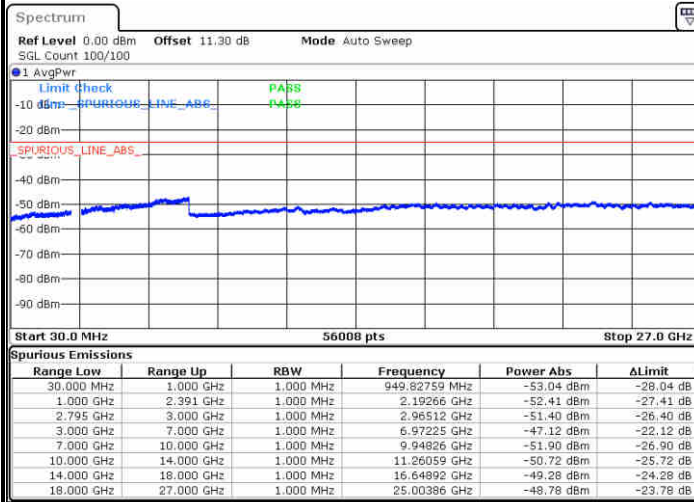




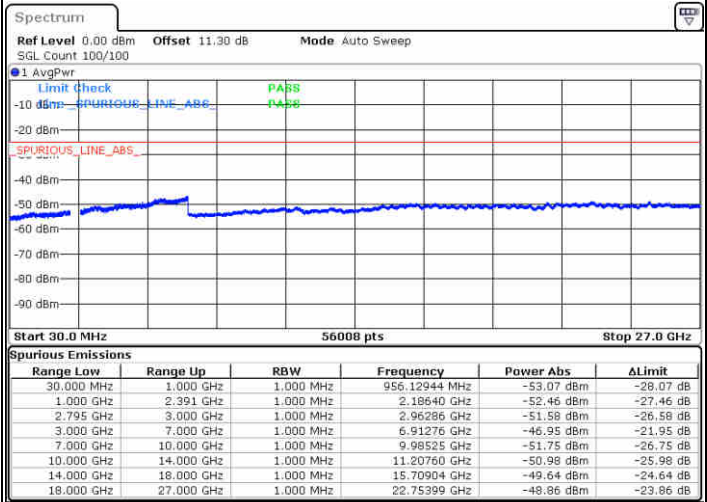
FR1 n41 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB



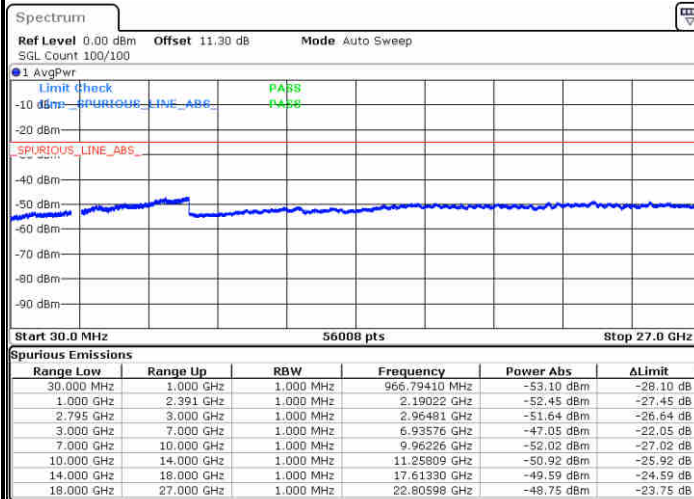
Date: 22.JAN.2021 00:17:08

Middle Channel / 1RB



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

Highest Channel / 1RB

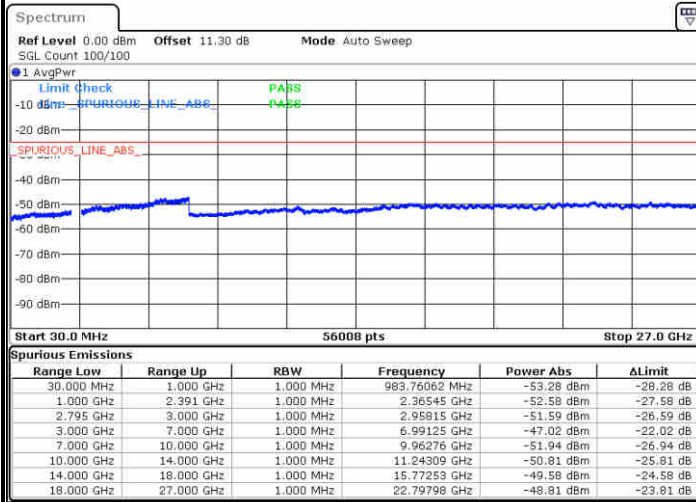


Date: 22.JAN.2021 00:23:55



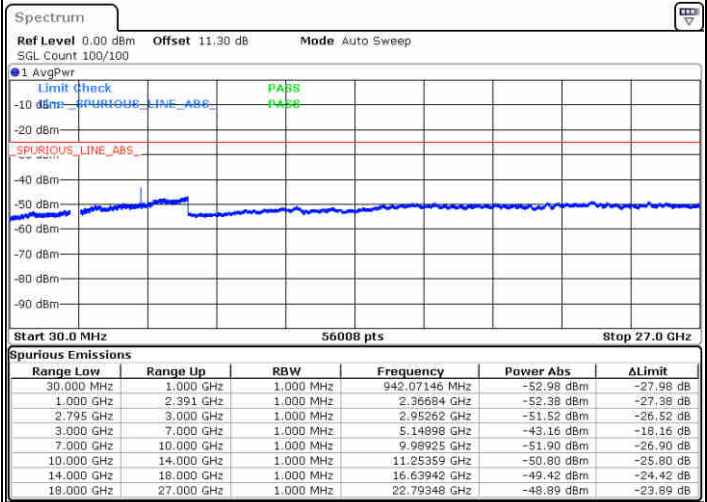
FR1 n41 / 40MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB



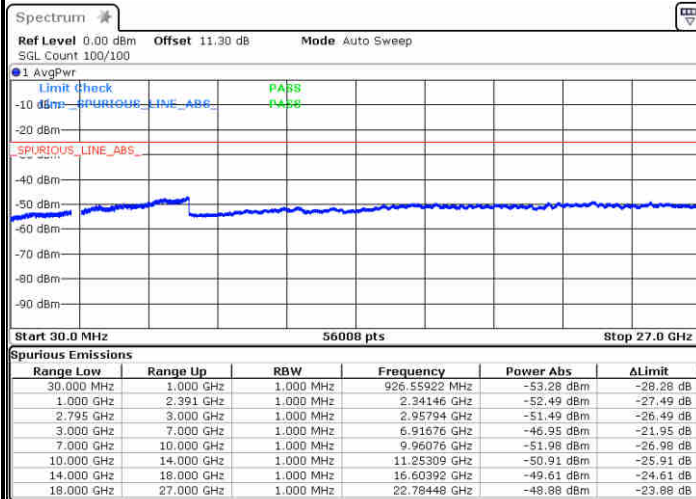
Date: 21.JAN.2021 23:24:42

Middle Channel / 1RB



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

Highest Channel / 1RB

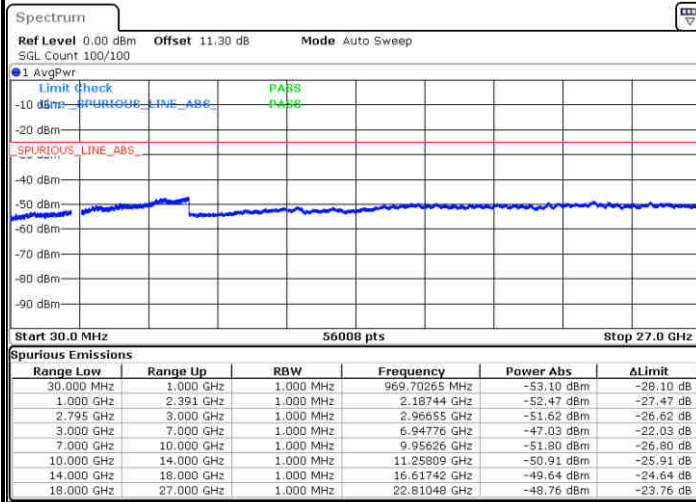


Date: 21.JAN.2021 23:20:07



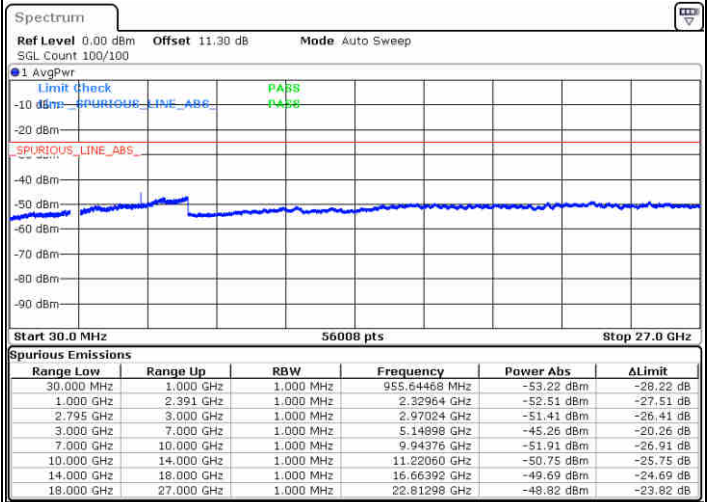
FR1 n41 / 40MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB



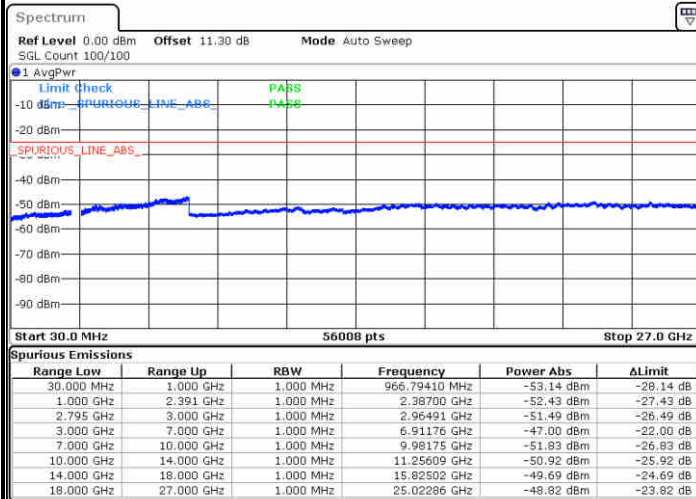
Date: 21.JAN.2021 23:22:32

Middle Channel / 1RB



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

Highest Channel / 1RB

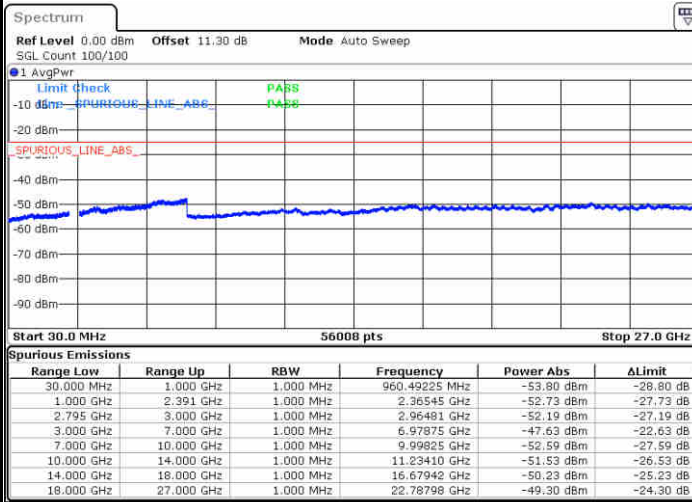


Date: 21.JAN.2021 23:21:07



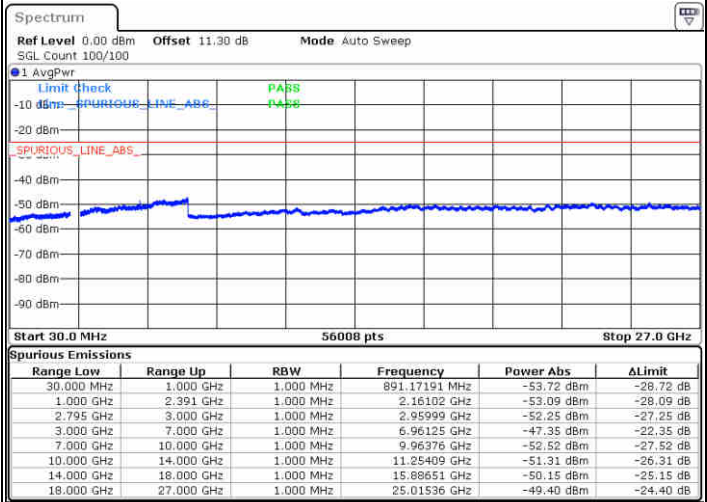
FR1 n41 / 80MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB



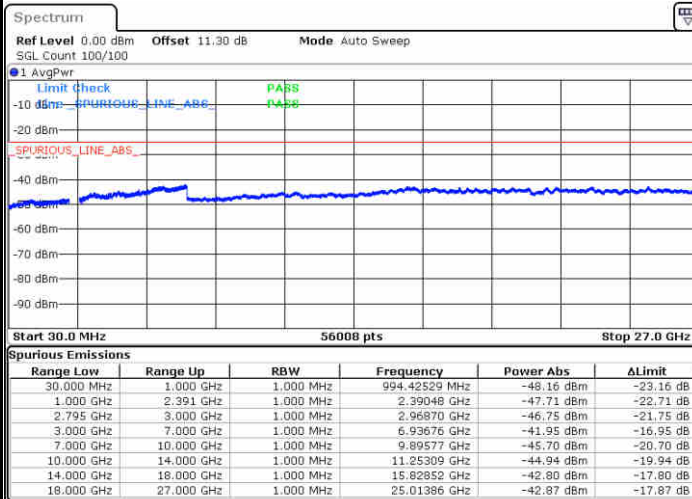
Date: 15.JAN.2021 03:13:20

Middle Channel / 1RB



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

Highest Channel / 1RB

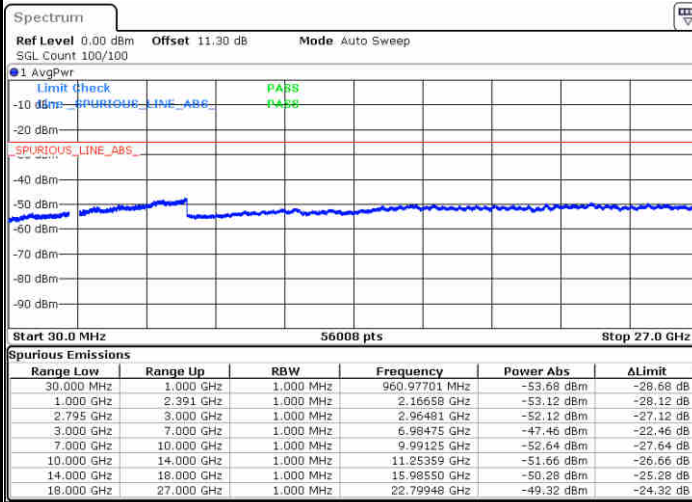


Date: 21.JAN.2021 17:48:09



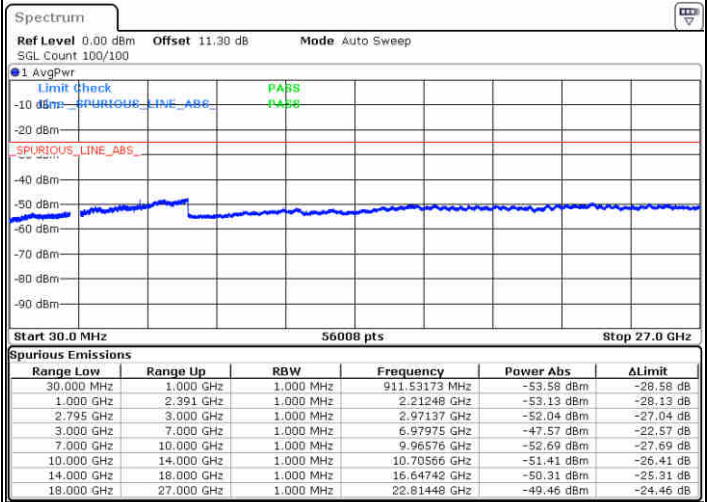
FR1 n41 / 80MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB



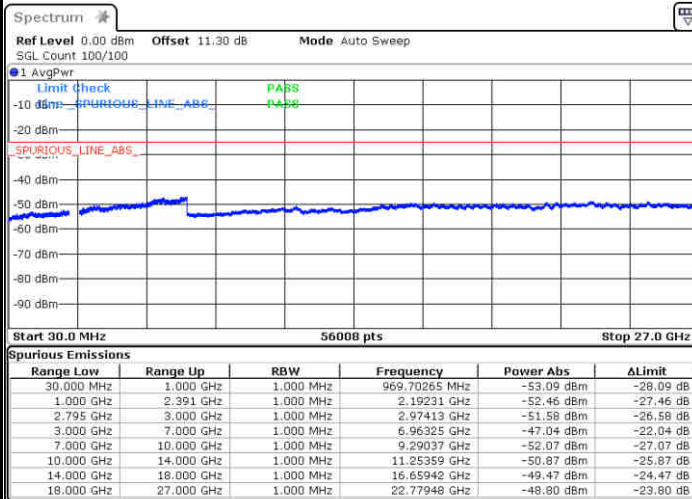
Date: 15.JAN.2021 03:09:47

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.

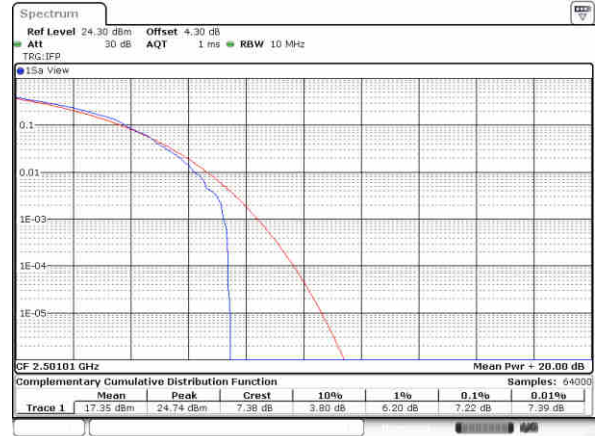
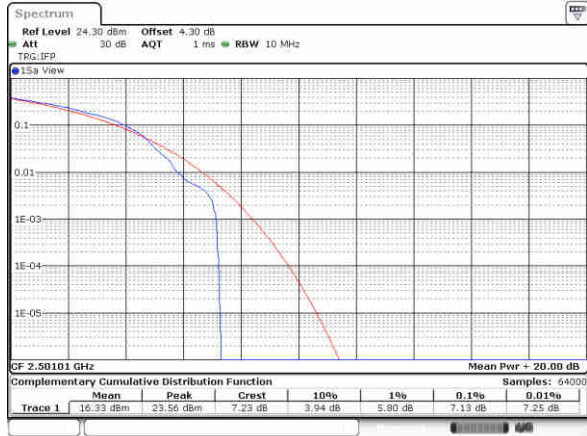
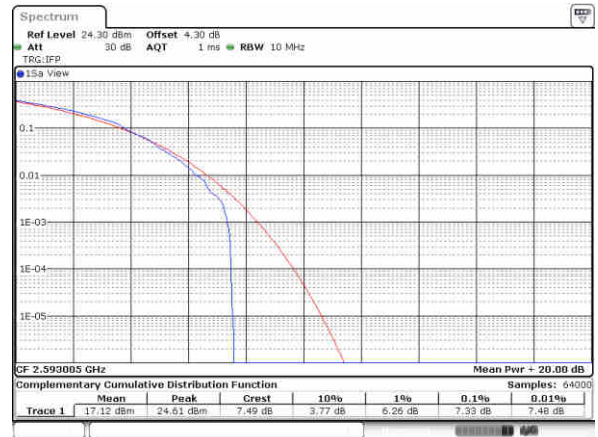
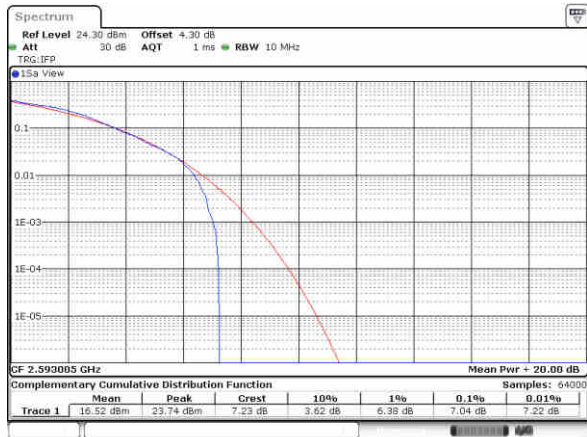
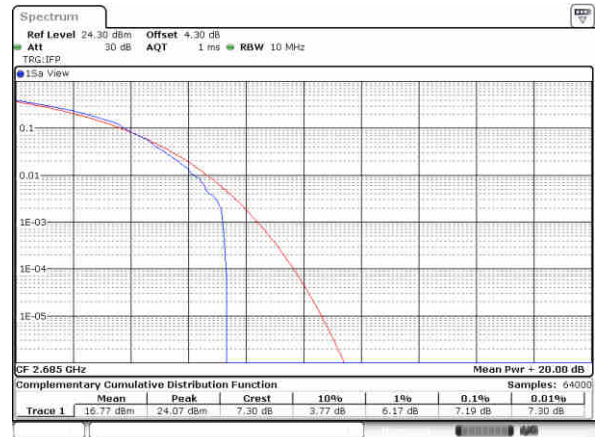
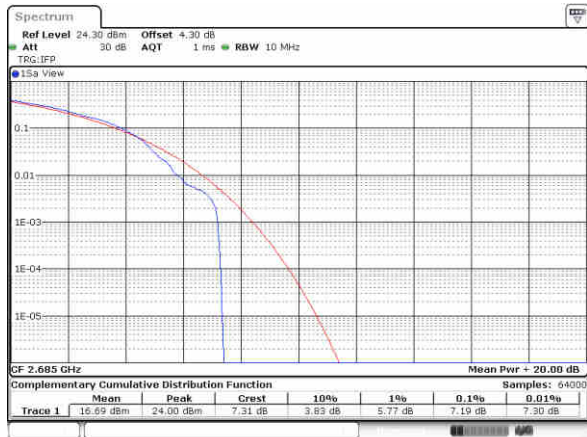


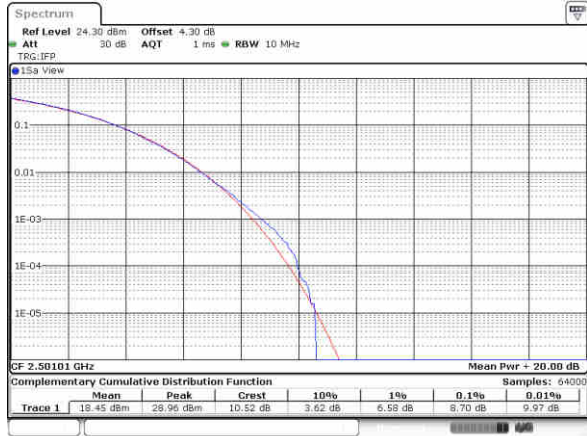
5G NR n41 UL_MIMO HPUE -SCS 15K

Peak-to-Average Ratio

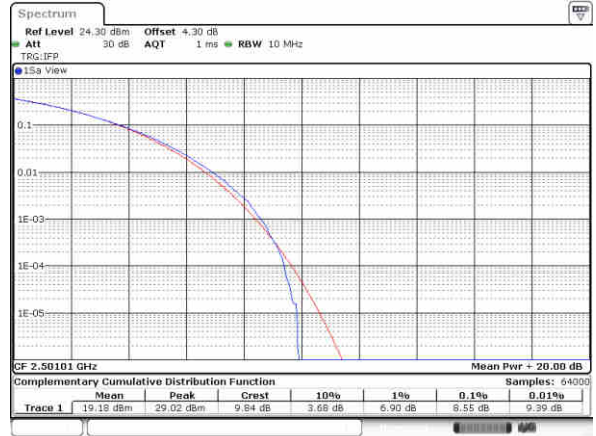
Mode	FR1 UL-MIMO n41 / 10MHz / CP-OFDM (M2)				
Mod.	QPSK	QPSK			Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	7.13	8.7			PASS
Middle CH	7.04	8.7			
Highest CH	7.19	8.2			

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			

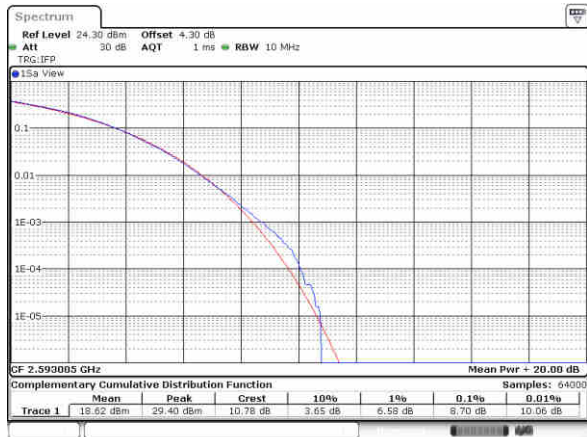
FR1 UL-MIMO n41 / 20MHz / CP-OFDM
QPSK(M2)
QPSK(M)
Lowest Channel / 1RB
Lowest Channel / 1RB

Middle Channel / 1 RB
Middle Channel / 1 RB

Highest Channel / 1 RB
Highest Channel / 1 RB


FR1 UL-MIMO n41 / 20MHz / CP-OFDM
QPSK(M2)
Lowest Channel / Full RB


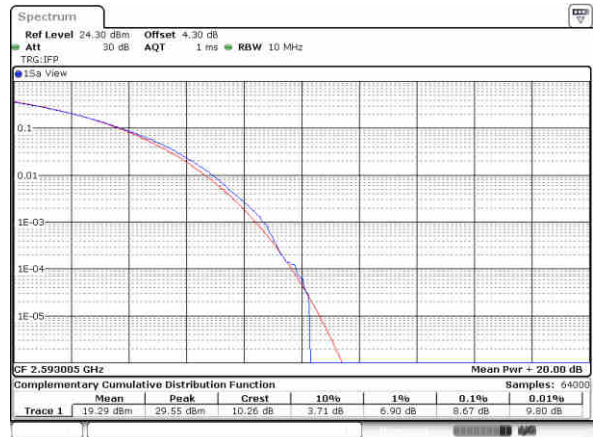
Date: 22_JAN_2021 @3126:23

QPSK(M)
Lowest Channel / Full RB


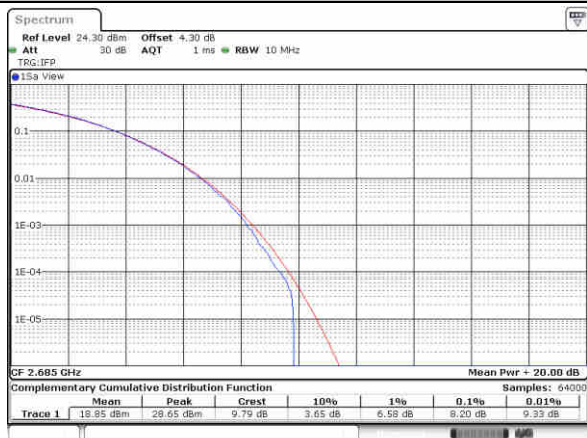
Date: 22_JAN_2021 @3150:26

Middle Channel / Full RB


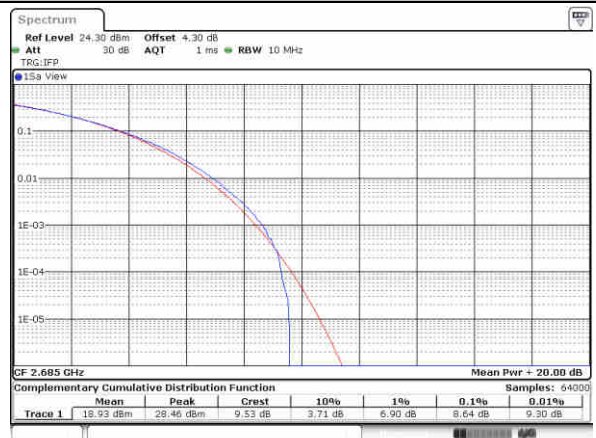
Date: 22_JAN_2021 @3123:36

Middle Channel / Full RB


Date: 22_JAN_2021 @3145:37

Highest Channel / Full RB


Date: 22_JAN_2021 @3127:09

Highest Channel / Full RB


Date: 22_JAN_2021 @3144:42

**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

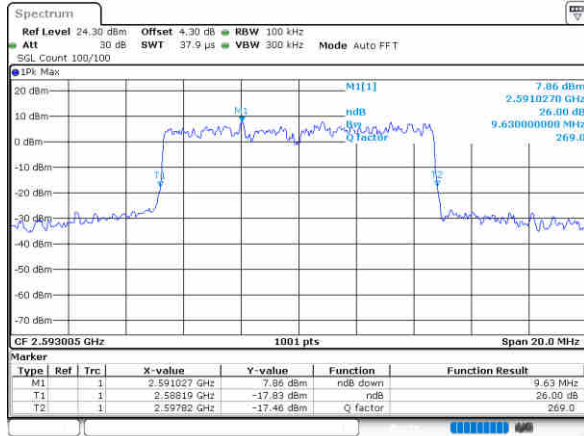
Mode	FR1 UL-MIMO n41 : 26dB BW(MHz) / CP-OFDM							
	M2				M			
BW	40MHz	40MHz	40MHz	40MHz	40MHz	40MHz	40MHz	40MHz
Mod.	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
Middle CH	41.08	40.84	40.92	40.92	40.84	40.84	40.92	41.08



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

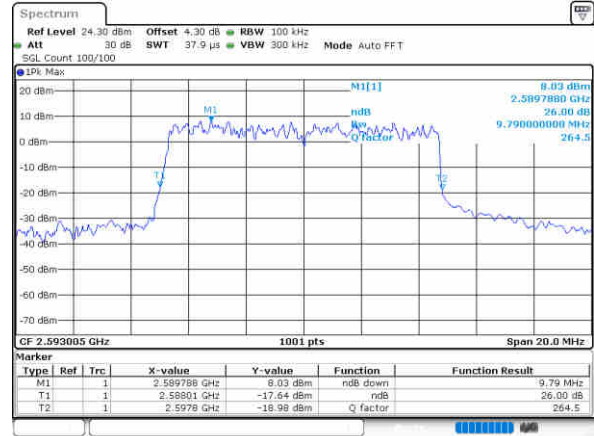
QPSK

Middle Channel



16QAM

Middle Channel



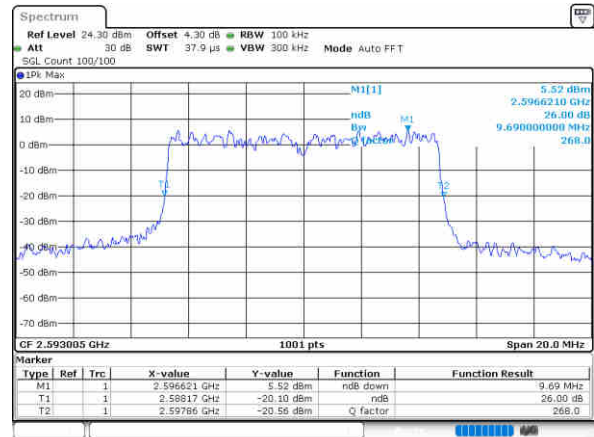
64QAM

Middle Channel



256QAM

Middle Channel

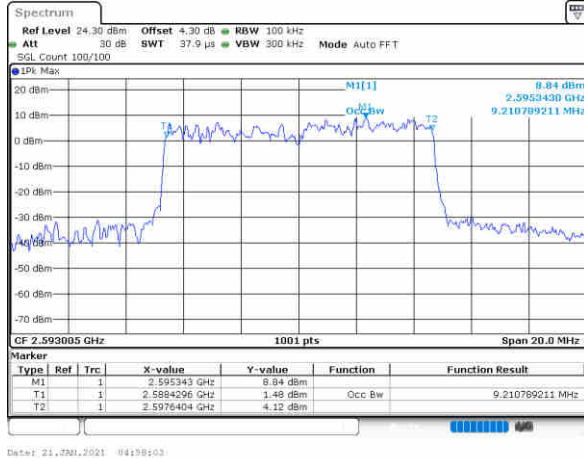




FR1 UL-MIMO n41 / 10MHz / CP-OFDM (M)

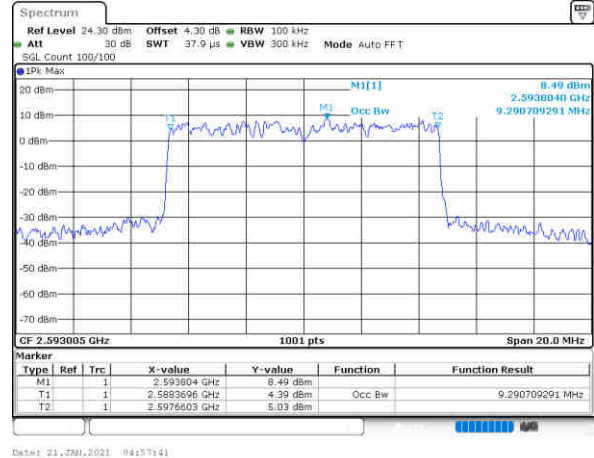
QPSK

Middle Channel



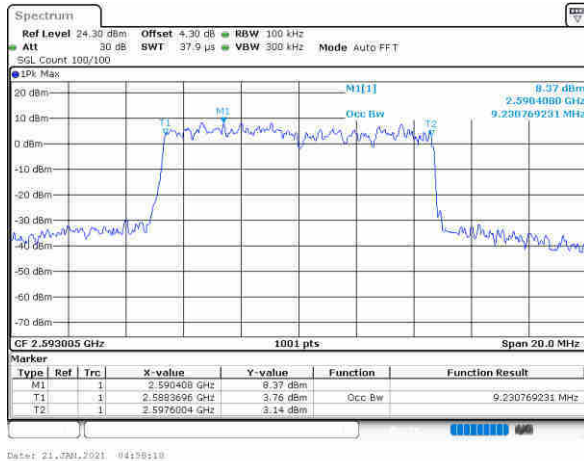
16QAM

Middle Channel



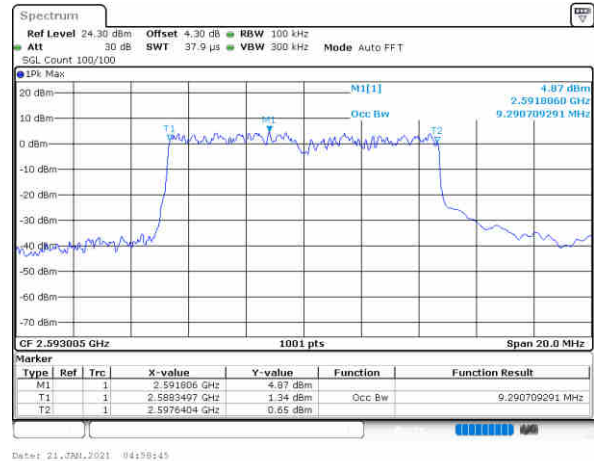
64QAM

Middle Channel



256QAM

Middle Channel





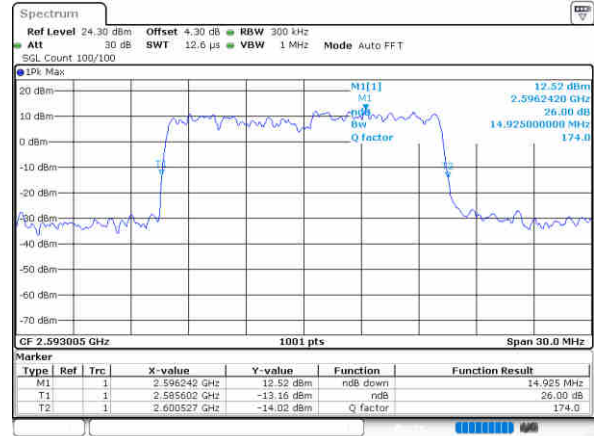
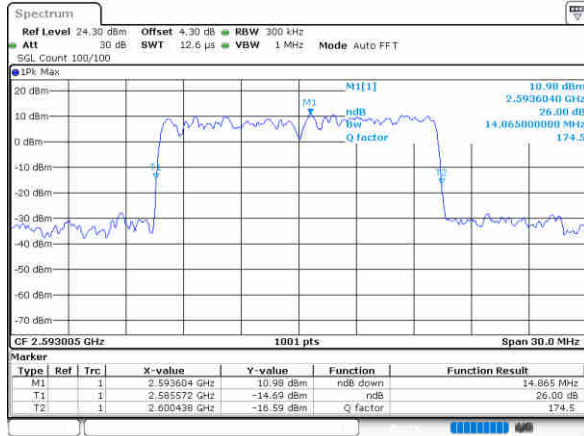
FR1 UL-MIMO n41 / 15MHz / CP-OFDM (M2)

QPSK

16QAM

Middle Channel

Middle Channel

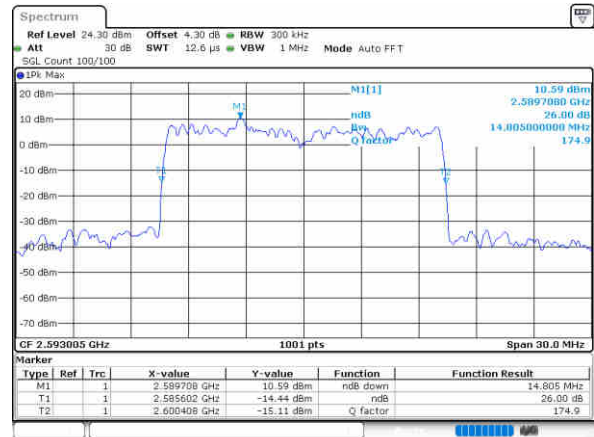
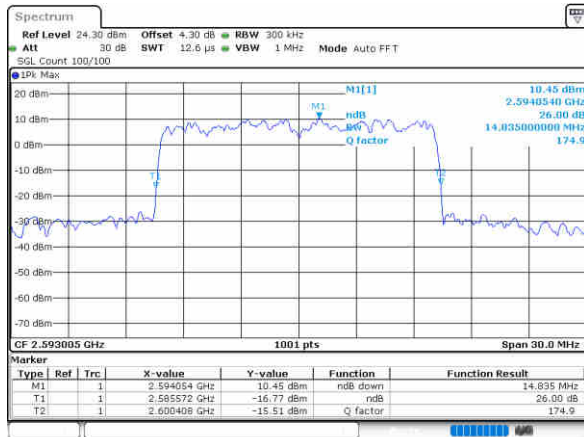


64QAM

256QAM

Middle Channel

Middle Channel

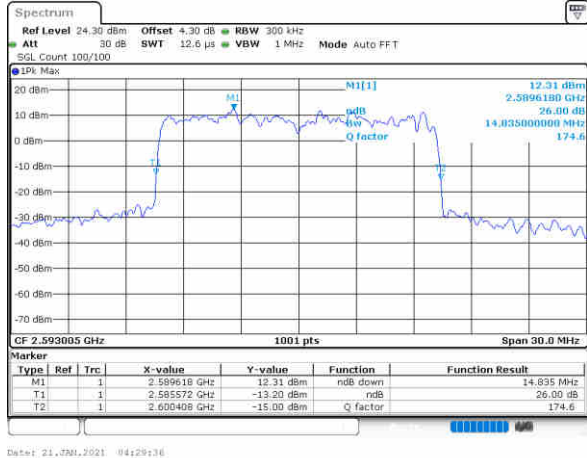




FR1 UL-MIMO n41 / 15MHz / CP-OFDM (M)

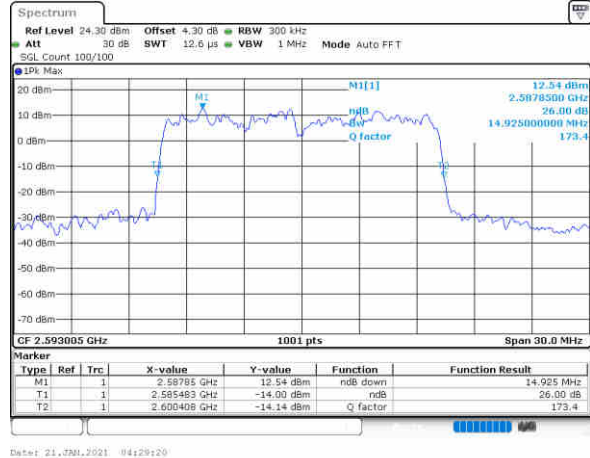
QPSK

Middle Channel



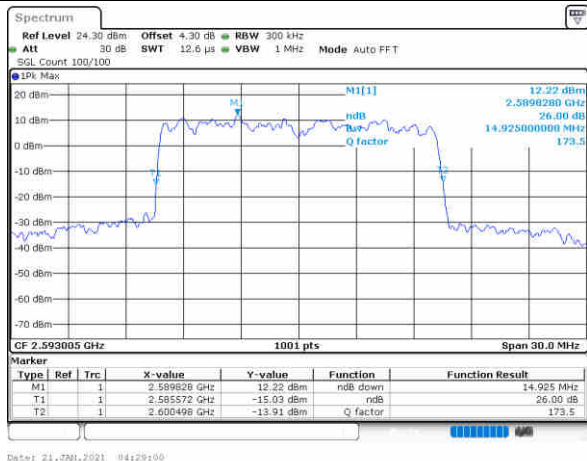
16QAM

Middle Channel



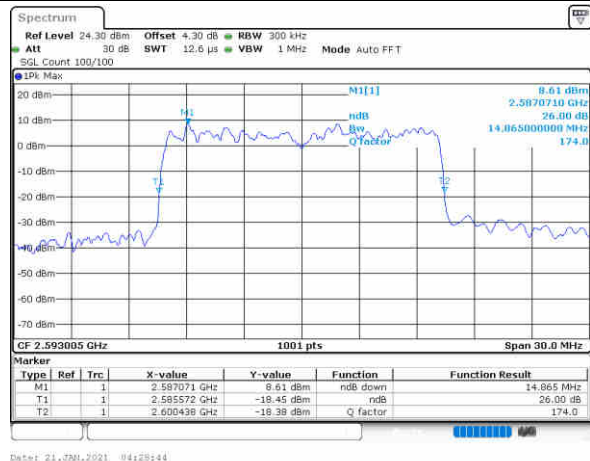
64QAM

Middle Channel



256QAM

Middle Channel

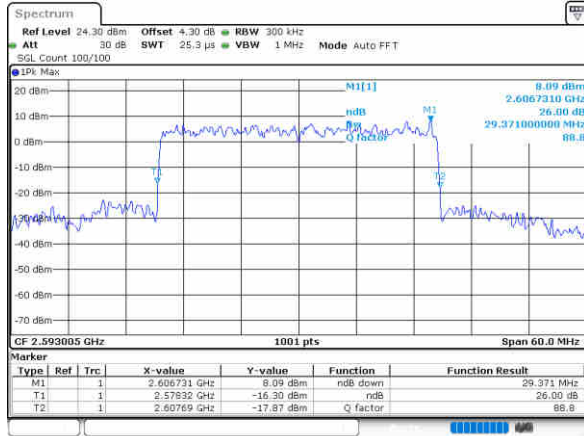




FR1 UL-MIMO n41 / 30MHz / CP-OFDM (M2)

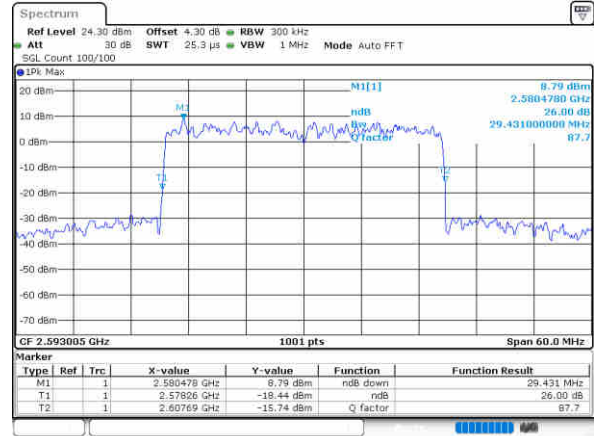
QPSK

Middle Channel



16QAM

Middle Channel



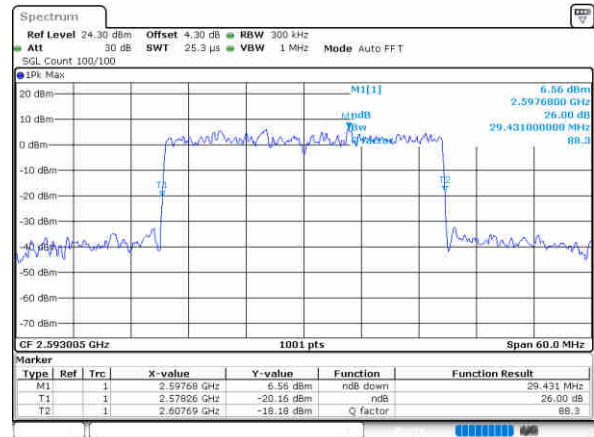
64QAM

Middle Channel



256QAM

Middle Channel

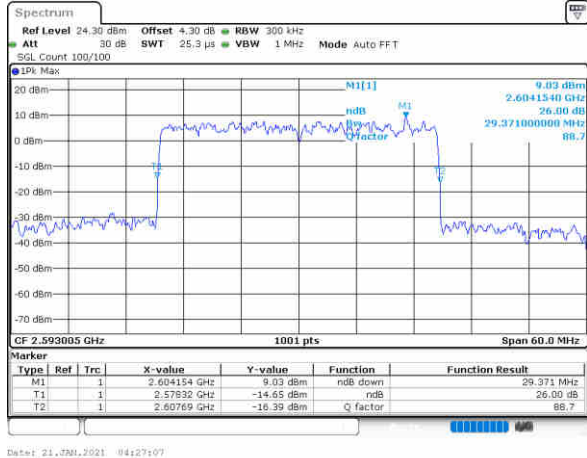




FR1 UL-MIMO n41 / 30MHz / CP-OFDM (M)

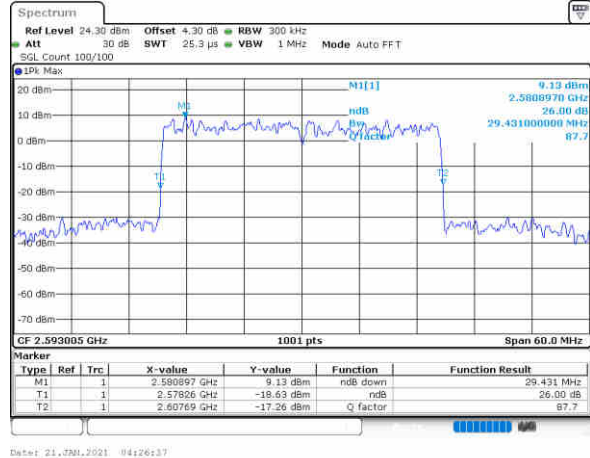
QPSK

Middle Channel



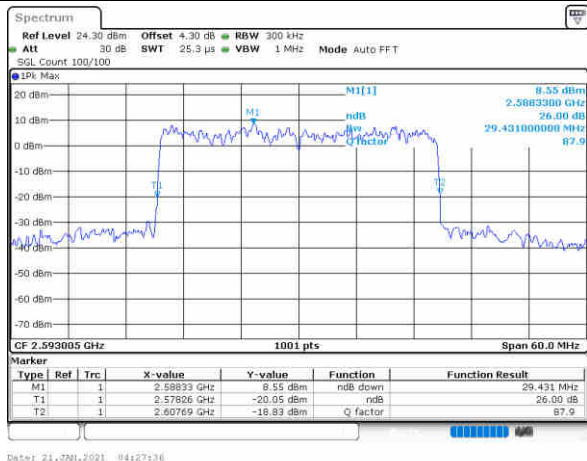
16QAM

Middle Channel



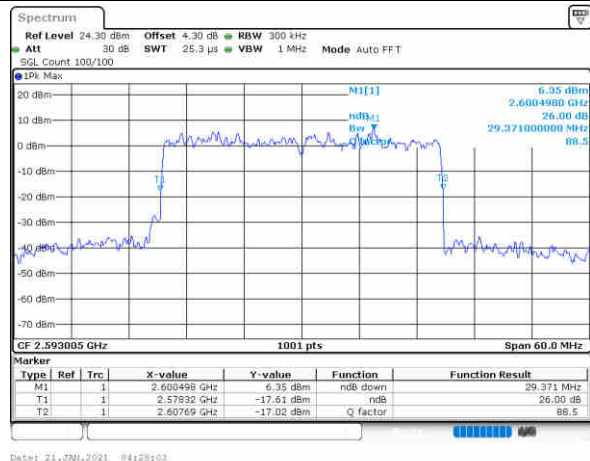
64QAM

Middle Channel



256QAM

Middle Channel





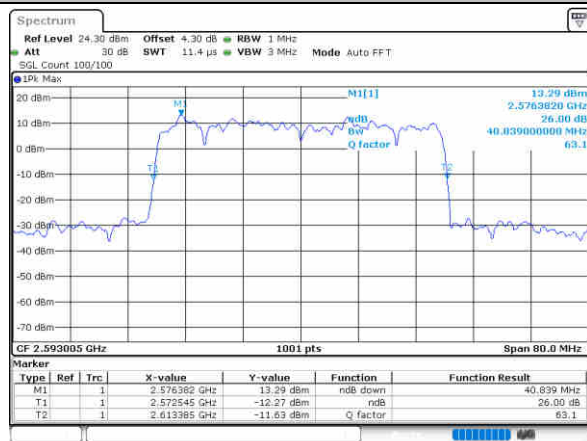
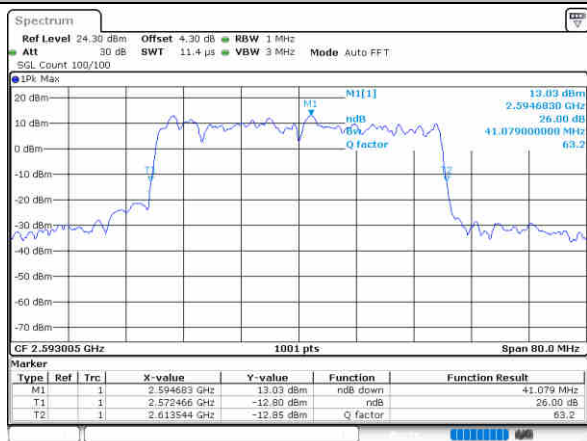
FR1 UL-MIMO n41 / 40MHz / CP-OFDM (M2)

QPSK

16QAM

Middle Channel

Middle Channel

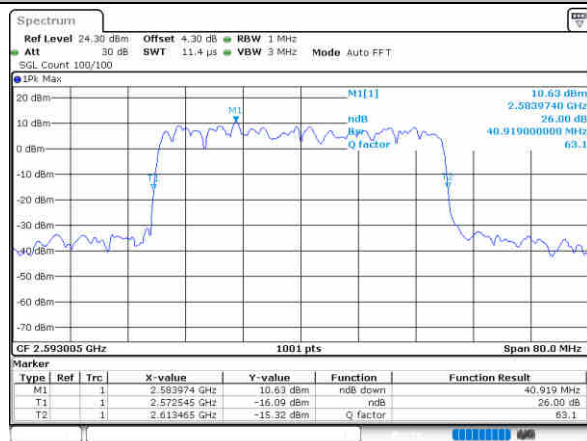
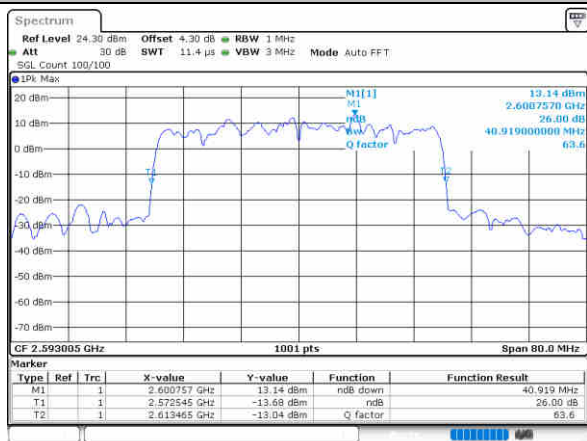


64QAM

256QAM

Middle Channel

Middle Channel





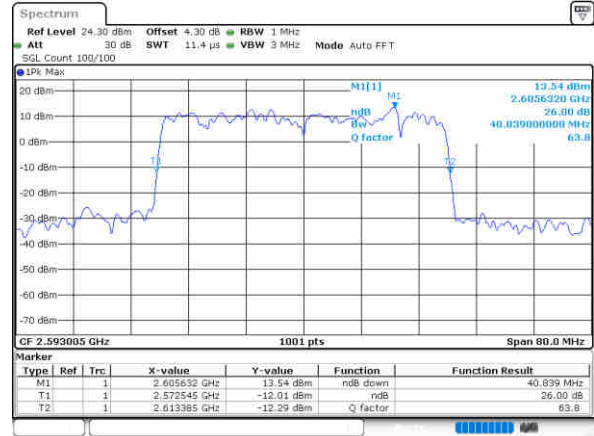
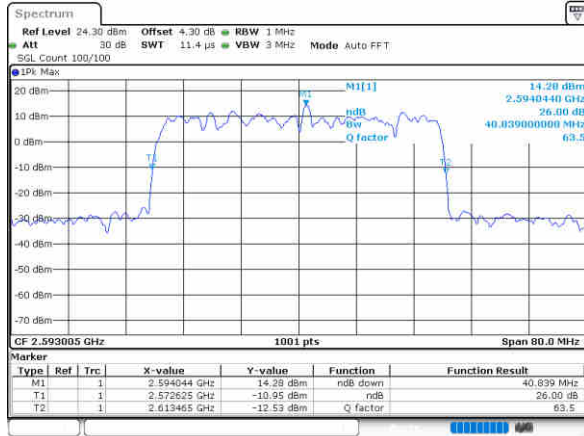
FR1 UL-MIMO n41 / 40MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel

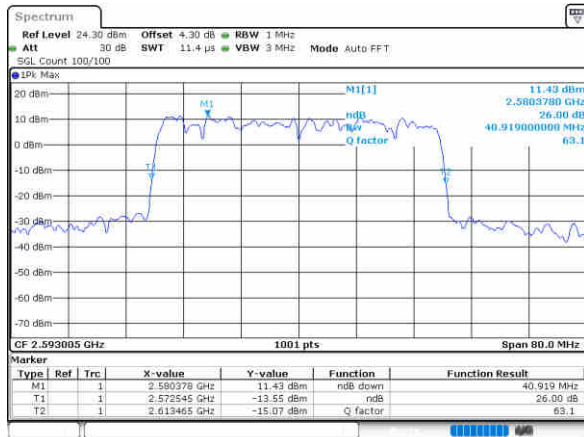


64QAM

256QAM

Middle Channel

Middle Channel



**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



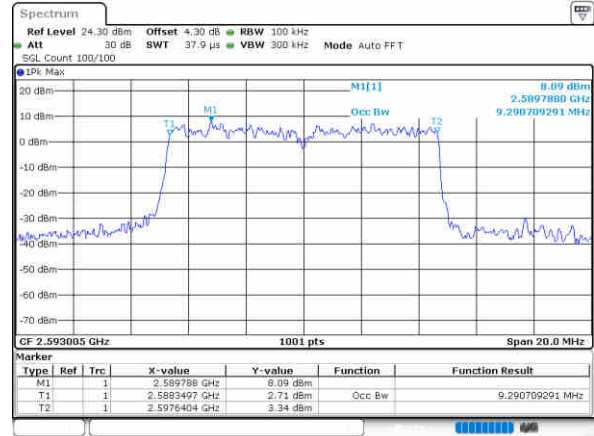
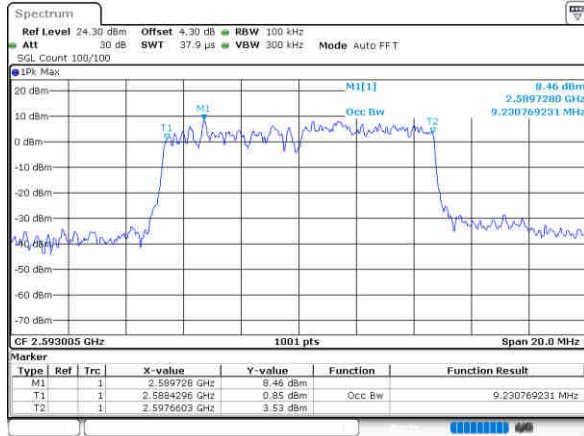
FR1 UL-MIMO n41 / 10MHz / CP-OFDM (M2)

QPSK

16QAM

Middle Channel

Middle Channel

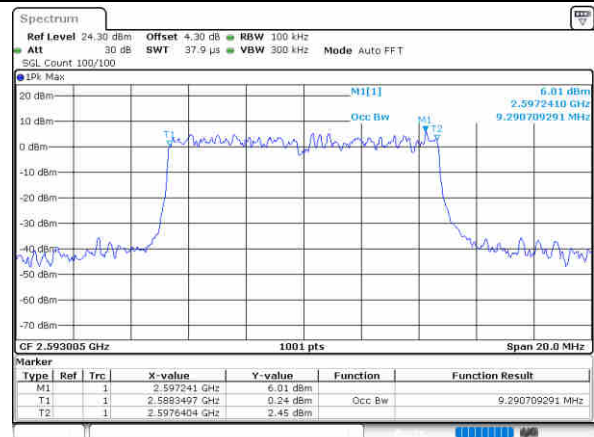
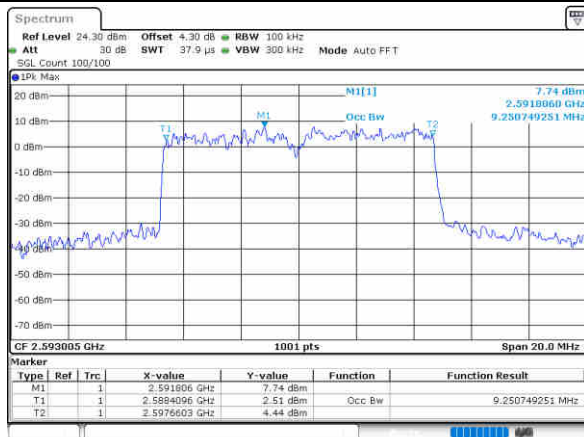


64QAM

256QAM

Middle Channel

Middle Channel





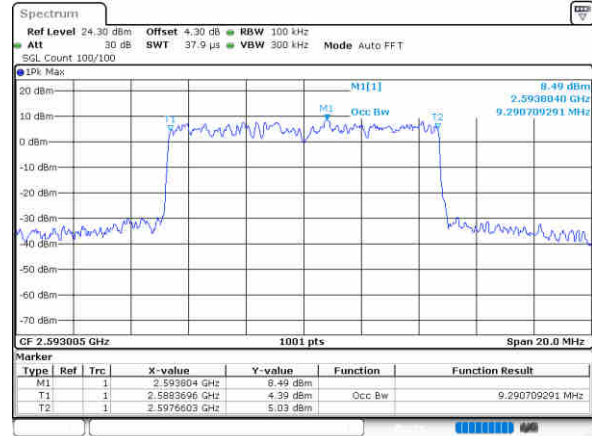
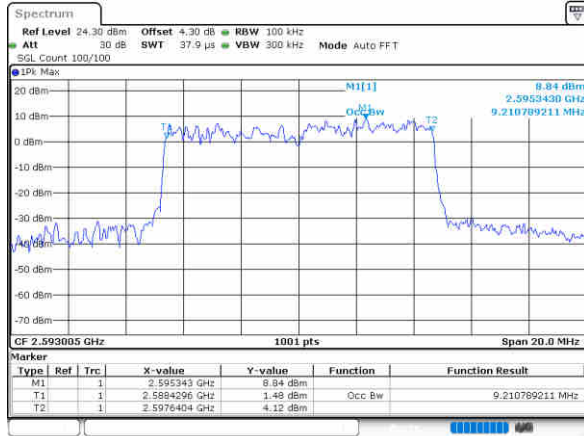
FR1 UL-MIMO n41 / 10MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel

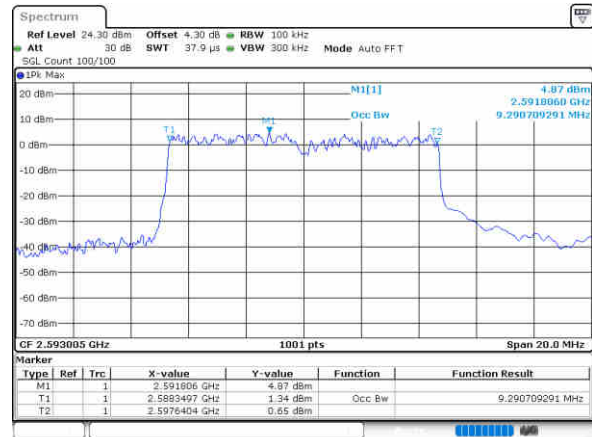
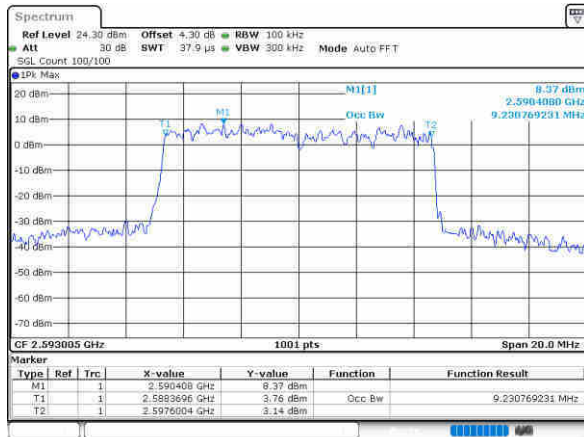


64QAM

256QAM

Middle Channel

Middle Channel

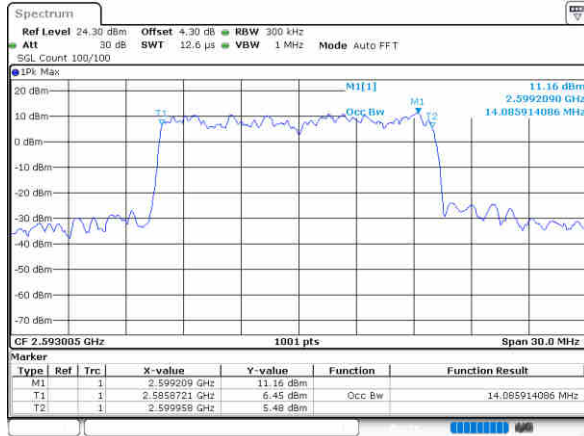




FR1 UL-MIMO n41 / 15MHz / CP-OFDM (M2)

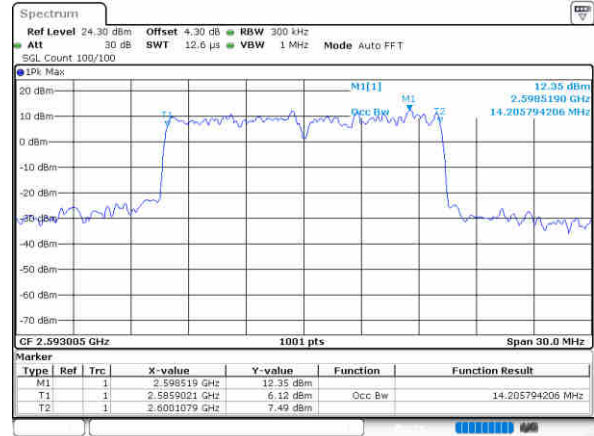
QPSK

Middle Channel



16QAM

Middle Channel



64QAM

Middle Channel



256QAM

Middle Channel





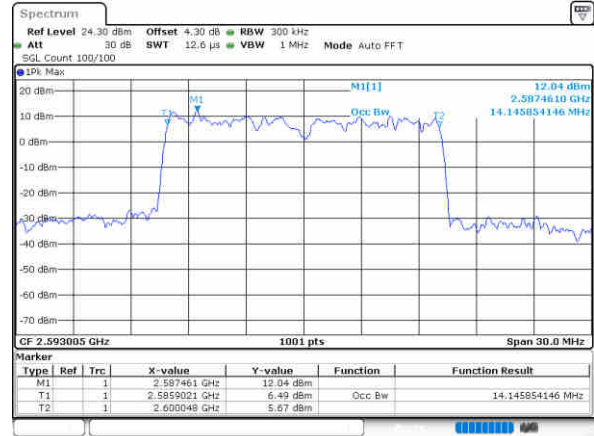
FR1 UL-MIMO n41 / 15MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel



64QAM

256QAM

Middle Channel

Middle Channel

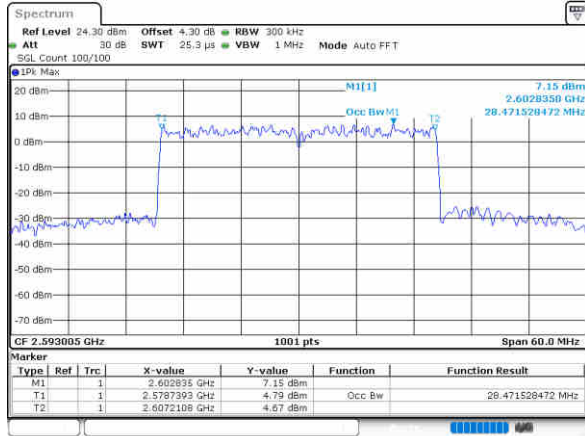




FR1 UL-MIMO n41 / 30MHz / CP-OFDM (M2)

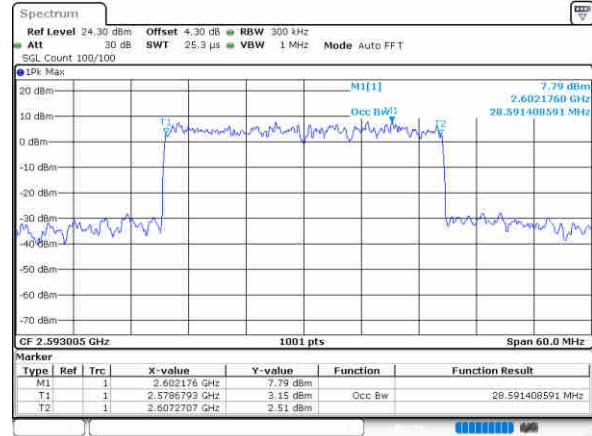
QPSK

Middle Channel



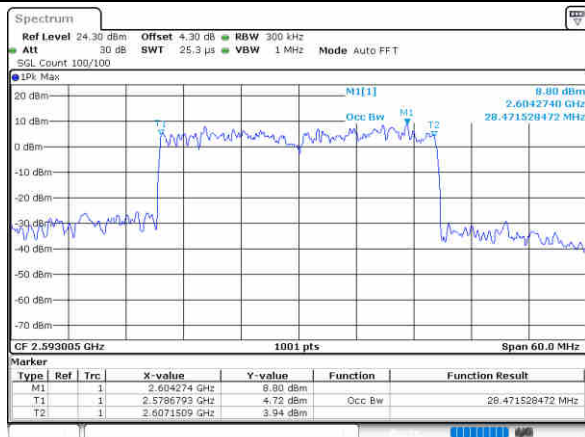
16QAM

Middle Channel



64QAM

Middle Channel



256QAM

Middle Channel

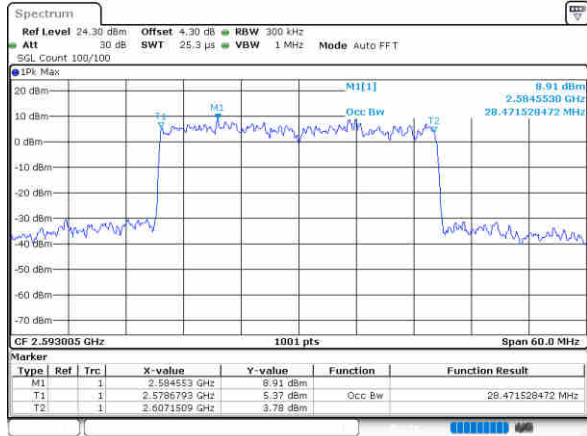




FR1 UL-MIMO n41 / 30MHz / CP-OFDM (M)

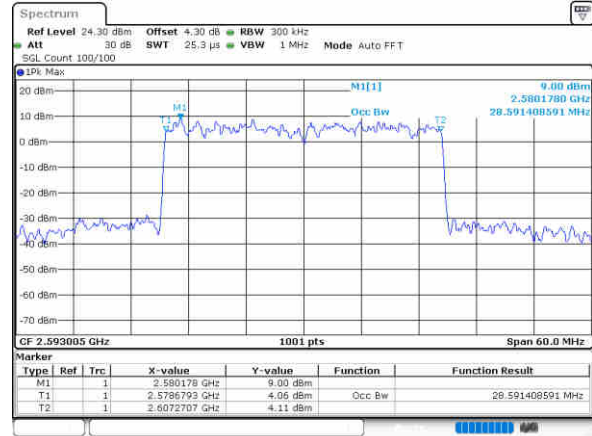
QPSK

Middle Channel



16QAM

Middle Channel



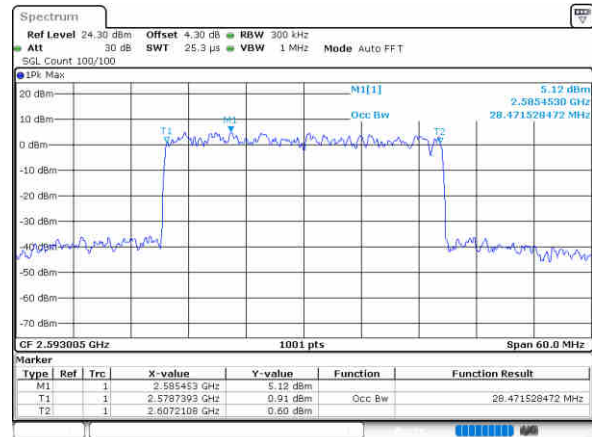
64QAM

Middle Channel



256QAM

Middle Channel

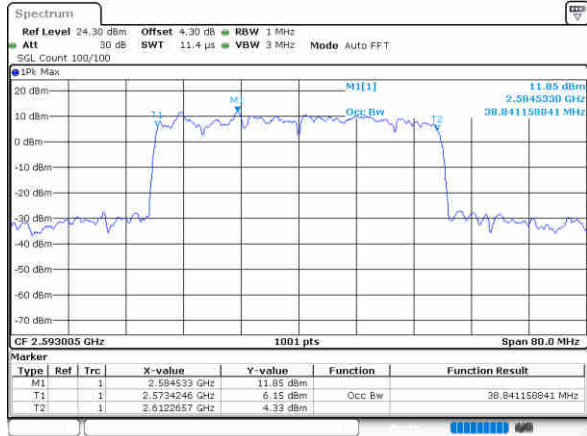




FR1 UL-MIMO n41 / 40MHz / CP-OFDM (M2)

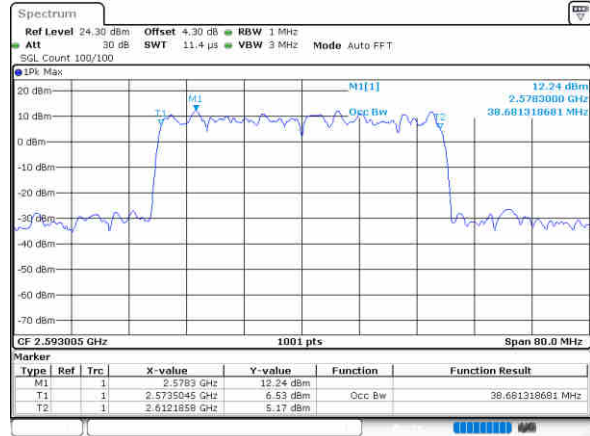
QPSK

Middle Channel



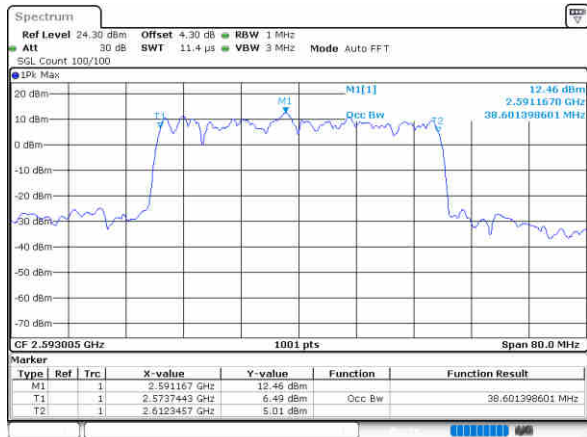
16QAM

Middle Channel



64QAM

Middle Channel



256QAM

Middle Channel

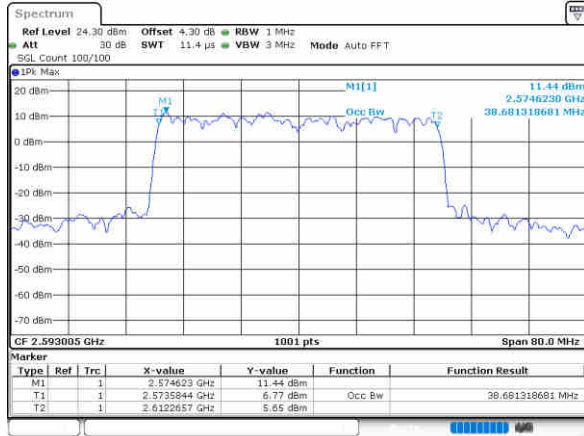




FR1 UL-MIMO n41 / 40MHz / CP-OFDM (M)

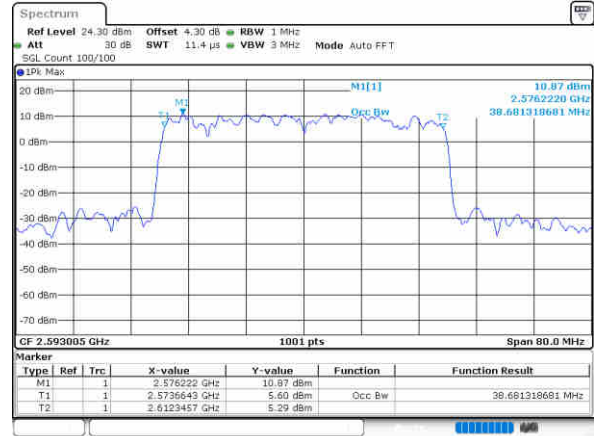
QPSK

Middle Channel



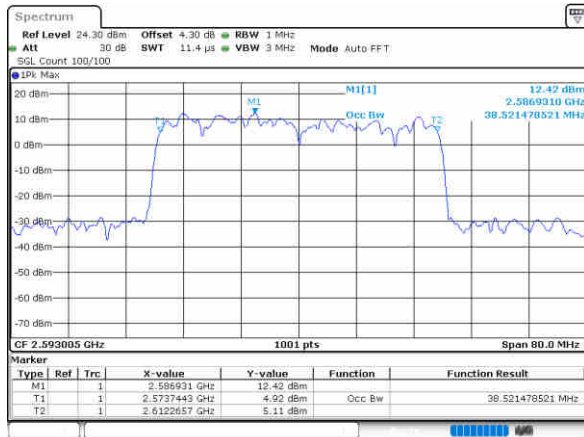
16QAM

Middle Channel



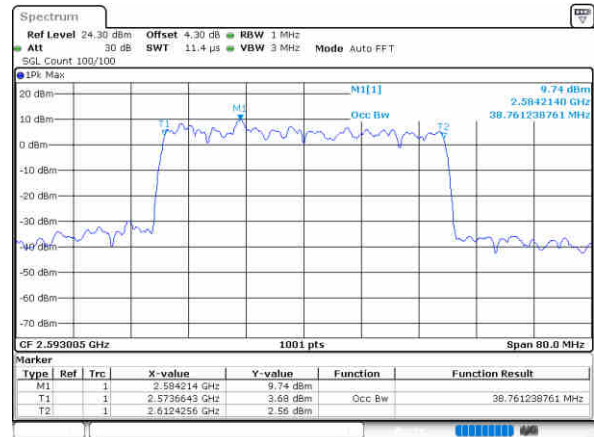
64QAM

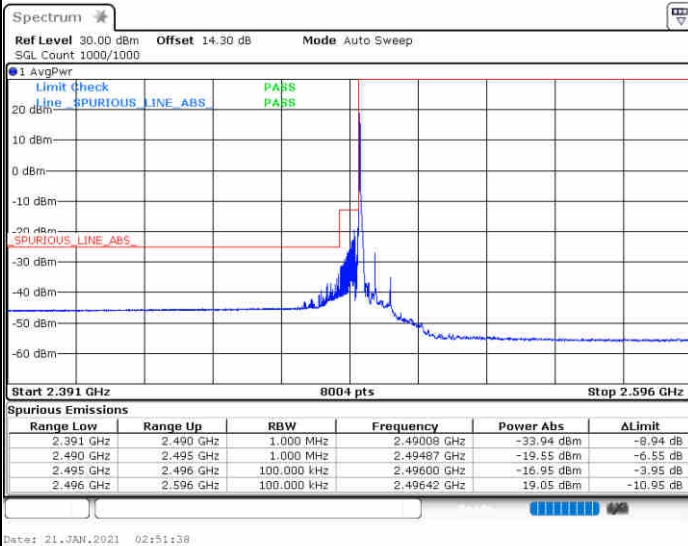
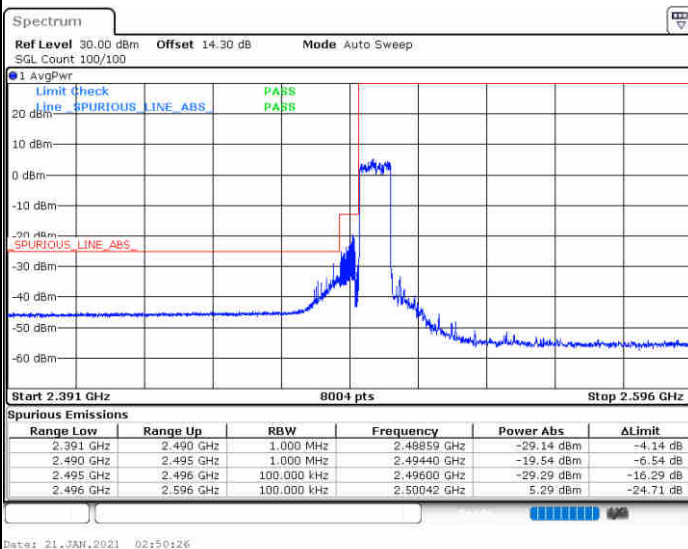
Middle Channel



256QAM

Middle Channel



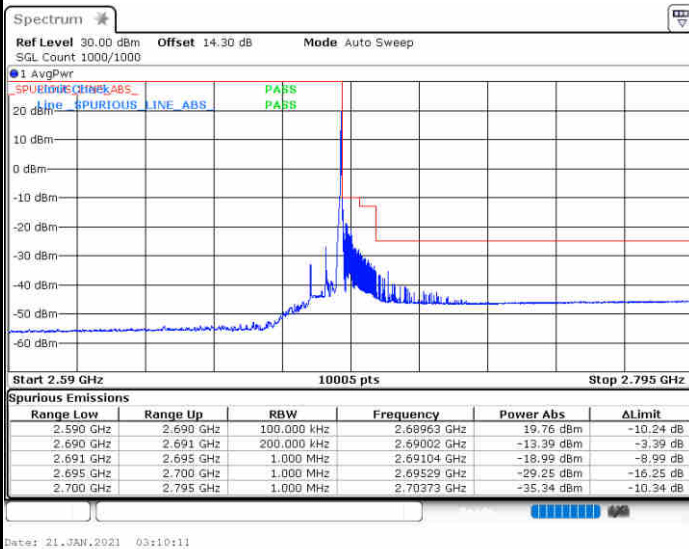
**Conducted Band Edge****FR1 UL-MIMO n41 / 10MHz / CP-OFDM QPSK (M2)****Lowest Band Edge / 1 RB****Channel Power < -13dBm Pass****Lowest Band Edge / Full RB****Channel Power < -13dBm Pass**



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

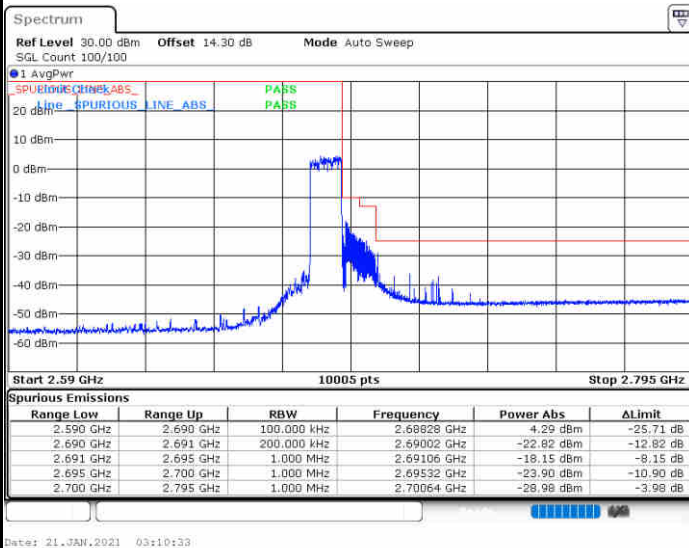
Highest Band Edge / 1 RB

Channel Power < -10dBm Pass



Highest Band Edge / Full RB

Channel Power < -10dBm Pass

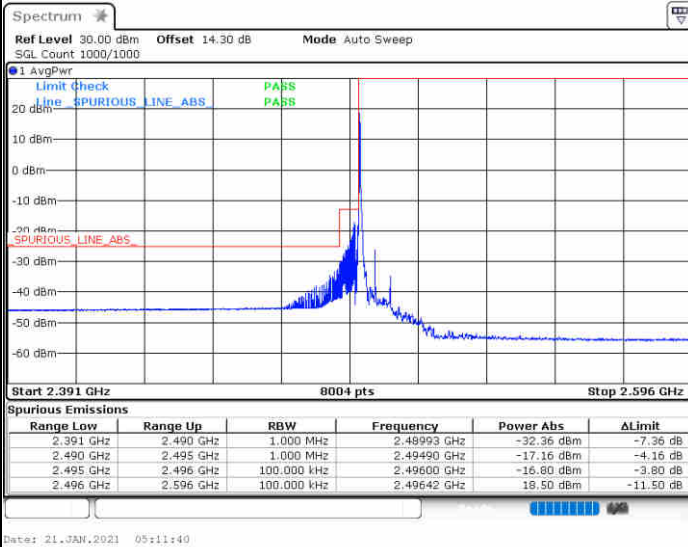




FR1 UL-MIMO n41 / 10MHz / CP-OFDM QPSK (M)

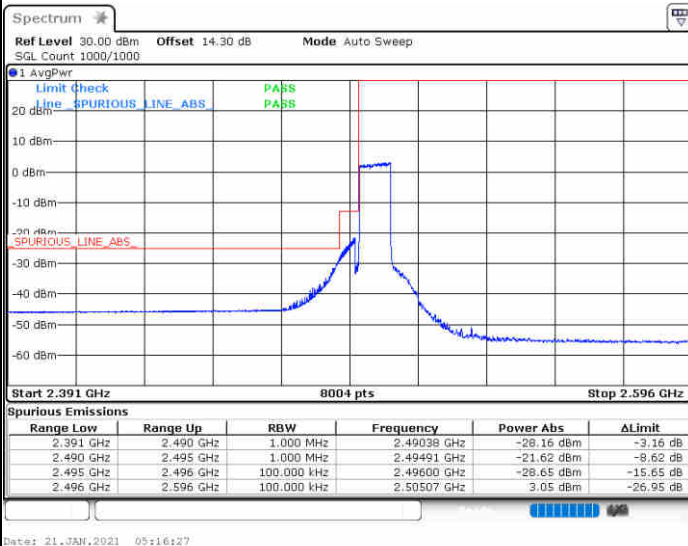
Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



Lowest Band Edge / Full RB

Channel Power < -13dBm Pass

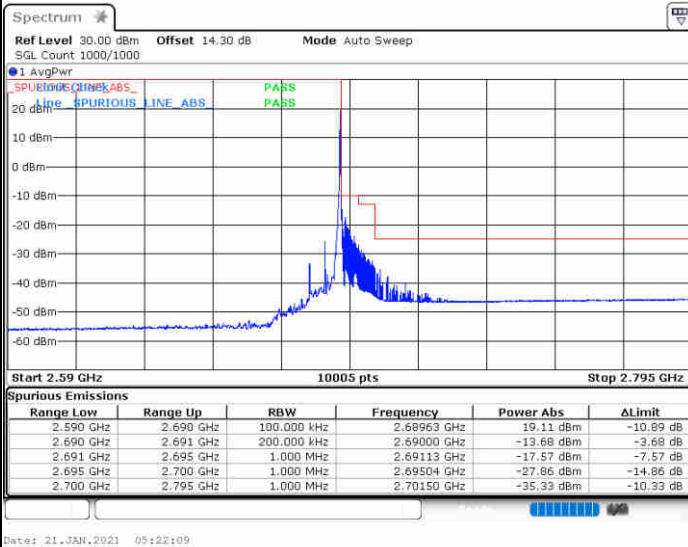




FR1 UL-MIMO n41 / 10MHz / CP-OFDM QPSK (M)

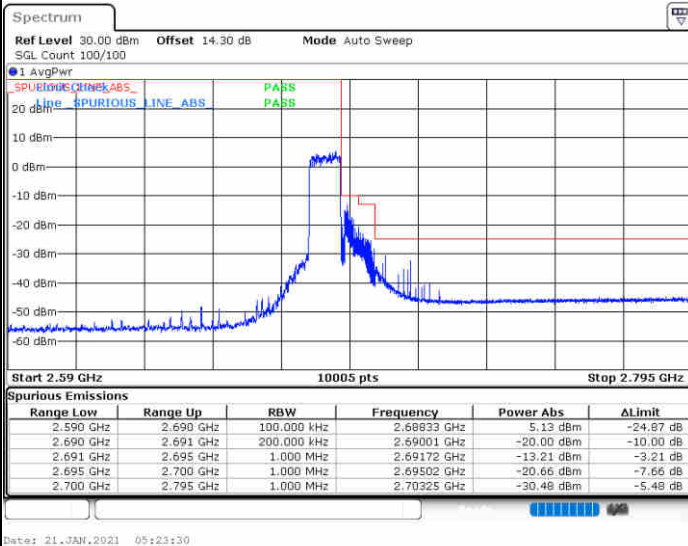
Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Highest Band Edge / Full RB

Channel Power < -13dBm Pass

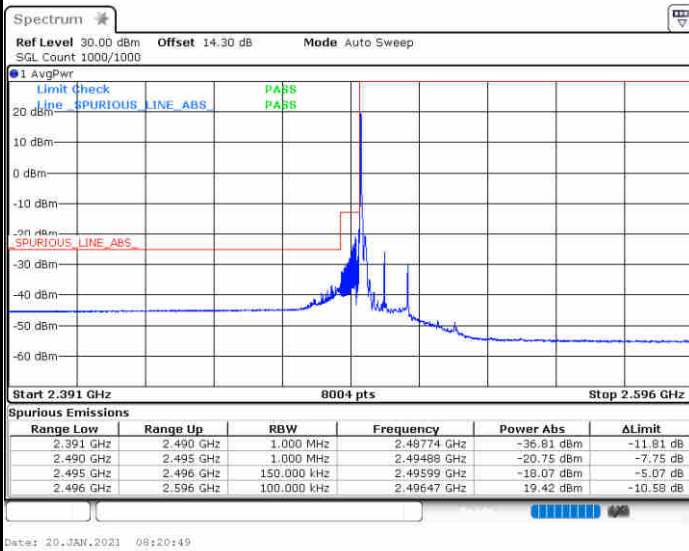




FR1 UL-MIMO n41 / 15MHz / CP-OFDM QPSK (M2)

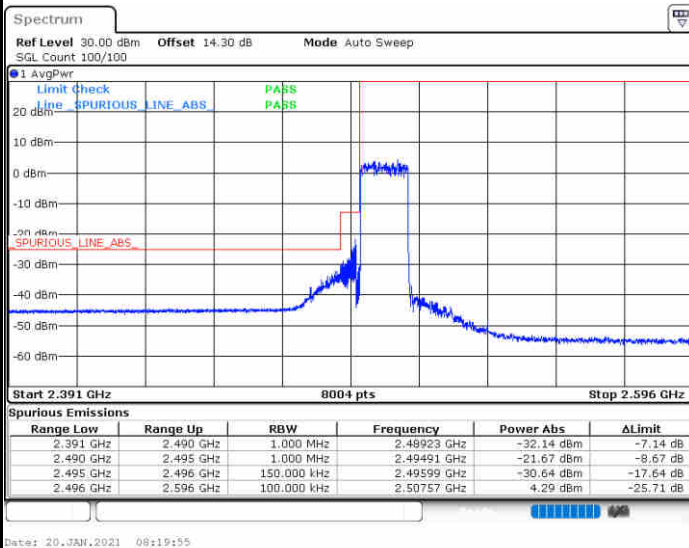
Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



Lowest Band Edge / Full RB

Channel Power < -13dBm Pass

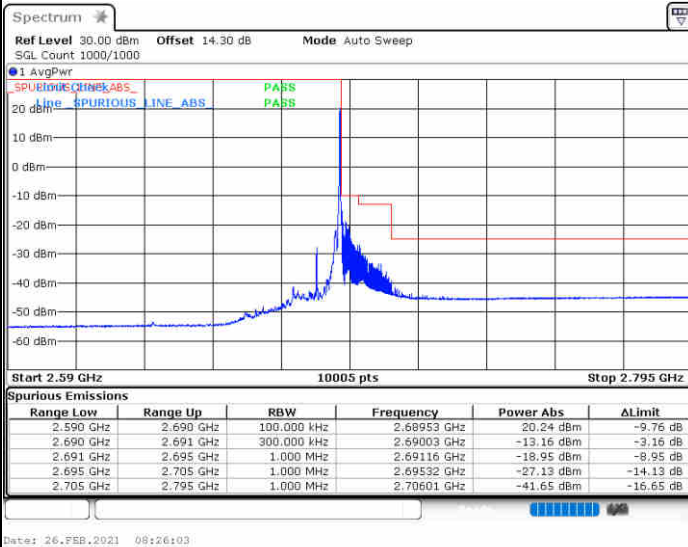




FR1 UL-MIMO n41 / 15MHz / CP-OFDM QPSK (M2)

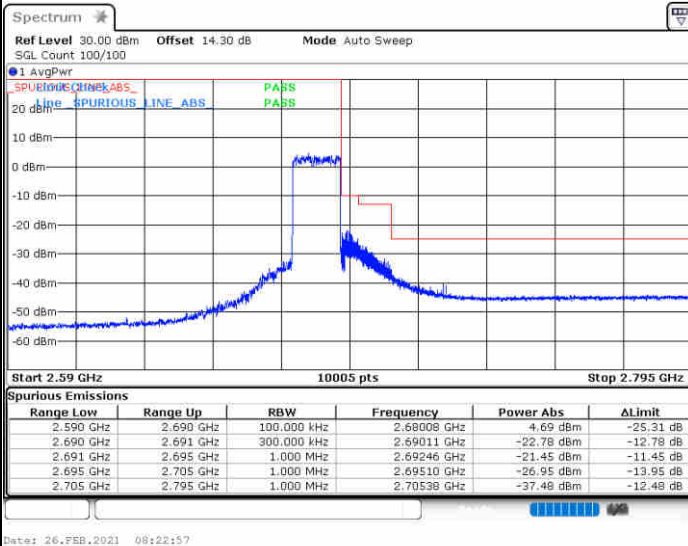
Highest Band Edge / 1 RB

Channel Power < -10dBm Pass



Highest Band Edge / Full RB

Channel Power < -10dBm Pass

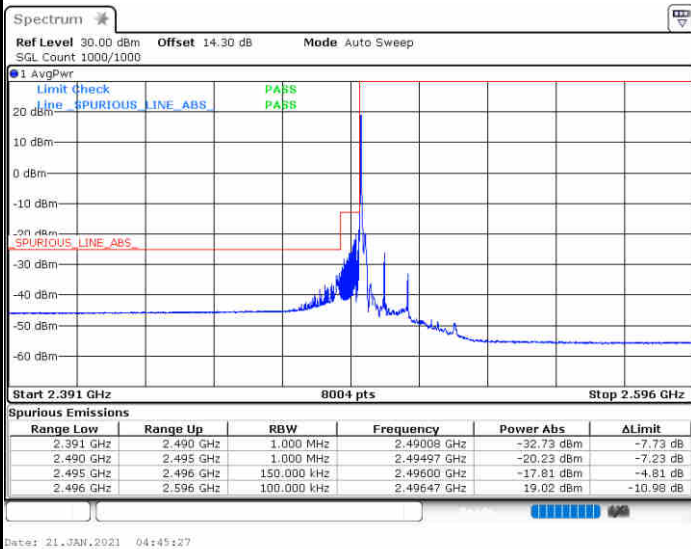




FR1 UL-MIMO n41 / 15MHz / CP-OFDM QPSK (M)

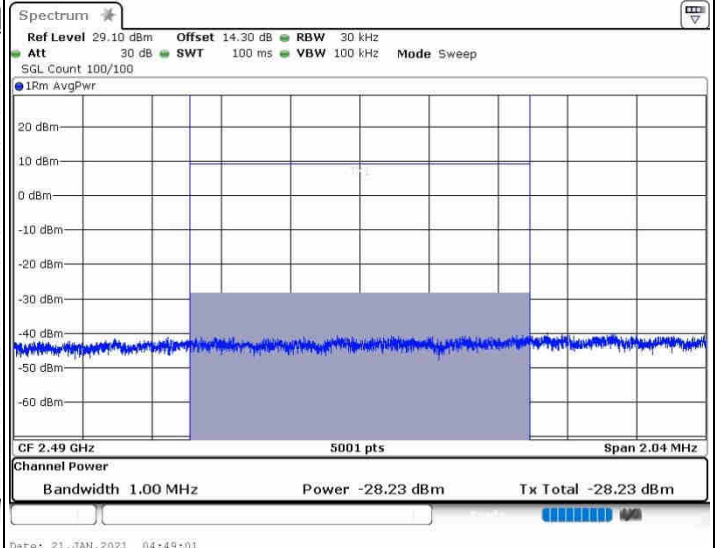
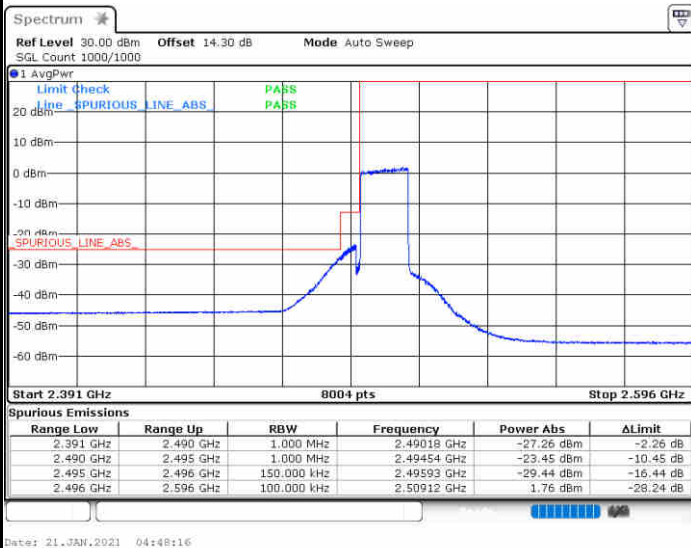
Lowest Band Edge / 1 RB

Channel Power < -25dBm Pass



Lowest Band Edge / Full RB

Channel Power < -25dBm Pass

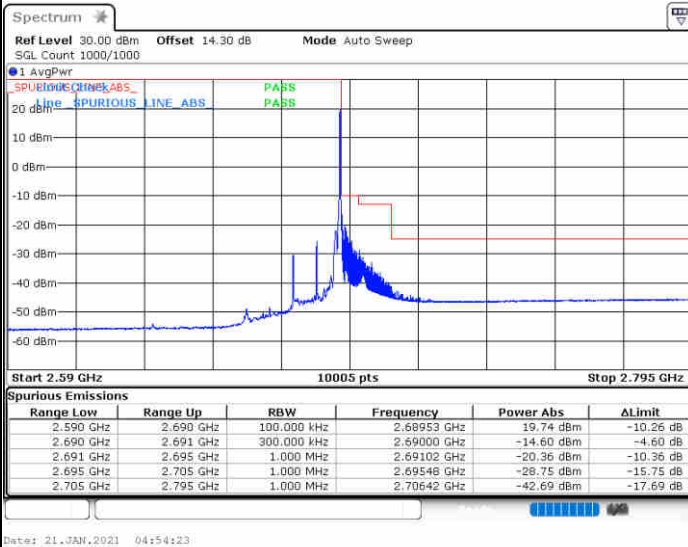




FR1 UL-MIMO n41 / 15MHz / CP-OFDM QPSK (M)

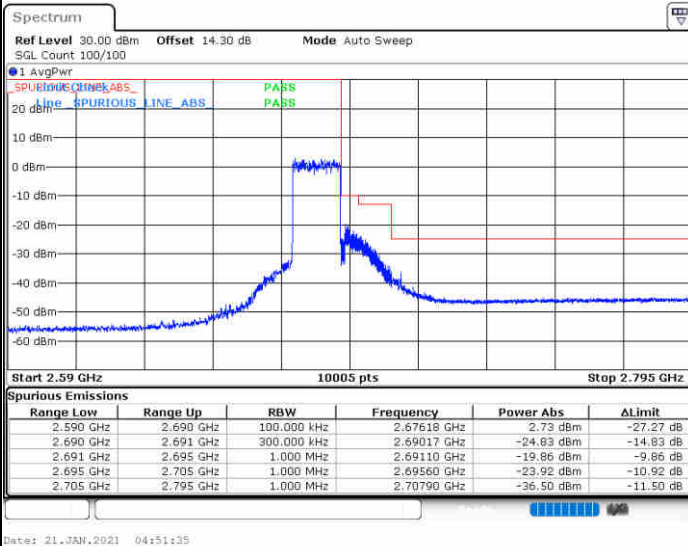
Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Highest Band Edge / Full RB

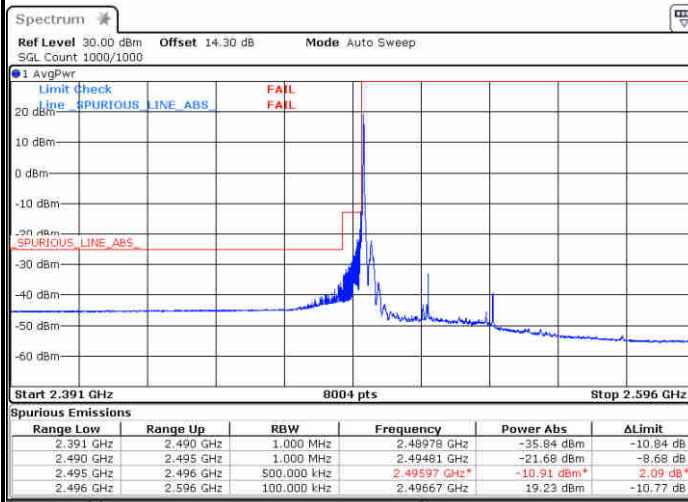
Channel Power < -13dBm Pass



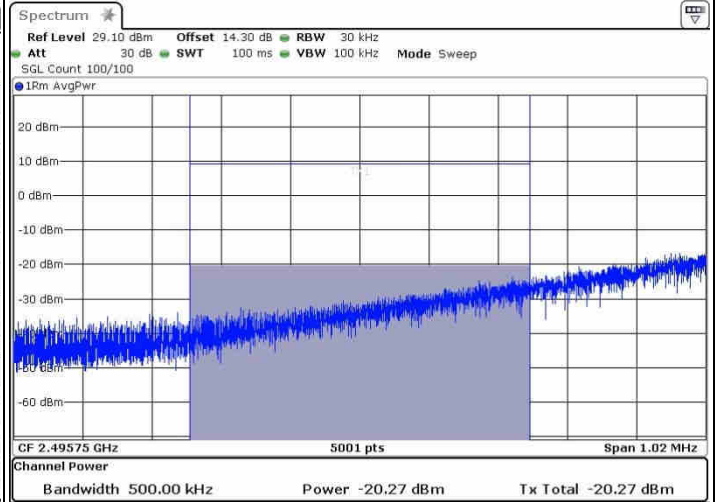


FR1 UL-MIMO n41 / 40MHz / CP-OFDM QPSK (M2)

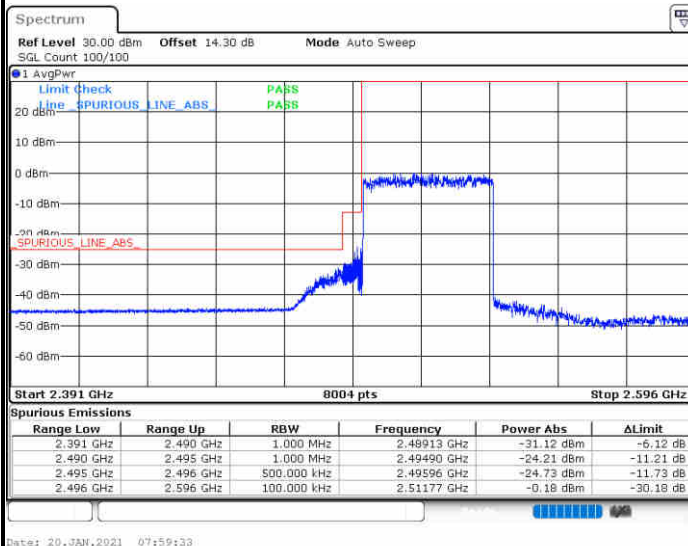
Lowest Band Edge / 1 RB



Channel Power < -13dBm Pass



Lowest Band Edge / Full RB



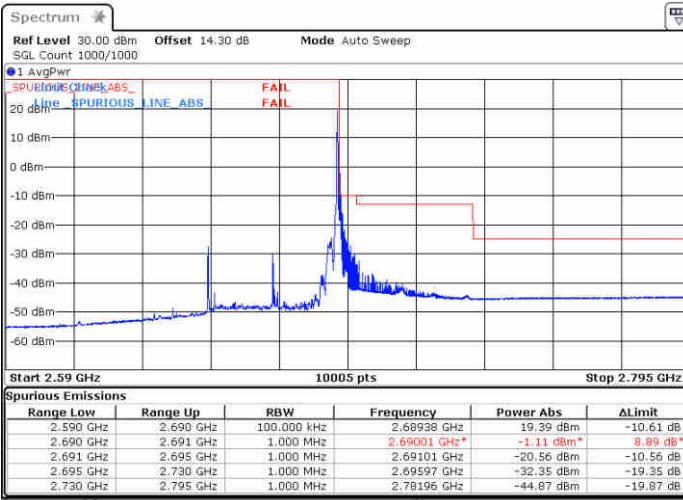
Channel Power < -13dBm Pass

/

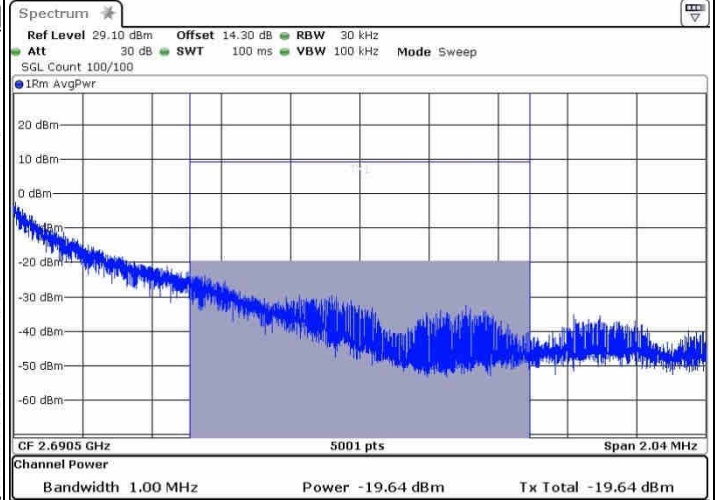


FR1 UL-MIMO n41 / 40MHz / CP-OFDM QPSK (M2)

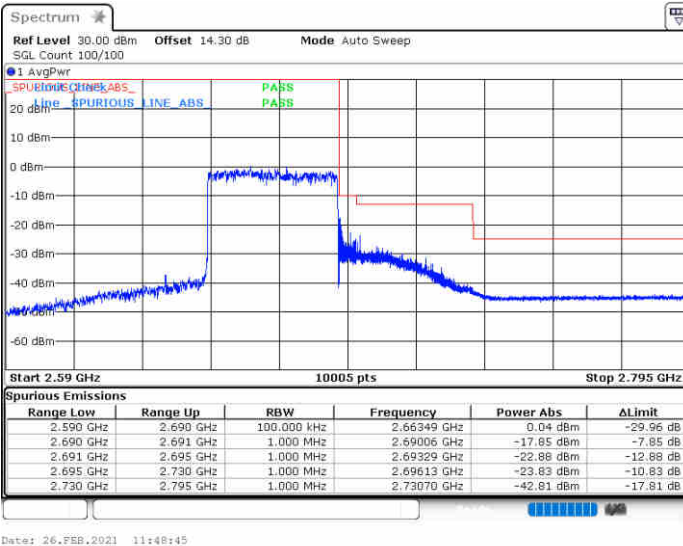
Highest Band Edge / 1 RB



Channel Power < -10dBm Pass



Highest Band Edge / Full RB



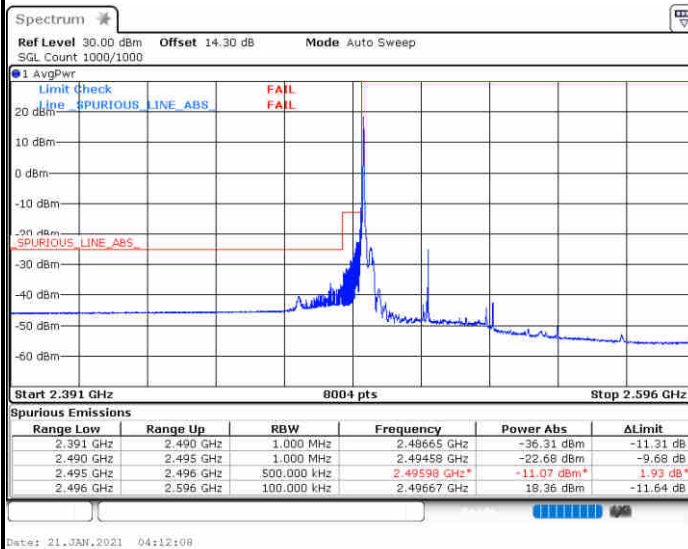
Channel Power < -10dBm Pass

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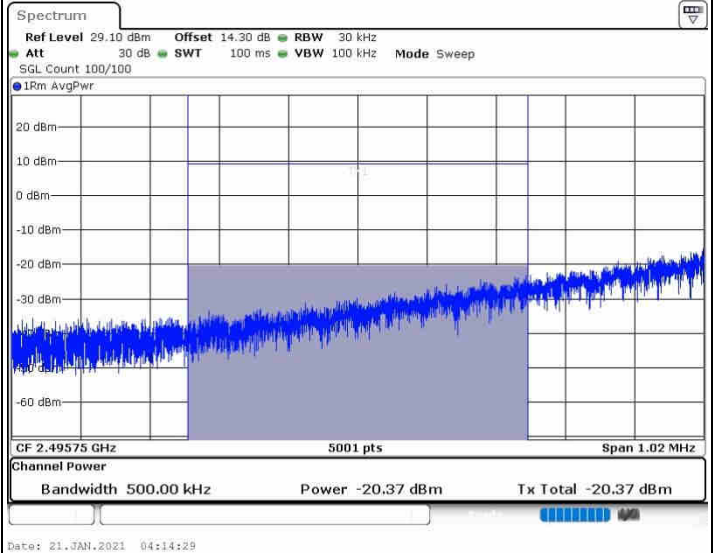


FR1 UL-MIMO n41 / 40MHz / CP-OFDM QPSK (M)

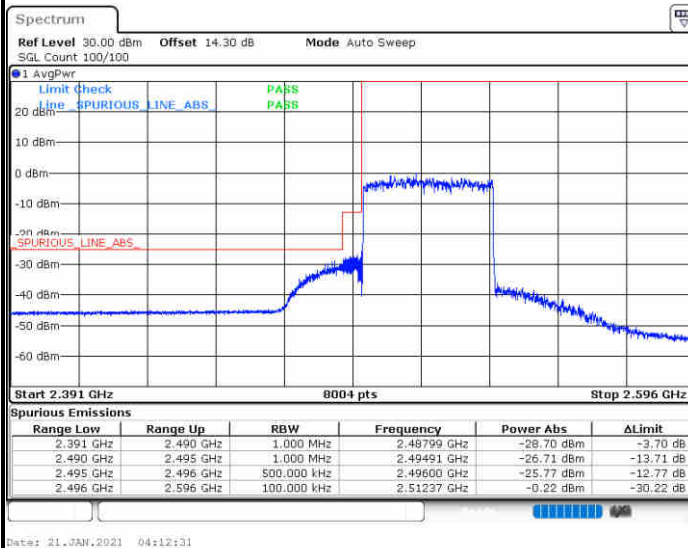
Lowest Band Edge / 1 RB



Channel Power < -13dBm Pass



Lowest Band Edge / Full RB



Channel Power < -13dBm Pass

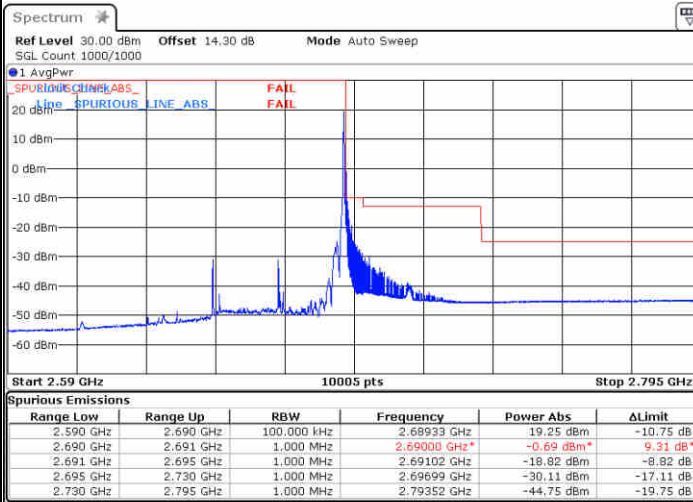
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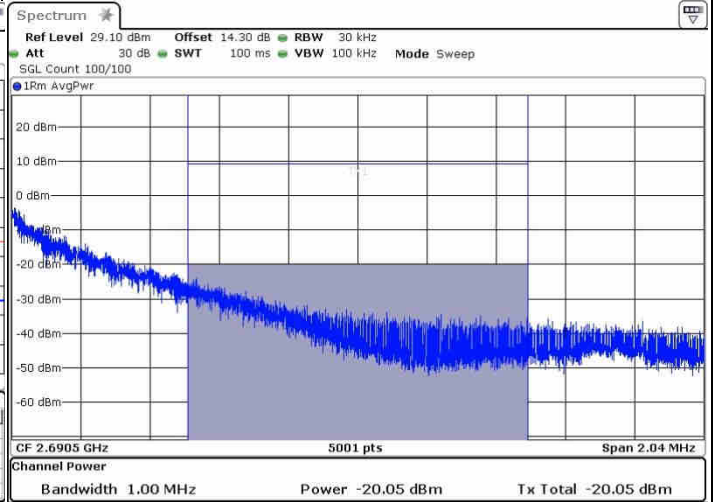
FR1 UL-MIMO n41 / 40MHz / CP-OFDM QPSK (M)

Highest Band Edge / 1 RB

Channel Power < -10dBm Pass



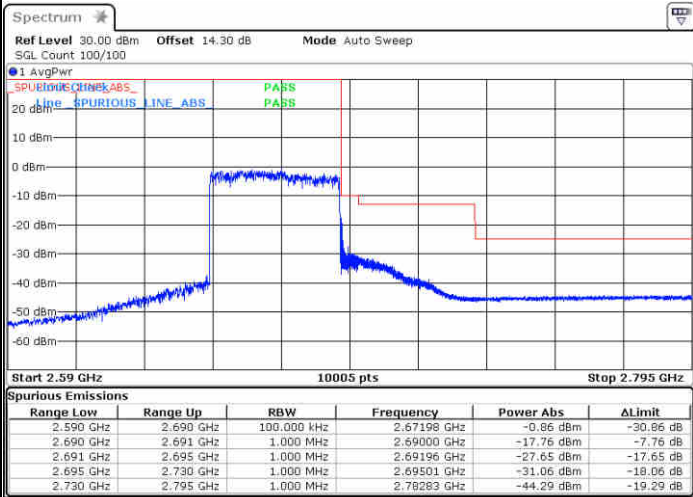
Date: 26.FEB.2021 13:38:55



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

Highest Band Edge / Full RB

Channel Power < -10dBm Pass



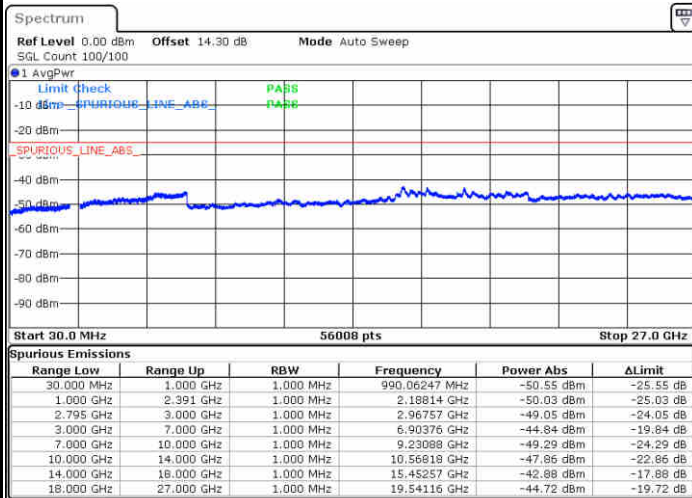
Date: 26.FEB.2021 13:45:56



Conducted Spurious Emission

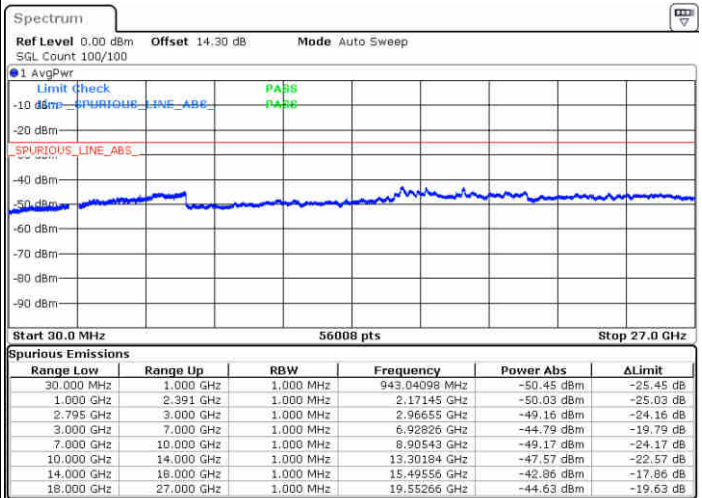
FR1 UL-MIMO n41 / 10MHz / CP-OFDM QPSK (M2)

Lowest Channel / 1RB



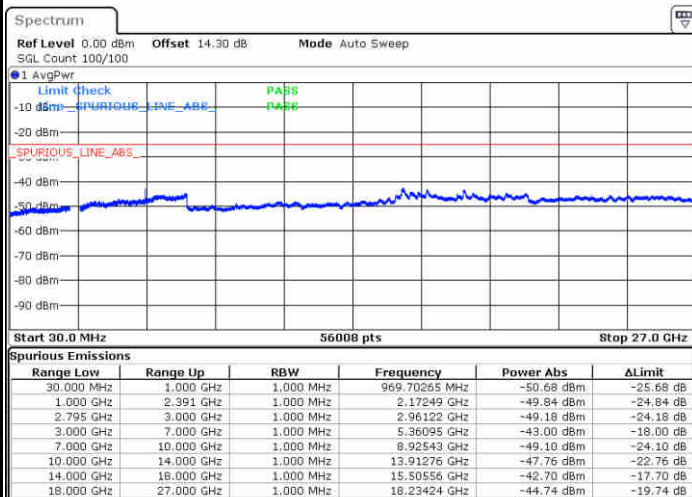
Date: 21.JAN.2021 03:32:07

Middle Channel / 1RB



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

Highest Channel / 1RB

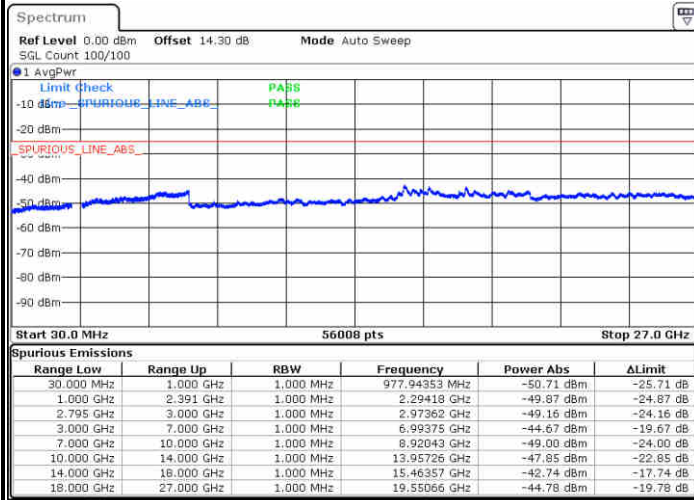


Date: 21.JAN.2021 03:12:57



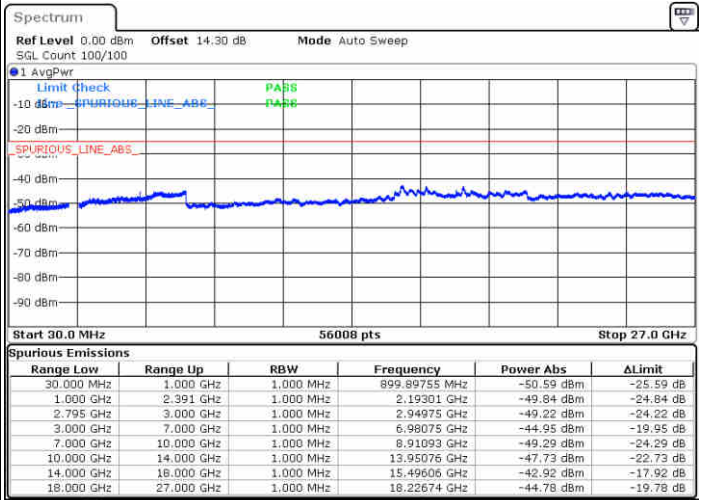
FR1 UL-MIMO n41 / 10MHz / CP-OFDM QPSK (M)

Lowest Channel / 1RB



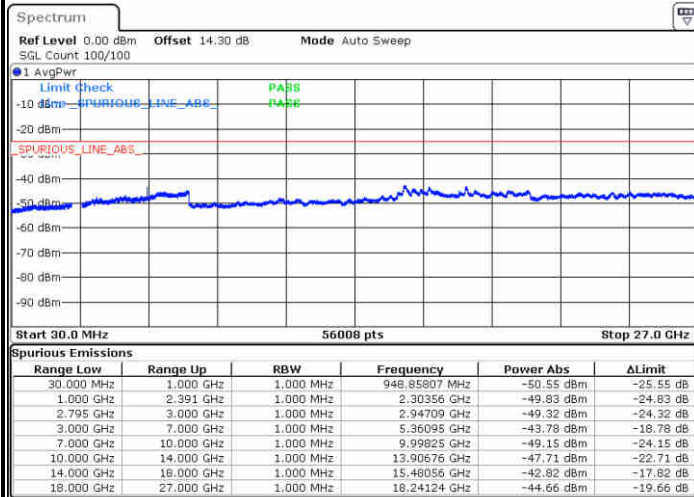
Date: 21.JAN.2021 05:17:24

Middle Channel / 1RB



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

Highest Channel / 1RB

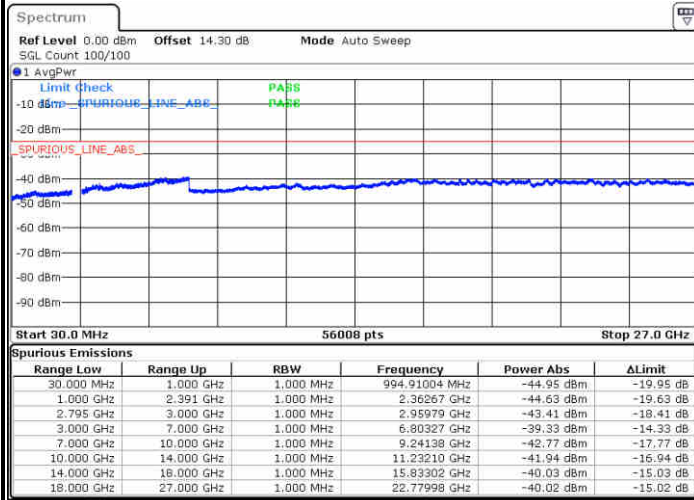


Date: 21.JAN.2021 05:20:35



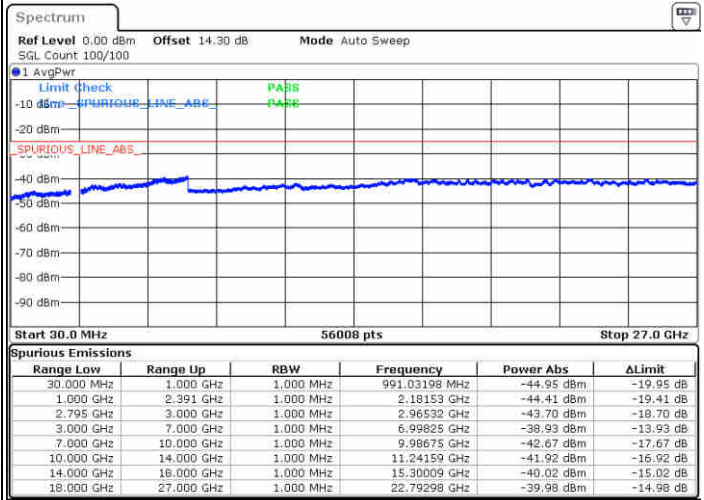
FR1 UL-MIMO n41 / 15MHz / CP-OFDM QPSK (M2)

Lowest Channel / 1RB



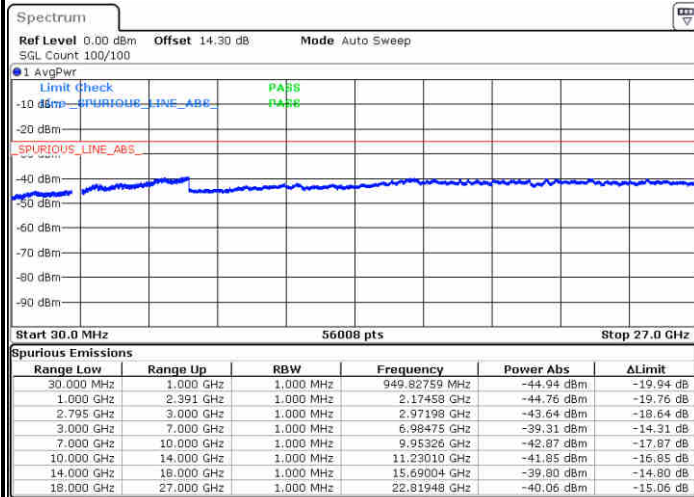
Date: 20.JAN.2021 08:34:01

Middle Channel / 1RB



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

Highest Channel / 1RB



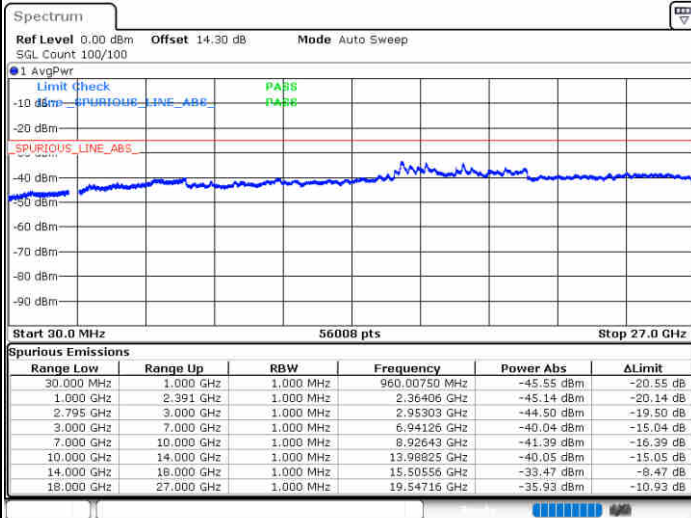
Date: 20.JAN.2021 08:27:38



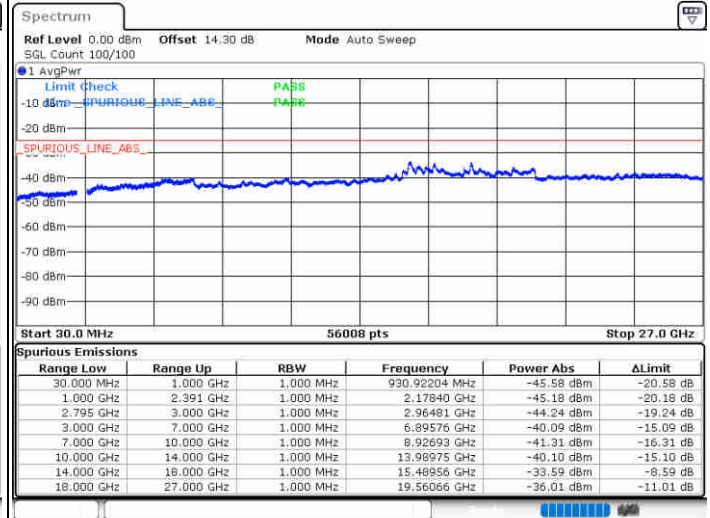
FR1 UL-MIMO n41 / 15MHz / CP-OFDM QPSK (M)

Lowest Channel / 1RB

Middle Channel / 1RB

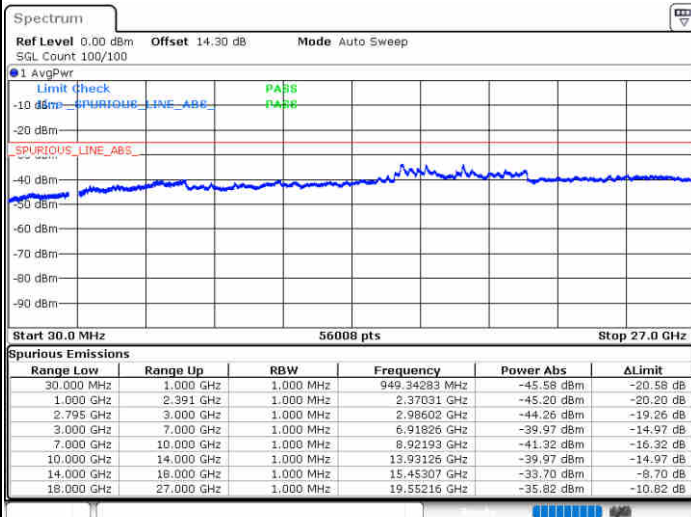


Date: 21.JAN.2021 04:44:23



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

Highest Channel / 1RB

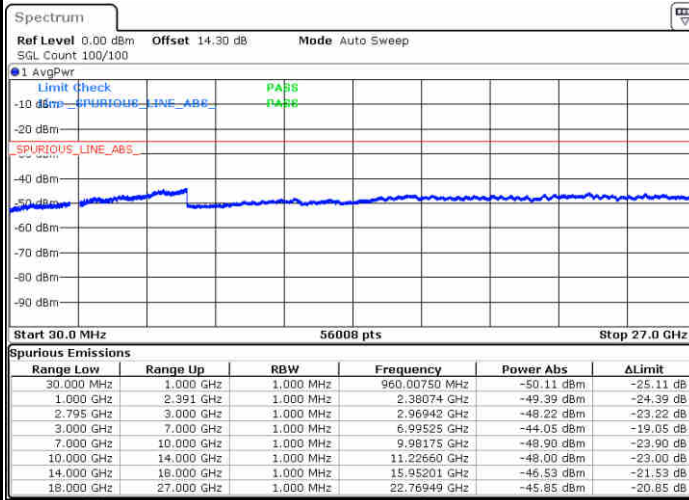


Date: 21.JAN.2021 04:55:32



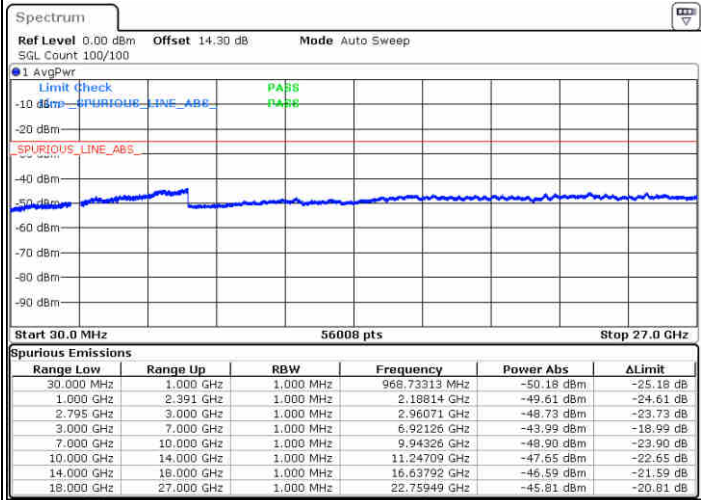
FR1 UL-MIMO n41 / 40MHz / CP-OFDM QPSK (M2)

Lowest Channel / 1RB



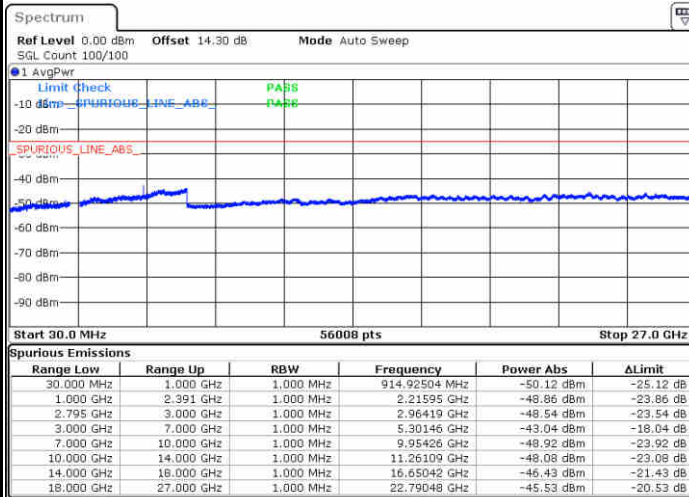
Date: 20.JAN.2021 08:12:26

Middle Channel / 1RB



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

Highest Channel / 1RB



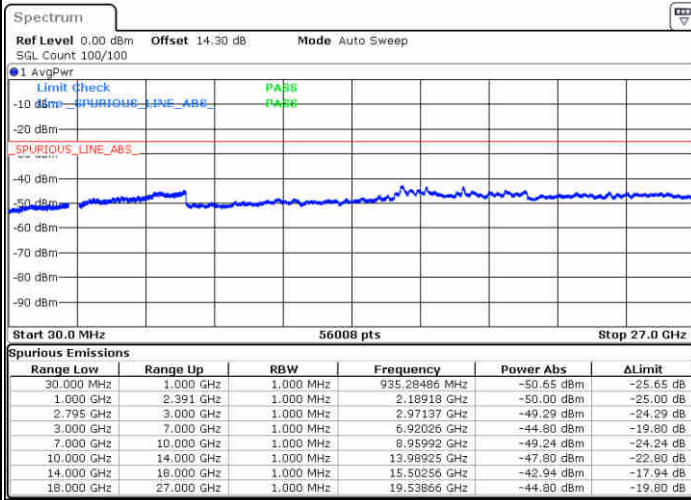
Date: 20.JAN.2021 08:08:31



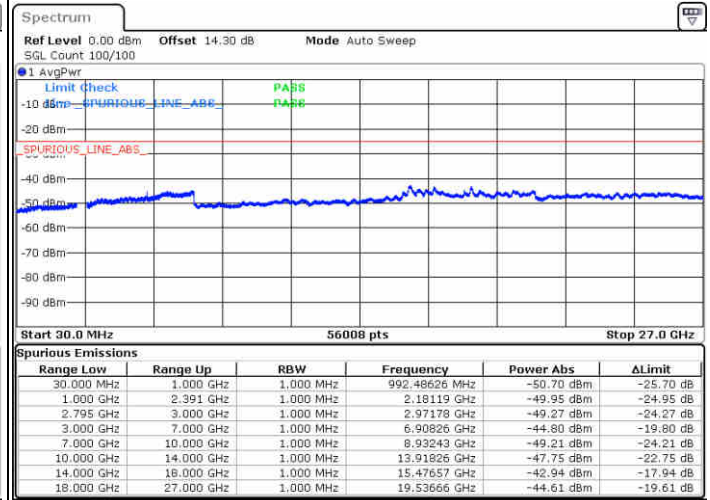
FR1 UL-MIMO n41 / 40MHz / CP-OFDM QPSK (M)

Lowest Channel / 1RB

Middle Channel / 1RB

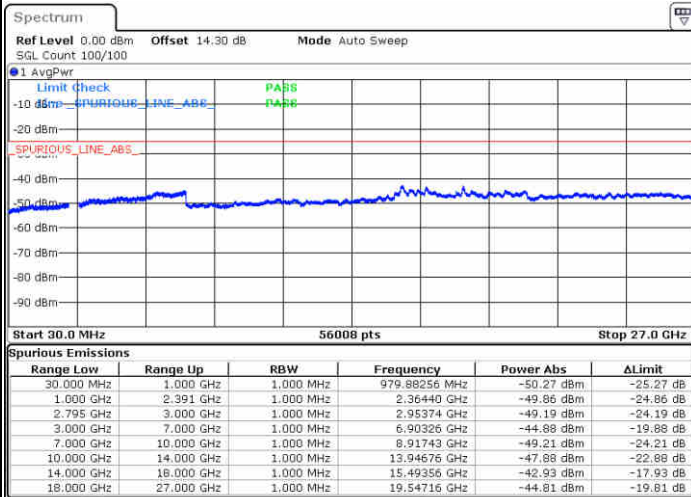


Date: 21.JAN.2021 04:09:40



Date: 21.JAN.2021 04:02:58

Highest Channel / 1RB



Date: 21.JAN.2021 04:24:05

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			

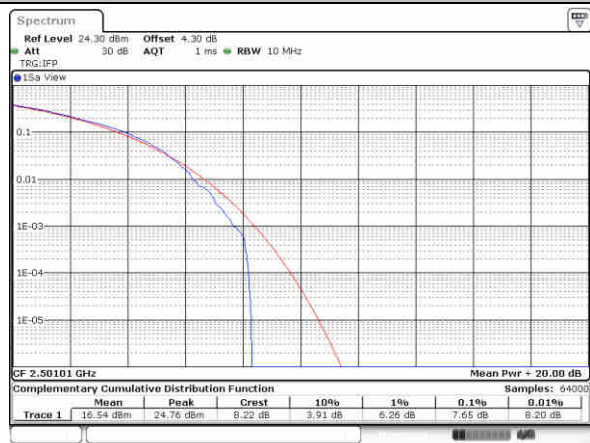
Mode	FR1 UL-MIMO n41 / 10MHz / CP-OFDM (M)				
Mod.	QPSK	QPSK			Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	8.09	8.9			PASS
Middle CH	8.03	8.78			
Highest CH	7.59	8.81			



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

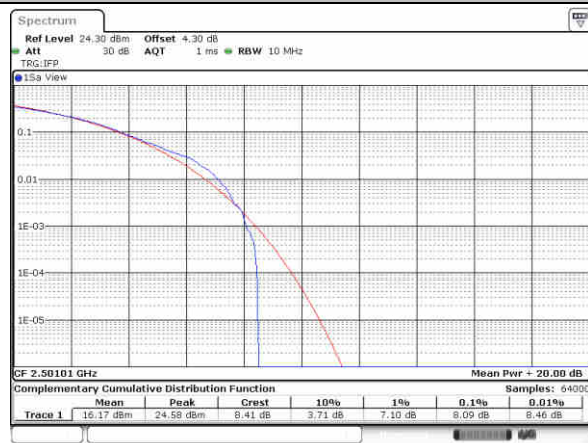
QPSK(M2)

Lowest Channel / 1RB

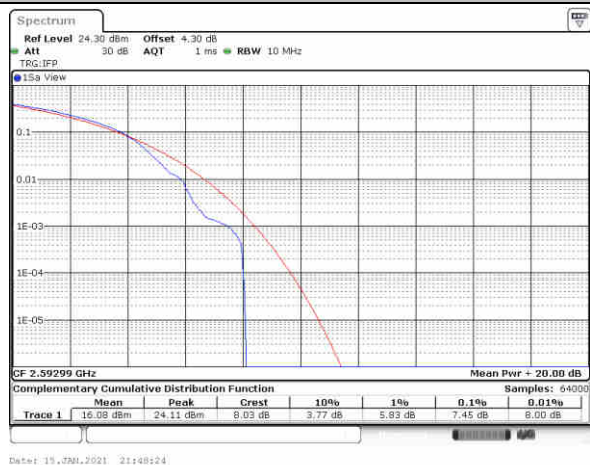


QPSK(M)

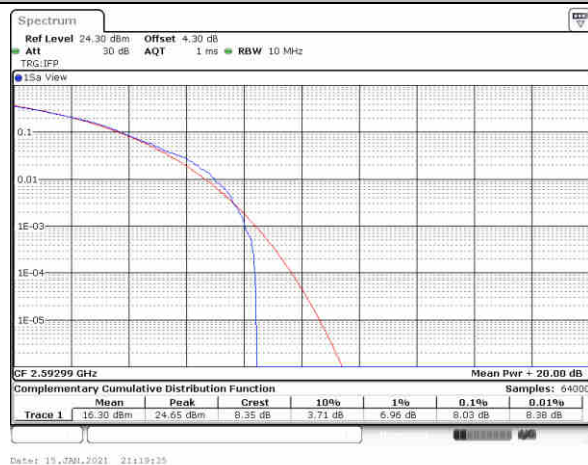
Lowest Channel / 1RB



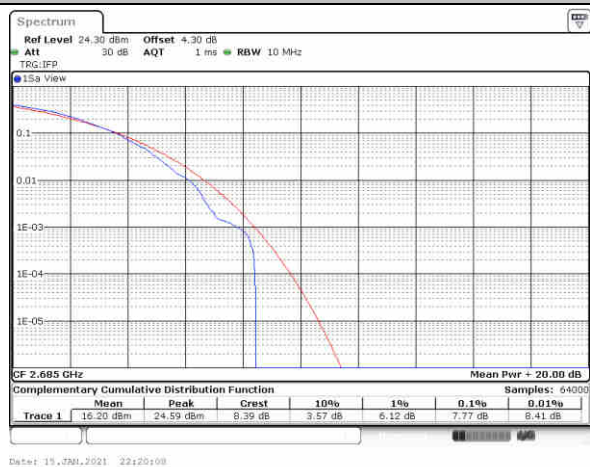
Middle Channel / 1 RB



Middle Channel / 1 RB



Highest Channel / 1 RB



Highest Channel / 1 RB

