



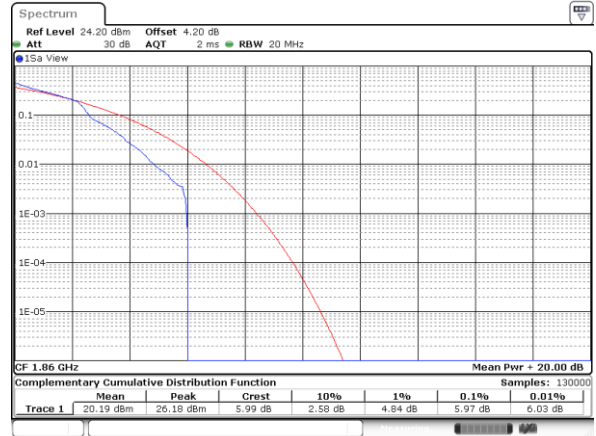
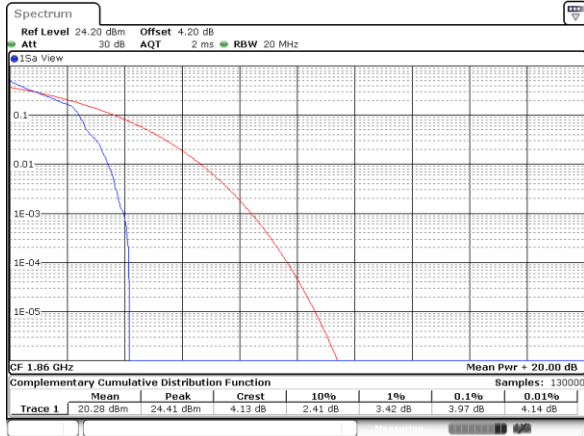
FR1 n2 / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

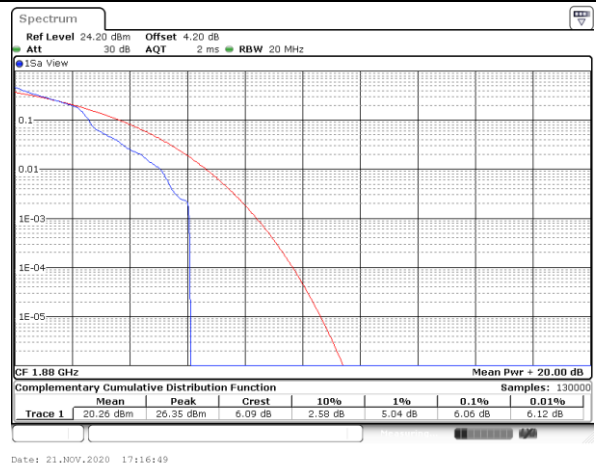
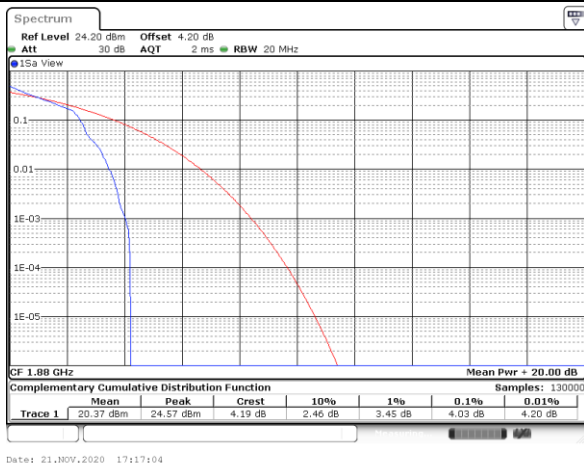
Lowest Channel / 1RB

Lowest Channel / 1RB



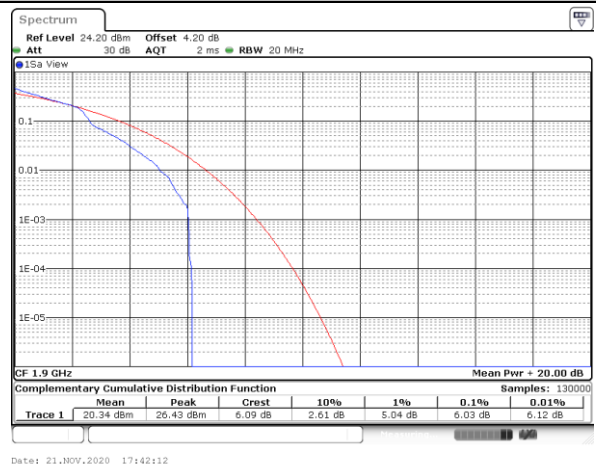
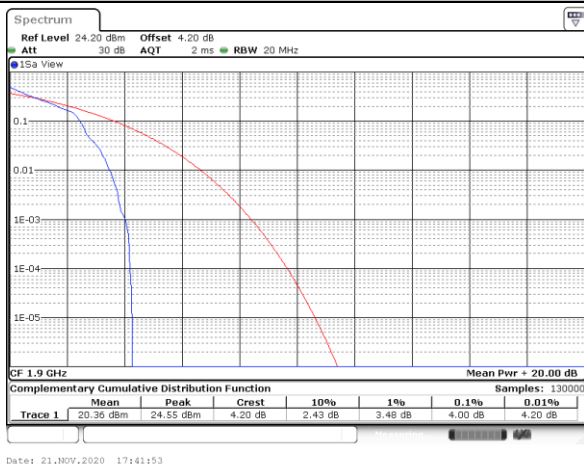
Middle Channel / 1 RB

Middle Channel / 1 RB



Highest Channel / 1 RB

Highest Channel / 1 RB





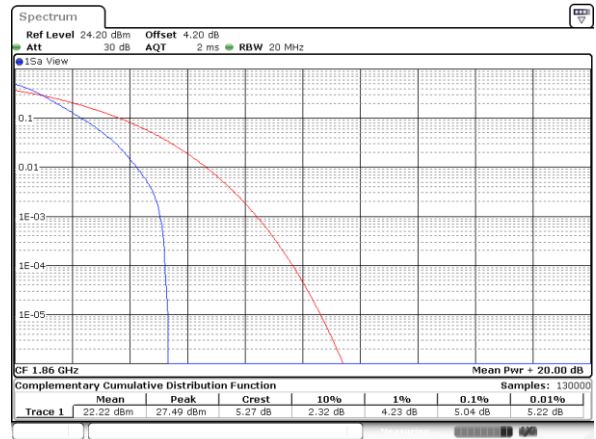
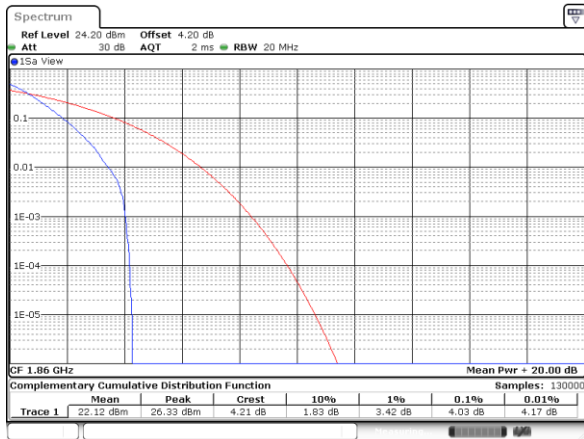
FR1 n2 / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

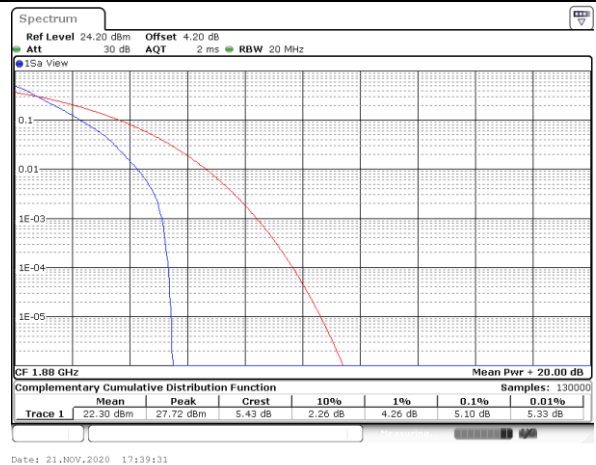
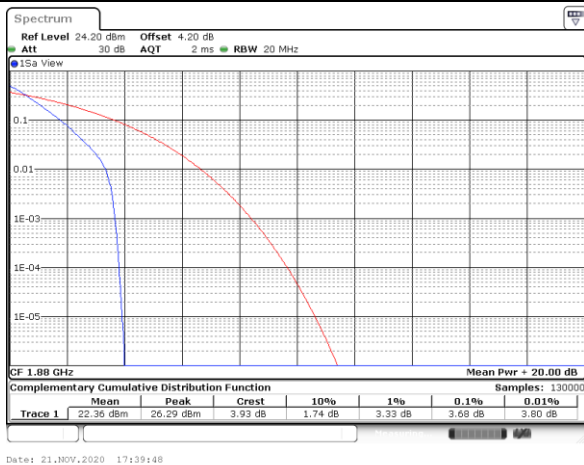
Lowest Channel / Full RB

Lowest Channel / Full RB



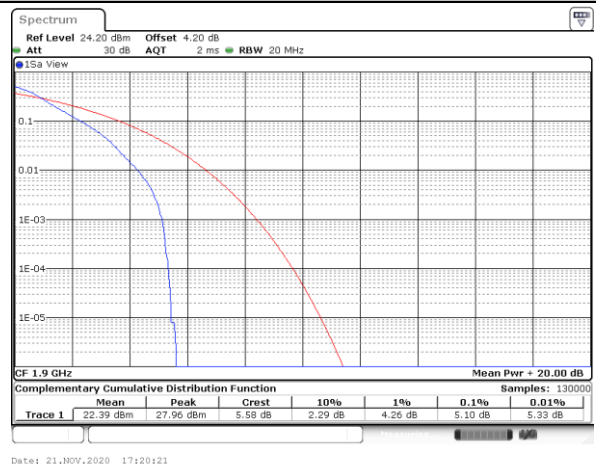
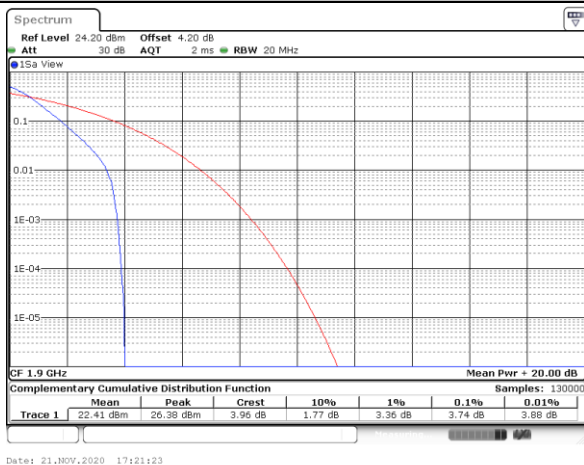
Middle Channel / Full RB

Middle Channel / Full RB



Highest Channel / Full RB

Highest Channel / Full RB



**26dB Bandwidth**

Mode	FR1 n2 : 26dB BW(MHz) / CP-OFDM							
BW	5MHz	5MHz	5MHz	5MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	4.88	4.92	4.98	4.93				

Mode	FR1 n2 : 26dB BW(MHz) / CP-OFDM							
BW	10MHz	10MHz	10MHz	10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	9.85	9.87	9.83	9.83				

Mode	FR1 n2 : 26dB BW(MHz) / CP-OFDM							
BW	15MHz	15MHz	15MHz	15MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	14.89	14.98	14.95	14.98				

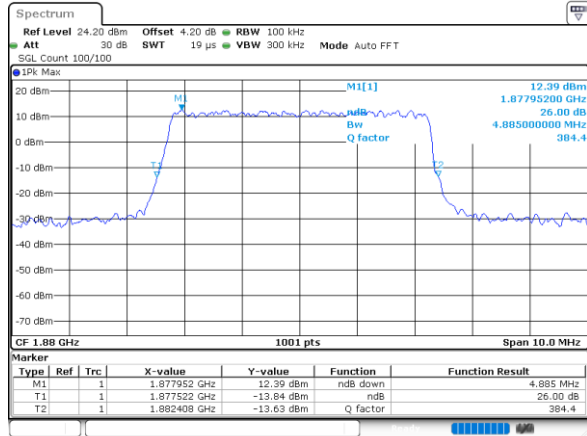
Mode	FR1 n2 : 26dB BW(MHz) / CP-OFDM							
BW	20MHz	20MHz	20MHz	20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	19.86	19.74	19.74	19.94				



FR1 n2 / 5MHz / CP-OFDM

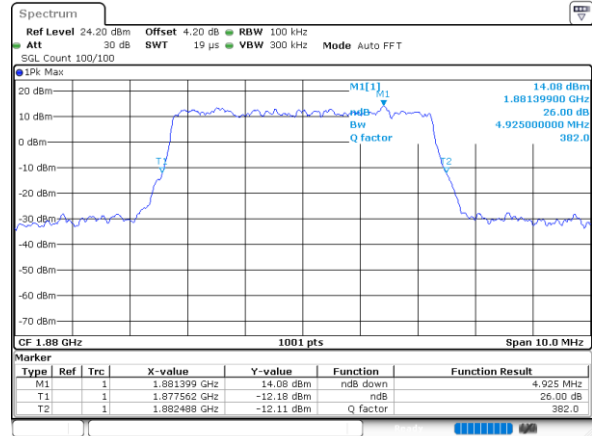
QPSK

Middle Channel



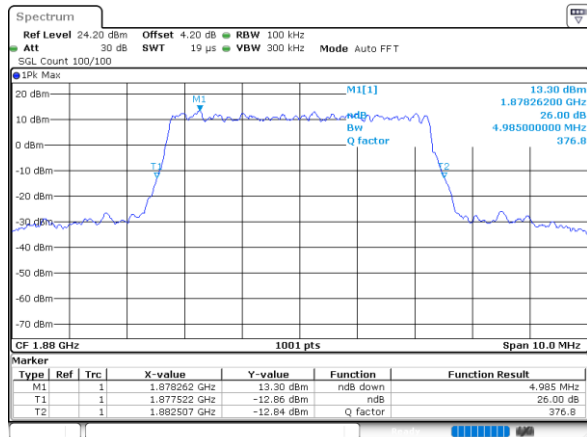
16QAM

Middle Channel



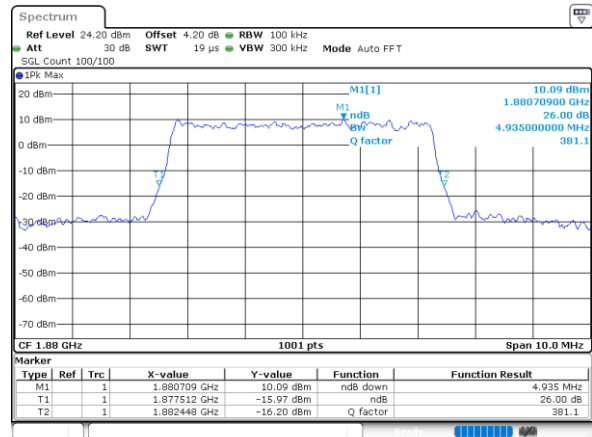
64QAM

Middle Channel



256QAM

Middle Channel

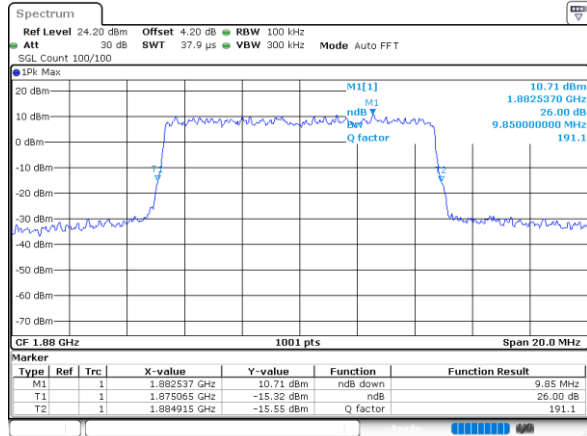




FR1 n2 / 10MHz / CP-OFDM

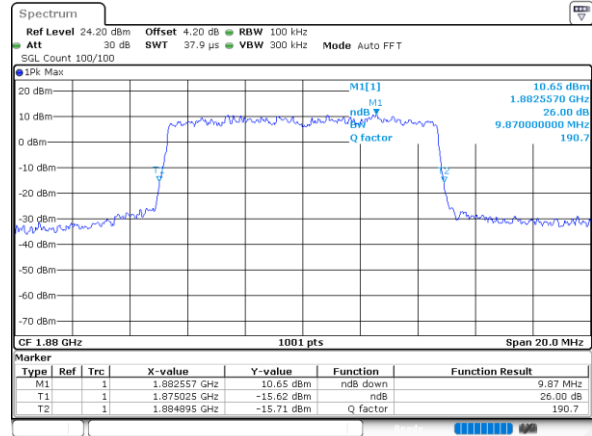
QPSK

Middle Channel



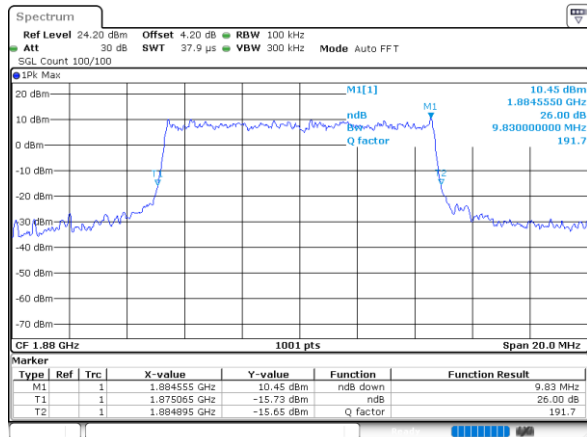
16QAM

Middle Channel



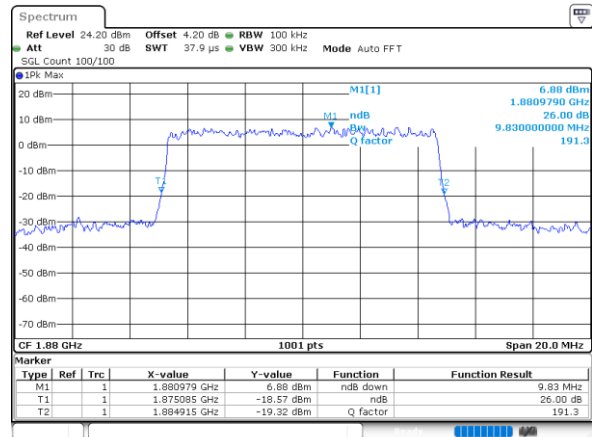
64QAM

Middle Channel



256QAM

Middle Channel





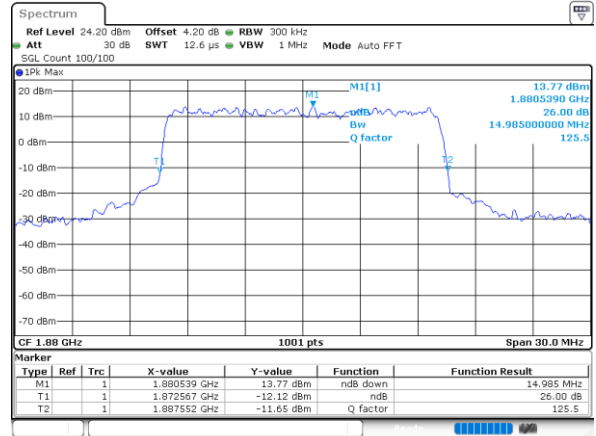
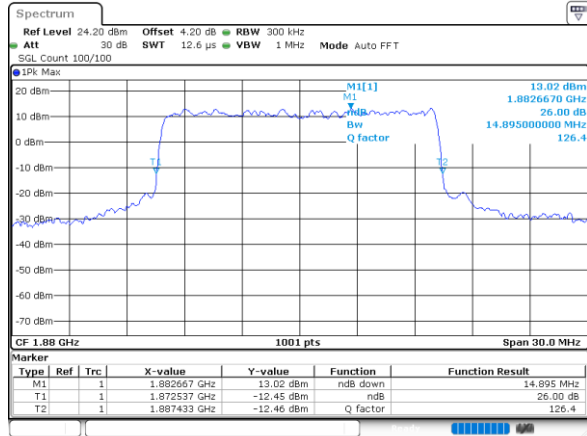
FR1 n2 / 15MHz / CP-OFDM

QPSK

16QAM

Middle Channel

Middle Channel

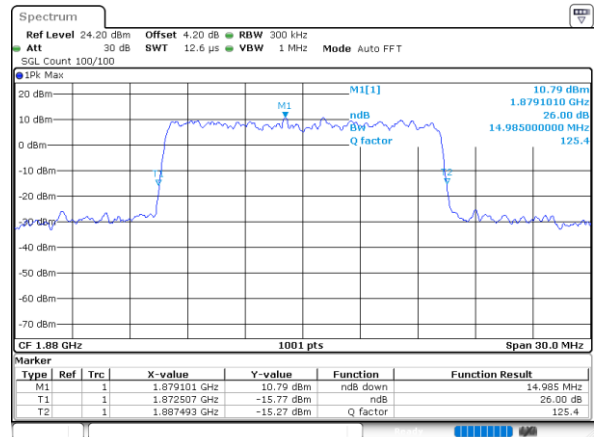
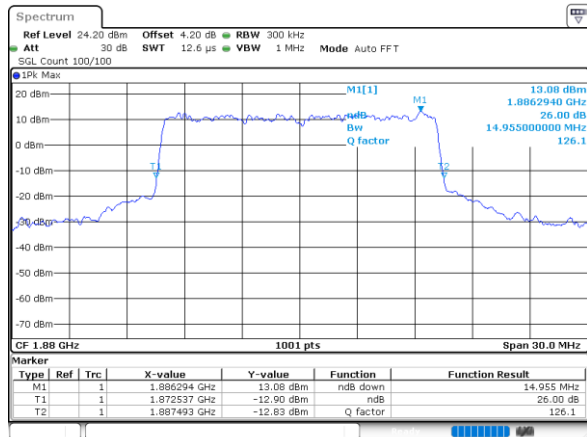


64QAM

256QAM

Middle Channel

Middle Channel

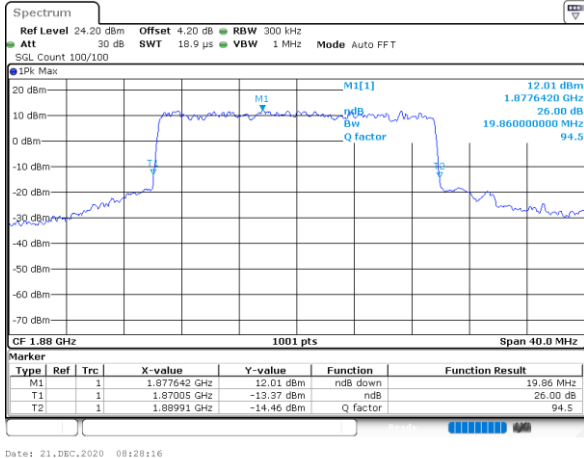




FR1 n2 / 20MHz / CP-OFDM

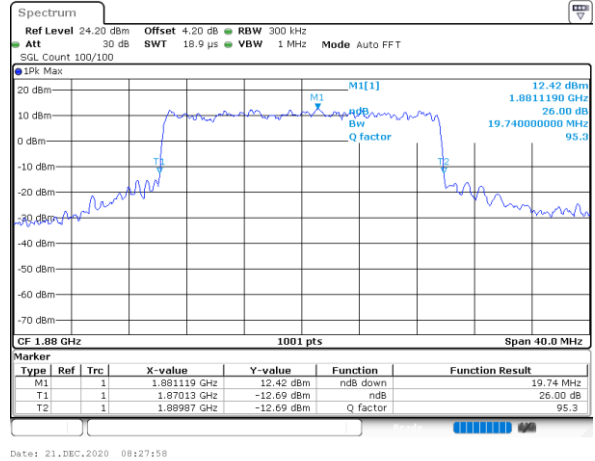
QPSK

Middle Channel



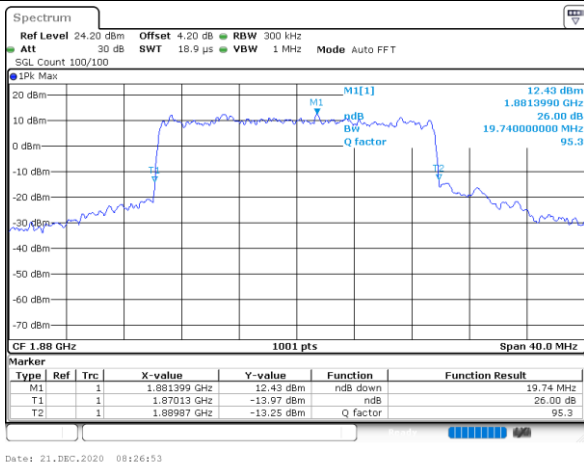
16QAM

Middle Channel



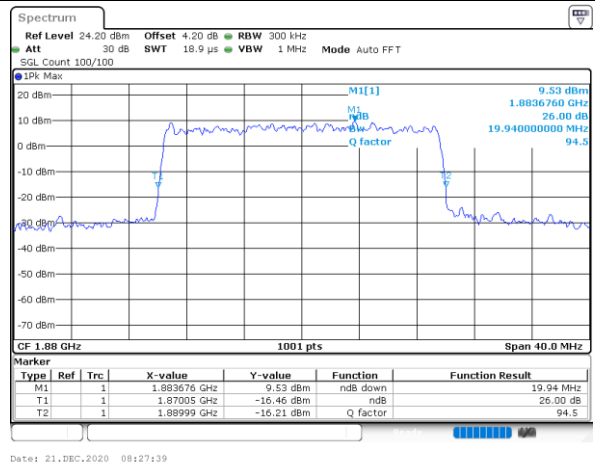
64QAM

Middle Channel



256QAM

Middle Channel



**Occupied Bandwidth**

Mode	FR1 n2 : OBW(MHz) / CP-OFDM							
BW	5MHz	5MHz	5MHz	5MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	4.48	4.47	4.48	4.46				

Mode	FR1 n2 : OBW(MHz) / CP-OFDM							
BW	10MHz	10MHz	10MHz	10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	9.29	9.27	9.29	9.27				

Mode	FR1 n2 : OBW(MHz) / CP-OFDM							
BW	15MHz	15MHz	15MHz	15MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	14.17	14.11	14.2	14.08				

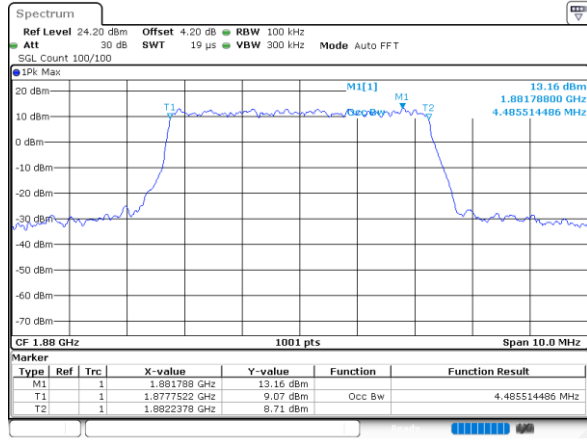
Mode	FR1 n2 : OBW(MHz) / CP-OFDM							
BW	20MHz	20MHz	20MHz	20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	18.9	18.9	18.94	18.94				



FR1 n2 / 5MHz / CP-OFDM

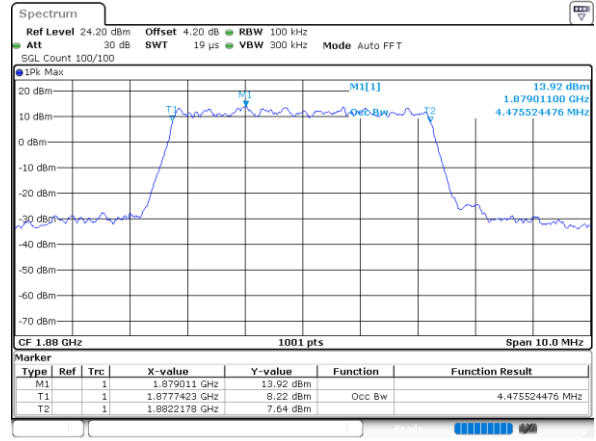
QPSK

Middle Channel



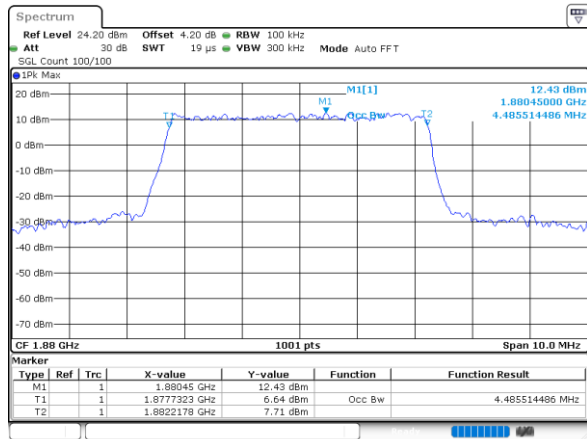
16QAM

Middle Channel



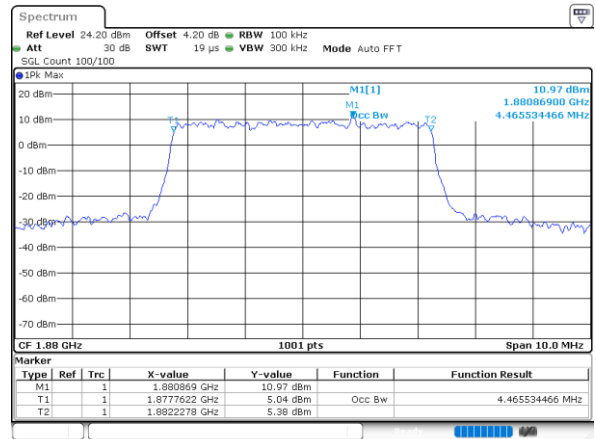
64QAM

Middle Channel



256QAM

Middle Channel

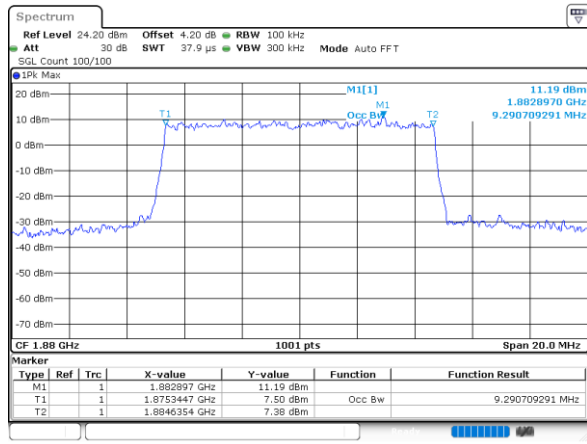




FR1 n2 / 10MHz / CP-OFDM

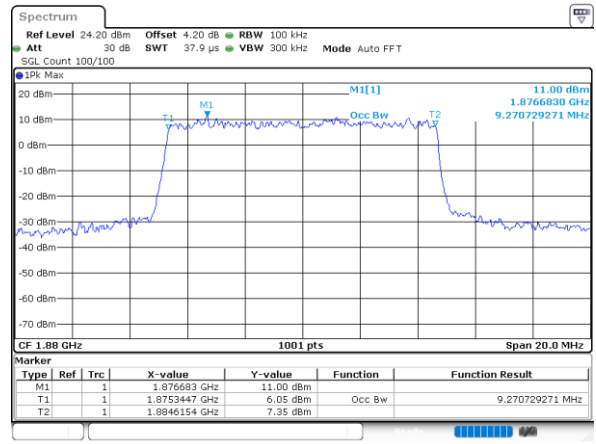
QPSK

Middle Channel



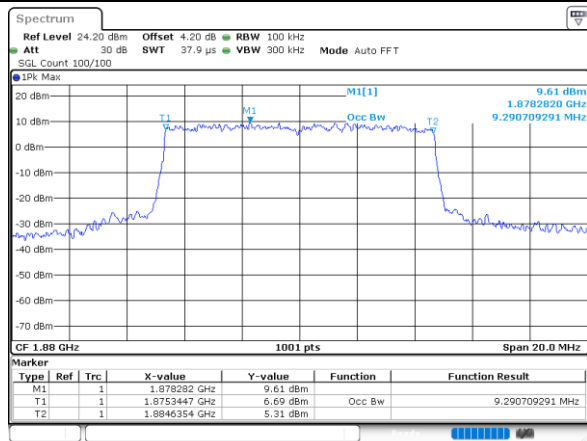
16QAM

Middle Channel



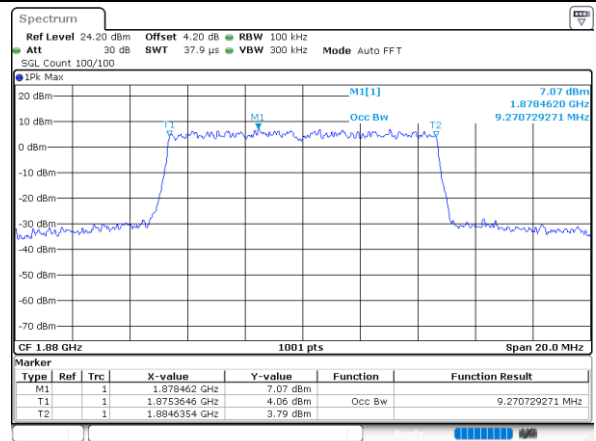
64QAM

Middle Channel



256QAM

Middle Channel

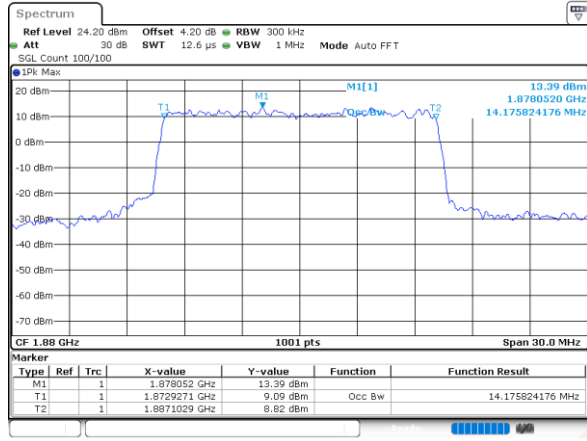




FR1 n2 / 15MHz / CP-OFDM

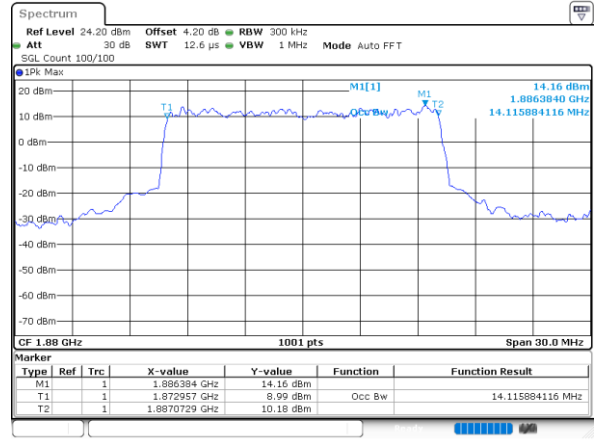
QPSK

Middle Channel



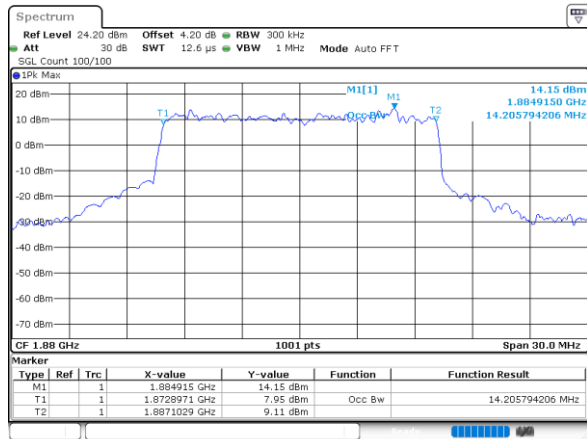
16QAM

Middle Channel



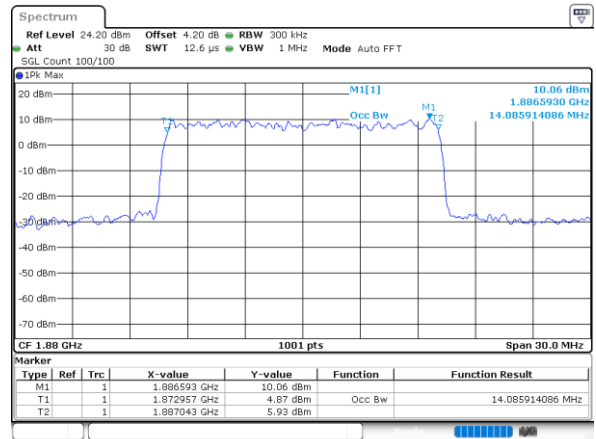
64QAM

Middle Channel



256QAM

Middle Channel

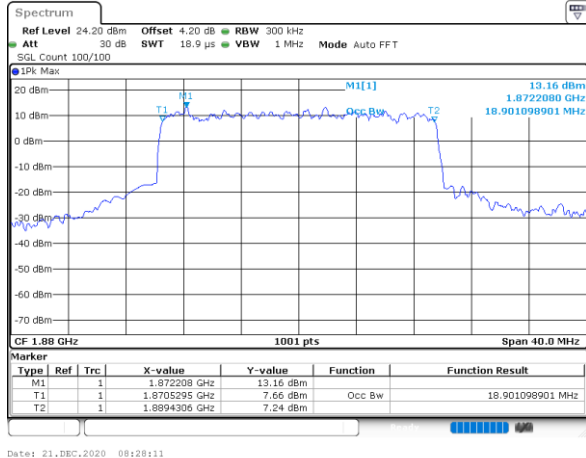




FR1 n2 / 20MHz / CP-OFDM

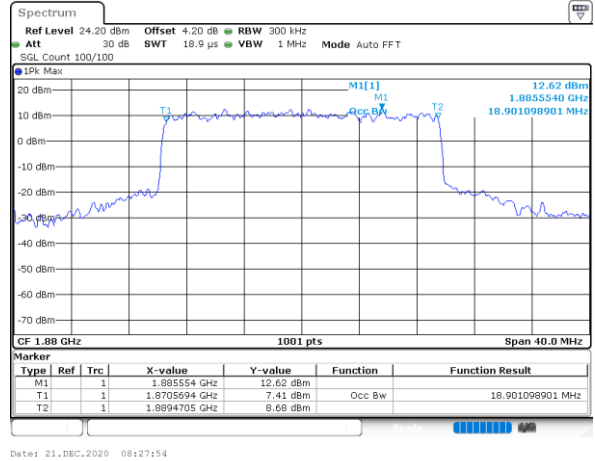
QPSK

Middle Channel



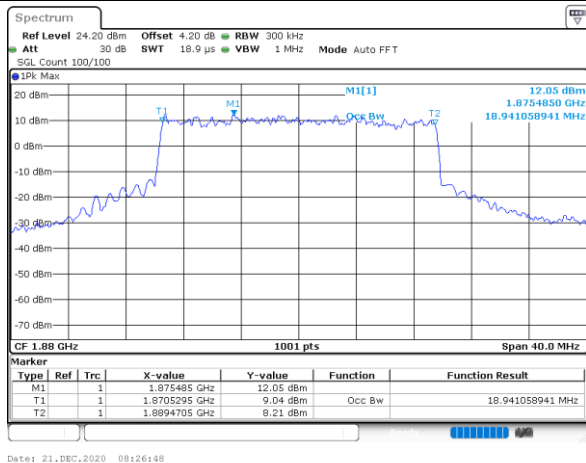
16QAM

Middle Channel



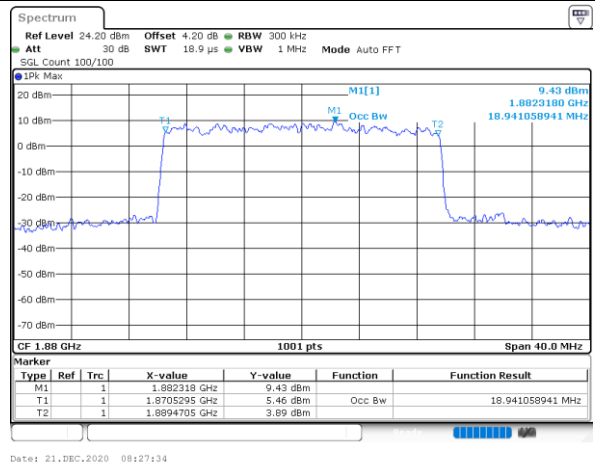
64QAM

Middle Channel



256QAM

Middle Channel

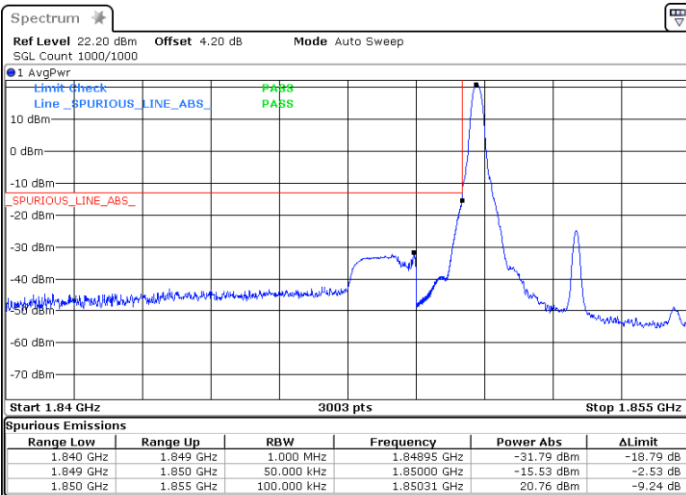




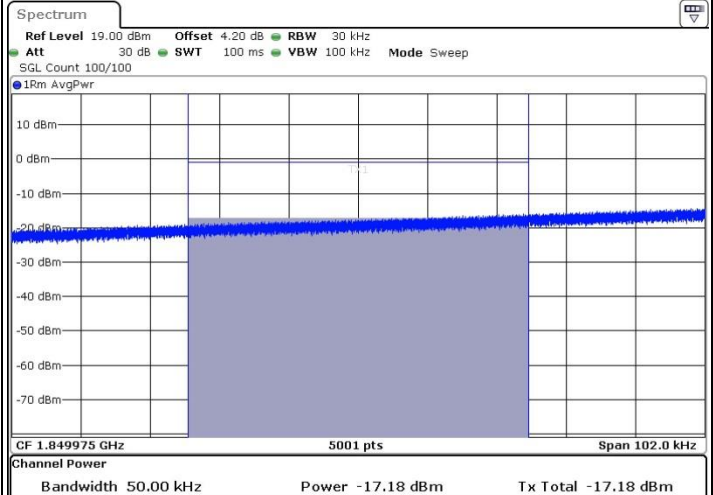
Conducted Band Edge

FR1 n2 / 5MHz / DFT-S OFDM BPSK

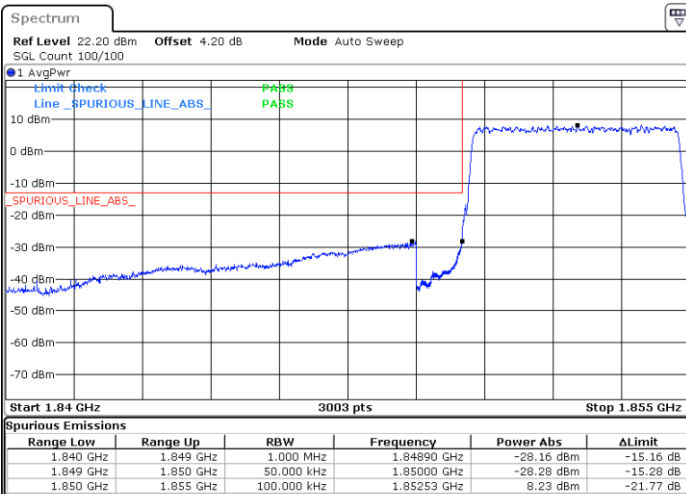
Lowest Band Edge / 1 RB



Channel Power < -13dBm Pass



Lowest Band Edge / Full RB



Channel Power < -13dBm Pass

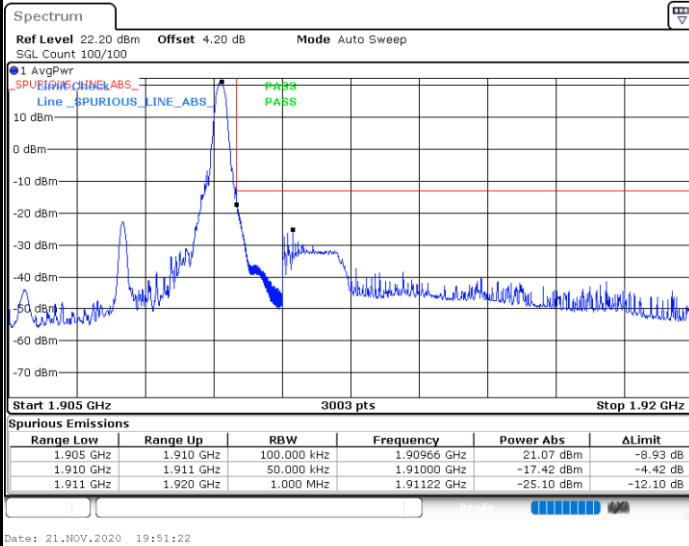
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FR1 n2 / 5MHz / DFT-S OFDM BPSK

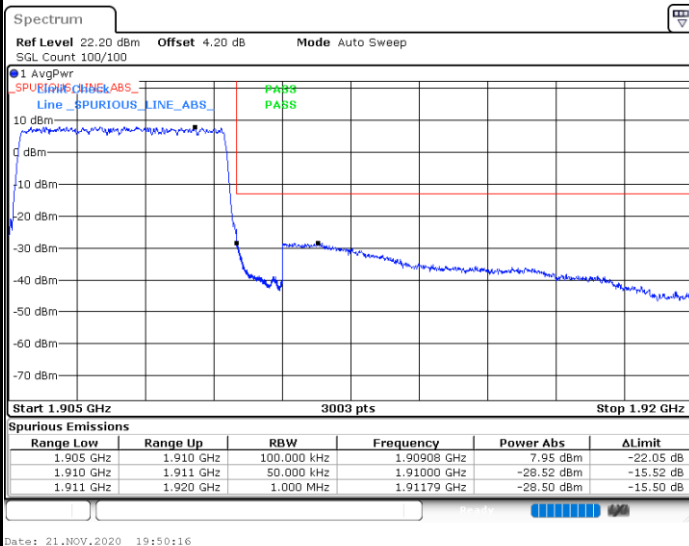
Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Highest Band Edge / Full RB

Channel Power < -13dBm Pass

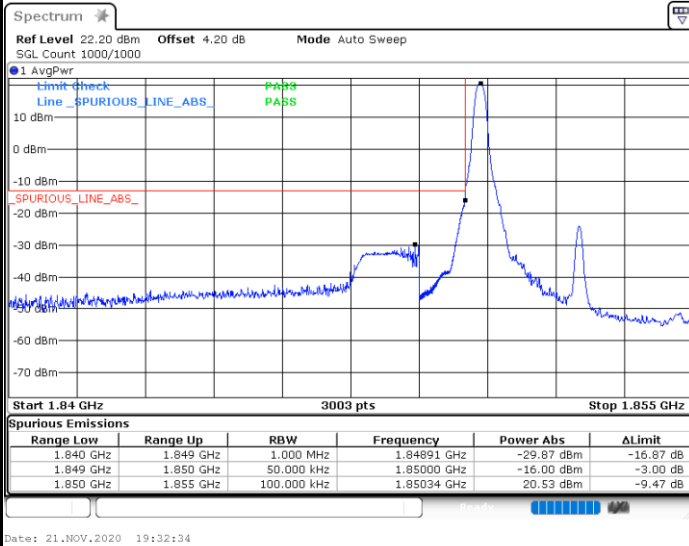




FR1 n2 / 5MHz / DFT-S OFDM QPSK

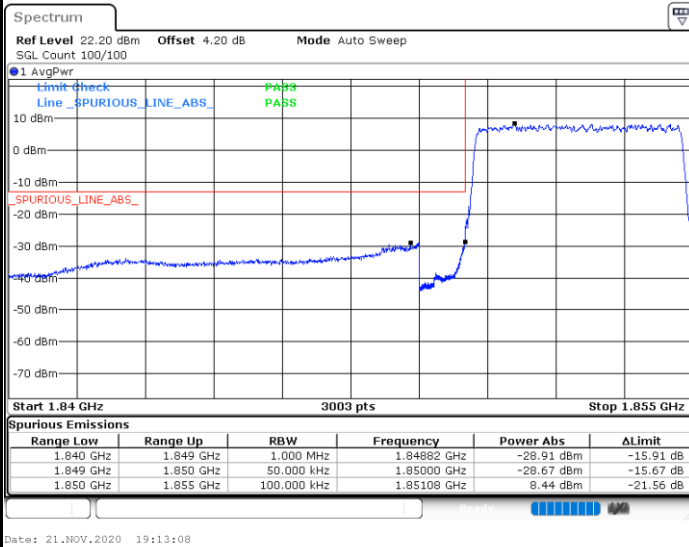
Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



Lowest Band Edge / Full RB

Channel Power < -13dBm Pass

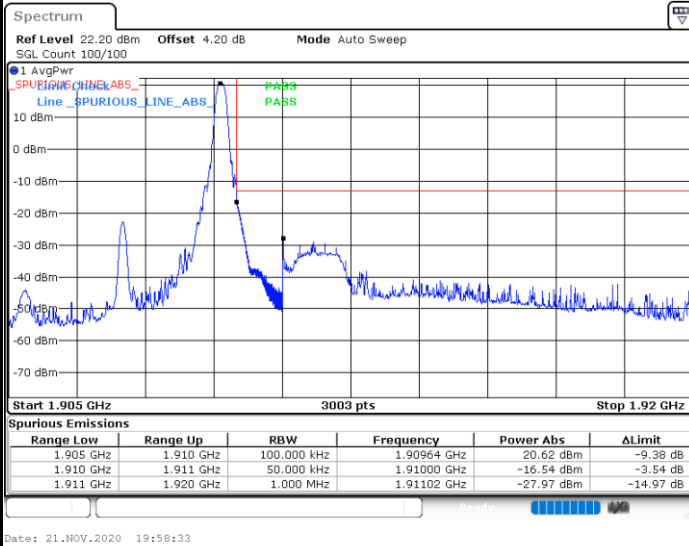




FR1 n2 / 5MHz / DFT-S OFDM QPSK

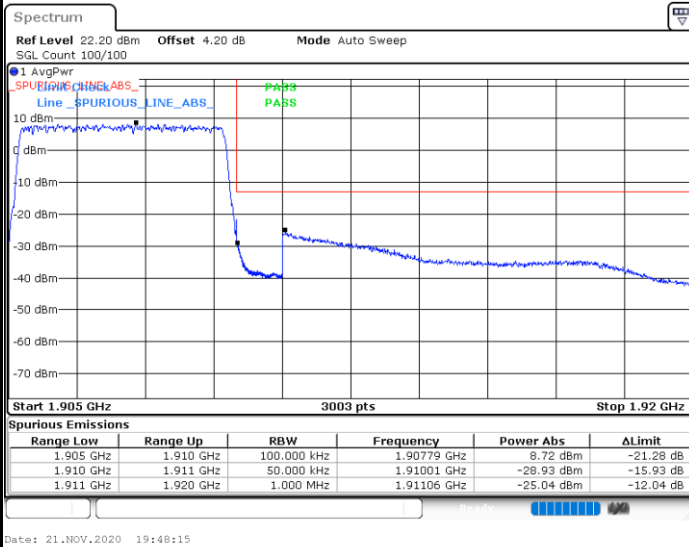
Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Highest Band Edge / Full RB

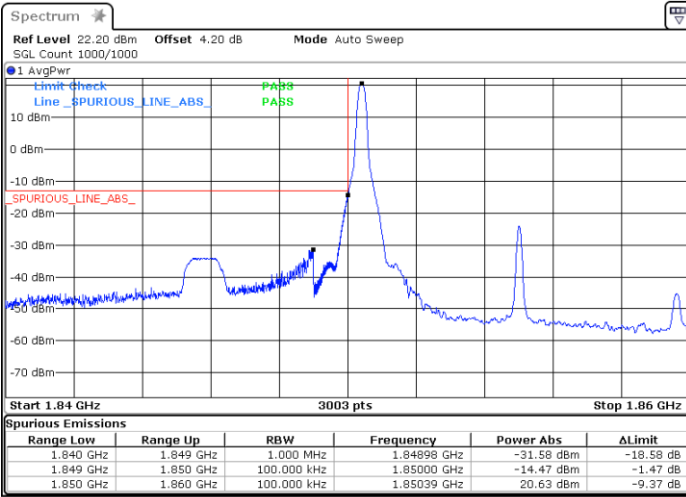
Channel Power < -13dBm Pass



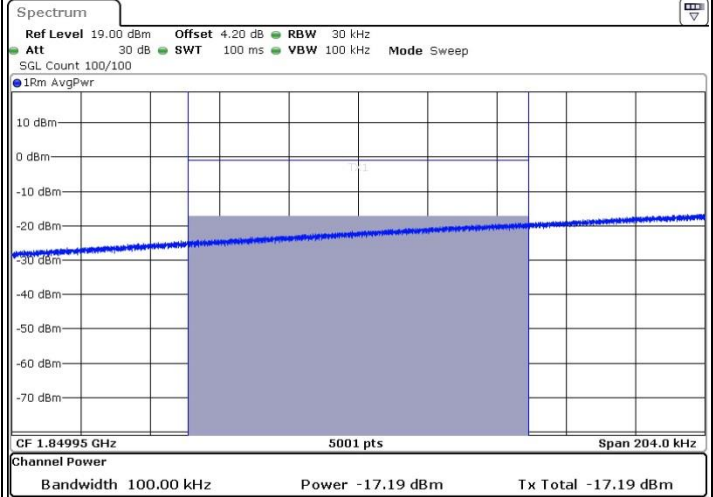


FR1 n2 / 10MHz / DFT-S OFDM BPSK

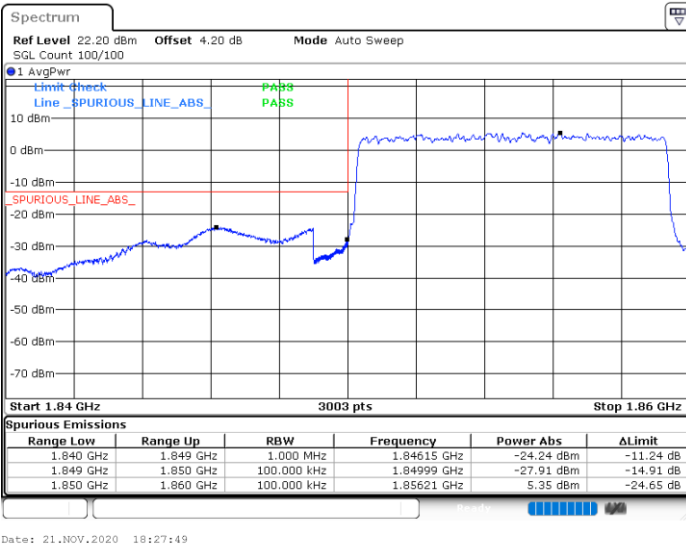
Lowest Band Edge / 1 RB



Channel Power < -13dBm Pass



Lowest Band Edge / Full RB



Channel Power < -13dBm Pass

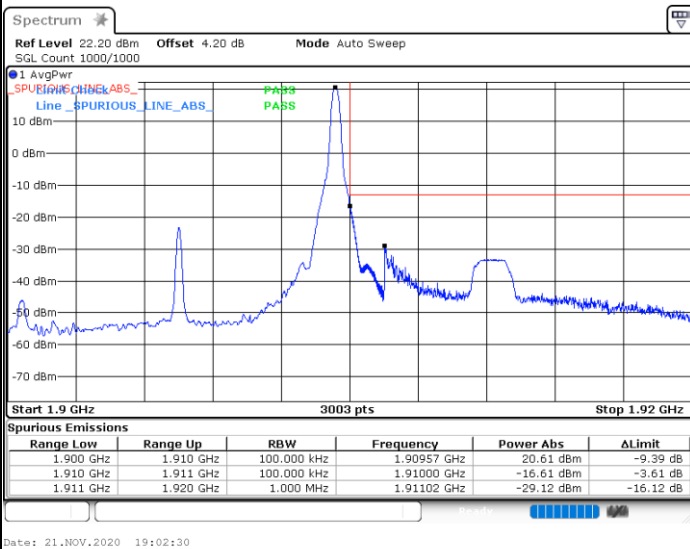
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FR1 n2 / 10MHz / DFT-S OFDM BPSK

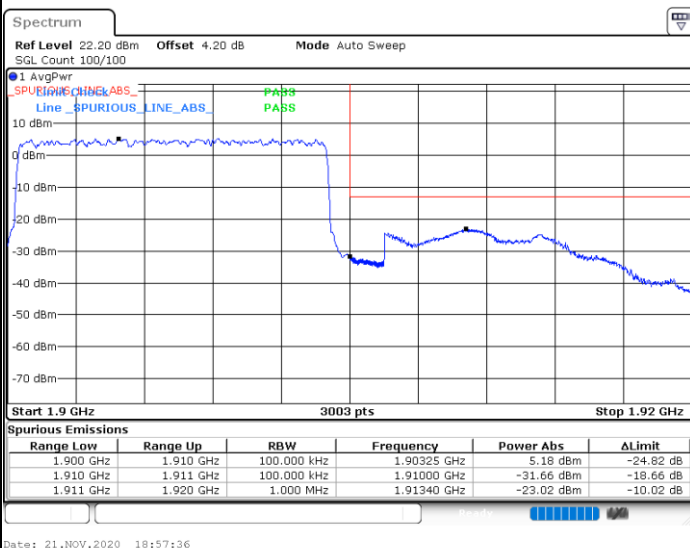
Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Highest Band Edge / Full RB

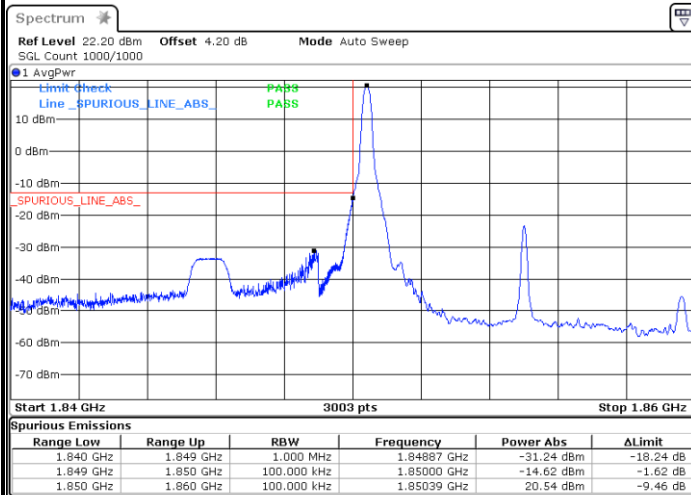
Channel Power < -13dBm Pass





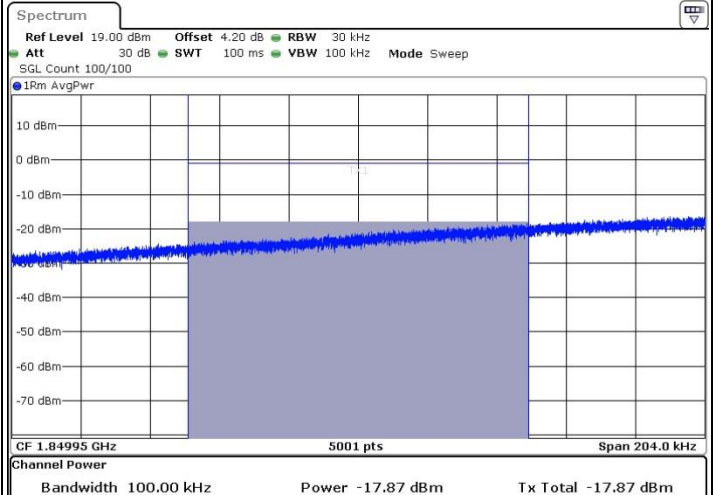
FR1 n2 / 10MHz / DFT-S OFDM QPSK

Lowest Band Edge / 1 RB



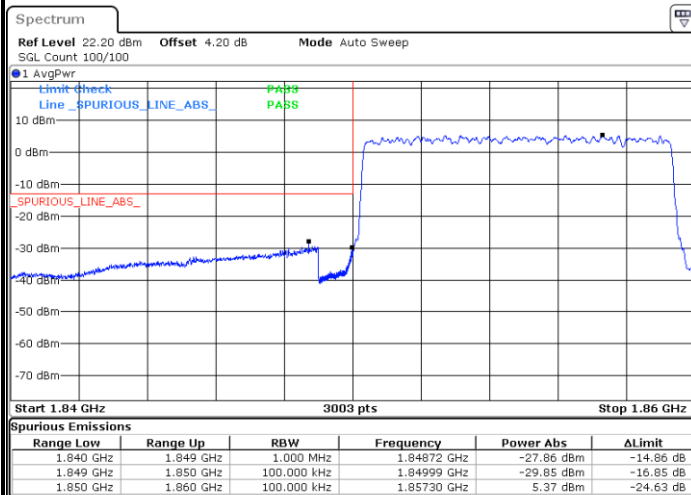
Date: 21.NOV.2020 18:11:16

Channel Power < -13dBm Pass



Date: 21.NOV.2020 18:25:34

Lowest Band Edge / Full RB



Date: 21.NOV.2020 18:27:04

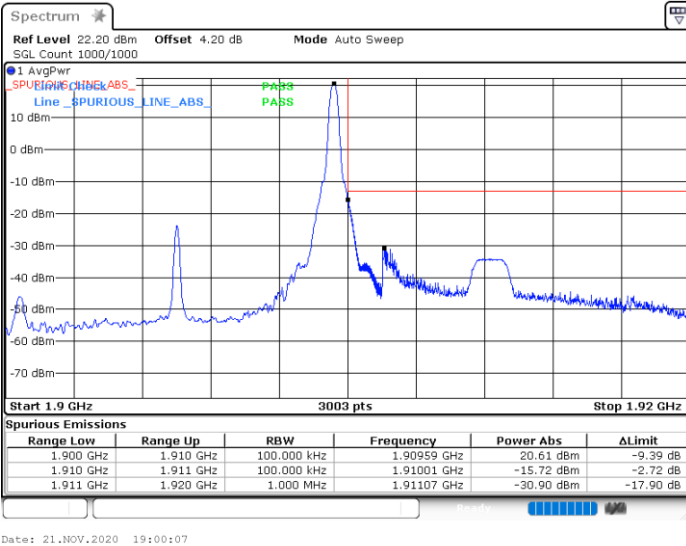
Channel Power < -13dBm Pass

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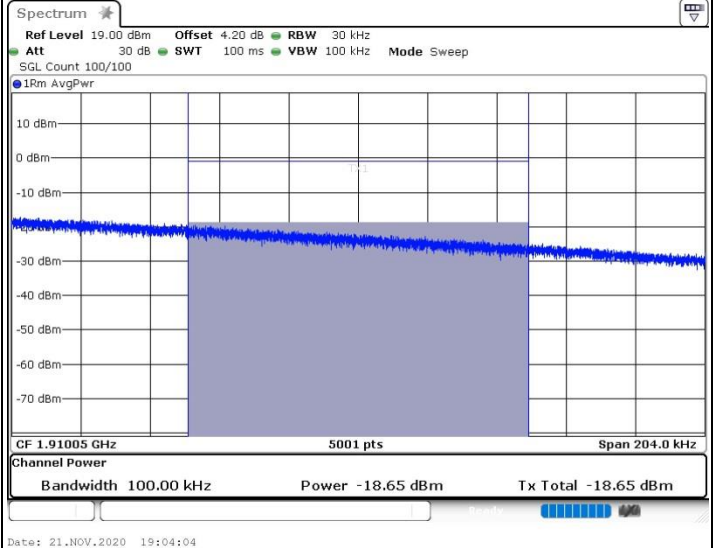


FR1 n2 / 10MHz / DFT-S OFDM QPSK

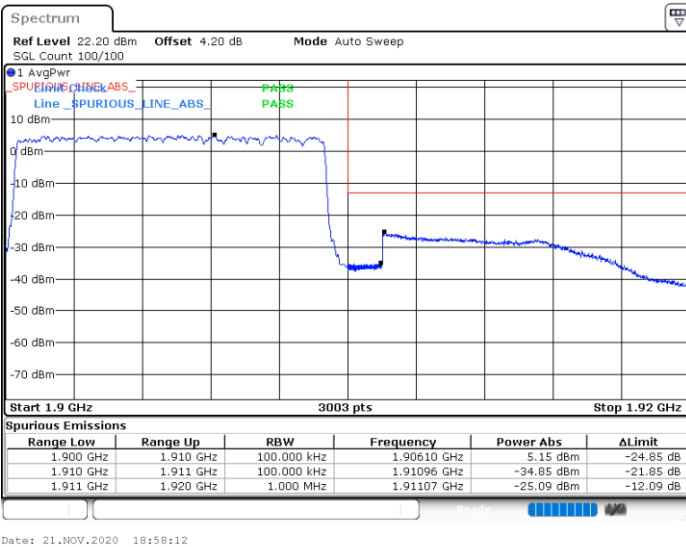
Highest Band Edge / 1 RB



Channel Power < -13dBm Pass



Highest Band Edge / Full RB



Channel Power < -13dBm Pass

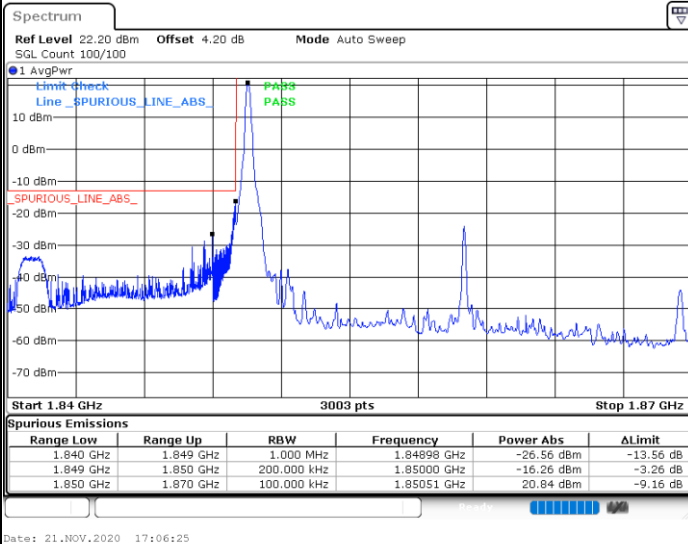
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FR1 n2 / 20MHz / DFT-S OFDM BPSK

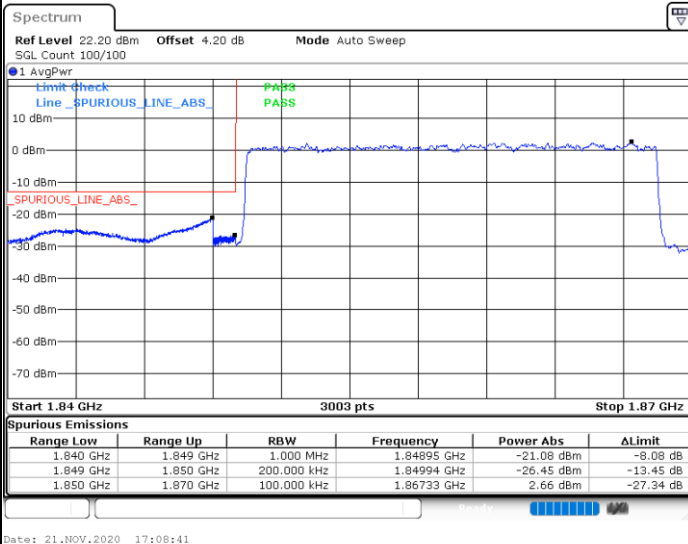
Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



Lowest Band Edge / Full RB

Channel Power < -13dBm Pass

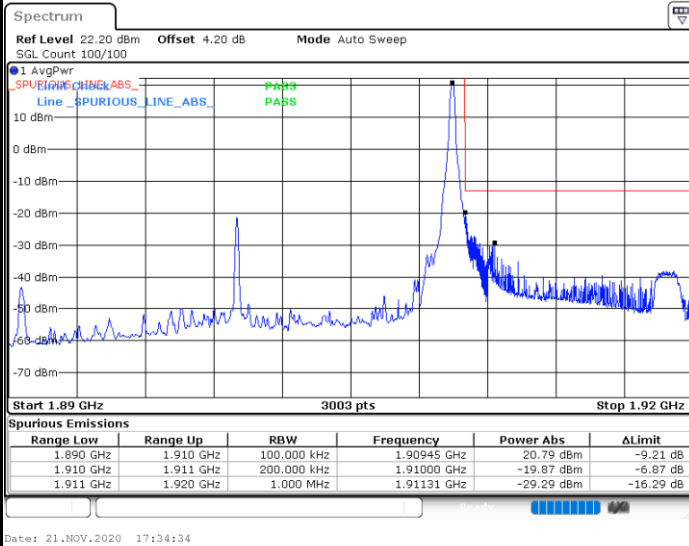




FR1 n2 / 20MHz / DFT-S OFDM BPSK

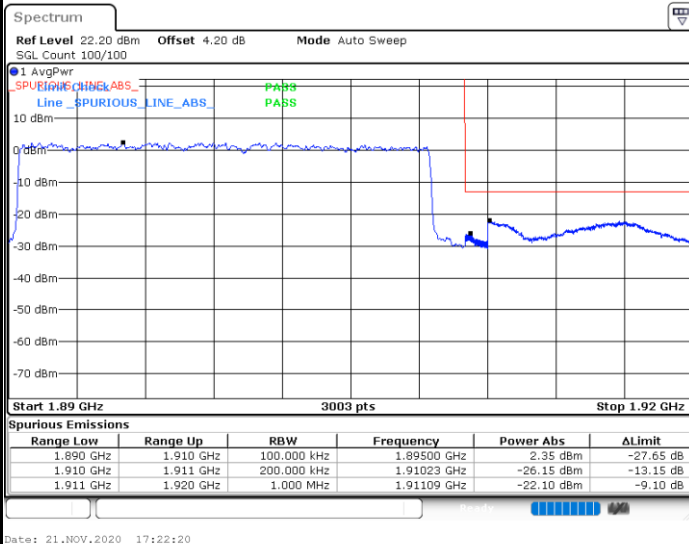
Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Highest Band Edge / Full RB

Channel Power < -13dBm Pass

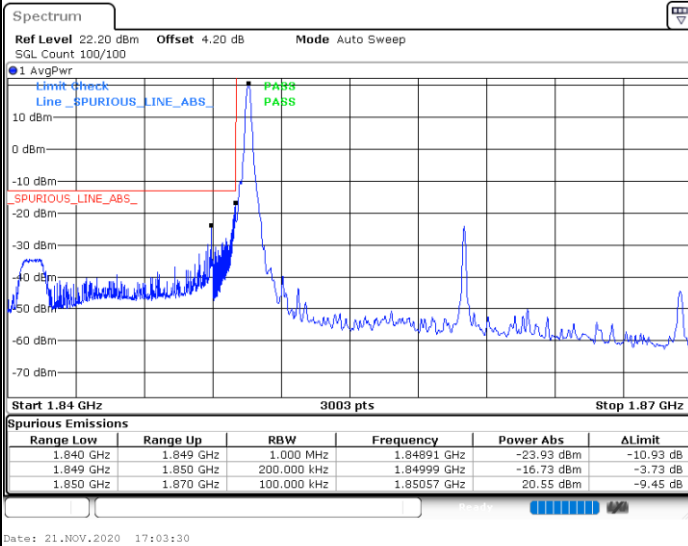




FR1 n2 / 20MHz / DFT-S OFDM QPSK

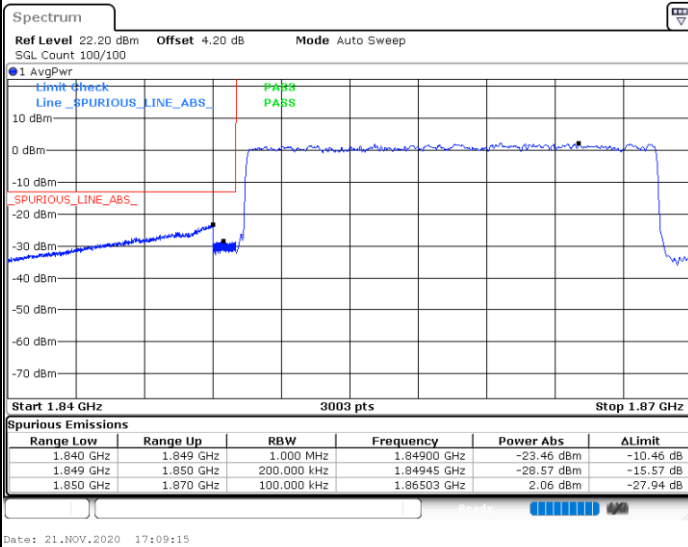
Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass



Lowest Band Edge / Full RB

Channel Power < -13dBm Pass

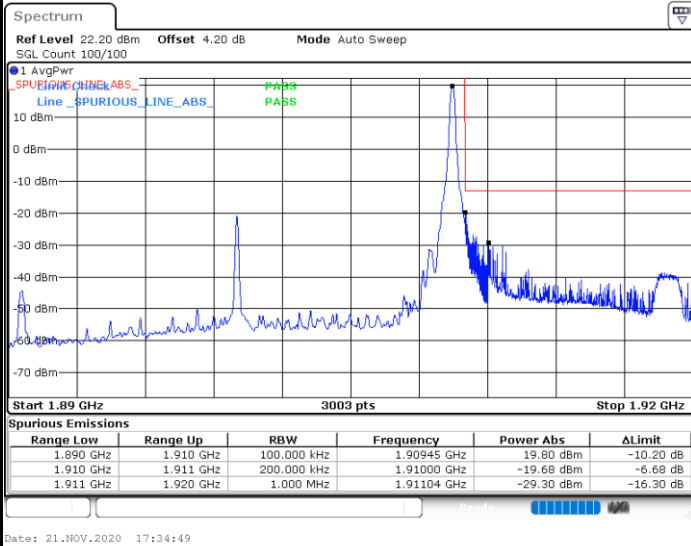




FR1 n2 / 20MHz / DFT-S OFDM QPSK

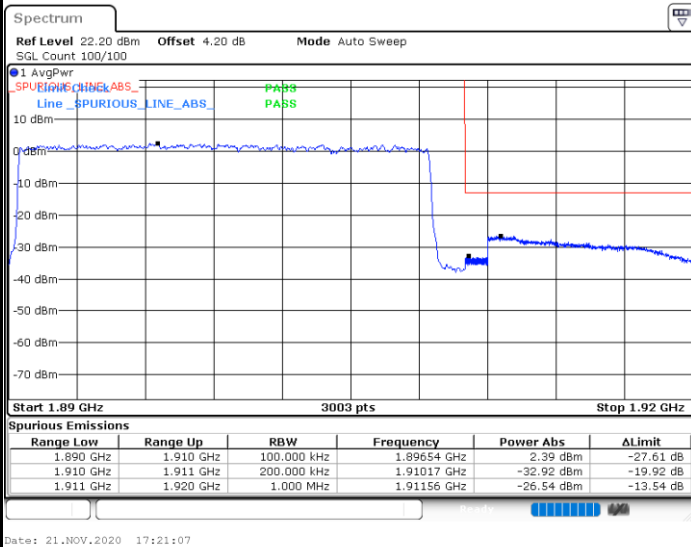
Highest Band Edge / 1 RB

Channel Power < -13dBm Pass



Highest Band Edge / Full RB

Channel Power < -13dBm Pass



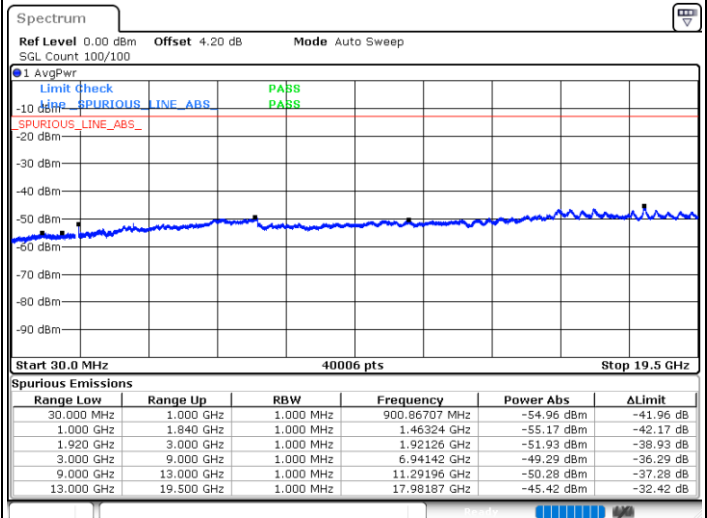
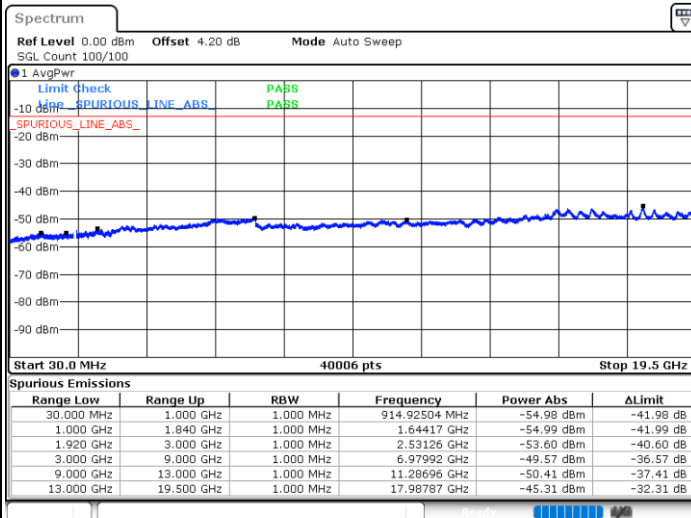


Conducted Spurious Emission

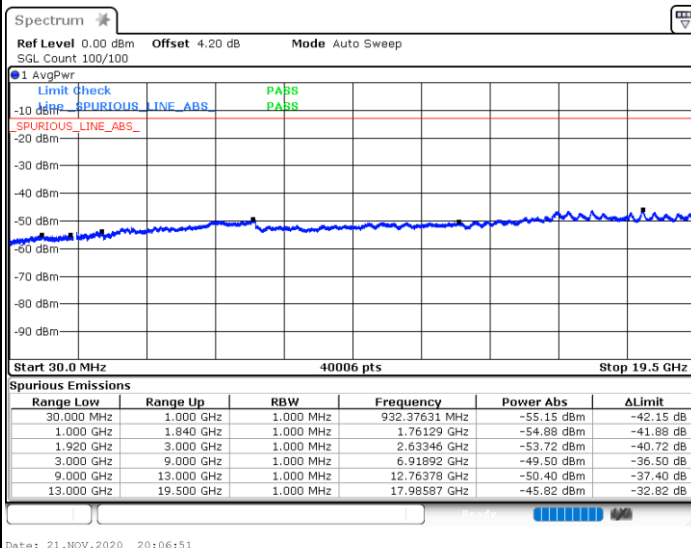
FR1 n2 / 5MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

Middle Channel / 1RB



Highest Channel / 1RB

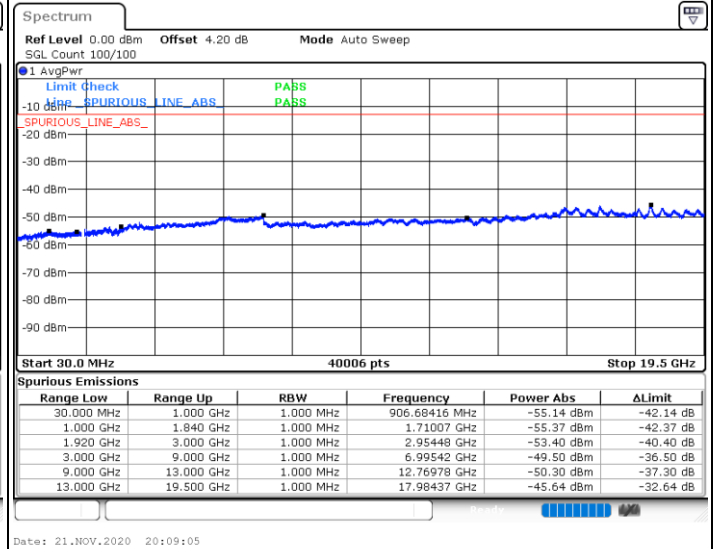
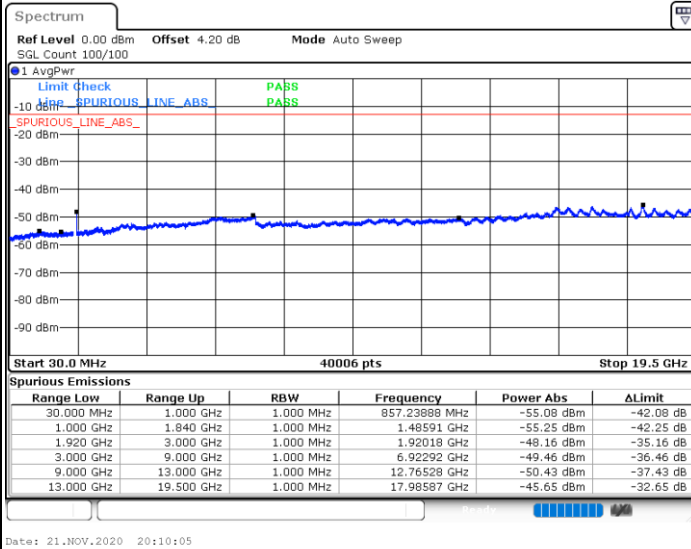




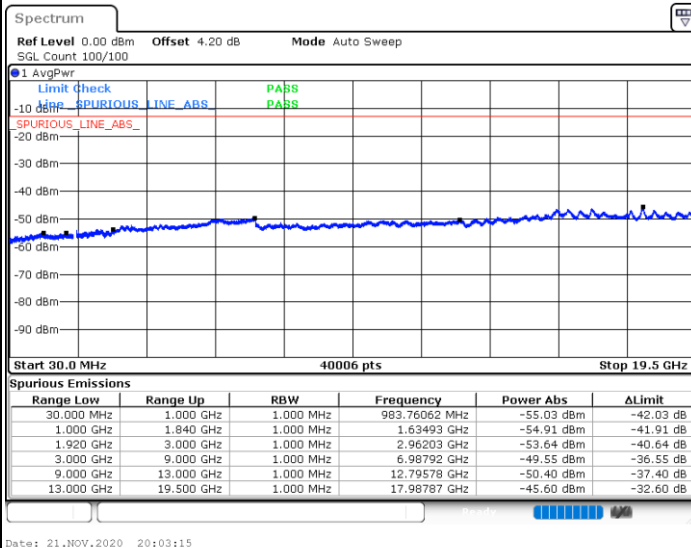
FR1 n2 / 5MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

Middle Channel / 1RB



Highest Channel / 1RB

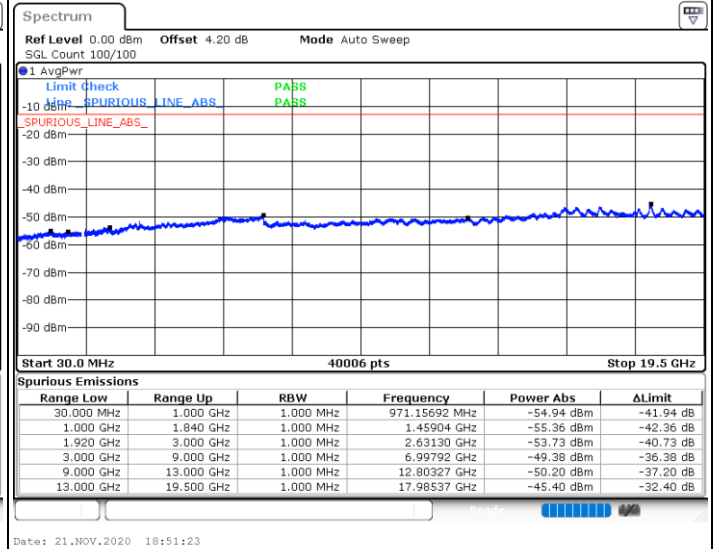
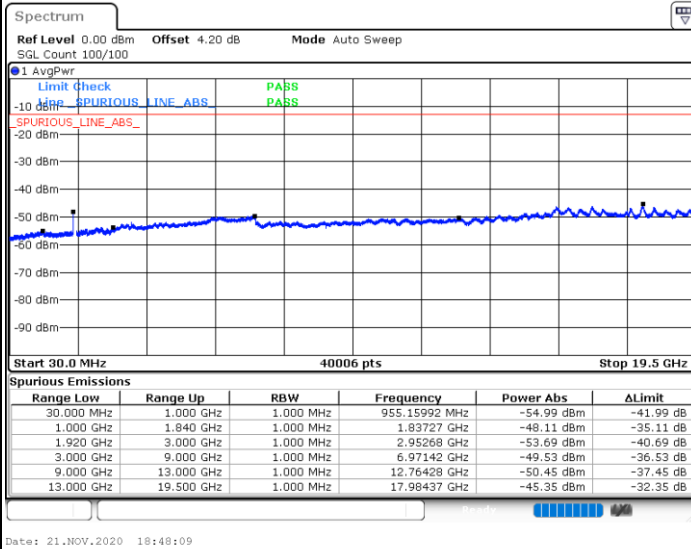




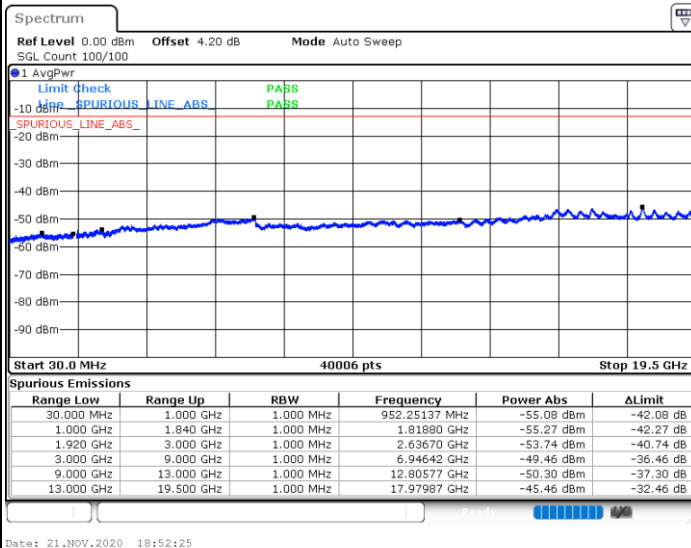
FR1 n2 / 10MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

Middle Channel / 1RB



Highest Channel / 1RB

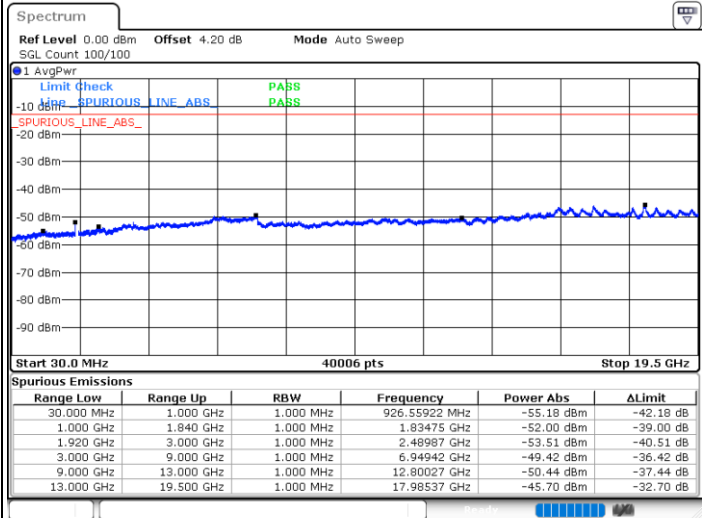
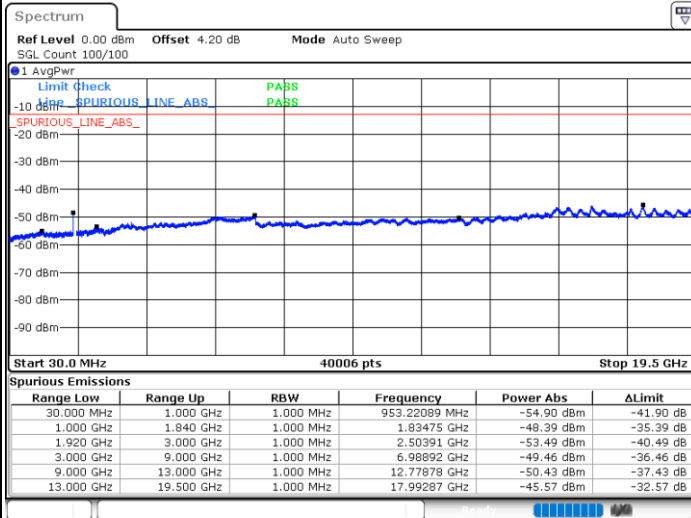




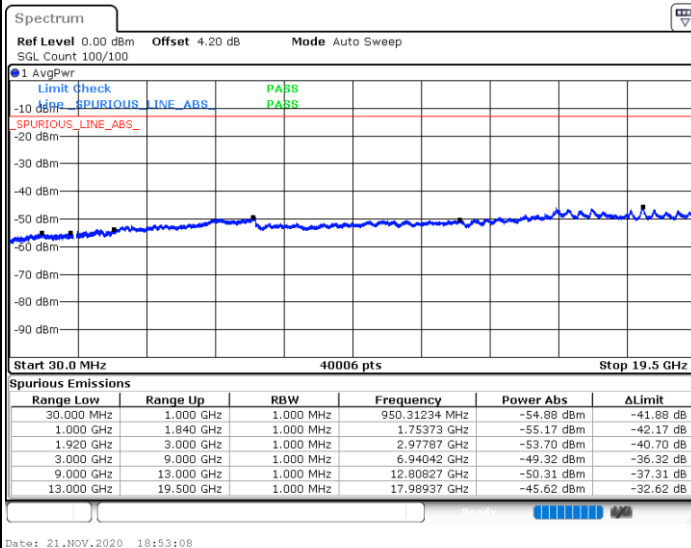
FR1 n2 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

Middle Channel / 1RB



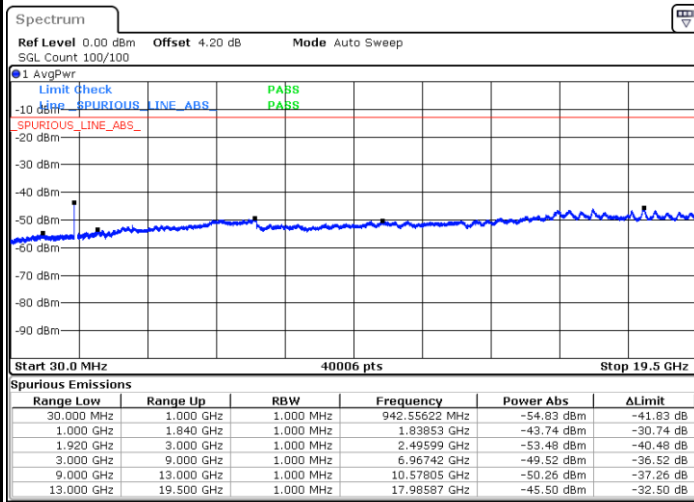
Highest Channel / 1RB





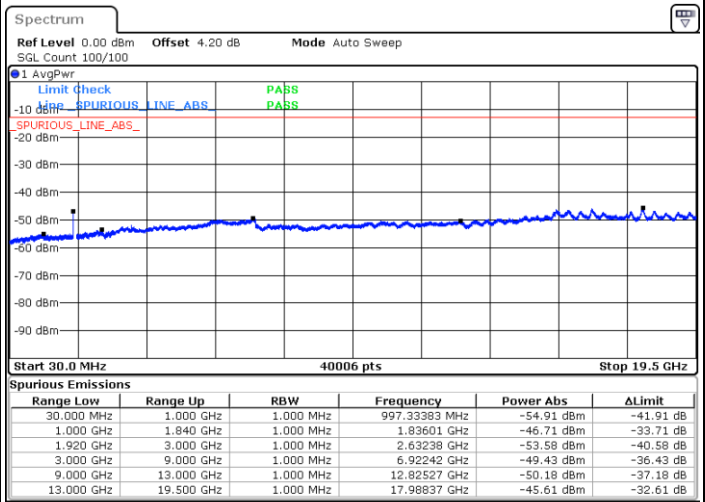
FR1 n2 / 20MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB



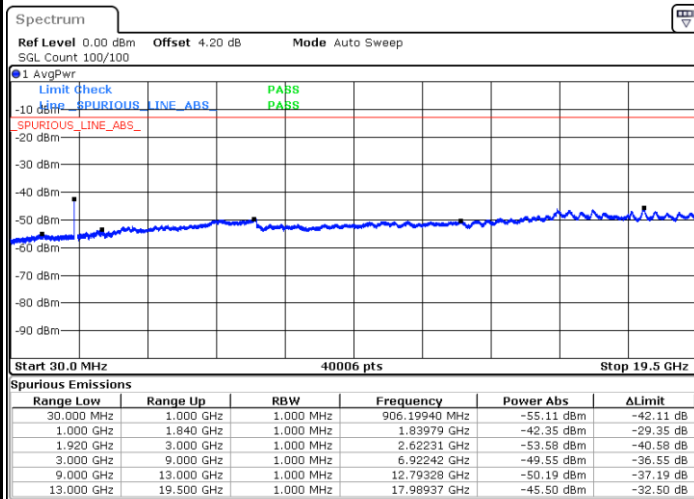
Date: 21.NOV.2020 16:49:45

Middle Channel / 1RB



Date: 21.NOV.2020 16:56:19

Highest Channel / 1RB

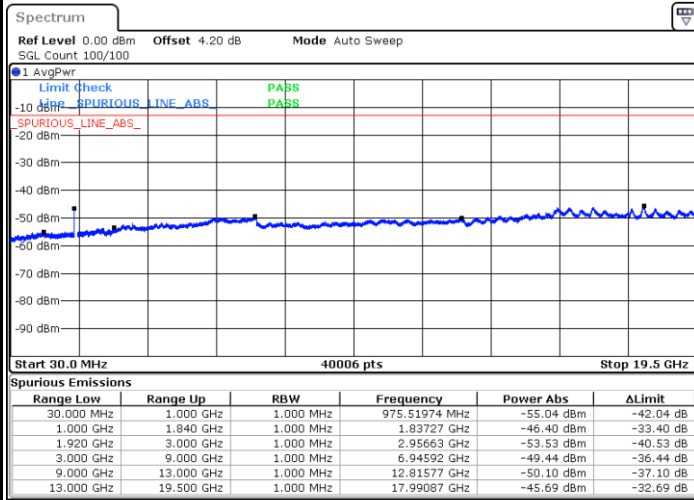


Date: 21.NOV.2020 16:58:14



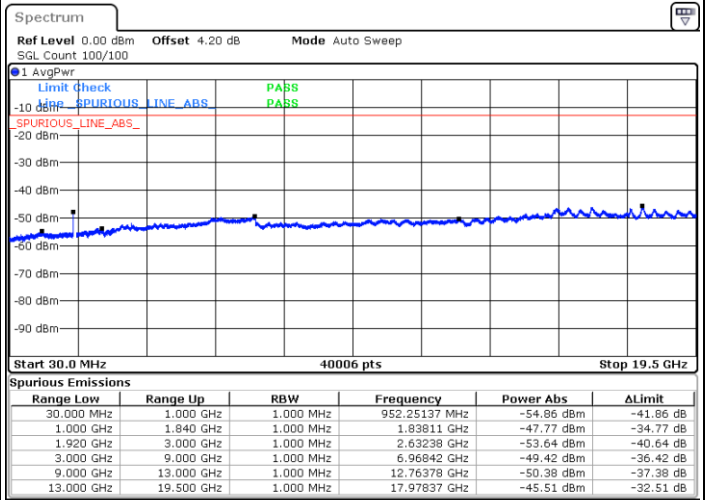
FR1 n2 / 20MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB



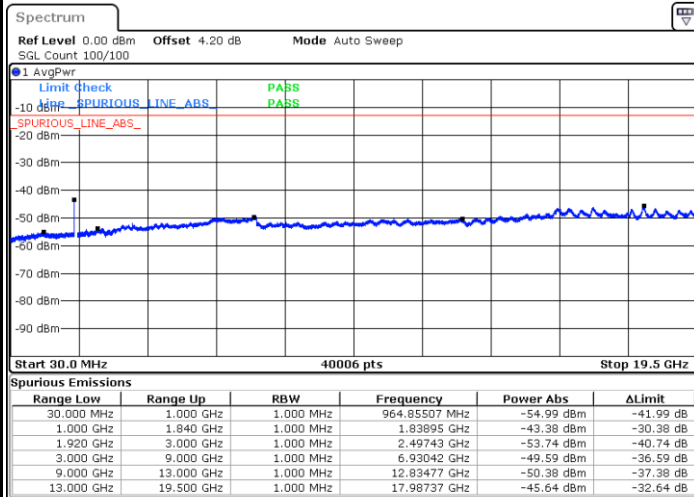
Date: 21.NOV.2020 16:52:11

Middle Channel / 1RB



Date: 21.NOV.2020 16:53:31

Highest Channel / 1RB



Date: 21.NOV.2020 17:02:47

**Frequency Stability**

Test Conditions		NR n2 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Within Band
		Deviation (ppm)	Result
50	Normal Voltage	0.0014	PASS
40	Normal Voltage	0.0017	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0013	
10	Normal Voltage	0.0013	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0019	
-20	Normal Voltage	0.0015	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0019	
20	Normal Voltage	0.0013	
20	Battery End Point	0.0021	

Note:

1. Normal Voltage =7.74 V. ; Battery End Point (BEP) =7.2 V. ; Maximum Voltage =8.9 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

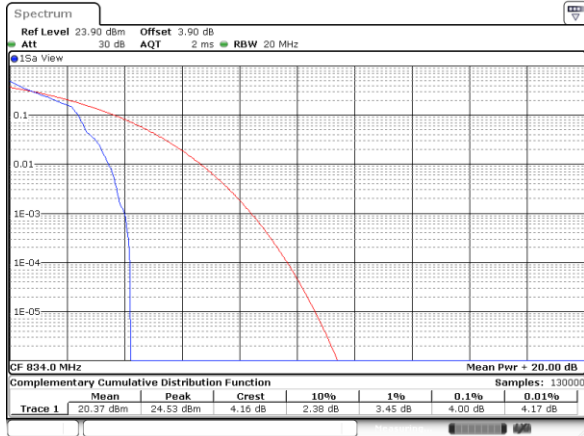


5G NR n5

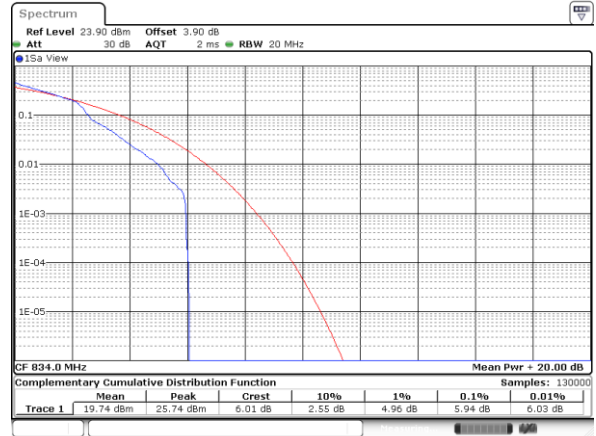
NSA

Peak-to-Average Ratio

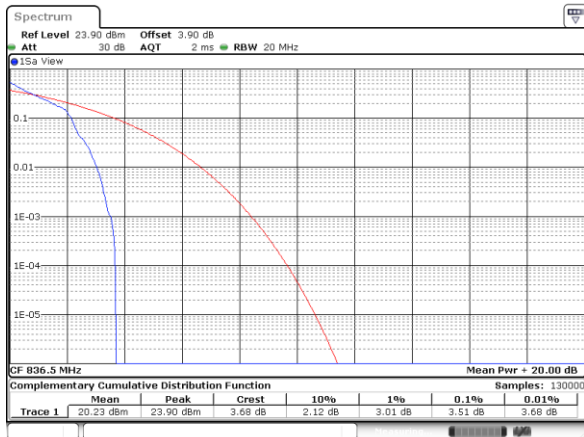
Mode	FR1 n5+2A / 20MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	PI/2 BPSK	QPSK	QPSK	Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.00	4.00	5.94	5.42	PASS
Middle CH	3.51	3.74	5.33	4.96	
Highest CH	3.45	3.51	4.90	4.90	

FR1 n5+2A / 20MHz / DFT-S OFDM
PI/2 BPSK
QPSK
Lowest Channel / 1RB
Lowest Channel / 1RB


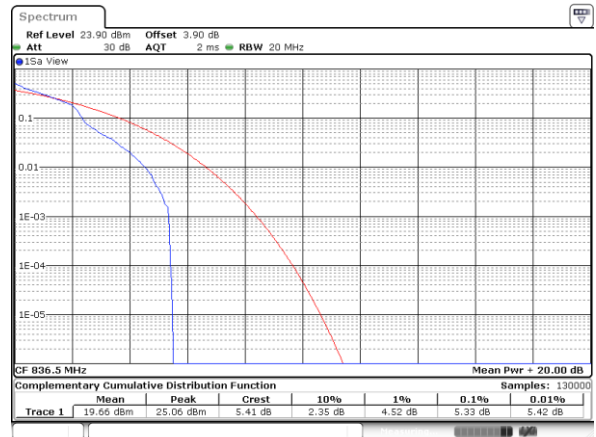
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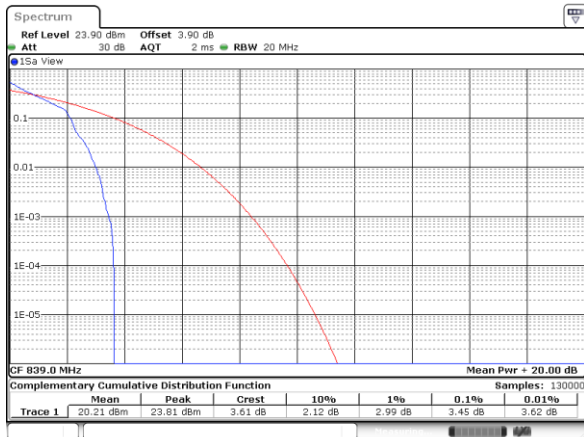
Date: 24.NOV.2020 04:56:40

Middle Channel / 1 RB
Middle Channel / 1 RB


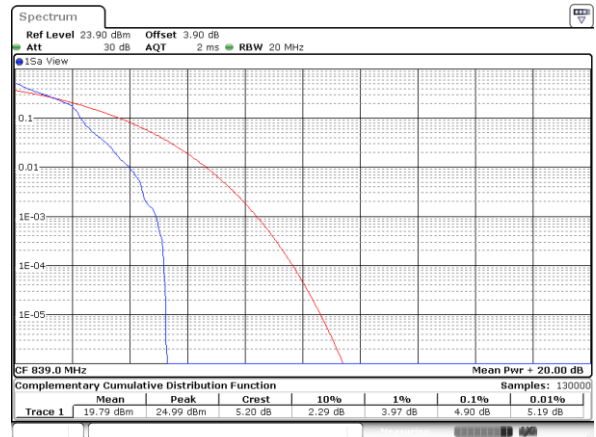
Date: 24.NOV.2020 04:57:15



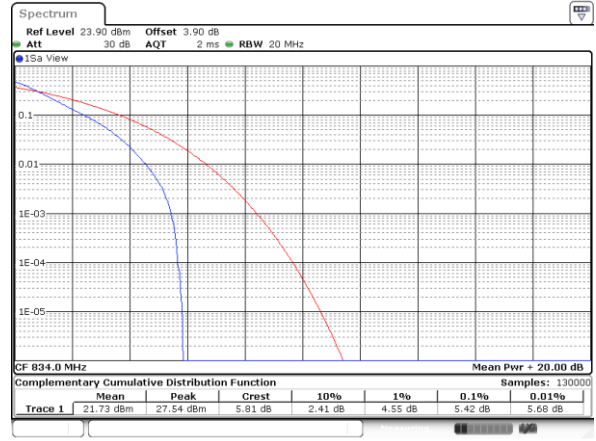
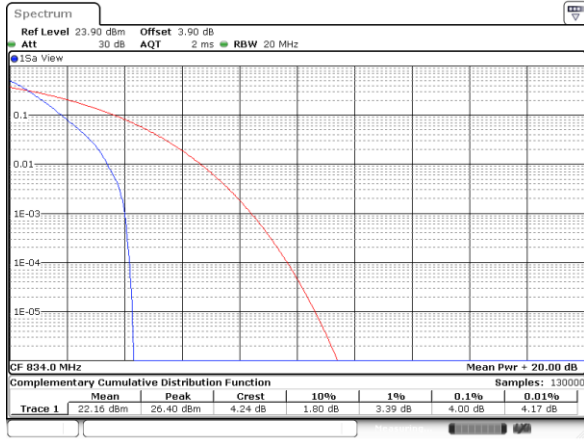
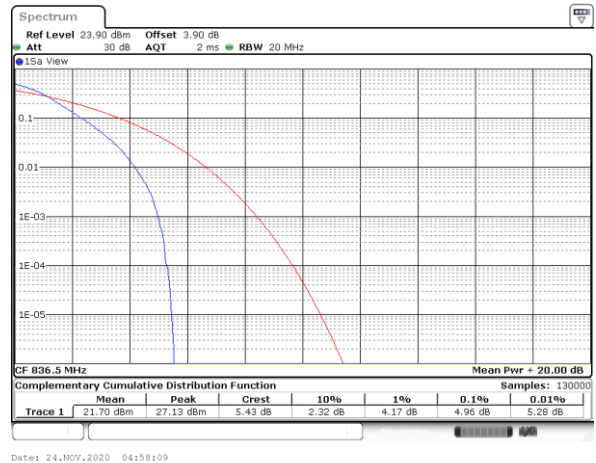
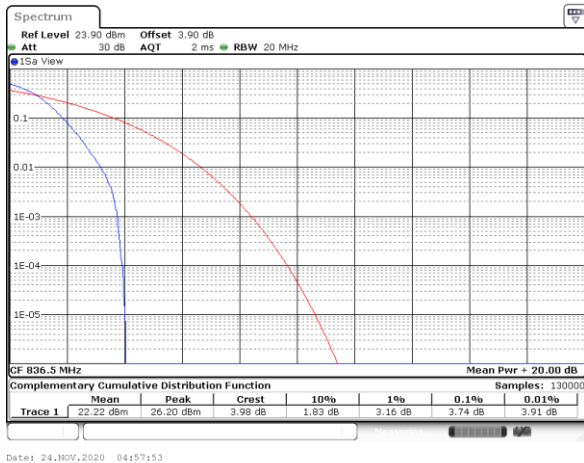
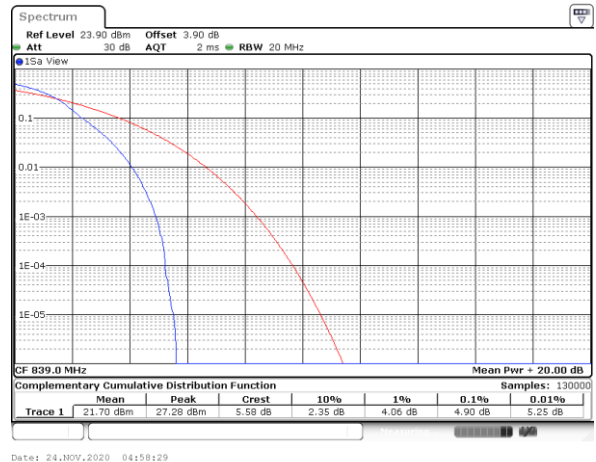
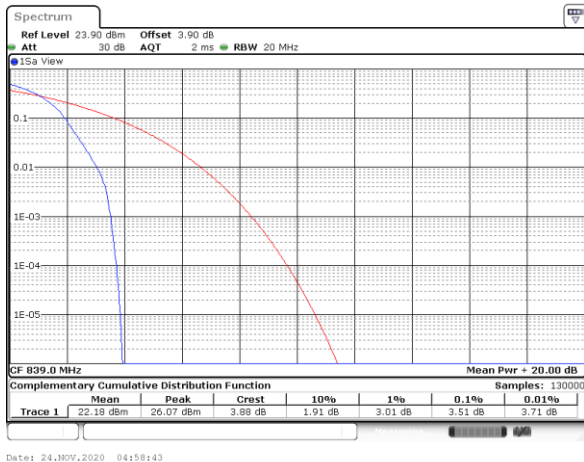
Date: 24.NOV.2020 04:57:01

Highest Channel / 1 RB
Highest Channel / 1 RB


Date: 24.NOV.2020 04:58:58



Date: 24.NOV.2020 04:59:13

FR1 n5+2A / 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 n5+2A : 26dB BW(MHz) / CP-OFDM							
BW	5MHz	5MHz	5MHz	5MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	4.92	4.87	4.83	4.89				

Mode	FR1 n5+2A : 26dB BW(MHz) / CP-OFDM							
BW	10MHz	10MHz	10MHz	10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	9.87	9.79	9.83	9.89				

Mode	FR1 n5+2A : 26dB BW(MHz) / CP-OFDM							
BW	15MHz	15MHz	15MHz	15MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	15.04	15.01	14.86	14.92				

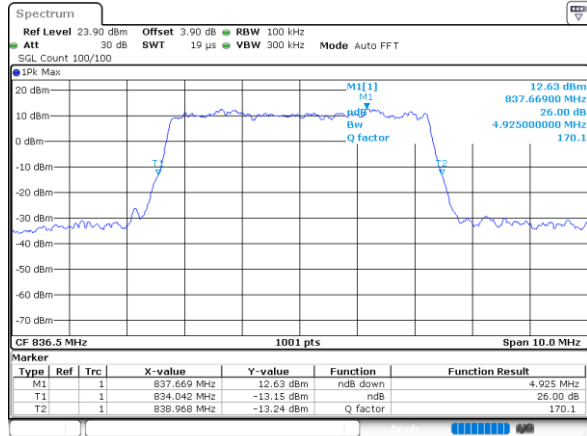
Mode	FR1 n5+2A : 26dB BW(MHz) / CP-OFDM							
BW	20MHz	20MHz	20MHz	20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Middle CH	19.9	19.9	19.94	19.86				



FR1 n5+2A / 5MHz / CP-OFDM

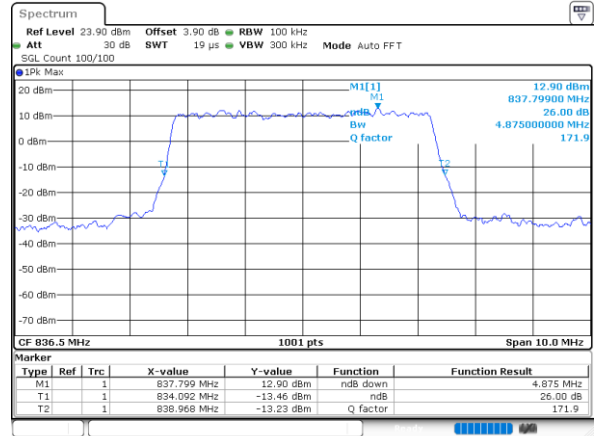
QPSK

Middle Channel



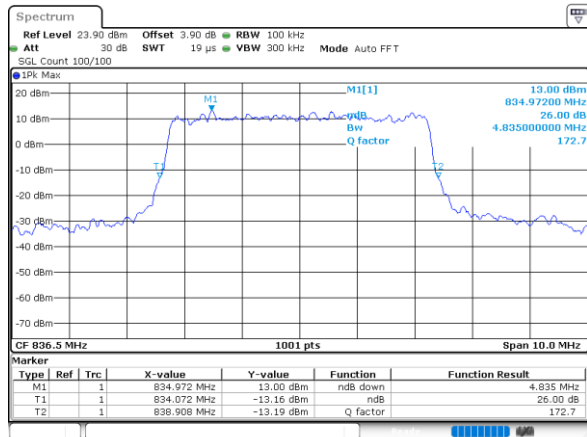
16QAM

Middle Channel



64QAM

Middle Channel



256QAM

Middle Channel

