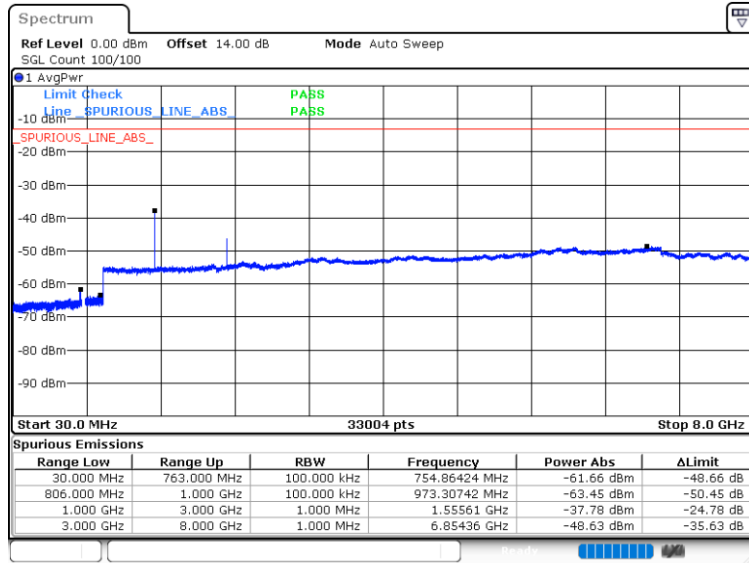




LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 22.APR.2024 16:31:21



Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0026	PASS
40	Normal Voltage	0.0011	
30	Normal Voltage	0.0058	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0059	
0	Normal Voltage	0.0033	
-10	Normal Voltage	0.0029	
-20	Normal Voltage	0.0048	
-30	Normal Voltage	0.0032	
20	Maximum Voltage	0.0033	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0014	

Note:

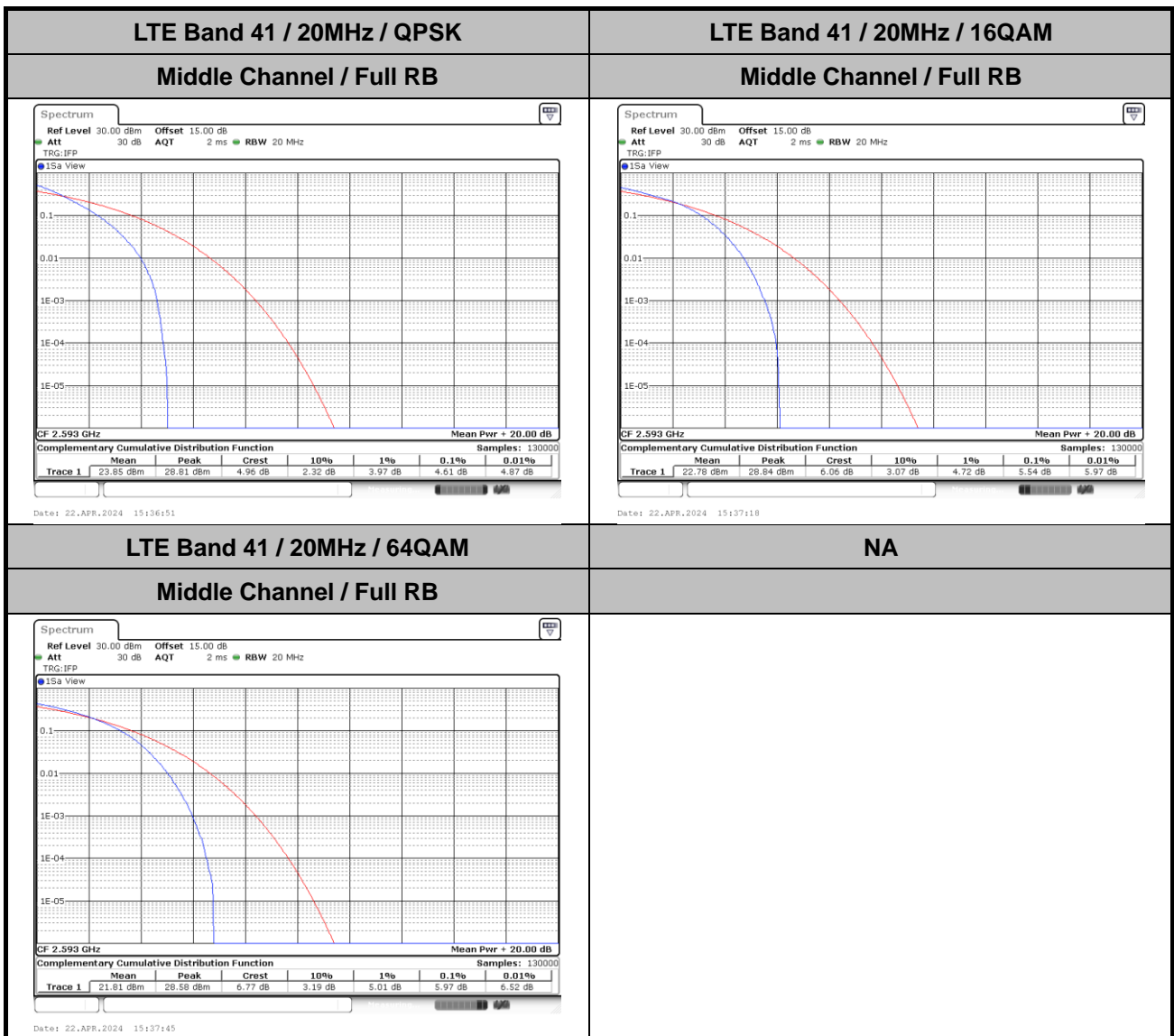
1. Normal Voltage = 3.89 V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage = 4.3 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 41

## Peak-to-Average Ratio

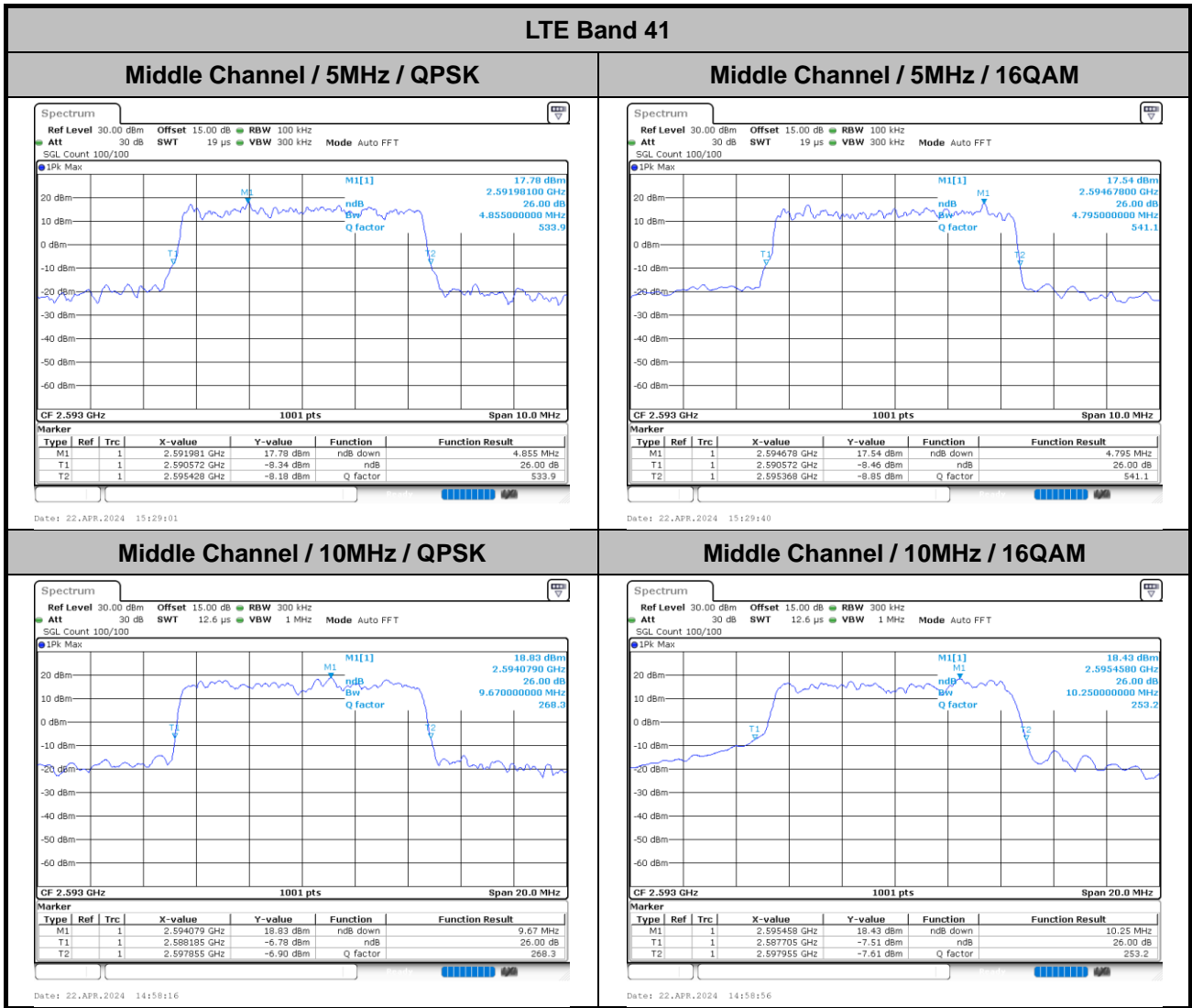
Mode	LTE Band 41 / 20MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.61	5.54	5.97	PASS





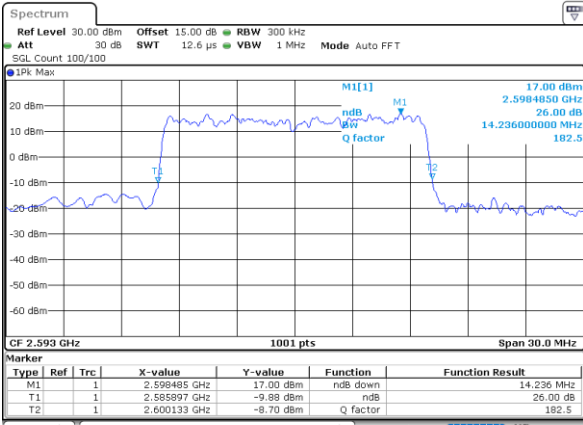
# 26dB Bandwidth

Mode	LTE Band 41 : 26dB BW(MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	4.86	4.80	9.67	10.25	14.24	14.30	18.62	18.94



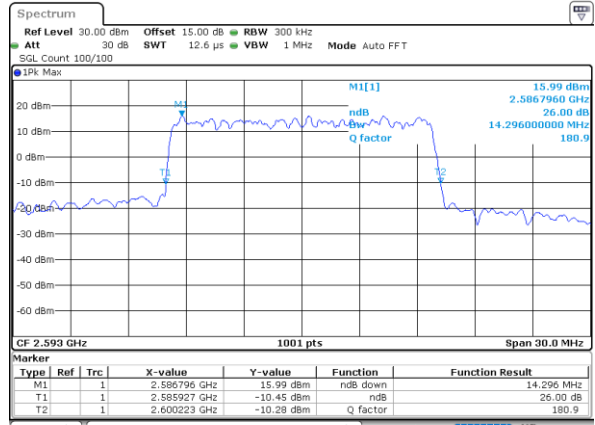


Middle Channel / 15MHz / QPSK



Date: 24.APR.2024 15:05:58

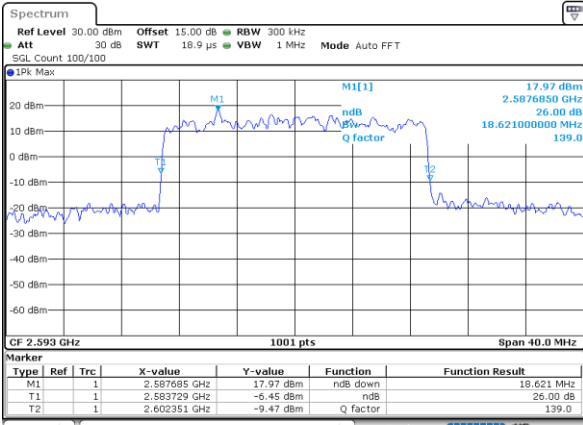
Middle Channel / 15MHz / 16QAM



Date: 24.APR.2024 15:06:37

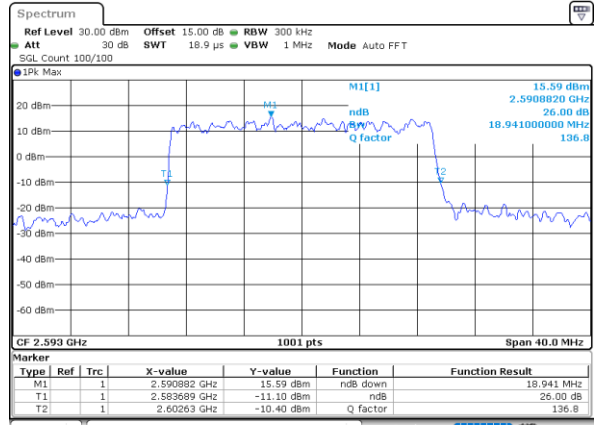
LTE Band 41

Middle Channel / 20MHz / QPSK



Date: 22.APR.2024 15:35:45

Middle Channel / 20MHz / 16QAM

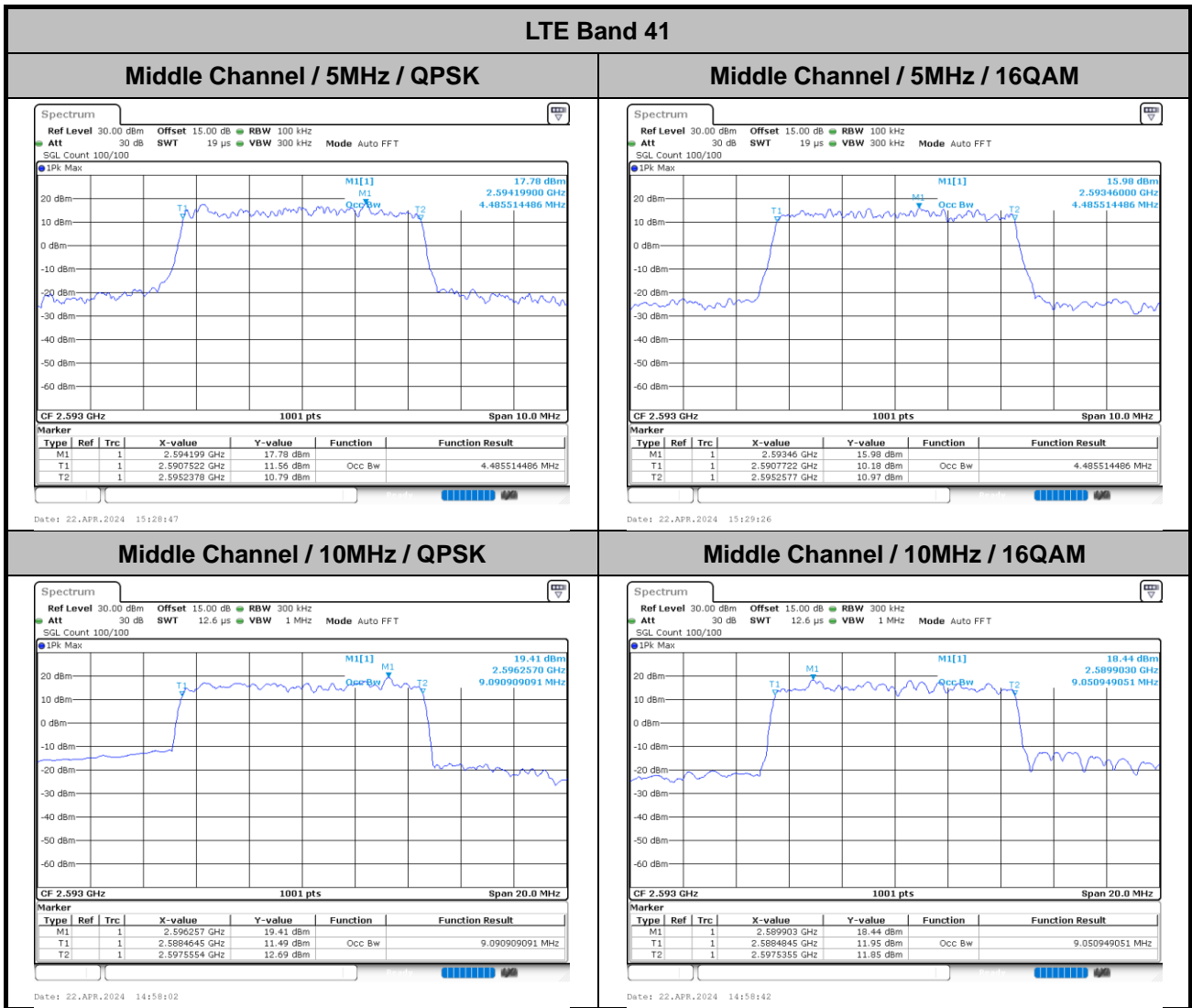


Date: 22.APR.2024 15:36:25



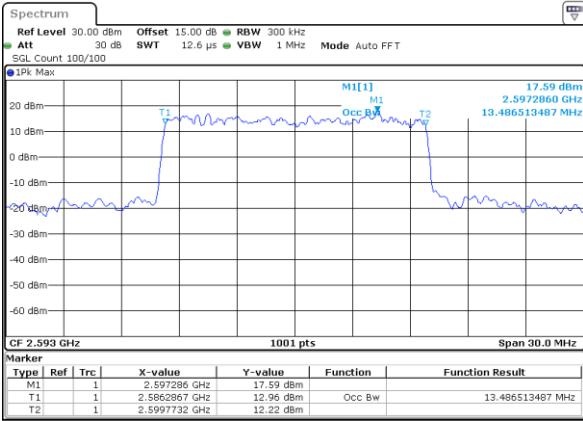
# Occupied Bandwidth

Mode	LTE Band 41 : 99%OBW(MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	4.49	4.49	9.09	9.05	13.49	13.43	17.90	17.94



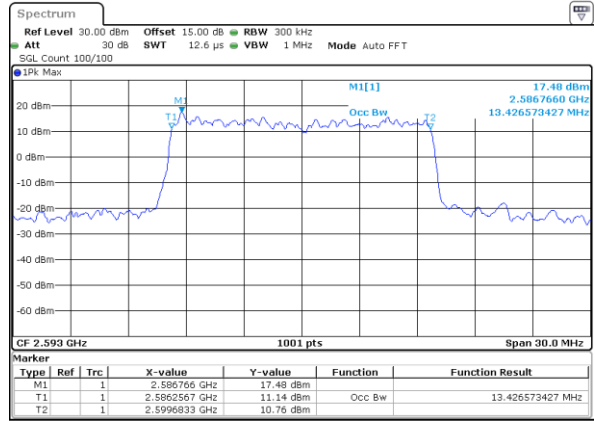


Middle Channel / 15MHz / QPSK



Date: 24.APR.2024 15:05:44

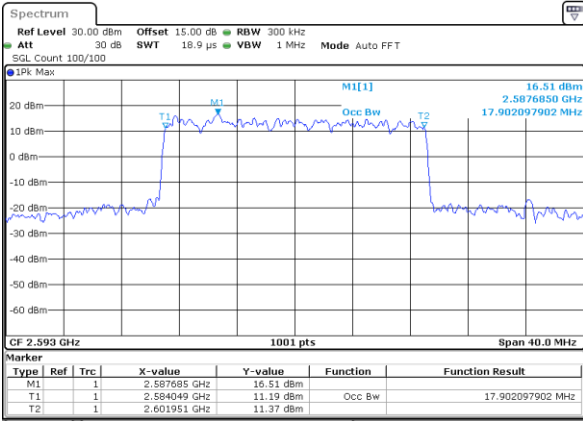
Middle Channel / 15MHz / 16QAM



Date: 24.APR.2024 15:06:23

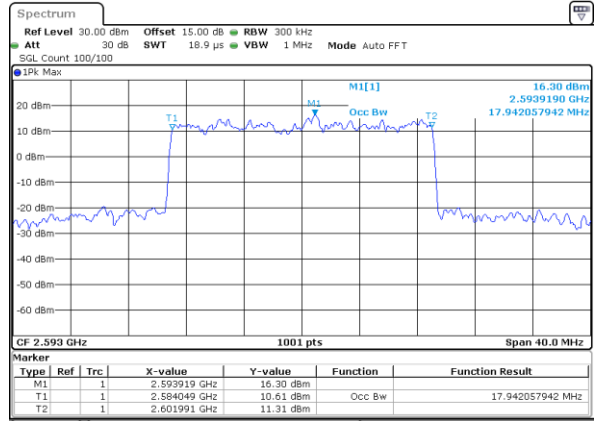
LTE Band 41

Middle Channel / 20MHz / QPSK



Date: 22.APR.2024 15:35:31

Middle Channel / 20MHz / 16QAM



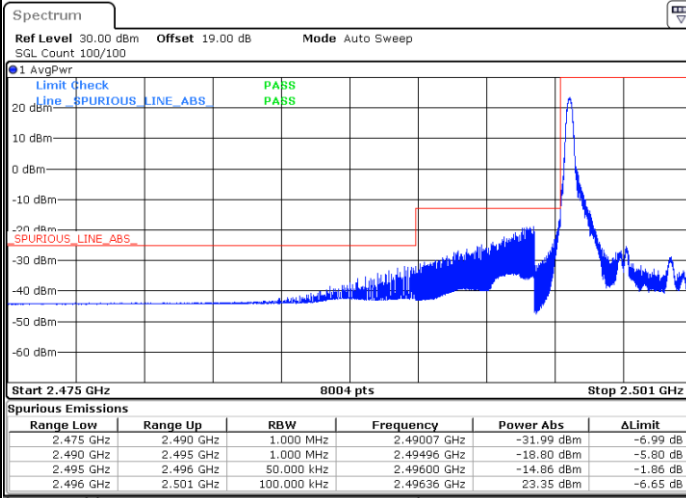
Date: 22.APR.2024 15:36:11



# Conducted Band Edge

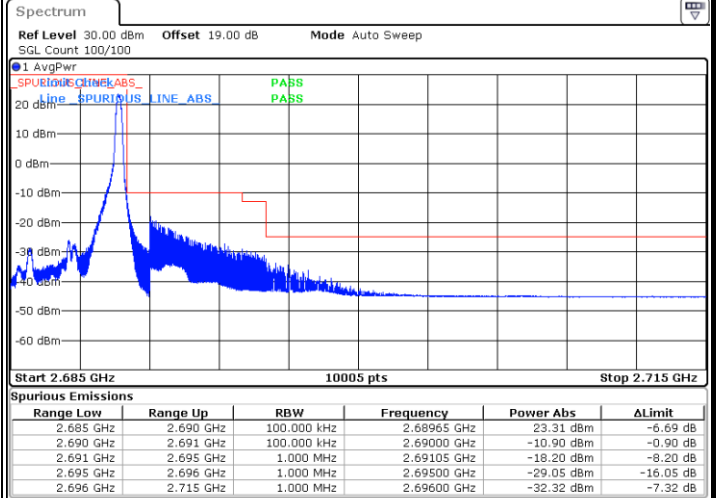
## LTE Band 41 / 5MHz / QPSK

### Lowest Band Edge / 1 RB



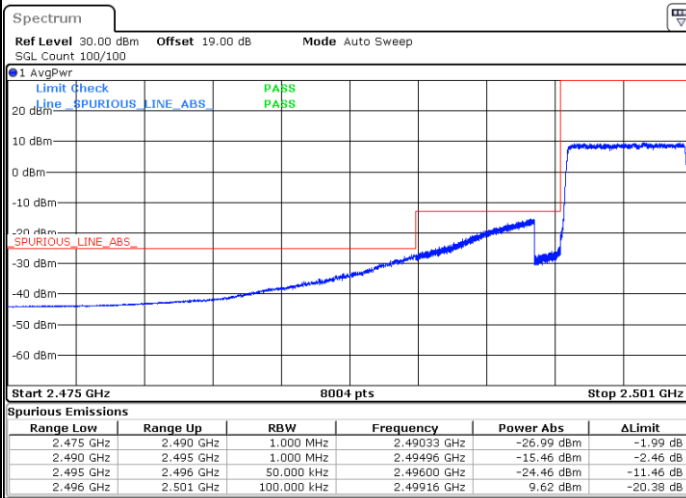
Date: 24.APR.2024 14:29:29

### Highest Band Edge / 1 RB



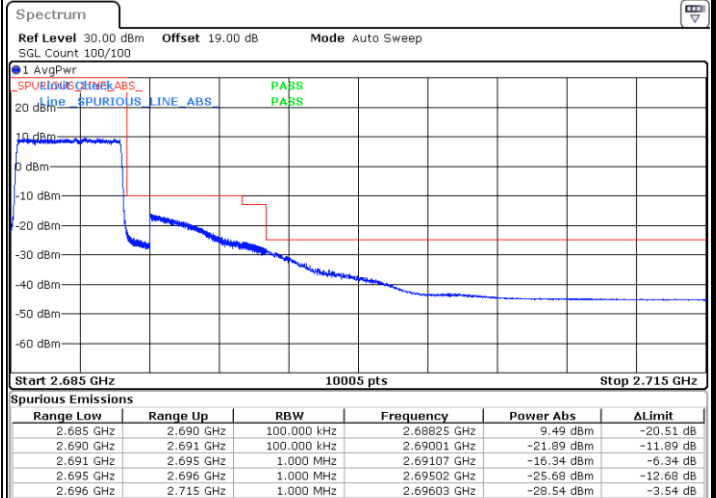
Date: 24.APR.2024 14:35:38

### Lowest Band Edge / Full RB



Date: 24.APR.2024 14:34:34

### Highest Band Edge / Full RB



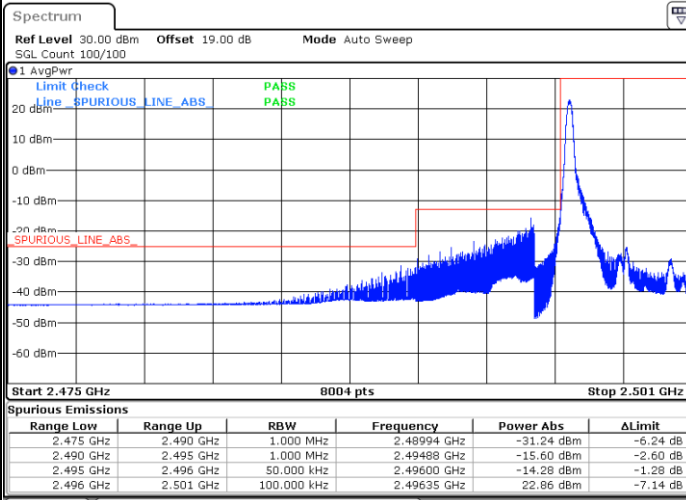
Date: 24.APR.2024 14:40:54





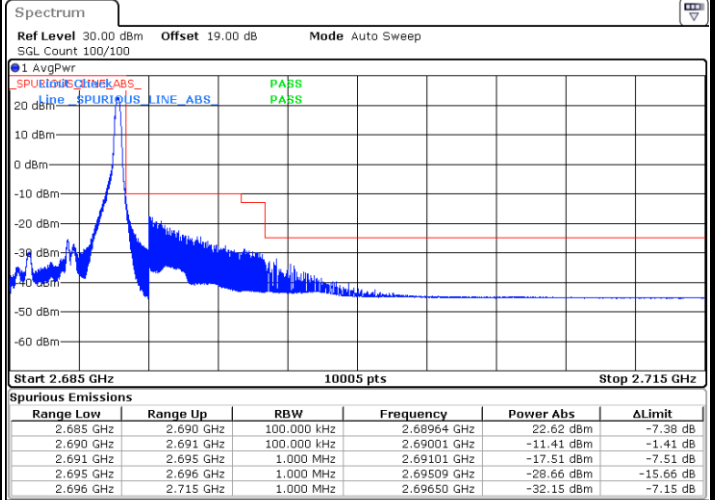
LTE Band 41 / 5MHz / 16QAM

Lowest Band Edge / 1RB



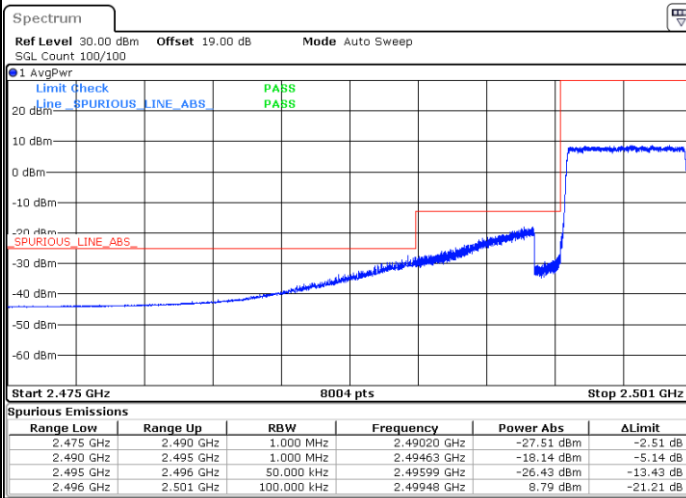
Date: 24.APR.2024 14:30:30

Highest Band Edge / 1 RB



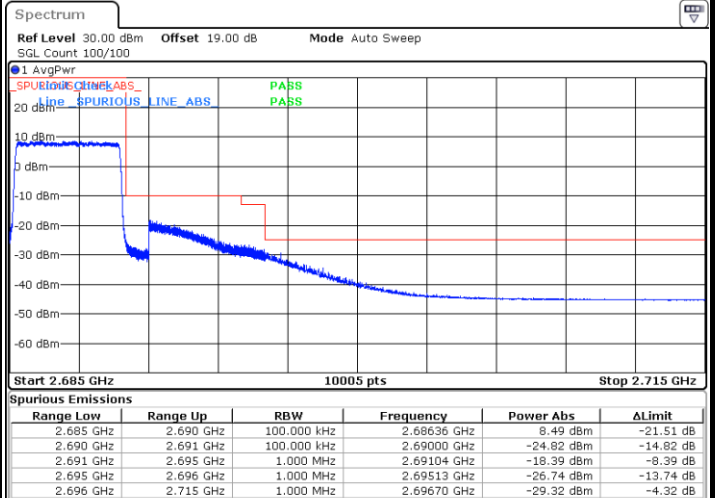
Date: 24.APR.2024 14:36:41

Lowest Band Edge / Full RB



Date: 24.APR.2024 14:33:33

Highest Band Edge / Full RB

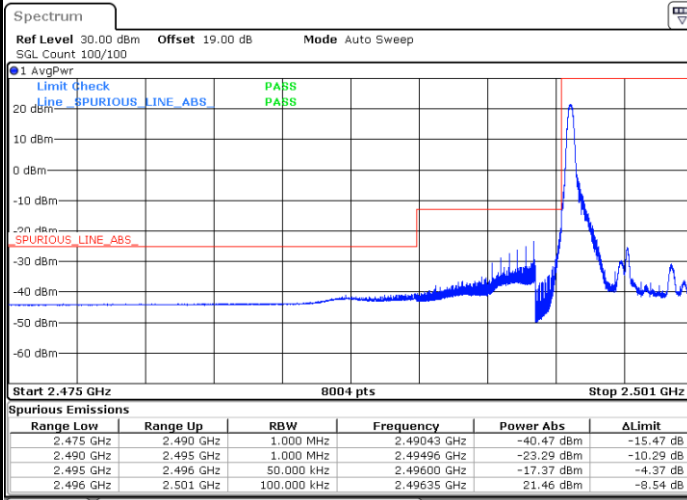


Date: 24.APR.2024 14:39:51



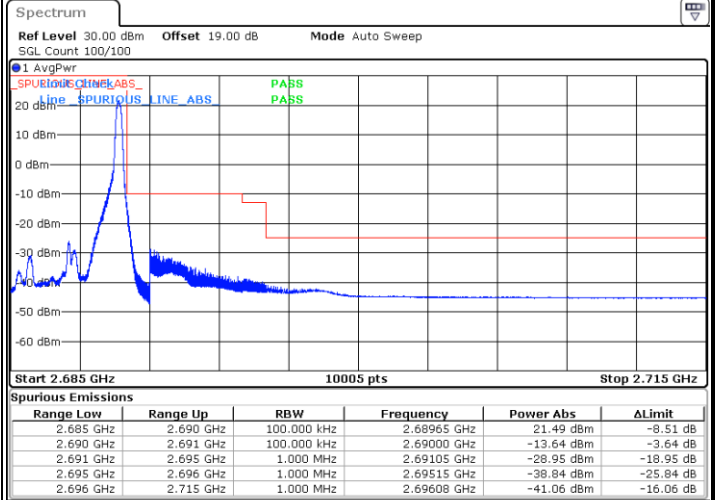
LTE Band 41 / 5MHz / 64QAM

Lowest Band Edge / 1RB



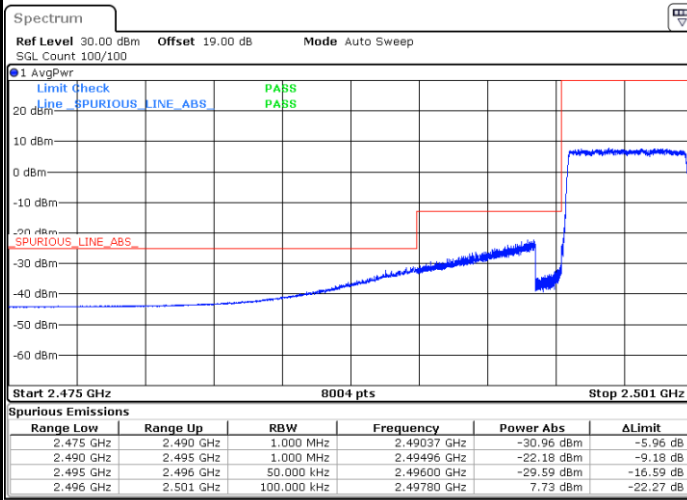
Date: 24.APR.2024 14:31:31

Highest Band Edge / 1 RB



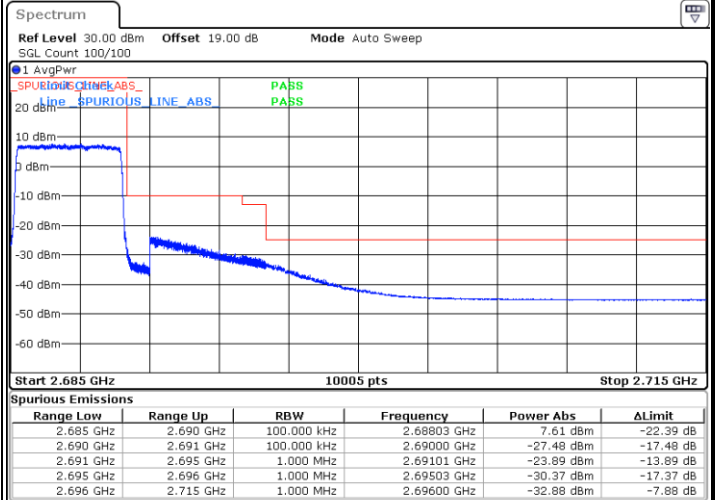
Date: 24.APR.2024 14:37:44

Lowest Band Edge / Full RB



Date: 24.APR.2024 14:32:32

Highest Band Edge / Full RB

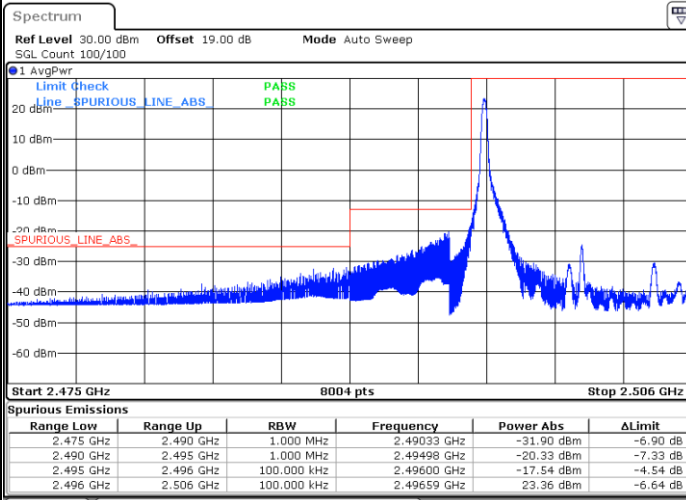


Date: 24.APR.2024 14:38:48



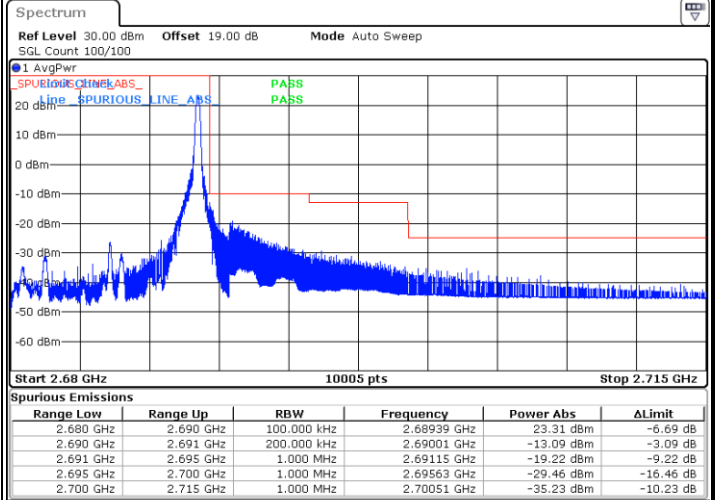
LTE Band 41 / 10MHz / QPSK

Lowest Band Edge / 1 RB



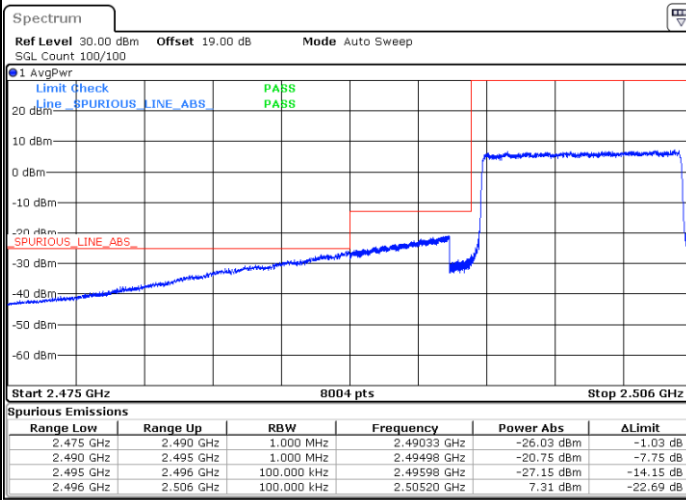
Date: 24.APR.2024 14:42:38

Highest Band Edge / 1 RB



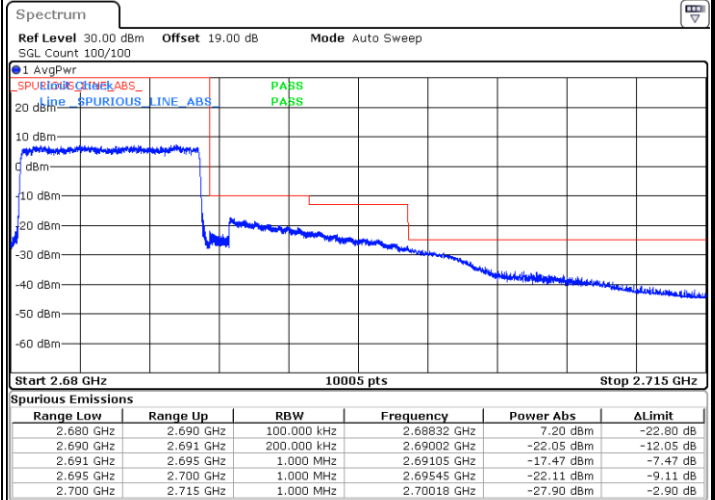
Date: 24.APR.2024 14:48:42

Lowest Band Edge / Full RB



Date: 9.JUN.2024 11:25:08

Highest Band Edge / Full RB

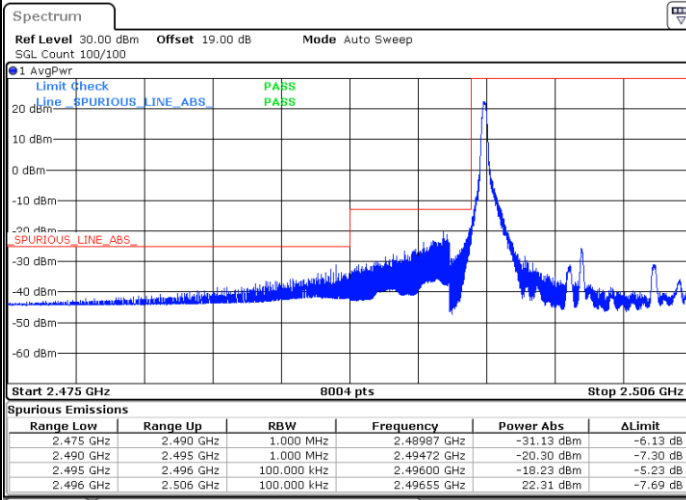


Date: 24.APR.2024 14:53:45



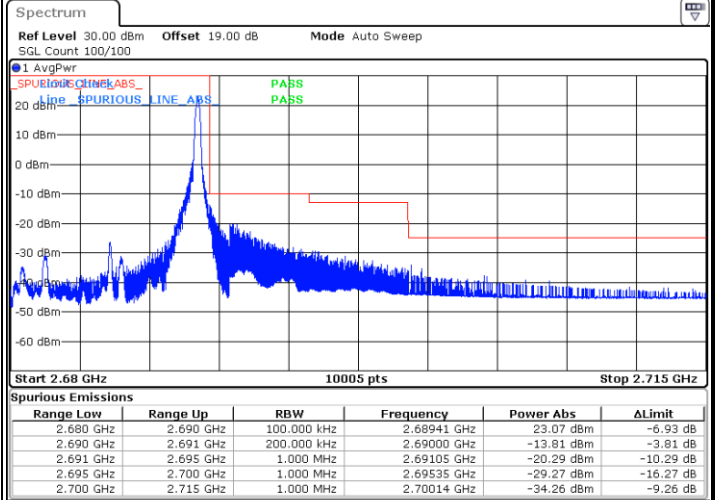
LTE Band 41 / 10MHz / 16QAM

Lowest Band Edge / 1RB



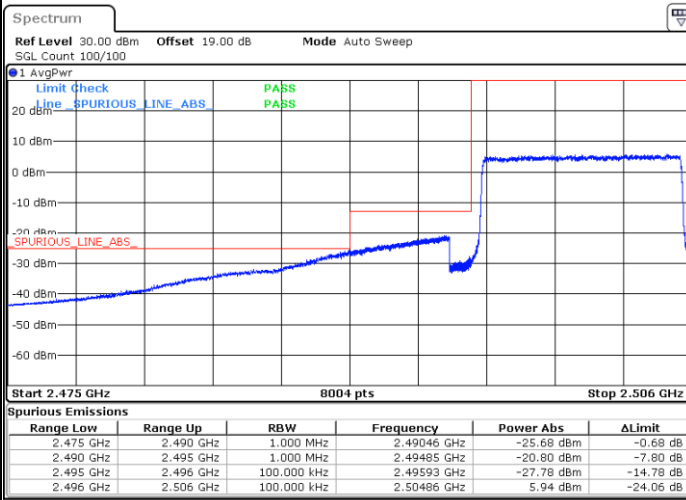
Date: 24.APR.2024 14:43:39

Highest Band Edge / 1 RB



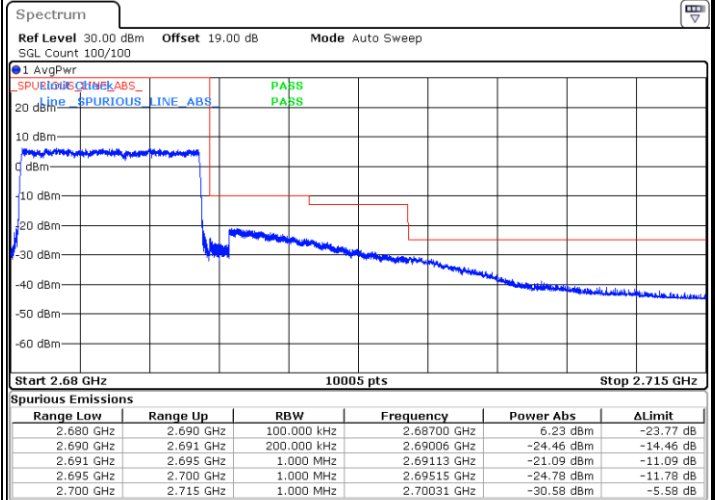
Date: 24.APR.2024 14:49:43

Lowest Band Edge / Full RB



Date: 24.APR.2024 14:46:41

Highest Band Edge / Full RB

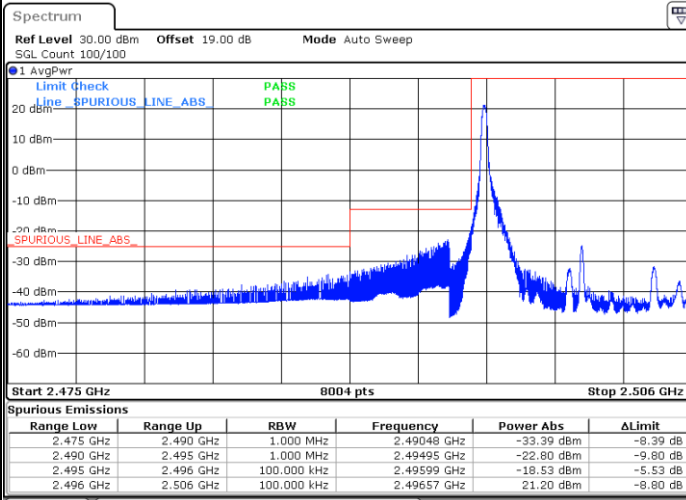


Date: 24.APR.2024 14:52:45



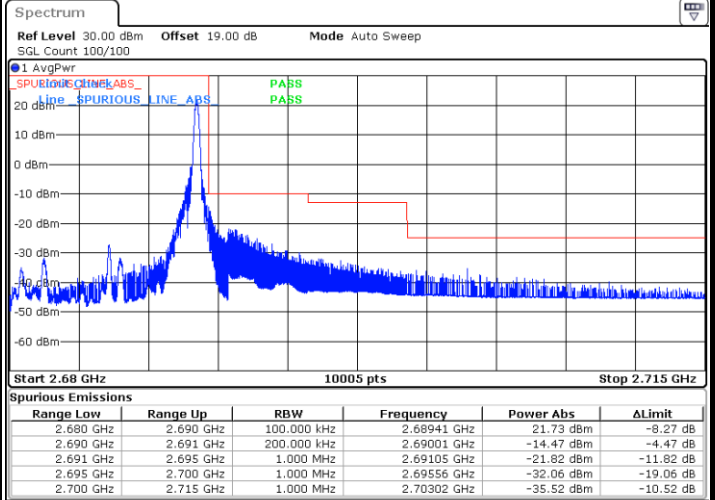
LTE Band 41 / 10MHz / 64QAM

Lowest Band Edge / 1RB



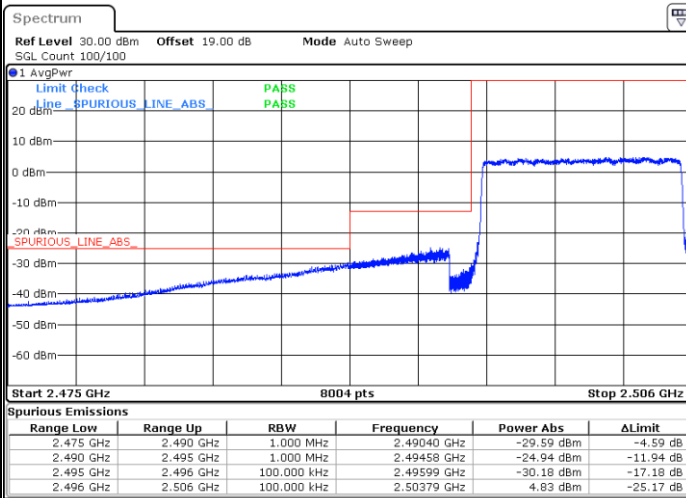
Date: 24.APR.2024 14:44:40

Highest Band Edge / 1 RB



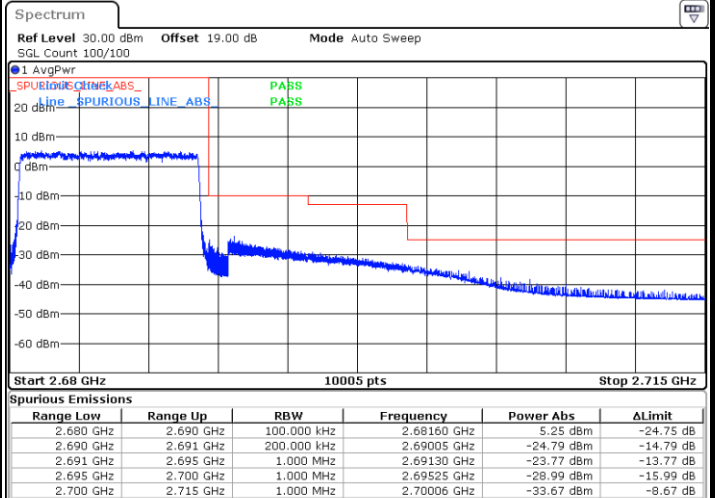
Date: 24.APR.2024 14:50:44

Lowest Band Edge / Full RB



Date: 24.APR.2024 14:45:10

Highest Band Edge / Full RB

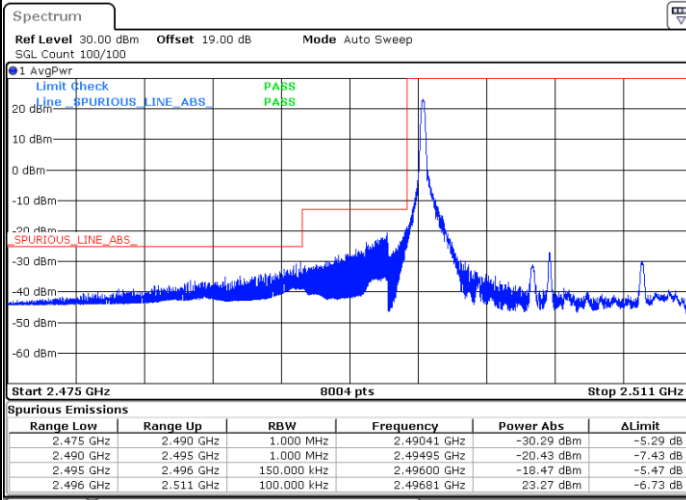


Date: 24.APR.2024 14:51:44



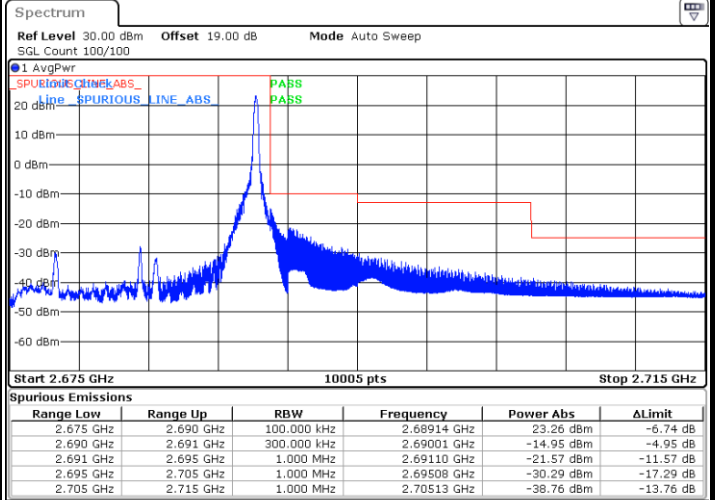
LTE Band 41 / 15MHz / QPSK

Lowest Band Edge / 1 RB



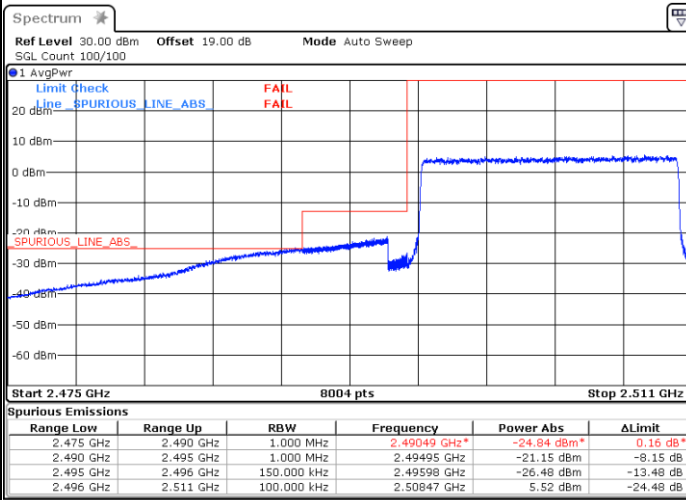
Date: 24.APR.2024 14:57:04

Highest Band Edge / 1 RB



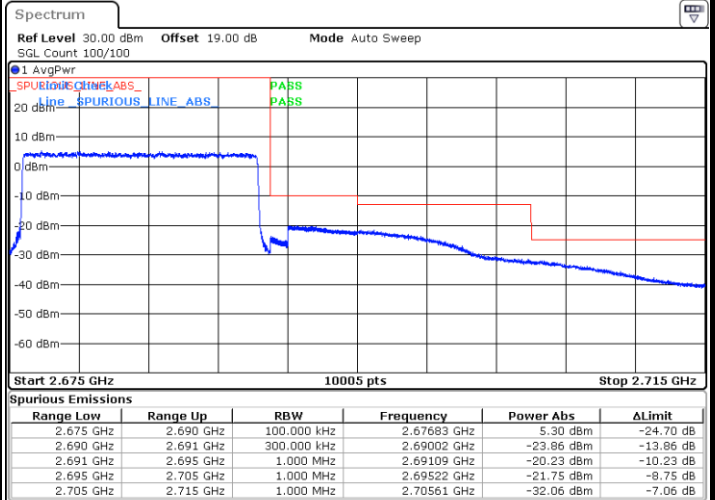
Date: 24.APR.2024 15:07:37

Lowest Band Edge / Full RB

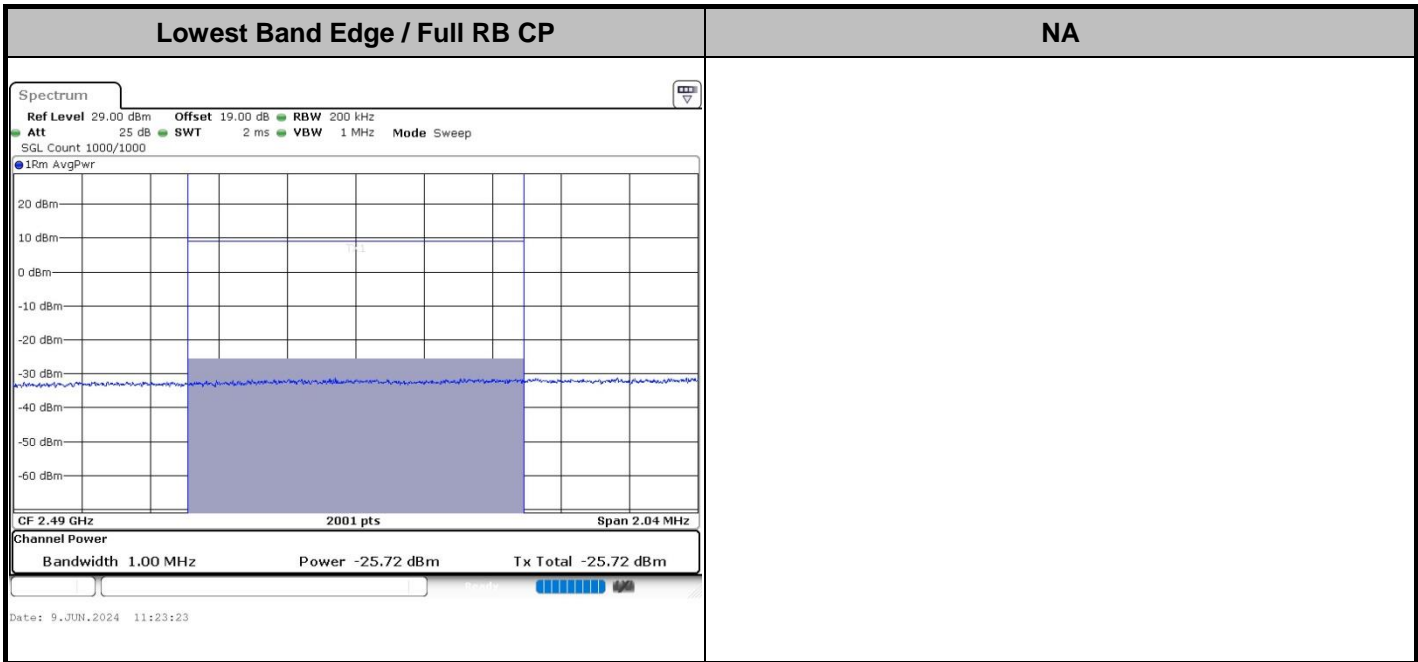


Date: 9.JUN.2024 11:22:32

Highest Band Edge / Full RB



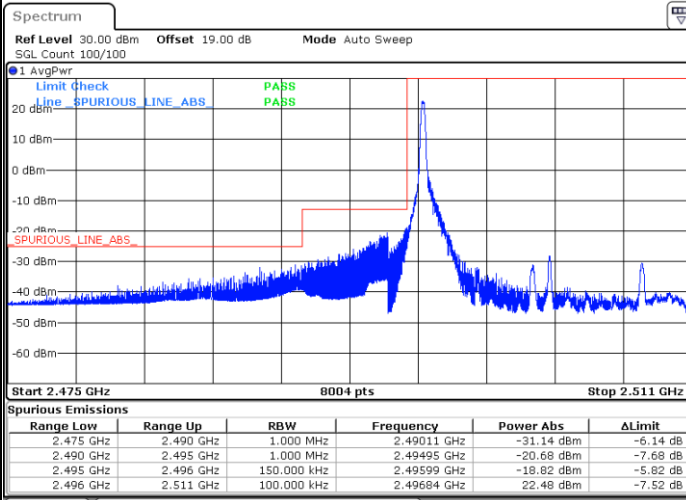
Date: 24.APR.2024 15:41:40





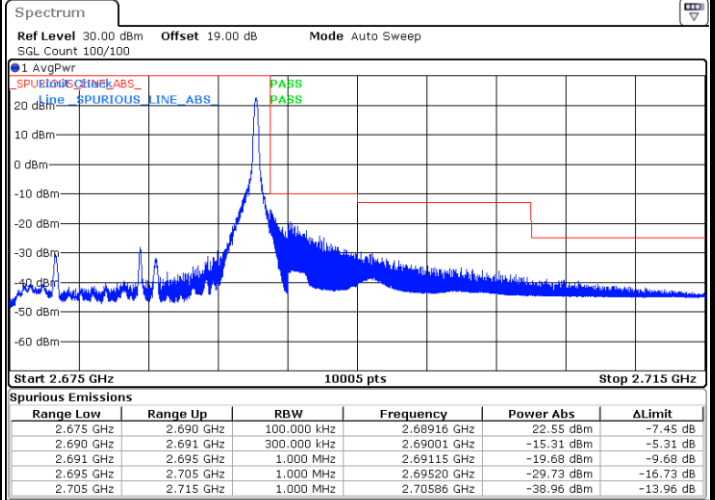
LTE Band 41 / 15MHz / 16QAM

Lowest Band Edge / 1RB



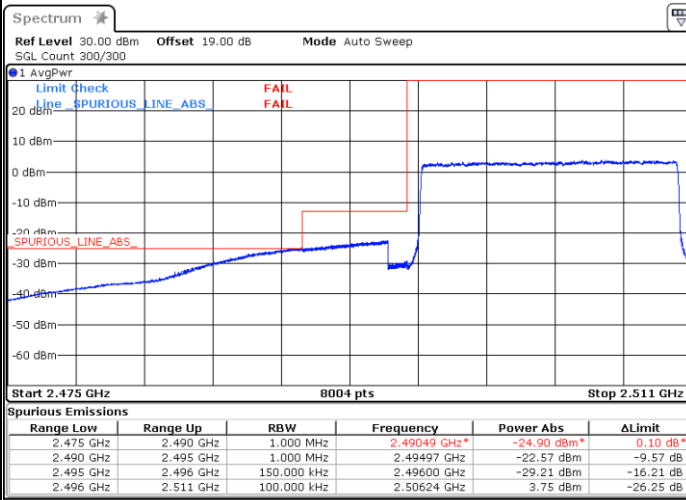
Date: 24.APR.2024 14:58:05

Highest Band Edge / 1 RB



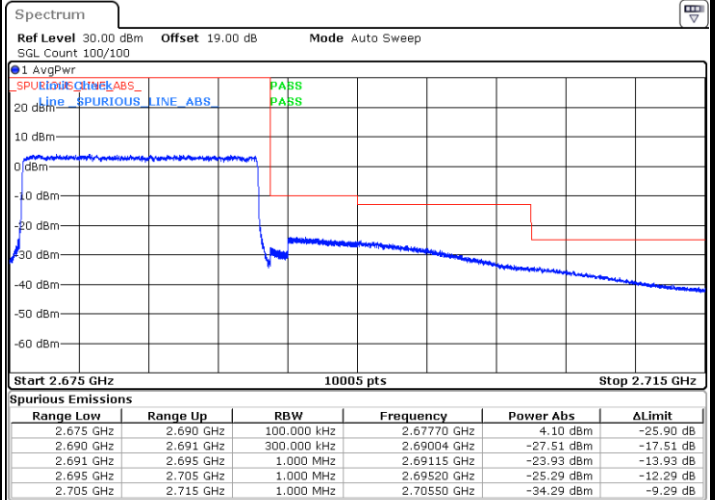
Date: 24.APR.2024 15:37:35

Lowest Band Edge / Full RB



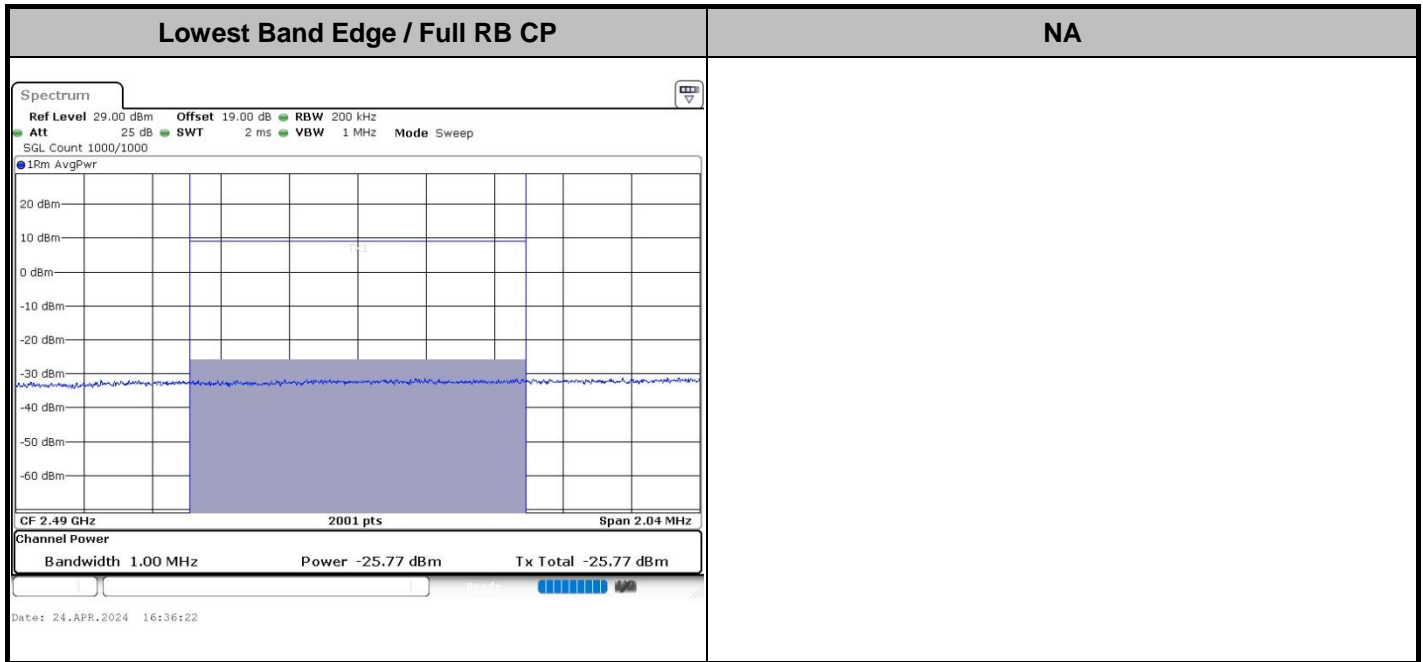
Date: 24.APR.2024 16:29:43

Highest Band Edge / Full RB



Date: 24.APR.2024 15:40:40

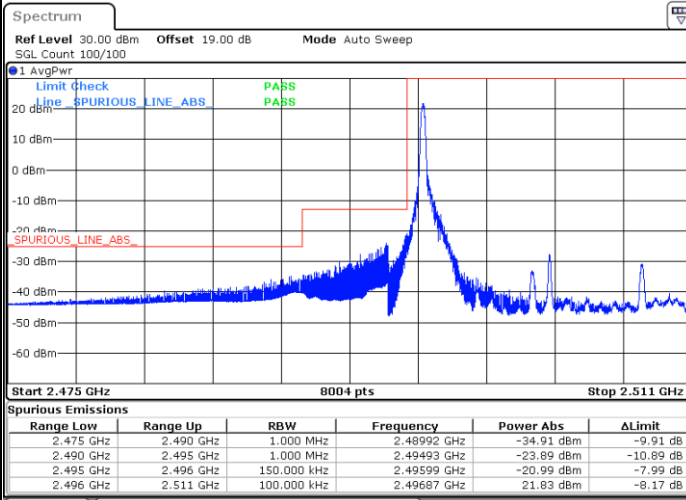






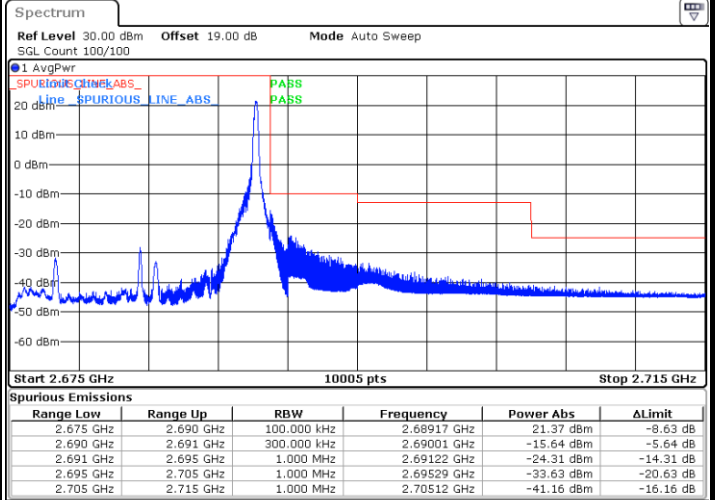
LTE Band 41 / 15MHz / 64QAM

Lowest Band Edge / 1RB



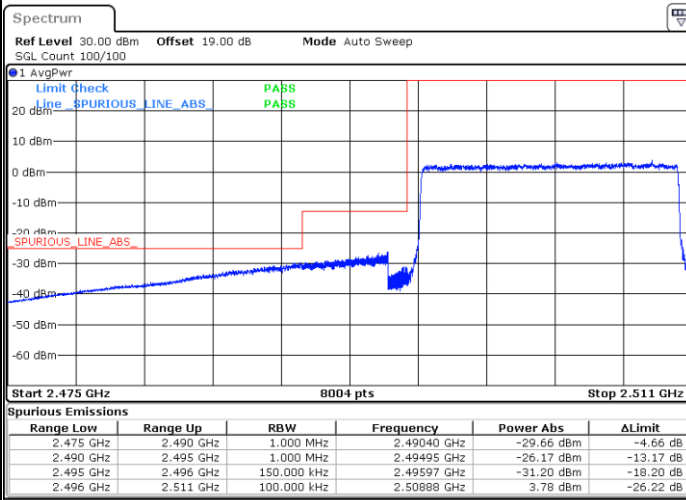
Date: 24.APR.2024 14:59:05

Highest Band Edge / 1 RB



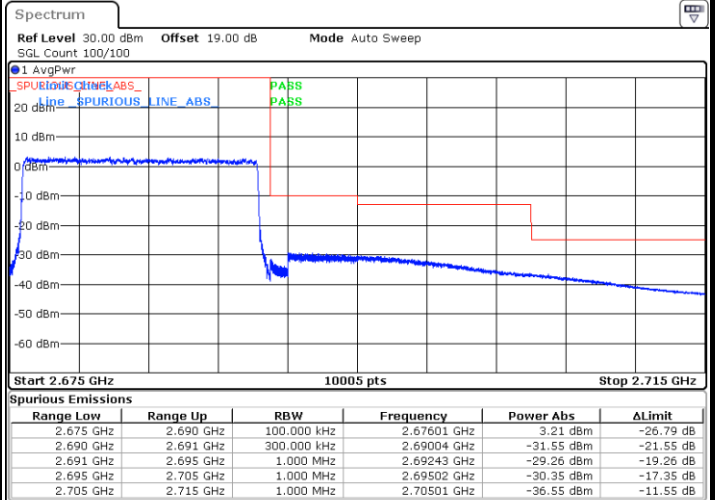
Date: 24.APR.2024 15:38:36

Lowest Band Edge / Full RB



Date: 24.APR.2024 15:00:06

Highest Band Edge / Full RB

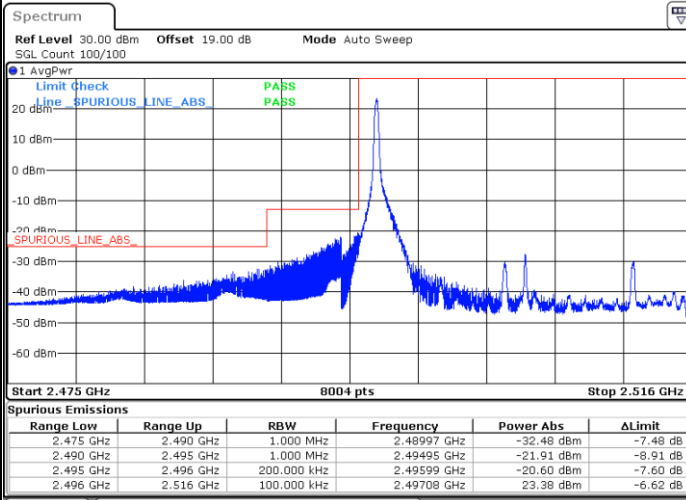


Date: 24.APR.2024 15:39:39



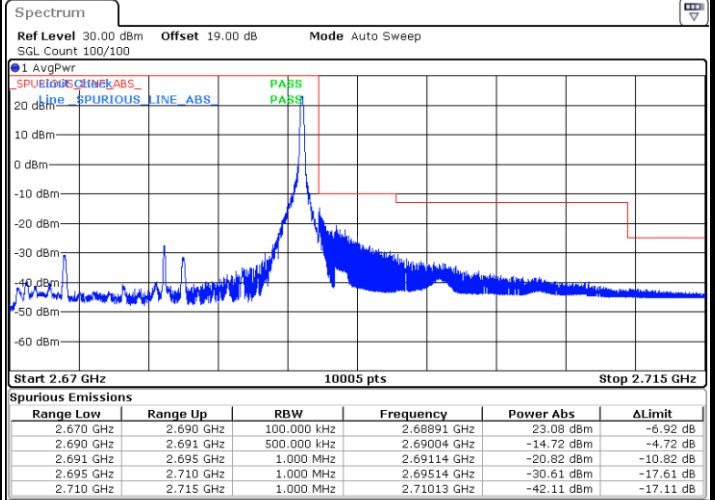
LTE Band 41 / 20MHz / QPSK

Lowest Band Edge / 1 RB



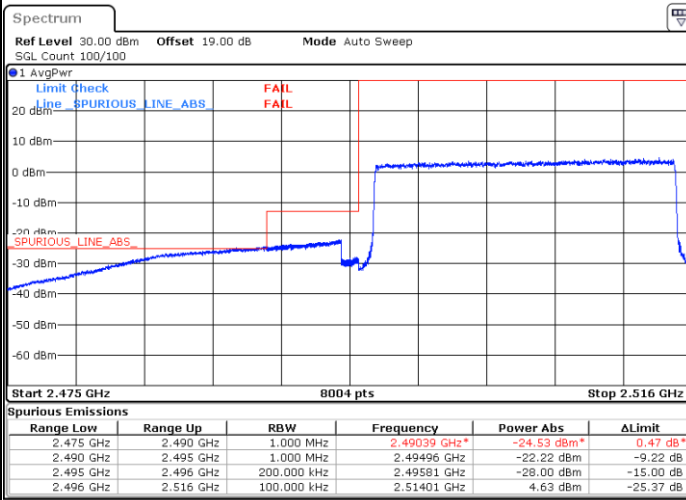
Date: 24.APR.2024 15:45:31

Highest Band Edge / 1 RB



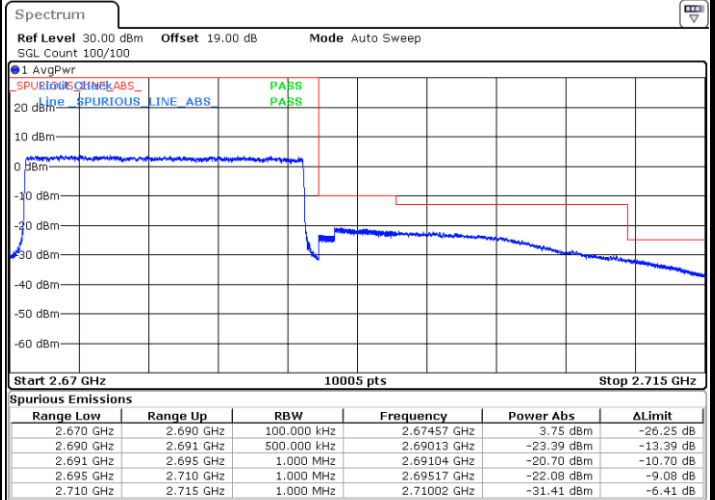
Date: 24.APR.2024 15:53:15

Lowest Band Edge / Full RB

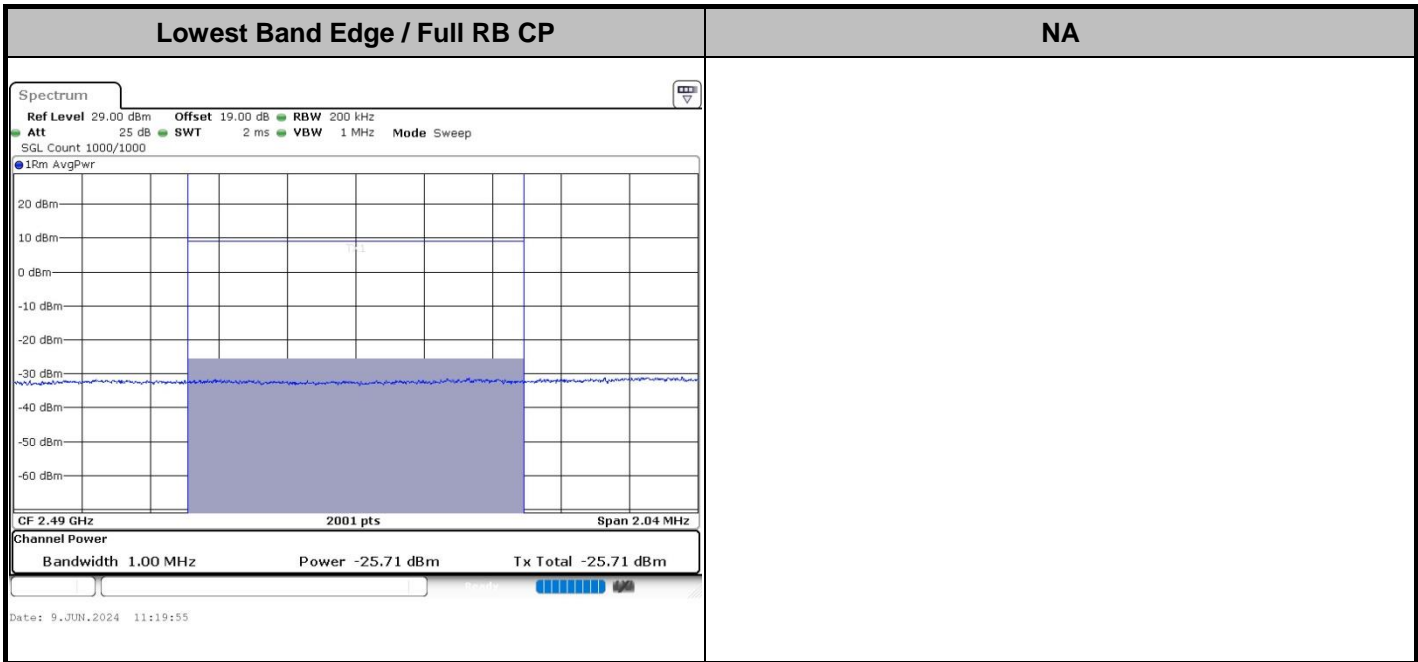


Date: 9.JUN.2024 11:18:06

Highest Band Edge / Full RB



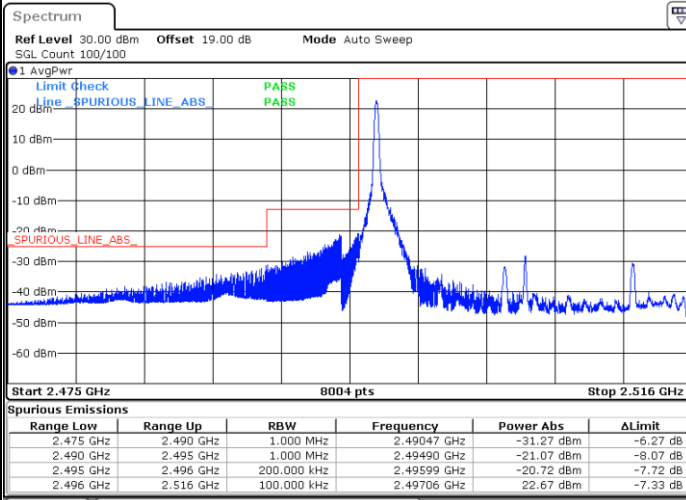
Date: 24.APR.2024 15:58:23





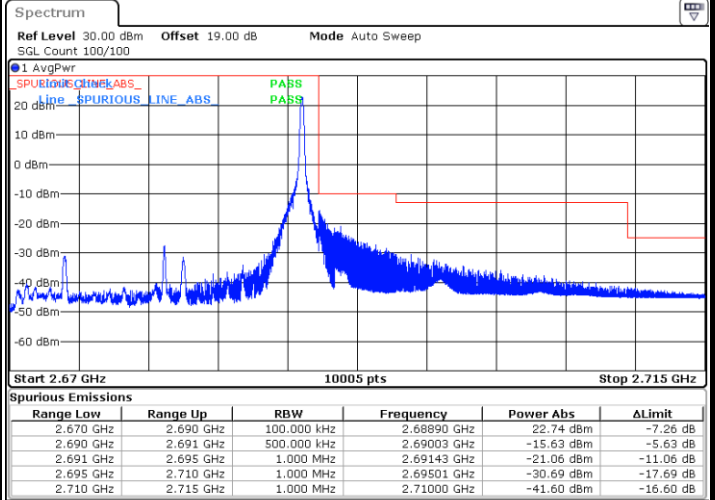
LTE Band 41 / 20MHz / 16QAM

Lowest Band Edge / 1RB



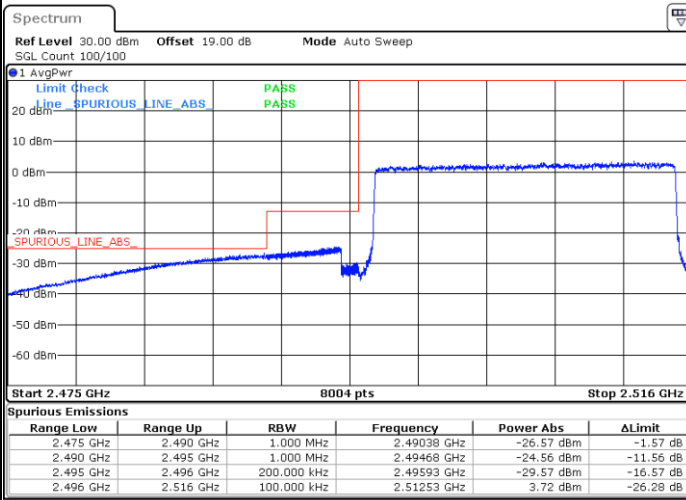
Date: 24.APR.2024 15:46:32

Highest Band Edge / 1 RB



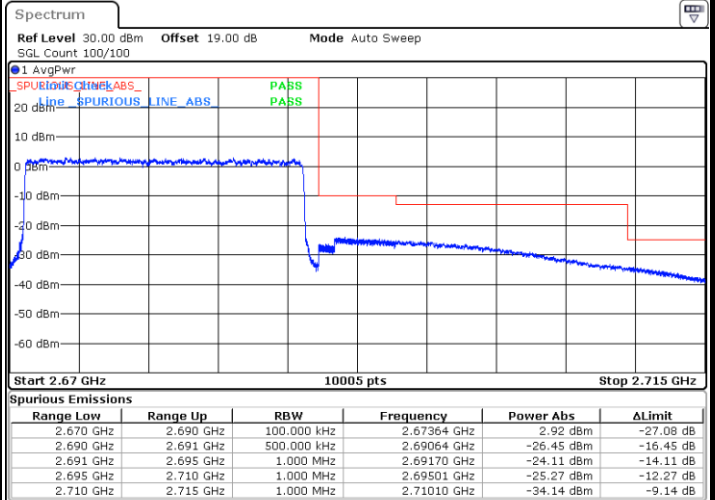
Date: 24.APR.2024 15:54:16

Lowest Band Edge / Full RB



Date: 9.JUN.2024 11:17:03

Highest Band Edge / Full RB

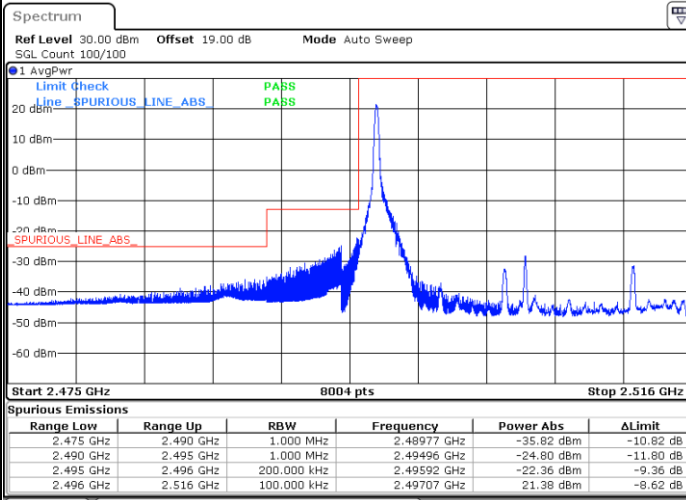


Date: 24.APR.2024 15:57:21



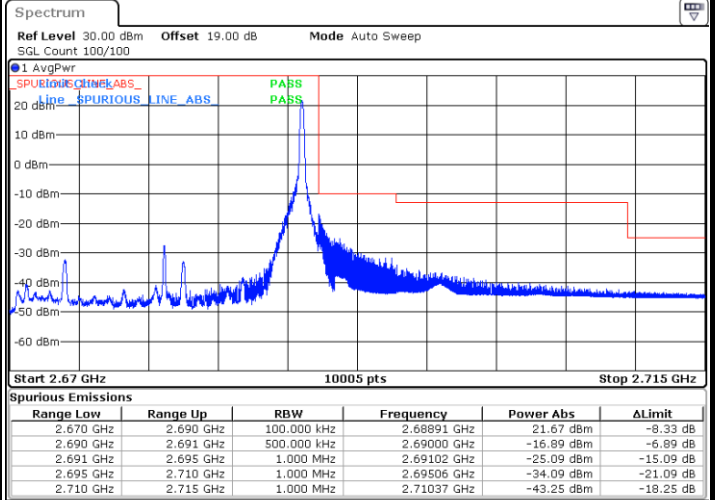
LTE Band 41 / 20MHz / 64QAM

Lowest Band Edge / 1RB



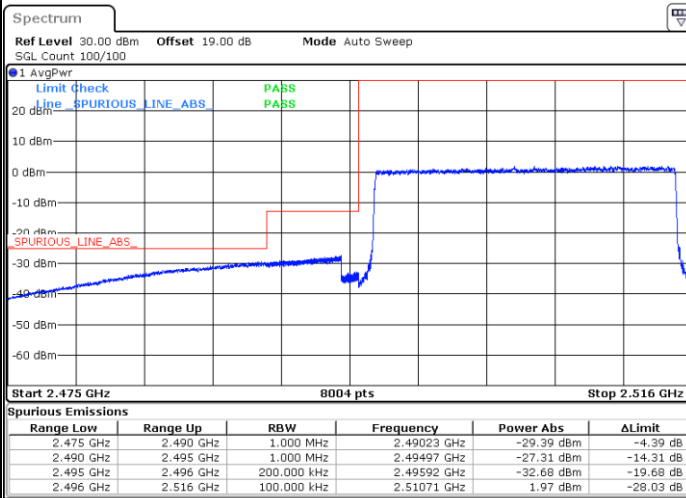
Date: 24.APR.2024 15:47:33

Highest Band Edge / 1 RB



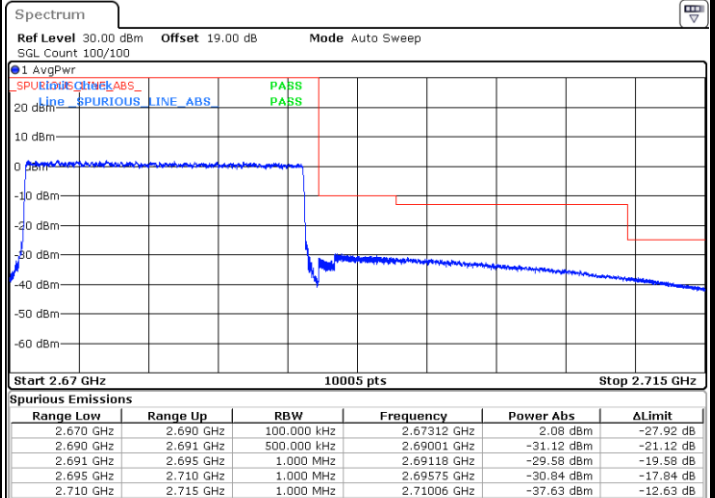
Date: 24.APR.2024 15:55:18

Lowest Band Edge / Full RB



Date: 24.APR.2024 15:48:34

Highest Band Edge / Full RB



Date: 24.APR.2024 15:56:19

Note: for bandedge test, the "CP" means channel power integrated method.

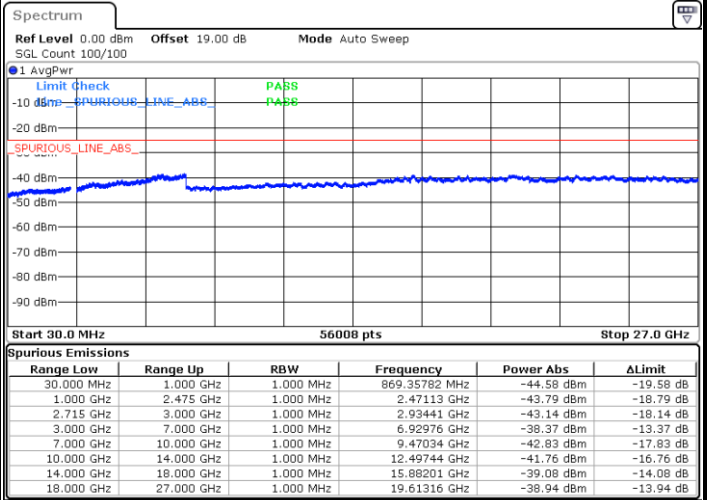
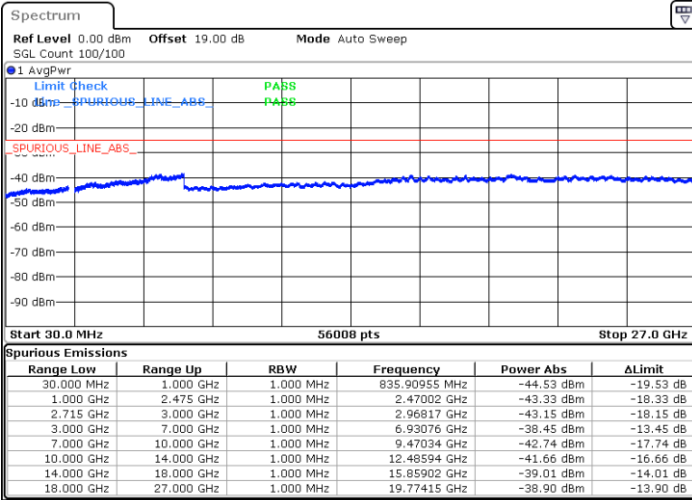


# Conducted Spurious Emission

## LTE Band 41 / 5MHz

### Lowest Channel / QPSK

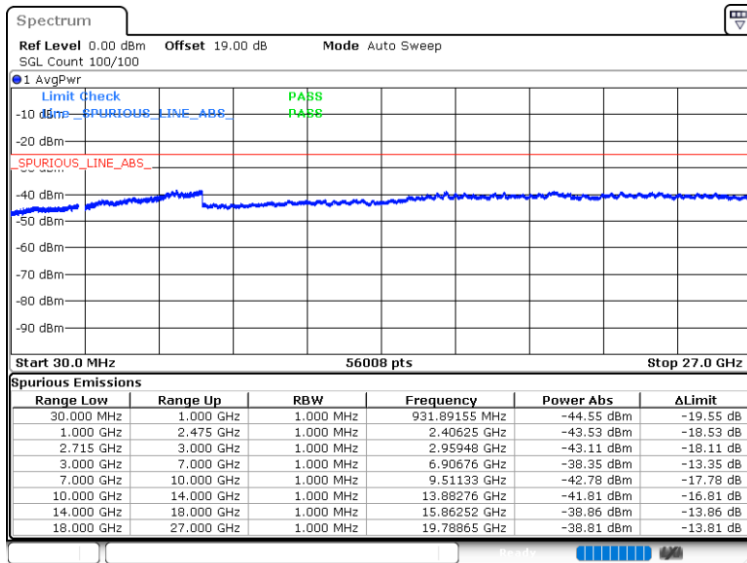
### Middle Channel / QPSK



Date: 22.APR.2024 15:27:01

Date: 22.APR.2024 15:28:21

### Highest Channel / QPSK



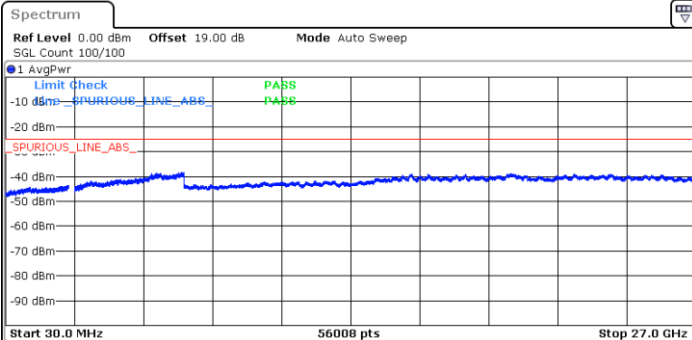
Date: 22.APR.2024 15:30:59



LTE Band 41 / 10MHz

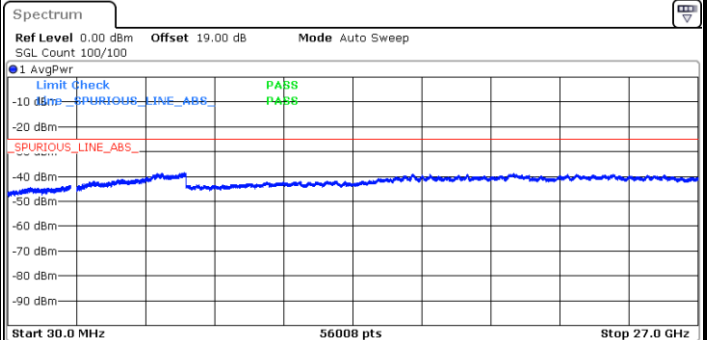
Lowest Channel / QPSK

Middle Channel / QPSK



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	963.40080 MHz	-44.32 dBm	-19.32 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.46744 GHz	-43.59 dBm	-18.59 dB
2.715 GHz	3.000 GHz	1.000 MHz	2.95136 GHz	-43.11 dBm	-18.11 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97825 GHz	-38.35 dBm	-13.35 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.52283 GHz	-42.73 dBm	-17.73 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.85339 GHz	-41.87 dBm	-16.87 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.98725 GHz	-39.06 dBm	-14.06 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.77615 GHz	-38.90 dBm	-13.90 dB

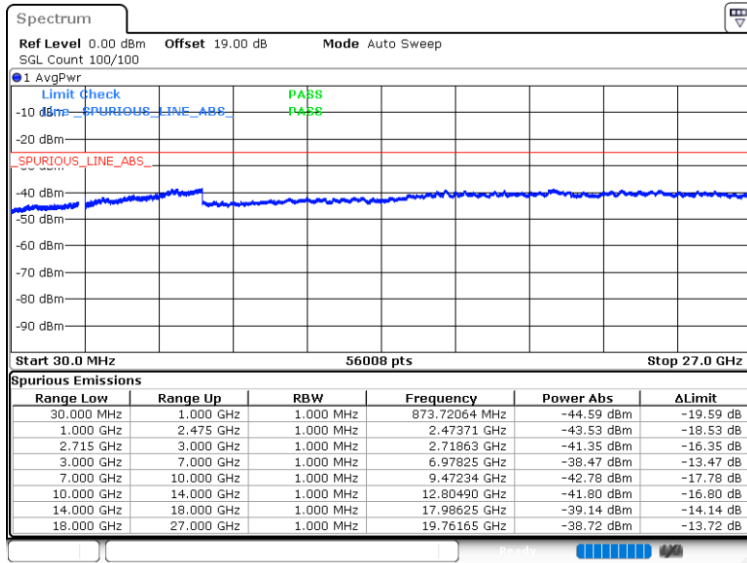
Date: 22.APR.2024 15:33:02



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	929.46777 MHz	-44.37 dBm	-19.37 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.45712 GHz	-43.58 dBm	-18.58 dB
2.715 GHz	3.000 GHz	1.000 MHz	2.95133 GHz	-42.96 dBm	-17.96 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92076 GHz	-38.43 dBm	-13.43 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.48484 GHz	-42.79 dBm	-17.79 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.89426 GHz	-41.84 dBm	-16.84 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.53443 GHz	-39.08 dBm	-14.08 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.79165 GHz	-38.89 dBm	-13.89 dB

Date: 22.APR.2024 14:57:36

Highest Channel / QPSK



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	873.72064 MHz	-44.59 dBm	-19.59 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.47371 GHz	-43.53 dBm	-18.53 dB
2.715 GHz	3.000 GHz	1.000 MHz	2.71863 GHz	-41.35 dBm	-16.35 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97825 GHz	-38.47 dBm	-13.47 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.47234 GHz	-42.78 dBm	-17.78 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.80490 GHz	-41.80 dBm	-16.80 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.98625 GHz	-39.14 dBm	-14.14 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.76165 GHz	-38.72 dBm	-13.72 dB

Date: 24.APR.2024 14:55:20

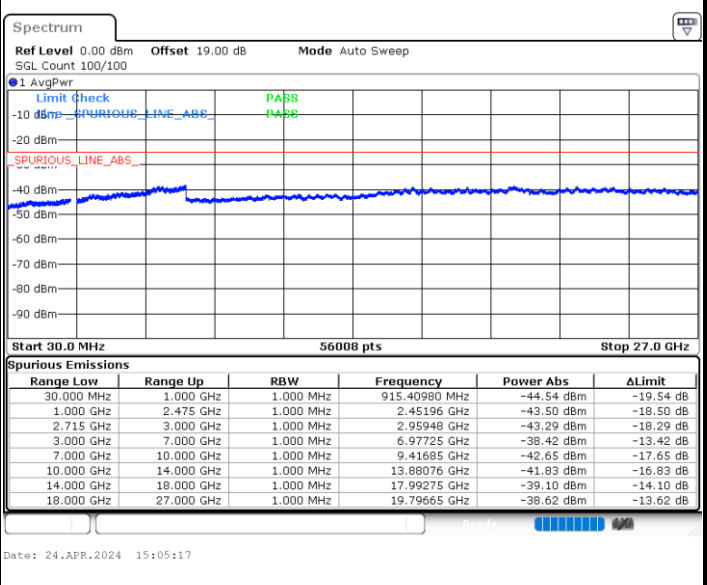
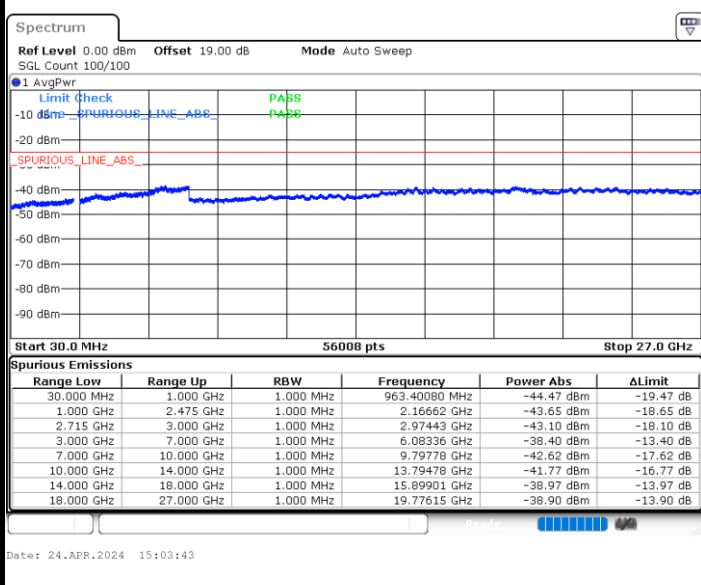




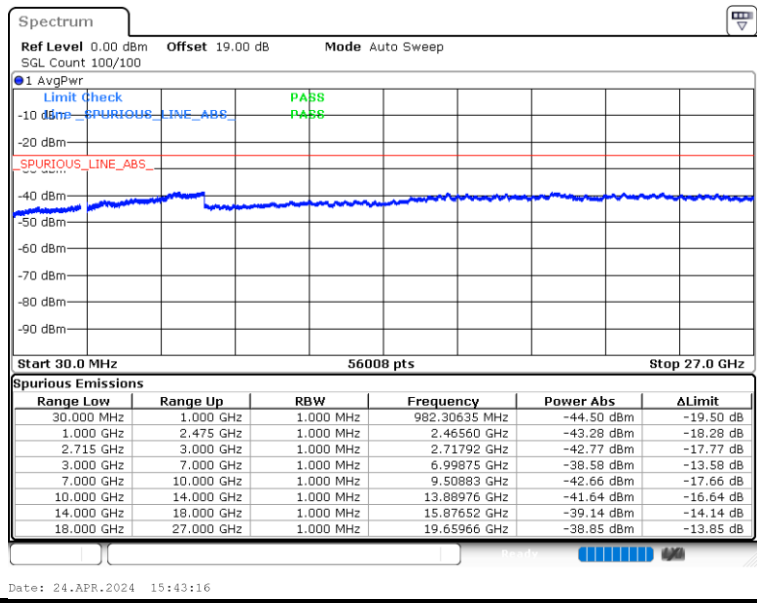
LTE Band 41 / 15MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK

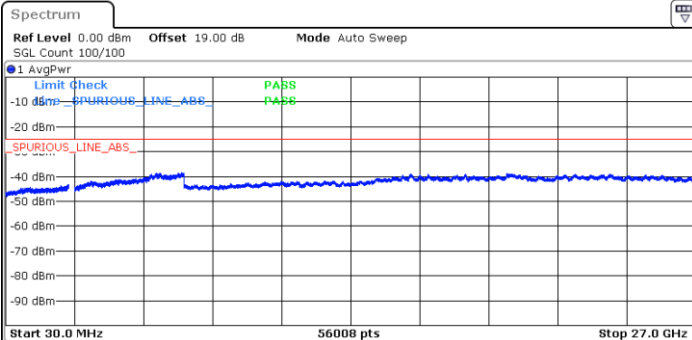




LTE Band 41 / 20MHz

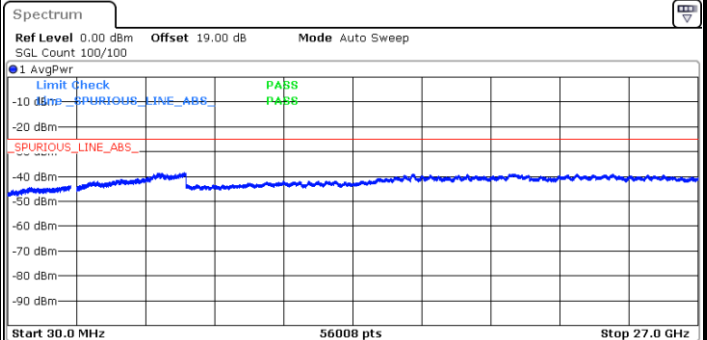
Lowest Channel / QPSK

Middle Channel / QPSK



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	989.57771 MHz	-44.50 dBm	-19.50 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.47297 GHz	-43.33 dBm	-18.33 dB
2.715 GHz	3.000 GHz	1.000 MHz	2.97144 GHz	-43.15 dBm	-18.15 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.89876 GHz	-38.46 dBm	-13.46 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.41235 GHz	-42.59 dBm	-17.59 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.89176 GHz	-41.83 dBm	-16.83 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.53443 GHz	-38.91 dBm	-13.91 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.63966 GHz	-38.87 dBm	-13.87 dB

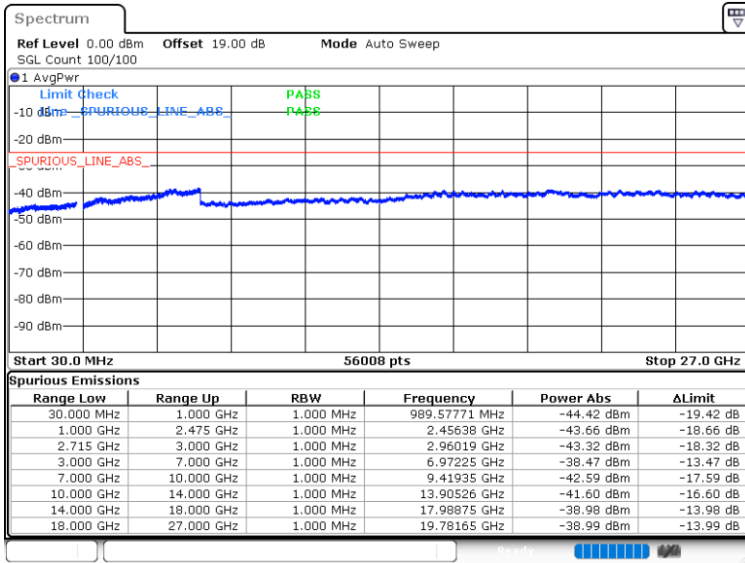
Date: 24.APR.2024 15:52:14



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	960.00750 MHz	-44.33 dBm	-19.33 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.47260 GHz	-43.56 dBm	-18.56 dB
2.715 GHz	3.000 GHz	1.000 MHz	2.96973 GHz	-43.21 dBm	-18.21 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93476 GHz	-38.47 dBm	-13.47 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.43034 GHz	-42.71 dBm	-17.71 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.85589 GHz	-41.81 dBm	-16.81 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.86752 GHz	-38.92 dBm	-13.92 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.79965 GHz	-38.92 dBm	-13.92 dB

Date: 22.APR.2024 15:35:05

Highest Channel / QPSK



Date: 22.APR.2024 15:39:04



### Frequency Stability

Test Conditions		LTE Band 41 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0003	PASS
40	Normal Voltage	0.0002	
30	Normal Voltage	0.0001	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0003	
0	Normal Voltage	0.0002	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0001	
-30	Normal Voltage	0.0005	
20	Maximum Voltage	0.0001	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0002	

**Note:**

1. Normal Voltage = 3.89 V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage = 4.3 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 7C

## 26dB Bandwidth

Mode	LTE Band 7C : 26dB BW(MHz)			
QPSK				
BW	10MHz+20MHz	15MHz+10MHz	15MHz+15MHz	15MHz+20MHz
Middle CH	29.97	25.18	30.63	34.83
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	30.15	35.04	39.96	

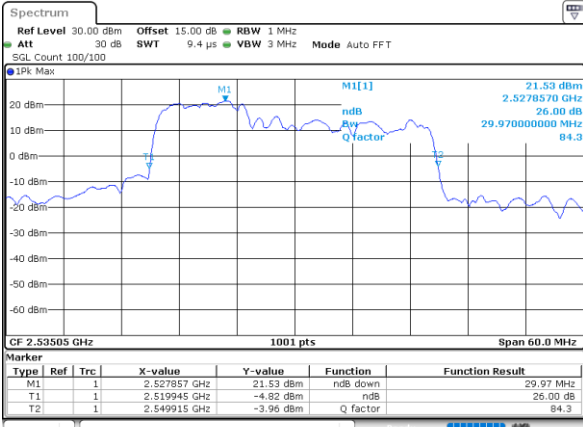
Mode	LTE Band 7C : 26dB BW(MHz)			
16QAM				
BW	10MHz+20MHz	15MHz+10MHz	15MHz+15MHz	15MHz+20MHz
Middle CH	29.91	25.08	30.51	34.69
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	29.85	34.97	39.96	



LTE Band 7C

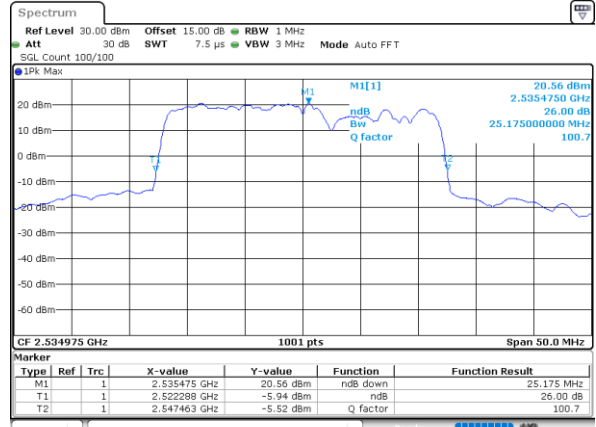
QPSK

Middle Channel / 10MHz+20MHz



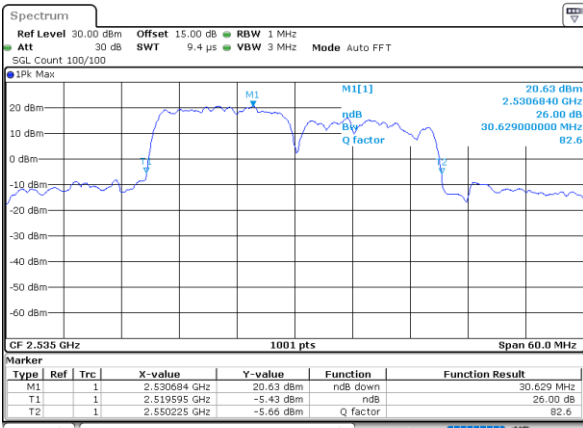
Date: 20, APR, 2024 16:17:20

Middle Channel / 15MHz+10MHz



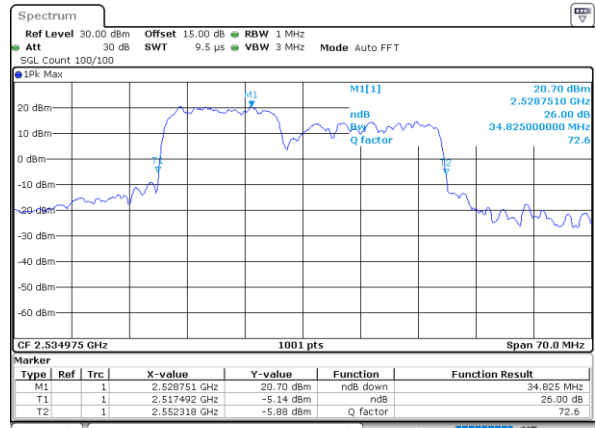
Date: 20, APR, 2024 18:44:03

Middle Channel / 15MHz+15MHz



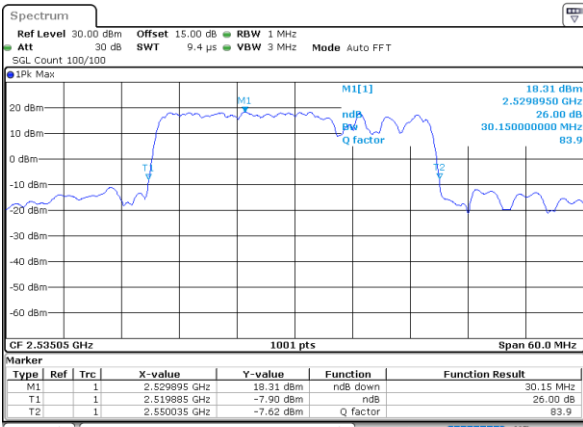
Date: 20, APR, 2024 17:10:46

Middle Channel / 15MHz+20MHz



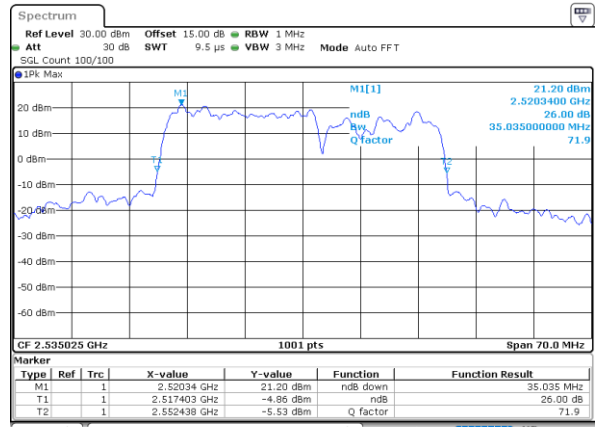
Date: 20, APR, 2024 17:35:06

Middle Channel / 20MHz+10MHz



Date: 20, APR, 2024 16:40:29

Middle Channel / 20MHz+15MHz



Date: 20, APR, 2024 17:58:27

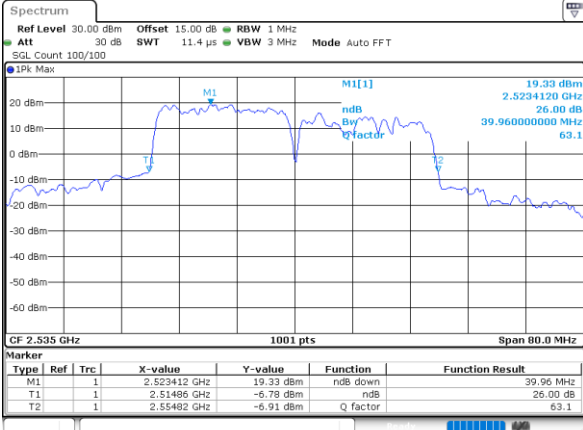


LTE Band 7C

QPSK

Middle Channel / 20MHz+20MHz

N/A



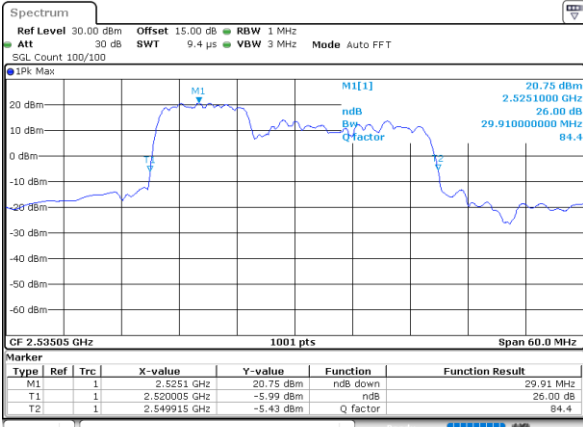
Date: 20\_APR\_2024 18:21:37



LTE Band 7C

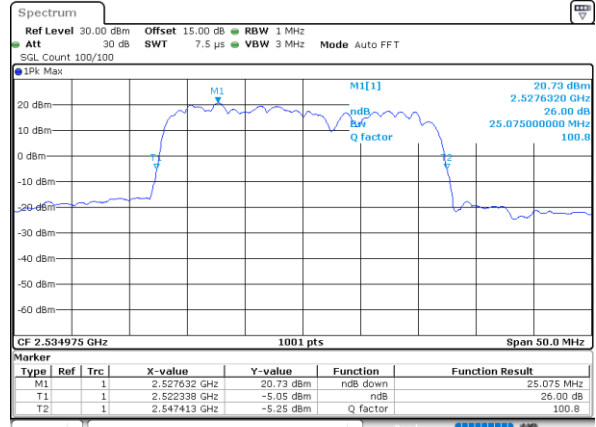
16QAM

Middle Channel / 10MHz+20MHz



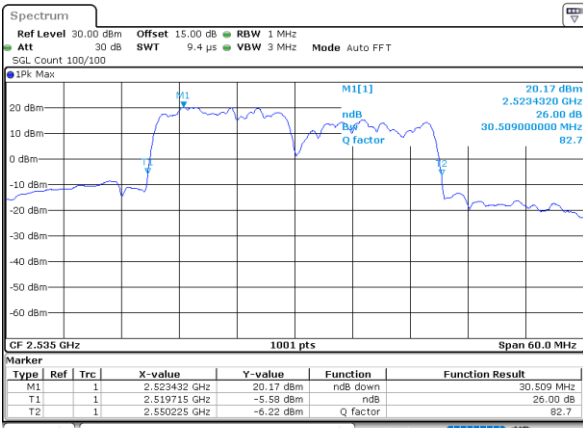
Date: 20, APR, 2024 16:17:49

Middle Channel / 15MHz+10MHz



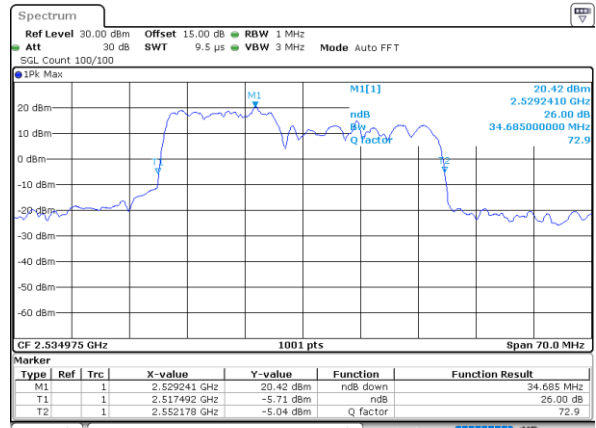
Date: 20, APR, 2024 18:44:32

Middle Channel / 15MHz+15MHz



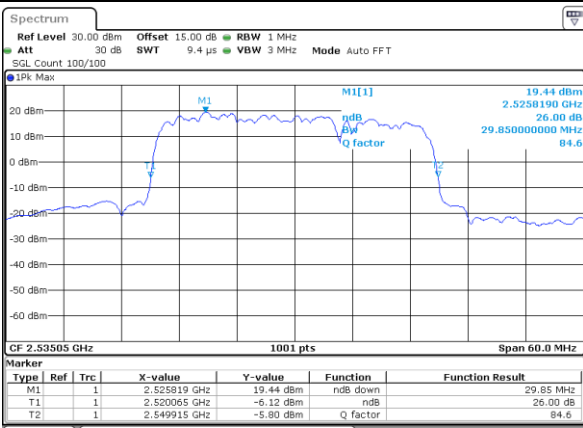
Date: 20, APR, 2024 17:11:14

Middle Channel / 15MHz+20MHz



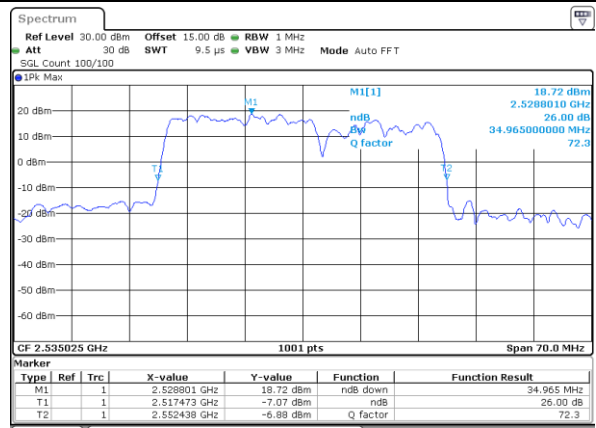
Date: 20, APR, 2024 17:35:36

Middle Channel / 20MHz+10MHz



Date: 20, APR, 2024 16:40:59

Middle Channel / 20MHz+15MHz



Date: 20, APR, 2024 17:58:57

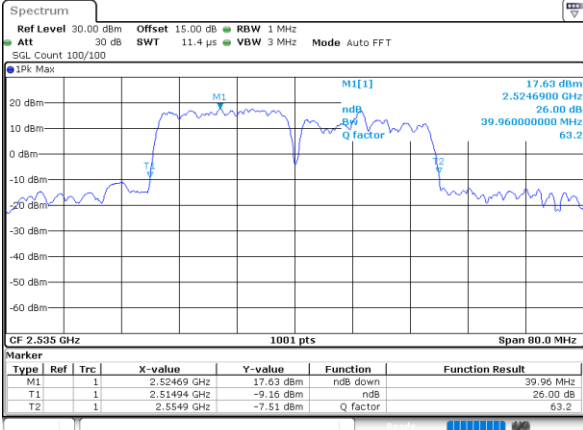


LTE Band 7C

16QAM

Middle Channel / 20MHz+20MHz

N/A



Date: 20\_APR\_2024 18:22:04





### Occupied Bandwidth

Mode	LTE Band 7C : 99%OBW(MHz)			
QPSK				
BW	10MHz+20MHz	15MHz+10MHz	15MHz+15MHz	15MHz+20MHz
Middle CH	27.87	23.53	28.47	32.52
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	28.11	32.87	37.40	

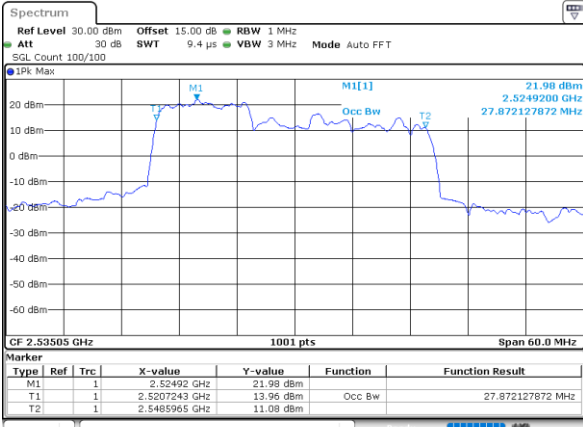
Mode	LTE Band 7C : 99%OBW(MHz)			
16QAM				
BW	10MHz+20MHz	15MHz+10MHz	15MHz+15MHz	15MHz+20MHz
Middle CH	27.39	23.53	28.47	32.87
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	28.11	32.80	37.24	



LTE Band 7C

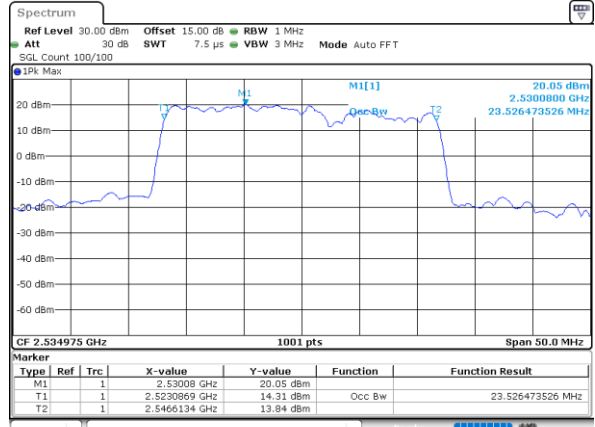
QPSK

Middle Channel / 10MHz+20MHz



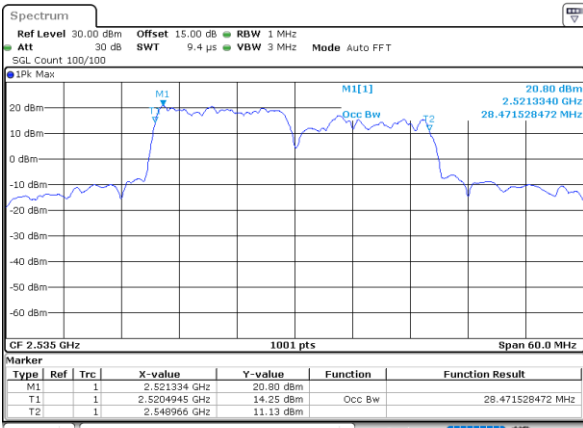
Date: 20.APR.2024 16:16:51

Middle Channel / 15MHz+10MHz



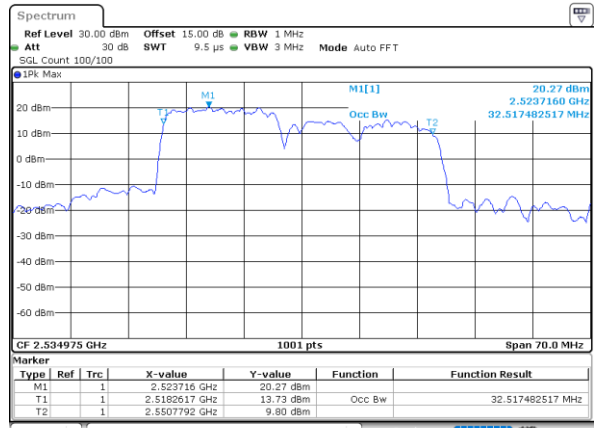
Date: 20.APR.2024 18:43:34

Middle Channel / 15MHz+15MHz



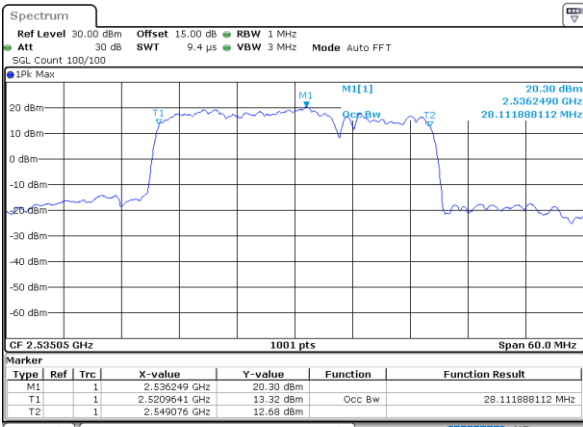
Date: 20.APR.2024 17:10:19

Middle Channel / 15MHz+20MHz



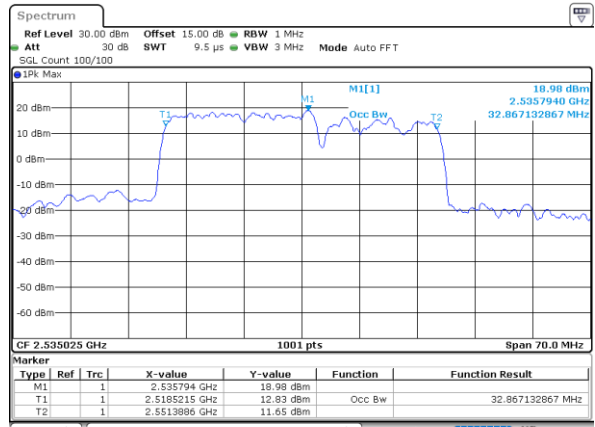
Date: 20.APR.2024 17:34:37

Middle Channel / 20MHz+10MHz



Date: 20.APR.2024 16:39:59

Middle Channel / 20MHz+15MHz



Date: 20.APR.2024 17:57:58

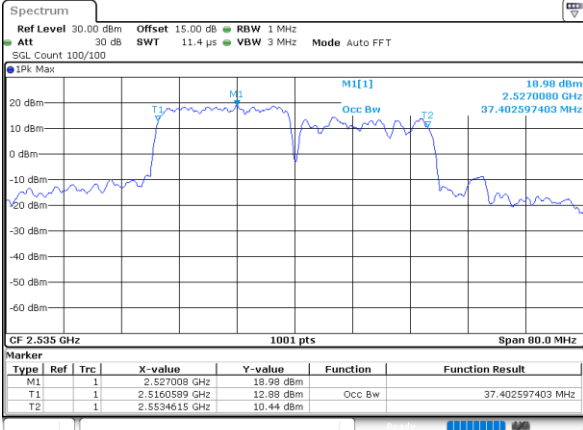


LTE Band 7C

QPSK

Middle Channel / 20MHz+20MHz

N/A



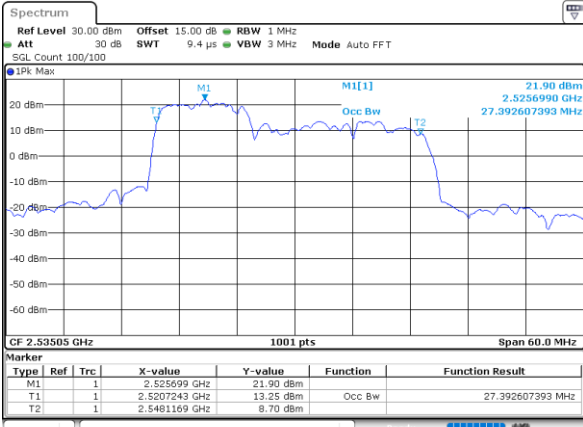
Date: 20, APR, 2024 18:21:10



LTE Band 7C

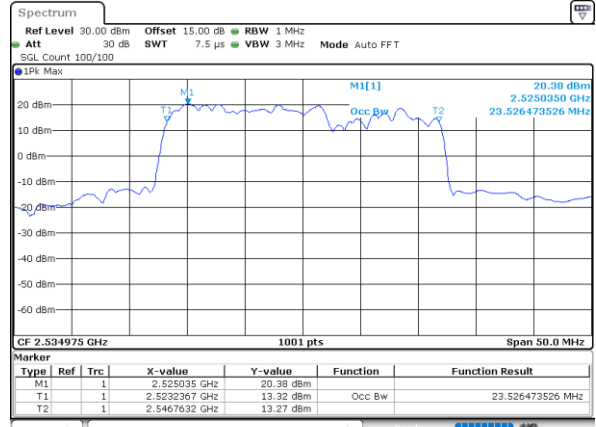
16QAM

Middle Channel / 10MHz+20MHz



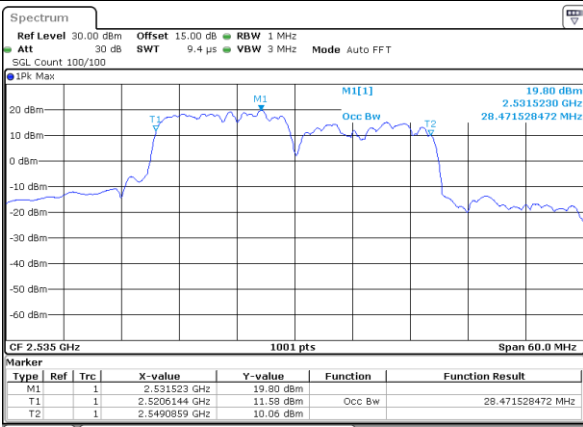
Date: 20.APR.2024 16:18:18

Middle Channel / 15MHz+10MHz



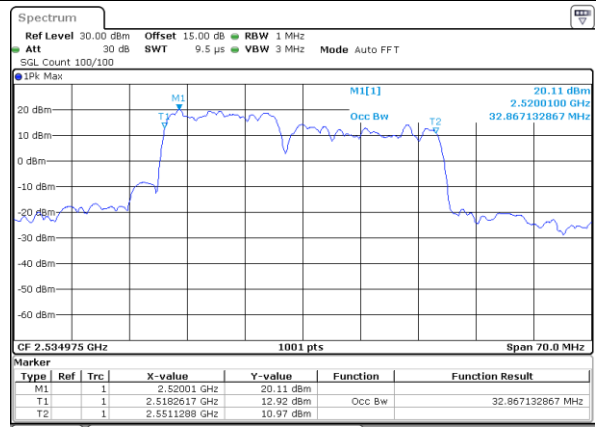
Date: 20.APR.2024 18:45:02

Middle Channel / 15MHz+15MHz



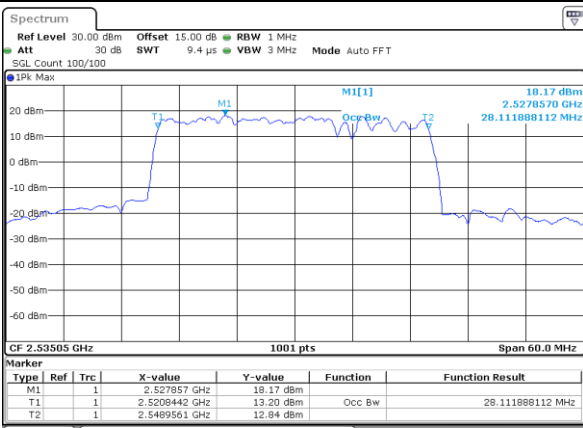
Date: 20.APR.2024 17:11:41

Middle Channel / 15MHz+20MHz



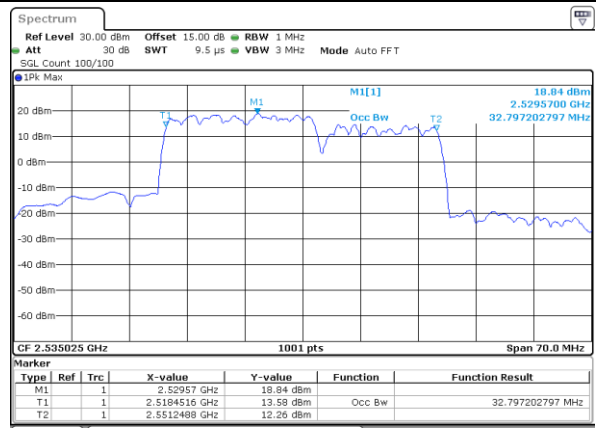
Date: 20.APR.2024 17:36:05

Middle Channel / 20MHz+10MHz



Date: 20.APR.2024 16:41:28

Middle Channel / 20MHz+15MHz



Date: 20.APR.2024 17:59:26

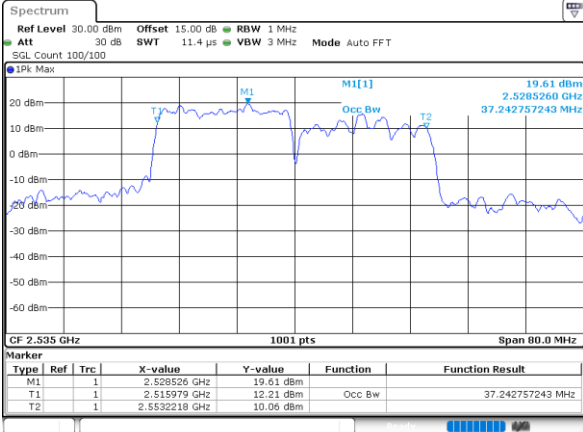


LTE Band 7C

16QAM

Middle Channel / 20MHz+20MHz

N/A



Date: 20, APR, 2024 18:22:32