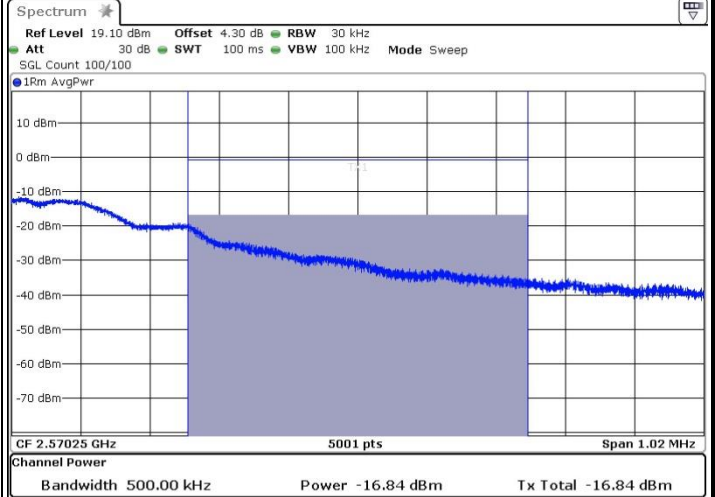
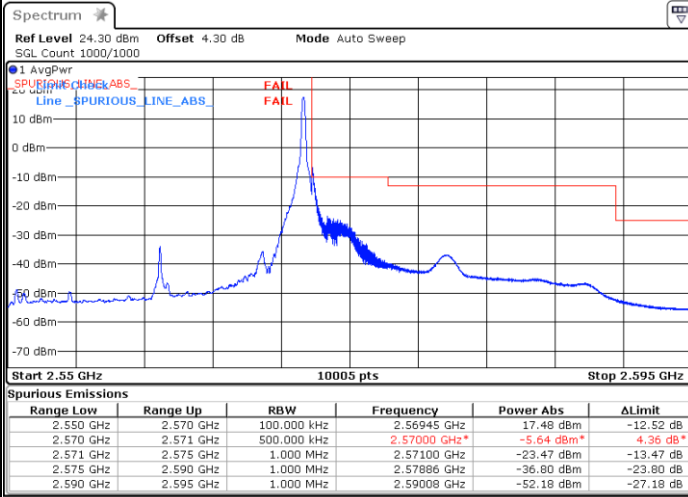




FR1 n7 / 20MHz / DFT-S OFDM QPSK

Highest Band Edge / 1 RB

Channel Power < -10dBm Pass

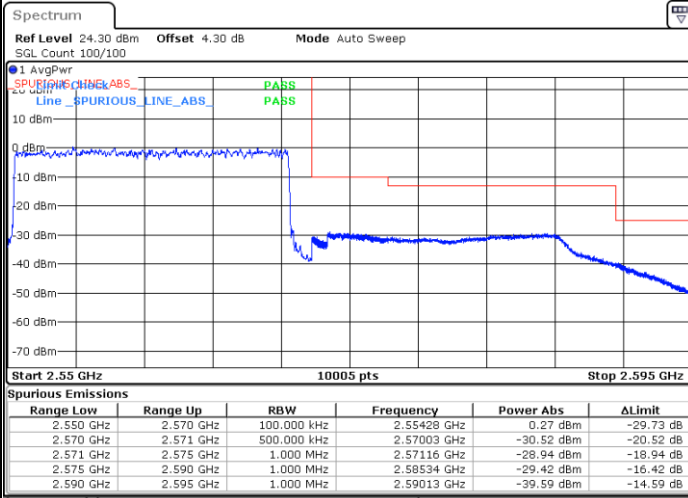


Date: 13.JAN.2021 05:08:15

Date: 13.JAN.2021 05:09:33

Highest Band Edge / Full RB

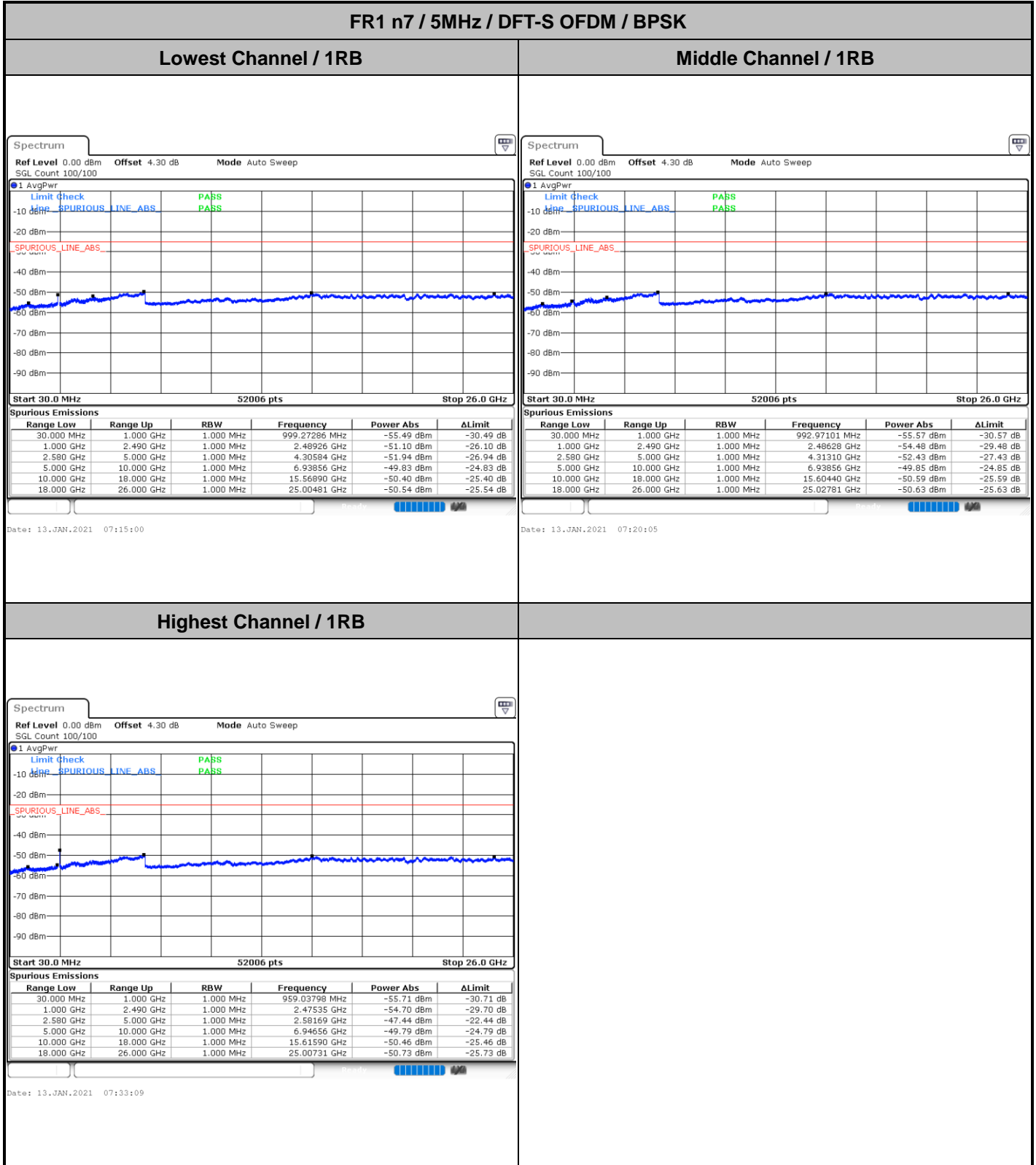
Channel Power < -10dBm Pass



Date: 13.JAN.2021 05:10:45



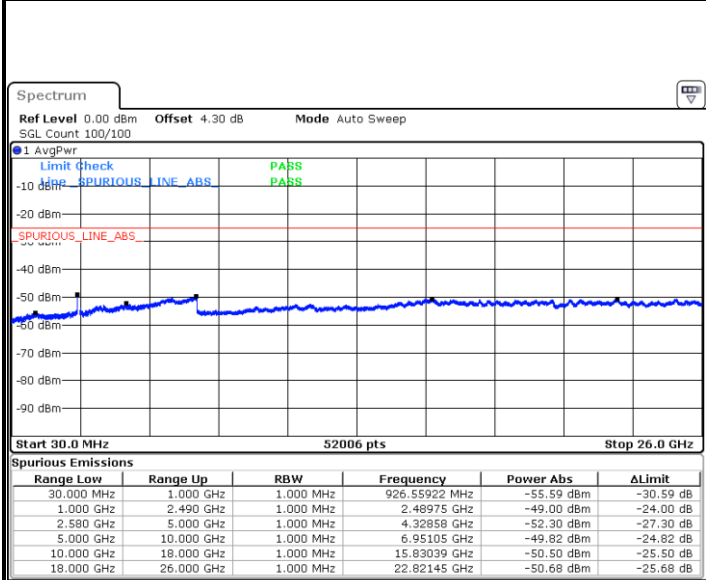
# Conducted Spurious Emission





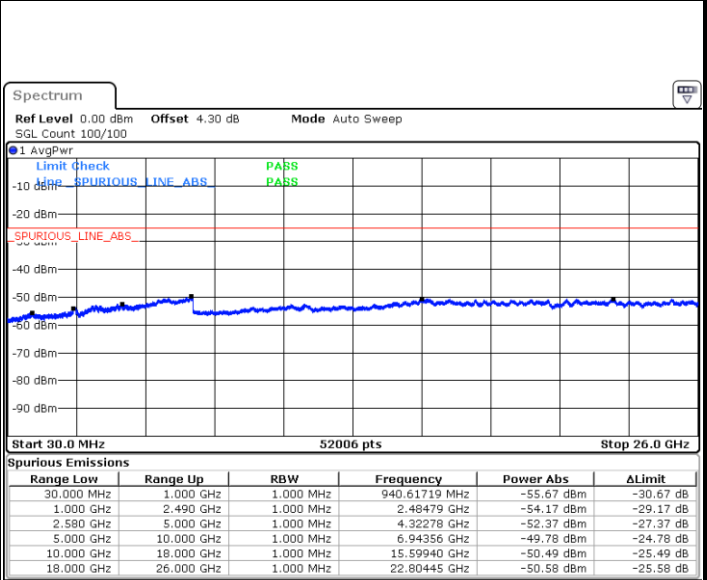
**FR1 n7 / 5MHz / DFT-S OFDM / QPSK**

**Lowest Channel / 1RB**



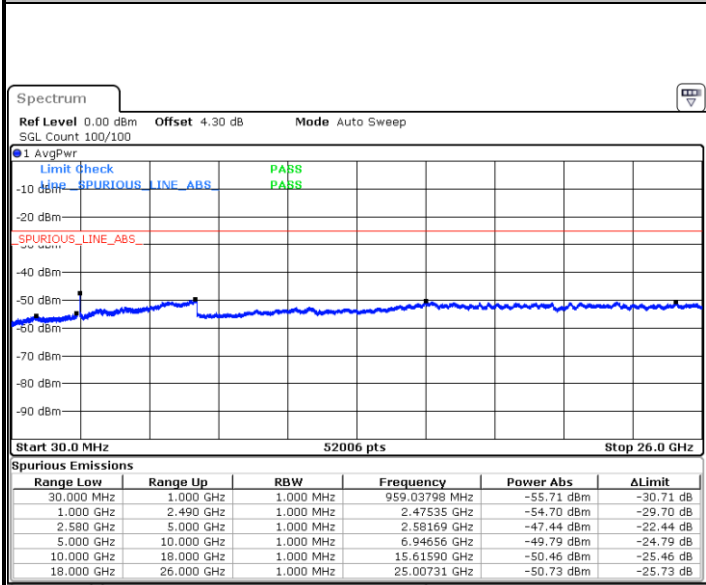
Date: 13.JAN.2021 07:09:50

**Middle Channel / 1RB**



Date: 13.JAN.2021 07:21:21

**Highest Channel / 1RB**

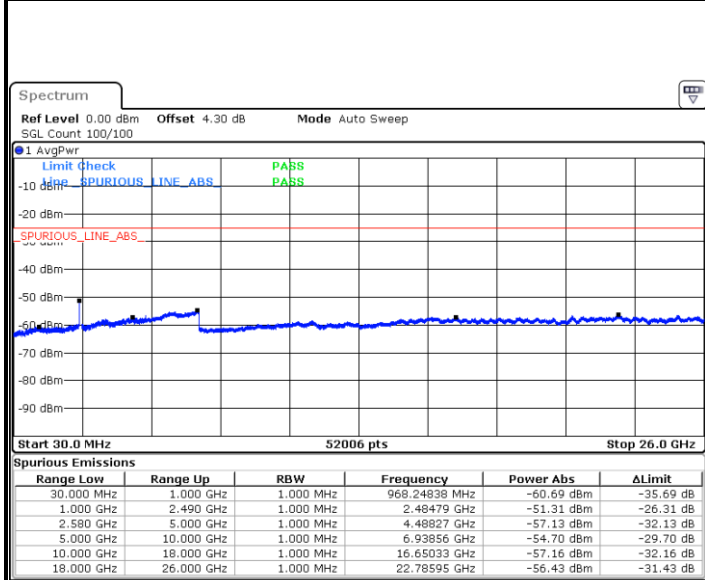


Date: 13.JAN.2021 07:33:09



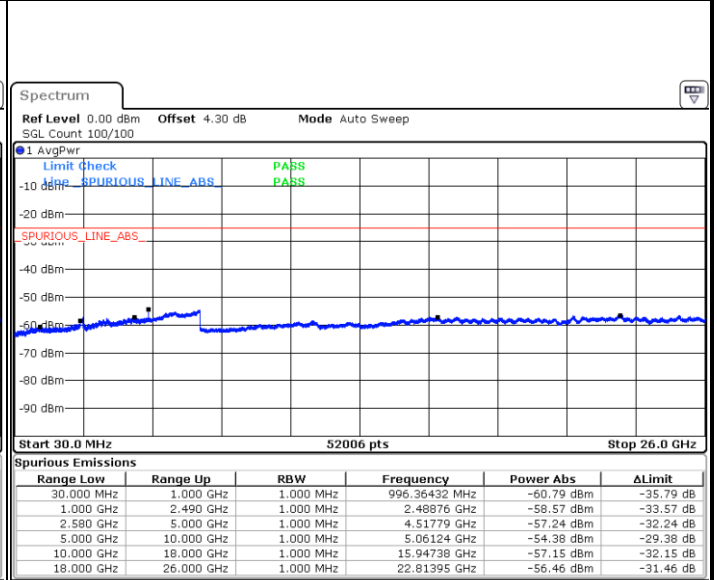
**FR1 n7 / 10MHz / DFT-S OFDM / BPSK**

**Lowest Channel / 1RB**



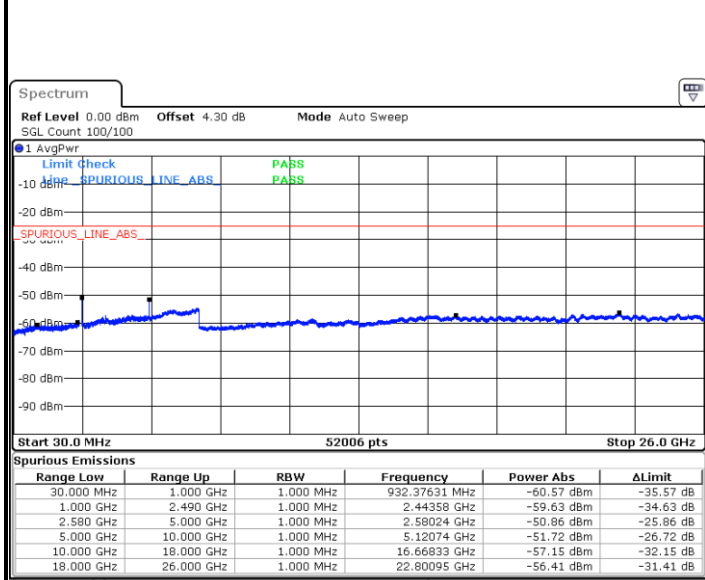
Date: 13.JAN.2021 06:51:15

**Middle Channel / 1RB**



Date: 13.JAN.2021 05:54:31

**Highest Channel / 1RB**



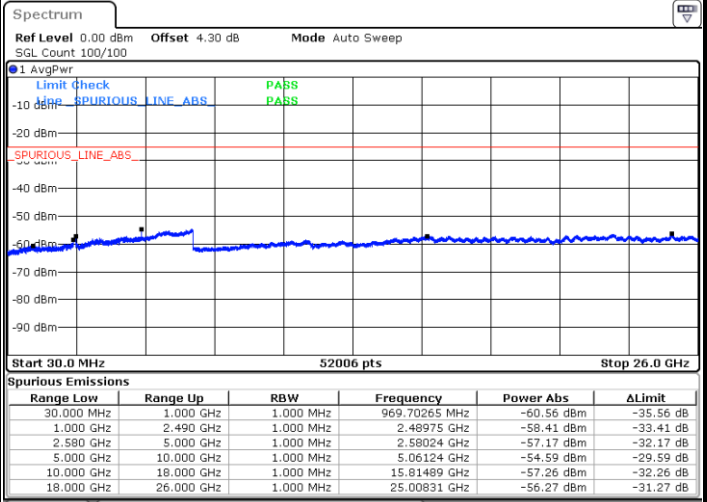
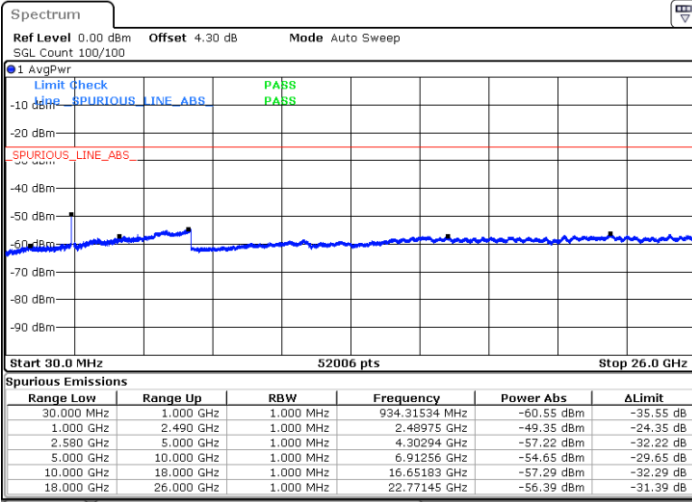
Date: 13.JAN.2021 05:50:05



FR1 n7 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

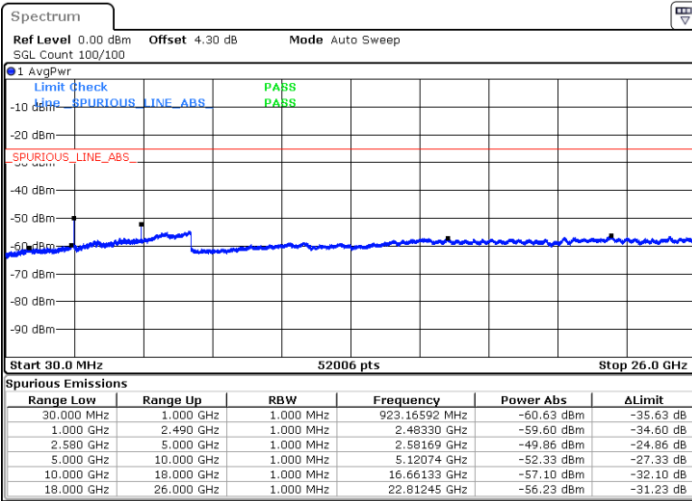
Middle Channel / 1RB



Date: 13.JAN.2021 06:52:27

Date: 13.JAN.2021 05:53:20

Highest Channel / 1RB

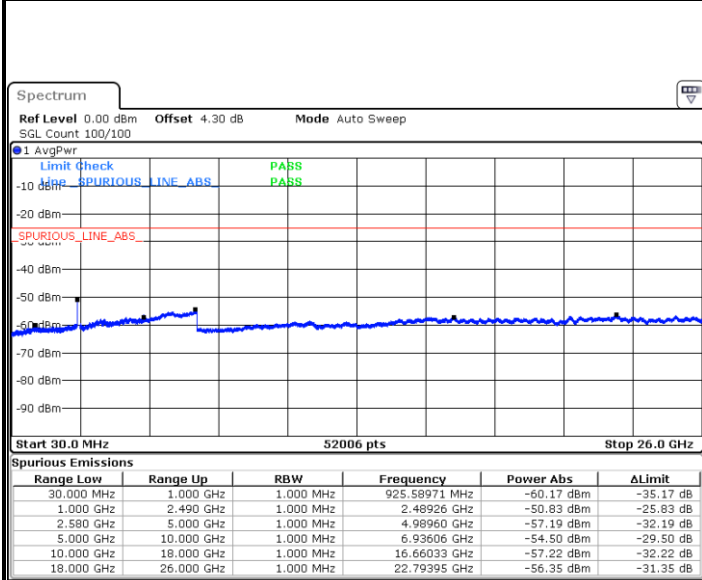


Date: 13.JAN.2021 05:51:07



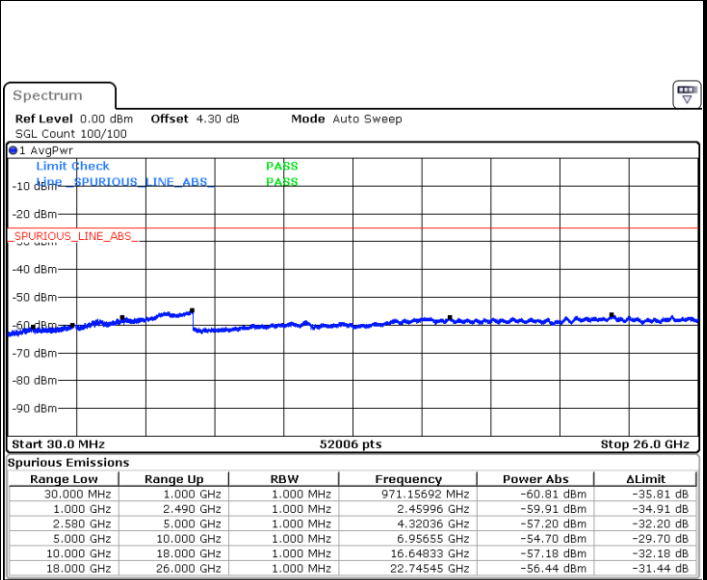
**FR1 n7 / 20MHz / DFT-S OFDM / BPSK**

**Lowest Channel / 1RB**



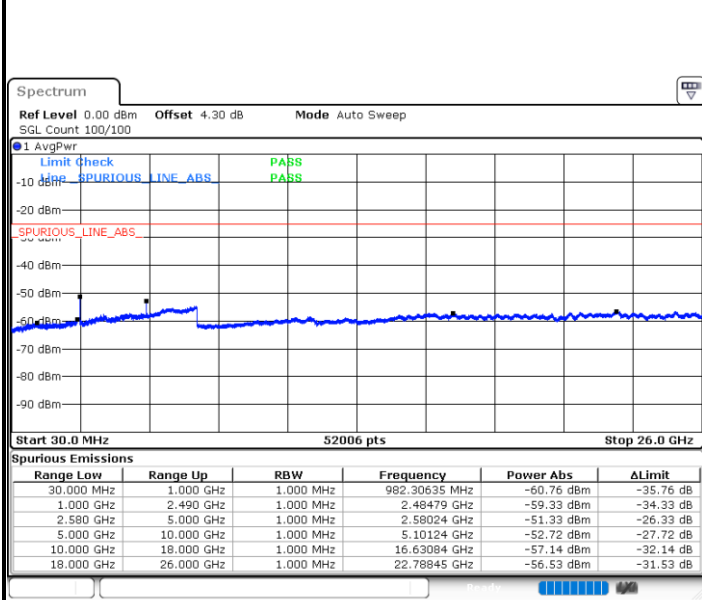
Date: 13.JAN.2021 05:22:26

**Middle Channel / 1RB**



Date: 13.JAN.2021 05:17:33

**Highest Channel / 1RB**

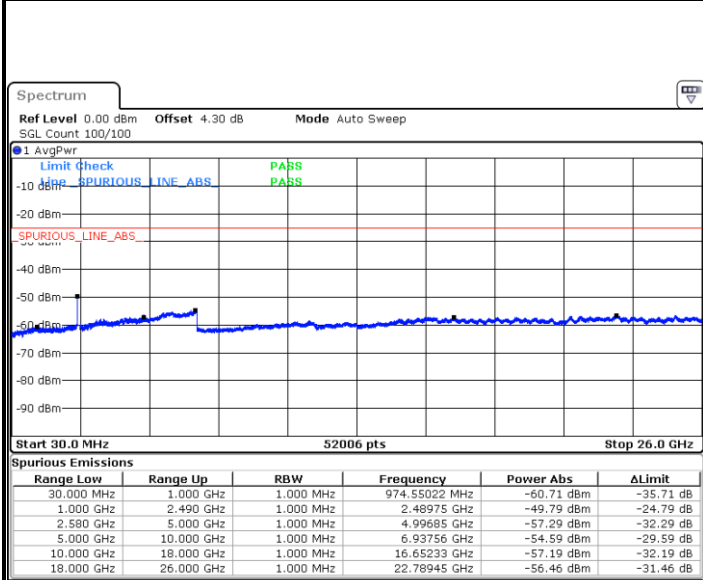


Date: 13.JAN.2021 05:15:08



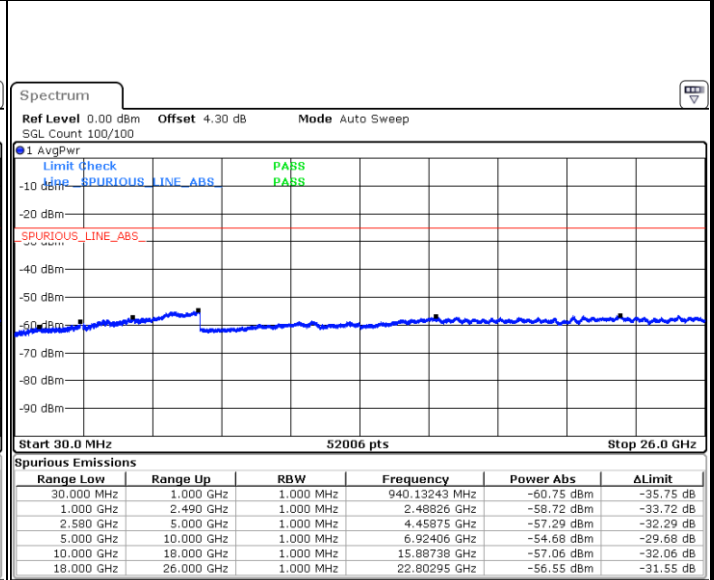
FR1 n7 / 20MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB



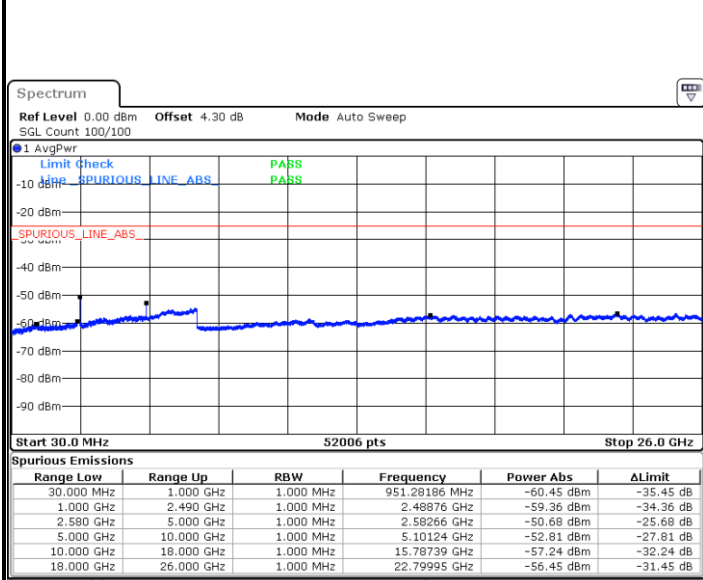
Date: 13.JAN.2021 05:21:20

Middle Channel / 1RB



Date: 13.JAN.2021 05:18:52

Highest Channel / 1RB



Date: 13.JAN.2021 05:14:11



Frequency Stability

Test Conditions		NR n7 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Within Band
		Deviation (ppm)	Result
50	Normal Voltage	0.0022	PASS
40	Normal Voltage	0.0017	
30	Normal Voltage	0.0018	
20(Ref.)	Normal Voltage	0.0013	
10	Normal Voltage	0.0029	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0031	
-20	Normal Voltage	0.0015	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0028	
20	Normal Voltage	0.0013	
20	Battery End Point	0.0011	

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 n38 SA-SCS 15K

## Peak-to-Average Ratio

Mode	FR1 n38 / 20MHz / 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	2.96	4.00	4.29	5.42	<b>PASS</b>
Middle CH	2.81	4.03	4.14	5.51	
Highest CH	4.00	4.09	4.75	5.57	



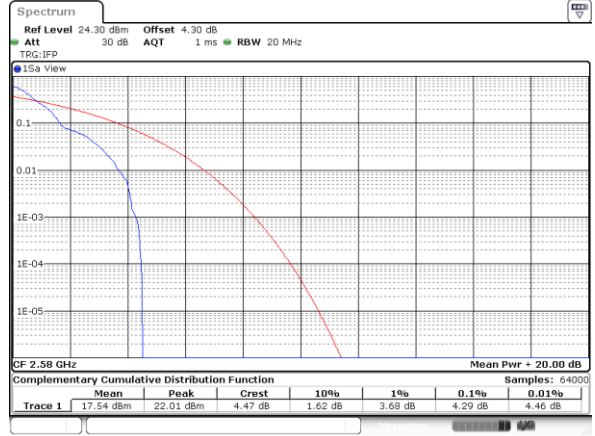
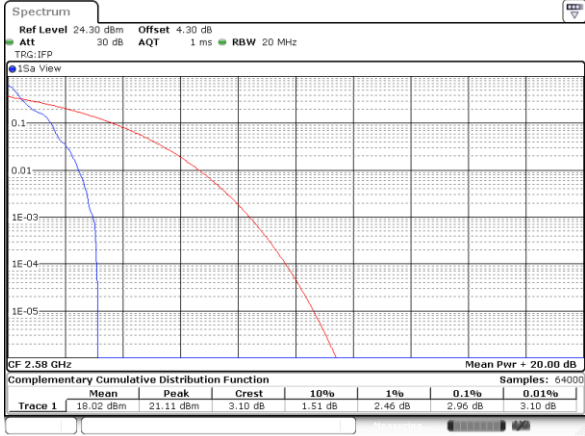
FR1 n38 / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

Lowest Channel / 1RB

Lowest Channel / 1RB

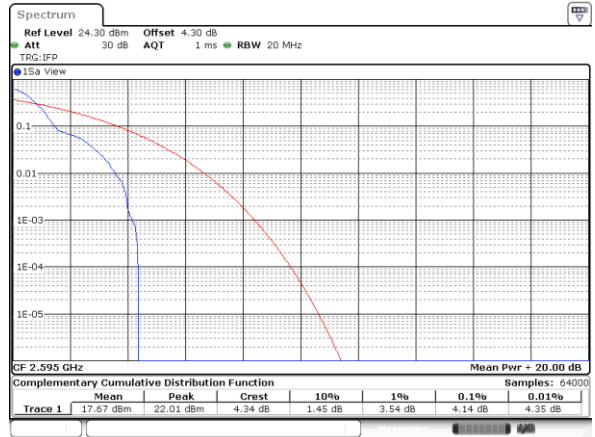
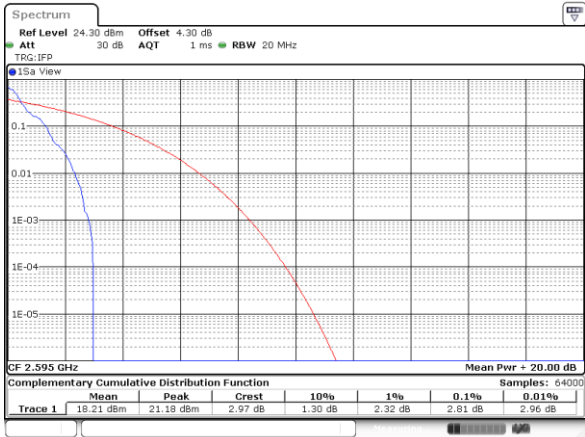


Date: 21\_JAN\_2021 05:59:23

Date: 21\_JAN\_2021 05:59:44

Middle Channel / 1 RB

Middle Channel / 1 RB

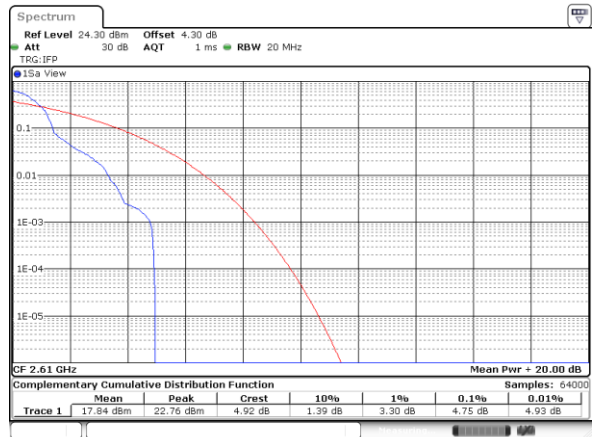
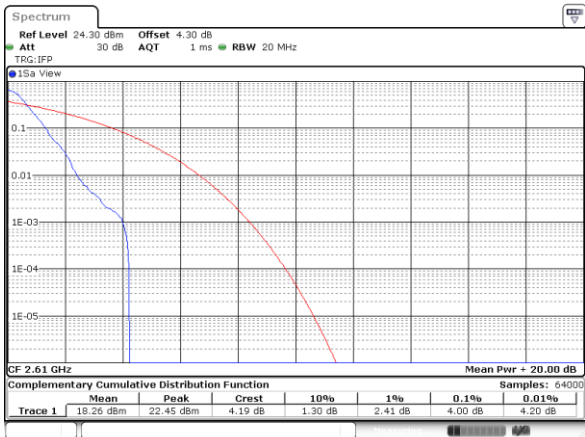


Date: 21\_JAN\_2021 05:38:59

Date: 21\_JAN\_2021 05:39:48

Highest Channel / 1 RB

Highest Channel / 1 RB



Date: 21\_JAN\_2021 06:03:53

Date: 21\_JAN\_2021 06:03:33



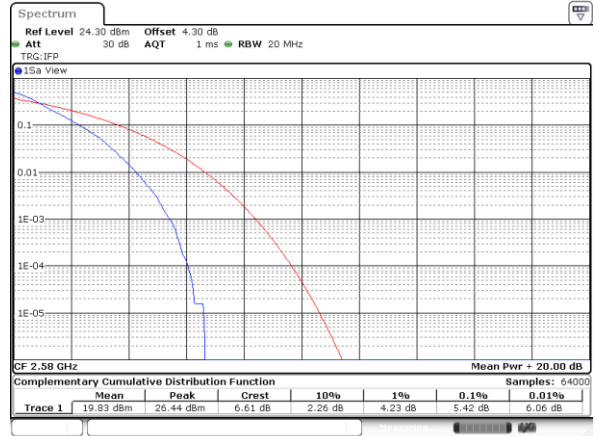
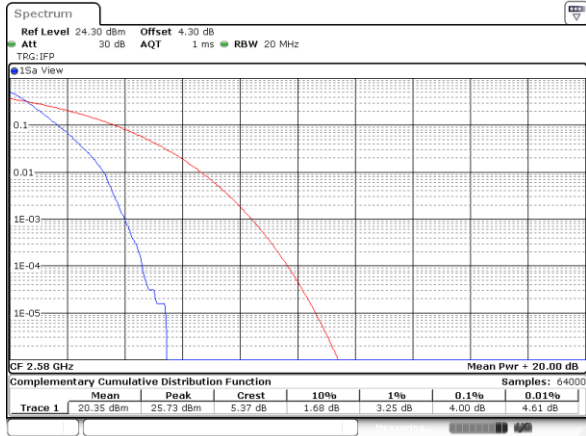
FR1 n38 / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

Lowest Channel / Full RB

Lowest Channel / Full RB

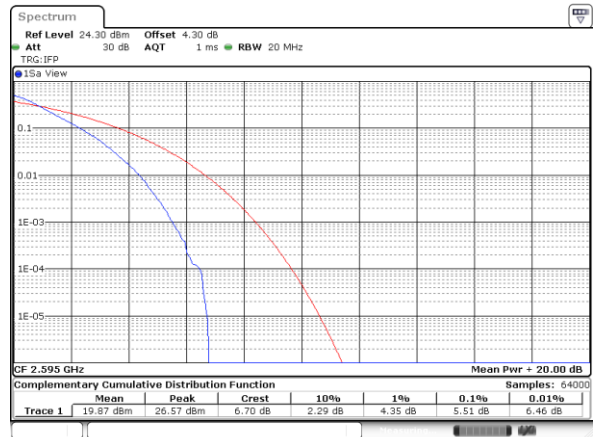
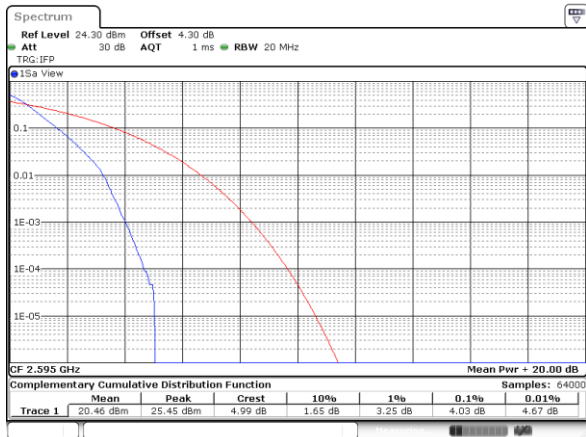


Date: 21.JAN.2021 06:01:08

Date: 21.JAN.2021 06:00:31

Middle Channel / Full RB

Middle Channel / Full RB

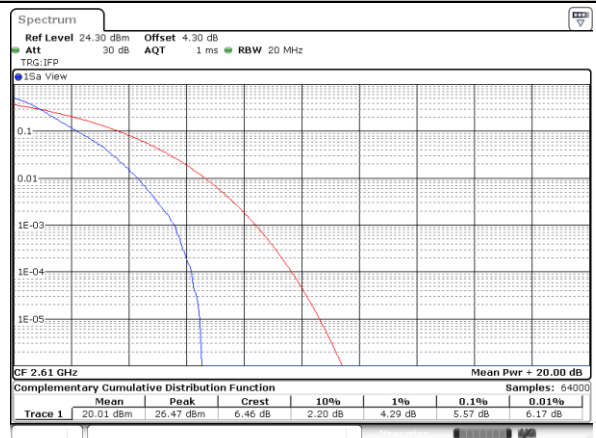
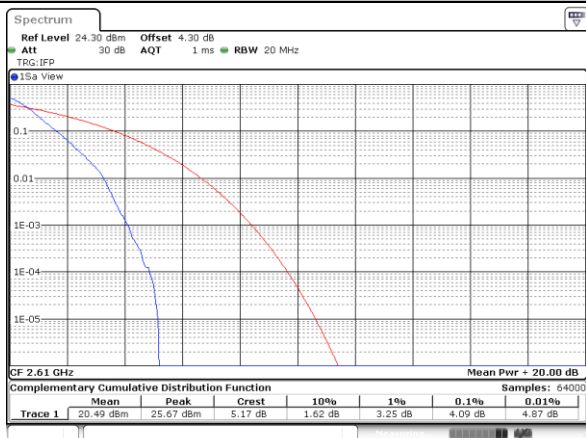


Date: 21.JAN.2021 05:37:59

Date: 21.JAN.2021 05:37:02

Highest Channel / Full RB

Highest Channel / Full RB



Date: 21.JAN.2021 06:02:11

Date: 21.JAN.2021 06:02:45



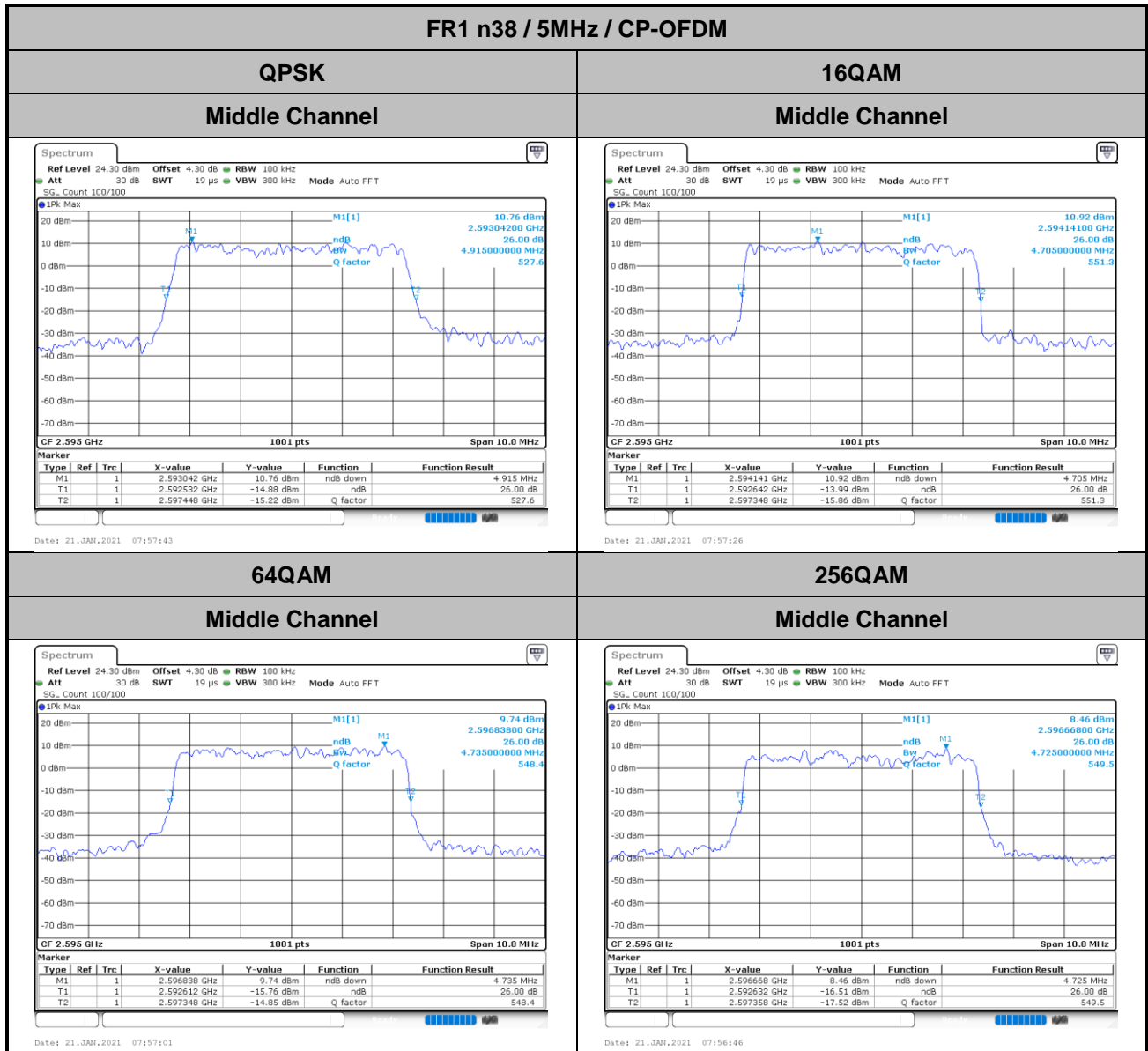
26dB Bandwidth

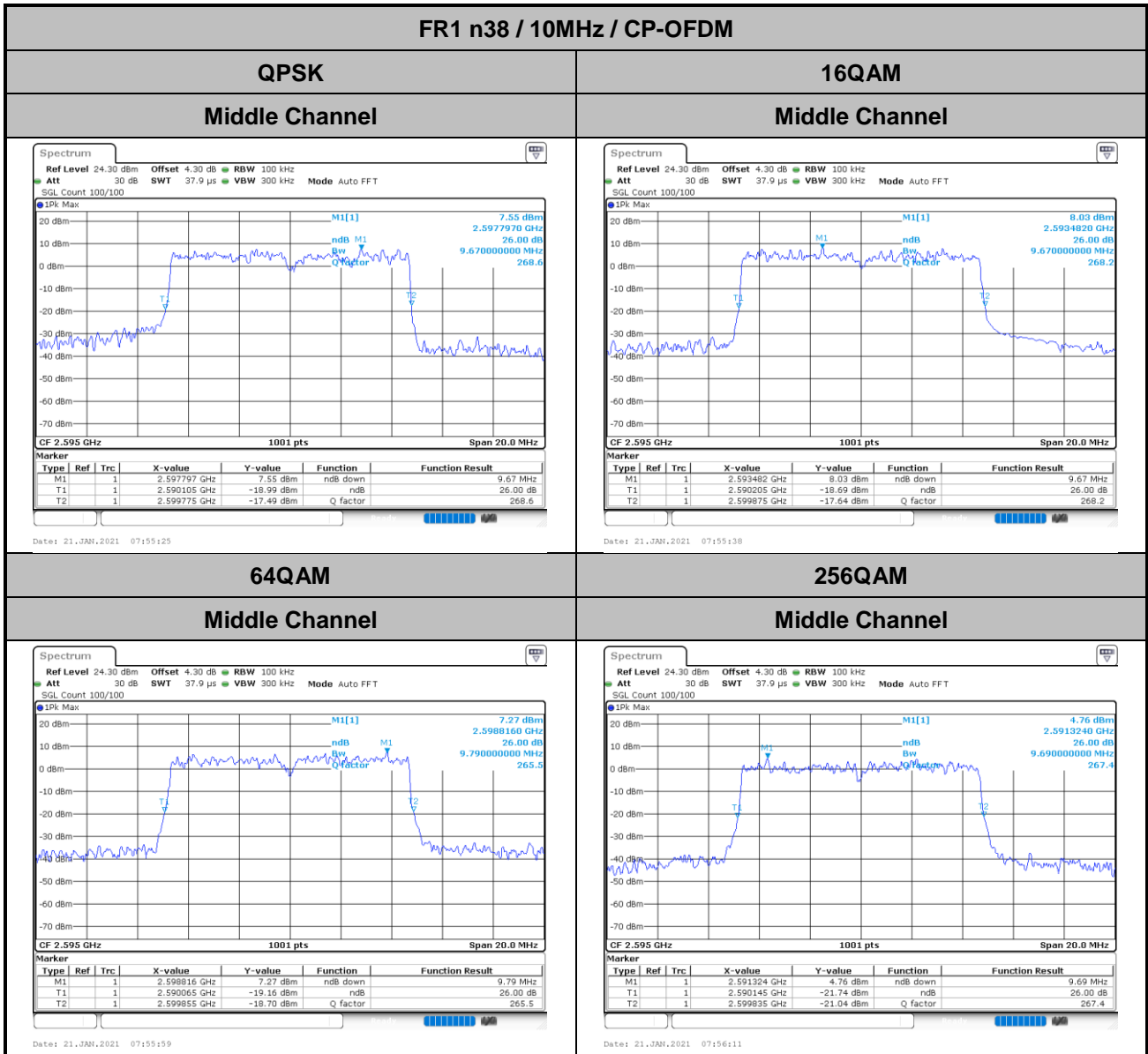
Mode	FR1 n38 : 26dB BW(MHz) / CP-OFDM							
BW	5MHz	5MHz	5MHz	5MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	4.92	4.71	4.74	4.73				

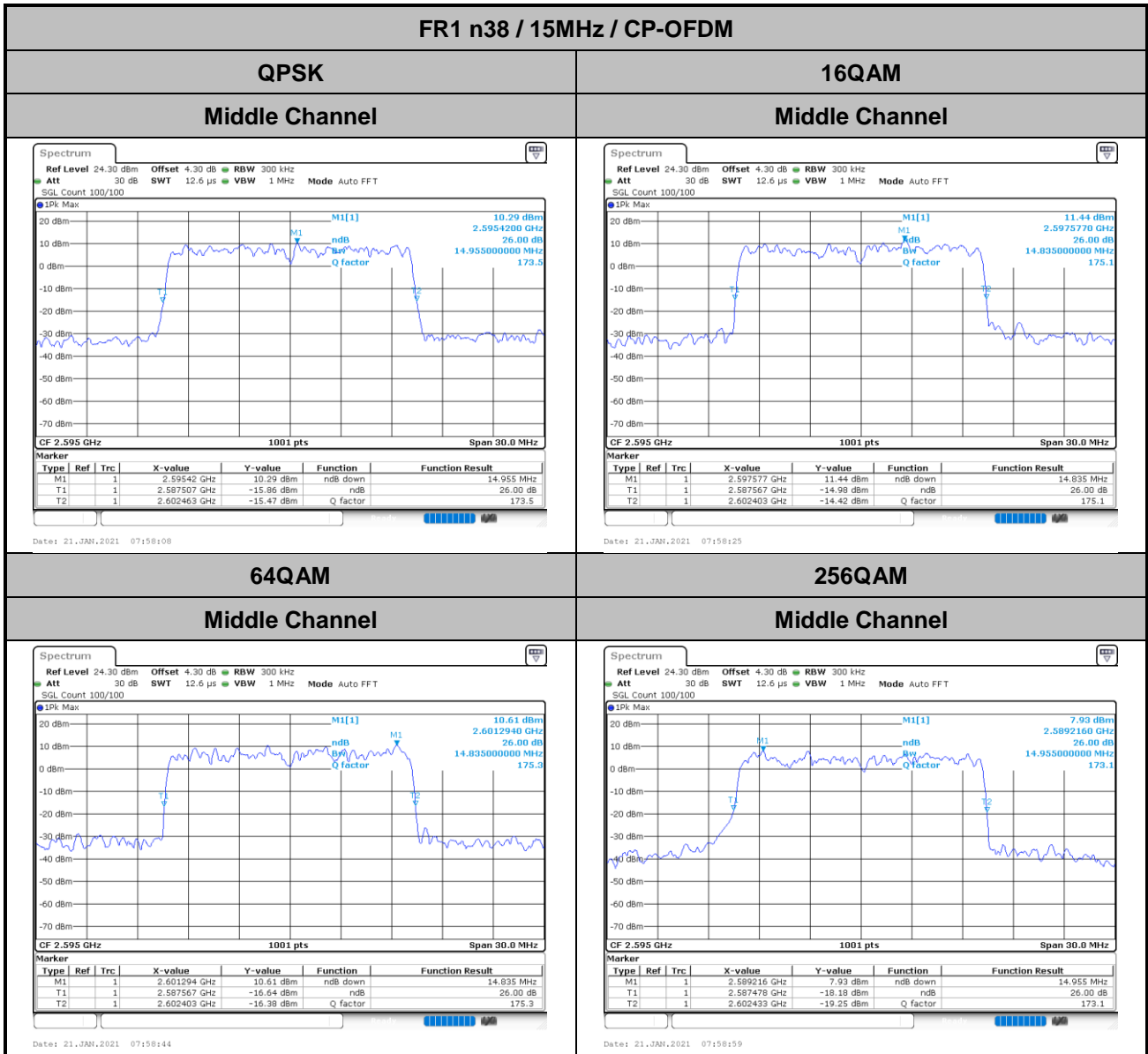
Mode	FR1 n38 : 26dB BW(MHz) / CP-OFDM							
BW	10MHz	10MHz	10MHz	10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	9.67	9.67	9.79	9.69				

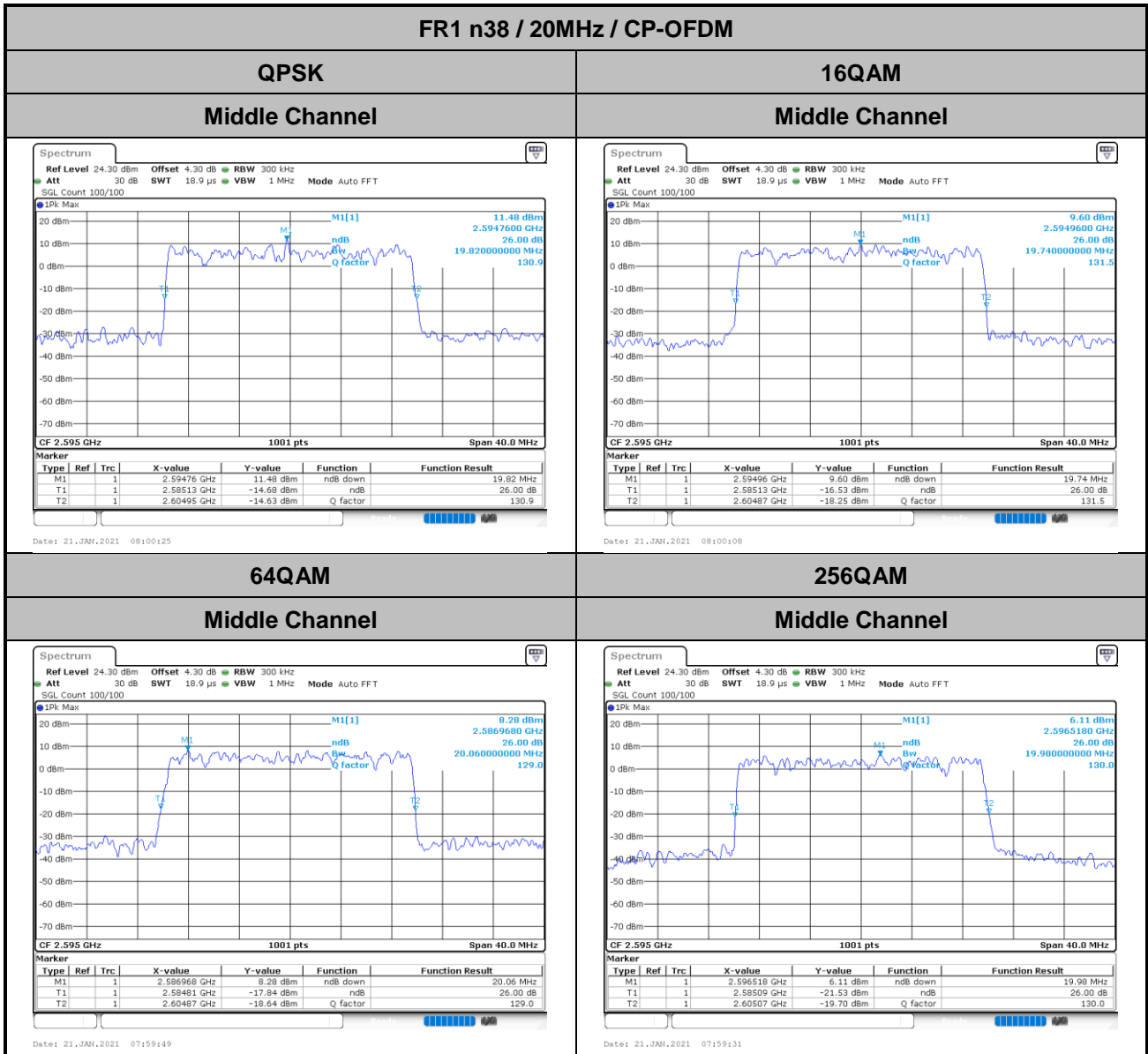
Mode	FR1 n38 : 26dB BW(MHz) / CP-OFDM							
BW	15MHz	15MHz	15MHz	15MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	14.96	14.84	14.84	14.96				

Mode	FR1 n38 : 26dB BW(MHz) / CP-OFDM							
BW	20MHz	20MHz	20MHz	20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	19.82	19.74	20.06	19.98				













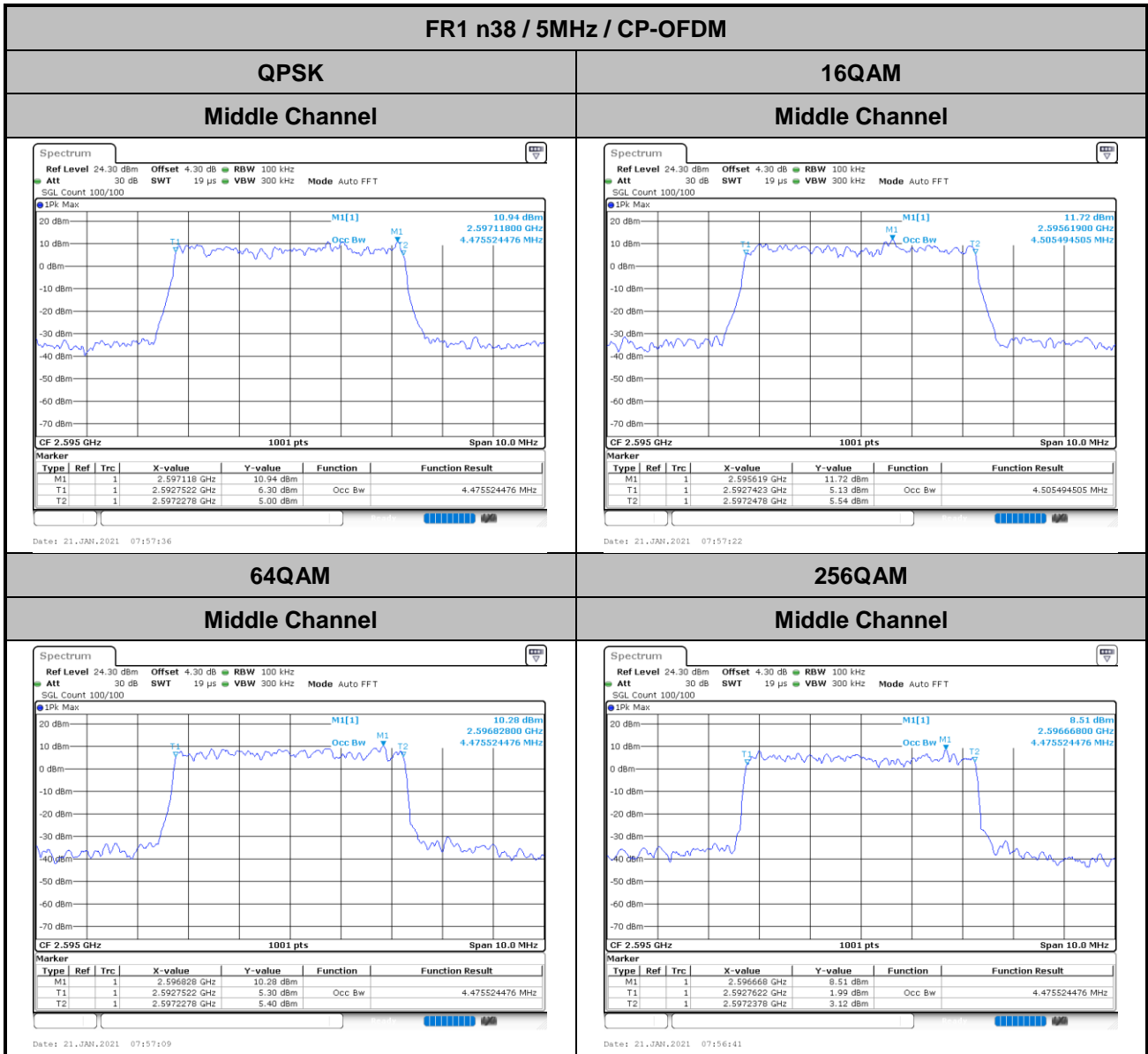
### Occupied Bandwidth

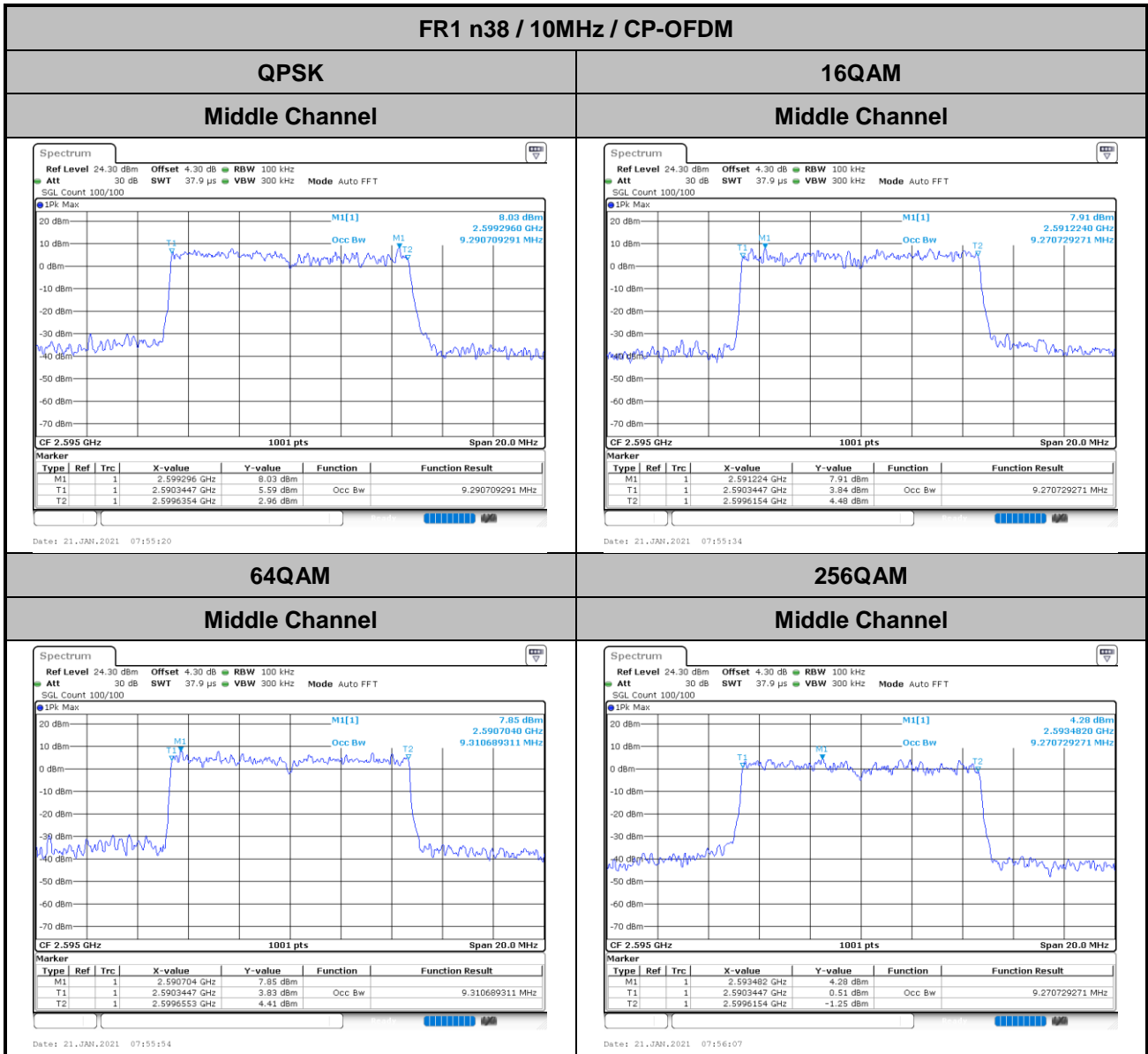
Mode	FR1 n38 : OBW(MHz) / CP-OFDM							
BW	5MHz	5MHz	5MHz	5MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	4.48	4.51	4.48	4.48				

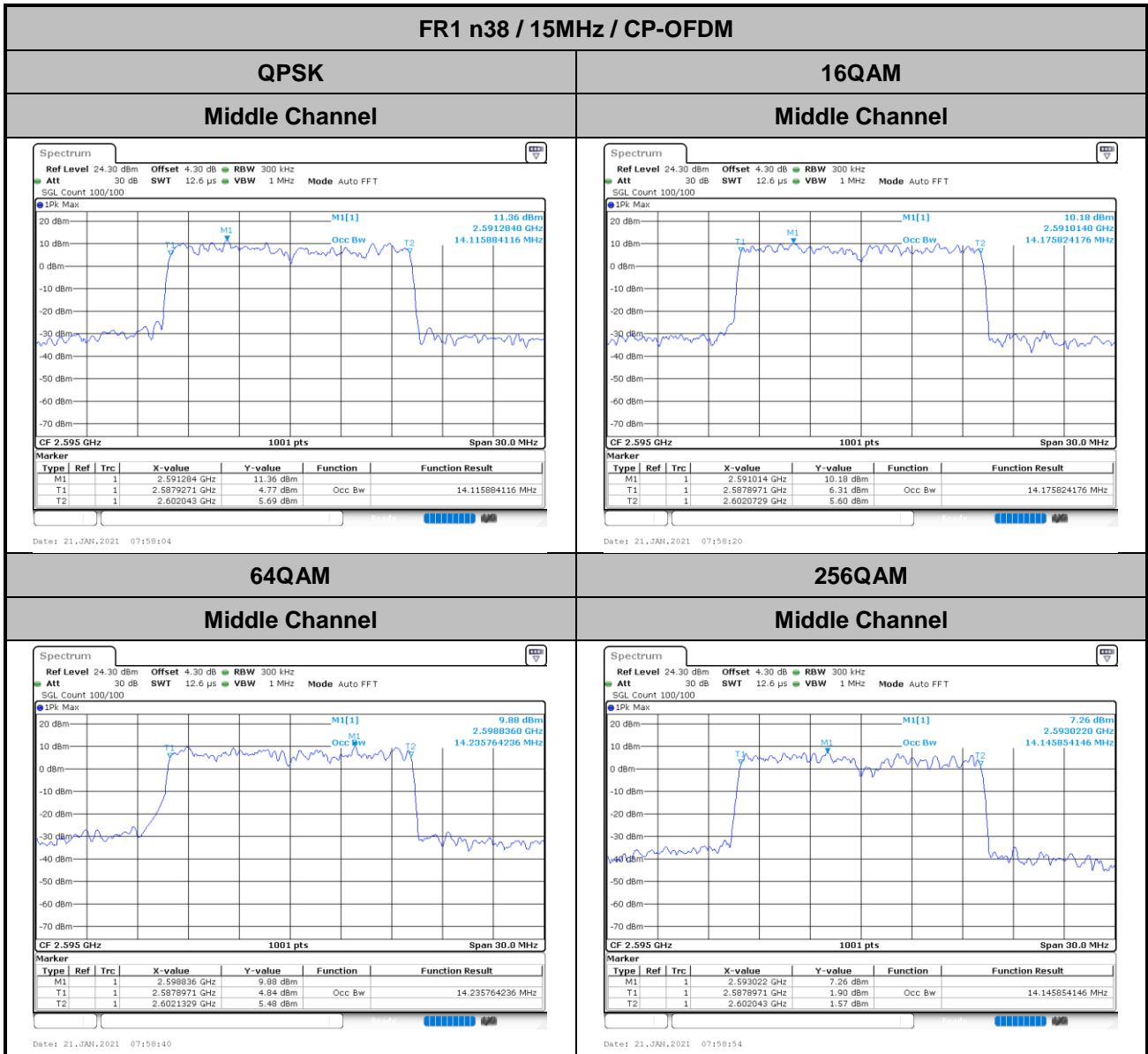
Mode	FR1 n38 : OBW(MHz) / CP-OFDM							
BW	10MHz	10MHz	10MHz	10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	9.29	9.27	9.31	9.27				

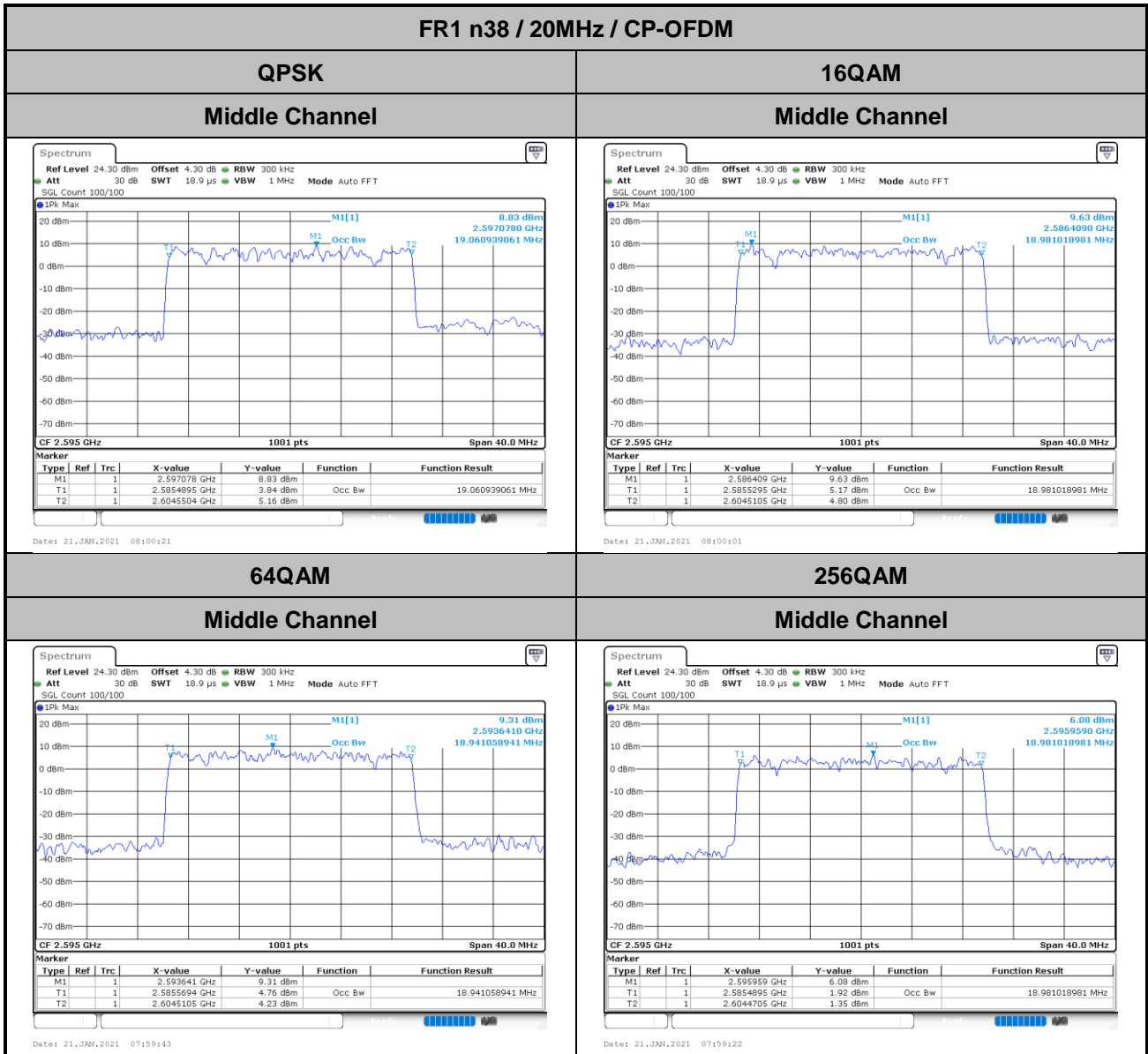
Mode	FR1 n38 : OBW(MHz) / CP-OFDM							
BW	15MHz	15MHz	15MHz	15MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	14.12	14.18	14.24	14.15				

Mode	FR1 n38 : OBW(MHz) / CP-OFDM							
BW	20MHz	20MHz	20MHz	20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	19.06	18.98	18.94	18.98				





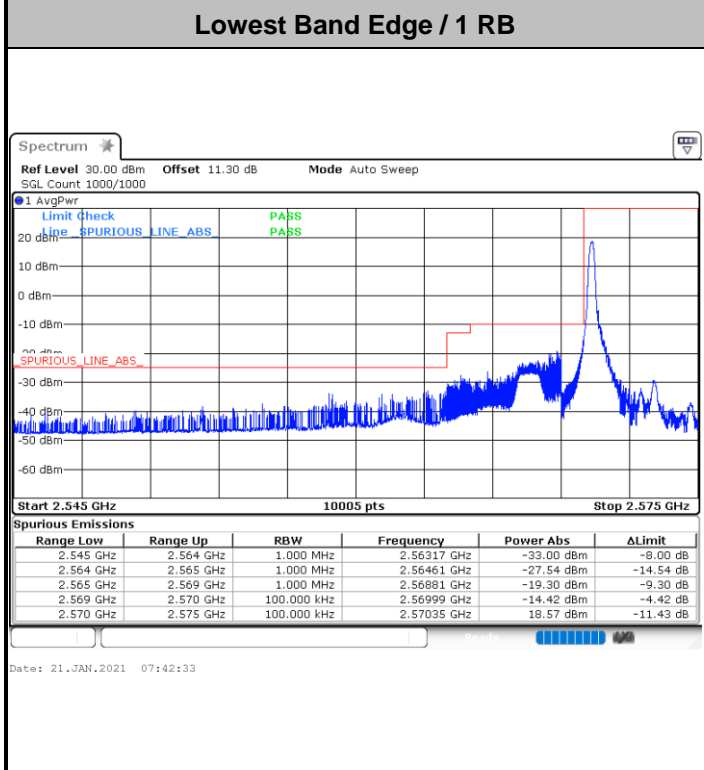




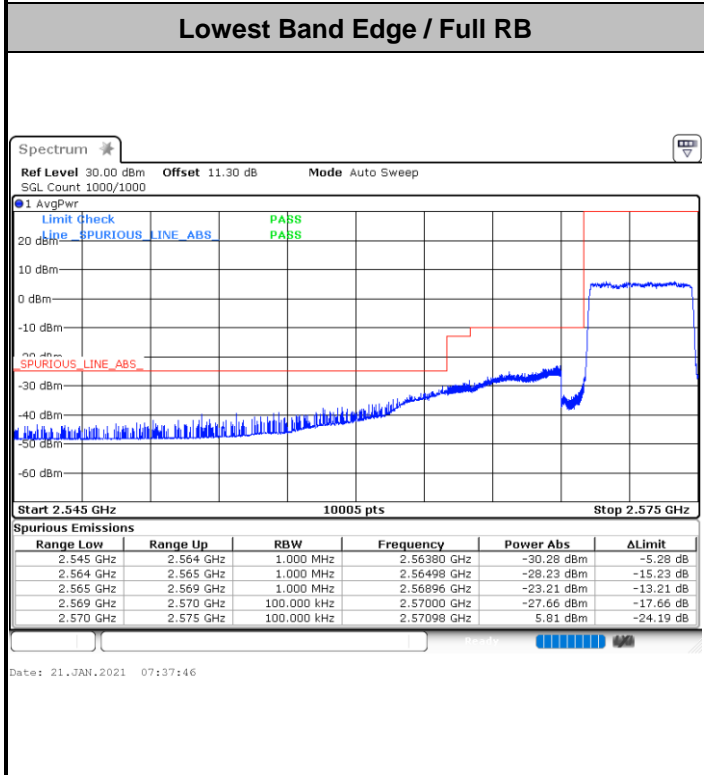


# Conducted Band Edge

## FR1 n38 / 5MHz / DFT-S OFDM BPSK



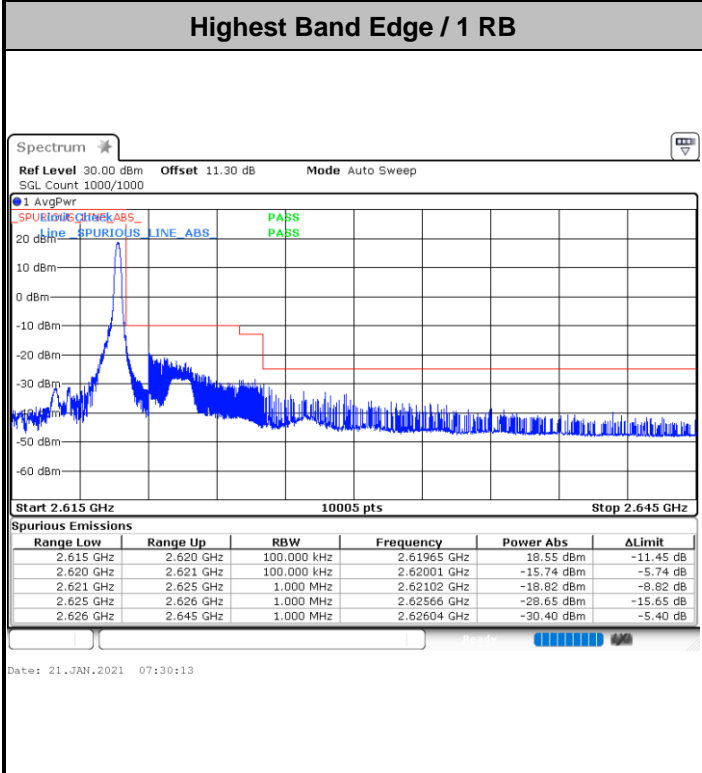
Channel Power < -13dBm Pass



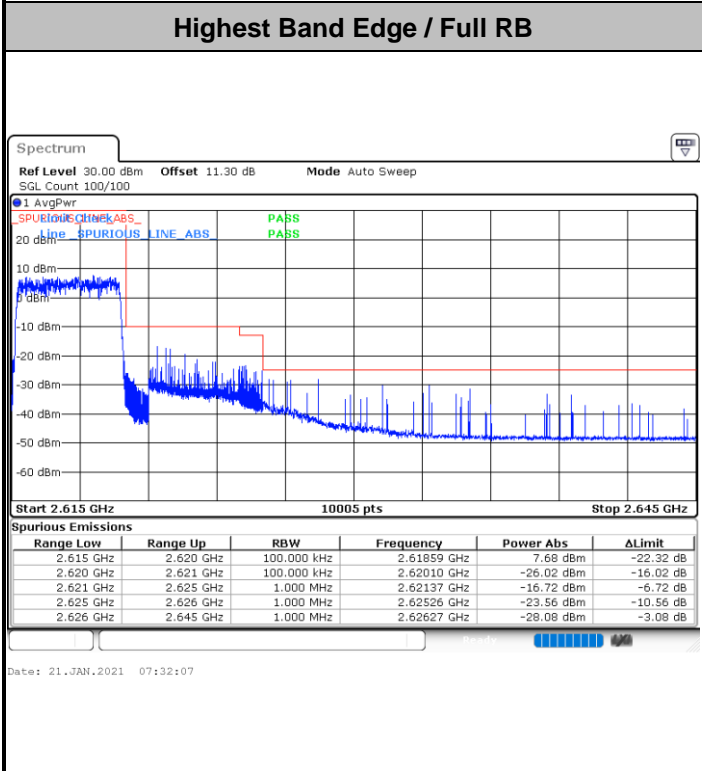
Channel Power < -13dBm Pass



**FR1 n38 / 5MHz / DFT-S OFDM BPSK**



**Channel Power < -13dBm Pass**



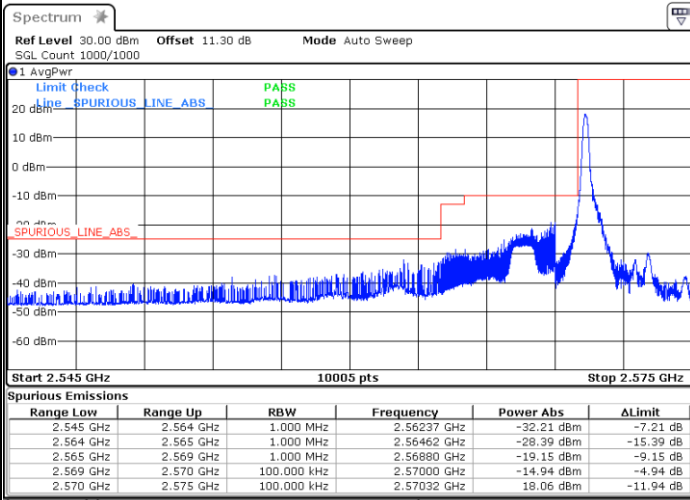
**Channel Power < -13dBm Pass**



FR1 n38 / 5MHz / DFT-S OFDM QPSK

Lowest Band Edge / 1 RB

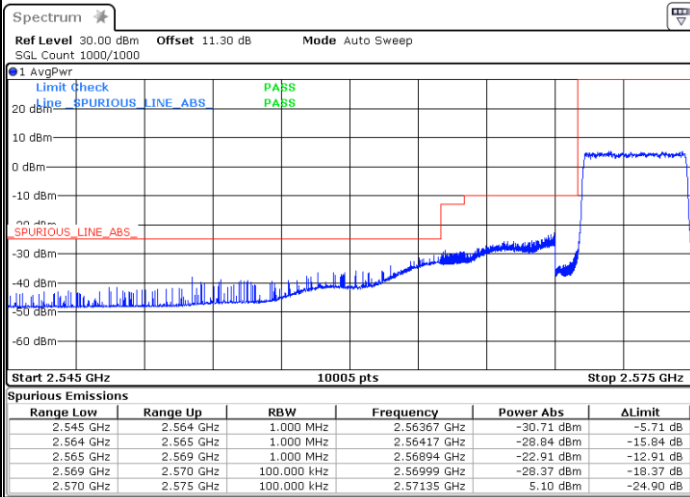
Channel Power < -13dBm Pass



Date: 21.JAN.2021 07:40:55

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



Date: 21.JAN.2021 07:39:37

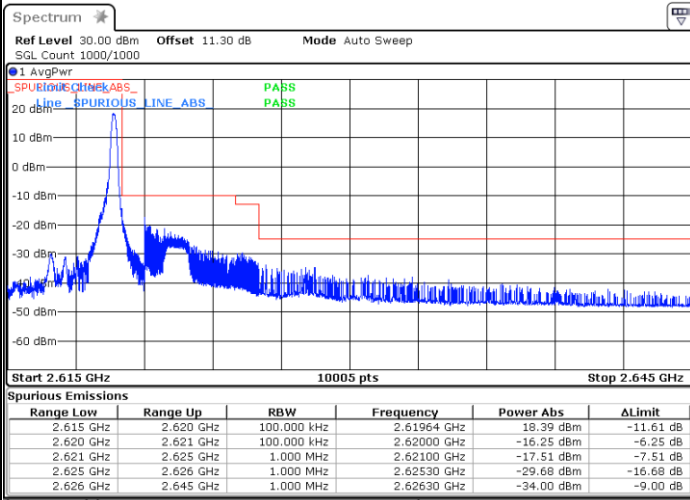




FR1 n38 / 5MHz / DFT-S OFDM QPSK

Highest Band Edge / 1 RB

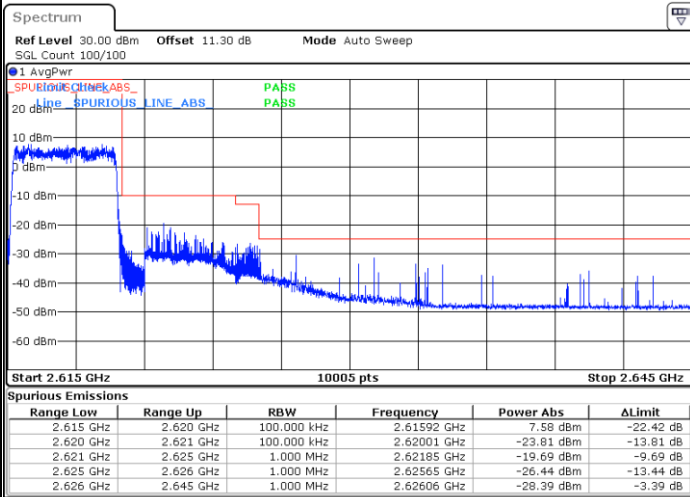
Channel Power < -13dBm Pass



Date: 21.JAN.2021 07:31:20

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



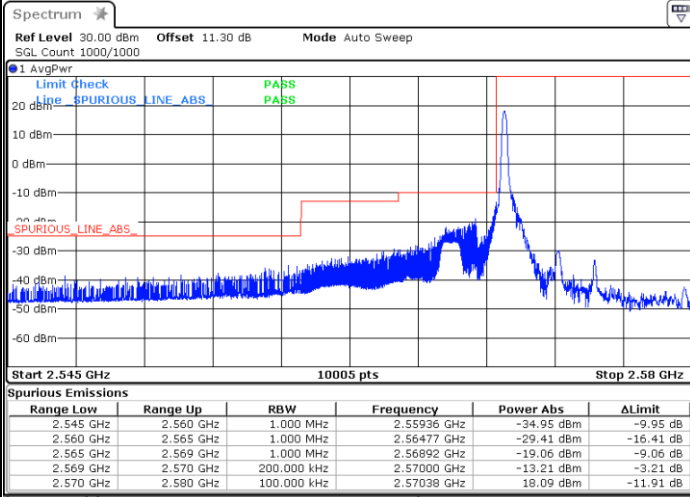
Date: 21.JAN.2021 07:31:44



FR1 n38 / 10MHz / DFT-S OFDM BPSK

Lowest Band Edge / 1 RB

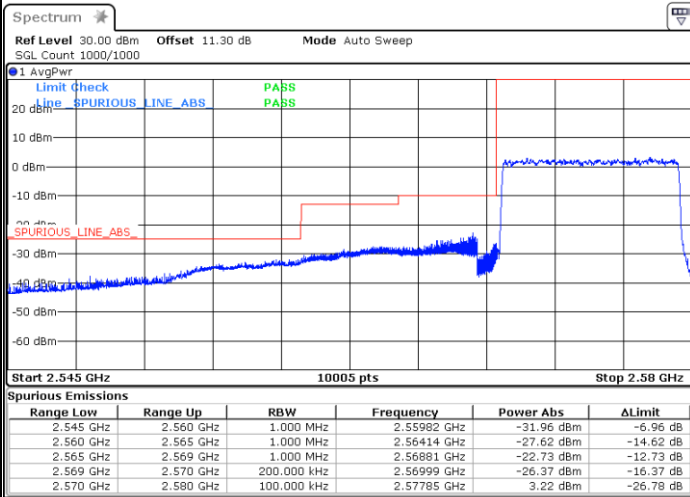
Channel Power < -13dBm Pass



Date: 21.JAN.2021 07:50:00

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



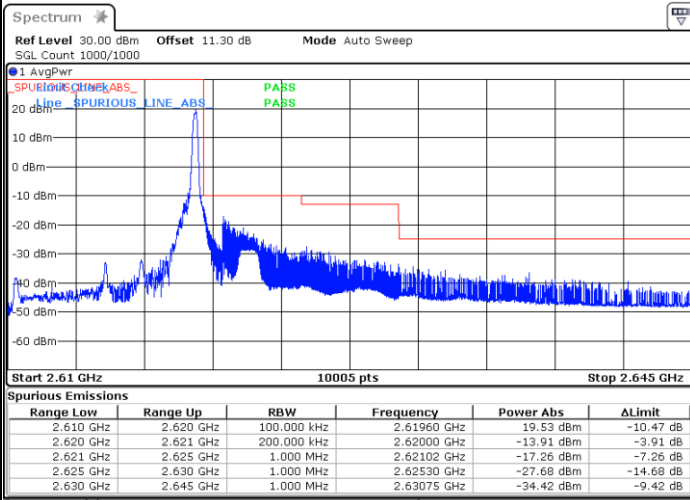
Date: 21.JAN.2021 07:48:58



FR1 n38 / 10MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB

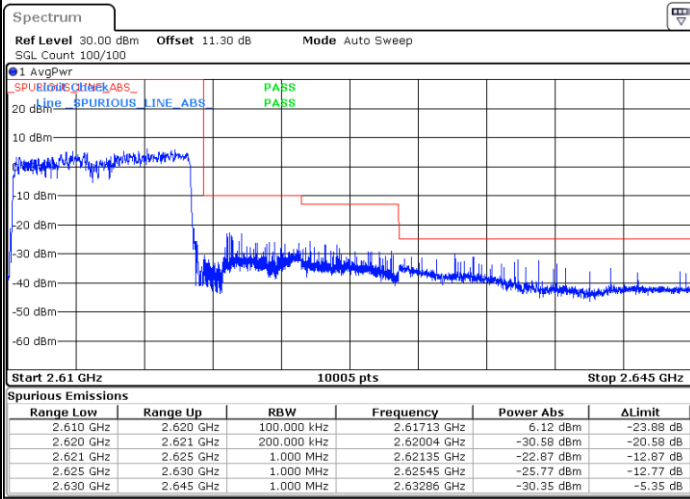
Channel Power < -13dBm Pass



Date: 21.JAN.2021 06:34:55

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



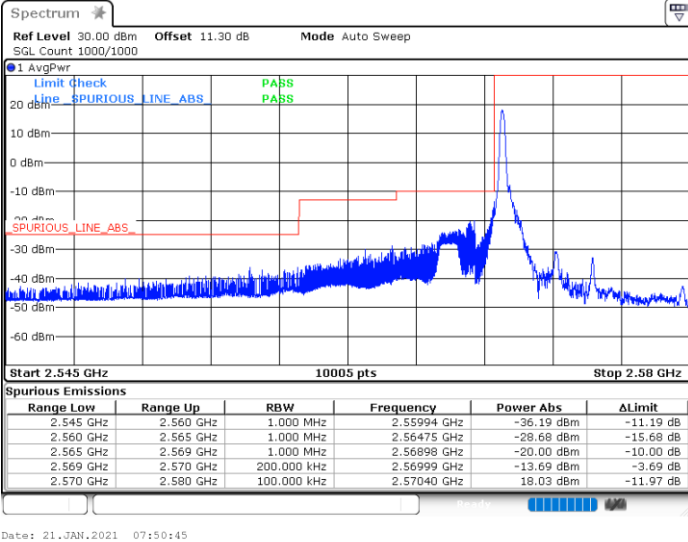
Date: 21.JAN.2021 06:35:30



FR1 n38 / 10MHz / DFT-S OFDM QPSK

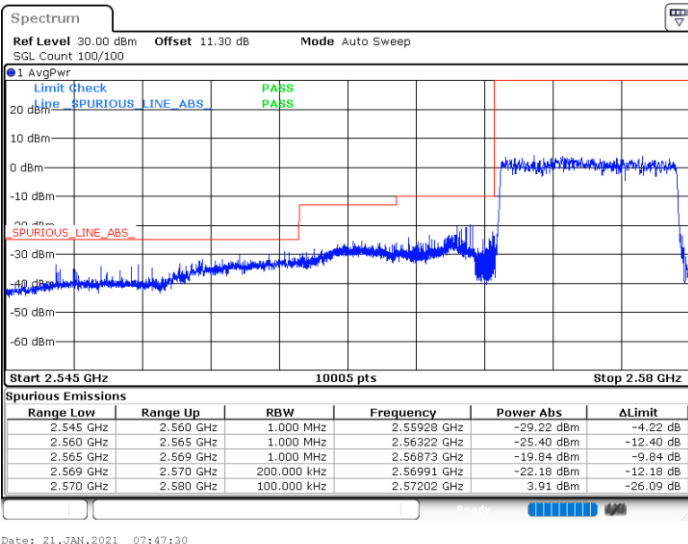
Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



Lowest Band Edge / Full RB

Channel Power < -13dBm Pass

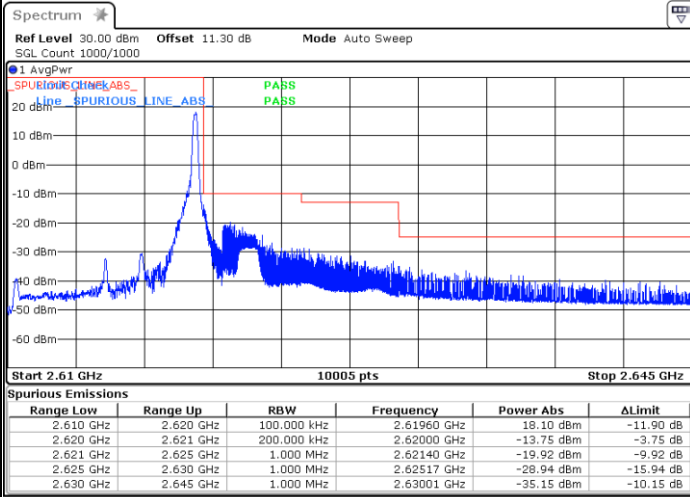




FR1 n38 / 10MHz / DFT-S OFDM QPSK

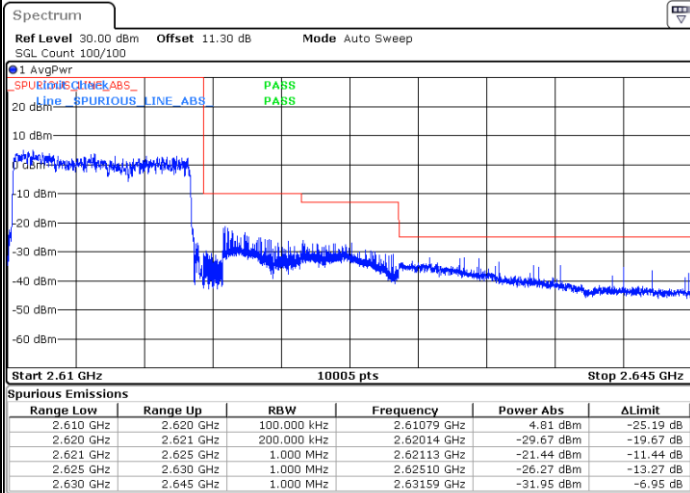
Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Highest Band Edge / Full RB

Channel Power < -13dBm Pass

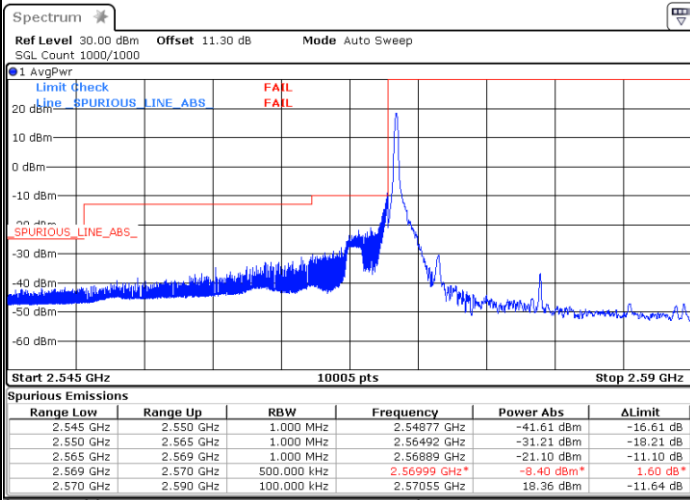




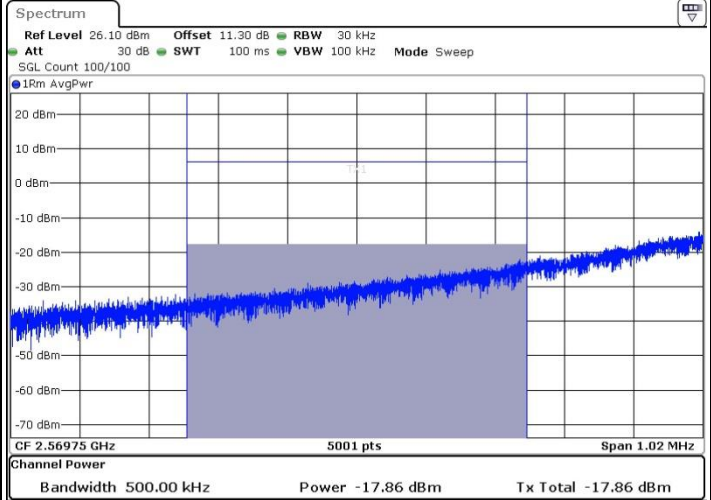
FR1 n38 / 20MHz / DFT-S OFDM BPSK

Lowest Band Edge / 1 RB

Channel Power < -10dBm Pass



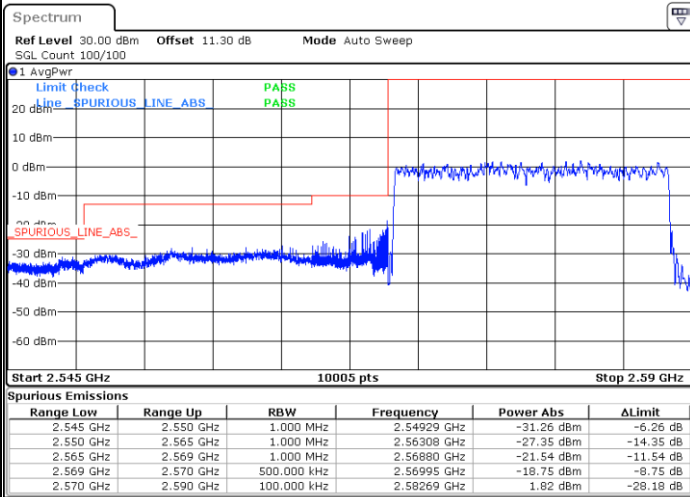
Date: 21.JAN.2021 05:55:57



Date: 21.JAN.2021 05:58:11

Lowest Band Edge / Full RB

Channel Power < -10dBm Pass



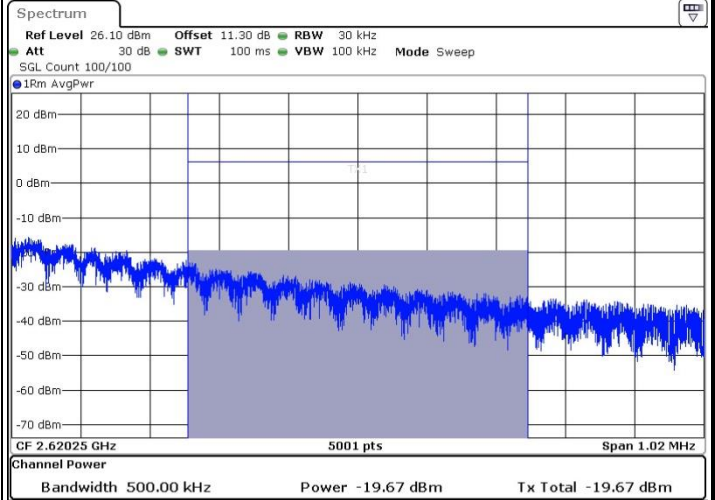
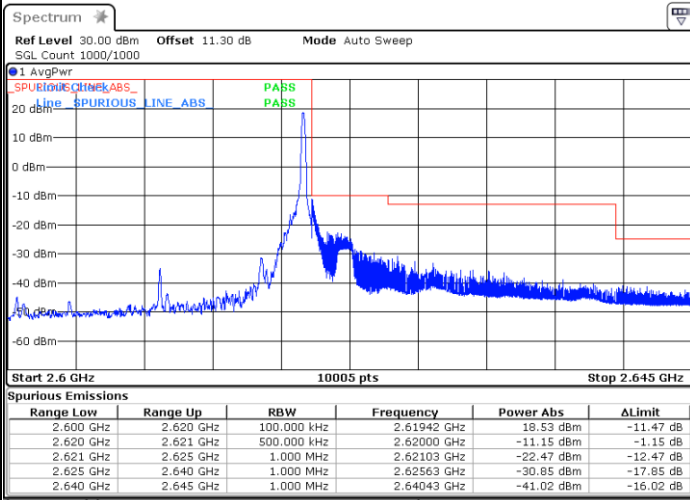
Date: 21.JAN.2021 05:56:18



FR1 n38 / 20MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB

Channel Power < -10dBm Pass

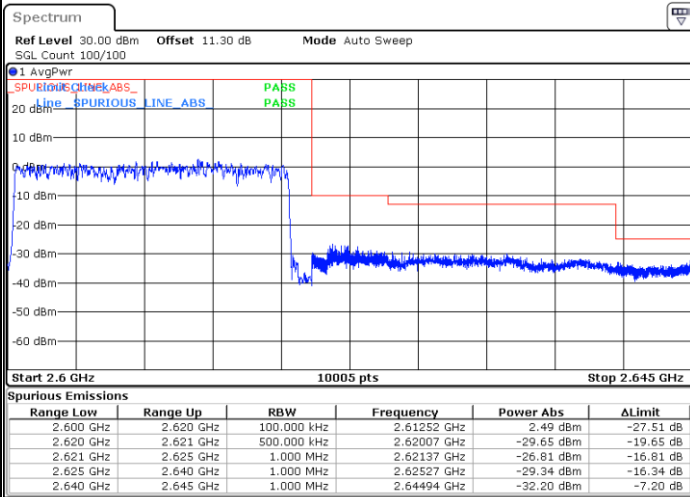


Date: 21.JAN.2021 06:12:35

Date: 21.JAN.2021 06:15:32

Highest Band Edge / Full RB

Channel Power < -10dBm Pass



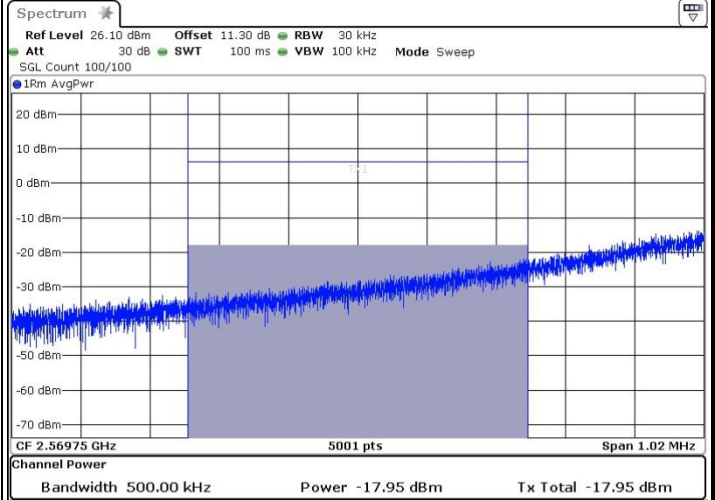
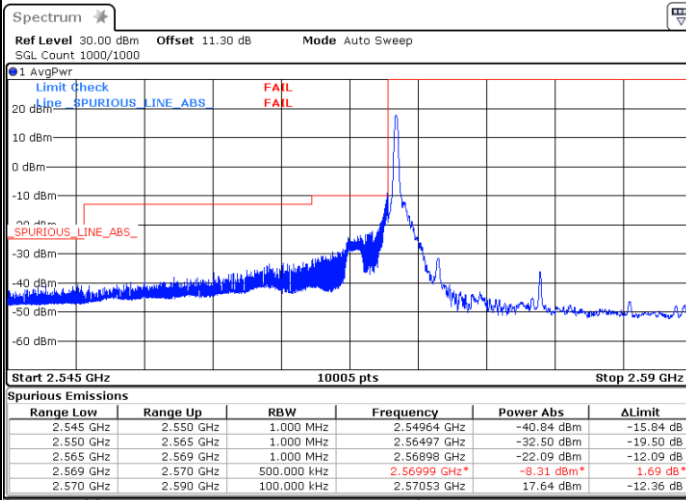
Date: 21.JAN.2021 06:12:57



FR1 n38 / 20MHz / DFT-S OFDM QPSK

Lowest Band Edge / 1 RB

Channel Power < -10dBm Pass

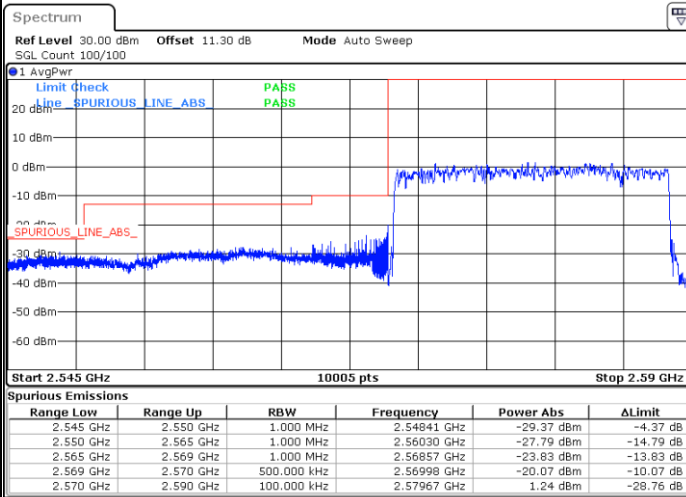


Date: 21.JAN.2021 05:55:00

Date: 21.JAN.2021 05:57:43

Lowest Band Edge / Full RB

Channel Power < -10dBm Pass



Date: 21.JAN.2021 05:56:32

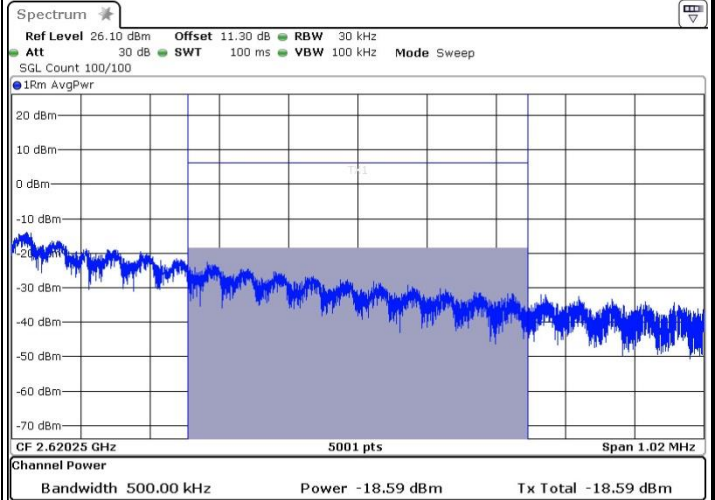
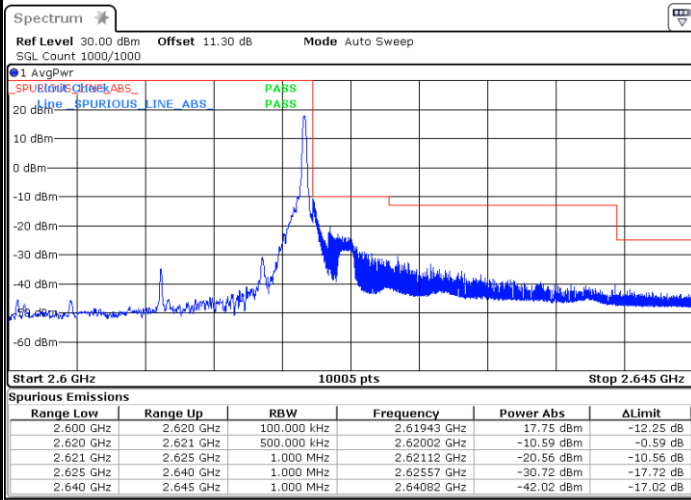




FR1 n38 / 20MHz / DFT-S OFDM QPSK

Highest Band Edge / 1 RB

Channel Power < -10dBm Pass

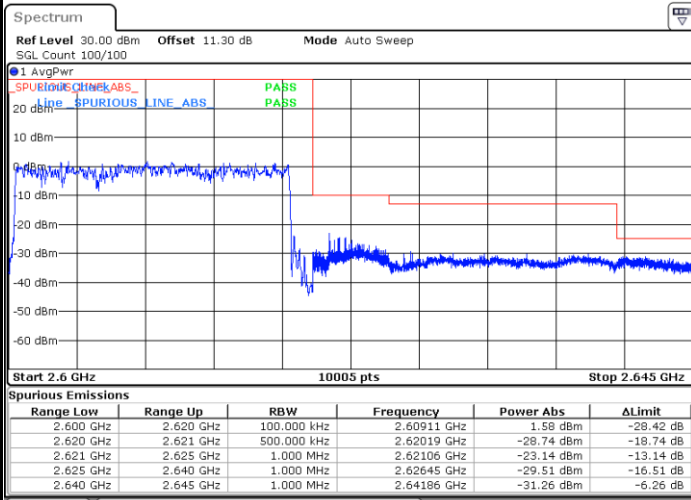


Date: 21.JAN.2021 06:11:22

Date: 21.JAN.2021 06:15:10

Highest Band Edge / Full RB

Channel Power < -10dBm Pass



Date: 21.JAN.2021 06:13:18

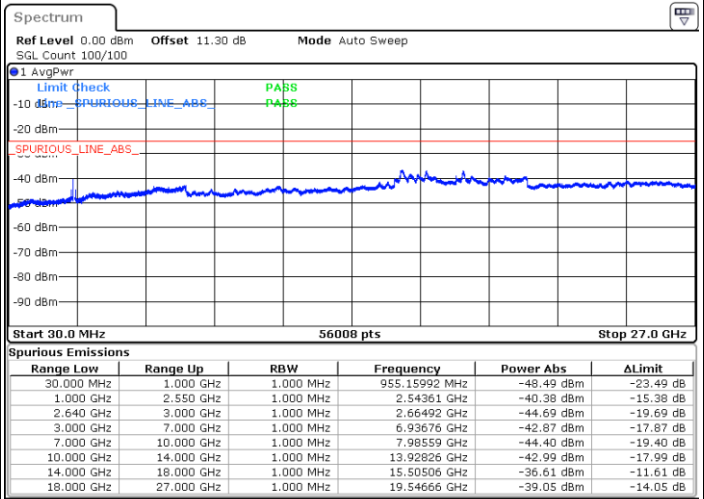
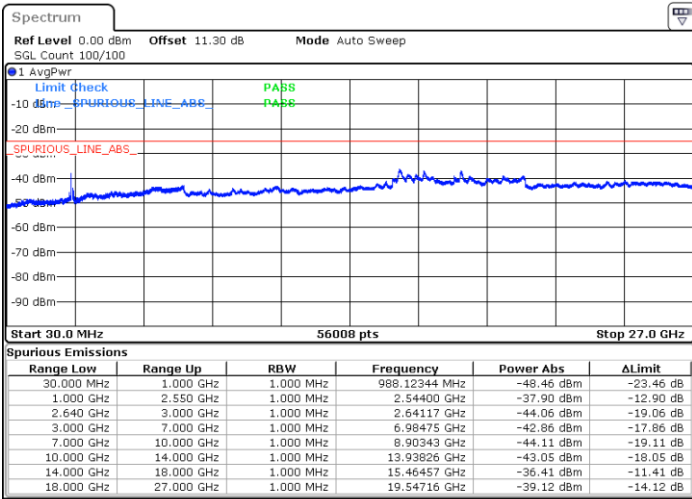


# Conducted Spurious Emission

FR1 n38 / 5MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

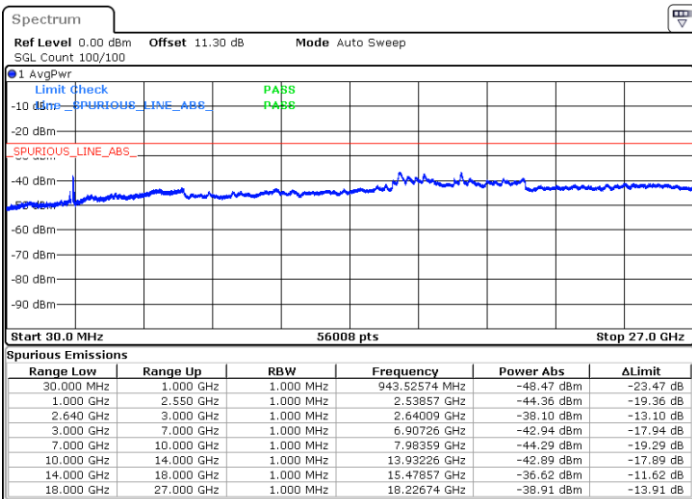
Middle Channel / 1RB



Date: 21.JAN.2021 07:43:56

Date: 21.JAN.2021 06:57:56

Highest Channel / 1RB



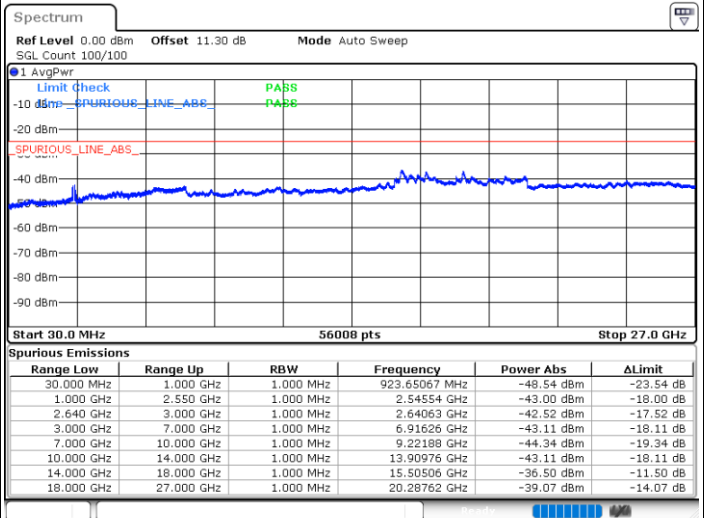
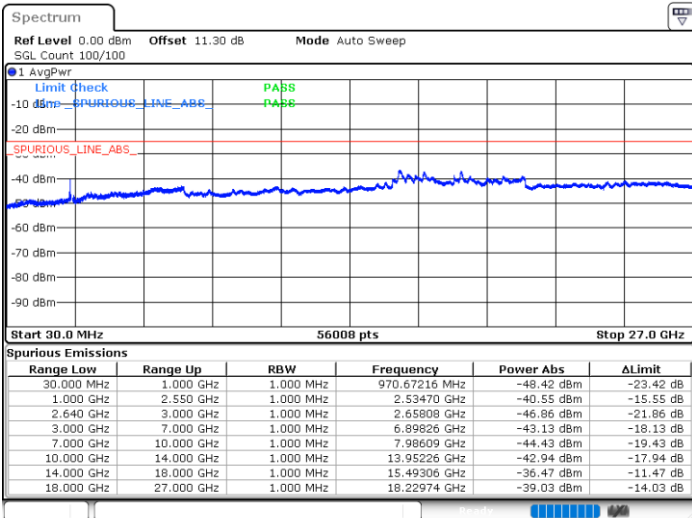
Date: 21.JAN.2021 07:28:59



FR1 n38 / 5MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

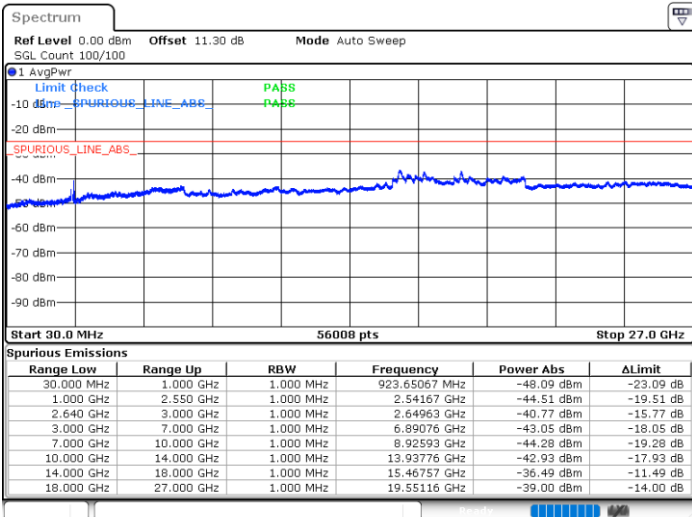
Middle Channel / 1RB



Date: 21.JAN.2021 07:44:53

Date: 21.JAN.2021 07:26:12

Highest Channel / 1RB



Date: 21.JAN.2021 07:27:56