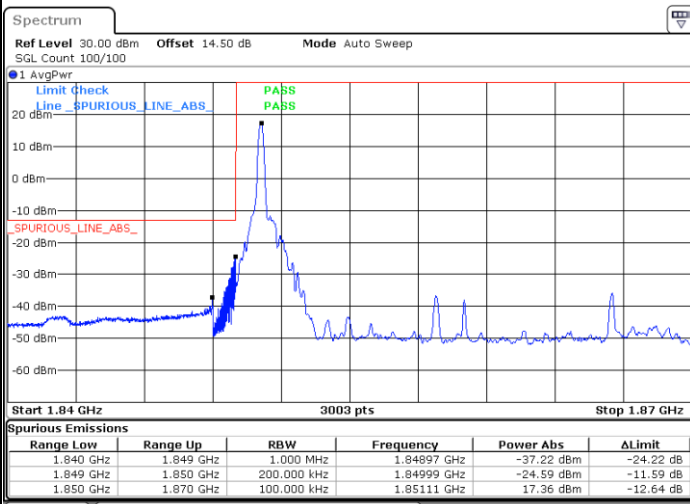




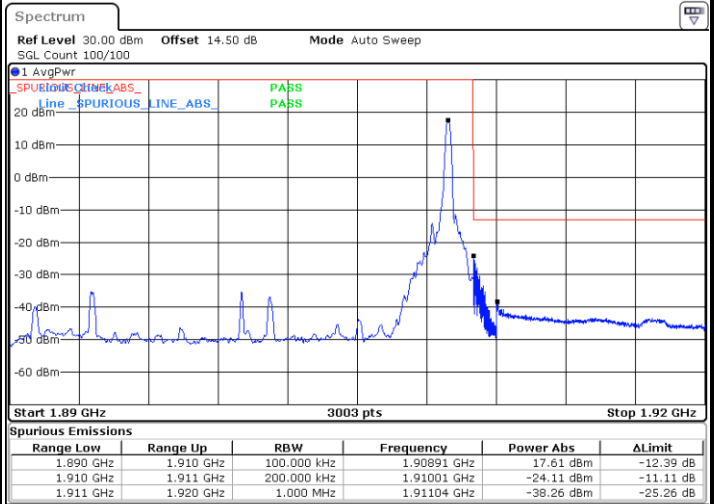
LTE Band 2 / 20MHz / 64QAM

Lowest Band Edge / 1 RB



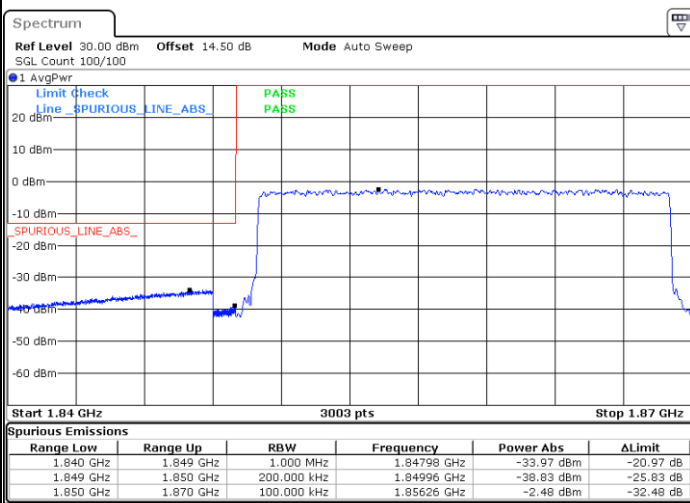
Date: 21.JUN.2024 13:11:05

Highest Band Edge / 1 RB



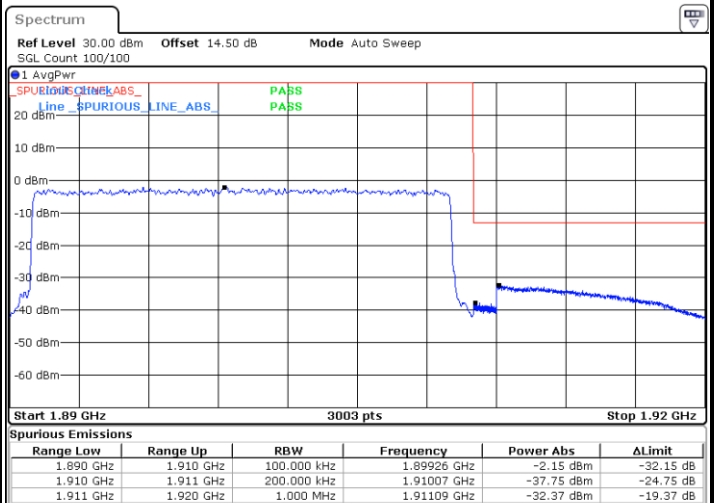
Date: 21.JUN.2024 13:22:10

Lowest Band Edge / Full RB



Date: 21.JUN.2024 13:14:10

Highest Band Edge / Full RB



Date: 21.JUN.2024 13:25:15

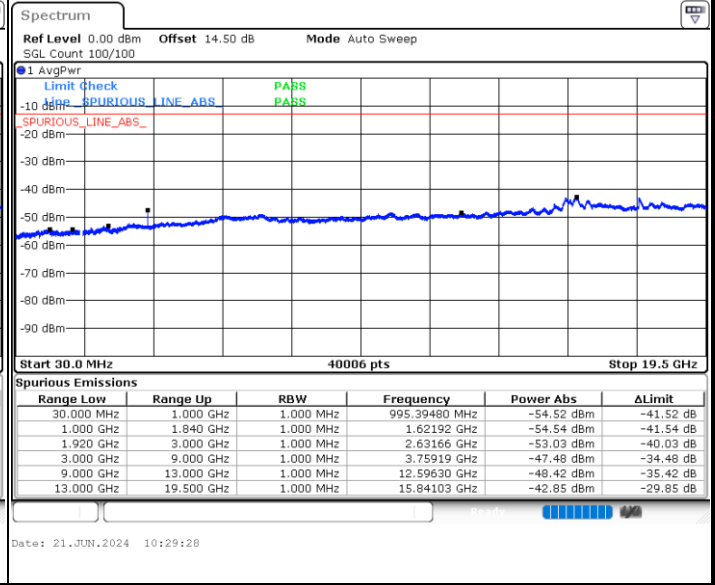
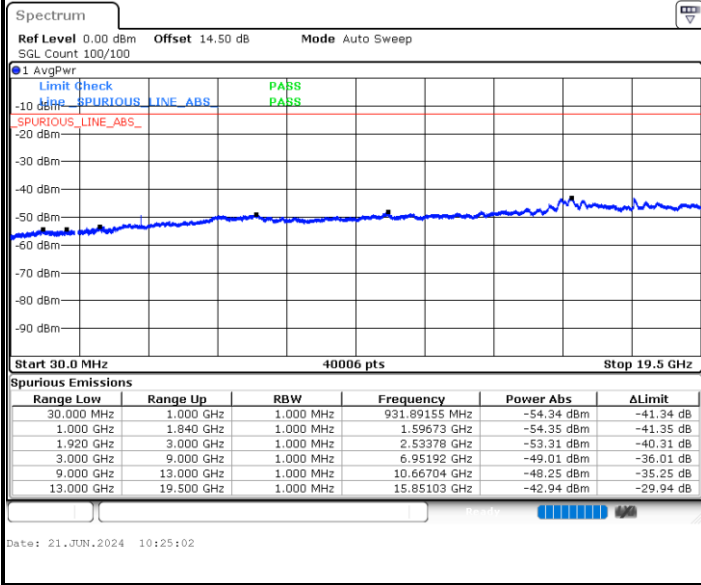


# Conducted Spurious Emission

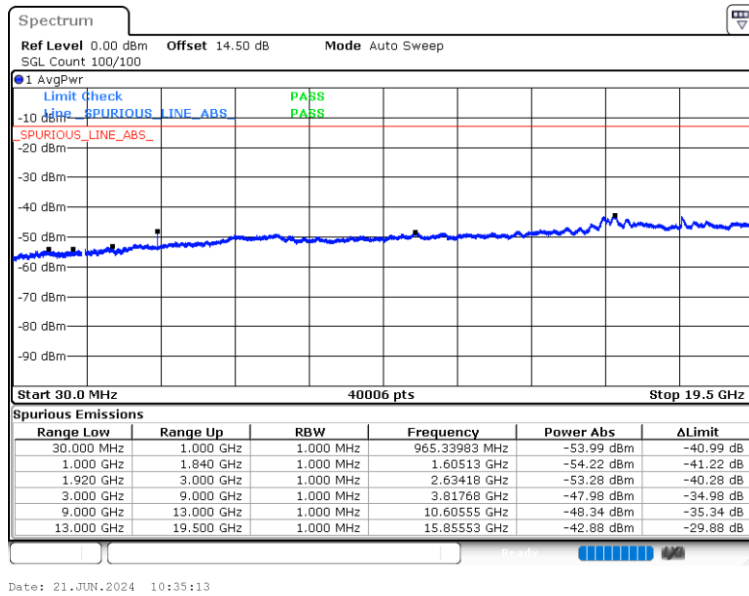
## LTE Band 2 / 1.4MHz

### Lowest Channel / QPSK

### Middle Channel / QPSK



### Highest Channel / QPSK

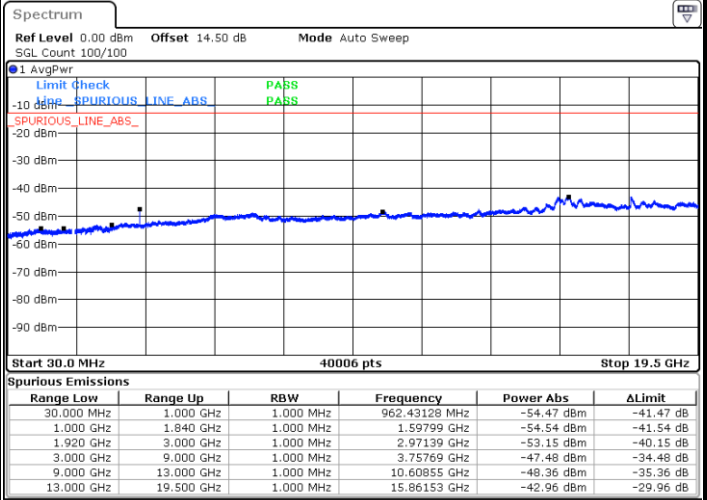
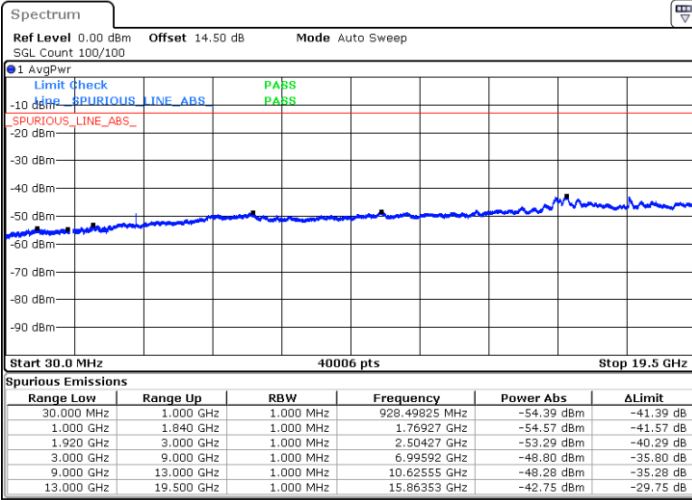




LTE Band 2 / 3MHz

Lowest Channel / QPSK

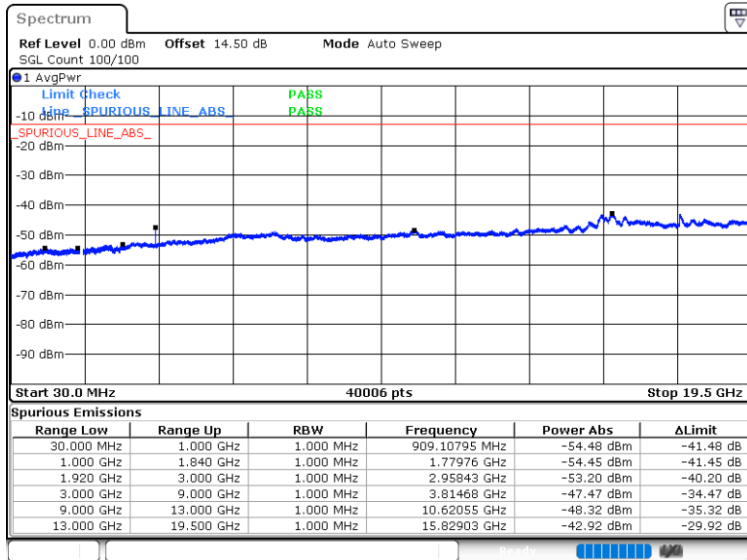
Middle Channel / QPSK



Date: 21 JUN.2024 10:45:51

Date: 21 JUN.2024 10:50:17

Highest Channel / QPSK



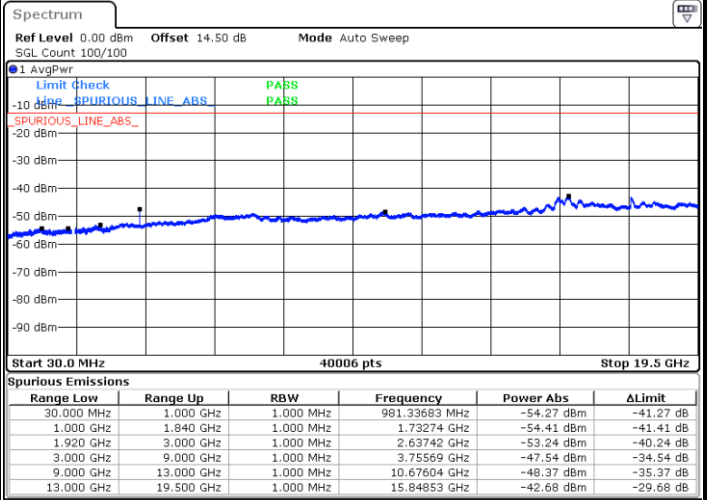
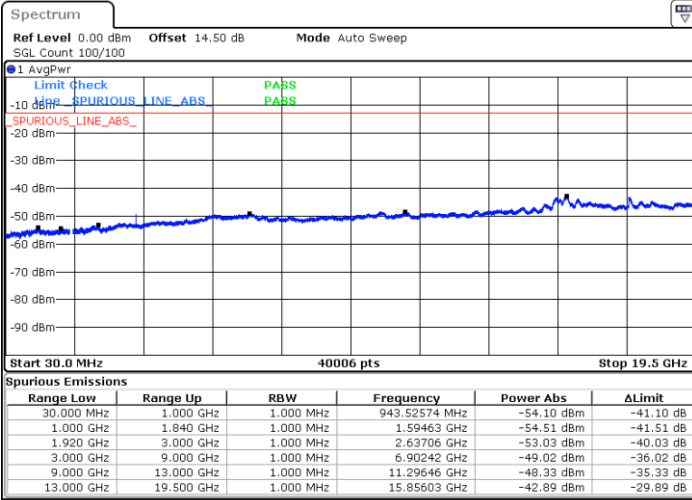
Date: 21 JUN.2024 10:59:18



LTE Band 2 / 5MHz

Lowest Channel / QPSK

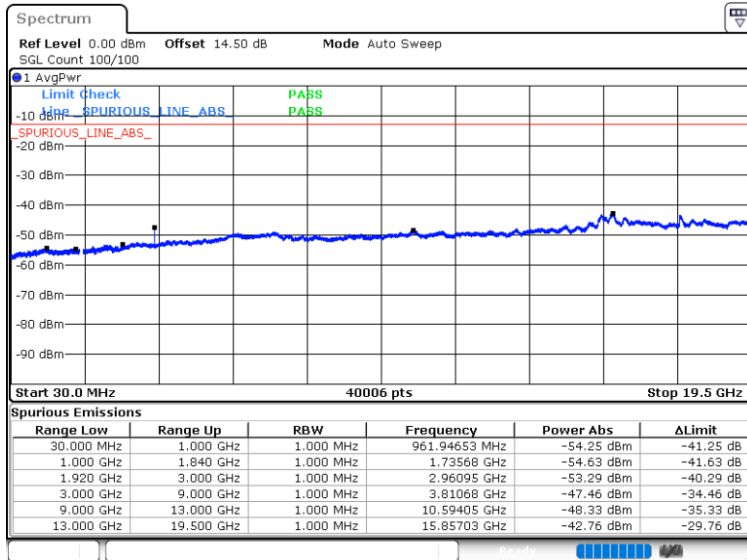
Middle Channel / QPSK



Date: 21 JUN 2024 11:11:18

Date: 21 JUN 2024 11:15:23

Highest Channel / QPSK



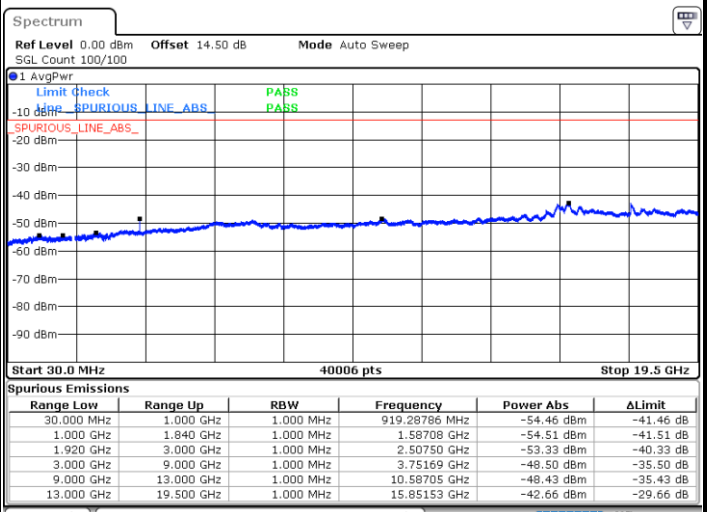
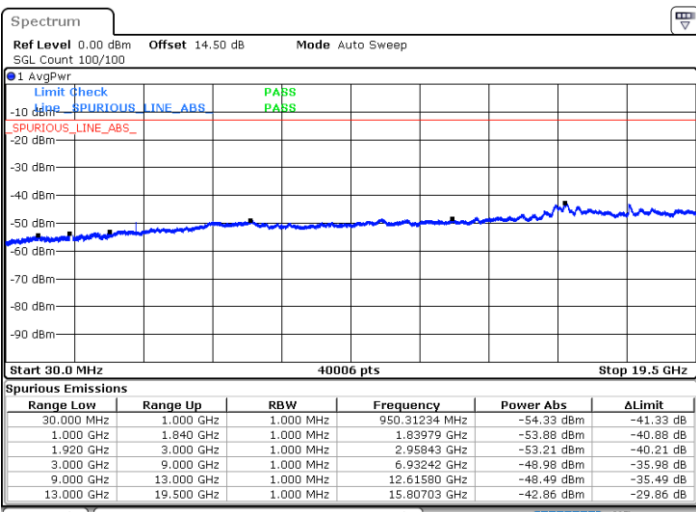
Date: 21 JUN 2024 11:23:50



LTE Band 2 / 10MHz

Lowest Channel / QPSK

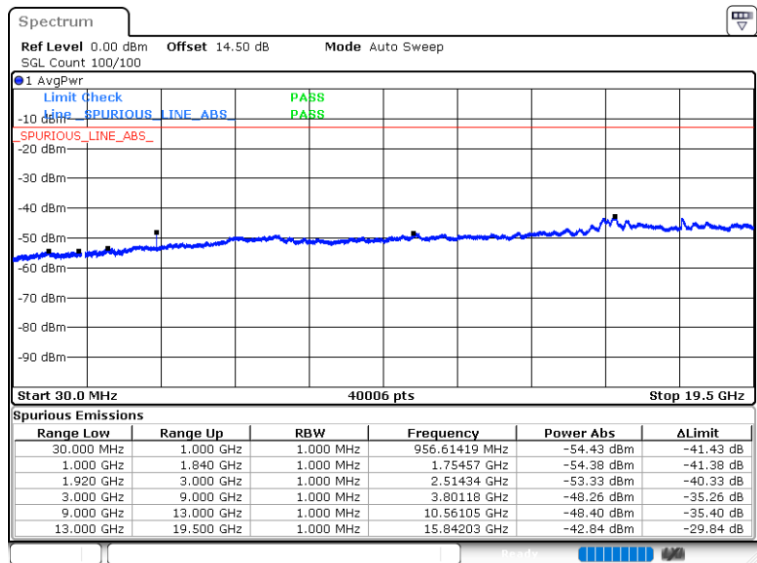
Middle Channel / QPSK



Date: 21 JUN.2024 11:37:35

Date: 21 JUN.2024 11:38:41

Highest Channel / QPSK



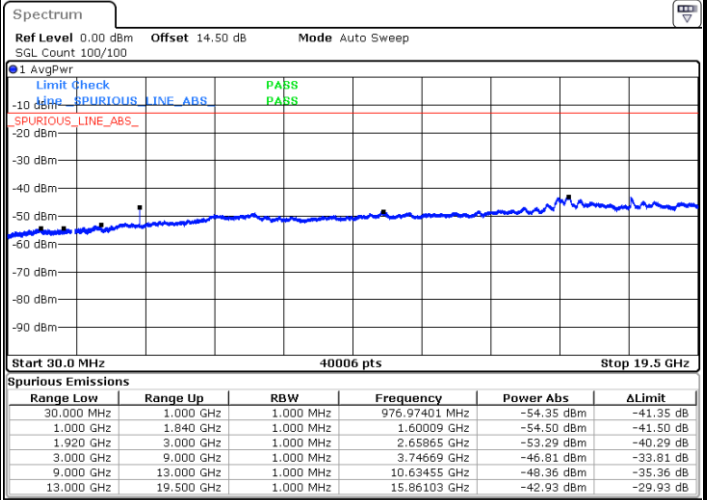
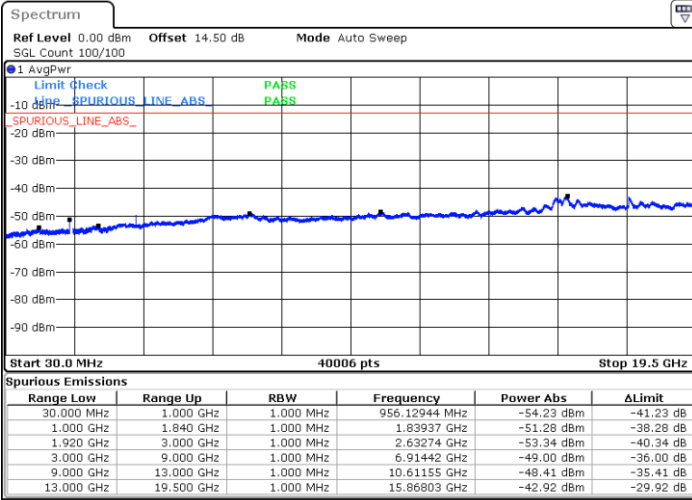
Date: 21 JUN.2024 11:47:16



LTE Band 2 / 15MHz

Lowest Channel / QPSK

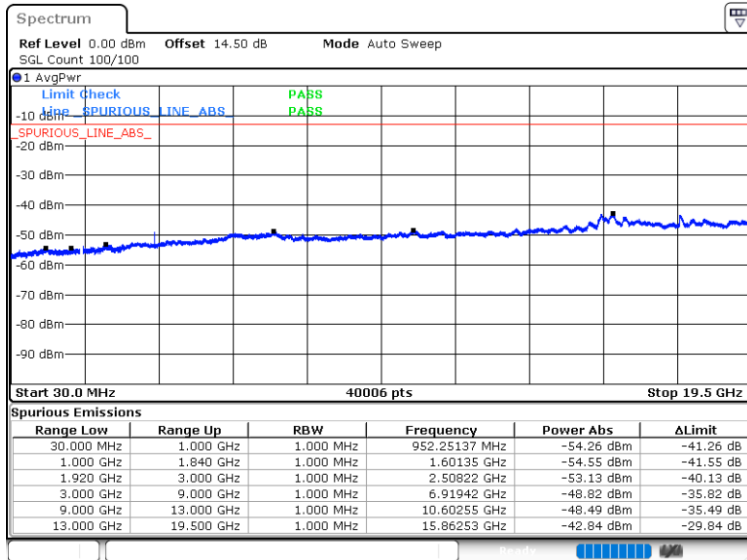
Middle Channel / QPSK



Date: 21 JUN.2024 11:59:55

Date: 21 JUN.2024 12:01:00

Highest Channel / QPSK



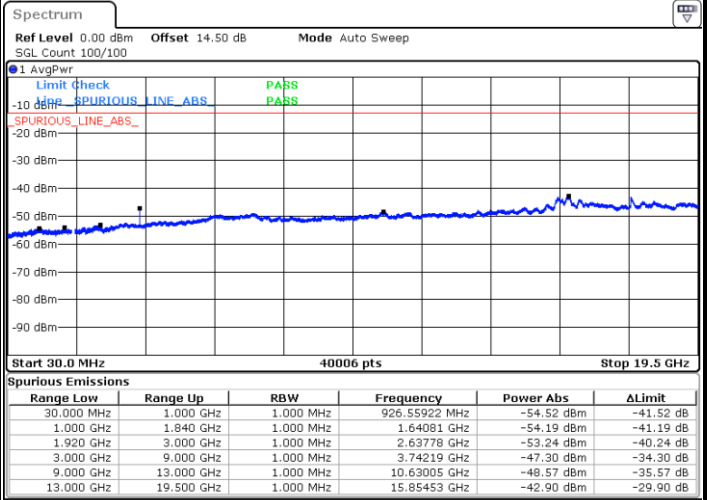
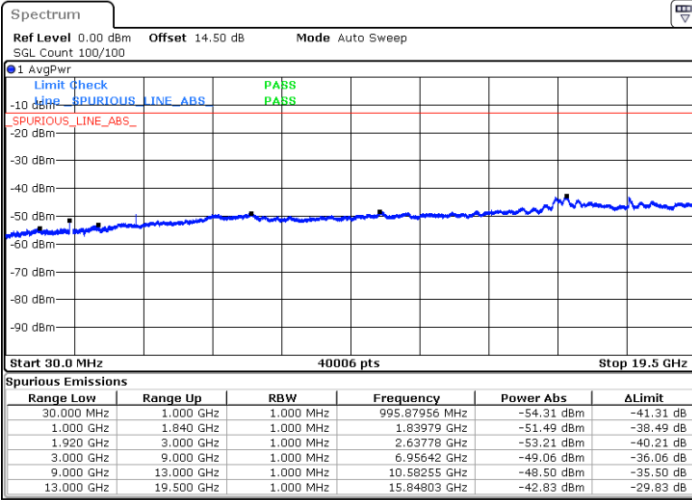
Date: 21 JUN.2024 12:09:35



LTE Band 2 / 20MHz

Lowest Channel / QPSK

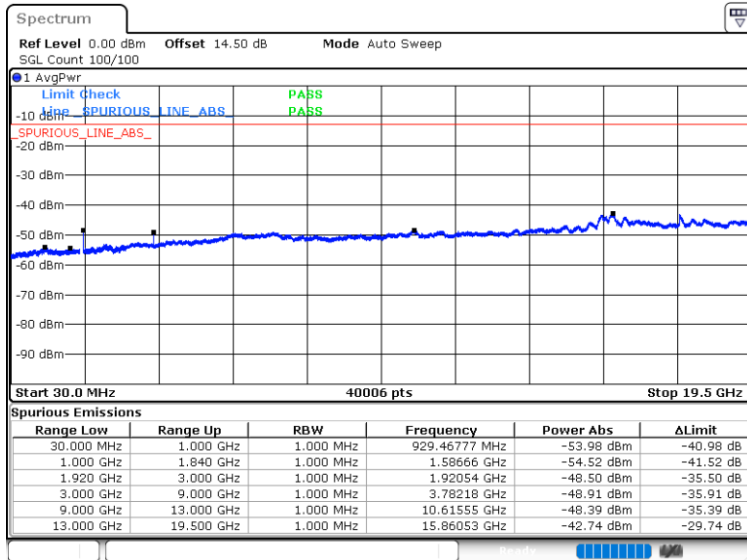
Middle Channel / QPSK



Date: 21 JUN.2024 13:15:16

Date: 21 JUN.2024 13:16:22

Highest Channel / QPSK



Date: 21 JUN.2024 13:26:21



### Frequency Stability

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0004	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0017	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0025	
-10	Normal Voltage	0.0019	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0017	

**Note:**

1. Normal Voltage = 3.91 V. ; Battery End Point (BEP) = 3.4 V. ; Maximum Voltage = 4.5 V.
2. The frequency fundamental emissions stay within the authorized frequency block.





## LTE Band 12

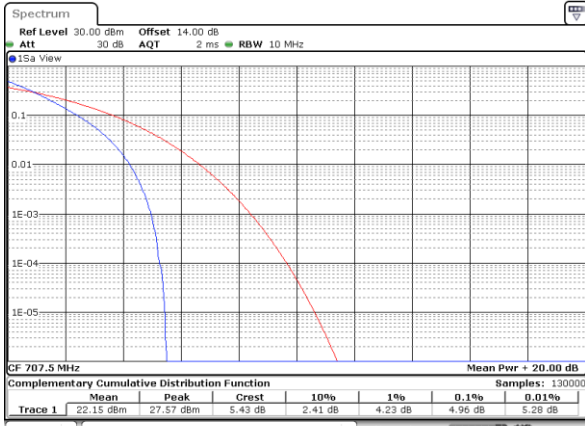
### Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.96	5.80	6.17	<b>PASS</b>



LTE Band 12 / 10MHz / QPSK

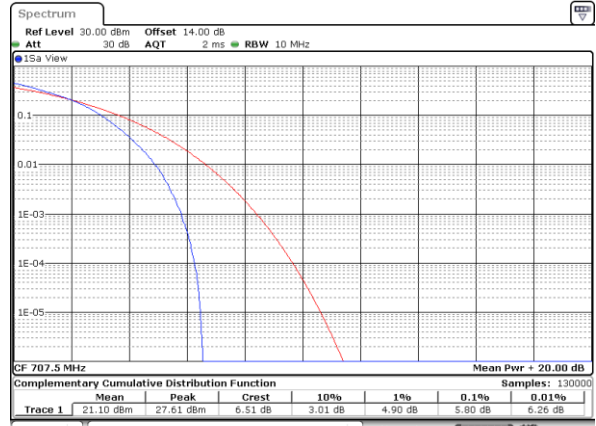
Middle Channel / Full RB



Date: 24 JUN 2024 09:17:50

LTE Band 12 / 10MHz / 16QAM

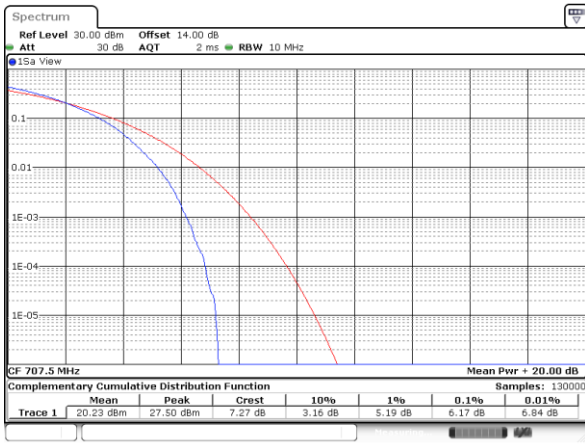
Middle Channel / Full RB



Date: 24 JUN 2024 09:18:20

LTE Band 12 / 10MHz / 64QAM

Middle Channel / Full RB



Date: 24 JUN 2024 09:18:51



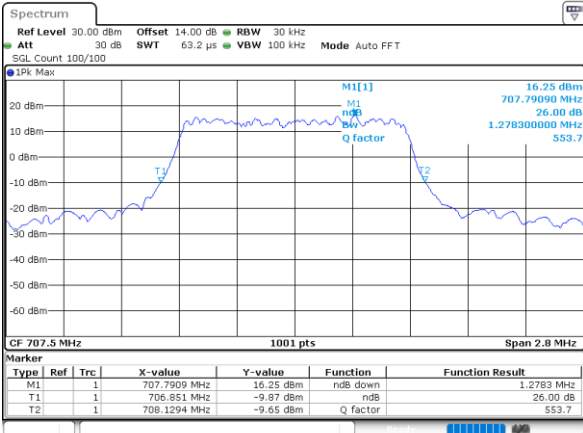
## 26dB Bandwidth

Mode	LTE Band 12 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz					
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM				
Middle CH	1.28	1.29	2.97	2.97	4.85	4.83	9.95	9.71				



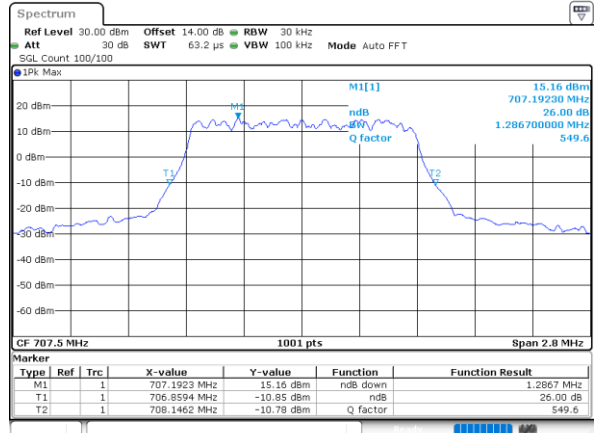
LTE Band 12

Middle Channel / 1.4MHz / QPSK



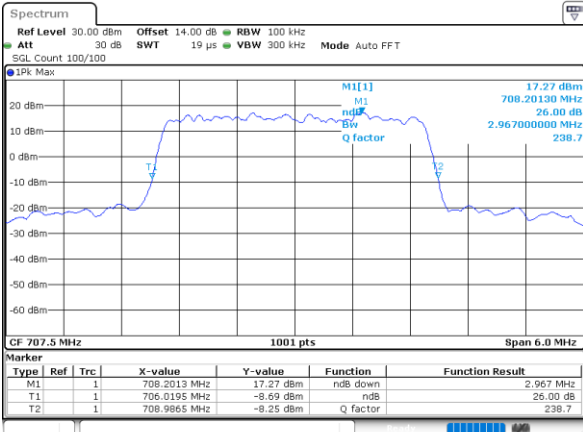
Date: 20 JUN 2024 20:17:55

Middle Channel / 1.4MHz / 16QAM



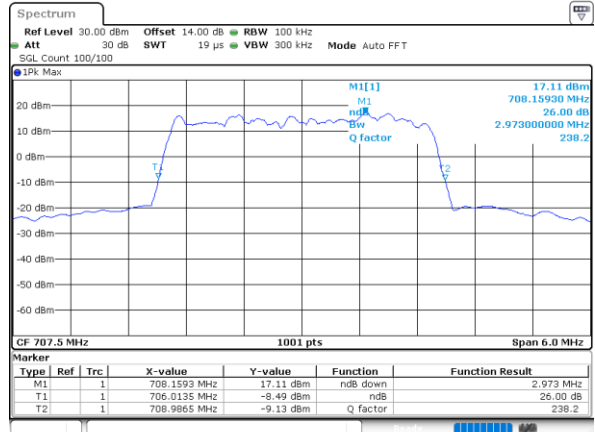
Date: 20 JUN 2024 20:18:35

Middle Channel / 3MHz / QPSK



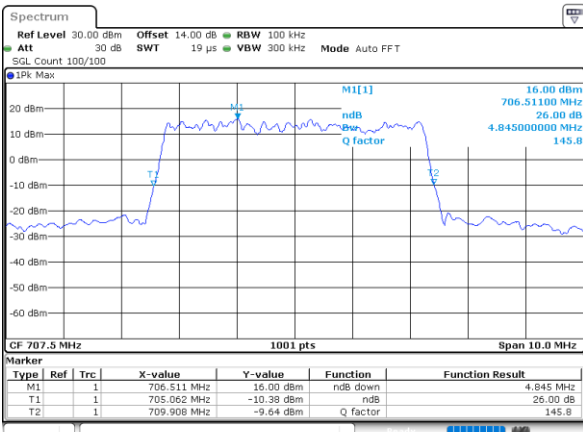
Date: 21 JUN 2024 09:29:00

Middle Channel / 3MHz / 16QAM



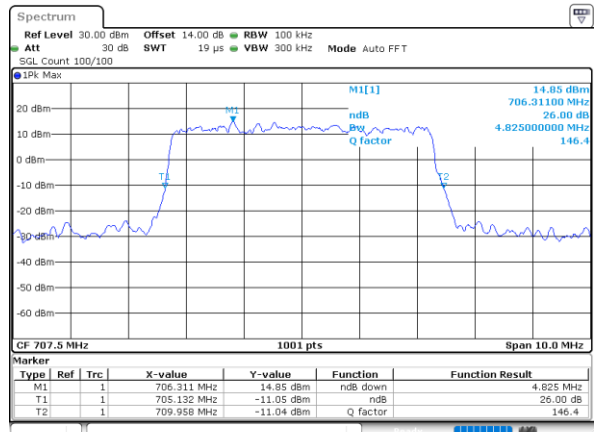
Date: 21 JUN 2024 09:29:40

Middle Channel / 5MHz / QPSK



Date: 21 JUN 2024 09:50:48

Middle Channel / 5MHz / 16QAM

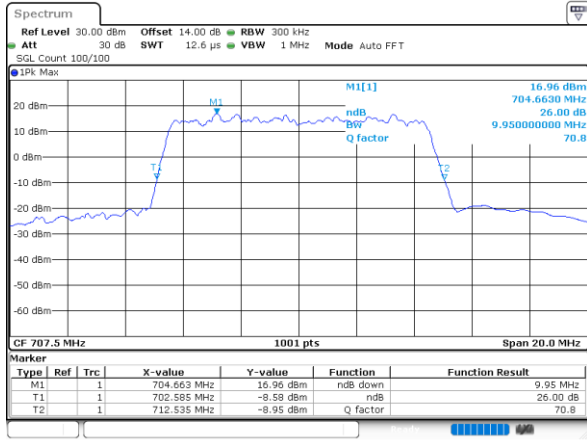


Date: 21 JUN 2024 09:51:27



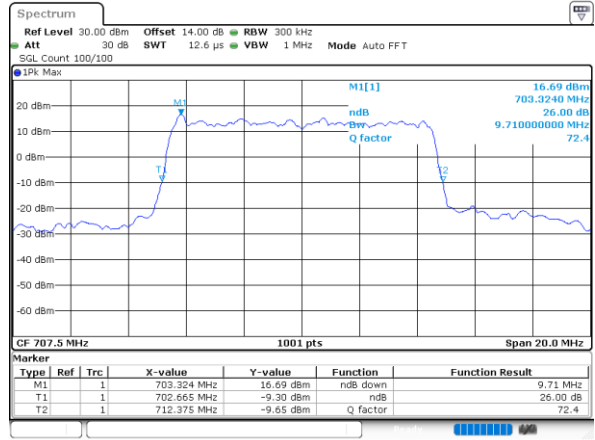
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 21 JUN 2024 10:09:55

Middle Channel / 10MHz / 16QAM



Date: 21 JUN 2024 10:10:34



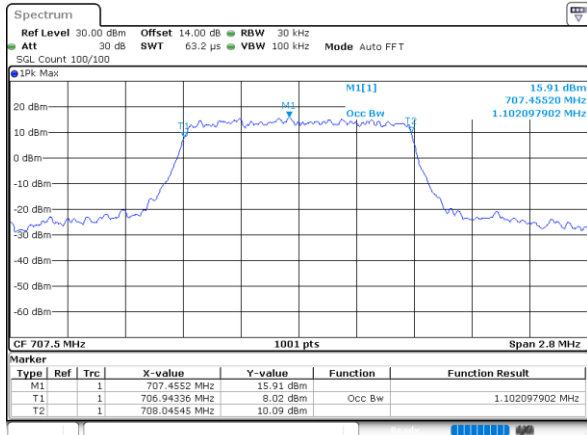
### Occupied Bandwidth

Mode	LTE Band 12 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz					
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM				
Middle CH	1.10	1.09	2.72	2.70	4.50	4.50	9.03	8.99				



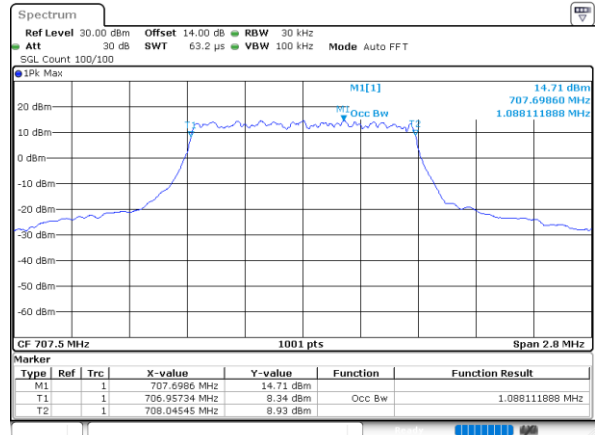
LTE Band 12

Middle Channel / 1.4MHz / QPSK



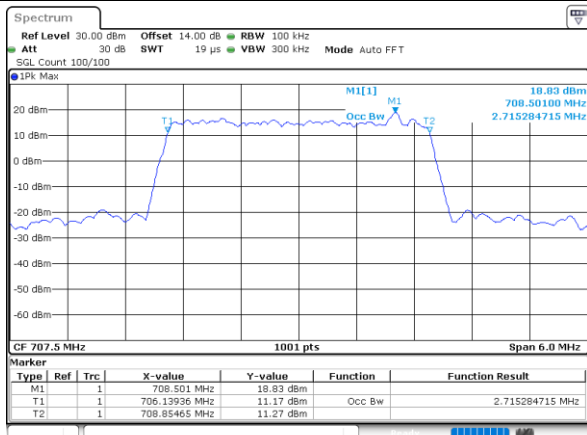
Date: 20 JUN 2024 20:17:41

Middle Channel / 1.4MHz / 16QAM



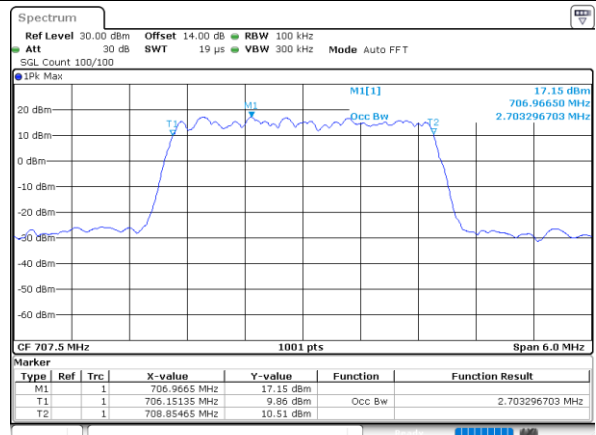
Date: 20 JUN 2024 20:18:21

Middle Channel / 3MHz / QPSK



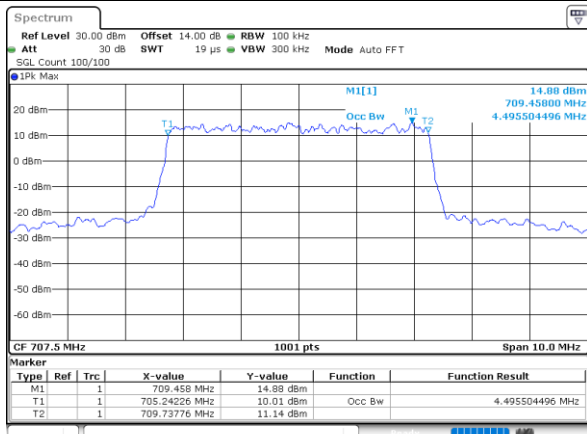
Date: 21 JUN 2024 09:28:46

Middle Channel / 3MHz / 16QAM



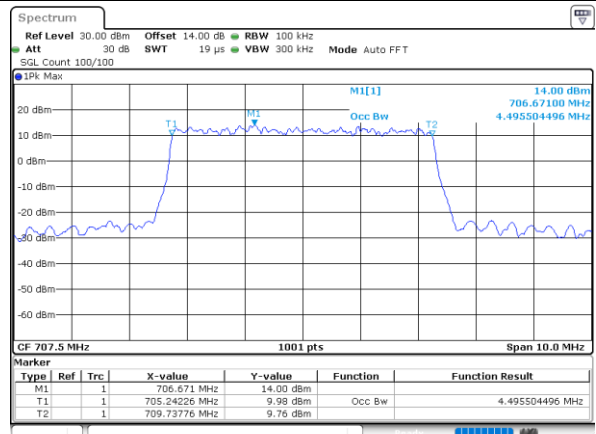
Date: 21 JUN 2024 09:29:26

Middle Channel / 5MHz / QPSK



Date: 21 JUN 2024 09:50:34

Middle Channel / 5MHz / 16QAM

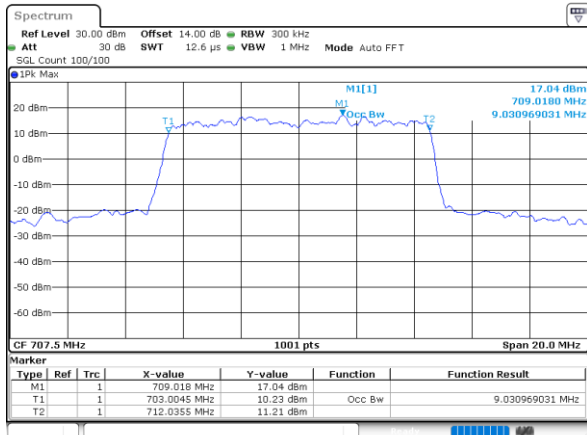


Date: 21 JUN 2024 09:51:13



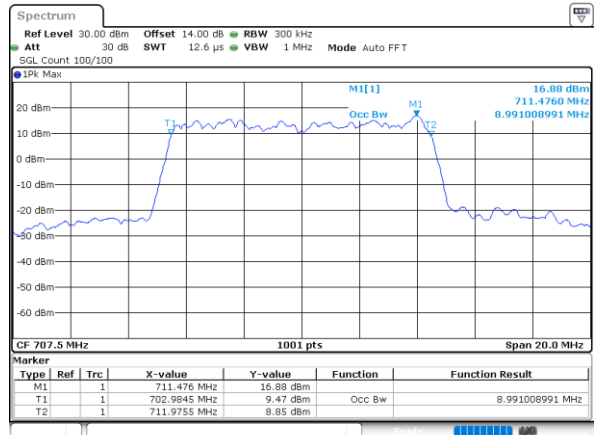
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 21 JUN 2024 10:09:41

Middle Channel / 10MHz / 16QAM

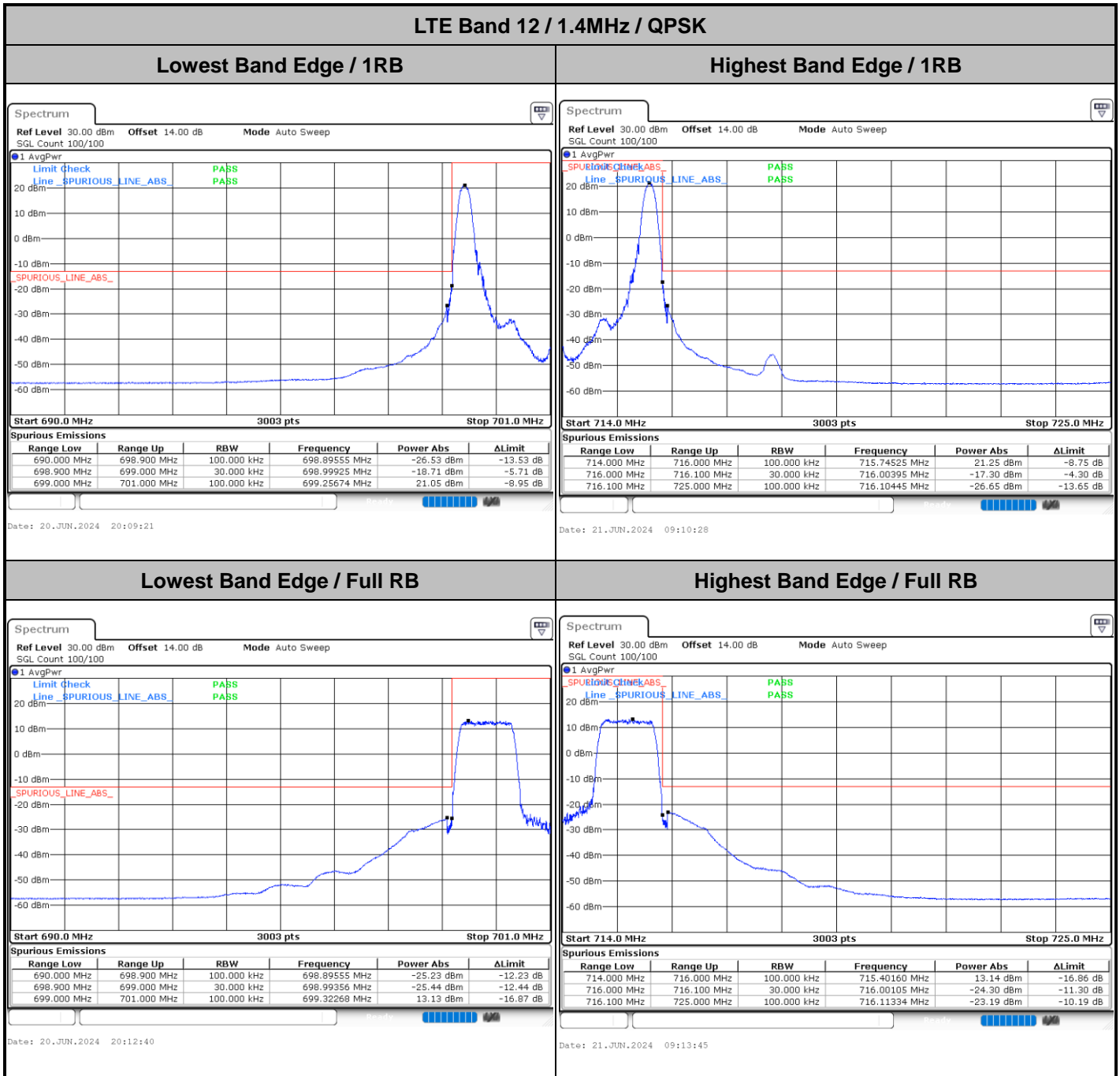


Date: 21 JUN 2024 10:10:20





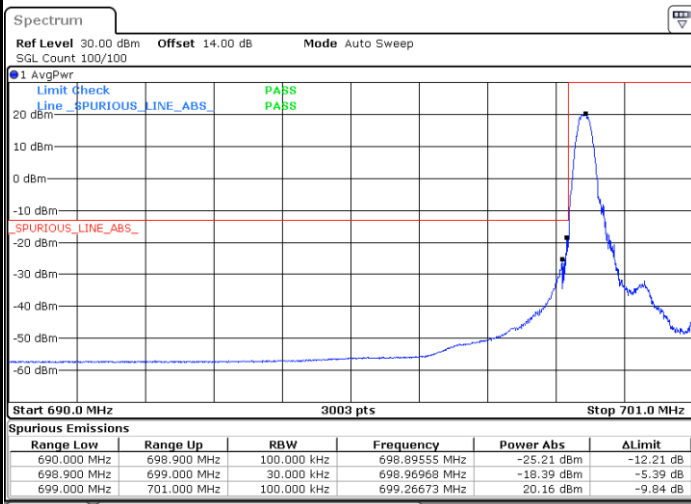
# Conducted Band Edge





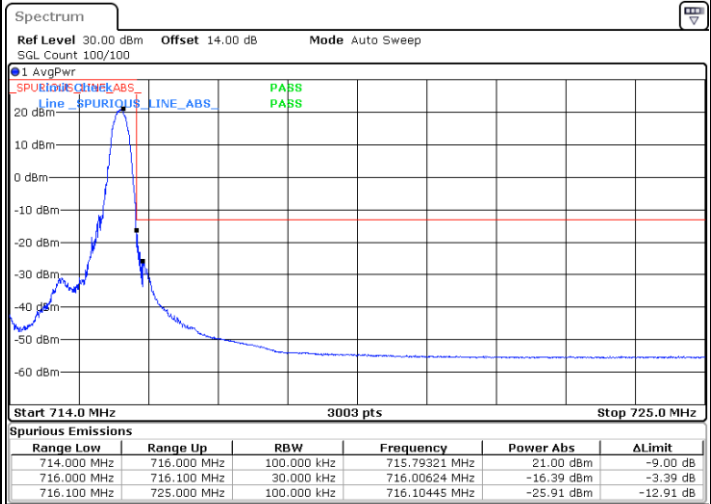
LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



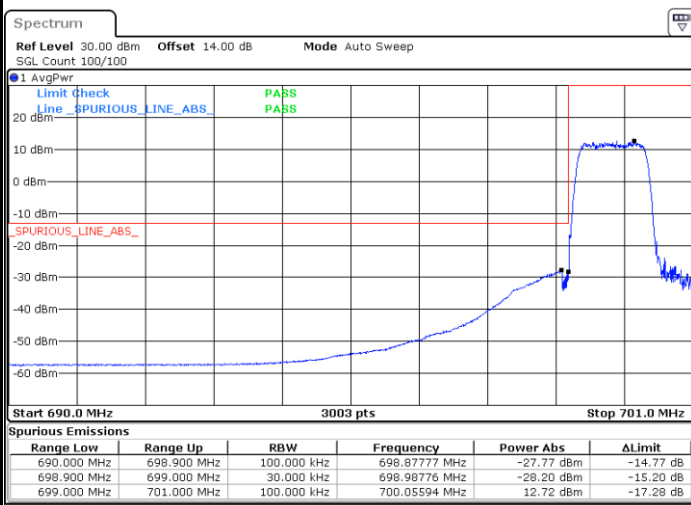
Date: 20 JUN 2024 20:10:28

Highest Band Edge / 1 RB



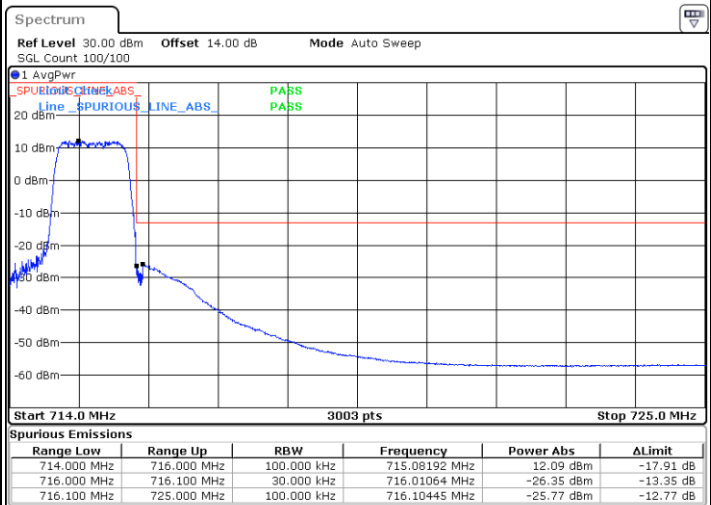
Date: 24 JUN 2024 09:13:21

Lowest Band Edge / Full RB



Date: 20 JUN 2024 20:13:47

Highest Band Edge / Full RB

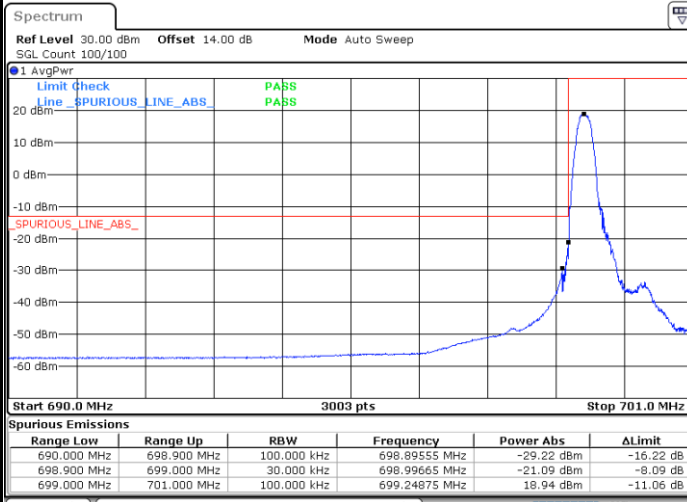


Date: 21 JUN 2024 09:14:50



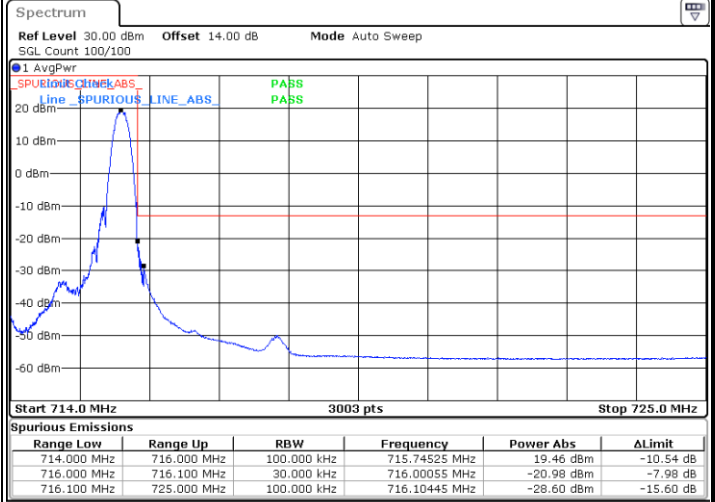
LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



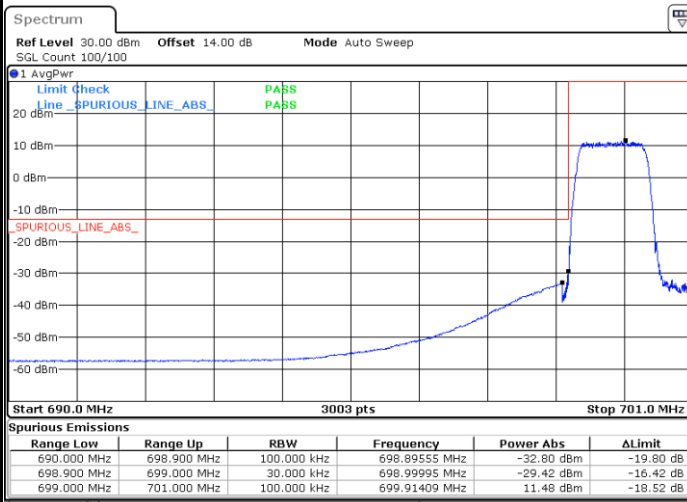
Date: 20.JUN.2024 20:11:34

Highest Band Edge / 1 RB



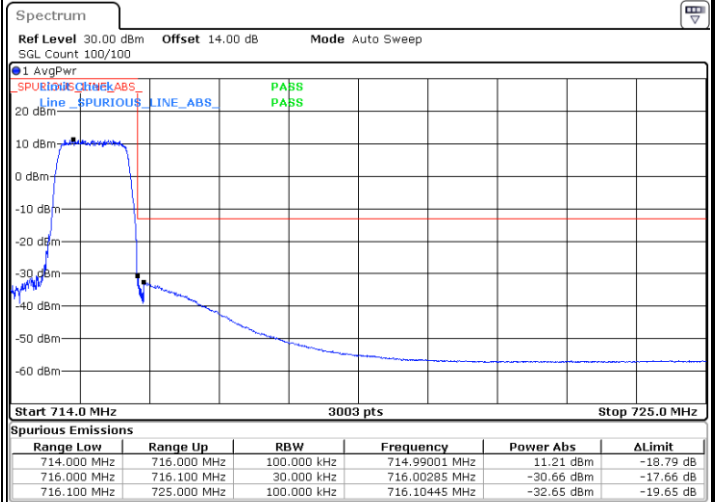
Date: 21.JUN.2024 09:12:39

Lowest Band Edge / Full RB



Date: 20.JUN.2024 20:14:53

Highest Band Edge / Full RB

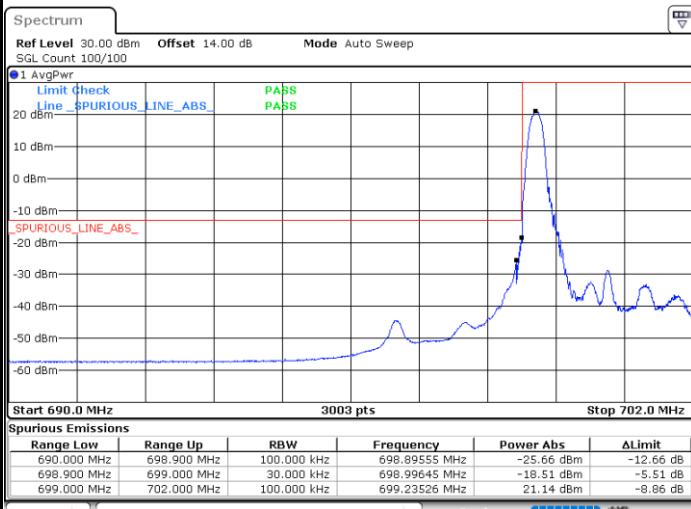


Date: 21.JUN.2024 09:15:56



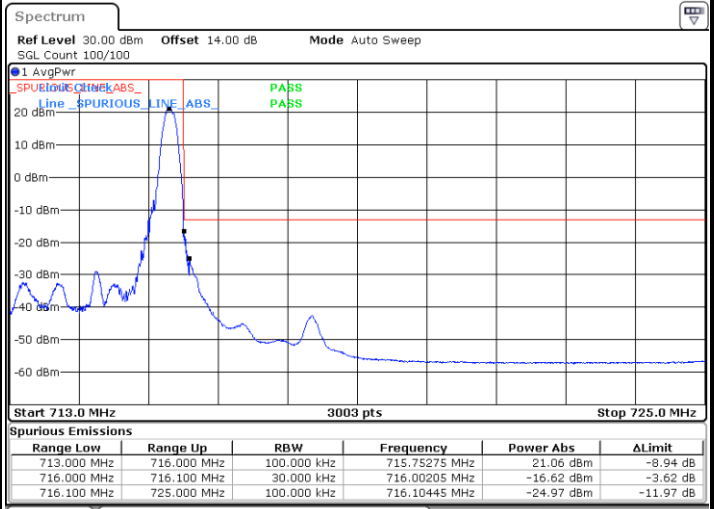
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



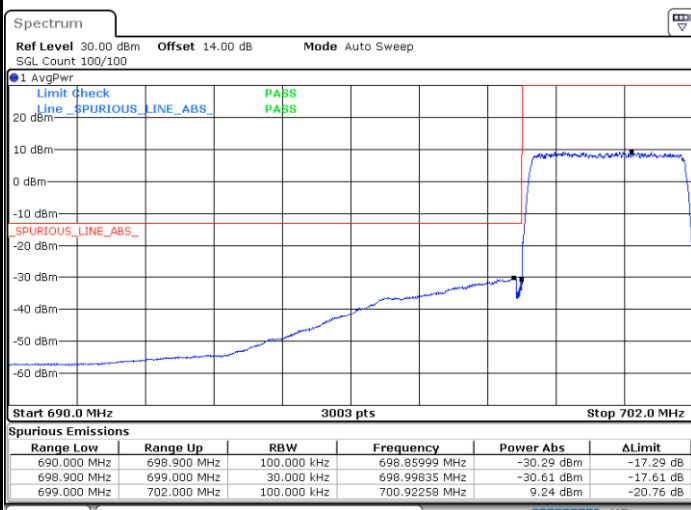
Date: 21.JUN.2024 09:20:35

Highest Band Edge / 1RB



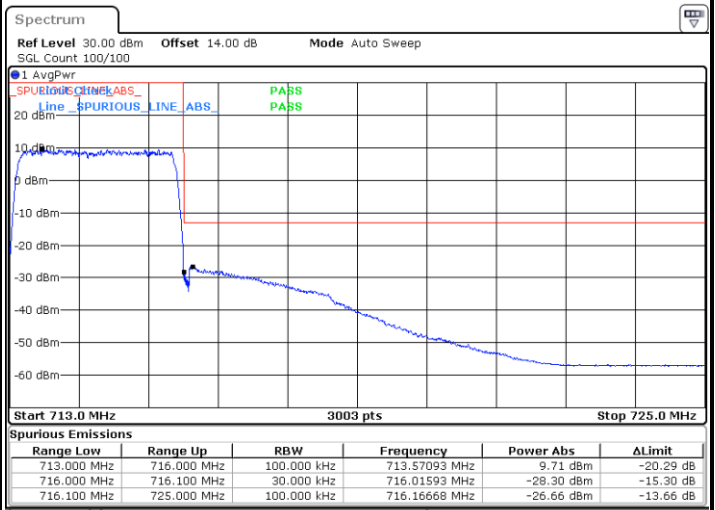
Date: 21.JUN.2024 09:30:44

Lowest Band Edge / Full RB



Date: 21.JUN.2024 09:23:51

Highest Band Edge / Full RB

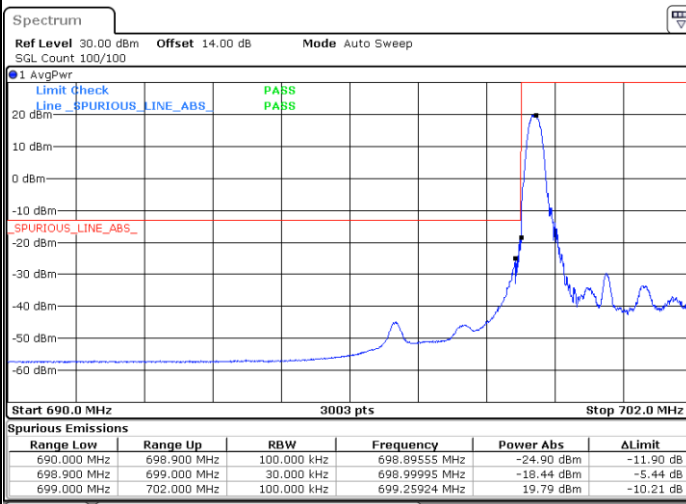


Date: 21.JUN.2024 09:34:00



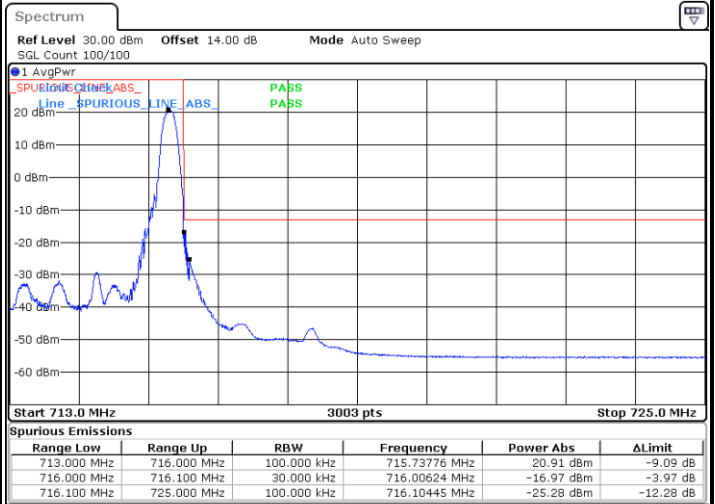
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



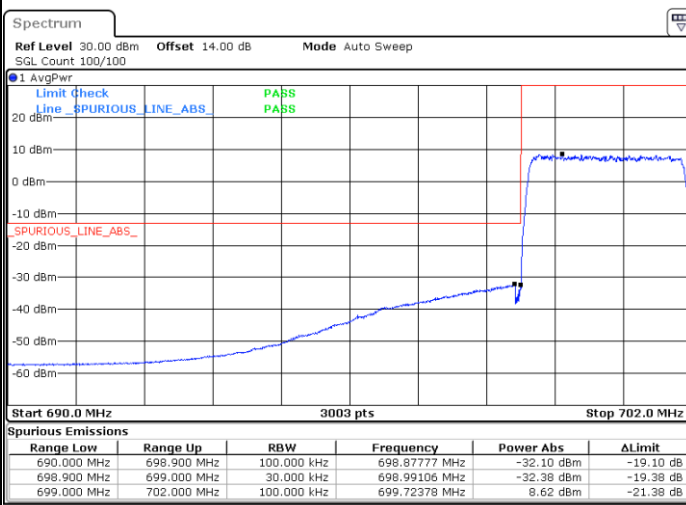
Date: 21 JUN 2024 09:21:41

Highest Band Edge / 1 RB



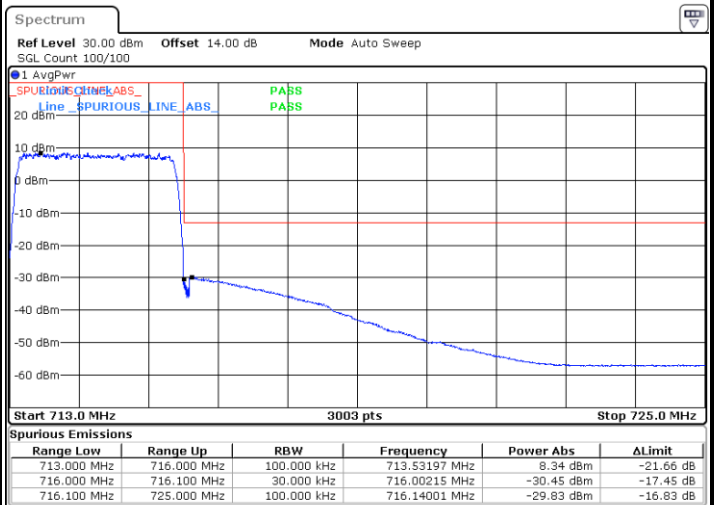
Date: 24 JUN 2024 09:15:26

Lowest Band Edge / Full RB



Date: 21 JUN 2024 09:24:56

Highest Band Edge / Full RB

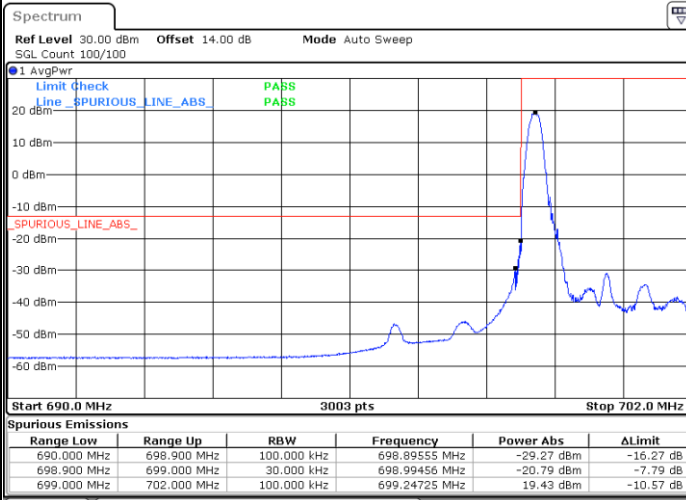


Date: 21 JUN 2024 09:35:06



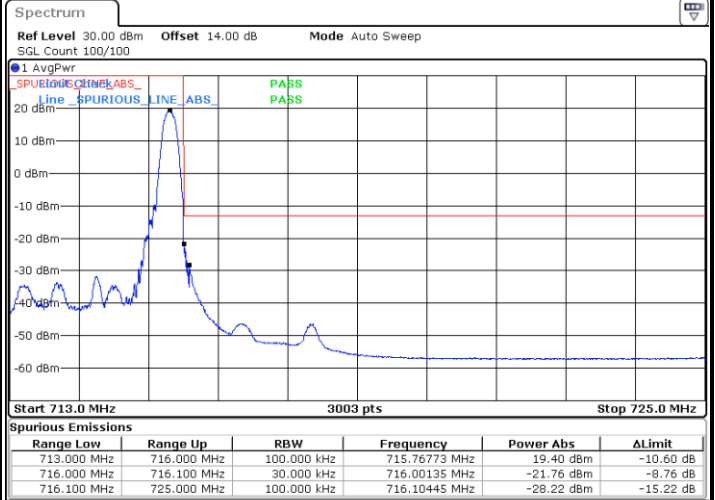
LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



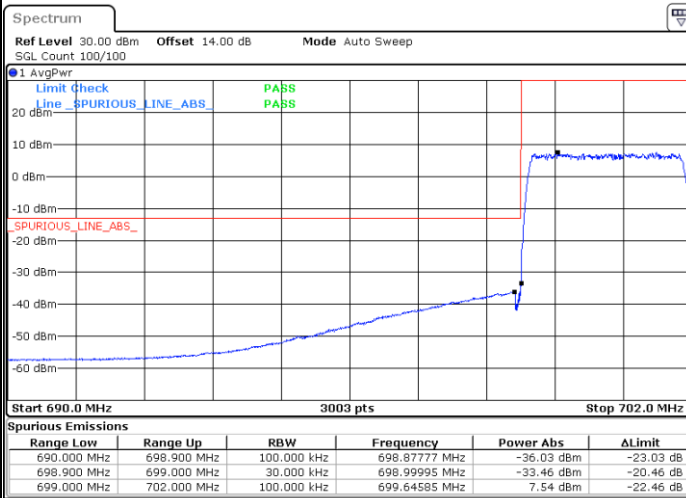
Date: 21.JUN.2024 09:22:46

Highest Band Edge / 1 RB



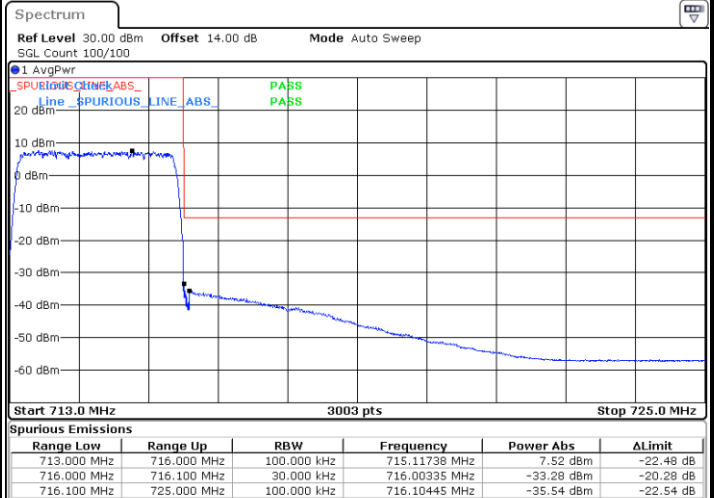
Date: 21.JUN.2024 09:32:55

Lowest Band Edge / Full RB



Date: 21.JUN.2024 09:26:02

Highest Band Edge / Full RB

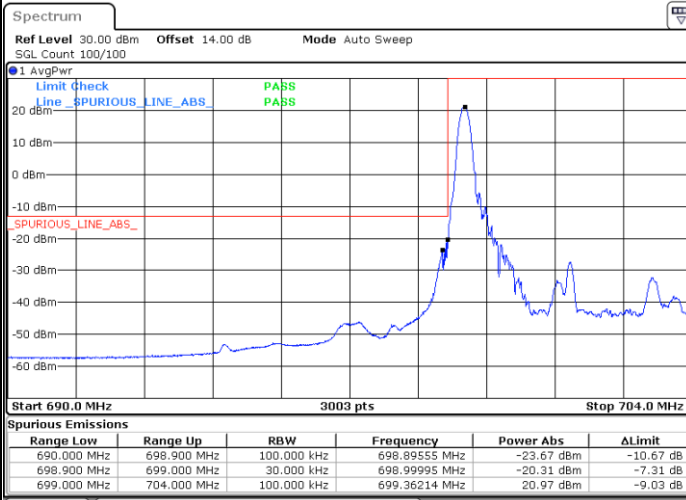


Date: 21.JUN.2024 09:36:11



LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1RB



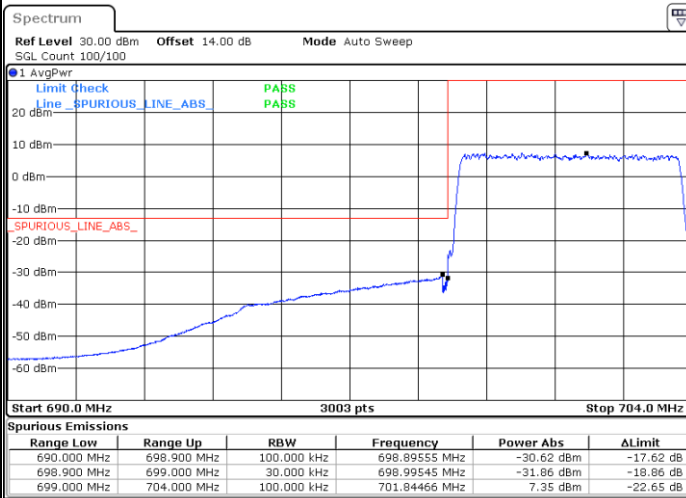
Date: 21.JUN.2024 09:42:22

Highest Band Edge / 1RB



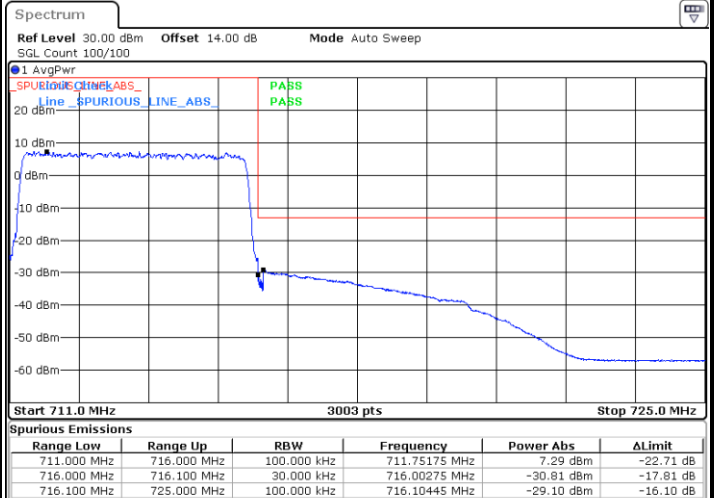
Date: 21.JUN.2024 09:52:31

Lowest Band Edge / Full RB



Date: 21.JUN.2024 09:45:38

Highest Band Edge / Full RB

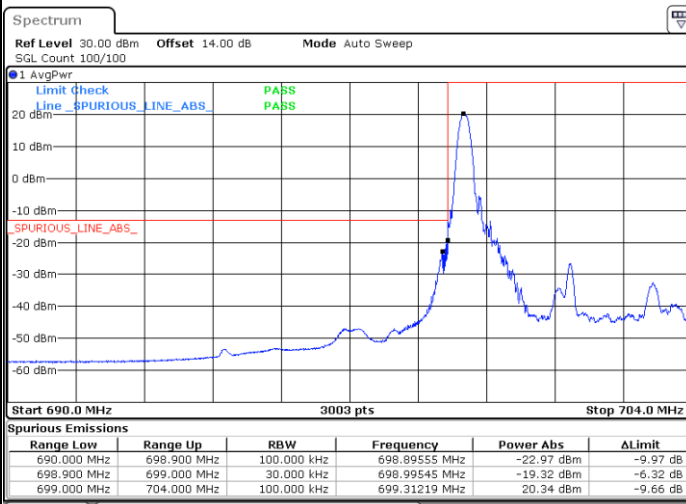


Date: 21.JUN.2024 09:55:48



LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



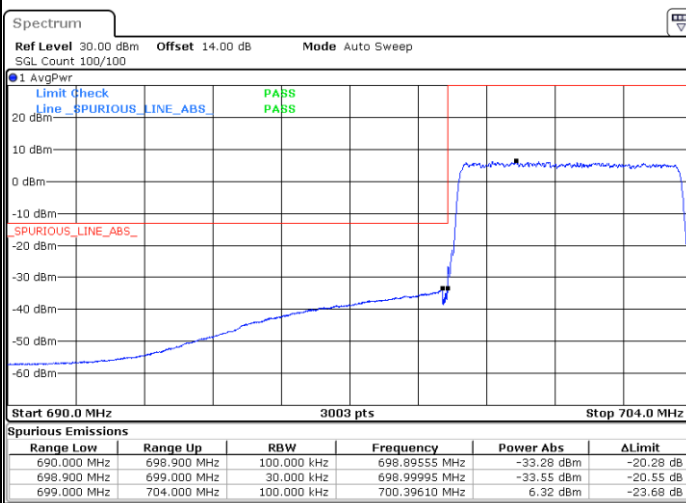
Date: 21.JUN.2024 09:43:27

Highest Band Edge / 1 RB



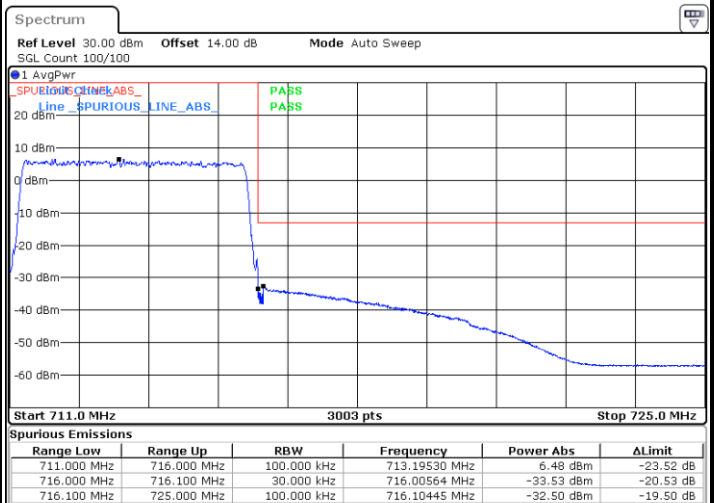
Date: 21.JUN.2024 09:53:37

Lowest Band Edge / Full RB



Date: 21.JUN.2024 09:46:43

Highest Band Edge / Full RB



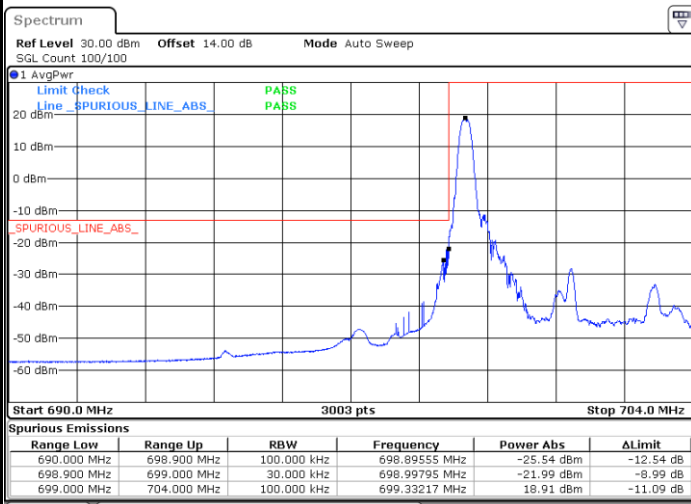
Date: 21.JUN.2024 09:56:53





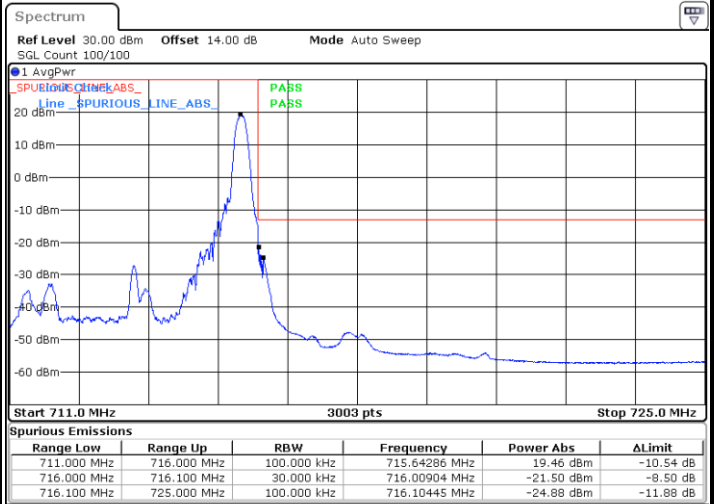
LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1 RB



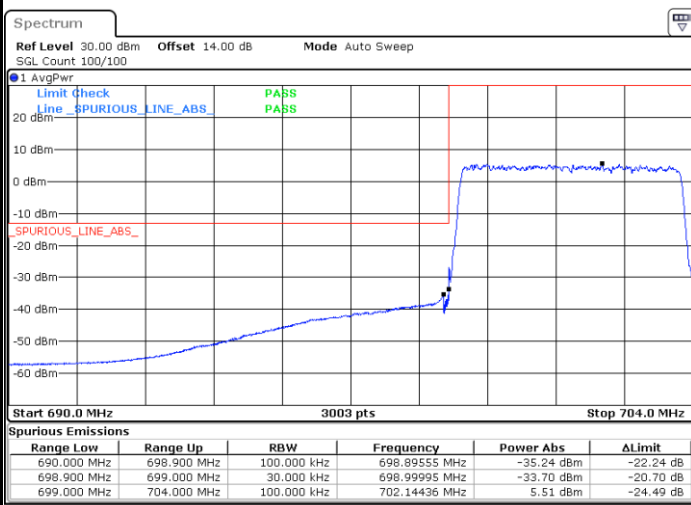
Date: 21.JUN.2024 09:44:32

Highest Band Edge / 1 RB



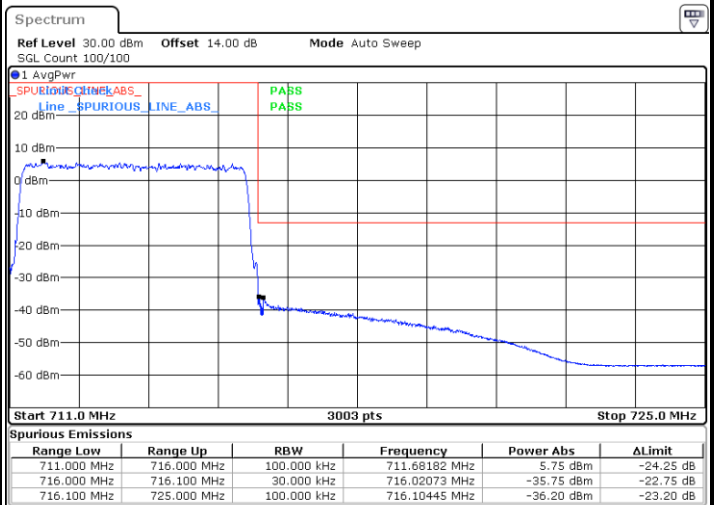
Date: 21.JUN.2024 09:54:42

Lowest Band Edge / Full RB



Date: 21.JUN.2024 09:47:48

Highest Band Edge / Full RB

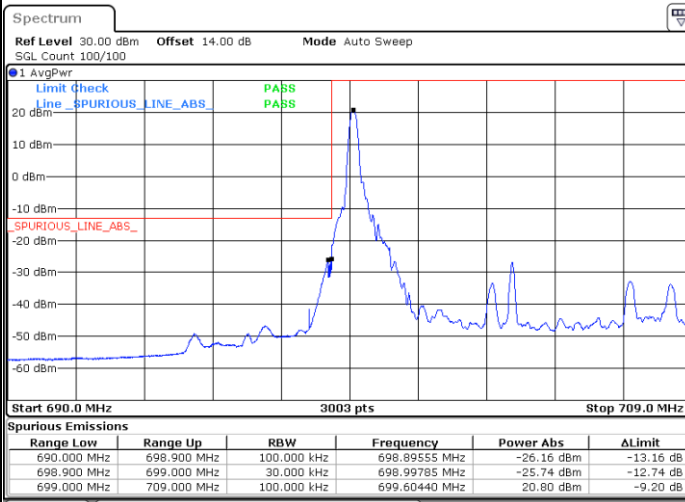


Date: 21.JUN.2024 09:57:59



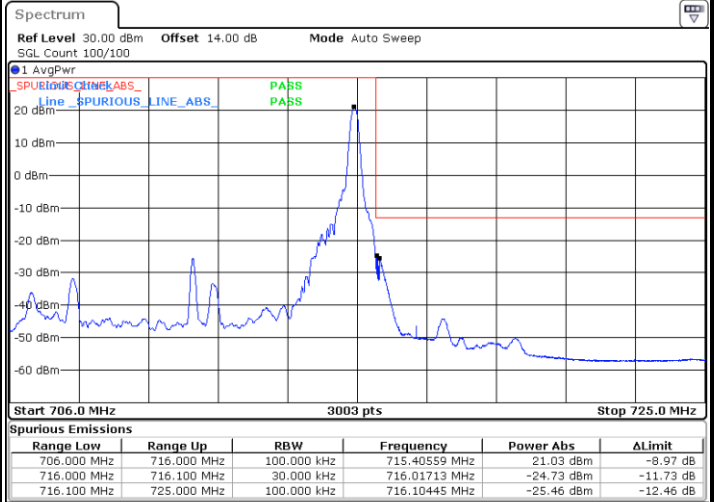
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1RB



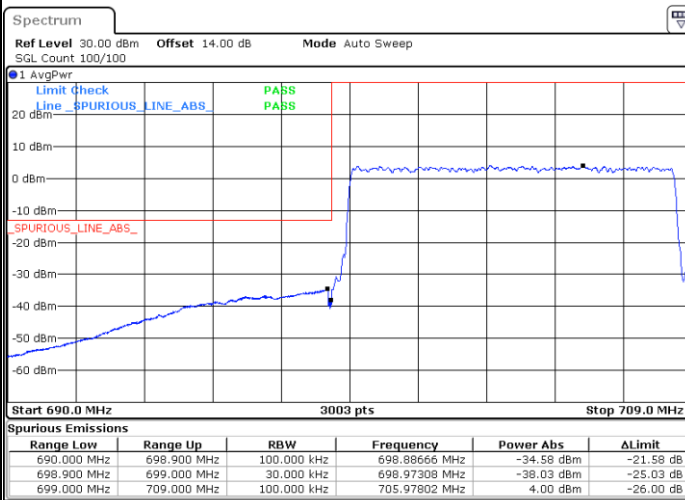
Date: 21.JUN.2024 10:01:29

Highest Band Edge / 1RB



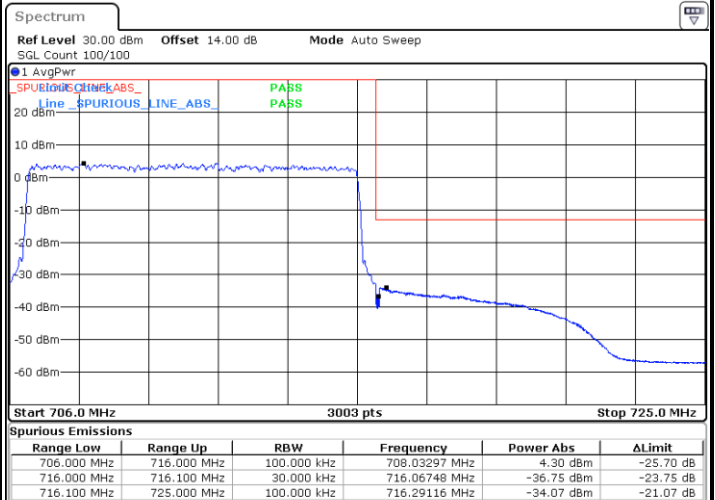
Date: 21.JUN.2024 10:11:39

Lowest Band Edge / Full RB



Date: 21.JUN.2024 10:04:45

Highest Band Edge / Full RB

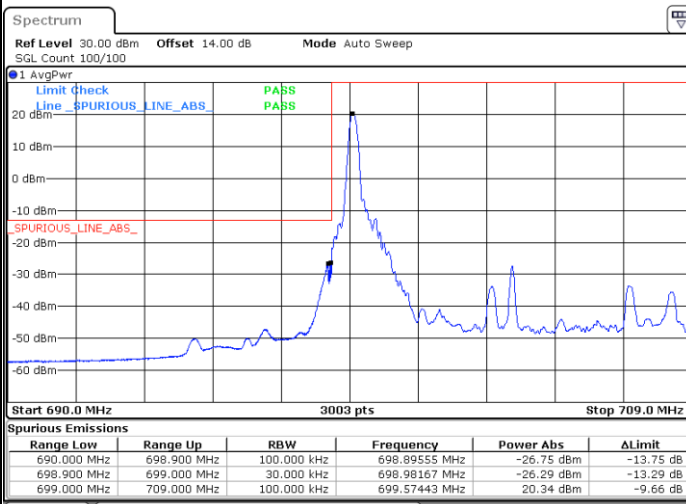


Date: 21.JUN.2024 10:14:55



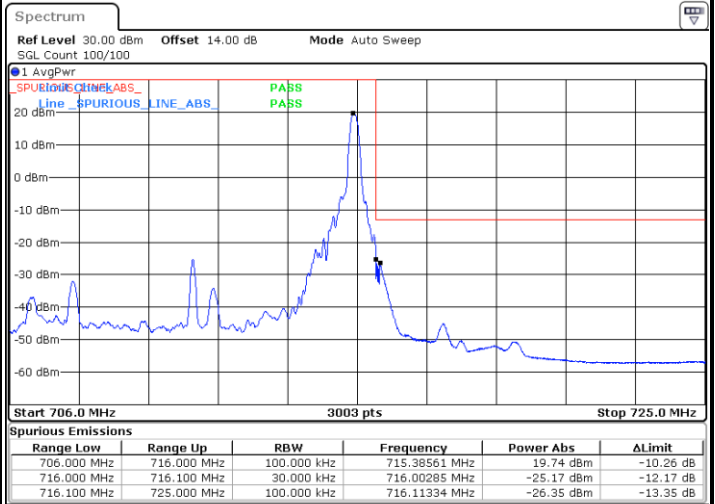
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



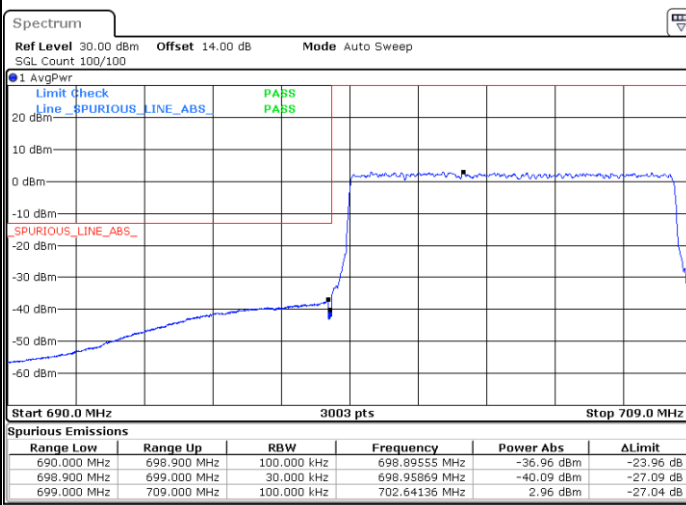
Date: 21.JUN.2024 10:02:34

Highest Band Edge / 1 RB



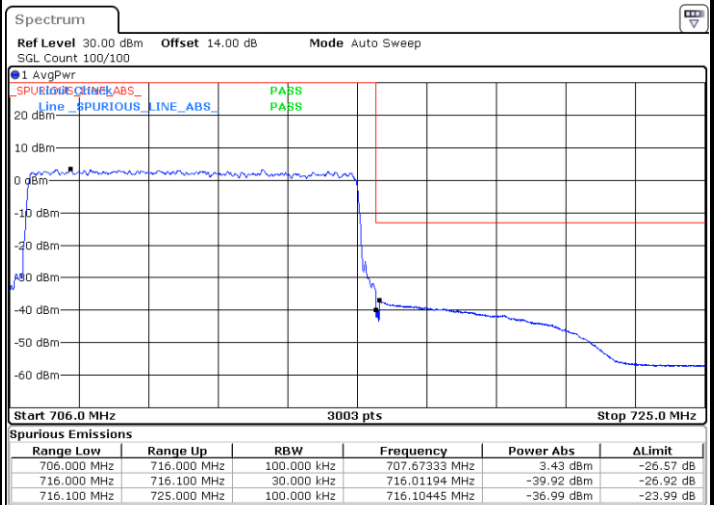
Date: 21.JUN.2024 10:12:44

Lowest Band Edge / Full RB



Date: 21.JUN.2024 10:05:51

Highest Band Edge / Full RB

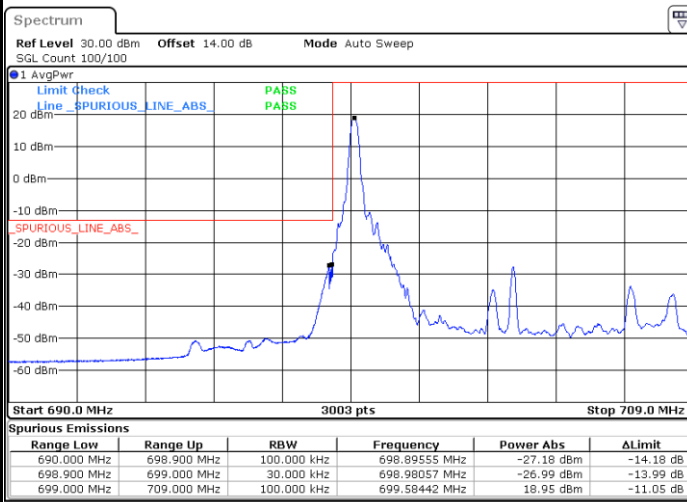


Date: 21.JUN.2024 10:16:01



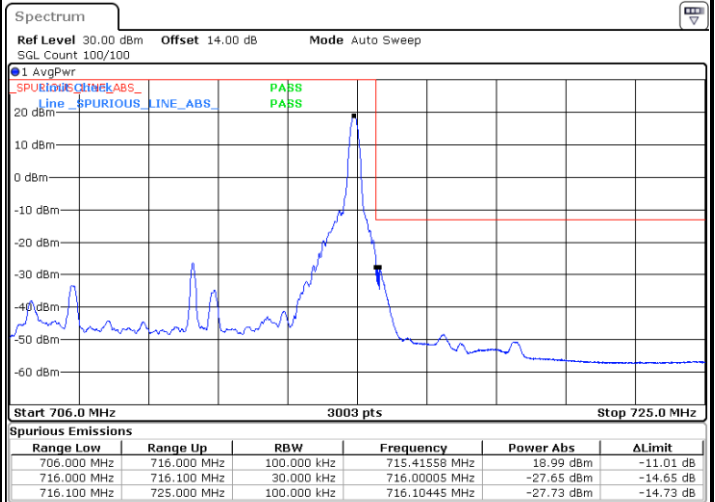
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



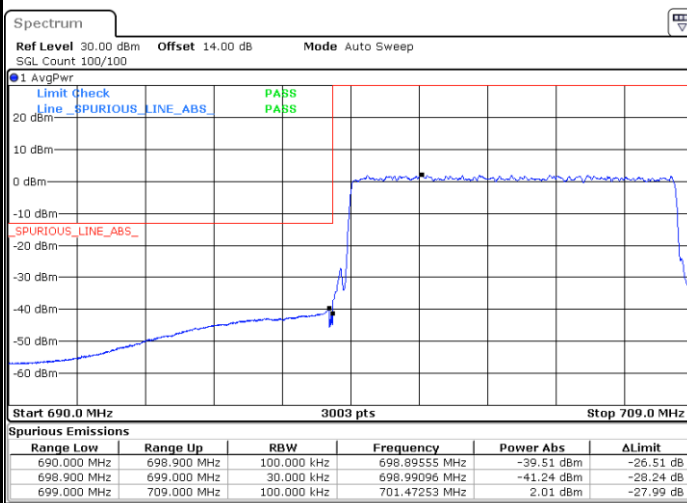
Date: 21.JUN.2024 10:03:40

Highest Band Edge / 1 RB



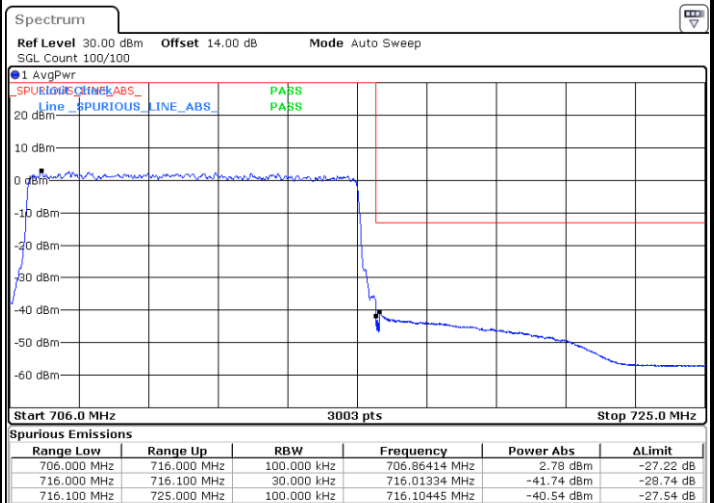
Date: 21.JUN.2024 10:13:50

Lowest Band Edge / Full RB



Date: 21.JUN.2024 10:06:56

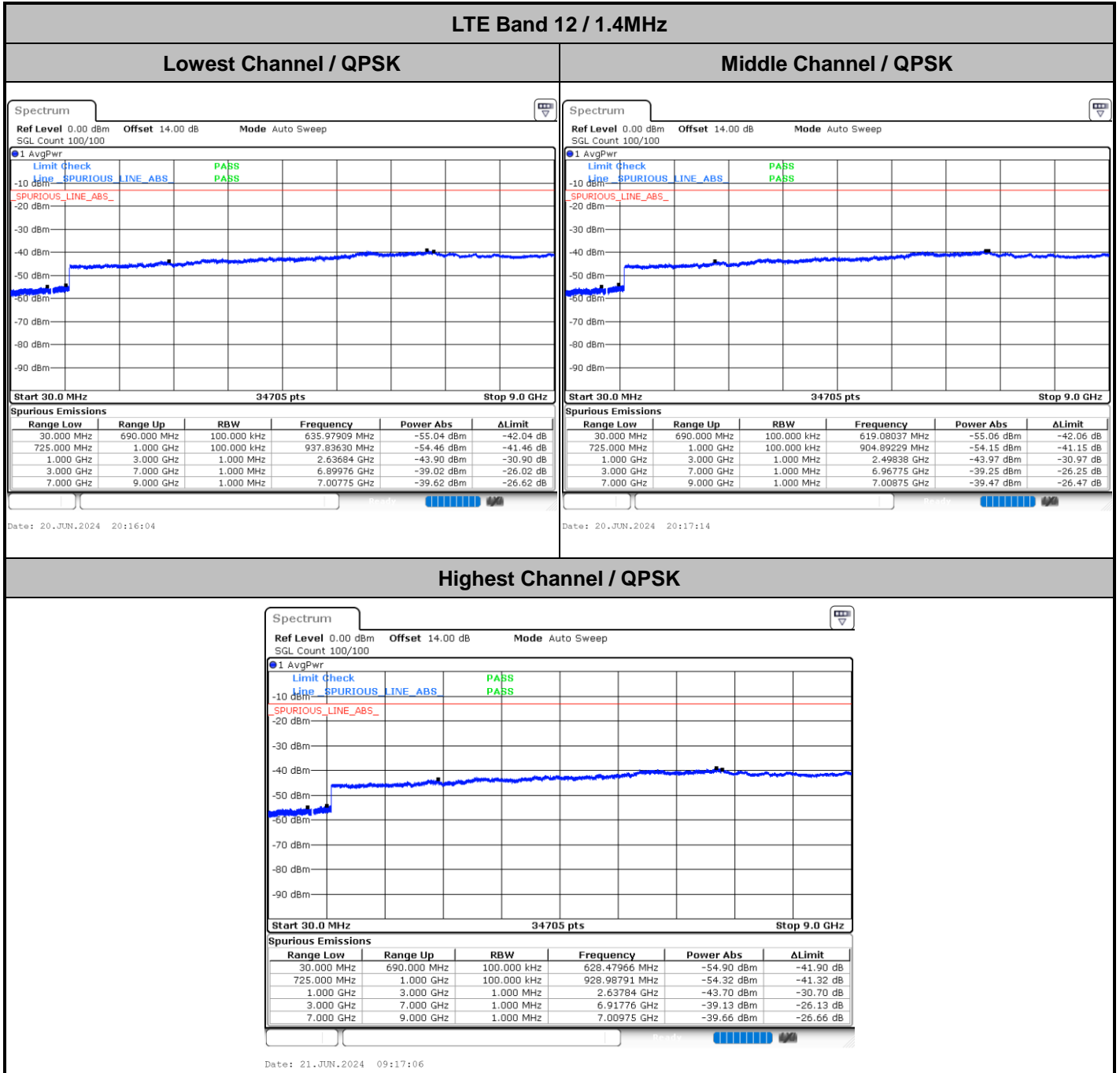
Highest Band Edge / Full RB



Date: 21.JUN.2024 10:17:06



# Conducted Spurious Emission

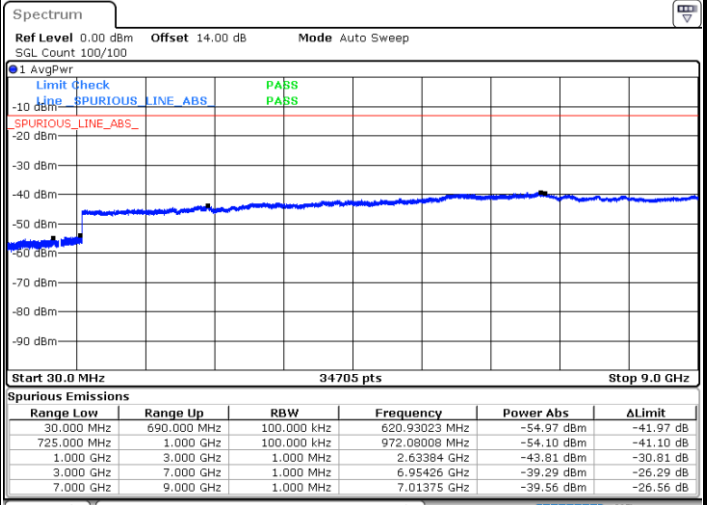
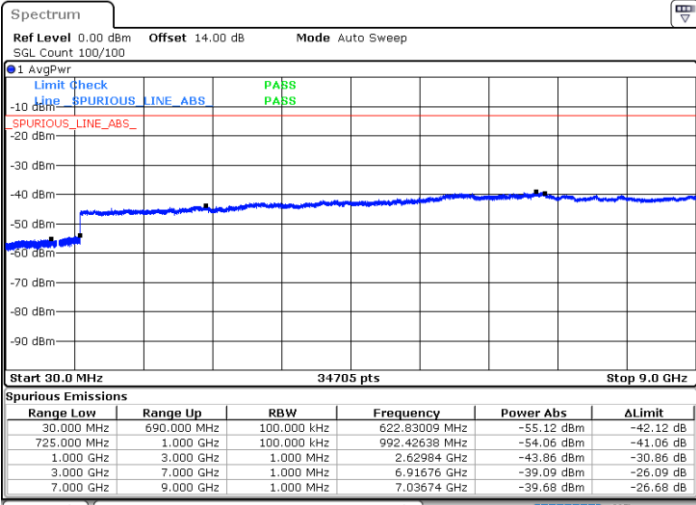




LTE Band 12 / 3MHz

Lowest Channel / QPSK

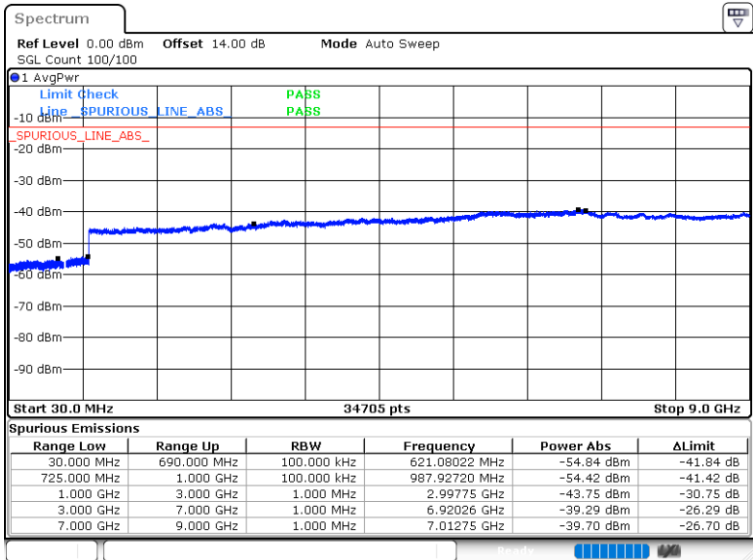
Middle Channel / QPSK



Date: 21.JUN.2024 09:27:11

Date: 21.JUN.2024 09:28:21

Highest Channel / QPSK



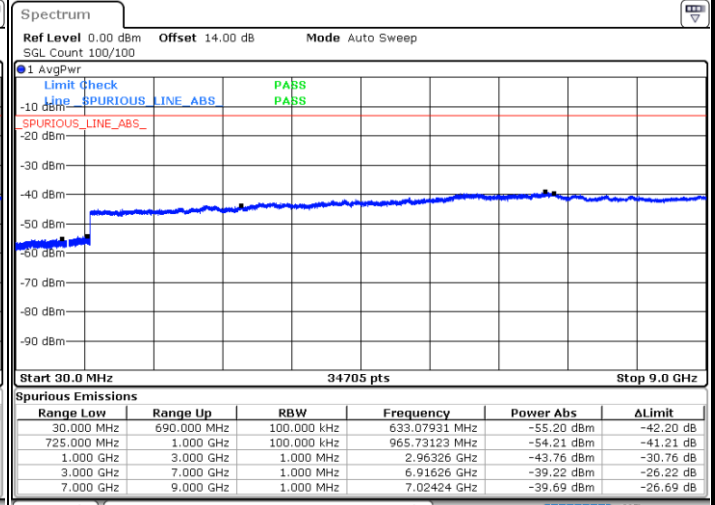
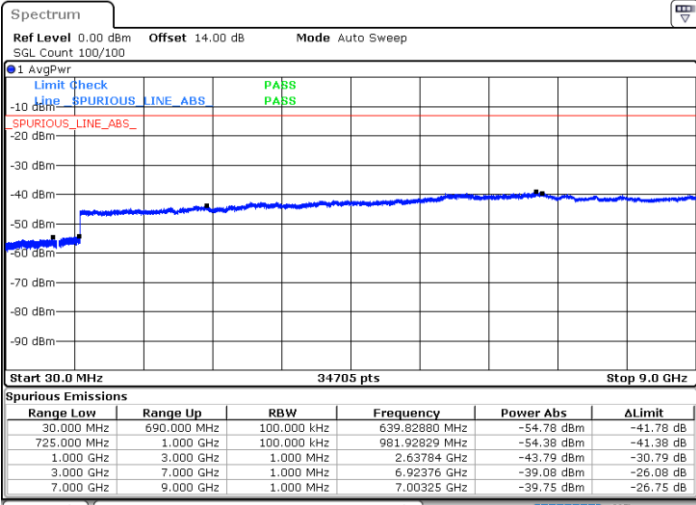
Date: 21.JUN.2024 09:37:21



LTE Band 12 / 5MHz

Lowest Channel / QPSK

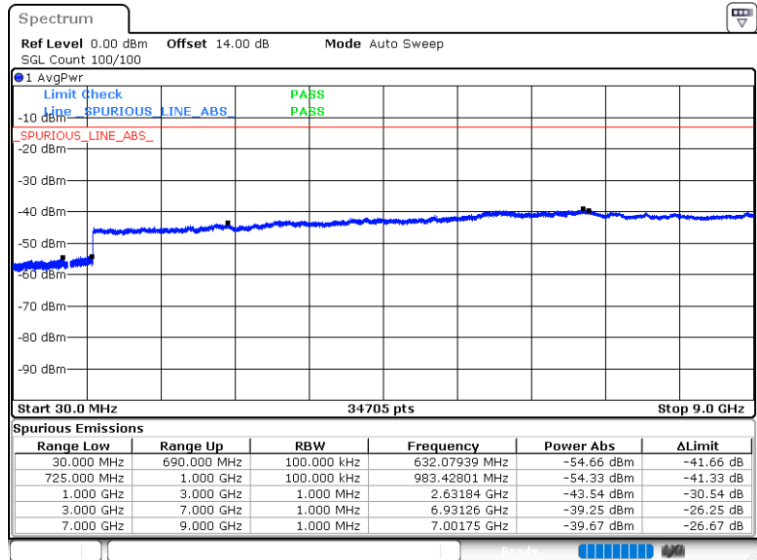
Middle Channel / QPSK



Date: 21 JUN.2024 09:48:58

Date: 21 JUN.2024 09:50:08

Highest Channel / QPSK



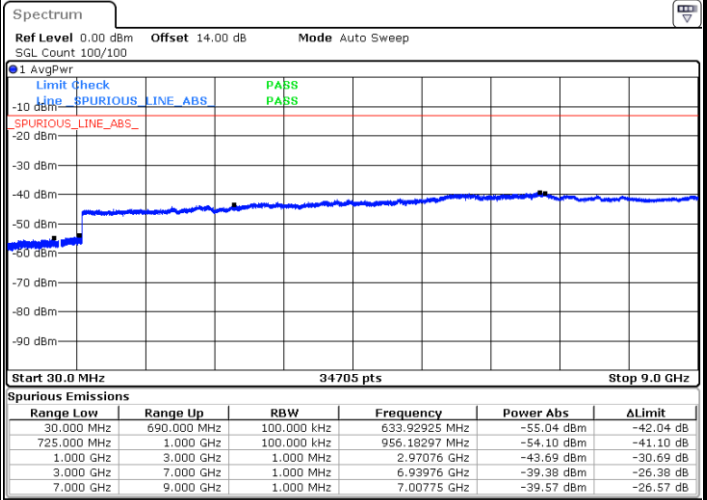
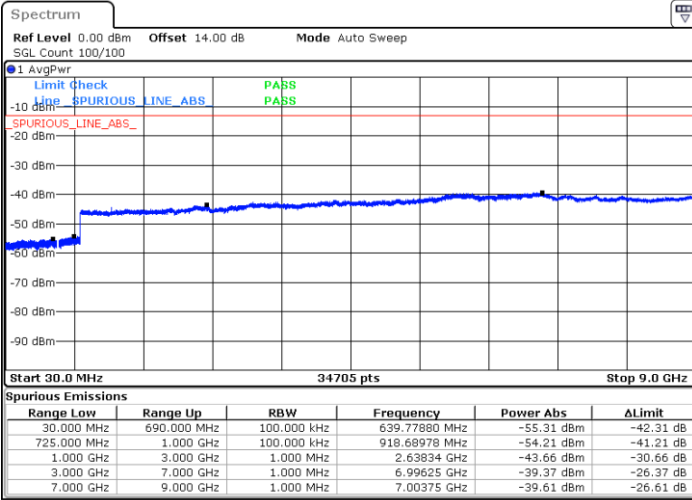
Date: 21 JUN.2024 09:59:09



LTE Band 12 / 10MHz

Lowest Channel / QPSK

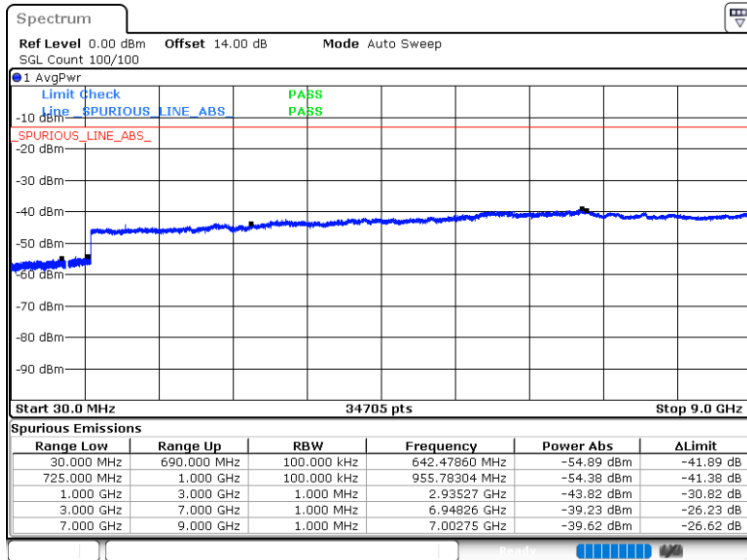
Middle Channel / QPSK



Date: 21.JUN.2024 10:08:06

Date: 21.JUN.2024 10:09:15

Highest Channel / QPSK



Date: 21.JUN.2024 10:18:16





Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0003	PASS
40	Normal Voltage	0.0021	
30	Normal Voltage	0.0001	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0002	
0	Normal Voltage	0.0019	
-10	Normal Voltage	0.0016	
-20	Normal Voltage	0.0001	
-30	Normal Voltage	0.0005	
20	Maximum Voltage	0.0001	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0003	

Note:

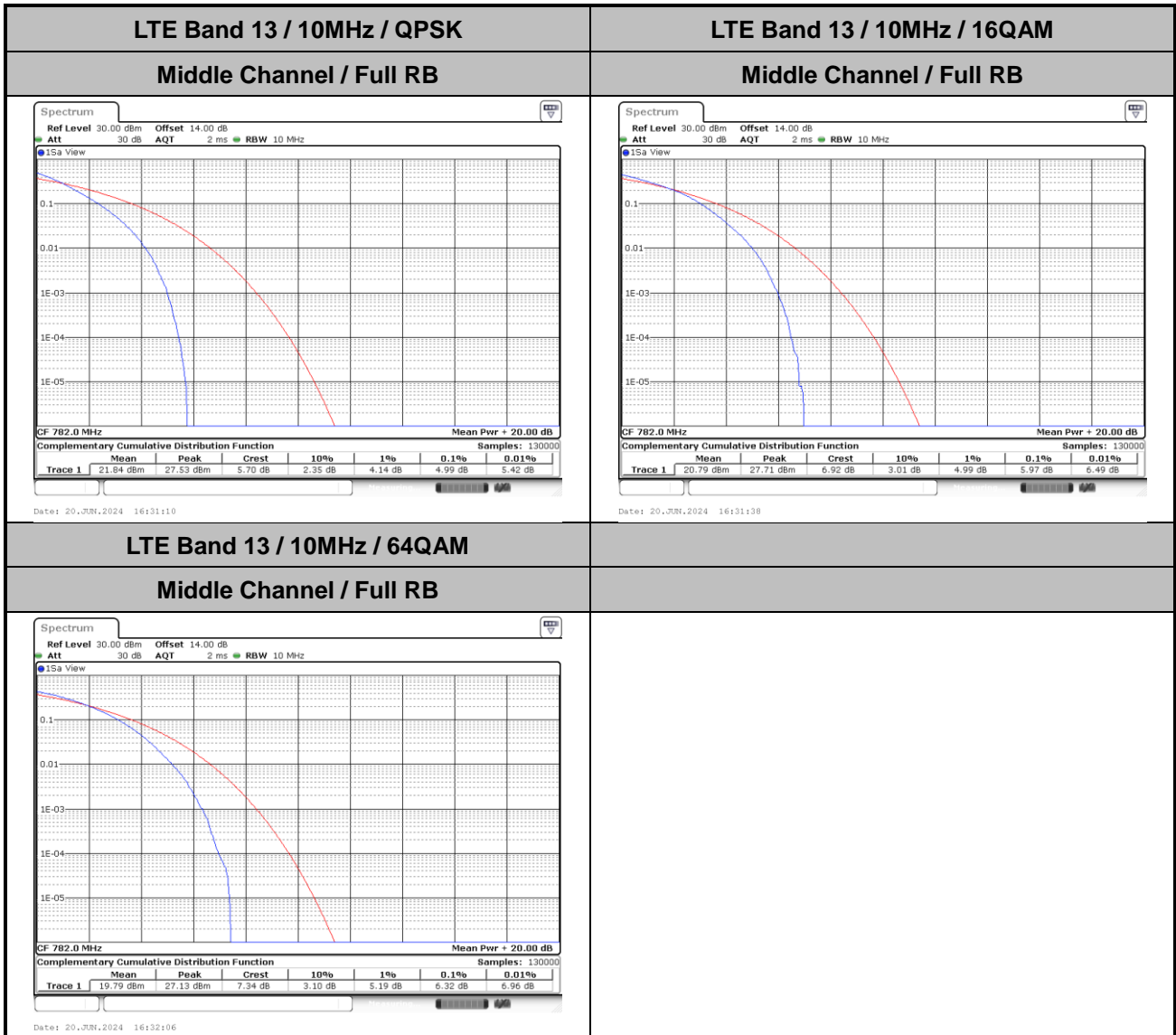
1. Normal Voltage = 3.91 V. ; Battery End Point (BEP) = 3.4 V. ; Maximum Voltage = 4.5 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 13

### Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.99	5.97	6.32	<b>PASS</b>





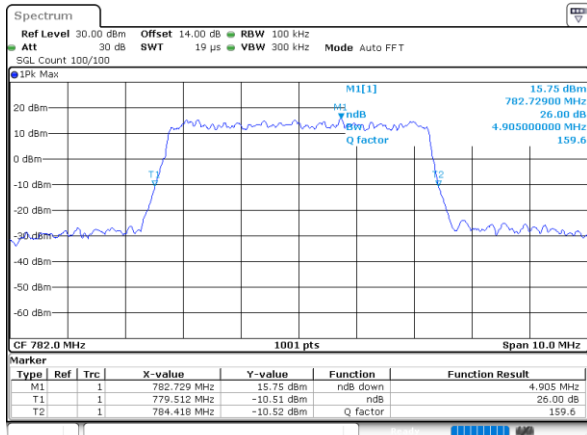
### 26dB Bandwidth

Mode	LTE Band 13 : 26dB BW(MHz)											
	BW				5MHz		10MHz					
Mod.					QPSK	16QAM	QPSK	16QAM				
Middle CH					4.91	4.87	9.83	9.69				



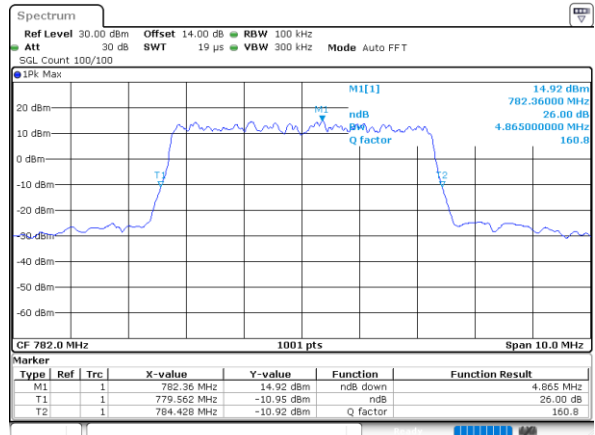
LTE Band 13

Middle Channel / 5MHz / QPSK



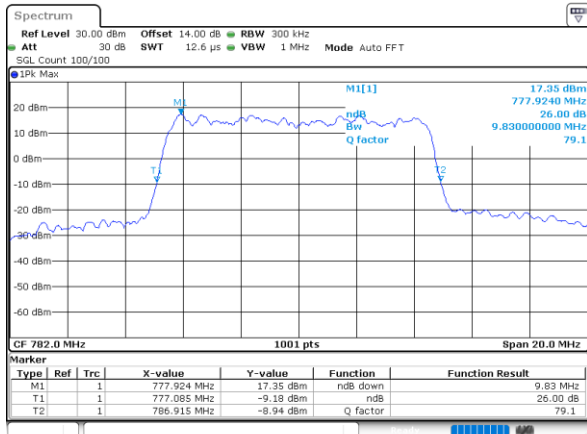
Date: 20 JUN 2024 16:05:00

Middle Channel / 5MHz / 16QAM



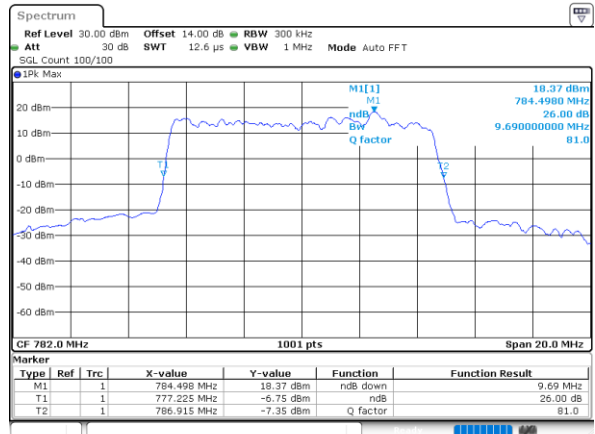
Date: 20 JUN 2024 16:05:40

Middle Channel / 10MHz / QPSK



Date: 20 JUN 2024 16:30:03

Middle Channel / 10MHz / 16QAM



Date: 20 JUN 2024 16:30:43



### Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)											
	BW				5MHz		10MHz					
Mod.					QPSK	16QAM	QPSK	16QAM				
Middle CH					4.51	4.50	9.07	9.01				