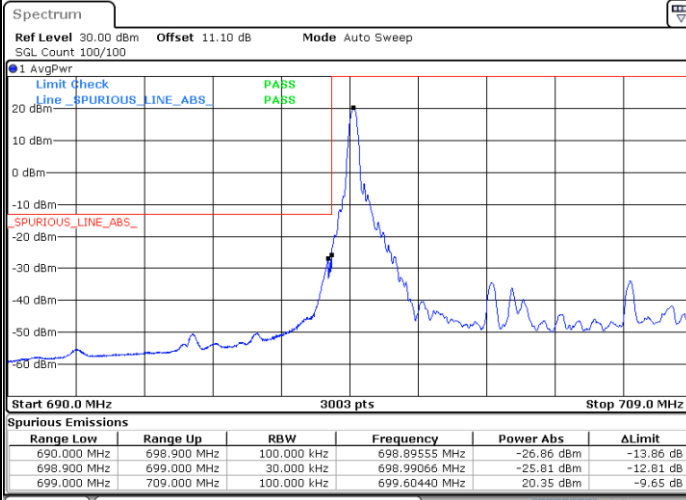




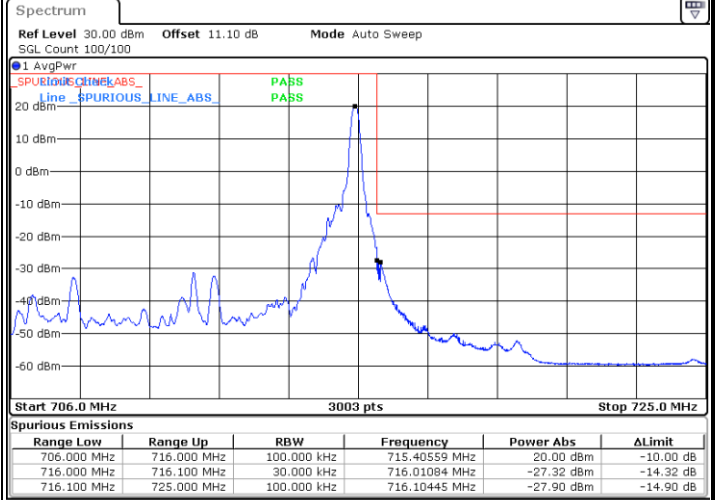
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



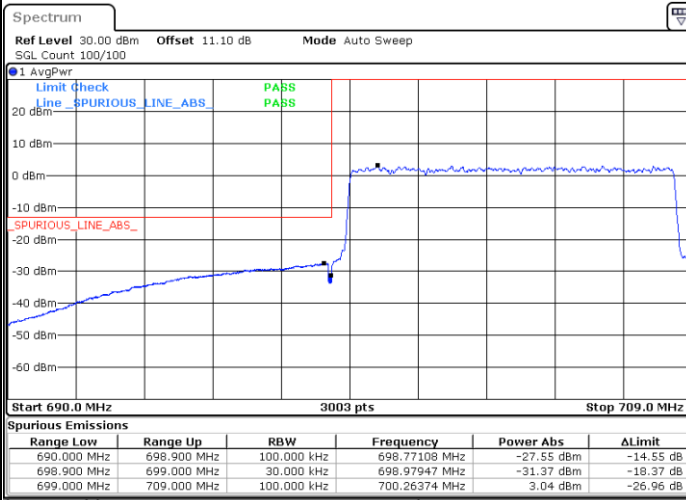
Date: 7.FEB.2022 14:47:45

Highest Band Edge / 1 RB



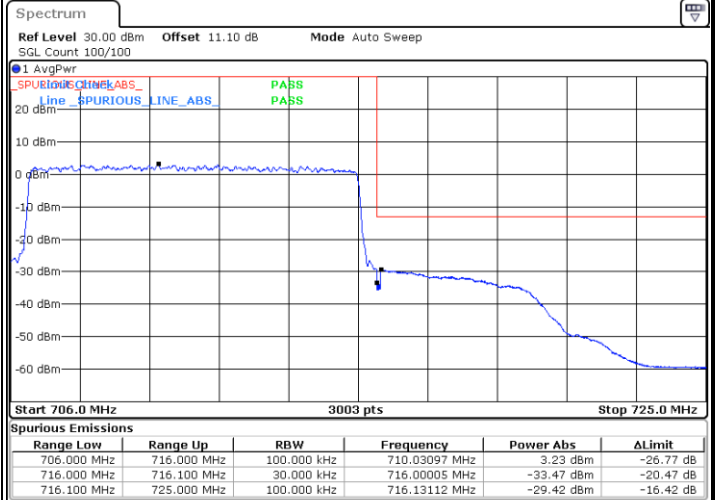
Date: 7.FEB.2022 14:59:44

Lowest Band Edge / Full RB



Date: 7.FEB.2022 14:51:05

Highest Band Edge / Full RB

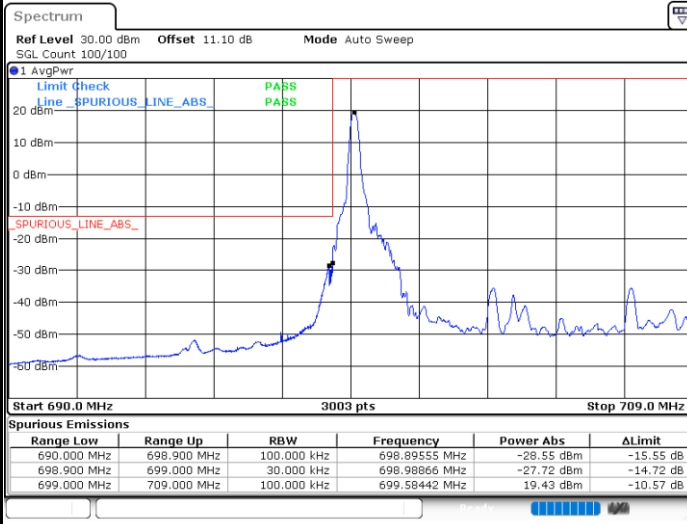


Date: 7.FEB.2022 15:03:05

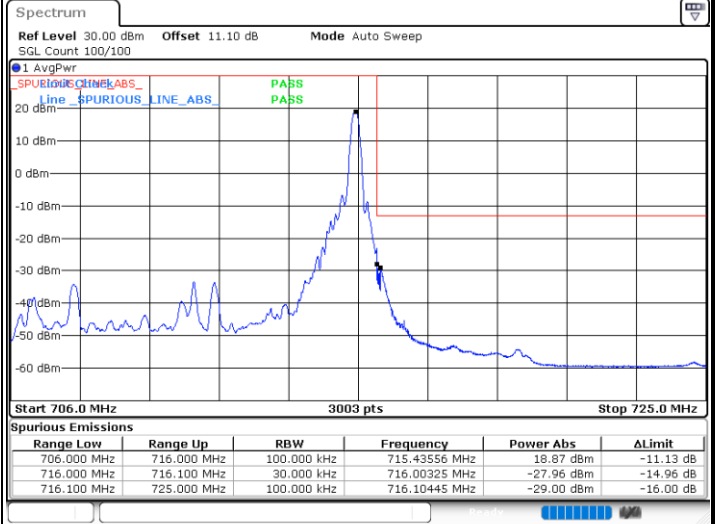


LTE Band 12 / 10MHz / 64QAM

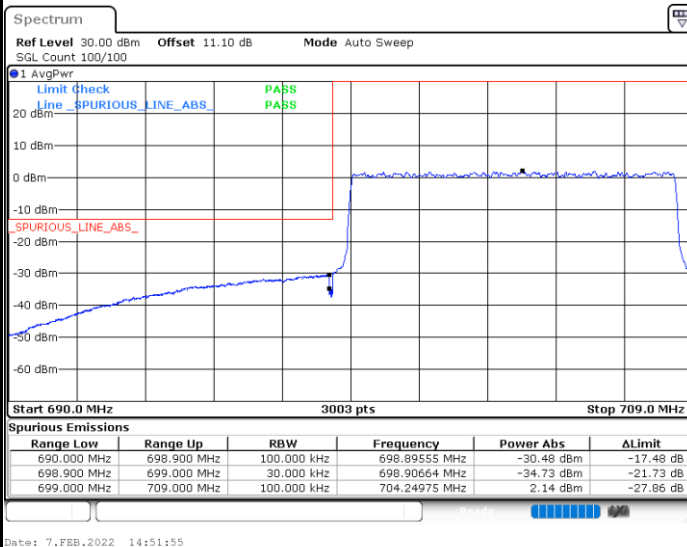
Lowest Band Edge / 1 RB



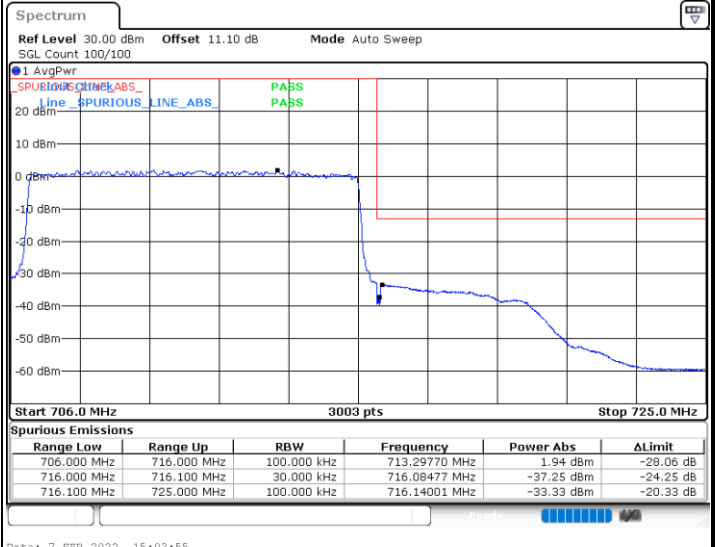
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



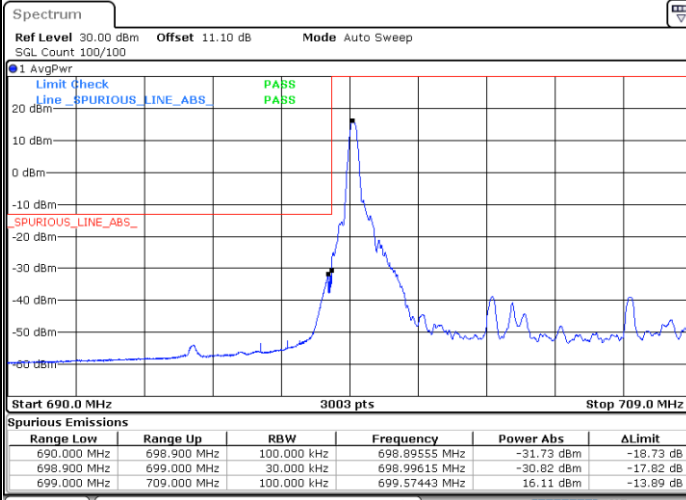
Highest Band Edge / Full RB





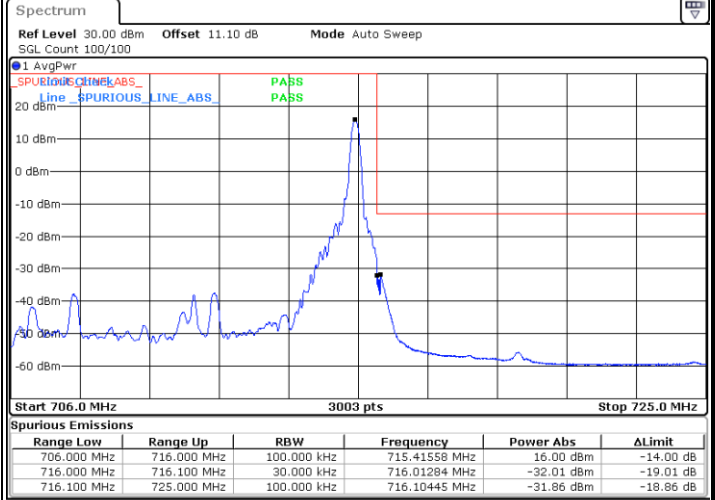
LTE Band 12 / 10MHz / 256QAM

Lowest Band Edge / 1 RB



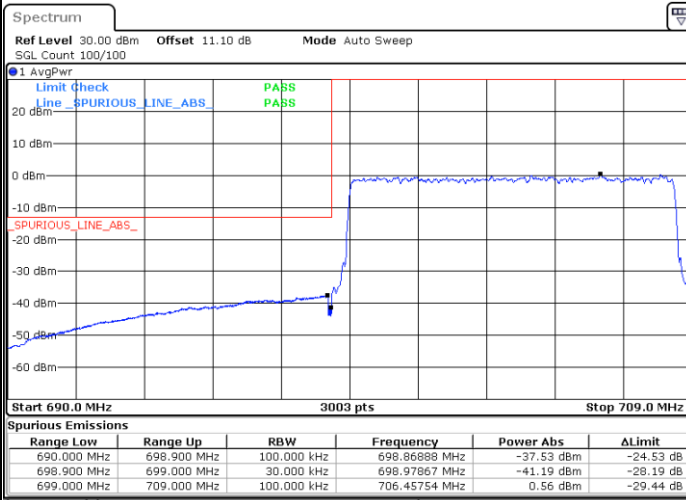
Date: 7.FEB.2022 14:49:25

Highest Band Edge / 1 RB



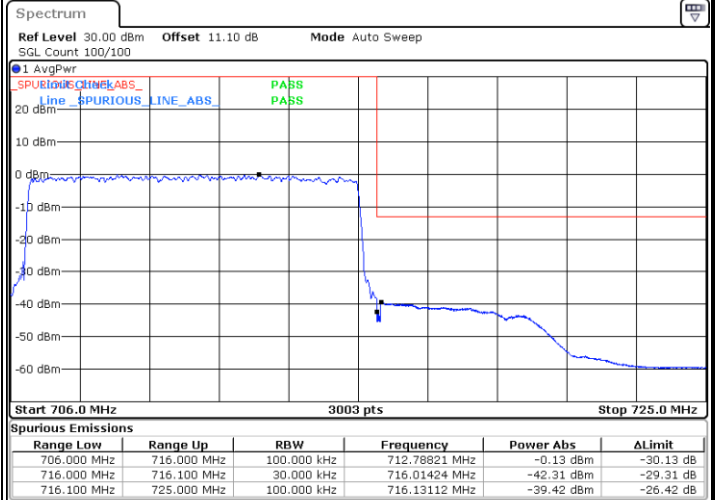
Date: 7.FEB.2022 15:01:24

Lowest Band Edge / Full RB



Date: 7.FEB.2022 14:52:45

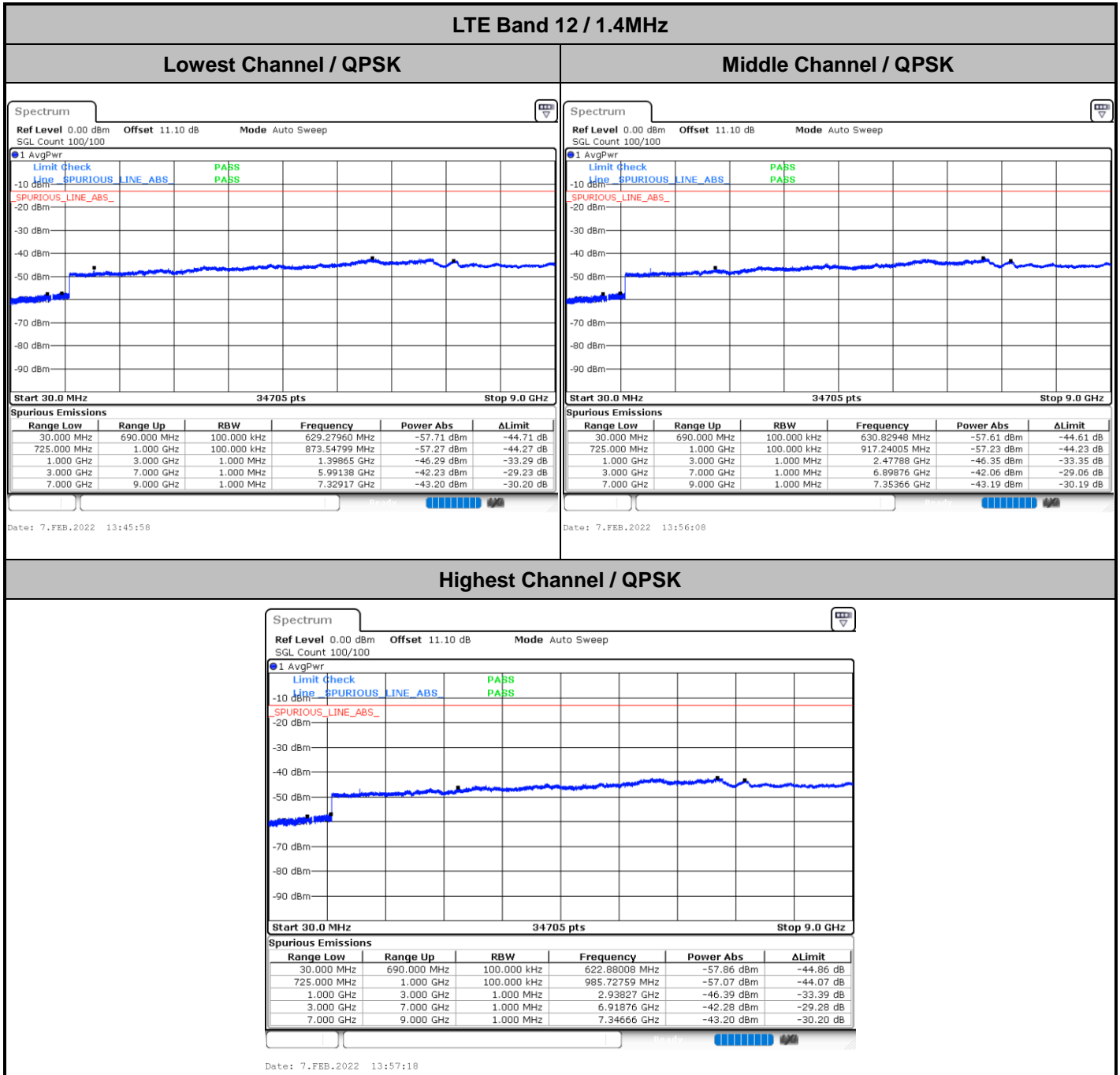
Highest Band Edge / Full RB



Date: 7.FEB.2022 15:04:45



# Conducted Spurious Emission

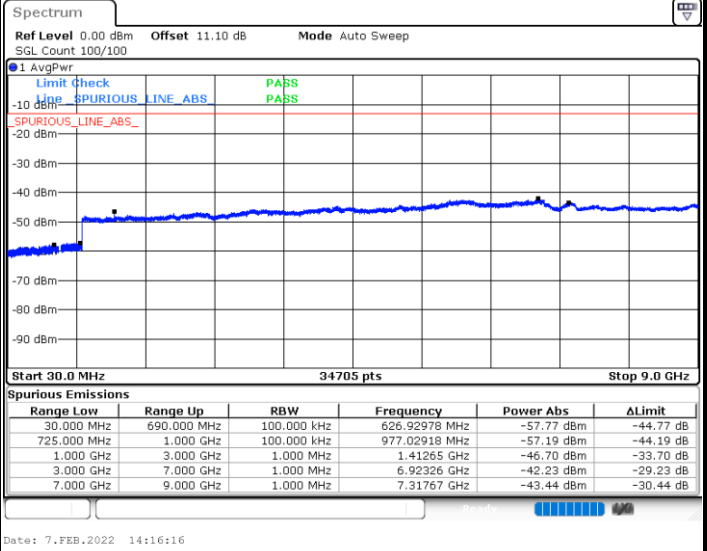
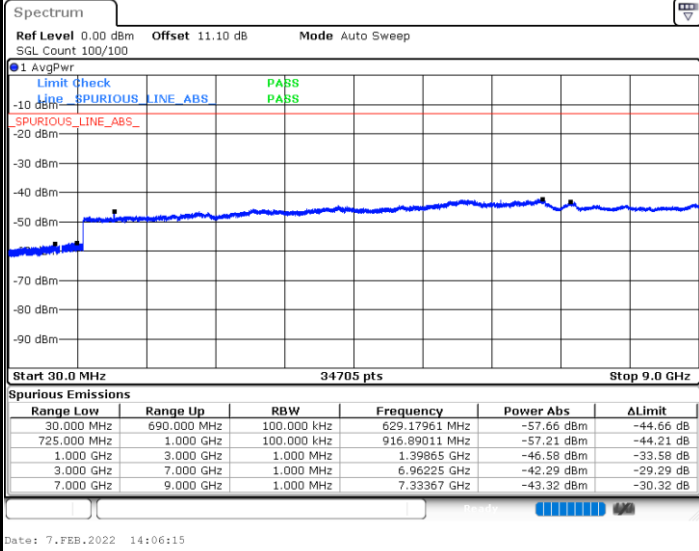




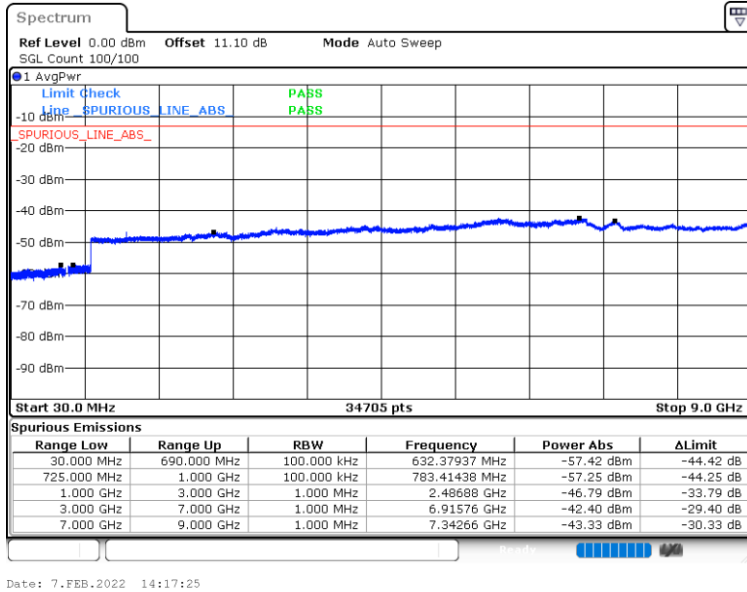
LTE Band 12 / 3MHz

Lowest Channel / QPSK

Middle Channel / QPSK



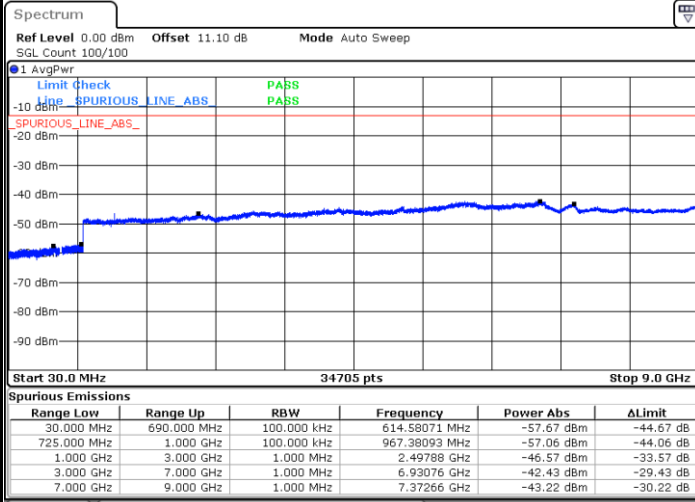
Highest Channel / QPSK





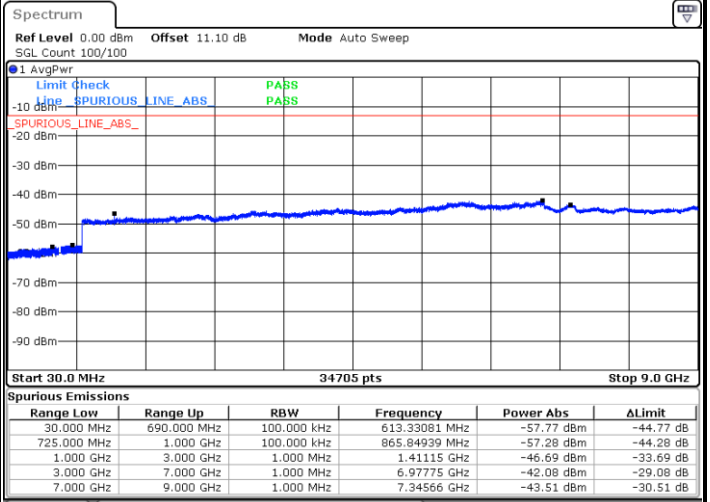
LTE Band 12 / 5MHz

Lowest Channel / QPSK



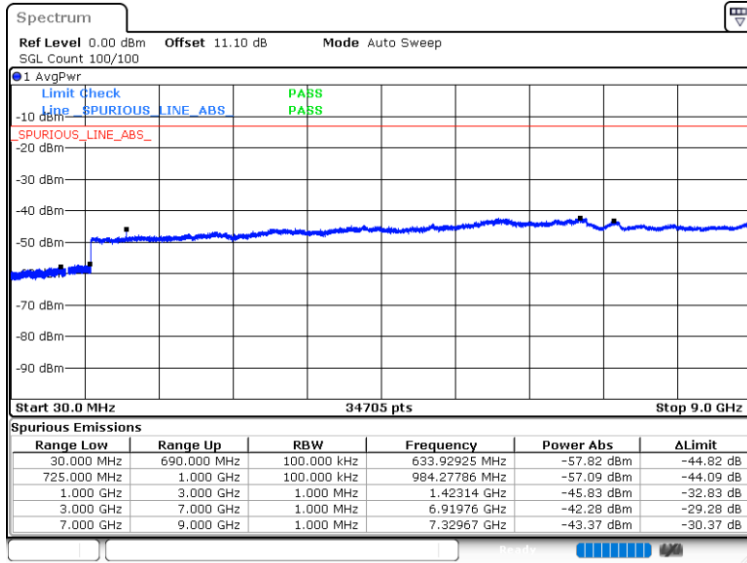
Date: 7.FEB.2022 14:26:34

Middle Channel / QPSK



Date: 7.FEB.2022 14:36:33

Highest Channel / QPSK



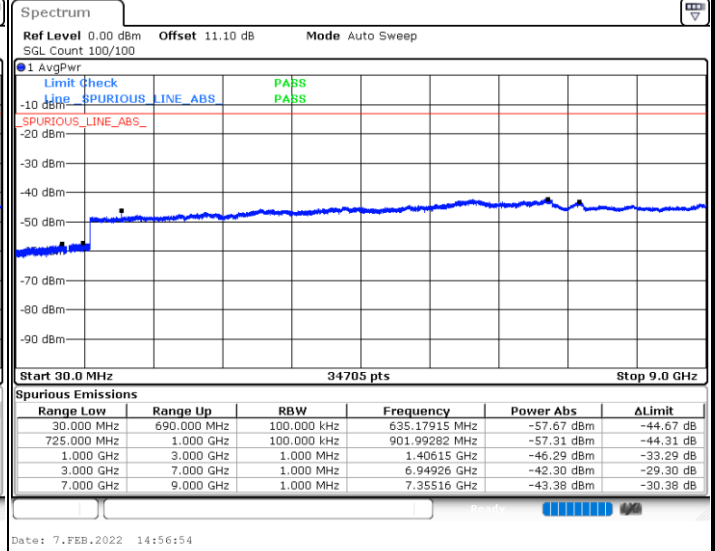
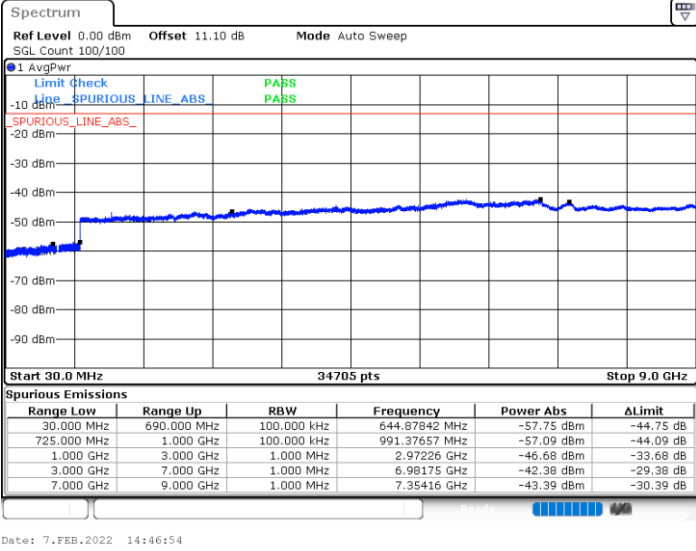
Date: 7.FEB.2022 14:37:43



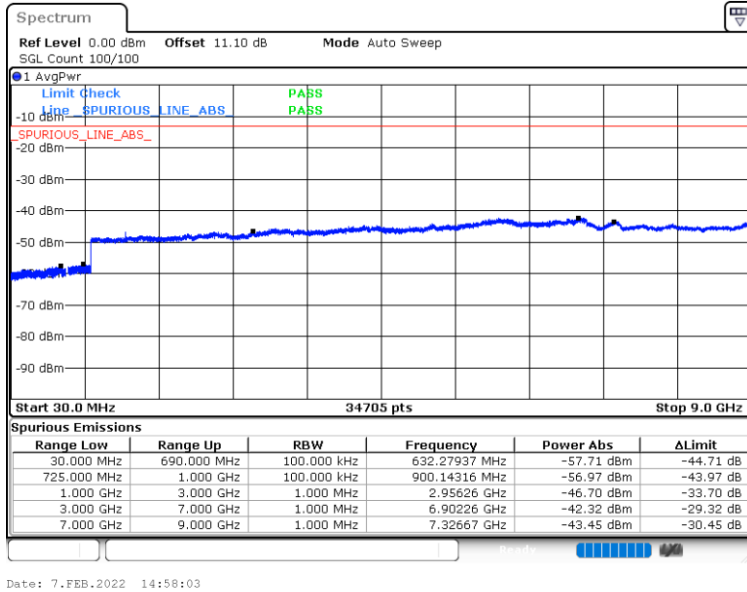
LTE Band 12 / 10MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK





### 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	0.0054	PASS
40	Normal Voltage	0.0037	
30	Normal Voltage	0.0007	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0058	
0	Normal Voltage	0.0165	
-10	Normal Voltage	0.0180	
-20	Normal Voltage	0.0143	
-30	Normal Voltage	0.0167	
20	Maximum Voltage	0.0126	
20	Normal Voltage	0.0141	
20	Battery End Point	0.0037	

**Note:**

- 1. Normal Voltage =4.2 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.3 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.





## LTE Band 13

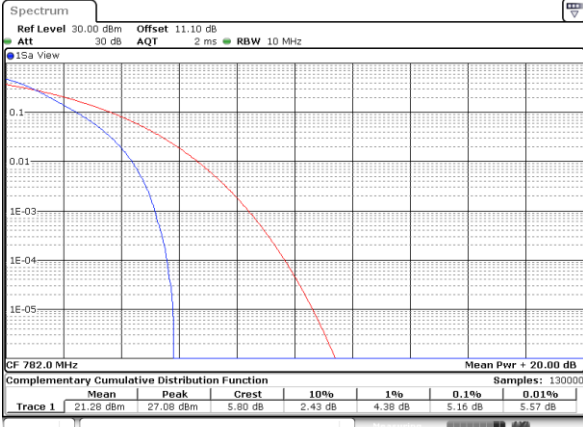
### Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	5.16	6.17	6.43	6.29	PASS



LTE Band 13 / 10MHz / QPSK

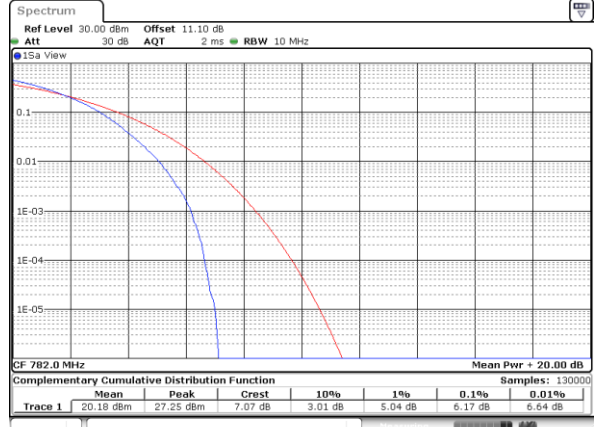
Middle Channel / Full RB



Date: 7.FEB.2022 16:03:56

LTE Band 13 / 10MHz / 16QAM

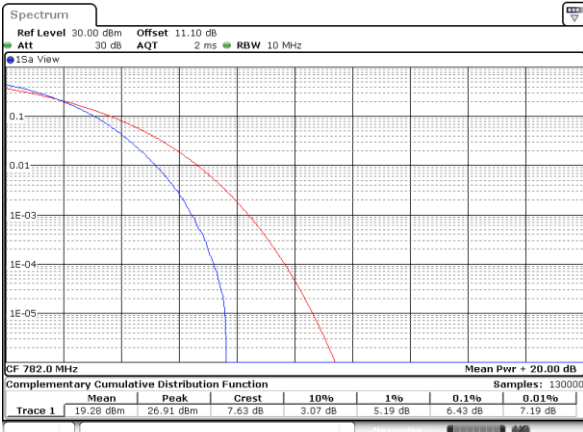
Middle Channel / Full RB



Date: 7.FEB.2022 16:03:35

LTE Band 13 / 10MHz / 64QAM

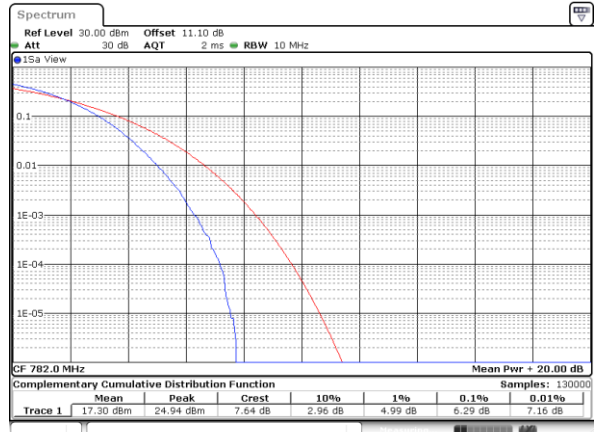
Middle Channel / Full RB



Date: 7.FEB.2022 16:03:13

LTE Band 13 / 10MHz / 256QAM

Middle Channel / Full RB



Date: 7.FEB.2022 16:16:09



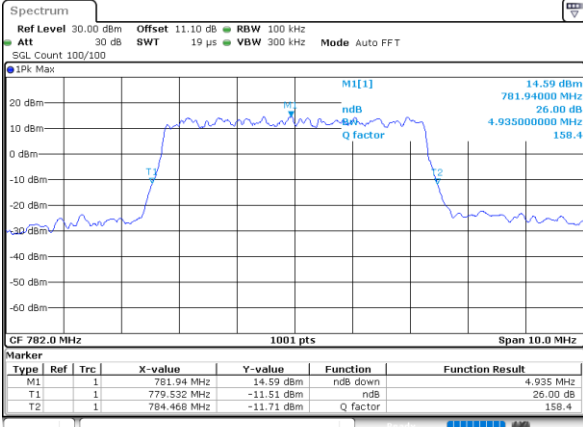
**26dB Bandwidth**

Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	4.94	4.78	9.83	9.87	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	-	-	-	-	4.87	4.93	9.79	9.75	-	-	-	-



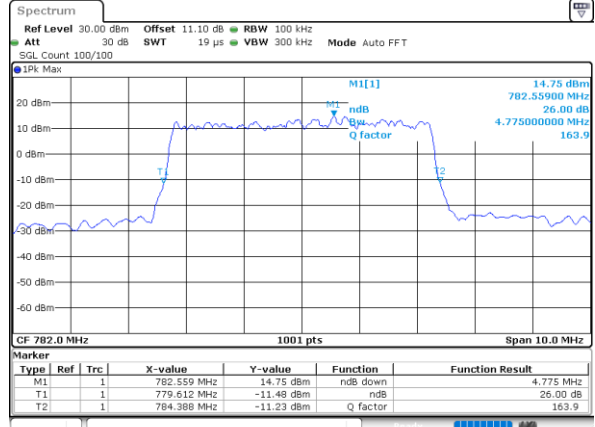
LTE Band 13

Middle Channel / 5MHz / QPSK



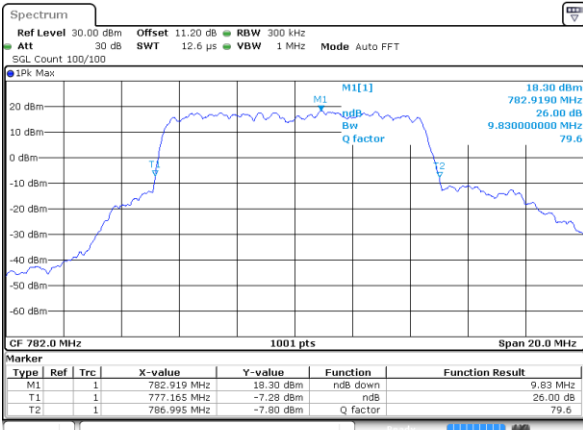
Date: 7.FEB.2022 15:42:18

Middle Channel / 5MHz / 16QAM



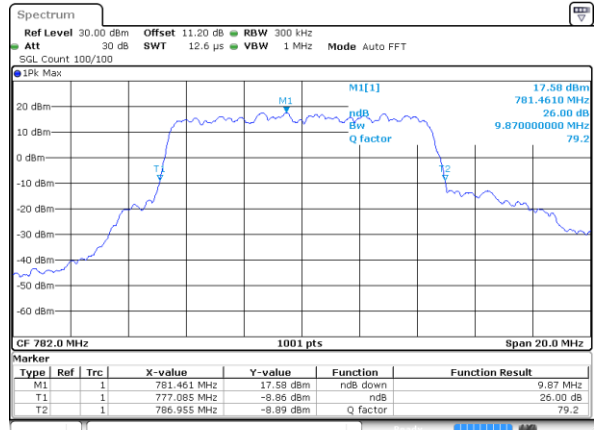
Date: 7.FEB.2022 15:42:58

Middle Channel / 10MHz / QPSK



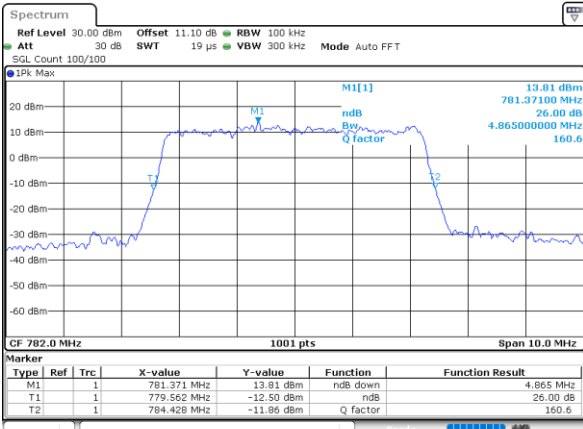
Date: 24 MAR 2021 00:06:31

Middle Channel / 10MHz / 16QAM



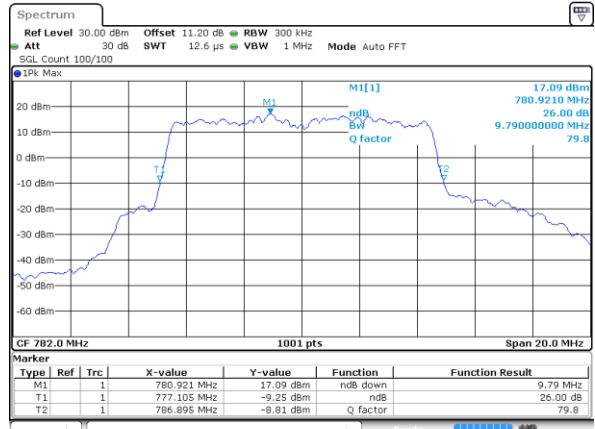
Date: 24 MAR 2021 00:06:08

Middle Channel / 5MHz / 64QAM



Date: 7.FEB.2022 15:50:11

Middle Channel / 10MHz / 64QAM



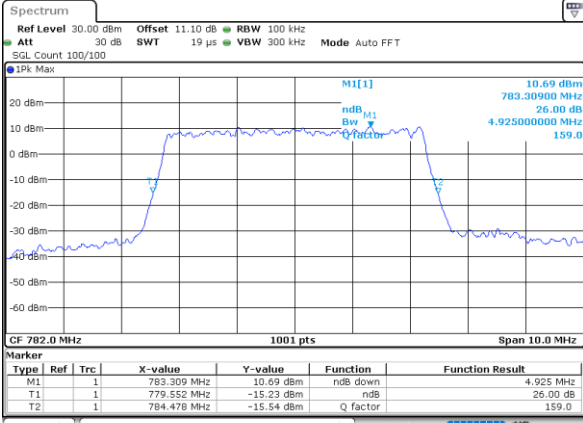
Date: 24 MAR 2021 00:19:18



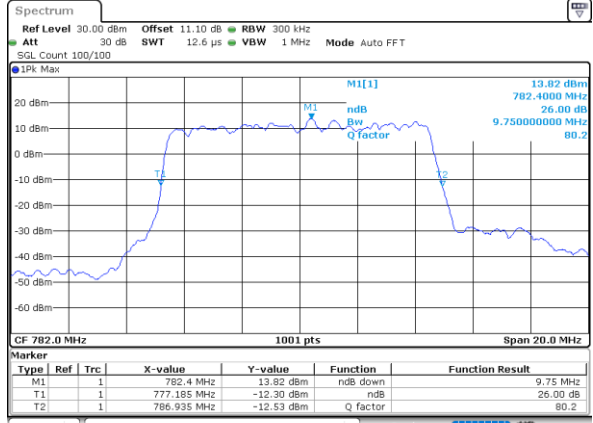
LTE Band 13

Middle Channel / 5MHz / 256QAM

Middle Channel / 10MHz / 256QAM



Date: 7.FEB.2022 16:10:14



Date: 7.FEB.2022 16:13:18



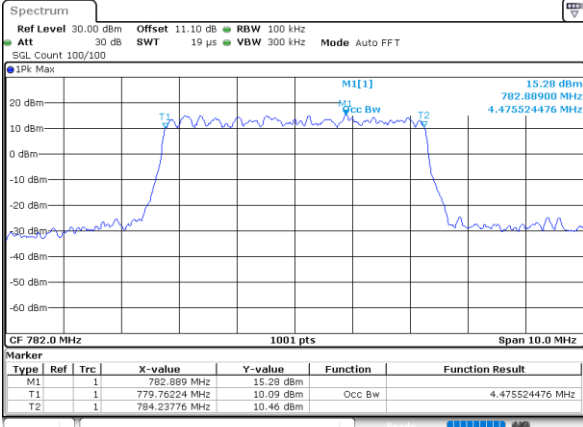
**Occupied Bandwidth**

Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	4.48	4.48	9.03	8.99	-	-	-	-
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	-	-	-	-	4.49	4.46	8.97	9.03	-	-	-	-



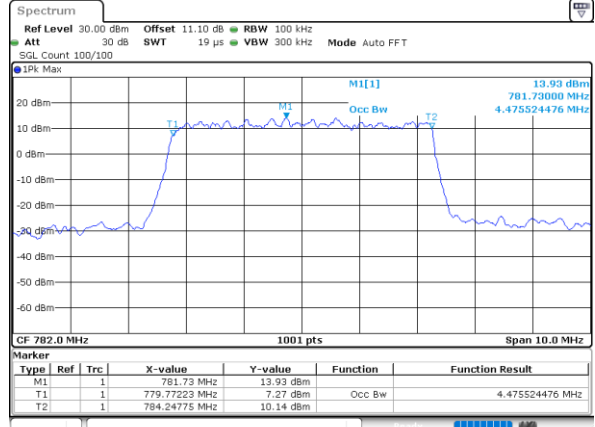
LTE Band 13

Middle Channel / 5MHz / QPSK



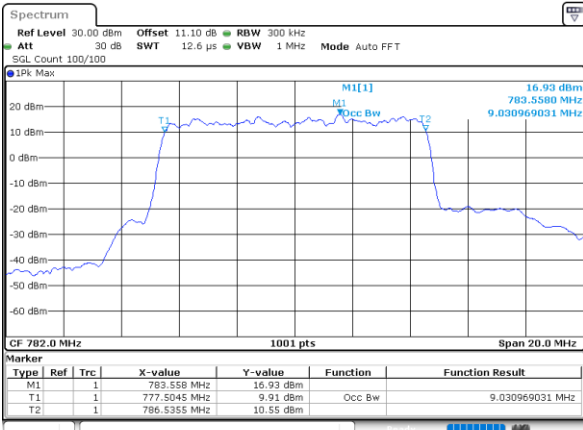
Date: 7.FEB.2022 15:43:39

Middle Channel / 5MHz / 16QAM



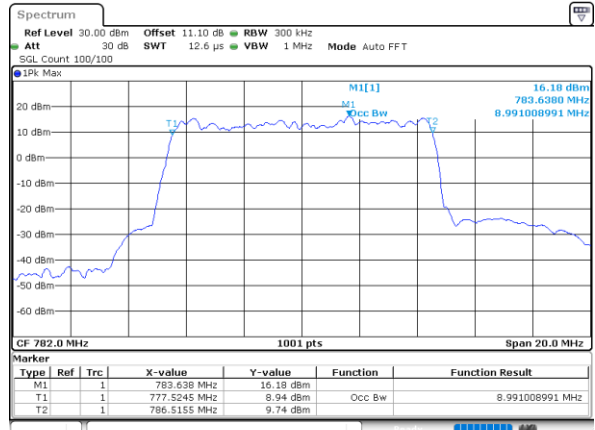
Date: 7.FEB.2022 15:43:18

Middle Channel / 10MHz / QPSK



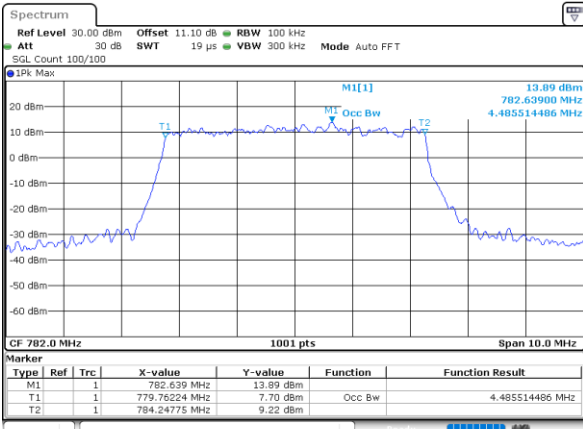
Date: 7.FEB.2022 15:52:34

Middle Channel / 10MHz / 16QAM



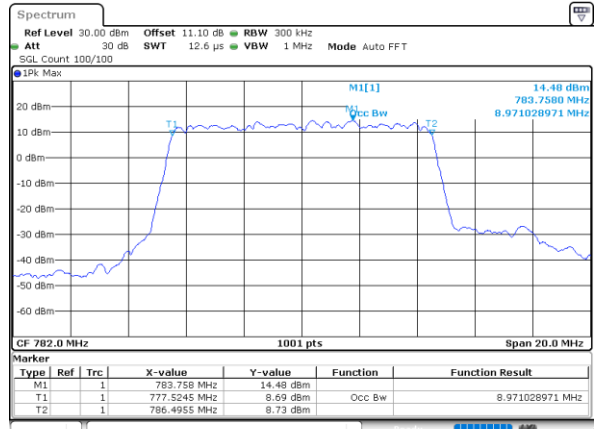
Date: 7.FEB.2022 15:52:54

Middle Channel / 5MHz / 64QAM



Date: 7.FEB.2022 15:50:31

Middle Channel / 10MHz / 64QAM



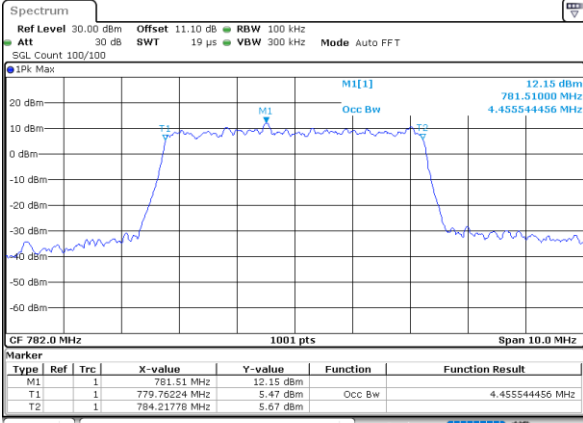
Date: 7.FEB.2022 16:00:02



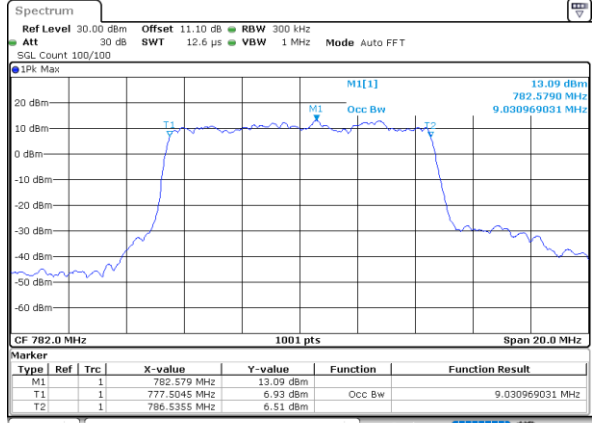
LTE Band 13

Middle Channel / 5MHz / 256QAM

Middle Channel / 10MHz / 256QAM



Date: 7.FEB.2022 16:10:34



Date: 7.FEB.2022 16:12:58



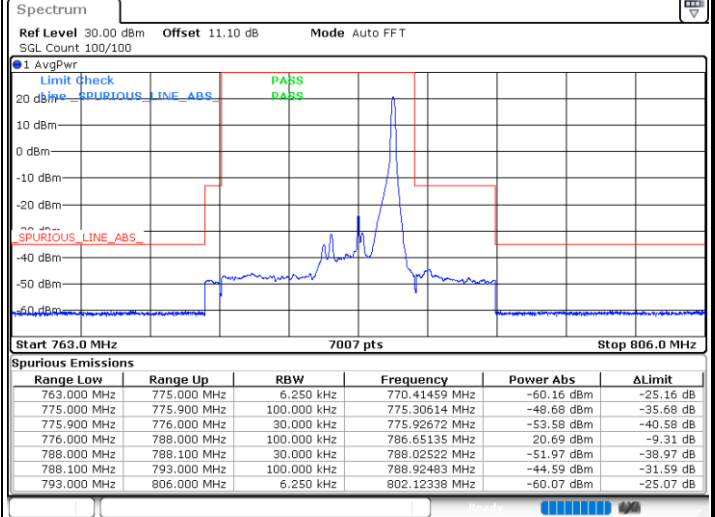
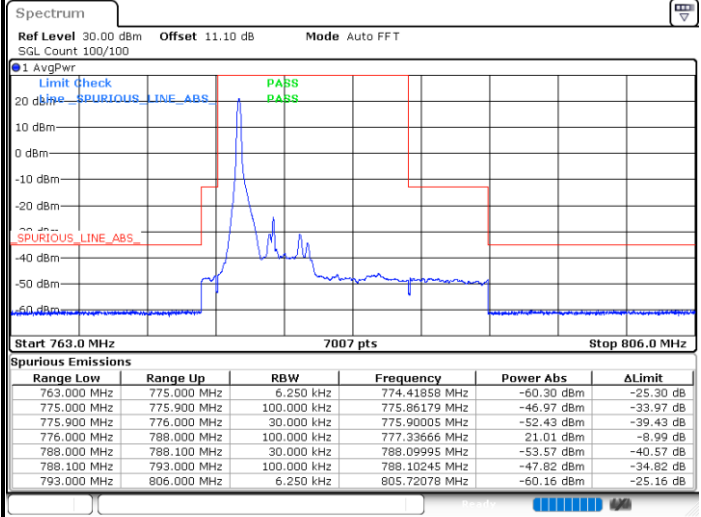


# Conducted Band Edge

## LTE Band 13 / 5MHz / QPSK

### Lowest Band Edge / 1 RB

### Highest Band Edge / 1 RB

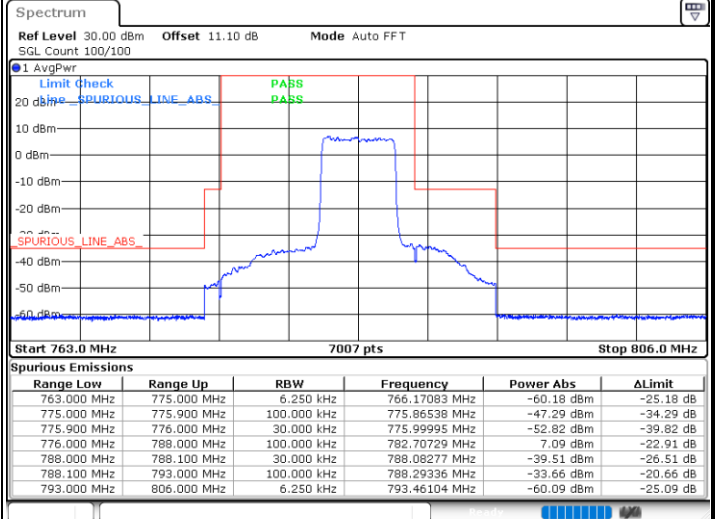
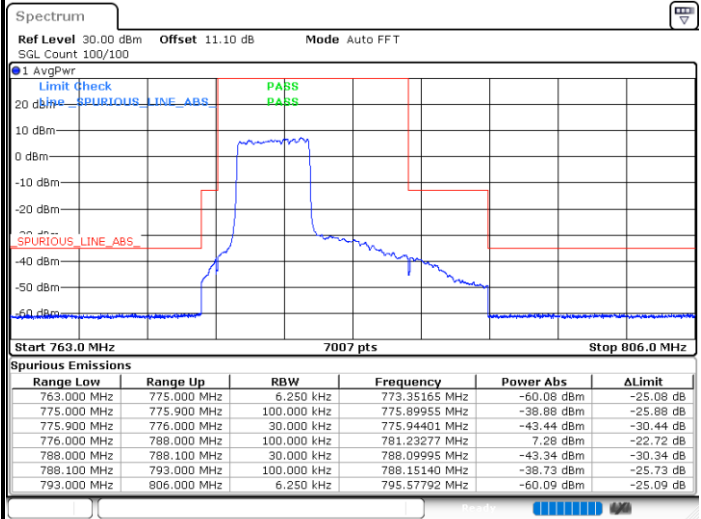


Date: 7.FEB.2022 15:39:57

Date: 7.FEB.2022 15:46:59

### Lowest Band Edge / Full RB

### Highest Band Edge / Full RB



Date: 7.FEB.2022 15:37:26

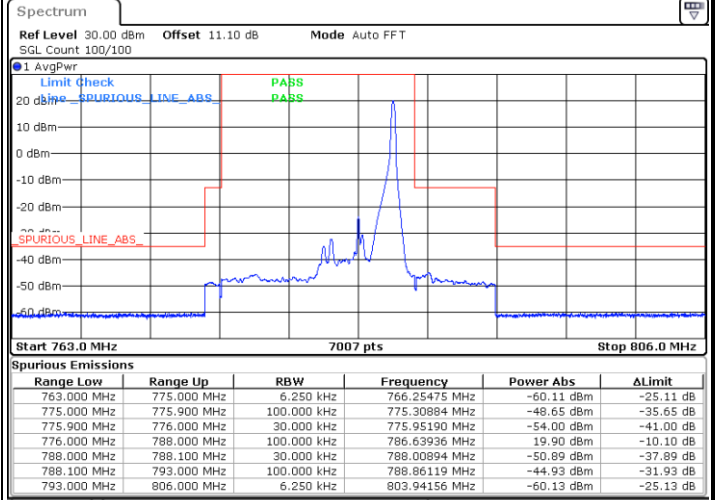
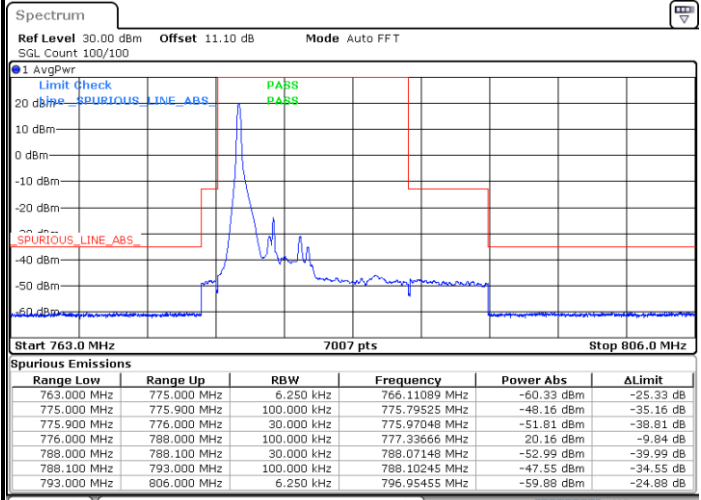
Date: 7.FEB.2022 15:44:28



LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

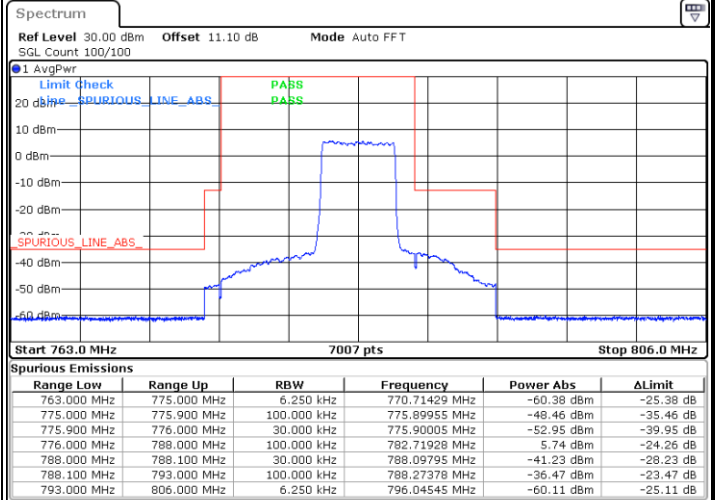
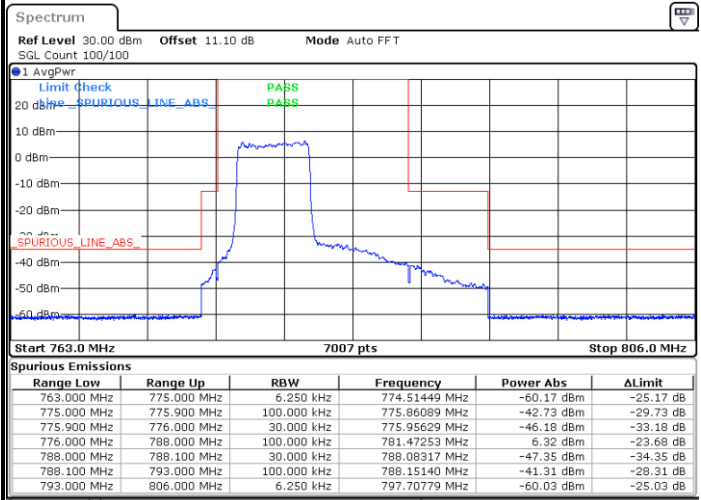


Date: 7.FEB.2022 15:39:07

Date: 7.FEB.2022 15:46:09

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 7.FEB.2022 15:38:16

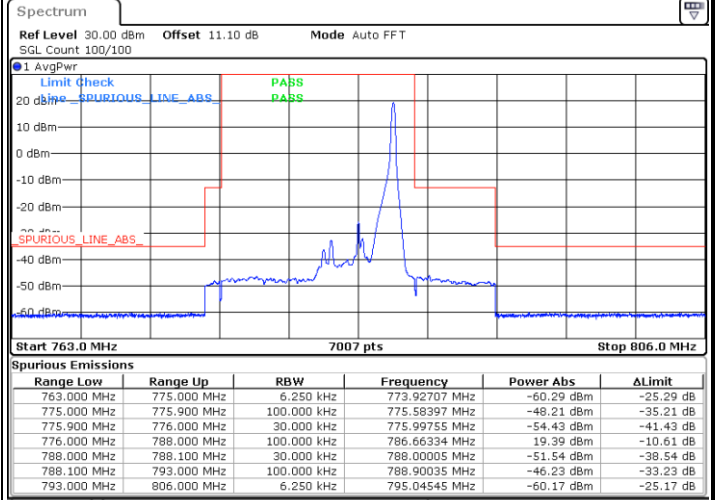
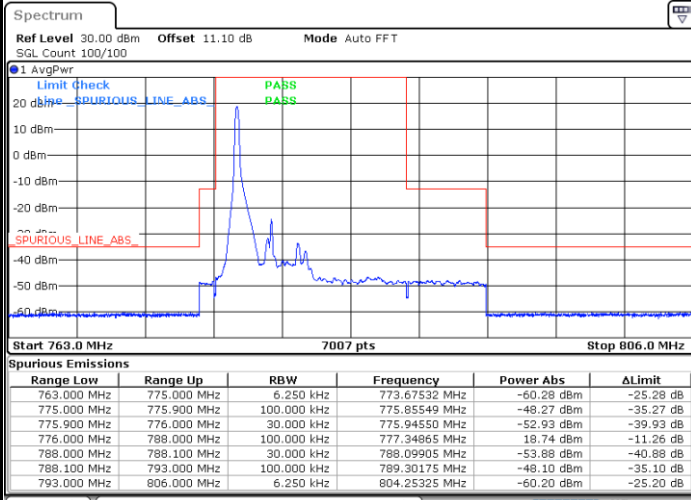
Date: 7.FEB.2022 15:45:18



LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

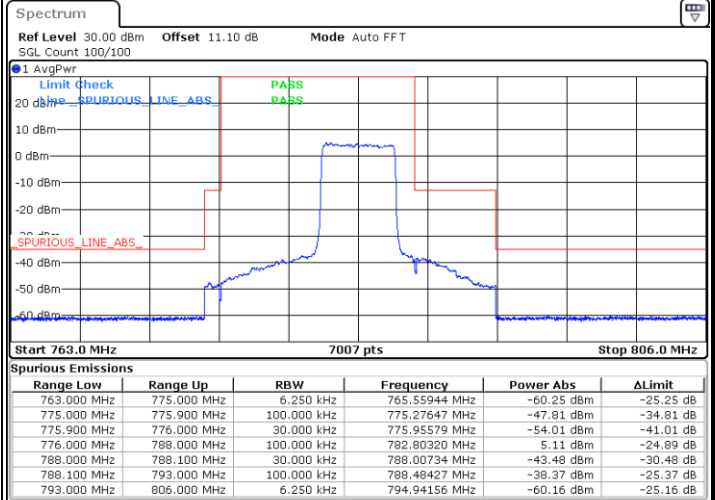
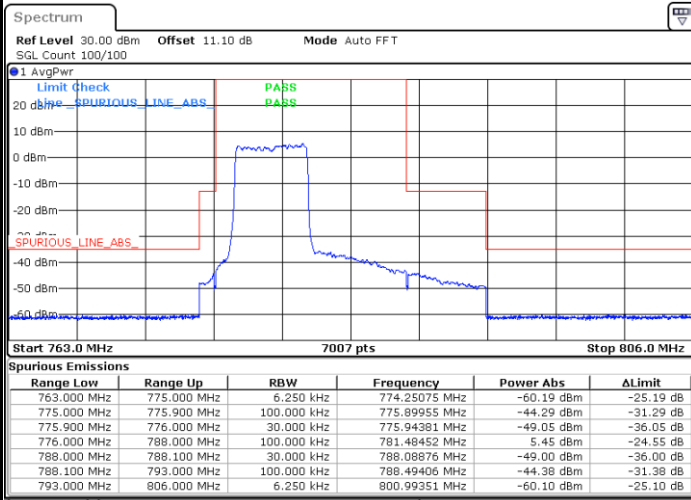


Date: 7.FEB.2022 15:49:50

Date: 7.FEB.2022 15:52:11

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 7.FEB.2022 15:48:59

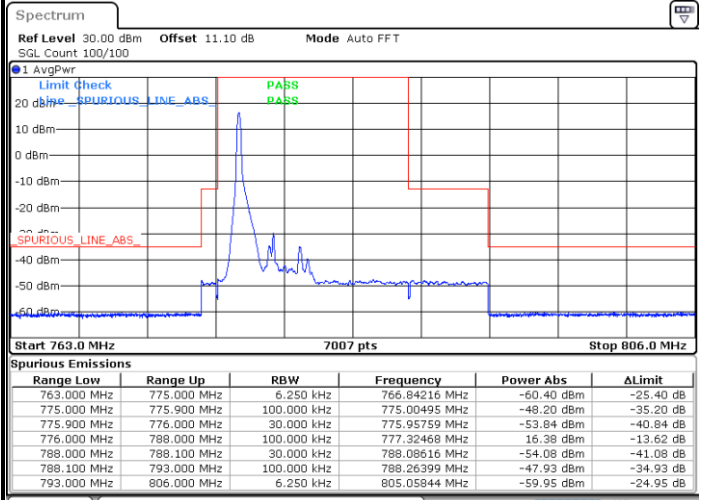
Date: 7.FEB.2022 15:51:21



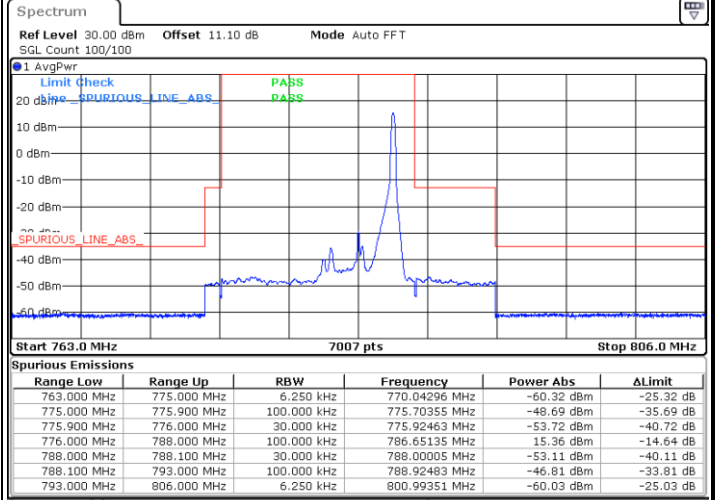
LTE Band 13 / 5MHz / 256QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



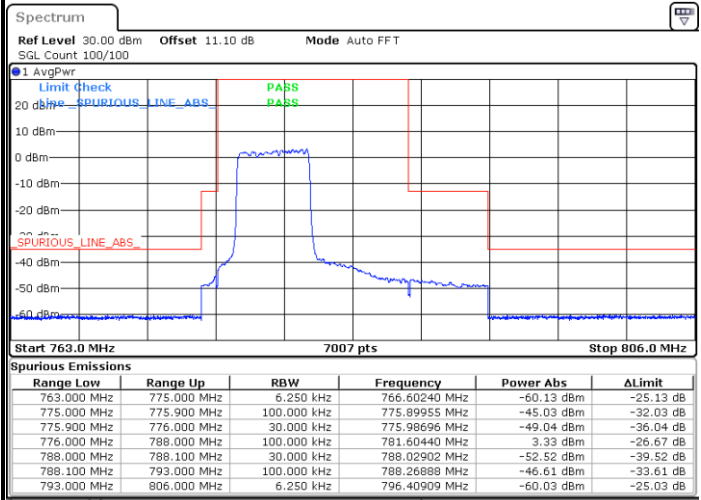
Date: 7.FEB.2022 16:17:21



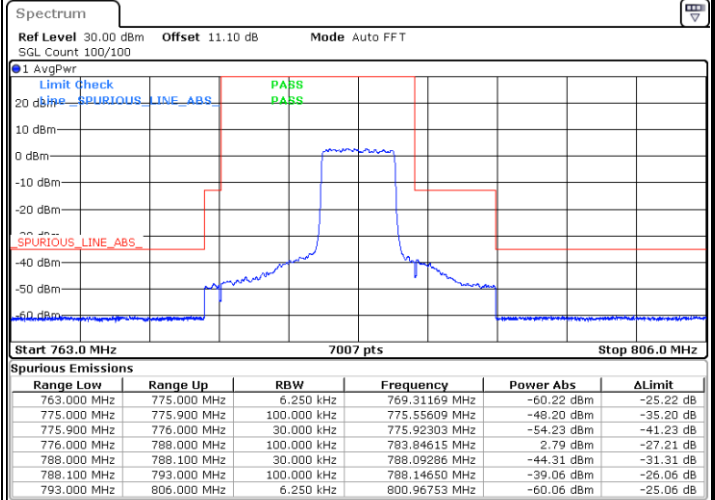
Date: 7.FEB.2022 16:18:09

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 7.FEB.2022 16:07:43



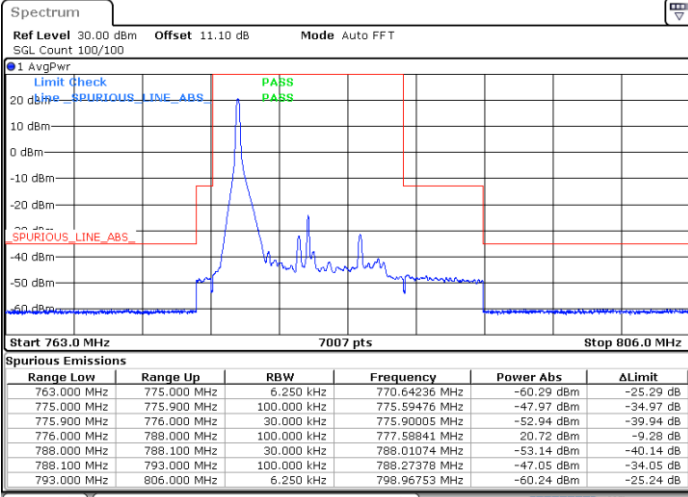
Date: 7.FEB.2022 16:18:56



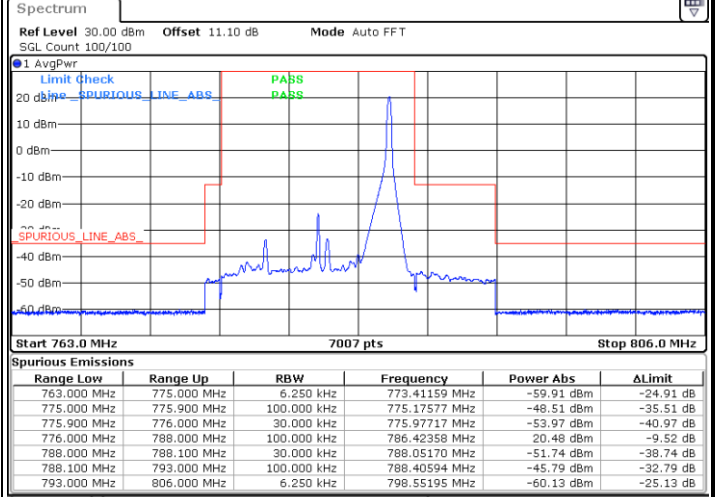
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

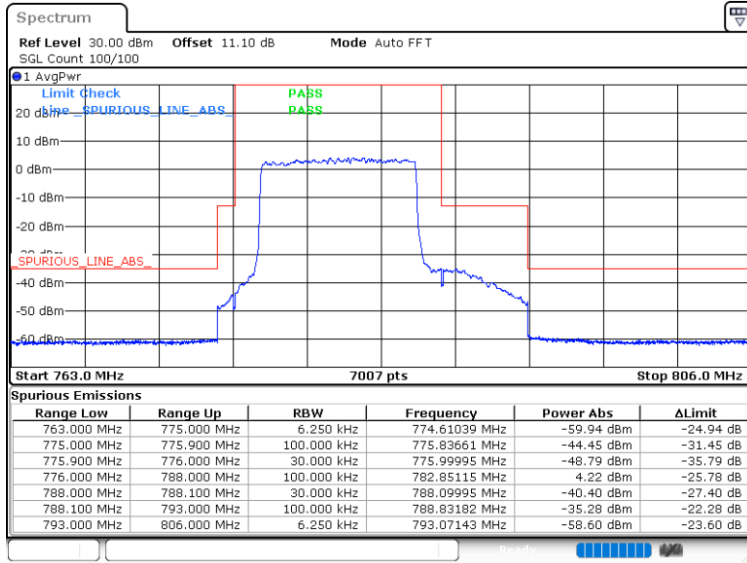


Date: 7.FEB.2022 15:56:53



Date: 7.FEB.2022 15:57:43

Band Edge / Full RB



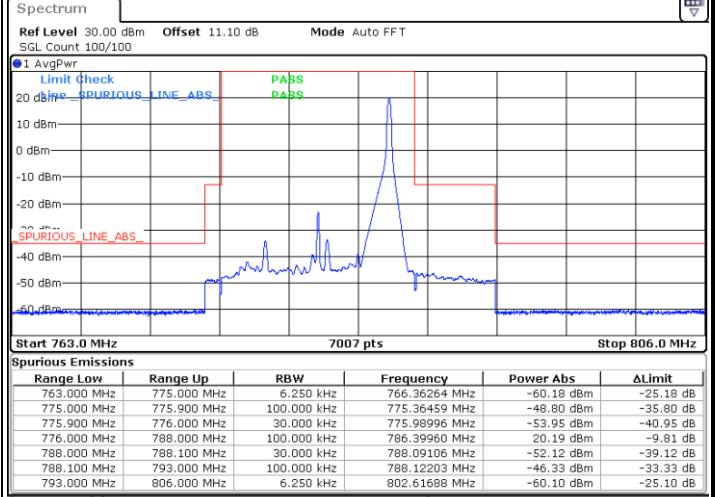
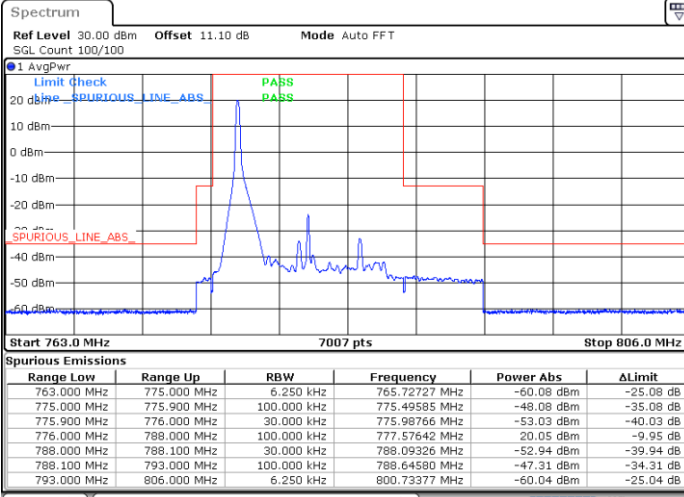
Date: 7.FEB.2022 15:54:24



LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

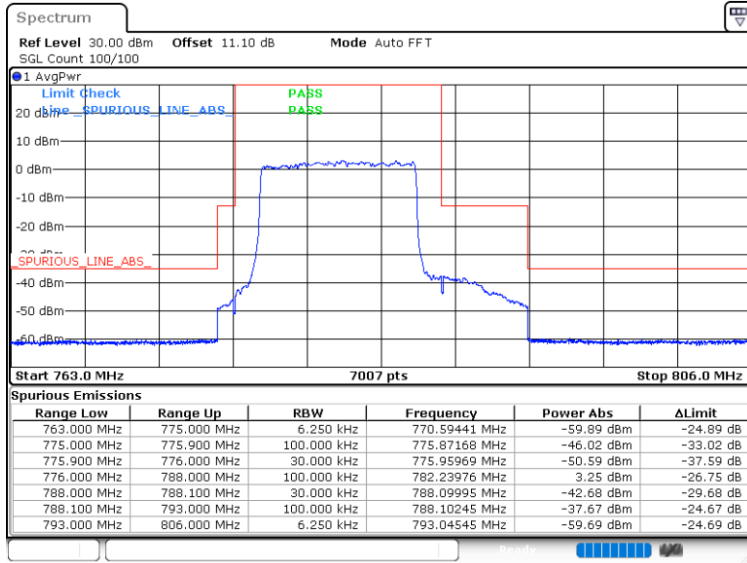
Highest Band Edge / 1 RB



Date: 7.FEB.2022 15:56:04

Date: 7.FEB.2022 15:58:32

Band Edge / Full RB



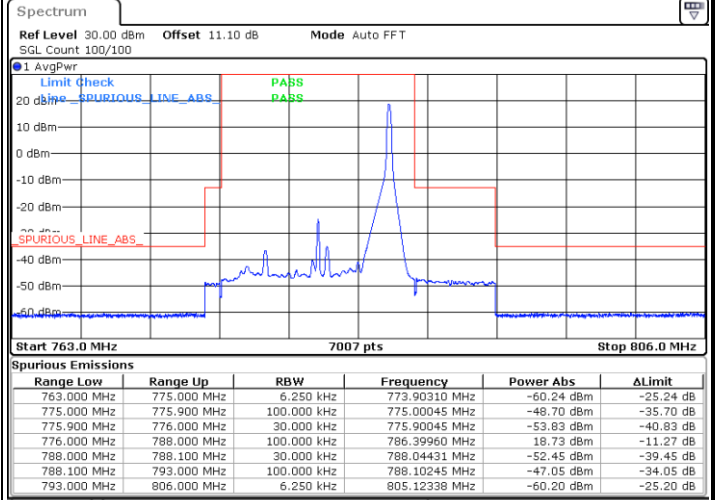
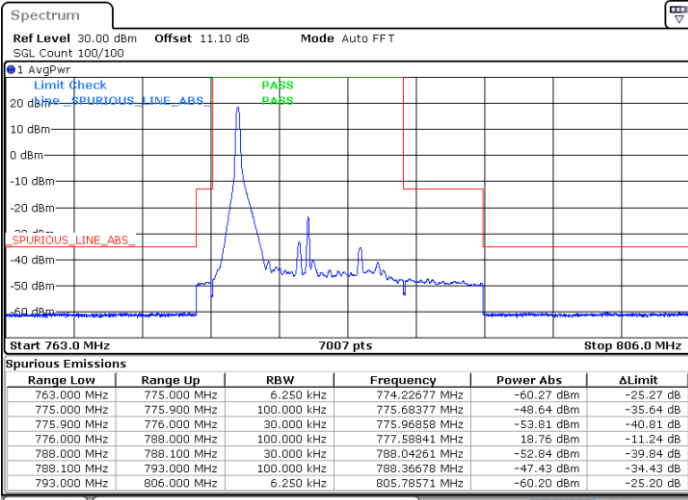
Date: 7.FEB.2022 15:55:14



LTE Band 13 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

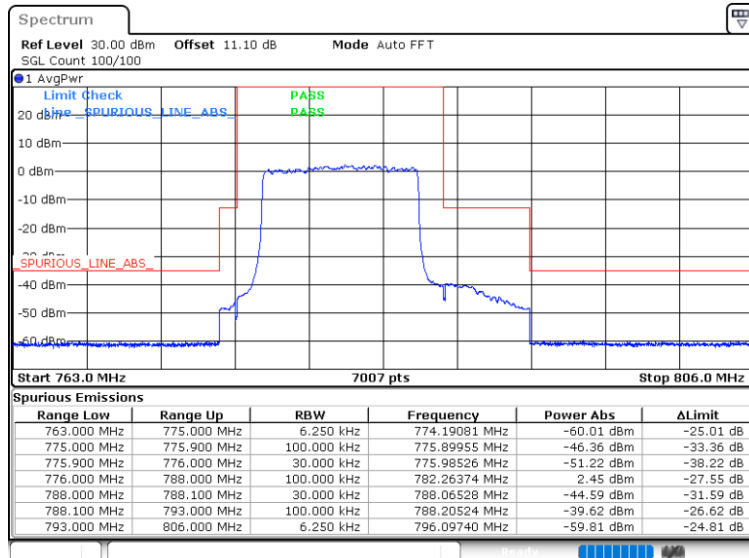
Highest Band Edge / 1 RB



Date: 7.FEB.2022 16:02:02

Date: 7.FEB.2022 16:02:51

Band Edge / Full RB



Date: 7.FEB.2022 16:01:12

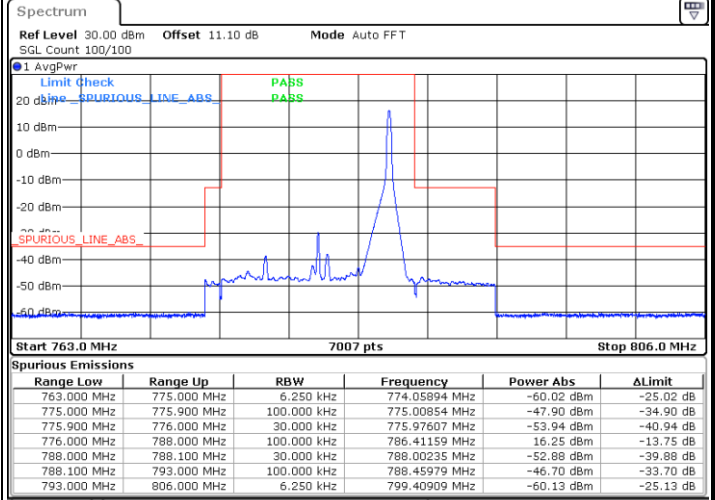
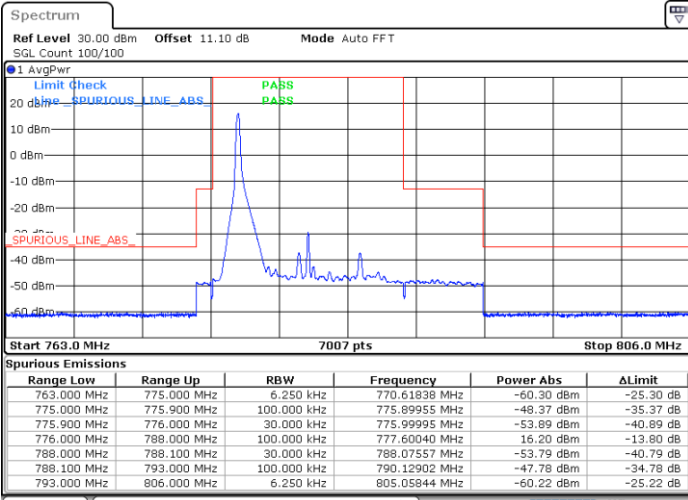




LTE Band 13 / 10MHz / 256QAM

Lowest Band Edge / 1 RB

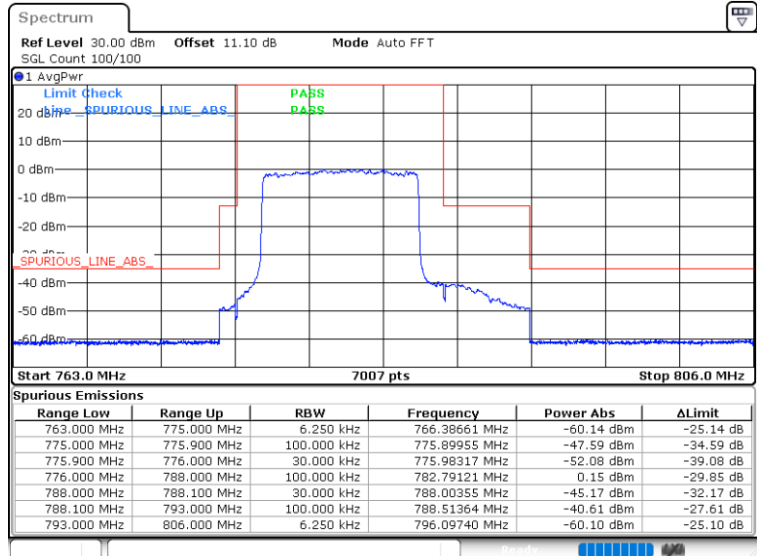
Highest Band Edge / 1 RB



Date: 7.FEB.2022 16:14:57

Date: 7.FEB.2022 16:15:47

Band Edge / Full RB

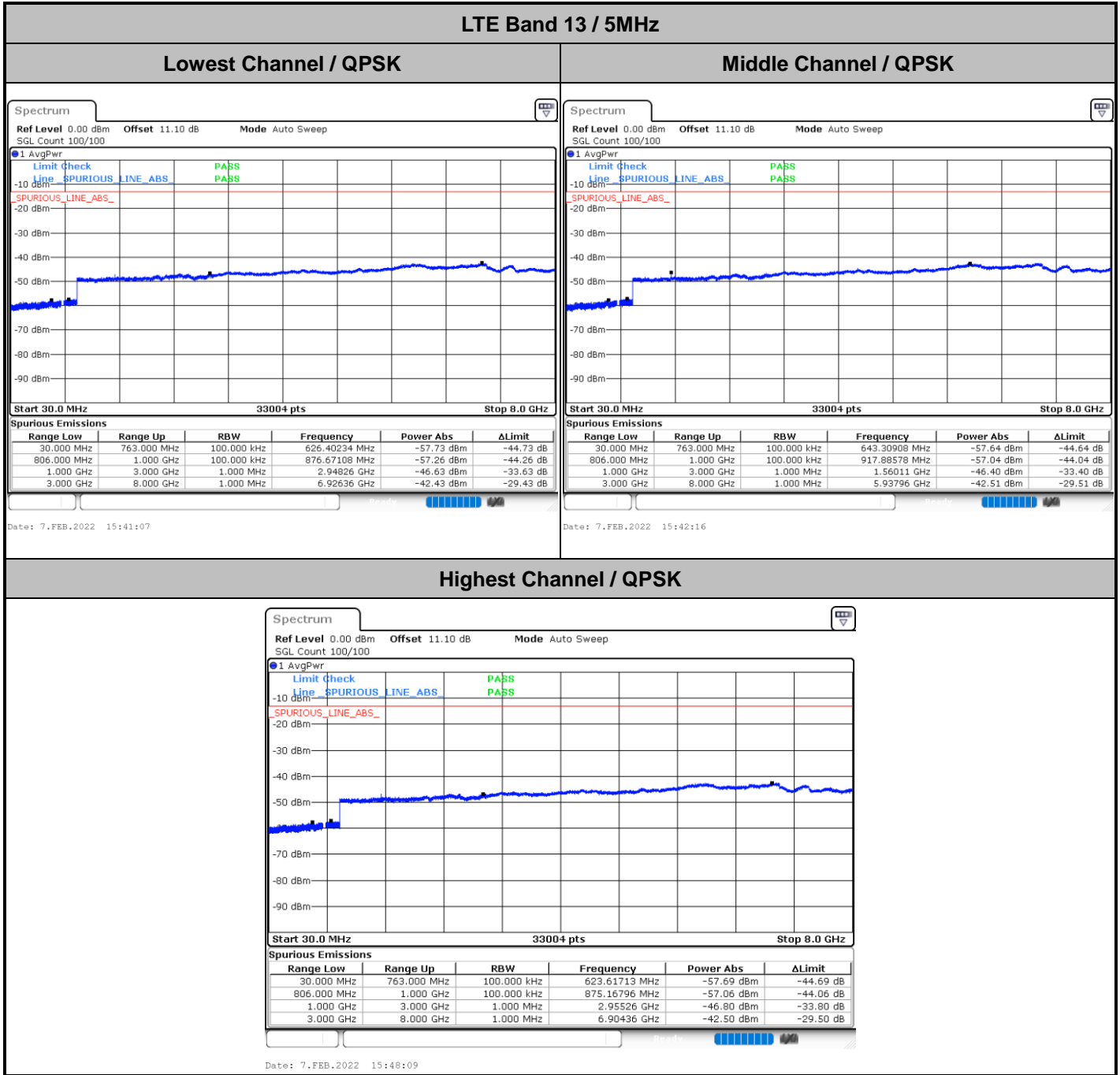


Date: 7.FEB.2022 16:14:08





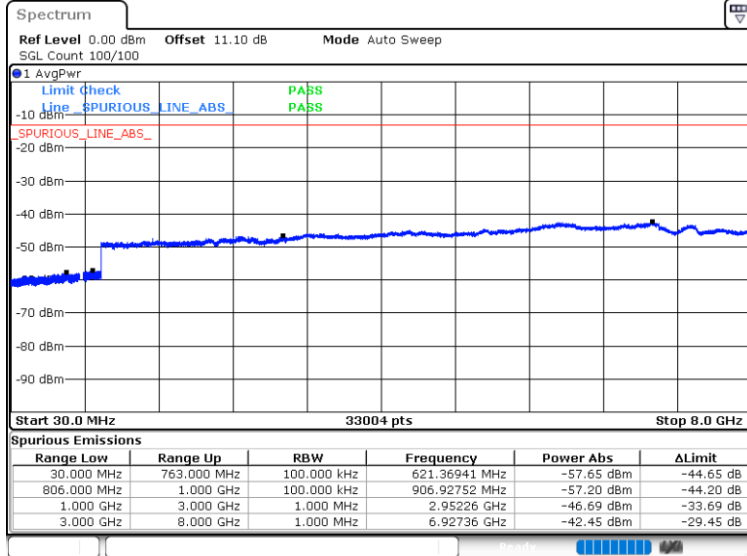
# Conducted Spurious Emission





LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 7.FEB.2022 15:59:41



### 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	0.0119	PASS
40	Normal Voltage	0.0009	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0157	
0	Normal Voltage	0.0043	
-10	Normal Voltage	0.0133	
-20	Normal Voltage	0.0059	
-30	Normal Voltage	0.0040	
20	Maximum Voltage	0.0072	
20	Normal Voltage	0.0037	
20	Battery End Point	0.0040	

**Note:**

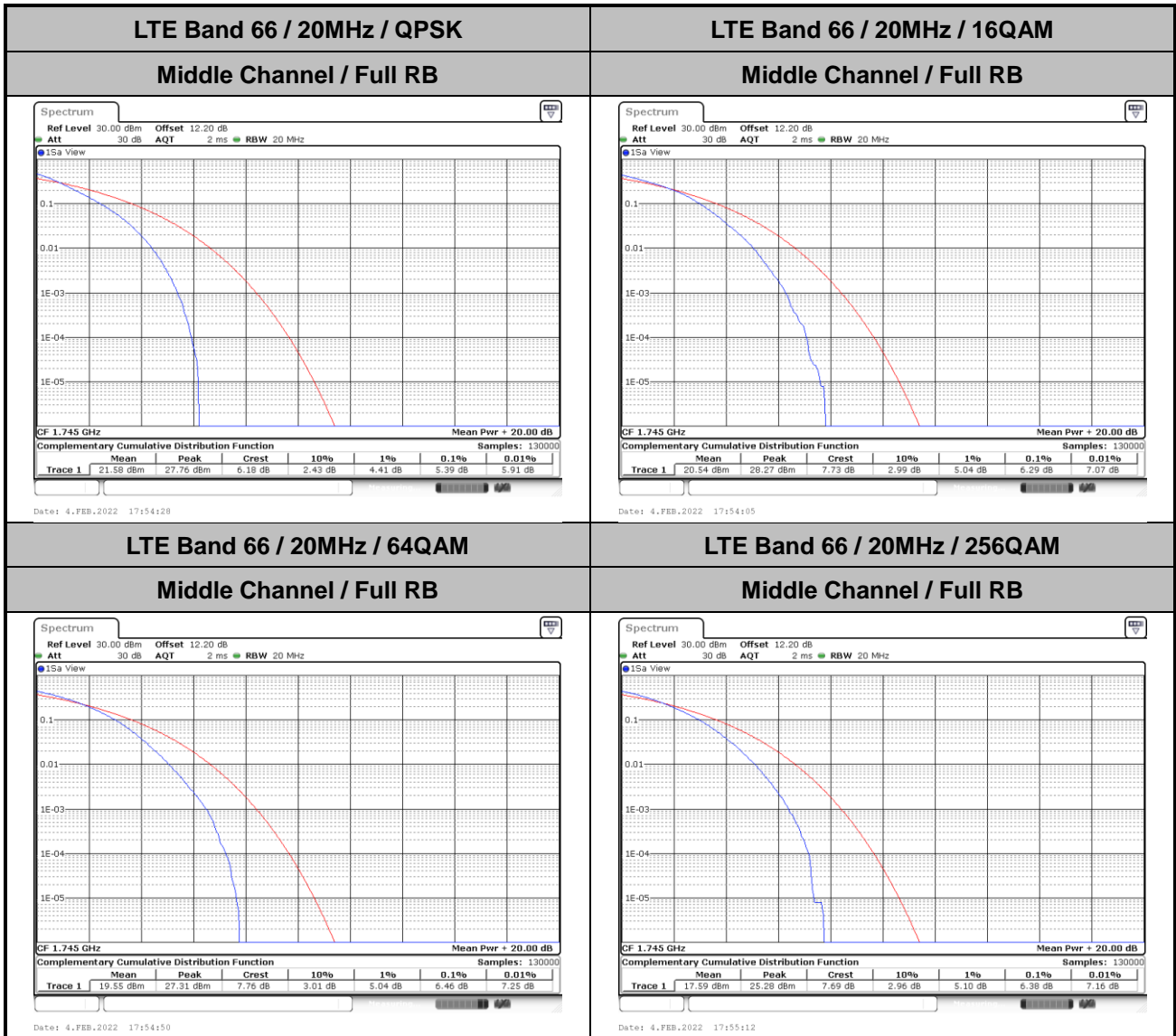
- 1. Normal Voltage =4.2 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.3 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 66

### Peak-to-Average Ratio

Mode	LTE Band 66 / 20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	5.39	6.29	6.46	6.38	PASS





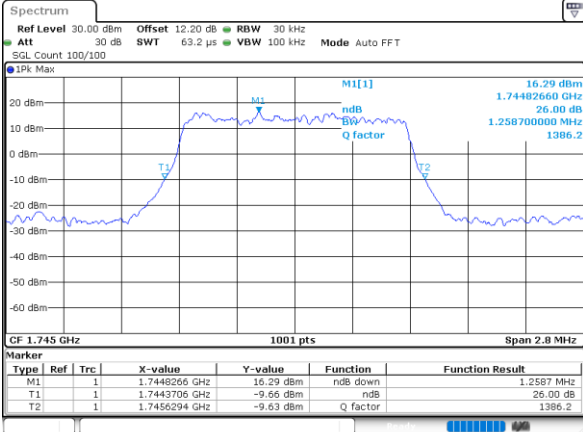
**26dB Bandwidth**

Mode	LTE Band 66 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.26	1.28	2.96	2.94	4.86	4.89	9.67	9.71	14.51	14.30	18.70	18.74
Mode	LTE Band 66 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	1.28	1.26	3.00	2.98	4.89	4.81	9.73	9.75	14.45	14.33	18.82	18.86



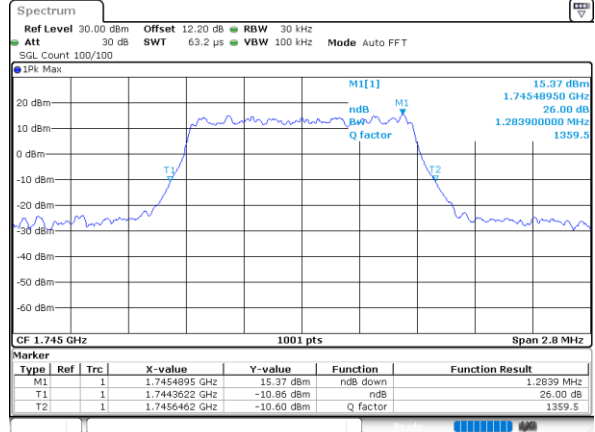
LTE Band 66

Middle Channel / 1.4MHz / QPSK



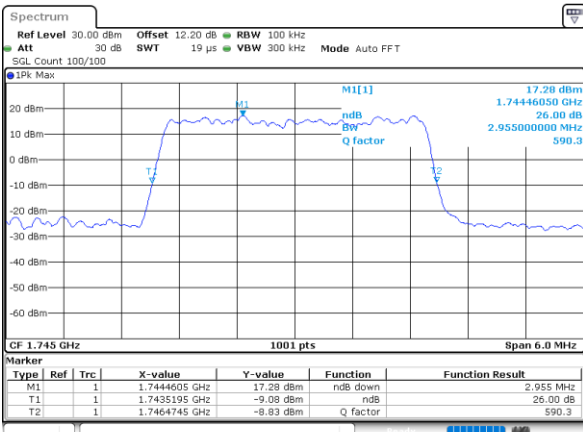
Date: 4.FEB.2022 15:57:12

Middle Channel / 1.4MHz / 16QAM



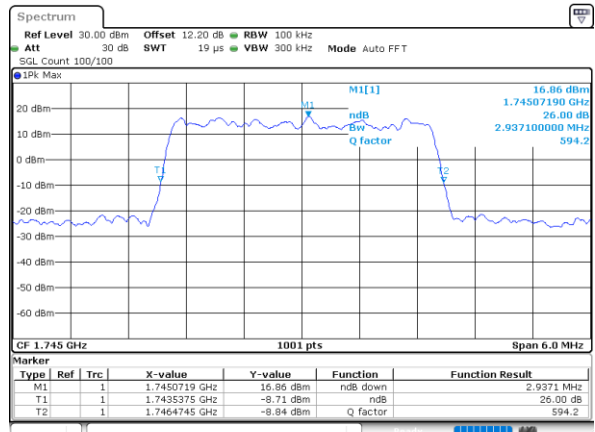
Date: 4.FEB.2022 15:57:33

Middle Channel / 3MHz / QPSK



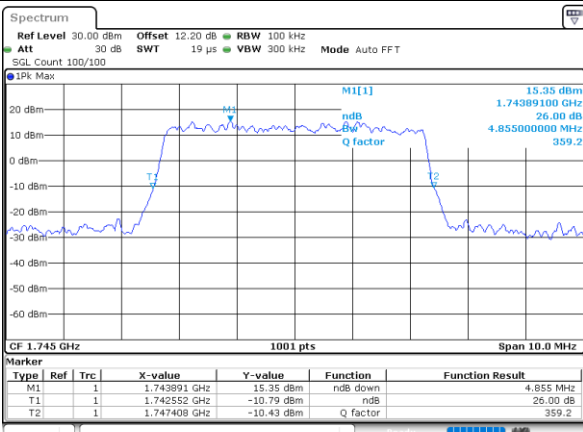
Date: 4.FEB.2022 16:23:02

Middle Channel / 3MHz / 16QAM



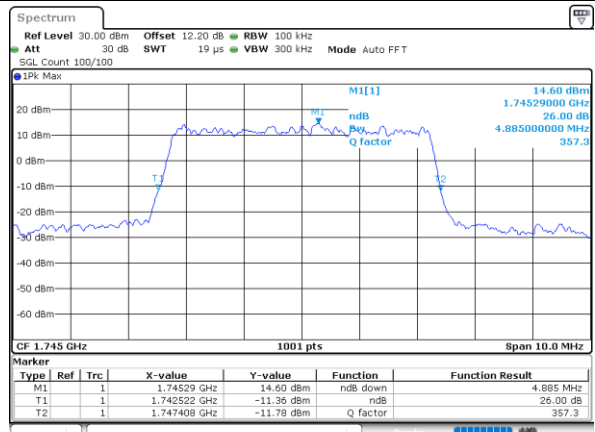
Date: 4.FEB.2022 16:23:23

Middle Channel / 5MHz / QPSK



Date: 4.FEB.2022 16:42:56

Middle Channel / 5MHz / 16QAM

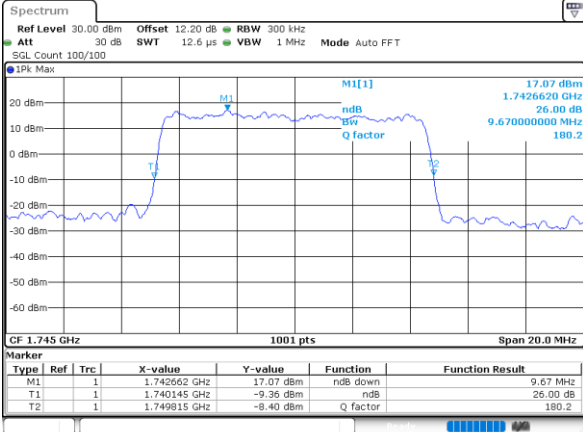


Date: 4.FEB.2022 16:43:17



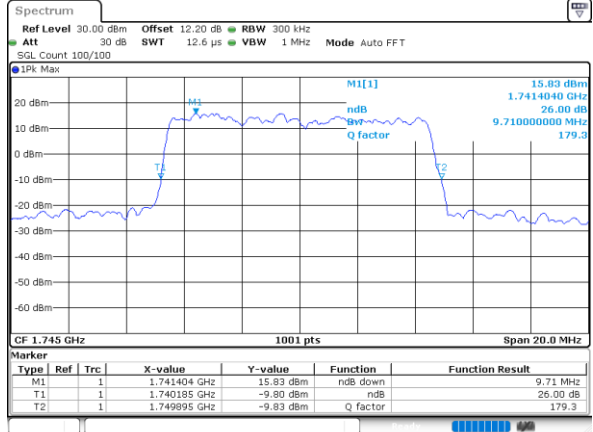
LTE Band 66

Middle Channel / 10MHz / QPSK



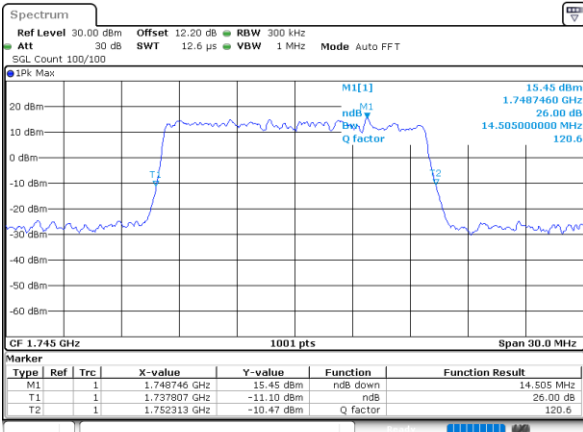
Date: 4.FEB.2022 17:02:47

Middle Channel / 10MHz / 16QAM



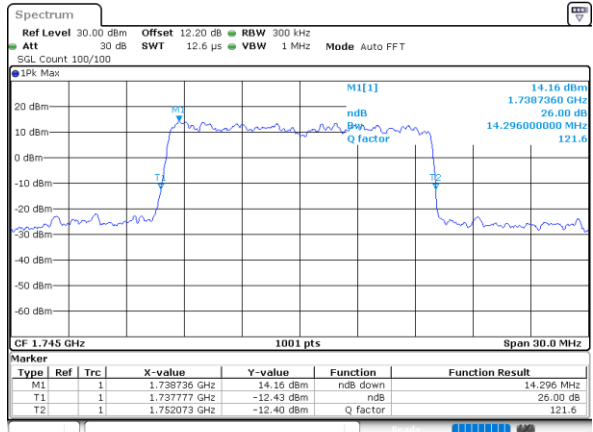
Date: 4.FEB.2022 17:03:08

Middle Channel / 15MHz / QPSK



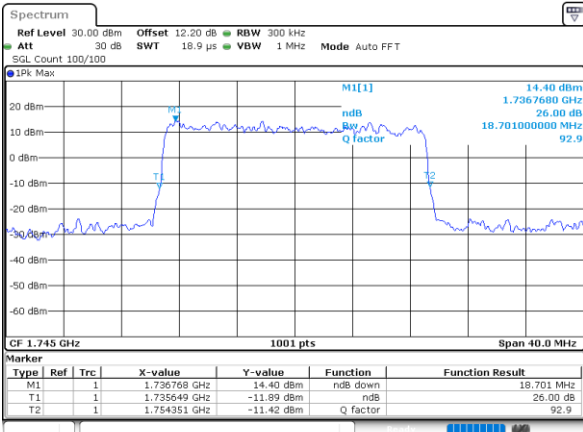
Date: 4.FEB.2022 17:22:38

Middle Channel / 15MHz / 16QAM



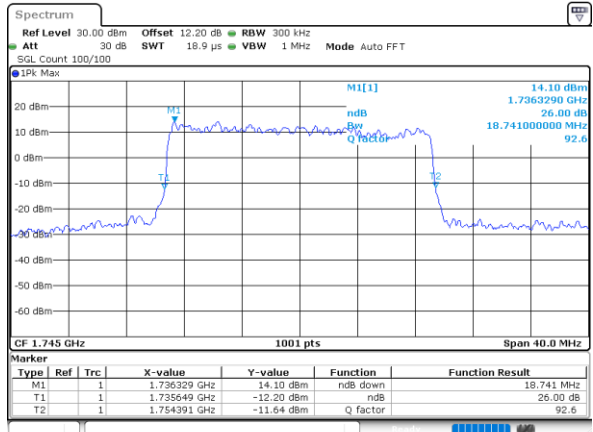
Date: 4.FEB.2022 17:22:59

Middle Channel / 20MHz / QPSK



Date: 4.FEB.2022 17:42:29

Middle Channel / 20MHz / 16QAM



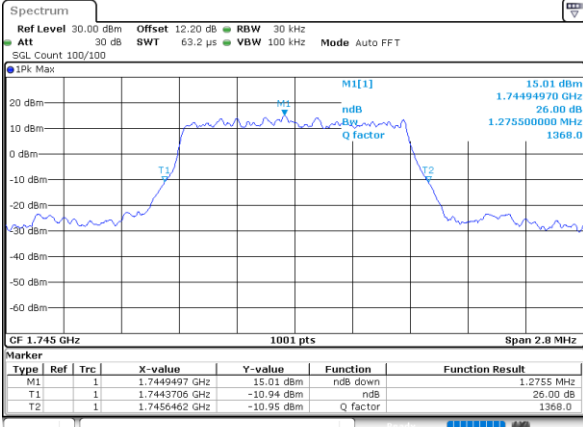
Date: 4.FEB.2022 17:42:50





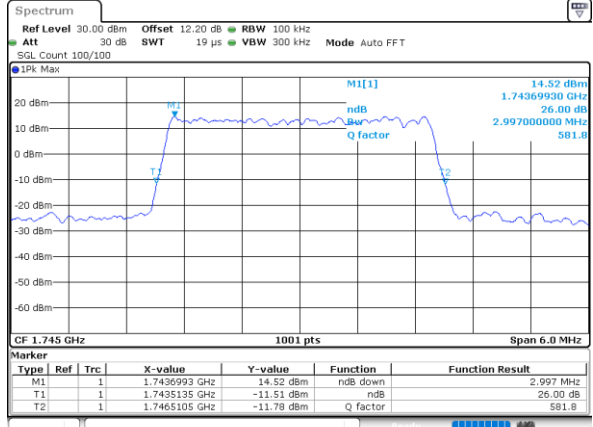
LTE Band 66

Middle Channel / 1.4MHz / 64QAM



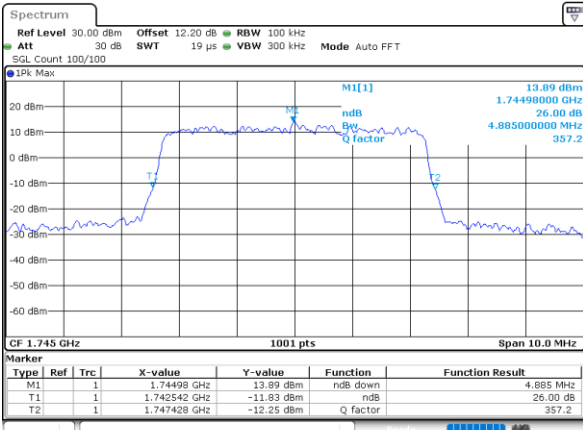
Date: 4.FEB.2022 15:58:36

Middle Channel / 3MHz / 64QAM



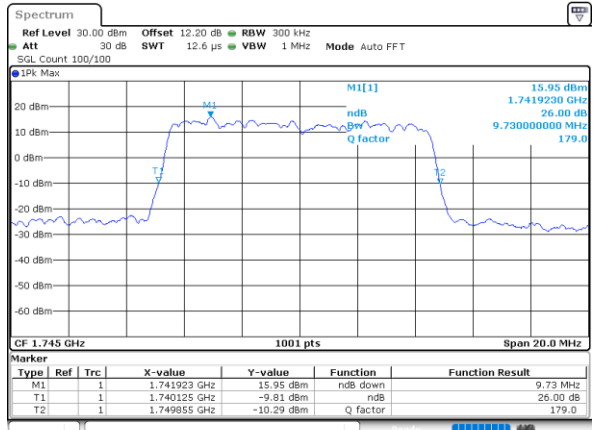
Date: 4.FEB.2022 16:24:26

Middle Channel / 5MHz / 64QAM



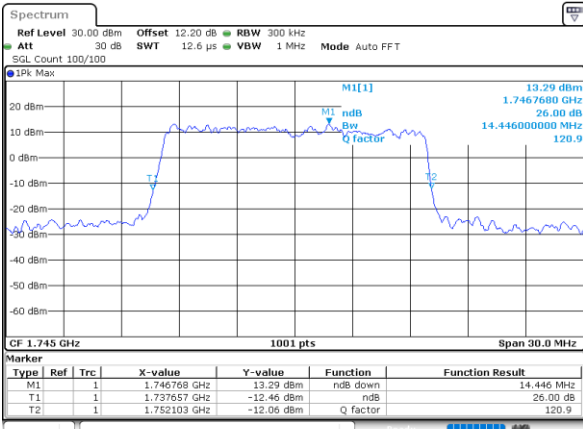
Date: 4.FEB.2022 16:44:20

Middle Channel / 10MHz / 64QAM



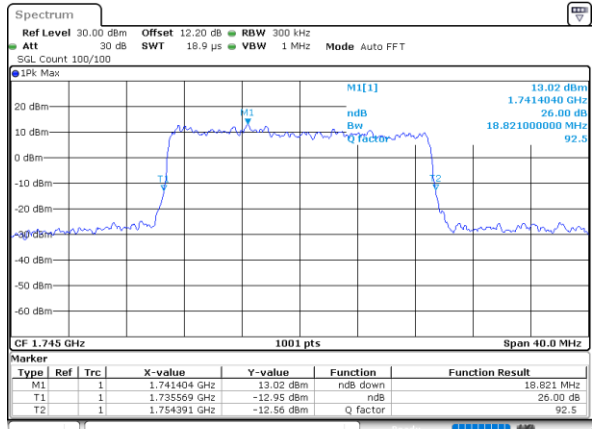
Date: 4.FEB.2022 17:04:11

Middle Channel / 15MHz / 64QAM



Date: 4.FEB.2022 17:24:02

Middle Channel / 20MHz / 64QAM

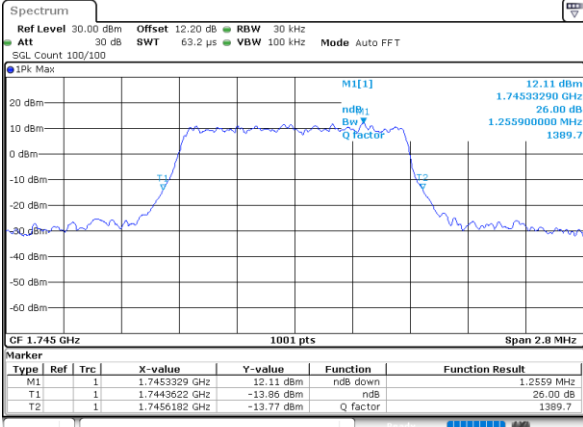


Date: 4.FEB.2022 17:43:54



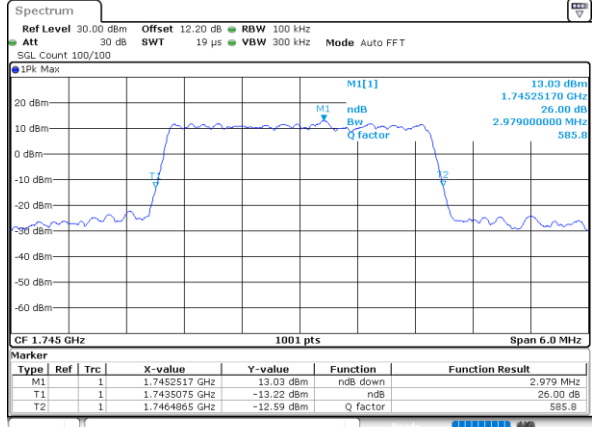
LTE Band 66

Middle Channel / 1.4MHz / 256QAM



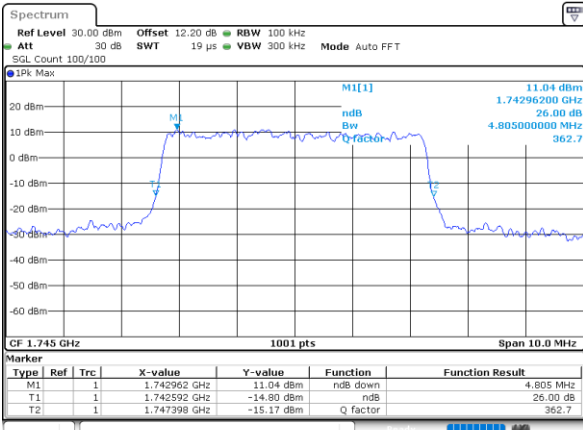
Date: 4.FEB.2022 15:58:57

Middle Channel / 3MHz / 256QAM



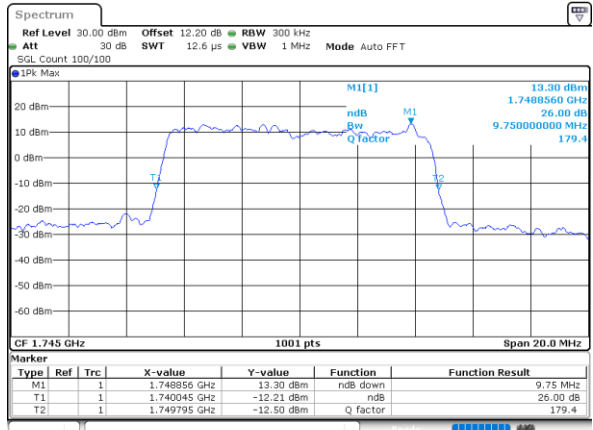
Date: 4.FEB.2022 16:24:47

Middle Channel / 5MHz / 256QAM



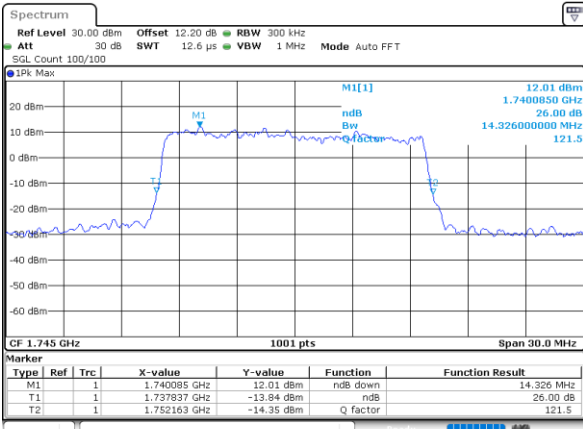
Date: 4.FEB.2022 16:44:41

Middle Channel / 10MHz / 256QAM



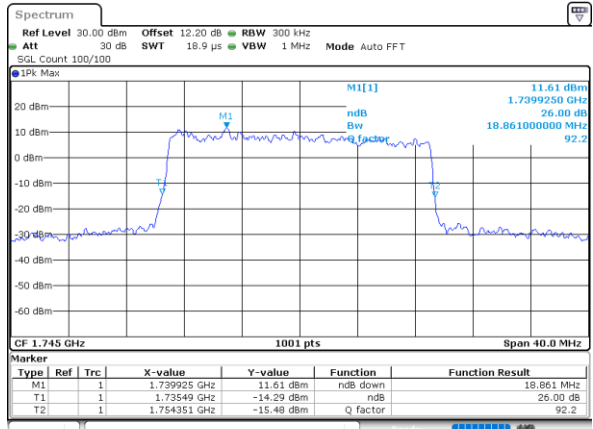
Date: 4.FEB.2022 17:04:32

Middle Channel / 15MHz / 256QAM



Date: 4.FEB.2022 17:24:23

Middle Channel / 20MHz / 256QAM



Date: 4.FEB.2022 17:44:15



Occupied Bandwidth

Mode	LTE Band 66 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.10	1.09	2.73	2.72	4.48	4.49	9.01	9.03	13.37	13.40	17.82	17.86
Mode	LTE Band 66 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	1.08	1.09	2.71	2.73	4.49	4.49	9.03	9.01	13.43	13.43	17.90	17.94