



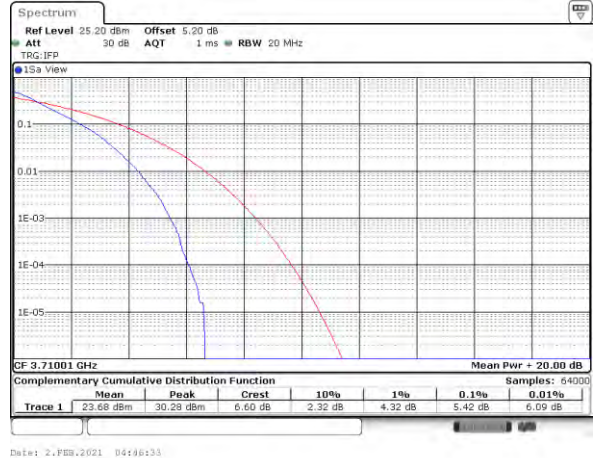
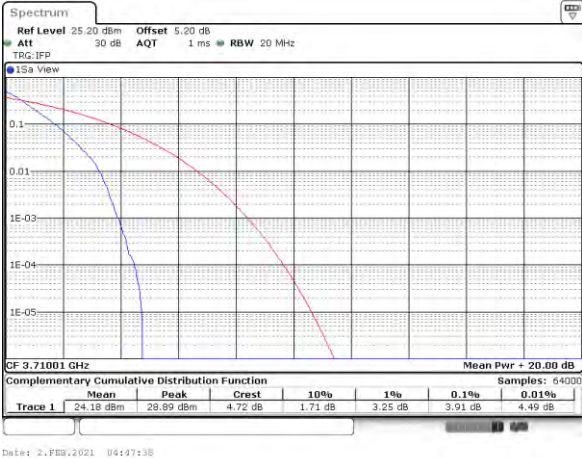
FR1 n78 / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

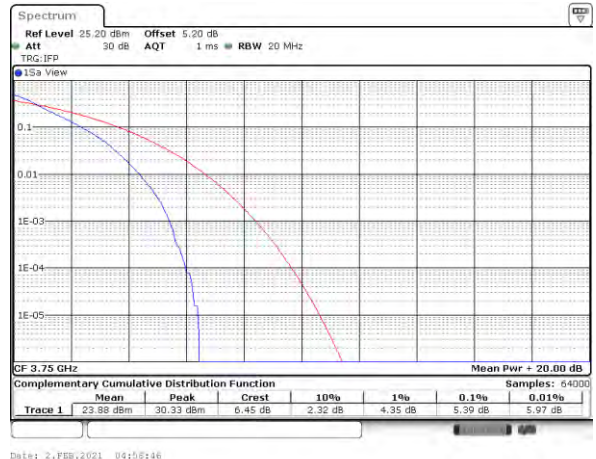
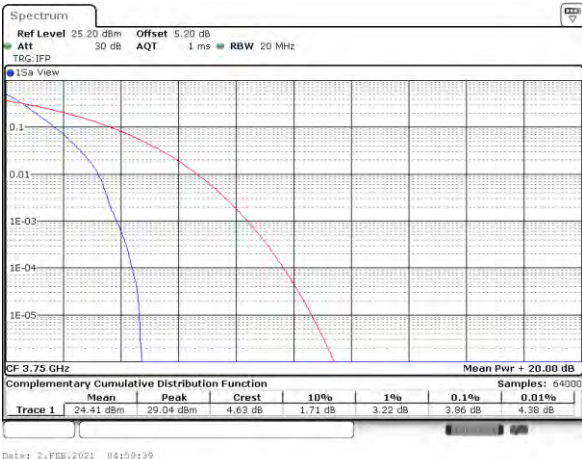
Lowest Channel / Full RB

Lowest Channel / Full RB



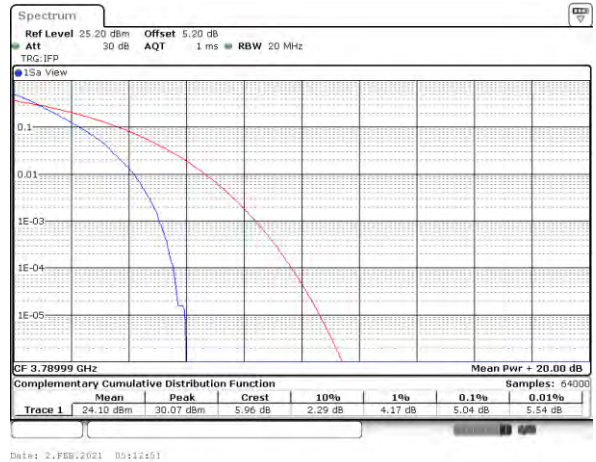
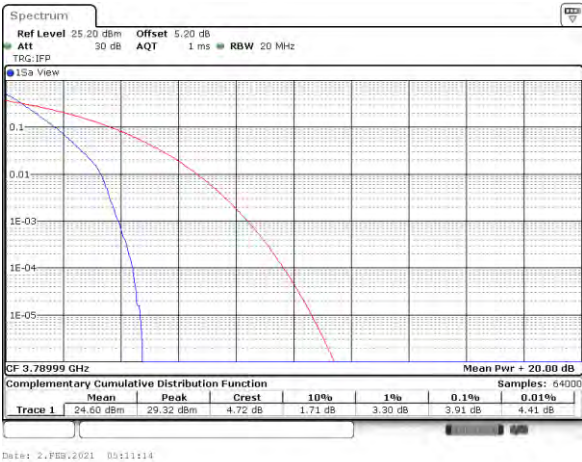
Middle Channel / Full RB

Middle Channel / Full RB



Highest Channel / Full RB

Highest Channel / Full RB



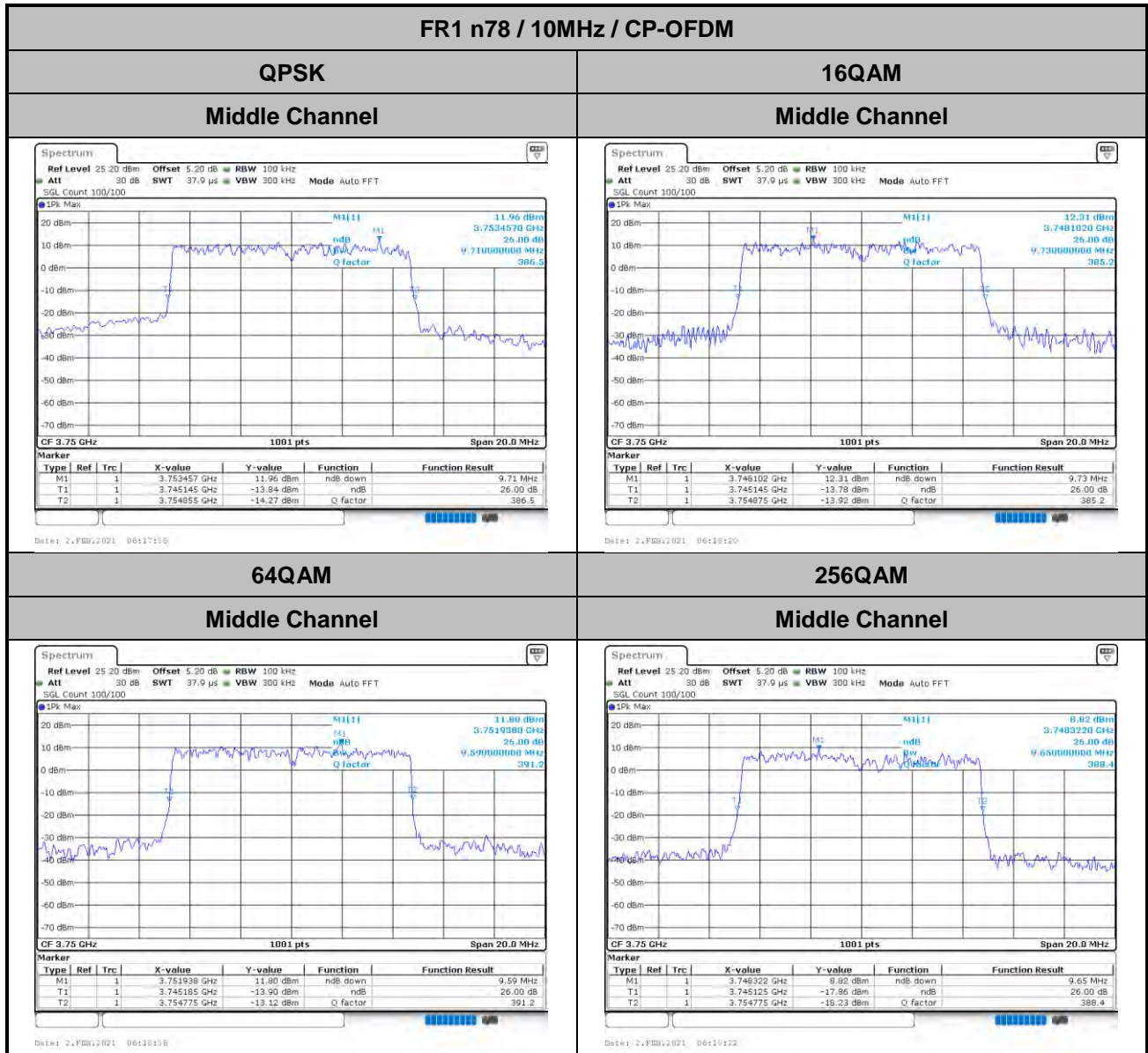


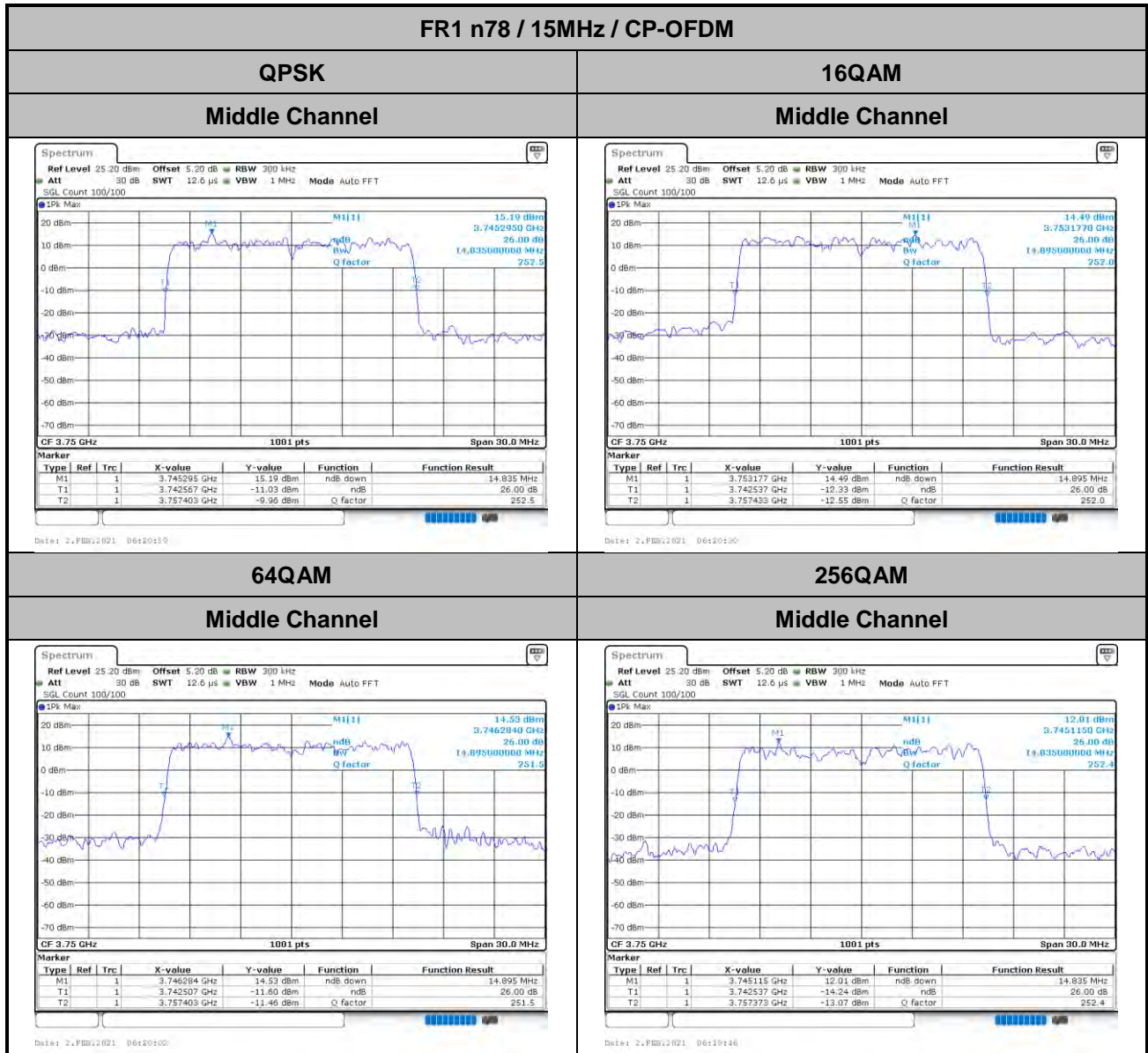
**26dB Bandwidth**

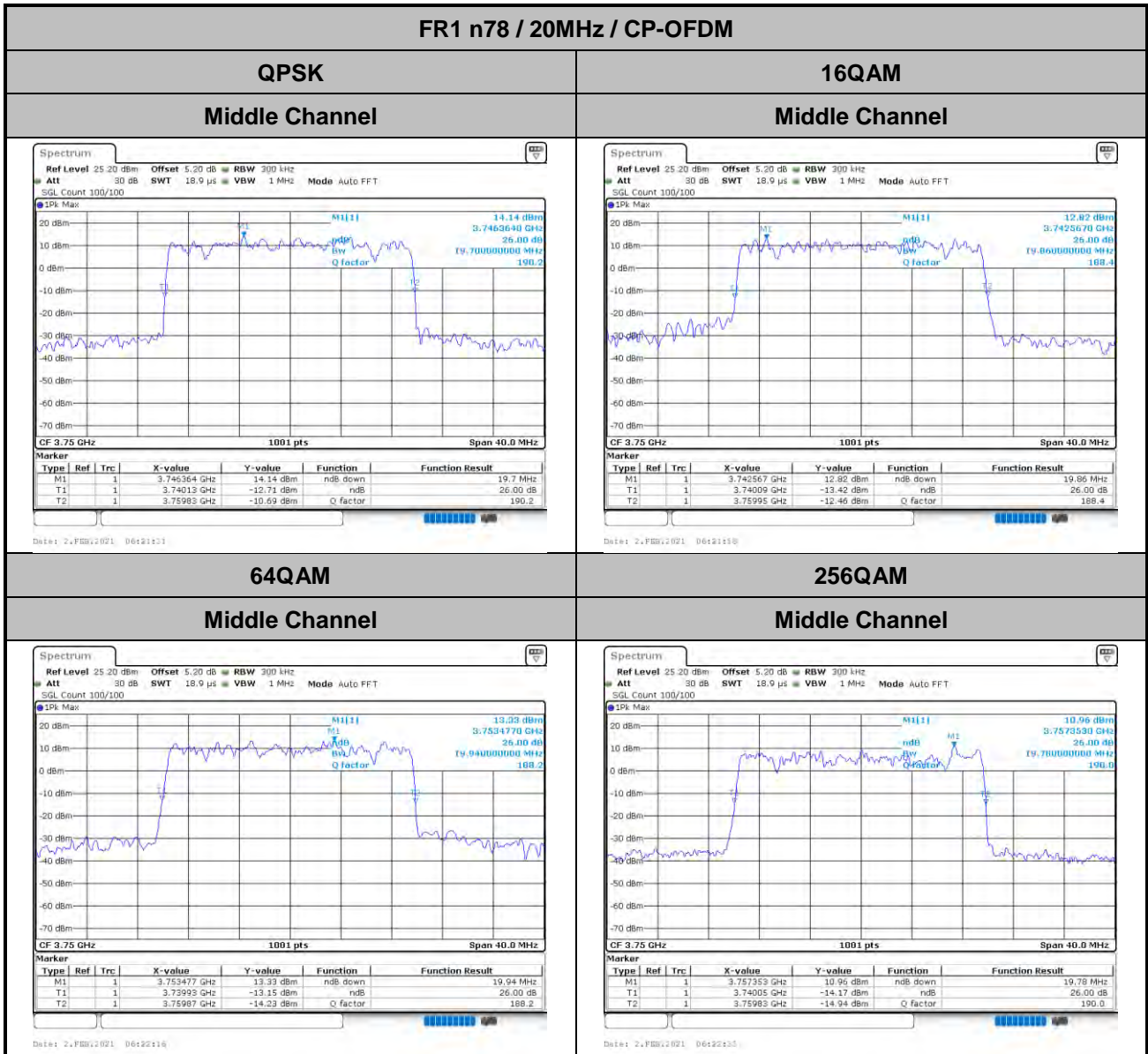
Mode	FR1 n78 : 26dB BW(MHz) / CP-OFDM							
BW	10MHz	10MHz	10MHz	10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	9.71	9.73	9.59	9.65				

Mode	FR1 n78 : 26dB BW(MHz) / CP-OFDM							
BW	15MHz	15MHz	15MHz	15MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	14.84	14.90	14.90	14.84				

Mode	FR1 n78 : 26dB BW(MHz) / CP-OFDM							
BW	20MHz	20MHz	20MHz	20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	19.7	19.86	19.94	19.78				







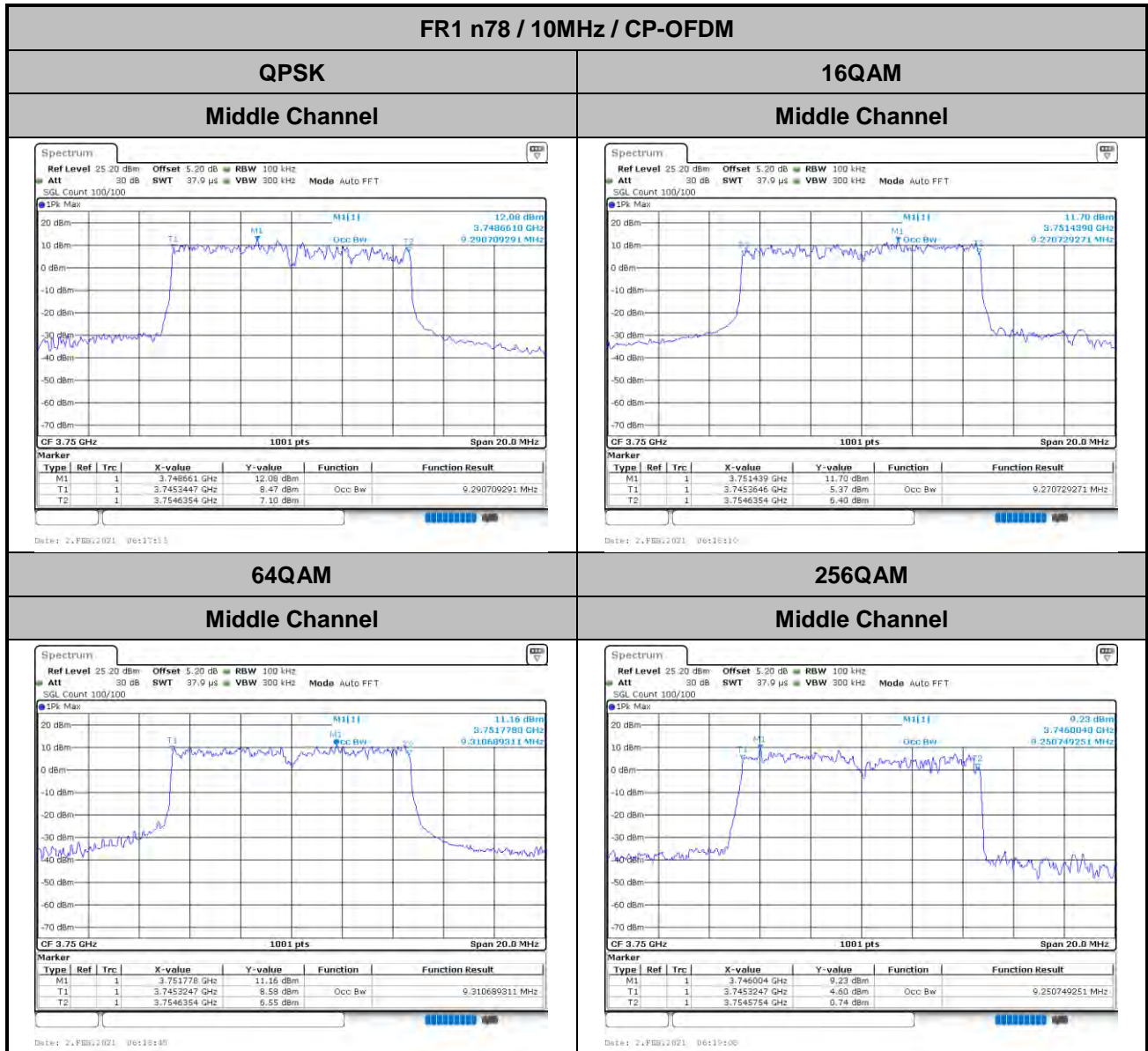


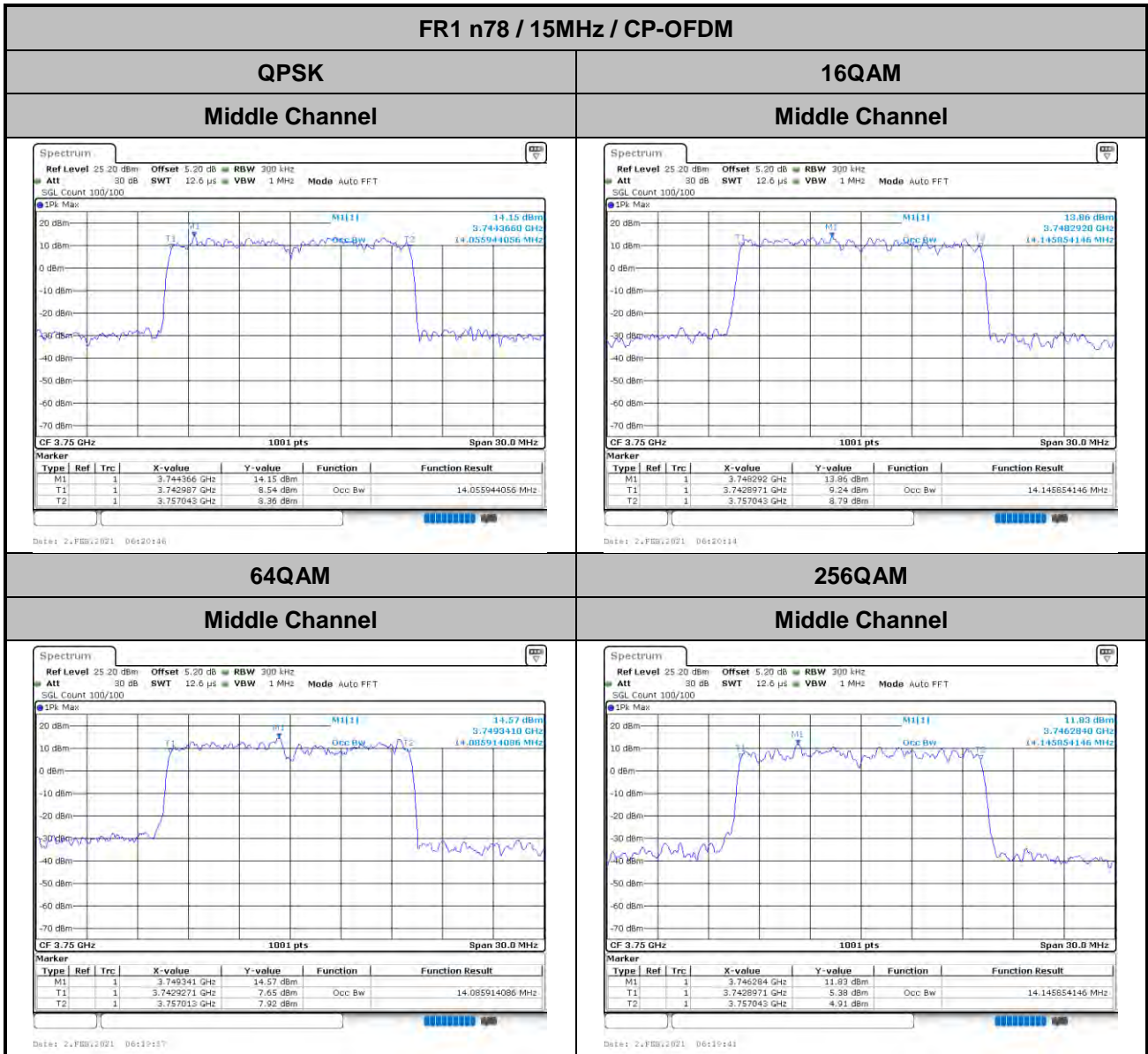
### Occupied Bandwidth

Mode	FR1 n78 : OBW(MHz) / CP-OFDM							
BW	10MHz	10MHz	10MHz	10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	9.29	9.30	9.31	9.25				

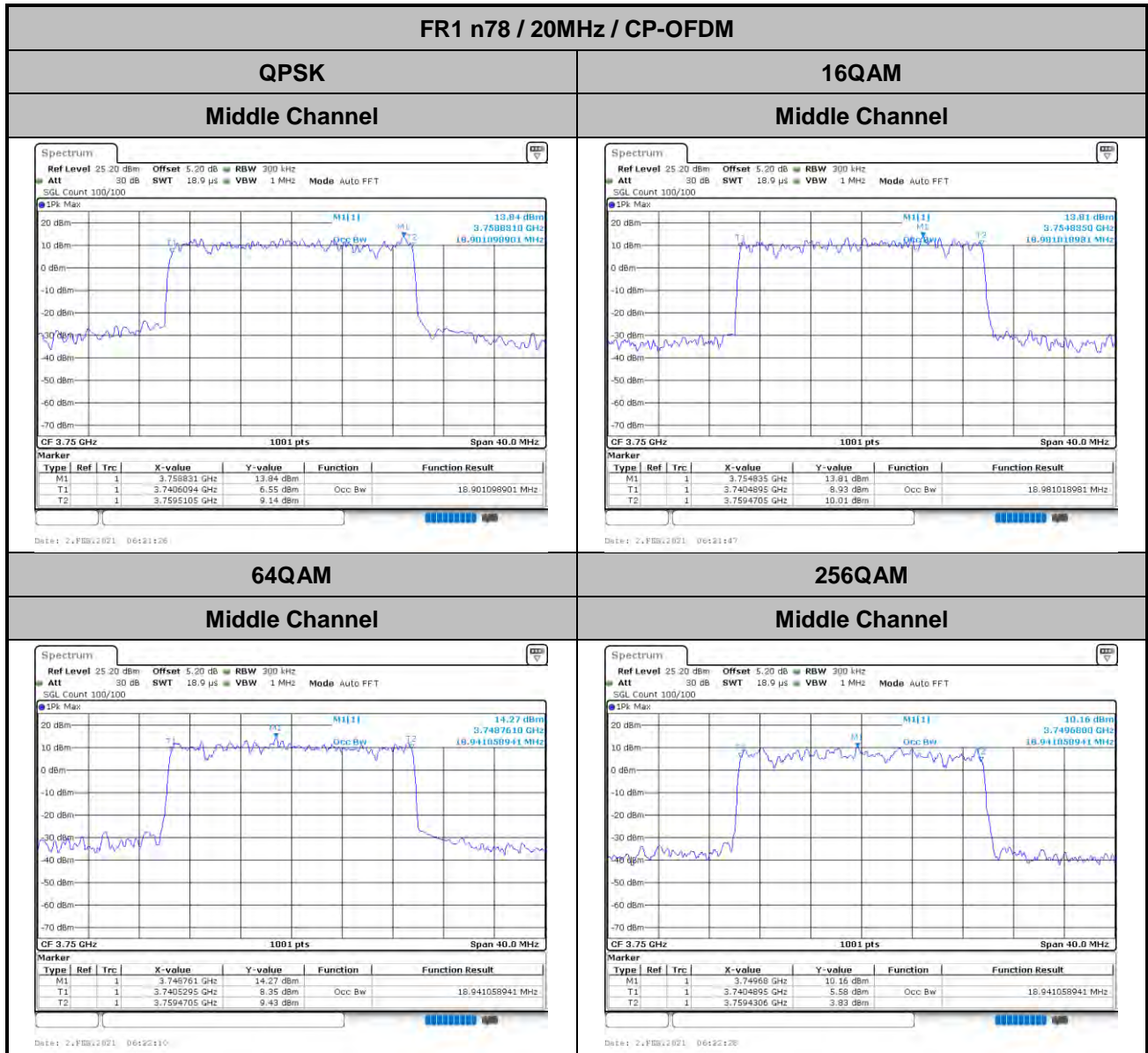
Mode	FR1 n78 : OBW(MHz) / CP-OFDM							
BW	15MHz	15MHz	15MHz	15MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	14.06	14.15	14.09	14.15				

Mode	FR1 n78 : OBW(MHz) / CP-OFDM							
BW	20MHz	20MHz	20MHz	20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	18.90	18.98	18.94	18.94				



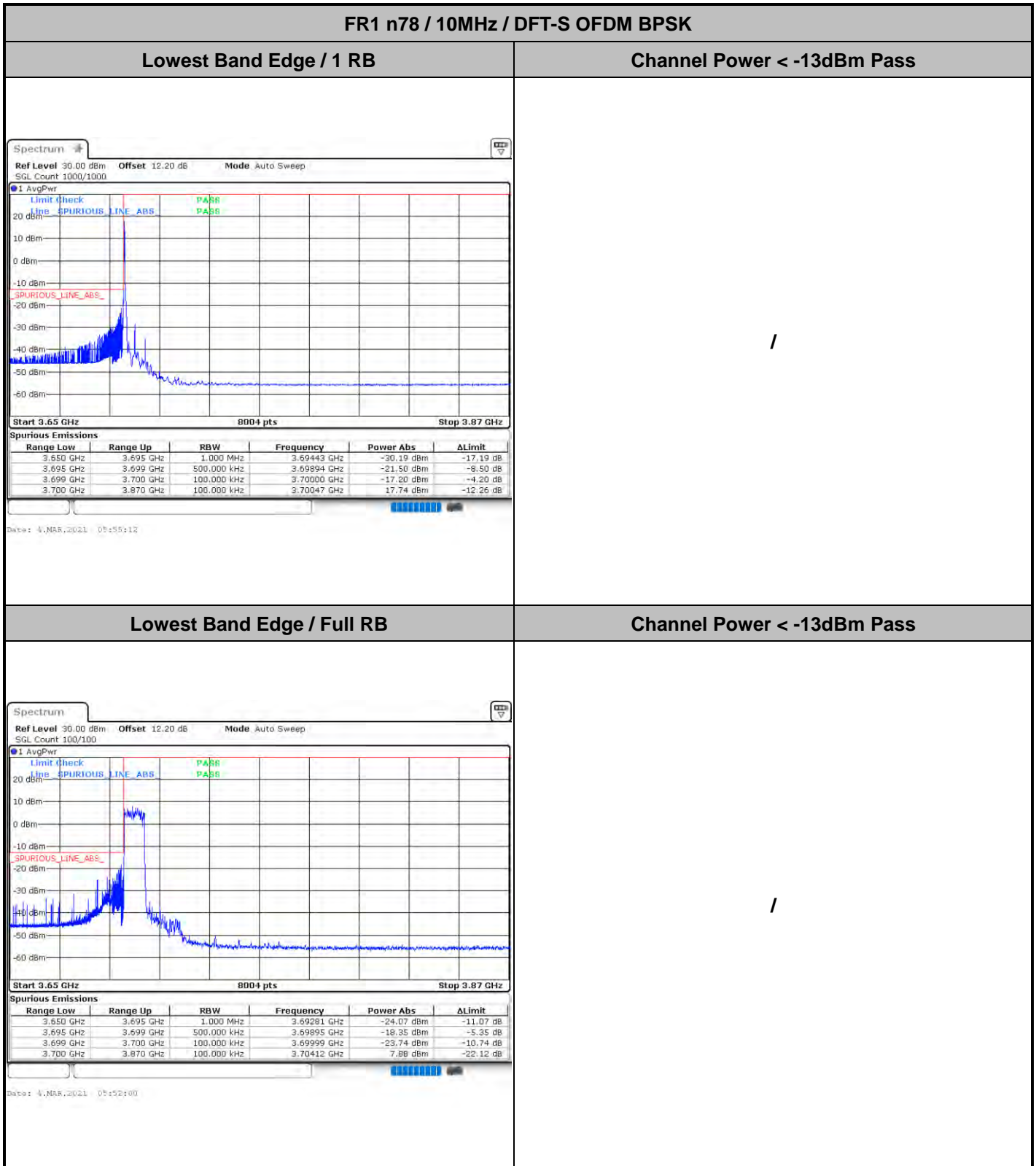








# Conducted Band Edge

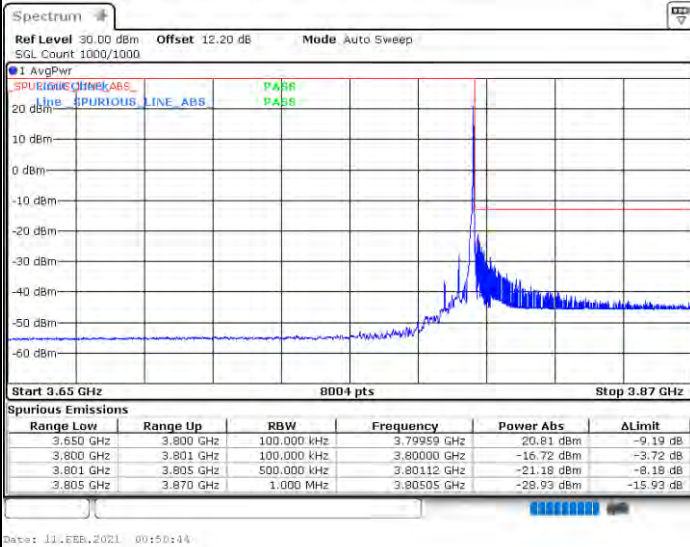




FR1 n78 / 10MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB

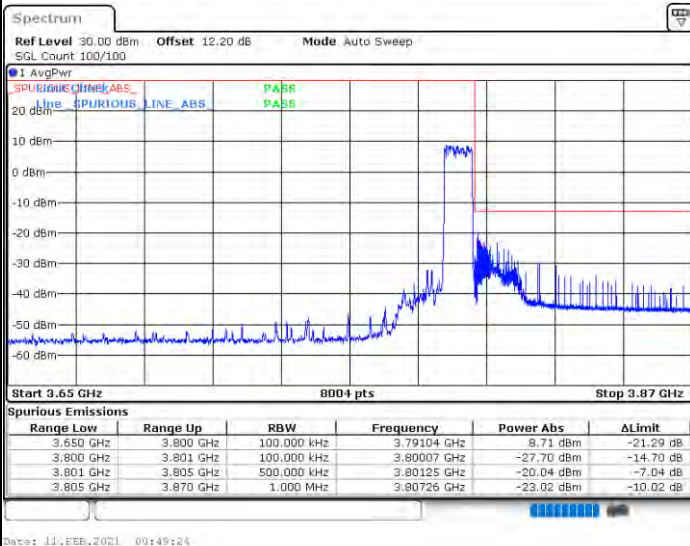
Channel Power < -13dBm Pass



/

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



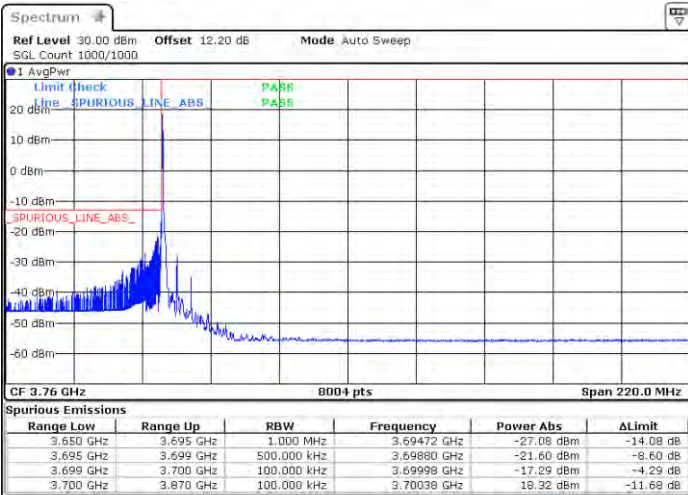
/



FR1 n78 / 10MHz / DFT-S OFDM QPSK

Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



Date: 4, MAR, 2021 05:54:01

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



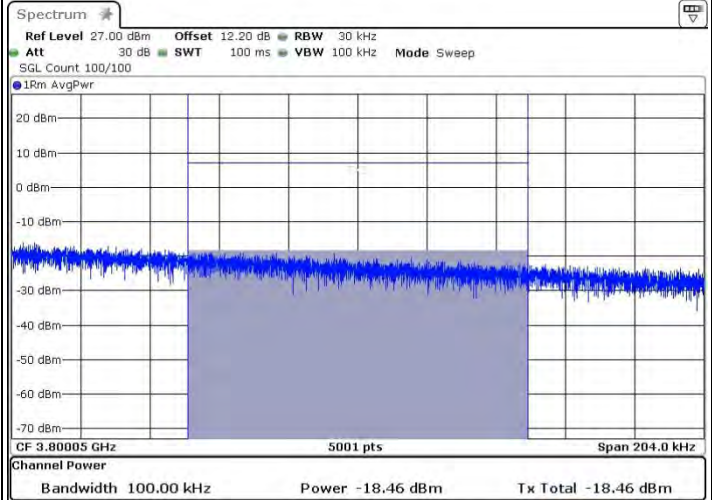
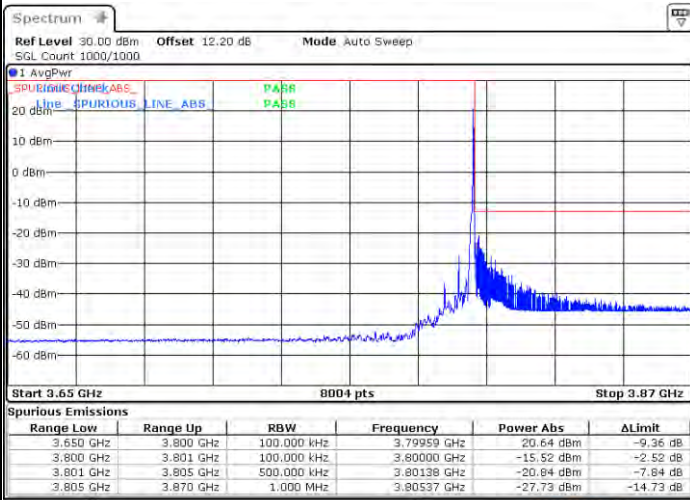
Date: 4, MAR, 2021 05:52:39



FR1 n78 / 10MHz / DFT-S OFDM QPSK

Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Date: 11.FEB.2021 00:51:50

Date: 11.FEB.2021 00:53:08

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



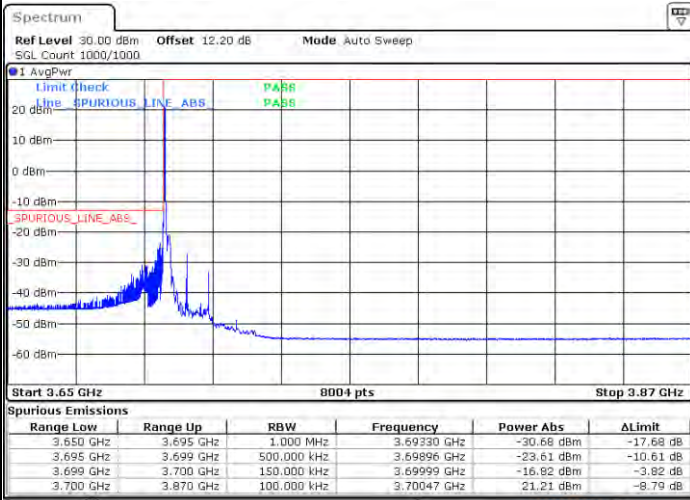
Date: 11.FEB.2021 00:48:11



FR1 n78 / 15MHz / DFT-S OFDM BPSK

Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



Date: 12.MAR.2021 04:52:19

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



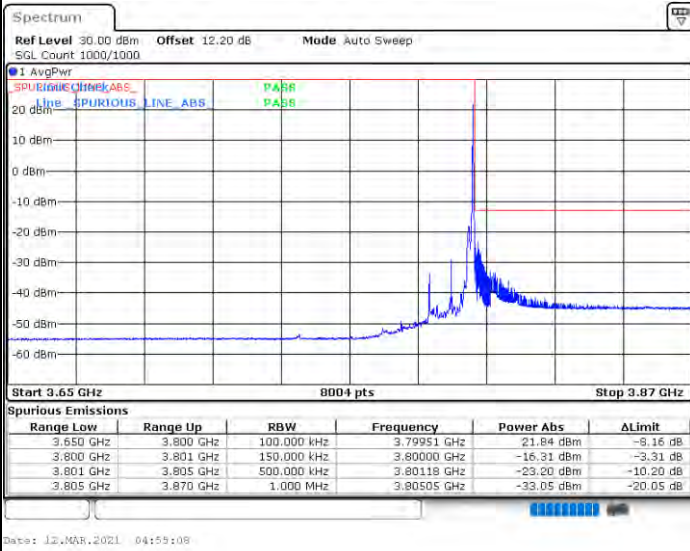
Date: 12.MAR.2021 04:52:53



FR1 n78 / 15MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB

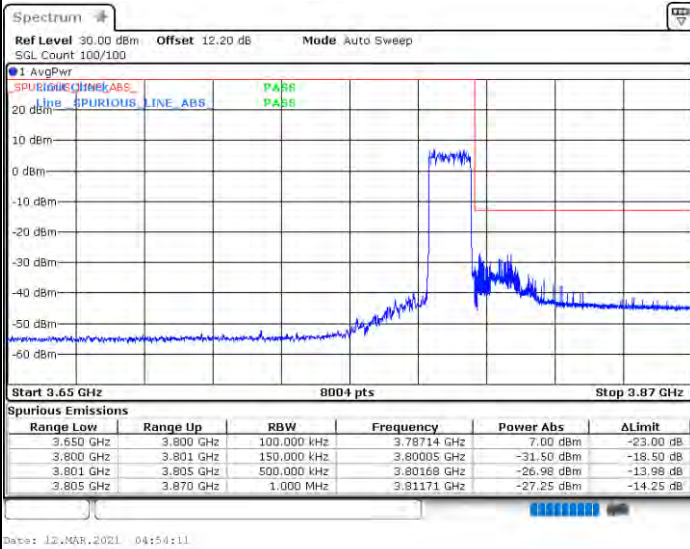
Channel Power < -13dBm Pass



/

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



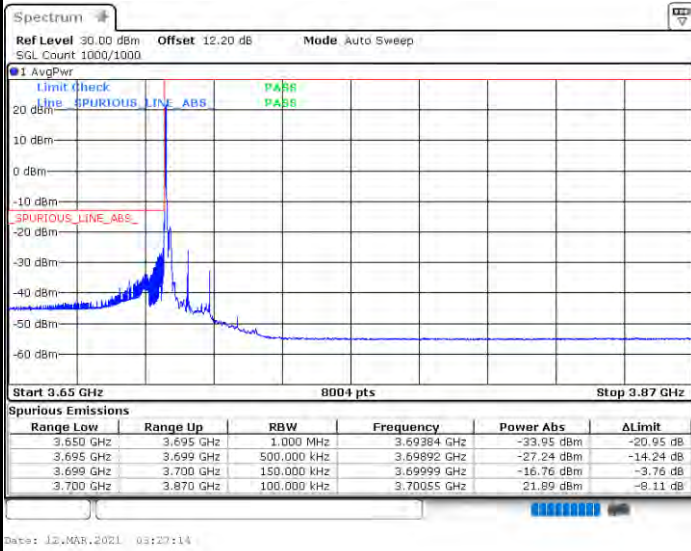
/



FR1 n78 / 15MHz / DFT-S OFDM QPSK

Lowest Band Edge / 1 RB

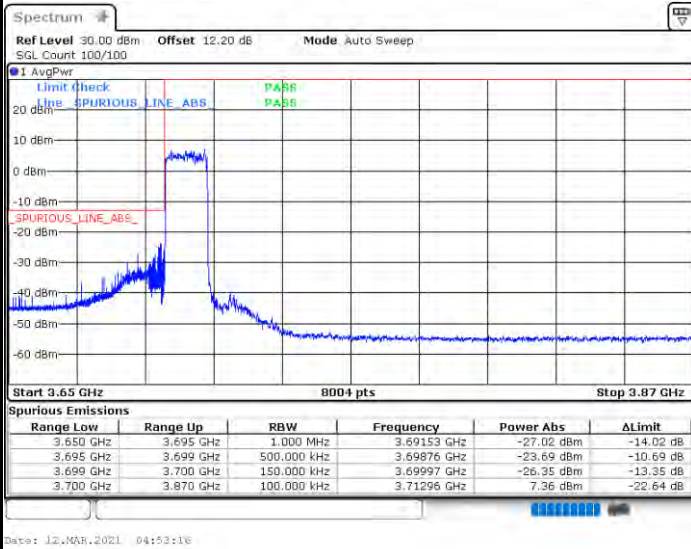
Channel Power < -13dBm Pass



/

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



/

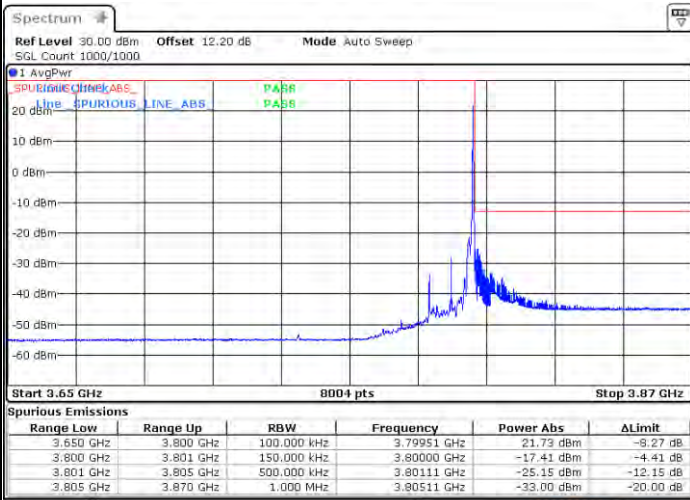




FR1 n78 / 15MHz / DFT-S OFDM QPSK

Highest Band Edge / 1 RB

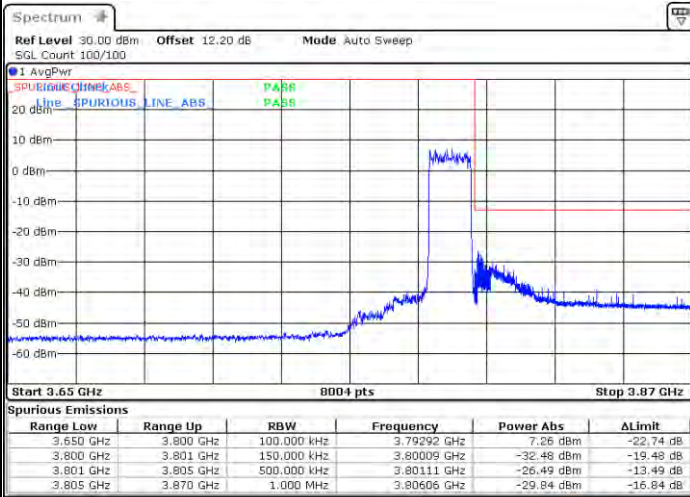
Channel Power < -13dBm Pass



Date: 12.MAR.2021 03:20:52

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



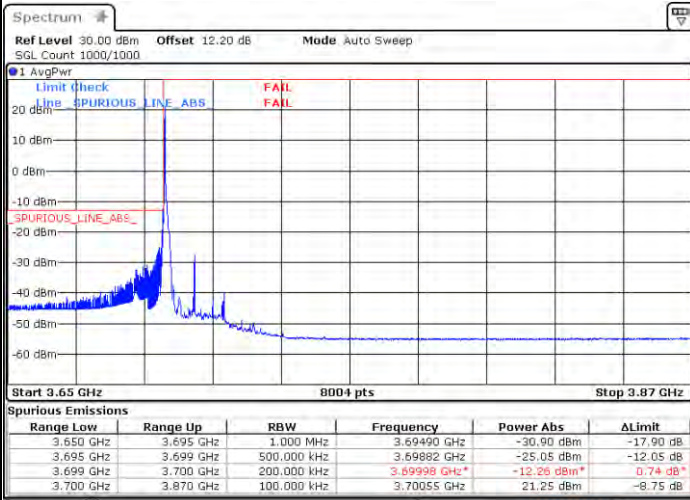
Date: 12.MAR.2021 04:53:48



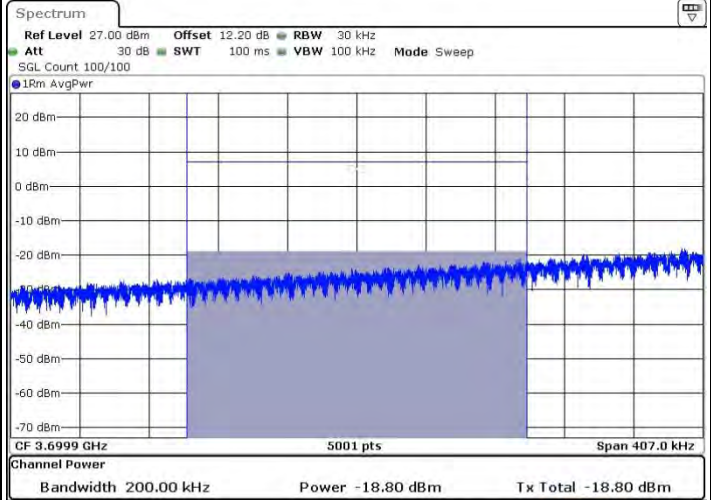
FR1 n78 / 20MHz / DFT-S OFDM BPSK

Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



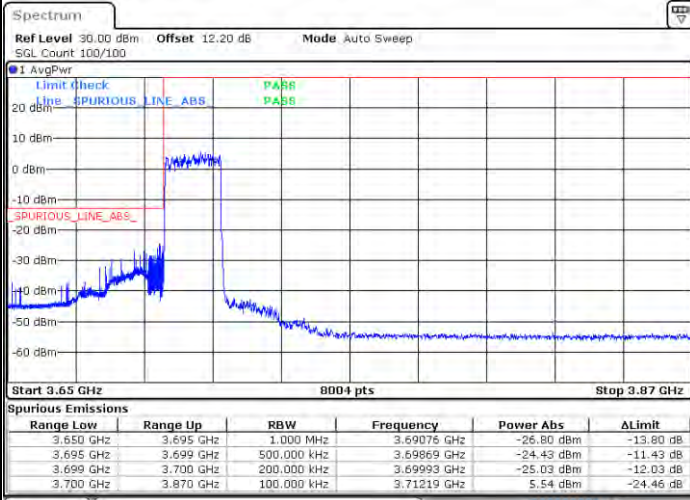
Date: 13.MAR.2021 07:19:10



Date: 13.MAR.2021 08:35:35

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



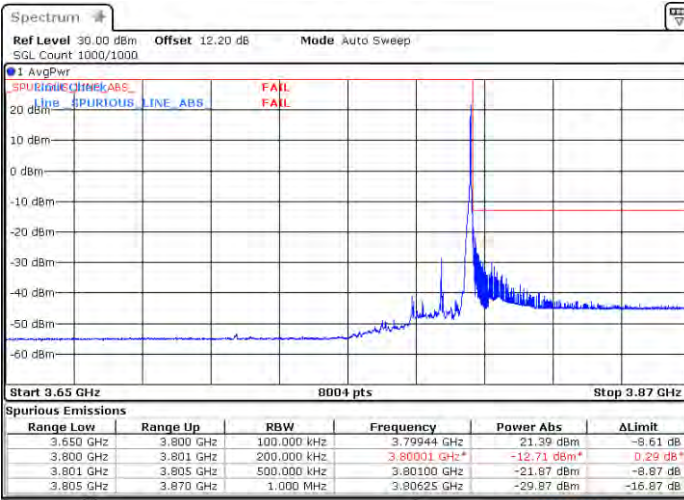
Date: 13.MAR.2021 07:26:29

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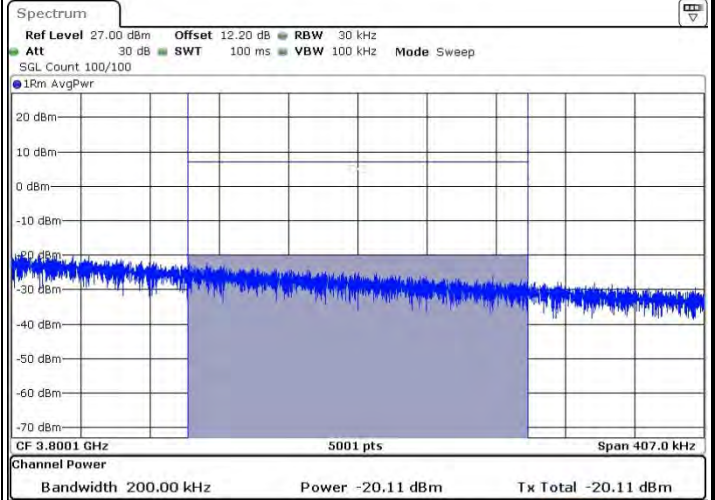
FR1 n78 / 20MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB



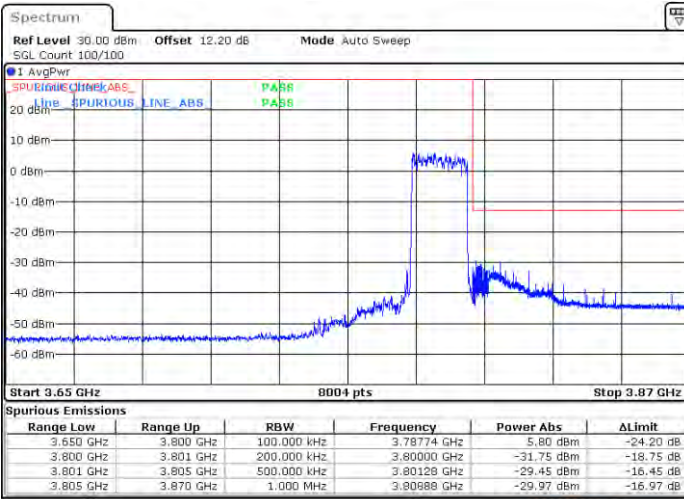
Date: 13.MAR.2021 07:33:21

Channel Power < -13dBm Pass



Date: 13.MAR.2021 08:37:15

Highest Band Edge / Full RB



Date: 13.MAR.2021 07:40:21

Channel Power < -13dBm Pass

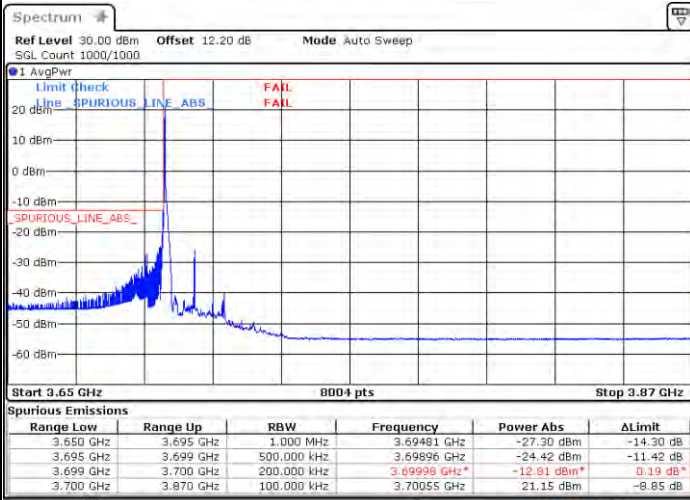
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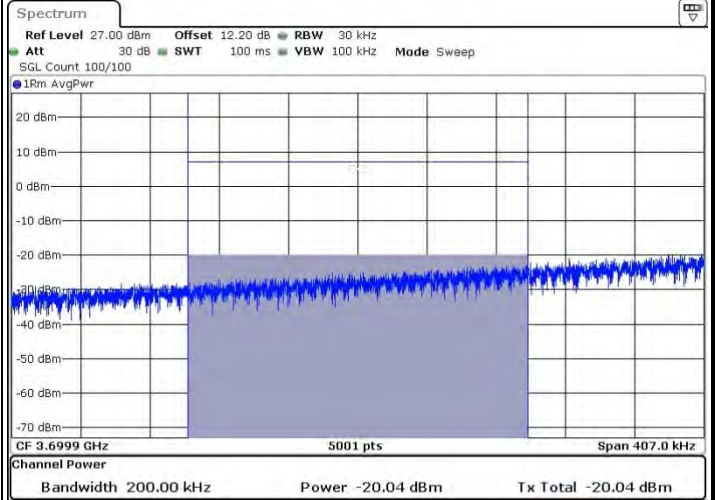
FR1 n78 / 20MHz / DFT-S OFDM QPSK

Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



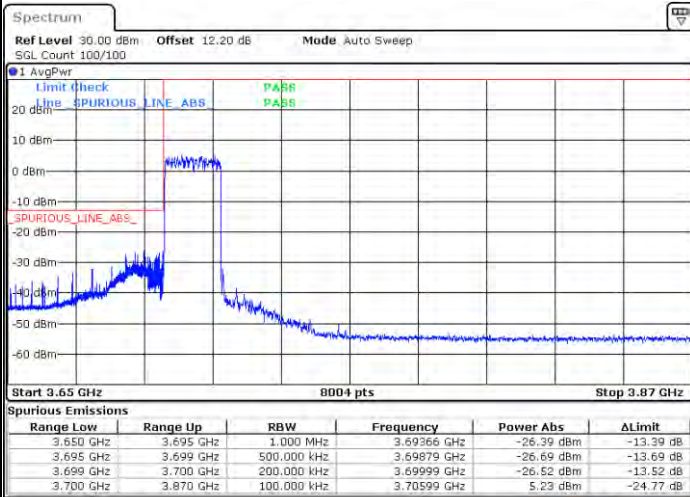
Date: 13.MAR.2021 07:23:07



Date: 13.MAR.2021 08:35:52

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



Date: 13.MAR.2021 07:29:06

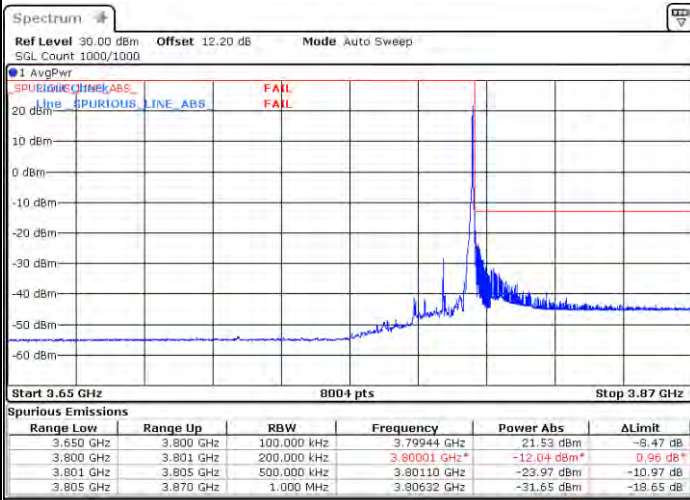
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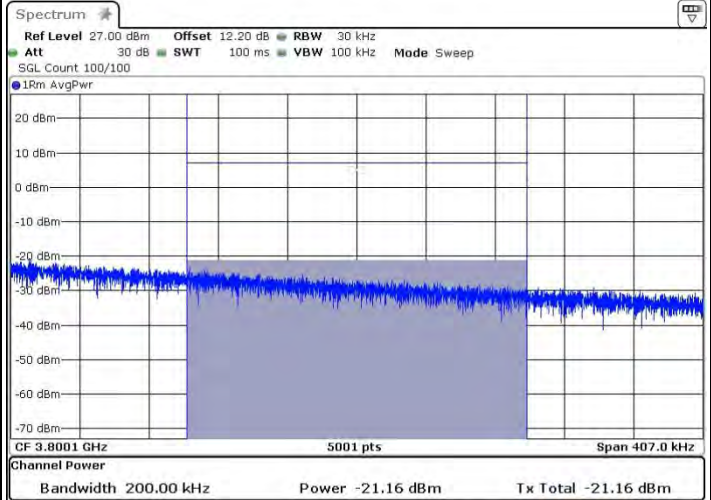
FR1 n78 / 20MHz / DFT-S OFDM QPSK

Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Date: 13.MAR.2021 07:36:23



Date: 13.MAR.2021 08:36:51

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



Date: 13.MAR.2021 07:36:55

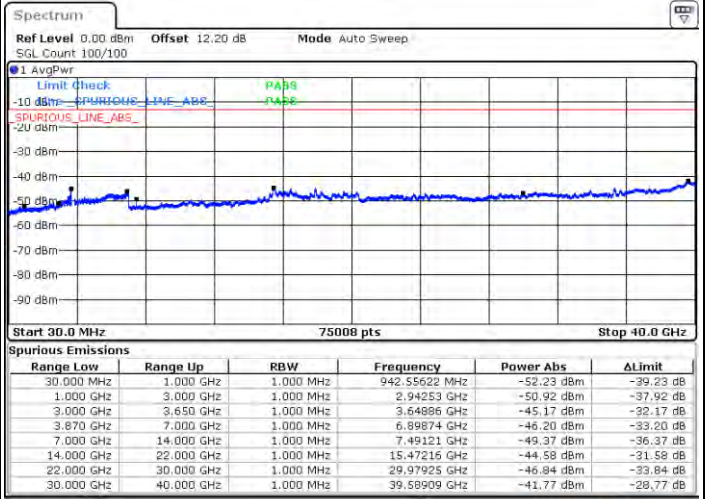
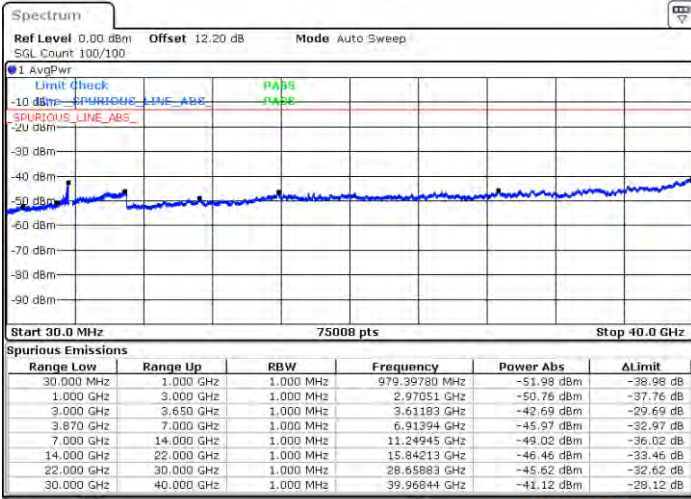


# Conducted Spurious Emission

FR1 n78 / 10MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

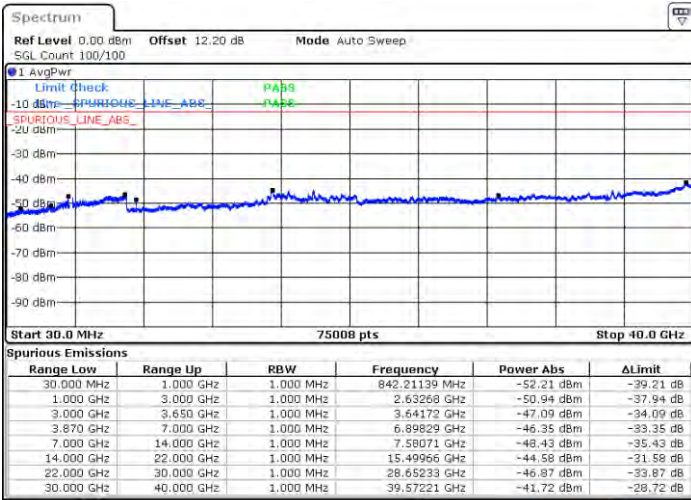
Middle Channel / 1RB



Date: 4.MAR.2021 05:56:26

Date: 2.FEB.2021 06:06:40

Highest Channel / 1RB



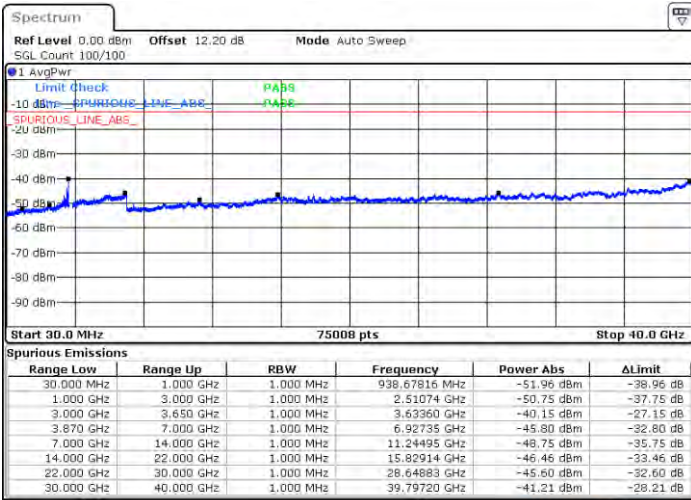
Date: 2.FEB.2021 06:15:34



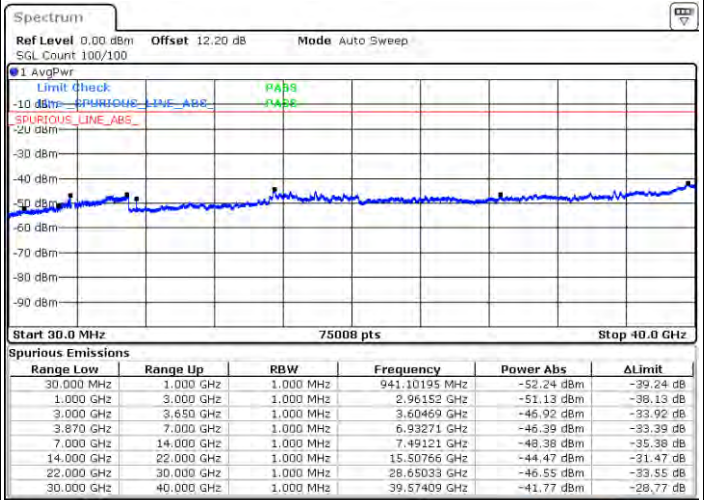
FR1 n78 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

Middle Channel / 1RB

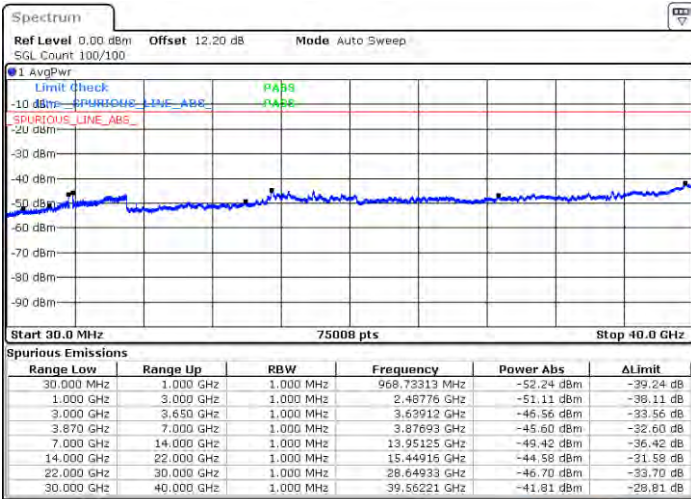


Date: 4.MAR.2021 05:57:44



Date: 2.FEB.2021 06:05:06

Highest Channel / 1RB



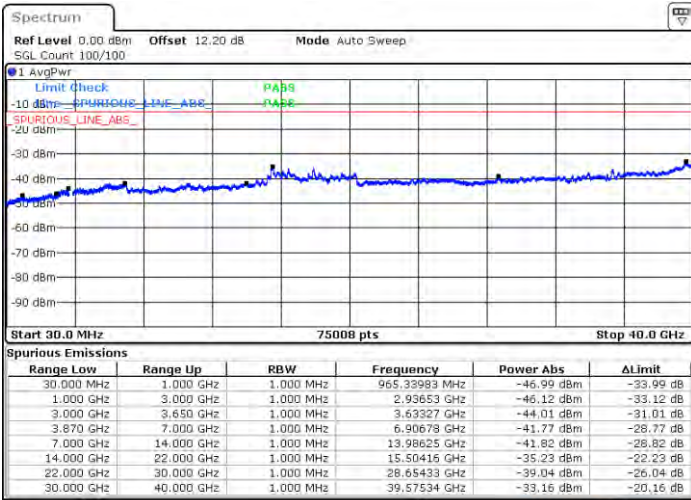
Date: 2.FEB.2021 06:14:25



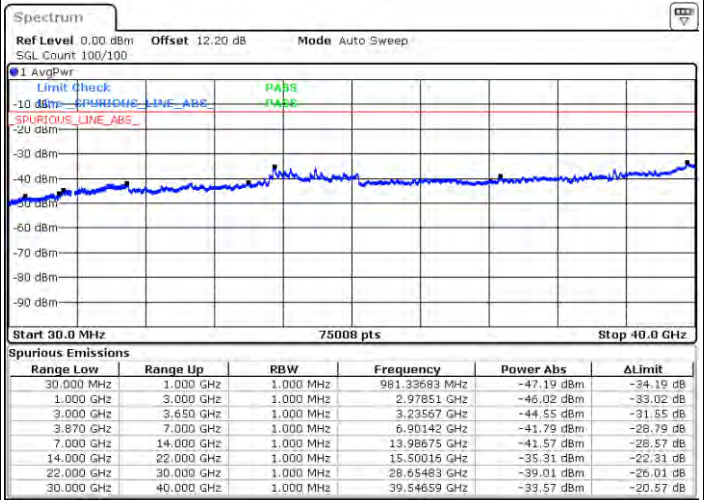
FR1 n78 / 15MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

Middle Channel / 1RB

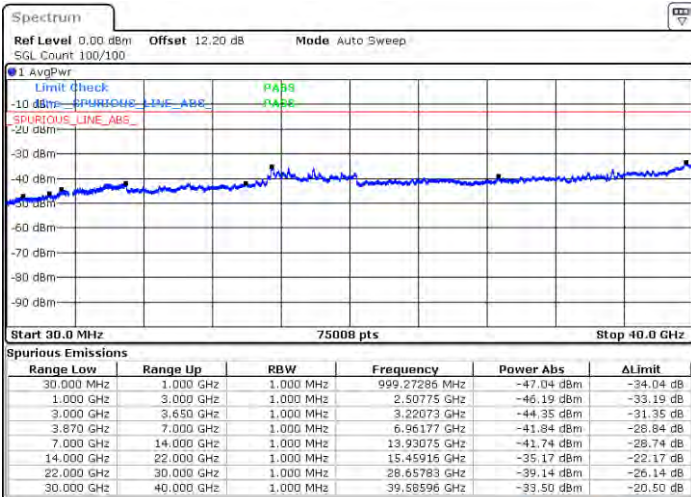


Date: 2.FEB.2021 05:25:10



Date: 2.FEB.2021 05:29:05

Highest Channel / 1RB



Date: 2.FEB.2021 05:48:13

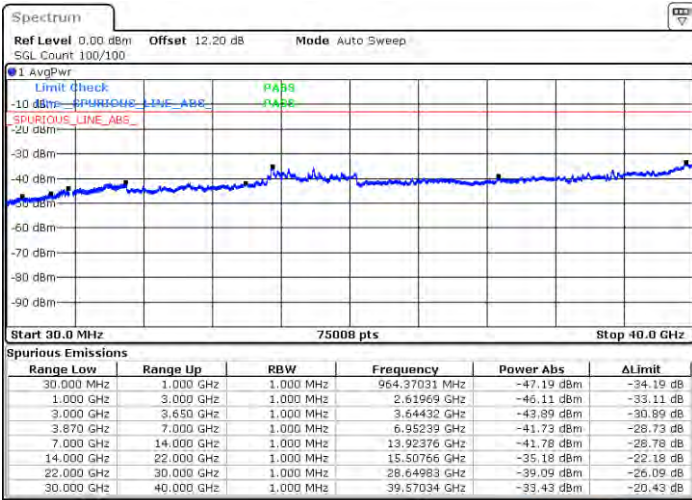




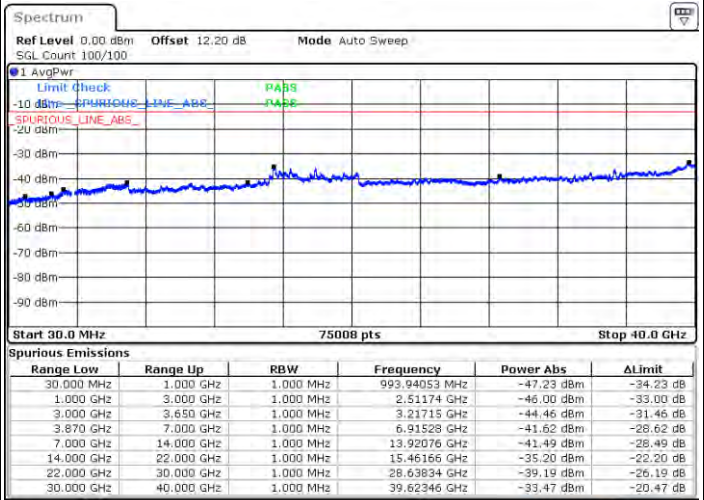
FR1 n78 / 15MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

Middle Channel / 1RB

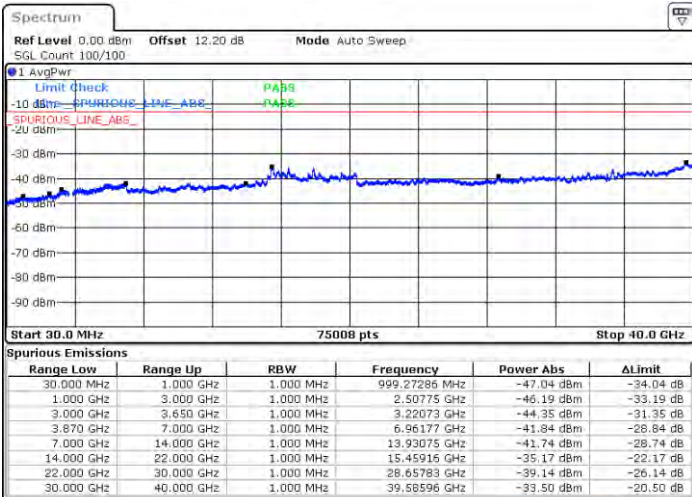


Date: 2, FEB, 2021 05:26:21



Date: 2, FEB, 2021 05:27:50

Highest Channel / 1RB



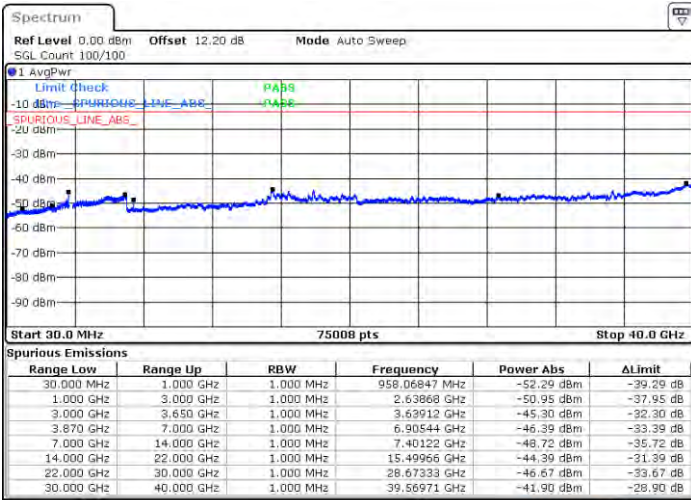
Date: 2, FEB, 2021 05:48:13



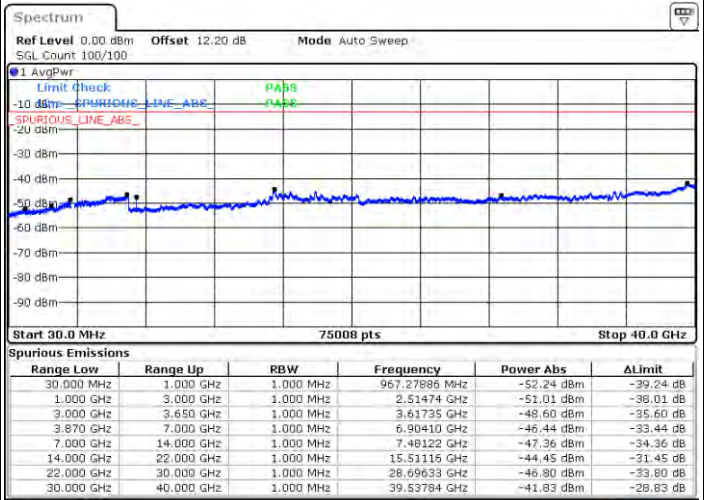
FR1 n78 / 20MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

Middle Channel / 1RB

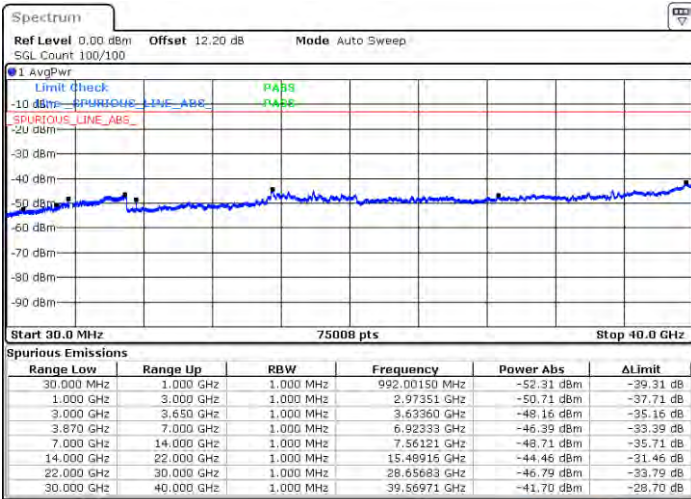


Date: 2.FEB.2021 04:52:52



Date: 2.FEB.2021 05:03:59

Highest Channel / 1RB



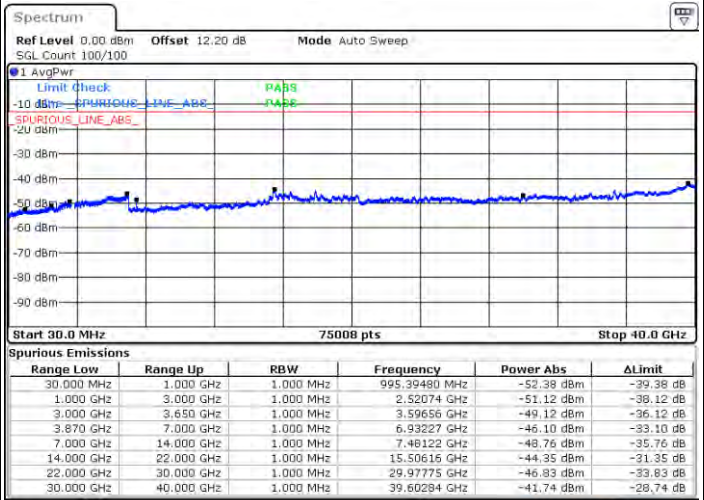
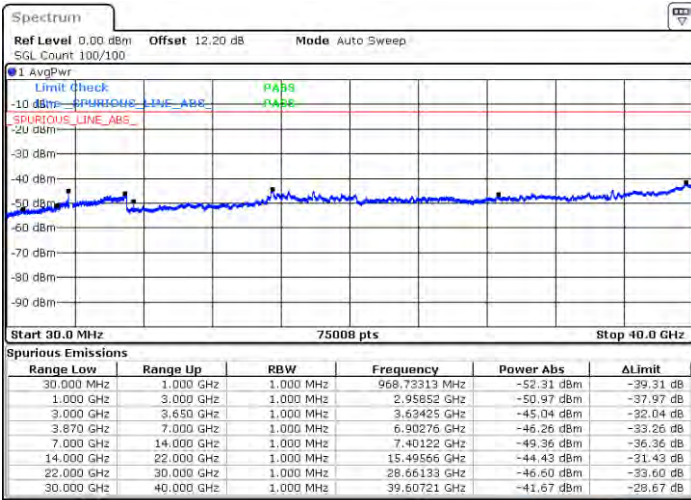
Date: 2.FEB.2021 05:07:42



FR1 n78 / 20MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

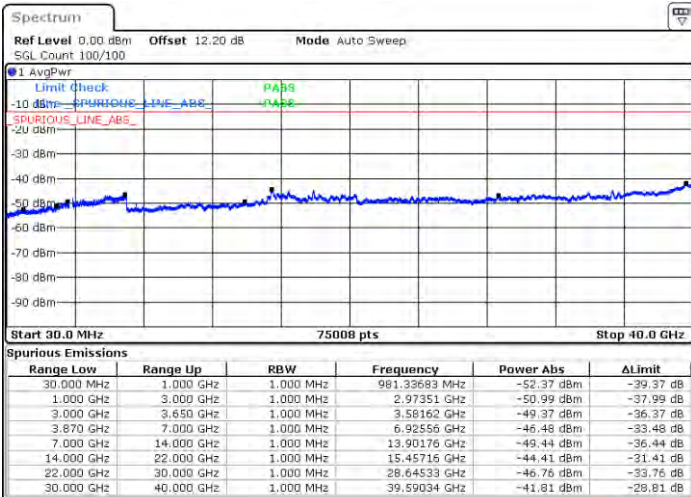
Middle Channel / 1RB



Date: 2.FEB.2021 04:50:25

Date: 2.FEB.2021 05:01:48

Highest Channel / 1RB



Date: 2.FEB.2021 05:10:09



### Frequency Stability

Test Conditions		NR n78 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Within Band
		Deviation (ppm)	Result
50	Normal Voltage	0.0025	PASS
40	Normal Voltage	0.0007	
30	Normal Voltage	0.0019	
20(Ref.)	Normal Voltage	0.0013	
10	Normal Voltage	0.0019	
0	Normal Voltage	0.0015	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0021	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0016	
20	Battery End Point	0.0029	

**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 n78 SA-SCS 30K

### Peak-to-Average Ratio

Mode	FR1 n78 / 10MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	PI/2 BPSK	QPSK	QPSK	Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.09	3.88	4.96	5.48	<b>PASS</b>
Middle CH	4.43	4.09	5.39	4.99	
Highest CH	4.00	3.83	5.07	4.99	



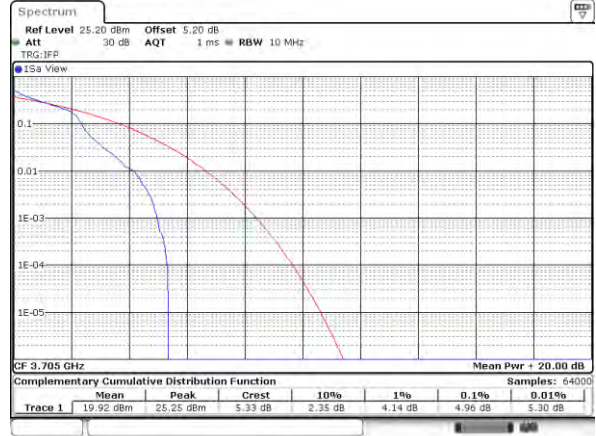
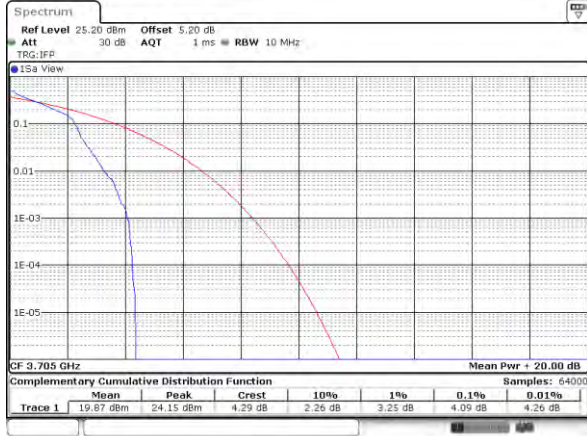
FR1 n78 / 10MHz / DFT-S OFDM

PI/2 BPSK

QPSK

Lowest Channel / 1RB

Lowest Channel / 1RB

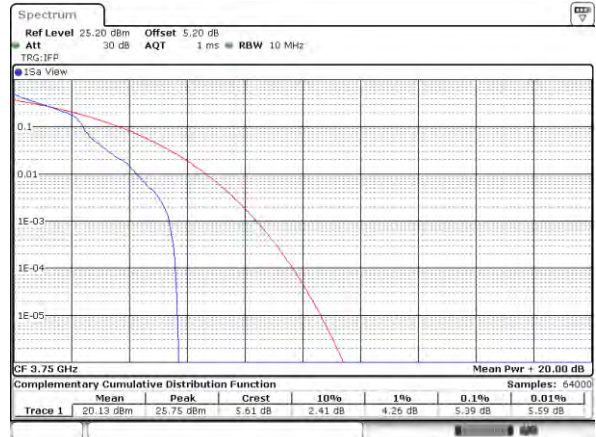
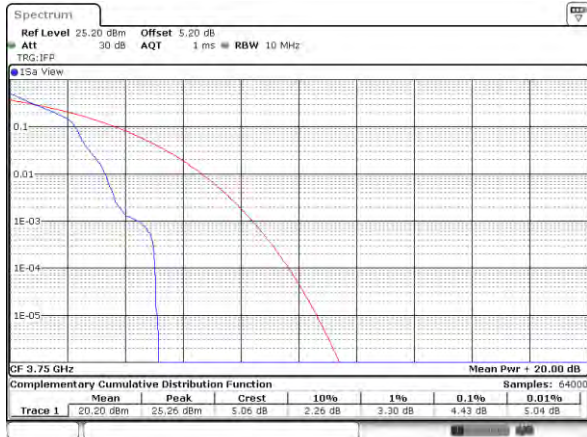


Date: 2.FEB.2021 07:28:36

Date: 2.FEB.2021 07:29:13

Middle Channel / 1 RB

Middle Channel / 1 RB

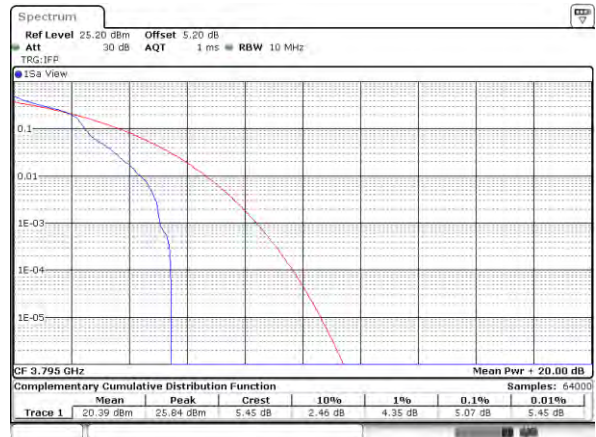
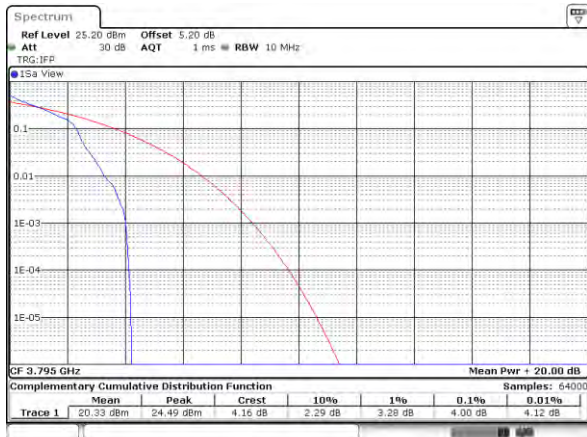


Date: 2.FEB.2021 06:46:01

Date: 2.FEB.2021 06:45:35

Highest Channel / 1 RB

Highest Channel / 1 RB



Date: 2.FEB.2021 07:32:11

Date: 2.FEB.2021 07:32:40



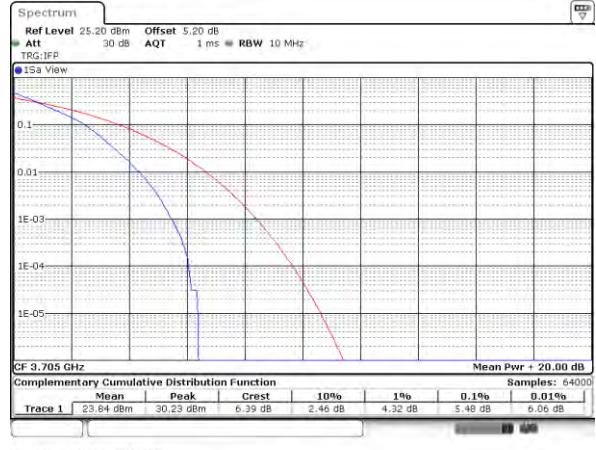
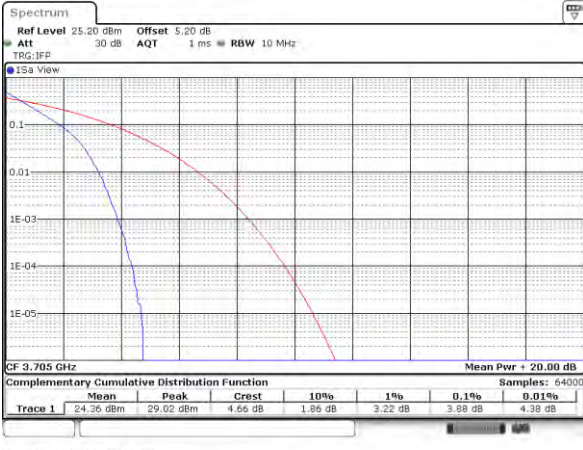
FR1 n78 / 10MHz / DFT-S OFDM

PI/2 BPSK

QPSK

Lowest Channel / Full RB

Lowest Channel / Full RB

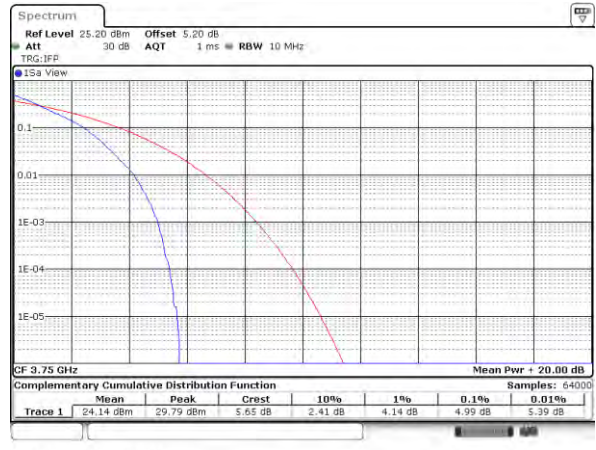
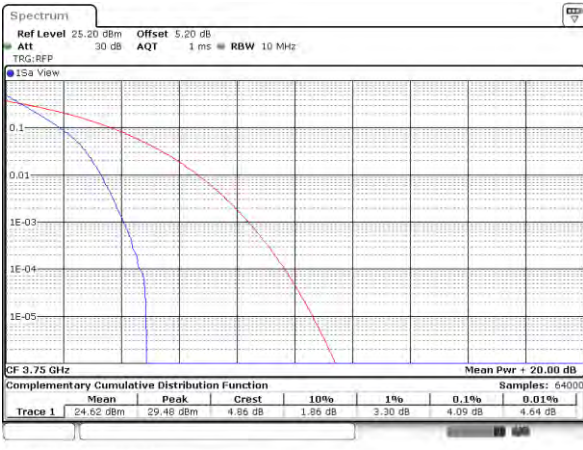


Date: 2.FEB.2021 07:26:51

Date: 2.FEB.2021 07:27:31

Middle Channel / Full RB

Middle Channel / Full RB

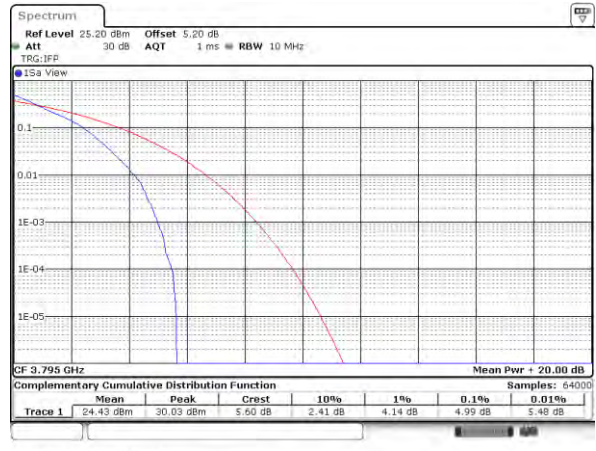
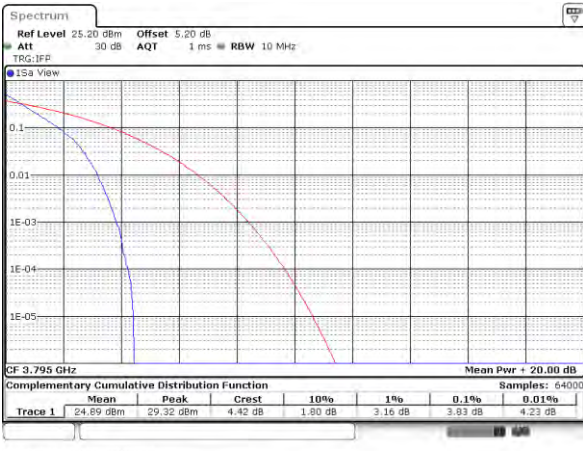


Date: 2.FEB.2021 06:42:46

Date: 2.FEB.2021 06:44:59

Highest Channel / Full RB

Highest Channel / Full RB



Date: 2.FEB.2021 07:53:38

Date: 2.FEB.2021 07:53:04



26dB Bandwidth

Mode	FR1 n78 : 26dB BW(MHz) / CP-OFDM							
BW	10MHz	10MHz	10MHz	10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	9.37	9.13	9.27	8.99				

Mode	FR1 n78 : 26dB BW(MHz) / CP-OFDM							
BW	15MHz	15MHz	15MHz	15MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	14.42	14.54	14.42	14.45				

Mode	FR1 n78 : 26dB BW(MHz) / CP-OFDM							
BW	20MHz	20MHz	20MHz	20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	18.98	18.94	19.58	19.18				

Mode	FR1 n78 : 26dB BW(MHz) / CP-OFDM							
BW	40MHz	40MHz	40MHz	40MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	40.28	40.36	40.12	40.20				

Mode	FR1 n78 : 26dB BW(MHz) / CP-OFDM							
BW	50MHz	50MHz	50MHz	50MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	49.75	49.65	49.75	49.75				

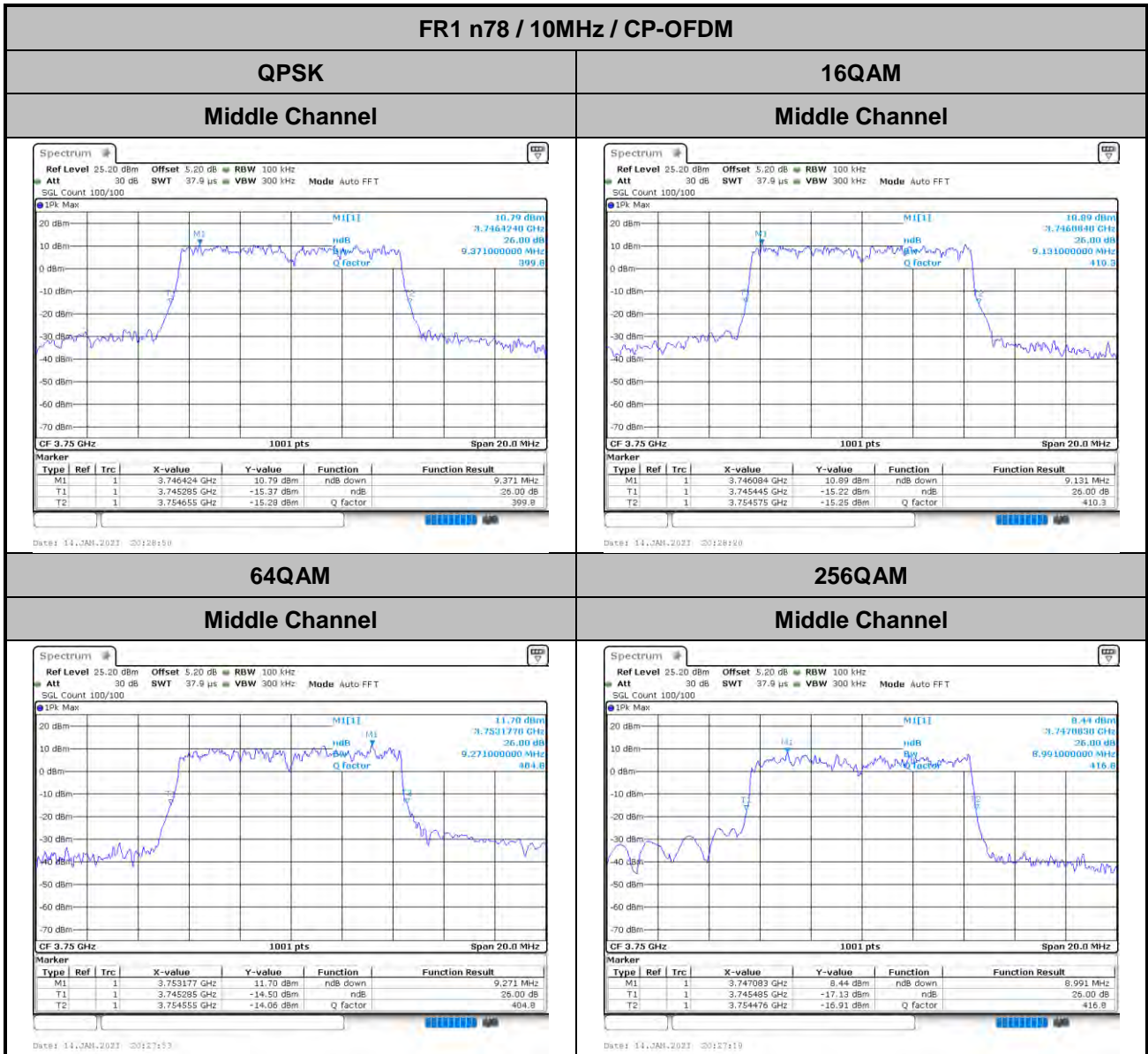
Mode	FR1 n78 : 26dB BW(MHz) / CP-OFDM							
BW	60MHz	60MHz	60MHz	60MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	60.42	60.42	60.42	60.42				

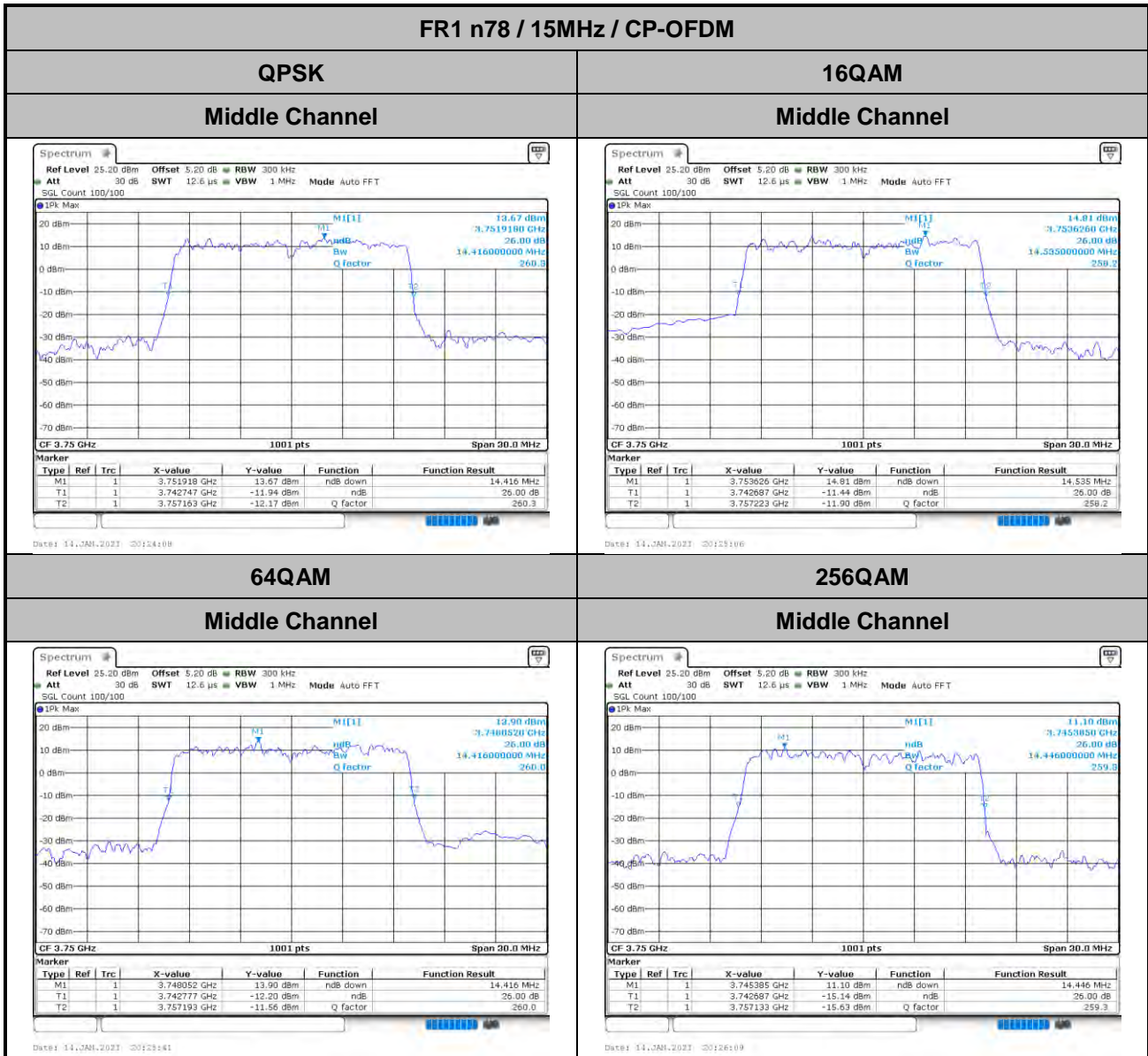
Mode	FR1 n78 : 26dB BW(MHz) / CP-OFDM							
BW	80MHz	80MHz	80MHz	80MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	79.92	79.92	79.92	79.92				

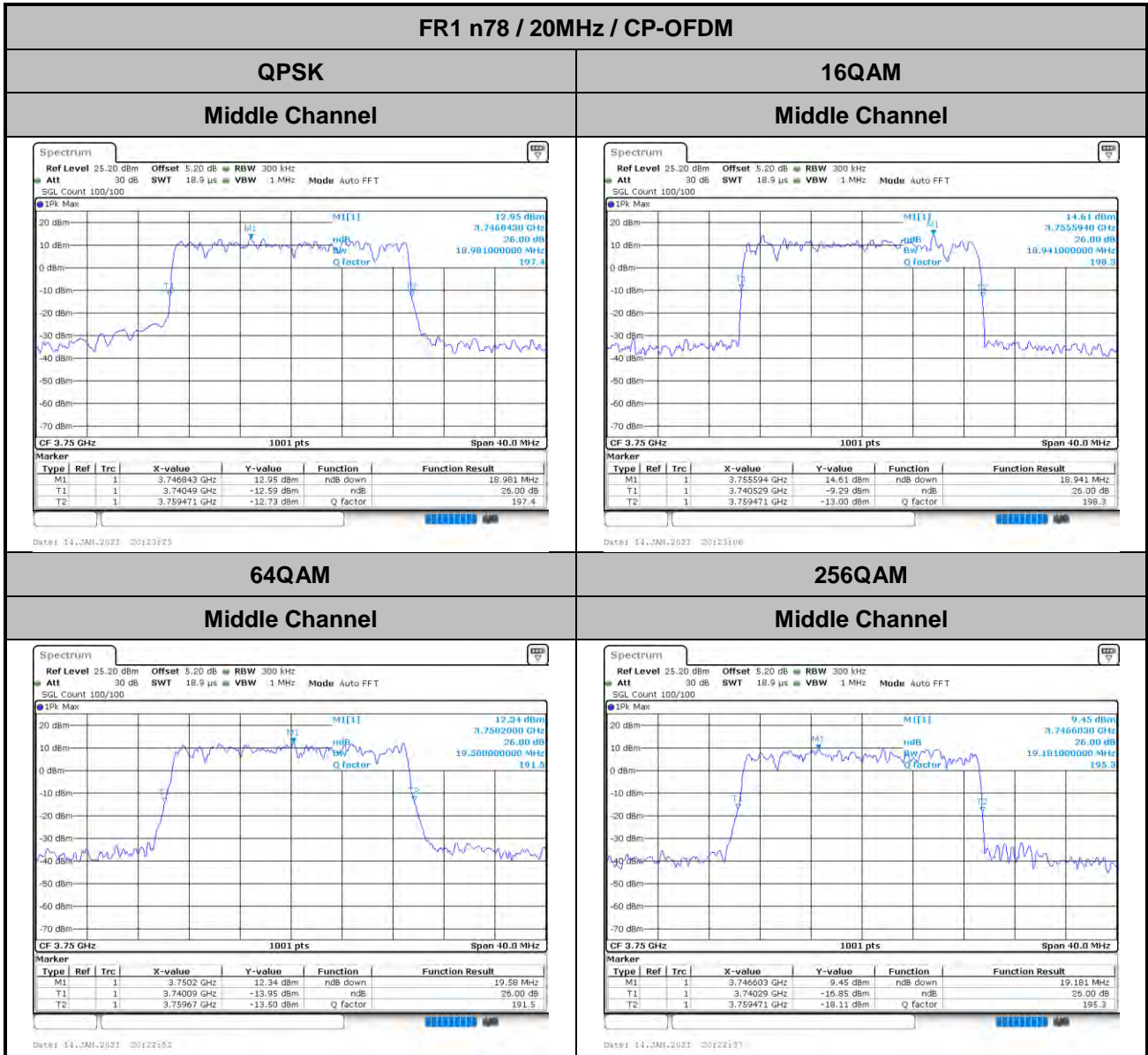


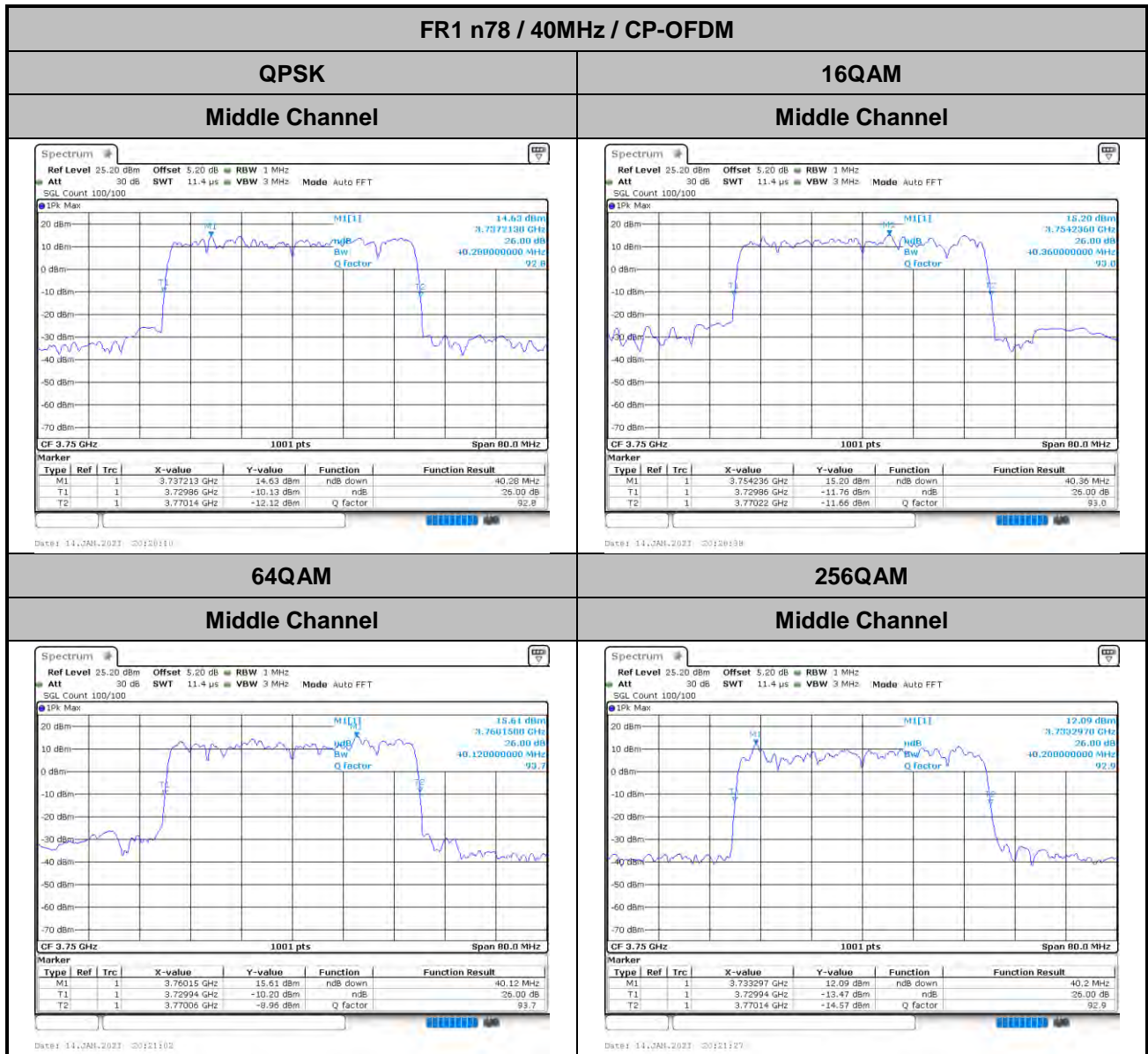


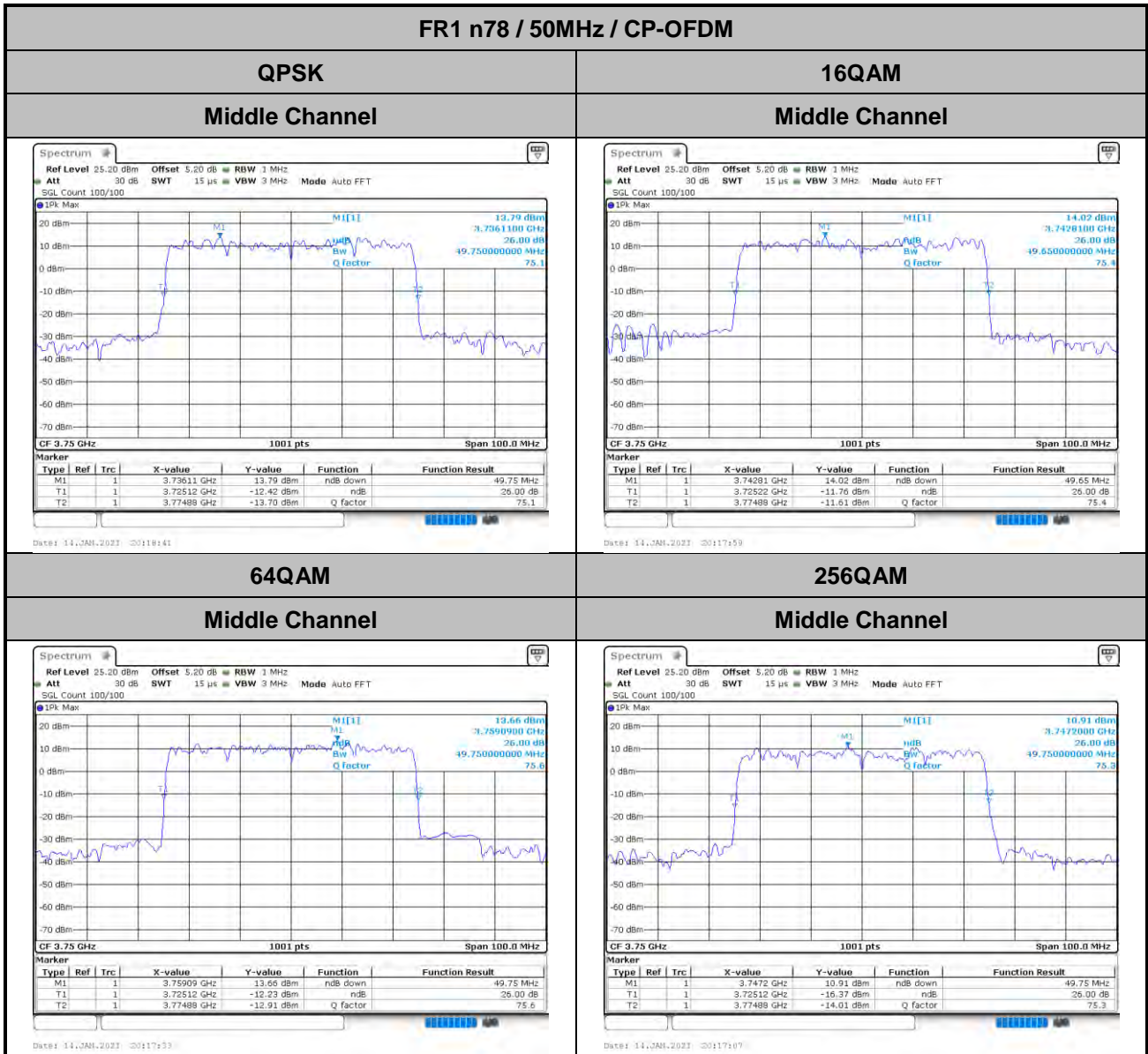
Mode	FR1 n78 : 26dB BW(MHz) / CP-OFDM							
BW	100MHz	100MHz	100MHz	100MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	100.30	100.30	100.50	100.70				

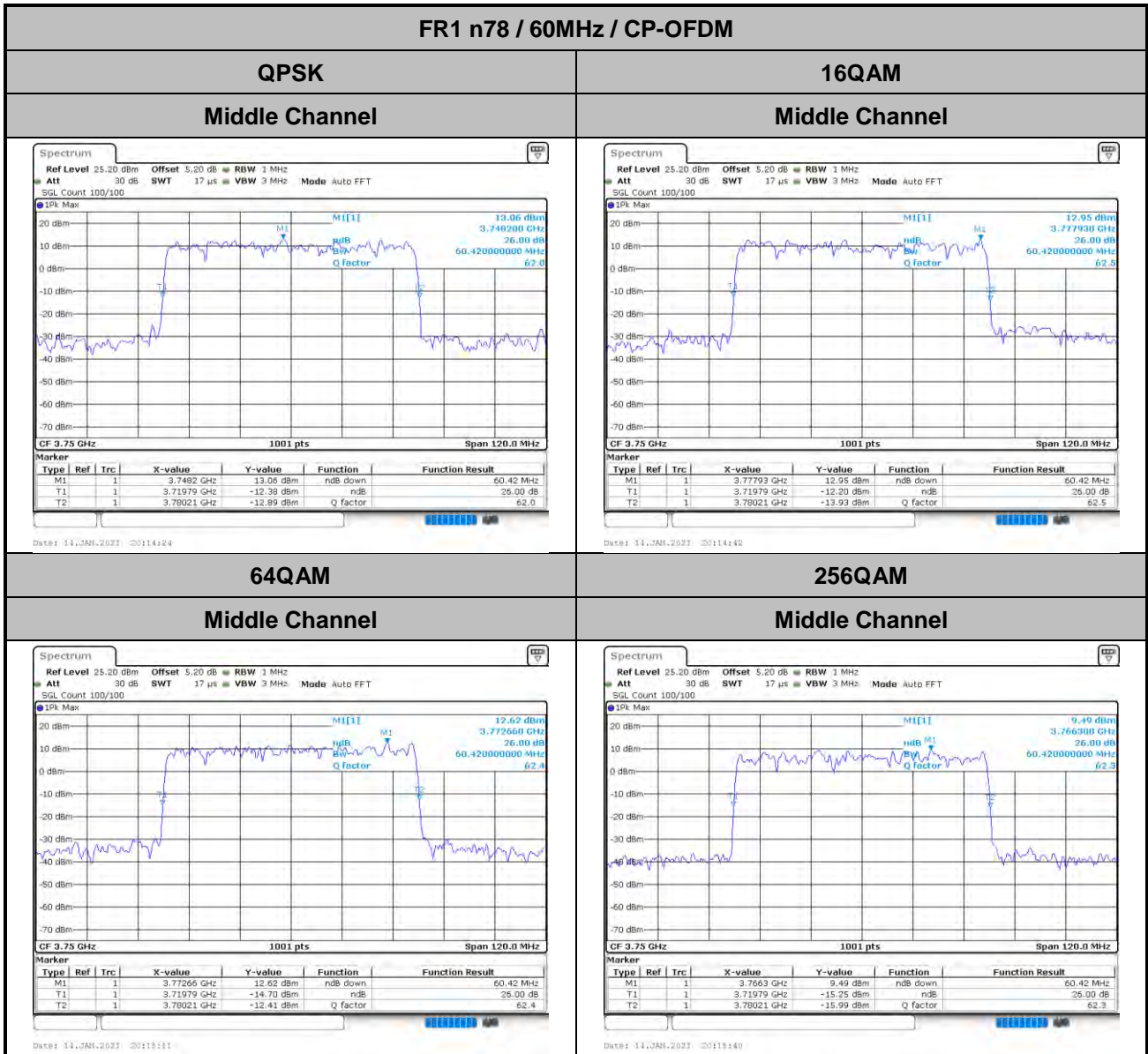


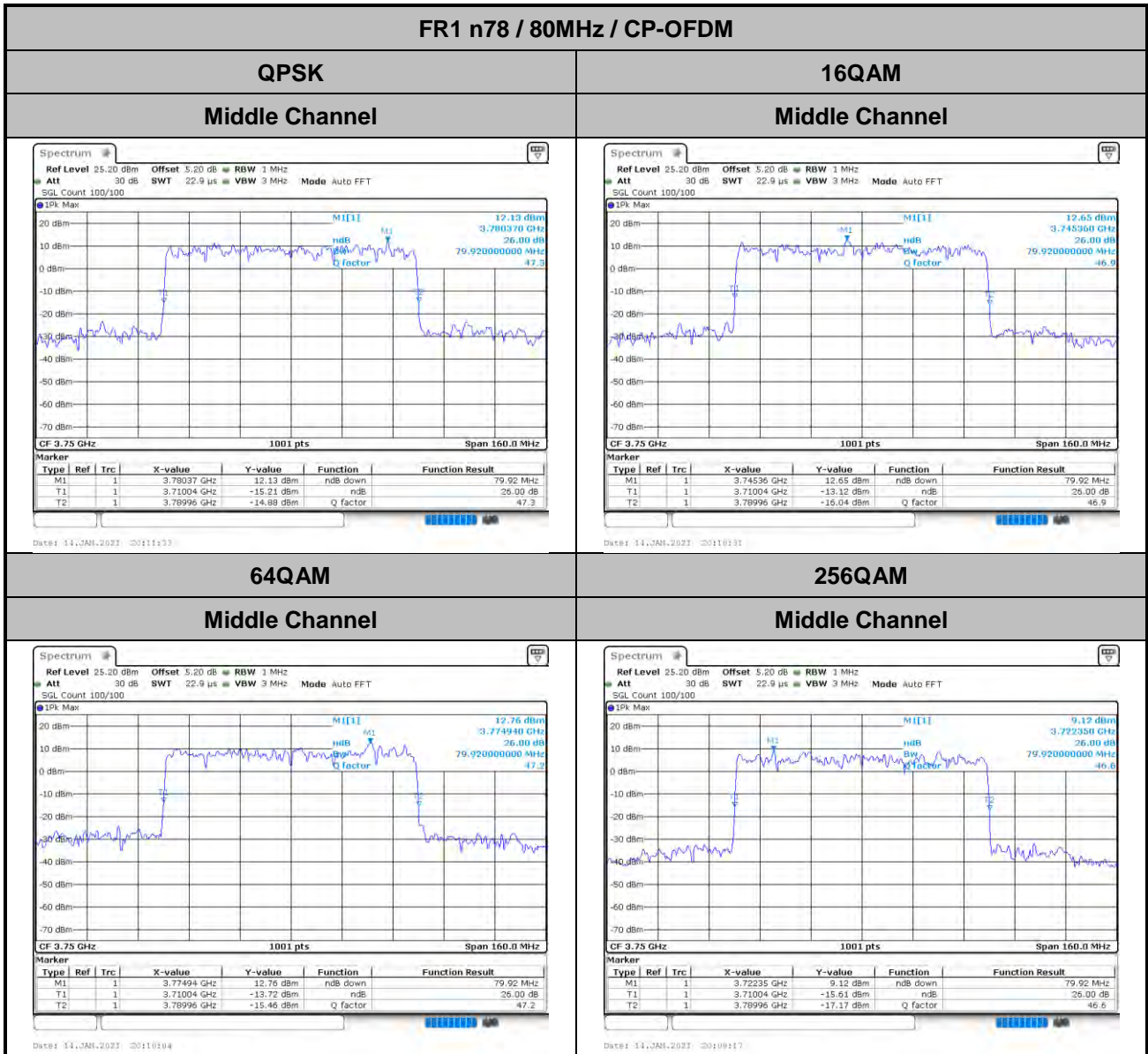
















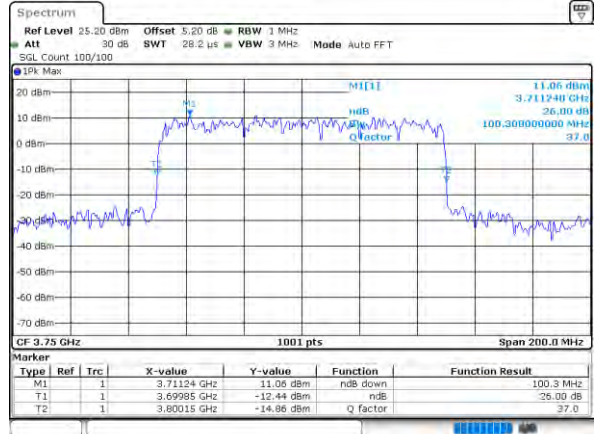
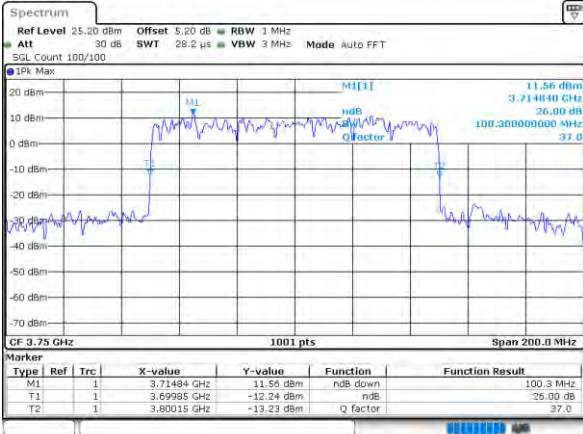
FR1 n78 / 100MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel



Date: 14, JAN, 2021 00:08:40

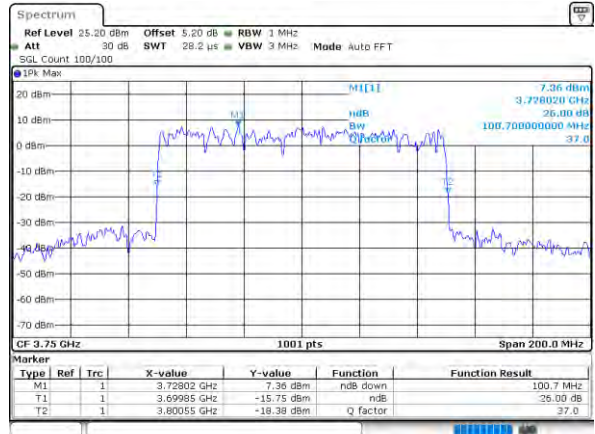
Date: 14, JAN, 2021 00:06:04

64QAM

256QAM

Middle Channel

Middle Channel



Date: 14, JAN, 2021 00:06:23

Date: 14, JAN, 2021 00:06:41



### Occupied Bandwidth

Mode	FR1 n78 : OBW(MHz) / CP-OFDM							
BW	10MHz	10MHz	10MHz	10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	8.61	8.59	8.51	8.51				

Mode	FR1 n78 : OBW(MHz) / CP-OFDM							
BW	15MHz	15MHz	15MHz	15MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	13.61	13.55	13.49	13.49				

Mode	FR1 n78 : OBW(MHz) / CP-OFDM							
BW	20MHz	20MHz	20MHz	20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	18.26	18.14	18.26	18.18				

Mode	FR1 n78 : OBW(MHz) / CP-OFDM							
BW	40MHz	40MHz	40MHz	40MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	38.04	37.88	37.88	38.12				

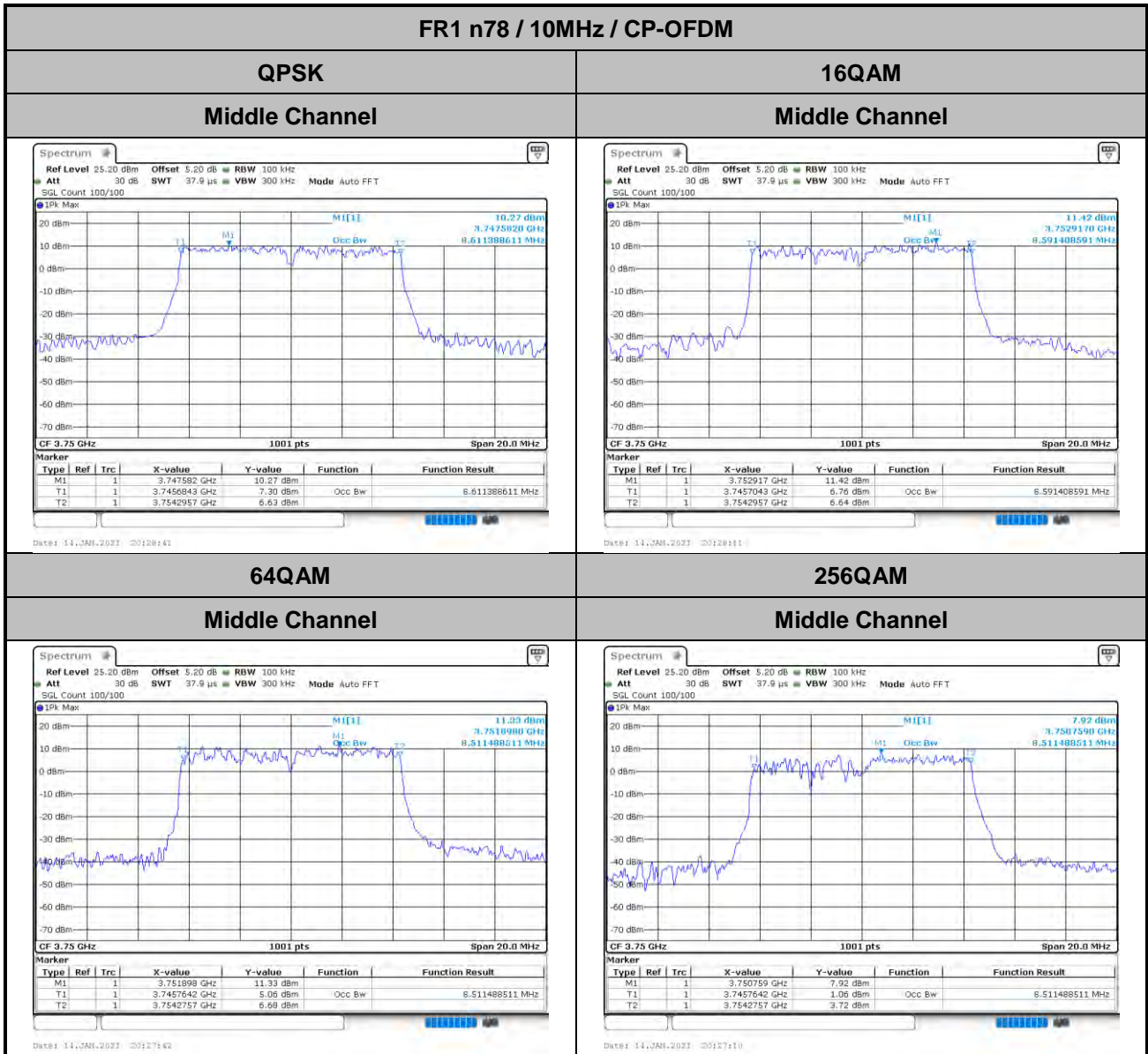
Mode	FR1 n78 : OBW(MHz) / CP-OFDM							
BW	50MHz	50MHz	50MHz	50MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	47.55	47.55	47.35	47.65				

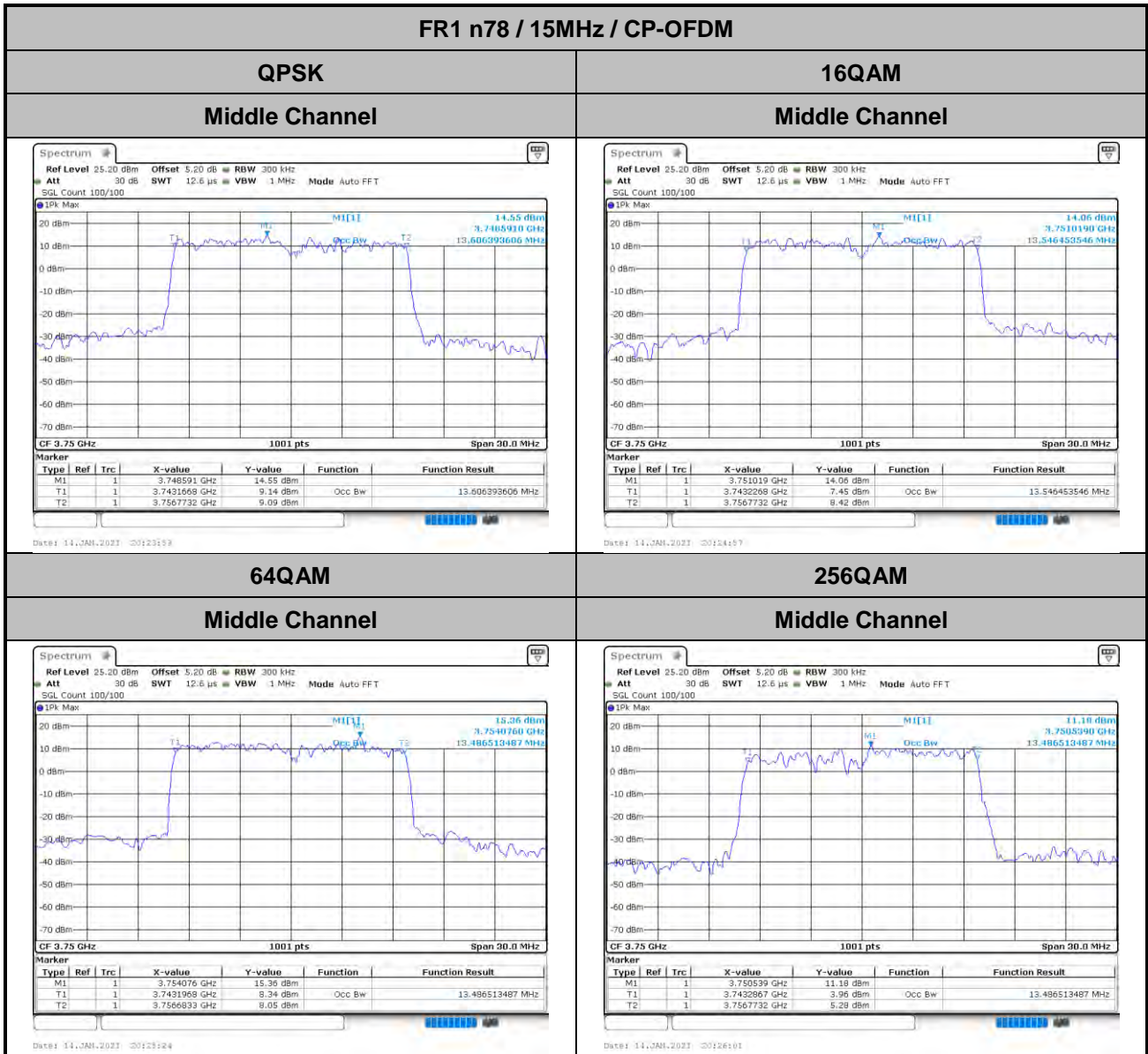
Mode	FR1 n78 : OBW(MHz) / CP-OFDM							
BW	60MHz	60MHz	60MHz	60MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	57.78	58.02	57.42	57.90				

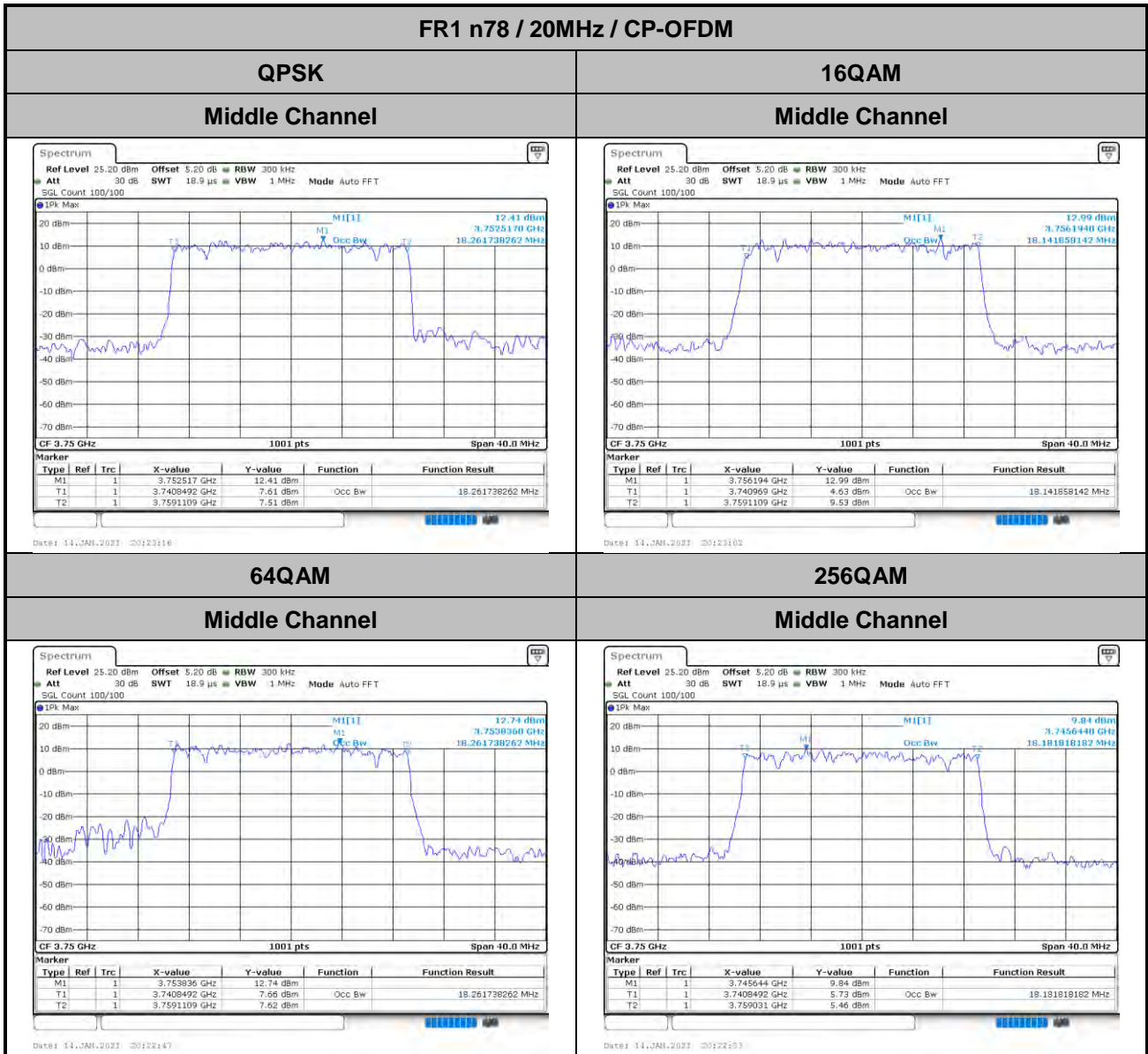
Mode	FR1 n78 : OBW(MHz) / CP-OFDM							
BW	80MHz	80MHz	80MHz	80MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	77.20	77.36	77.20	77.52				



Mode	FR1 n78 : OBW(MHz) / CP-OFDM							
<b>BW</b>	100MHz	100MHz	100MHz	100MHz				
<b>Mod.</b>	QPSK	16QAM	64QAM	256QAM				
<b>Middle CH</b>	97.10	97.10	97.50	97.50				









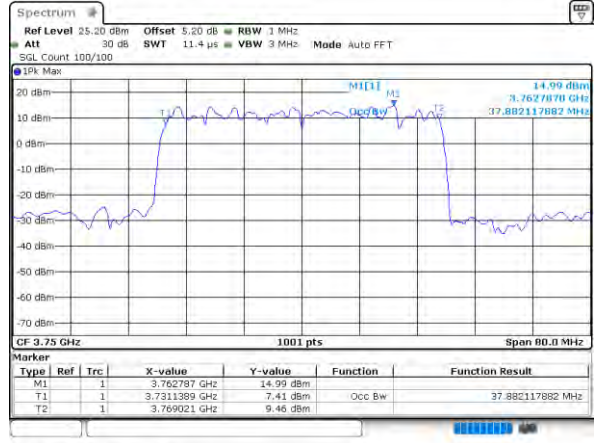
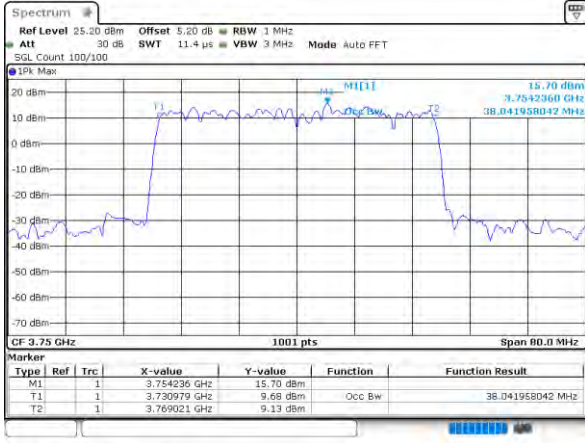
FR1 n78 / 40MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel



Date: 14, JAN, 2021 00:20:00

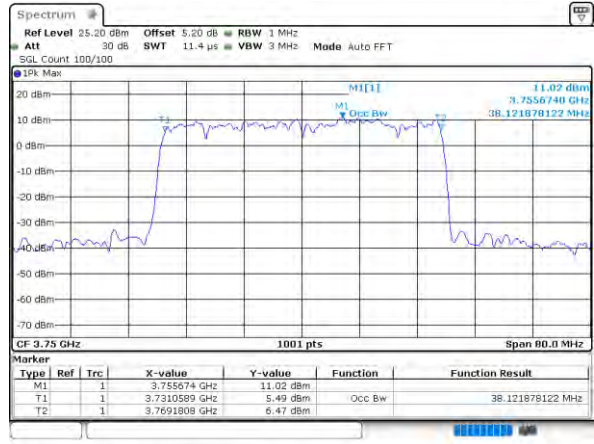
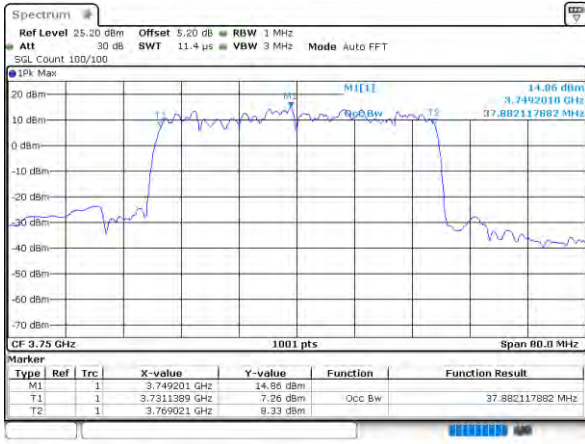
Date: 14, JAN, 2021 00:20:28

64QAM

256QAM

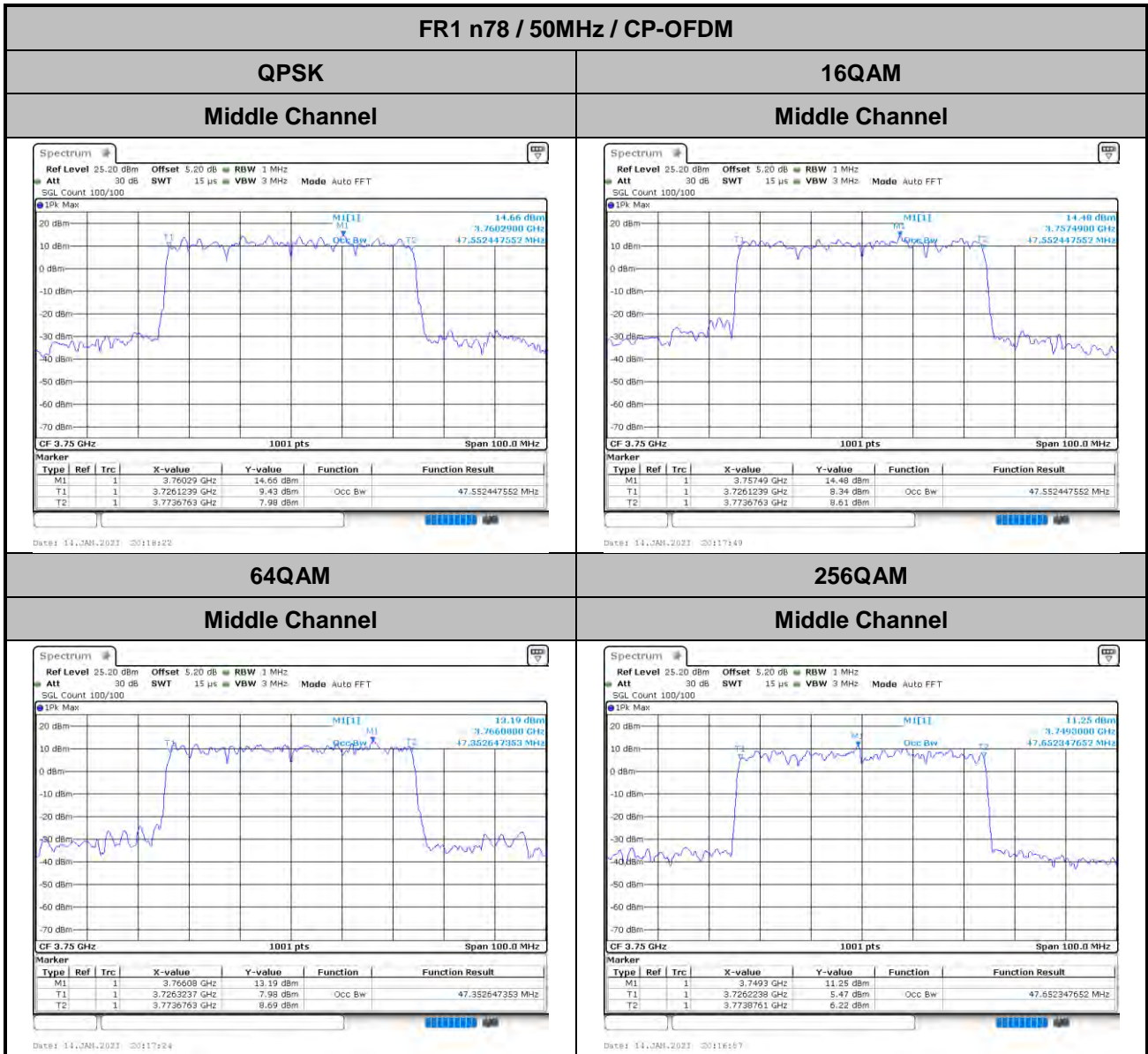
Middle Channel

Middle Channel

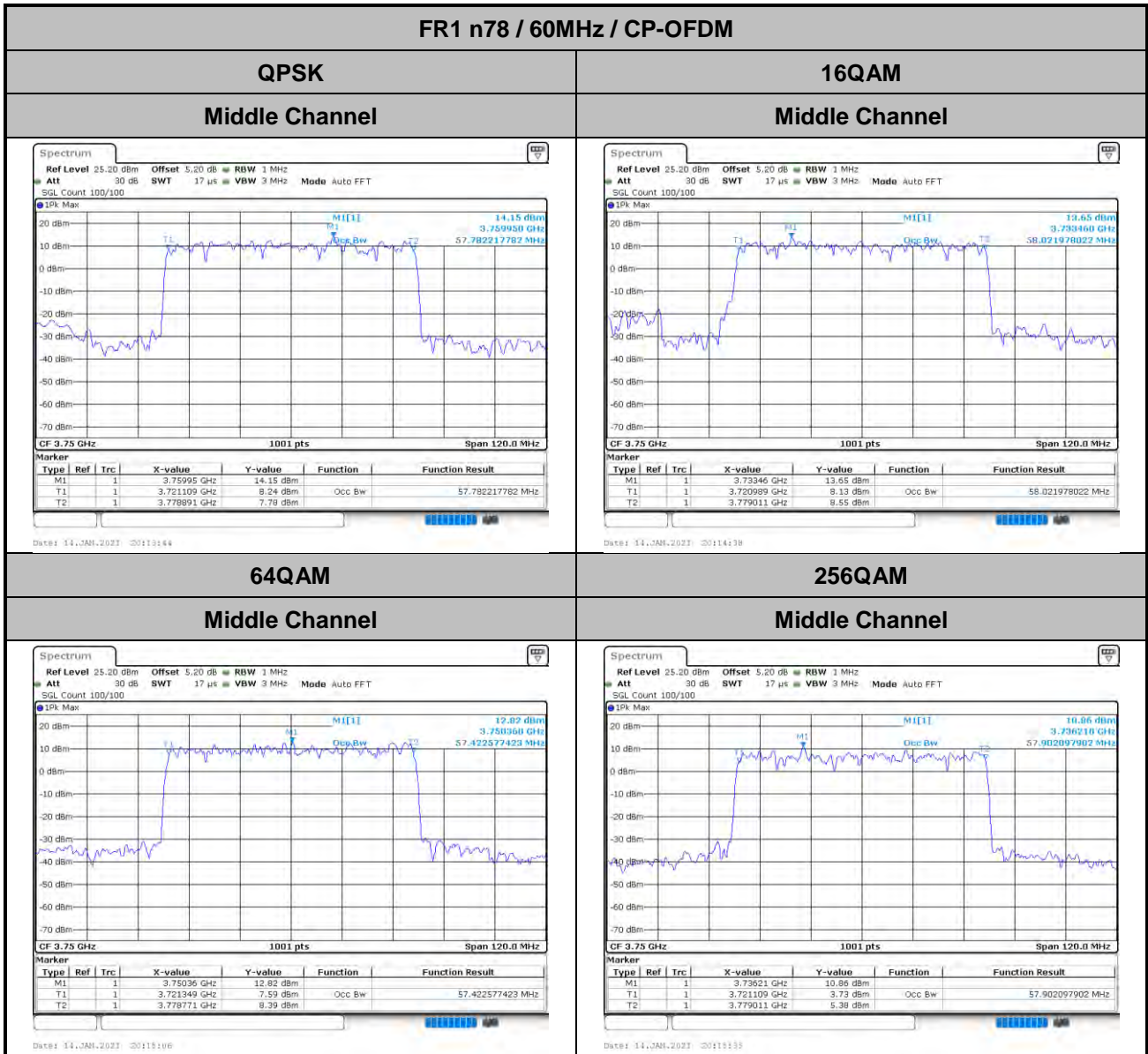


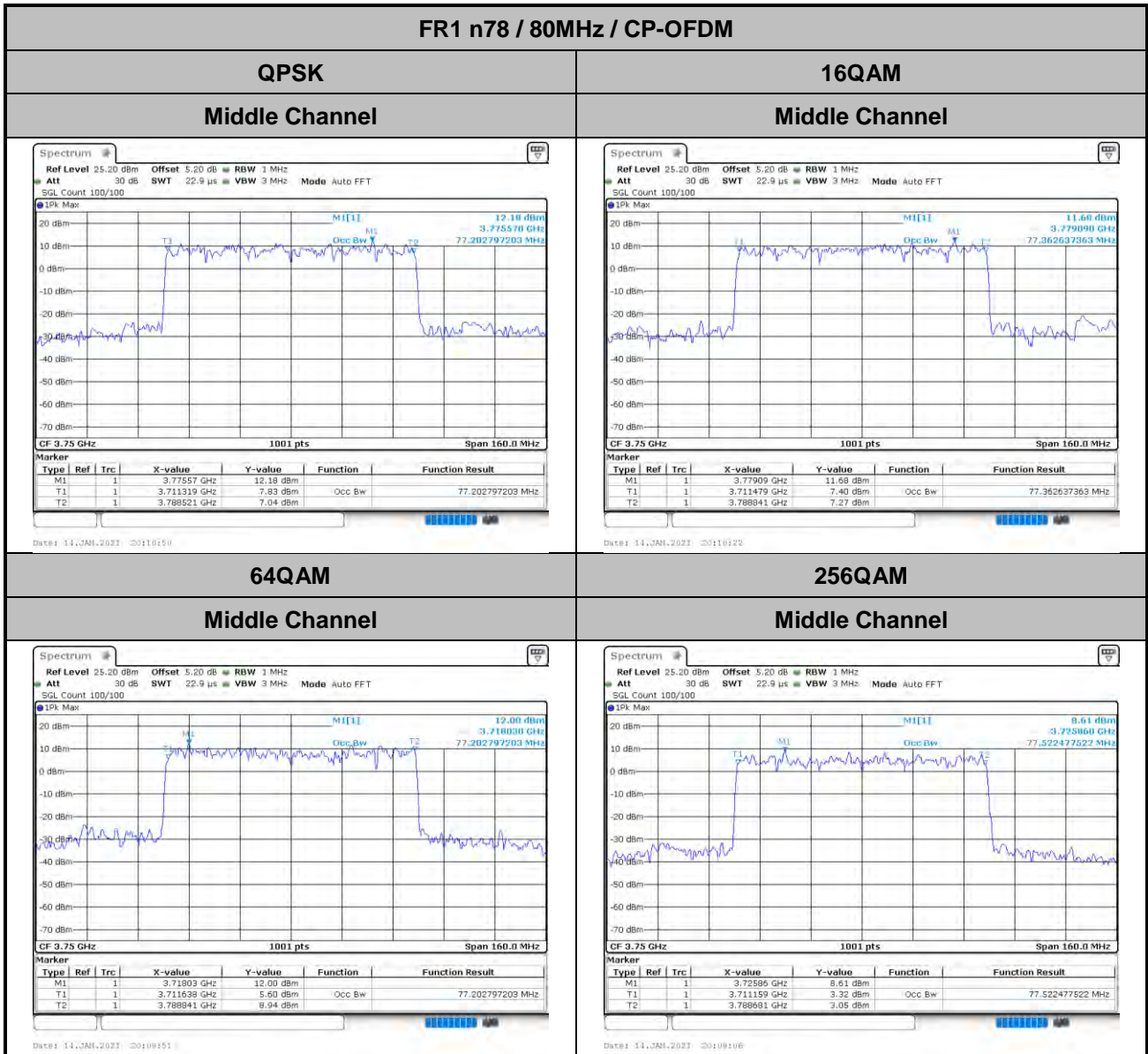
Date: 14, JAN, 2021 00:20:53

Date: 14, JAN, 2021 00:21:19











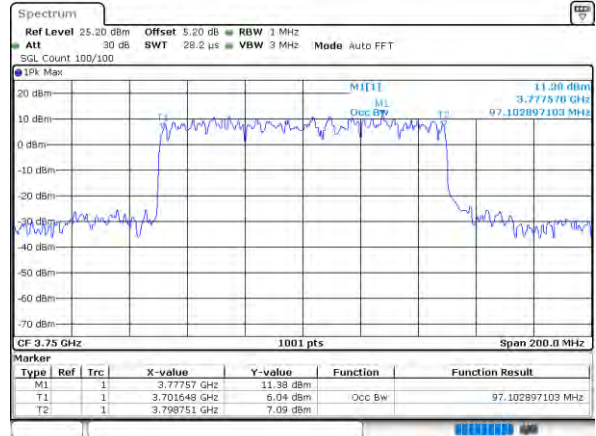
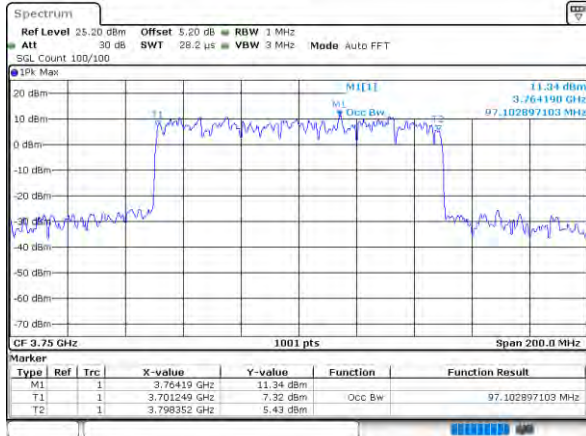
FR1 n78 / 100MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel



Date: 14.JAN.2021 00:0833g

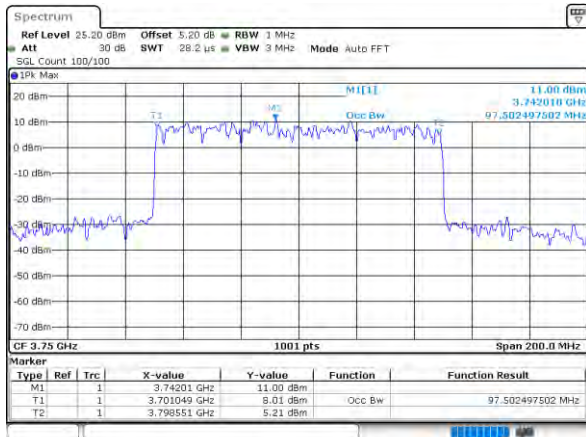
Date: 14.JAN.2021 00:0838g

64QAM

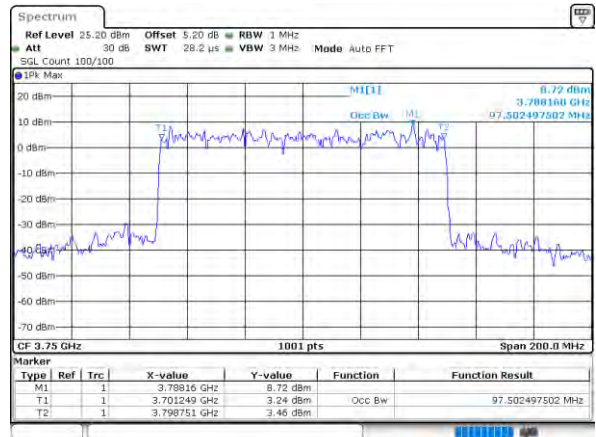
256QAM

Middle Channel

Middle Channel



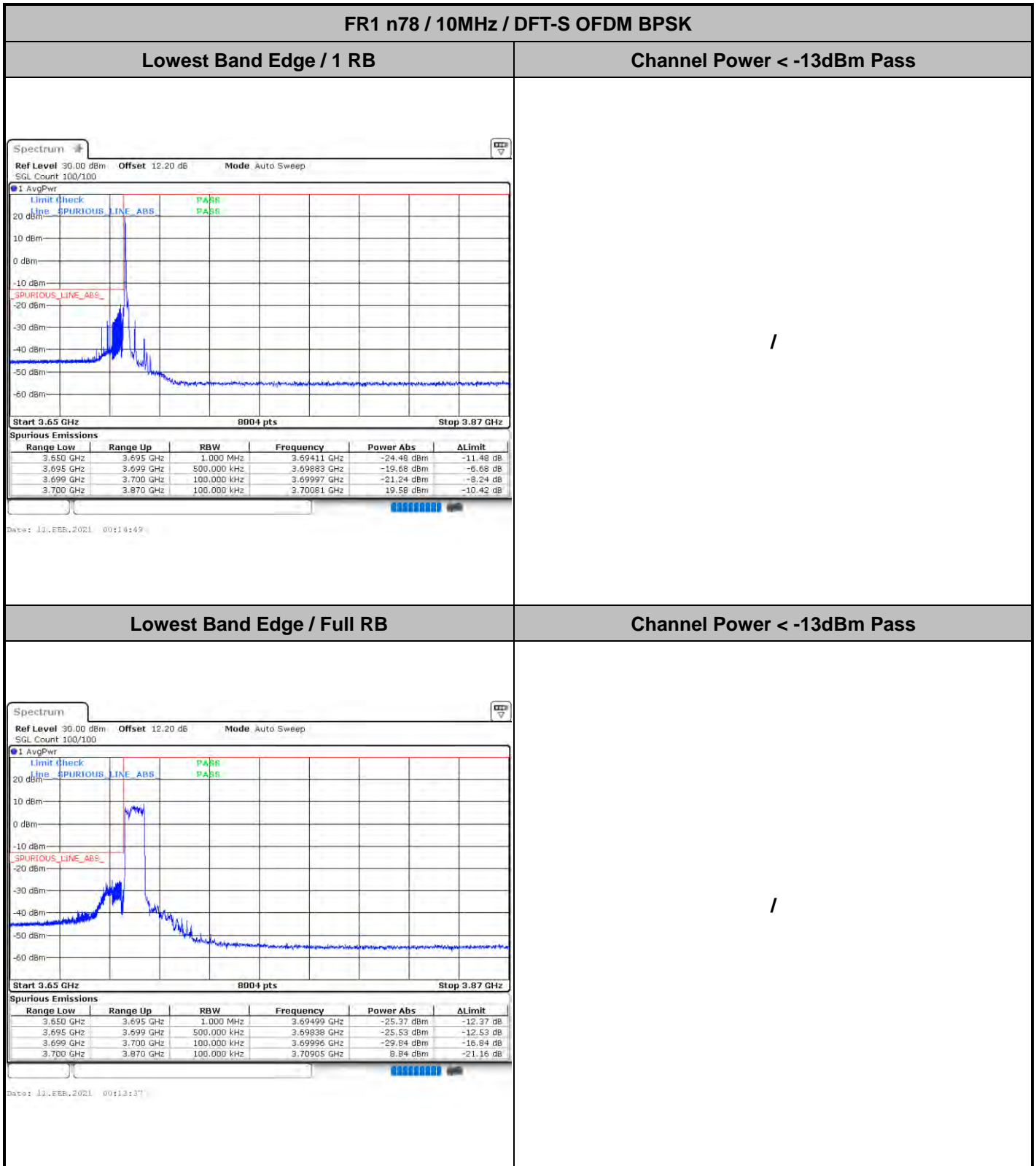
Date: 14.JAN.2021 00:0617g



Date: 14.JAN.2021 00:0653g



# Conducted Band Edge

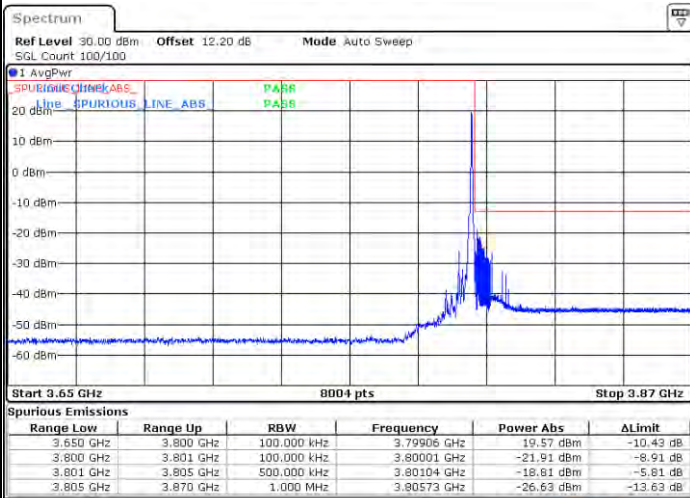




FR1 n78 / 10MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB

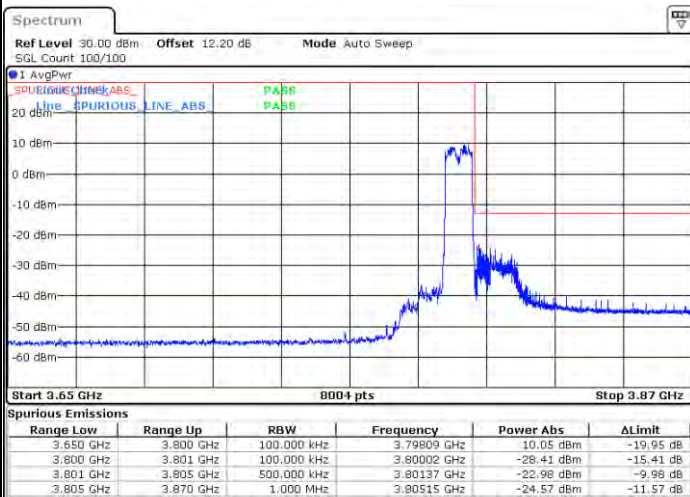
Channel Power < -13dBm Pass



Date: 11.FEB.2021 00:16:09

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



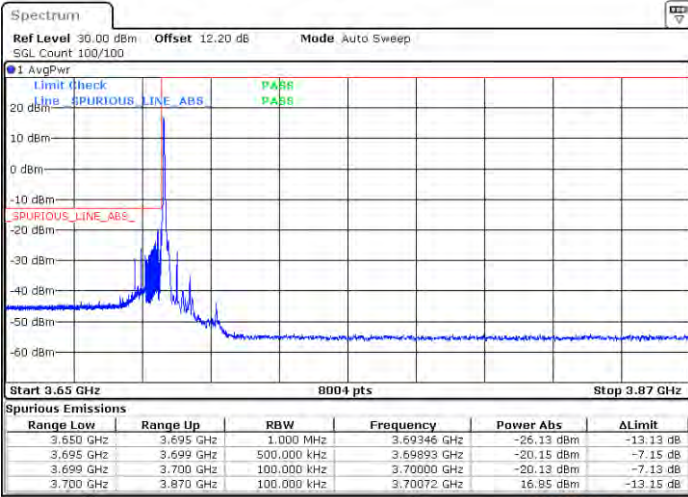
Date: 11.FEB.2021 00:16:31



FR1 n78 / 10MHz / DFT-S OFDM QPSK

Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



Date: 11.FEB.2021 00:19:08

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



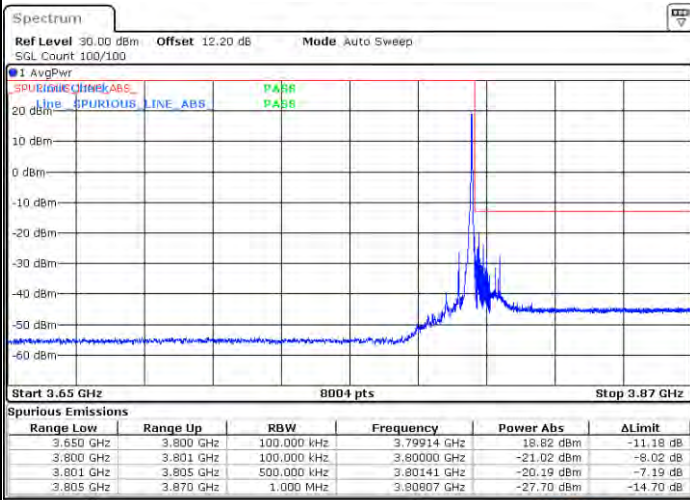
Date: 11.FEB.2021 00:18:35



FR1 n78 / 10MHz / DFT-S OFDM QPSK

Highest Band Edge / 1 RB

Channel Power < -13dBm Pass

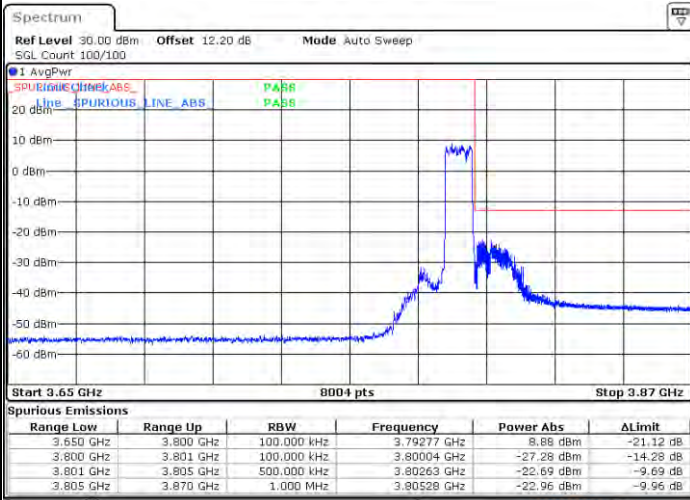


/

Date: 11.FEB.2021 00:15:52

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



/

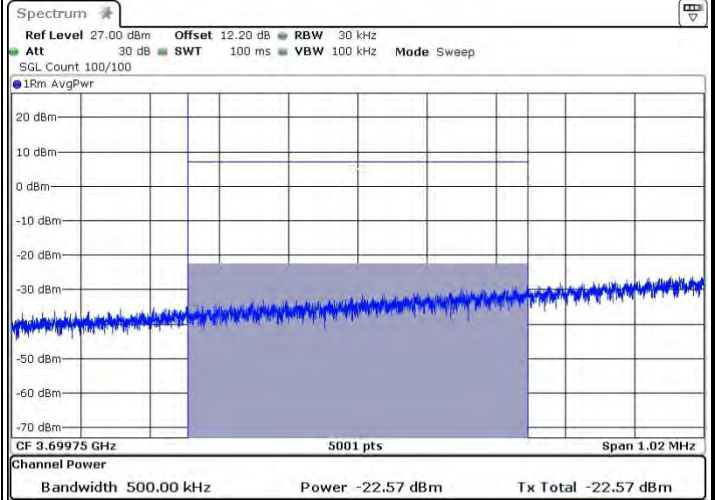
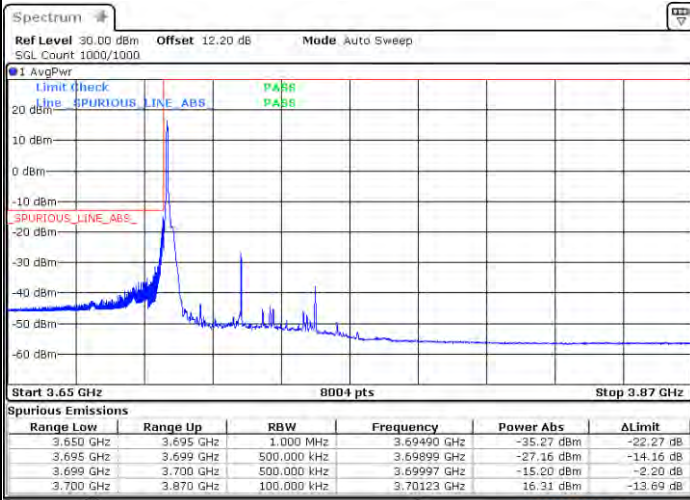
Date: 11.FEB.2021 00:16:48



FR1 n78 / 50MHz / DFT-S OFDM BPSK

Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass

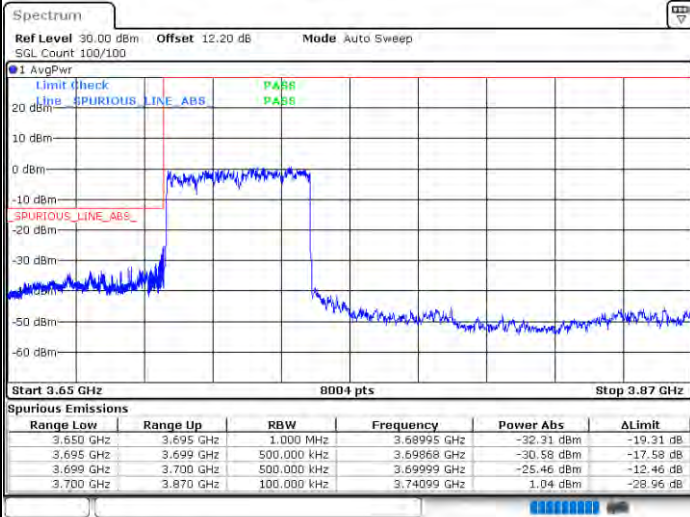


Date: 30.JAN.2021 03:59:27

Date: 30.JAN.2021 04:26:21

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



Date: 30.JAN.2021 03:57:05

/

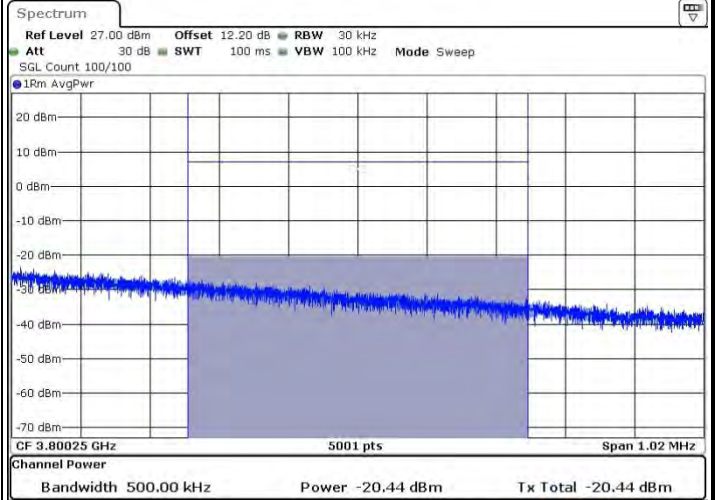
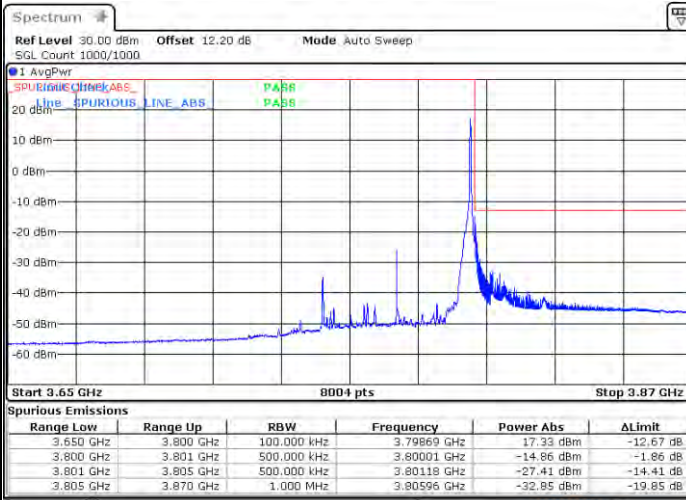




FR1 n78 / 50MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB

Channel Power < -13dBm Pass

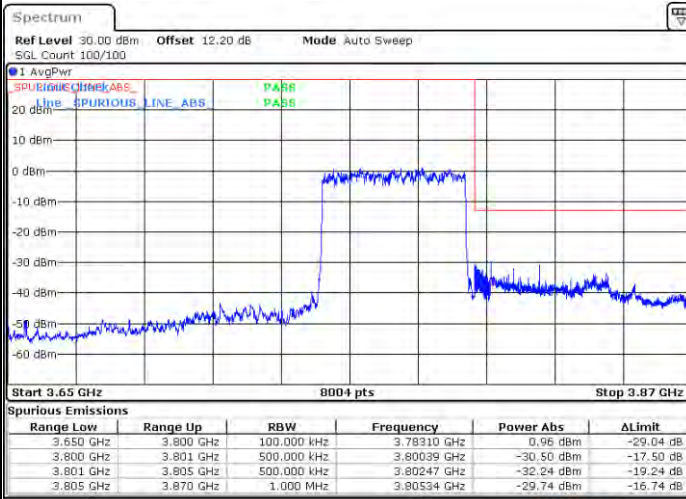


Date: 30.JAN.2021 04:01:55

Date: 30.JAN.2021 04:23:10

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



Date: 30.JAN.2021 03:59:11

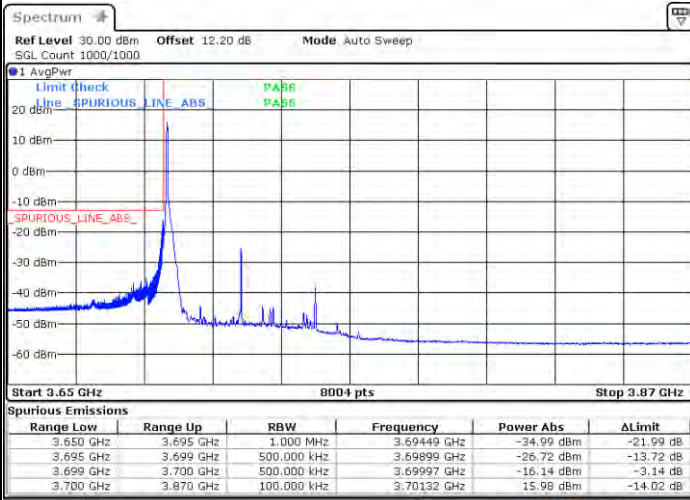
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FR1 n78 / 50MHz / DFT-S OFDM QPSK

Lowest Band Edge / 1 RB

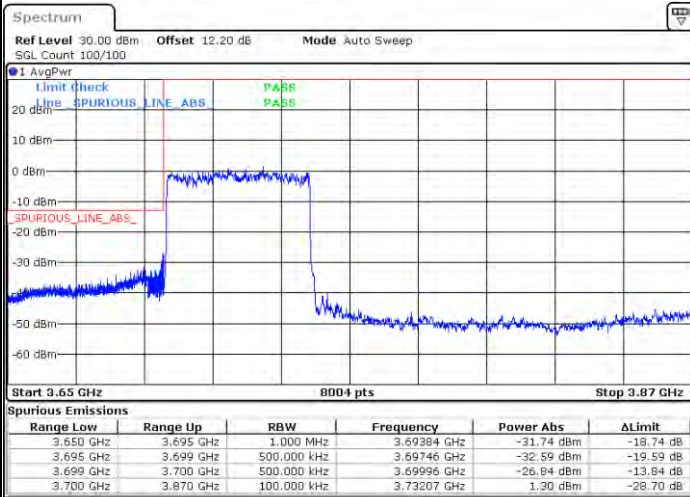
Channel Power < -13dBm Pass



/

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



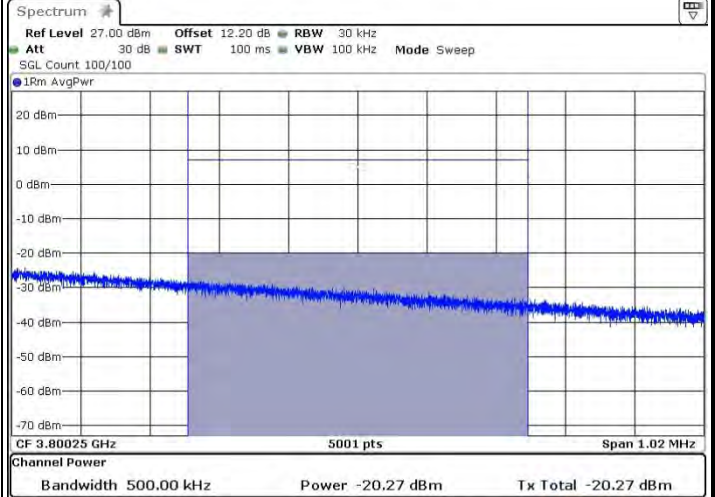
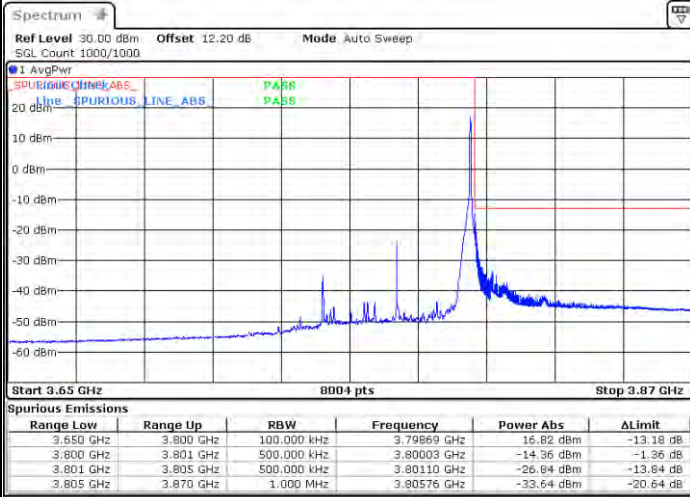
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FR1 n78 / 50MHz / DFT-S OFDM QPSK

Highest Band Edge / 1 RB

Channel Power < -13dBm Pass

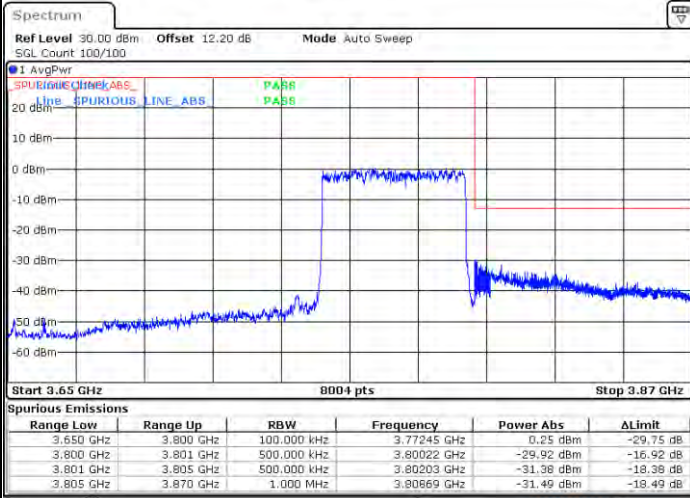


Date: 30.JAN.2021 04:09:13

Date: 30.JAN.2021 04:19:49

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



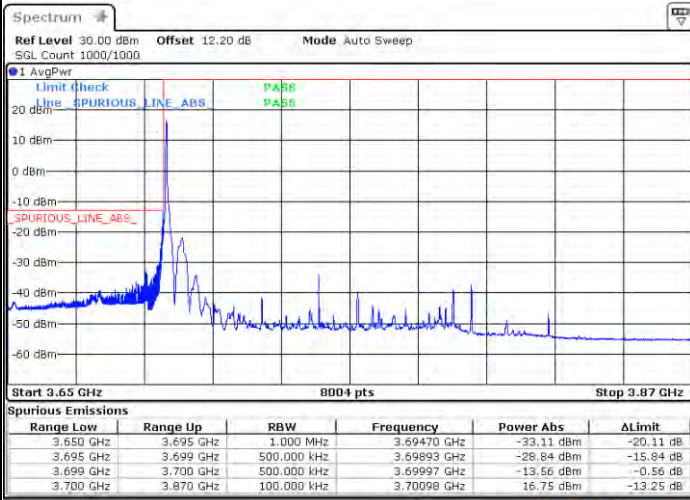
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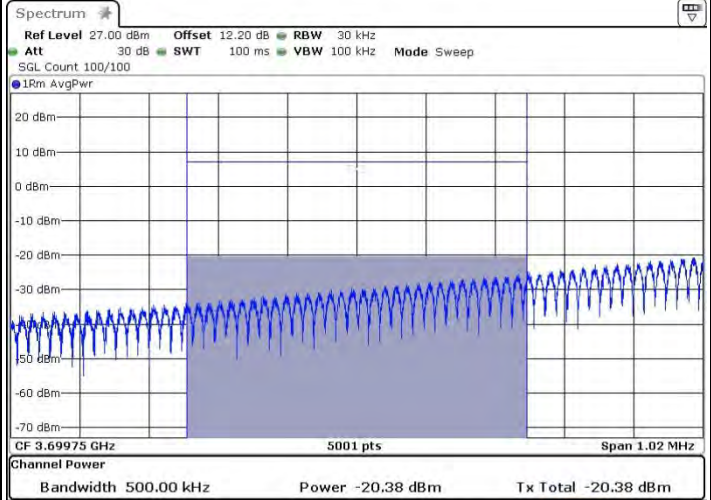
FR1 n78 / 100MHz / DFT-S OFDM BPSK

Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



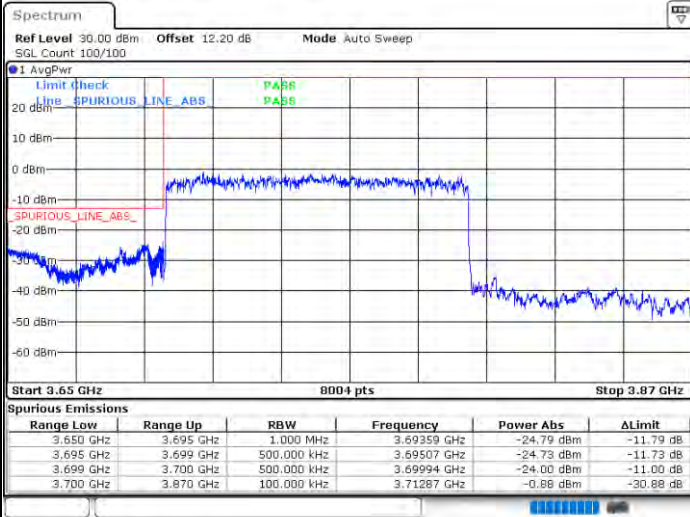
Date: 11.FEB.2021 00:28:40



Date: 11.FEB.2021 00:29:48

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



Date: 11.FEB.2021 00:31:55

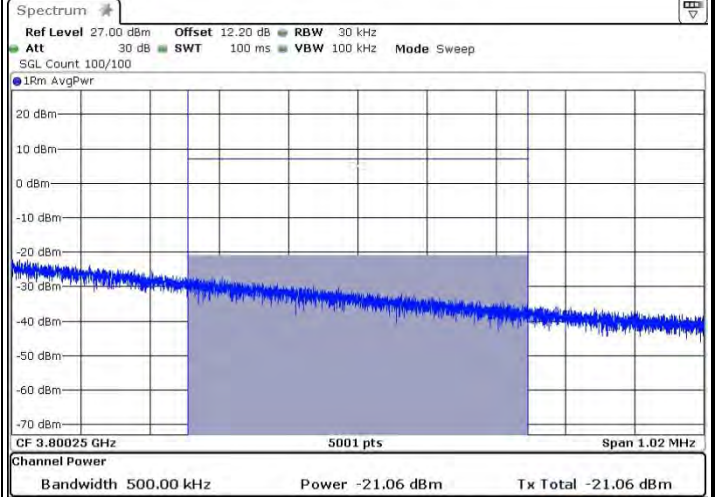
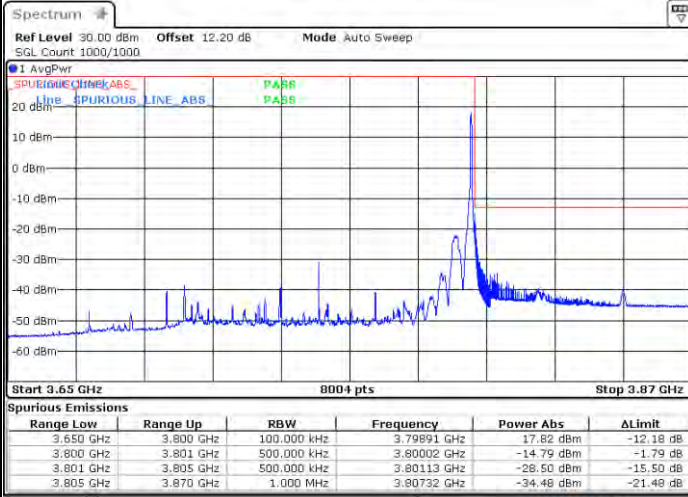
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FR1 n78 / 100MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB

Channel Power < -13dBm Pass

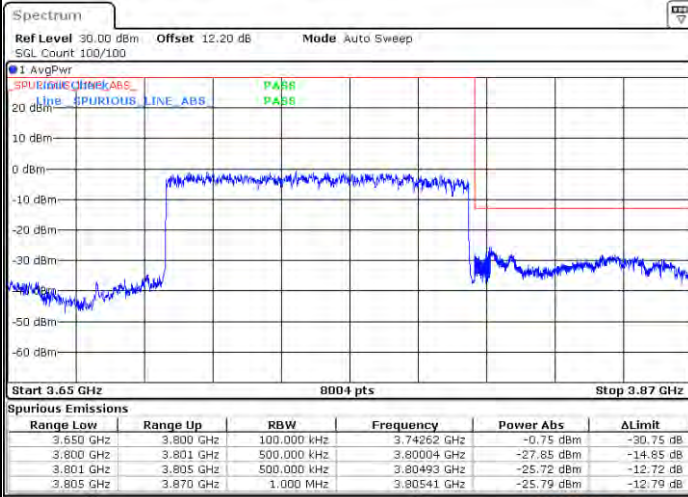


Date: 11.FEB.2021 00:35:11

Date: 11.FEB.2021 00:36:47

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



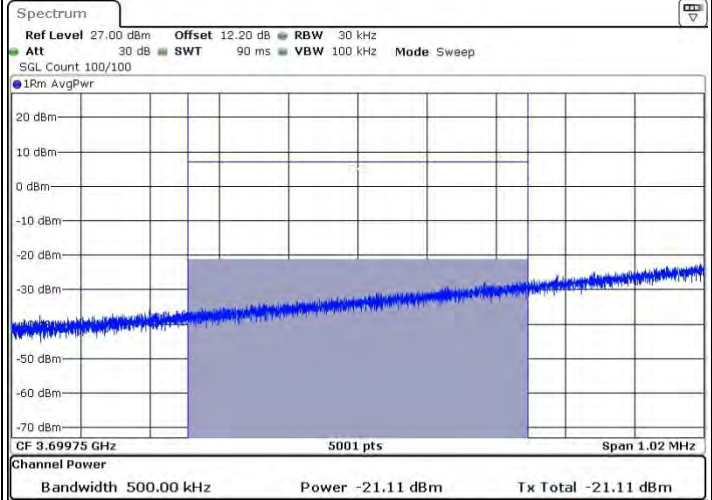
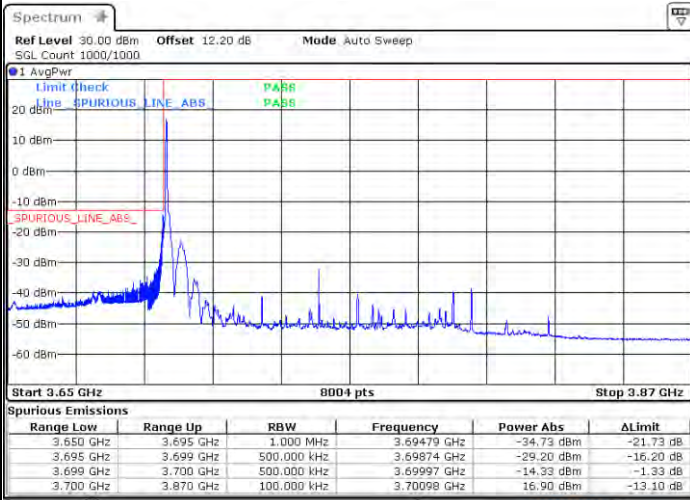
Date: 11.FEB.2021 00:32:14



FR1 n78 / 100MHz / DFT-S OFDM QPSK

Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass

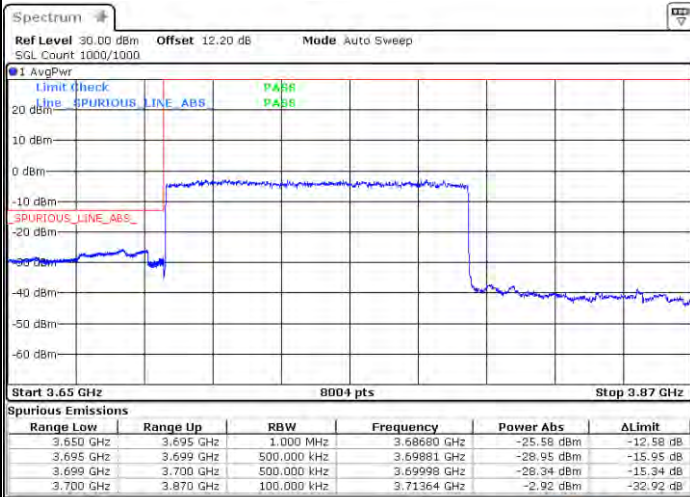


Date: 11.FEB.2021 00:27:26

Date: 11.FEB.2021 00:30:18

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



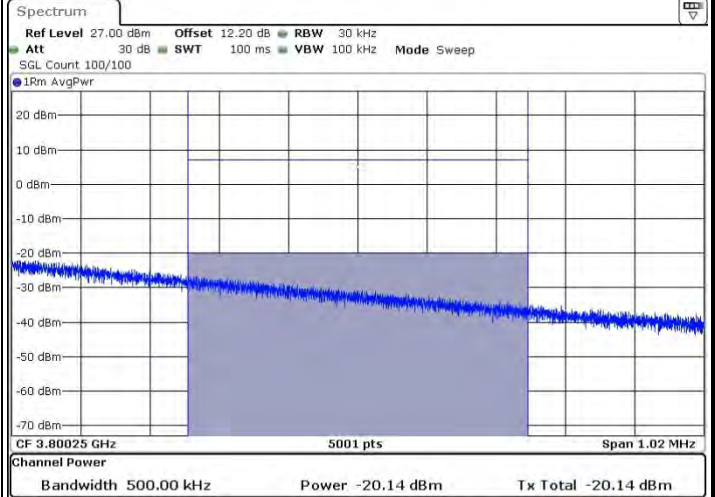
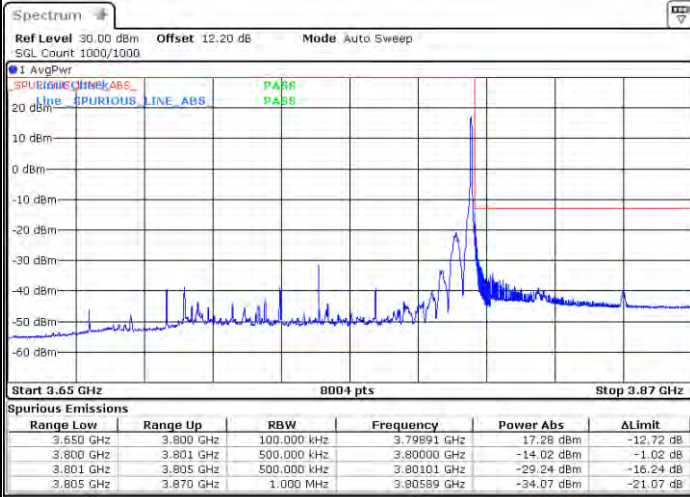
Date: 11.FEB.2021 00:31:36



FR1 n78 / 100MHz / DFT-S OFDM QPSK

Highest Band Edge / 1 RB

Channel Power < -13dBm Pass

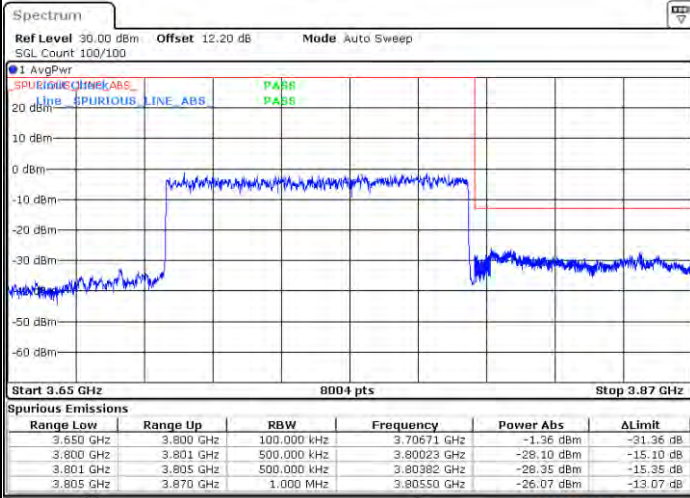


Date: 11.FEB.2021 00:23:21

Date: 11.FEB.2021 00:37:07

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



Date: 11.FEB.2021 00:22:32

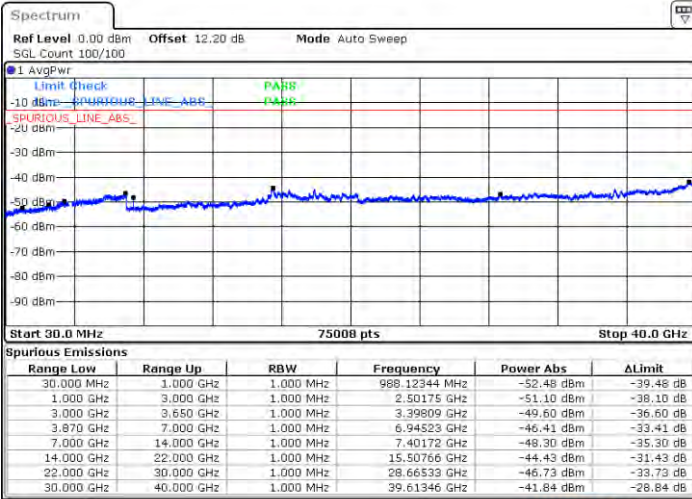


# Conducted Spurious Emission

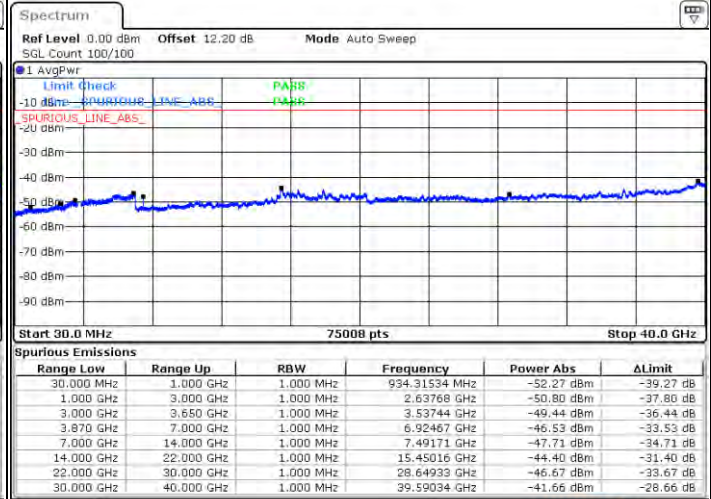
FR1 n78 / 10MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

Middle Channel / 1RB

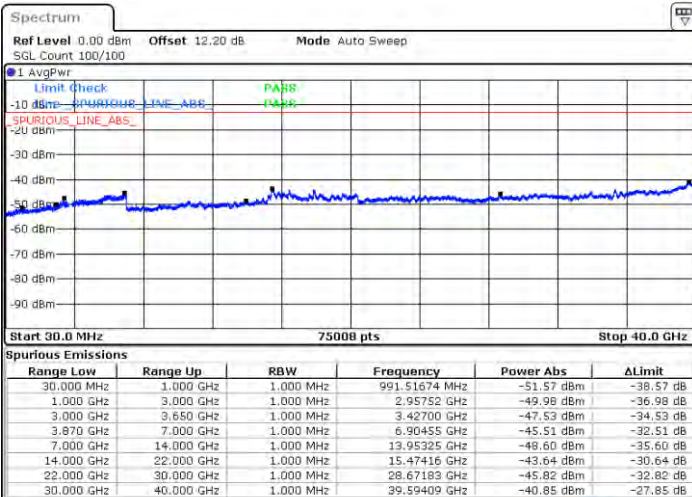


Date: 2.FEB.2021 06:53:30



Date: 2.FEB.2021 06:47:10

Highest Channel / 1RB



Date: 11.FEB.2021 00:20:11

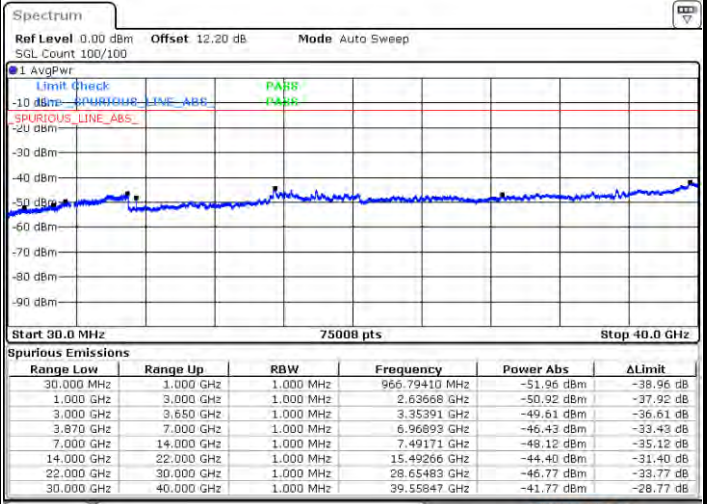
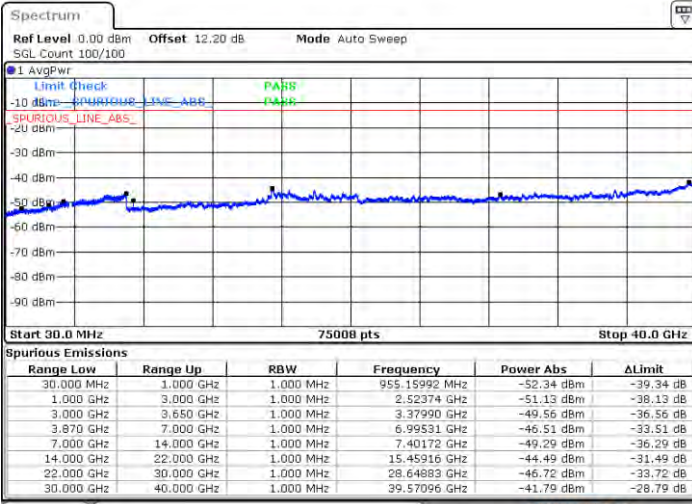




FR1 n78 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

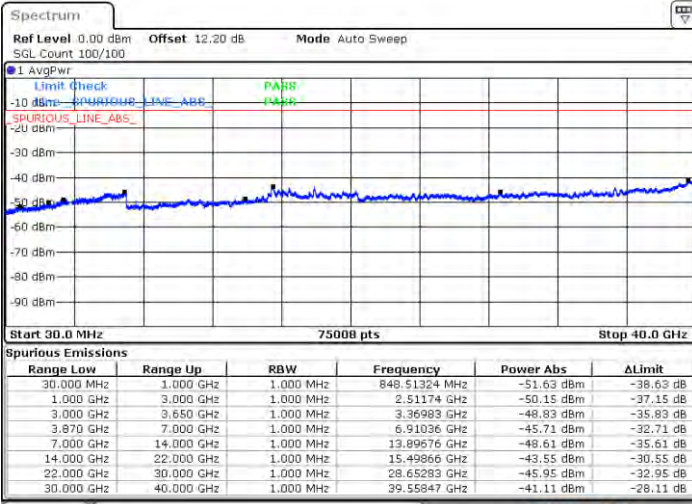
Middle Channel / 1RB



Date: 2.FEB.2021 06:51:03

Date: 2.FEB.2021 06:49:34

Highest Channel / 1RB



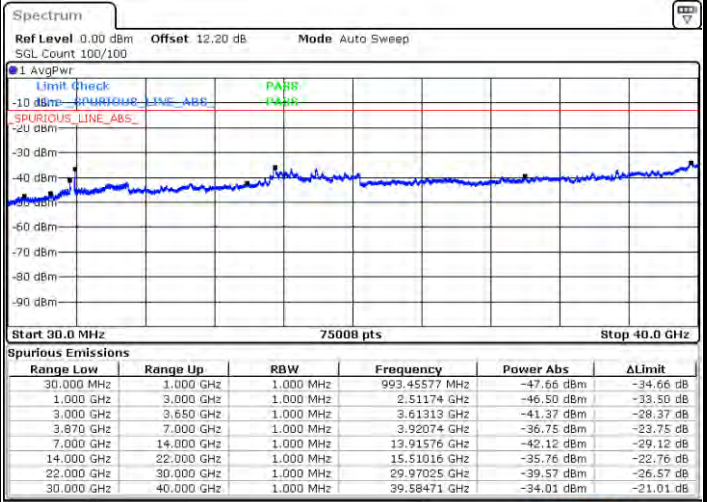
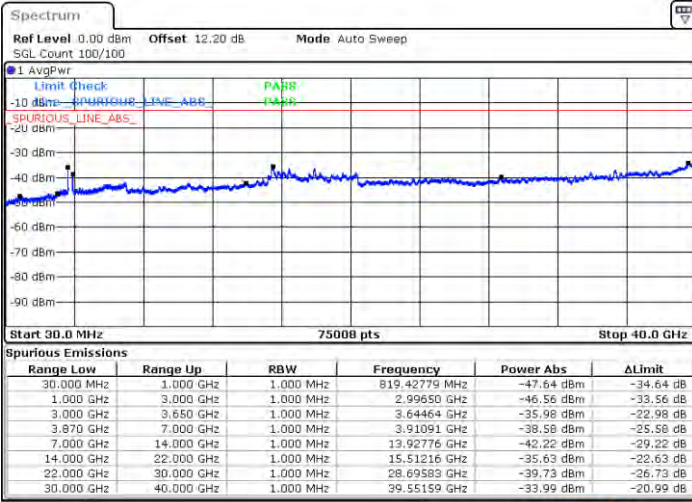
Date: 11.FEB.2021 00:18:35



FR1 n78 / 50MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

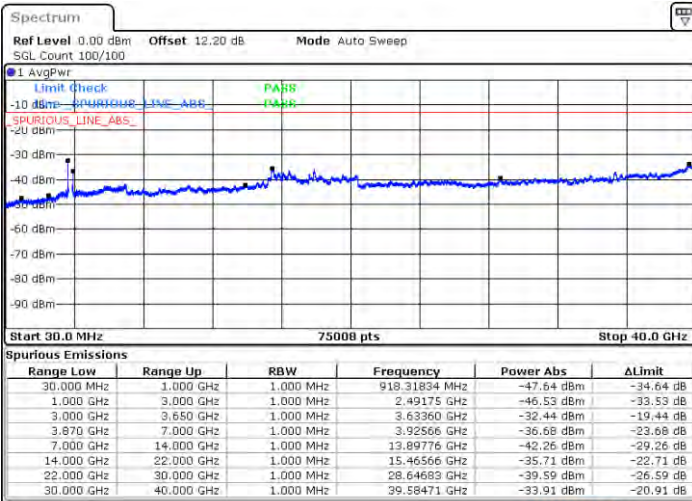
Middle Channel / 1RB



Date: 20.JAN.2021 02:48:18

Date: 20.JAN.2021 02:56:24

Highest Channel / 1RB



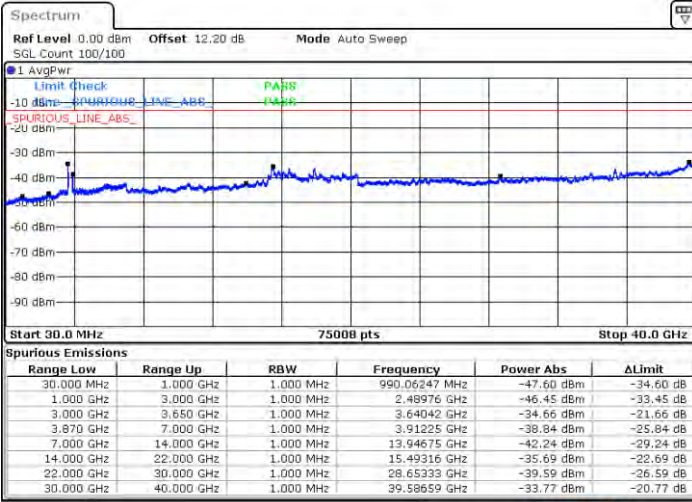
Date: 20.JAN.2021 03:00:11



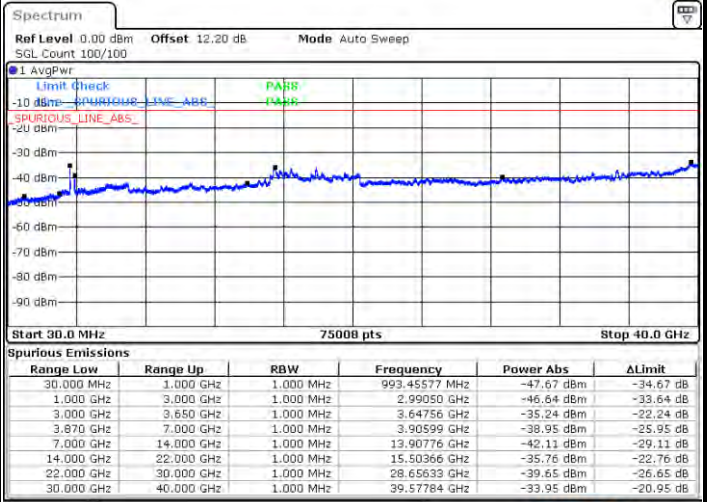
FR1 n78 / 50MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

Middle Channel / 1RB

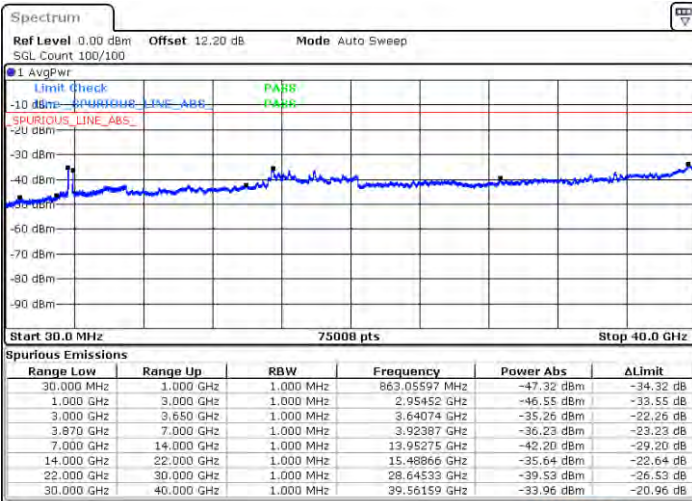


Date: 20.JAN.2021 02:49:34



Date: 20.JAN.2021 02:52:10

Highest Channel / 1RB

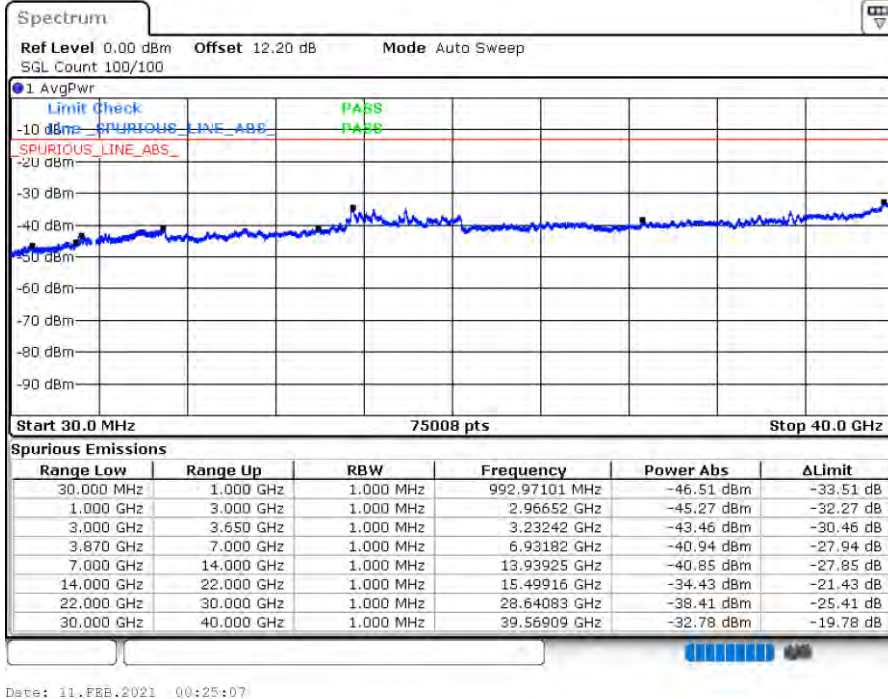


Date: 20.JAN.2021 03:01:30



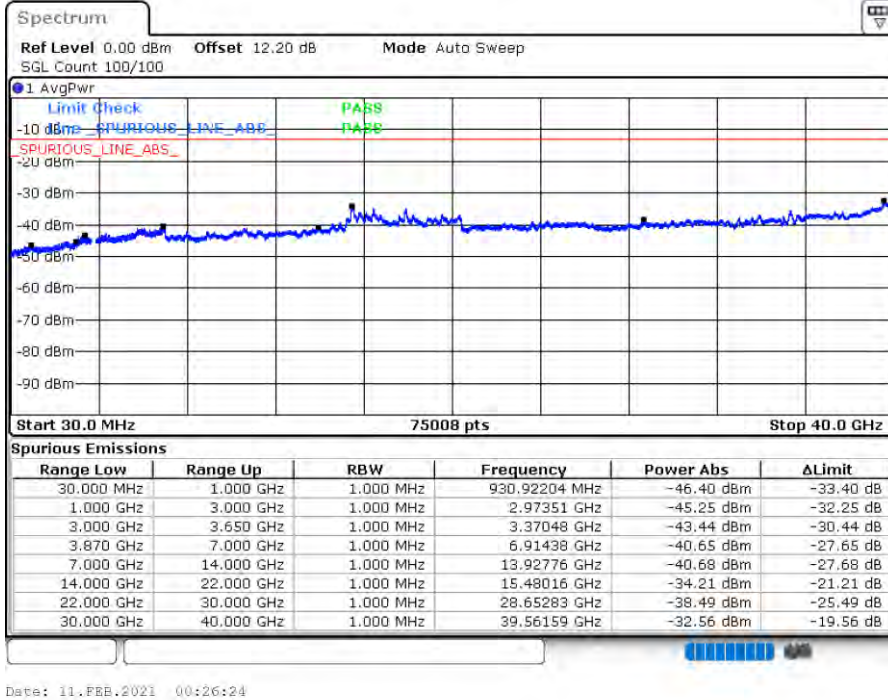
FR1 n78 / 100MHz / DFT-S OFDM / BPSK

Middle Channel / 1RB



FR1 n78 / 100MHz / DFT-S OFDM / QPSK

Middle Channel / 1RB





Frequency Stability

Test Conditions		NR n78 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Within Band
		Deviation (ppm)	Result
50	Normal Voltage	0.0018	PASS
40	Normal Voltage	0.0022	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0013	
10	Normal Voltage	0.0035	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0019	
-20	Normal Voltage	0.0025	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0019	
20	Normal Voltage	0.0013	
20	Battery End Point	0.0018	

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 n78 UL\_MIMO HPUE -SCS 15K

#### Peak-to-Average Ratio

Mode	FR1 UL-MIMO n78 / 20MHz / CP-OFDM (M2)				
Mod.	QPSK	QPSK			Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.58	8.46			PASS
Middle CH	6.58	8.38			
Highest CH	6.52	8.38			

Mode	FR1 UL-MIMO n78 / 20MHz / CP-OFDM (M)				
Mod.	QPSK	QPSK			Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.36	8.32			PASS
Middle CH	7.30	8.26			
Highest CH	7.30	8.09			



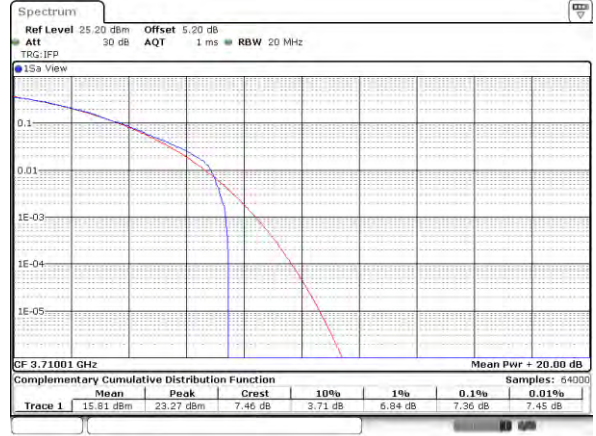
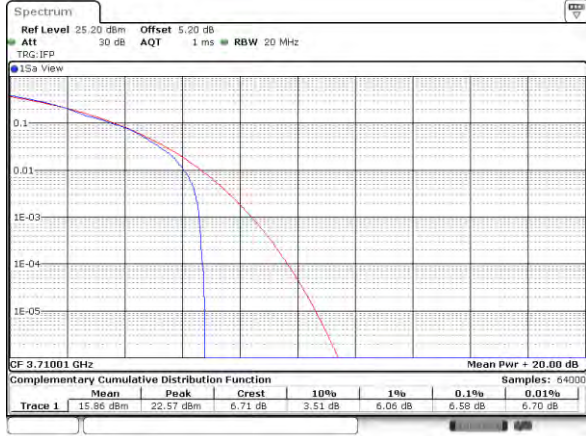
FR1 UL-MIMO n78 / 20MHz / CP-OFDM

QPSK(M2)

QPSK(M)

Lowest Channel / 1RB

Lowest Channel / 1RB

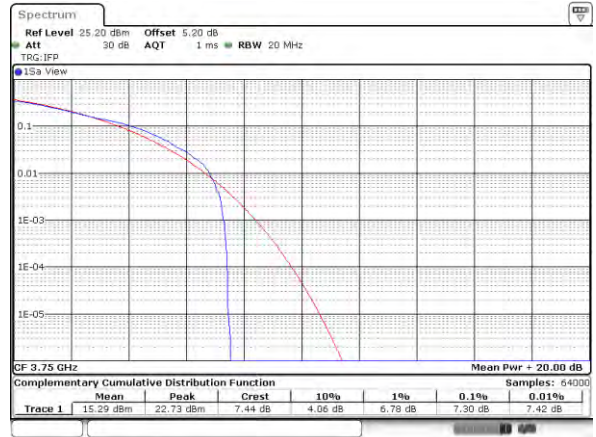
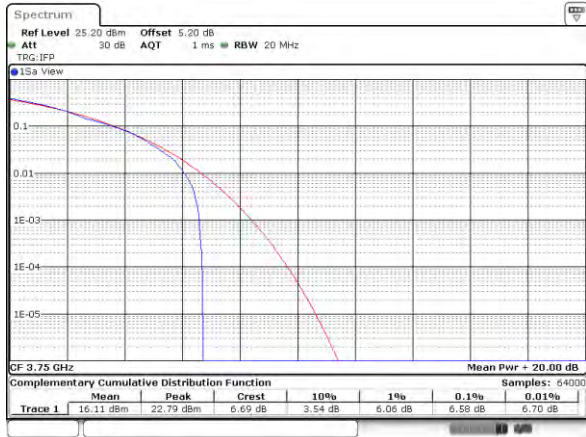


Date: 4/FEB/2021 21:08:17

Date: 3/FEB/2021 06:17:49

Middle Channel / 1 RB

Middle Channel / 1 RB

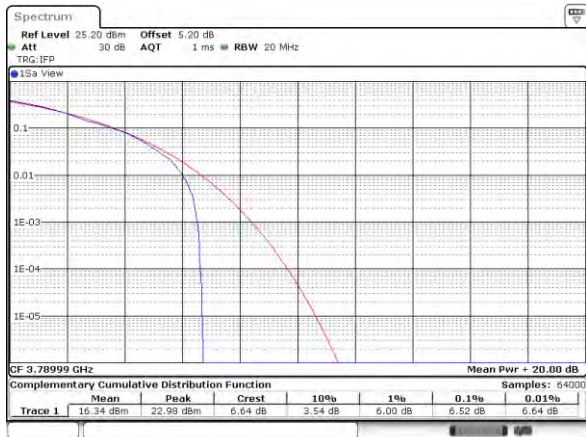


Date: 4/FEB/2021 21:08:17

Date: 3/FEB/2021 06:15:35

Highest Channel / 1 RB

Highest Channel / 1 RB



Date: 4/FEB/2021 21:09:05

Date: 3/FEB/2021 06:41:55



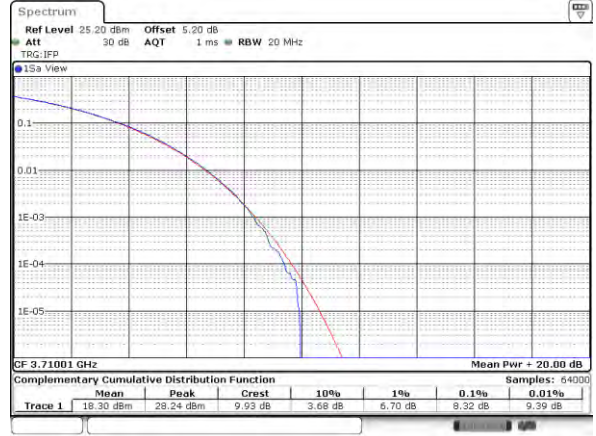
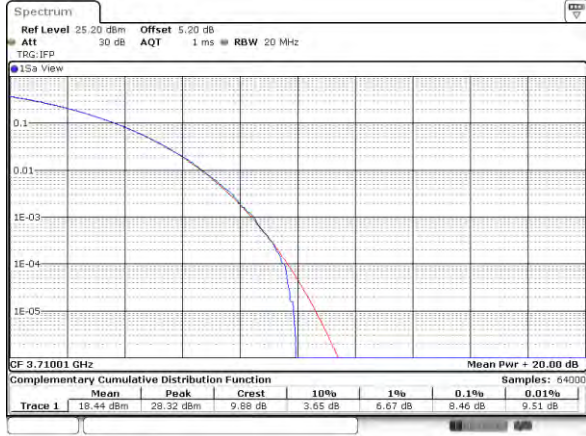
FR1 UL-MIMO n78 / 20MHz / CP-OFDM

QPSK(M2)

QPSK(M)

Lowest Channel / Full RB

Lowest Channel / Full RB



Date: 4/FEB/2021 21:13:38

Date: 3/FEB/2021 06:37:03

Middle Channel / Full RB

Middle Channel / Full RB

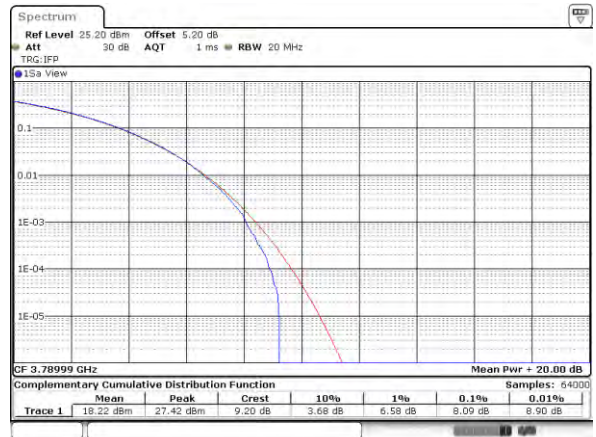
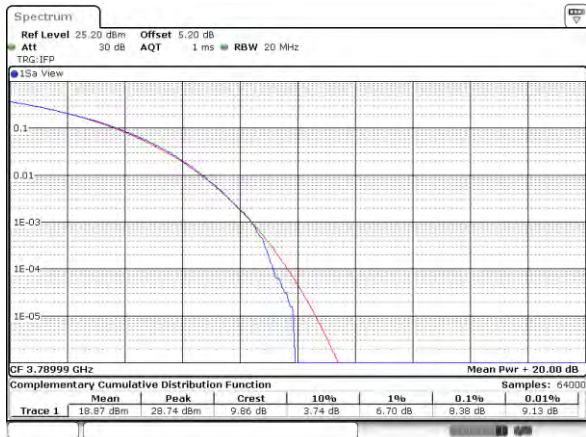


Date: 4/FEB/2021 21:08:21

Date: 3/FEB/2021 06:13:32

Highest Channel / Full RB

Highest Channel / Full RB



Date: 4/FEB/2021 21:48:40

Date: 3/FEB/2021 06:42:50



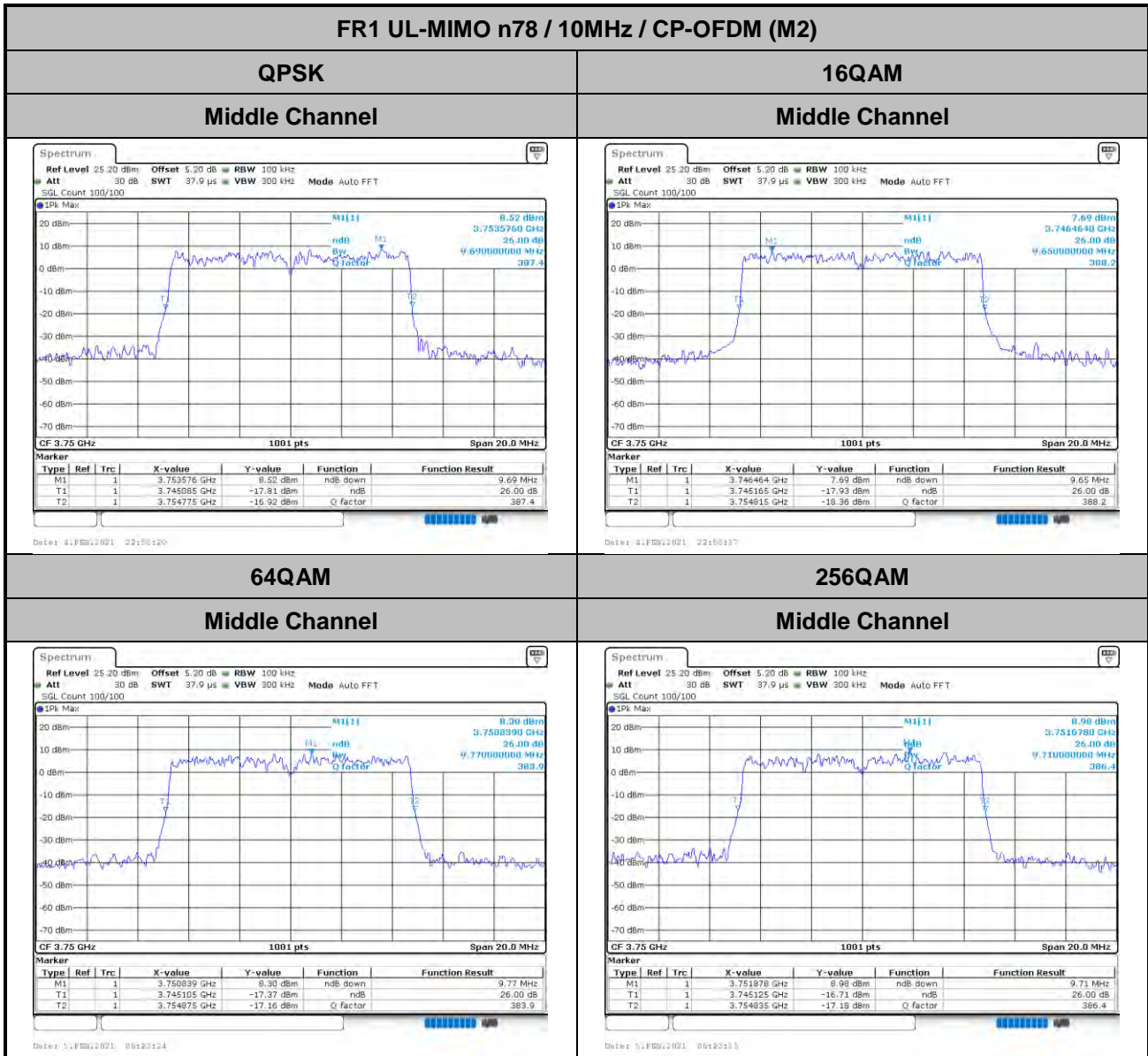


**26dB Bandwidth**

Mode	FR1 UL-MIMO n78 : 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	9.69	9.65	9.77	9.69	9.71	9.67	9.75	9.75

Mode	FR1 UL-MIMO n78 : 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	14.83	14.86	14.83	14.83	14.92	14.83	14.80	14.86

Mode	FR1 UL-MIMO n78 : 26dB BW(MHz) / CP-OFDM							
	M2				M			
BW	20MHz	20MHz	20MHz	20MHz	20MHz	20MHz	20MHz	20MHz
Mod.	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
Middle CH	19.66	19.7	19.74	19.94	19.74	19.7	19.94	19.7





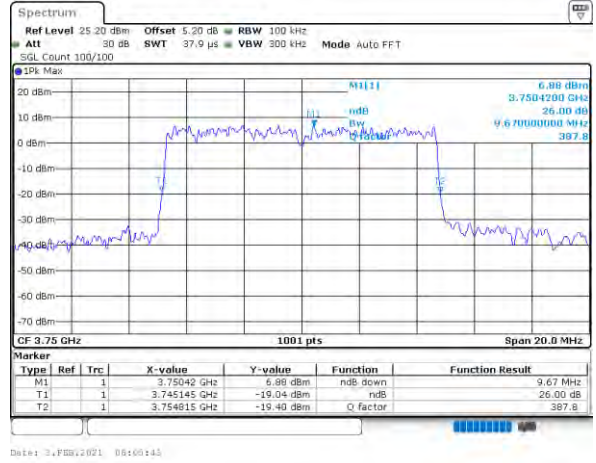
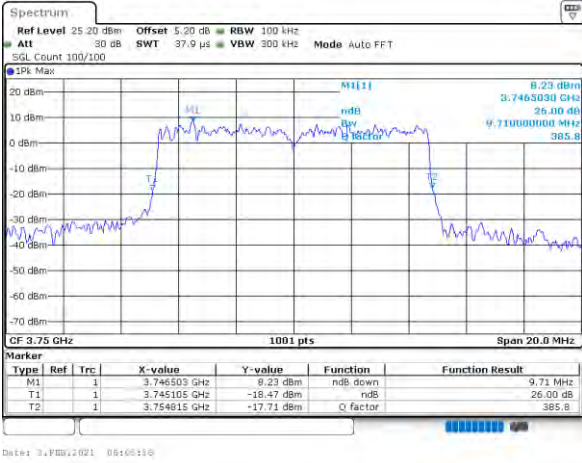
FR1 UL-MIMO n78 / 10MHz / CP-OFDM (M)

QPSK

16QAM

Middle Channel

Middle Channel

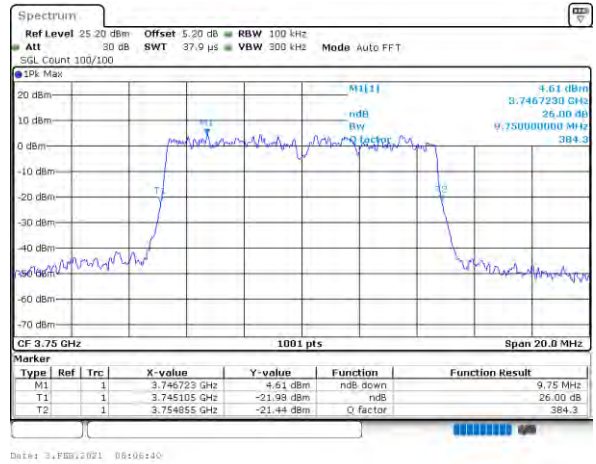
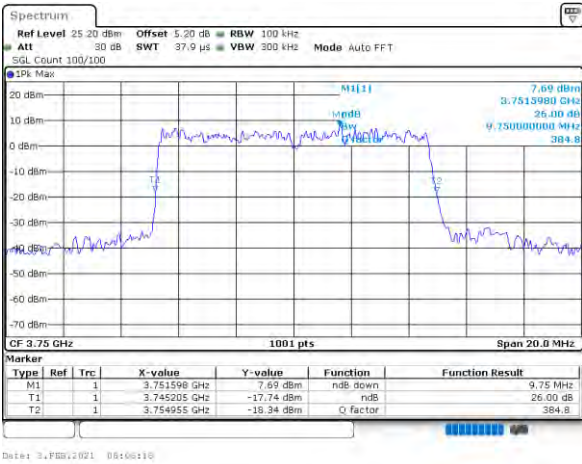


64QAM

256QAM

Middle Channel

Middle Channel





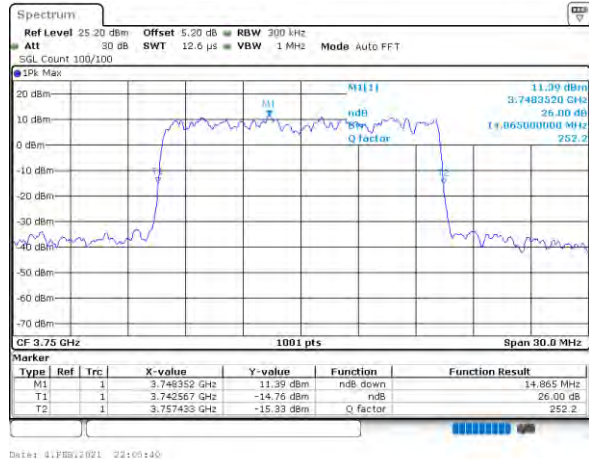
FR1 UL-MIMO n78 / 15MHz / CP-OFDM (M2)

QPSK

16QAM

Middle Channel

Middle Channel



64QAM

256QAM

Middle Channel

Middle Channel

