

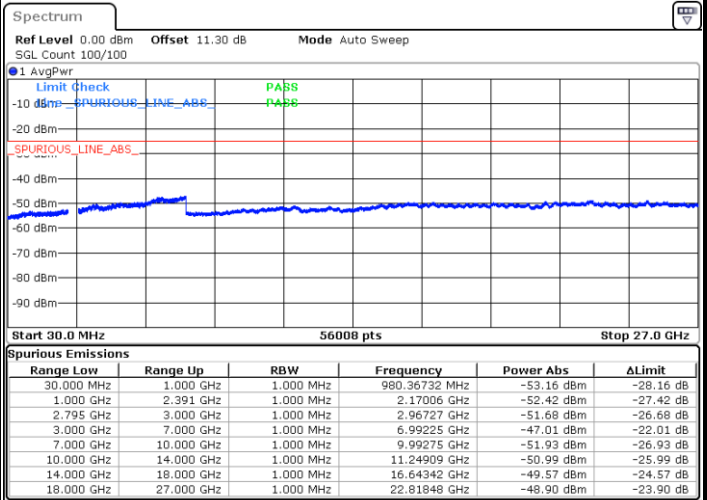
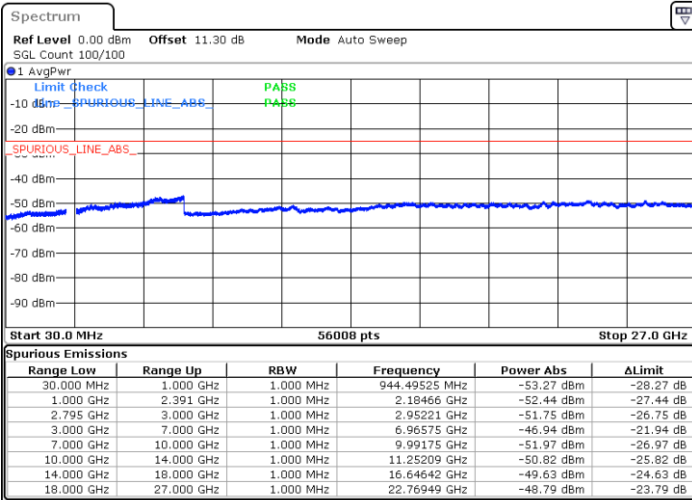


Conducted Spurious Emission

FR1 n41 / 10MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

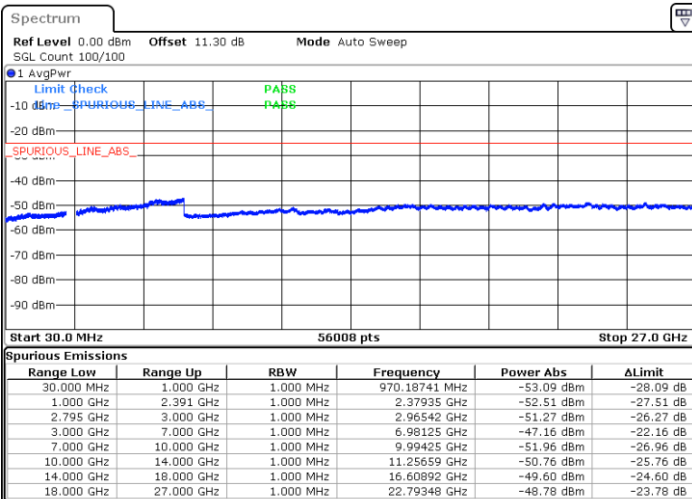
Middle Channel / 1RB



Date: 22.JAN.2021 00:16:11

Date: 22.JAN.2021 00:19:39

Highest Channel / 1RB



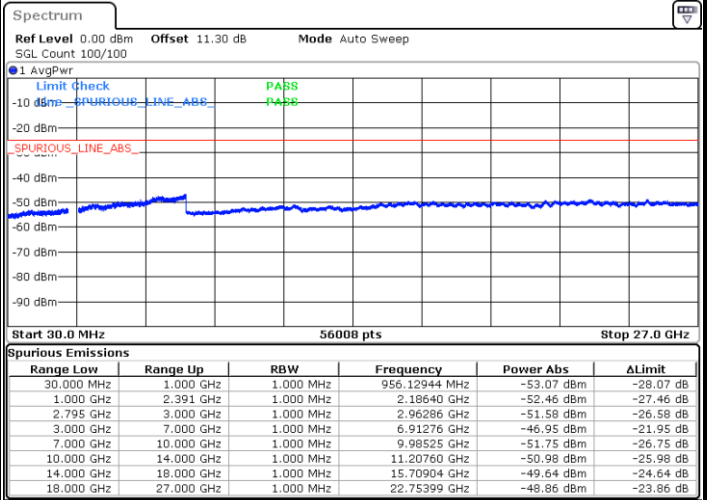
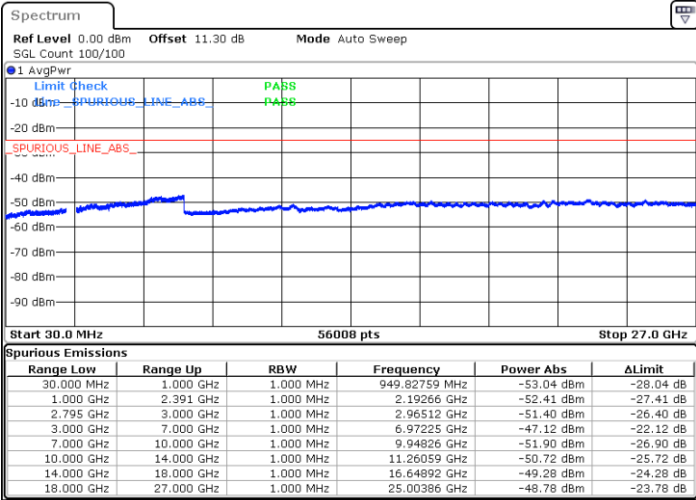
Date: 22.JAN.2021 00:22:00



FR1 n41 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

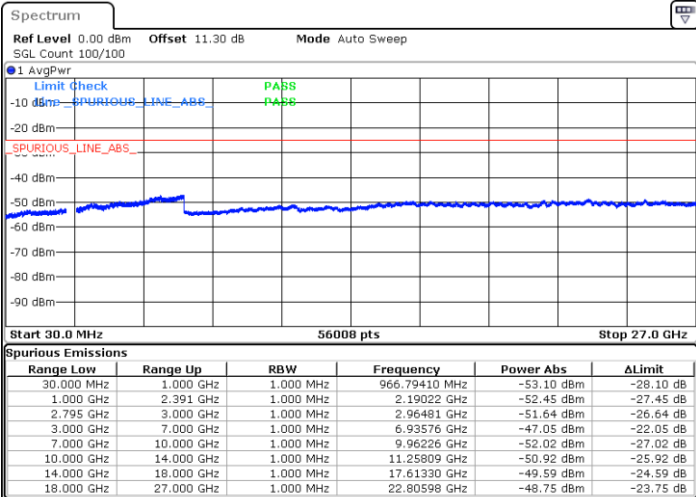
Middle Channel / 1RB



Date: 22.JAN.2021 00:17:08

Date: 22.JAN.2021 00:18:27

Highest Channel / 1RB



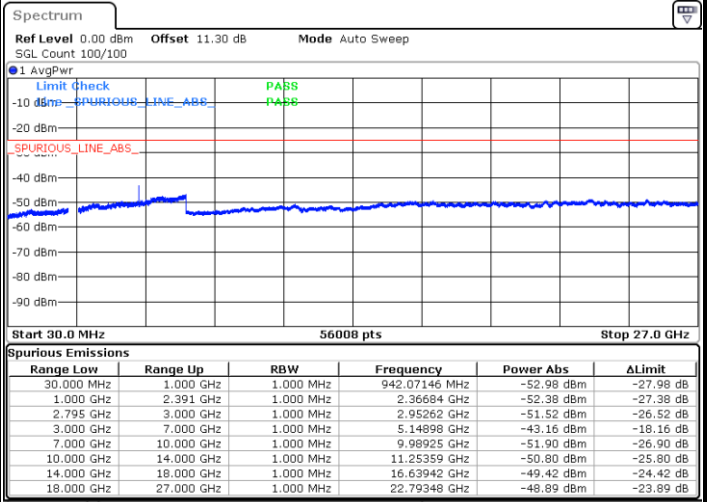
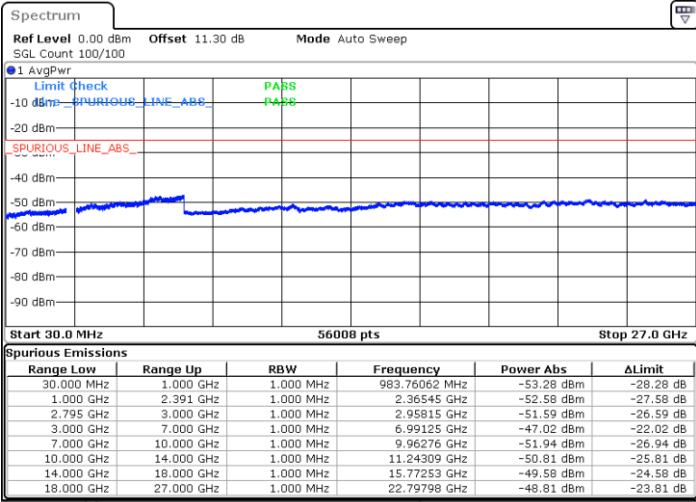
Date: 22.JAN.2021 00:23:55



FR1 n41 / 40MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

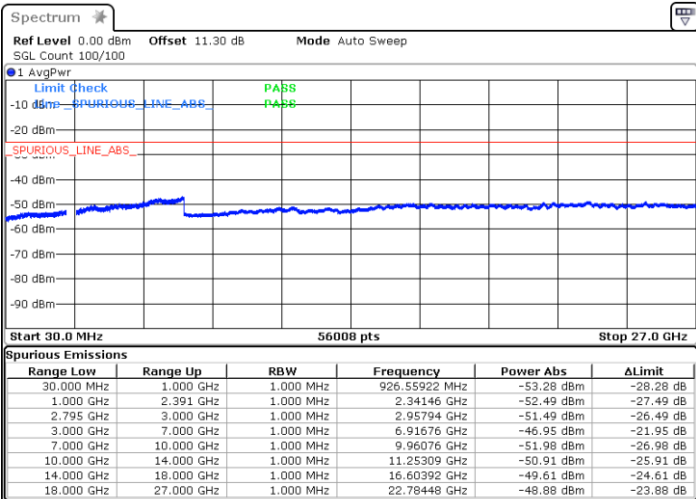
Middle Channel / 1RB



Date: 21.JAN.2021 23:24:42

Date: 21.JAN.2021 22:52:24

Highest Channel / 1RB



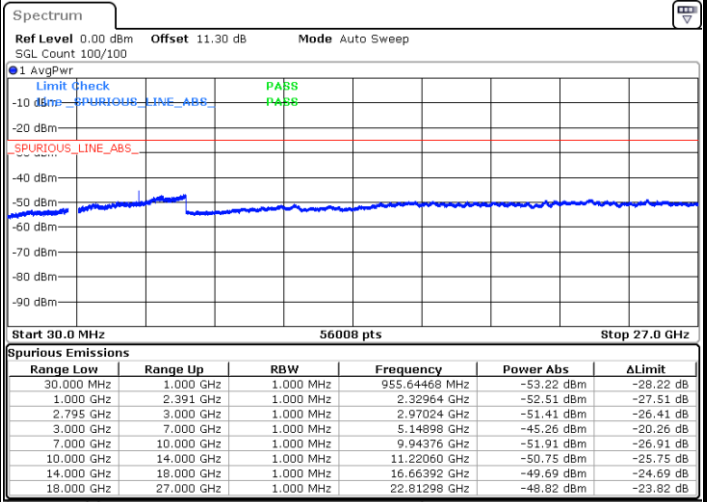
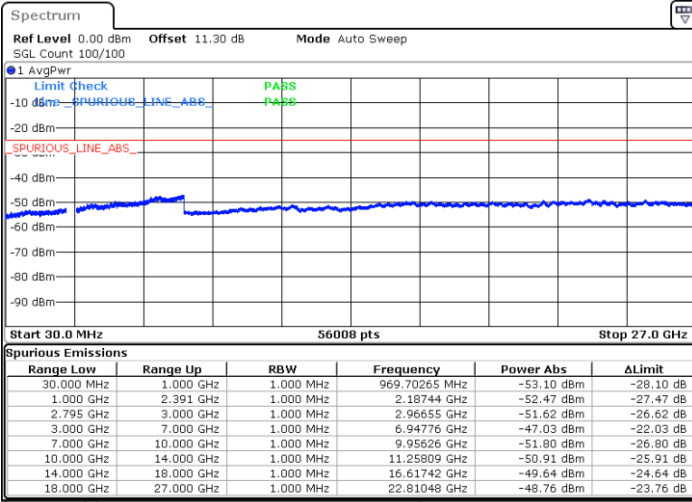
Date: 21.JAN.2021 23:20:07



FR1 n41 / 40MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

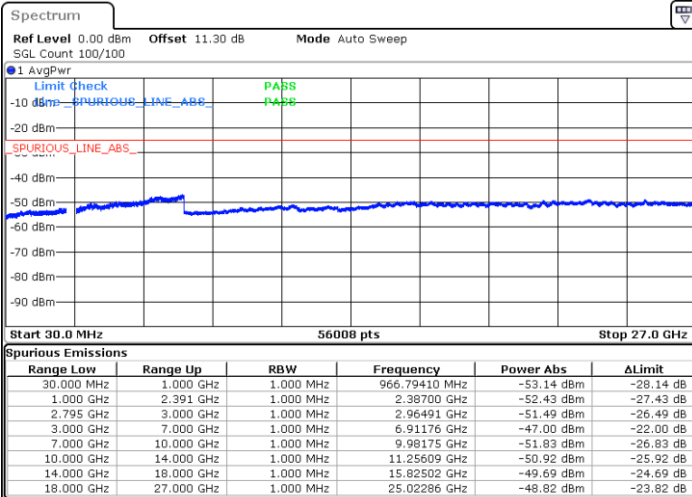
Middle Channel / 1RB



Date: 21.JAN.2021 23:22:32

Date: 21.JAN.2021 22:40:12

Highest Channel / 1RB



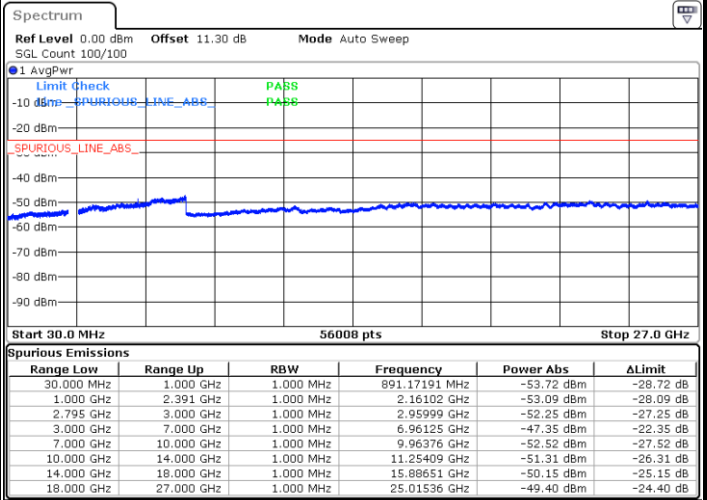
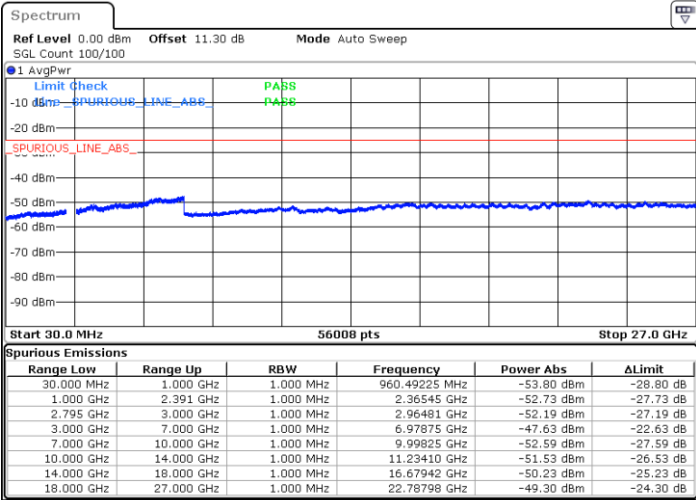
Date: 21.JAN.2021 23:21:07



FR1 n41 / 80MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

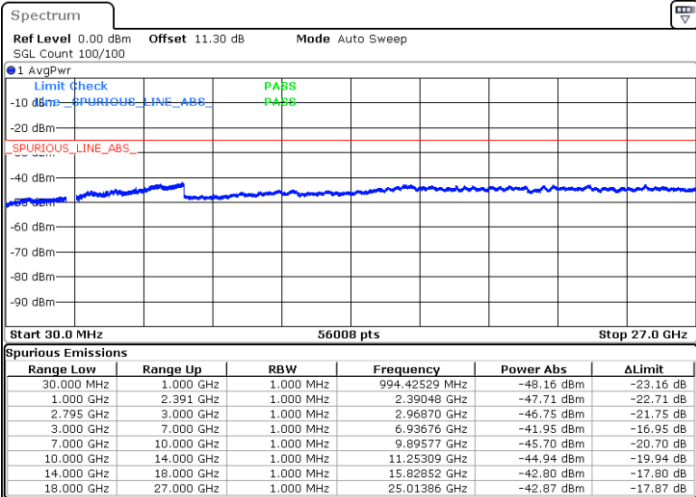
Middle Channel / 1RB



Date: 15.JAN.2021 03:13:20

Date: 15.JAN.2021 03:02:38

Highest Channel / 1RB

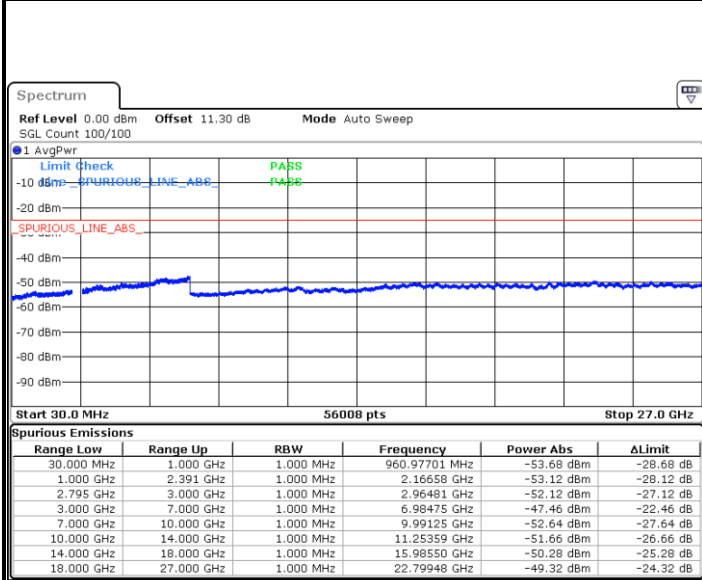


Date: 21.JAN.2021 17:48:09



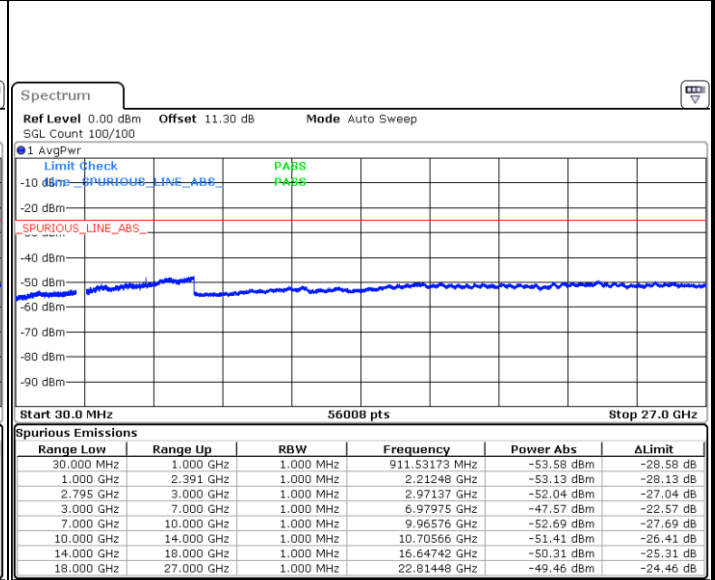
FR1 n41 / 80MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB



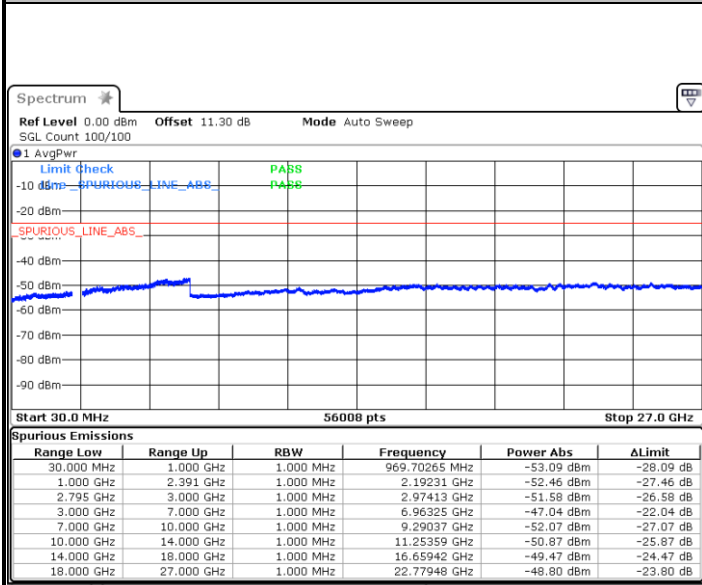
Date: 15.JAN.2021 03:09:47

Middle Channel / 1RB



Date: 15.JAN.2021 03:07:05

Highest Channel / 1RB



Date: 21.JAN.2021 17:46:32



Frequency Stability

Test Conditions		NR n41 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Within Band
		Deviation (ppm)	Result
50	Normal Voltage	0.0022	PASS
40	Normal Voltage	0.0018	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0013	
10	Normal Voltage	0.0015	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0019	
-20	Normal Voltage	0.0021	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0029	
20	Normal Voltage	0.0013	
20	Battery End Point	0.0033	

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 n41 UL_MIMO HPUE -SCS 15K

Peak-to-Average Ratio

Mode	FR1 UL-MIMO n41 / 10MHz / CP-OFDM (M2)				
Mod.	QPSK	QPSK			Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	7.13	8.7			PASS
Middle CH	7.04	8.7			
Highest CH	7.19	8.2			

Mode	FR1 UL-MIMO n41 / 10MHz / CP-OFDM (M)				
Mod.	QPSK	QPSK			Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	7.22	8.55			PASS
Middle CH	7.33	8.67			
Highest CH	7.19	8.64			



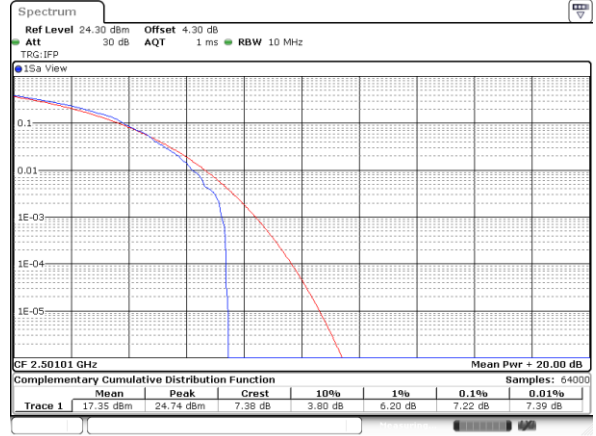
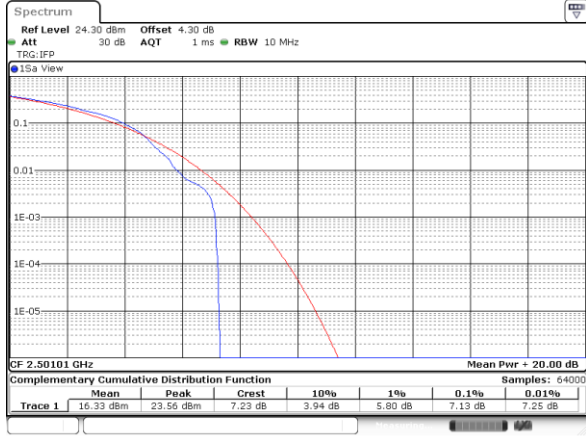
FR1 UL-MIMO n41 / 20MHz / CP-OFDM

QPSK(M2)

QPSK(M)

Lowest Channel / 1RB

Lowest Channel / 1RB

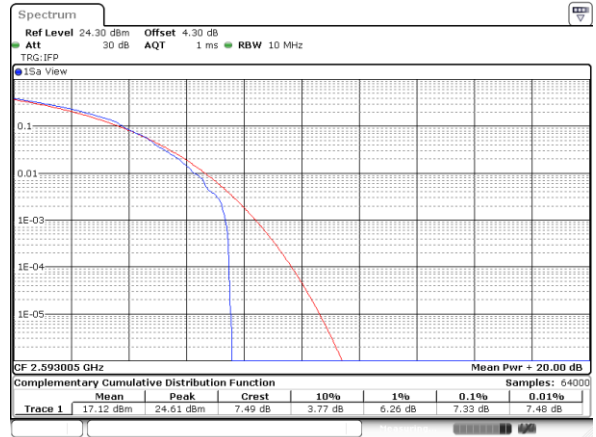
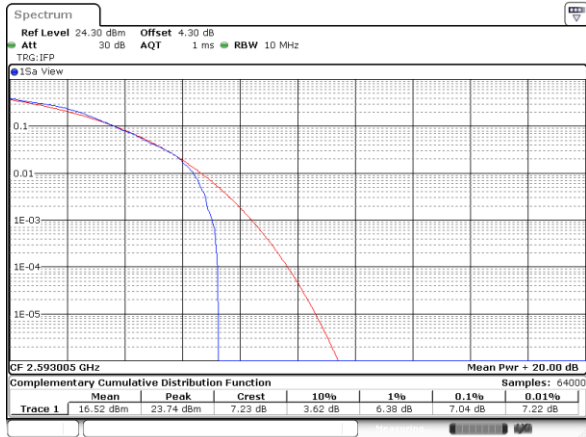


Date: 22_JAN_2021 03:24:37

Date: 22_JAN_2021 03:48:05

Middle Channel / 1 RB

Middle Channel / 1 RB

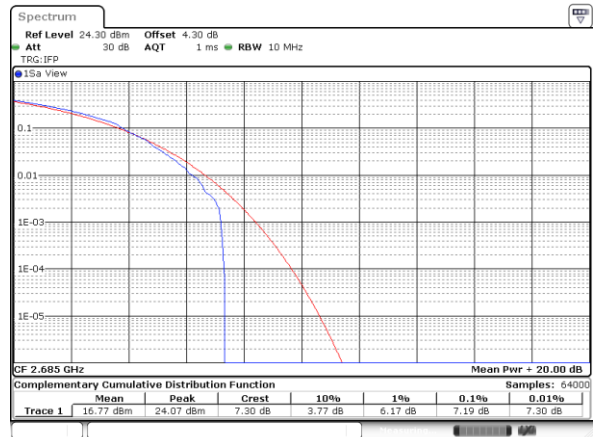
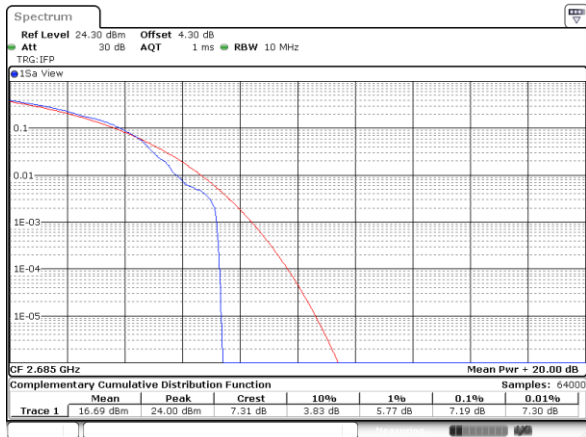


Date: 22_JAN_2021 03:23:19

Date: 22_JAN_2021 03:47:15

Highest Channel / 1 RB

Highest Channel / 1 RB



Date: 22_JAN_2021 03:28:44

Date: 22_JAN_2021 03:42:42



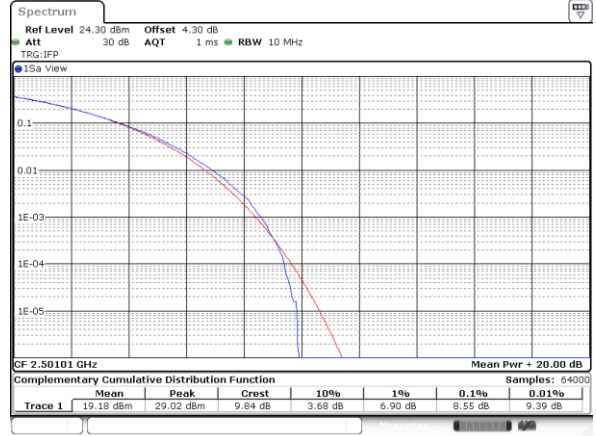
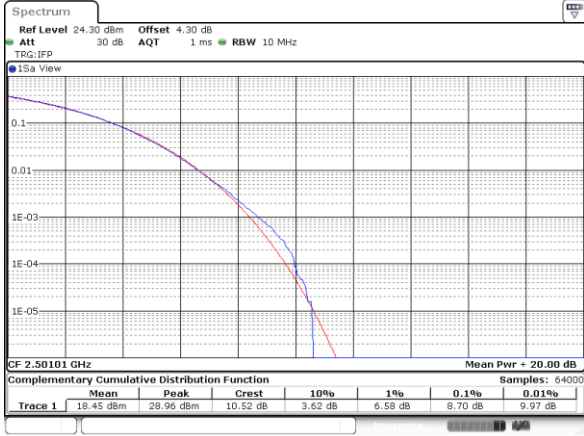
FR1 UL-MIMO n41 / 20MHz / CP-OFDM

QPSK(M2)

QPSK(M)

Lowest Channel / Full RB

Lowest Channel / Full RB

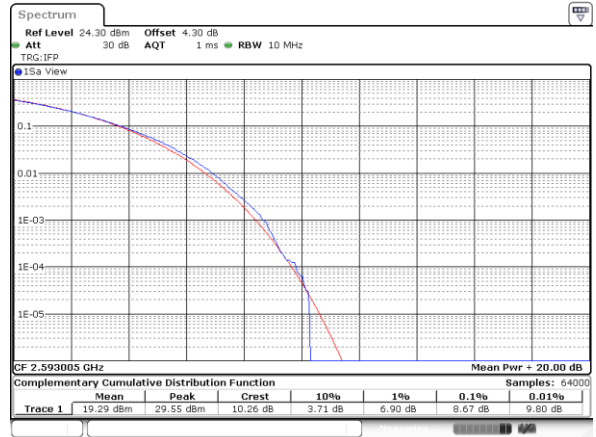
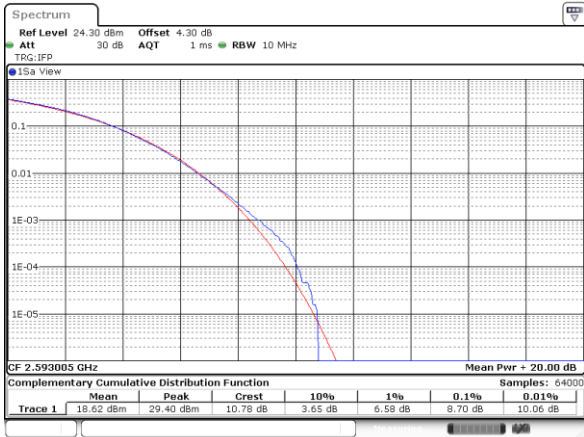


Date: 22_JAN_2021 03:26:23

Date: 22_JAN_2021 03:50:26

Middle Channel / Full RB

Middle Channel / Full RB

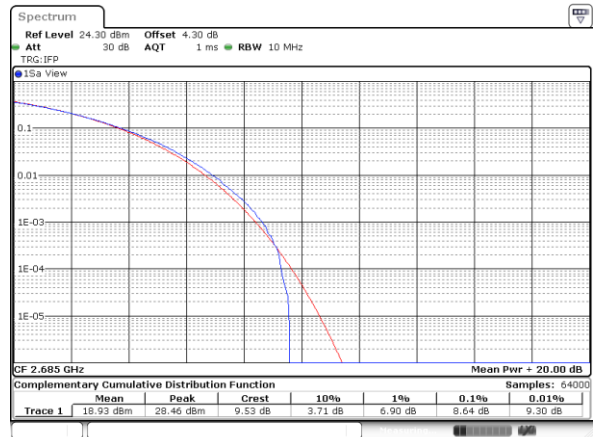
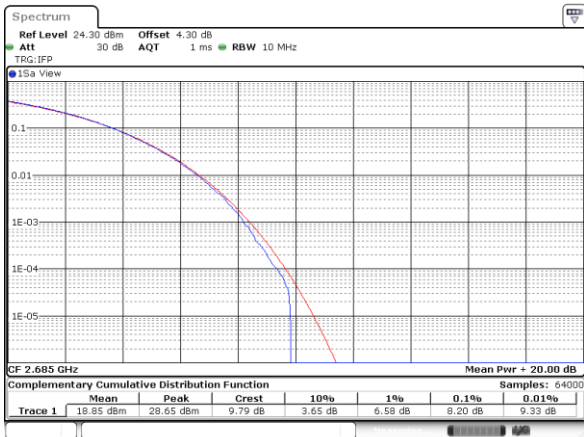


Date: 22_JAN_2021 03:21:56

Date: 22_JAN_2021 03:45:37

Highest Channel / Full RB

Highest Channel / Full RB



Date: 22_JAN_2021 03:27:09

Date: 22_JAN_2021 03:44:42



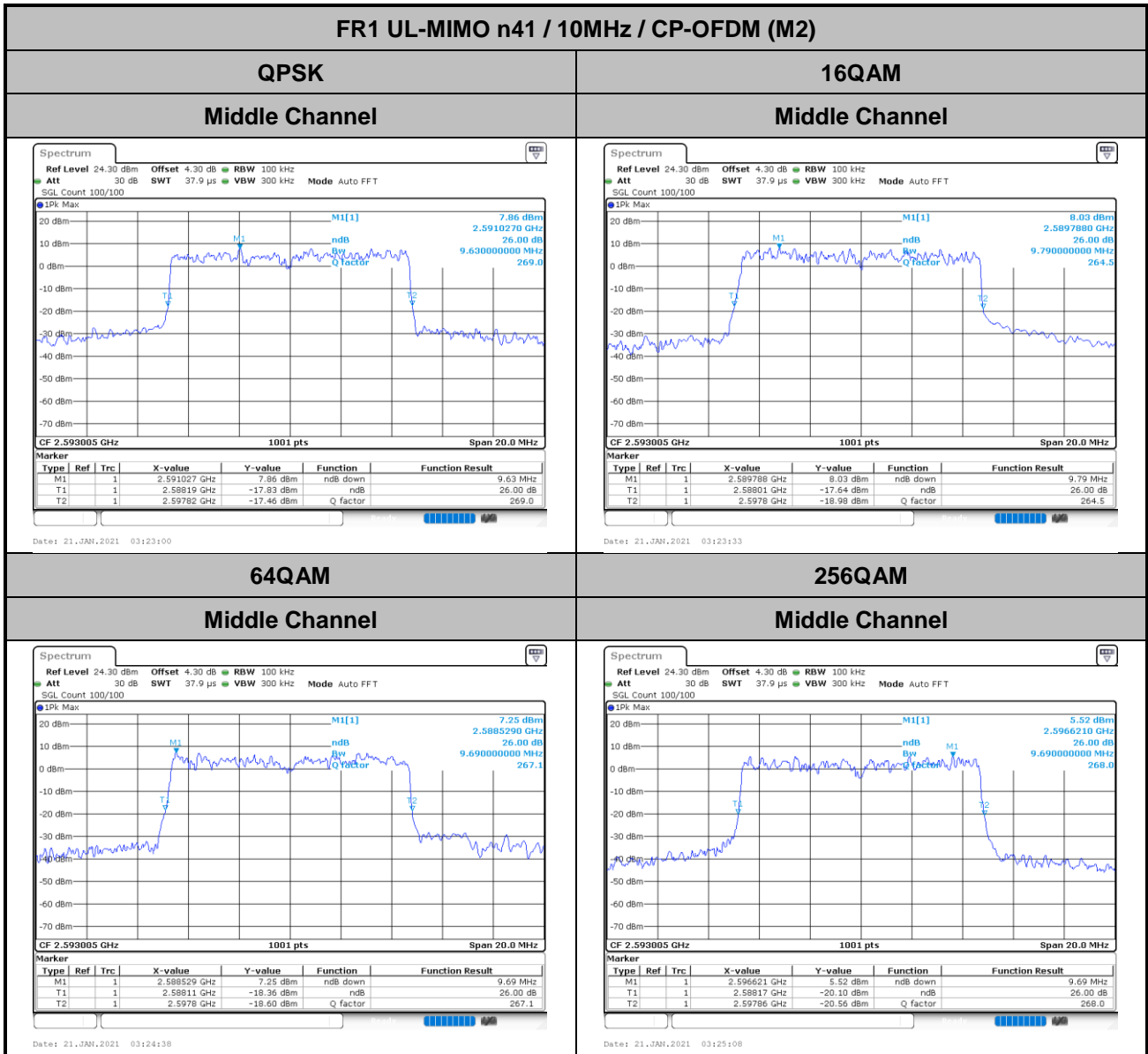
26dB Bandwidth

Mode	FR1 UL-MIMO n41 : 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	9.63	9.79	9.69	9.69	9.71	9.67	9.63	9.67

Mode	FR1 UL-MIMO n41 : 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	14.87	14.93	14.84	14.81	14.84	14.93	14.93	14.87

Mode	FR1 UL-MIMO n41 : 26dB BW(MHz) / CP-OFDM							
	M2				M			
BW	30MHz	30MHz	30MHz	30MHz	30MHz	30MHz	30MHz	30MHz
Mod.	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
Middle CH	29.37	29.43	29.37	29.43	29.37	29.43	29.43	29.37

Mode	FR1 UL-MIMO n41 : 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	41.08	40.84	40.92	40.92	40.84	40.84	40.92	41.08





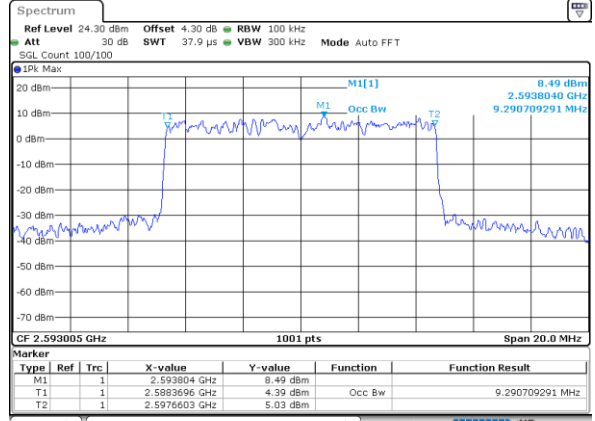
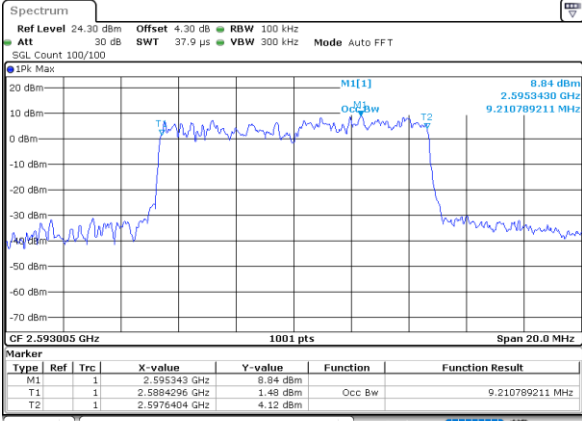
FR1 UL-MIMO n41 / 10MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 21.JAN.2021 04:58:03

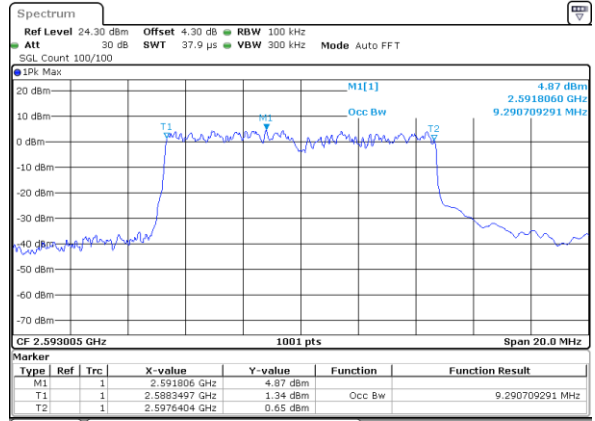
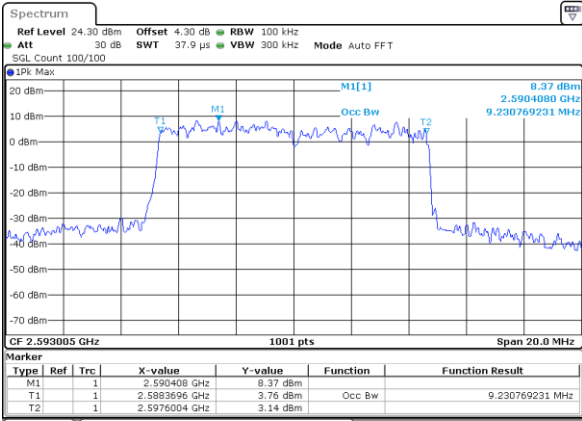
Date: 21.JAN.2021 04:57:41

64QAM

256QAM

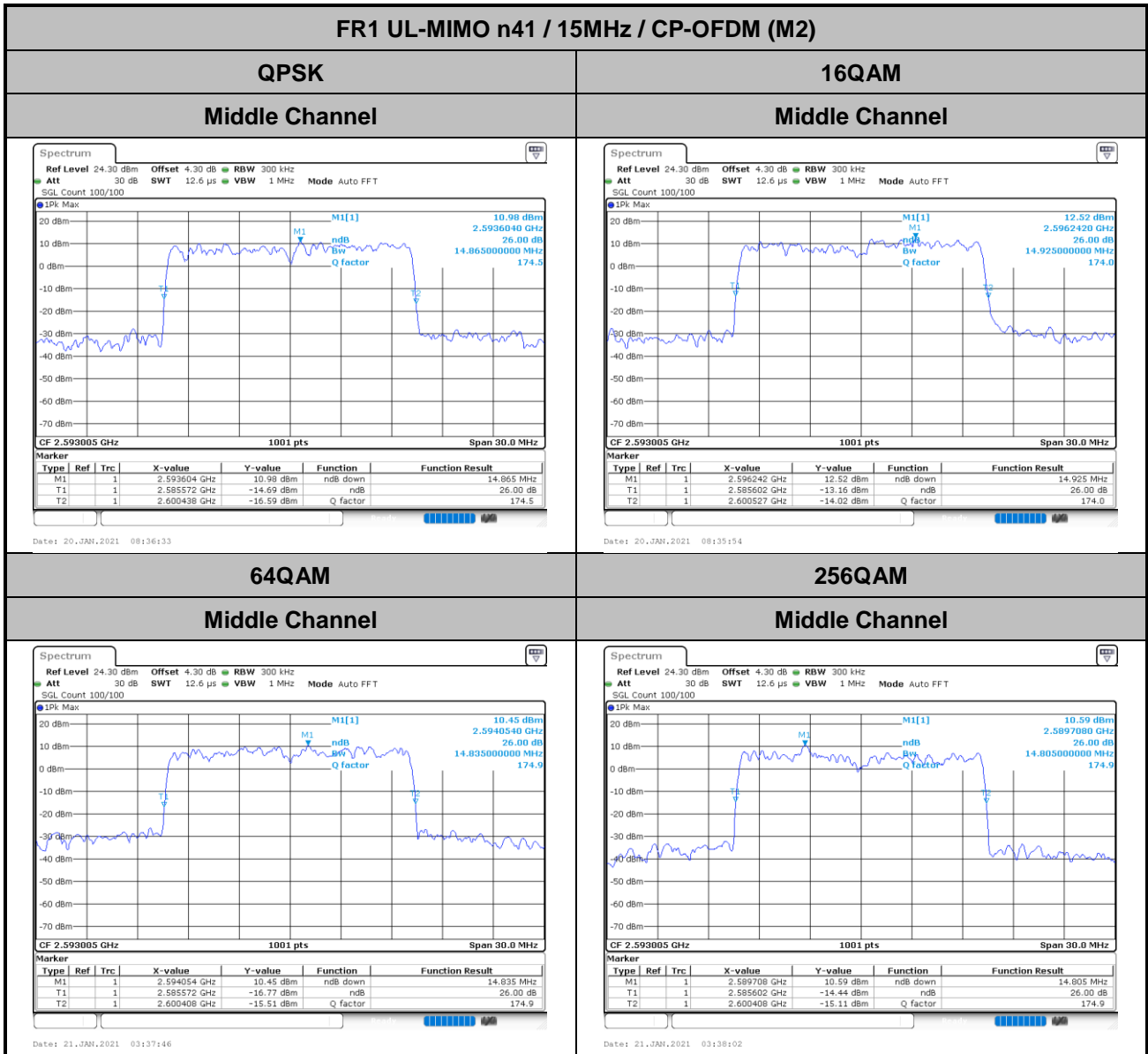
Middle Channel

Middle Channel



Date: 21.JAN.2021 04:58:18

Date: 21.JAN.2021 04:58:45





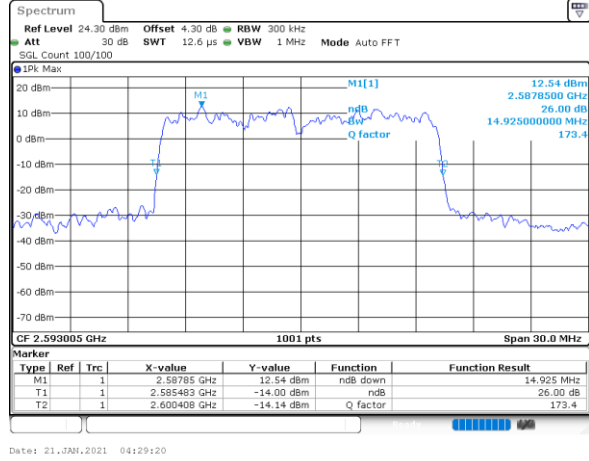
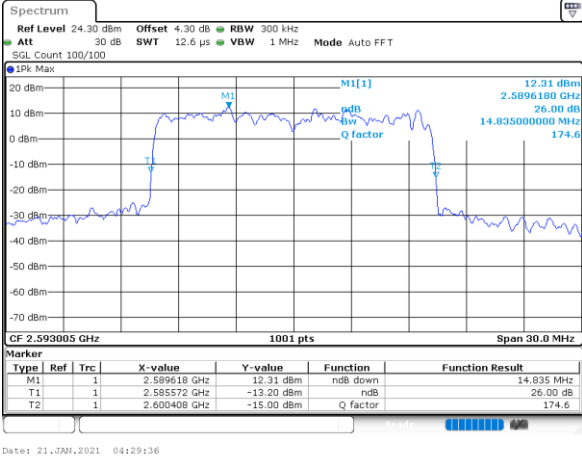
FR1 UL-MIMO n41 / 15MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel

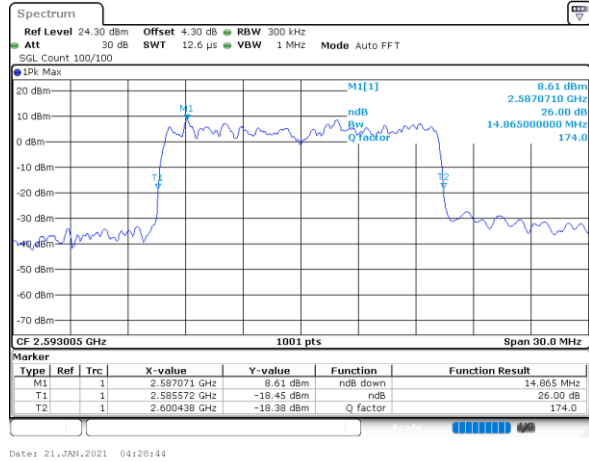
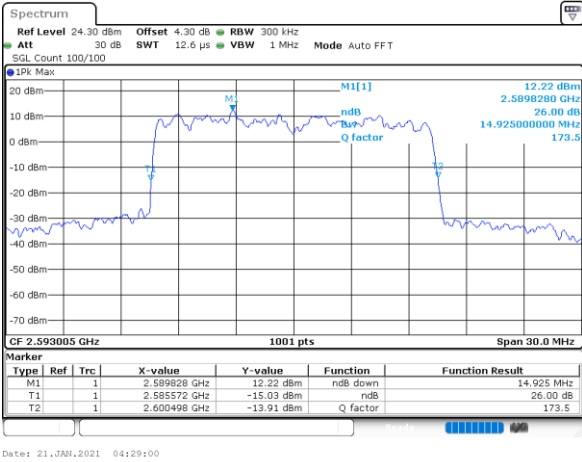


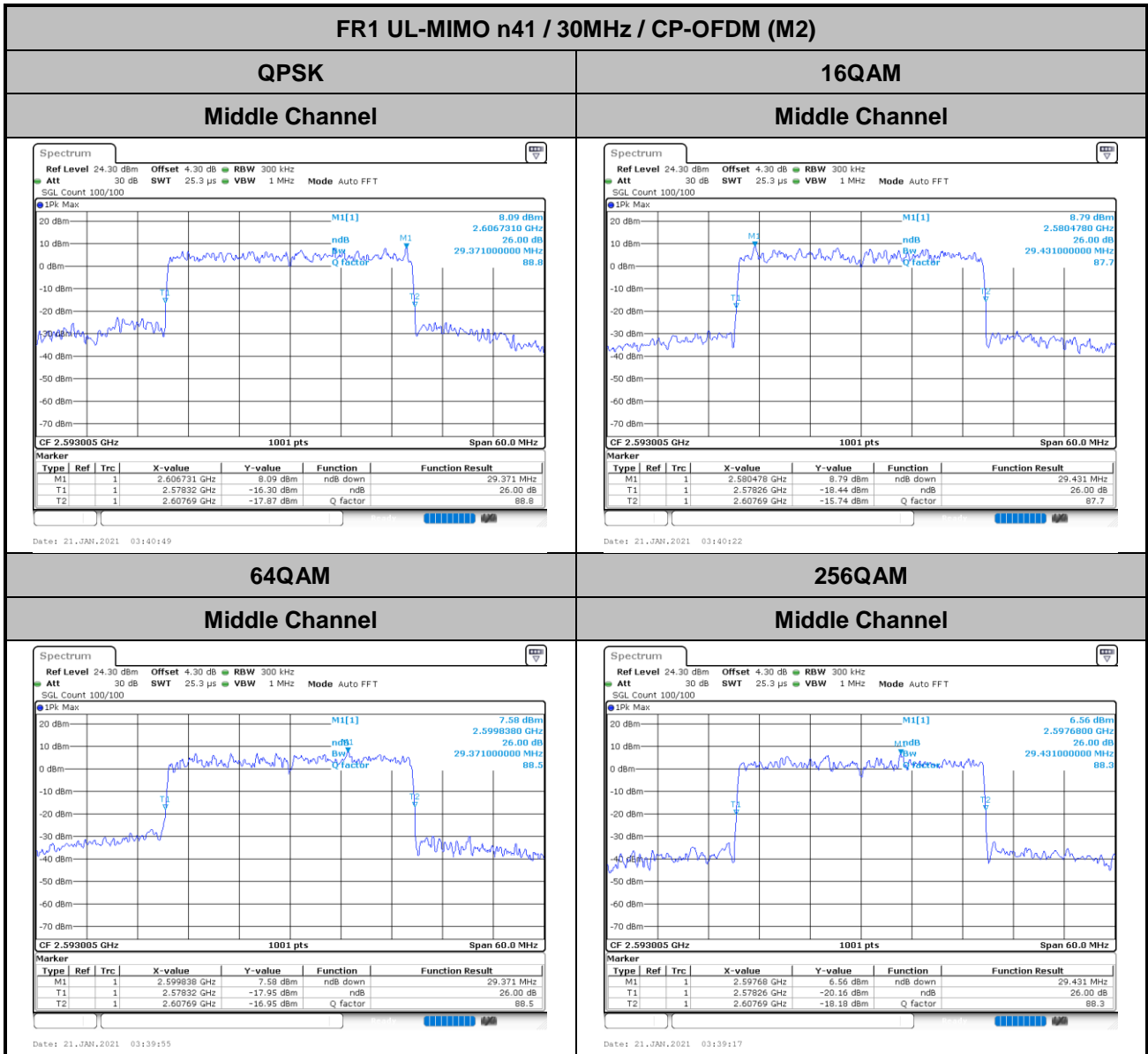
64QAM

256QAM

Middle Channel

Middle Channel







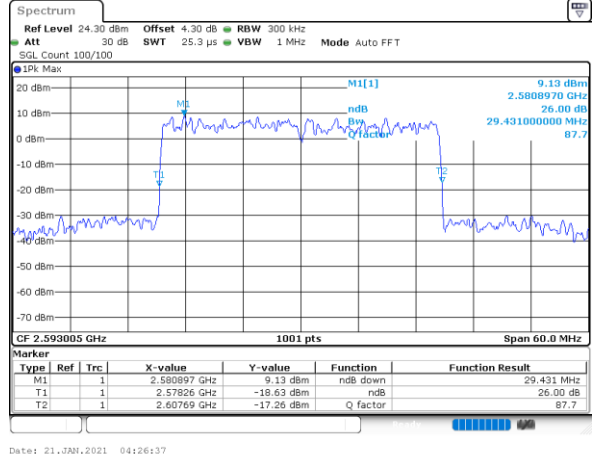
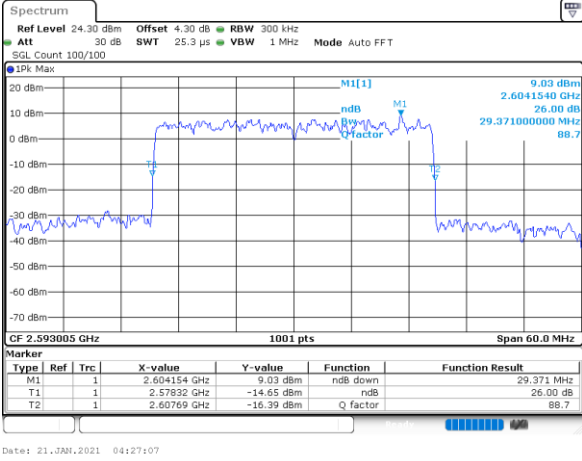
FR1 UL-MIMO n41 / 30MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 21_JAN_2021 04:27:07

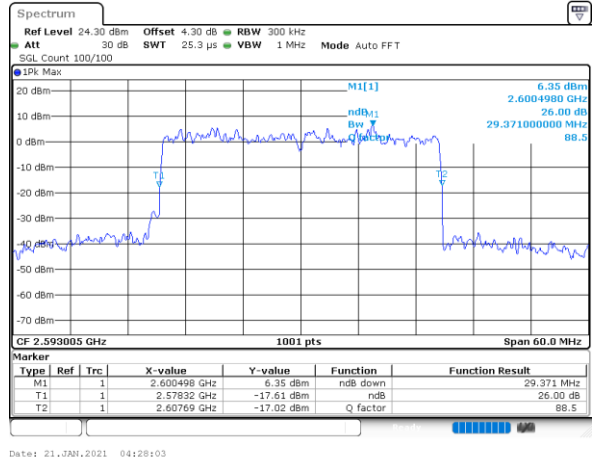
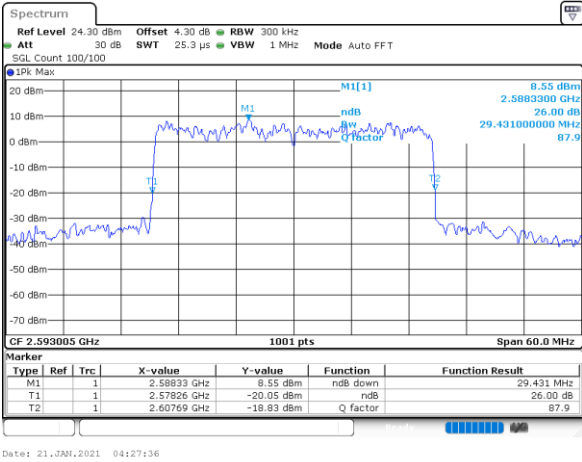
Date: 21_JAN_2021 04:26:37

64QAM

256QAM

Middle Channel

Middle Channel



Date: 21_JAN_2021 04:27:36

Date: 21_JAN_2021 04:28:03



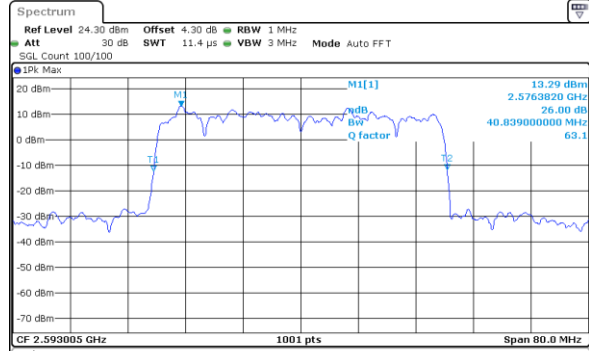
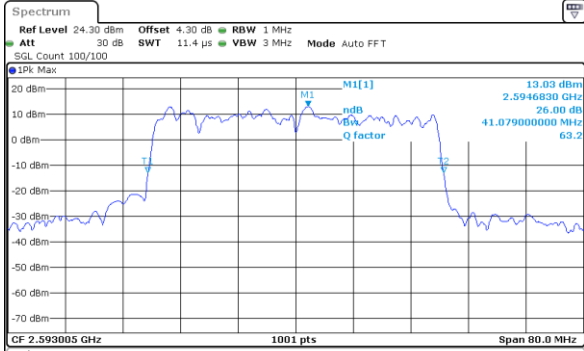
FR1 UL-MIMO n41 / 40MHz / CP-OFDM (M2)

QPSK

16QAM

Middle Channel

Middle Channel



Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		2.594683 GHz	13.03 dBm	ndB down	41.079 MHz
T1	1		2.572466 GHz	-12.80 dBm	ndB	26.00 dB
T2	1		2.613544 GHz	-12.85 dBm	Q factor	63.2

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		2.576382 GHz	13.29 dBm	ndB down	40.839 MHz
T1	1		2.572545 GHz	-12.27 dBm	ndB	26.00 dB
T2	1		2.613385 GHz	-11.63 dBm	Q factor	63.1

Date: 21.JAN.2021 03:15:41

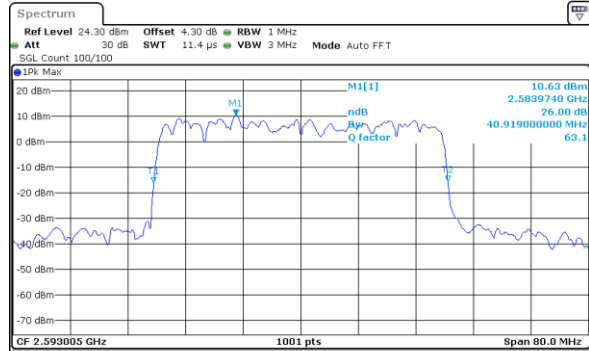
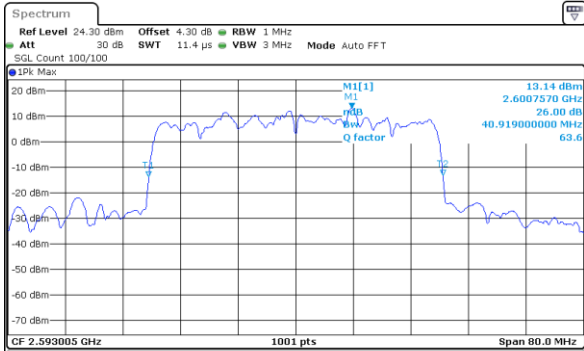
Date: 21.JAN.2021 03:15:59

64QAM

256QAM

Middle Channel

Middle Channel



Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		2.600757 GHz	13.14 dBm	ndB down	40.919 MHz
T1	1		2.572545 GHz	-13.68 dBm	ndB	26.00 dB
T2	1		2.613465 GHz	-13.04 dBm	Q factor	63.6

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1	1		2.583974 GHz	10.63 dBm	ndB down	40.919 MHz
T1	1		2.572545 GHz	-16.09 dBm	ndB	26.00 dB
T2	1		2.613465 GHz	-15.32 dBm	Q factor	63.1

Date: 21.JAN.2021 03:41:56

Date: 21.JAN.2021 03:42:20



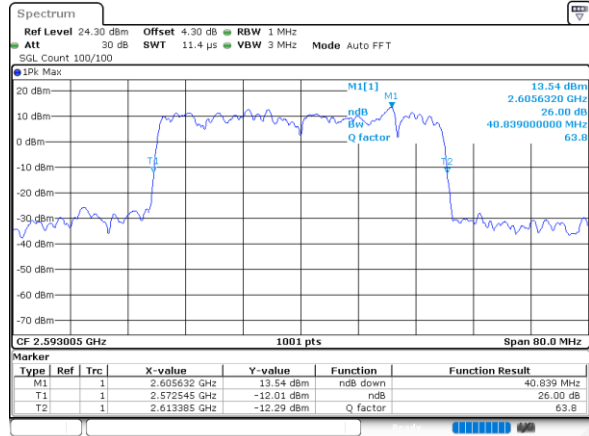
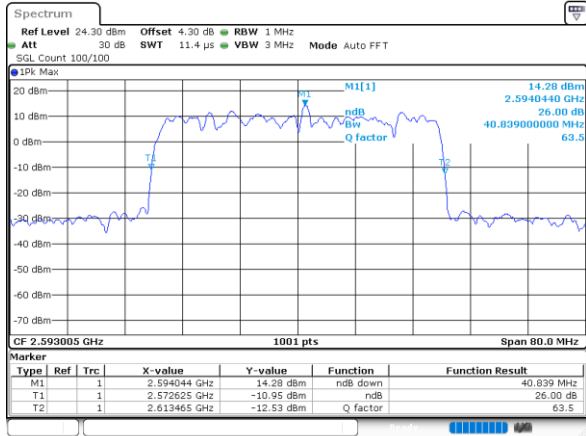
FR1 UL-MIMO n41 / 40MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 21.JAN.2021 04:00:02

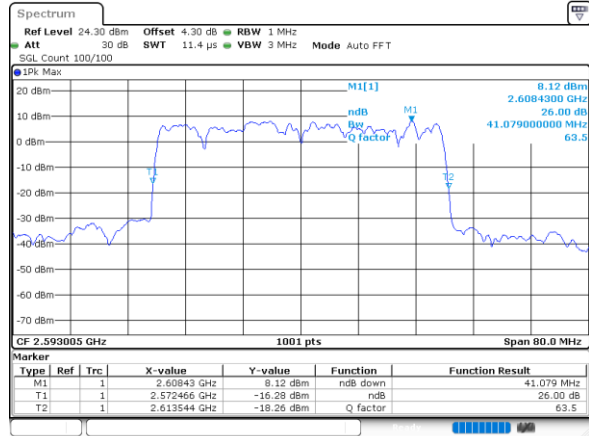
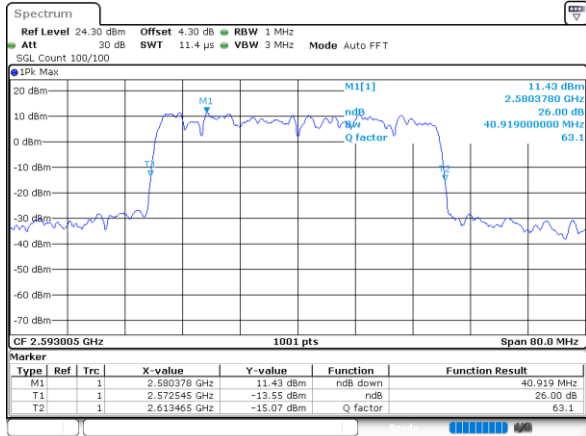
Date: 21.JAN.2021 03:59:46

64QAM

256QAM

Middle Channel

Middle Channel



Date: 21.JAN.2021 04:00:22

Date: 21.JAN.2021 04:00:44



Occupied Bandwidth

Mode	FR1 UL-MIMO n41 : OBW(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	9.29	9.25	9.29	9.21	9.29	9.23	9.29

Mode	FR1 UL-MIMO n41 : OBW(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	14.09	14.21	14.15	14.18	14.18	14.15	14.06	14.06

Mode	FR1 UL-MIMO n41 : OBW(MHz) / CP-OFDM							
	M2				M			
BW	30MHz	30MHz	30MHz	30MHz	30MHz	30MHz	30MHz	30MHz
Mod.	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
Middle CH	28.47	28.59	28.47	28.35	28.47	28.59	28.47	28.47

Mode	FR1 UL-MIMO n41 : OBW(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	38.84	38.68	38.60	38.28	38.68	38.68	38.52	38.76



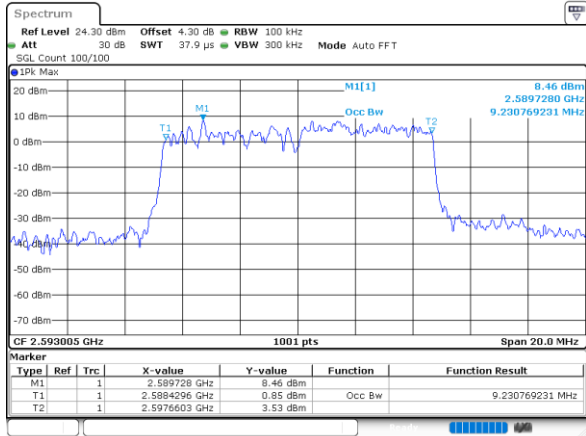
FR1 UL-MIMO n41 / 10MHz / CP-OFDM (M2)

QPSK

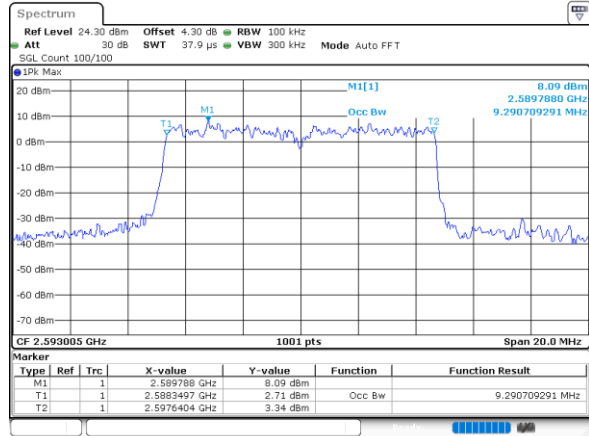
16QAM

Middle Channel

Middle Channel



Date: 21.JAN.2021 03:12:52



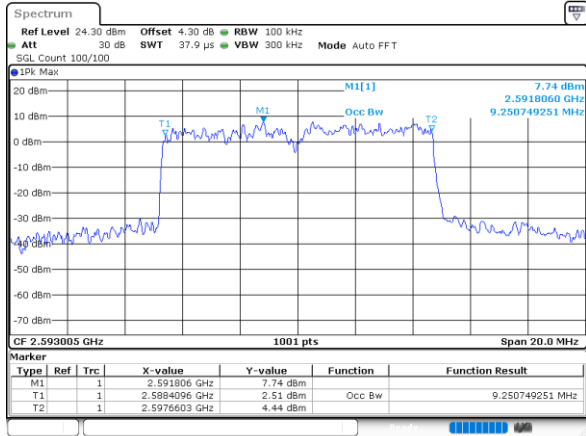
Date: 21.JAN.2021 03:12:50

64QAM

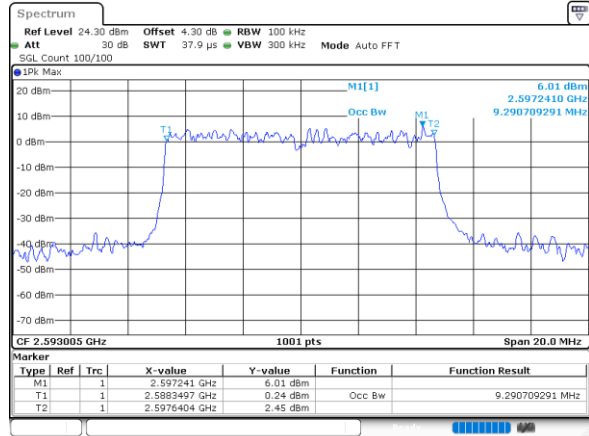
256QAM

Middle Channel

Middle Channel



Date: 21.JAN.2021 03:24:26



Date: 21.JAN.2021 03:25:00



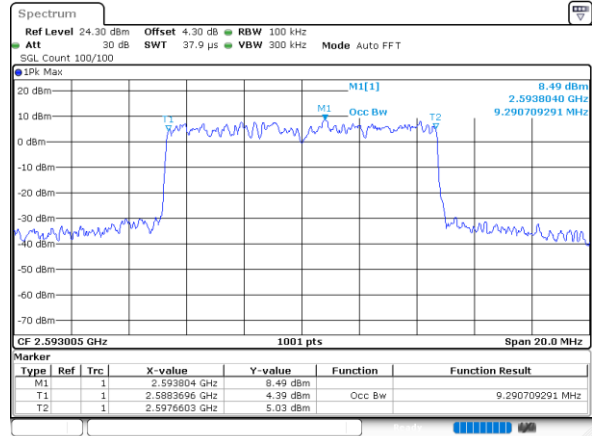
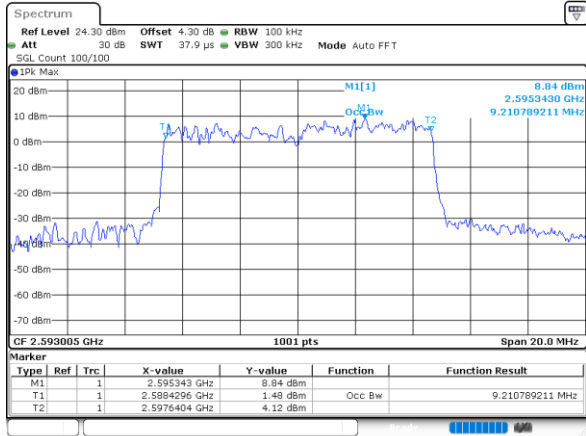
FR1 UL-MIMO n41 / 10MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 21.JAN.2021 04:58:03

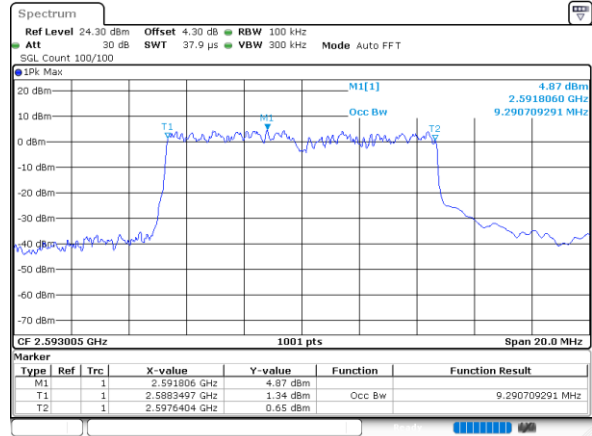
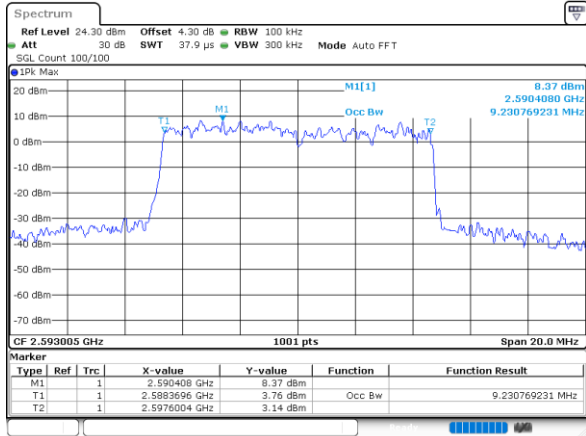
Date: 21.JAN.2021 04:57:41

64QAM

256QAM

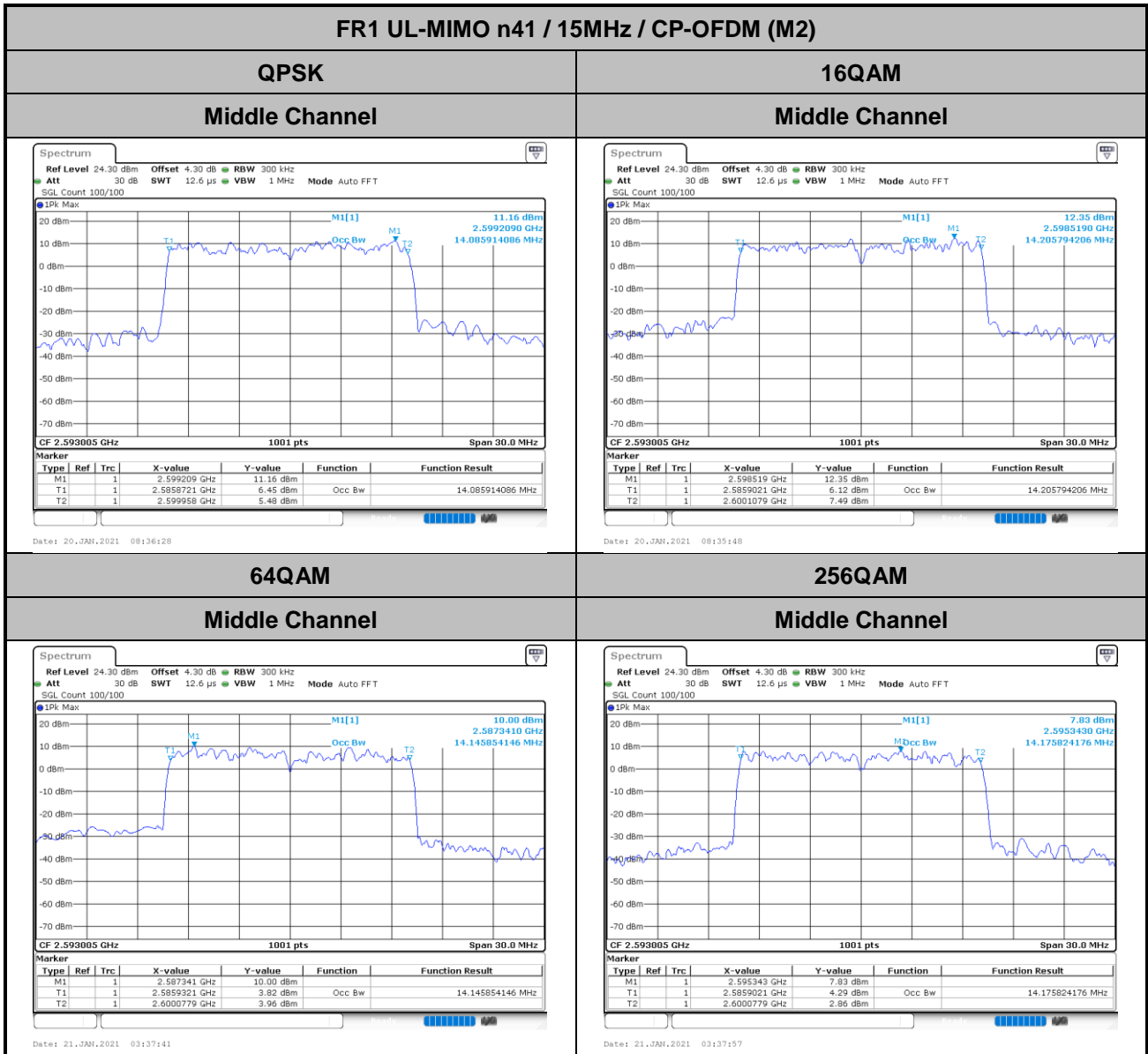
Middle Channel

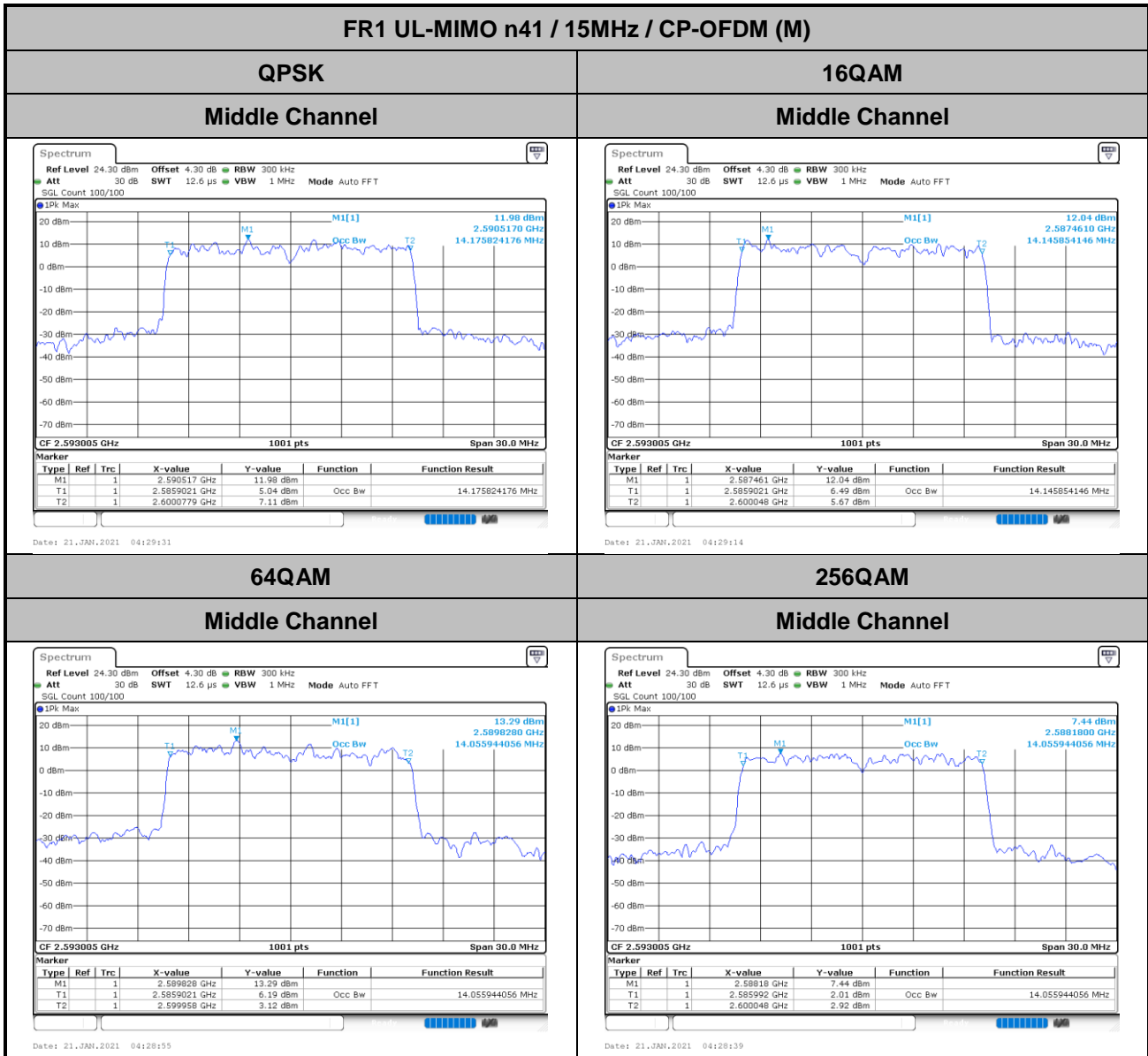
Middle Channel



Date: 21.JAN.2021 04:58:18

Date: 21.JAN.2021 04:58:45







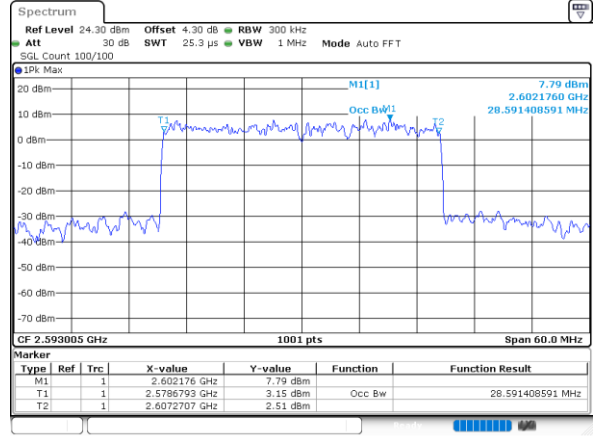
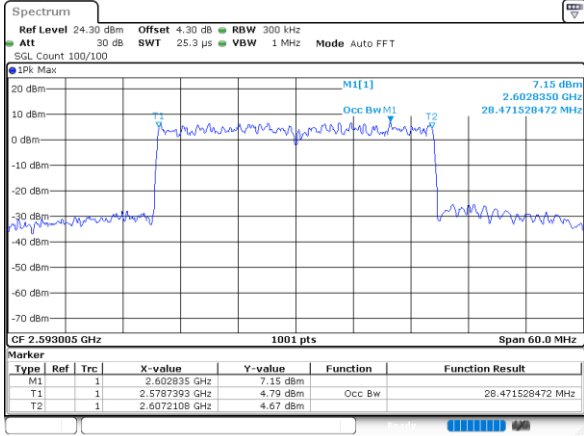
FR1 UL-MIMO n41 / 30MHz / CP-OFDM (M2)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 21.JAN.2021 03:40:39

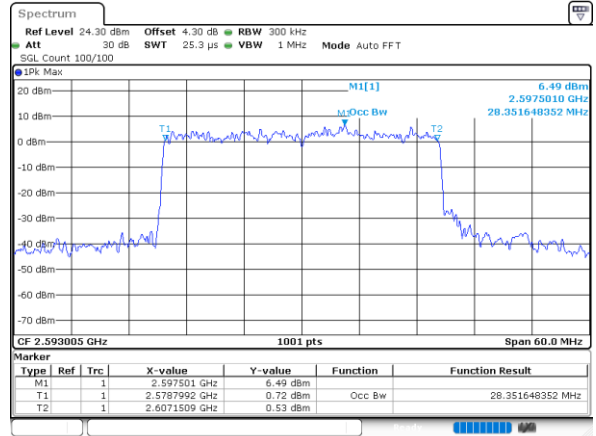
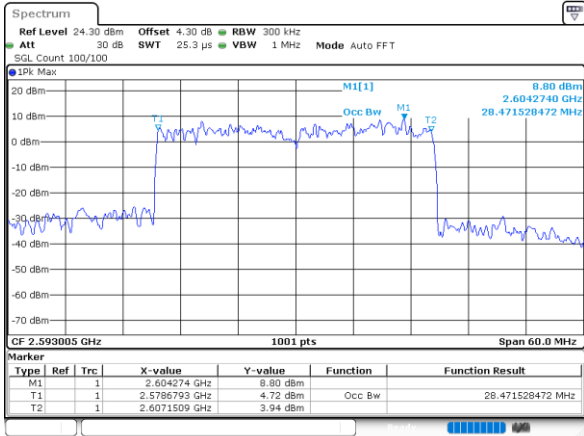
Date: 21.JAN.2021 03:40:13

64QAM

256QAM

Middle Channel

Middle Channel



Date: 21.JAN.2021 03:39:45

Date: 21.JAN.2021 03:38:58



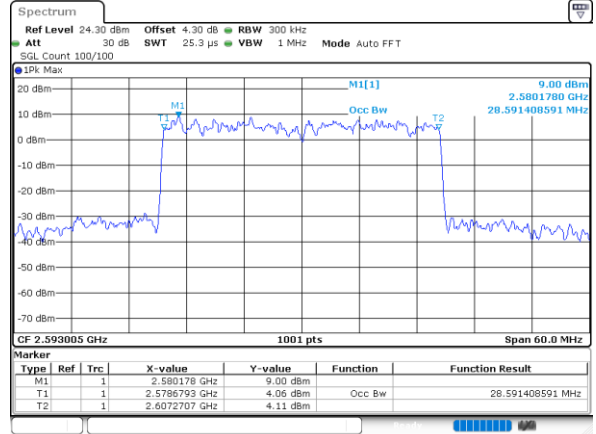
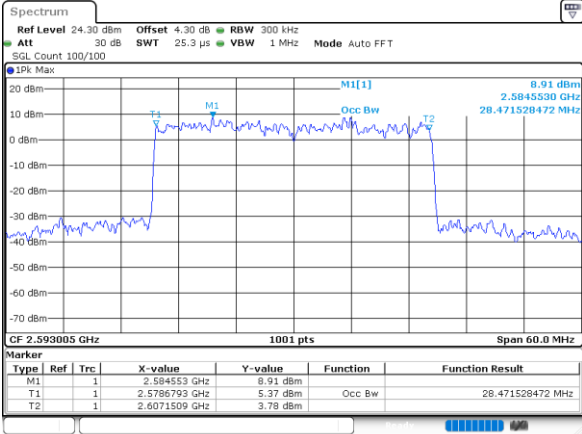
FR1 UL-MIMO n41 / 30MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 21.JAN.2021 04:26:55

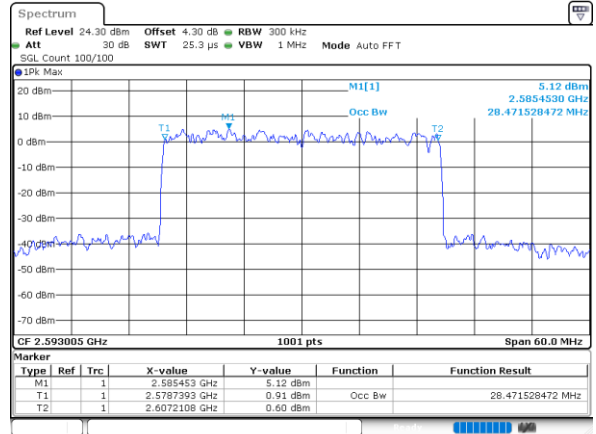
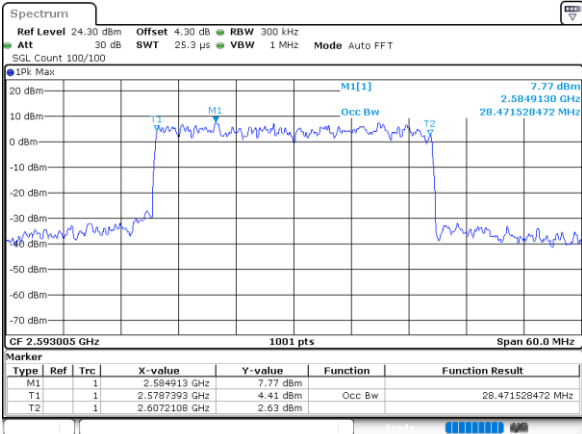
Date: 21.JAN.2021 04:26:26

64QAM

256QAM

Middle Channel

Middle Channel



Date: 21.JAN.2021 04:27:26

Date: 21.JAN.2021 04:27:54



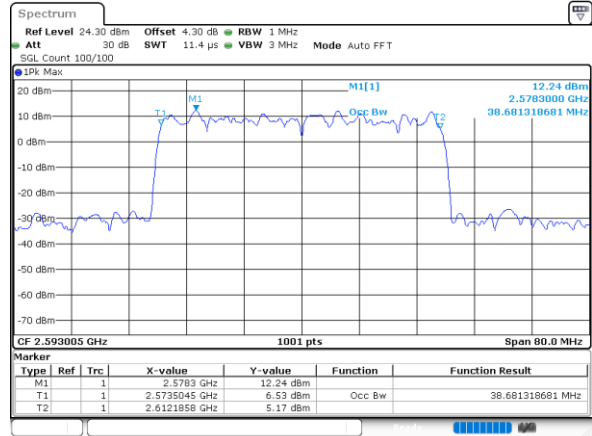
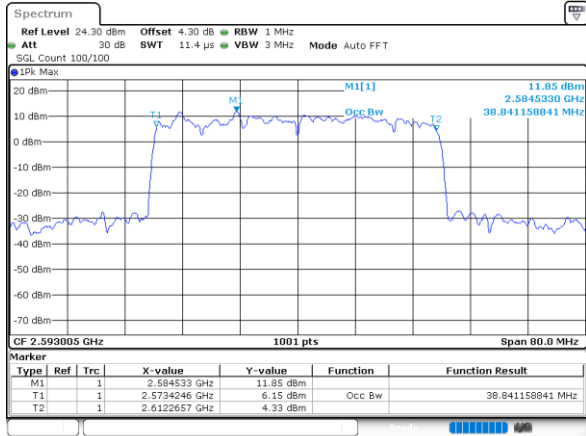
FR1 UL-MIMO n41 / 40MHz / CP-OFDM (M2)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 21.JAN.2021 03:15:36

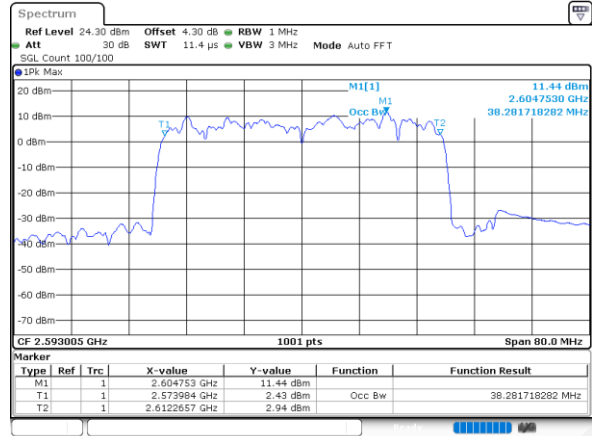
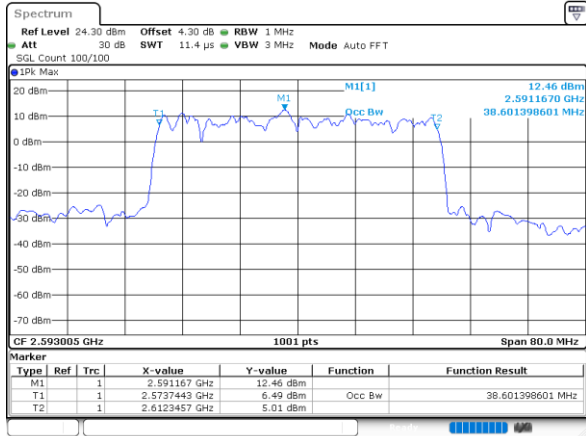
Date: 21.JAN.2021 03:15:54

64QAM

256QAM

Middle Channel

Middle Channel



Date: 21.JAN.2021 03:41:44

Date: 21.JAN.2021 03:42:13



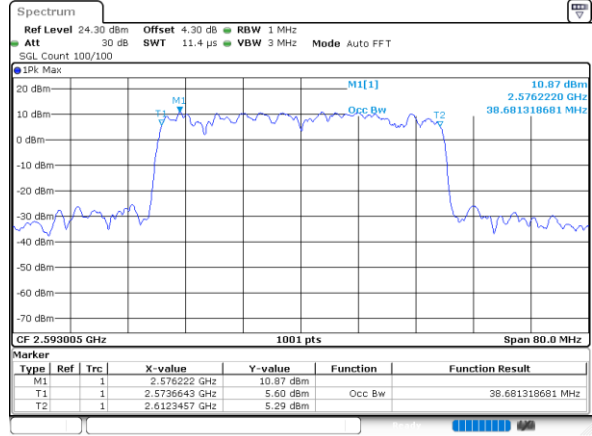
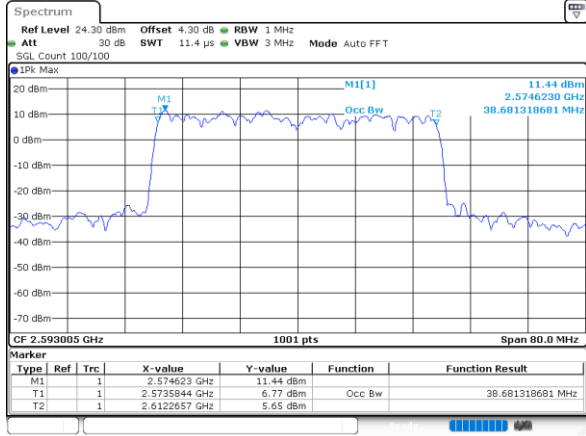
FR1 UL-MIMO n41 / 40MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 21.JAN.2021 03:59:57

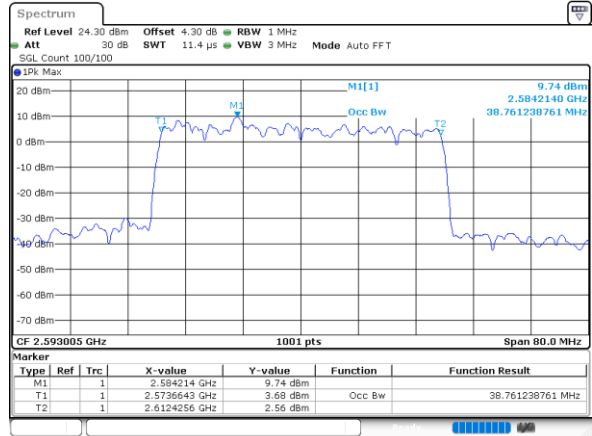
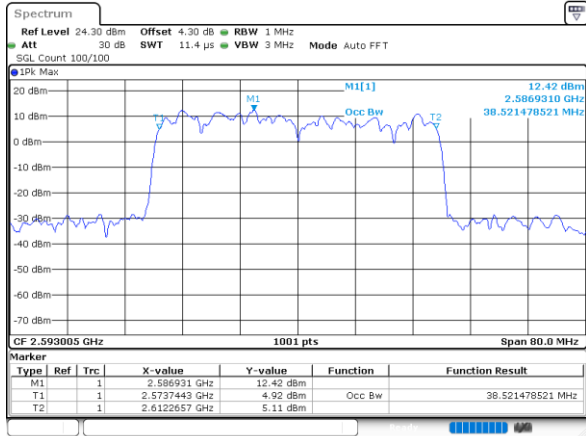
Date: 21.JAN.2021 03:59:41

64QAM

256QAM

Middle Channel

Middle Channel

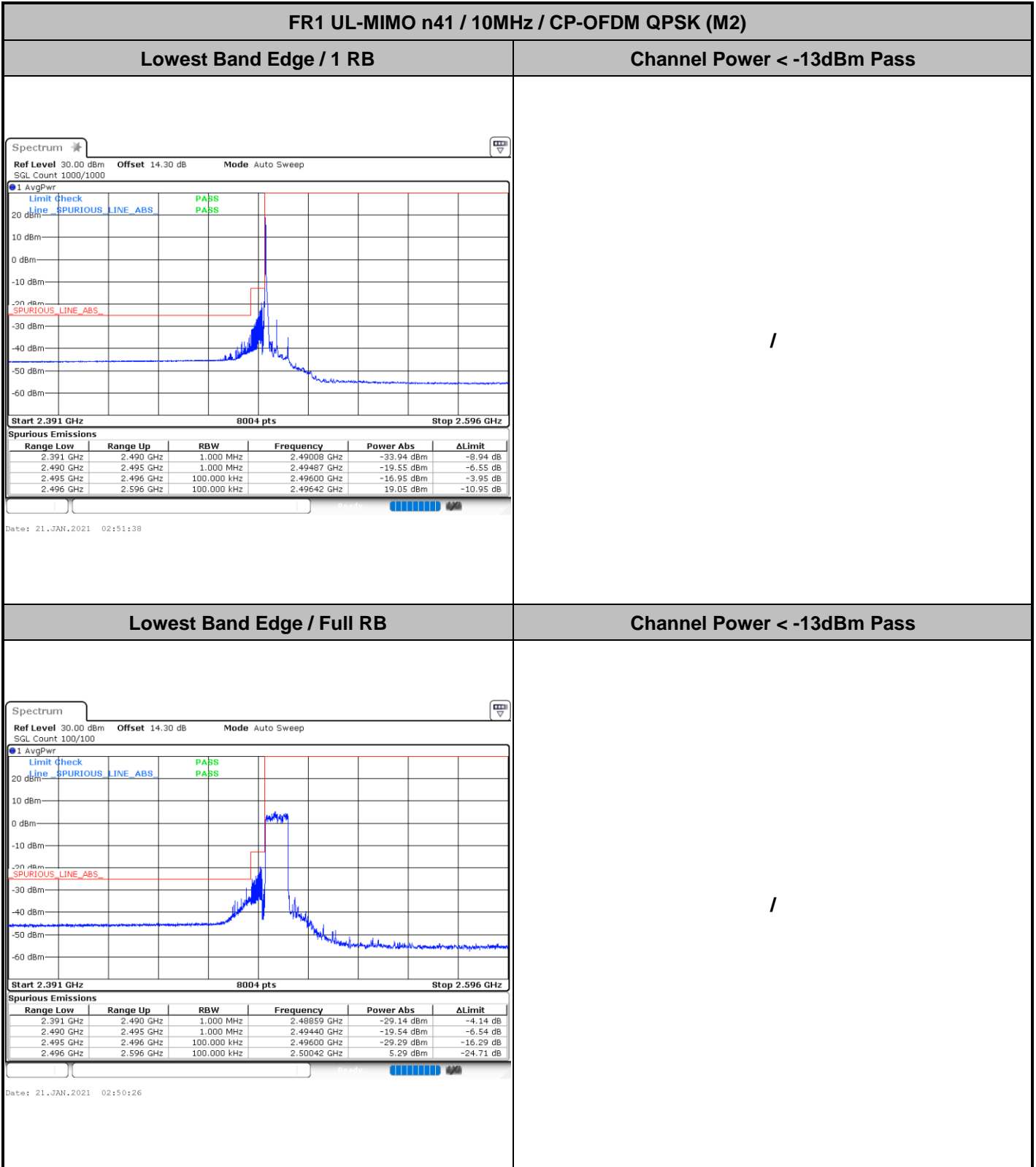


Date: 21.JAN.2021 04:00:14

Date: 21.JAN.2021 04:00:18



Conducted Band Edge

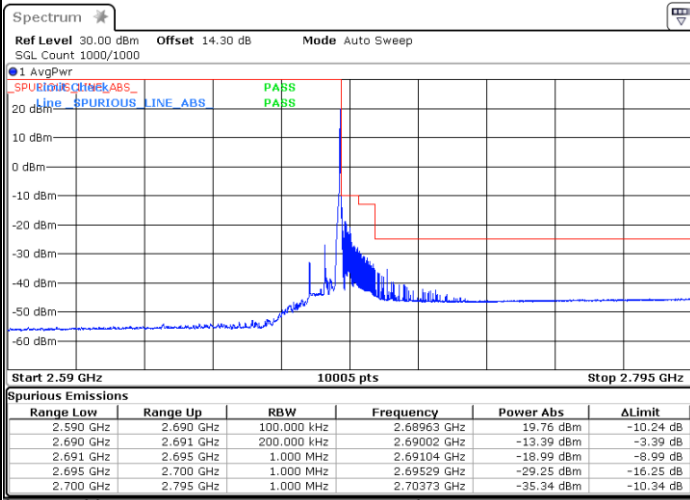




FR1 UL-MIMO n41 / 10MHz / CP-OFDM QPSK (M2)

Highest Band Edge / 1 RB

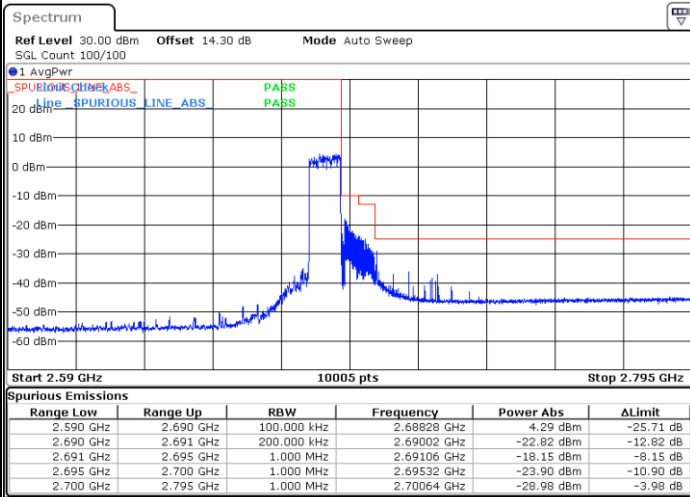
Channel Power < -10dBm Pass



Date: 21.JAN.2021 03:10:11

Highest Band Edge / Full RB

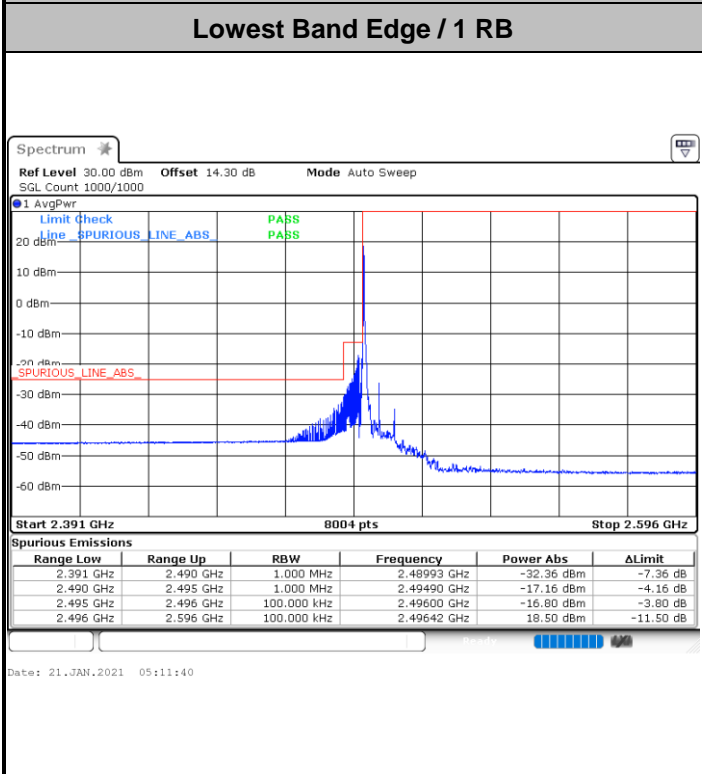
Channel Power < -10dBm Pass



Date: 21.JAN.2021 03:10:33

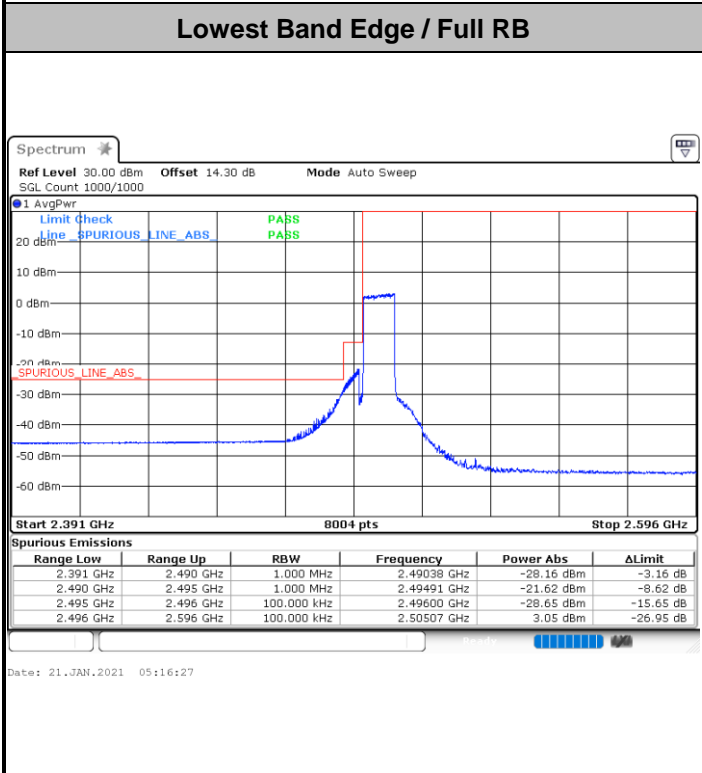


FR1 UL-MIMO n41 / 10MHz / CP-OFDM QPSK (M)



Channel Power < -13dBm Pass

/



Channel Power < -13dBm Pass

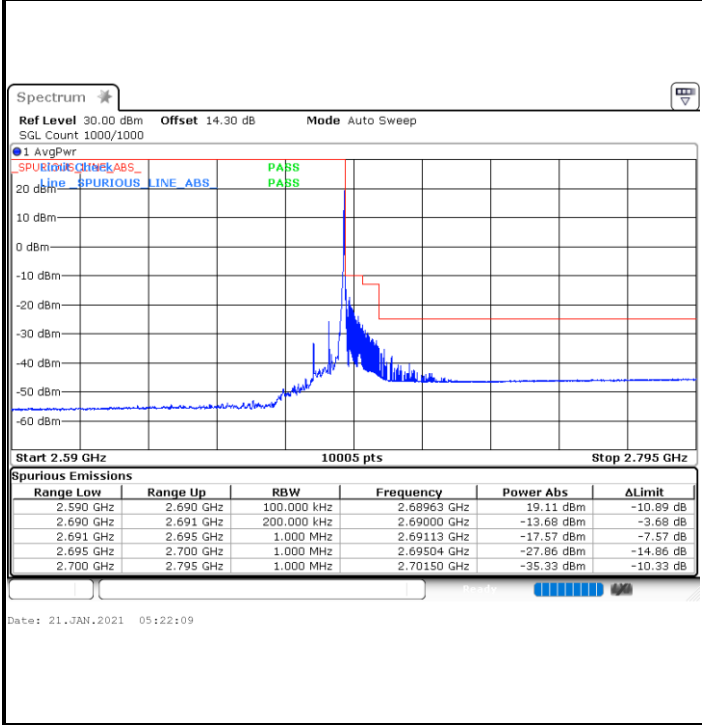
/



FR1 UL-MIMO n41 / 10MHz / CP-OFDM QPSK (M)

Highest Band Edge / 1 RB

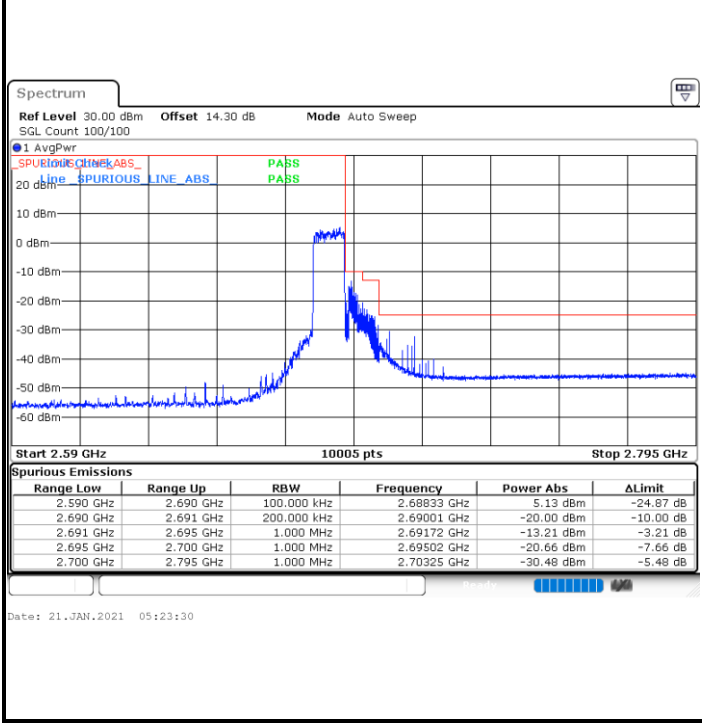
Channel Power < -13dBm Pass



/

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



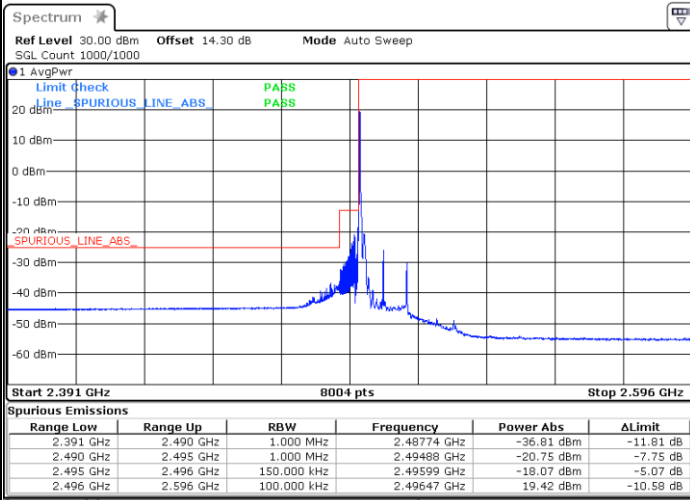
/



FR1 UL-MIMO n41 / 15MHz / CP-OFDM QPSK (M2)

Lowest Band Edge / 1 RB

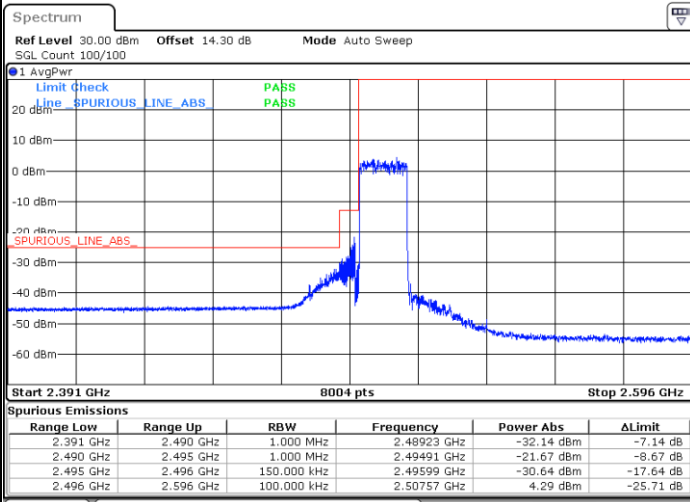
Channel Power < -13dBm Pass



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.391 GHz	2.490 GHz	1.000 MHz	2.48774 GHz	-36.81 dBm	-11.81 dB
2.490 GHz	2.495 GHz	1.000 MHz	2.49488 GHz	-20.75 dBm	-7.75 dB
2.495 GHz	2.496 GHz	150.000 kHz	2.49599 GHz	-18.07 dBm	-5.07 dB
2.496 GHz	2.596 GHz	100.000 kHz	2.49647 GHz	19.42 dBm	-10.58 dB

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.391 GHz	2.490 GHz	1.000 MHz	2.48923 GHz	-32.14 dBm	-7.14 dB
2.490 GHz	2.495 GHz	1.000 MHz	2.49491 GHz	-21.67 dBm	-8.67 dB
2.495 GHz	2.496 GHz	150.000 kHz	2.49599 GHz	-30.64 dBm	-17.64 dB
2.496 GHz	2.596 GHz	100.000 kHz	2.50757 GHz	4.29 dBm	-25.71 dB