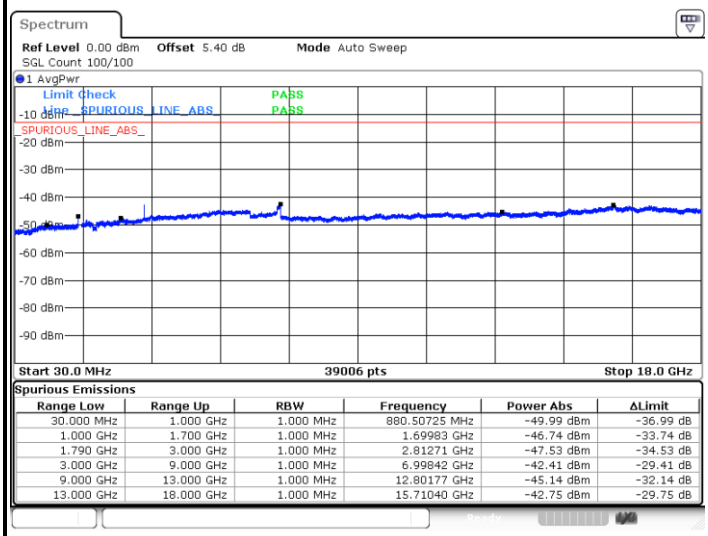
FR1 n66 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

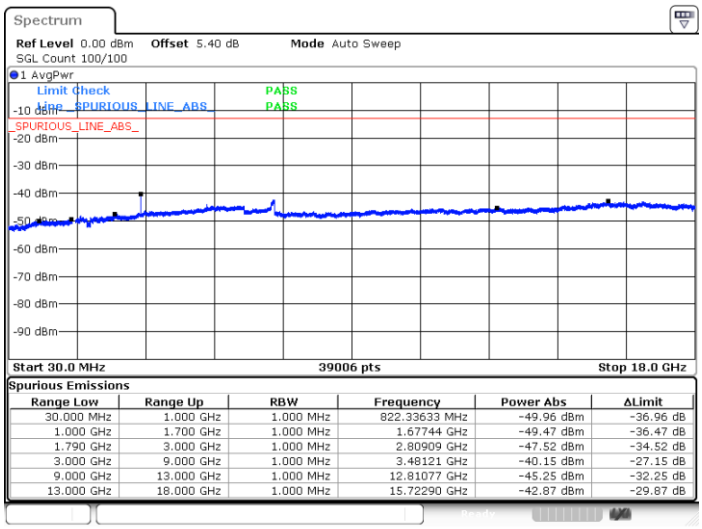


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	880.50725 MHz	-49.99 dBm	-36.99 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69983 GHz	-46.74 dBm	-33.74 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.81271 GHz	-47.53 dBm	-34.53 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99842 GHz	-42.41 dBm	-29.41 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.80177 GHz	-45.14 dBm	-32.14 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.71040 GHz	-42.75 dBm	-29.75 dB

Date: 9.JUN.2020 05:26:22

Middle Channel / 1RB1

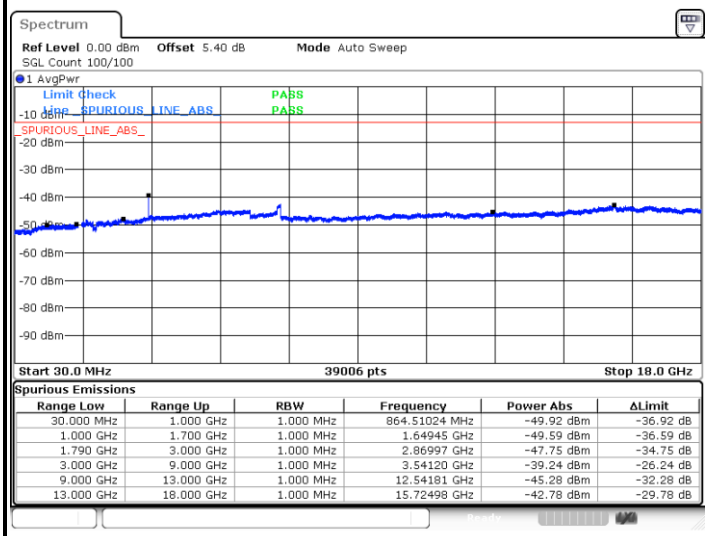


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	822.33633 MHz	-49.96 dBm	-36.96 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.67744 GHz	-49.47 dBm	-36.47 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.80909 GHz	-47.52 dBm	-34.52 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.48121 GHz	-40.15 dBm	-27.15 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.81077 GHz	-45.25 dBm	-32.25 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.72290 GHz	-42.87 dBm	-29.87 dB

Date: 9.JUN.2020 04:26:43

Highest Channel / 1RB1



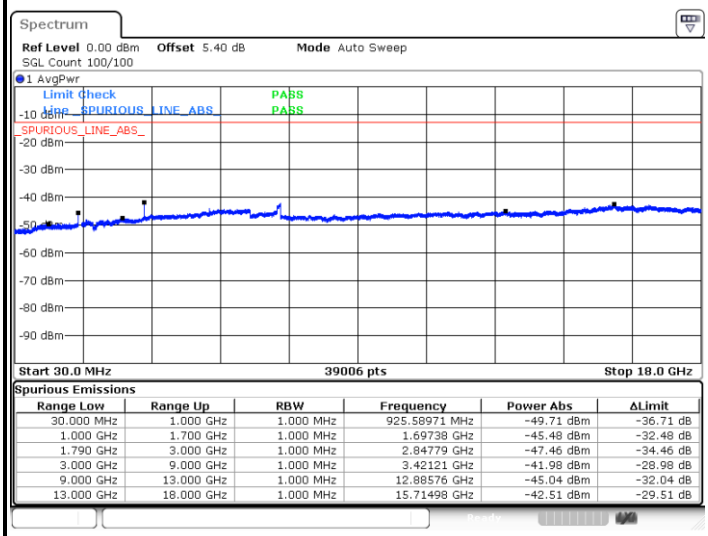
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	864.51024 MHz	-49.92 dBm	-36.92 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.64945 GHz	-49.59 dBm	-36.59 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.86997 GHz	-47.75 dBm	-34.75 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.54120 GHz	-39.24 dBm	-26.24 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.54181 GHz	-45.28 dBm	-32.28 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.72498 GHz	-42.78 dBm	-29.78 dB

Date: 9.JUN.2020 06:51:33

FR1 n66 / 15MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

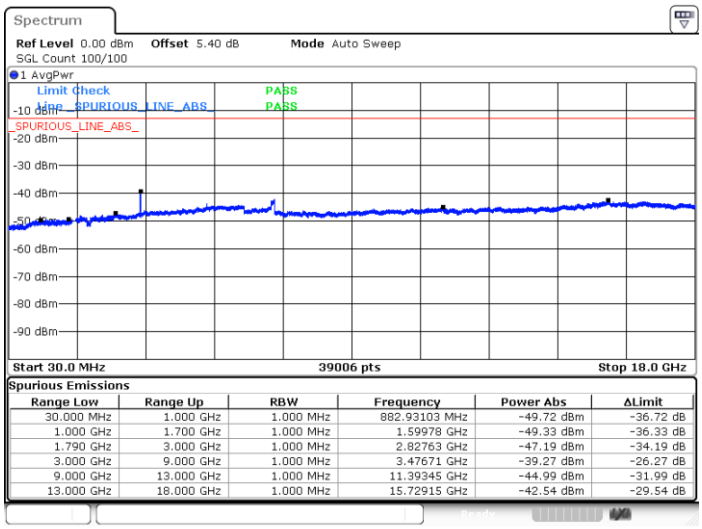


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	925.58971 MHz	-49.71 dBm	-36.71 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69738 GHz	-45.48 dBm	-32.48 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.84779 GHz	-47.46 dBm	-34.46 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42121 GHz	-41.98 dBm	-28.98 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.88576 GHz	-45.04 dBm	-32.04 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.71498 GHz	-42.51 dBm	-29.51 dB

Date: 8.JUN.2020 16:12:24

Middle Channel / 1RB1

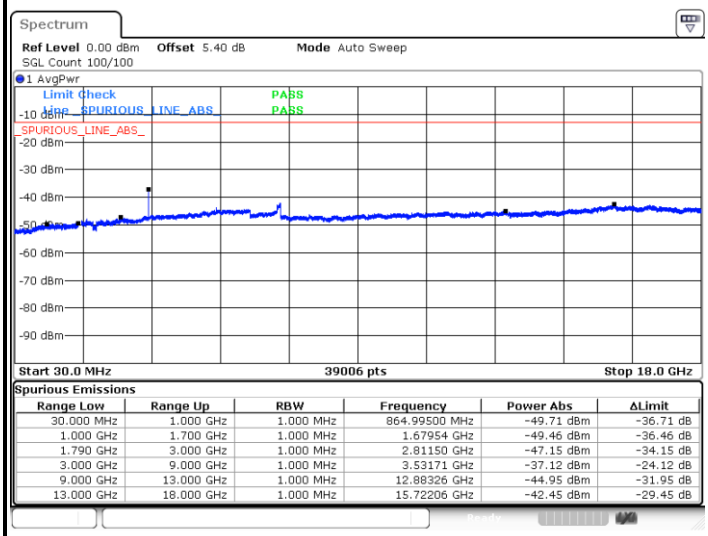


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	882.93103 MHz	-49.72 dBm	-36.72 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.59978 GHz	-49.33 dBm	-36.33 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.82763 GHz	-47.19 dBm	-34.19 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.47671 GHz	-39.27 dBm	-26.27 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.39345 GHz	-44.99 dBm	-31.99 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.72915 GHz	-42.54 dBm	-29.54 dB

Date: 8.JUN.2020 17:48:58

Highest Channel / 1RB1



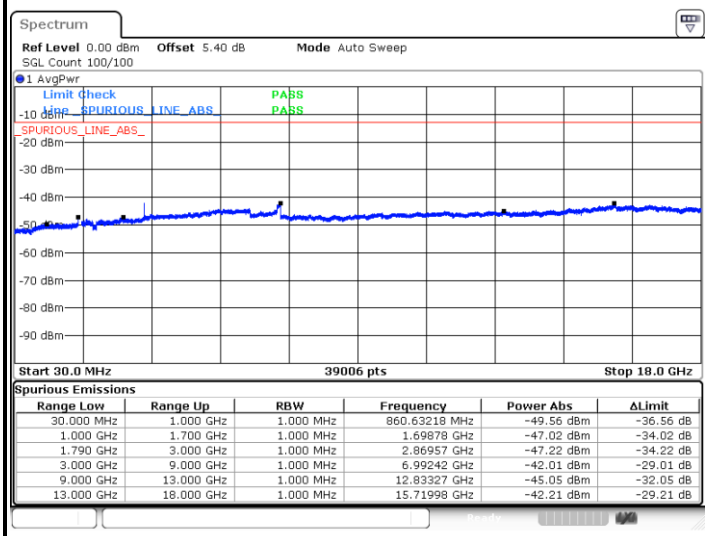
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	864.99500 MHz	-49.71 dBm	-36.71 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.67954 GHz	-49.46 dBm	-36.46 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.81150 GHz	-47.15 dBm	-34.15 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.53171 GHz	-37.12 dBm	-24.12 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.88326 GHz	-44.95 dBm	-31.95 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.72206 GHz	-42.45 dBm	-29.45 dB

Date: 8.JUN.2020 20:11:38

FR1 n66 / 20MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

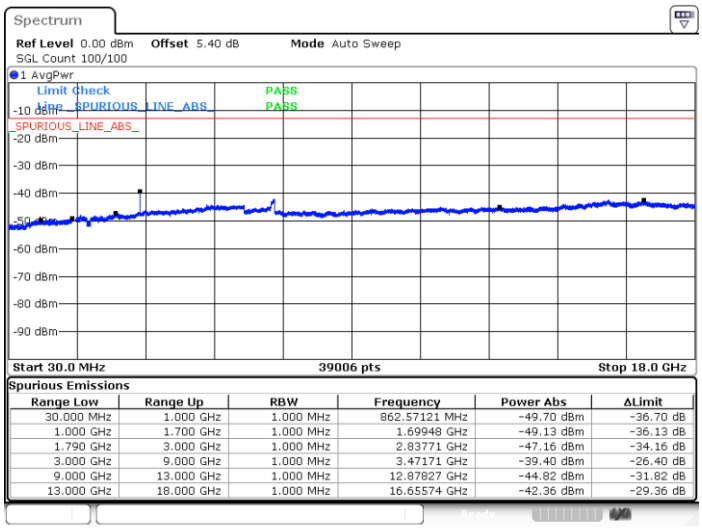


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	860.63218 MHz	-49.56 dBm	-36.56 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69878 GHz	-47.02 dBm	-34.02 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.86957 GHz	-47.22 dBm	-34.22 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99242 GHz	-42.01 dBm	-29.01 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.83327 GHz	-45.05 dBm	-32.05 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.71998 GHz	-42.21 dBm	-29.21 dB

Date: 5.JUN.2020 13:56:43

Middle Channel / 1RB1

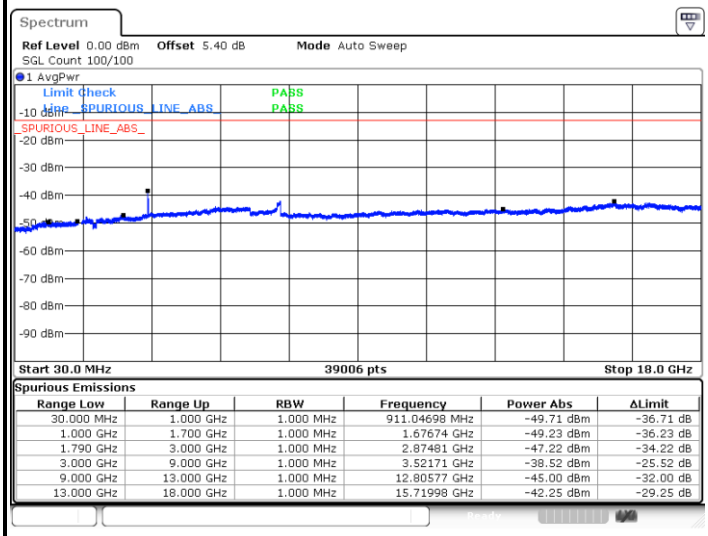


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	862.57121 MHz	-49.70 dBm	-36.70 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69948 GHz	-49.13 dBm	-36.13 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.83771 GHz	-47.16 dBm	-34.16 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.47171 GHz	-39.40 dBm	-26.40 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.87827 GHz	-44.82 dBm	-31.82 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.65574 GHz	-42.36 dBm	-29.36 dB

Date: 5.JUN.2020 11:16:24

Highest Channel / 1RB1



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	911.04698 MHz	-49.71 dBm	-36.71 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.67674 GHz	-49.23 dBm	-36.23 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.87481 GHz	-47.22 dBm	-34.22 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.52171 GHz	-38.52 dBm	-25.52 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.80577 GHz	-45.00 dBm	-32.00 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.71998 GHz	-42.25 dBm	-29.25 dB

Date: 5.JUN.2020 14:12:25

Frequency Stability

Test Conditions		FR1 n66 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0042	PASS
40	Normal Voltage	0.0019	
30	Normal Voltage	0.0009	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0046	
0	Normal Voltage	0.0011	
-10	Normal Voltage	0.0020	
-20	Normal Voltage	0.0040	
-30	Normal Voltage	0.0048	
20	Maximum Voltage	0.0028	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0024	

Note:

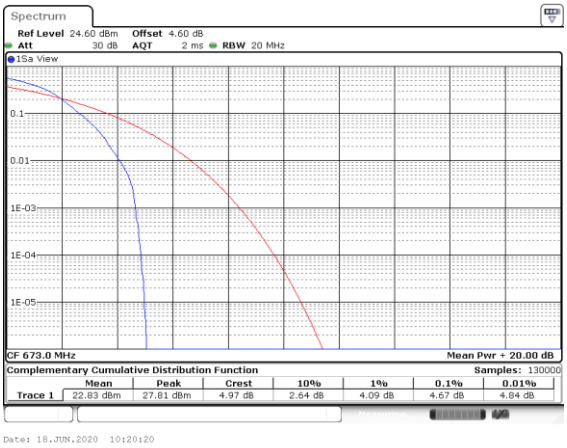
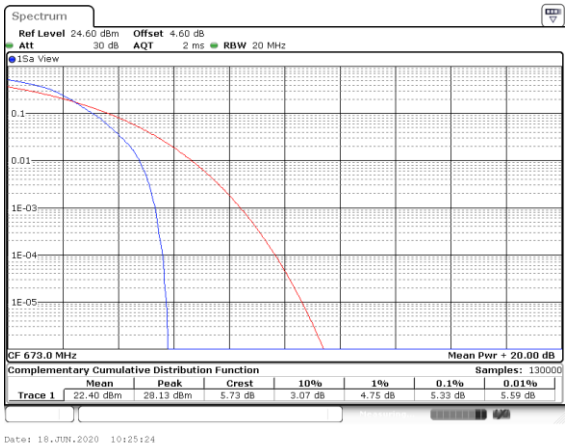
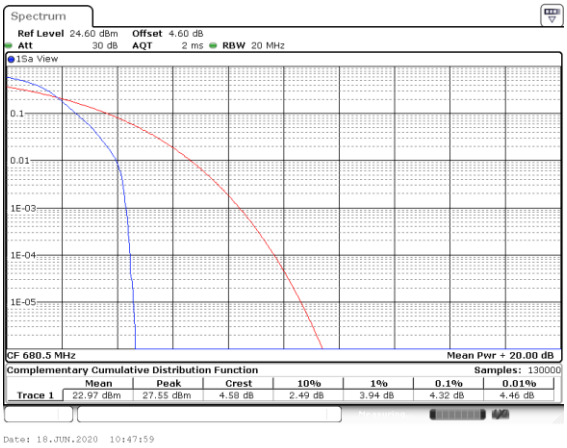
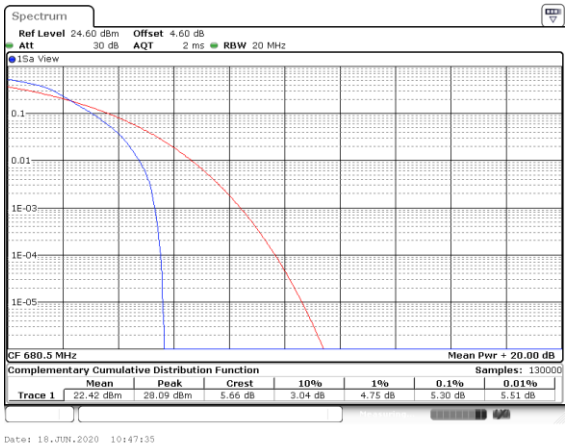
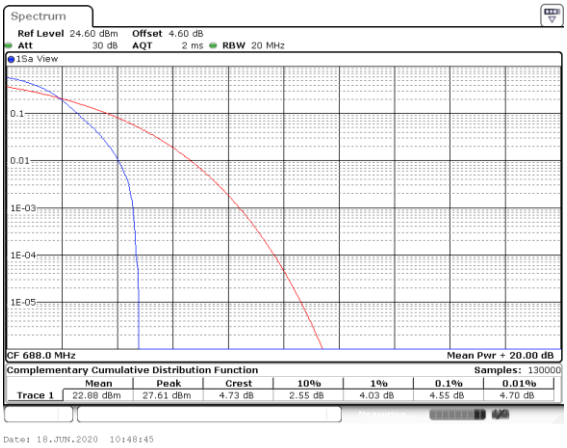
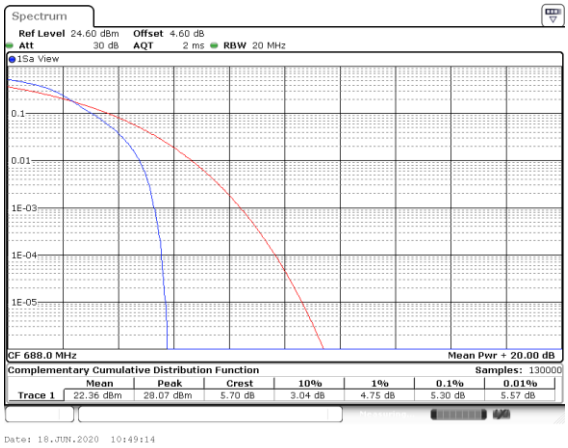
1. Normal Voltage =3.87 V.；Battery End Point (BEP) =3.60 V.；Maximum Voltage =4.45 V.

2. The frequency fundamental emissions stay within the authorized frequency block.

FR1 n71

Peak-to-Average Ratio

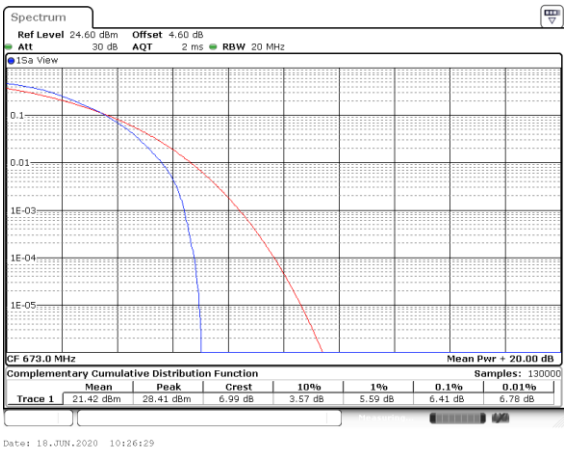
Mode	FR1 n71 / 20MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Lowest CH	4.67	5.33	6.41	6.87	PASS
Middle CH	4.32	5.30	6.52	6.87	
Highest CH	4.55	5.30	6.43	6.78	
Mode	FR1 n71 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Lowest CH	7.28				PASS
Middle CH	7.30				
Highest CH	7.42				

FR1 n71 / 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**
	

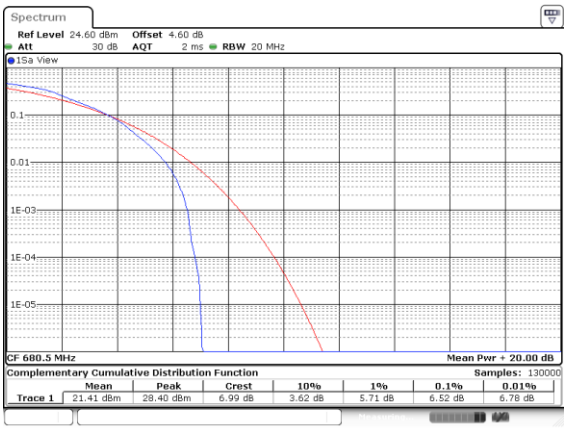
FR1 n71 / 20MHz / DFT-S OFDM

16QAM

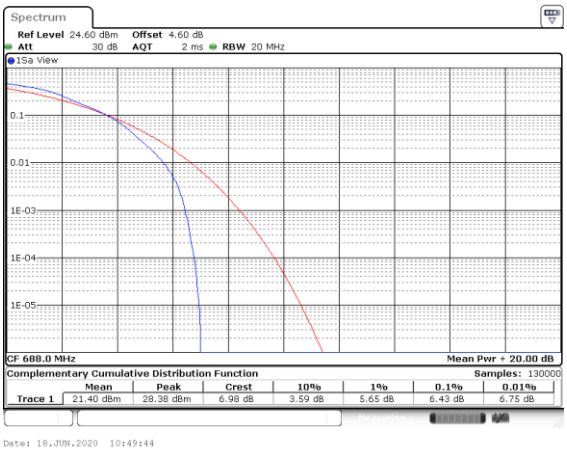
Lowest Channel / Full RB



Middle Channel / Full RB

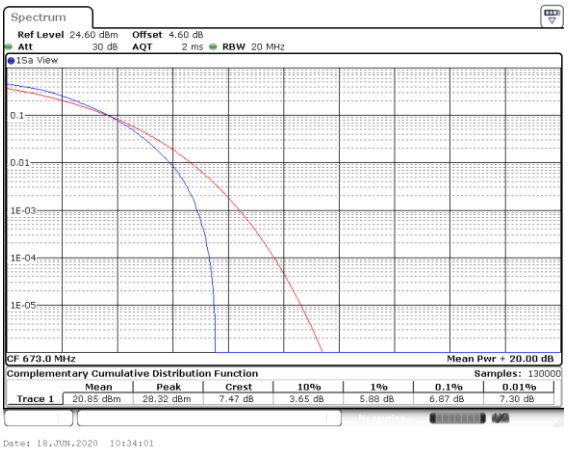


Highest Channel / Full RB

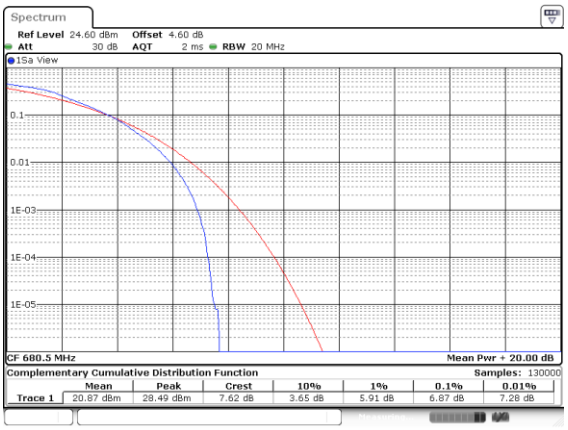


64QAM

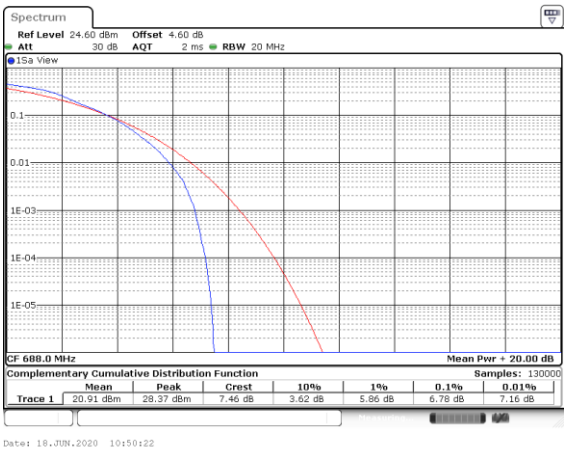
Lowest Channel / Full RB

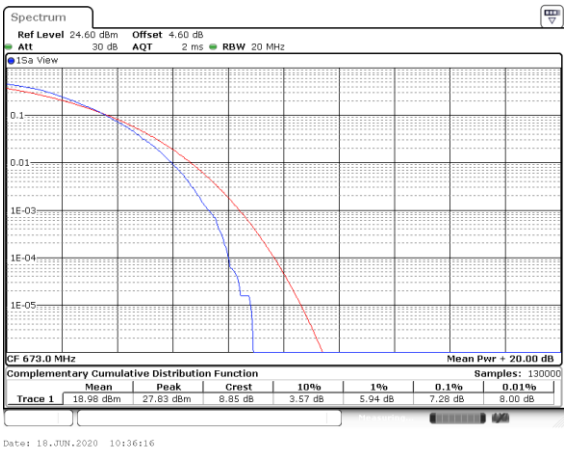
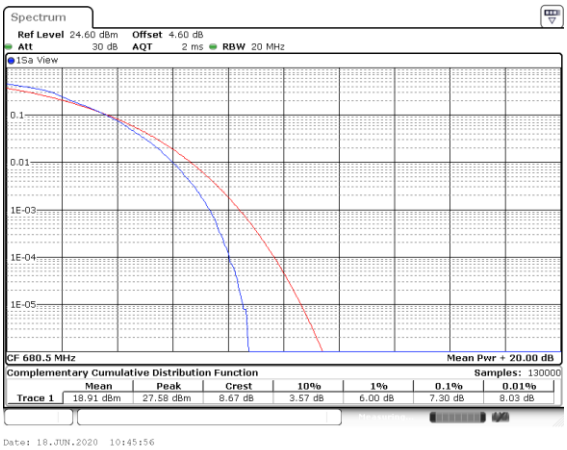
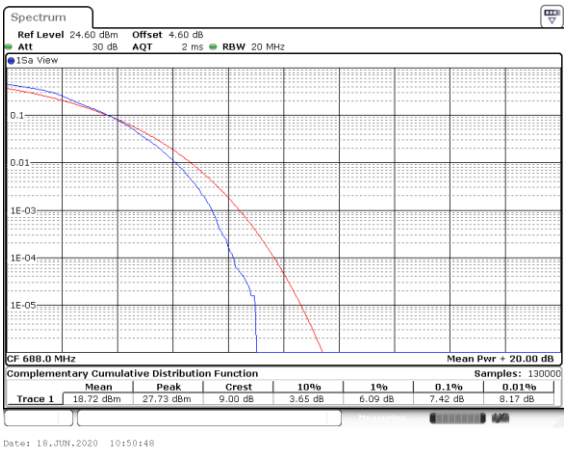


Middle Channel / Full RB



Highest Channel / Full RB

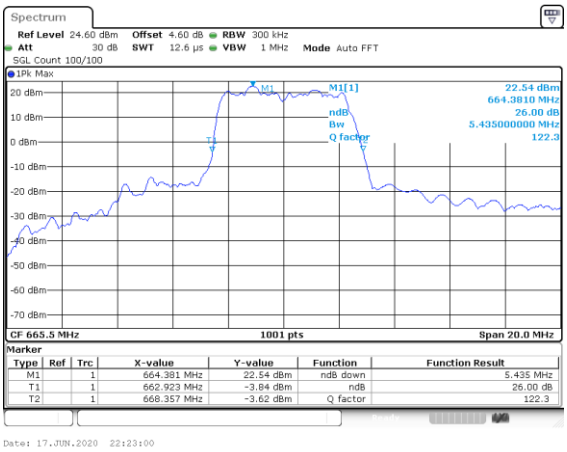
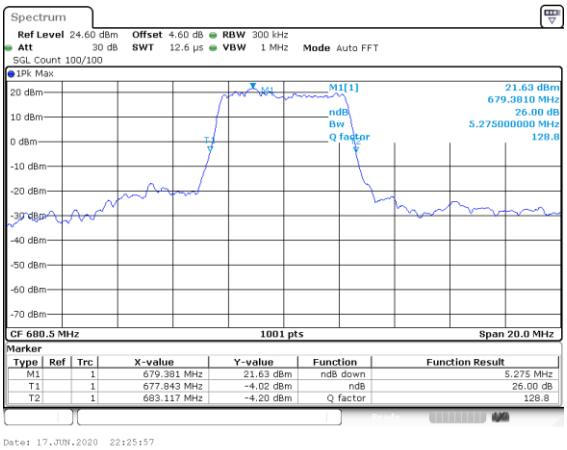
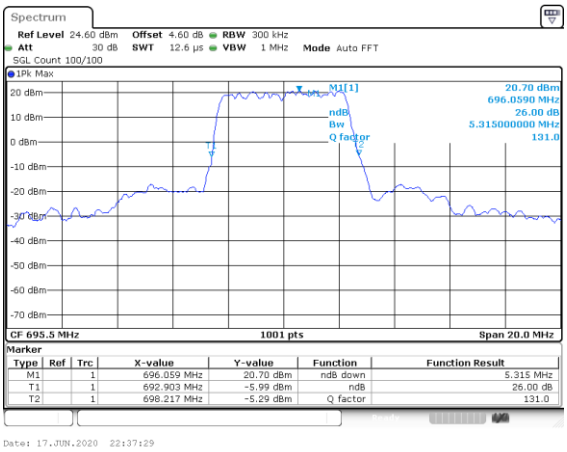


FR1 n71 / 20MHz / DFT-S OFDM	
256QAM	
Lowest Channel / Full RB	
	
Middle Channel / Full RB	
	
Highest Channel / Full RB	
	

26dB Bandwidth

Mode	FR1 n71 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK		PI/2 BPSK	
Lowest CH	5.44		9.79		14.63		18.70	
Middle CH	5.28		9.81		14.42		18.78	
Highest CH	5.32		9.73		14.12		18.94	

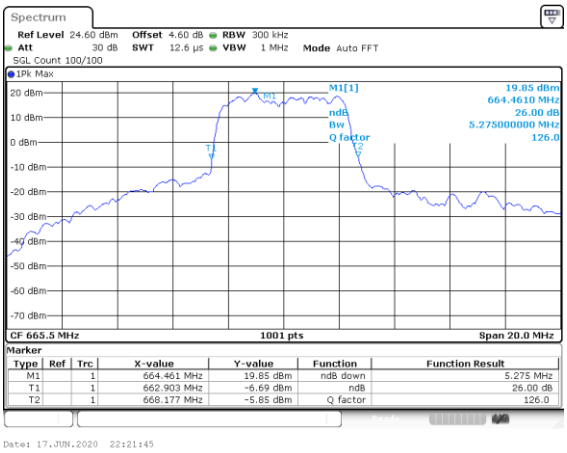
Mode	FR1 n71 : 26dB BW(MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	5.28	5.24	10.29	10.03	14.93	14.87	19.82	19.74
Middle CH	5.30	5.46	10.09	10.11	14.84	15.11	19.90	19.94
Highest CH	5.36	5.48	10.23	10.25	14.87	14.93	19.94	19.98
Mode	FR1 n71 : 26dB BW(MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	5.24	5.46	9.99	10.37	14.93	14.93	19.98	19.86
Middle CH	5.42	5.18	10.09	10.17	15.11	14.99	19.74	19.82
Highest CH	5.34	5.18	10.07	10.27	14.87	14.93	19.78	19.74

FR1 n71 / 5MHz / DFT-S OFDM	
PI/2 BPSK	
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

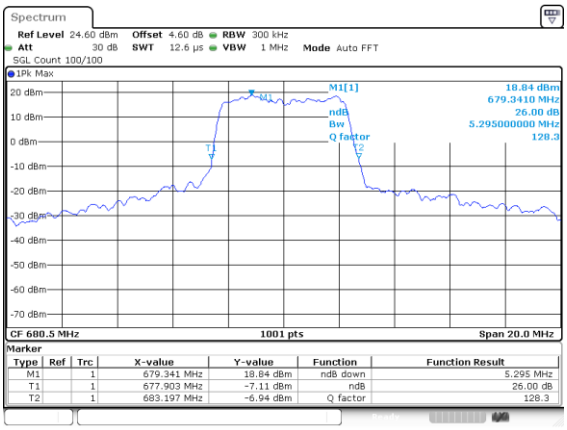
FR1 n71 / 5MHz / CP OFDM

QPSK

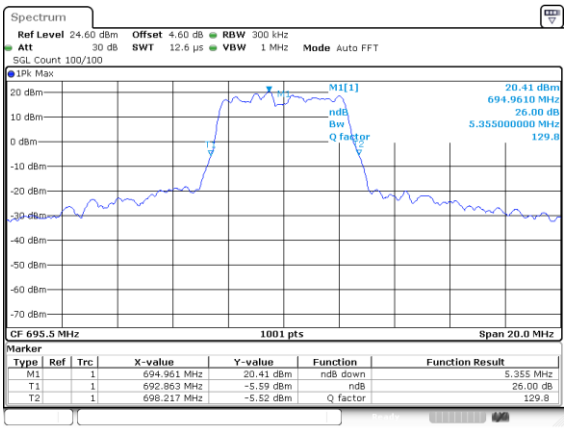
Lowest Channel



Middle Channel

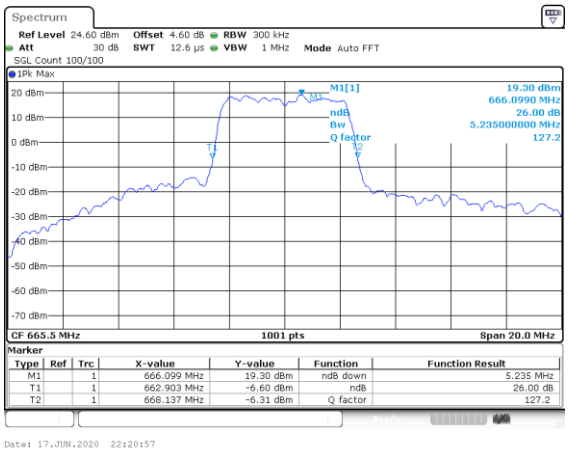


Highest Channel

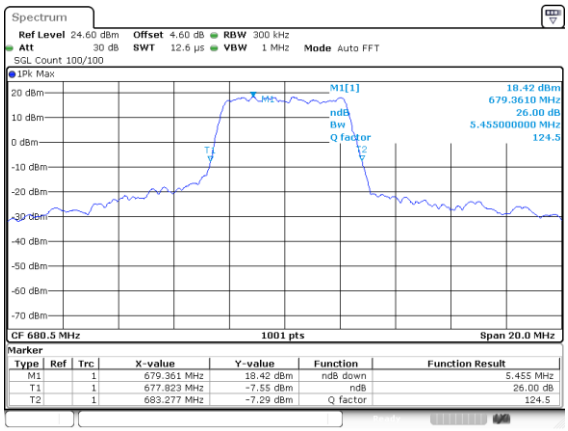


16QAM

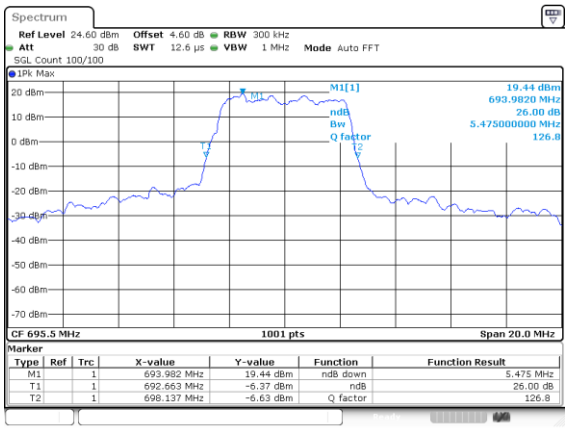
Lowest Channel



Middle Channel



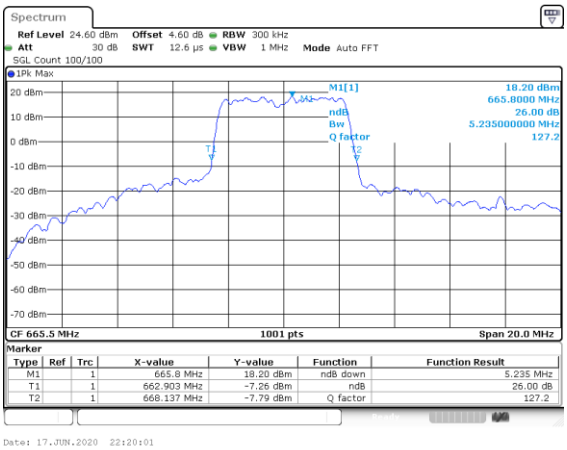
Highest Channel



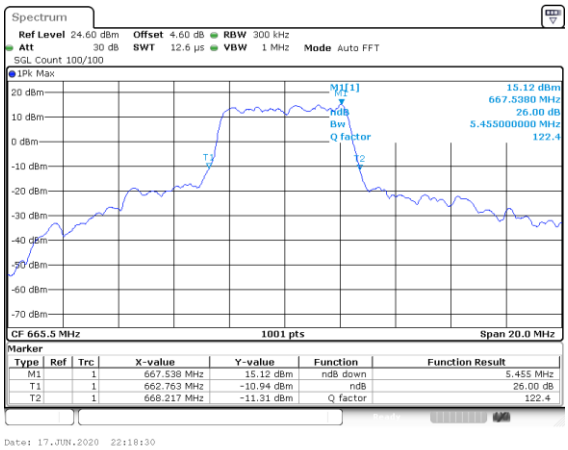
FR1 n71 / 5MHz / CP OFDM

64QAM

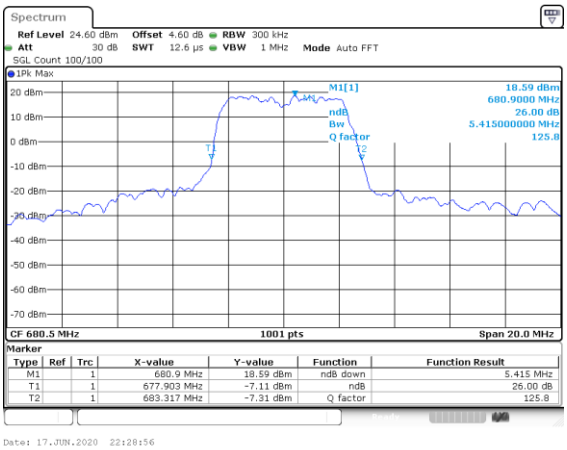
Lowest Channel



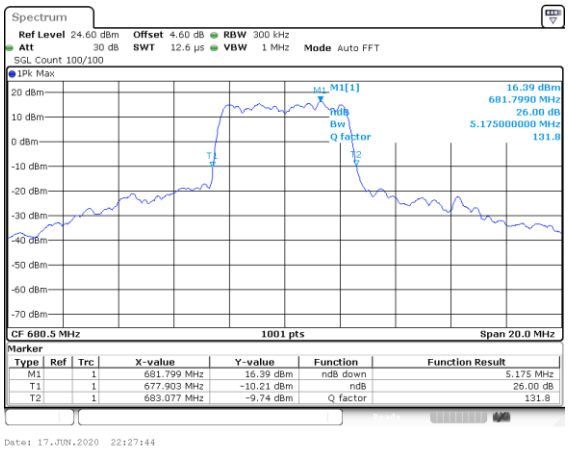
Lowest Channel



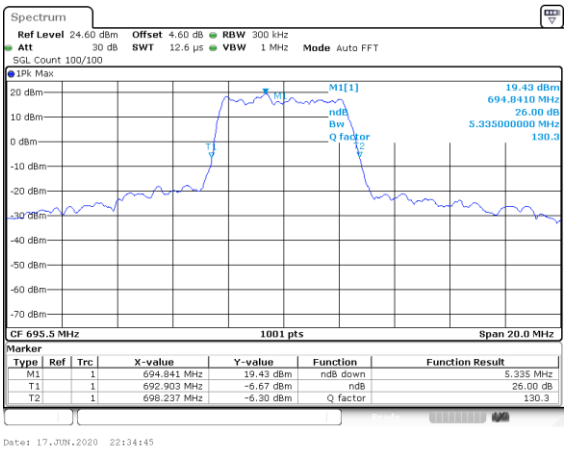
Middle Channel



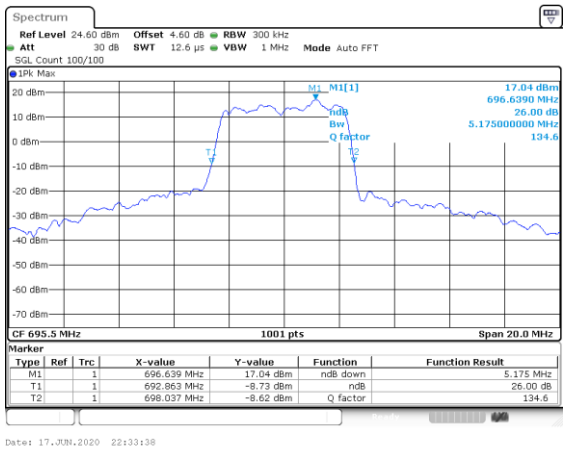
Middle Channel



Highest Channel



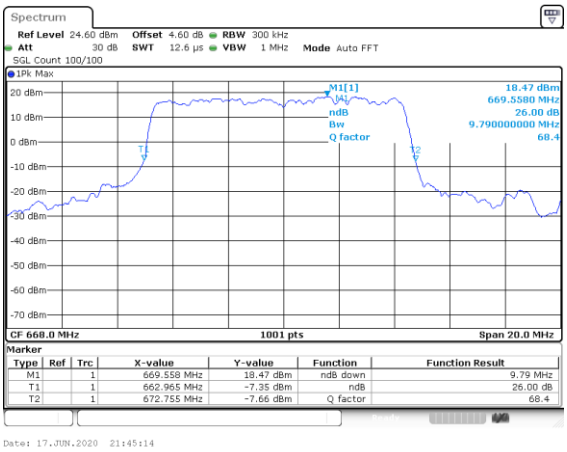
Highest Channel



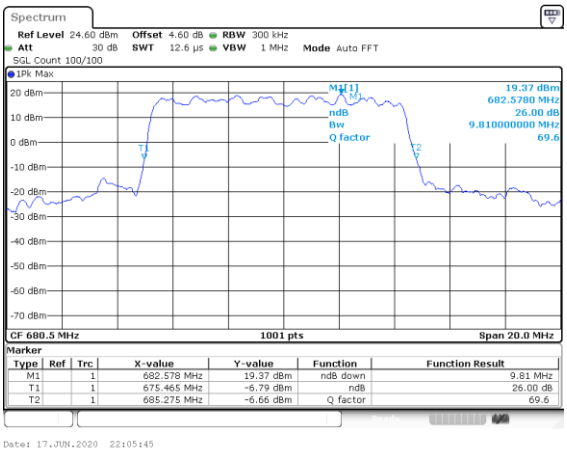
FR1 n71 / 10MHz / DFT-S OFDM

PI/2 BPSK

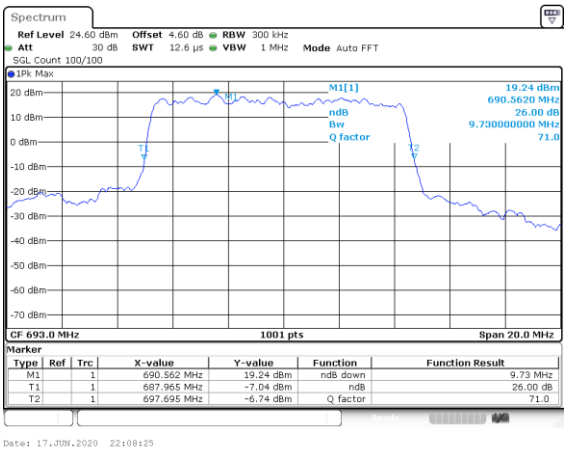
Lowest Channel



Middle Channel



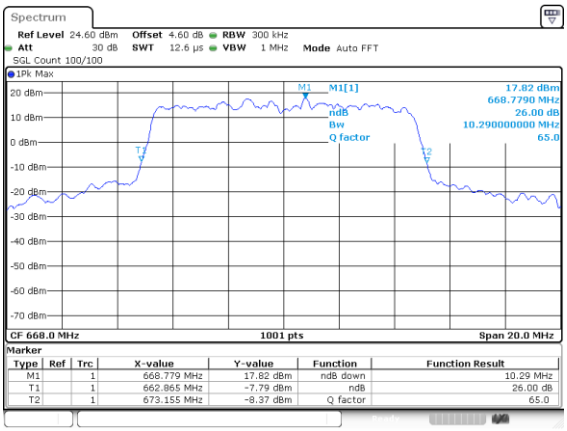
Highest Channel



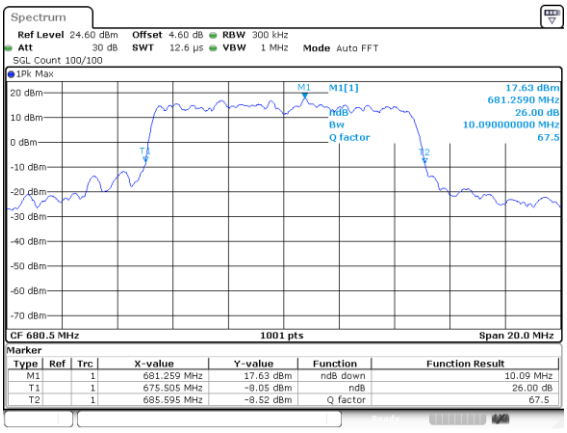
FR1 n71 / 10MHz / CP OFDM

QPSK

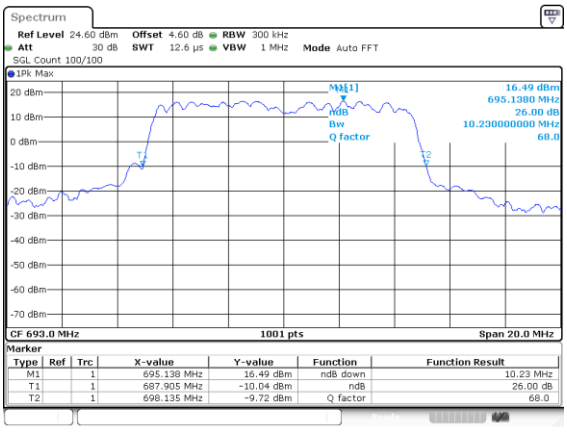
Lowest Channel



Middle Channel

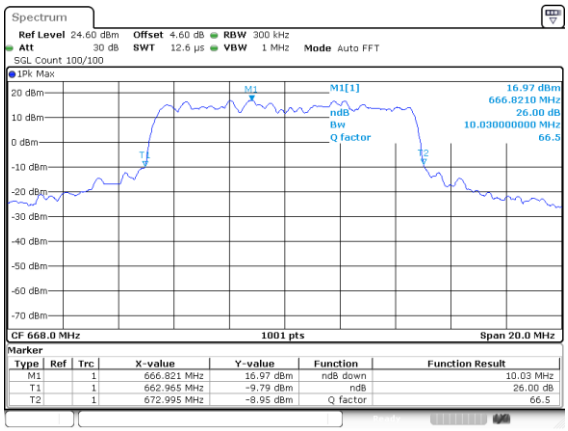


Highest Channel

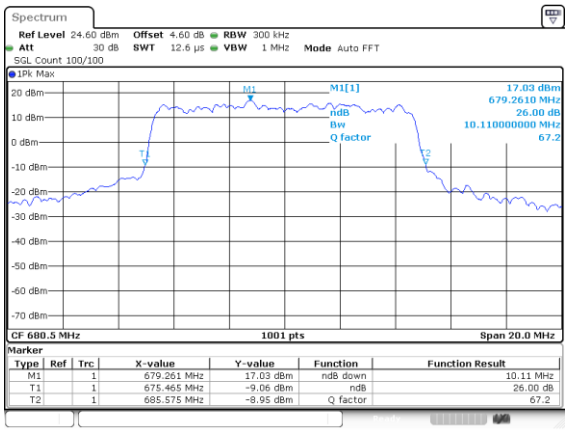


16QAM

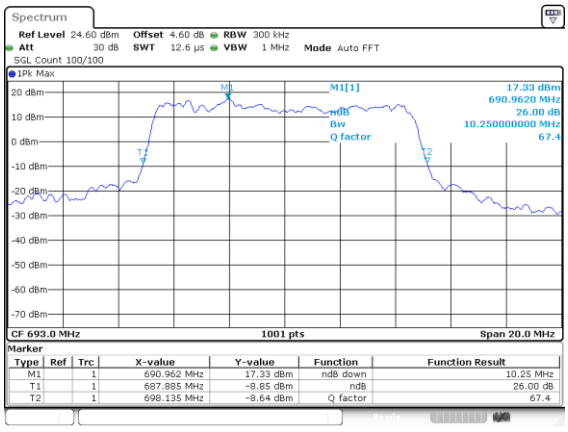
Lowest Channel



Middle Channel



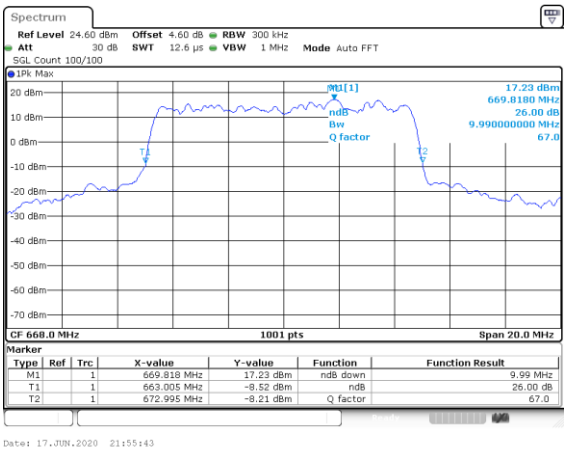
Highest Channel



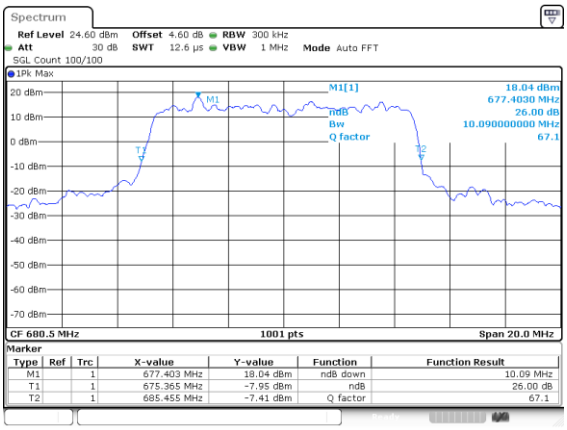
FR1 n71 / 10MHz / CP OFDM

64QAM

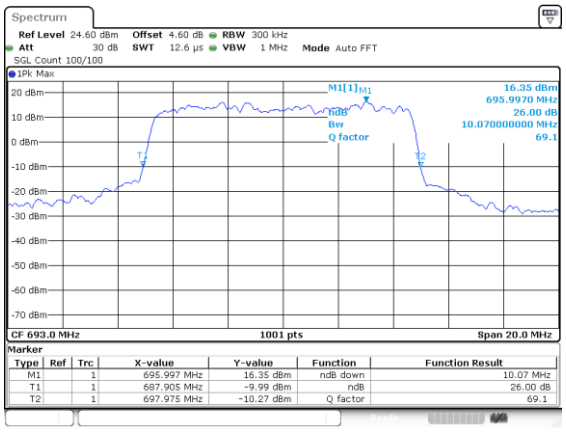
Lowest Channel



Middle Channel

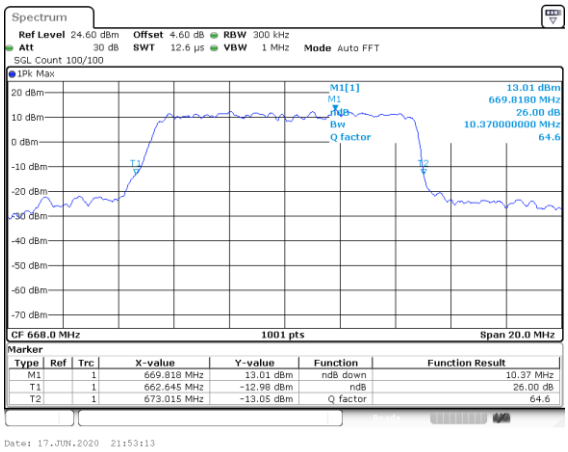


Highest Channel

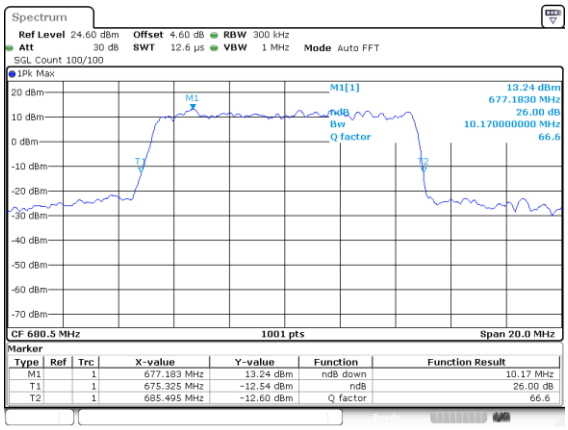


256QAM

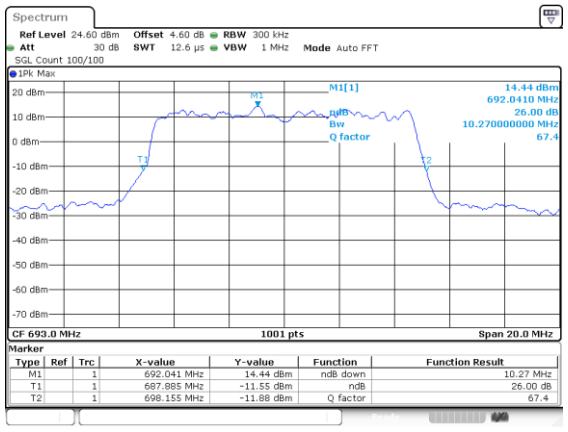
Lowest Channel

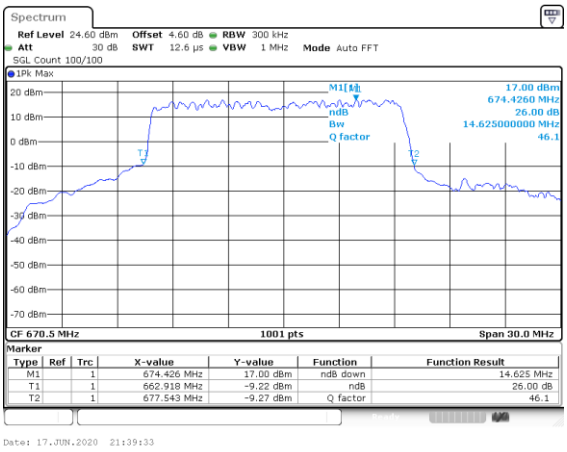
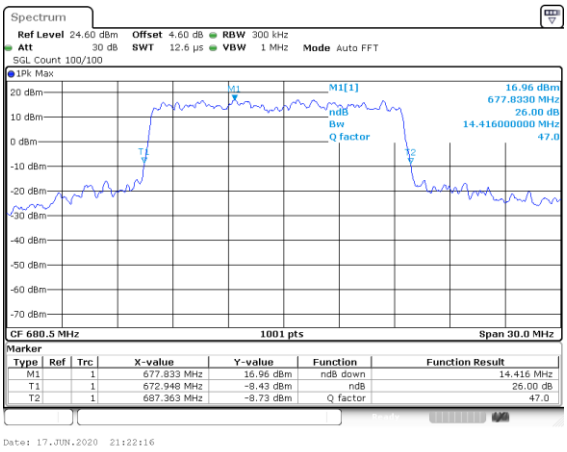
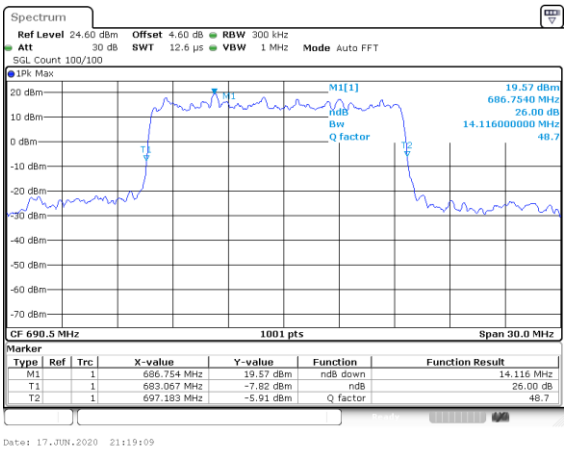


Middle Channel



Highest Channel

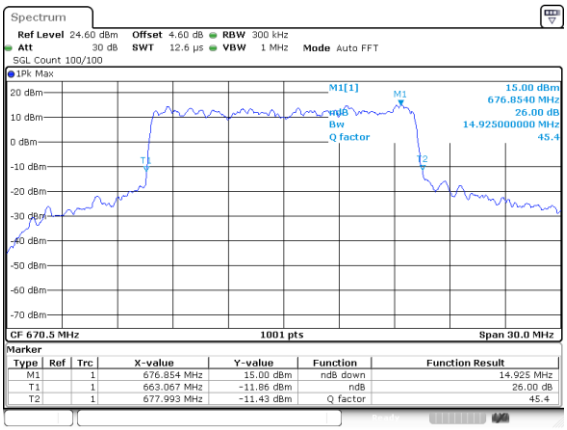


FR1 n71 / 15MHz / DFT-S OFDM	
PI/2 BPSK	
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

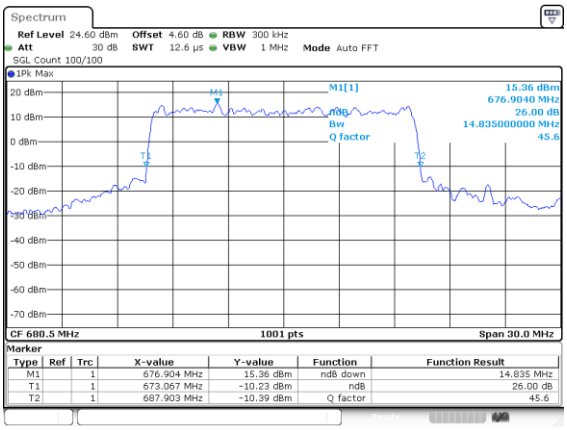
FR1 n71 / 15MHz / CP OFDM

QPSK

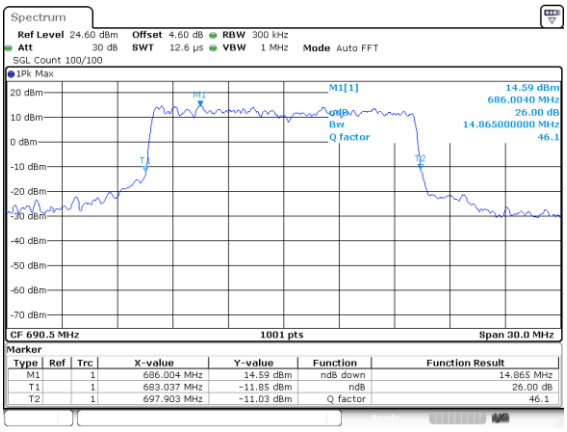
Lowest Channel



Middle Channel

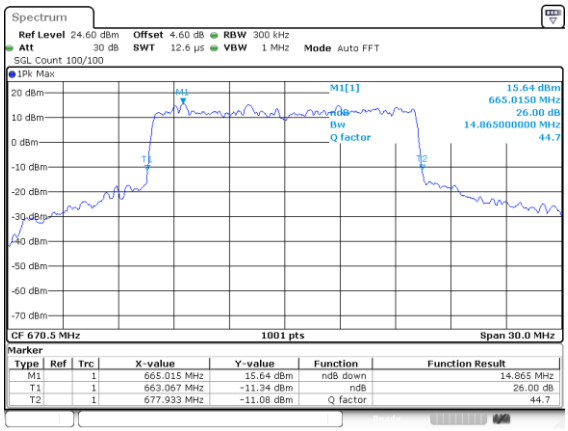


Highest Channel

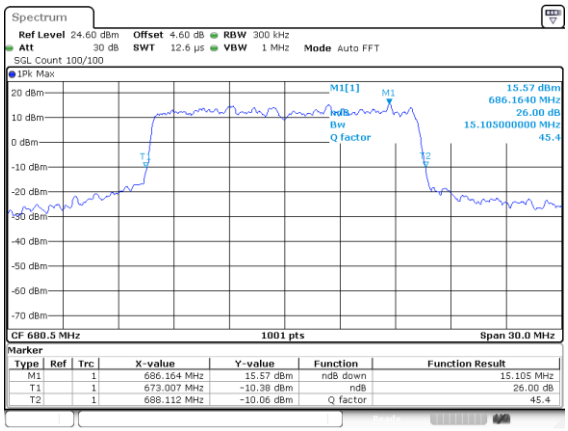


16QAM

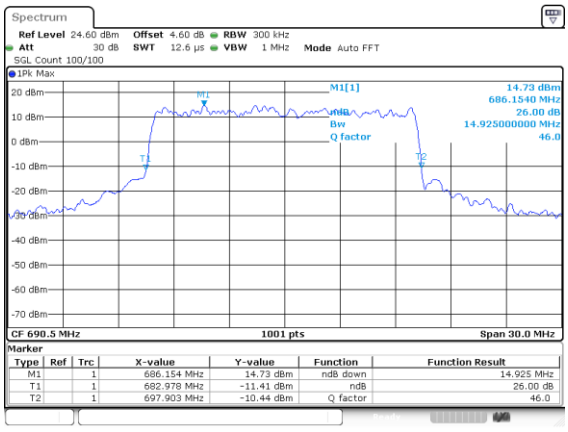
Lowest Channel



Middle Channel



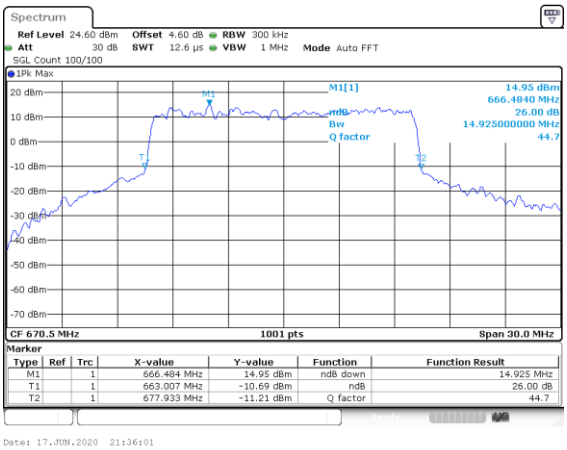
Highest Channel



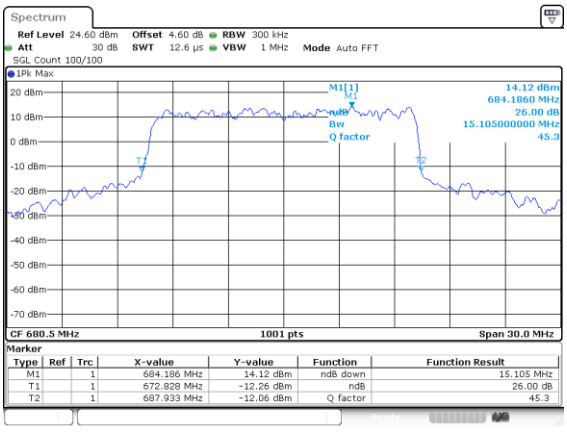
FR1 n71 / 15MHz / CP OFDM

64QAM

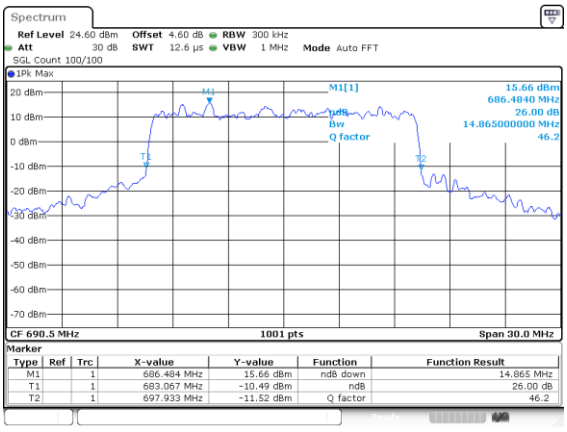
Lowest Channel



Middle Channel

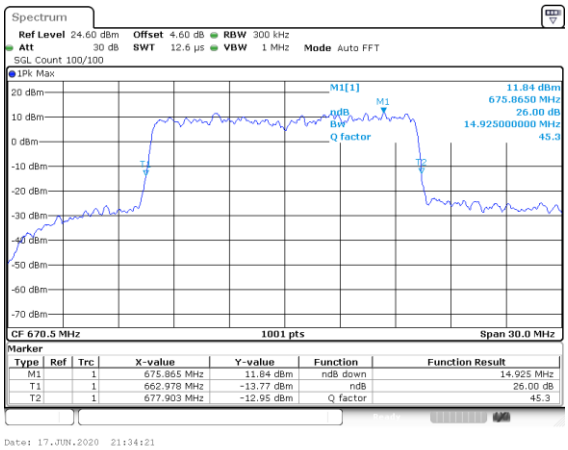


Highest Channel

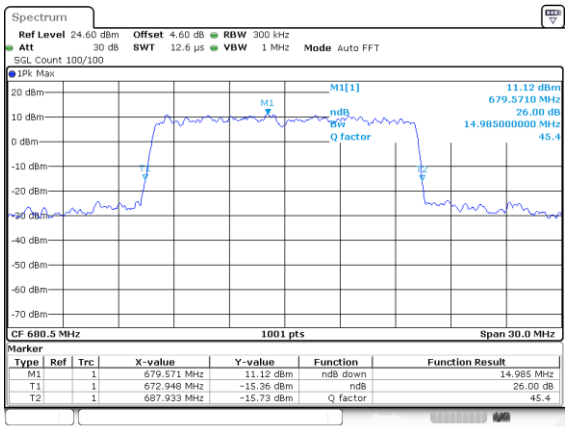


256QAM

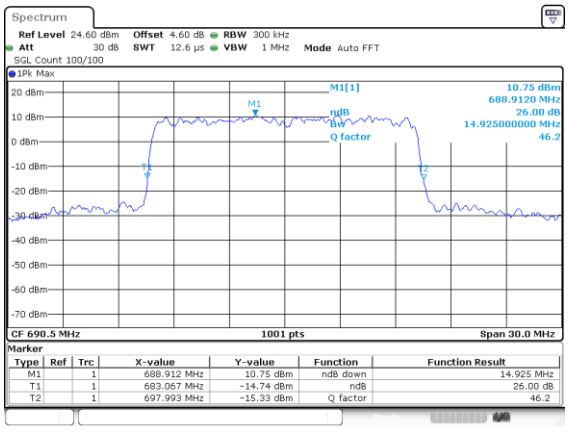
Lowest Channel

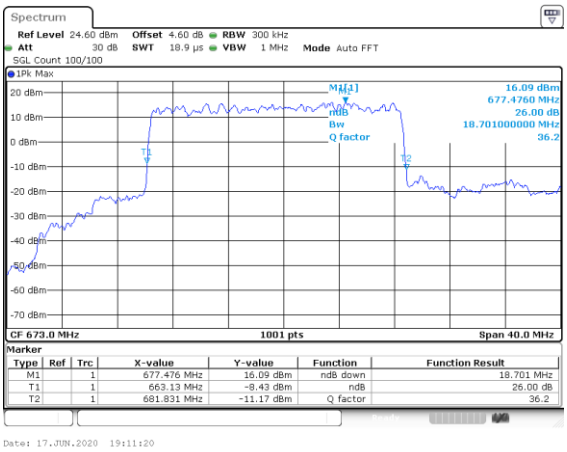
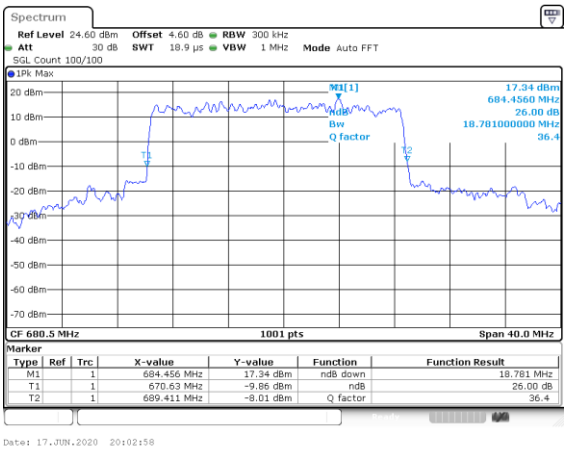
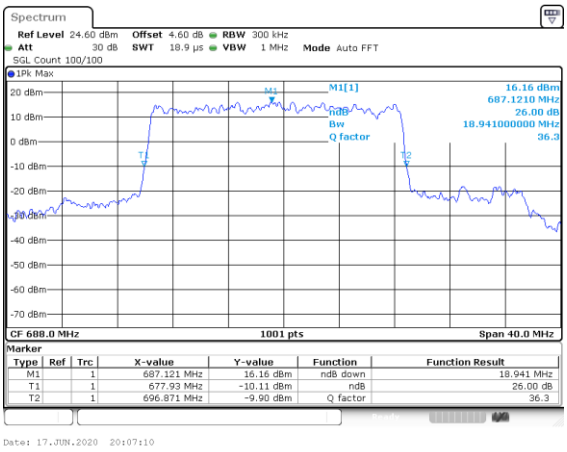


Middle Channel



Highest Channel

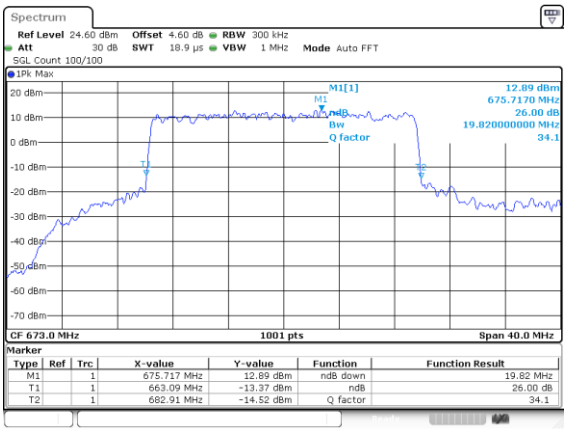


FR1 n71 / 20MHz / DFT-S OFDM	
PI/2 BPSK	
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

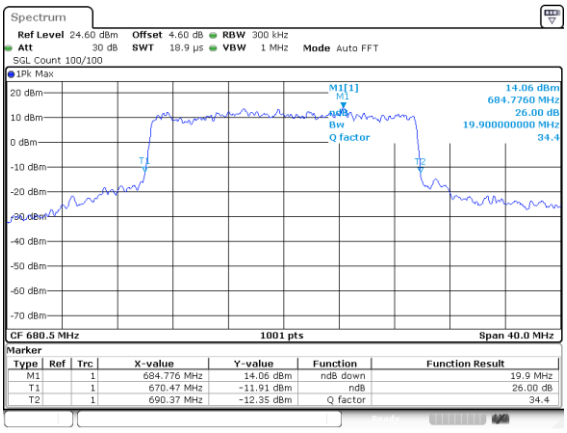
FR1 n71 / 20MHz / CP OFDM

QPSK

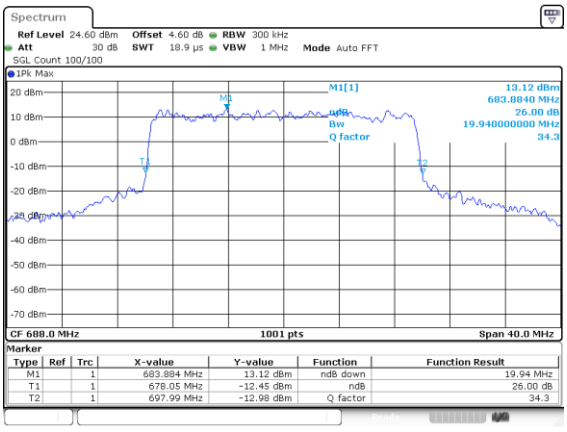
Lowest Channel



Middle Channel

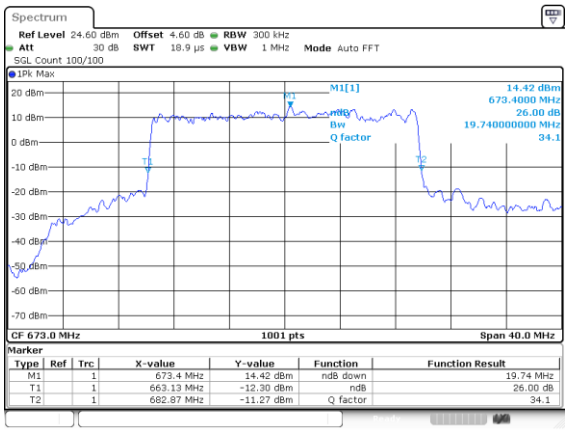


Highest Channel

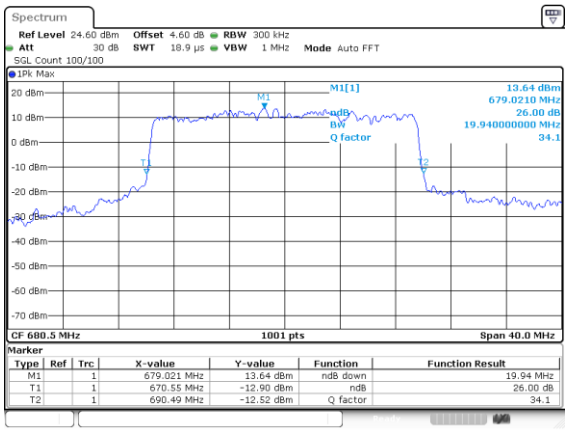


16QAM

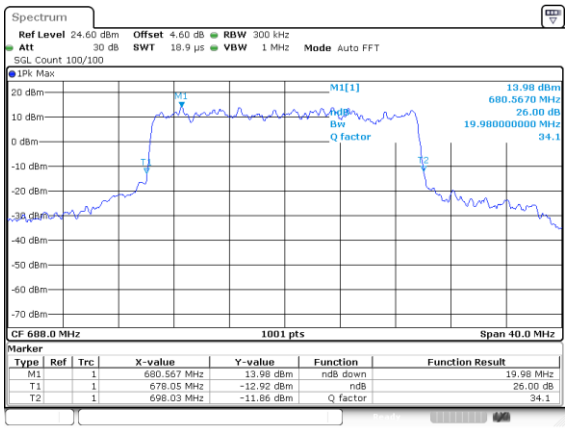
Lowest Channel



Middle Channel



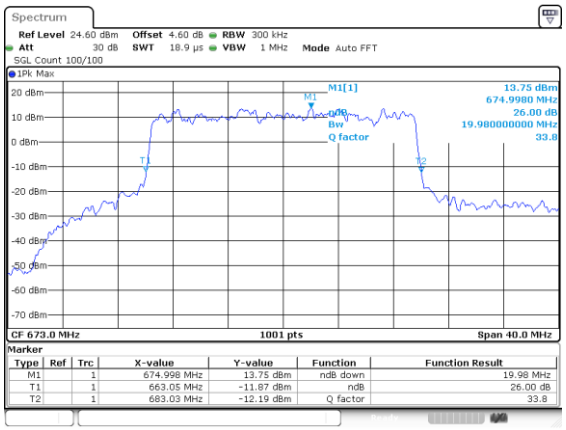
Highest Channel



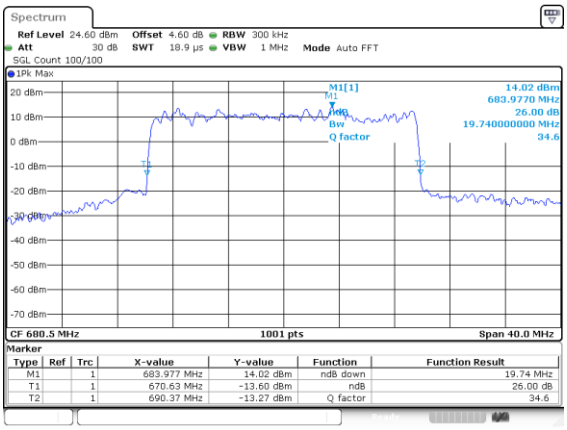
FR1 n71 / 20MHz / CP OFDM

64QAM

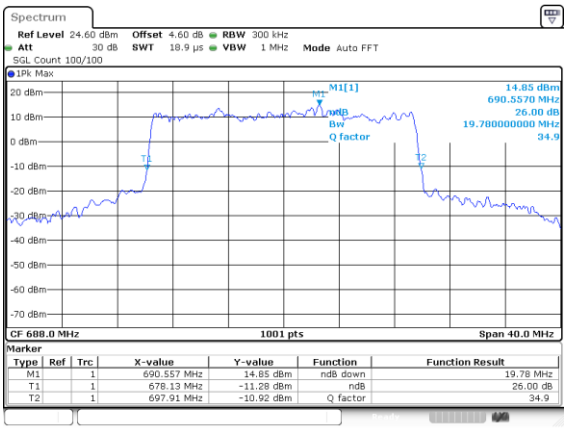
Lowest Channel



Middle Channel

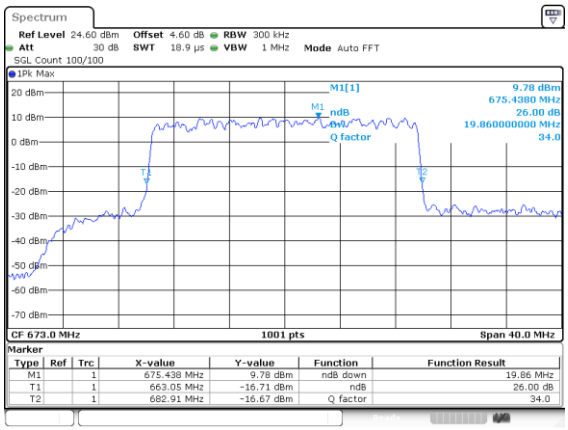


Highest Channel

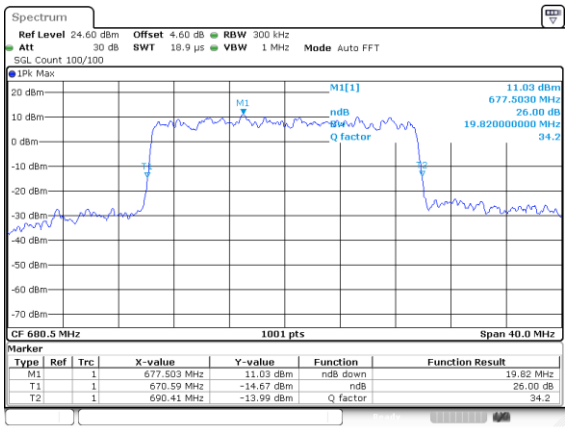


256QAM

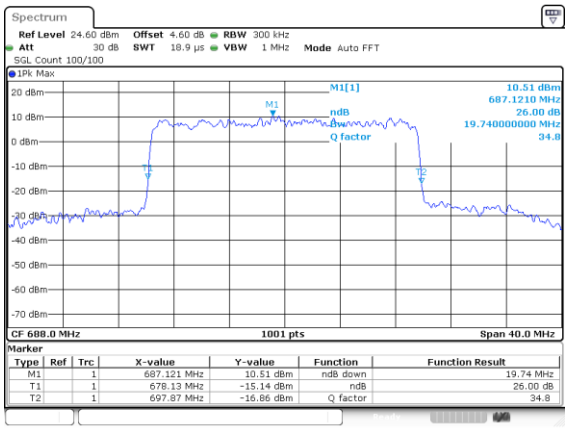
Lowest Channel



Middle Channel



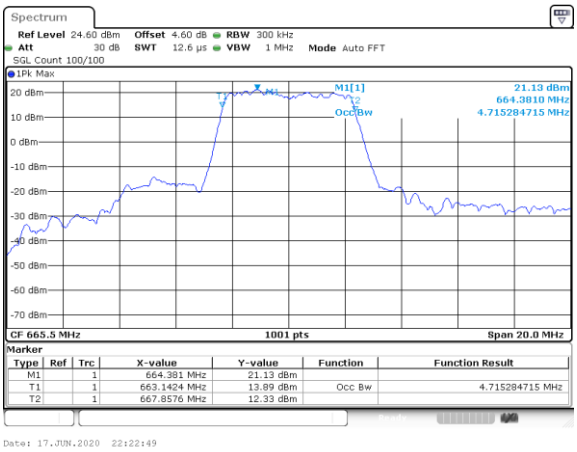
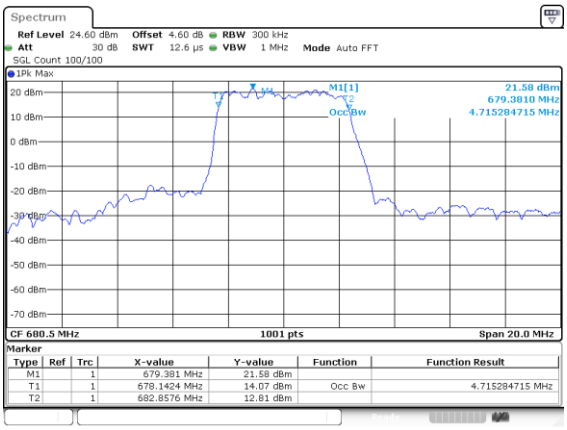
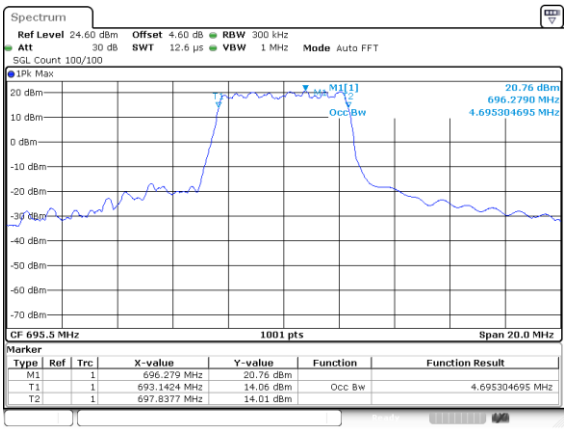
Highest Channel



Occupied Bandwidth

Mode	FR1 n71 : 99%OBW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK		PI/2 BPSK	
Lowest CH	4.72		9.03		13.49		17.94	
Middle CH	4.72		9.01		13.52		17.86	
Highest CH	4.70		9.03		13.52		17.90	

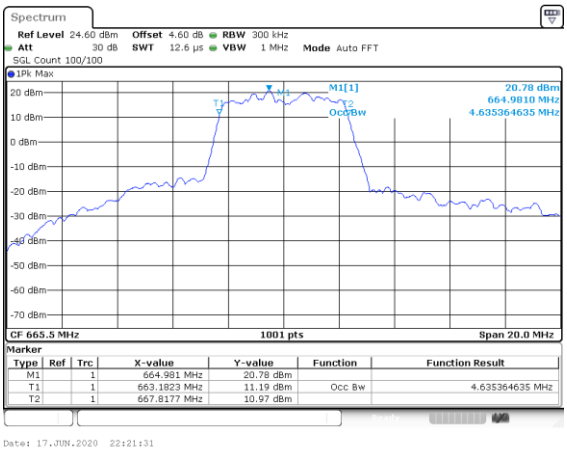
Mode	FR1 n71 : 99%OBW (MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	4.64	4.68	9.37	9.43	14.15	14.15	18.90	18.90
Middle CH	4.68	4.62	9.35	9.37	14.09	14.12	18.94	18.98
Highest CH	4.64	4.66	9.33	9.29	14.15	14.09	18.82	18.90
Mode	FR1 n71 : 99%OBW (MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	4.66	4.68	9.31	9.37	14.18	14.12	18.90	18.94
Middle CH	4.64	4.64	9.33	9.37	14.18	14.12	18.90	18.90
Highest CH	4.66	4.68	9.35	9.37	14.12	14.15	18.90	18.94

FR1 n71 / 5MHz / DFT-S OFDM	
PI/2 BPSK	
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

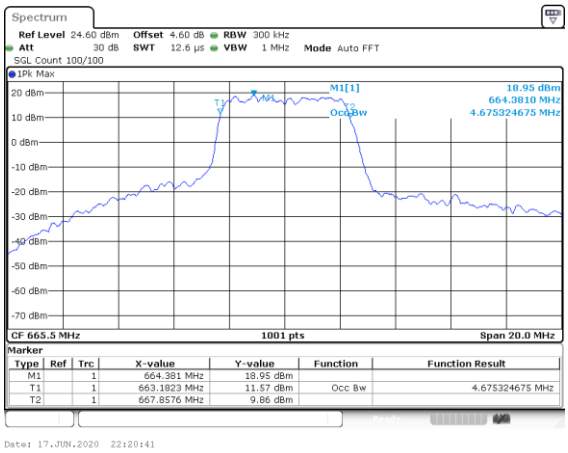
FR1 n71 / 5MHz / CP OFDM

QPSK

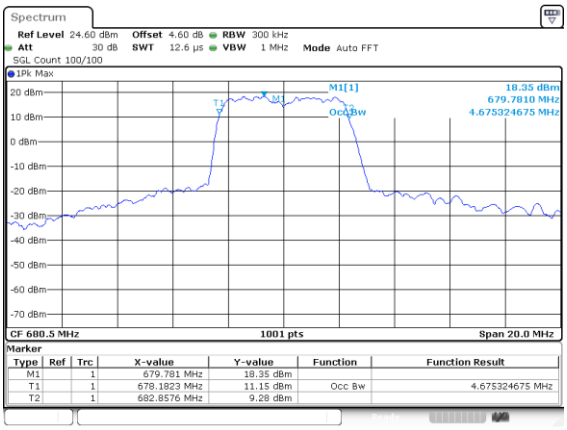
Lowest Channel



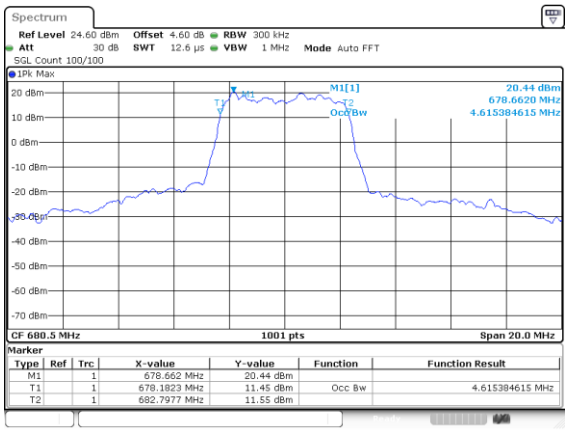
Lowest Channel



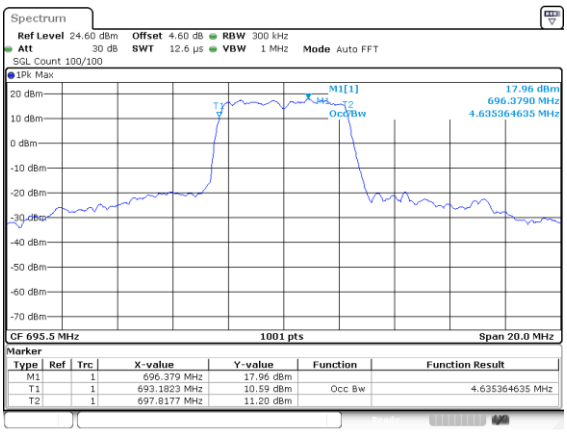
Middle Channel



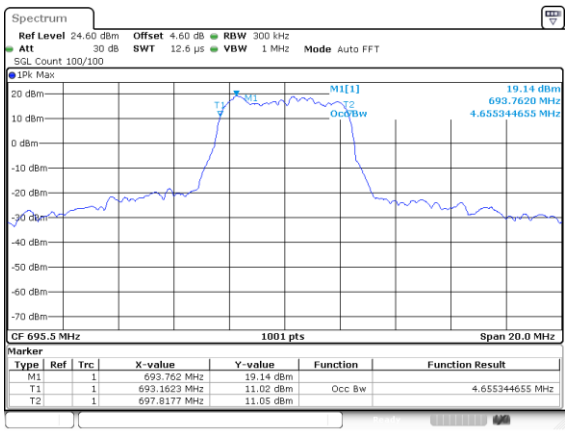
Middle Channel



Highest Channel



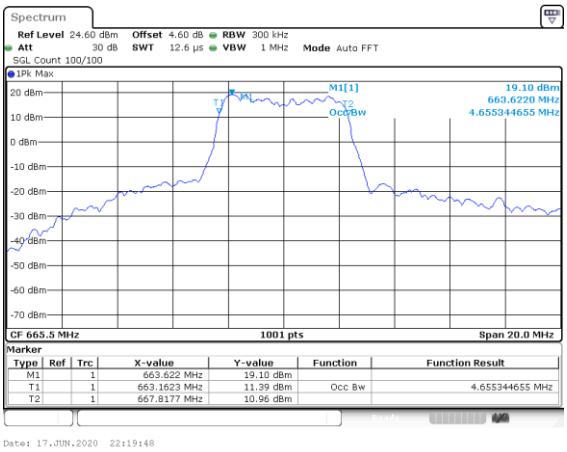
Highest Channel



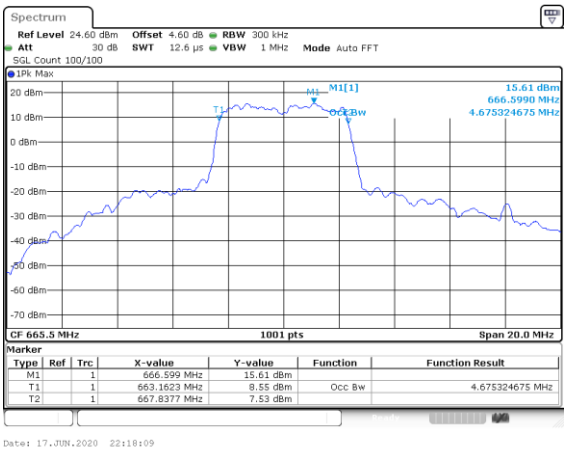
FR1 n71 / 5MHz / CP OFDM

64QAM

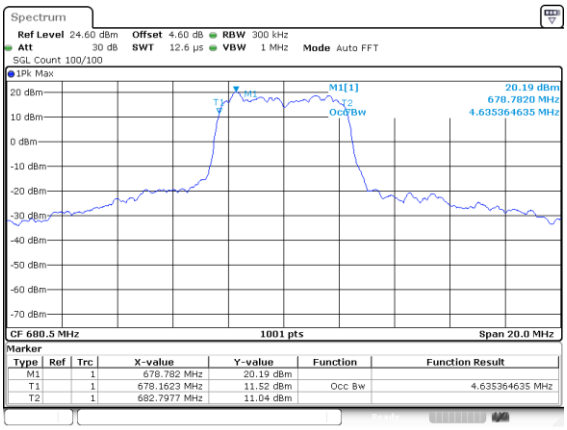
Lowest Channel



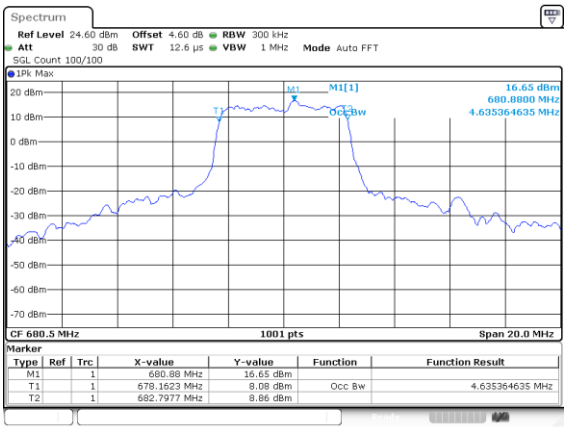
Lowest Channel



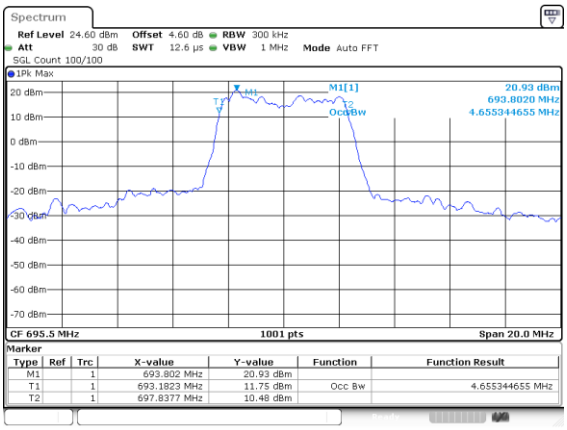
Middle Channel



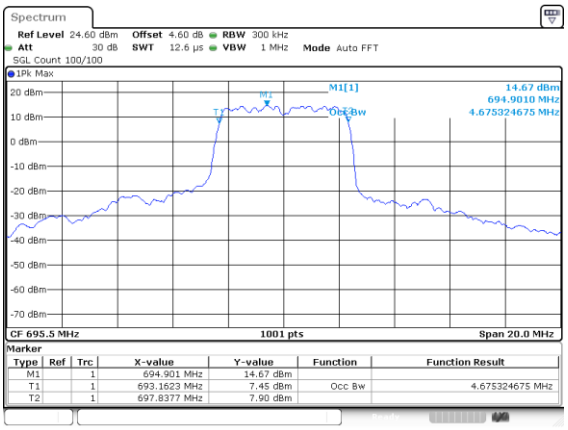
Middle Channel

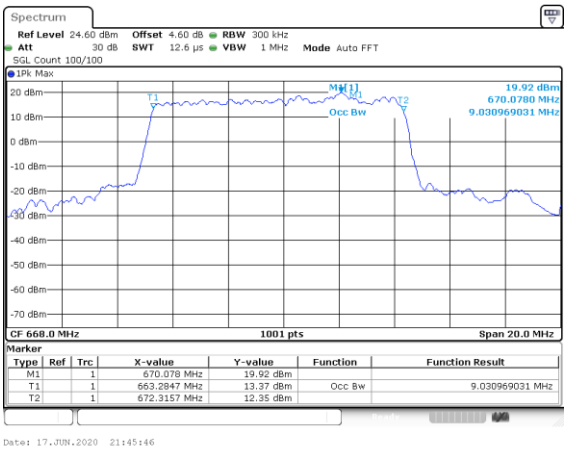
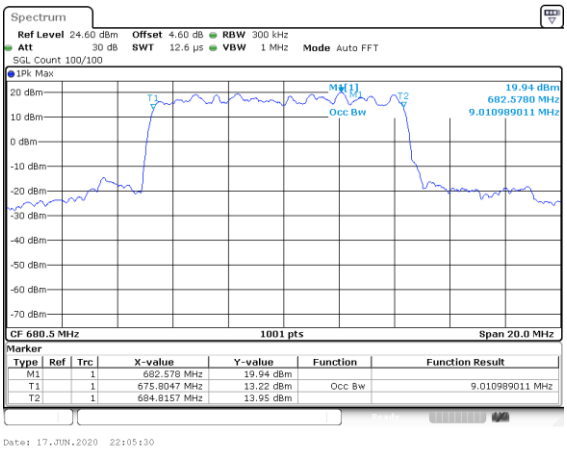


Highest Channel



Highest Channel



FR1 n71 / 10MHz / DFT-S OFDM	
PI/2 BPSK	
Lowest Channel	
	
Middle Channel	
	
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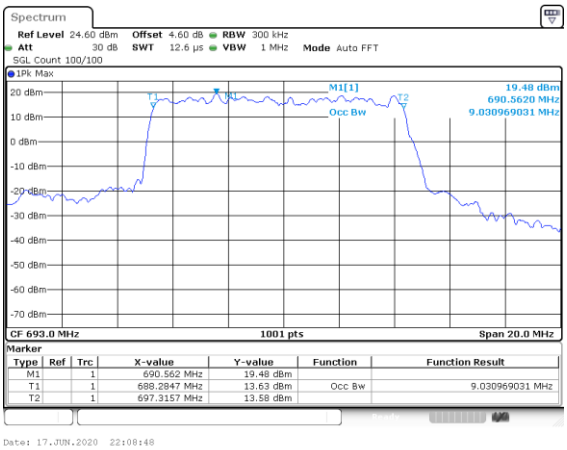
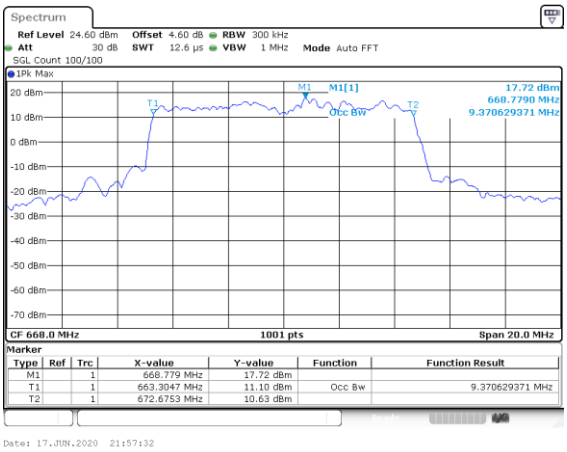
	

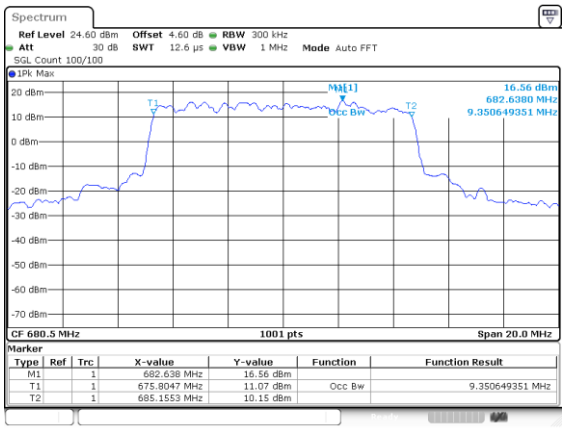
FR1 n71 / 10MHz / CP OFDM

QPSK

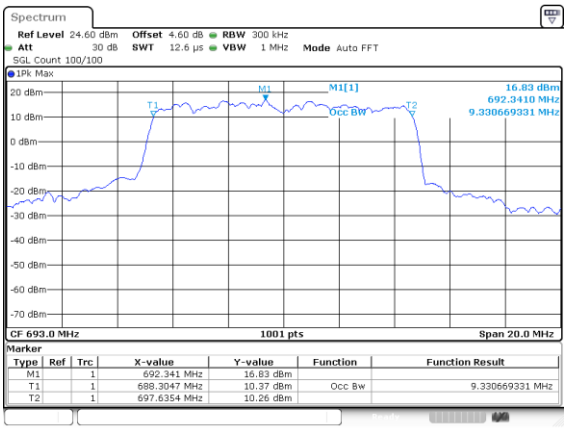
Lowest Channel



Middle Channel

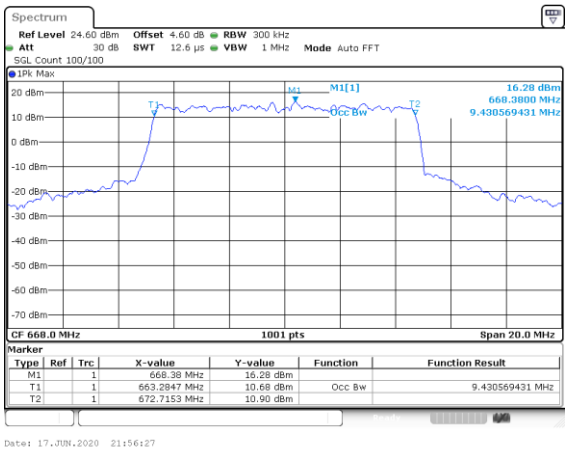


Highest Channel

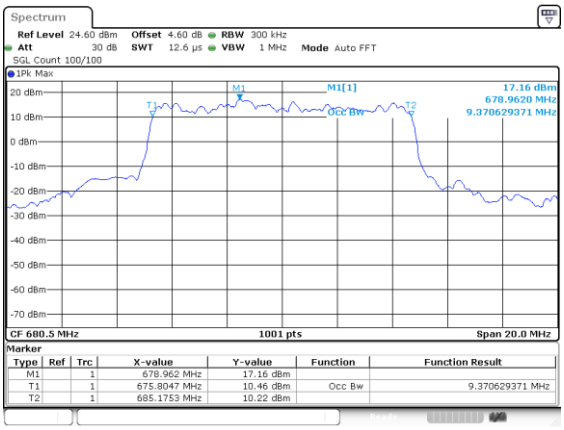


16QAM

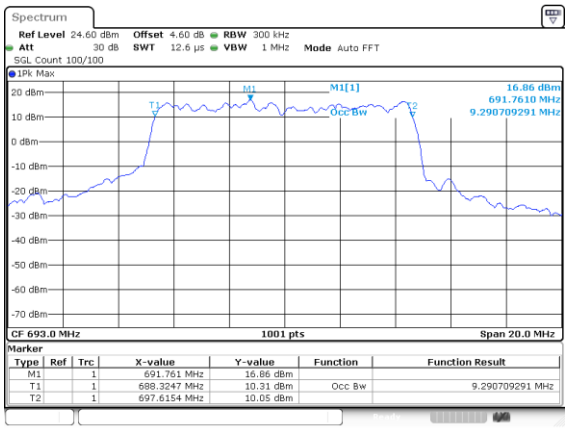
Lowest Channel



Middle Channel



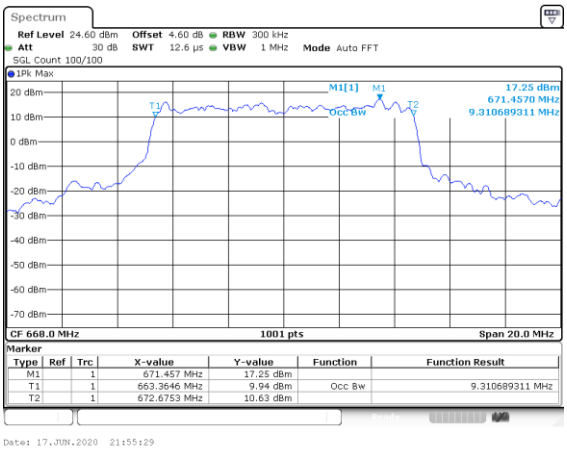
Highest Channel



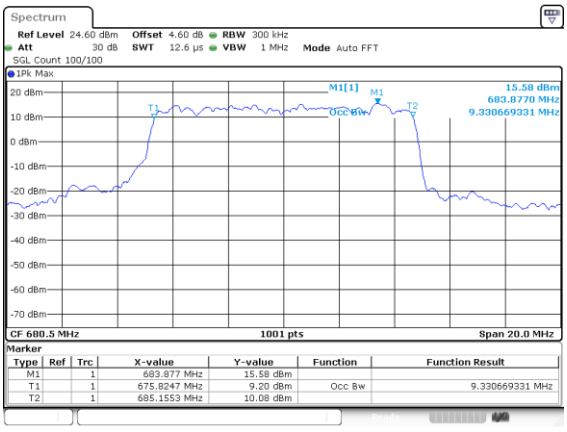
FR1 n71 / 10MHz / CP OFDM

64QAM

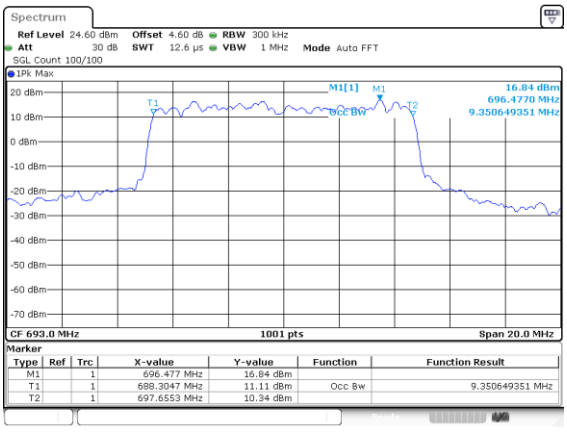
Lowest Channel



Middle Channel

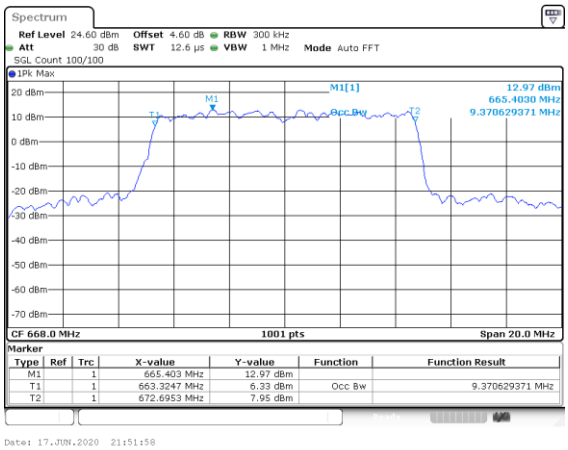


Highest Channel

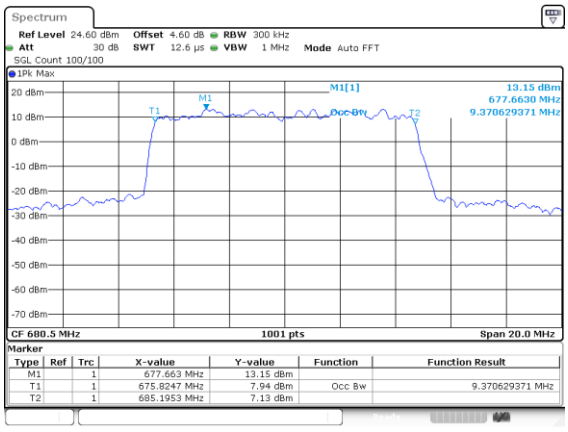


256QAM

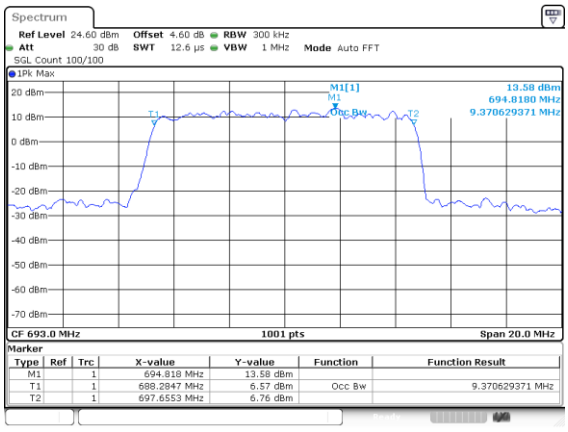
Lowest Channel

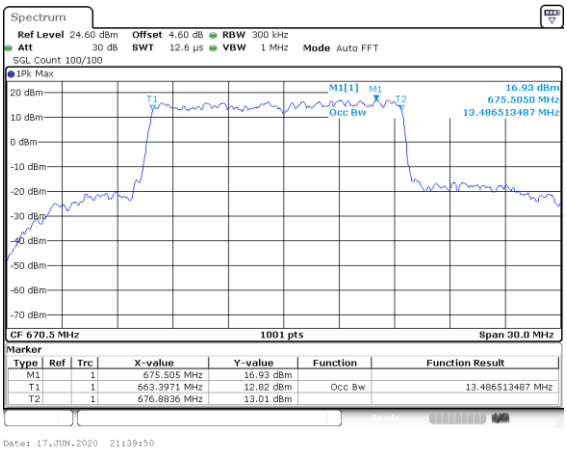
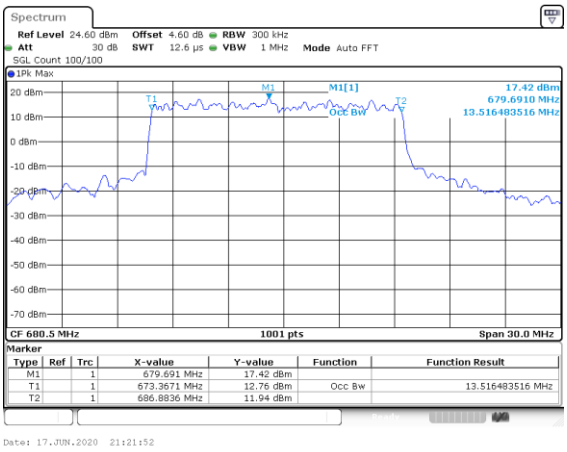
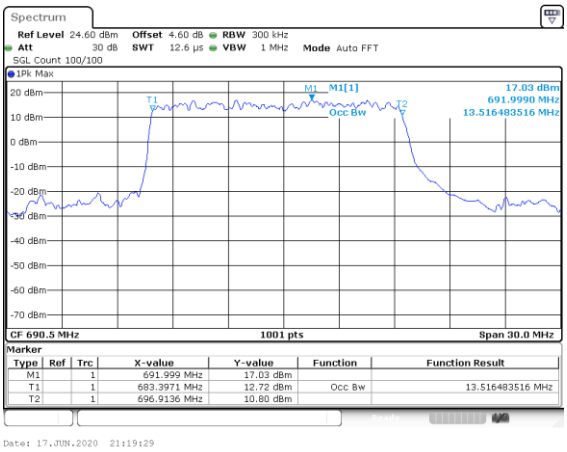


Middle Channel



Highest Channel



FR1 n71 / 15MHz / DFT-S OFDM	
PI/2 BPSK	
Lowest Channel	
	
Middle Channel	
	
Highest Channel