

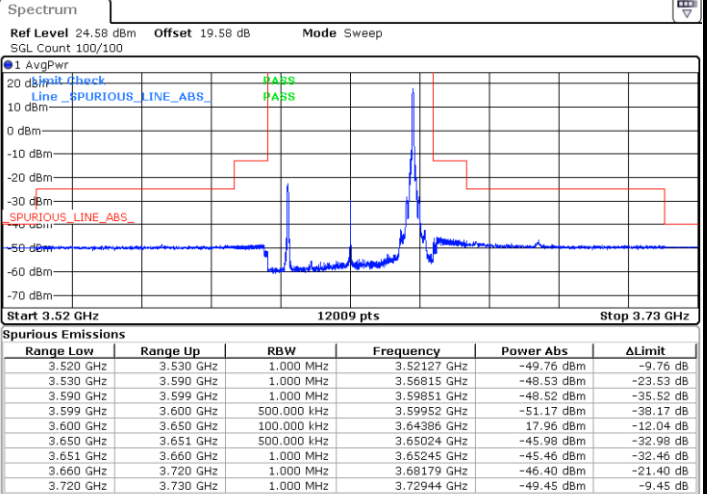
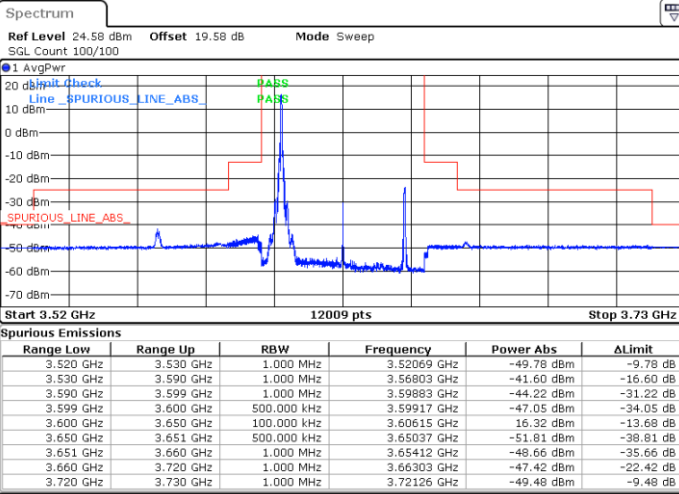


FR1 n48 / 40MHz / DFT-S OFDM / 64QAM

Middle Channel

1RB0

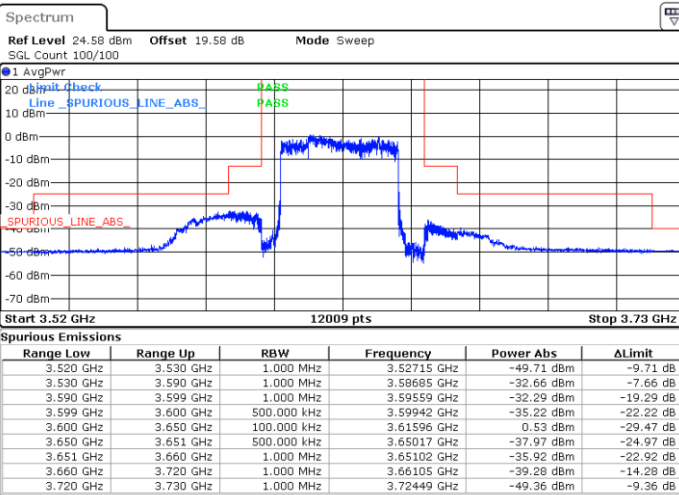
1RBmax



Date: 28.SEP.2023 02:15:03

Date: 28.SEP.2023 02:18:36

Full RB



Date: 28.SEP.2023 02:20:24

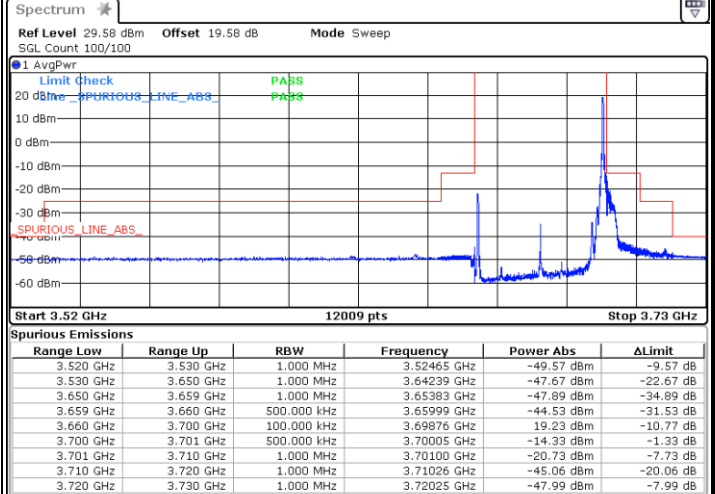
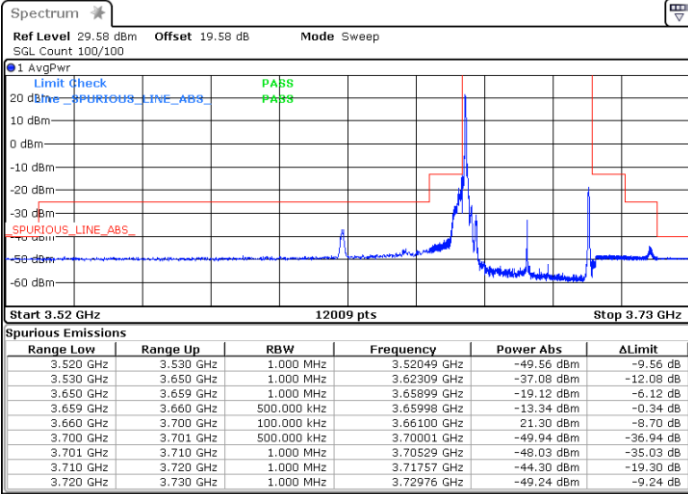


FR1 n48 / 40MHz / DFT-S OFDM / 64QAM

Highest Channel

1RB0

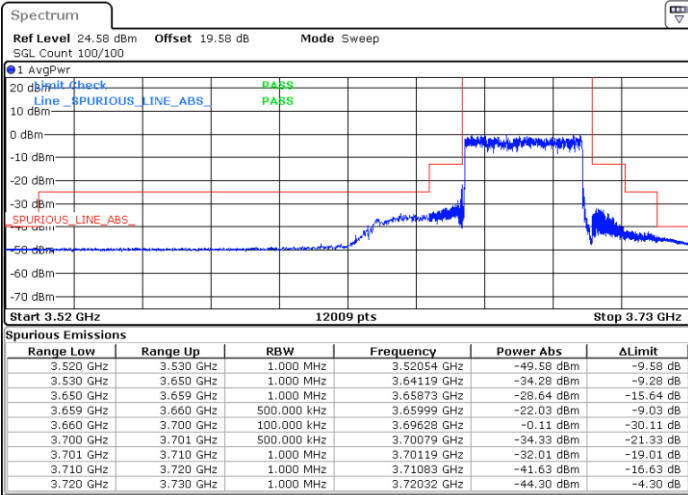
1RBmax



Date: 28.SEP.2023 20:22:08

Date: 28.SEP.2023 20:25:54

Full RB



Date: 29.SEP.2023 01:46:46

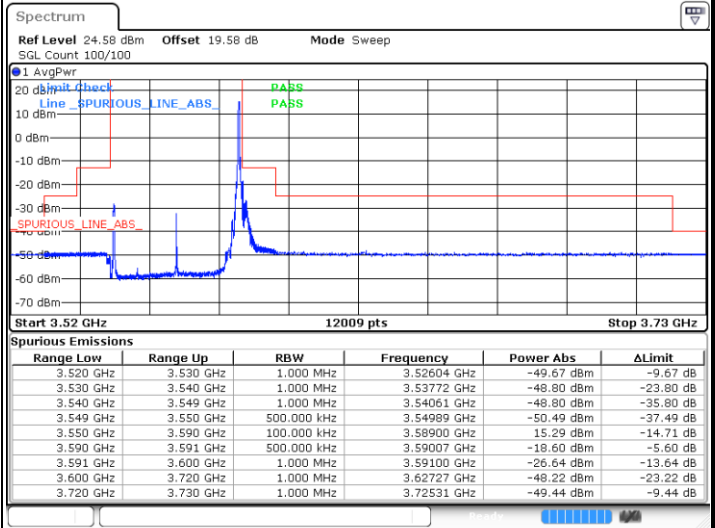
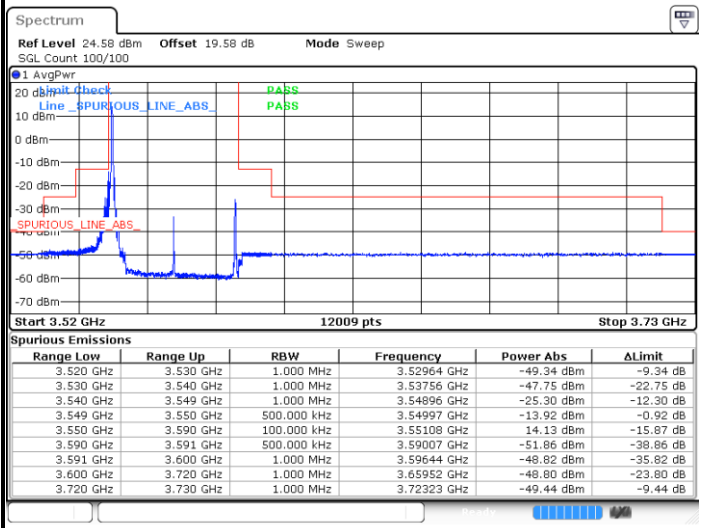


FR1 n48 / 40MHz / DFT-S OFDM / 256QAM

Lowest Channel

1RB0

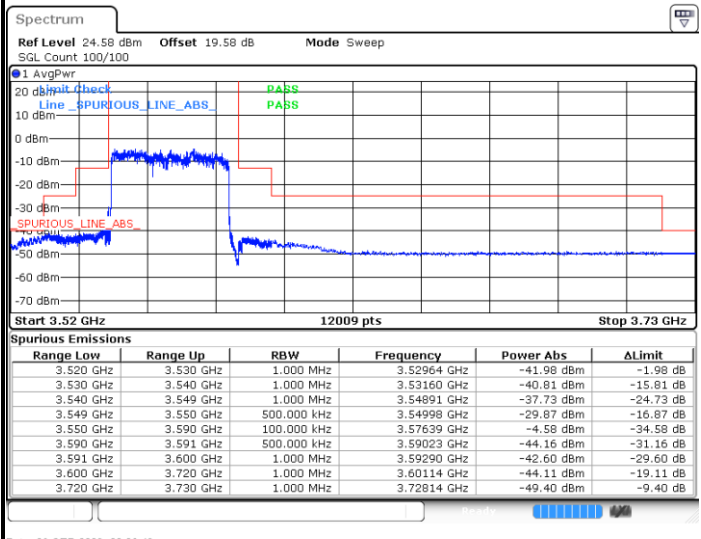
1RBmax



Date: 28.SEP.2023 02:07:13

Date: 28.SEP.2023 02:13:19

Full RB



Date: 28.SEP.2023 02:06:43

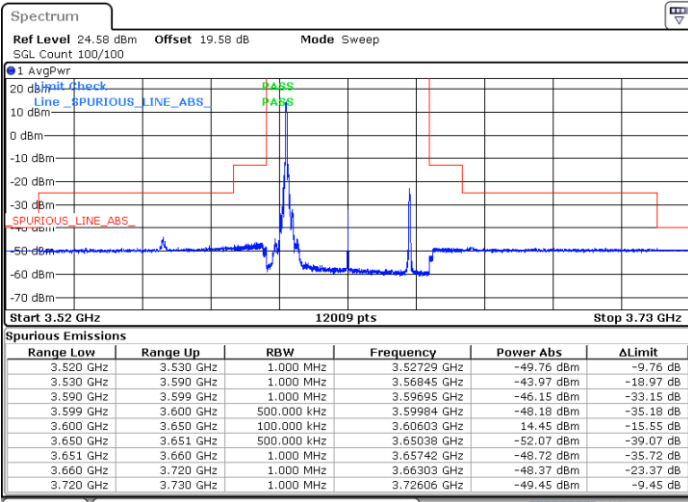


FR1 n48 / 40MHz / DFT-S OFDM / 256QAM

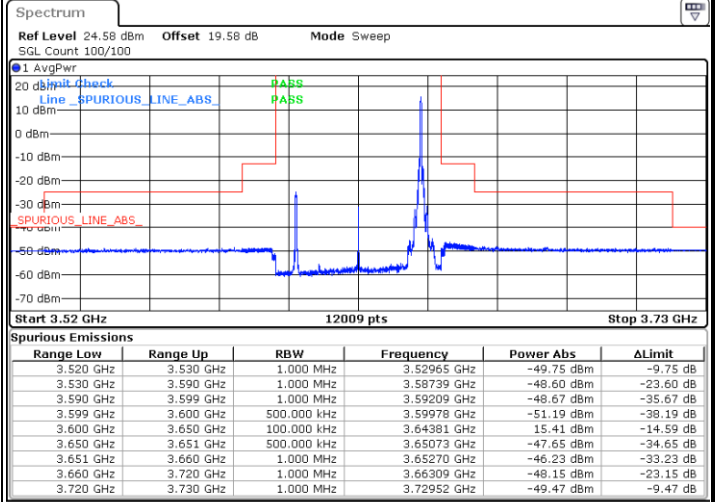
Middle Channel

1RB0

1RBmax

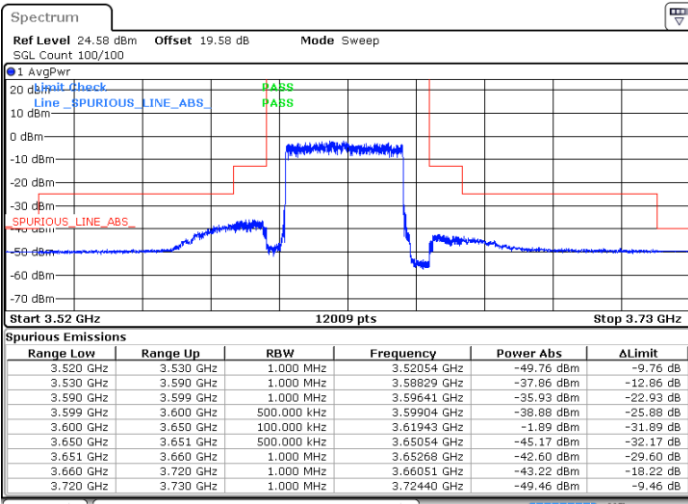


Date: 28.SEP.2023 02:14:35



Date: 28.SEP.2023 02:19:12

Full RB



Date: 28.SEP.2023 02:19:53

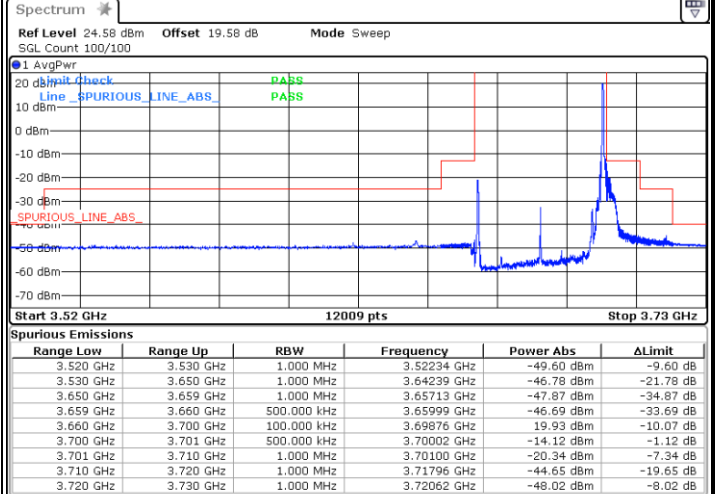
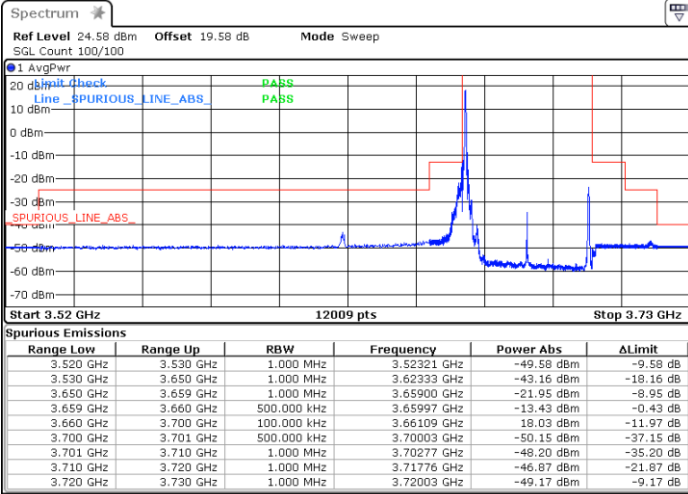


FR1 n48 / 40MHz / DFT-S OFDM / 256QAM

Highest Channel

1RB0

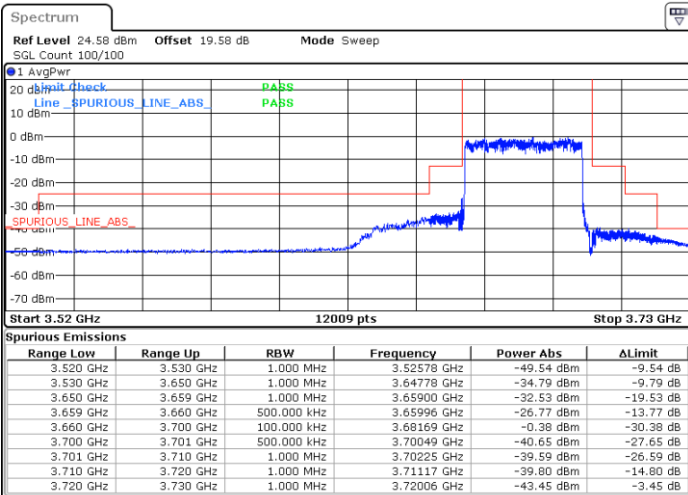
1RBmax



Date: 29.SEP.2023 01:51:26

Date: 28.SEP.2023 20:25:18

Full RB



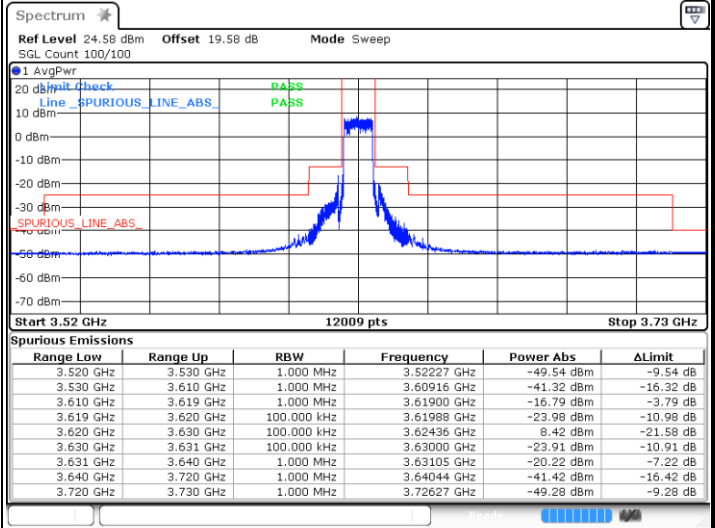
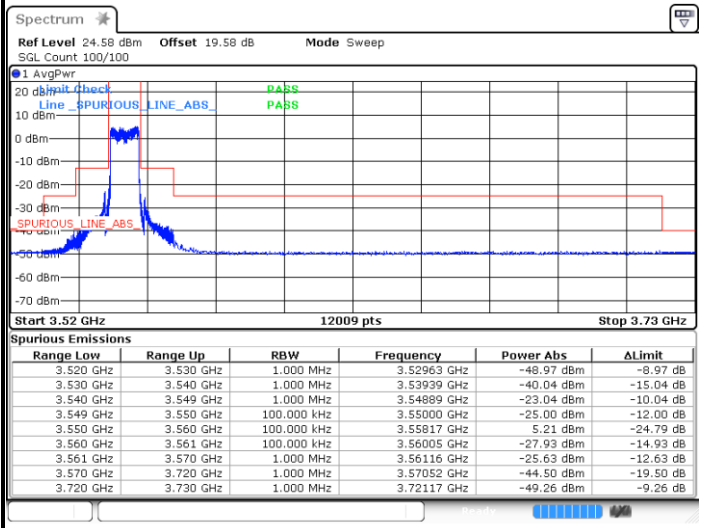
Date: 29.SEP.2023 01:47:04



FR1 n48 / 10MHz / CP OFDM / QPSK / Full RB

Lowest Channel

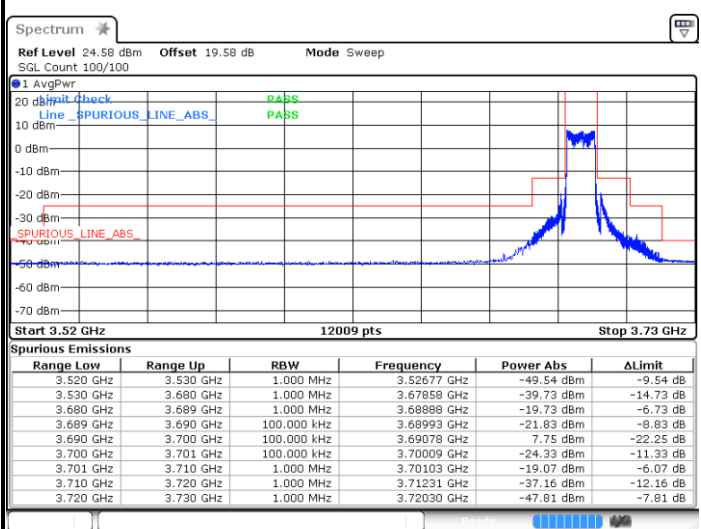
Middle Channel



Date: 28.SEP.2023 22.22.09

Date: 28.SEP.2023 22.22.40

Highest Channel



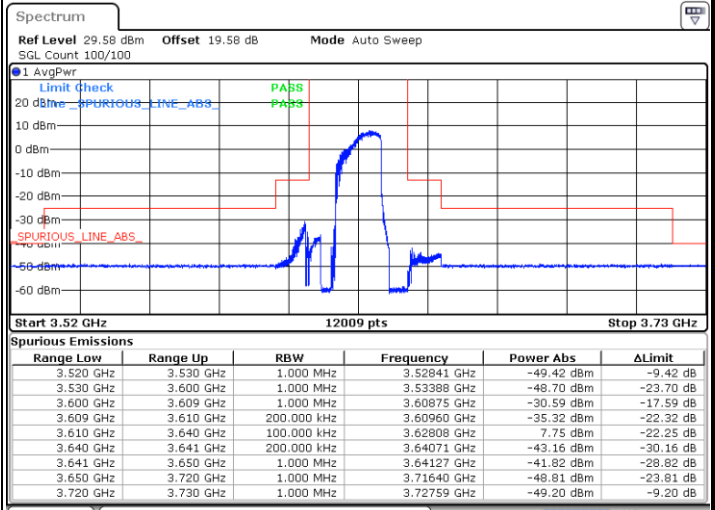
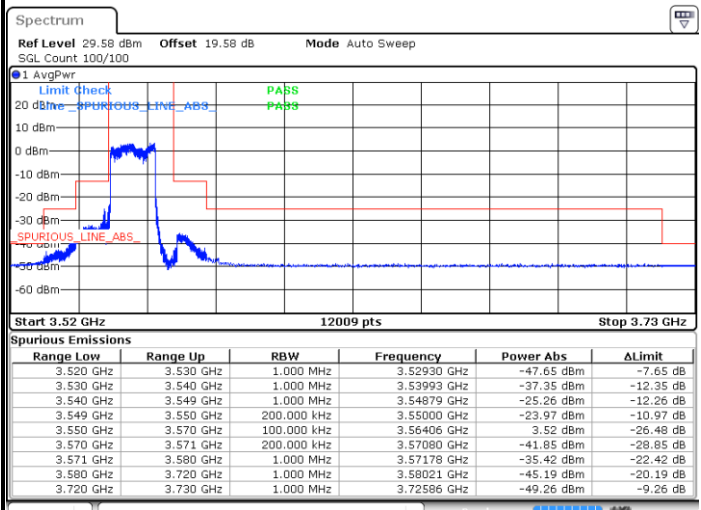
Date: 28.SEP.2023 22.23.09



FR1 n48 / 15MHz / CP OFDM / QPSK / Full RB

Lowest Channel

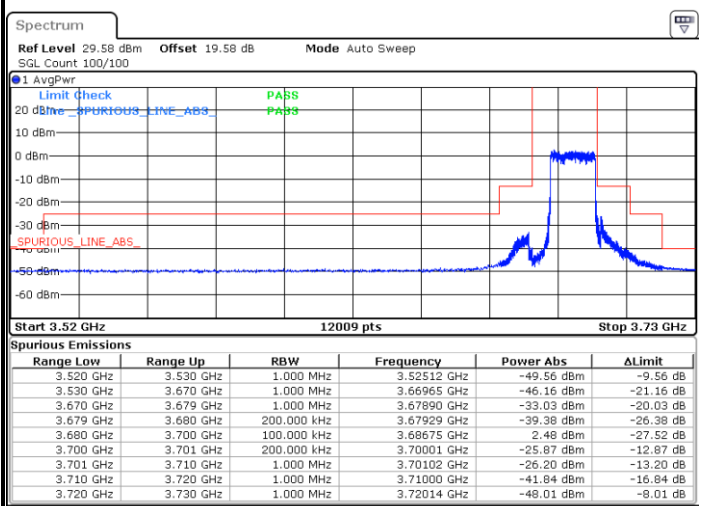
Middle Channel



Date: 28.SEP.2023 23:24:25

Date: 28.SEP.2023 23:24:50

Highest Channel



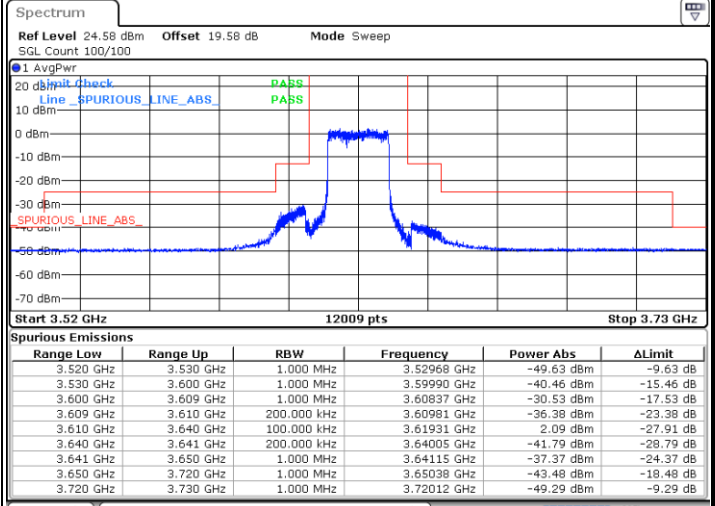
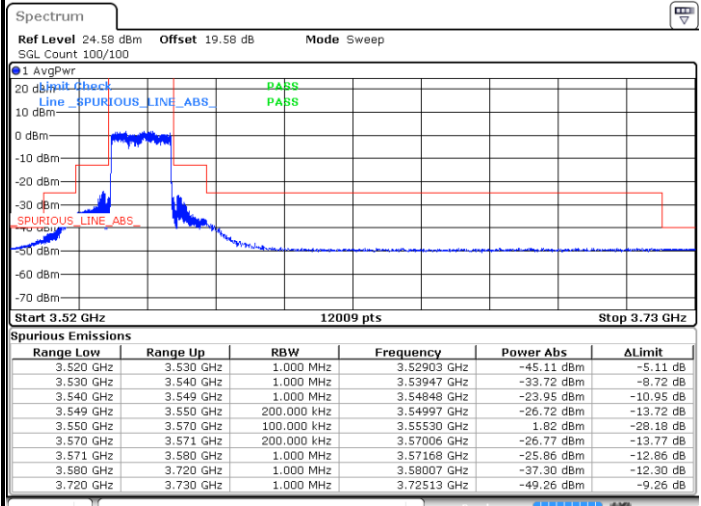
Date: 28.SEP.2023 23:25:11



FR1 n48 / 20MHz / CP OFDM / QPSK / Full RB

Lowest Channel

Middle Channel



Date: 28.SEP.2023 23:52:26

Date: 28.SEP.2023 23:52:55

Highest Channel



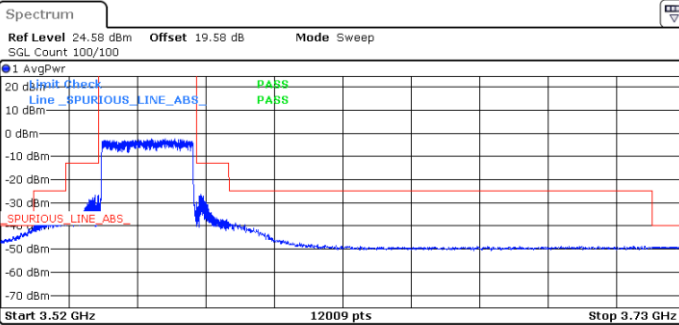
Date: 28.SEP.2023 23:53:20



FR1 n48 / 30MHz / CP OFDM / QPSK / Full RB

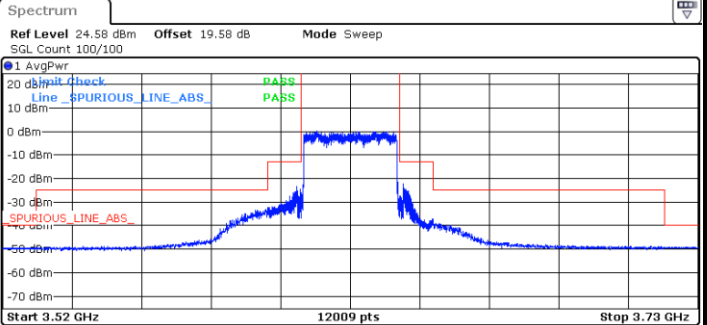
Lowest Channel

Middle Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.520 GHz	3.530 GHz	1.000 MHz	3.52993 GHz	-40.83 dBm	-0.83 dB
3.530 GHz	3.540 GHz	1.000 MHz	3.53900 GHz	-36.27 dBm	-11.27 dB
3.540 GHz	3.549 GHz	1.000 MHz	3.54894 GHz	-26.80 dBm	-13.80 dB
3.549 GHz	3.550 GHz	300.000 kHz	3.54994 GHz	-26.59 dBm	-13.59 dB
3.550 GHz	3.580 GHz	100.000 kHz	3.58632 GHz	-2.38 dBm	-32.38 dB
3.580 GHz	3.581 GHz	300.000 kHz	3.58006 GHz	-29.64 dBm	-16.64 dB
3.581 GHz	3.590 GHz	1.000 MHz	3.58137 GHz	-26.35 dBm	-13.35 dB
3.590 GHz	3.720 GHz	1.000 MHz	3.59201 GHz	-38.81 dBm	-13.81 dB
3.720 GHz	3.730 GHz	1.000 MHz	3.72335 GHz	-49.25 dBm	-9.25 dB



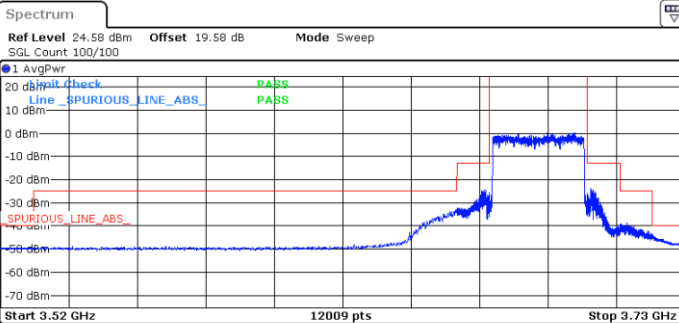
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.520 GHz	3.530 GHz	1.000 MHz	3.52127 GHz	-49.61 dBm	-9.61 dB
3.530 GHz	3.600 GHz	1.000 MHz	3.59962 GHz	-33.16 dBm	-8.16 dB
3.600 GHz	3.609 GHz	1.000 MHz	3.60891 GHz	-23.54 dBm	-10.54 dB
3.609 GHz	3.610 GHz	300.000 kHz	3.60997 GHz	-24.62 dBm	-11.62 dB
3.610 GHz	3.640 GHz	100.000 kHz	3.61489 GHz	0.13 dBm	-29.87 dB
3.640 GHz	3.641 GHz	300.000 kHz	3.64025 GHz	-27.40 dBm	-14.40 dB
3.641 GHz	3.650 GHz	1.000 MHz	3.64102 GHz	-22.33 dBm	-9.33 dB
3.650 GHz	3.720 GHz	1.000 MHz	3.65010 GHz	-38.64 dBm	-13.64 dB
3.720 GHz	3.730 GHz	1.000 MHz	3.72416 GHz	-49.31 dBm	-9.31 dB

Date: 29.SEP.2023 00:26:37

Date: 29.SEP.2023 00:27:03

Highest Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.520 GHz	3.530 GHz	1.000 MHz	3.52826 GHz	-49.57 dBm	-9.57 dB
3.530 GHz	3.660 GHz	1.000 MHz	3.65955 GHz	-33.00 dBm	-8.00 dB
3.660 GHz	3.669 GHz	1.000 MHz	3.66821 GHz	-24.47 dBm	-11.47 dB
3.669 GHz	3.670 GHz	300.000 kHz	3.66992 GHz	-25.69 dBm	-12.69 dB
3.670 GHz	3.700 GHz	100.000 kHz	3.69574 GHz	0.38 dBm	-29.62 dB
3.700 GHz	3.701 GHz	300.000 kHz	3.70003 GHz	-26.16 dBm	-13.16 dB
3.701 GHz	3.710 GHz	1.000 MHz	3.70105 GHz	-23.90 dBm	-10.90 dB
3.710 GHz	3.720 GHz	1.000 MHz	3.71212 GHz	-38.75 dBm	-13.75 dB
3.720 GHz	3.730 GHz	1.000 MHz	3.72015 GHz	-43.86 dBm	-3.86 dB

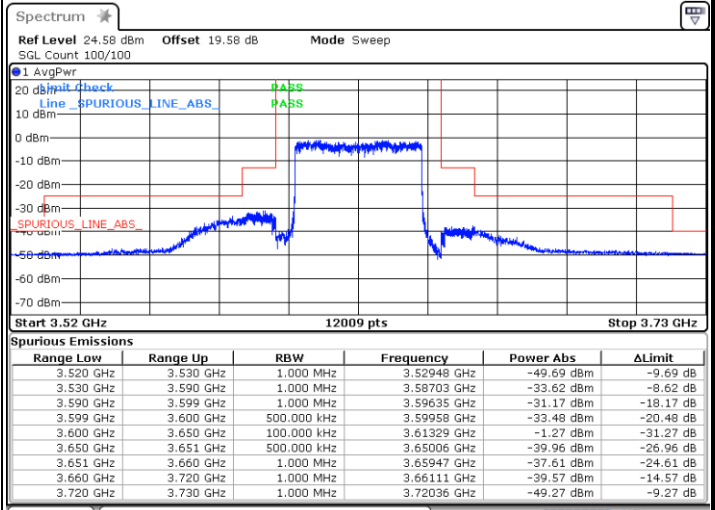
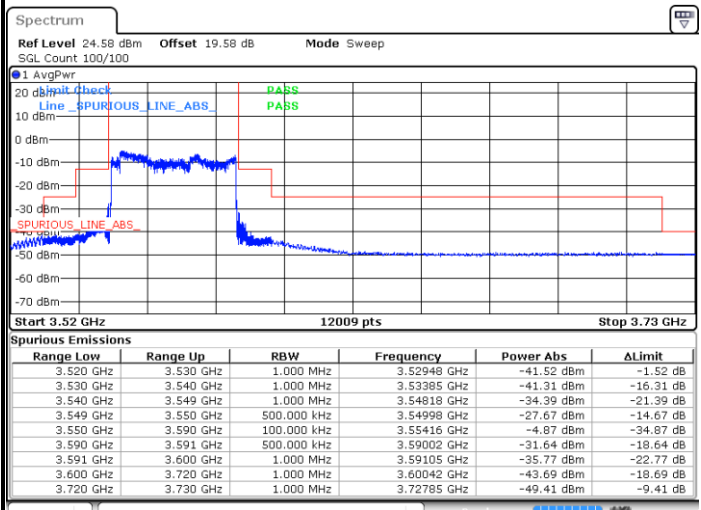
Date: 29.SEP.2023 00:27:24



FR1 n48 / 40MHz / CP OFDM / QPSK / Full RB

Lowest Channel

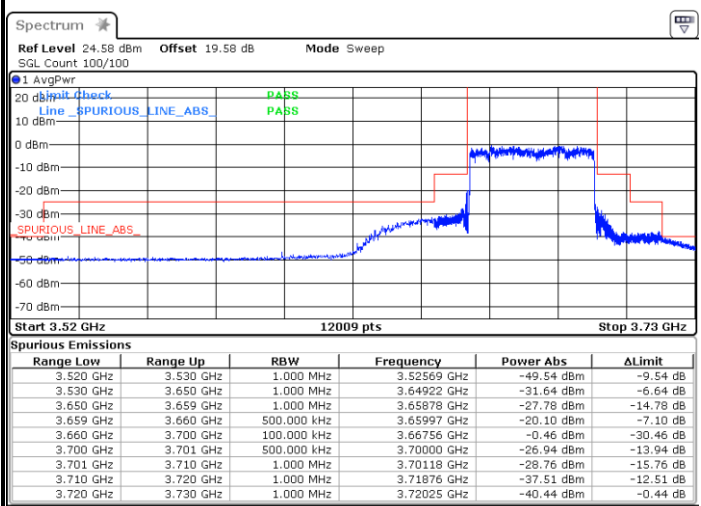
Middle Channel



Date: 28.SEP.2023 02:27:08

Date: 28.SEP.2023 02:25:46

Highest Channel



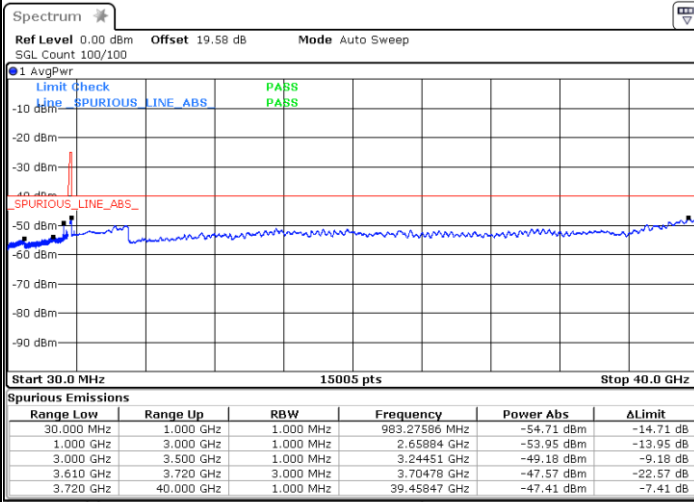
Date: 29.SEP.2023 01:45:11



Conducted Spurious Emission

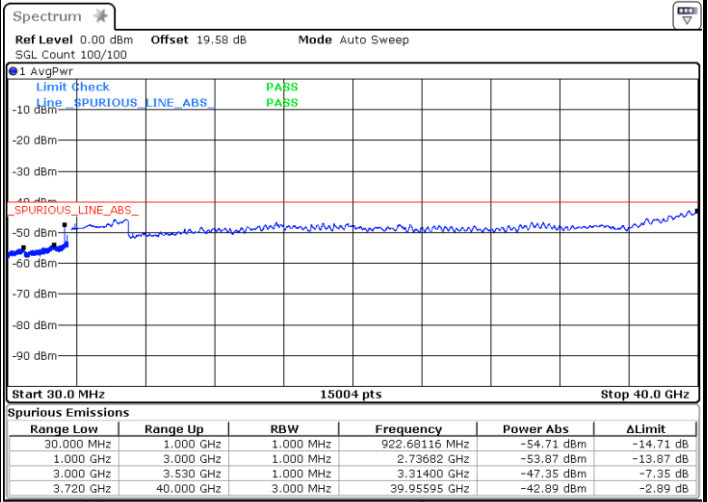
FR1 n48 / 10MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel



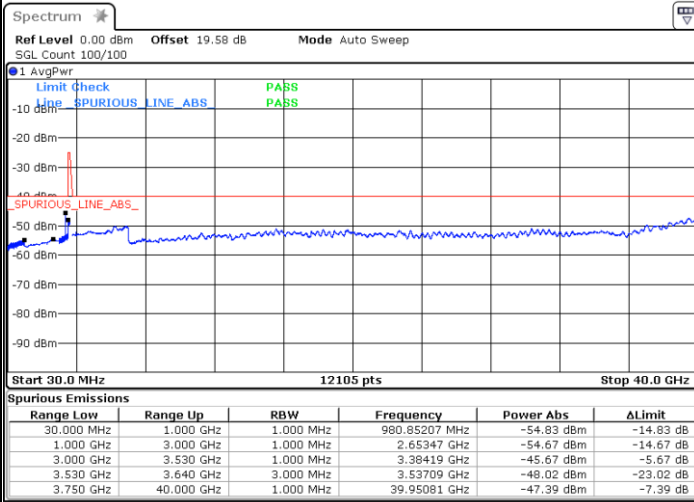
Date: 29 SEP 2023 00:13:09

Middle Channel



Date: 29 SEP 2023 00:14:31

Highest Channel

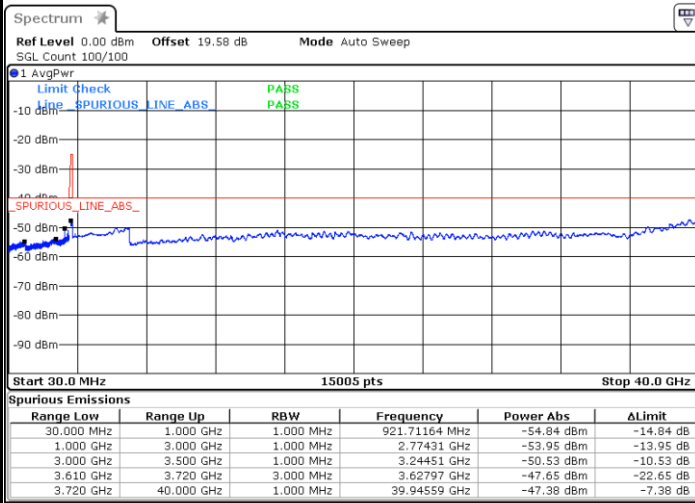


Date: 29 SEP 2023 00:16:29



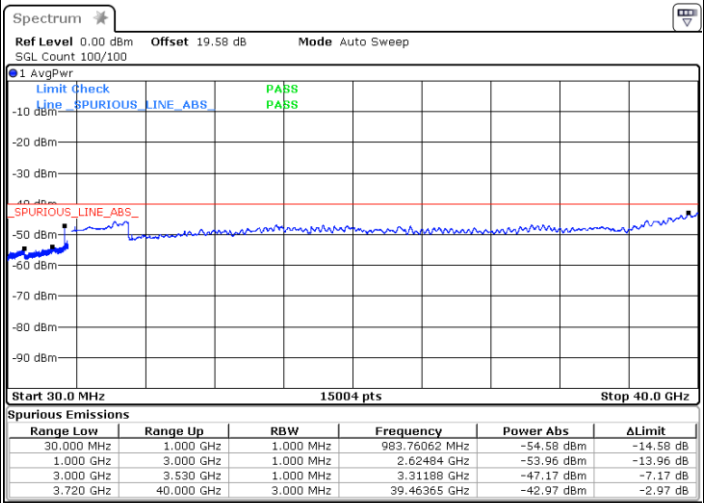
FR1 n48 / 15MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel



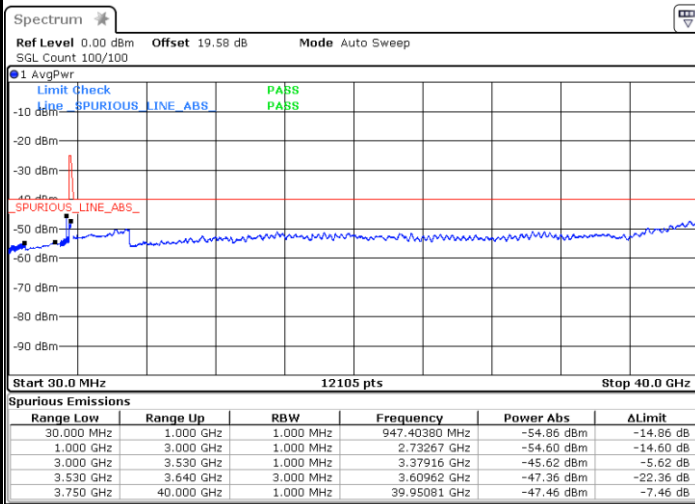
Date: 29 SEP 2023 00:18:14

Middle Channel



Date: 29 SEP 2023 00:19:21

Highest Channel



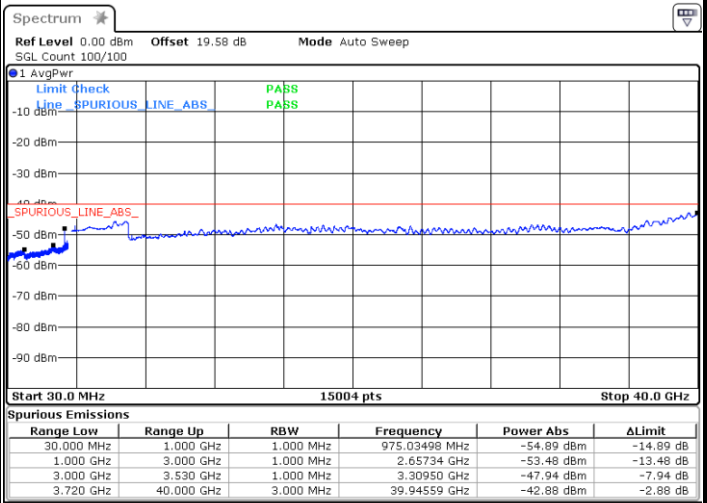
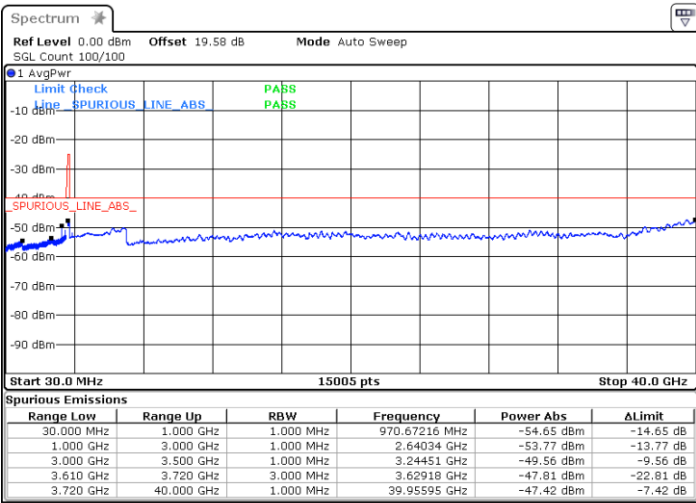
Date: 29 SEP 2023 00:20:34



FR1 n48 / 20MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

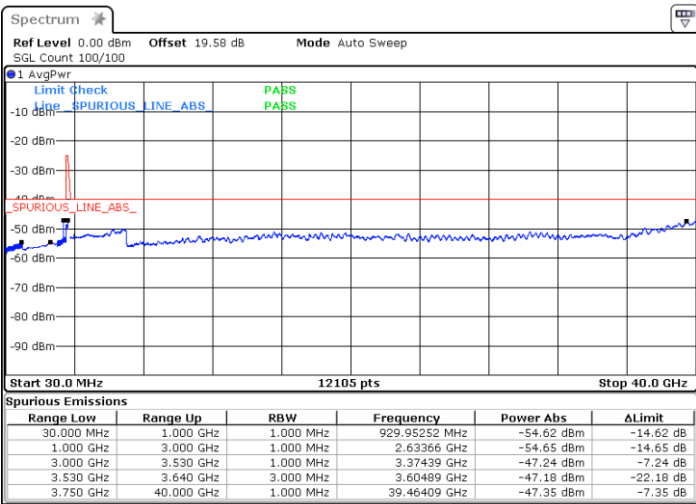
Middle Channel



Date: 29 SEP 2023 00:10:46

Date: 29 SEP 2023 00:09:25

Highest Channel



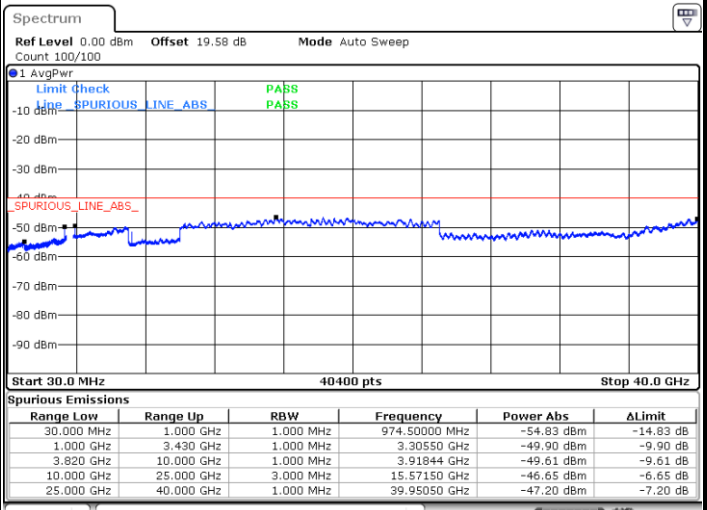
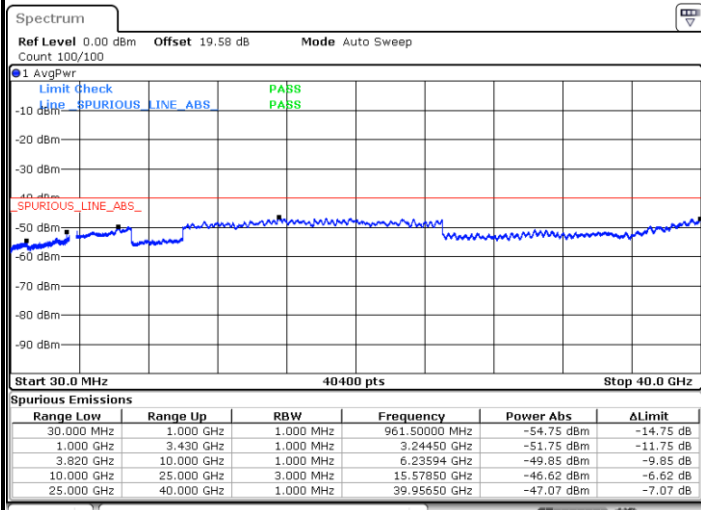
Date: 29 SEP 2023 00:08:17



FR1 n48 / 30MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

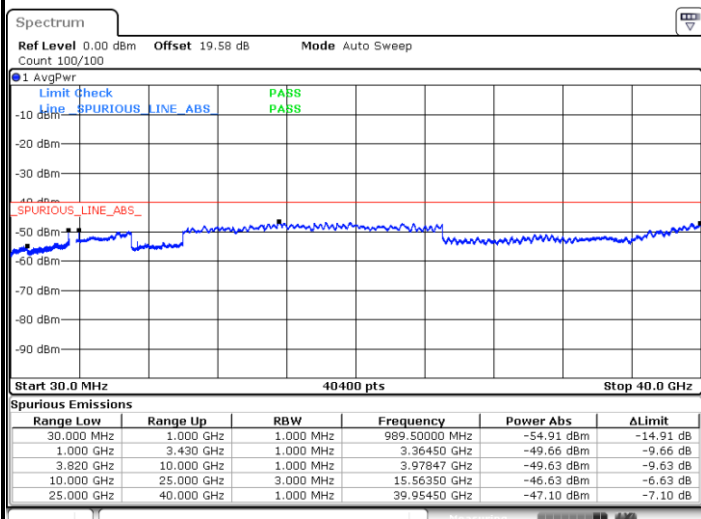
Middle Channel



Date: 29 SEP 2023 00:47:43

Date: 29 SEP 2023 00:46:35

Highest Channel



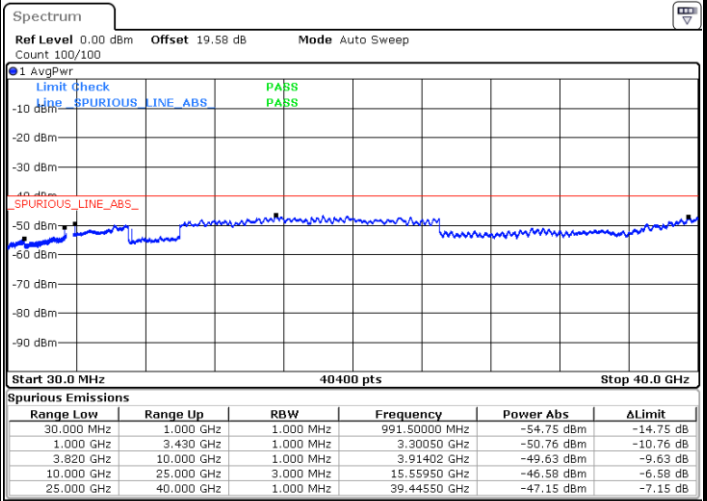
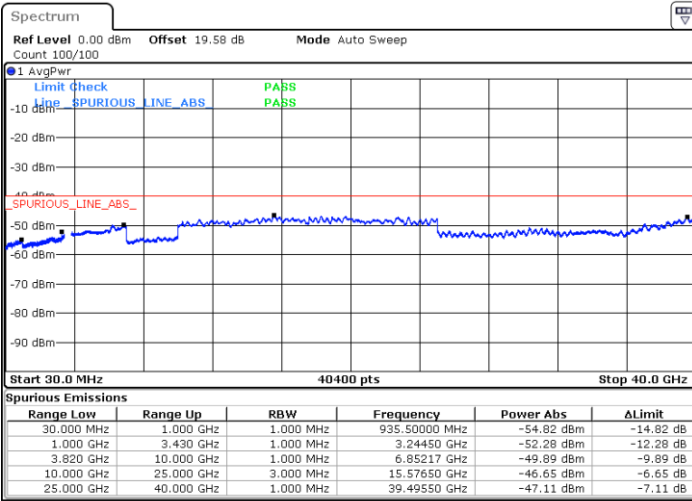
Date: 29 SEP 2023 00:45:30



FR1 n48 / 40MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

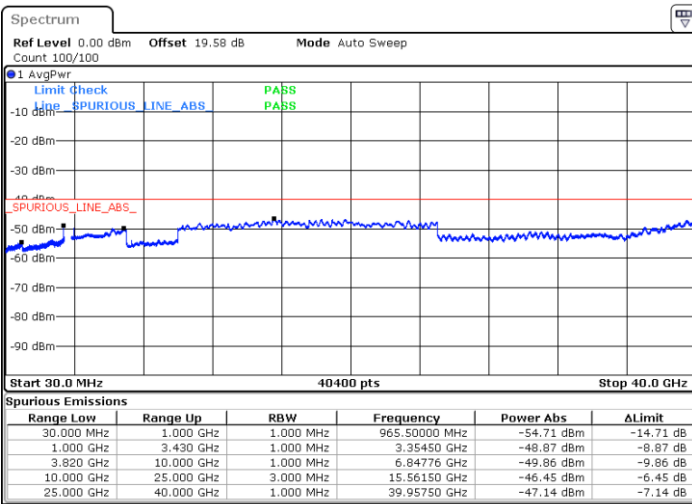
Middle Channel



Date: 29 SEP 2023 00:49:39

Date: 29 SEP 2023 00:50:52

Highest Channel



Date: 29 SEP 2023 00:51:59



Frequency Stability

Test Conditions		FR1 n48 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	2.2	PASS
40	Normal Voltage	2.2	
30	Normal Voltage	2.3	
20(Ref.)	Normal Voltage	2.2	
10	Normal Voltage	2.1	
0	Normal Voltage	2.2	
-10	Normal Voltage	2.2	
-20	Normal Voltage	2.4	
-30	Normal Voltage	2.2	
20	Maximum Voltage	2.4	
20	Normal Voltage	2.3	
20	Battery End Point	2.1	

Note:

- 1. Normal Voltage = 48 V. ; Battery End Point (BEP) = 42.5 V. ; Maximum Voltage = 57 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



<MIMO Mode>

MIMO <Ant. 4>

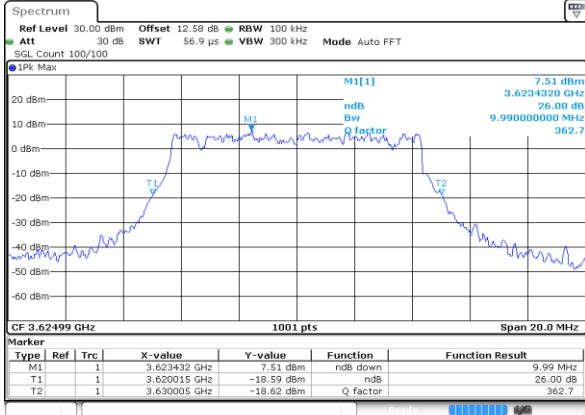
26dB Bandwidth

Mode	FR1 n48 : 26dB BW(MHz) / CP OFDM							
BW	10MHz		15MHz		20MHz		30MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	9.99	9.27	14.30	14.24	19.06	19.62	28.95	29.13
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	9.49	9.61	14.45	14.48	19.82	19.02	28.89	28.89
BW	40MHz							
Mod.	QPSK	16QAM						
Middle CH	40.36	40.20						
Mod.	64QAM	256QAM						
Middle CH	40.44	40.20						



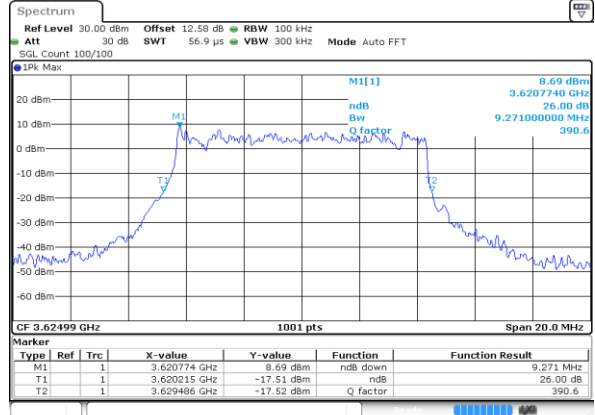
FR1 n48 / 10MHz / CP OFDM / Middle Channel / Full RB

QPSK



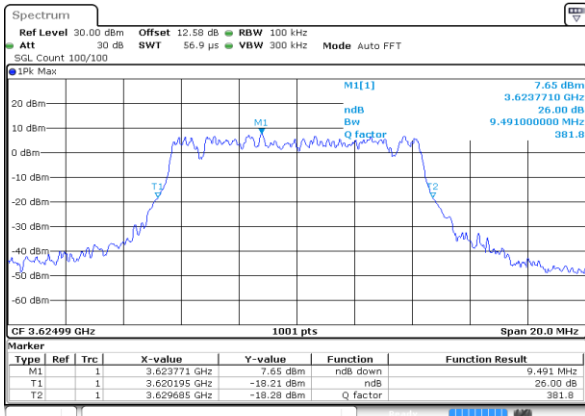
Date: 27 SEP 2023 20:13:42

16QAM



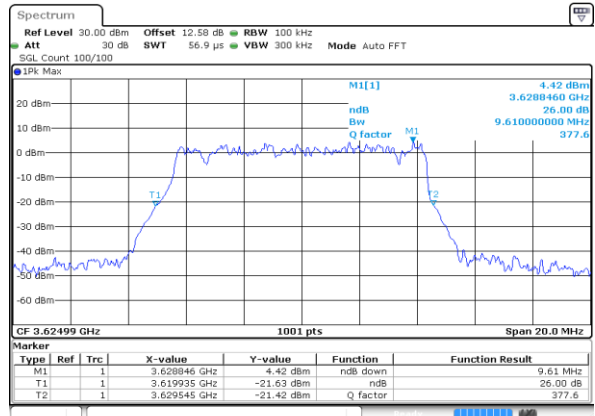
Date: 27 SEP 2023 20:13:05

64QAM



Date: 27 SEP 2023 20:12:31

256QAM

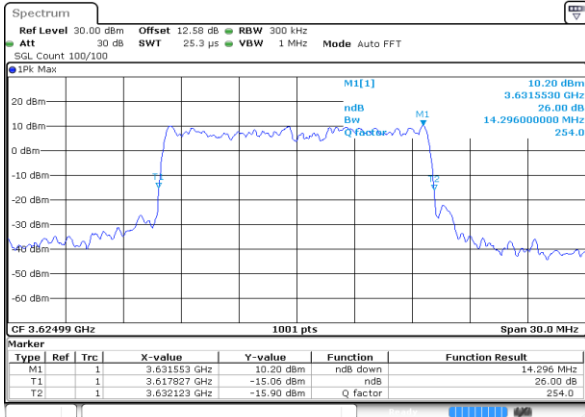


Date: 27 SEP 2023 20:11:59



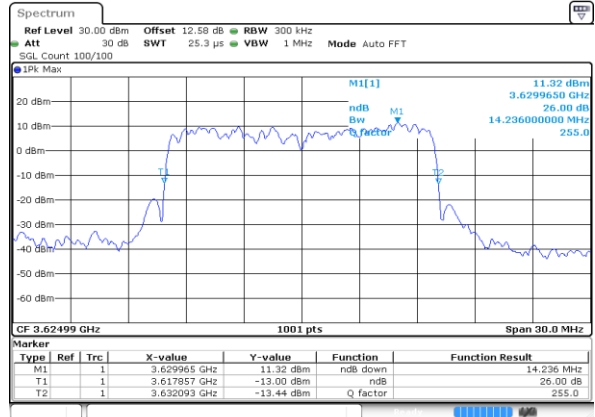
FR1 n48 / 15MHz / CP OFDM / Middle Channel / Full RB

QPSK



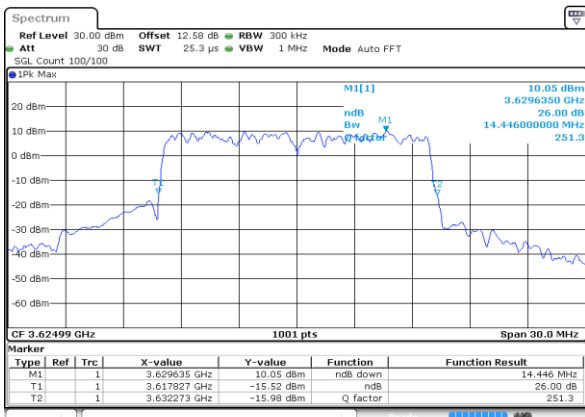
Date: 27 SEP 2023 20:08:00

16QAM



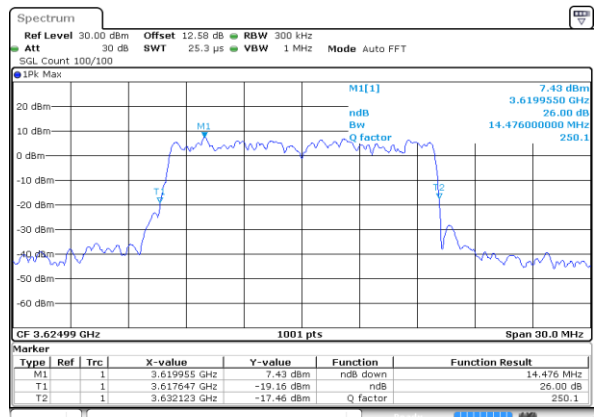
Date: 27 SEP 2023 20:08:36

64QAM



Date: 27 SEP 2023 20:10:16

256QAM

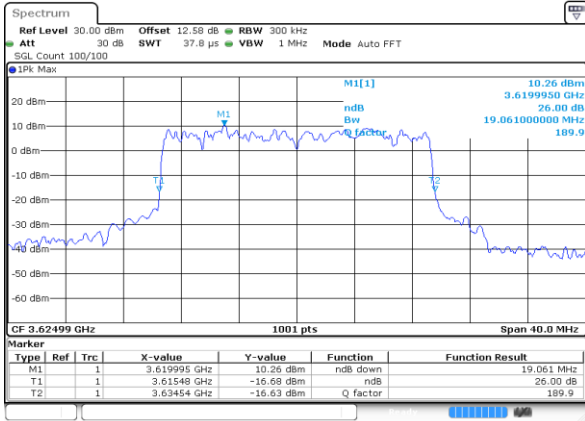


Date: 27 SEP 2023 20:10:51



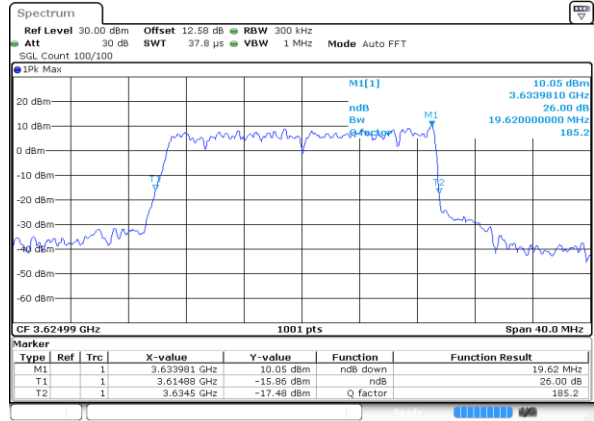
FR1 n48 / 20MHz / CP OFDM / Middle Channel / Full RB

QPSK



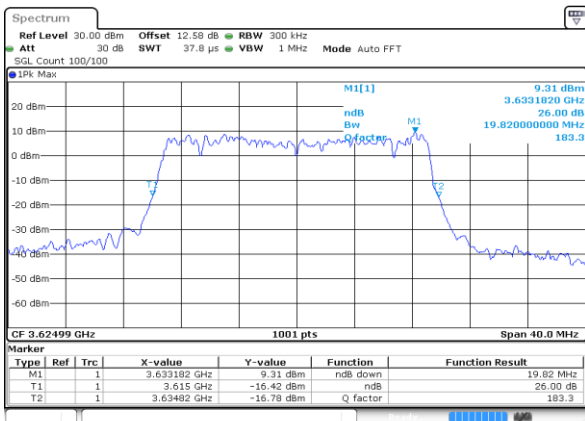
Date: 27 SEP 2023 20:07:30

16QAM



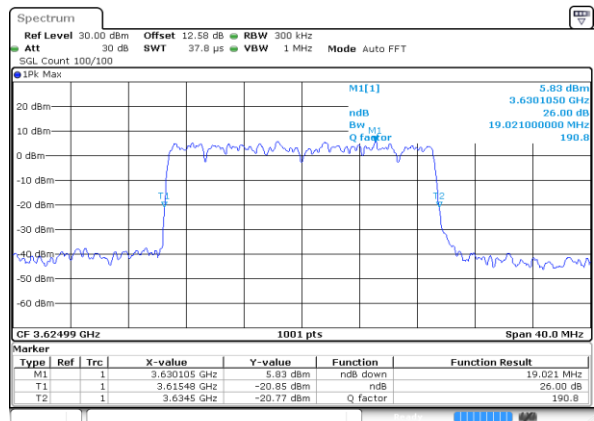
Date: 27 SEP 2023 20:06:47

64QAM



Date: 27 SEP 2023 20:06:13

256QAM

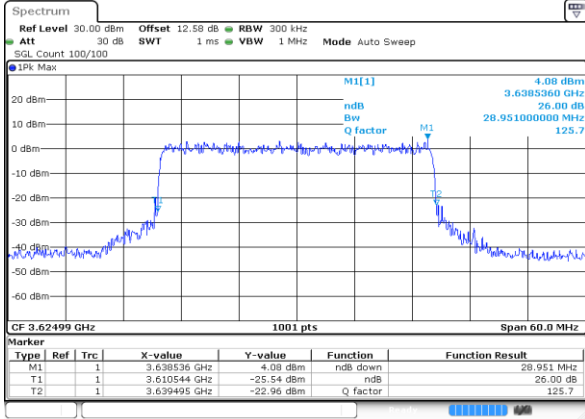


Date: 27 SEP 2023 20:05:38



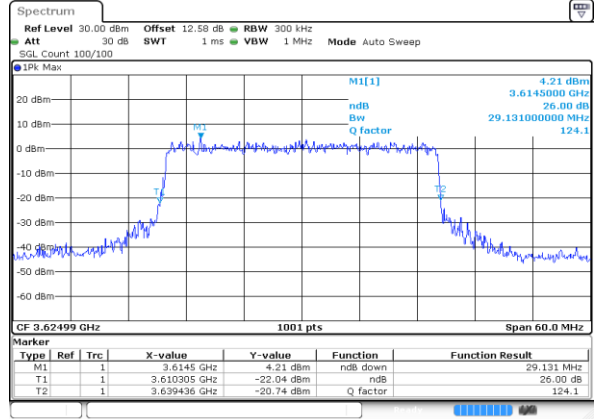
FR1 n48 / 30MHz / CP OFDM / Middle Channel / Full RB

QPSK



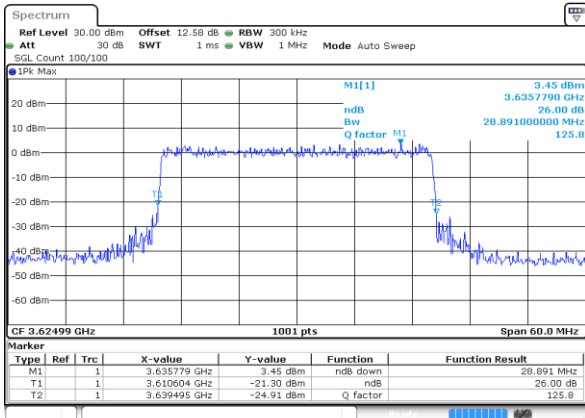
Date: 27 SEP 2023 20:02:52

16QAM



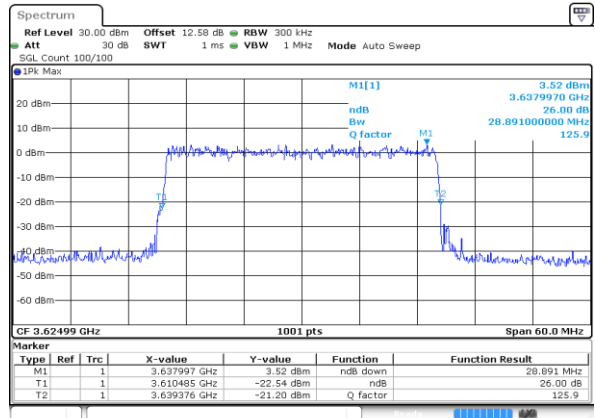
Date: 27 SEP 2023 20:03:13

64QAM



Date: 27 SEP 2023 20:03:59

256QAM

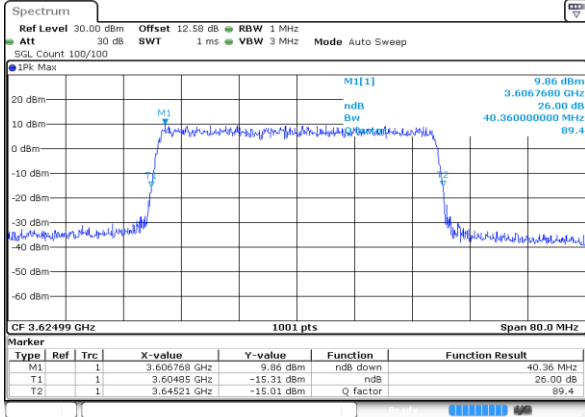


Date: 27 SEP 2023 20:04:28



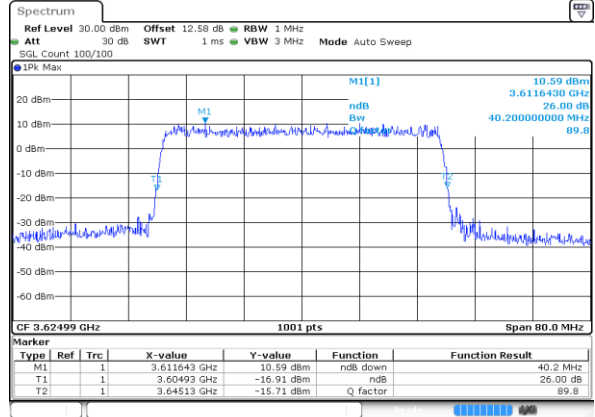
FR1 n48 / 40MHz / CP OFDM / Middle Channel / Full RB

QPSK



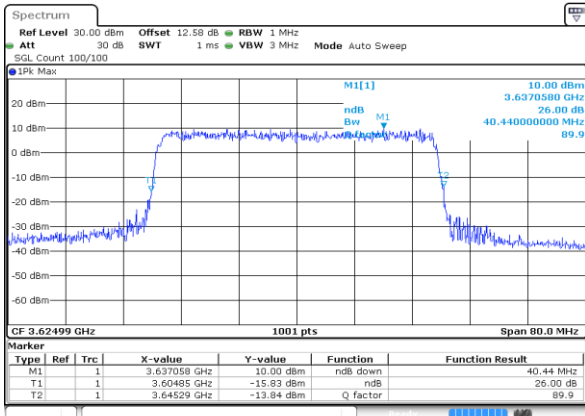
Date: 27 SEP 2023 20:01:35

16QAM



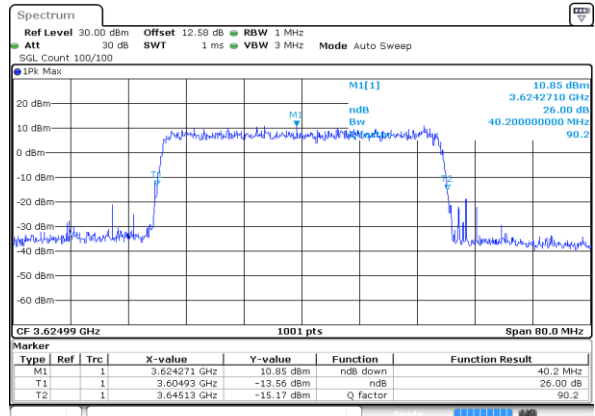
Date: 27 SEP 2023 20:01:17

64QAM



Date: 27 SEP 2023 20:00:44

256QAM



Date: 27 SEP 2023 20:00:07



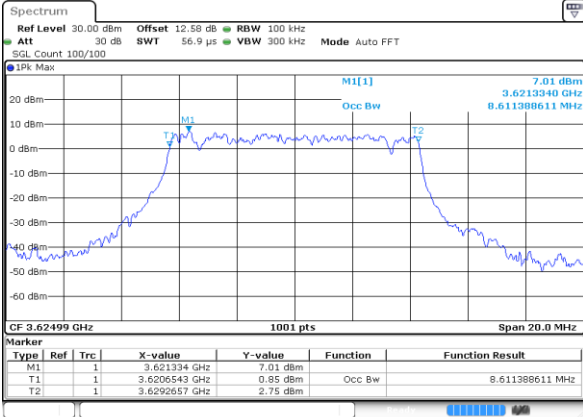
Occupied Bandwidth

Mode	FR1 n48 : OB BW(MHz) / CP OFDM							
BW	10MHz		15MHz		20MHz		30MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	8.61	8.57	13.52	13.61	18.26	18.22	27.87	27.81
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	8.57	8.57	13.67	13.58	18.26	18.22	27.87	27.87
BW	40MHz							
Mod.	QPSK	16QAM						
Middle CH	37.96	37.96						
Mod.	64QAM	256QAM						
Middle CH	38.12	38.12						



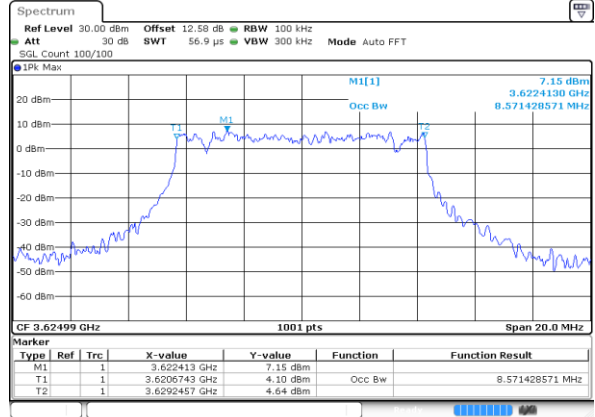
FR1 n48 / 10MHz / CP OFDM / Middle Channel / Full RB

QPSK



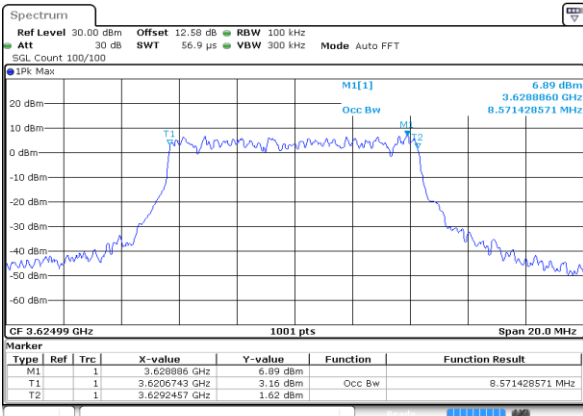
Date: 27 SEP 2023 20:13:29

16QAM



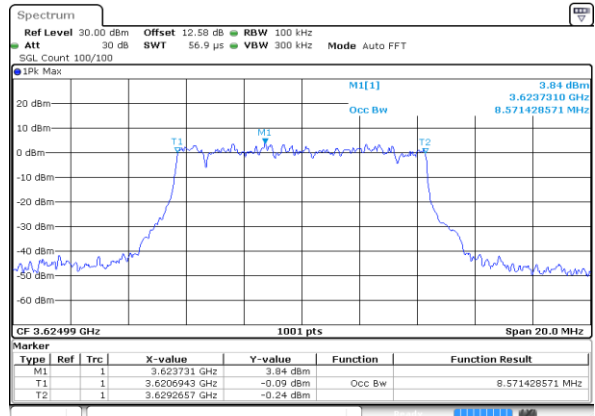
Date: 27 SEP 2023 20:12:53

64QAM



Date: 27 SEP 2023 20:12:19

256QAM

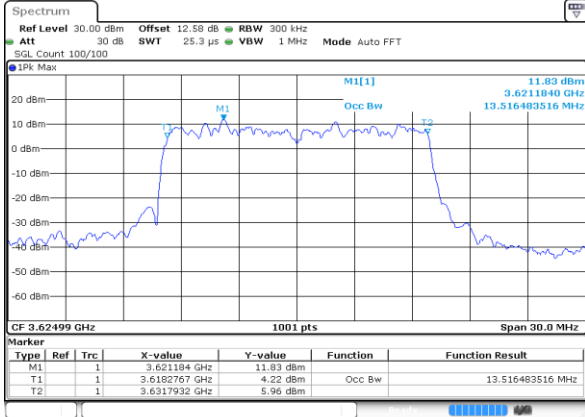


Date: 27 SEP 2023 20:11:46



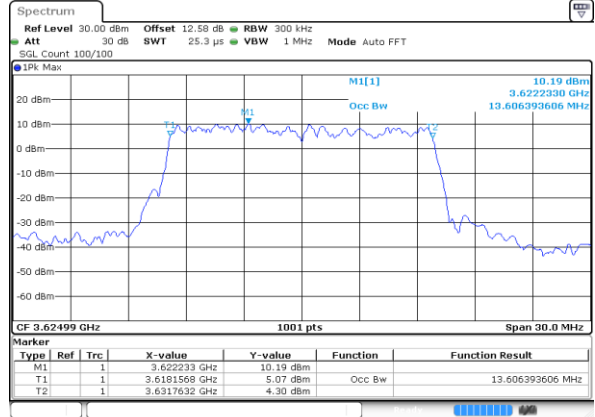
FR1 n48 / 15MHz / CP OFDM / Middle Channel / Full RB

QPSK



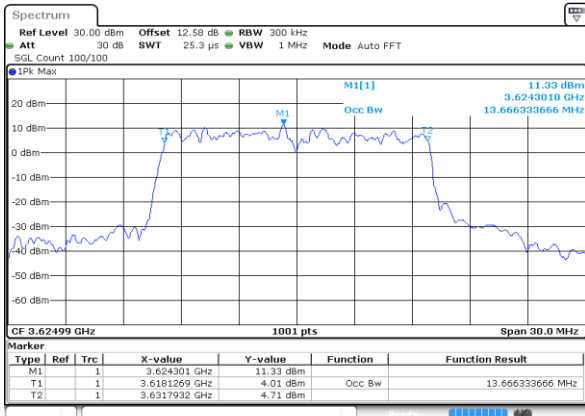
Date: 27 SEP 2023 20:08:45

16QAM



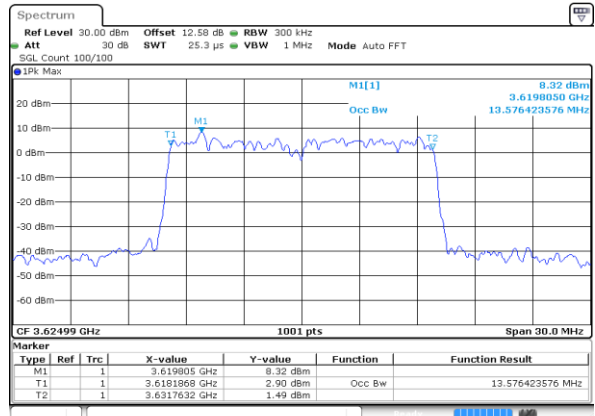
Date: 27 SEP 2023 20:09:24

64QAM



Date: 27 SEP 2023 20:10:04

256QAM

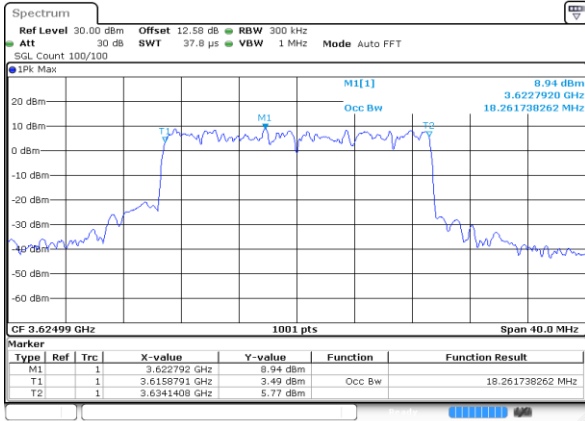


Date: 27 SEP 2023 20:10:40



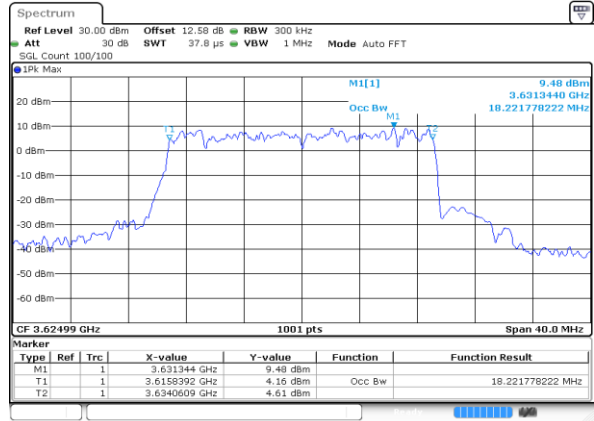
FR1 n48 / 20MHz / CP OFDM / Middle Channel / Full RB

QPSK



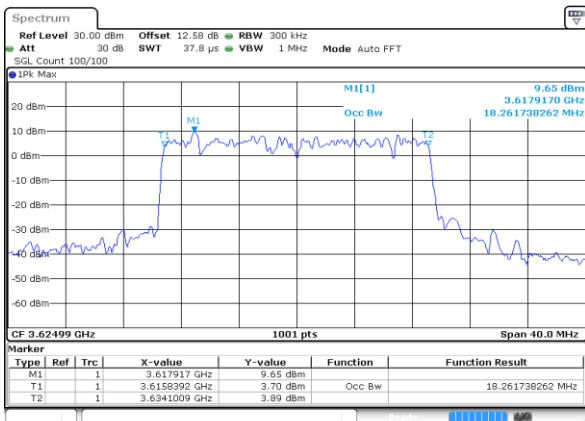
Date: 27 SEP 2023 20:07:15

16QAM



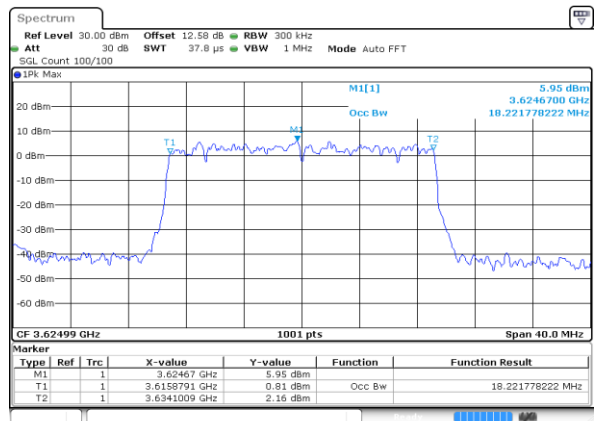
Date: 27 SEP 2023 20:06:35

64QAM



Date: 27 SEP 2023 20:06:00

256QAM

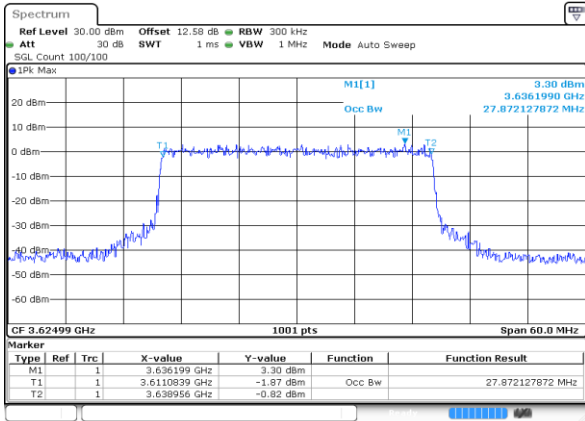


Date: 27 SEP 2023 20:05:20



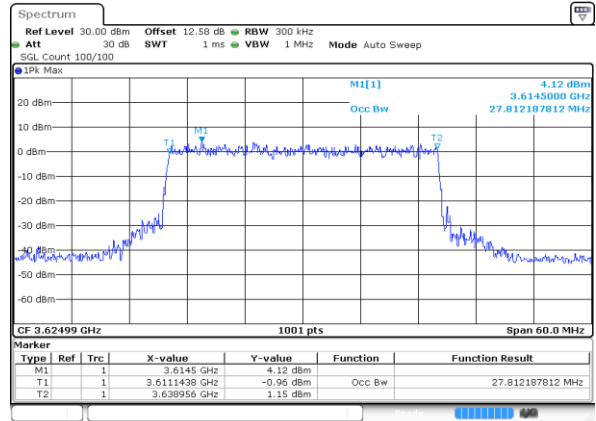
FR1 n48 / 30MHz / CP OFDM / Middle Channel / Full RB

QPSK



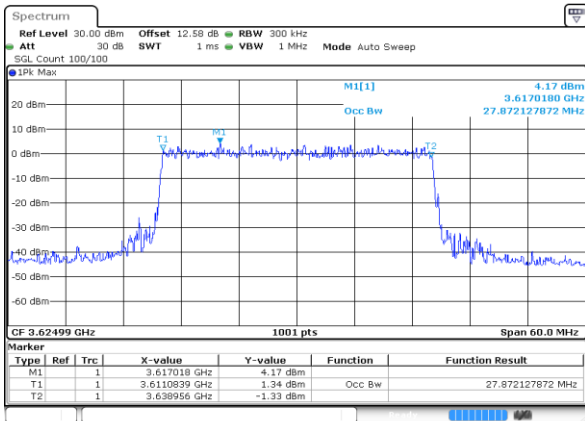
Date: 27 SEP 2023 20:02:38

16QAM



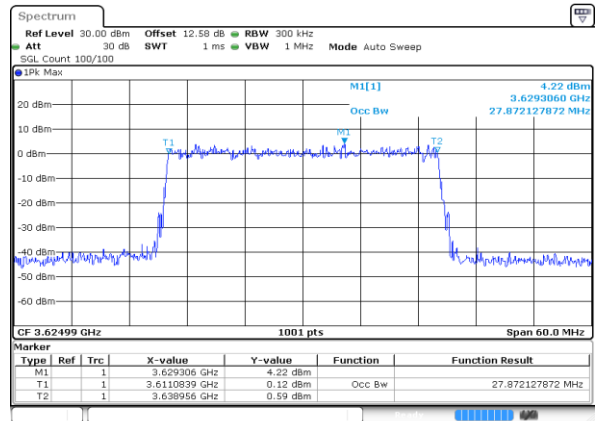
Date: 27 SEP 2023 20:03:27

64QAM



Date: 27 SEP 2023 20:03:50

256QAM

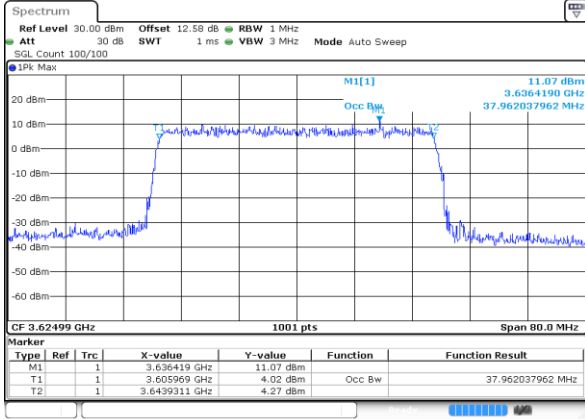


Date: 27 SEP 2023 20:04:17



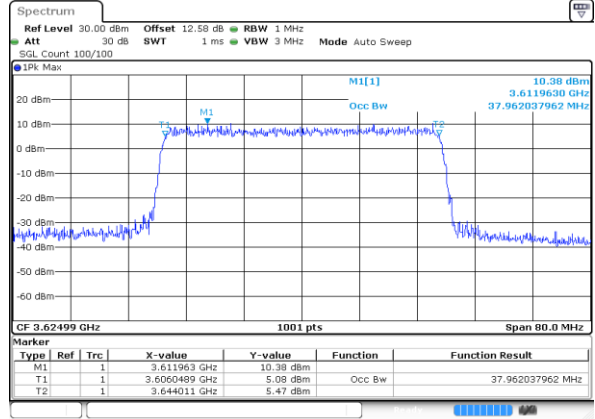
FR1 n48 / 40MHz / CP OFDM / Middle Channel / Full RB

QPSK



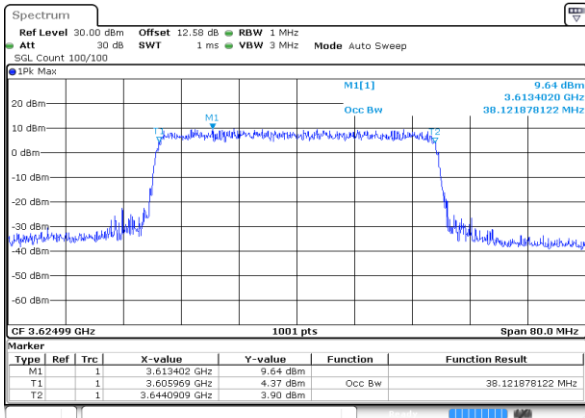
Date: 27 SEP 2023 20:01:54

16QAM



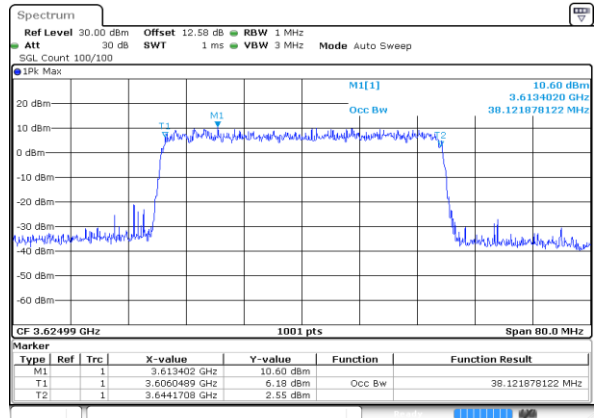
Date: 27 SEP 2023 20:01:02

64QAM



Date: 27 SEP 2023 20:00:33

256QAM



Date: 27 SEP 2023 19:58:53



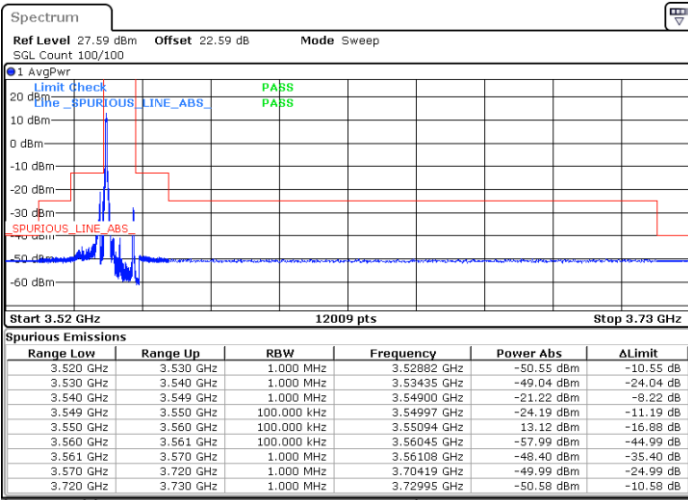
Unwanted Emission (MASK)

FR1 n48 / 10MHz / CP OFDM / QPSK

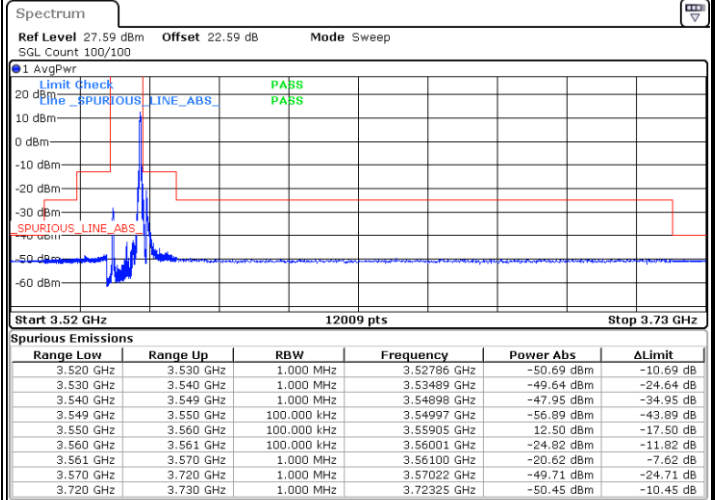
Lowest Channel

1RB0

1RBmax

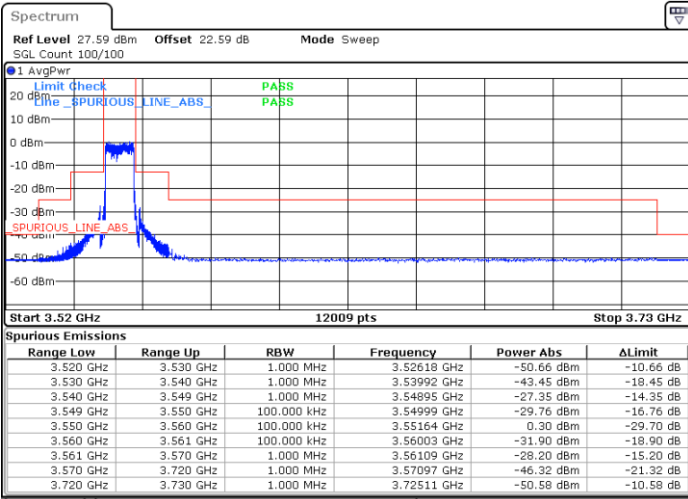


Date: 27.SEP.2023 20:22:54



Date: 27.SEP.2023 20:23:26

Full RB



Date: 27.SEP.2023 20:15:20

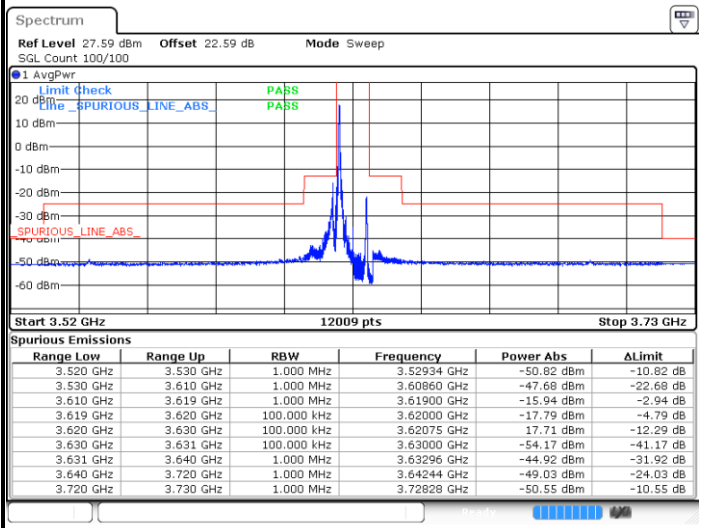


FR1 n48 / 10MHz / CP OFDM / QPSK

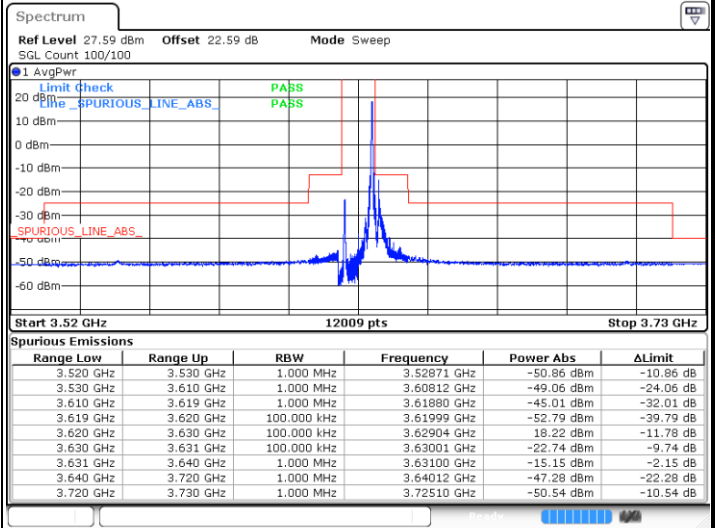
Middle Channel

1RB0

1RBmax

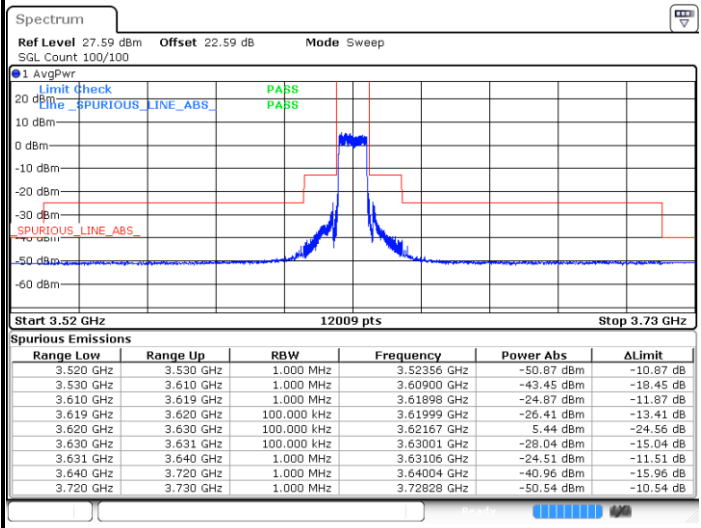


Date: 27.SEP.2023 20:31:36



Date: 27.SEP.2023 20:35:15

Full RB



Date: 27.SEP.2023 20:35:52

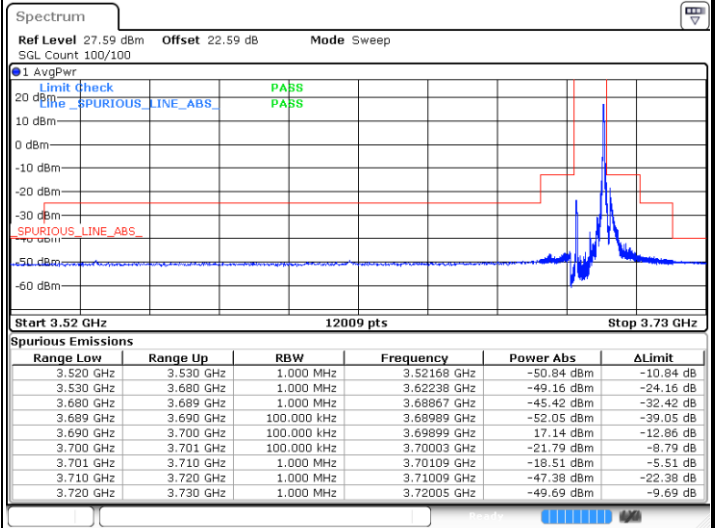
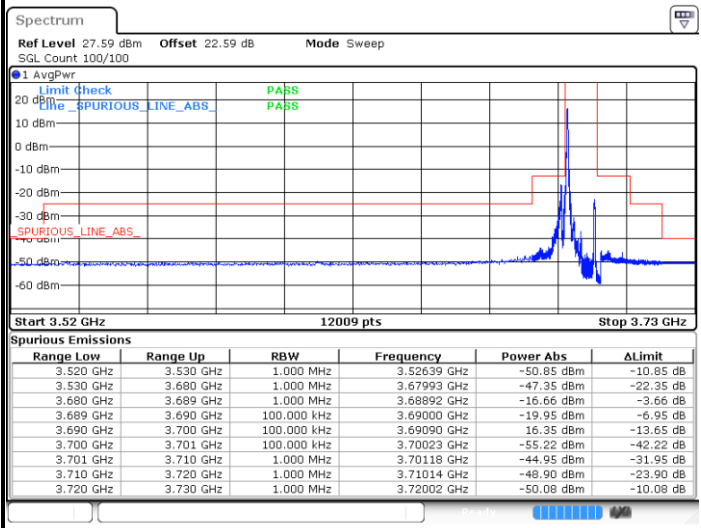


FR1 n48 / 10MHz / CP OFDM / QPSK

Highest Channel

1RB0

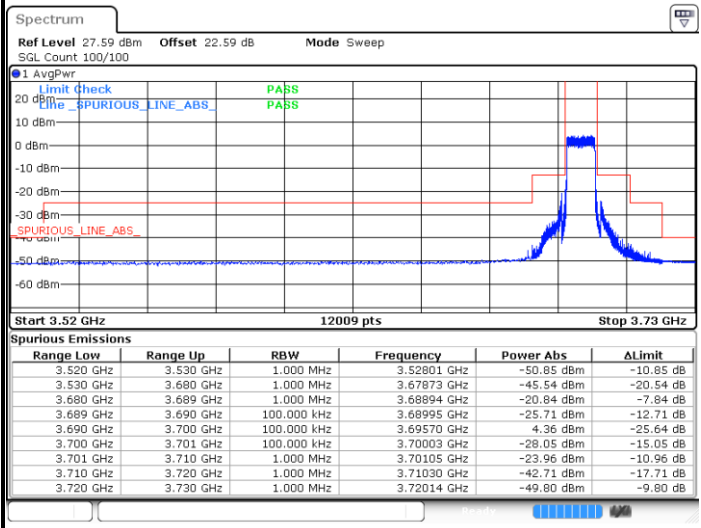
1RBmax



Date: 27.SEP.2023 20:40:02

Date: 27.SEP.2023 20:43:11

Full RB



Date: 27.SEP.2023 20:39:34

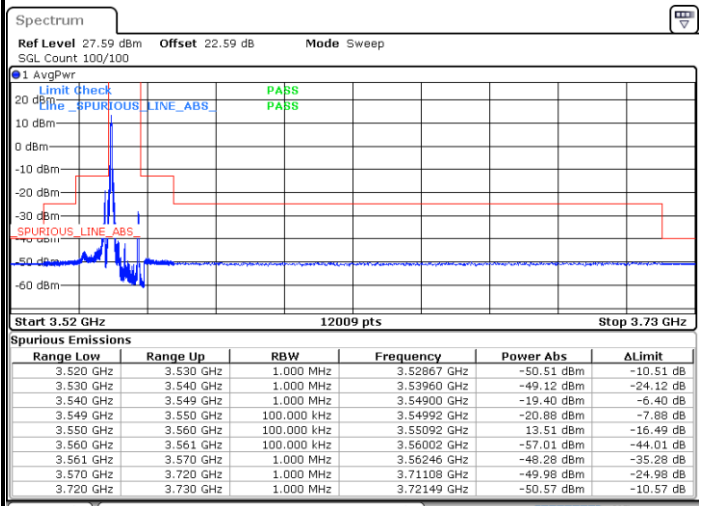


FR1 n48 / 10MHz / CP OFDM / 16QAM

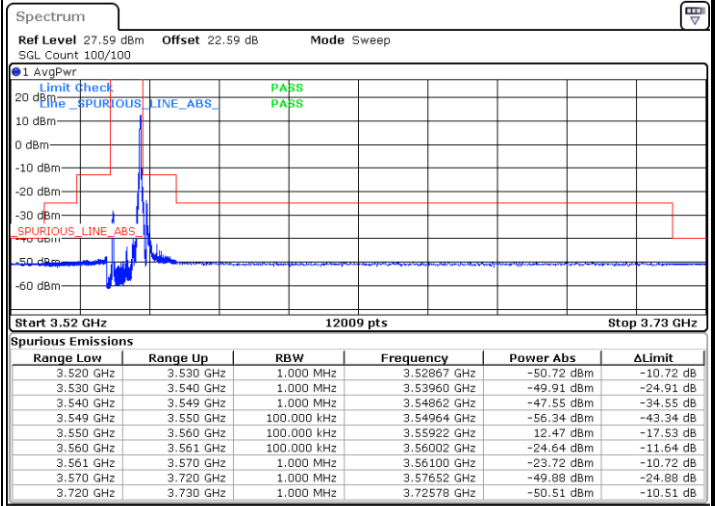
Lowest Channel

1RB0

1RBmax

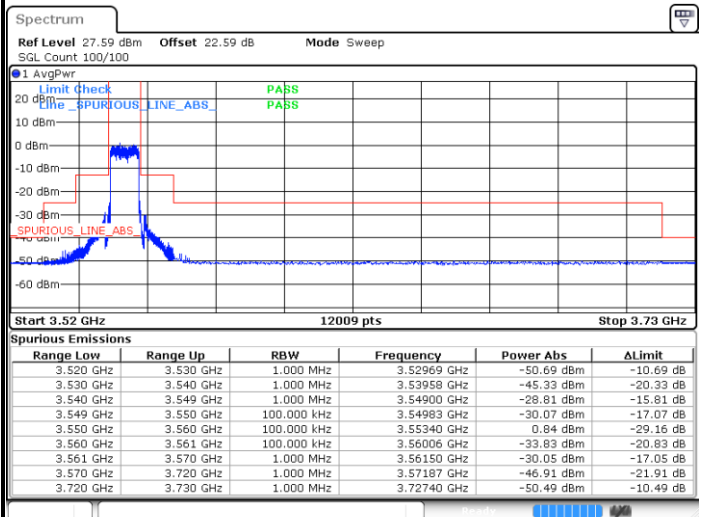


Date: 27.SEP.2023 20:22:28



Date: 27.SEP.2023 20:23:53

Full RB



Date: 27.SEP.2023 20:17:32