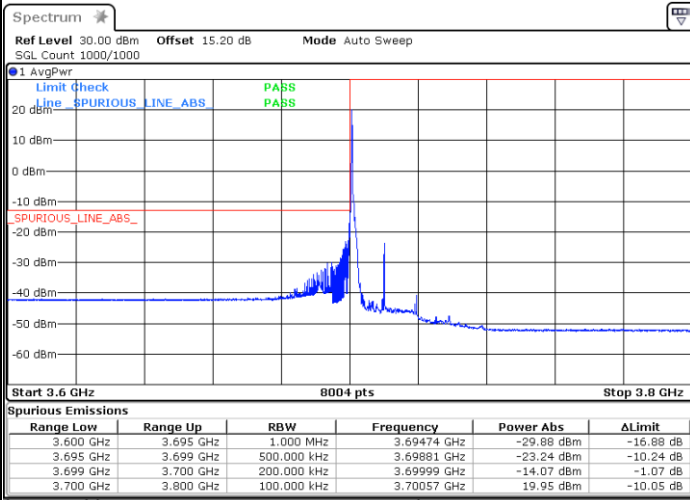




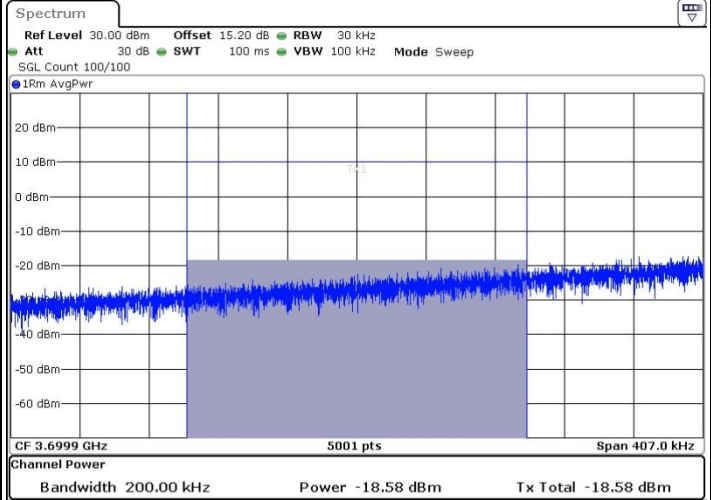
FR1 UL-MIMO n77 / 20MHz / CP-OFDM QPSK (M2)

Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



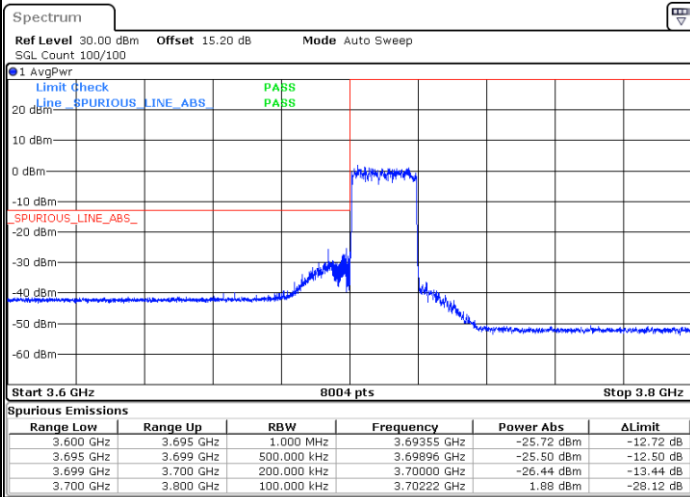
Date: 14.MAR.2021 01:55:44



Date: 14.MAR.2021 02:05:18

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



Date: 14.MAR.2021 01:59:46

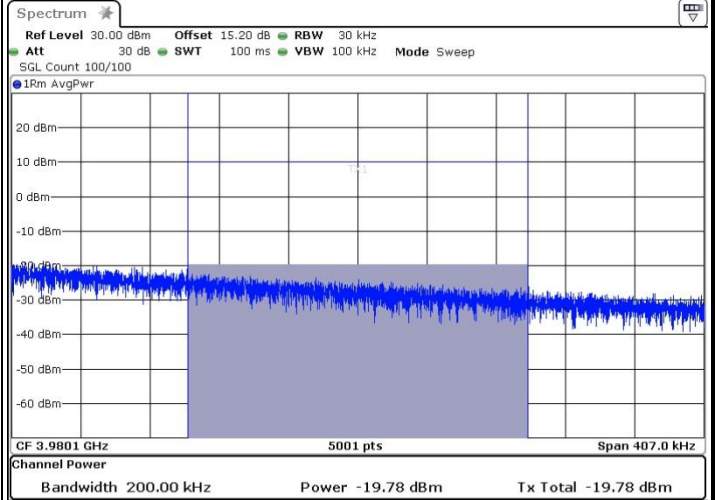
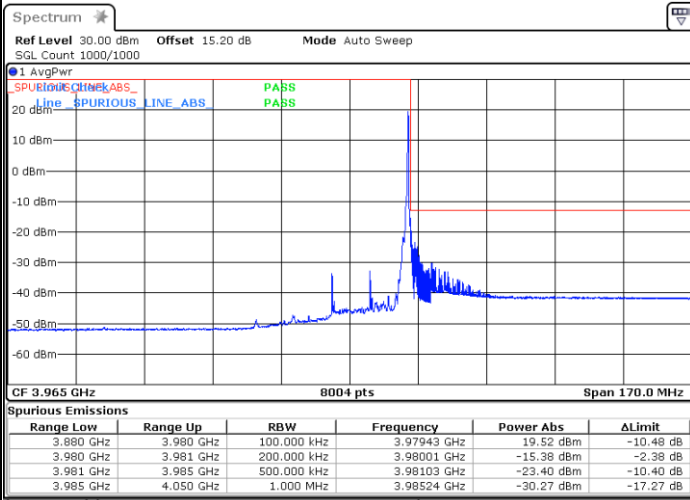
/



FR1 UL-MIMO n77 / 20MHz / CP-OFDM QPSK (M2)

Highest Band Edge / 1 RB

Channel Power < -13dBm Pass

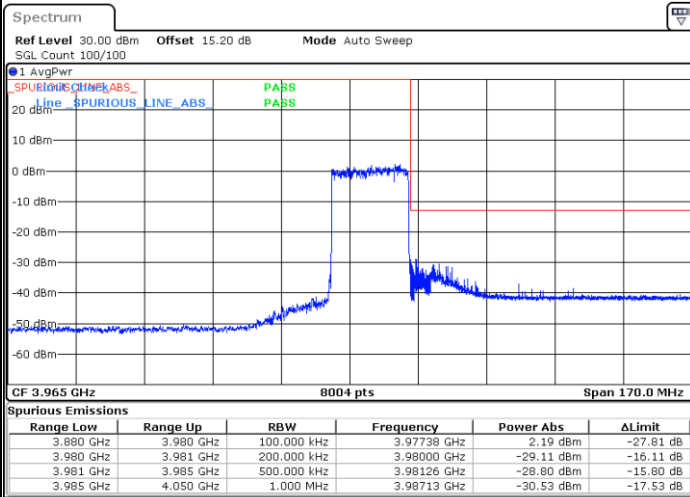


Date: 14.MAR.2021 02:10:29

Date: 14.MAR.2021 02:06:40

Highest Band Edge / Full RB

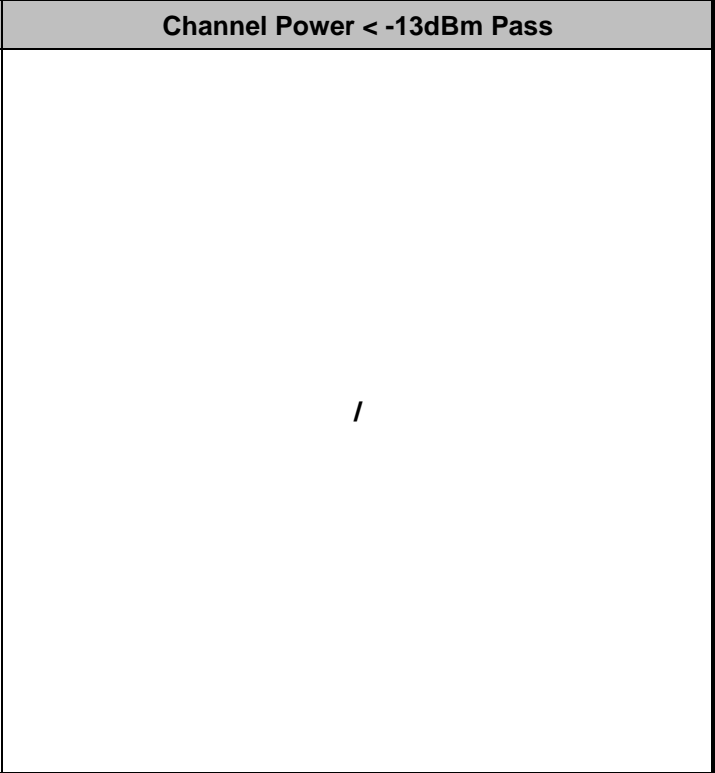
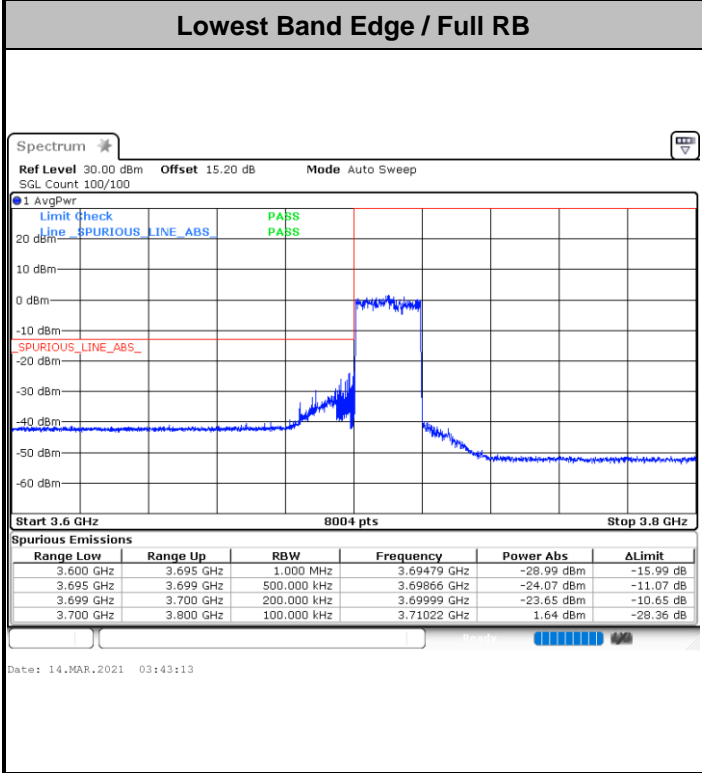
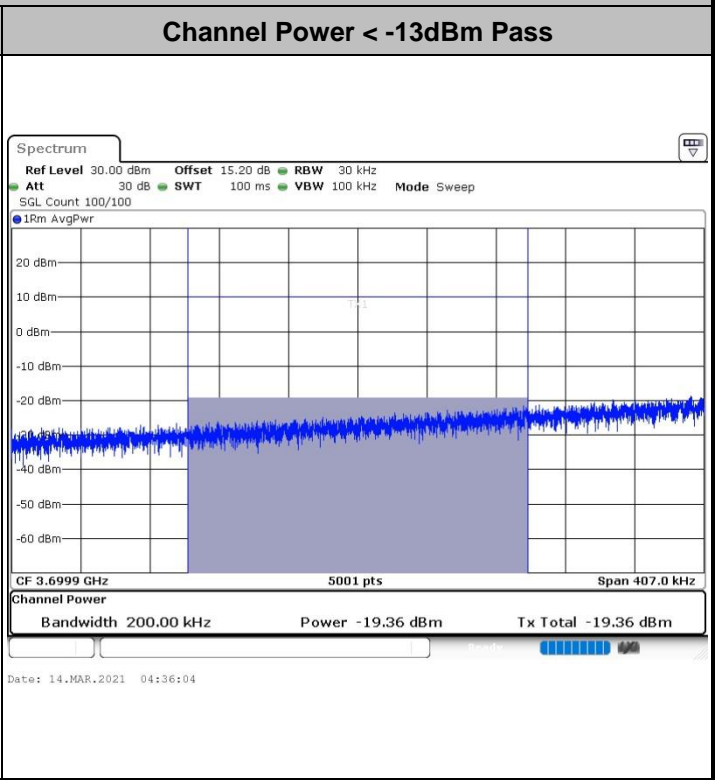
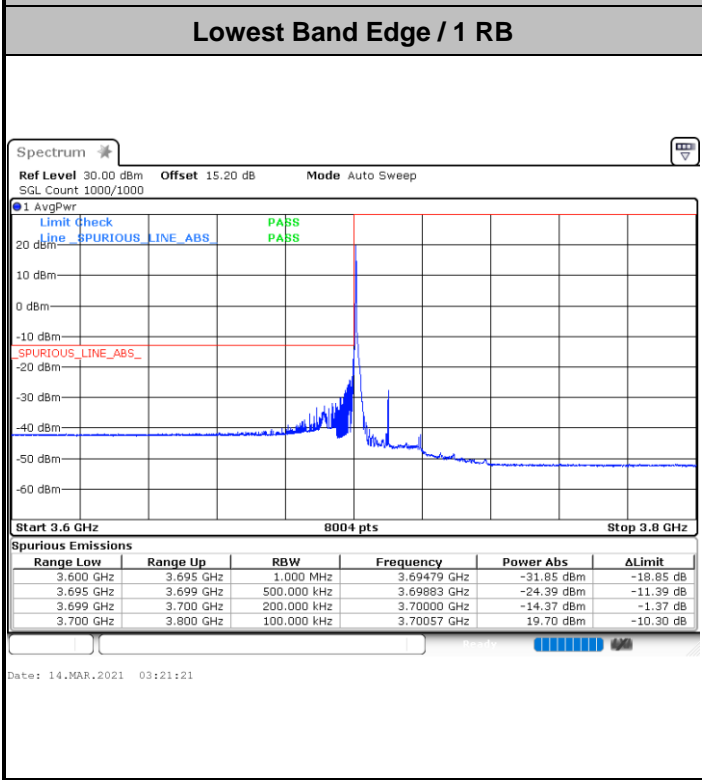
Channel Power < -13dBm Pass



Date: 14.MAR.2021 02:00:20



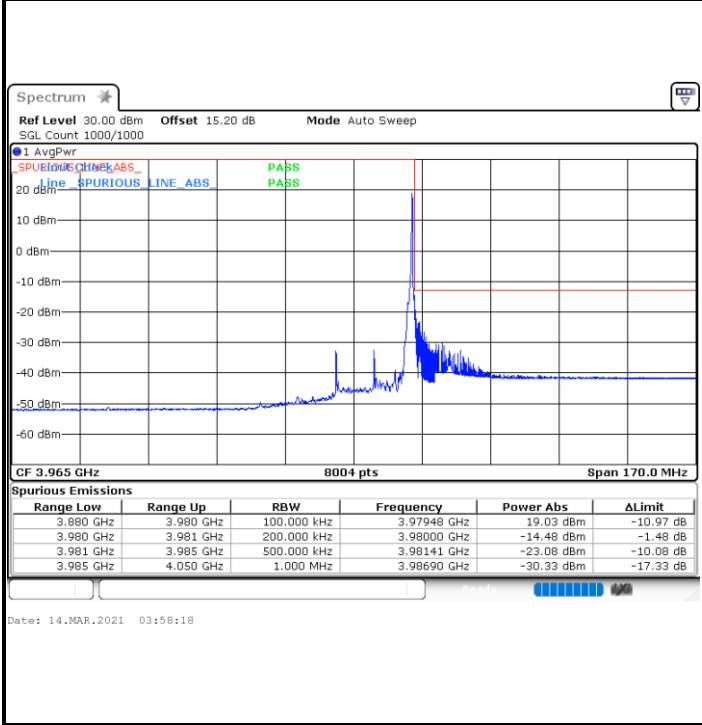
FR1 UL-MIMO n77 / 20MHz / CP-OFDM QPSK (M)



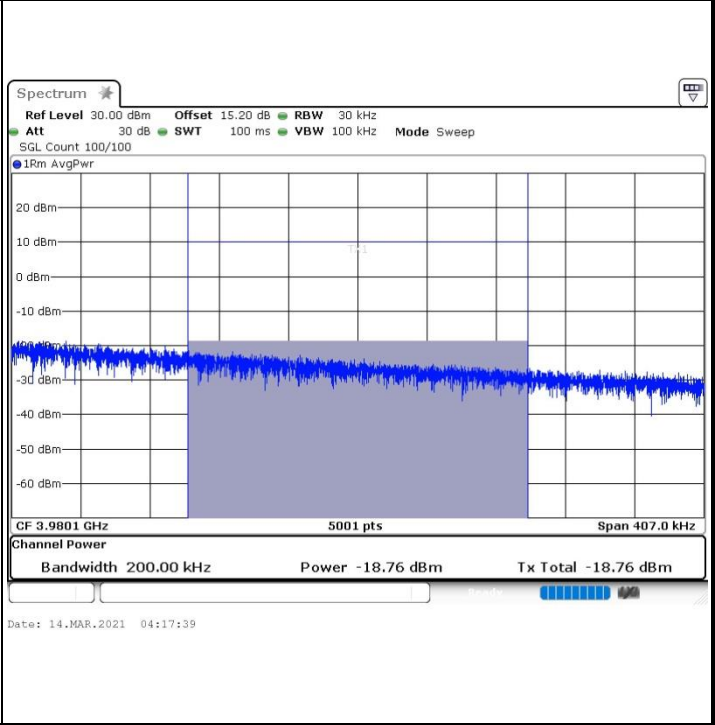


FR1 UL-MIMO n77 / 20MHz / CP-OFDM QPSK (M)

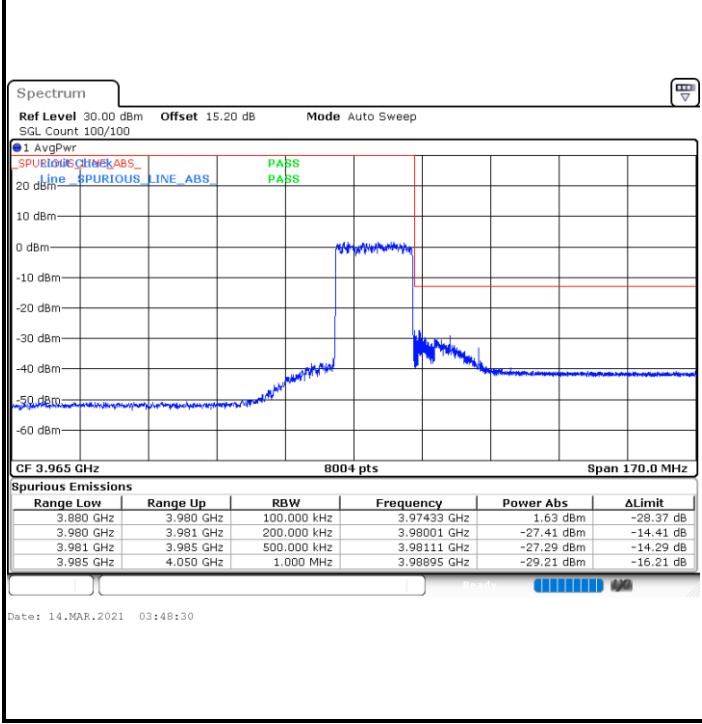
Highest Band Edge / 1 RB



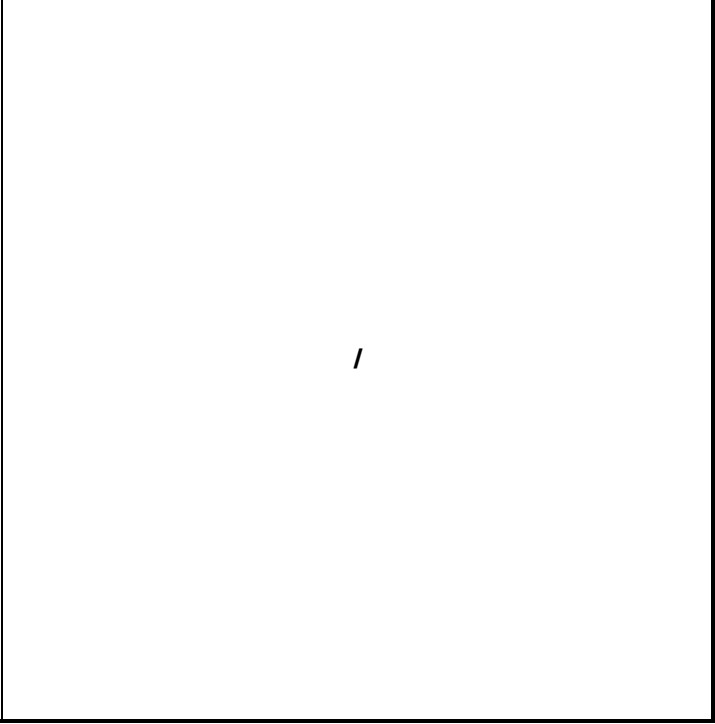
Channel Power < -13dBm Pass



Highest Band Edge / Full RB



Channel Power < -13dBm Pass



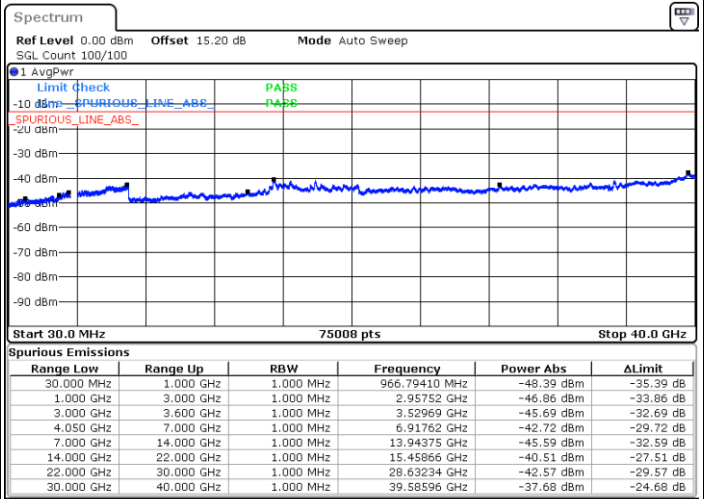
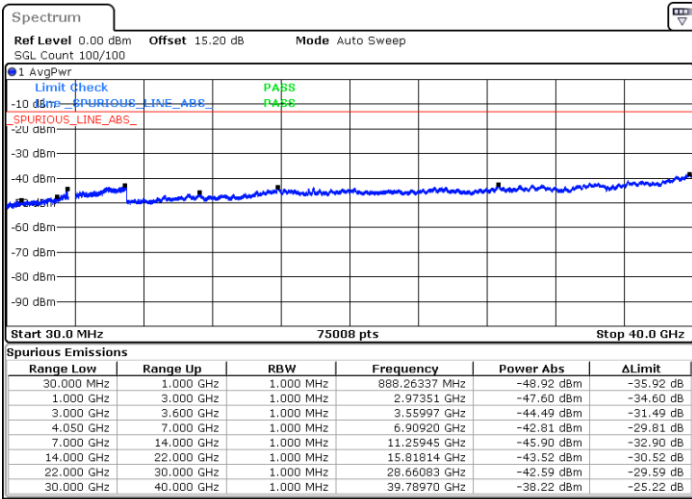


Conducted Spurious Emission

FR1 UL-MIMO n77 / 10MHz / CP-OFDM QPSK (M2)

Lowest Channel / 1RB

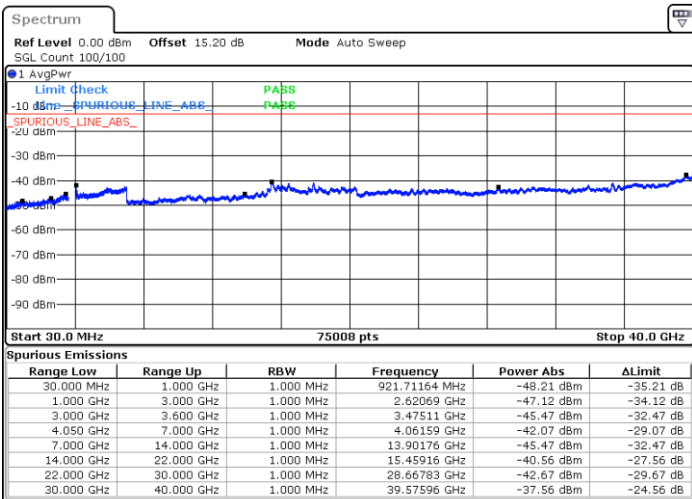
Middle Channel / 1RB



Date: 3.MAR.2021 03:18:09

Date: 13.FEB.2021 19:44:05

Highest Channel / 1RB

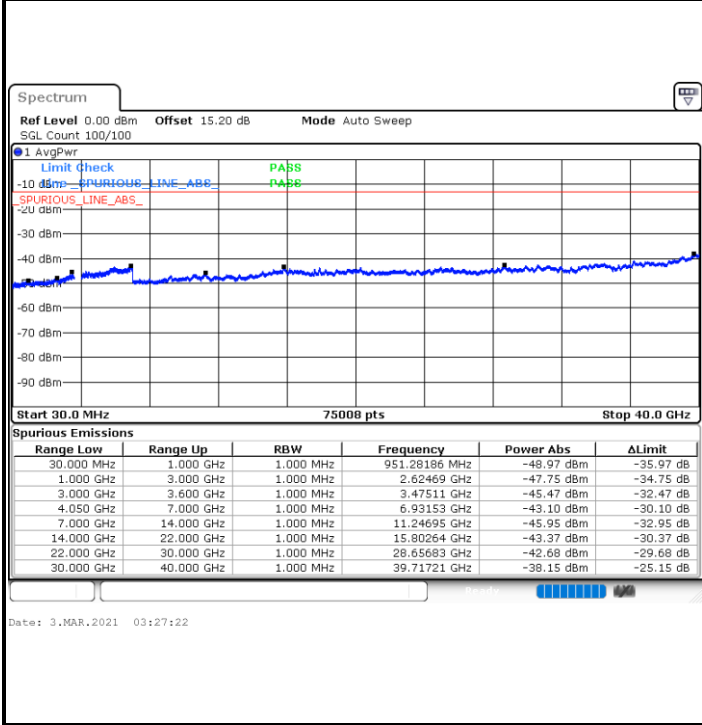


Date: 13.FEB.2021 19:50:50

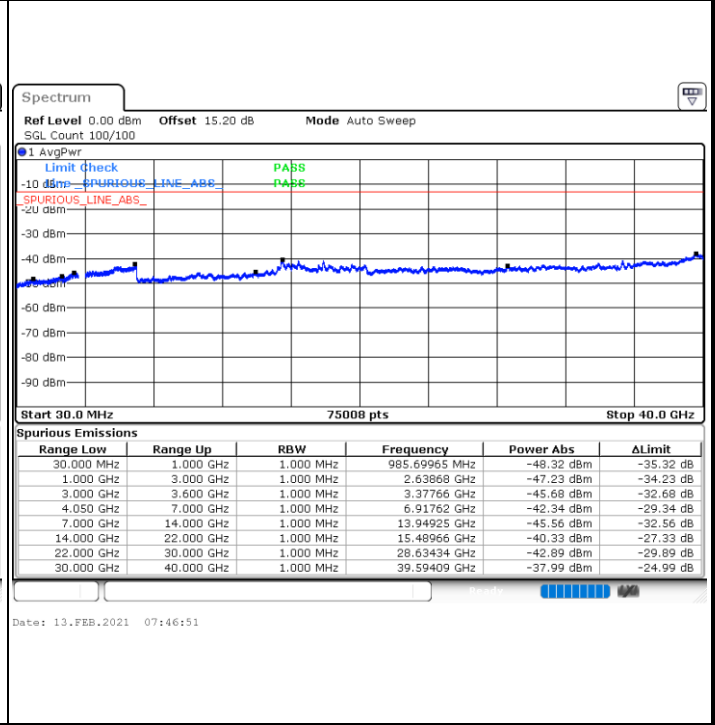


FR1 UL-MIMO n77 / 10MHz / CP-OFDM QPSK (M)

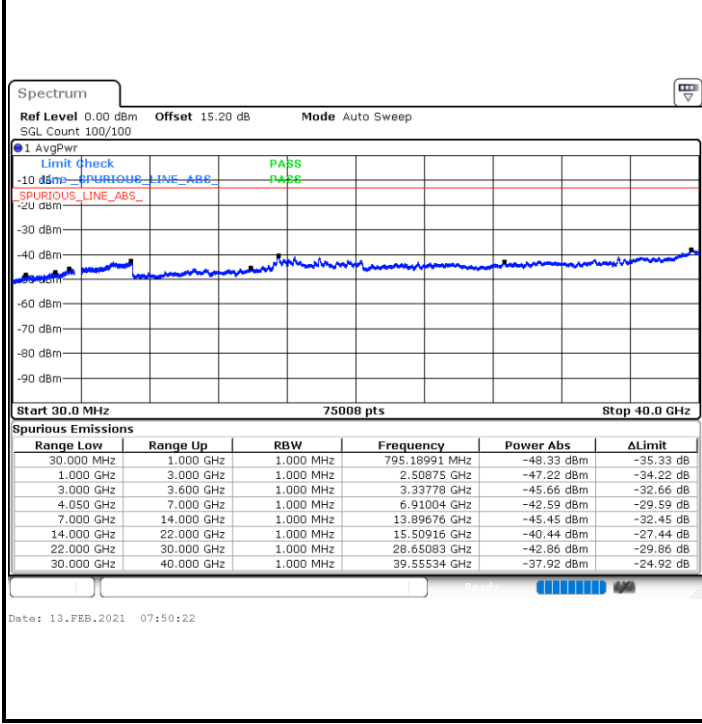
Lowest Channel / 1RB



Middle Channel / 1RB



Highest Channel / 1RB

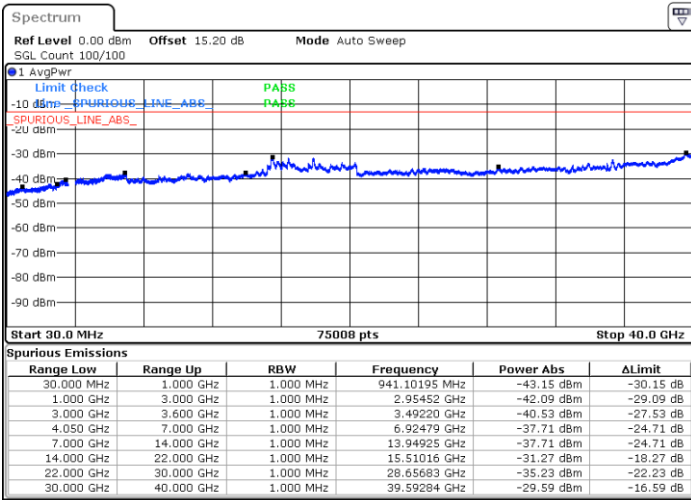




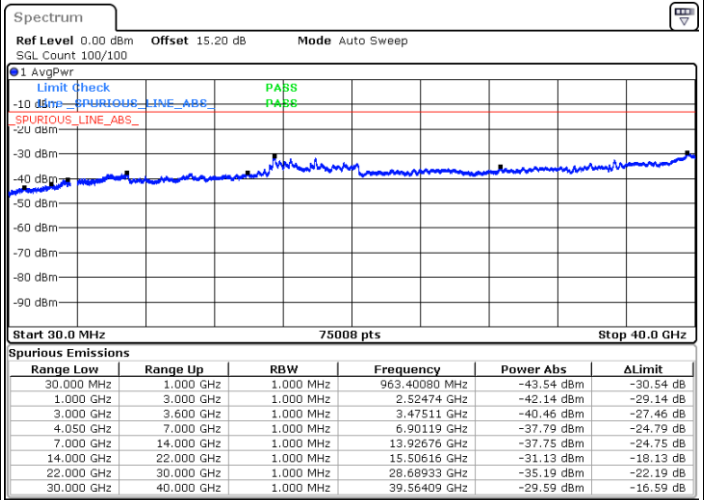
FR1 UL-MIMO n77 / 15MHz / CP-OFDM QPSK (M2)

Lowest Channel / 1RB

Middle Channel / 1RB

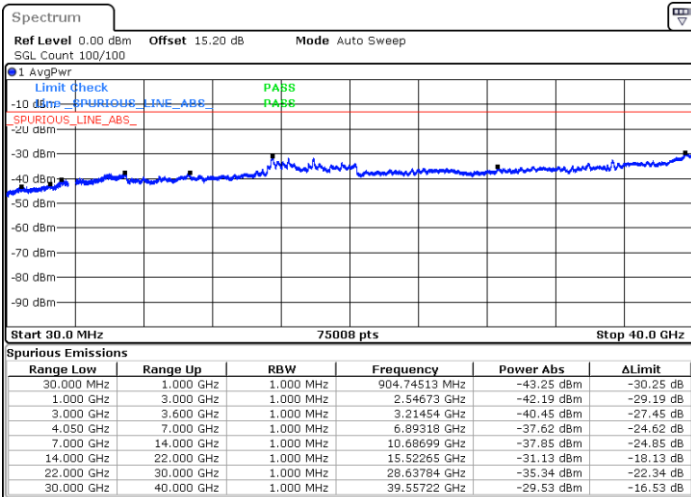


Date: 13.FEB.2021 19:15:24



Date: 13.FEB.2021 19:26:40

Highest Channel / 1RB



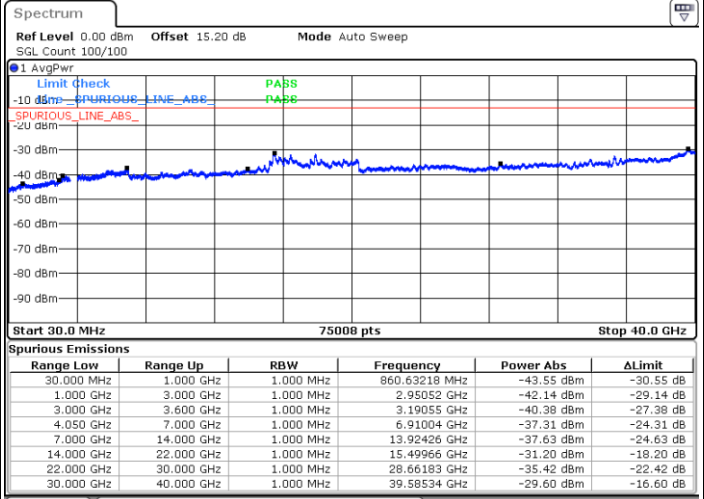
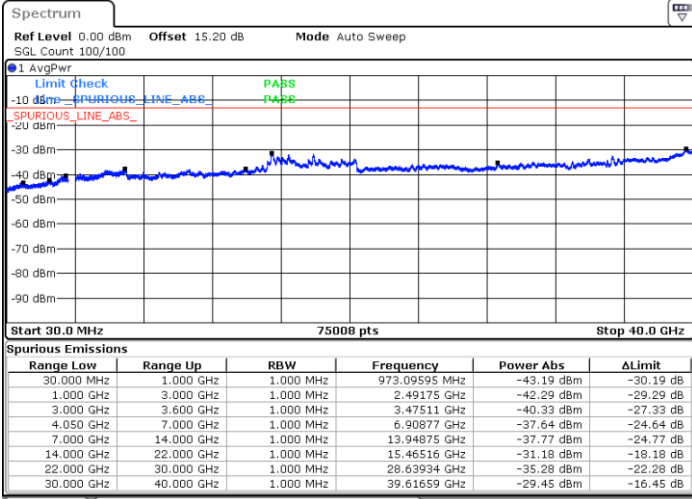
Date: 13.FEB.2021 19:30:45



FR1 UL-MIMO n77 / 15MHz / CP-OFDM QPSK (M)

Lowest Channel / 1RB

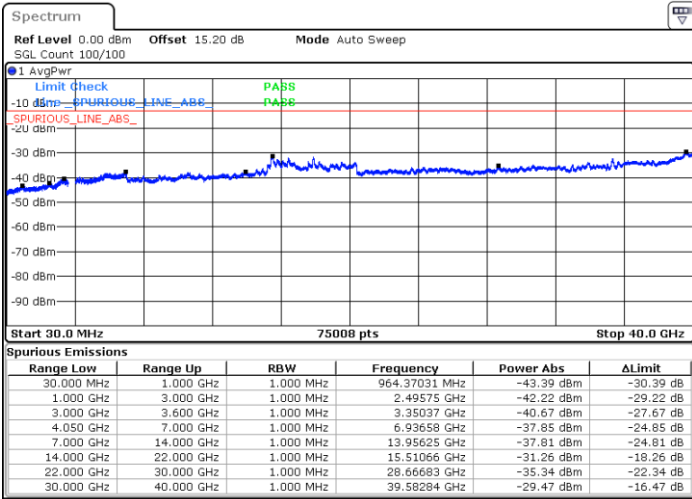
Middle Channel / 1RB



Date: 13.FEB.2021 06:01:19

Date: 13.FEB.2021 06:03:38

Highest Channel / 1RB



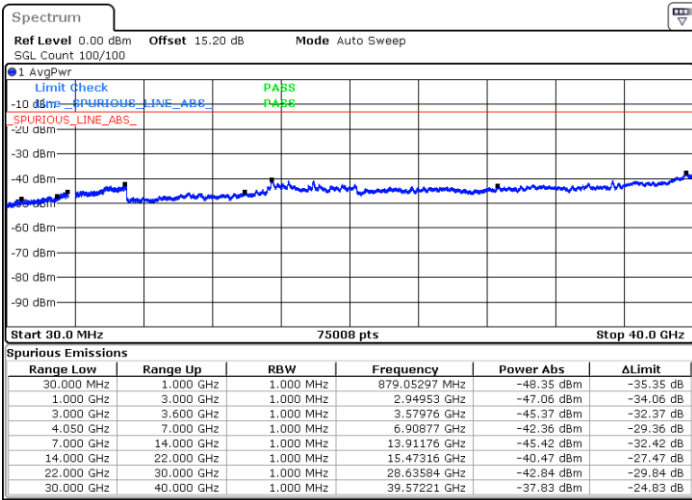
Date: 13.FEB.2021 06:15:40



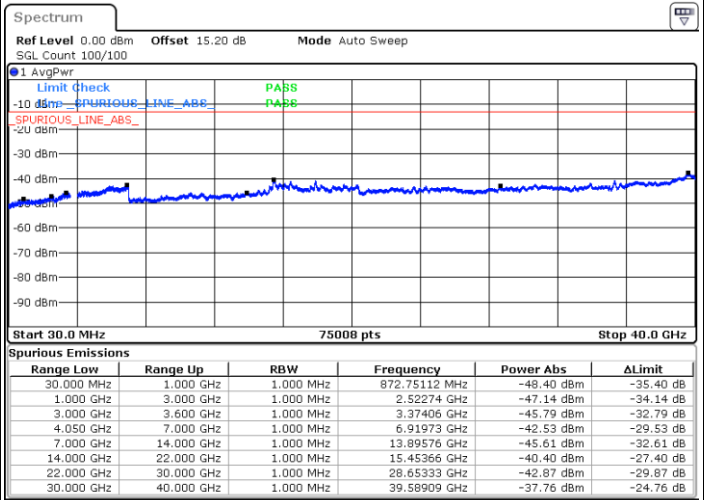
FR1 UL-MIMO n77 / 20MHz / CP-OFDM QPSK (M2)

Lowest Channel / 1RB

Middle Channel / 1RB

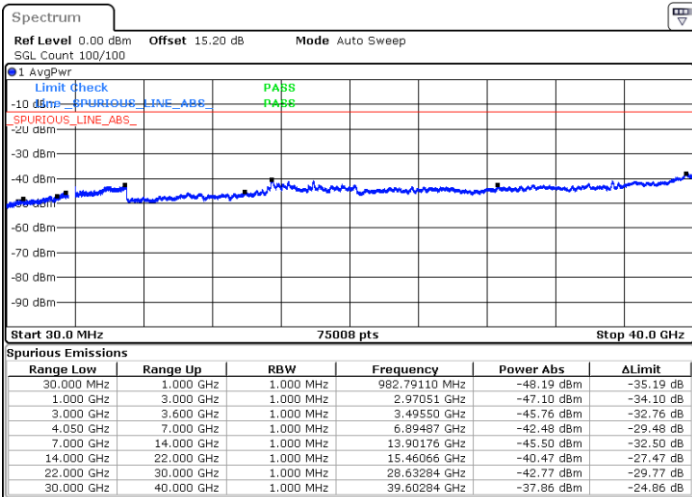


Date: 13.FEB.2021 18:01:51



Date: 13.FEB.2021 17:50:00

Highest Channel / 1RB



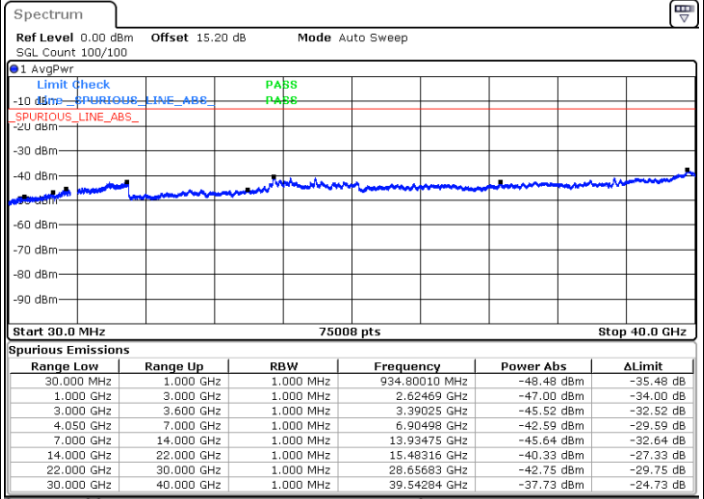
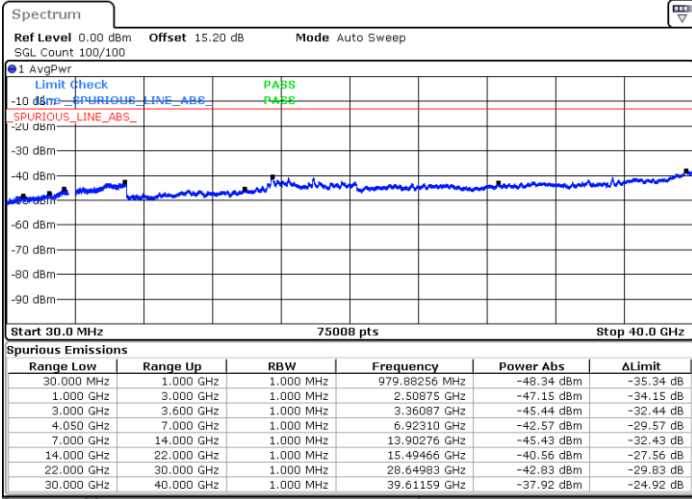
Date: 13.FEB.2021 18:12:32



FR1 UL-MIMO n77 / 20MHz / CP-OFDM QPSK (M)

Lowest Channel / 1RB

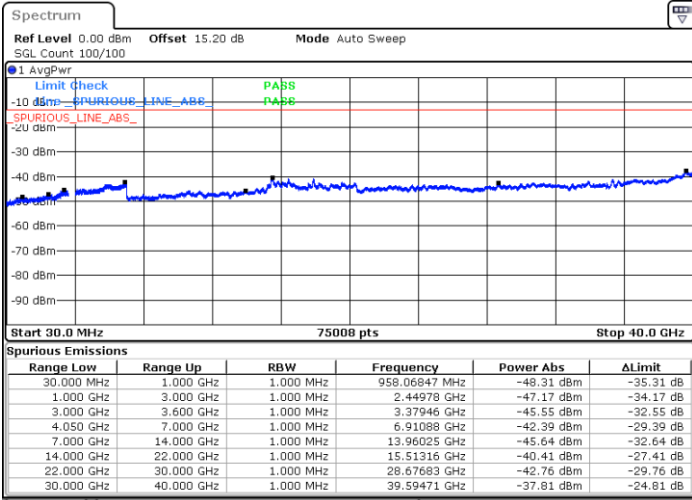
Middle Channel / 1RB



Date: 13.FEB.2021 04:51:58

Date: 13.FEB.2021 05:05:12

Highest Channel / 1RB



Date: 13.FEB.2021 05:07:16



Frequency Stability

Test Conditions		NR UL-MIMO n77 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Within Band
		Deviation (ppm)	Result
50	Normal Voltage	0.0025	PASS
40	Normal Voltage	0.0019	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0015	
10	Normal Voltage	0.0019	
0	Normal Voltage	0.0023	
-10	Normal Voltage	0.0014	
-20	Normal Voltage	0.0017	
-30	Normal Voltage	0.0012	
20	Maximum Voltage	0.0025	
20	Normal Voltage	0.0026	
20	Battery End Point	0.0013	

Note:

1. Normal Voltage =3.3 V. ; Battery End Point (BEP) =3.14 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



5G NR n77 UL_MIMO HPUE -SCS 30K

Peak-to-Average Ratio

Mode	FR1 UL-MIMO n77 / 10MHz / CP-OFDM (M2)				
Mod.	QPSK	QPSK			Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	7.65	8.35			PASS
Middle CH	7.45	8.38			
Highest CH	7.13	8.32			

Mode	FR1 UL-MIMO n77 / 10MHz / CP-OFDM (M)				
Mod.	QPSK	QPSK			Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	8.29	8.58			PASS
Middle CH	7.39	8.61			
Highest CH	7.86	8.17			



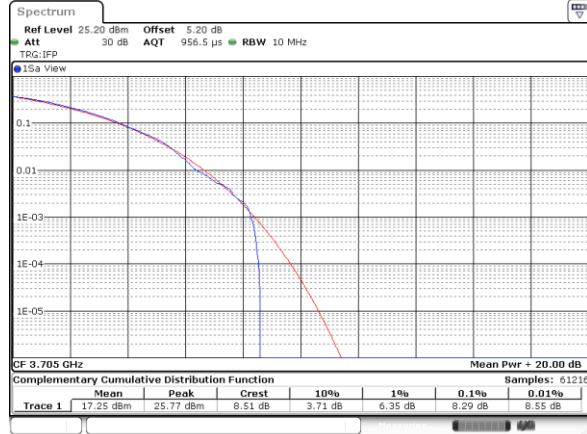
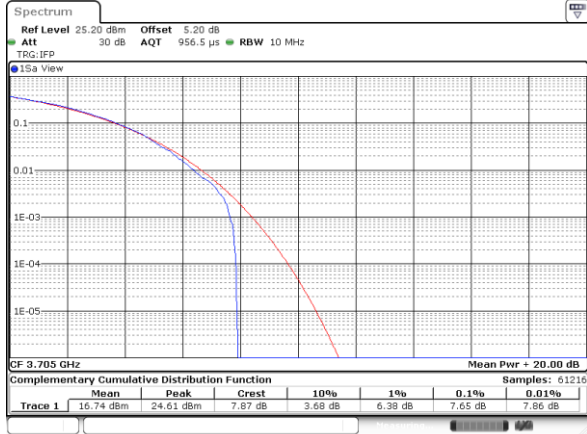
FR1 UL-MIMO n77 / 10MHz / CP-OFDM

QPSK(M2)

QPSK(M)

Lowest Channel / 1RB

Lowest Channel / 1RB

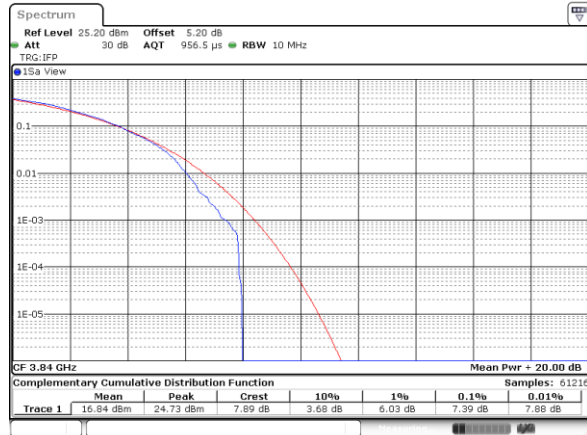
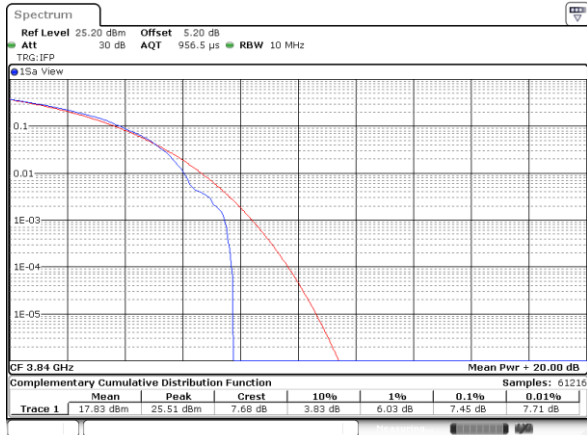


Date: 13.FEB.2021 16:38:56

Date: 13.FEB.2021 12:13:28

Middle Channel / 1 RB

Middle Channel / 1 RB

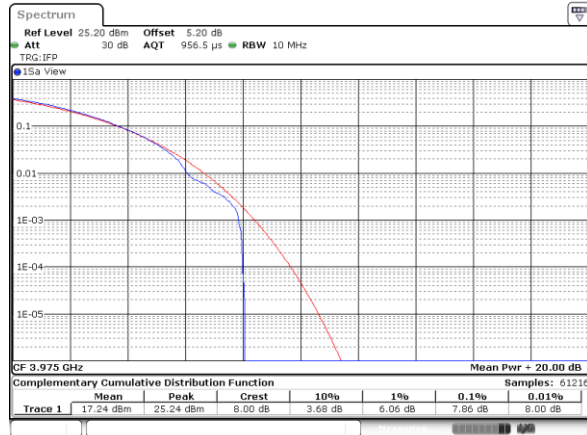
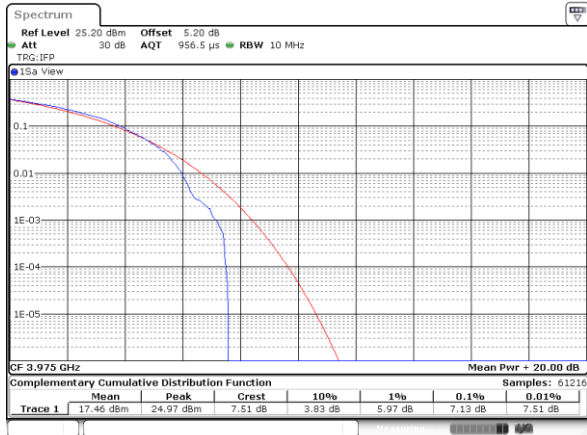


Date: 13.FEB.2021 16:25:58

Date: 13.FEB.2021 12:07:29

Highest Channel / 1 RB

Highest Channel / 1 RB



Date: 13.FEB.2021 17:14:41

Date: 13.FEB.2021 12:48:04



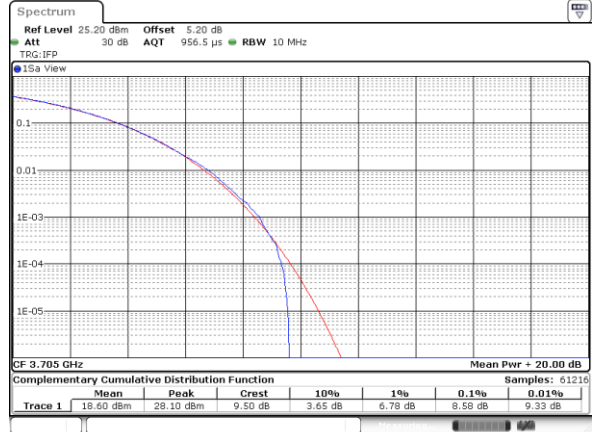
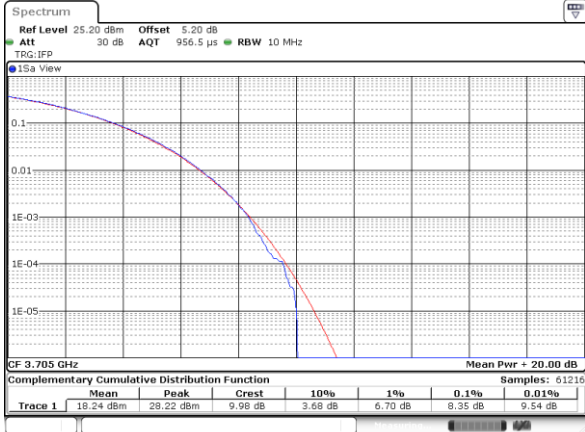
FR1 UL-MIMO n77 / 10MHz / CP-OFDM

QPSK(M2)

QPSK(M)

Lowest Channel / Full RB

Lowest Channel / Full RB

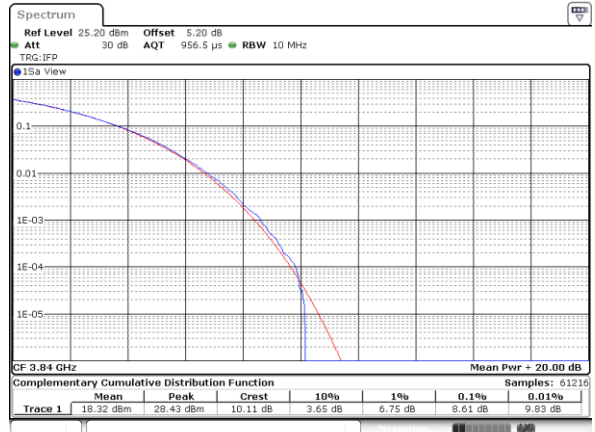
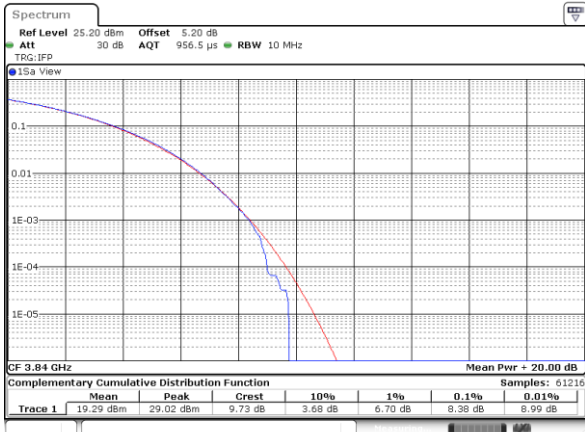


Date: 13.FEB.2021 16:46:17

Date: 13.FEB.2021 12:43:14

Middle Channel / Full RB

Middle Channel / Full RB

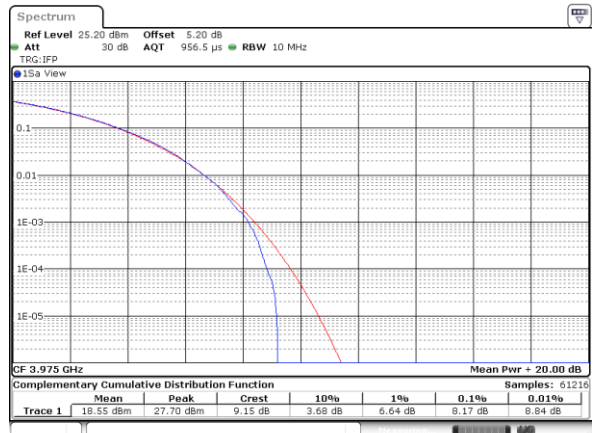


Date: 13.FEB.2021 16:23:25

Date: 13.FEB.2021 12:05:28

Highest Channel / Full RB

Highest Channel / Full RB



Date: 13.FEB.2021 17:07:55

Date: 13.FEB.2021 12:46:17



26dB Bandwidth

Mode	FR1 UL-MIMO n77 : 26dB BW(MHz) / CP-OFDM							
	M2				M			
BW	10MHz	10MHz	10MHz	10MHz	10MHz	10MHz	10MHz	10MHz
Mod.	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
Middle CH	9.23	9.11	9.15	9.15	9.33	9.07	9.11	9.29

Mode	FR1 UL-MIMO n77 : 26dB BW(MHz) / CP-OFDM							
	M2				M			
BW	15MHz	15MHz	15MHz	15MHz	15MHz	15MHz	15MHz	15MHz
Mod.	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
Middle CH	14.33	14.30	14.27	14.39	14.42	14.75	14.57	14.54

Mode	FR1 UL-MIMO n77 : 26dB BW(MHz) / CP-OFDM							
	M2				M			
BW	20MHz	20MHz	20MHz	20MHz	20MHz	20MHz	20MHz	20MHz
Mod.	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
Middle CH	18.98	18.94	19.26	19.02	19.30	18.98	19.10	19.02

Mode	FR1 UL-MIMO n77 : 26dB BW(MHz) / CP-OFDM							
	M2				M			
BW	40MHz	40MHz	40MHz	40MHz	40MHz	40MHz	40MHz	40MHz
Mod.	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
Middle CH	40.28	40.28	40.12	40.2	40.2	40.12	40.36	40.36

Mode	FR1 UL-MIMO n77 : 26dB BW(MHz) / CP-OFDM							
	M2				M			
BW	50MHz	50MHz	50MHz	50MHz	50MHz	50MHz	50MHz	50MHz
Mod.	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
Middle CH	49.65	49.75	50.15	49.75	49.65	49.75	49.65	49.75

Mode	FR1 UL-MIMO n77 : 26dB BW(MHz) / CP-OFDM							
	M2				M			
BW	60MHz	60MHz	60MHz	60MHz	60MHz	60MHz	60MHz	60MHz
Mod.	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
Middle CH	60.42	60.42	60.3	60.54	60.42	60.54	60.3	60.42



Mode	FR1 UL-MIMO n77 : 26dB BW(MHz) / CP-OFDM							
	M2				M			
BW	80MHz	80MHz	80MHz	80MHz	80MHz	80MHz	80MHz	80MHz
Mod.	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
Middle CH	79.92	79.92	80.08	79.92	80.08	80.08	79.92	79.76

Mode	FR1 UL-MIMO n77 : 26dB BW(MHz) / CP-OFDM							
	M2				M			
BW	100MHz	100MHz	100MHz	100MHz	100MHz	100MHz	100MHz	100MHz
Mod.	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
Middle CH	100.3	100.5	100.1	100.3	100.3	100.3	100.1	100.3



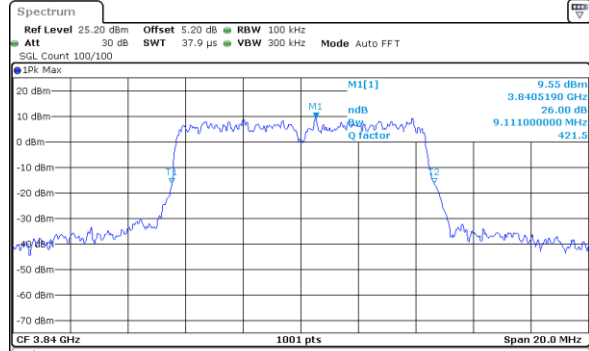
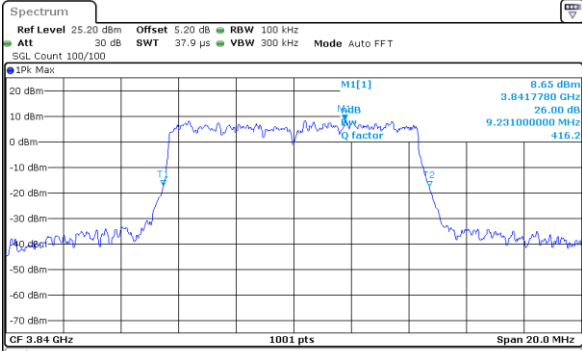
FR1 UL-MIMO n77 / 10MHz / CP-OFDM (M2)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 13.FEB.2021 16:21:57

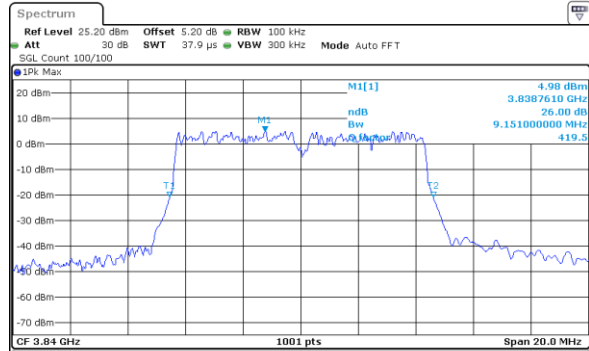
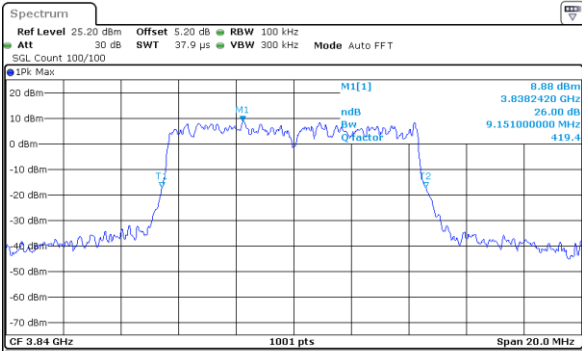
Date: 13.FEB.2021 16:22:17

64QAM

256QAM

Middle Channel

Middle Channel



Date: 13.FEB.2021 16:23:58

Date: 13.FEB.2021 16:25:24



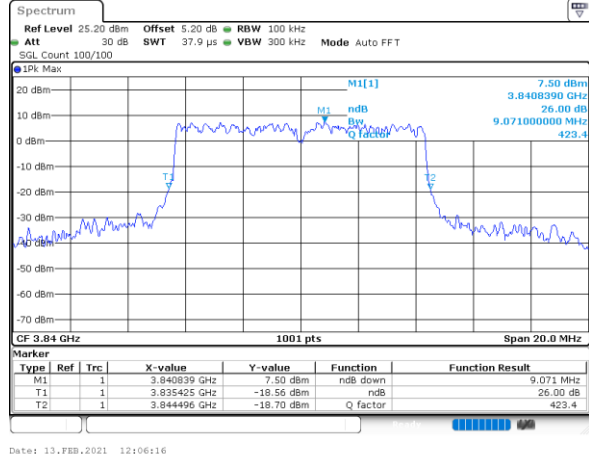
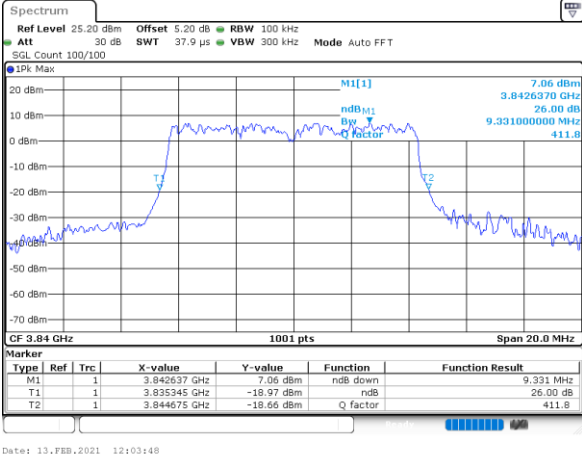
FR1 UL-MIMO n77 / 10MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 13.FEB.2021 12:10:48

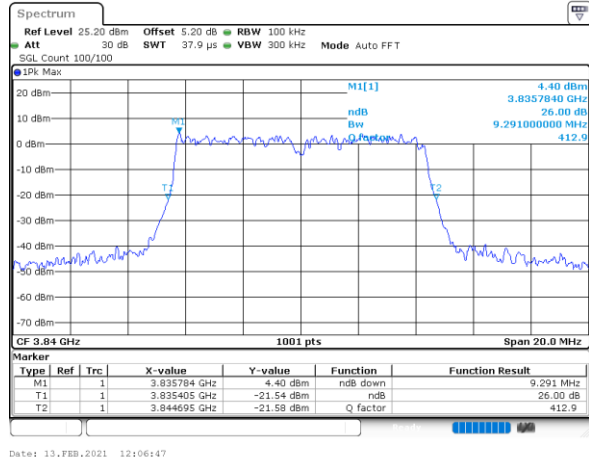
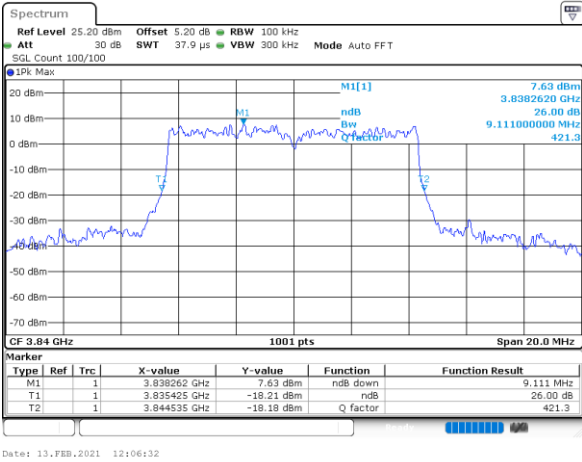
Date: 13.FEB.2021 12:10:16

64QAM

256QAM

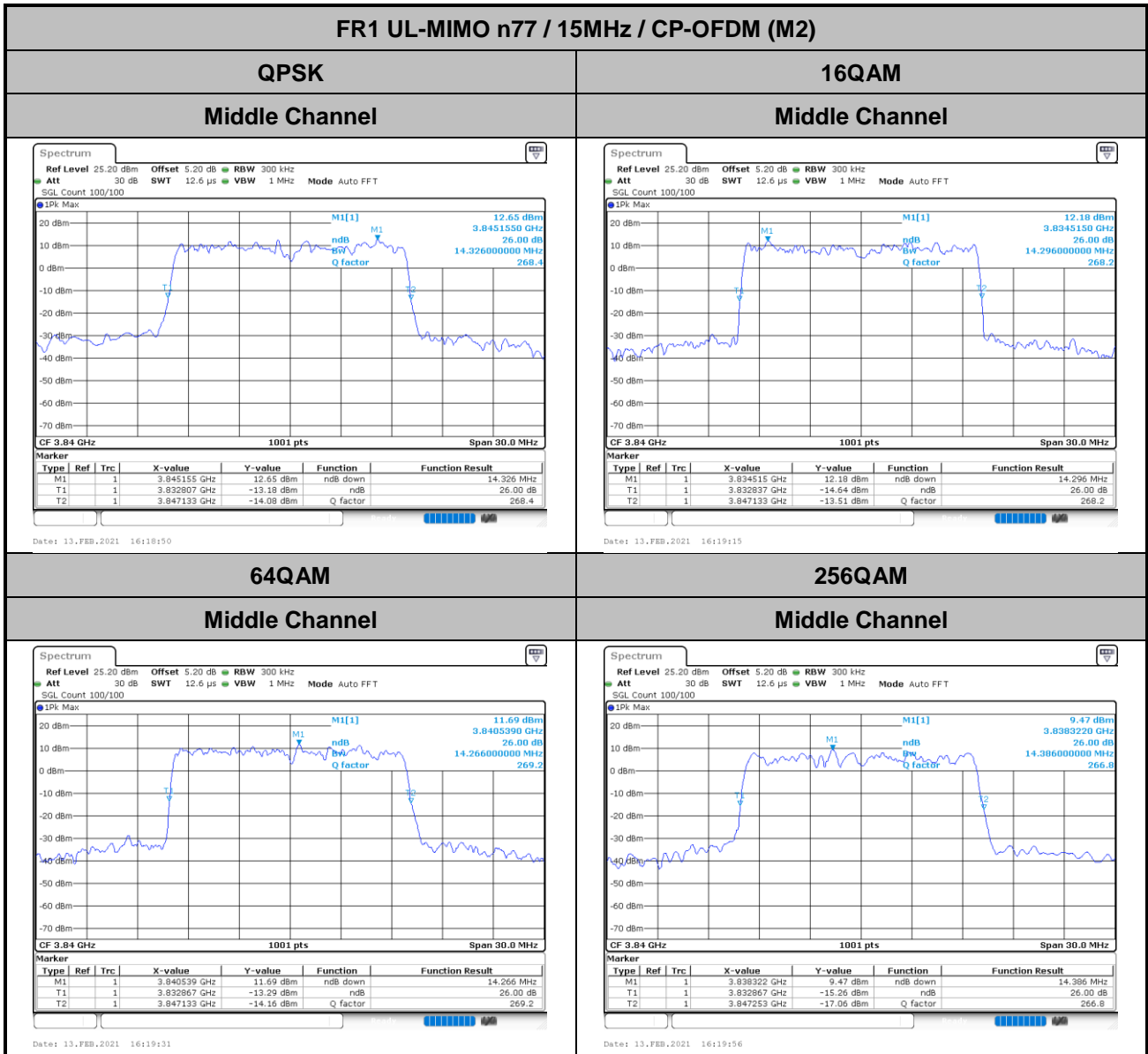
Middle Channel

Middle Channel



Date: 13.FEB.2021 12:10:52

Date: 13.FEB.2021 12:10:47





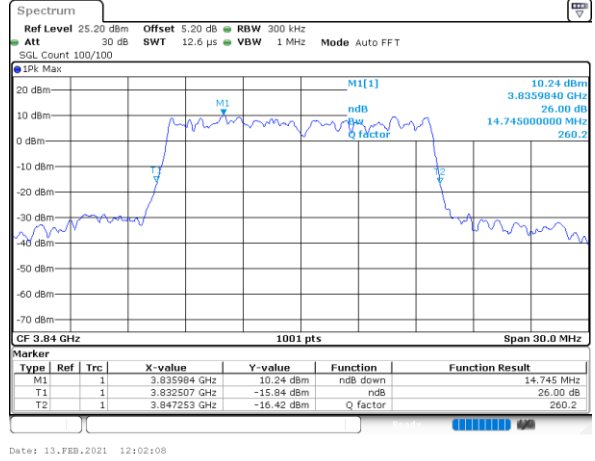
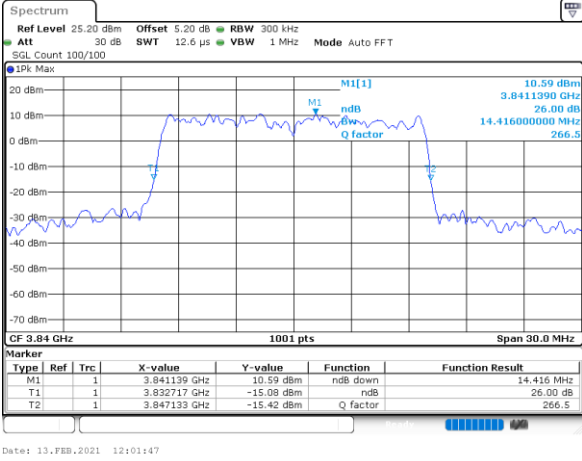
FR1 UL-MIMO n77 / 15MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel

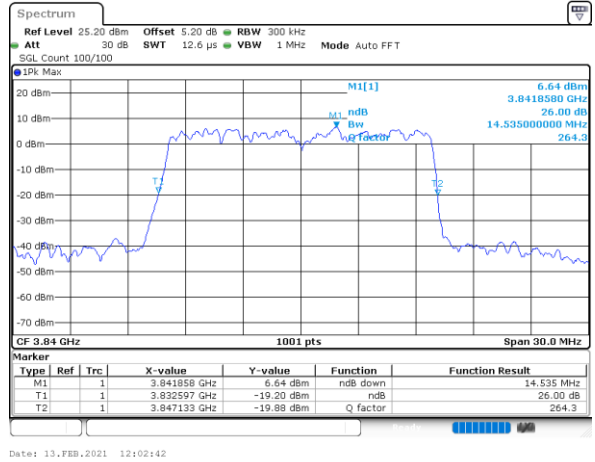
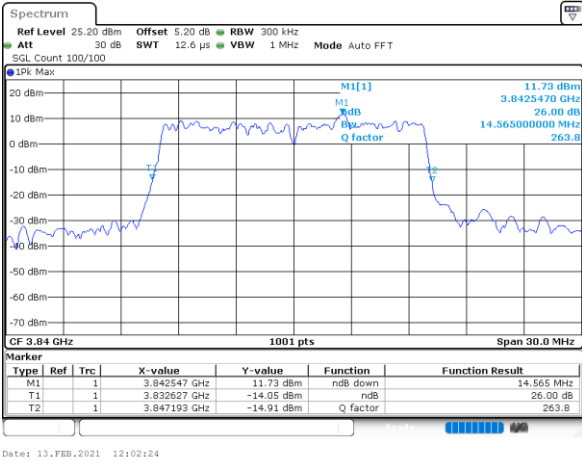


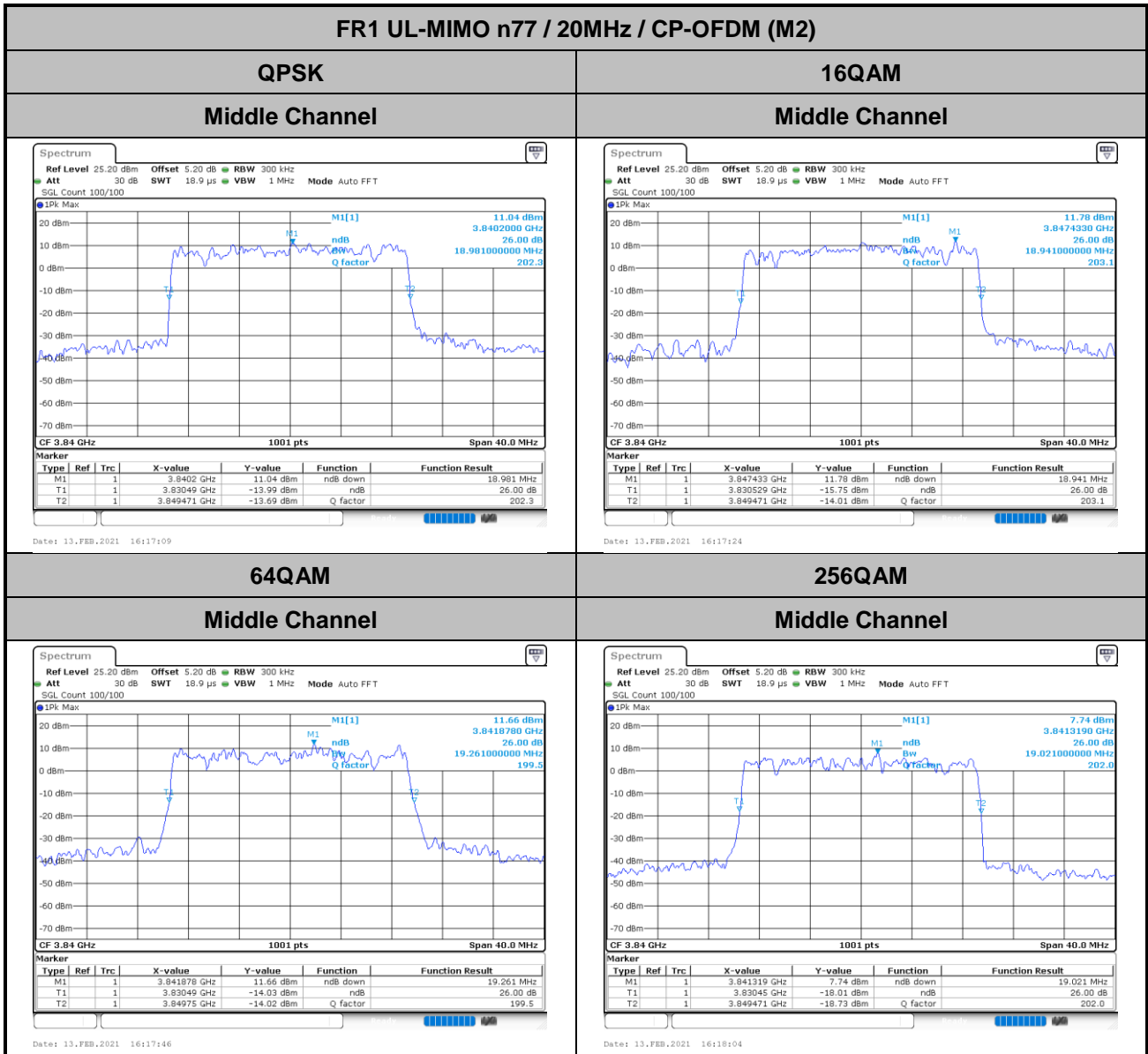
64QAM

256QAM

Middle Channel

Middle Channel







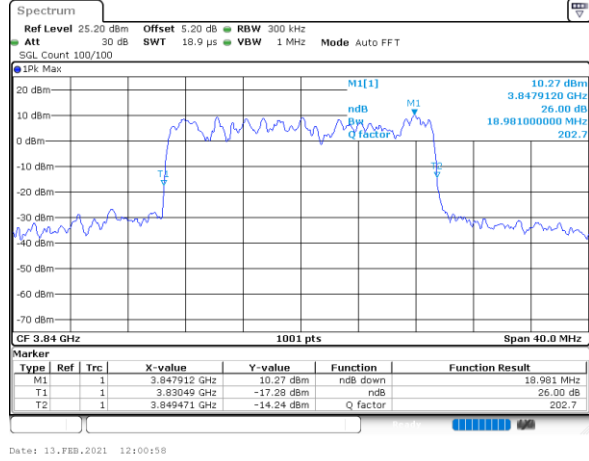
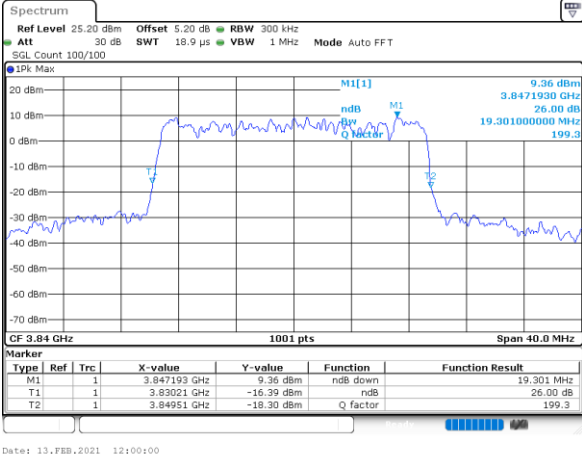
FR1 UL-MIMO n77 / 20MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 13.FEB.2021 12:00:00

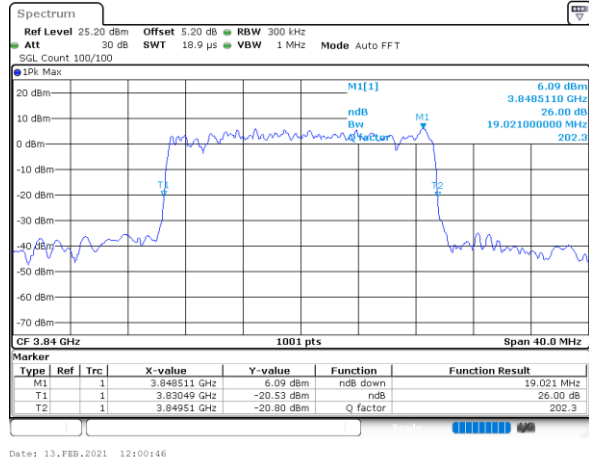
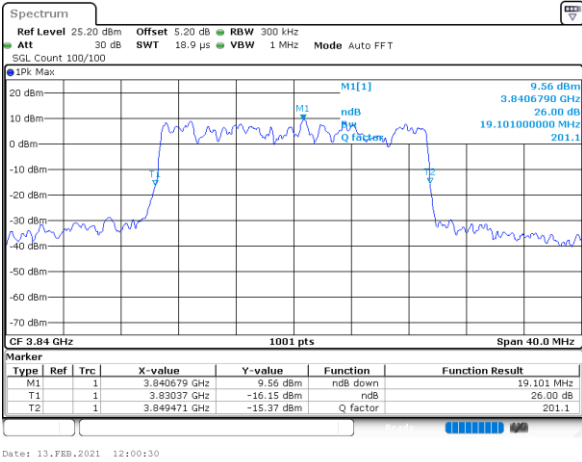
Date: 13.FEB.2021 12:00:58

64QAM

256QAM

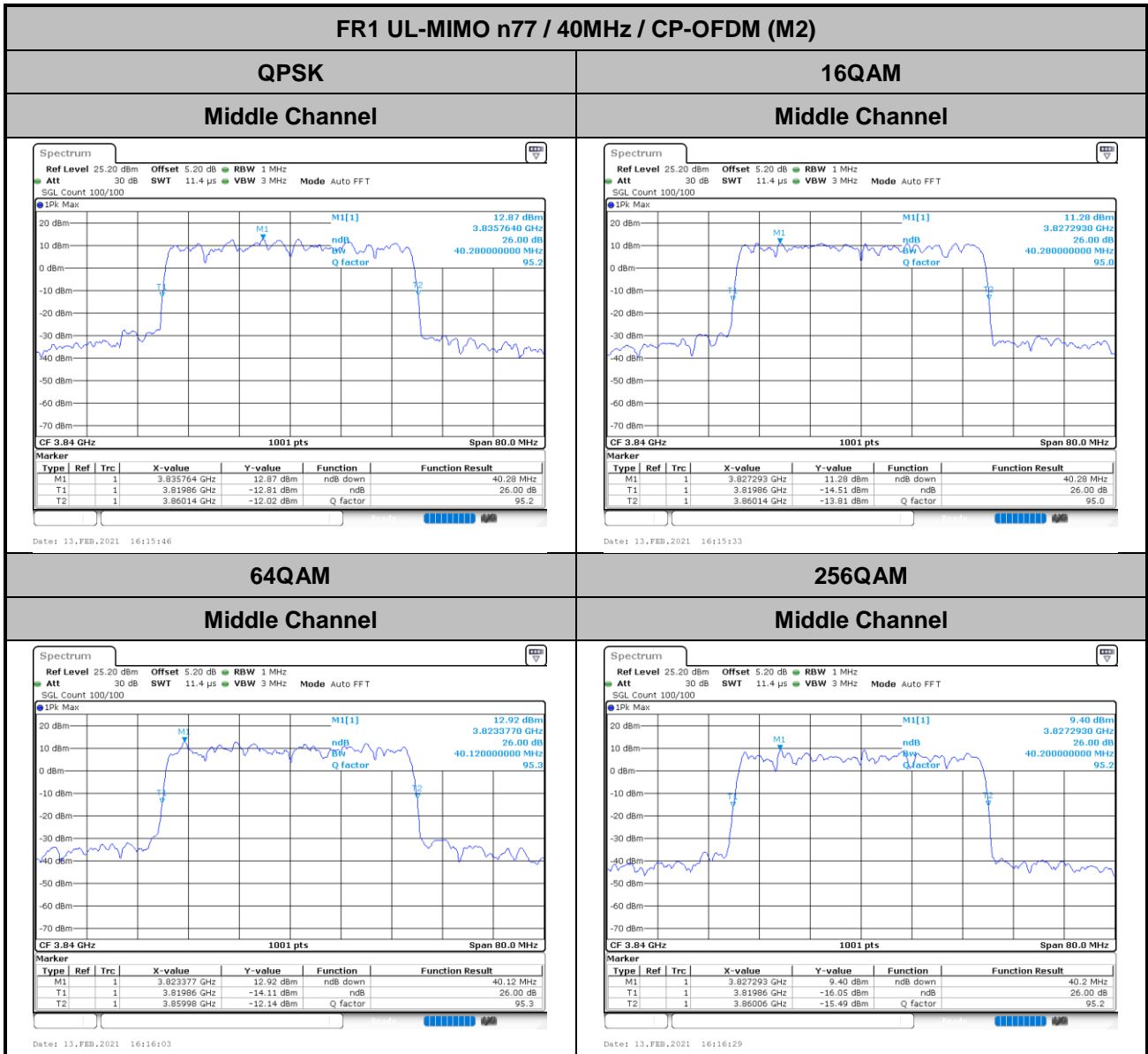
Middle Channel

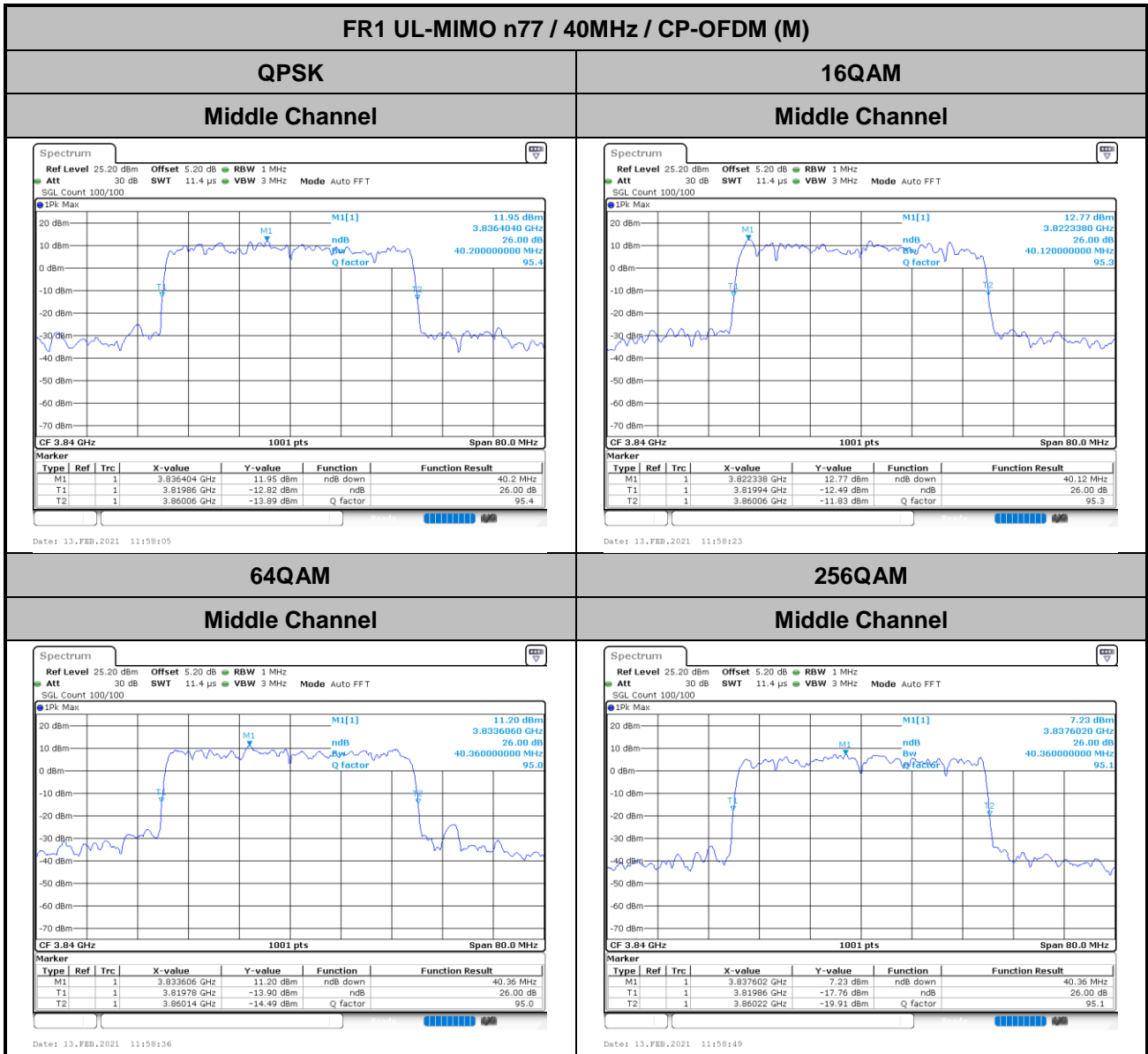
Middle Channel



Date: 13.FEB.2021 12:00:30

Date: 13.FEB.2021 12:00:46







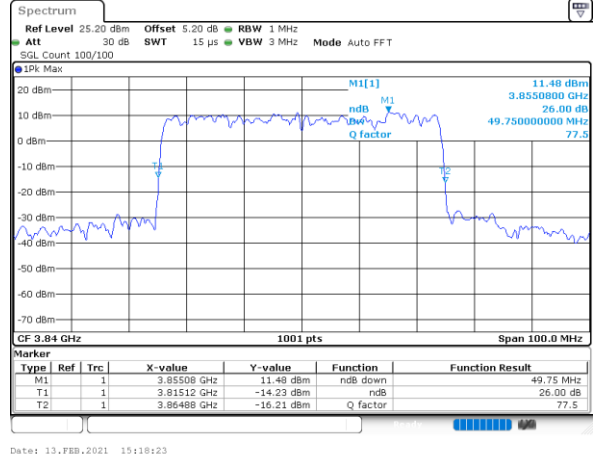
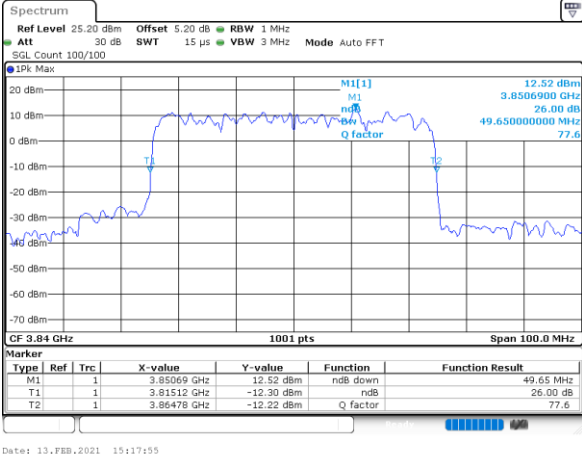
FR1 UL-MIMO n77 / 50MHz / CP-OFDM (M2)

QPSK

16QAM

Middle Channel

Middle Channel

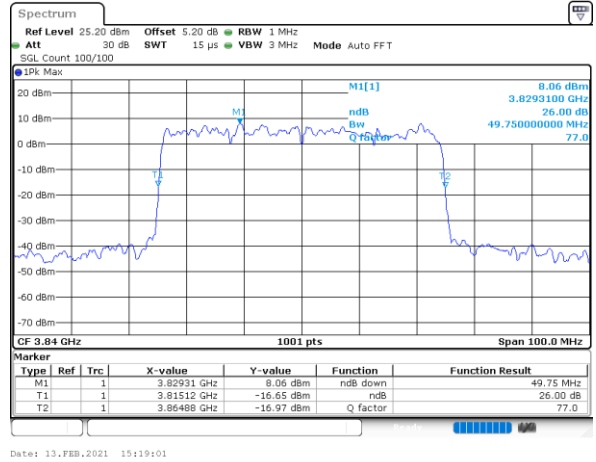
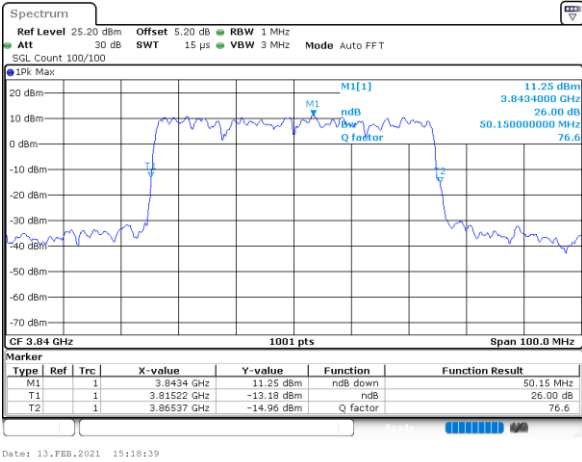


64QAM

256QAM

Middle Channel

Middle Channel





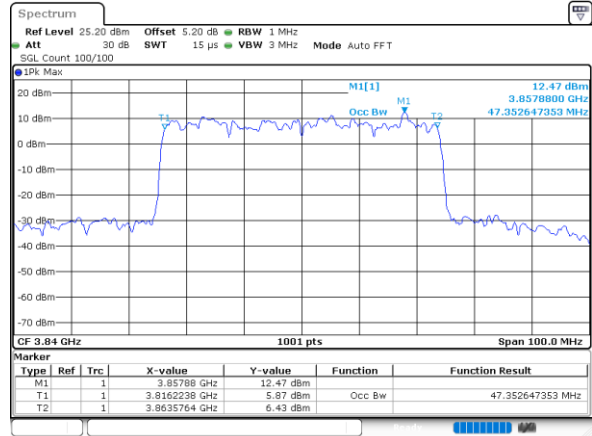
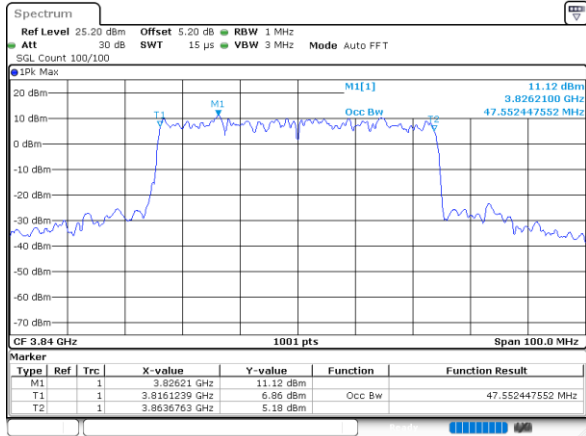
FR1 UL-MIMO n77 / 50MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 13.FEB.2021 10:53:46

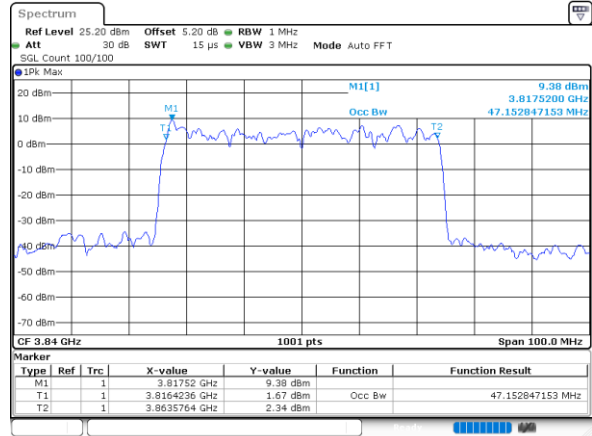
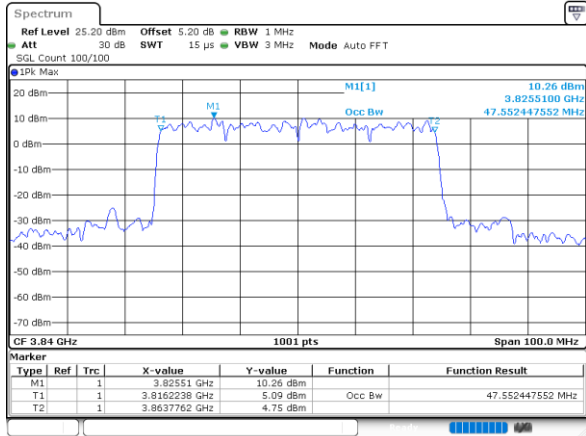
Date: 13.FEB.2021 10:54:01

64QAM

256QAM

Middle Channel

Middle Channel



Date: 13.FEB.2021 10:54:28

Date: 13.FEB.2021 10:54:57



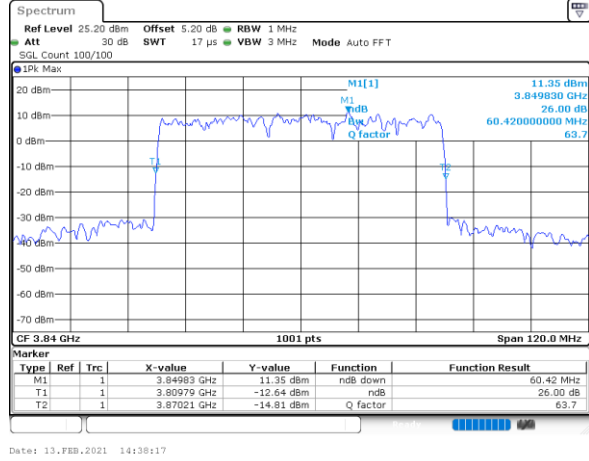
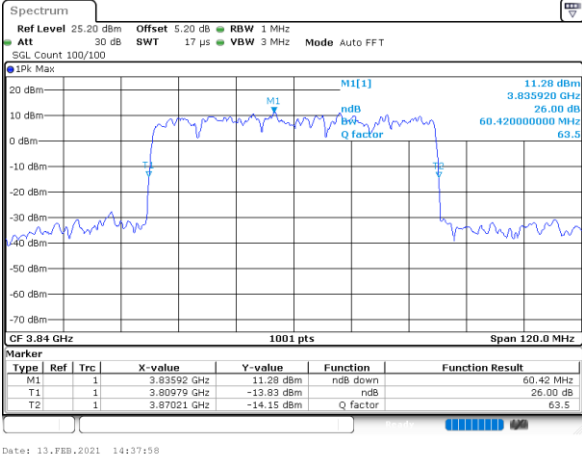
FR1 UL-MIMO n77 / 60MHz / CP-OFDM (M2)

QPSK

16QAM

Middle Channel

Middle Channel

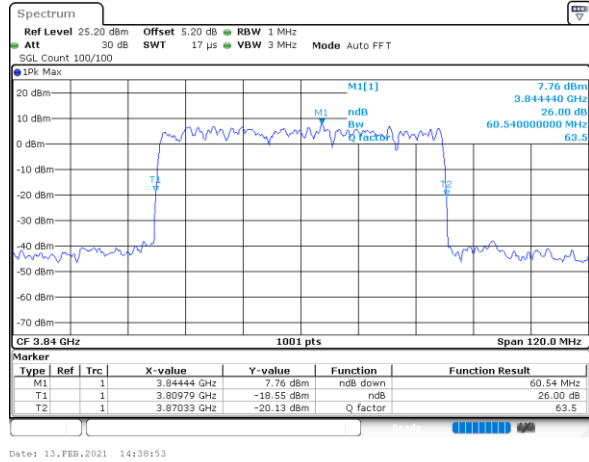
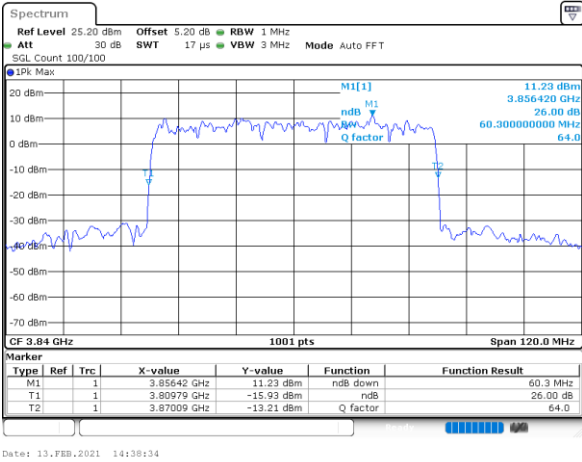


64QAM

256QAM

Middle Channel

Middle Channel





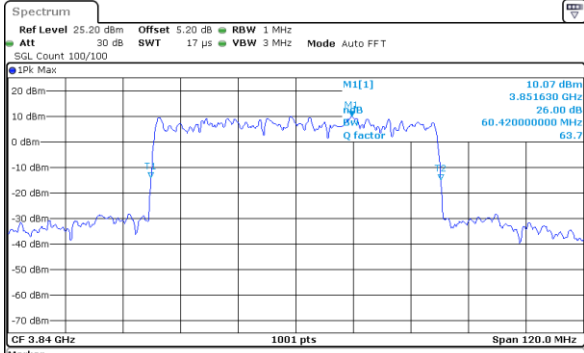
FR1 UL-MIMO n77 / 60MHz / CP-OFDM (M)

QPSK

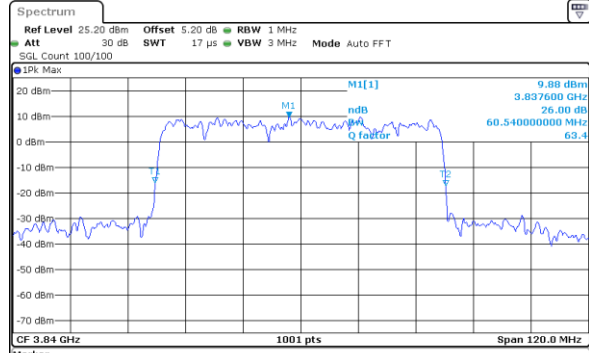
16QAM

Middle Channel

Middle Channel



Date: 13.FEB.2021 10:51:42



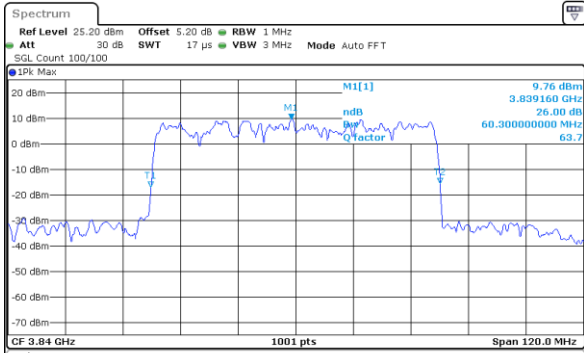
Date: 13.FEB.2021 10:52:04

64QAM

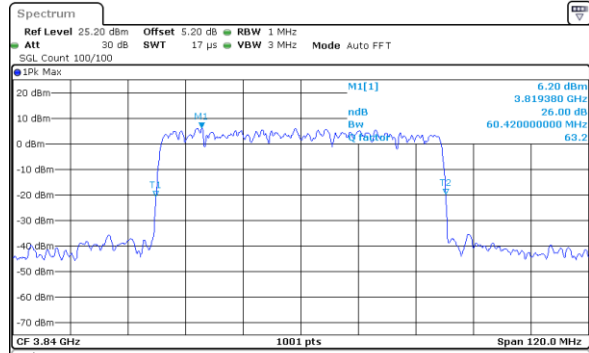
256QAM

Middle Channel

Middle Channel



Date: 13.FEB.2021 10:52:24



Date: 13.FEB.2021 10:52:40



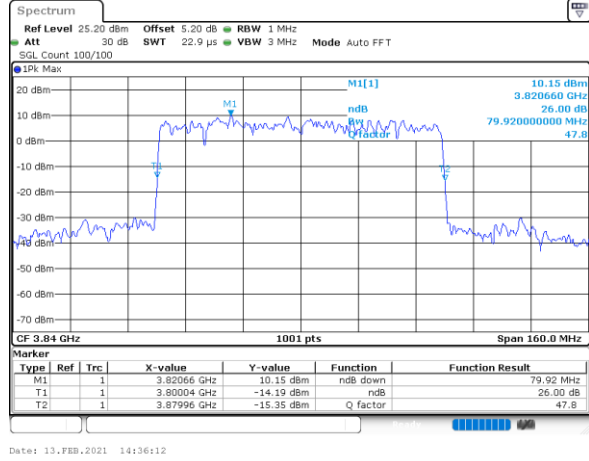
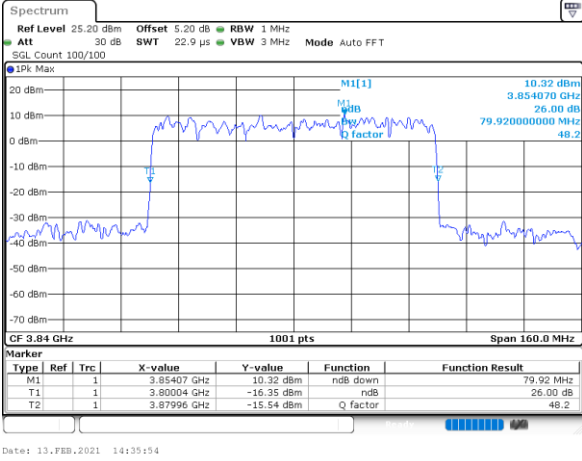
FR1 UL-MIMO n77 / 80MHz / CP-OFDM (M2)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 13.FEB.2021 14:35:54

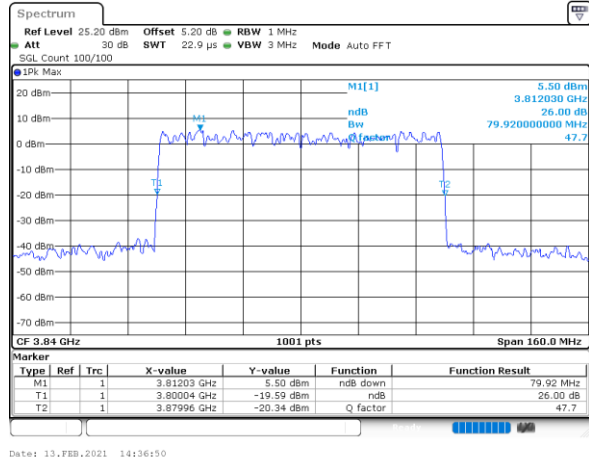
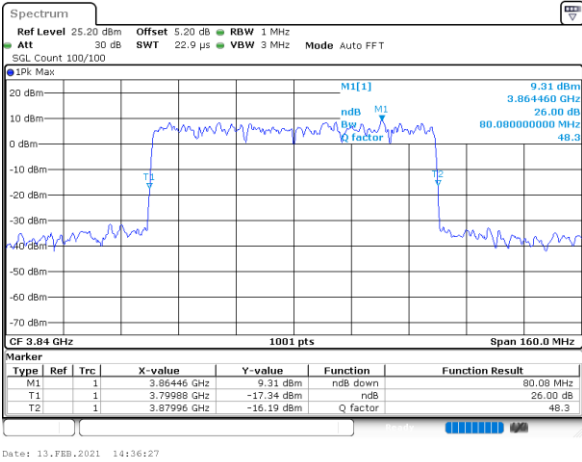
Date: 13.FEB.2021 14:36:12

64QAM

256QAM

Middle Channel

Middle Channel



Date: 13.FEB.2021 14:36:27

Date: 13.FEB.2021 14:36:50



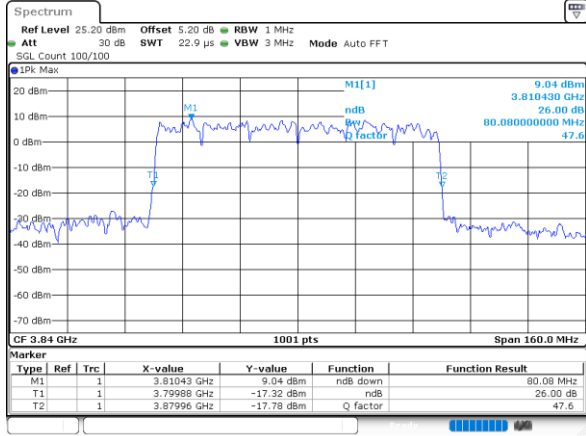
FR1 UL-MIMO n77 / 80MHz / CP-OFDM (M)

QPSK

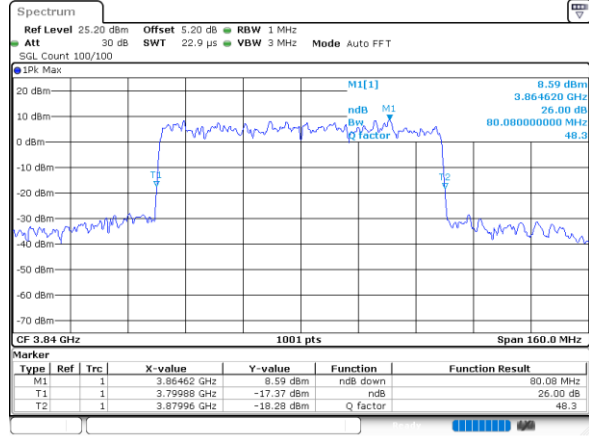
16QAM

Middle Channel

Middle Channel



Date: 13.FEB.2021 10:49:12



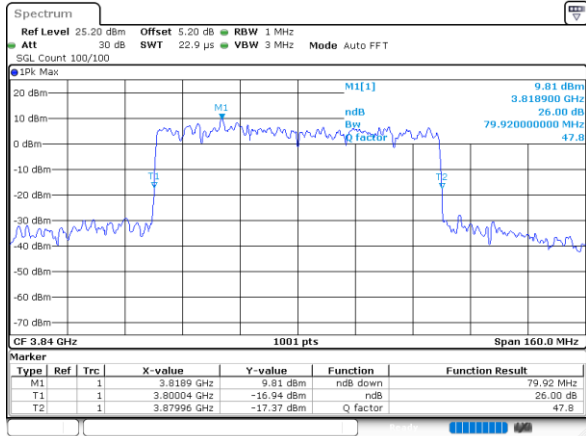
Date: 13.FEB.2021 10:49:33

64QAM

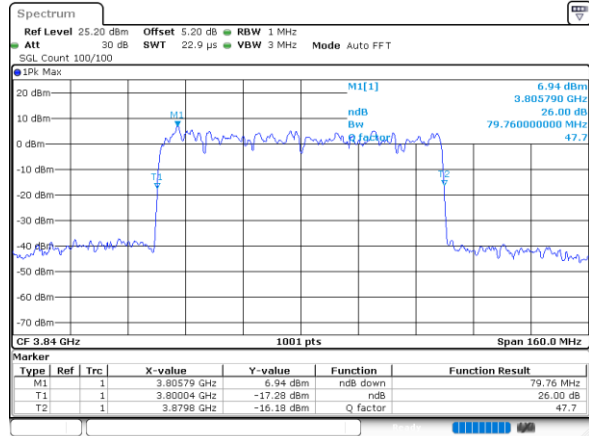
256QAM

Middle Channel

Middle Channel



Date: 13.FEB.2021 10:49:50



Date: 13.FEB.2021 10:50:17



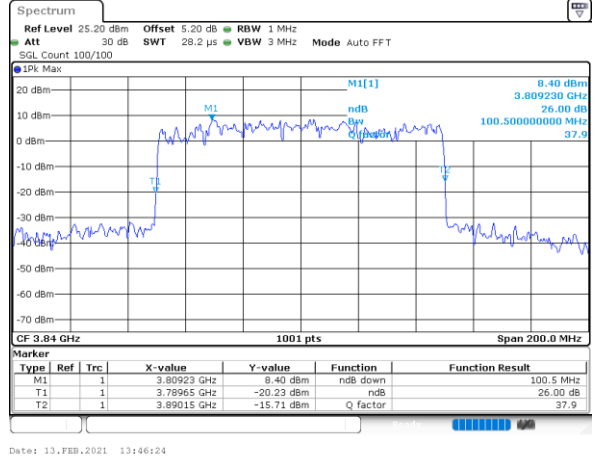
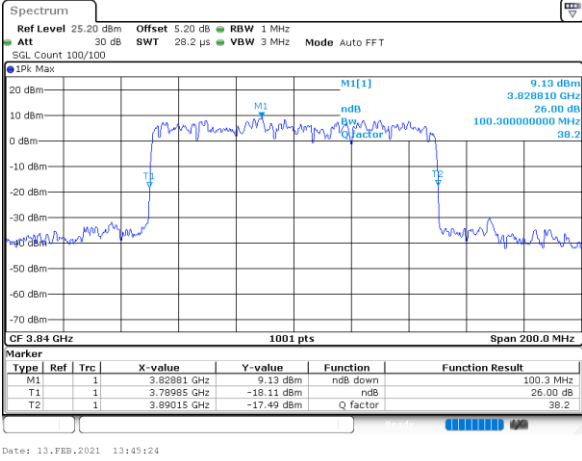
FR1 UL-MIMO n77 / 100MHz / CP-OFDM (M2)

QPSK

16QAM

Middle Channel

Middle Channel



64QAM

256QAM

Middle Channel

Middle Channel

