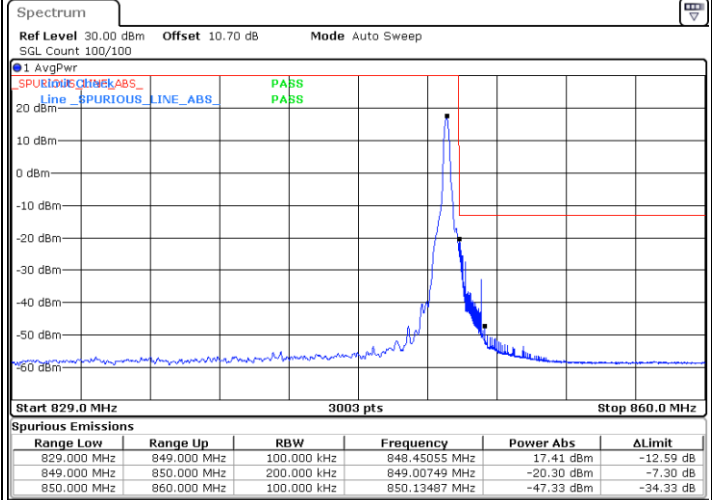
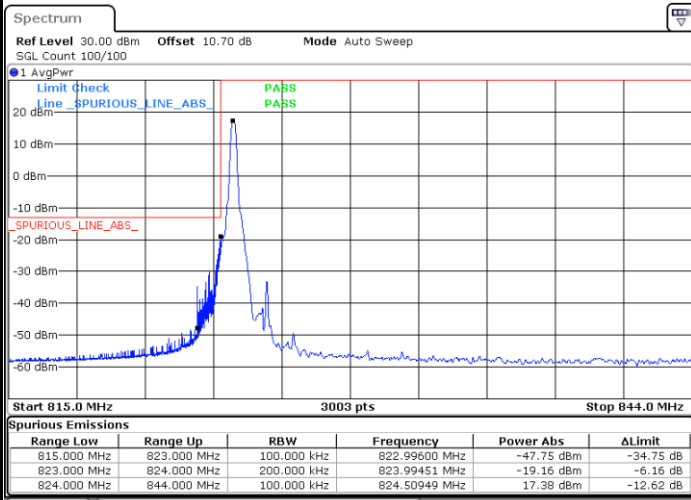




FR1 n5 / 20MHz / DFT-s-OFDM / 64QAM

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBMAX

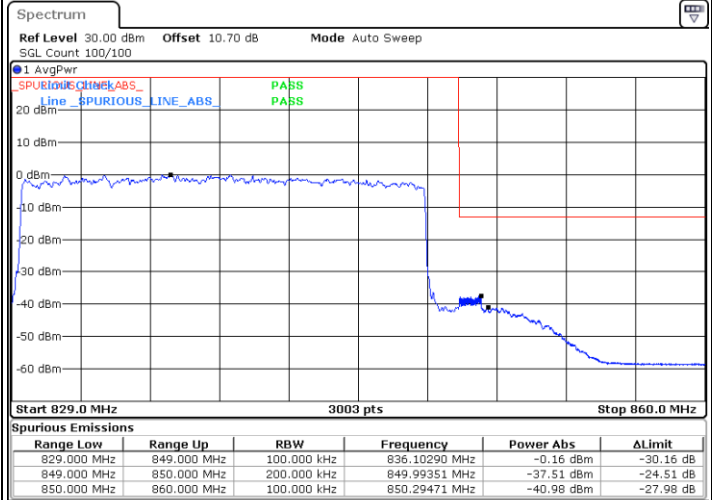
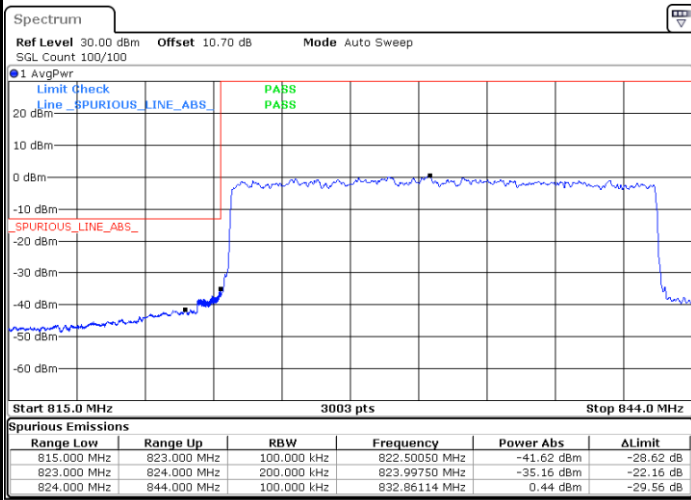


Date: 10 JUN.2020 18:08:01

Date: 10 JUN.2020 18:25:19

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 10 JUN.2020 18:01:24

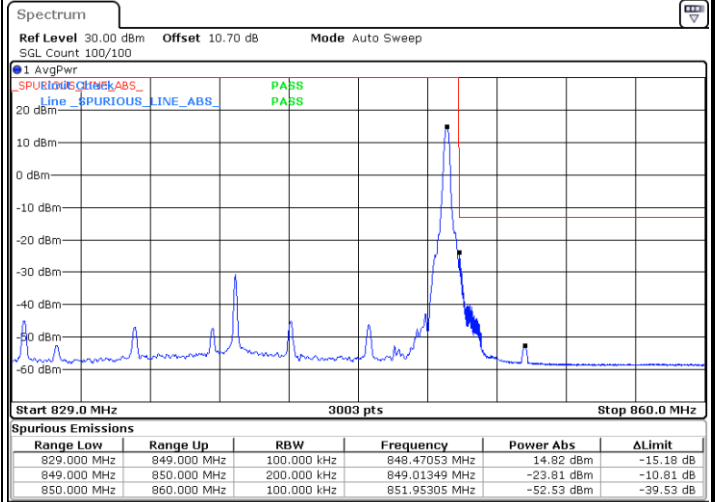
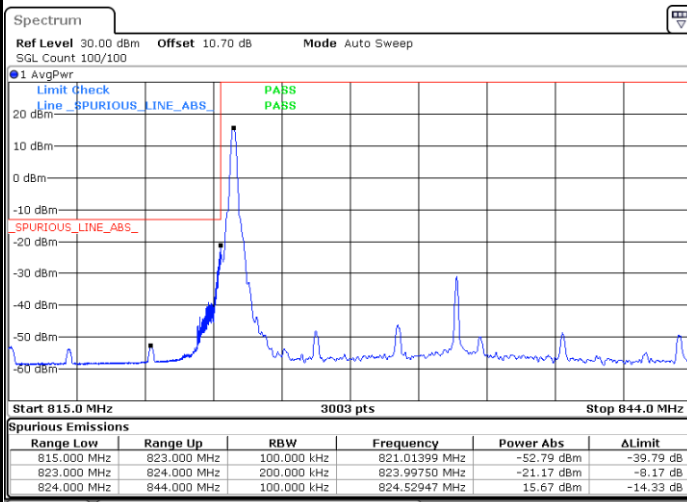
Date: 10 JUN.2020 18:21:59



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

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBMAX

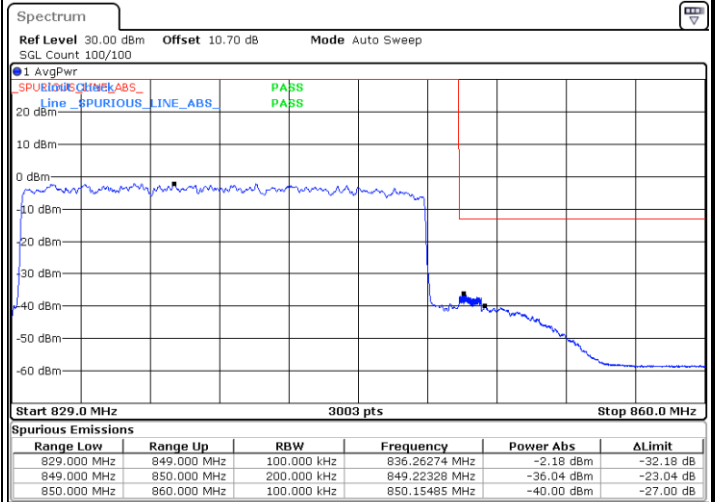
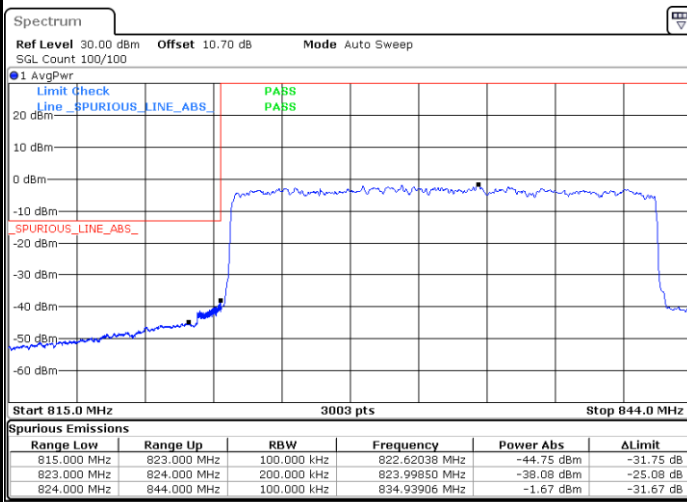


Date: 10 JUN.2020 18:06:55

Date: 10 JUN.2020 18:24:18

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 10 JUN.2020 18:02:41

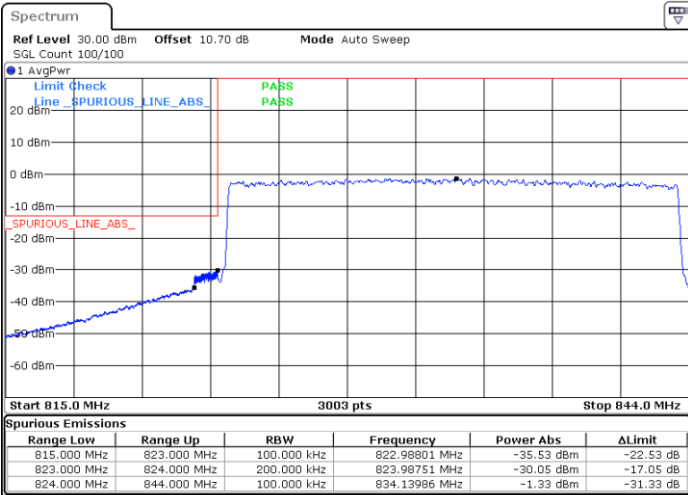
Date: 10 JUN.2020 18:23:12



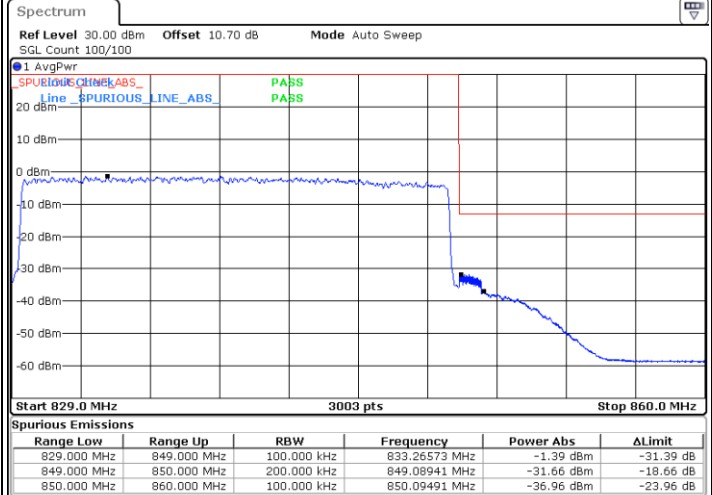
FR1 n5 / 20MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



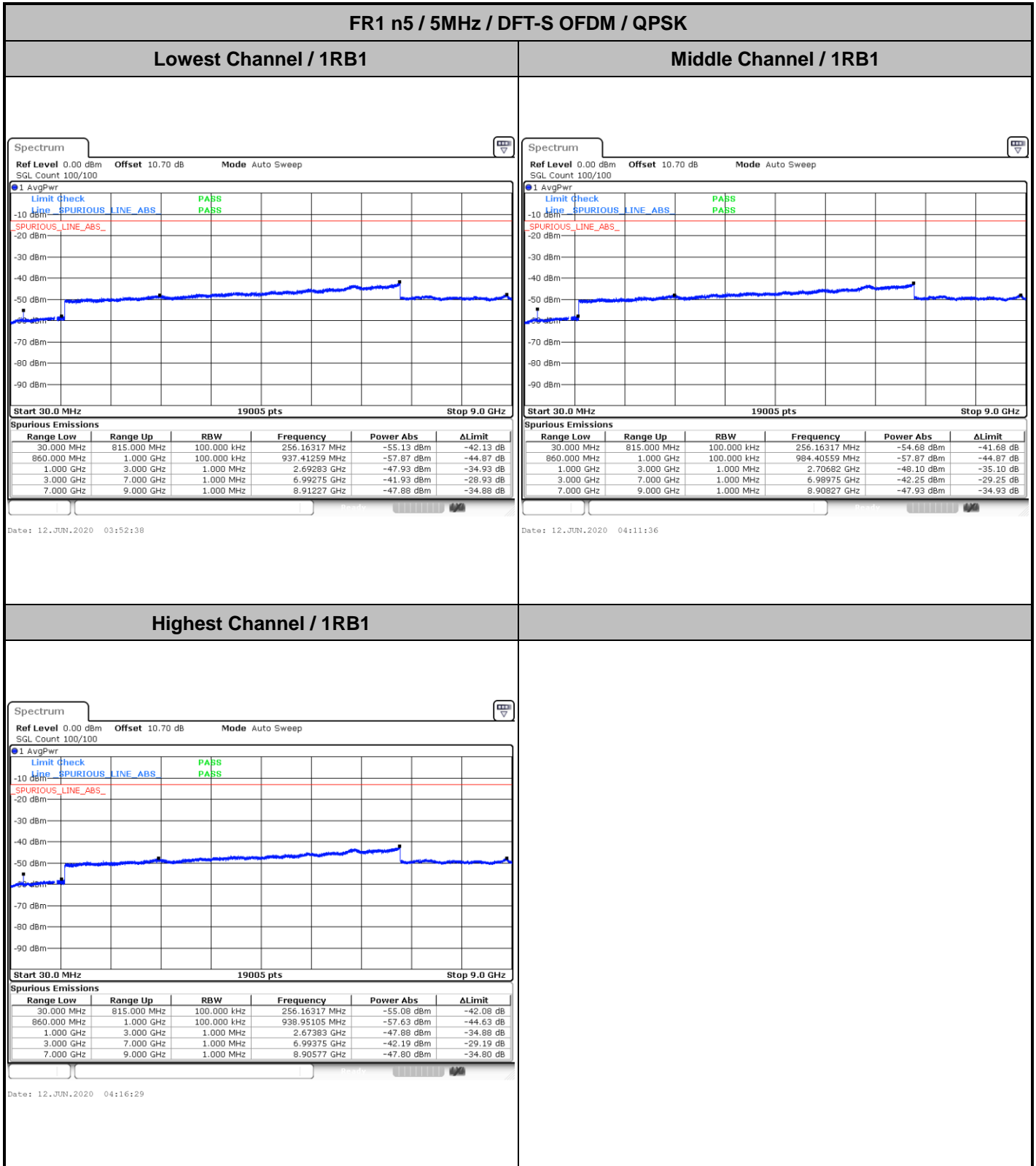
Date: 10 JUN 2020 15:00:44



Date: 10 JUN 2020 15:07:11



# Conducted Spurious Emission

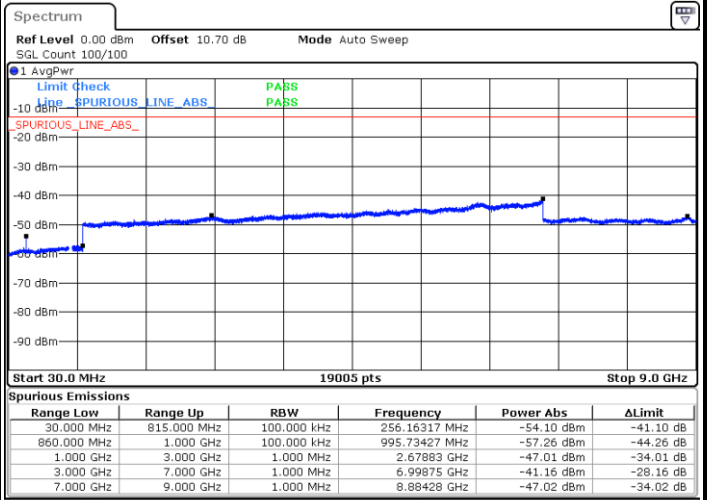
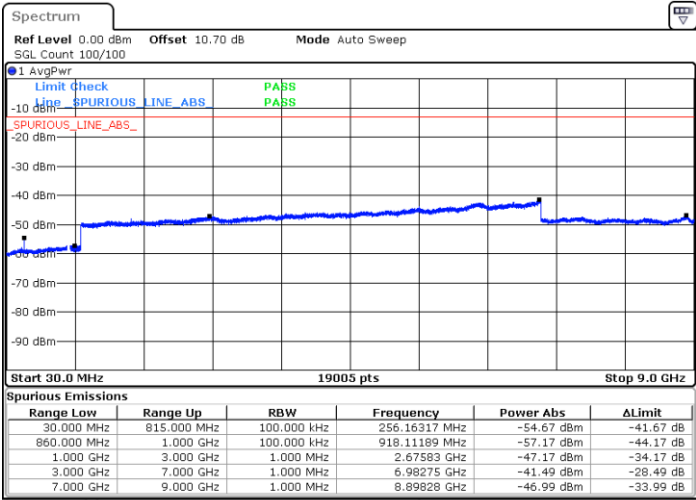




FR1 n5 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

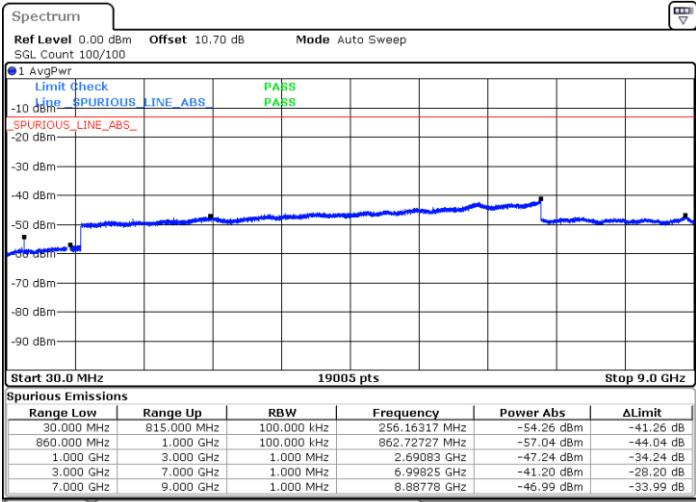
Middle Channel / 1RB1



Date: 11. JUN. 2020 04:17:49

Date: 11. JUN. 2020 04:32:42

Highest Channel / 1RB1



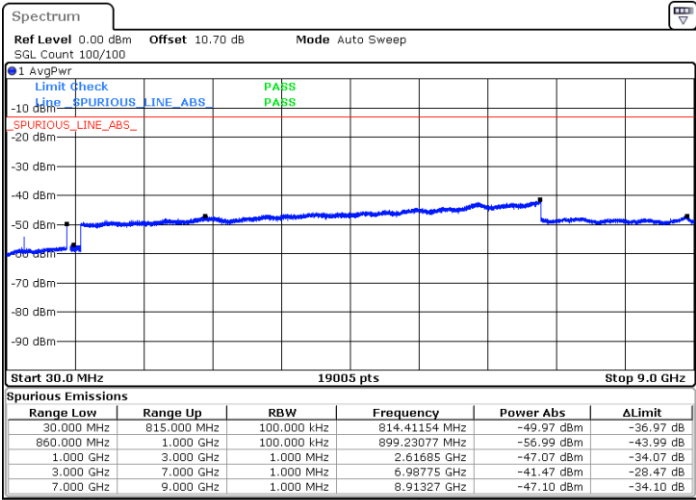
Date: 11. JUN. 2020 04:38:41



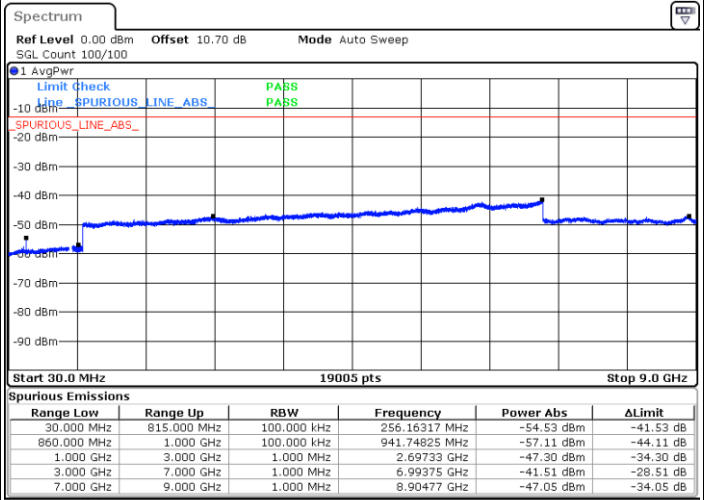
FR1 n5 / 15MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

Middle Channel / 1RB1

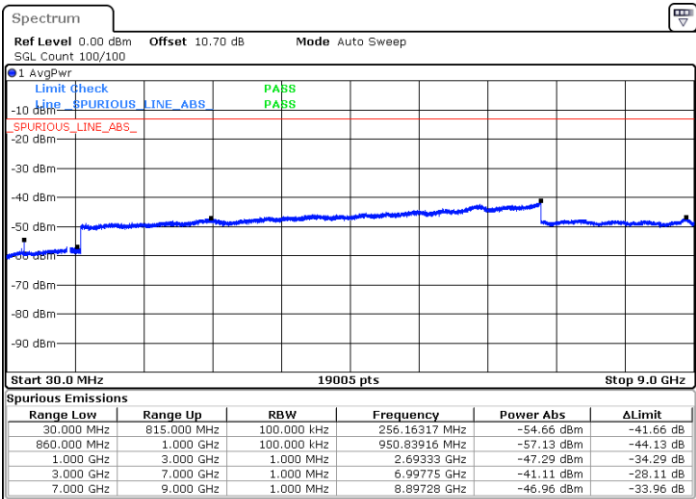


Date: 11.JUN.2020 02:22:51



Date: 11.JUN.2020 02:54:13

Highest Channel / 1RB1



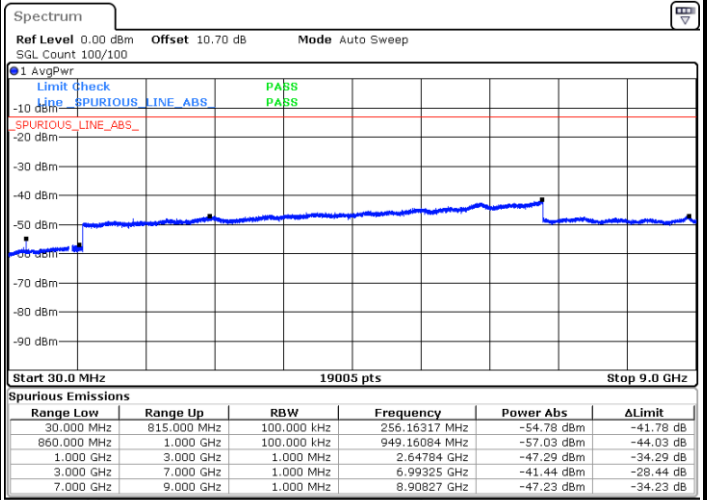
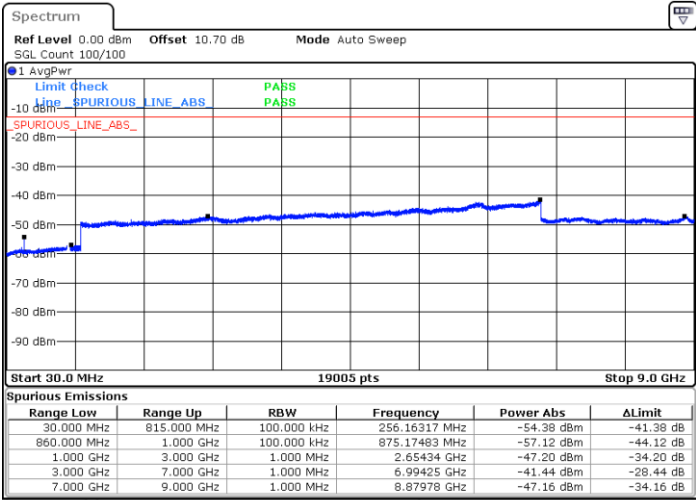
Date: 11.JUN.2020 03:11:46



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

Lowest Channel / 1RB1

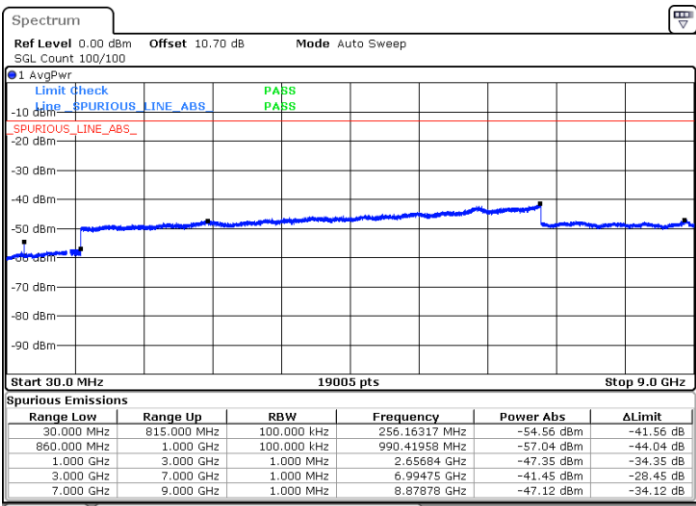
Middle Channel / 1RB1



Date: 10. JUN. 2020 18:12:11

Date: 10. JUN. 2020 18:16:31

Highest Channel / 1RB1



Date: 10. JUN. 2020 18:38:07



Frequency Stability

Test Conditions		FR1 n5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0006	PASS
40	Normal Voltage	0.0072	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0062	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0129	
-20	Normal Voltage	0.0051	
-30	Normal Voltage	0.0059	
20	Maximum Voltage	0.0062	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0086	

Note:

1. Normal Voltage =3.3 V. ; Battery End Point (BEP) =3.1 V. ; Maximum Voltage =3.6 V.
2. The frequency fundamental emissions stay within the authorized frequency block.





# FR1 n7

## Peak-to-Average Ratio

Mode	FR1 n7 / 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	3.77	4.35	5.51	5.94	<b>PASS</b>
Middle CH	3.42	4.20	5.45	5.88	
Highest CH	3.65	4.32	5.59	6.00	
Mode	FR1 n7 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Lowest CH	6.43				<b>PASS</b>
Middle CH	6.41				
Highest CH	6.49				



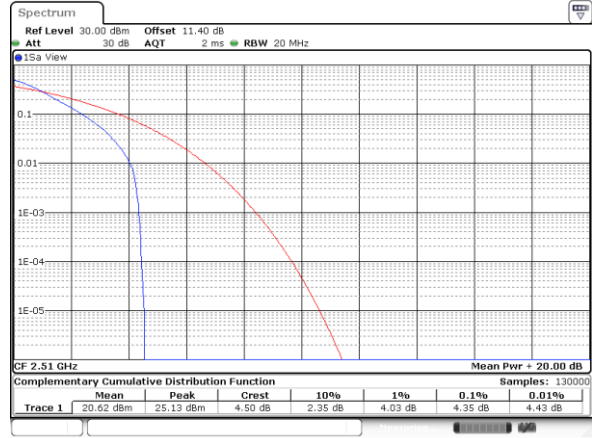
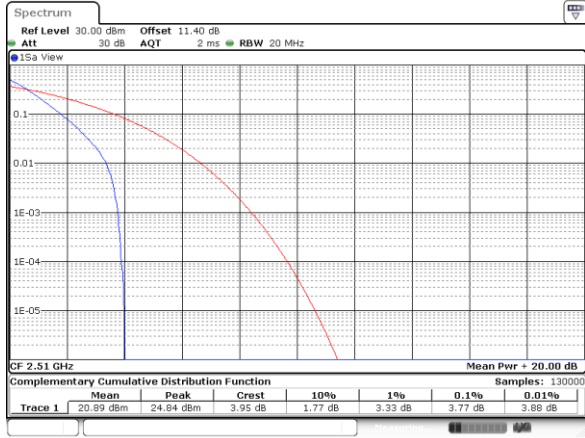
FR1 n7 / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

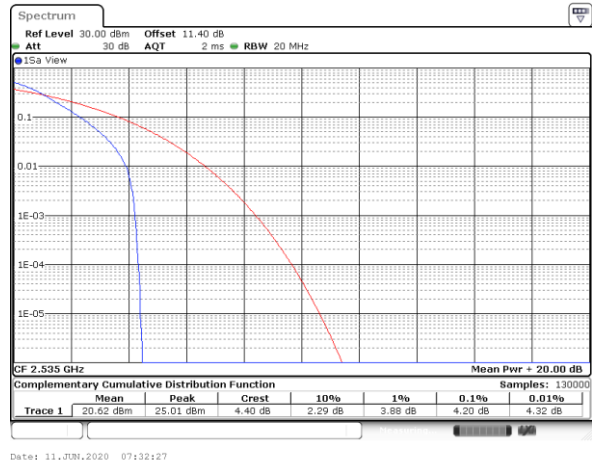
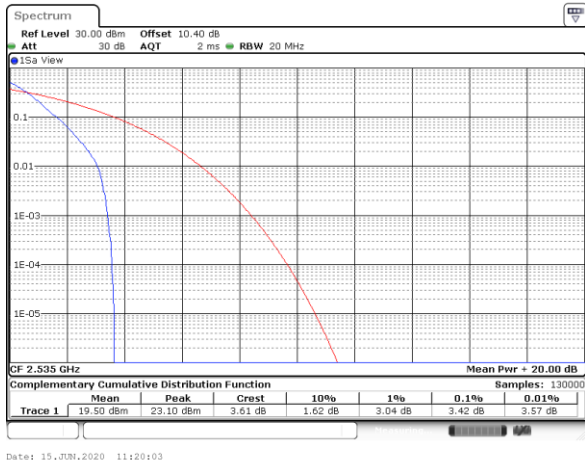
Lowest Channel / Full RB

Lowest Channel / Full RB



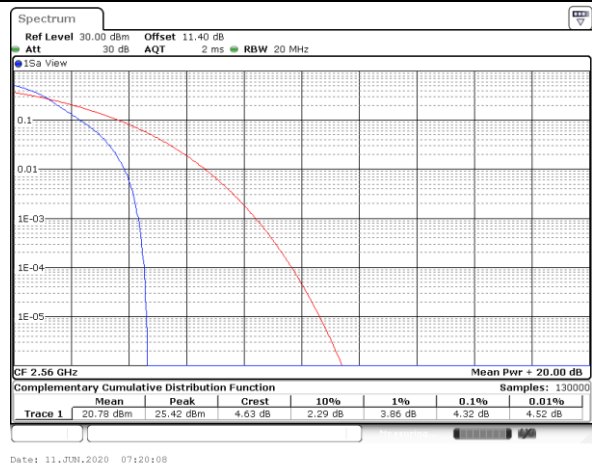
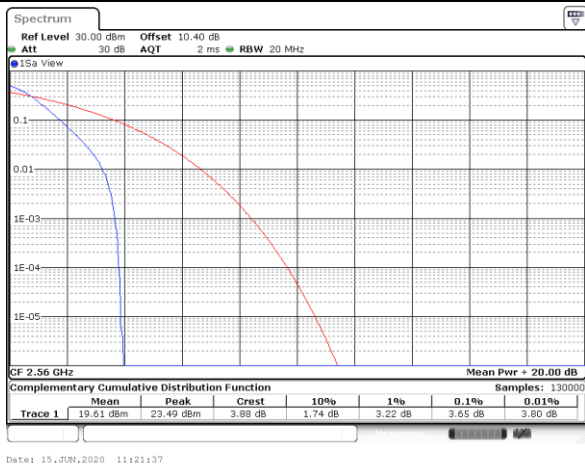
Middle Channel / Full RB

Middle Channel / Full RB



Highest Channel / Full RB

Highest Channel / Full RB





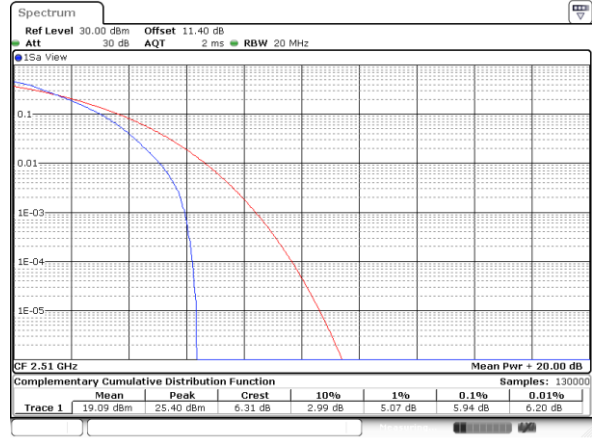
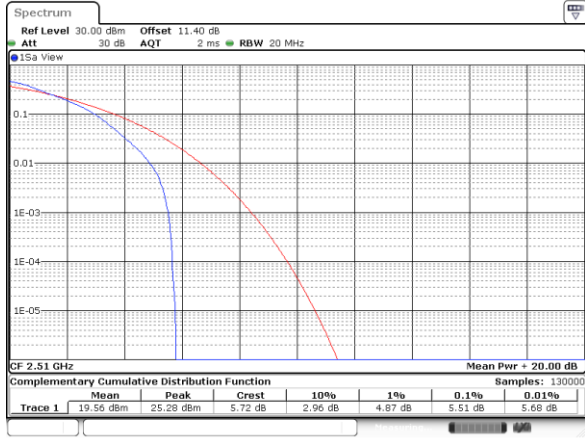
FR1 n7 / 20MHz / DFT-S OFDM

16QAM

64QAM

Lowest Channel / Full RB

Lowest Channel / Full RB

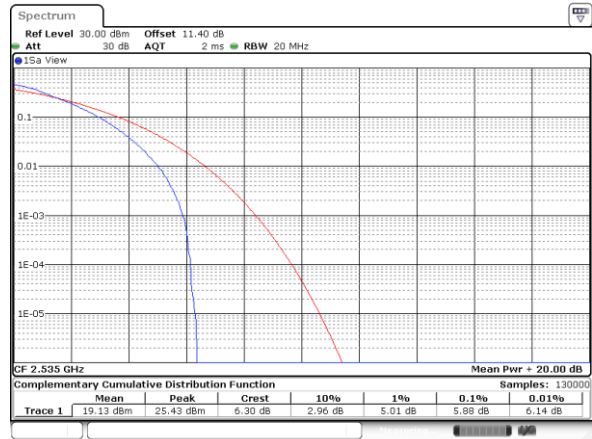
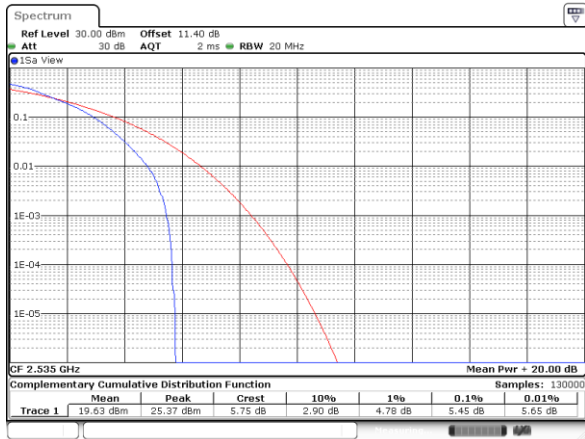


Date: 11 JUN 2020 07:13:31

Date: 11 JUN 2020 07:13:43

Middle Channel / Full RB

Middle Channel / Full RB

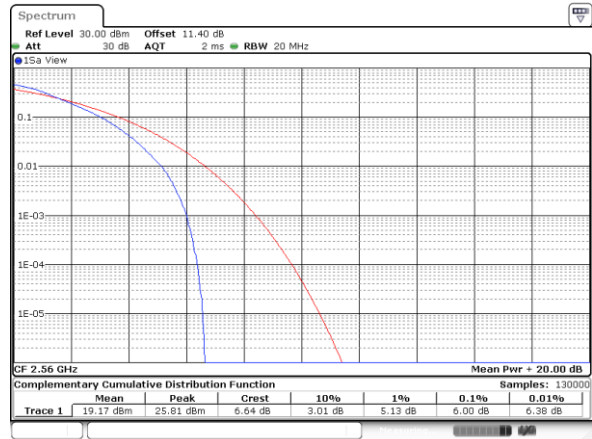
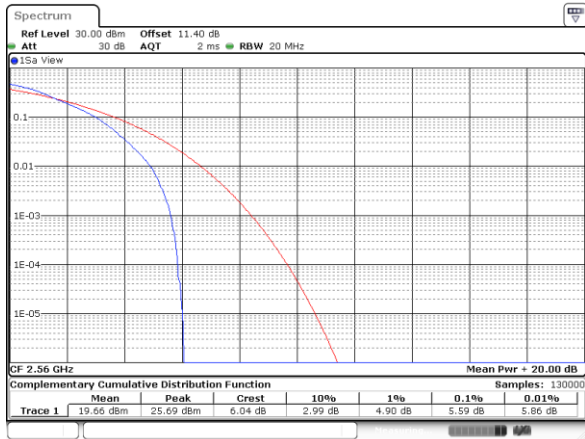


Date: 11 JUN 2020 07:13:16

Date: 11 JUN 2020 07:13:04

Highest Channel / Full RB

Highest Channel / Full RB



Date: 11 JUN 2020 07:12:48

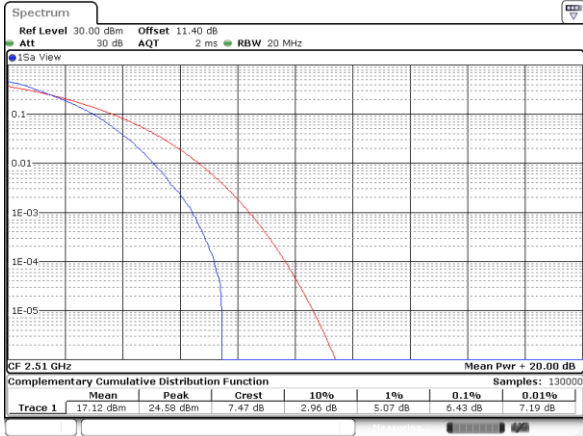
Date: 11 JUN 2020 07:12:24



FR1 n7 / 20MHz / DFT-S OFDM

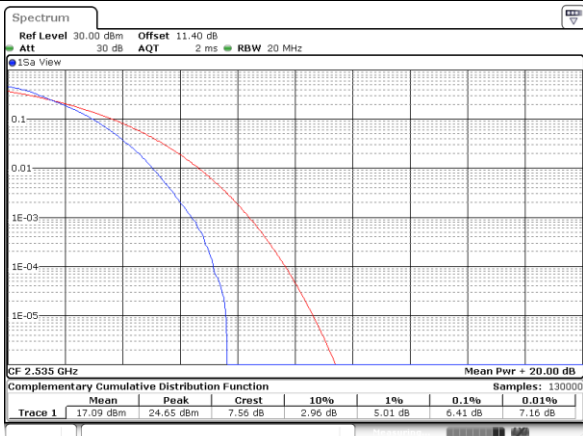
256QAM

Lowest Channel / Full RB



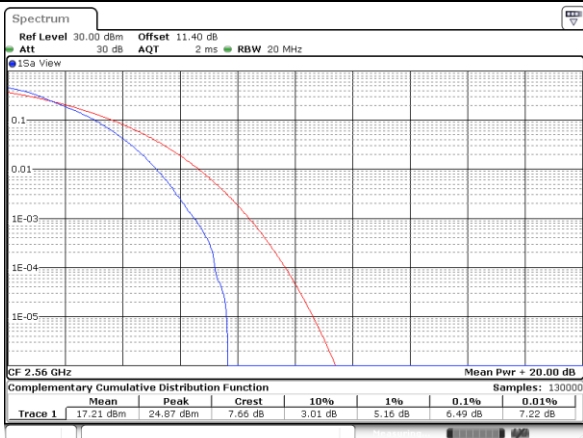
Date: 11 JUN 2020 07:13:04

Middle Channel / Full RB



Date: 11 JUN 2020 07:13:54

Highest Channel / Full RB



Date: 11 JUN 2020 07:12:48



**26dB Bandwidth**

Mode	FR1 n7 : 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	5.21		9.71		14.30		18.98	
Middle CH	5.23		9.69		14.27		18.86	
Highest CH	5.41		9.81		14.21		18.78	

Mode	FR1 n7 : 26dB BW(MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	5.19	5.30	10.13	10.03	14.99	14.90	19.82	19.78
Middle CH	5.13	5.34	10.07	10.21	14.93	14.87	19.86	19.86
Highest CH	5.25	5.24	10.09	10.09	14.99	14.96	19.74	19.94

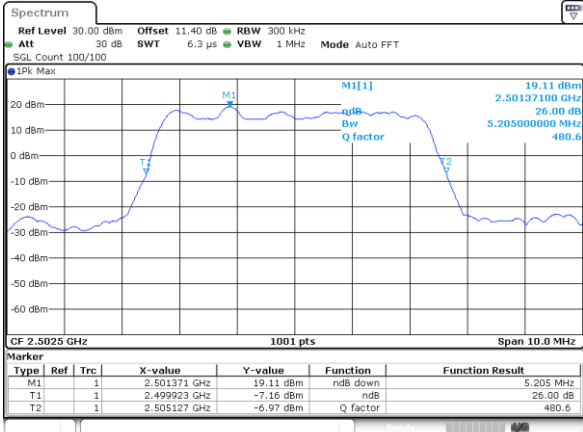
Mode	FR1 n7 : 26dB BW(MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	5.37	5.18	10.25	10.21	14.96	14.93	19.82	20.02
Middle CH	5.35	5.21	10.09	10.21	14.99	14.84	19.78	19.82
Highest CH	5.24	5.37	10.03	10.15	14.84	14.93	19.74	19.90



FR1 n7 / 5MHz / DFT-S OFDM

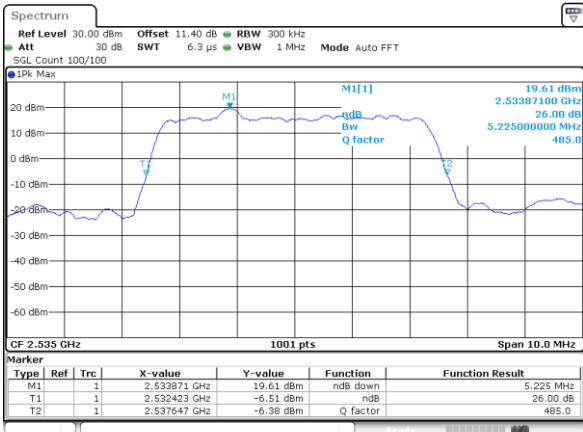
PI/2 BPSK

Lowest Channel



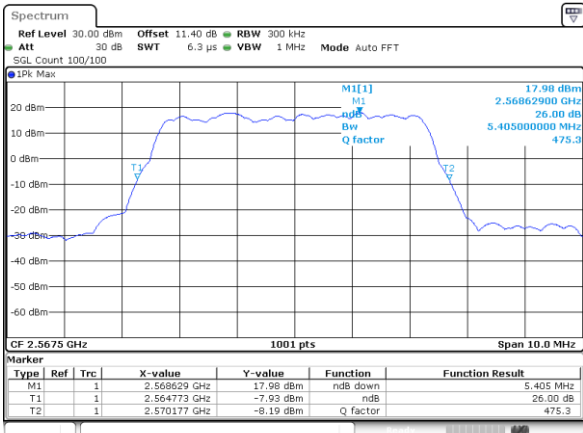
Date: 12 JUN 2020 05:40:51

Middle Channel



Date: 12 JUN 2020 05:49:53

Highest Channel



Date: 12 JUN 2020 06:04:43



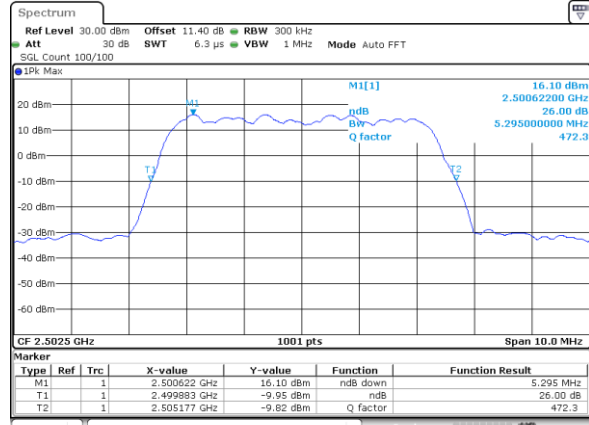
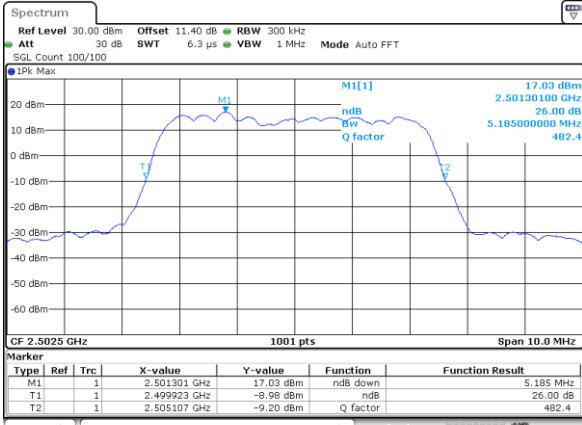
FR1 n7 / 5MHz / CP OFDM

QPSK

16QAM

Lowest Channel

Lowest Channel

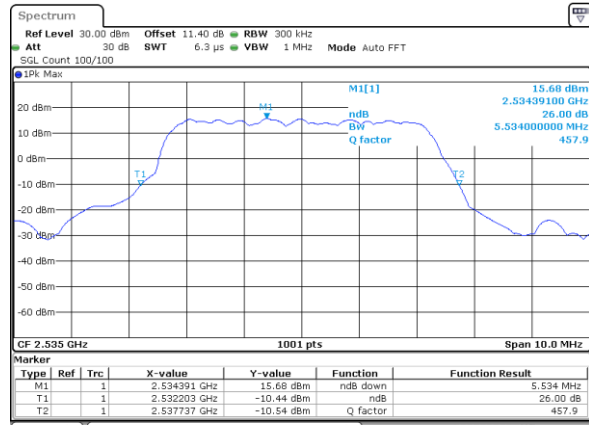
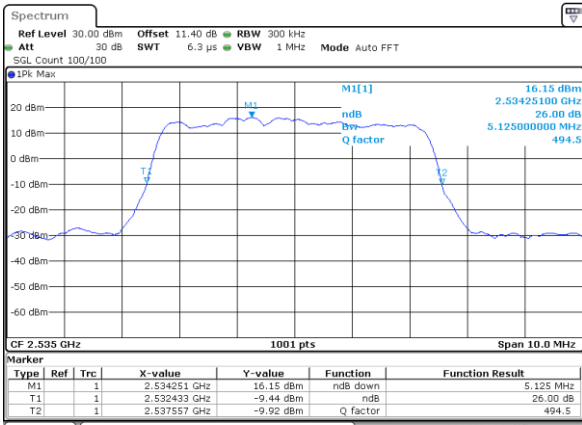


Date: 15 JUN 2020 14:25:53

Date: 15 JUN 2020 14:26:30

Middle Channel

Middle Channel

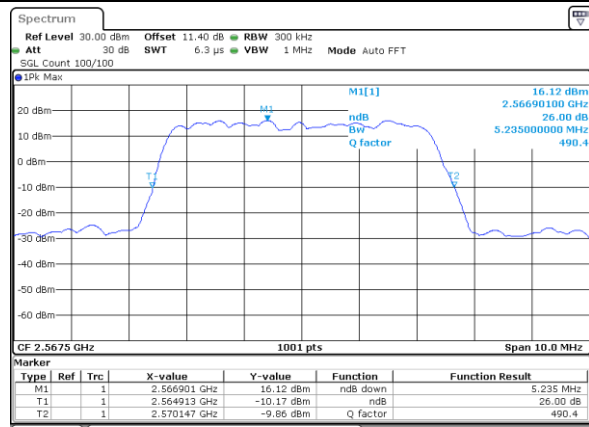
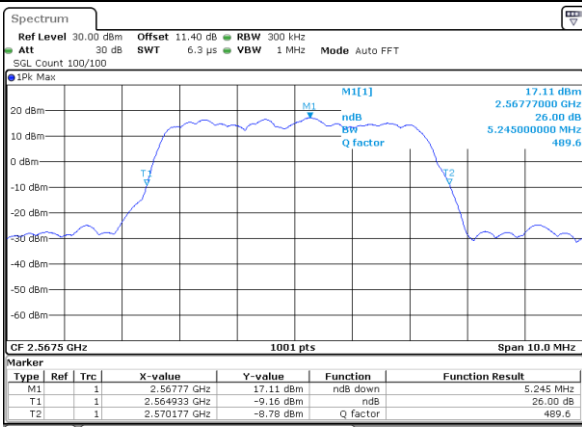


Date: 15 JUN 2020 14:28:04

Date: 15 JUN 2020 14:28:18

Highest Channel

Highest Channel



Date: 15 JUN 2020 14:29:47

Date: 15 JUN 2020 14:29:32



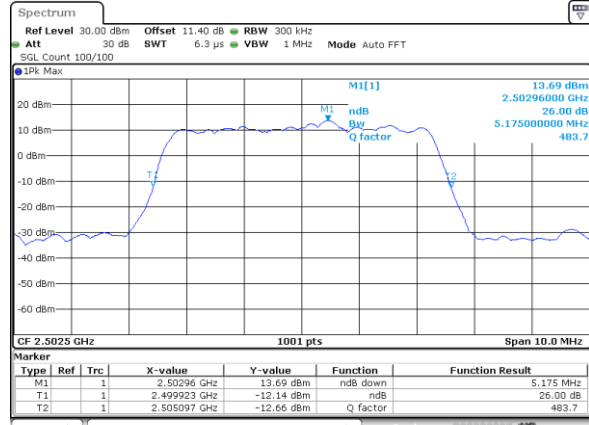
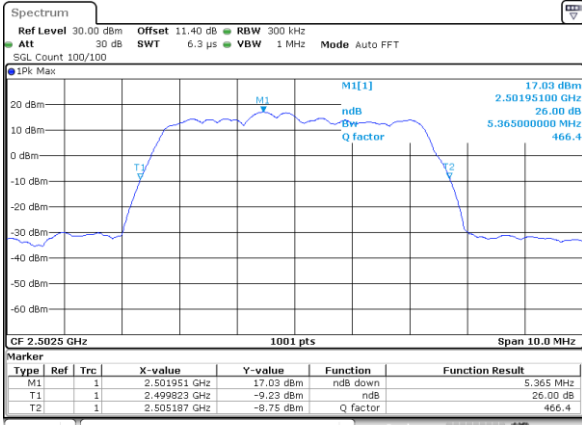
FR1 n7 / 5MHz / CP OFDM

64QAM

256QAM

Lowest Channel

Lowest Channel

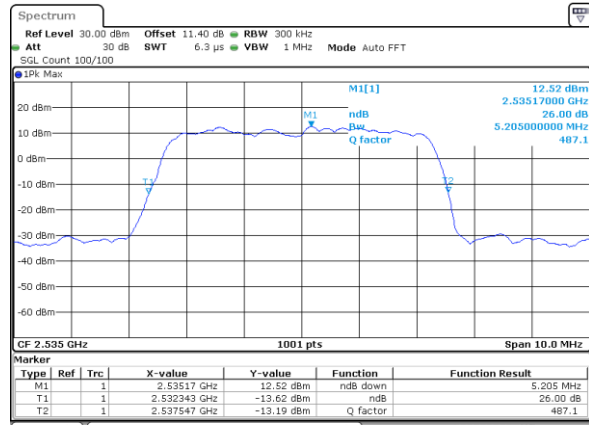
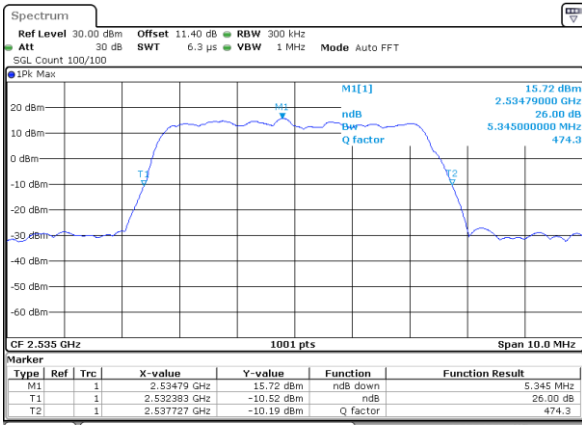


Date: 15 JUN 2020 14:26:53

Date: 15 JUN 2020 14:27:12

Middle Channel

Middle Channel

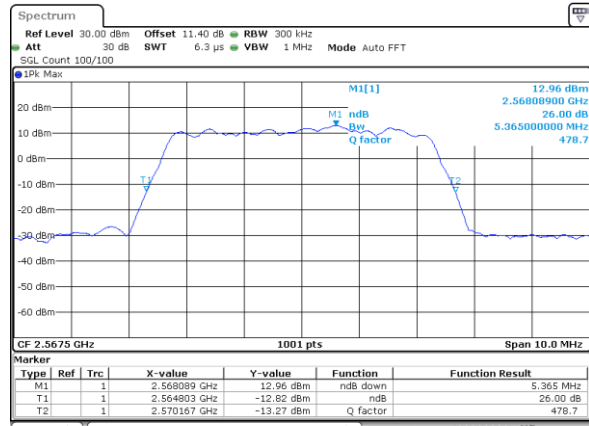
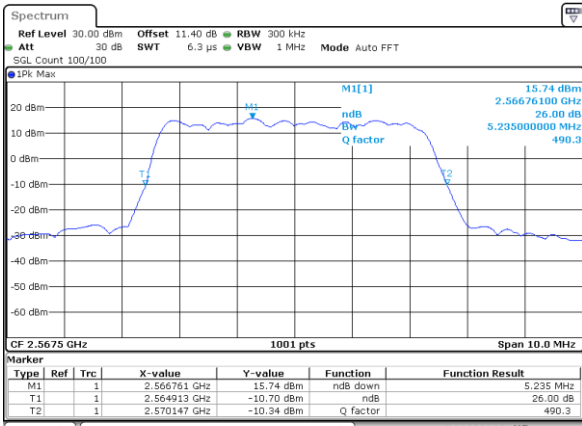


Date: 15 JUN 2020 14:28:31

Date: 15 JUN 2020 14:28:45

Highest Channel

Highest Channel



Date: 15 JUN 2020 14:29:20

Date: 15 JUN 2020 14:29:07

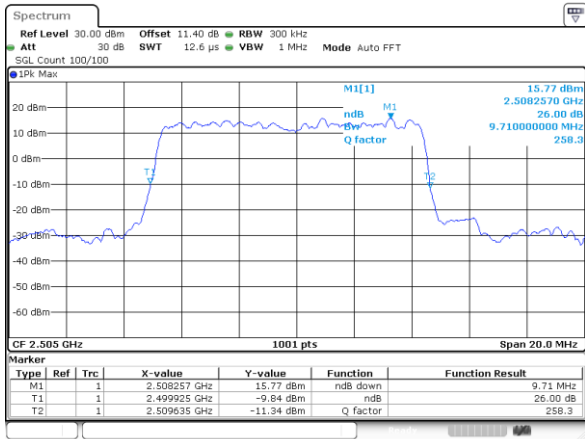




FR1 n7 / 10MHz / DFT-S OFDM

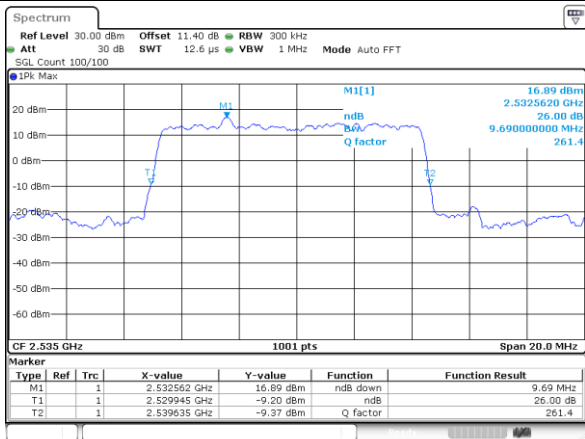
PI/2 BPSK

Lowest Channel



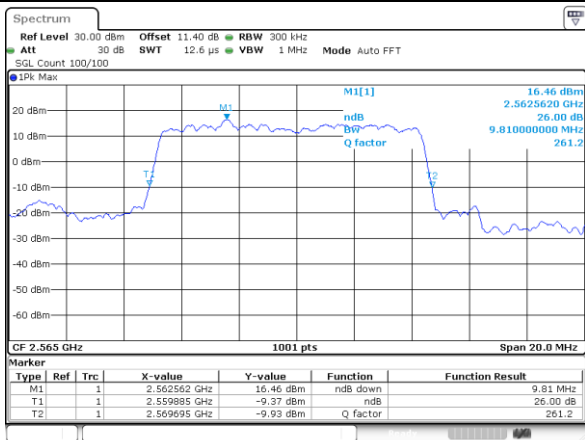
Date: 12 JUN 2020 07:10:13

Middle Channel



Date: 12 JUN 2020 07:14:47

Highest Channel



Date: 12 JUN 2020 07:22:45



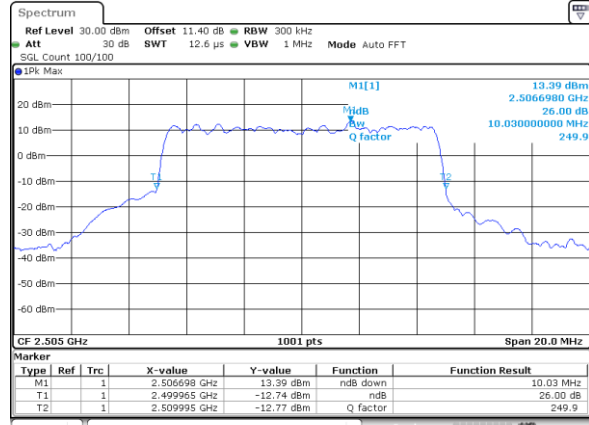
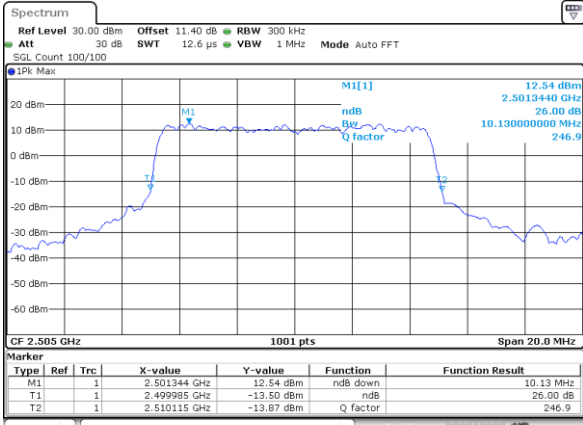
FR1 n7 / 10MHz / CP OFDM

QPSK

16QAM

Lowest Channel

Lowest Channel

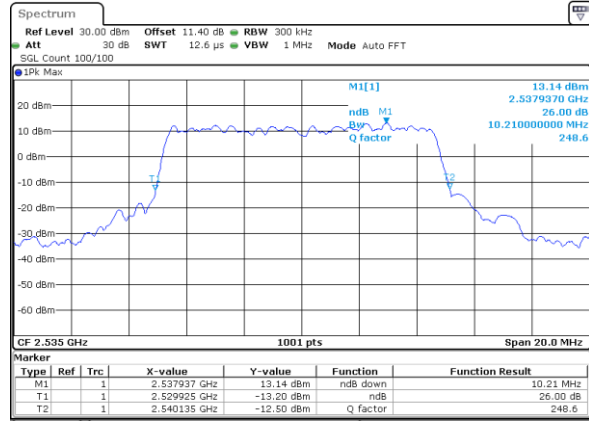
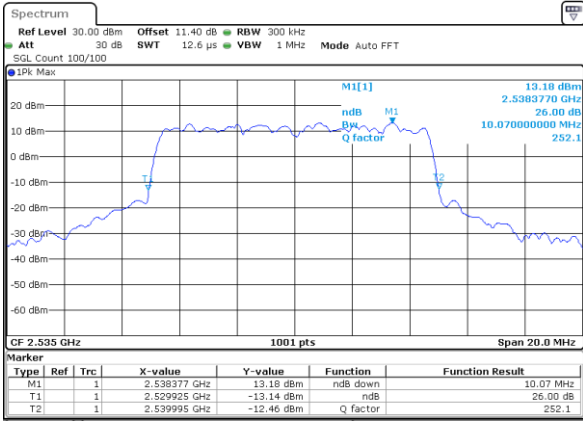


Date: 15 JUN 2020 14:31:15

Date: 15 JUN 2020 14:31:47

Middle Channel

Middle Channel

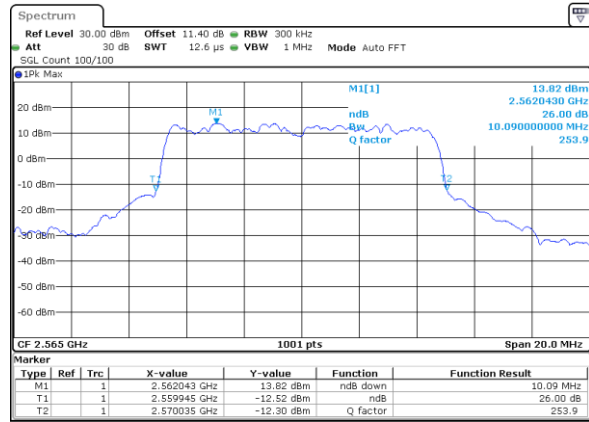
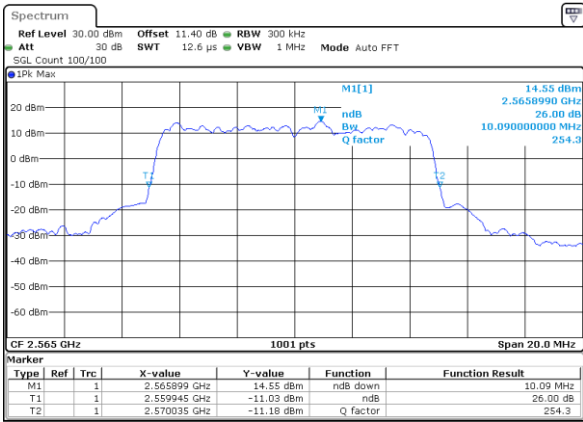


Date: 15 JUN 2020 14:37:28

Date: 15 JUN 2020 14:37:42

Highest Channel

Highest Channel



Date: 15 JUN 2020 14:39:26

Date: 15 JUN 2020 14:39:12



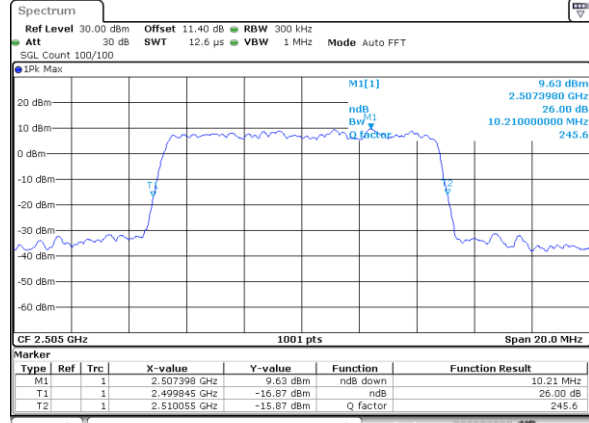
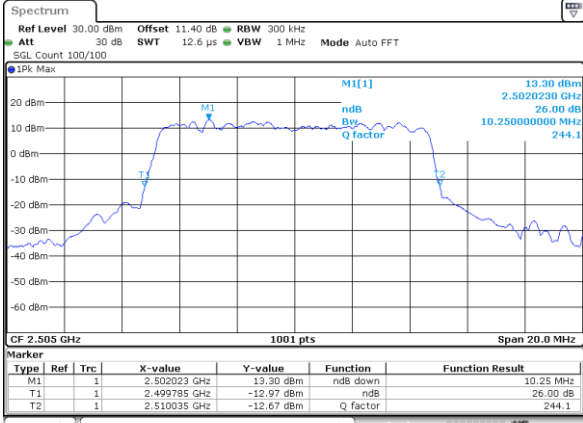
FR1 n7 / 10MHz / CP OFDM

64QAM

256QAM

Lowest Channel

Lowest Channel

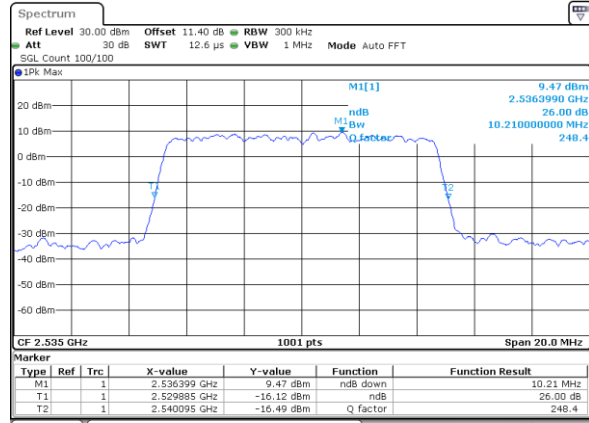
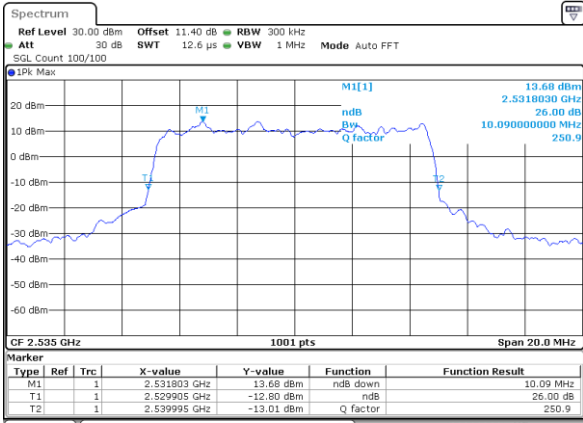


Date: 15 JUN 2020 14:32:05

Date: 15 JUN 2020 14:32:26

Middle Channel

Middle Channel

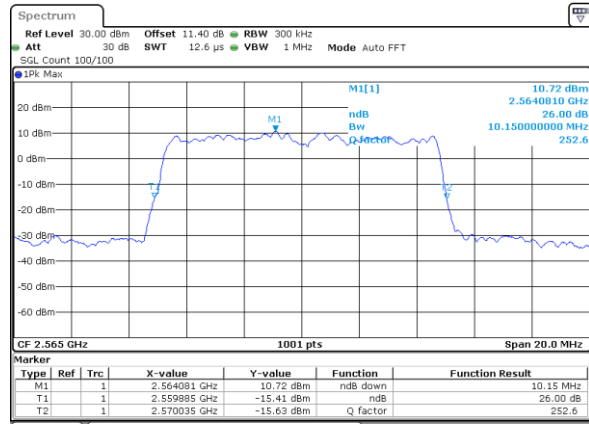
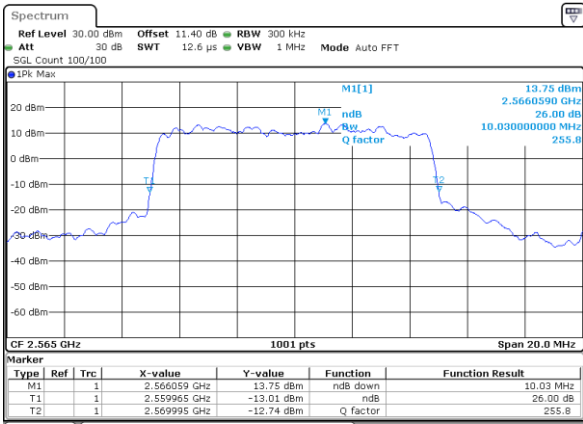


Date: 15 JUN 2020 14:37:56

Date: 15 JUN 2020 14:38:10

Highest Channel

Highest Channel



Date: 15 JUN 2020 14:38:59

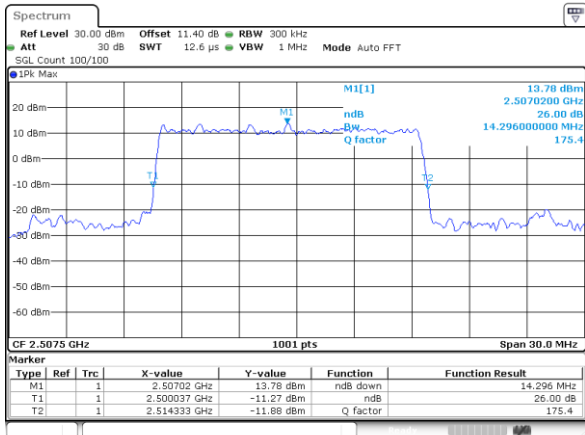
Date: 15 JUN 2020 14:38:46



FR1 n7 / 15MHz / DFT-S OFDM

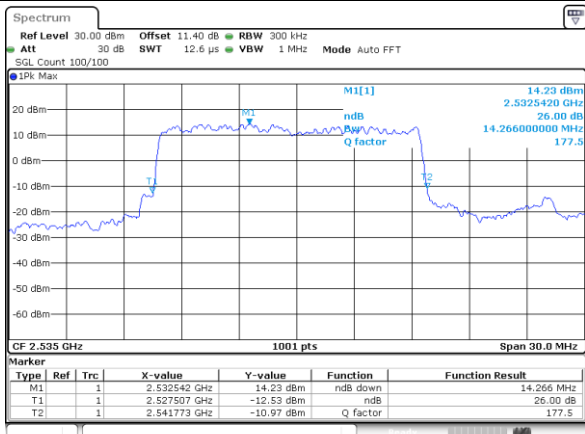
PI/2 BPSK

Lowest Channel



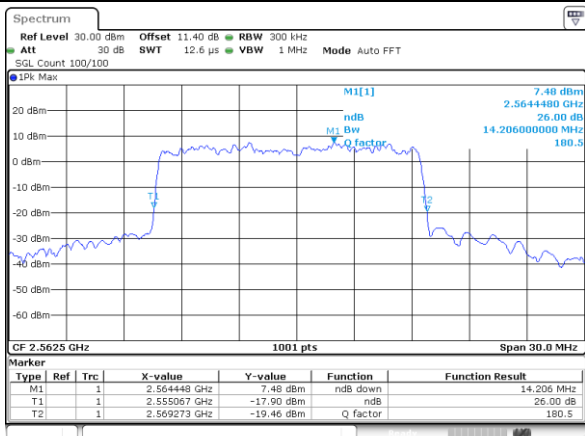
Date: 11 JUN 2020 09:43:40

Middle Channel



Date: 11 JUN 2020 09:58:38

Highest Channel



Date: 11 JUN 2020 11:14:41



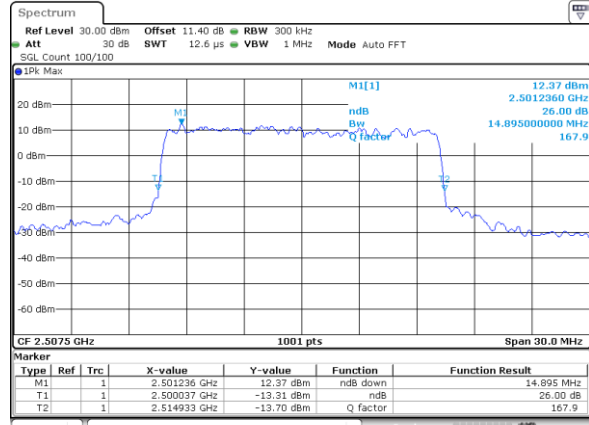
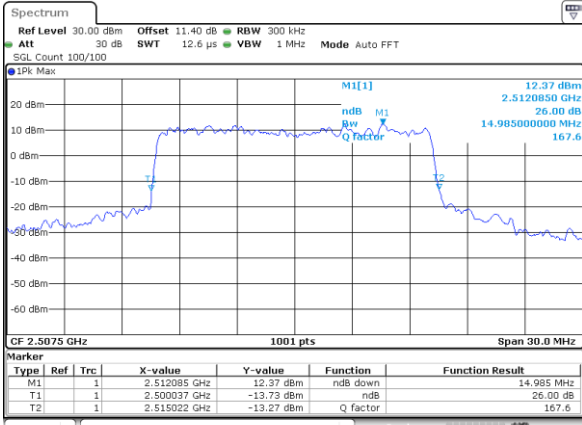
FR1 n7 / 15MHz / CP OFDM

QPSK

16QAM

Lowest Channel

Lowest Channel

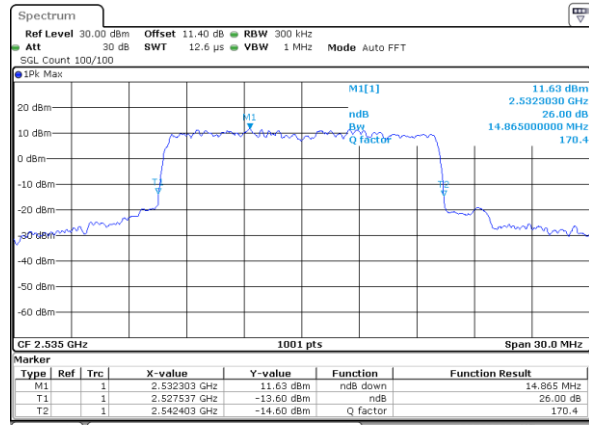
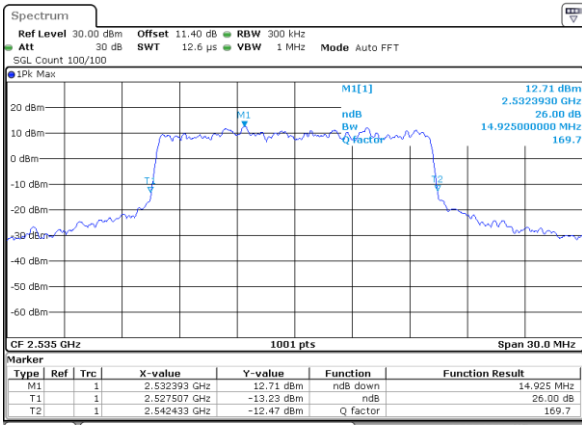


Date: 11 JUN 2020 09:14:33

Date: 11 JUN 2020 09:14:07

Middle Channel

Middle Channel

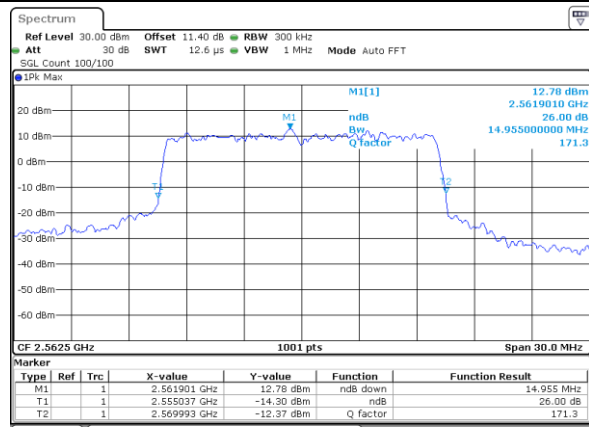
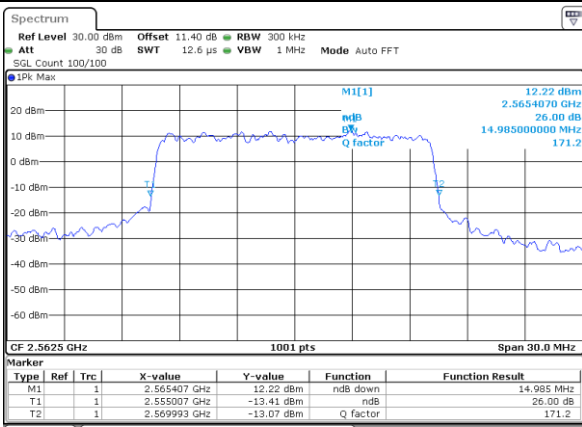


Date: 11 JUN 2020 09:16:35

Date: 11 JUN 2020 09:17:29

Highest Channel

Highest Channel



Date: 11 JUN 2020 09:22:37

Date: 11 JUN 2020 09:22:13



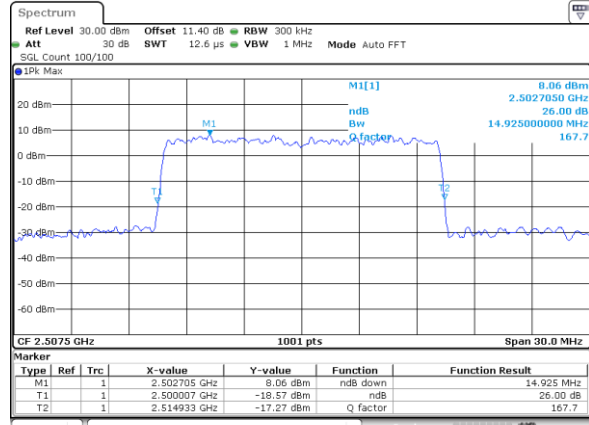
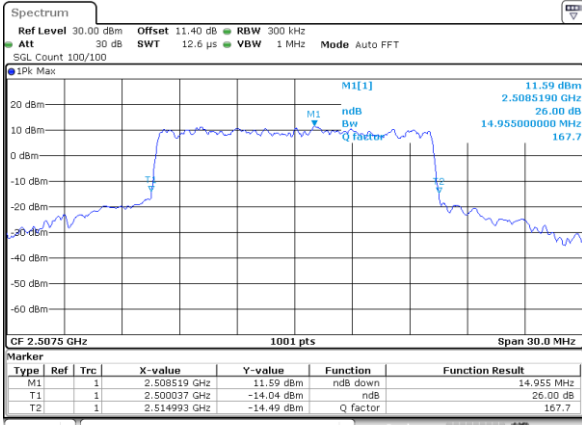
FR1 n7 / 15MHz / CP OFDM

64QAM

256QAM

Lowest Channel

Lowest Channel

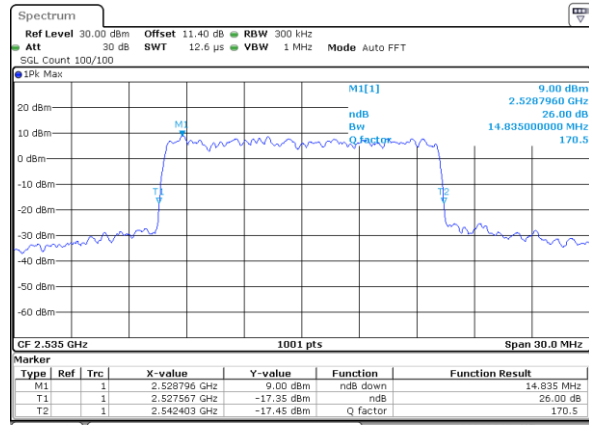
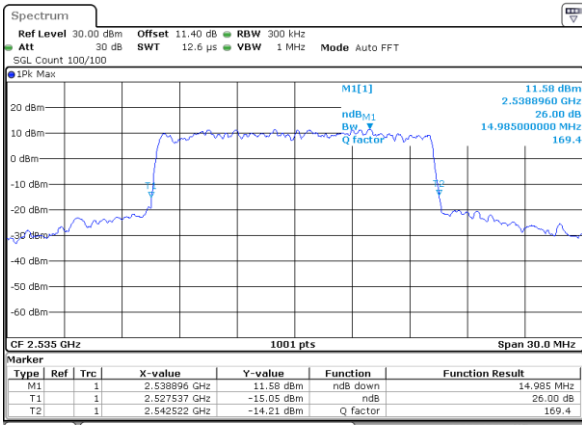


Date: 11 JUN 2020 09:13:41

Date: 11 JUN 2020 09:13:05

Middle Channel

Middle Channel

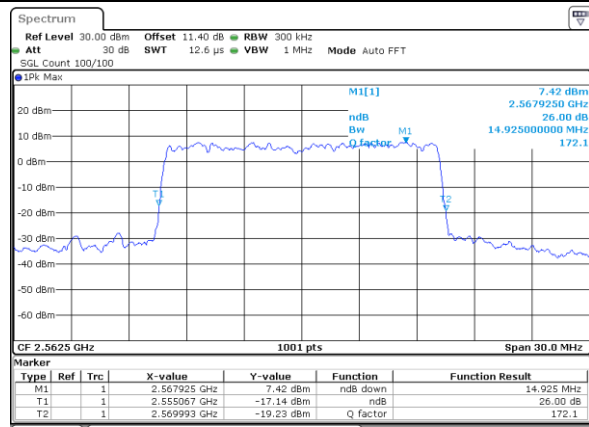
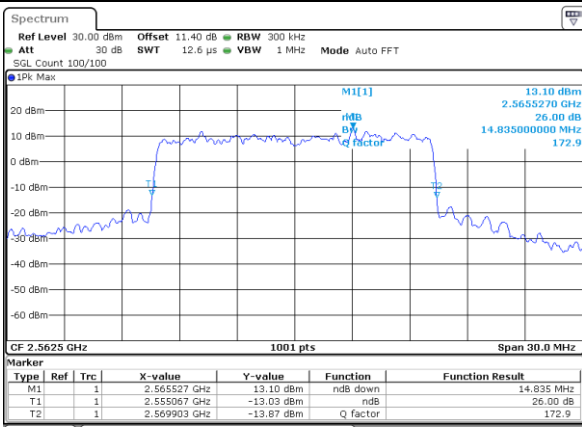


Date: 11 JUN 2020 09:17:52

Date: 11 JUN 2020 09:18:18

Highest Channel

Highest Channel



Date: 11 JUN 2020 09:21:44

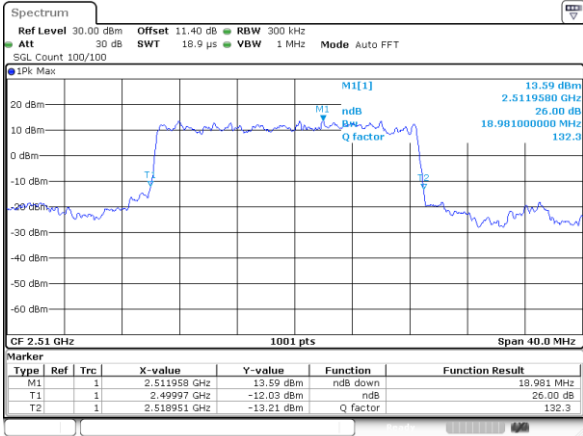
Date: 11 JUN 2020 09:21:12



FR1 n7 / 20MHz / DFT-S OFDM

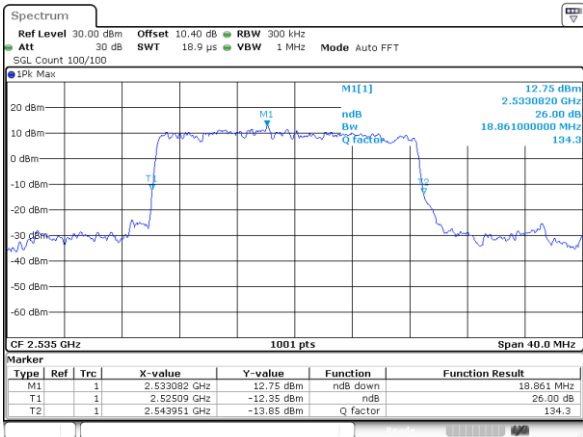
PI/2 BPSK

Lowest Channel



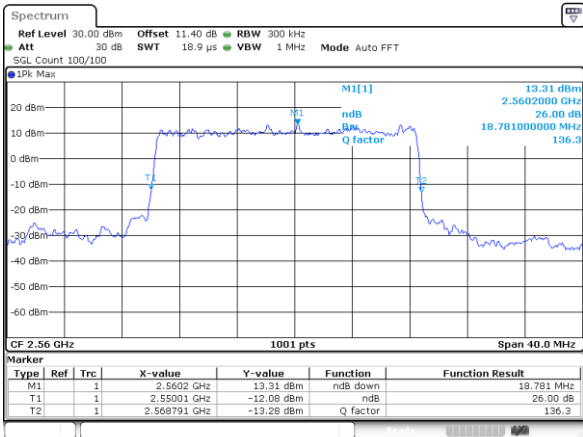
Date: 11 JUN 2020 06:00:24

Middle Channel



Date: 15 JUN 2020 11:19:53

Highest Channel



Date: 15 JUN 2020 14:44:06



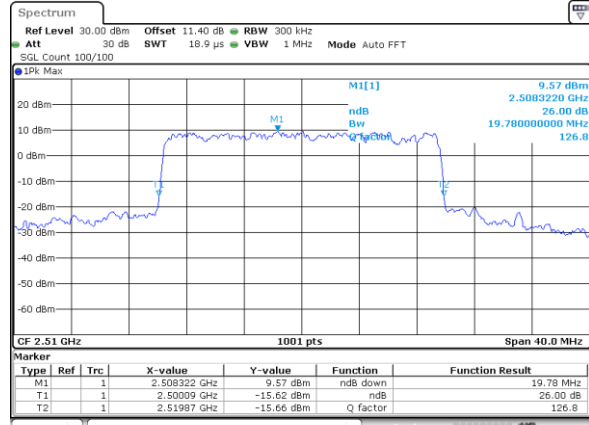
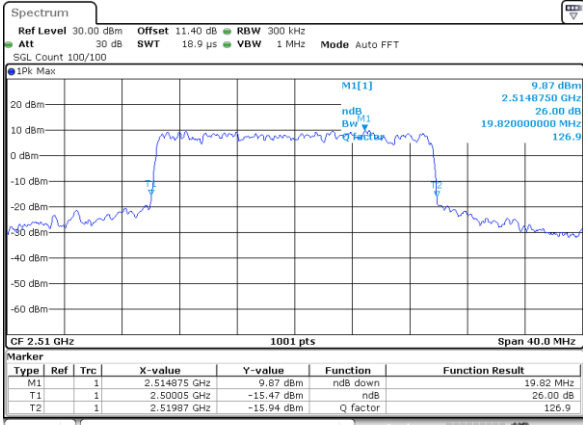
FR1 n7 / 20MHz / CP OFDM

QPSK

16QAM

Lowest Channel

Lowest Channel

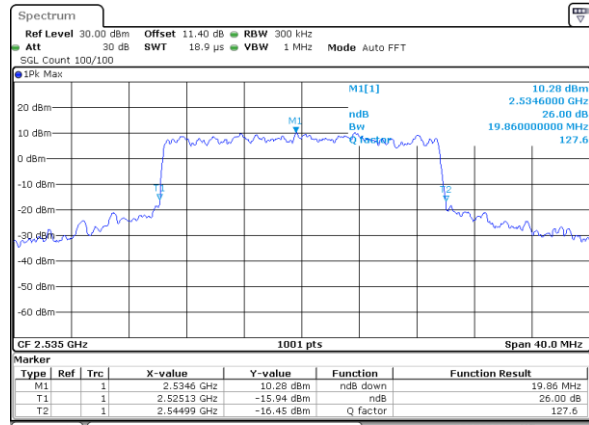
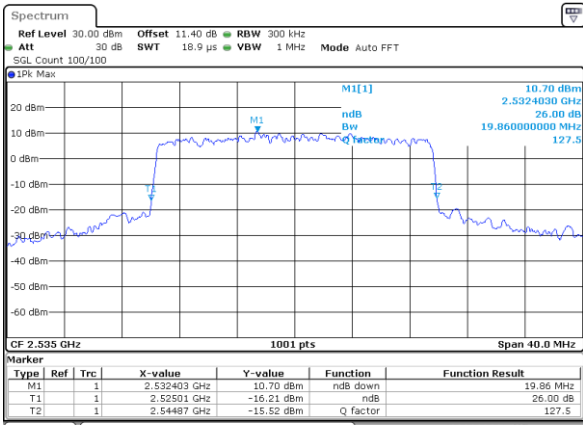


Date: 11 JUN 2020 18:31:31

Date: 11 JUN 2020 18:32:08

Middle Channel

Middle Channel

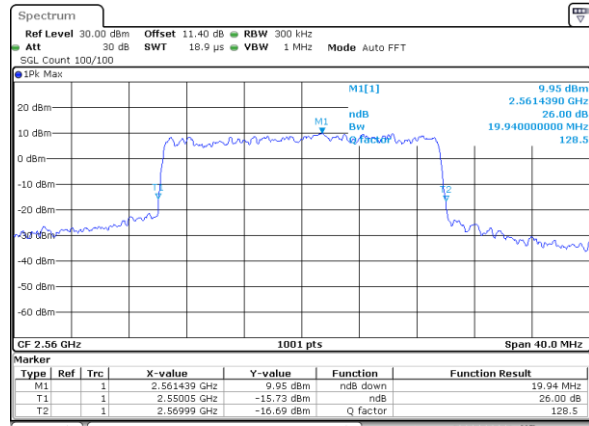
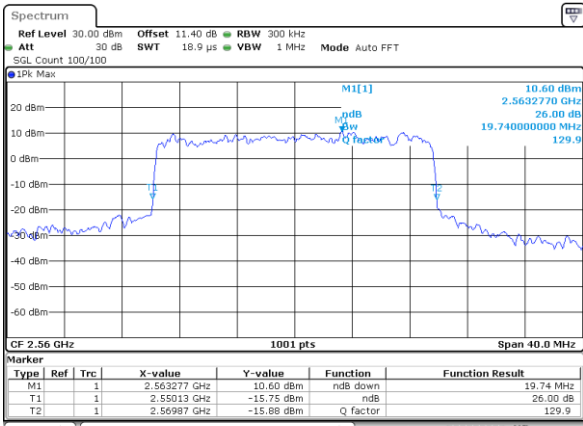


Date: 11 JUN 2020 18:31:02

Date: 11 JUN 2020 18:30:43

Highest Channel

Highest Channel



Date: 11 JUN 2020 18:27:05

Date: 11 JUN 2020 18:27:49





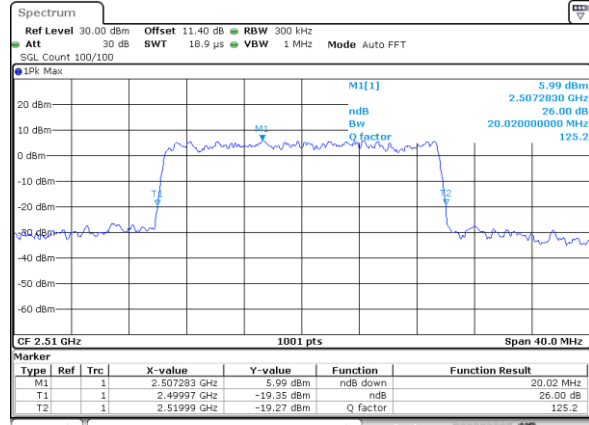
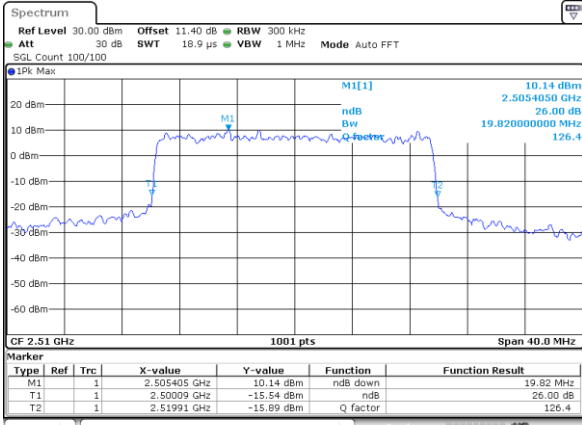
FR1 n7 / 20MHz / CP OFDM

64QAM

256QAM

Lowest Channel

Lowest Channel

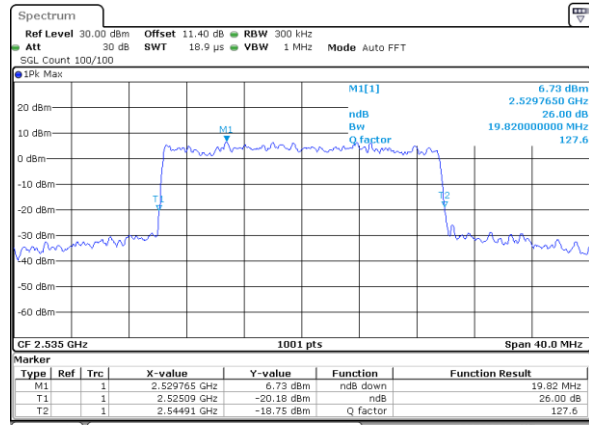
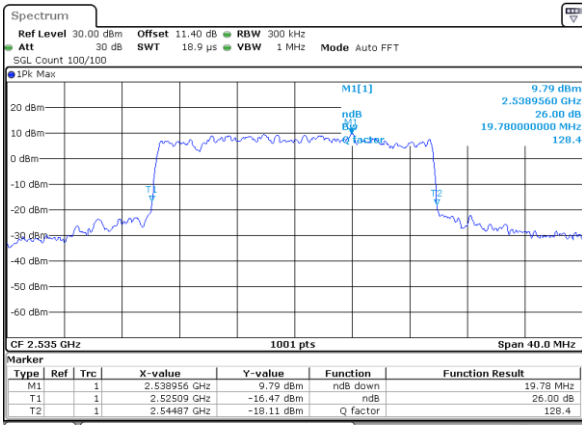


Date: 11 JUN 2020 18:32:33

Date: 11 JUN 2020 18:32:57

Middle Channel

Middle Channel

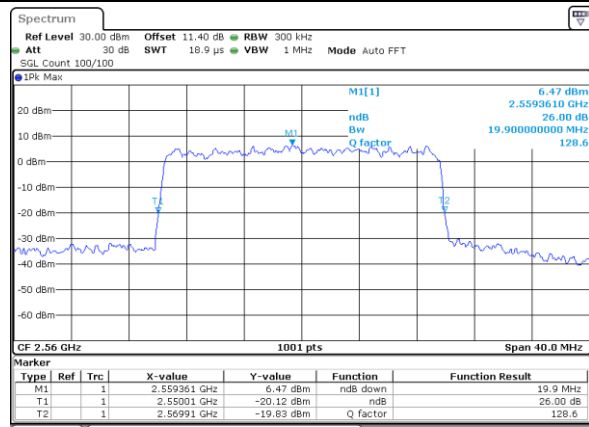
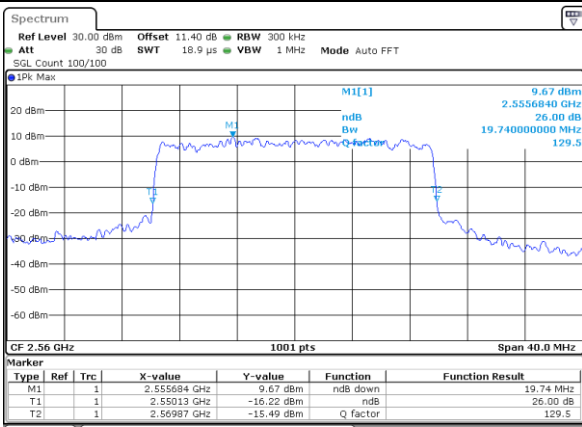


Date: 11 JUN 2020 18:30:21

Date: 11 JUN 2020 18:30:01

Highest Channel

Highest Channel



Date: 11 JUN 2020 18:28:16

Date: 11 JUN 2020 18:28:41



**Occupied Bandwidth**

Mode	FR1 n7 : 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	4.65		9.05		13.46		17.90	
Middle CH	4.71		9.05		13.49		17.86	
Highest CH	4.69		9.05		13.46		17.86	

Mode	FR1 n7 : 99%OBW (MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	4.65	4.64	9.41	9.29	14.12	14.12	18.98	18.90
Middle CH	4.64	4.64	9.35	9.39	14.12	14.12	18.90	18.90
Highest CH	4.63	4.66	9.39	9.41	14.12	14.06	18.86	18.94

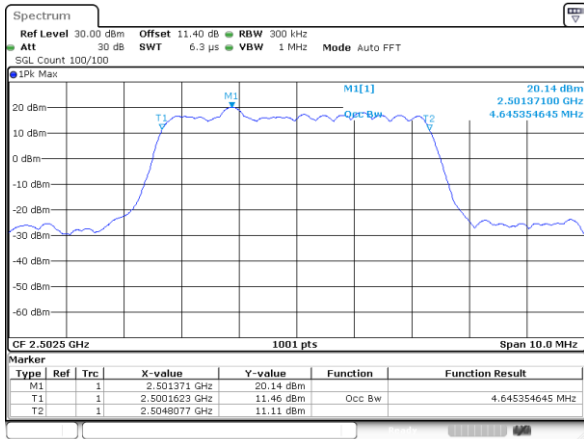
Mode	FR1 n7 : 99%OBW (MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	4.69	4.62	9.37	9.37	14.15	14.15	18.90	18.94
Middle CH	4.69	4.67	9.37	9.35	14.21	14.15	18.90	18.86
Highest CH	4.65	4.58	9.37	9.33	14.18	14.09	18.90	19.02



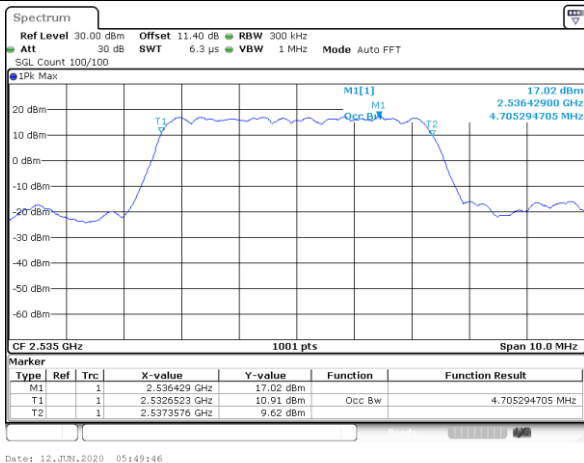
FR1 n7 / 5MHz / DFT-S OFDM

PI/2 BPSK

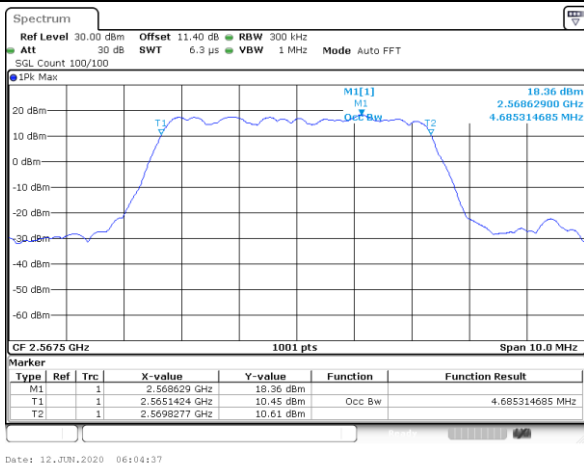
Lowest Channel



Middle Channel



Highest Channel





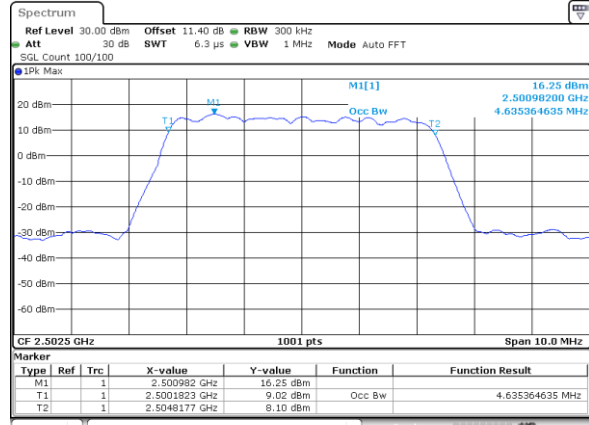
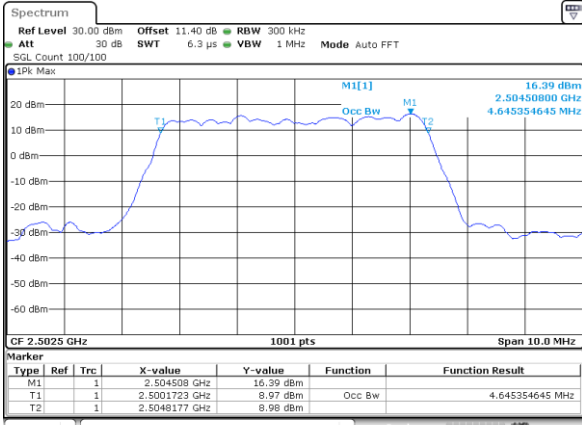
FR1 n7 / 5MHz / CP OFDM

QPSK

16QAM

Lowest Channel

Lowest Channel

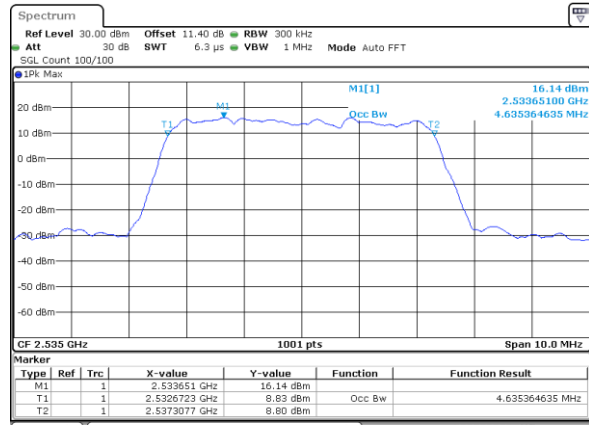
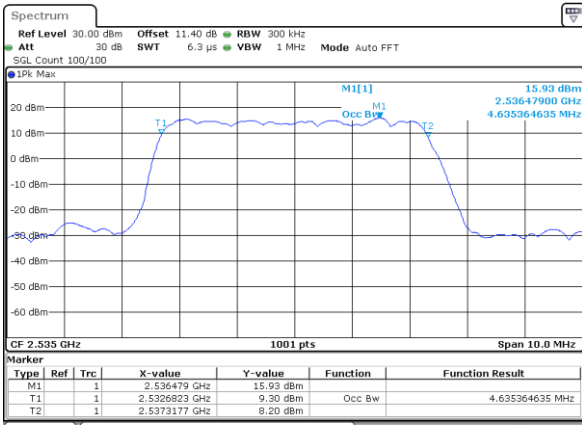


Date: 15 JUN 2020 14:25:46

Date: 15 JUN 2020 14:26:22

Middle Channel

Middle Channel

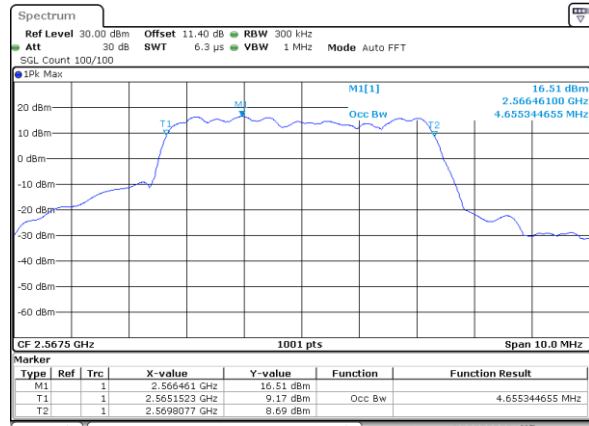
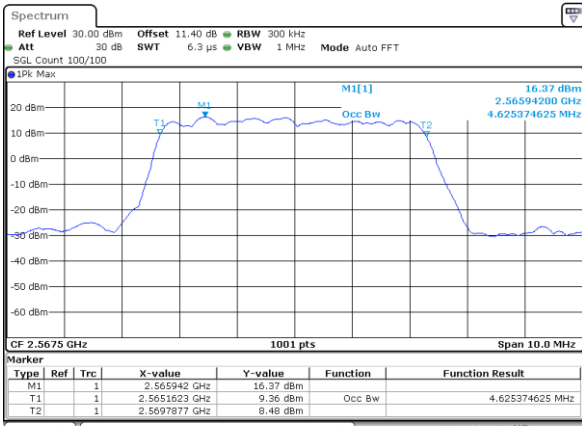


Date: 15 JUN 2020 14:27:58

Date: 15 JUN 2020 14:28:13

Highest Channel

Highest Channel



Date: 15 JUN 2020 14:29:41

Date: 15 JUN 2020 14:29:27



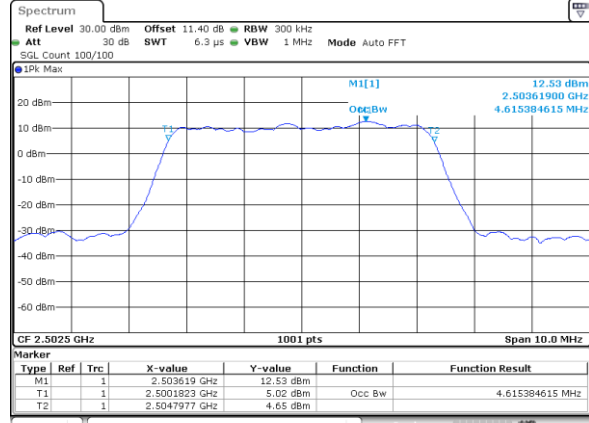
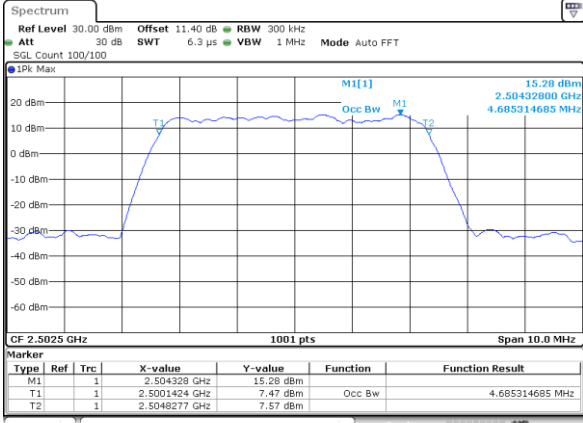
FR1 n7 / 5MHz / CP OFDM

64QAM

256QAM

Lowest Channel

Lowest Channel

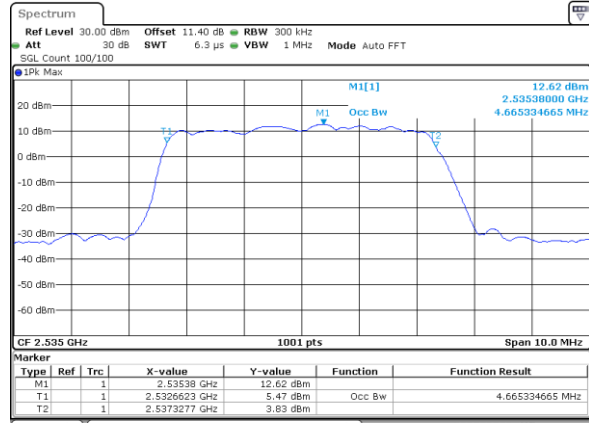
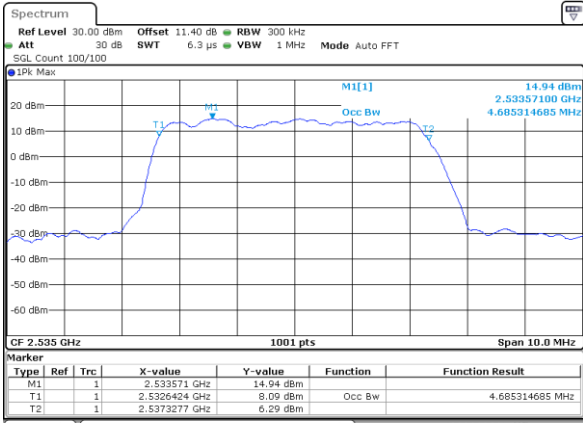


Date: 15 JUN 2020 14:26:45

Date: 15 JUN 2020 14:27:06

Middle Channel

Middle Channel

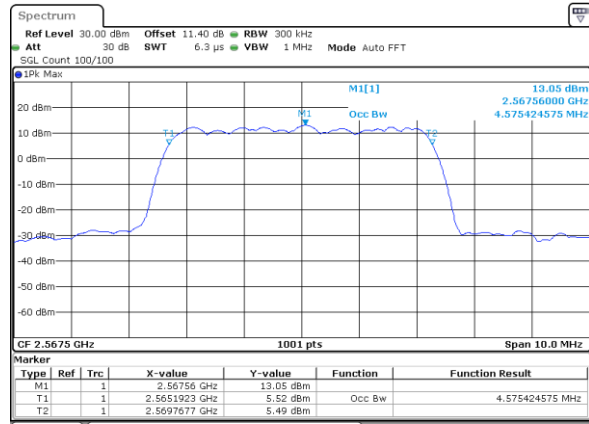
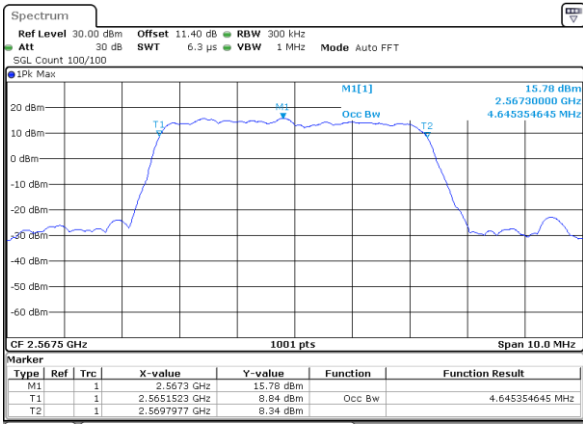


Date: 15 JUN 2020 14:28:25

Date: 15 JUN 2020 14:28:39

Highest Channel

Highest Channel



Date: 15 JUN 2020 14:29:14

Date: 15 JUN 2020 14:29:01