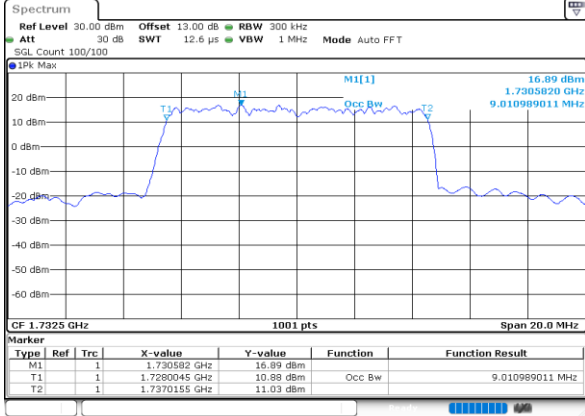




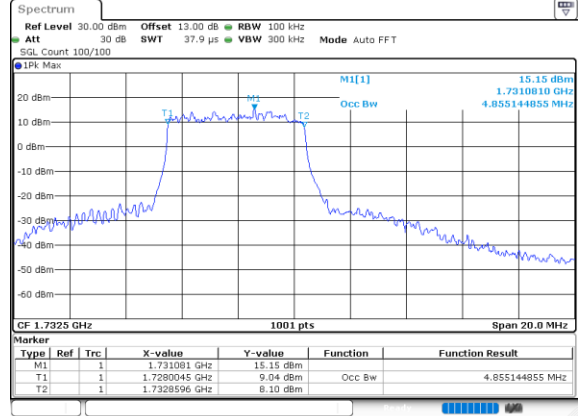
LTE Band 4

Middle Channel / 10MHz / QPSK



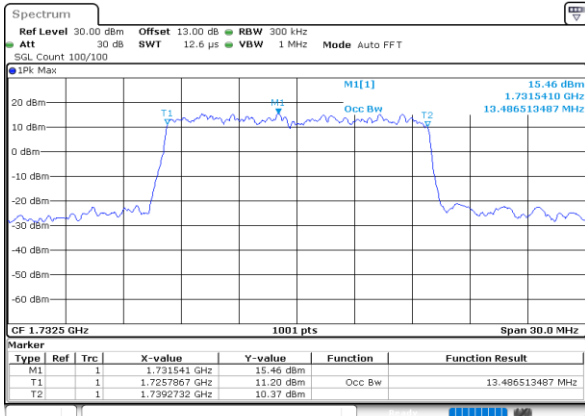
Date: 8.MAR.2023 16:52:41

Middle Channel / 10MHz / 16QAM



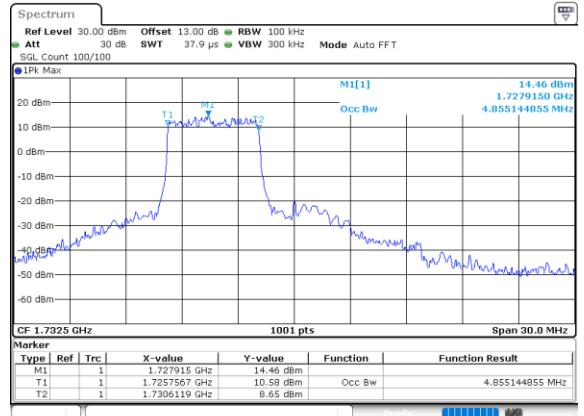
Date: 4.JUL.2023 15:42:48

Middle Channel / 15MHz / QPSK



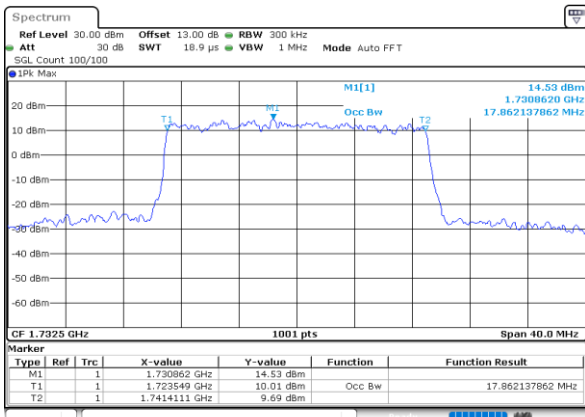
Date: 8.MAR.2023 17:01:51

Middle Channel / 15MHz / 16QAM



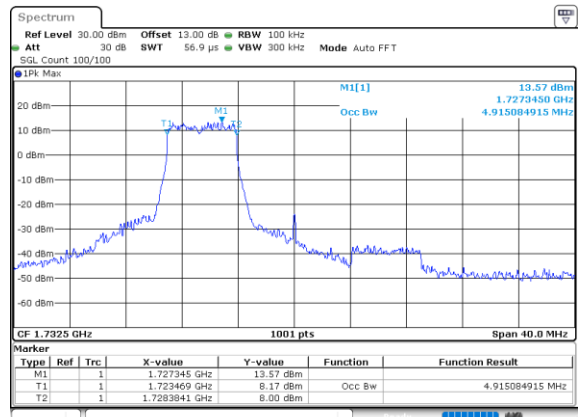
Date: 4.JUL.2023 15:43:36

Middle Channel / 20MHz / QPSK



Date: 8.MAR.2023 17:11:00

Middle Channel / 20MHz / 16QAM



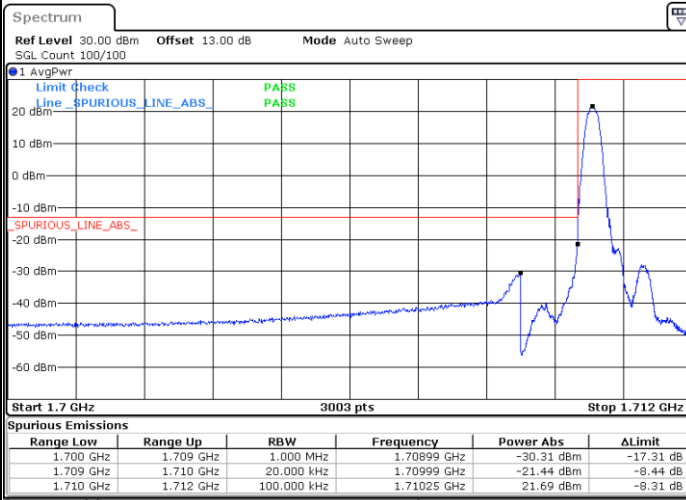
Date: 4.JUL.2023 15:44:24



# Conducted Band Edge

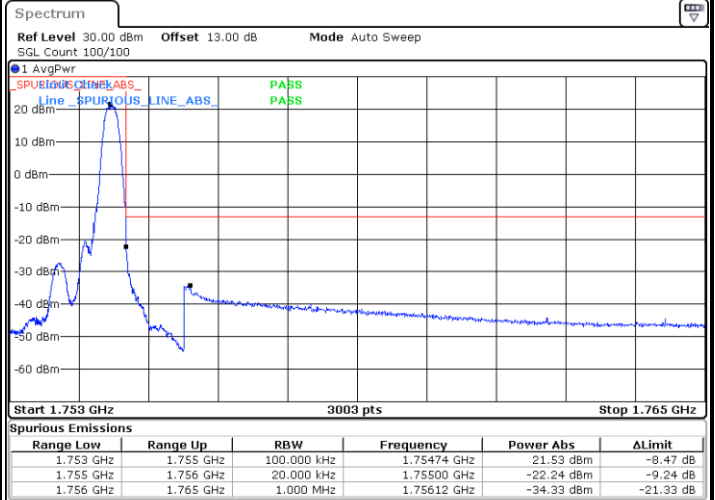
## LTE Band 4 / 1.4MHz / QPSK

### Lowest Band Edge / 1RB



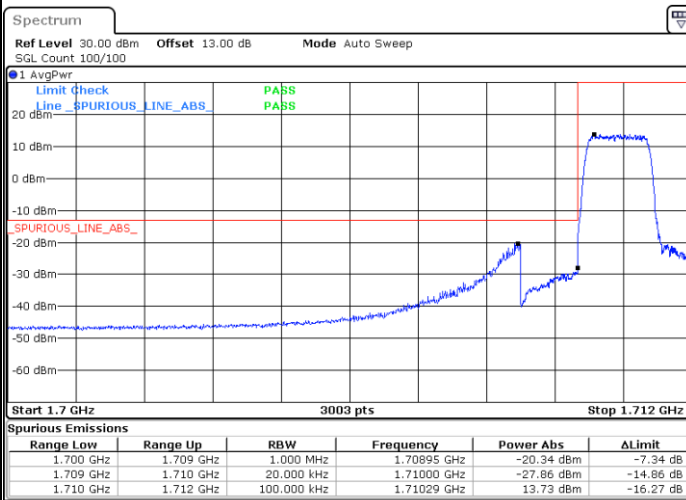
Date: 8.MAR.2023 16:18:49

### Highest Band Edge / 1RB



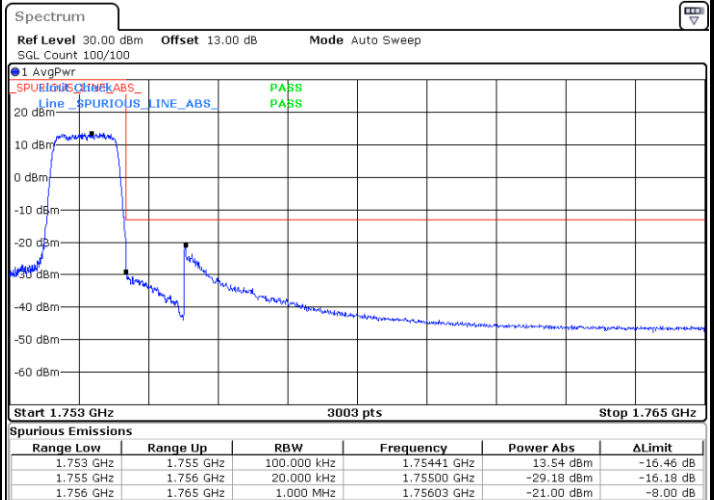
Date: 8.MAR.2023 16:27:03

### Lowest Band Edge / Full RB



Date: 8.MAR.2023 16:21:16

### Highest Band Edge / Full RB

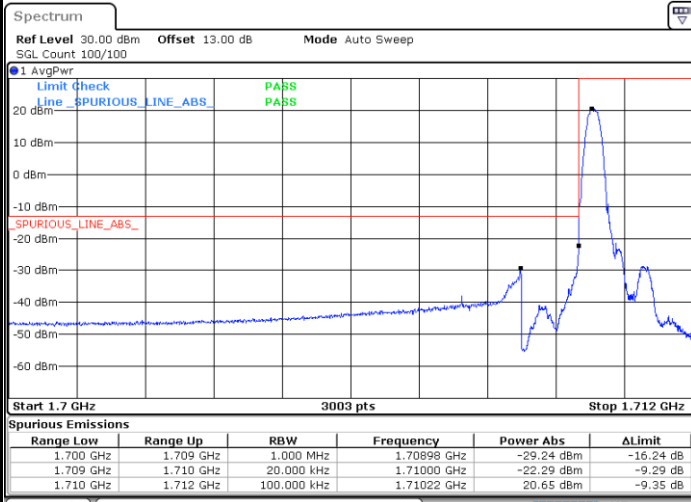


Date: 8.MAR.2023 16:29:29



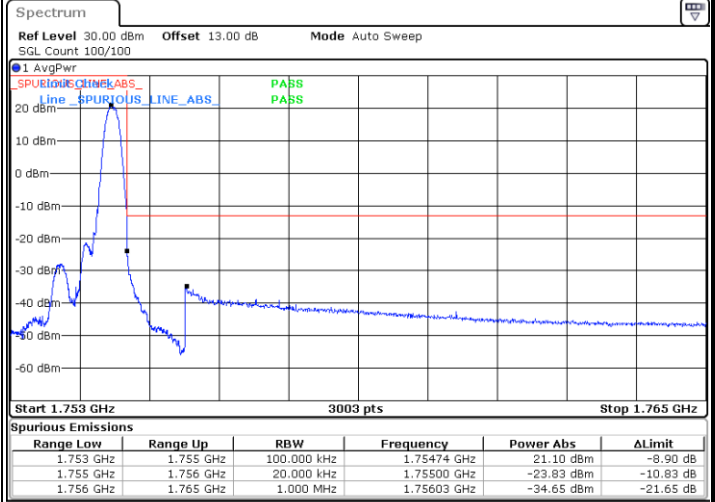
LTE Band 4 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



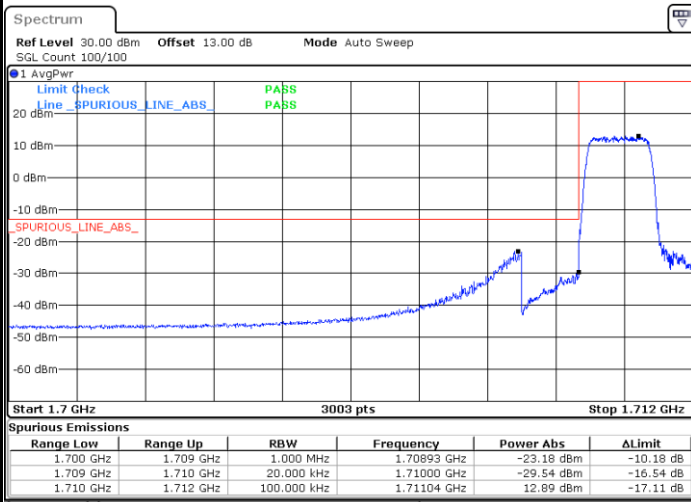
Date: 8.MAR.2023 16:20:02

Highest Band Edge / 1 RB



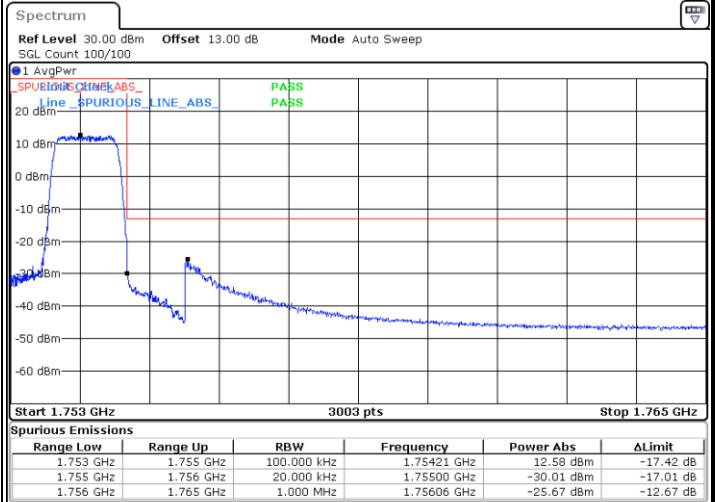
Date: 8.MAR.2023 16:28:16

Lowest Band Edge / Full RB



Date: 8.MAR.2023 16:22:29

Highest Band Edge / Full RB

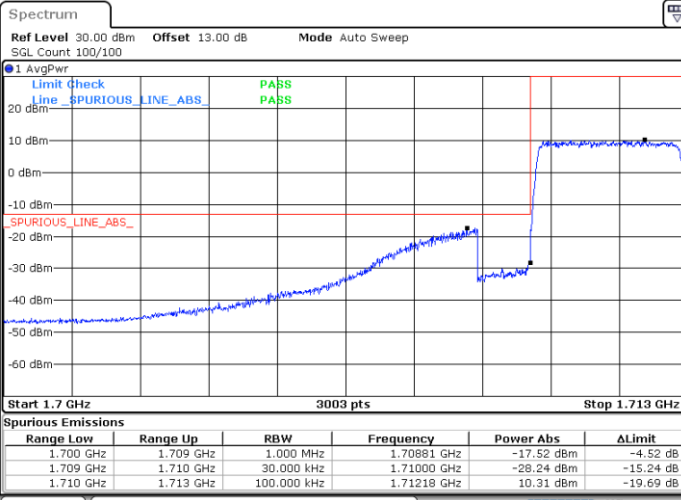


Date: 8.MAR.2023 16:30:43

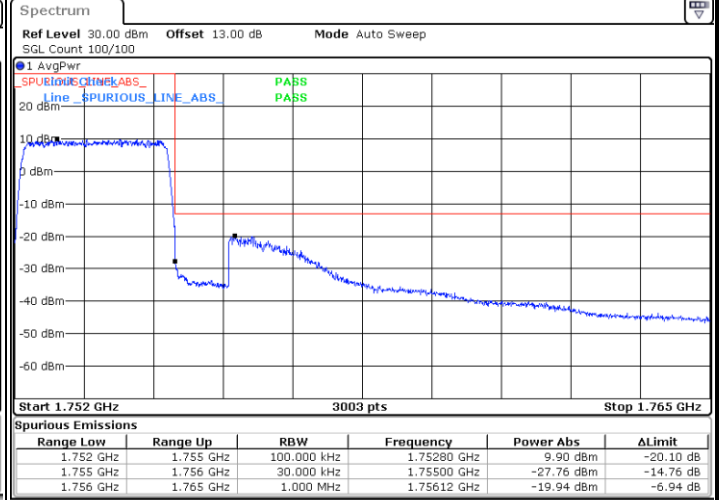


LTE Band 4 / 3MHz / QPSK

Lowest Band Edge / Full RB

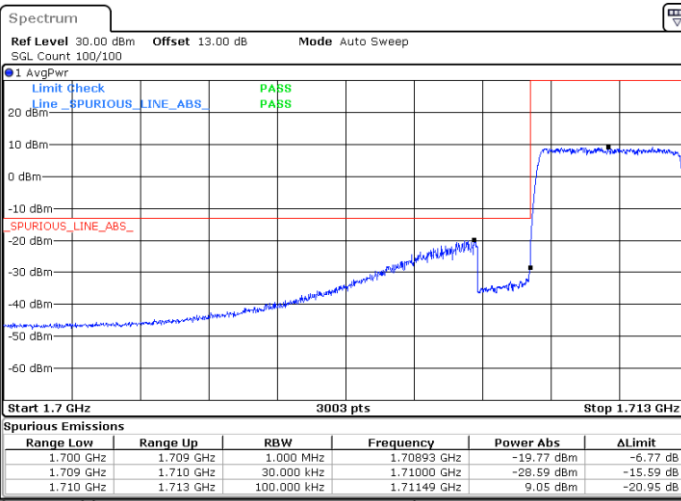


Highest Band Edge / Full RB

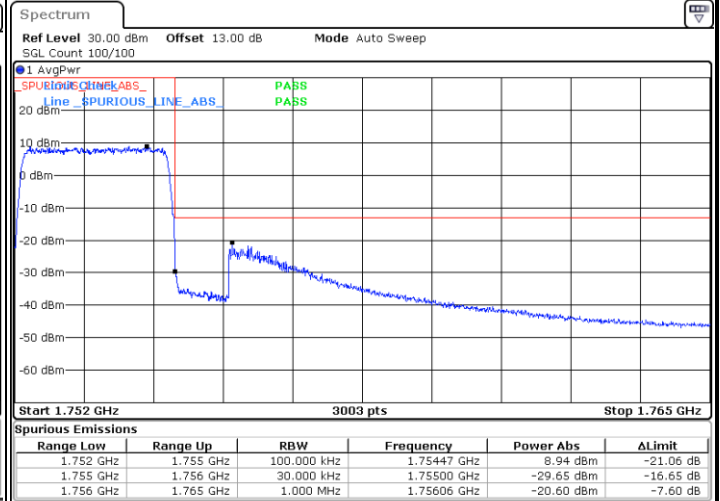


LTE Band 4 / 3MHz / 16QAM

Lowest Band Edge / Full RB



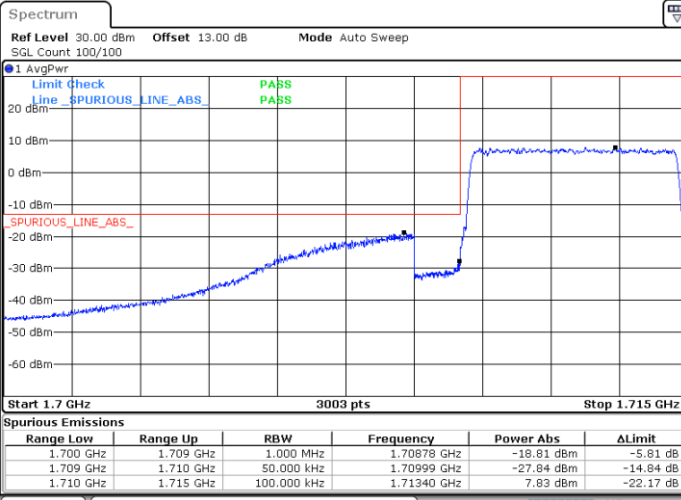
Highest Band Edge / Full RB





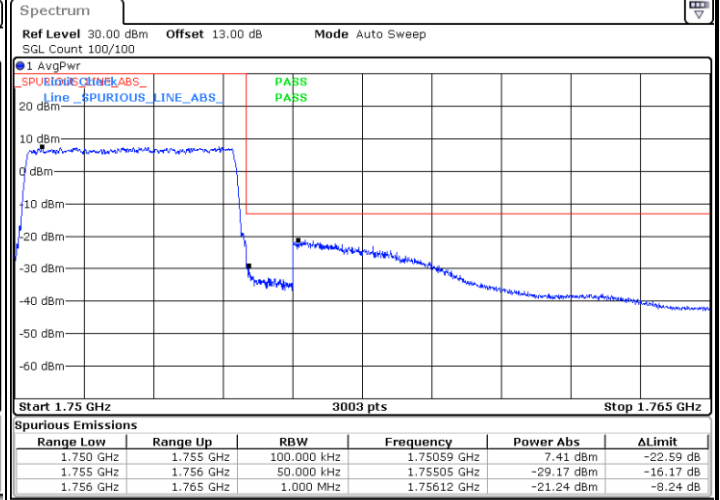
LTE Band 4 / 5MHz / QPSK

Lowest Band Edge / Full RB



Date: 8.MAR.2023 16:44:35

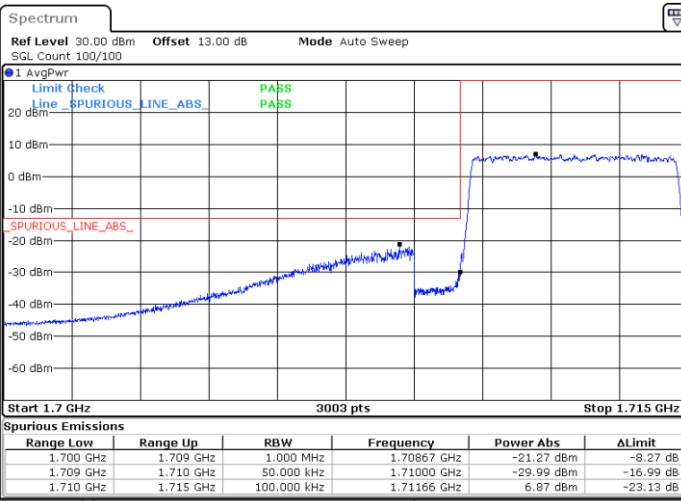
Highest Band Edge / Full RB



Date: 8.MAR.2023 16:48:36

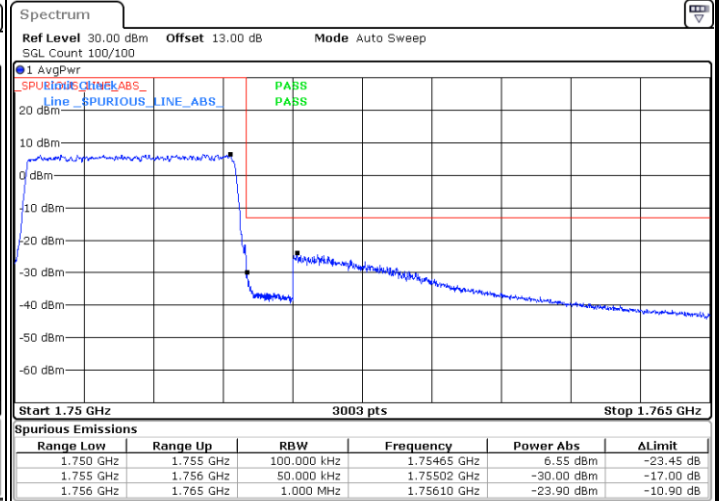
LTE Band 4 / 5MHz / 16QAM

Lowest Band Edge / Full RB



Date: 8.MAR.2023 16:45:49

Highest Band Edge / Full RB

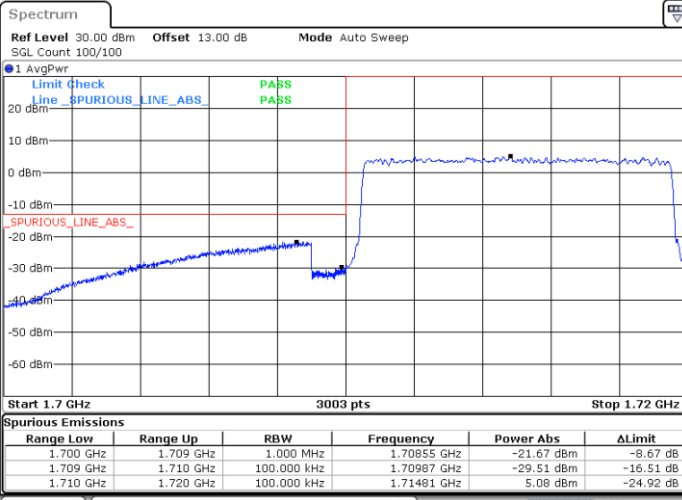


Date: 8.MAR.2023 16:49:50



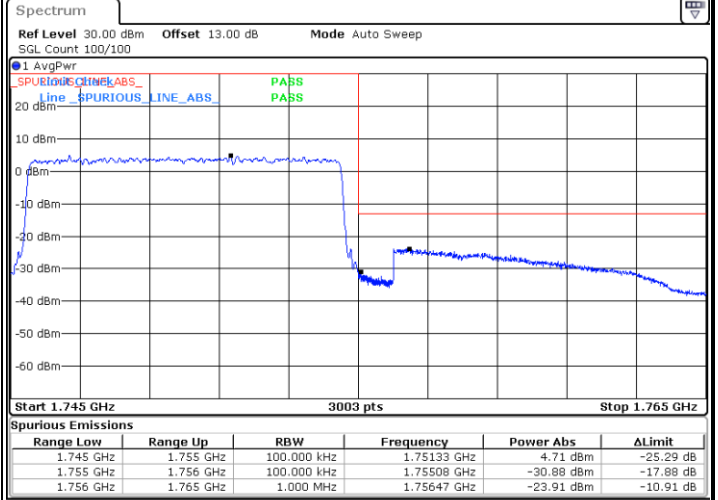
LTE Band 4 / 10MHz / QPSK

Lowest Band Edge / Full RB



Date: 8.MAR.2023 16:51:04

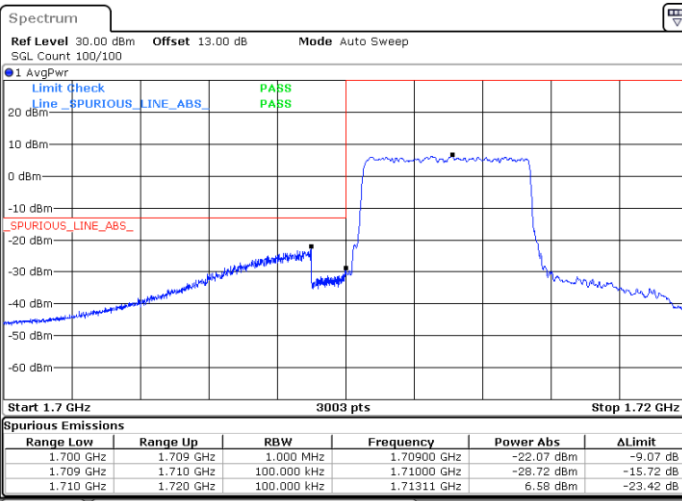
Highest Band Edge / Full RB



Date: 8.MAR.2023 16:55:06

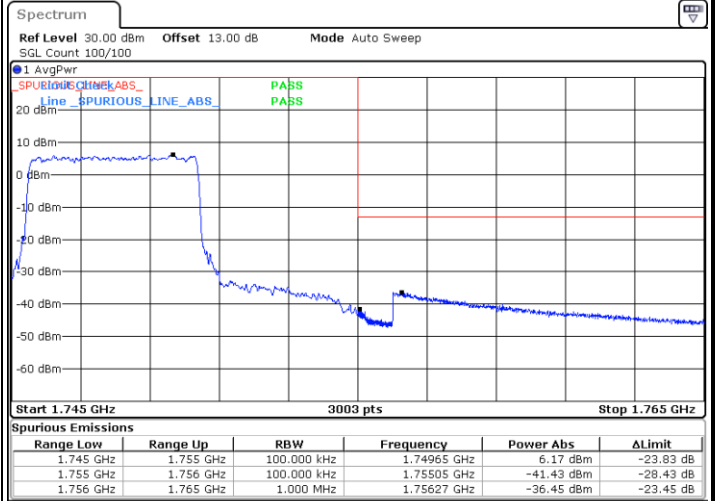
LTE Band 4 / 10MHz / 16QAM

Lowest Band Edge / 27RB0



Date: 8.MAR.2023 16:52:17

Highest Band Edge / 27 RB0

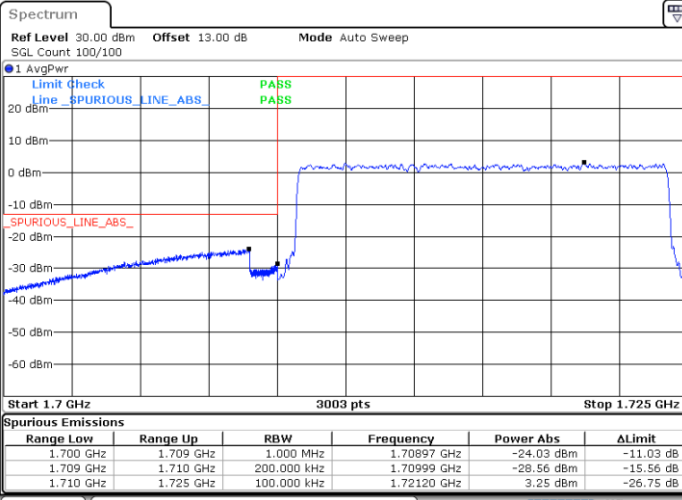


Date: 8.MAR.2023 16:56:19



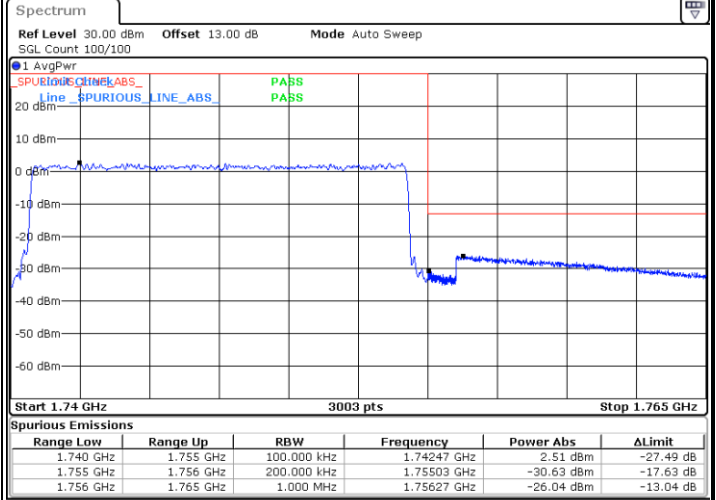
LTE Band 4 / 15MHz / QPSK

Lowest Band Edge / Full RB



Date: 8.MAR.2023 17:00:13

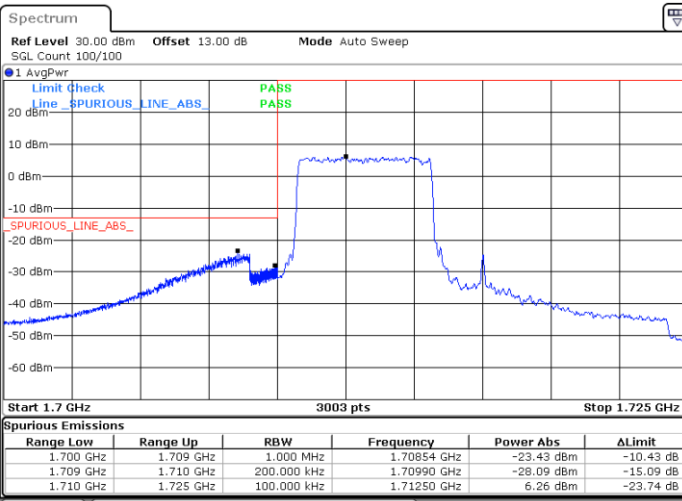
Highest Band Edge / Full RB



Date: 8.MAR.2023 17:06:54

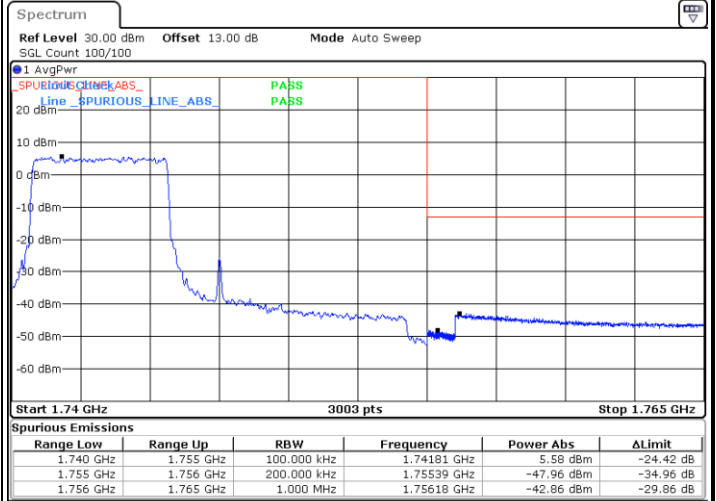
LTE Band 4 / 15MHz / 16QAM

Lowest Band Edge / 27 RB0



Date: 8.MAR.2023 17:01:26

Highest Band Edge / 27 RB0

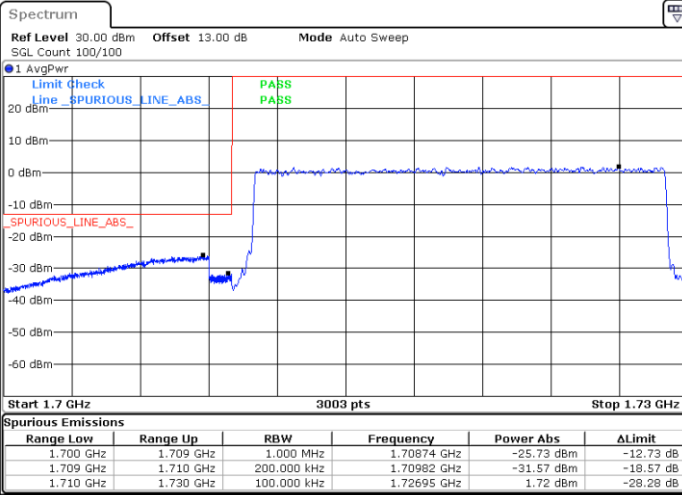


Date: 8.MAR.2023 17:08:08



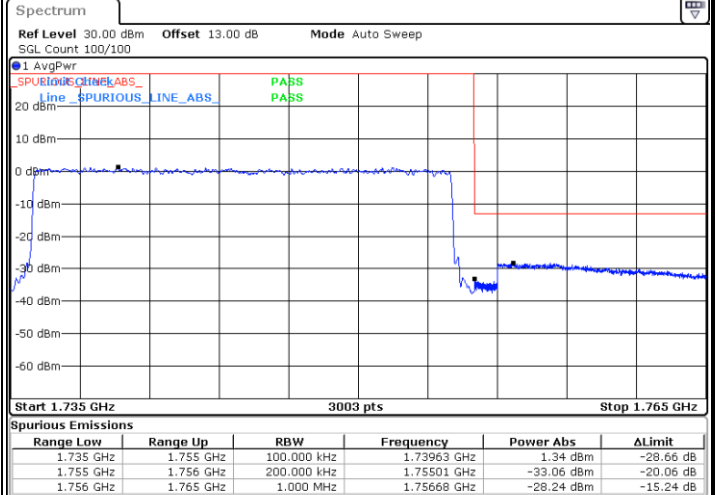
LTE Band 4 / 20MHz / QPSK

Lowest Band Edge / Full RB



Date: 8.MAR.2023 17:09:22

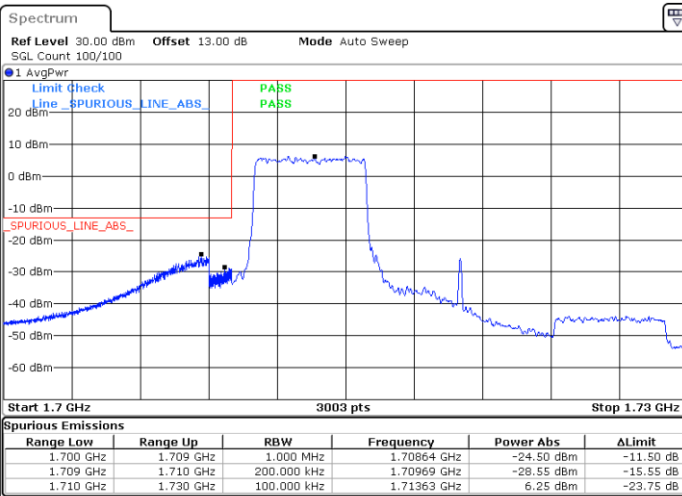
Highest Band Edge / Full RB



Date: 8.MAR.2023 17:16:03

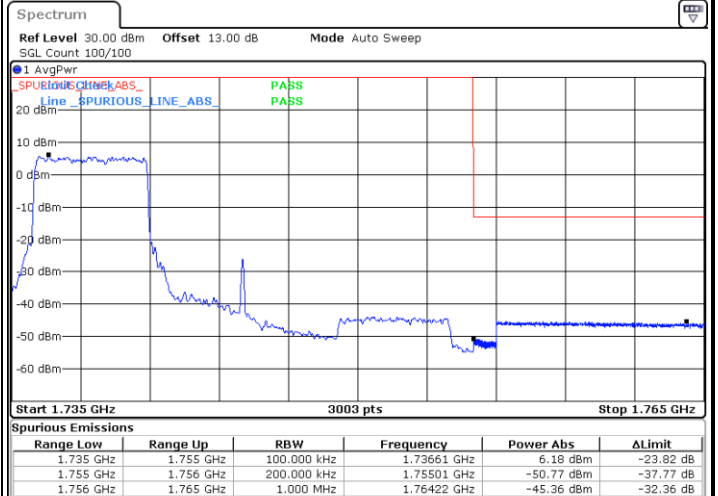
LTE Band 4 / 20MHz / 16QAM

Lowest Band Edge / 27 RB0



Date: 8.MAR.2023 17:10:36

Highest Band Edge / 27 RB0



Date: 8.MAR.2023 17:17:17



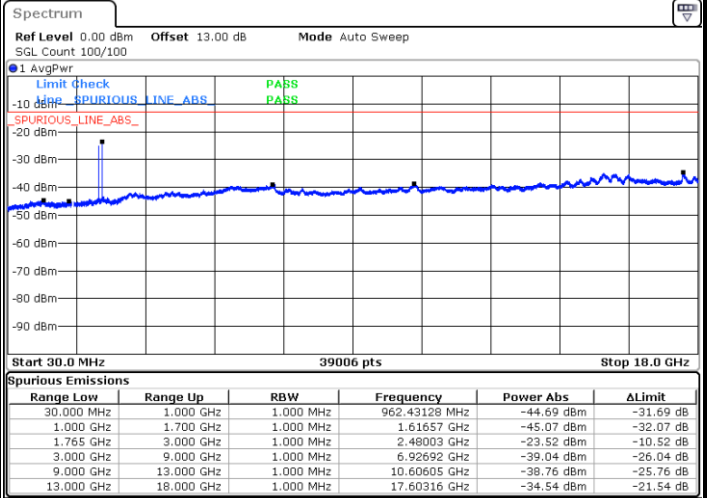
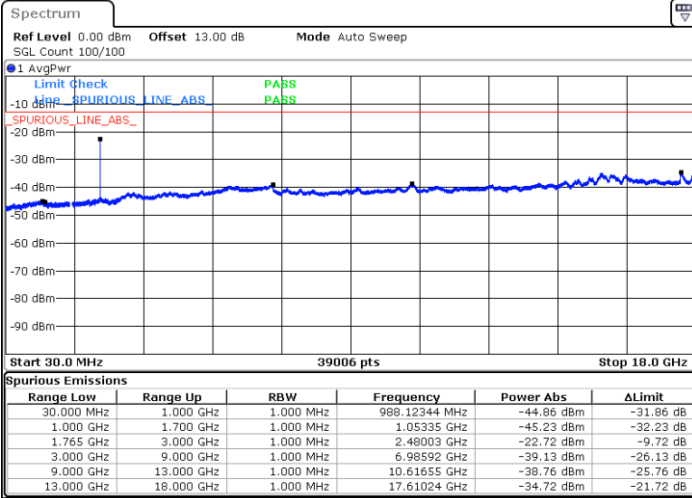


# Conducted Spurious Emission

## LTE Band 4 / 1.4MHz

### Lowest Channel / QPSK

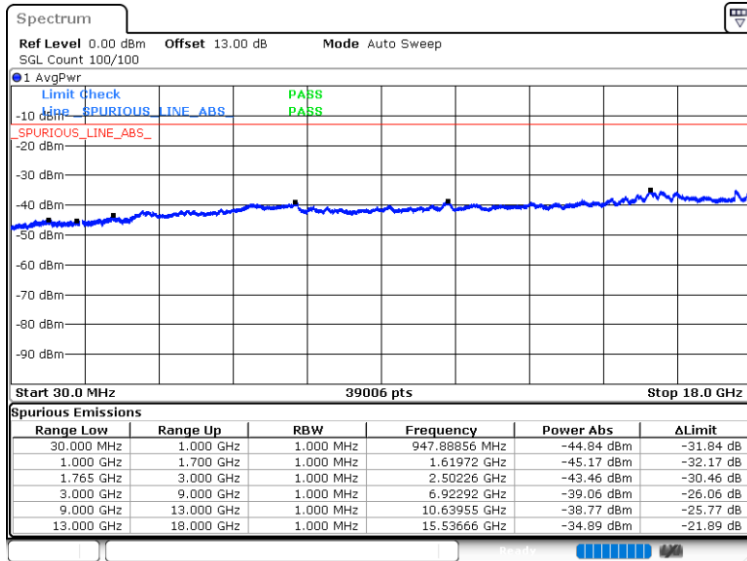
### Middle Channel / QPSK



Date: 8.MAR.2023 16:23:22

Date: 8.MAR.2023 16:25:49

### Highest Channel / QPSK

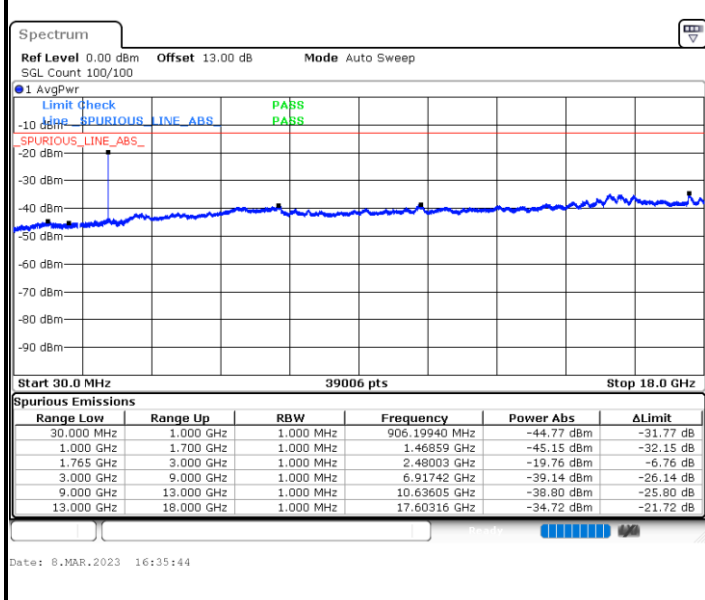


Date: 8.MAR.2023 16:31:36

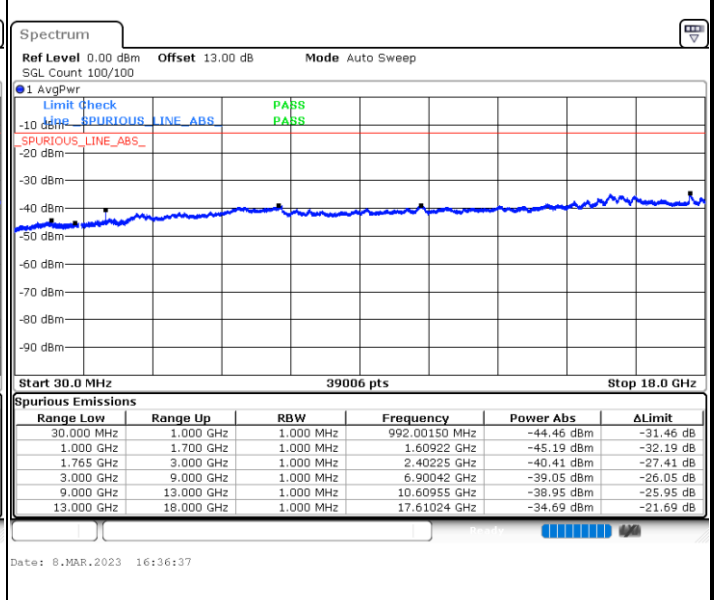


**LTE Band 4 / 3MHz**

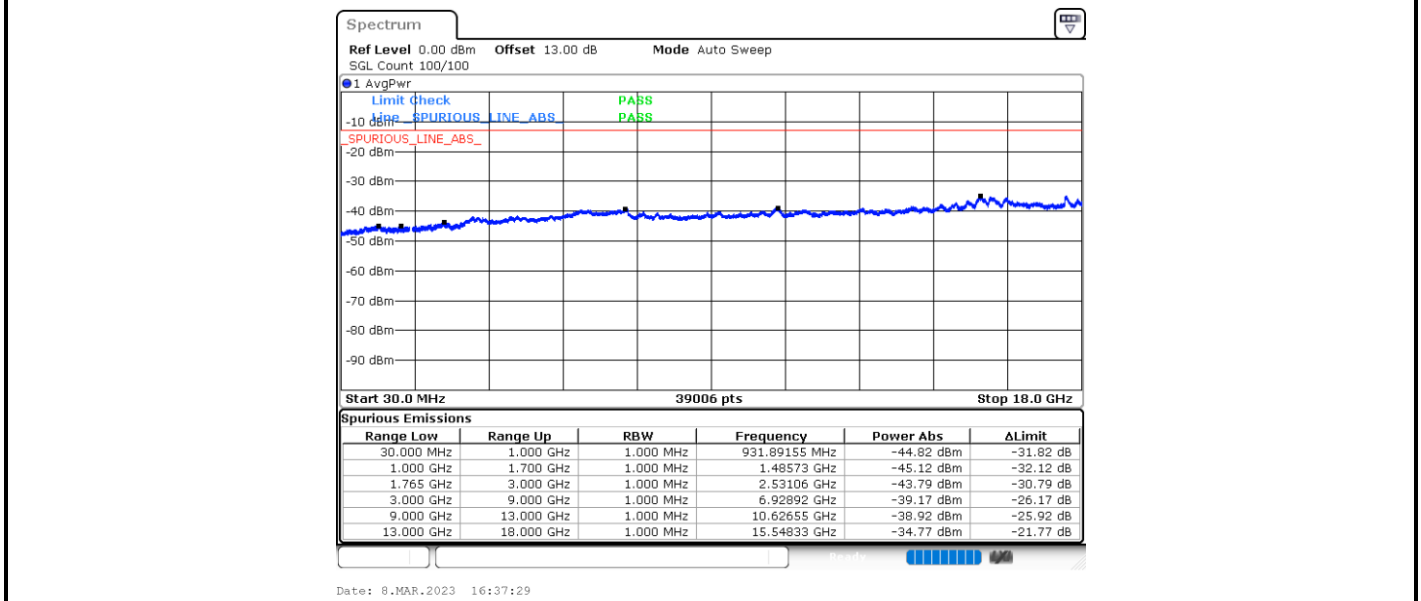
**Lowest Channel / QPSK**



**Middle Channel / QPSK**



**Highest Channel / QPSK**

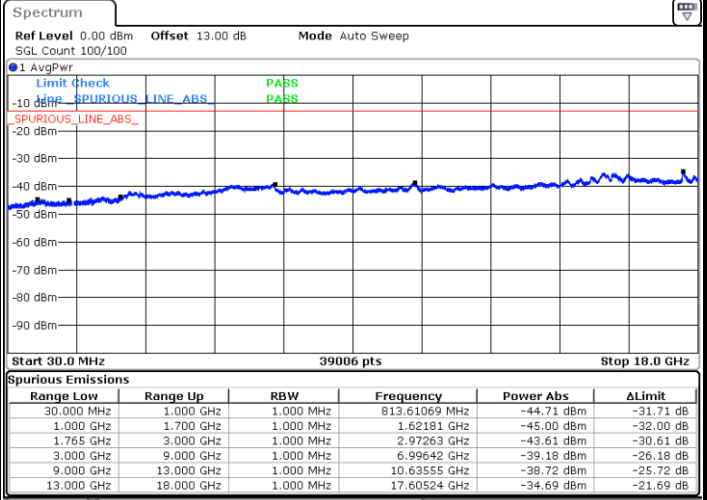
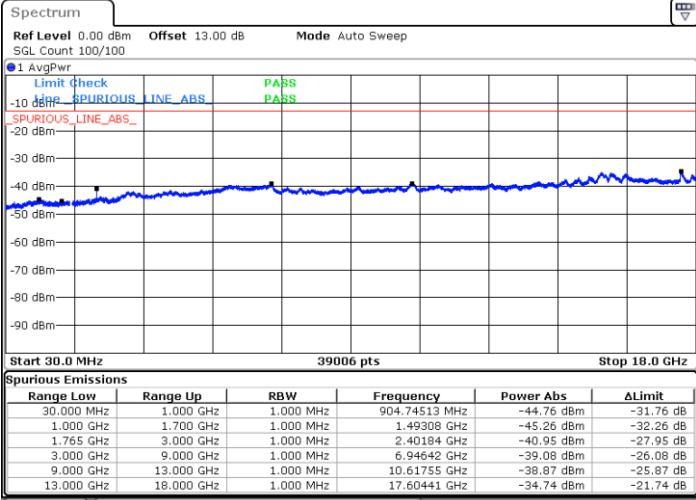




LTE Band 4 / 5MHz

Lowest Channel / QPSK

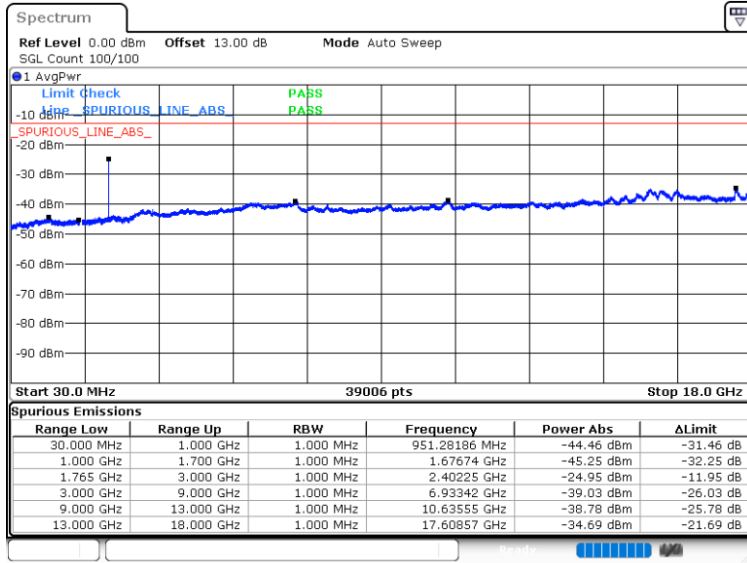
Middle Channel / QPSK



Date: 8.MAR.2023 16:41:37

Date: 8.MAR.2023 16:42:29

Highest Channel / QPSK



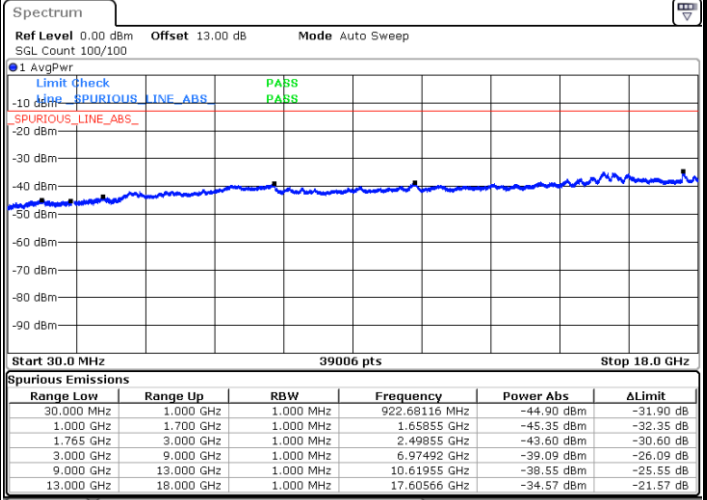
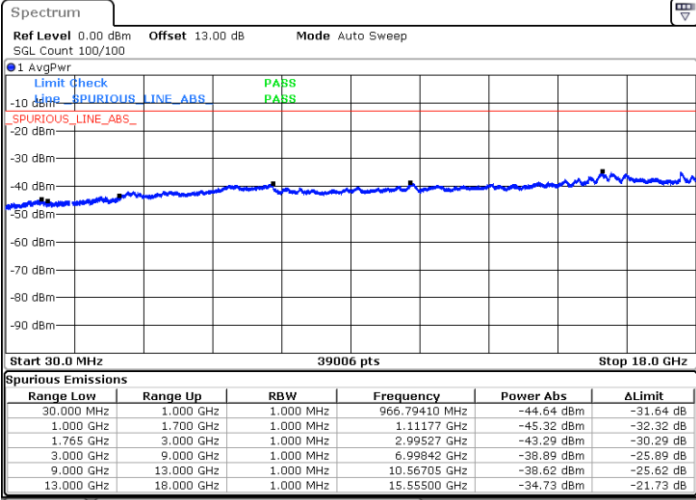
Date: 8.MAR.2023 16:43:22



LTE Band 4 / 10MHz

Lowest Channel / QPSK

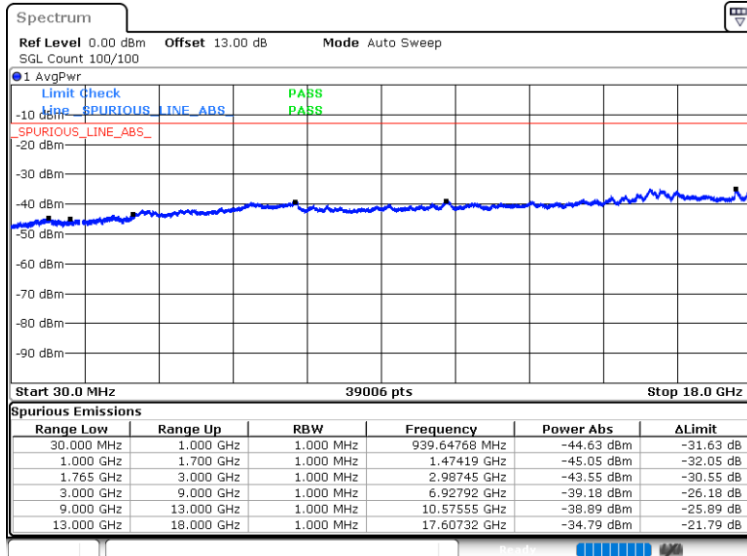
Middle Channel / QPSK



Date: 8.MAR.2023 16:57:12

Date: 8.MAR.2023 16:58:05

Highest Channel / QPSK



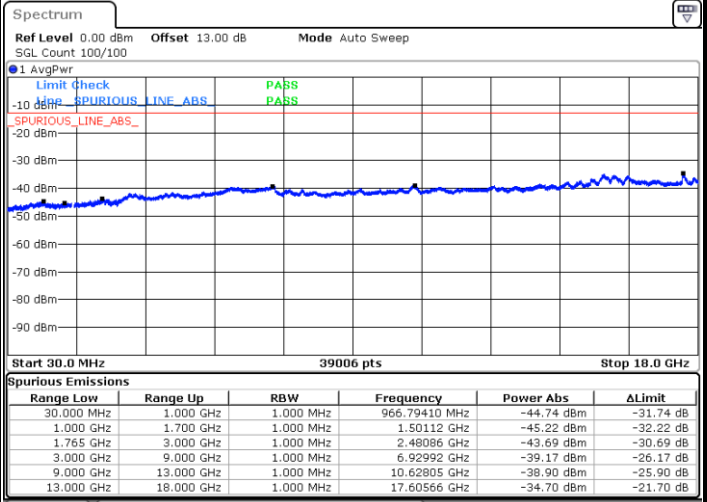
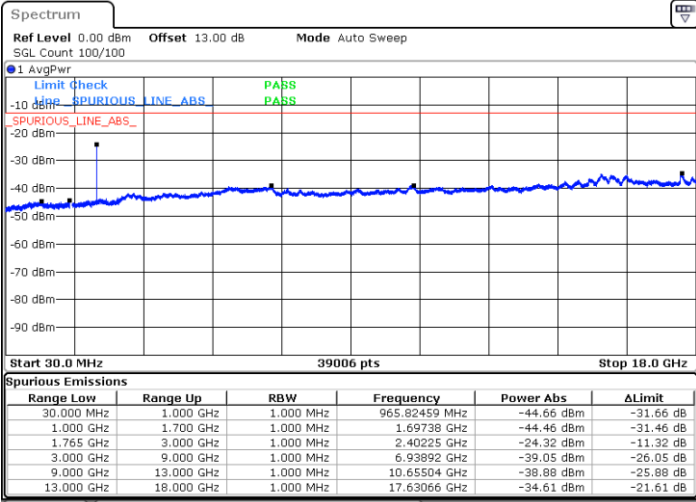
Date: 8.MAR.2023 16:58:58



LTE Band 4 / 15MHz

Lowest Channel / QPSK

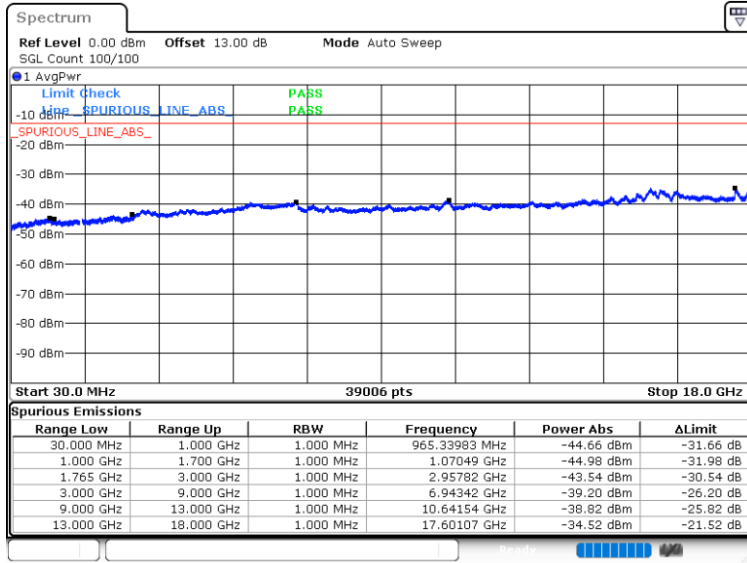
Middle Channel / QPSK



Date: 8.MAR.2023 17:03:55

Date: 8.MAR.2023 17:04:48

Highest Channel / QPSK



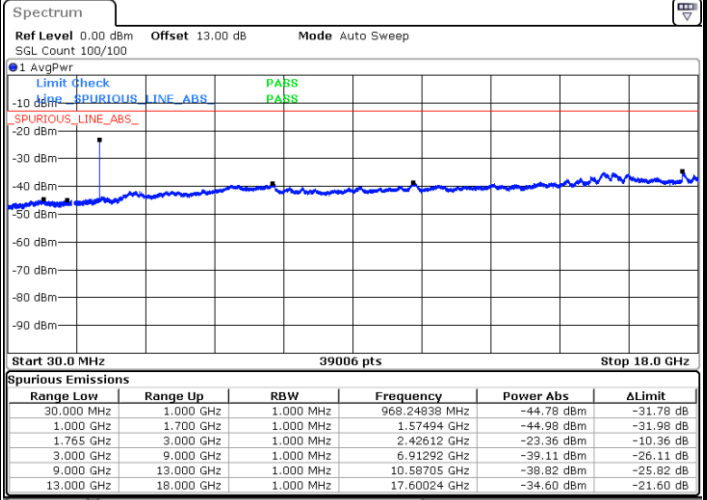
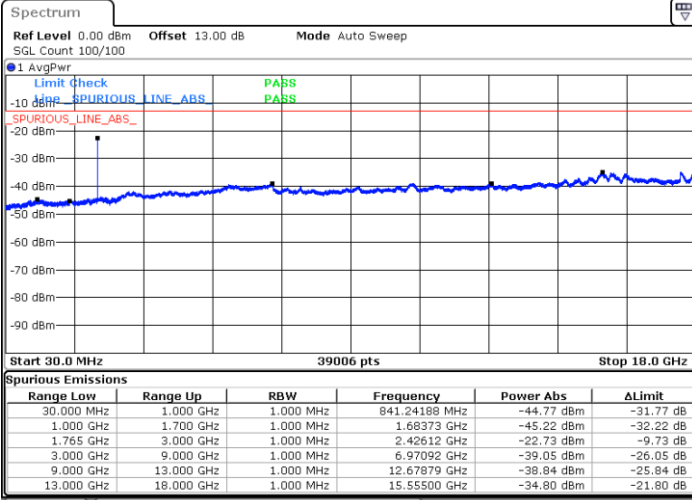
Date: 8.MAR.2023 17:05:40



LTE Band 4 / 20MHz

Lowest Channel / QPSK

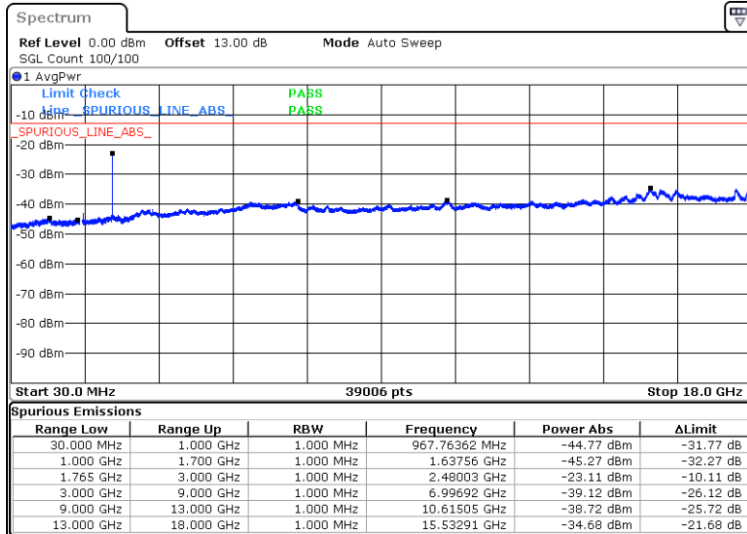
Middle Channel / QPSK



Date: 8.MAR.2023 17:13:04

Date: 8.MAR.2023 17:13:57

Highest Channel / QPSK



Date: 8.MAR.2023 17:14:49



### Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
35	Normal Voltage	0.0068	PASS
30	Normal Voltage	0.0041	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0070	
0	Normal Voltage	0.0018	
20	Maximum Voltage	0.0068	
20	Normal Voltage	0.0002	
20	Battery End Point	0.0063	

**Note:**

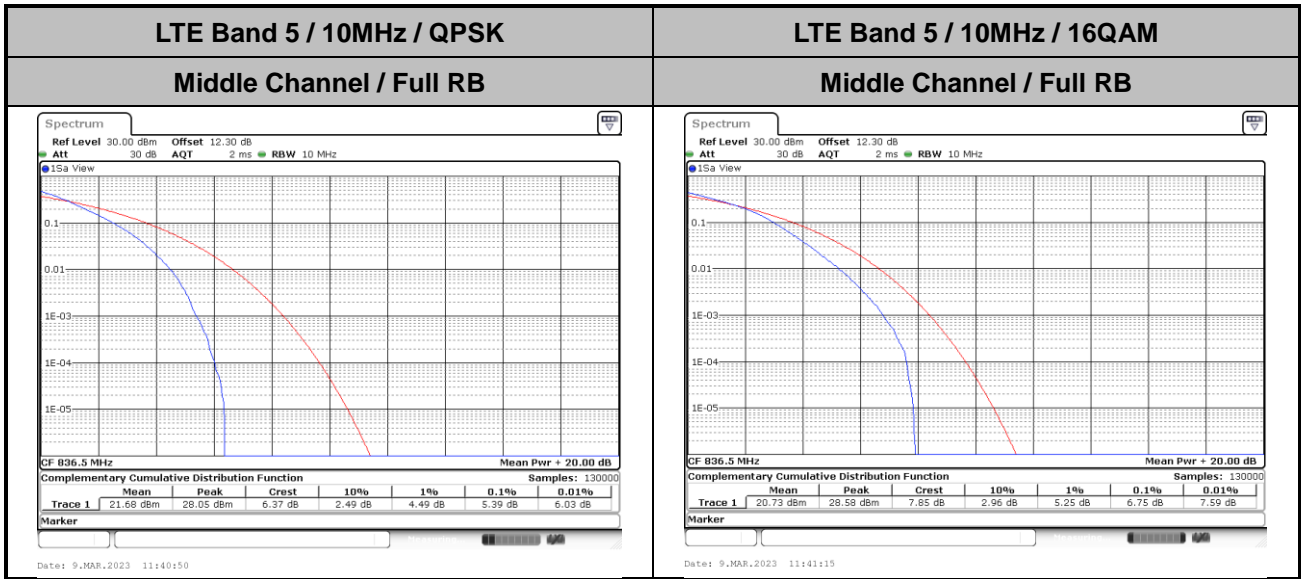
- 1. Normal Voltage = 3.87 V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage = 4.4 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 5

## Peak-to-Average Ratio

Mode	LTE Band 5 / 10MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	27RB0	Result
Middle CH	5.39	6.75	PASS







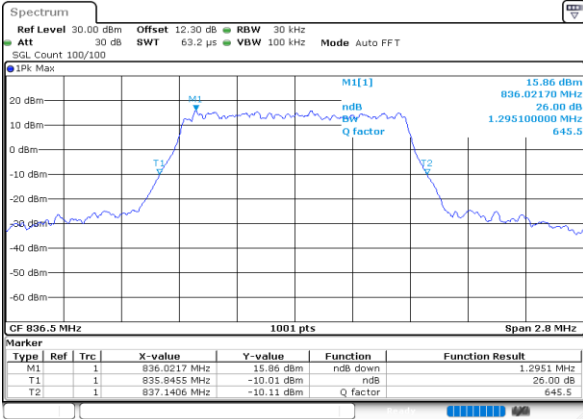
**26dB Bandwidth**

Mode	LTE Band 5 : 26dB BW(MHz)							
	1.4MHz		3MHz		5MHz		10MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.30	1.28	3.00	3.04	4.96	5.05	9.89	5.51



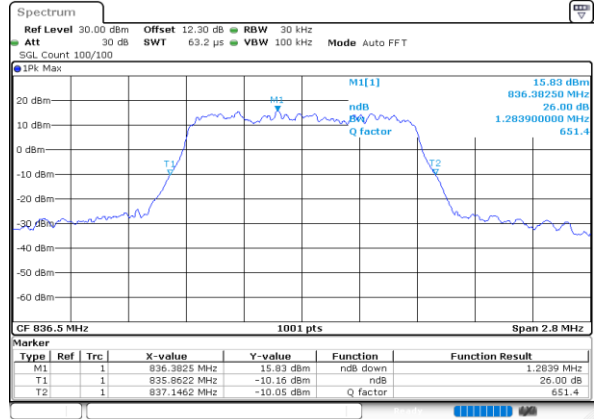
LTE Band 5

Middle Channel / 1.4MHz / QPSK



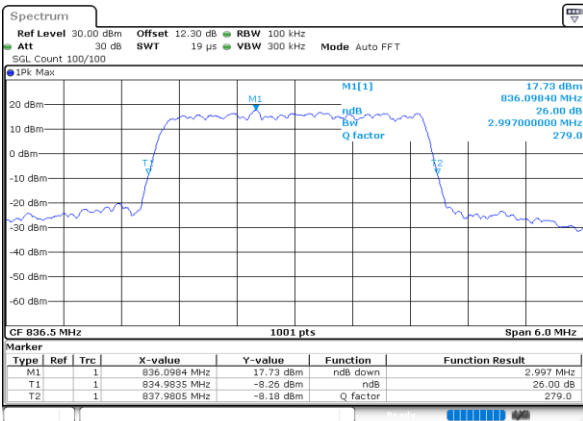
Date: 9.MAR.2023 11:17:38

Middle Channel / 1.4MHz / 16QAM



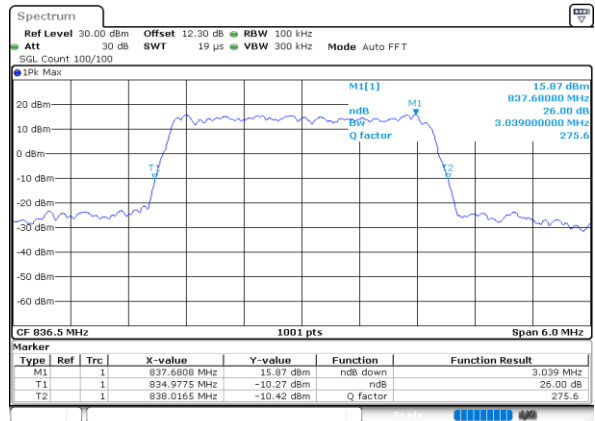
Date: 9.MAR.2023 11:18:26

Middle Channel / 3MHz / QPSK



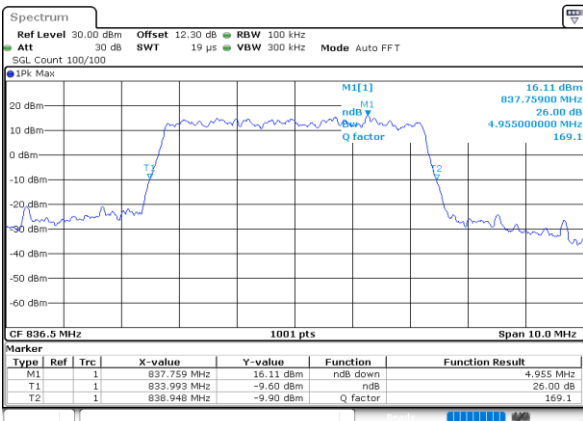
Date: 9.MAR.2023 11:27:28

Middle Channel / 3MHz / 16QAM



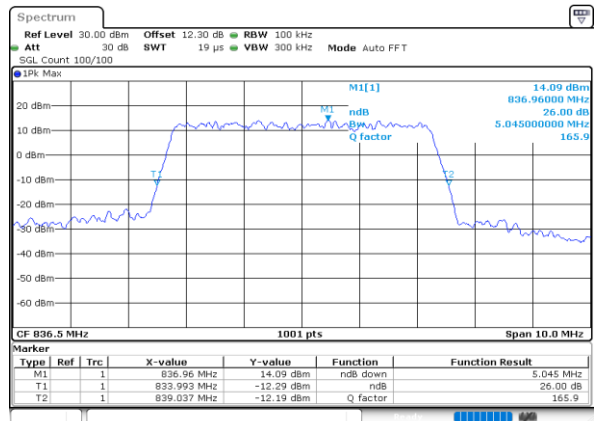
Date: 9.MAR.2023 11:28:15

Middle Channel / 5MHz / QPSK



Date: 9.MAR.2023 11:33:56

Middle Channel / 5MHz / 16QAM

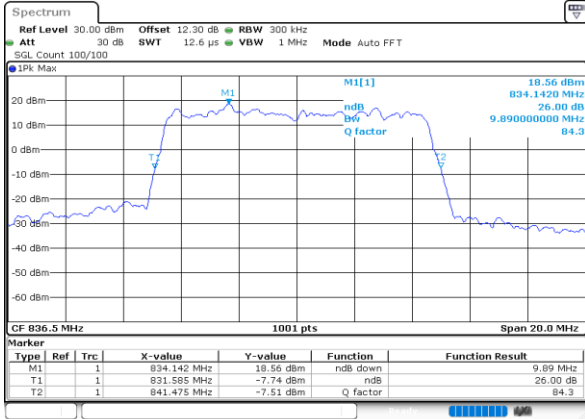


Date: 9.MAR.2023 11:34:43



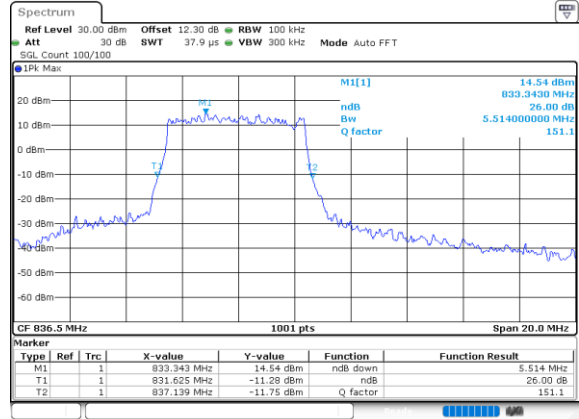
LTE Band 5

Middle Channel / 10MHz / QPSK



Date: 9.MAR.2023 11:40:25

Middle Channel / 10MHz / 16QAM



Date: 4.JUL.2023 16:51:25



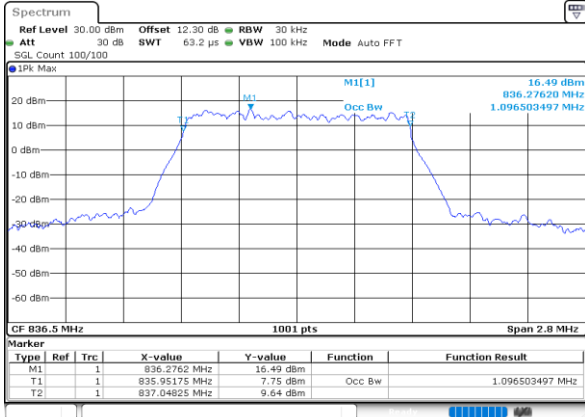
## Occupied Bandwidth

Mode	LTE Band 5 : 99%OBW(MHz)							
	1.4MHz		3MHz		5MHz		10MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.10	1.09	2.74	2.70	4.49	4.48	9.01	4.86



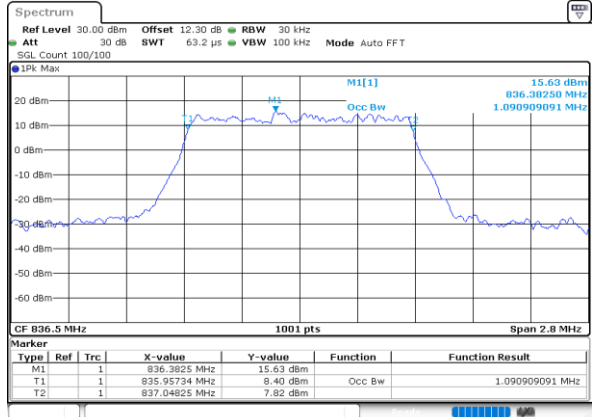
LTE Band 5

Middle Channel / 1.4MHz / QPSK



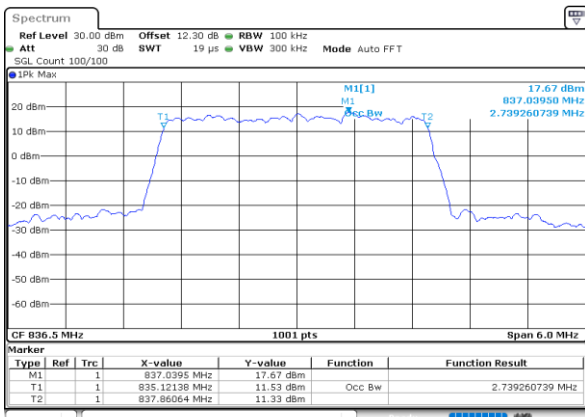
Date: 9.MAR.2023 11:17:15

Middle Channel / 1.4MHz / 16QAM



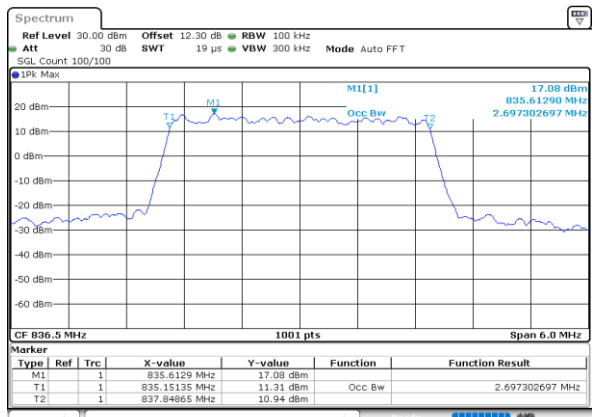
Date: 9.MAR.2023 11:18:02

Middle Channel / 3MHz / QPSK



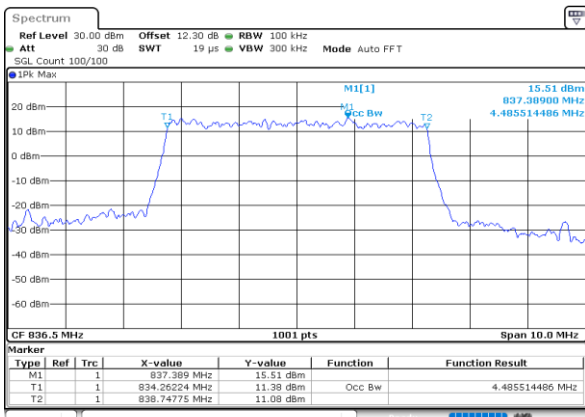
Date: 9.MAR.2023 11:27:04

Middle Channel / 3MHz / 16QAM



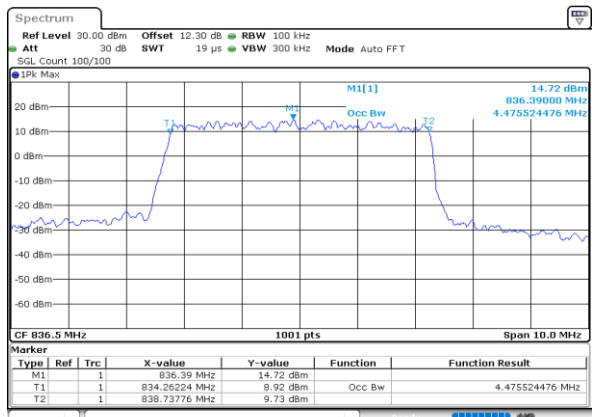
Date: 9.MAR.2023 11:27:52

Middle Channel / 5MHz / QPSK



Date: 9.MAR.2023 11:33:33

Middle Channel / 5MHz / 16QAM

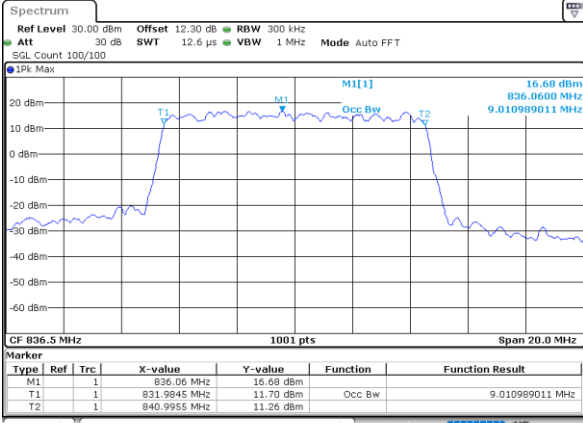


Date: 9.MAR.2023 11:34:20



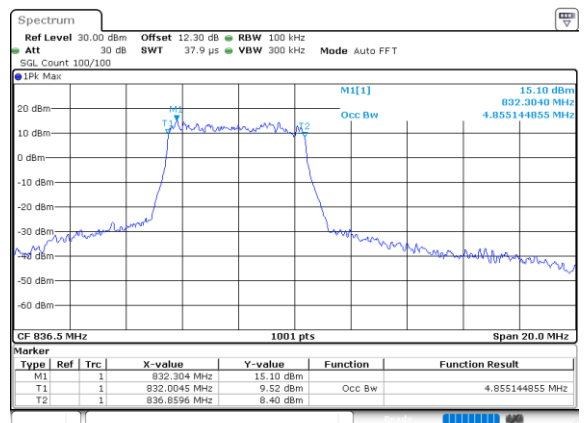
LTE Band 5

Middle Channel / 10MHz / QPSK



Date: 9.MAR.2023 11:40:02

Middle Channel / 10MHz / 16QAM



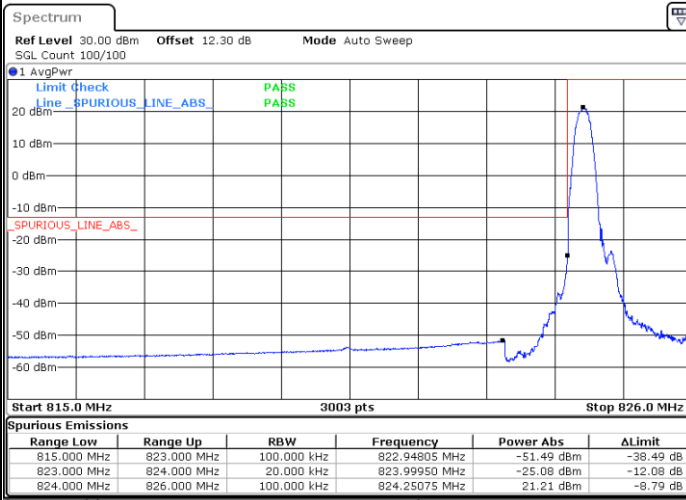
Date: 4.JUL.2023 16:51:01



# Conducted Band Edge

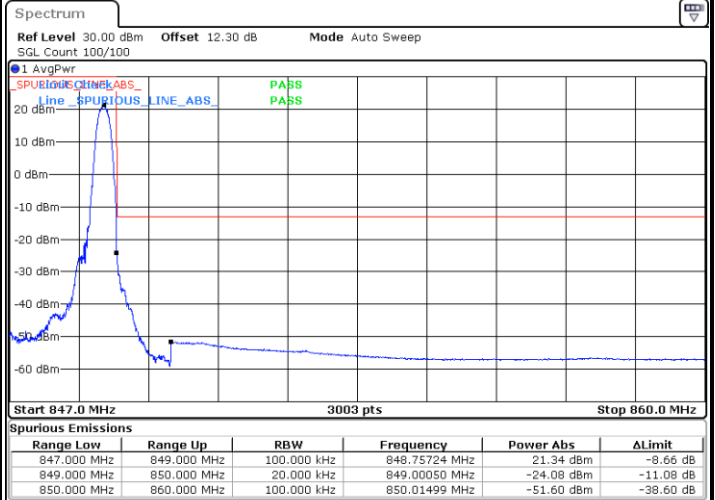
## LTE Band 5 / 1.4MHz / QPSK

### Lowest Band Edge / 1RB



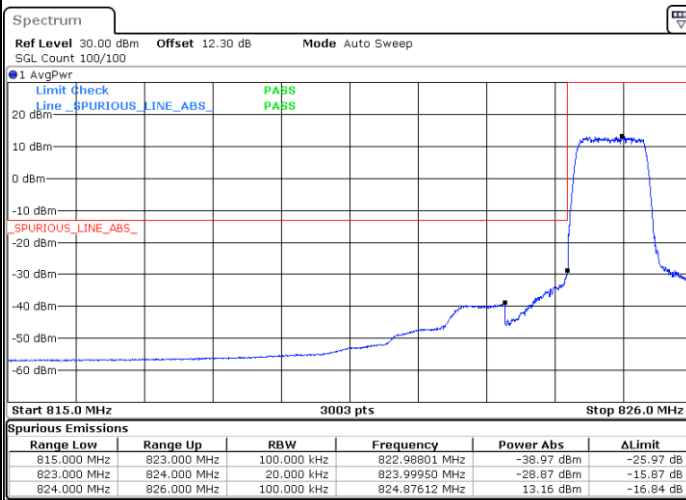
Date: 9.MAR.2023 11:11:24

### Highest Band Edge / 1RB



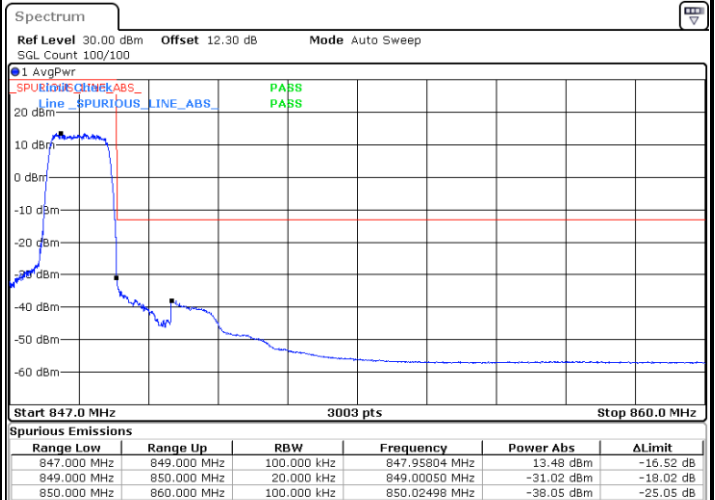
Date: 9.MAR.2023 11:22:59

### Lowest Band Edge / Full RB



Date: 9.MAR.2023 11:14:44

### Highest Band Edge / Full RB

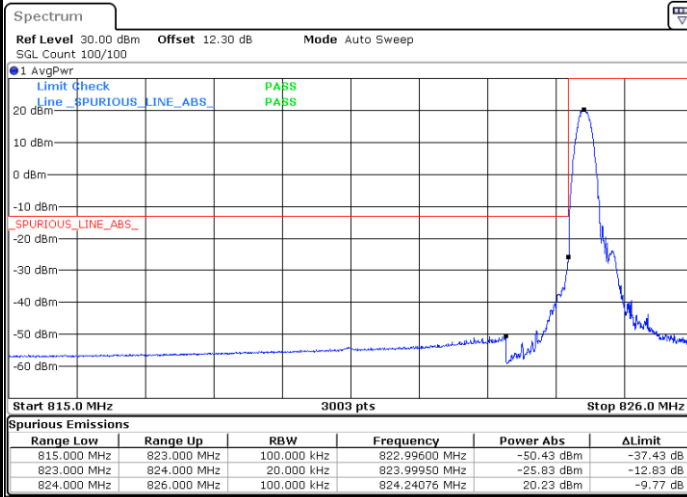


Date: 9.MAR.2023 11:20:32



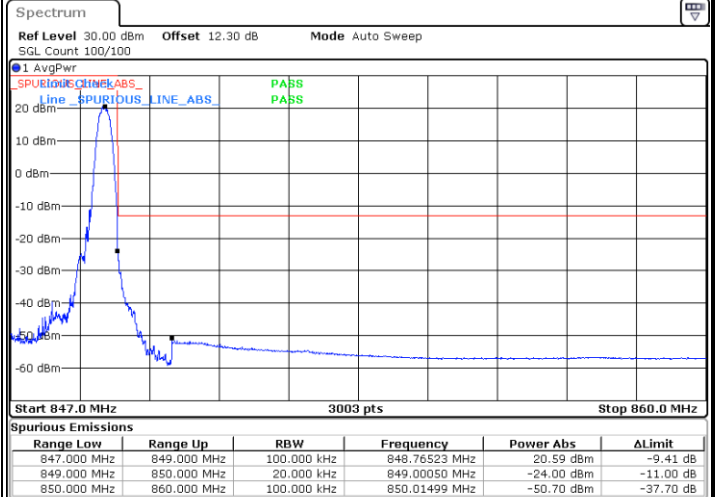
LTE Band 5 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



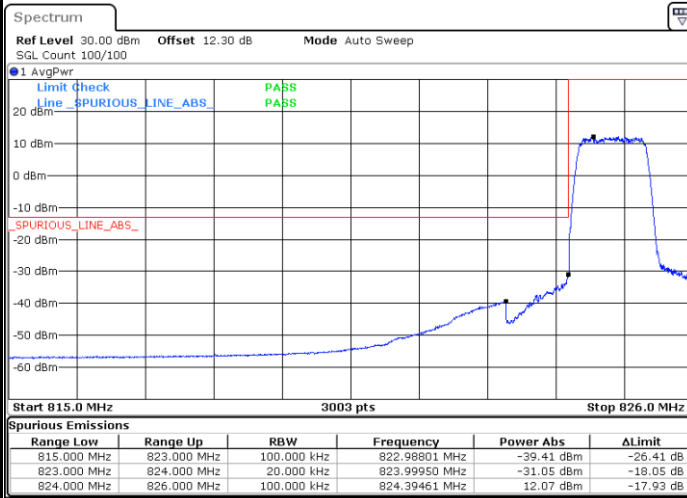
Date: 9.MAR.2023 11:12:38

Highest Band Edge / 1 RB



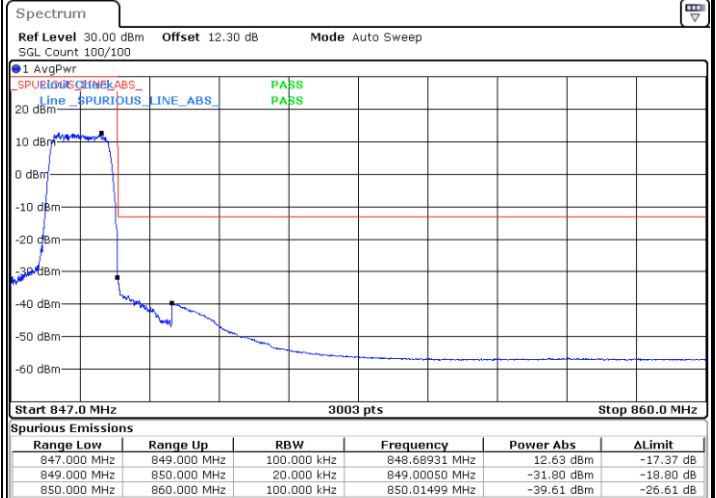
Date: 9.MAR.2023 11:24:12

Lowest Band Edge / Full RB



Date: 9.MAR.2023 11:15:58

Highest Band Edge / Full RB



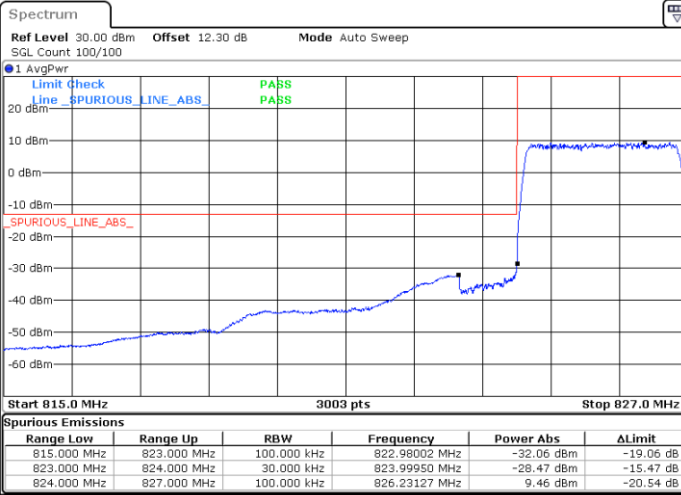
Date: 9.MAR.2023 11:21:45





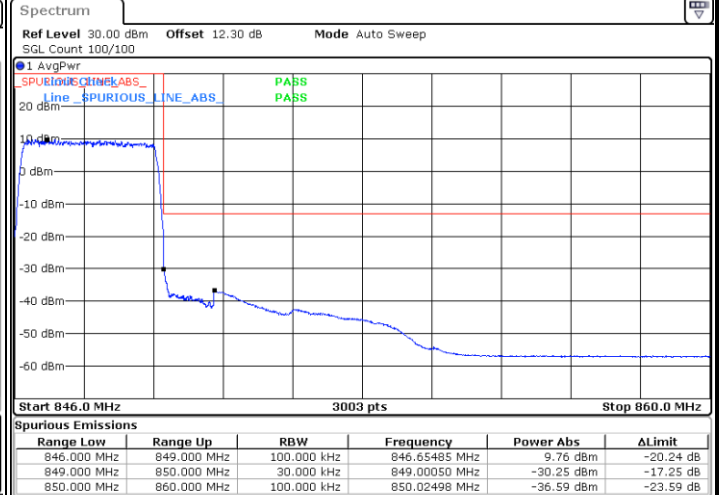
LTE Band 5 / 3MHz / QPSK

Lowest Band Edge / Full RB



Date: 9.MAR.2023 11:25:27

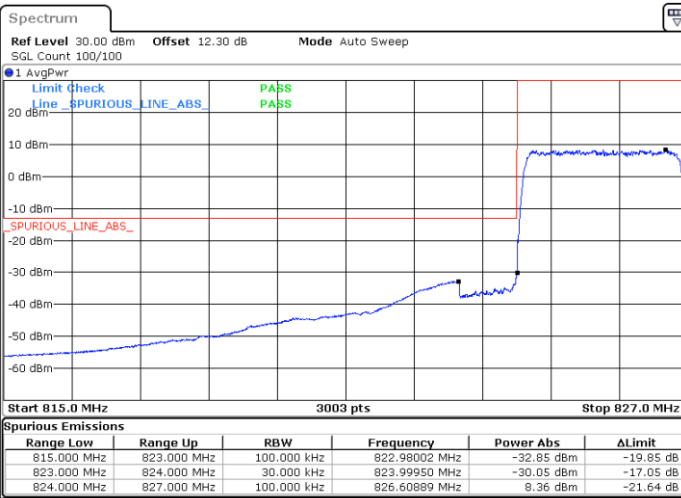
Highest Band Edge / Full RB



Date: 9.MAR.2023 11:29:28

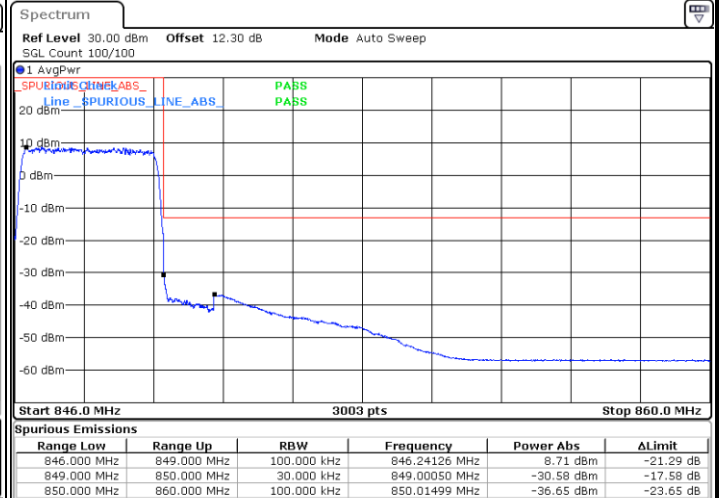
LTE Band 5 / 3MHz / 16QAM

Lowest Band Edge / Full RB



Date: 9.MAR.2023 11:26:40

Highest Band Edge / Full RB

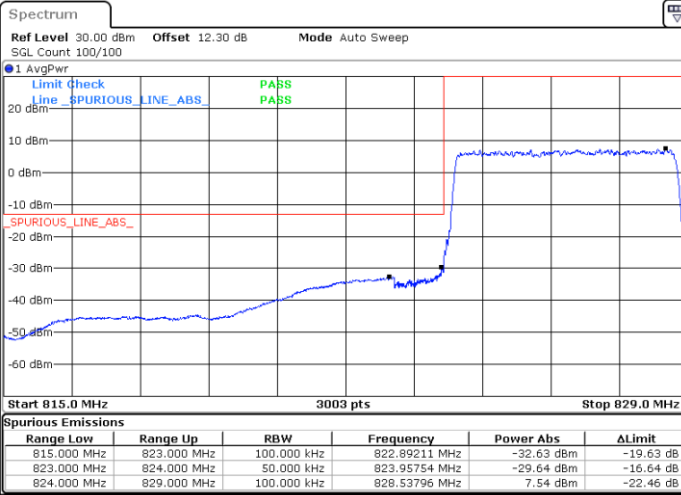


Date: 9.MAR.2023 11:30:41



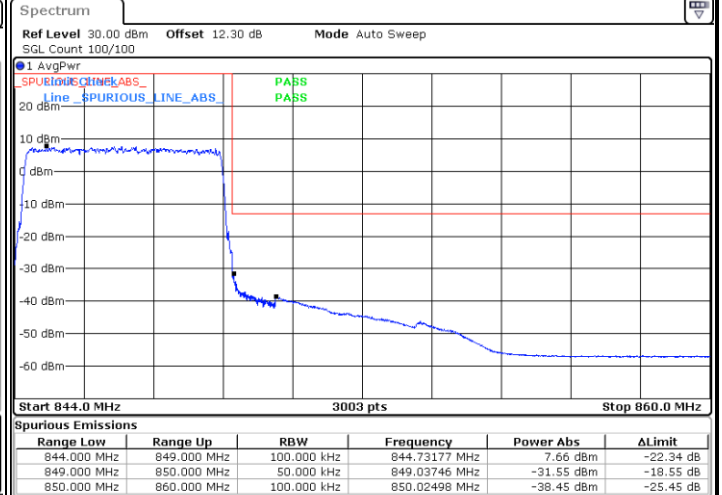
LTE Band 5 / 5MHz / QPSK

Lowest Band Edge / Full RB



Date: 9.MAR.2023 11:31:55

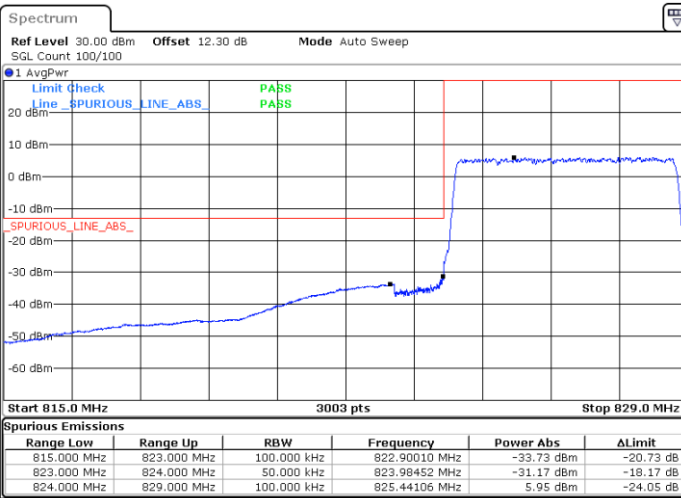
Highest Band Edge / Full RB



Date: 9.MAR.2023 11:35:56

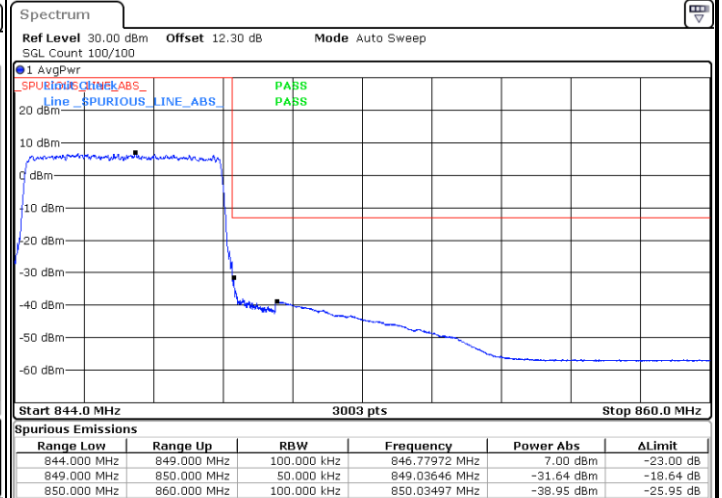
LTE Band 5 / 5MHz / 16QAM

Lowest Band Edge / Full RB



Date: 9.MAR.2023 11:33:09

Highest Band Edge / Full RB

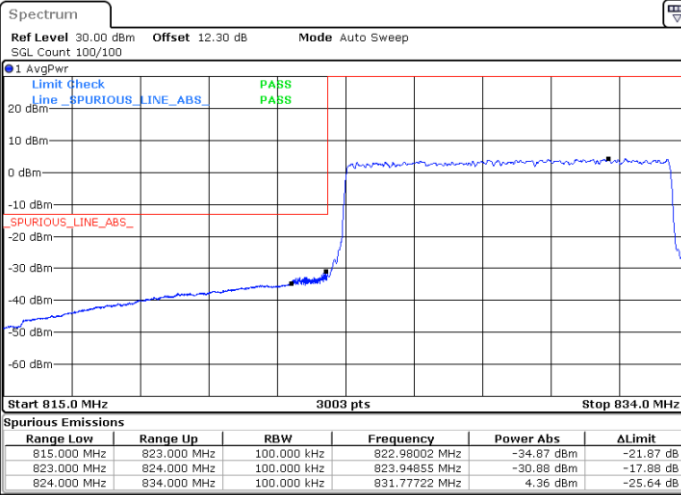


Date: 9.MAR.2023 11:37:09



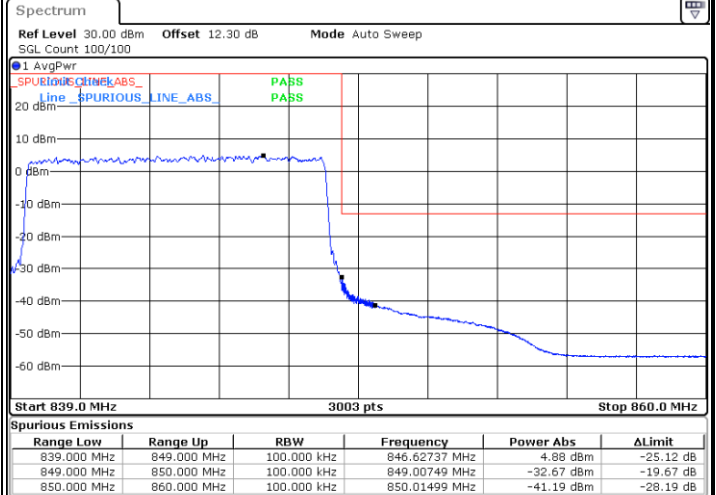
LTE Band 5 / 10MHz / QPSK

Lowest Band Edge / Full RB



Date: 9.MAR.2023 11:38:24

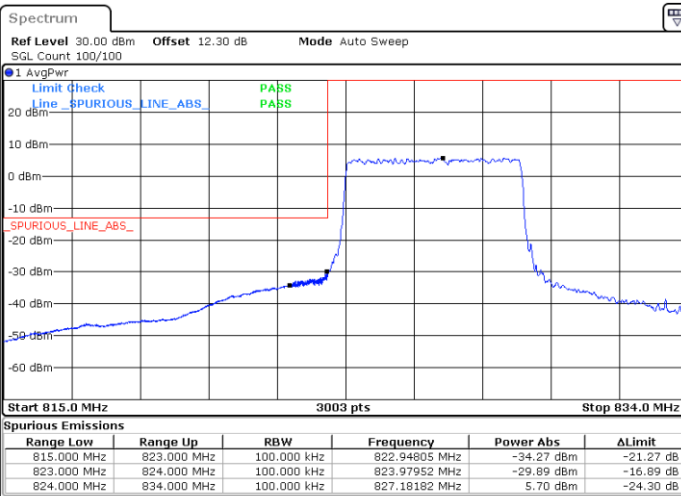
Highest Band Edge / Full RB



Date: 9.MAR.2023 11:43:15

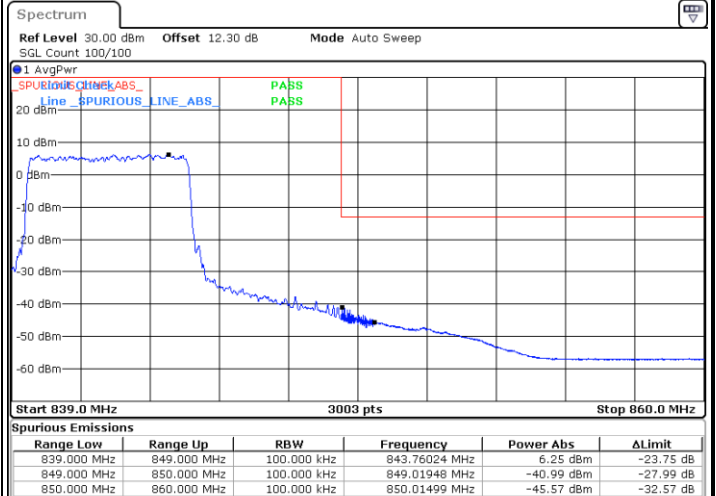
LTE Band 5 / 10MHz / 16QAM

Lowest Band Edge / 27RB0



Date: 9.MAR.2023 11:39:37

Highest Band Edge / 27 RB0



Date: 9.MAR.2023 11:44:28

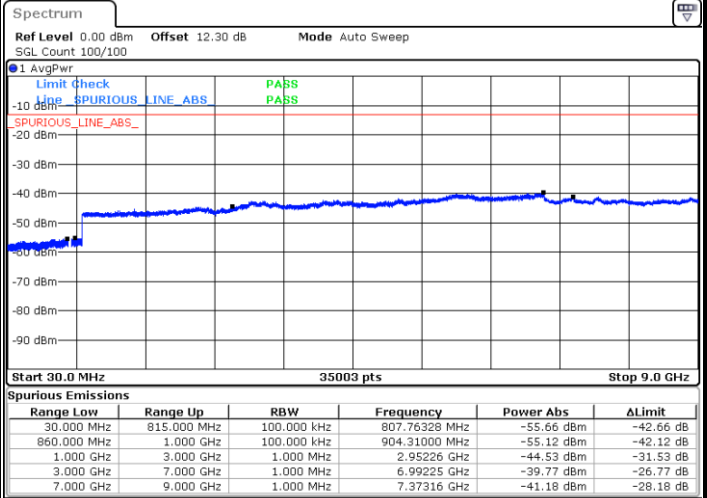
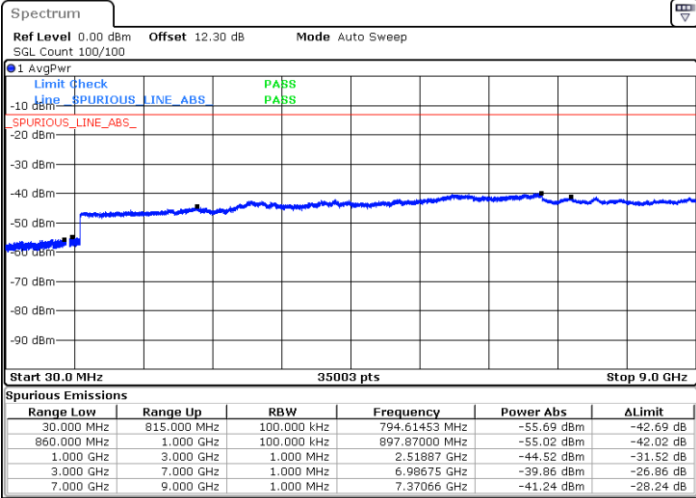


# Conducted Spurious Emission

## LTE Band 5 / 1.4MHz

### Lowest Channel / QPSK

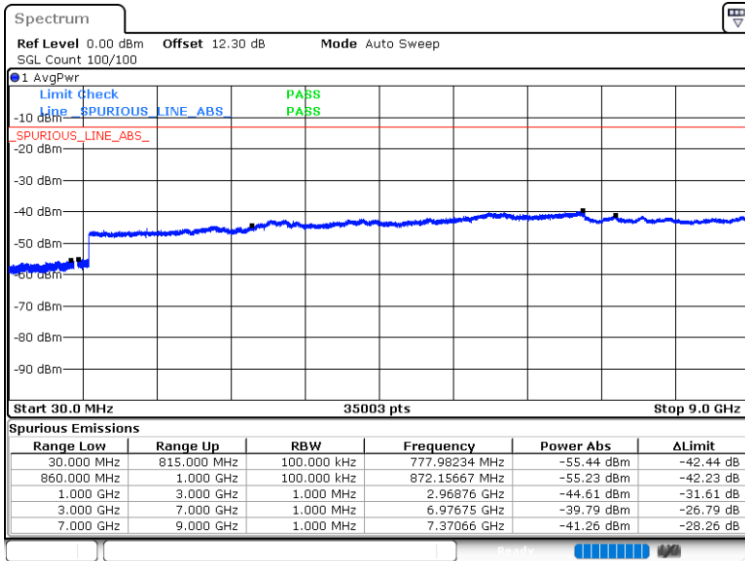
### Middle Channel / QPSK



Date: 9.MAR.2023 11:13:30

Date: 9.MAR.2023 11:16:51

### Highest Channel / QPSK



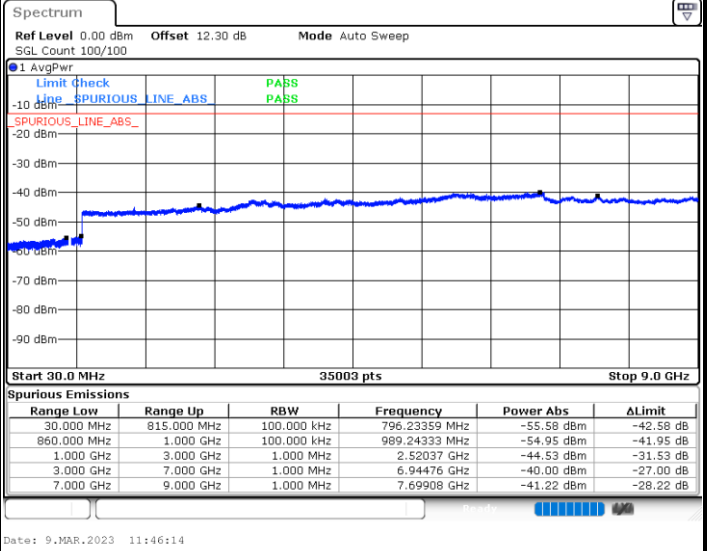
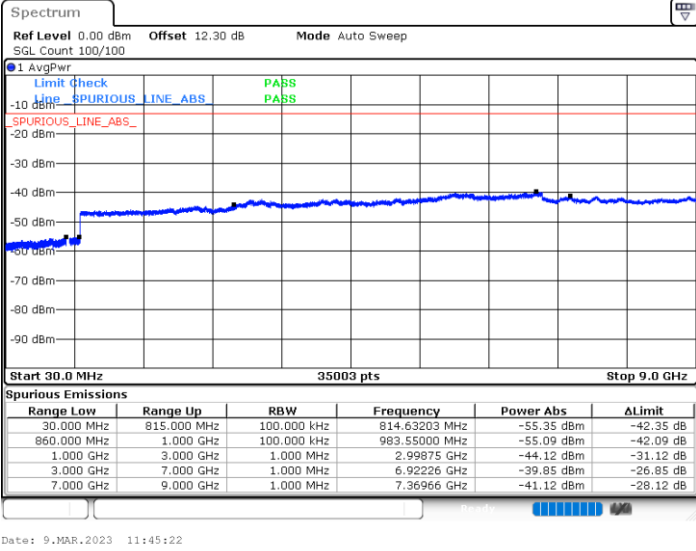
Date: 9.MAR.2023 11:19:18



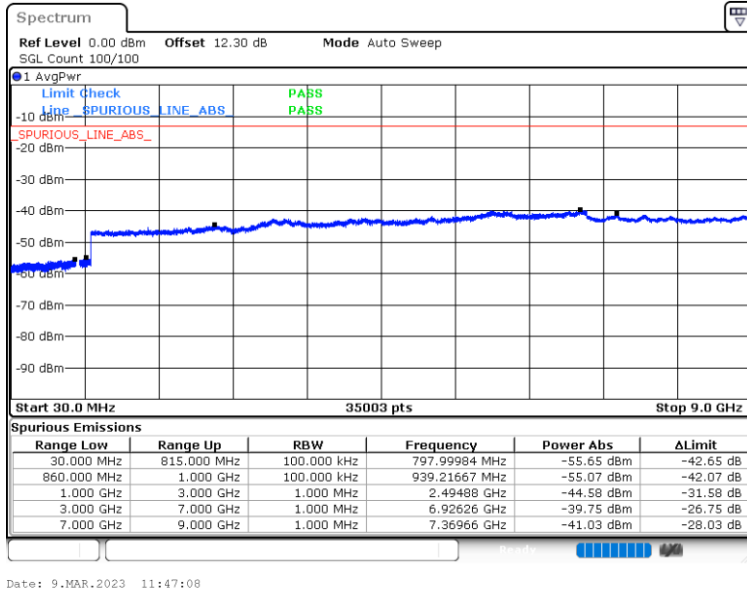
LTE Band 5 / 3MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK

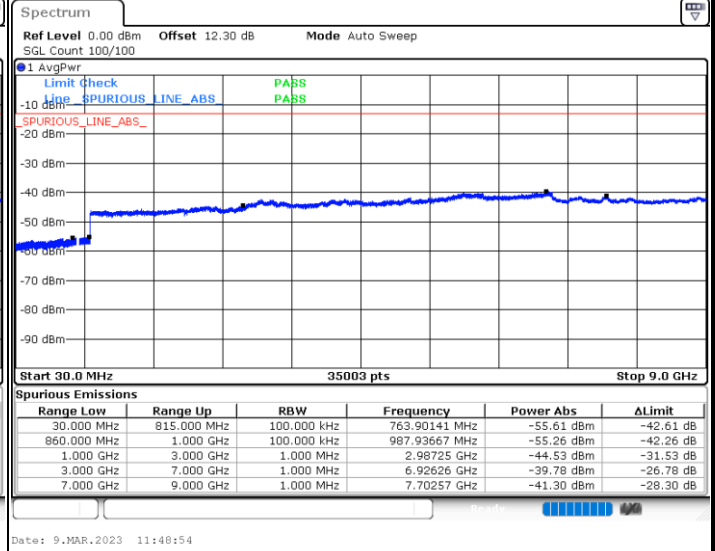
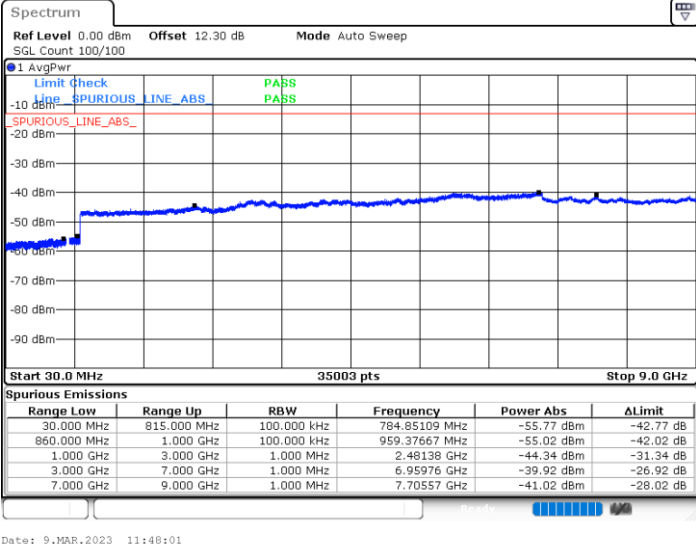




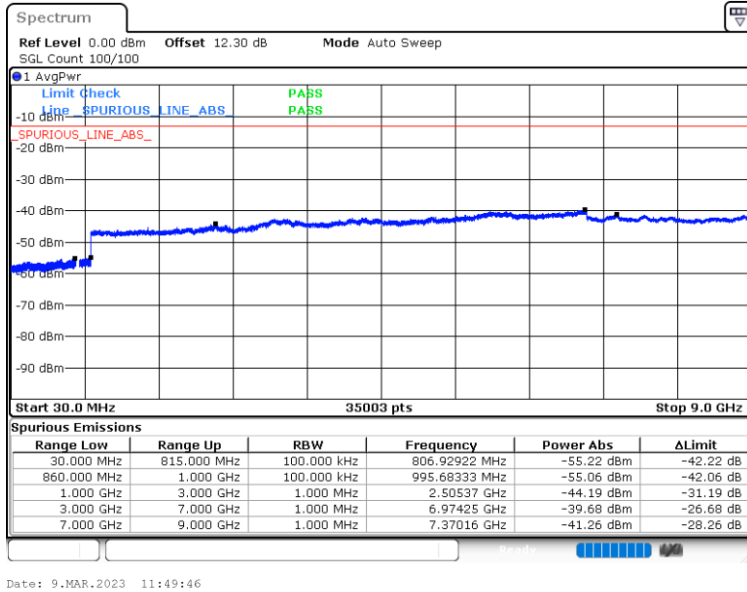
LTE Band 5 / 5MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK

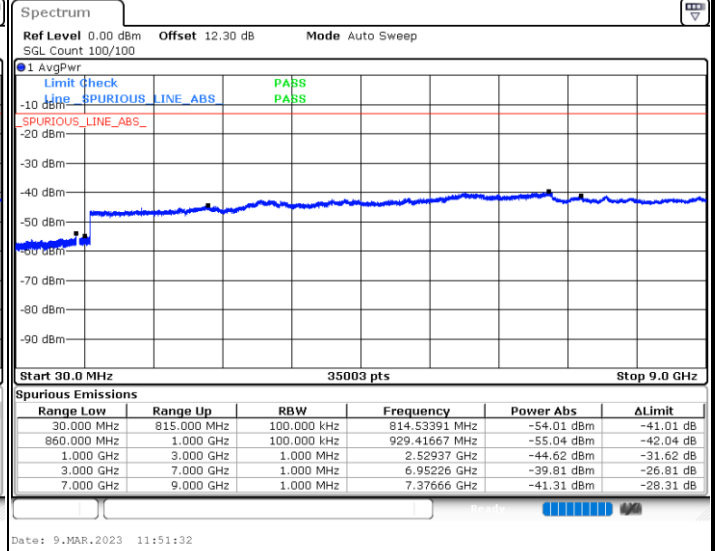
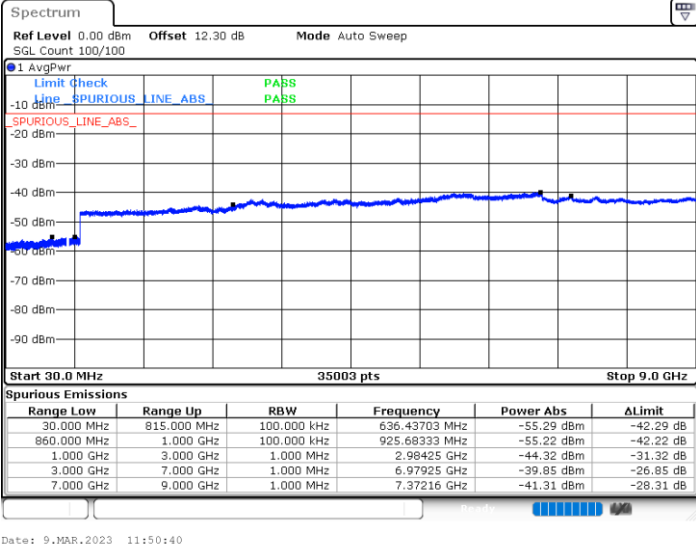




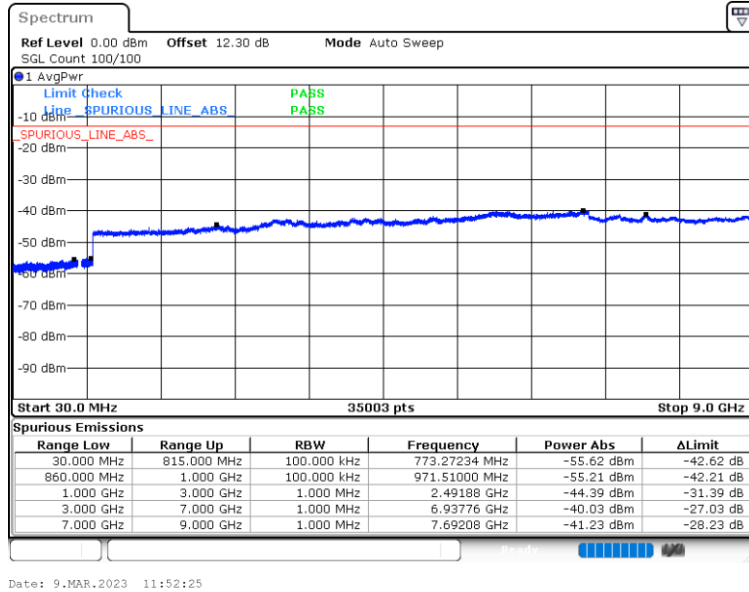
LTE Band 5 / 10MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK





### Frequency Stability

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
35	Normal Voltage	0.0090	PASS
30	Normal Voltage	0.0079	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0087	
0	Normal Voltage	0.0072	
20	Maximum Voltage	0.0096	
20	Normal Voltage	0.0047	
20	Battery End Point	0.0033	

**Note:** Normal Voltage = 3.87 V. ; Battery End Point (BEP) = 4.4 V. ; Maximum Voltage = 3.6 V.

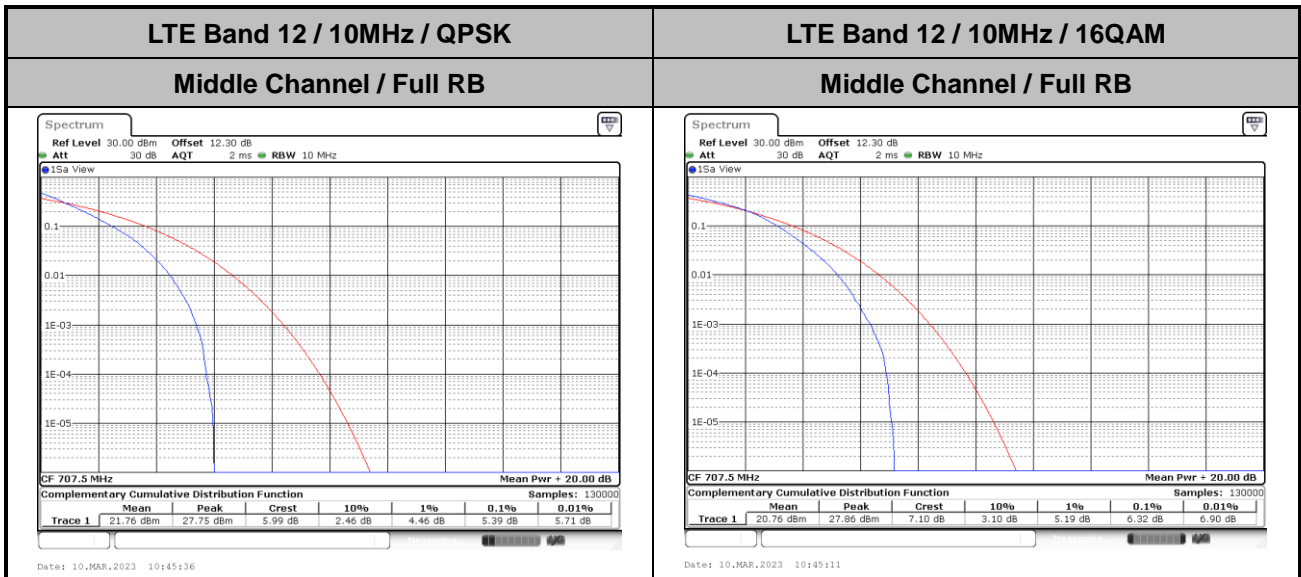




# LTE Band 12

## Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	27 RB0	Result
Middle CH	5.39	6.32	PASS





**26dB Bandwidth**

Mode	LTE Band 12 : 26dB BW(MHz)							
	1.4MHz		3MHz		5MHz		10MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.29	1.28	3.00	3.03	4.95	4.89	9.69	5.55