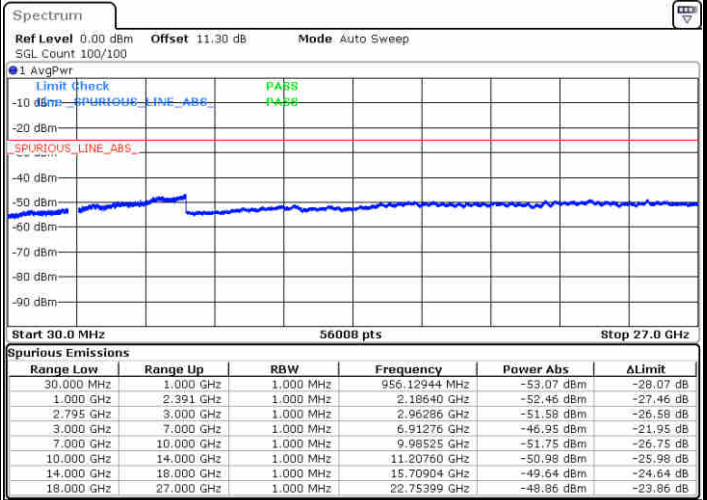
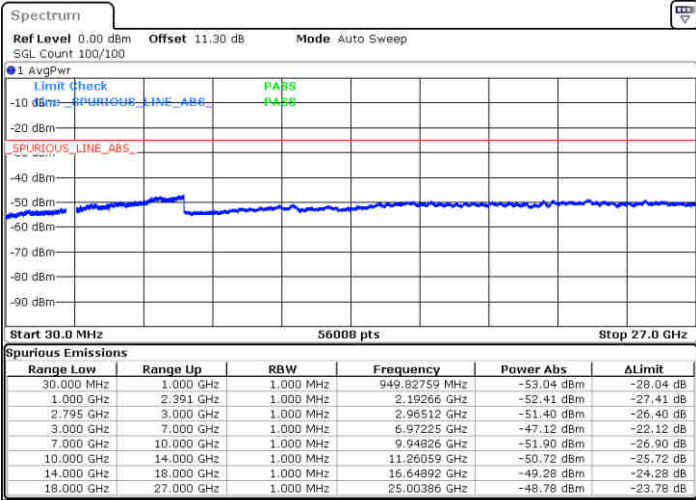




FR1 n41 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

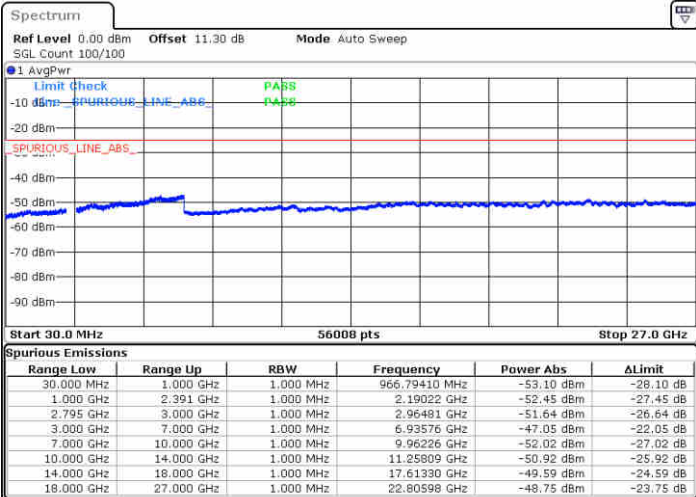
Middle Channel / 1RB



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

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

Highest Channel / 1RB



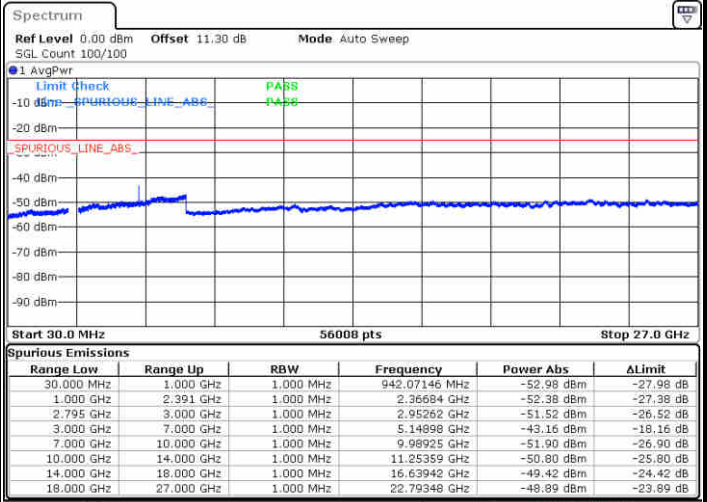
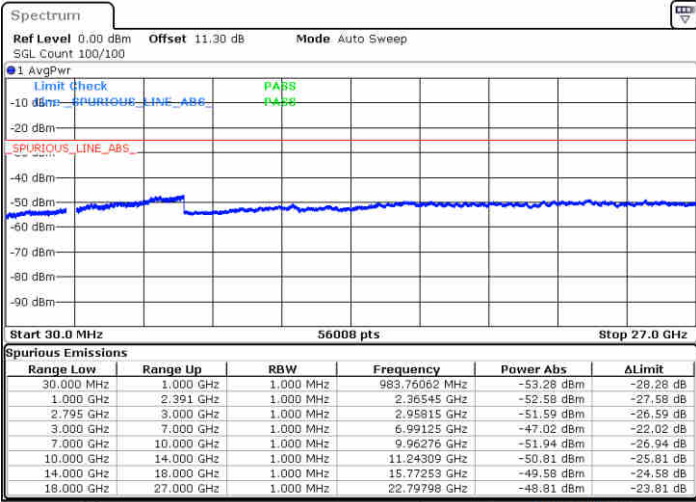
Date: 22.JAN.2021 00:23:55



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

Lowest Channel / 1RB

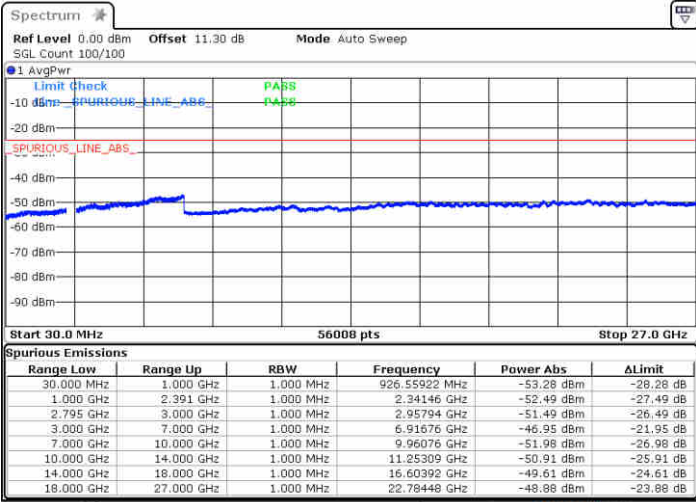
Middle Channel / 1RB



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

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

Highest Channel / 1RB



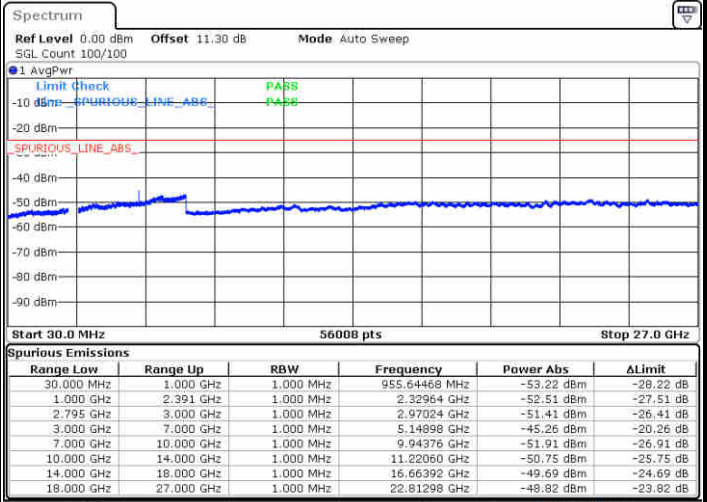
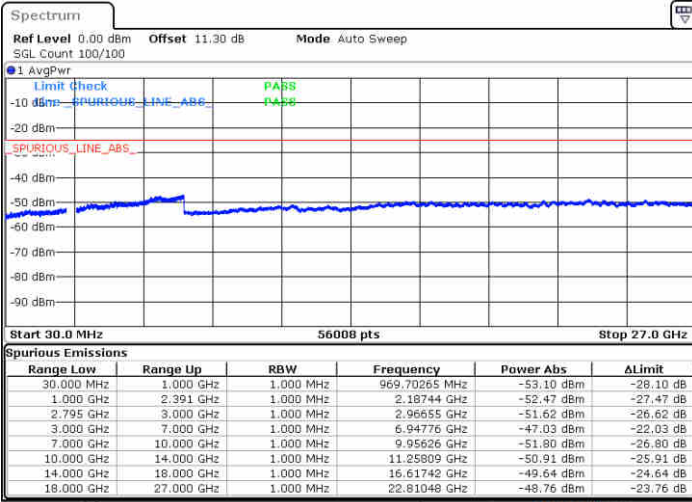
Date: 21.JAN.2021 23:20:07



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

Lowest Channel / 1RB

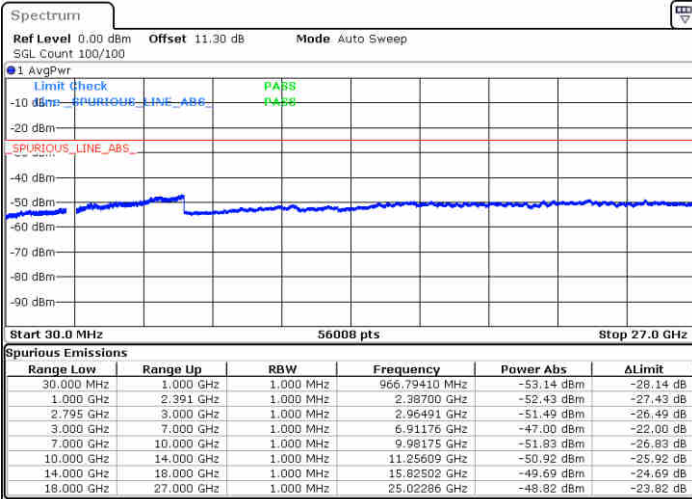
Middle Channel / 1RB



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

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

Highest Channel / 1RB



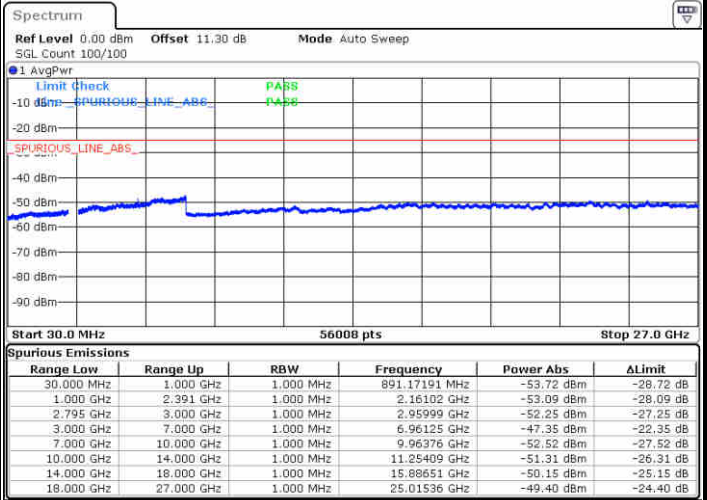
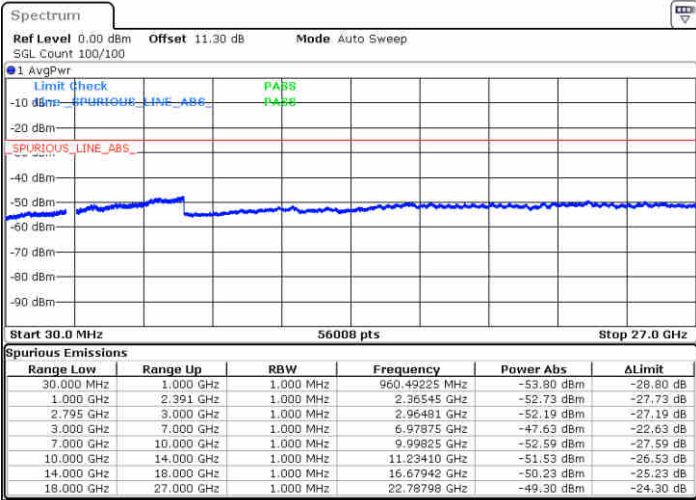
Date: 21.JAN.2021 23:21:07



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

Lowest Channel / 1RB

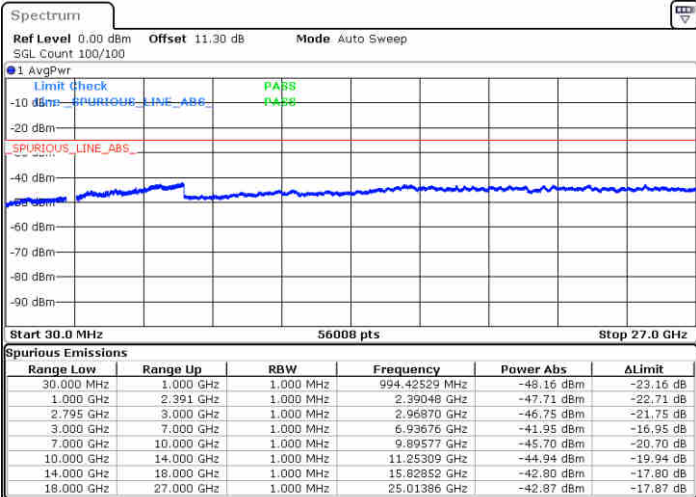
Middle Channel / 1RB



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

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

Highest Channel / 1RB



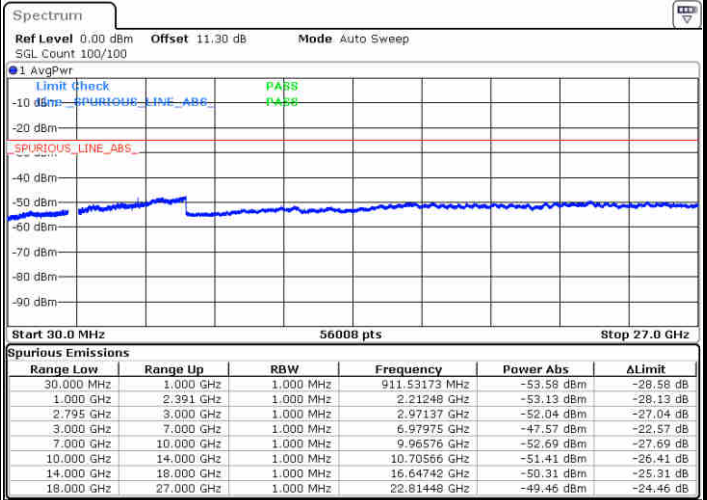
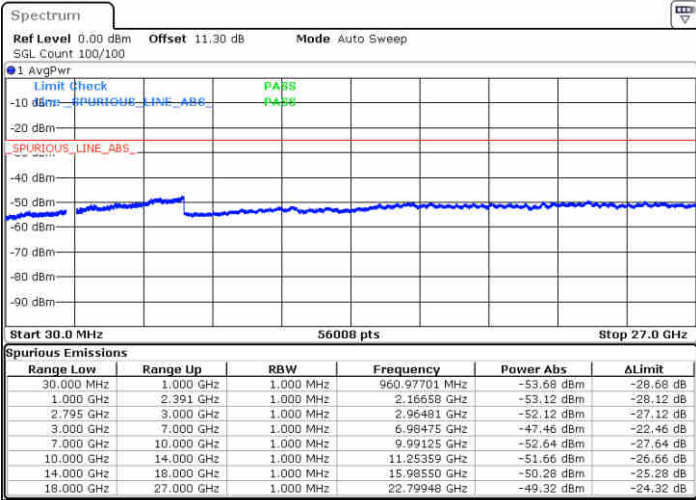
Date: 21.JAN.2021 17:48:09



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

Lowest Channel / 1RB

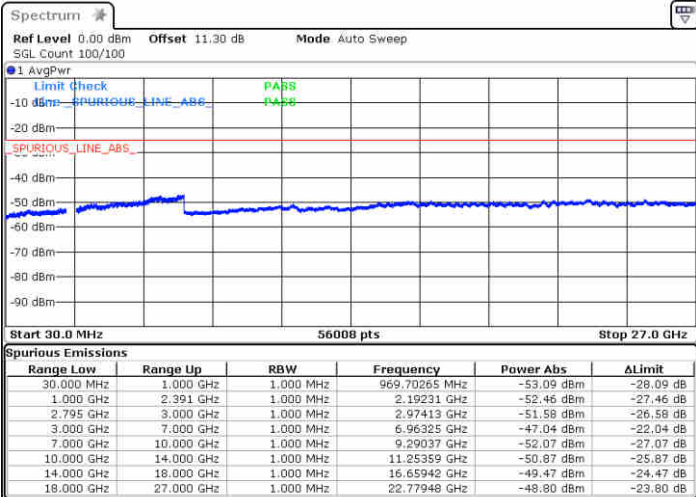
Middle Channel / 1RB



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

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			



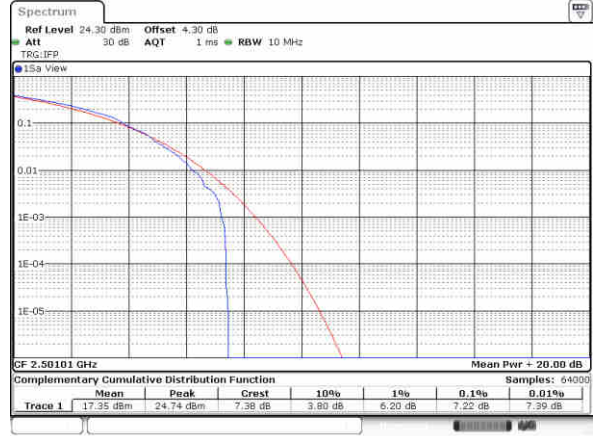
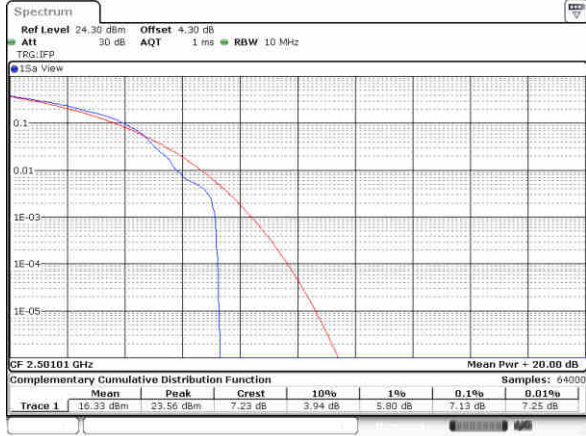
FR1 UL-MIMO n41 / 20MHz / CP-OFDM

QPSK(M2)

QPSK(M)

Lowest Channel / 1RB

Lowest Channel / 1RB

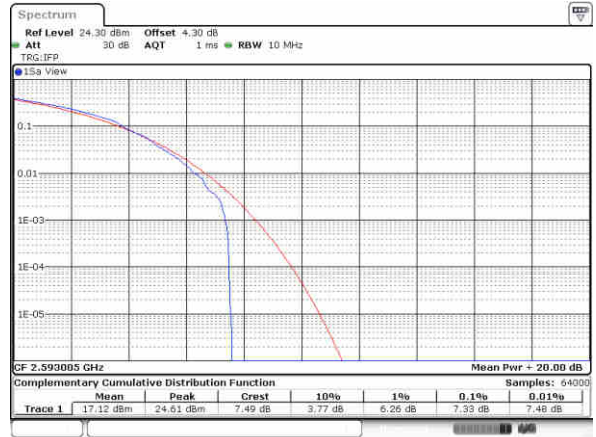
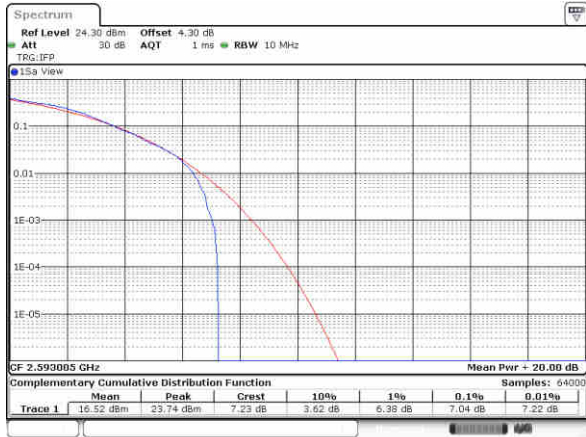


Date: 22_JAN_2021 03:24:37

Date: 22_JAN_2021 03:48:05

Middle Channel / 1 RB

Middle Channel / 1 RB

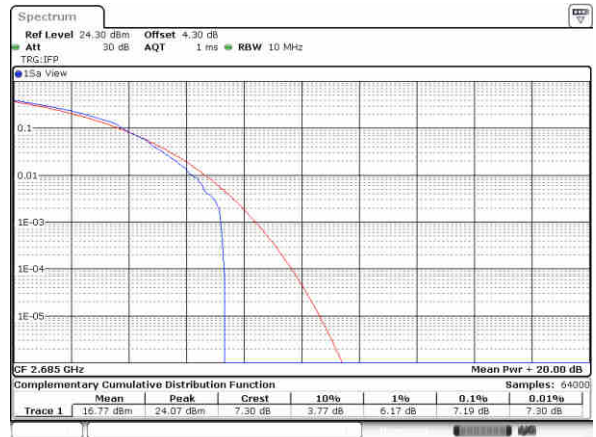
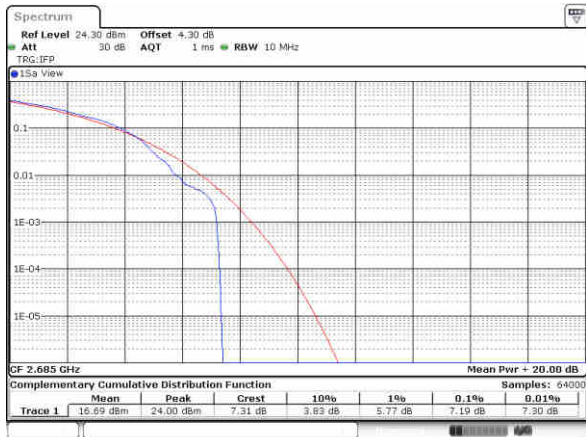


Date: 22_JAN_2021 03:23:19

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



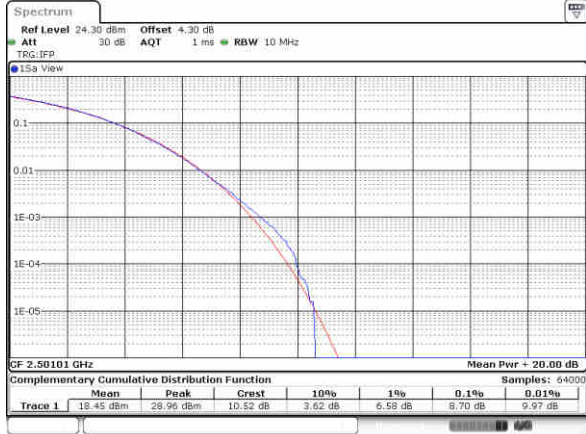
FR1 UL-MIMO n41 / 20MHz / CP-OFDM

QPSK(M2)

QPSK(M)

Lowest Channel / Full RB

Lowest Channel / Full RB

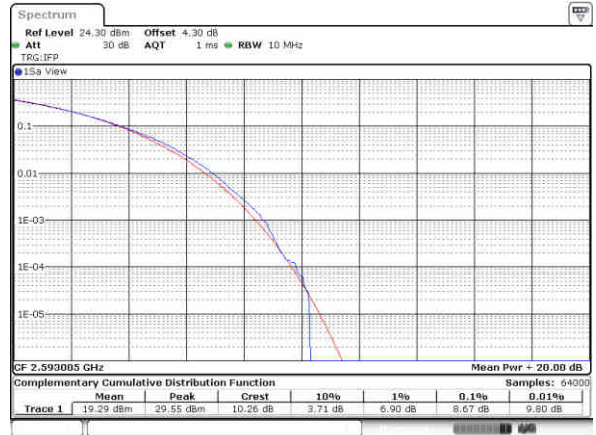
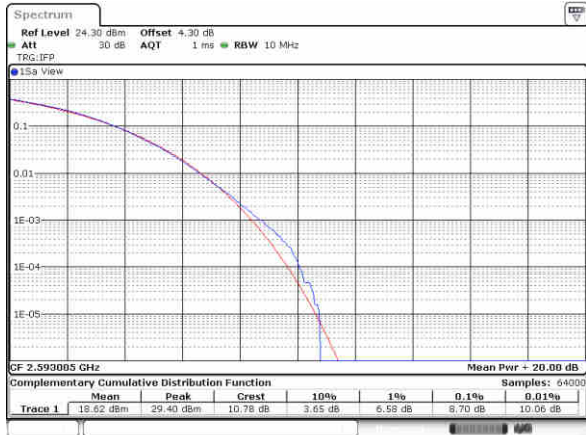


Date: 22_JAN_2021 03:12:13

Date: 22_JAN_2021 03:19:26

Middle Channel / Full RB

Middle Channel / Full RB

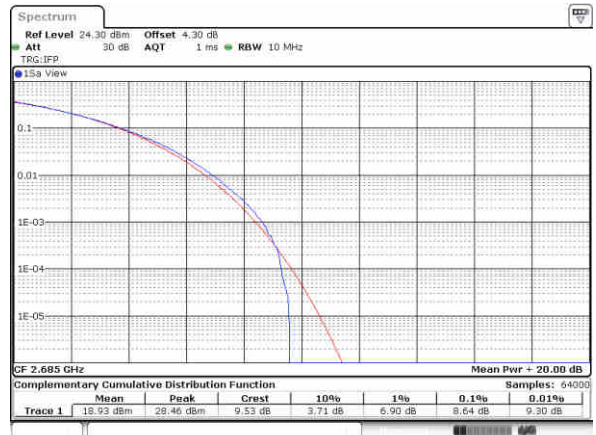
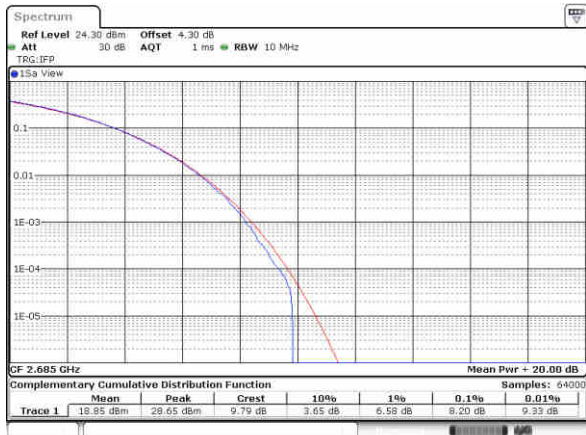


Date: 22_JAN_2021 03:21:36

Date: 22_JAN_2021 03:25:17

Highest Channel / Full RB

Highest Channel / Full RB



Date: 22_JAN_2021 03:27:09

Date: 22_JAN_2021 03:44:42



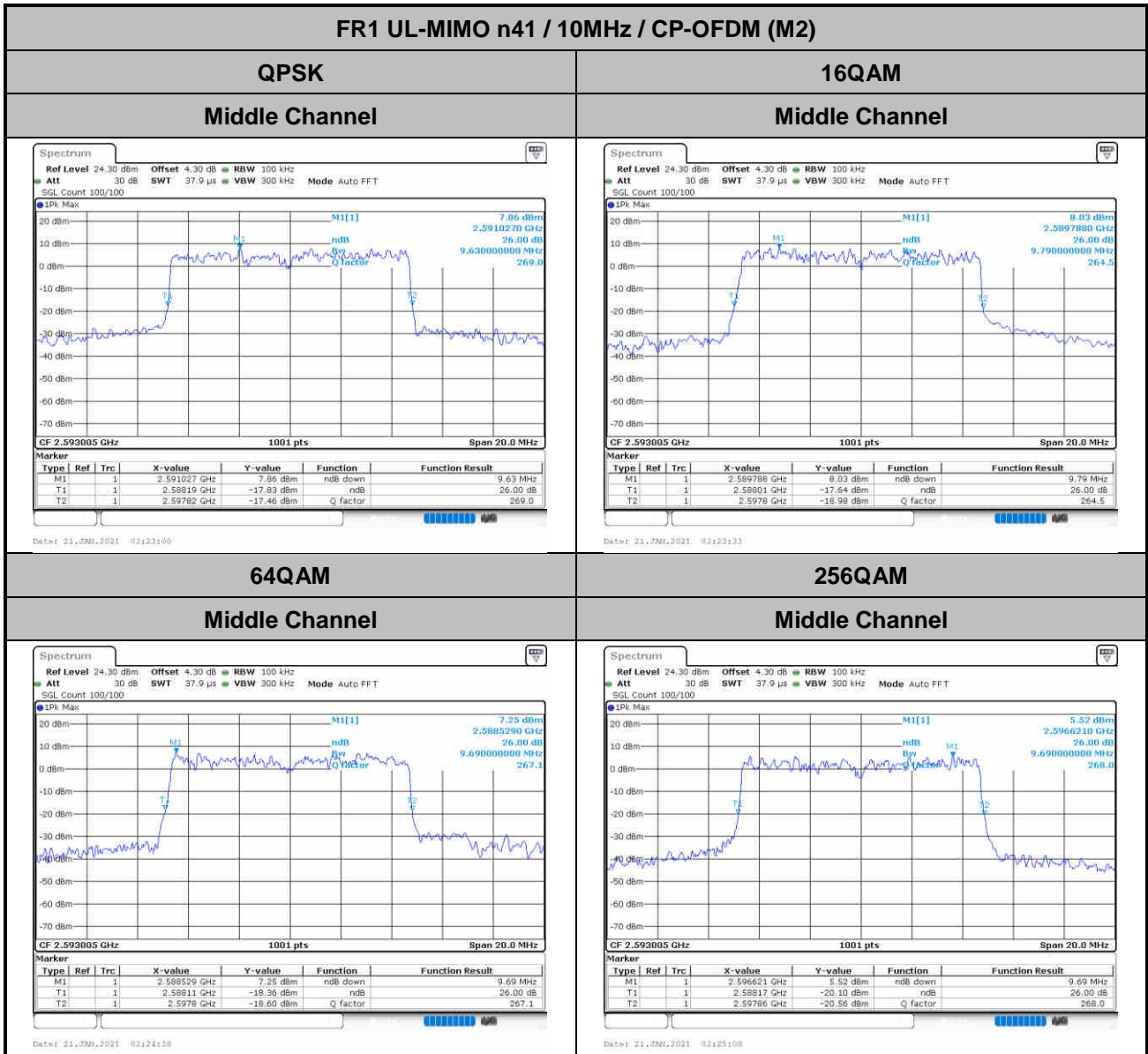
26dB Bandwidth

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





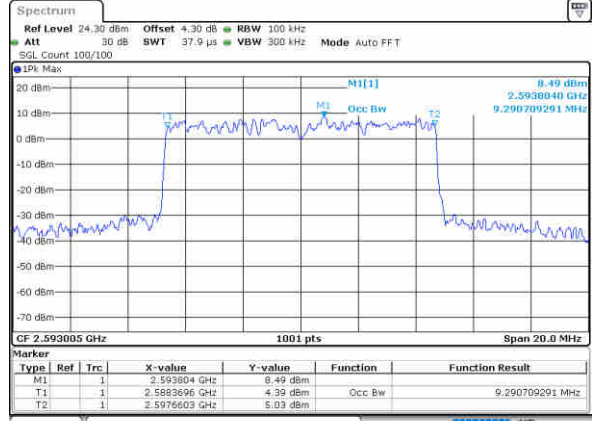
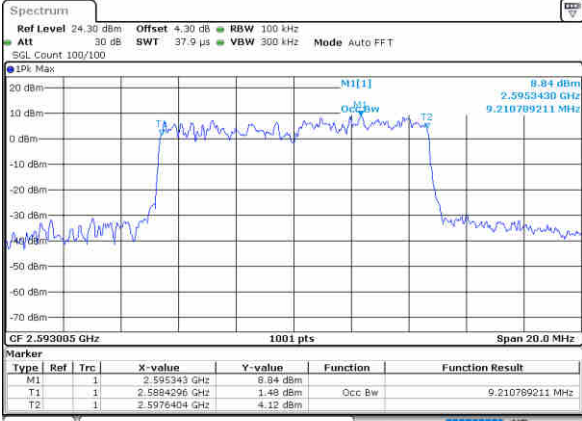
FR1 UL-MIMO n41 / 10MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 21_JAN_2021 @4158103

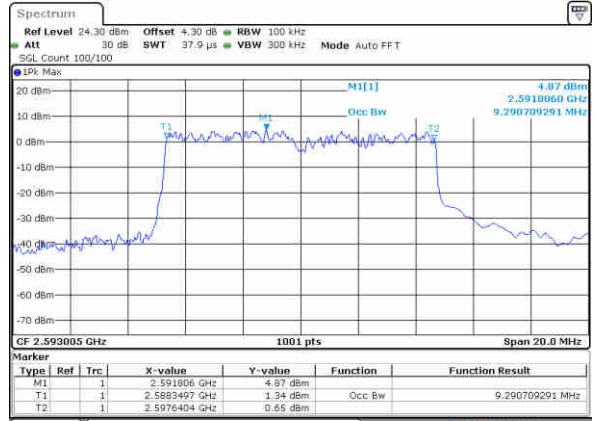
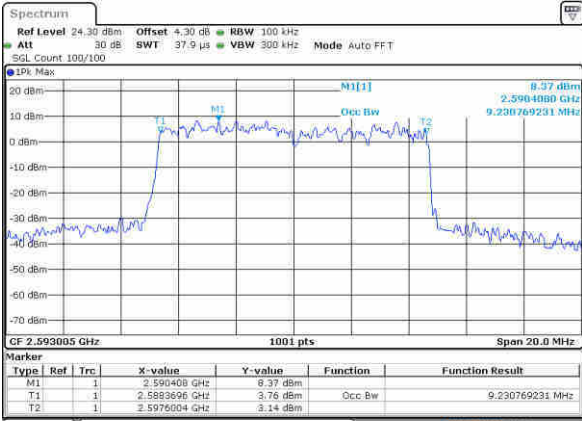
Date: 21_JAN_2021 @4157541

64QAM

256QAM

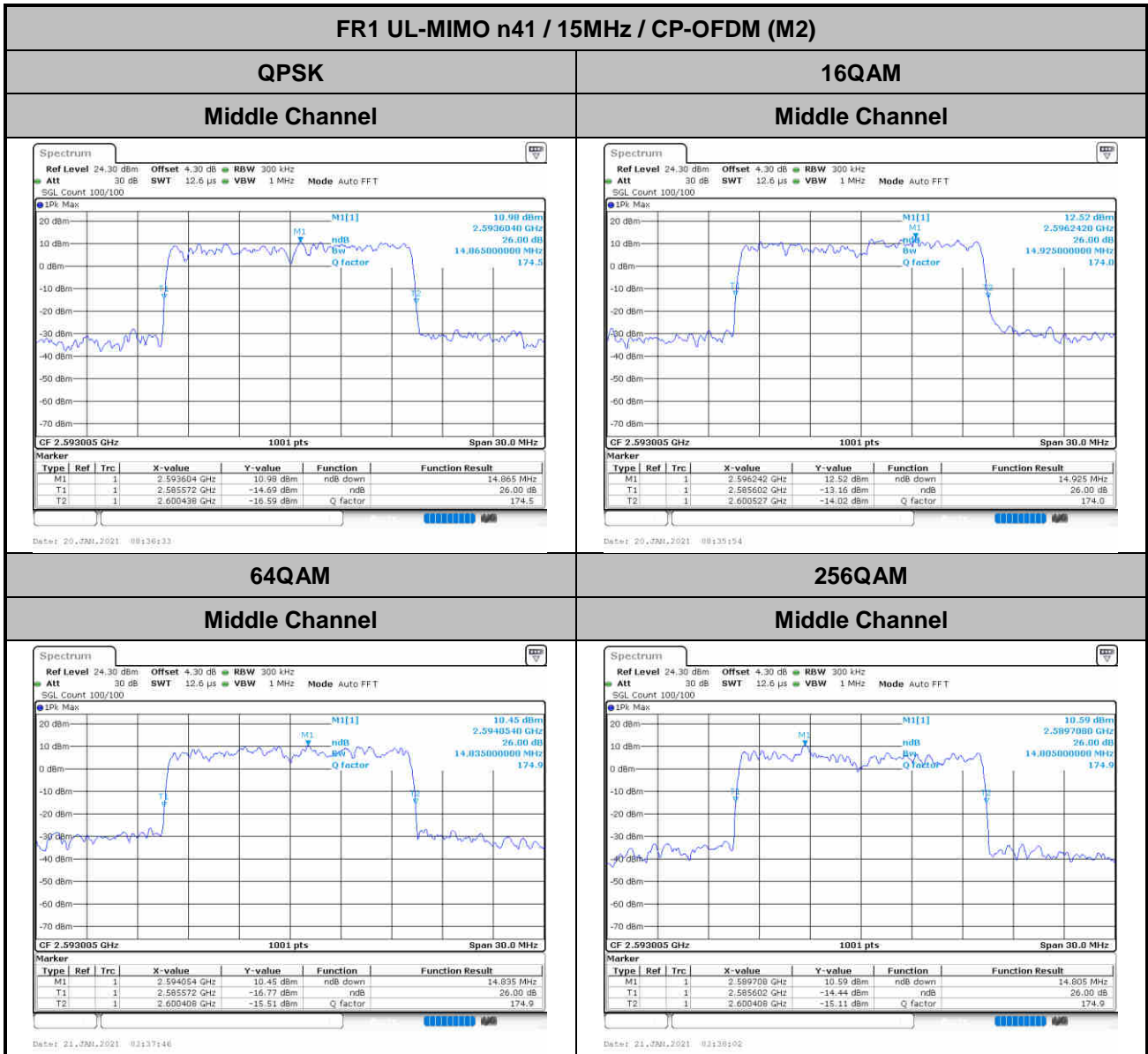
Middle Channel

Middle Channel



Date: 21_JAN_2021 @4158118

Date: 21_JAN_2021 @4158145





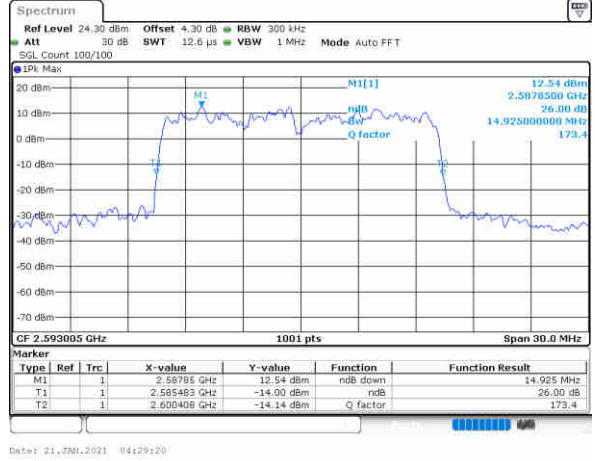
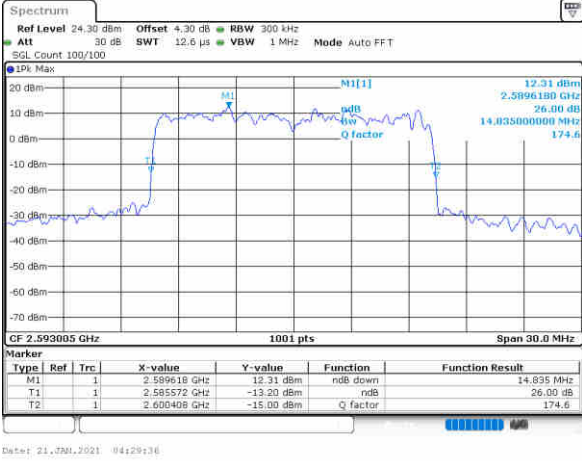
FR1 UL-MIMO n41 / 15MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel

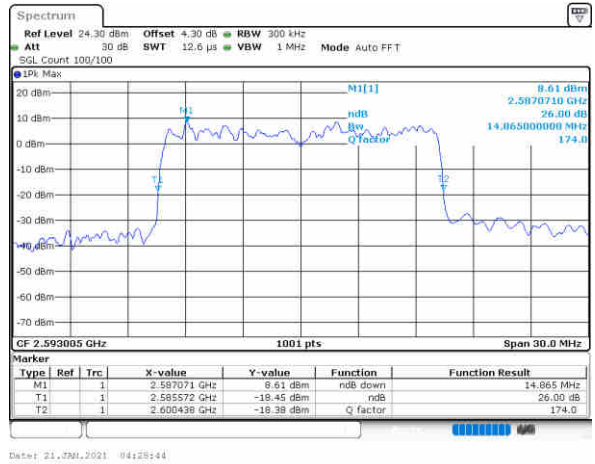
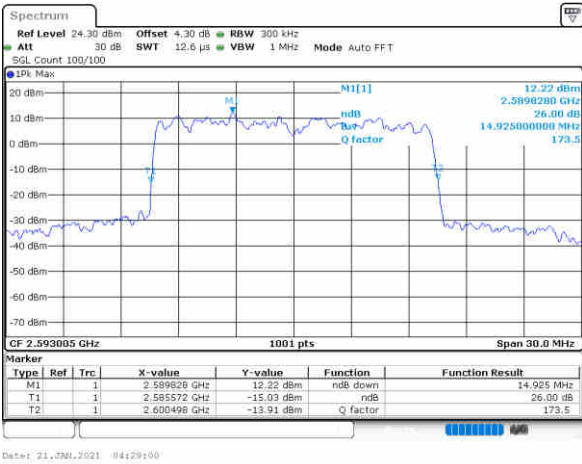


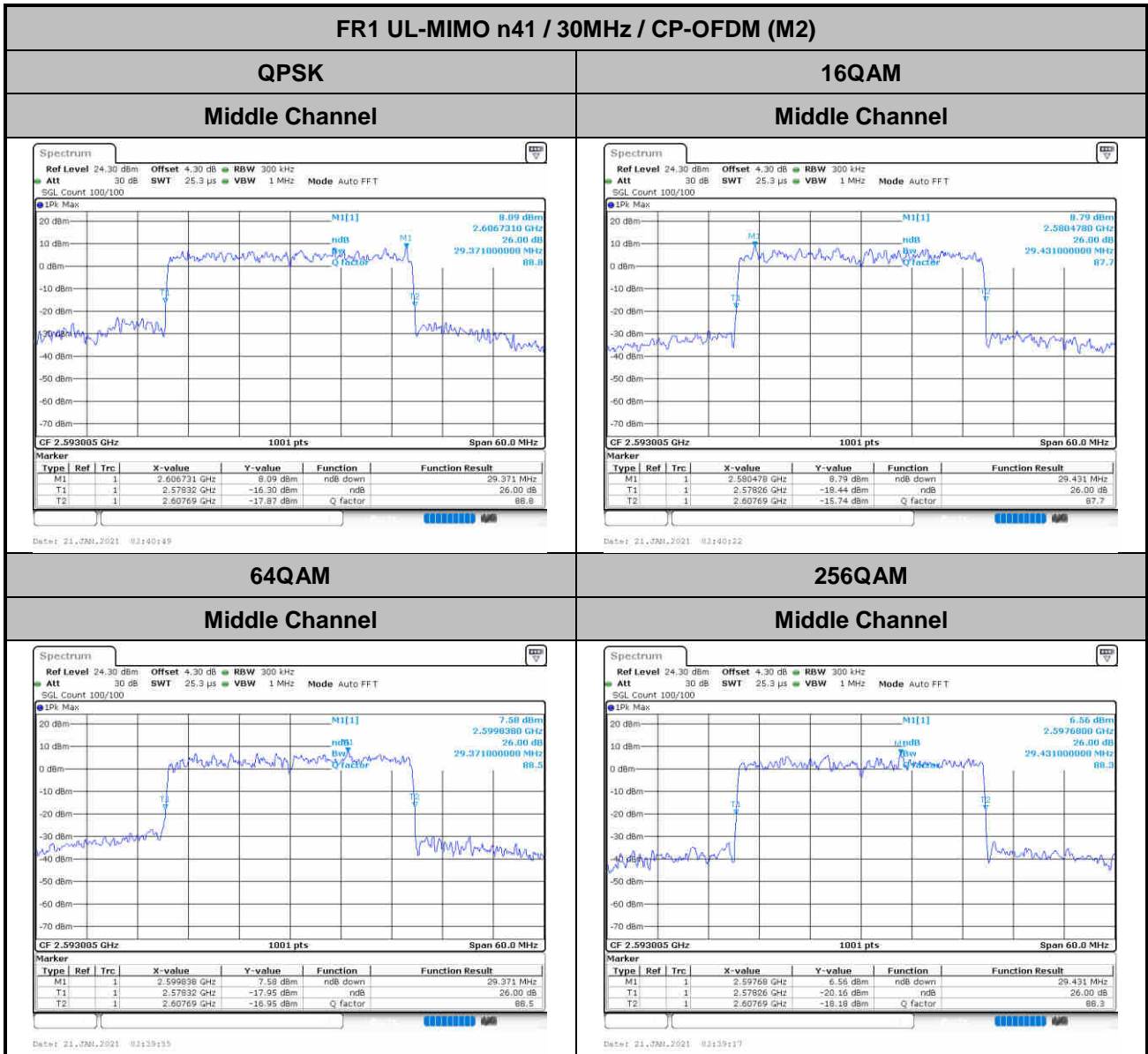
64QAM

256QAM

Middle Channel

Middle Channel







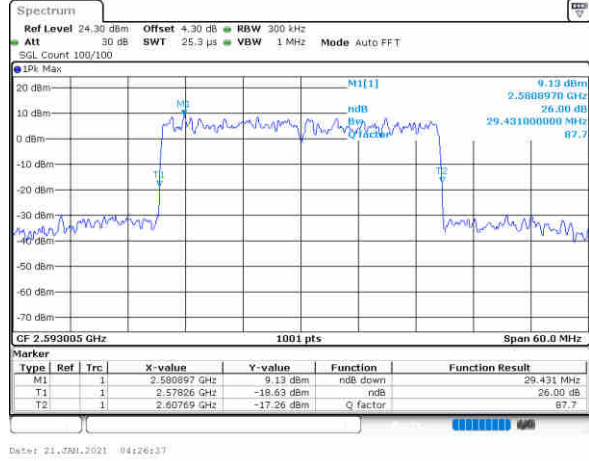
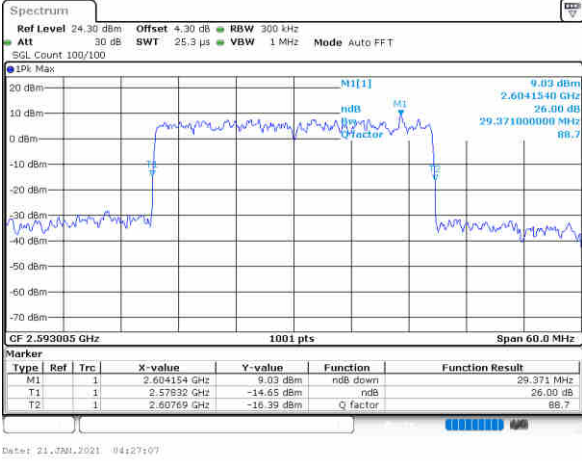
FR1 UL-MIMO n41 / 30MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 21_JAN_2021 @4127107

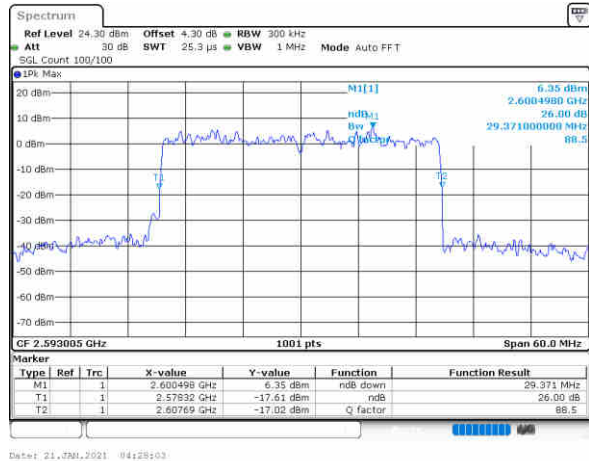
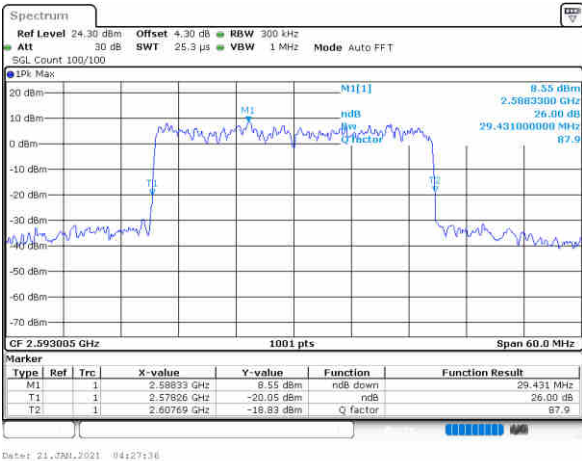
Date: 21_JAN_2021 @4126137

64QAM

256QAM

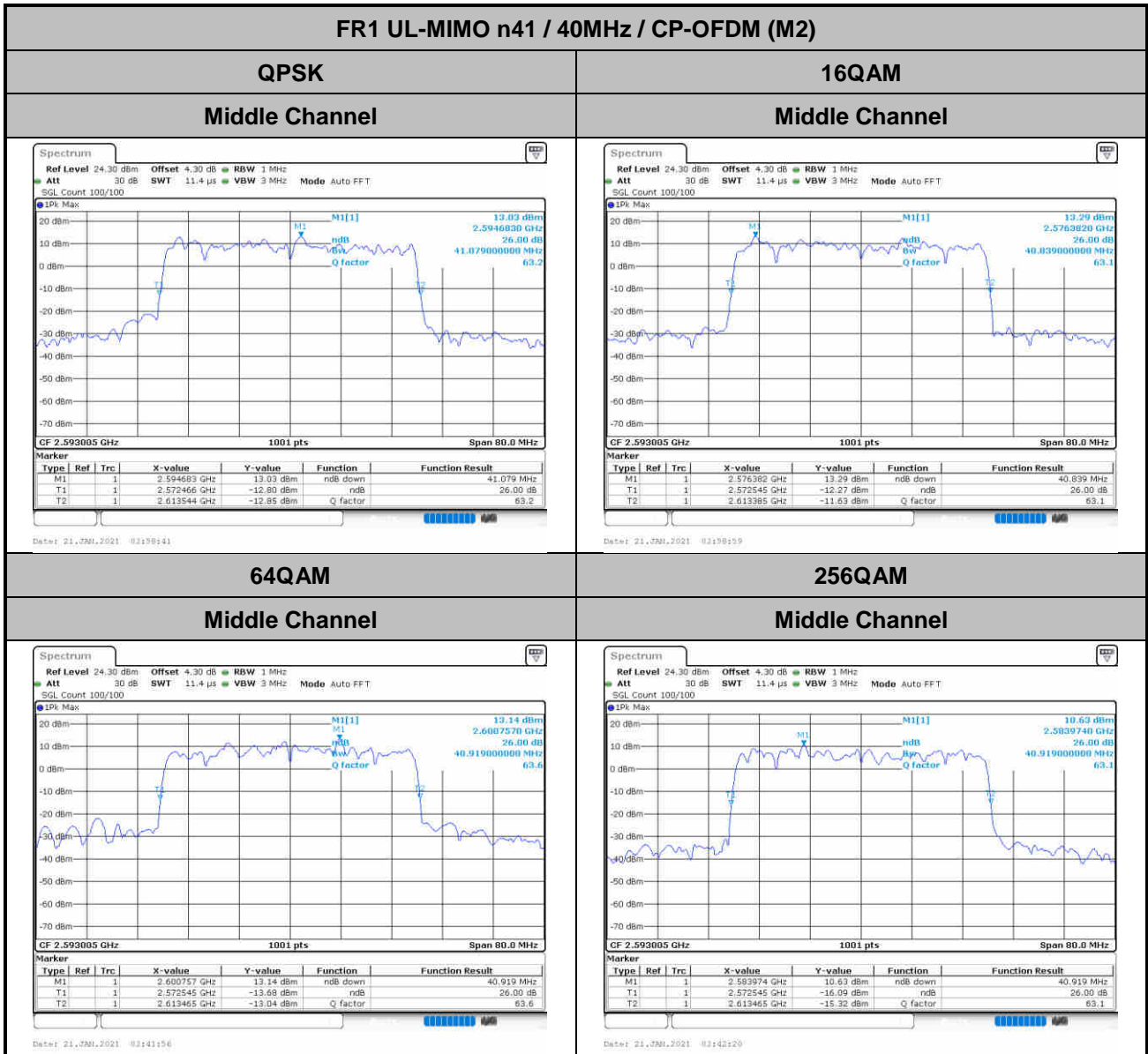
Middle Channel

Middle Channel



Date: 21_JAN_2021 @4127136

Date: 21_JAN_2021 @4128103





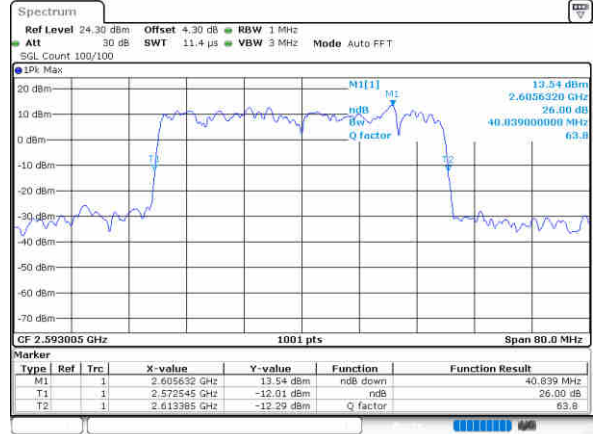
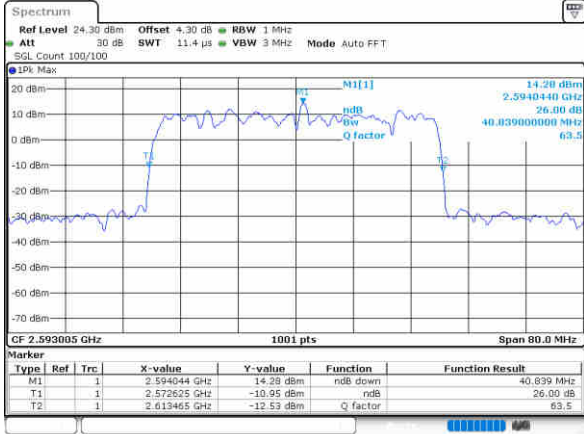
FR1 UL-MIMO n41 / 40MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 21_JAN_2021 @4109102

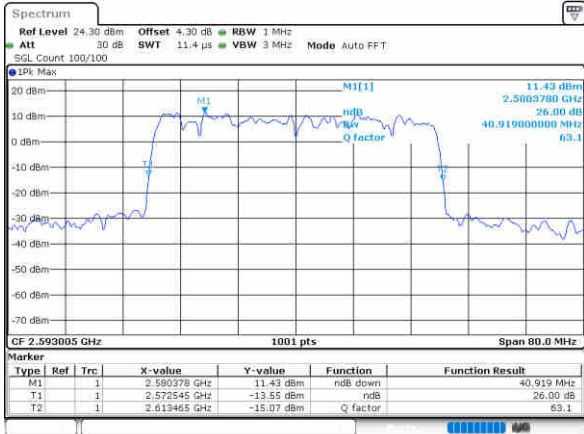
Date: 21_JAN_2021 @2159146

64QAM

256QAM

Middle Channel

Middle Channel



Date: 21_JAN_2021 @4109122

Date: 21_JAN_2021 @4109144



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



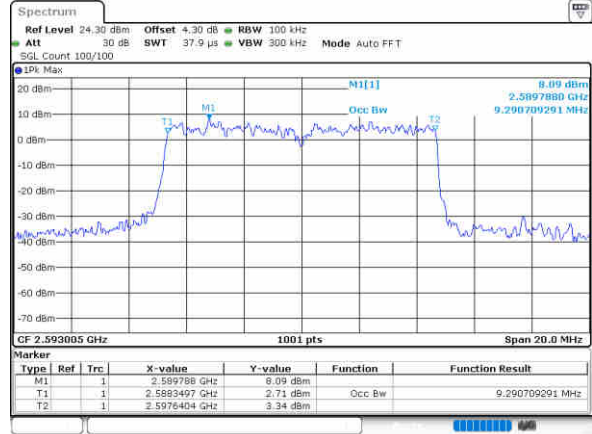
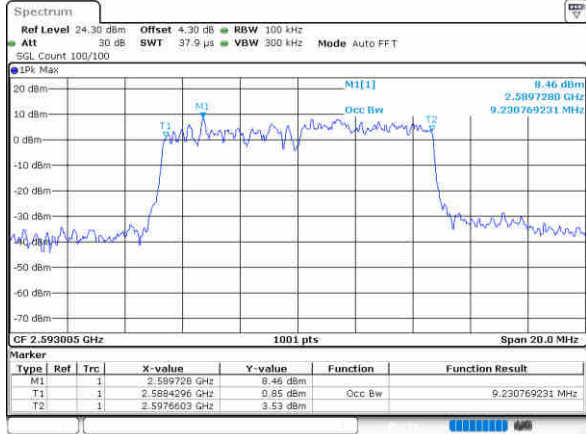
FR1 UL-MIMO n41 / 10MHz / CP-OFDM (M2)

QPSK

16QAM

Middle Channel

Middle Channel



Date: 21_JAN_2021 03:22:52

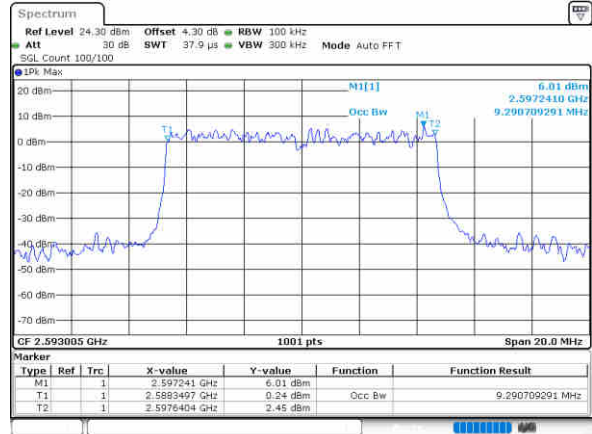
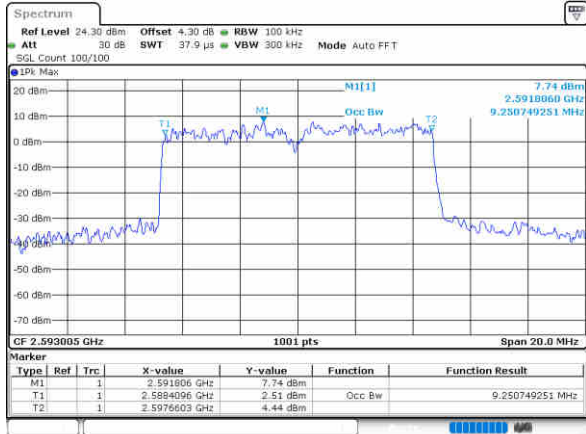
Date: 21_JAN_2021 03:23:29

64QAM

256QAM

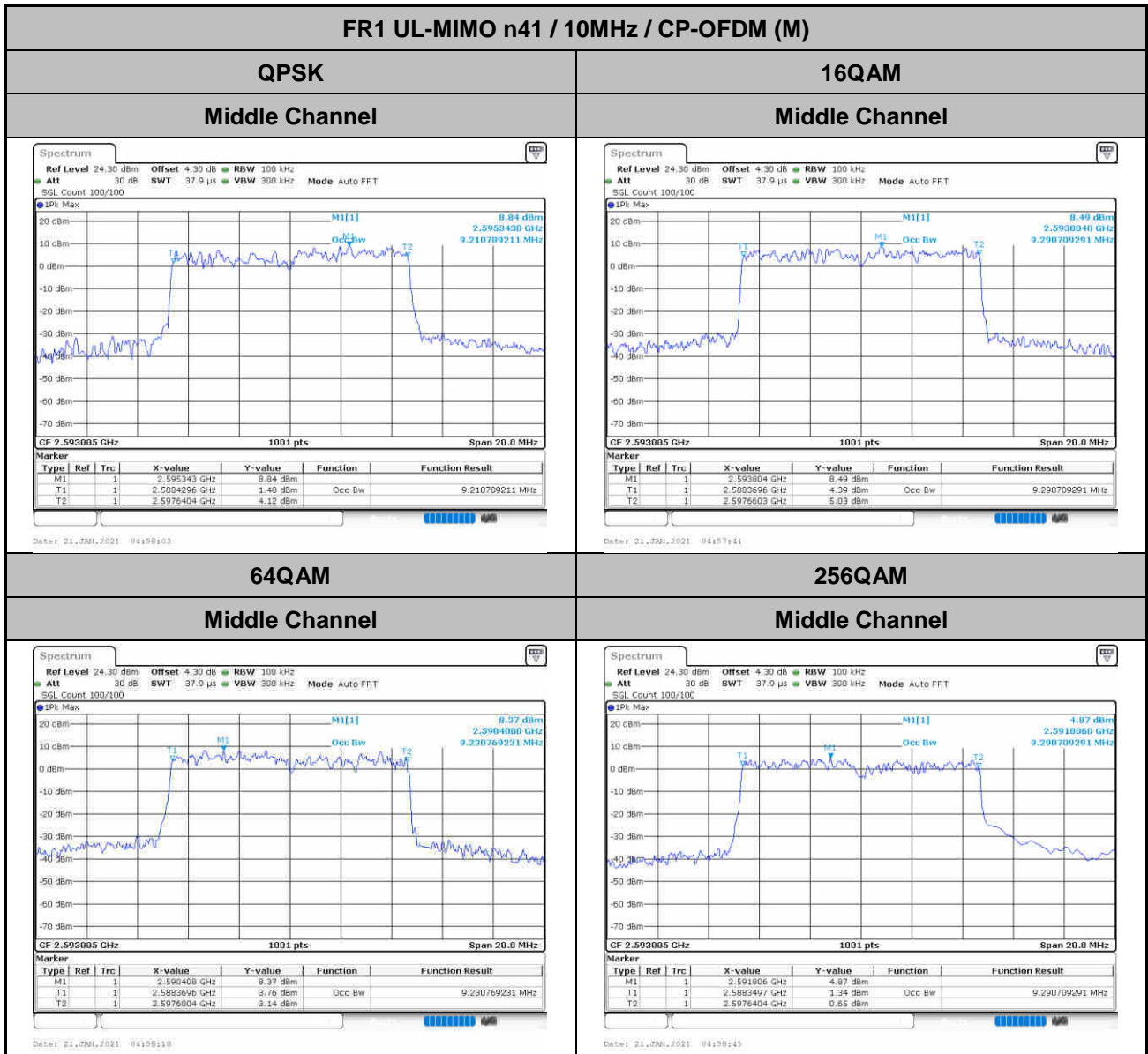
Middle Channel

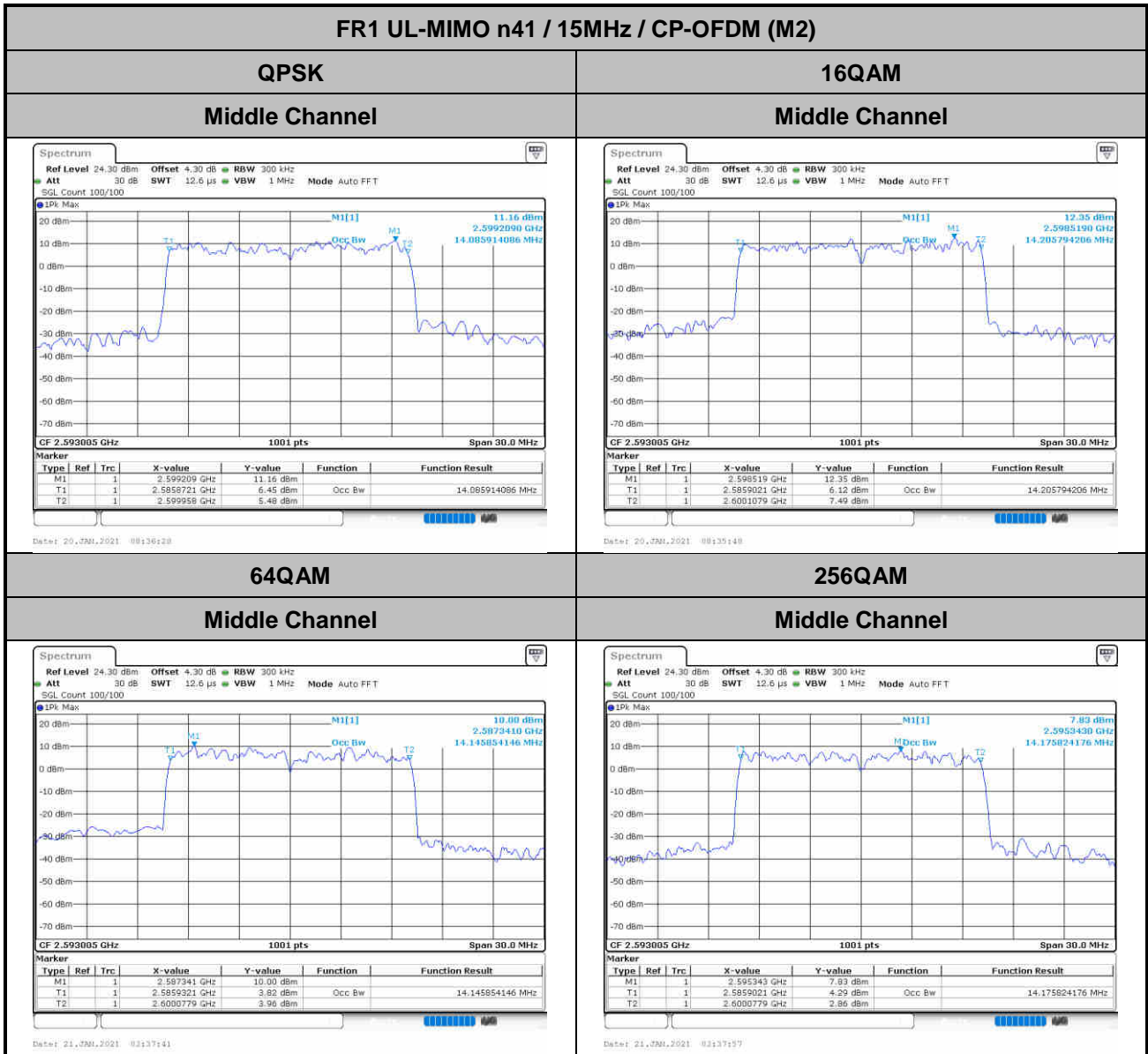
Middle Channel

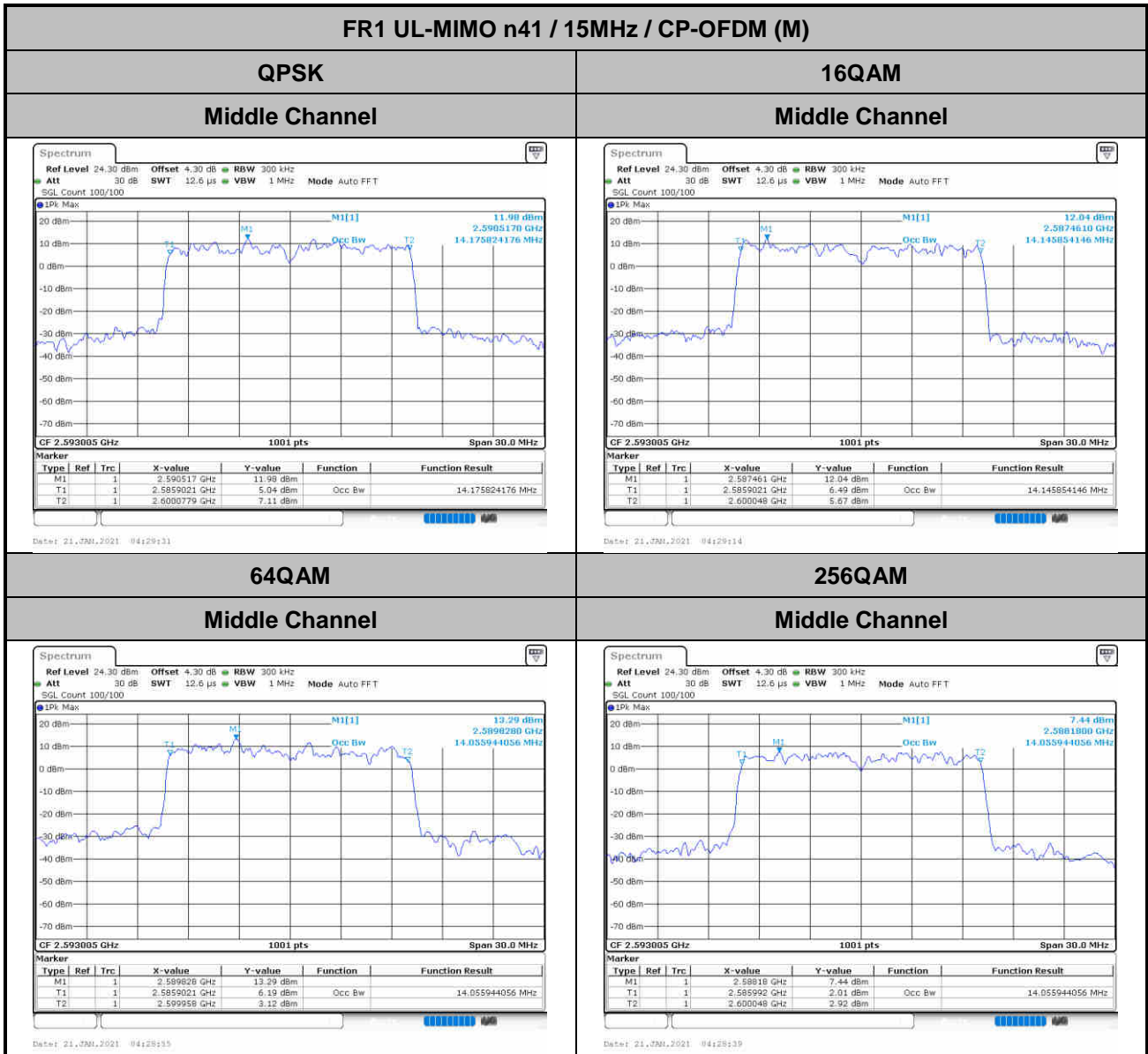


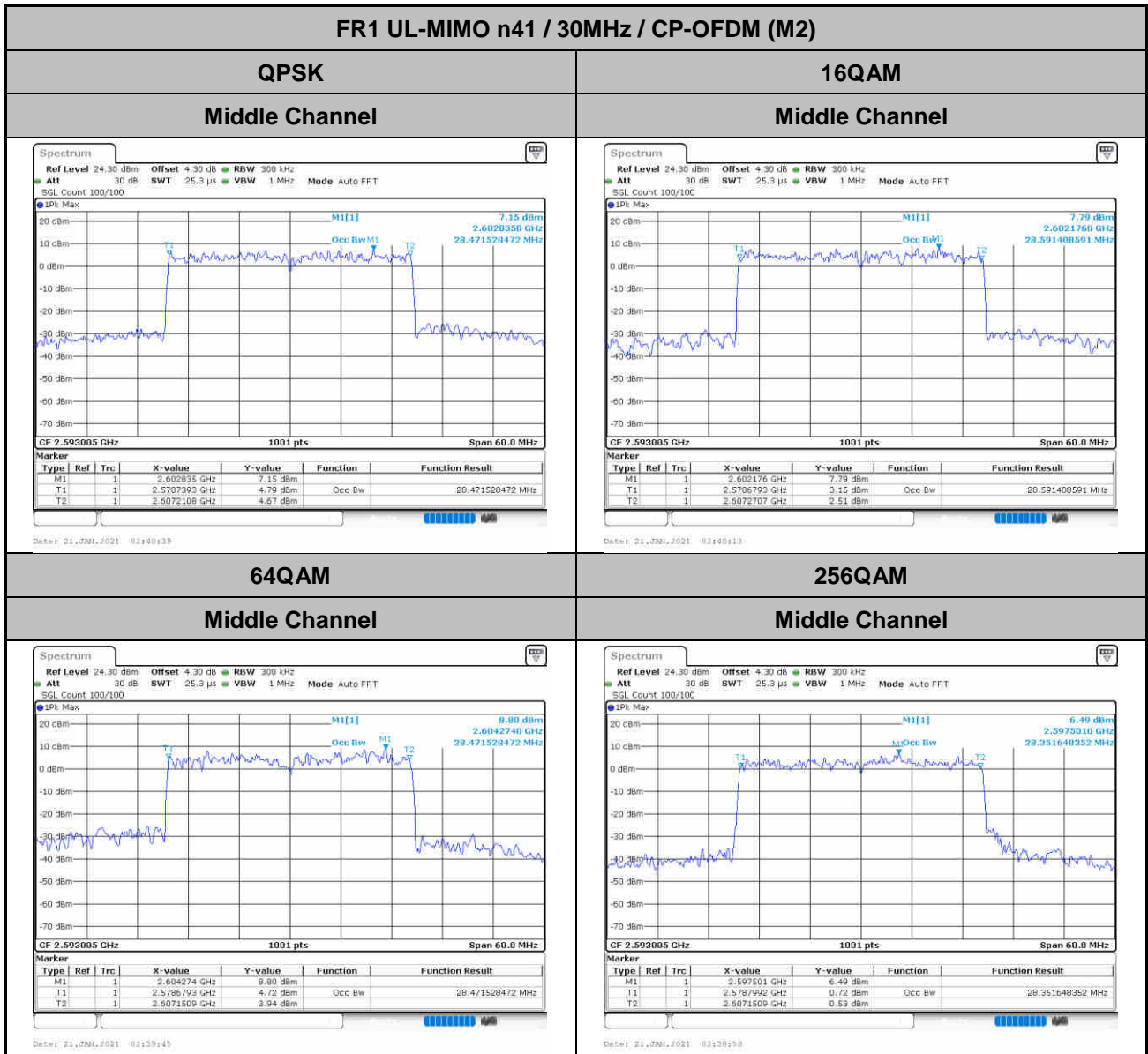
Date: 21_JAN_2021 03:24:26

Date: 21_JAN_2021 03:25:00











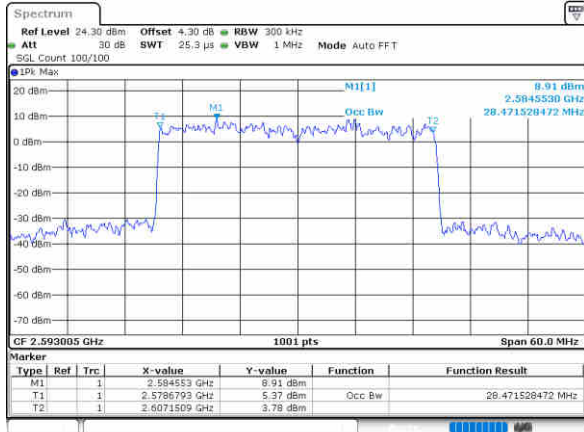
FR1 UL-MIMO n41 / 30MHz / CP-OFDM (M)

QPSK

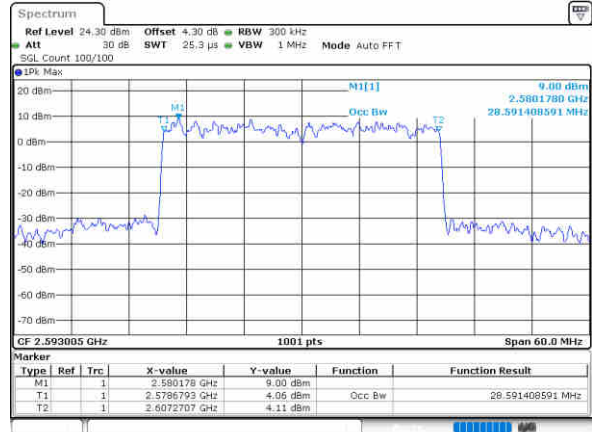
16QAM

Middle Channel

Middle Channel



Date: 21_JAN_2021 @4126155



Date: 21_JAN_2021 @4126126

64QAM

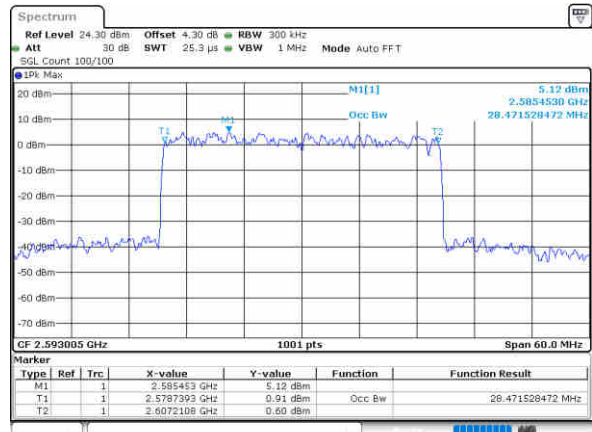
256QAM

Middle Channel

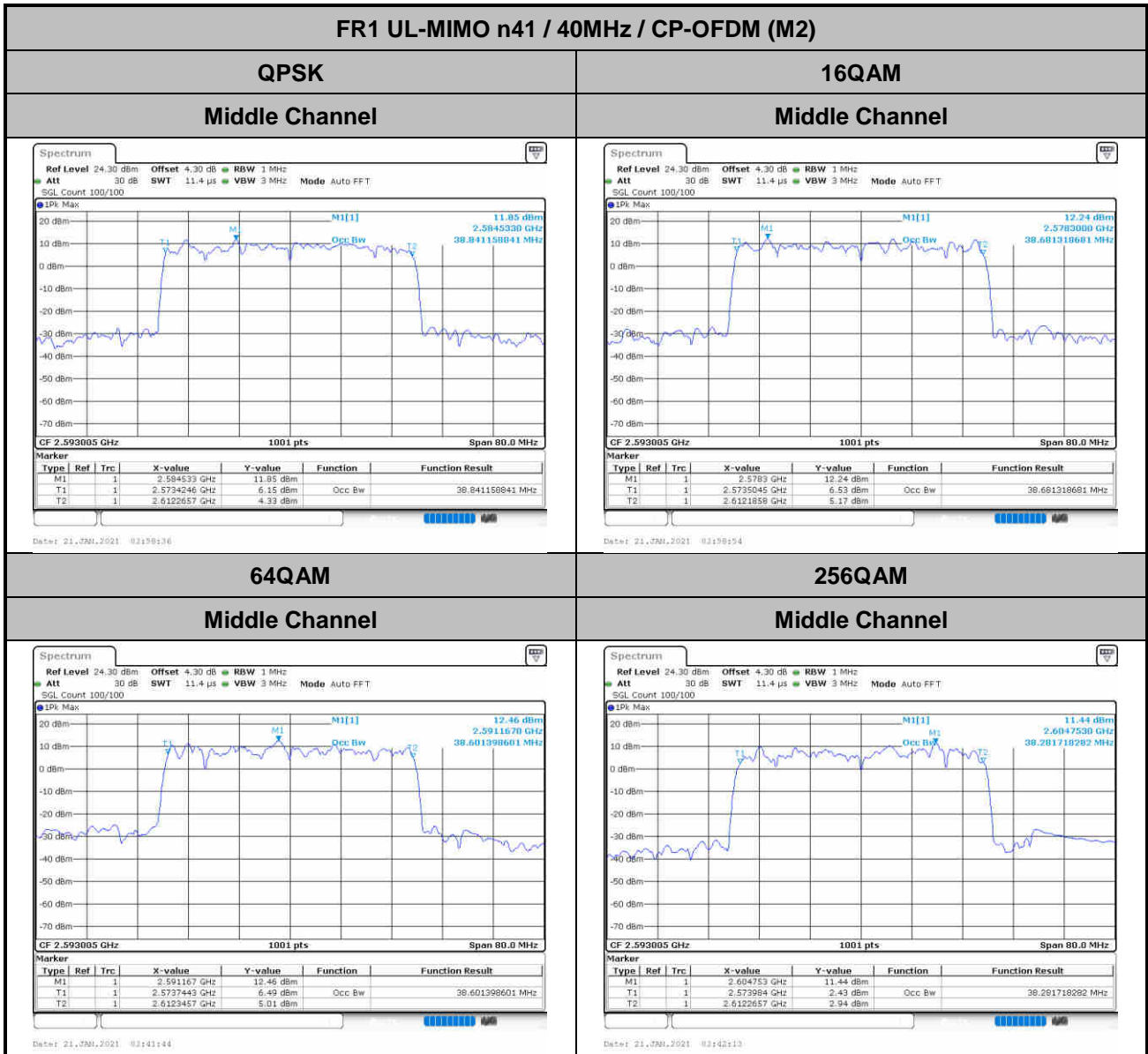
Middle Channel

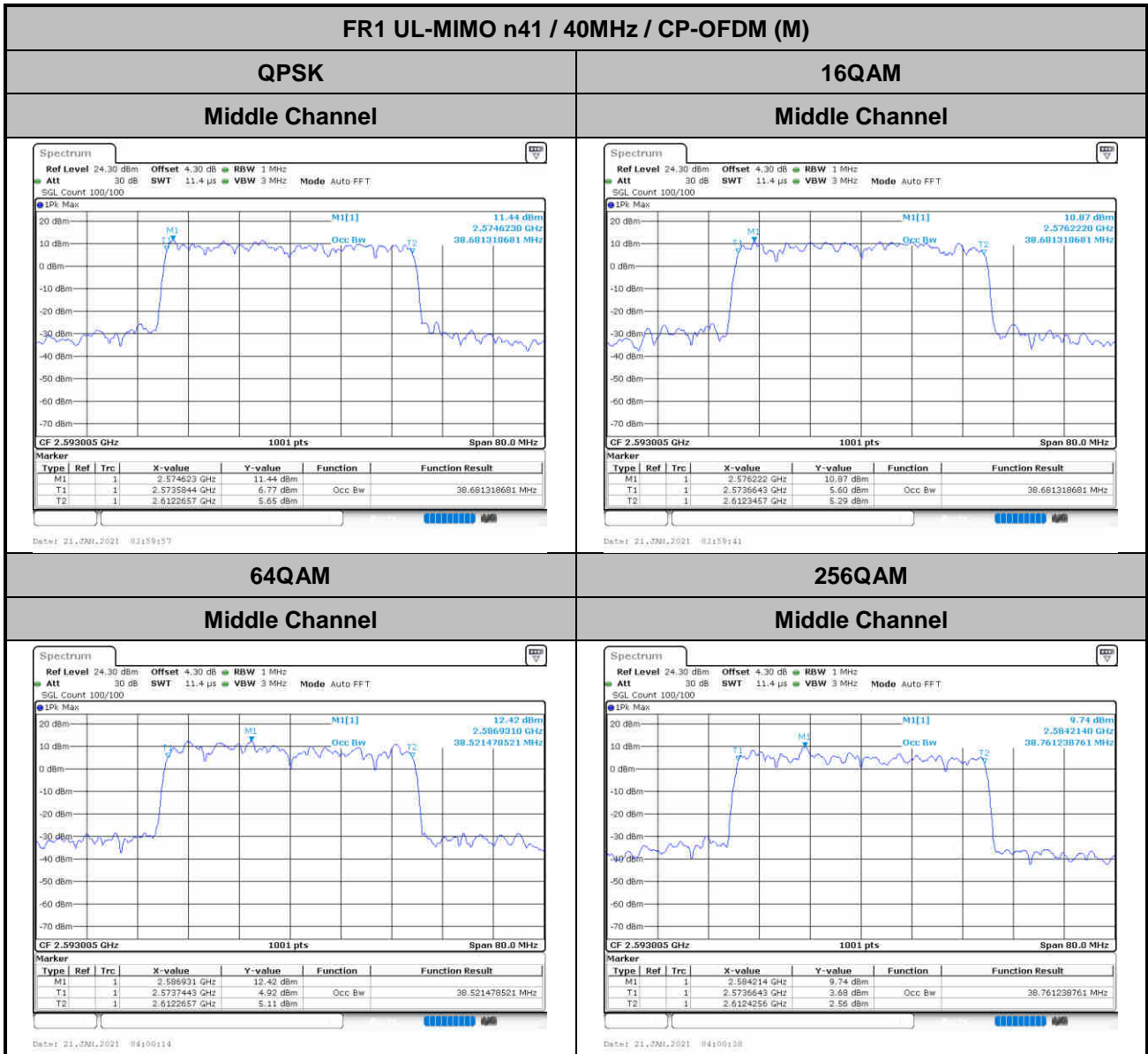


Date: 21_JAN_2021 @4127126



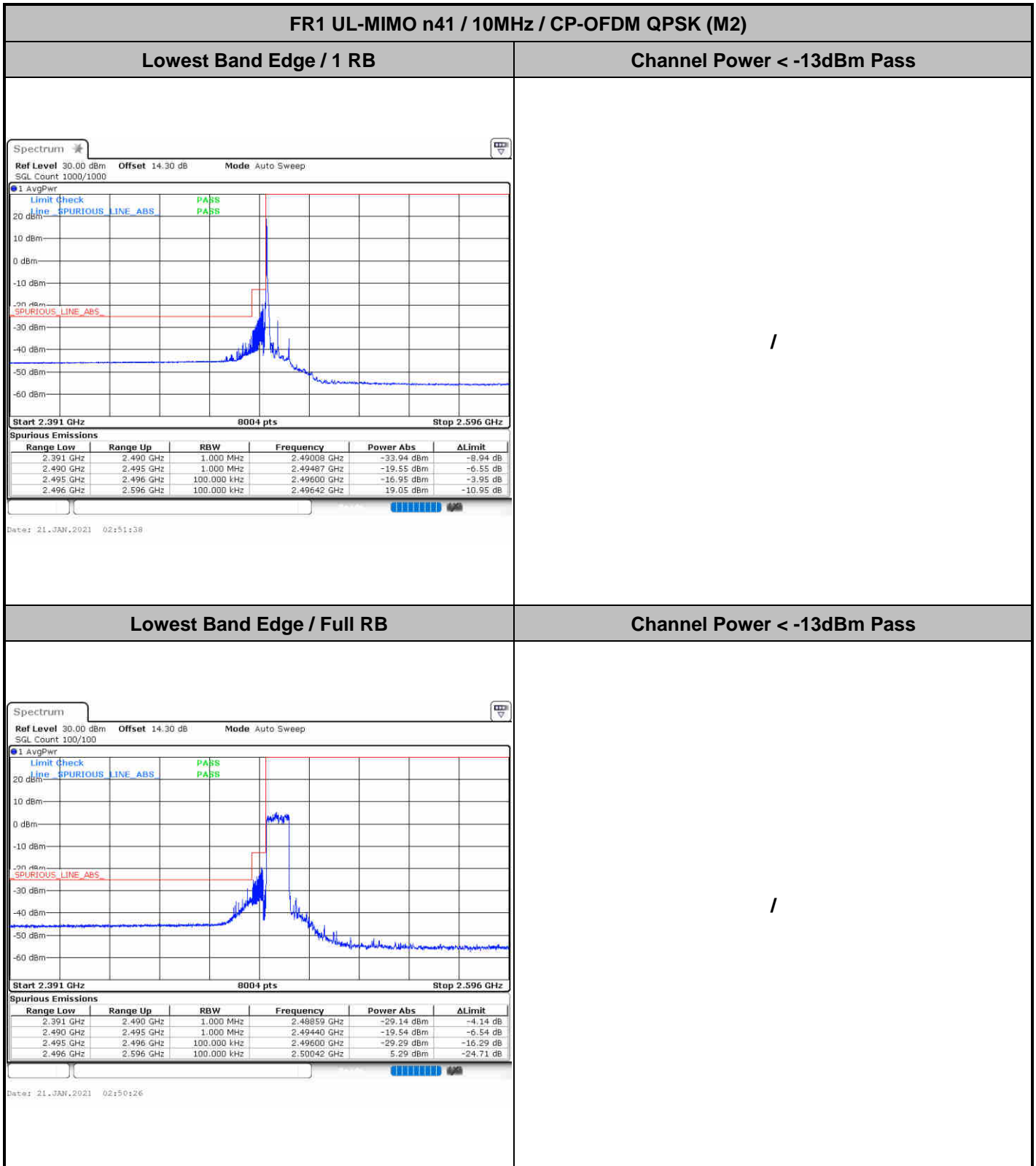
Date: 21_JAN_2021 @4127154







Conducted Band Edge

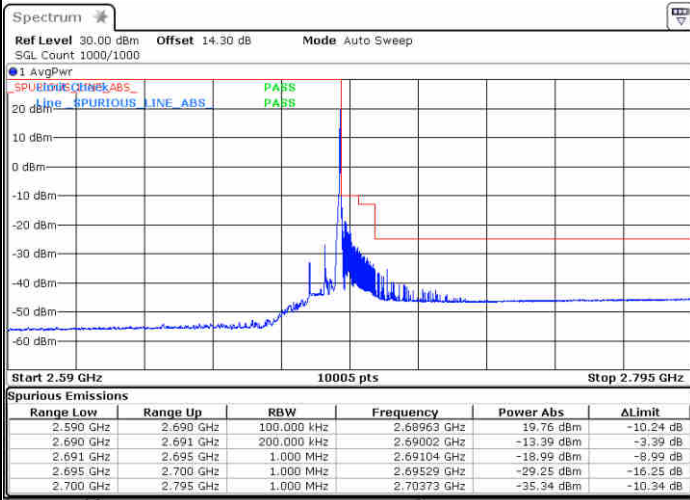




FR1 UL-MIMO n41 / 10MHz / CP-OFDM QPSK (M2)

Highest Band Edge / 1 RB

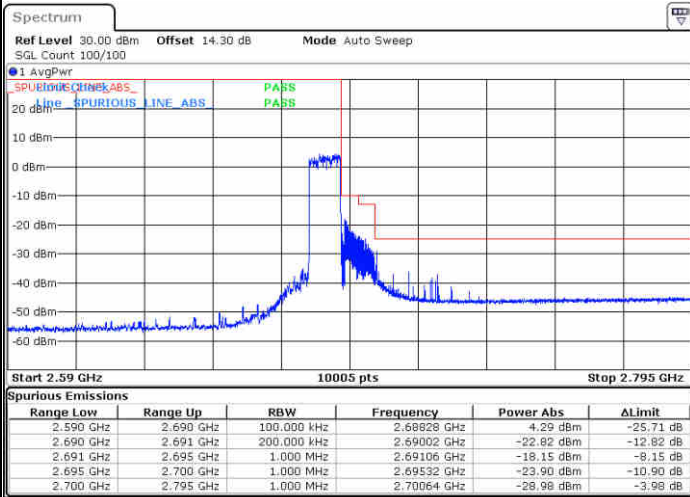
Channel Power < -10dBm Pass



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

Highest Band Edge / Full RB

Channel Power < -10dBm Pass



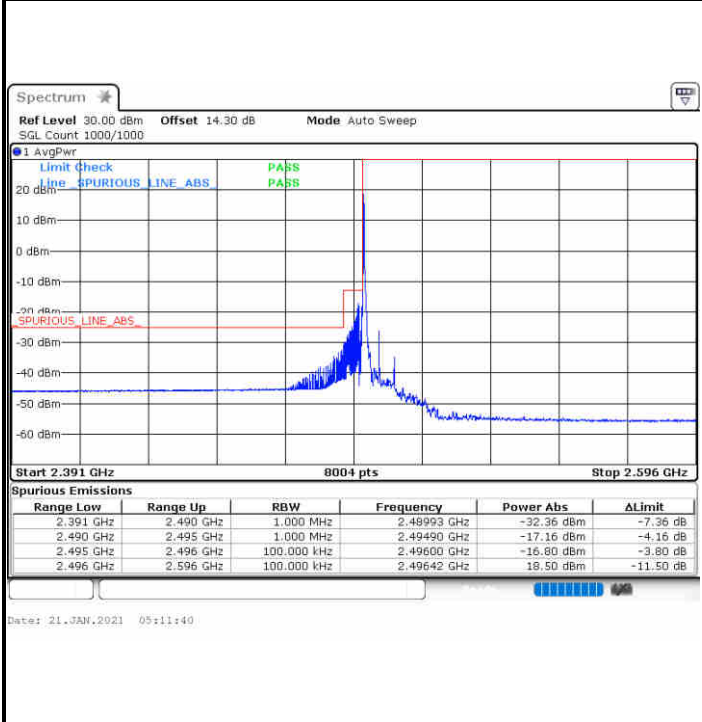
Date: 21.JAN.2021 03:10:33



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

Lowest Band Edge / 1 RB

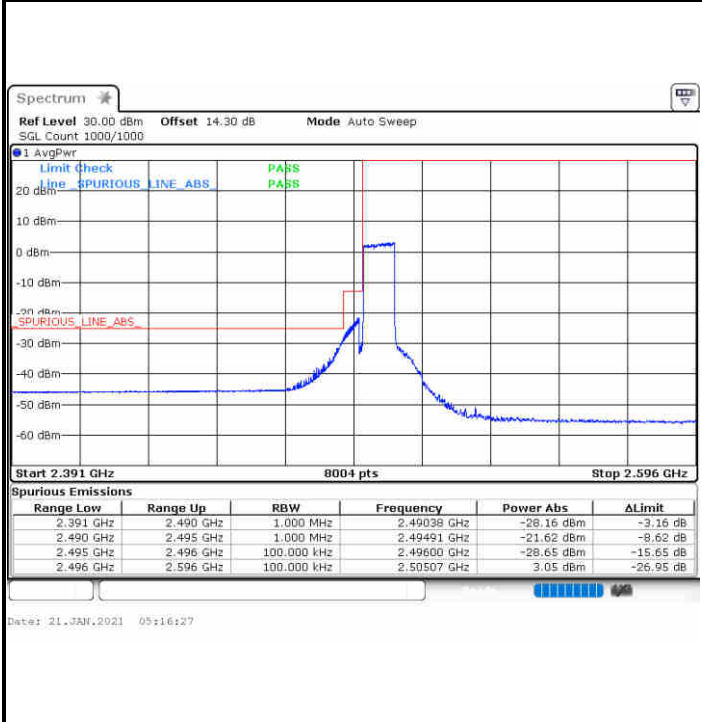
Channel Power < -13dBm Pass



/

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



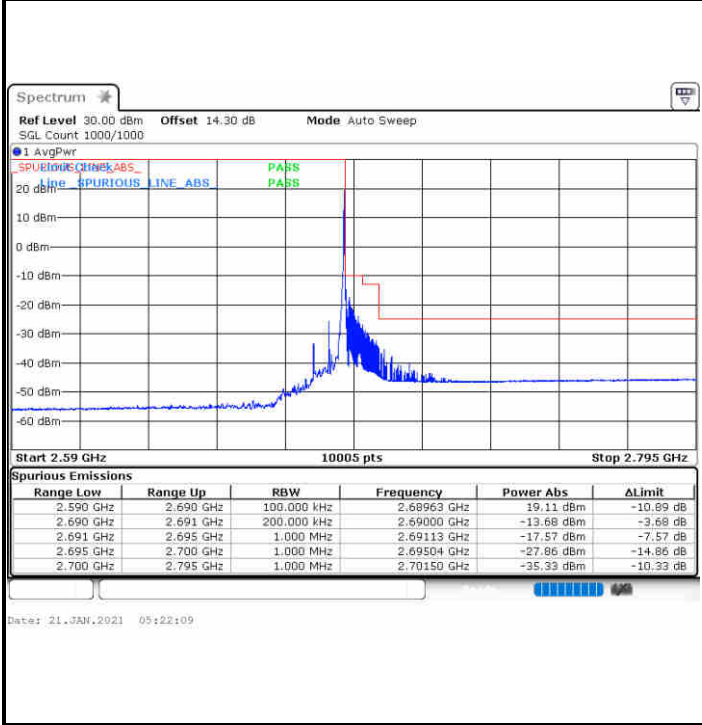
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FR1 UL-MIMO n41 / 10MHz / CP-OFDM QPSK (M)

Highest Band Edge / 1 RB

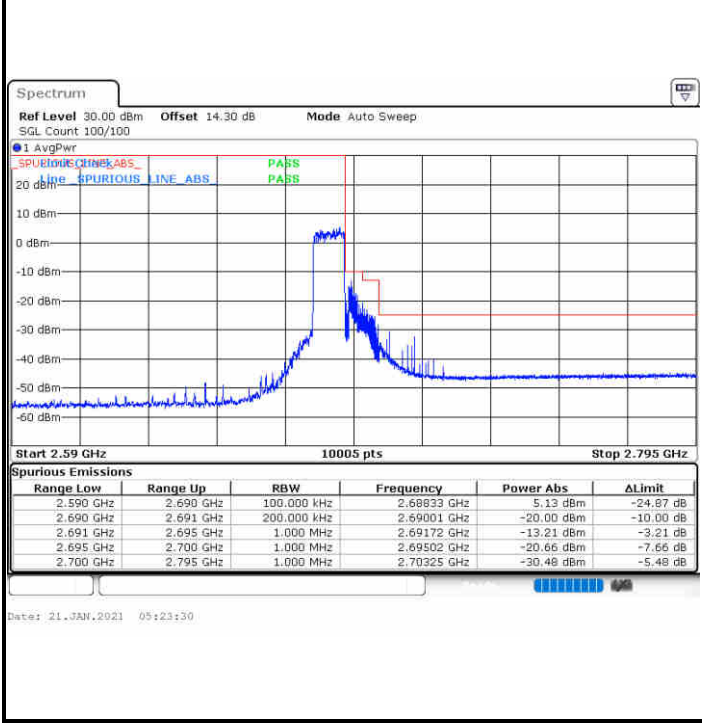
Channel Power < -13dBm Pass



/

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



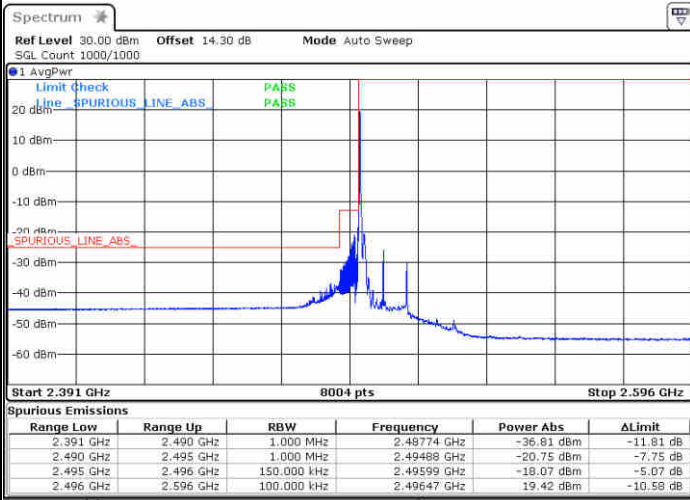
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FR1 UL-MIMO n41 / 15MHz / CP-OFDM QPSK (M2)

Lowest Band Edge / 1 RB

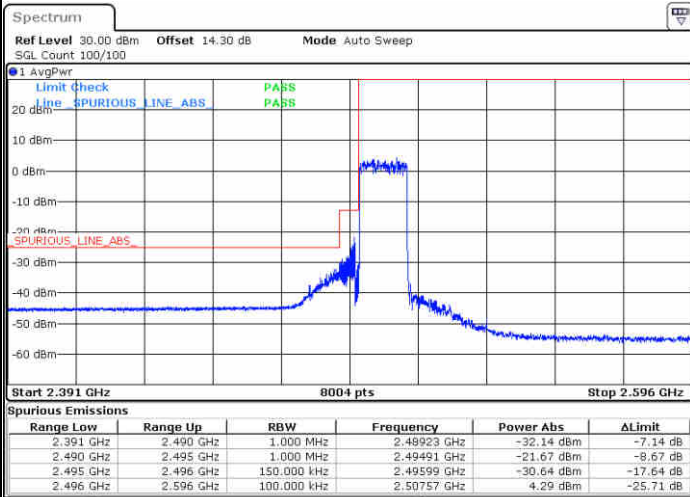
Channel Power < -13dBm Pass



Date: 20.JAN.2021 09:20:49

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



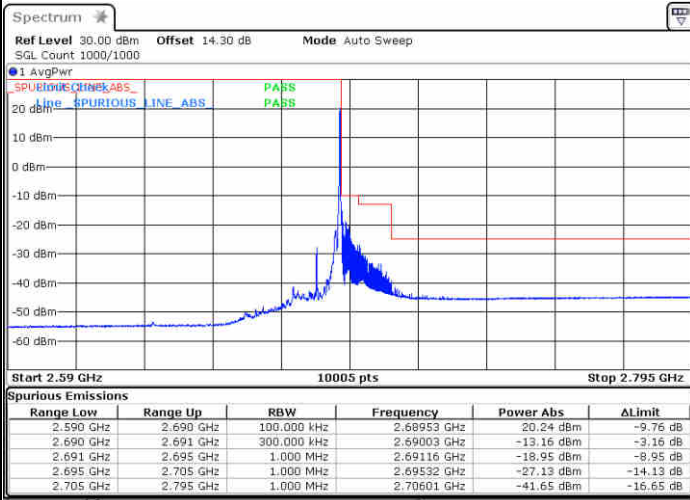
Date: 20.JAN.2021 09:19:55



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

Highest Band Edge / 1 RB

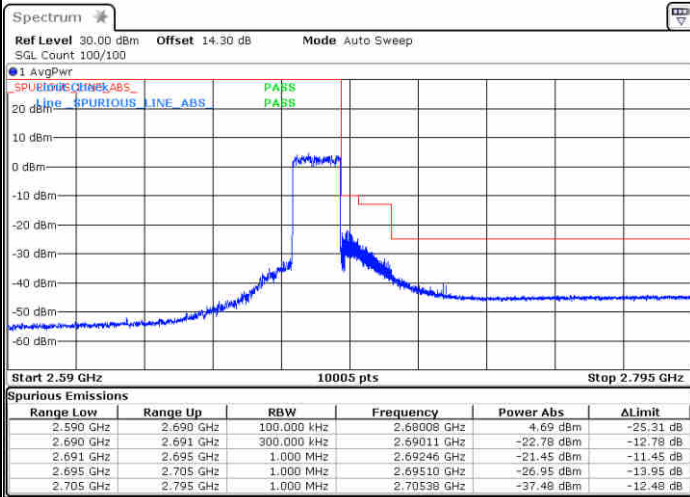
Channel Power < -10dBm Pass



Date: 26.FEB.2021 09:26:03

Highest Band Edge / Full RB

Channel Power < -10dBm Pass

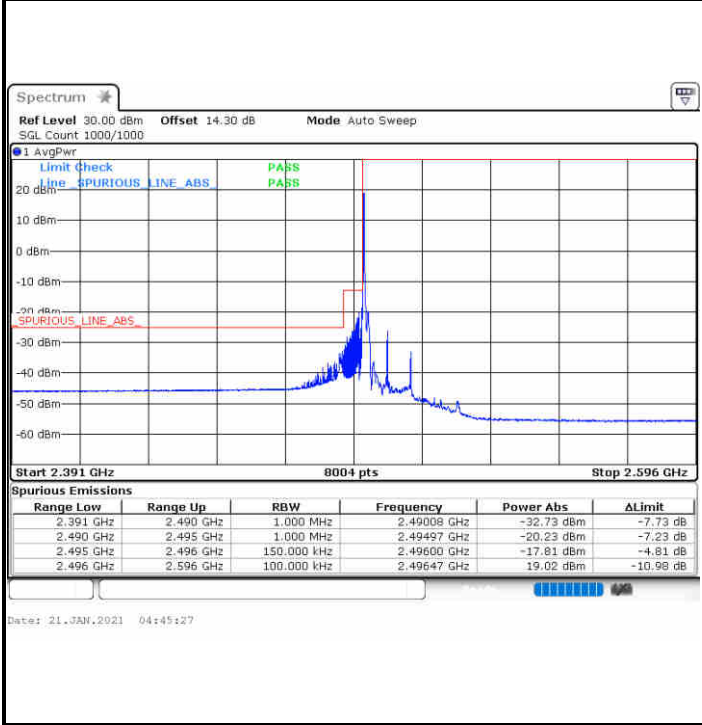


Date: 26.FEB.2021 09:22:57



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

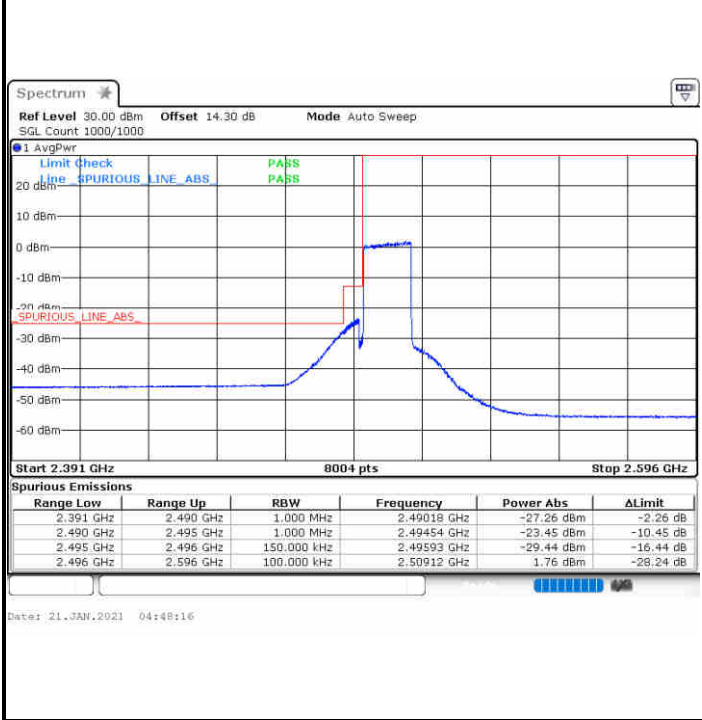
Lowest Band Edge / 1 RB



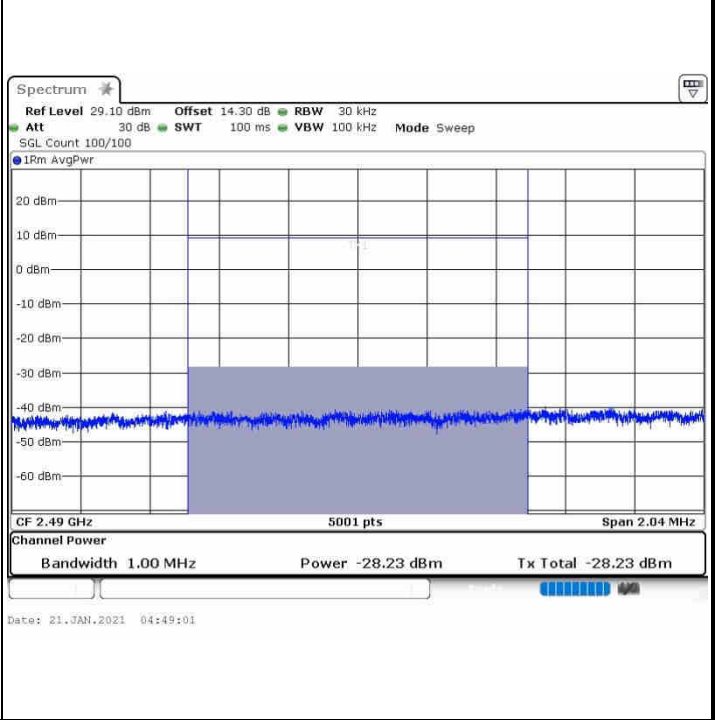
Channel Power < -25dBm Pass

/

Lowest Band Edge / Full RB



Channel Power < -25dBm Pass

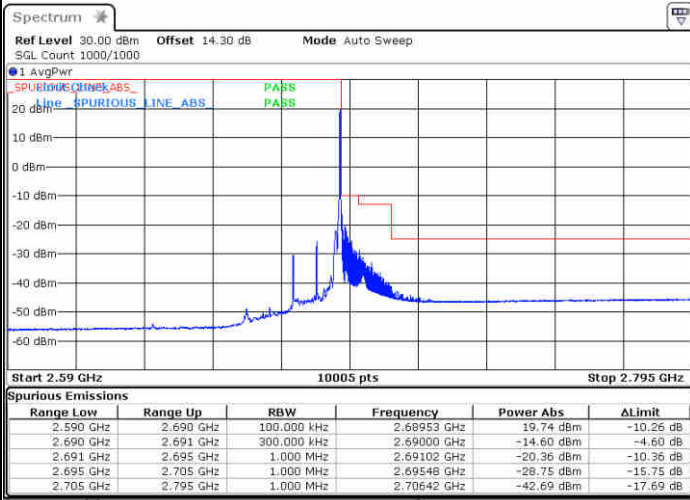




FR1 UL-MIMO n41 / 15MHz / CP-OFDM QPSK (M)

Highest Band Edge / 1 RB

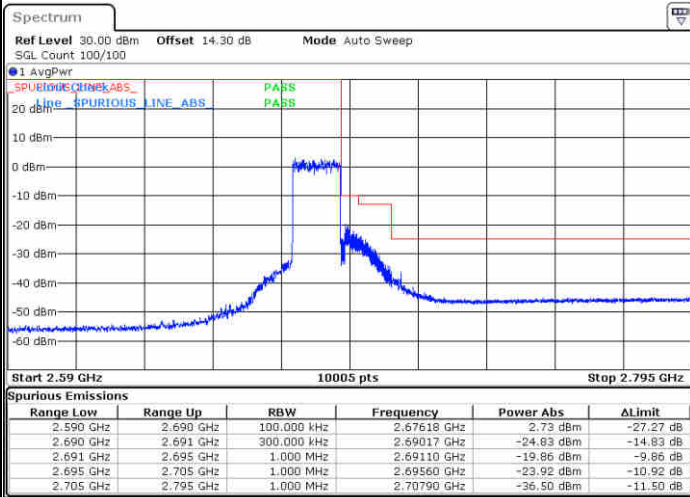
Channel Power < -13dBm Pass



Date: 21.JAN.2021 04:54:23

Highest Band Edge / Full RB

Channel Power < -13dBm Pass

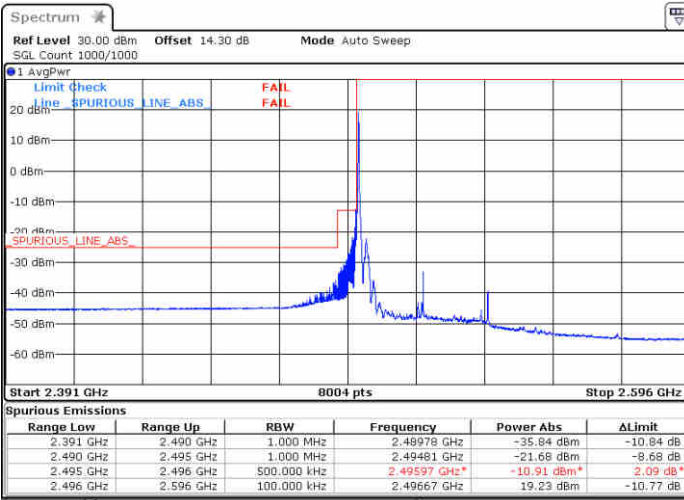


Date: 21.JAN.2021 04:51:35



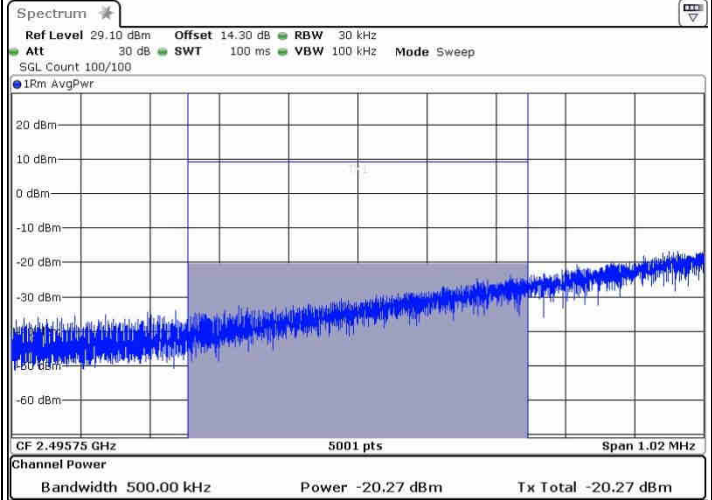
FR1 UL-MIMO n41 / 40MHz / CP-OFDM QPSK (M2)

Lowest Band Edge / 1 RB



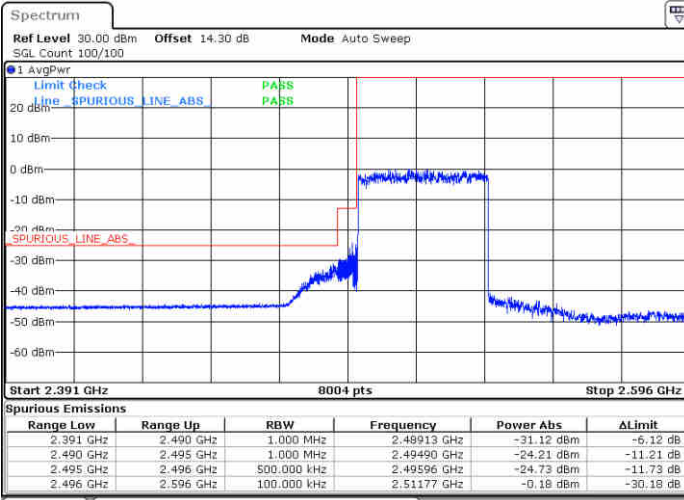
Date: 20.JAN.2021 09:02:10

Channel Power < -13dBm Pass



Date: 20.JAN.2021 09:03:13

Lowest Band Edge / Full RB



Date: 20.JAN.2021 07:59:33

Channel Power < -13dBm Pass

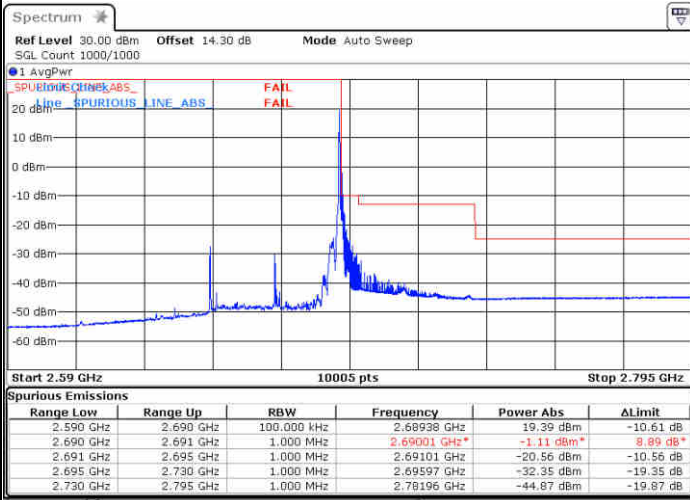
/



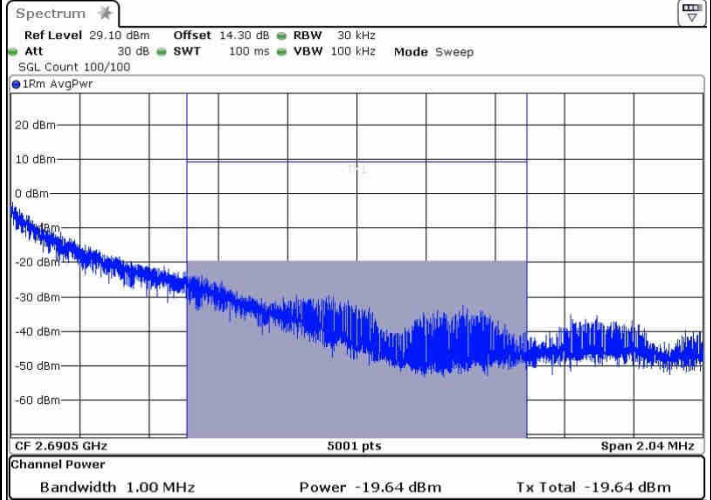
FR1 UL-MIMO n41 / 40MHz / CP-OFDM QPSK (M2)

Highest Band Edge / 1 RB

Channel Power < -10dBm Pass



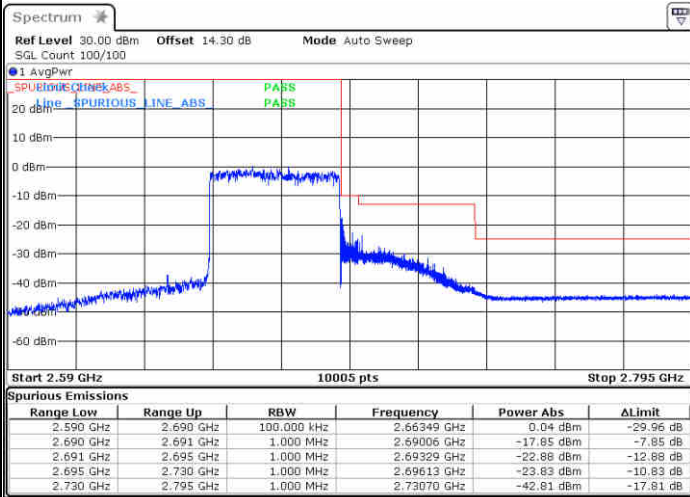
Date: 26.FEB.2021 11:43:45



Date: 26.FEB.2021 11:45:46

Highest Band Edge / Full RB

Channel Power < -10dBm Pass



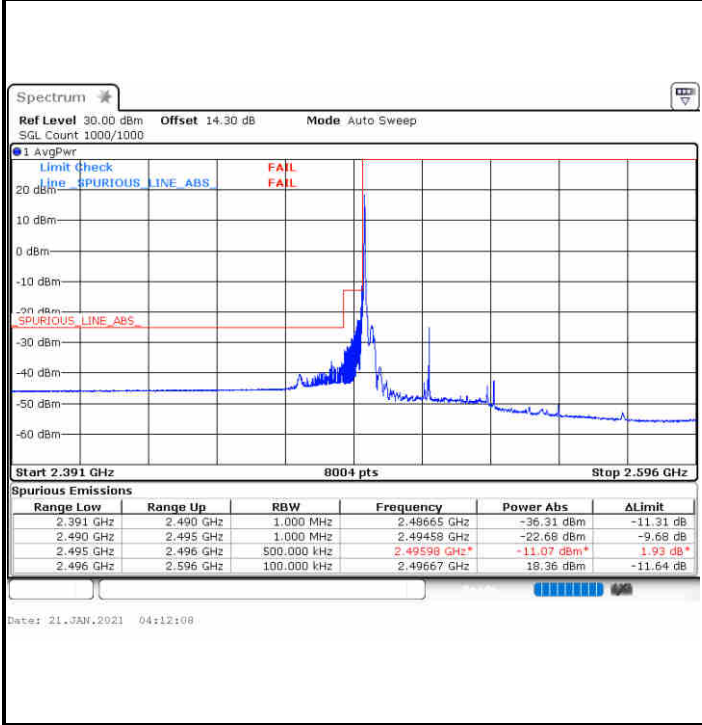
Date: 26.FEB.2021 11:48:45

/

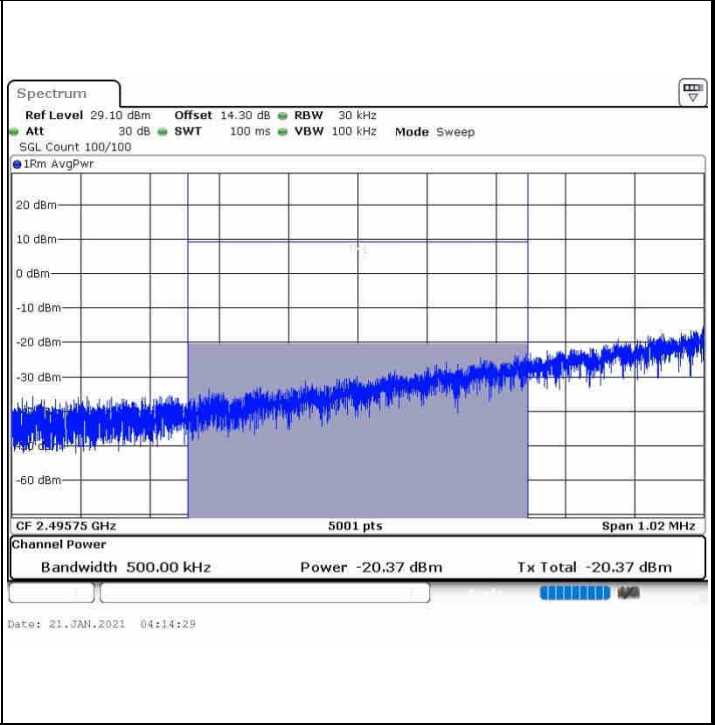


FR1 UL-MIMO n41 / 40MHz / CP-OFDM QPSK (M)

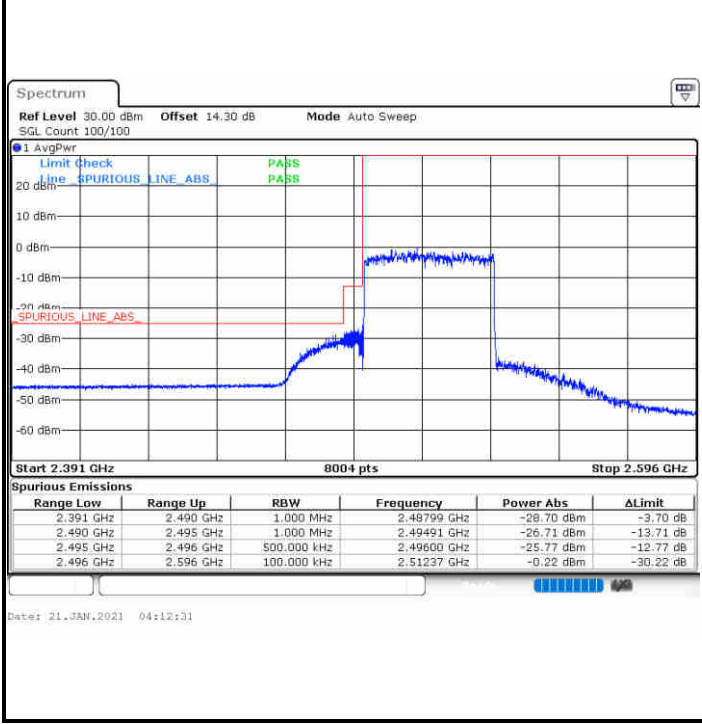
Lowest Band Edge / 1 RB



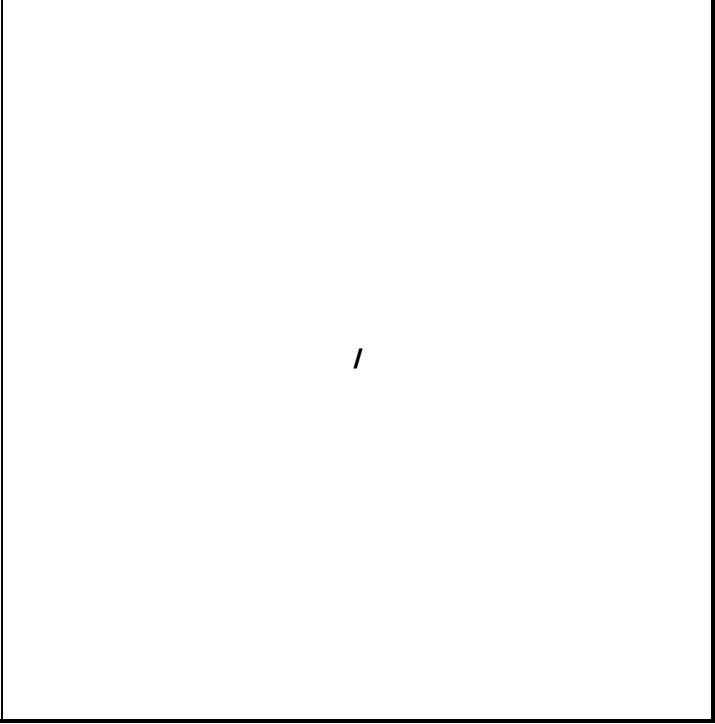
Channel Power < -13dBm Pass



Lowest Band Edge / Full RB



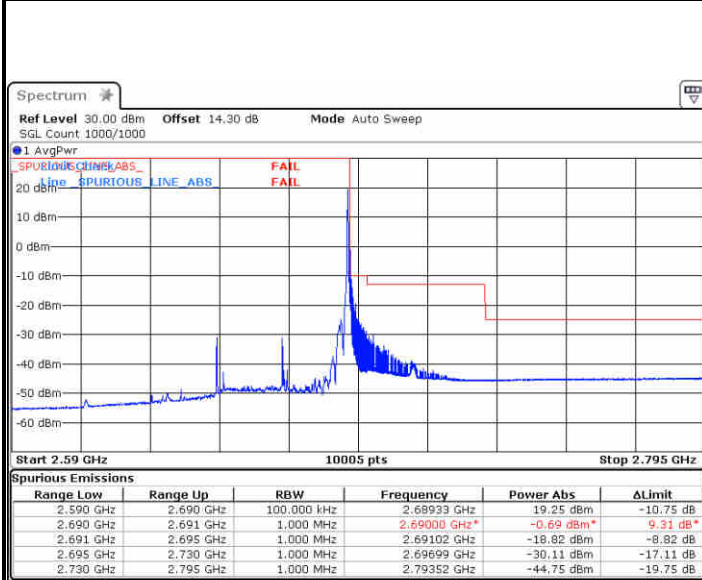
Channel Power < -13dBm Pass





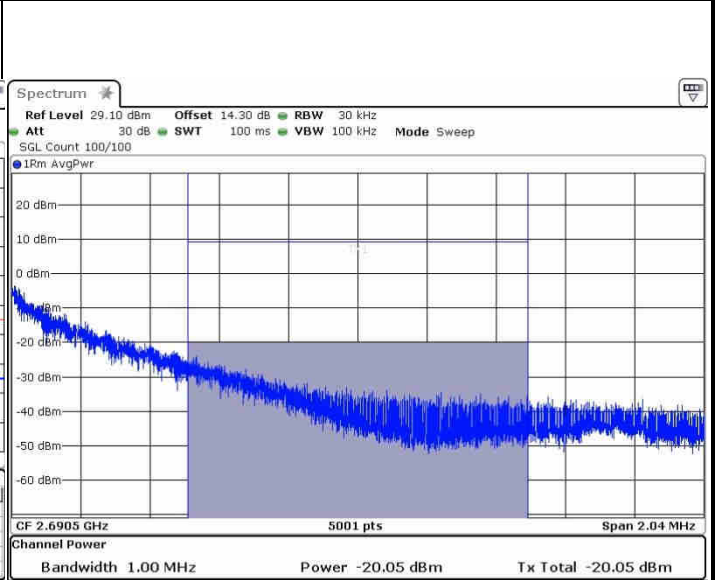
FR1 UL-MIMO n41 / 40MHz / CP-OFDM QPSK (M)

Highest Band Edge / 1 RB



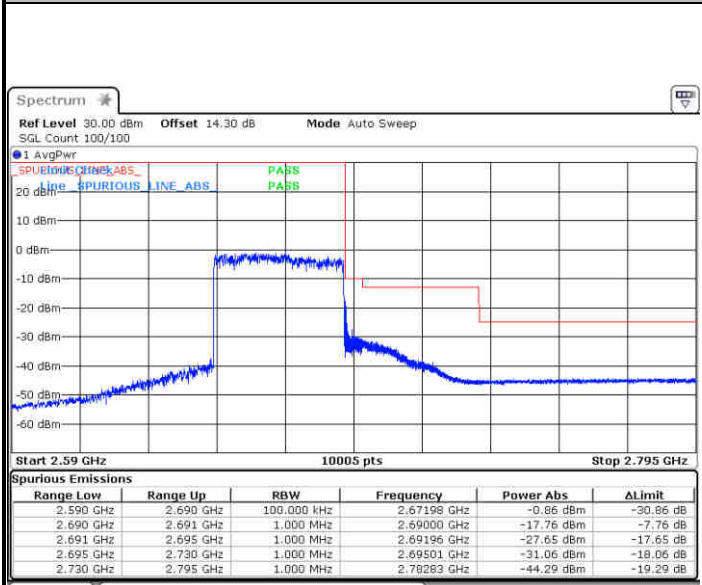
Date: 26.FEB.2021 13:38:55

Channel Power < -10dBm Pass



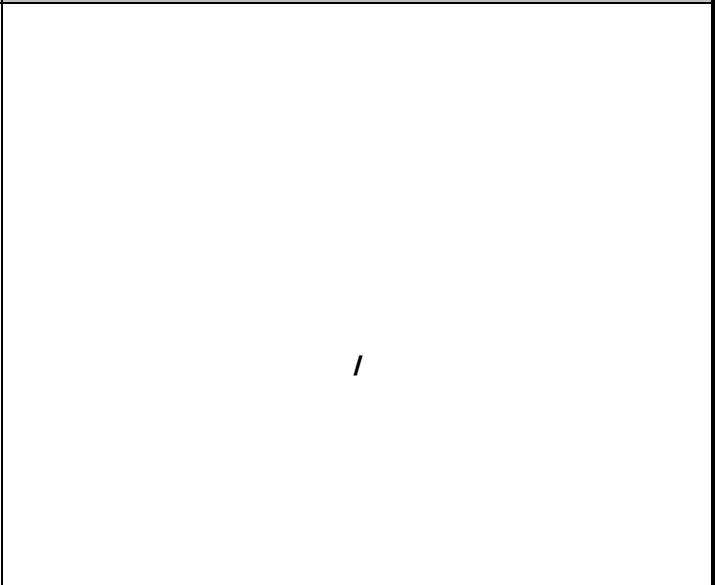
Date: 26.FEB.2021 13:40:23

Highest Band Edge / Full RB



Date: 26.FEB.2021 13:45:56

Channel Power < -10dBm Pass



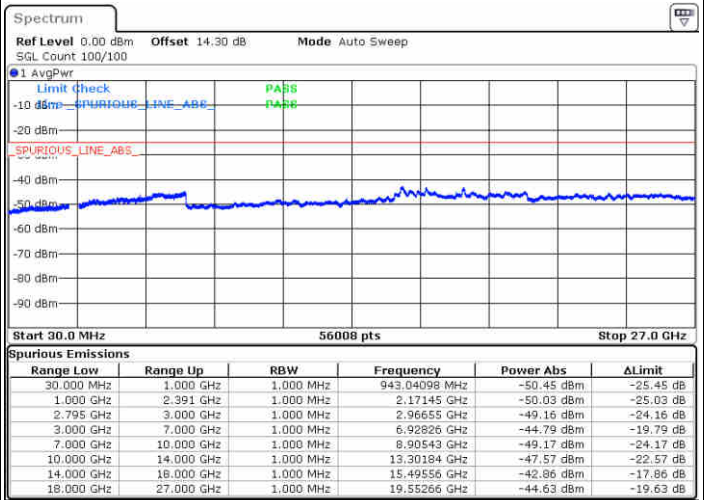
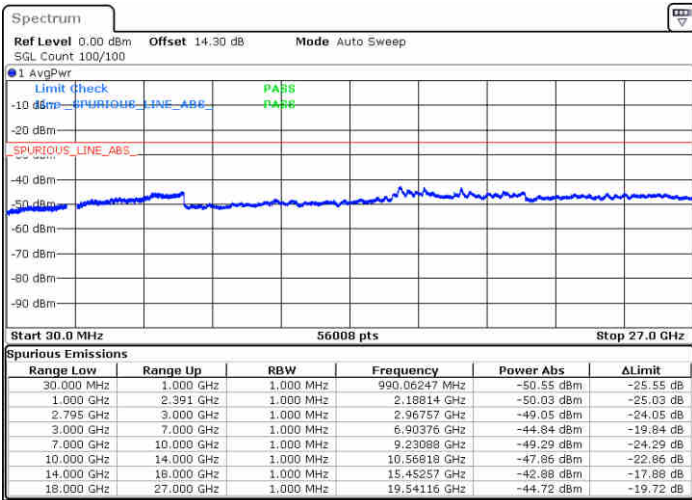


Conducted Spurious Emission

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

Lowest Channel / 1RB

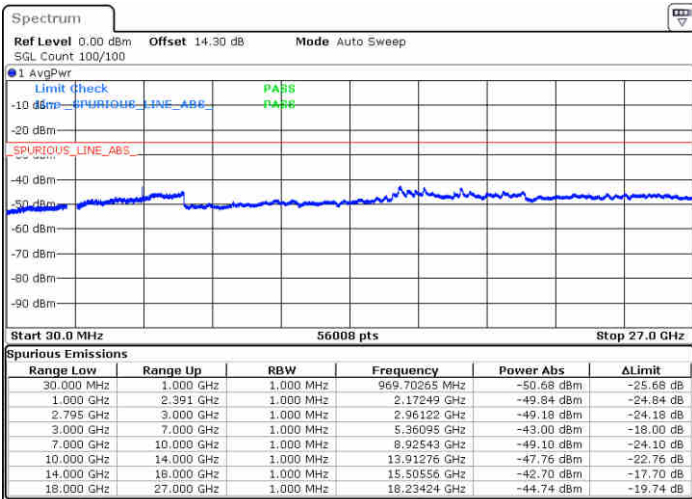
Middle Channel / 1RB



Date: 21.JAN.2021 03:32:07

Date: 21.JAN.2021 03:19:56

Highest Channel / 1RB

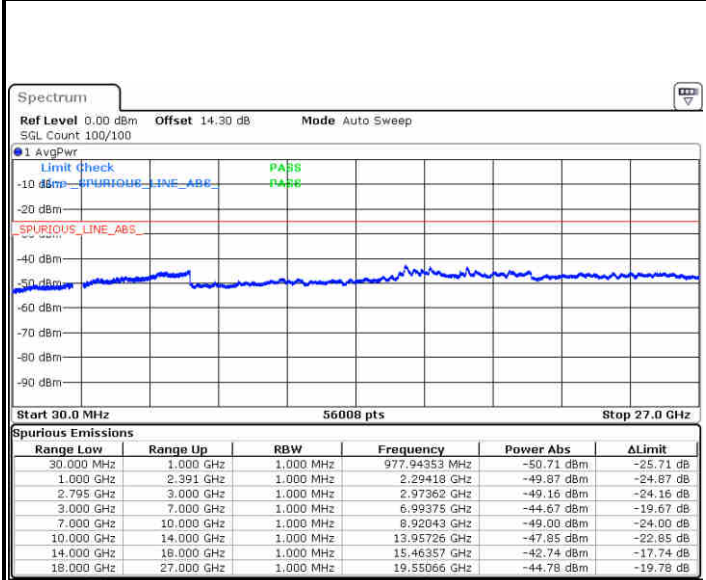


Date: 21.JAN.2021 03:12:57



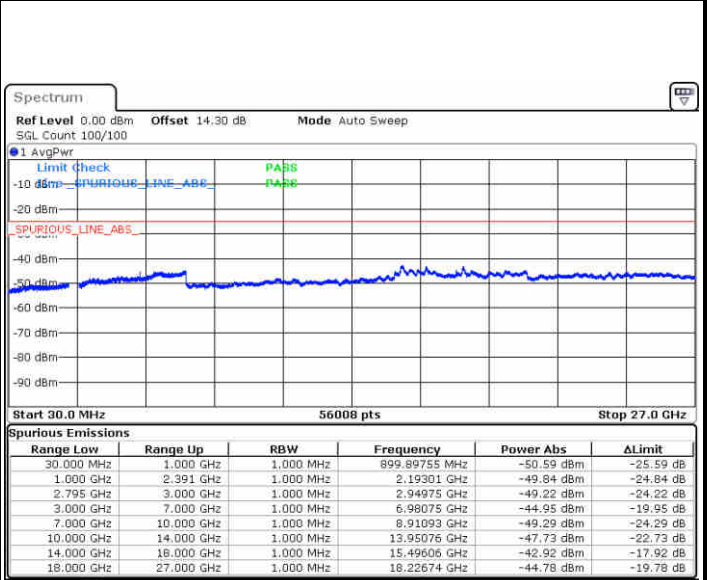
FR1 UL-MIMO n41 / 10MHz / CP-OFDM QPSK (M)

Lowest Channel / 1RB



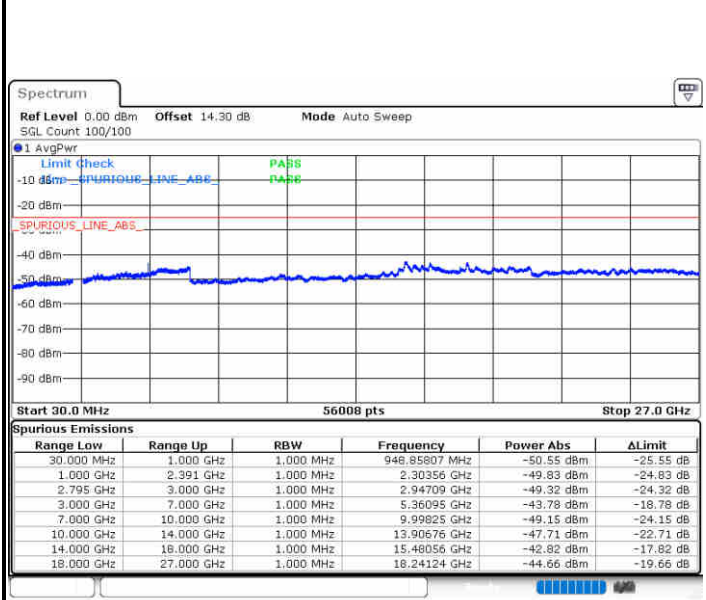
Date: 21.JAN.2021 05:17:24

Middle Channel / 1RB



Date: 21.JAN.2021 05:03:48

Highest Channel / 1RB



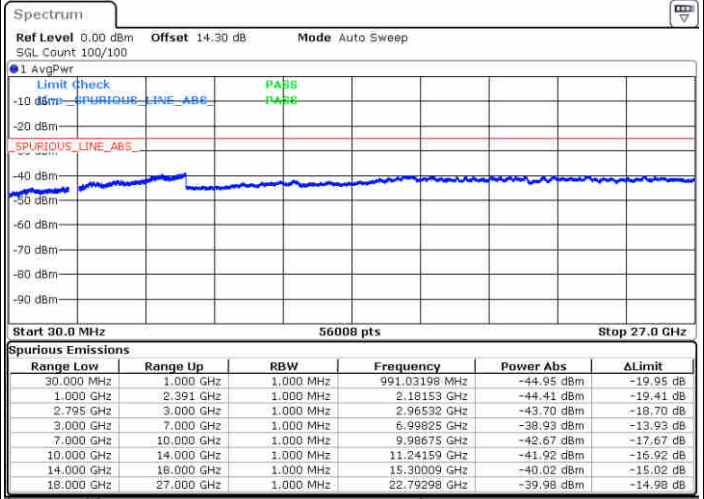
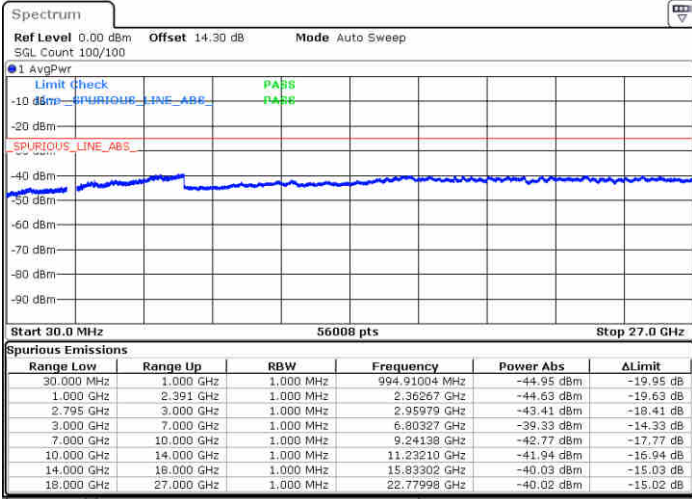
Date: 21.JAN.2021 05:20:35



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

Lowest Channel / 1RB

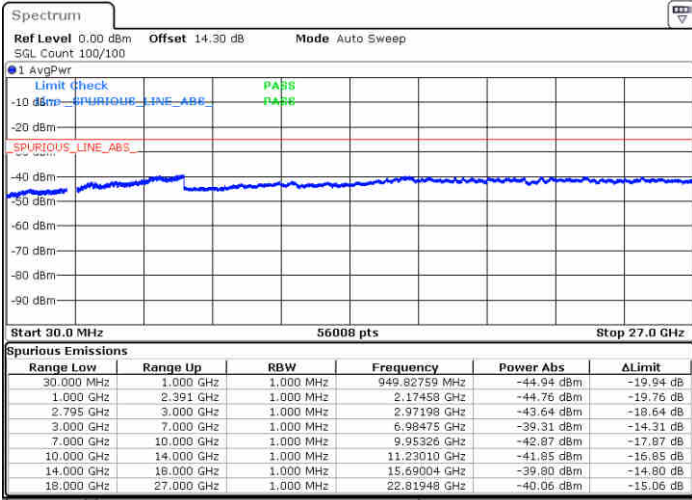
Middle Channel / 1RB



Date: 20.JAN.2021 08:34:01

Date: 20.JAN.2021 08:28:53

Highest Channel / 1RB



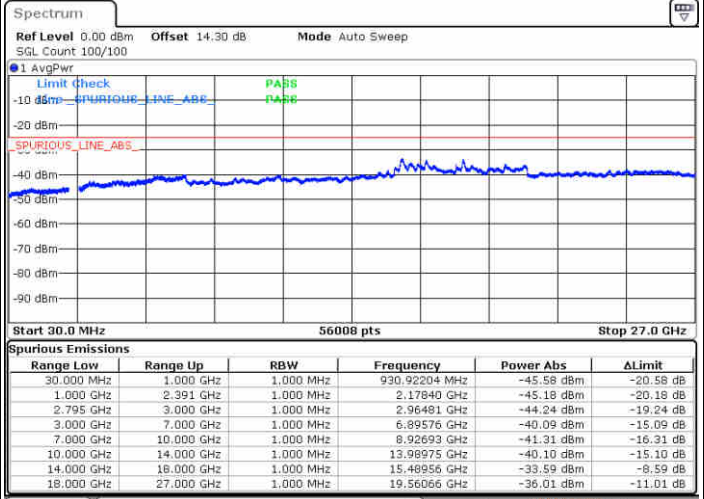
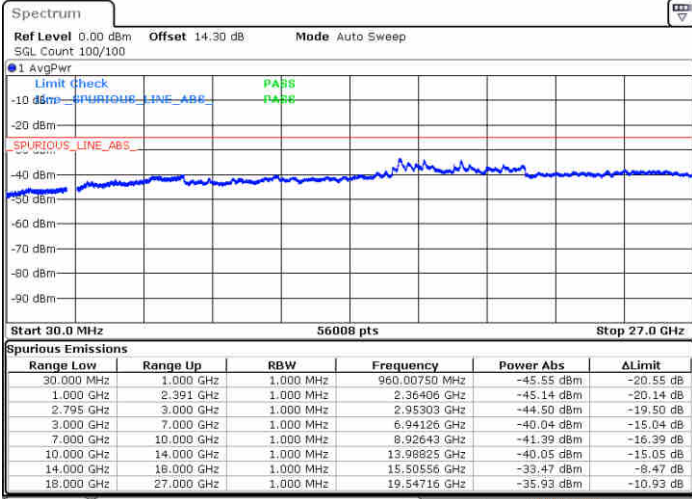
Date: 20.JAN.2021 08:27:38



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

Lowest Channel / 1RB

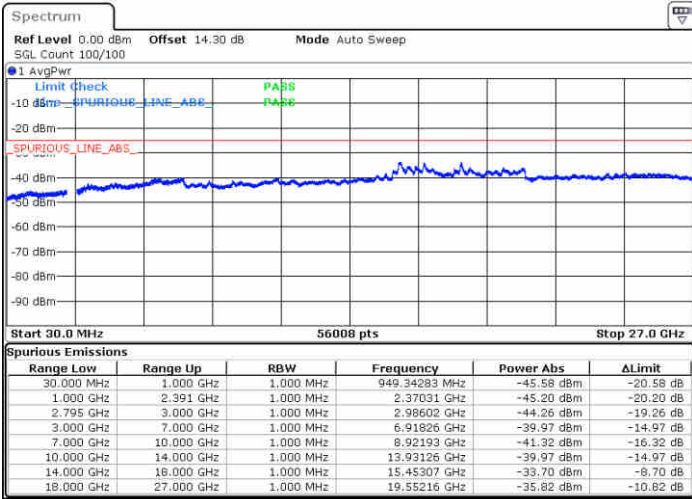
Middle Channel / 1RB



Date: 21.JAN.2021 04:44:23

Date: 21.JAN.2021 04:31:28

Highest Channel / 1RB



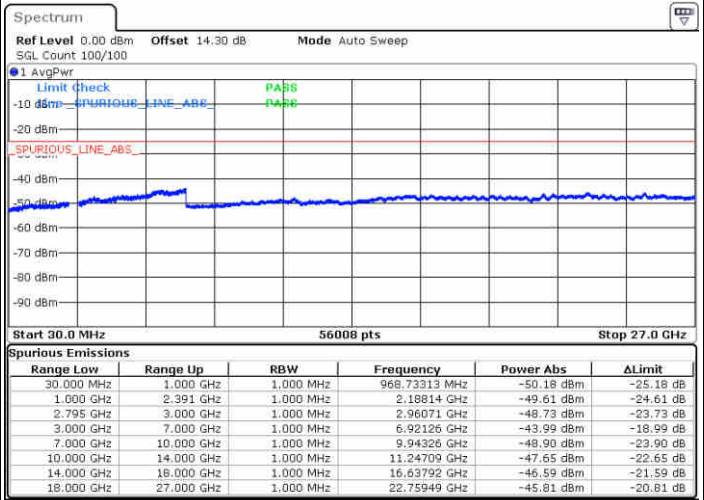
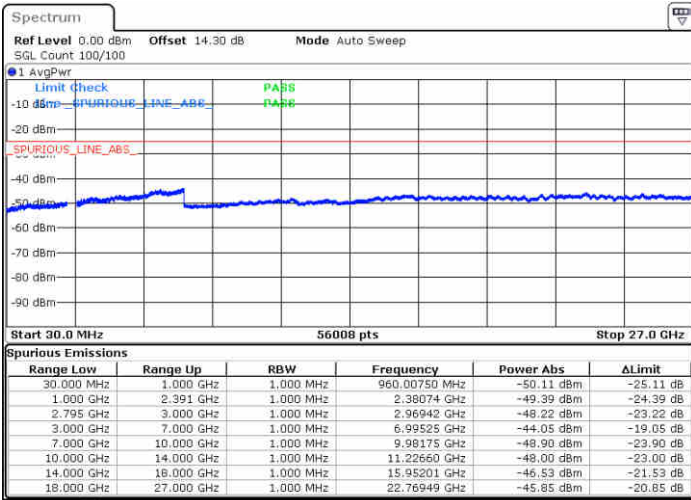
Date: 21.JAN.2021 04:55:32



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

Lowest Channel / 1RB

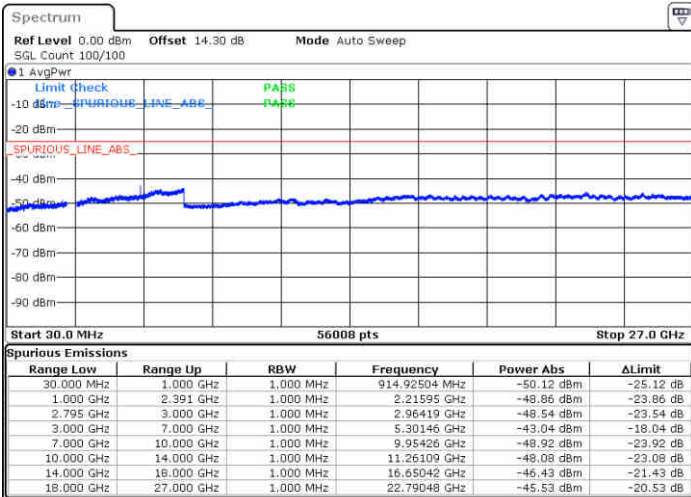
Middle Channel / 1RB



Date: 20.JAN.2021 08:12:26

Date: 20.JAN.2021 08:11:20

Highest Channel / 1RB

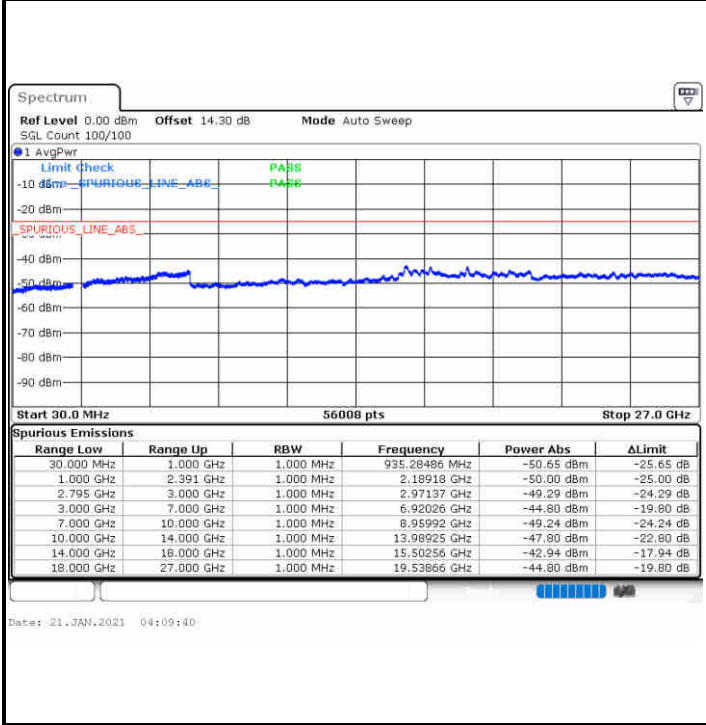


Date: 20.JAN.2021 08:08:31

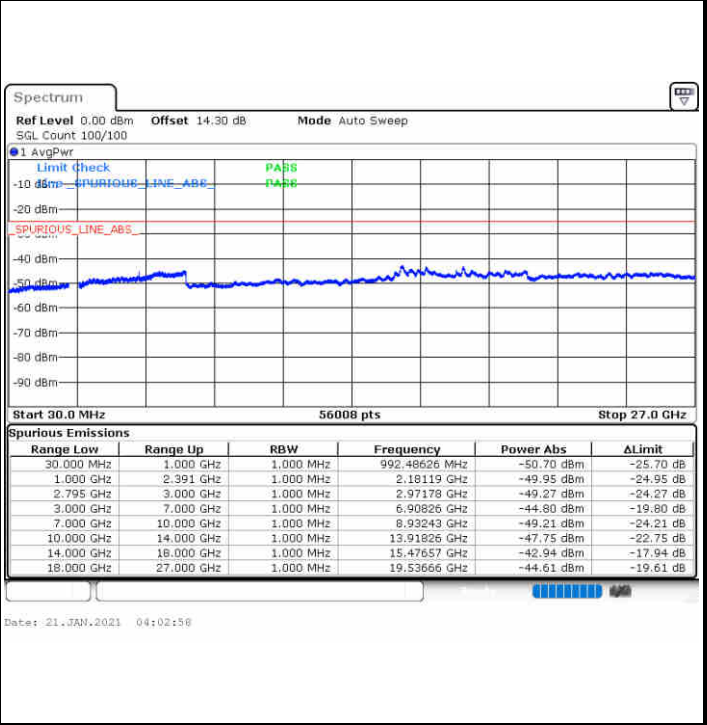


FR1 UL-MIMO n41 / 40MHz / CP-OFDM QPSK (M)

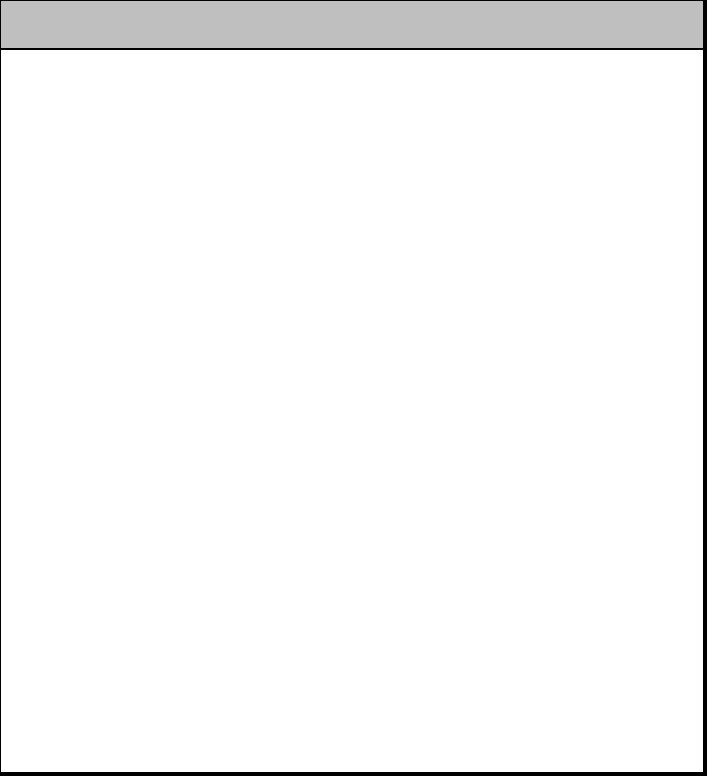
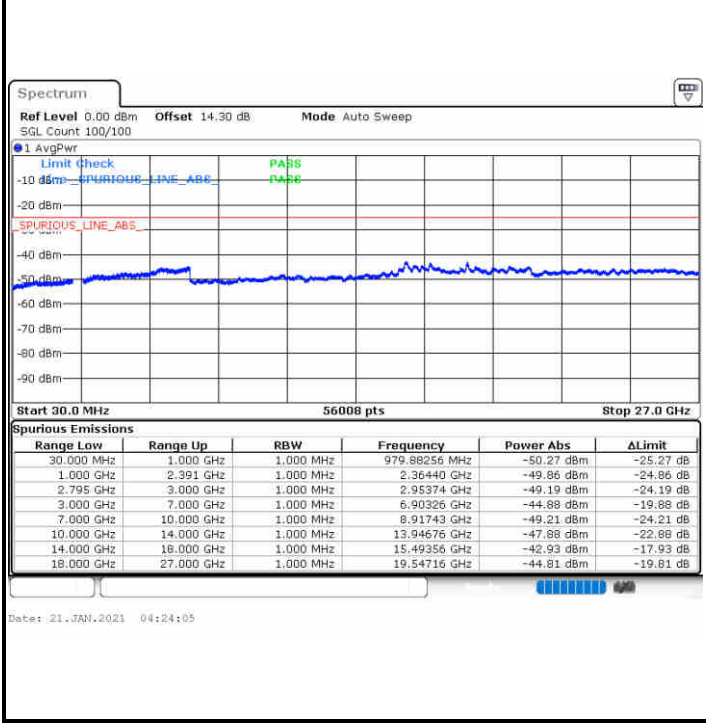
Lowest Channel / 1RB



Middle Channel / 1RB



Highest Channel / 1RB





Frequency Stability

Test Conditions		NR UL-MIMO n41 (QPSK) / 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	0.0016	
20(Ref.)	Normal Voltage	0.0015	
10	Normal Voltage	0.0022	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0025	
-20	Normal Voltage	0.0021	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0028	
20	Normal Voltage	0.0024	
20	Battery End Point	0.0022	

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 30K

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	7.65	8.64			PASS
Middle CH	7.45	8.61			
Highest CH	7.77	8.61			

Mode	FR1 UL-MIMO n41 / 10MHz / CP-OFDM (M)				
Mod.	QPSK	QPSK			Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	8.09	8.9			PASS
Middle CH	8.03	8.78			
Highest CH	7.59	8.81			



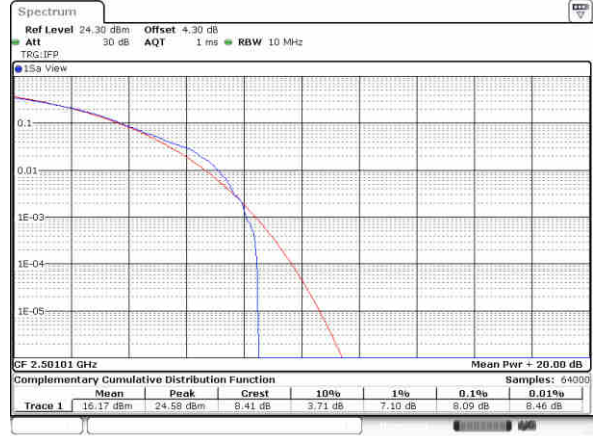
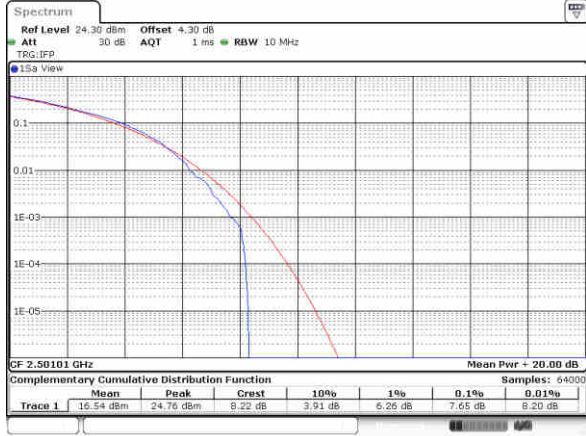
FR1 UL-MIMO n41 / 10MHz / CP-OFDM

QPSK(M2)

QPSK(M)

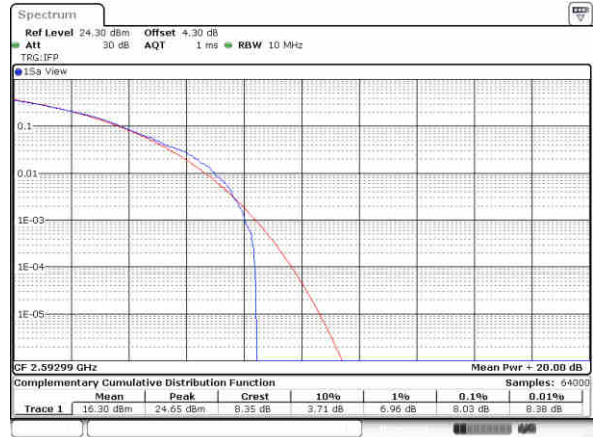
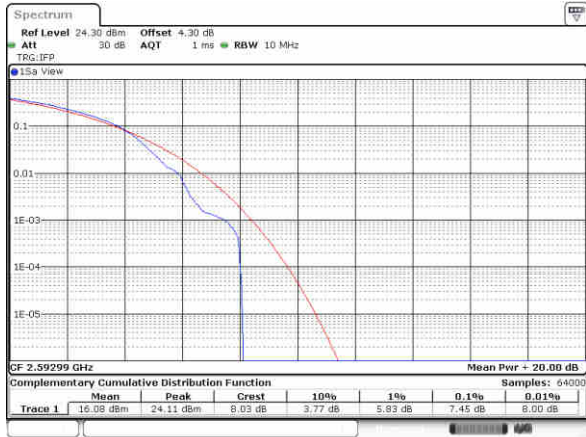
Lowest Channel / 1RB

Lowest Channel / 1RB



Middle Channel / 1 RB

Middle Channel / 1 RB



Highest Channel / 1 RB

Highest Channel / 1 RB

