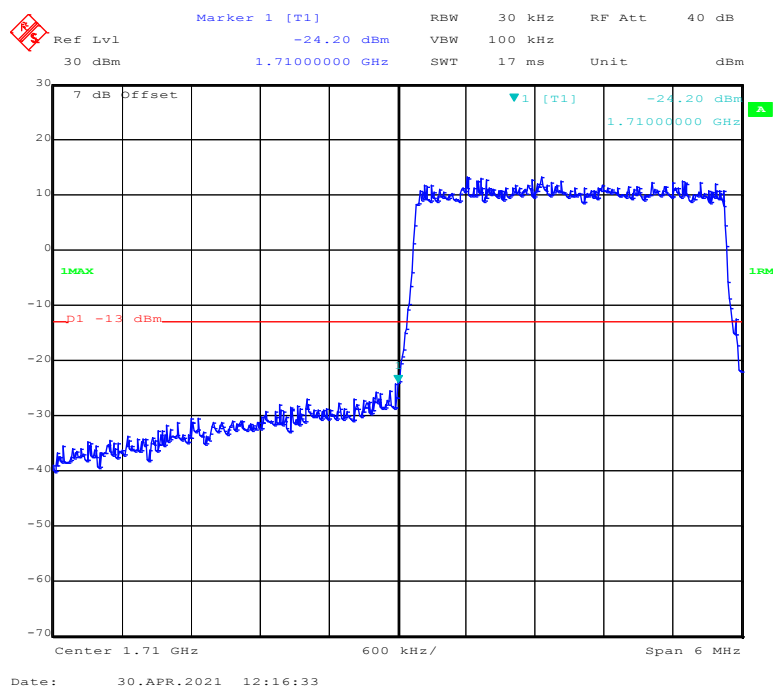
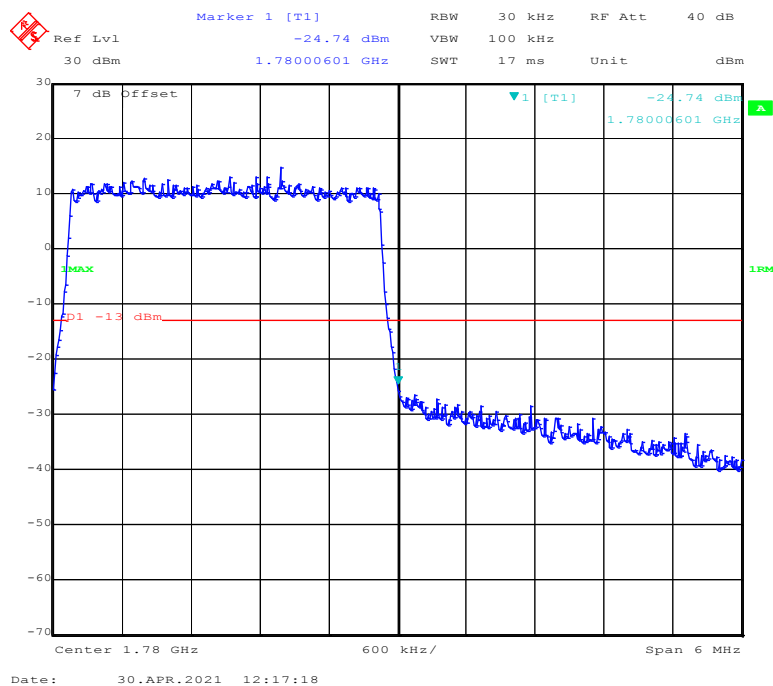


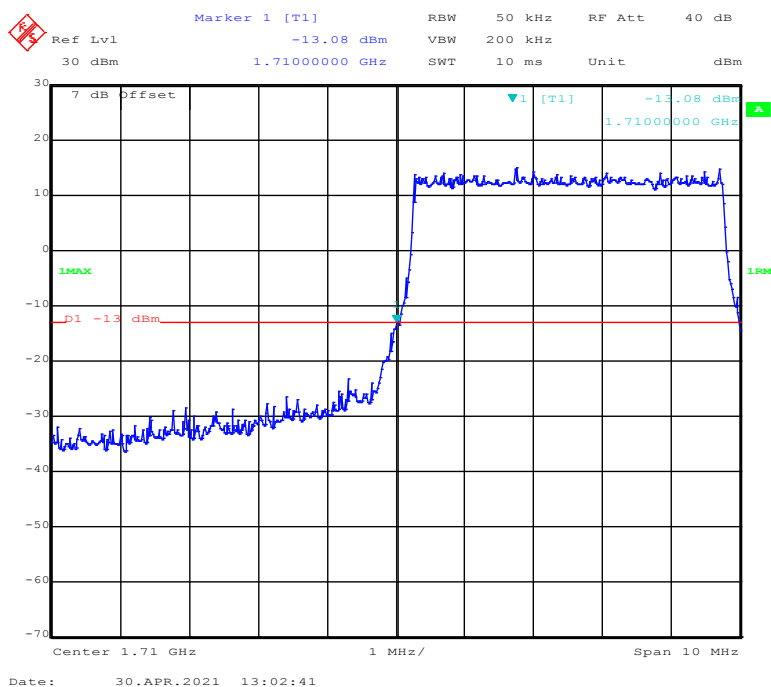
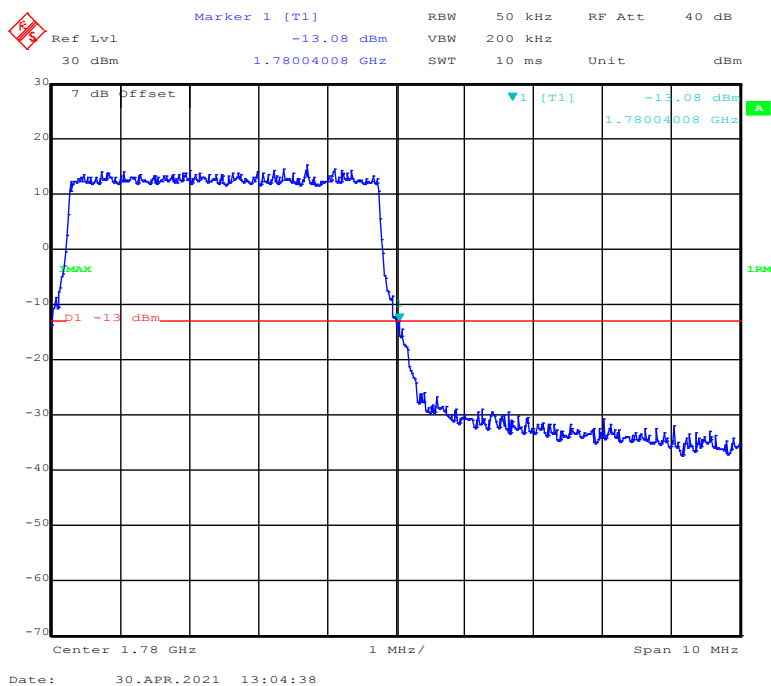
QPSK (10 MHz, FULL RB) - Left Band Edge**QPSK (10 MHz, FULL RB) - Right Band Edge**

QPSK (15 MHz, FULL RB) - Left Band Edge**QPSK (15 MHz, FULL RB) - Right Band Edge**

QPSK (20 MHz, FULL RB) - Left Band Edge**QPSK (20 MHz, FULL RB) - Right Band Edge**

16-QAM (1.4 MHz, FULL RB) - Left Band Edge**16-QAM (1.4 MHz, FULL RB) - Right Band Edge**

16-QAM (3 MHz, FULL RB) - Left Band Edge**16-QAM (3 MHz, FULL RB) - Right Band Edge**

16-QAM (5 MHz, FULL RB) - Left Band Edge**16-QAM (5 MHz, FULL RB) - Right Band Edge**

Marker 1 [T1] RBW 100 kHz RF Att 40 dB
 Ref Lvl -15.30 dBm VBW 300 kHz
 30 dBm 1.71000000 GHz SWT 5 ms Unit dBm

7 dB Offset
 1MAX
 -13 dBm
 -15.30 dBm
 1.71000000 GHz
 1RM

Center 1.71 GHz 2 MHz/ Span 20 MHz

Date: 30.APR.2021 12:19:41

The screenshot displays a spectrum analyzer interface. At the top, a red diamond icon with 'RF' is visible. The main display area shows a blue trace of a signal. A red horizontal line is drawn across the plot at -13 dBm, labeled 'p1 -13 dBm'. A green vertical line is positioned at the signal's center frequency, labeled 'v1 [T1]'. The signal's power level is indicated as -19.04 dBm at 1.78002004 GHz. The plot has a grid with a center frequency of 1.78 GHz, a span of 20 MHz, and a resolution bandwidth (RBW) of 100 kHz. The y-axis represents power in dBm, ranging from -70 to 30. The x-axis represents frequency in MHz, ranging from 1.76 to 1.80. The signal is a narrowband pulse centered at 1.78 GHz.

Marker 1 [T1]
 -19.04 dBm
 1.78002004 GHz

RBW 100 kHz RF Att 40 dB
 VBW 300 kHz
 SWT 5 ms Unit dBm

7 dB Offset

1 MAX

p1 -13 dBm

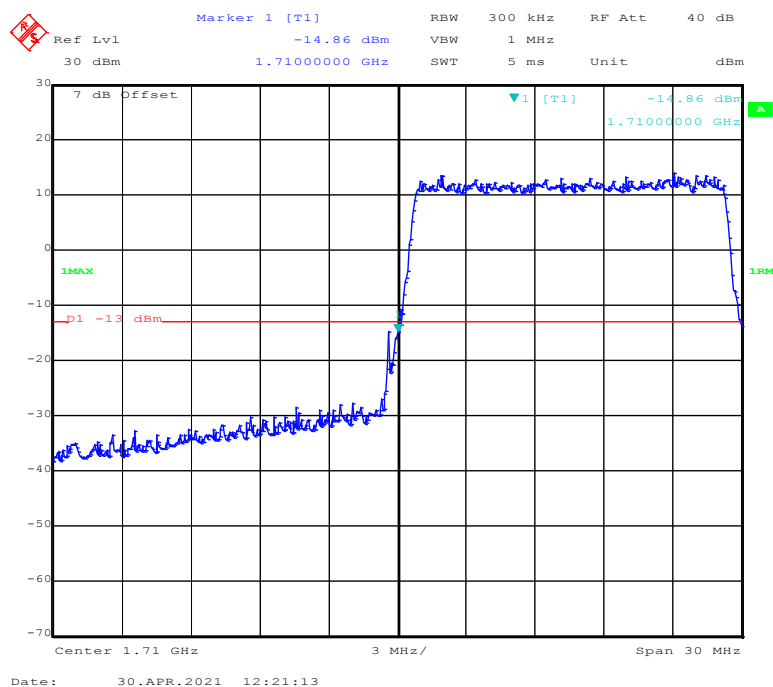
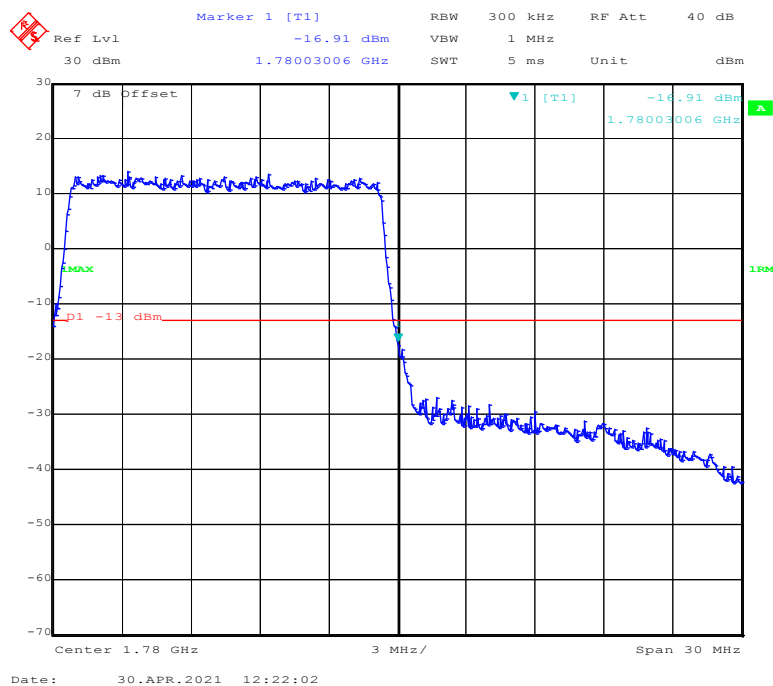
v1 [T1]

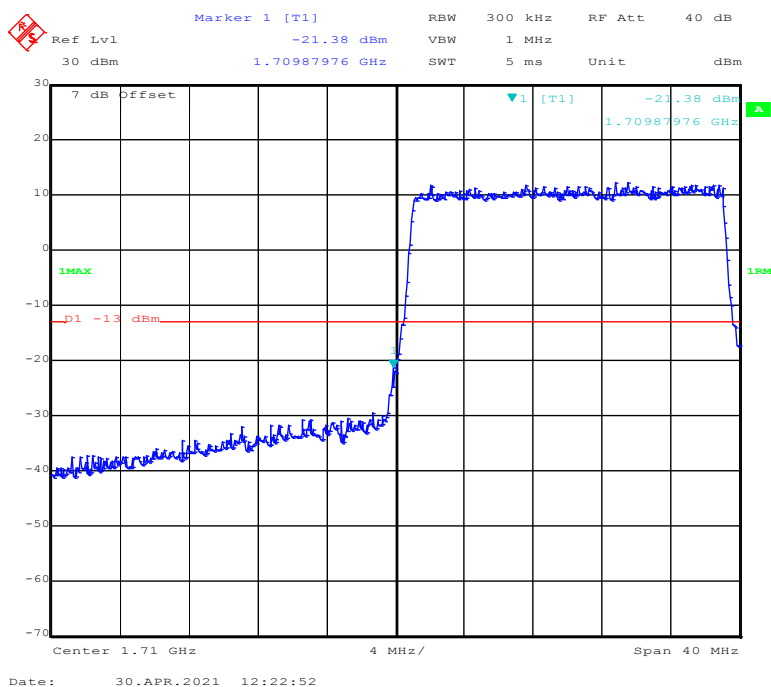
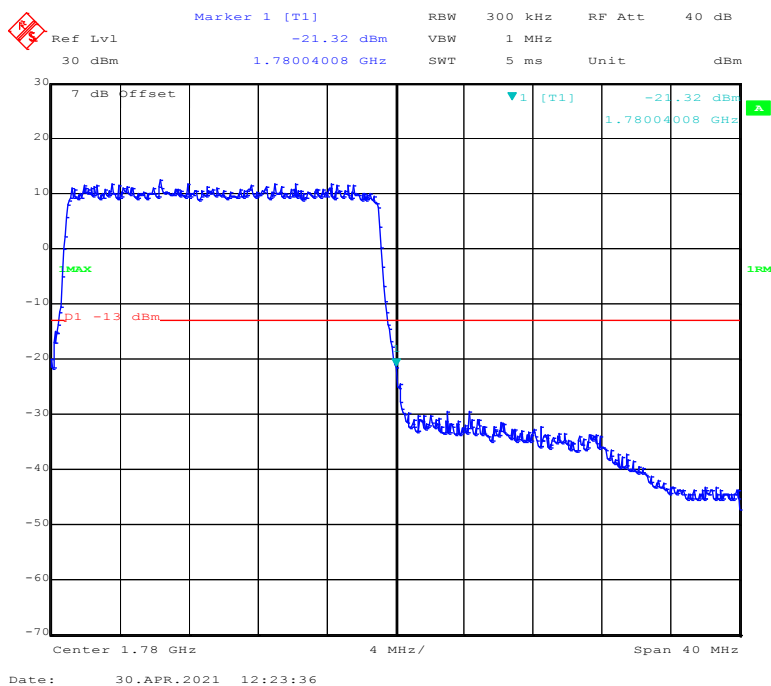
-19.04 dBm
 1.78002004 GHz

1RM

Center 1.78 GHz 2 MHz/ Span 20 MHz

Date: 30.APR.2021 12:20:25

16-QAM (15 MHz, FULL RB) - Left Band Edge**16-QAM (15 MHz, FULL RB) - Right Band Edge**

16-QAM (20 MHz, FULL RB) - Left Band Edge**16-QAM (20 MHz, FULL RB) - Right Band Edge**

FCC § 2.1055; § 22.355; § 24.235; § 27.54; § 90.213- FREQUENCY STABILITY**Applicable Standards**

FCC § 2.1055, § 22.355, § 24.235, § 27.54 and § 90.213.

According to FCC § 2.1055, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

According to § 22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency Range (MHz)	Base, fixed (ppm)	Mobile > 3 watts (ppm)	Mobile ≤ 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929.	5.0	N/A	N/A
929 to 960.	1.5	N/A	N/A
2110 to 2220	10.0	N/A	N/A

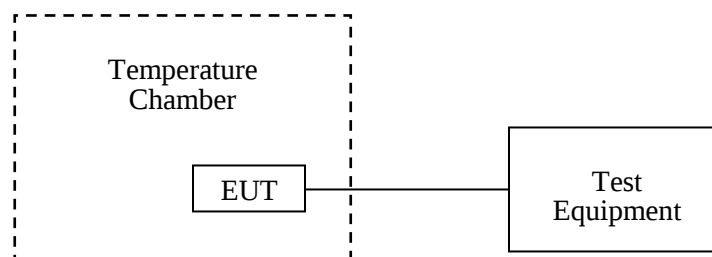
According to § 24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



Test Data**Environmental Conditions**

Temperature:	24.3-24.7 °C
Relative Humidity:	47-50 %
ATM Pressure:	101.2-101.7 kPa

The testing was performed by Tyrone Wang from 2021-05-13 to 2021-06-02.

EUT operation mode: Transmitting

Test Result: Compliant.

GSM 850 Band:

GPRS Mode, Middle Channel, $f_o = 836.6$ MHz				
Temperature (°C)	Power Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	7.7	13	0.01554	2.5
-20		20	0.02391	2.5
-10		11	0.01315	2.5
0		11	0.01315	2.5
10		20	0.02391	2.5
20		14	0.01673	2.5
30		12	0.01434	2.5
40		14	0.01673	2.5
50		11	0.01315	2.5
20	V min.= 6.93	14	0.01673	2.5
20	V max.= 8.47	12	0.01434	2.5

EGPRS Mode, Middle Channel, $f_o = 836.6$ MHz				
Temperature (°C)	Power Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	7.7	13	0.01554	2.5
-20		13	0.01554	2.5
-10		12	0.01434	2.5
0		11	0.01315	2.5
10		7	0.00837	2.5
20		10	0.01195	2.5
30		20	0.02391	2.5
40		16	0.01913	2.5
50		18	0.02152	2.5
20	V min.= 6.93	16	0.01913	2.5
20	V max.= 8.47	12	0.01434	2.5

WCDMA Band V:

WCDMA Mode, Middle Channel, $f_o = 836.6$ MHz				
Temperature (°C)	Power Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	7.7	17	0.020320	2.5
-20		19	0.014344	2.5
-10		19	0.014344	2.5
0		12	0.014344	2.5
10		12	0.014344	2.5
20		16	0.019125	2.5
30		22	0.026297	2.5
40		12	0.014344	2.5
50		18	0.021516	2.5
20	V min.= 6.93	19	0.022711	2.5
20	V max.= 8.47	15	0.017930	2.5

PCS 1900 Band:

GPRS Mode, Middle Channel, $f_0 = 1880.0$ MHz				
Temperature (°C)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	7.7	-9	-0.00479	pass
-20		-18	-0.00957	pass
-10		-11	-0.00585	pass
0		-12	-0.00638	pass
10		-14	-0.00745	pass
20		-18	-0.00957	pass
30		-12	-0.00638	pass
40		-18	-0.00957	pass
50		-17	-0.00904	pass
20	V min.= 6.93	-17	-0.00904	pass
20	V max.= 8.47	-11	-0.00585	pass

EGPRS Mode, Middle Channel, $f_0 = 1880.0$ MHz				
Temperature (°C)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	7.7	-12	-0.00638	pass
-20		-8	-0.00426	pass
-10		-16	-0.00851	pass
0		-14	-0.00745	pass
10		-15	-0.00798	pass
20		-16	-0.00851	pass
30		-20	-0.01064	pass
40		-15	-0.00798	pass
50		-13	-0.00691	pass
20	V min.= 6.93	-13	-0.00691	pass
20	V max.= 8.47	-13	-0.00691	pass

WCDMA Band II:

WCDMA Mode, Middle Channel, $f_0 = 1880.0$ MHz				
Temperature (°C)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	7.7	15	0.007979	pass
-20		14	0.007447	pass
-10		13	0.006915	pass
0		15	0.007979	pass
10		13	0.006915	pass
20		19	0.010106	pass
30		18	0.009574	pass
40		7	0.003723	pass
50		14	0.007447	pass
20	V min.= 6.93	17	0.009043	pass
20	V max.= 8.47	11	0.005851	pass

WCDMA Band IV:

WCDMA Mode, Low Channel & High Channel					
Temperature	Power Supplied	F_L	F_H	F_L Limit	F_H Limit
(°C)	(V_{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	1710.3378	1754.9207	1710	1755
-20		1710.4120	1754.6556	1710	1755
-10		1710.4237	1754.8657	1710	1755
0		1710.3844	1754.6678	1710	1755
10		1710.3463	1754.7170	1710	1755
20		1710.4122	1754.6635	1710	1755
30		1710.3986	1754.6725	1710	1755
40		1710.3256	1754.7923	1710	1755
50		1710.4010	1754.8255	1710	1755
20	V min.= 6.93	1710.3892	1754.8488	1710	1755
20	V max.= 8.47	1710.3466	1754.7201	1710	1755

LTE Band 2:

f_o = 1880.0 MHz (QPSK)				
Temperature (°C)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	7.7	16	0.0191	Pass
-20		20	0.0239	Pass
-10		15	0.0179	Pass
0		16	0.0191	Pass
10		12	0.0143	Pass
20		13	0.0155	Pass
30		16	0.0191	Pass
40		20	0.0239	Pass
50		15	0.0179	Pass
20	V min.= 6.93	14	0.0167	Pass
20	V max.= 8.47	14	0.0167	Pass

f_o = 1880.0 MHz (16-QAM)				
Temperature (°C)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	7.7	19	0.0227	Pass
-20		19	0.0227	Pass
-10		14	0.0167	Pass
0		7	0.0084	Pass
10		15	0.0179	Pass
20		11	0.0132	Pass
30		19	0.0227	Pass
40		8	0.0096	Pass
50		18	0.0215	Pass
20	V min.= 6.93	14	0.0167	Pass
20	V max.= 8.47	12	0.0143	Pass

LTE Band 4:

Low Channel & High Channel (QPSK)/ /Channel Bandwidth:20MHz					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	1710.0483	1754.9677	1710	1755
-20		1710.0454	1754.9602	1710	1755
-10		1710.0407	1754.9693	1710	1755
0		1710.0482	1754.9614	1710	1755
10		1710.0497	1754.9647	1710	1755
20		1710.0477	1754.9687	1710	1755
30		1710.0411	1754.9629	1710	1755
40		1710.0433	1754.9682	1710	1755
50		1710.0458	1754.9611	1710	1755
20	V min.= 6.93	1710.0428	1754.9683	1710	1755
20	V max.= 8.47	1710.0474	1754.9610	1710	1755

Low Channel & High Channel (16-QAM)/ /Channel Bandwidth:20MHz					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	1710.0490	1754.9648	1710	1755
-20		1710.0424	1754.9619	1710	1755
-10		1710.0411	1754.9671	1710	1755
0		1710.0417	1754.9622	1710	1755
10		1710.0436	1754.9679	1710	1755
20		1710.0495	1754.9659	1710	1755
30		1710.0455	1754.9641	1710	1755
40		1710.0452	1754.9671	1710	1755
50		1710.0476	1754.9643	1710	1755
20	V min.= 6.93	1710.0442	1754.9603	1710	1755
20	V max.= 8.47	1710.0434	1754.9653	1710	1755

LTE Band 5:

Middle Channel, $f_o = 836.5$ MHz (QPSK)				
Temperature	Power Supplied	Frequency Error	Frequency Error	Limit
(°C)	(V _{DC})	(Hz)	(ppm)	(ppm)
-30	7.7	22	0.0263	2.5
-20		19	0.0227	2.5
-10		14	0.0167	2.5
0		15	0.0179	2.5
10		20	0.0239	2.5
20		13	0.0155	2.5
30		8	0.0096	2.5
40		10	0.0120	2.5
50		21	0.0251	2.5
20	V min.= 6.93	15	0.0179	2.5
20	V max.= 8.47	10	0.0120	2.5

Middle Channel, $f_o = 836.5$ MHz (16-QAM)				
Temperature	Power Supplied	Frequency Error	Frequency Error	Limit
(°C)	(V _{DC})	(Hz)	(ppm)	(ppm)
-30	7.7	10	0.0120	2.5
-20		13	0.0155	2.5
-10		19	0.0227	2.5
0		10	0.0120	2.5
10		21	0.0251	2.5
20		14	0.0167	2.5
30		19	0.0227	2.5
40		8	0.0096	2.5
50		14	0.0167	2.5
20	V min.= 6.93	16	0.0191	2.5
20	V max.= 8.47	16	0.0191	2.5

LTE Band 7:

Low Channel & High Channel (QPSK) /Channel Bandwidth:20MHz					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	2500.0462	2569.9584	2500	2570
-20		2500.0441	2569.9578	2500	2570
-10		2500.0431	2569.9520	2500	2570
0		2500.0432	2569.9518	2500	2570
10		2500.0415	2569.9502	2500	2570
20		2500.0408	2569.9536	2500	2570
30		2500.0442	2569.9536	2500	2570
40		2500.0432	2569.9594	2500	2570
50		2500.0496	2569.9569	2500	2570
20	V min.= 6.93	2500.0443	2569.9557	2500	2570
20	V max.= 8.47	2500.0409	2569.9565	2500	2570

Low Channel & High Channel (16-QAM) /Channel Bandwidth:20MHz					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	2500.0431	2569.9521	2500	2570
-20		2500.0500	2569.9527	2500	2570
-10		2500.0470	2569.9554	2500	2570
0		2500.0410	2569.9505	2500	2570
10		2500.0454	2569.9584	2500	2570
20		2500.0404	2569.9539	2500	2570
30		2500.0476	2569.9594	2500	2570
40		2500.0479	2569.9544	2500	2570
50		2500.0470	2569.9540	2500	2570
20	V min.= 6.93	2500.0441	2569.9547	2500	2570
20	V max.= 8.47	2500.0442	2569.9578	2500	2570

LTE Band 12:

Low Channel & High Channel (QPSK)/ /Channel Bandwidth:10MHz					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	699.9568	715.9478	699	716
-20		699.9593	715.9410	699	716
-10		699.9569	715.9463	699	716
0		699.9554	715.9480	699	716
10		699.9583	715.9496	699	716
20		699.9594	715.9464	699	716
30		699.9600	715.9413	699	716
40		699.9509	715.9447	699	716
50		699.9500	715.9443	699	716
20	V min.= 6.93	699.9600	715.9413	699	716
20	V max.= 8.47	699.9588	715.9427	699	716

Low Channel & High Channel (16-QAM)/ /Channel Bandwidth:10MHz					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	699.9513	715.9481	699	716
-20		699.9566	715.9421	699	716
-10		699.9509	715.9410	699	716
0		699.9503	715.9450	699	716
10		699.9524	715.9444	699	716
20		699.9528	715.9449	699	716
30		699.9525	715.9462	699	716
40		699.9520	715.9422	699	716
50		699.9521	715.9499	699	716
20	V min.= 6.93	699.9548	715.9446	699	716
20	V max.= 8.47	699.9548	715.9472	699	716

LTE Band 17:

Low Channel & High Channel (QPSK)/ /Channel Bandwidth:10MHz					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	704.9574	715.9439	704	716
-20		704.9524	715.9487	704	716
-10		704.9584	715.9409	704	716
0		704.9589	715.9450	704	716
10		704.9574	715.9478	704	716
20		704.9515	715.9419	704	716
30		704.9519	715.9465	704	716
40		704.9563	715.9426	704	716
50		704.9571	715.9434	704	716
20	V min.= 6.93	704.9569	715.9494	704	716
20	V max.= 8.47	704.9532	715.9400	704	716

Low Channel & High Channel (16-QAM)/ /Channel Bandwidth:10MHz					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	704.9525	715.9432	704	716
-20		704.9525	715.9442	704	716
-10		704.9577	715.9499	704	716
0		704.9566	715.9440	704	716
10		704.9570	715.9467	704	716
20		704.9558	715.9490	704	716
30		704.9583	715.9419	704	716
40		704.9529	715.9483	704	716
50		704.9566	715.9422	704	716
20	V min.= 6.93	704.9576	715.9426	704	716
20	V max.= 8.47	704.9527	715.9446	704	716

LTE Band 25:

f_o =1880.0 MHz (QPSK)				
Temperature (°C)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	7.7	13	0.0155	Pass
-20		18	0.0215	Pass
-10		11	0.0132	Pass
0		11	0.0132	Pass
10		15	0.0179	Pass
20		14	0.0167	Pass
30		19	0.0227	Pass
40		15	0.0179	Pass
50		13	0.0155	Pass
20	V min.= 6.93	19	0.0227	Pass
20	V max.= 8.47	15	0.0179	Pass

f_o =1880.0 MHz (16-QAM)				
Temperature (°C)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	7.7	17	0.0203	Pass
-20		16	0.0191	Pass
-10		13	0.0155	Pass
0		19	0.0227	Pass
10		21	0.0251	Pass
20		13	0.0155	Pass
30		18	0.0215	Pass
40		18	0.0215	Pass
50		15	0.0179	Pass
20	V min.= 6.93	16	0.0191	Pass
20	V max.= 8.47	11	0.0132	Pass

LTE Band 26:

Middle Channel, $f_o = 831.5$ MHz (QPSK)				
Temperature	Power Supplied	Frequency Error	Frequency Error	Limit
(°C)	(V _{DC})	(Hz)	(ppm)	(ppm)
-30	7.7	17	0.0203	2.5
-20		8	0.0096	2.5
-10		17	0.0203	2.5
0		10	0.0120	2.5
10		14	0.0167	2.5
20		10	0.0120	2.5
30		13	0.0155	2.5
40		19	0.0227	2.5
50		11	0.0132	2.5
20	V min.= 6.93	6	0.0072	2.5
20	V max.= 8.47	11	0.0132	2.5

Middle Channel, $f_o = 831.5$ MHz (16-QAM)				
Temperature	Power Supplied	Frequency Error	Frequency Error	Limit
(°C)	(V _{DC})	(Hz)	(ppm)	(ppm)
-30	7.7	8	0.0096	2.5
-20		8	0.0096	2.5
-10		14	0.0167	2.5
0		14	0.0167	2.5
10		14	0.0167	2.5
20		9	0.0108	2.5
30		16	0.0191	2.5
40		16	0.0191	2.5
50		14	0.0167	2.5
20	V min.= 6.93	10	0.0120	2.5
20	V max.= 8.47	13	0.0155	2.5

LTE Band 40:**2305-2315MHz**

Channel Bandwidth:10MHz (QPSK)					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	2305.0527	2314.9592	2305	2315
-20		2305.0548	2314.9534	2305	2315
-10		2305.0558	2314.9594	2305	2315
0		2305.0599	2314.9542	2305	2315
10		2305.0590	2314.9548	2305	2315
20		2305.0596	2314.9536	2305	2315
30		2305.0507	2314.9557	2305	2315
40		2305.0567	2314.9512	2305	2315
50		2305.0571	2314.9554	2305	2315
20	V min.= 6.93	2305.0551	2314.9520	2305	2315
20	V max.= 8.47	2305.0541	2314.9511	2305	2315

Channel Bandwidth:10MHz (16-QAM)					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	2305.0560	2314.9568	2305	2315
-20		2305.0579	2314.9555	2305	2315
-10		2305.0580	2314.9579	2305	2315
0		2305.0593	2314.9549	2305	2315
10		2305.0596	2314.9575	2305	2315
20		2305.0555	2314.9583	2305	2315
30		2305.0527	2314.9577	2305	2315
40		2305.0585	2314.9563	2305	2315
50		2305.0572	2314.9553	2305	2315
20	V min.= 6.93	2305.0563	2314.9582	2305	2315
20	V max.= 8.47	2305.0509	2314.9553	2305	2315

2350-2360MHz

Channel Bandwidth:10MHz (QPSK)					
Temperature	Power Supplied	F_L	F_H	F_L Limit	F_H Limit
(°C)	(V_{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	2350.0596	2359.9599	2350	2360
-20		2350.0597	2359.9573	2350	2360
-10		2350.0549	2359.9506	2350	2360
0		2350.0530	2359.9546	2350	2360
10		2350.0533	2359.9522	2350	2360
20		2350.0504	2359.956	2350	2360
30		2350.0509	2359.9521	2350	2360
40		2350.0542	2359.9504	2350	2360
50		2350.0553	2359.9525	2350	2360
20	V min.= 6.93	2350.0502	2359.9516	2350	2360
20	V max.= 8.47	2350.0511	2359.9573	2350	2360

Channel Bandwidth:10MHz (16-QAM)					
Temperature	Power Supplied	F_L	F_H	F_L Limit	F_H Limit
(°C)	(V_{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	2350.0566	2359.9587	2350	2360
-20		2350.0523	2359.9582	2350	2360
-10		2350.0572	2359.9521	2350	2360
0		2350.0536	2359.9542	2350	2360
10		2350.0507	2359.9528	2350	2360
20		2350.0574	2359.9598	2350	2360
30		2350.0550	2359.9539	2350	2360
40		2350.0596	2359.9504	2350	2360
50		2350.0583	2359.9558	2350	2360
20	V min.= 6.93	2350.0552	2359.9564	2350	2360
20	V max.= 8.47	2350.0529	2359.9558	2350	2360

LTE Band 41:

Low Channel & High Channel (QPSK) /Channel Bandwidth:20MHz					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	2555.0553	2654.9554	2555	2655
-20		2555.0511	2654.9521	2555	2655
-10		2555.0563	2654.9553	2555	2655
0		2555.0590	2654.9508	2555	2655
10		2555.0529	2654.9565	2555	2655
20		2555.0507	2654.9579	2555	2655
30		2555.0546	2654.9588	2555	2655
40		2555.0550	2654.9503	2555	2655
50		2555.0552	2654.9582	2555	2655
20	V min.= 6.93	2555.0580	2654.9513	2555	2655
20	V max.= 8.47	2555.0527	2654.9568	2555	2655

Low Channel & High Channel (16-QAM) /Channel Bandwidth:20MHz					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	2555.0517	2654.9538	2555	2655
-20		2555.0585	2654.9526	2555	2655
-10		2555.0547	2654.9577	2555	2655
0		2555.0535	2654.9566	2555	2655
10		2555.0557	2654.9589	2555	2655
20		2555.0522	2654.9581	2555	2655
30		2555.0557	2654.9521	2555	2655
40		2555.0517	2654.9574	2555	2655
50		2555.0583	2654.9551	2555	2655
20	V min.= 6.93	2555.0550	2654.9557	2555	2655
20	V max.= 8.47	2555.0507	2654.9505	2555	2655

LTE Band 66:

Low Channel & High Channel (QPSK) /Channel Bandwidth:20MHz					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	1710.9574	1779.9582	1710	1780
-20		1710.9517	1779.9545	1710	1780
-10		1710.9567	1779.9531	1710	1780
0		1710.9575	1779.9573	1710	1780
10		1710.9513	1779.9573	1710	1780
20		1710.9582	1779.9527	1710	1780
30		1710.9575	1779.9569	1710	1780
40		1710.9583	1779.9507	1710	1780
50		1710.9592	1779.9531	1710	1780
20	V min.= 6.93	1710.9516	1779.9560	1710	1780
20	V max.= 8.47	1710.9546	1779.9501	1710	1780

Low Channel & High Channel (16-QAM) /Channel Bandwidth:20MHz					
Temperature	Power Supplied	F _L	F _H	F _L Limit	F _H Limit
(°C)	(V _{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	7.7	1710.9506	1779.9531	1710	1780
-20		1710.9511	1779.9557	1710	1780
-10		1710.9597	1779.9514	1710	1780
0		1710.9509	1779.9546	1710	1780
10		1710.9553	1779.9539	1710	1780
20		1710.9545	1779.9559	1710	1780
30		1710.9580	1779.9593	1710	1780
40		1710.9544	1779.9538	1710	1780
50		1710.9500	1779.9565	1710	1780
20	V min.= 6.93	1710.9564	1779.9529	1710	1780
20	V max.= 8.47	1710.9548	1779.9573	1710	1780

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