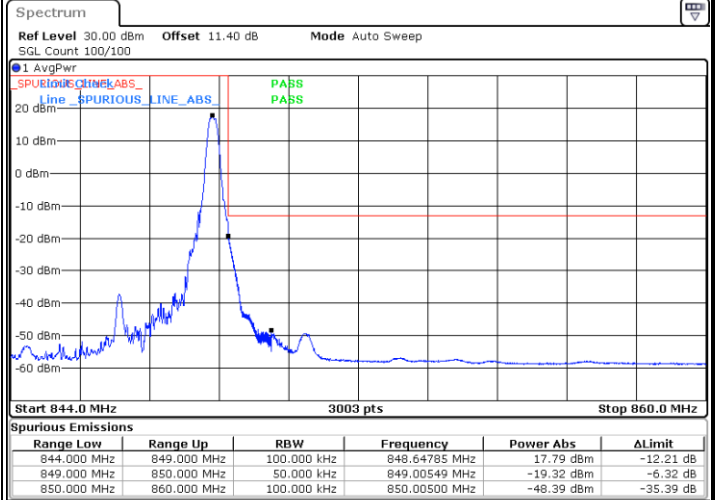
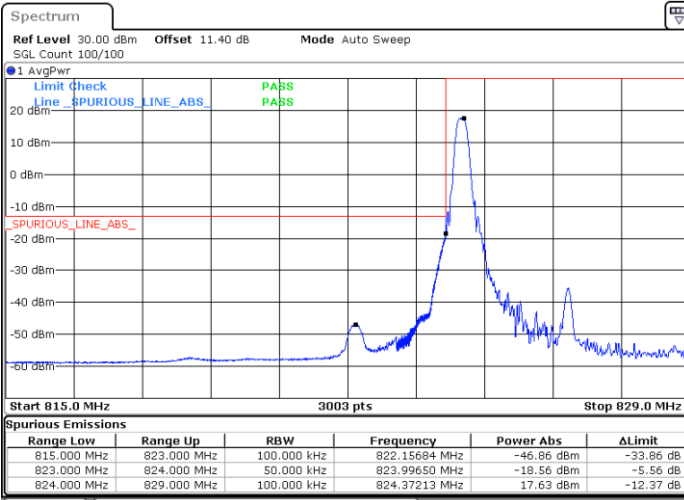




FR1 n5 / 5MHz / DFT-S OFDM / 16QAM

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

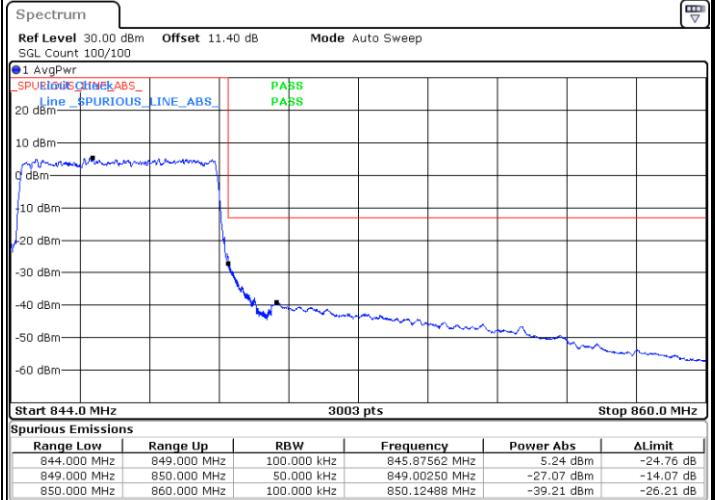
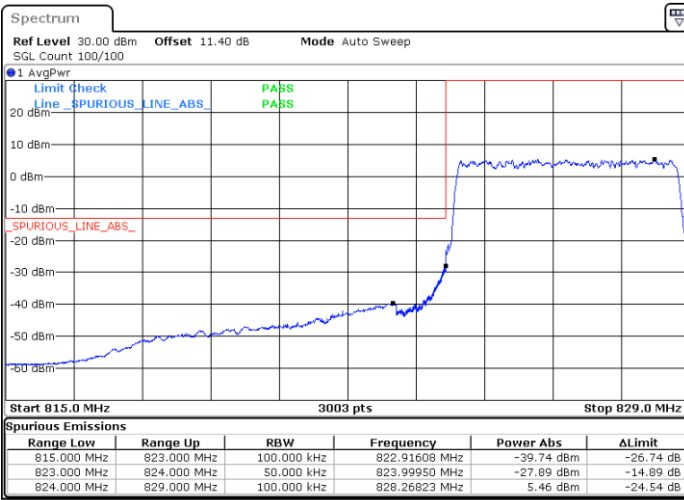


Date: 29 JUN 2020 17:09:16

Date: 29 JUN 2020 16:50:58

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN 2020 16:58:37

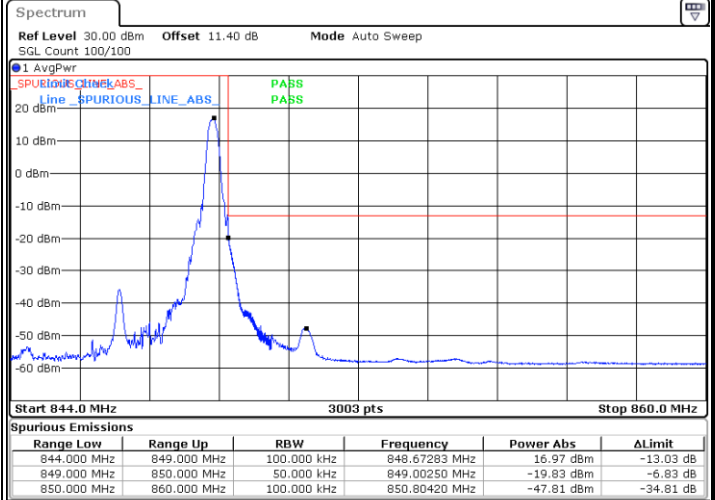
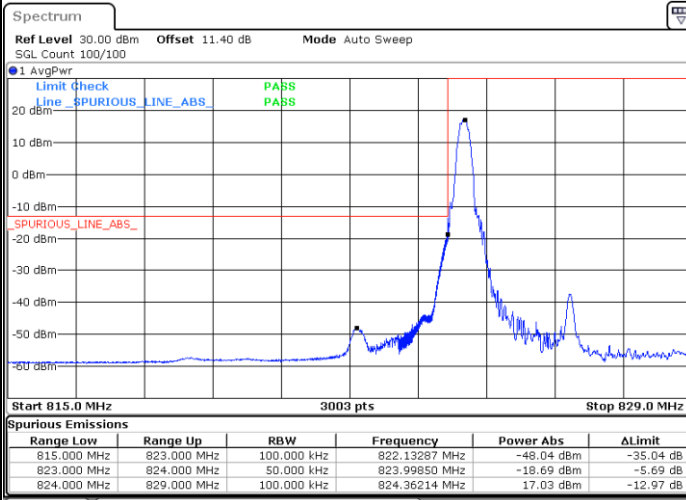
Date: 29 JUN 2020 16:43:38



FR1 n5 / 5MHz / DFT-S OFDM / 64QAM

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

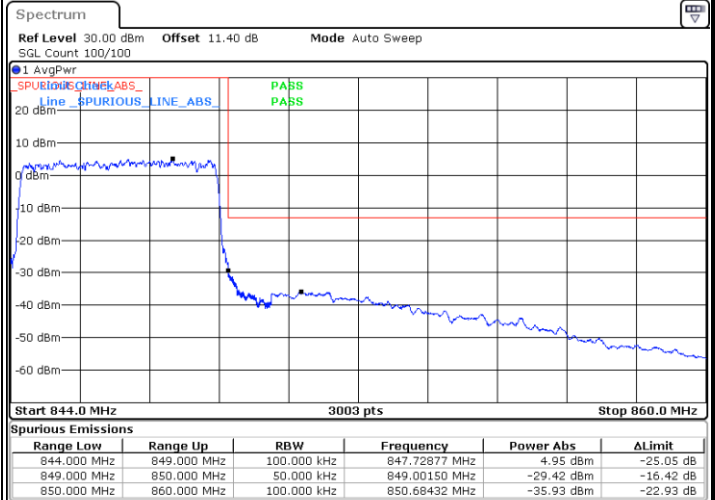
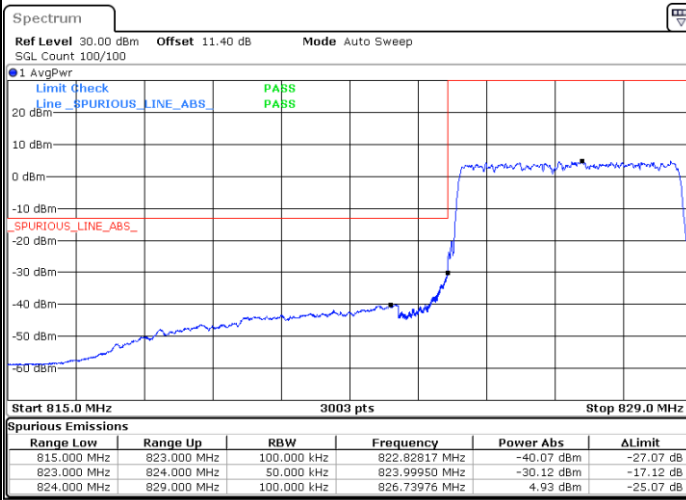


Date: 29 JUN 2020 17:08:34

Date: 29 JUN 2020 16:50:04

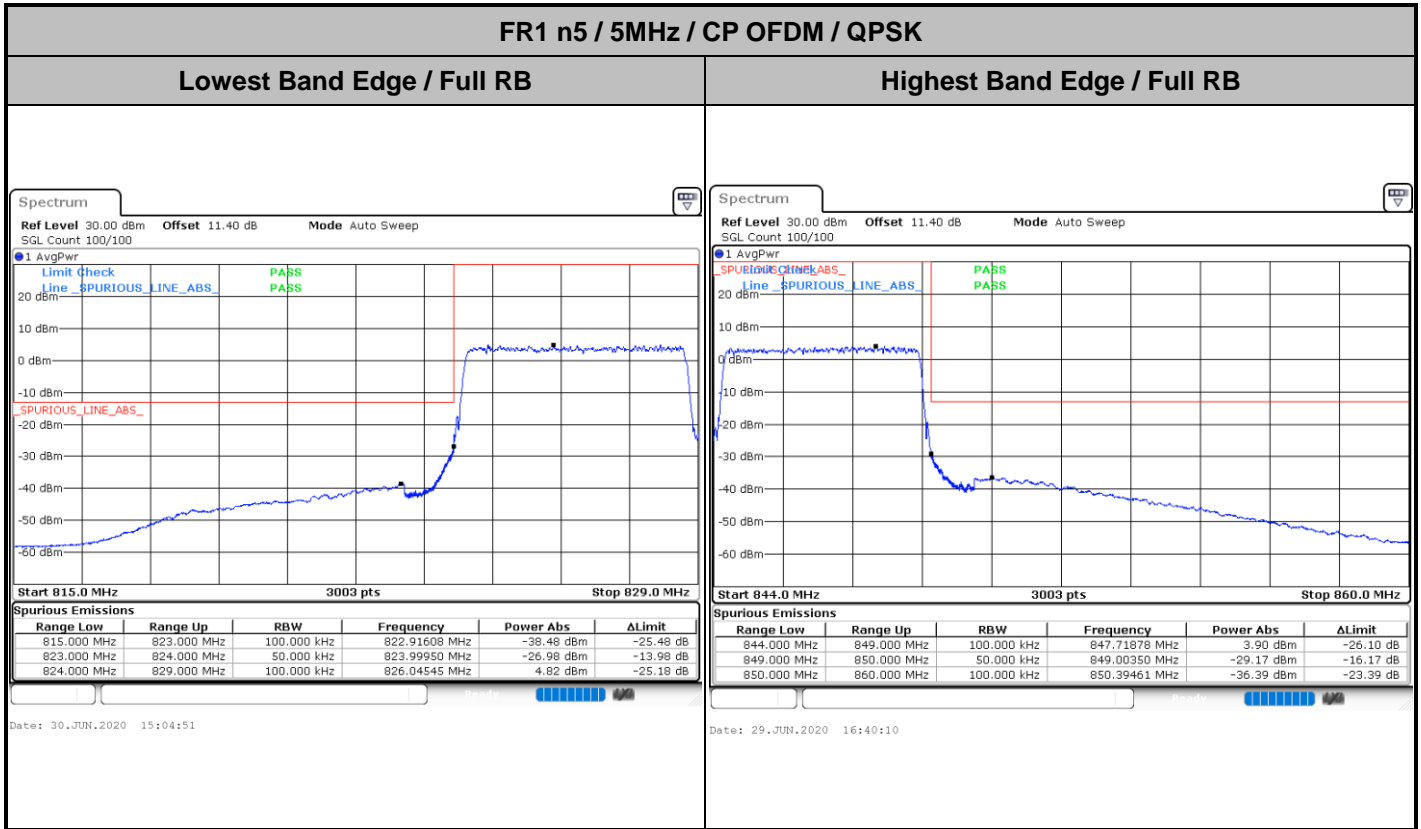
Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN 2020 16:59:25

Date: 29 JUN 2020 16:44:26

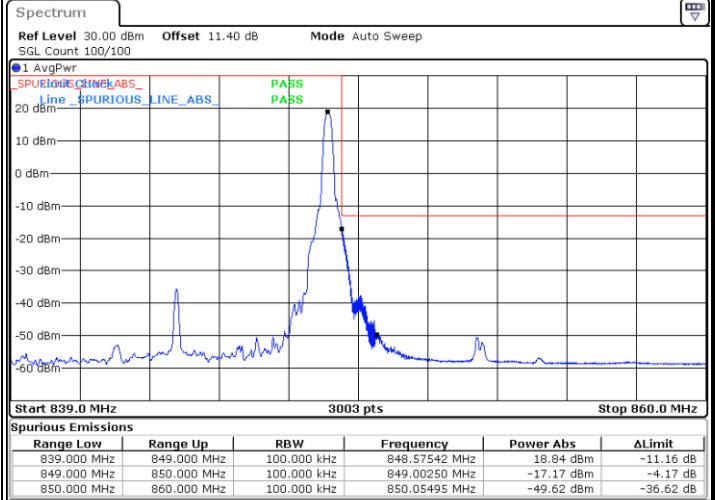
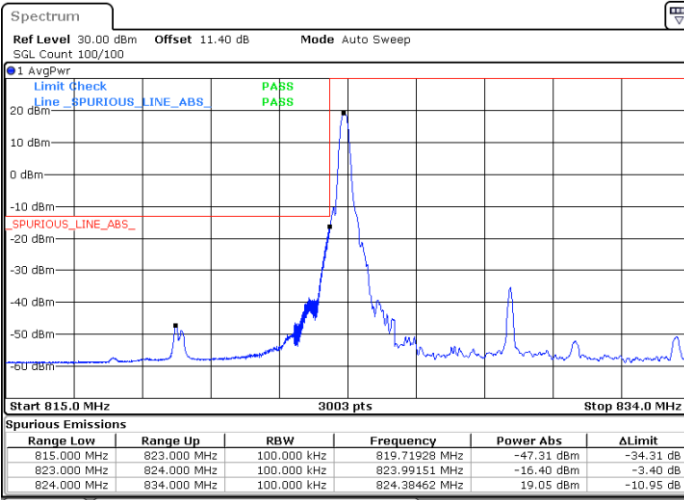




FR1 n5 / 10MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

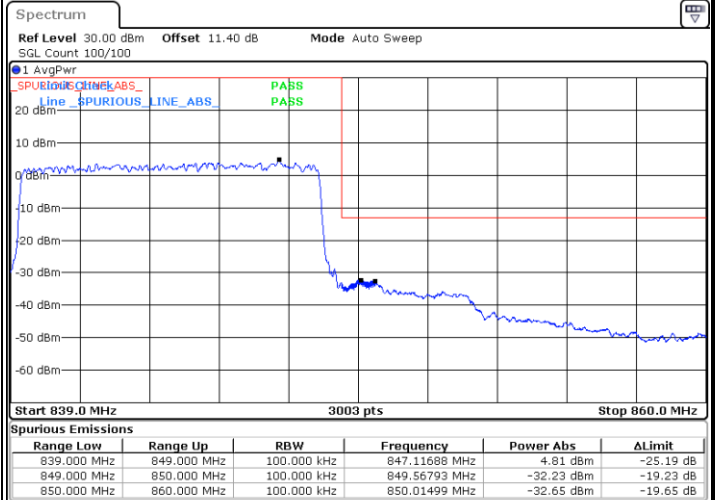
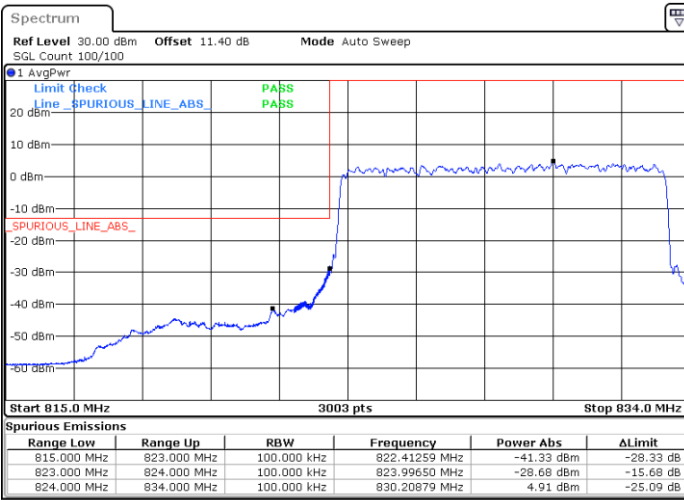


Date: 29 JUN 2020 16:17:42

Date: 29 JUN 2020 16:26:26

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN 2020 16:11:40

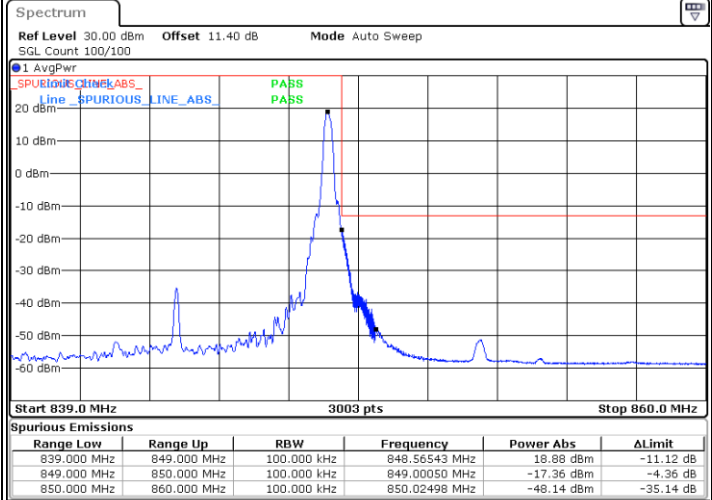
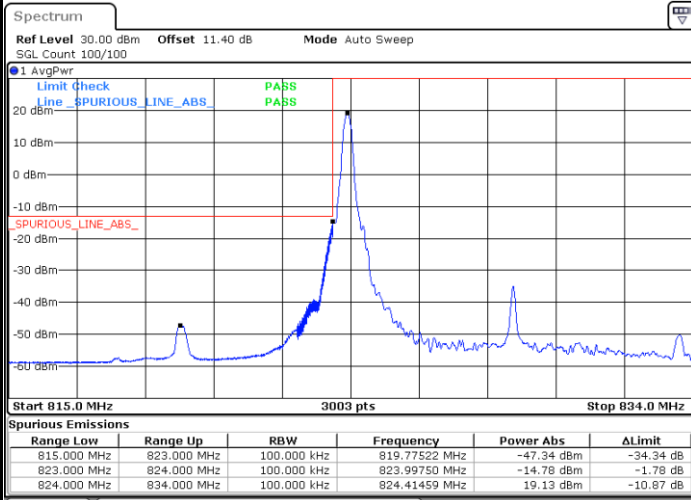
Date: 29 JUN 2020 16:20:16



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

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

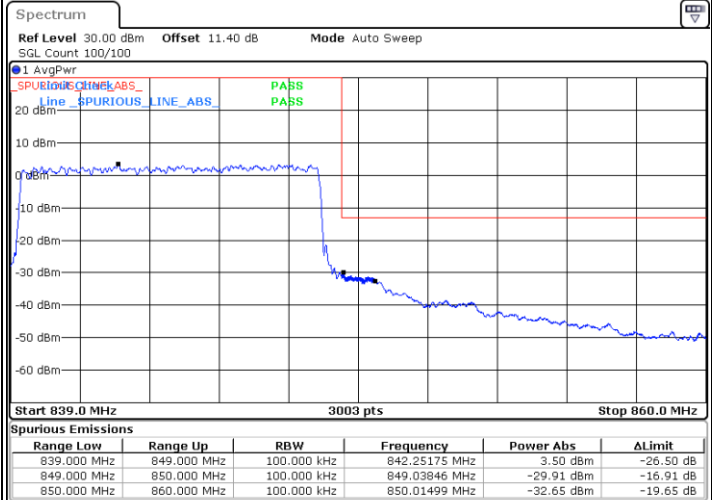
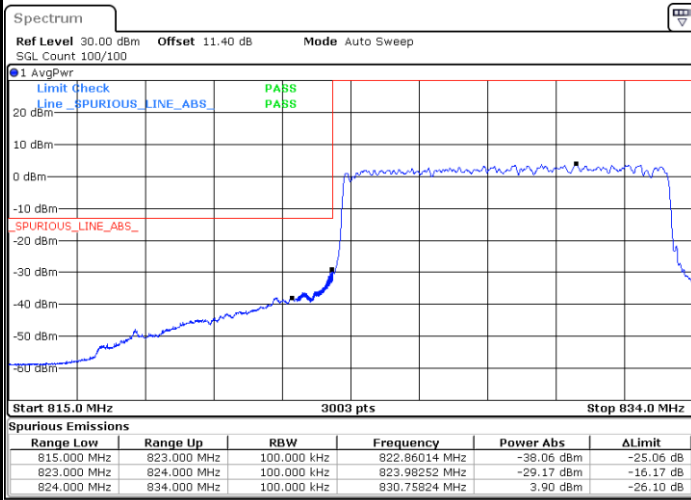


Date: 29 JUN 2020 16:16:59

Date: 29 JUN 2020 16:25:50

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN 2020 16:12:11

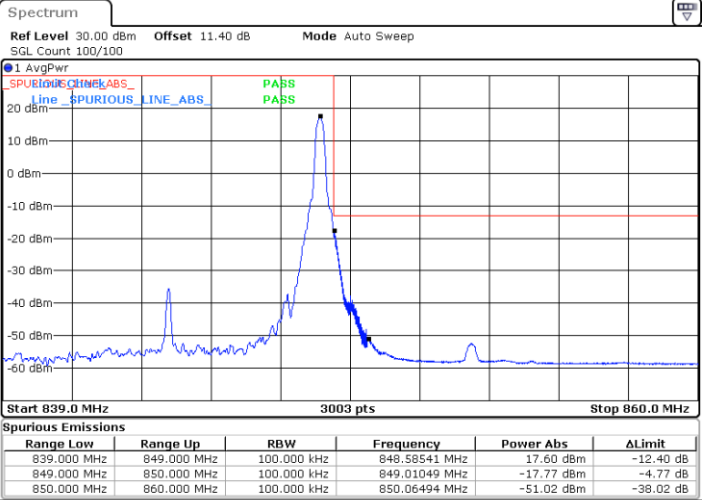
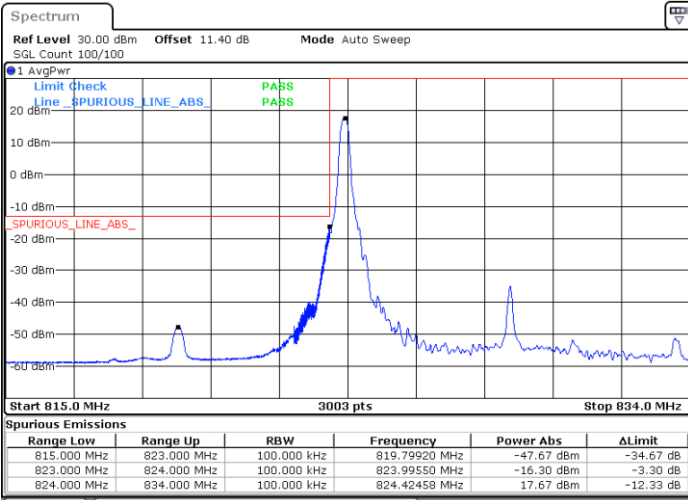
Date: 29 JUN 2020 16:20:51



FR1 n5 / 10MHz / DFT-s-OFDM / 16QAM

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

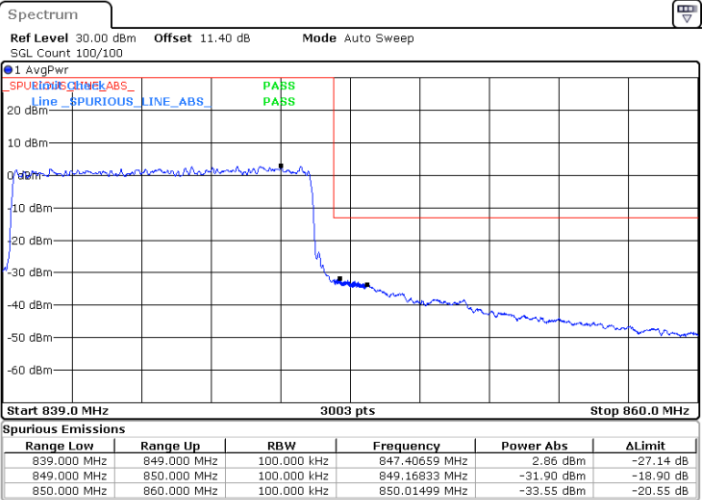
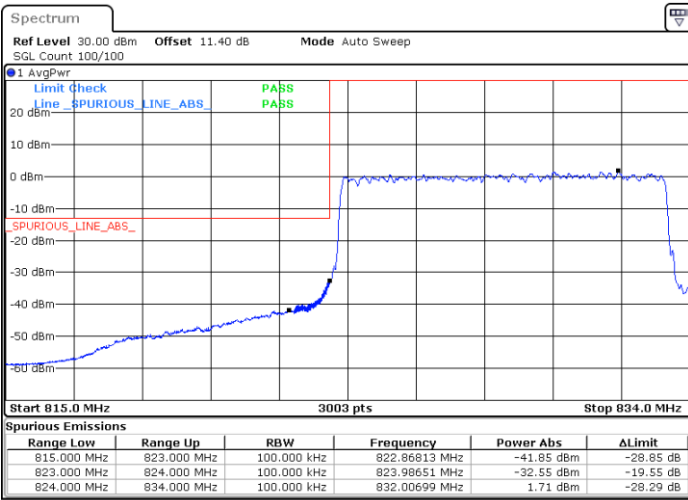


Date: 29 JUN 2020 16:16:26

Date: 29 JUN 2020 16:25:03

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN 2020 16:13:02

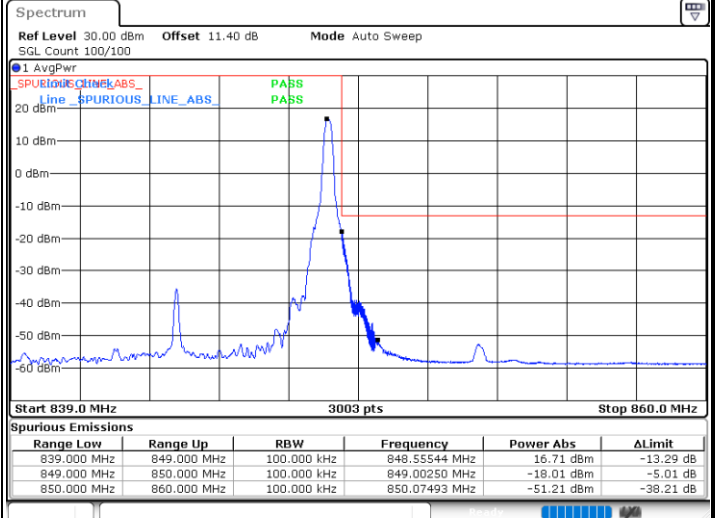
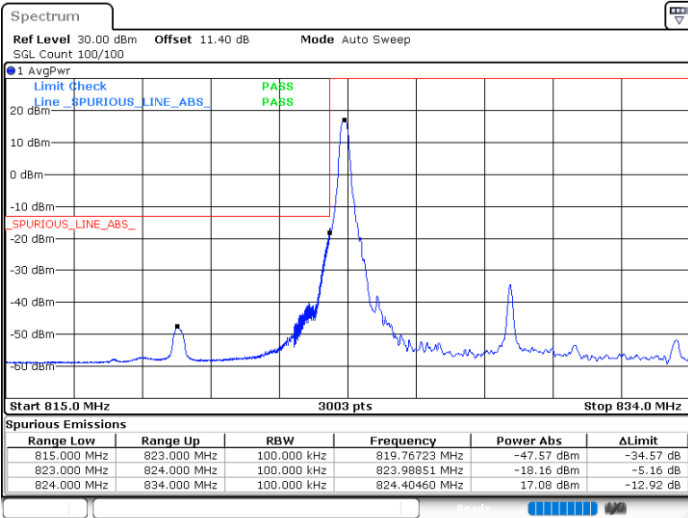
Date: 29 JUN 2020 16:21:40



FR1 n5 / 10MHz / DFT-s-OFDM / 64QAM

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

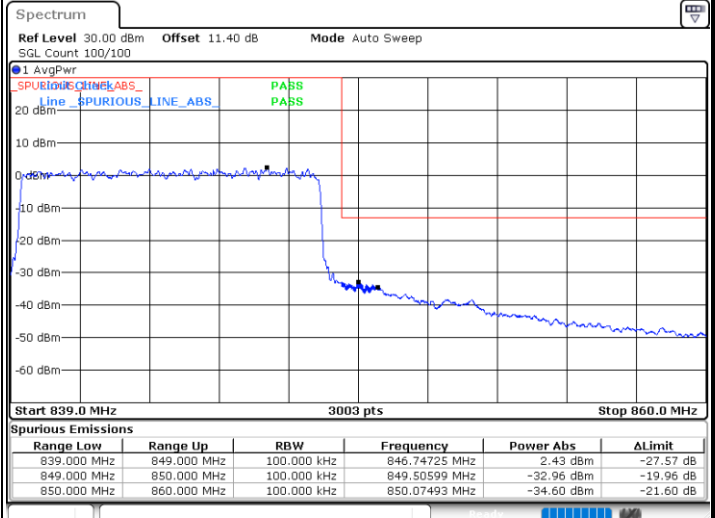
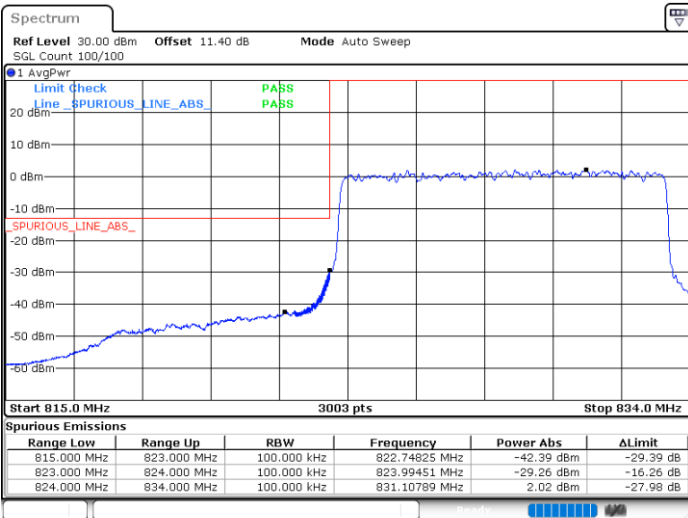


Date: 29 JUN.2020 16:15:50

Date: 29 JUN.2020 16:24:23

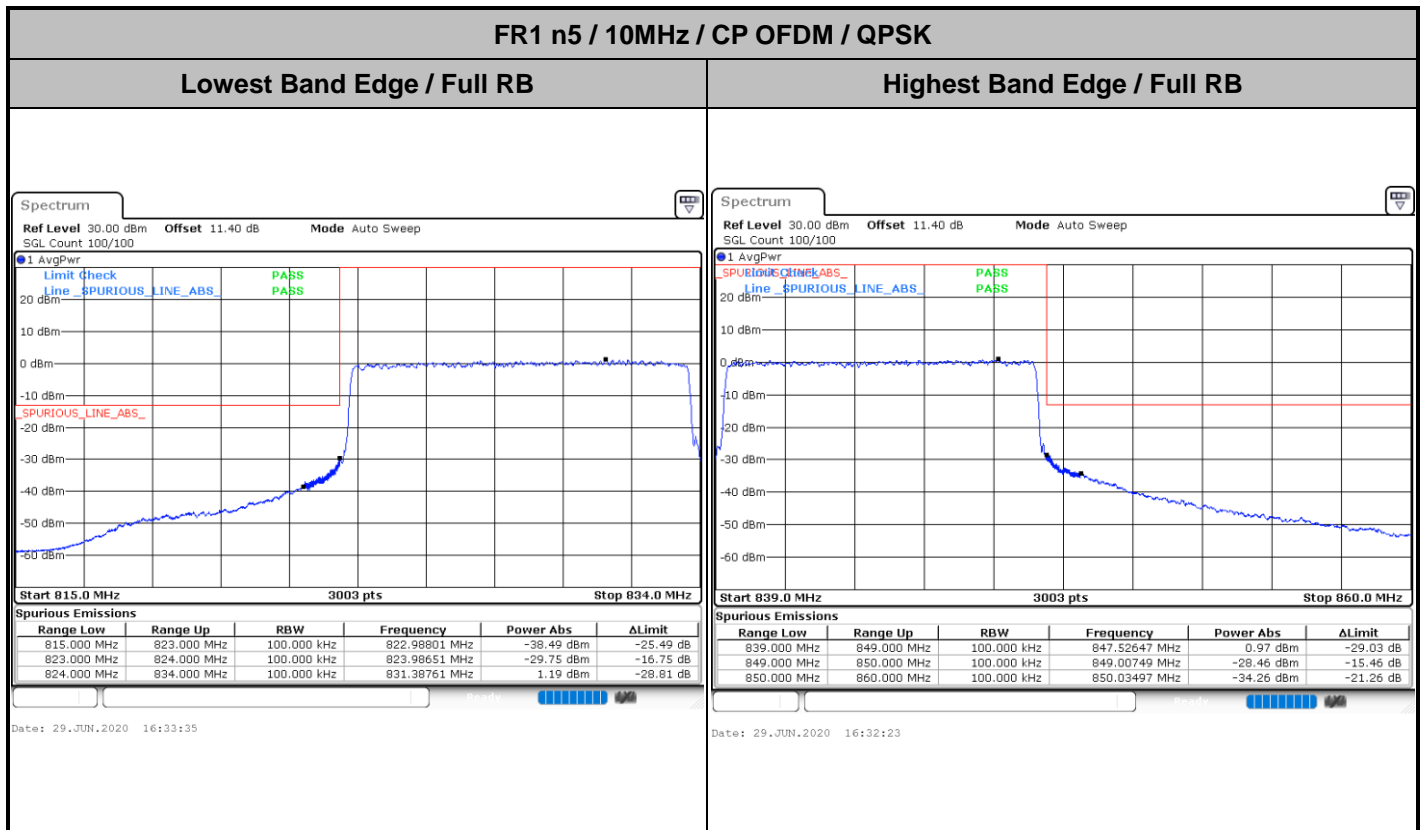
Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN.2020 16:13:34

Date: 29 JUN.2020 16:22:18



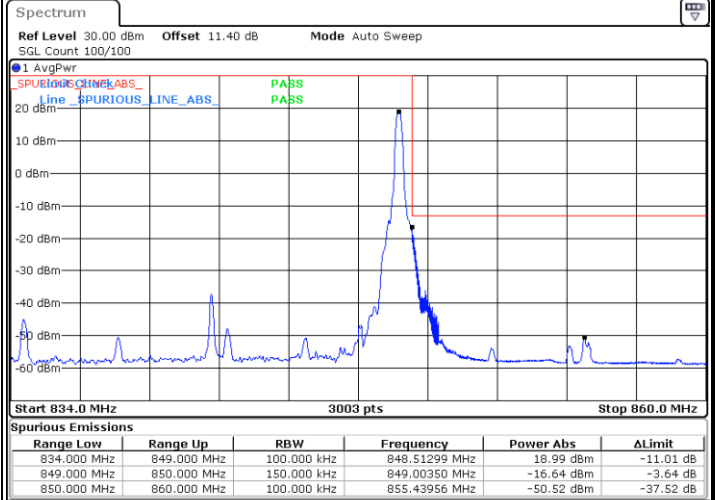
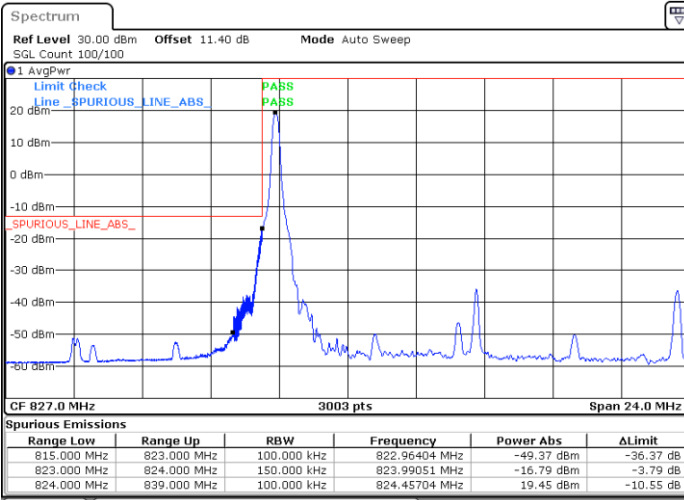




FR1 n5 / 15MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

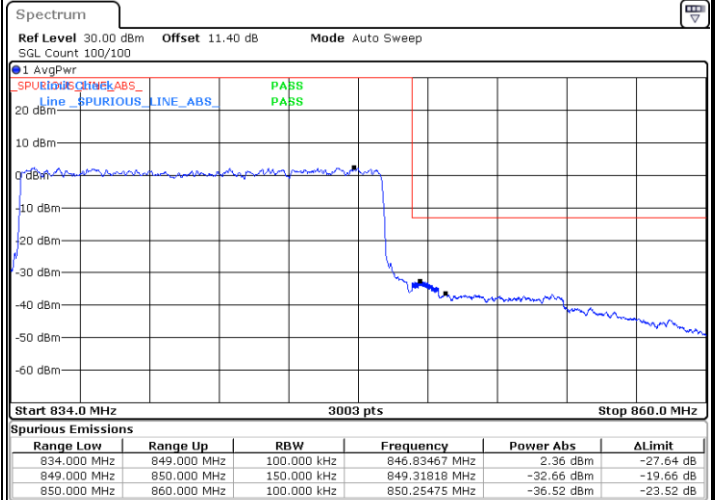
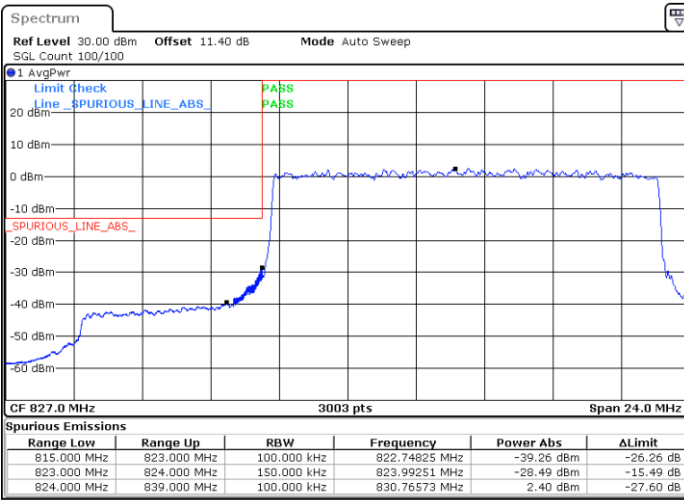


Date: 29 JUN 2020 15:51:28

Date: 29 JUN 2020 16:01:09

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN 2020 15:45:02

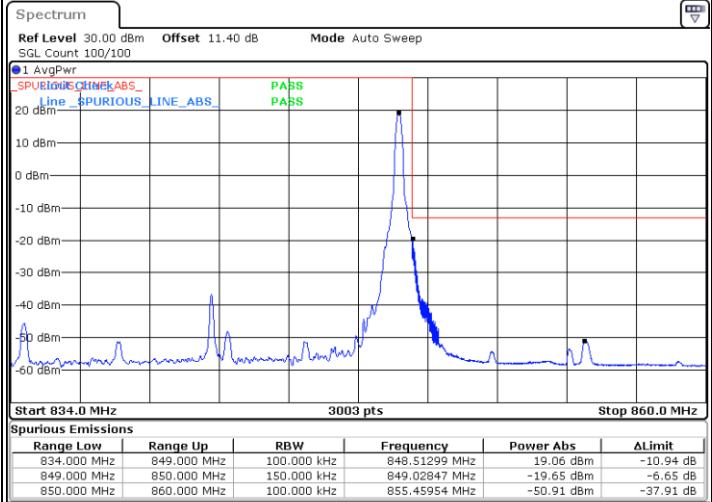
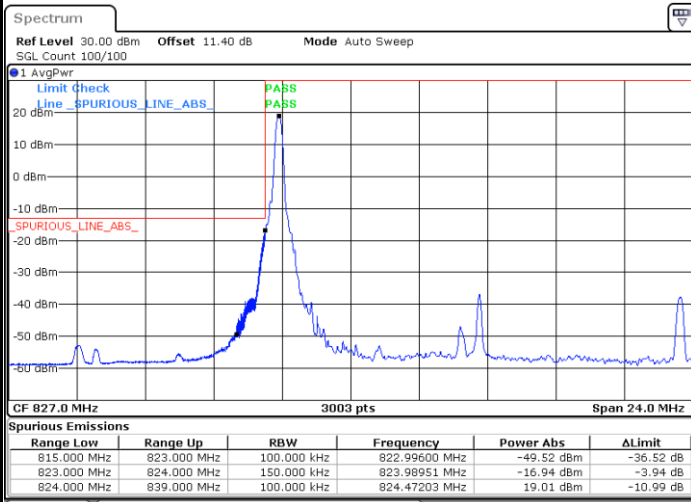
Date: 29 JUN 2020 15:54:25



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

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

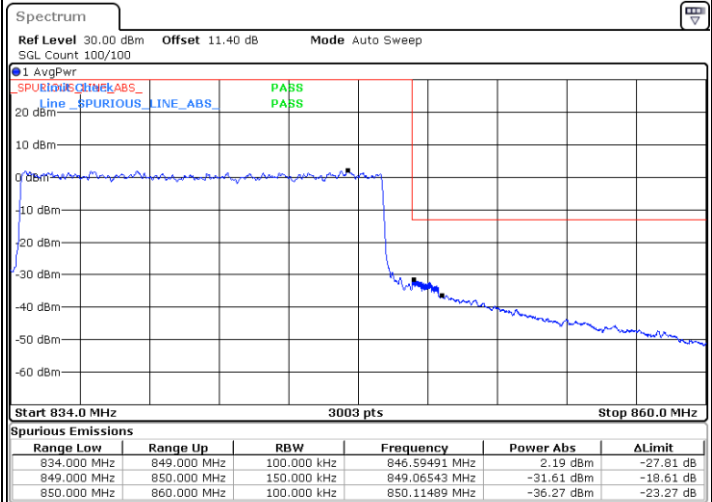
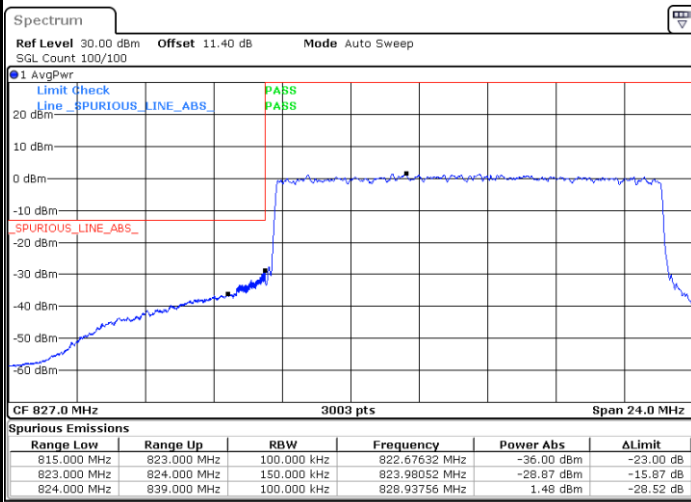


Date: 29 JUN 2020 15:49:40

Date: 29 JUN 2020 15:59:56

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN 2020 15:45:40

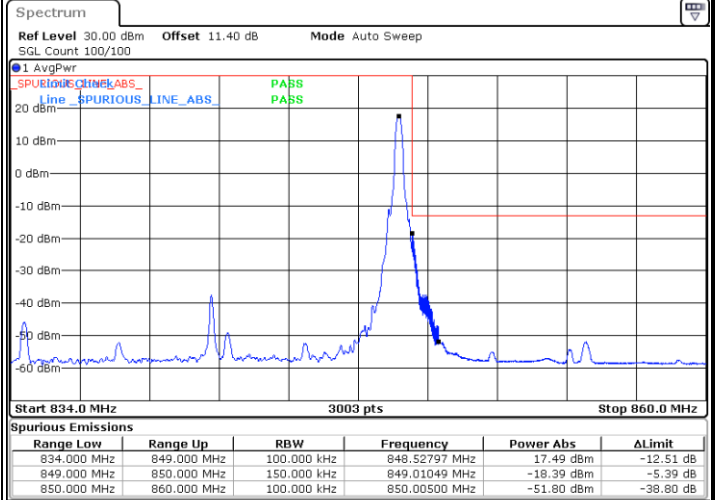
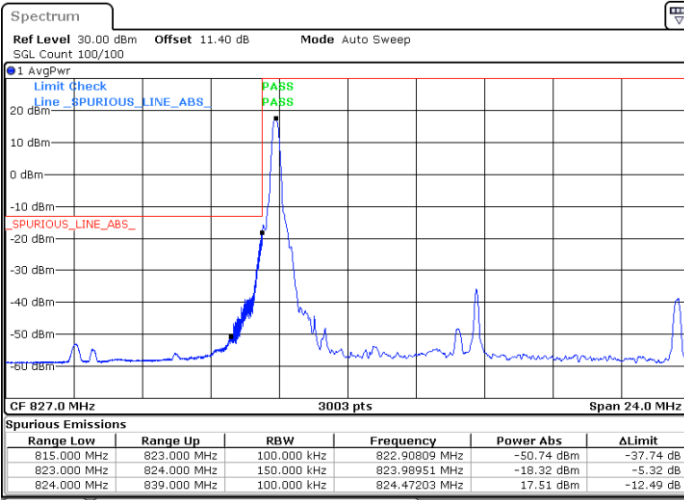
Date: 29 JUN 2020 15:54:59



FR1 n5 / 15MHz / DFT-s-OFDM / 16QAM

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

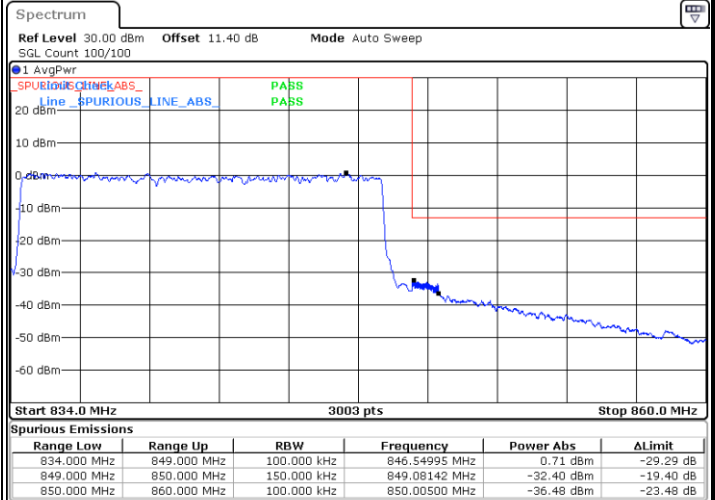
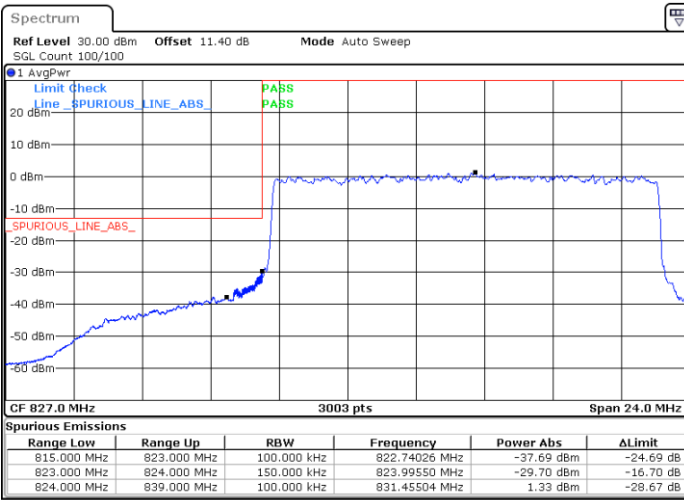


Date: 29 JUN.2020 15:49:09

Date: 29 JUN.2020 15:59:22

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN.2020 15:46:12

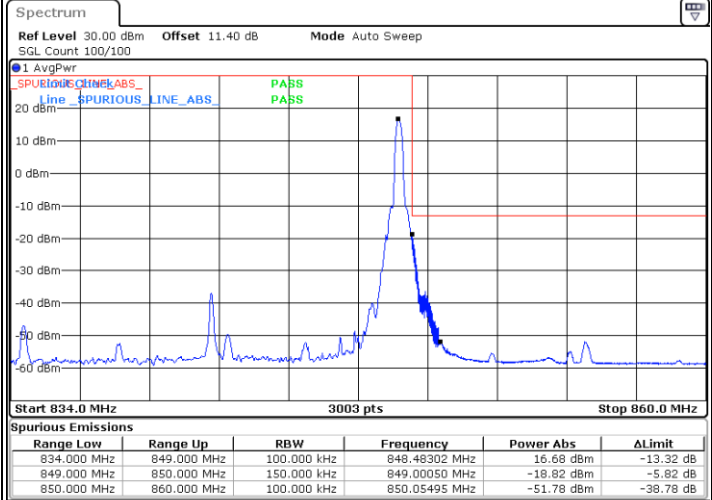
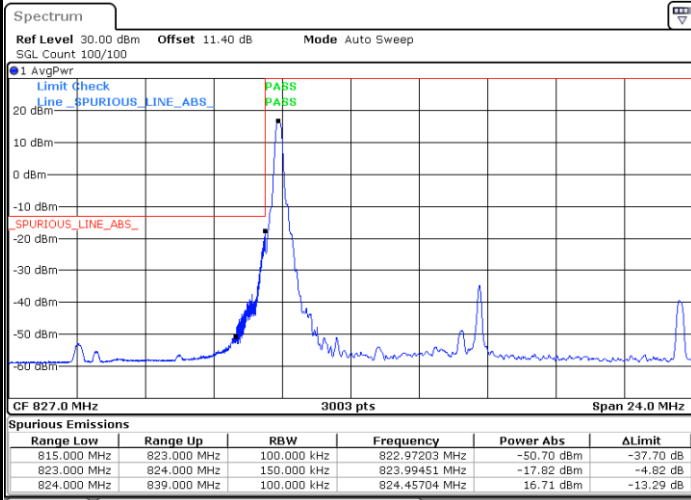
Date: 29 JUN.2020 15:55:43



FR1 n5 / 15MHz / DFT-s-OFDM / 64QAM

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

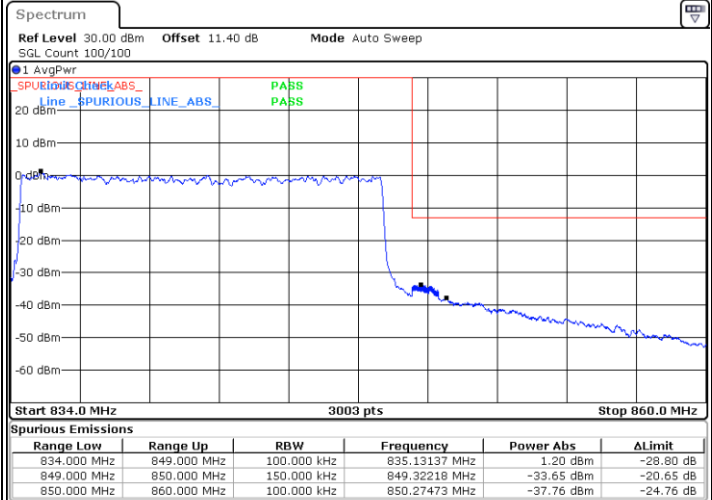
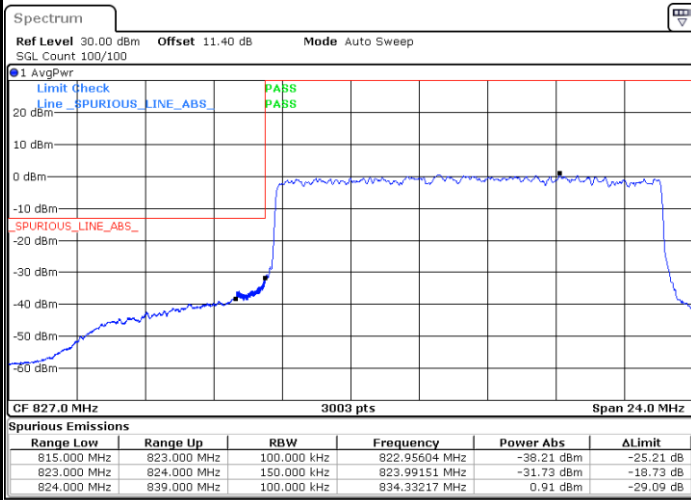


Date: 29 JUN 2020 15:48:38

Date: 29 JUN 2020 15:58:49

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN 2020 15:46:45

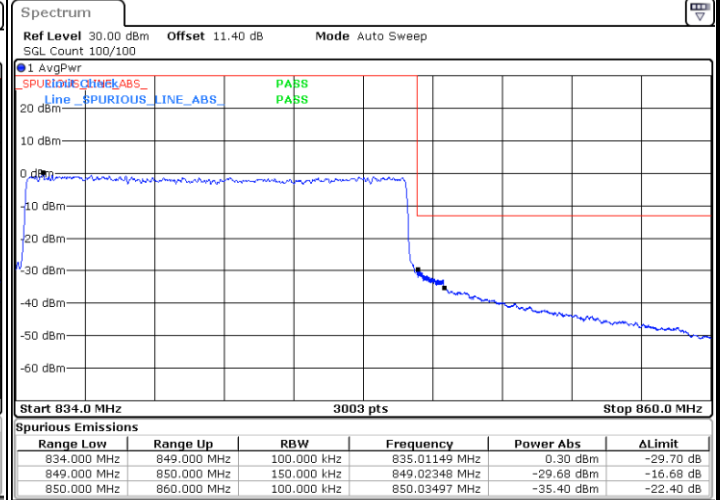
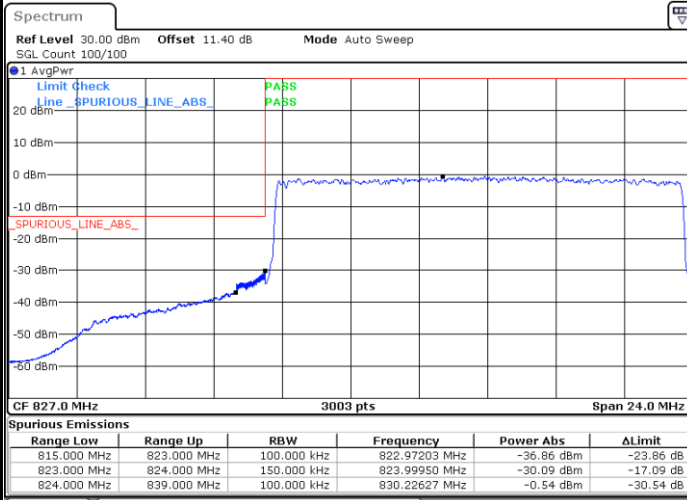
Date: 29 JUN 2020 15:56:19



FR1 n5 / 15MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29.JUN.2020 16:05:15

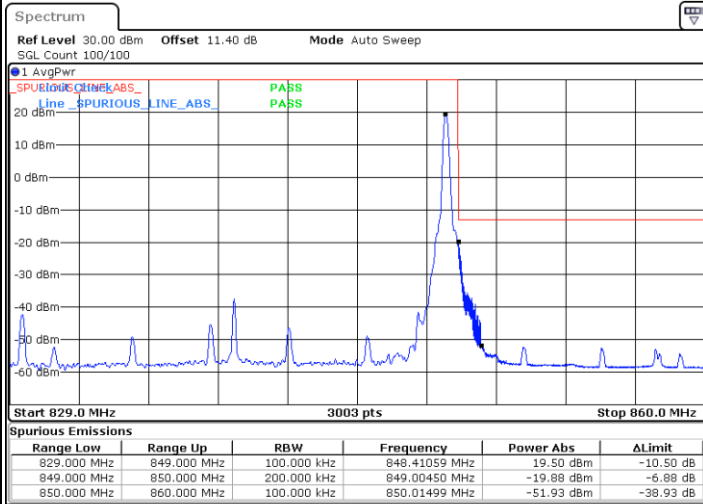
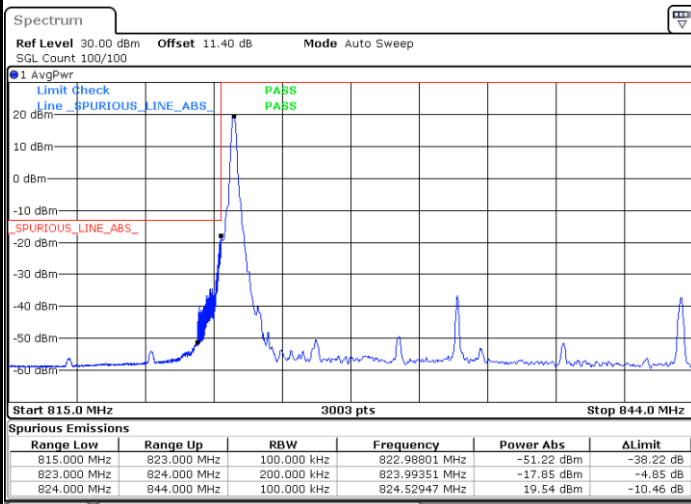
Date: 29.JUN.2020 16:02:17



FR1 n5 / 20MHz / DFT-s-OFDM / PI/2 BPSK

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

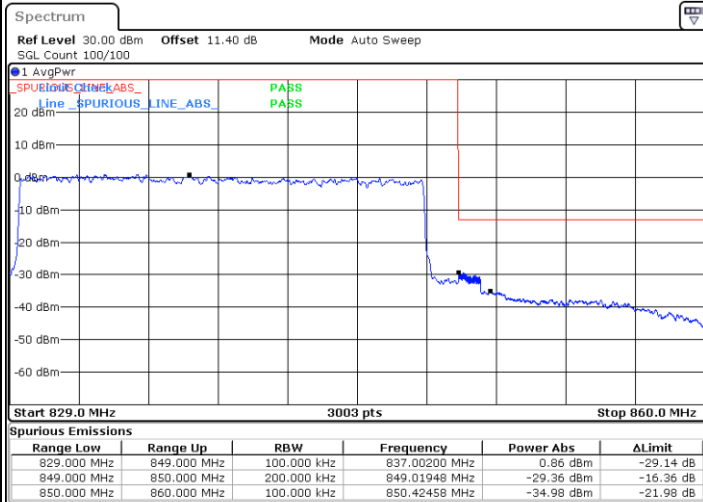
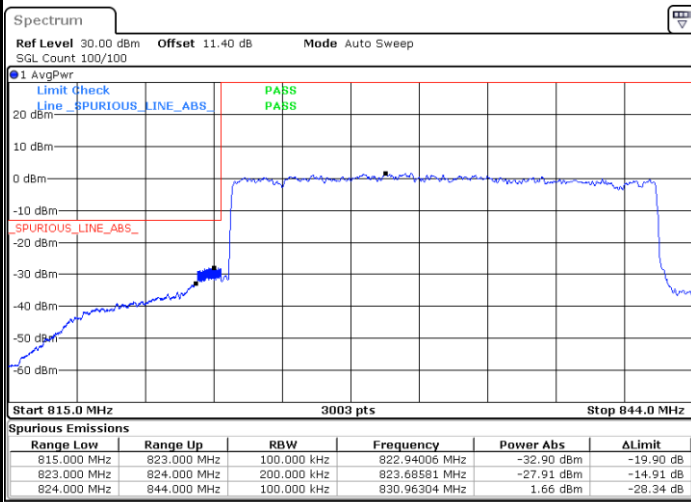


Date: 29 JUN 2020 15:18:14

Date: 29 JUN 2020 16:10:21

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN 2020 15:05:10

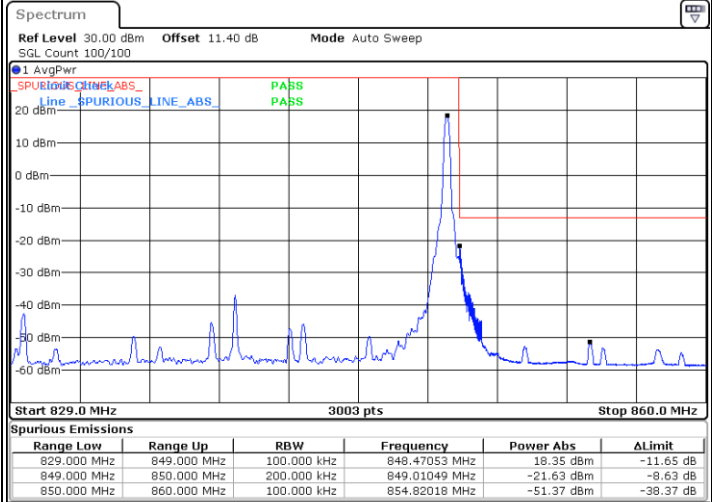
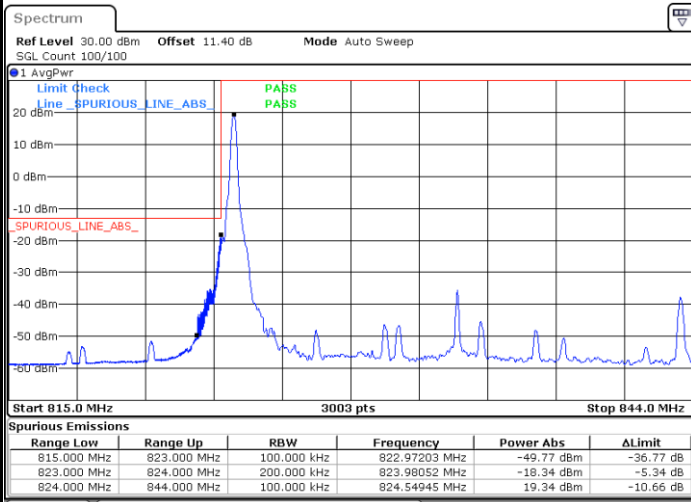
Date: 29 JUN 2020 15:27:38



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

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

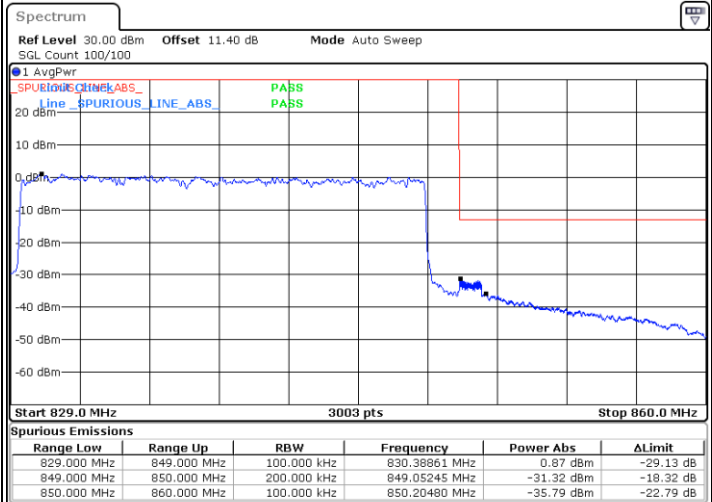
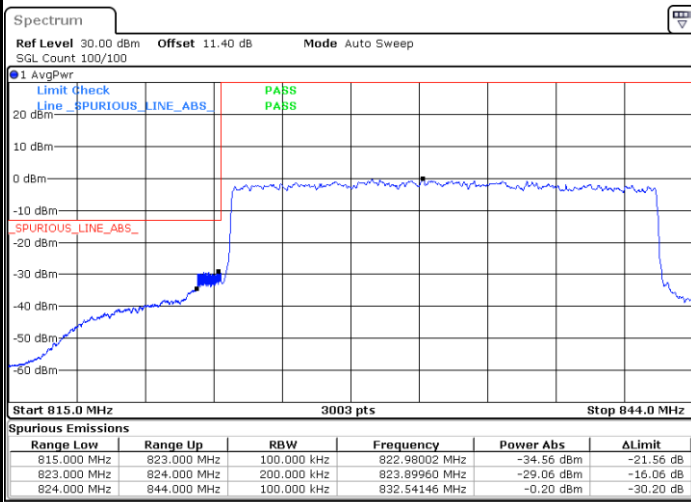


Date: 29 JUN 2020 15:17:31

Date: 29 JUN 2020 16:09:34

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN 2020 15:06:03

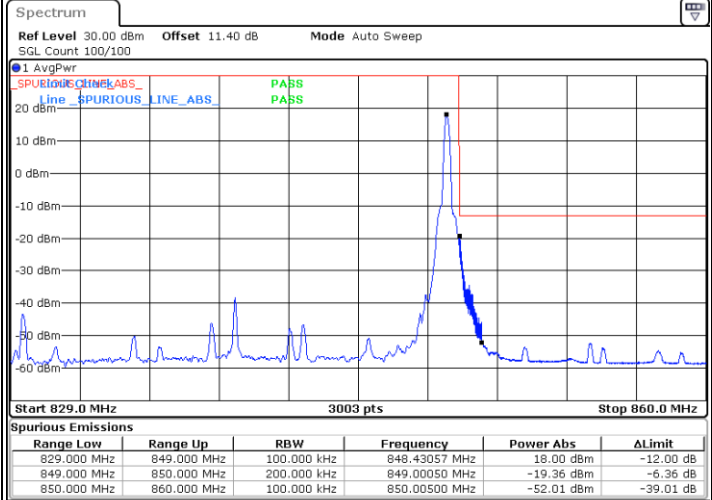
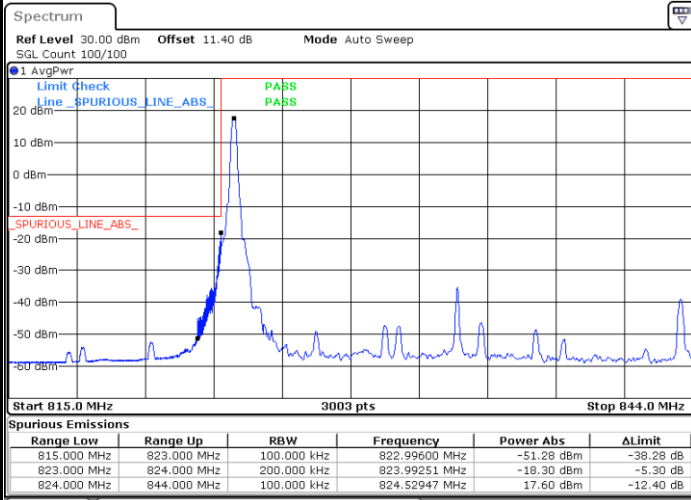
Date: 29 JUN 2020 15:26:08



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

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

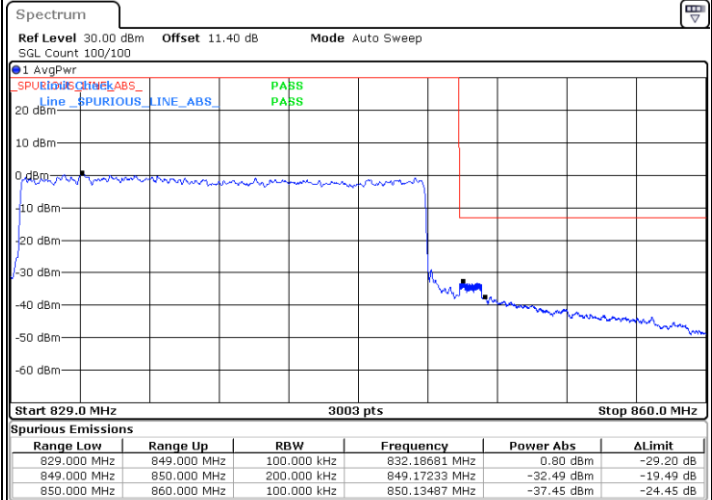
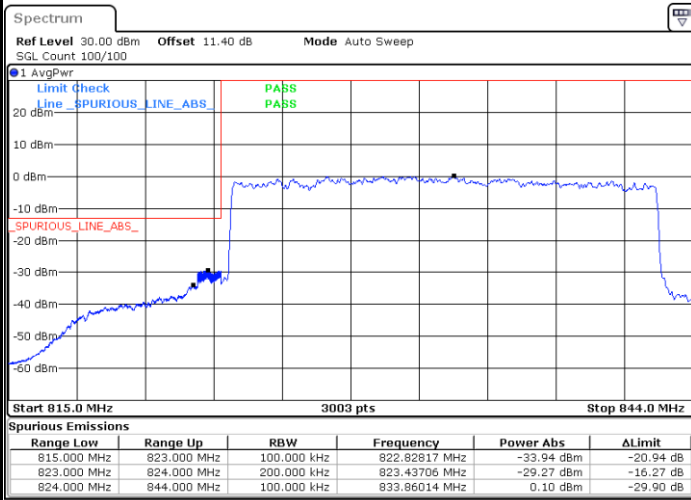


Date: 29 JUN 2020 15:17:00

Date: 29 JUN 2020 16:09:00

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN 2020 15:07:13

Date: 29 JUN 2020 15:25:27

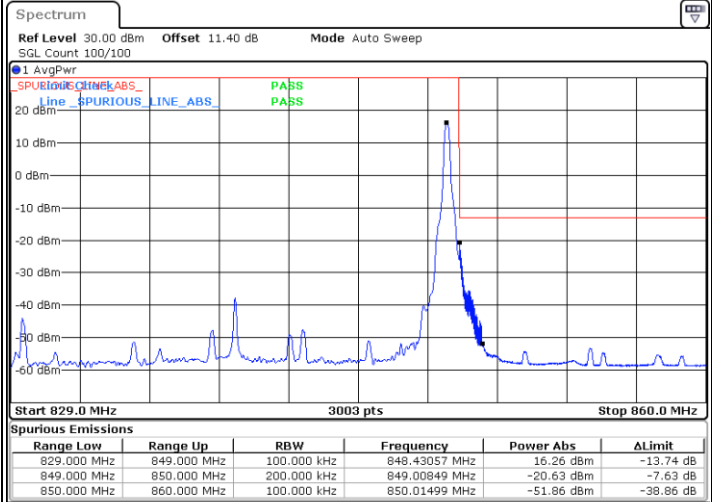
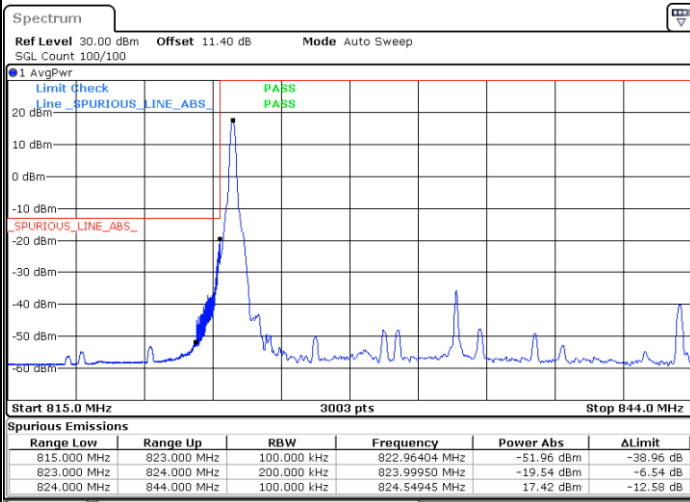




FR1 n5 / 20MHz / DFT-s-OFDM / 64QAM

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

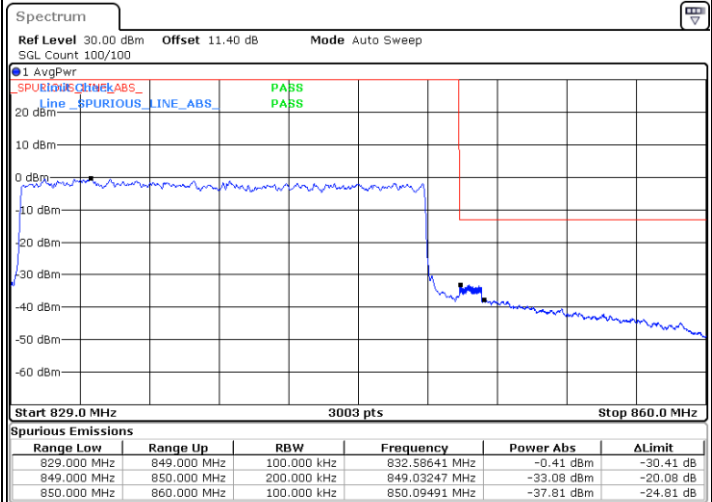
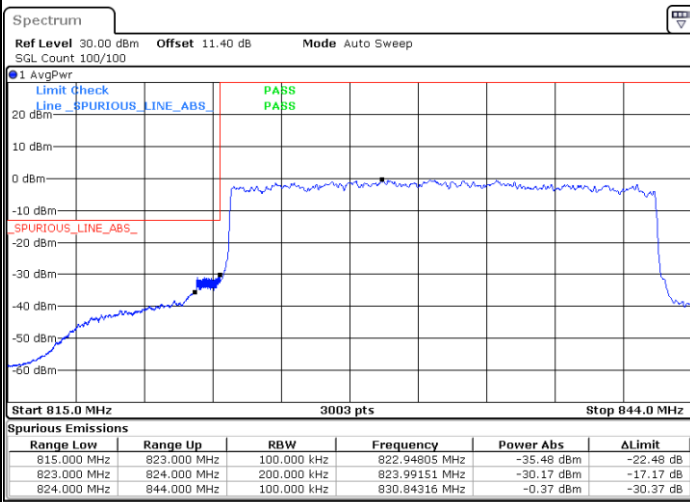


Date: 29.JUN.2020 15:16:25

Date: 29.JUN.2020 16:08:21

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29.JUN.2020 15:08:11

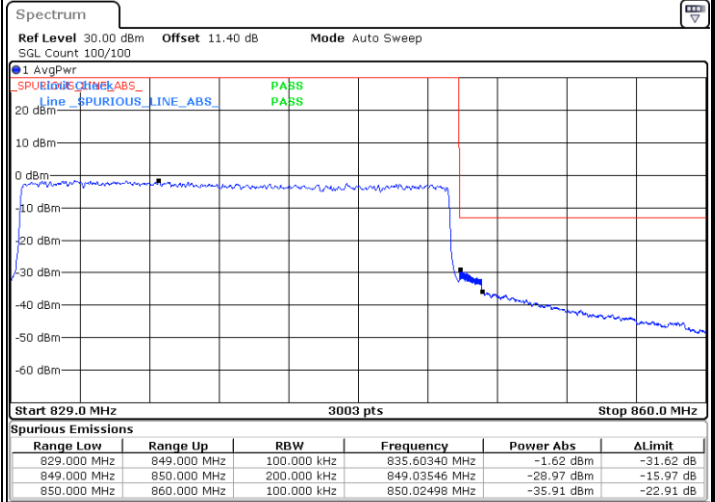
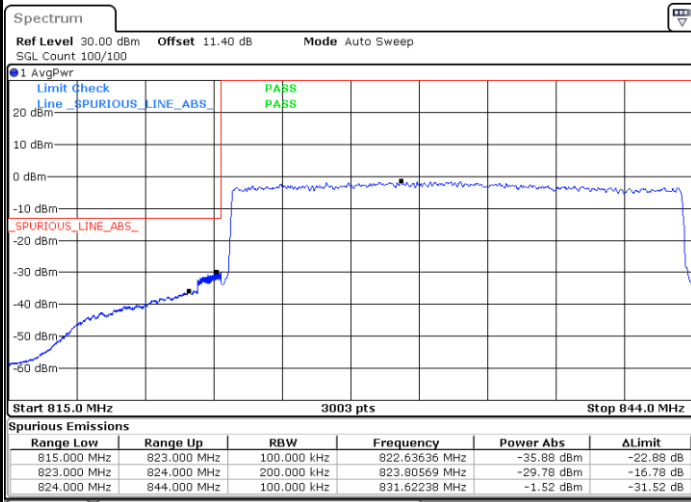
Date: 29.JUN.2020 15:24:33



FR1 n5 / 20MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 29 JUN 2020 15:36:14

Date: 29 JUN 2020 15:30:42

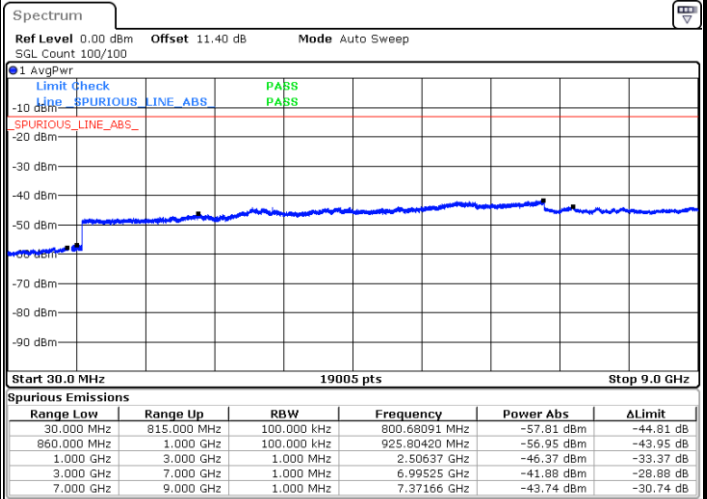
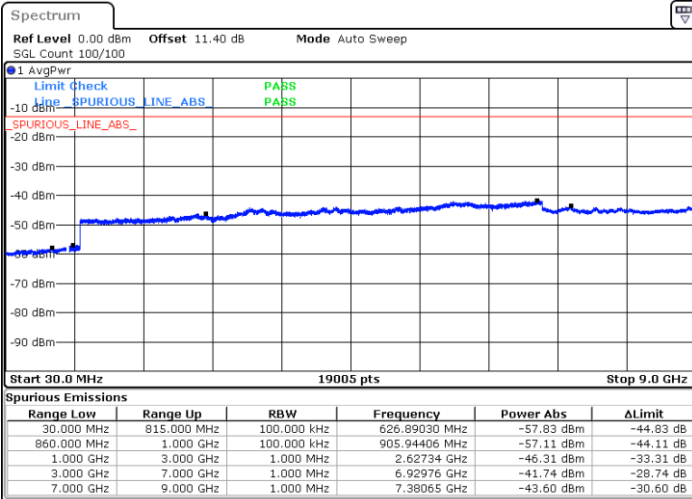


# Conducted Spurious Emission

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

Lowest Channel / 1RB1

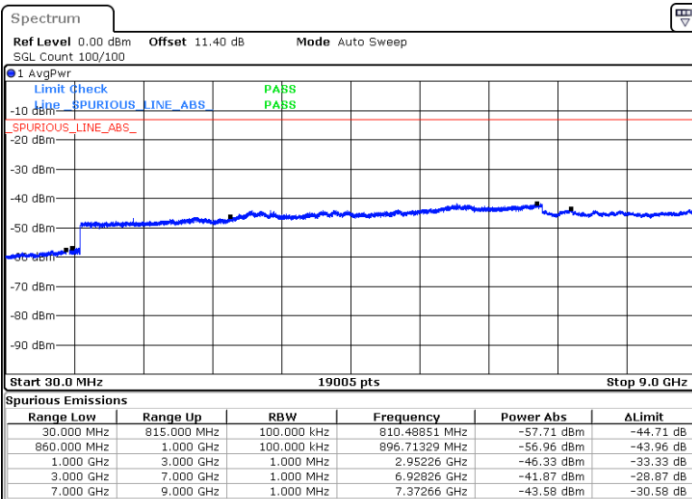
Middle Channel / 1RB1



Date: 29.JUN.2020 17:11:26

Date: 29.JUN.2020 16:54:29

Highest Channel / 1RB1



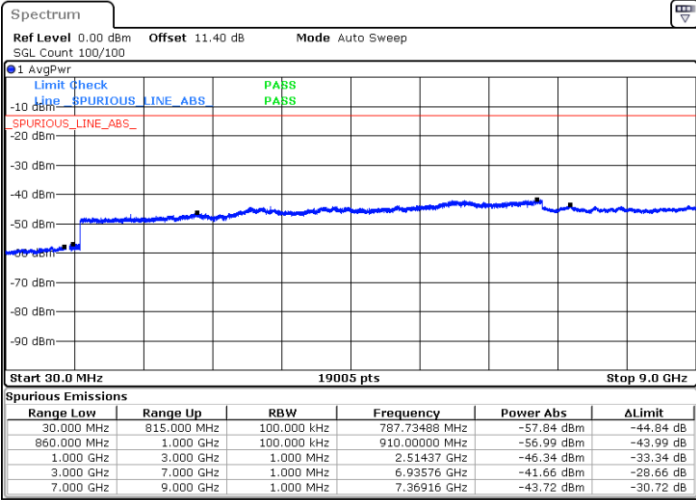
Date: 29.JUN.2020 16:53:28



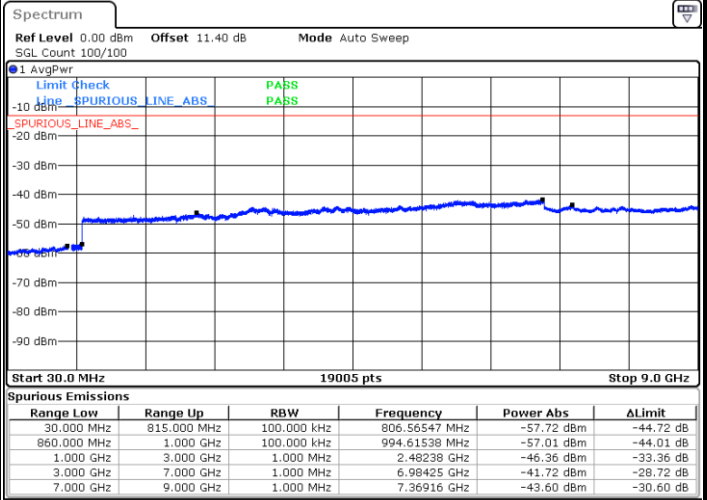
FR1 n5 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

Middle Channel / 1RB1

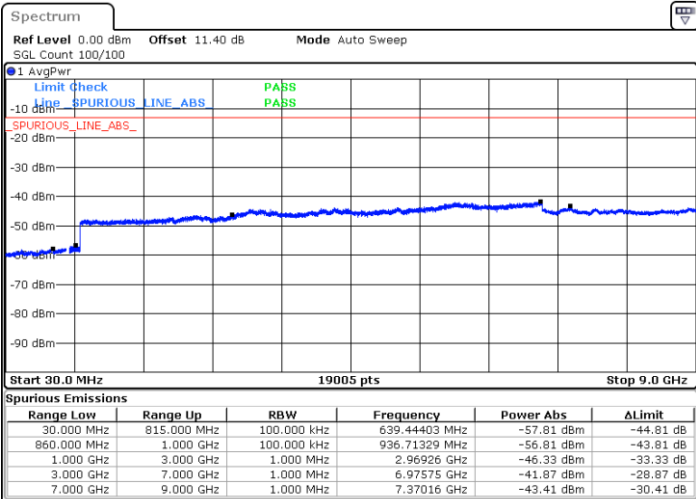


Date: 29.JUN.2020 16:18:27



Date: 29.JUN.2020 16:27:45

Highest Channel / 1RB1



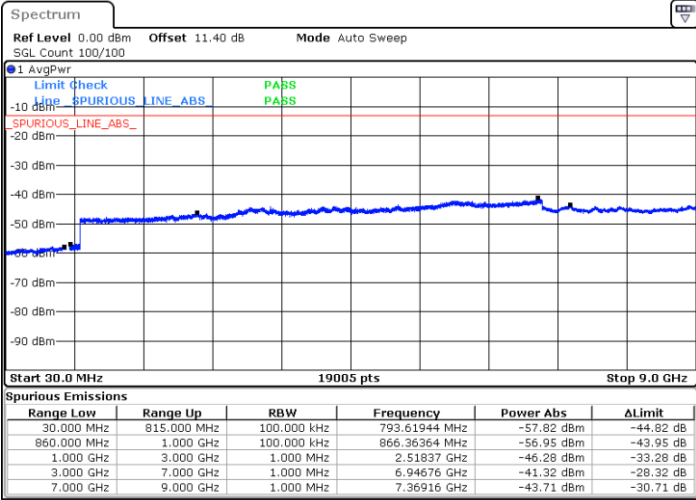
Date: 29.JUN.2020 16:27:11



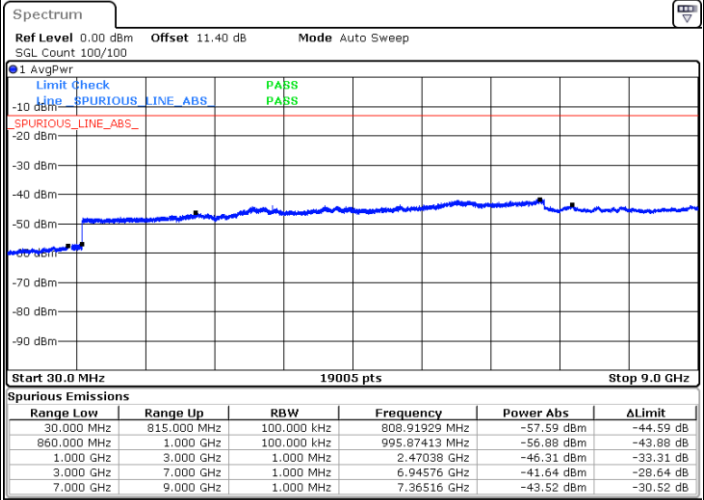
FR1 n5 / 15MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

Middle Channel / 1RB1

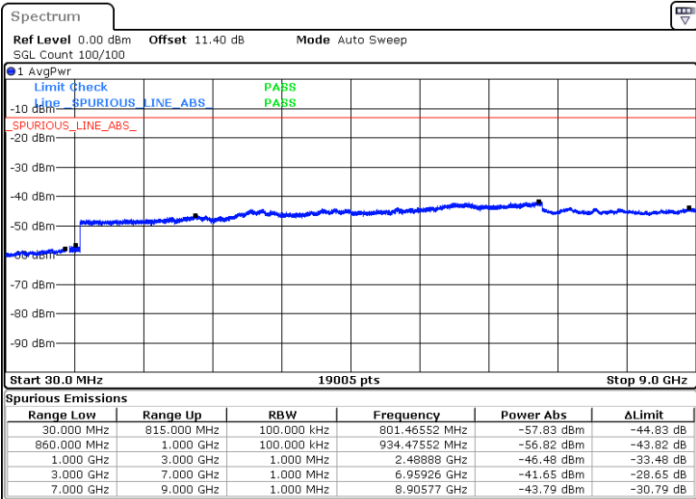


Date: 29.JUN.2020 15:50:34



Date: 29.JUN.2020 15:52:23

Highest Channel / 1RB1



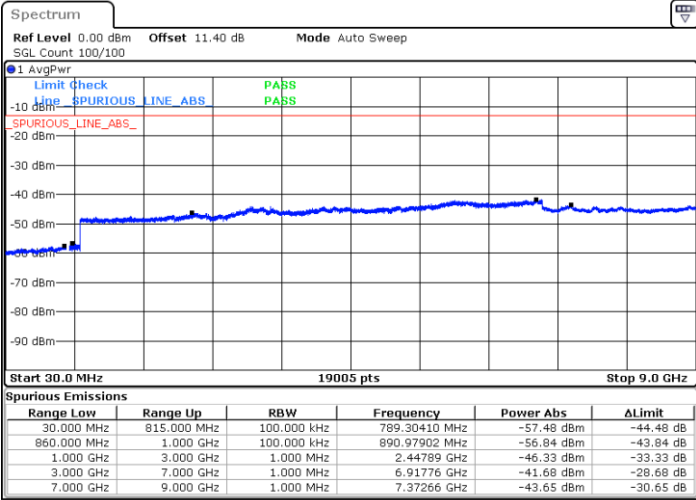
Date: 29.JUN.2020 16:00:21



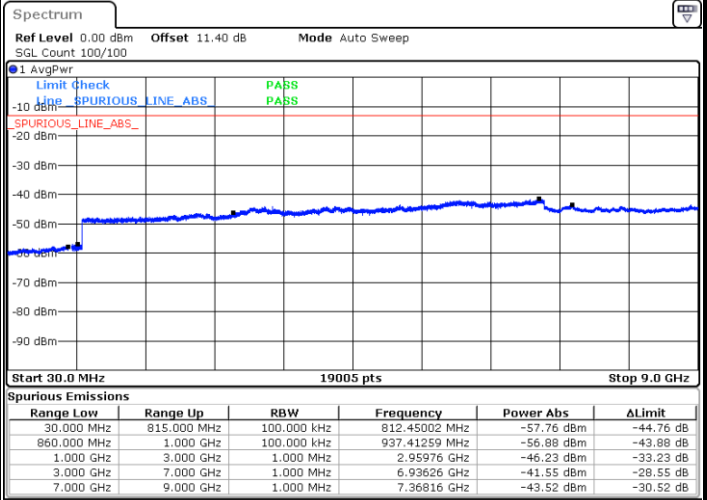
FR1 n5 / 20MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

Middle Channel / 1RB1

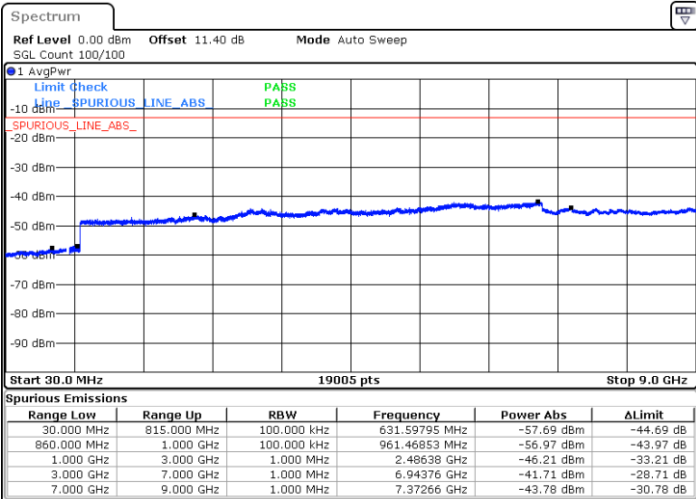


Date: 29.JUN.2020 15:18:52



Date: 29.JUN.2020 15:19:31

Highest Channel / 1RB1



Date: 29.JUN.2020 15:28:24



### Frequency Stability

Test Conditions		FR1 n5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0017	PASS
40	Normal Voltage	0.0011	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0013	
-30	Normal Voltage	0.0001	
20	Maximum Voltage	0.0000	
20	Normal Voltage	0.0017	
20	Battery End Point	0.0011	

**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 n41

## Peak-to-Average Ratio

Mode	FR1 n41 / 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	6.87	7.48	8.35	8.64	<b>PASS</b>
Middle CH	6.81	7.39	8.41	8.72	
Highest CH	6.49	7.30	8.41	8.64	





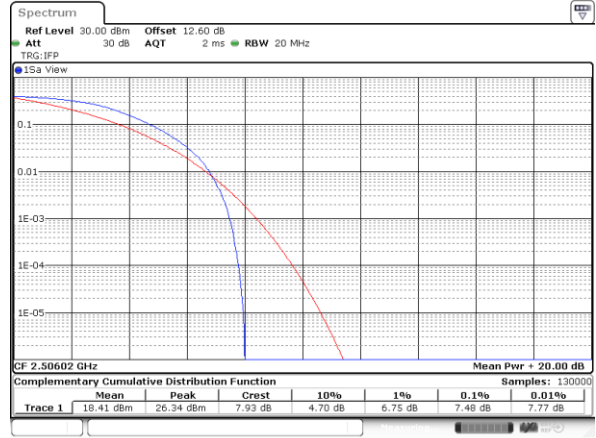
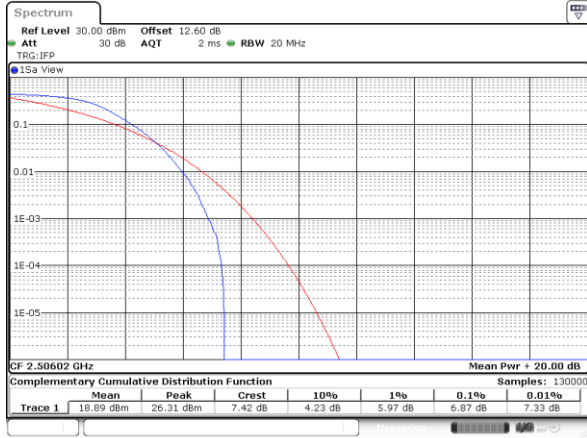
FR1 n41 / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

Lowest Channel / Full RB

Lowest Channel / Full RB

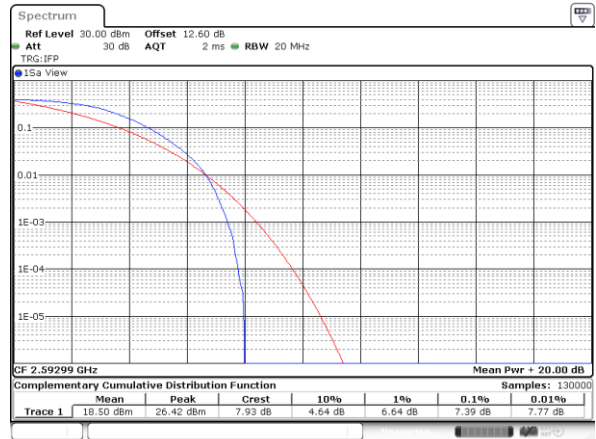
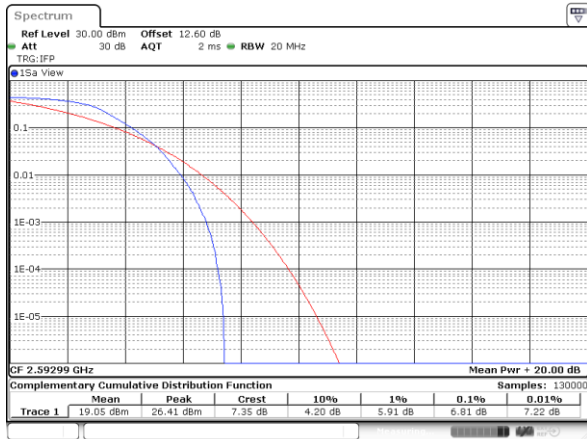


Date: 27\_JUN\_2020 01:50:28

Date: 27\_JUN\_2020 01:49:03

Middle Channel / Full RB

Middle Channel / Full RB

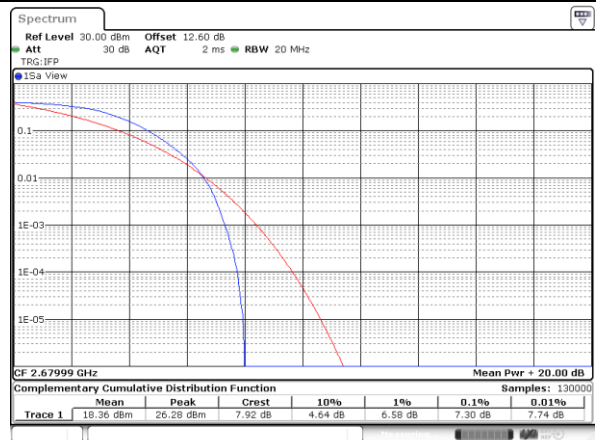
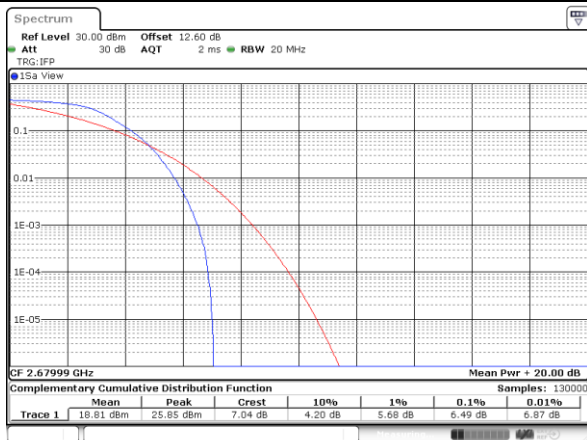


Date: 27\_JUN\_2020 02:20:15

Date: 27\_JUN\_2020 02:19:35

Highest Channel / Full RB

Highest Channel / Full RB



Date: 27\_JUN\_2020 02:23:25

Date: 27\_JUN\_2020 02:24:10



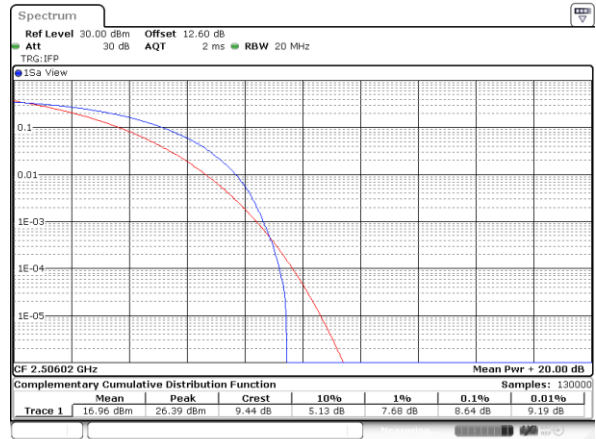
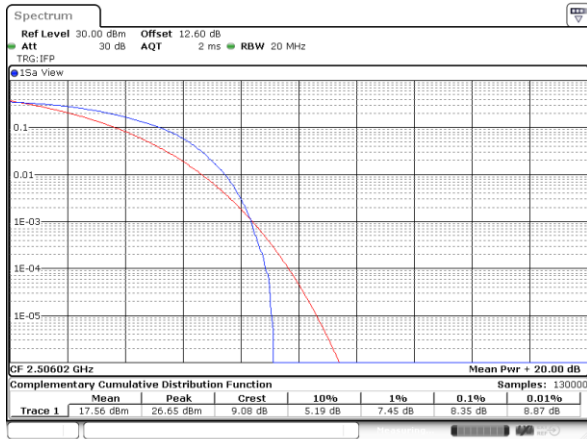
FR1 n41 / 20MHz / DFT-S OFDM

16QAM

64QAM

Lowest Channel / Full RB

Lowest Channel / Full RB

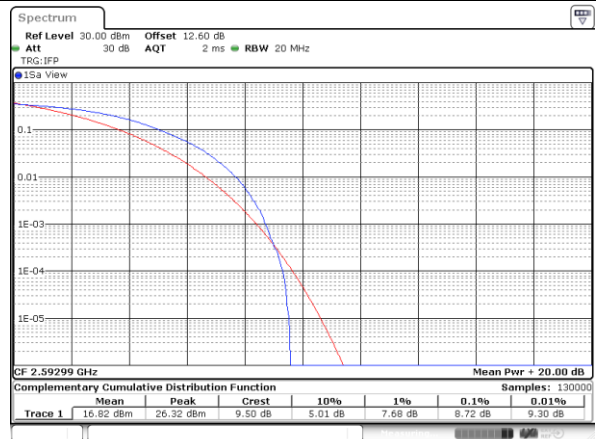
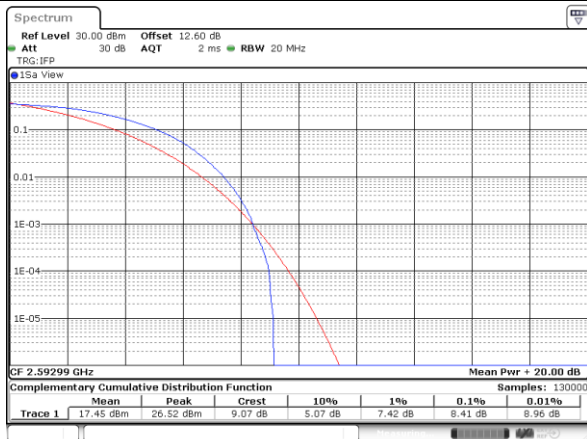


Date: 27\_JUN\_2020 01:53:49

Date: 27\_JUN\_2020 01:55:52

Middle Channel / Full RB

Middle Channel / Full RB

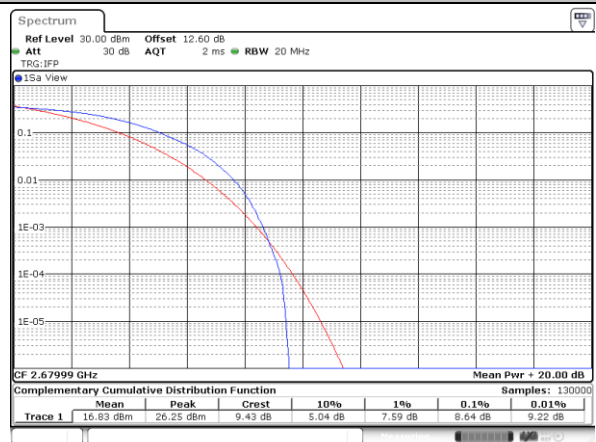
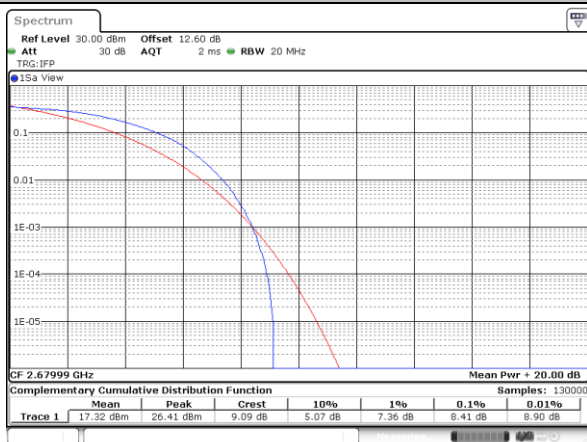


Date: 27\_JUN\_2020 02:18:21

Date: 27\_JUN\_2020 02:17:31

Highest Channel / Full RB

Highest Channel / Full RB



Date: 27\_JUN\_2020 02:25:02

Date: 27\_JUN\_2020 02:25:36



**26dB Bandwidth**

Mode		FR1 n41 : 26dB BW(MHz) / DFT-S OFDM							
LTE BW		20MHz	20MHz	20MHz	20MHz	20MHz	20MHz	20MHz	
NR BW		20MHz	40MHz	50MHz	60MHz	80MHz	90MHz	100MHz	
Mod.		PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	PI/2 BPSK	
Lowest CH	LTE	18.90	18.90	18.90	18.90	18.90	18.90	18.90	
	NR	18.74	38.20	47.95	60.30	79.60	88.29	99.30	
	LTE+NR	37.64	57.1	66.85	79.2	98.5	107.19	118.2	
Middle CH	LTE	18.94	18.94	18.94	18.94	18.94	18.94	18.94	
	NR	18.98	38.04	48.05	60.42	79.60	88.65	99.10	
	LTE+NR	37.92	56.98	66.99	79.36	98.54	107.59	118.04	
Highest CH	LTE	19.02	19.02	19.02	19.02	19.02	19.02	19.02	
	NR	18.94	38.36	47.95	60.30	79.60	88.47	98.70	
	LTE+NR	37.96	57.38	66.97	79.32	98.62	107.49	117.72	

Mode		FR1 n41 : 26dB BW(MHz) / CP OFDM							
LTE BW		20MHz		20MHz		20MHz		20MHz	
NR BW		20MHz		40MHz		50MHz		60MHz	
Mod.		QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	LTE	18.90	19.14	18.90	19.14	18.90	19.14	18.90	19.14
	NR	19.74	19.70	40.28	40.28	49.75	49.75	60.54	60.30
	LTE+NR	38.64	38.84	59.18	59.42	68.65	68.89	79.44	79.44
Middle CH	LTE	18.94	18.70	18.94	18.70	18.94	18.70	18.94	18.70
	NR	18.98	19.38	40.36	40.04	49.65	49.85	60.30	60.42
	LTE+NR	37.92	38.08	59.3	58.74	68.59	68.55	79.24	79.12
Highest CH	LTE	19.02	18.78	19.02	18.78	19.02	18.78	19.02	18.78
	NR	19.30	19.42	40.20	40.44	49.75	49.75	60.30	60.66
	LTE+NR	38.32	38.2	59.22	59.22	68.77	68.53	79.32	79.44



Mode		FR1 n41 : 26dB BW(MHz) / CP OFDM							
LTE BW		20MHz		20MHz		20MHz		20MHz	
NR BW		20MHz		40MHz		50MHz		60MHz	
Mod.		64QAM		64QAM		64QAM		64QAM	
Lowest CH	LTE	18.62		18.62		18.62		18.62	
	NR	19.26		40.20		49.65		60.42	
	LTE+NR	37.88		58.82		68.27		79.04	
Middle CH	LTE	18.58		18.58		18.58		18.58	
	NR	19.06		40.20		49.75		60.54	
	LTE+NR	37.64		58.78		68.33		79.12	
Highest CH	LTE	18.82		18.82		18.82		18.82	
	NR	19.66		40.28		49.75		60.30	
	LTE+NR	38.48		59.1		68.57		79.12	

Mode		FR1 n41 : 26dB BW(MHz) / CP OFDM					
LTE BW		20MHz		20MHz		20MHz	
NR BW		80MHz		90MHz		100MHz	
Mod.		QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	LTE	18.90	19.14	18.90	19.14	18.90	19.14
	NR	79.92	79.76	90.09	90.27	100.10	99.90
	LTE+NR	98.82	98.9	108.99	109.41	119	119.04
Middle CH	LTE	18.94	18.70	18.94	18.70	18.94	18.70
	NR	79.76	80.08	90.27	90.27	100.10	100.70
	LTE+NR	98.7	98.78	109.21	108.97	119.04	119.4
Highest CH	LTE	19.02	18.78	19.02	18.78	19.02	18.78
	NR	79.76	79.92	90.27	90.27	99.90	100.30
	LTE+NR	98.78	98.7	109.29	109.05	118.92	119.08



Mode		FR1 n41 : 26dB BW(MHz) / CP OFDM					
LTE BW		20MHz		20MHz		20MHz	
NR BW		80MHz		90MHz		100MHz	
Mod.		64QAM		64QAM		64QAM	
Lowest CH	LTE	18.62		18.62		18.62	
	NR	79.92		90.27		100.30	
	LTE+NR	98.54		108.89		118.92	
Middle CH	LTE	18.58		18.58		18.58	
	NR	80.24		90.45		100.30	
	LTE+NR	98.82		109.03		118.88	
Highest CH	LTE	18.82		18.82		18.82	
	NR	79.76		90.27		100.50	
	LTE+NR	98.58		109.09		119.32	

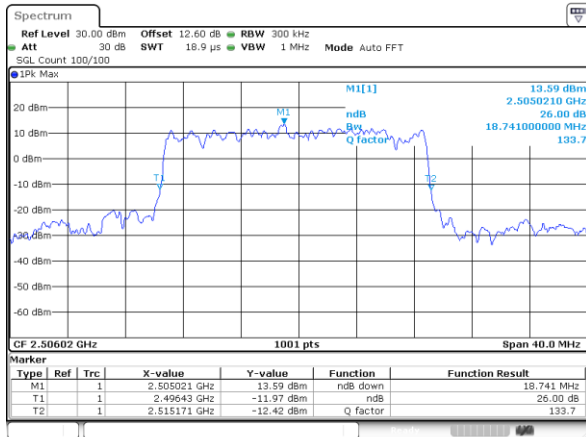
**Note:** The EN-DC of LTE Band 41 test results are leverage form LTE single carrier.



FR1 n41 / 20MHz / DFT-S OFDM

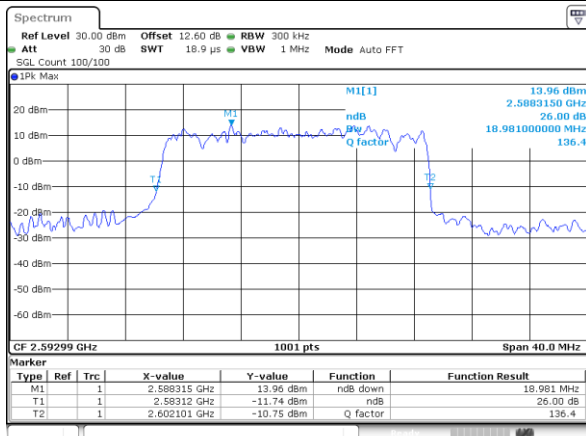
PI/2 BPSK

Lowest Channel



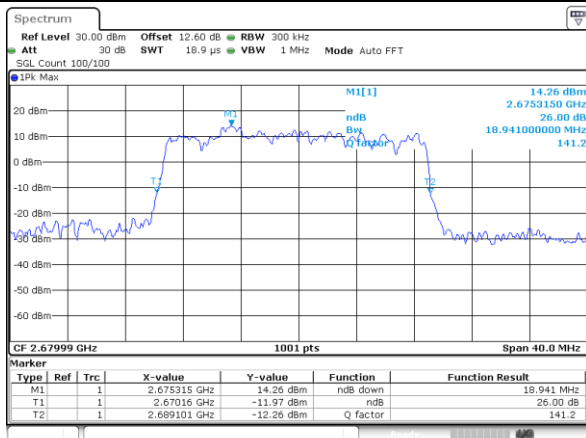
Date: 26 JUN 2020 07:14:14

Middle Channel



Date: 26 JUN 2020 05:12:12

Highest Channel



Date: 26 JUN 2020 05:53:00



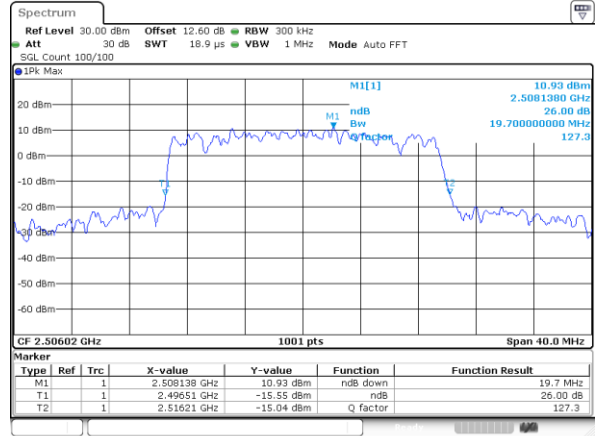
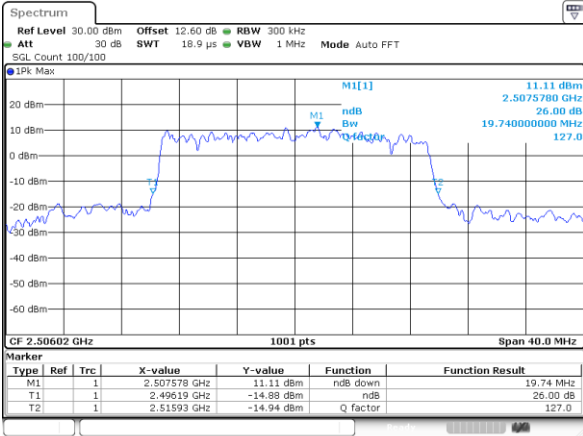
FR1 n41 / 20MHz / CP OFDM

QPSK

16QAM

Lowest Channel

Lowest Channel

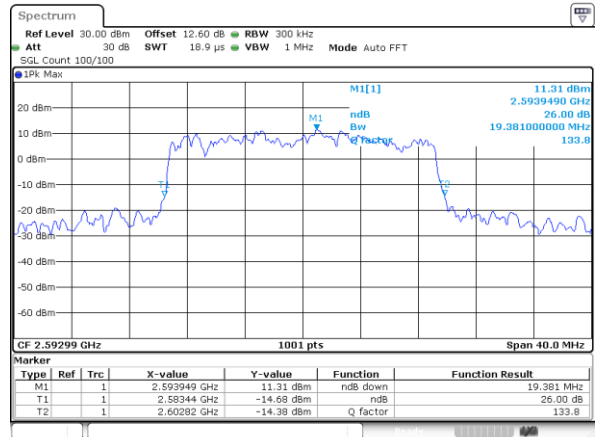
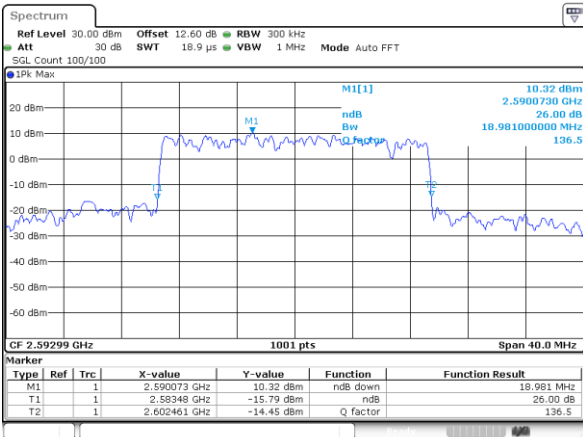


Date: 26 JUN 2020 06:37:45

Date: 26 JUN 2020 06:46:50

Middle Channel

Middle Channel

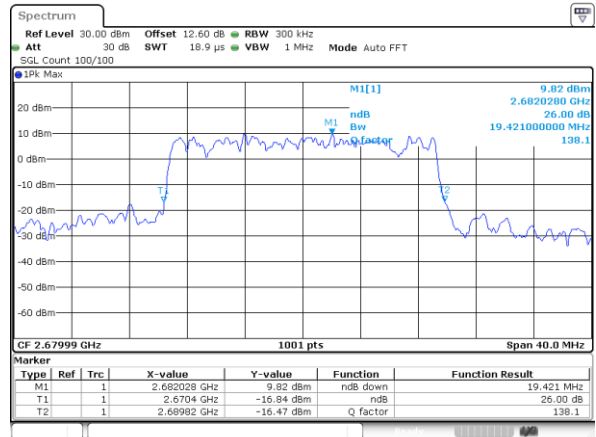
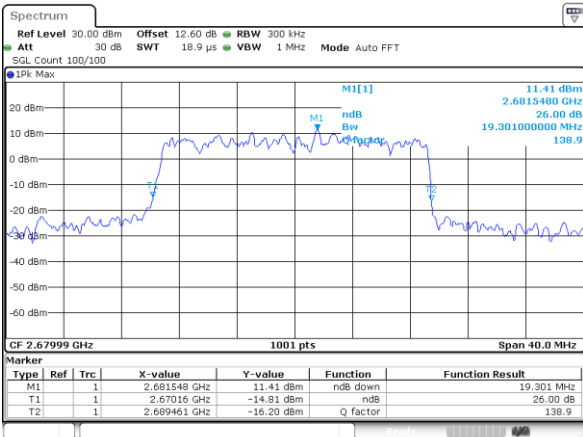


Date: 26 JUN 2020 06:31:25

Date: 26 JUN 2020 06:30:11

Highest Channel

Highest Channel



Date: 26 JUN 2020 05:59:28

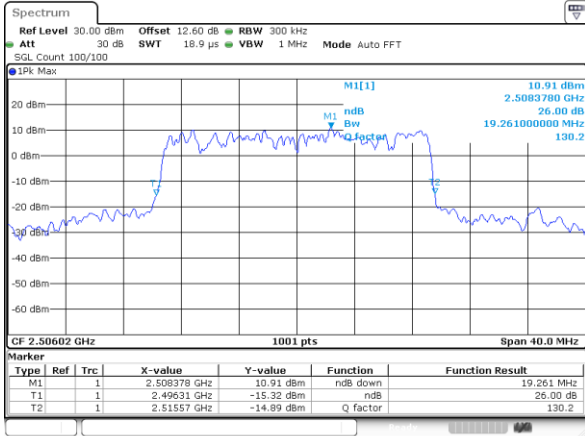
Date: 26 JUN 2020 06:10:47



FR1 n41 / 20MHz / CP OFDM

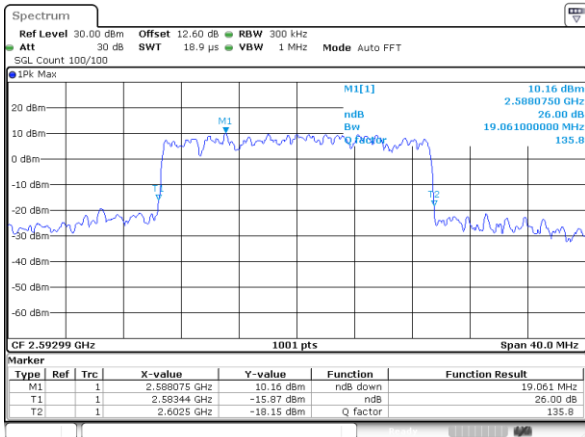
64QAM

Lowest Channel



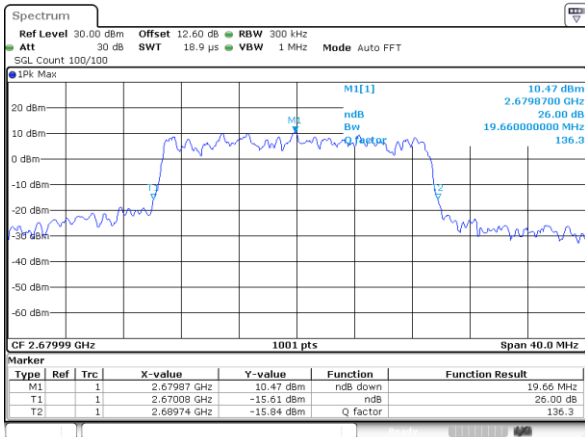
Date: 26 JUN 2020 06:44:26

Middle Channel



Date: 26 JUN 2020 06:27:10

Highest Channel



Date: 26 JUN 2020 06:07:44

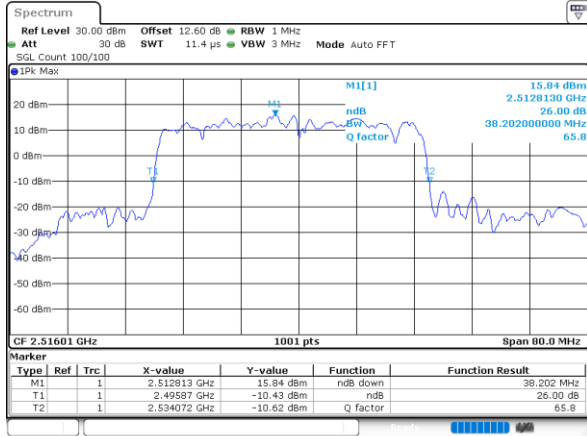




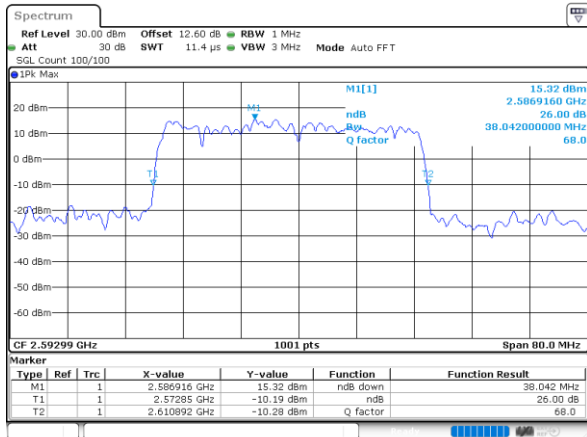
FR1 n41 / 40MHz / DFT-S OFDM

PI/2 BPSK

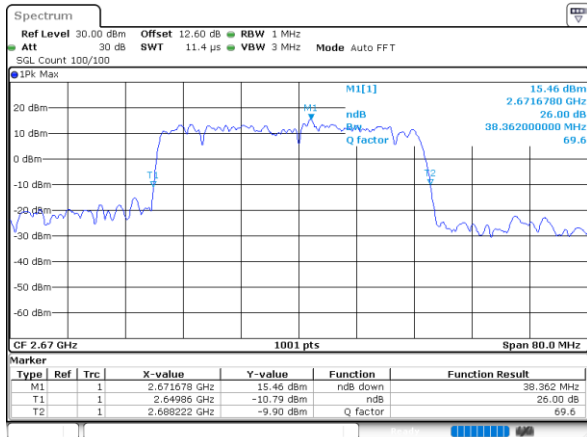
Lowest Channel



Middle Channel



Highest Channel





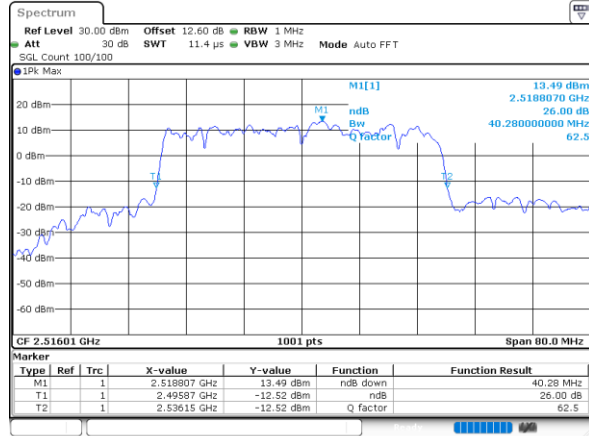
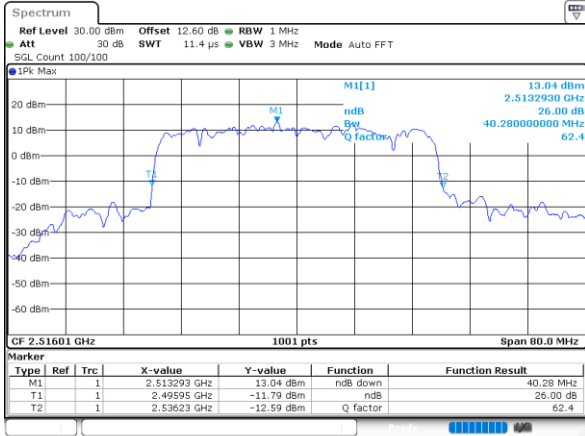
FR1 n41 / 40MHz / CP OFDM

QPSK

16QAM

Lowest Channel

Lowest Channel

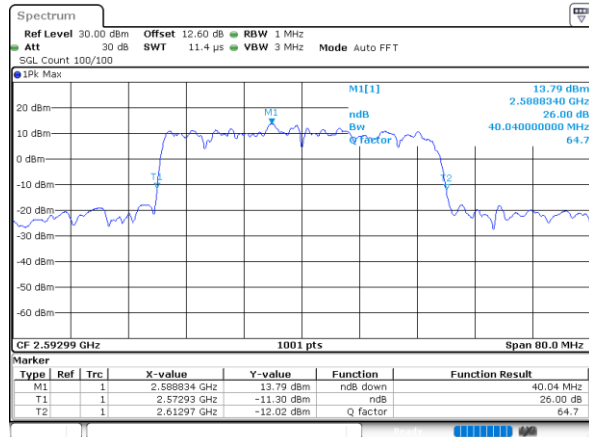
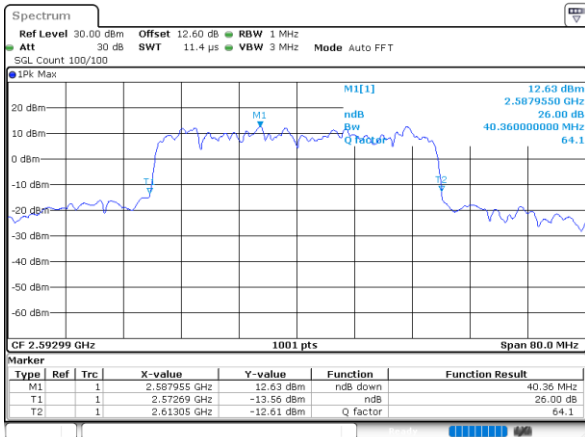


Date: 29\_JUN\_2020 02:19:46

Date: 29\_JUN\_2020 02:12:42

Middle Channel

Middle Channel

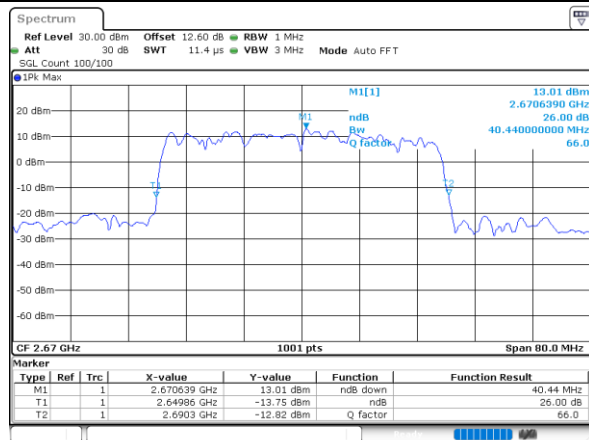
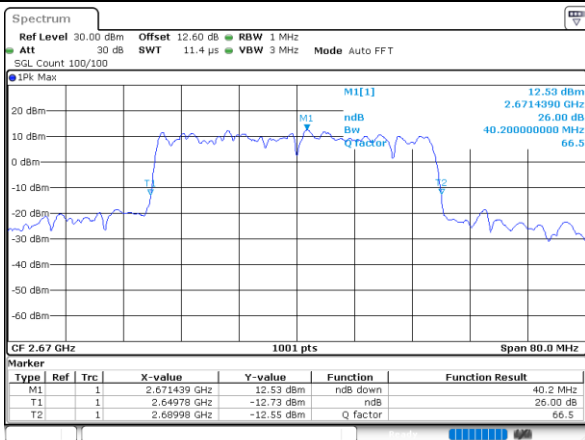


Date: 29\_JUN\_2020 01:03:01

Date: 29\_JUN\_2020 01:10:13

Highest Channel

Highest Channel



Date: 29\_JUN\_2020 01:10:33

Date: 29\_JUN\_2020 01:11:23