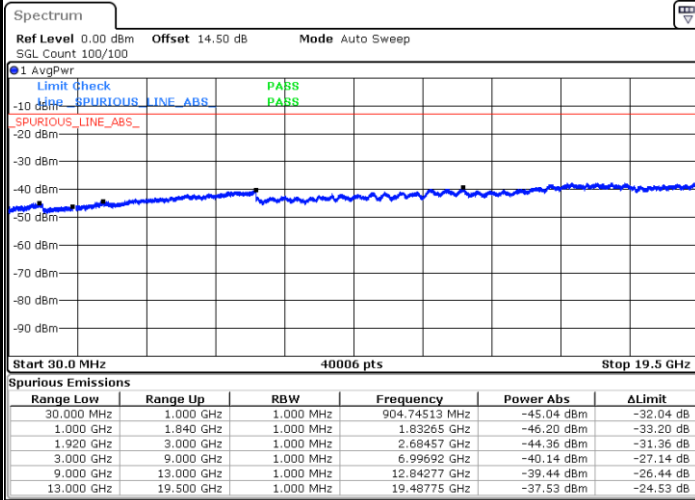




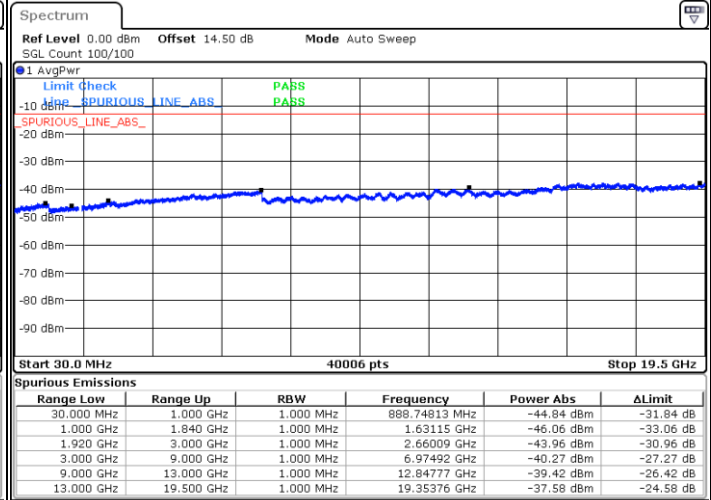
FR1 n2 / 5MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB0

Middle Channel / 1RB0

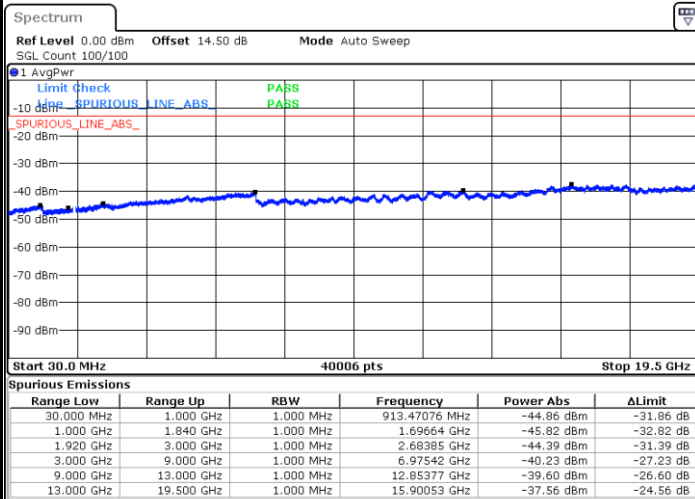


Date: 31.JUL.2020 02:55:25



Date: 31.JUL.2020 02:59:12

Highest Channel / 1RB0



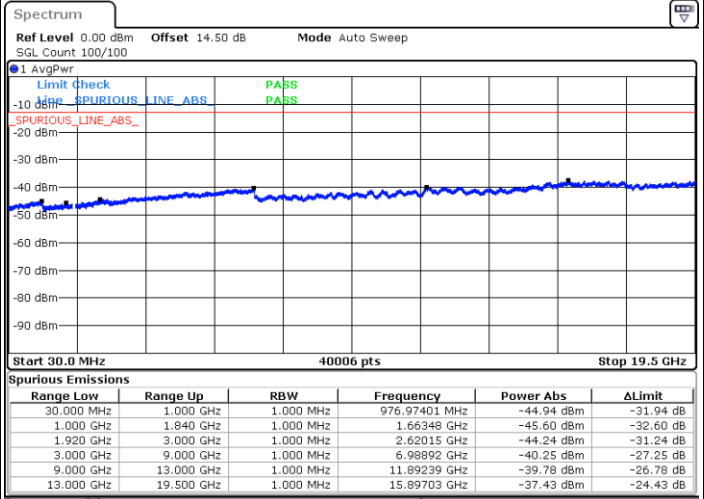
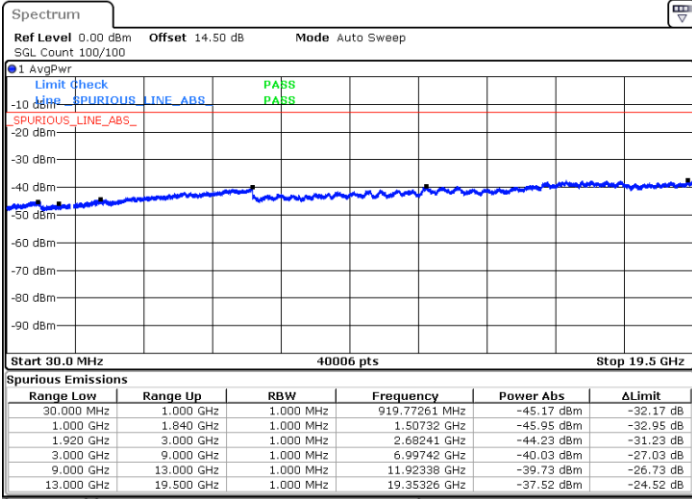
Date: 31.JUL.2020 02:29:55



FR1 n2 / 5MHz / DFT-S OFDM / 16QAM

Lowest Channel / 1RB0

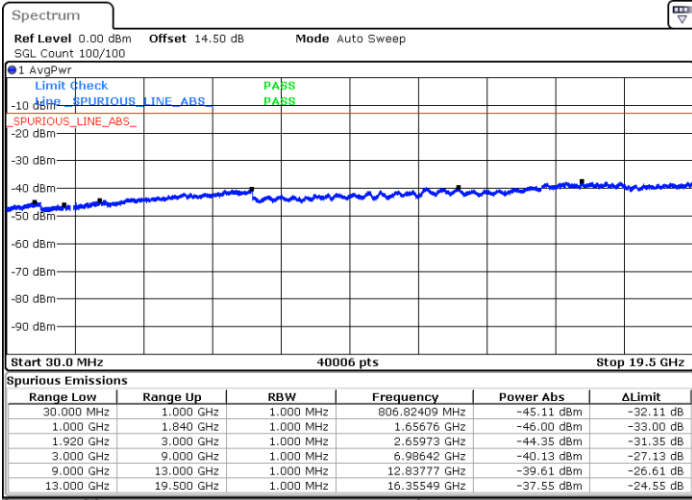
Middle Channel / 1RB0



Date: 31 JUL 2020 02:56:09

Date: 31 JUL 2020 03:02:17

Highest Channel / 1RB0



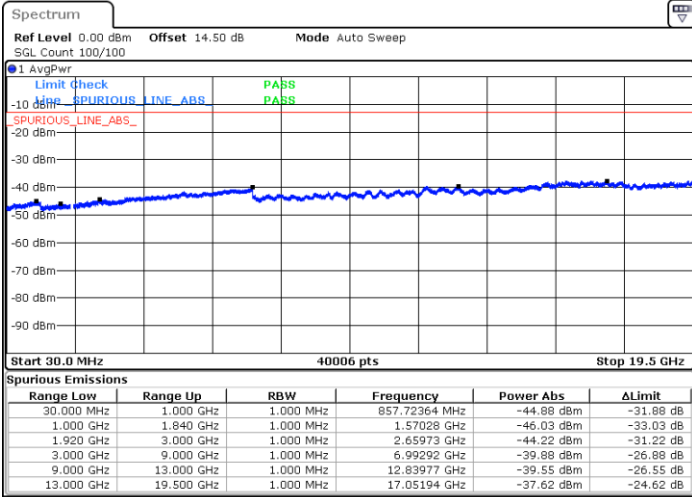
Date: 31 JUL 2020 02:30:40



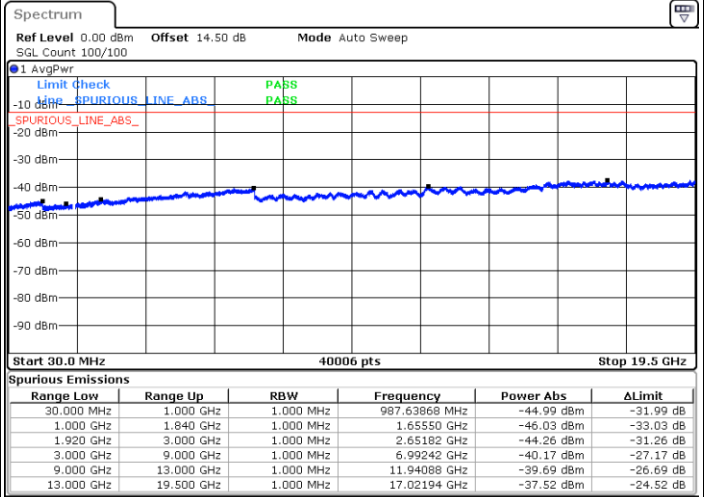
FR1 n2 / 5MHz / DFT-S OFDM / 64QAM

Lowest Channel / 1RB0

Middle Channel / 1RB0

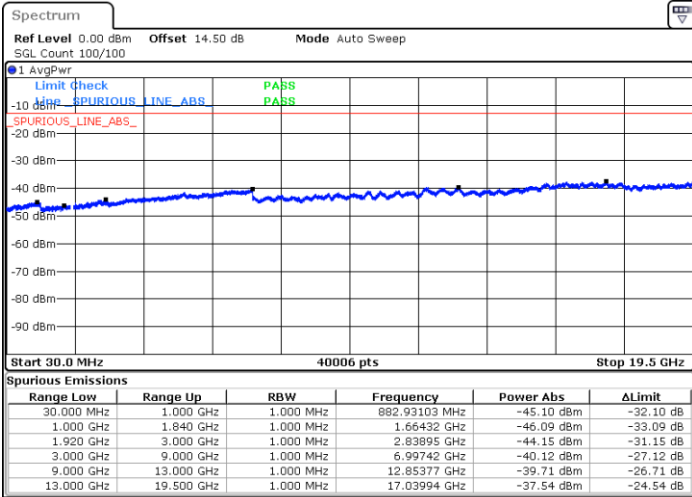


Date: 31 JUL 2020 02:56:50



Date: 31 JUL 2020 03:04:42

Highest Channel / 1RB0



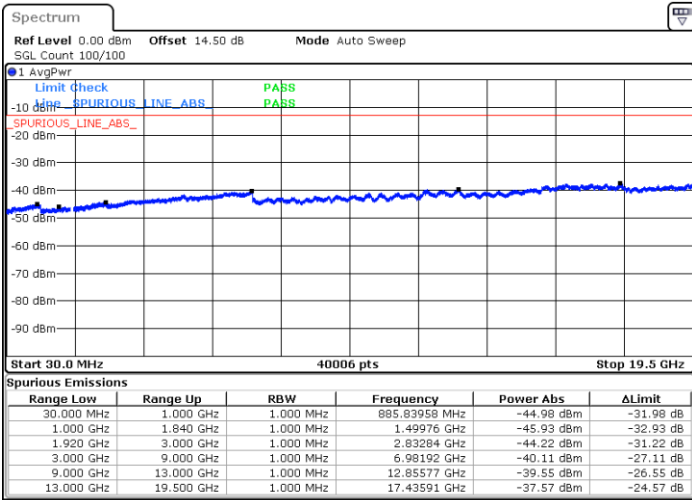
Date: 31 JUL 2020 02:32:19



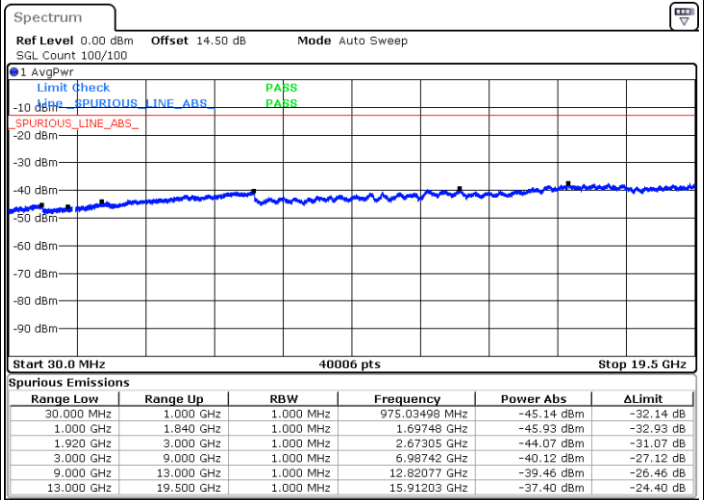
FR1 n2 / 5MHz / DFT-S OFDM / 256QAM

Lowest Channel / 1RB0

Middle Channel / 1RB0

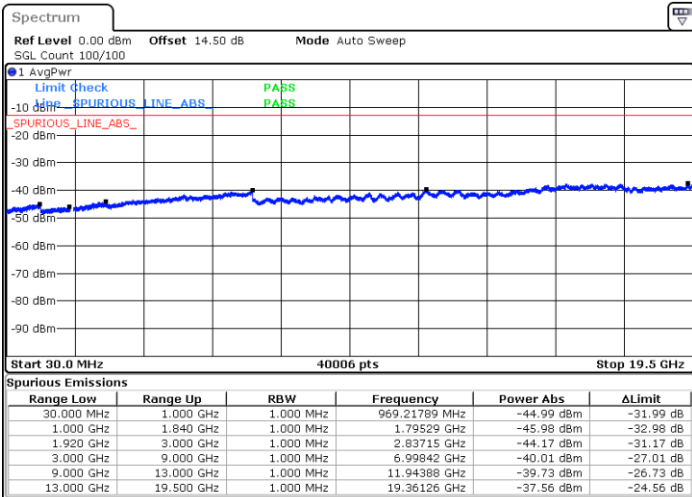


Date: 31 JUL 2020 02:57:38



Date: 31 JUL 2020 03:05:25

Highest Channel / 1RB0



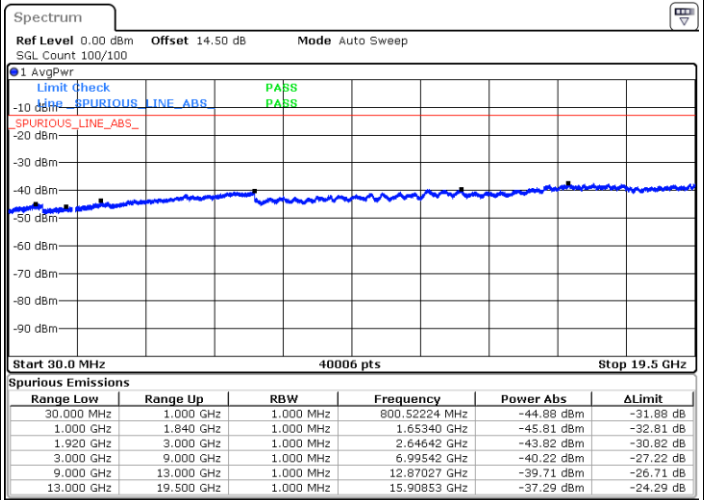
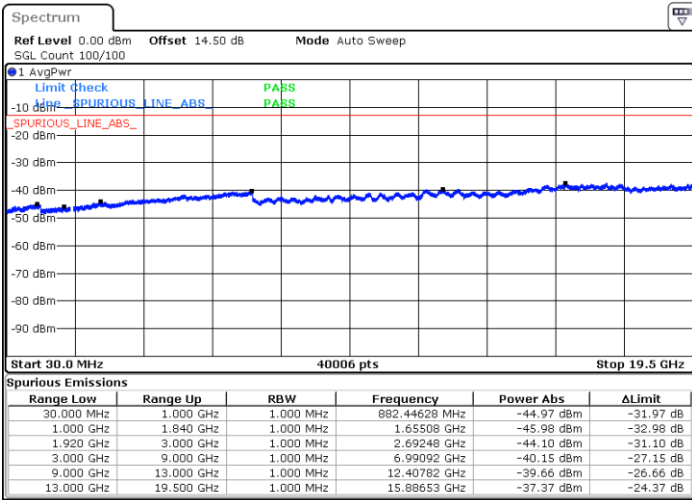
Date: 31 JUL 2020 02:34:23



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

Lowest Channel / 1RB0

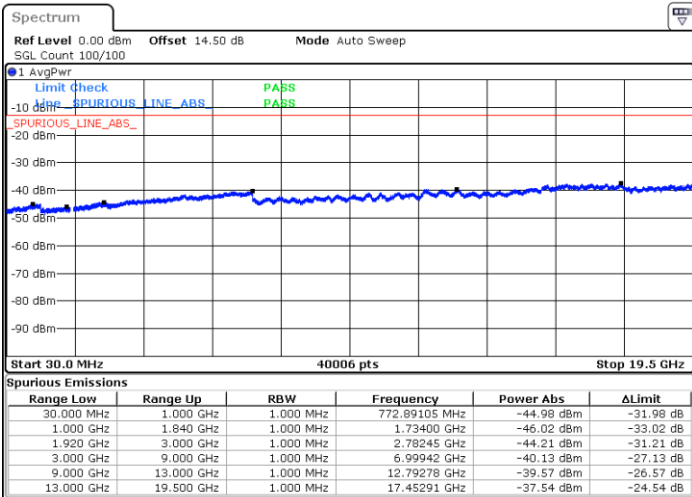
Middle Channel / 1RB0



Date: 31 JUL 2020 06:07:23

Date: 31 JUL 2020 06:09:29

Highest Channel / 1RB0



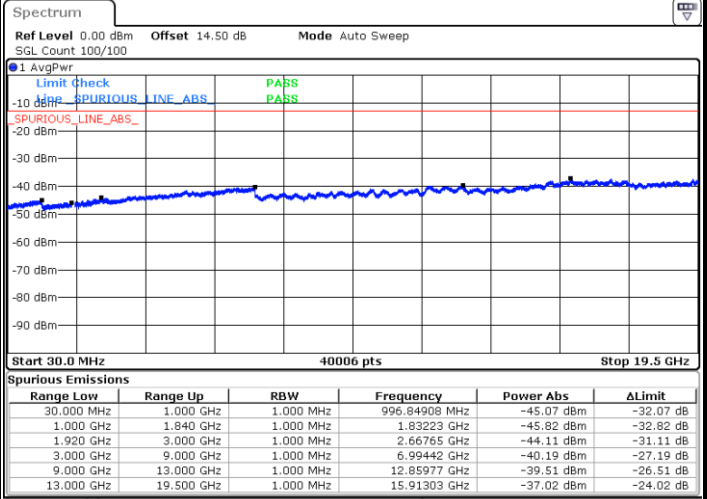
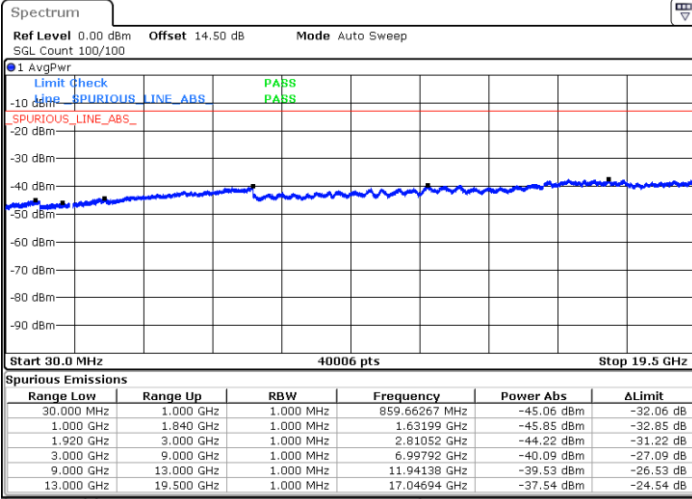
Date: 31 JUL 2020 06:37:43



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

Lowest Channel / 1RB0

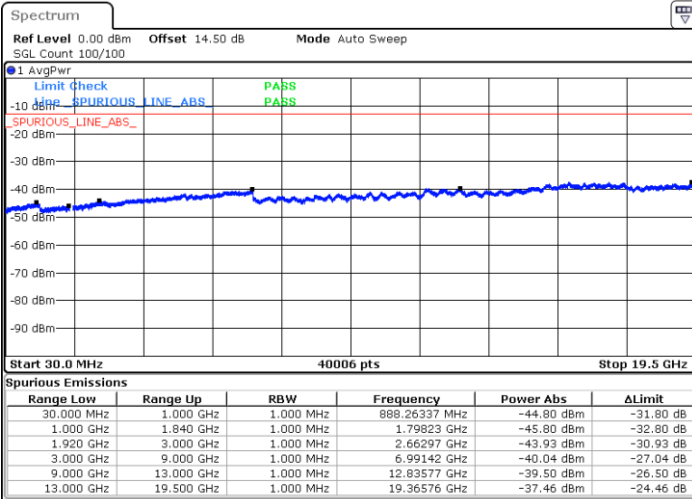
Middle Channel / 1RB0



Date: 31.JUL.2020 06:06:05

Date: 31.JUL.2020 06:10:10

Highest Channel / 1RB0



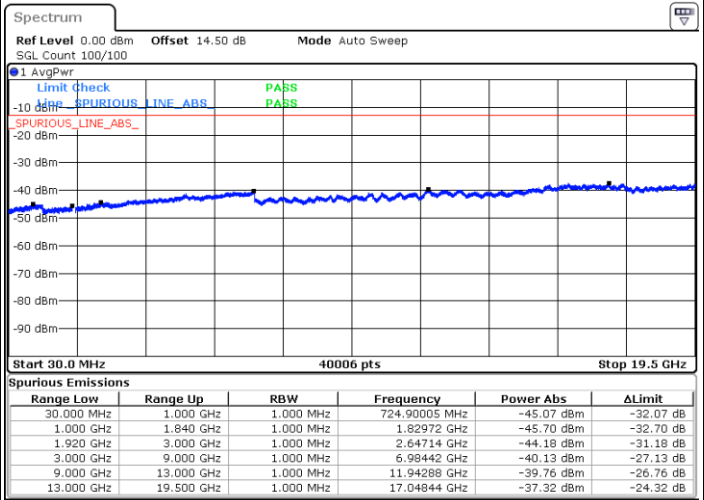
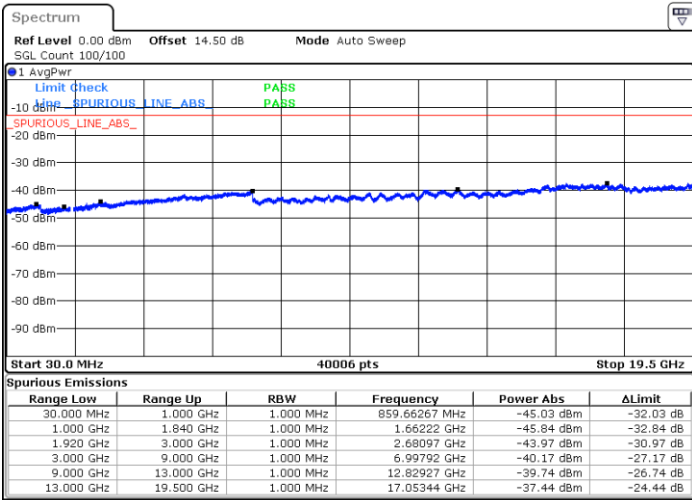
Date: 31.JUL.2020 06:38:23



FR1 n2 / 10MHz / DFT-S OFDM / 16QAM

Lowest Channel / 1RB0

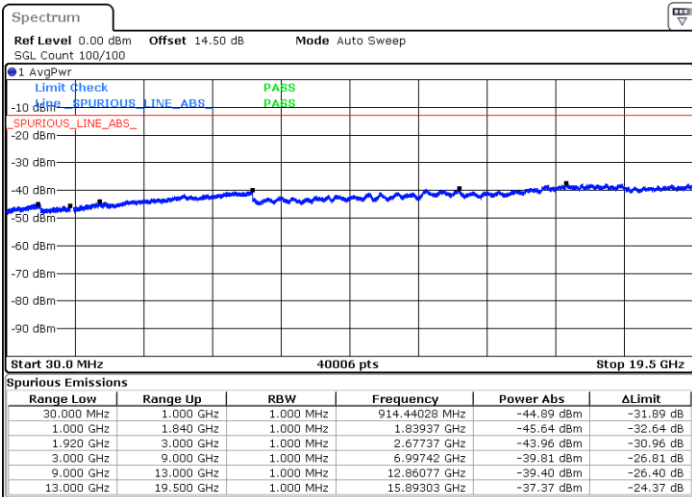
Middle Channel / 1RB0



Date: 31 JUL 2020 06:06:44

Date: 31 JUL 2020 06:10:54

Highest Channel / 1RB0



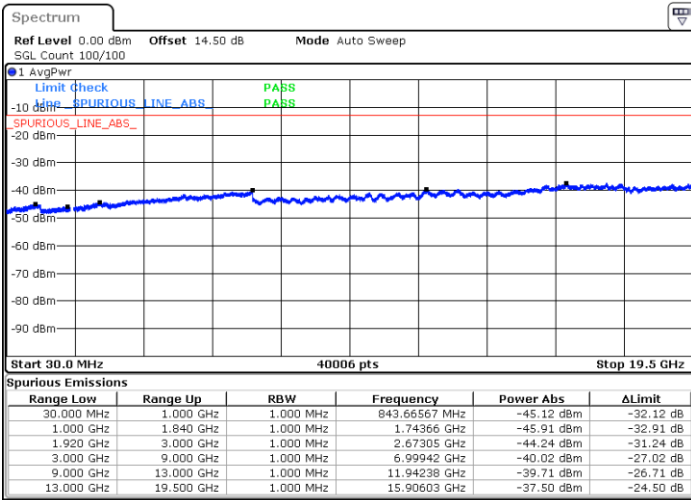
Date: 31 JUL 2020 06:39:09



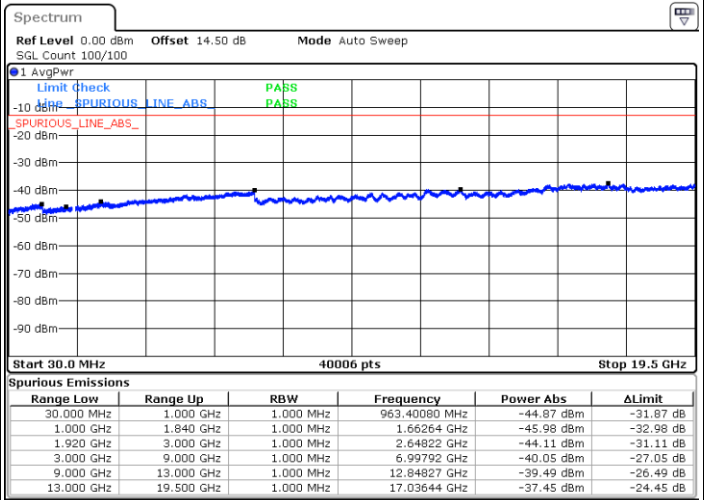
FR1 n2 / 10MHz / DFT-S OFDM / 64QAM

Lowest Channel / 1RB0

Middle Channel / 1RB0

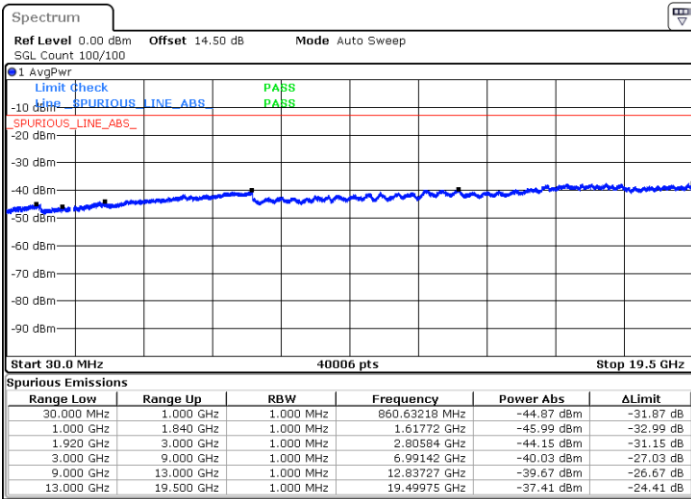


Date: 31 JUL 2020 06:08:04



Date: 31 JUL 2020 06:11:51

Highest Channel / 1RB0



Date: 31 JUL 2020 06:39:50

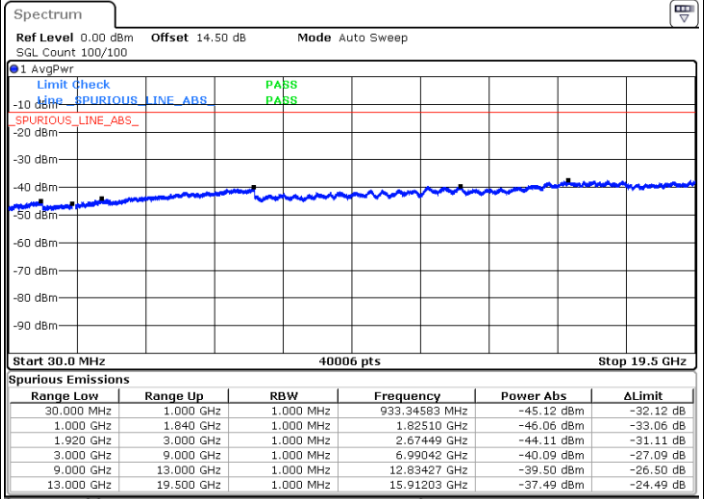
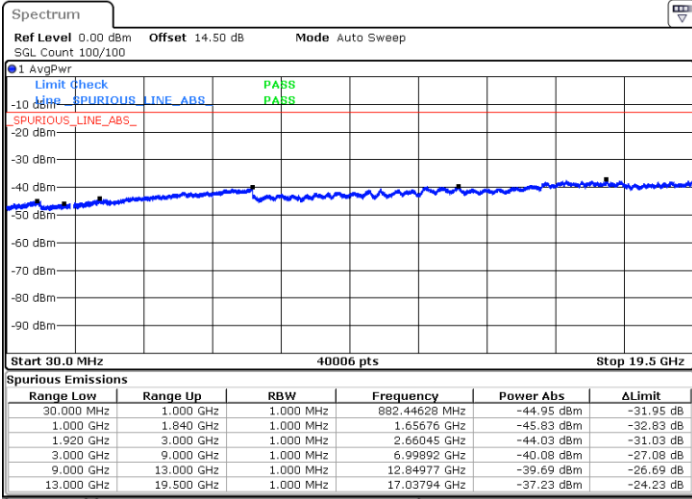




FR1 n2 / 10MHz / DFT-S OFDM / 256QAM

Lowest Channel / 1RB0

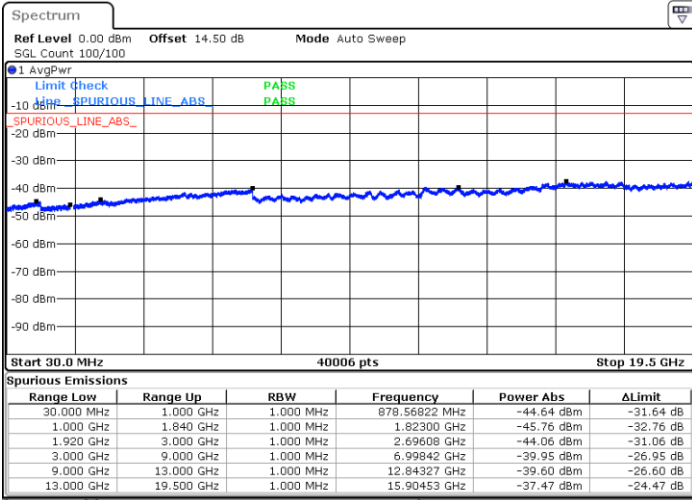
Middle Channel / 1RB0



Date: 31 JUL 2020 06:08:45

Date: 31 JUL 2020 06:36:52

Highest Channel / 1RB0



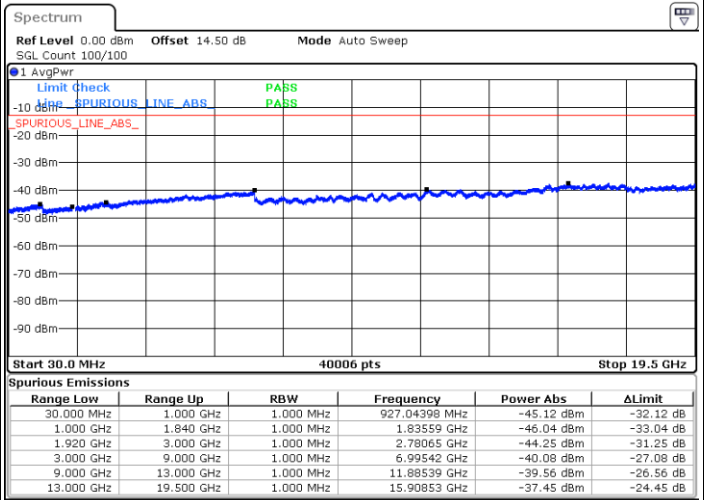
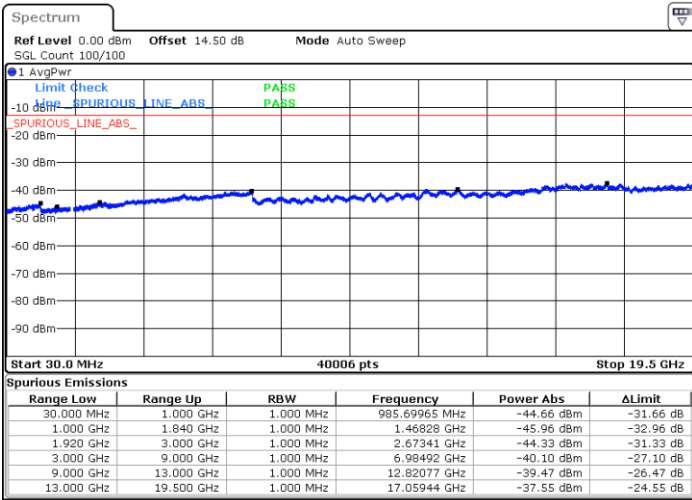
Date: 31 JUL 2020 06:40:37



FR1 n2 / 15MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB0

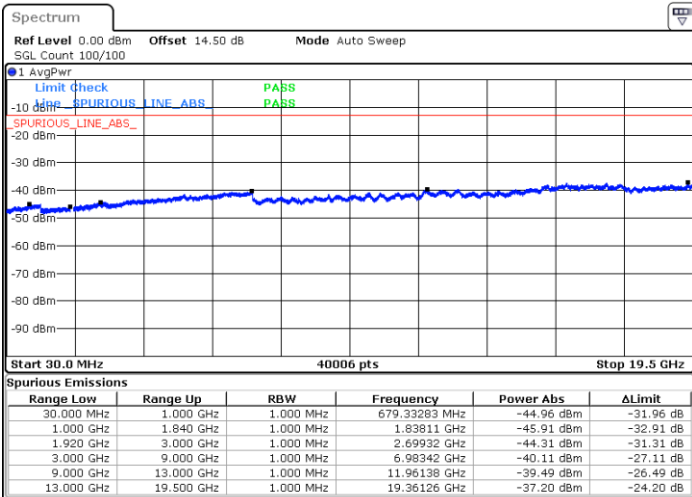
Middle Channel / 1RB0



Date: 31 JUL 2020 06:41:38

Date: 31 JUL 2020 06:45:42

Highest Channel / 1RB0



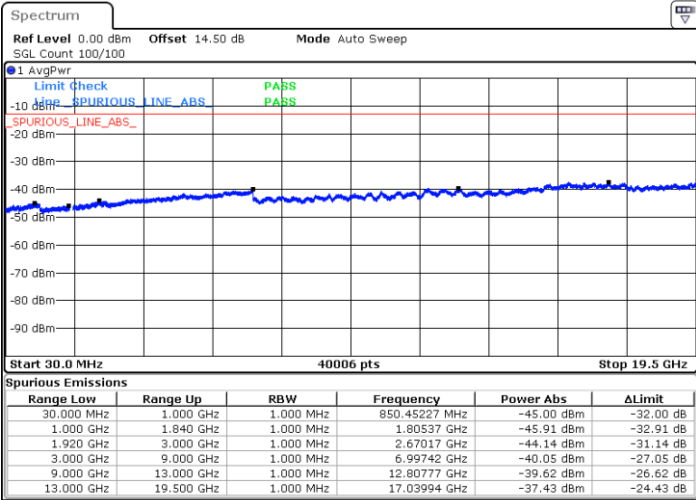
Date: 31 JUL 2020 06:49:51



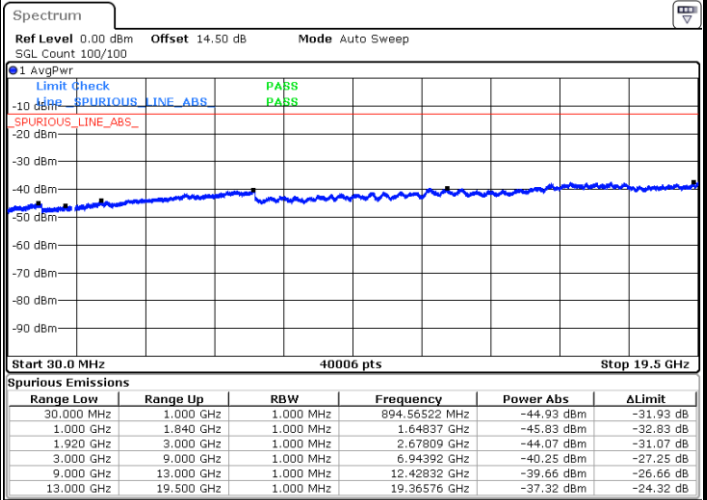
FR1 n2 / 15MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB0

Middle Channel / 1RB0

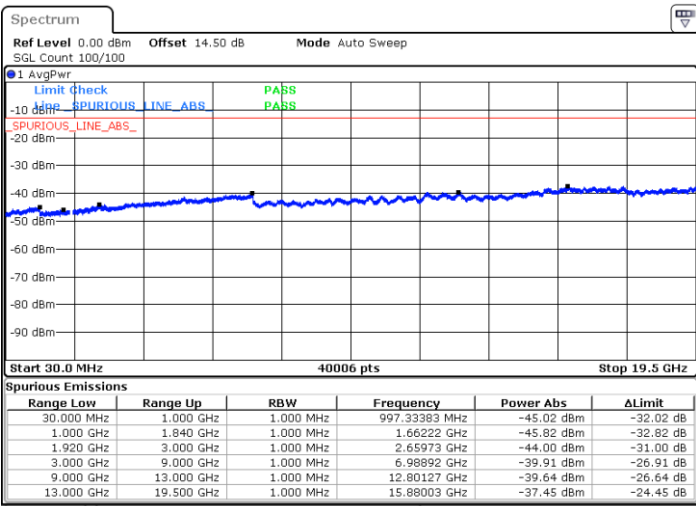


Date: 31.JUL.2020 06:42:26



Date: 31.JUL.2020 06:46:25

Highest Channel / 1RB0



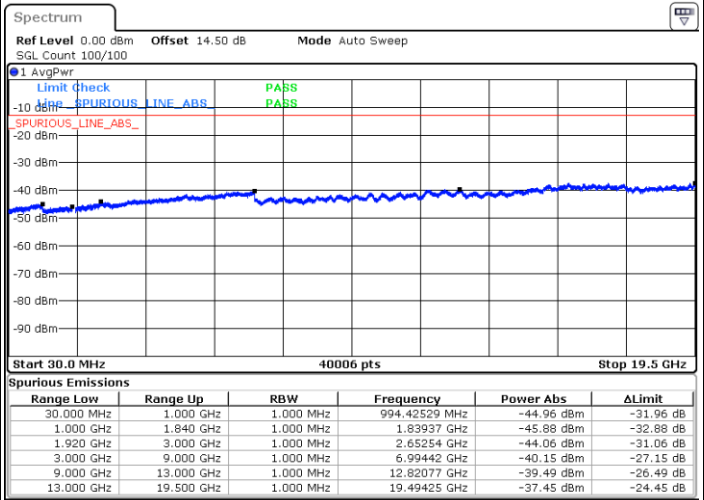
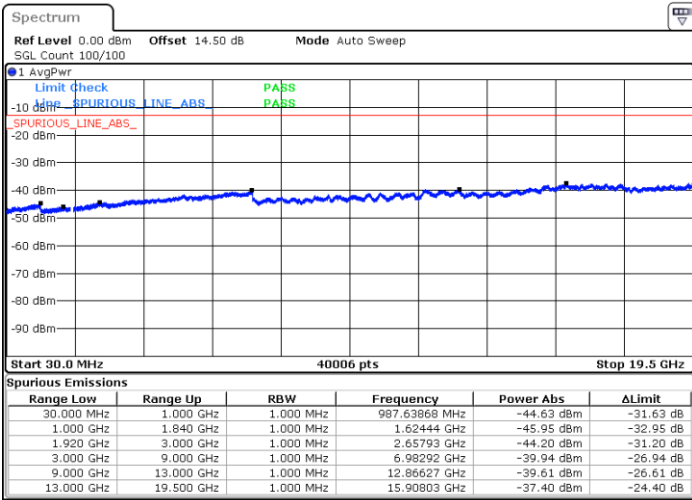
Date: 31.JUL.2020 06:50:40



FR1 n2 / 15MHz / DFT-S OFDM / 16QAM

Lowest Channel / 1RB0

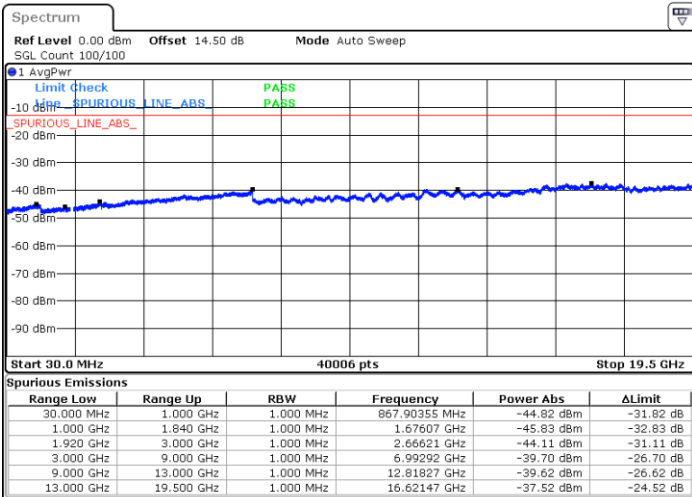
Middle Channel / 1RB0



Date: 31 JUL 2020 06:43:35

Date: 31 JUL 2020 06:47:14

Highest Channel / 1RB0



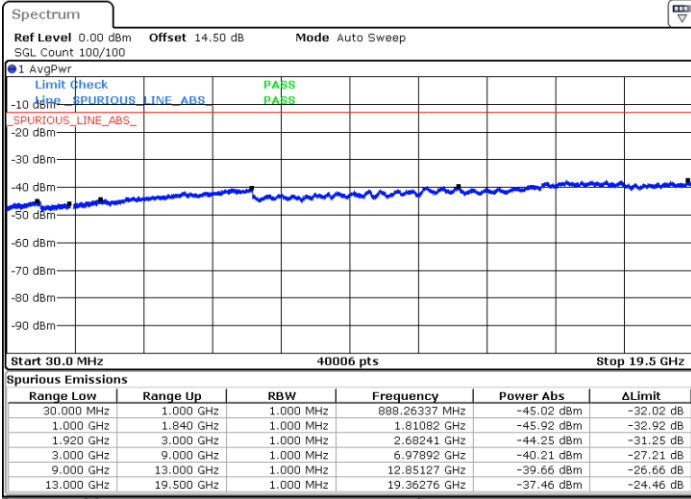
Date: 31 JUL 2020 06:52:23



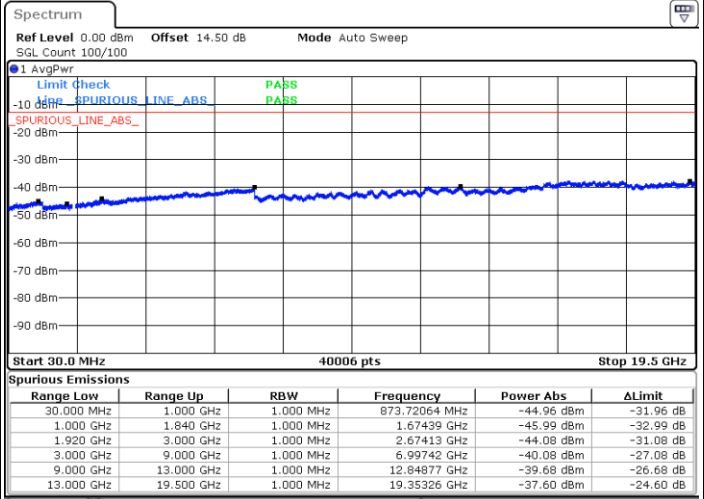
FR1 n2 / 15MHz / DFT-S OFDM / 64QAM

Lowest Channel / 1RB0

Middle Channel / 1RB0

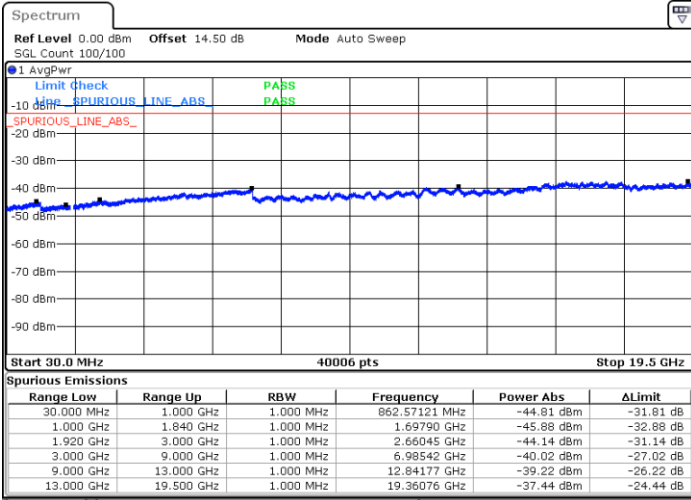


Date: 31 JUL 2020 06:44:17



Date: 31 JUL 2020 06:47:56

Highest Channel / 1RB0



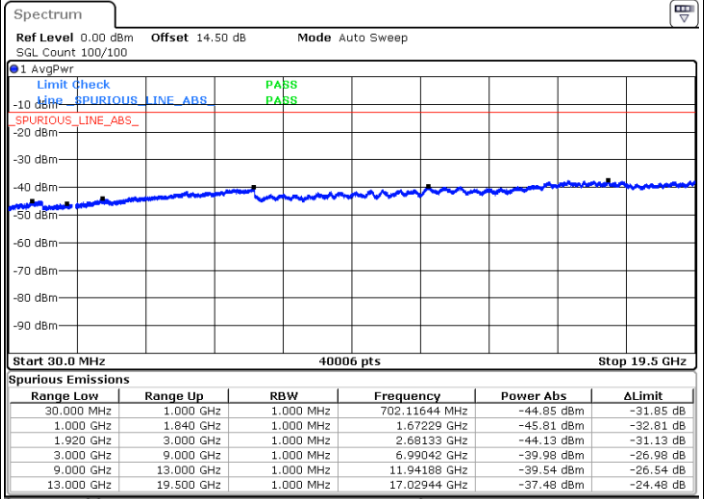
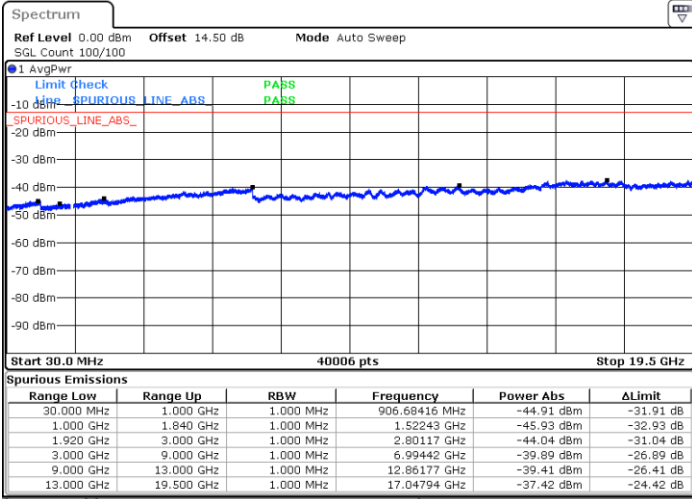
Date: 31 JUL 2020 06:54:26



FR1 n2 / 15MHz / DFT-S OFDM / 256QAM

Lowest Channel / 1RB0

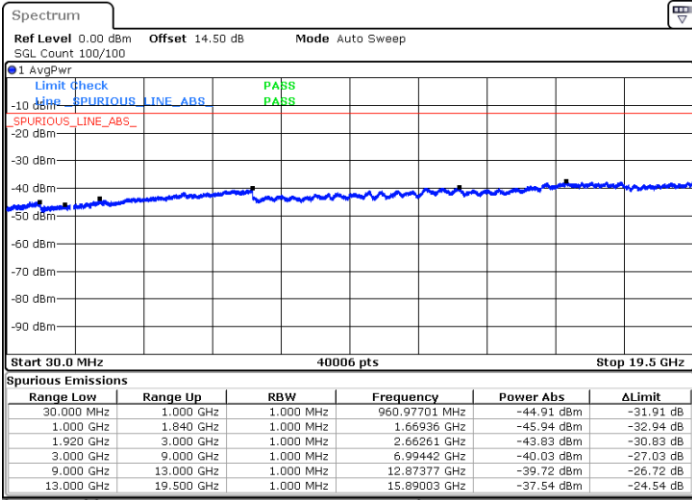
Middle Channel / 1RB0



Date: 31 JUL 2020 06:44:59

Date: 31 JUL 2020 06:48:38

Highest Channel / 1RB0



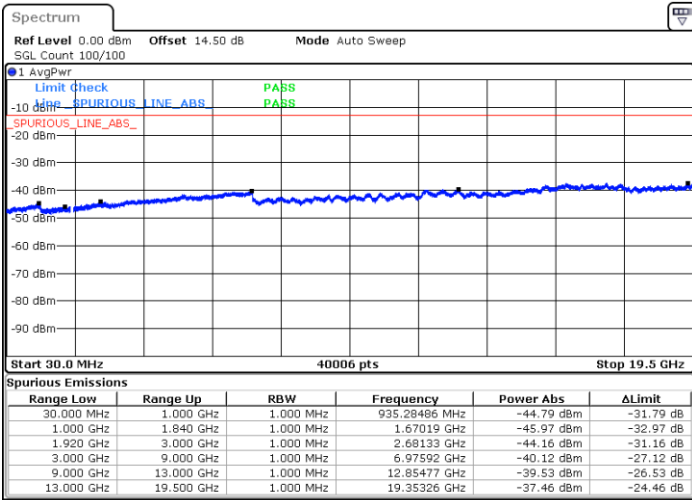
Date: 31 JUL 2020 06:55:50



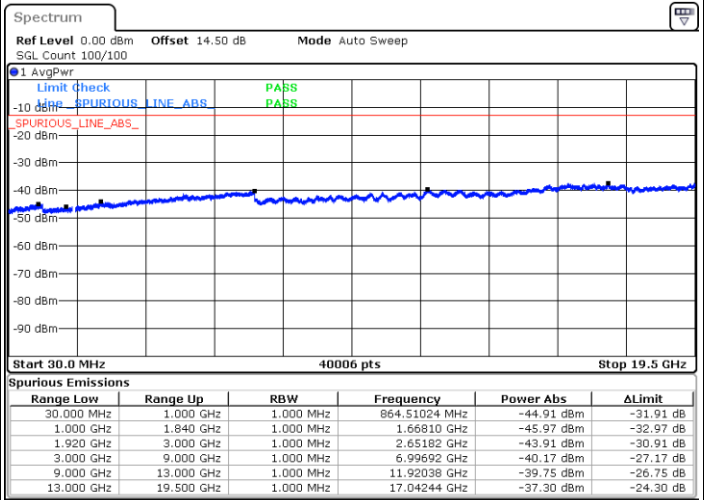
FR1 n2 / 20MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB0

Middle Channel / 1RB0

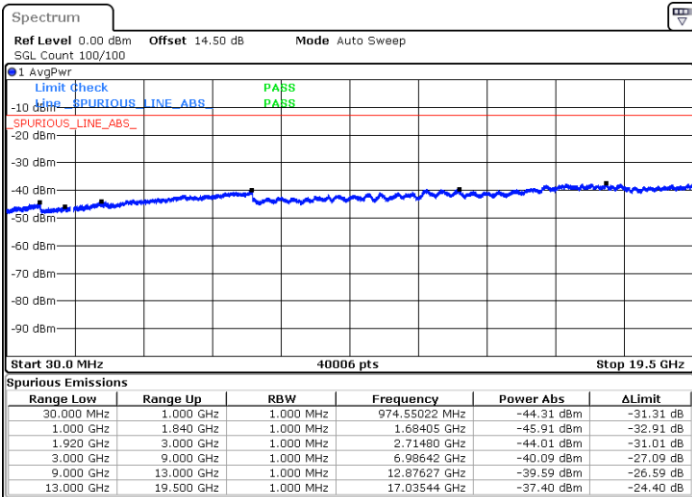


Date: 31 JUL 2020 06:56:44



Date: 31 JUL 2020 07:00:09

Highest Channel / 1RB0



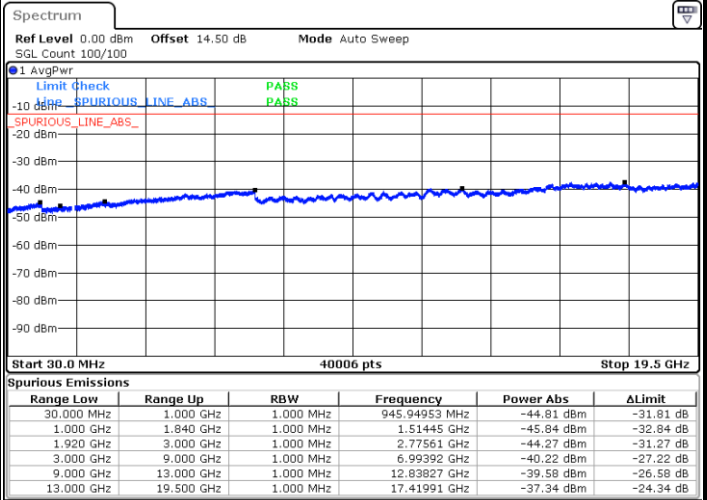
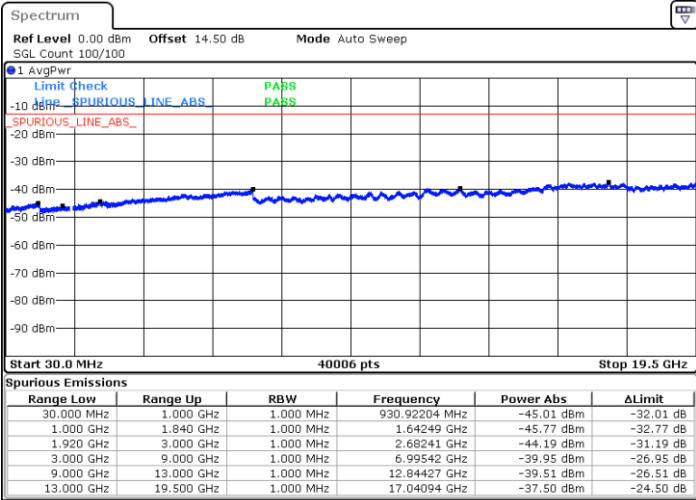
Date: 31 JUL 2020 07:04:21



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

Lowest Channel / 1RB0

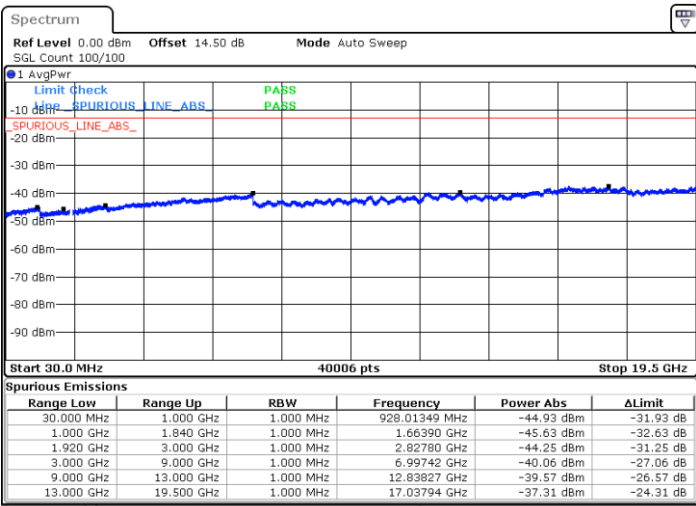
Middle Channel / 1RB0



Date: 31.JUL.2020 06:57:23

Date: 31.JUL.2020 07:01:00

Highest Channel / 1RB0



Date: 31.JUL.2020 07:05:05

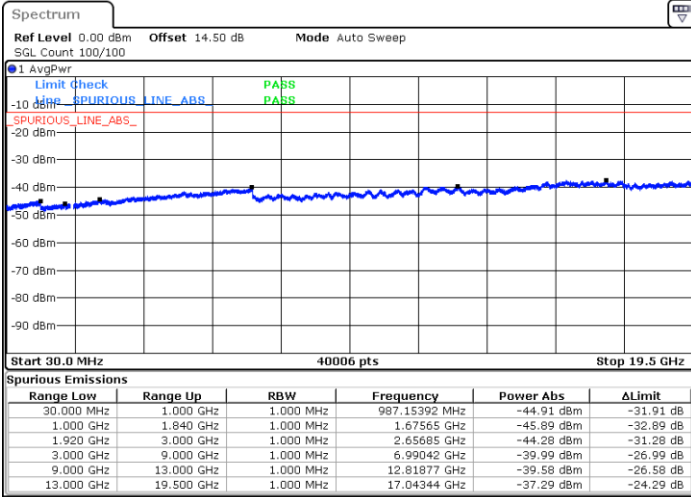




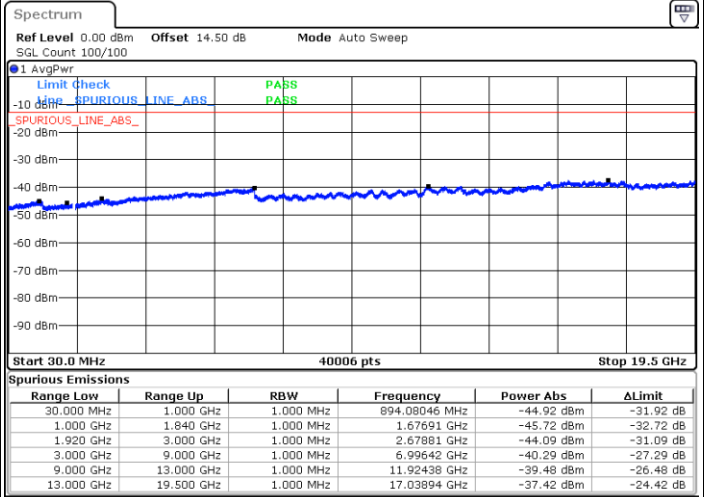
FR1 n2 / 20MHz / DFT-S OFDM / 16QAM

Lowest Channel / 1RB0

Middle Channel / 1RB0

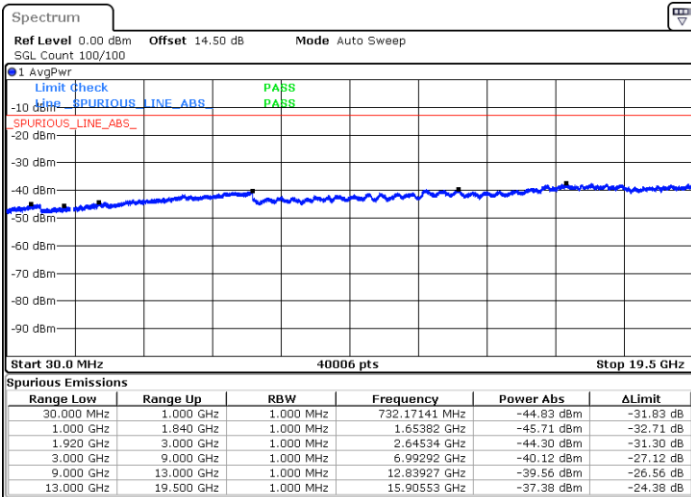


Date: 31 JUL 2020 06:58:03



Date: 31 JUL 2020 07:02:15

Highest Channel / 1RB0



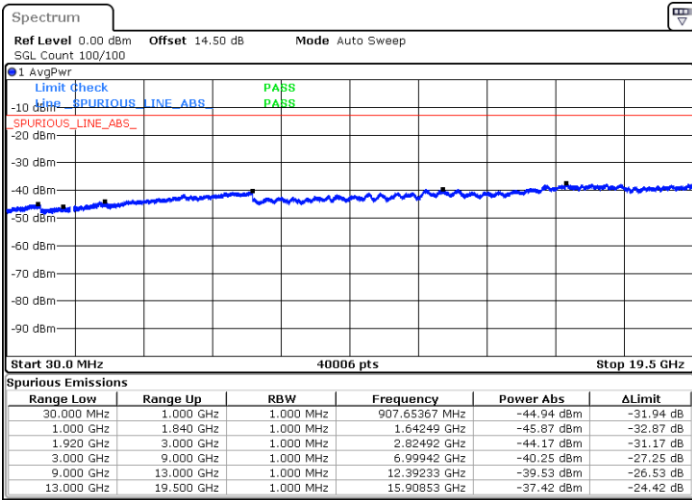
Date: 31 JUL 2020 07:05:46



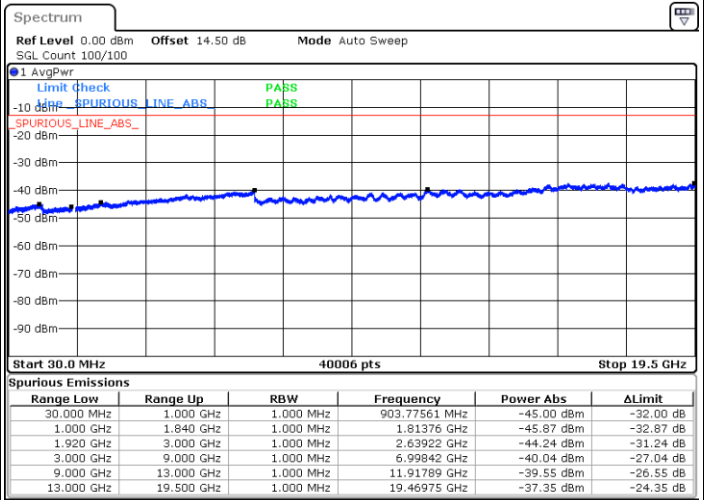
FR1 n2 / 20MHz / DFT-S OFDM / 64QAM

Lowest Channel / 1RB0

Middle Channel / 1RB0

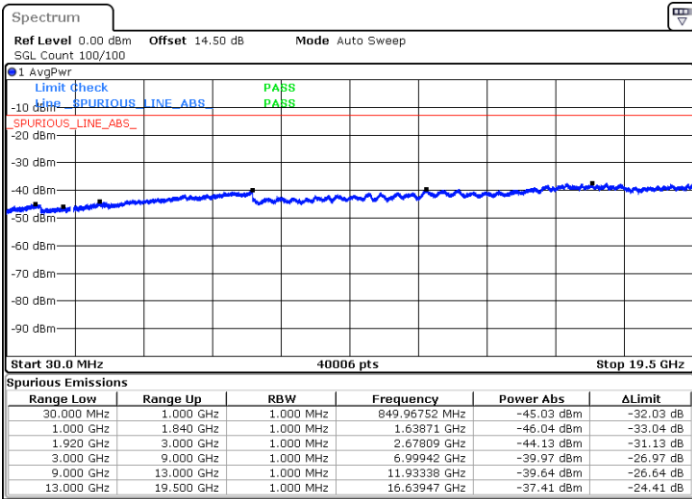


Date: 31 JUL 2020 06:58:45



Date: 31 JUL 2020 07:02:54

Highest Channel / 1RB0



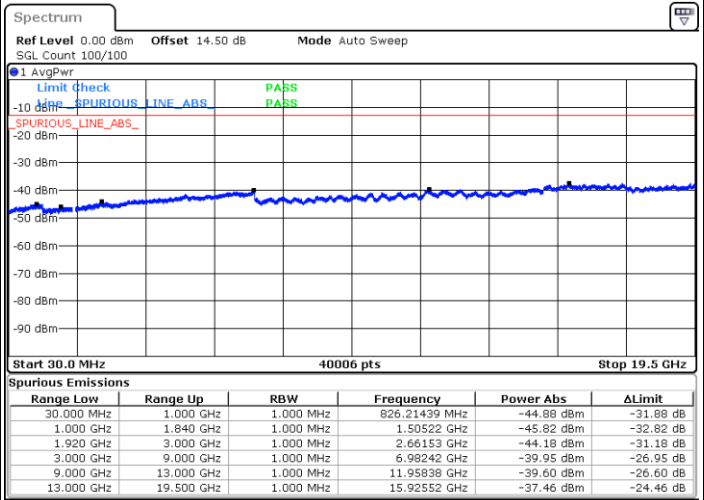
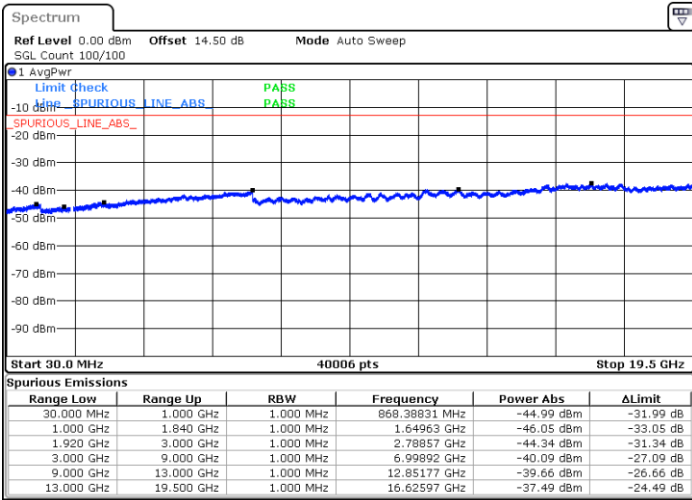
Date: 31 JUL 2020 07:06:26



FR1 n2 / 20MHz / DFT-S OFDM / 256QAM

Lowest Channel / 1RB0

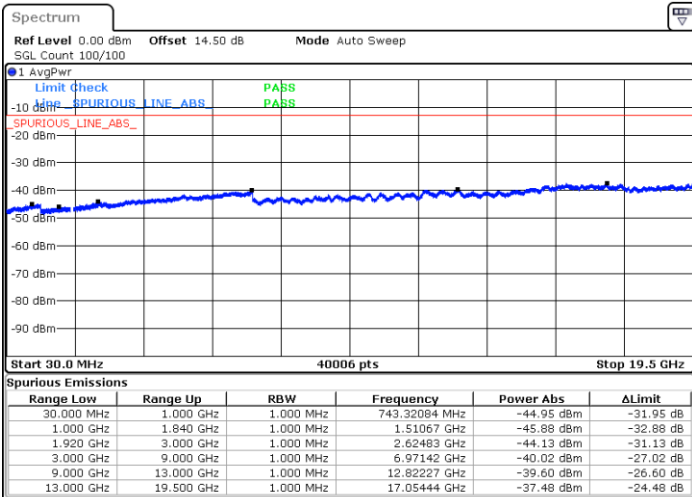
Middle Channel / 1RB0



Date: 31 JUL 2020 06:59:29

Date: 31 JUL 2020 07:03:37

Highest Channel / 1RB0



Date: 31 JUL 2020 07:07:08



Frequency Stability

Test Conditions		FR1 n2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0005	PASS
40	Normal Voltage	0.0009	
30	Normal Voltage	0.0009	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0020	
-20	Normal Voltage	0.0009	
-30	Normal Voltage	0.0000	
20	Maximum Voltage	0.0017	
20	Normal Voltage	0.0004	
20	Battery End Point	0.0009	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



# 5G NR n5

## Peak-to-Average Ratio

Mode	FR1 n5 / 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	4.99	5.22	6.38	6.72	<b>PASS</b>
Middle CH	5.04	5.30	6.41	6.87	
Highest CH	5.10	5.65	6.58	7.01	
Mode	FR1 n5 / 20MHz / DFT-S OFDM				
Mod.	256QAM	-	-	-	Limit: 13dB
RB Size	Full RB	-	-	-	Result
Lowest CH	7.19	-	-	-	<b>PASS</b>
Middle CH	7.33	-	-	-	
Highest CH	7.48	-	-	-	
Mode	FR1 n5 / 20MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	1 RB0	1 RB0	1 RB0	1 RB0	Result
Lowest CH	5.16	4.96	5.88	6.67	<b>PASS</b>
Middle CH	5.88	5.51	6.52	7.39	
Highest CH	5.22	4.84	5.91	6.78	
Mode	FR1 n5 / 20MHz / DFT-S OFDM				
Mod.	256QAM	-	-	-	Limit: 13dB
RB Size	1 RB0	-	-	-	Result
Lowest CH	8.29	-	-	-	<b>PASS</b>
Middle CH	8.55	-	-	-	
Highest CH	7.57	-	-	-	



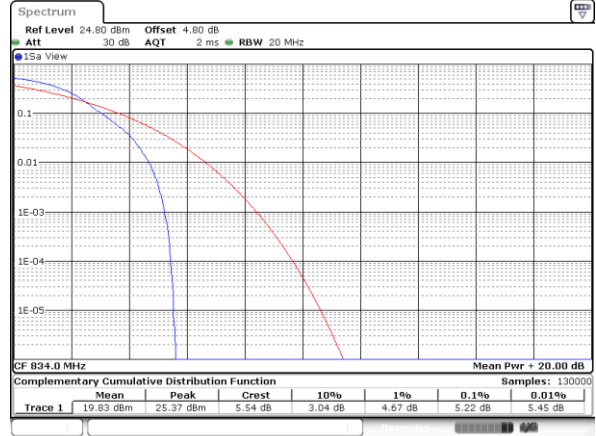
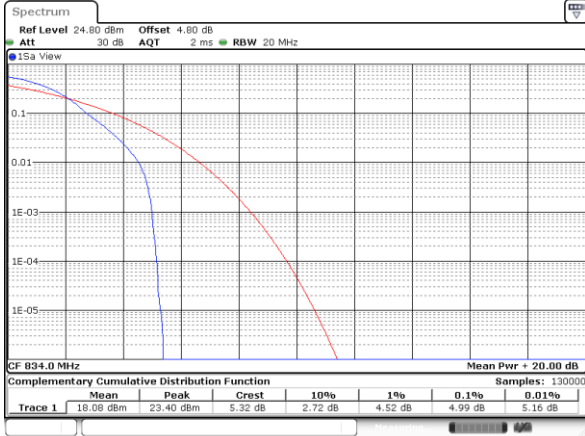
FR1 n5 / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

Lowest Channel / Full RB

Lowest Channel / Full RB

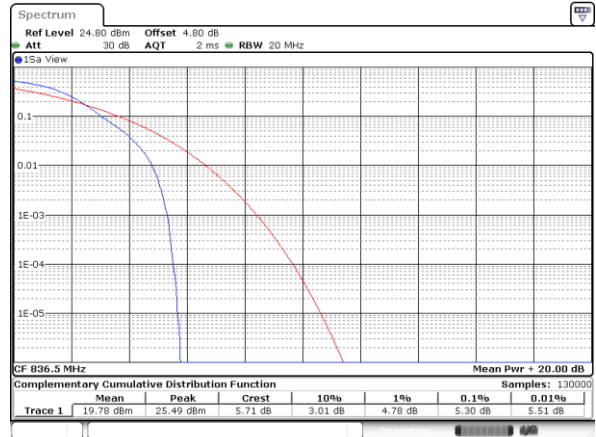
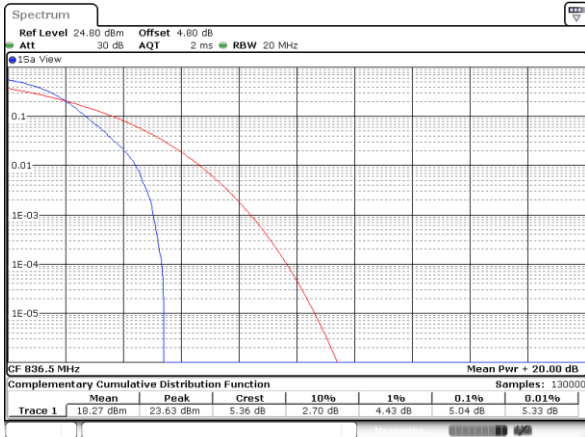


Date: 30 JUN 2020 00:28:06

Date: 30 JUN 2020 00:27:56

Middle Channel / Full RB

Middle Channel / Full RB

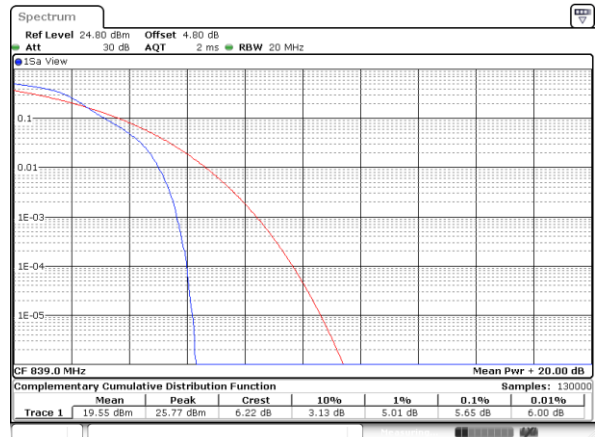
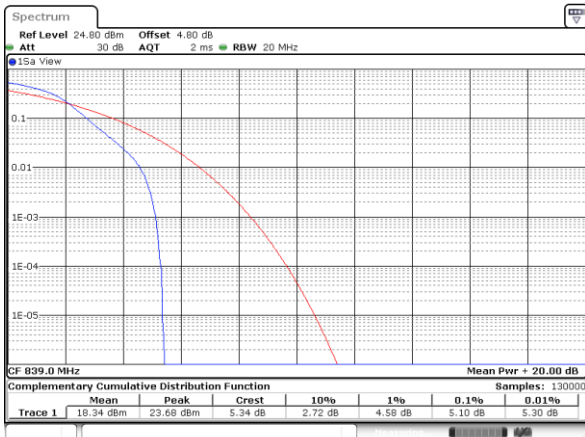


Date: 30 JUN 2020 00:25:13

Date: 30 JUN 2020 00:25:01

Highest Channel / Full RB

Highest Channel / Full RB



Date: 30 JUN 2020 00:23:25

Date: 30 JUN 2020 00:23:34



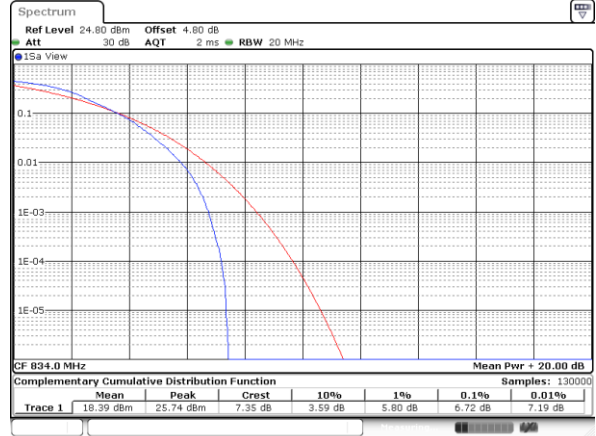
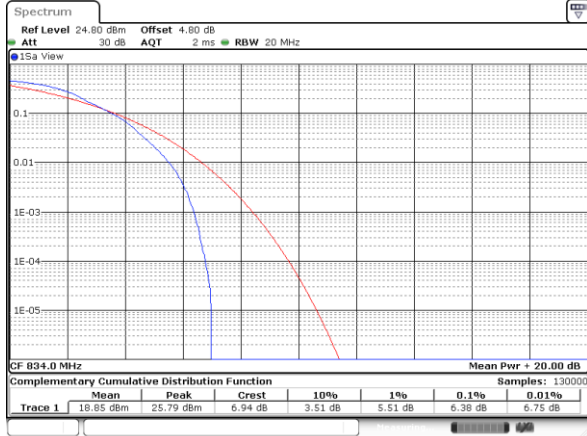
FR1 n5 / 20MHz / DFT-S OFDM

16QAM

64QAM

Lowest Channel / Full RB

Lowest Channel / Full RB

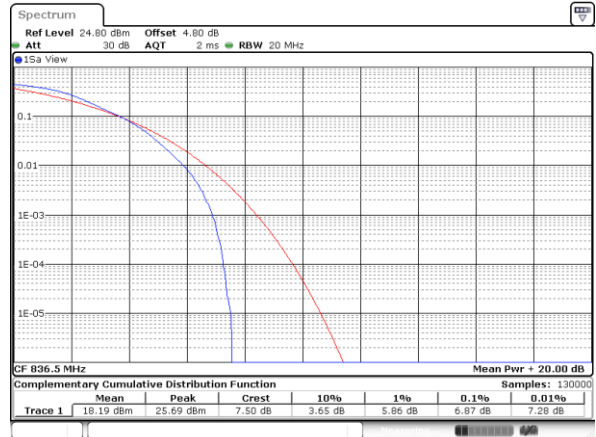
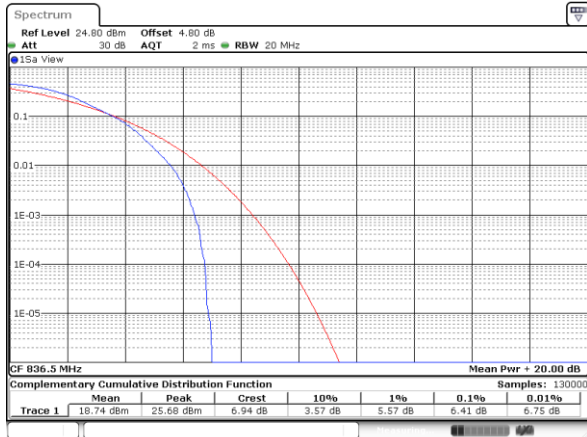


Date: 30 JUN 2020 00:27:49

Date: 30 JUN 2020 00:27:42

Middle Channel / Full RB

Middle Channel / Full RB

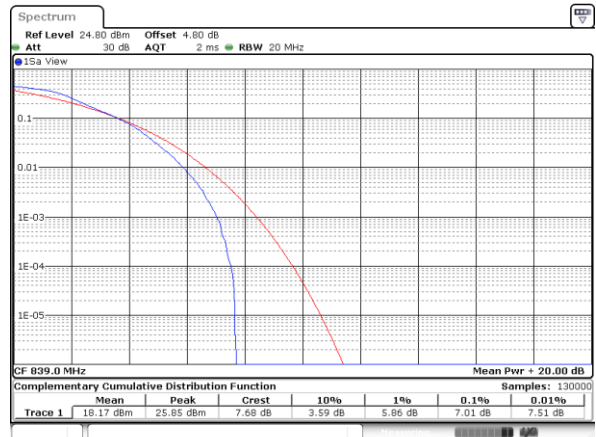
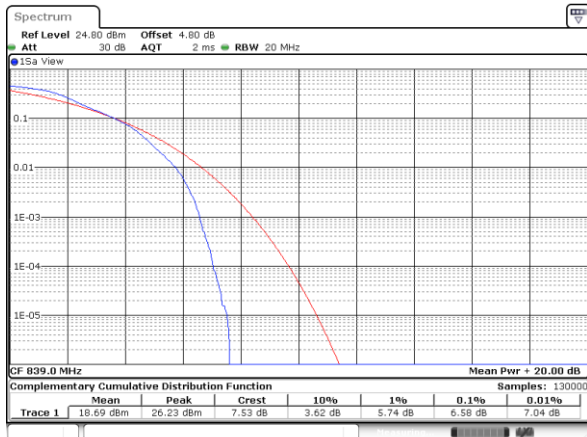


Date: 30 JUN 2020 00:24:52

Date: 30 JUN 2020 00:24:44

Highest Channel / Full RB

Highest Channel / Full RB



Date: 30 JUN 2020 00:23:42

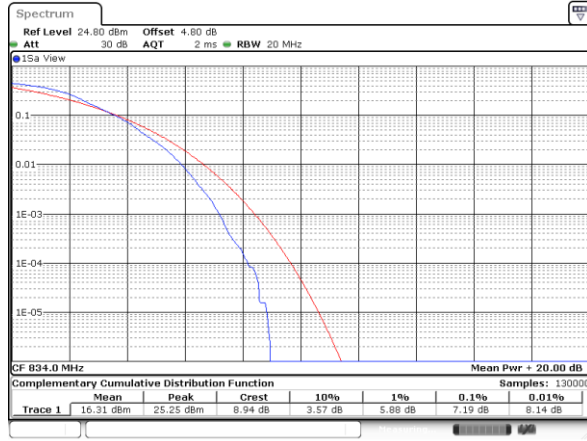
Date: 30 JUN 2020 00:23:51



FR1 n5 / 20MHz / DFT-S OFDM

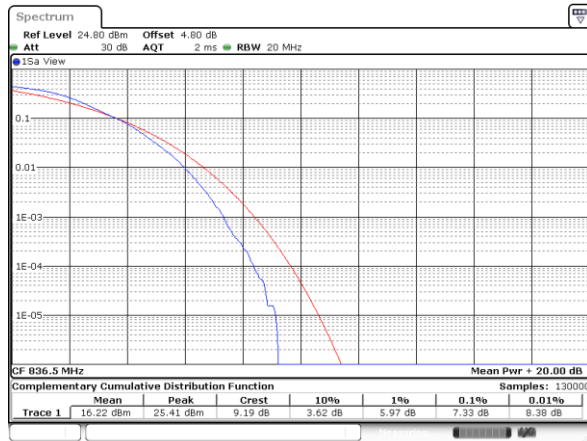
256QAM

Lowest Channel / Full RB



Date: 30 JUN 2020 00:27:35

Middle Channel / Full RB



Date: 30 JUN 2020 00:24:36

Highest Channel / Full RB



Date: 30 JUN 2020 00:24:05





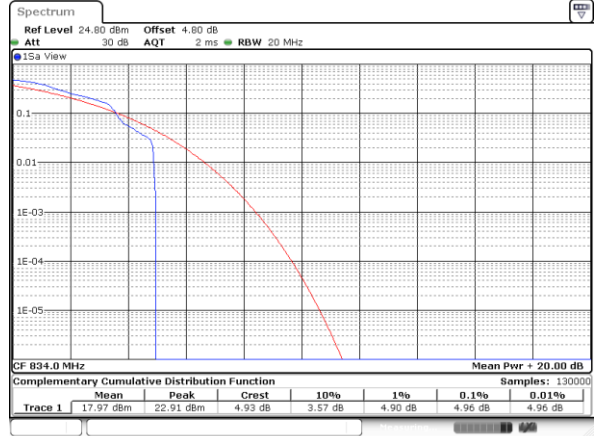
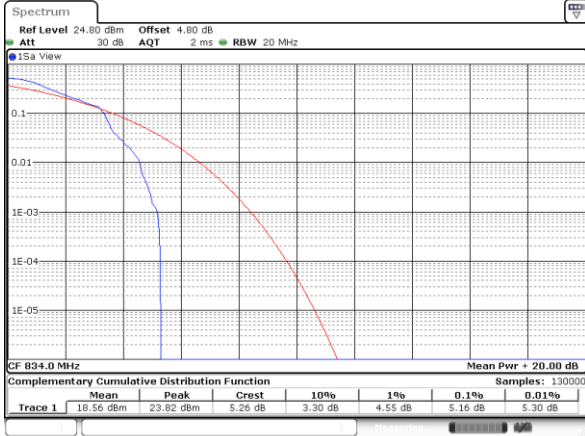
FR1 n5 / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

Lowest Channel / 1RB0

Lowest Channel / 1RB0

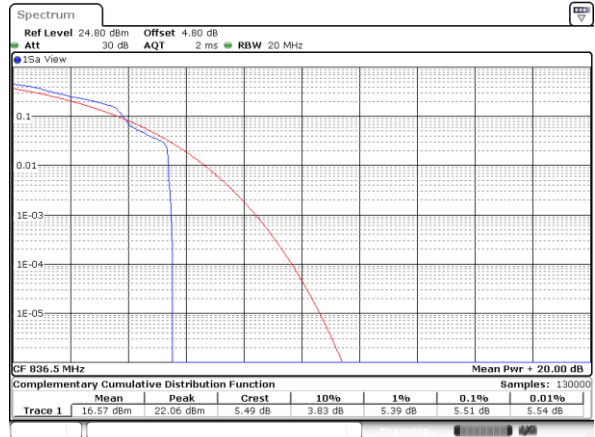
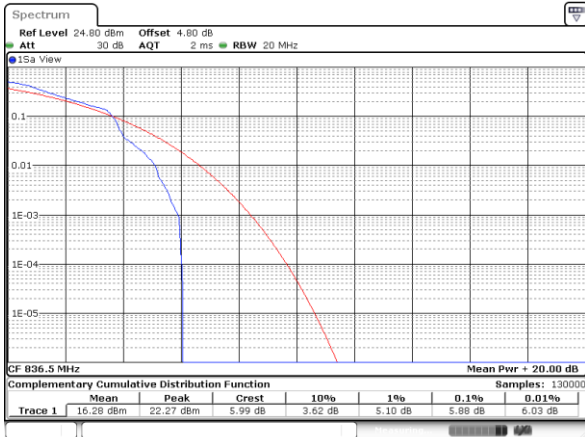


Date: 30 JUN 2020 00:26:50

Date: 30 JUN 2020 00:27:00

Middle Channel / 1RB0

Middle Channel / 1RB0

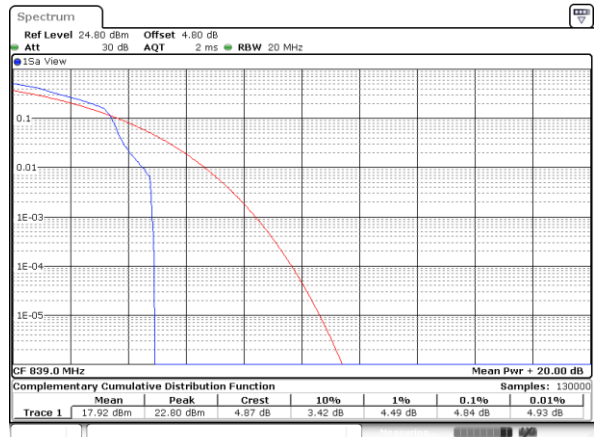
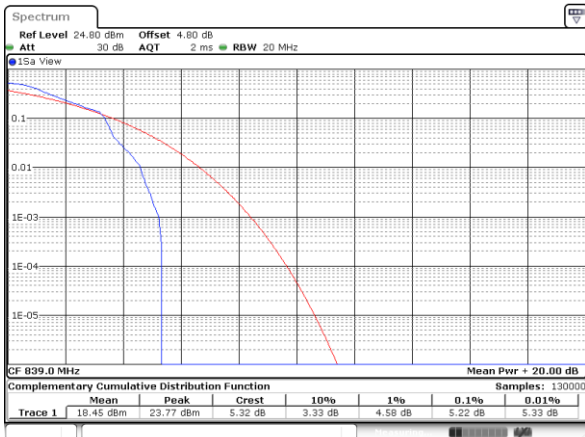


Date: 30 JUN 2020 00:25:23

Date: 30 JUN 2020 00:25:32

Highest Channel / 1RB0

Highest Channel / 1RB0



Date: 30 JUN 2020 00:23:14

Date: 30 JUN 2020 00:23:01



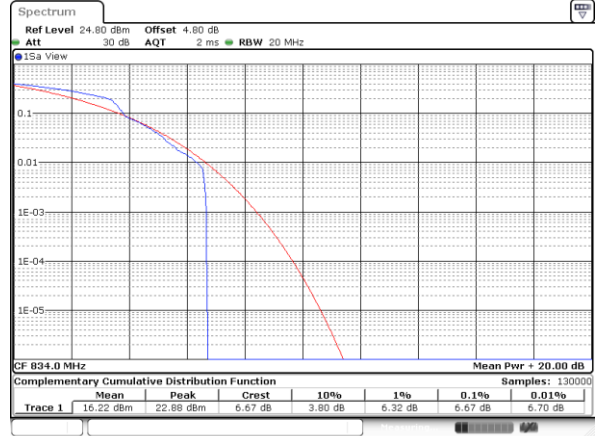
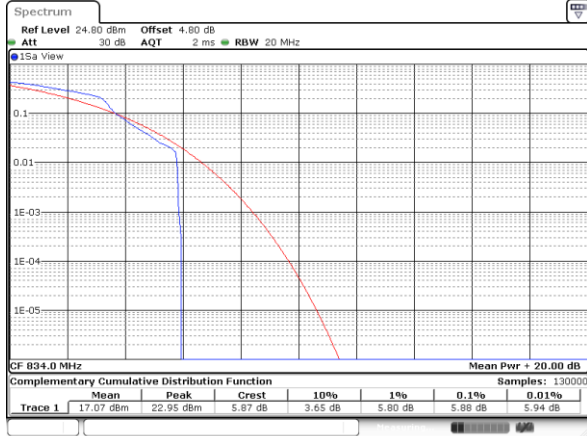
FR1 n5 / 20MHz / DFT-S OFDM

16QAM

64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RB0

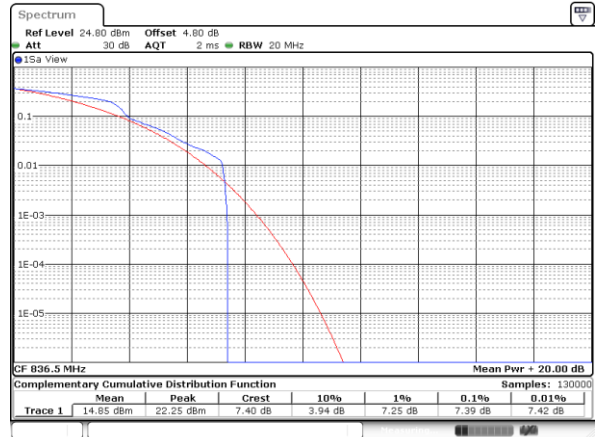
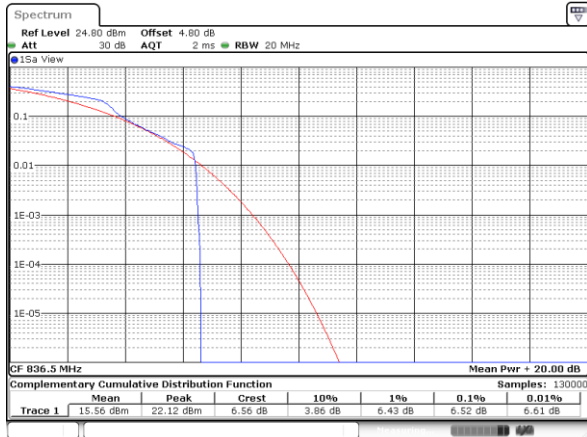


Date: 30 JUN 2020 00:27:07

Date: 30 JUN 2020 00:27:15

Middle Channel / 1RB0

Middle Channel / 1RB0

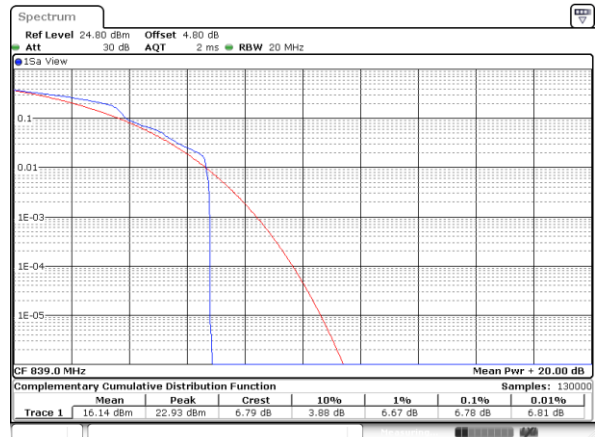
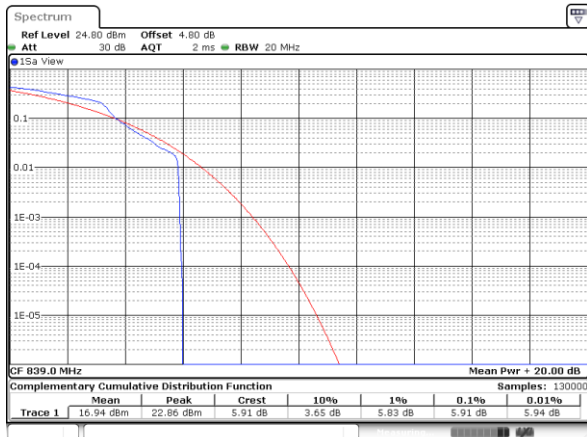


Date: 30 JUN 2020 00:25:40

Date: 30 JUN 2020 00:25:49

Highest Channel / 1RB0

Highest Channel / 1RB0



Date: 30 JUN 2020 00:22:50

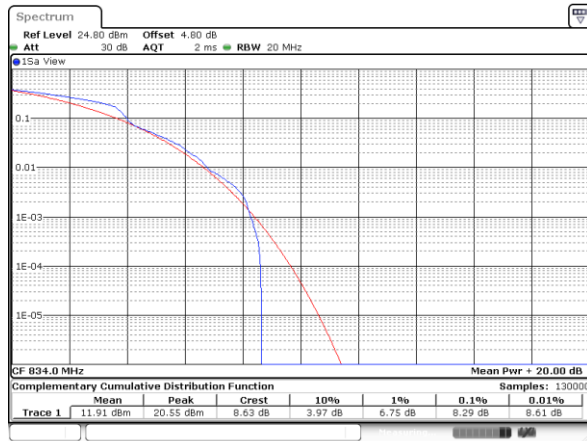
Date: 30 JUN 2020 00:22:32



FR1 n5 / 20MHz / DFT-S OFDM

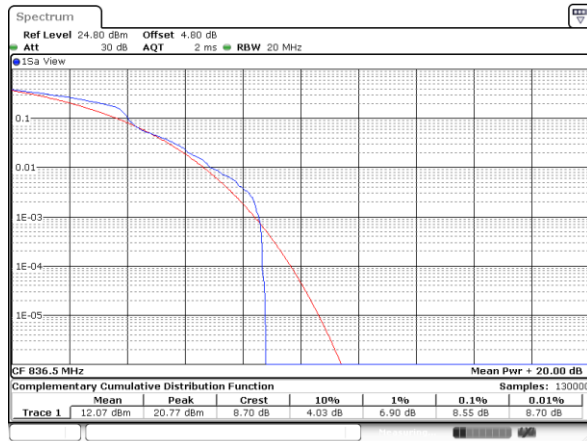
256QAM

Lowest Channel / 1RB0



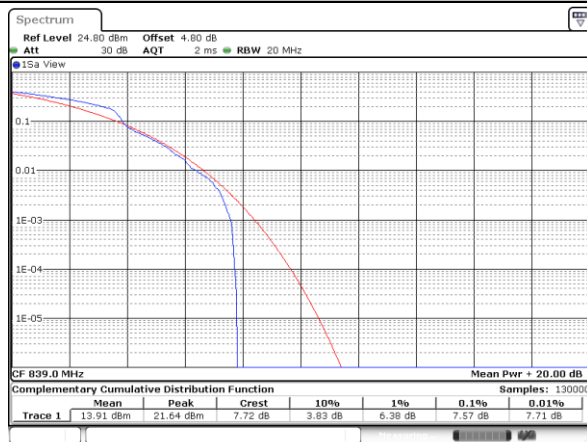
Date: 30 JUN 2020 00:27:25

Middle Channel / 1RB0



Date: 30 JUN 2020 00:26:01

Highest Channel / 1RB0

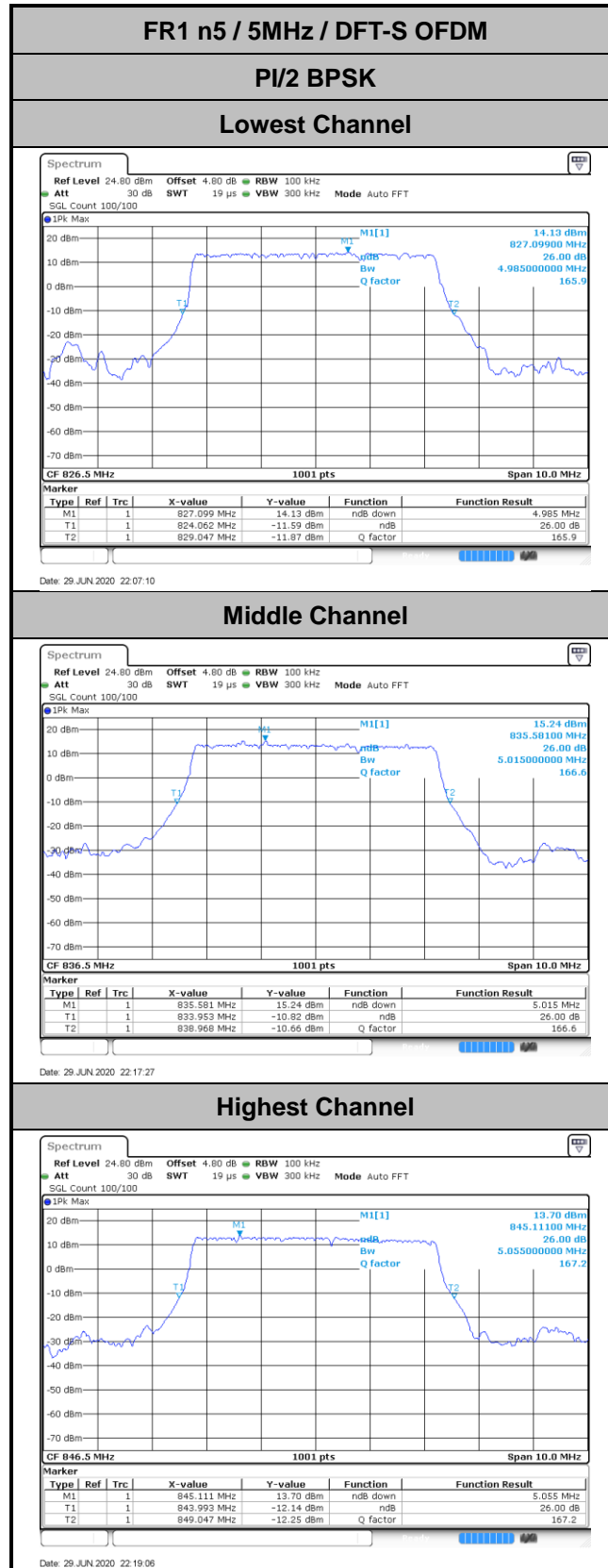


Date: 30 JUN 2020 00:22:41



**26dB Bandwidth**

Mode	FR1 n5 : 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	4.99		9.83		14.36		20.38	
Middle CH	5.02		9.89		14.27		20.42	
Highest CH	5.06		9.87		14.27		20.14	
Mode	FR1 n5 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	5.08	4.98	9.65	9.73	14.15	14.57	20.10	20.10
Middle CH	5.09	5.06	9.69	9.87	14.24	14.24	20.10	20.18
Highest CH	5.02	5.18	9.63	9.85	14.33	14.21	20.10	20.02
Mode	FR1 n5 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	4.96	5.04	10.05	9.81	14.21	14.45	20.02	20.10
Middle CH	5.07	5.23	9.85	9.71	14.24	14.30	20.14	20.10
Highest CH	5.11	5.15	9.69	9.97	14.51	14.27	20.10	20.14





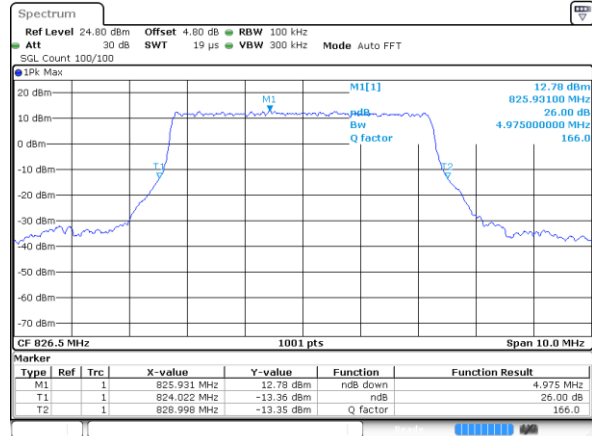
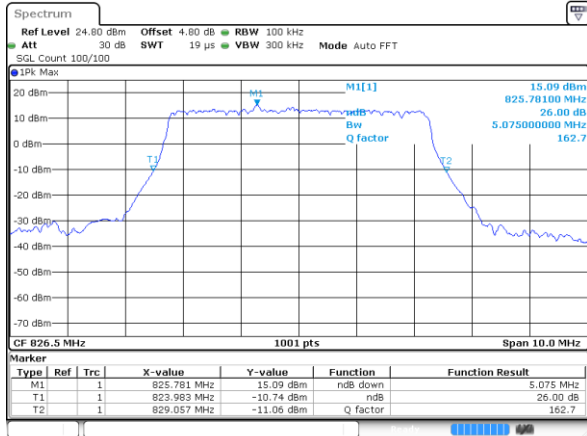
FR1 n5 / 5MHz / DFT-S OFDM

QPSK

16QAM

Lowest Channel

Lowest Channel

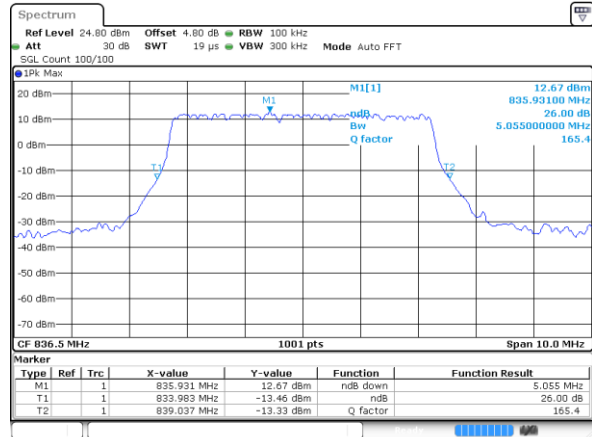
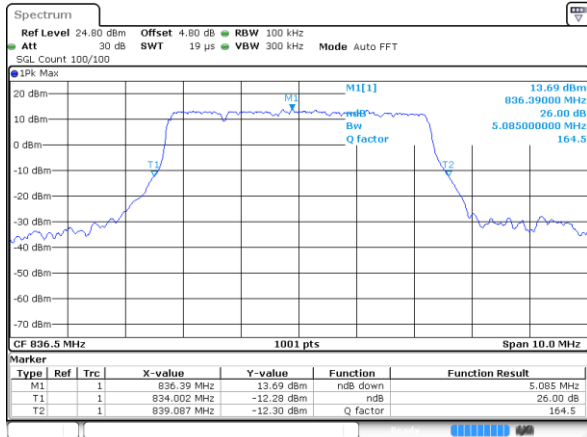


Date: 29 JUN 2020 22:12:16

Date: 29 JUN 2020 22:12:38

Middle Channel

Middle Channel

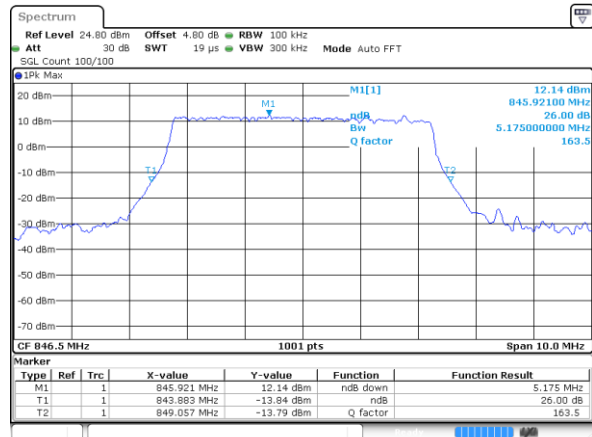
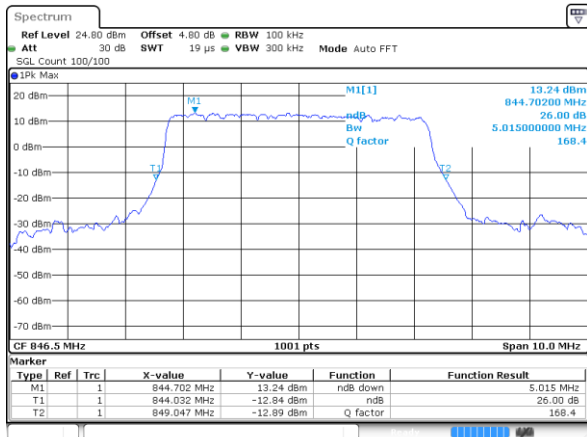


Date: 29 JUN 2020 22:17:43

Date: 29 JUN 2020 22:17:56

Highest Channel

Highest Channel



Date: 29 JUN 2020 22:21:59

Date: 29 JUN 2020 22:22:17



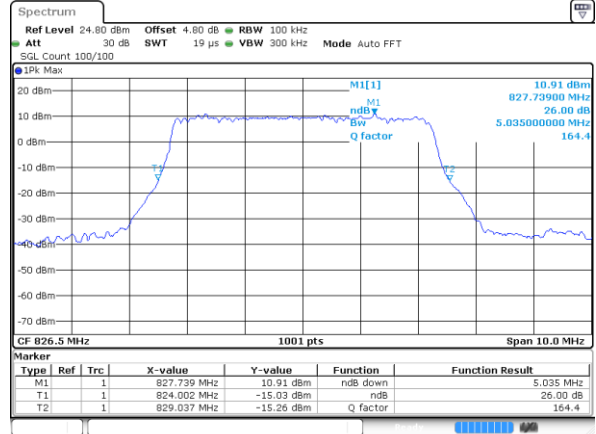
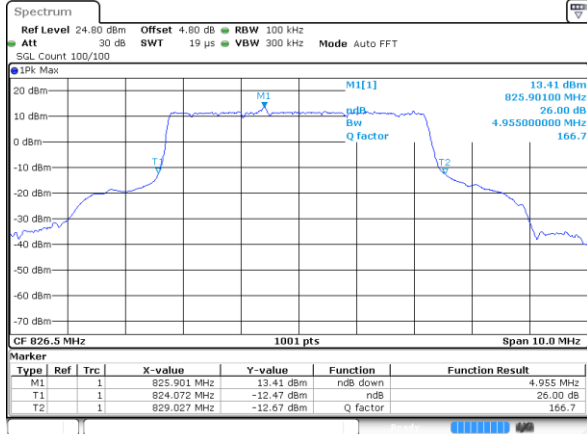
FR1 n5 / 5MHz / DFT-S OFDM

64QAM

256QAM

Lowest Channel

Lowest Channel

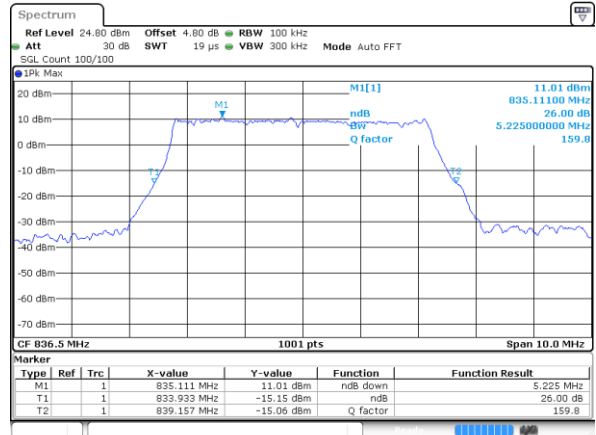
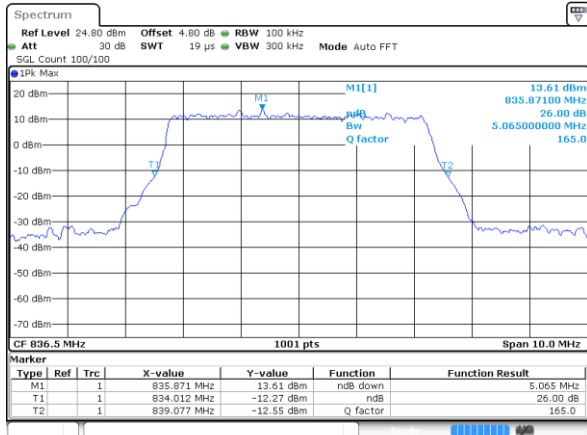


Date: 29 JUN 2020 22:15:12

Date: 29 JUN 2020 22:15:37

Middle Channel

Middle Channel

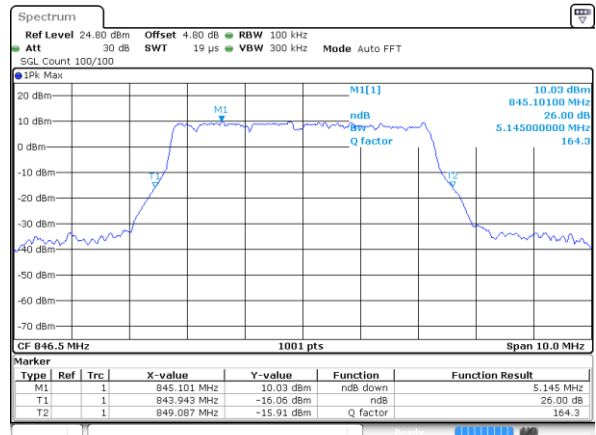
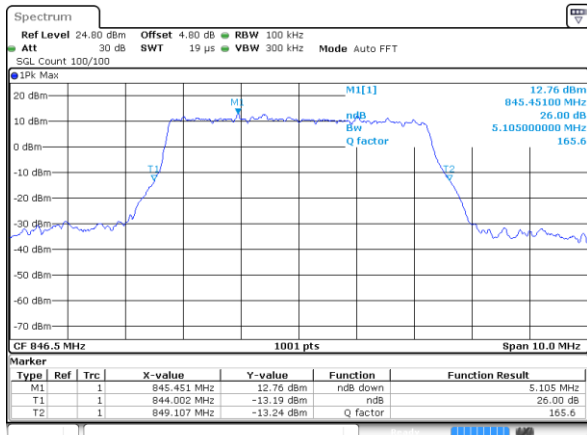


Date: 29 JUN 2020 22:18:08

Date: 29 JUN 2020 22:18:26

Highest Channel

Highest Channel



Date: 29 JUN 2020 22:25:29

Date: 29 JUN 2020 22:26:02

