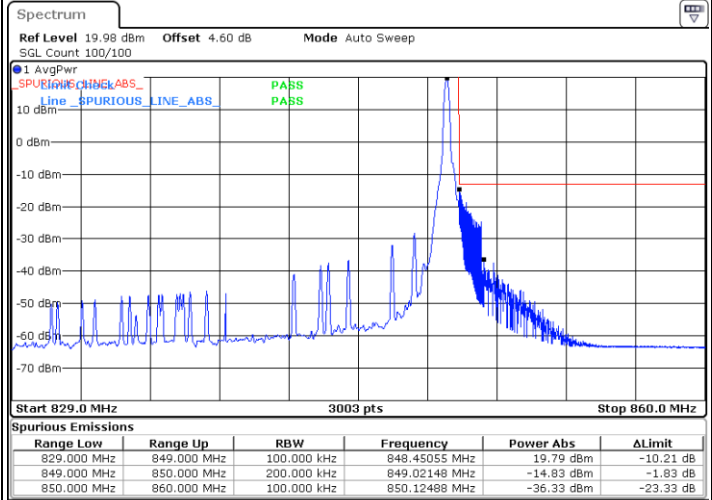
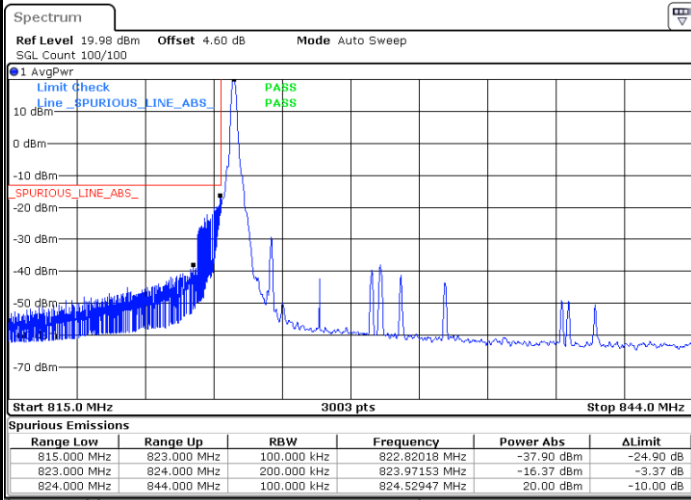




FR1 n5 / 20MHz / DFT-s-OFDM / 16QAM

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBMAX

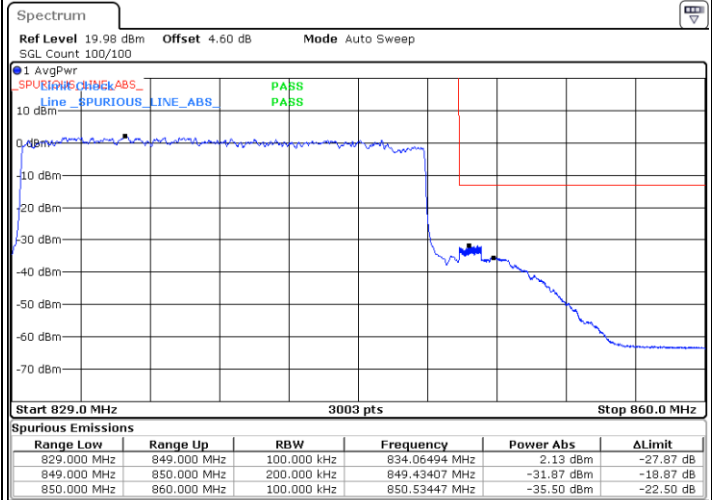
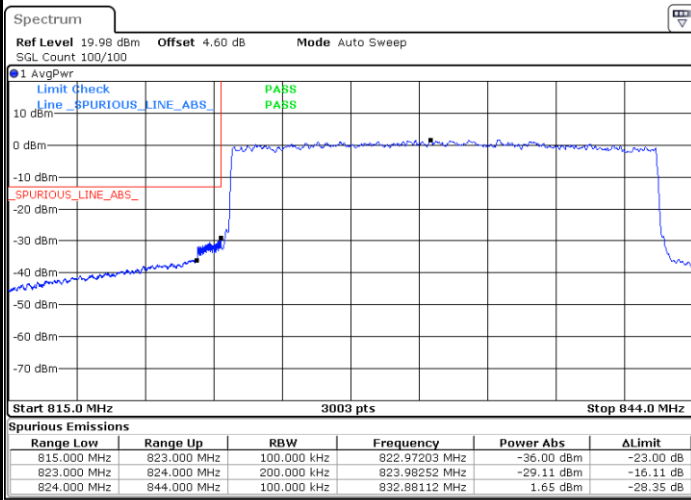


Date: 9 JUN, 2020 16:40:35

Date: 9 JUN, 2020 22:29:42

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 9 JUN, 2020 19:39:47

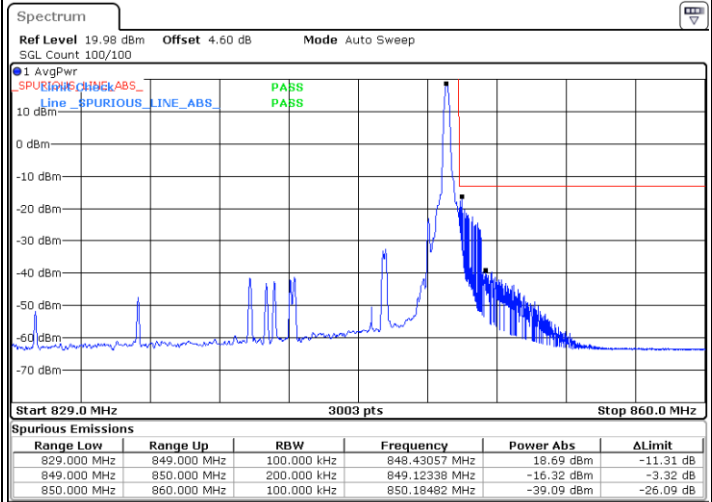
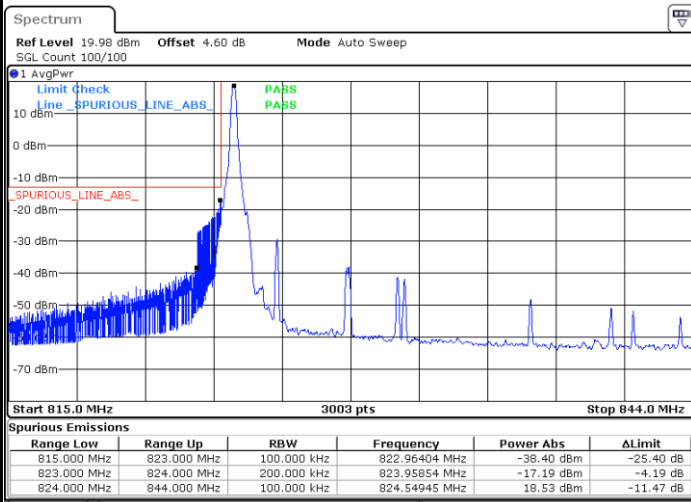
Date: 9 JUN, 2020 22:27:28



FR1 n5 / 20MHz / DFT-s-OFDM / 64QAM

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBMAX

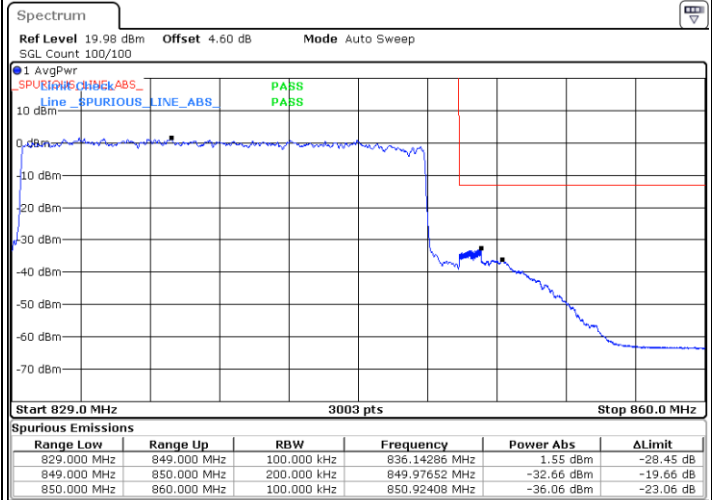
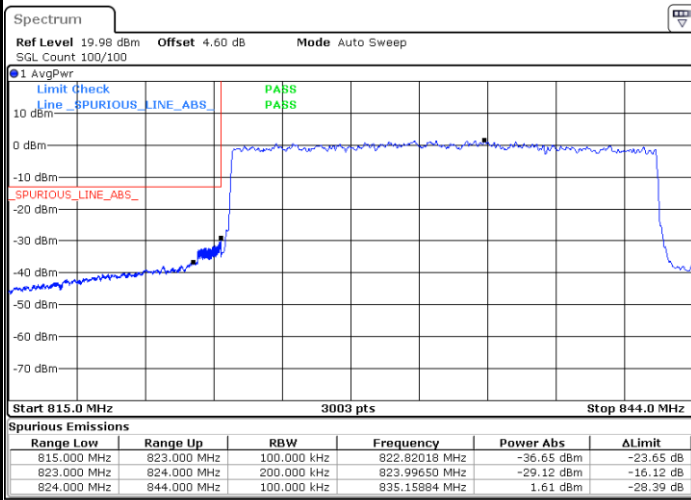


Date: 9 JUN 2020 16:42:07

Date: 9 JUN 2020 22:23:35

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 9 JUN 2020 19:43:21

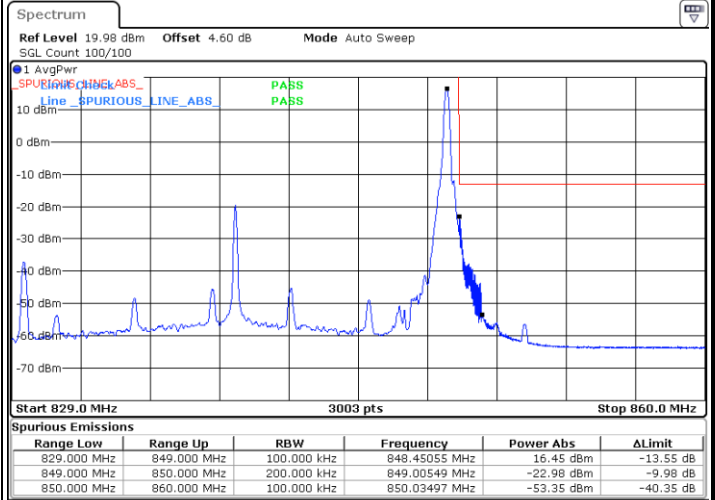
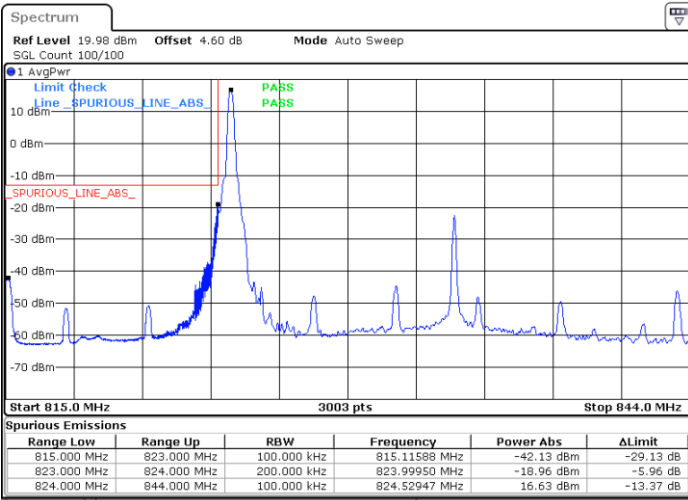
Date: 9 JUN 2020 22:25:59



FR1 n5 / 20MHz / DFT-s-OFDM / 256QAM

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBMAX

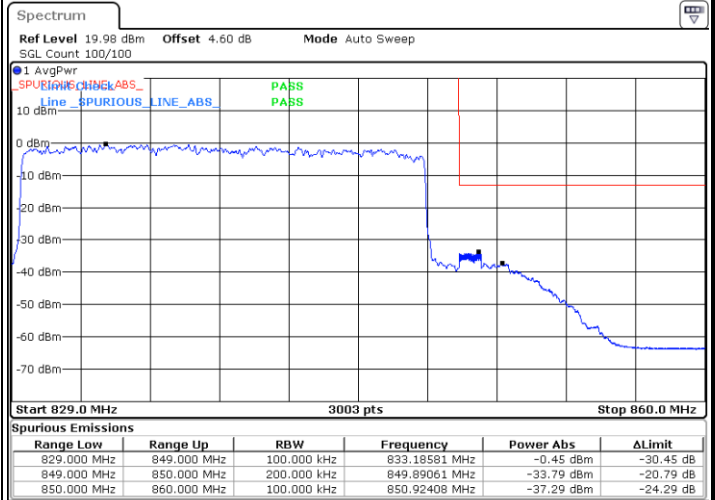
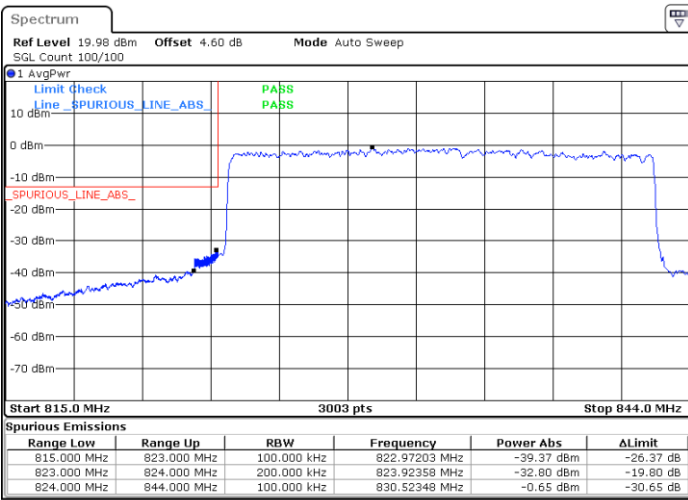


Date: 9 JUN.2020 19:54:56

Date: 9 JUN.2020 21:58:01

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 9 JUN.2020 19:51:46

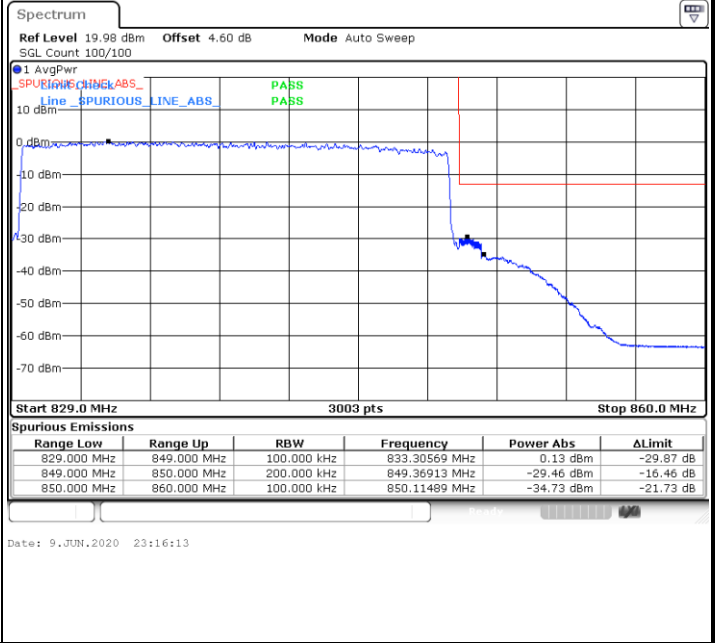
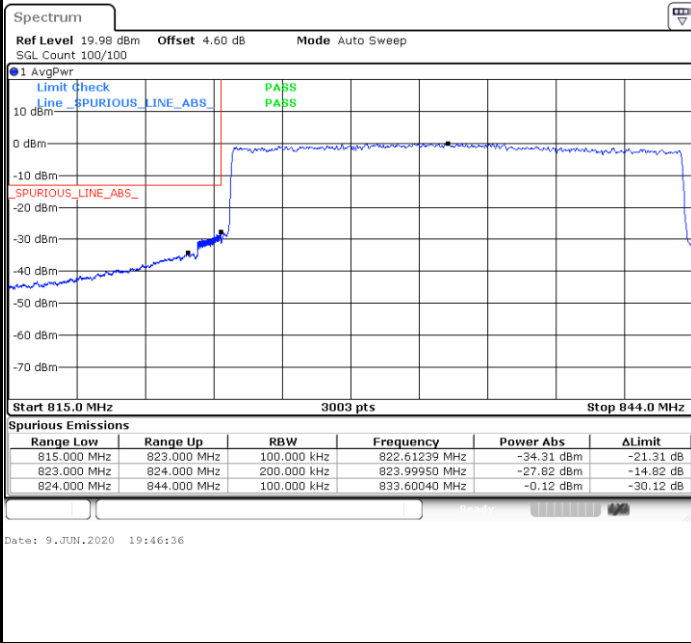
Date: 9 JUN.2020 21:56:05



FR1 n5 / 20MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



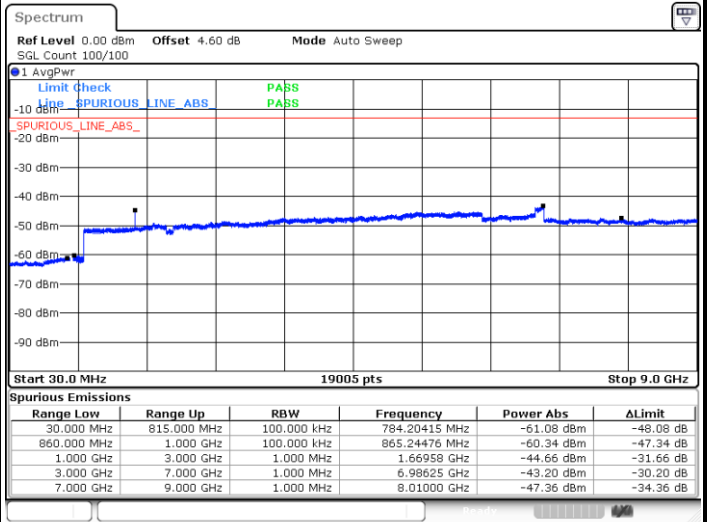
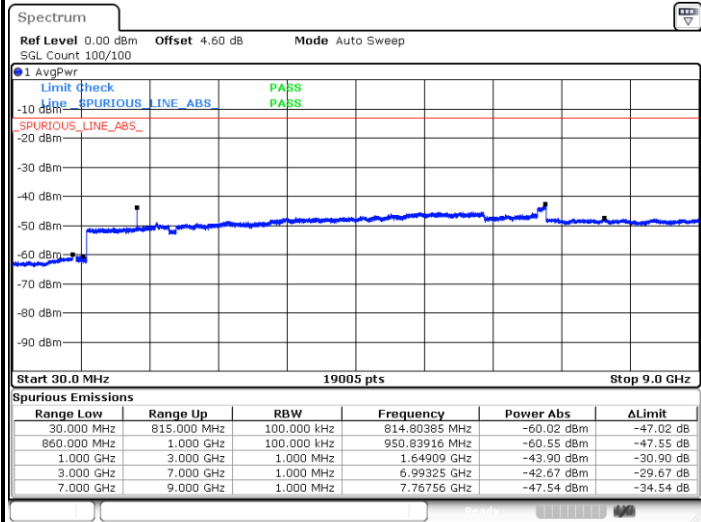


Conducted Spurious Emission

FR1 n5 / 5MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

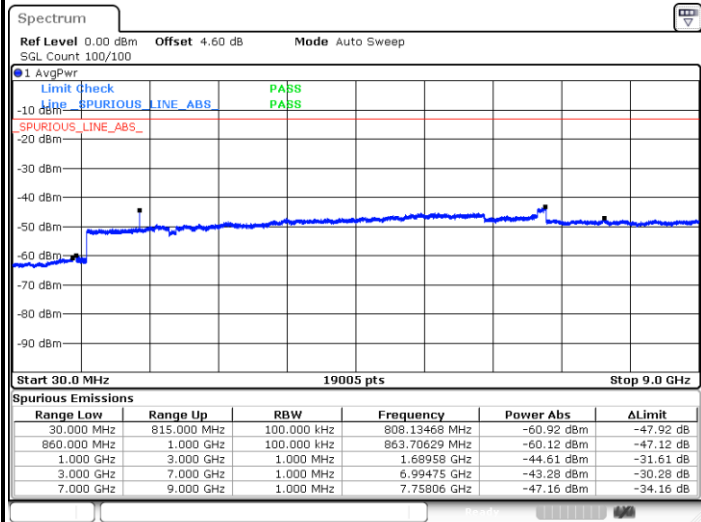
Middle Channel / 1RB1



Date: 12. JUN. 2020 03:42:40

Date: 12. JUN. 2020 05:46:42

Highest Channel / 1RB1



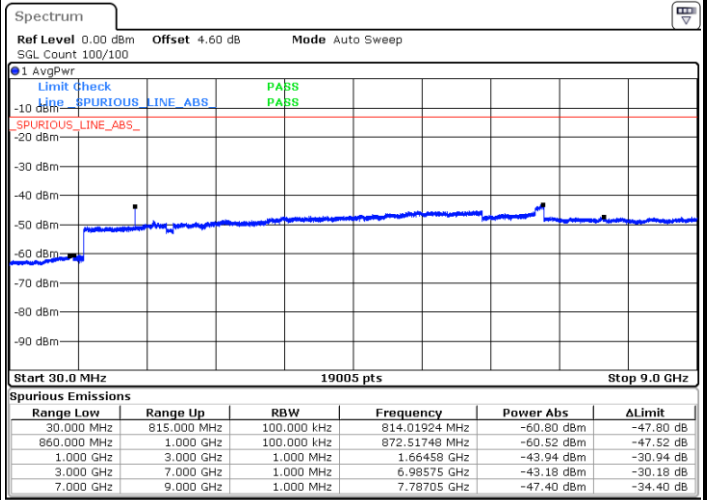
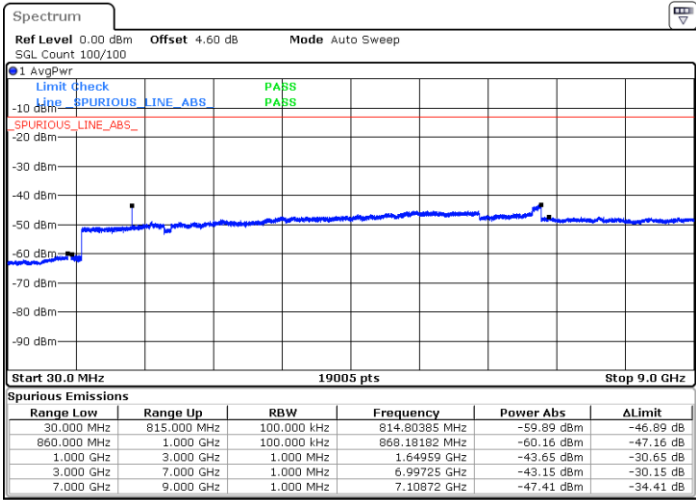
Date: 12. JUN. 2020 04:40:20



FR1 n5 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

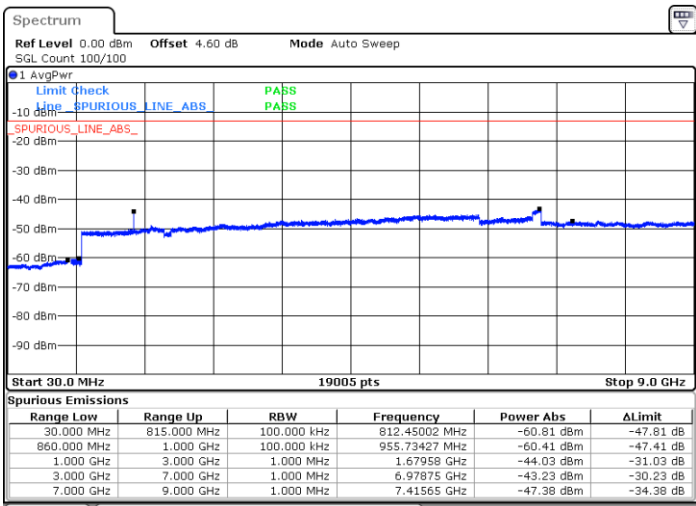
Middle Channel / 1RB1



Date: 11.JUN.2020 20:50:00

Date: 11.JUN.2020 23:03:17

Highest Channel / 1RB1



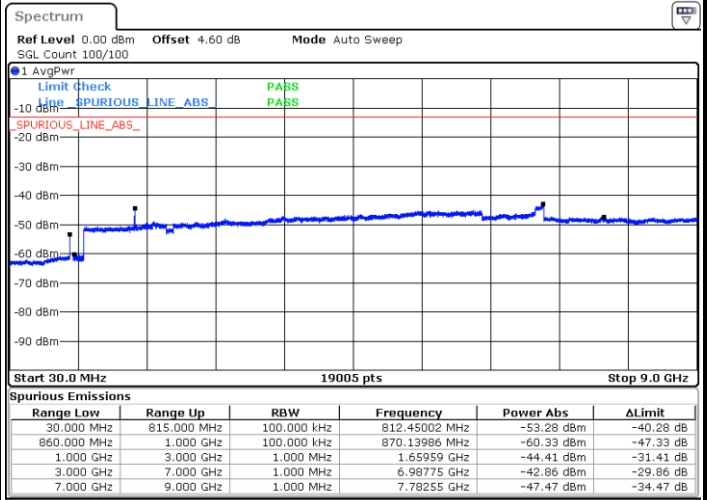
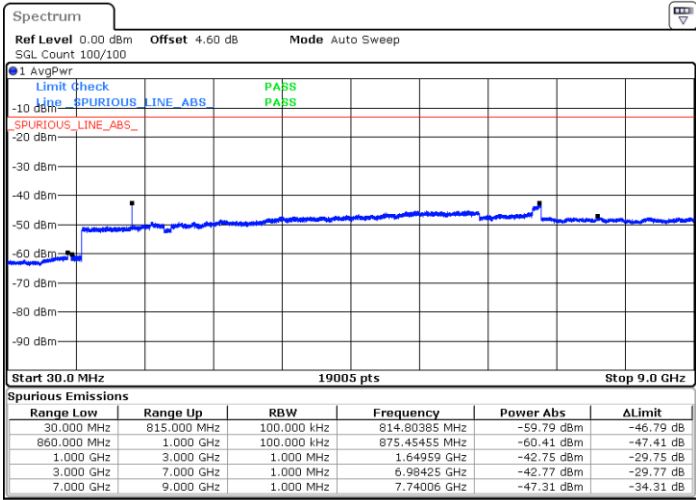
Date: 11.JUN.2020 23:20:26



FR1 n5 / 15MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

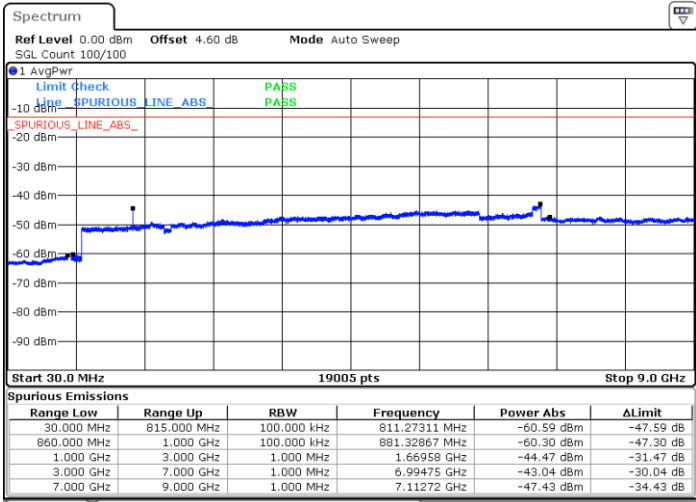
Middle Channel / 1RB1



Date: 11.JUN.2020 14:22:17

Date: 11.JUN.2020 16:46:51

Highest Channel / 1RB1



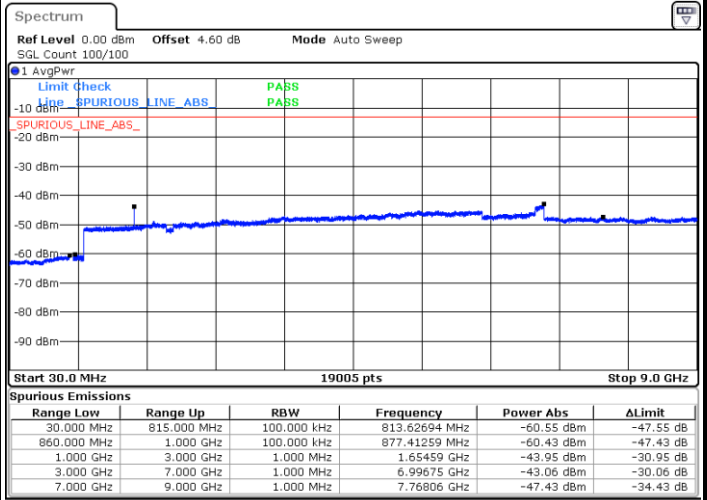
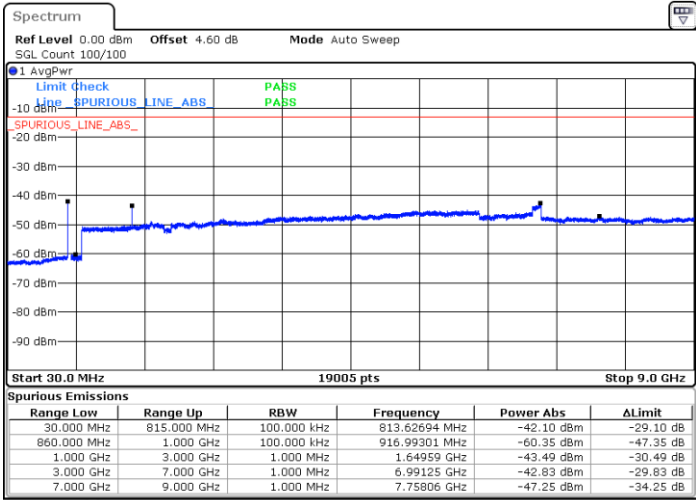
Date: 11.JUN.2020 19:03:15



FR1 n5 / 20MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

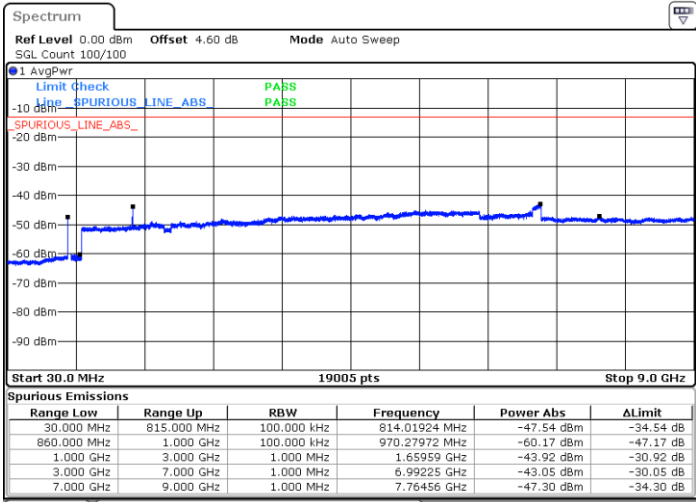
Middle Channel / 1RB1



Date: 9 JUN 2020 20:09:58

Date: 9 JUN 2020 20:26:28

Highest Channel / 1RB1



Date: 9 JUN 2020 21:27:54



Frequency Stability

Test Conditions		FR1 n5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0025	PASS
40	Normal Voltage	0.0043	
30	Normal Voltage	0.0019	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0045	
0	Normal Voltage	0.0037	
-10	Normal Voltage	0.0013	
-20	Normal Voltage	0.0014	
-30	Normal Voltage	0.0019	
20	Maximum Voltage	0.0039	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0042	

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 n12

Peak-to-Average Ratio

Mode	FR1 n12 / 15MHz / 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	4.58	6.35	7.16	7.25	PASS
Middle CH	5.13	6.41	7.13	7.28	
Highest CH	5.16	6.41	7.16	7.30	
Mode	FR1 n12 / 15MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Lowest CH	7.48				PASS
Middle CH	7.51				
Highest CH	7.62				



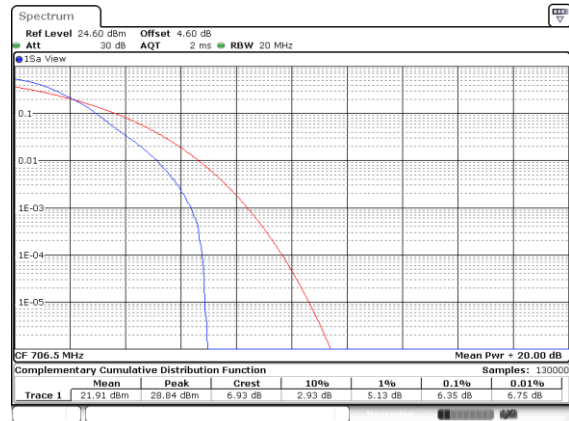
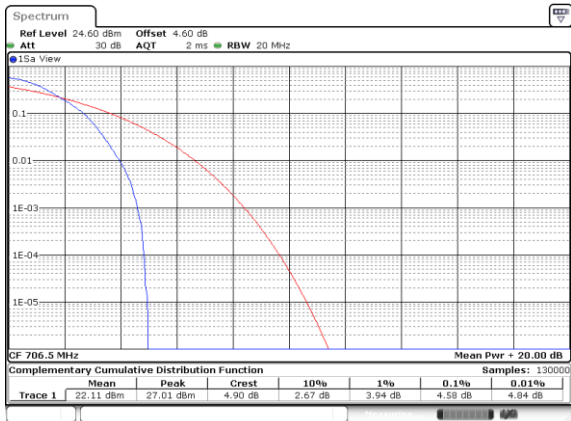
FR1 n12 / 15MHz / DFT-S OFDM

PI/2 BPSK

QPSK

Lowest Channel / Full RB

Lowest Channel / Full RB

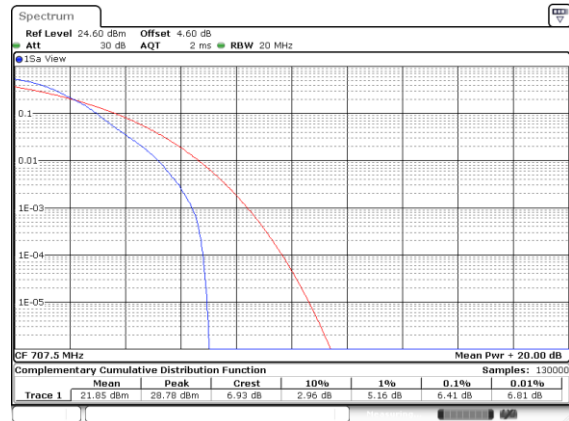
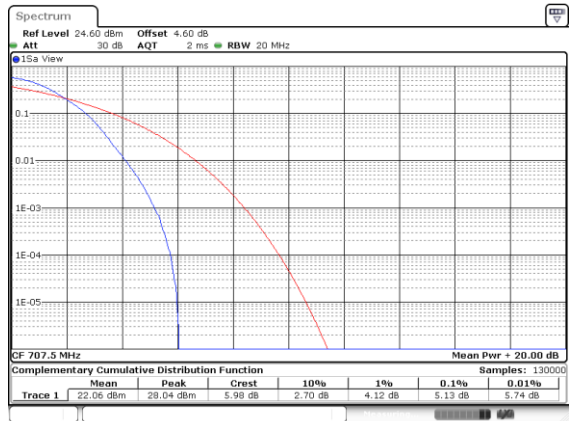


Date: 18 JUN 2020 17:24:08

Date: 18 JUN 2020 17:24:37

Middle Channel / Full RB

Middle Channel / Full RB

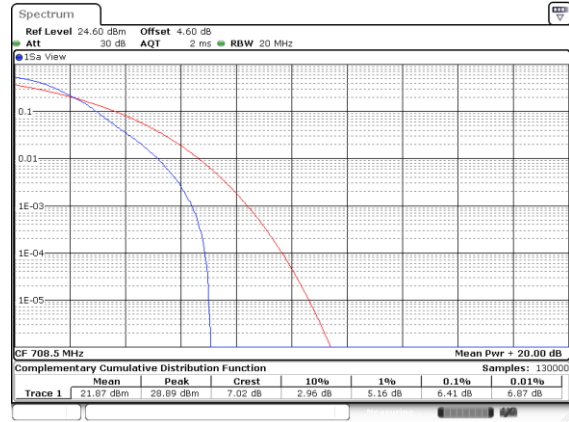
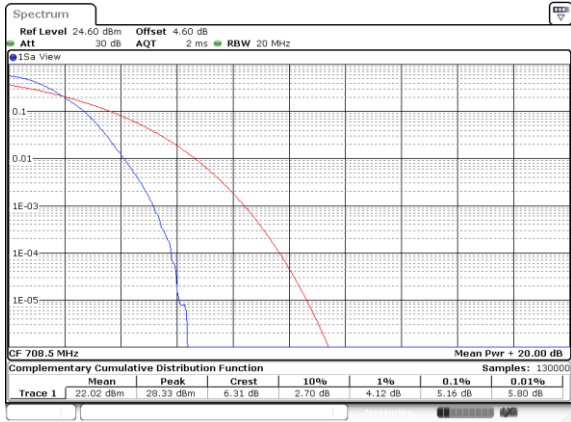


Date: 18 JUN 2020 17:07:14

Date: 18 JUN 2020 17:07:24

Highest Channel / Full RB

Highest Channel / Full RB



Date: 18 JUN 2020 16:55:50

Date: 18 JUN 2020 16:55:20



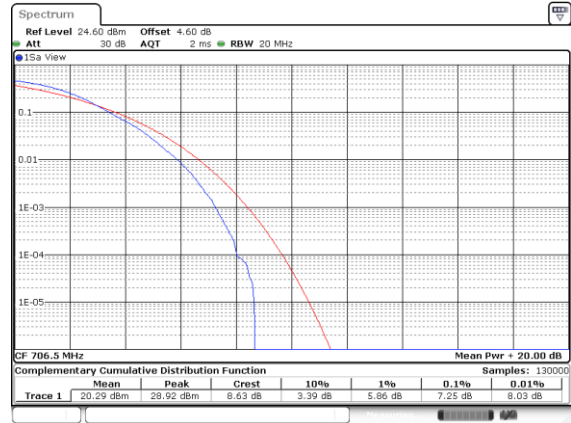
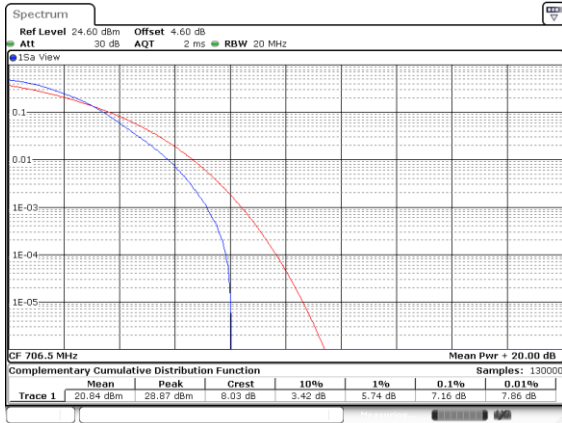
FR1 n12 / 15MHz / DFT-S OFDM

16QAM

64QAM

Lowest Channel / Full RB

Lowest Channel / Full RB

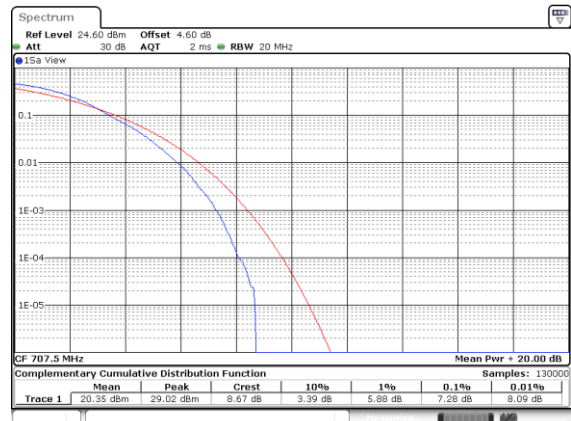
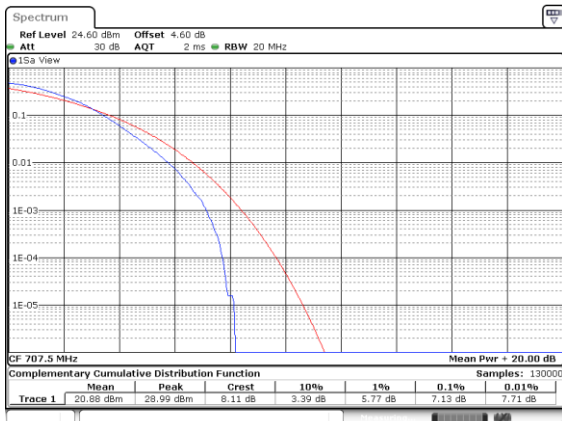


Date: 18 JUN 2020 17:25:19

Date: 18 JUN 2020 17:25:45

Middle Channel / Full RB

Middle Channel / Full RB

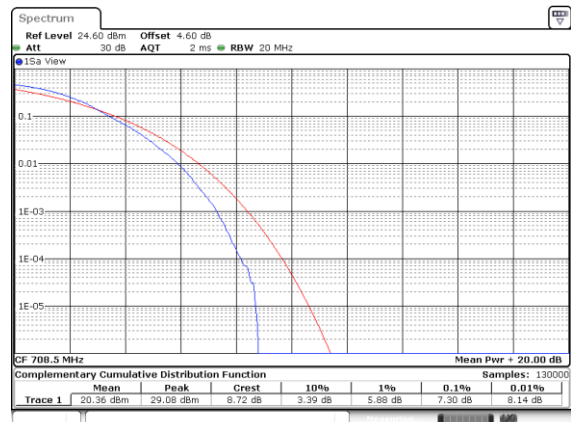
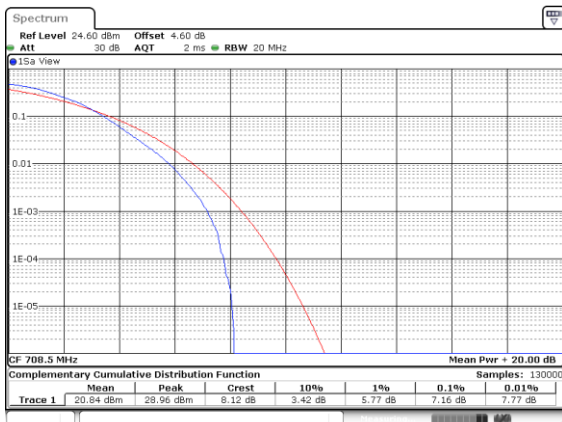


Date: 18 JUN 2020 17:06:40

Date: 18 JUN 2020 17:03:36

Highest Channel / Full RB

Highest Channel / Full RB



Date: 18 JUN 2020 16:56:13

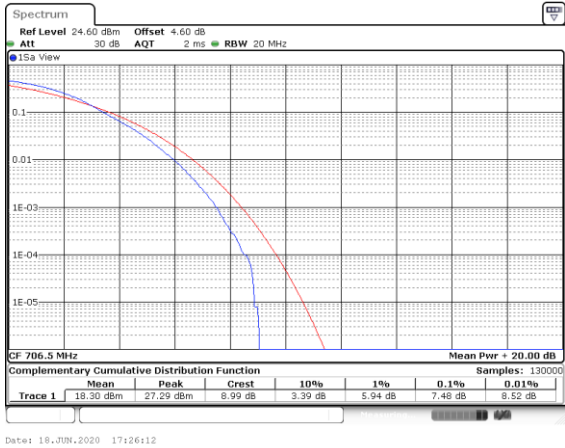
Date: 18 JUN 2020 16:56:50



FR1 n12 / 15MHz / DFT-S OFDM

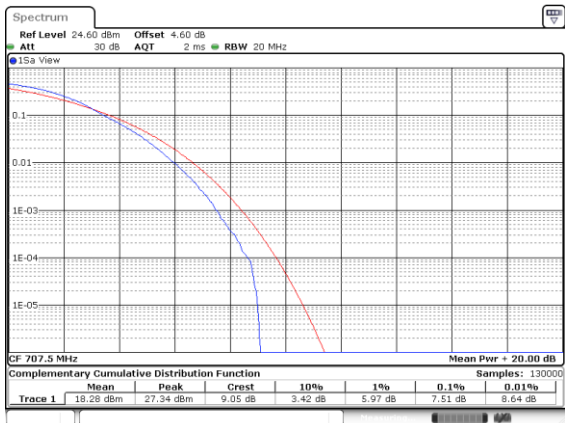
256QAM

Lowest Channel / Full RB



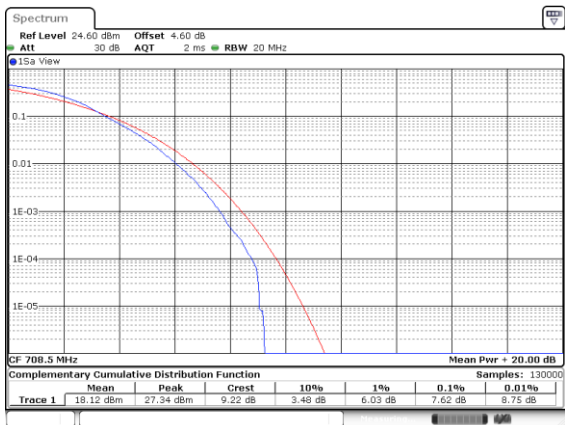
Date: 18.JUN.2020 17:26:12

Middle Channel / Full RB



Date: 18.JUN.2020 16:58:43

Highest Channel / Full RB



Date: 18.JUN.2020 16:57:31



26dB Bandwidth

Mode BW Mod.	FR1 n12 : 26dB BW(MHz) / DFT-S OFDM						
	5MHz		10MHz		15MHz		
	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK		
Lowest CH	5.40		9.65		14.21		
Middle CH	5.44		9.71		14.36		
Highest CH	5.46		9.91		14.21		

Mode BW Mod.	FR1 n12 : 26dB BW(MHz) / CP OFDM						
	5MHz		10MHz		15MHz		
	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	
Lowest CH	5.30	5.32	10.15	10.15	15.14	14.93	
Middle CH	5.30	5.44	10.01	10.19	14.99	15.14	
Highest CH	5.18	5.36	10.01	10.17	14.84	15.23	

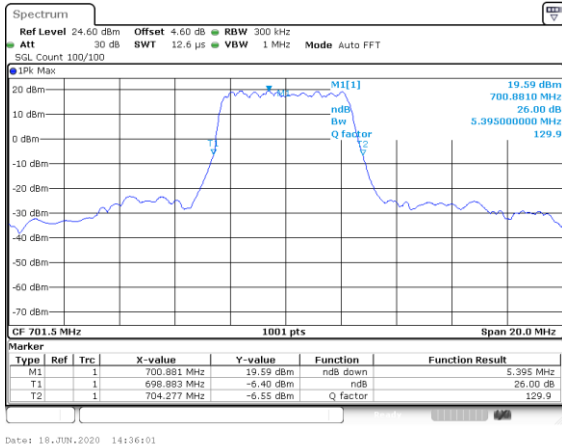
Mode BW Mod.	FR1 n12 : 26dB BW(MHz) / CP OFDM						
	5MHz		10MHz		15MHz		
	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	
Lowest CH	5.24	5.38	10.21	10.19	14.93	14.96	
Middle CH	5.30	5.20	10.05	10.15	14.99	15.02	
Highest CH	5.34	5.18	10.13	10.25	14.99	14.96	



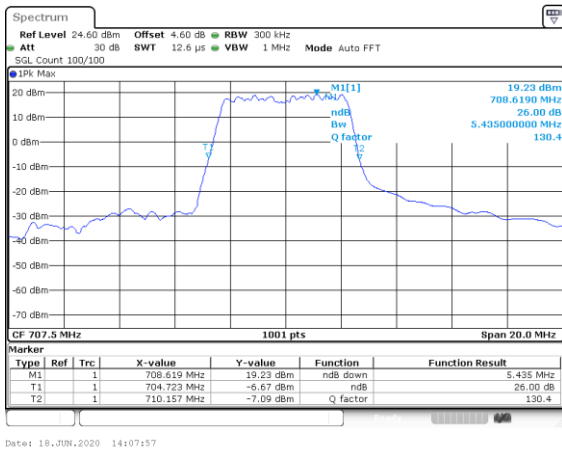
FR1 n12 / 5MHz / DFT-S OFDM

PI/2 BPSK

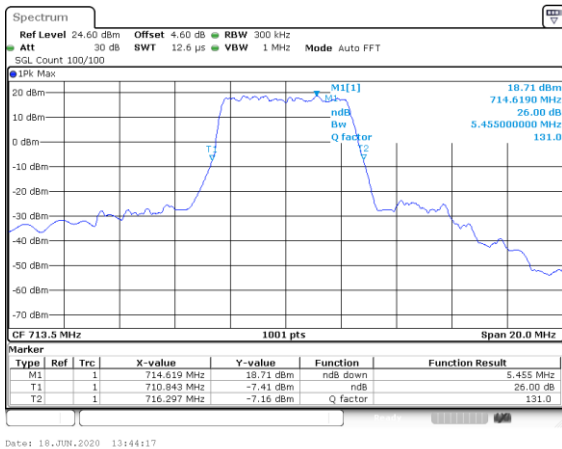
Lowest Channel



Middle Channel



Highest Channel





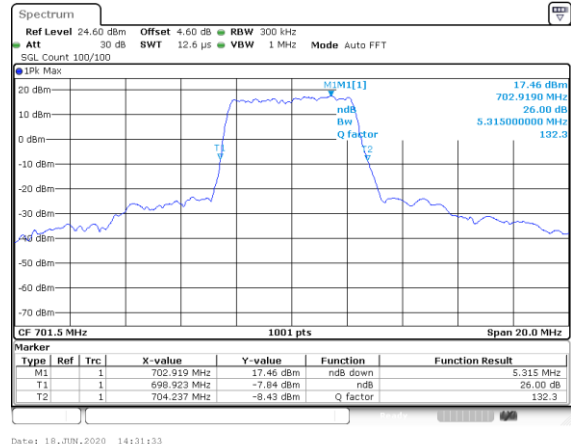
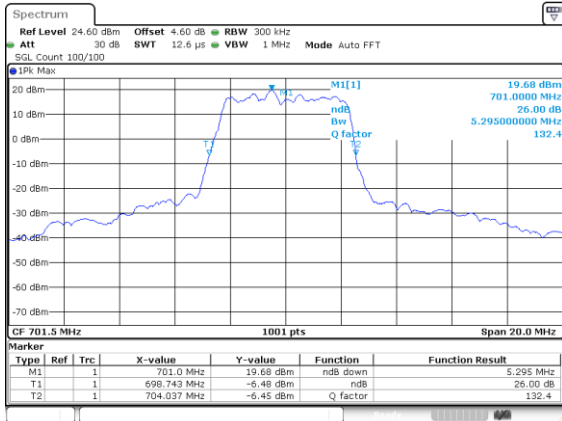
FR1 n12 / 5MHz / CP OFDM

QPSK

16QAM

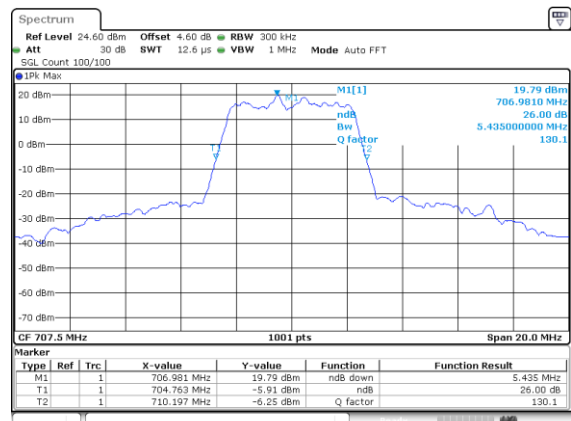
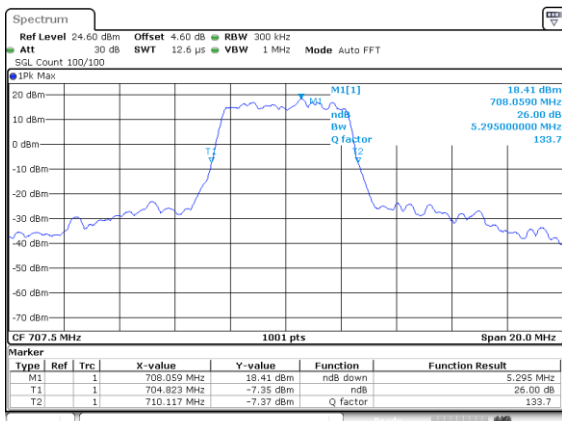
Lowest Channel

Lowest Channel



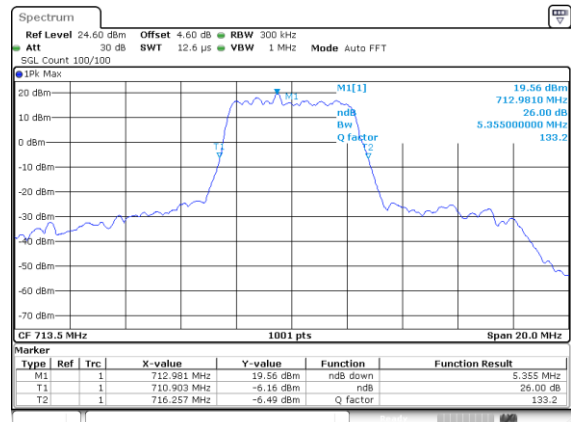
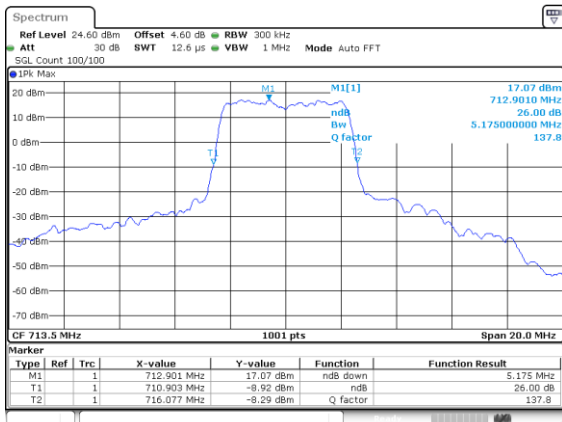
Middle Channel

Middle Channel



Highest Channel

Highest Channel





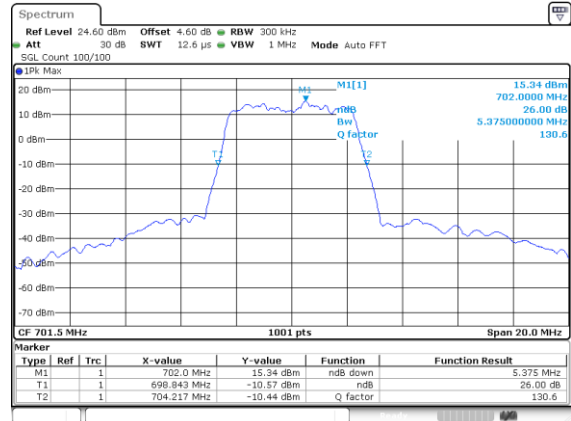
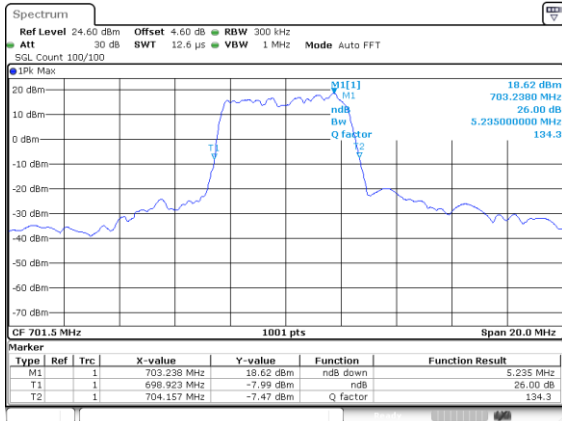
FR1 n12 / 5MHz / CP OFDM

64QAM

256QAM

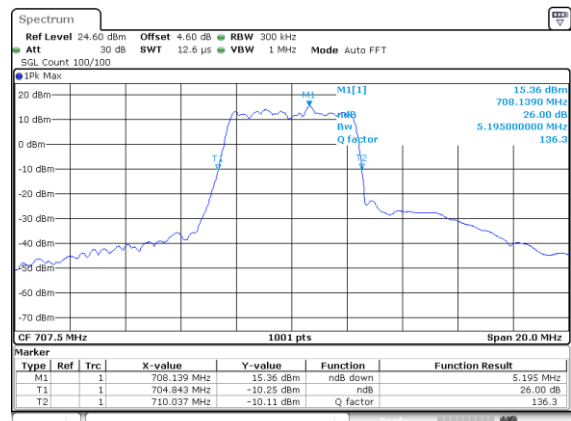
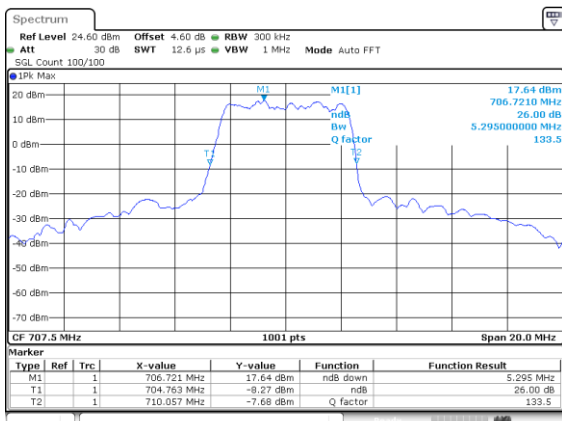
Lowest Channel

Lowest Channel



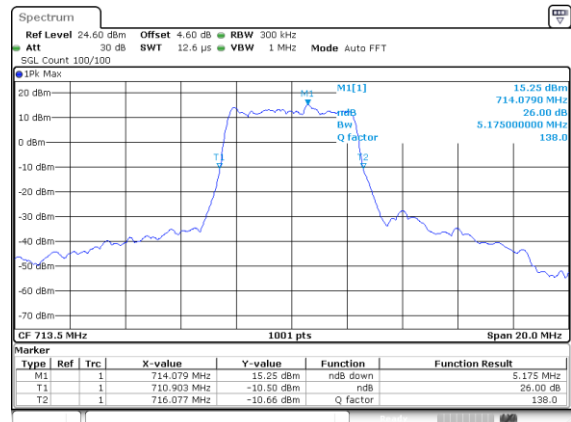
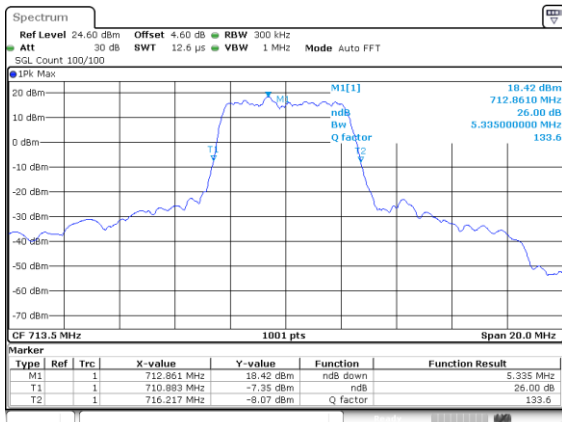
Middle Channel

Middle Channel



Highest Channel

Highest Channel

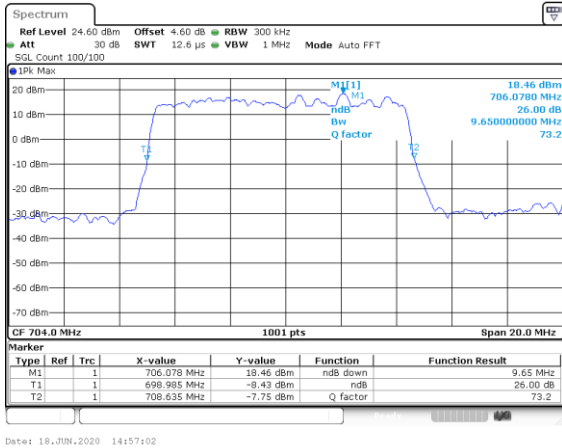




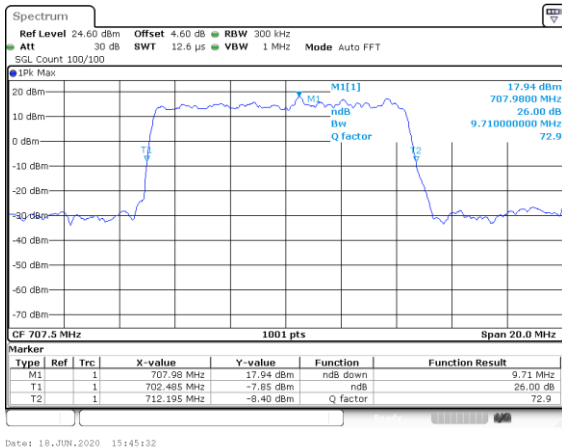
FR1 n12 / 10MHz / DFT-S OFDM

PI/2 BPSK

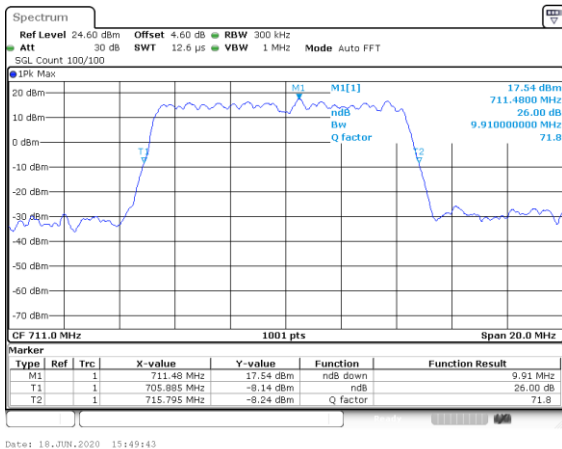
Lowest Channel



Middle Channel



Highest Channel





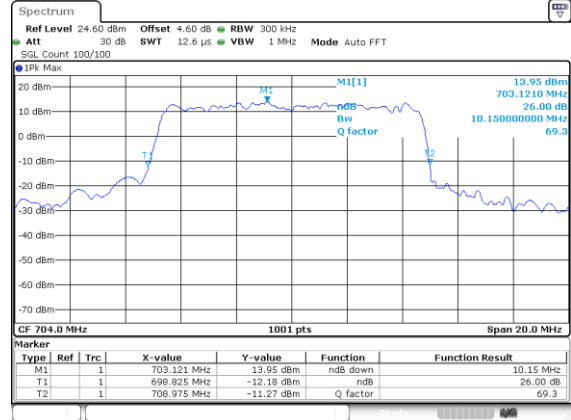
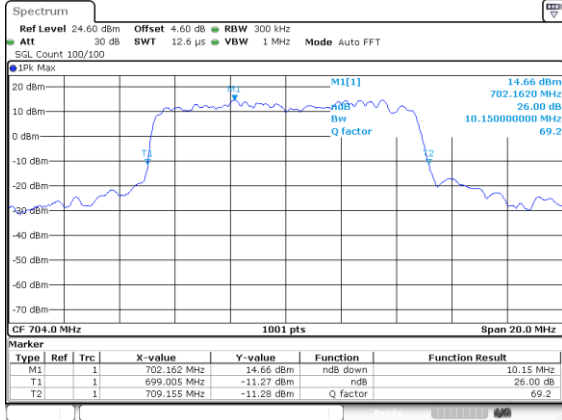
FR1 n12 / 10MHz / CP OFDM

QPSK

16QAM

Lowest Channel

Lowest Channel

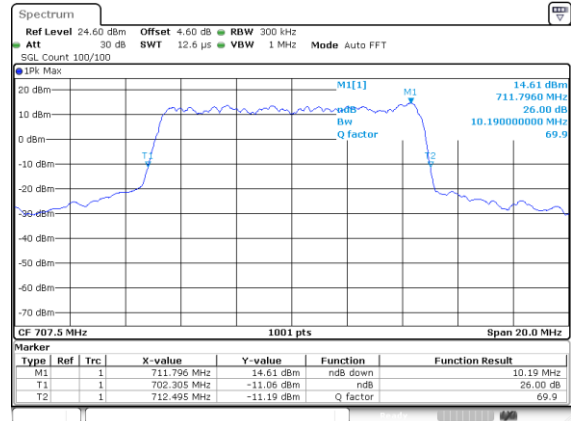
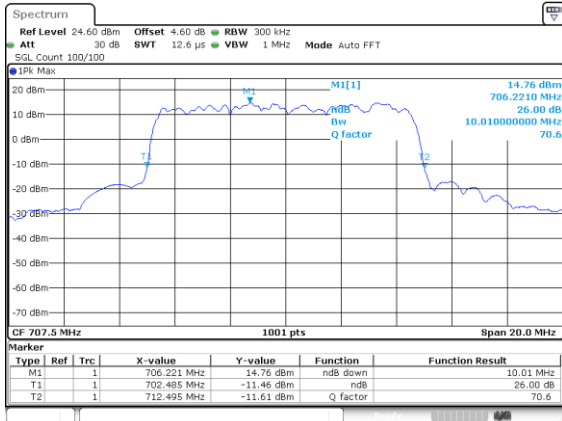


Date: 18 JUN 2020 15:38:41

Date: 18 JUN 2020 15:37:06

Middle Channel

Middle Channel

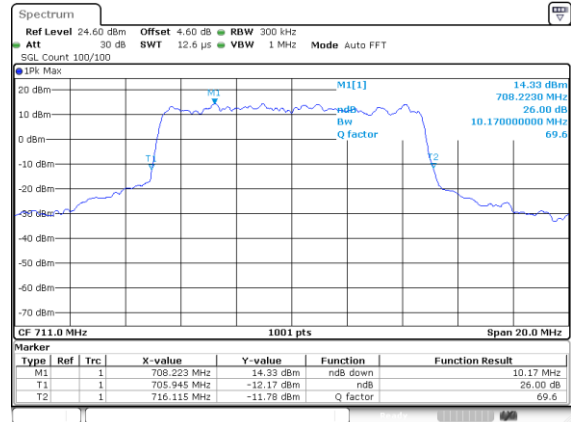
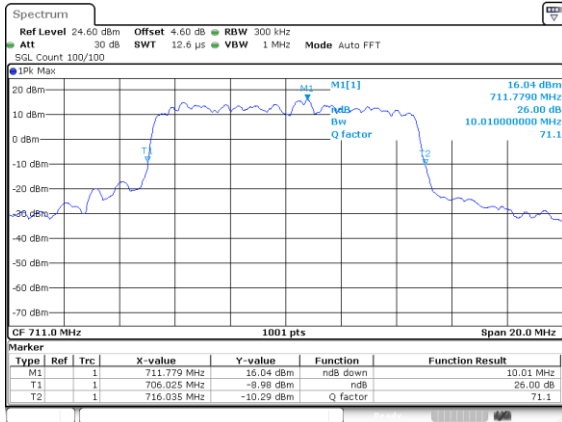


Date: 18 JUN 2020 15:40:02

Date: 18 JUN 2020 15:41:12

Highest Channel

Highest Channel



Date: 18 JUN 2020 15:52:03

Date: 18 JUN 2020 15:52:59



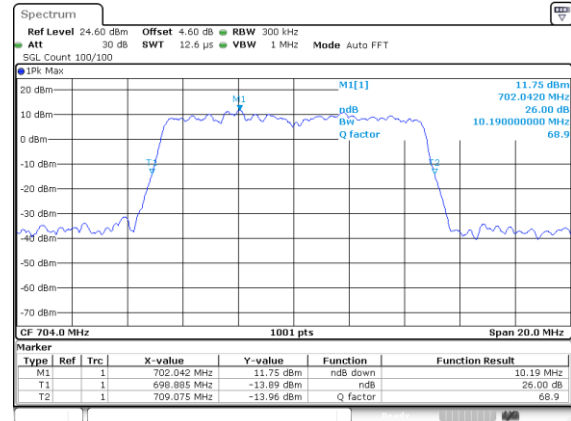
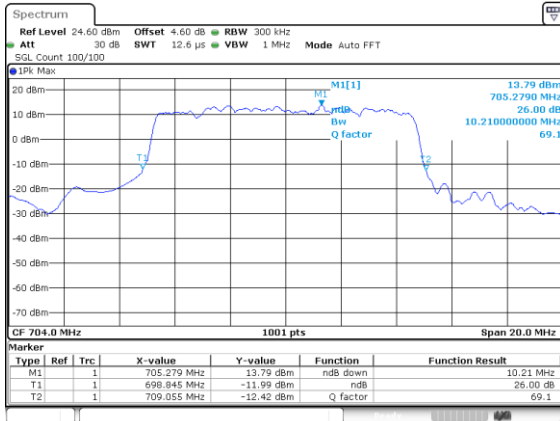
FR1 n12 / 10MHz / CP OFDM

64QAM

256QAM

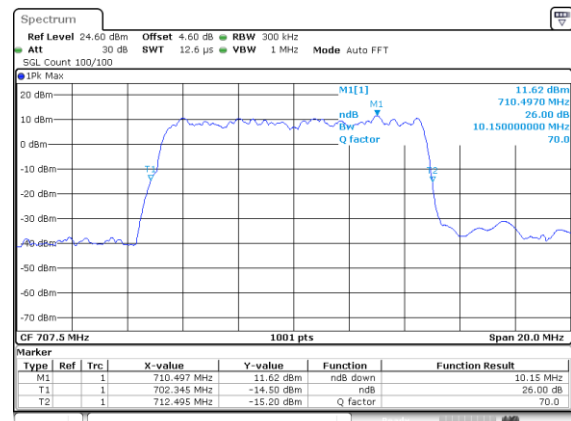
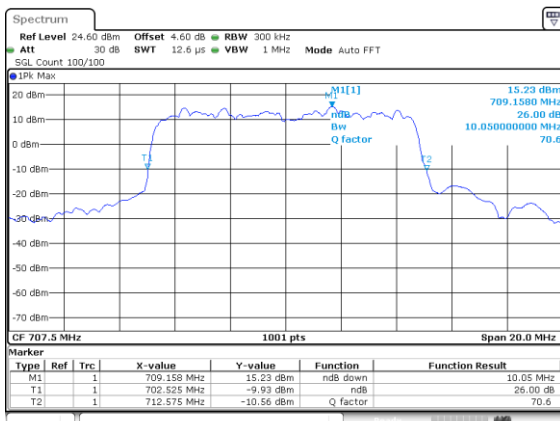
Lowest Channel

Lowest Channel



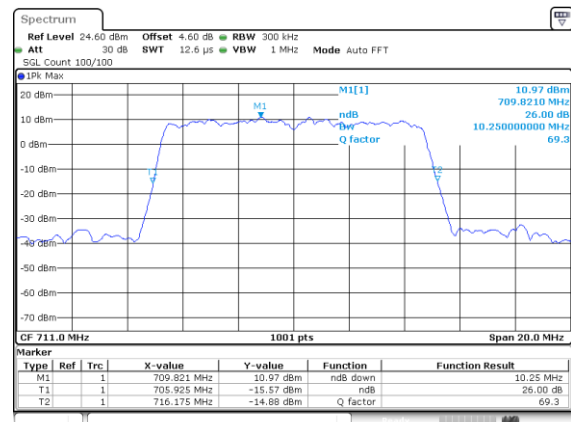
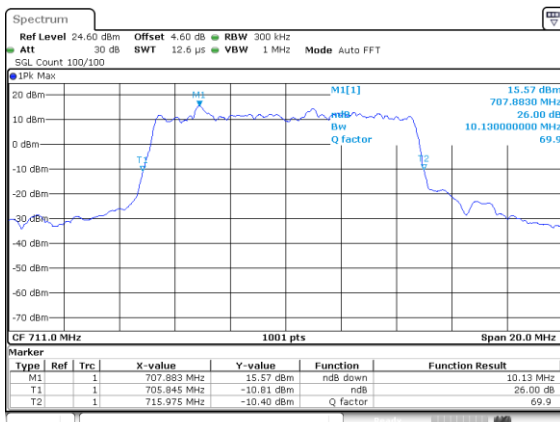
Middle Channel

Middle Channel



Highest Channel

Highest Channel

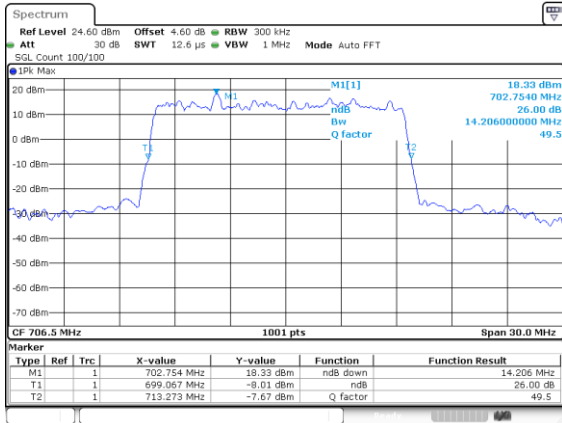




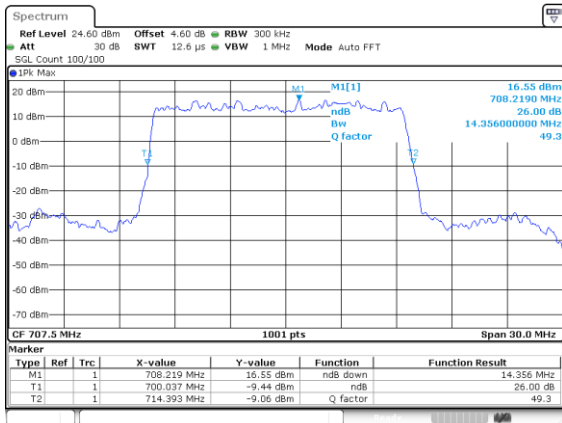
FR1 n12 / 15MHz / DFT-S OFDM

PI/2 BPSK

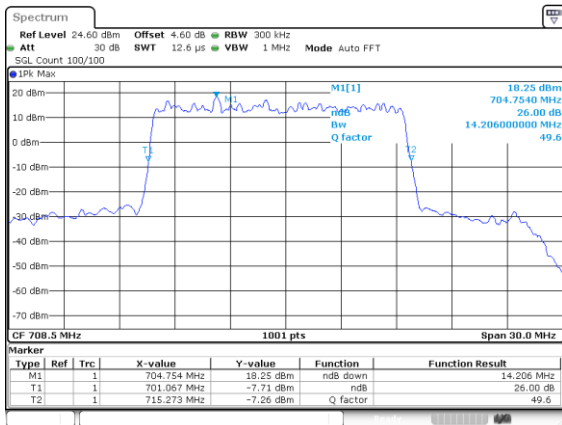
Lowest Channel



Middle Channel



Highest Channel





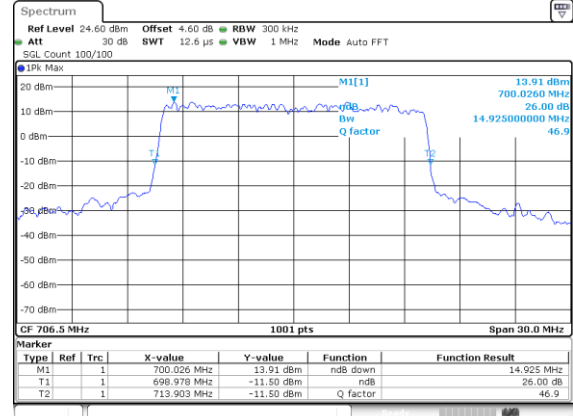
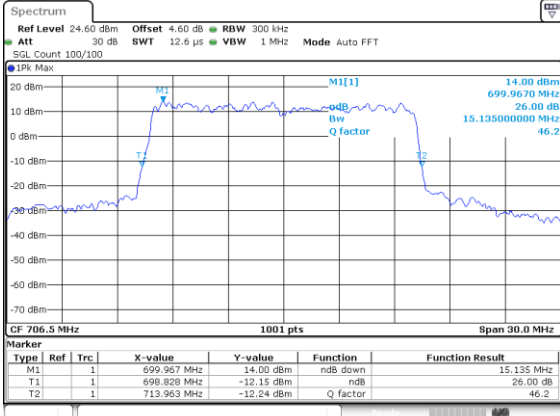
FR1 n12 / 15MHz / CP OFDM

QPSK

16QAM

Lowest Channel

Lowest Channel

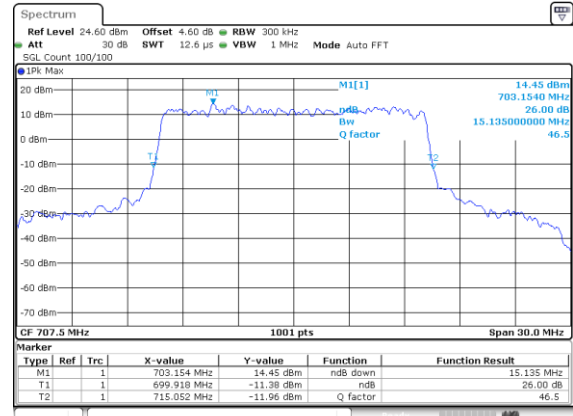
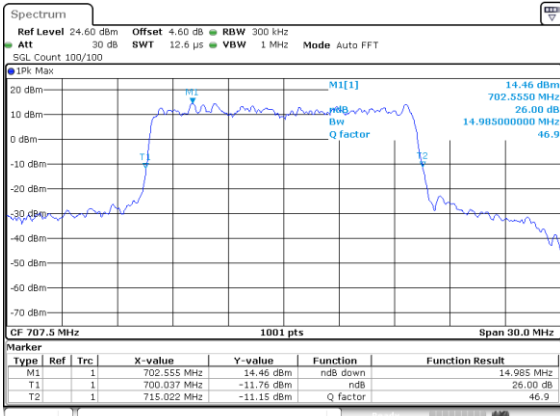


Date: 18 JUN 2020 17:22:02

Date: 18 JUN 2020 17:21:12

Middle Channel

Middle Channel

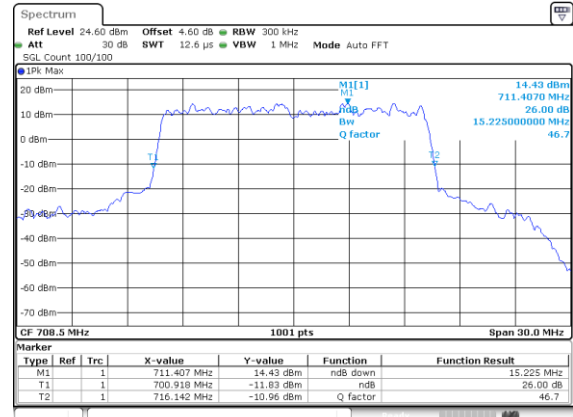
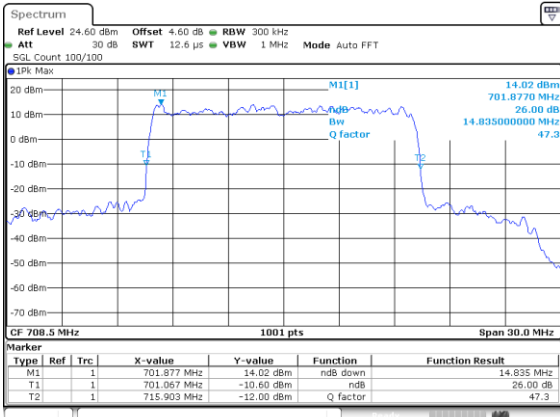


Date: 18 JUN 2020 17:16:31

Date: 18 JUN 2020 17:15:32

Highest Channel

Highest Channel



Date: 18 JUN 2020 16:52:01

Date: 18 JUN 2020 16:50:31



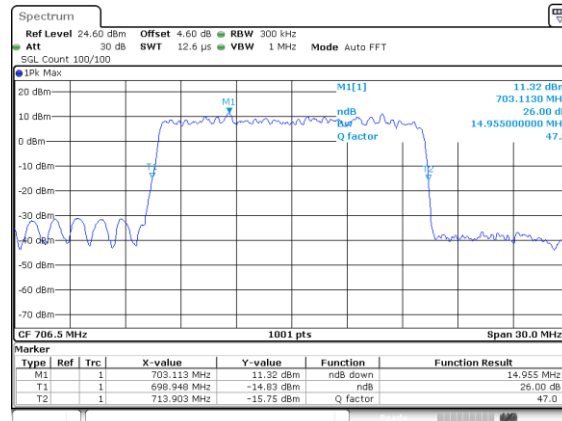
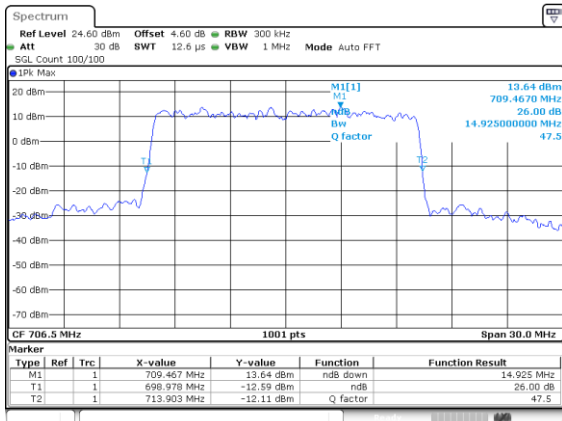
FR1 n12 / 15MHz / CP OFDM

64QAM

256QAM

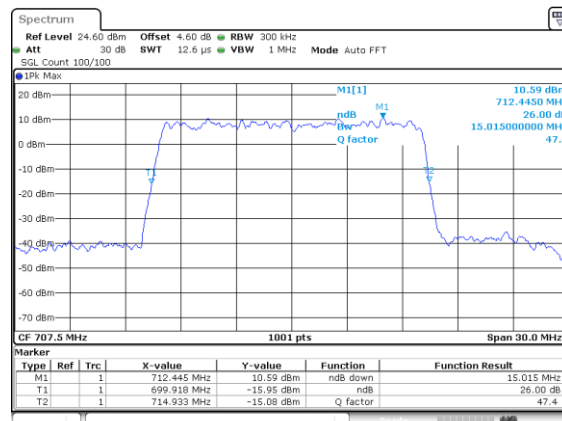
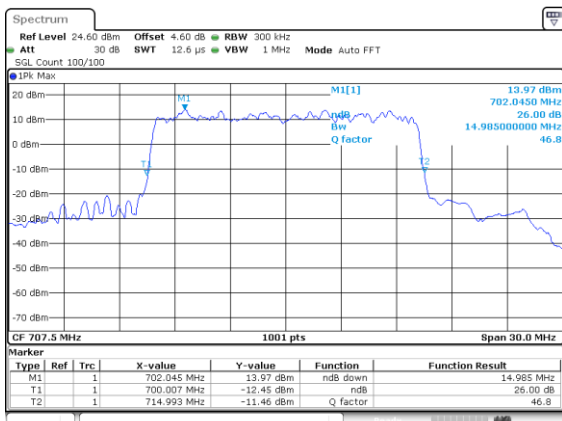
Lowest Channel

Lowest Channel



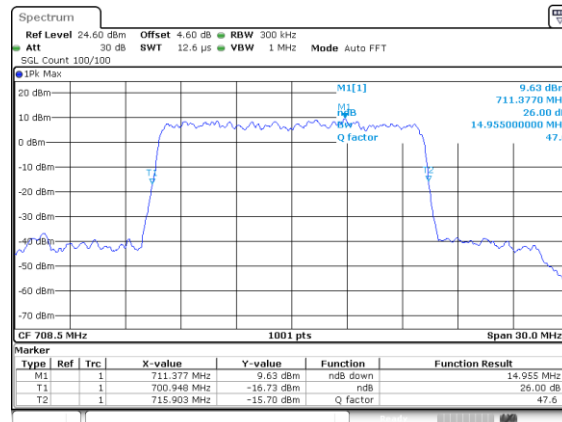
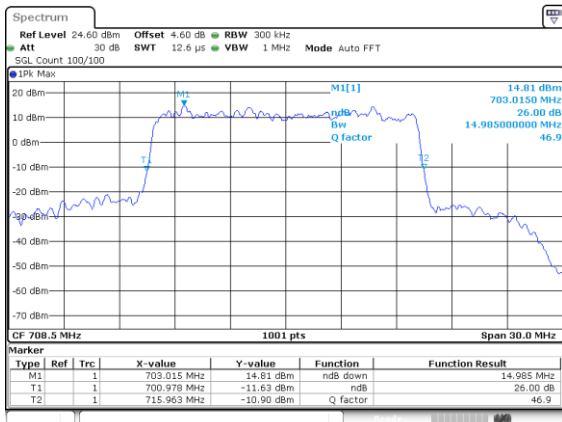
Middle Channel

Middle Channel



Highest Channel

Highest Channel





Occupied Bandwidth

Mode BW Mod.	FR1 n12 : 99%OBW(MHz) / DFT-S OFDM						
	5MHz		10MHz		15MHz		
	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK		
Lowest CH	4.68		9.05		13.46		
Middle CH	4.68		9.07		13.52		
Highest CH	4.72		9.03		13.46		

Mode BW Mod.	FR1 n12 : 99%OBW (MHz) / CP OFDM						
	5MHz		10MHz		15MHz		
	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	
Lowest CH	4.64	4.72	9.31	9.27	14.12	14.15	
Middle CH	4.66	4.62	9.35	9.39	14.09	14.09	
Highest CH	4.64	4.62	9.33	9.31	14.12	14.18	

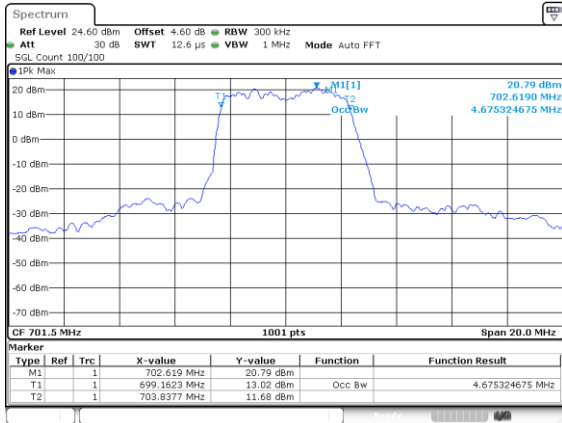
Mode BW Mod.	FR1 n12 : 99%OBW (MHz) / CP OFDM						
	5MHz		10MHz		15MHz		
	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	
Lowest CH	4.64	4.70	9.33	9.29	14.12	14.09	
Middle CH	4.66	4.64	9.33	9.31	14.09	14.12	
Highest CH	4.62	4.64	9.35	9.35	14.18	14.12	



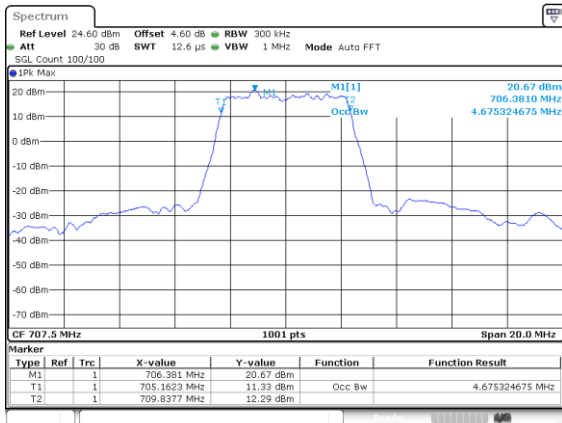
FR1 n12 / 5MHz / DFT-S OFDM

PI/2 BPSK

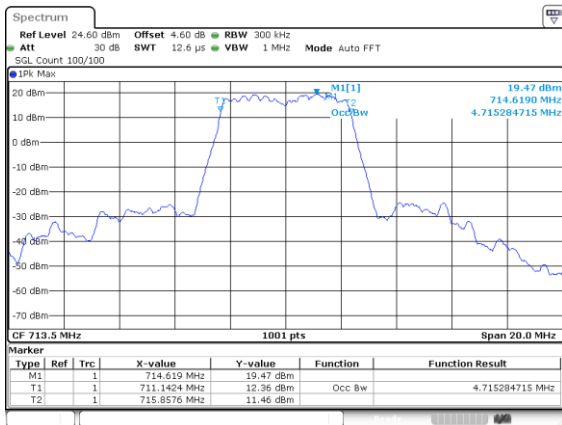
Lowest Channel



Middle Channel



Highest Channel





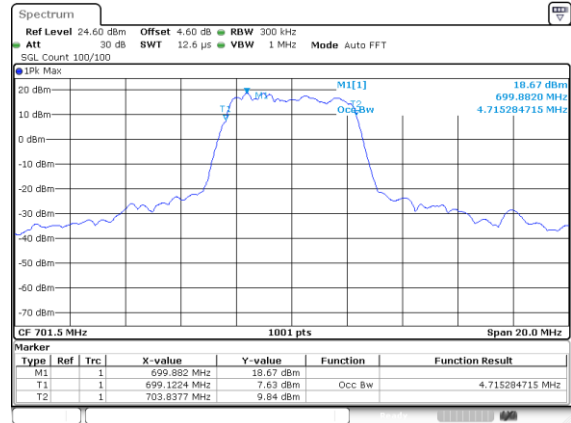
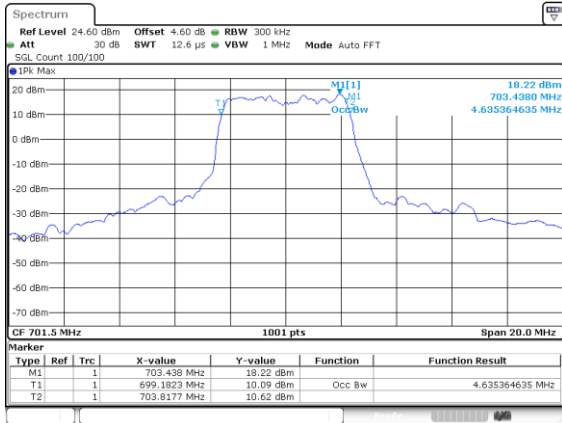
FR1 n12 / 5MHz / CP OFDM

QPSK

16QAM

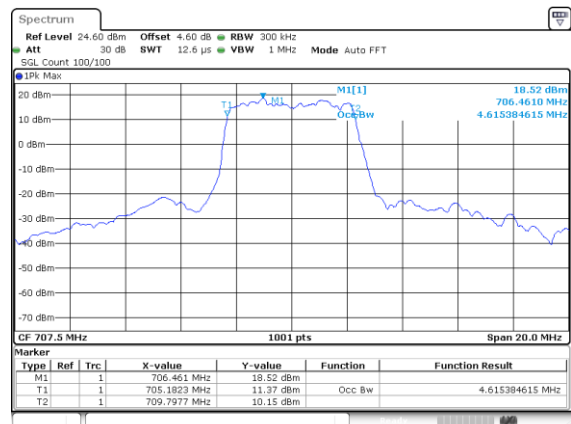
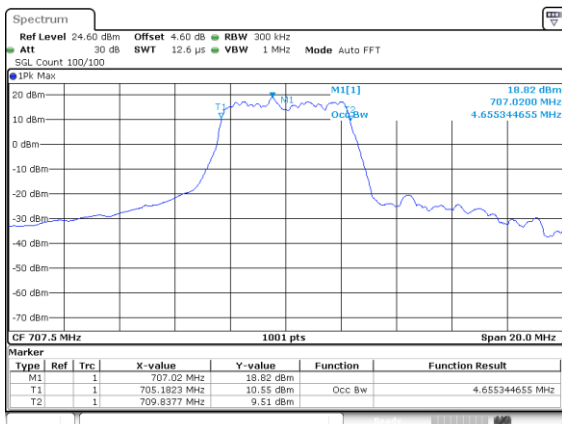
Lowest Channel

Lowest Channel



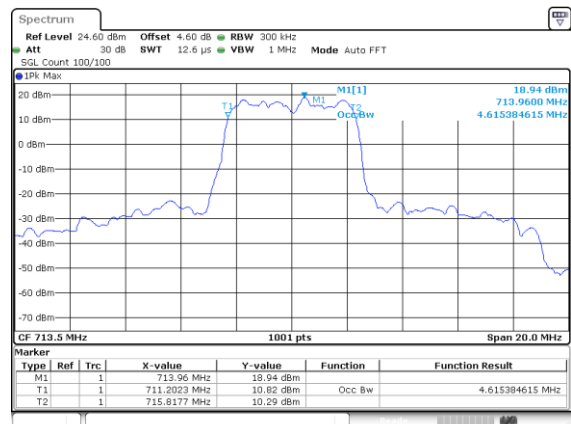
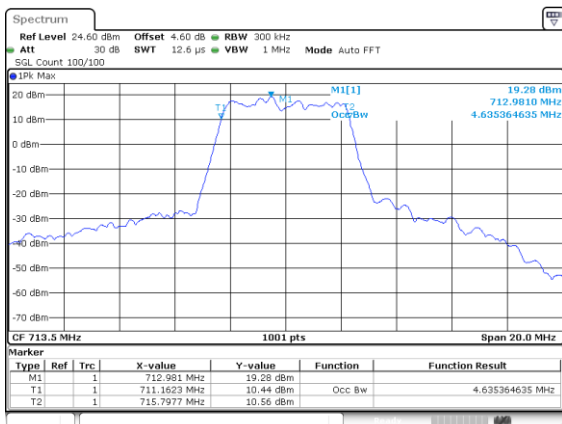
Middle Channel

Middle Channel



Highest Channel

Highest Channel





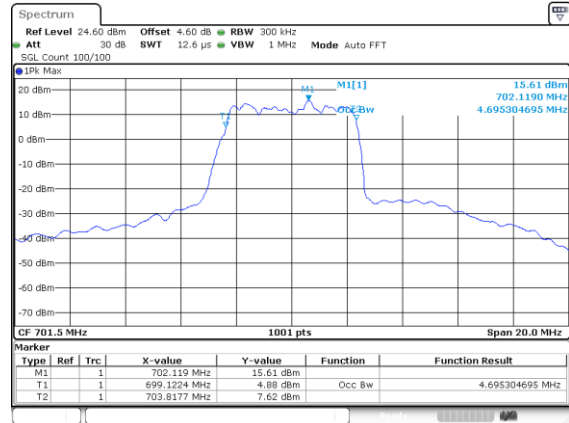
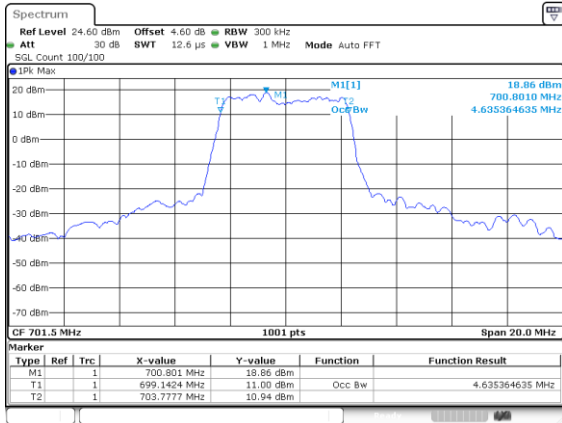
FR1 n12 / 5MHz / CP OFDM

64QAM

256QAM

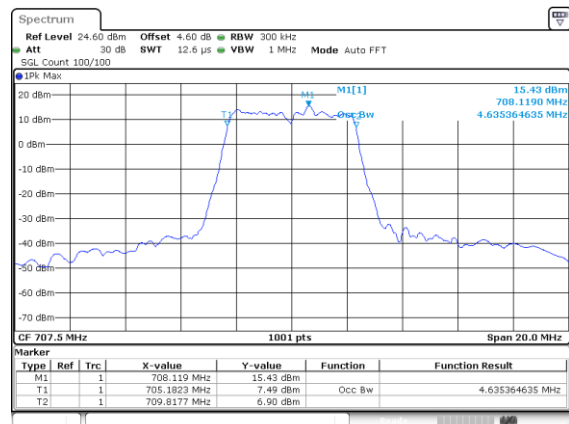
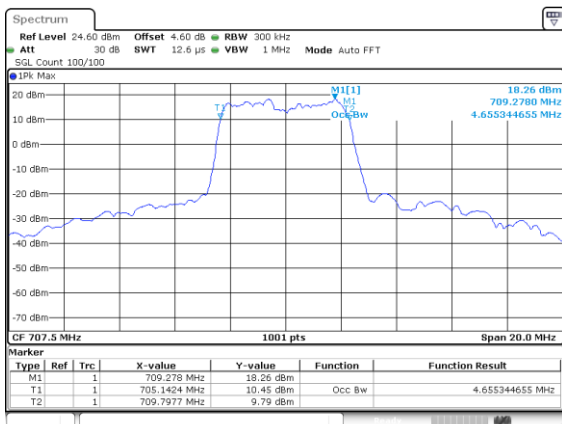
Lowest Channel

Lowest Channel



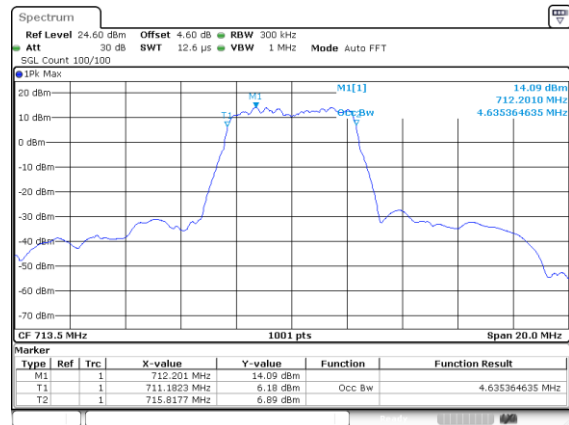
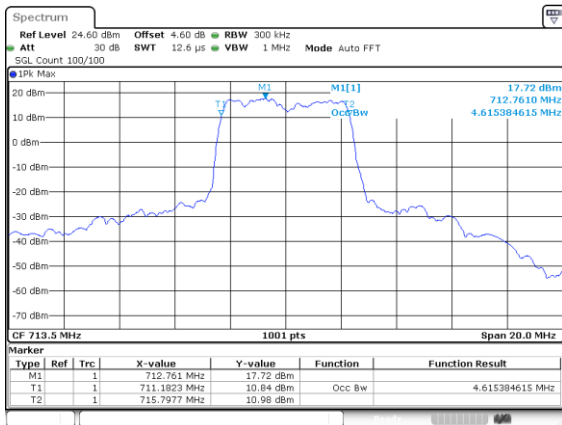
Middle Channel

Middle Channel



Highest Channel

Highest Channel

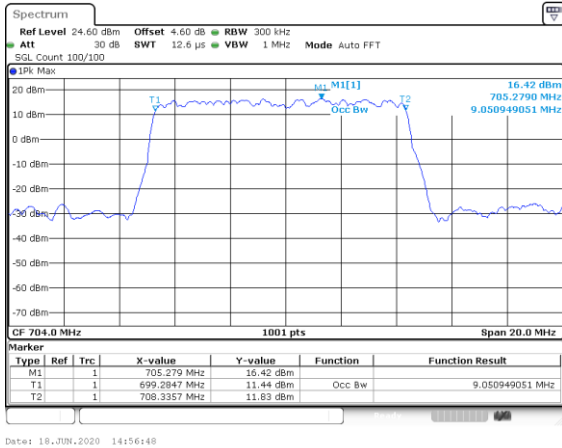




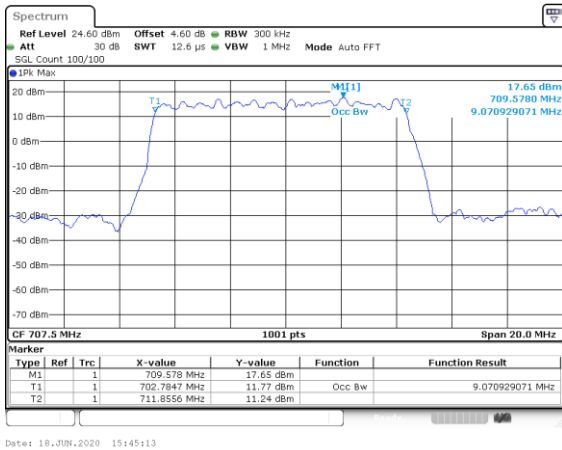
FR1 n12 / 10MHz / DFT-S OFDM

PI/2 BPSK

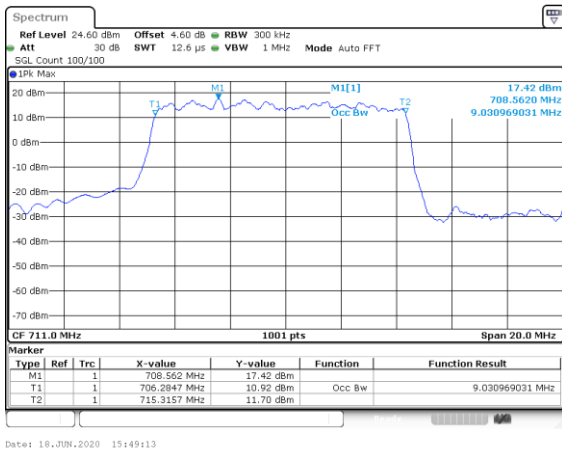
Lowest Channel



Middle Channel



Highest Channel





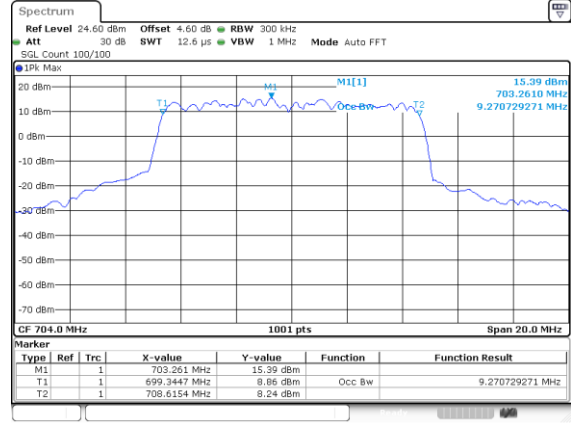
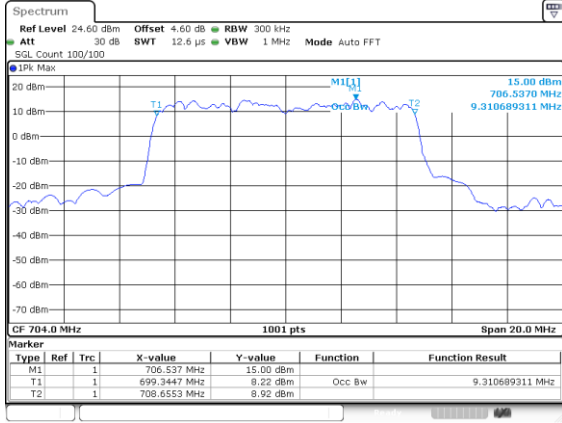
FR1 n12 / 10MHz / CP OFDM

QPSK

16QAM

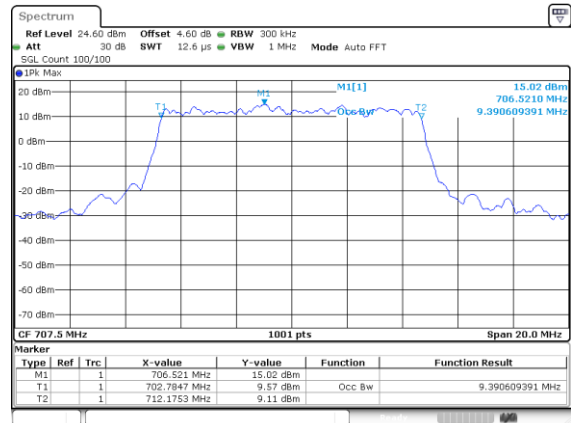
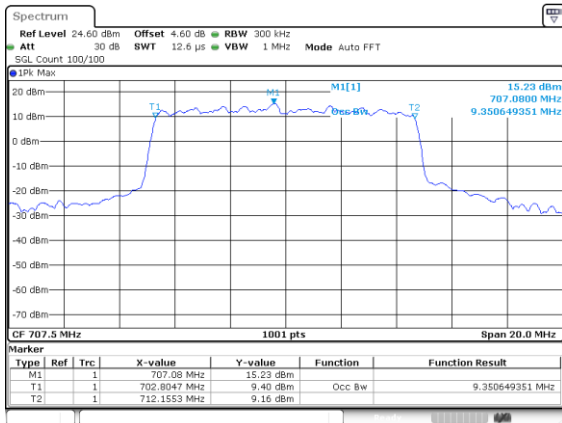
Lowest Channel

Lowest Channel



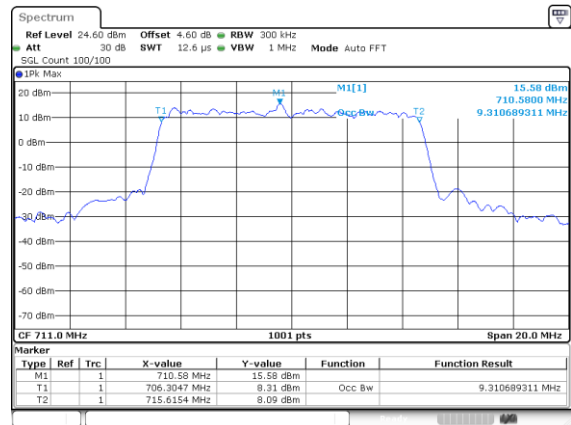
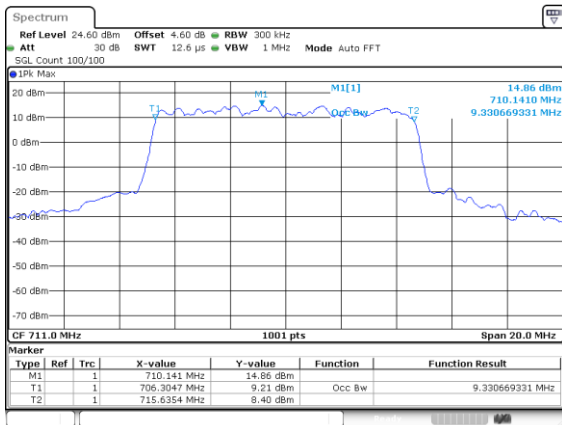
Middle Channel

Middle Channel



Highest Channel

Highest Channel





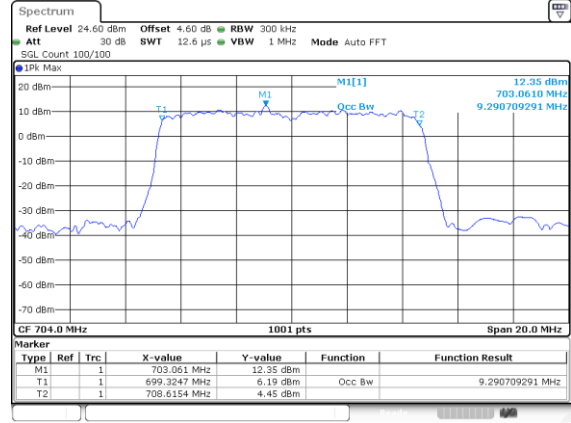
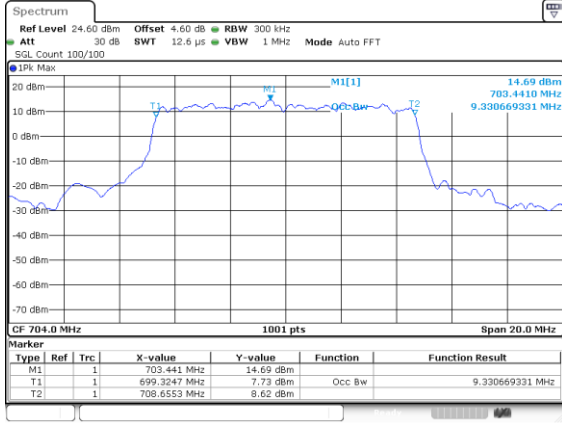
FR1 n12 / 10MHz / CP OFDM

64QAM

256QAM

Lowest Channel

Lowest Channel

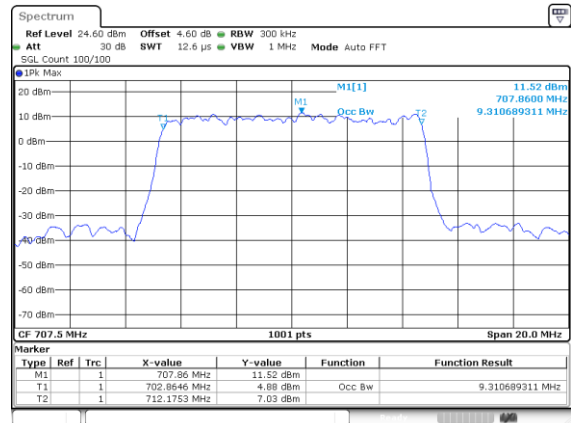
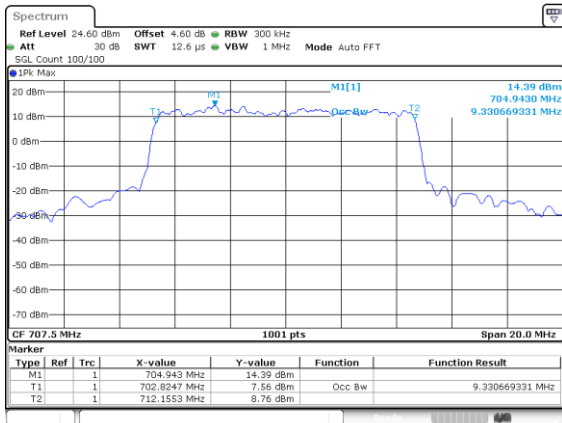


Date: 18 JUN 2020 15:35:55

Date: 18 JUN 2020 15:34:01

Middle Channel

Middle Channel

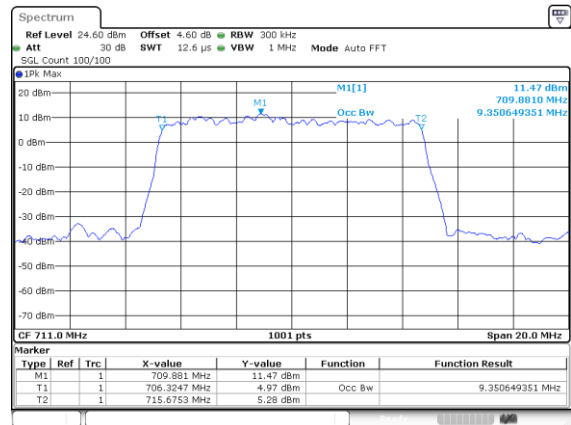
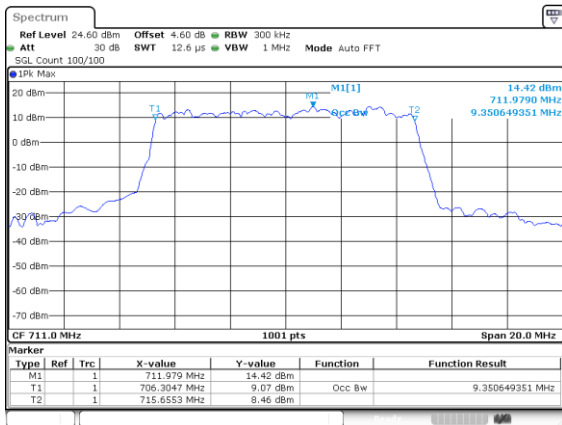


Date: 18 JUN 2020 15:41:41

Date: 18 JUN 2020 15:43:50

Highest Channel

Highest Channel



Date: 18 JUN 2020 15:53:30

Date: 18 JUN 2020 15:53:36