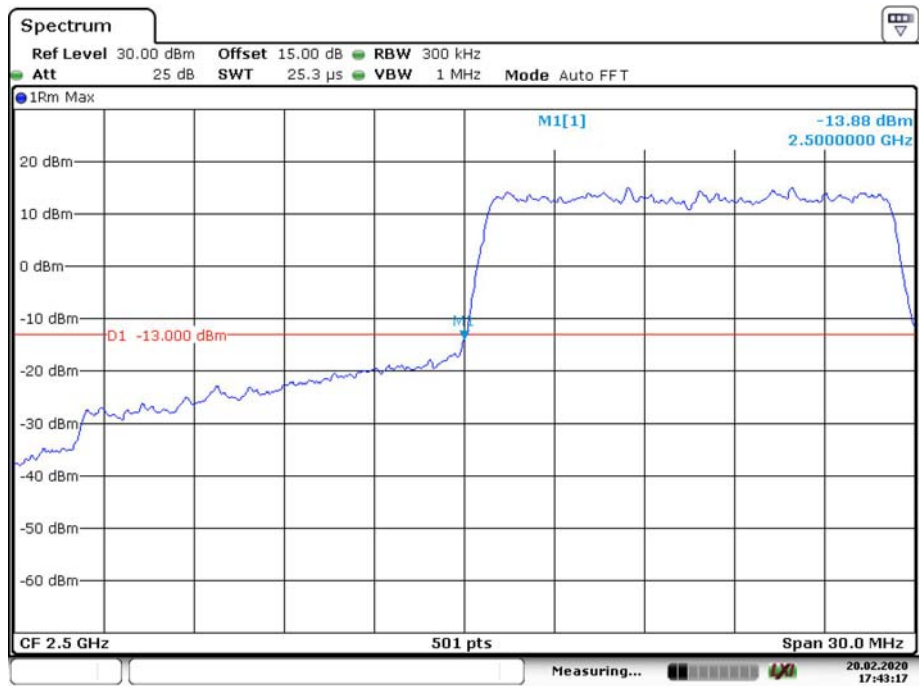


QPSK_15MHz_75 RB_Left



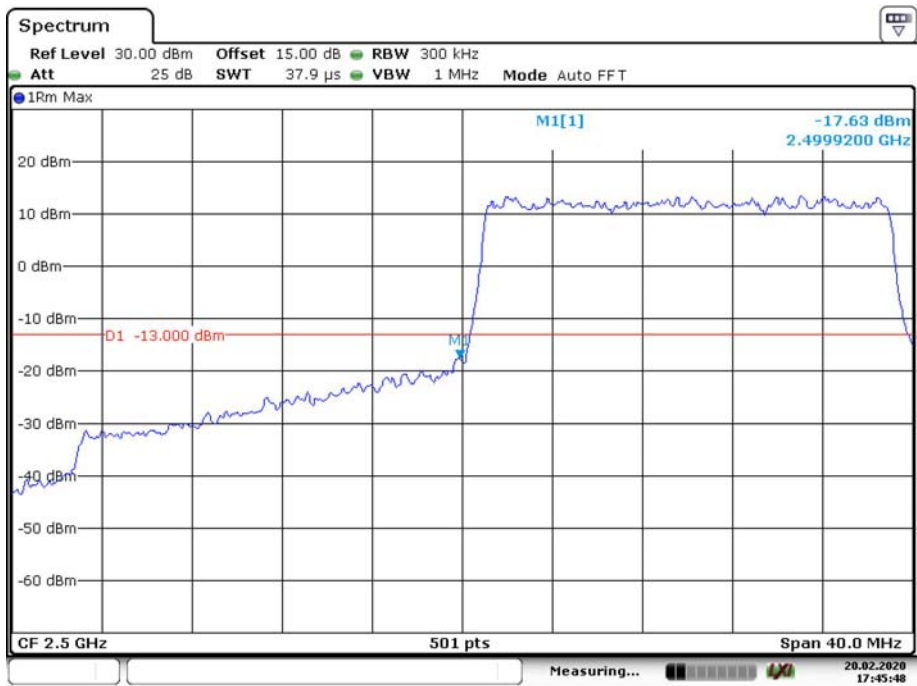
Date: 20.FEB.2020 17:43:18

QPSK_15MHz_75 RB_Right



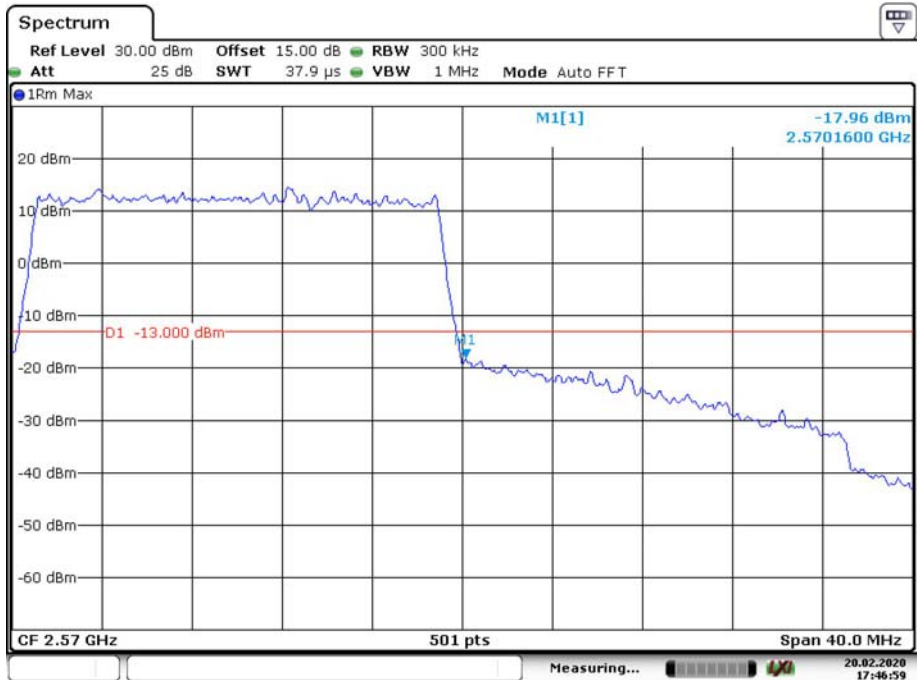
Date: 20.FEB.2020 17:44:29

QPSK_20MHz_FULL RB_Left



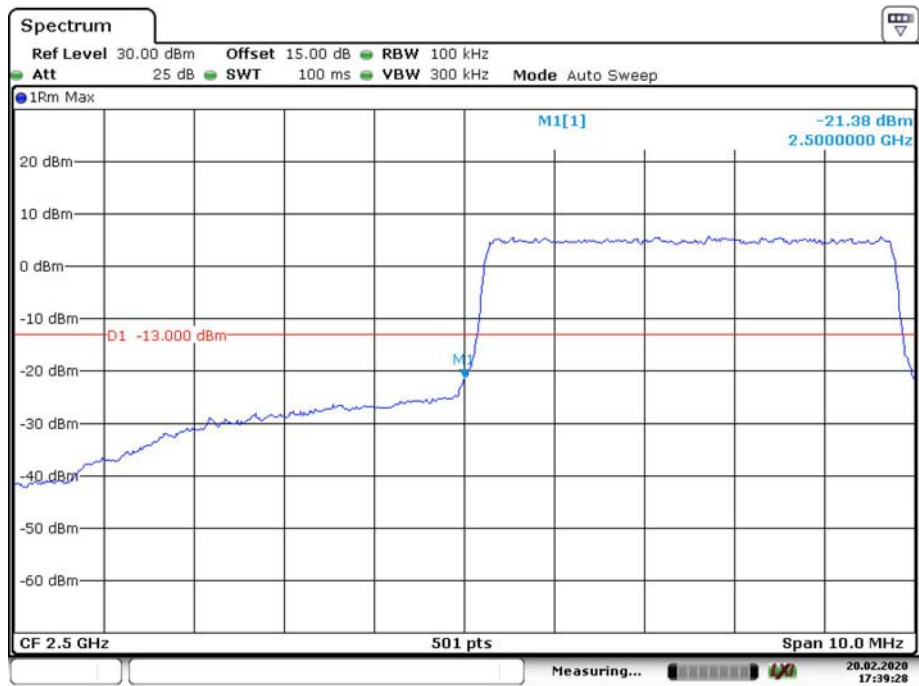
Date: 20.FEB.2020 17:45:49

QPSK_20MHz_FULL RB_Right



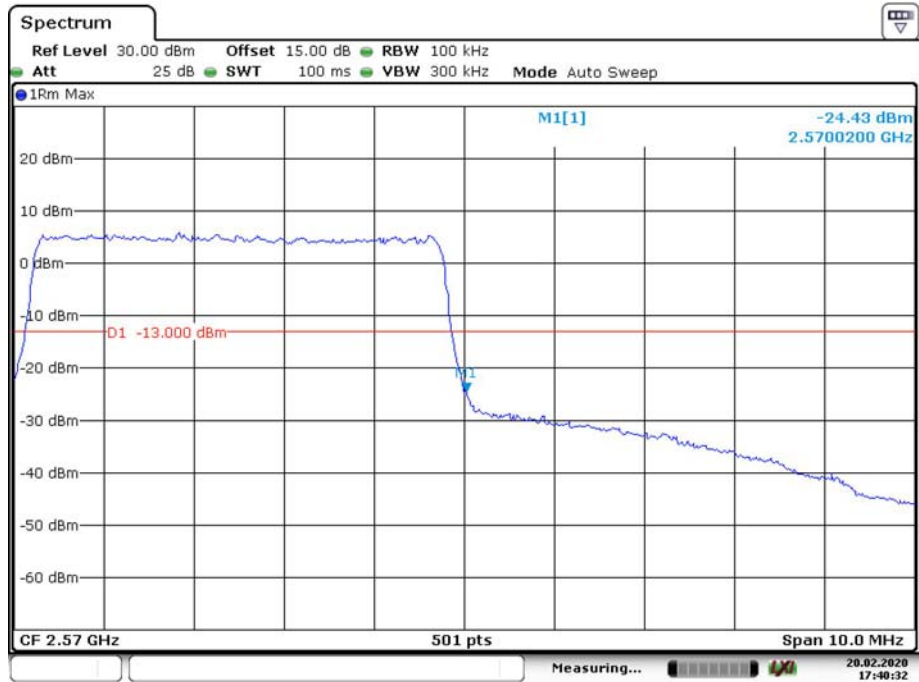
Date: 20.FEB.2020 17:47:00

16QAM_5MHz_25 RB_Left



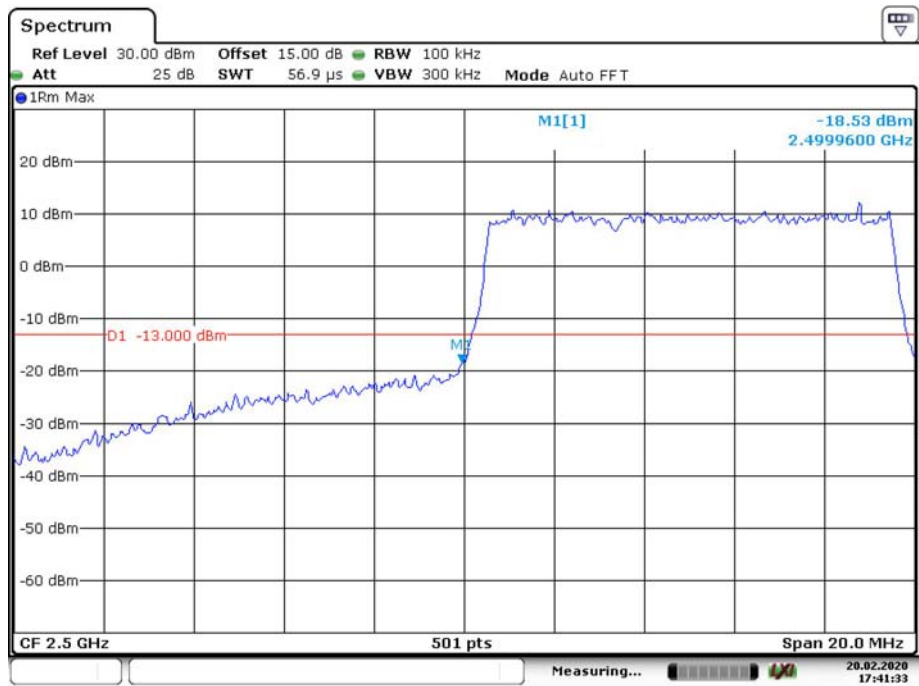
Date: 20.FEB.2020 17:39:29

16QAM_5MHz_25 RB_Right



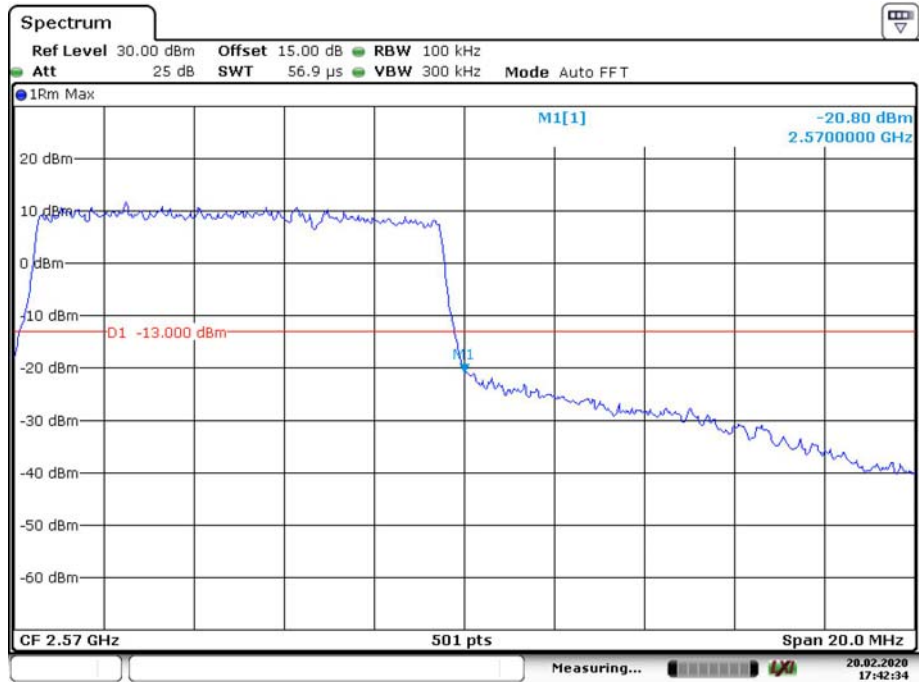
Date: 20.FEB.2020 17:40:33

16QAM_10MHz_ 50 RB_ Left



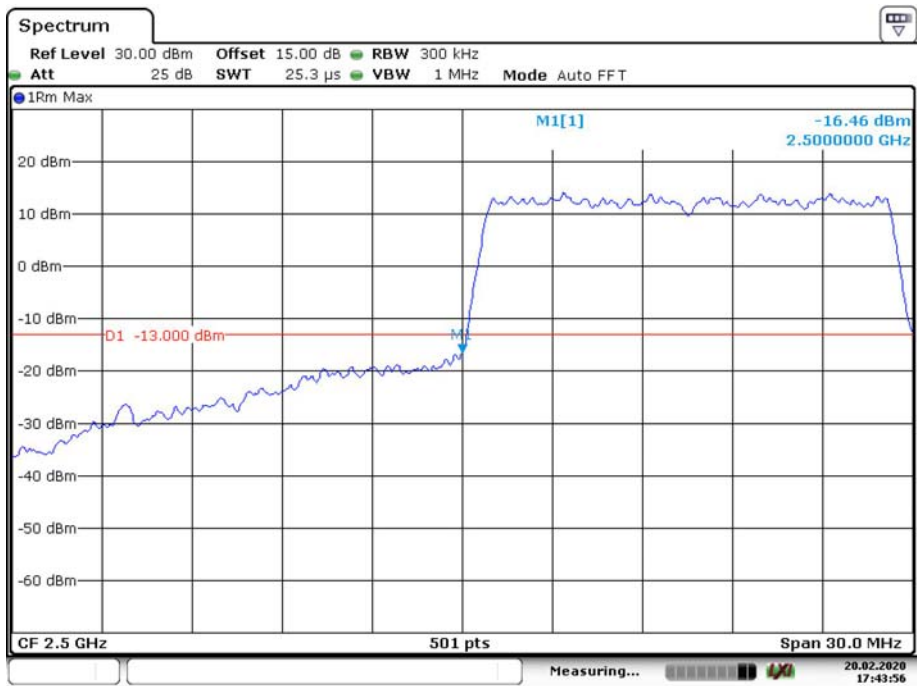
Date: 20.FEB.2020 17:41:34

16QAM_10MHz_ 50 RB_ Right



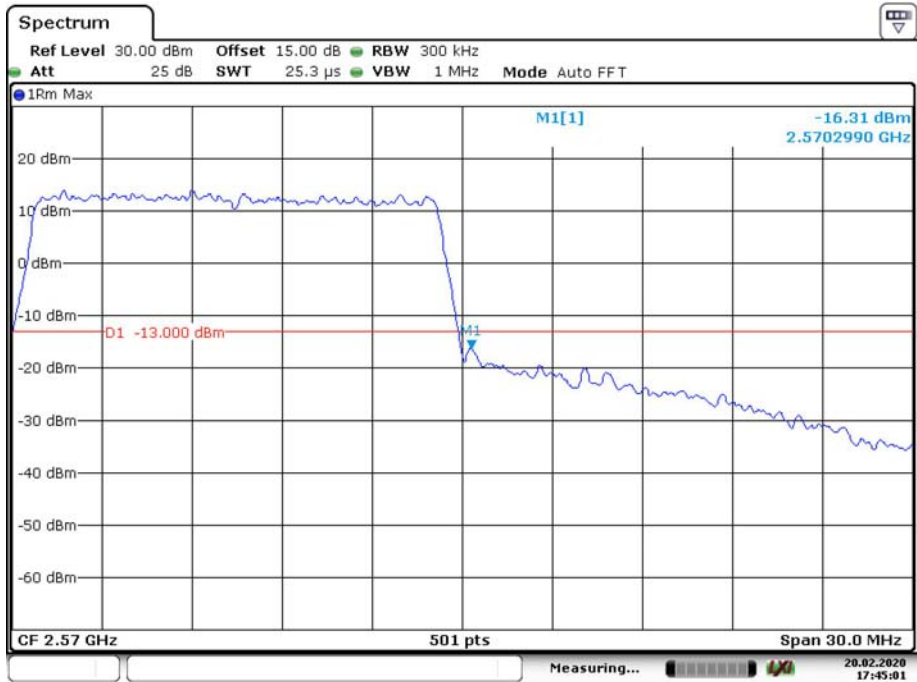
Date: 20.FEB.2020 17:42:35

16QAM_15MHz_75 RB_Left



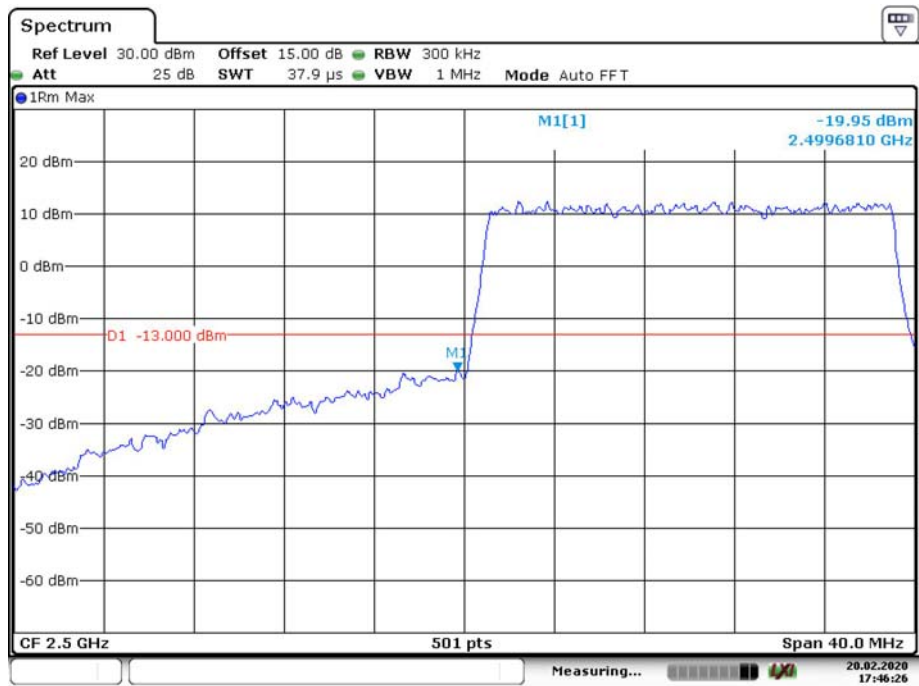
Date: 20.FEB.2020 17:43:57

16QAM_15MHz_75 RB_Right



Date: 20.FEB.2020 17:45:01

16QAM_20MHz_FULL RB_Left

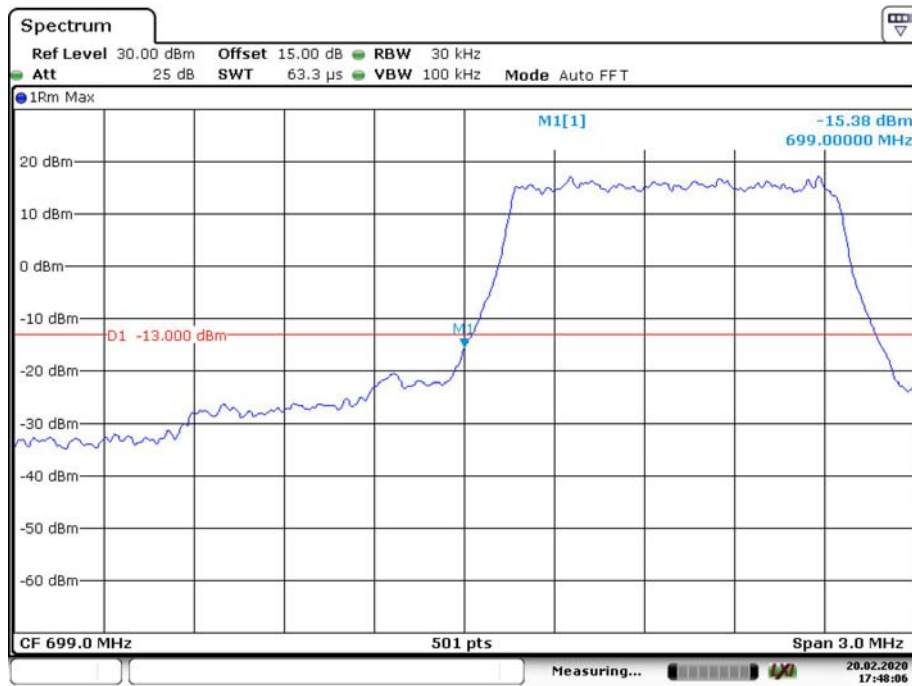


16QAM_20MHz_FULL RB_Right



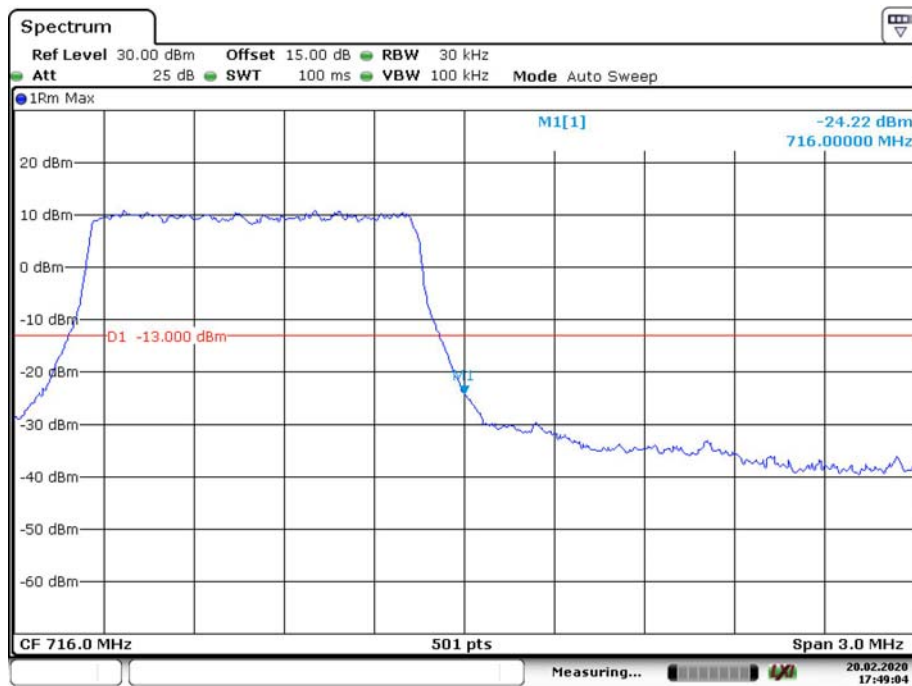
LTE Band 12

QPSK_1.4MHz_6 RB_ Left



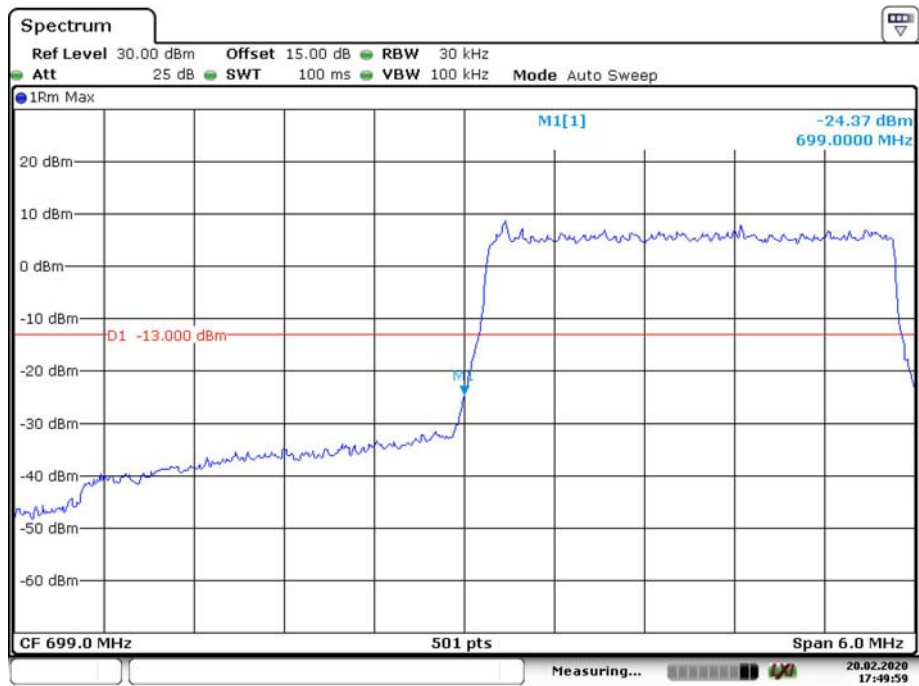
Date: 20.FEB.2020 17:48:07

QPSK_1.4MHz_6 RB_ Right



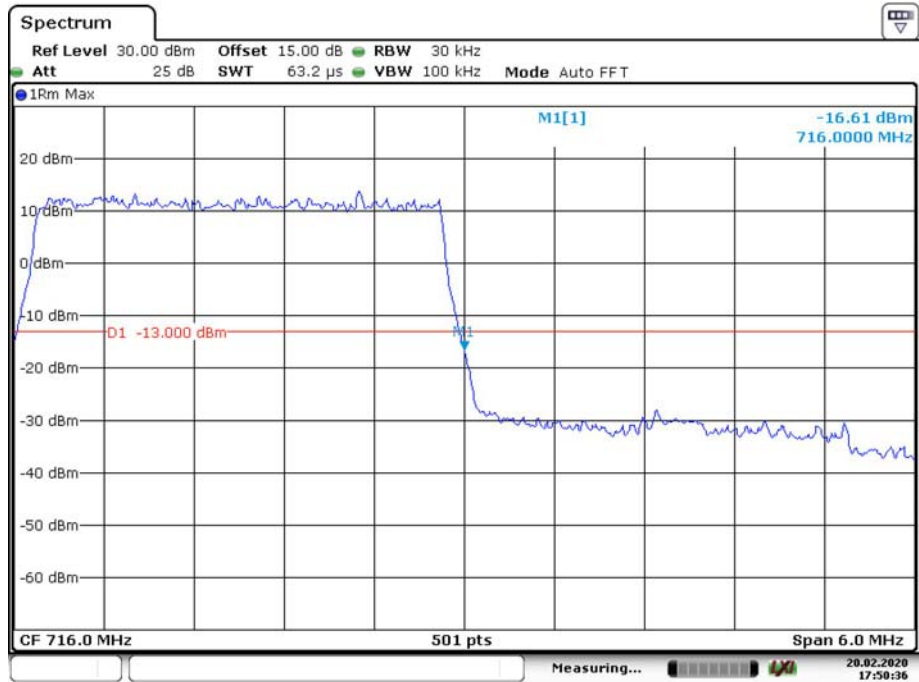
Date: 20.FEB.2020 17:49:05

QPSK_3MHz_15 RB_Left



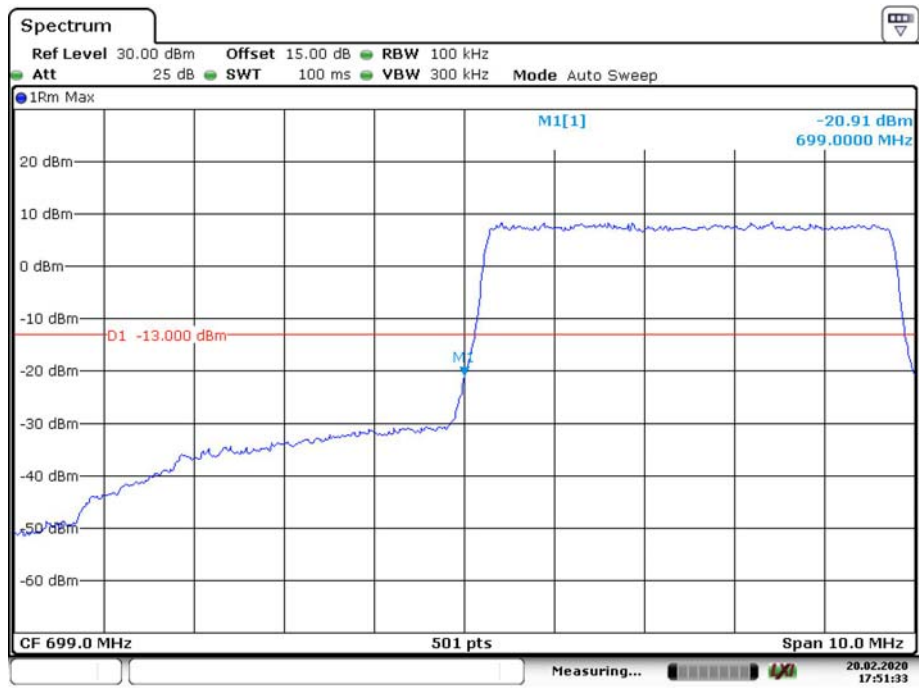
Date: 20.FEB.2020 17:50:00

QPSK_3MHz_15 RB_Right



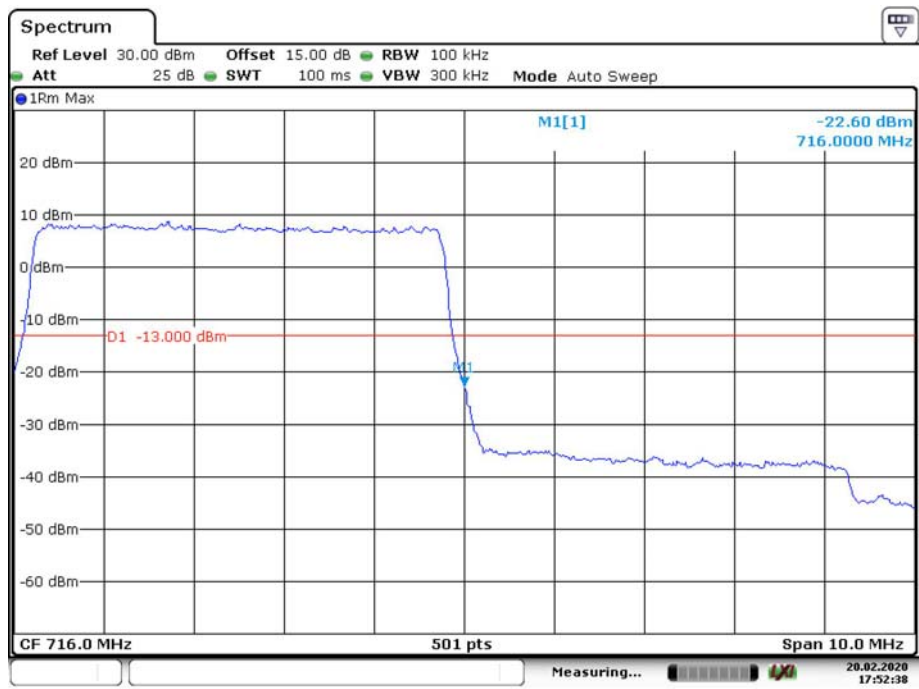
Date: 20.FEB.2020 17:50:36

QPSK_5MHz_25 RB_Left



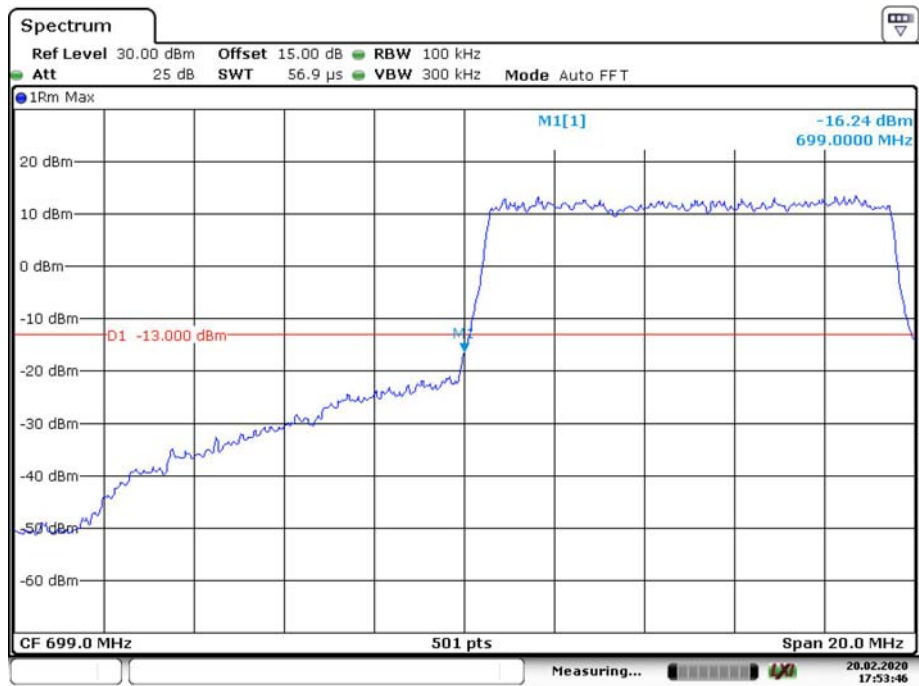
Date: 20.FEB.2020 17:51:33

QPSK_5MHz_25 RB_Right



Date: 20.FEB.2020 17:52:38

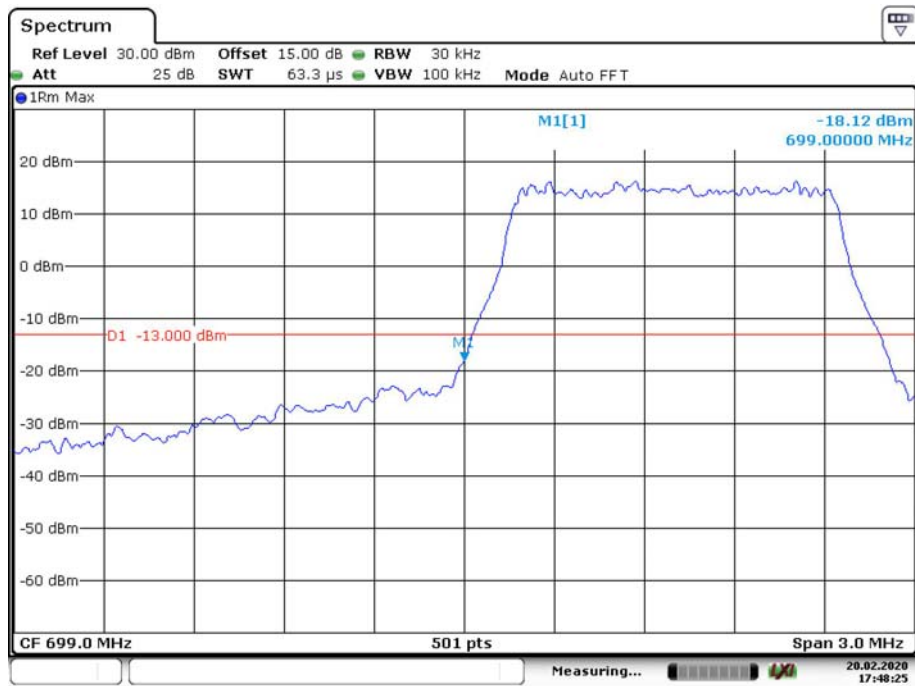
QPSK_10MHz_50 RB_Left



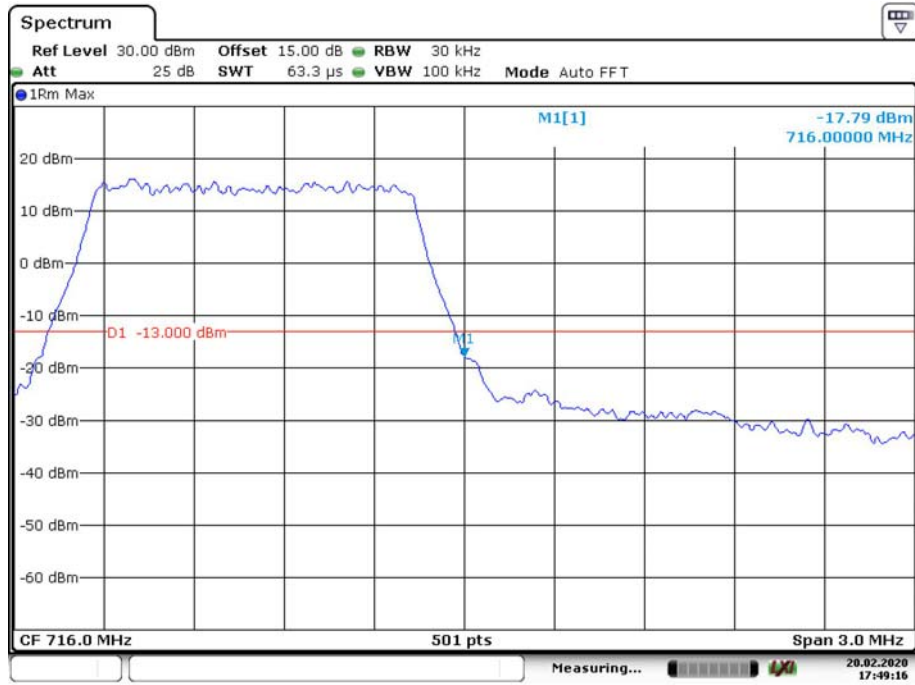
QPSK_10MHz_50 RB_Right



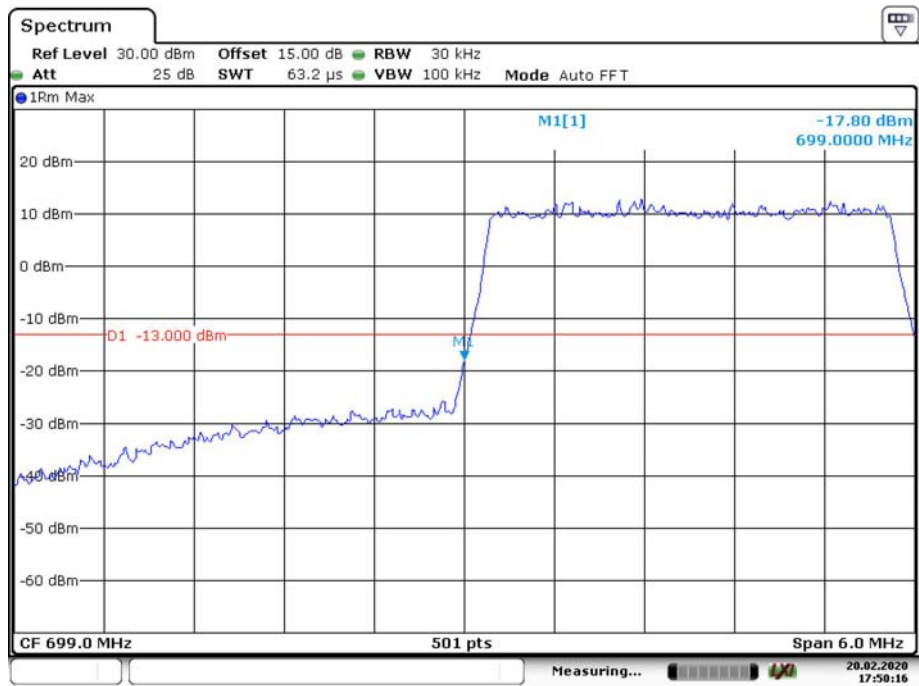
16QAM_1.4MHz_6 RB_Left



16QAM_1.4MHz_6 RB_Right

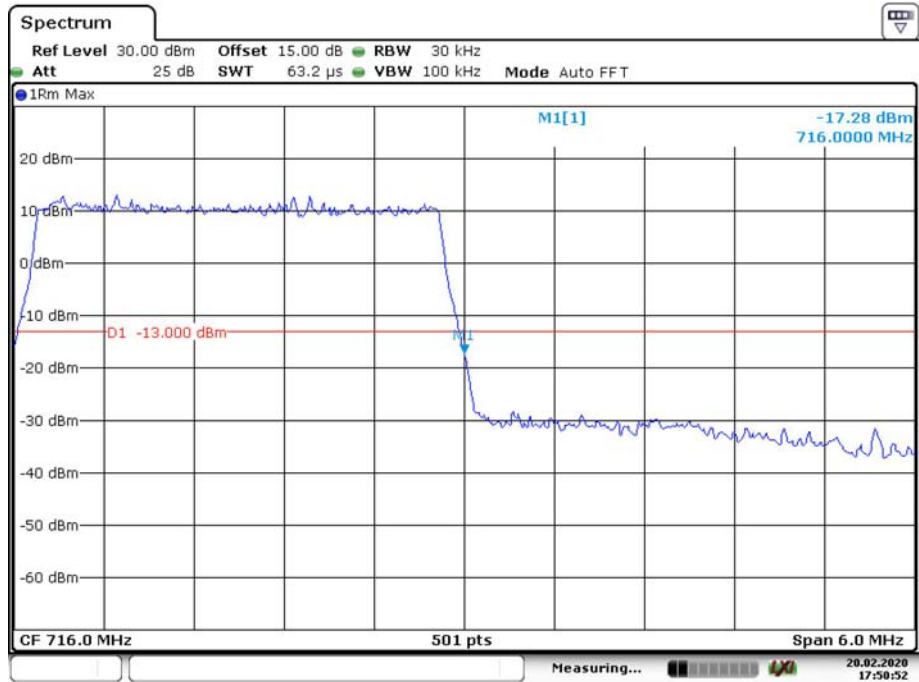


16QAM_3MHz_15 RB_ Left



Date: 20.FEB.2020 17:50:16

16QAM_3MHz_15 RB_ Right



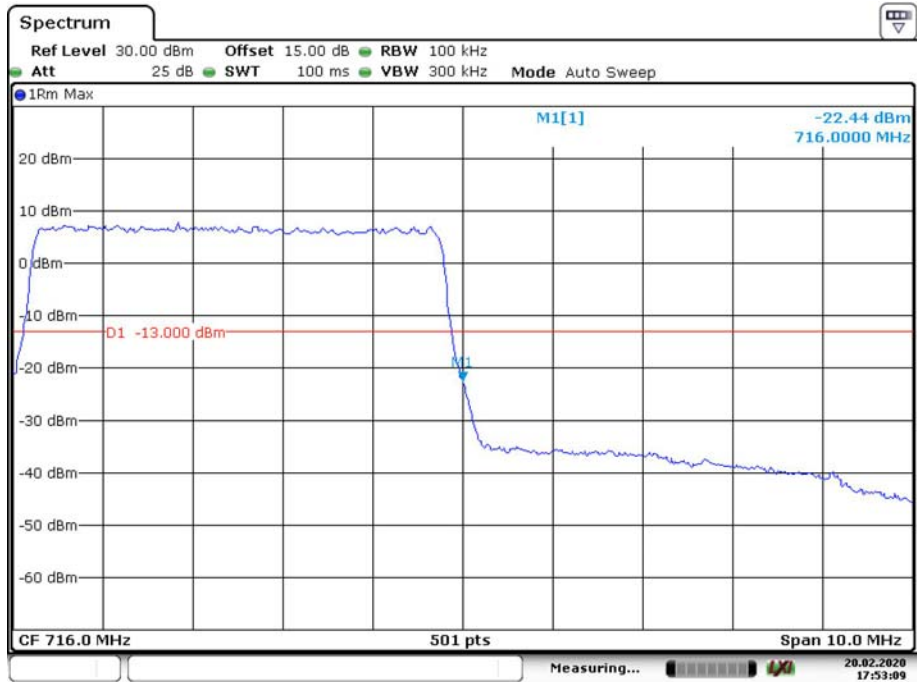
Date: 20.FEB.2020 17:50:52

16QAM_5MHz_25 RB_Left



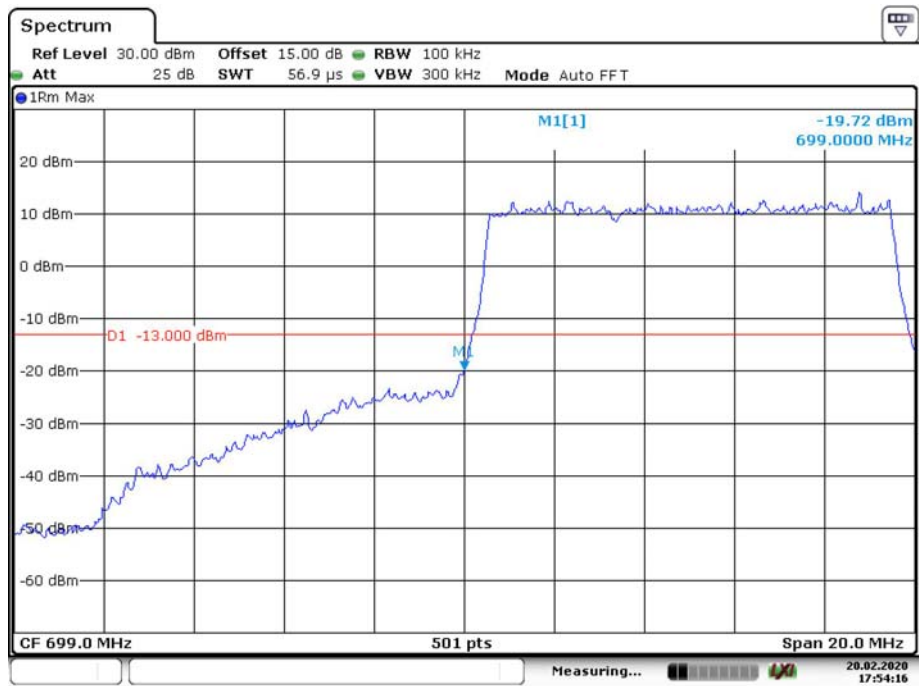
Date: 20.FEB.2020 17:52:07

16QAM_5MHz_25 RB_Right



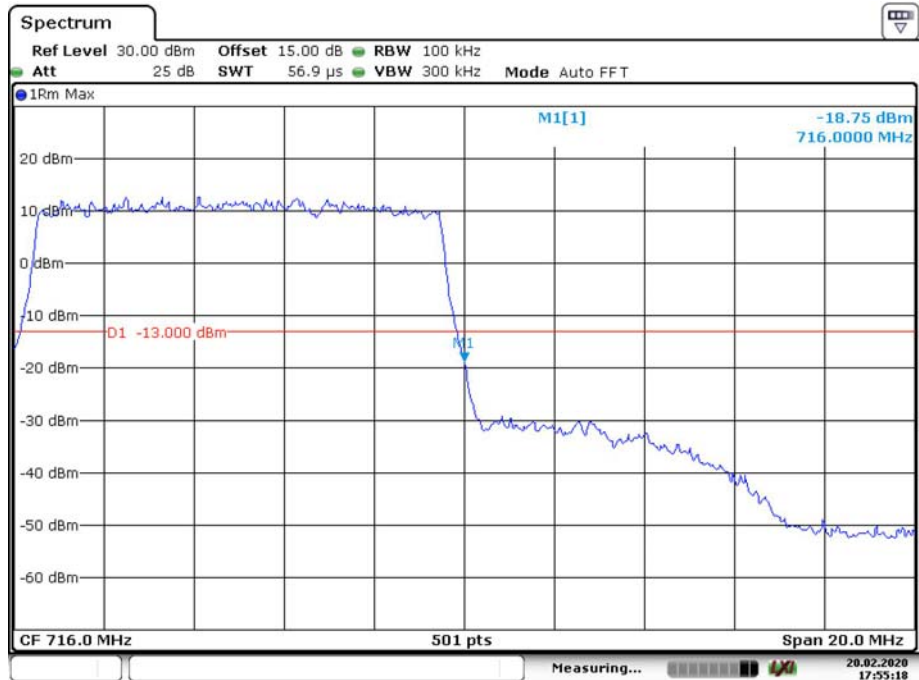
Date: 20.FEB.2020 17:53:09

16QAM_10MHz_ 50 RB_ Left



Date: 20.FEB.2020 17:54:16

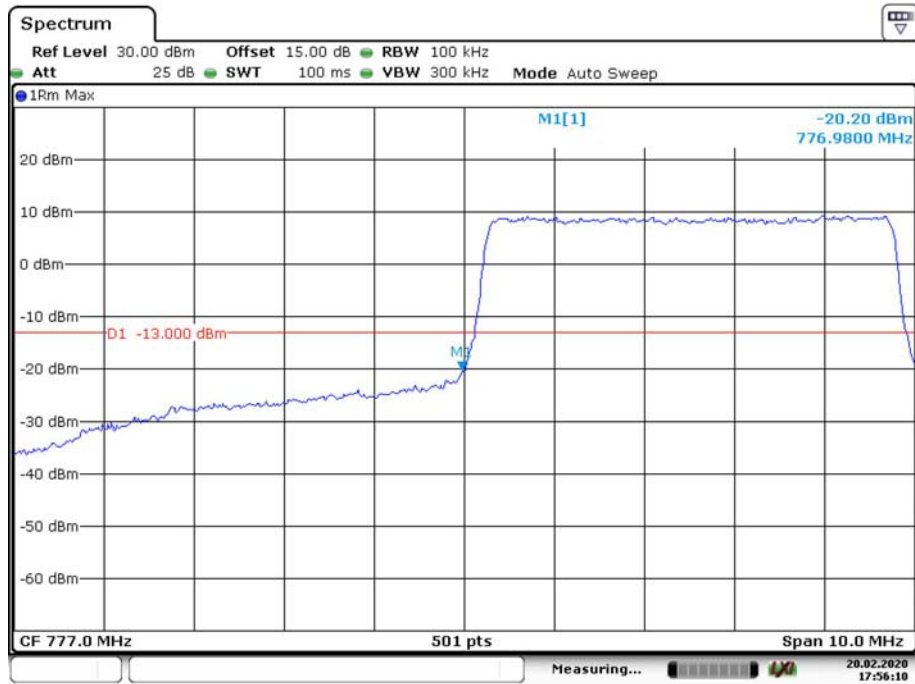
16QAM_10MHz_ 50 RB_ Right



Date: 20.FEB.2020 17:55:18

LTE Band 13

QPSK_5MHz_25 RB_Left



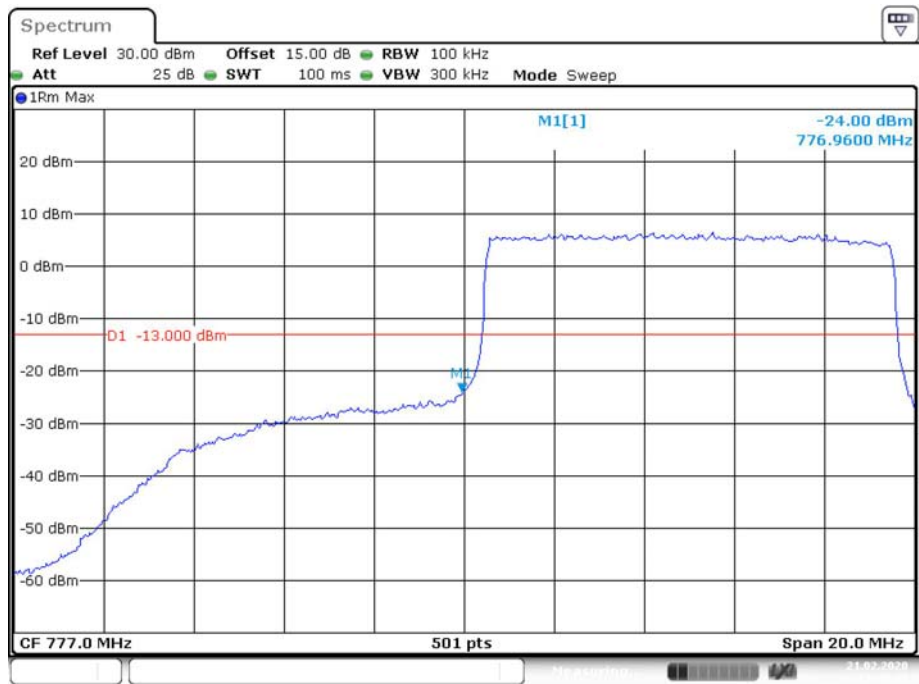
Date: 20.FEB.2020 17:56:10

QPSK_5MHz_25 RB_Right

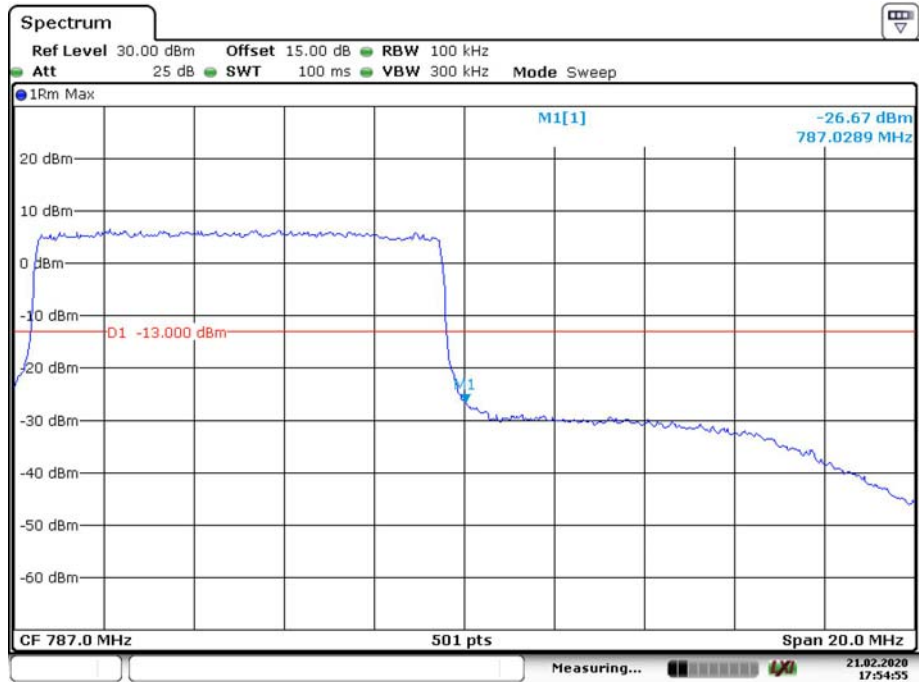


Date: 20.FEB.2020 17:57:15

QPSK_10MHz_50 RB_Left



QPSK_10MHz_50 RB_Right

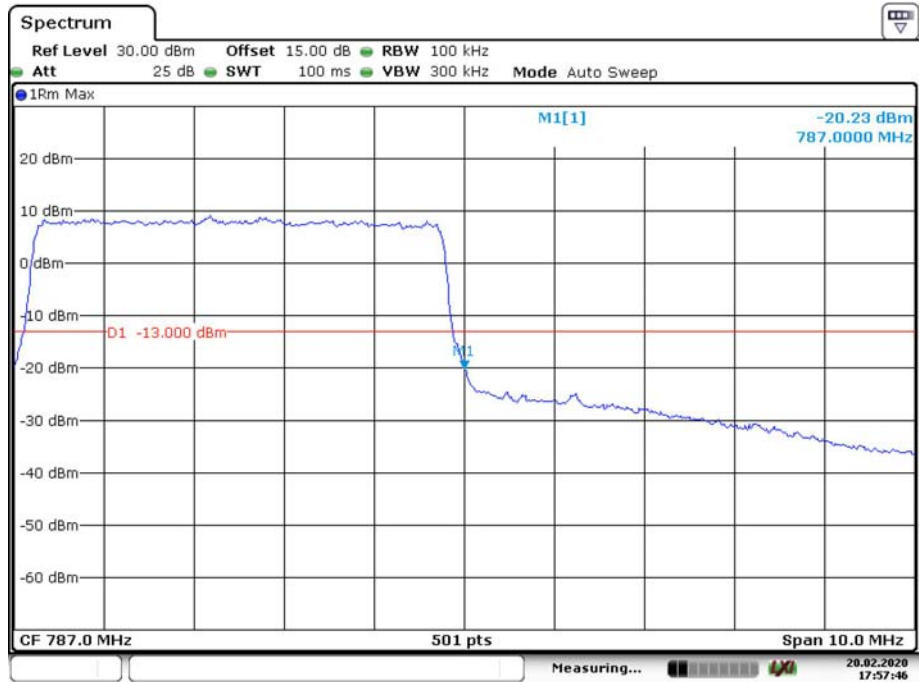


16QAM_5MHz_25 RB_Left



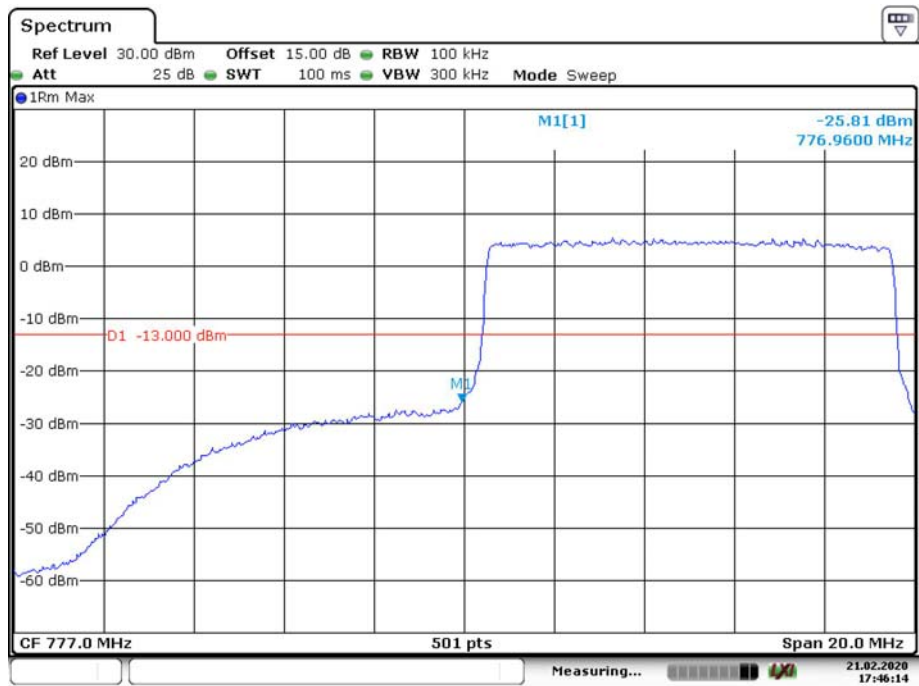
Date: 20.FEB.2020 17:56:40

16QAM_5MHz_25 RB_Right



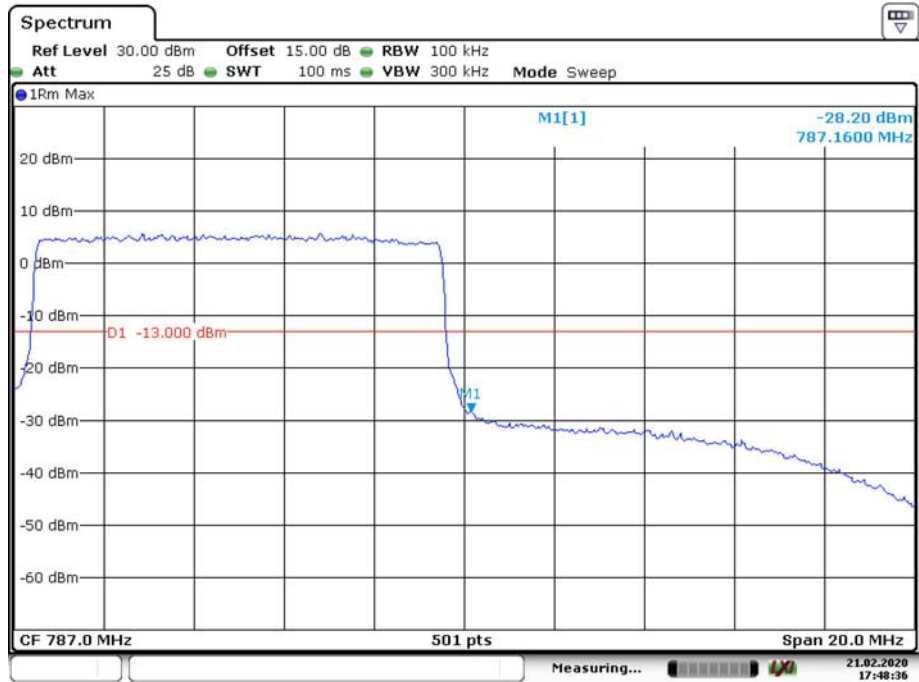
Date: 20.FEB.2020 17:57:46

16QAM_10MHz_50 RB_Left



Date: 21.FEB.2020 17:46:14

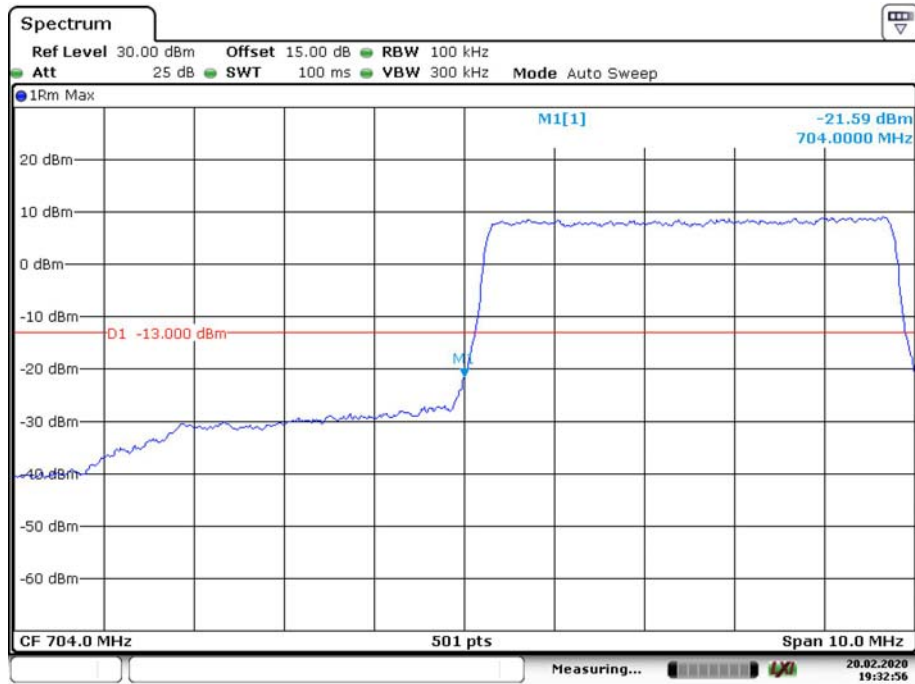
16QAM_10MHz_50 RB_Right



Date: 21.FEB.2020 17:48:36

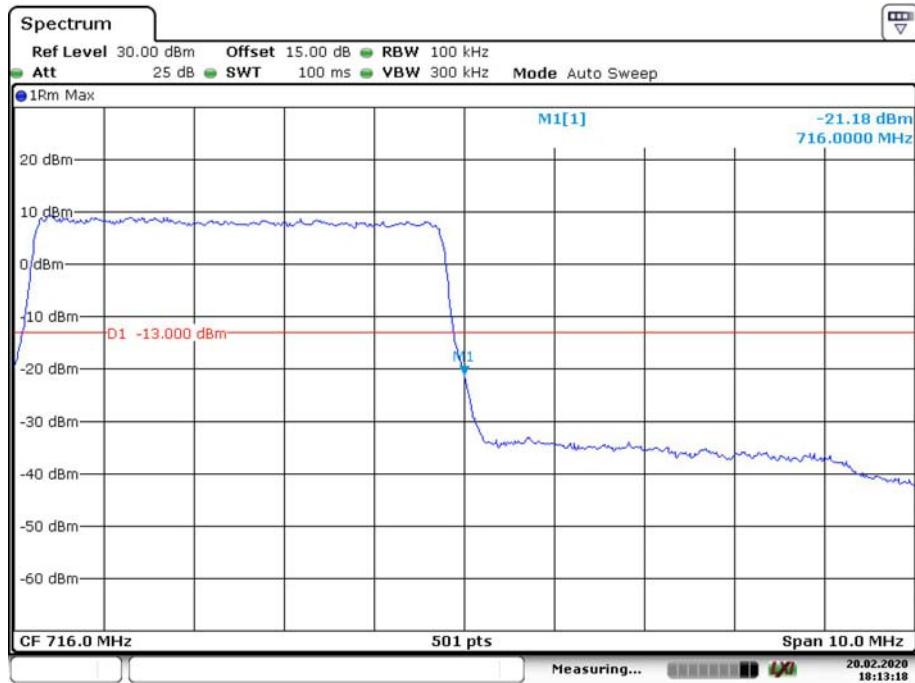
LTE Band 17

QPSK_5MHz_25 RB_Left



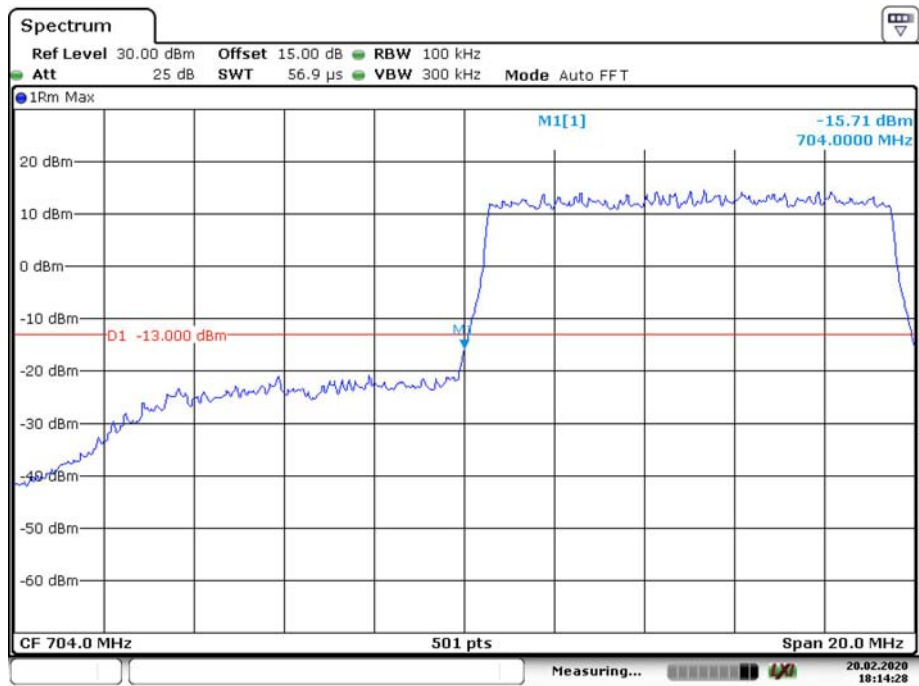
Date: 20.FEB.2020 19:32:56

QPSK_5MHz_25 RB_Right

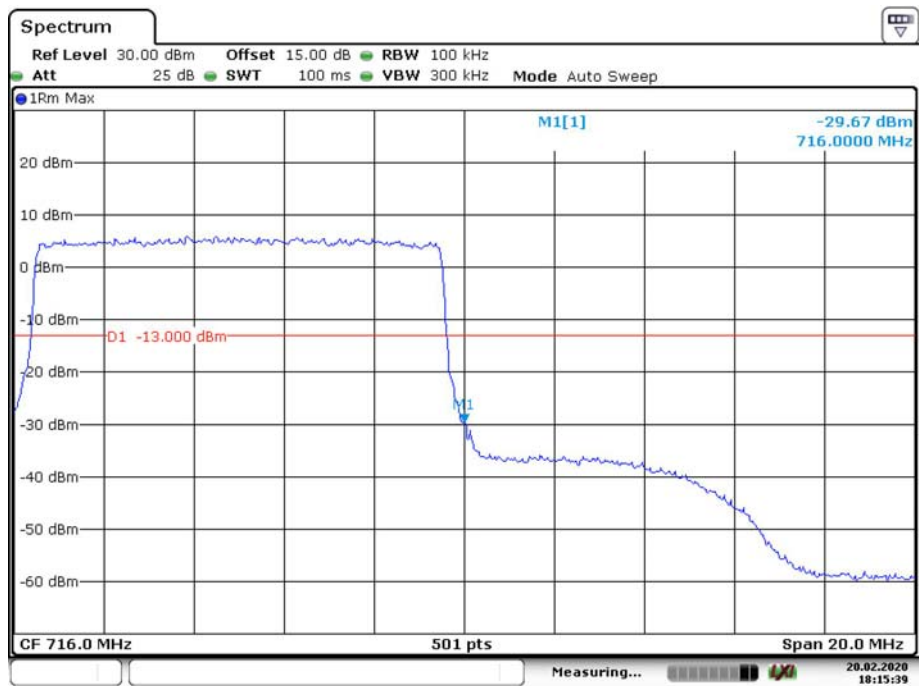


Date: 20.FEB.2020 18:13:18

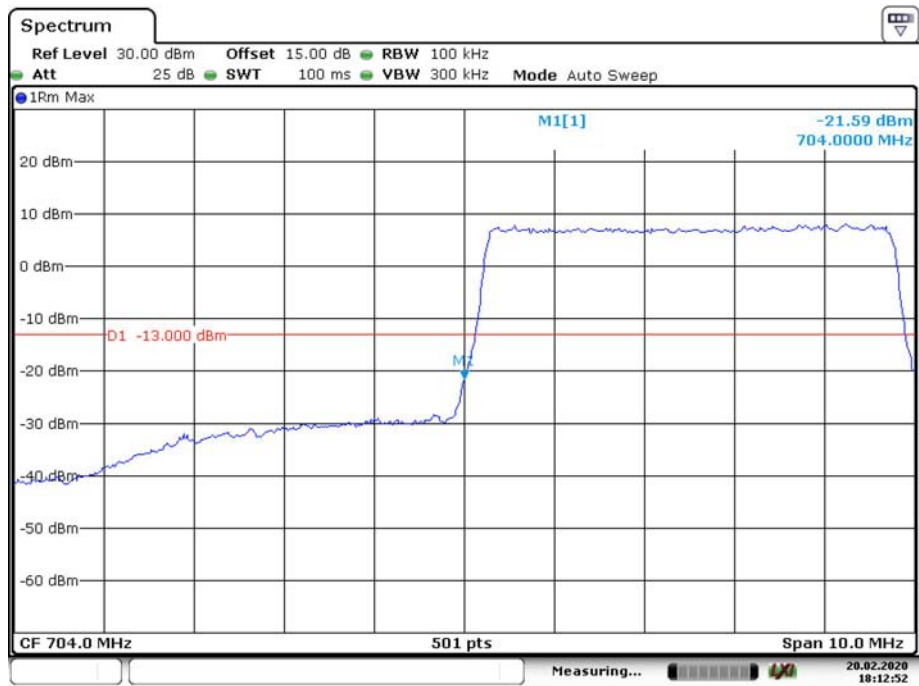
QPSK_10MHz_50 RB_Left



QPSK_10MHz_50 RB_Right

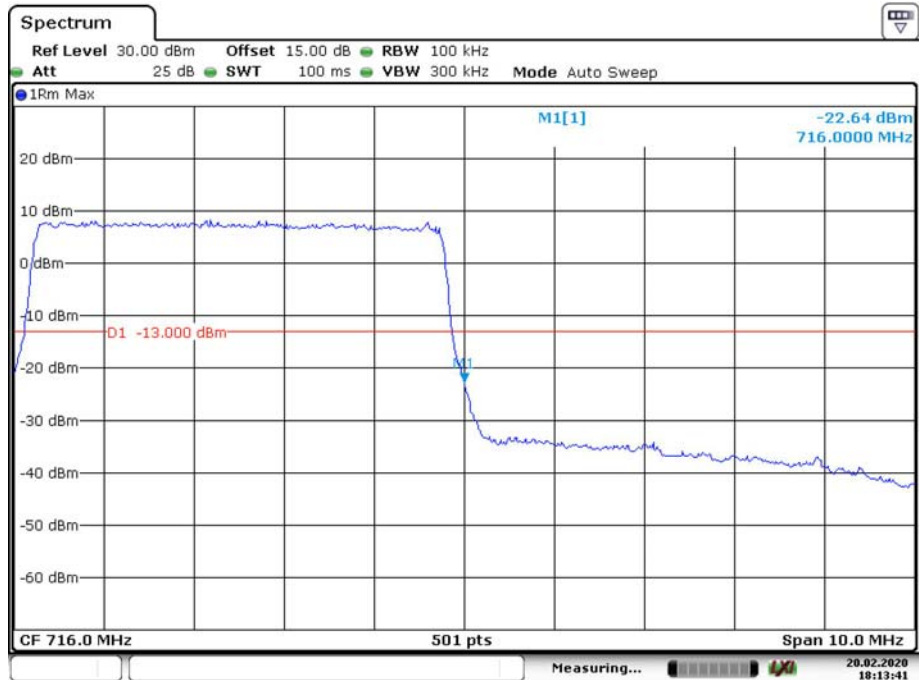


16QAM_5MHz_25 RB_Left



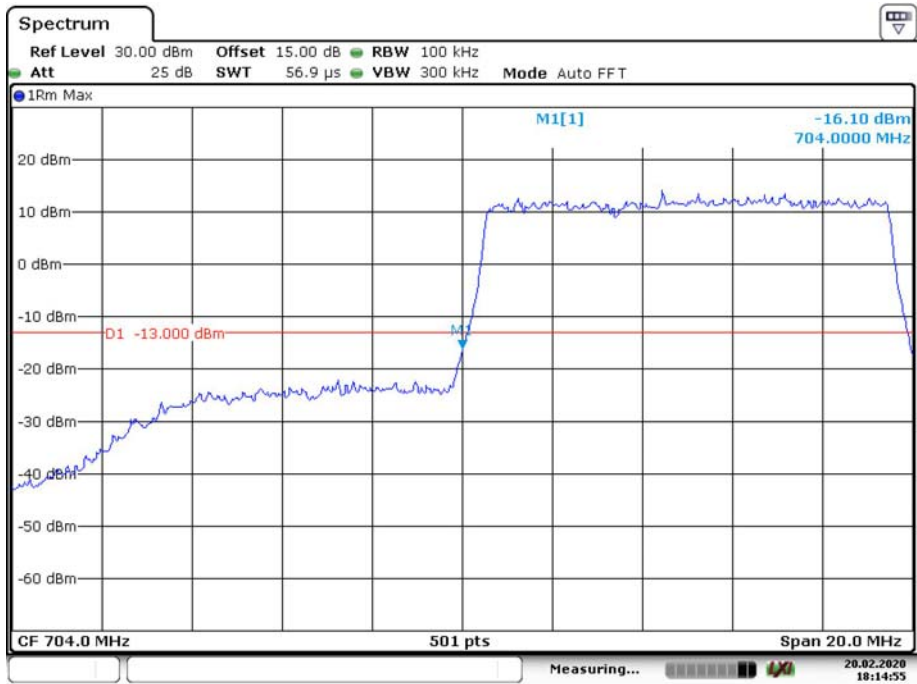
Date: 20.FEB.2020 18:12:52

16QAM_5MHz_25 RB_Right



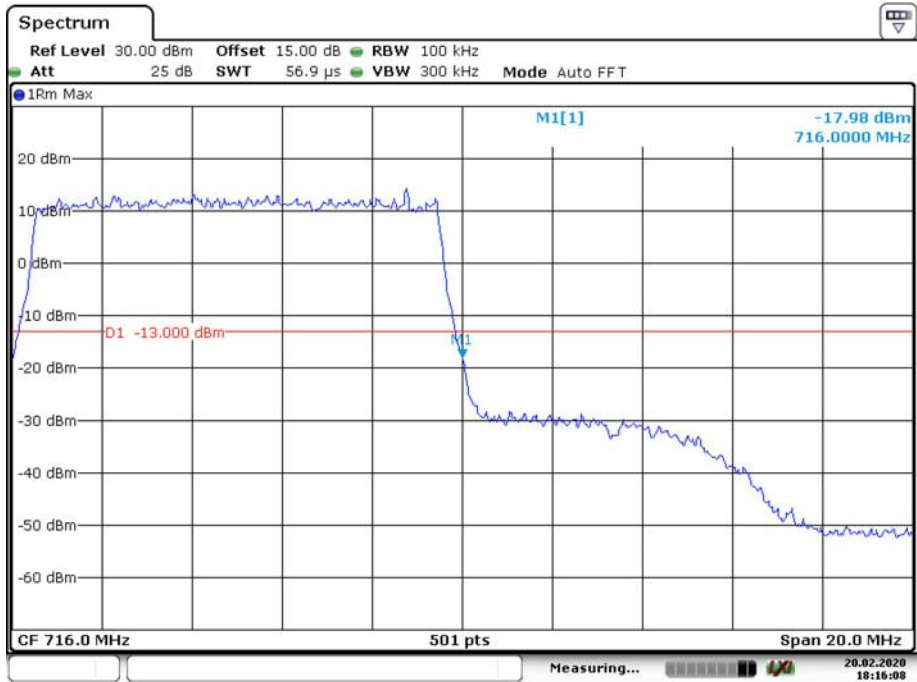
Date: 20.FEB.2020 18:13:41

16QAM_10MHz_ 50 RB_ Left



Date: 20.FEB.2020 18:14:55

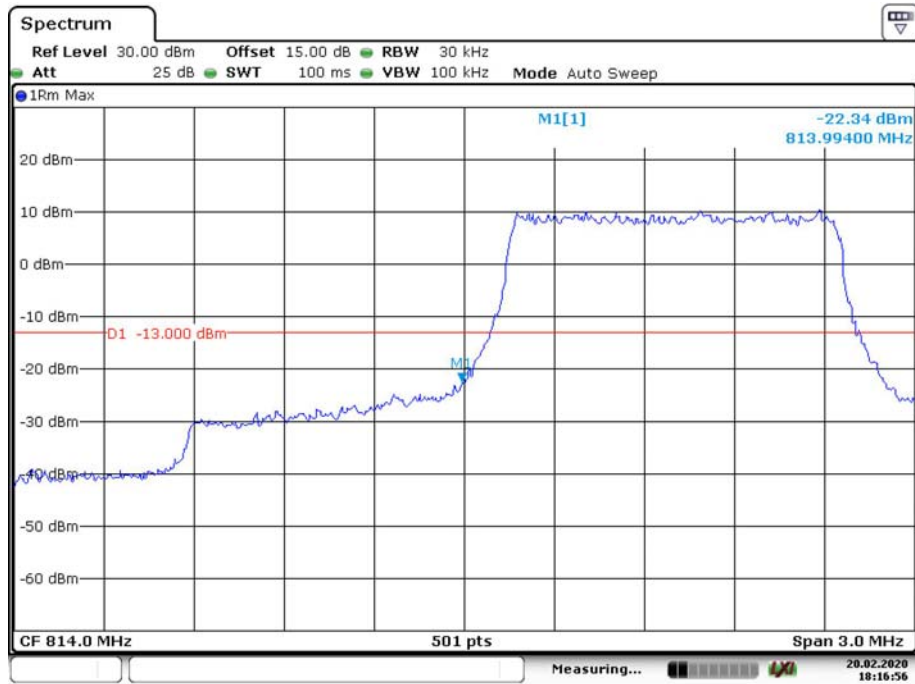
16QAM_10MHz_ 50 RB_ Right



Date: 20.FEB.2020 18:16:08

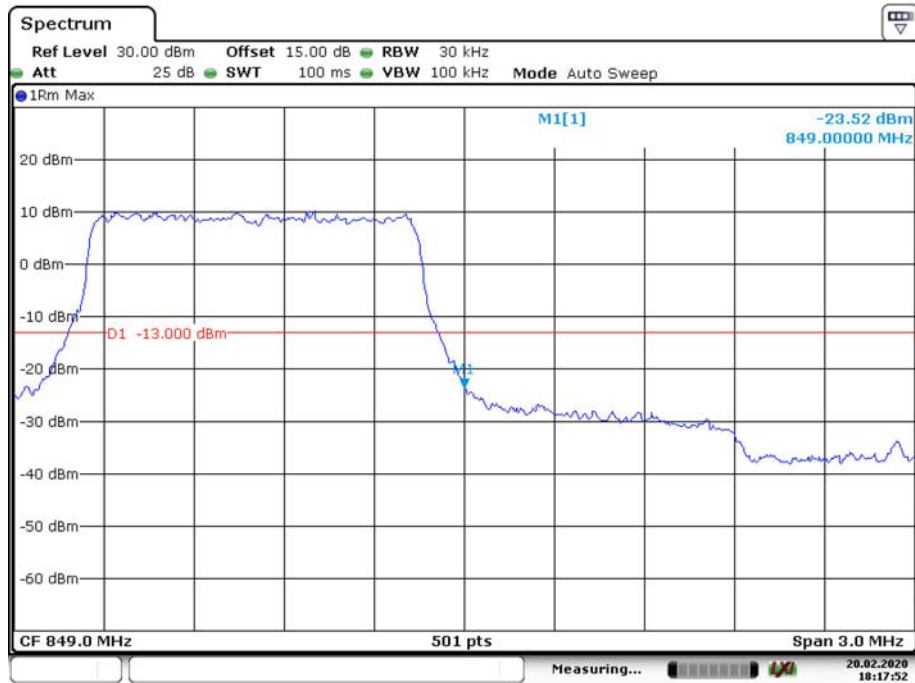
LTE Band 26

QPSK_1.4MHz_6 RB_ Left



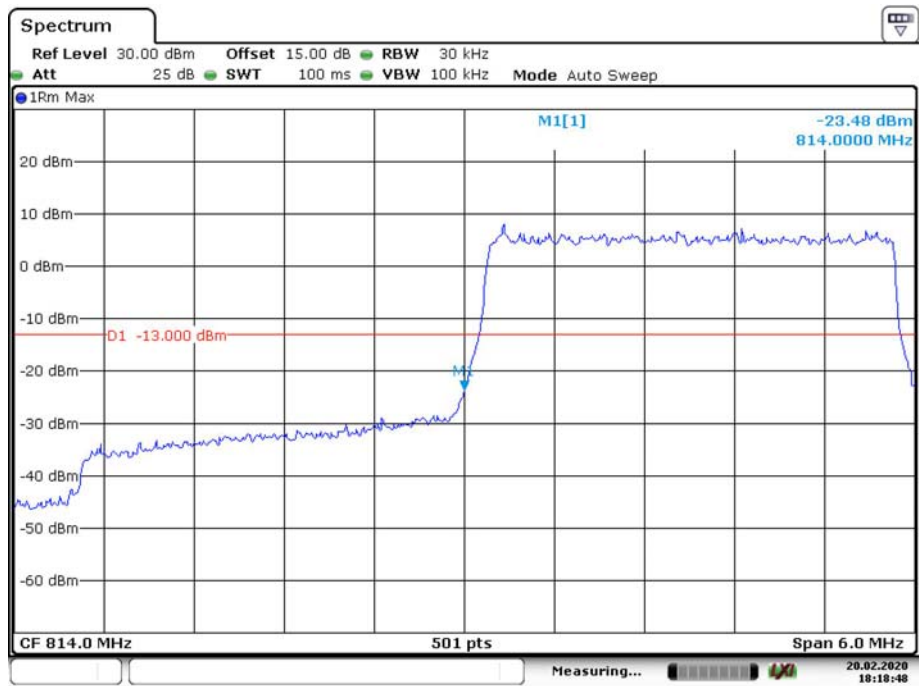
Date: 20.FEB.2020 18:16:56

QPSK_1.4MHz_6 RB_ Right



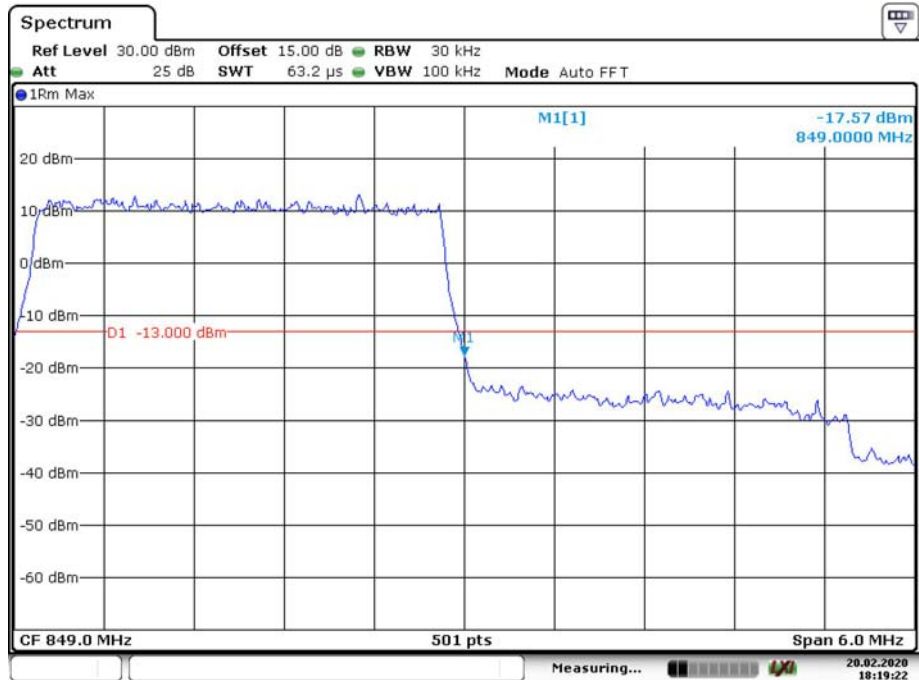
Date: 20.FEB.2020 18:17:52

QPSK_3MHz_15 RB_Left



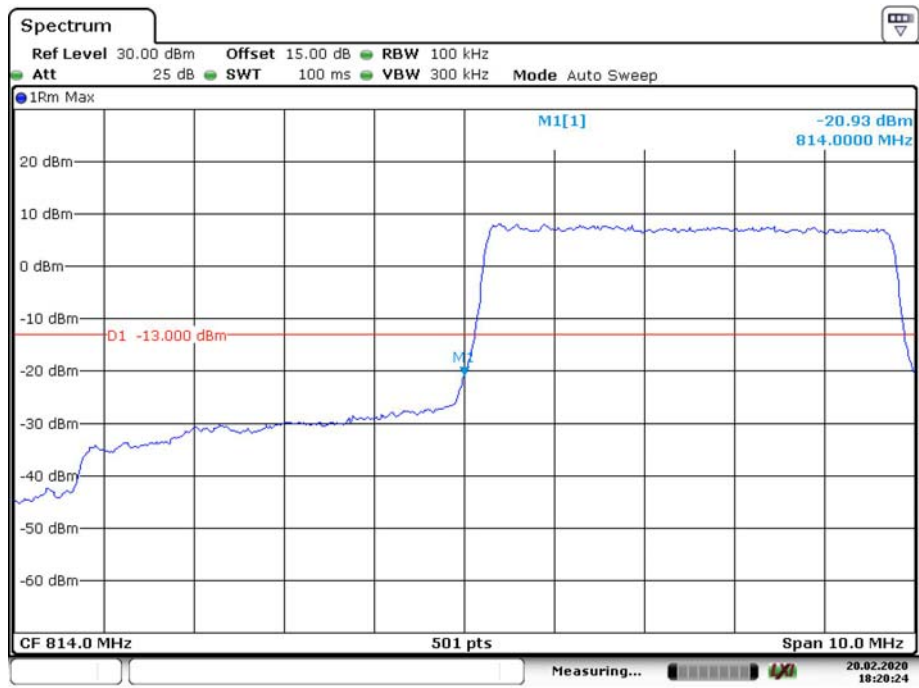
Date: 20.FEB.2020 18:18:48

QPSK_3MHz_15 RB_Right



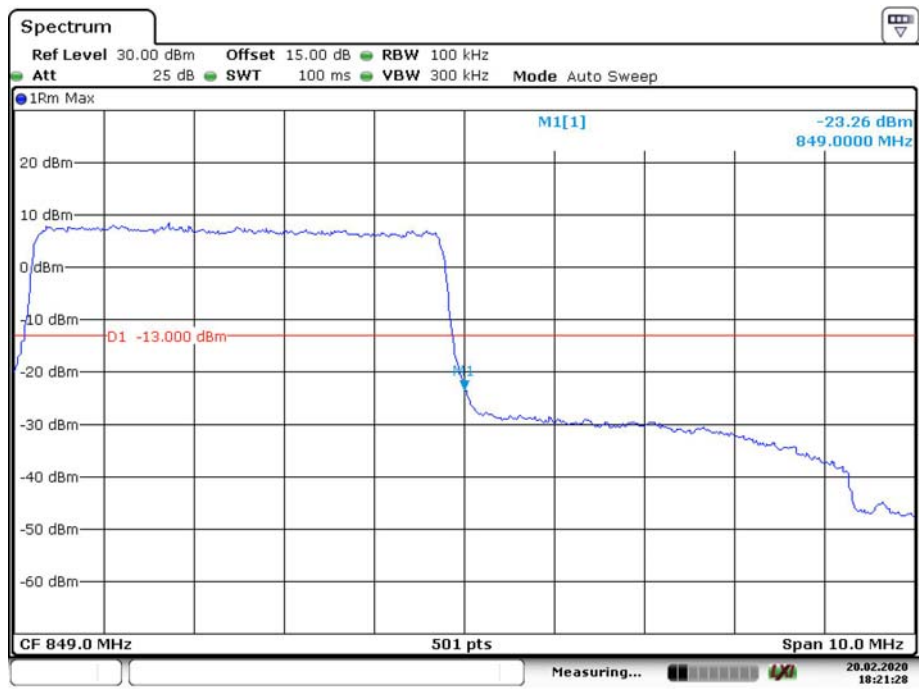
Date: 20.FEB.2020 18:19:21

QPSK_5MHz_25 RB_Left



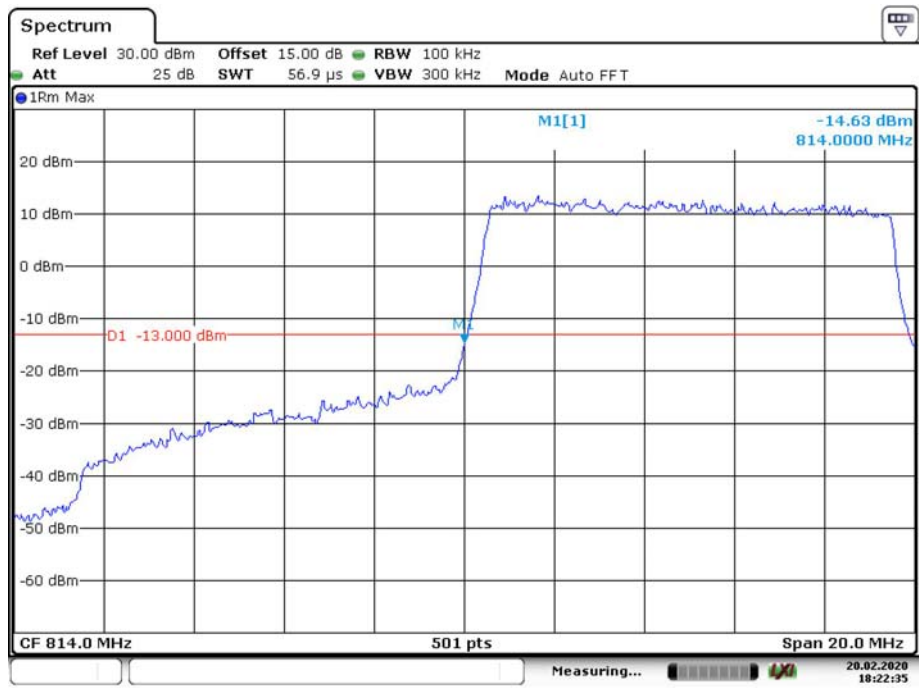
Date: 20.FEB.2020 18:20:24

QPSK_5MHz_25 RB_Right

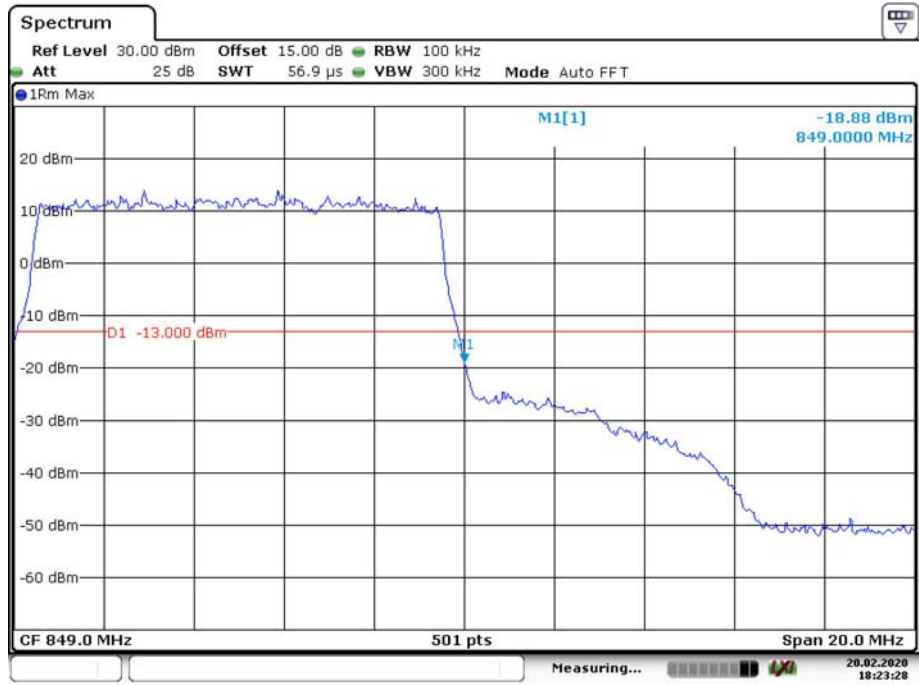


Date: 20.FEB.2020 18:21:28

QPSK_10MHz_50 RB_Left



QPSK_10MHz_50 RB_Right



QPSK_15MHz_75 RB_Left



Date: 20.FEB.2020 18:24:41

QPSK_15MHz_75 RB_Right



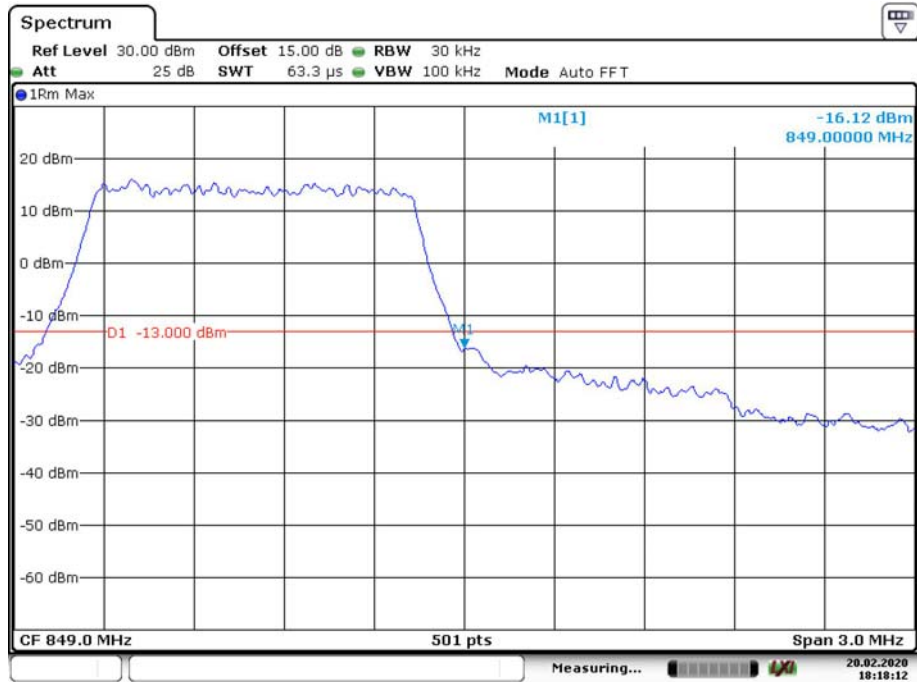
Date: 20.FEB.2020 18:25:54

16QAM_1.4MHz_6 RB_Left



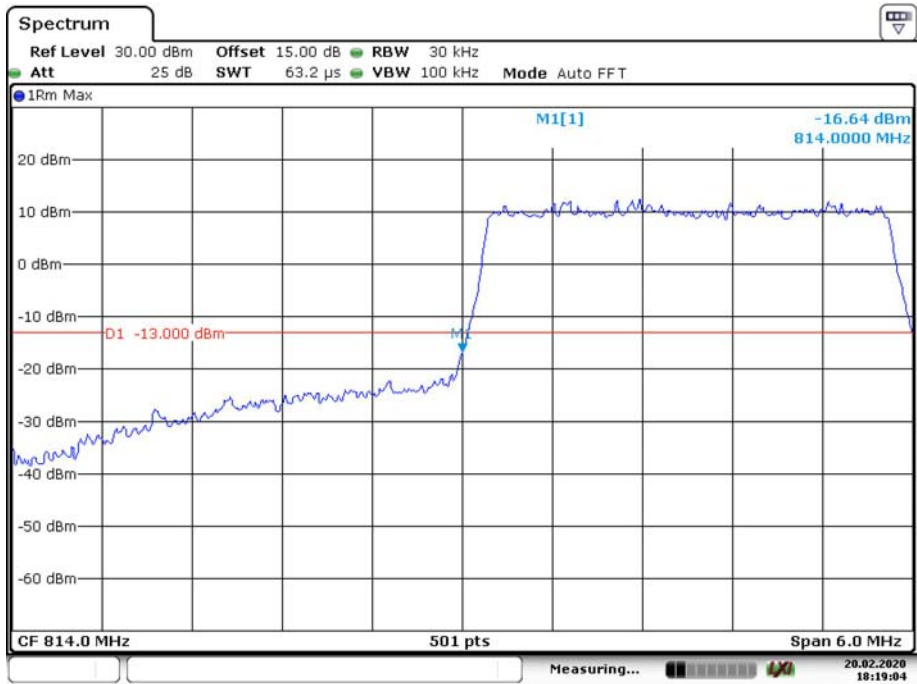
Date: 20.FEB.2020 18:17:12

16QAM_1.4MHz_6 RB_Right

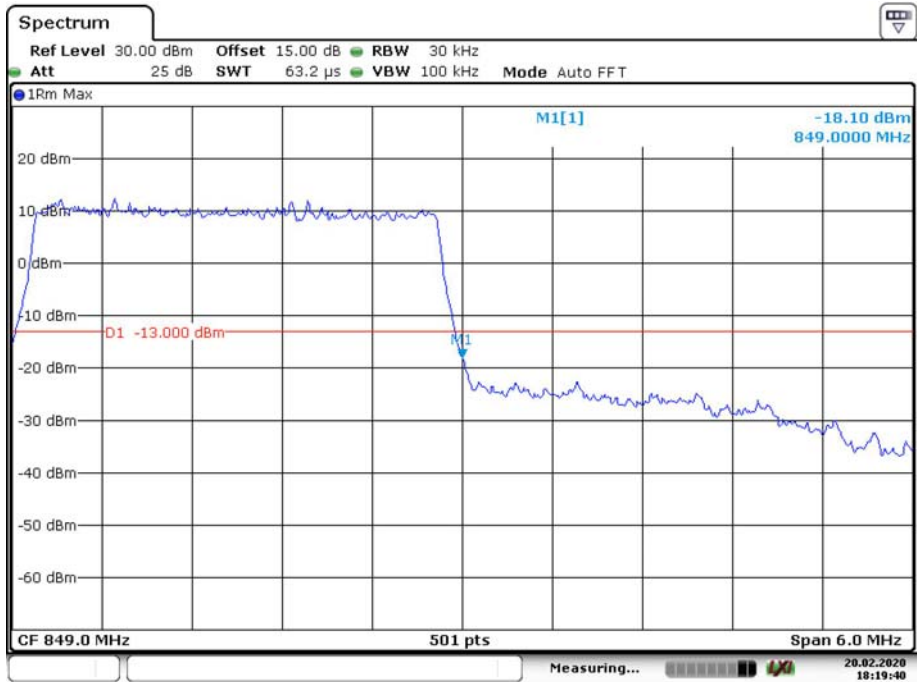


Date: 20.FEB.2020 18:18:12

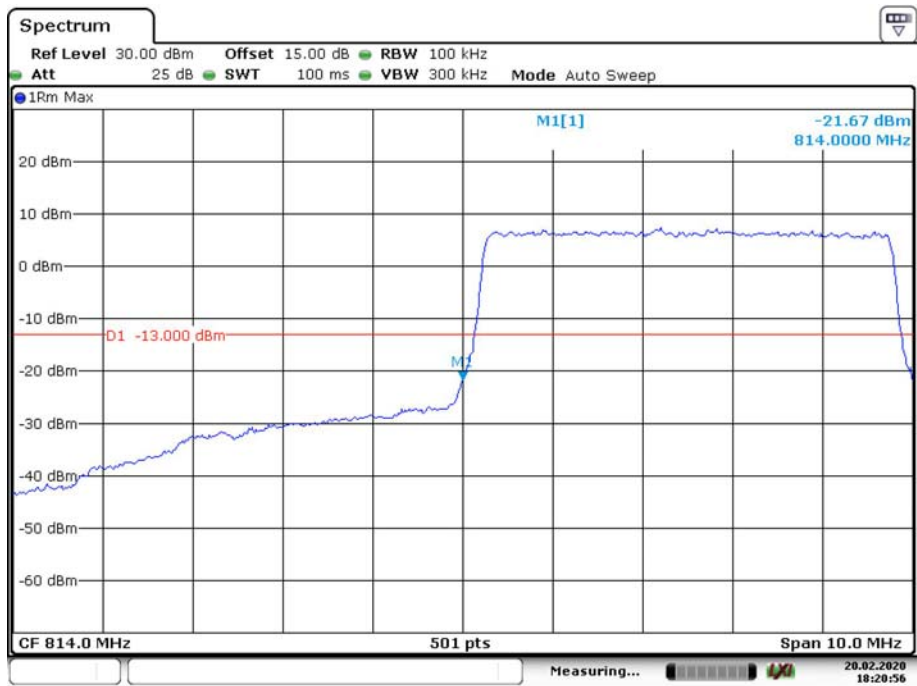
16QAM_3MHz_15 RB_Left



16QAM_3MHz_15 RB_Right



16QAM_5MHz_25 RB_Left



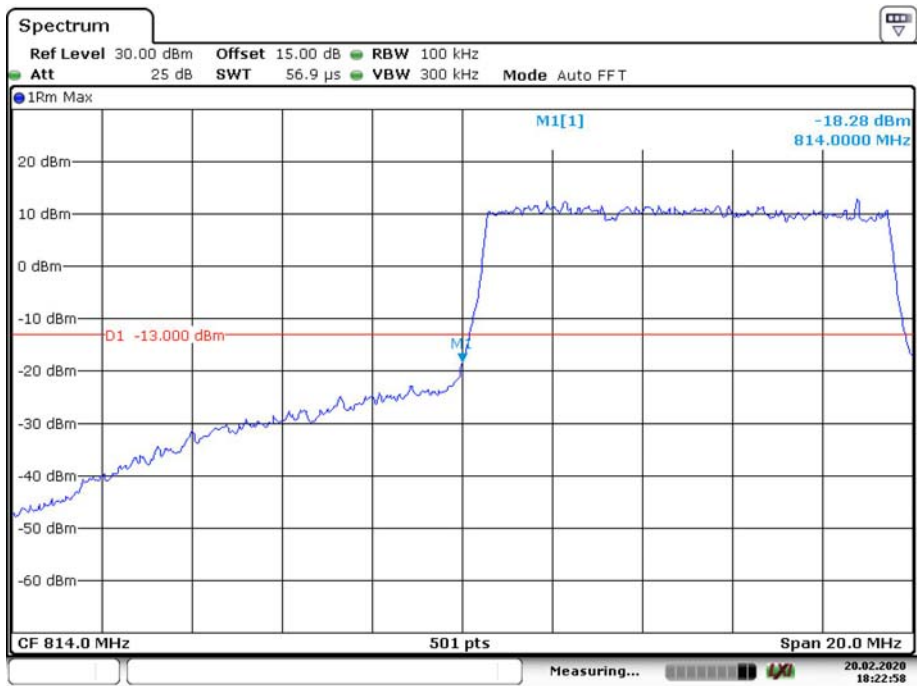
Date: 20.FEB.2020 18:20:56

16QAM_5MHz_25 RB_Right



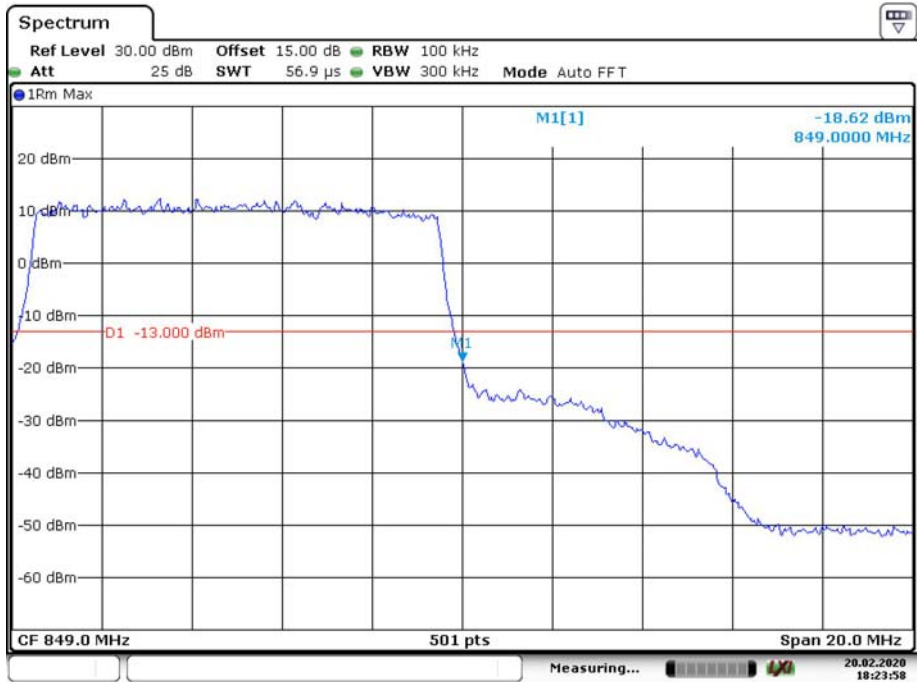
Date: 20.FEB.2020 18:22:01

16QAM_10MHz_ 50 RB_ Left



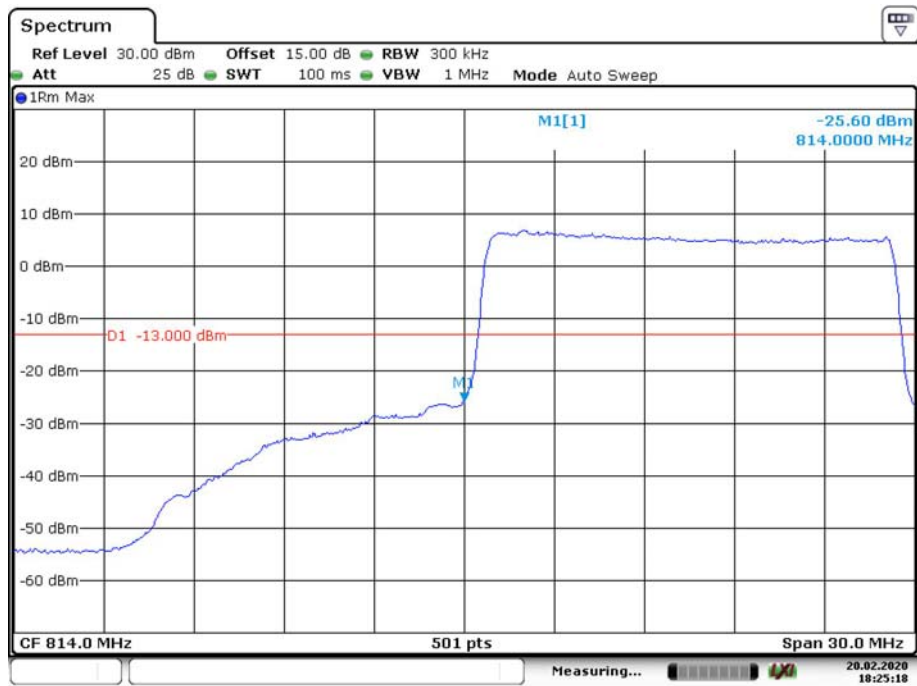
Date: 20.FEB.2020 18:22:58

16QAM_10MHz_ 50 RB_ Right



Date: 20.FEB.2020 18:23:58

16QAM_15MHz_ 75 RB_ Left



Date: 20.FEB.2020 18:25:18

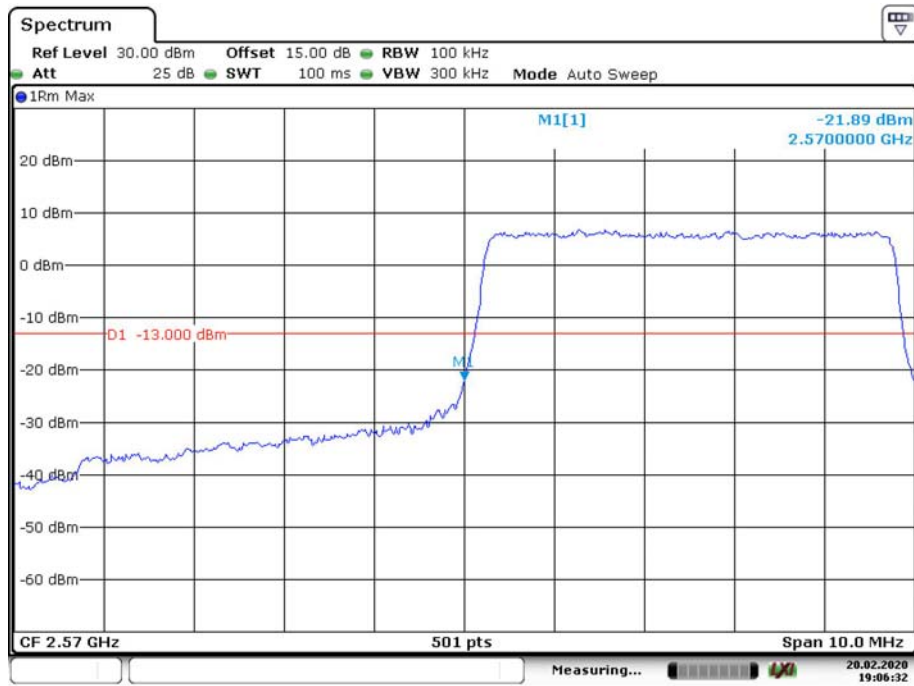
16QAM_15MHz_ 75 RB_ Right



Date: 20.FEB.2020 18:26:19

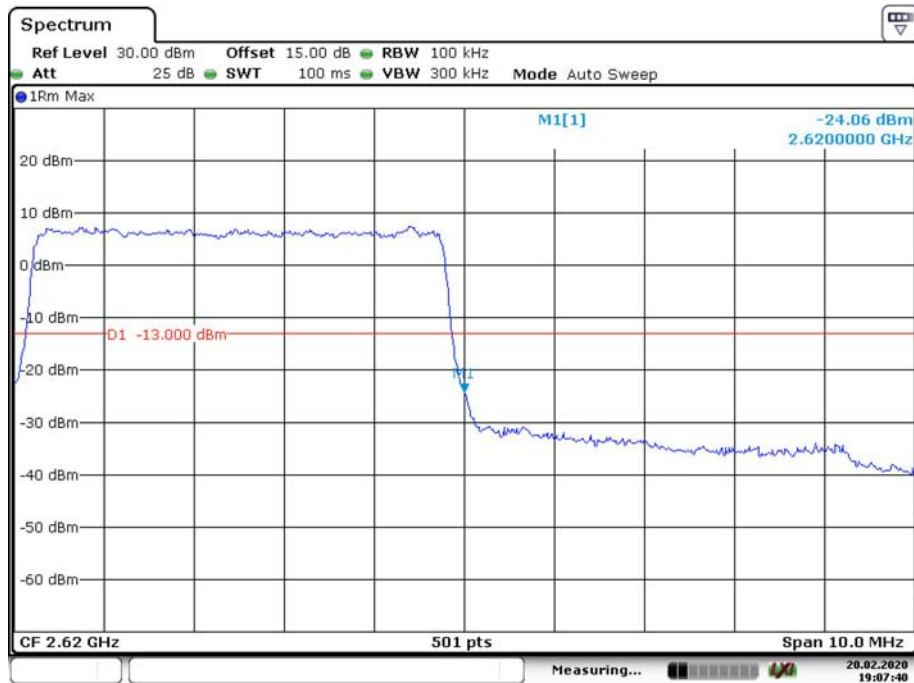
LTE Band 38

QPSK_5MHz_25 RB_Left



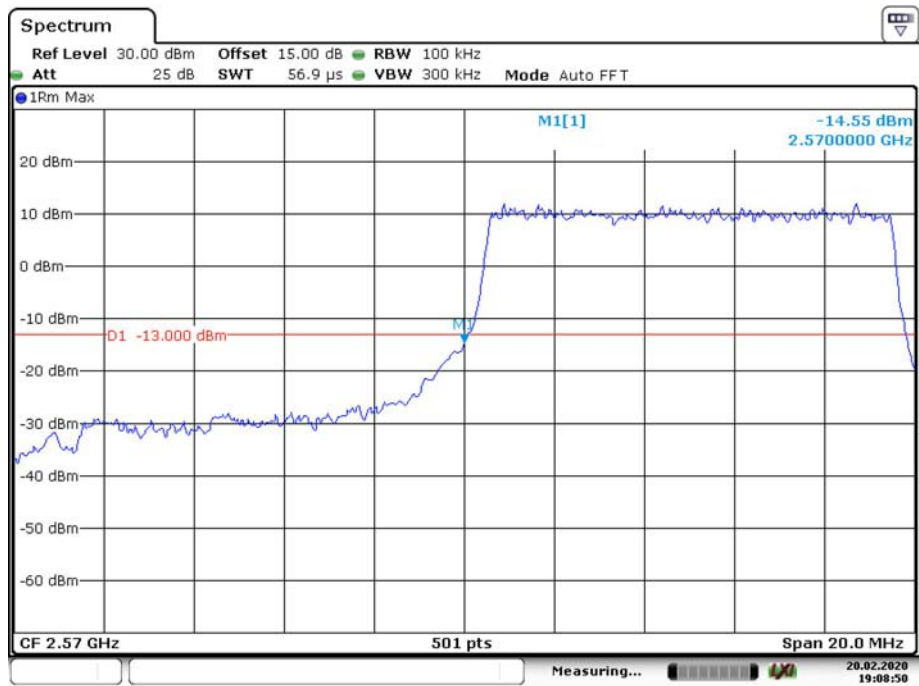
Date: 20.FEB.2020 19:06:32

QPSK_5MHz_25 RB_Right

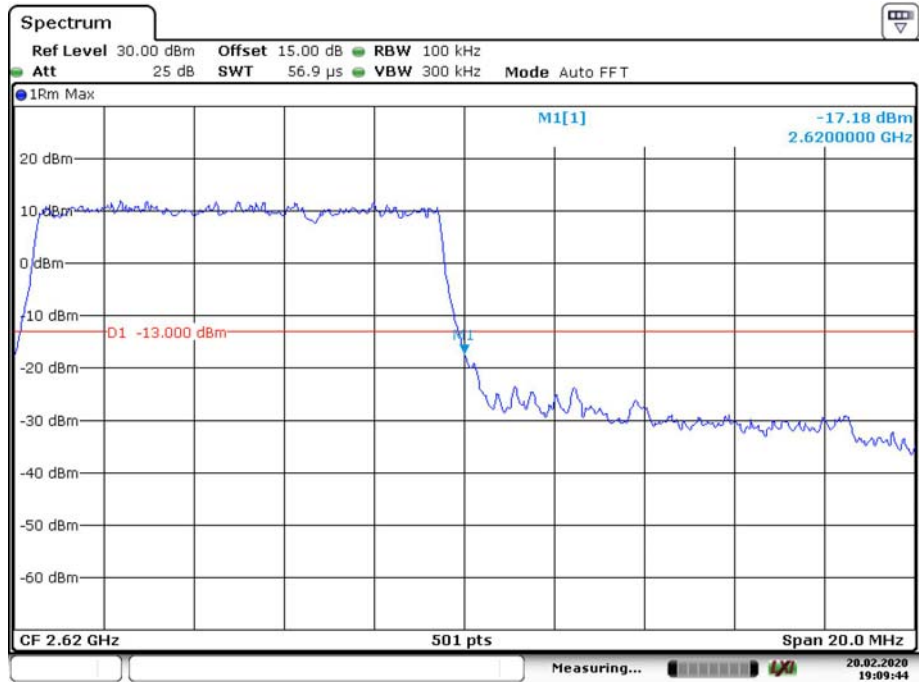


Date: 20.FEB.2020 19:07:40

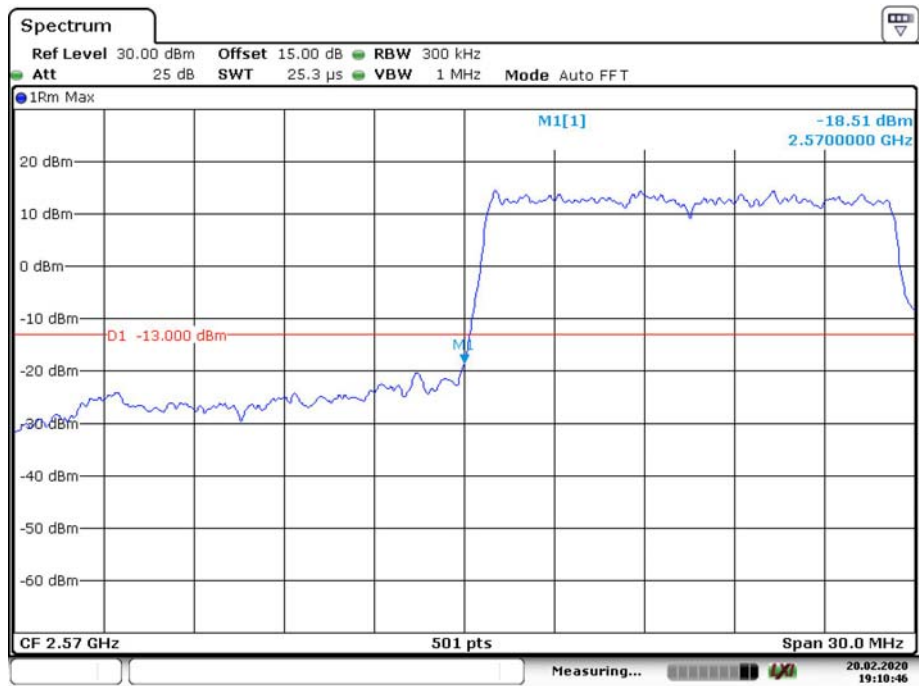
QPSK_10MHz_50 RB_Left



QPSK_10MHz_50 RB_Right



QPSK_15MHz_75 RB_Left



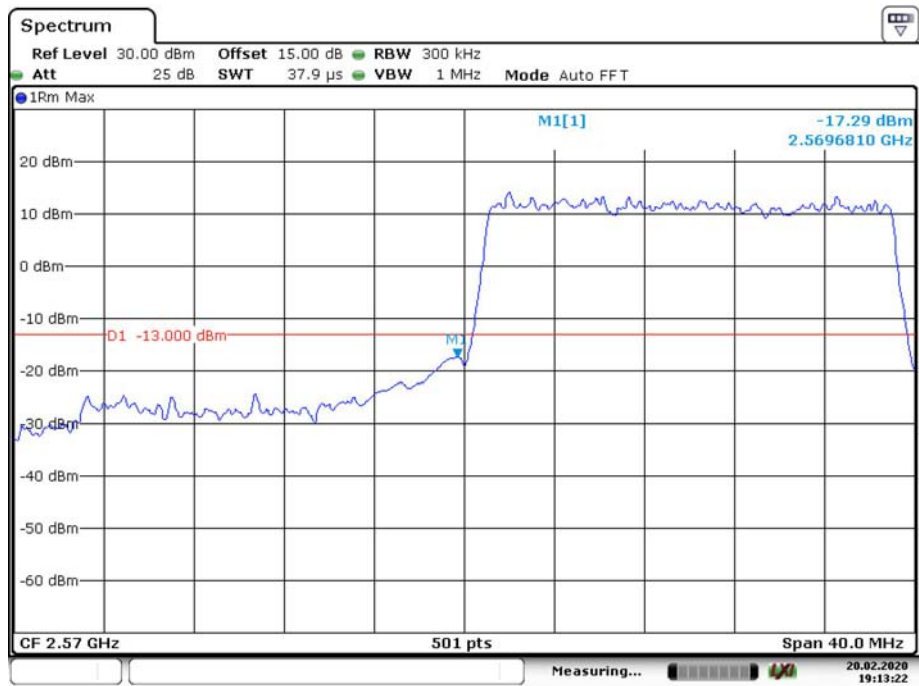
Date: 20.FEB.2020 19:10:46

QPSK_15MHz_75 RB_Right



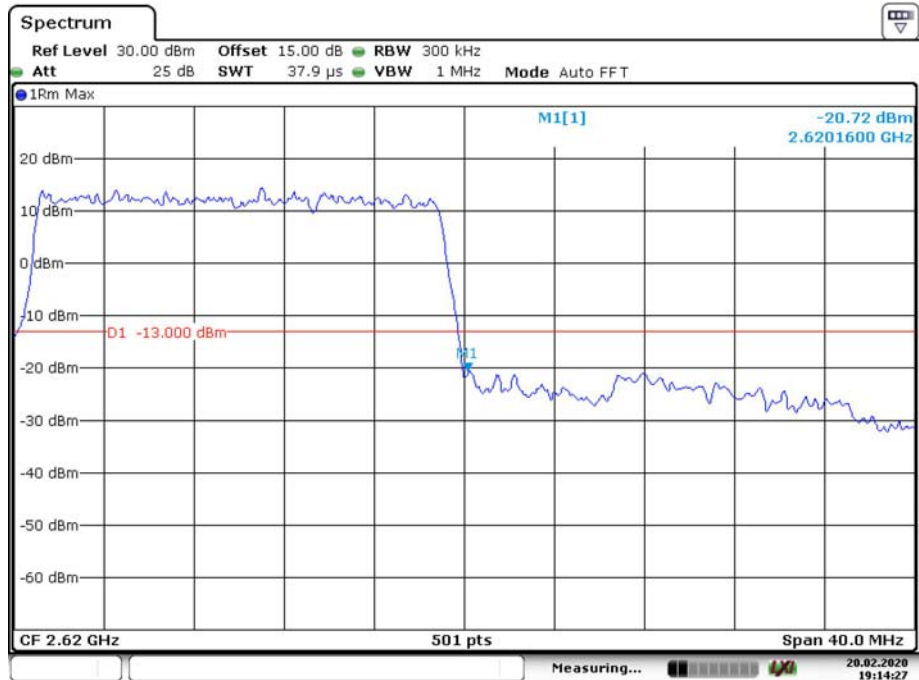
Date: 20.FEB.2020 19:11:47

QPSK_20MHz_FULL RB_Left



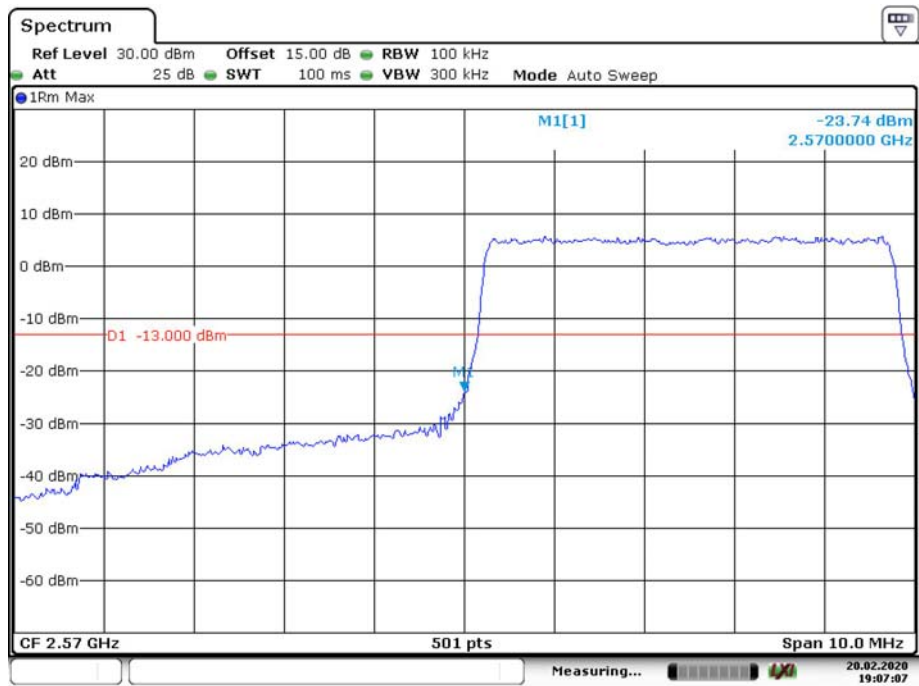
Date: 20.FEB.2020 19:13:22

QPSK_20MHz_FULL RB_Right



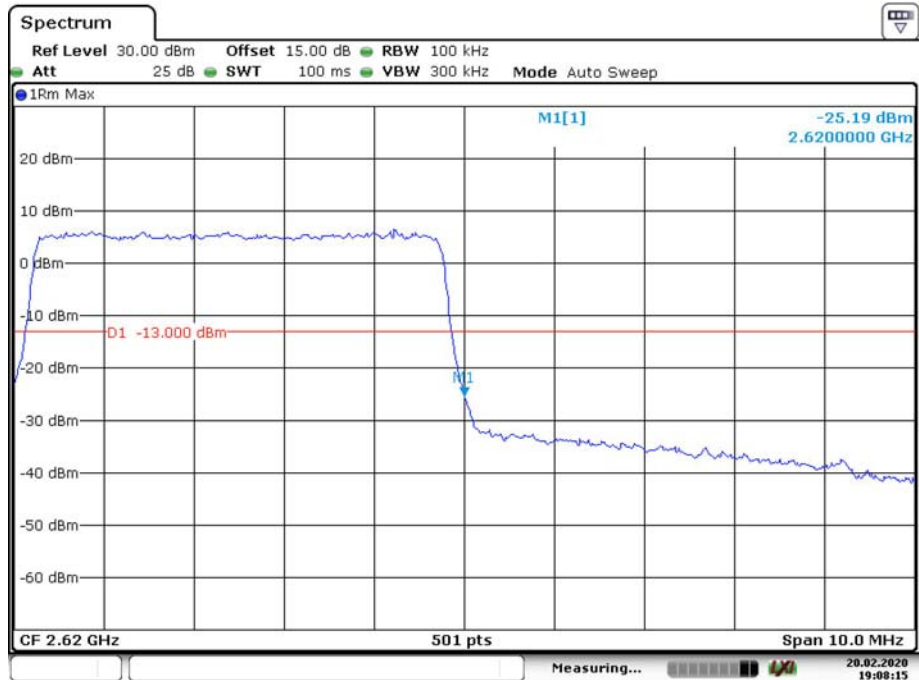
Date: 20.FEB.2020 19:14:27

16QAM_5MHz_25 RB_Left



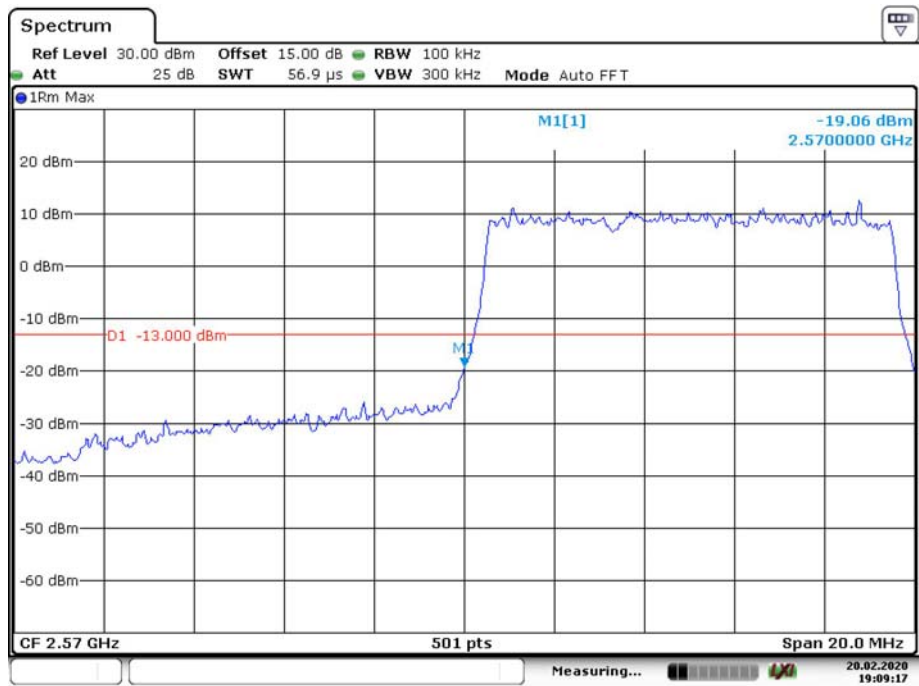
Date: 20.FEB.2020 19:07:07

16QAM_5MHz_25 RB_Right



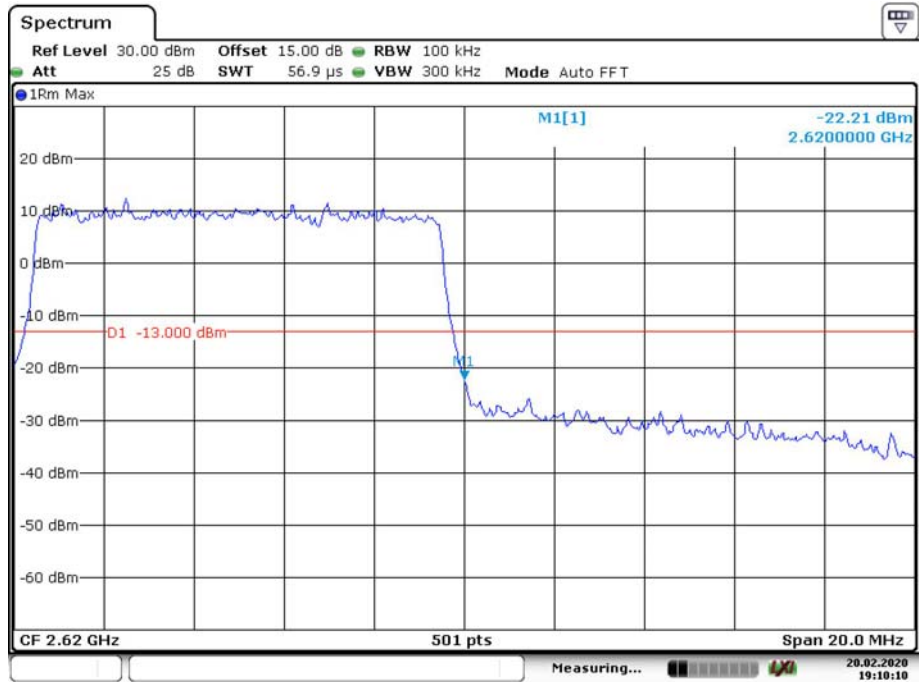
Date: 20.FEB.2020 19:08:15

16QAM_10MHz_ 50 RB_ Left



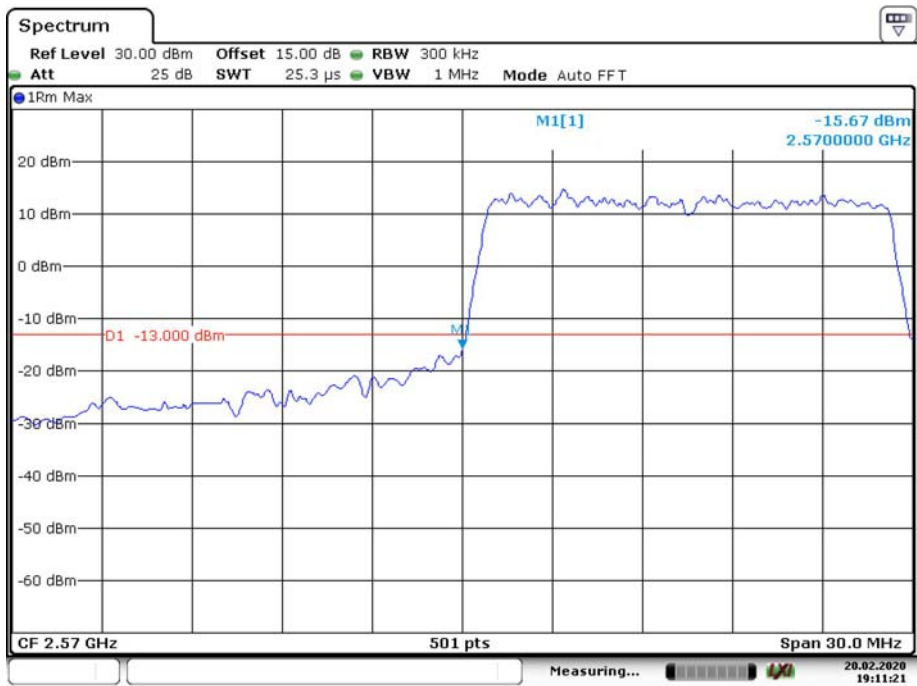
Date: 20.FEB.2020 19:09:17

16QAM_10MHz_ 50 RB_ Right



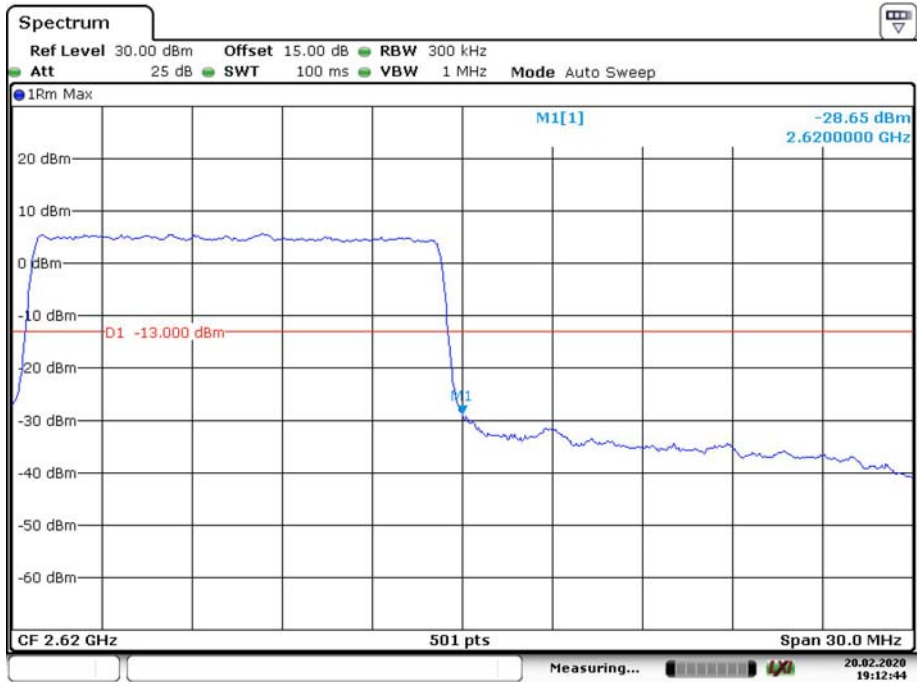
Date: 20.FEB.2020 19:10:10

16QAM_15MHz_75 RB_Left



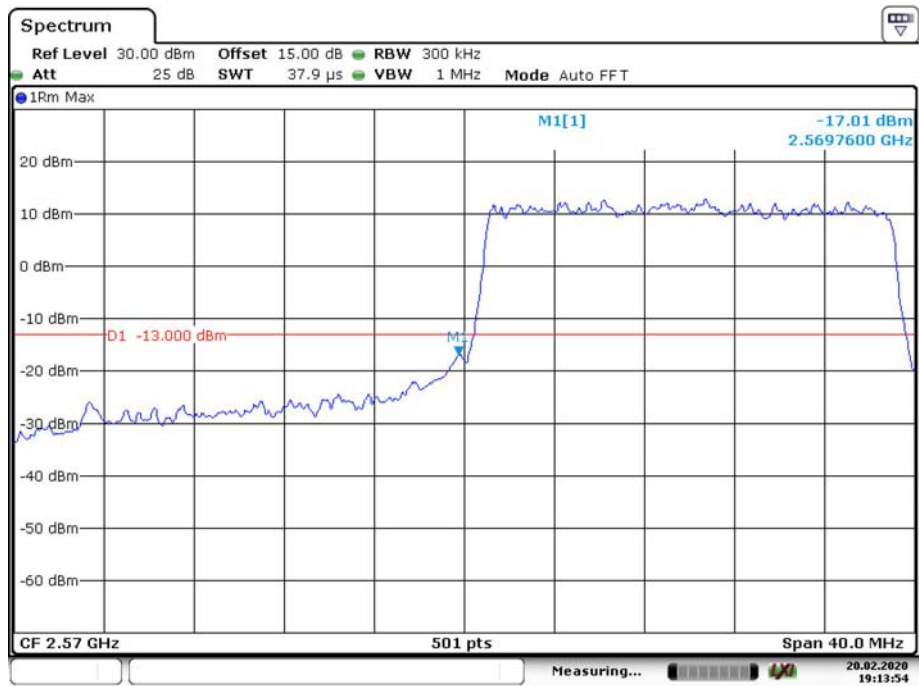
Date: 20.FEB.2020 19:11:21

16QAM_15MHz_75 RB_Right



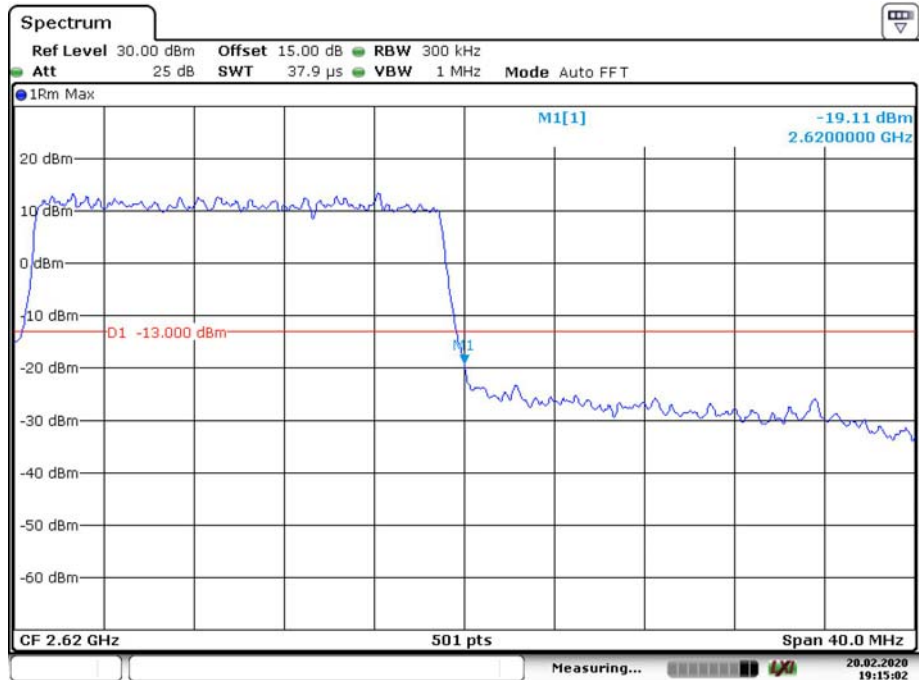
Date: 20.FEB.2020 19:12:44

16QAM_20MHz_FULL RB_Left



Date: 20.FEB.2020 19:13:54

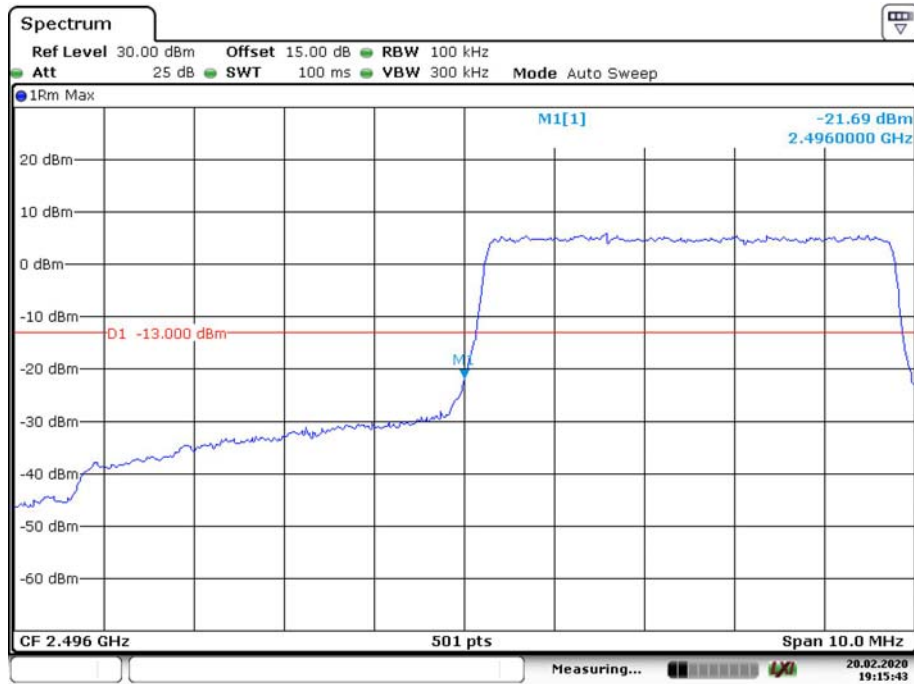
16QAM_20MHz_FULL RB_Right



Date: 20.FEB.2020 19:15:02

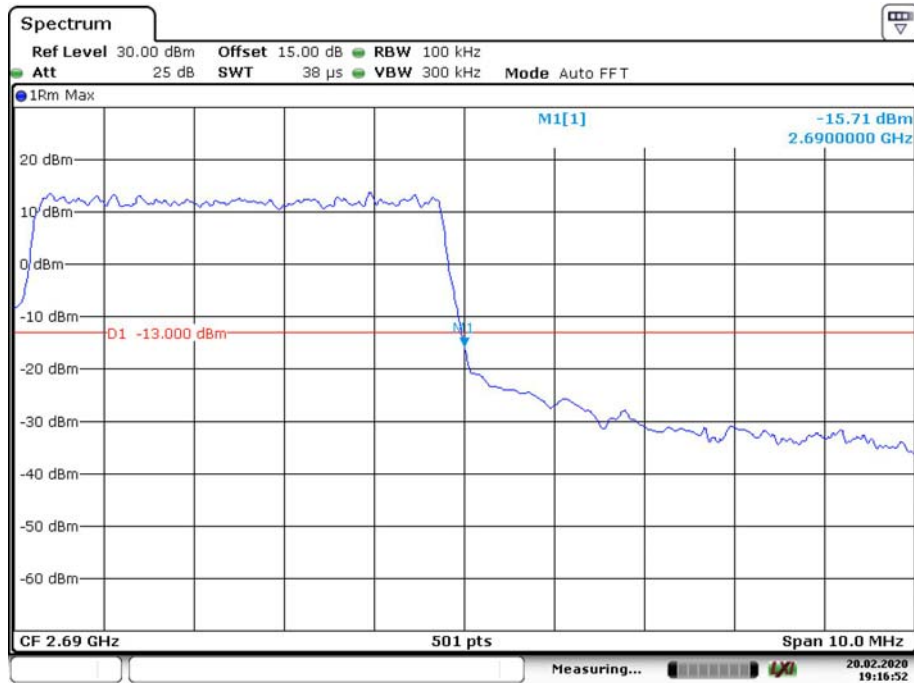
LTE Band 41

QPSK_5MHz_25 RB_Left



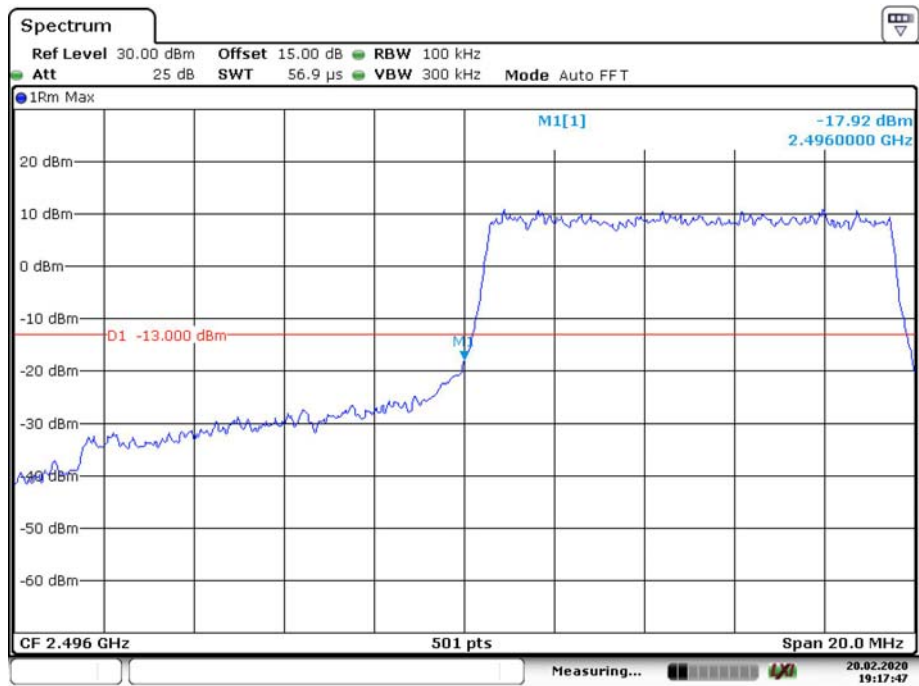
Date: 20.FEB.2020 19:15:43

QPSK_5MHz_25 RB_Right



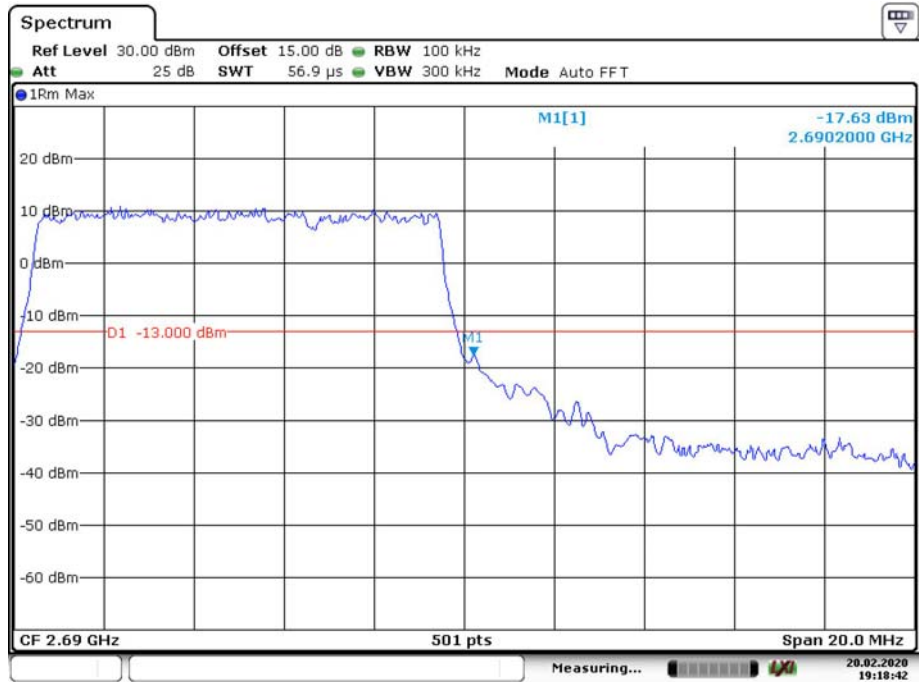
Date: 20.FEB.2020 19:16:52

QPSK_10MHz_50 RB_Left



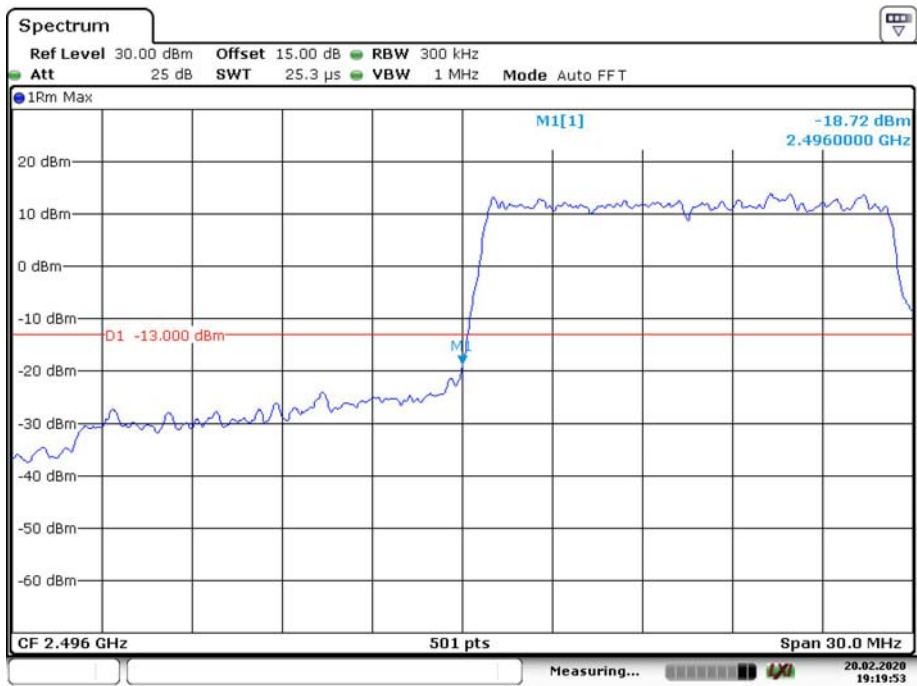
Date: 20.FEB.2020 19:17:47

QPSK_10MHz_50 RB_Right

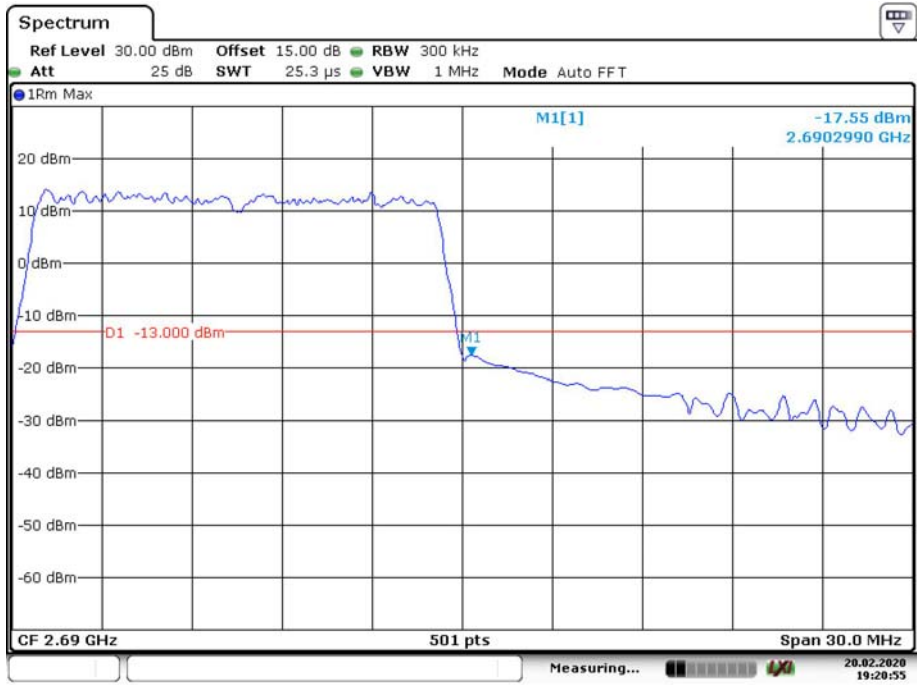


Date: 20.FEB.2020 19:18:42

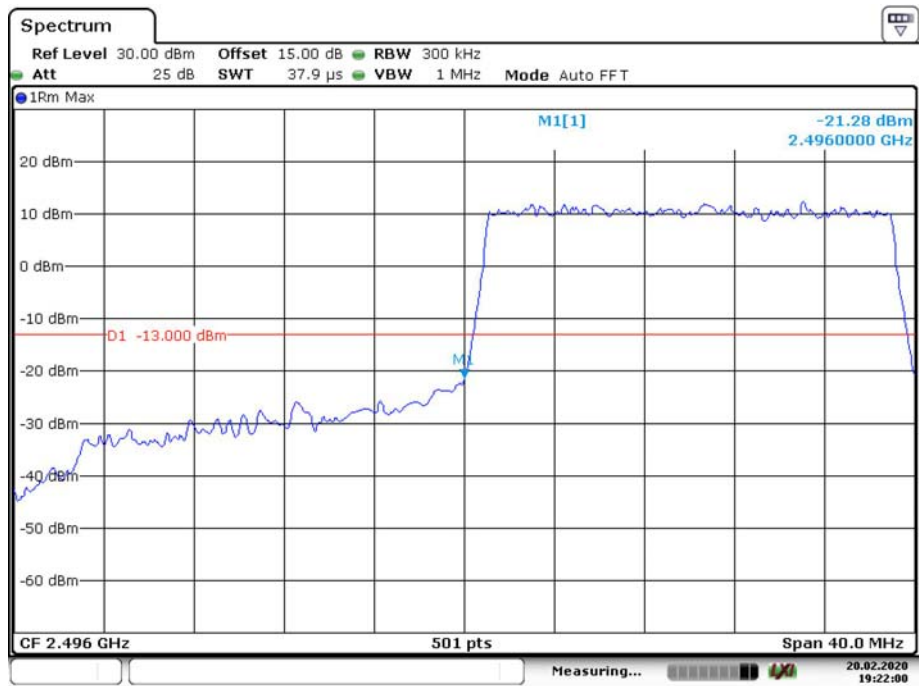
QPSK_15MHz_75 RB_Left



QPSK_15MHz_75 RB_Right

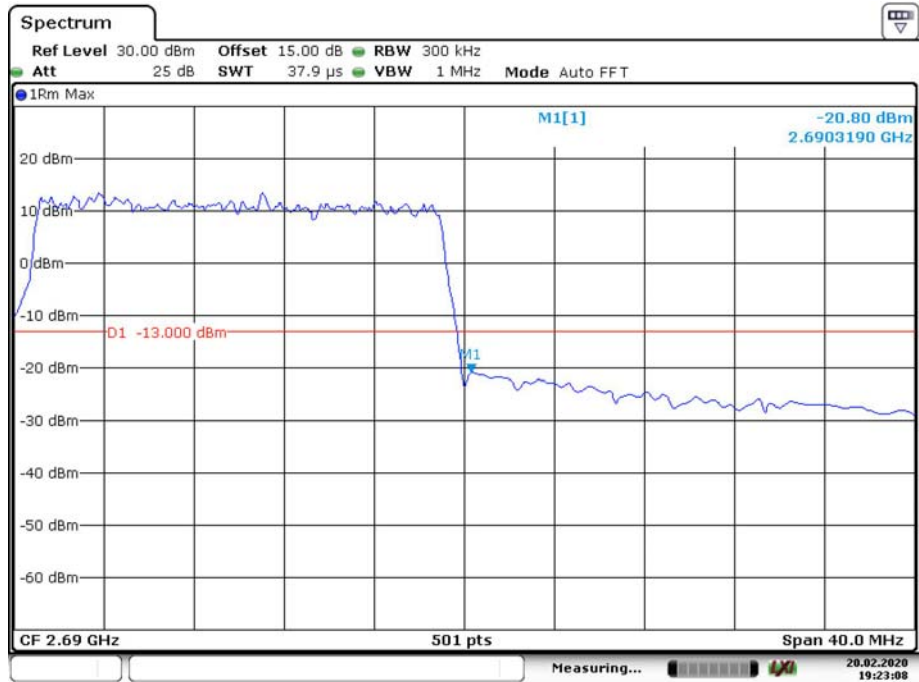


QPSK_20MHz_FULL RB_Left



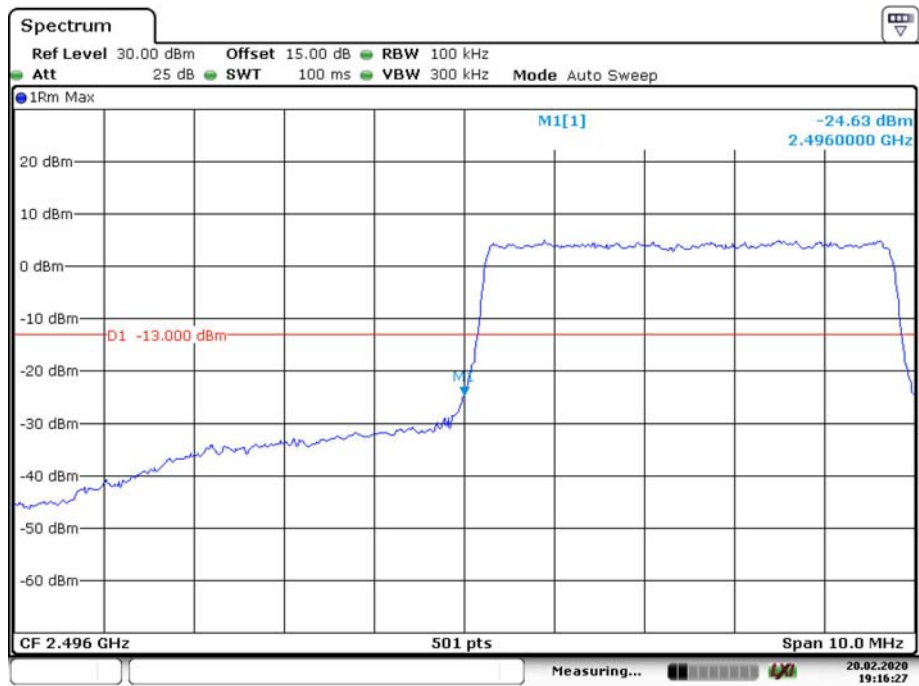
Date: 20.FEB.2020 19:22:00

QPSK_20MHz_FULL RB_Right



Date: 20.FEB.2020 19:23:08

16QAM_5MHz_25 RB_Left



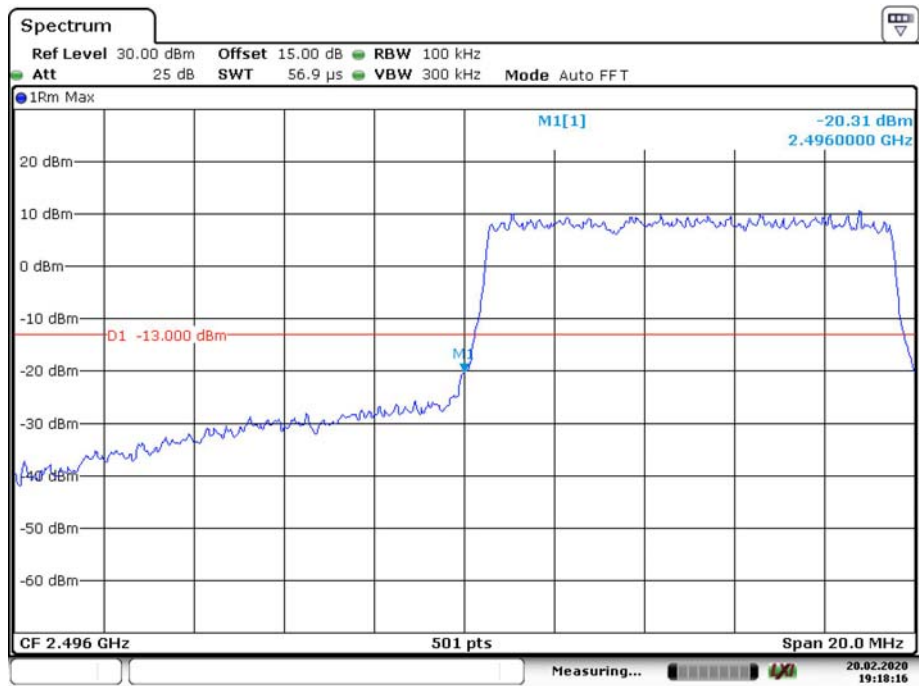
Date: 20.FEB.2020 19:16:27

16QAM_5MHz_25 RB_Right



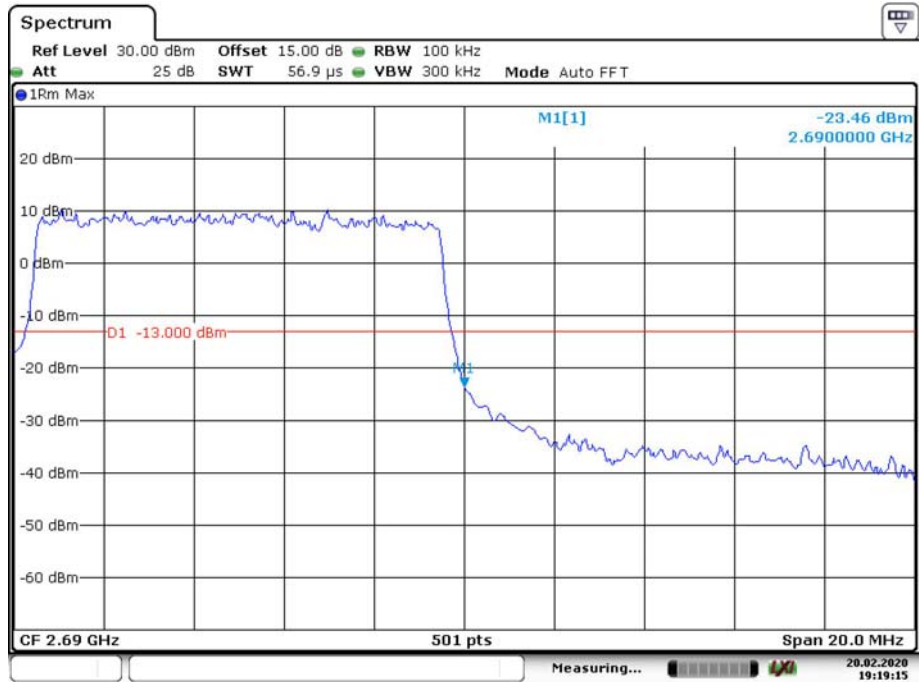
Date: 20.FEB.2020 19:17:11

16QAM_10MHz_ 50 RB_ Left



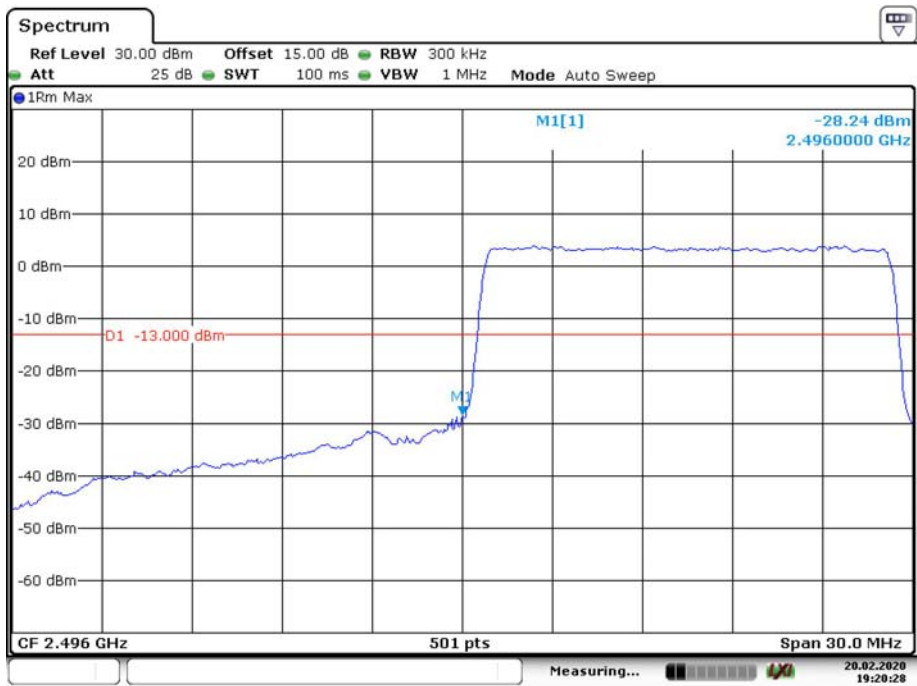
Date: 20.FEB.2020 19:18:16

16QAM_10MHz_ 50 RB_ Right



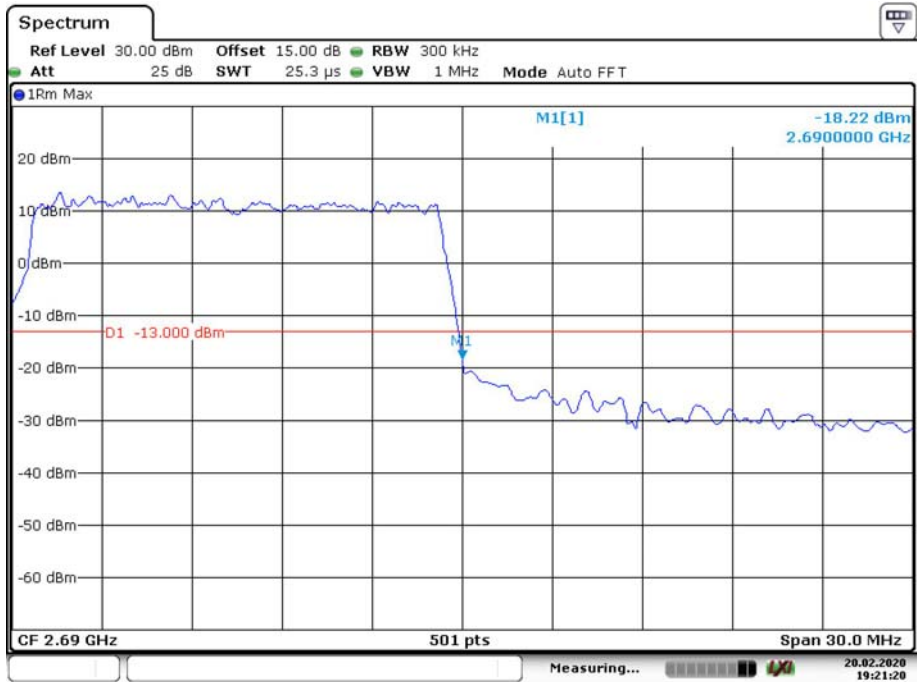
Date: 20.FEB.2020 19:19:15

16QAM_15MHz_75 RB_Left



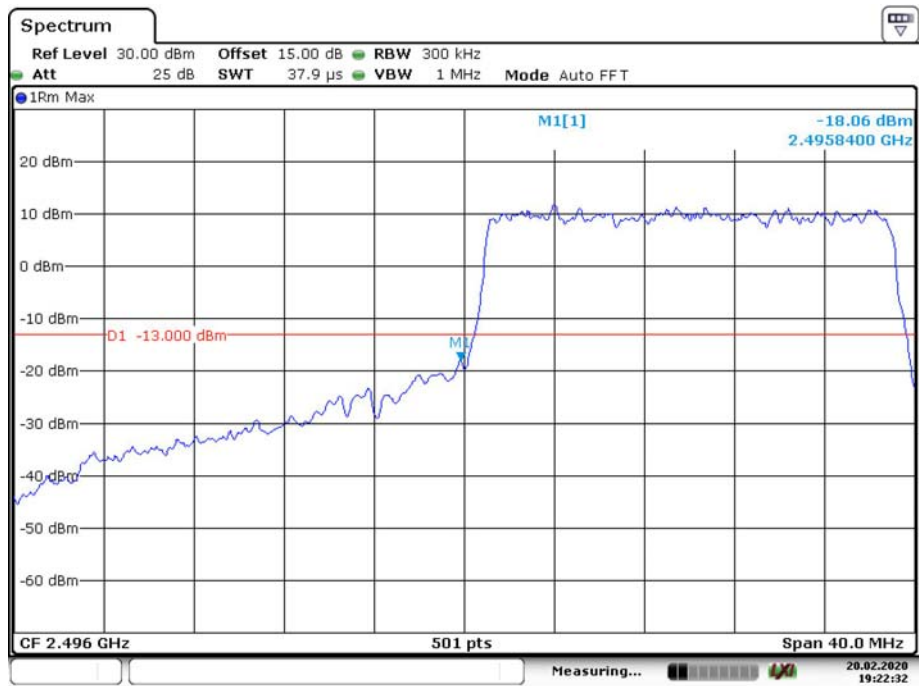
Date: 20.FEB.2020 19:20:28

16QAM_15MHz_75 RB_Right



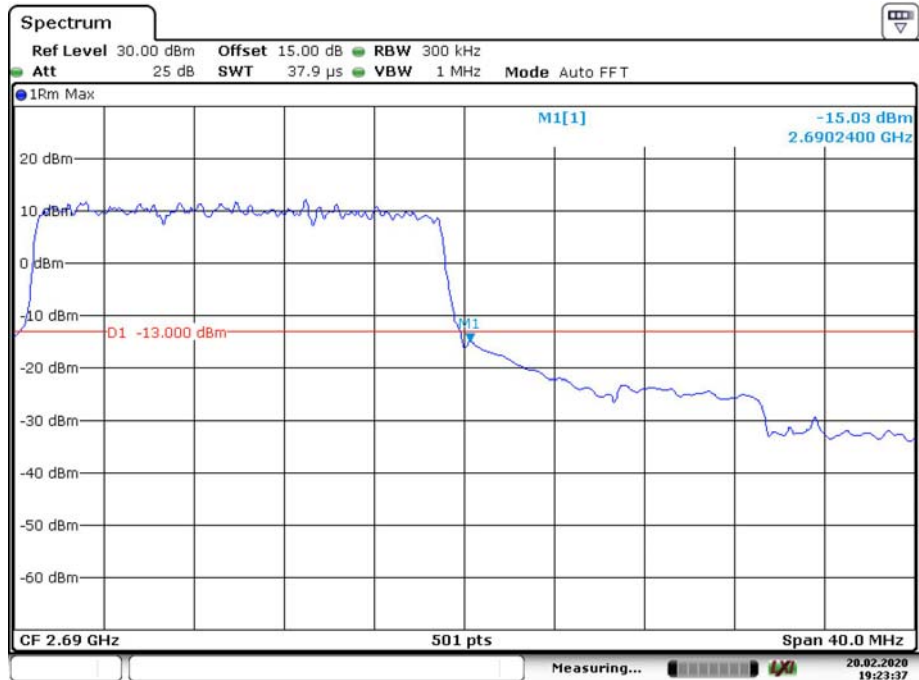
Date: 20.FEB.2020 19:21:20

16QAM_20MHz_FULL RB_Left



Date: 20.FEB.2020 19:22:32

16QAM_20MHz_FULL RB_Right



Date: 20.FEB.2020 19:23:37

FCC §2.1055, §22.355 & §24.235 & §27.54& §90.213 - FREQUENCY STABILITY

Applicable Standard

FCC § 2.1055 (a), § 2.1055 (d), §22.355, §24.235, §27.54, §90.213

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

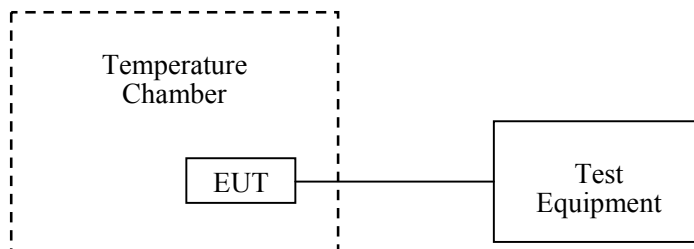
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external AC 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 AC 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: An external variable AC power supply was connected to the battery terminals of the equipment under test. The voltage was set from 85% to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the battery end point. The output frequency was recorded for each battery voltage.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2020-01-09	2021-01-09
yzjingcheng	Coaxial Cable	KTRFBU-141-50	41005011	Each time	N/A
Unknown	Coaxial Cable	C-SJ00-0010	C0010/01	Each time	N/A
E-Microwave	Blocking Control	EMDCB-00036	0E01201047	Each time	N/A
E-Microwave	Coaxial Attenuators	EMCA10-5RN-6	0E01203239	Each time	N/A
R&S	Universal Radio Communication Tester	CMU200	106 891	2019-09-12	2020-09-12
R&S	Wideband Radio Communication Tester	CMW500	147473	2019-08-03	2020-08-03
ESPEC	Constant temperature and humidity Tester	ESX-4CA	018 463	2019-03-26	2020-03-26
UNI-T	Multimeter	UT39A	M130199938	2019-07-23	2020-07-23
Pro instrument	DC Power Supply	pps3300	3300012	N/A	N/A

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data**Environmental Conditions**

Temperature:	19.1~22.9°C
Relative Humidity:	35~75 %
ATM Pressure:	101.6~102.6 kPa
Tester:	Fay Hu
Test Date:	2020-02-13~2020-02-20

GSM, Middle Channel, $f_c = 836.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	FCC Limit
°C	V_{DC}	Hz	ppm	ppm
-30	3.85	1	0.00120	2.5
-20		2	0.00239	
-10		1	0.00120	
0		2	0.00239	
10		3	0.00359	
20		4	0.00478	
30		4	0.00478	
40		3	0.00359	
50		2	0.00239	
20		4.4	4	
20	3.6	4	0.00478	

EGPRS, Middle Channel, $f_c = 836.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	FCC Limit
°C	V_{DC}	Hz	ppm	ppm
-30	3.85	13	0.01554	2.5
-20		11	0.01315	
-10		12	0.01434	
0		16	0.01913	
10		17	0.02032	
20		17	0.02032	
30		16	0.01913	
40		12	0.01434	
50		9	0.01076	
20		4.4	12	
20	3.6	10	0.01195	

GSM1900, Middle Channel, $f_c = 1880.0$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	V_{DC}	Hz	ppm	
-30	3.85	1	0.00053	Pass
-20		0	0.00000	
-10		1	0.00053	
0		3	0.00160	
10		2	0.00106	
20		3	0.00160	
30		3	0.00160	
40		2	0.00106	
50		1	0.00053	
20		4.4	0	
20	3.6	1	0.00053	

EGPRS1900, Middle Channel, $f_c = 1880.0$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	V_{DC}	Hz	ppm	
-30	3.85	7	0.00372	Pass
-20		8	0.00426	
-10		9	0.00479	
0		9	0.00479	
10		12	0.00638	
20		13	0.00691	
30		13	0.00691	
40		11	0.00585	
50		8	0.00426	
20		4.4	9	
20	3.6	11	0.00585	

WCDMA Band II: R99

Middle Channel, $f_c = 1880.0$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	V _{DC}	Hz	ppm	
-30	3.85	0	0.00000	Pass
-20		1	0.00053	
-10		0	0.00000	
0		1	0.00053	
10		1	0.00053	
20		1	0.00053	
30		0	0.00000	
40		-1	-0.00053	
50		-2	-0.00106	
20		4.4	-1	
20	3.6	-2	-0.00106	

WCDMA Band IV: R99

Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
		F _L	F _H	F _L	F _H
-30	3.85	1710.812	1754.559	1710	1755
-20		1710.491	1754.486	1710	1755
-10		1710.897	1754.869	1710	1755
0		1710.682	1754.761	1710	1755
10		1710.525	1754.743	1710	1755
20		1710.517	1754.717	1710	1755
30		1710.587	1754.459	1710	1755
40		1710.675	1754.836	1710	1755
50		1710.849	1754.854	1710	1755
20		4.4	1710.212	1754.781	1710
20	3.6	1710.846	1754.631	1710	1755

WCDMA Band V: R99

Middle Channel, $f_c = 836.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V _{DC}	Hz	ppm	ppm
-30	3.85	-2	-0.00239	2.5
-20		-1	-0.00120	
-10		0	0.00000	
0		0	0.00000	
10		-1	-0.00120	
20		0	0.00000	
30		-2	-0.00239	
40		-2	-0.00239	
50		-1	-0.00120	
20		4.4	-1	
20	3.6	-2	-0.00239	

LTE Band 2:

QPSK, Channel Bandwidth: 10MHz Middle Channel, $f_c = 1880$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	V _{DC}	Hz	ppm	
-30	3.85	-4.32	-0.0023	Pass
-20		7.11	0.0038	
-10		6.63	0.0035	
0		7.27	0.0039	
10		-7.83	-0.0042	
20		-8.75	-0.0047	
30		5.80	0.0031	
40		5.52	0.0029	
50		-8.21	-0.0044	
20		4.4	8.52	
20	3.6	-9.19	-0.0049	

16QAM, Channel Bandwidth:10MHz Middle Channel, $f_c = 1880$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	V _{DC}	Hz	ppm	
-30	3.85	-4.72	-0.0025	Pass
-20		8.21	0.0044	
-10		-5.24	-0.0028	
0		-8.25	-0.0044	
10		8.31	0.0044	
20		-5.58	-0.003	
30		-7.46	-0.004	
40		-5.30	-0.0028	
50		-9.10	-0.0048	
20		4.4	9.23	
20	3.6	-6.98	-0.0037	

LTE Band 4:

QPSK, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
		F _L	F _H	F _L	F _H
°C	V _{DC}				
-30	3.85	1710.570722	1754.508611	1710	1755
-20		1710.570734	1754.508802	1710	1755
-10		1710.570942	1754.509462	1710	1755
0		1710.5707342	1754.509242	1710	1755
10		1710.571123	1754.508694	1710	1755
20		1710.571113	1754.509020	1710	1755
30		1710.571543	1754.509539	1710	1755
40		1710.571323	1754.508920	1710	1755
50		1710.570812	1754.508552	1710	1755
20		4.4	1710.571544	1754.508676	1710
20	3.6	1710.570976	1754.509248	1710	1755

16QAM, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
°C	V _{DC}	F _L	F _H	F _L	F _H
-30	3.85	1710.571140	1754.509007	1710	1755
-20		1710.571351	1754.509405	1710	1755
-10		1710.571358	1754.509062	1710	1755
0		1710.571005	1754.509020	1710	1755
10		1710.571456	1754.508568	1710	1755
20		1710.570860	1754.509144	1710	1755
30		1710.571105	1754.509344	1710	1755
40		1710.571101	1754.509444	1710	1755
50		1710.570917	1754.509323	1710	1755
20		4.4	1710.570890	1754.508936	1710
20	3.6	1710.570704	1754.509474	1710	1755

LTE Band 5:

Middle Channel, f _c = 836.5 MHz, Channel Bandwidth:10MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V _{DC}	Hz	ppm	ppm
-30	3.85	-0.47	-0.0006	2.5
-20		9.14	0.0109	
-10		-5.60	-0.0067	
0		-5.99	-0.0072	
10		9.71	0.0116	
20		9.07	0.0108	
30		-6.09	-0.0073	
40		-6.26	-0.0075	
50		-8.15	-0.0097	
20		4.4	-7.26	
20	3.6	-9.66	-0.0115	

Middle Channel, $f_c = 836.5$ MHz, Channel Bandwidth:10MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V _{DC}	Hz	ppm	ppm
-30	3.85	-0.90	-0.0011	2.5
-20		-7.81	-0.0093	
-10		-5.53	-0.0066	
0		-8.97	-0.0107	
10		6.95	0.0083	
20		5.58	0.0067	
30		8.85	0.0106	
40		9.60	0.0115	
50		9.98	0.0119	
20		4.4	7.80	
20	3.6	6.82	0.0082	

LTE Band 7:

QPSK, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
°C	V _{DC}	F _L	F _H	F _L	F _H
-30	3.85	2500.5375	2569.5130	2500	2570
-20		2500.5353	2569.5130	2500	2570
-10		2500.5350	2569.5129	2500	2570
0		2500.5352	2569.5132	2500	2570
10		2500.5355	2569.5129	2500	2570
20		2500.5353	2569.5132	2500	2570
30		2500.5355	2569.5130	2500	2570
40		2500.5356	2569.5128	2500	2570
50		2500.5349	2569.5133	2500	2570
20		4.4	2500.5350	2569.5128	2500
20	3.6	2500.5352	2569.5133	2500	2570

16QAM, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
°C	V _{DC}	F _L	F _H	F _L	F _H
-30	3.85	2500.5750	2569.5135	2500	2570
-20		2500.5757	2569.5130	2500	2570
-10		2500.5754	2569.5130	2500	2570
0		2500.5757	2569.5136	2500	2570
10		2500.5751	2569.5129	2500	2570
20		2500.5753	2569.5132	2500	2570
30		2500.5757	2569.5128	2500	2570
40		2500.5754	2569.5129	2500	2570
50		2500.5749	2569.5134	2500	2570
20		4.4	2500.5749	2569.5129	2500
20	3.6	2500.5749	2569.5132	2500	2570

LTE Band 12:

QPSK, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
°C	V _{DC}	F _L	F _H	F _L	F _H
-30	3.85	699.5752	715.5134	699	716
-20		699.5756	715.5128	699	716
-10		699.5750	715.5135	699	716
0		699.5750	715.5136	699	716
10		699.5752	715.5130	699	716
20		699.5753	715.5132	699	716
30		699.5753	715.5135	699	716
40		699.5753	715.5129	699	716
50		699.5749	715.5132	699	716
20		4.4	699.5753	715.5128	699
20	3.6	699.5758	715.5128	699	716

16QAM, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
°C	V _{DC}	F _L	F _H	F _L	F _H
-30	3.85	699.5751	715.4728	699	716
-20		699.5751	715.4727	699	716
-10		699.5751	715.4728	699	716
0		699.5749	715.4733	699	716
10		699.5754	715.4727	699	716
20		699.5753	715.4731	699	716
30		699.5749	715.4734	699	716
40		699.5753	715.4734	699	716
50		699.5755	715.4730	699	716
20		4.4	699.5757	715.4735	699
20	3.6	699.5754	715.4733	699	716

LTE Band 13:

QPSK, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
°C	V _{DC}	F _L	F _H	F _L	F _H
-30	3.85	777.5355	786.5131	777	787
-20		777.5356	786.5137	777	787
-10		777.5356	786.5128	777	787
0		777.5354	786.5127	777	787
10		777.5348	786.5131	777	787
20		777.5353	786.5132	777	787
30		777.5358	786.5137	777	787
40		777.5357	786.5128	777	787
50		777.5352	786.5132	777	787
20		4.4	777.5356	786.5131	777
20	3.6	777.5348	786.5128	777	787

16QAM, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
°C	V _{DC}	F _L	F _H	F _L	F _H
-30	3.85	777.5824	786.5207	777	787
-20		777.5827	786.5199	777	787
-10		777.5820	786.5207	777	787
0		777.5825	786.5203	777	787
10		777.5819	786.5204	777	787
20		777.5823	786.5202	777	787
30		777.5827	786.5199	777	787
40		777.5820	786.5204	777	787
50		777.5819	786.5206	777	787
20		4.4	777.5821	786.5200	777
20	3.6	777.5825	786.5201	777	787

LTE Band 17:

QPSK, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
°C	V _{DC}	F _L	F _H	F _L	F _H
-30	3.85	704.5426	715.5206	704	716
-20		704.5423	715.5202	704	716
-10		704.5419	715.5199	704	716
0		704.5424	715.5198	704	716
10		704.5422	715.5206	704	716
20		704.5423	715.5202	704	716
30		704.5420	715.5200	704	716
40		704.5423	715.5199	704	716
50		704.5419	715.5204	704	716
20		4.4	704.5424	715.5200	704
20	3.6	704.5422	715.5205	704	716

16QAM, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
°C	V _{DC}	F _L	F _H	F _L	F _H
-30	3.85	704.5826	715.5201	704	716
-20		704.5824	715.5199	704	716
-10		704.5825	715.5200	704	716
0		704.5825	715.5206	704	716
10		704.5826	715.5206	704	716
20		704.5823	715.5202	704	716
30		704.5825	715.5203	704	716
40		704.5825	715.5201	704	716
50		704.5828	715.5202	704	716
20		4.4	704.5828	715.5206	704
20	3.6	704.5828	715.5202	704	716

LTE Band 26:

Middle Channel, f _c = 831.5 MHz, Channel Bandwidth:10MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V _{DC}	Hz	ppm	ppm
-30	3.85	-0.66	-0.0008	2.5
-20		-9.36	-0.0113	
-10		-7.81	-0.0094	
0		5.79	0.007	
10		-8.17	-0.0098	
20		-7.27	-0.0087	
30		9.69	0.0117	
40		-8.93	-0.0107	
50		6.72	0.0081	
20		4.4	-8.02	
20	3.6	-9.03	-0.0109	

Middle Channel, $f_c = 831.5$ MHz, Channel Bandwidth:10MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V _{DC}	Hz	ppm	ppm
-30	3.85	-0.93	-0.0011	2.5
-20		-6.81	-0.0082	
-10		9.66	0.0116	
0		-8.32	-0.01	
10		5.40	0.0065	
20		5.24	0.0063	
30		-6.54	-0.0079	
40		7.62	0.0092	
50		6.80	0.0082	
20		4.4	-7.99	
20	3.6	-9.44	-0.0114	

LTE Band 38:

QPSK, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
°C	V _{DC}	F _L	F _H	F _L	F _H
-30	3.85	2570.5825	2619.5206	2570	2620
-20		2570.5821	2619.5198	2570	2620
-10		2570.5822	2619.5201	2570	2620
0		2570.5819	2619.5205	2570	2620
10		2570.5826	2619.5202	2570	2620
20		2570.5823	2619.5202	2570	2620
30		2570.5820	2619.5205	2570	2620
40		2570.5826	2619.5201	2570	2620
50		2570.5822	2619.5206	2570	2620
20		4.4	2570.5820	2619.5200	2570
20	3.6	2570.5825	2619.5199	2570	2620

16QAM, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
°C	V _{DC}	F _L	F _H	F _L	F _H
-30	3.85	2570.5822	2619.5205	2570	2620
-20		2570.5827	2619.5206	2570	2620
-10		2570.5824	2619.5197	2570	2620
0		2570.5822	2619.5204	2570	2620
10		2570.5820	2619.5203	2570	2620
20		2570.5823	2619.5202	2570	2620
30		2570.5826	2619.5204	2570	2620
40		2570.5828	2619.5199	2570	2620
50		2570.5826	2619.5206	2570	2620
20		4.4	2570.5821	2619.5201	2570
20	3.6	2570.5821	2619.5203	2570	2620

LTE Band 41:

QPSK, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
°C	V _{DC}	F _L	F _H	F _L	F _H
-30	3.85	2496.4992	2696.453	2496	2690
-20		2496.4912	2696.496	2496	2690
-10		2496.5582	2696.426	2496	2690
0		2496.5072	2696.437	2496	2690
10		2496.5812	2696.479	2496	2690
20		2496.5402	2696.462	2496	2690
30		2496.5012	2696.453	2496	2690
40		2496.5312	2696.431	2496	2690
50		2496.5162	2696.46	2496	2690
20		4.4	2496.5272	2696.506	2496
20	3.6	2496.5692	2696.468	2496	2690

16QAM, Channel Bandwidth:10MHz					
Temperature	Voltage	Test Result (MHz)		Limit (MHz)	
°C	V _{DC}	F _L	F _H	F _L	F _H
-30	3.85	2496.5762	2696.414	2496	2690
-20		2496.5772	2696.457	2496	2690
-10		2496.4992	2696.464	2496	2690
0		2496.5522	2696.472	2496	2690
10		2496.5052	2696.42	2496	2690
20		2496.5402	2696.462	2496	2690
30		2496.5342	2696.468	2496	2690
40		2496.5502	2696.416	2496	2690
50		2496.5202	2696.506	2496	2690
20		4.4	2496.5762	2696.481	2496
20	3.6	2496.5092	2696.412	2496	2690

Note: The fundamental emissions stay within the authorized bands of operation based on the frequency deviation measured is small, the extreme voltage was declared by applicant.

******* END OF REPORT *******