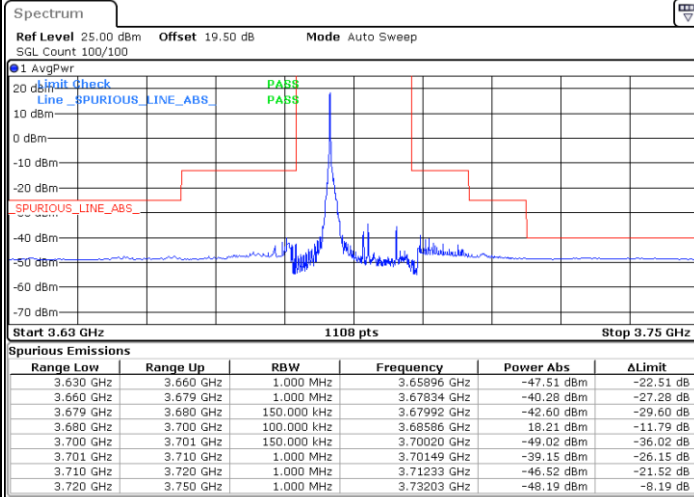




LTE Band 48 / 15MHz

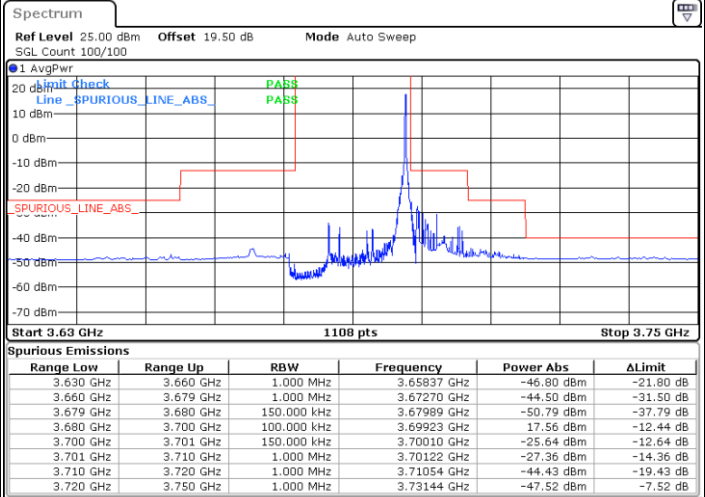
16QAM

Highest Channel / 1RB0



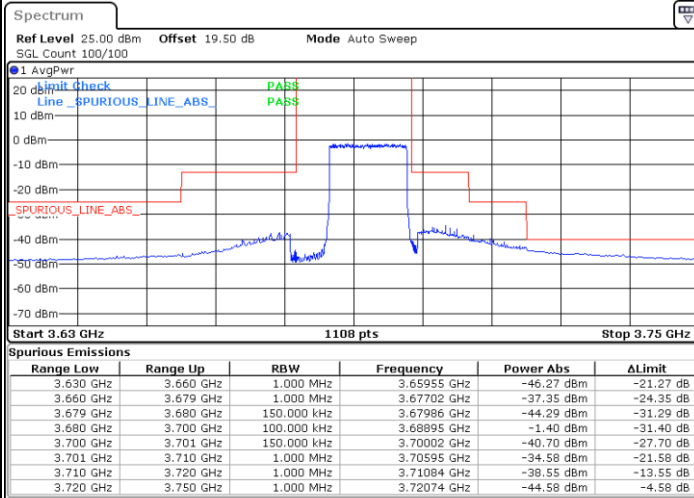
Date: 1.JUL.2024 14:26:16

Highest Channel / 1RBmax



Date: 1.JUL.2024 14:31:15

Highest Channel / FullRB



Date: 1.JUL.2024 14:36:15

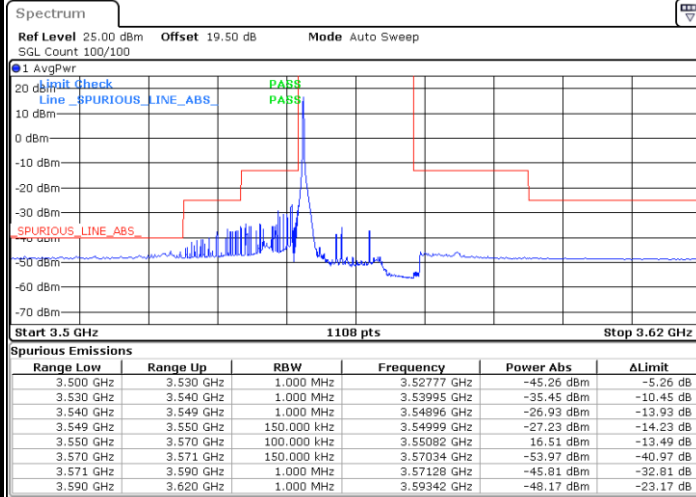
N/A



LTE Band 48 / 15MHz

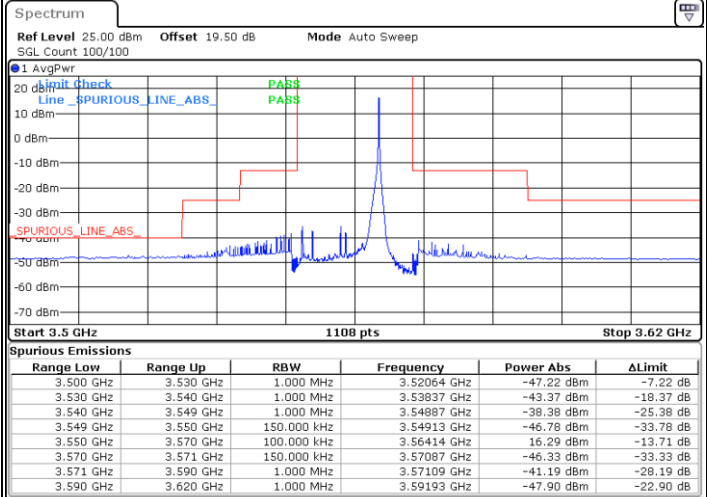
64QAM

Lowest Channel / 1RB0



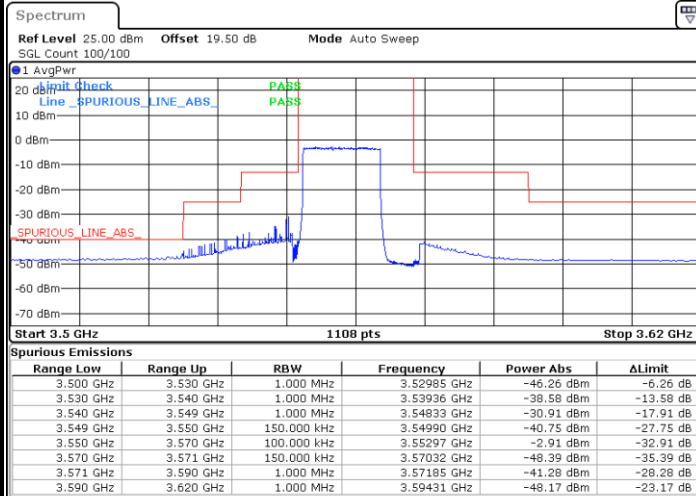
Date: 1.JUL.2024 11:16:35

Lowest Channel / 1RBmax



Date: 1.JUL.2024 11:22:52

Lowest Channel / FullIRB



Date: 1.JUL.2024 11:24:07

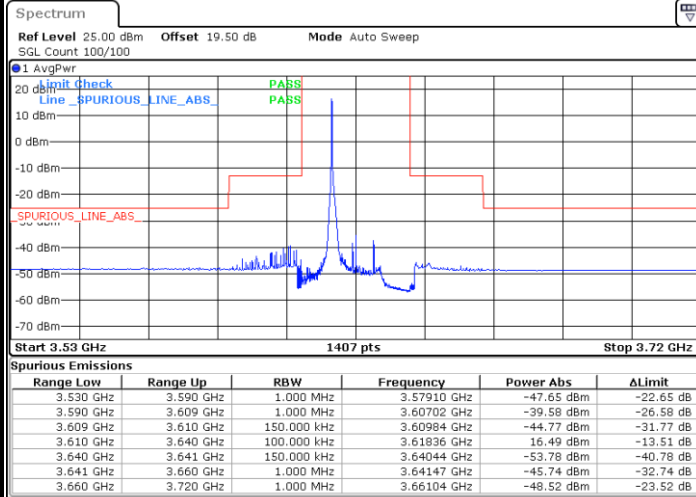
N/A



LTE Band 48 / 15MHz

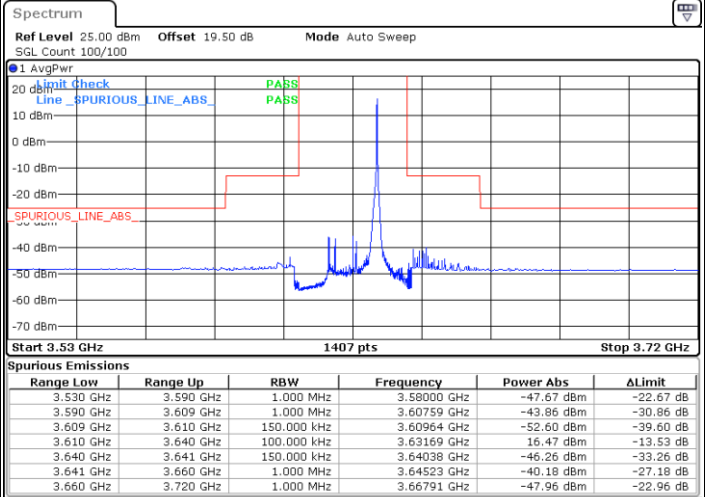
64QAM

Middle Channel / 1RB0



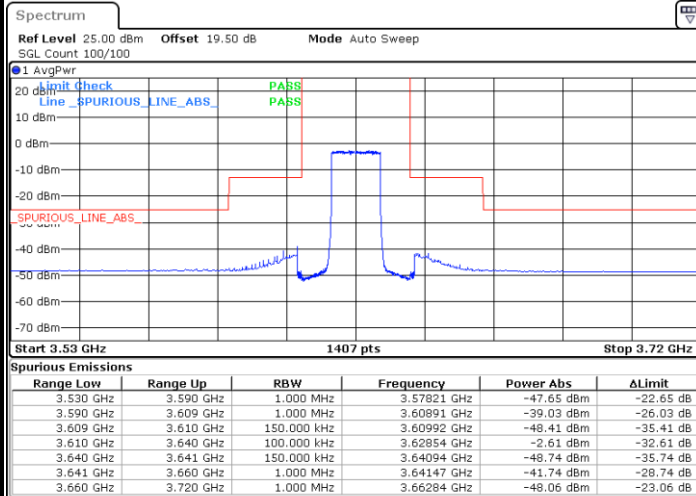
Date: 1.JUL.2024 14:13:32

Middle Channel / 1RBmax



Date: 1.JUL.2024 14:05:16

Middle Channel / FullRB



Date: 1.JUL.2024 14:03:37

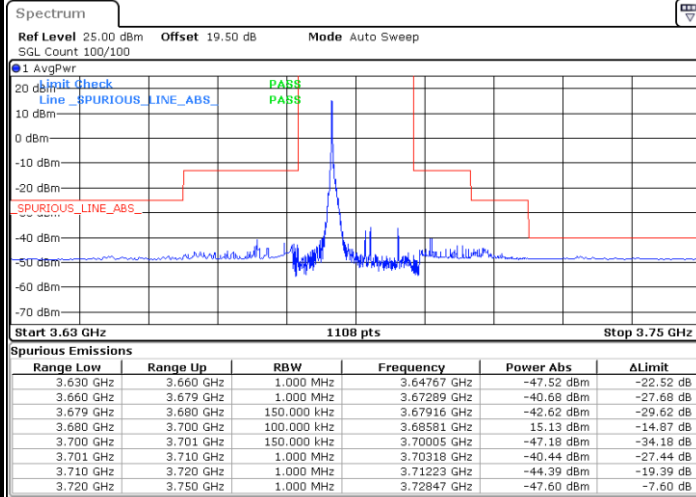
N/A



LTE Band 48 / 15MHz

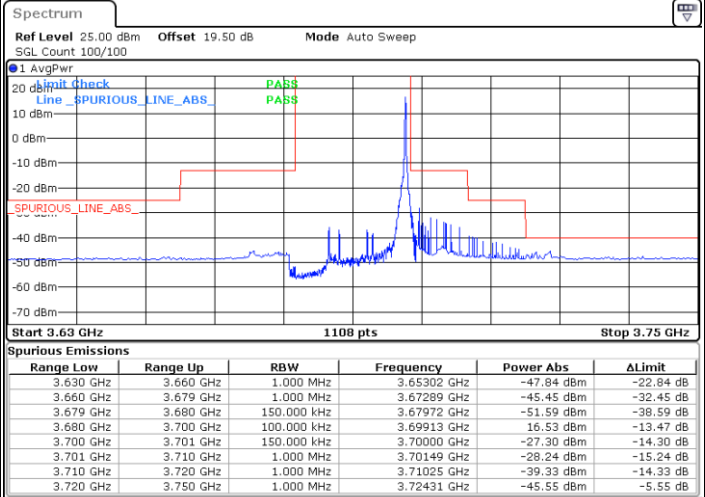
64QAM

Highest Channel / 1RB0



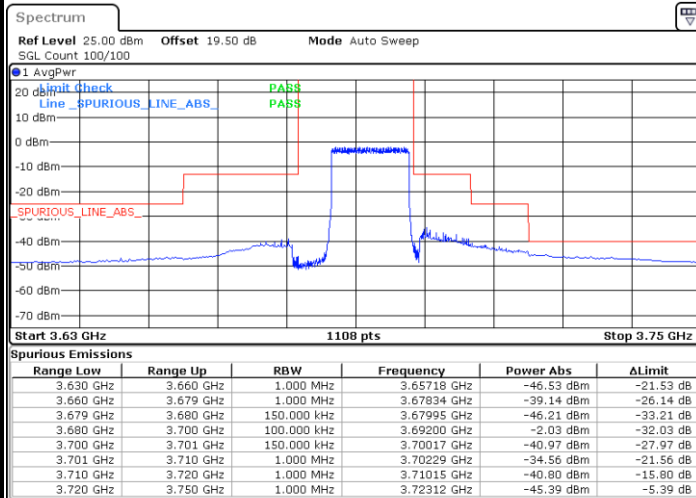
Date: 1.JUL.2024 14:24:36

Highest Channel / 1RBmax



Date: 1.JUL.2024 14:32:55

Highest Channel / FullRB



Date: 1.JUL.2024 14:34:35

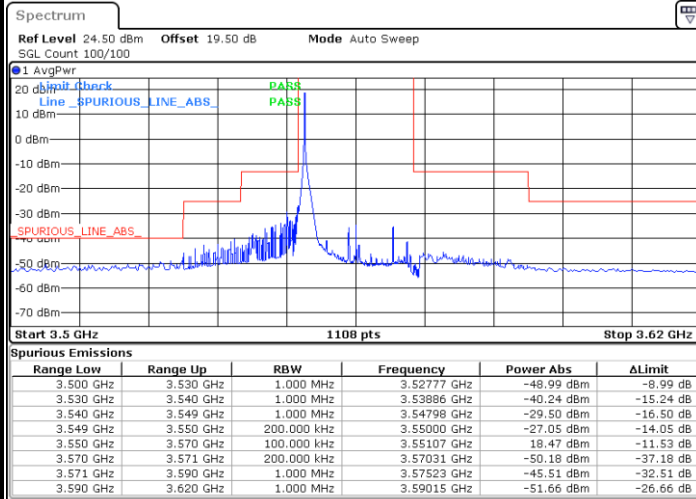
N/A



LTE Band 48 / 20MHz

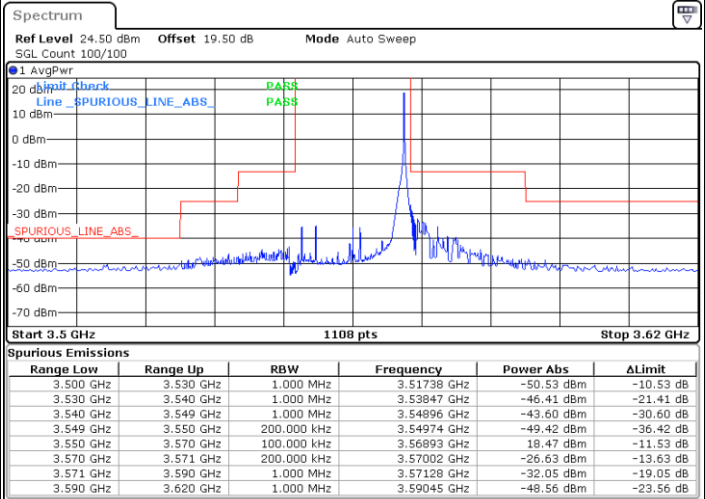
QPSK

Lowest Channel / 1RB0



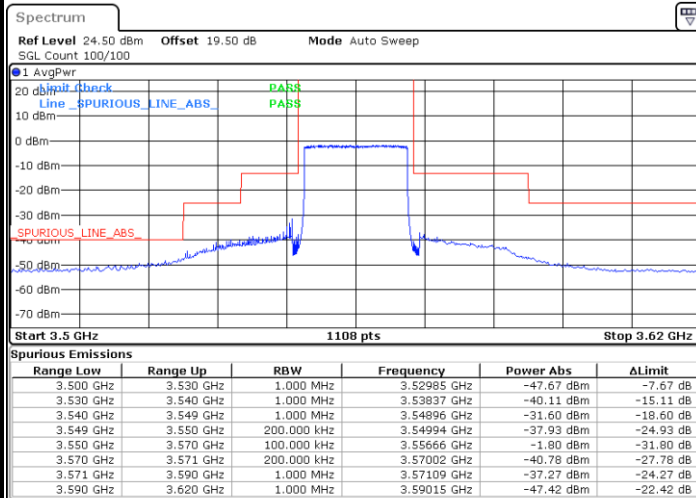
Date: 1.JUL.2024 14:48:11

Lowest Channel / 1RBmax



Date: 1.JUL.2024 14:56:32

Lowest Channel / FullIRB



Date: 1.JUL.2024 14:58:12

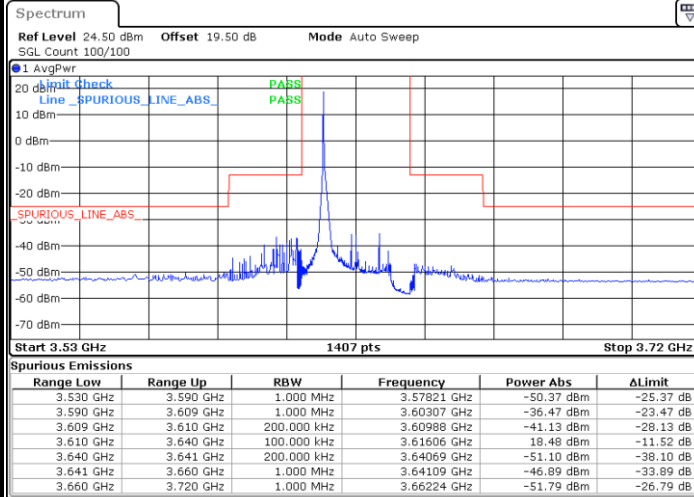
N/A



LTE Band 48 / 20MHz

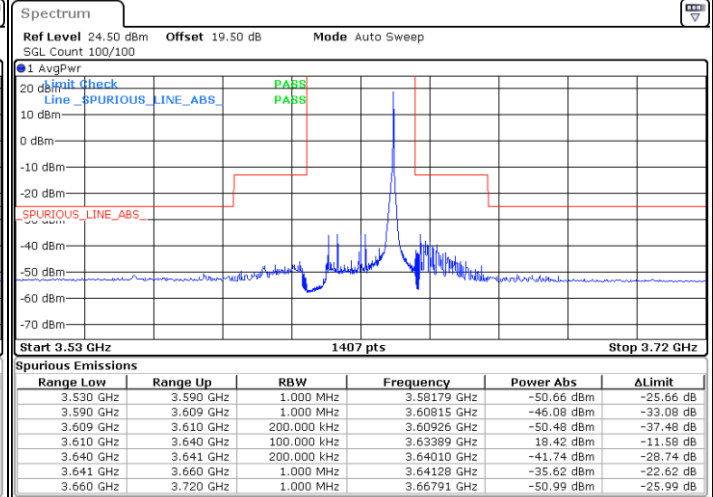
QPSK

Middle Channel / 1RB0



Date: 1.JUL.2024 15:24:14

Middle Channel / 1RBmax



Date: 1.JUL.2024 15:15:58

Middle Channel / FullRB



Date: 1.JUL.2024 15:14:19

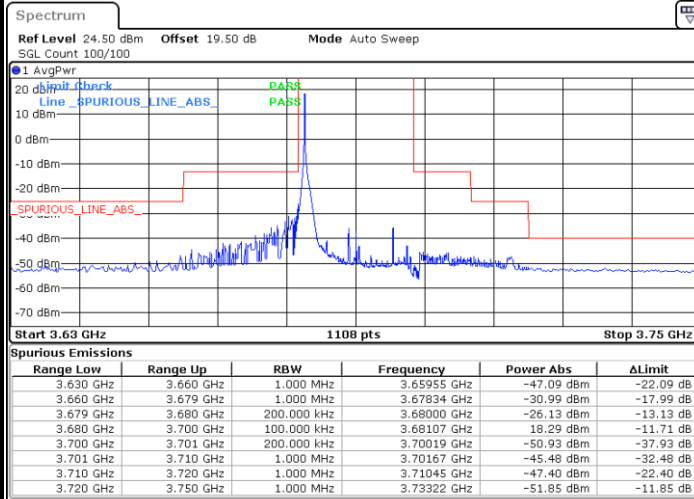
N/A



LTE Band 48 / 20MHz

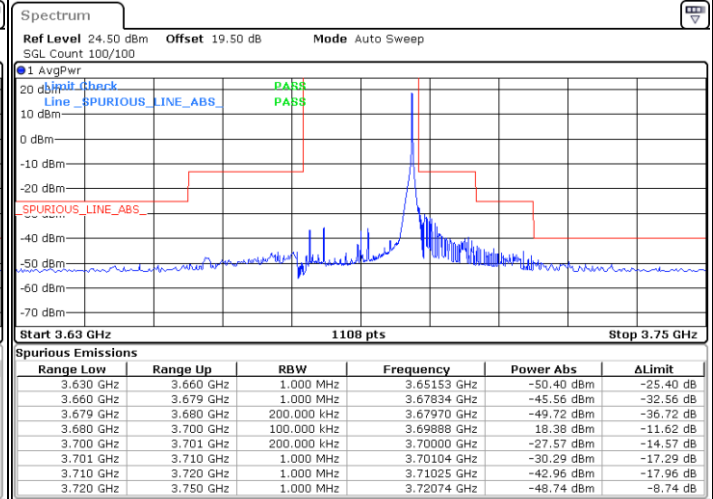
QPSK

Highest Channel / 1RB0



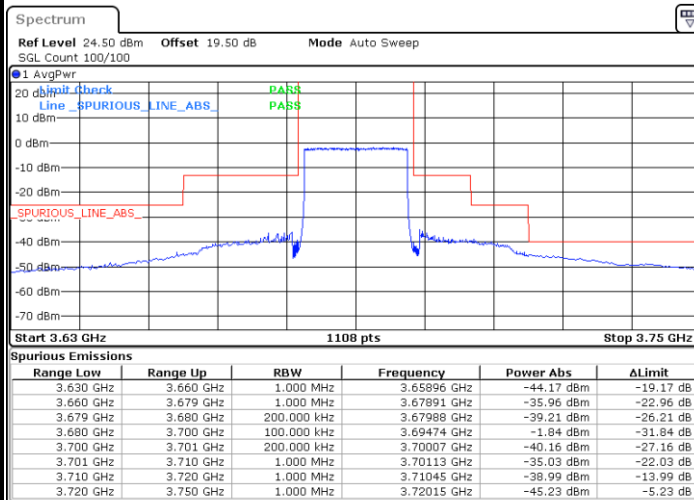
Date: 1.JUL.2024 15:36:24

Highest Channel / 1RBmax



Date: 1.JUL.2024 15:44:43

Highest Channel / FullRB



Date: 1.JUL.2024 15:46:23

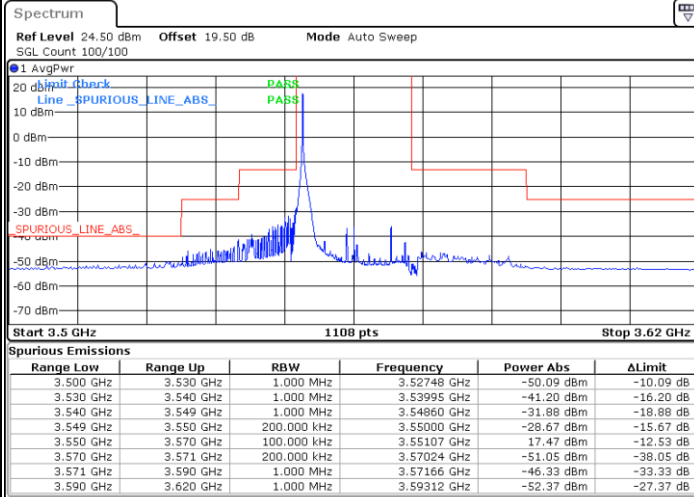
N/A



LTE Band 48 / 20MHz

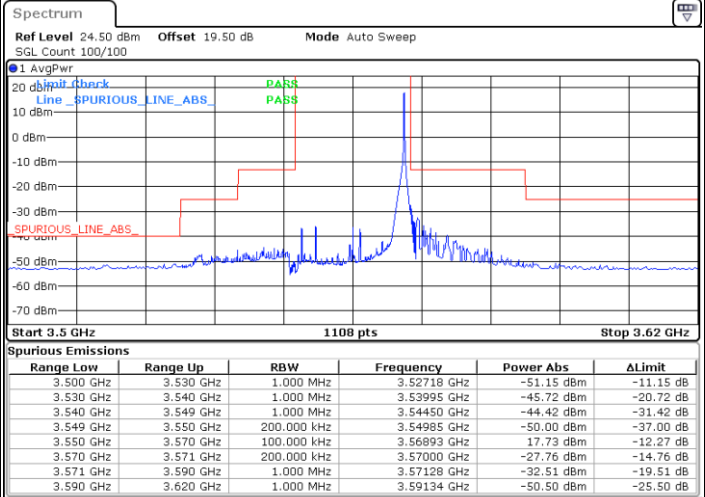
16QAM

Lowest Channel / 1RB0



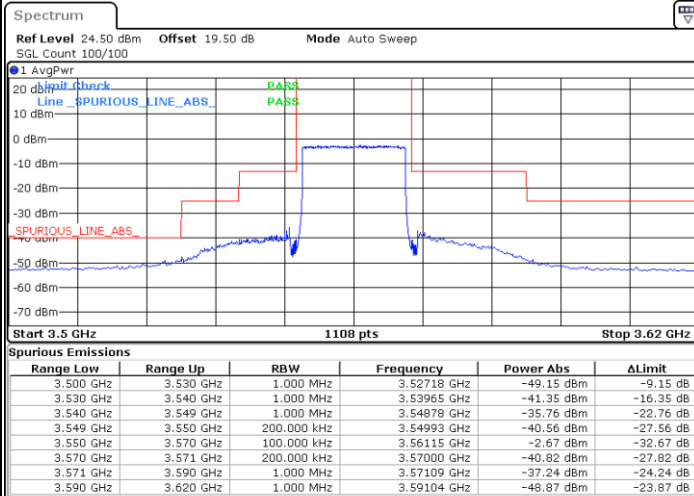
Date: 1.JUL.2024 14:49:51

Lowest Channel / 1RBmax



Date: 1.JUL.2024 14:54:51

Lowest Channel / FullIRB



Date: 1.JUL.2024 14:59:52

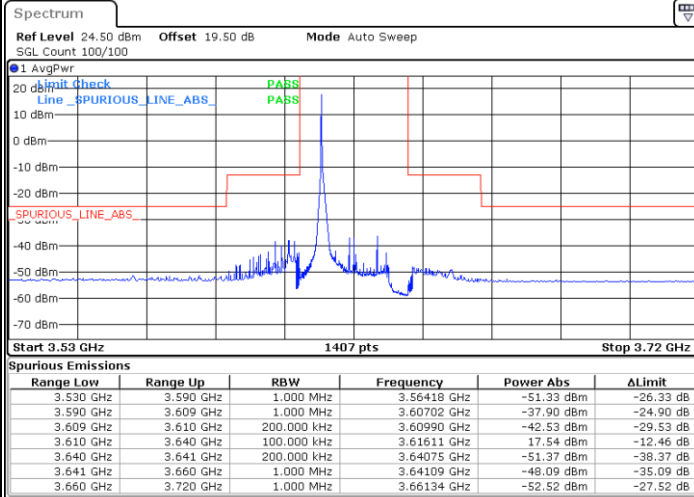
N/A



LTE Band 48 / 20MHz

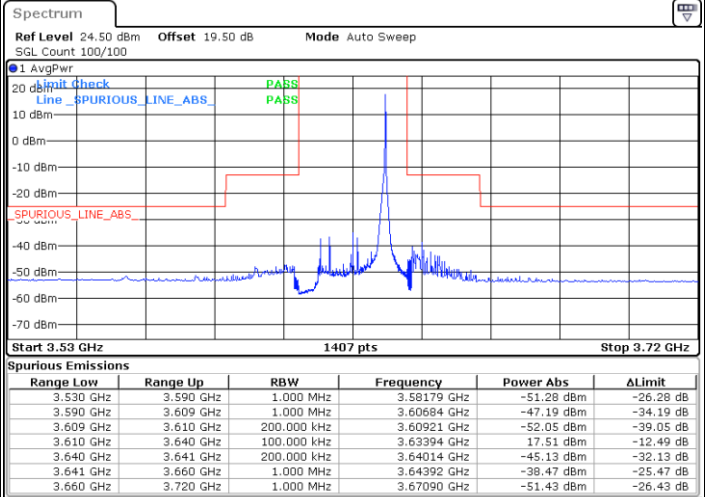
16QAM

Middle Channel / 1RB0



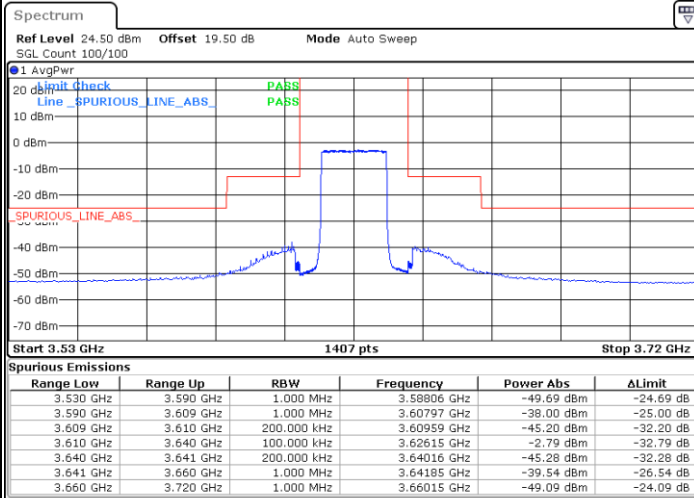
Date: 1.JUL.2024 15:22:35

Middle Channel / 1RBmax



Date: 1.JUL.2024 15:17:37

Middle Channel / FullRB



Date: 1.JUL.2024 15:12:39

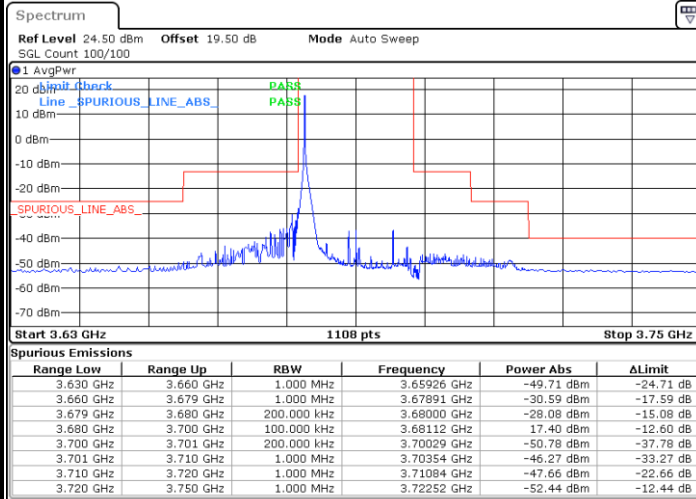
N/A



LTE Band 48 / 20MHz

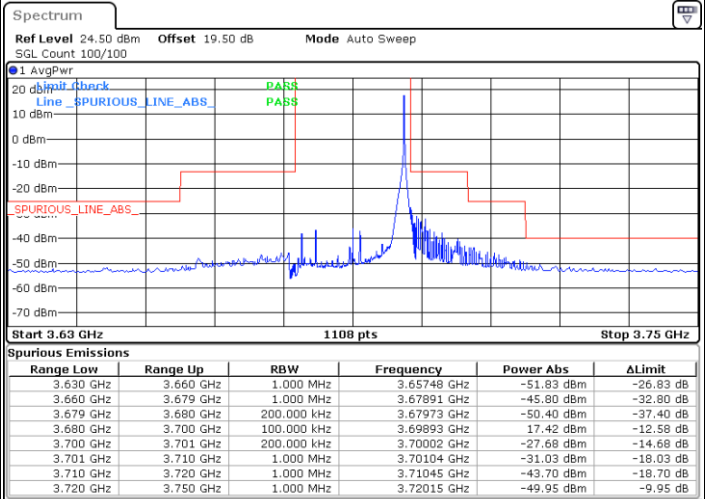
16QAM

Highest Channel / 1RB0



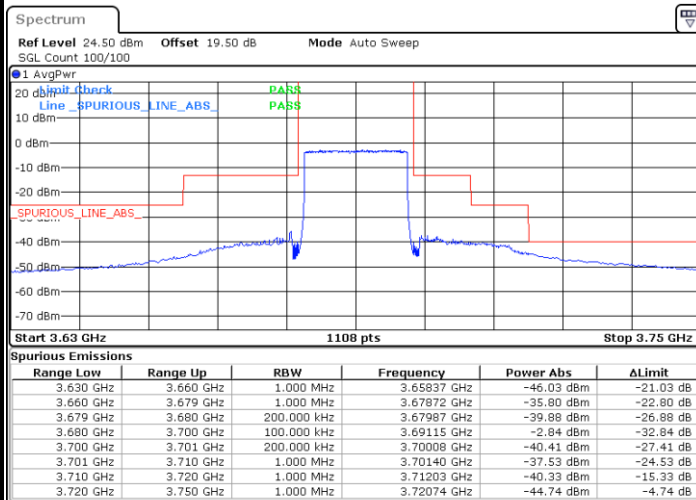
Date: 1.JUL.2024 15:38:04

Highest Channel / 1RBmax



Date: 1.JUL.2024 15:43:03

Highest Channel / FullRB



Date: 1.JUL.2024 15:49:56

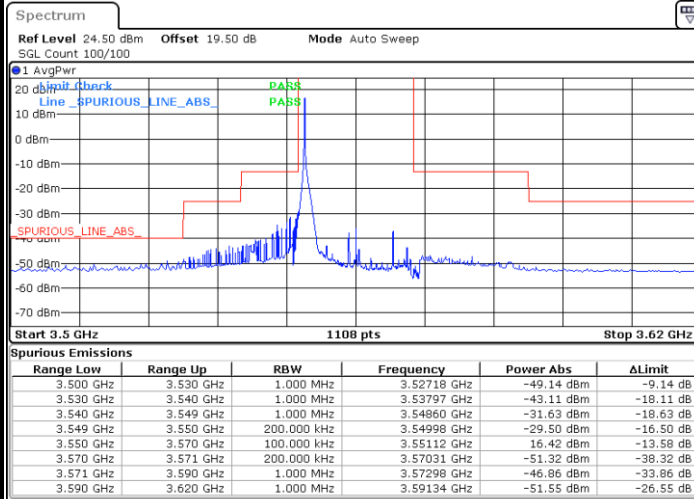
N/A



LTE Band 48 / 20MHz

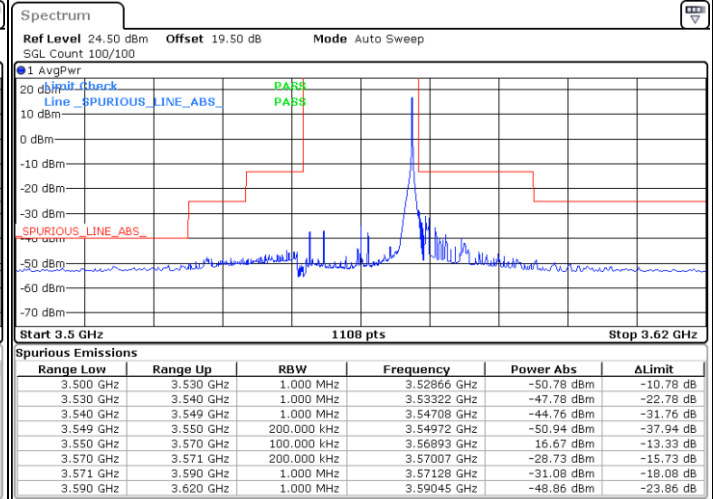
64QAM

Lowest Channel / 1RB0



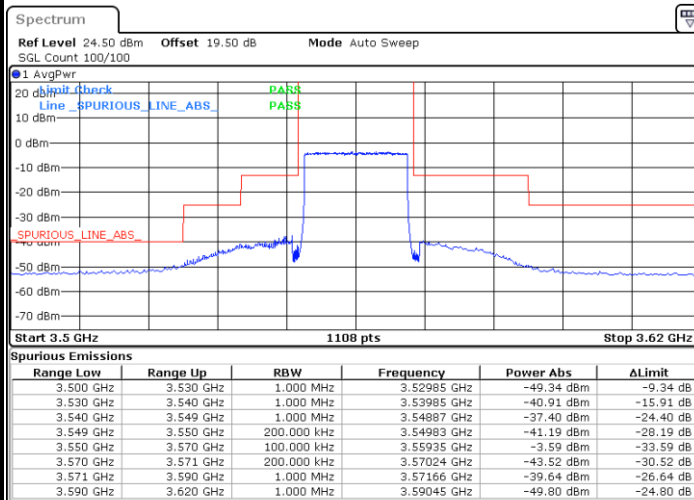
Date: 1.JUL.2024 14:51:31

Lowest Channel / 1RBmax



Date: 1.JUL.2024 14:53:11

Lowest Channel / FullRB



Date: 1.JUL.2024 15:01:32

N/A



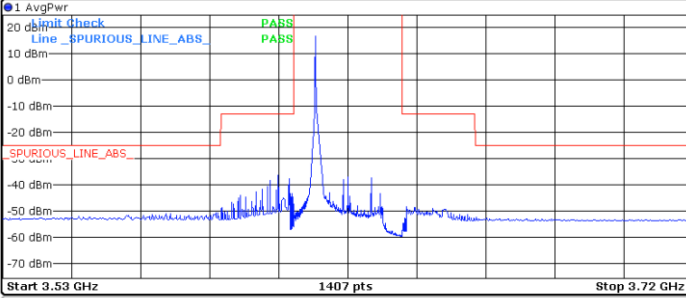
LTE Band 48 / 20MHz

64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax

Spectrum

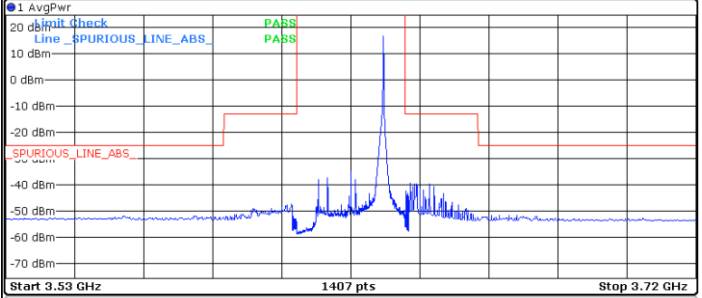
Ref Level 24.50 dBm Offset 19.50 dB Mode Auto Sweep
SGL Count 100/100

Start 3.53 GHz 1407 pts Stop 3.72 GHz

Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.590 GHz	1.000 MHz	3.58925 GHz	-50.48 dBm	-25.48 dB
3.590 GHz	3.609 GHz	1.000 MHz	3.60571 GHz	-36.44 dBm	-23.44 dB
3.609 GHz	3.610 GHz	200.000 kHz	3.60918 GHz	-43.24 dBm	-30.24 dB
3.610 GHz	3.640 GHz	100.000 kHz	3.61606 GHz	16.50 dBm	-13.50 dB
3.640 GHz	3.641 GHz	200.000 kHz	3.64072 GHz	-52.67 dBm	-39.67 dB
3.641 GHz	3.660 GHz	1.000 MHz	3.64109 GHz	-48.15 dBm	-35.15 dB
3.660 GHz	3.720 GHz	1.000 MHz	3.66045 GHz	-52.16 dBm	-27.16 dB

Spectrum

Ref Level 24.50 dBm Offset 19.50 dB Mode Auto Sweep
SGL Count 100/100

Start 3.53 GHz 1407 pts Stop 3.72 GHz

Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.590 GHz	1.000 MHz	3.58239 GHz	-51.78 dBm	-26.78 dB
3.590 GHz	3.609 GHz	1.000 MHz	3.60872 GHz	-47.30 dBm	-34.30 dB
3.609 GHz	3.610 GHz	200.000 kHz	3.60914 GHz	-51.94 dBm	-38.94 dB
3.610 GHz	3.640 GHz	100.000 kHz	3.63394 GHz	16.49 dBm	-13.51 dB
3.640 GHz	3.641 GHz	200.000 kHz	3.64008 GHz	-42.34 dBm	-29.34 dB
3.641 GHz	3.660 GHz	1.000 MHz	3.64128 GHz	-39.22 dBm	-26.22 dB
3.660 GHz	3.720 GHz	1.000 MHz	3.66851 GHz	-51.46 dBm	-26.46 dB

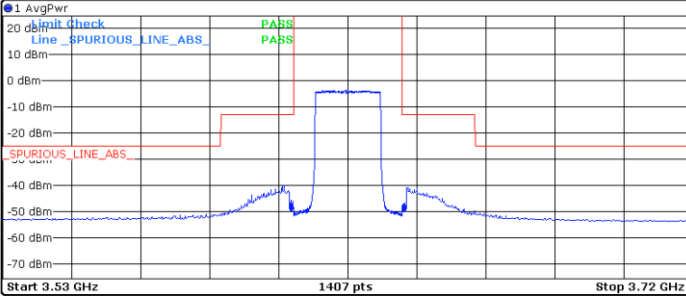
Date: 1.JUL.2024 15:20:56

Date: 1.JUL.2024 15:19:16

Middle Channel / FullRB

N/A

Spectrum

Ref Level 24.50 dBm Offset 19.50 dB Mode Auto Sweep
SGL Count 100/100

Start 3.53 GHz 1407 pts Stop 3.72 GHz

Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.590 GHz	1.000 MHz	3.58597 GHz	-50.79 dBm	-25.79 dB
3.590 GHz	3.609 GHz	1.000 MHz	3.60740 GHz	-39.96 dBm	-26.96 dB
3.609 GHz	3.610 GHz	200.000 kHz	3.60948 GHz	-45.64 dBm	-32.64 dB
3.610 GHz	3.640 GHz	100.000 kHz	3.62440 GHz	-3.81 dBm	-33.81 dB
3.640 GHz	3.641 GHz	200.000 kHz	3.64059 GHz	-46.63 dBm	-33.63 dB
3.641 GHz	3.660 GHz	1.000 MHz	3.64109 GHz	-40.89 dBm	-27.89 dB
3.660 GHz	3.720 GHz	1.000 MHz	3.66015 GHz	-50.26 dBm	-25.26 dB

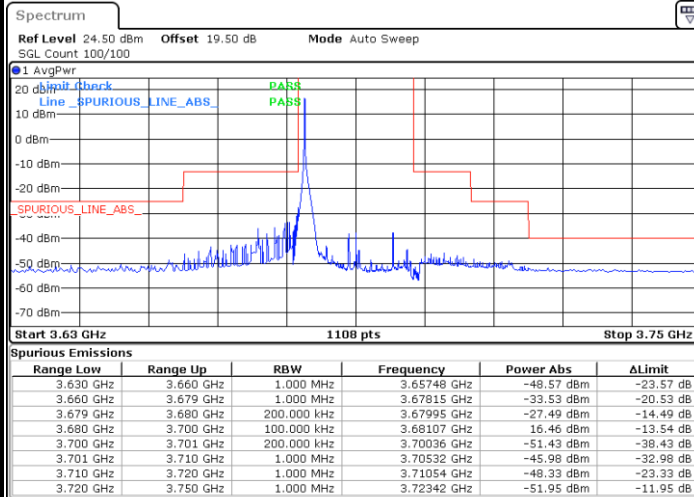
Date: 1.JUL.2024 15:11:00



LTE Band 48 / 20MHz

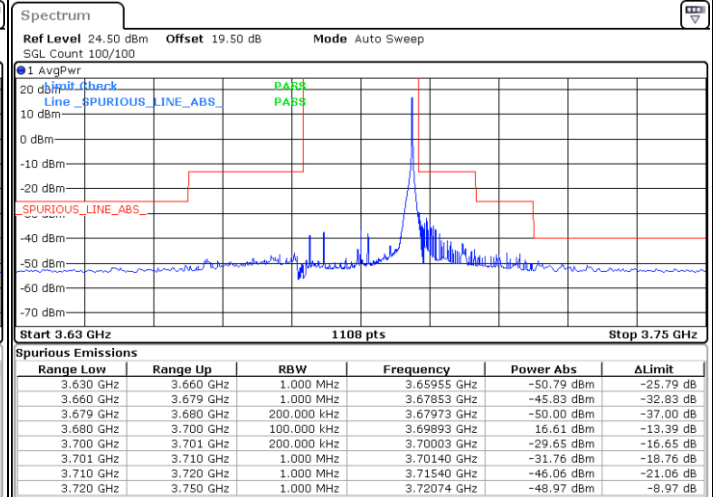
64QAM

Highest Channel / 1RB0



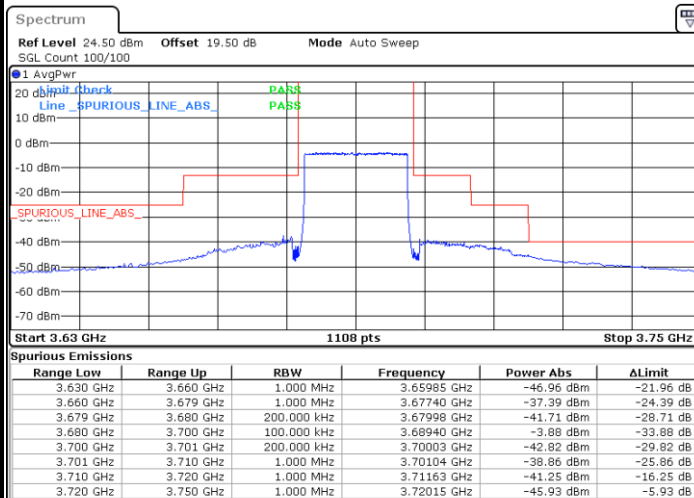
Date: 1.JUL.2024 15:39:44

Highest Channel / 1RBmax



Date: 1.JUL.2024 15:41:23

Highest Channel / FullRB



Date: 1.JUL.2024 15:51:36

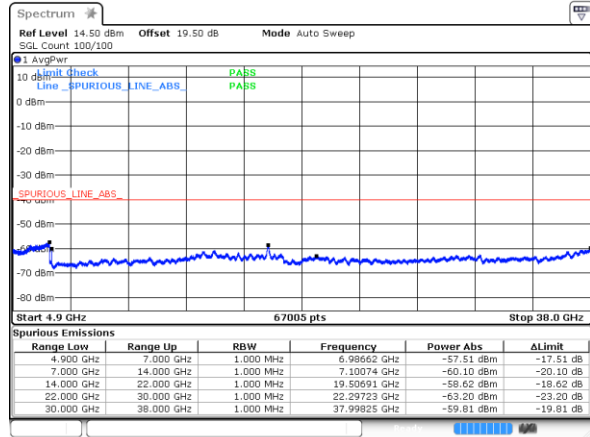
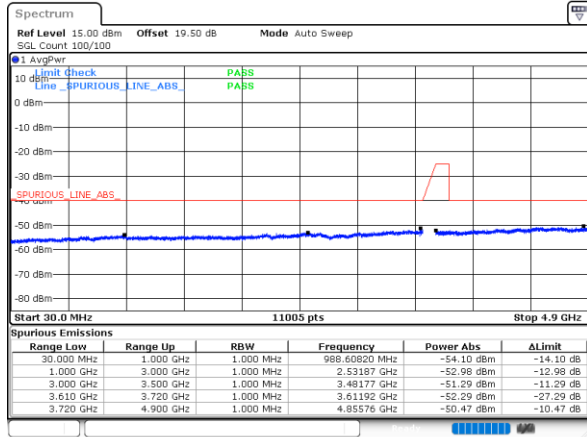
N/A



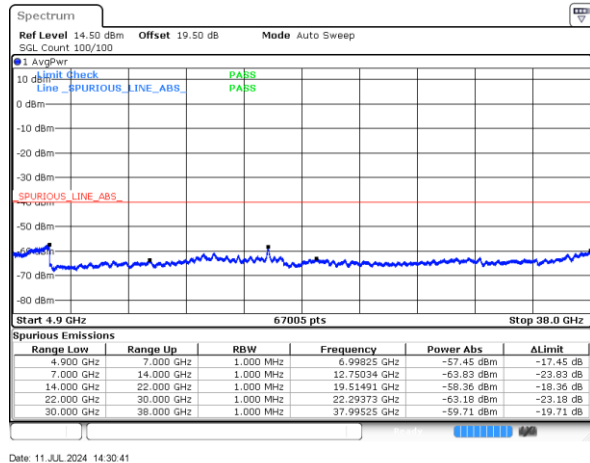
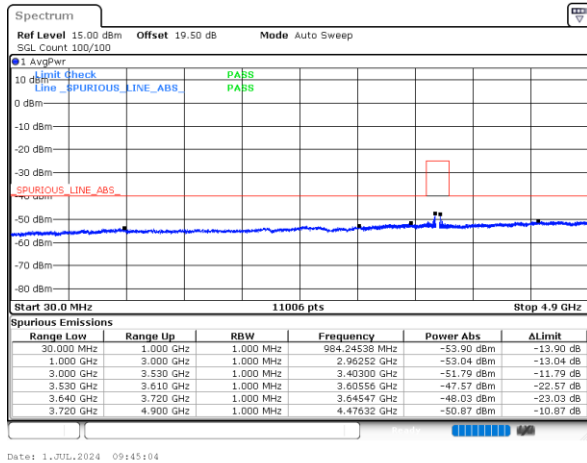
Conducted Spurious Emission

LTE Band 48 / 5MHz

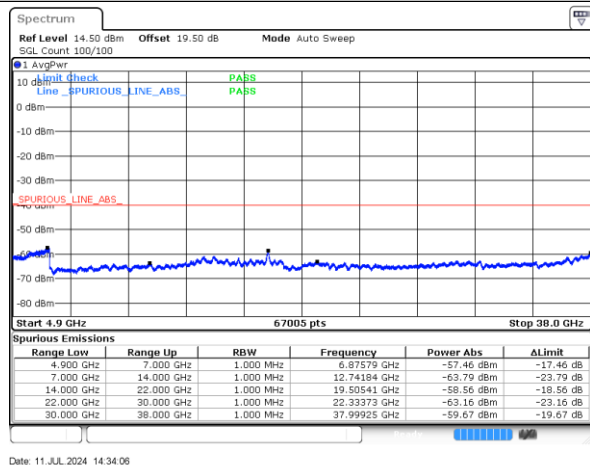
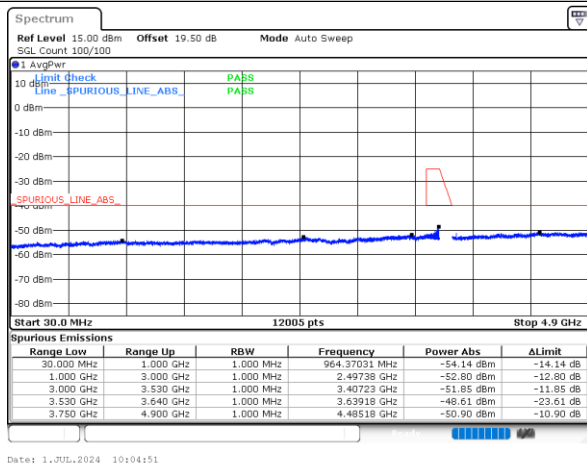
Lowest Channel / QPSK



Middle Channel / QPSK



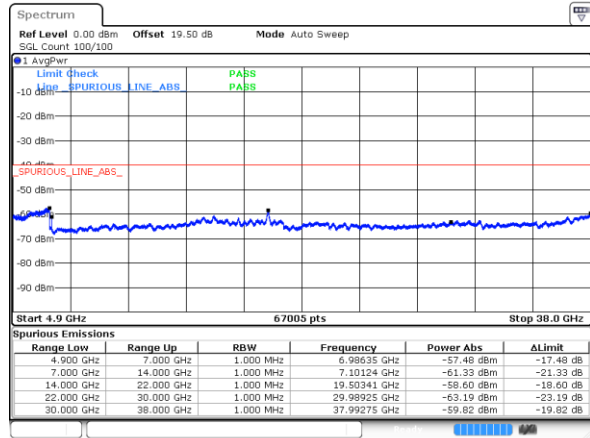
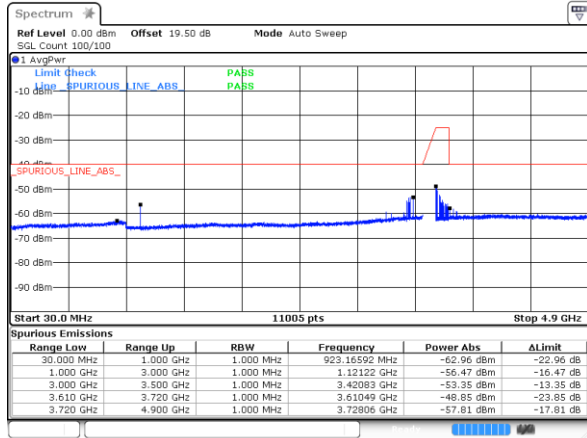
Highest Channel / QPSK



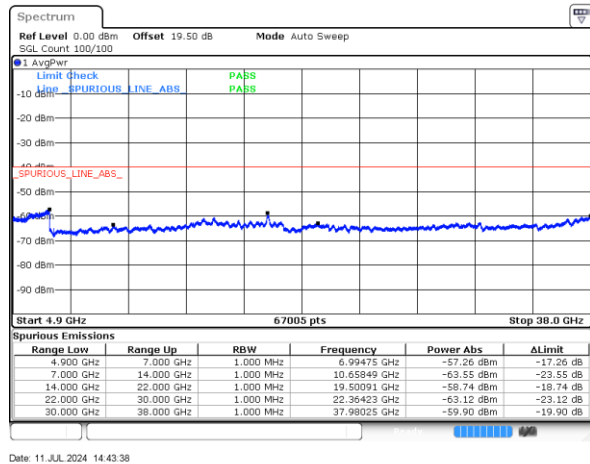
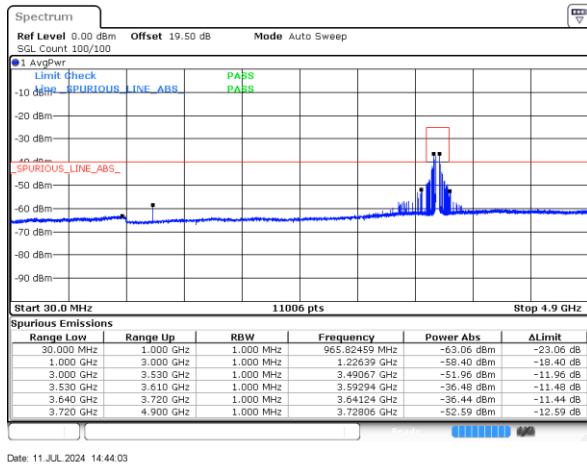


LTE Band 48 / 10MHz

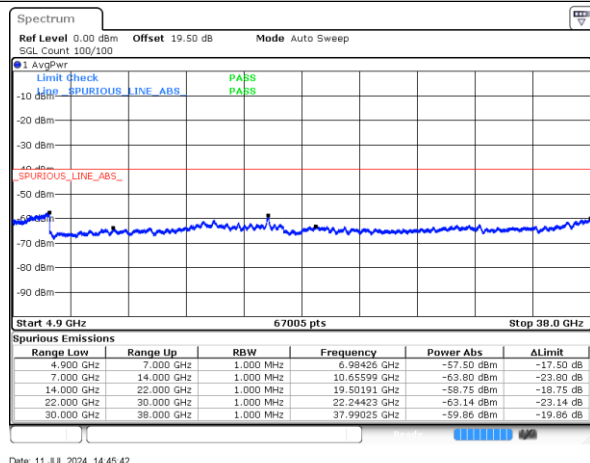
Lowest Channel / QPSK



Middle Channel / QPSK



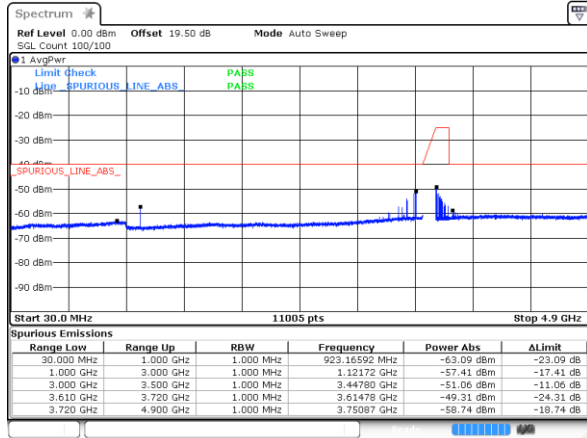
Highest Channel / QPSK



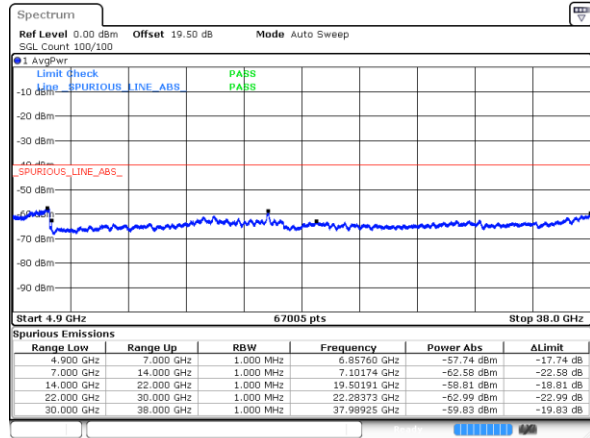


LTE Band 48 / 15MHz

Lowest Channel / QPSK

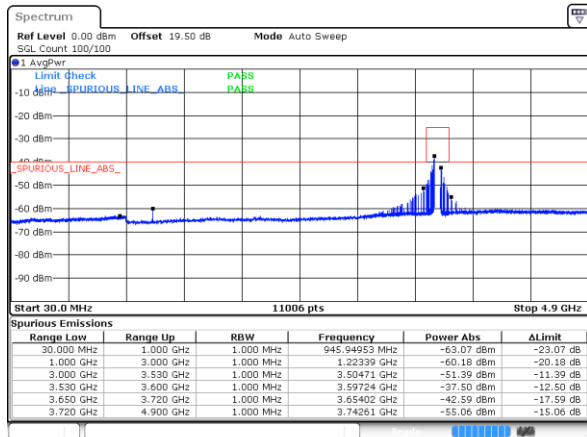


Date: 11 JUL 2024 14:48:32

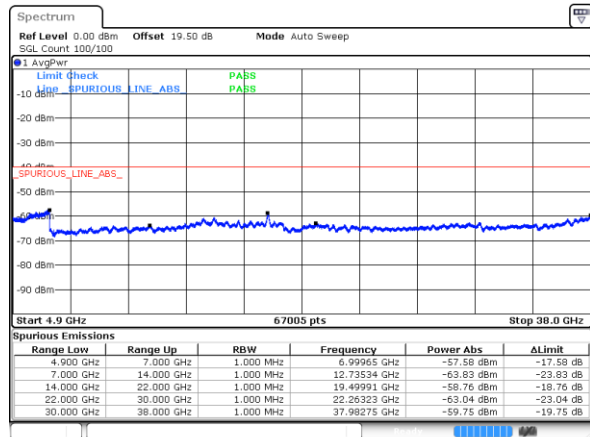


Date: 11 JUL 2024 14:50:36

Middle Channel / QPSK

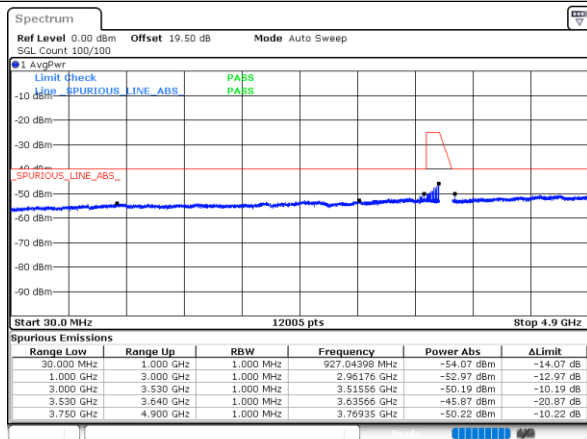


Date: 11 JUL 2024 14:54:57

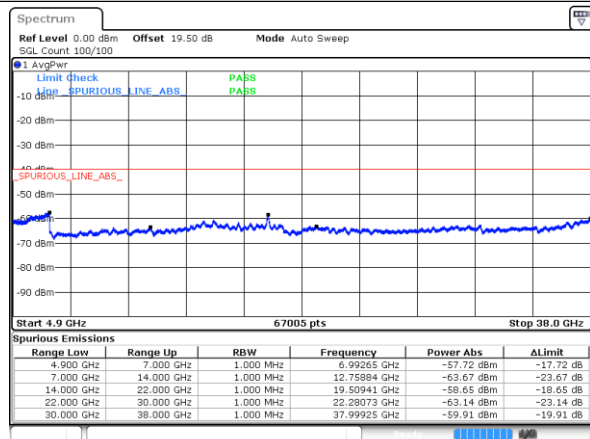


Date: 11 JUL 2024 14:54:38

Highest Channel / QPSK



Date: 11 JUL 2024 14:39:19

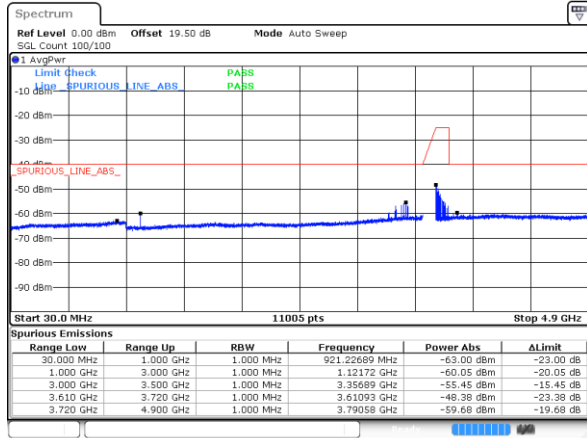


Date: 11 JUL 2024 14:56:16

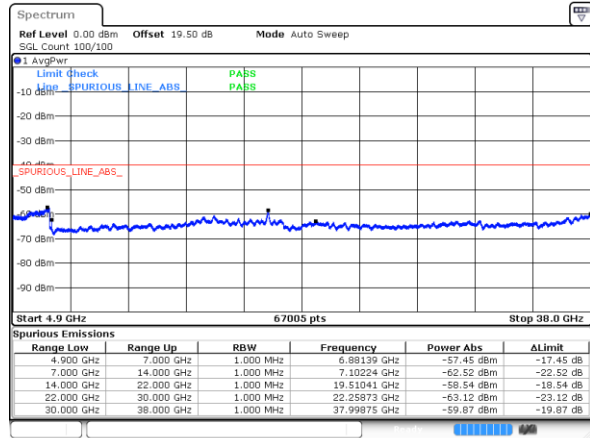


LTE Band 48 / 20MHz

Lowest Channel / QPSK

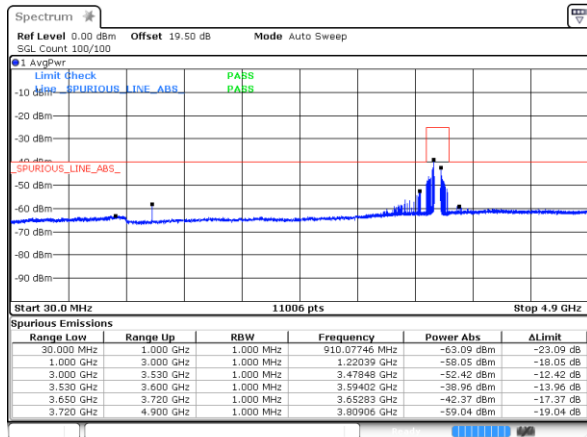


Date: 11 JUL 2024 15:01:28

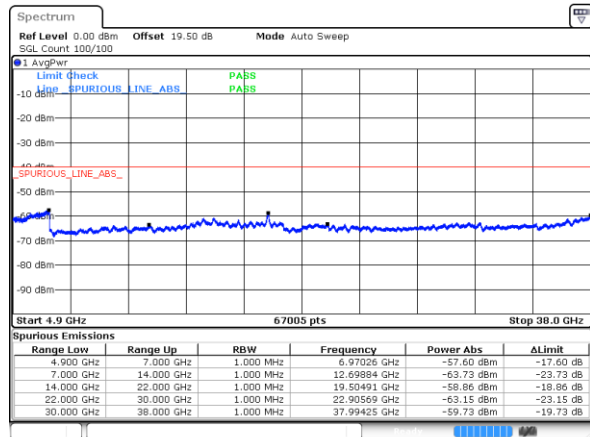


Date: 11 JUL 2024 15:00:55

Middle Channel / QPSK

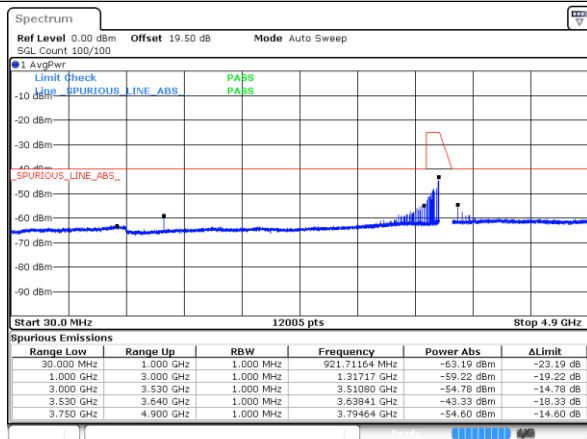


Date: 11 JUL 2024 15:02:41

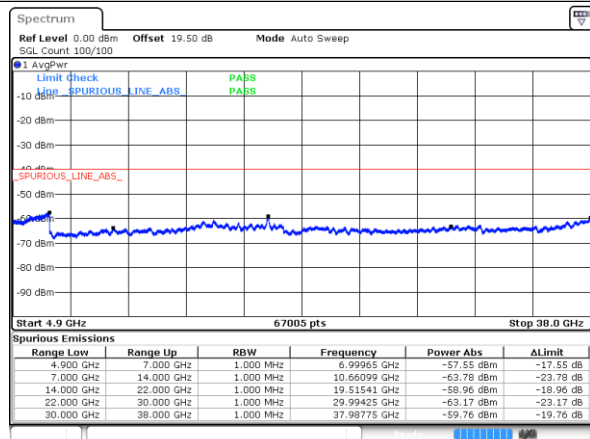


Date: 11 JUL 2024 15:03:48

Highest Channel / QPSK



Date: 11 JUL 2024 15:05:49



Date: 11 JUL 2024 15:05:27

**Frequency Stability**

Test Conditions		LTE Band 48 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0000	PASS
40	Normal Voltage	0.0001	
30	Normal Voltage	0.0002	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0003	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0009	
-20	Normal Voltage	0.0000	
-30	Normal Voltage	0.0004	
20	Maximum Voltage	0.0009	
20	Normal Voltage	0.0001	
20	Minimum Voltage	0.0011	

Note:

1. Normal Voltage = 3.3 V. ; Minimum Voltage = 3.14 V. ; Maximum Voltage = 4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band CA_48C

26dB Bandwidth

Mode	LTE Band 48C : 26dB BW(MHz)			
QPSK				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Middle CH	24.63	29.85	34.90	24.88
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	29.91	34.90	39.80	-

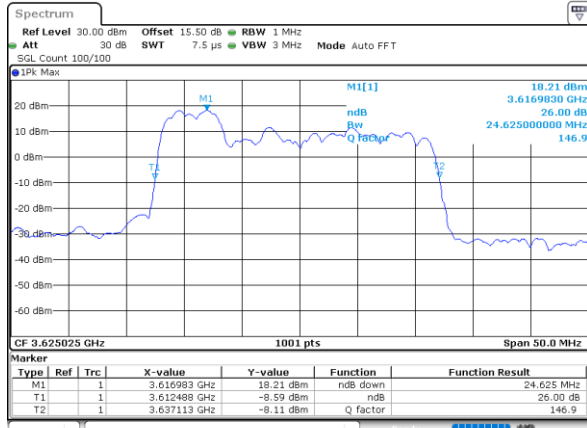
Mode	LTE Band 48C : 26dB BW(MHz)			
16QAM				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Middle CH	24.68	29.79	34.69	24.98
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	29.91	34.90	39.64	-



LTE Band 48C

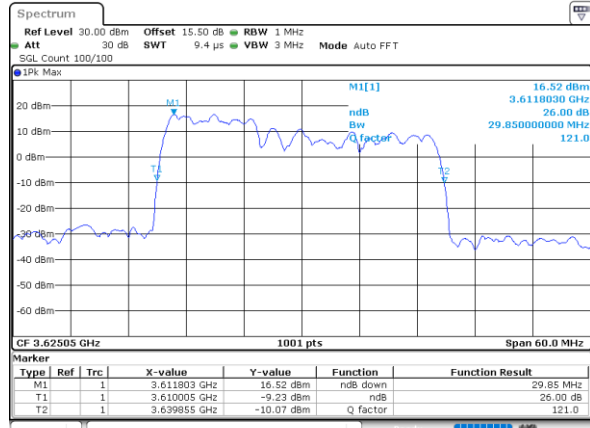
QPSK

Middle Channel / 5MHz+20MHz



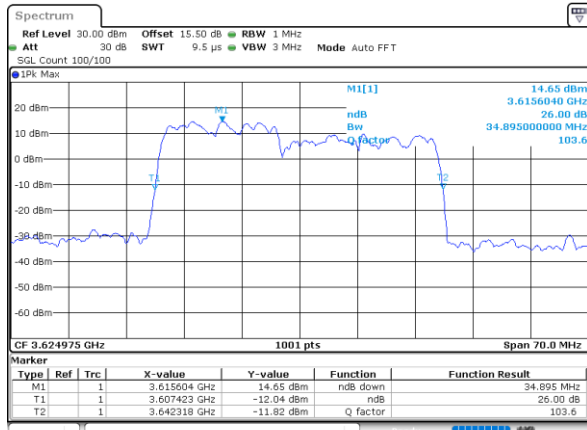
Date: 5.JUL.2024 21:44:09

Middle Channel / 10MHz+20MHz



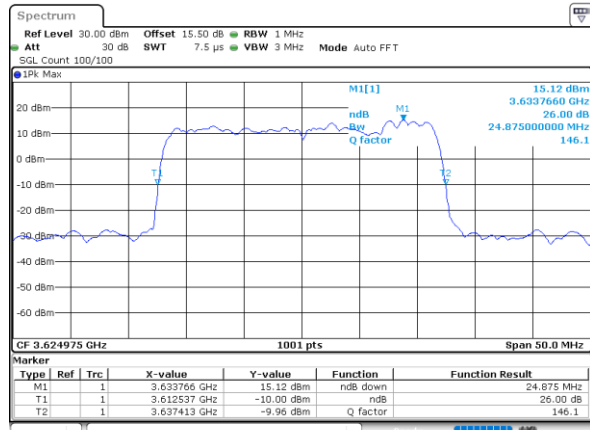
Date: 5.JUL.2024 23:43:10

Middle Channel / 15MHz+20MHz



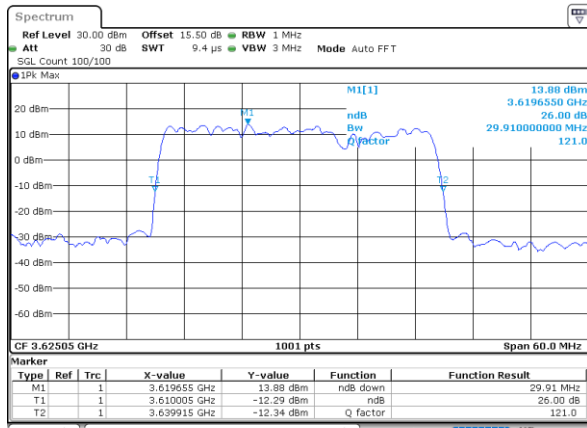
Date: 6.JUL.2024 08:52:07

Middle Channel / 20MHz+5MHz



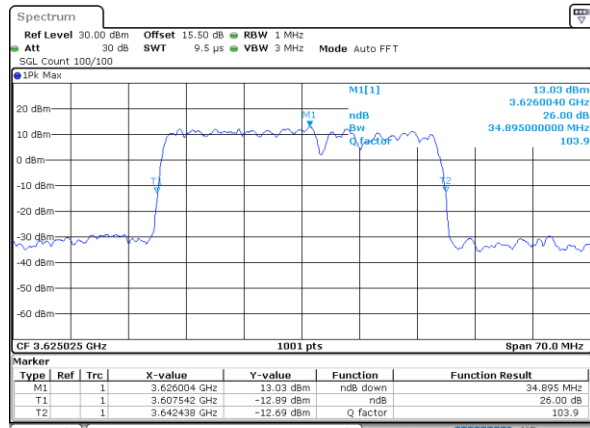
Date: 5.JUL.2024 22:43:39

Middle Channel / 20MHz+10MHz

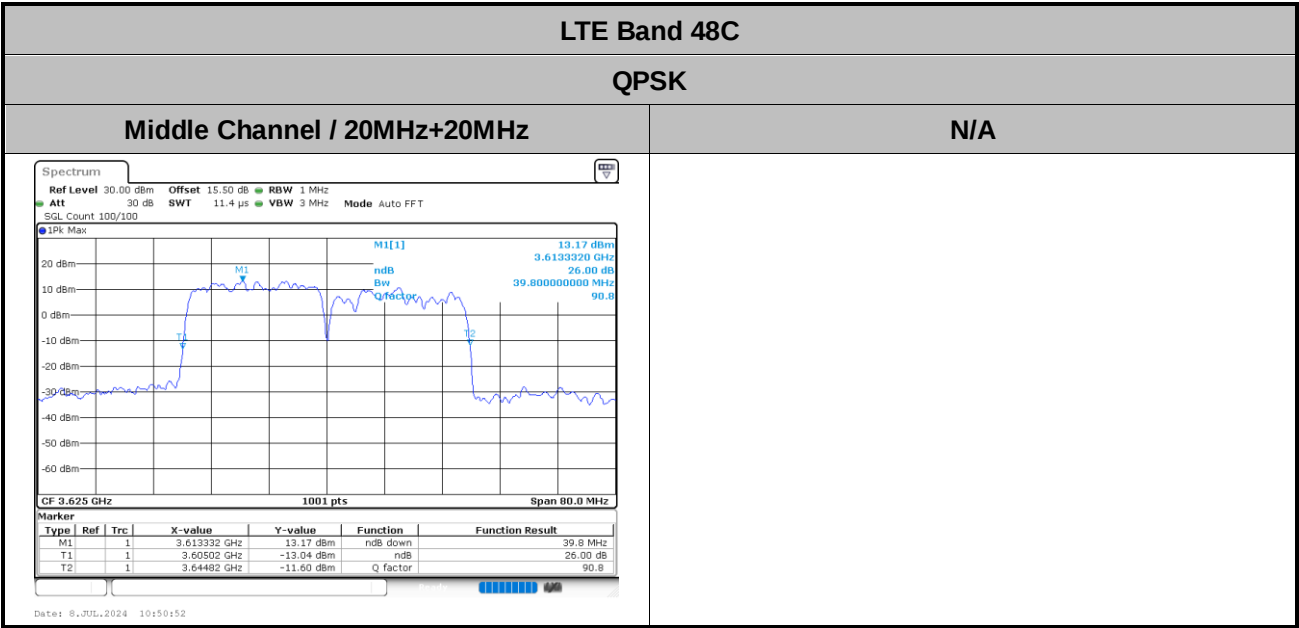


Date: 6.JUL.2024 00:42:50

Middle Channel / 20MHz+15MHz



Date: 6.JUL.2024 09:51:28

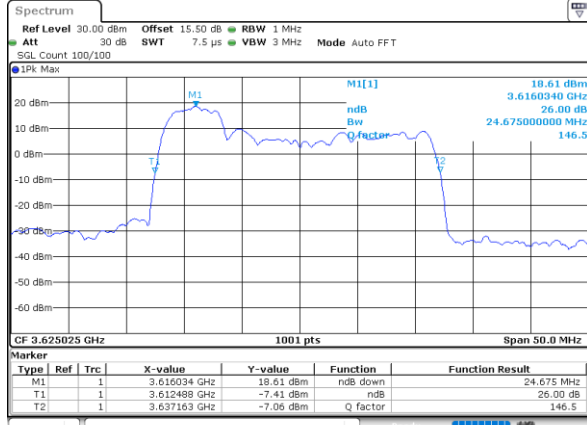




LTE Band 48C

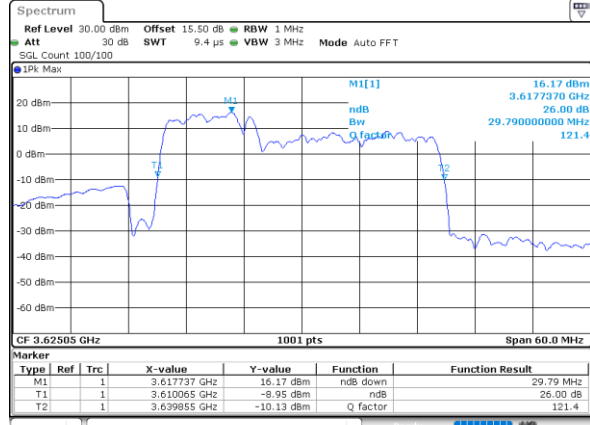
16QAM

Middle Channel / 5MHz+20MHz



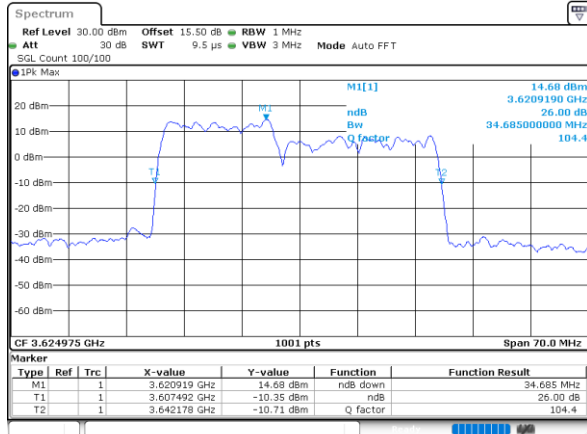
Date: 5,JUL,2024 21:44:45

Middle Channel / 10MHz+20MHz



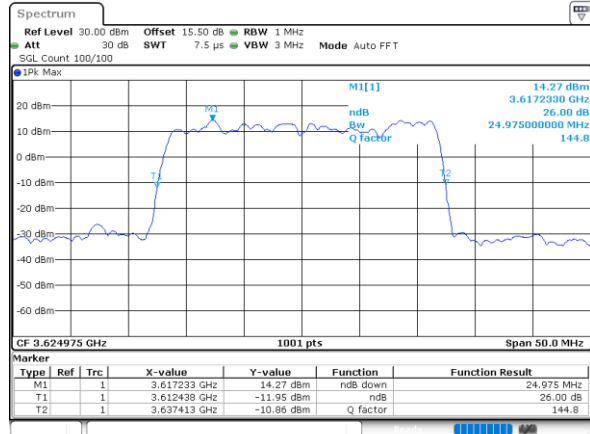
Date: 5,JUL,2024 23:43:46

Middle Channel / 15MHz+20MHz



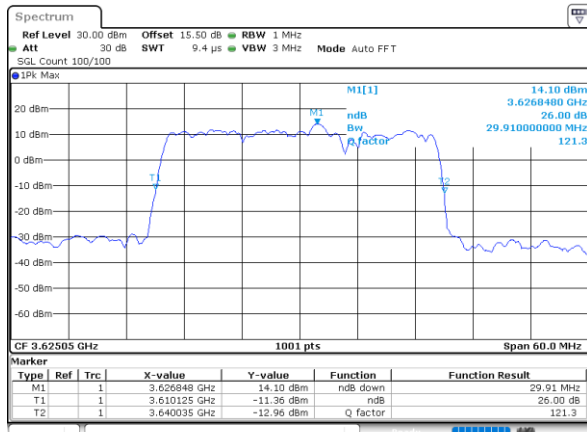
Date: 6,JUL,2024 08:52:43

Middle Channel / 20MHz+5MHz



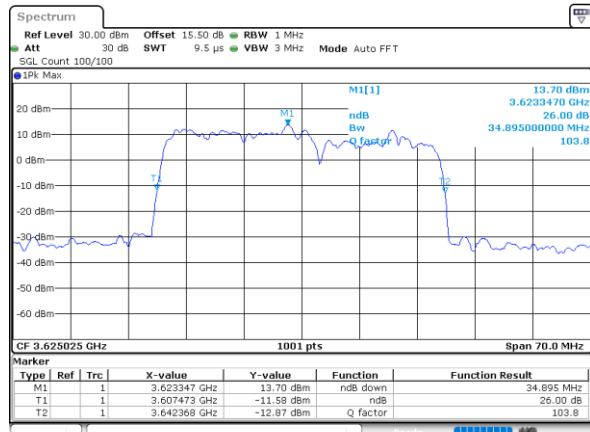
Date: 5,JUL,2024 22:44:15

Middle Channel / 20MHz+10MHz

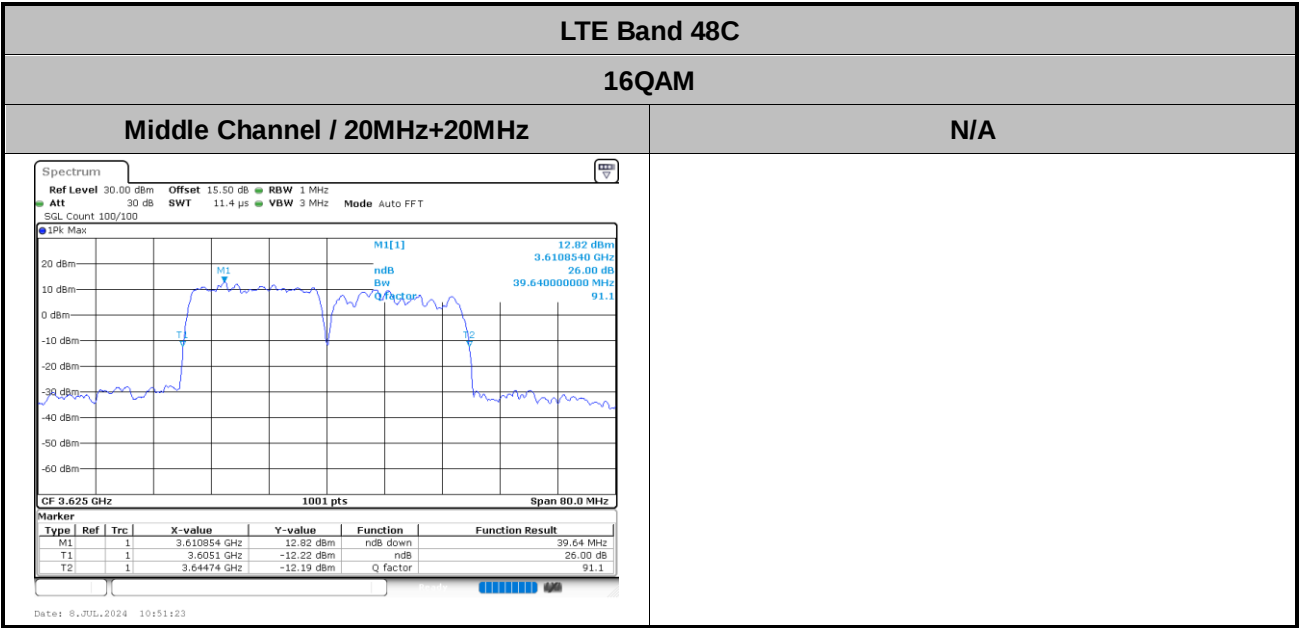


Date: 6,JUL,2024 00:43:26

Middle Channel / 20MHz+15MHz



Date: 6,JUL,2024 09:52:04



**Occupied Bandwidth**

Mode	LTE Band 48C : 99%OBW(MHz)			
QPSK				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Middle CH	23.38	28.05	32.66	23.23
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	27.75	32.45	37.08	-

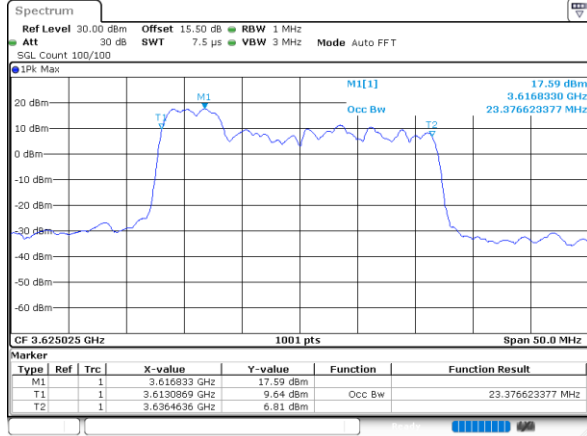
Mode	LTE Band 48C : 99%OBW(MHz)			
16QAM				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Middle CH	23.13	27.93	32.66	23.03
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	28.23	32.66	37.40	-



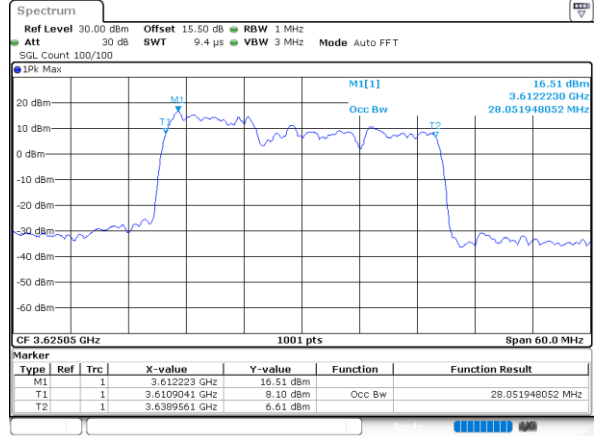
LTE Band 48C

QPSK

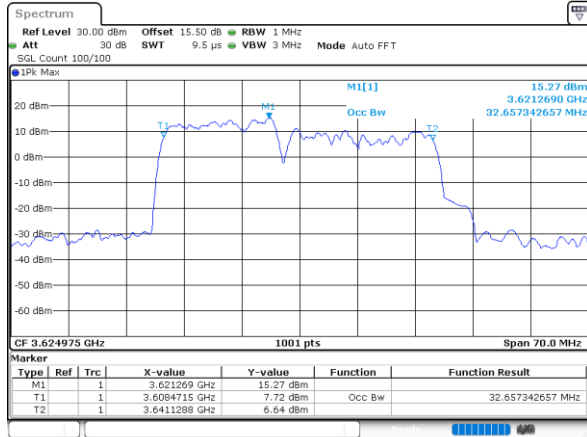
Middle Channel / 5MHz+20MHz



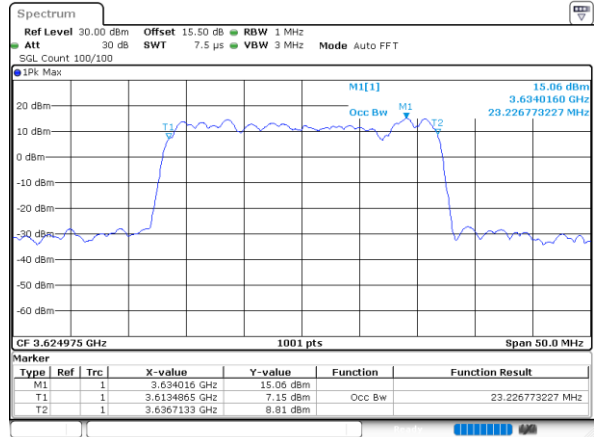
Middle Channel / 10MHz+20MHz



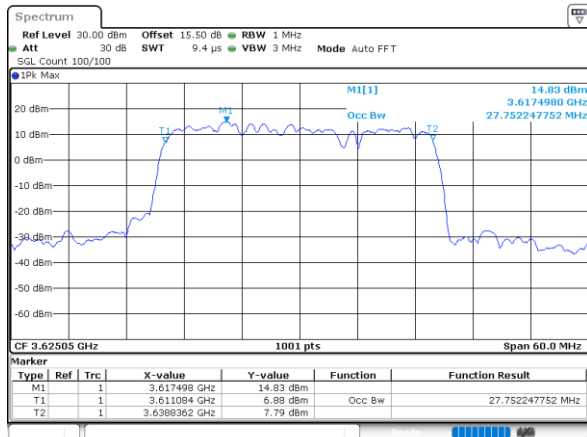
Middle Channel / 15MHz+20MHz



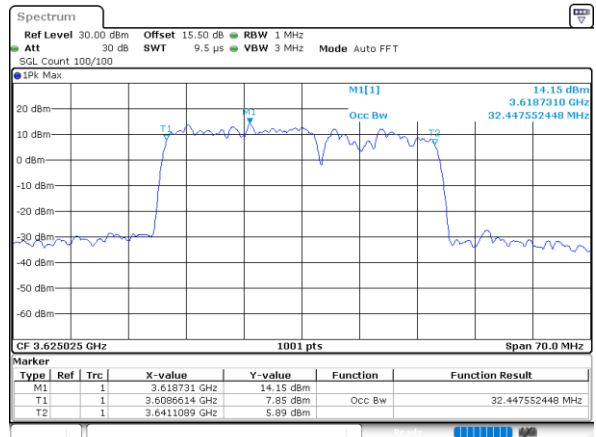
Middle Channel / 20MHz+5MHz

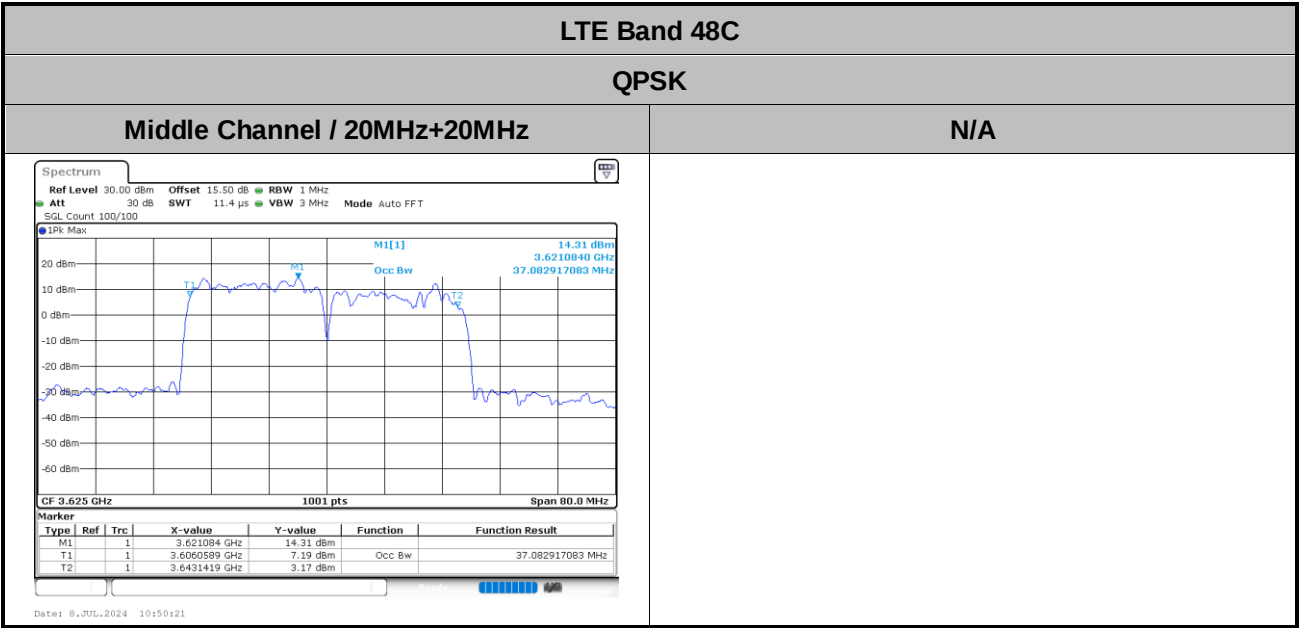


Middle Channel / 20MHz+10MHz



Middle Channel / 20MHz+15MHz



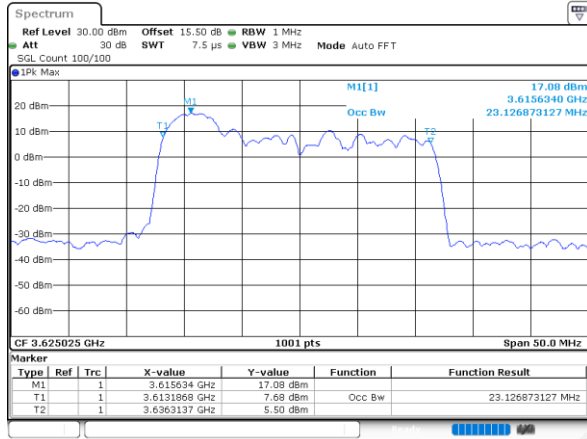




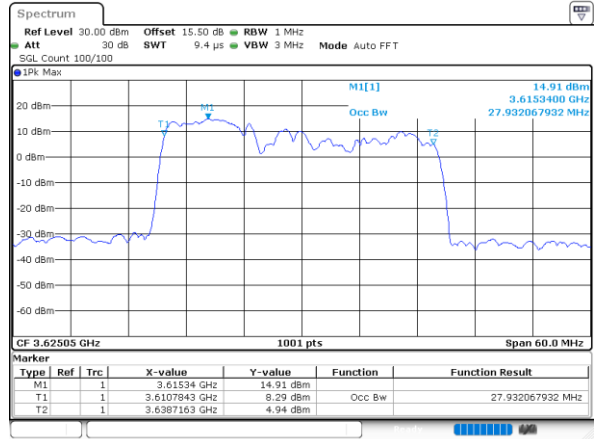
LTE Band 48C

16QAM

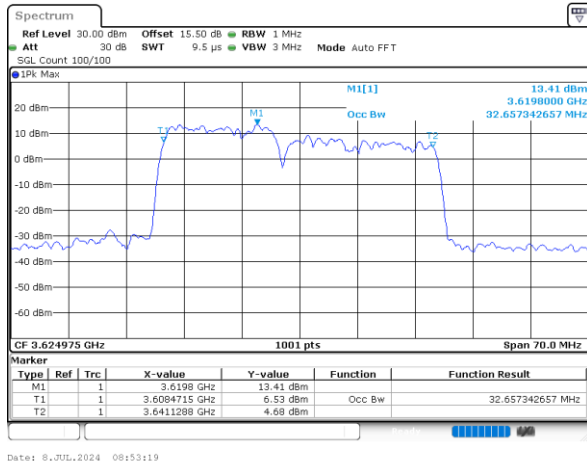
Middle Channel / 5MHz+20MHz



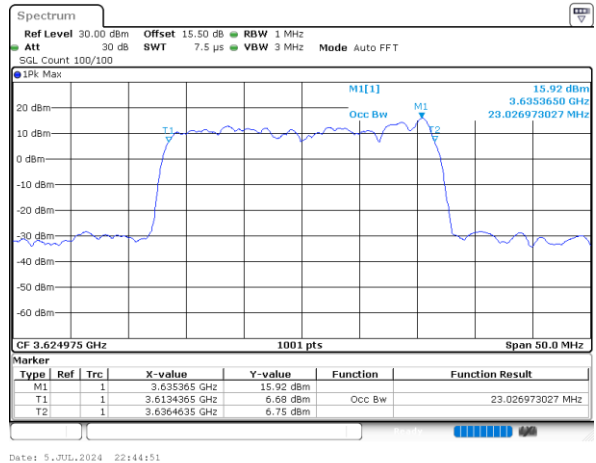
Middle Channel / 10MHz+20MHz



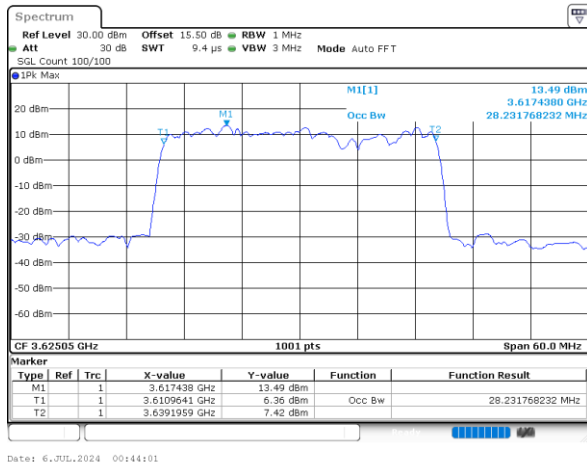
Middle Channel / 15MHz+20MHz



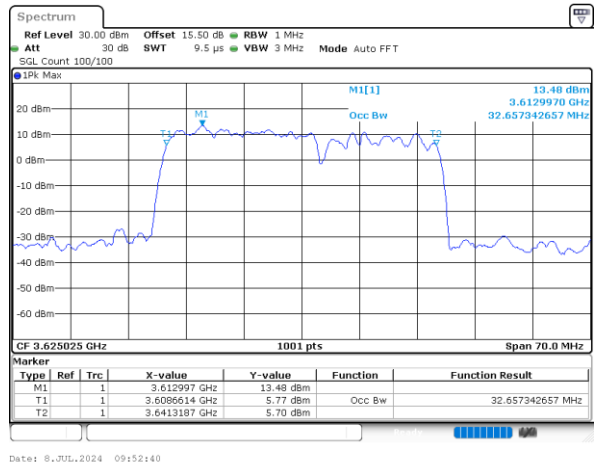
Middle Channel / 20MHz+5MHz

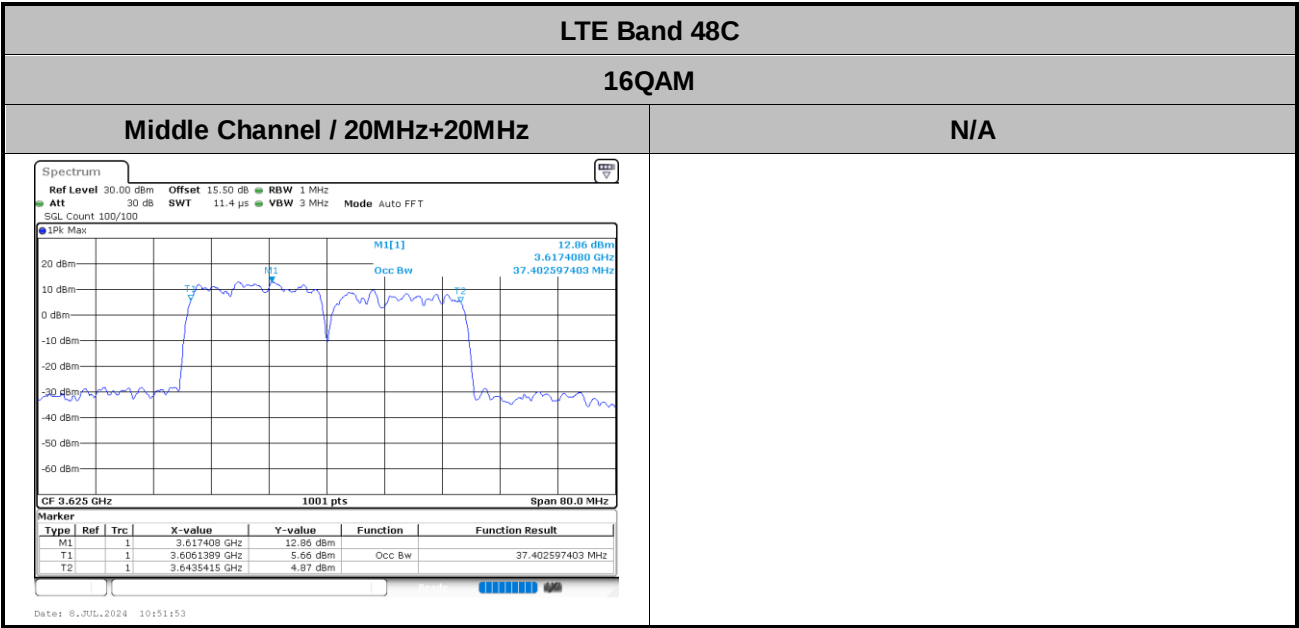


Middle Channel / 20MHz+10MHz



Middle Channel / 20MHz+15MHz







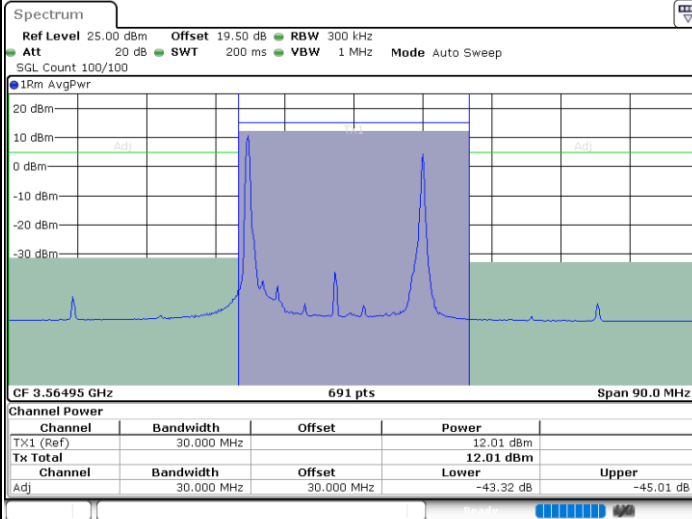
ACLR

LTE Band 48C / 5MHz+20MHz

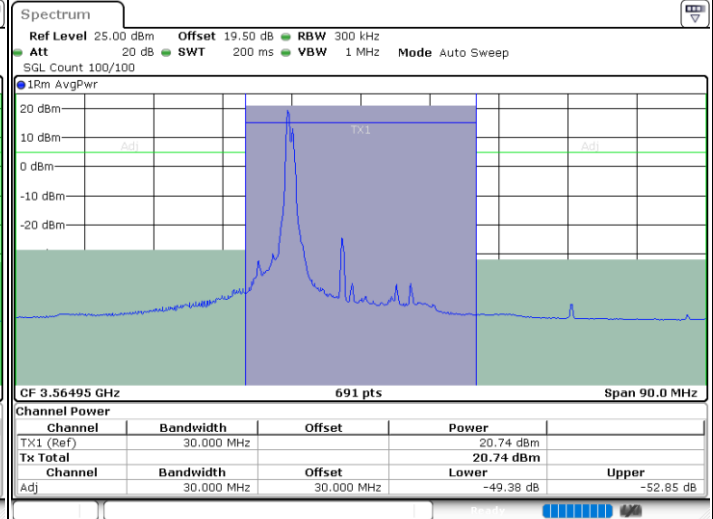
QPSK

Lowest Channel / 1RB0 and 1RB99

Lowest Channel / 1RB24 and 1RB0



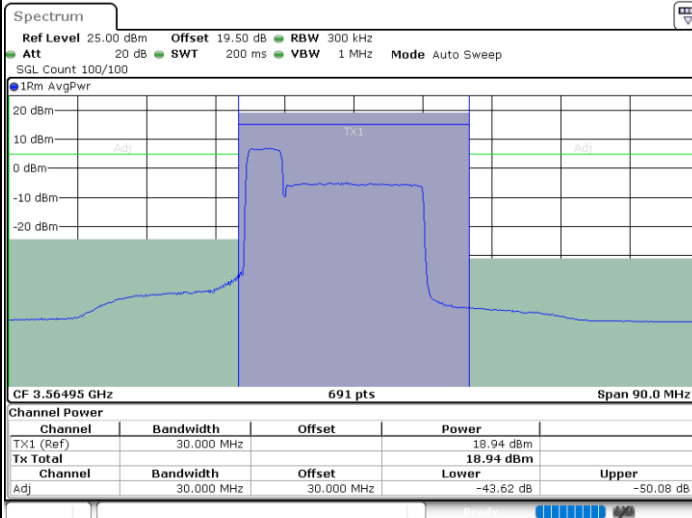
Date: 5.JUL.2024 22:15:59



Date: 5.JUL.2024 22:16:54

Lowest Channel / FullIRB

N/A



Date: 5.JUL.2024 22:11:23

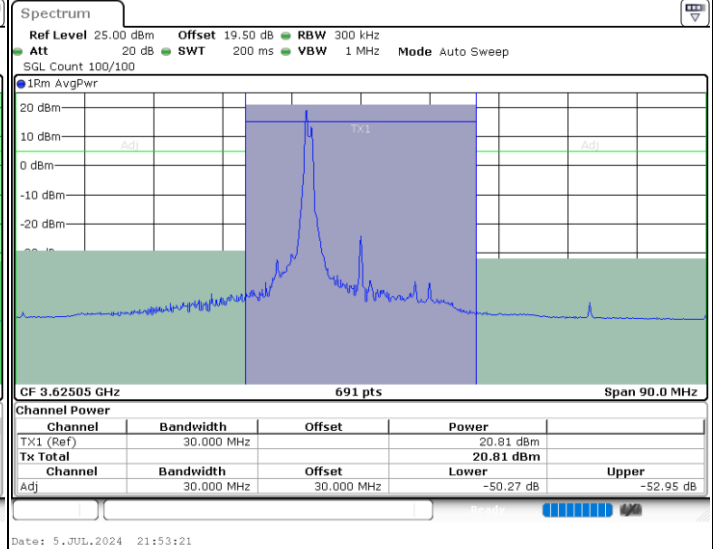
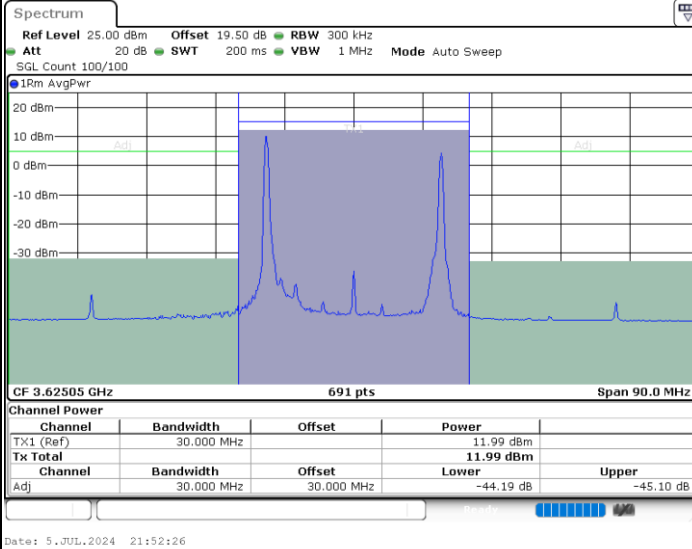


LTE Band 48C / 5MHz+20MHz

QPSK

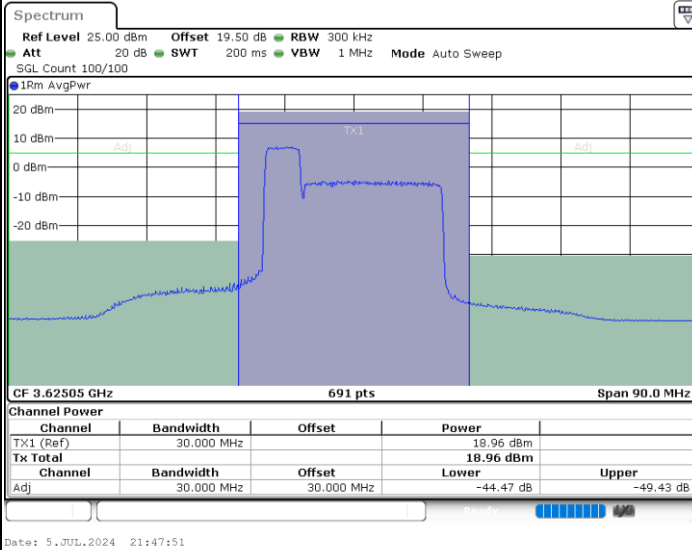
Middle Channel / 1RB0 and 1RB99

Middle Channel / 1RB24 and 1RB0



Middle Channel / FullRB

N/A



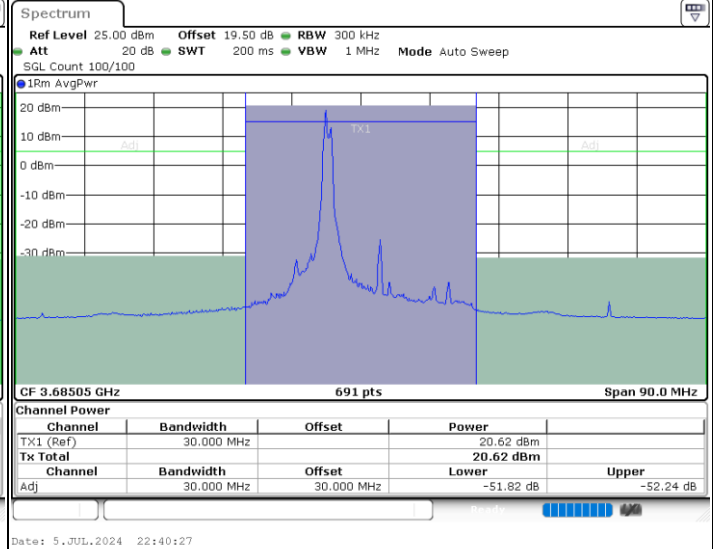
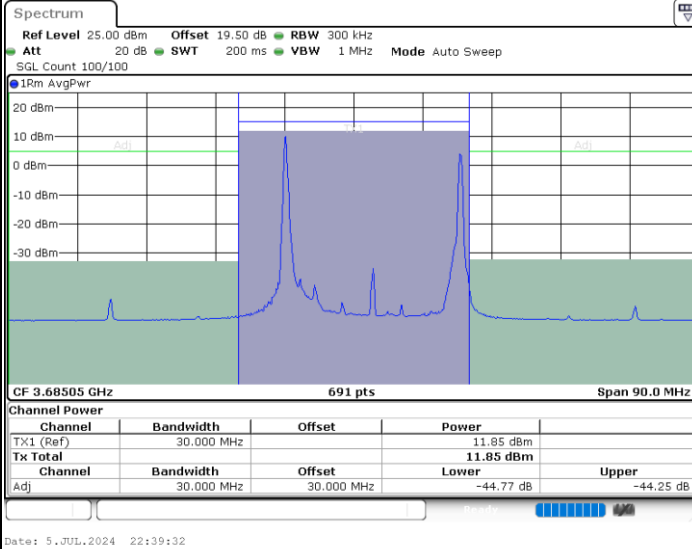


LTE Band 48C / 5MHz+20MHz

QPSK

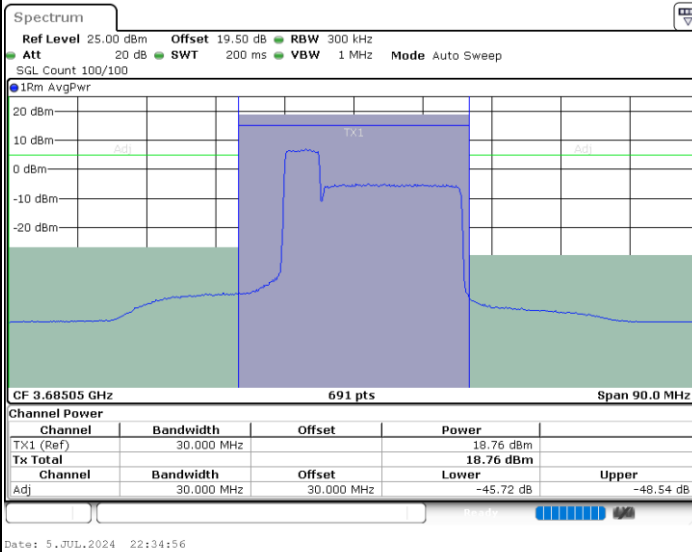
Highest Channel / 1RB0 and 1RB99

Highest Channel / 1RB24 and 1RB0



Highest Channel / FullRB

N/A



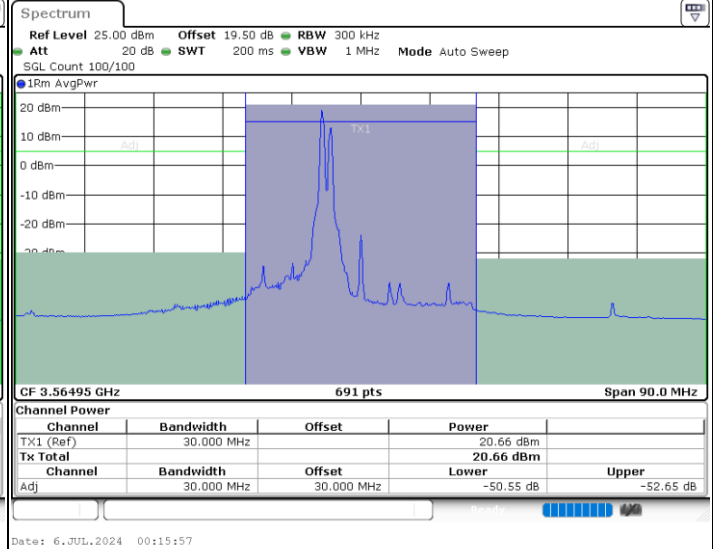
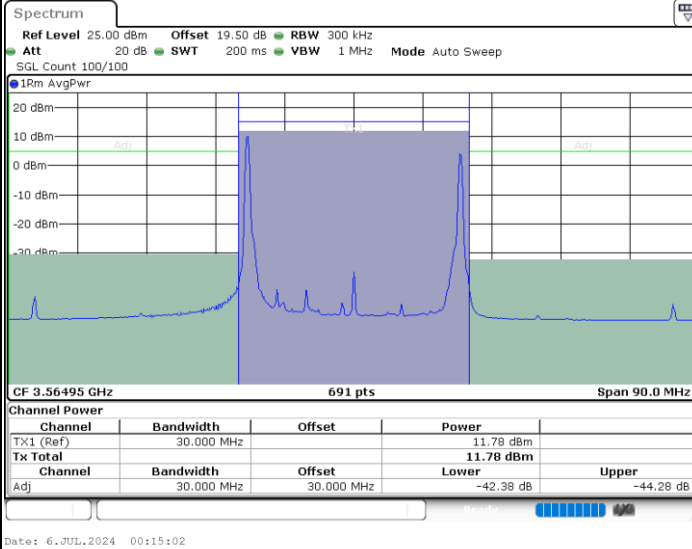


LTE Band 48C / 10MHz+20MHz

QPSK

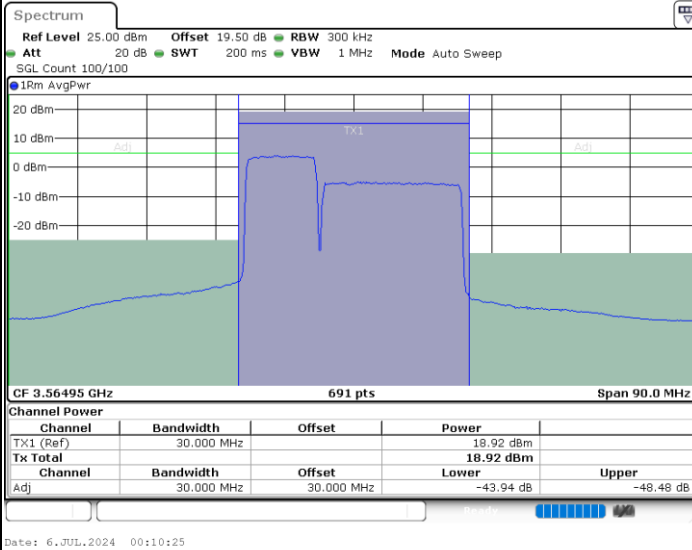
Lowest Channel / 1RB0 and 1RB99

Lowest Channel / 1RB49 and 1RB0



Lowest Channel / FullIRB

N/A



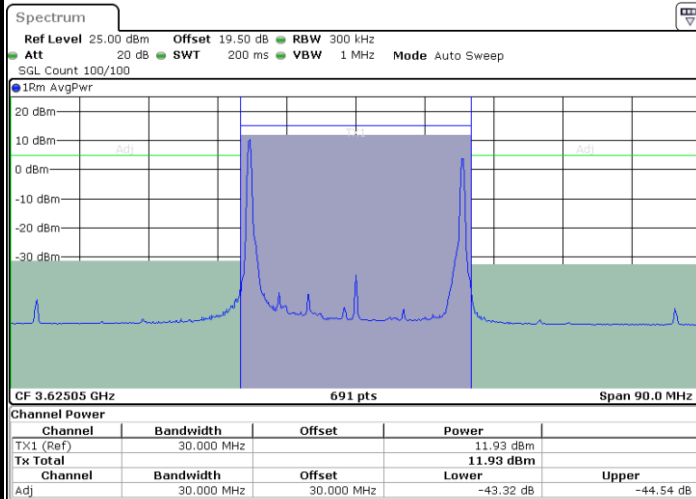


LTE Band 48C / 10MHz+20MHz

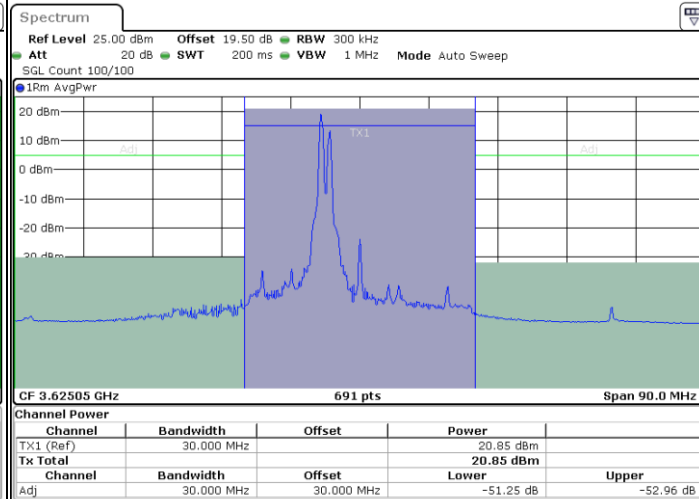
QPSK

Middle Channel / 1RB0 and 1RB99

Middle Channel / 1RB49 and 1RB0



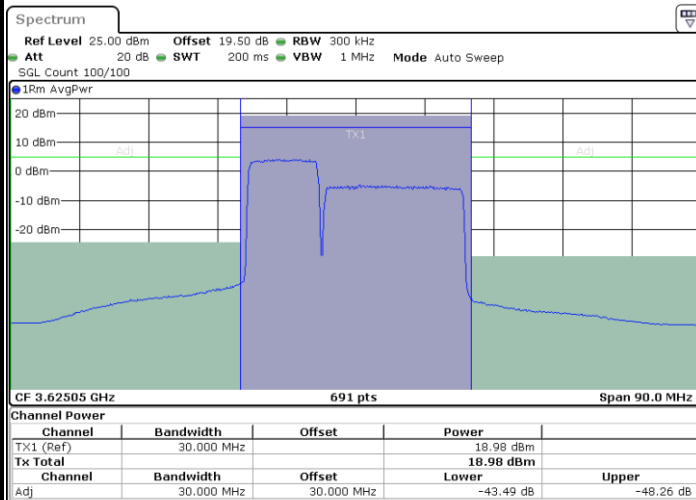
Date: 5.JUL.2024 23:51:27



Date: 5.JUL.2024 23:52:22

Middle Channel / FullRB

N/A



Date: 5.JUL.2024 23:46:51

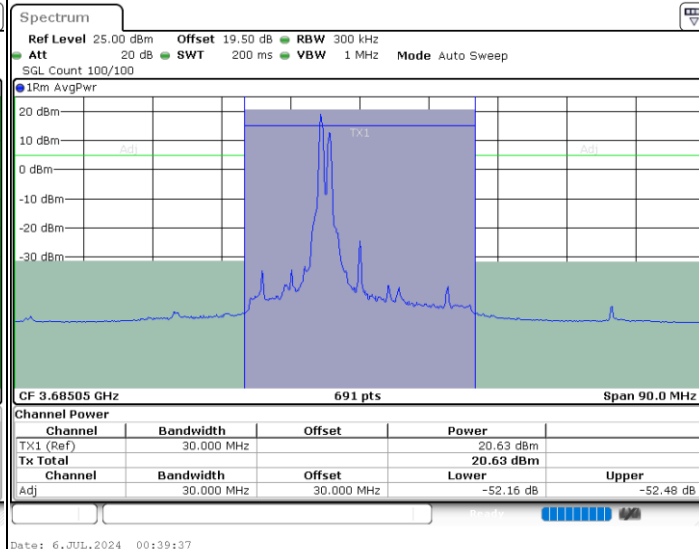
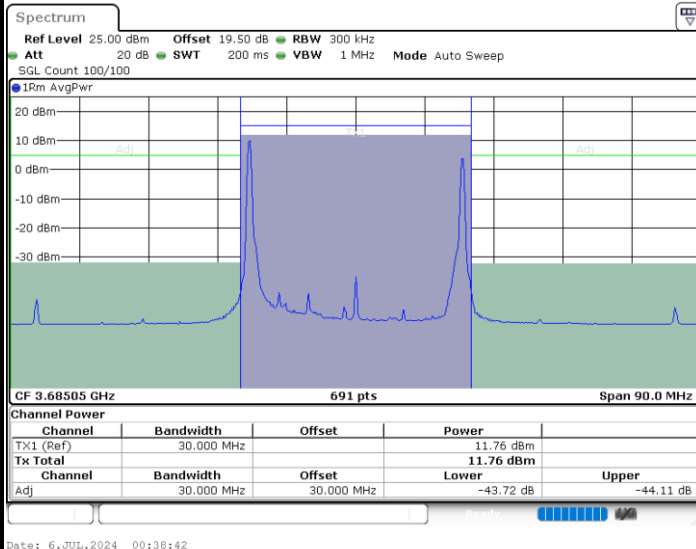


LTE Band 48C / 10MHz+20MHz

QPSK

Highest Channel / 1RB0 and 1RB99

Highest Channel / 1RB49 and 1RB0



Highest Channel / FullRB

N/A

